Analytical Resources, LLC
Analytical Chemists and Consultants

17 July 2023

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

RE: AOC5 MR Phase 1

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

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

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

Associated Work Order(s)	Associated SDG ID(s)
23A0207	N/A

Susan Dunnihoo

Digitally signed by Susan Dunnihoo
Date: 2023.07.17 12:19:24 -07'00'

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

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

Analytical Resources, LLC

Susan Dunnihoo, Director, Client Services

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

Accredited in accordance with nelac
Cert# 100006-012

1 of 2 23A0207

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 4215

Project/Client Name: AOCS ME Phase 1
Project Number: 210075.01.02
Contact Name: Amara Vandervoort
Sampled By: Windward

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

Shipping Date: 1/11/23
Airbill Number: —
Turnaround requested: Std

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required) PCB	SMS SVOCs	SMS metals	TOC/Total Solids	DIF	Archive	cPAHs	As	Comments / Instructions [Jar tag number(s)]
1/11/23	0822	LOW23-IT1088	4	Sediment	X	—	—	X	NA	X	X	X	
	0842	LOW23-IT1089	4		X	—	—	X	X	X	X	X	
	0904	-IT1079	4		X	—	—	X	NA	X	X	X	
	0924	-IT1080	4		X	—	—	X	NA	X	X	X	
	0924	-IT1080FD	4		X	—	—	X	NA	X	X	X	
	0941	-IT1072	4		X	—	—	X	NA	X	X	X	
	1015	-IT1081	4		X	—	—	X	NA	X	X	X	
	1045	-IT1068	4		X	—	—	X	NA	X	X	X	
	1103	-IT1062	4		X	—	—	X	NA	X	X	X	
	1132	-IT1097	4		X	—	—	X	NA	X	—	—	
	1234	-SC1085	3		X	—	—	X	—	X	—	—	
1/11/23	1322	LOW23-SC1069	3	Sediment	X	—	—	X	—	X	—	—	
		Total Number of Containers	46	Purchase Order / Statement of Work # APT-110222-AOCS-ARL									

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Amara Vandervoort	Phillip BF	Print name:	
Signature:	Company: AR	Signature:	Company:
Company: Windward.		Company:	
Date/Time: 1/11/23 1645	Date/Time: PLB 1/11 1/11/23 16:45	Date/Time:	Date/Time:

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

Wind Ward environmental LLC

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

206.378.1364

To be completed by Laboratory upon sample receipt:

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

2 of 2 23A0207

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 4212

Project/Client Name: AOCS NR Phase 1
Project Number: 210075.01.02
Contact Name: Amara VanderVoet
Sampled By: Windward

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

Shipping Date:
Airbill Number: —
Turnaround requested: Std

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required) PCB	SMS SVOCs	SMS metals	TOC / Total solids	DIF	Arsenic	cPAHs	As	Comments / Instructions [Jar tag number(s)]
1/11/23	1309	LOW23-SC1058	3	Sediment	X	—	—	X	—	X	—	—	
	1337	-SC1073	3		X	—	—	X	—	X	—	—	
	1413	-IT1078	4		X	—	—	X	NA	X	X	X	
	1454	-IT1201	4		X	—	—	X	NA	X	X	X	
1/11/23	1521	LOW23-IT1209	4	Sediment	X	—	—	X	X	X	X	X	
		Total Number of Containers	18	Purchase Order / Statement of Work #	APJ-110222-AOCS-ARL								

1/11/23

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Amara VanderVoet	Phillip	Print name:	
Signature:	Company: AR	Signature:	Company:
Company: Windward	Date/Time: 1/11/23 16:35	Company:	Date/Time:
Date/Time: 1/17/23 1645		Date/Time:	

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

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

To be completed by Laboratory upon sample receipt:

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

1 of 2

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 4215

Project/Client Name: AOCS mP Phase 1
Project Number: 210075.01.02
Contact Name: Amara Vandervoort
Sampled By: Windward

Ship to: ARL
Attn: Sue Dunnhoo
Shipper: courier
Form filled out by: AV

Shipping Date: 11/11/23
Airbill Number:
Turnaround requested: Std

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required)								Comments / Instructions [Jar tag number(s)]
					AVS	SVOCs	Metals	Total Solids	DW	Arsenic	cPAHs	As	
11/11/23	0822	LOW23-IT1088	4	Sediment	X	—	—	X	NA	X	X	X	
	0842	LOW23-IT1089	4		X	—	—	X	X	X	X	X	
	0904	-IT1079	4		X	—	—	X	NA	X	X	X	
	0924	-IT1080	4		X	—	—	X	NA	X	X	X	
	0924	-IT1080FD	4		X	—	—	X	NA	X	X	X	
	0941	-IT1072	4		X	—	—	X	NA	X	X	X	
	1015	-IT1081	4		X	—	—	X	NA	X	X	X	
	1045	-IT1068	4		X	—	—	X	NA	X	X	X	
	1103	-IT1062	4		X	—	—	X	NA	X	X	X	
	1132	-IT1097	4		X	—	—	X	X	X	X	X	
	1234	-SC1085	3		X	—	—	X	—	X	—	—	
11/11/23	1322	LOW23-SC1069	3	Sediment	X	—	—	X	—	X	—	—	
		Total Number of Containers	46		Purchase Order / Statement of Work # APT-110222-AOCS-ARL								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Amara VanderVoA	Print name: Phillip PB	Print name:	
Signature: Amara Vandervoort	Company: AR	Signature:	Company:
Company: Windward	Date/Time: PIB 1/11/23 1645	Company:	Date/Time:
Date/Time: 11/11/23 1645		Date/Time:	

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

To be completed by Laboratory upon sample receip

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

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

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

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

COC No(s): 4215, 4212 NA Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 23A0207 Tracking No: _____ NA

Preliminary Examination Phase:

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

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

Time ~~16:45~~ PIB 17:05 4.2 6.0 5.8 6.0 4.3 ____

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90077208

Cooler Accepted by: PIB Date: 1/11/23 Time: ~~16:45~~ FEA ~~17:05~~ 1645 JBw

Complete custody forms and attach all shipping documents

Log-In Phase:

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

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

Samples Logged by: JBw Date: 1/12/23 Time: 0850 Labels checked by: JBw

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

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

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

RE: AOC5 - 23A0207 receipts

Amara Vandervort <amarav@windwardenv.com>

Thu 1/12/2023 9:03 PM

To: Sue Dunnihoo <limsadm@arilabs.com>

Hi Sue,
There was an error on the COC for this batch. Sample LDW23-IT1068 should be NA for D/F and LDW23-IT1097 need to be changed from NA for D/F to yes D/F and As and cPAHs need to be added, please.

I will send an amended copy of the COC to you tomorrow. Thanks! -Amara

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From: Sue Dunnihoo <limsadm@arilabs.com>
Sent: Thursday, January 12, 2023 11:46 AM
To: Labdata <labdata@anchorqea.com>
Cc: Ali Judkins <ajudkins@anchorqea.com>; Amara Vandervort <amarav@windwardenv.com>; Anastasia Barr <anastasiab@windwardenv.com>
Subject: AOC5 - 23A0207 receipts

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Please find attached for your review.

Regards, Sue

I will be working remotely Jan 13th and out of the office Jan 16th.

*** NOTE - TATs are running 3 to 6 weeks depending on analysis ***

Courier requests cannot be guaranteed for same day pick-ups or deliveries. Please schedule in advance.

****Please email you bottle requests to your project manager several days before needed to give staff time to assemble the kit - we may not be able to accommodate your request as a walk-in****

Susan D. Dunnihoo

She/her/hers

Client Services Director

Analytical Resources, LLC

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle, WA 98101	Project Manager: Ali Judkins	07/17/2023 10:32

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
23A0207-01	LDW23-IT1088	Solid	01/11/23 08:22	01/11/23 16:45
23A0207-02	LDW23-IT1089	Solid	01/11/23 08:42	01/11/23 16:45
23A0207-03	LDW23-IT1079	Solid	01/11/23 09:04	01/11/23 16:45
23A0207-04	LDW23-IT1080	Solid	01/11/23 09:24	01/11/23 16:45
23A0207-05	LDW23-IT1080-FD	Solid	01/11/23 09:24	01/11/23 16:45
23A0207-06	LDW23-IT1072	Solid	01/11/23 09:41	01/11/23 16:45
23A0207-07	LDW23-IT1081	Solid	01/11/23 10:15	01/11/23 16:45
23A0207-08	LDW23-IT1068	Solid	01/11/23 10:45	01/11/23 16:45
23A0207-09	LDW23-IT1062	Solid	01/11/23 11:03	01/11/23 16:45
23A0207-10	LDW23-IT1097	Solid	01/11/23 11:32	01/11/23 16:45
23A0207-11	LDW23-SC1085	Solid	01/11/23 12:34	01/11/23 16:45
23A0207-12	LDW23-SC1069	Solid	01/11/23 13:22	01/11/23 16:45
23A0207-13	LDW23-SC1058	Solid	01/11/23 13:09	01/11/23 16:45
23A0207-14	LDW23-SC1073	Solid	01/11/23 13:37	01/11/23 16:45
23A0207-15	LDW23-IT1078	Solid	01/11/23 14:13	01/11/23 16:45
23A0207-16	LDW23-IT1201	Solid	01/11/23 14:54	01/11/23 16:45
23A0207-17	LDW23-IT1209	Solid	01/11/23 15:21	01/11/23 16:45

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	17-Jul-2023 10:32

Case Narrative

Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Work Order: 23A0207

Sample receipt

Samples as listed on the preceding page were received 11-Jan-2023 16:45 under ARI work order 23A0207. For details regarding sample receipt, please refer to the Cooler Receipt Form. Samples were frozen on receipt to preserve holding times.

Changes to the analyses requested are noted in the enclosed records of communications, including adding SIM- PAH and a metals list for only arsenic.

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

The sample(s) were extracted and analyzed within the recommended holding times for samples stored frozen. Extracts with a yellow color were initially analyzed at a 3x dilution.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries for d14-dibenzo(a,h)anthracene or d10-fluoranthene were high of control limits where flagged on the summary sheets.

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

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

The batch BLA0683 matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits.

The batch BLE0421 matrix spike (MS) recoveries for several compounds were low of limits and flagged on the summary sheet. The matrix spike duplicate (MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits, reported under work order 23E0219.

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

PCB Aroclors - EPA Method SW8082A

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

Decachlorobiphenyl (DCBP) was high of control limits in SKL0048-SCV6 in the initial calibration sequence on both columns. SLB0127-CCV1 had response for aroclor 1248 and DCBP low of limits on the ZB5 column. SLB0148-CCV7 and SLB0148-CCVD showed aroclor 1248 low on the ZB5 column. SLB0127-CCV3 showed DCBP low of limits on both columns. SLB0127-ICV2, SLB0148-ICV2, SLB0148-CCV4, SLB0148-CCV6 and SLB0148-CCVE showed aroclor 1260 low on the first column. SLB0148-CCV5 showed DCBP low on the ZB5 column. SLB0148-CCVB showed aroclor 1254 low on the ZB5 column. Results have been reported from the ZB35 column as primary.

Hexachlorobiphenyl was low of limits on the ZB5 column for LDW23-IT1201 and LDW23-IT1209.

The surrogate percent recoveries were high outside control limits on the ZB35 column in LDW23-IT1209, attributed to the

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

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

Reported:
17-Jul-2023 10:32

Case Narrative

matrix.

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

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

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

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

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

Total Metals - EPA Method 6020B (Arsenic)

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

Initial and continuing calibrations were within method requirements.

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

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

The duplicate (DUP) relative percent differences (RPD) were within advisory control limits, with batch BLE0306 reported under work order 23E0009.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent differences (RPD) were within advisory control limits, with batch BLE0306 reported under work order 23E0009.

Wet Chemistry (Total Organic Carbon and Total Solids)

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

Initial and continuing calibrations were within method requirements.

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

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

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

The batch BLA0321 matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits, reported under work order 23A0206.

The batch BLA0360 matrix spike (MS) percent recoveries were within advisory control limits. The duplicate (DUP) relative percent difference (RPD) was high of advisory control limits and flagged on the summary sheet.

Dioxin/Furans - EPA Method 1613

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

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	17-Jul-2023 10:32

Case Narrative

SLB0345-CCV1 showed response for 13C12-1,2,3,7,8-PeCDF and 13C12-2,3,4,7,8-PeCDF below control limits. SLB0345-CCV2 had 1,2,3,6,7,8-HxCDF, 13C12-1,2,3,7,8-PeCDD, 13C12-1,2,3,7,8-PeCDF and 13C12-2,3,4,7,8-PeCDF low of control limits. SLB0345-ICV1 showed 13C12-1,2,3,4,7,8,9-HpCDF and 13C12-1,2,3,6,7,8-HxCDD low of limits. Two resolution checks were noted by the analyst to be outside limits in SLB0345-CCV2.

Labeled internal standard areas were just high limits in the method blank BLA0261-BLK1 for 13C12-1,2,3,6,7,8-HxCDF, 13C12-1,2,3,4,7,8-HxCDD and 13C12-1,2,3,6,7,8-HxCDD. The labeled internal standard 13C12-1,2,3,6,7,8-HxCDD was high of limits in BLA0261-BS1. The recovery for 13C12-1,2,3,6,7,8-HxCDF (128%) was outside acceptance limits (26-123) in LDW23-IT1097. As these samples were noted to cause matrix issues with instrument performance, outliers are flagged, and no further action was taken.

The cleanup surrogate percent recoveries were within control limits.

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

The OPR (Ongoing Precision and Recovery) standard percent recovery for 1,2,3,6,7,8-HxCDF (83.9%) was noted as low of control limits (84-120%) and flagged on the summary sheet.

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

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

Results that have been "X" flagged indicate possible interference from CDPEs (chlorinated diphenyl ethers).

Revised 05/31/2023 to include SIM-PAH and arsenic for sample LDW23-IT1097

Revised 07/03/2023 to correct PCB calibration reference.

Revised 07/17/2023 to include SLD0272-SCV data.

QUALIFIERS AND NOTES

Qualifier	Definition
Y1	Raised reporting limit due to interference
X	Indicates possible CDPE interference.
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
P1	The reported value is greater than 40% difference between the concentrations determined on two GC columns where applicable.
J	Estimated concentration value detected below the reporting limit.
EMPC	Estimated Maximum Possible Concentration qualifier for HRGCMS Dioxin
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
D	The reported value is from a dilution
B	This analyte was detected in the method blank.
*	Flagged value is not within established control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1088

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

Polynuclear Aromatic Hydrocarbons

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-01 A	SDG:	23A0207
Sampled:	01/11/23 08:22	Prepared:	02/01/23 11:29	File ID:	N823020612.D
% Solids:	78.42	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/06/23 17:45
Batch:	BLA0683	Sequence:	SLB0075	Initial/Final:	12.78 g Wet / 0.5 mL
Instrument:	NT8	Column:	RXI-17Sil ms	Calibration:	GA00050
Cleanups:	GPC, Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
56-55-3	Benzo(a)anthracene	1	2.99	J	0.82	4.99
218-01-9	Chrysene	1	3.79	J	1.05	4.99
205-99-2	Benzo(b)fluoranthene	1	3.07	J	1.37	4.99
207-08-9	Benzo(k)fluoranthene	1	1.58	J	0.76	4.99
50-32-8	Benzo(a)pyrene	1	2.36	J	0.61	4.99
193-39-5	Indeno(1,2,3-cd)pyrene	1	1.57	J	1.05	4.99
53-70-3	Dibenzo(a,h)anthracene	1	4.99	U	0.89	4.99

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	149.67	124	83.0	32 - 120	
Dibenzo[a,h]anthracene-d14	149.67	173	116	21 - 133	
Fluoranthene-d10	149.67	127	85.0	36 - 134	

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020612.D

Page 1

Date : 06-FEB-2023 17:45

Client ID:

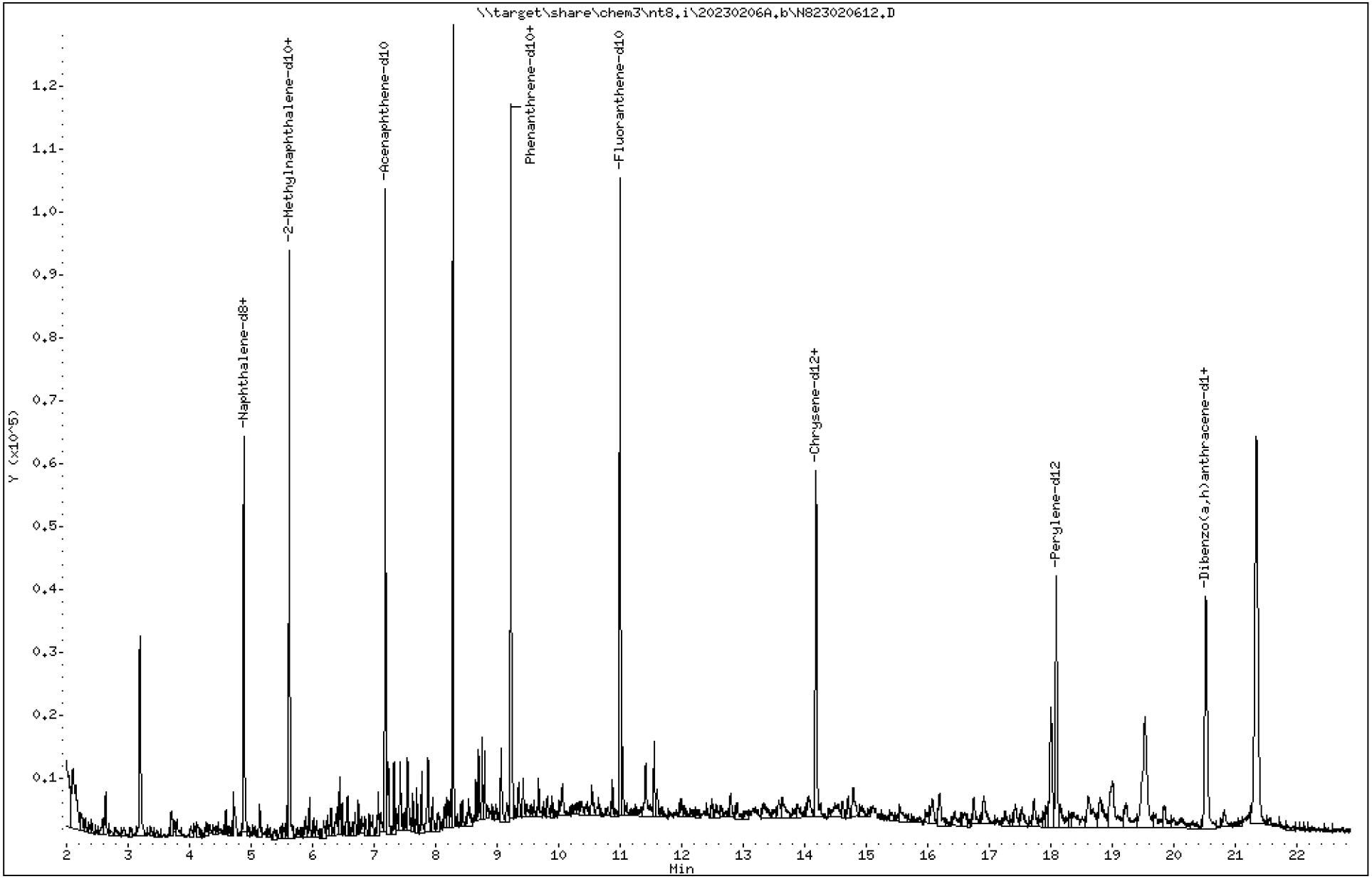
Instrument: nt8.i

Sample Info: 23A0207-01

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



23A0207 CLPLIKE (Rev3) - Page 13 of 3315

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020612.D

Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

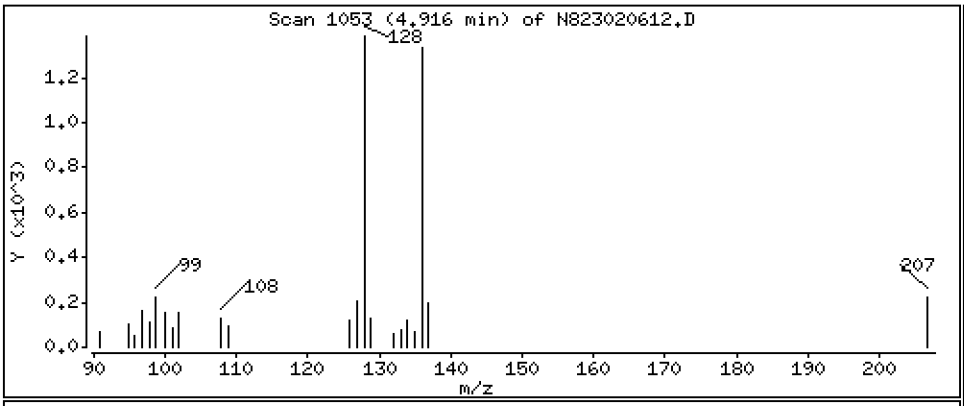
Operator: JZ

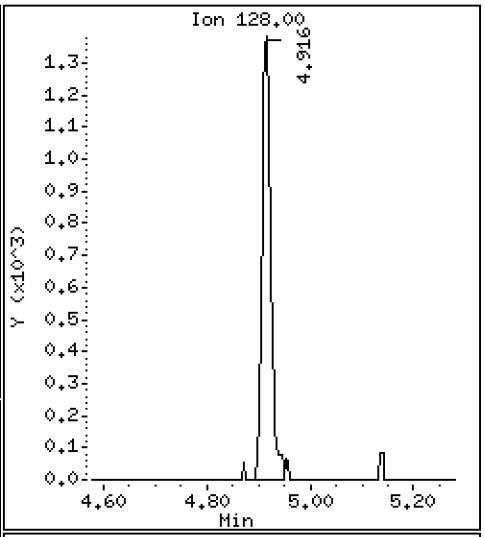
Column phase: Rxi-17sil

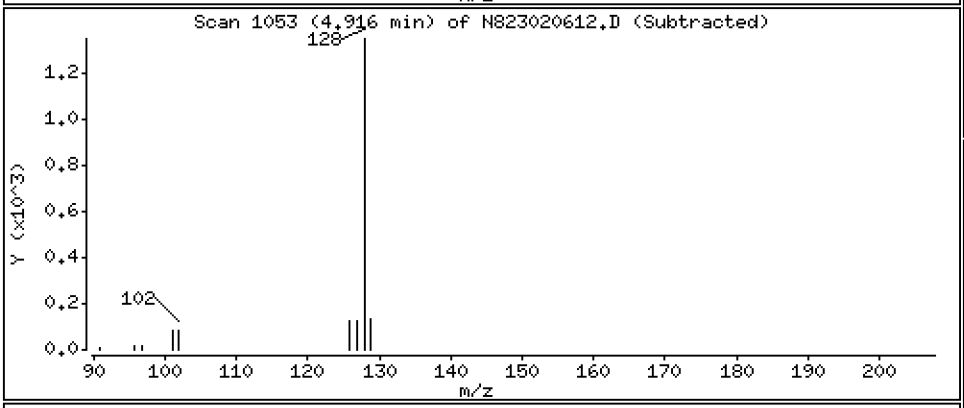
Column diameter: 0.25

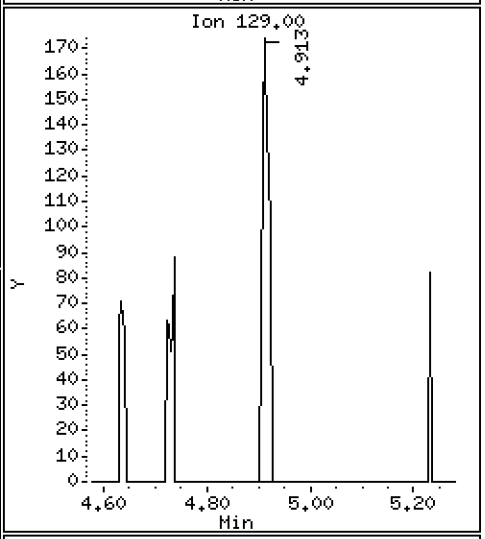
2 Naphthalene

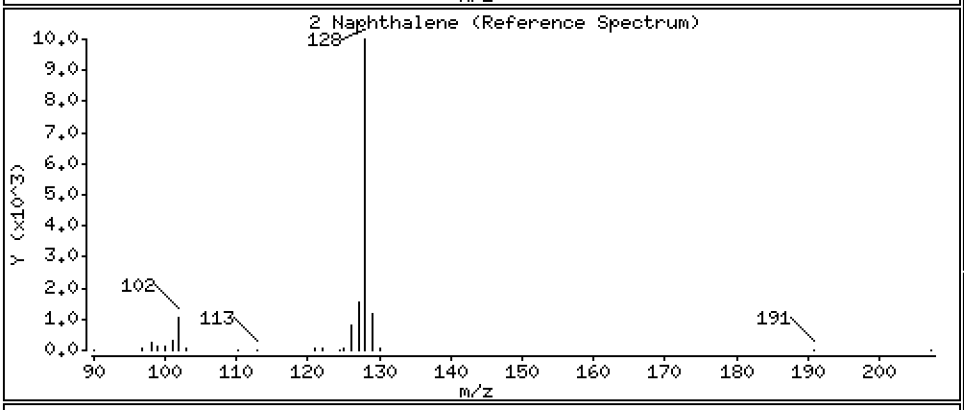
Concentration: 0.07115 ug/mL

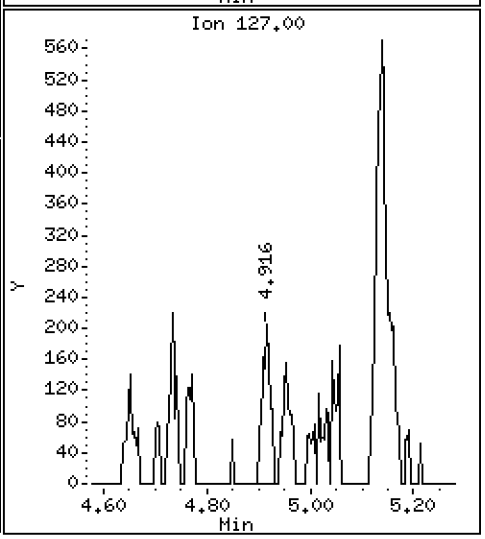


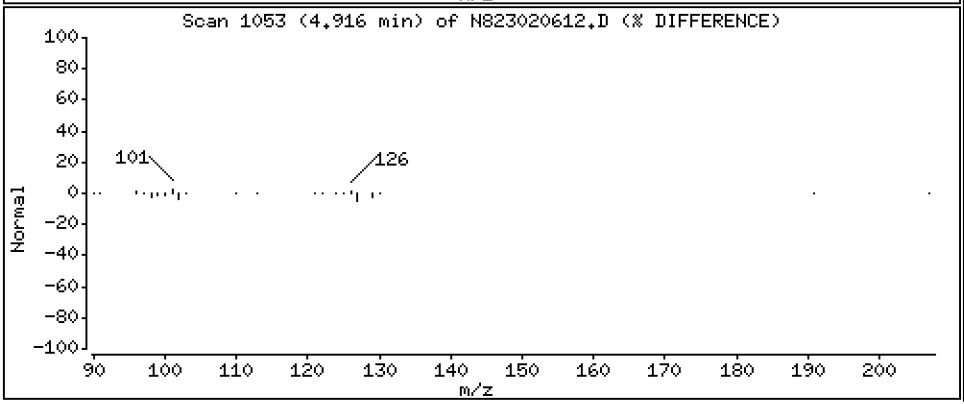












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Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

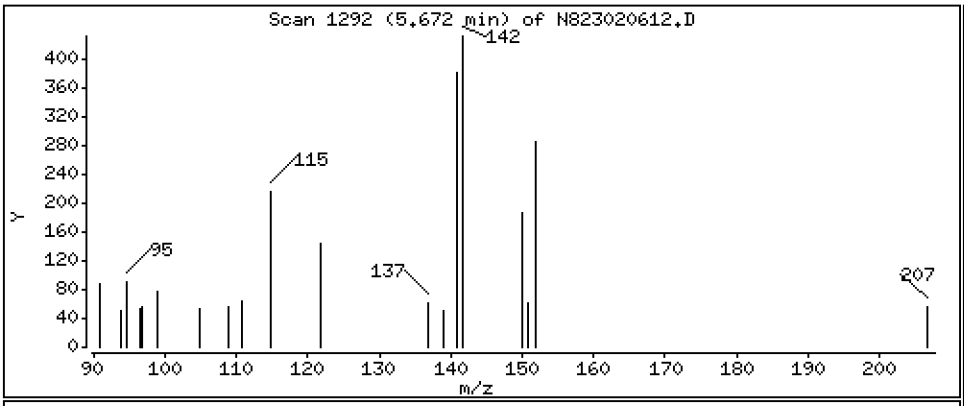
Operator: JZ

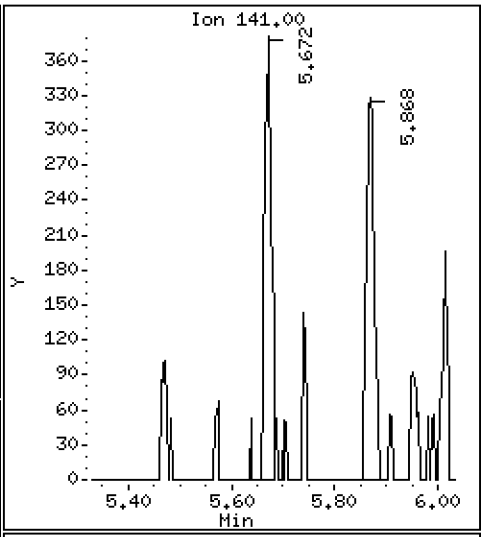
Column phase: Rxi-17sil

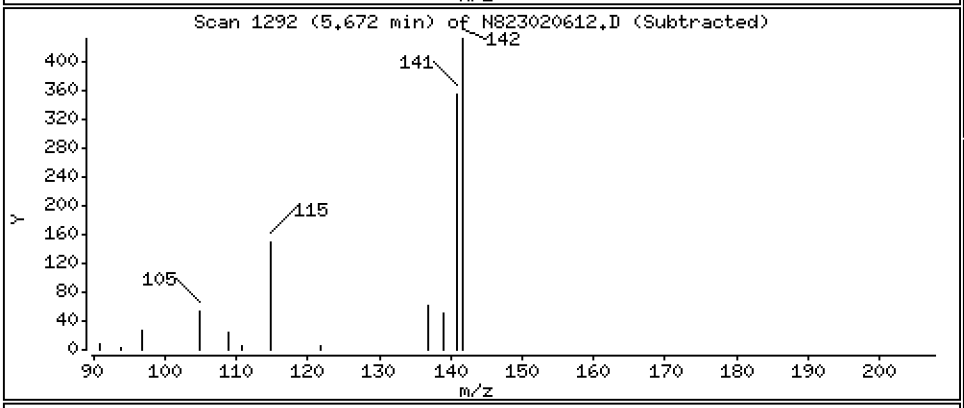
Column diameter: 0.25

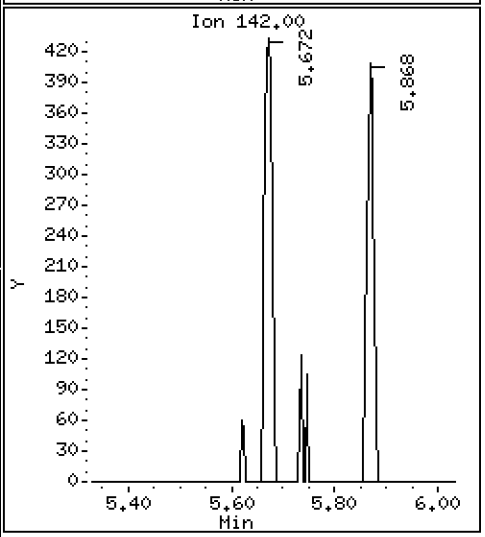
4 2-Methylnaphthalene

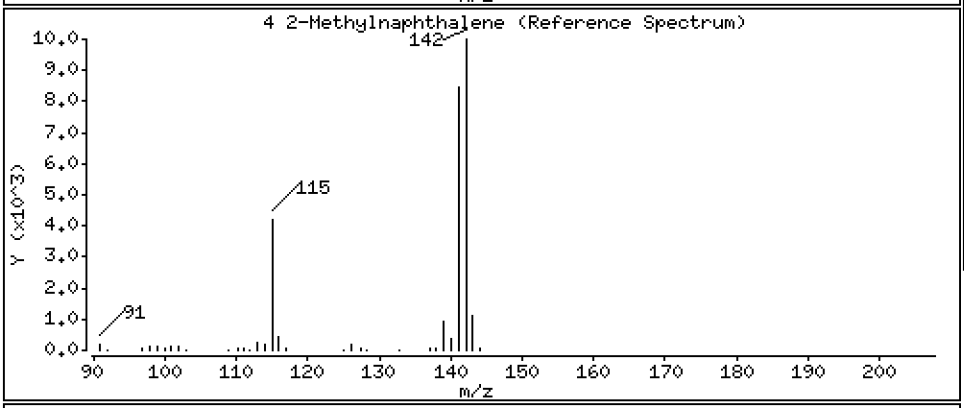
Concentration: 0.02653 ug/mL

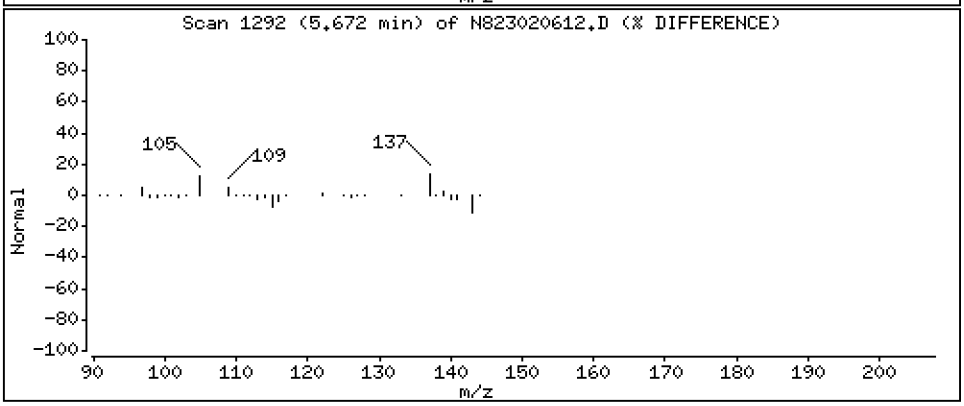












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Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

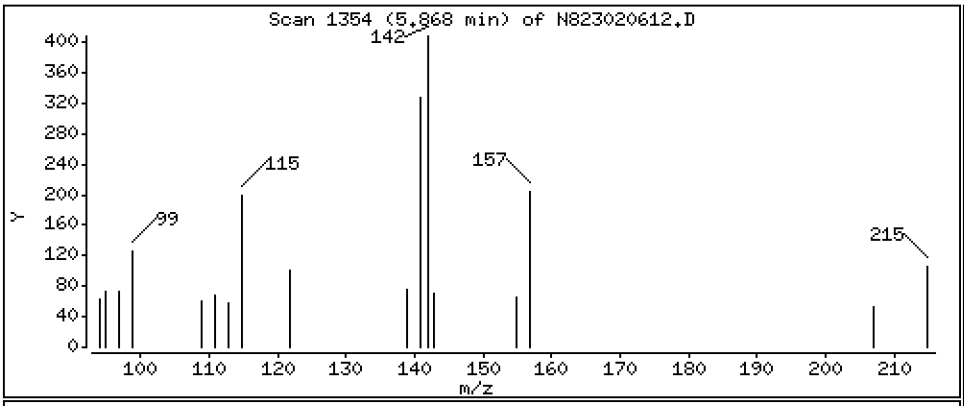
Operator: JZ

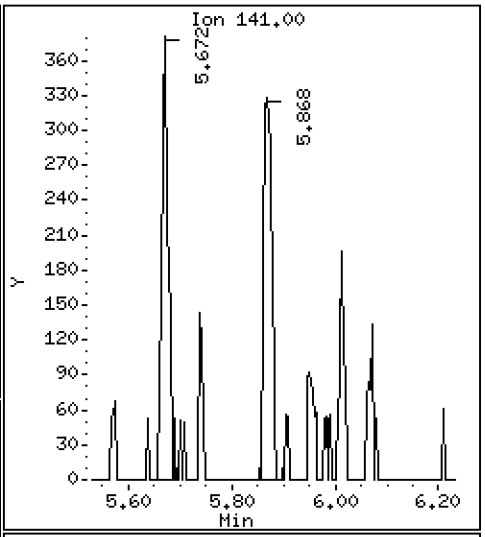
Column phase: Rxi-17sil

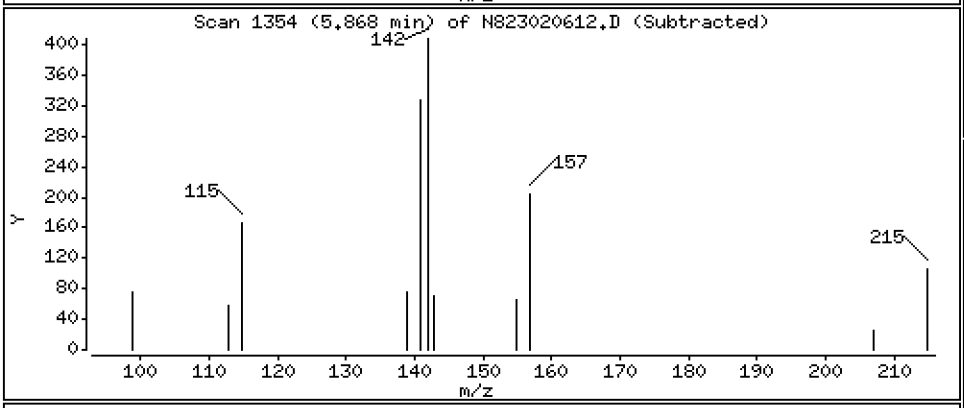
Column diameter: 0.25

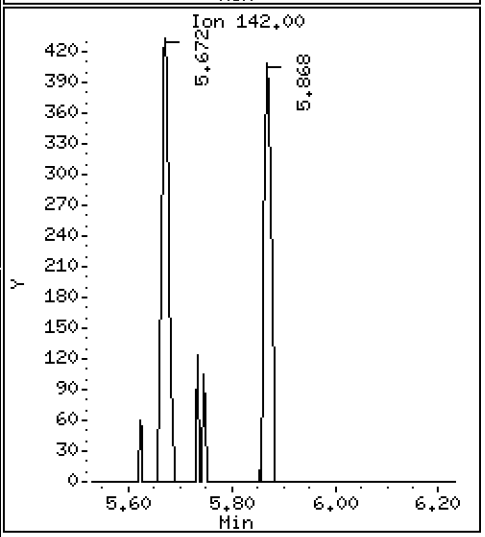
5 1-methylnaphthalene

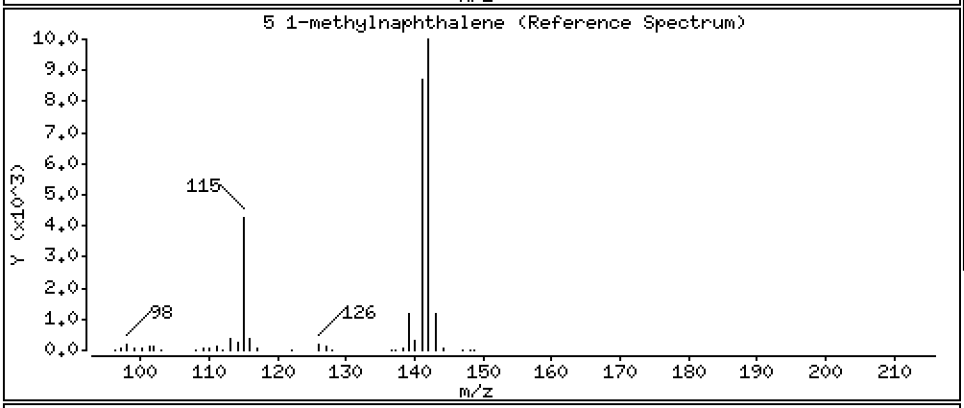
Concentration: 0.02792 ug/mL

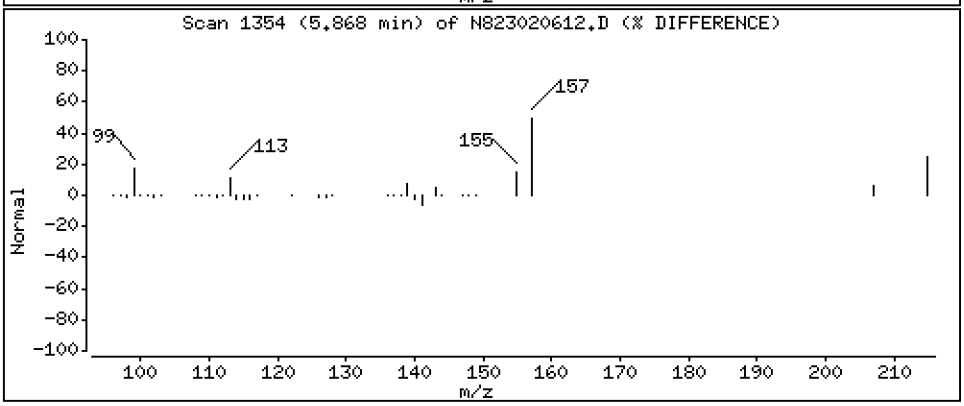












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Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

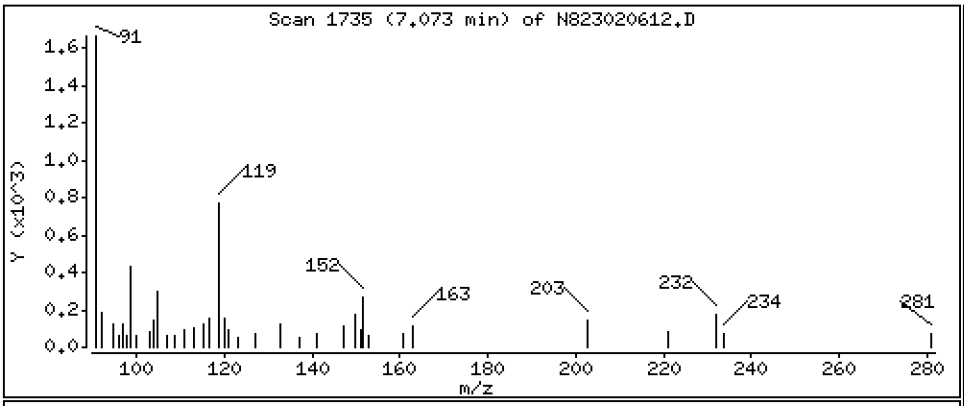
Operator: JZ

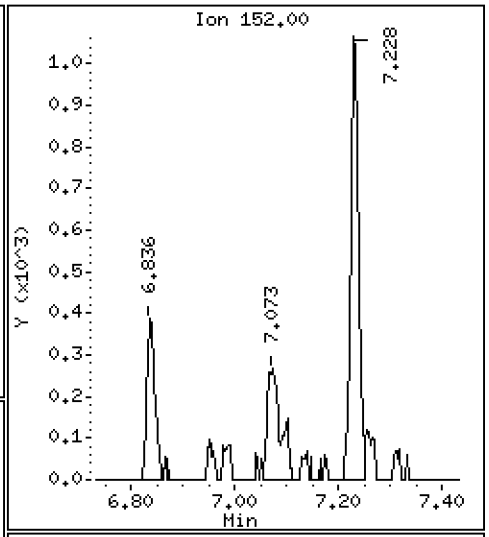
Column phase: Rxi-17sil

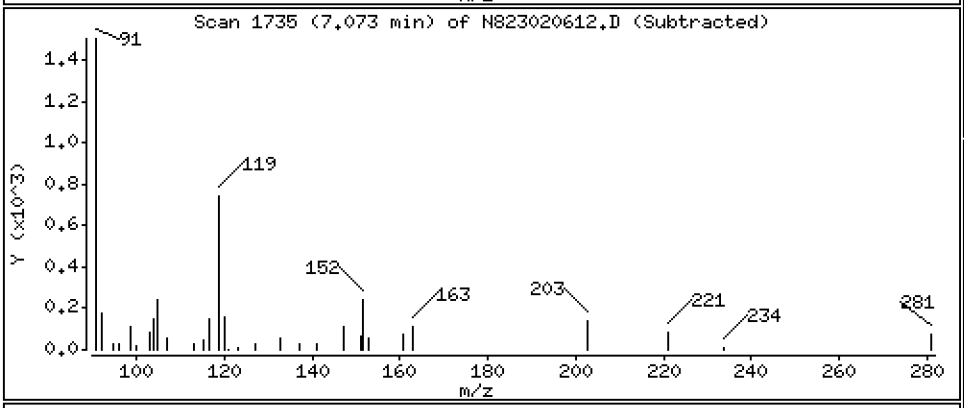
Column diameter: 0.25

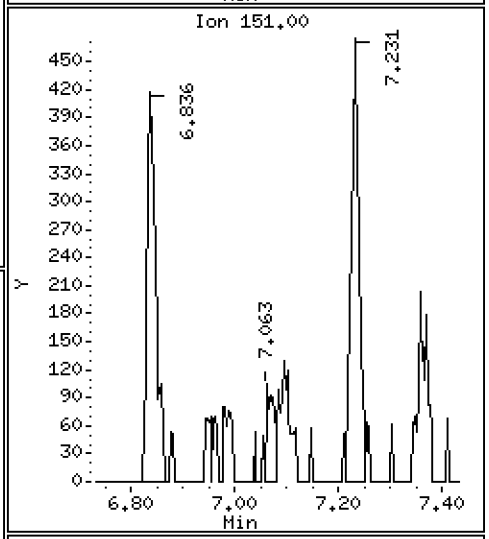
9 Acenaphthylene

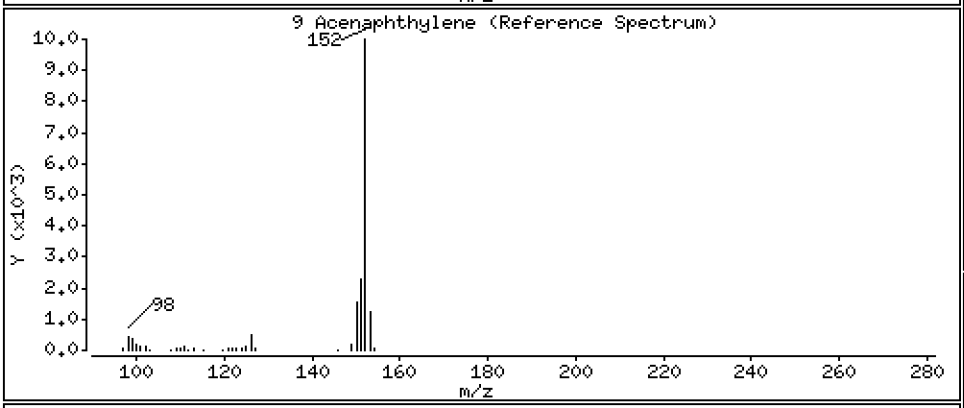
Concentration: 0.02168 ug/mL

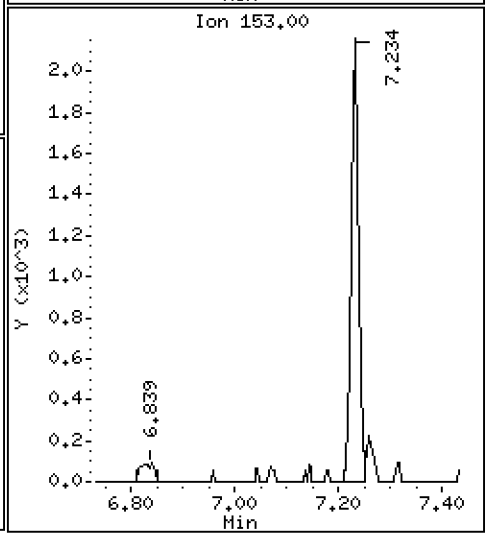


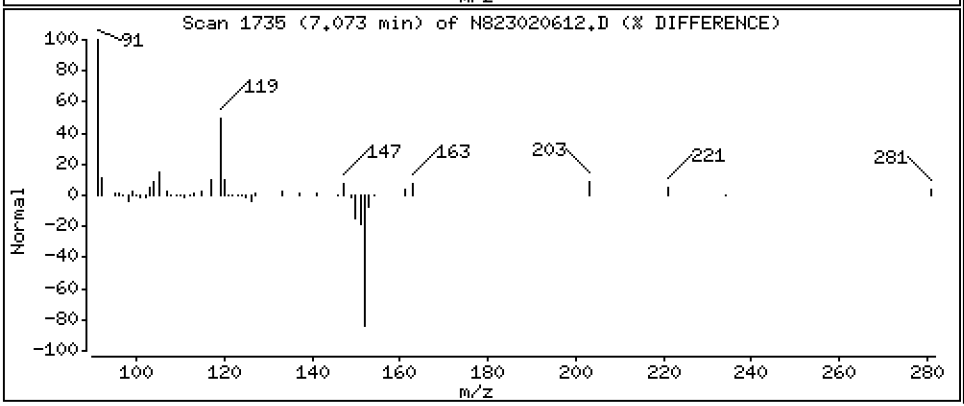












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Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

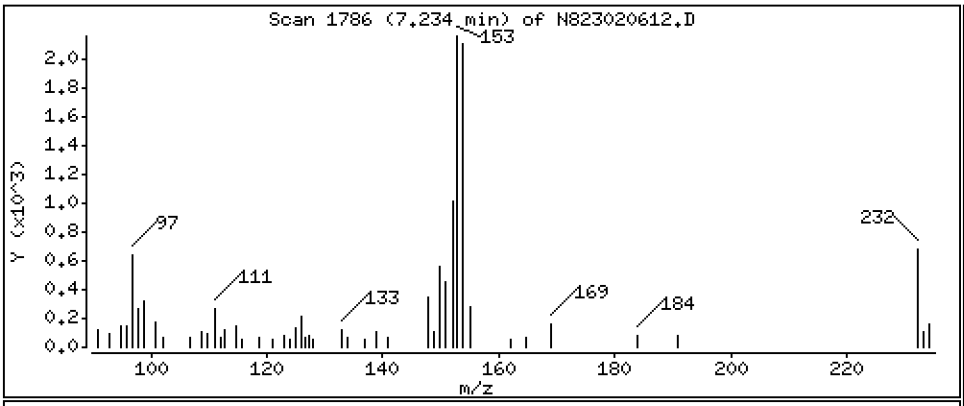
Operator: JZ

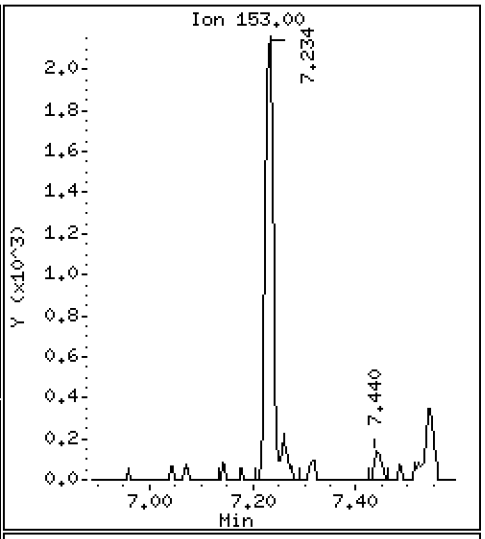
Column phase: Rxi-17sil

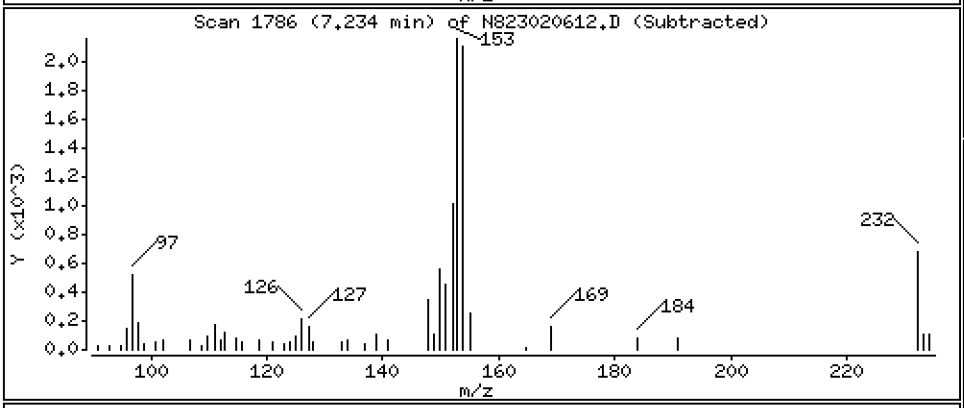
Column diameter: 0.25

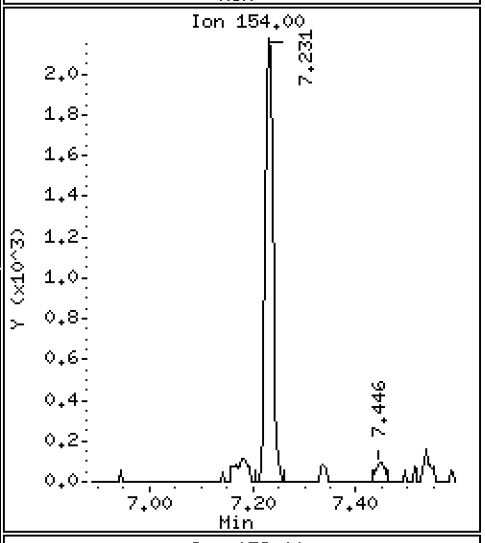
11 Acenaphthene

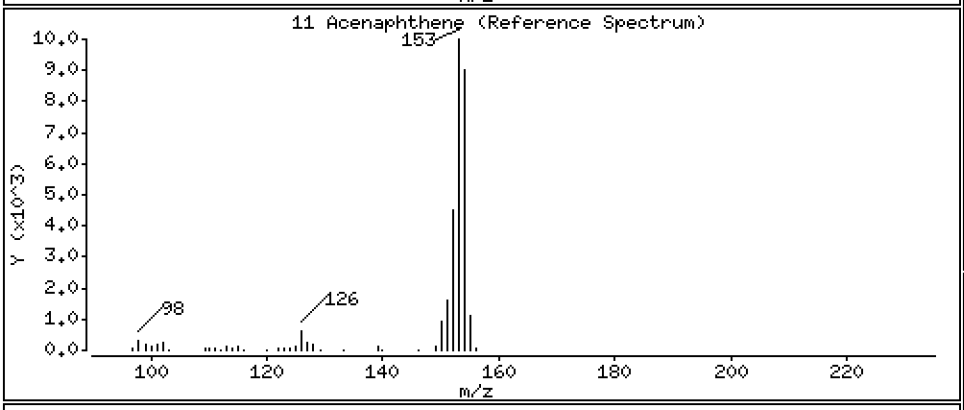
Concentration: 0.1598 ug/mL

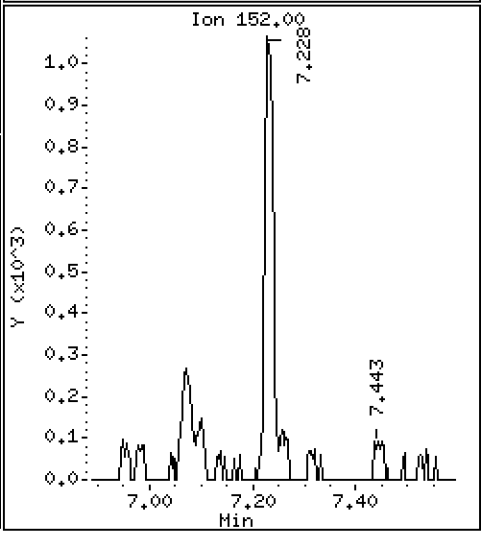


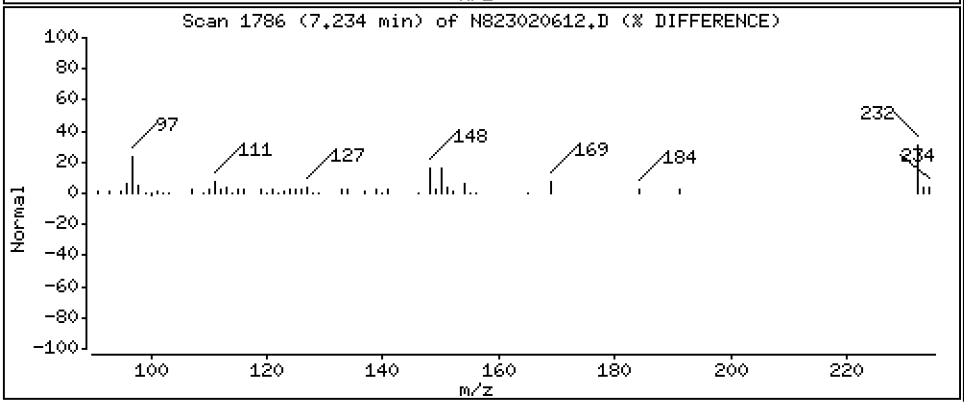












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Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

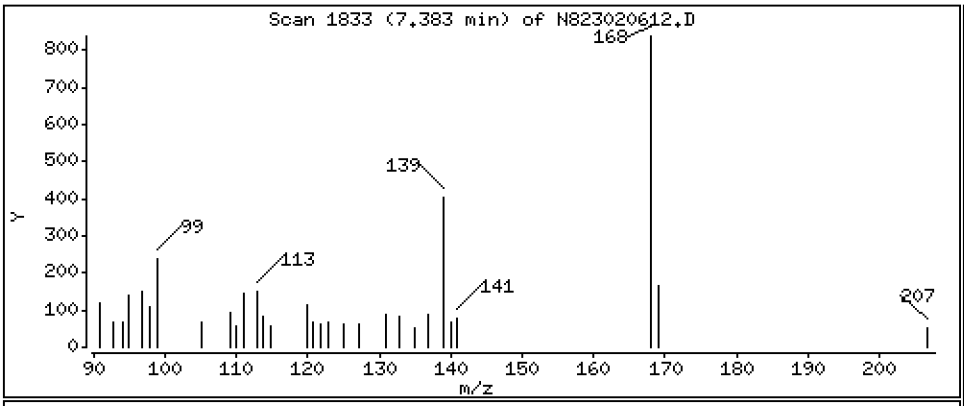
Operator: JZ

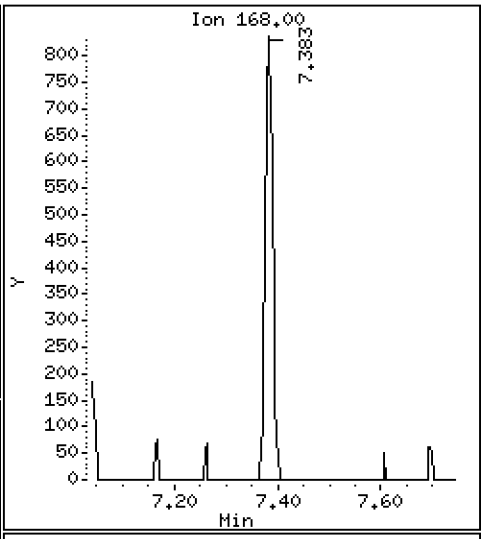
Column phase: Rxi-17sil

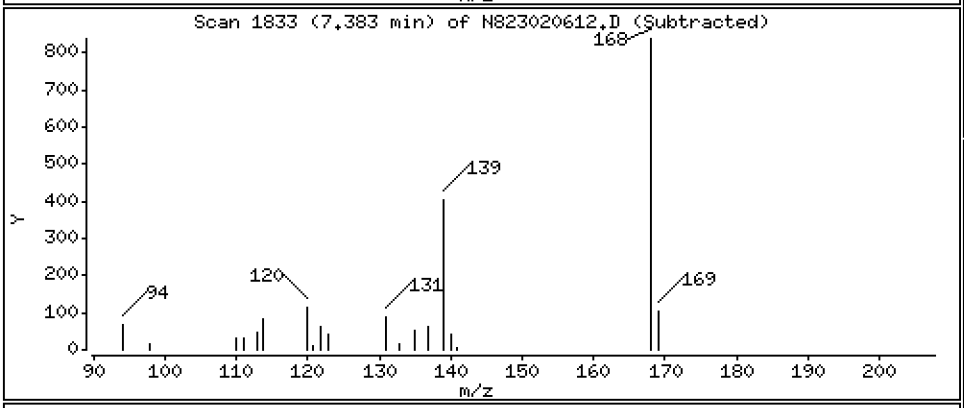
Column diameter: 0.25

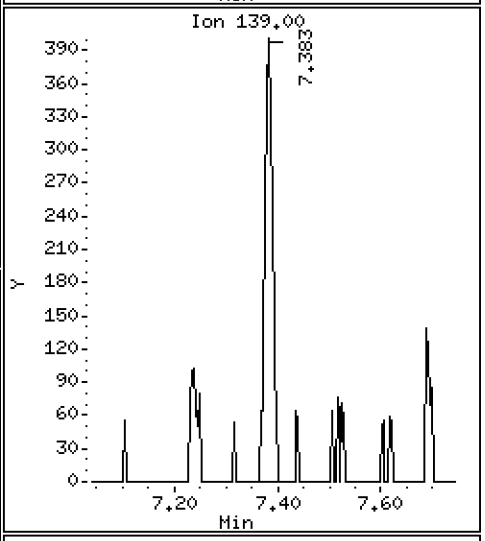
12 Dibenzofuran

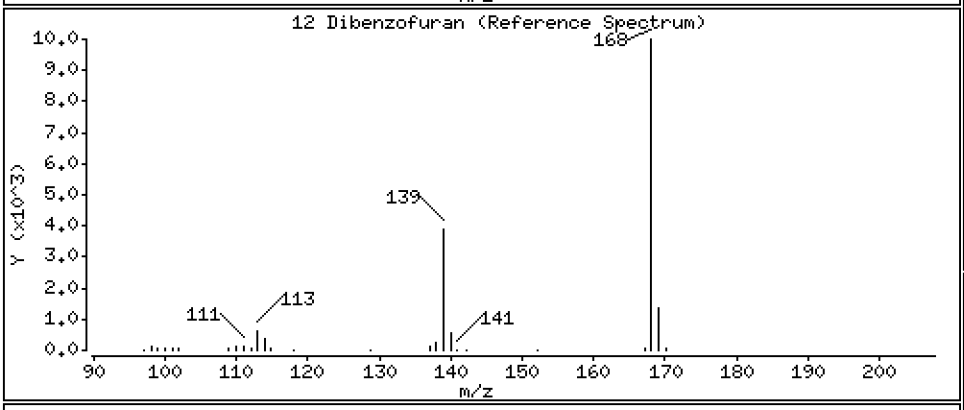
Concentration: 0.03517 ug/mL

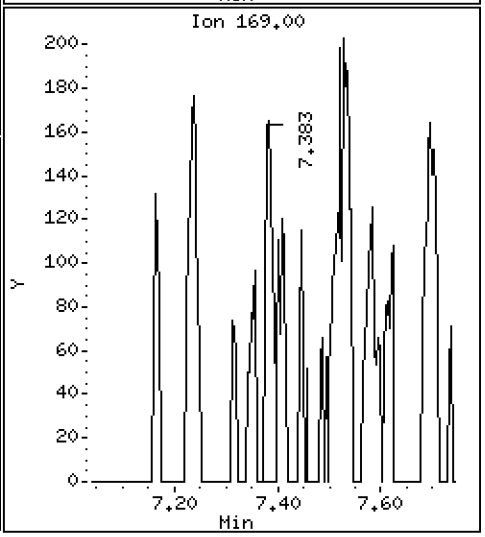


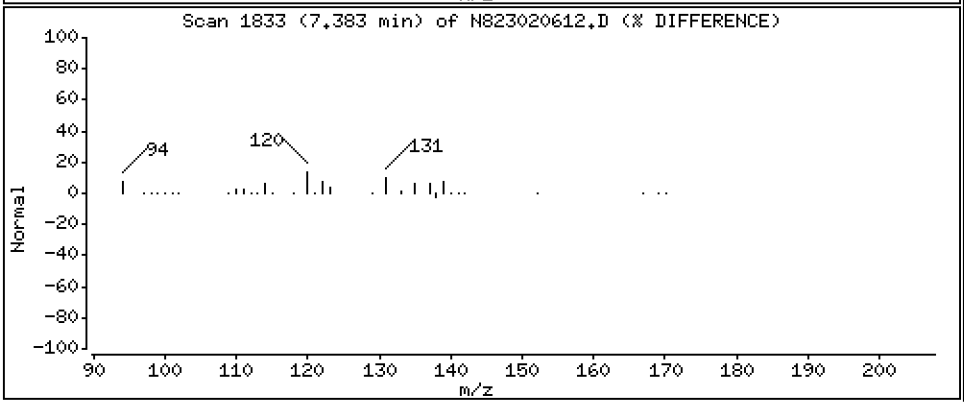












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Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

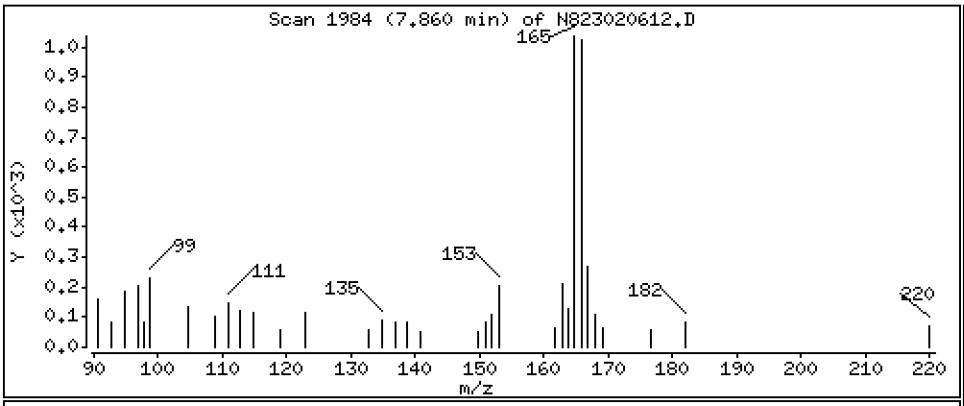
Operator: JZ

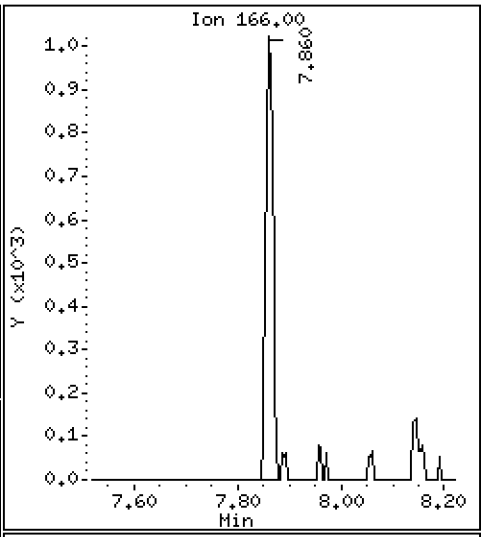
Column phase: Rxi-17sil

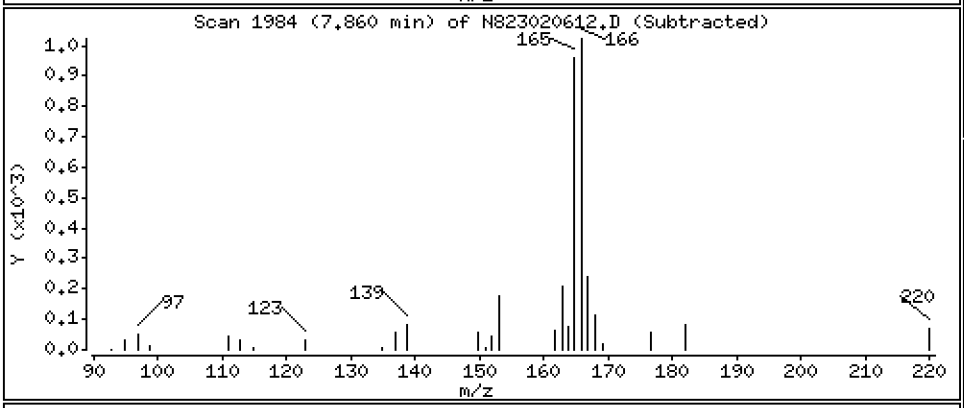
Column diameter: 0.25

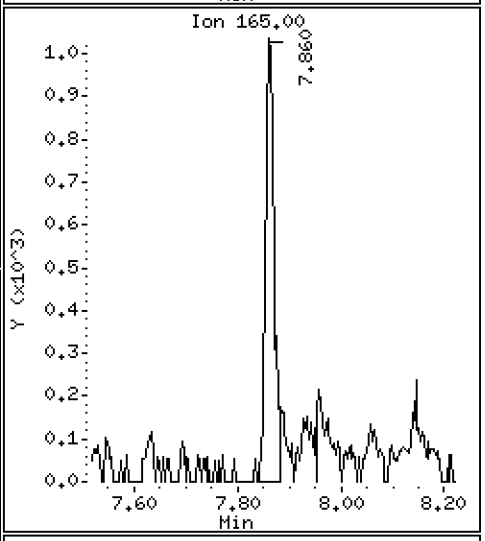
14 Fluorene

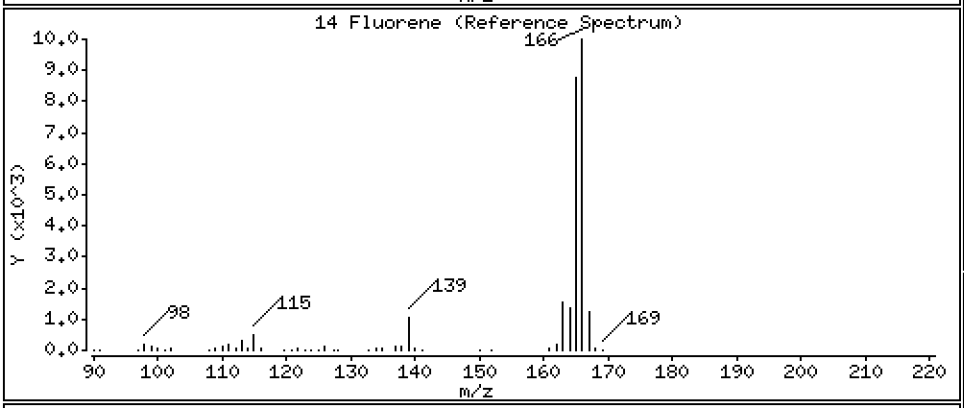
Concentration: 0.05351 ug/mL

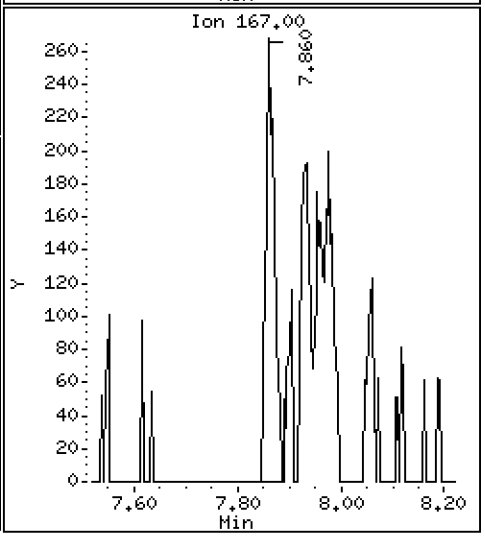


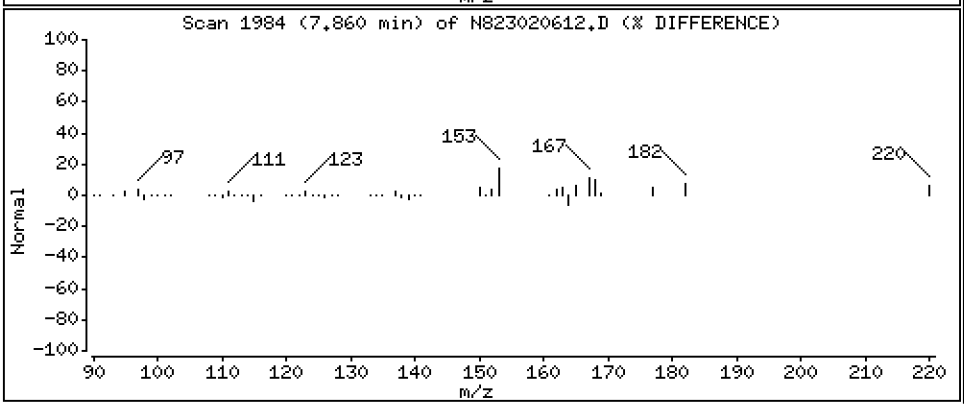












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Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

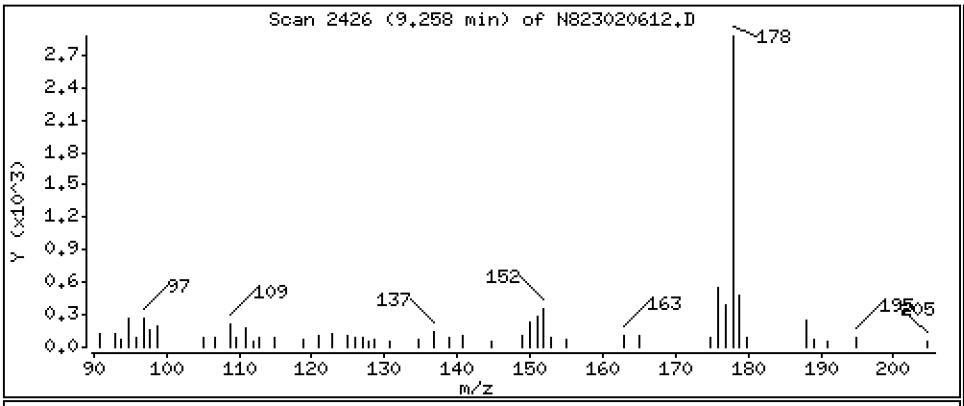
Operator: JZ

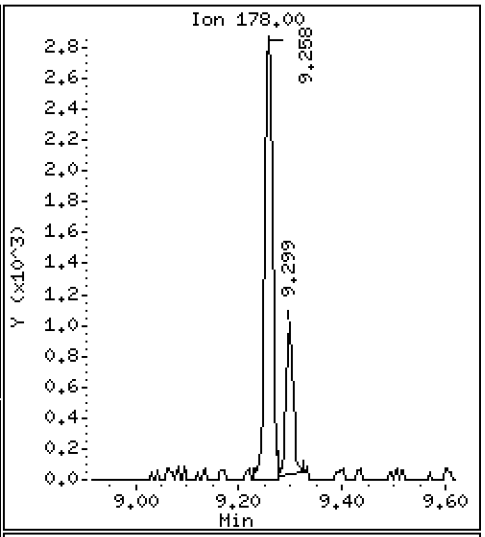
Column phase: Rxi-17sil

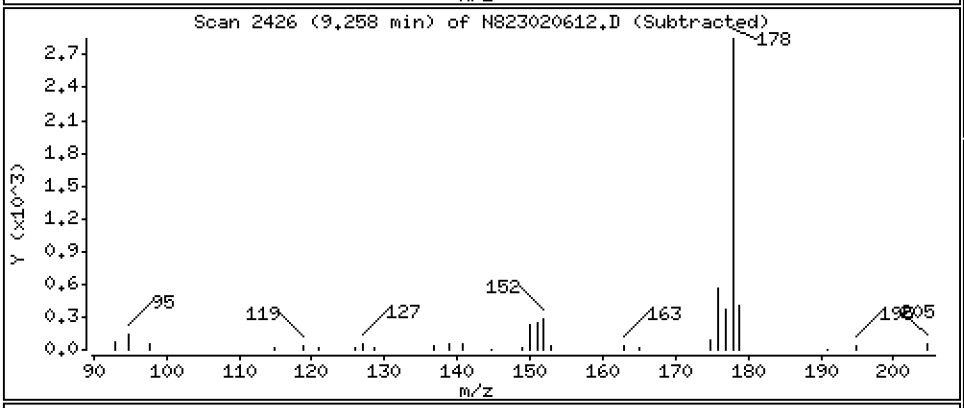
Column diameter: 0.25

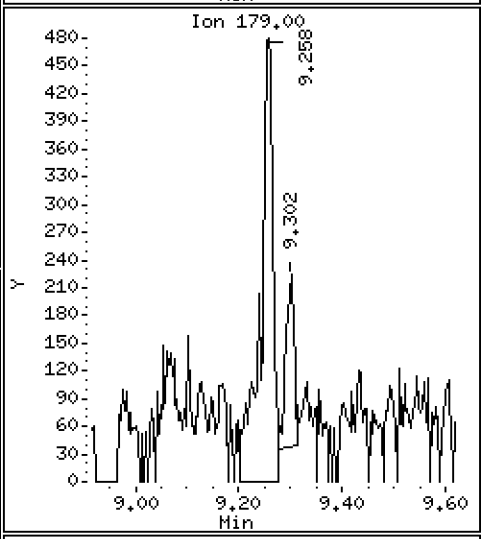
16 Phenanthrene

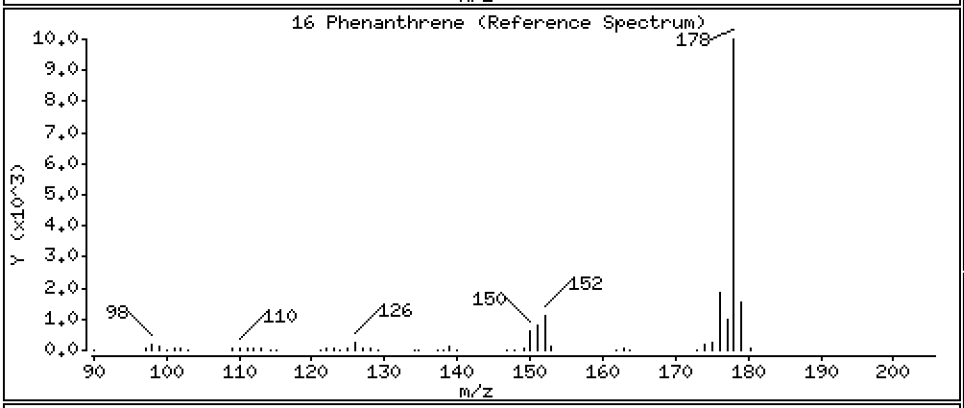
Concentration: 0.1180 ug/mL

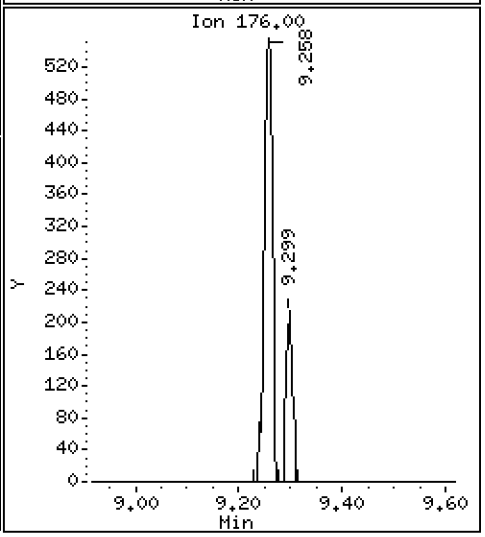


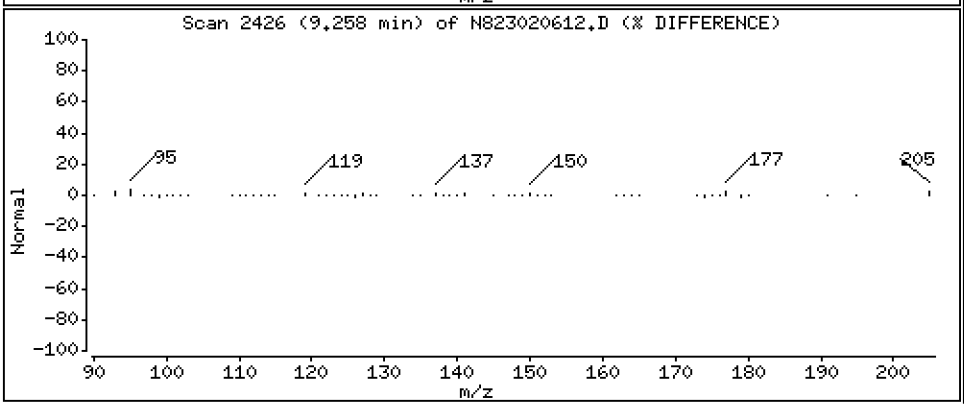












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Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

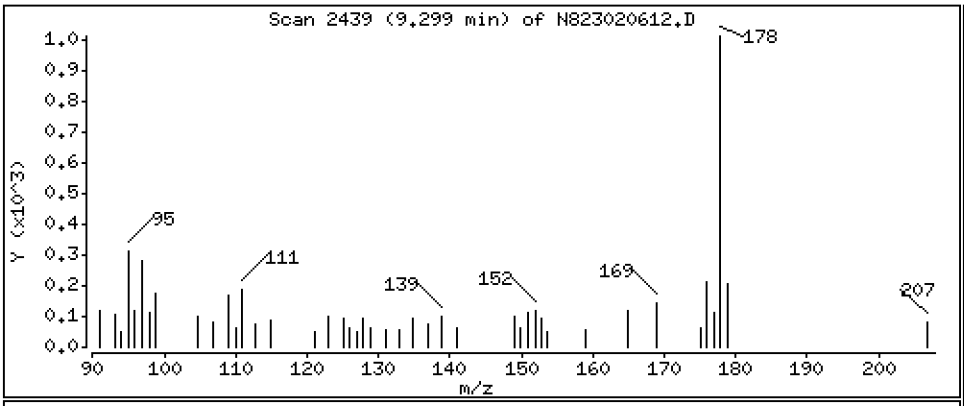
Operator: JZ

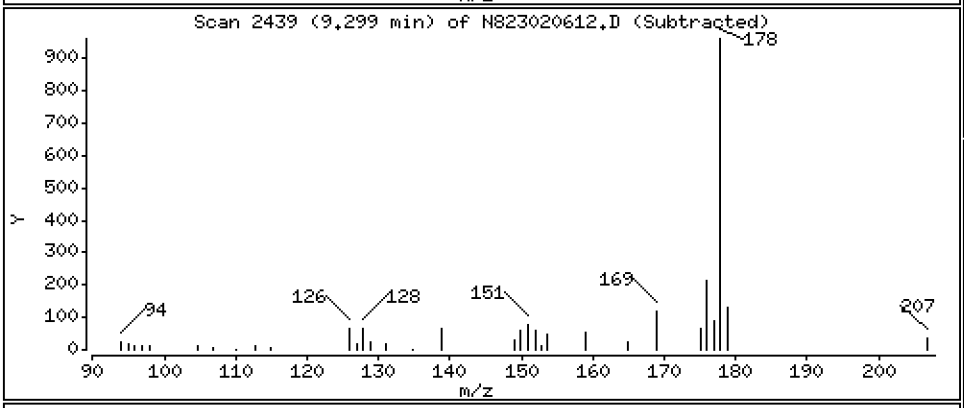
Column phase: Rxi-17sil

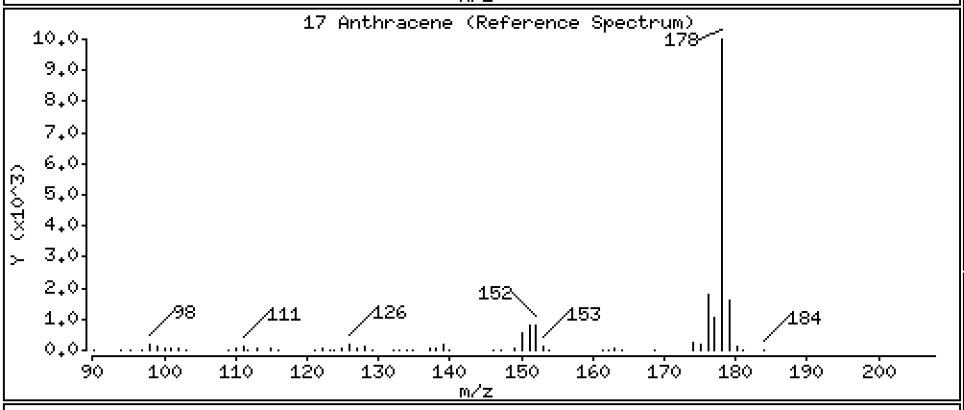
Column diameter: 0.25

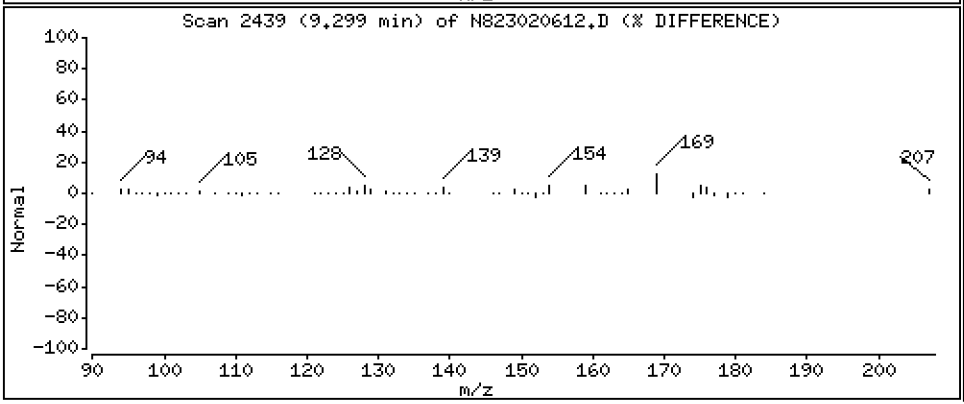
17 Anthracene

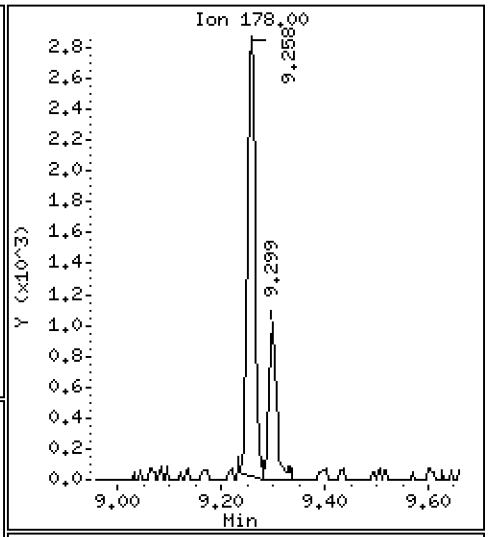
Concentration: 0.04580 ug/mL

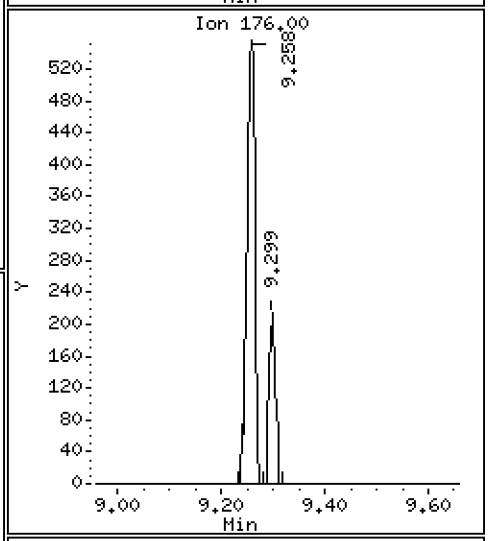


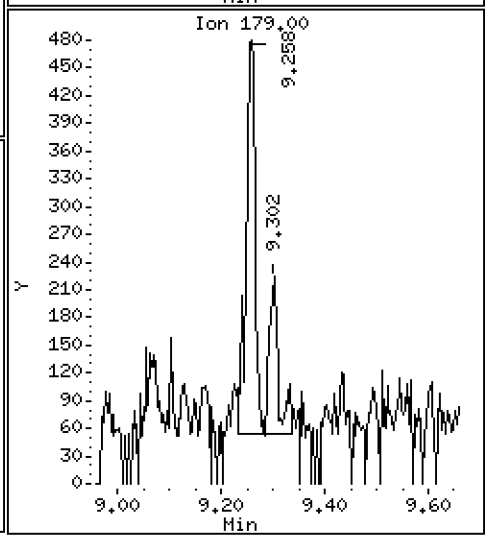












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Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

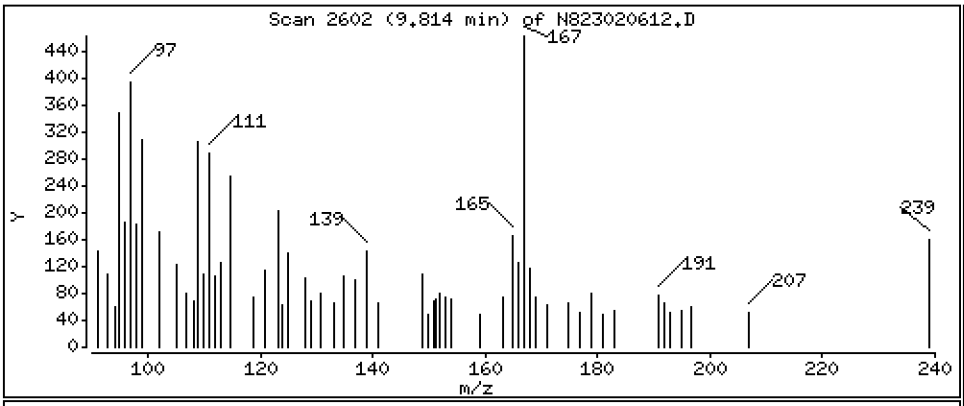
Operator: JZ

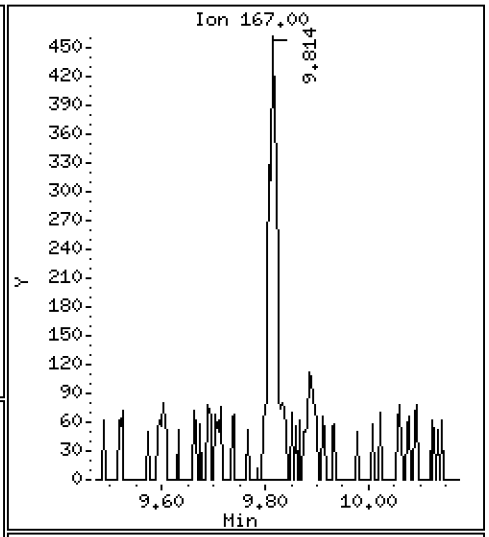
Column phase: Rxi-17sil

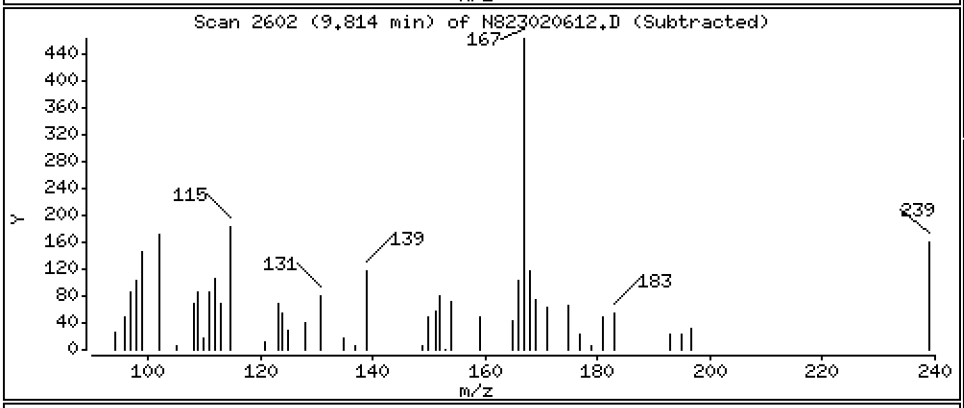
Column diameter: 0.25

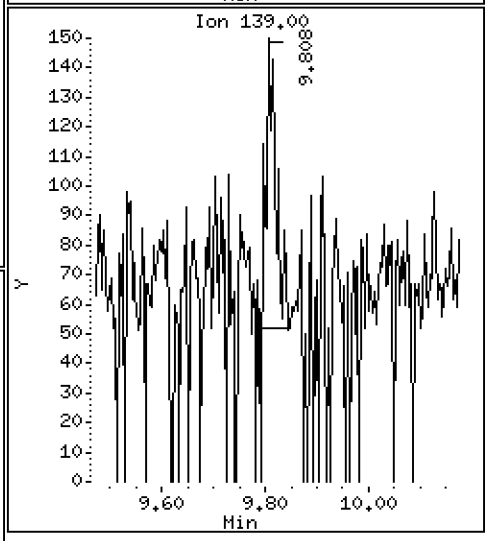
19 Carbazole

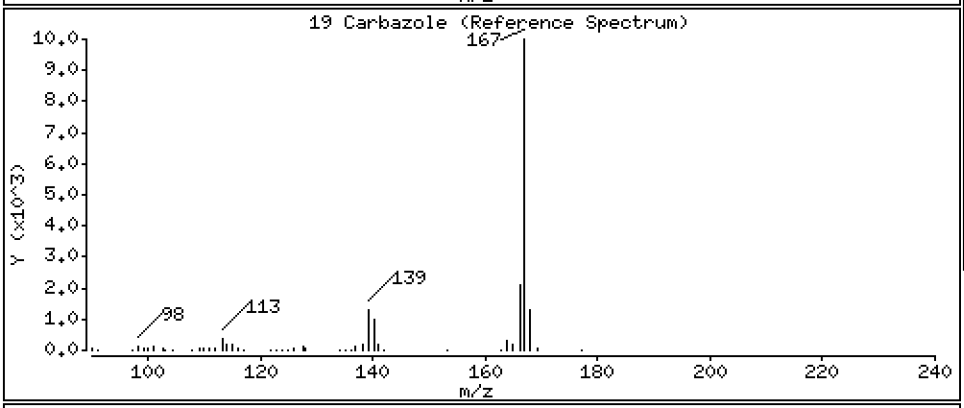
Concentration: 0.02598 ug/mL

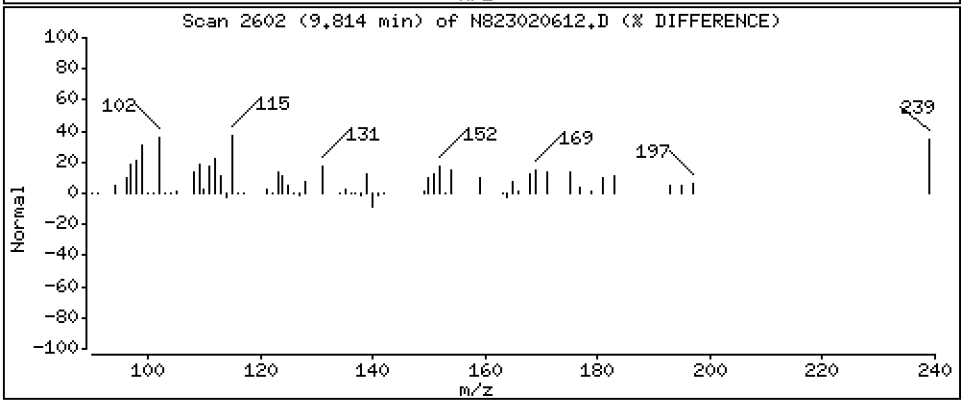












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Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

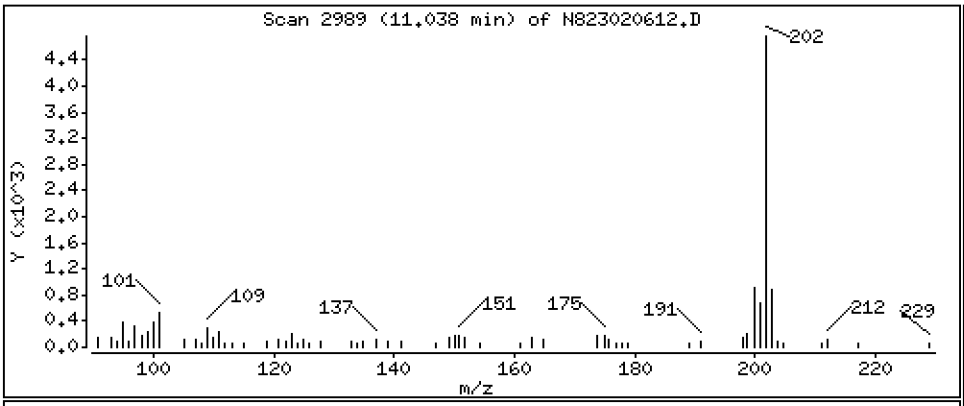
Operator: JZ

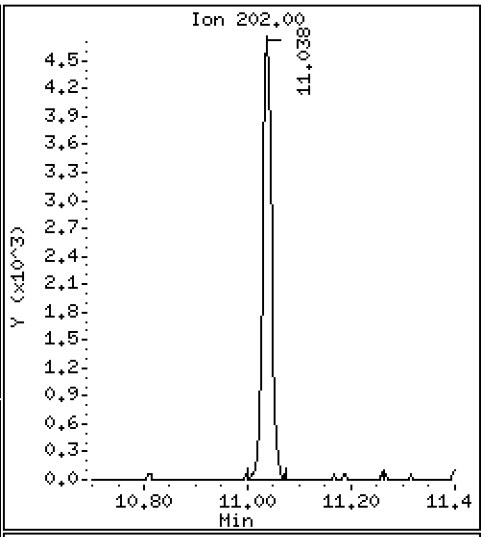
Column phase: Rxi-17sil

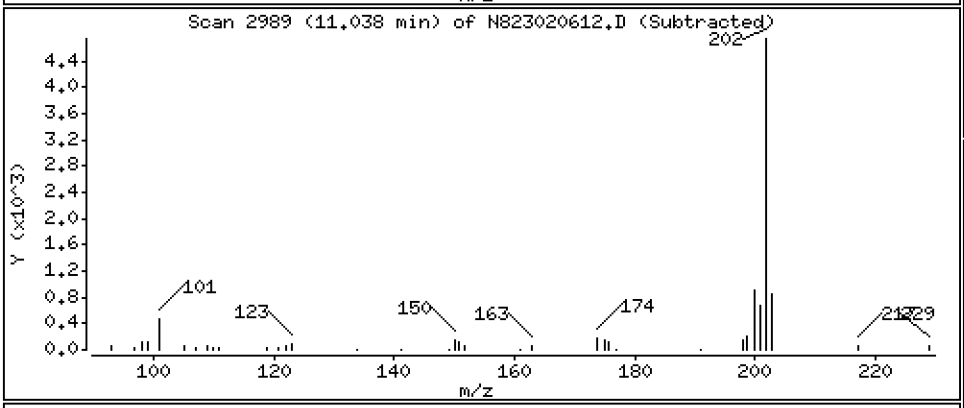
Column diameter: 0.25

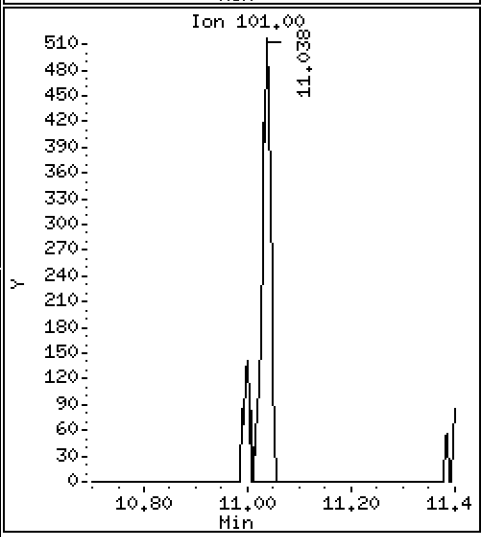
22 Fluoranthene

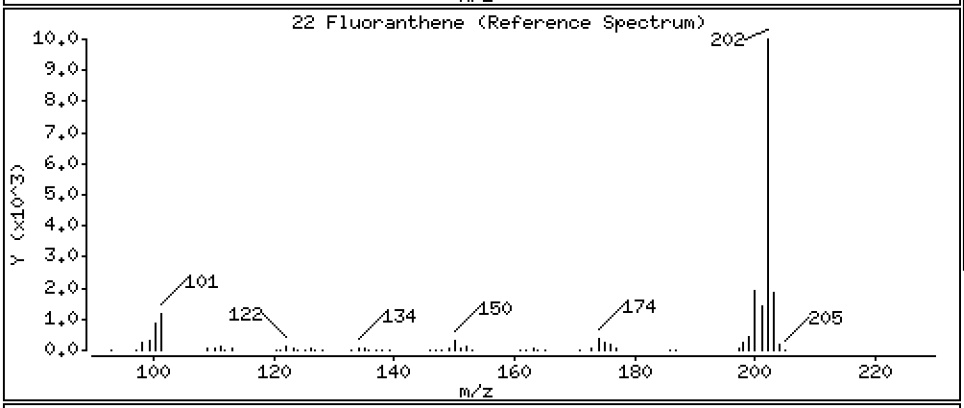
Concentration: 0.2154 ug/mL

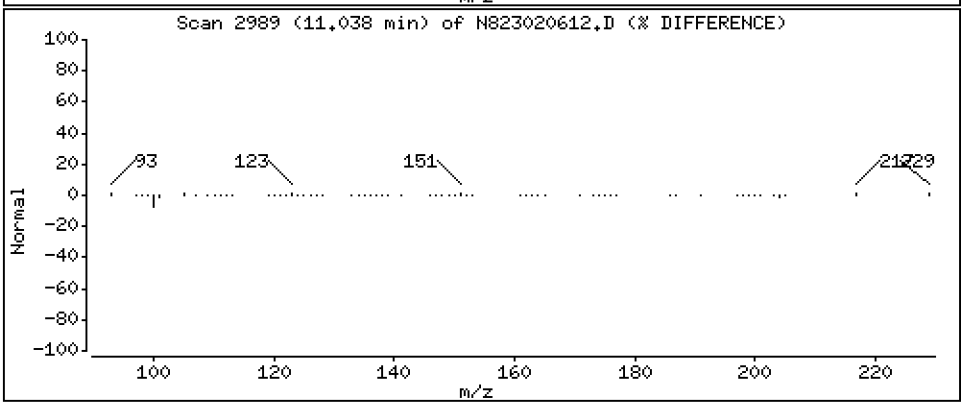












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Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

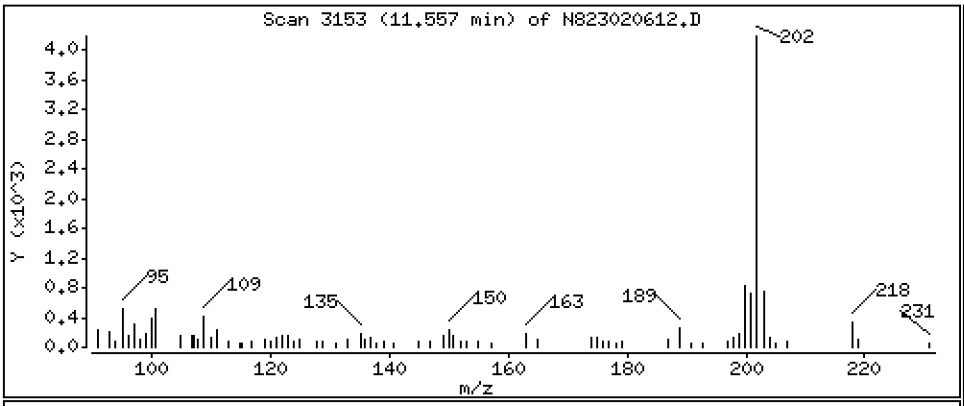
Operator: JZ

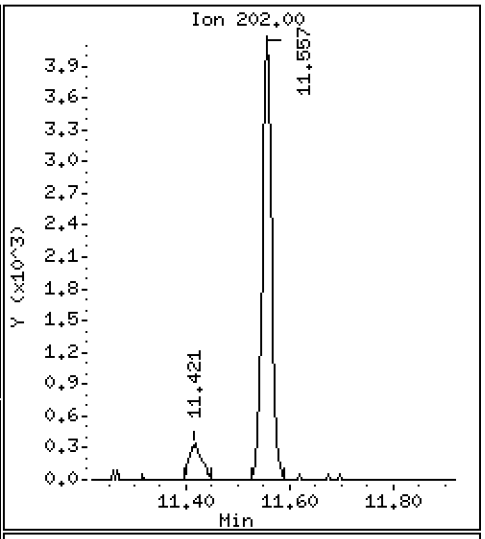
Column phase: Rxi-17sil

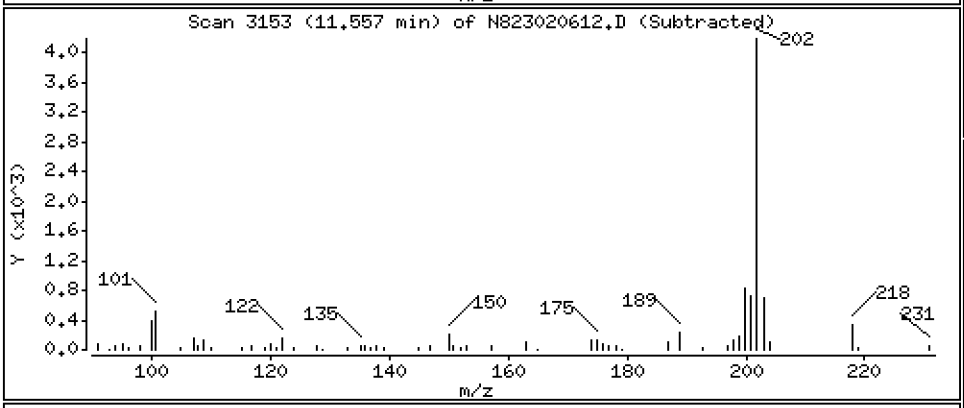
Column diameter: 0.25

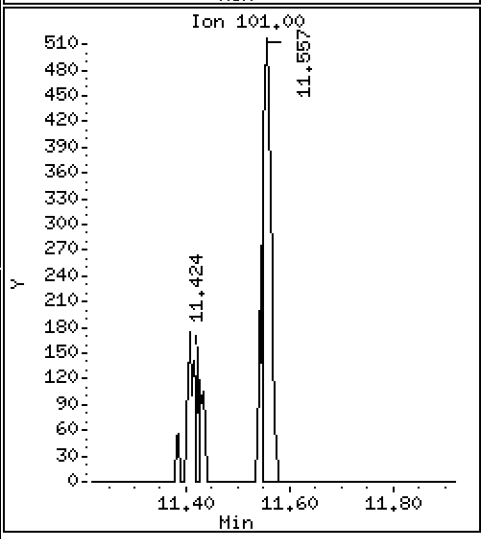
23 Pyrene

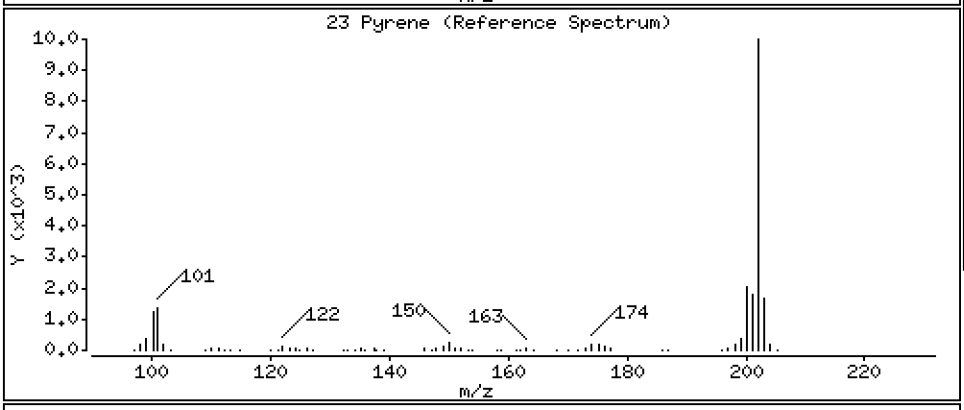
Concentration: 0.2423 ug/mL

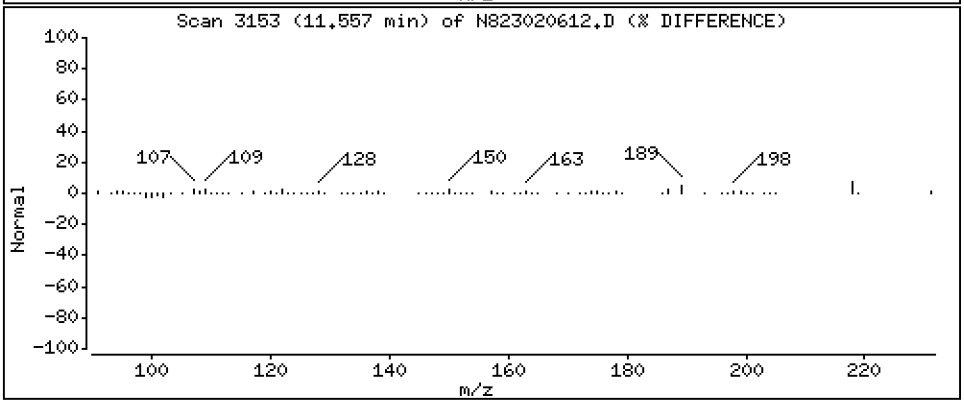












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Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

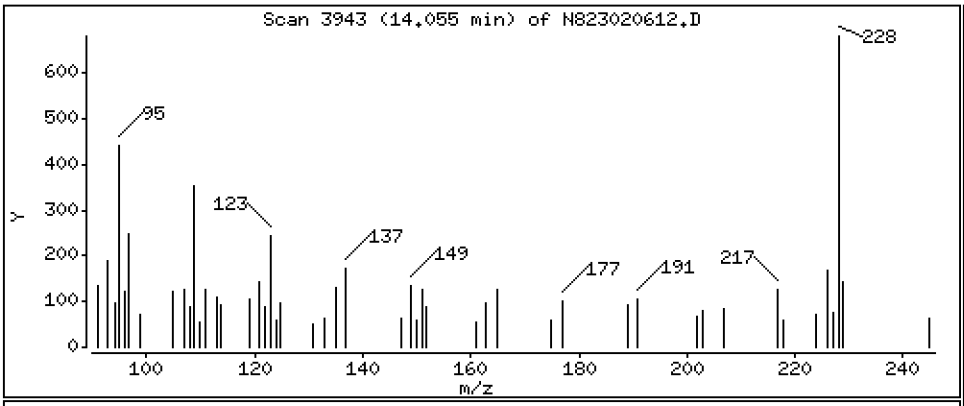
Operator: JZ

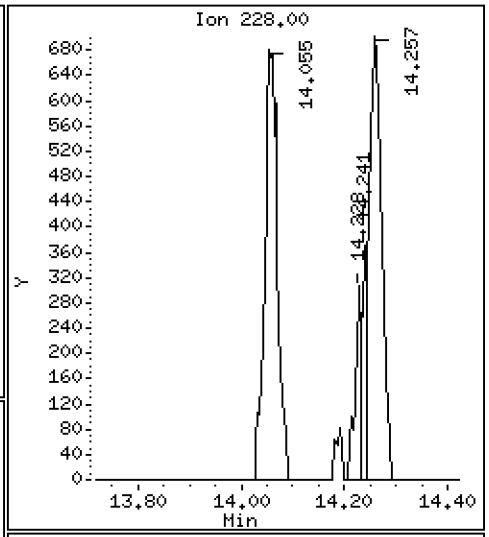
Column phase: Rxi-17sil

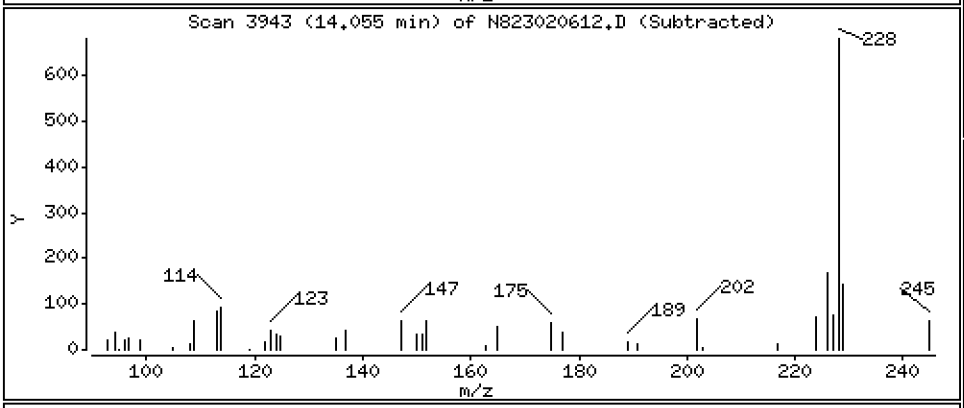
Column diameter: 0.25

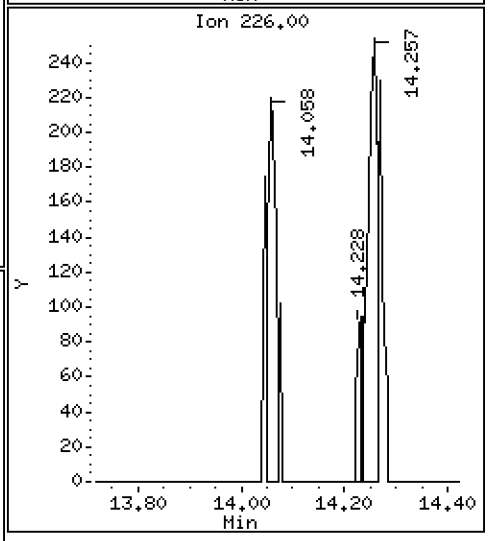
24 Benzo(a)anthracene

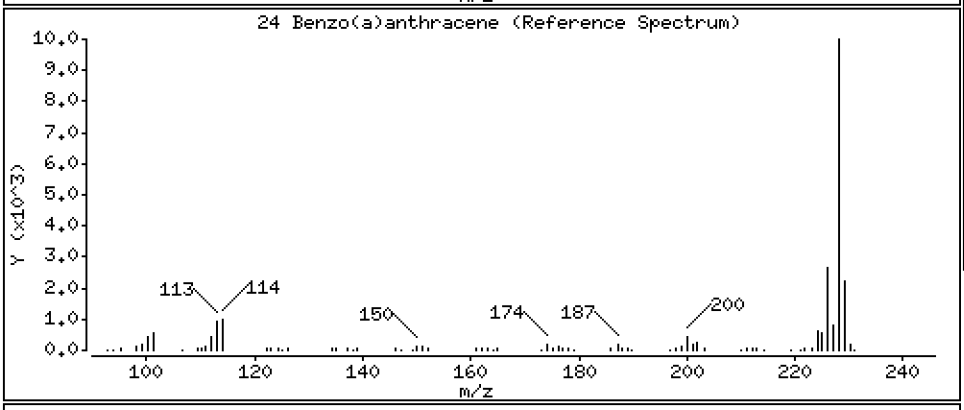
Concentration: 0.05991 ug/mL

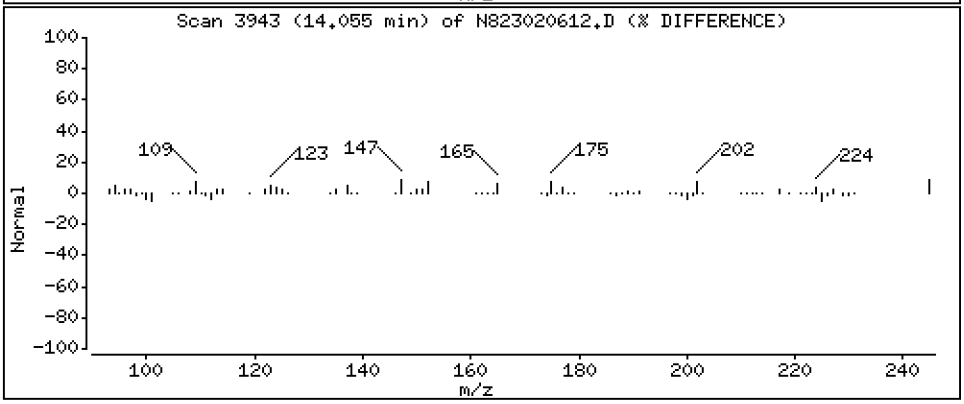












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Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

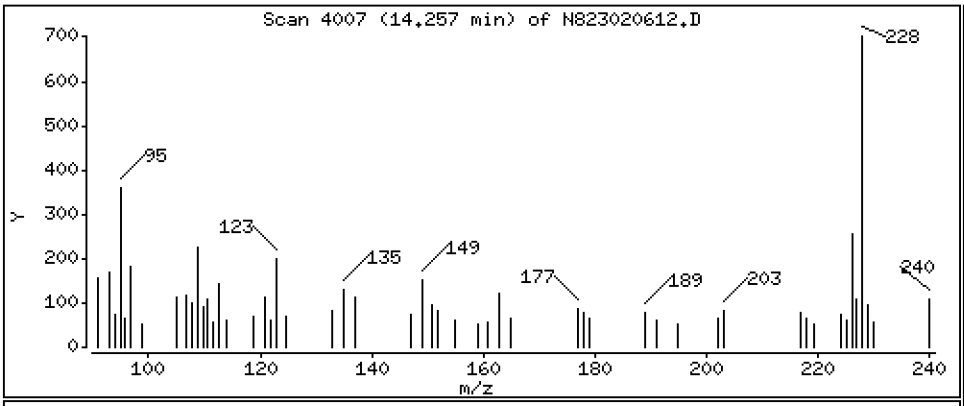
Operator: JZ

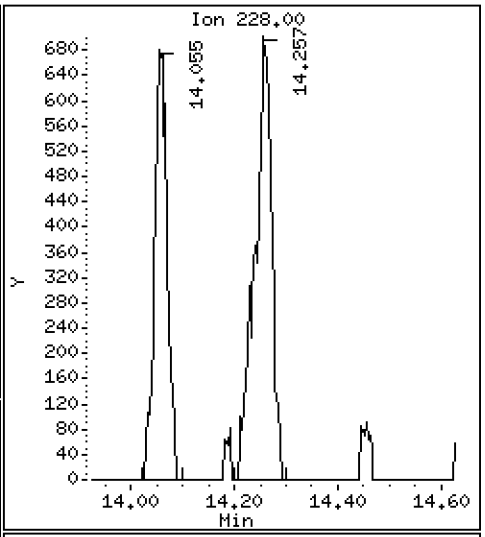
Column phase: Rxi-17sil

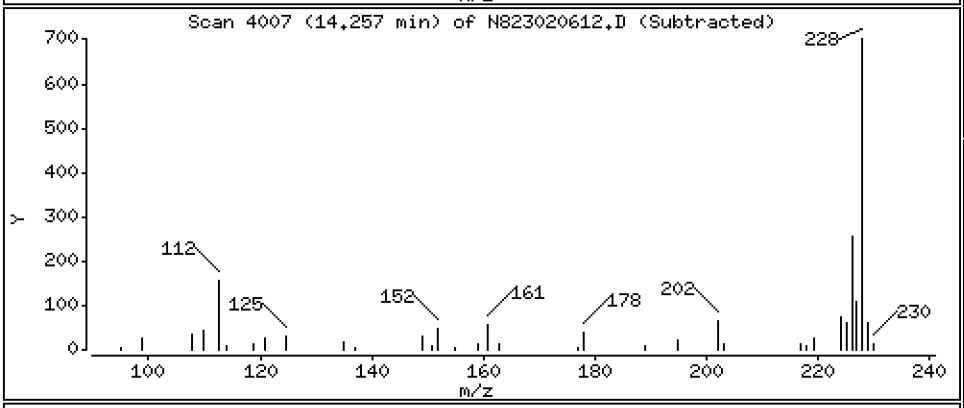
Column diameter: 0.25

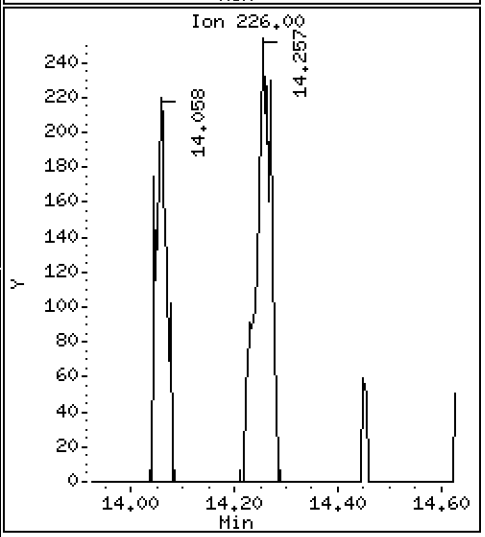
27 Chrysene

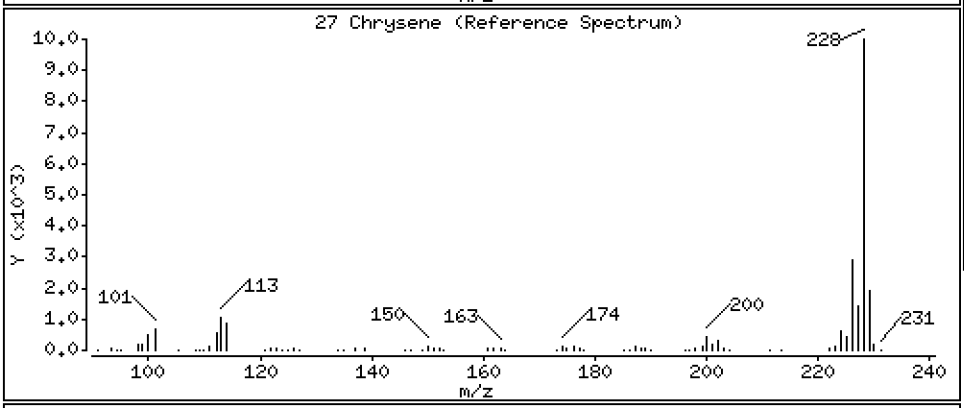
Concentration: 0.07596 ug/mL

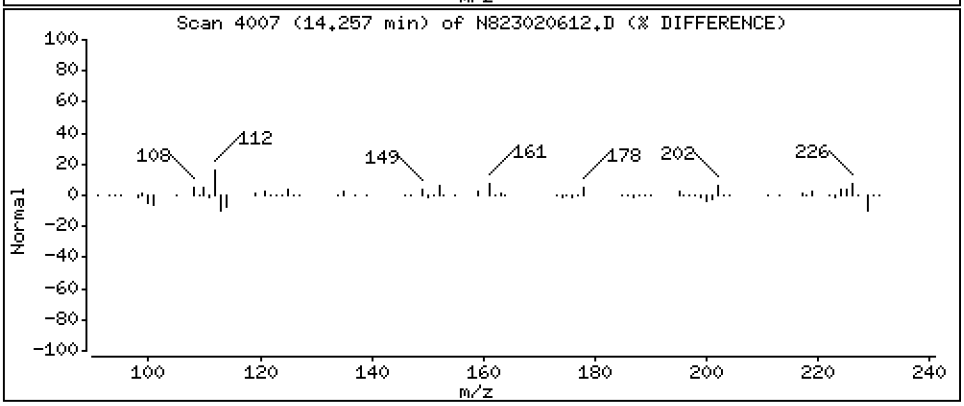












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Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

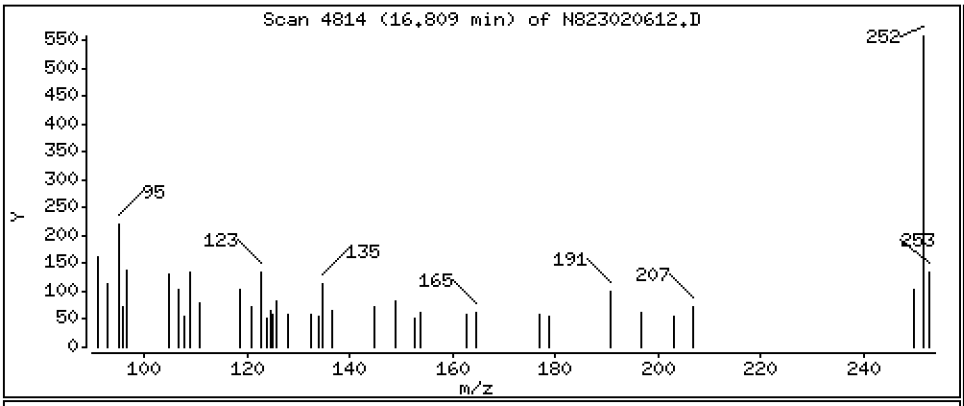
Operator: JZ

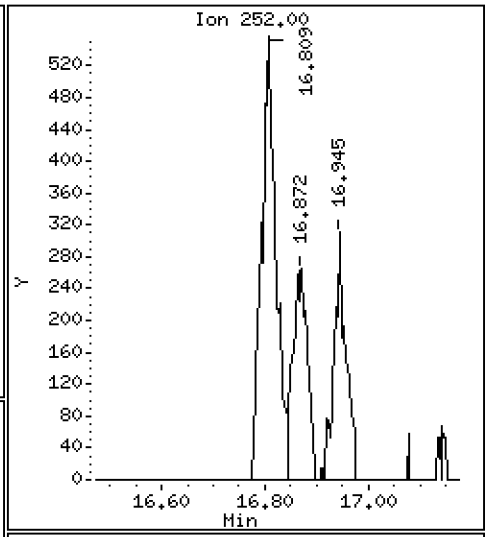
Column phase: Rxi-17sil

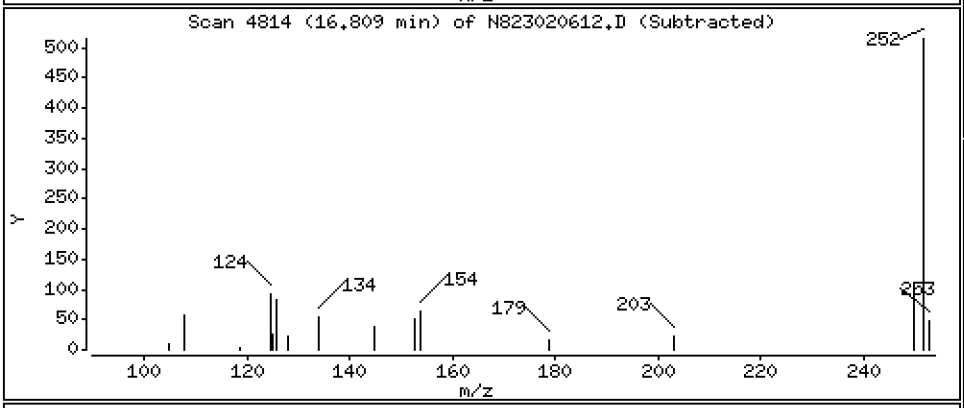
Column diameter: 0.25

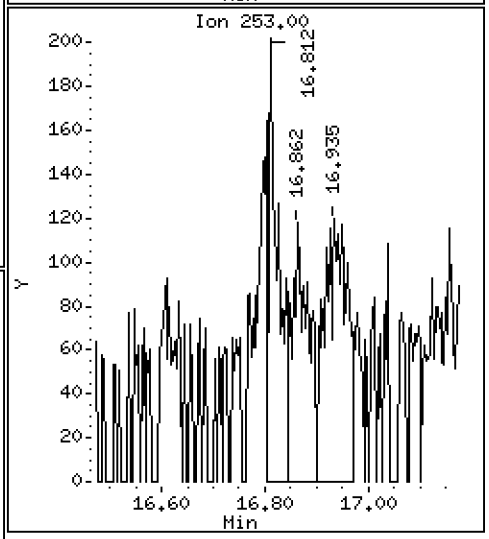
28 Benzo(b)fluoranthene

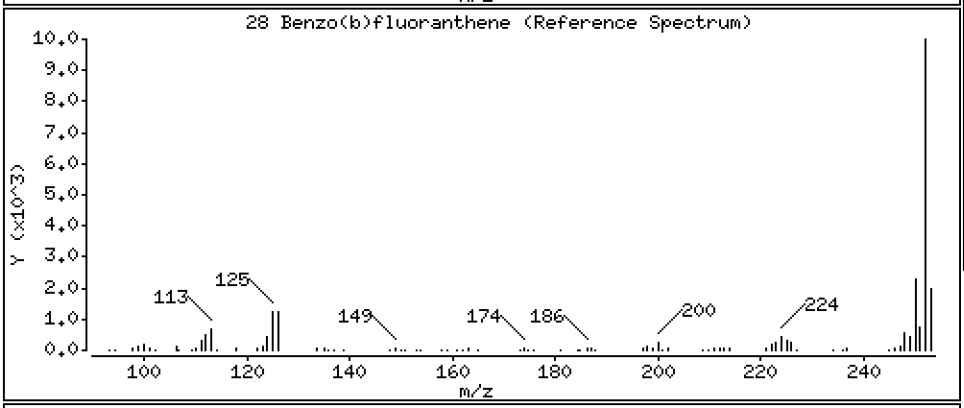
Concentration: 0.06159 ug/mL

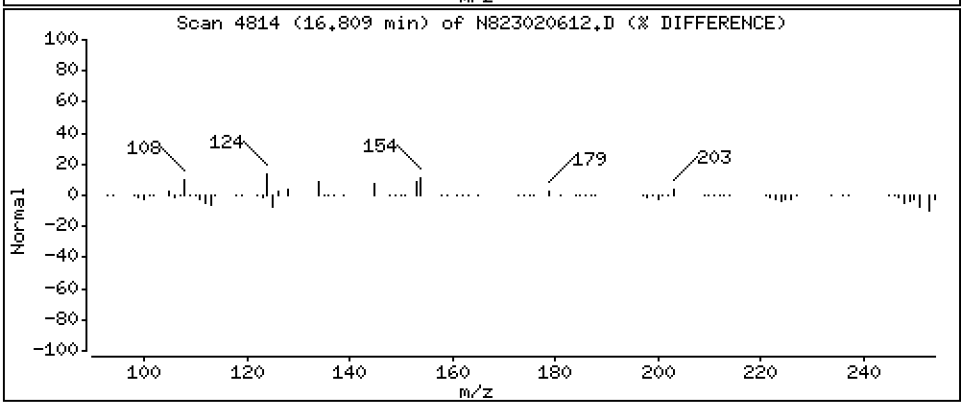












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Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

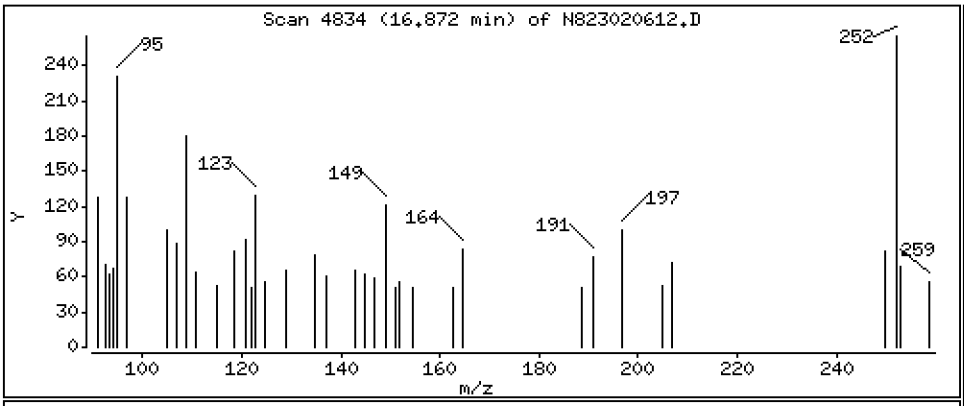
Operator: JZ

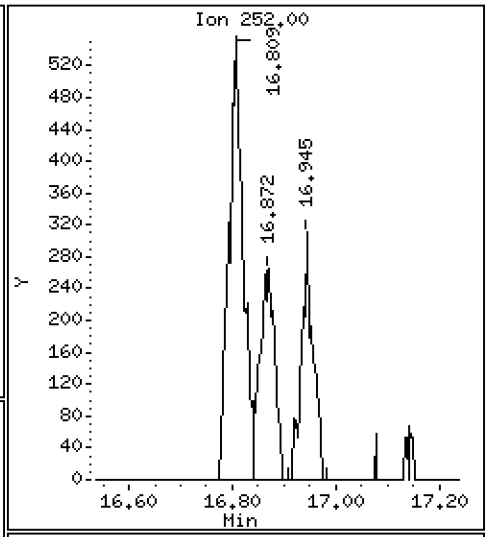
Column phase: Rxi-17sil

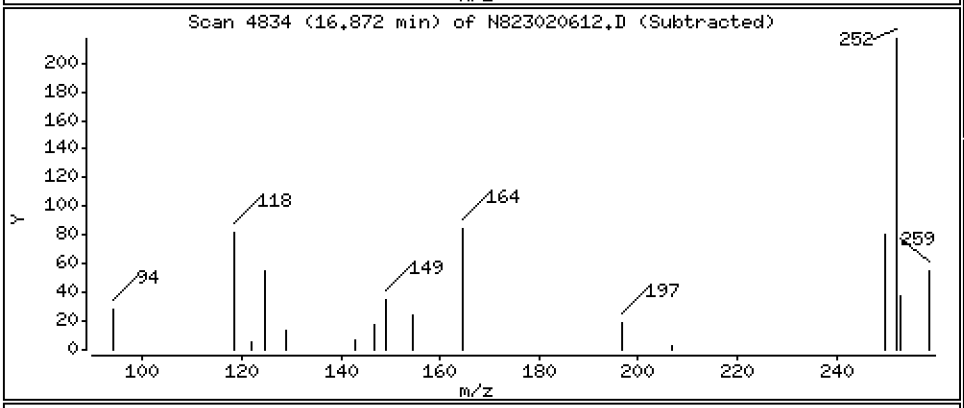
Column diameter: 0.25

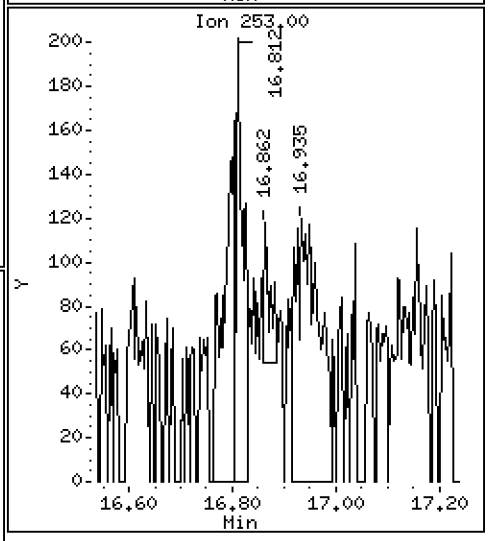
29 Benzo(k)fluoranthene

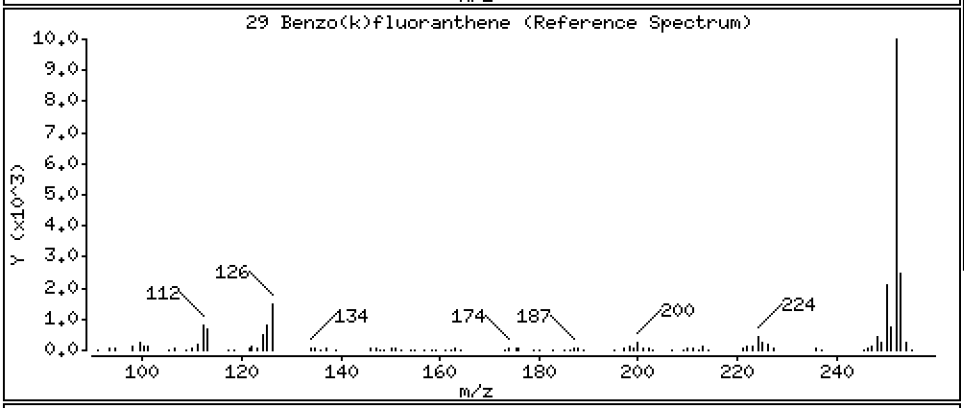
Concentration: 0.03164 ug/mL

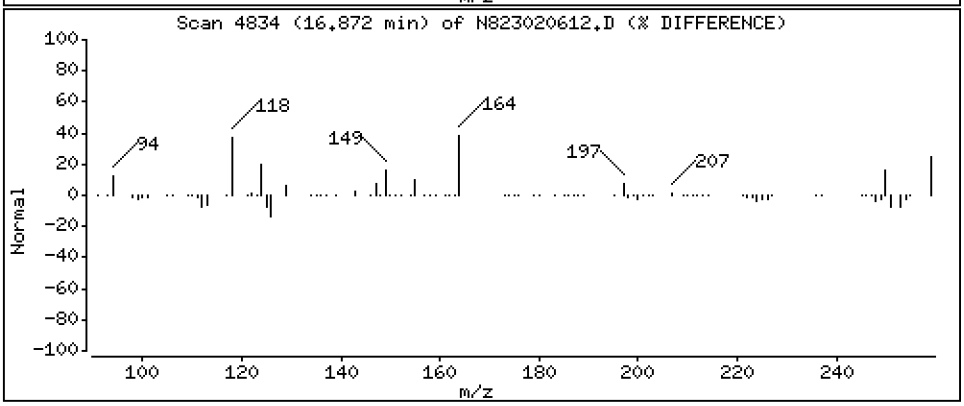












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020612.D

Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

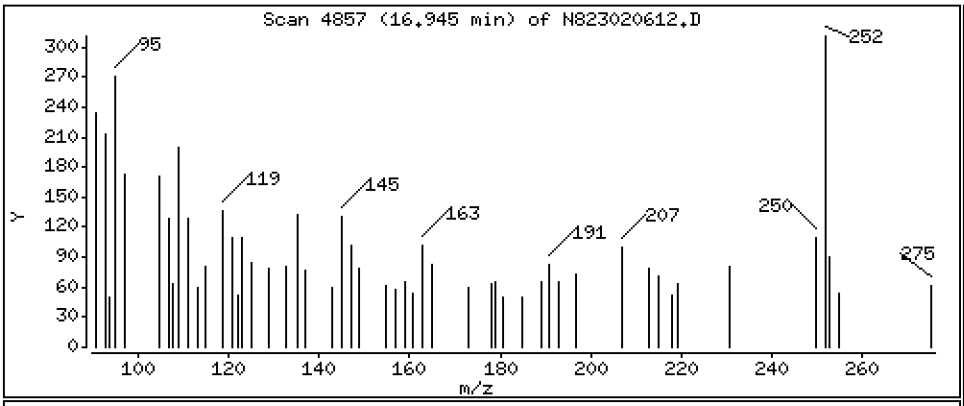
Operator: JZ

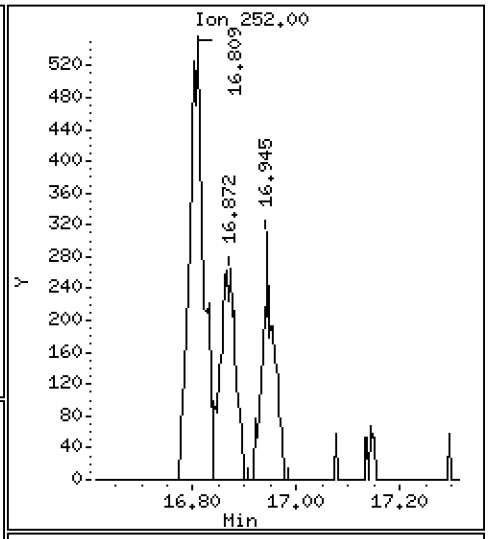
Column phase: Rxi-17sil

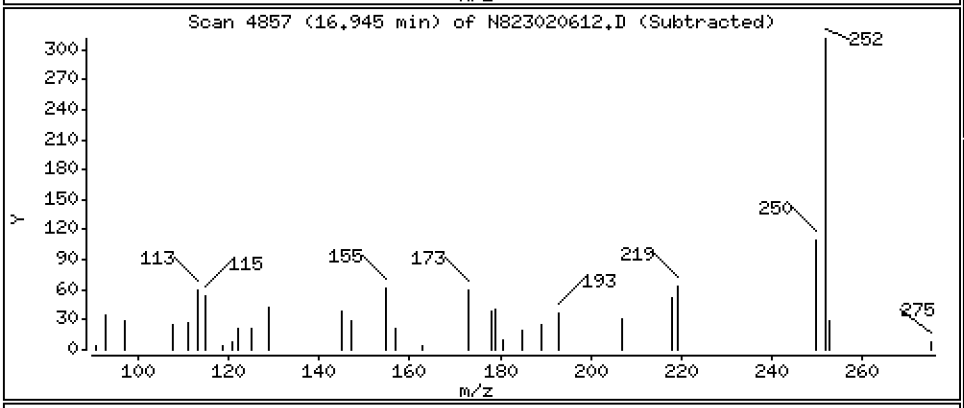
Column diameter: 0.25

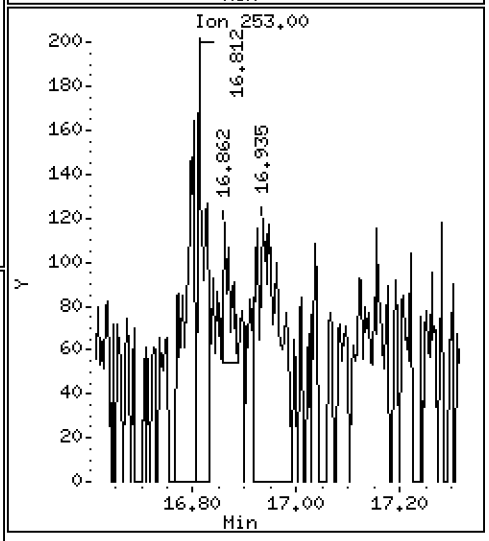
30 Benzo(j)fluoranthene

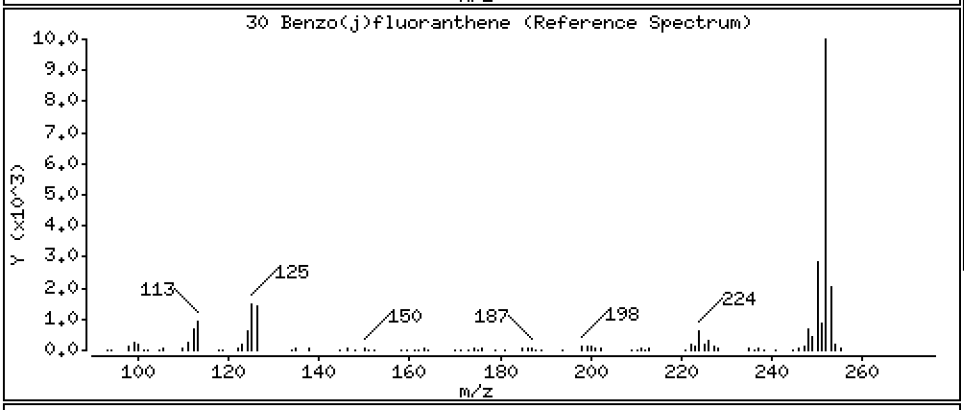
Concentration: 0.03075 ug/mL

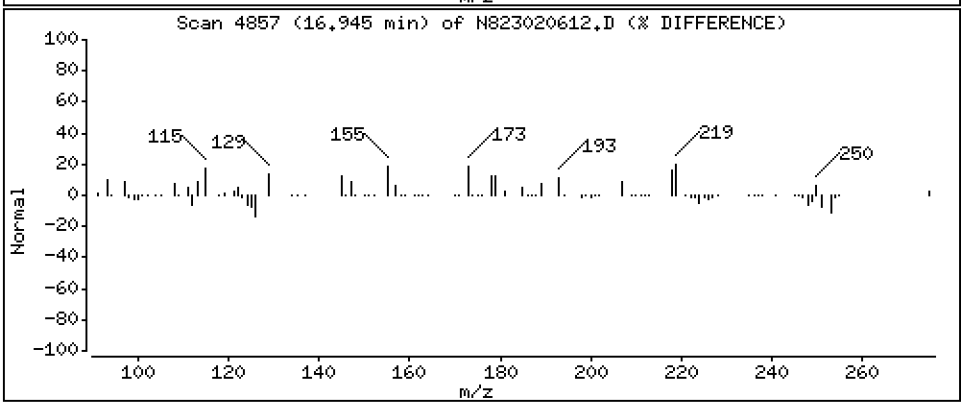












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020612.D

Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

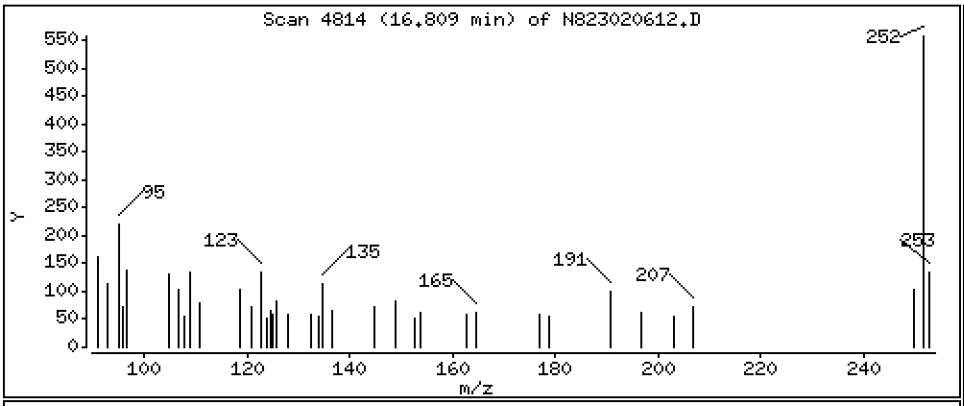
Operator: JZ

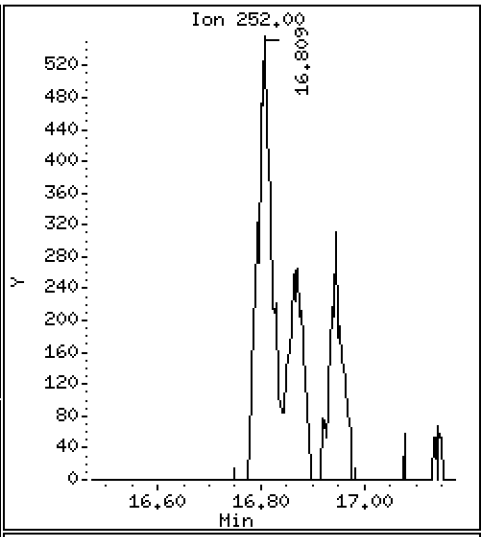
Column phase: Rxi-17sil

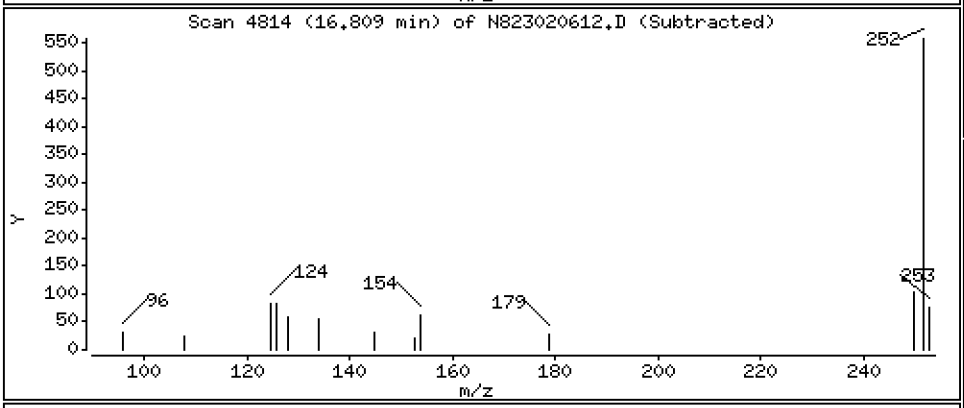
Column diameter: 0.25

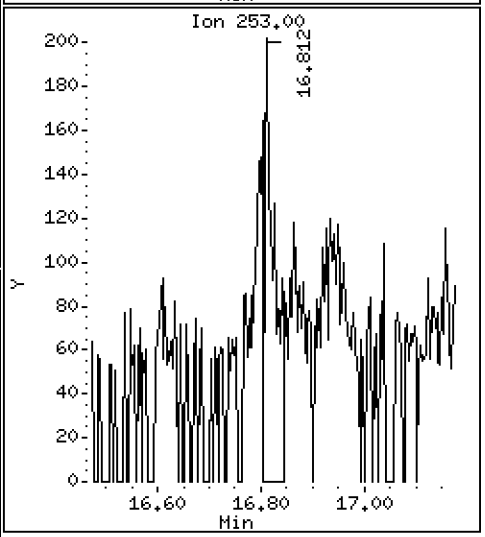
31 Total Benzofluoranthenes

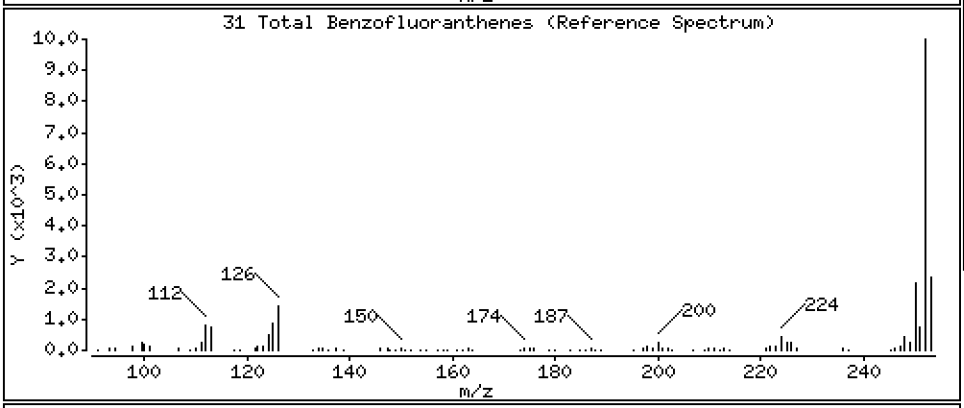
Concentration: 0.1244 ug/mL

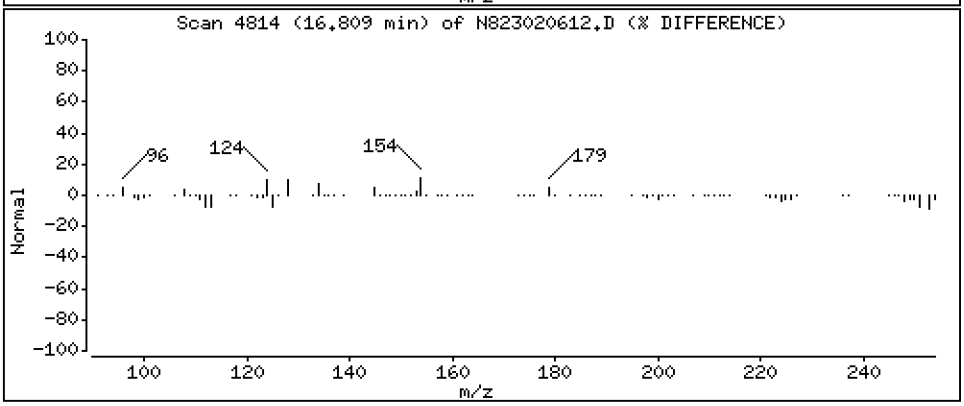












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020612.D

Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

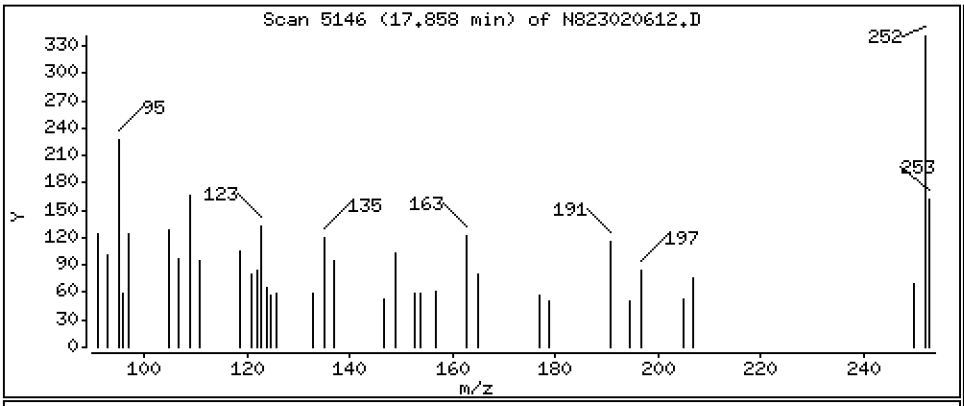
Operator: JZ

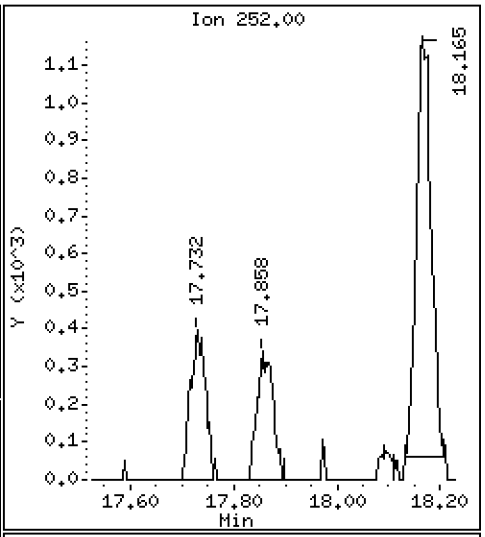
Column phase: Rxi-17sil

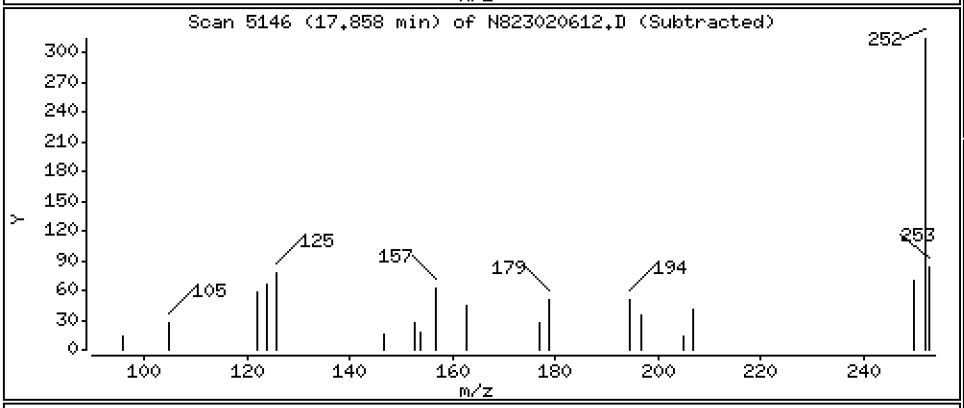
Column diameter: 0.25

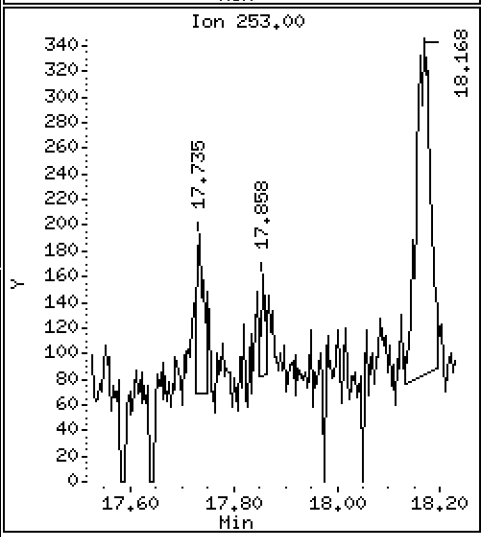
32 Benzo(a)pyrene

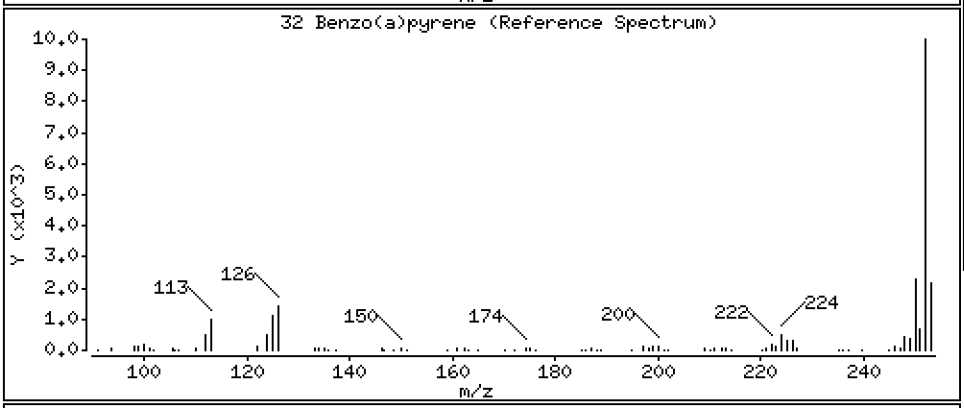
Concentration: 0.04722 ug/mL

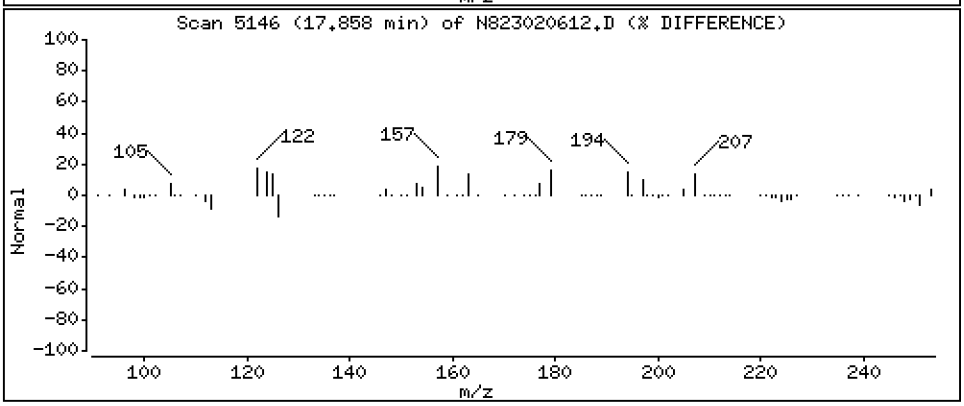












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Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

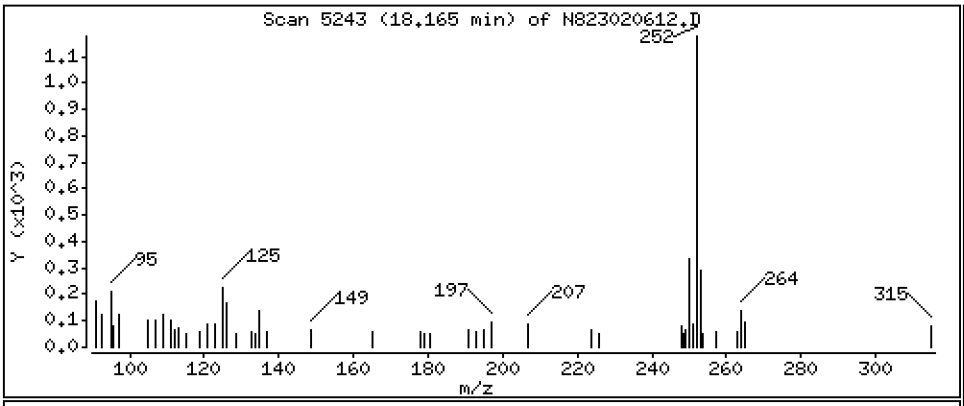
Operator: JZ

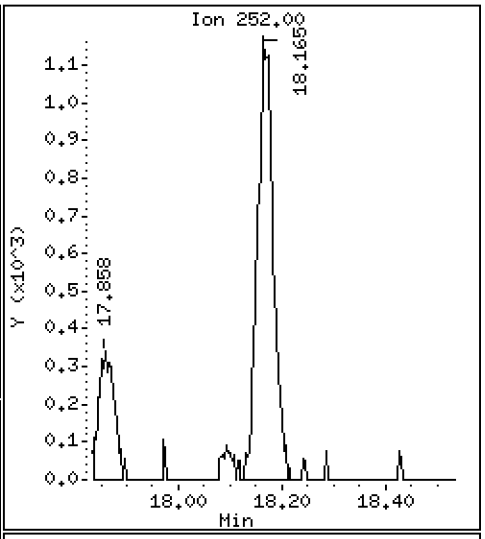
Column phase: Rxi-17sil

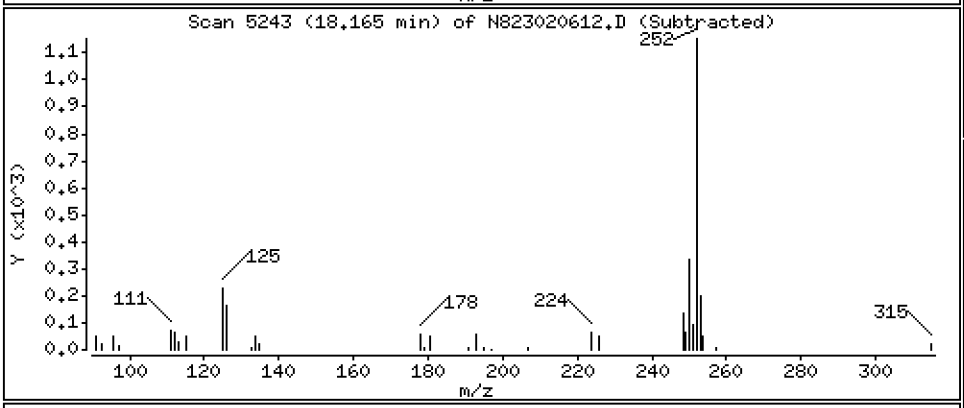
Column diameter: 0.25

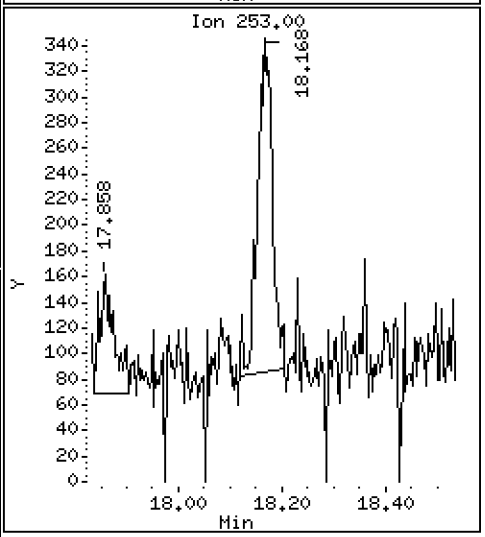
35 Perylene

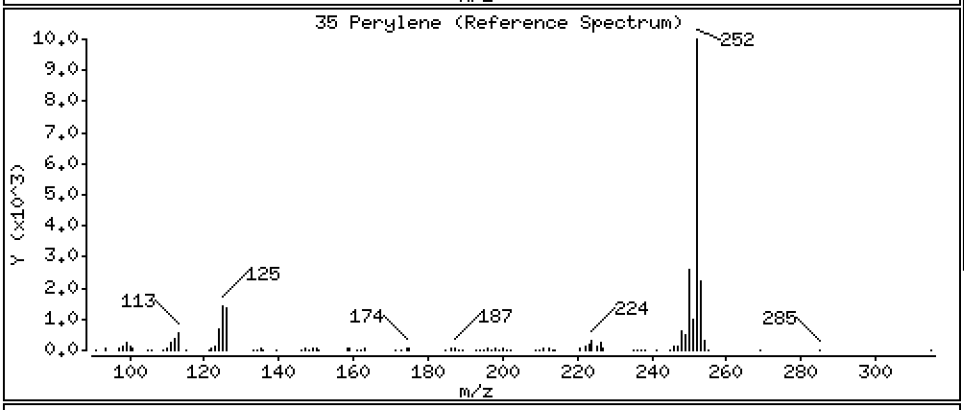
Concentration: 0.1537 ug/mL

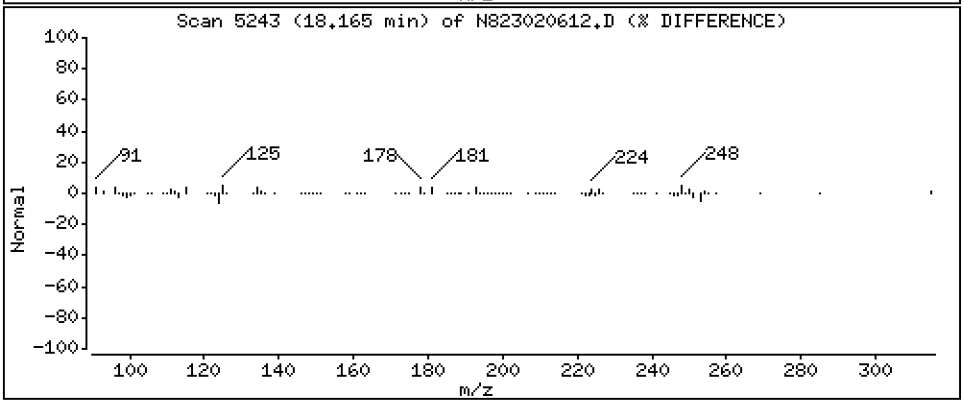












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Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

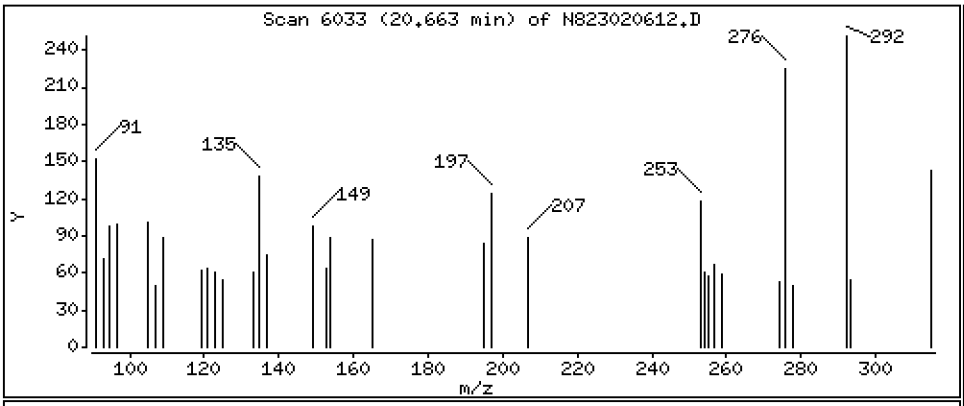
Operator: JZ

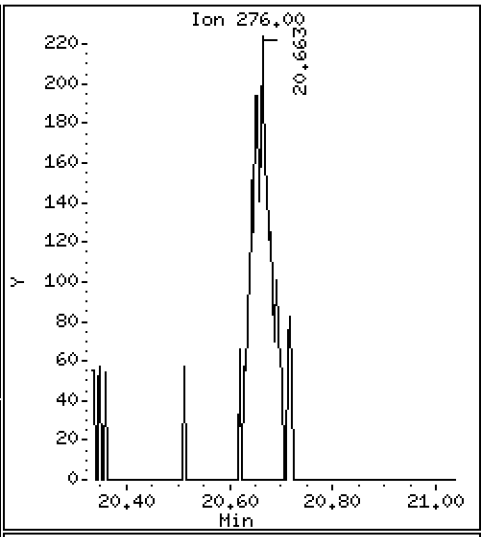
Column phase: Rxi-17sil

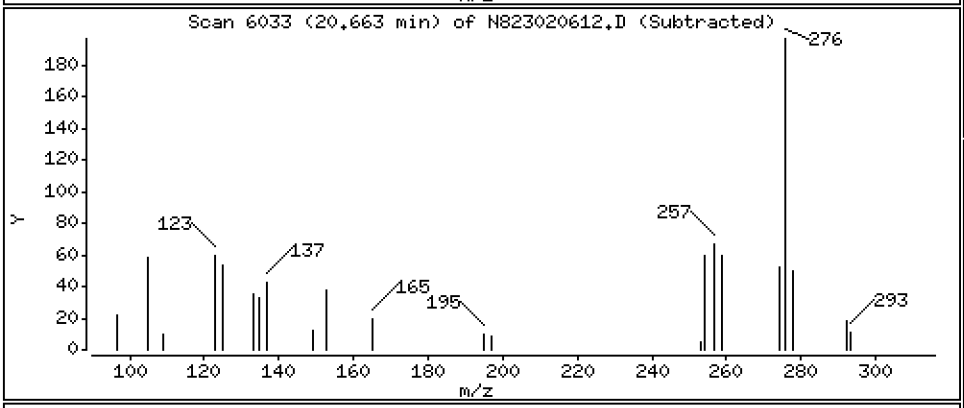
Column diameter: 0.25

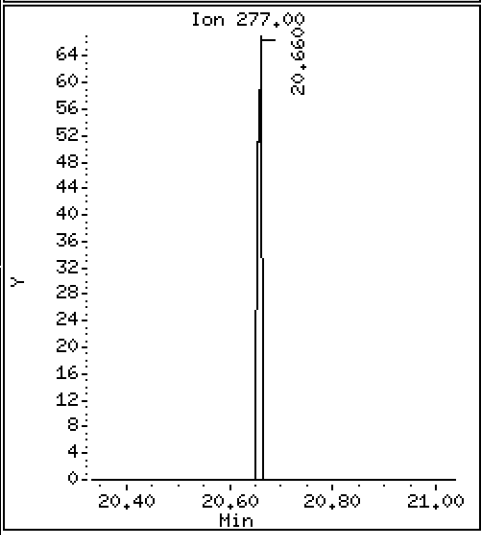
37 Indeno(1,2,3-cd)pyrene

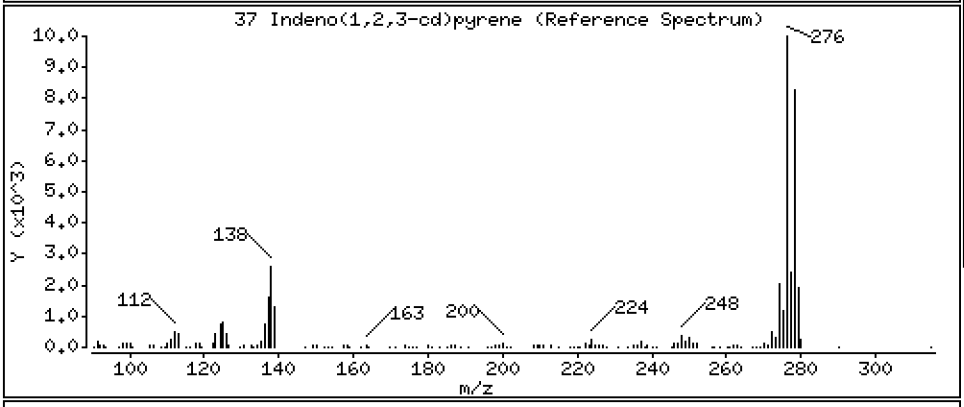
Concentration: 0.03143 ug/mL

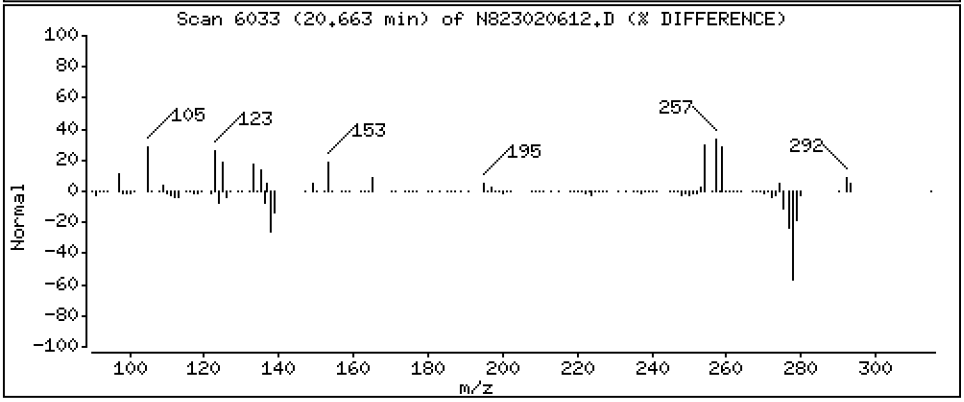












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020612.D

Date : 06-FEB-2023 17:45

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-01

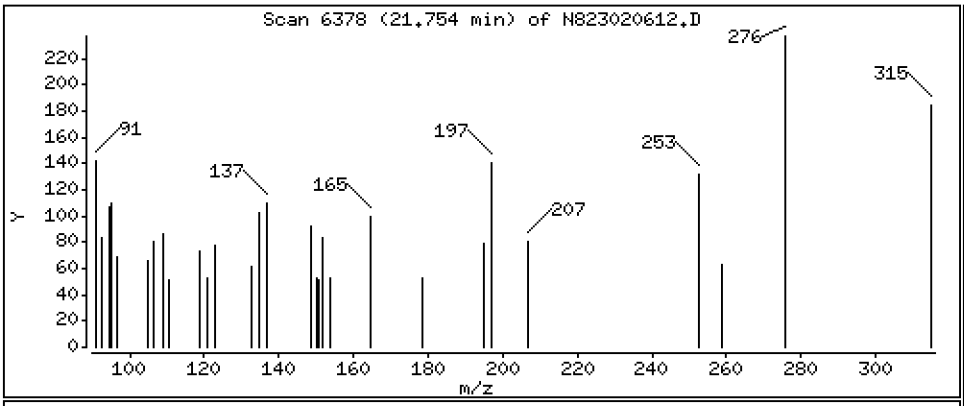
Operator: JZ

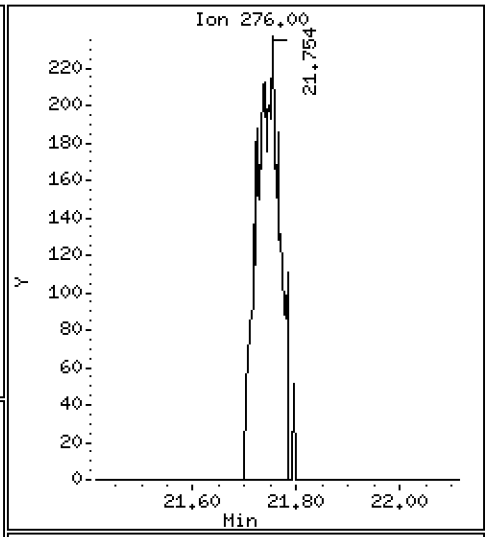
Column phase: Rxi-17sil

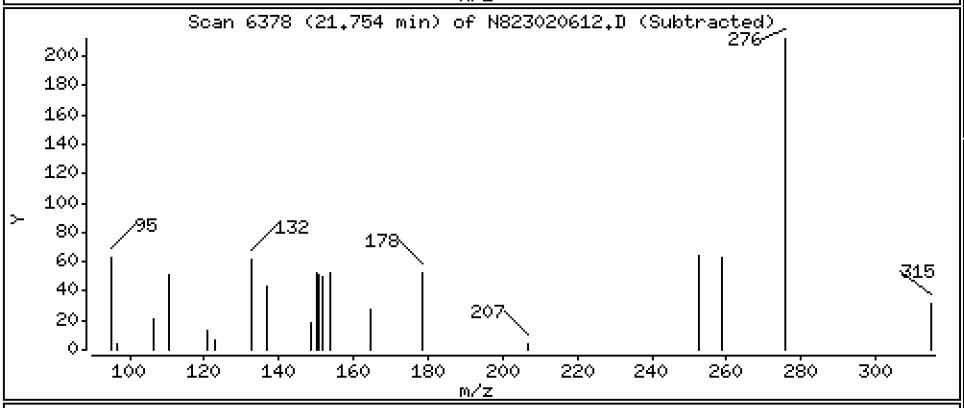
Column diameter: 0.25

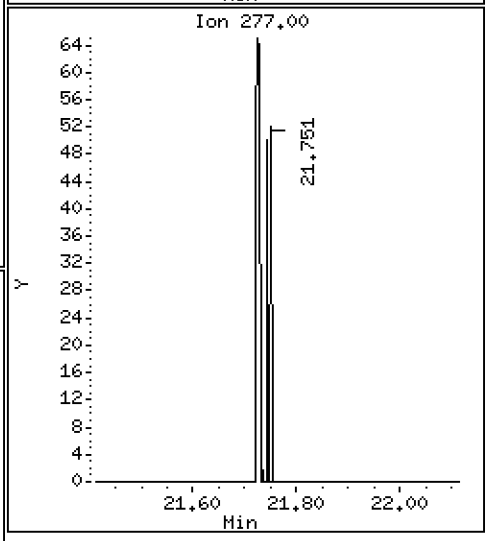
39 Benzo(g,h,i)perylene

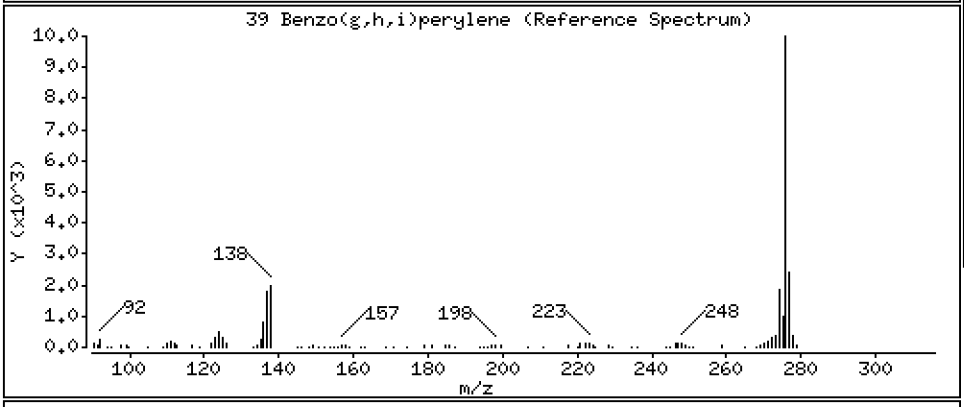
Concentration: 0.04518 ug/mL

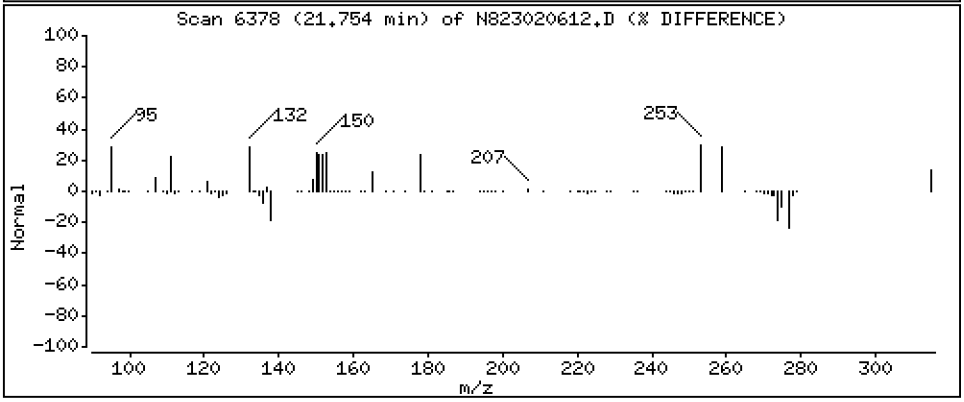












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020612.D
Lab Smp Id: 23A0207-01
Inj Date : 06-FEB-2023 17:45
Operator : JZ Inst ID: nt8.i
Smp Info : 23A0207-01
Misc Info : 23-
Comment : 1ul Injection
Method : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 13:04 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1	Naphthalene-d8	136	4.884	4.900	(1.000)	49668	2.00000	
	2	Naphthalene	128	4.916	4.928	(1.006)	1643	0.07115	0.07115
$	3	2-Methylnaphthalene-d10	152	5.624	5.634	(1.151)	33738	2.49068	2.491
	4	2-Methylnaphthalene	141	5.672	5.681	(1.161)	337	0.02653	0.02653
	5	1-methylnaphthalene	141	5.868	5.880	(1.201)	360	0.02792	0.02792
	9	Acenaphthylene	152	7.072	7.082	(0.985)	487	0.02168	0.02168
*	10	Acenaphthene-d10	164	7.183	7.189	(1.000)	29744	2.00000	
	11	Acenaphthene	153	7.234	7.240	(1.007)	2405	0.15981	0.1598
	12	Dibenzofuran	168	7.382	7.392	(1.028)	804	0.03517	0.03517
	14	Fluorene	166	7.860	7.869	(1.094)	950	0.05351	0.05351
*	15	Phenanthrene-d10	188	9.223	9.232	(1.000)	50330	2.00000	
	16	Phenanthrene	178	9.257	9.267	(1.004)	2902	0.11804	0.1180
	17	Anthracene	178	9.298	9.308	(1.008)	1023	0.04580	0.04580
	19	Carbazole	167	9.814	9.823	(1.064)	532	0.02598	0.02598
	22	Fluoranthene	202	11.038	11.050	(1.197)	5765	0.21542	0.2154
$	21	Fluoranthene-d10	212	11.003	11.009	(1.193)	56631	2.55033	2.550
	23	Pyrene	202	11.556	11.569	(0.815)	5270	0.24232	0.2423
	24	Benzo(a)anthracene	228	14.054	14.070	(0.991)	1181	0.05991	0.05991
*	25	Chrysene-d12	240	14.187	14.202	(1.000)	35079	2.00000	
	27	Chrysene	228	14.256	14.275	(1.005)	1594	0.07596	0.07596
	28	Benzo(b)fluoranthene	252	16.808	16.824	(0.929)	1079	0.06159	0.06159
	29	Benzo(k)fluoranthene	252	16.871	16.887	(0.933)	543	0.03164	0.03164
	30	Benzo(j)fluoranthene	252	16.944	16.963	(0.937)	475	0.03075	0.03075
	31	Total Benzofluoranthenes	252	16.808	16.824	(0.929)	2064	0.12440	0.1244(M)
	32	Benzo(a)pyrene	252	17.858	17.877	(0.987)	728	0.04722	0.04722
*	33	Perylene-d12	264	18.092	18.107	(1.000)	30080	2.00000	
	35	Perylene	252	18.165	18.183	(1.004)	2543	0.15372	0.1537
$	36	Dibenzo(a,h)anthracene-d14	292	20.527	20.549	(1.135)	40857	3.46657	3.467
	37	Indeno(1,2,3-cd)pyrene	276	20.663	20.684	(1.142)	552	0.03143	0.03143
	38	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39	Benzo(g,h,i)perylene	276	21.753	21.763	(1.202)	719	0.04518	0.04518

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020612.D
Lab Smp Id: 23A0207-01
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44336	22168	88672	49668	12.03
10 Acenaphthene-d10	26127	13064	52254	29744	13.84
15 Phenanthrene-d10	47424	23712	94848	50330	6.13
25 Chrysene-d12	36794	18397	73588	35079	-4.66
33 Perylene-d12	36636	18318	73272	30080	-17.89

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.88	-0.32
10 Acenaphthene-d10	7.19	6.69	7.69	7.18	-0.08
15 Phenanthrene-d10	9.23	8.73	9.73	9.22	-0.10
25 Chrysene-d12	14.20	13.70	14.70	14.19	-0.11
33 Perylene-d12	18.11	17.61	18.61	18.09	-0.09

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

REVIEW SUMMARY FOR FILE - N823020612.D

Lab ID: 23A0207-01
nt8.i, 20230206A.b\FSIMPNA230119.m,   06-FEB-2023 17:45

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

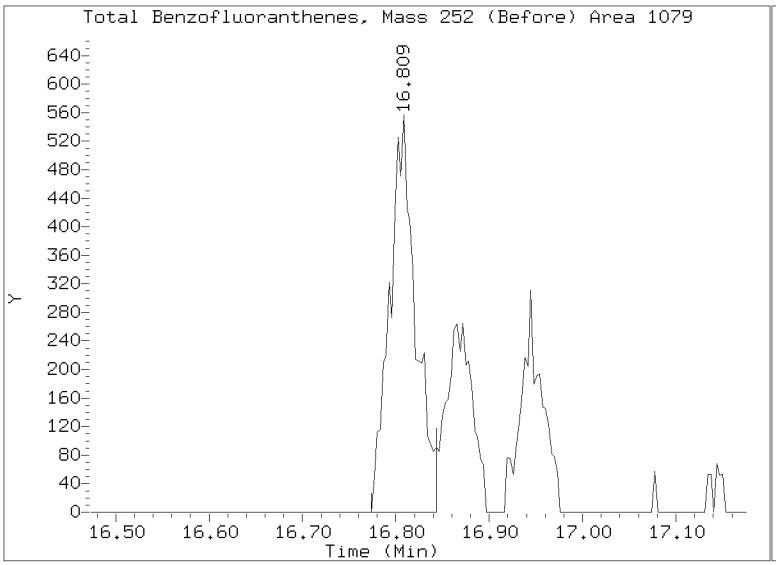
No RRT check performed

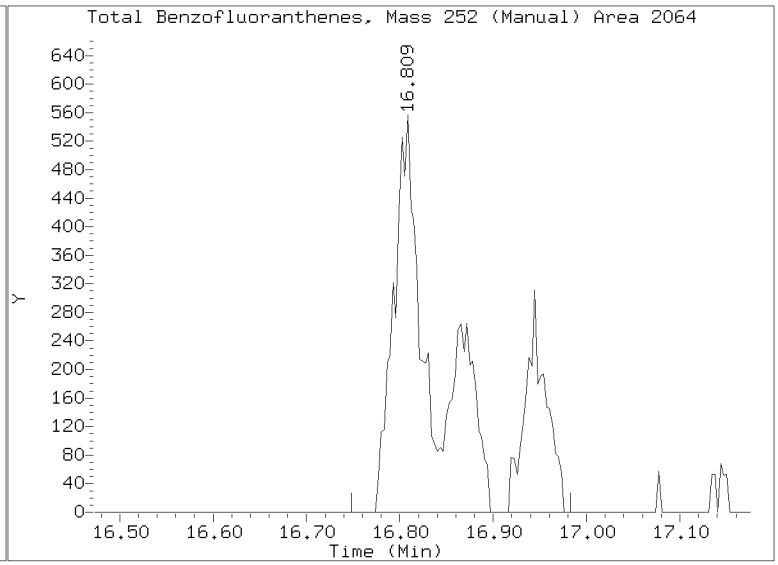
On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020612.D
Injection Date: 06-FEB-2023 17:45
Lab ID:23A0207-01 Client ID:
Report Date: 02/07/2023 14:35





Form I
ORGANIC ANALYSIS DATA SHEET
EPA 8270E-SIM
Polynuclear Aromatic Hydrocarbons

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-02 A	SDG:	23A0207
Sampled:	01/11/23 08:42	Prepared:	02/01/23 11:29	File ID:	N823020613.D
% Solids:	78.60	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/06/23 18:12
Batch:	BLA0683	Sequence:	SLB0075	Initial/Final:	12.77 g Wet / 0.5 mL
Instrument:	NT8	Column:	RXI-17Sil ms	Calibration:	GA00050
Cleanups:	GPC, Silica Gel				

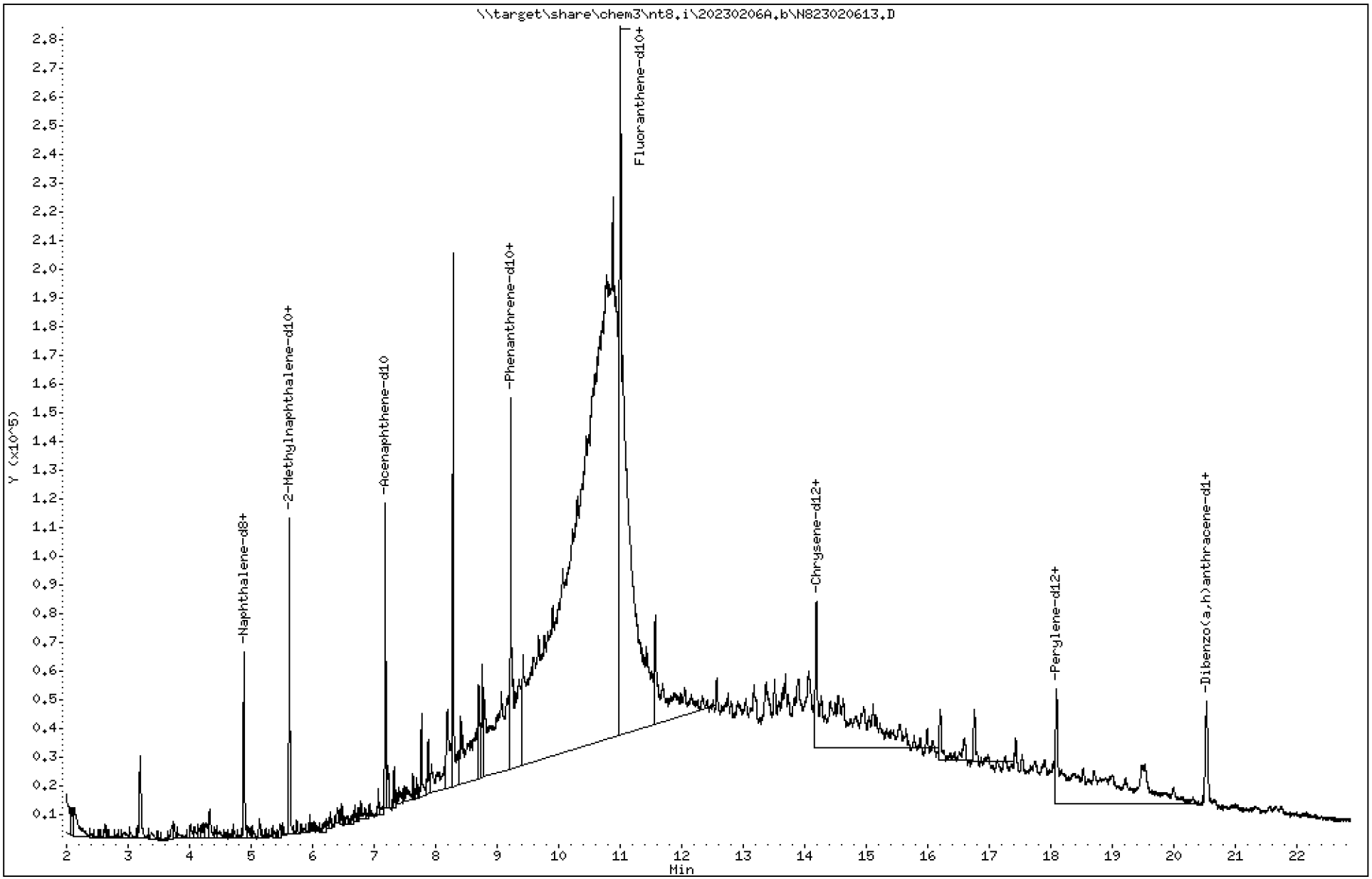
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
56-55-3	Benzo(a)anthracene	1	10.9		0.82	4.98
218-01-9	Chrysene	1	14.0		1.05	4.98
205-99-2	Benzo(b)fluoranthene	1	11.9		1.37	4.98
207-08-9	Benzo(k)fluoranthene	1	5.99		0.76	4.98
50-32-8	Benzo(a)pyrene	1	8.52		0.61	4.98
193-39-5	Indeno(1,2,3-cd)pyrene	1	7.94		1.05	4.98
53-70-3	Dibenzo(a,h)anthracene	1	2.27	J	0.89	4.98

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	149.44	140	93.5	32 - 120	
Dibenzo[a,h]anthracene-d14	149.44	202	135	21 - 133	*
Fluoranthene-d10	149.44	150	101	36 - 134	

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020613.D
Date : 06-FEB-2023 18:12
Client ID:
Sample Info: 23A0207-02

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



23A0207 CLPLIKE (Rev3) - Page 42 of 3315

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020613.D

Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

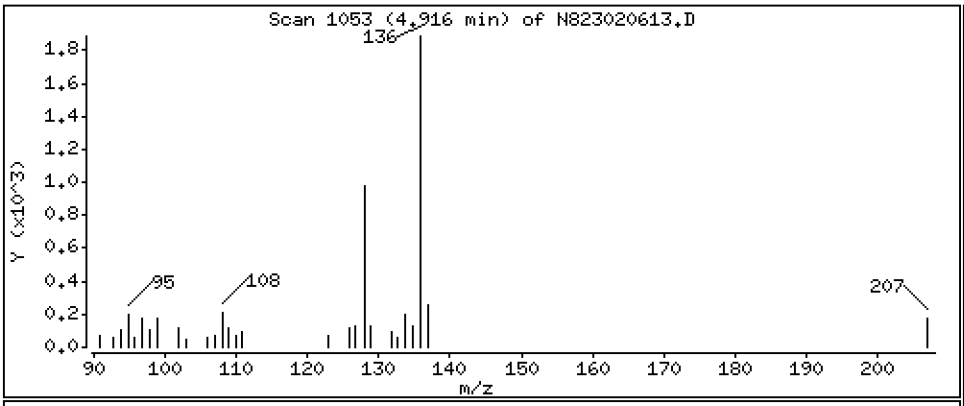
Operator: JZ

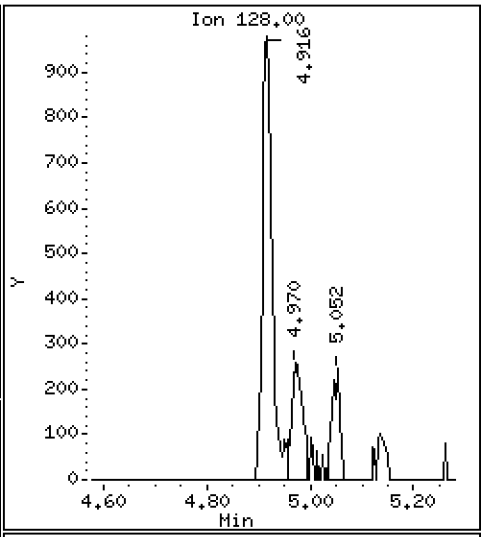
Column phase: Rxi-17sil

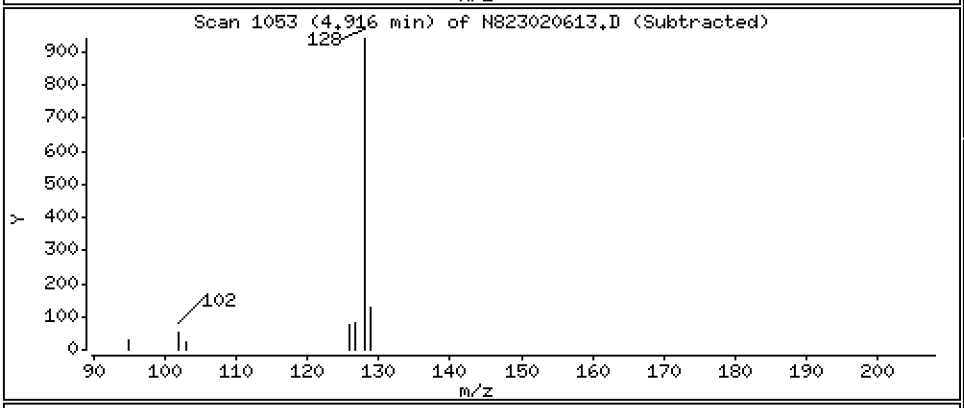
Column diameter: 0.25

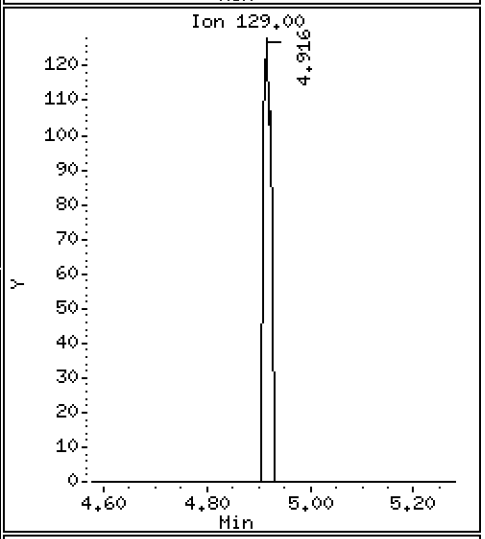
2 Naphthalene

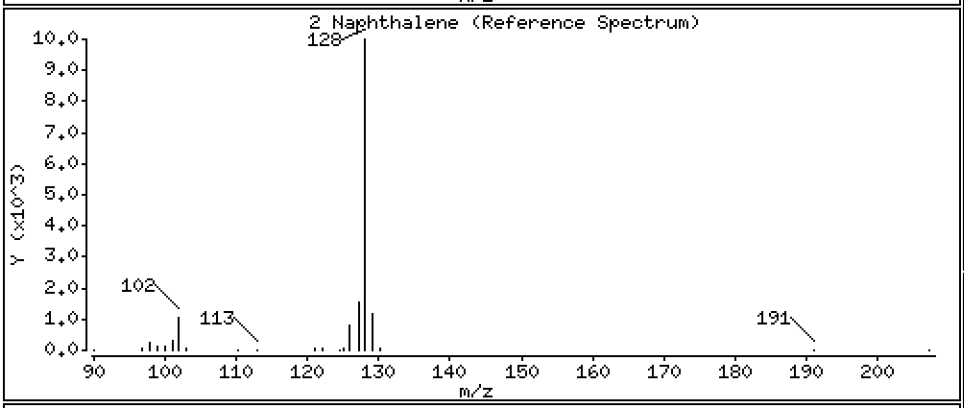
Concentration: 0.05282 ug/mL

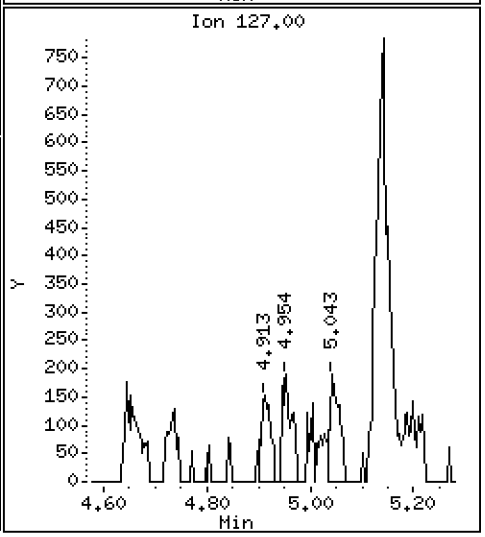


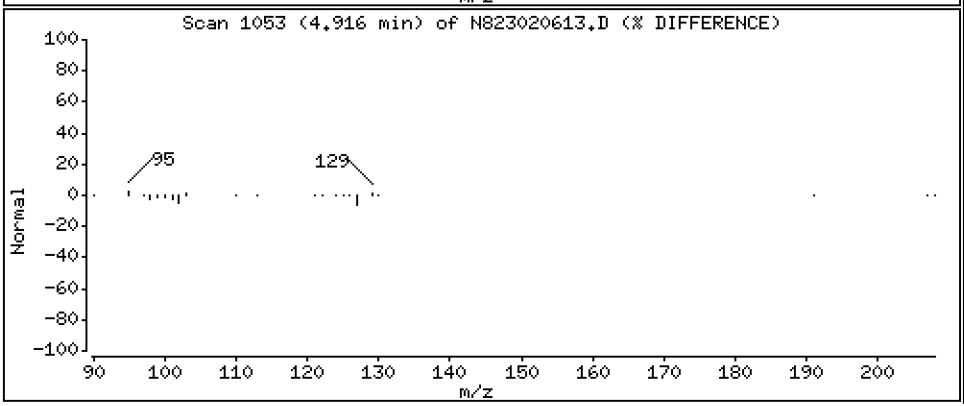












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

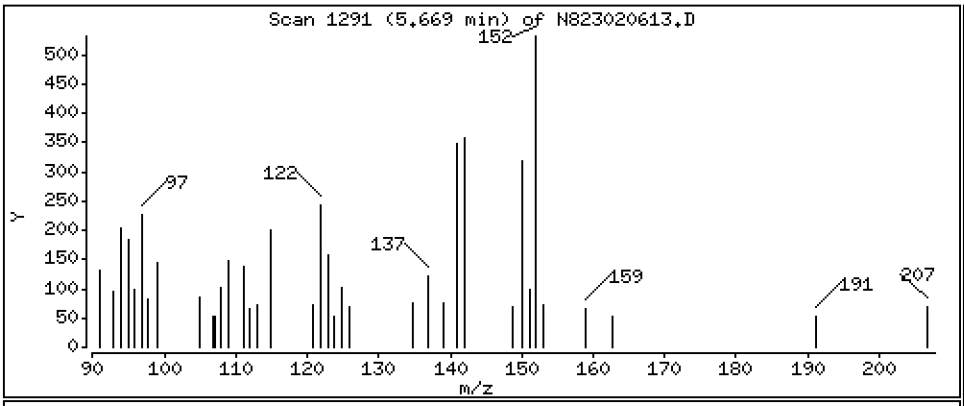
Operator: JZ

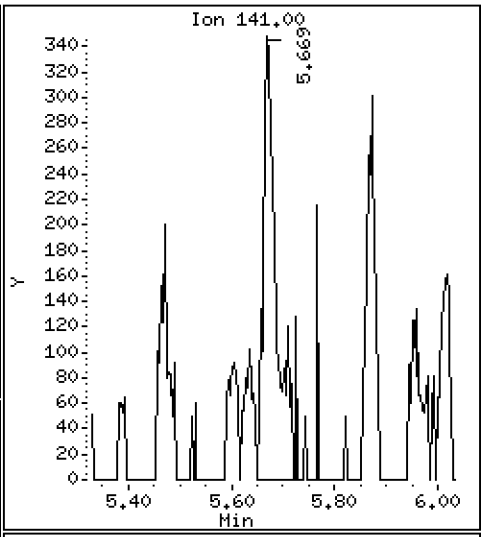
Column phase: Rxi-17sil

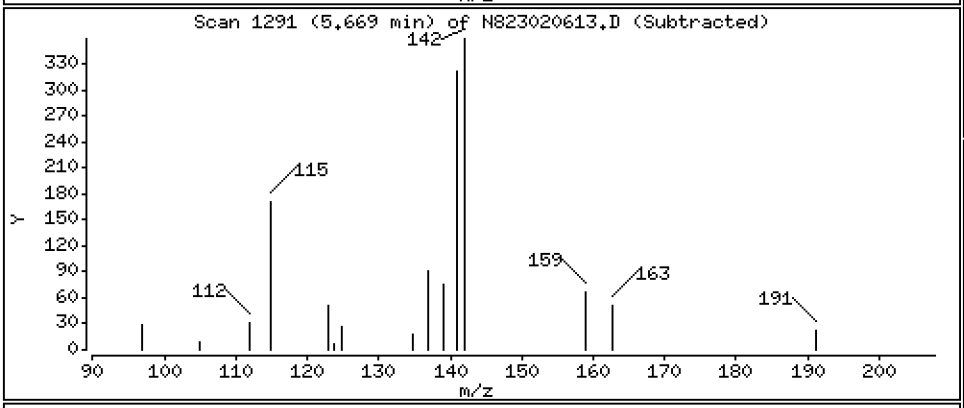
Column diameter: 0.25

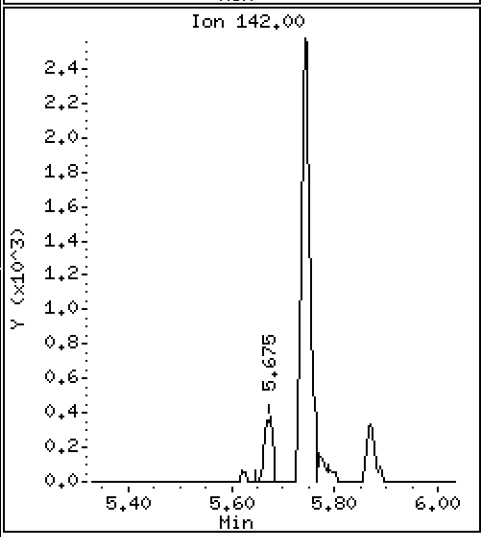
4 2-Methylnaphthalene

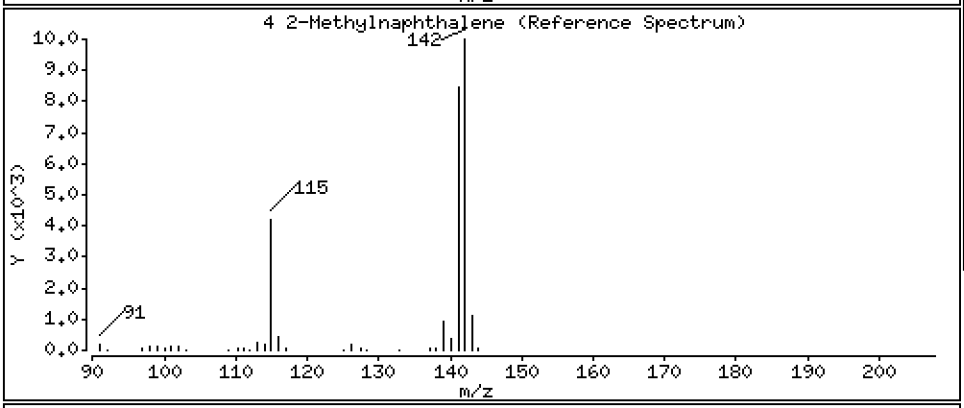
Concentration: 0.04436 ug/mL

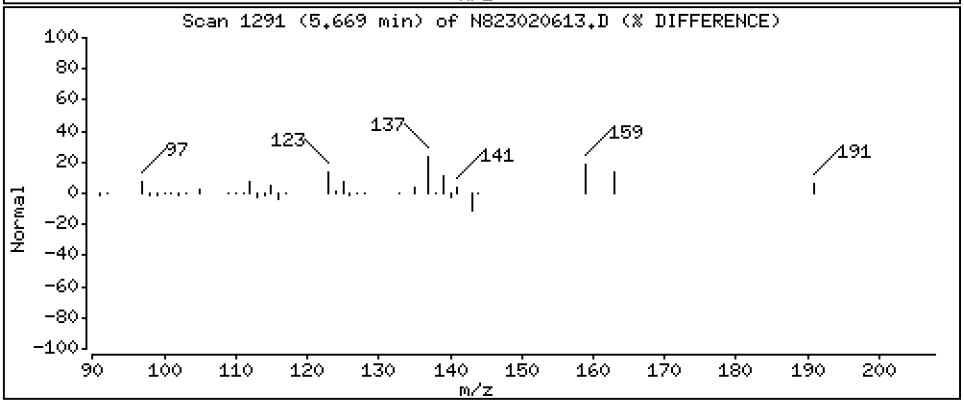












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

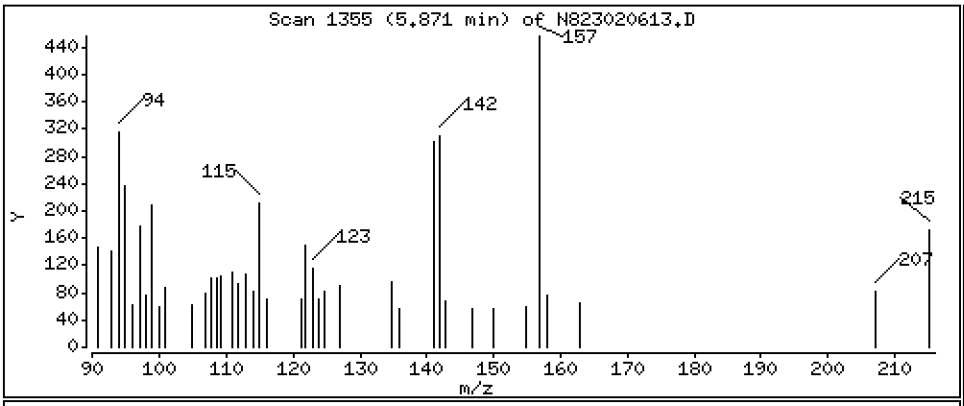
Operator: JZ

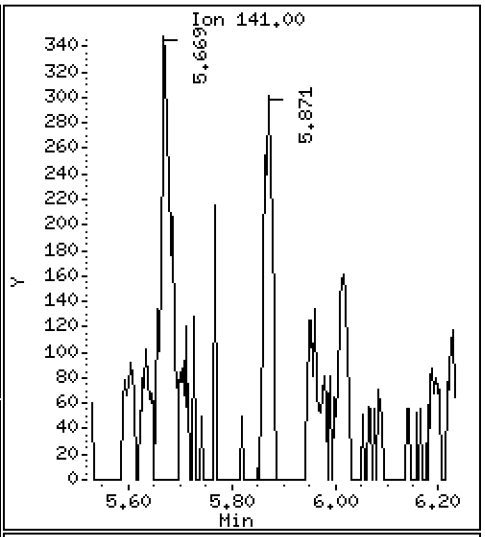
Column phase: Rxi-17sil

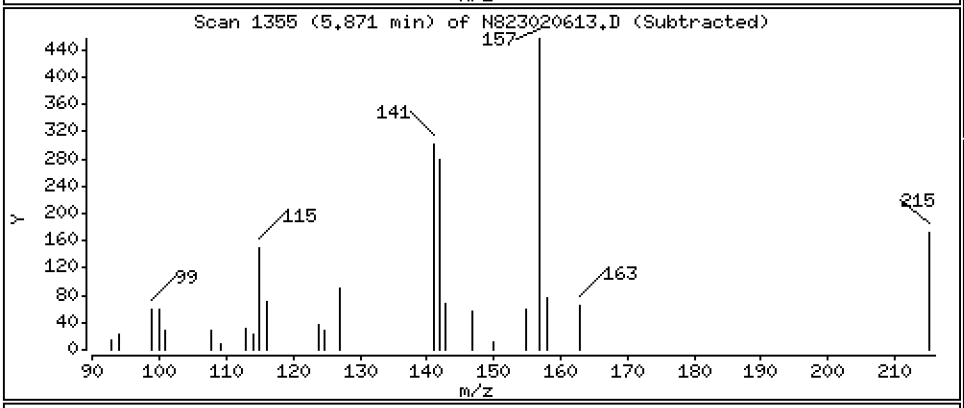
Column diameter: 0.25

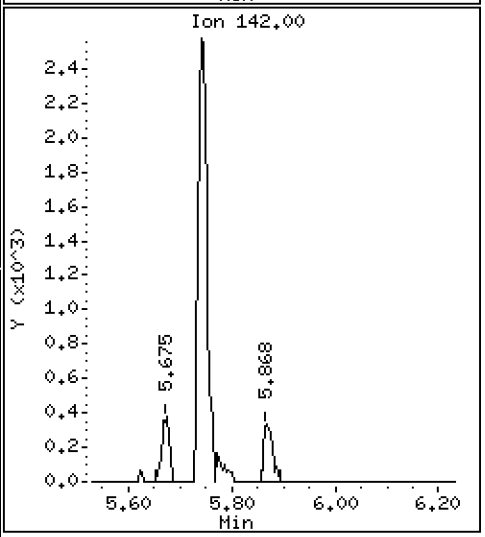
5 1-methylnaphthalene

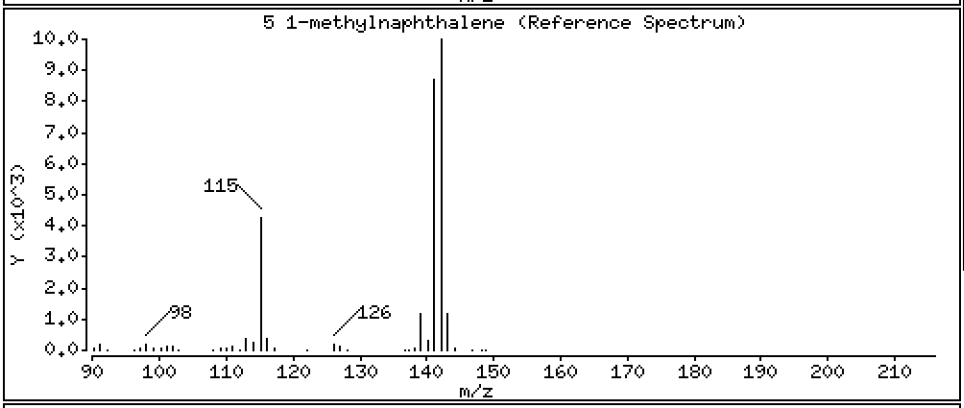
Concentration: 0.02468 ug/mL

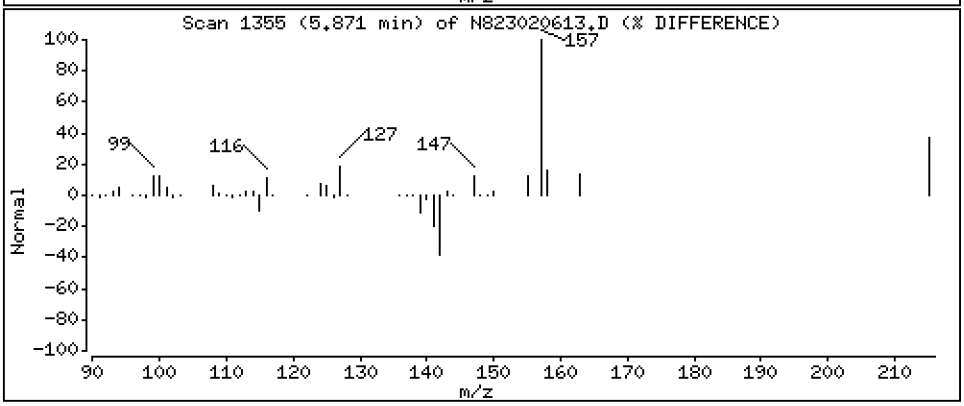












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

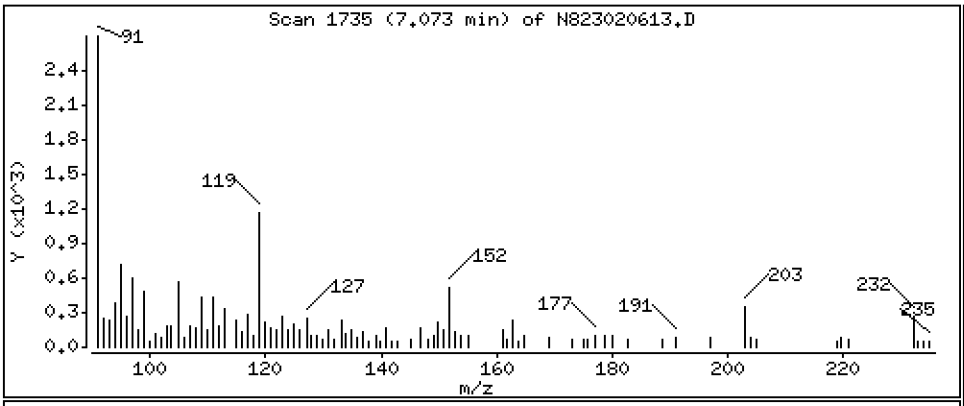
Operator: JZ

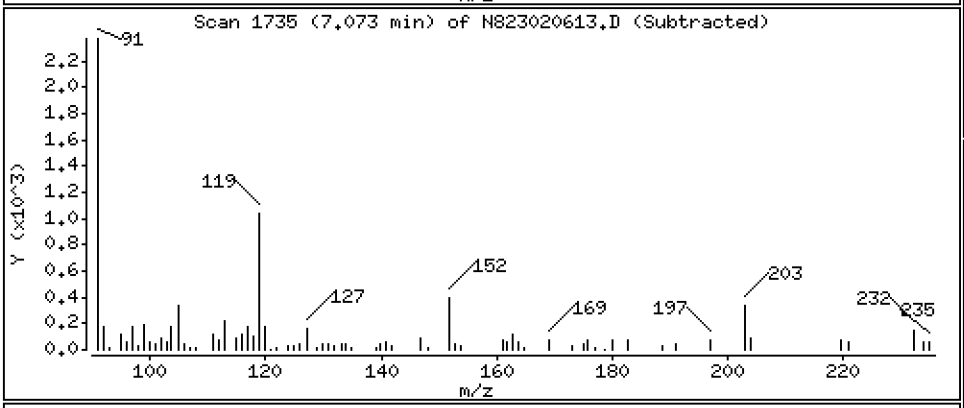
Column phase: Rxi-17sil

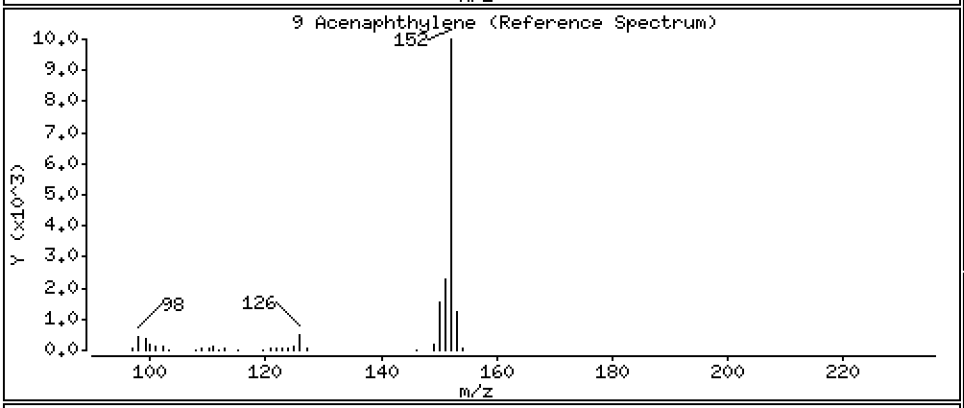
Column diameter: 0.25

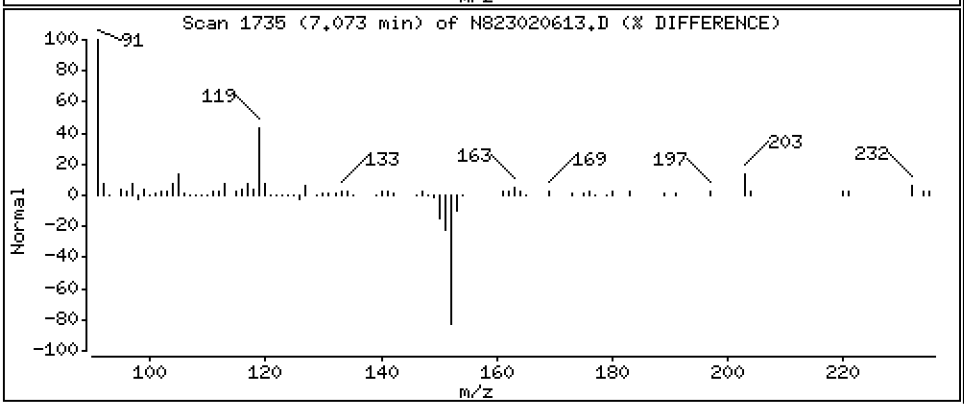
9 Acenaphthylene

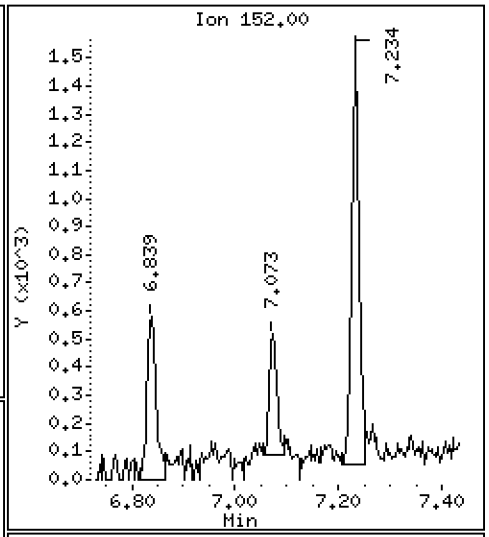
Concentration: 0.01786 ug/mL

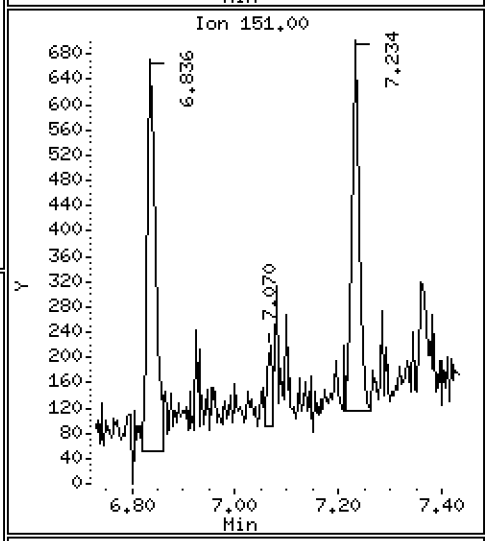


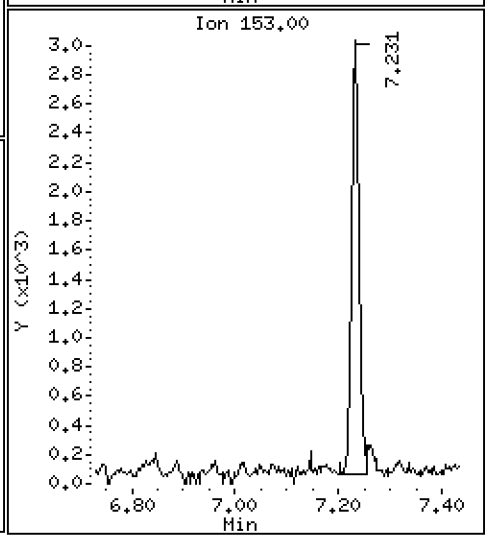












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

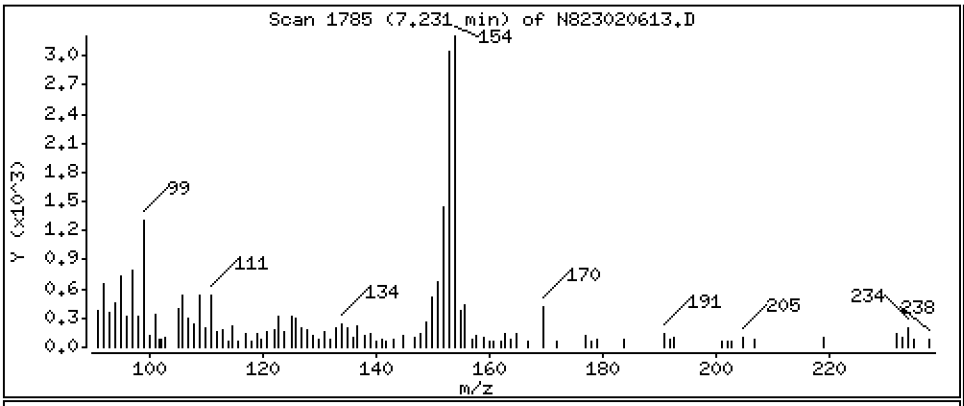
Operator: JZ

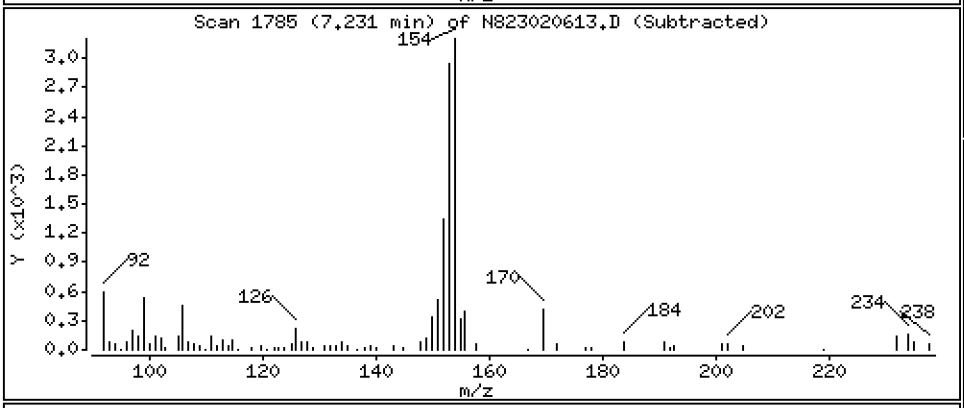
Column phase: Rxi-17sil

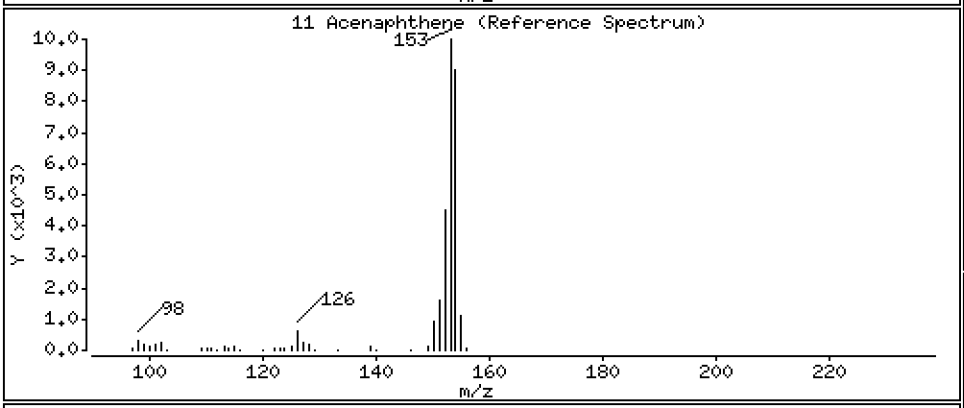
Column diameter: 0.25

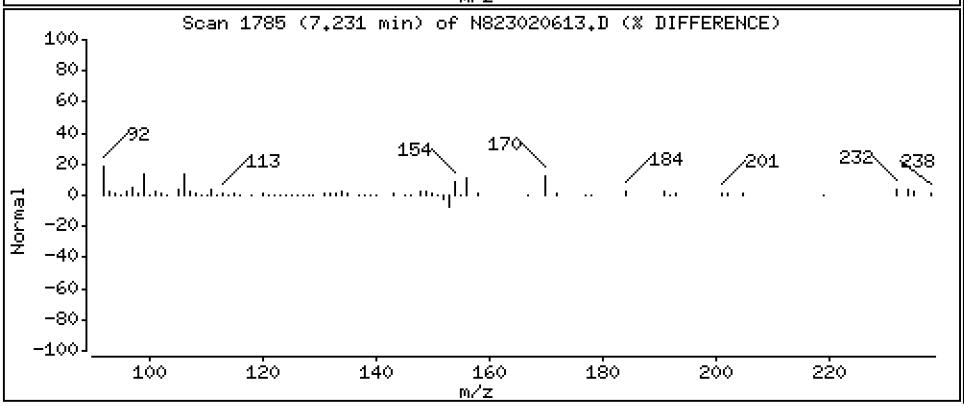
11 Acenaphthene

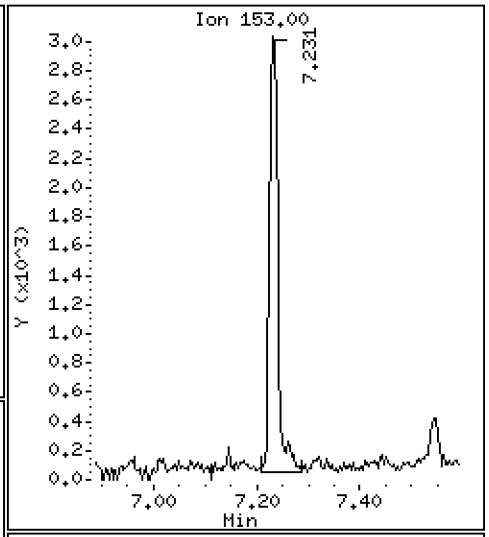
Concentration: 0.2111 ug/mL

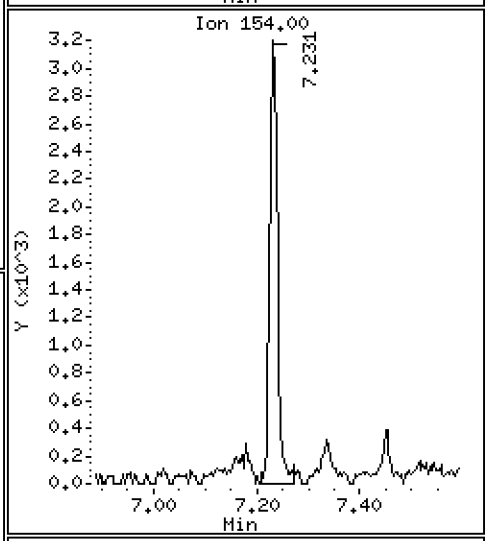


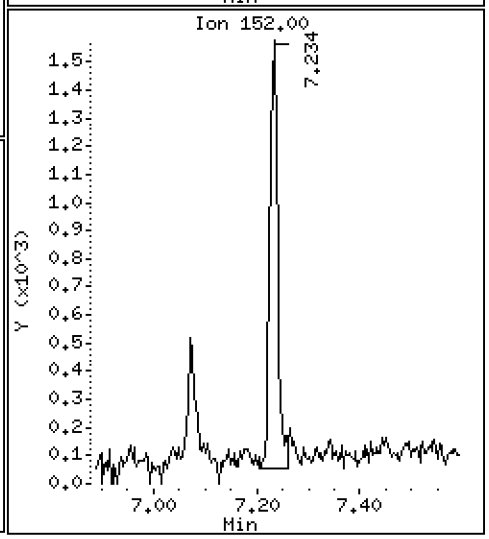












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

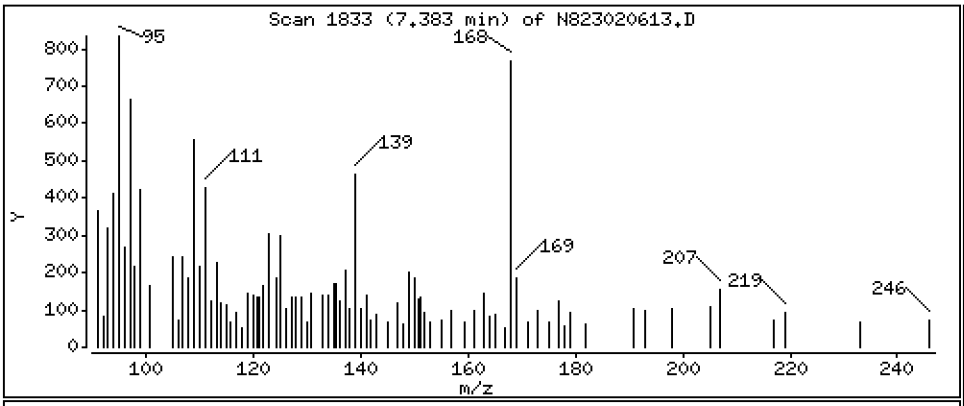
Operator: JZ

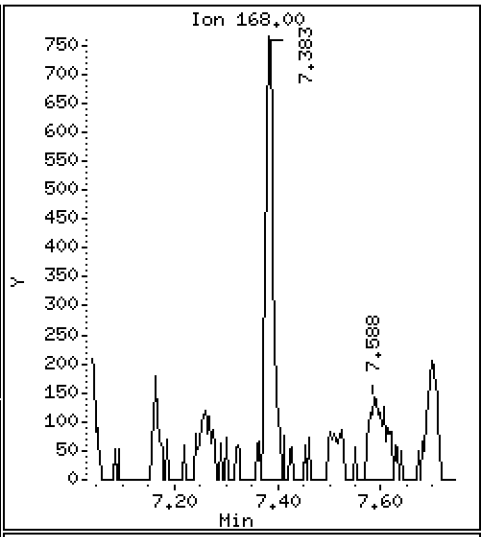
Column phase: Rxi-17sil

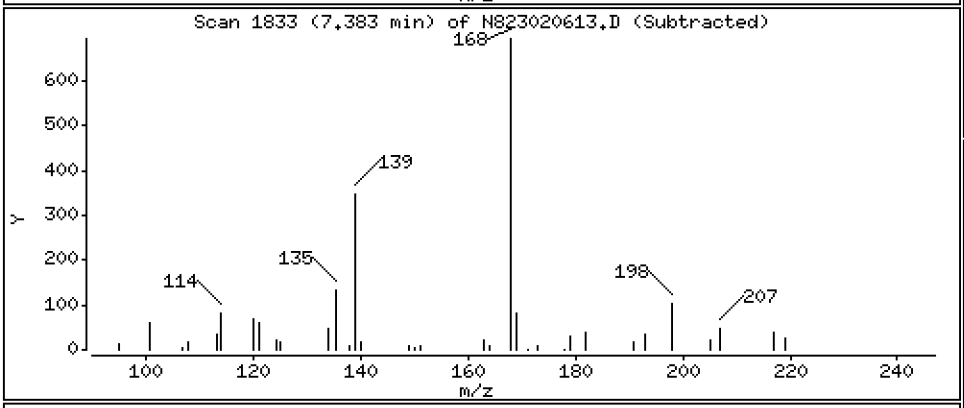
Column diameter: 0.25

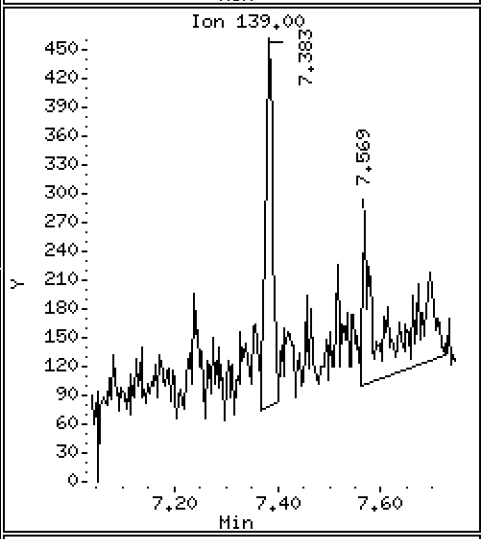
12 Dibenzofuran

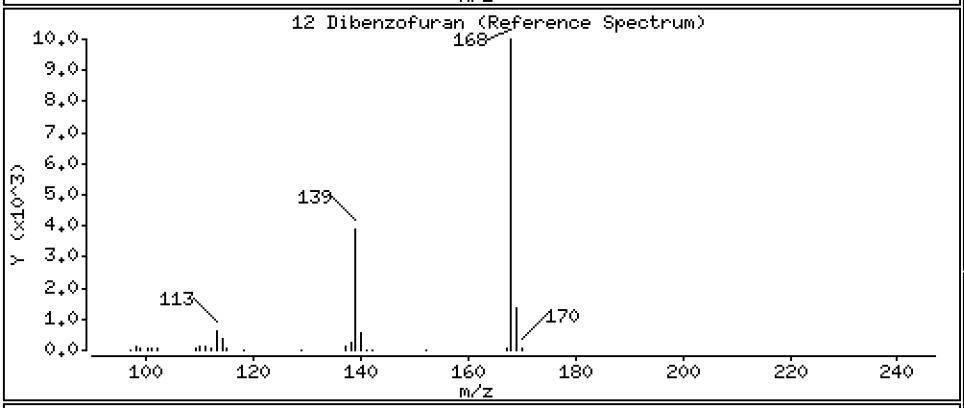
Concentration: 0.03434 ug/mL

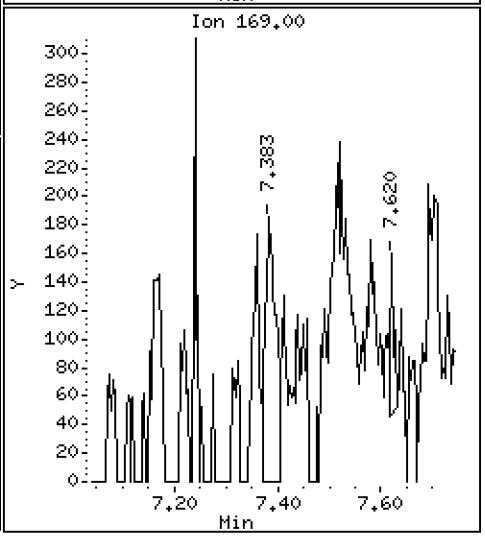


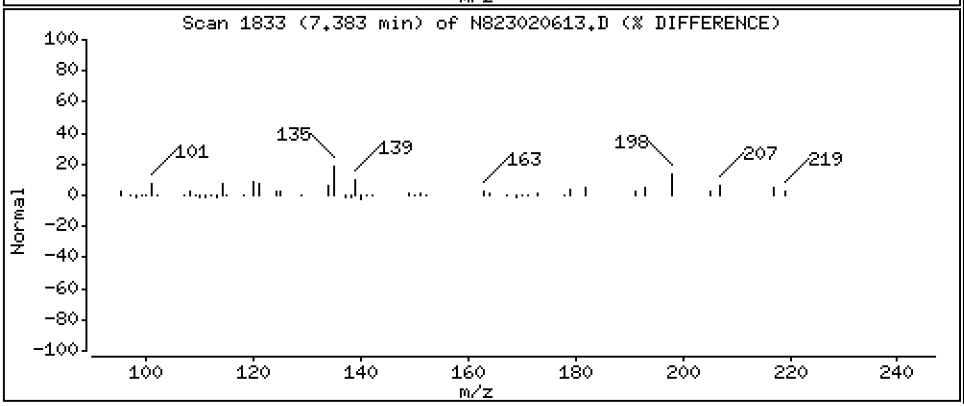












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

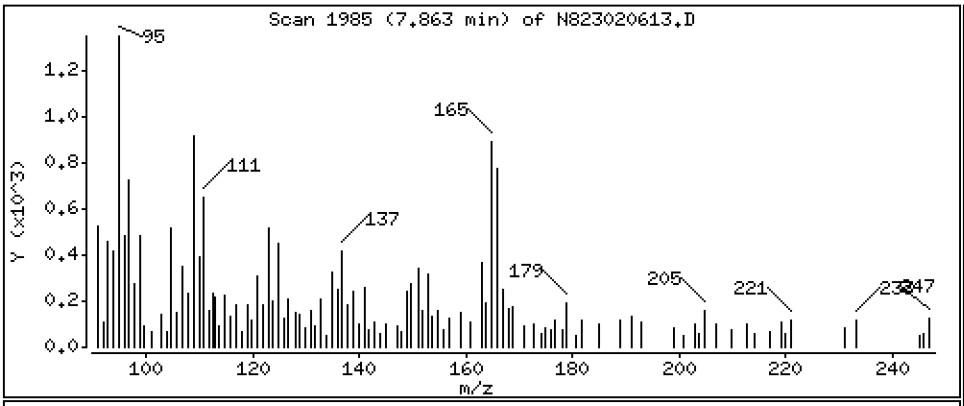
Operator: JZ

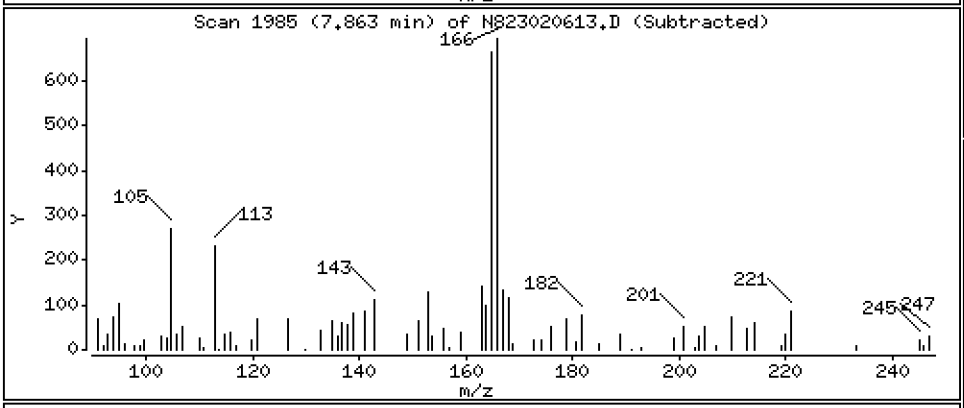
Column phase: Rxi-17sil

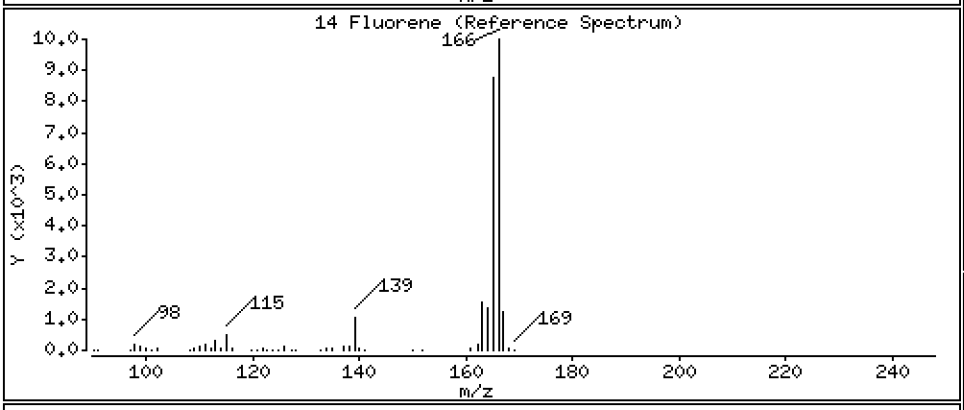
Column diameter: 0.25

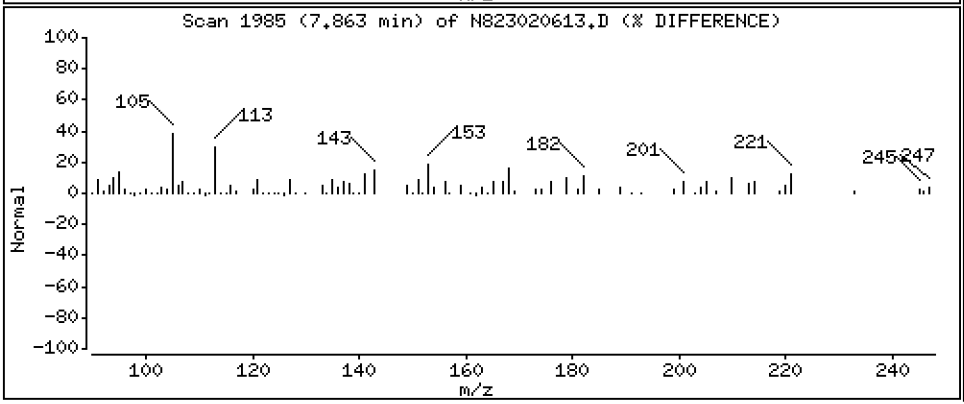
14 Fluorene

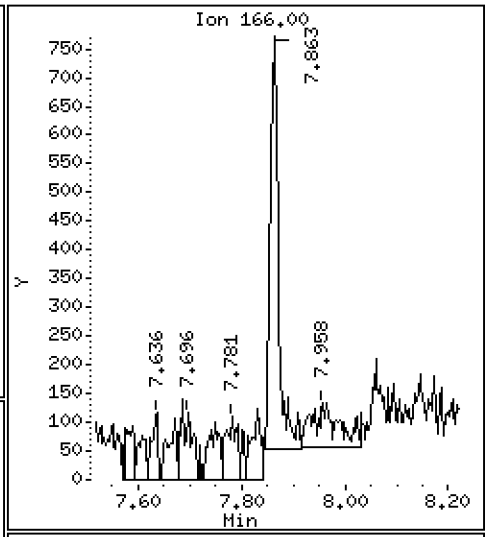
Concentration: 0.04265 ug/mL

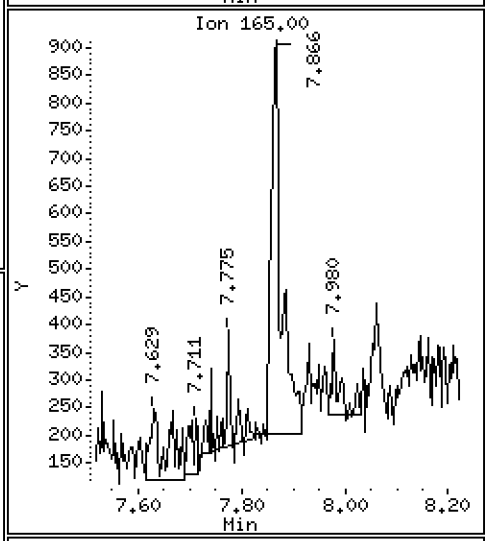


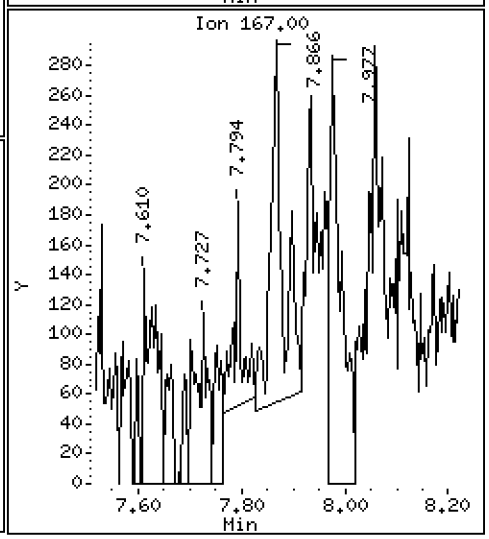












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

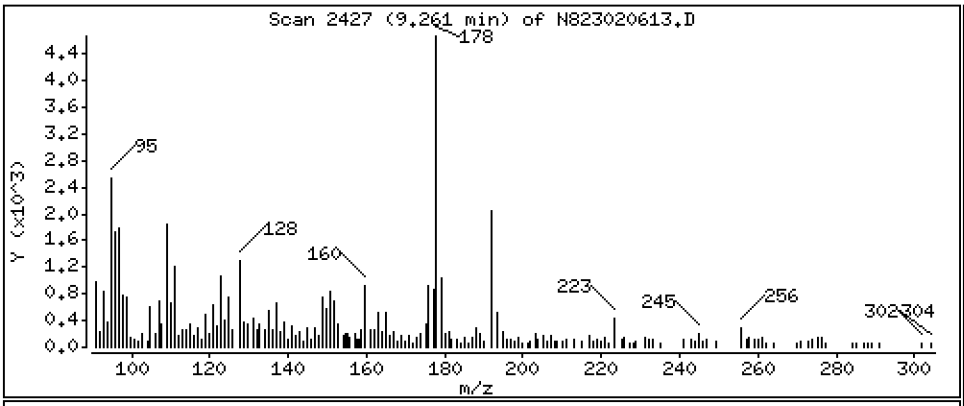
Operator: JZ

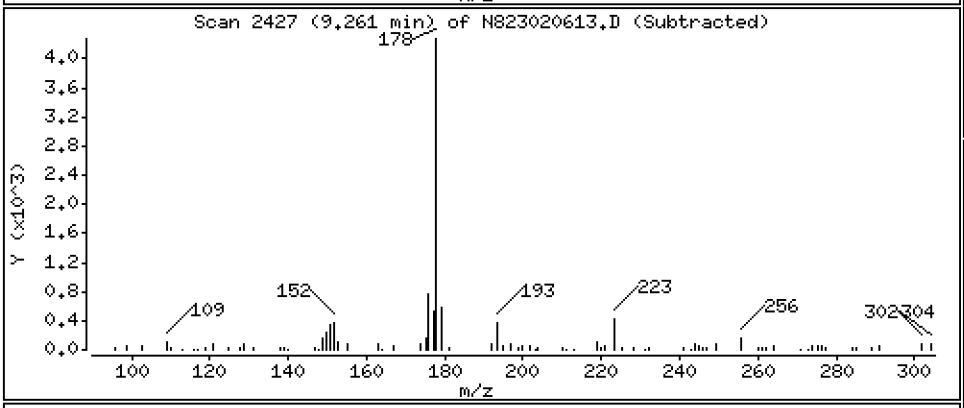
Column phase: Rxi-17sil

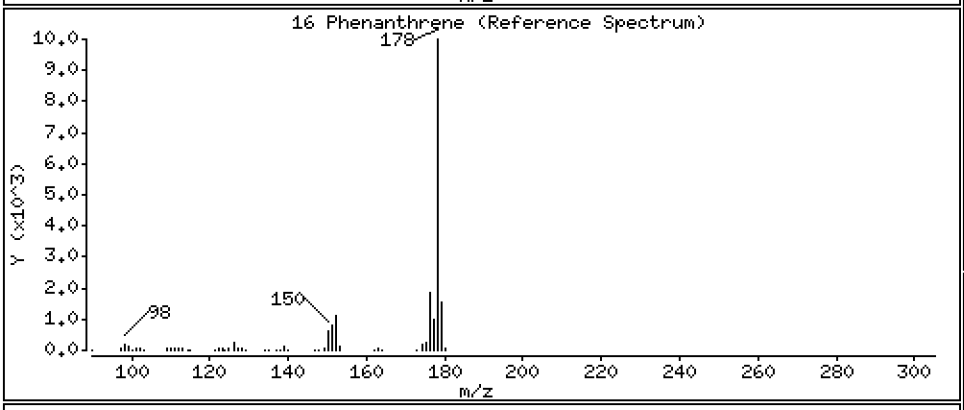
Column diameter: 0.25

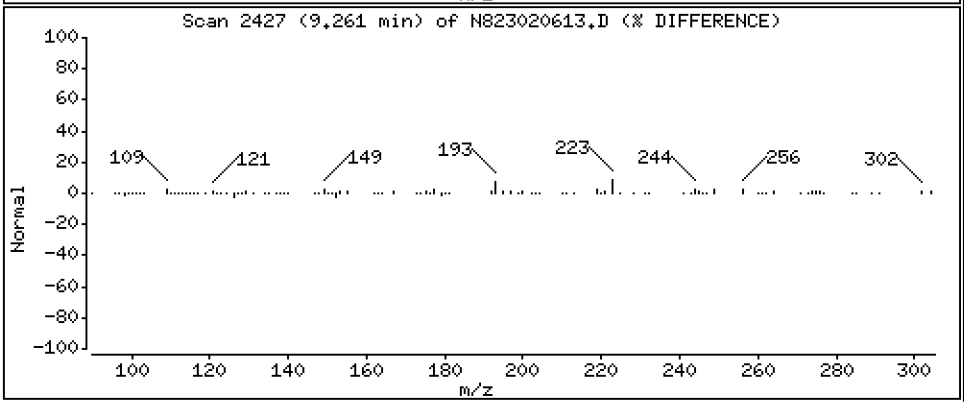
16 Phenanthrene

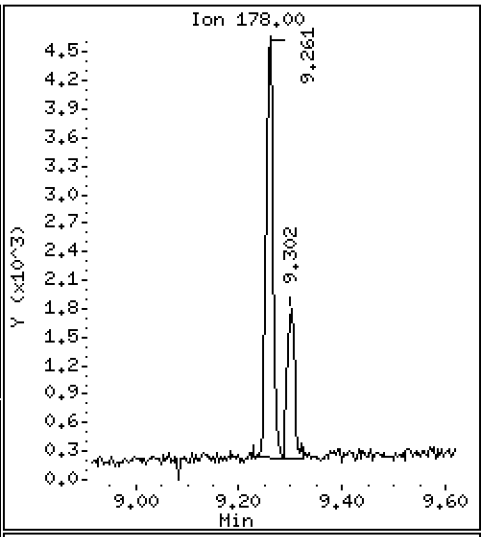
Concentration: 0.1753 ug/mL

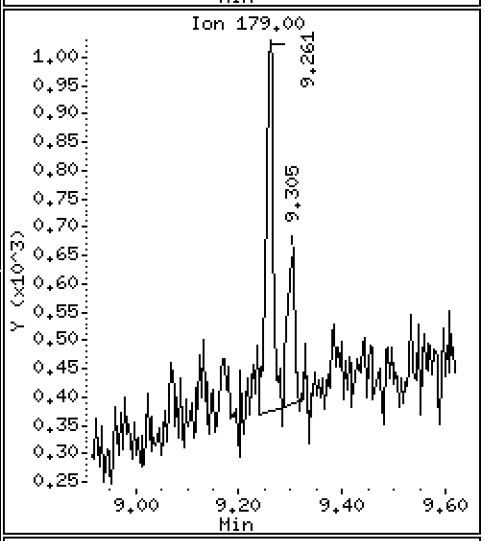


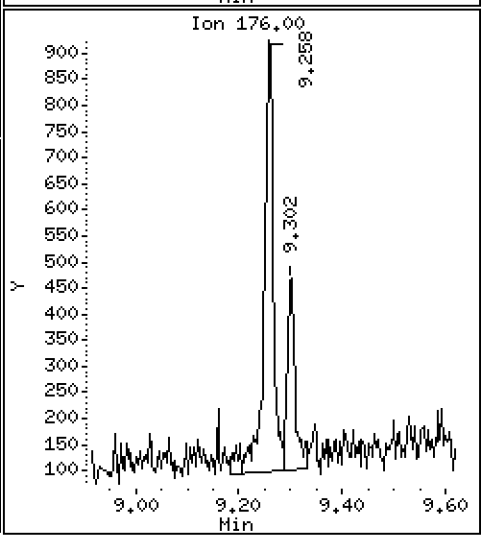












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

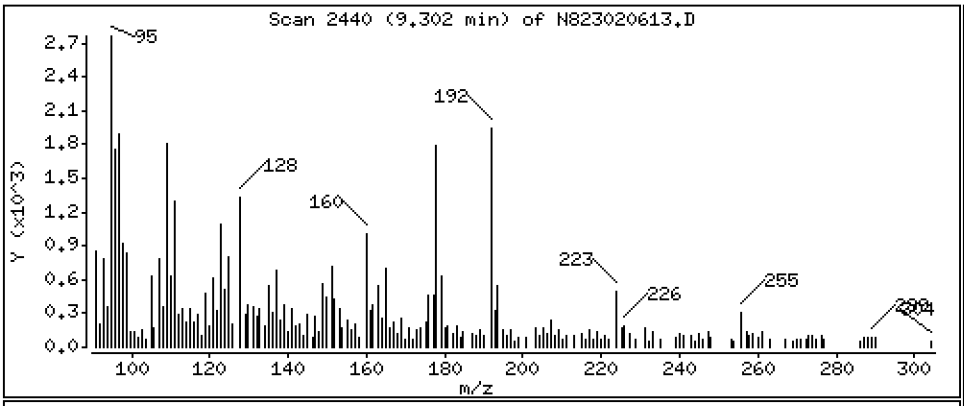
Operator: JZ

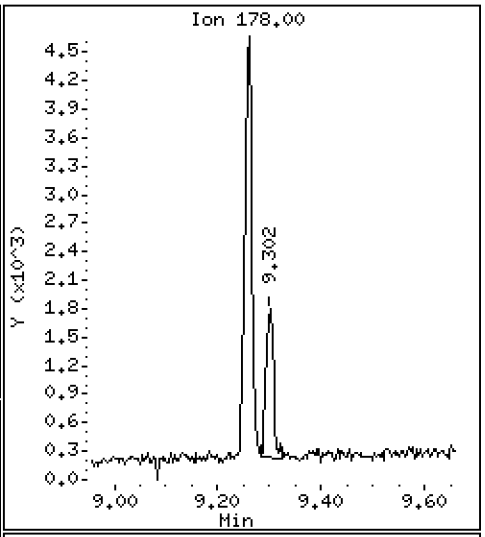
Column phase: Rxi-17sil

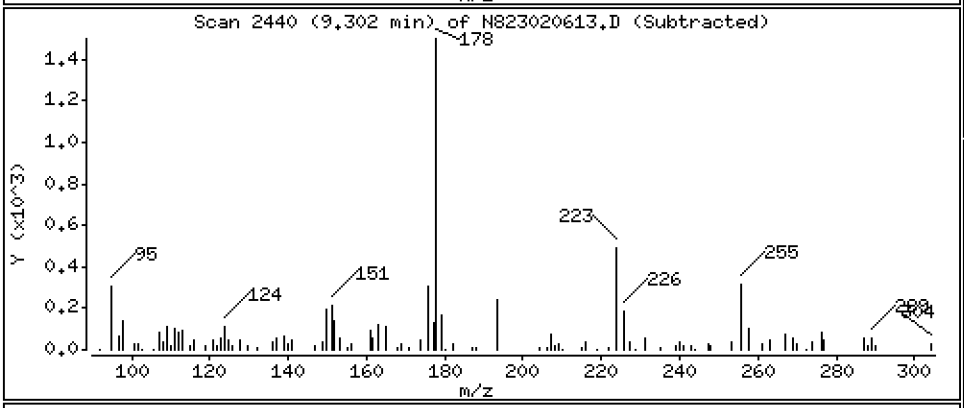
Column diameter: 0.25

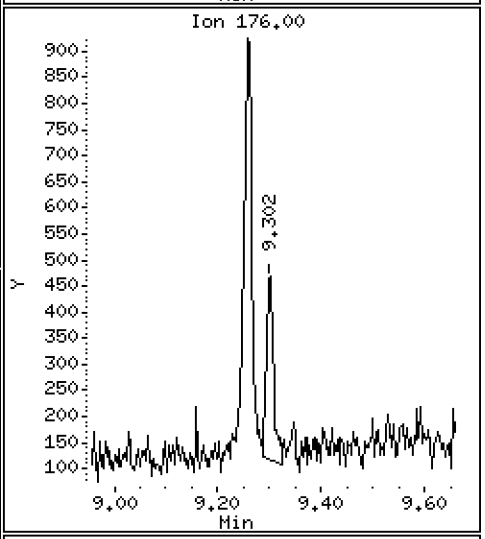
17 Anthracene

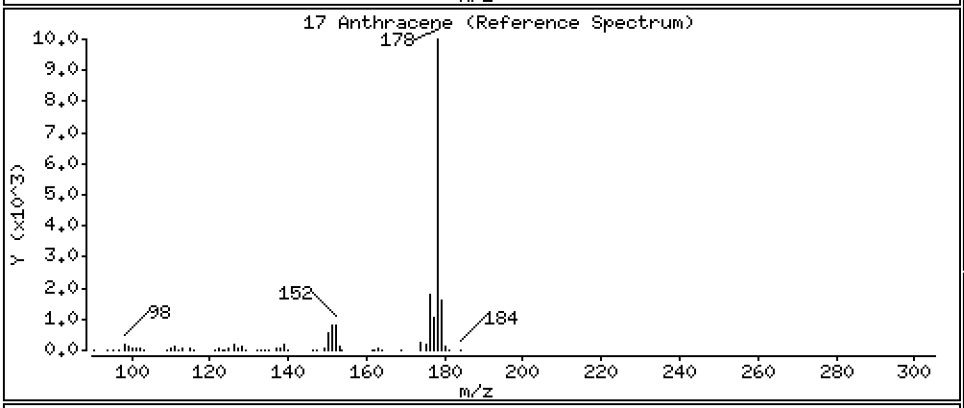
Concentration: 0.06875 ug/mL

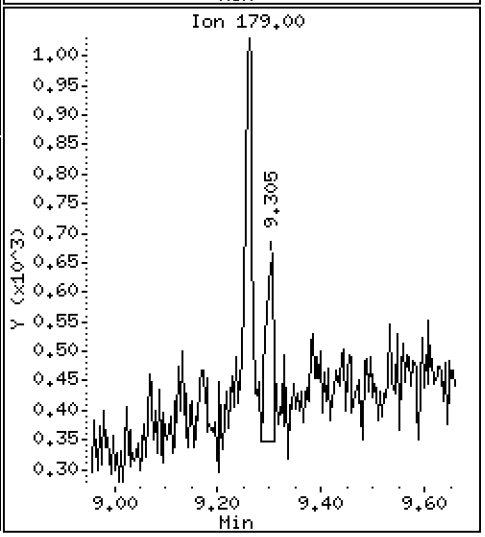


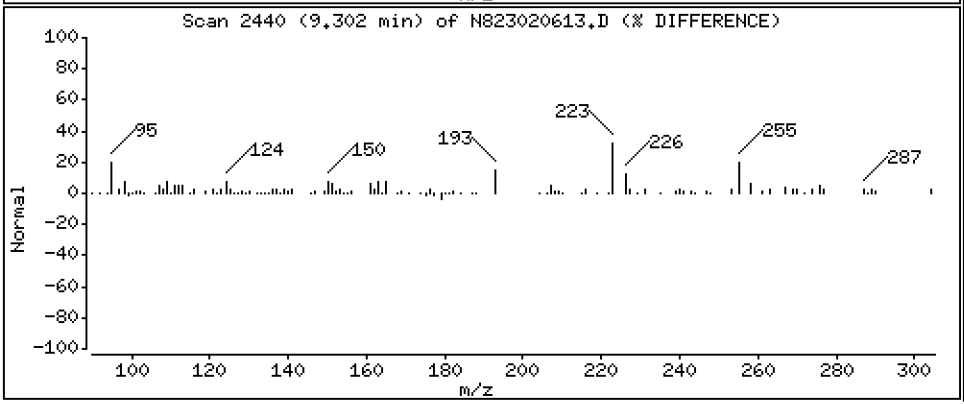












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

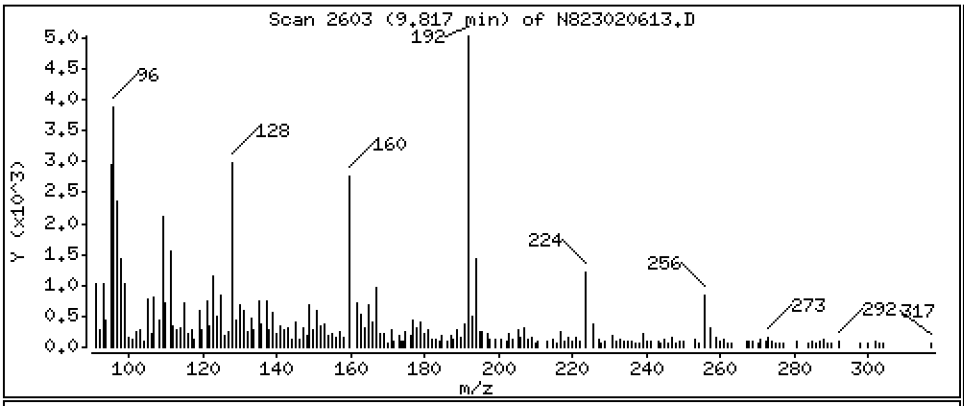
Operator: JZ

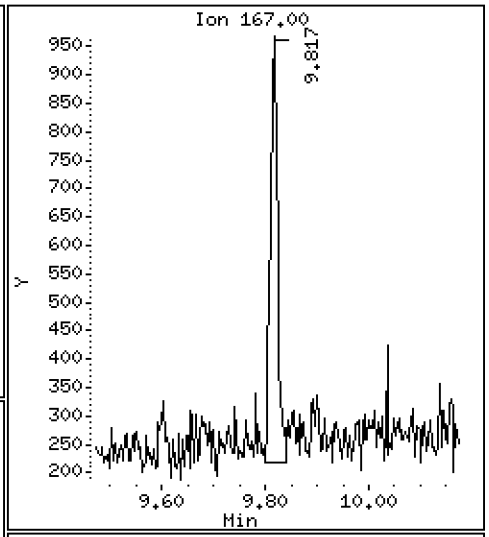
Column phase: Rxi-17sil

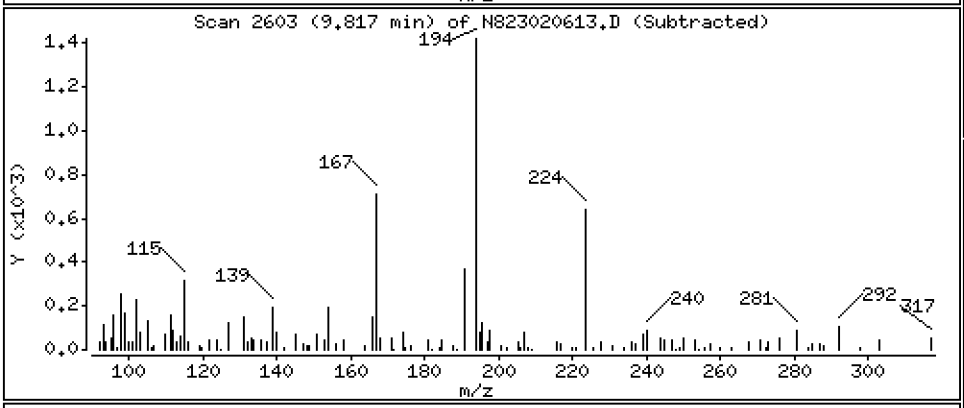
Column diameter: 0.25

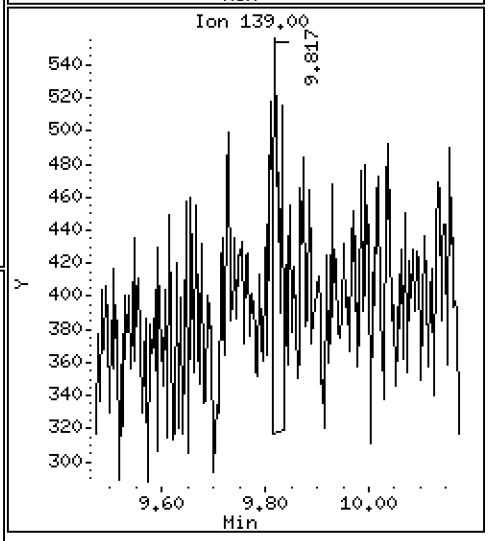
19 Carbazole

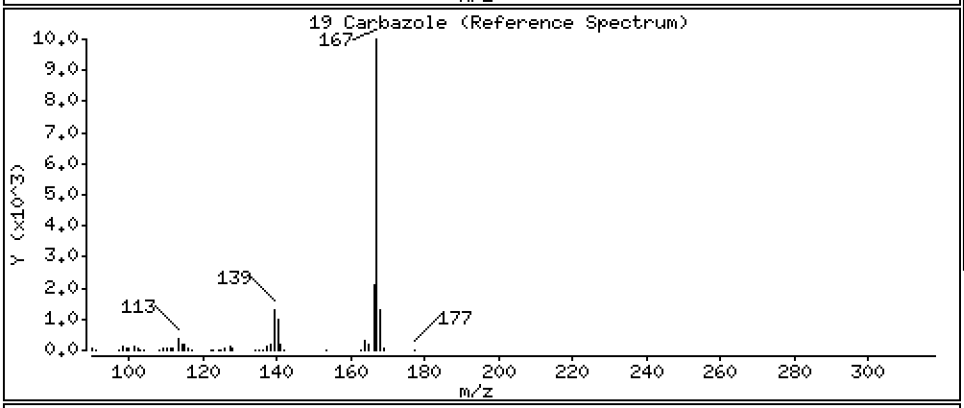
Concentration: 0.03587 ug/mL

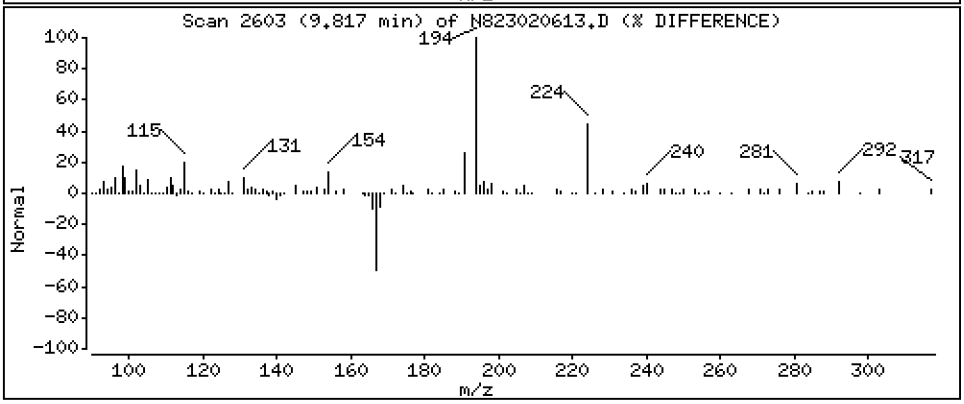












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

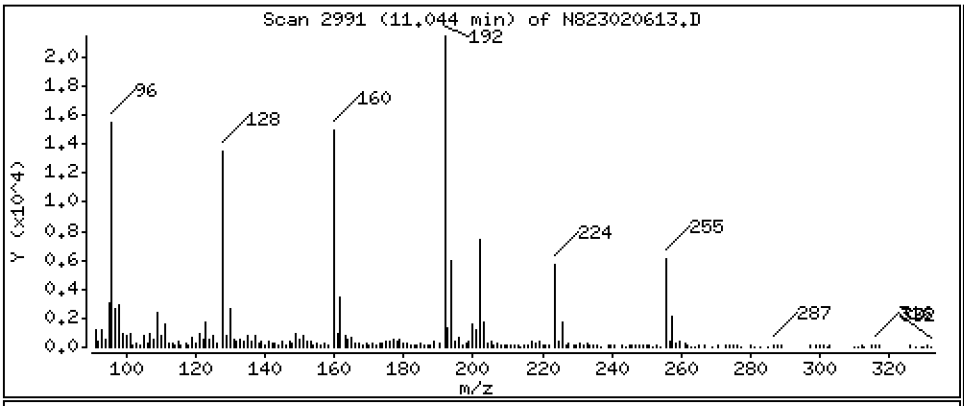
Operator: JZ

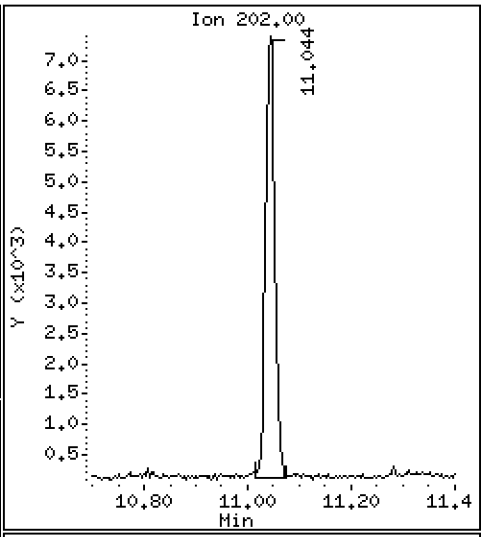
Column phase: Rxi-17sil

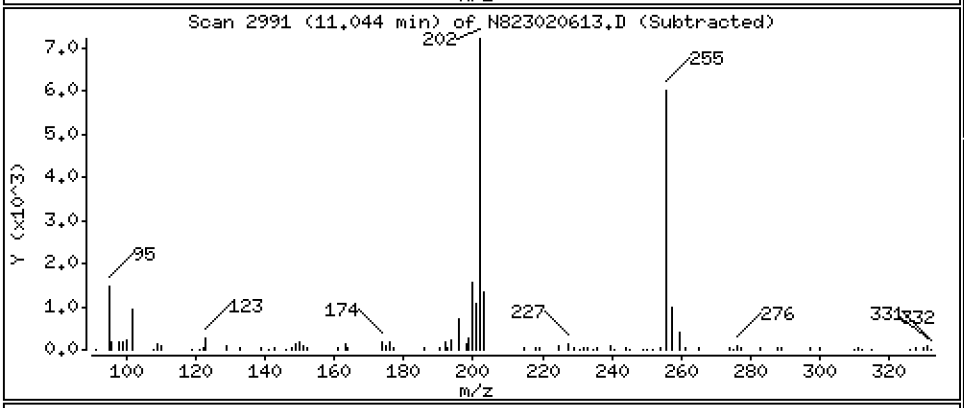
Column diameter: 0.25

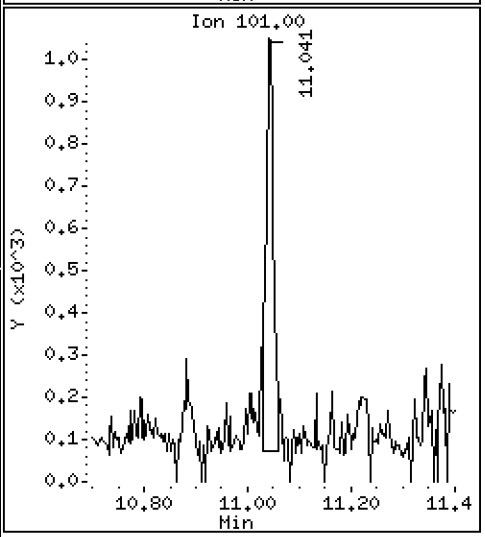
22 Fluoranthene

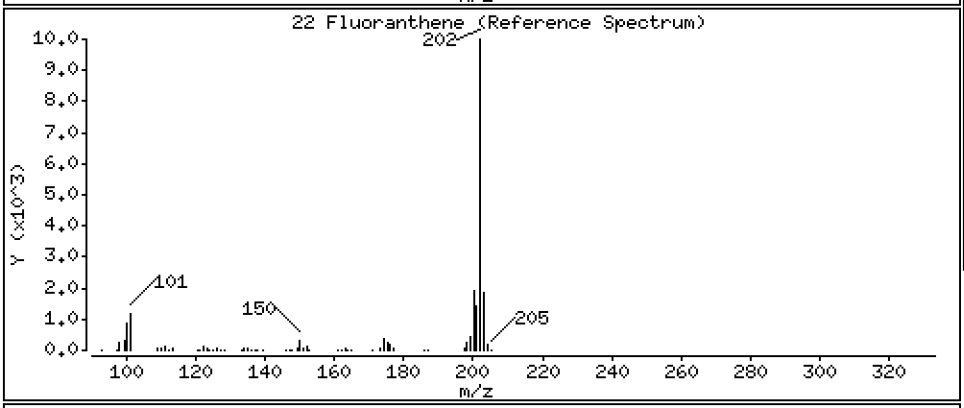
Concentration: 0.3582 ug/mL

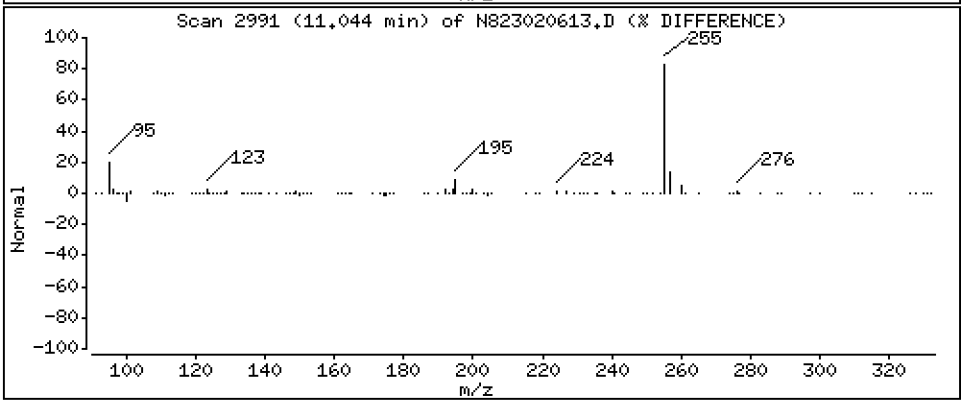












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

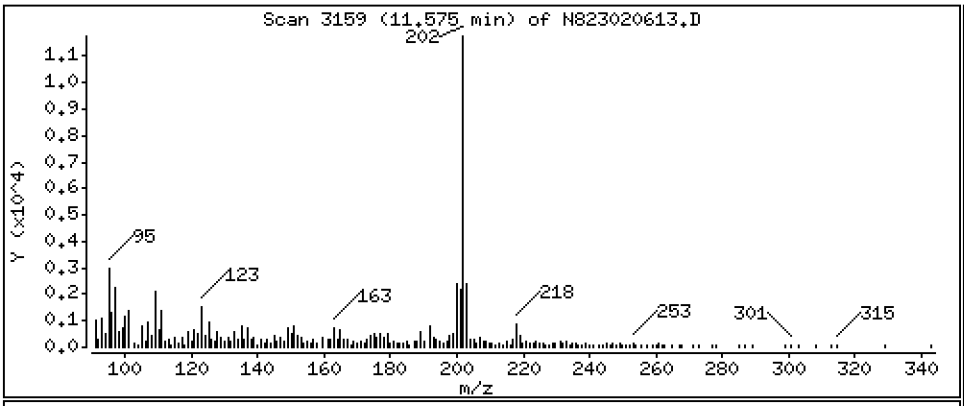
Operator: JZ

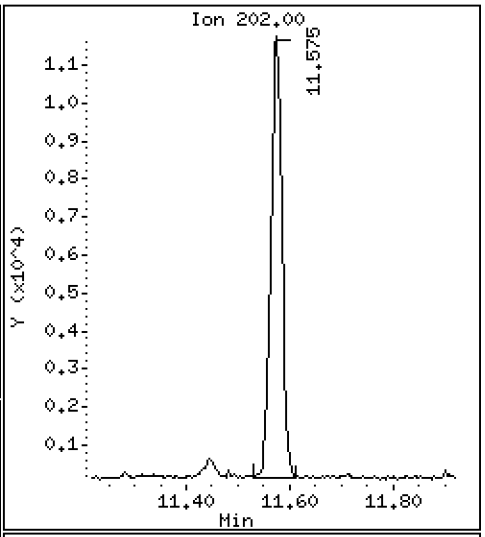
Column phase: Rxi-17sil

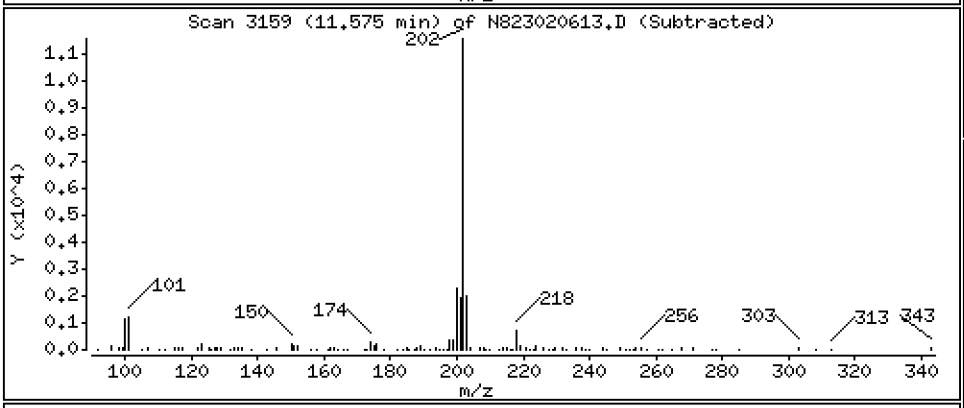
Column diameter: 0.25

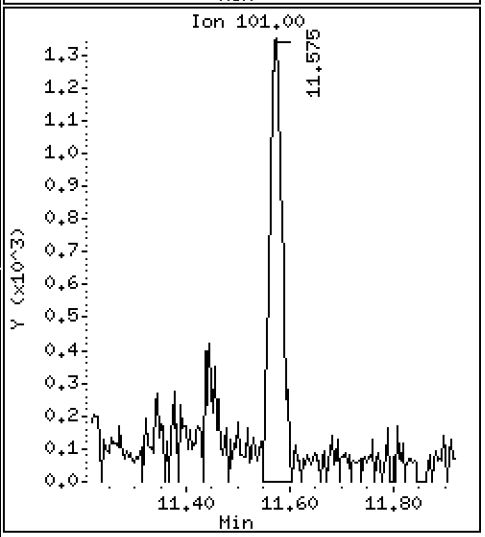
23 Pyrene

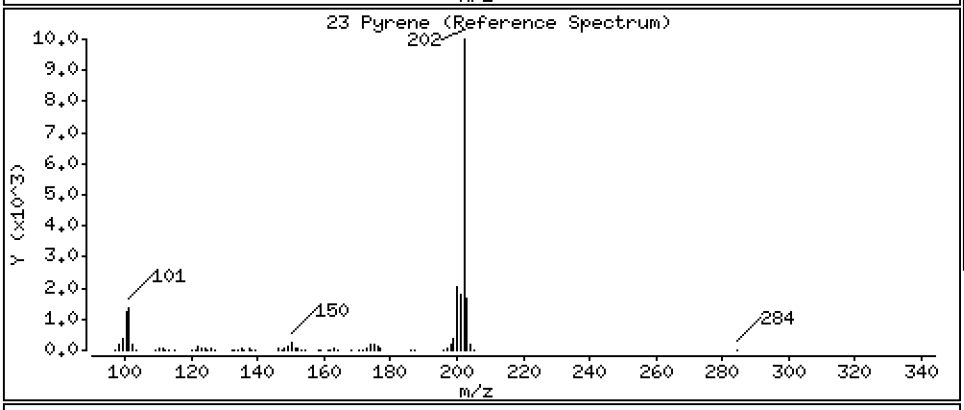
Concentration: 1.204 ug/mL

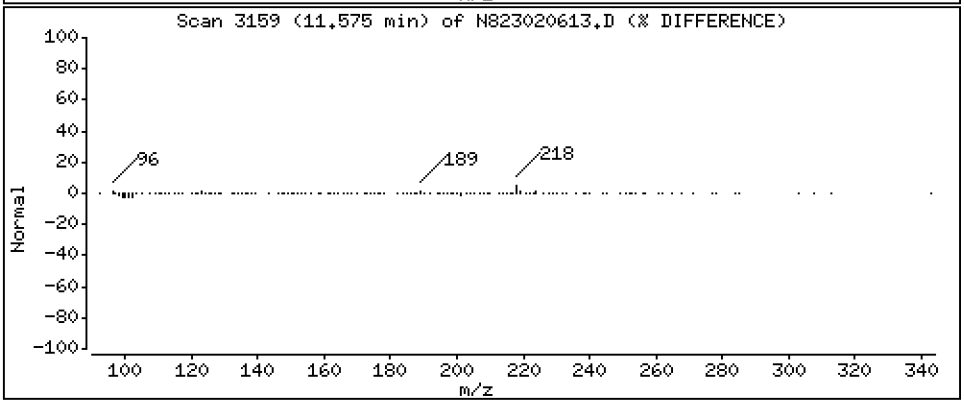












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

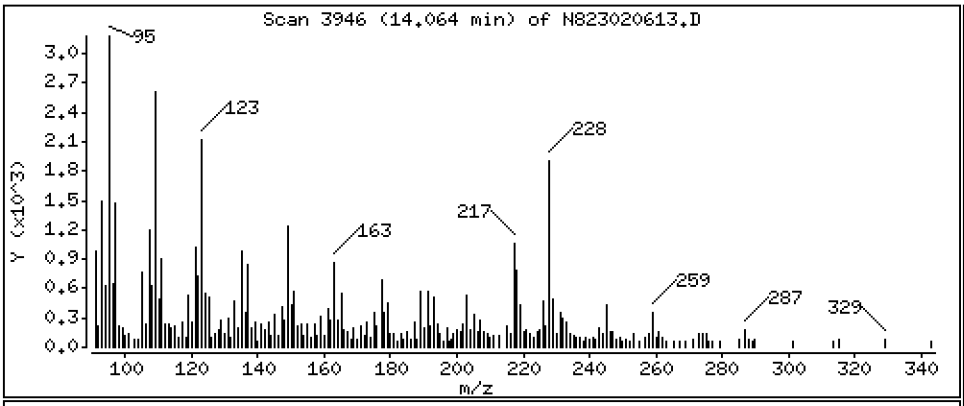
Operator: JZ

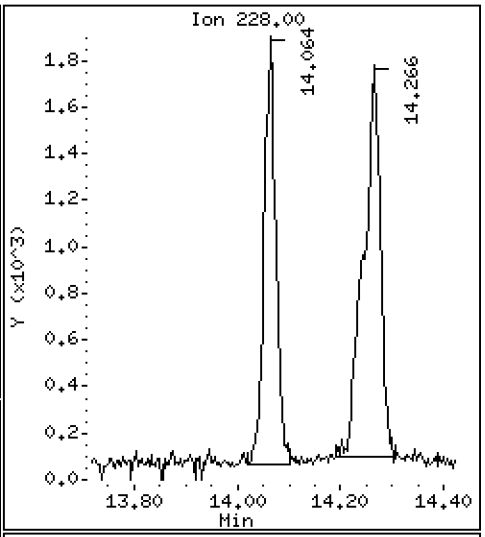
Column phase: Rxi-17sil

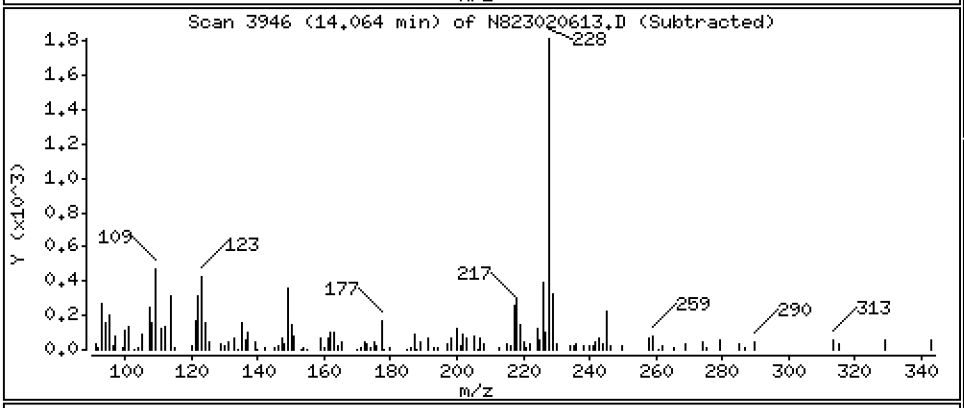
Column diameter: 0.25

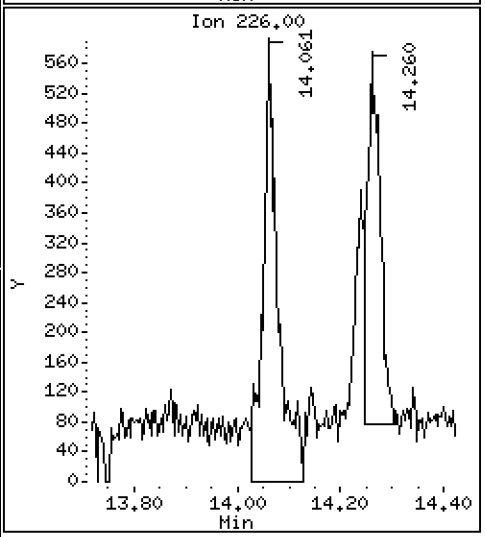
24 Benzo(a)anthracene

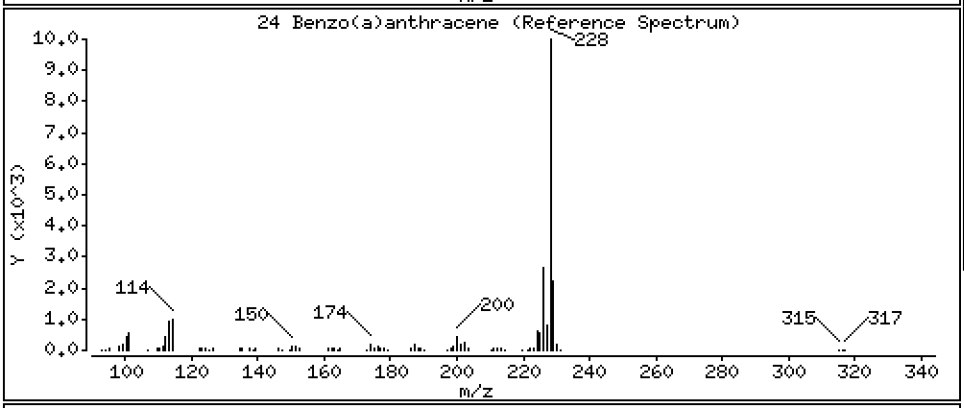
Concentration: 0.2194 ug/mL

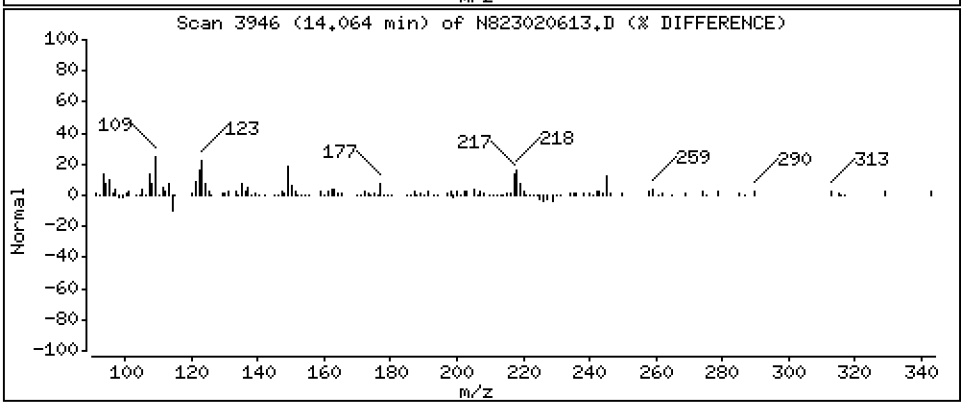












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

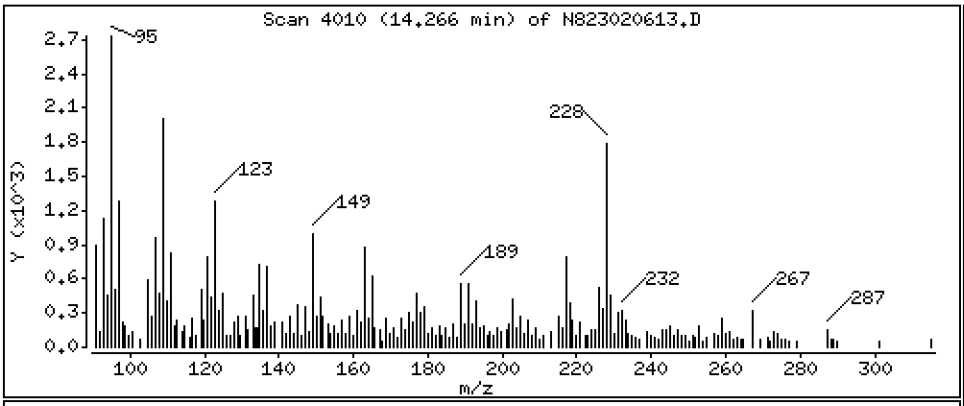
Operator: JZ

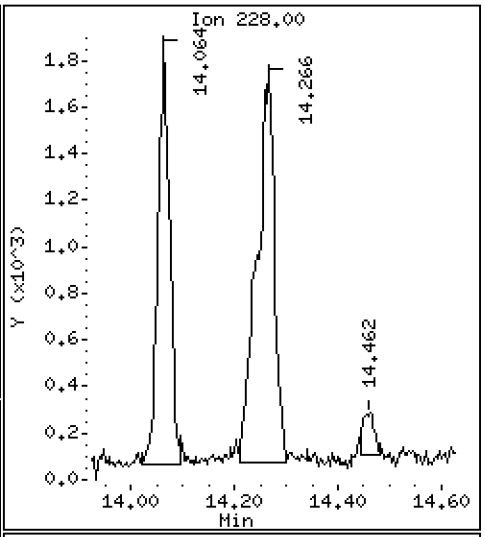
Column phase: Rxi-17sil

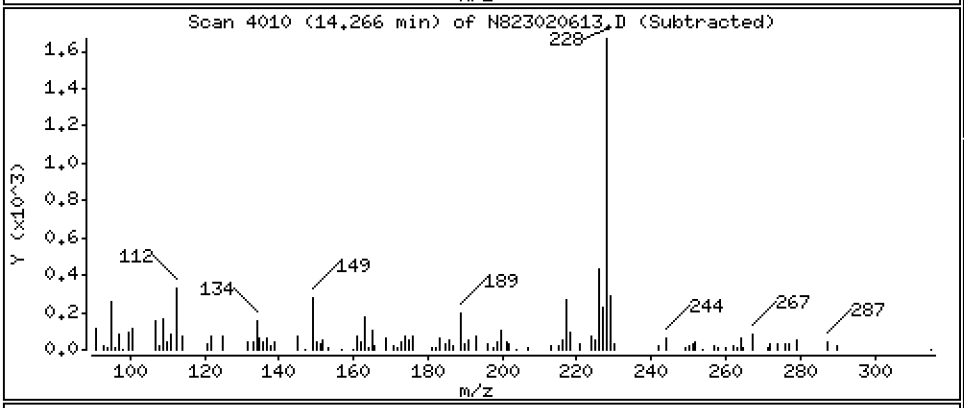
Column diameter: 0.25

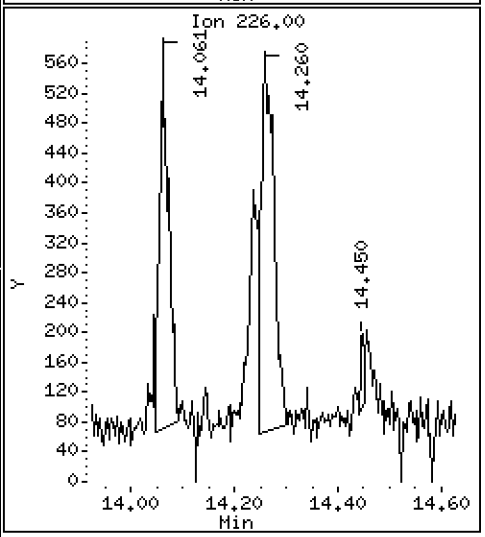
27 Chrysene

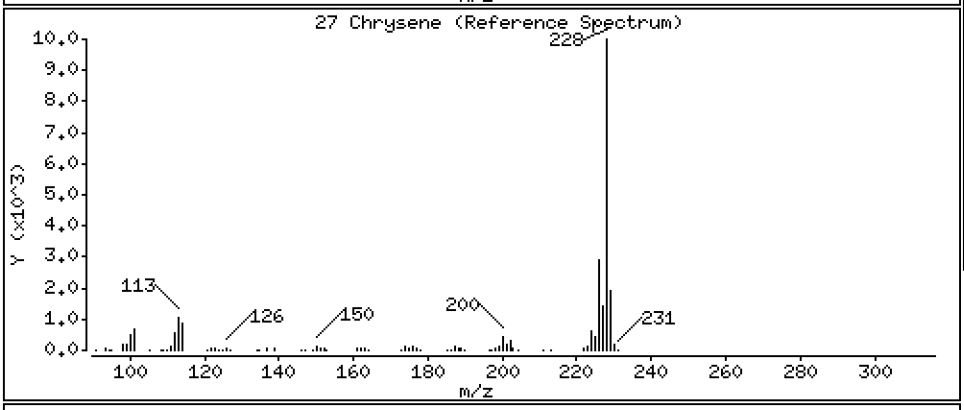
Concentration: 0.2807 ug/mL

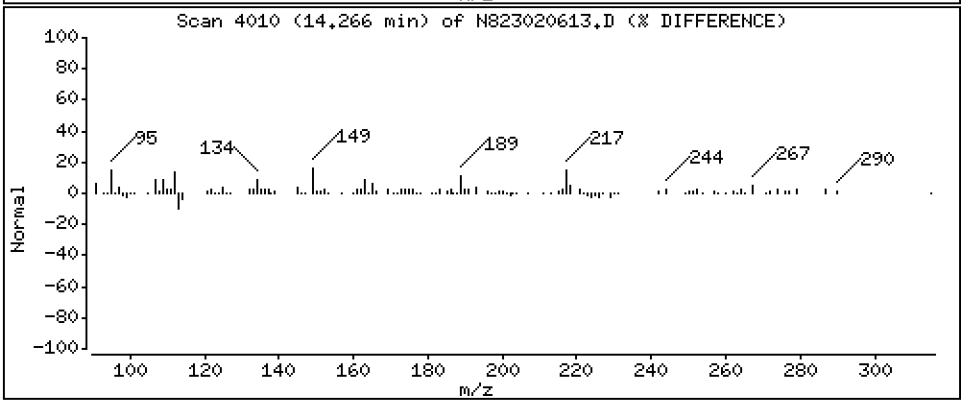












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

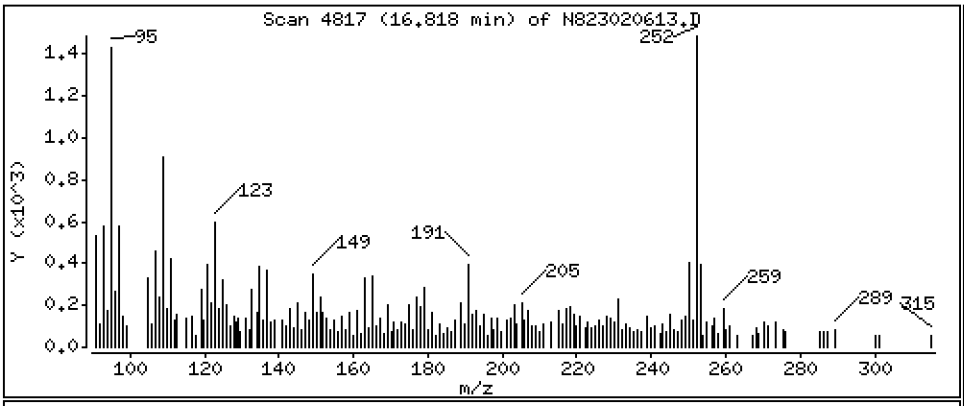
Operator: JZ

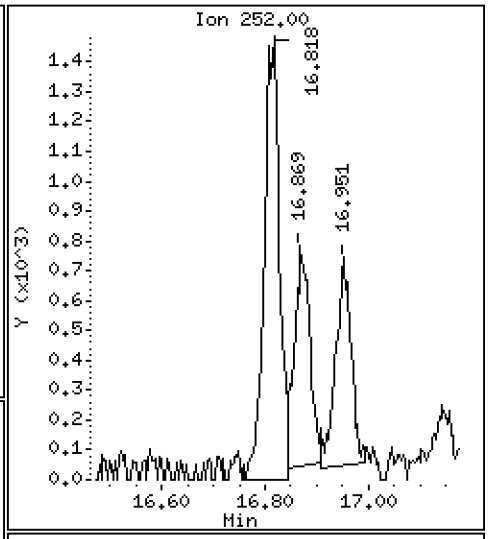
Column phase: Rxi-17sil

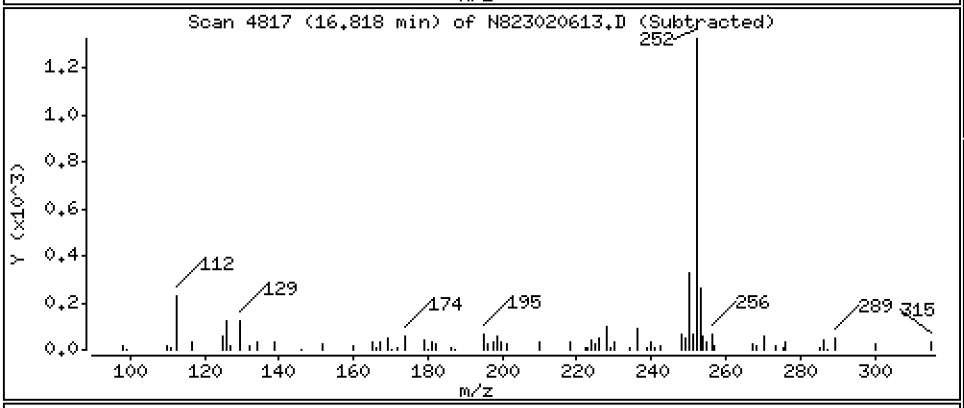
Column diameter: 0.25

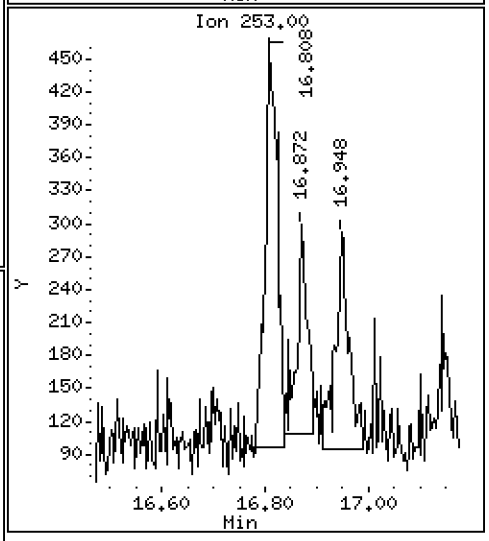
28 Benzo(b)fluoranthene

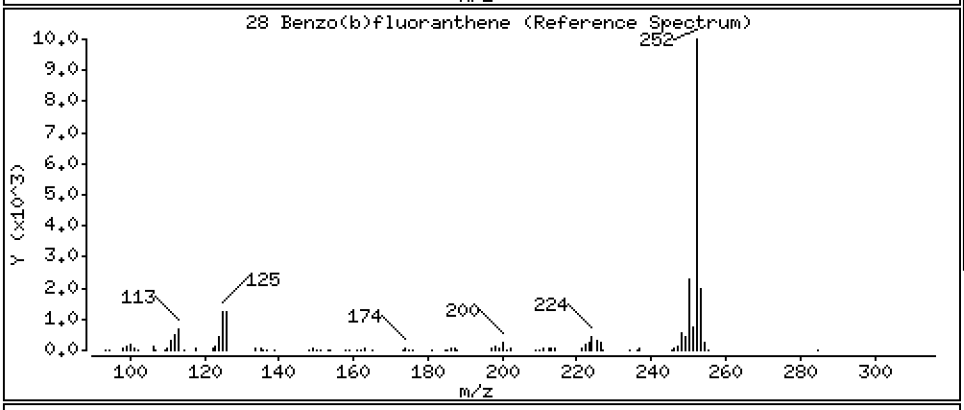
Concentration: 0.2386 ug/mL

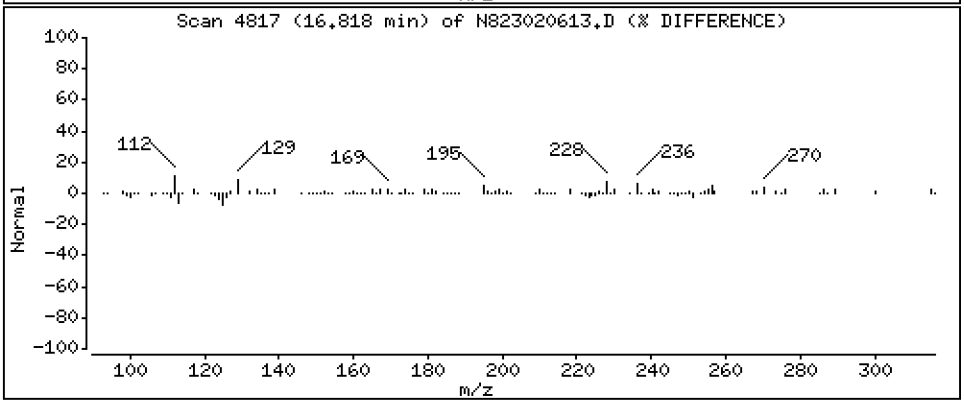












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020613.D

Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

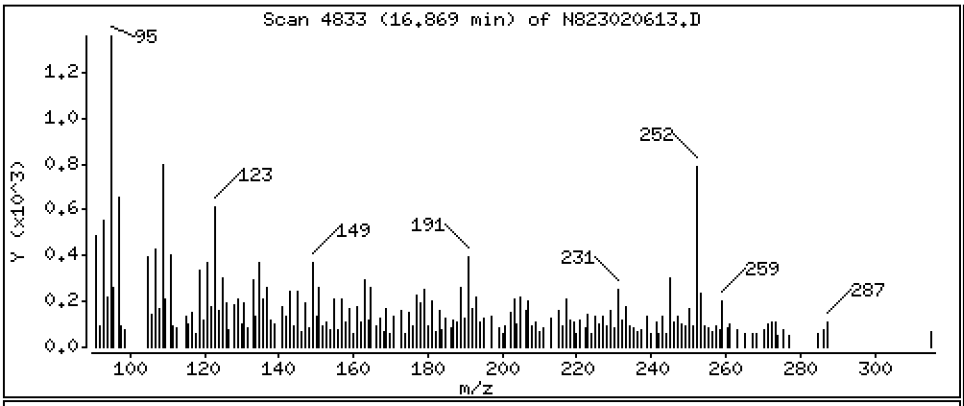
Operator: JZ

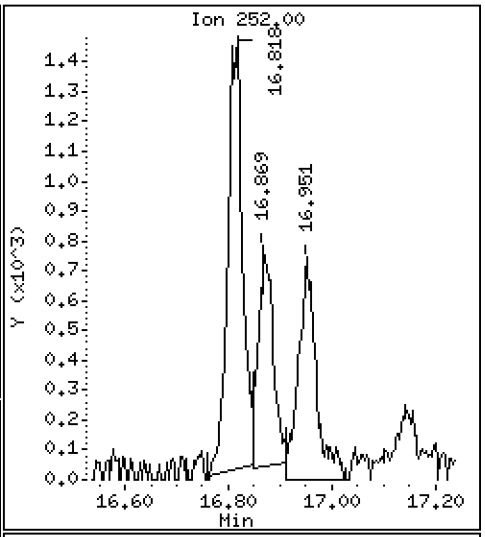
Column phase: Rxi-17sil

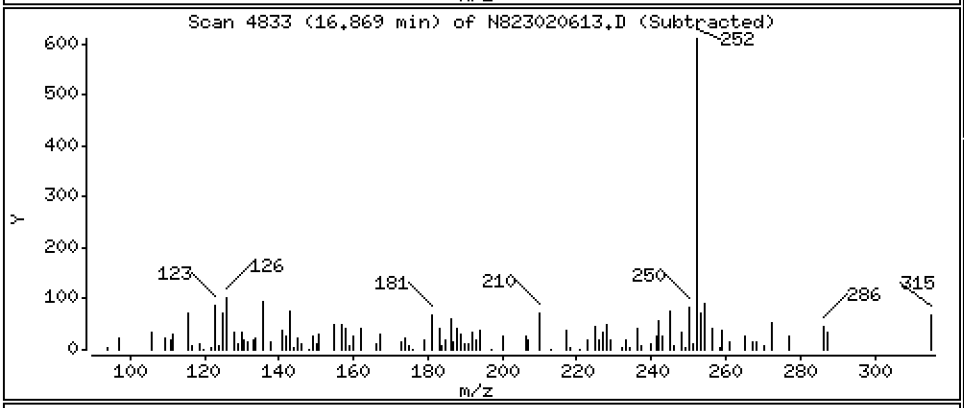
Column diameter: 0.25

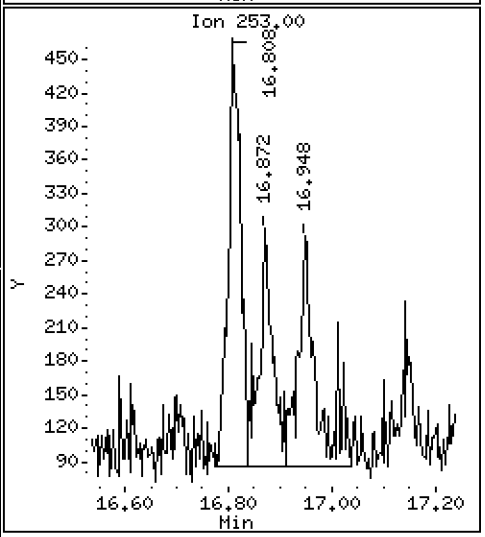
29 Benzo(k)fluoranthene

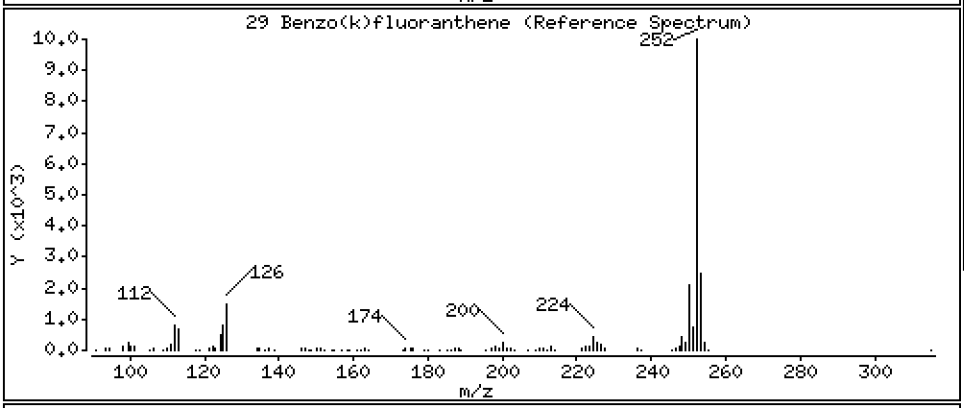
Concentration: 0.1203 ug/mL

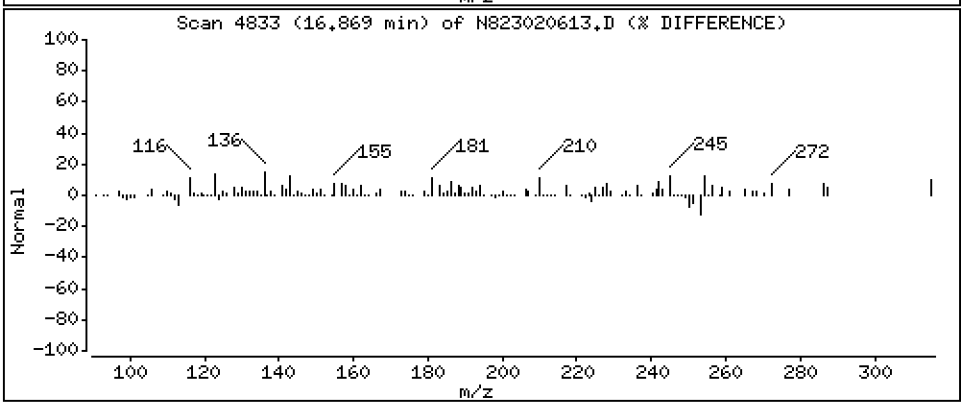












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

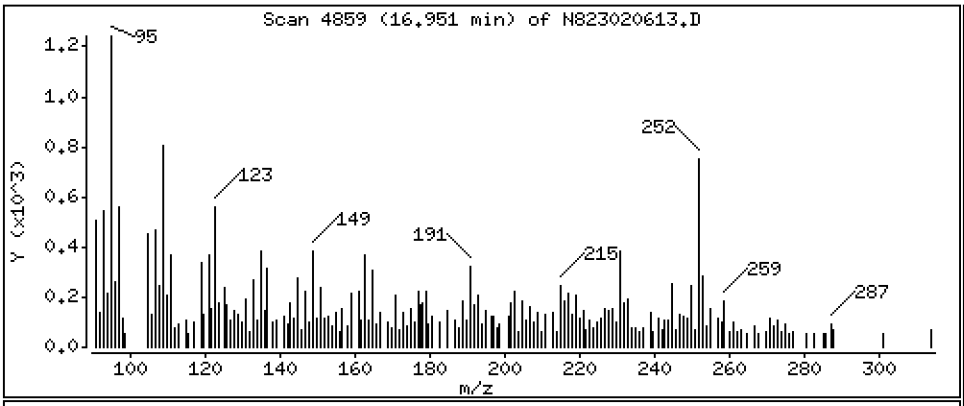
Operator: JZ

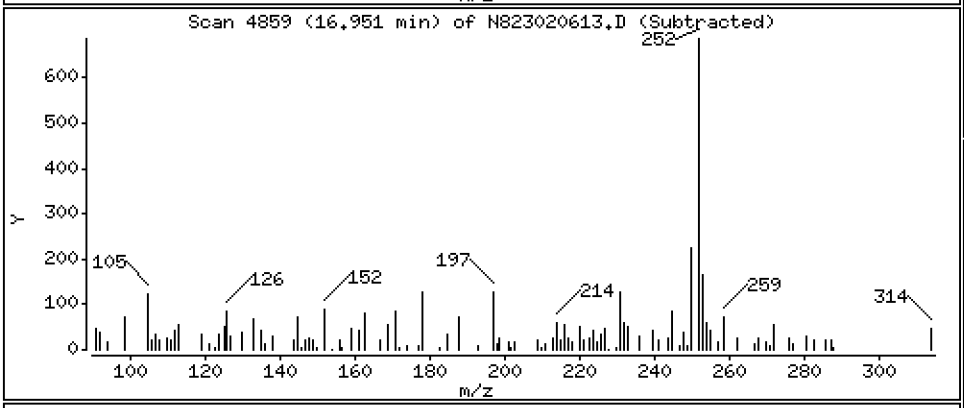
Column phase: Rxi-17sil

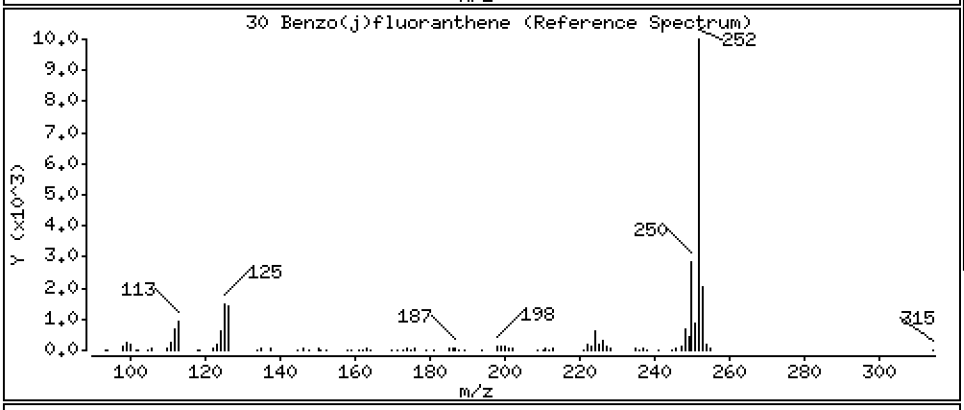
Column diameter: 0.25

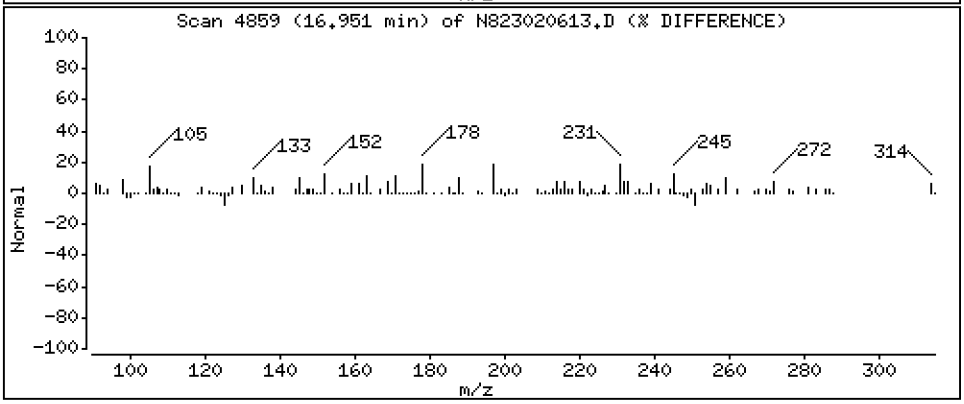
30 Benzo(j)fluoranthene

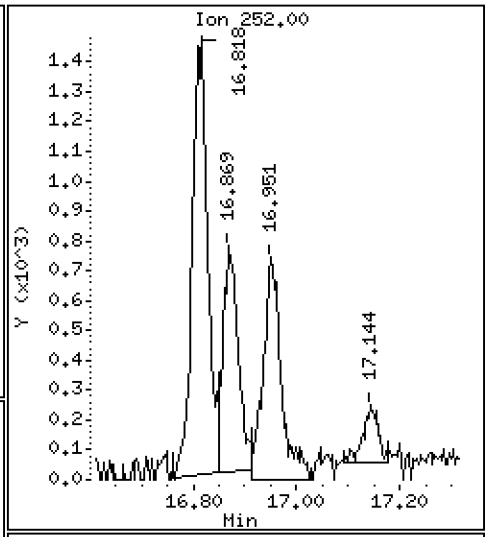
Concentration: 0.1601 ug/mL

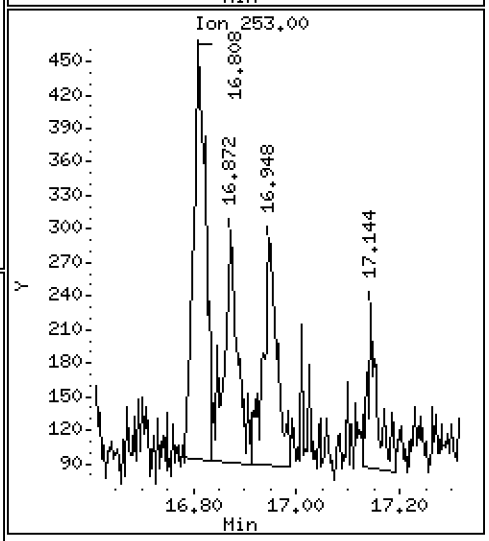












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

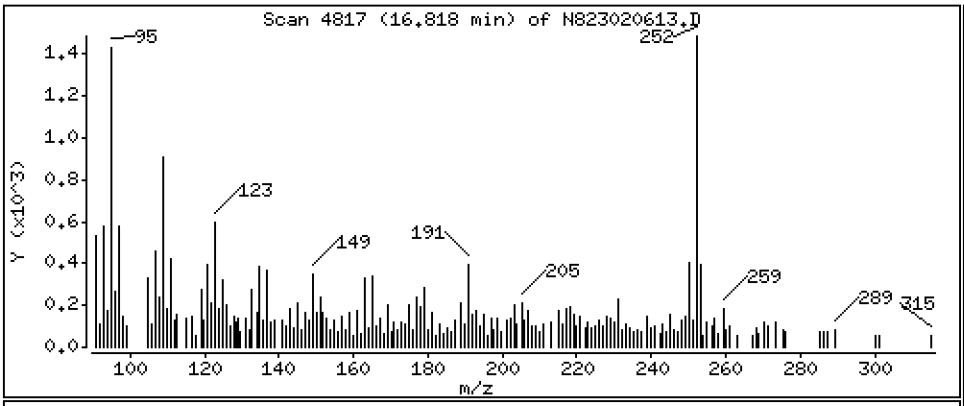
Operator: JZ

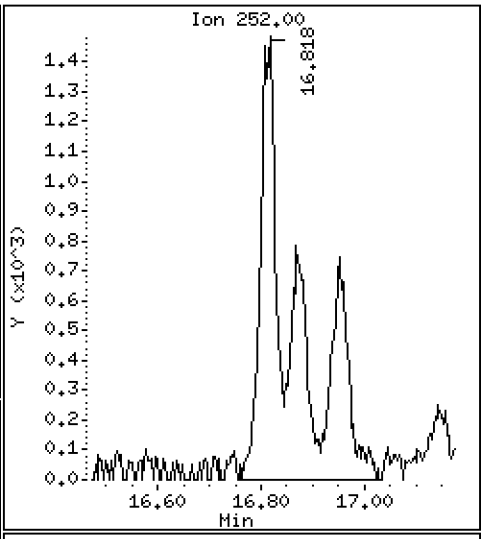
Column phase: Rxi-17sil

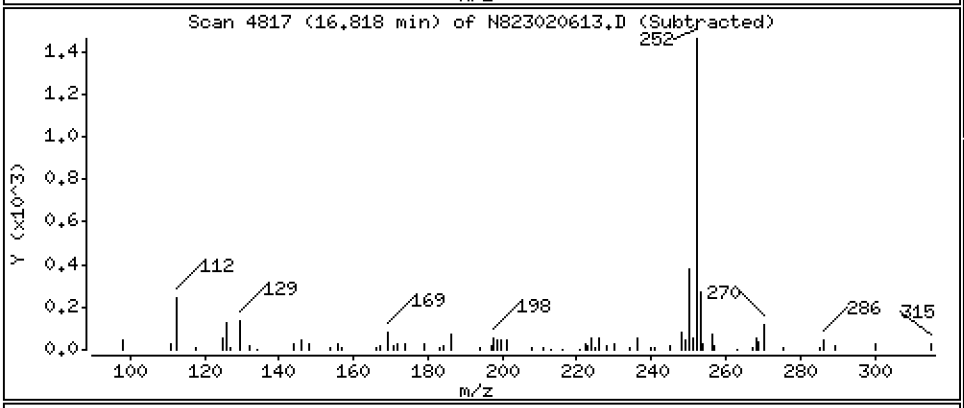
Column diameter: 0.25

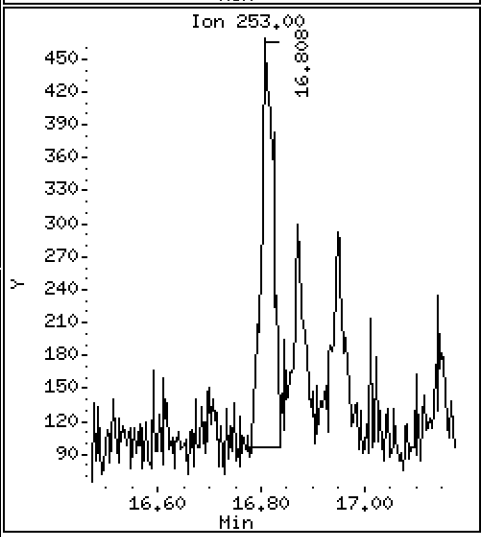
31 Total Benzofluoranthenes

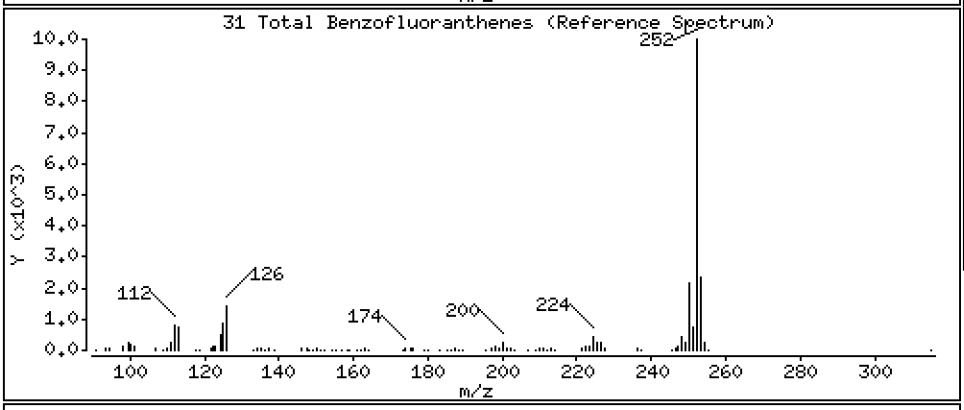
Concentration: 0.5420 ug/mL

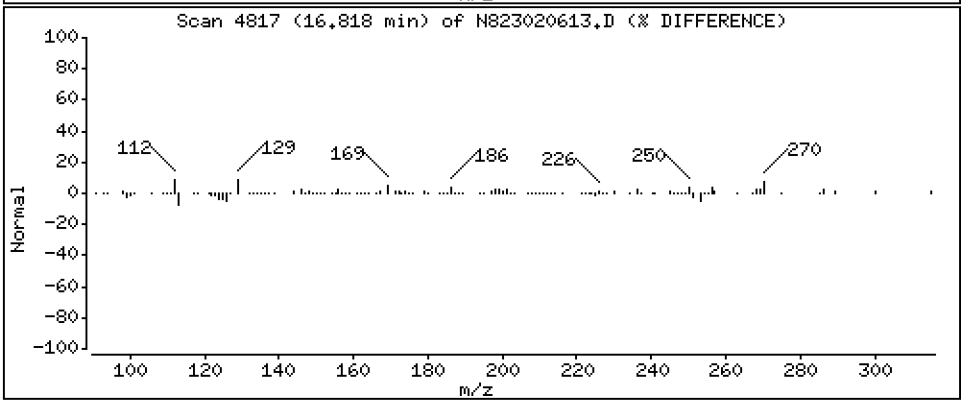












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

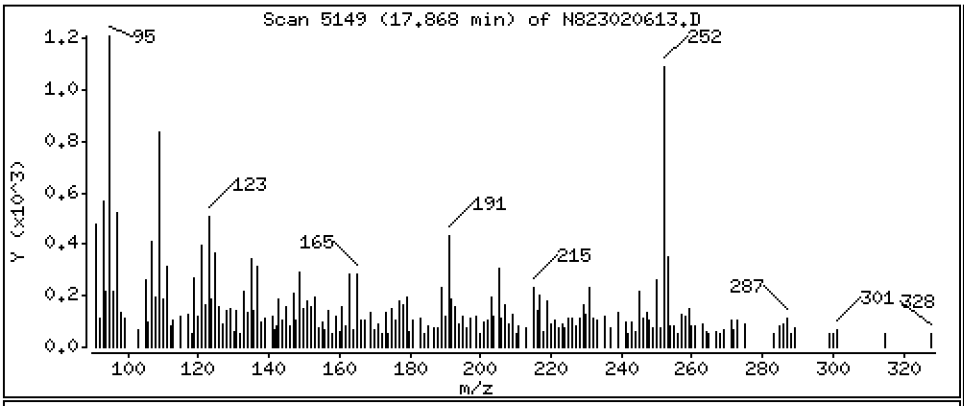
Operator: JZ

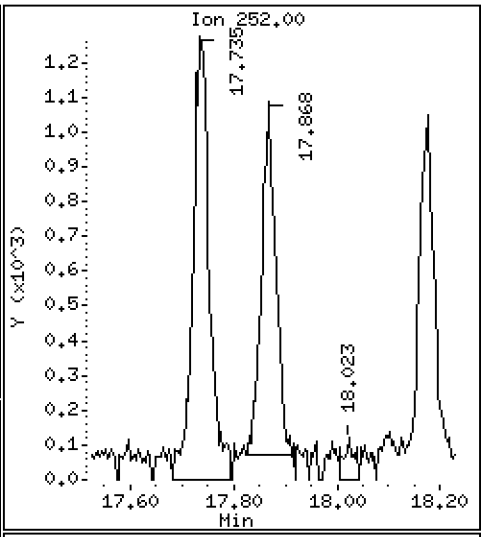
Column phase: Rxi-17sil

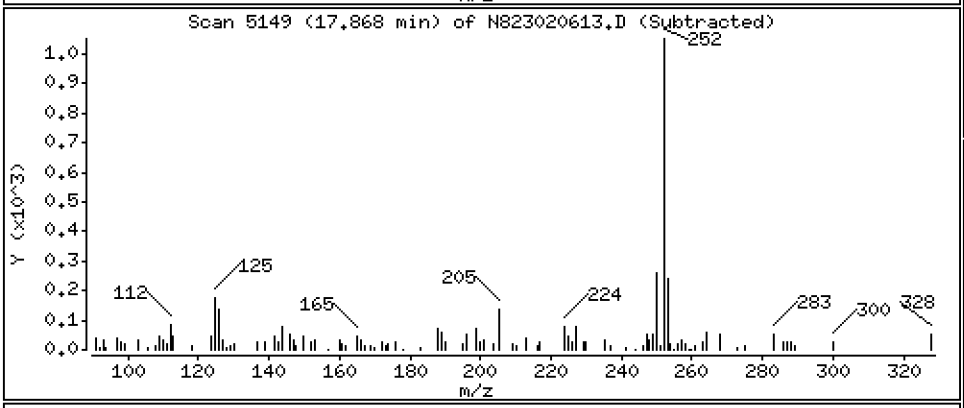
Column diameter: 0.25

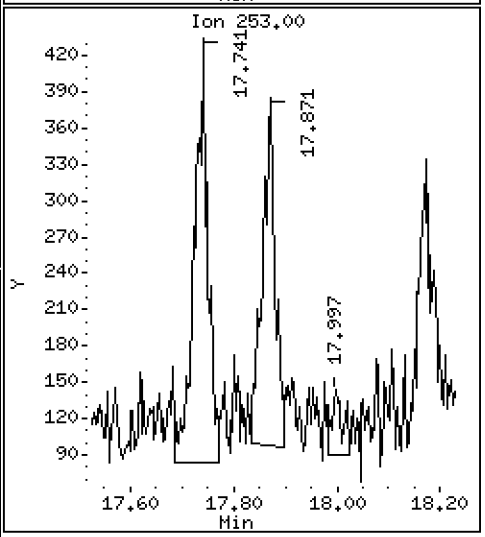
32 Benzo(a)pyrene

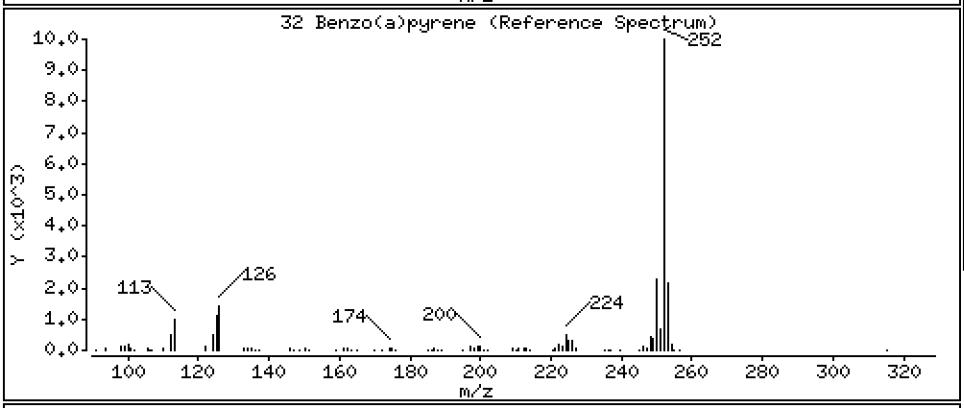
Concentration: 0.1711 ug/mL

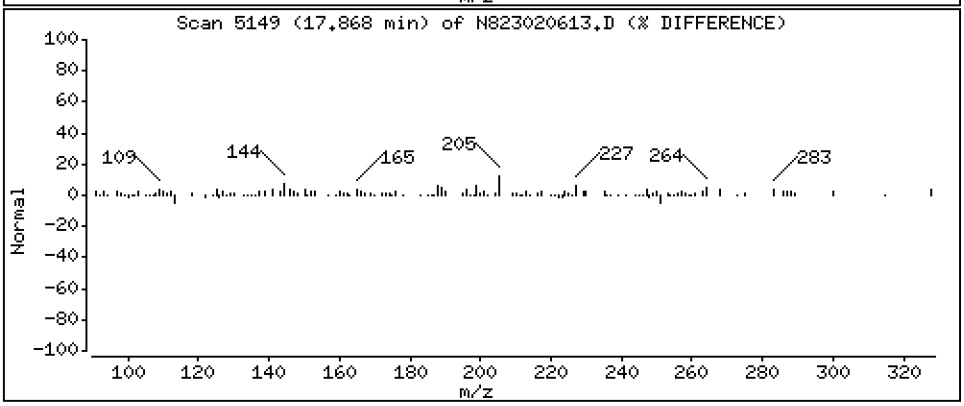












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

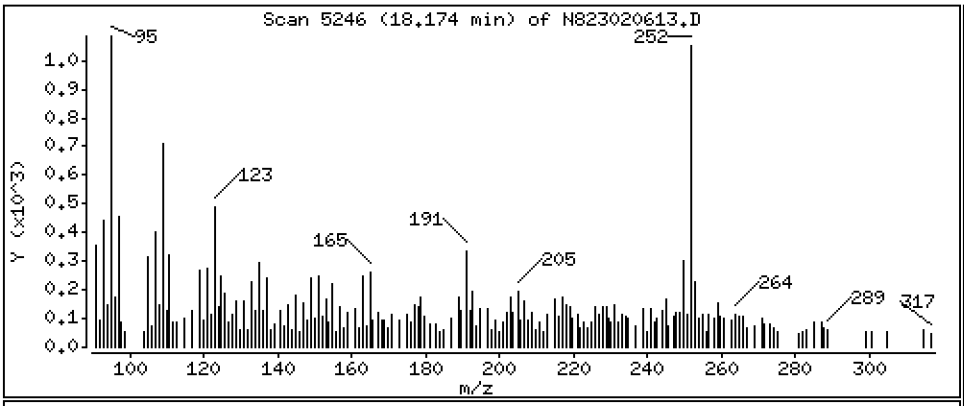
Operator: JZ

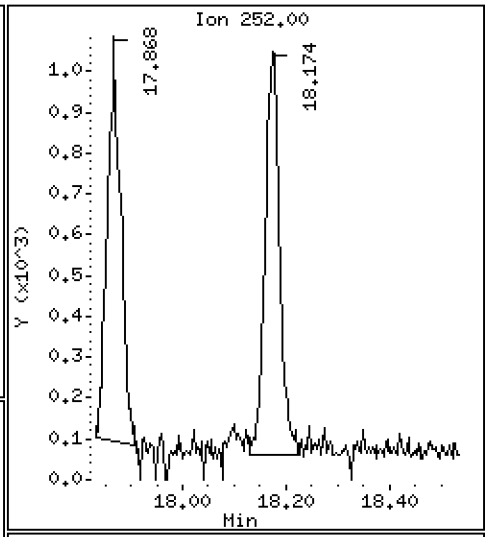
Column phase: Rxi-17sil

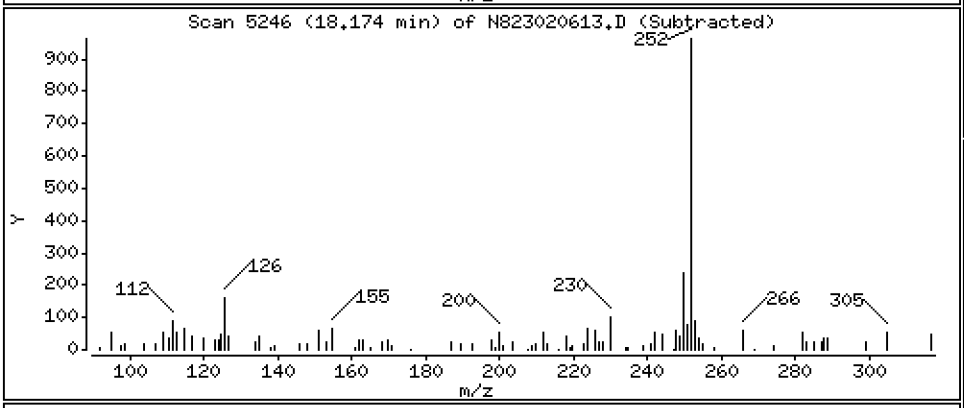
Column diameter: 0.25

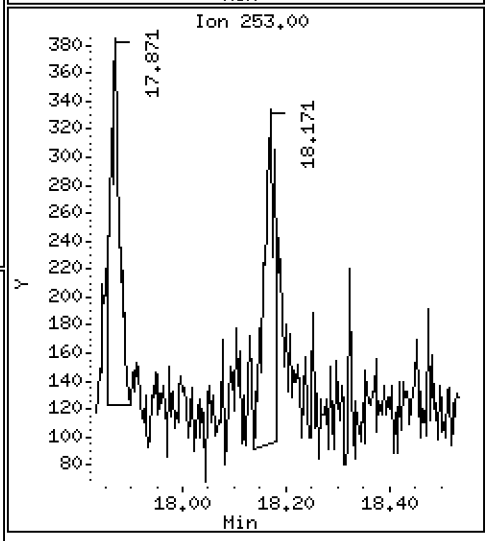
35 Perylene

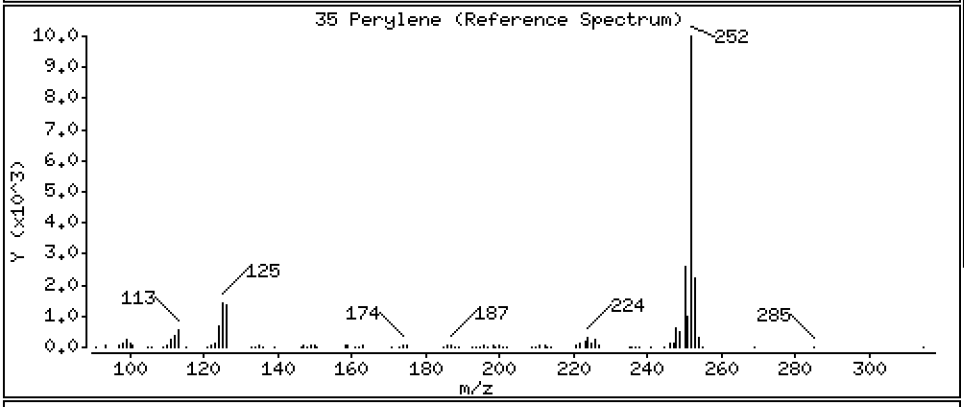
Concentration: 0.1611 ug/mL

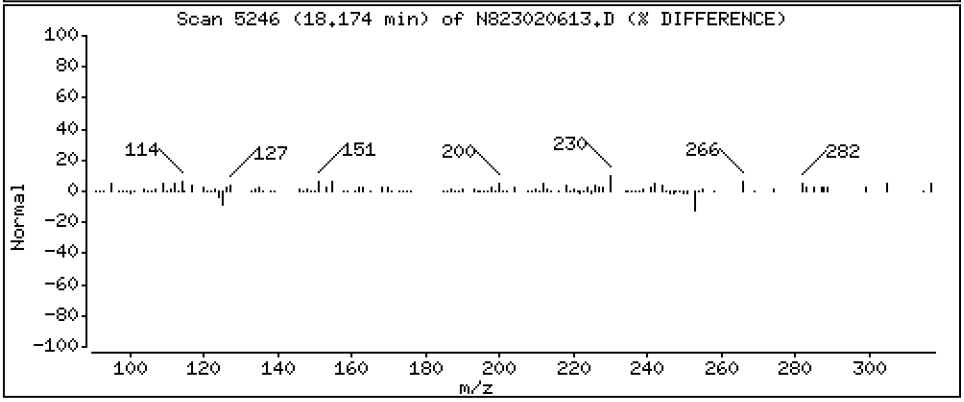












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

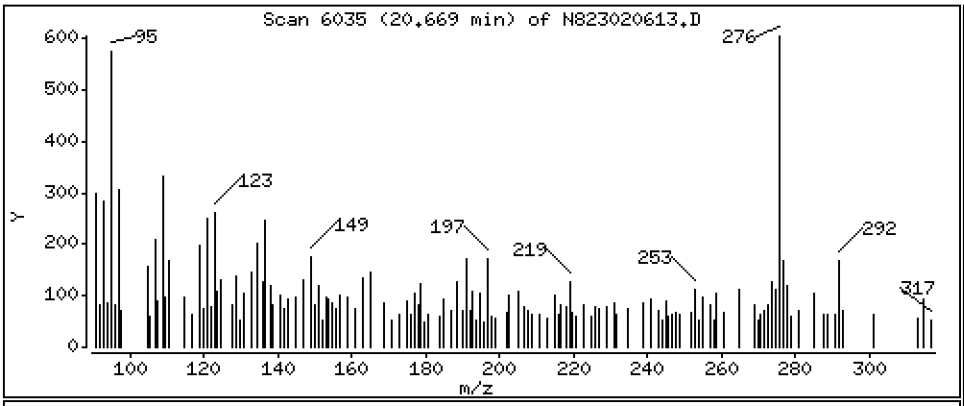
Operator: JZ

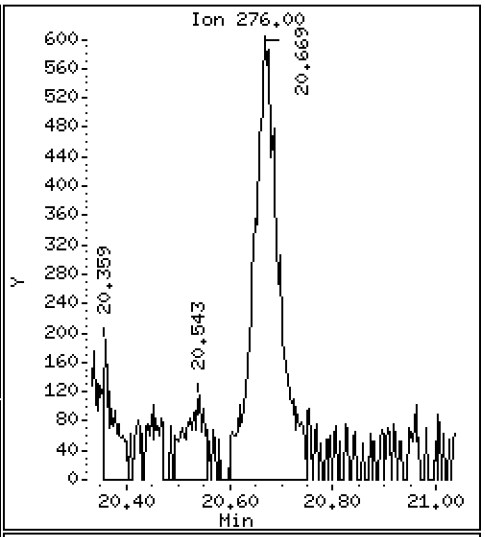
Column phase: Rxi-17sil

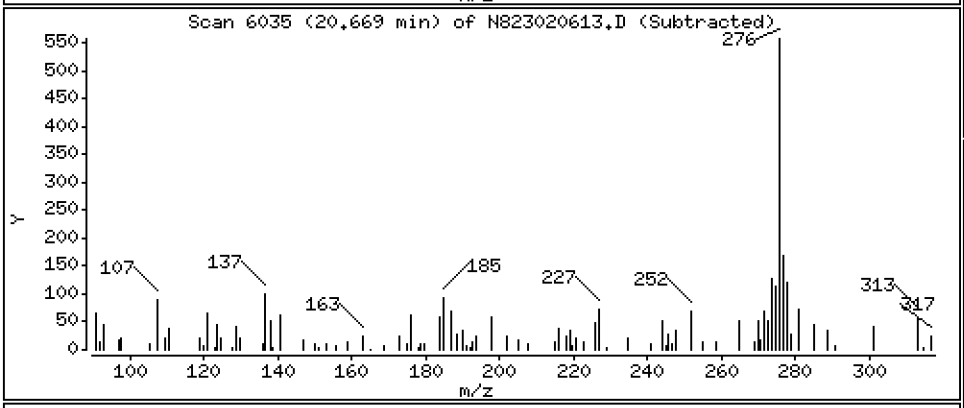
Column diameter: 0.25

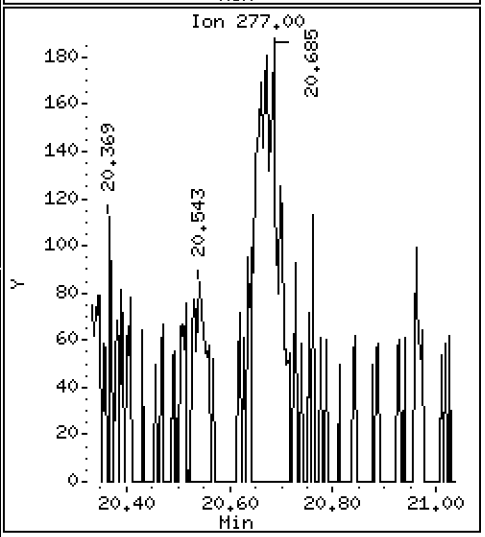
37 Indeno(1,2,3-cd)pyrene

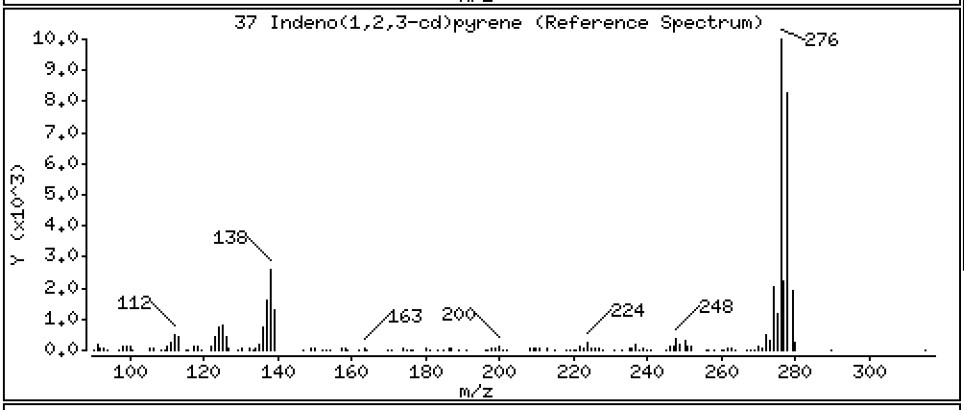
Concentration: 0.1593 ug/mL

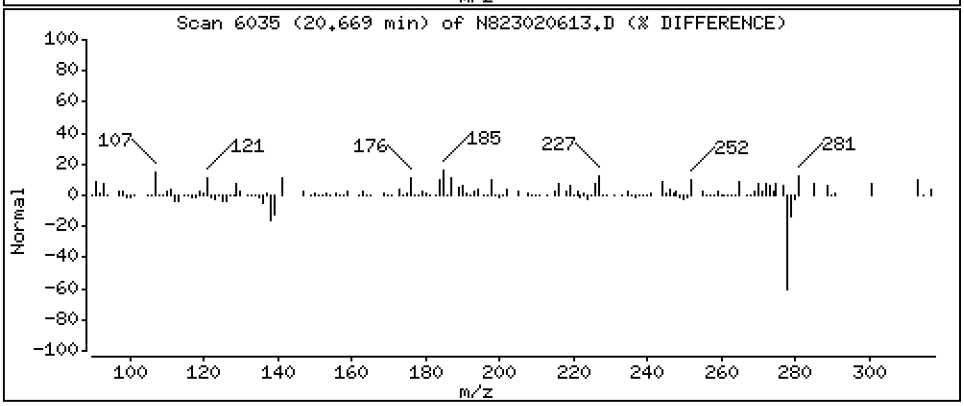












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

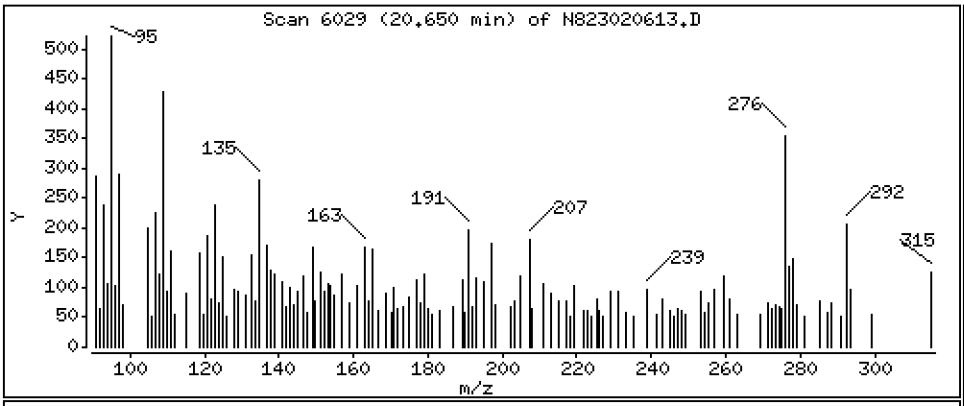
Operator: JZ

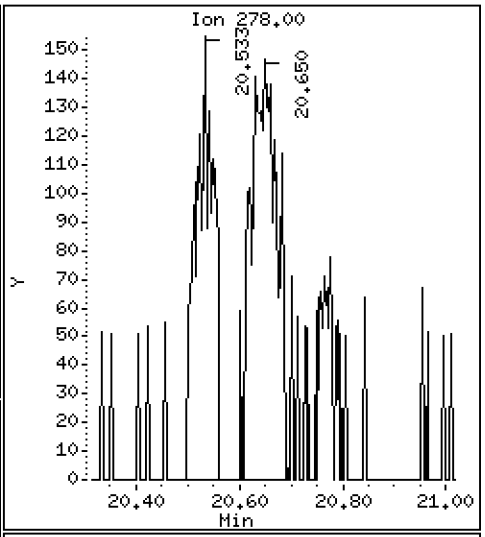
Column phase: Rxi-17sil

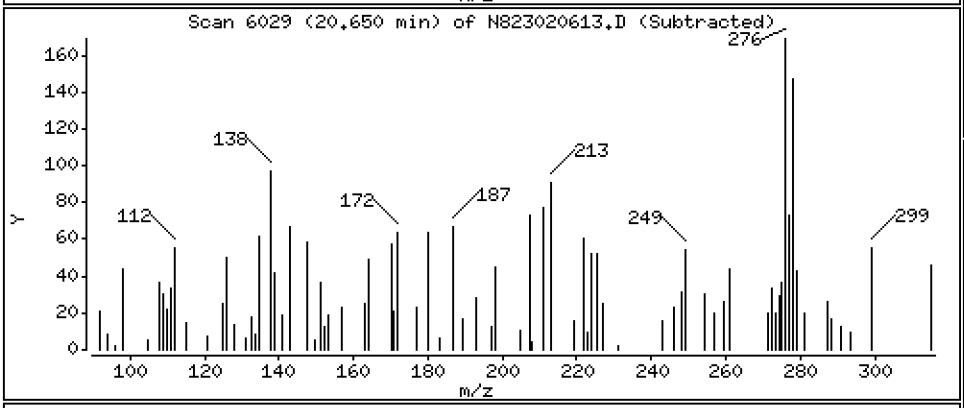
Column diameter: 0.25

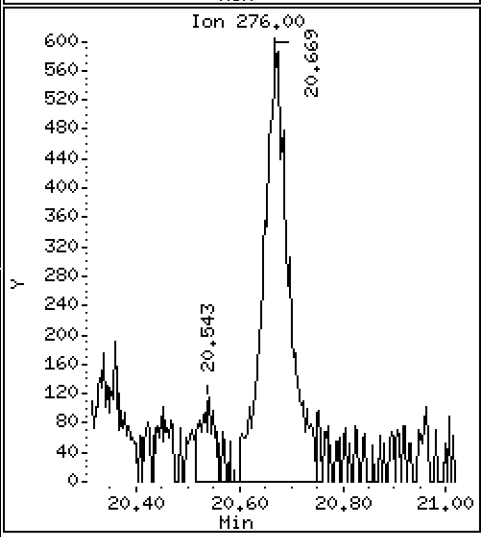
38 Dibenzo(a,h)anthracene

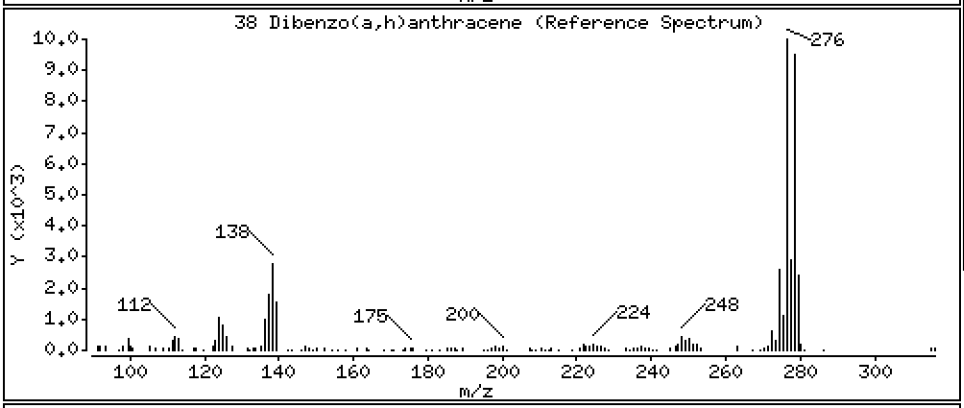
Concentration: 0.04563 ug/mL

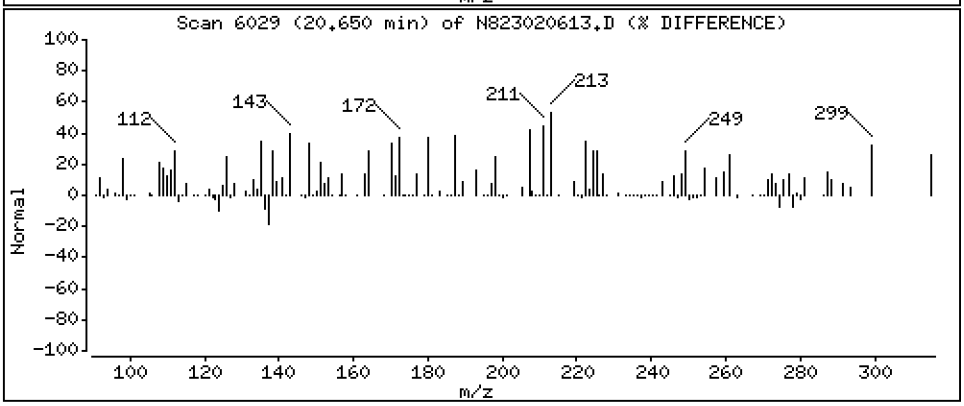












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Date : 06-FEB-2023 18:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-02

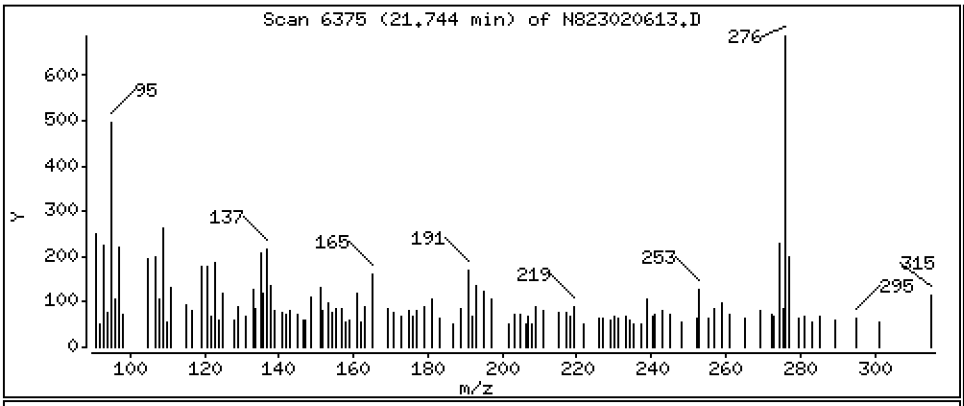
Operator: JZ

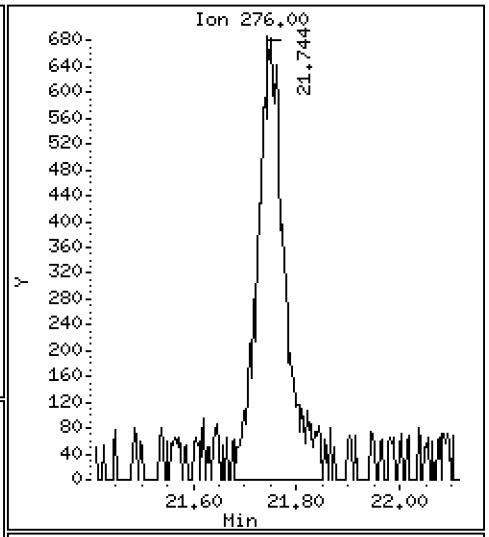
Column phase: Rxi-17sil

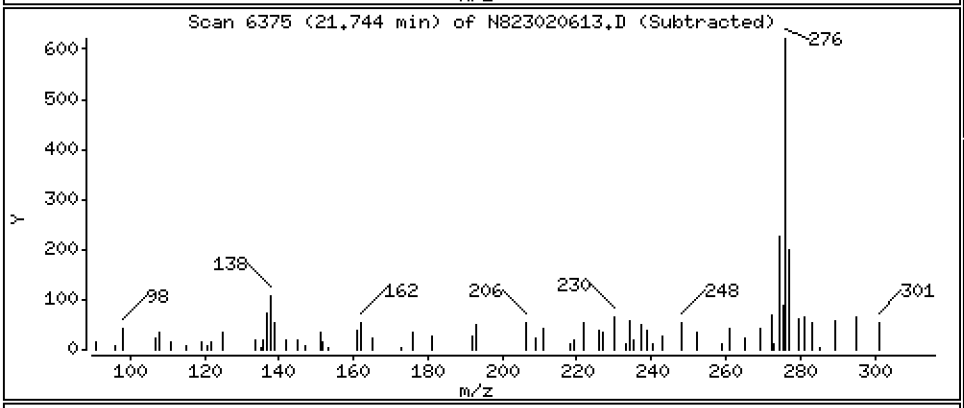
Column diameter: 0.25

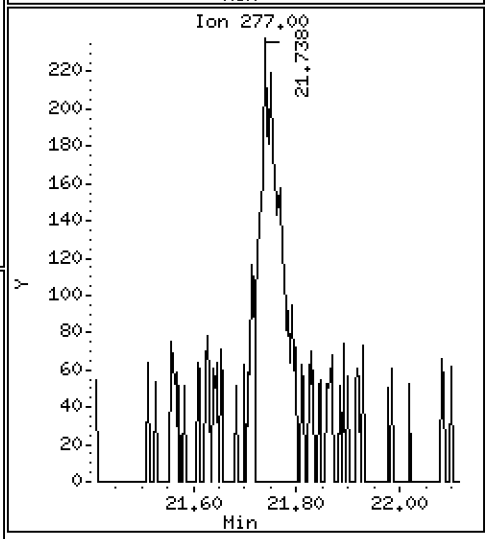
39 Benzo(g,h,i)perylene

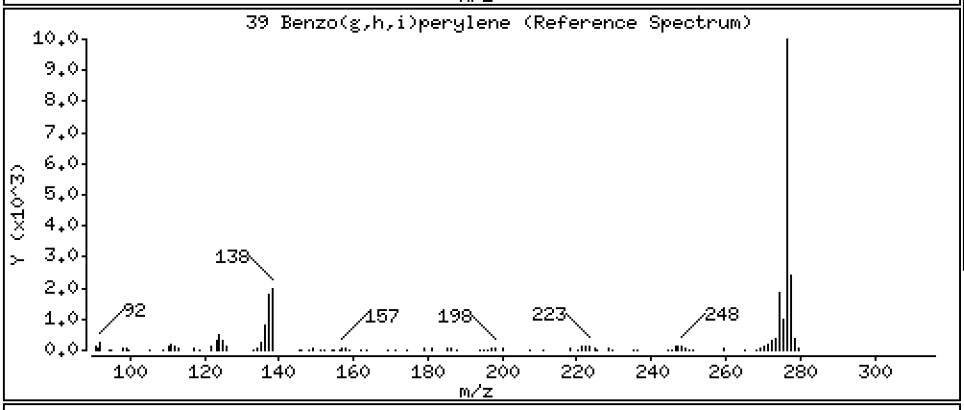
Concentration: 0.2188 ug/mL

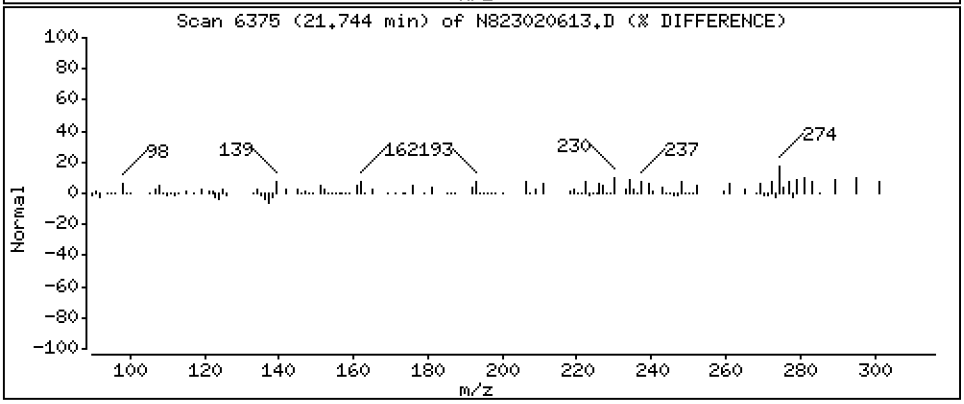












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020613.D
Lab Smp Id: 23A0207-02
Inj Date : 06-FEB-2023 18:12
Operator : JZ Inst ID: nt8.i
Smp Info : 23A0207-02
Misc Info : 23-
Comment : 1ul Injection
Method : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 13:04 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.887	4.900	(1.000)	52443	2.00000	
	2 Naphthalene	128	4.916	4.928	(1.006)	1288	0.05282	0.05282
$	3 2-Methylnaphthalene-d10	152	5.624	5.634	(1.151)	40114	2.80468	2.805
	4 2-Methylnaphthalene	141	5.668	5.681	(1.160)	595	0.04436	0.04436(M)
	5 1-methylnaphthalene	141	5.871	5.880	(1.201)	336	0.02468	0.02468
	9 Acenaphthylene	152	7.072	7.082	(0.985)	418	0.01786	0.01786
*	10 Acenaphthene-d10	164	7.183	7.189	(1.000)	30994	2.00000	
	11 Acenaphthene	153	7.230	7.240	(1.007)	3310	0.21107	0.2111
	12 Dibenzofuran	168	7.382	7.392	(1.028)	818	0.03434	0.03434
	14 Fluorene	166	7.863	7.869	(1.095)	789	0.04265	0.04265
*	15 Phenanthrene-d10	188	9.222	9.232	(1.000)	49132	2.00000	
	16 Phenanthrene	178	9.260	9.267	(1.004)	4207	0.17529	0.1753
	17 Anthracene	178	9.301	9.308	(1.009)	1499	0.06875	0.06875(M)
	19 Carbazole	167	9.817	9.823	(1.064)	717	0.03587	0.03587
	22 Fluoranthene	202	11.044	11.050	(1.197)	9357	0.35817	0.3582
$	21 Fluoranthene-d10	212	11.006	11.009	(1.193)	65465	3.02004	3.020
	23 Pyrene	202	11.575	11.569	(0.816)	17584	1.20433	1.204
	24 Benzo(a)anthracene	228	14.063	14.070	(0.991)	2903	0.21936	0.2194
*	25 Chrysene-d12	240	14.193	14.202	(1.000)	23550	2.00000	
	27 Chrysene	228	14.266	14.275	(1.005)	3955	0.28073	0.2807
	28 Benzo(b)fluoranthene	252	16.817	16.824	(0.929)	3042	0.23856	0.2386
	29 Benzo(k)fluoranthene	252	16.868	16.887	(0.932)	1502	0.12025	0.1203
	30 Benzo(j)fluoranthene	252	16.950	16.963	(0.937)	1800	0.16008	0.1601
	31 Total Benzofluoranthenes	252	16.817	16.824	(0.929)	6546	0.54204	0.5420(M)
	32 Benzo(a)pyrene	252	17.867	17.877	(0.987)	1920	0.17110	0.1711
*	33 Perylene-d12	264	18.098	18.107	(1.000)	21895	2.00000	
	35 Perylene	252	18.174	18.183	(1.004)	1940	0.16111	0.1611
$	36 Dibenzo(a,h)anthracene-d14	292	20.539	20.549	(1.135)	34841	4.06123	4.061
	37 Indeno(1,2,3-cd)pyrene	276	20.669	20.684	(1.142)	2037	0.15934	0.1593
	38 Dibenzo(a,h)anthracene	278	20.650	20.666	(1.141)	502	0.04563	0.04563
	39 Benzo(g,h,i)perylene	276	21.744	21.763	(1.201)	2534	0.21878	0.2188

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020613.D
Lab Smp Id: 23A0207-02
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44336	22168	88672	52443	18.29
10 Acenaphthene-d10	26127	13064	52254	30994	18.63
15 Phenanthrene-d10	47424	23712	94848	49132	3.60
25 Chrysene-d12	36794	18397	73588	23550	-35.99
33 Perylene-d12	36636	18318	73272	21895	-40.24

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.89	-0.26
10 Acenaphthene-d10	7.19	6.69	7.69	7.18	-0.09
15 Phenanthrene-d10	9.23	8.73	9.73	9.22	-0.10
25 Chrysene-d12	14.20	13.70	14.70	14.19	-0.07
33 Perylene-d12	18.11	17.61	18.61	18.10	-0.05

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

REVIEW SUMMARY FOR FILE - N823020613.D

Lab ID: 23A0207-02
nt8.i, 20230206A.b\FSIMPNA230119.m,   06-FEB-2023 18:12

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

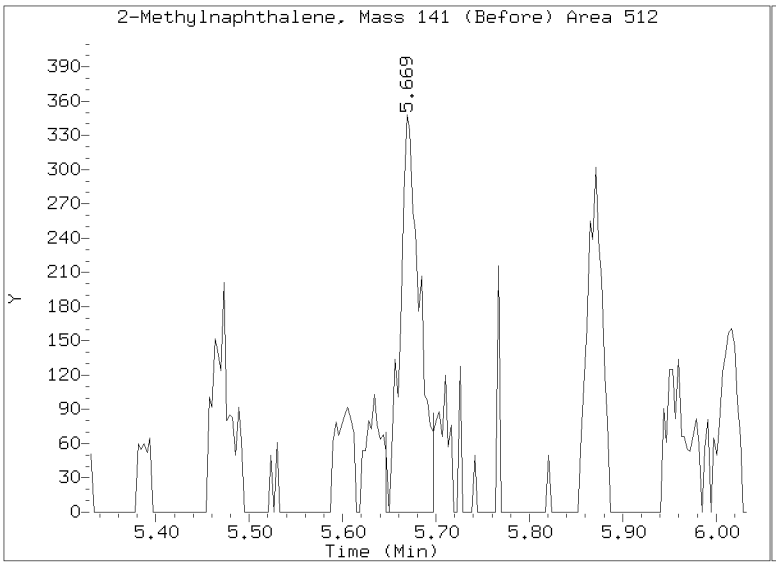
No RRT check performed

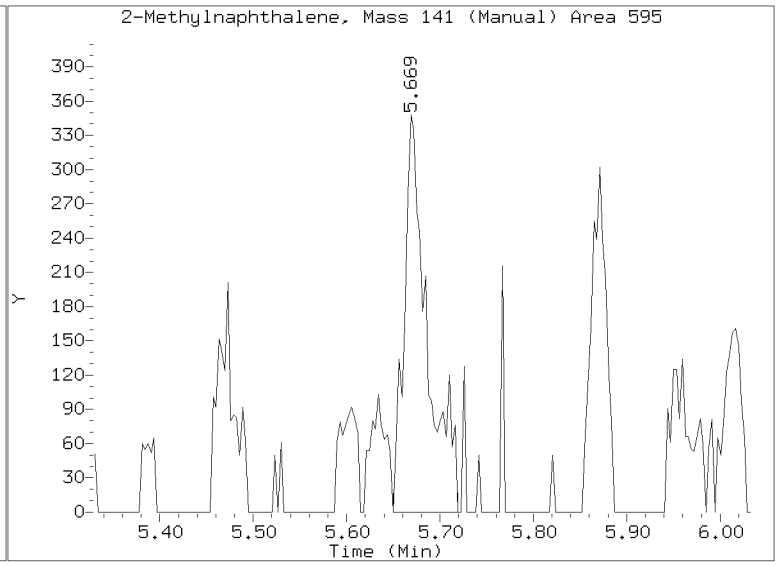
On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

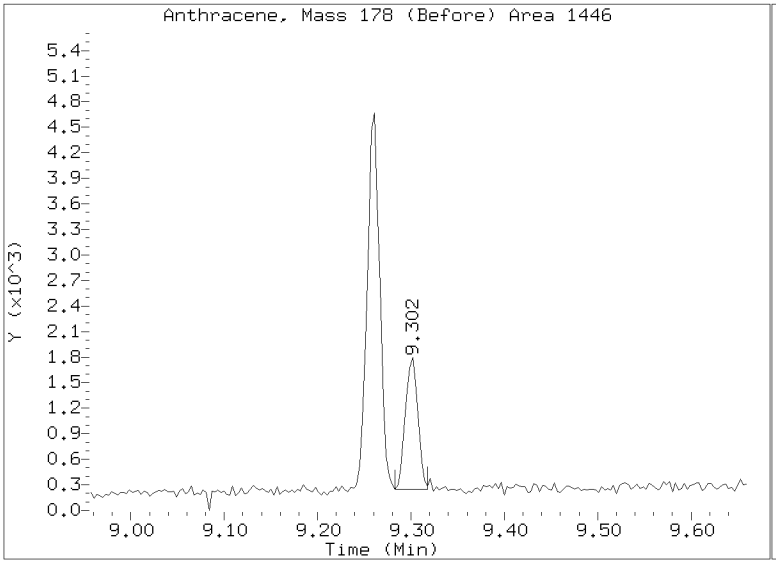
* Only compounds listed in the work order have been verified by the analyst *

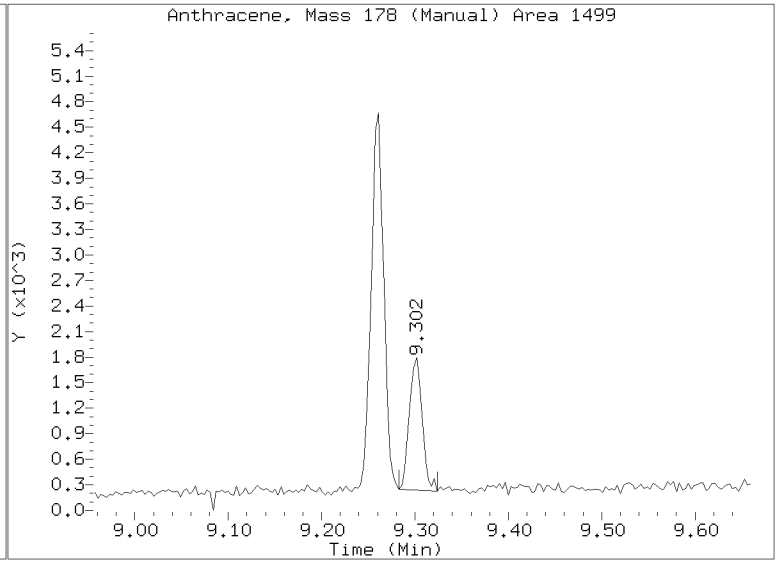
Quant Ion Manual Peak Adjustment Report

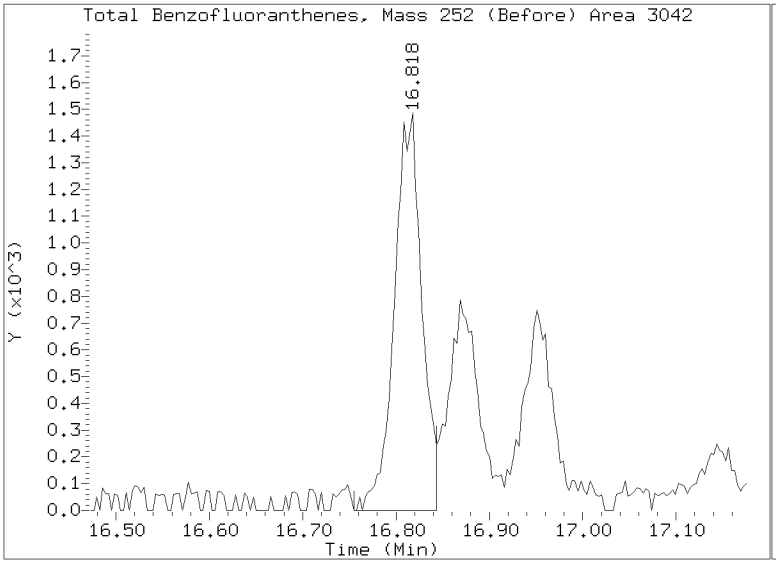
Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020613.D
Injection Date: 06-FEB-2023 18:12
Lab ID:23A0207-02 Client ID:
Report Date: 02/07/2023 14:35

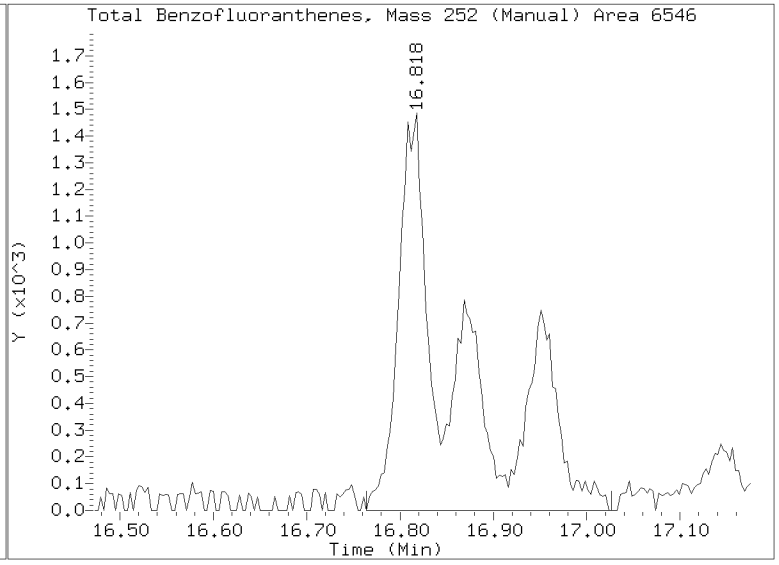












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1079

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

Polynuclear Aromatic Hydrocarbons

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-03 A	SDG:	23A0207
Sampled:	01/11/23 09:04	Prepared:	02/01/23 11:29	File ID:	N823020614.D
% Solids:	79.98	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/06/23 18:39
Batch:	BLA0683	Sequence:	SLB0075	Initial/Final:	12.5 g Wet / 0.5 mL
Instrument:	NT8	Column:	RXI-17Sil ms	Calibration:	GA00050
Cleanups:	GPC, Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
56-55-3	Benzo(a)anthracene	1	18.8		0.82	5.00
218-01-9	Chrysene	1	20.6		1.05	5.00
205-99-2	Benzo(b)fluoranthene	1	15.4		1.37	5.00
207-08-9	Benzo(k)fluoranthene	1	8.03		0.76	5.00
50-32-8	Benzo(a)pyrene	1	16.4		0.61	5.00
193-39-5	Indeno(1,2,3-cd)pyrene	1	14.3		1.05	5.00
53-70-3	Dibenzo(a,h)anthracene	1	4.98	J	0.89	5.00

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	150.04	109	72.8	32 - 120	
Dibenzo[a,h]anthracene-d14	150.04	159	106	21 - 133	
Fluoranthene-d10	150.04	107	71.5	36 - 134	

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020614.D

Page 1

Date : 06-FEB-2023 18:39

Client ID:

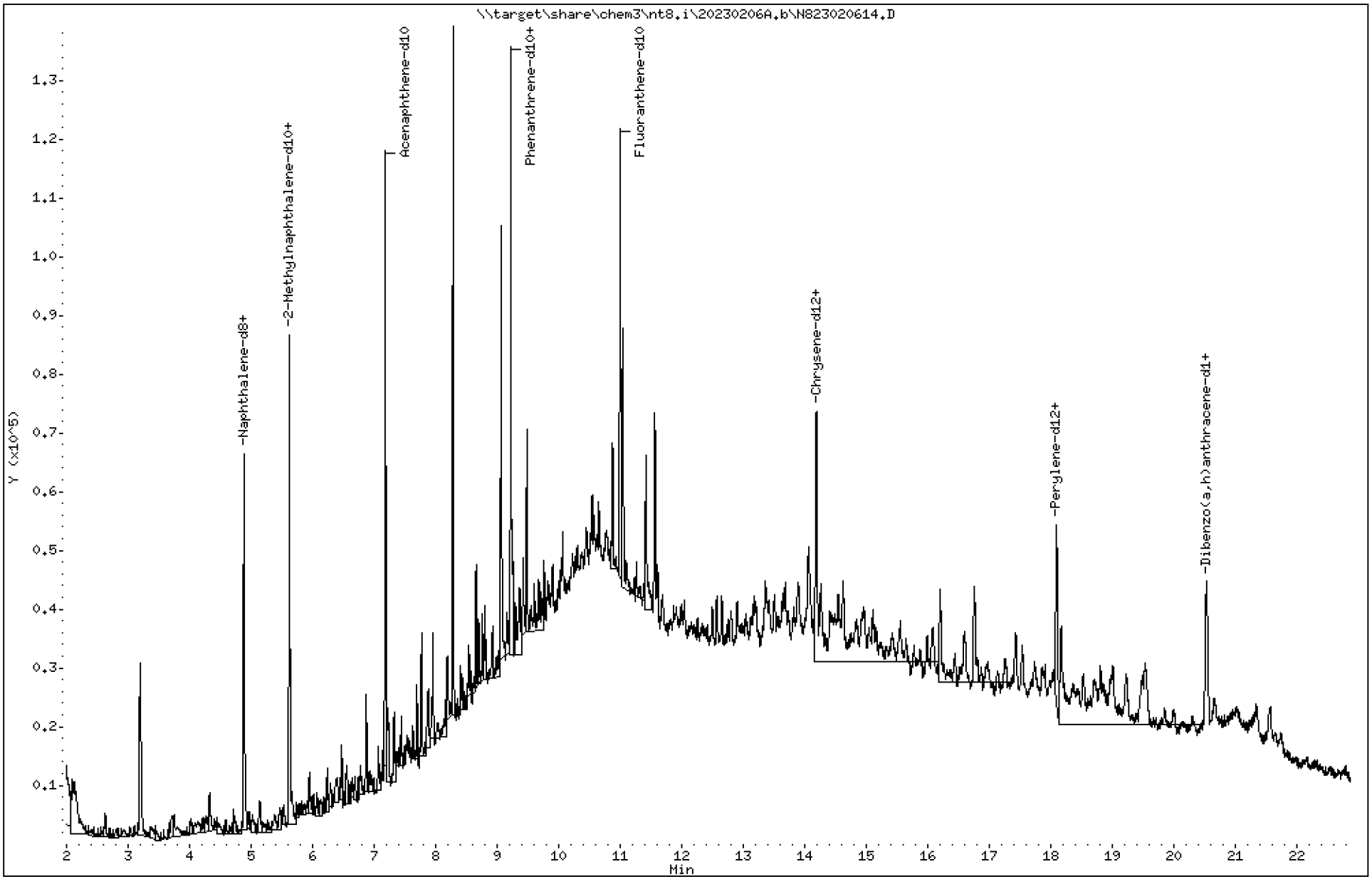
Instrument: nt8.i

Sample Info: 23A0207-03

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



23A0207 CLPLIKE (Rev3) - Page 72 of 3315

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020614.D

Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

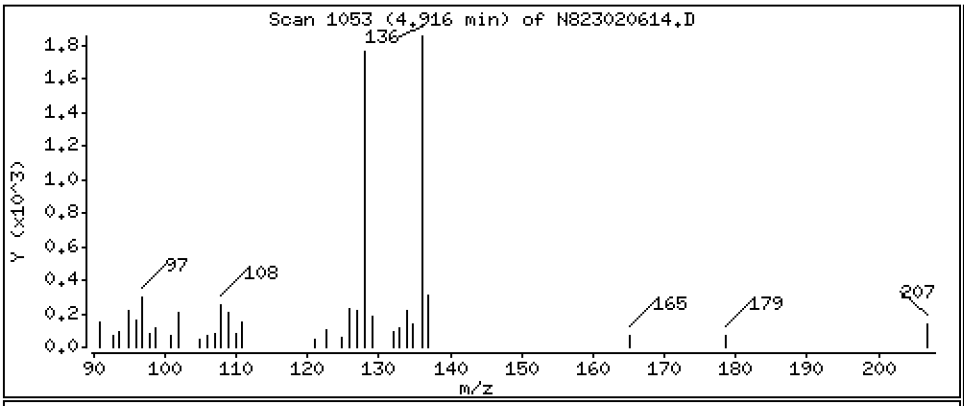
Operator: JZ

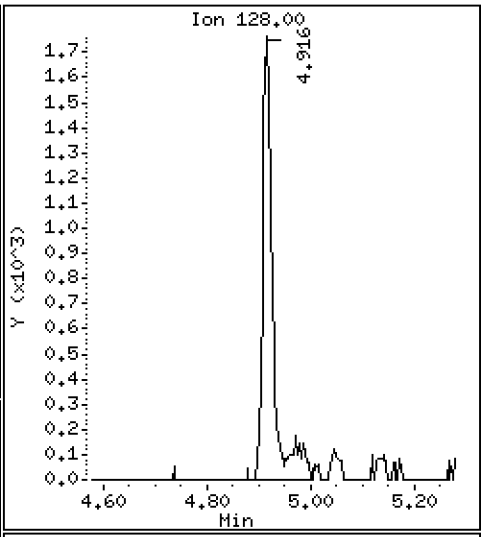
Column phase: Rxi-17sil

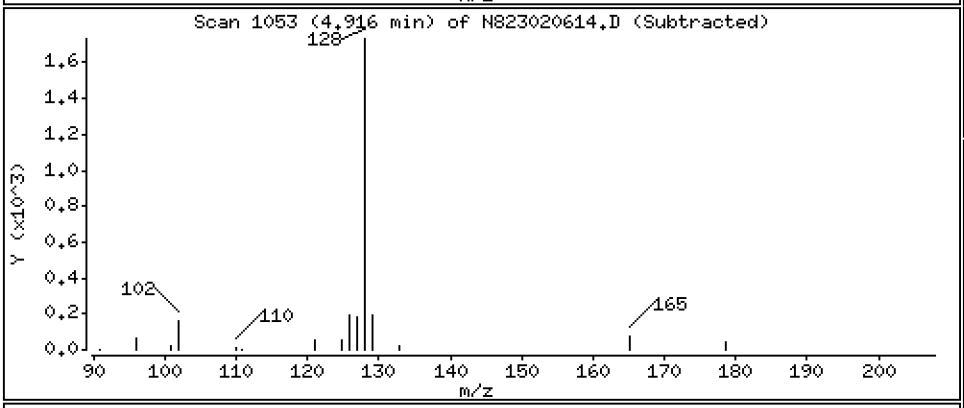
Column diameter: 0.25

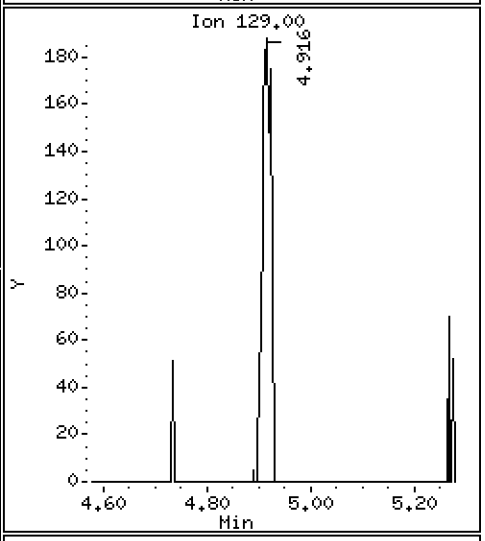
2 Naphthalene

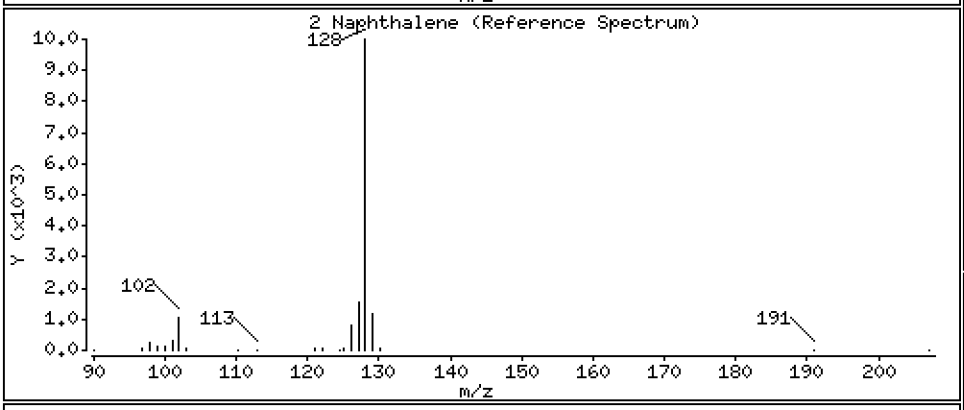
Concentration: 0.09986 ug/mL

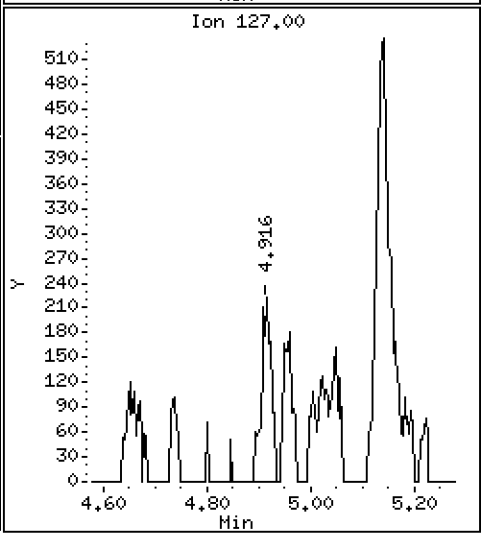


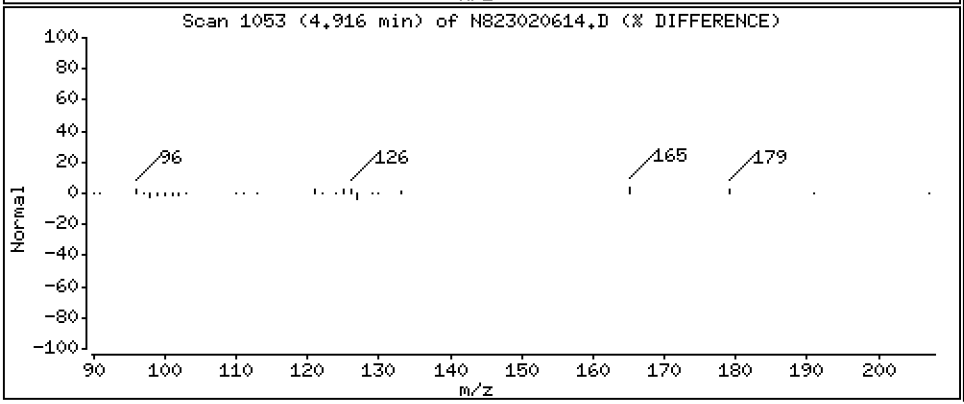












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

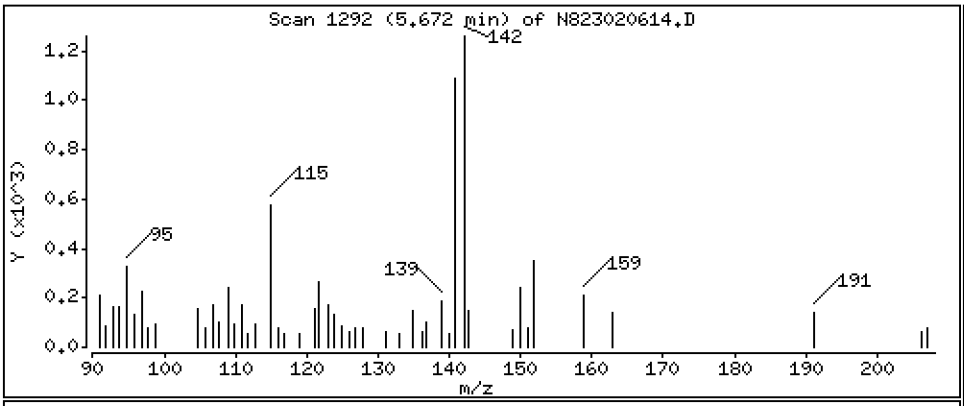
Operator: JZ

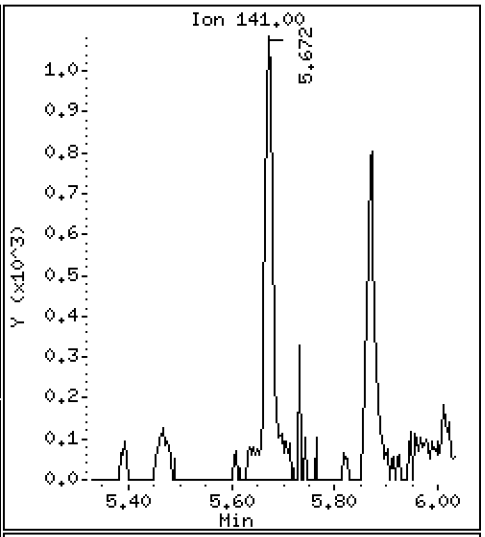
Column phase: Rxi-17sil

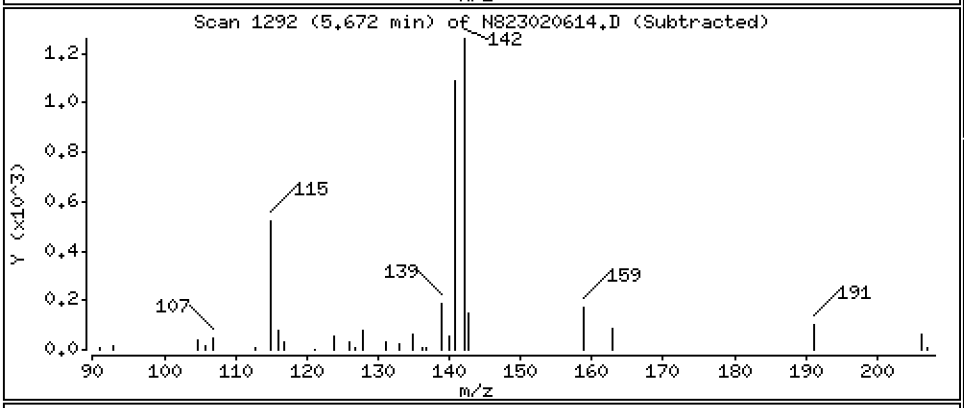
Column diameter: 0.25

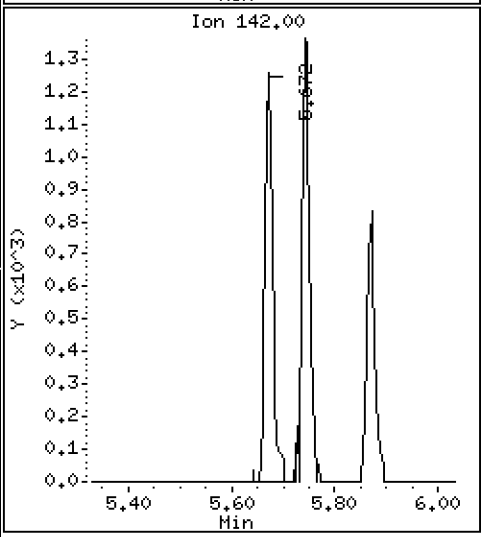
4 2-Methylnaphthalene

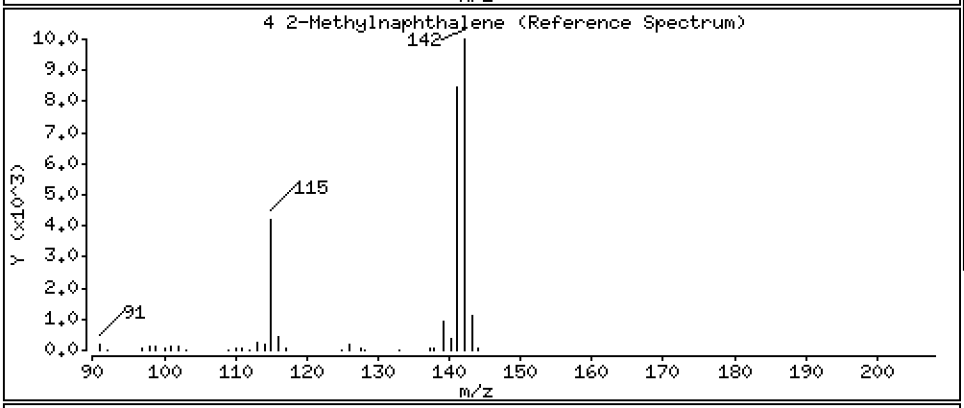
Concentration: 0.09887 ug/mL

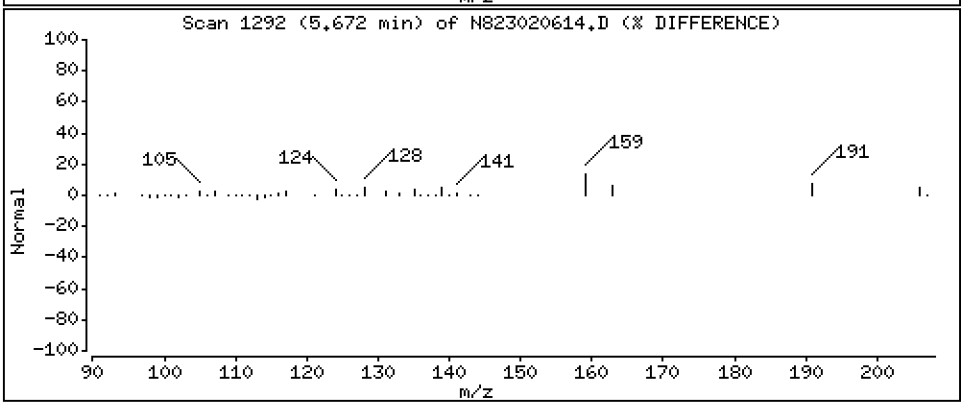












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

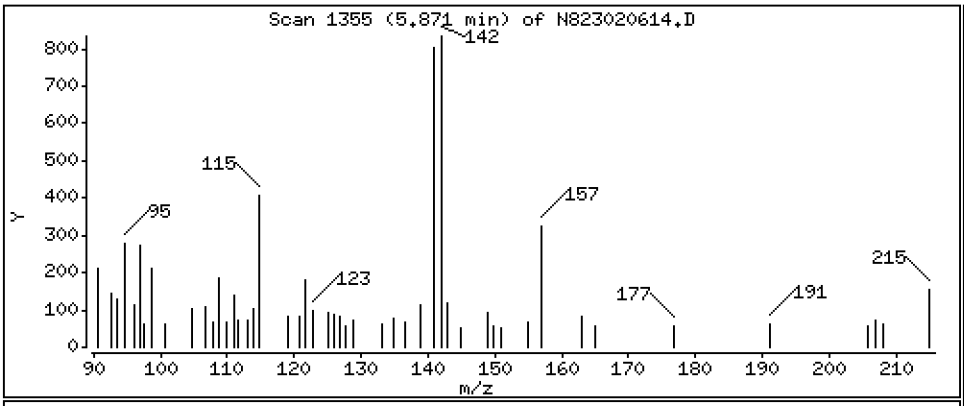
Operator: JZ

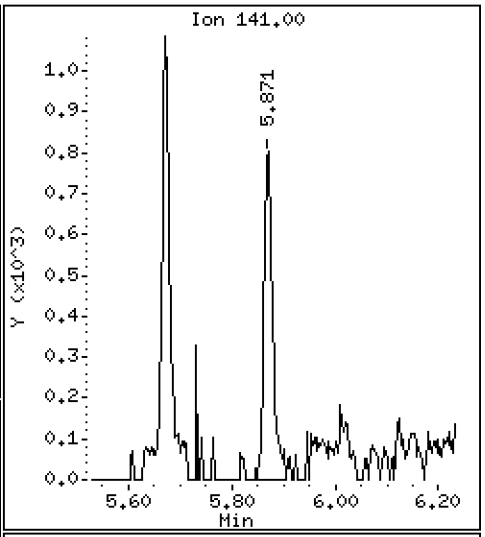
Column phase: Rxi-17sil

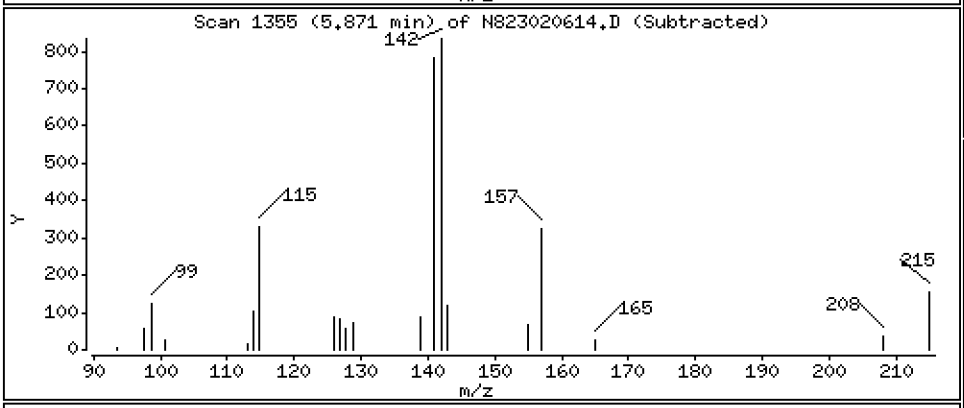
Column diameter: 0.25

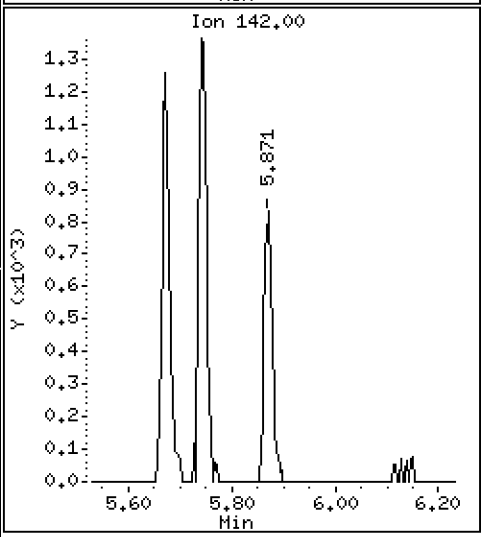
5 1-methylnaphthalene

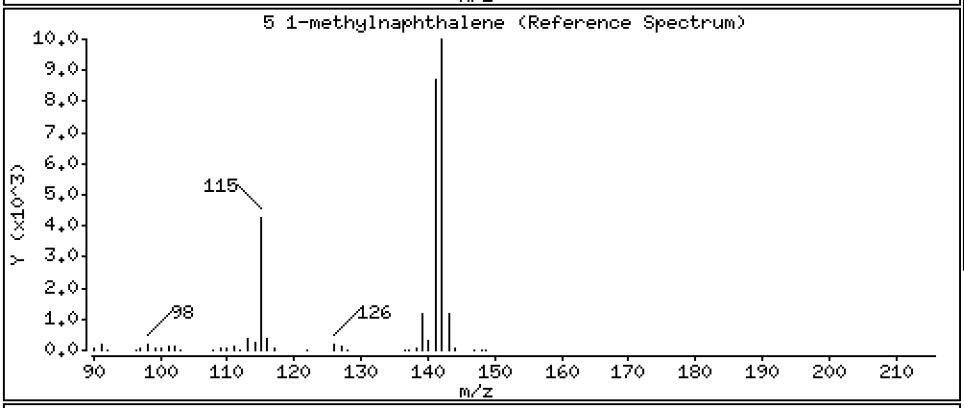
Concentration: 0.06883 ug/mL

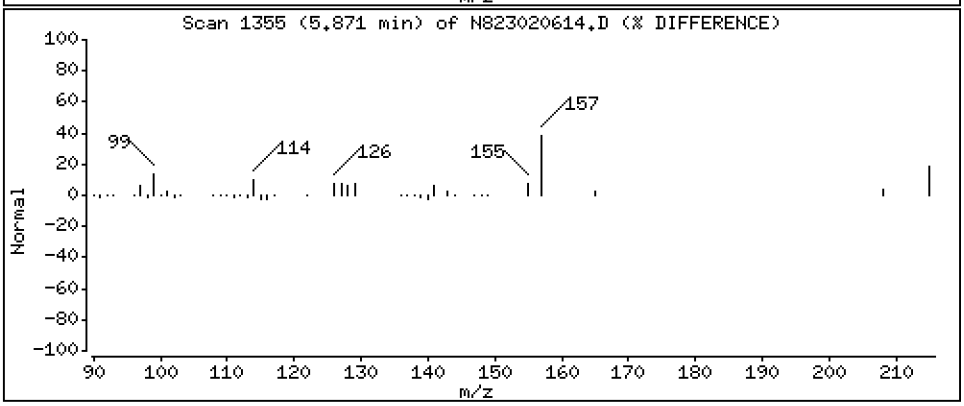












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

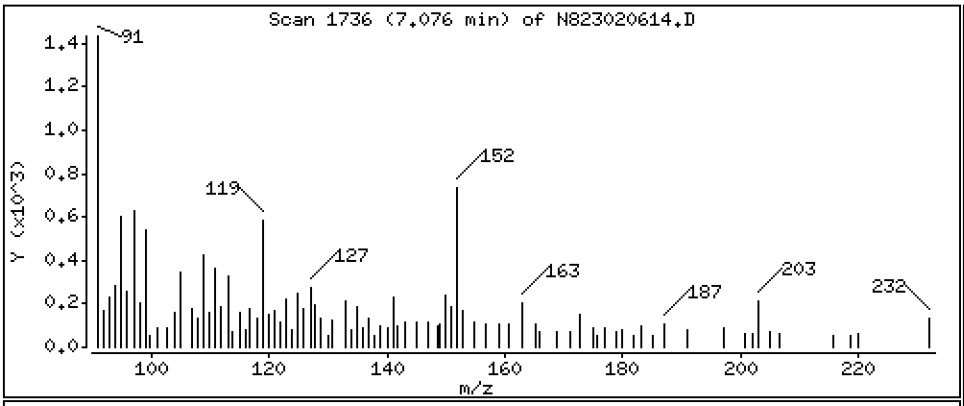
Operator: JZ

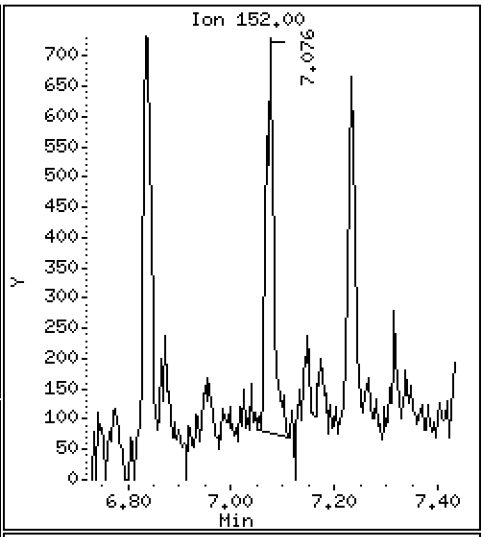
Column phase: Rxi-17sil

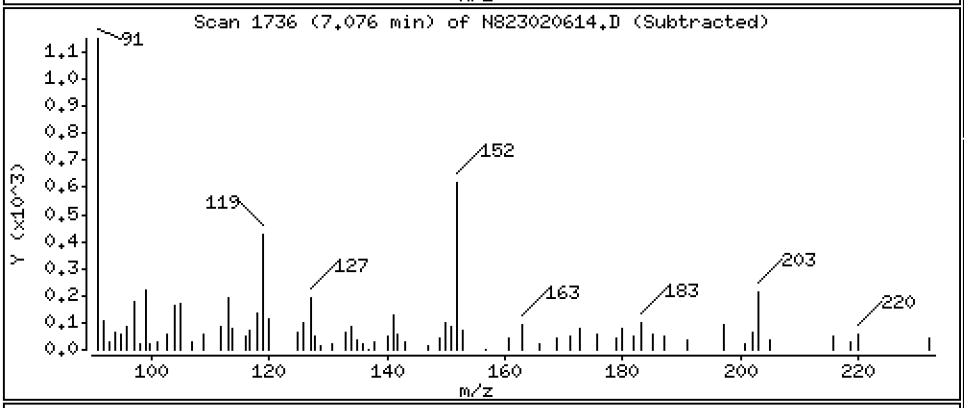
Column diameter: 0.25

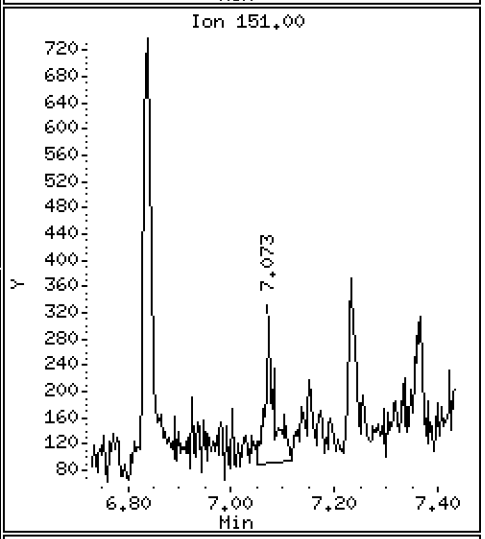
9 Acenaphthylene

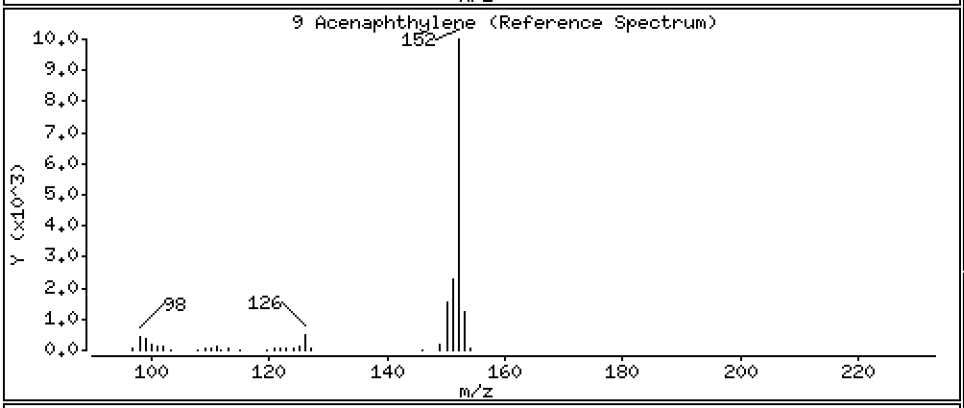
Concentration: 0.02848 ug/mL

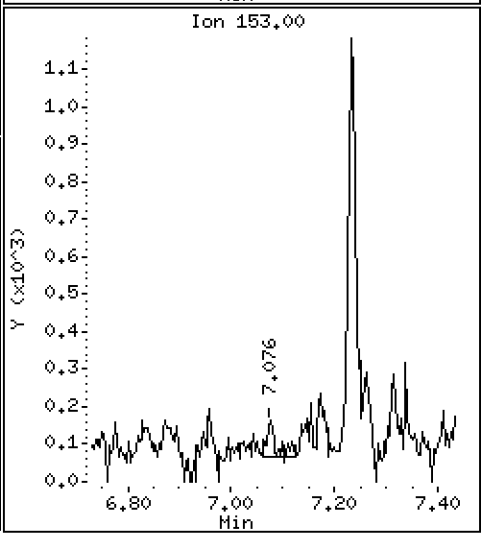


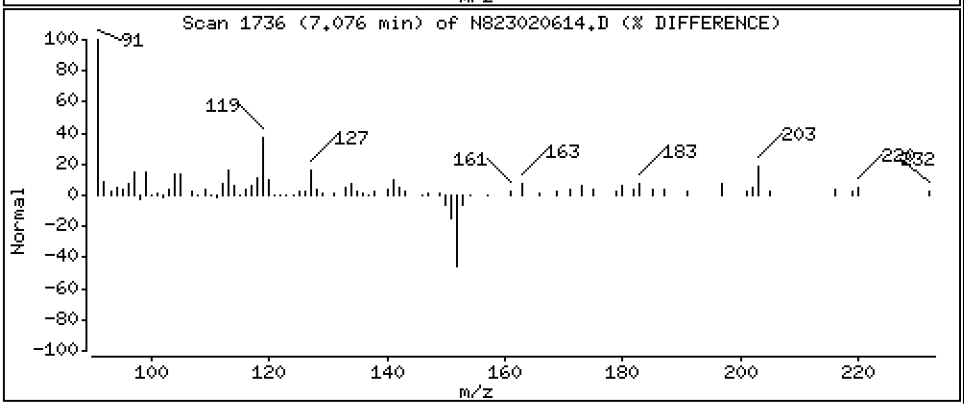












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

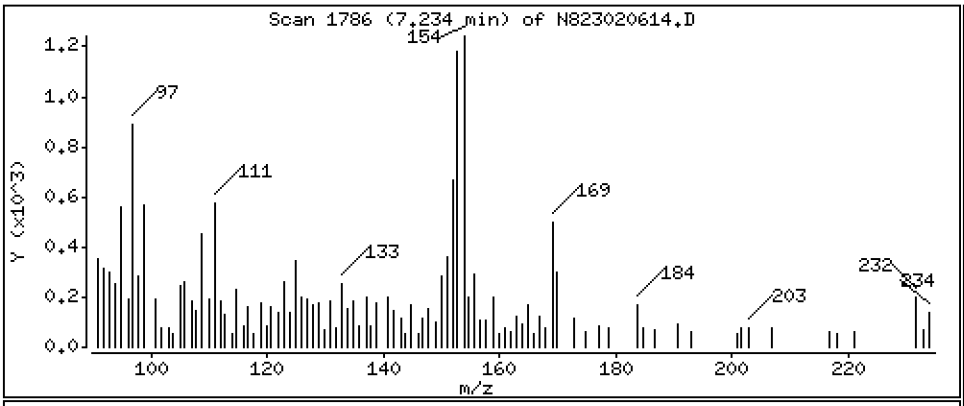
Operator: JZ

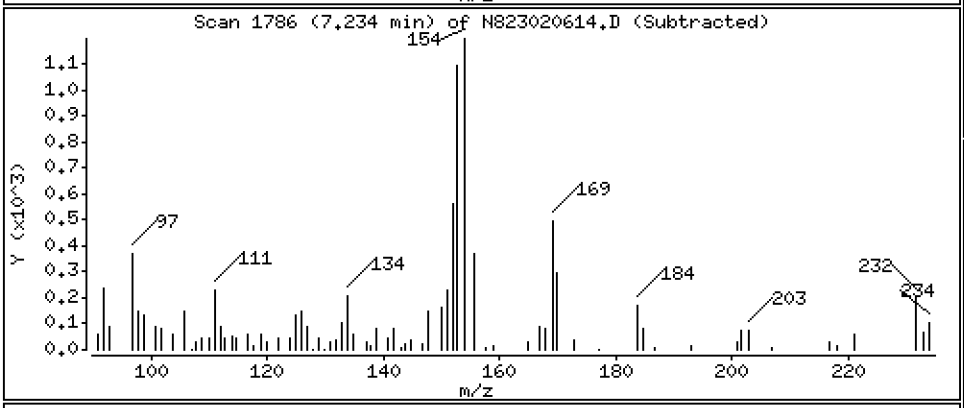
Column phase: Rxi-17sil

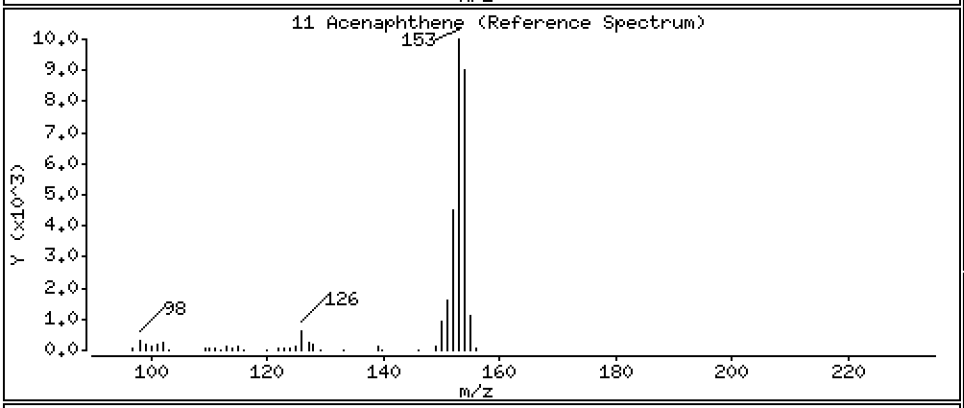
Column diameter: 0.25

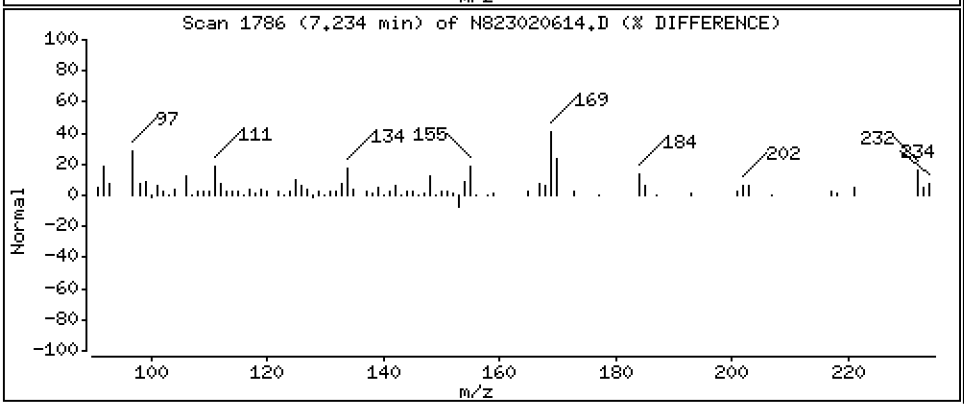
11 Acenaphthene

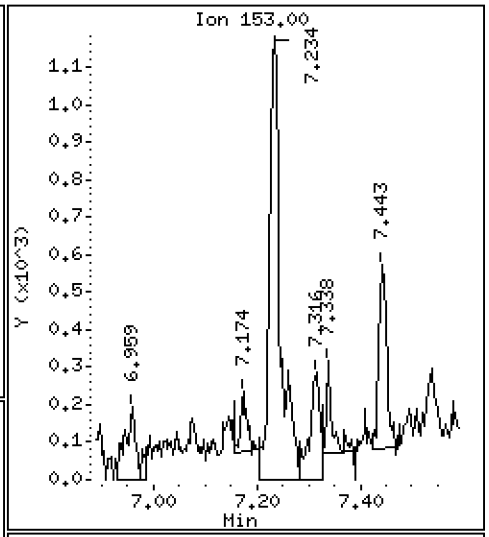
Concentration: 0.1112 ug/mL

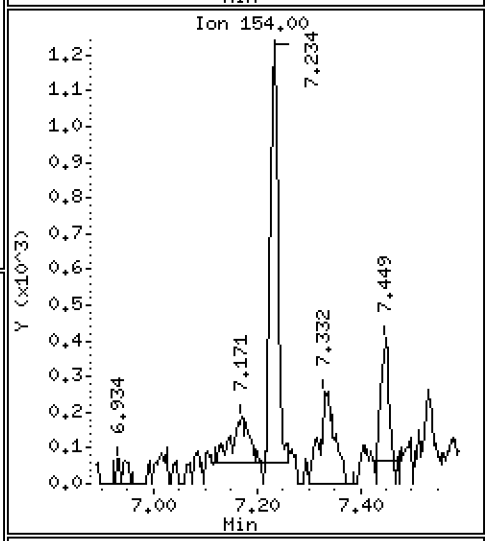


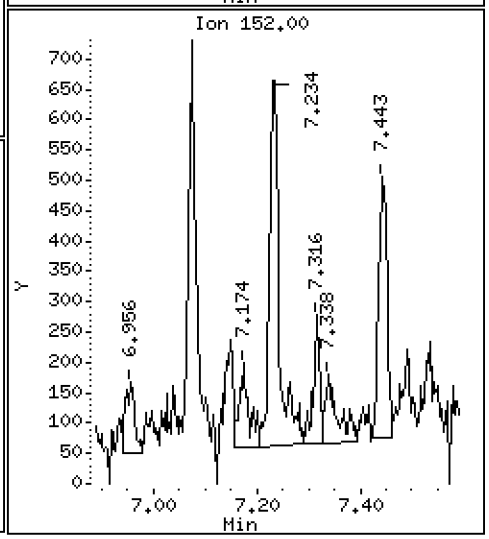












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

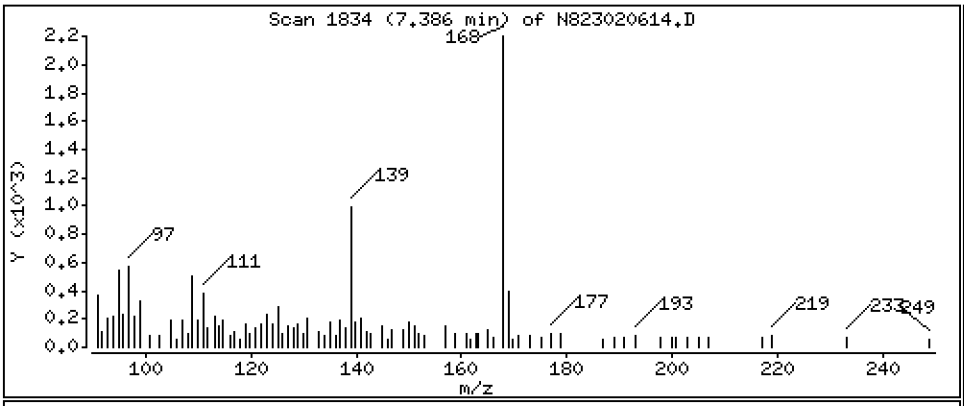
Operator: JZ

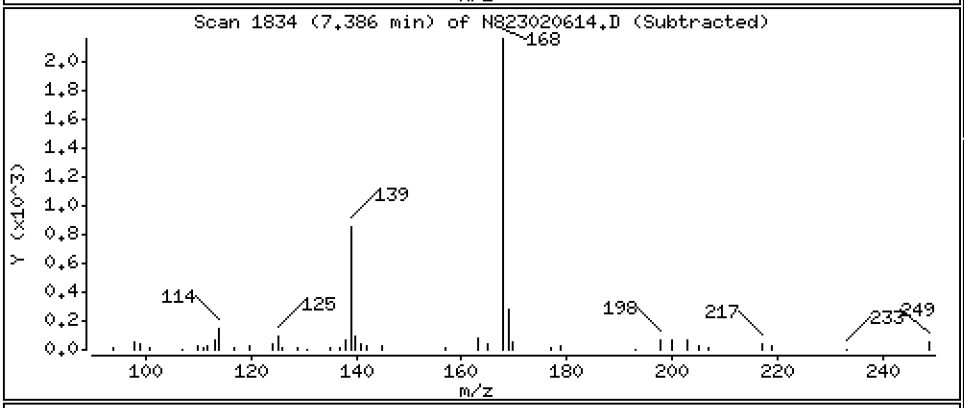
Column phase: Rxi-17sil

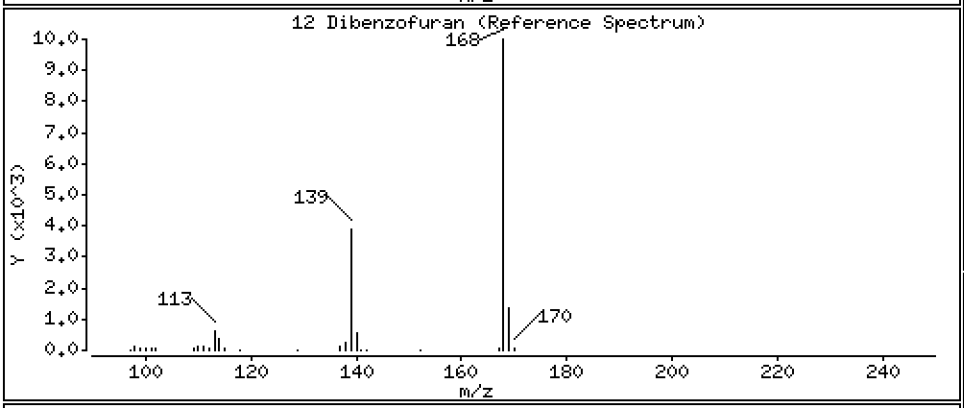
Column diameter: 0.25

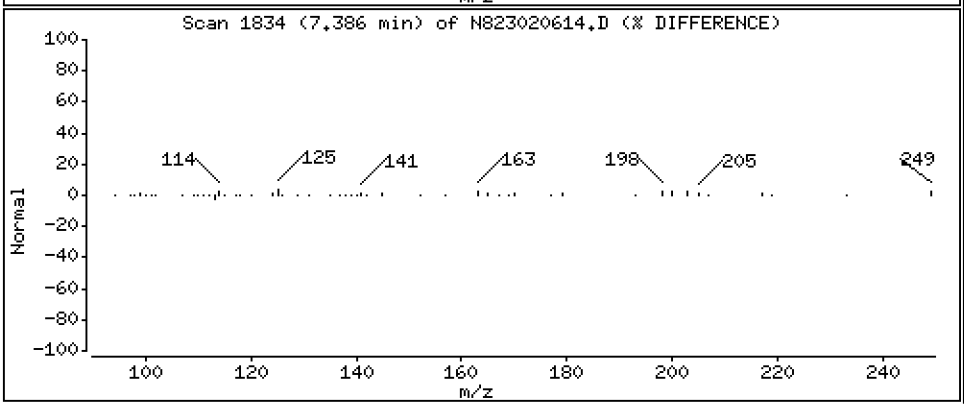
12 Dibenzofuran

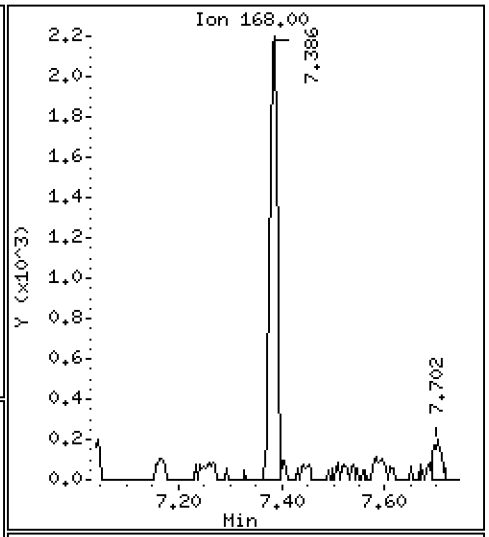
Concentration: 0.08932 ug/mL

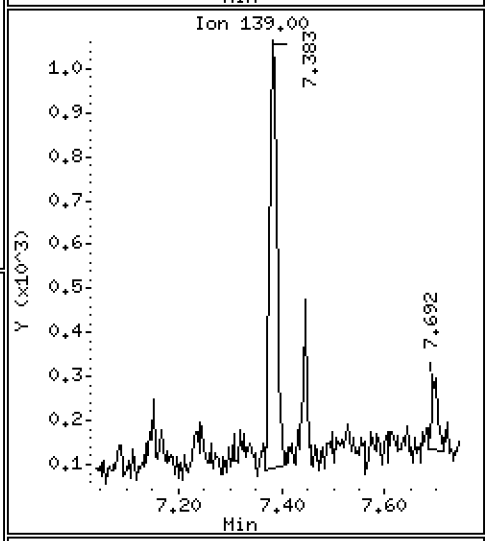


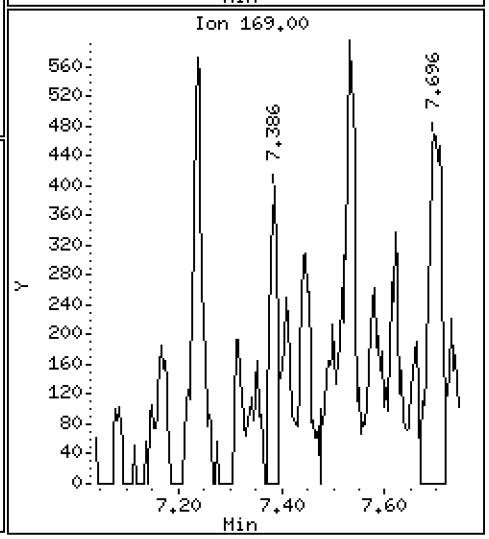












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

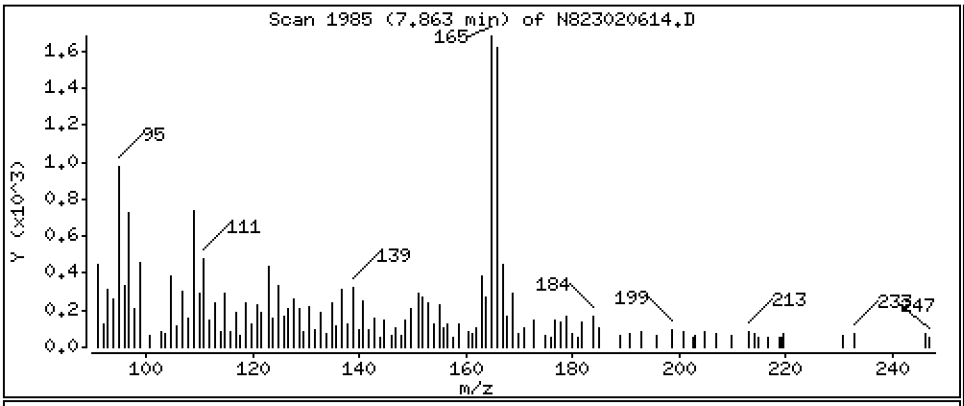
Operator: JZ

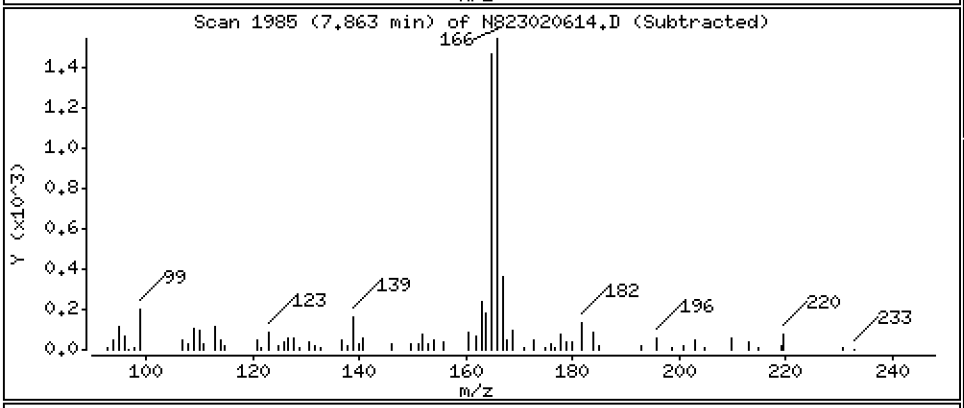
Column phase: Rxi-17sil

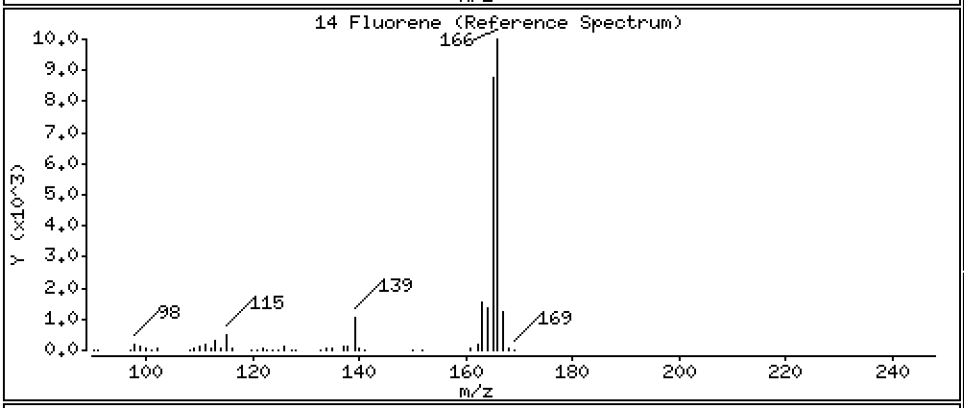
Column diameter: 0.25

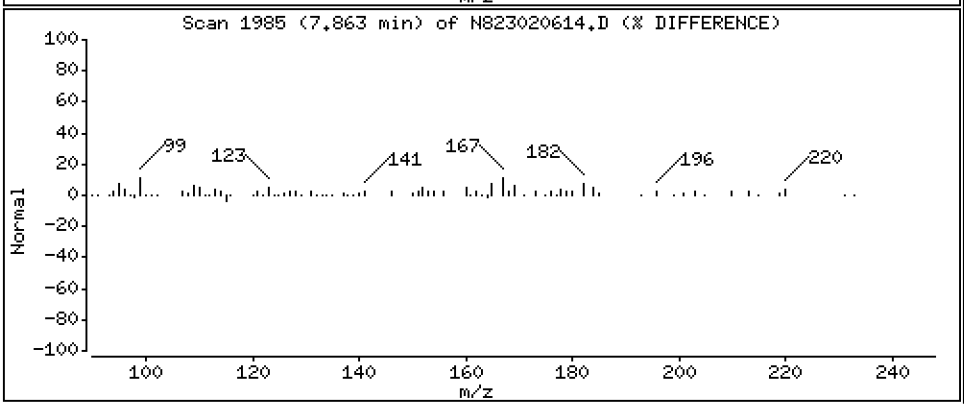
14 Fluorene

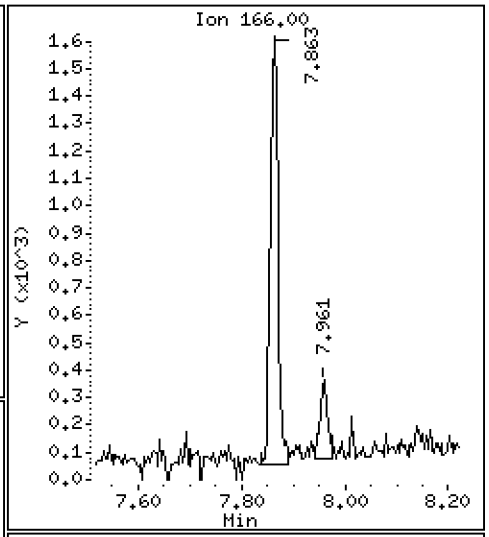
Concentration: 0.08642 ug/mL

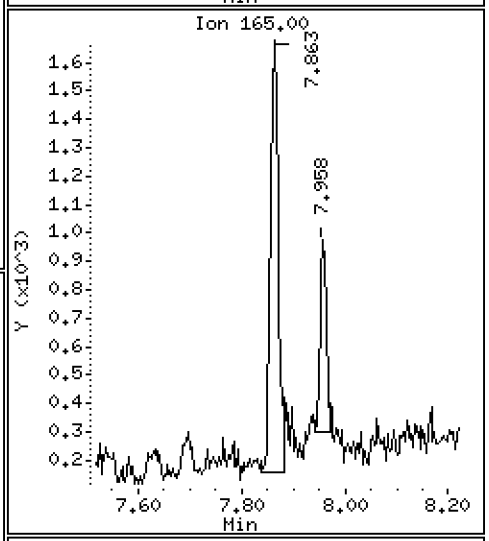


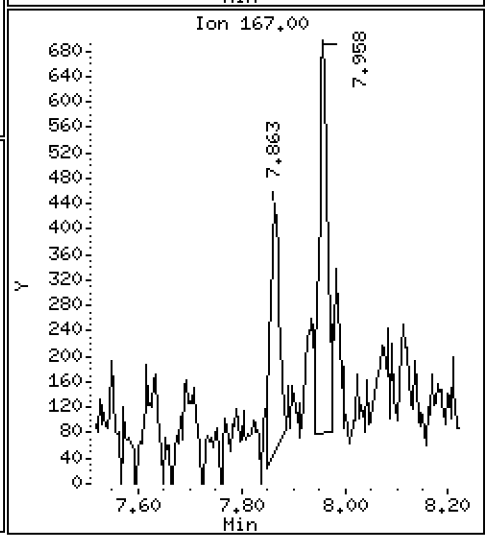












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

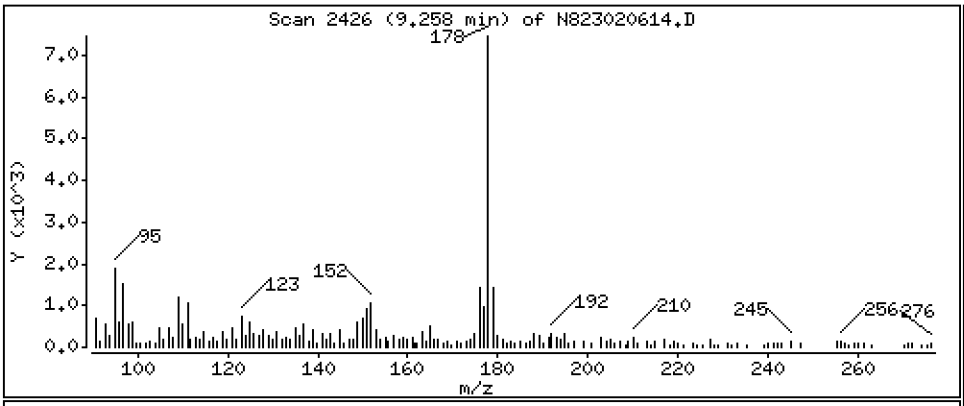
Operator: JZ

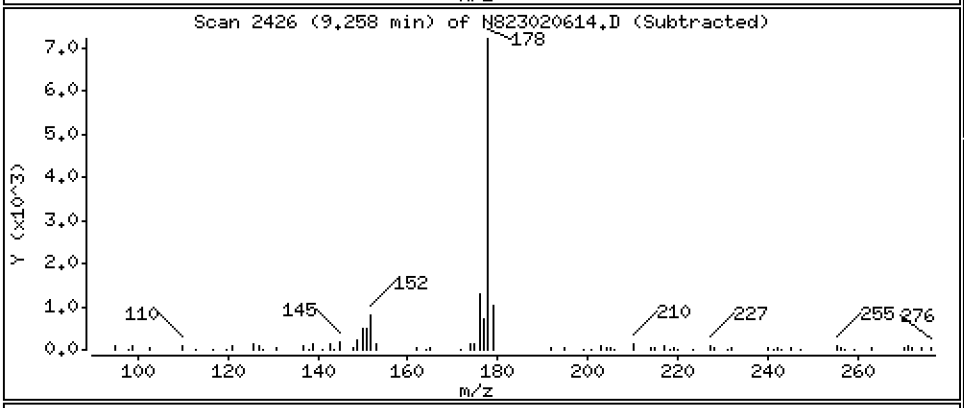
Column phase: Rxi-17sil

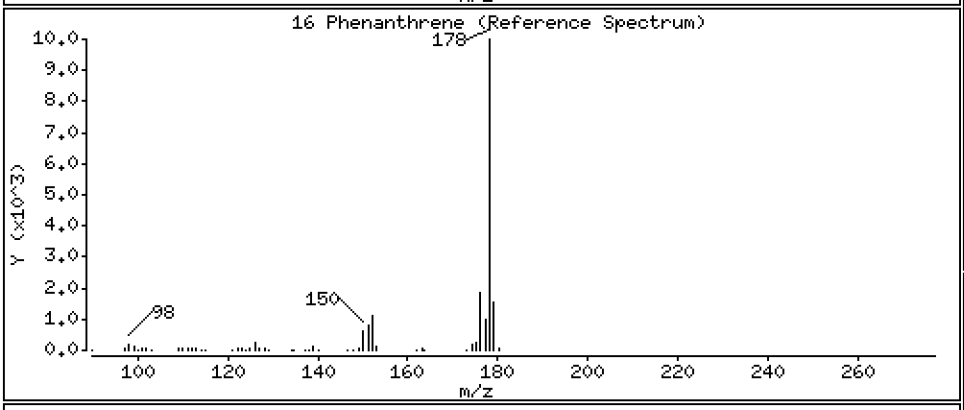
Column diameter: 0.25

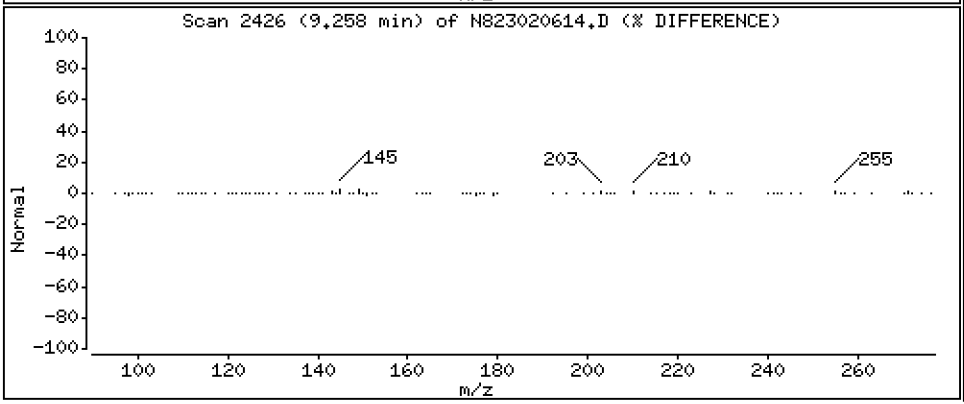
16 Phenanthrene

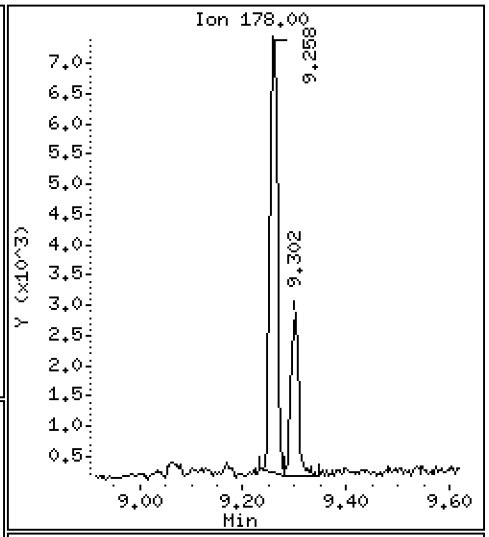
Concentration: 0.3091 ug/mL

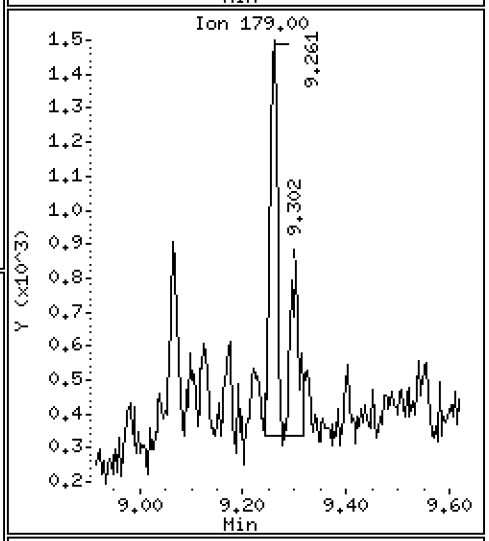


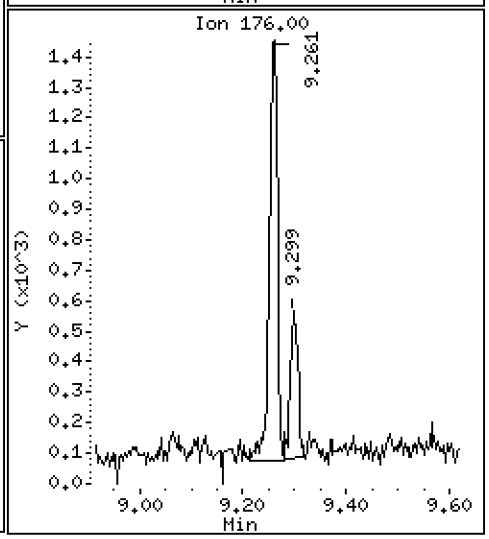












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

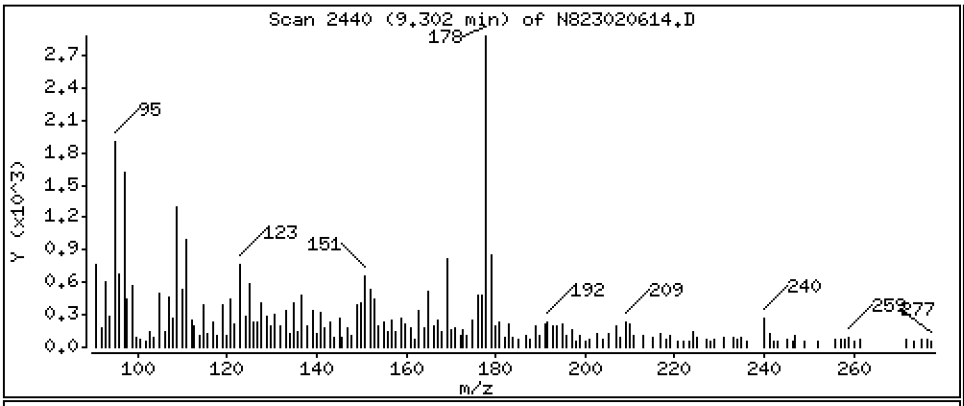
Operator: JZ

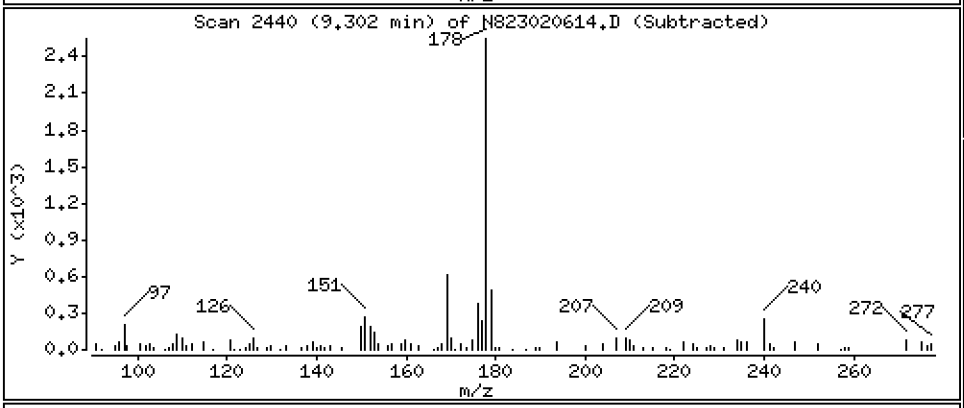
Column phase: Rxi-17sil

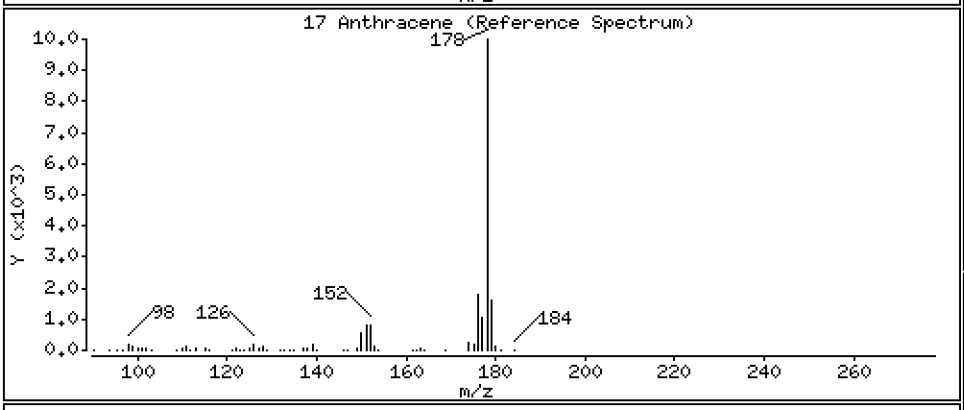
Column diameter: 0.25

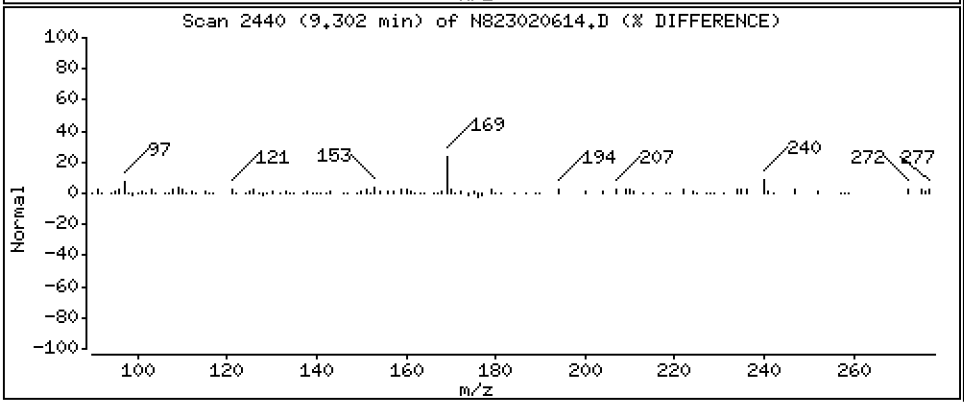
17 Anthracene

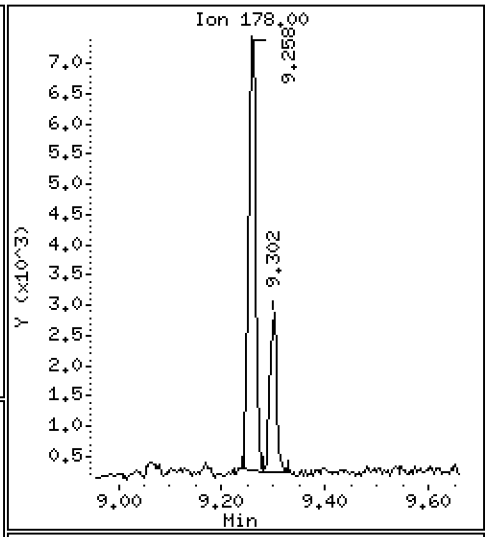
Concentration: 0.1172 ug/mL

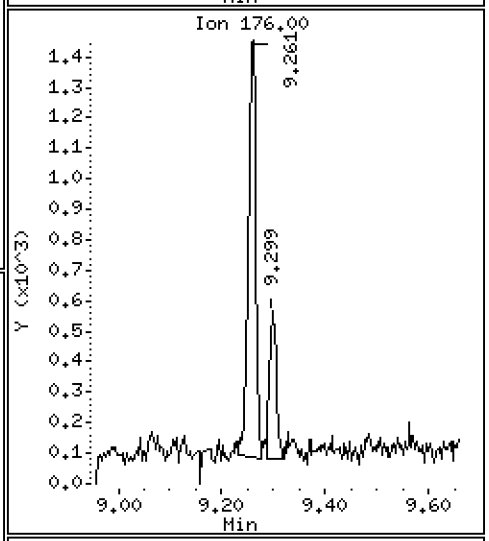


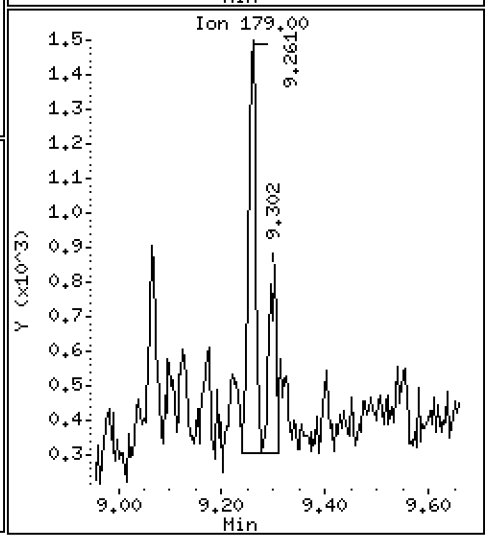












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

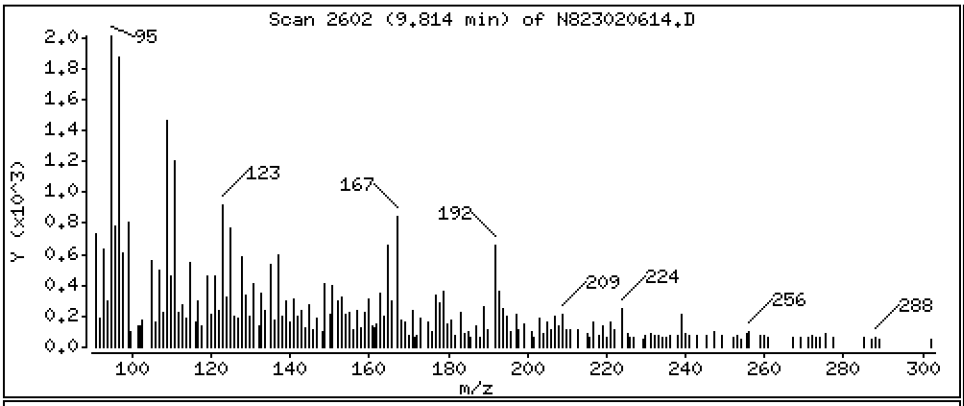
Operator: JZ

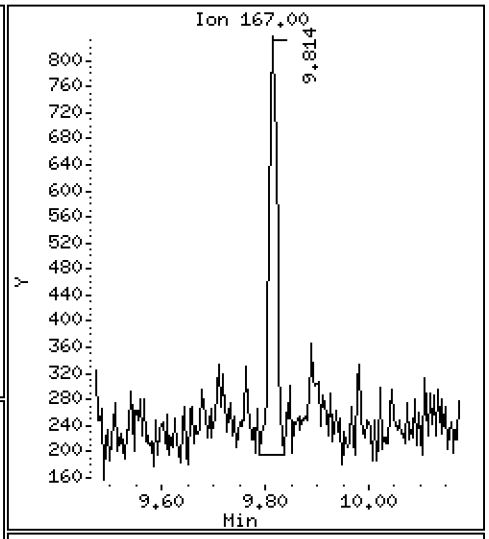
Column phase: Rxi-17sil

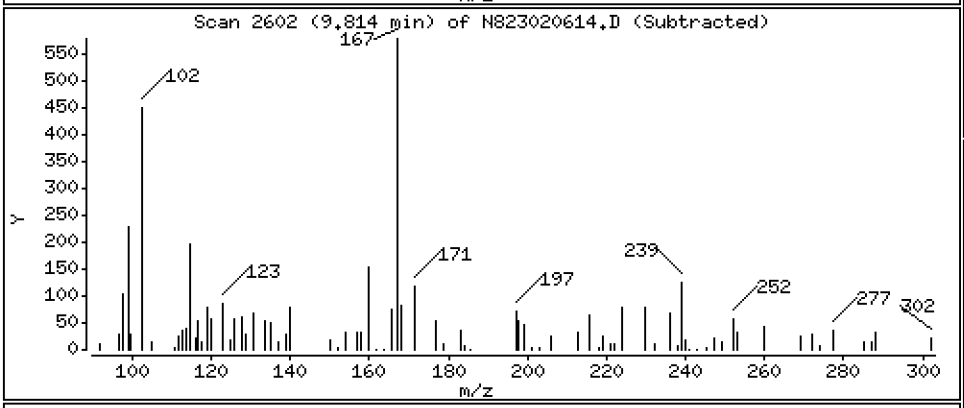
Column diameter: 0.25

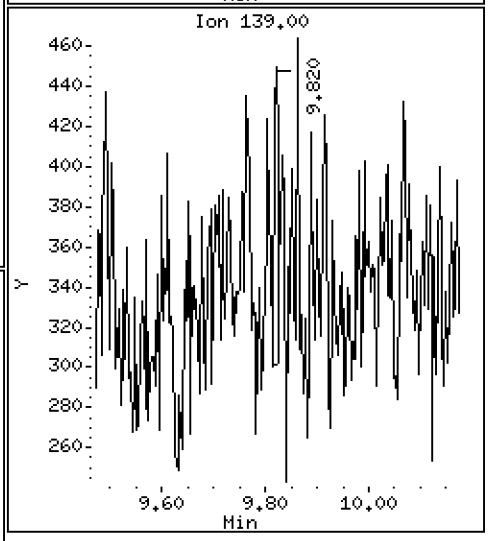
19 Carbazole

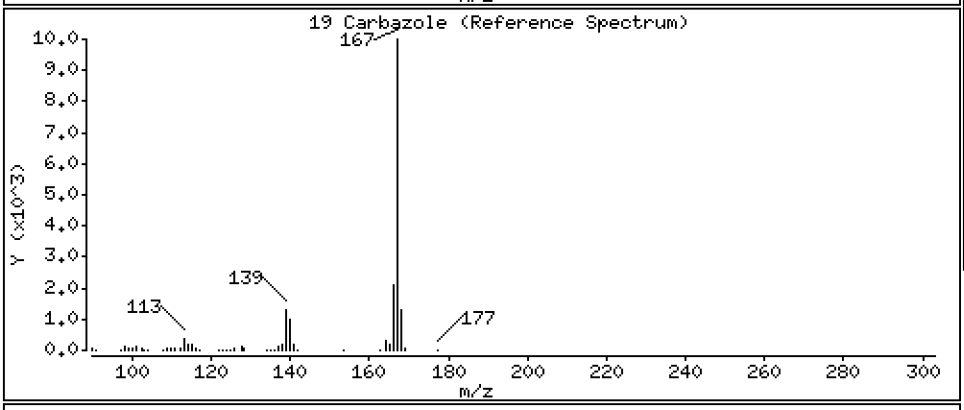
Concentration: 0.03504 ug/mL

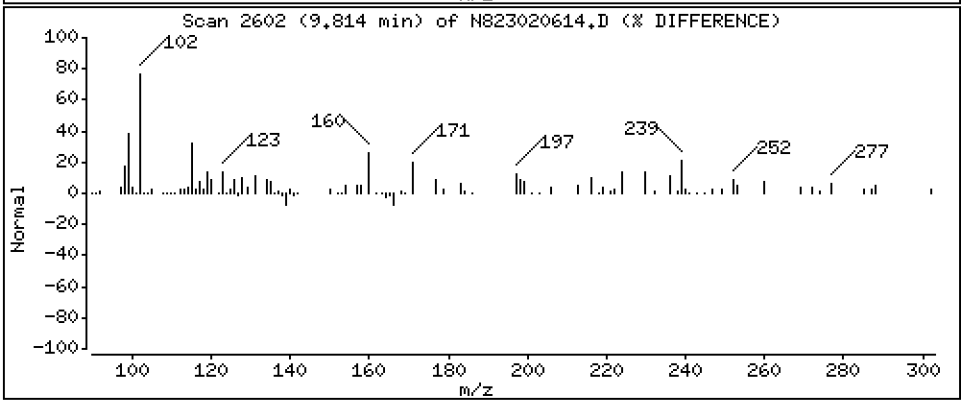












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

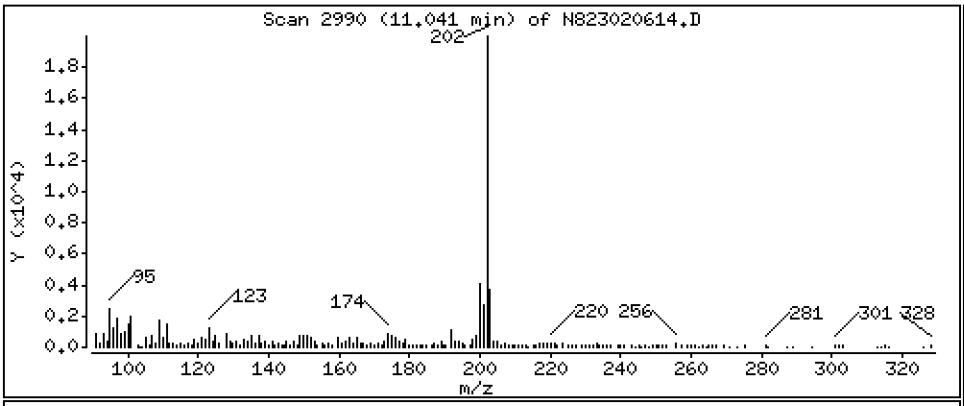
Operator: JZ

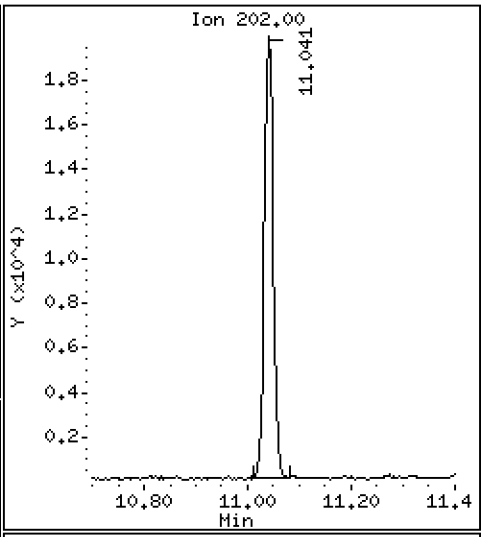
Column phase: Rxi-17sil

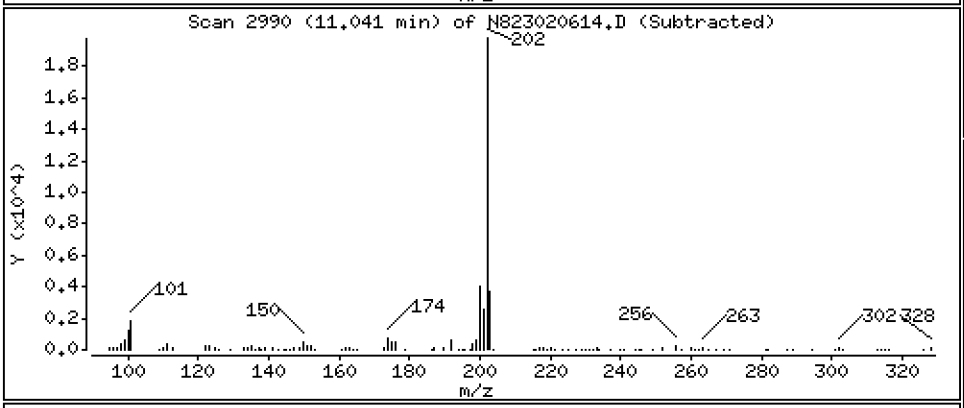
Column diameter: 0.25

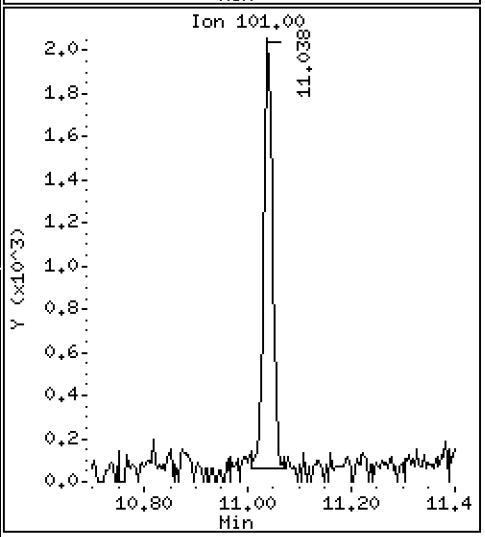
22 Fluoranthene

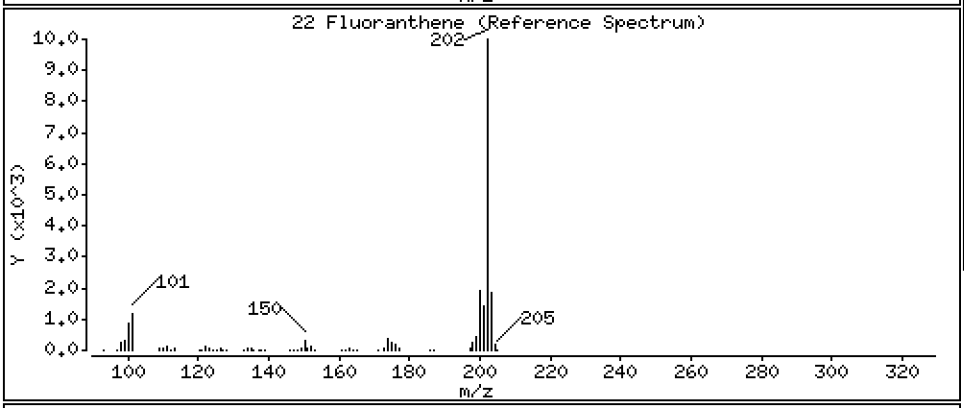
Concentration: 0.9852 ug/mL

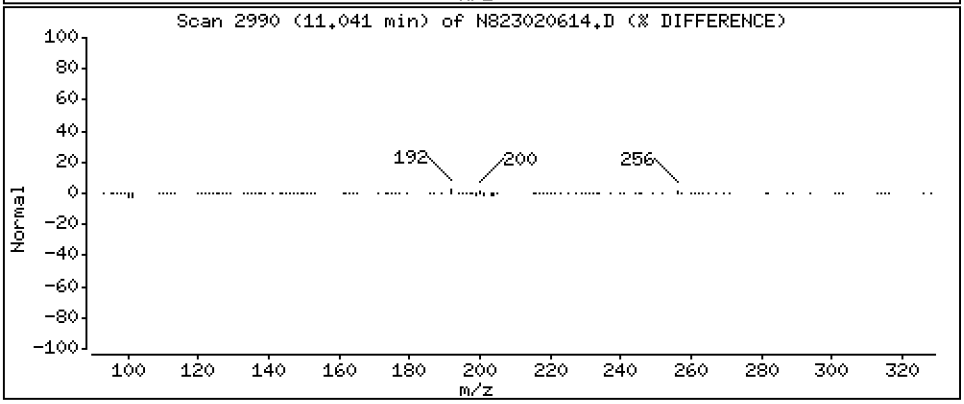












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

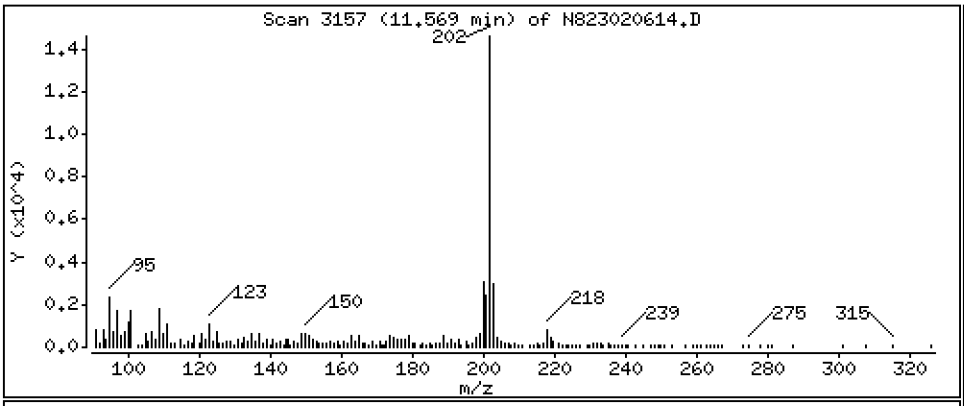
Operator: JZ

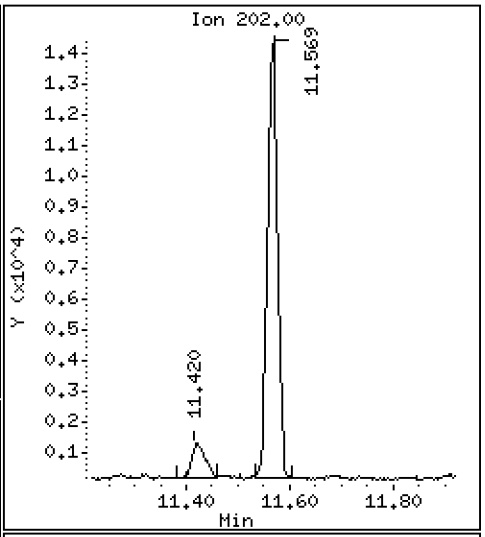
Column phase: Rxi-17sil

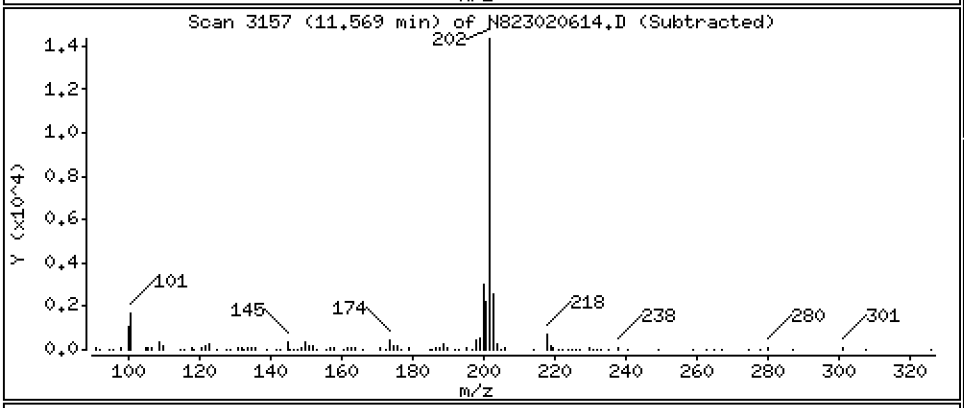
Column diameter: 0.25

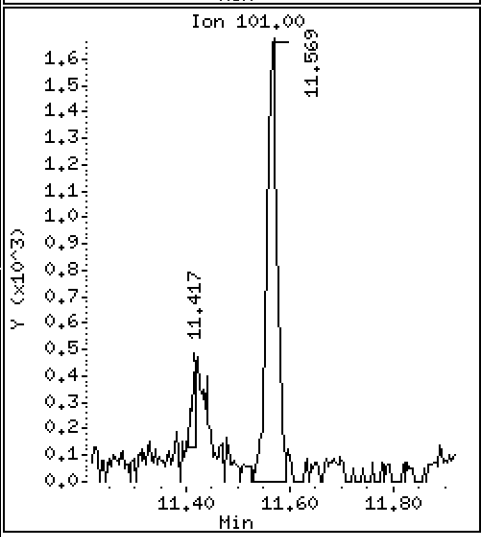
23 Pyrene

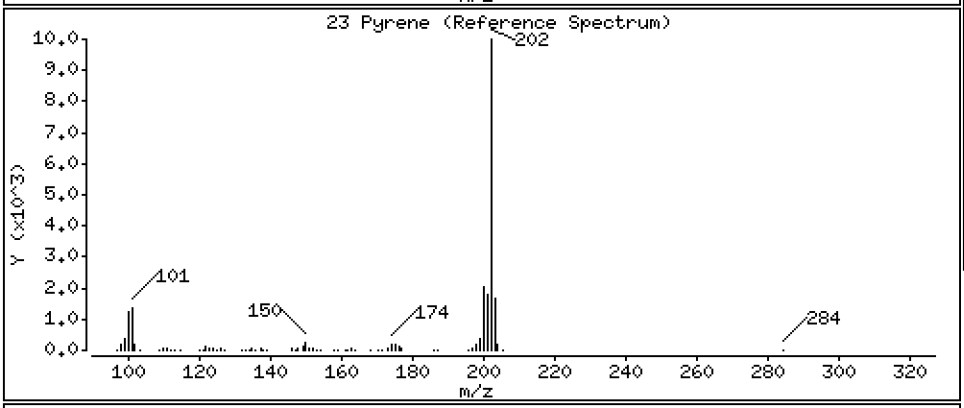
Concentration: 1.371 ug/mL

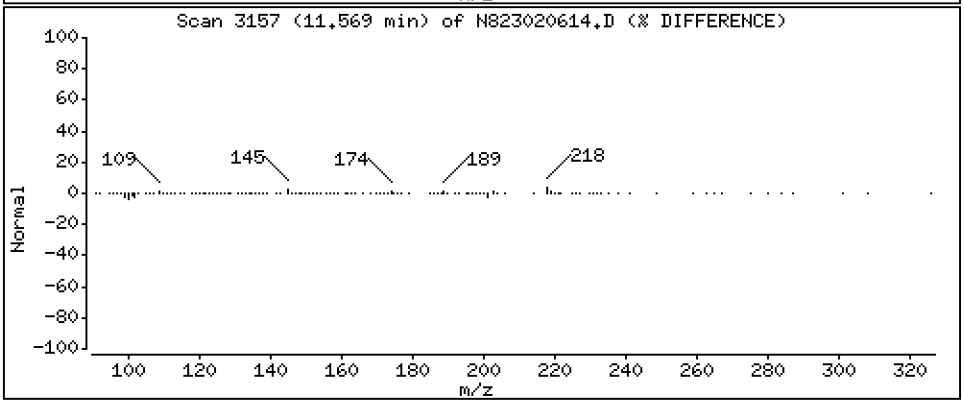












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020614.D

Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

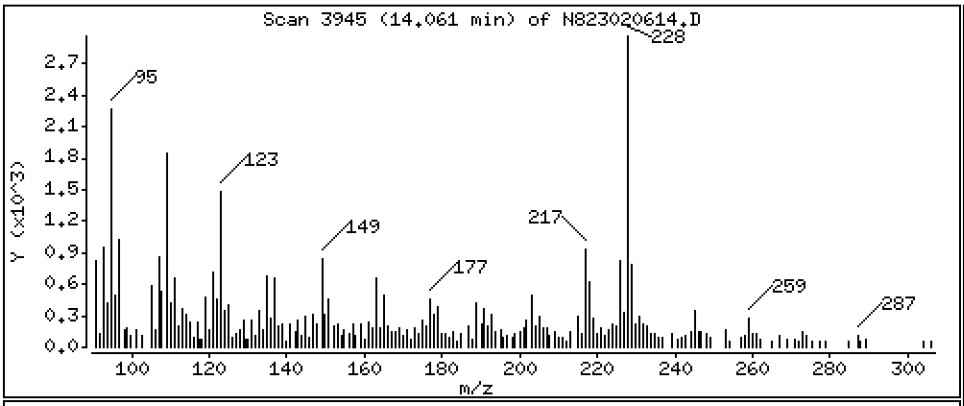
Operator: JZ

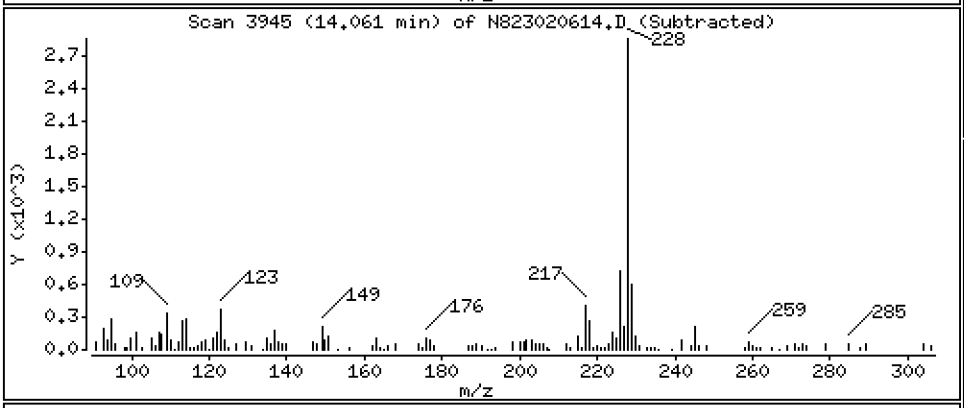
Column phase: Rxi-17sil

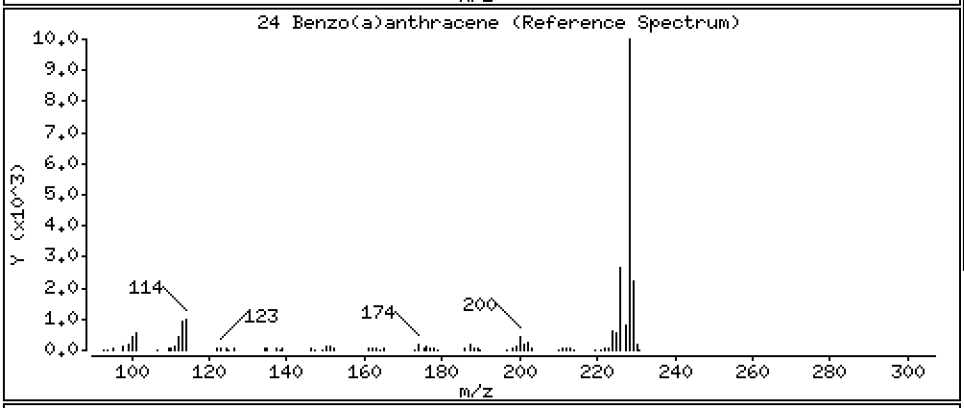
Column diameter: 0.25

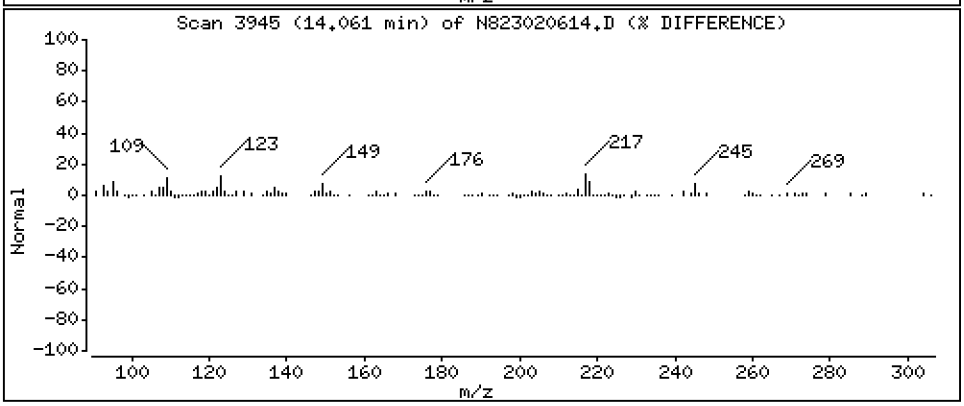
24 Benzo(a)anthracene

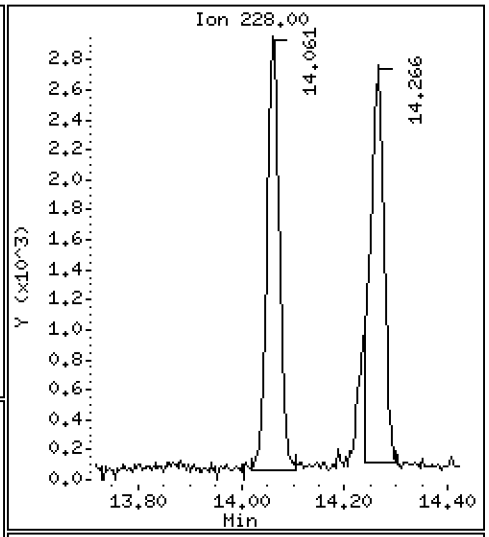
Concentration: 0.3768 ug/mL

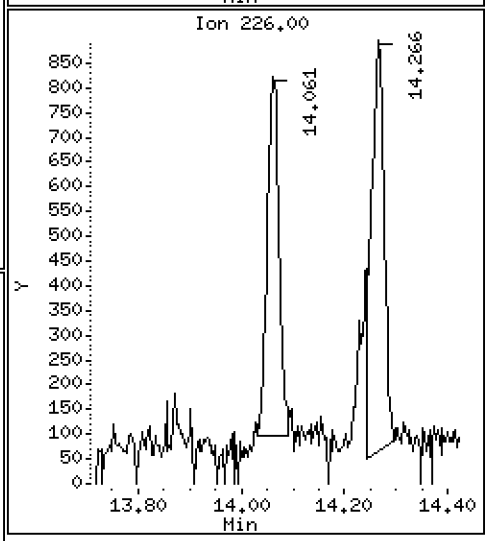












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

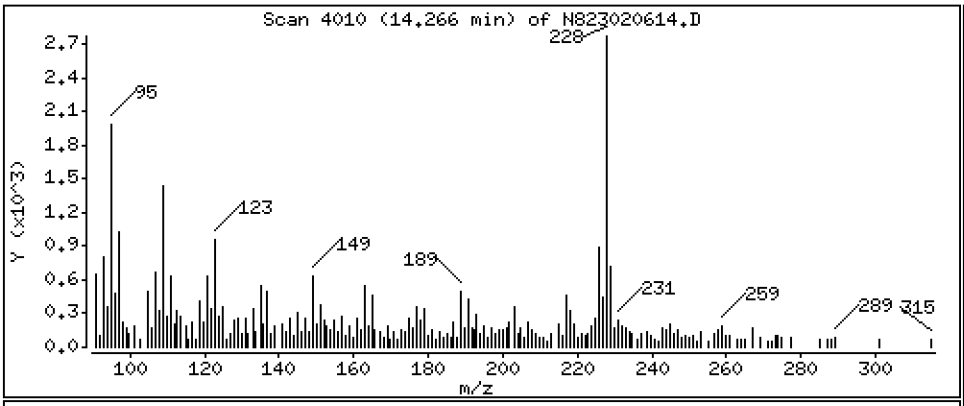
Operator: JZ

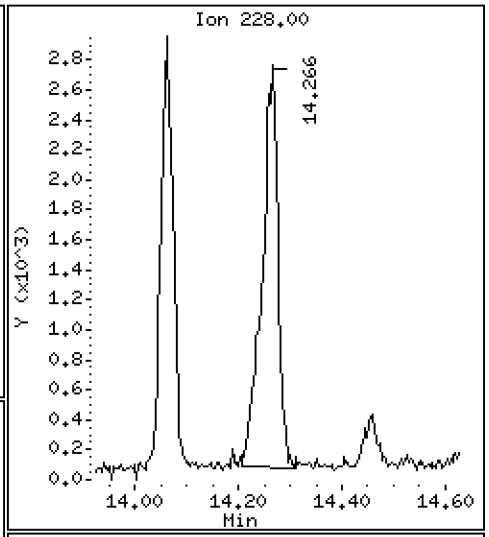
Column phase: Rxi-17sil

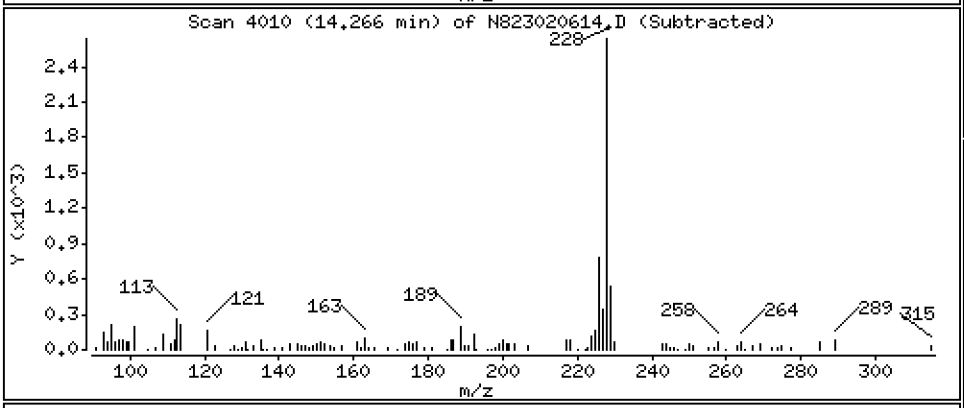
Column diameter: 0.25

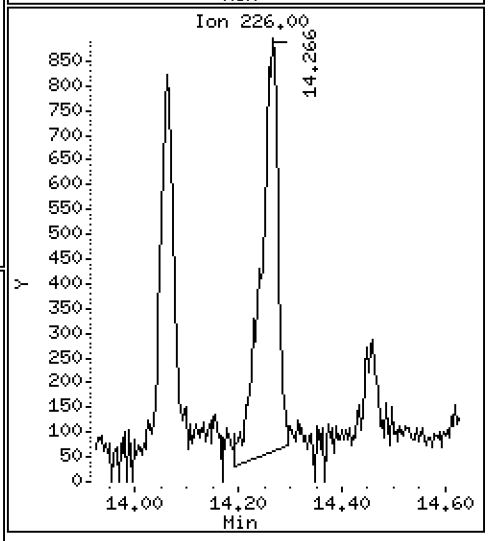
27 Chrysene

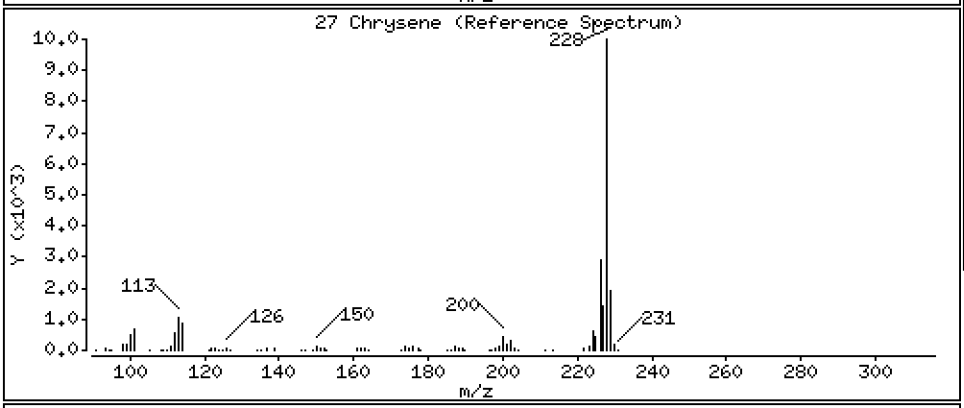
Concentration: 0.4119 ug/mL

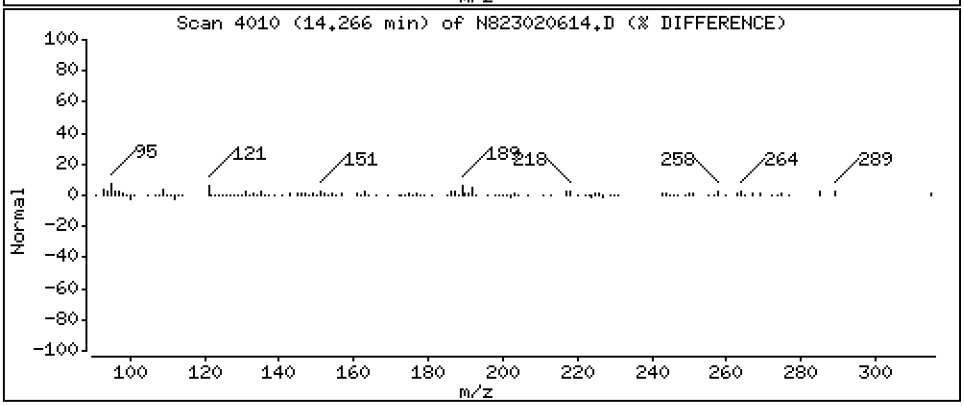












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

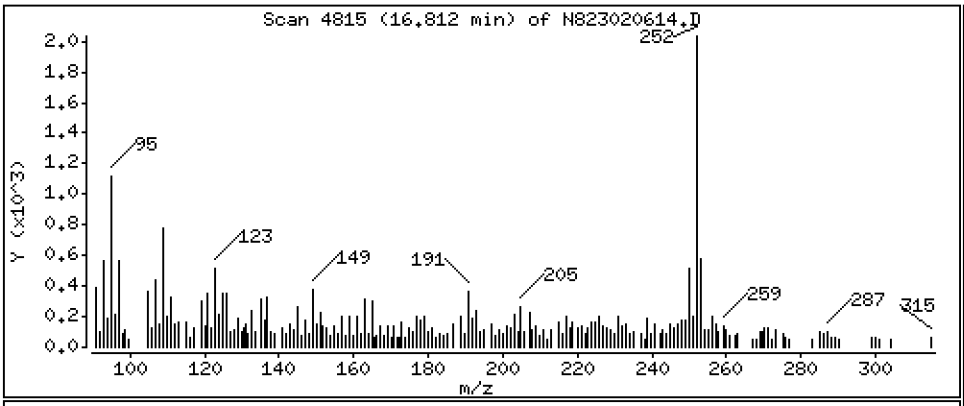
Operator: JZ

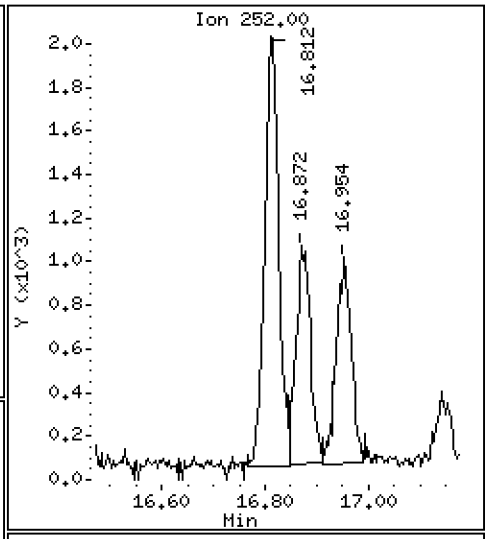
Column phase: Rxi-17sil

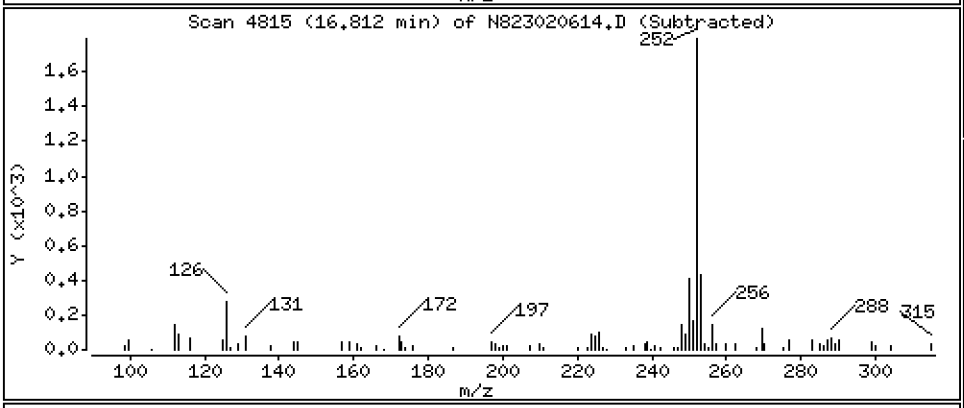
Column diameter: 0.25

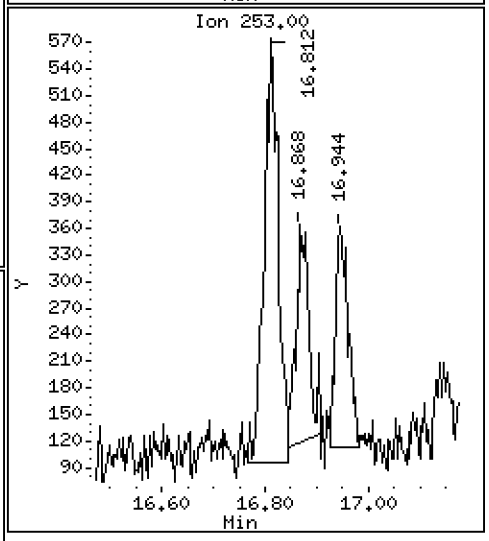
28 Benzo(b)fluoranthene

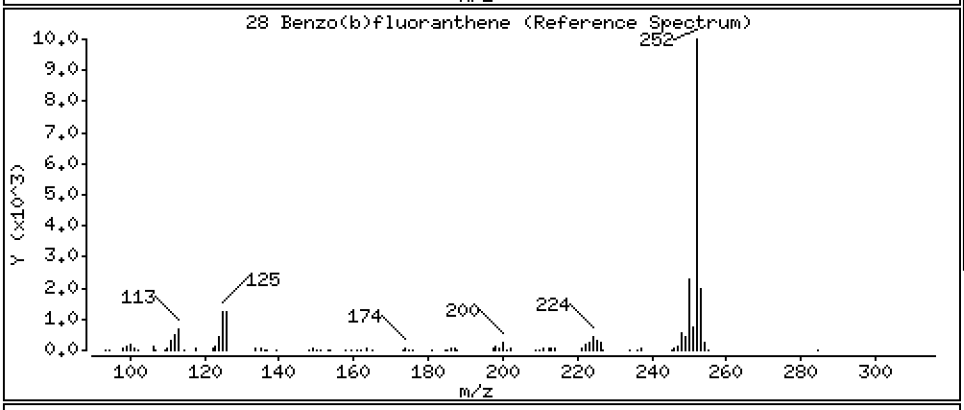
Concentration: 0.3086 ug/mL

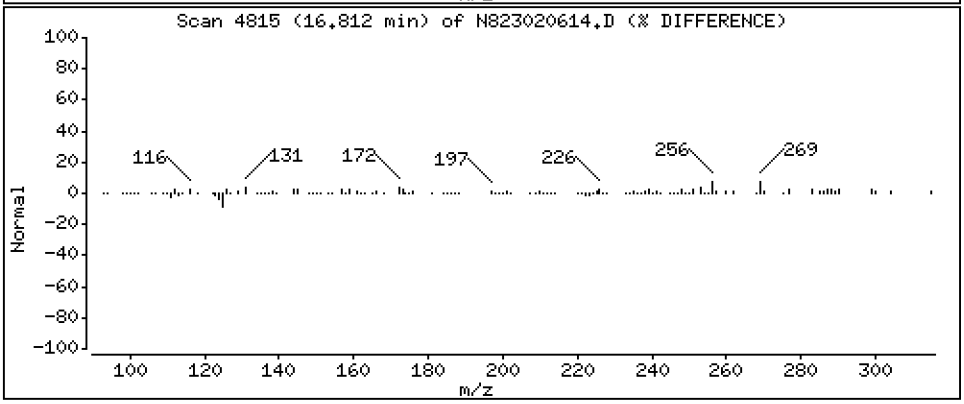












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

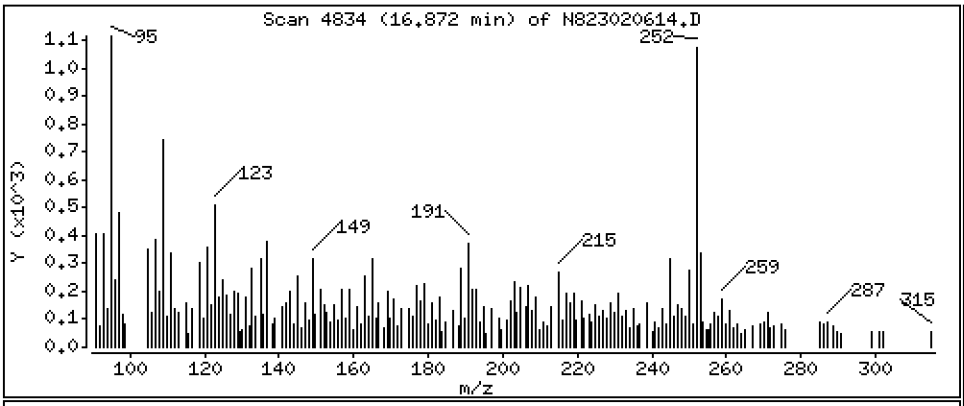
Operator: JZ

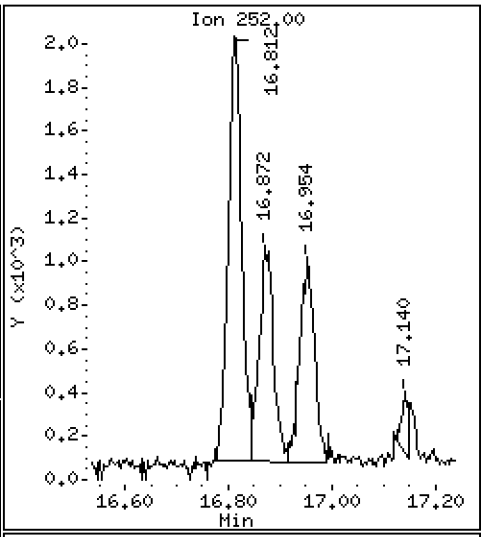
Column phase: Rxi-17sil

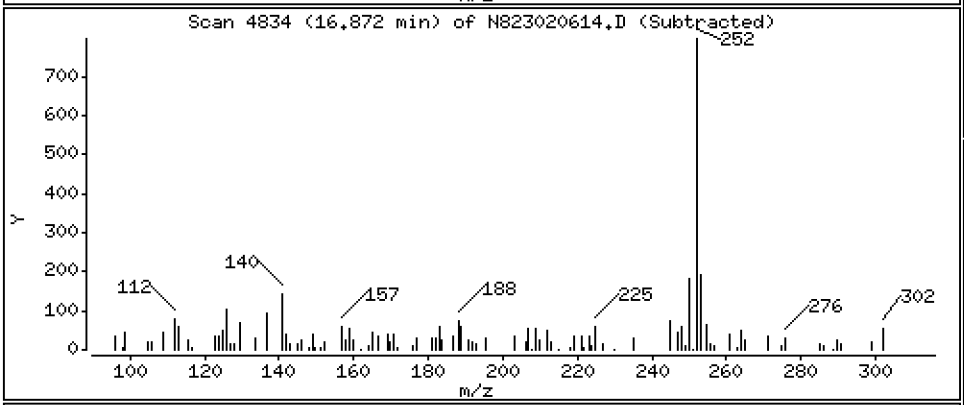
Column diameter: 0.25

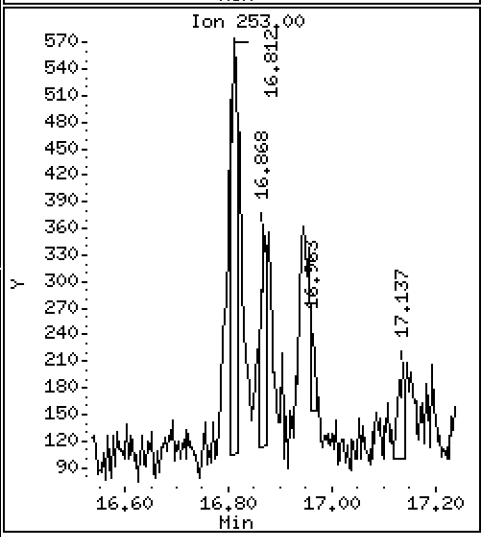
29 Benzo(k)fluoranthene

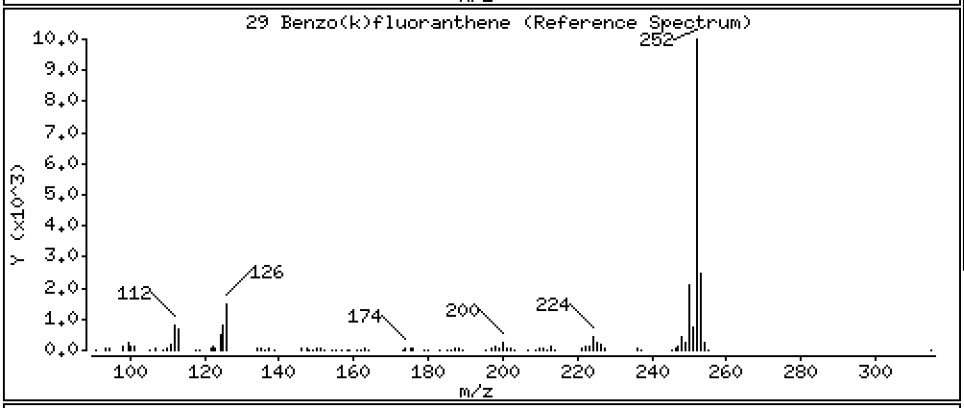
Concentration: 0.1606 ug/mL

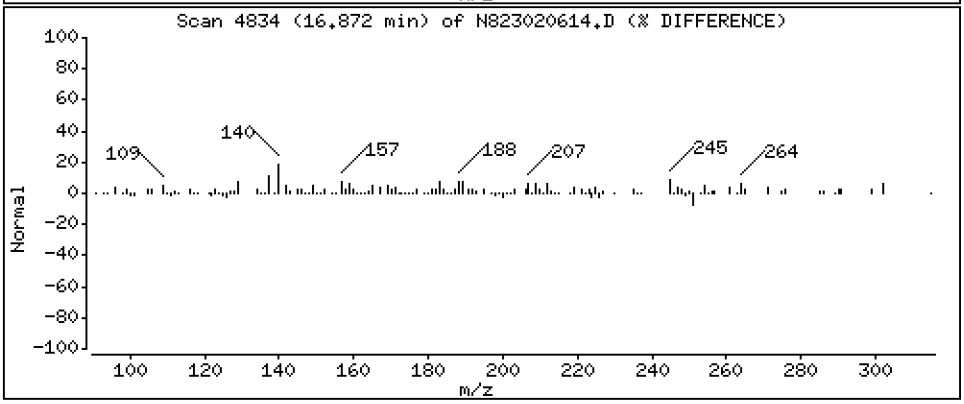












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

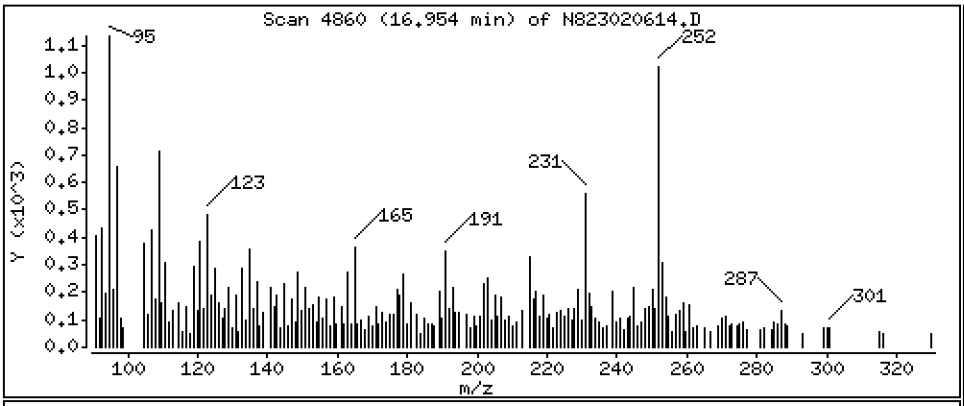
Operator: JZ

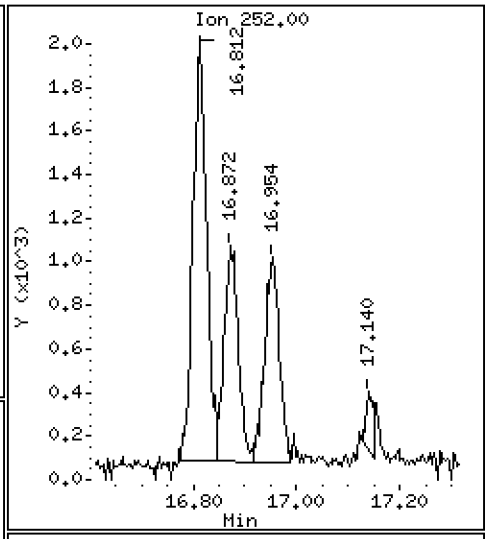
Column phase: Rxi-17sil

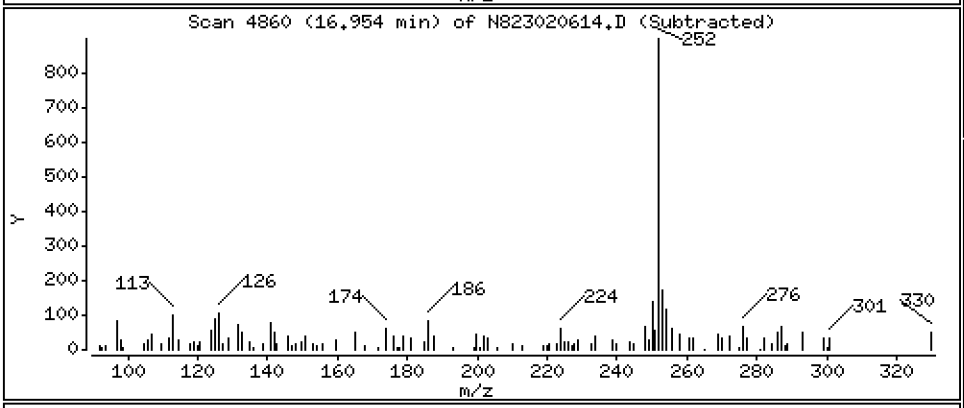
Column diameter: 0.25

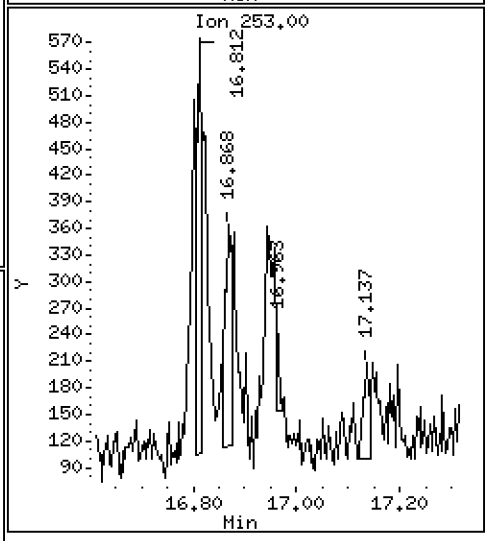
30 Benzo(j)fluoranthene

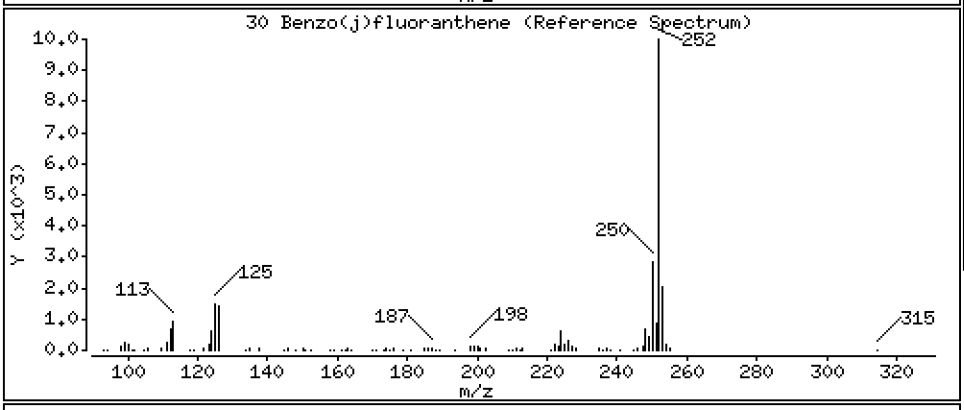
Concentration: 0.1737 ug/mL

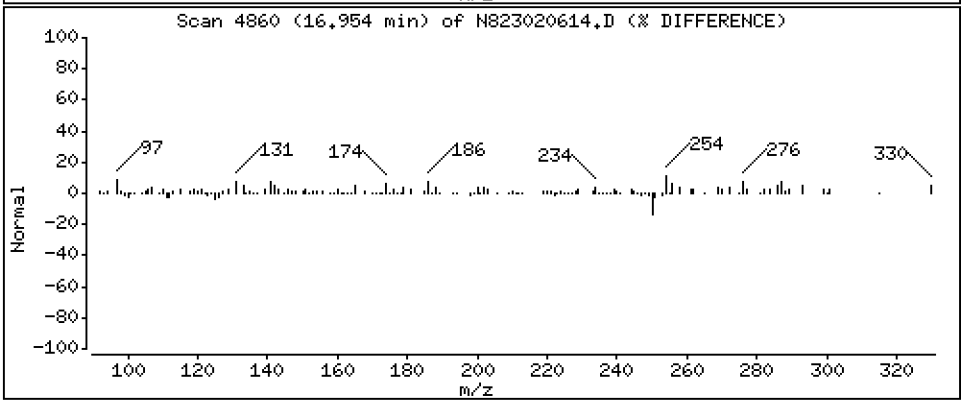












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

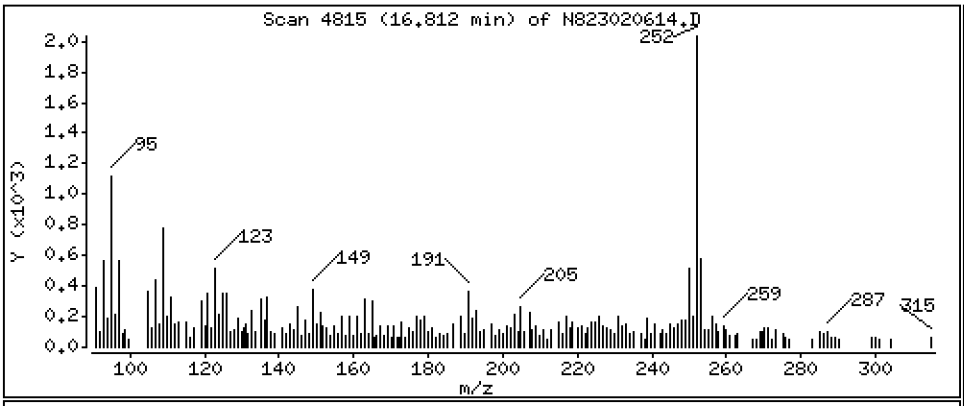
Operator: JZ

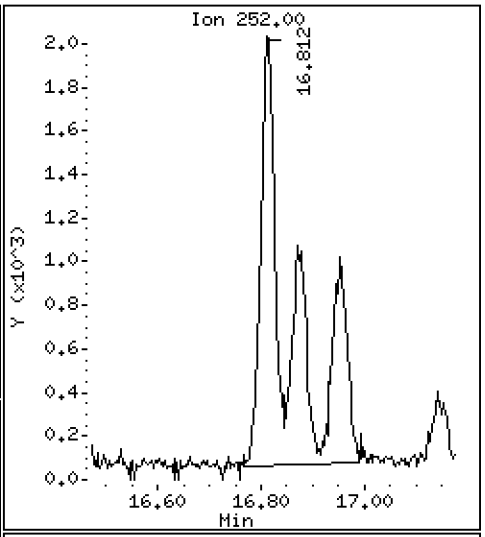
Column phase: Rxi-17sil

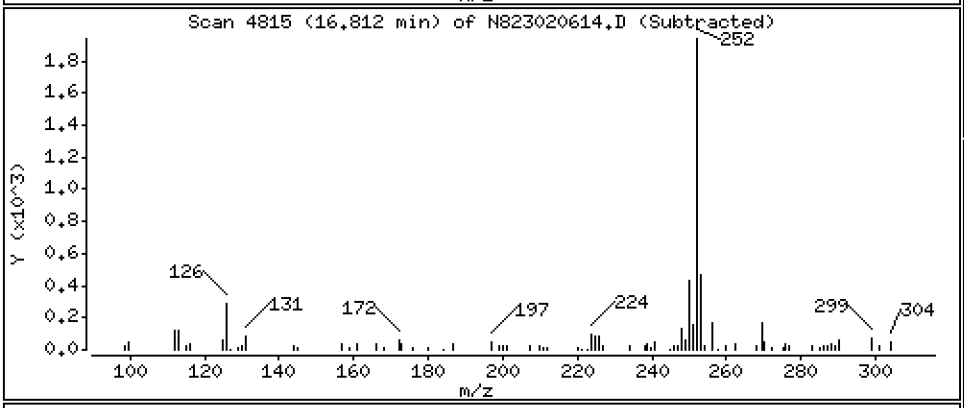
Column diameter: 0.25

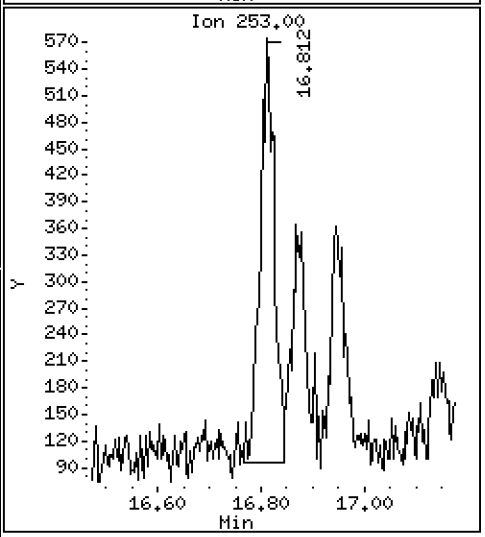
31 Total Benzofluoranthenes

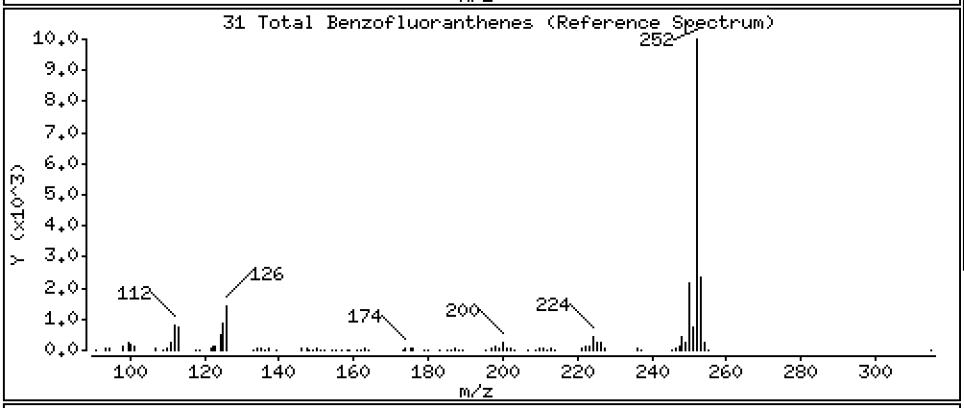
Concentration: 0.6513 ug/mL

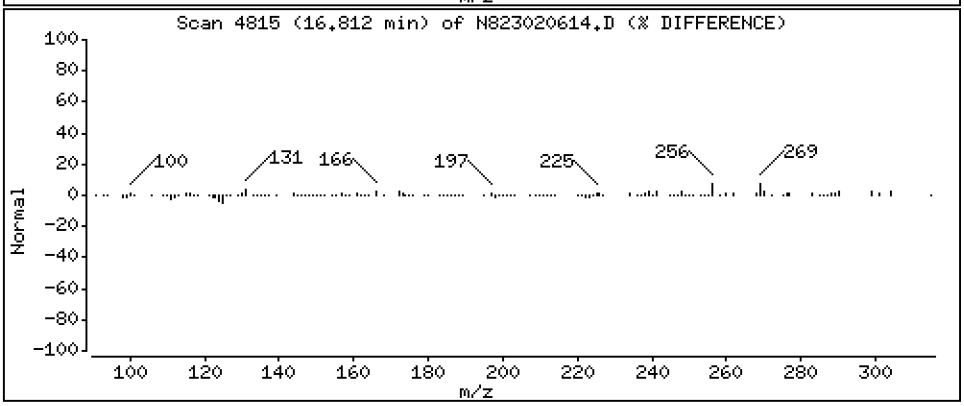












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

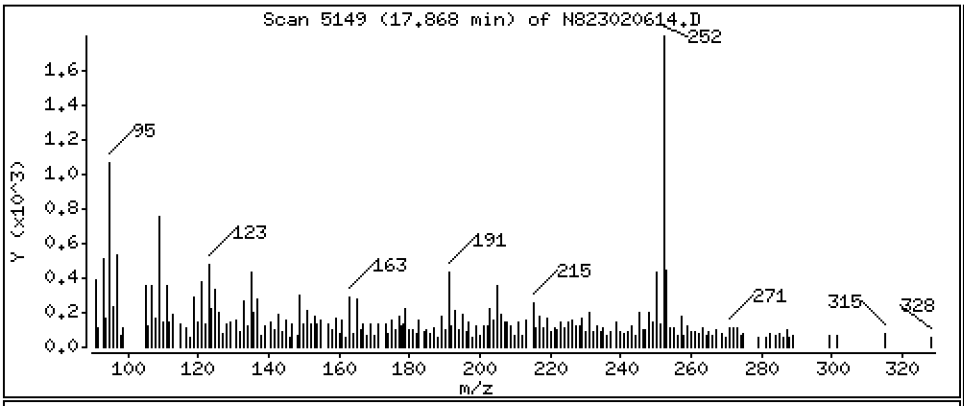
Operator: JZ

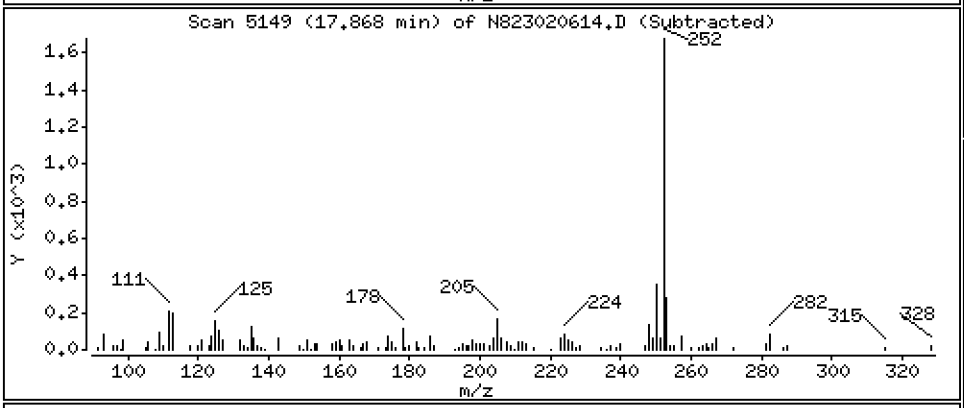
Column phase: Rxi-17sil

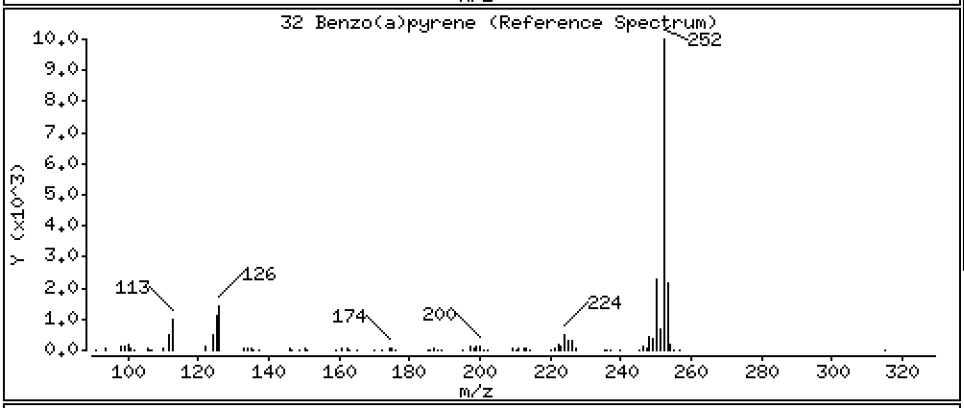
Column diameter: 0.25

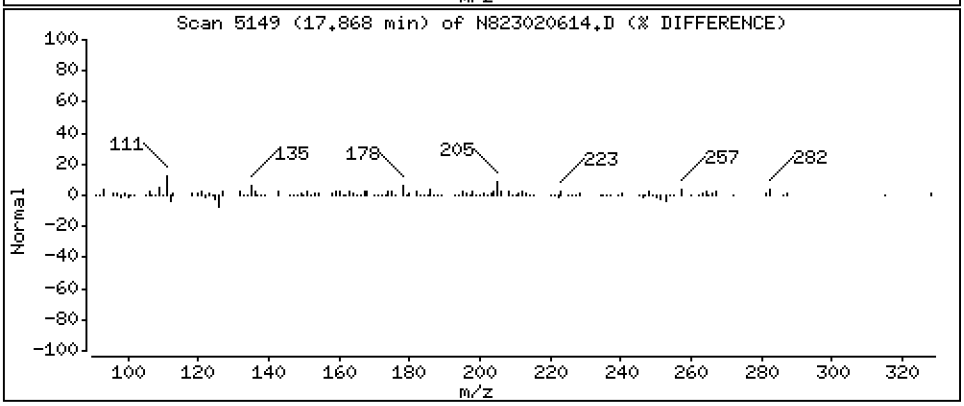
32 Benzo(a)pyrene

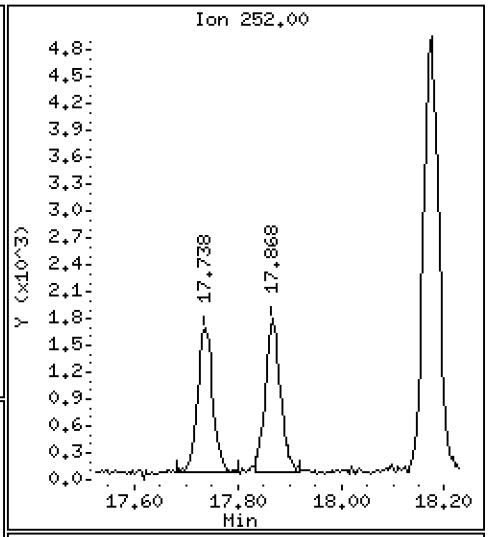
Concentration: 0.3272 ug/mL

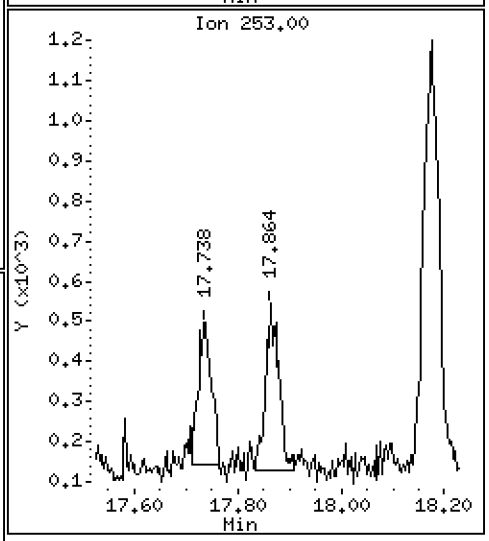












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

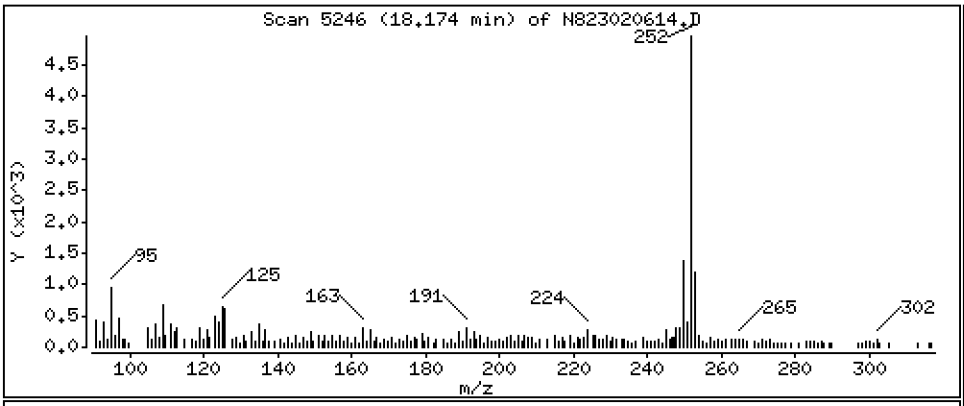
Operator: JZ

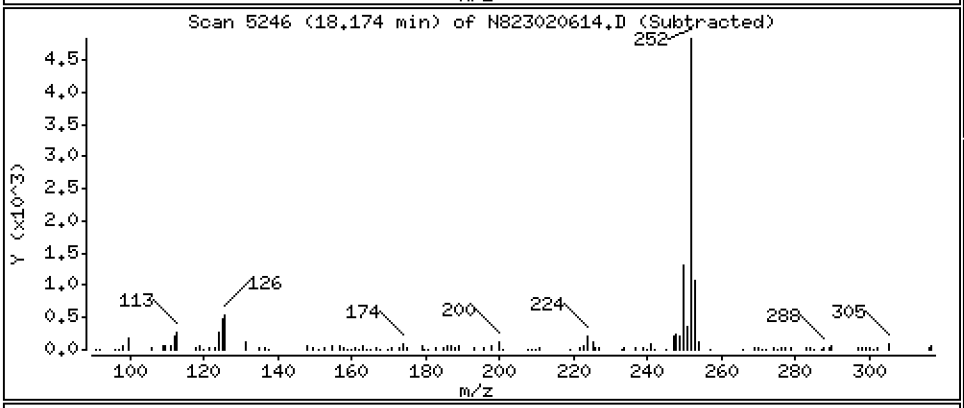
Column phase: Rxi-17sil

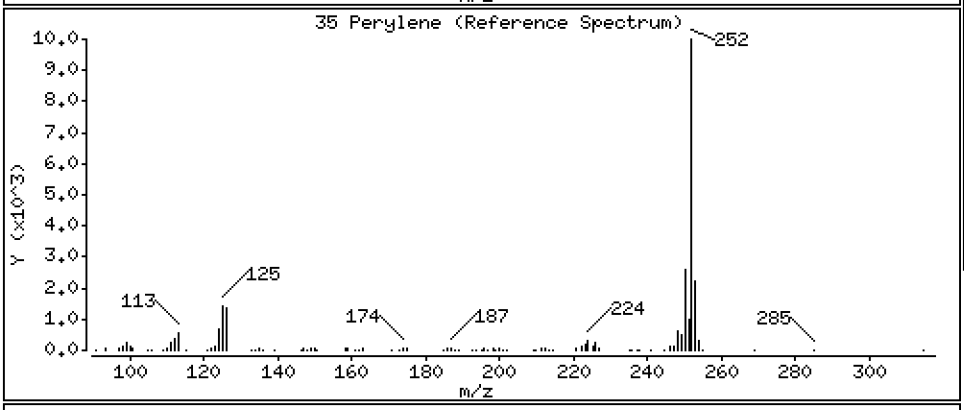
Column diameter: 0.25

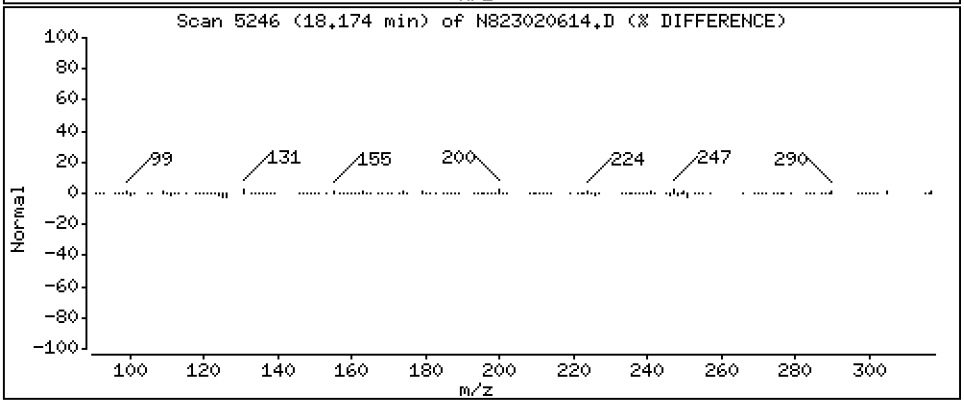
35 Perylene

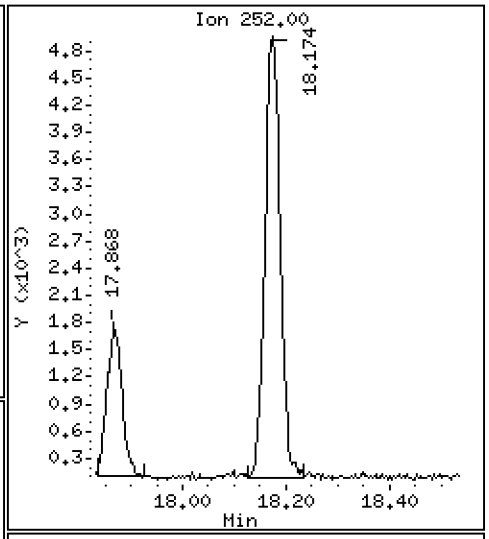
Concentration: 0.8676 ug/mL

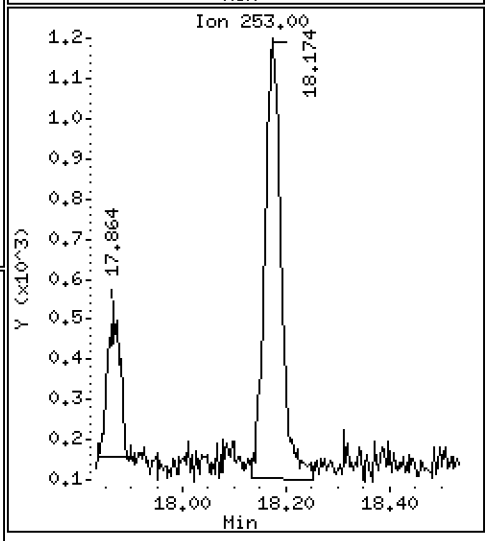












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

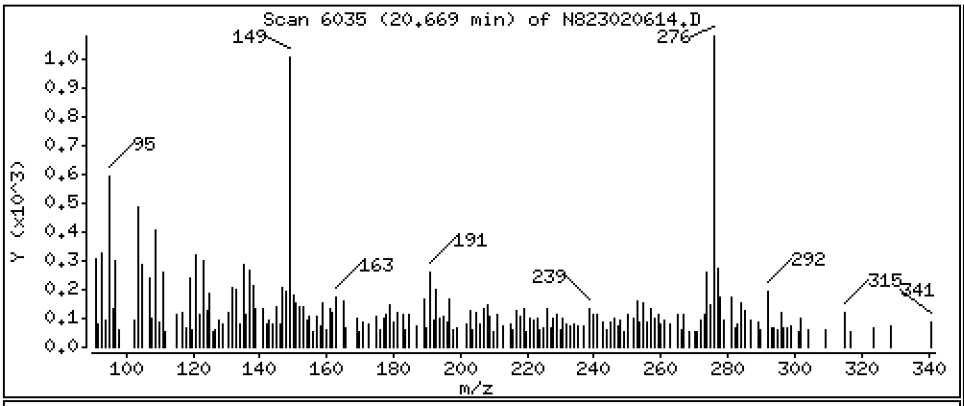
Operator: JZ

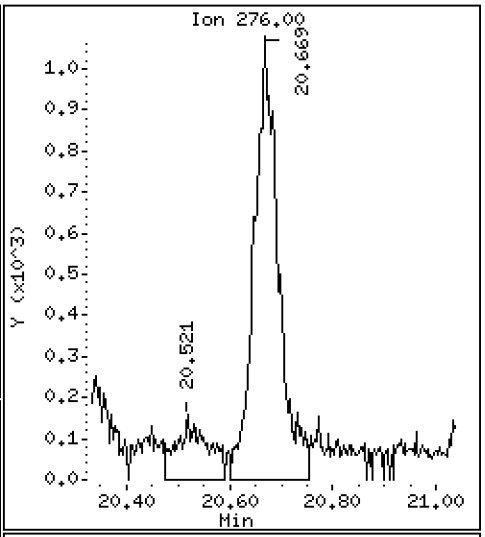
Column phase: Rxi-17sil

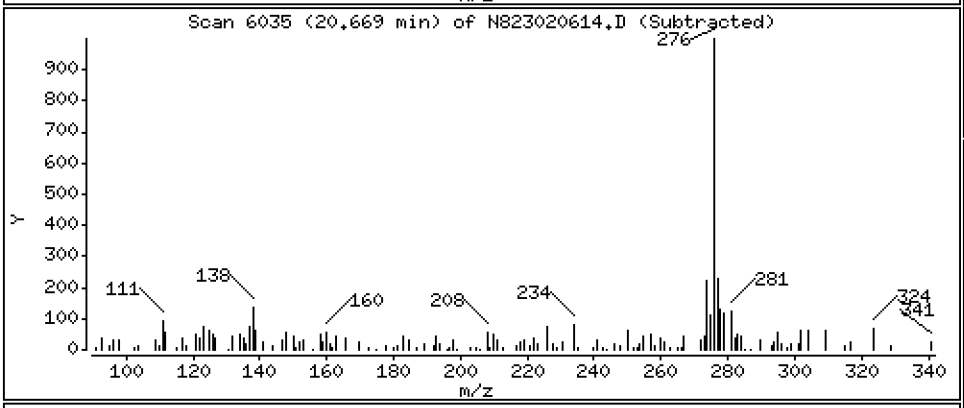
Column diameter: 0.25

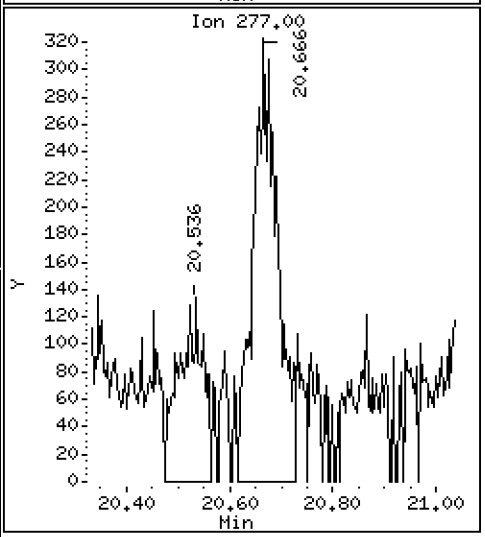
37 Indeno(1,2,3-cd)pyrene

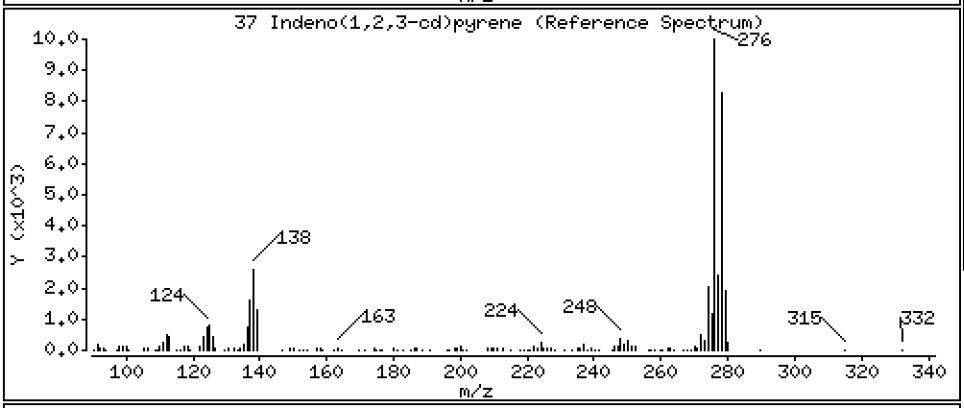
Concentration: 0.2855 ug/mL

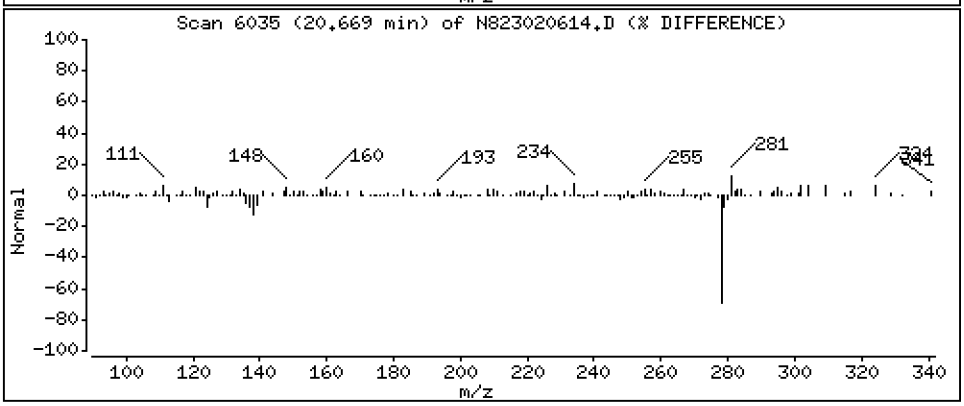












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020614.D

Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

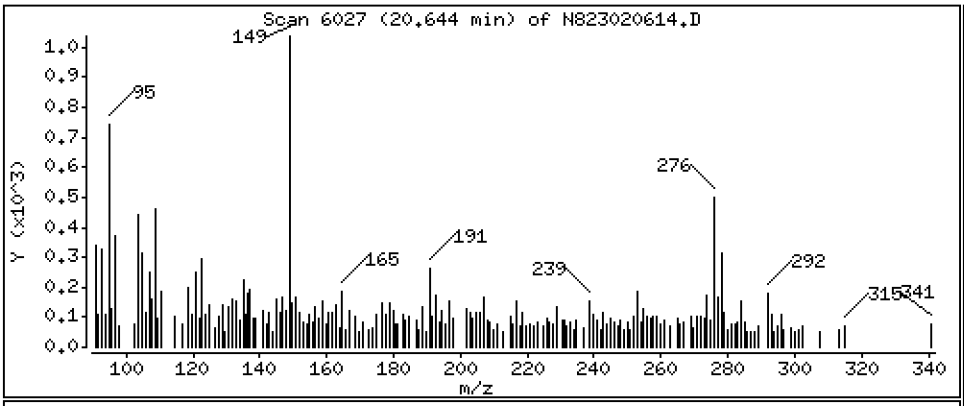
Operator: JZ

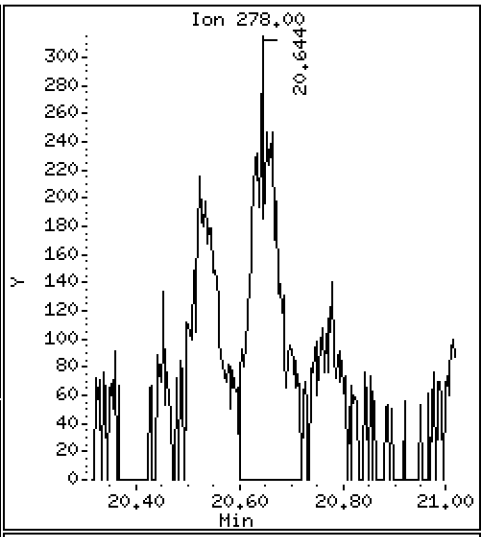
Column phase: Rxi-17sil

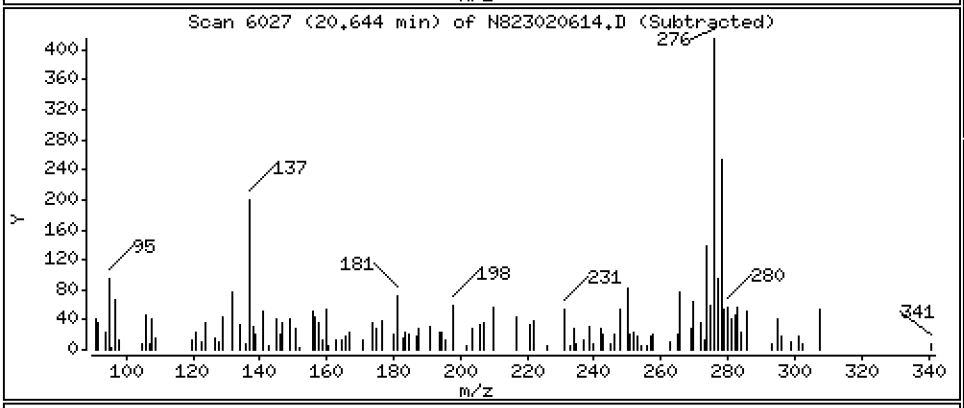
Column diameter: 0.25

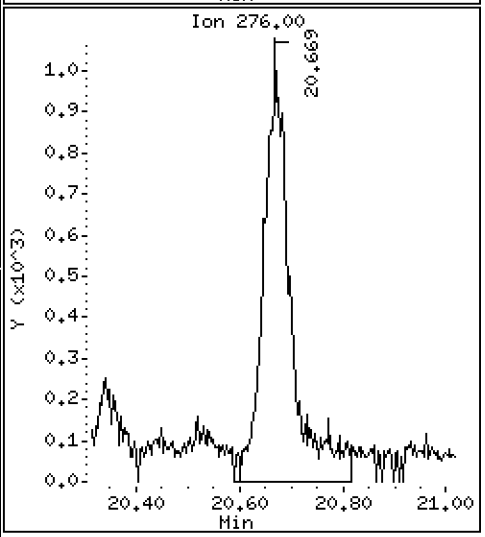
38 Dibenzo(a,h)anthracene

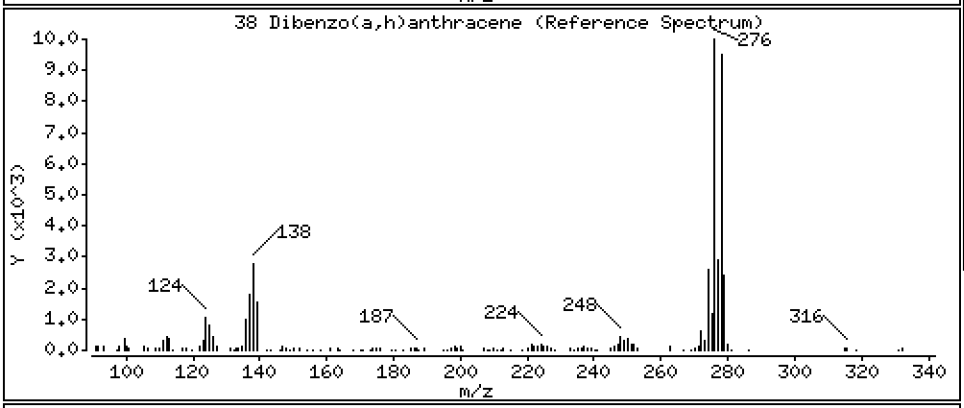
Concentration: 0.09952 ug/mL

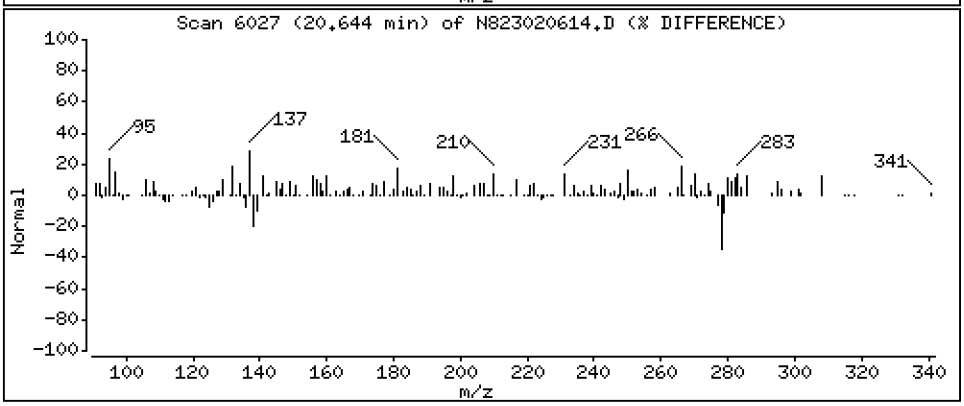












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Date : 06-FEB-2023 18:39

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-03

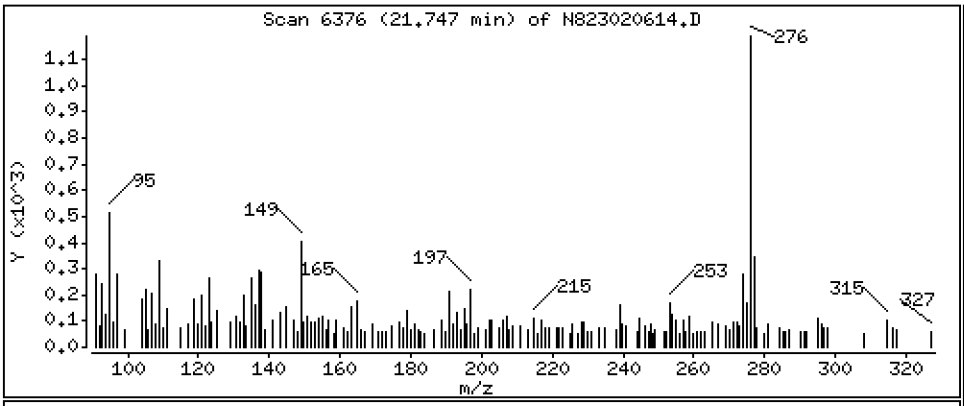
Operator: JZ

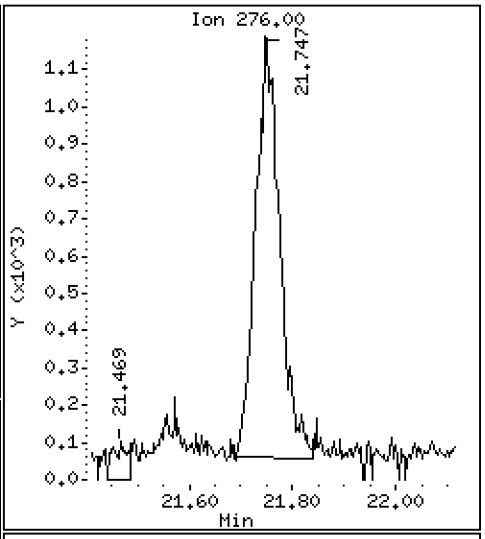
Column phase: Rxi-17sil

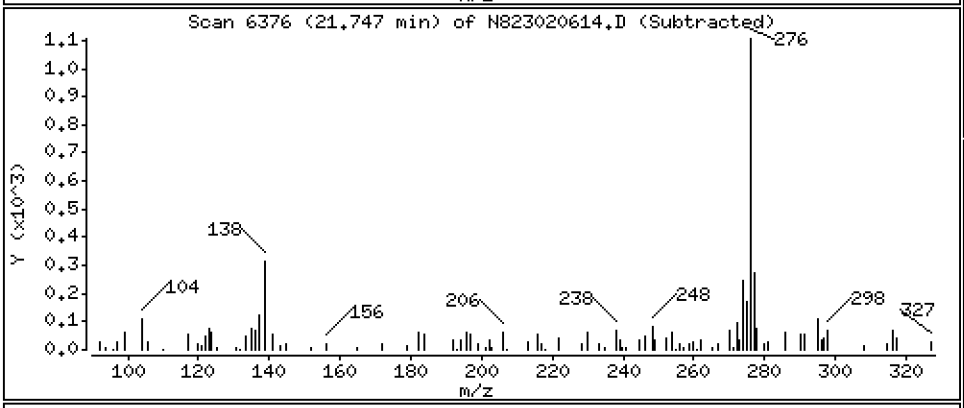
Column diameter: 0.25

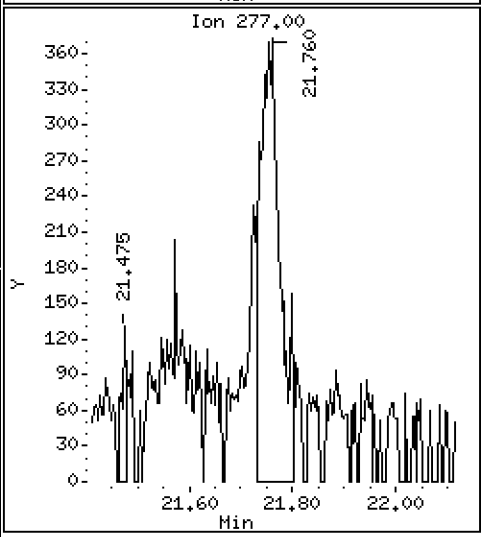
39 Benzo(g,h,i)perylene

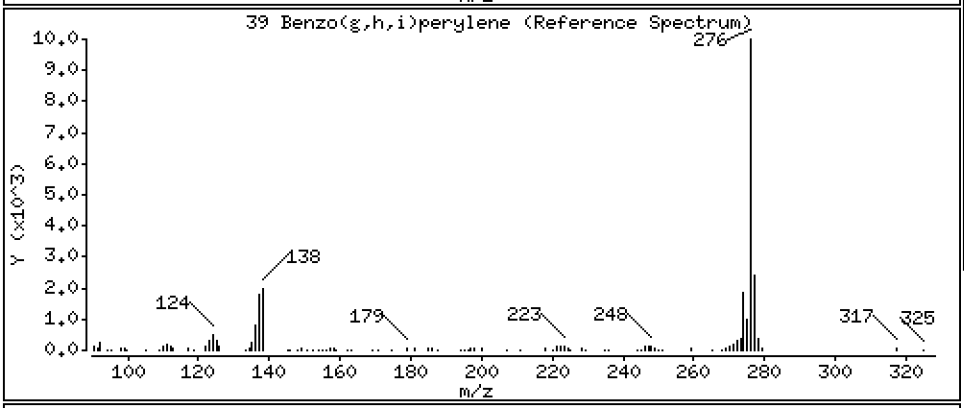
Concentration: 0.3303 ug/mL

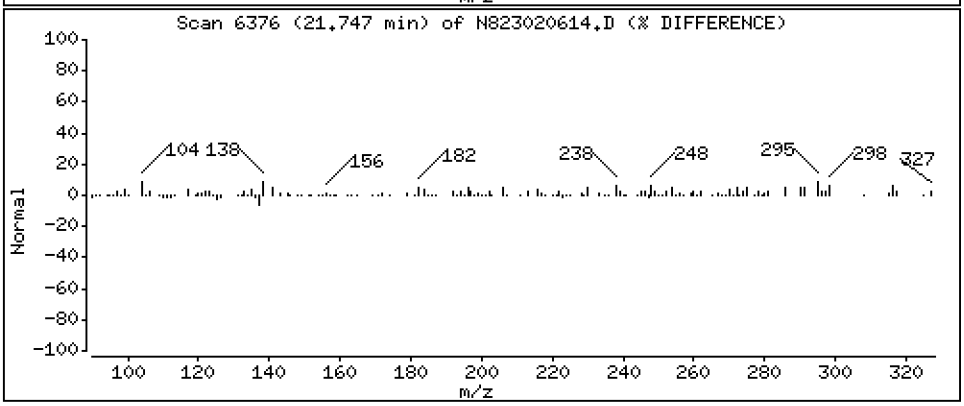












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020614.D
Lab Smp Id: 23A0207-03
Inj Date : 06-FEB-2023 18:39
Operator : JZ Inst ID: nt8.i
Smp Info : 23A0207-03
Misc Info : 23-
Comment : 1ul Injection
Method : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 13:04 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.884	4.900	(1.000)	52165	2.00000	
	2 Naphthalene	128	4.916	4.928	(1.006)	2422	0.09986	0.09986(M)
$	3 2-Methylnaphthalene-d10	152	5.624	5.634	(1.151)	31090	2.18533	2.185
	4 2-Methylnaphthalene	141	5.671	5.681	(1.161)	1319	0.09887	0.09887(M)
	5 1-methylnaphthalene	141	5.871	5.880	(1.202)	932	0.06883	0.06883(M)
	9 Acenaphthylene	152	7.075	7.082	(0.985)	658	0.02848	0.02848(M)
*	10 Acenaphthene-d10	164	7.183	7.189	(1.000)	30594	2.00000	
	11 Acenaphthene	153	7.233	7.240	(1.007)	1721	0.11118	0.1112
	12 Dibenzofuran	168	7.385	7.392	(1.028)	2100	0.08932	0.08932
	14 Fluorene	166	7.863	7.869	(1.095)	1578	0.08642	0.08642
*	15 Phenanthrene-d10	188	9.225	9.232	(1.000)	46304	2.00000	
	16 Phenanthrene	178	9.257	9.267	(1.003)	6992	0.30913	0.3091
	17 Anthracene	178	9.301	9.308	(1.008)	2409	0.11724	0.1172
	19 Carbazole	167	9.814	9.823	(1.064)	660	0.03504	0.03504
	22 Fluoranthene	202	11.040	11.050	(1.197)	24256	0.98520	0.9852
$	21 Fluoranthene-d10	212	11.003	11.009	(1.193)	43791	2.14356	2.144
	23 Pyrene	202	11.569	11.569	(0.815)	19636	1.37119	1.371
	24 Benzo(a)anthracene	228	14.060	14.070	(0.991)	4891	0.37682	0.3768
*	25 Chrysene-d12	240	14.193	14.202	(1.000)	23098	2.00000	
	27 Chrysene	228	14.266	14.275	(1.005)	5691	0.41187	0.4119(M)
	28 Benzo(b)fluoranthene	252	16.811	16.824	(0.929)	3778	0.30865	0.3086
	29 Benzo(k)fluoranthene	252	16.871	16.887	(0.932)	1925	0.16056	0.1606
	30 Benzo(j)fluoranthene	252	16.953	16.963	(0.937)	1875	0.17372	0.1737
	31 Total Benzofluoranthenes	252	16.811	16.824	(0.929)	7550	0.65129	0.6513(M)
	32 Benzo(a)pyrene	252	17.867	17.877	(0.987)	3524	0.32716	0.3272
*	33 Perylene-d12	264	18.098	18.107	(1.000)	21017	2.00000	
	35 Perylene	252	18.174	18.183	(1.004)	10029	0.86764	0.8676
$	36 Dibenzo(a,h)anthracene-d14	292	20.539	20.549	(1.135)	26118	3.17162	3.172
	37 Indeno(1,2,3-cd)pyrene	276	20.669	20.684	(1.142)	3504	0.28554	0.2855
	38 Dibenzo(a,h)anthracene	278	20.643	20.666	(1.141)	1051	0.09952	0.09952(M)
	39 Benzo(g,h,i)perylene	276	21.747	21.763	(1.202)	3672	0.33027	0.3303

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020614.D
Lab Smp Id: 23A0207-03
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44336	22168	88672	52165	17.66
10 Acenaphthene-d10	26127	13064	52254	30594	17.10
15 Phenanthrene-d10	47424	23712	94848	46304	-2.36
25 Chrysene-d12	36794	18397	73588	23098	-37.22
33 Perylene-d12	36636	18318	73272	21017	-42.63

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.88	-0.32
10 Acenaphthene-d10	7.19	6.69	7.69	7.18	-0.09
15 Phenanthrene-d10	9.23	8.73	9.73	9.23	-0.07
25 Chrysene-d12	14.20	13.70	14.70	14.19	-0.07
33 Perylene-d12	18.11	17.61	18.61	18.10	-0.05

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

REVIEW SUMMARY FOR FILE - N823020614.D

Lab ID: 23A0207-03
nt8.i, 20230206A.b\FSIMPNA230119.m,   06-FEB-2023 18:39

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

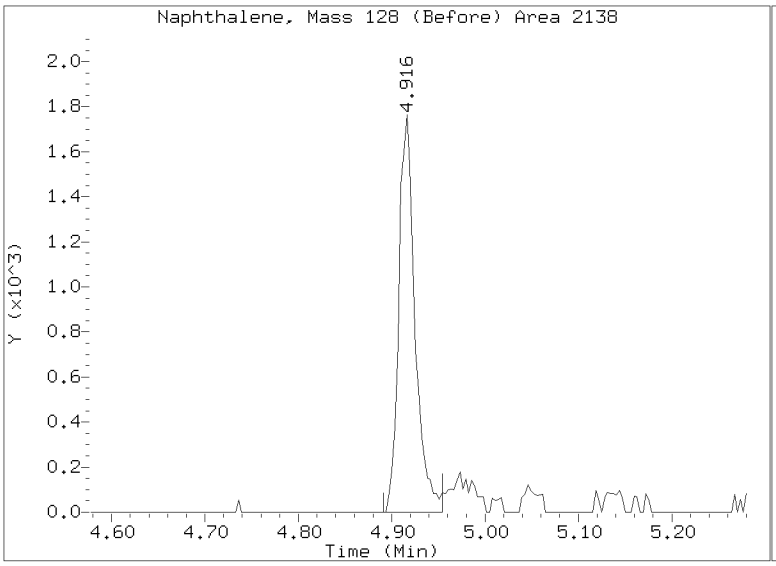
No RRT check performed

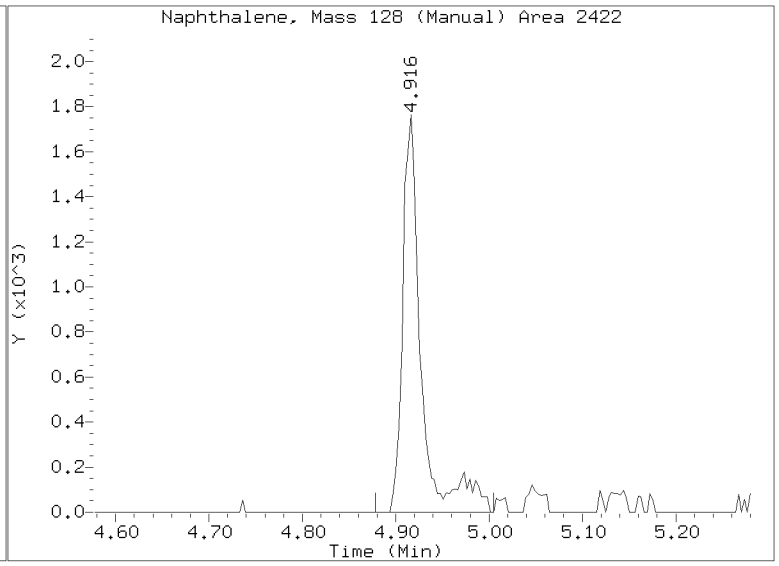
On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

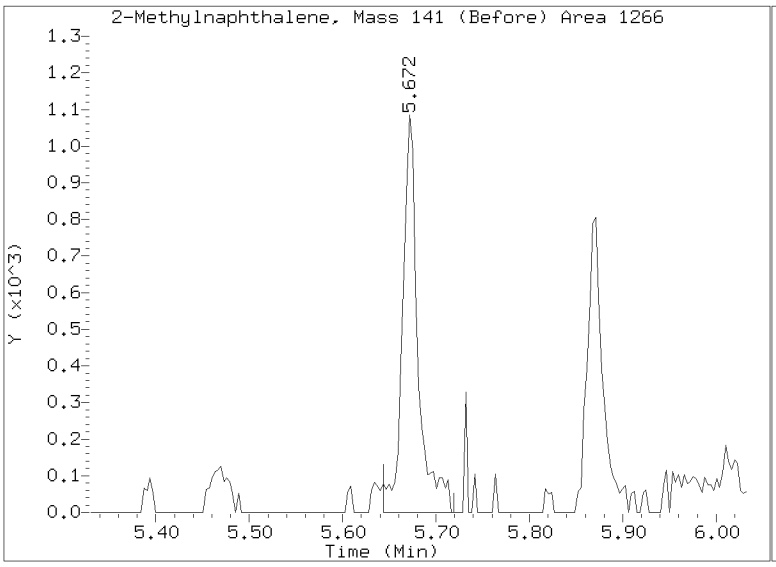
* Only compounds listed in the work order have been verified by the analyst *

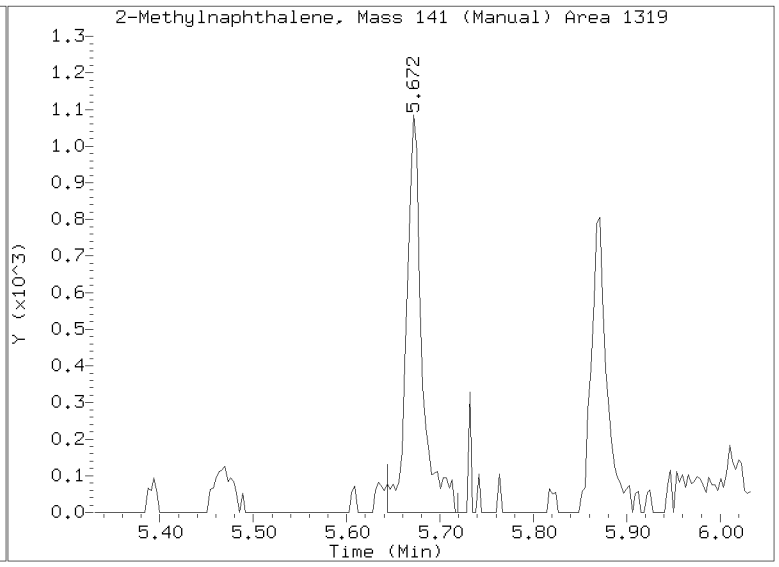
Quant Ion Manual Peak Adjustment Report

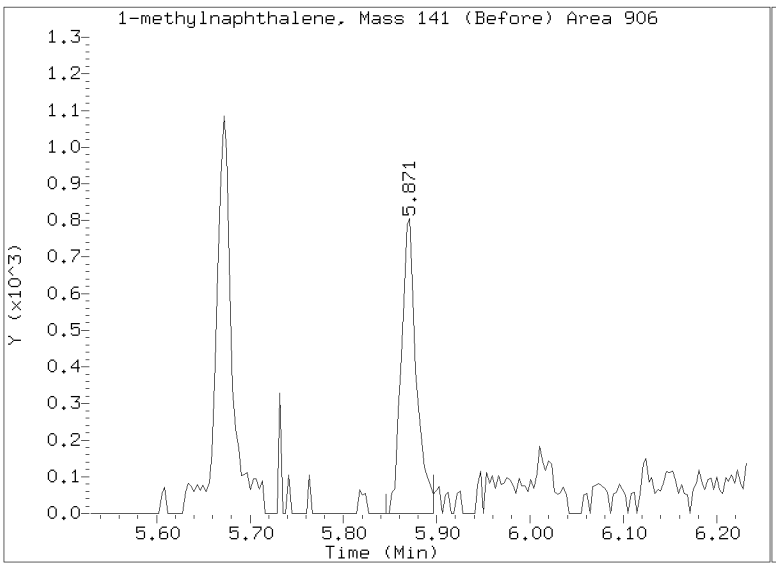
Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020614.D
Injection Date: 06-FEB-2023 18:39
Lab ID:23A0207-03 Client ID:
Report Date: 02/07/2023 14:35

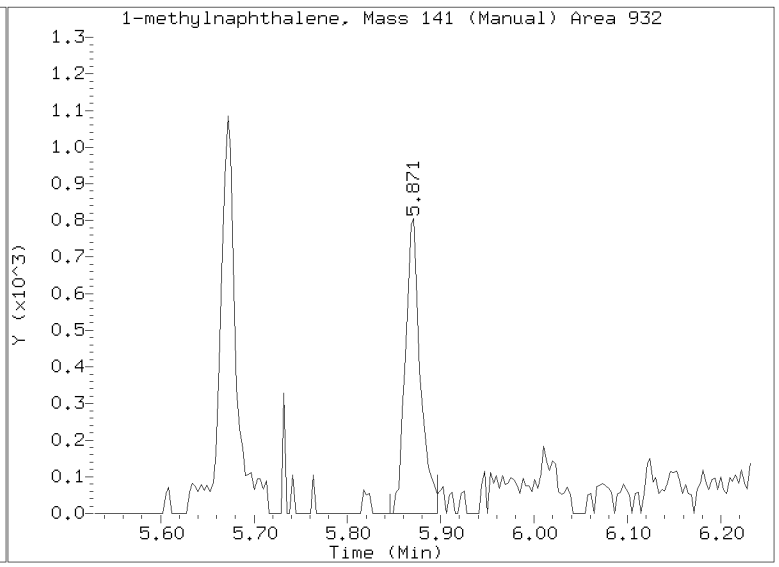






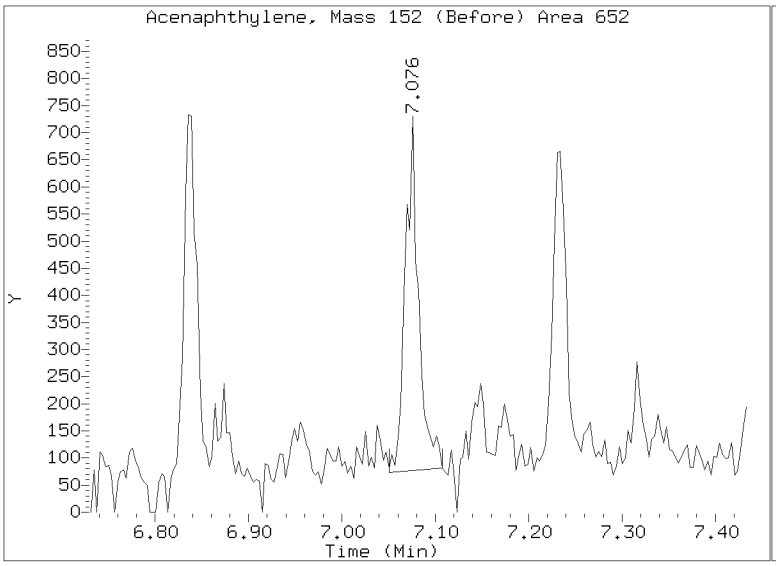


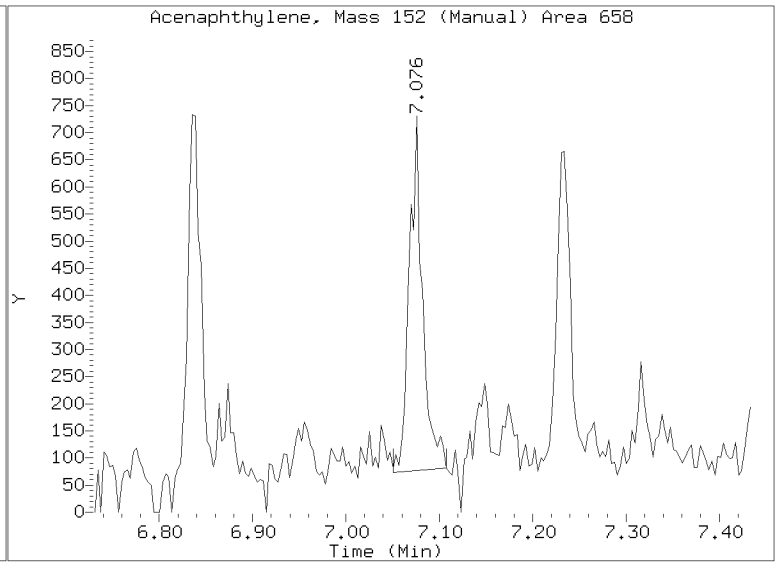


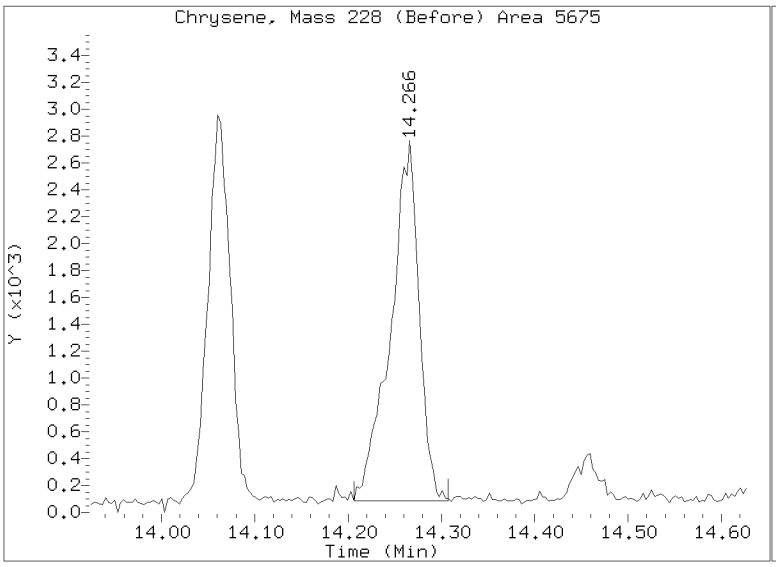


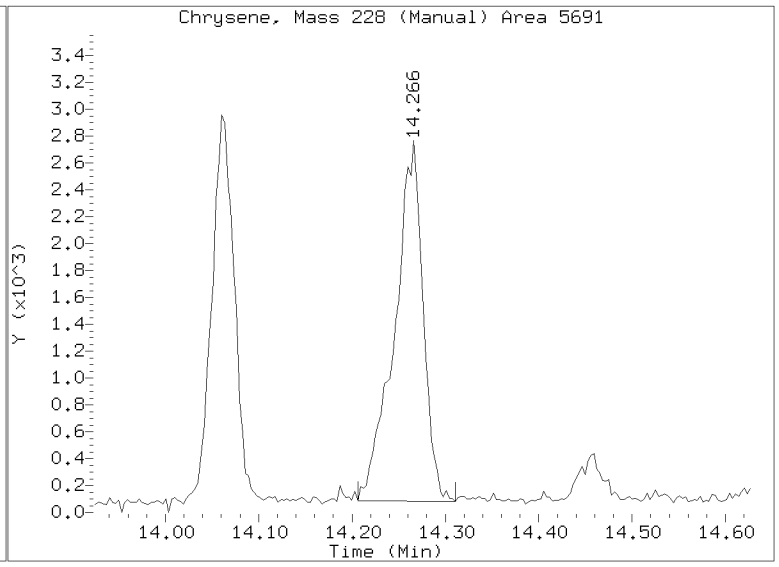
Quant Ion Manual Peak Adjustment Report

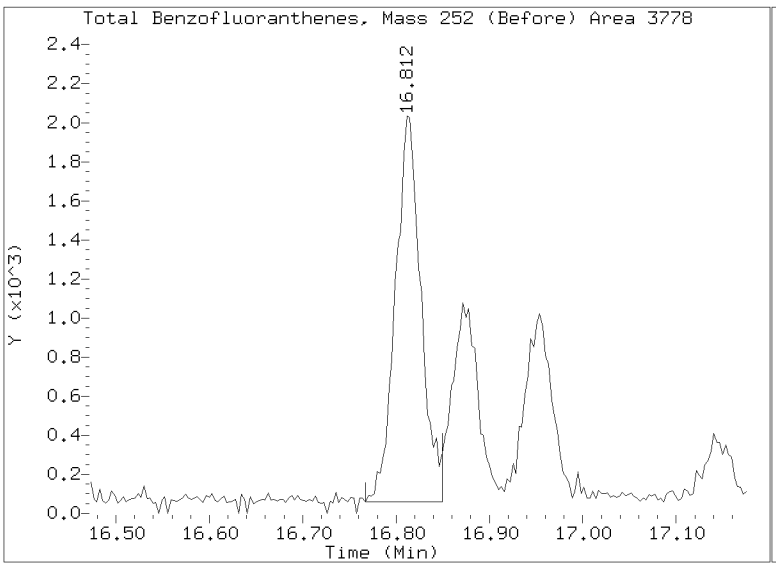
Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020614.D
Injection Date: 06-FEB-2023 18:39
Lab ID:23A0207-03 Client ID:
Report Date: 02/07/2023 14:35

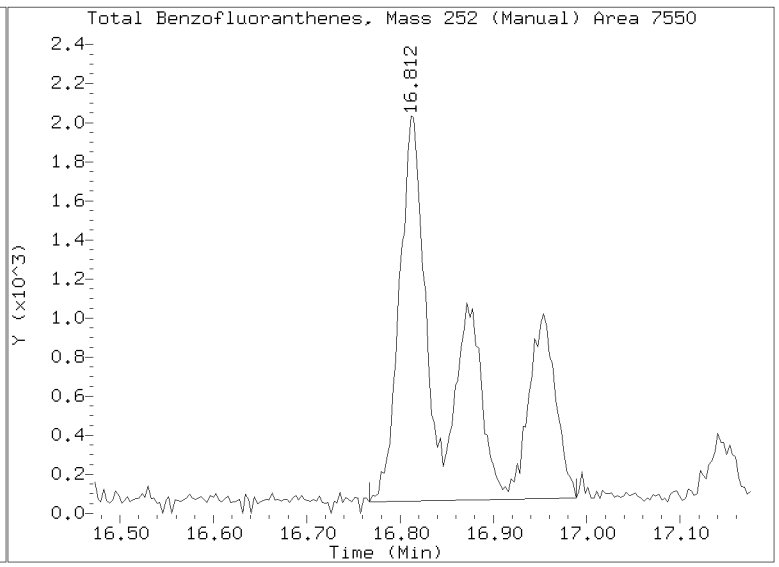












Quant Ion Manual Peak Adjustment Report

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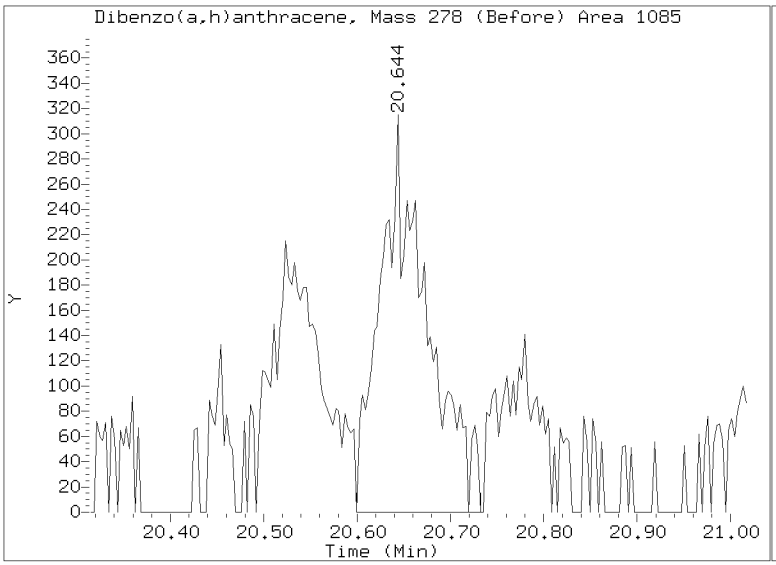
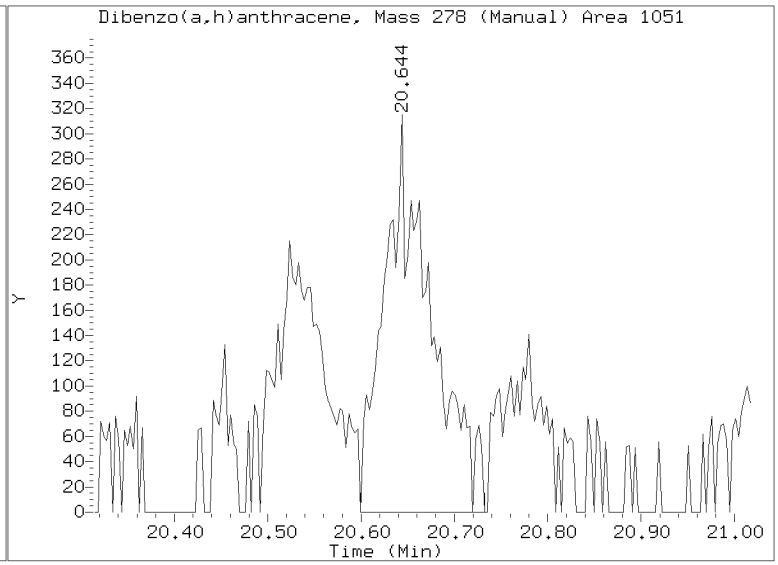
Injection Date: 06-FEB-2023 18:39
Lab ID:23A0207-03 Client ID:
Report Date: 02/07/2023 14:35





Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1080

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

Polynuclear Aromatic Hydrocarbons

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-04 A	SDG:	23A0207
Sampled:	01/11/23 09:24	Prepared:	02/01/23 11:29	File ID:	N823020805.D
% Solids:	73.60	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/08/23 13:33
Batch:	BLA0683	Sequence:	SLB0101	Initial/Final:	13.6 g Wet / 0.5 mL
Instrument:	NT8	Column:	RXI-17Sil ms	Calibration:	GA00050
Cleanups:	GPC, Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
56-55-3	Benzo(a)anthracene	3	46.9	D	2.47	15.0
218-01-9	Chrysene	3	47.2	D	3.16	15.0
205-99-2	Benzo(b)fluoranthene	3	36.7	D	4.11	15.0
207-08-9	Benzo(k)fluoranthene	3	22.5	D	2.28	15.0
50-32-8	Benzo(a)pyrene	3	39.4	D	1.84	15.0
193-39-5	Indeno(1,2,3-cd)pyrene	3	24.2	D	3.15	15.0
53-70-3	Dibenzo(a,h)anthracene	3	8.90	J, D	2.67	15.0

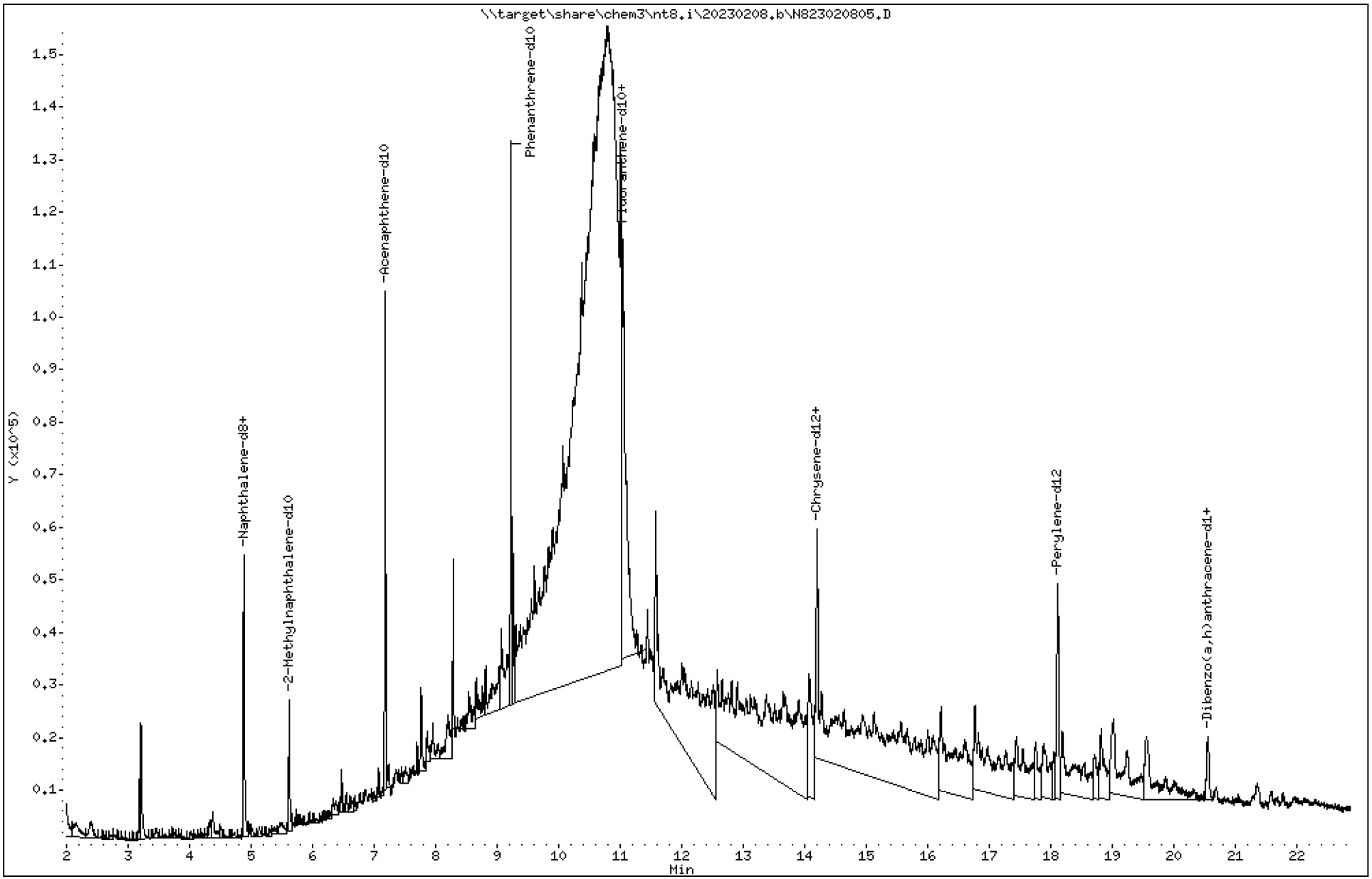
SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	149.86	110	73.2	32 - 120	
Dibenzo[a,h]anthracene-d14	149.86	155	104	21 - 133	
Fluoranthene-d10	149.86	130	87.0	36 - 134	

Data File: \\target\share\chem3\nt8.i\20230208.b\N823020805.D
Date : 08-FEB-2023 13:33
Client ID:
Sample Info: 23A0207-04,3,

Column phase: Rxi-17sil

Instrument: nt8.i

Operator: JZ
Column diameter: 0.25



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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

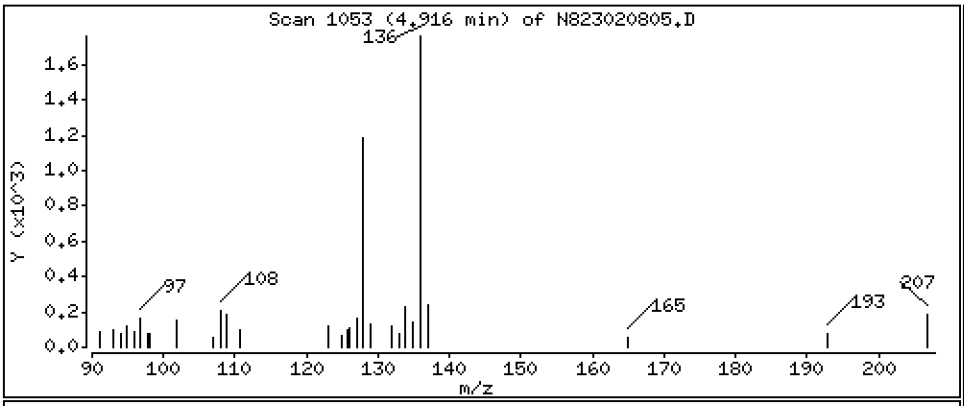
Operator: JZ

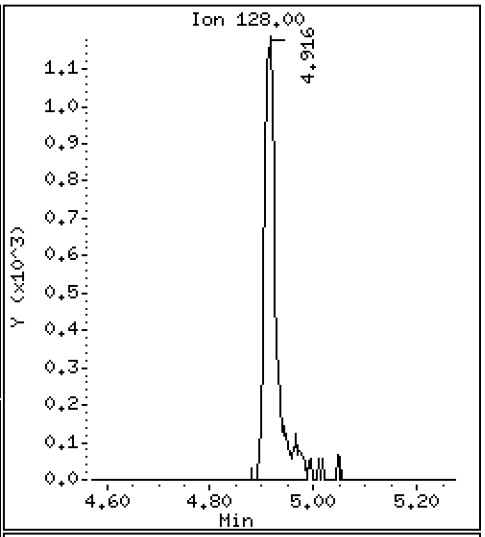
Column phase: Rxi-17sil

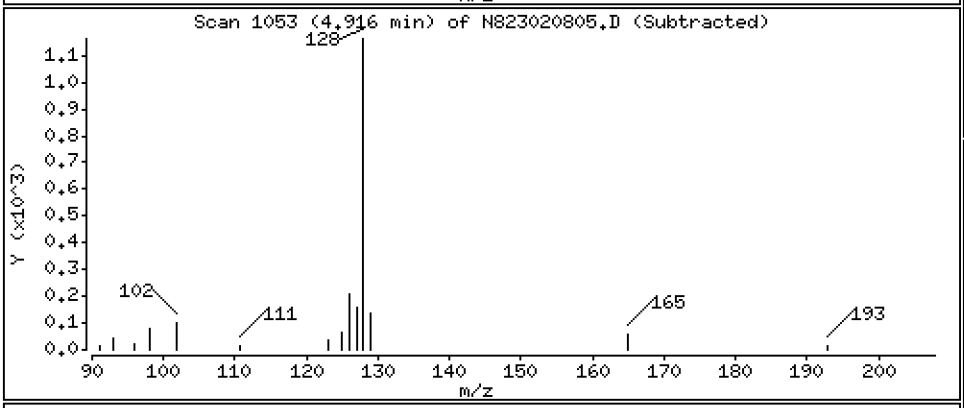
Column diameter: 0.25

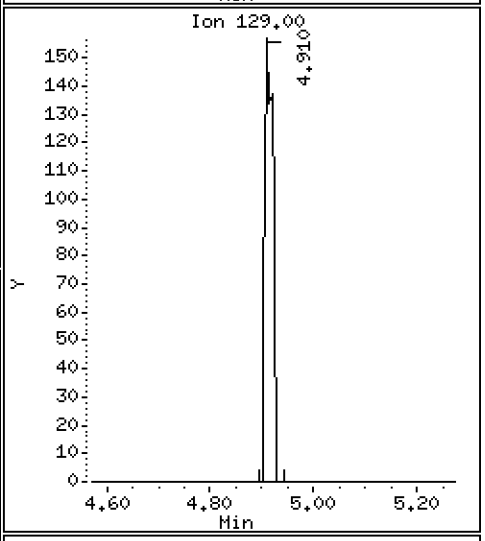
2 Naphthalene

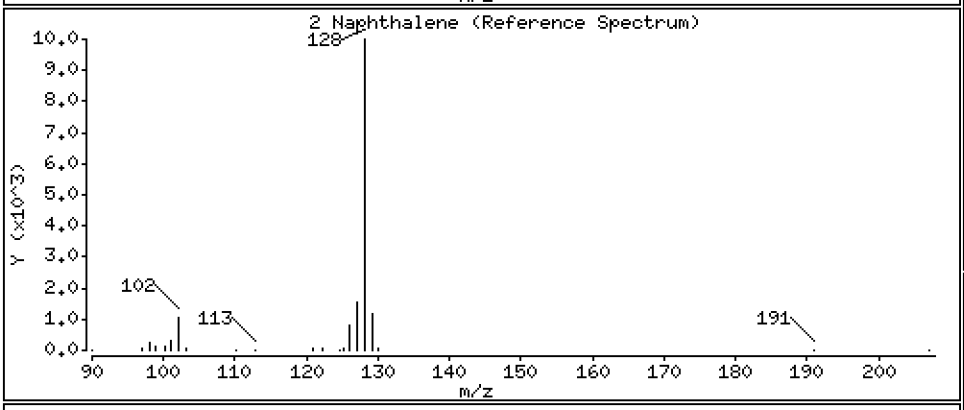
Concentration: 0.2572 ug/mL

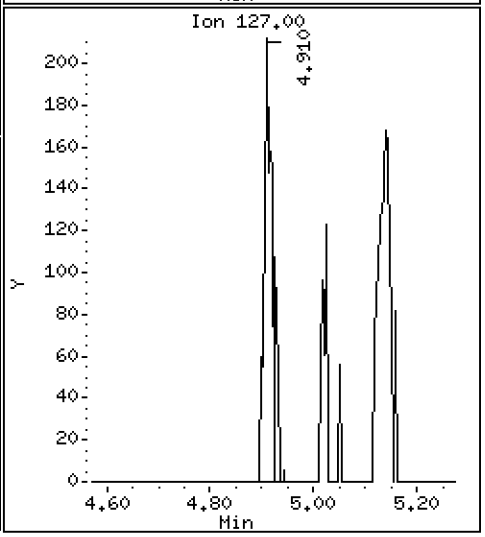


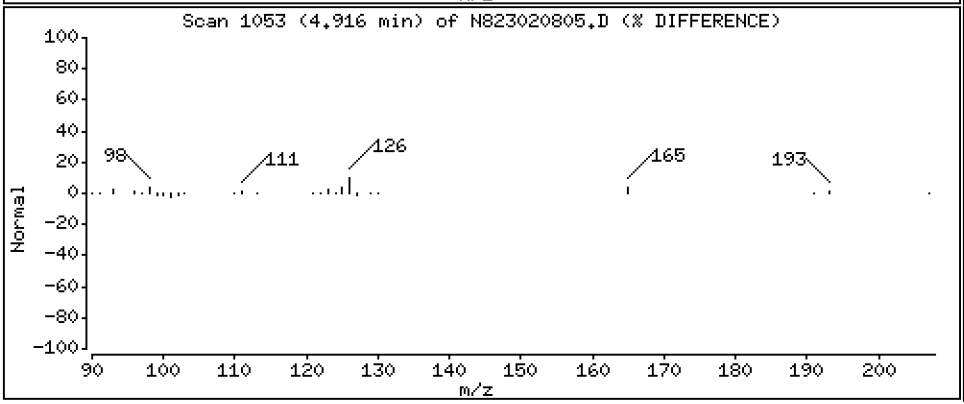












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

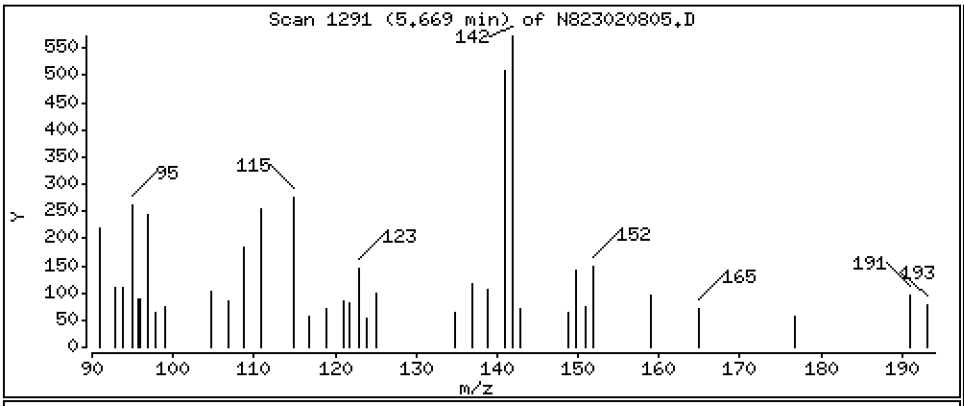
Operator: JZ

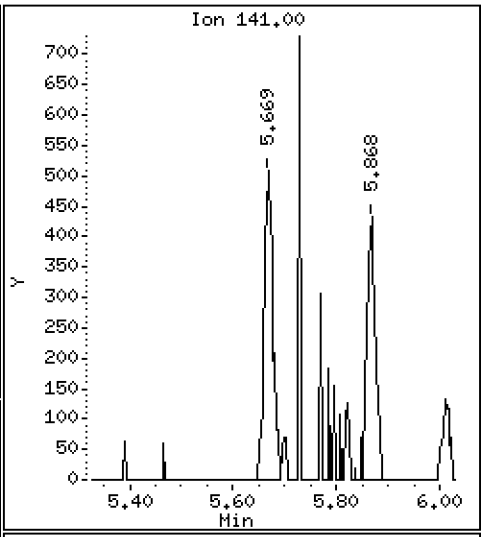
Column phase: Rxi-17sil

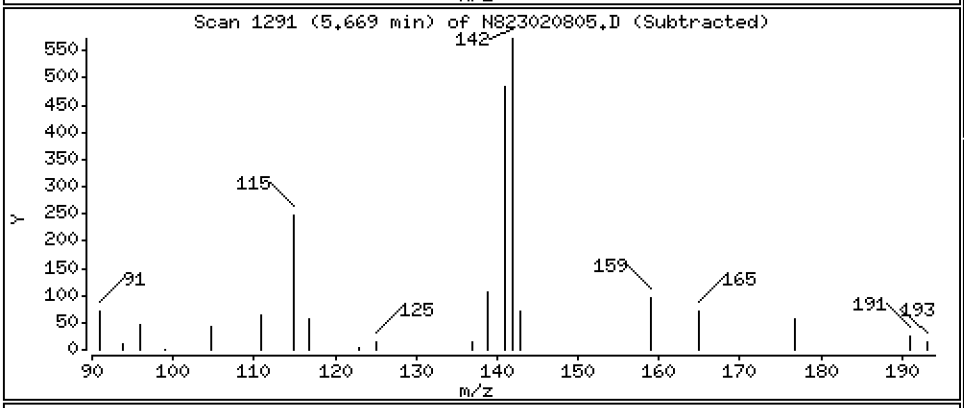
Column diameter: 0.25

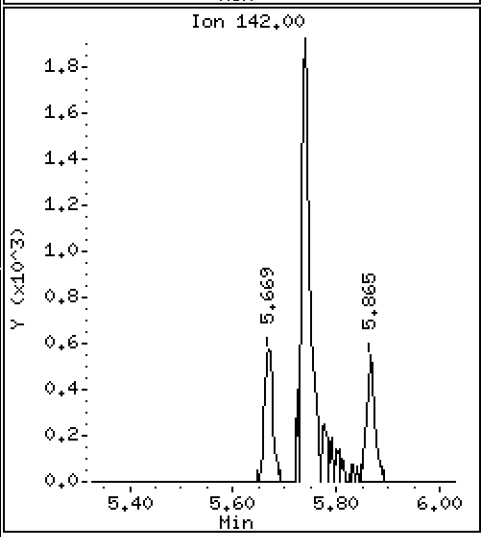
4 2-Methylnaphthalene

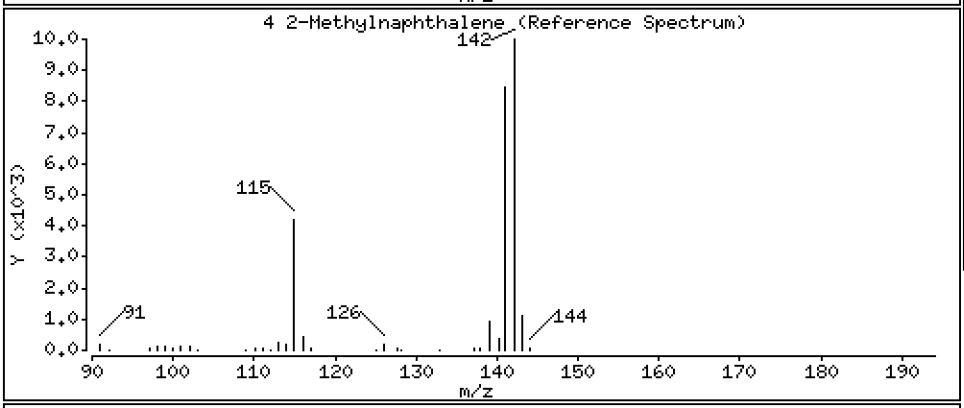
Concentration: 0.1479 ug/mL

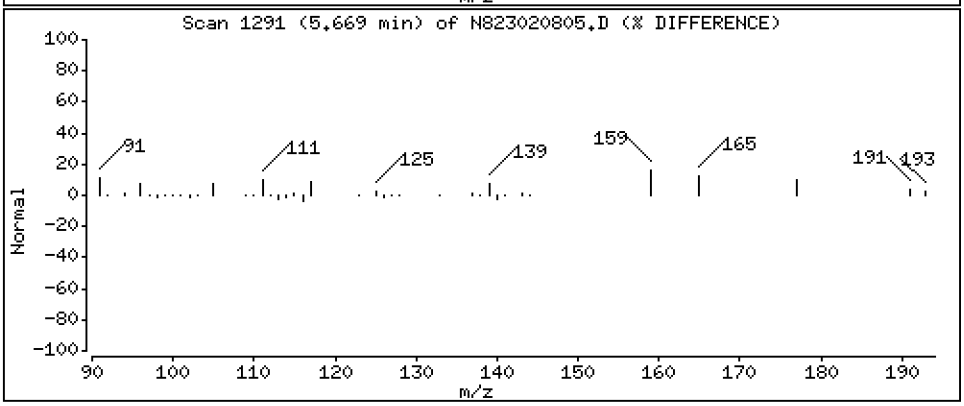












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

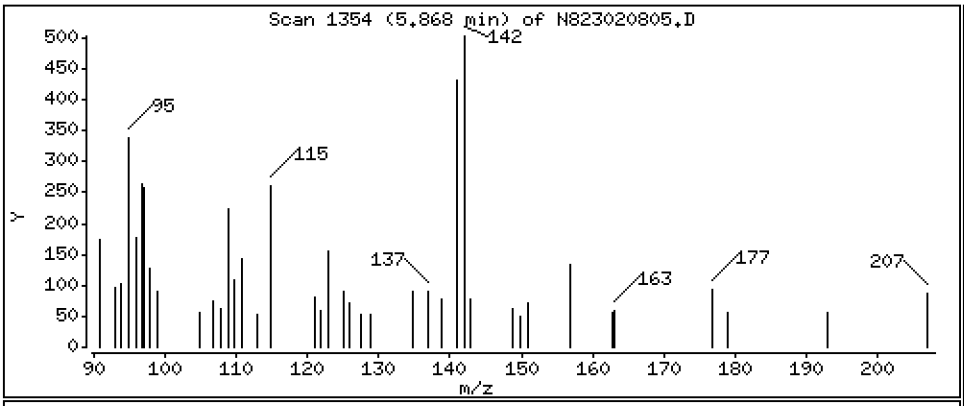
Operator: JZ

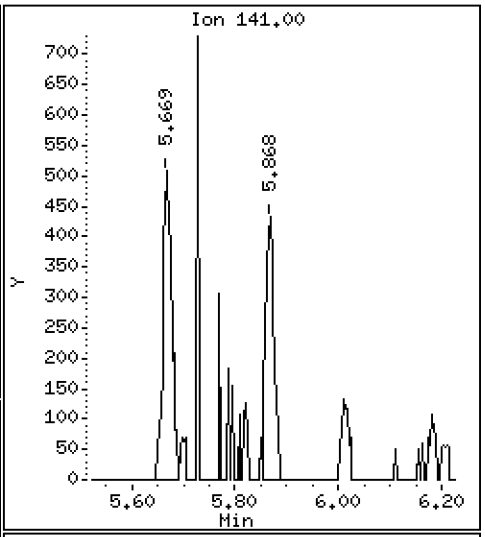
Column phase: Rxi-17sil

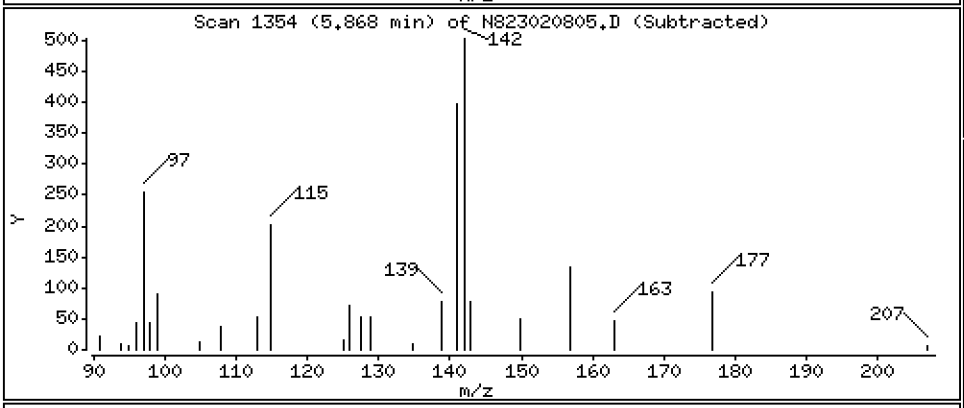
Column diameter: 0.25

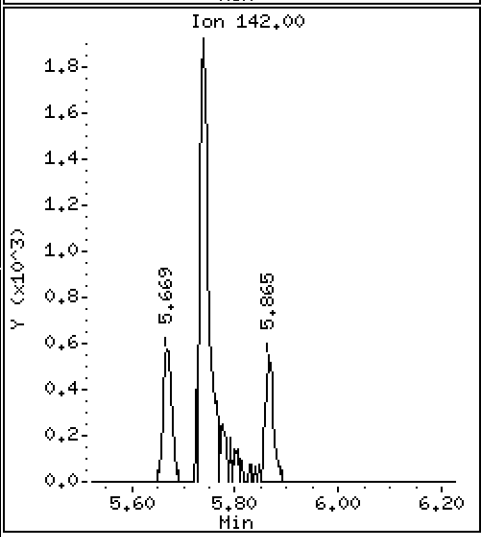
5 1-methylnaphthalene

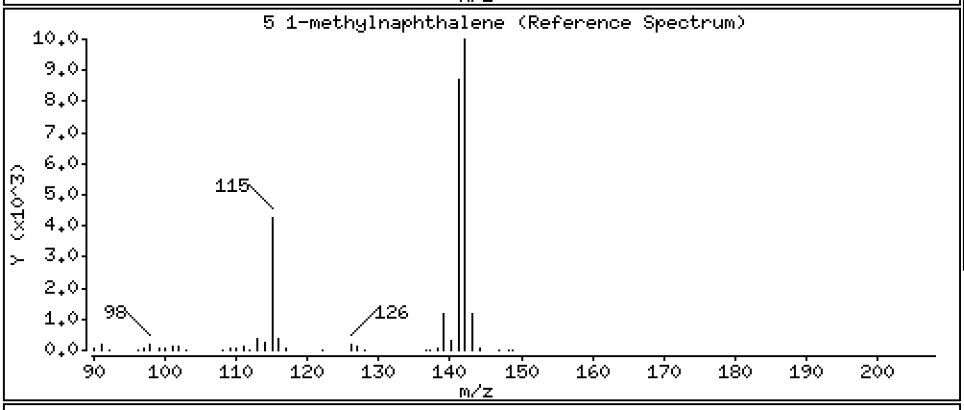
Concentration: 0.1216 ug/mL

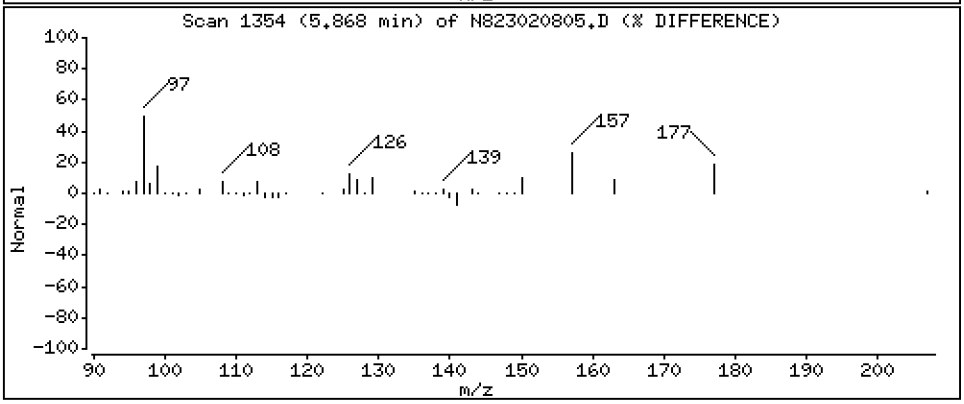












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

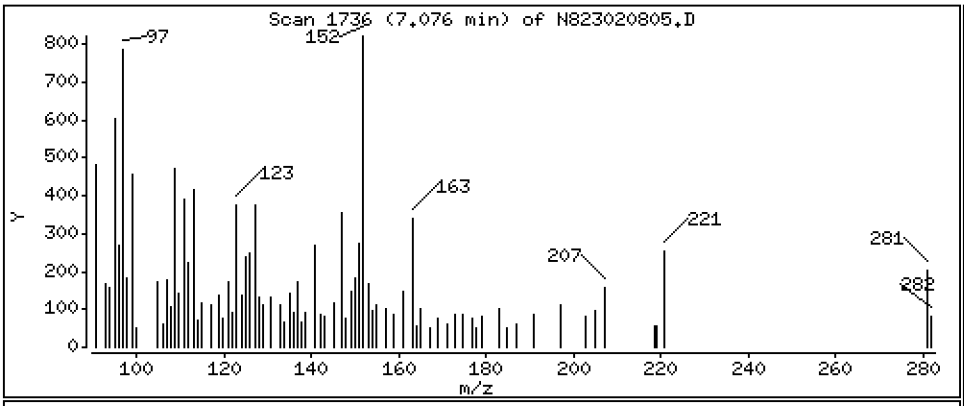
Operator: JZ

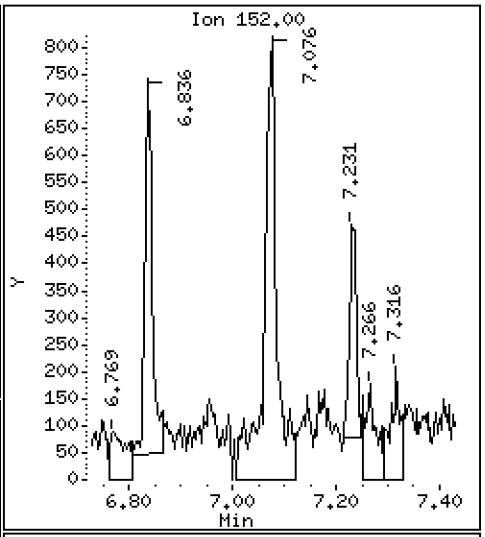
Column phase: Rxi-17sil

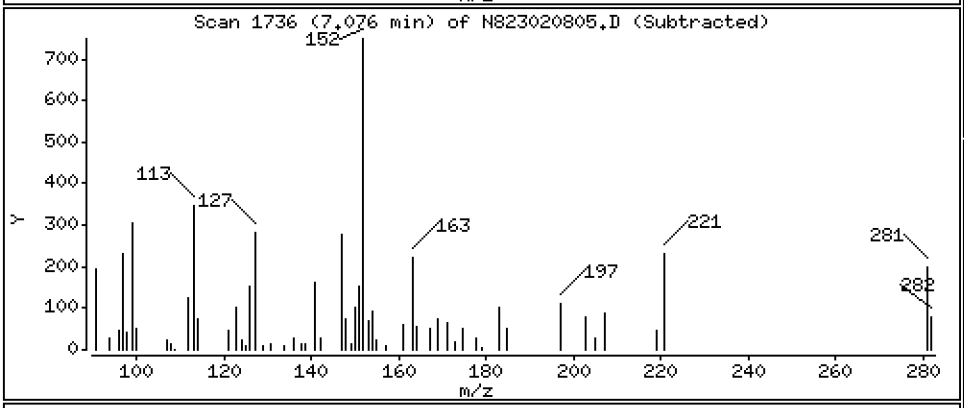
Column diameter: 0.25

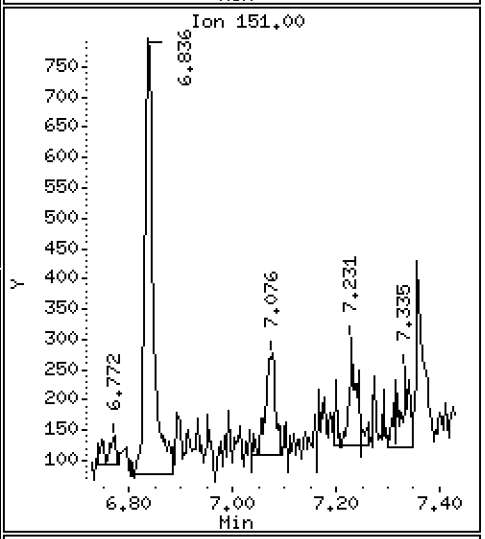
9 Acenaphthylene

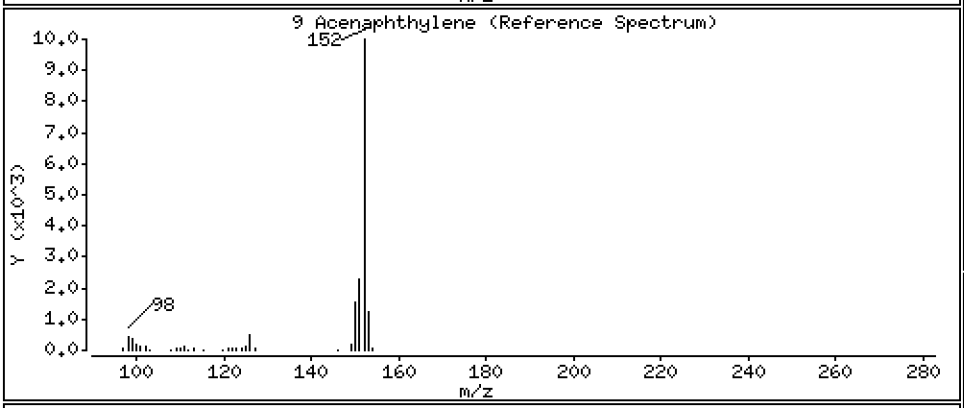
Concentration: 0.1976 ug/mL

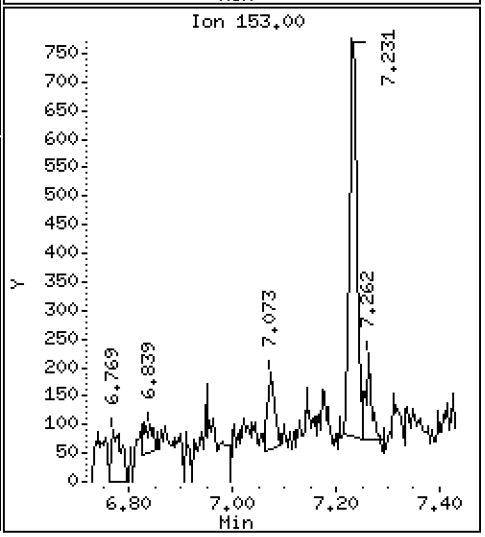


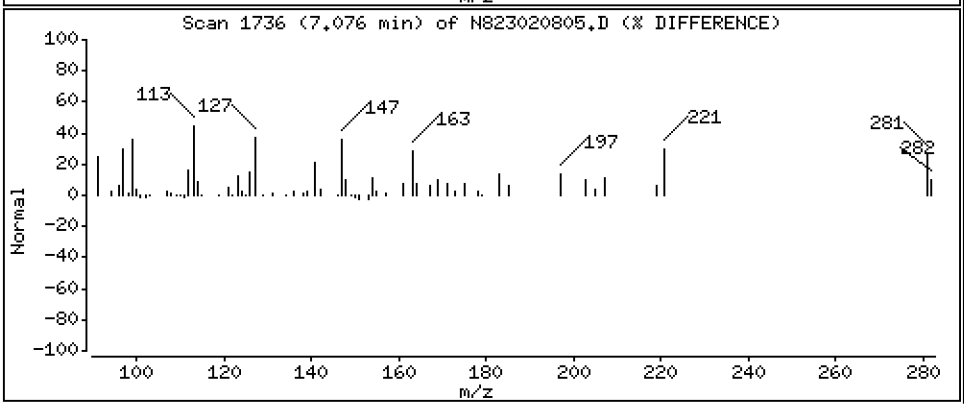












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

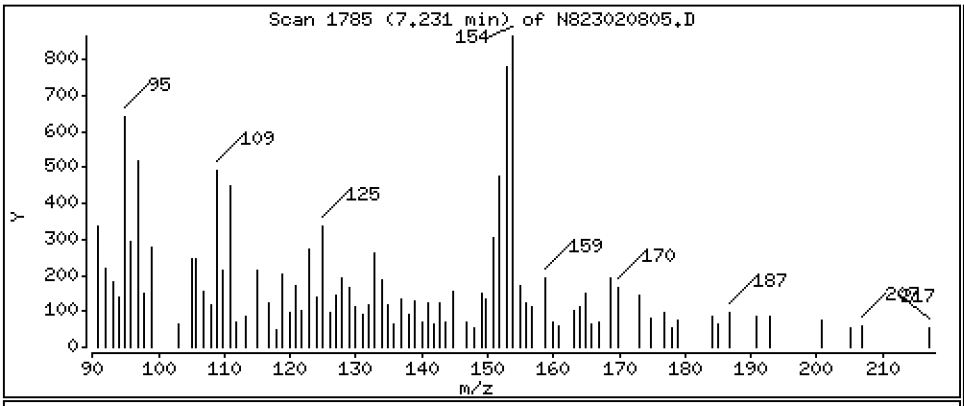
Operator: JZ

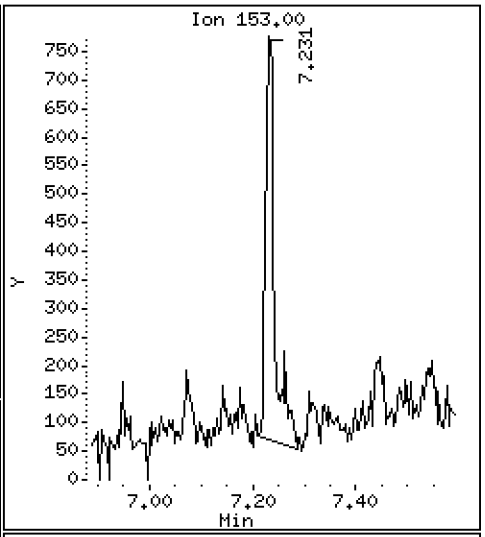
Column phase: Rxi-17sil

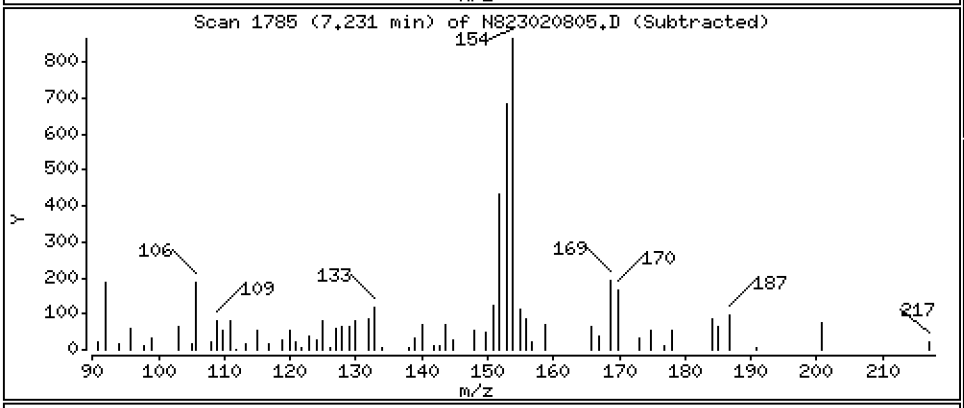
Column diameter: 0.25

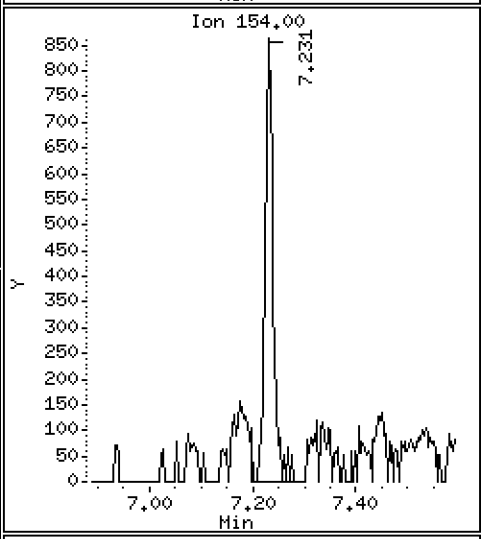
11 Acenaphthene

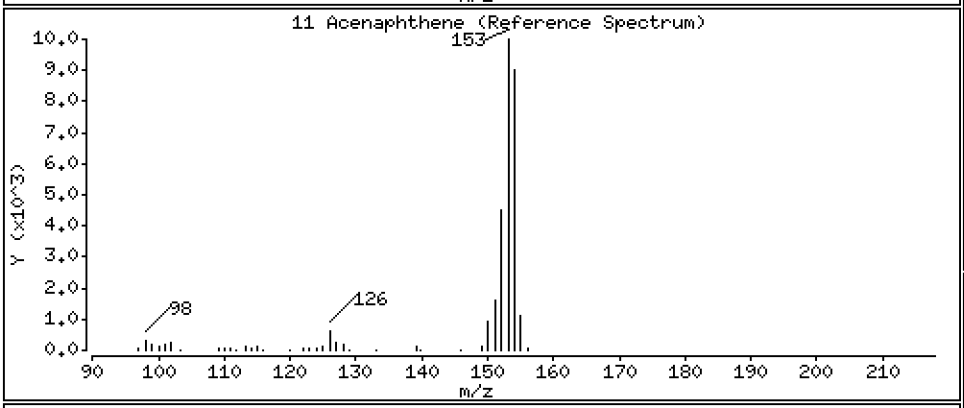
Concentration: 0.1856 ug/mL

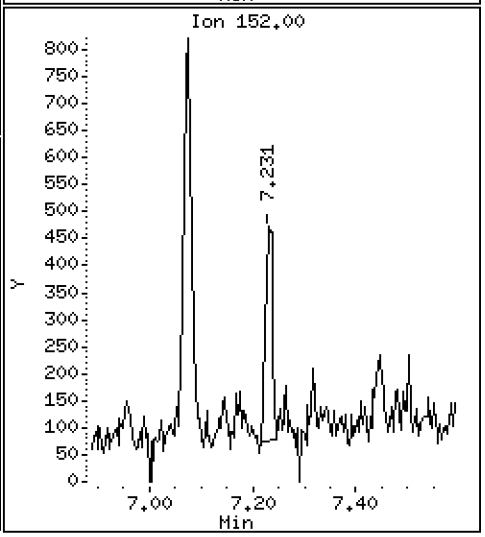


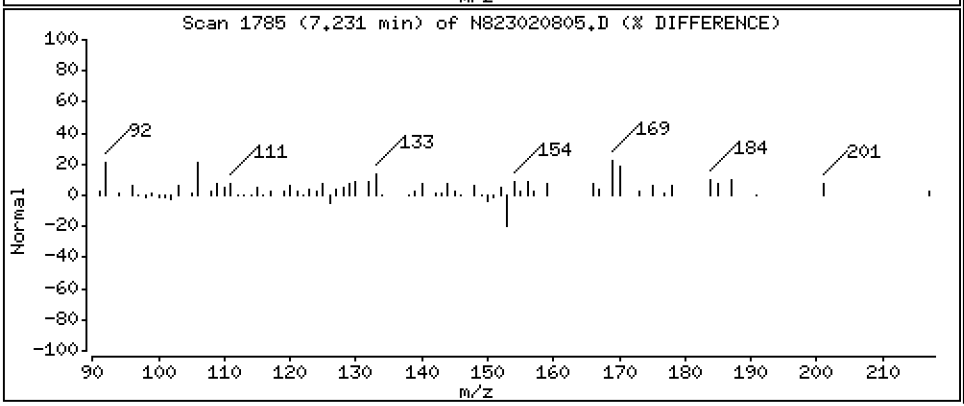












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

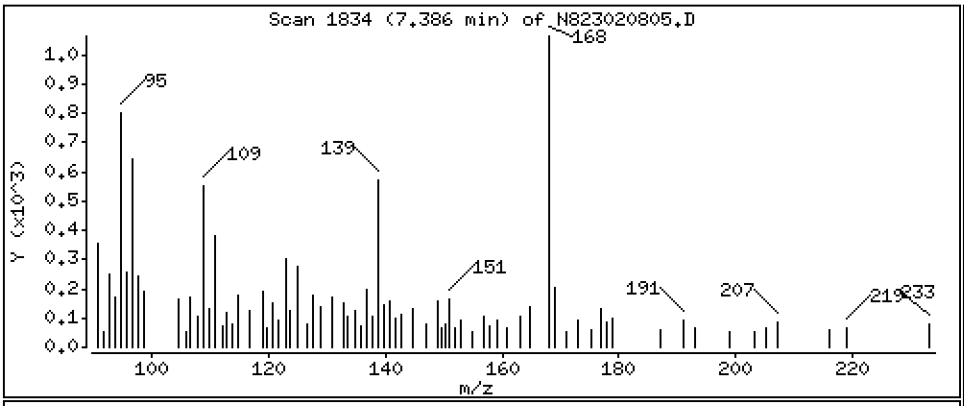
Operator: JZ

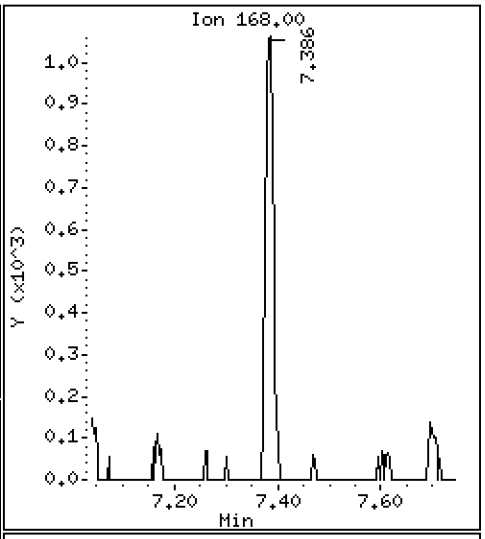
Column phase: Rxi-17sil

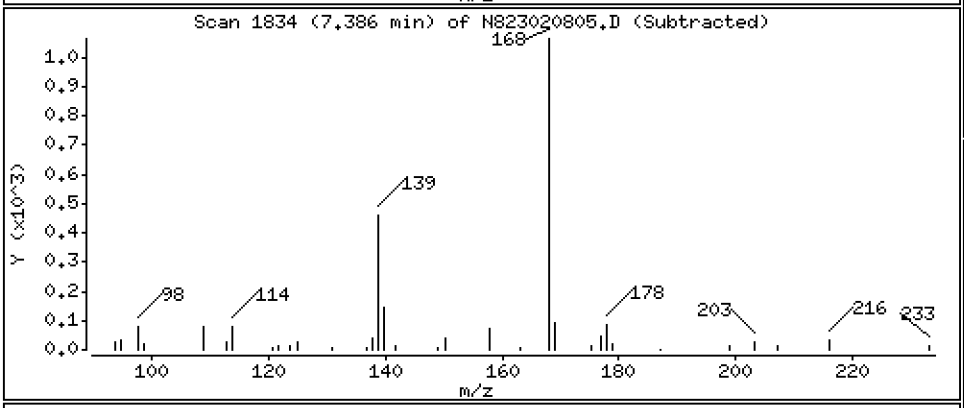
Column diameter: 0.25

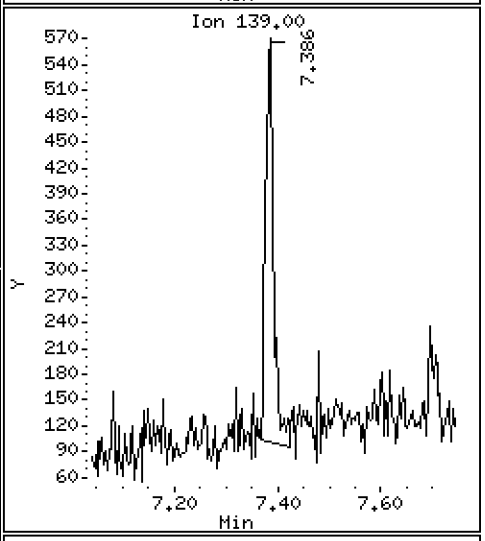
12 Dibenzofuran

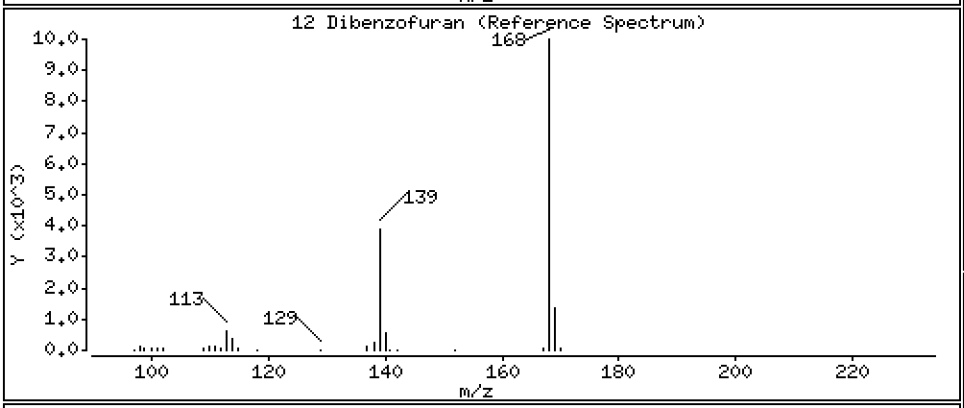
Concentration: 0.1521 ug/mL

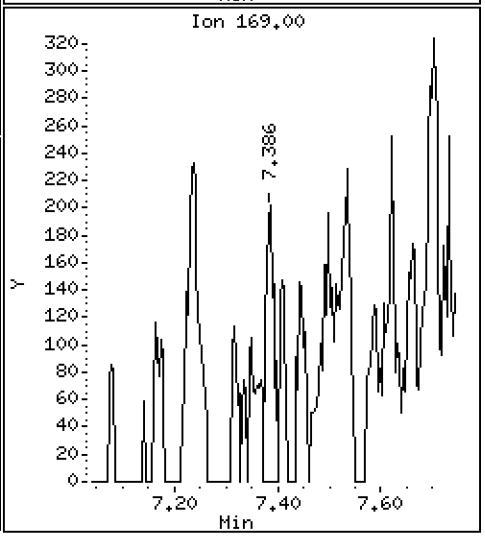


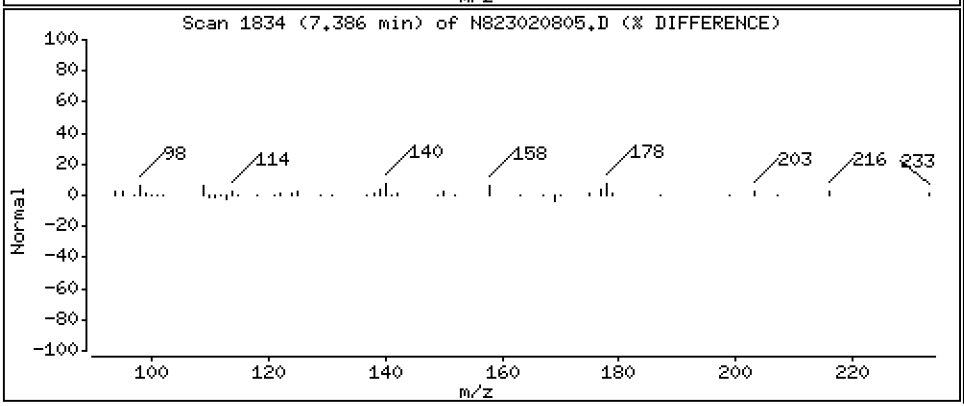












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

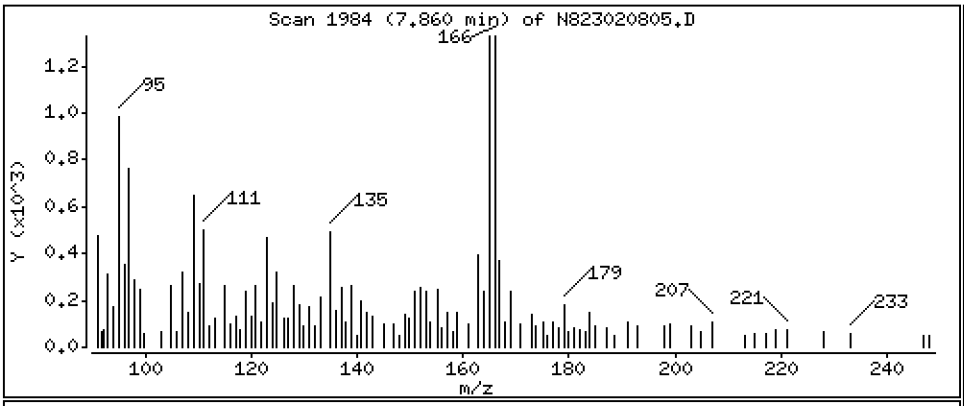
Operator: JZ

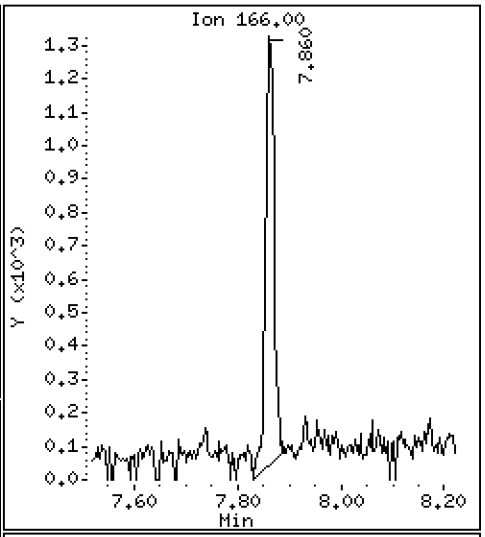
Column phase: Rxi-17sil

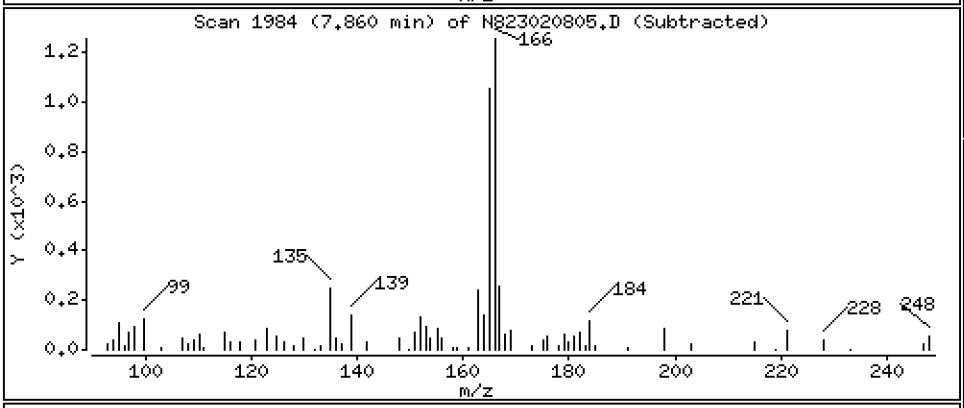
Column diameter: 0.25

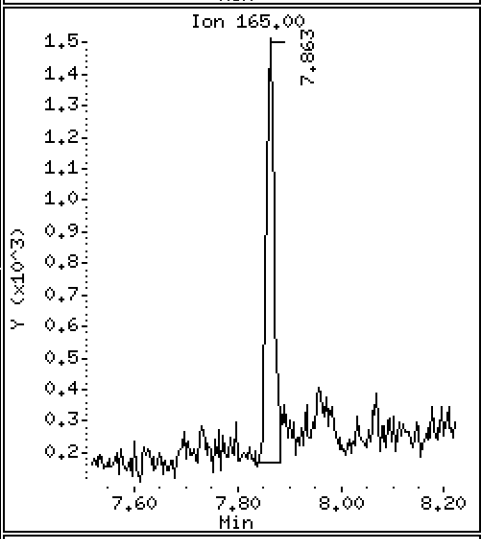
14 Fluorene

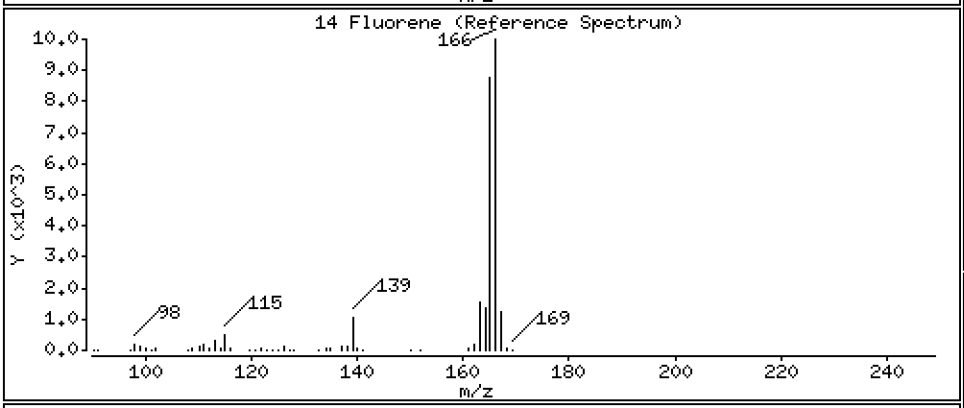
Concentration: 0.2555 ug/mL

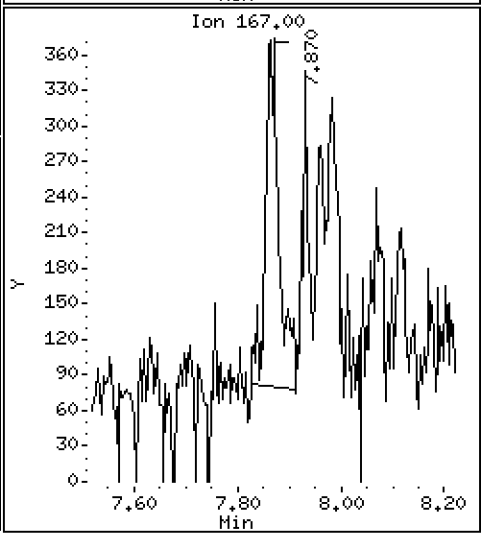


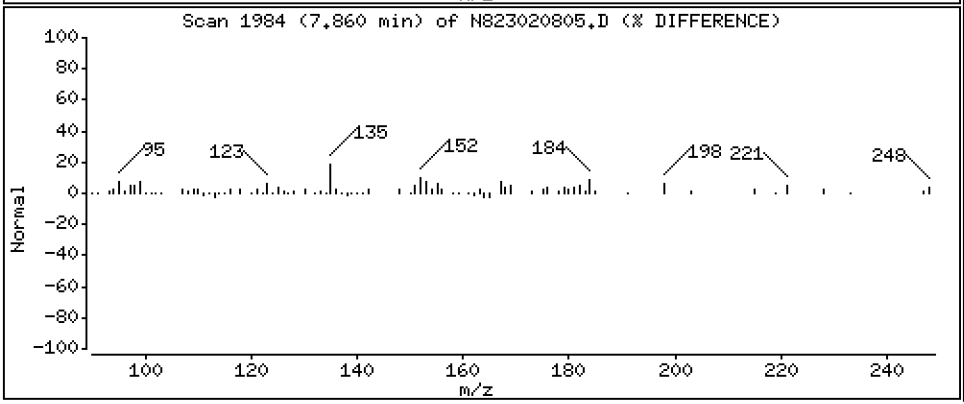












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

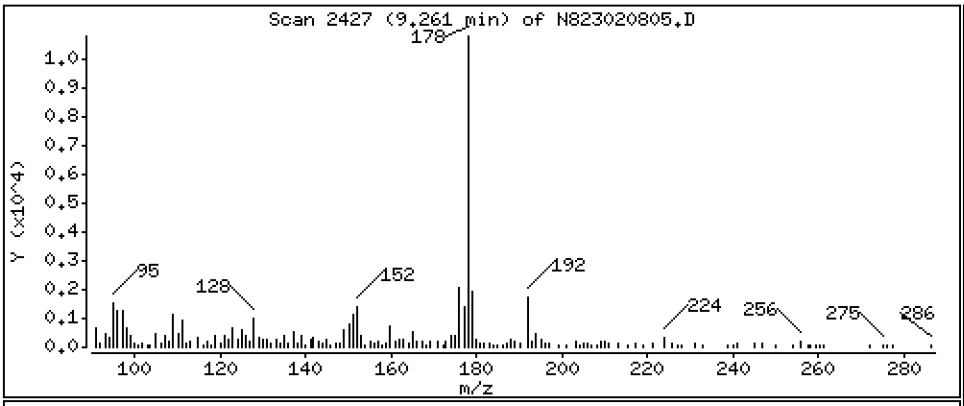
Operator: JZ

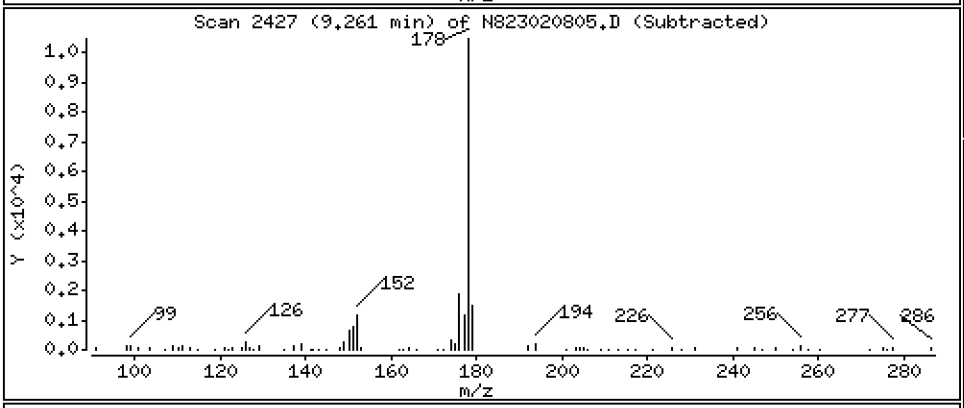
Column phase: Rxi-17sil

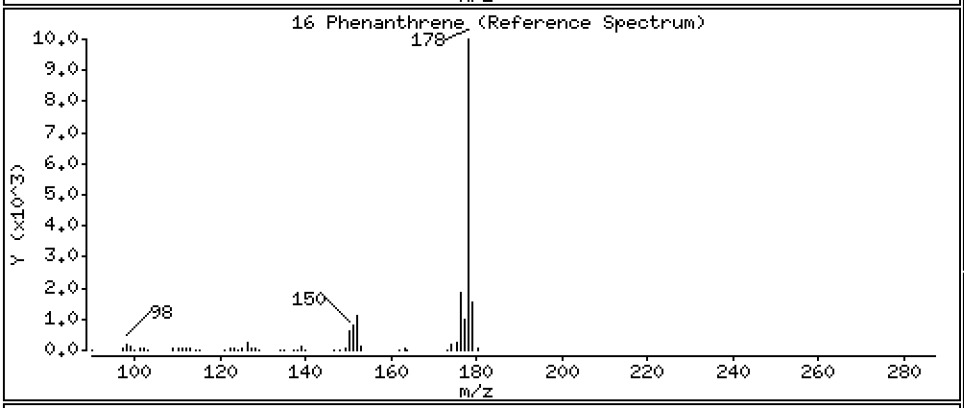
Column diameter: 0.25

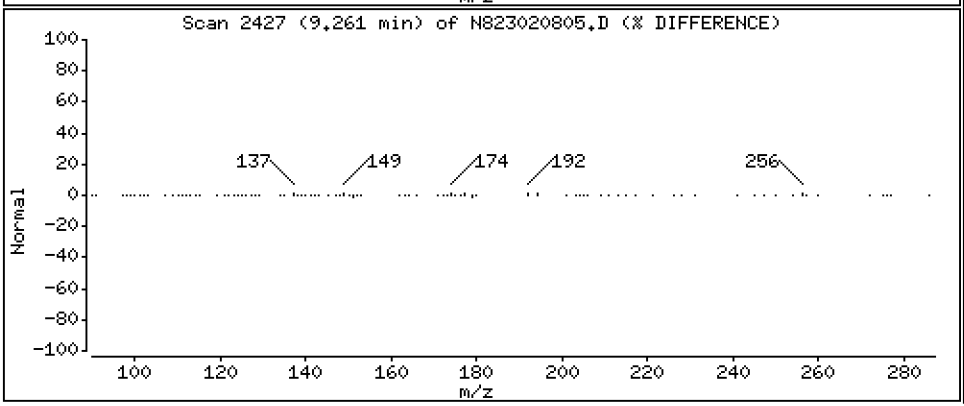
16 Phenanthrene

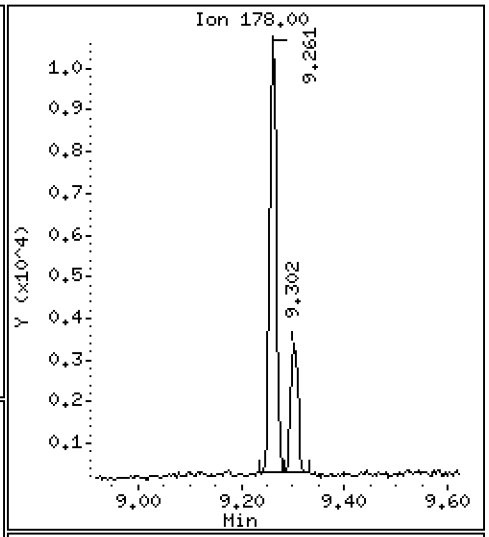
Concentration: 1.246 ug/mL

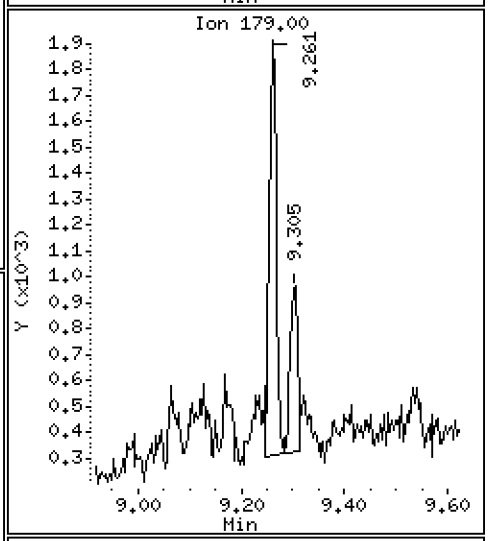


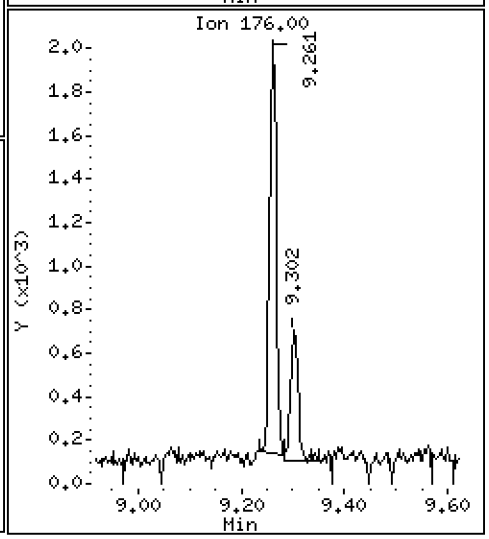












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

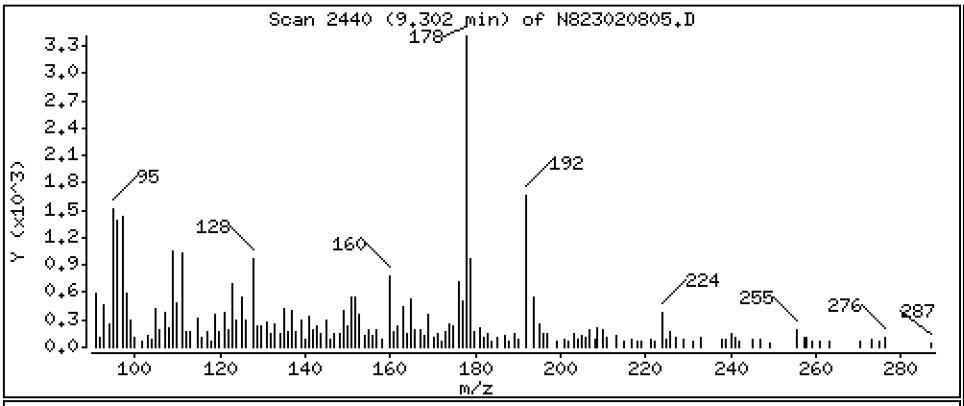
Operator: JZ

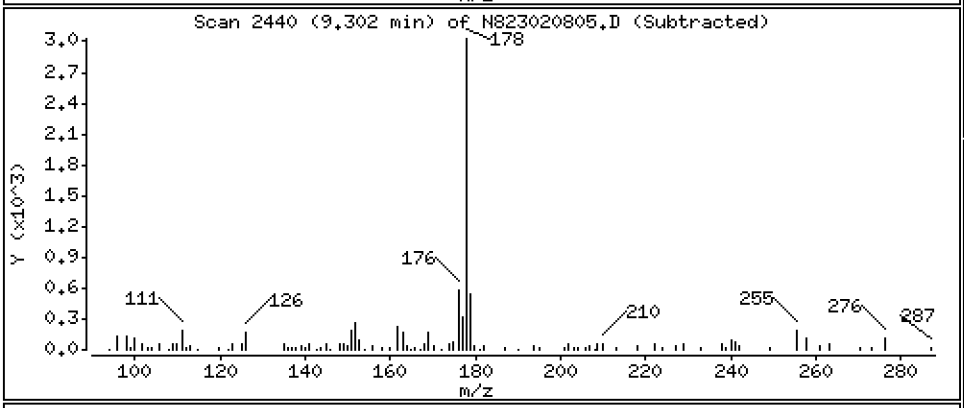
Column phase: Rxi-17sil

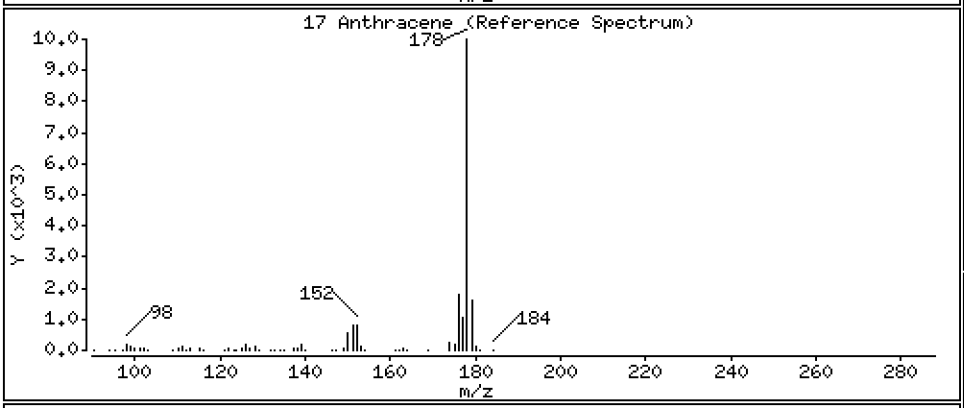
Column diameter: 0.25

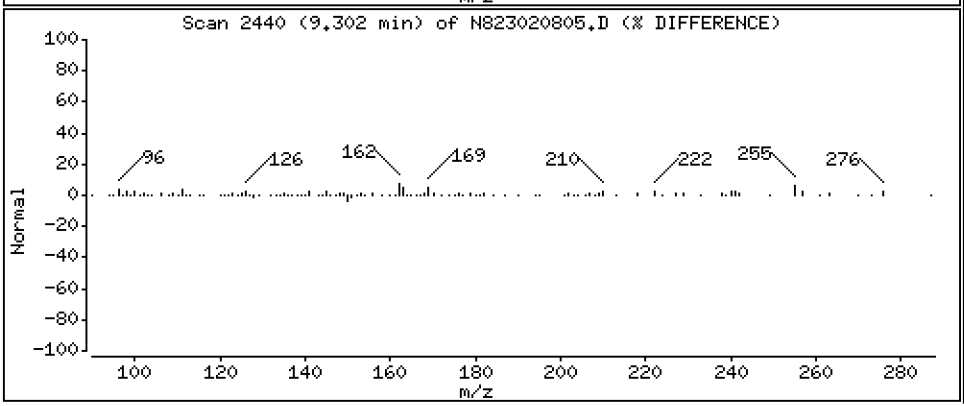
17 Anthracene

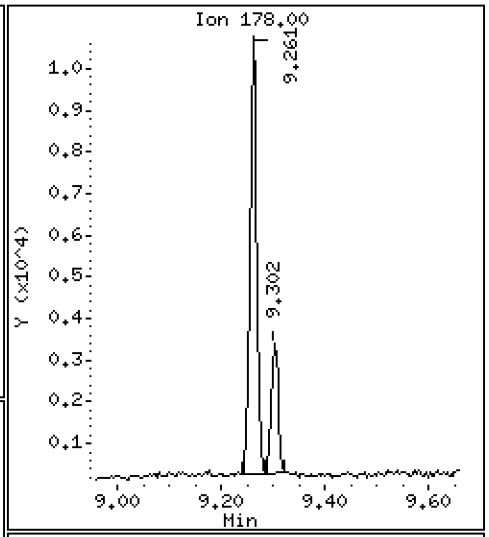
Concentration: 0.4173 ug/mL

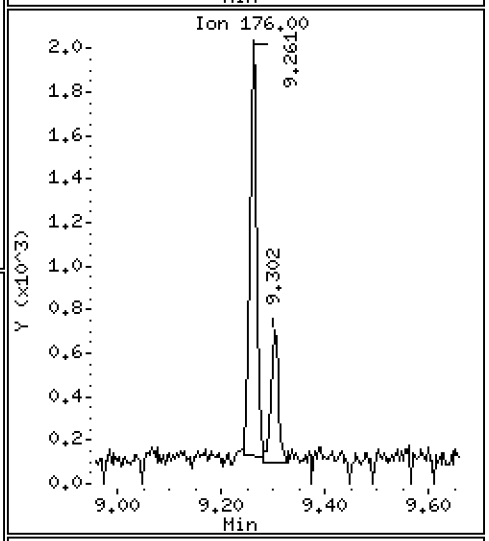


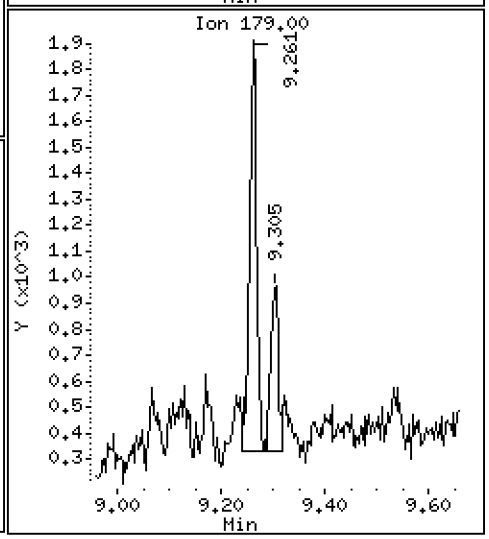












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

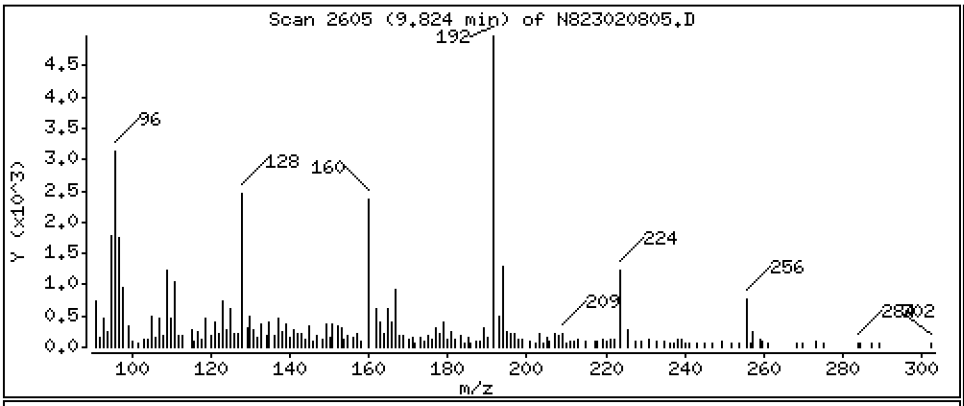
Operator: JZ

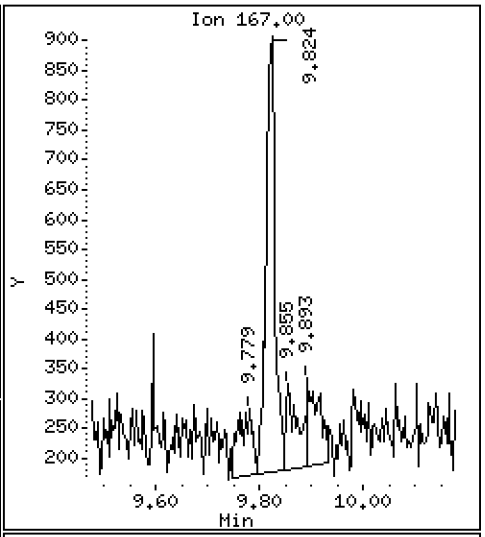
Column phase: Rxi-17sil

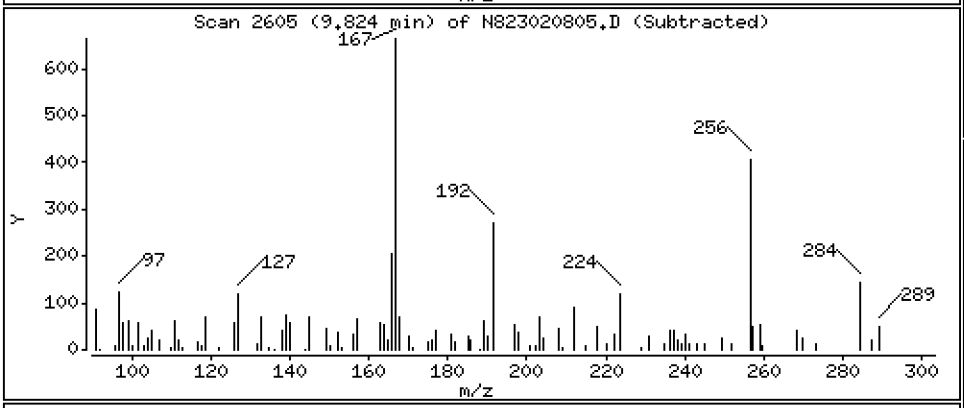
Column diameter: 0.25

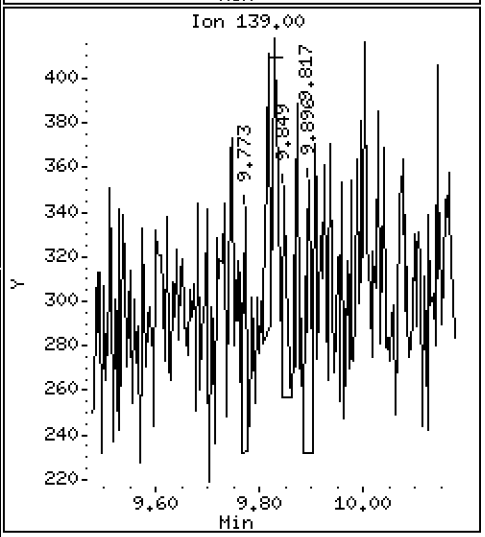
19 Carbazole

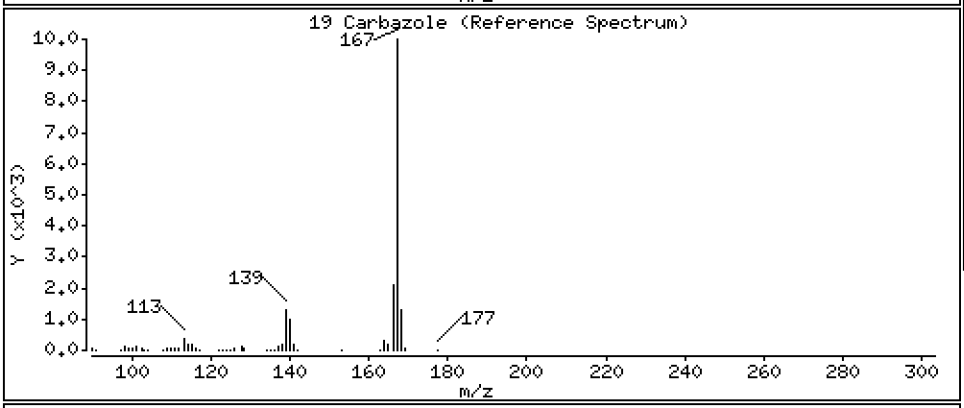
Concentration: 0.1402 ug/mL

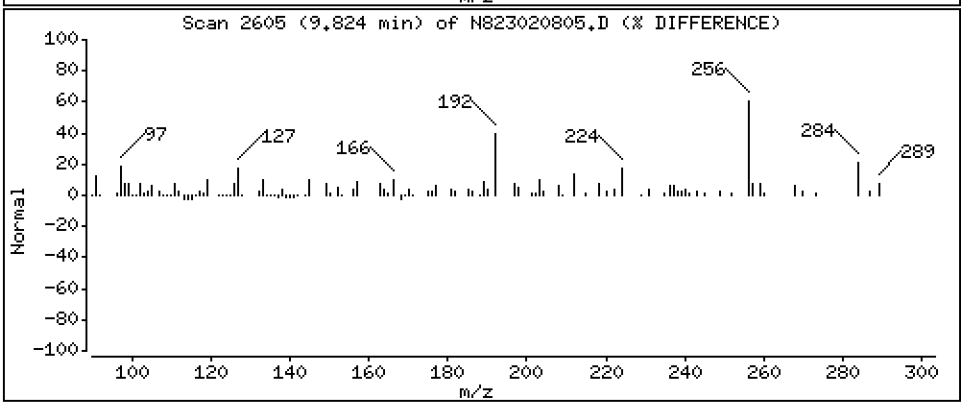












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

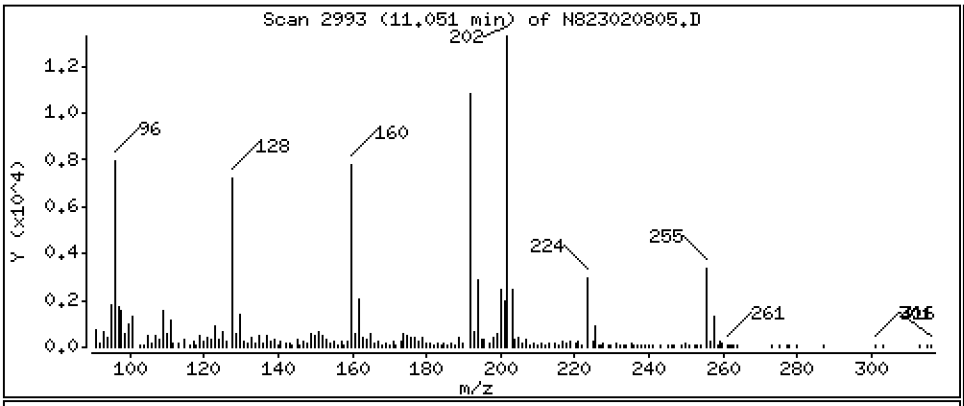
Operator: JZ

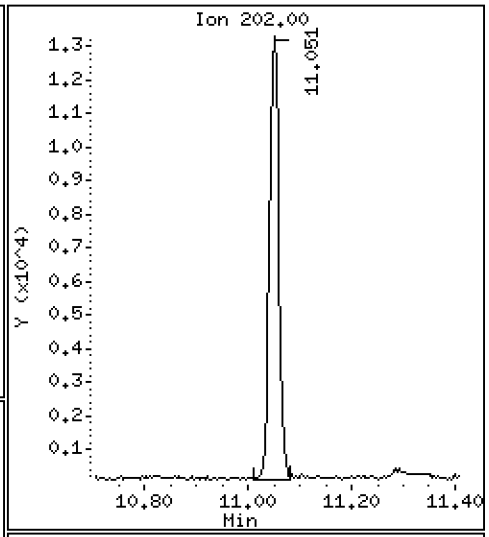
Column phase: Rxi-17sil

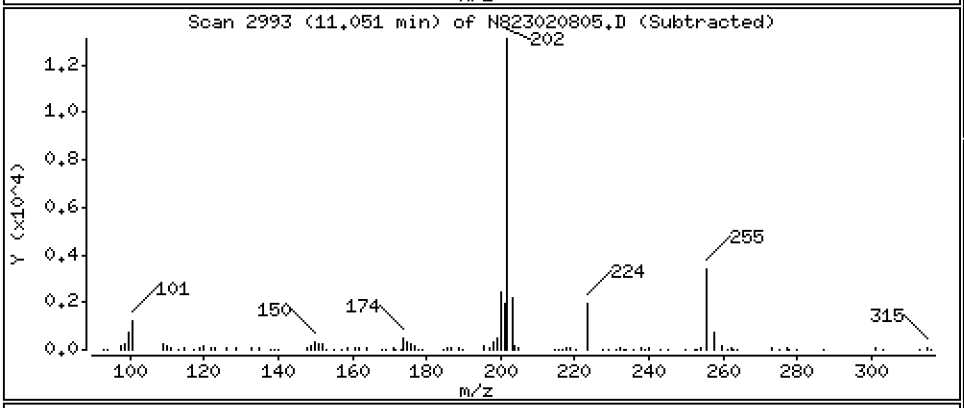
Column diameter: 0.25

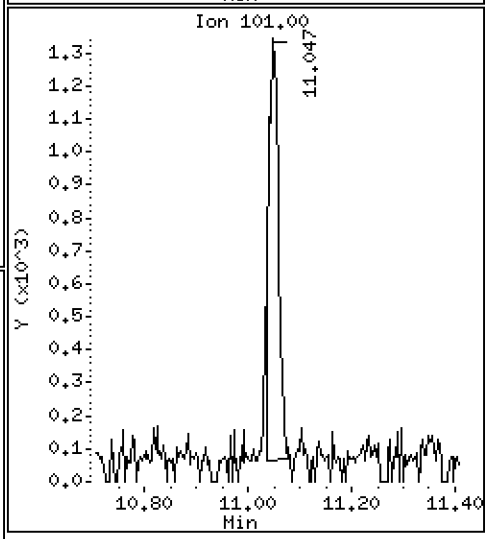
22 Fluoranthene

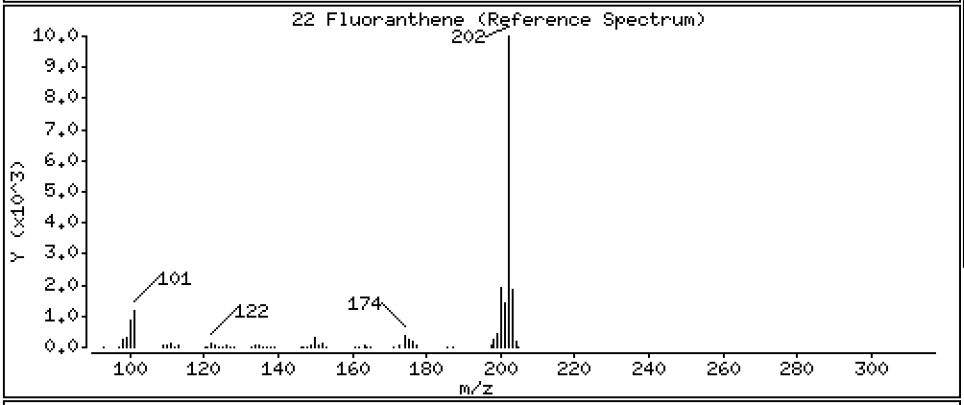
Concentration: 2.002 ug/mL

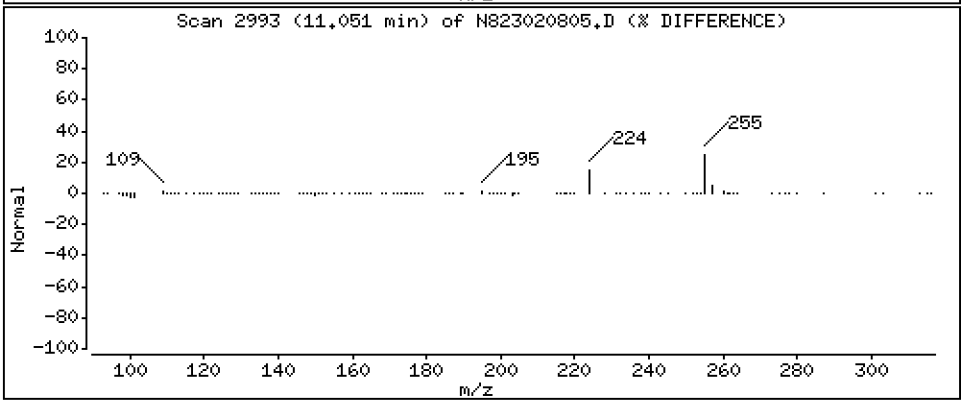












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

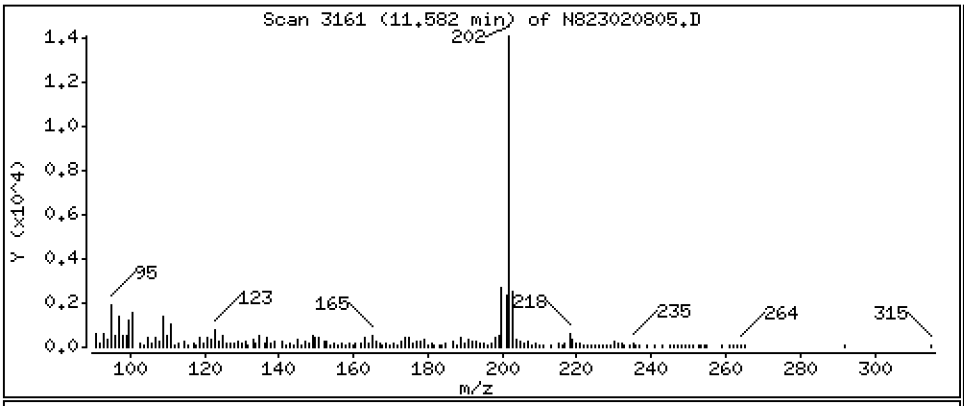
Operator: JZ

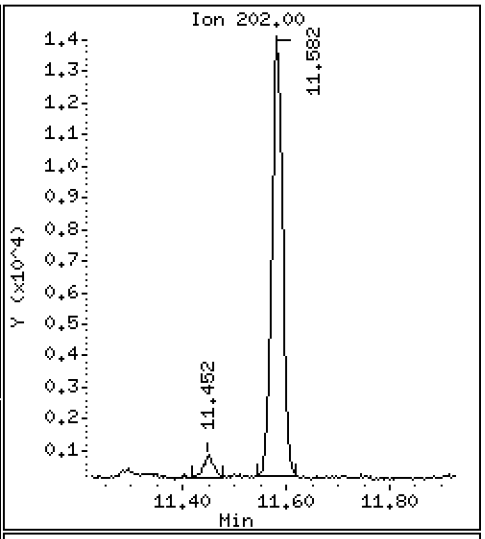
Column phase: Rxi-17sil

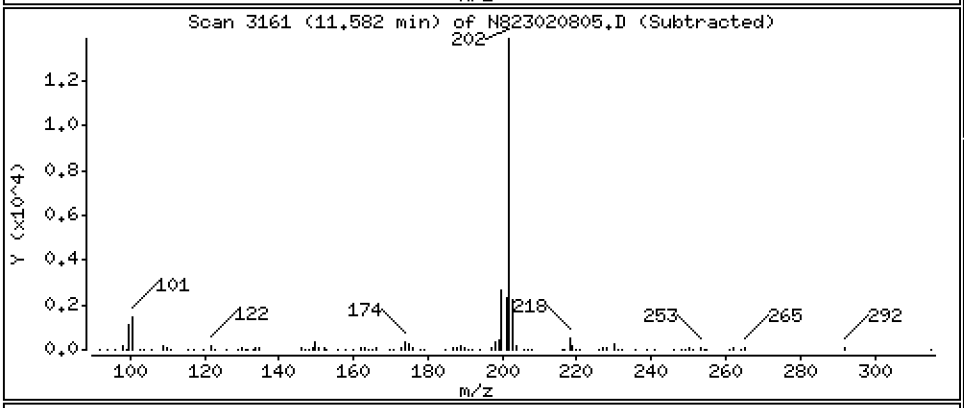
Column diameter: 0.25

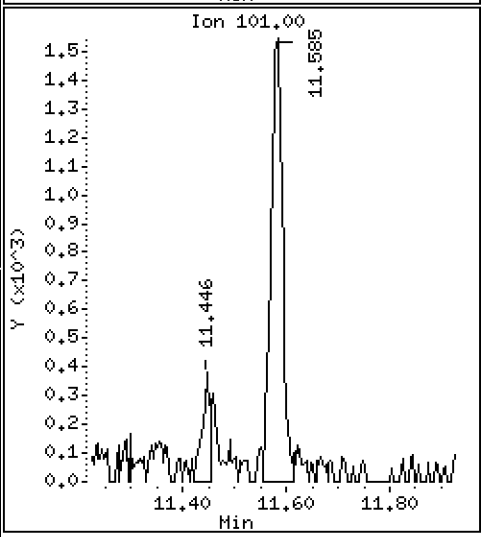
23 Pyrene

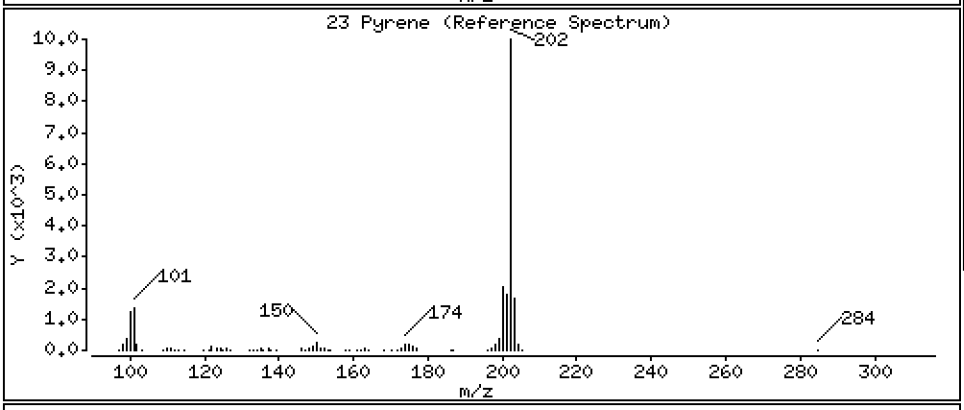
Concentration: 4.079 ug/mL

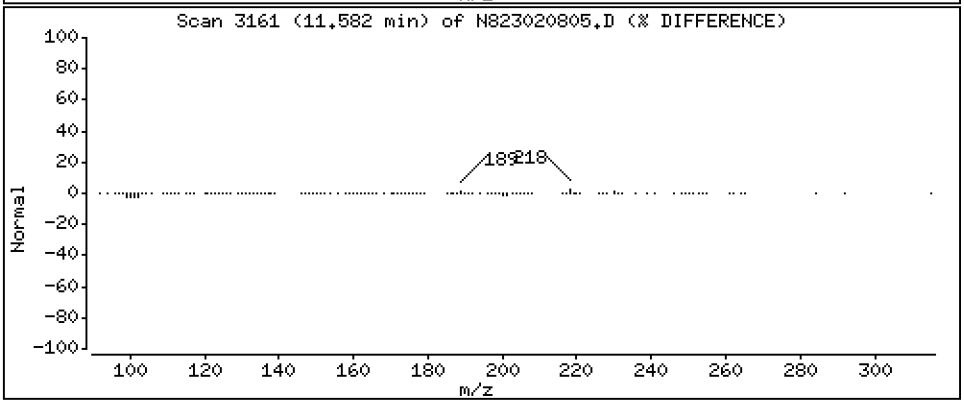












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

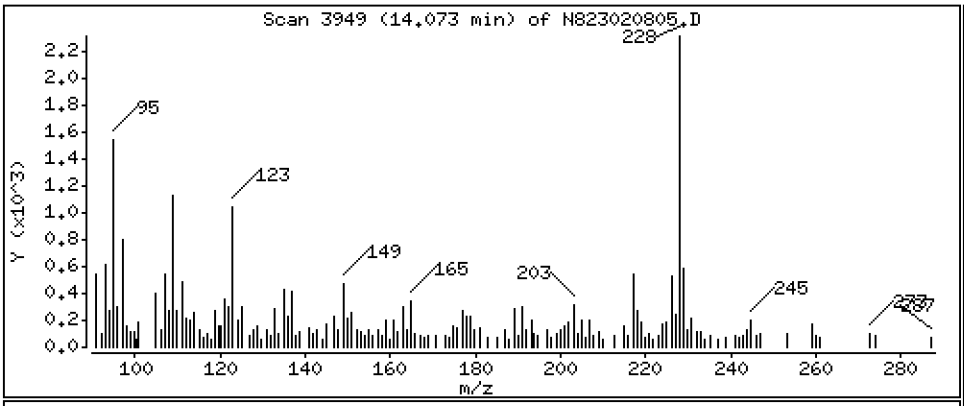
Operator: JZ

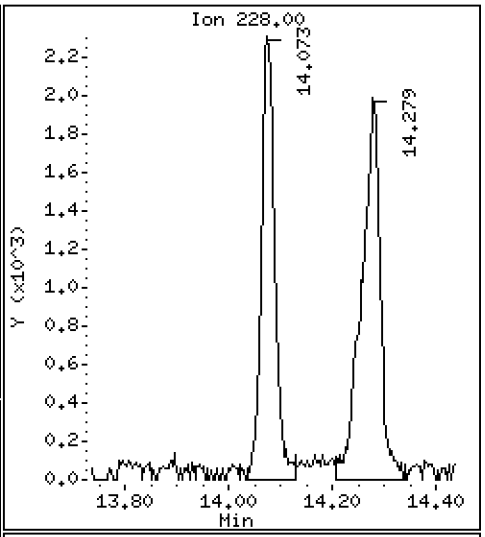
Column phase: Rxi-17sil

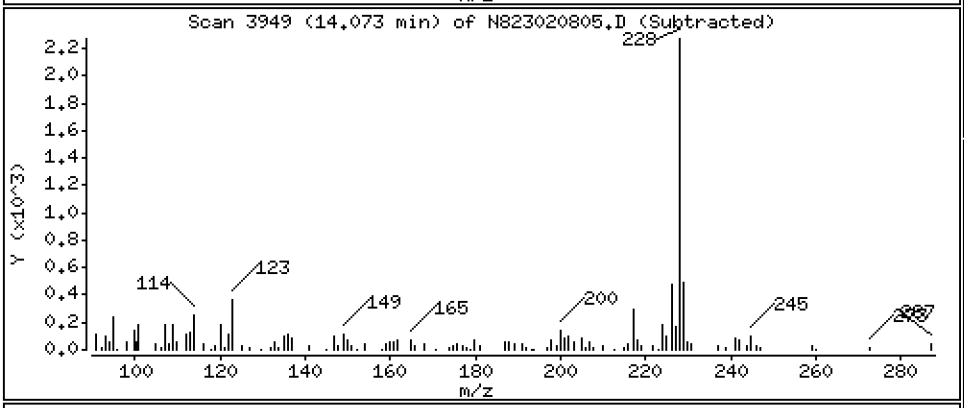
Column diameter: 0.25

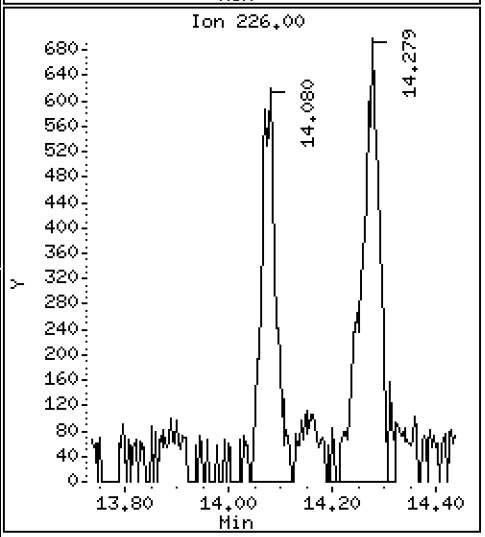
24 Benzo(a)anthracene

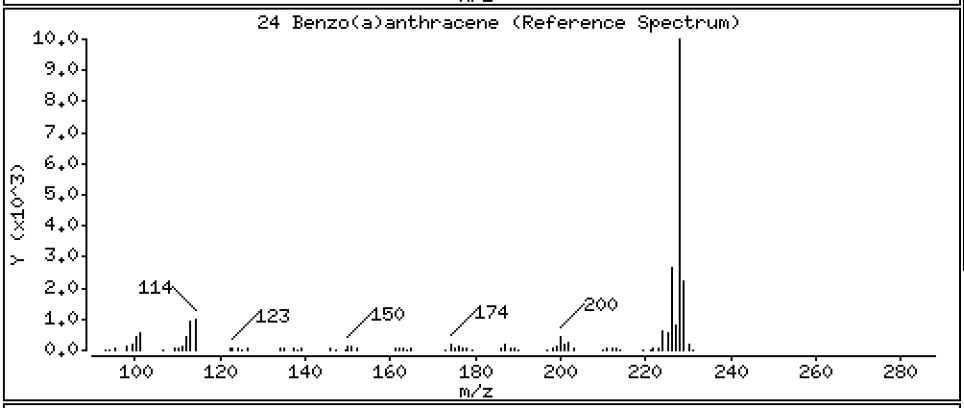
Concentration: 0.9391 ug/mL

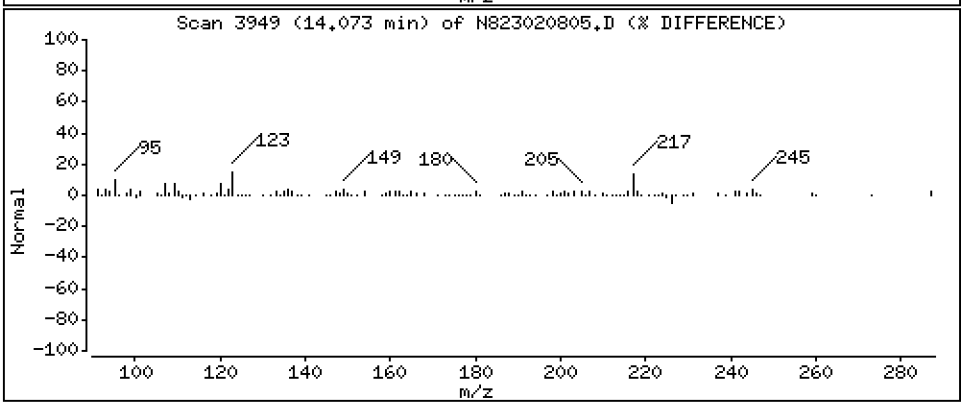












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

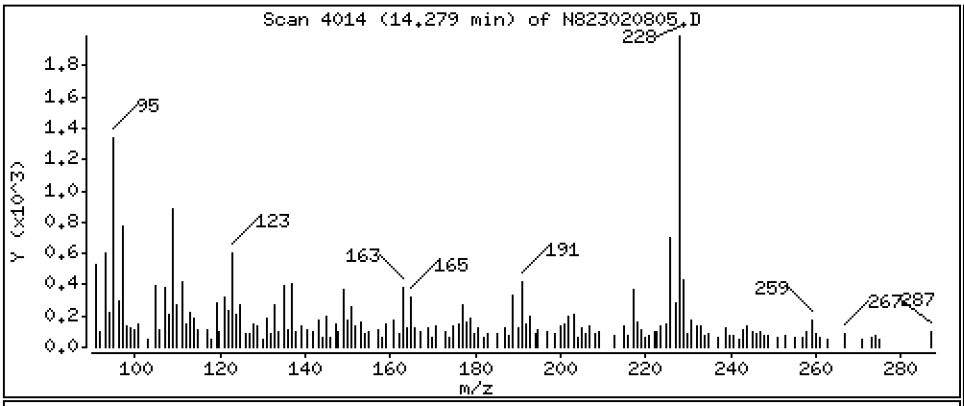
Operator: JZ

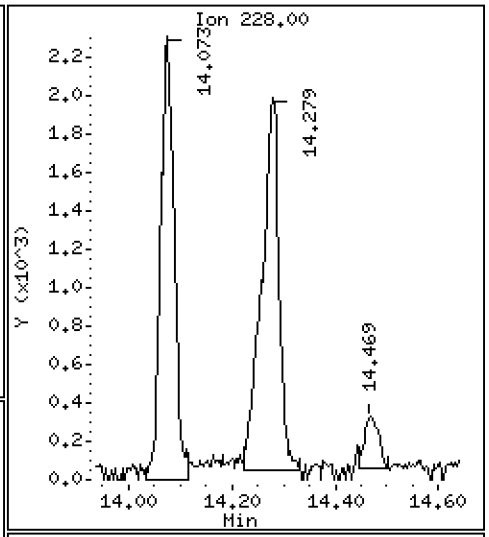
Column phase: Rxi-17sil

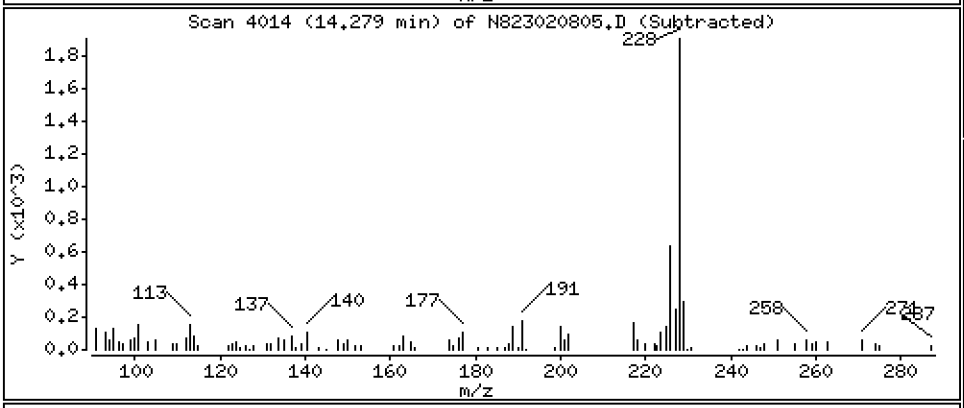
Column diameter: 0.25

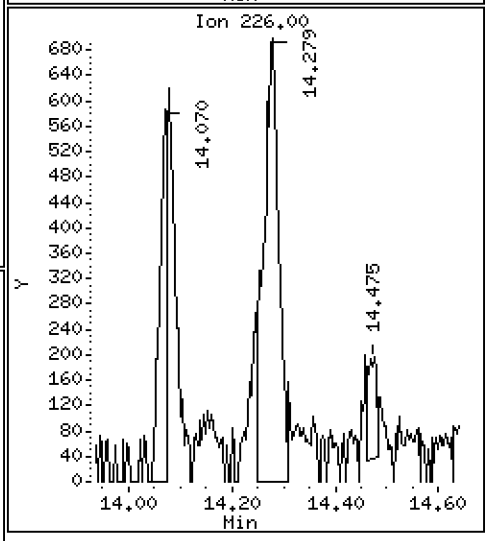
27 Chrysene

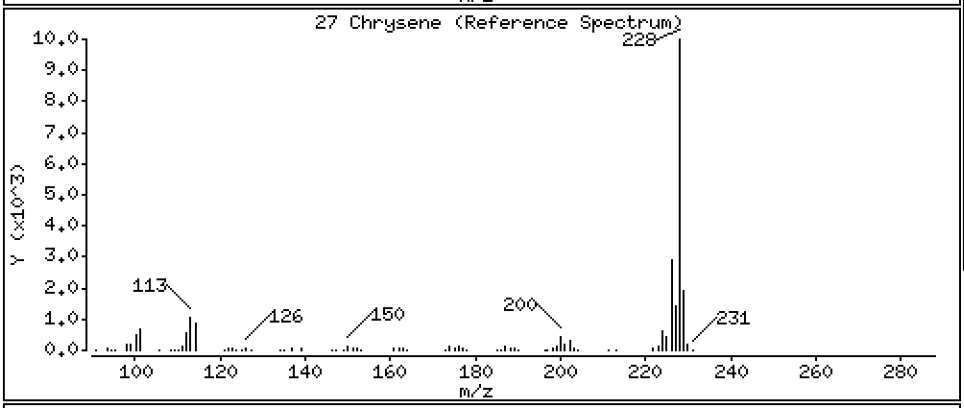
Concentration: 0.9458 ug/mL

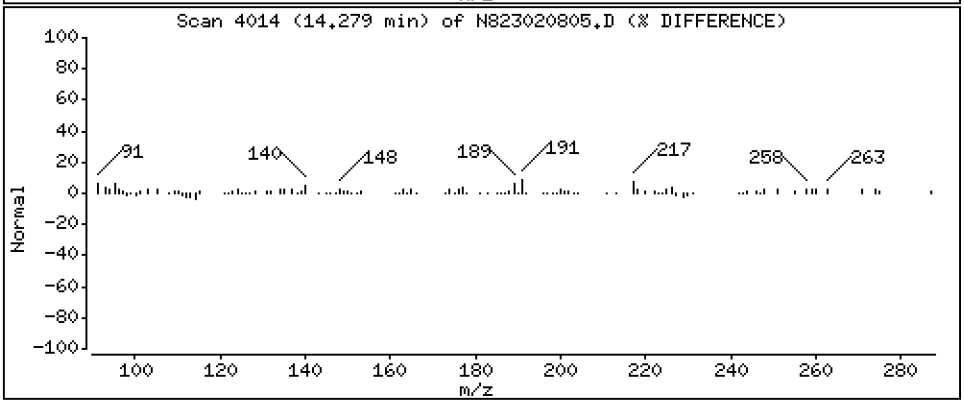












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

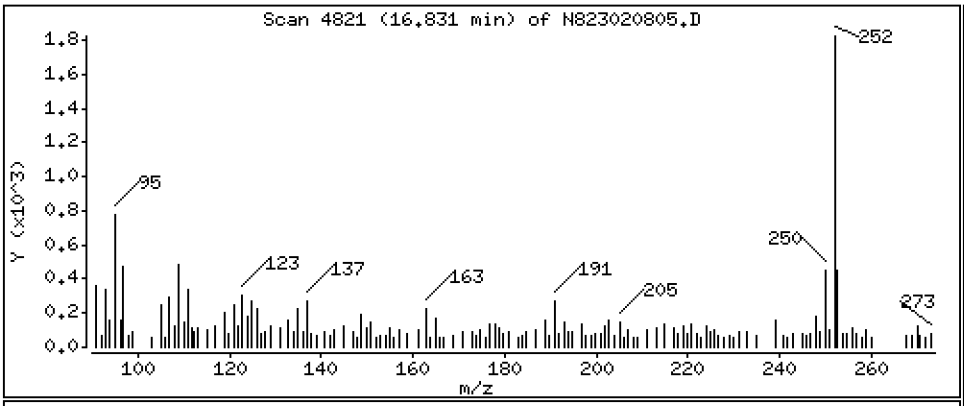
Operator: JZ

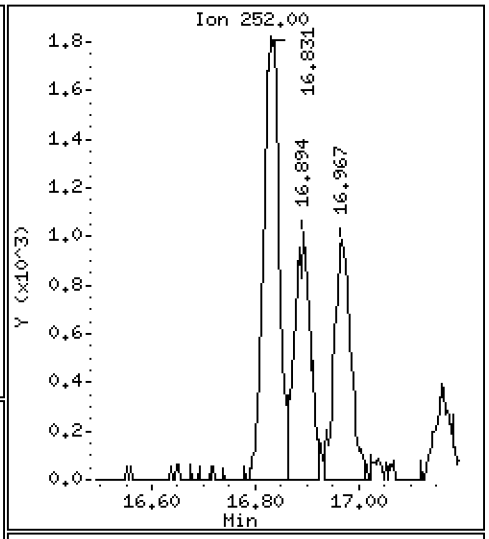
Column phase: Rxi-17sil

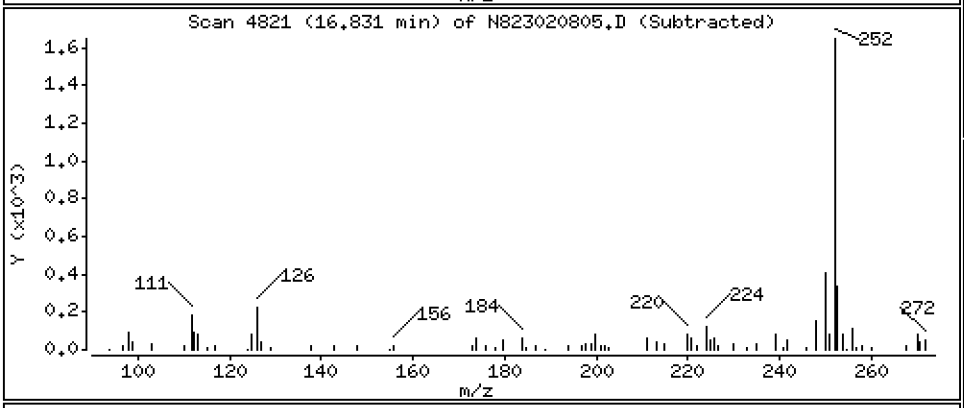
Column diameter: 0.25

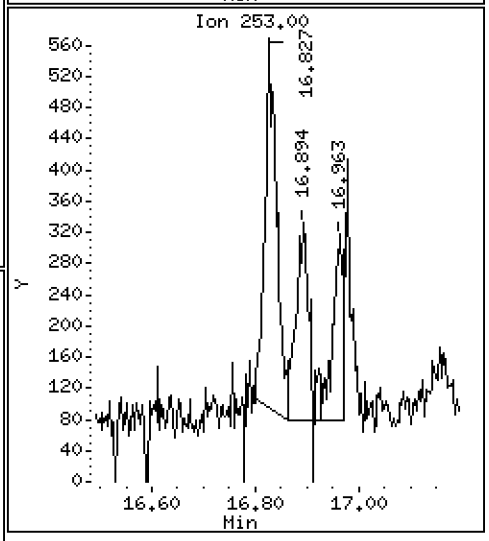
28 Benzo(b)fluoranthene

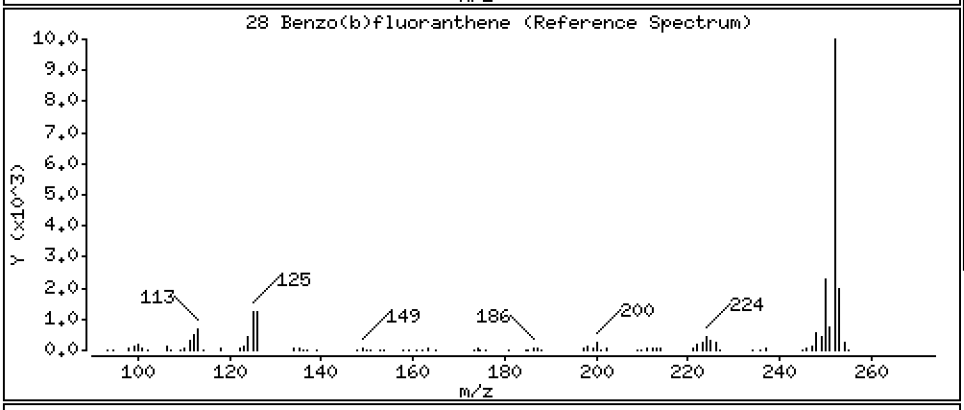
Concentration: 0.7340 ug/mL

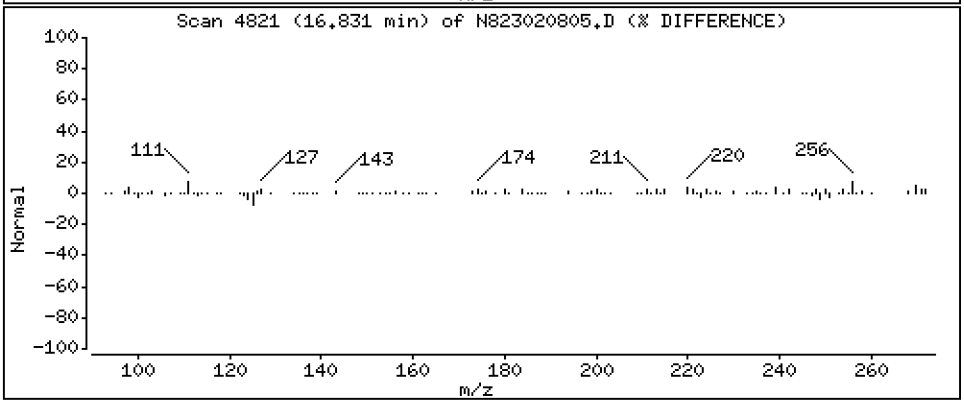












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

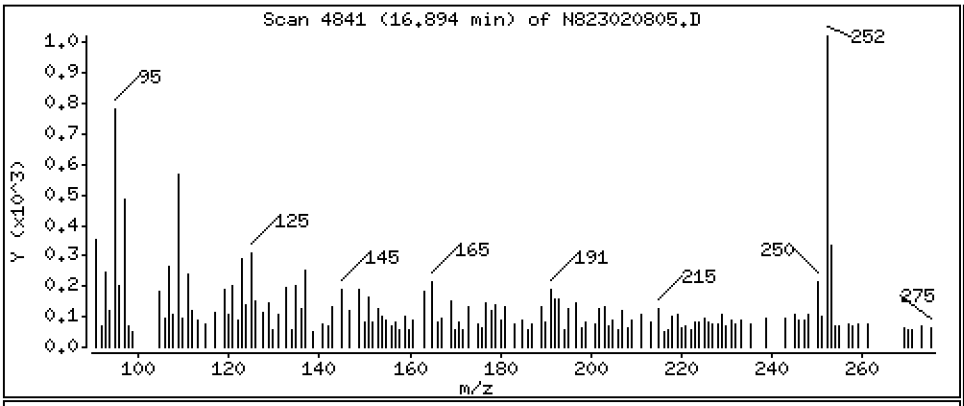
Operator: JZ

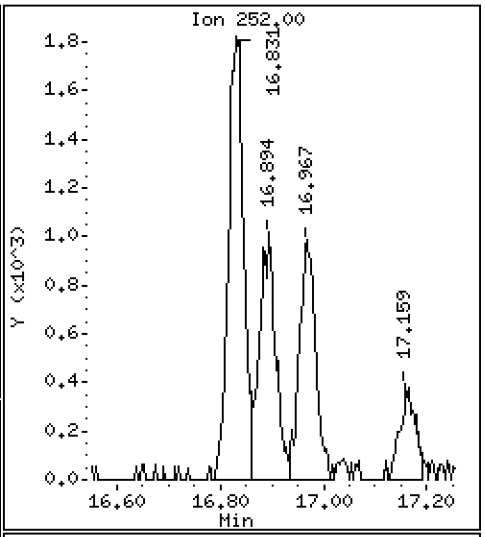
Column phase: Rxi-17sil

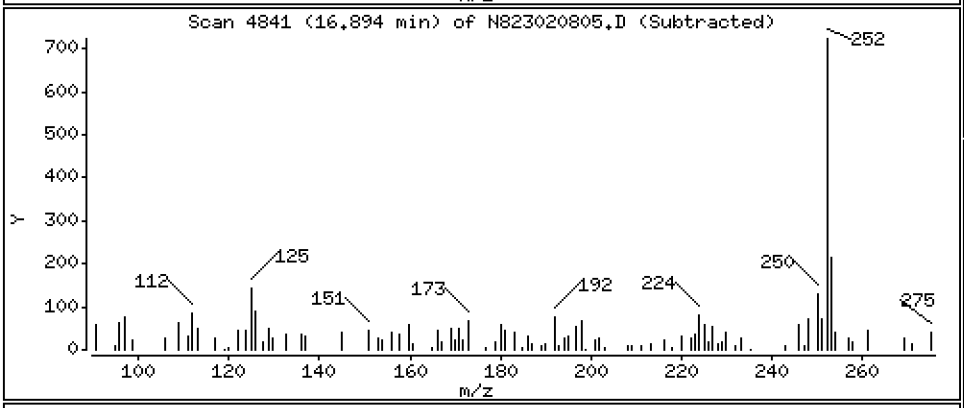
Column diameter: 0.25

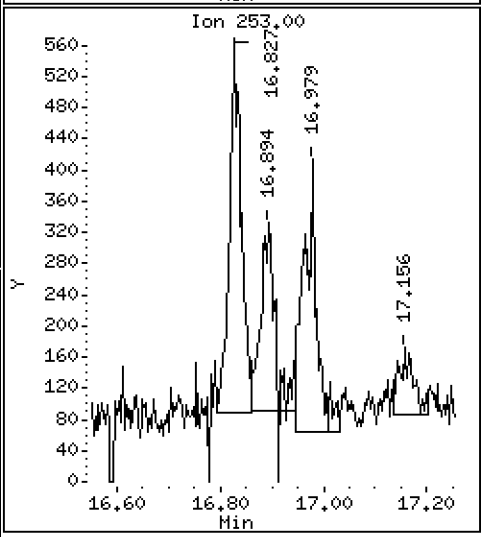
29 Benzo(k)fluoranthene

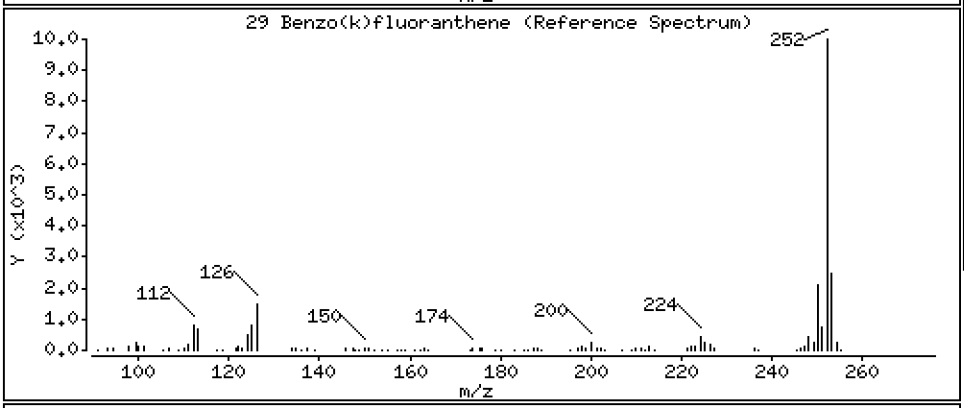
Concentration: 0.4502 ug/mL

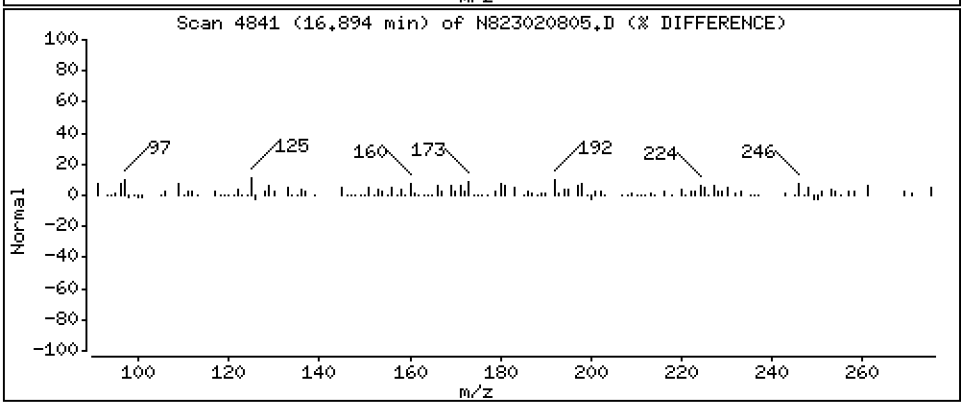












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

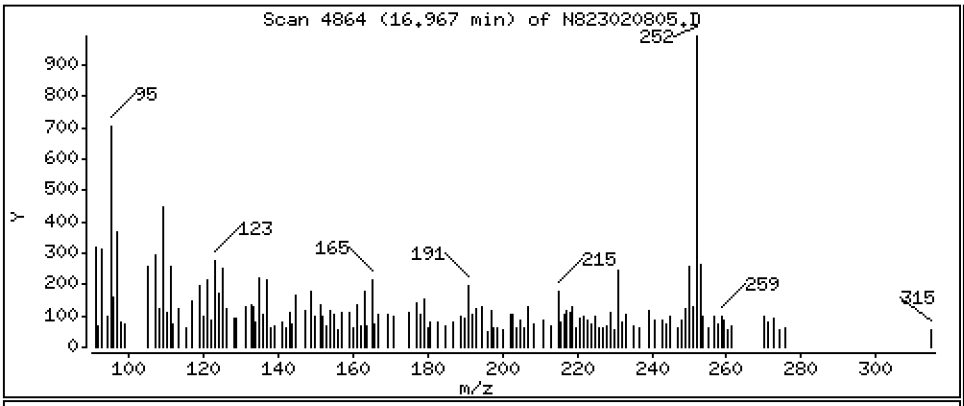
Operator: JZ

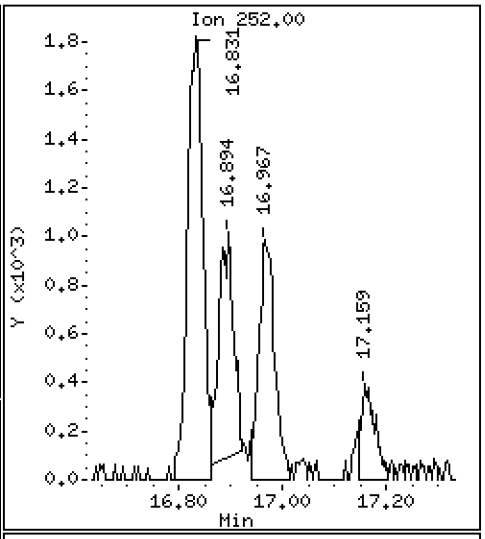
Column phase: Rxi-17sil

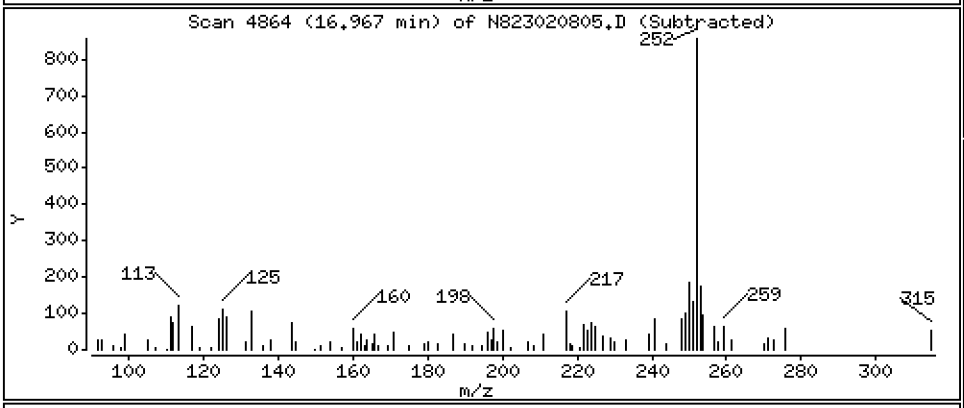
Column diameter: 0.25

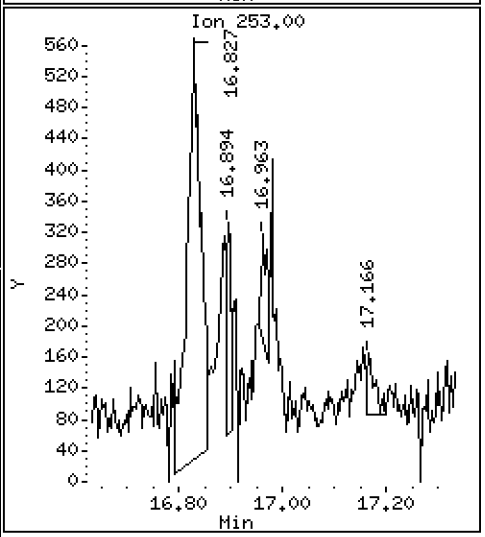
30 Benzo(j)fluoranthene

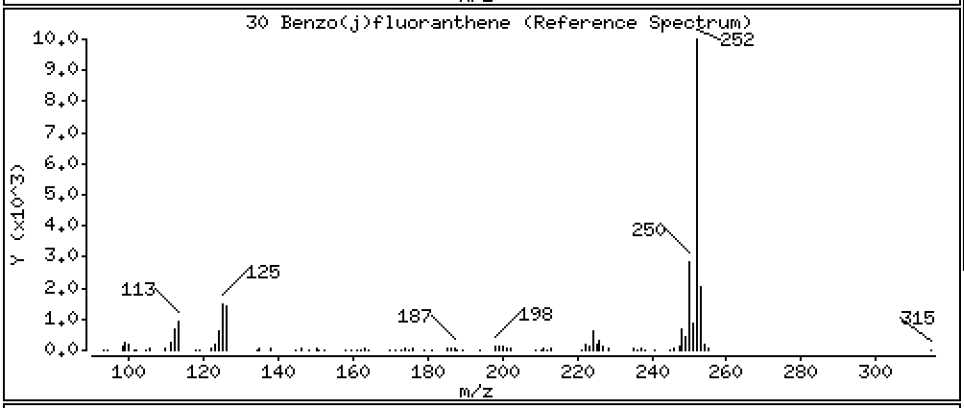
Concentration: 0.4489 ug/mL

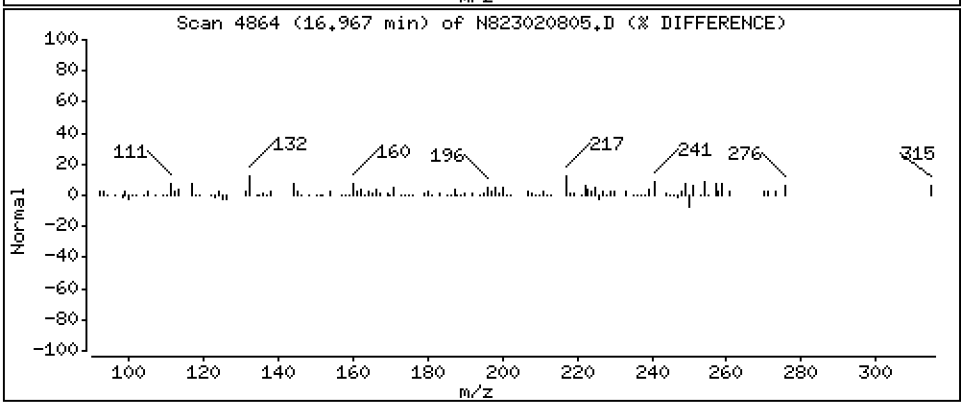












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020805.D

Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

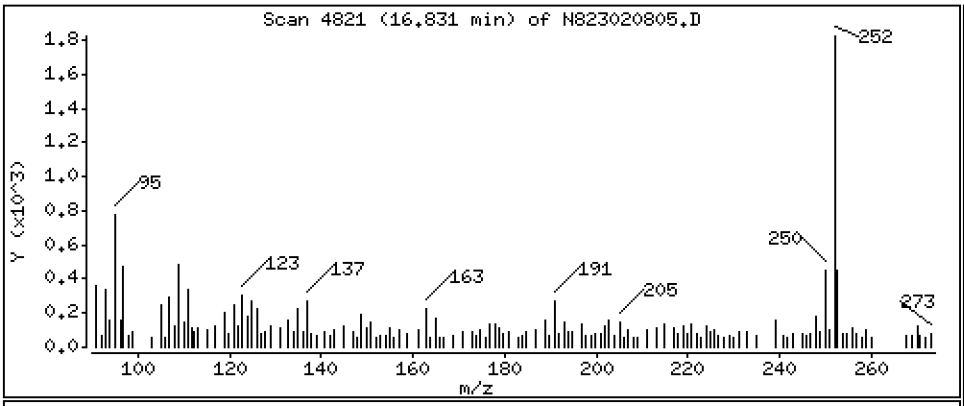
Operator: JZ

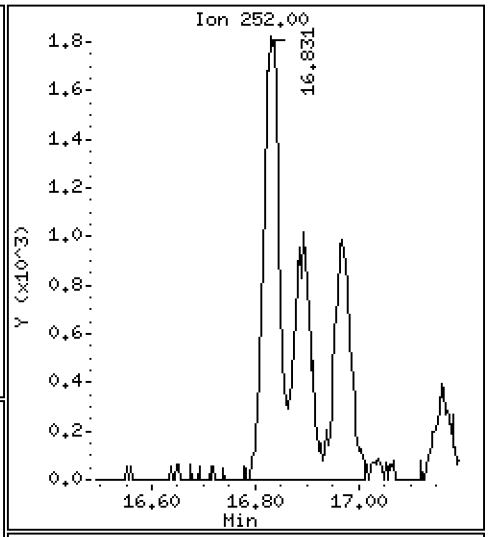
Column phase: Rxi-17sil

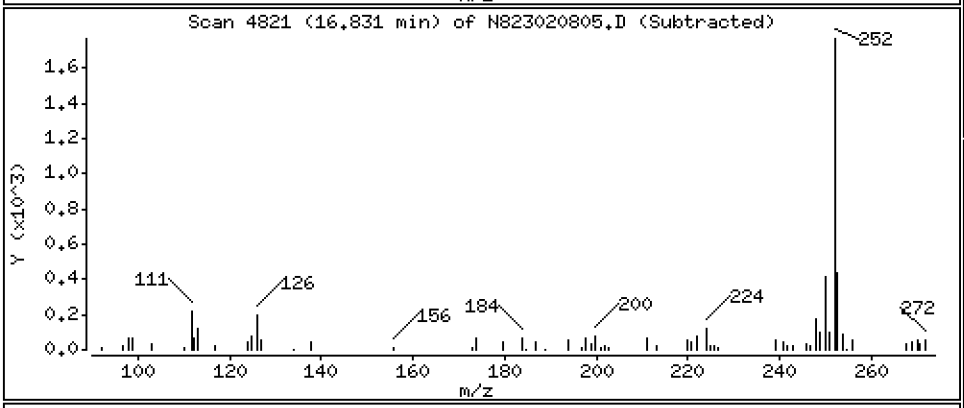
Column diameter: 0.25

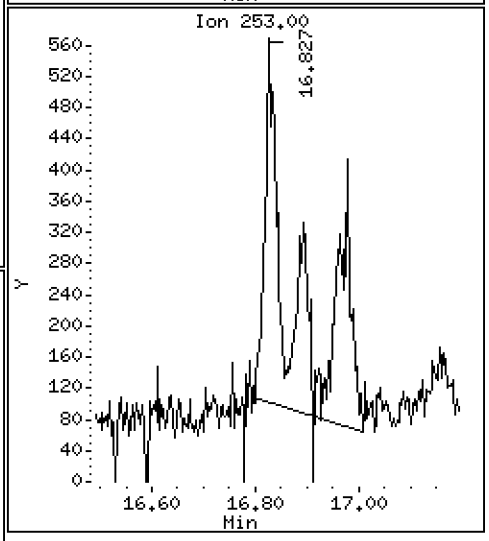
31 Total Benzofluoranthenes

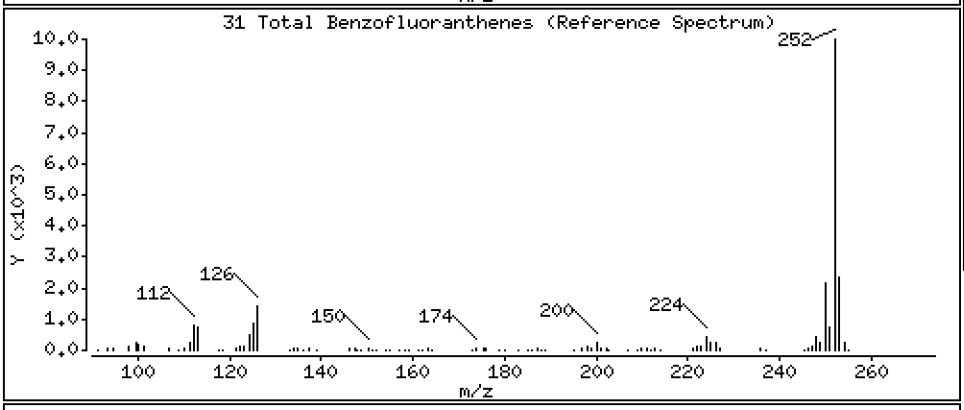
Concentration: 1.632 ug/mL

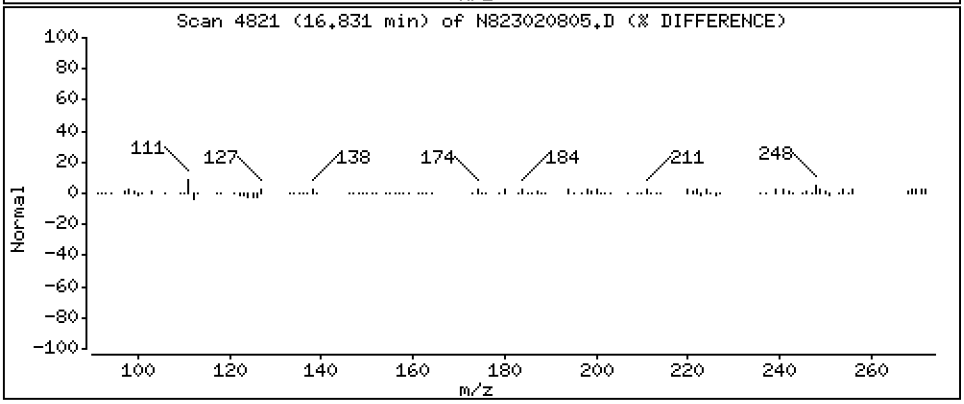












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020805.D

Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

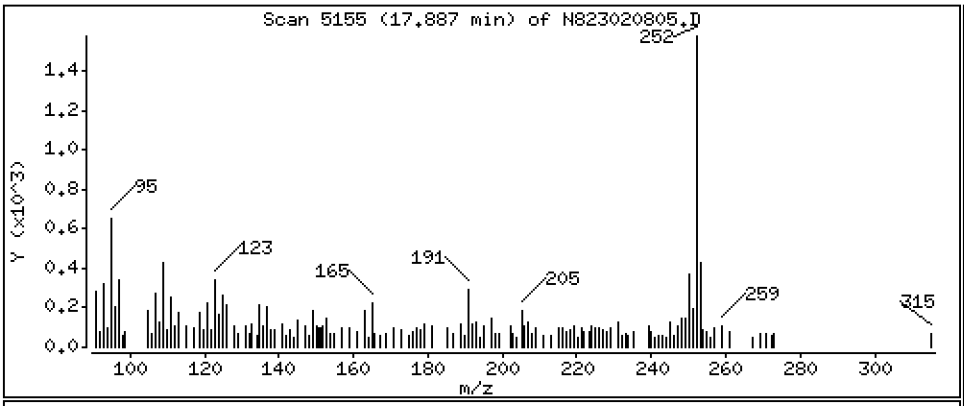
Operator: JZ

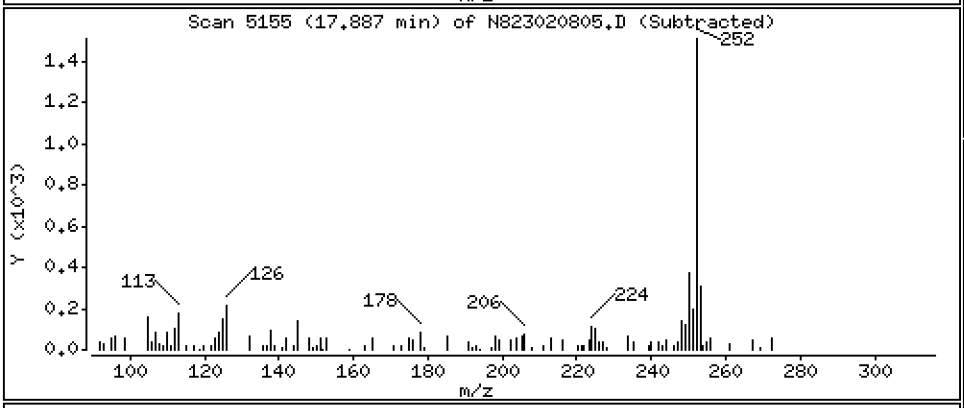
Column phase: Rxi-17sil

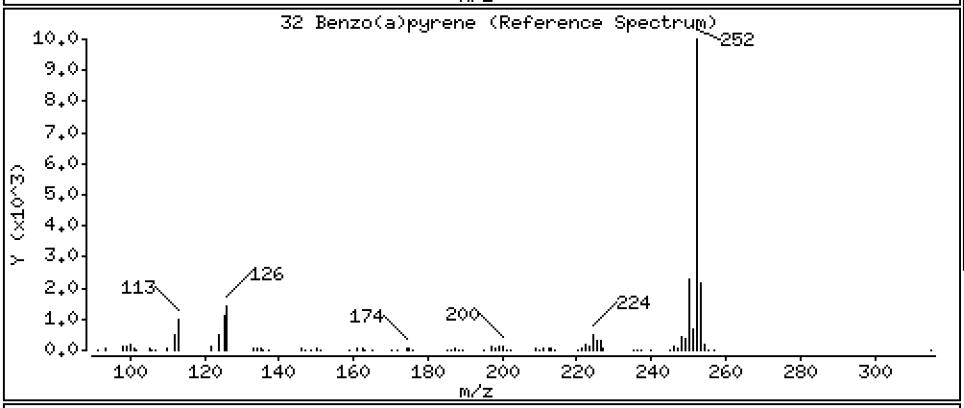
Column diameter: 0.25

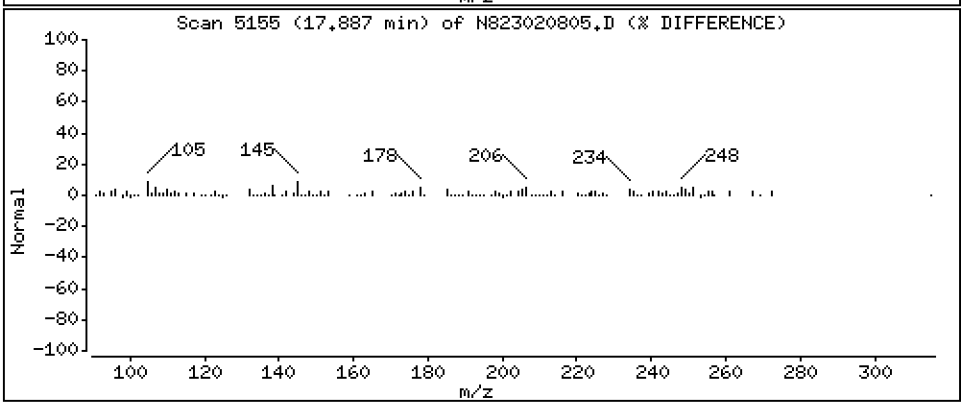
32 Benzo(a)pyrene

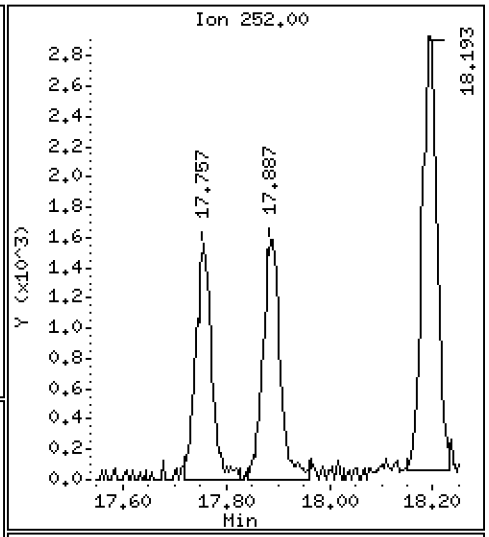
Concentration: 0.7879 ug/mL

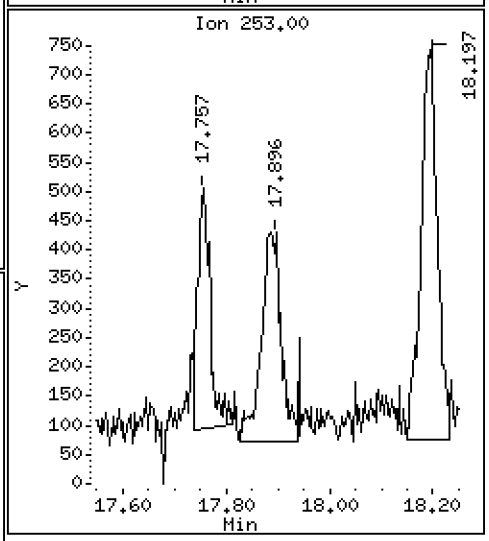












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020805.D

Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

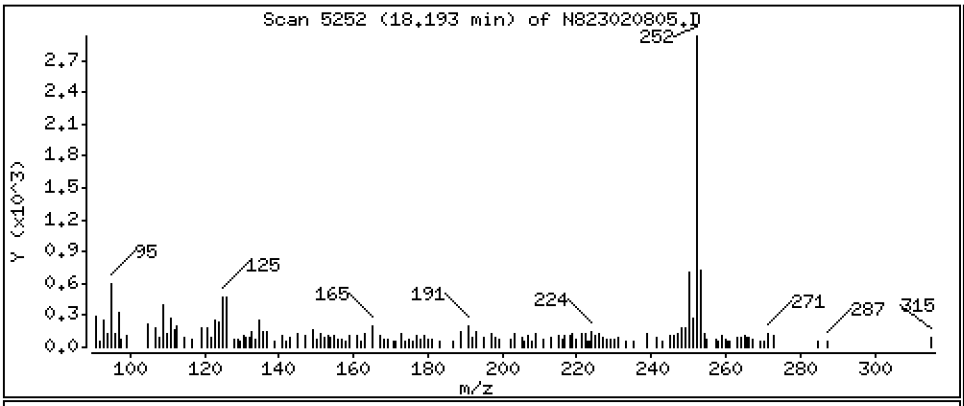
Operator: JZ

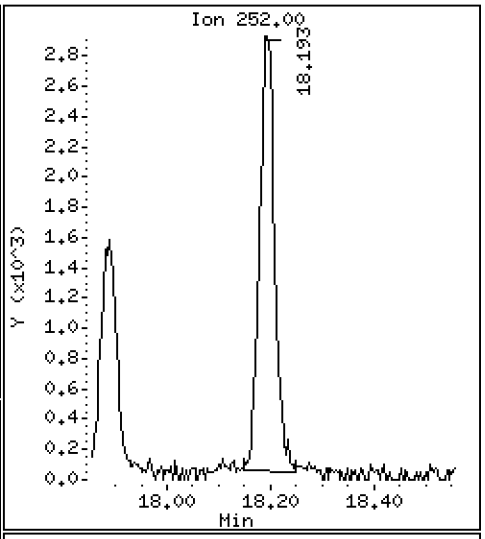
Column phase: Rxi-17sil

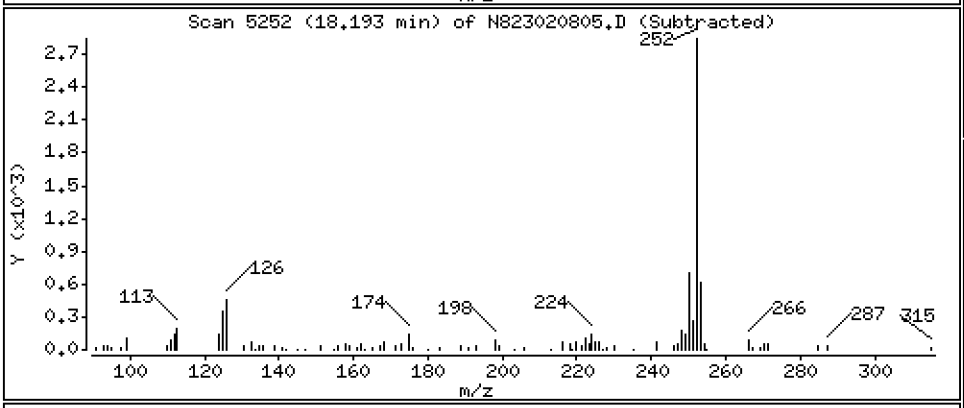
Column diameter: 0.25

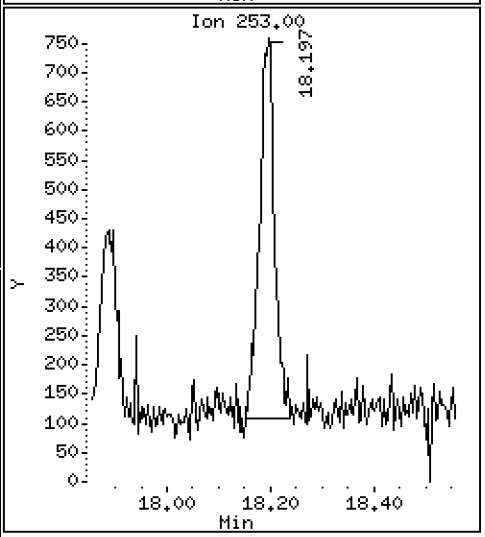
35 Perylene

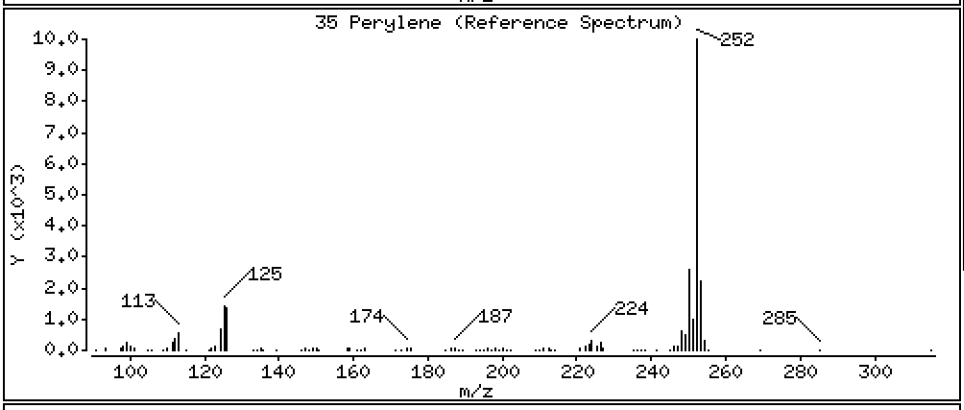
Concentration: 1.173 ug/mL

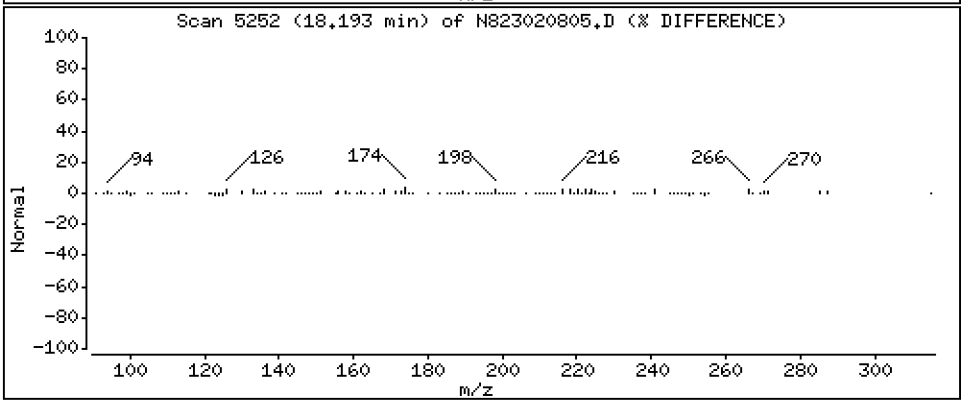












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

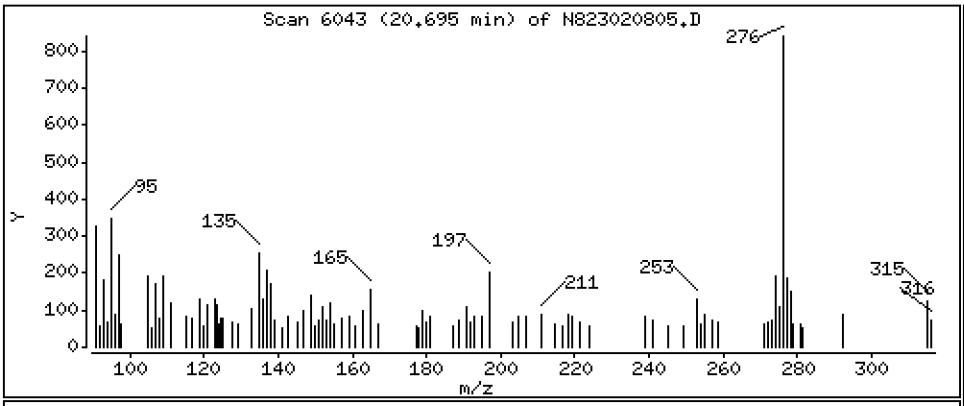
Operator: JZ

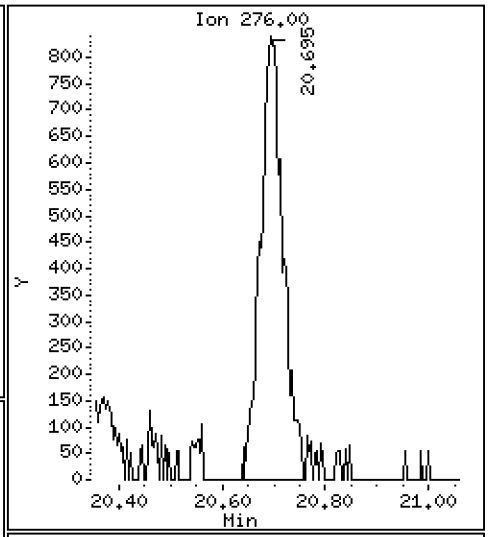
Column phase: Rxi-17sil

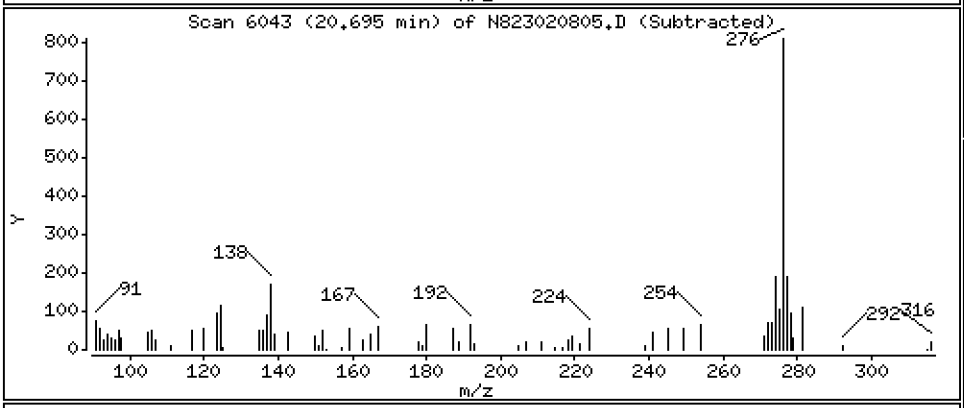
Column diameter: 0.25

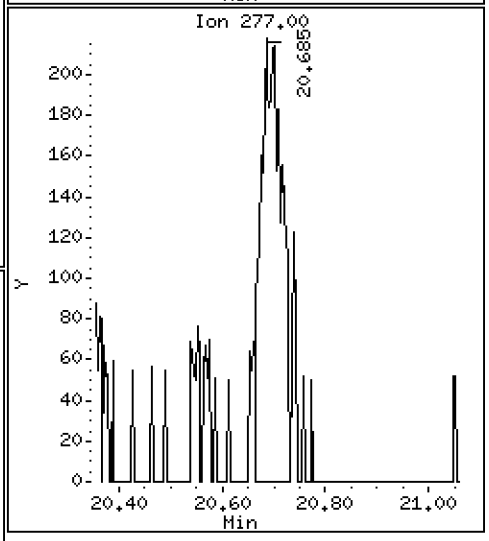
37 Indeno(1,2,3-cd)pyrene

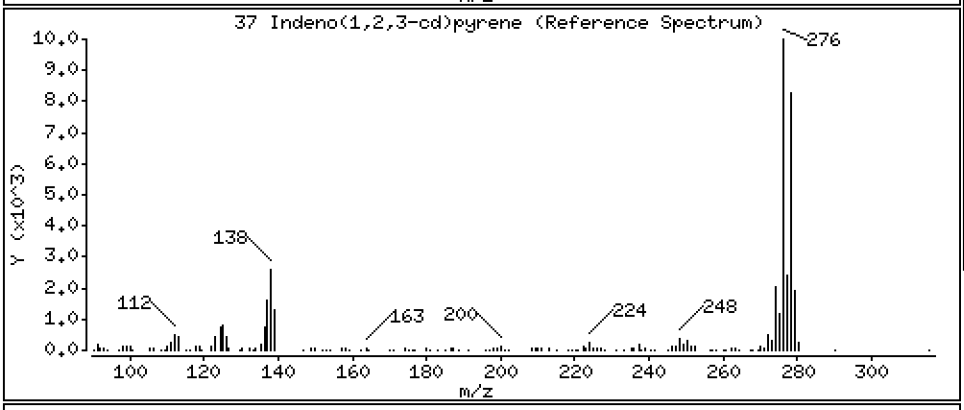
Concentration: 0.4851 ug/mL

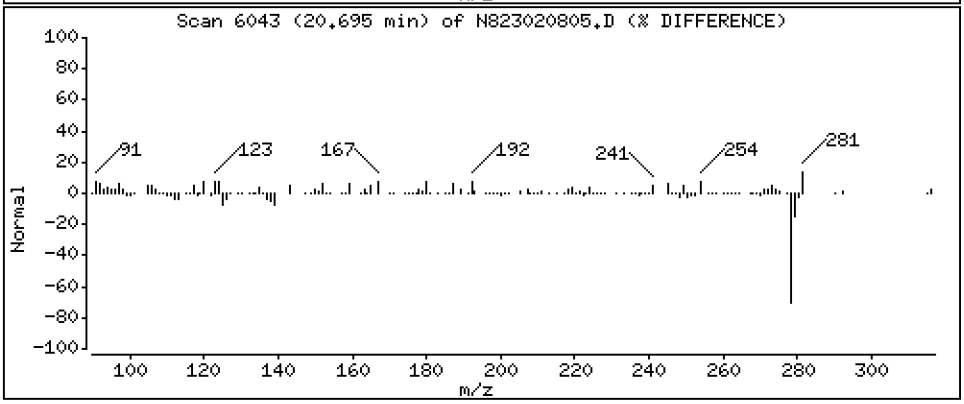












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

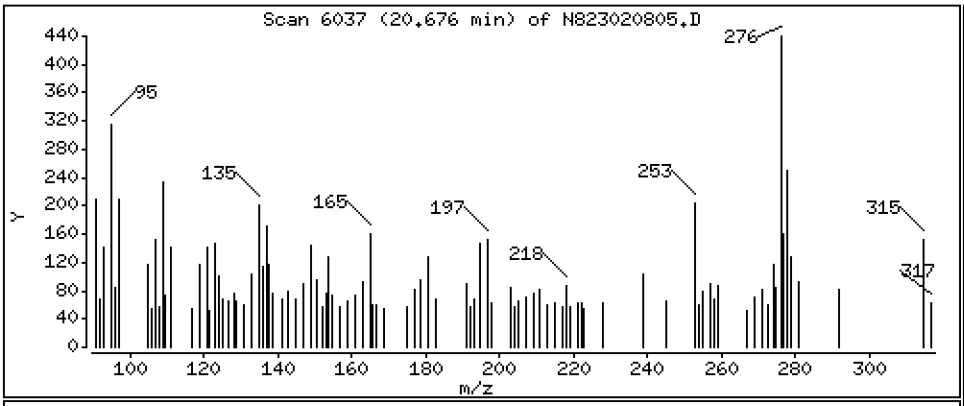
Operator: JZ

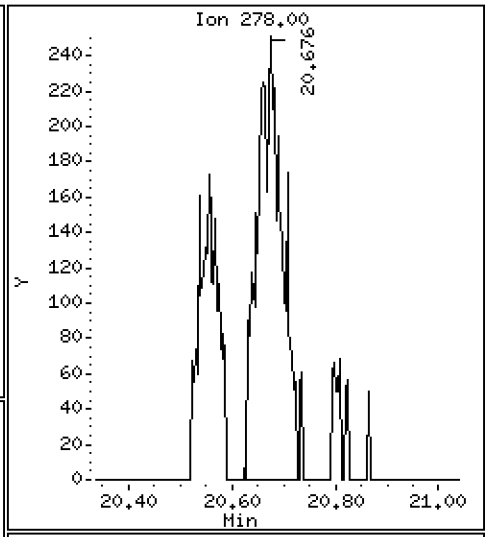
Column phase: Rxi-17sil

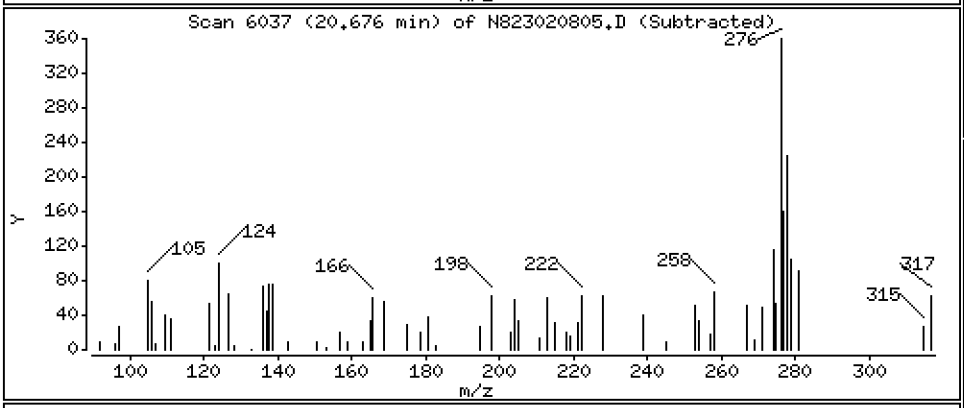
Column diameter: 0.25

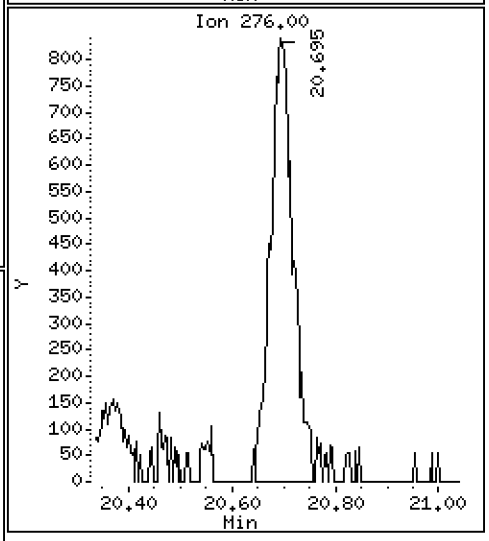
38 Dibenzo(a,h)anthracene

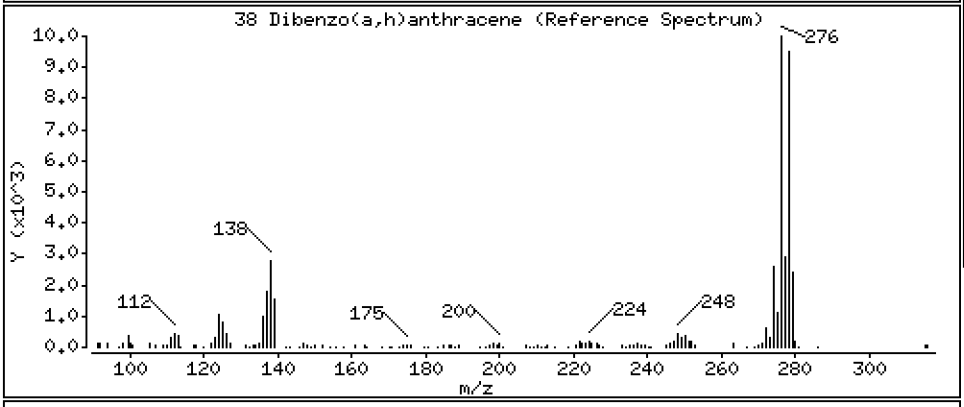
Concentration: 0.1782 ug/mL

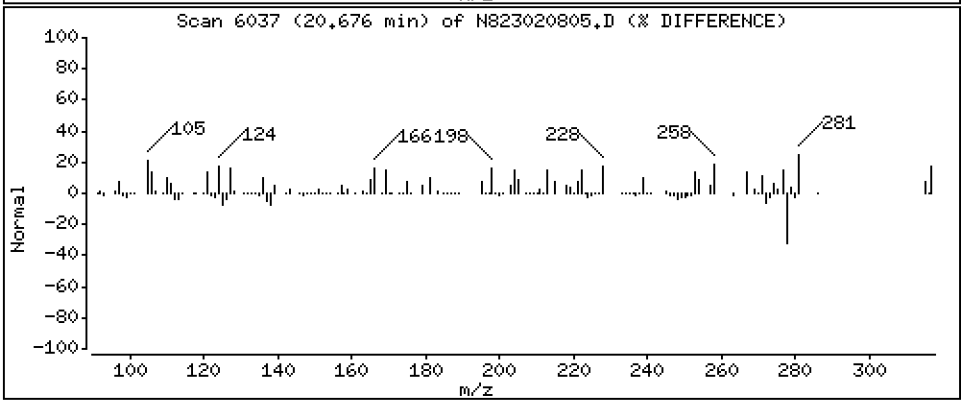












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Date : 08-FEB-2023 13:33

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-04,3,

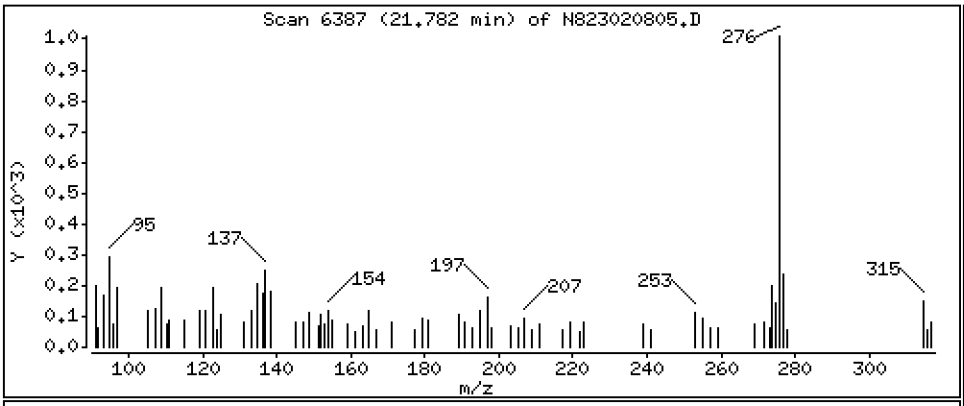
Operator: JZ

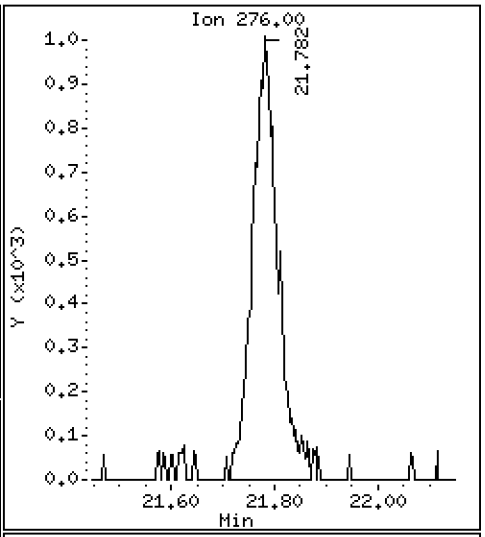
Column phase: Rxi-17sil

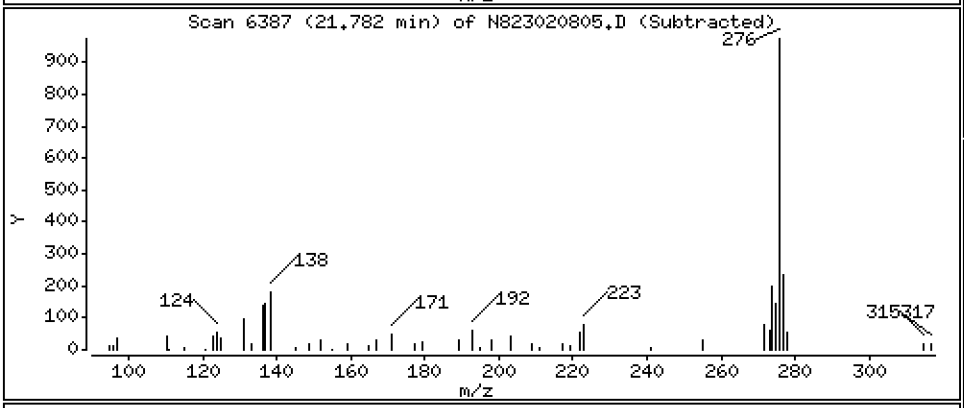
Column diameter: 0.25

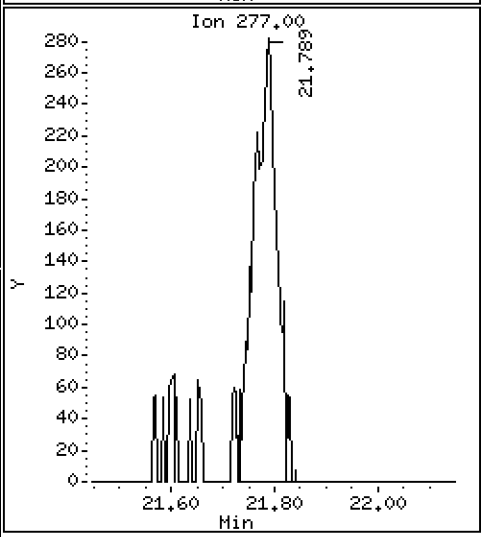
39 Benzo(g,h,i)perylene

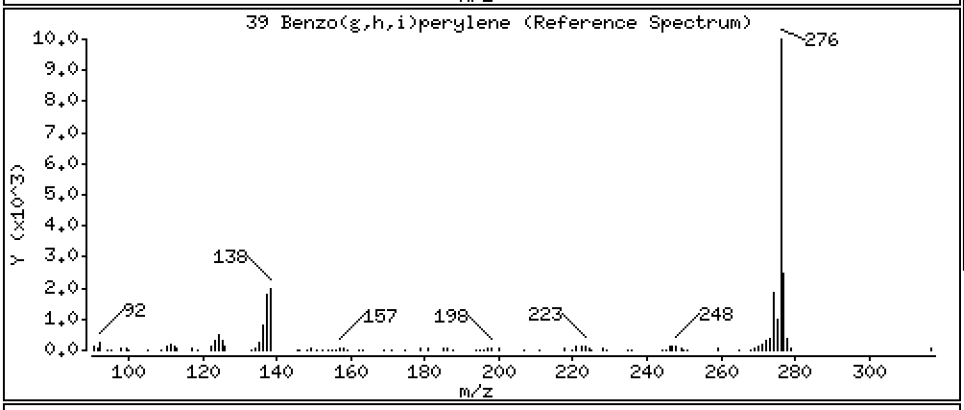
Concentration: 0.7069 ug/mL

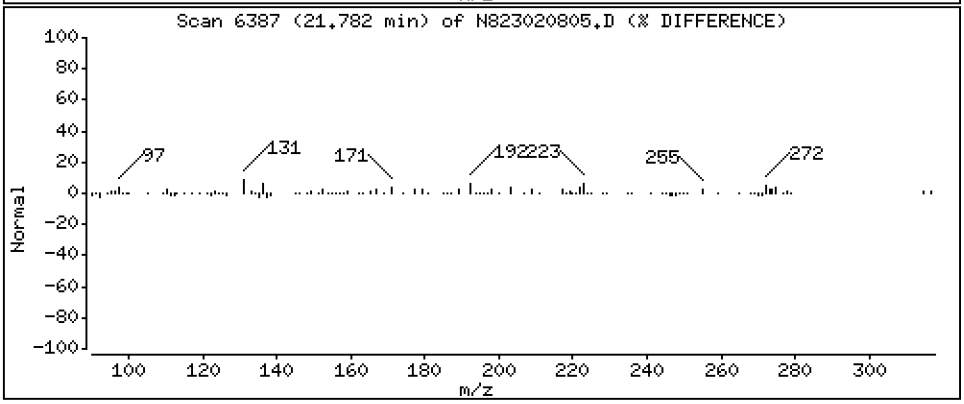












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230208.b\N823020805.D
Lab Smp Id: 23A0207-04
Inj Date : 08-FEB-2023 13:33
Operator : JZ Inst ID: nt8.i
Smp Info : 23A0207-04,3,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230208.b\FSIMPNA230119.m
Meth Date : 08-Feb-2023 21:18 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 5
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.884	4.894	(1.000)	47341	2.00000	
	2 Naphthalene	128	4.916	4.922	(1.006)	1887	0.08573	0.2572
$	3 2-Methylnaphthalene-d10	152	5.621	5.627	(1.151)	9454	0.73224	2.197
	4 2-Methylnaphthalene	141	5.668	5.678	(1.161)	597	0.04931	0.1479
	5 1-methylnaphthalene	141	5.868	5.874	(1.201)	498	0.04053	0.1216
	9 Acenaphthylene	152	7.075	7.079	(0.985)	1400	0.06586	0.1976
*	10 Acenaphthene-d10	164	7.183	7.189	(1.000)	28151	2.00000	
	11 Acenaphthene	153	7.230	7.240	(1.007)	881	0.06185	0.1856(M)
	12 Dibenzofuran	168	7.385	7.392	(1.028)	1097	0.05071	0.1521
	14 Fluorene	166	7.860	7.869	(1.094)	1431	0.08517	0.2555(M)
*	15 Phenanthrene-d10	188	9.226	9.232	(1.000)	46354	2.00000	
	16 Phenanthrene	178	9.260	9.270	(1.004)	9404	0.41532	1.246
	17 Anthracene	178	9.301	9.308	(1.008)	2861	0.13909	0.4173
	19 Carbazole	167	9.823	9.826	(1.065)	881	0.04672	0.1402
	22 Fluoranthene	202	11.050	11.056	(1.198)	16450	0.66742	2.002
$	21 Fluoranthene-d10	212	11.012	11.018	(1.194)	17785	0.86963	2.609
	23 Pyrene	202	11.581	11.575	(0.815)	20468	1.35971	4.079
	24 Benzo(a)anthracene	228	14.073	14.086	(0.991)	4271	0.31303	0.9391
*	25 Chrysene-d12	240	14.203	14.215	(1.000)	24280	2.00000	
	27 Chrysene	228	14.278	14.288	(1.005)	4579	0.31526	0.9458
	28 Benzo(b)fluoranthene	252	16.830	16.843	(0.929)	3920	0.24467	0.7340
	29 Benzo(k)fluoranthene	252	16.893	16.903	(0.932)	2355	0.15007	0.4502
	30 Benzo(j)fluoranthene	252	16.966	16.982	(0.936)	2114	0.14964	0.4489
	31 Total Benzofluoranthenes	252	16.830	16.843	(0.929)	8256	0.54412	1.632(M)
	32 Benzo(a)pyrene	252	17.886	17.899	(0.987)	3703	0.26265	0.7879
*	33 Perylene-d12	264	18.120	18.127	(1.000)	27509	2.00000	
	35 Perylene	252	18.193	18.206	(1.004)	5915	0.39096	1.173(M)
$	36 Dibenzo(a,h)anthracene-d14	292	20.558	20.568	(1.135)	11174	1.03668	3.110
	37 Indeno(1,2,3-cd)pyrene	276	20.694	20.707	(1.142)	2597	0.16169	0.4851
	38 Dibenzo(a,h)anthracene	278	20.675	20.688	(1.141)	821	0.05940	0.1782
	39 Benzo(g,h,i)perylene	276	21.782	21.798	(1.202)	3429	0.23563	0.7069(M)

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020805.D
Lab Smp Id: 23A0207-04
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230208.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 08-FEB-2023
Calibration Time: 12:05
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	47321	23661	94642	47341	0.04
10 Acenaphthene-d10	28133	14067	56266	28151	0.06
15 Phenanthrene-d10	52447	26224	104894	46354	-11.62
25 Chrysene-d12	43514	21757	87028	24280	-44.20
33 Perylene-d12	39495	19748	78990	27509	-30.35

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.89	4.39	5.39	4.88	-0.20
10 Acenaphthene-d10	7.19	6.69	7.69	7.18	-0.09
15 Phenanthrene-d10	9.23	8.73	9.73	9.23	-0.07
25 Chrysene-d12	14.22	13.72	14.72	14.20	-0.09
33 Perylene-d12	18.13	17.63	18.63	18.12	-0.04

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

REVIEW SUMMARY FOR FILE - N823020805.D

Lab ID: 23A0207-04
nt8.i, 20230208.b\FSIMPNA230119.m,   08-FEB-2023 13:33

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

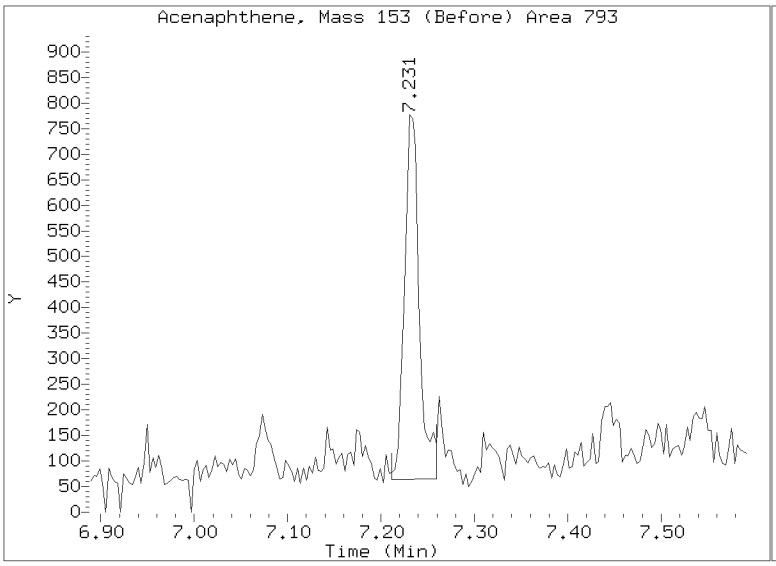
No RRT check performed

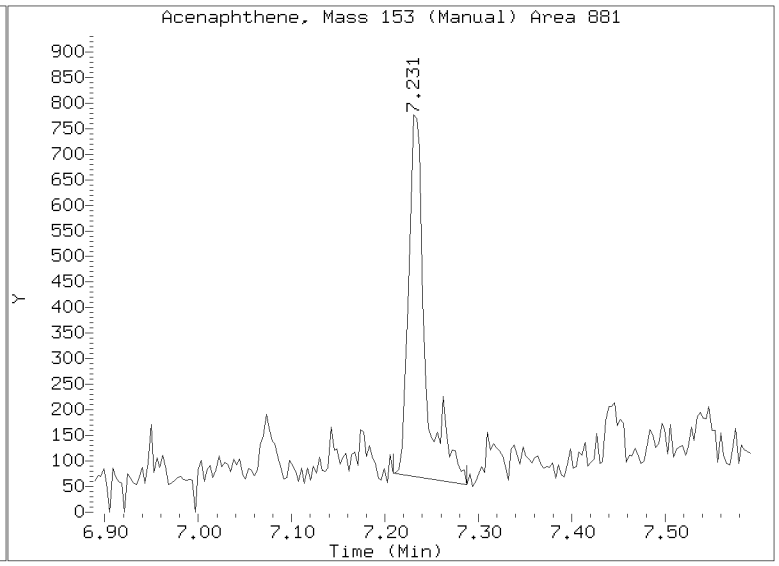
On Column LOD for nt8.i, 20230208.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

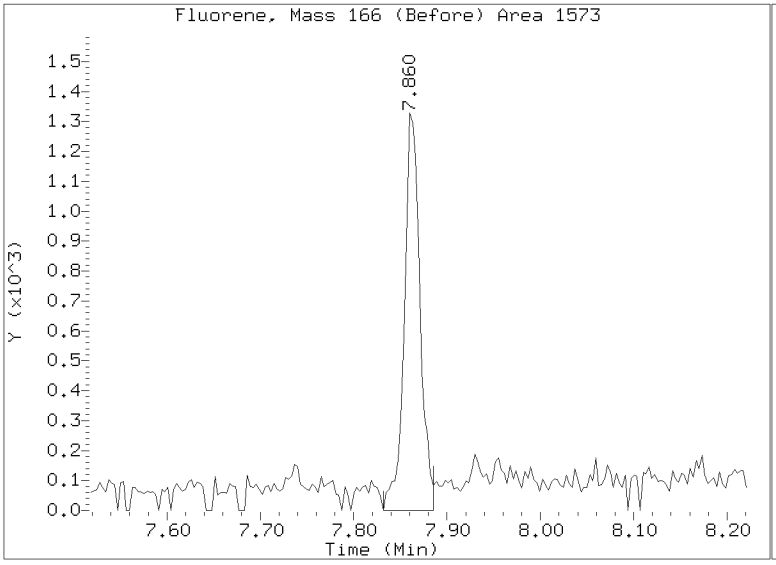
* Only compounds listed in the work order have been verified by the analyst *

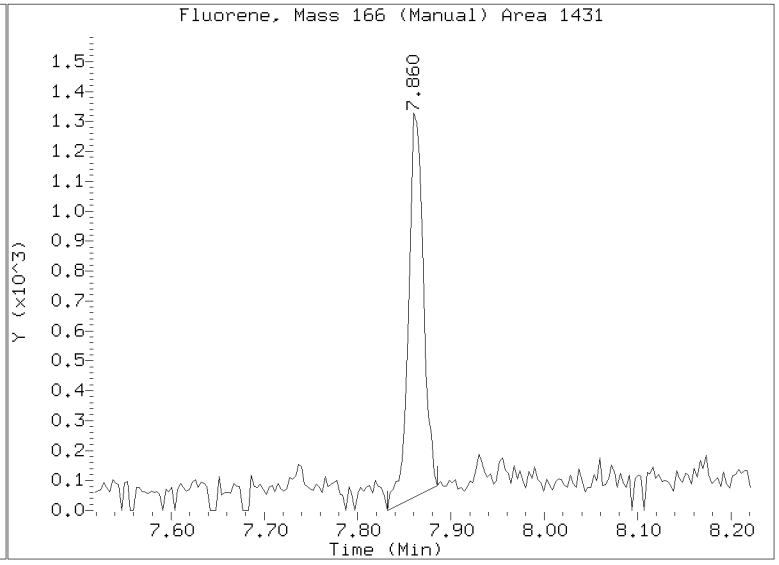
Quant Ion Manual Peak Adjustment Report

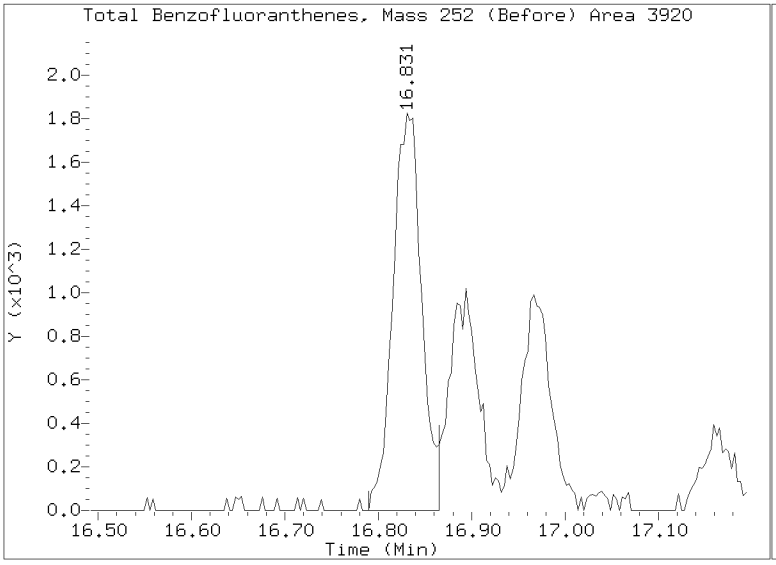
Datafile: //target/share/chem3/nt8.i/20230208.b/N823020805.D
Injection Date: 08-FEB-2023 13:33
Lab ID:23A0207-04 Client ID:
Report Date: 02/08/2023 21:38

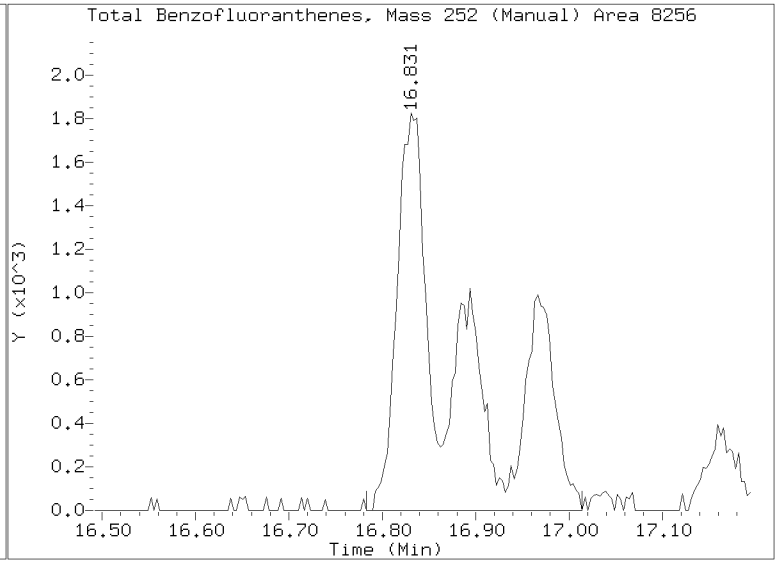












Quant Ion Manual Peak Adjustment Report

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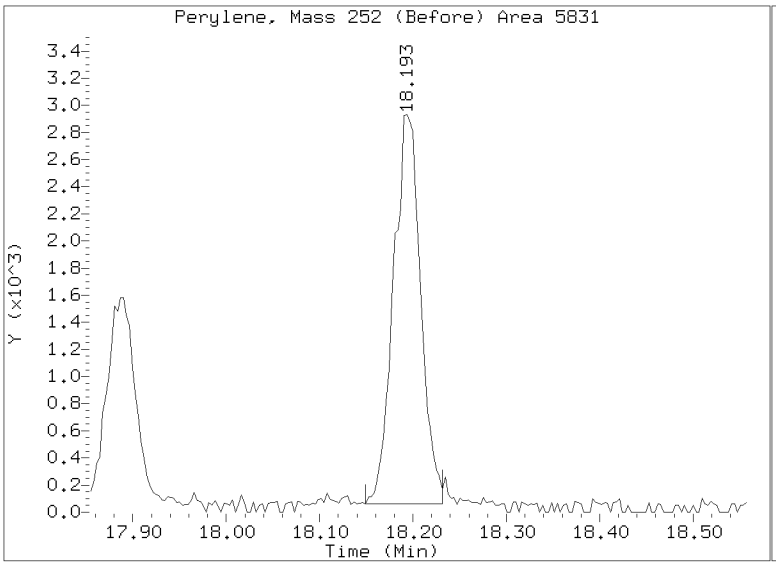
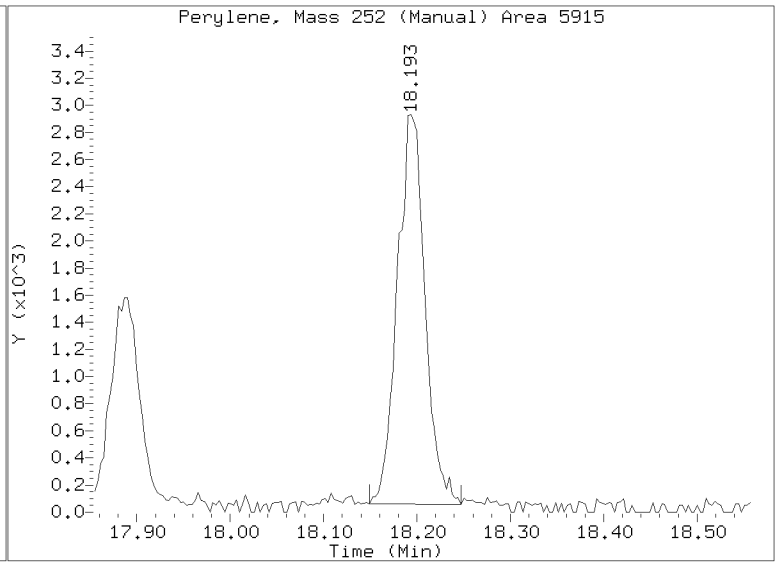
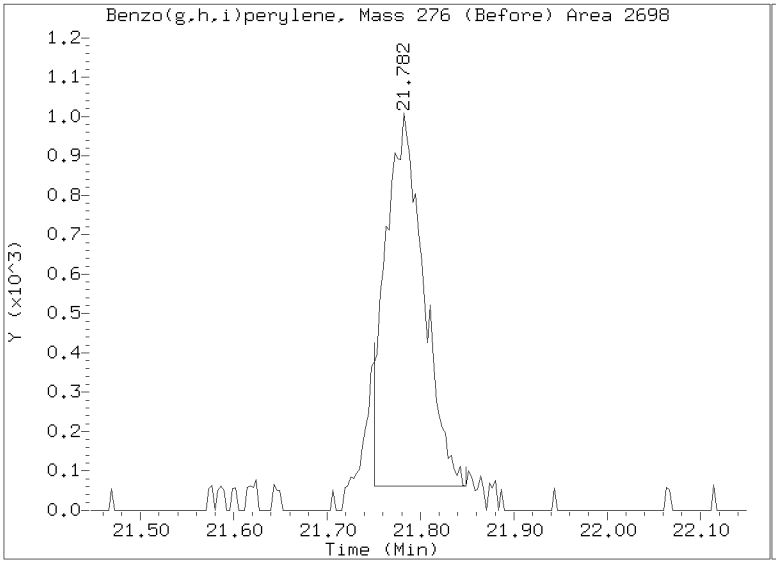
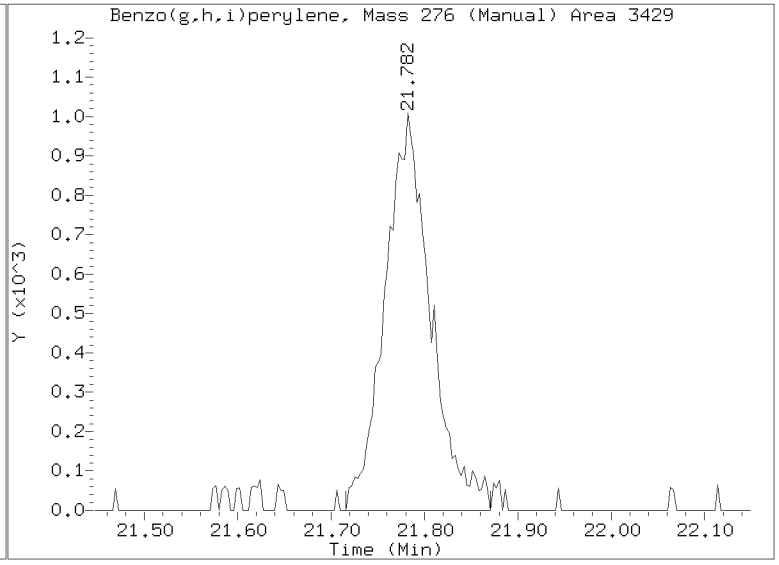
Injection Date: 08-FEB-2023 13:33
Lab ID:23A0207-04 Client ID:
Report Date: 02/08/2023 21:38









Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1080-FD

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

Polynuclear Aromatic Hydrocarbons

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-05 A	SDG:	23A0207
Sampled:	01/11/23 09:24	Prepared:	02/01/23 11:29	File ID:	N823020618.D
% Solids:	71.34	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/06/23 20:26
Batch:	BLA0683	Sequence:	SLB0075	Initial/Final:	14.07 g Wet / 0.5 mL
Instrument:	NT8	Column:	RXI-17Sil ms	Calibration:	GA00050
Cleanups:	GPC, Silica Gel				

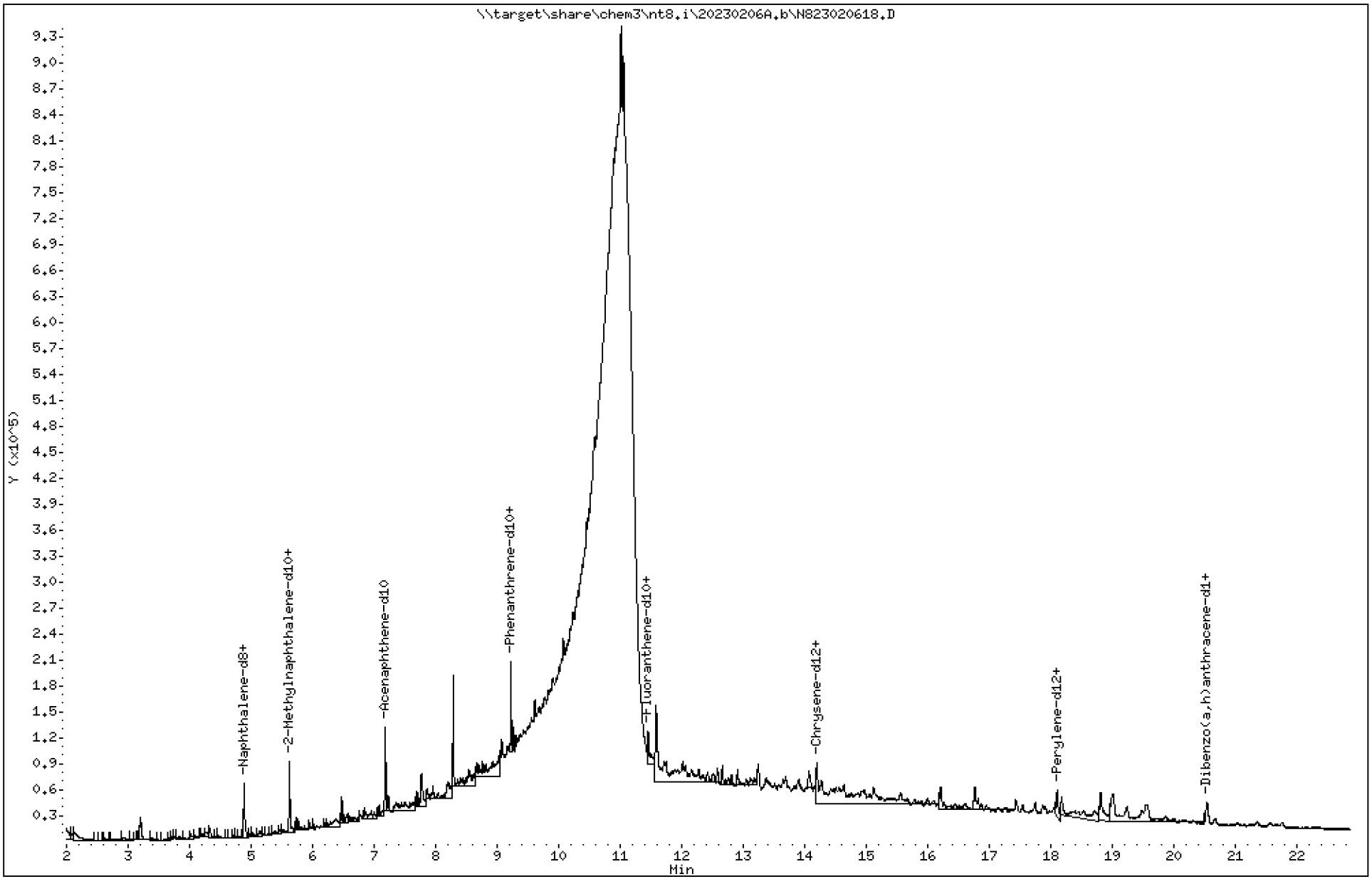
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
56-55-3	Benzo(a)anthracene	1	37.2		0.82	4.98
218-01-9	Chrysene	1	38.5		1.05	4.98
205-99-2	Benzo(b)fluoranthene	1	41.1		1.37	4.98
207-08-9	Benzo(k)fluoranthene	1	19.4		0.76	4.98
50-32-8	Benzo(a)pyrene	1	31.5		0.61	4.98
193-39-5	Indeno(1,2,3-cd)pyrene	1	22.3		1.05	4.98
53-70-3	Dibenzo(a,h)anthracene	1	11.8		0.89	4.98

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	149.44	110	73.4	32 - 120	
Dibenzo[a,h]anthracene-d14	149.44	148	99.1	21 - 133	
Fluoranthene-d10	149.44	149	99.9	36 - 134	

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020618.D
Date : 06-FEB-2023 20:26
Client ID:
Sample Info: 23A0207-05

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



23A0207 CLPLIKE (Rev3) - Page 135 of 3315

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020618.D

Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

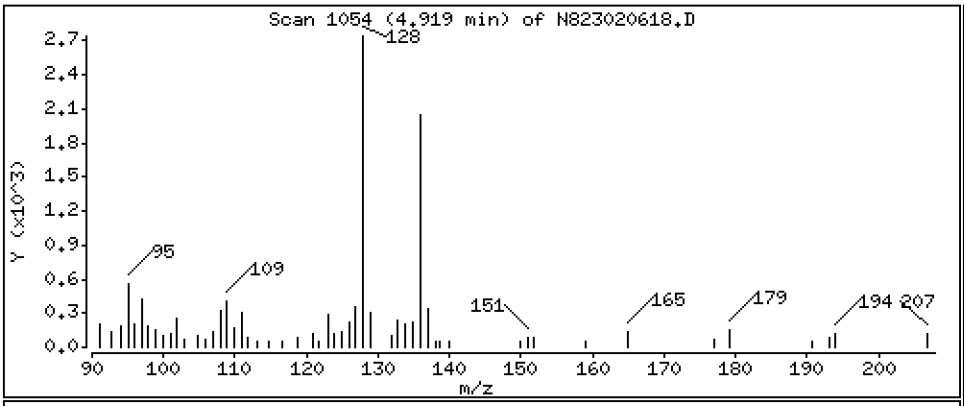
Operator: JZ

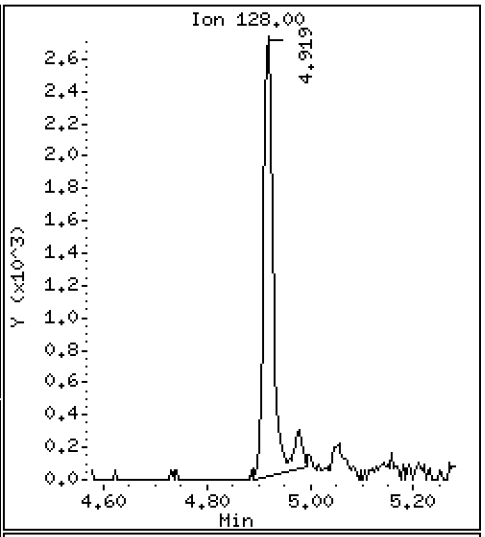
Column phase: Rxi-17sil

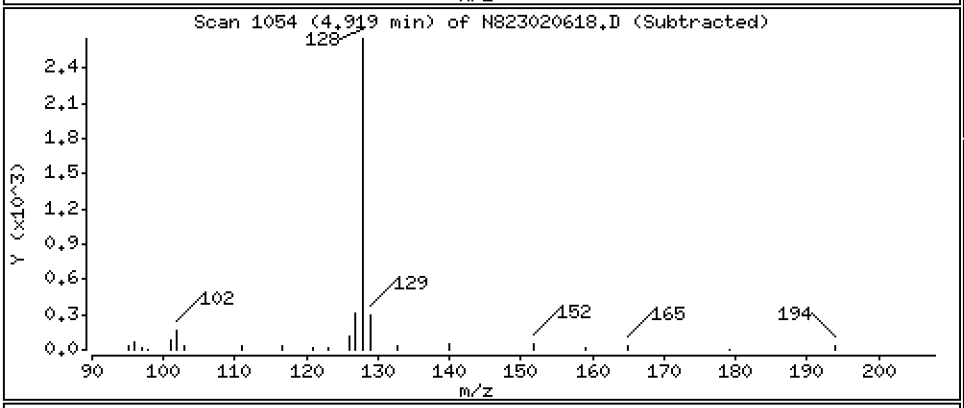
Column diameter: 0.25

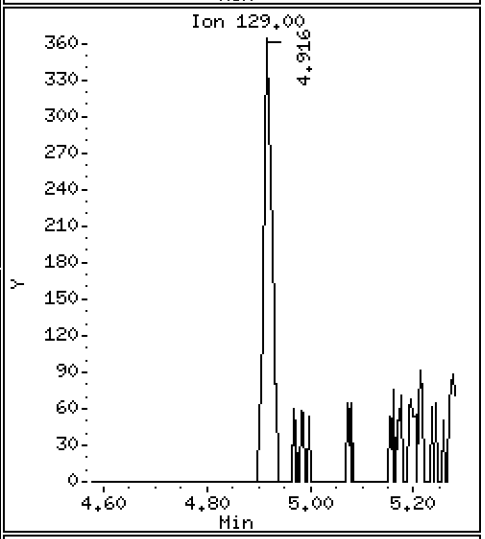
2 Naphthalene

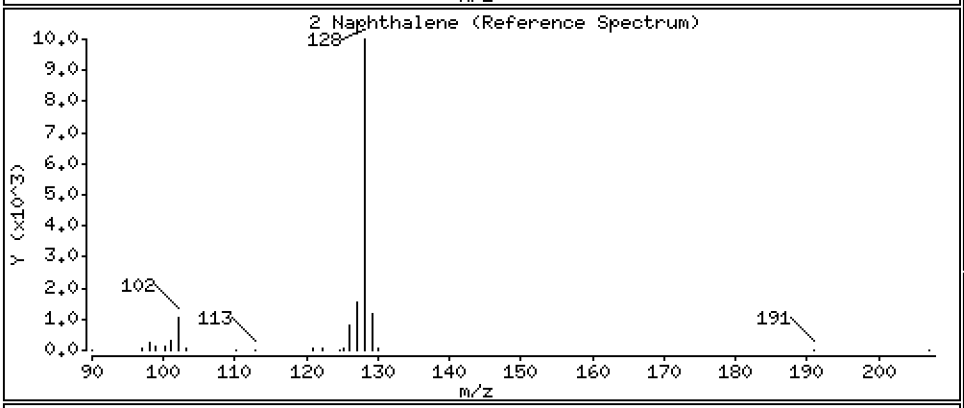
Concentration: 0.1542 ug/mL

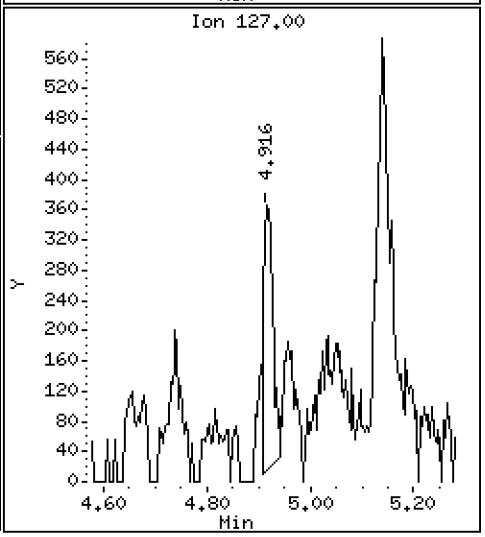


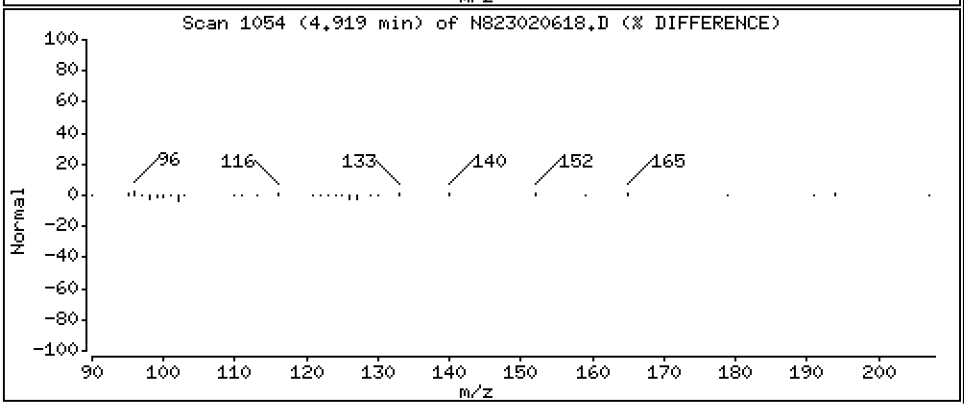












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

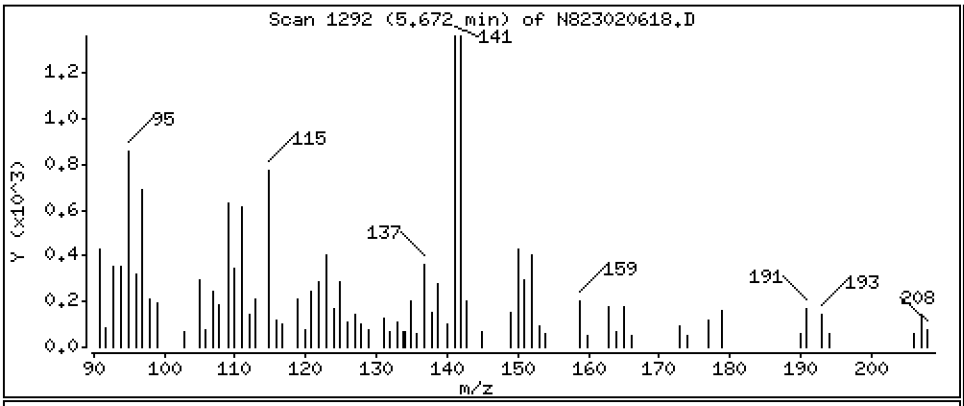
Operator: JZ

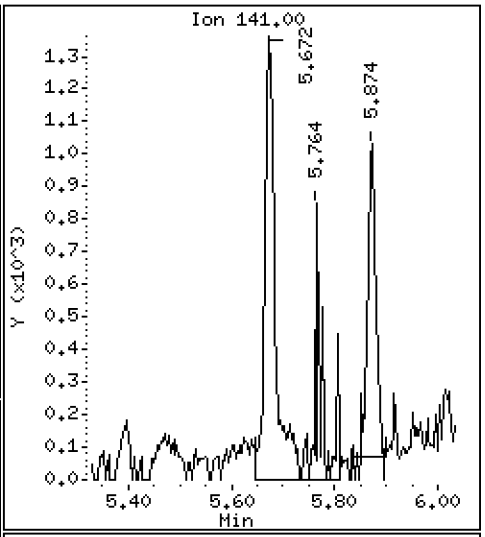
Column phase: Rxi-17sil

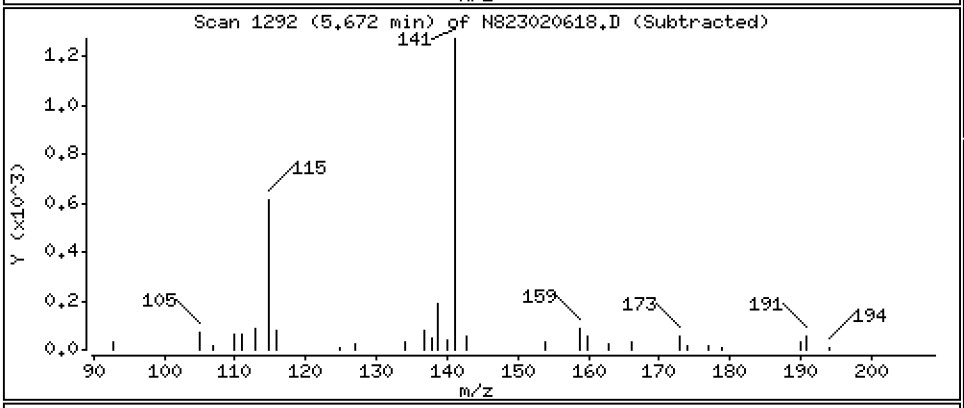
Column diameter: 0.25

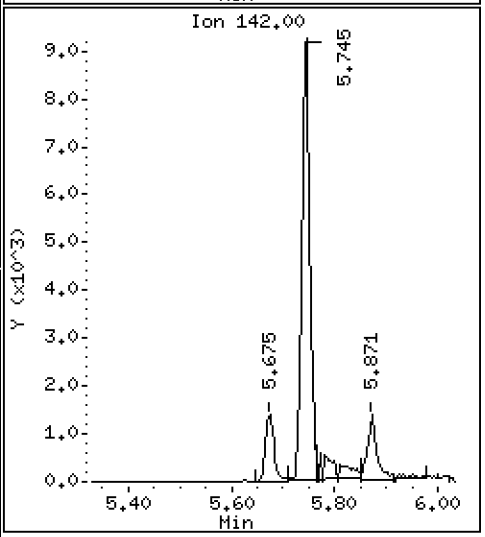
4 2-Methylnaphthalene

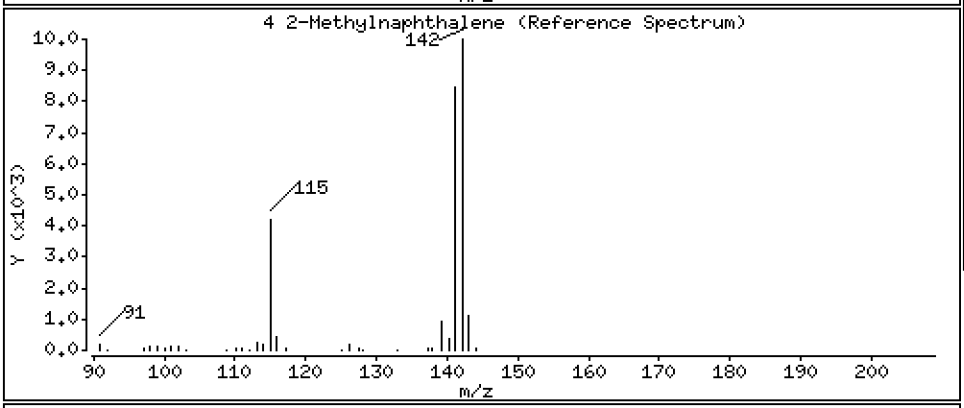
Concentration: 0.1453 ug/mL

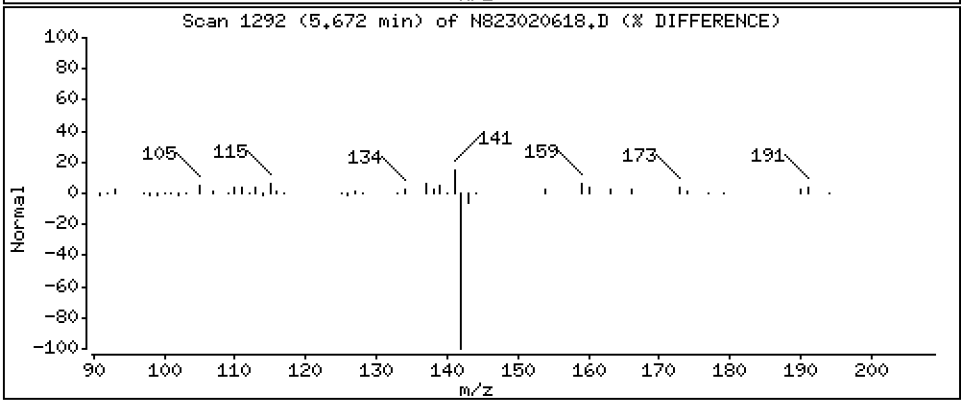












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

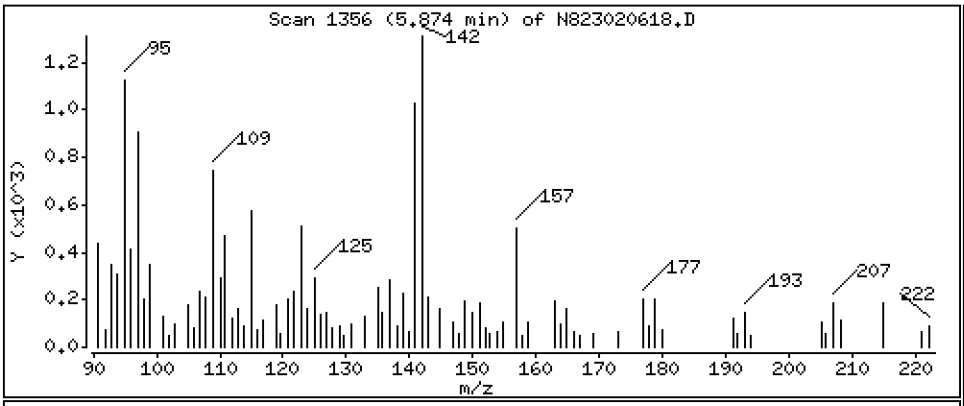
Operator: JZ

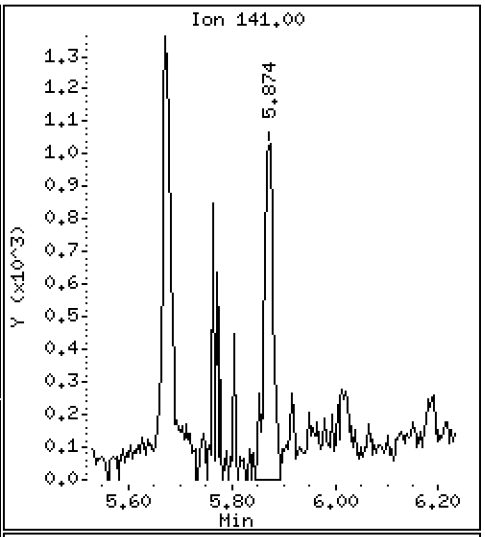
Column phase: Rxi-17sil

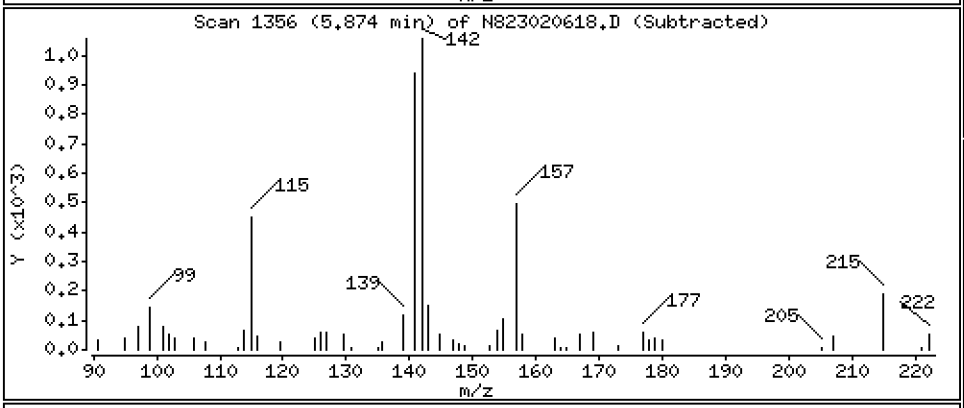
Column diameter: 0.25

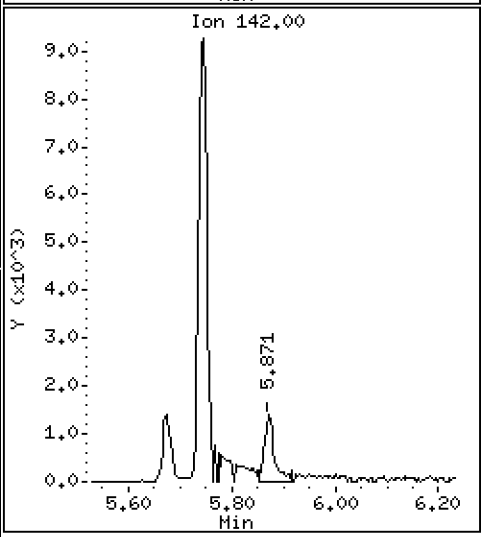
5 1-methylnaphthalene

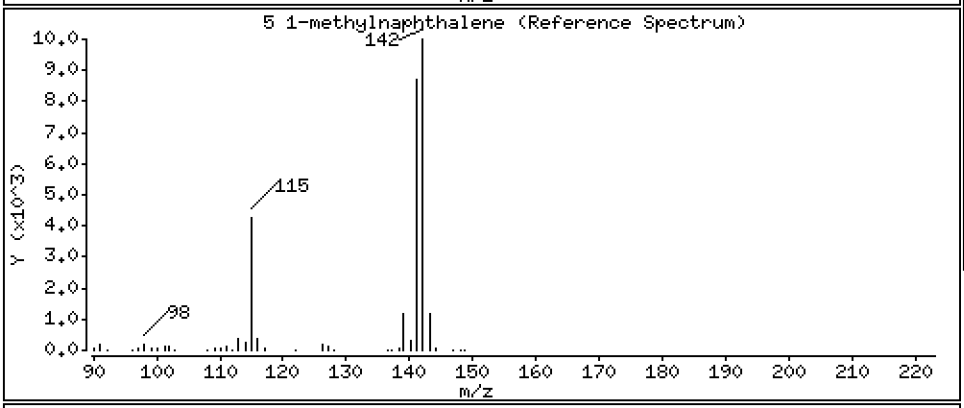
Concentration: 0.09958 ug/mL

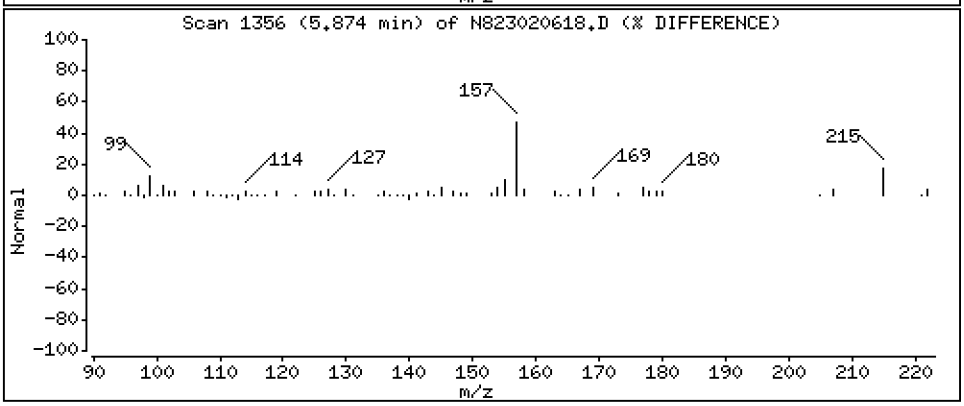












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

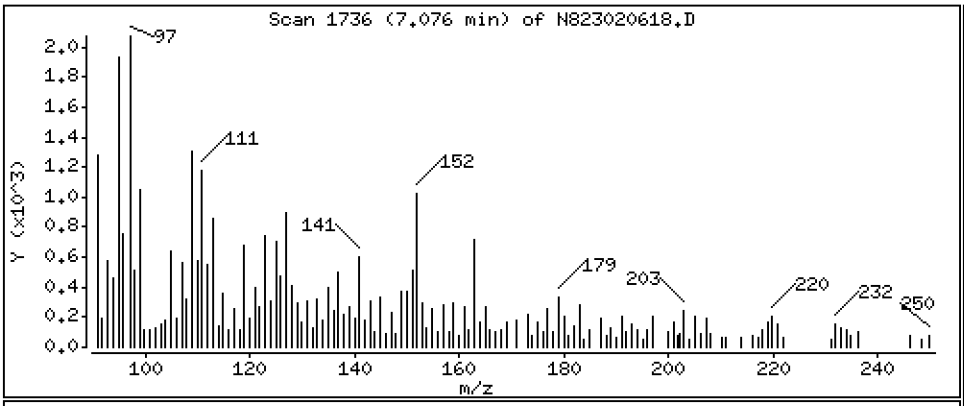
Operator: JZ

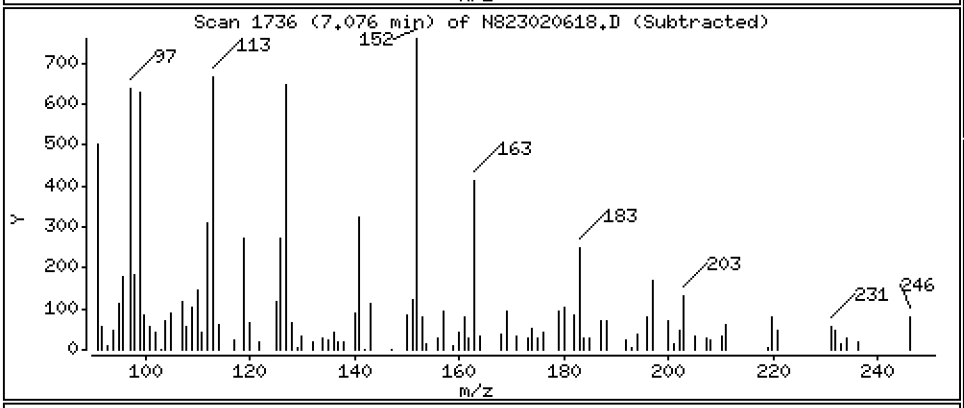
Column phase: Rxi-17sil

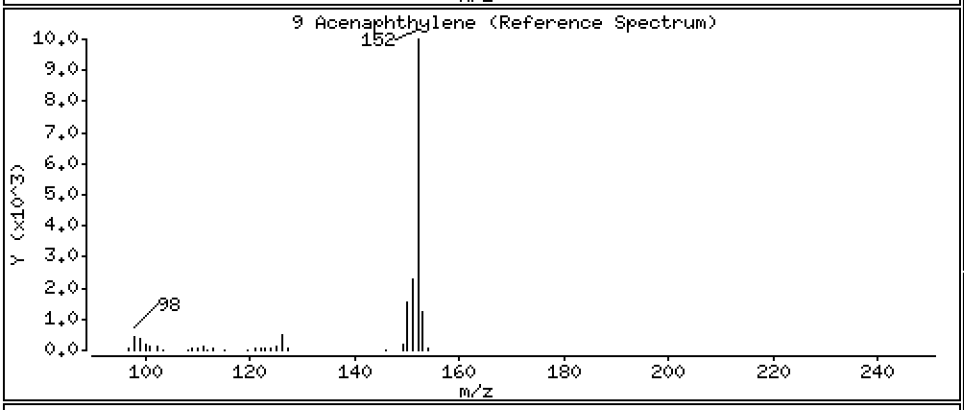
Column diameter: 0.25

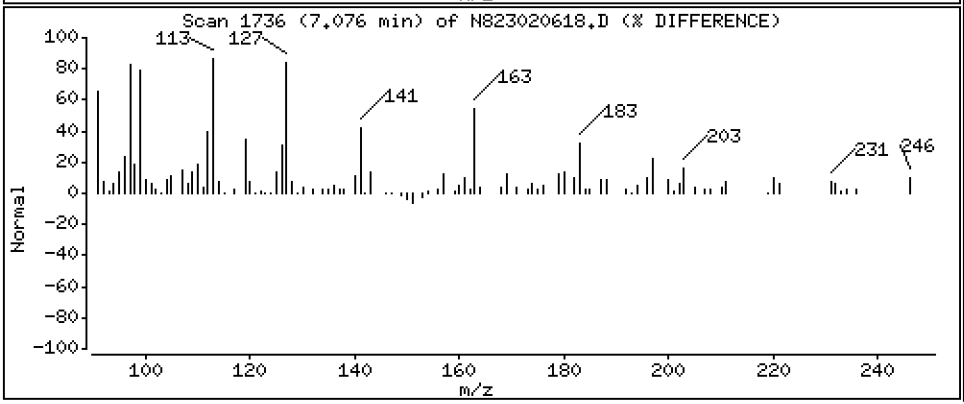
9 Acenaphthylene

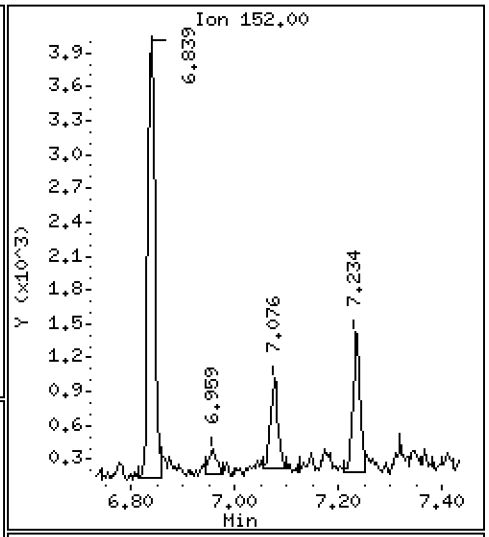
Concentration: 0.03869 ug/mL

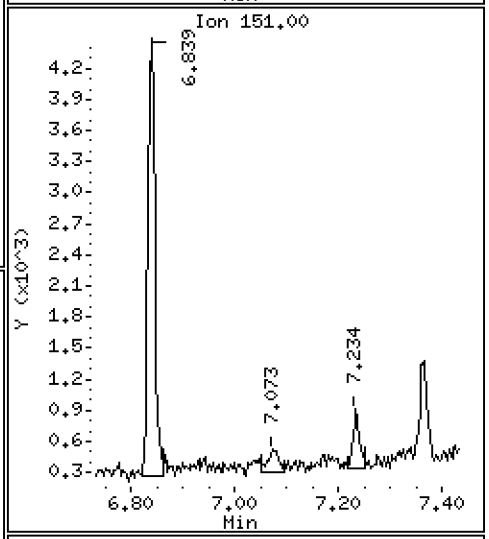


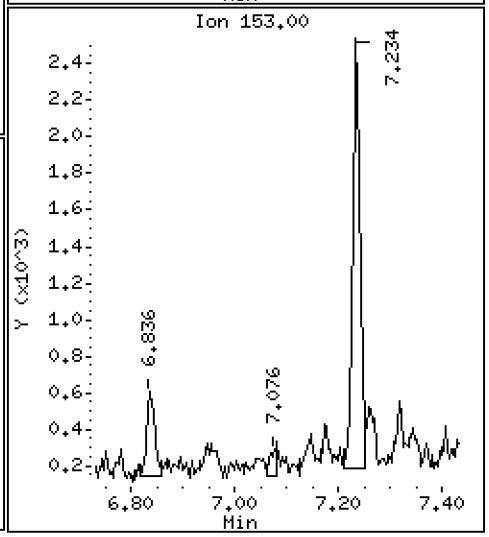












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

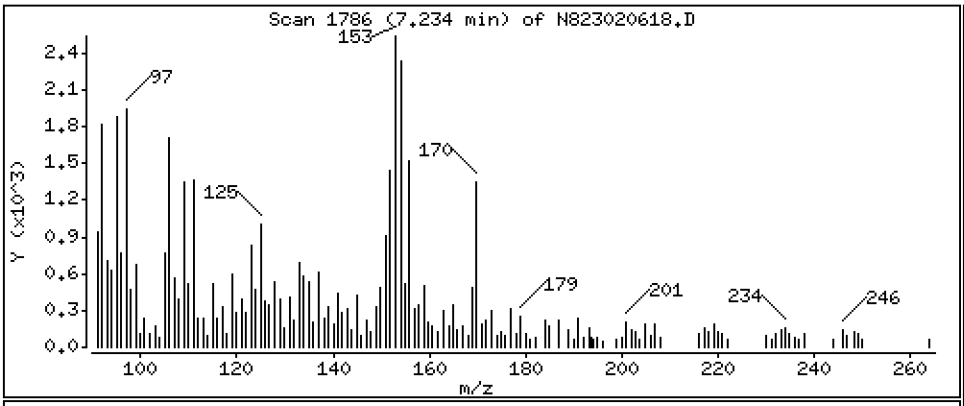
Operator: JZ

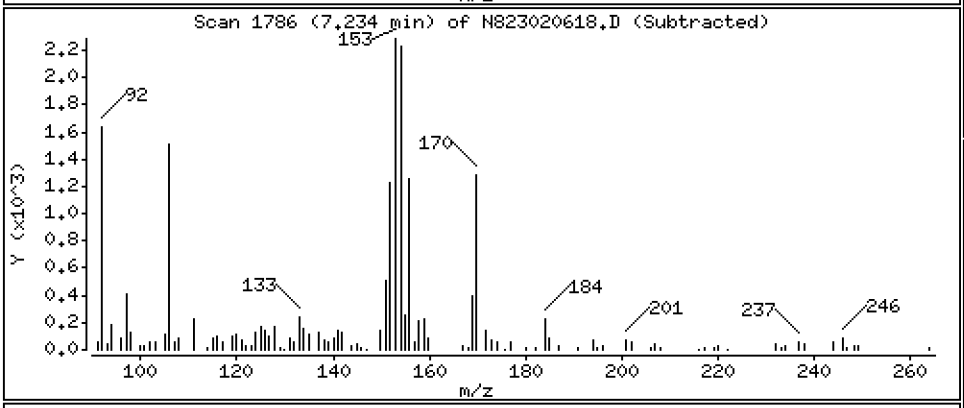
Column phase: Rxi-17sil

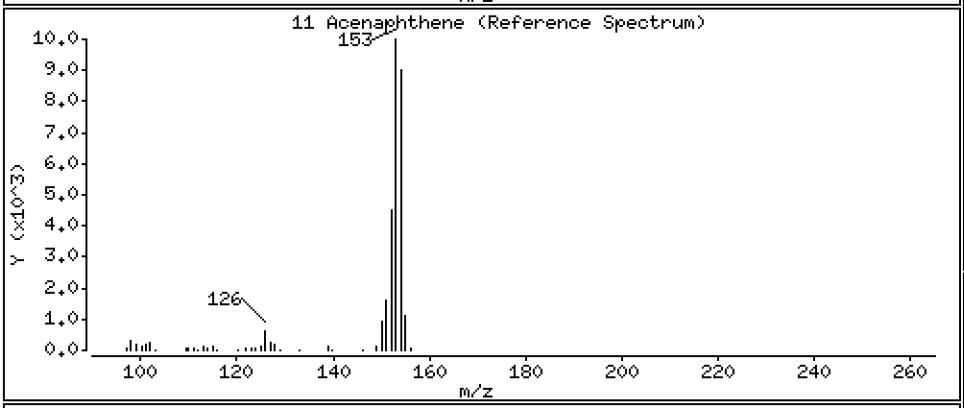
Column diameter: 0.25

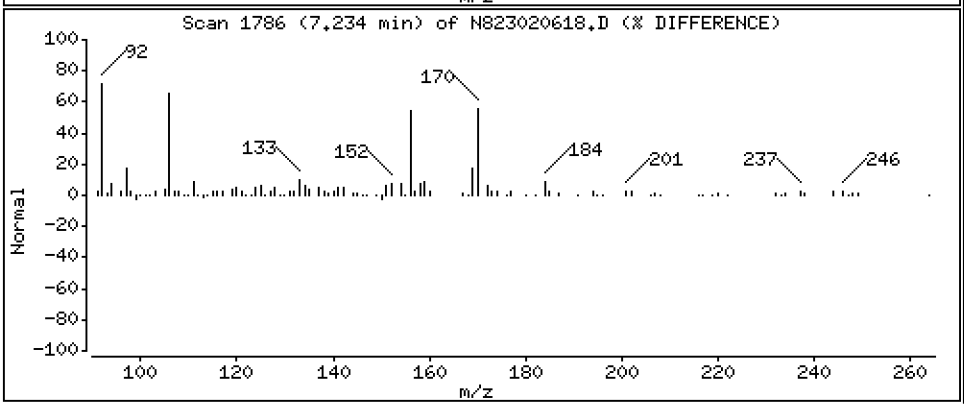
11 Acenaphthene

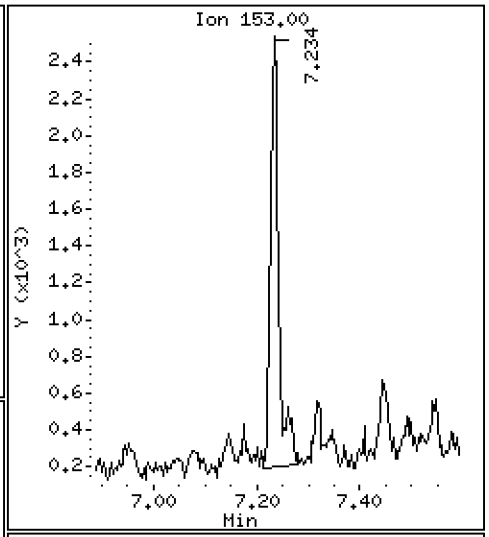
Concentration: 0.1863 ug/mL

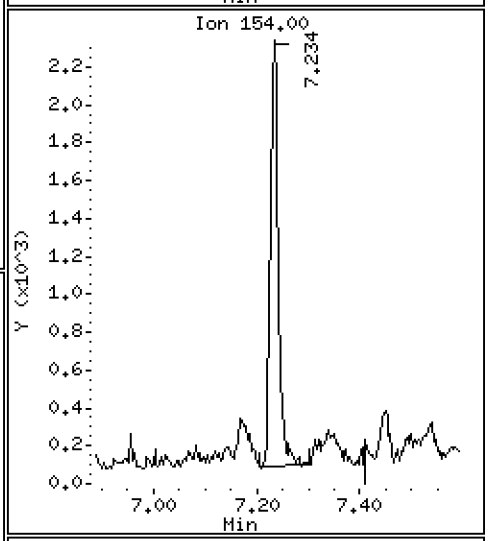


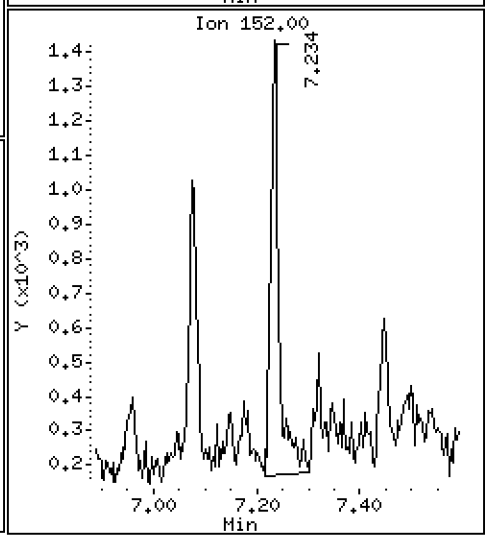












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

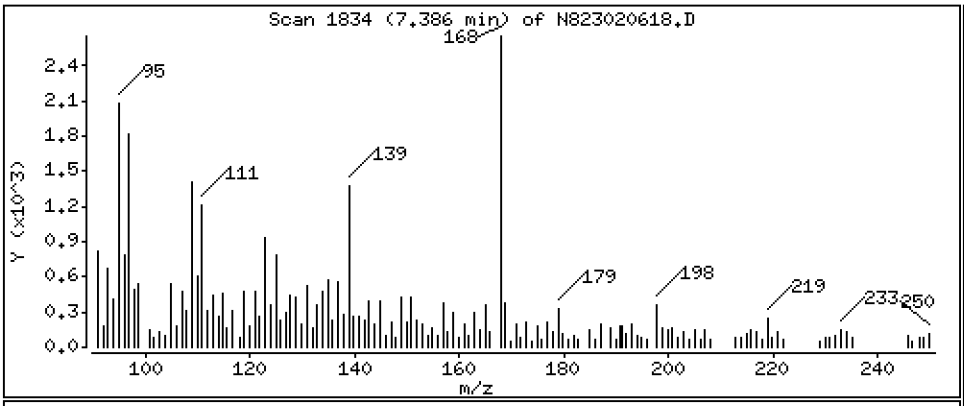
Operator: JZ

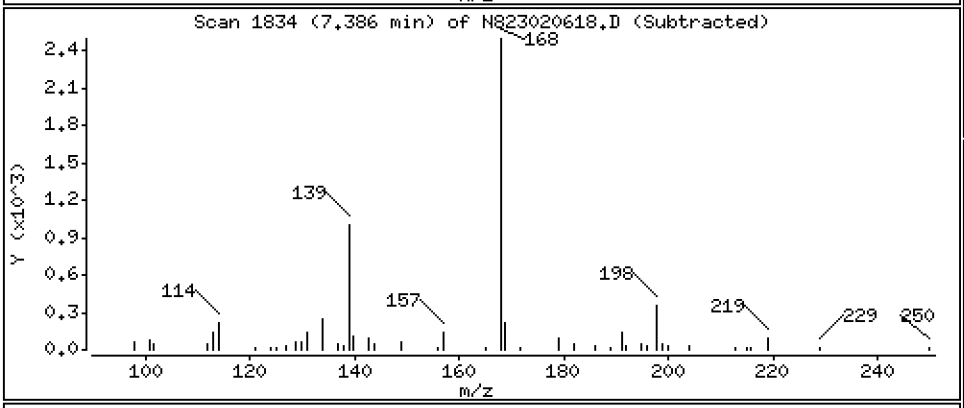
Column phase: Rxi-17sil

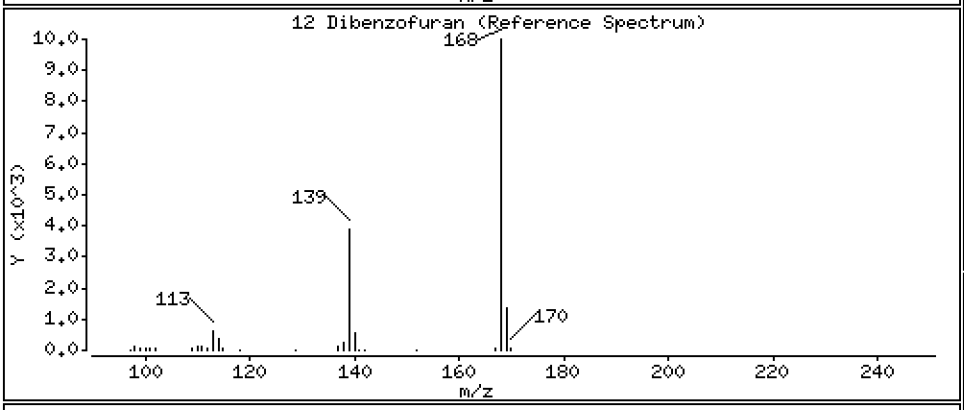
Column diameter: 0.25

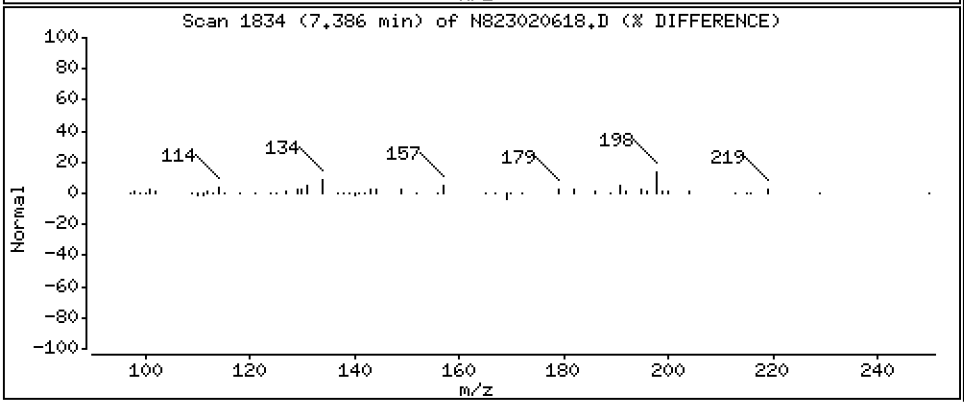
12 Dibenzofuran

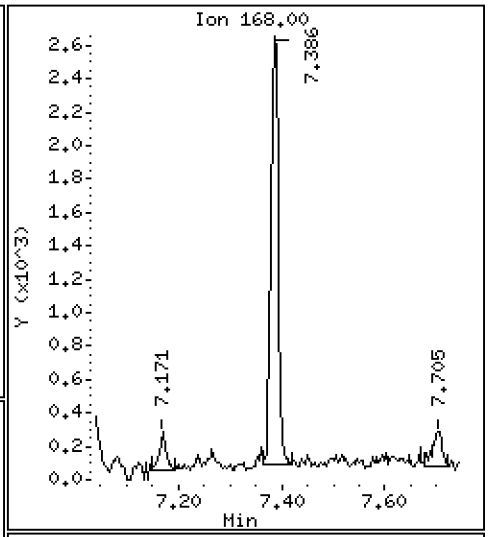
Concentration: 0.1141 ug/mL

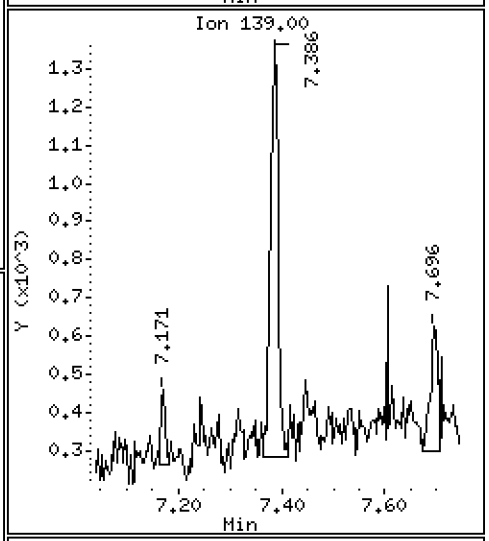


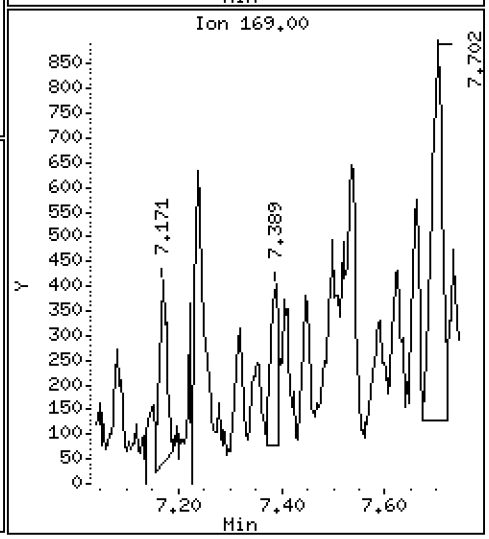












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

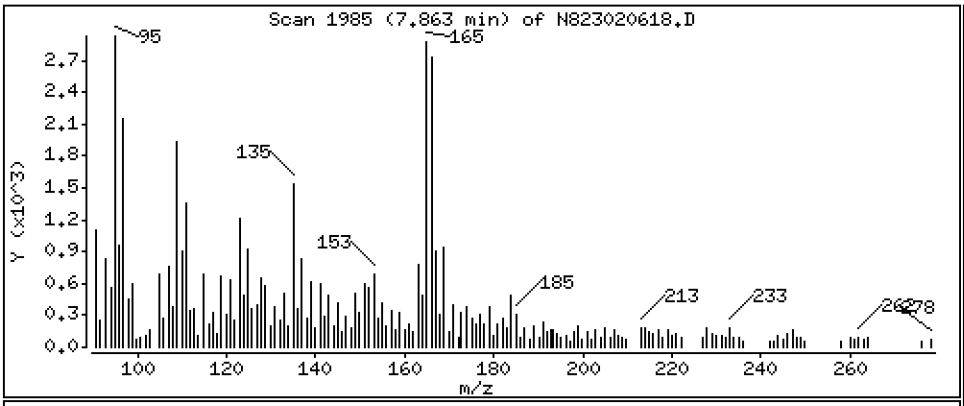
Operator: JZ

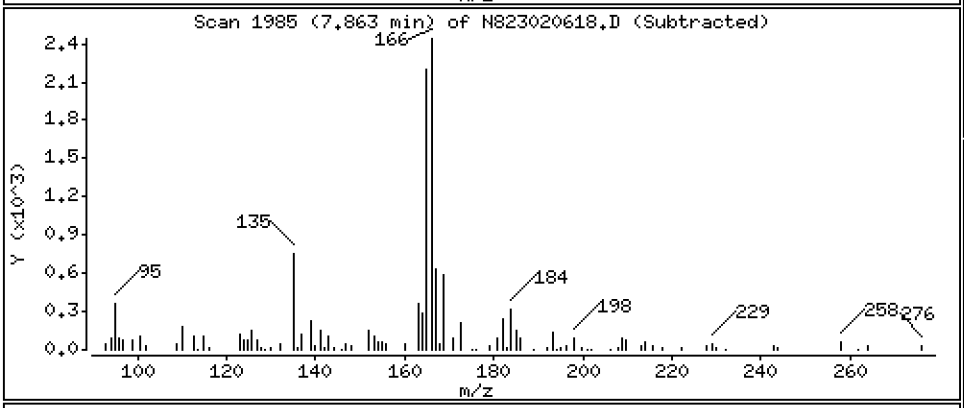
Column phase: Rxi-17sil

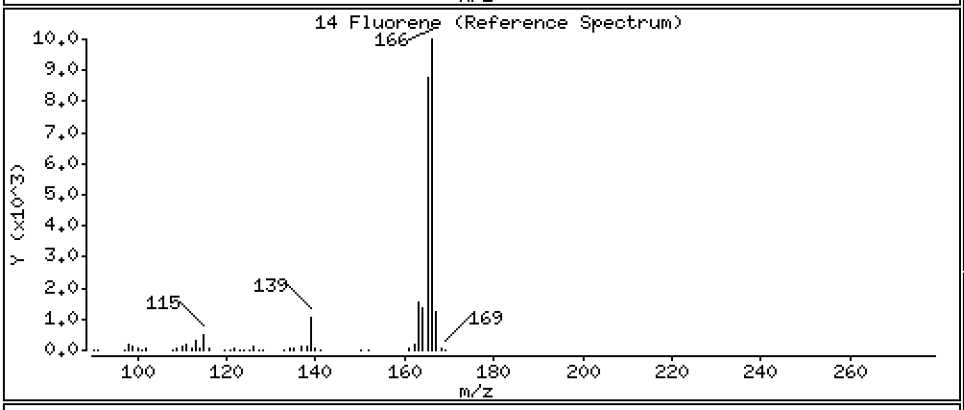
Column diameter: 0.25

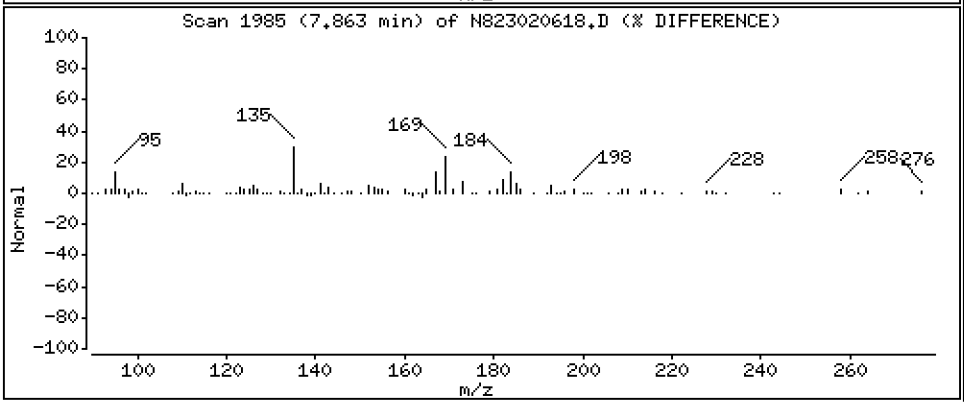
14 Fluorene

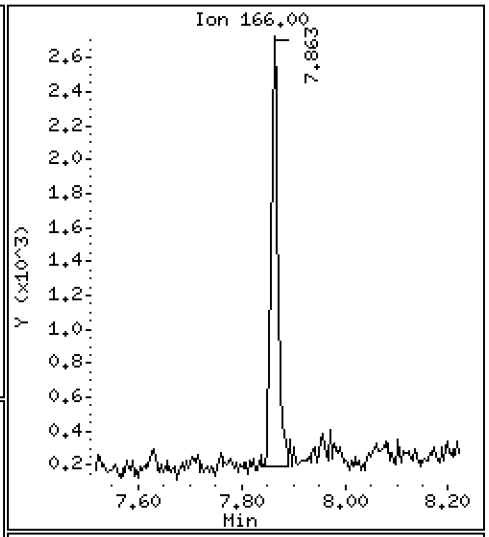
Concentration: 0.1401 ug/mL

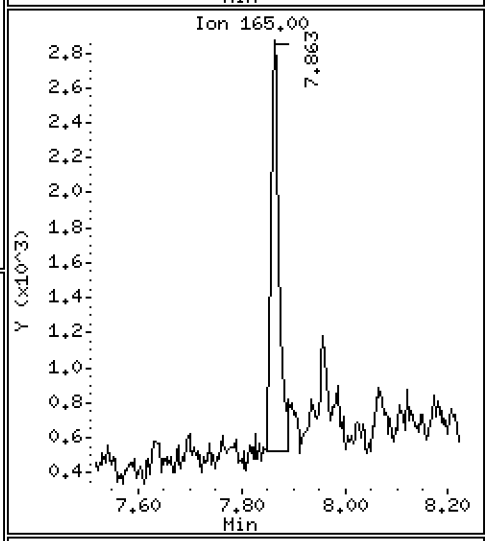


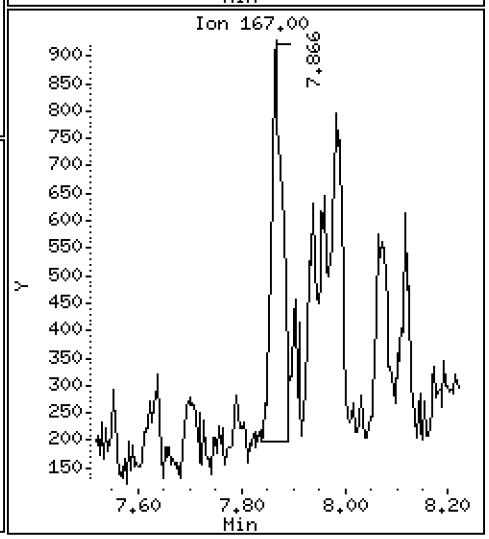












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

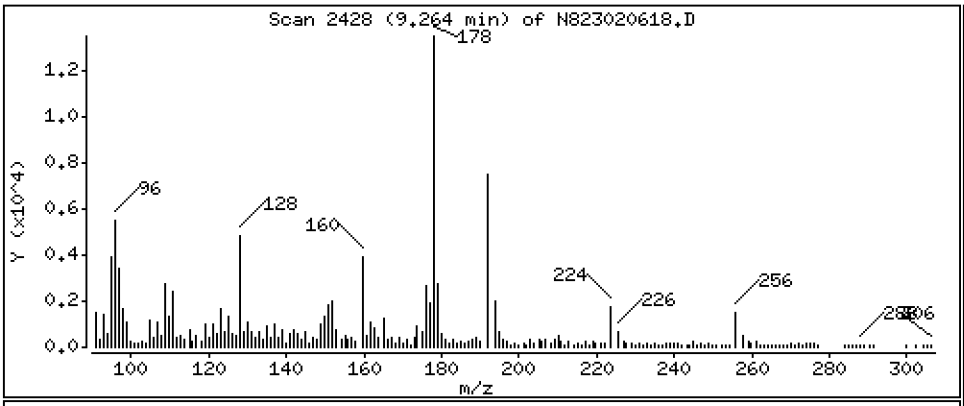
Operator: JZ

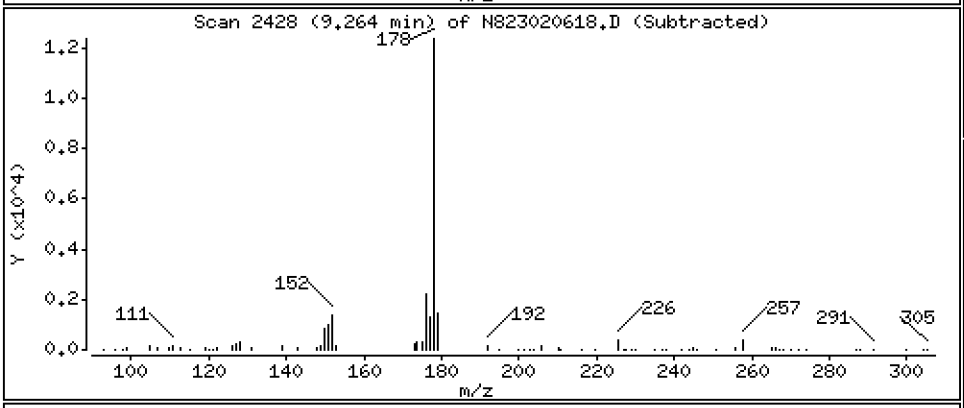
Column phase: Rxi-17sil

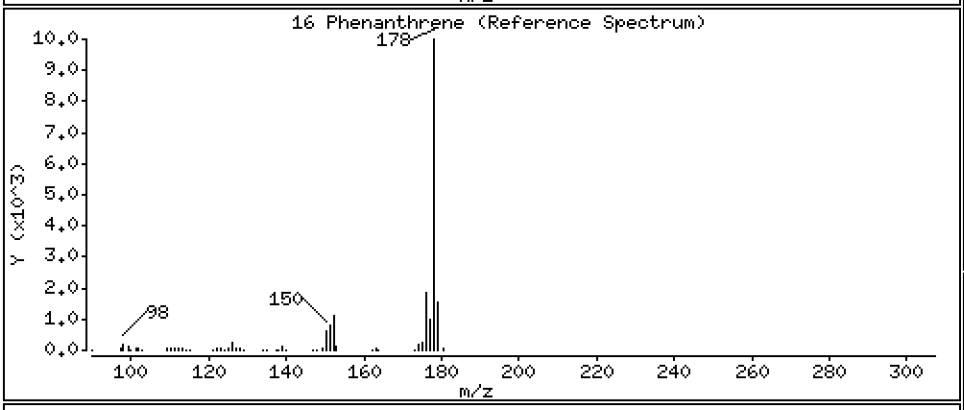
Column diameter: 0.25

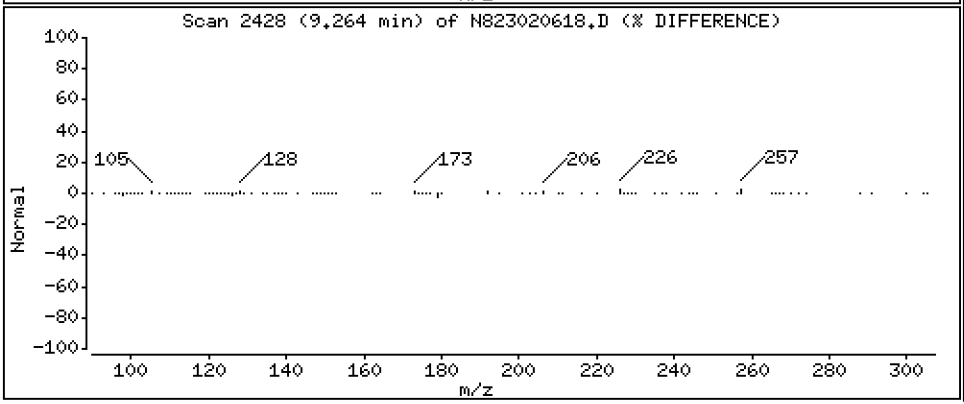
16 Phenanthrene

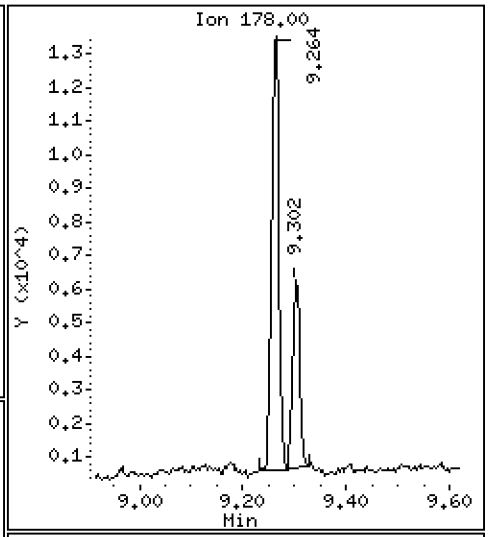
Concentration: 0.5633 ug/mL

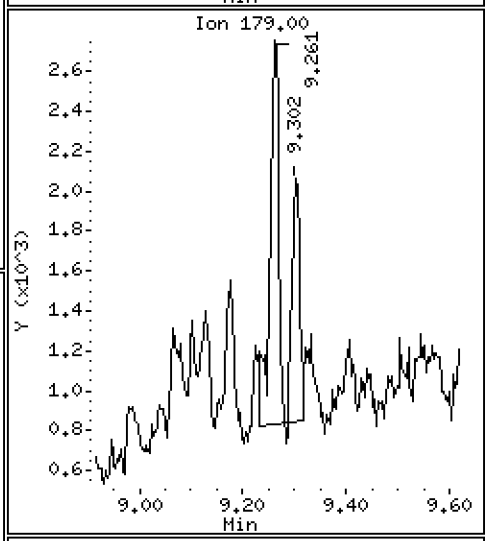


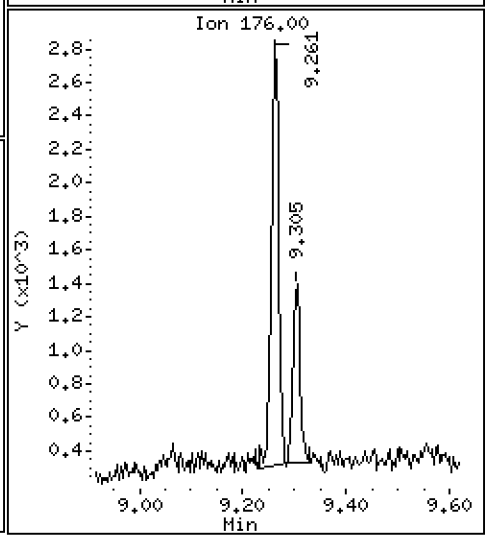












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

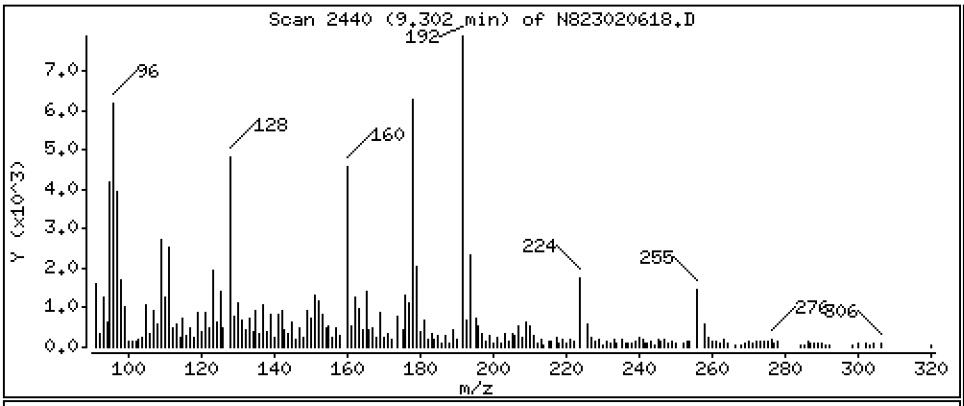
Operator: JZ

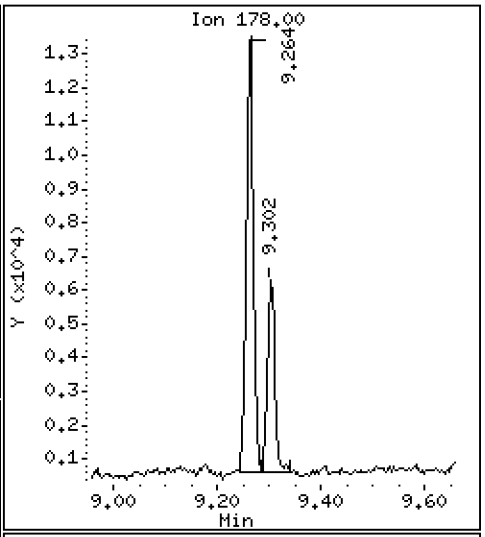
Column phase: Rxi-17sil

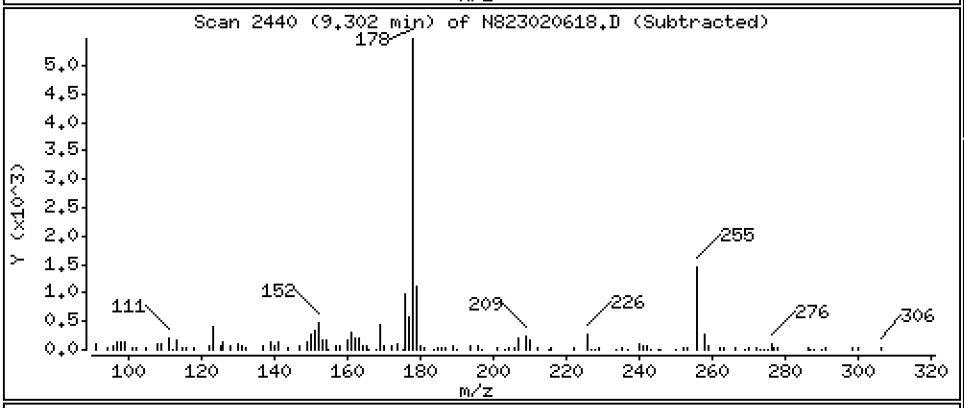
Column diameter: 0.25

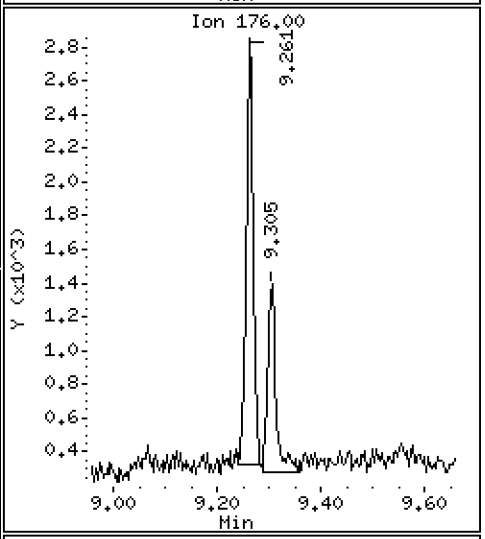
17 Anthracene

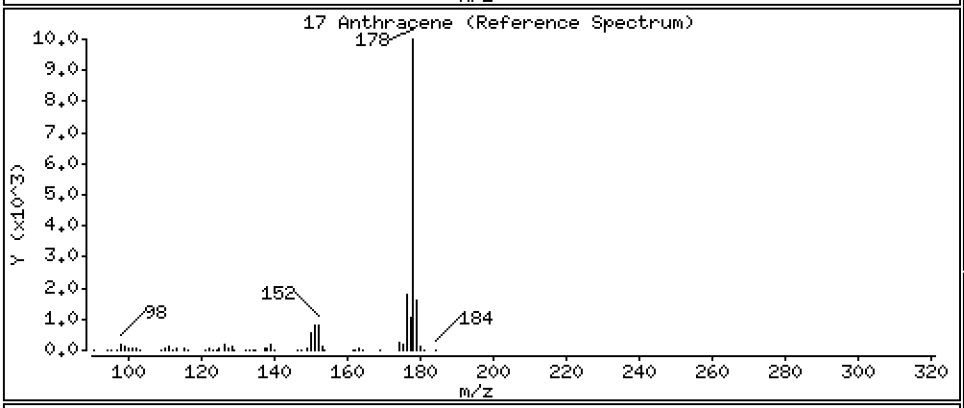
Concentration: 0.2774 ug/mL

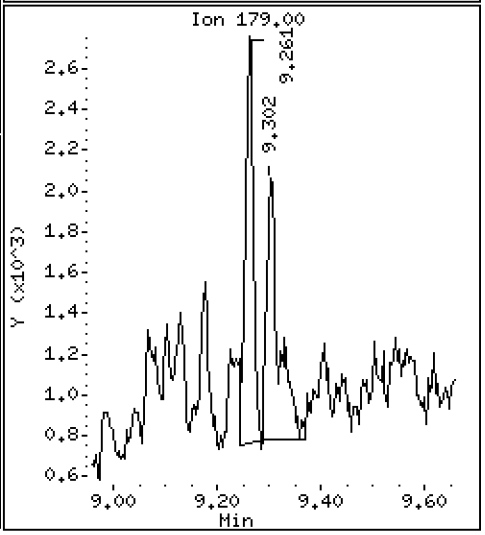


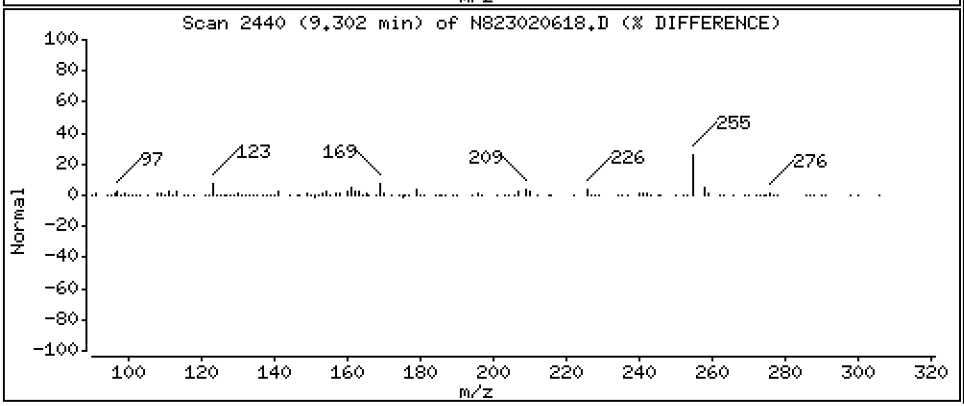












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

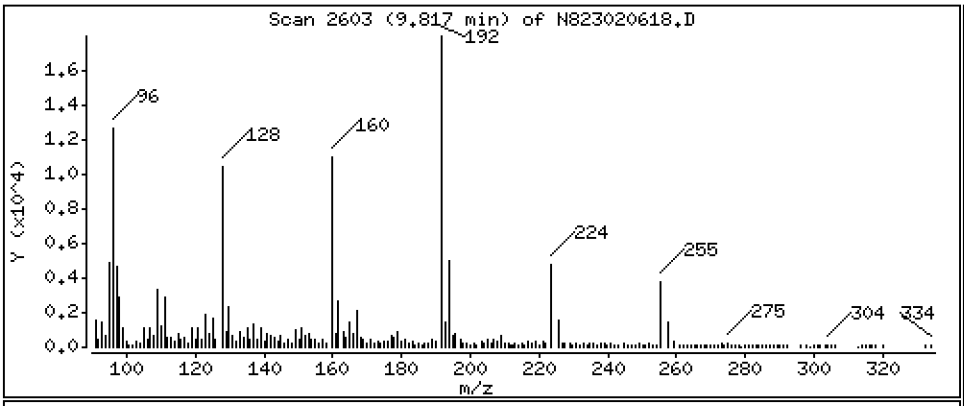
Operator: JZ

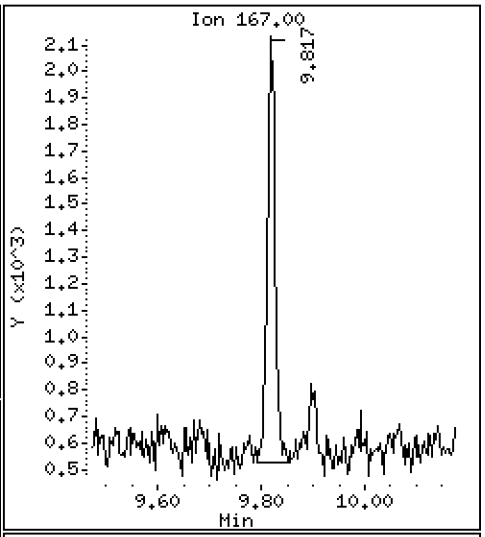
Column phase: Rxi-17sil

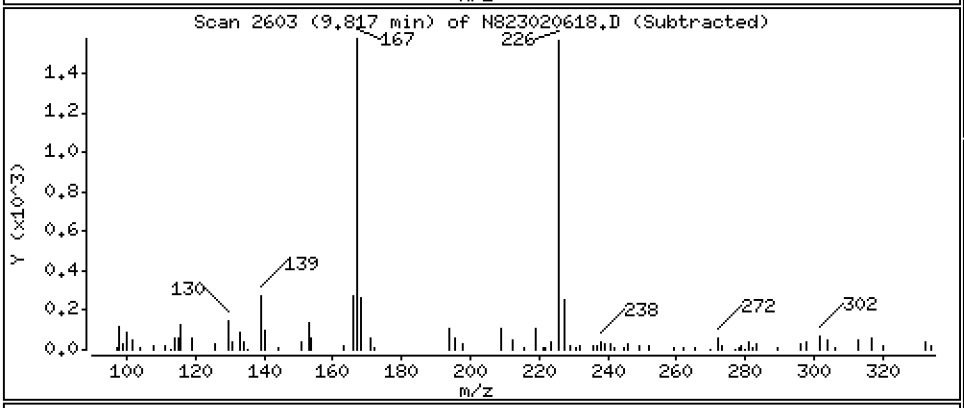
Column diameter: 0.25

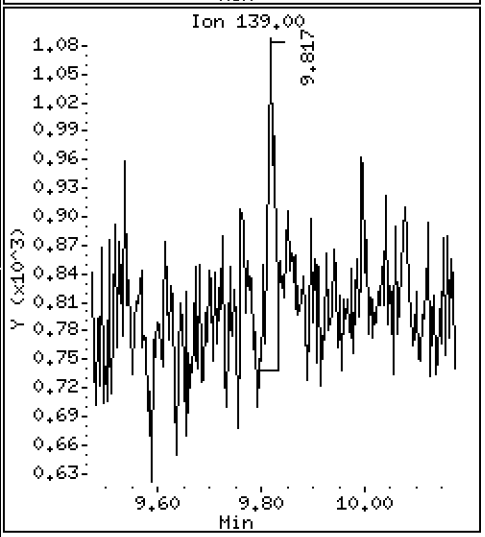
19 Carbazole

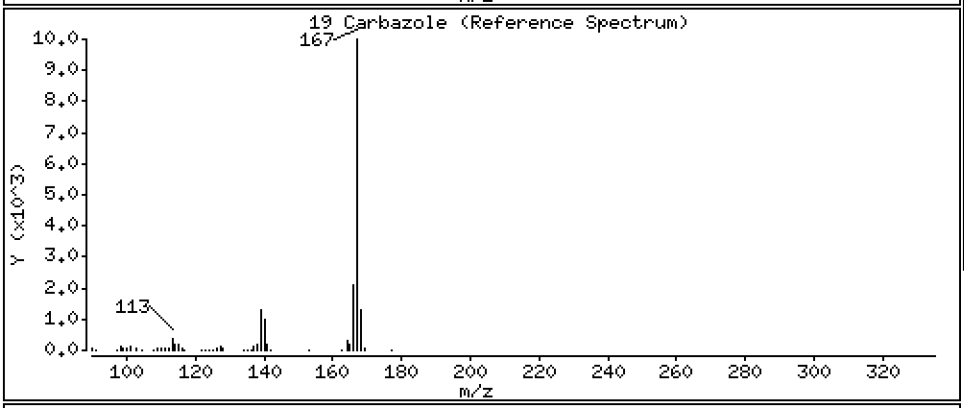
Concentration: 0.09177 ug/mL

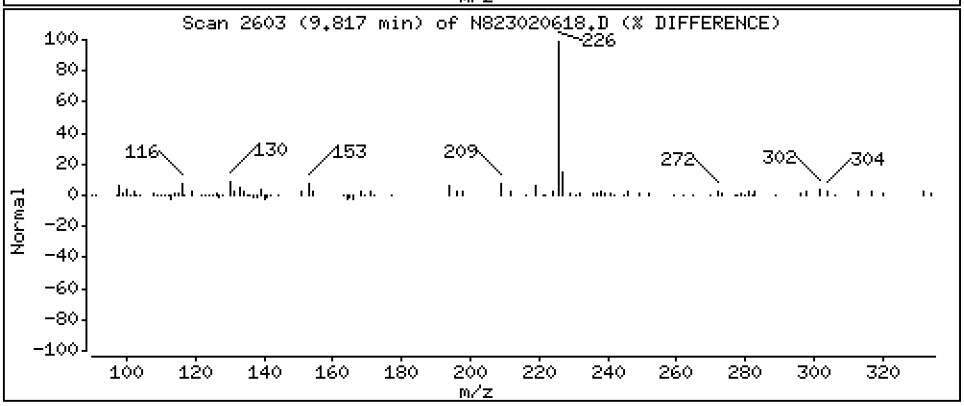












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

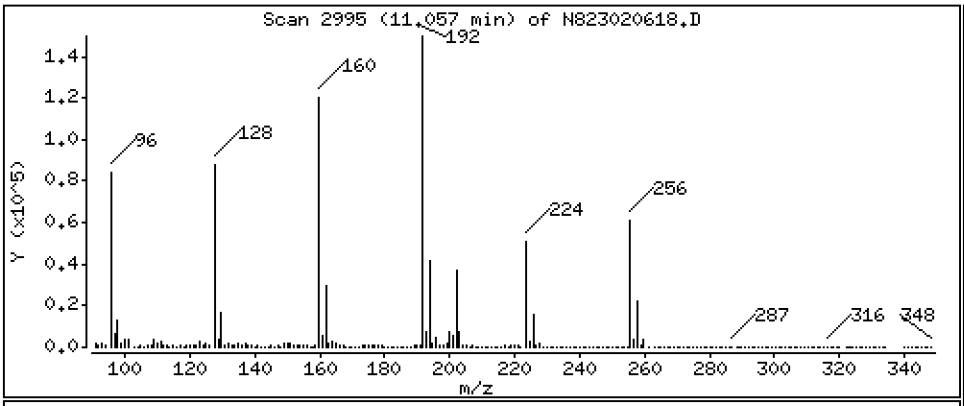
Operator: JZ

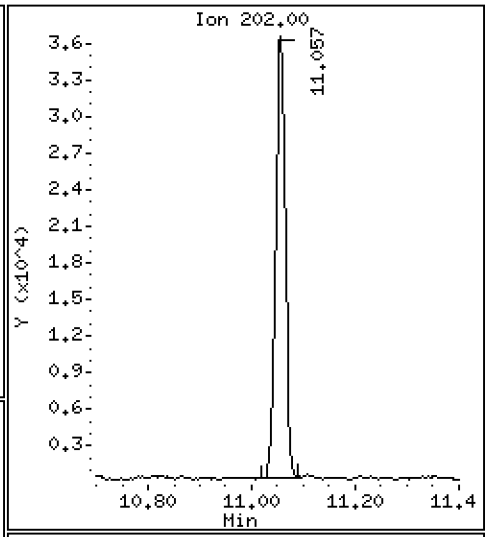
Column phase: Rxi-17sil

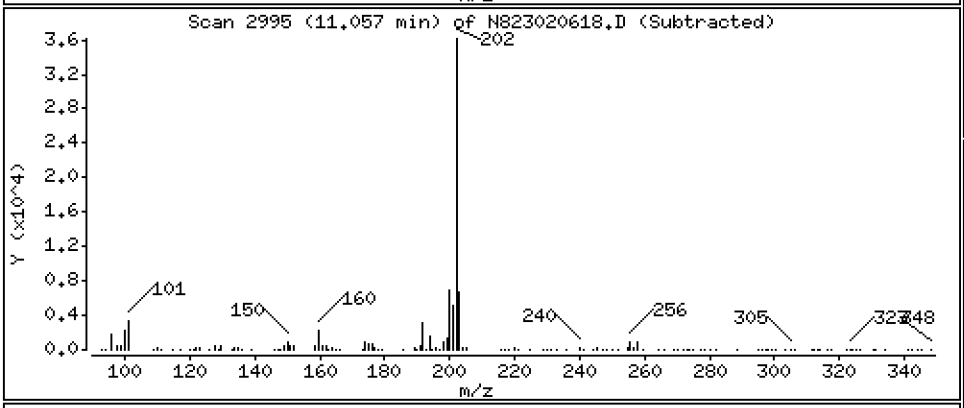
Column diameter: 0.25

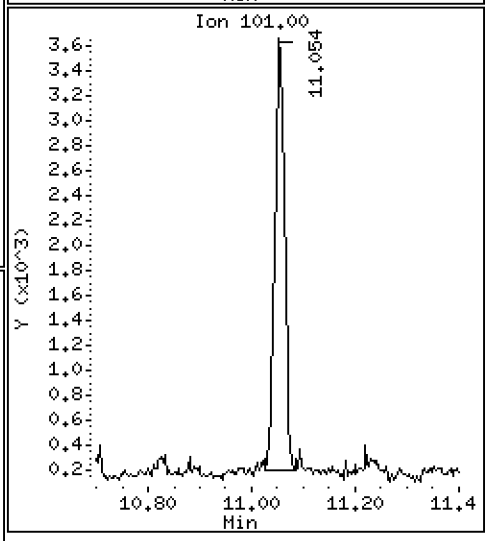
22 Fluoranthene

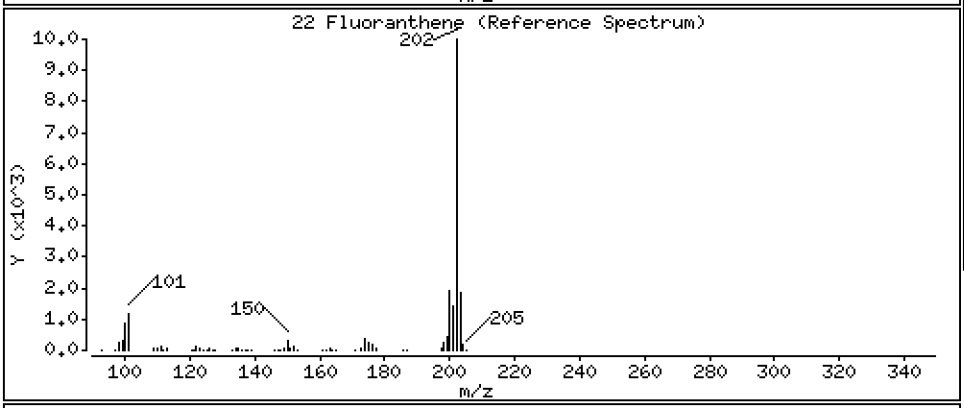
Concentration: 1.985 ug/mL

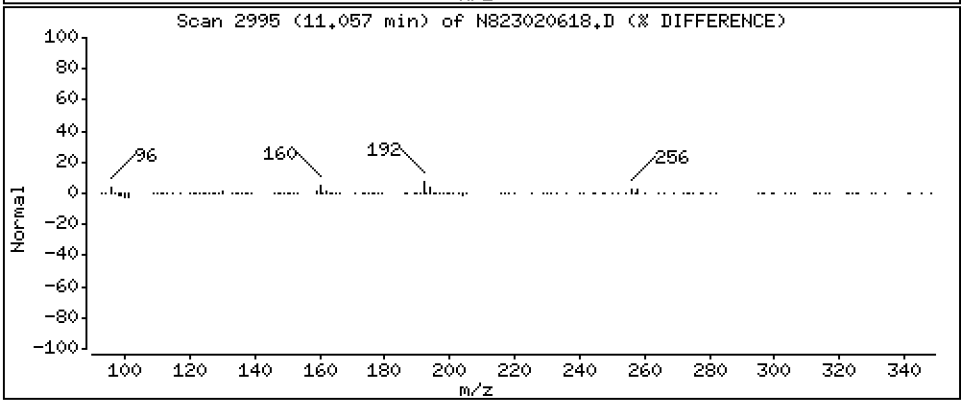












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

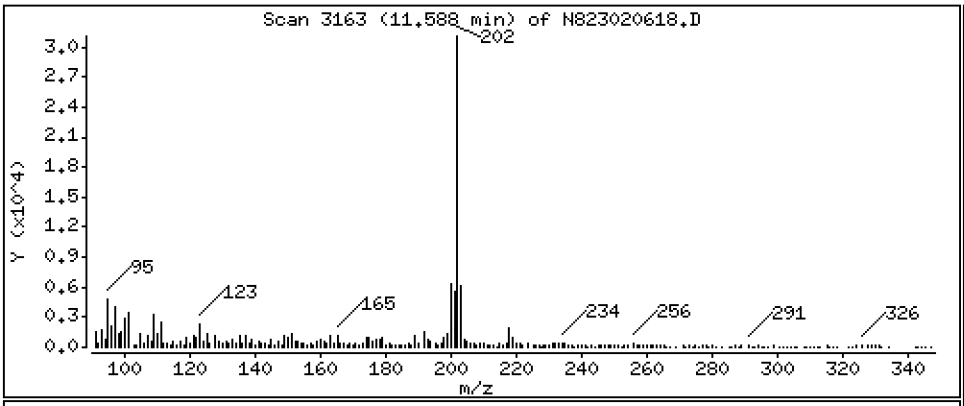
Operator: JZ

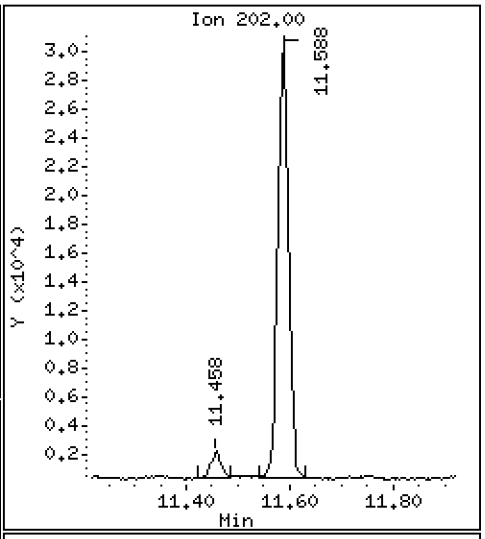
Column phase: Rxi-17sil

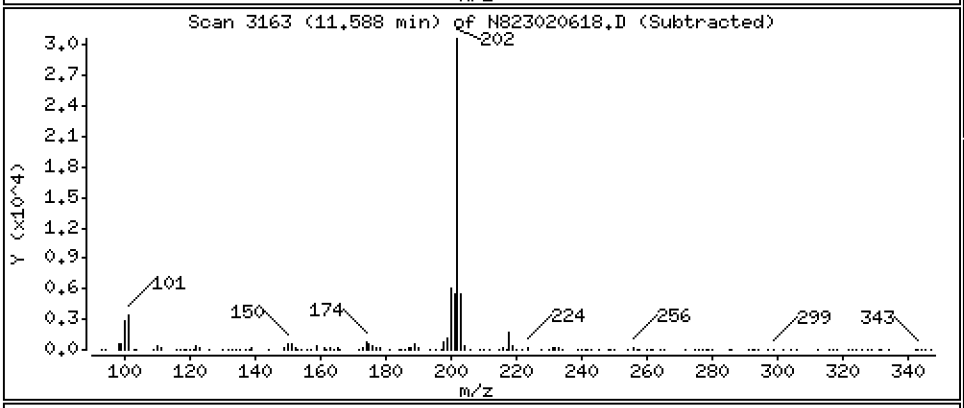
Column diameter: 0.25

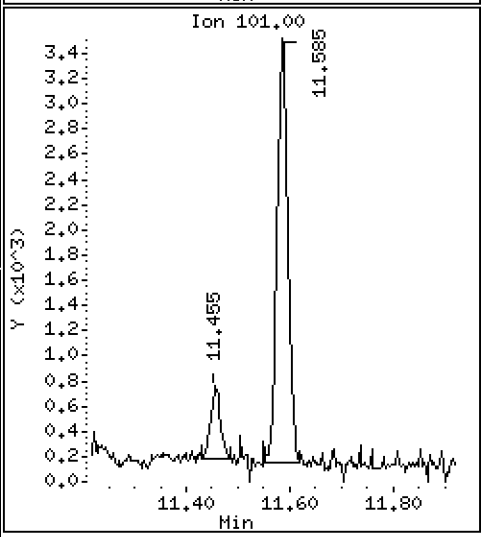
23 Pyrene

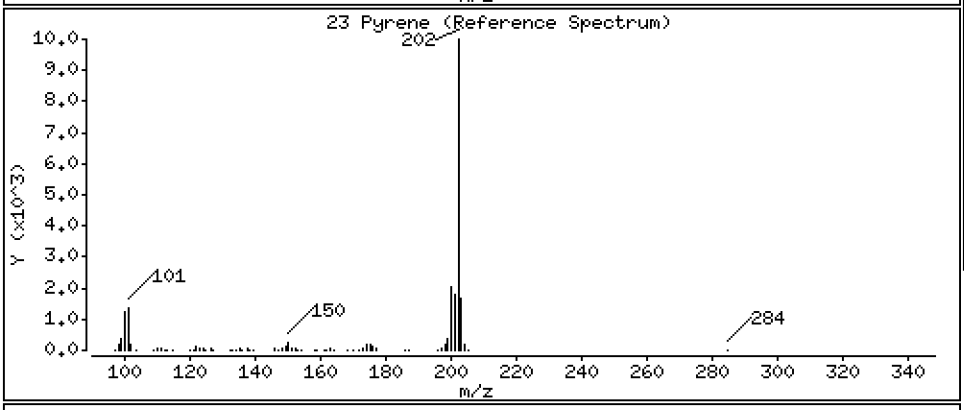
Concentration: 3.613 ug/mL

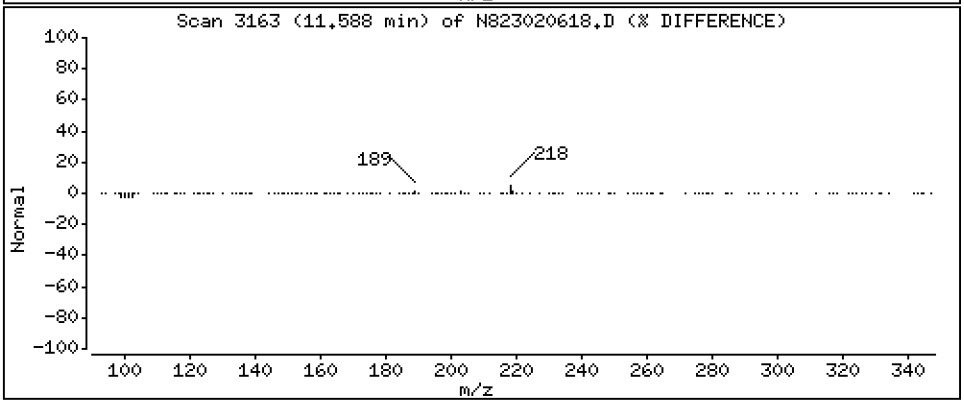












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

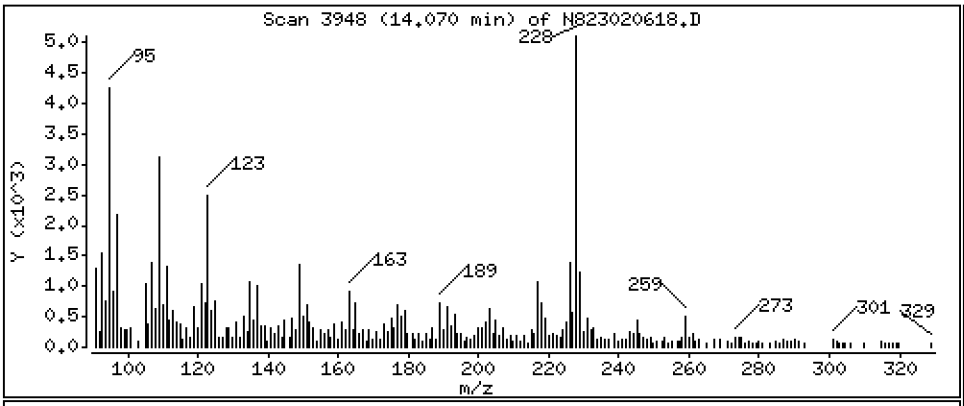
Operator: JZ

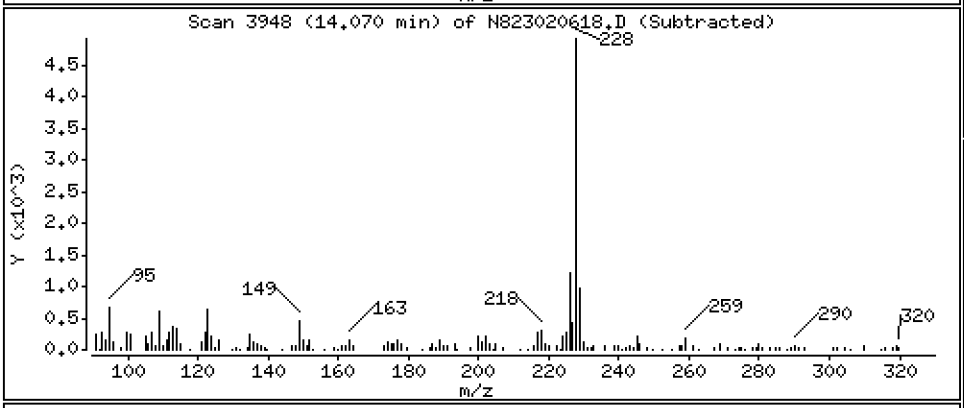
Column phase: Rxi-17sil

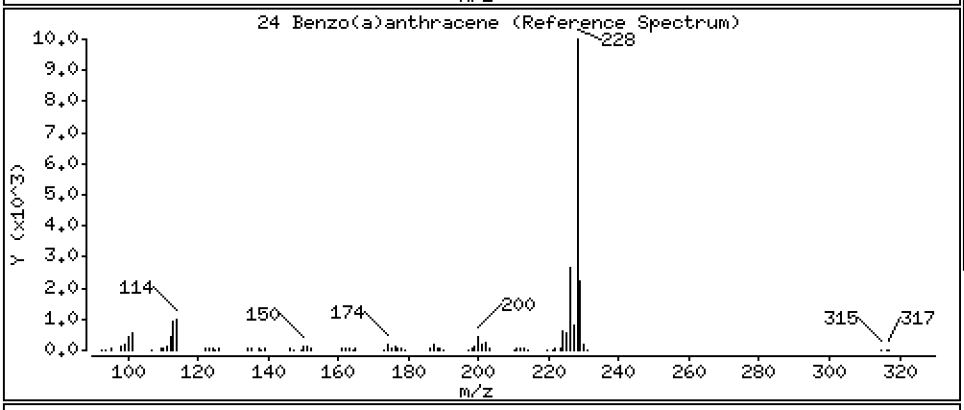
Column diameter: 0.25

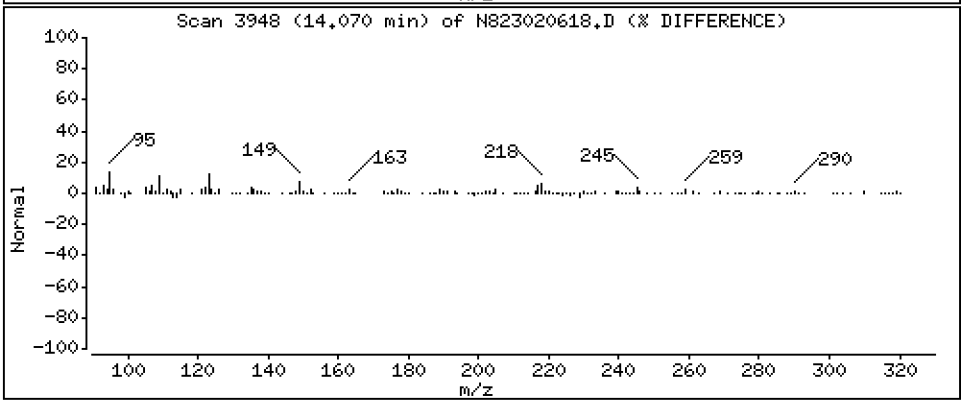
24 Benzo(a)anthracene

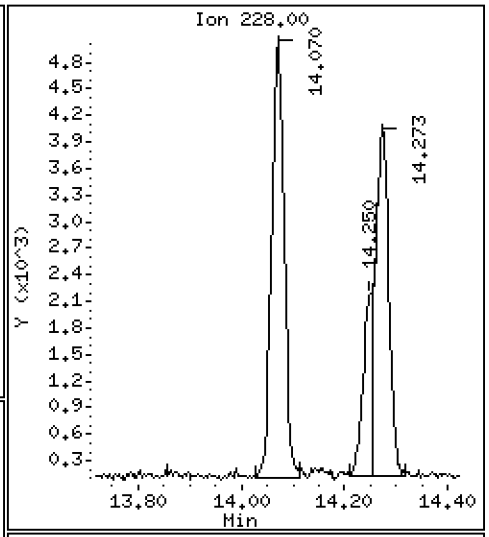
Concentration: 0.7471 ug/mL

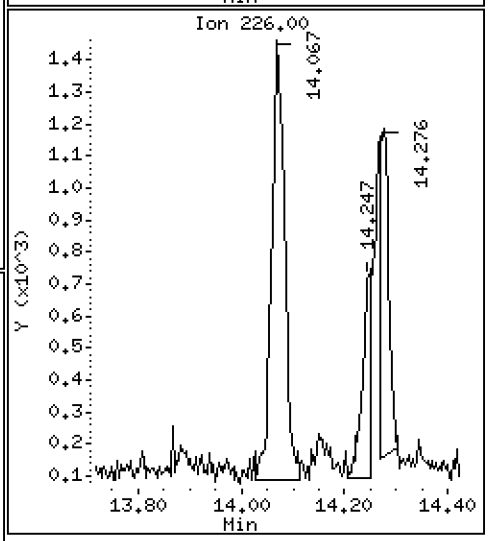












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020618.D

Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

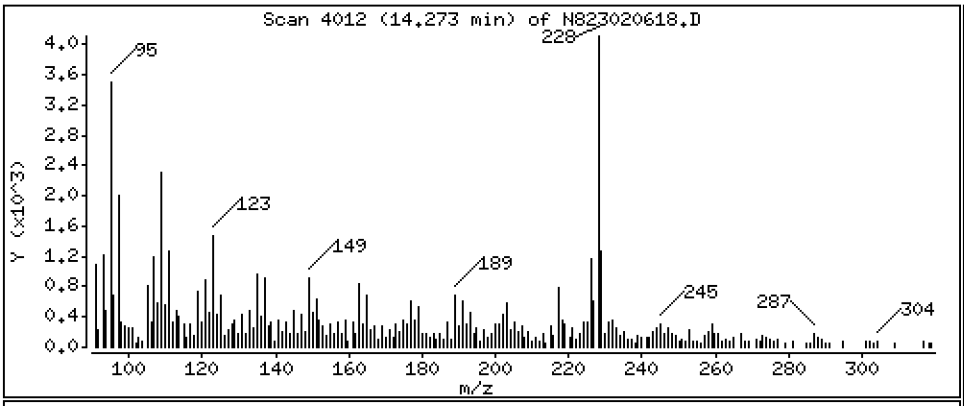
Operator: JZ

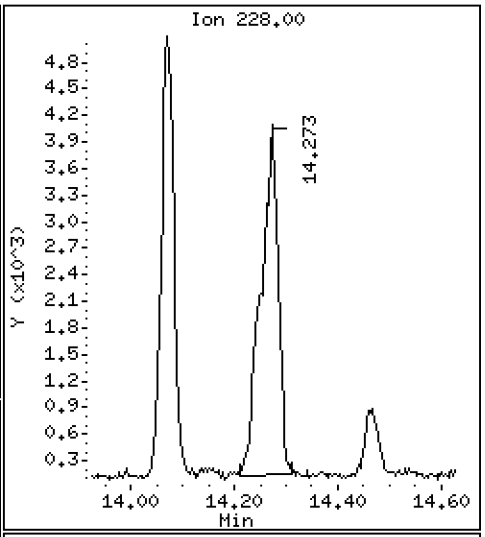
Column phase: Rxi-17sil

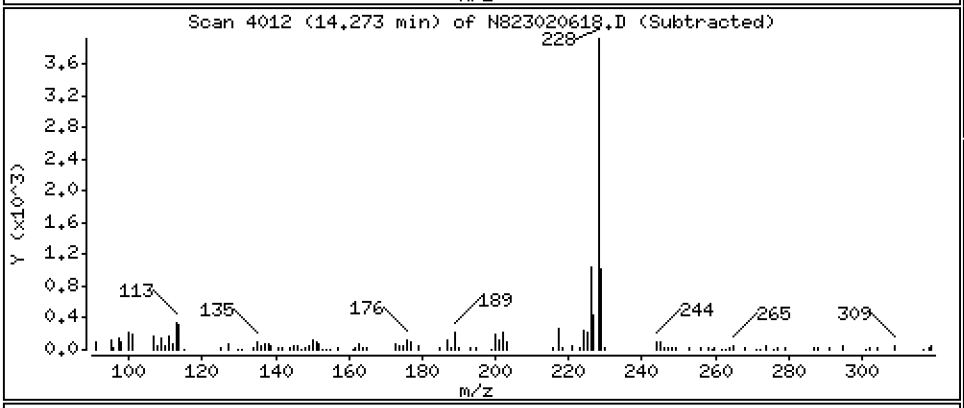
Column diameter: 0.25

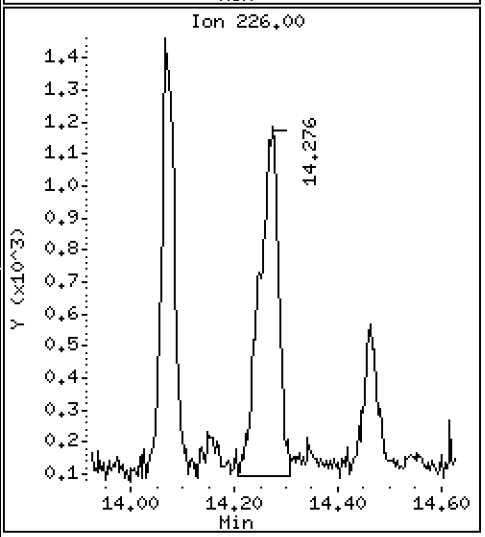
27 Chrysene

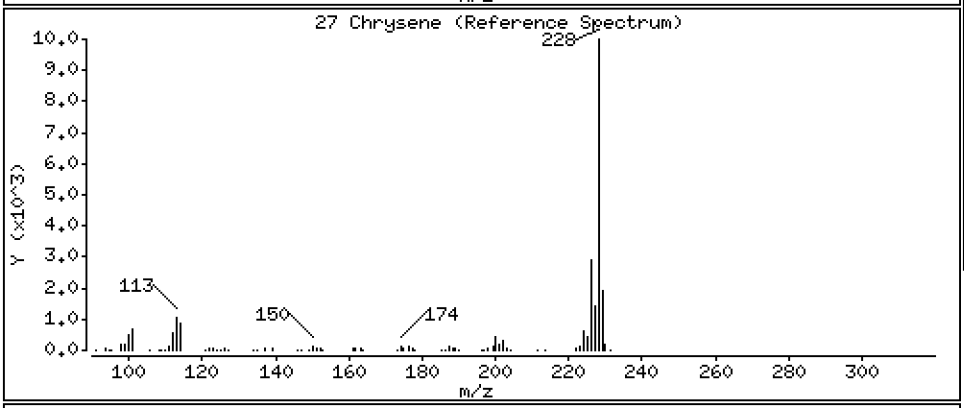
Concentration: 0.7728 ug/mL

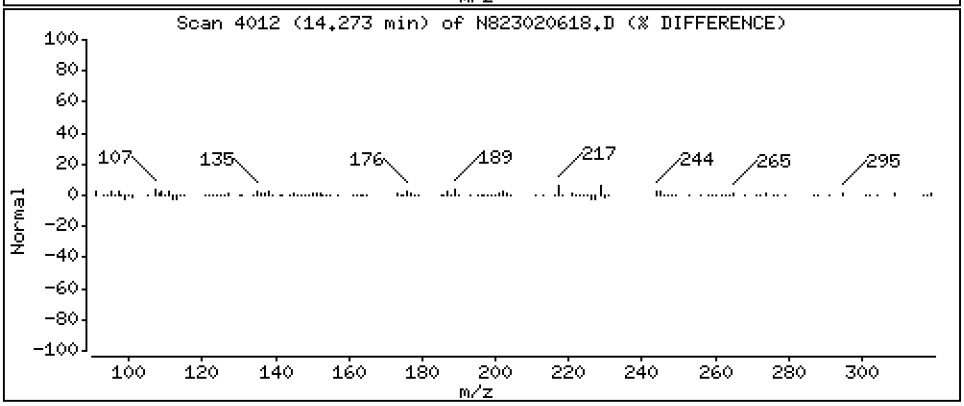












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020618.D

Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

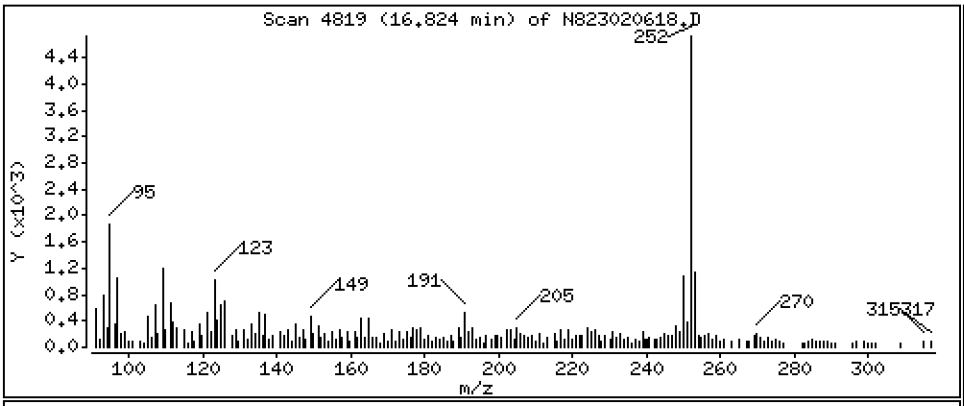
Operator: JZ

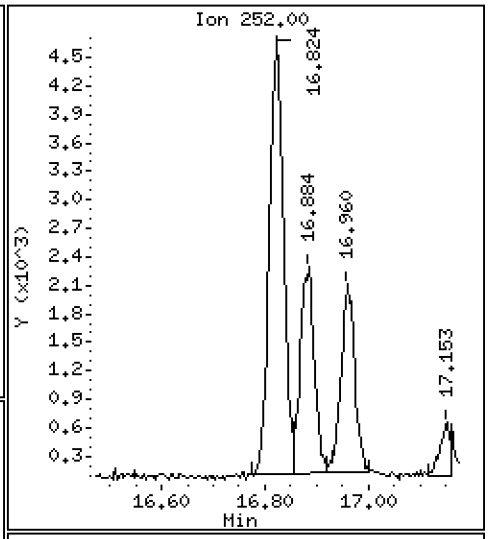
Column phase: Rxi-17sil

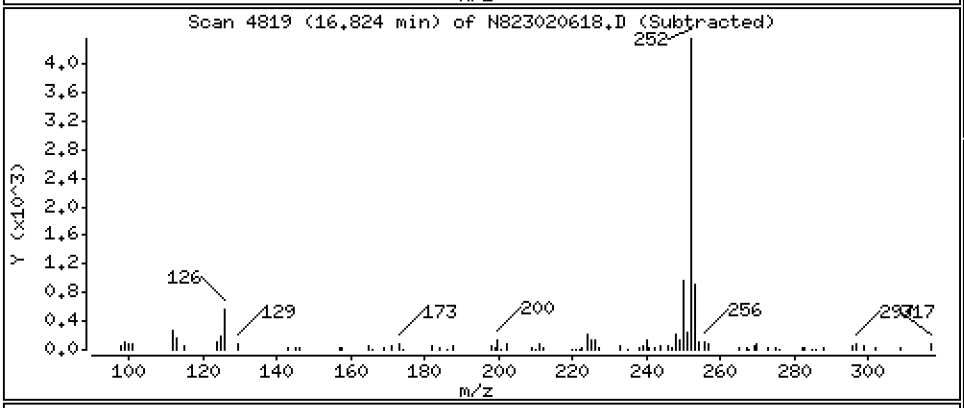
Column diameter: 0.25

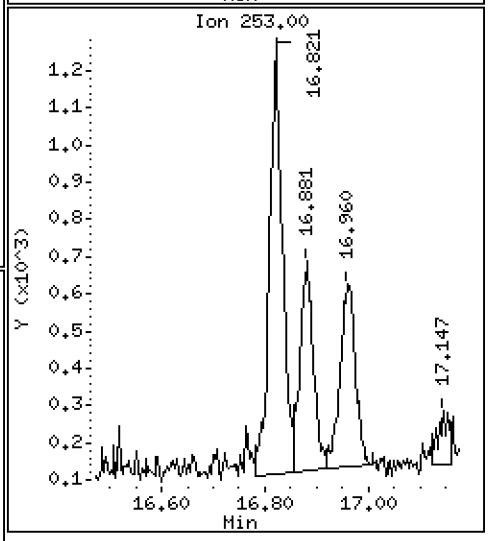
28 Benzo(b)fluoranthene

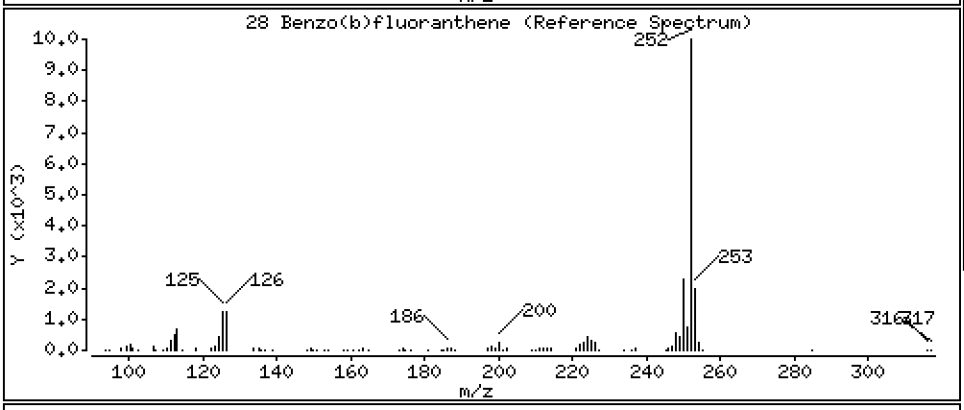
Concentration: 0.8252 ug/mL

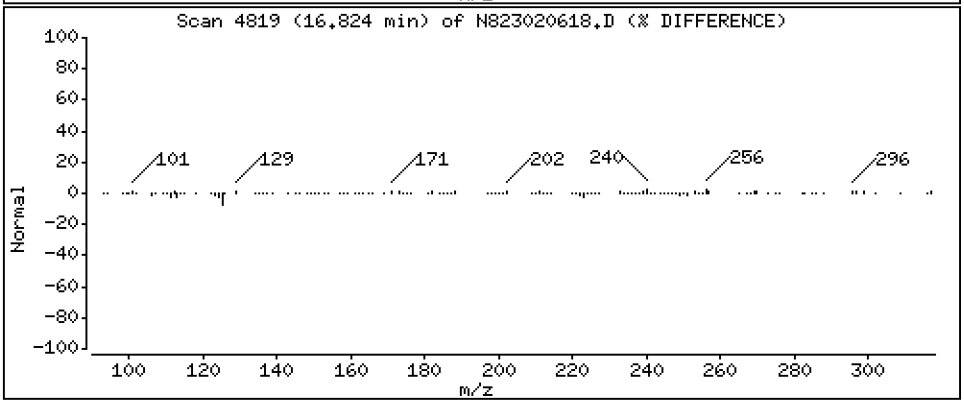












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

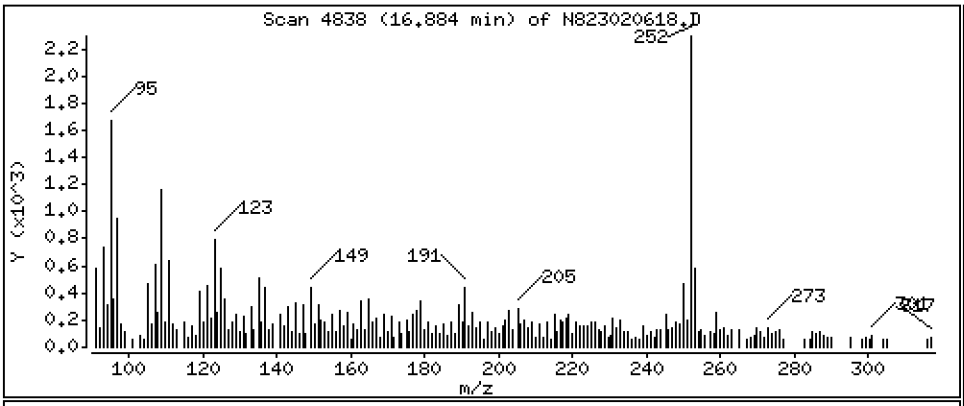
Operator: JZ

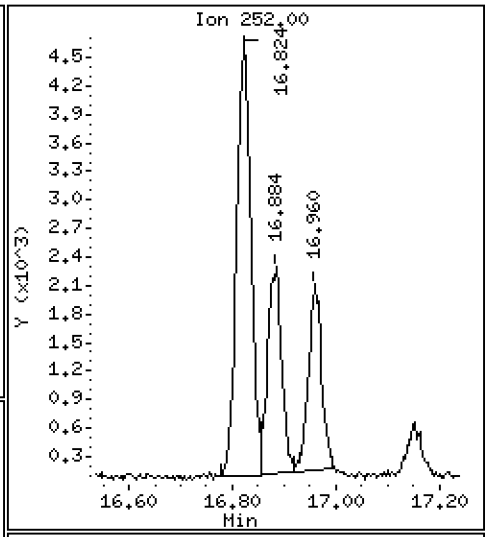
Column phase: Rxi-17sil

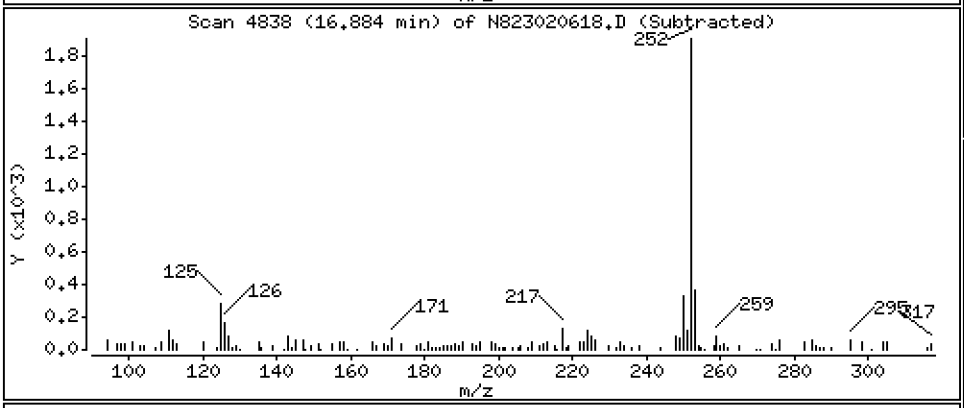
Column diameter: 0.25

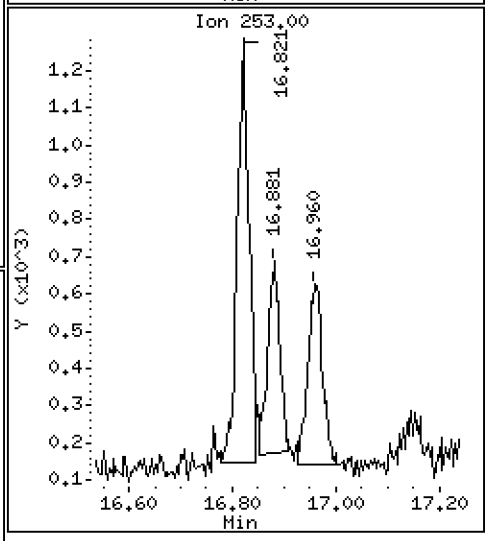
29 Benzo(k)fluoranthene

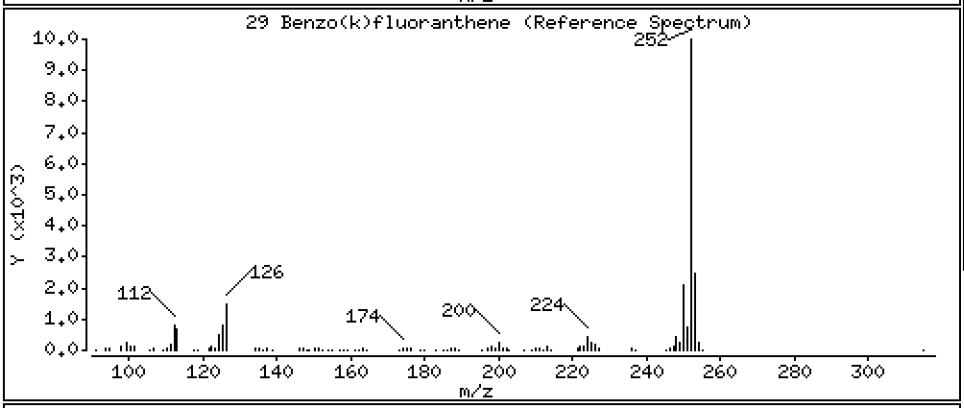
Concentration: 0.3888 ug/mL

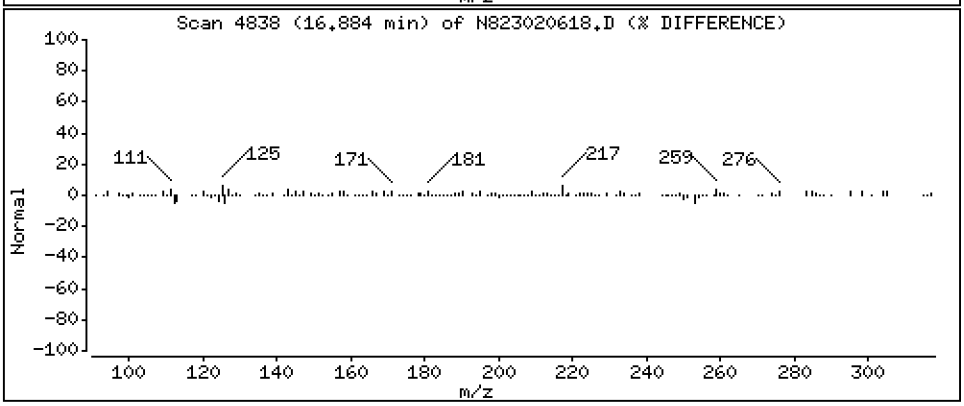












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

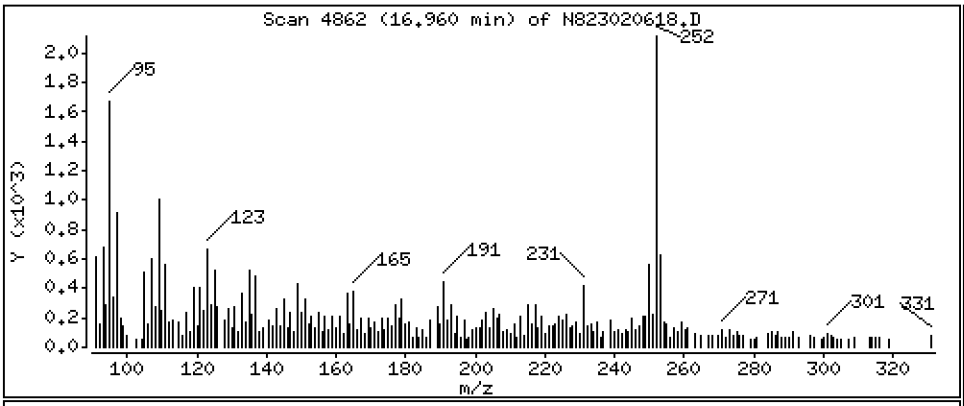
Operator: JZ

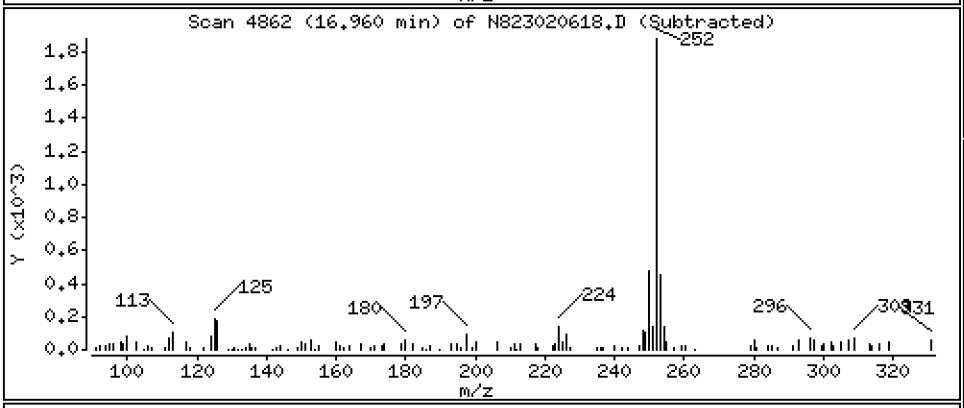
Column phase: Rxi-17sil

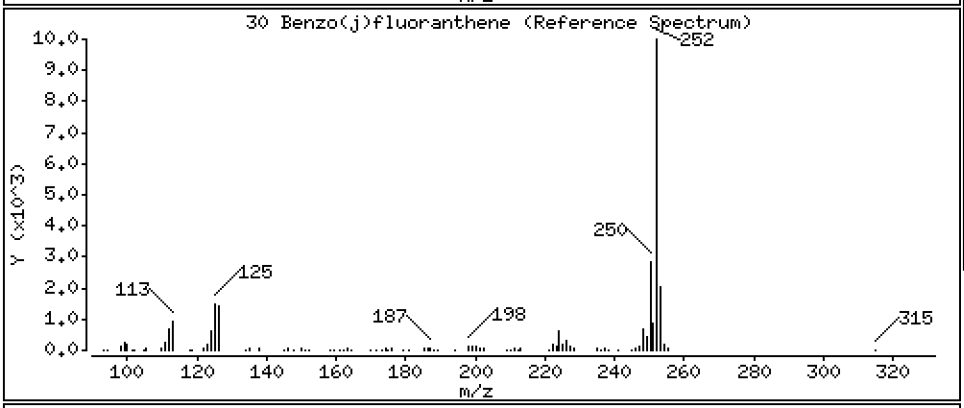
Column diameter: 0.25

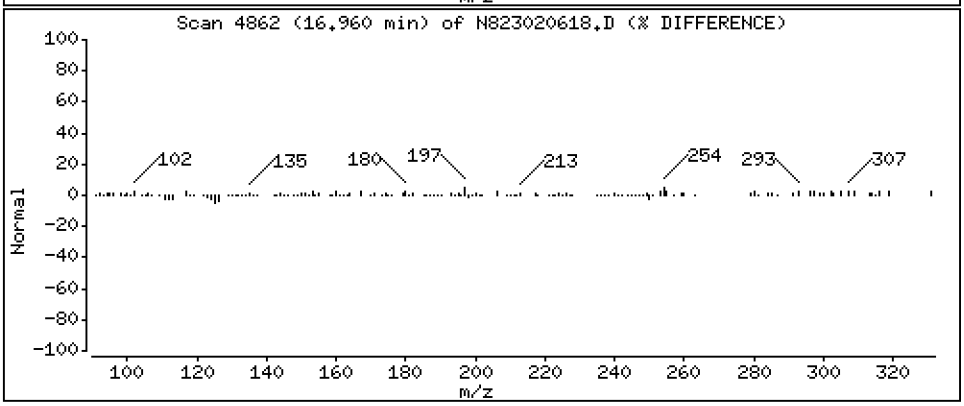
30 Benzo(j)fluoranthene

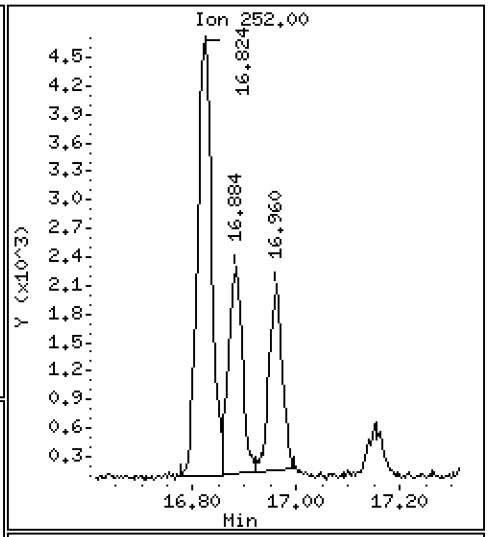
Concentration: 0.3679 ug/mL

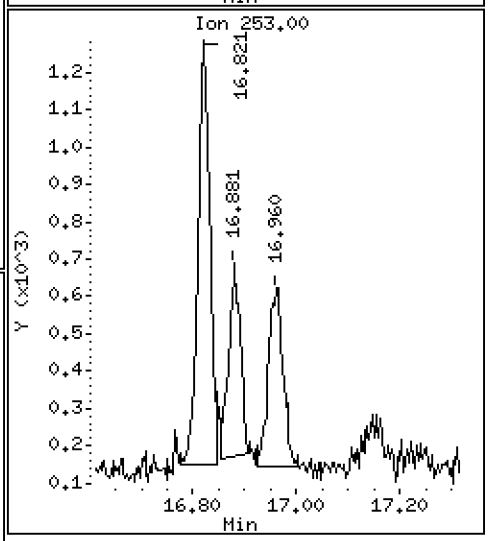












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

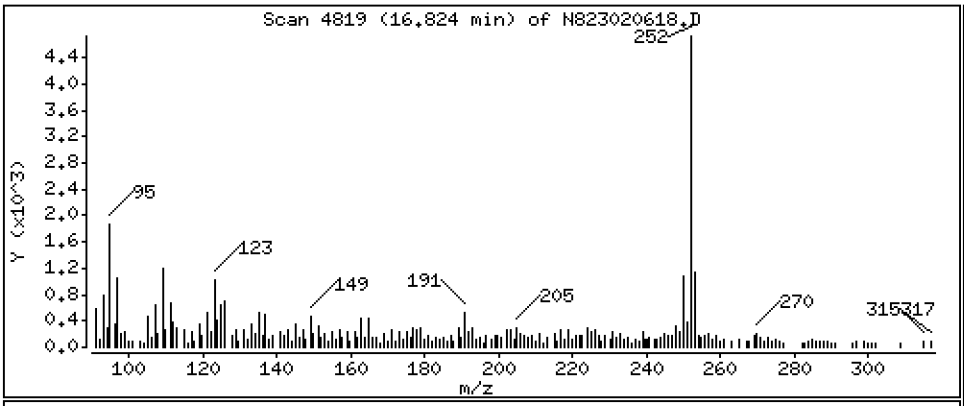
Operator: JZ

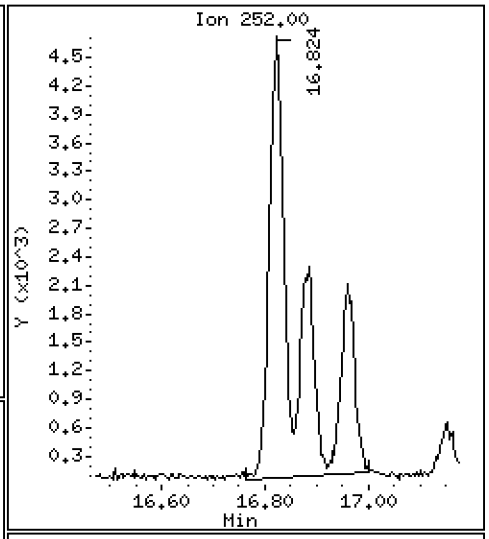
Column phase: Rxi-17sil

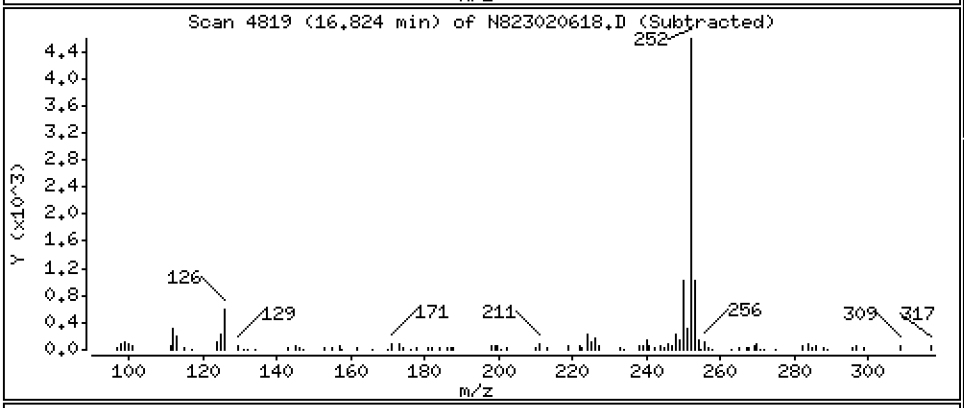
Column diameter: 0.25

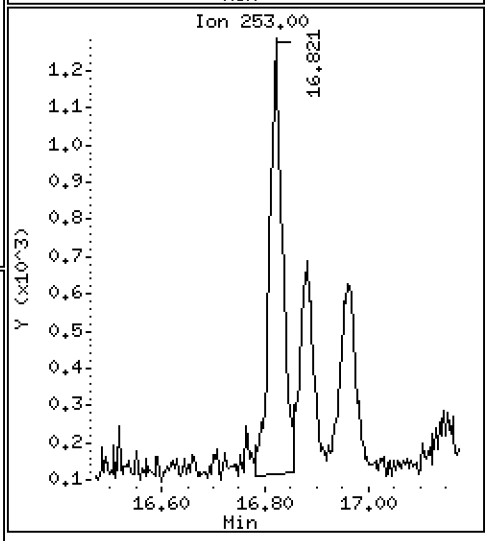
31 Total Benzofluoranthenes

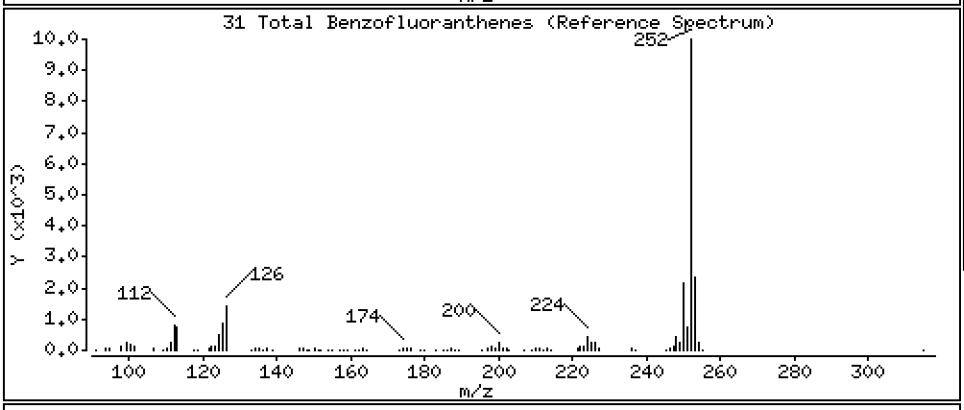
Concentration: 1.653 ug/mL

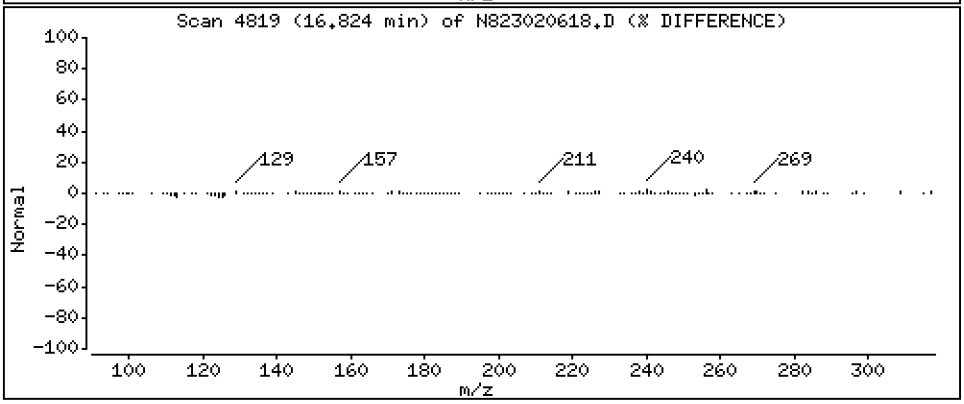












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

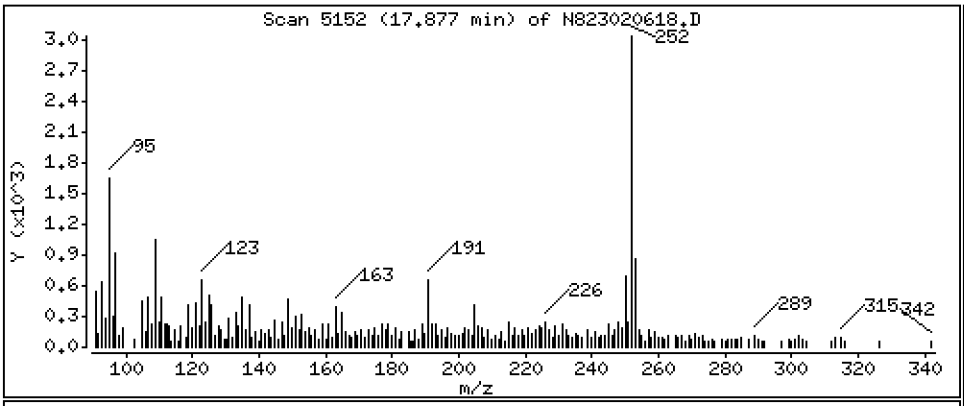
Operator: JZ

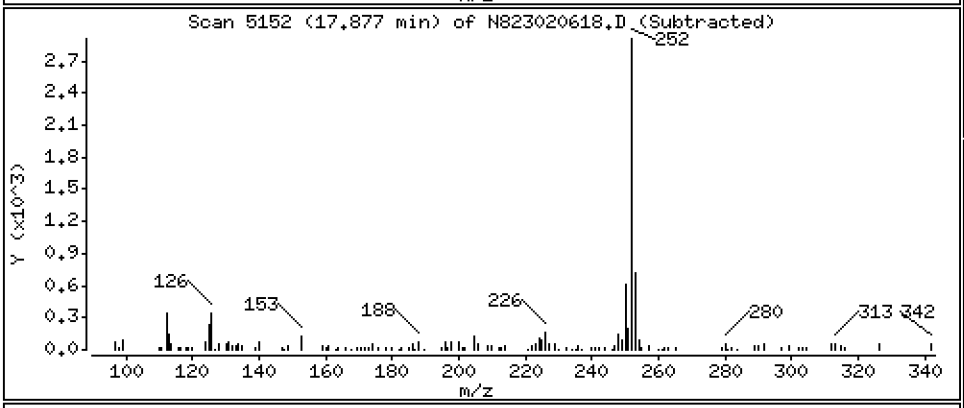
Column phase: Rxi-17sil

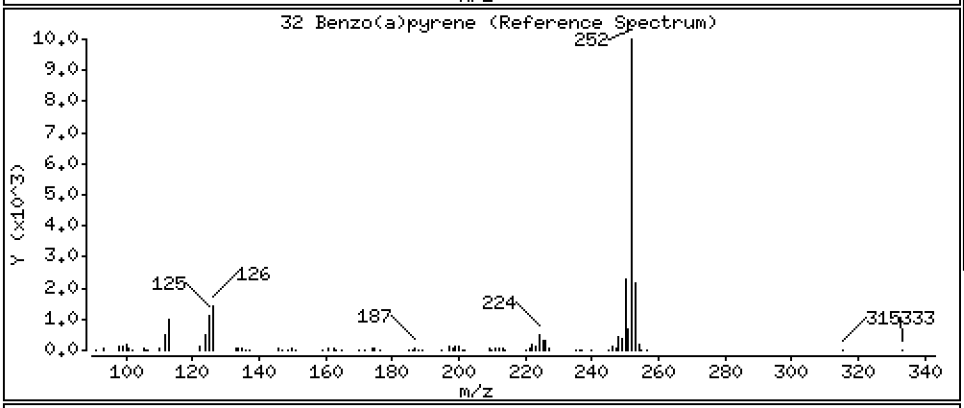
Column diameter: 0.25

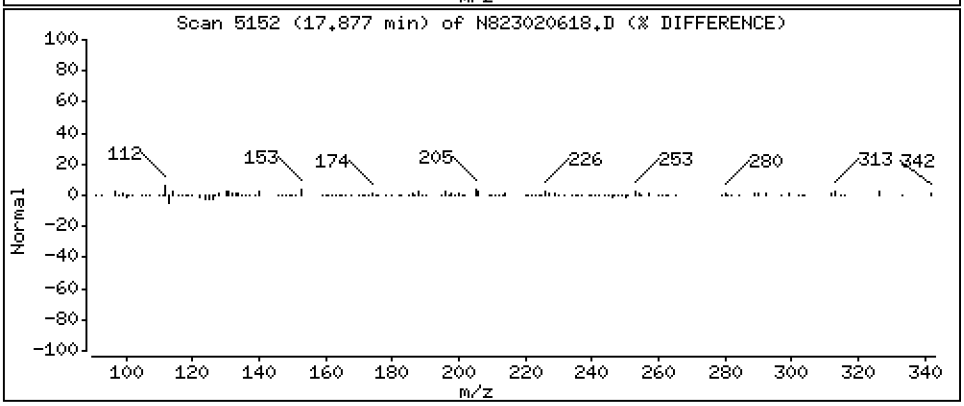
32 Benzo(a)pyrene

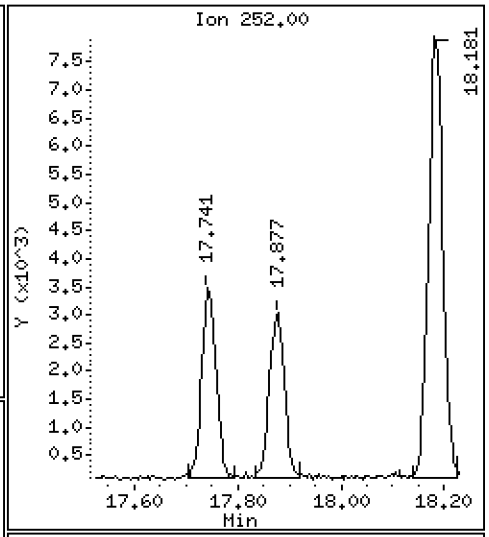
Concentration: 0.6322 ug/mL

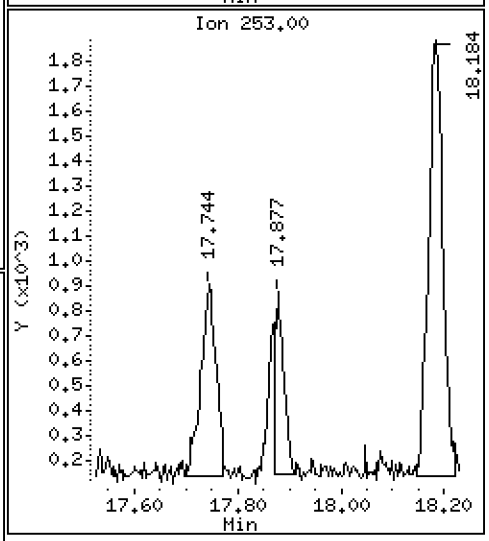












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

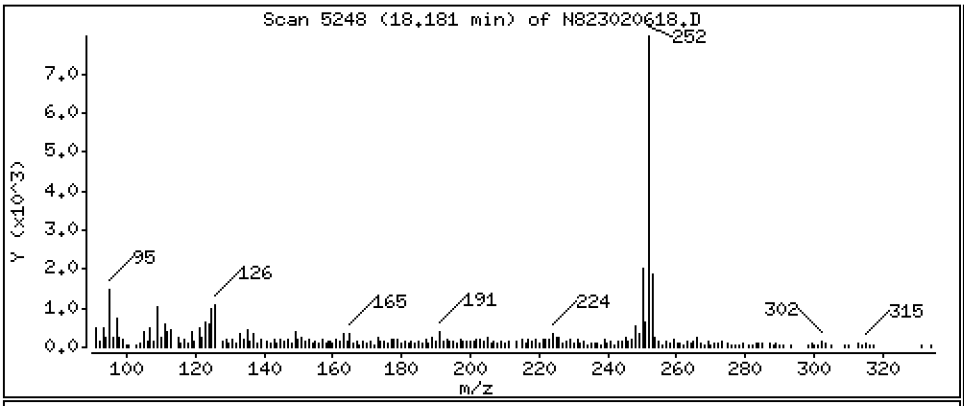
Operator: JZ

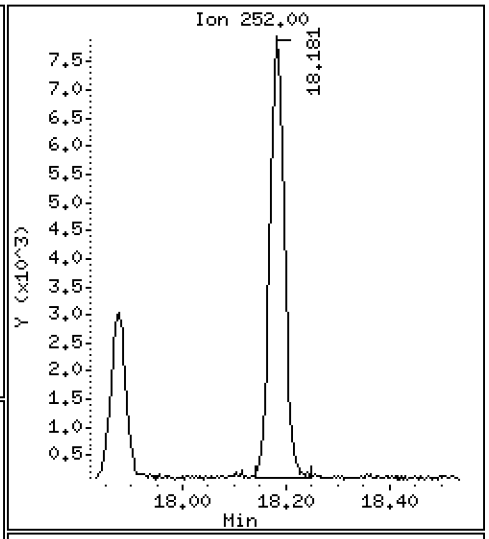
Column phase: Rxi-17sil

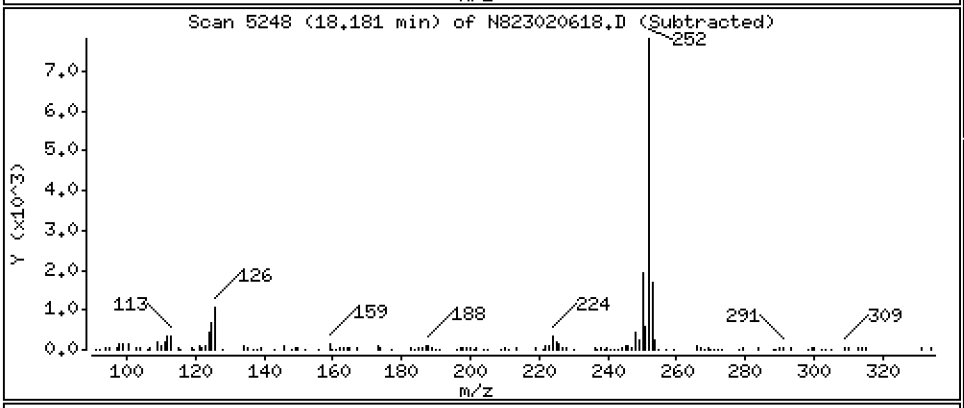
Column diameter: 0.25

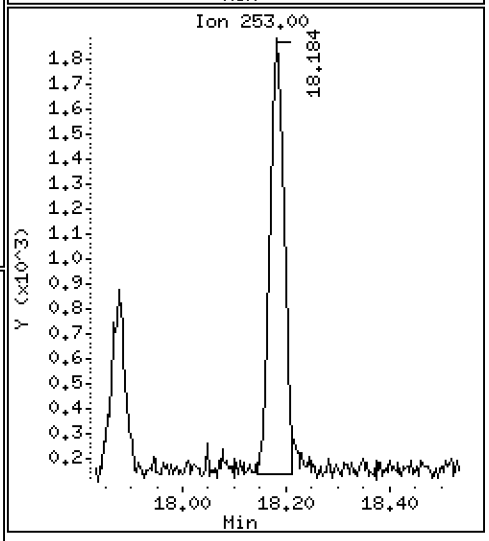
35 Perylene

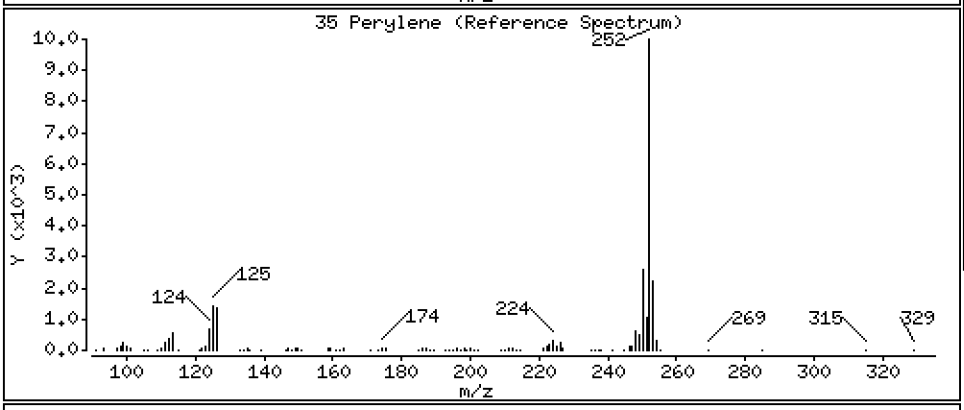
Concentration: 1.525 ug/mL

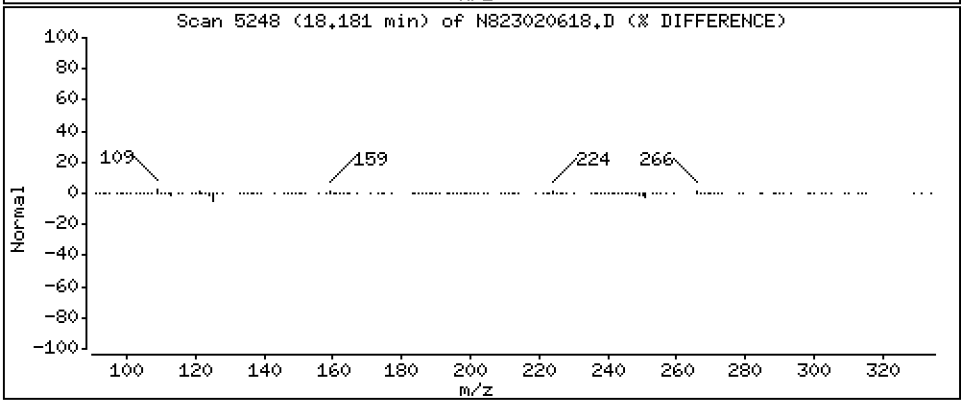












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

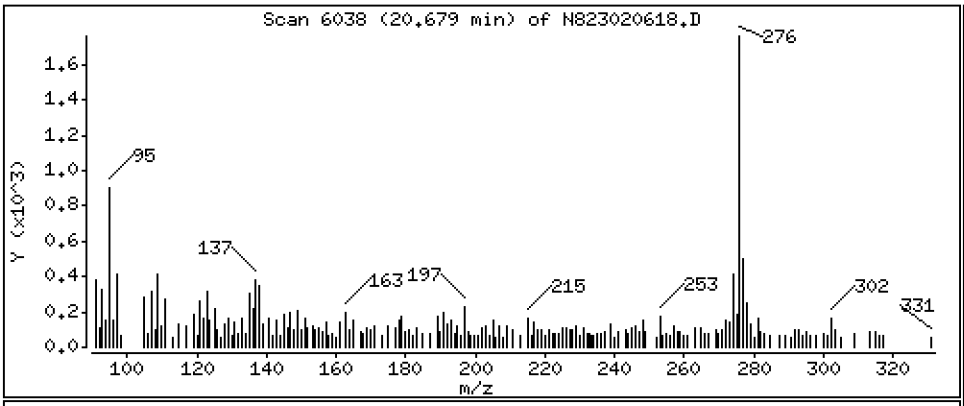
Operator: JZ

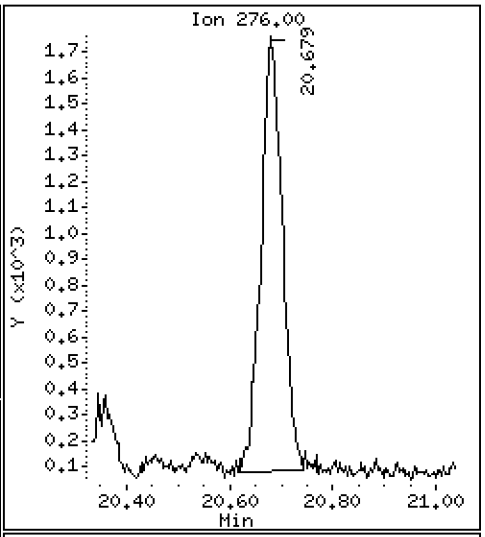
Column phase: Rxi-17sil

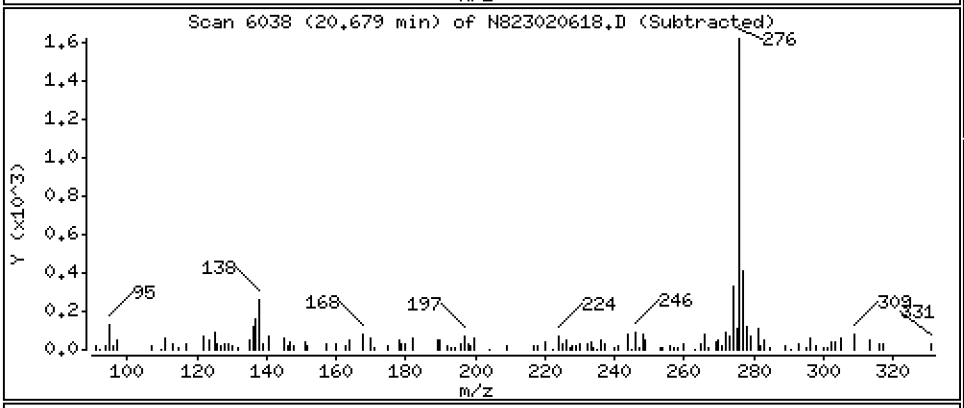
Column diameter: 0.25

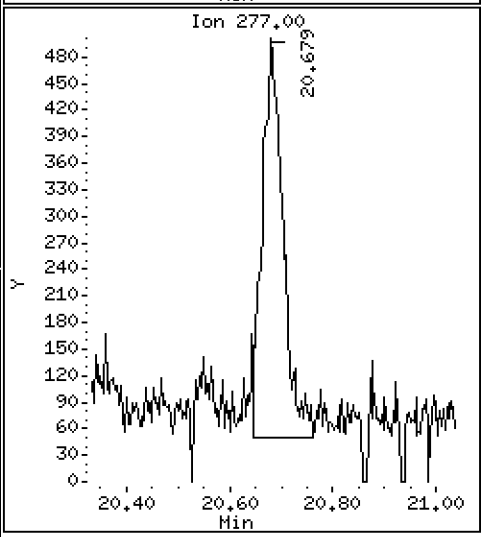
37 Indeno(1,2,3-cd)pyrene

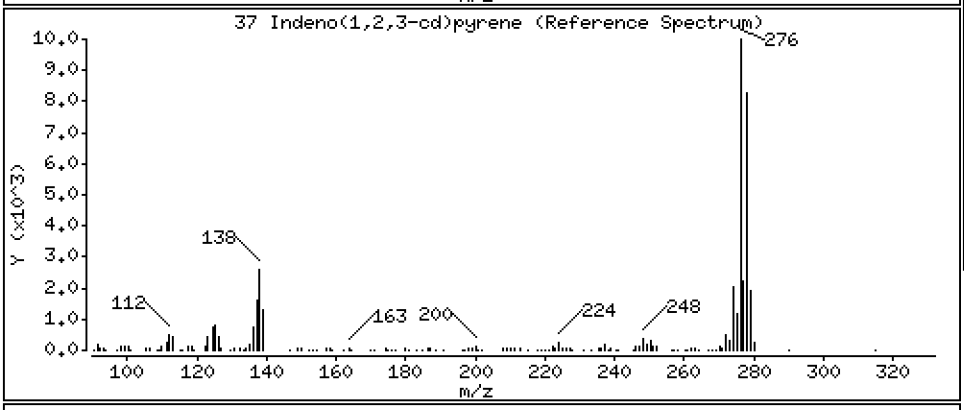
Concentration: 0.4482 ug/mL

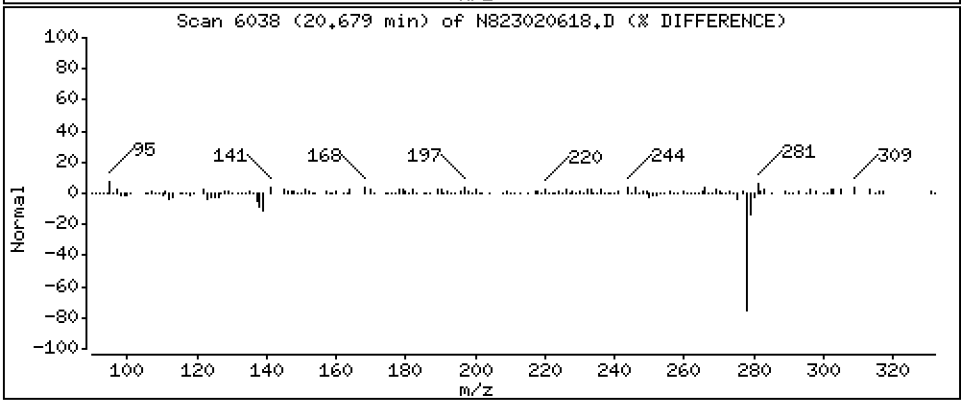












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Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

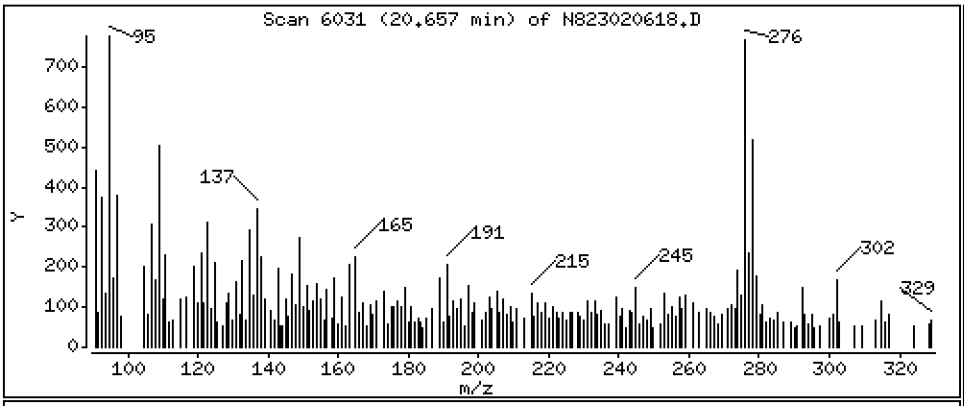
Operator: JZ

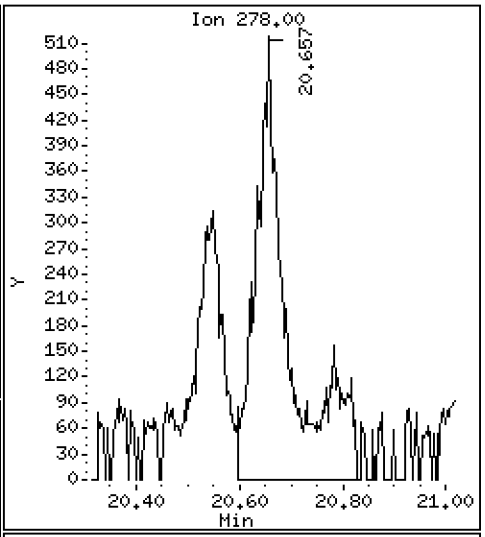
Column phase: Rxi-17sil

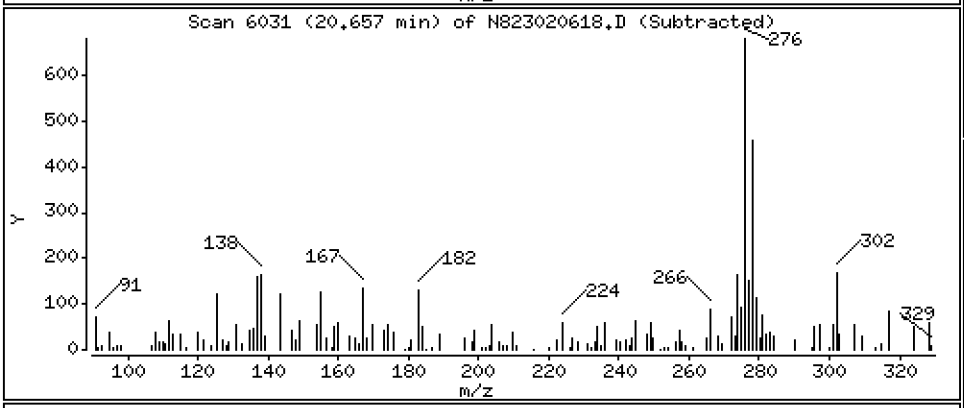
Column diameter: 0.25

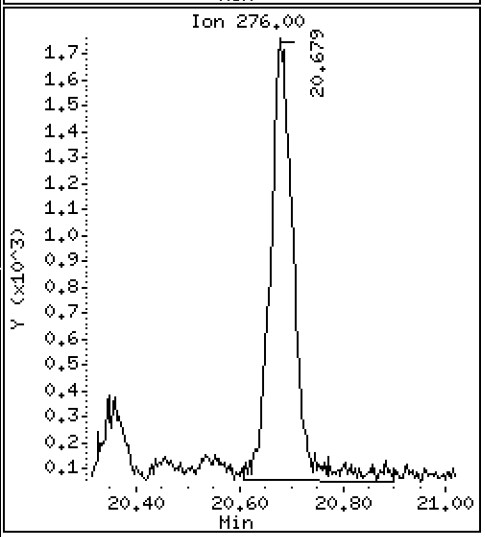
38 Dibenzo(a,h)anthracene

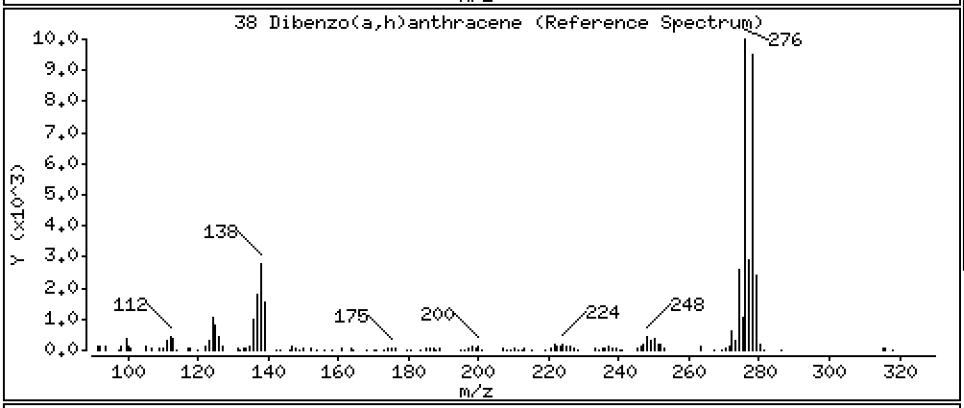
Concentration: 0.2372 ug/mL

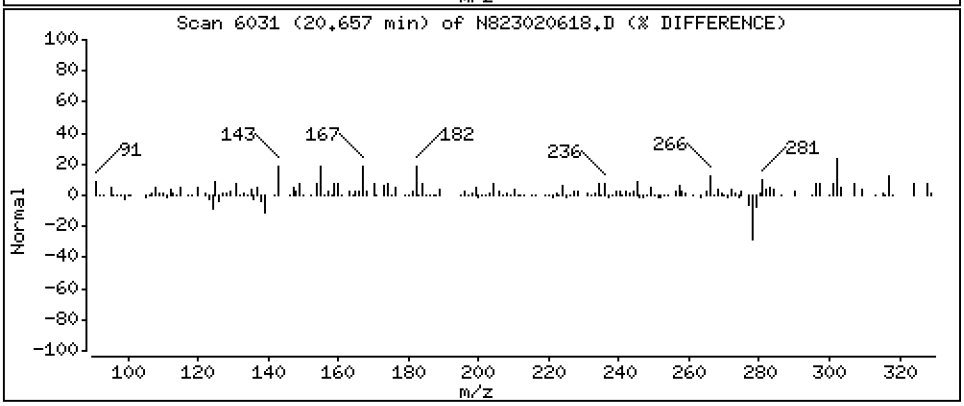












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020618.D

Date : 06-FEB-2023 20:26

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-05

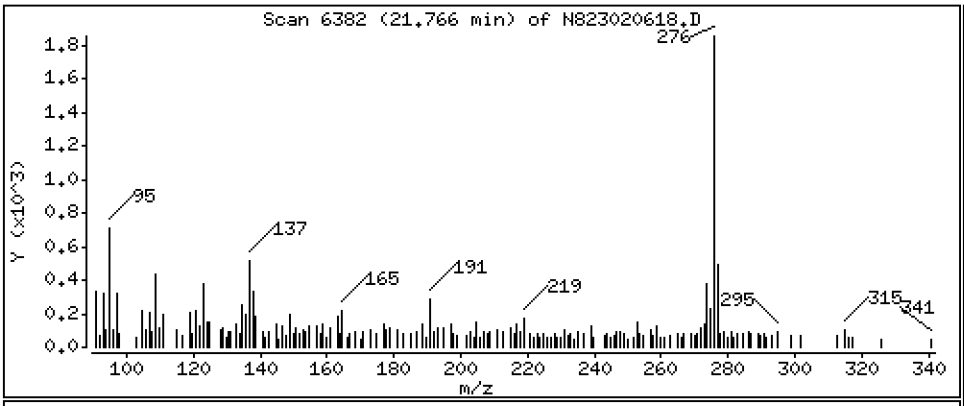
Operator: JZ

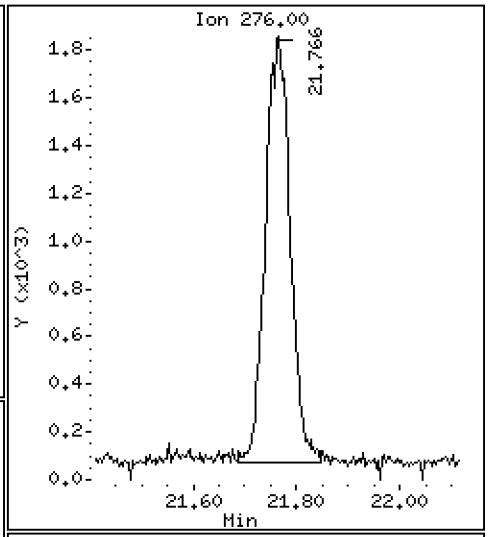
Column phase: Rxi-17sil

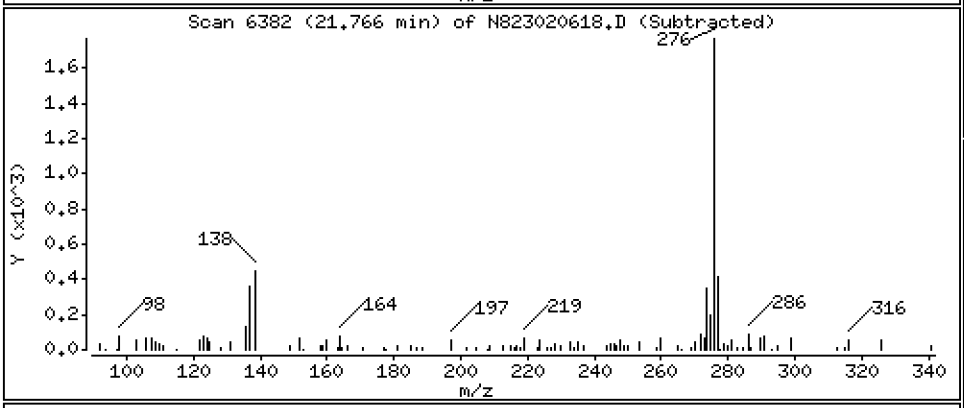
Column diameter: 0.25

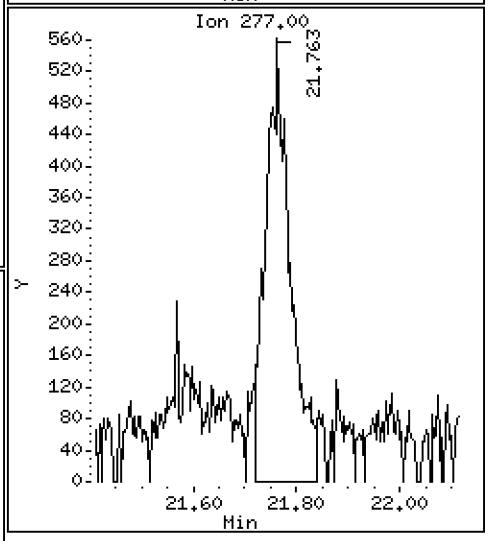
39 Benzo(g,h,i)perylene

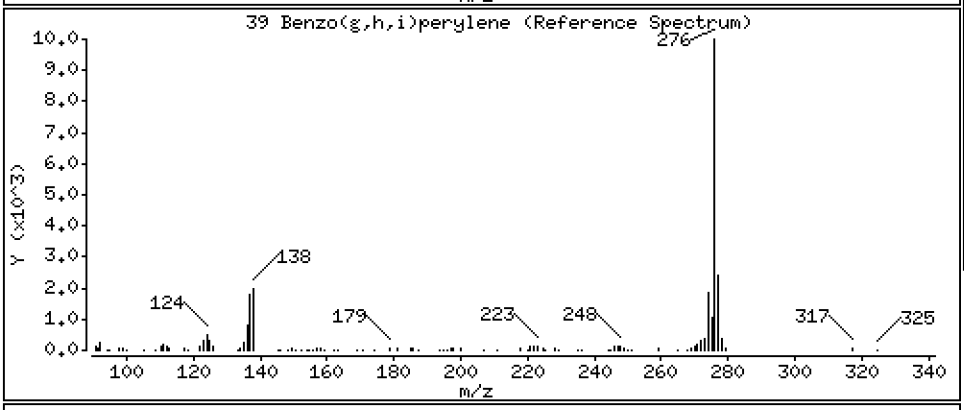
Concentration: 0.6178 ug/mL

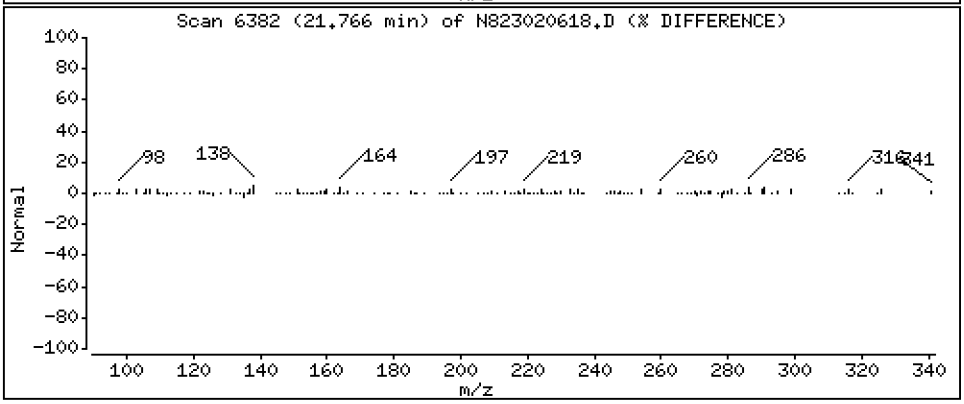












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020618.D
Lab Smp Id: 23A0207-05
Inj Date : 06-FEB-2023 20:26
Operator : JZ Inst ID: nt8.i
Smp Info : 23A0207-05
Misc Info : 23-
Comment : 1ul Injection
Method : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 13:04 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.887	4.900	(1.000)	50448	2.00000	
	2 Naphthalene	128	4.919	4.928	(1.006)	3616	0.15416	0.1542(M)
$	3 2-Methylnaphthalene-d10	152	5.624	5.634	(1.151)	30308	2.20287	2.203
	4 2-Methylnaphthalene	141	5.672	5.681	(1.160)	1875	0.14532	0.1453
	5 1-methylnaphthalene	141	5.874	5.880	(1.202)	1304	0.09958	0.09958(M)
	9 Acenaphthylene	152	7.075	7.082	(0.985)	829	0.03869	0.03869
*	10 Acenaphthene-d10	164	7.183	7.189	(1.000)	28375	2.00000	
	11 Acenaphthene	153	7.234	7.240	(1.007)	2675	0.18633	0.1863(M)
	12 Dibenzofuran	168	7.385	7.392	(1.028)	2488	0.11410	0.1141
	14 Fluorene	166	7.863	7.869	(1.095)	2373	0.14012	0.1401
*	15 Phenanthrene-d10	188	9.226	9.232	(1.000)	45673	2.00000	
	16 Phenanthrene	178	9.264	9.267	(1.004)	12567	0.56328	0.5633
	17 Anthracene	178	9.301	9.308	(1.008)	5623	0.27744	0.2774
	19 Carbazole	167	9.817	9.823	(1.064)	1705	0.09177	0.09177(M)
	22 Fluoranthene	202	11.056	11.050	(1.198)	48210	1.98518	1.985
$	21 Fluoranthene-d10	212	11.018	11.009	(1.194)	60414	2.99810	2.998
	23 Pyrene	202	11.588	11.569	(0.816)	44848	3.61289	3.613
	24 Benzo(a)anthracene	228	14.070	14.070	(0.991)	8406	0.74712	0.7471
*	25 Chrysene-d12	240	14.199	14.202	(1.000)	20022	2.00000	
	27 Chrysene	228	14.272	14.275	(1.005)	9256	0.77278	0.7728(M)
	28 Benzo(b)fluoranthene	252	16.824	16.824	(0.929)	8872	0.82521	0.8252
	29 Benzo(k)fluoranthene	252	16.884	16.887	(0.932)	4094	0.38876	0.3888
	30 Benzo(j)fluoranthene	252	16.960	16.963	(0.936)	3488	0.36792	0.3679
	31 Total Benzofluoranthenes	252	16.824	16.824	(0.929)	16828	1.65273	1.653(M)
	32 Benzo(a)pyrene	252	17.877	17.877	(0.987)	5981	0.63217	0.6322
*	33 Perylene-d12	264	18.111	18.107	(1.000)	18460	2.00000	
	35 Perylene	252	18.180	18.183	(1.004)	15484	1.52512	1.525(M)
$	36 Dibenzo(a,h)anthracene-d14	292	20.545	20.549	(1.134)	21514	2.97441	2.974
	37 Indeno(1,2,3-cd)pyrene	276	20.678	20.684	(1.142)	4831	0.44821	0.4482(M)
	38 Dibenzo(a,h)anthracene	278	20.656	20.666	(1.141)	2200	0.23718	0.2372(M)
	39 Benzo(g,h,i)perylene	276	21.766	21.763	(1.202)	6033	0.61779	0.6178(M)

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020618.D
Lab Smp Id: 23A0207-05
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44336	22168	88672	50448	13.79
10 Acenaphthene-d10	26127	13064	52254	28375	8.60
15 Phenanthrene-d10	47424	23712	94848	45673	-3.69
25 Chrysene-d12	36794	18397	73588	20022	-45.58
33 Perylene-d12	36636	18318	73272	18460	-49.61

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.89	-0.26
10 Acenaphthene-d10	7.19	6.69	7.69	7.18	-0.09
15 Phenanthrene-d10	9.23	8.73	9.73	9.23	-0.07
25 Chrysene-d12	14.20	13.70	14.70	14.20	-0.02
33 Perylene-d12	18.11	17.61	18.61	18.11	0.02

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

REVIEW SUMMARY FOR FILE - N823020618.D

Lab ID: 23A0207-05
nt8.i, 20230206A.b\FSIMPNA230119.m,   06-FEB-2023 20:26

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

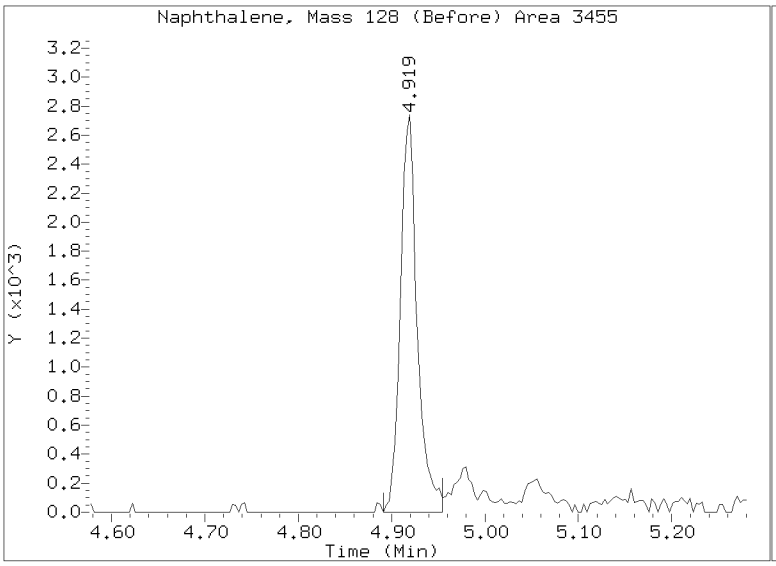
No RRT check performed

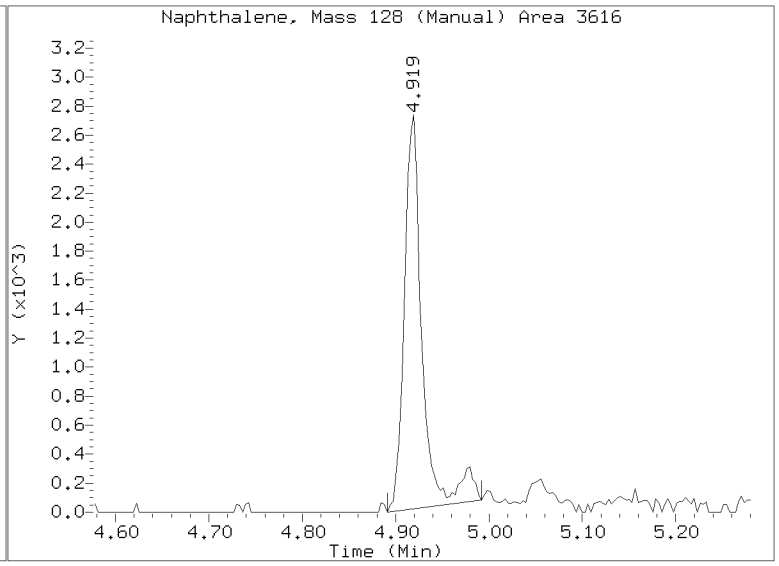
On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

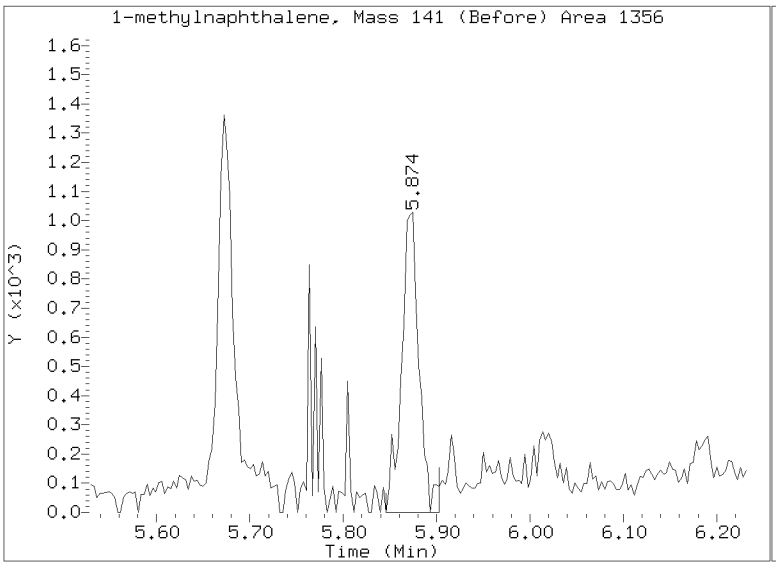
* Only compounds listed in the work order have been verified by the analyst *

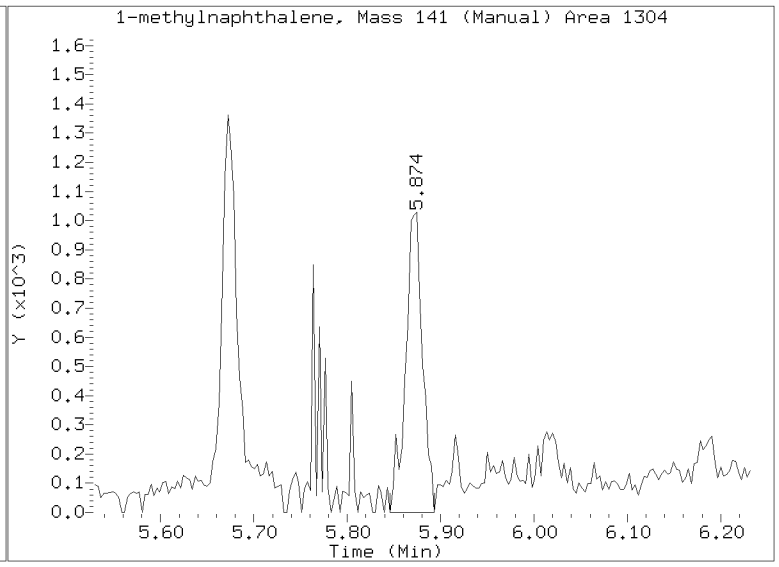
Quant Ion Manual Peak Adjustment Report

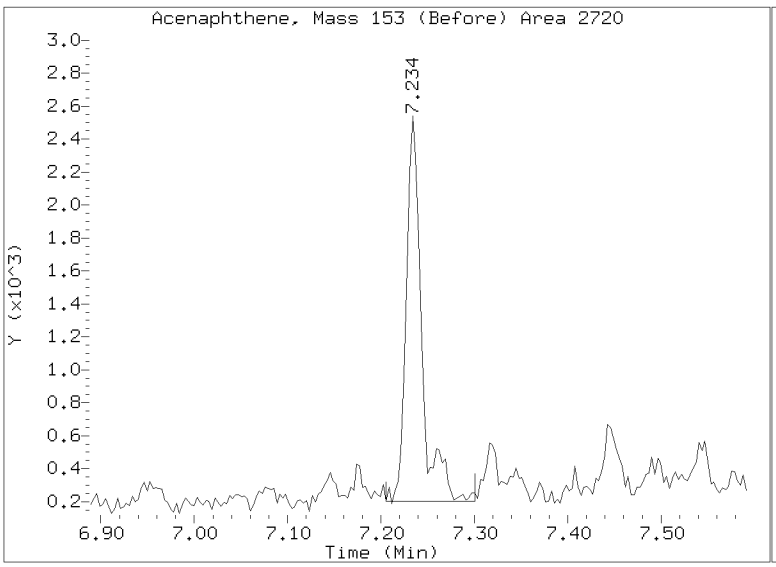
Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020618.D
Injection Date: 06-FEB-2023 20:26
Lab ID:23A0207-05 Client ID:
Report Date: 02/07/2023 15:59

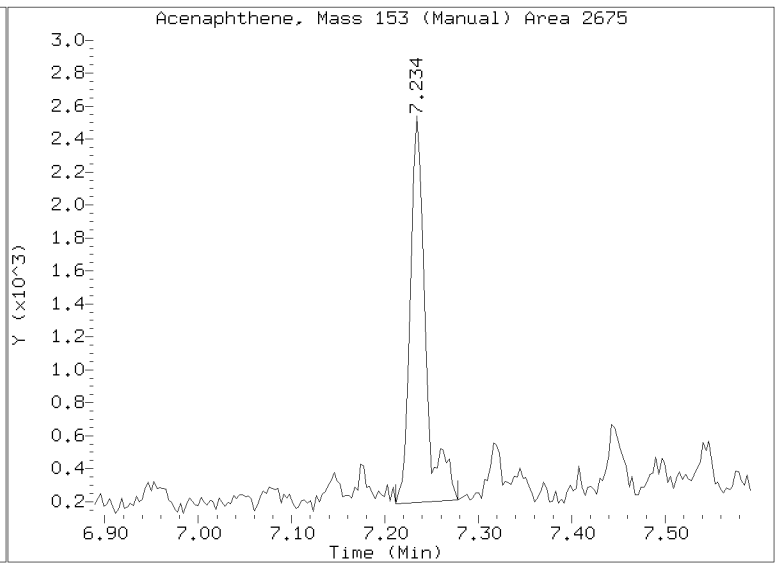












Quant Ion Manual Peak Adjustment Report

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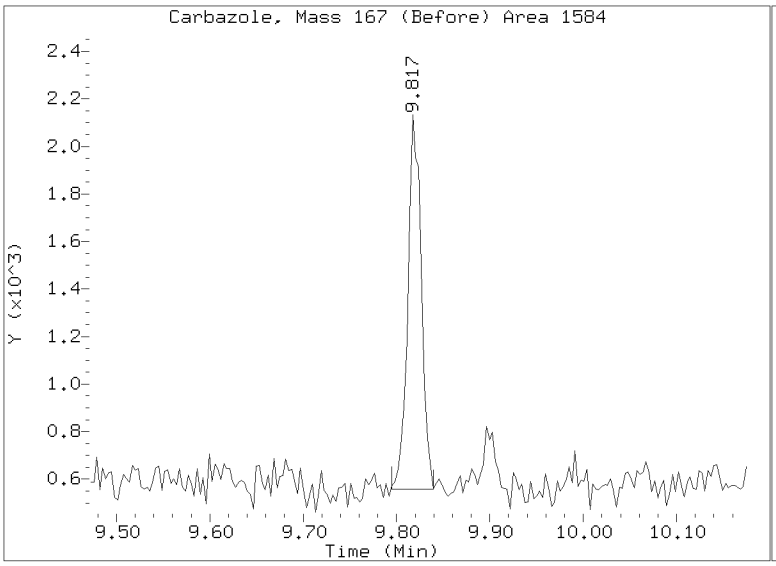
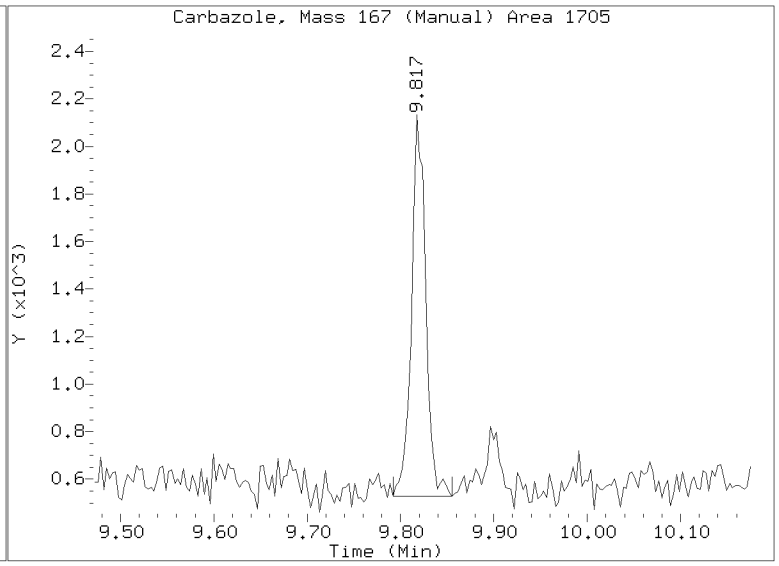
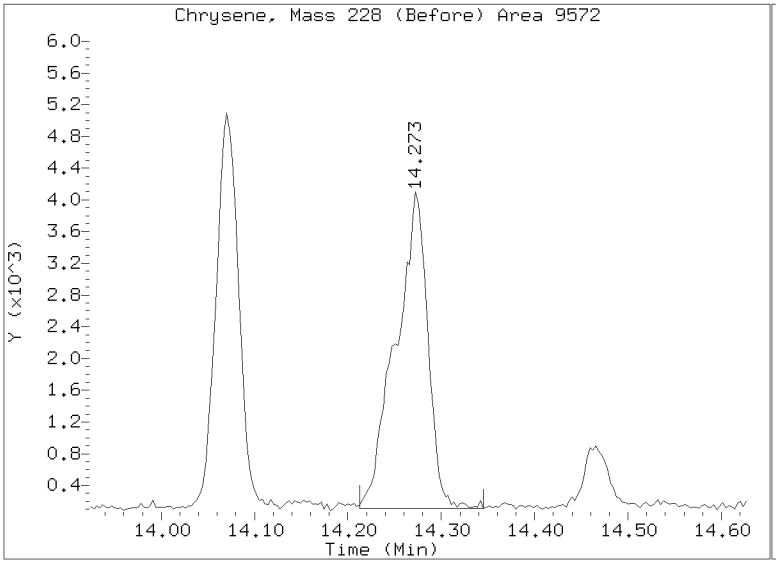
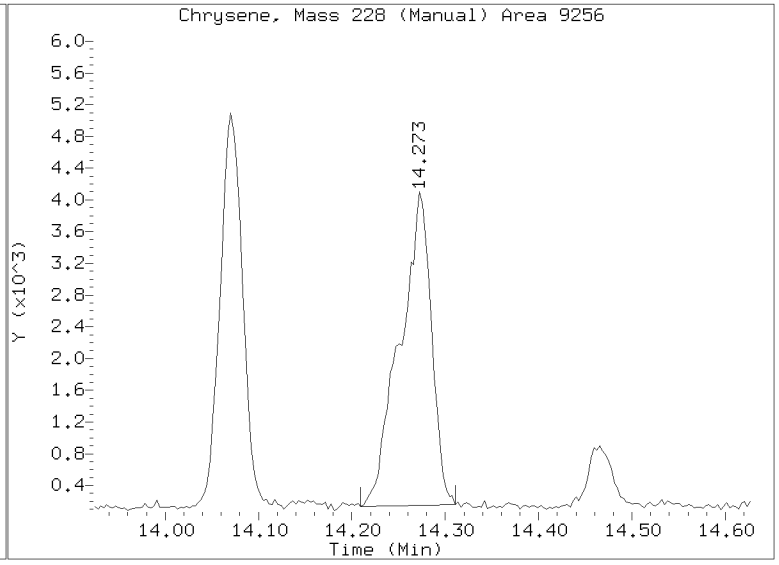
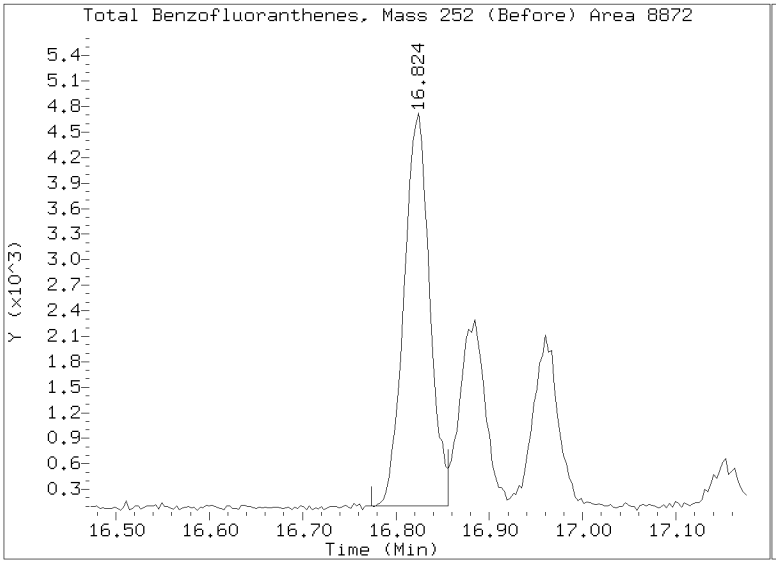
Injection Date: 06-FEB-2023 20:26
Lab ID:23A0207-05 Client ID:
Report Date: 02/07/2023 15:59

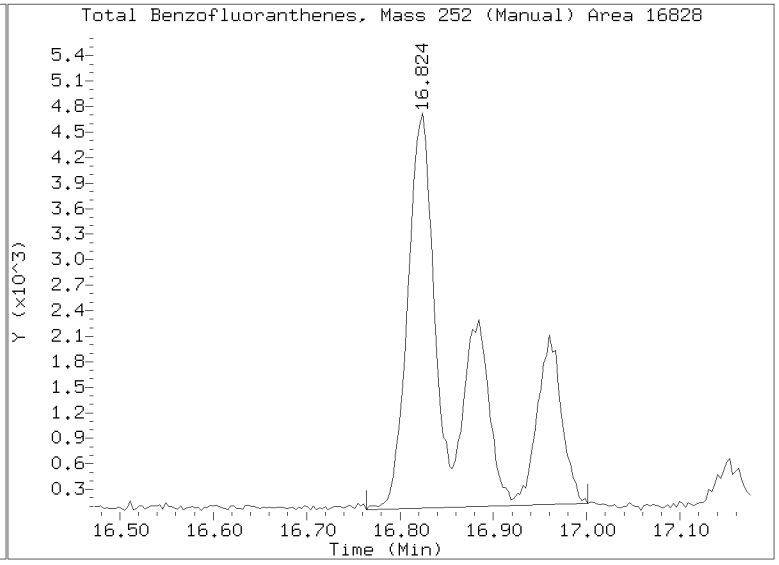












Quant Ion Manual Peak Adjustment Report

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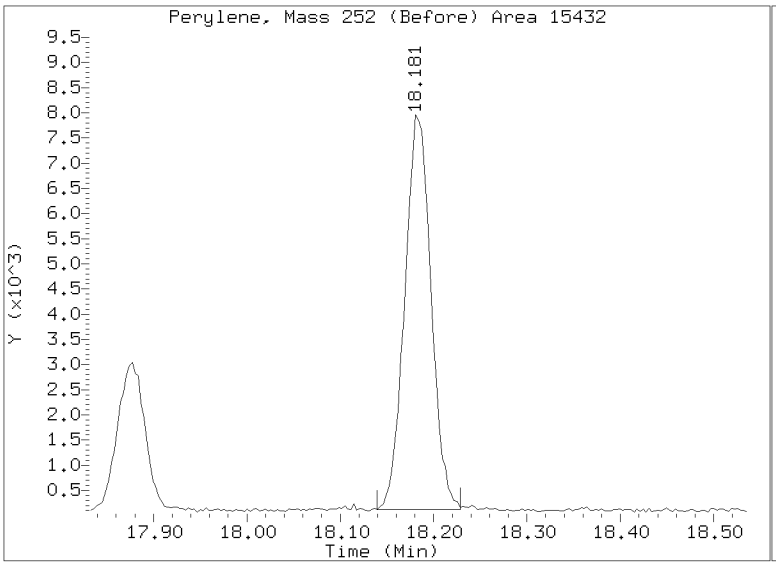
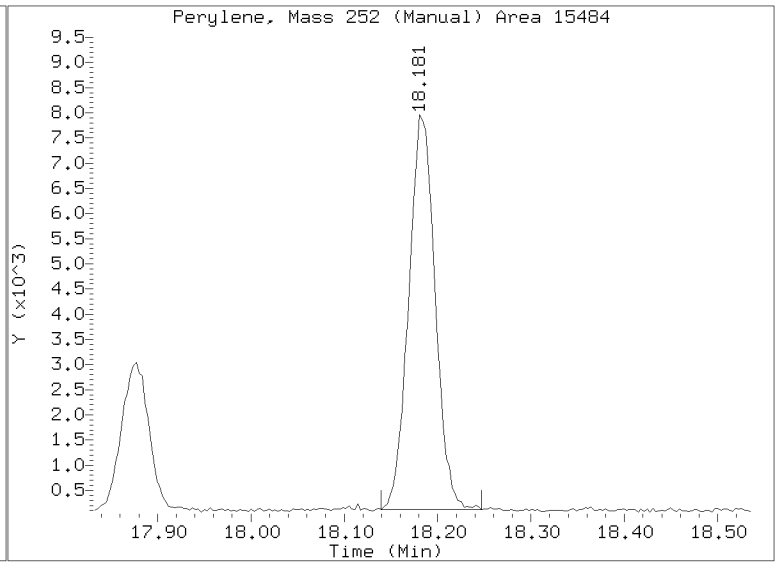
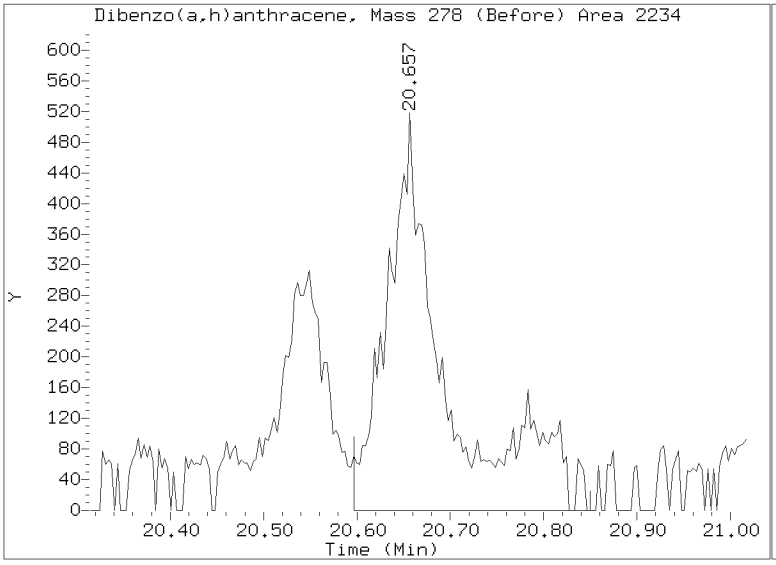
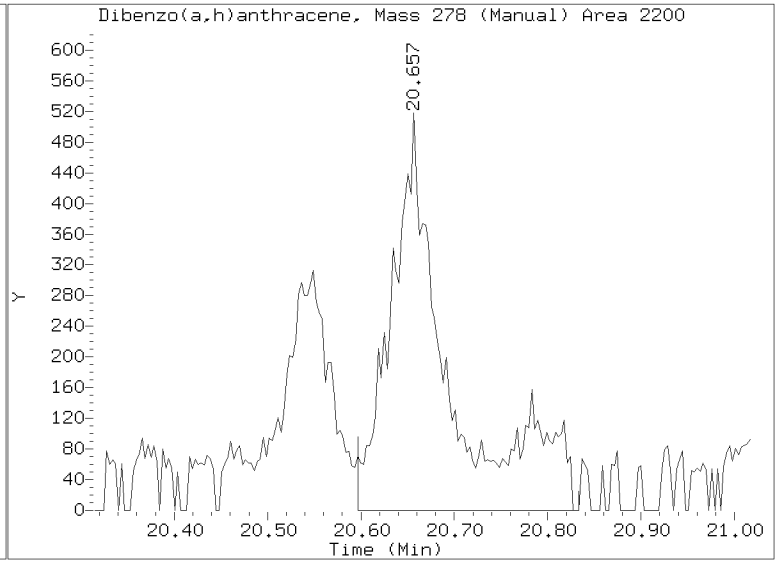
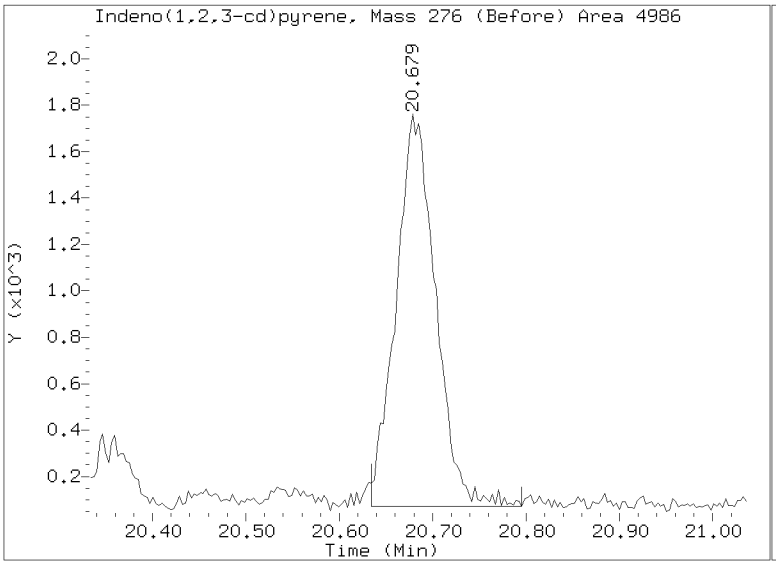
Lab ID:23A0207-05 Client ID:
Report Date: 02/07/2023 15:59

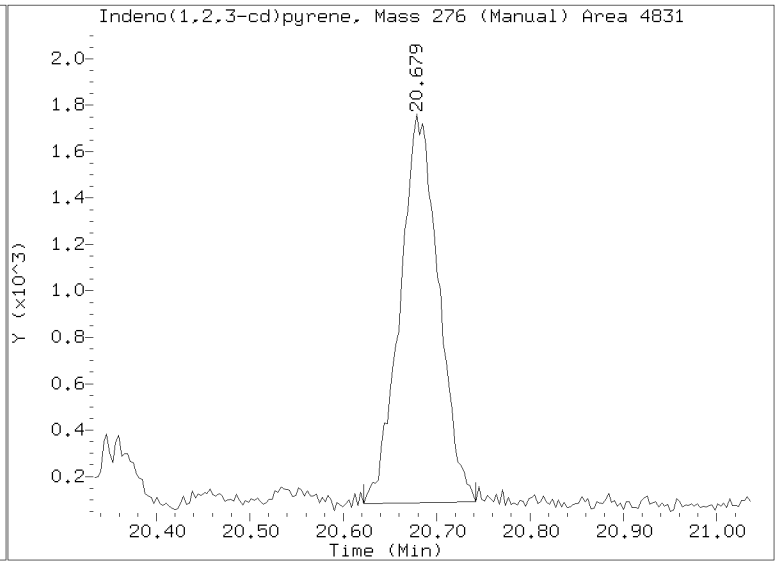












Quant Ion Manual Peak Adjustment Report

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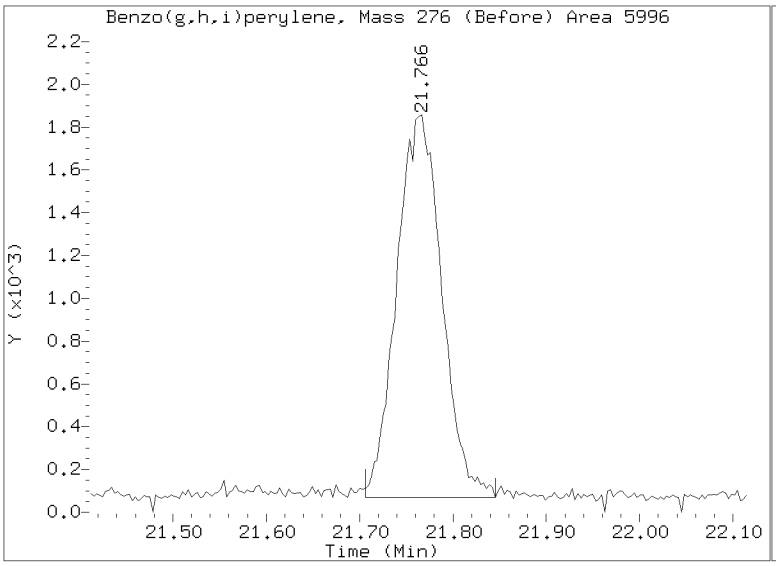
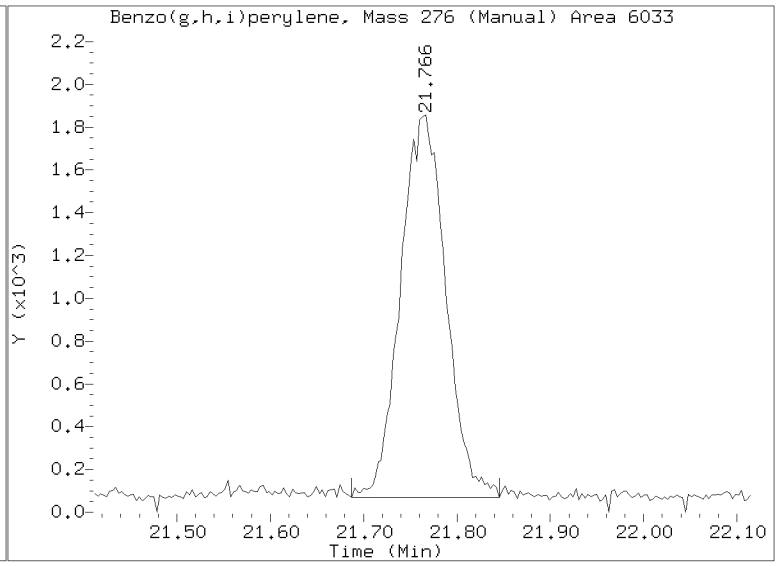
Injection Date: 06-FEB-2023 20:26
Lab ID:23A0207-05 Client ID:
Report Date: 02/07/2023 15:59





Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1072

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

Polynuclear Aromatic Hydrocarbons

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-06 A	SDG:	23A0207
Sampled:	01/11/23 09:41	Prepared:	02/01/23 11:29	File ID:	N823020619.D
% Solids:	78.96	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/06/23 20:53
Batch:	BLA0683	Sequence:	SLB0075	Initial/Final:	12.69 g Wet / 0.5 mL
Instrument:	NT8	Column:	RXI-17Sil ms	Calibration:	GA00050
Cleanups:	GPC, Silica Gel				

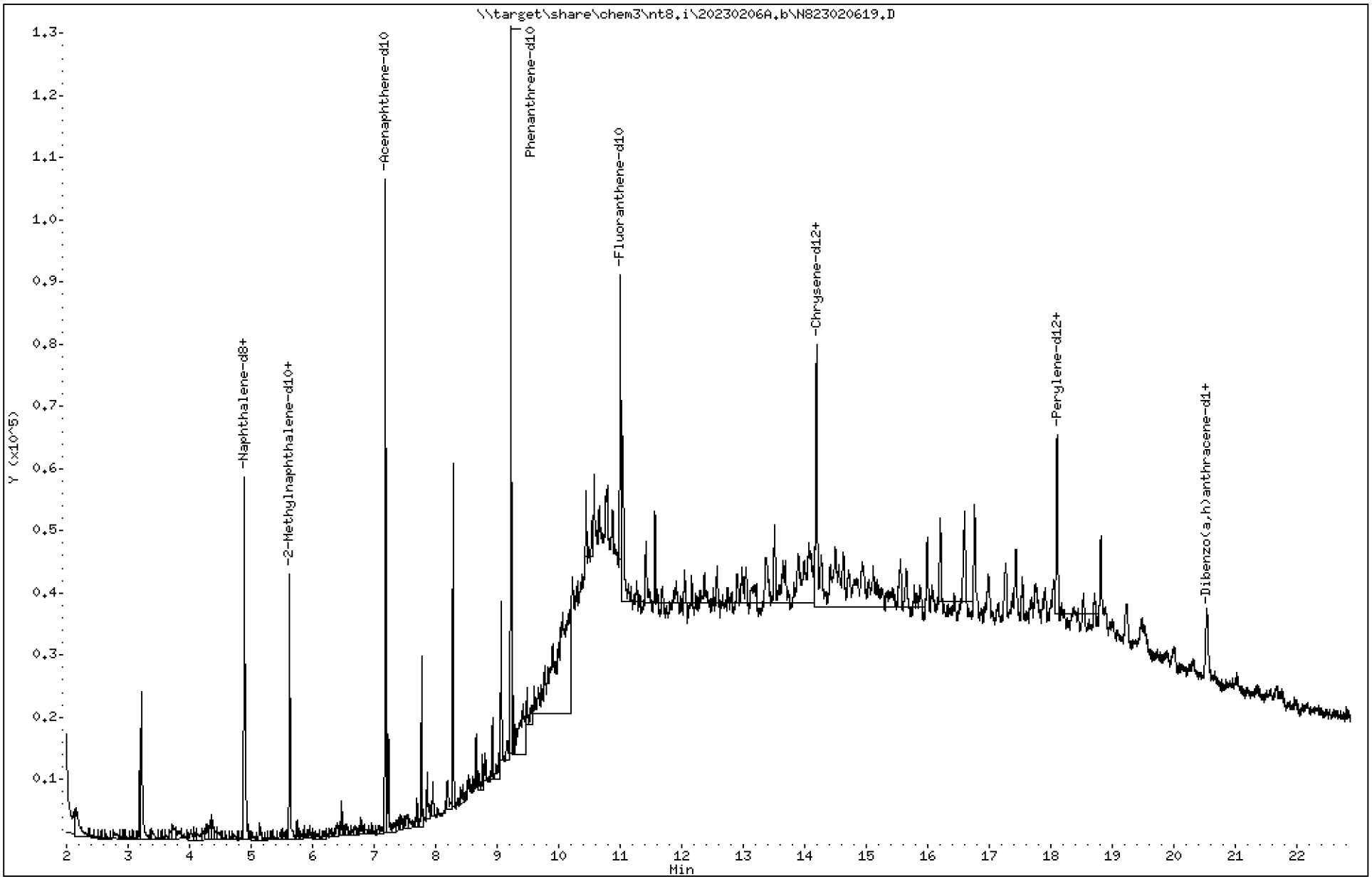
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
56-55-3	Benzo(a)anthracene	3	24.5	D	2.47	15.0
218-01-9	Chrysene	3	38.6	D	3.15	15.0
205-99-2	Benzo(b)fluoranthene	3	22.6	D	4.11	15.0
207-08-9	Benzo(k)fluoranthene	3	10.7	J, D	2.28	15.0
50-32-8	Benzo(a)pyrene	3	20.3	D	1.84	15.0
193-39-5	Indeno(1,2,3-cd)pyrene	3	13.4	J, D	3.14	15.0
53-70-3	Dibenzo(a,h)anthracene	3	3.53	J, D	2.67	15.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	149.70	173	116	32 - 120	
Dibenzo[a,h]anthracene-d14	149.70	203	135	21 - 133	*
Fluoranthene-d10	149.70	170	114	36 - 134	

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020619.D
Date : 06-FEB-2023 20:53
Client ID:
Sample Info: 23A0207-06,3

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



23A0207 CLPLIKE (Rev3) - Page 168 of 3315

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020619.D

Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

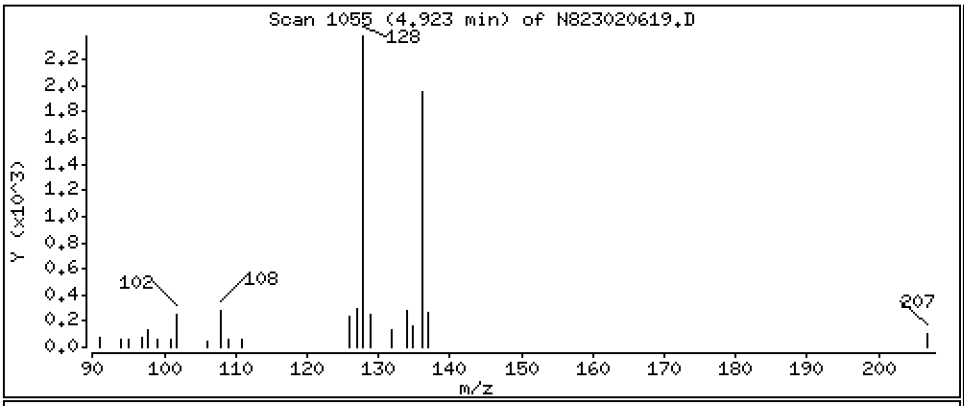
Operator: JZ

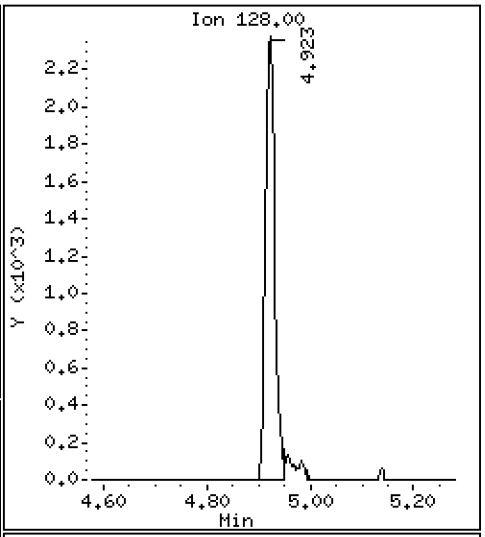
Column phase: Rxi-17sil

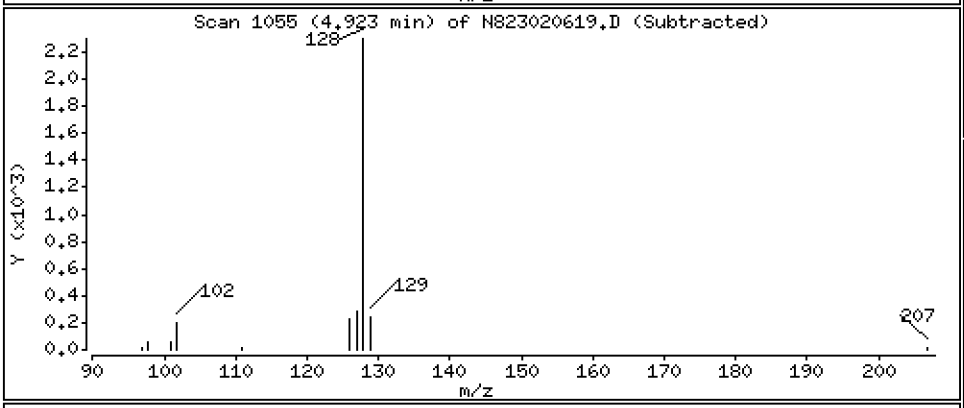
Column diameter: 0.25

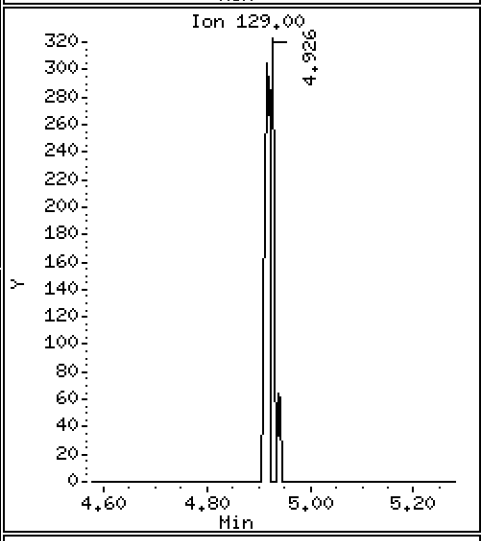
2 Naphthalene

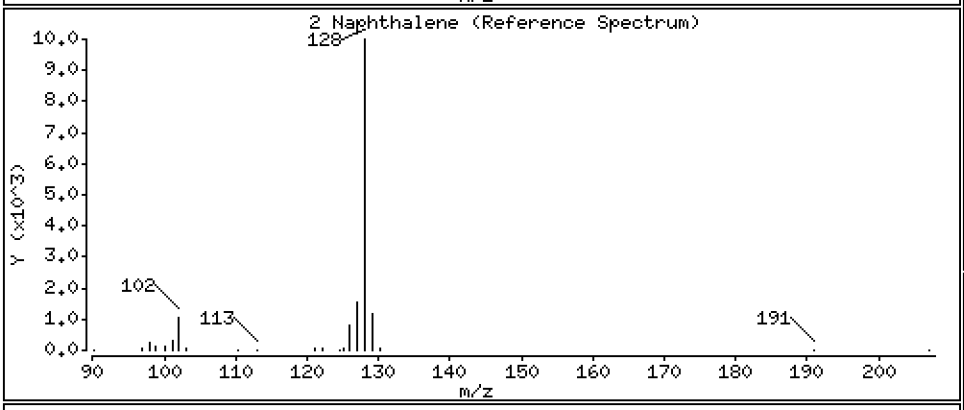
Concentration: 0.3739 ug/mL

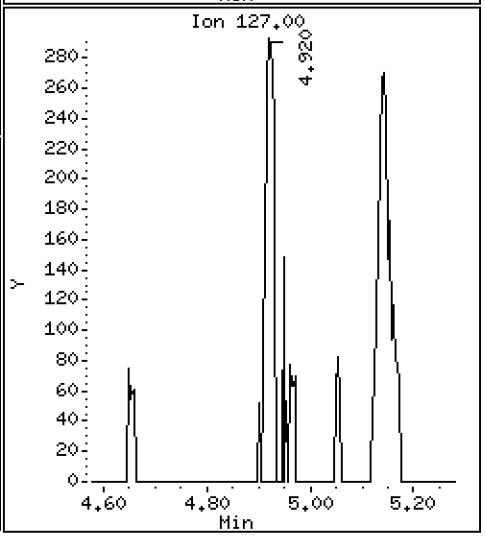


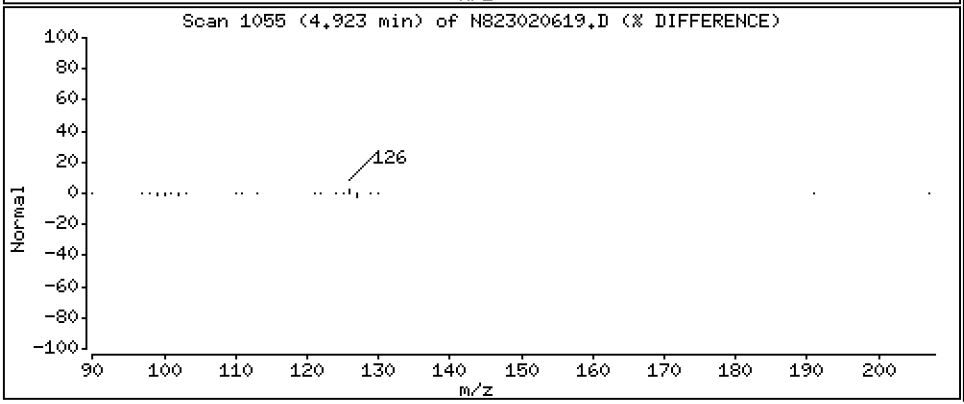












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Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

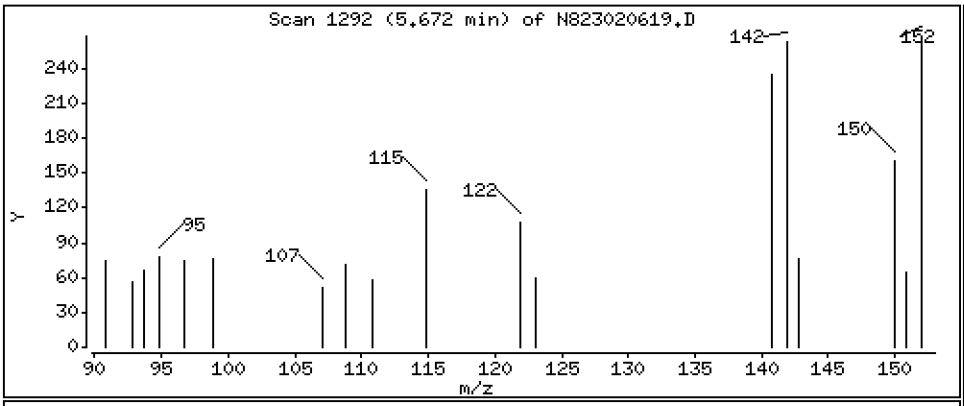
Operator: JZ

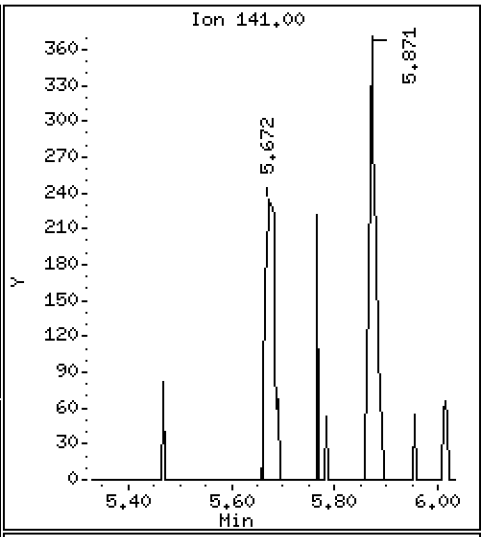
Column phase: Rxi-17sil

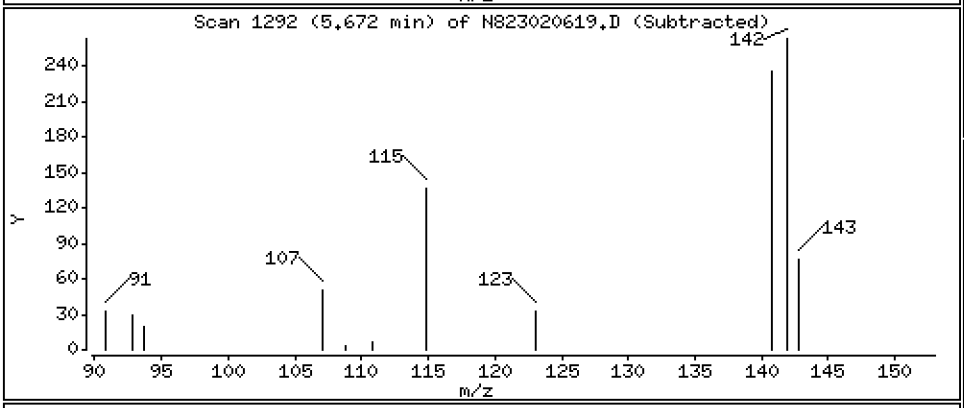
Column diameter: 0.25

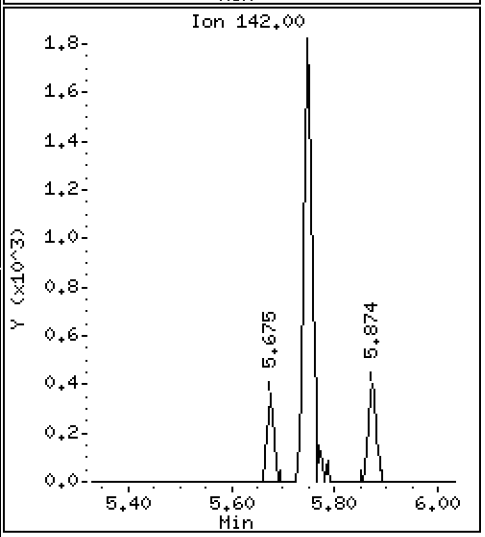
4 2-Methylnaphthalene

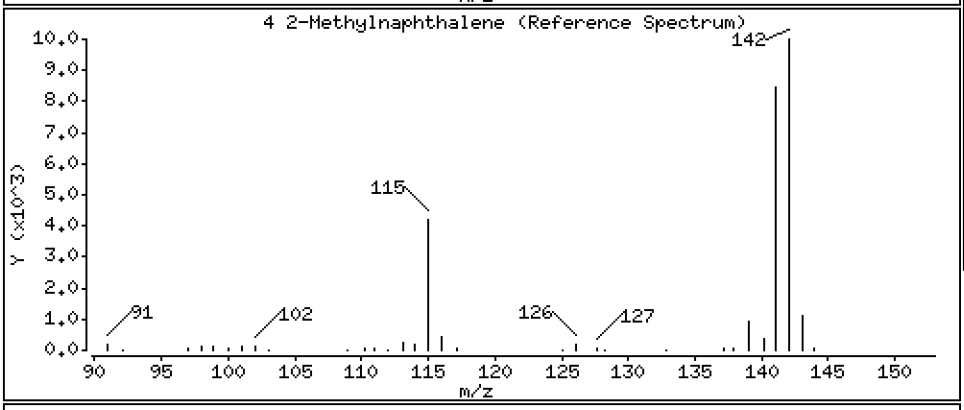
Concentration: 0.06834 ug/mL

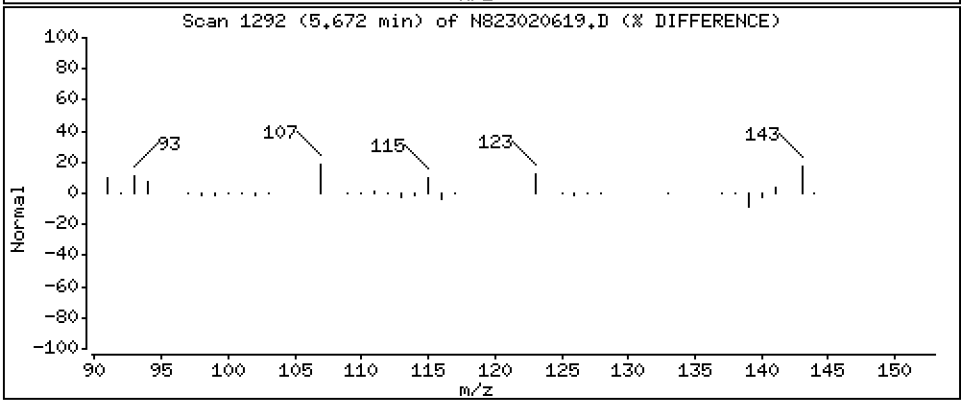












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Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

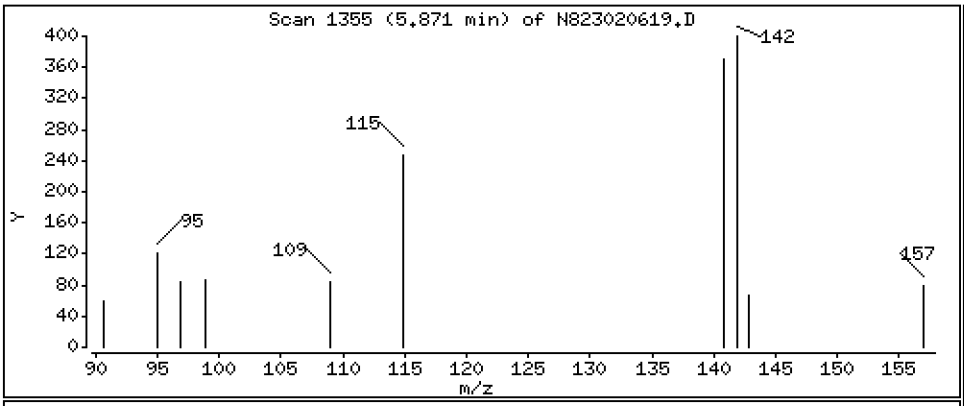
Operator: JZ

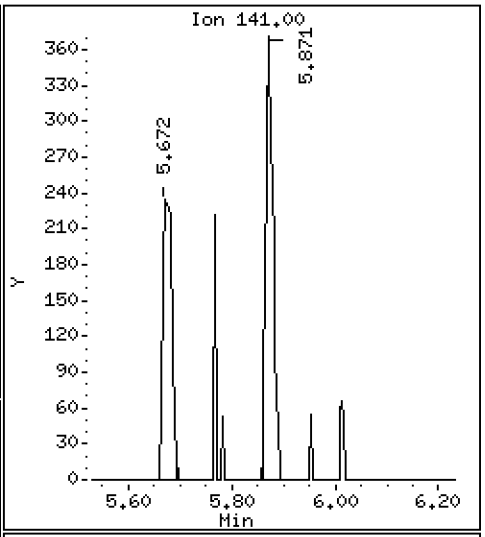
Column phase: Rxi-17sil

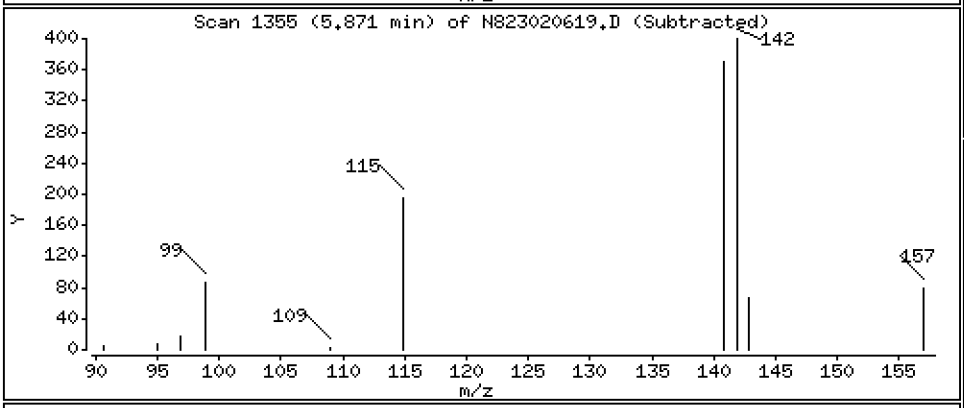
Column diameter: 0.25

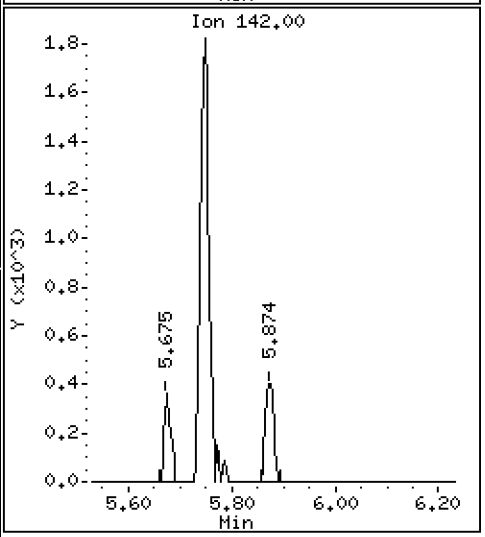
5 1-methylnaphthalene

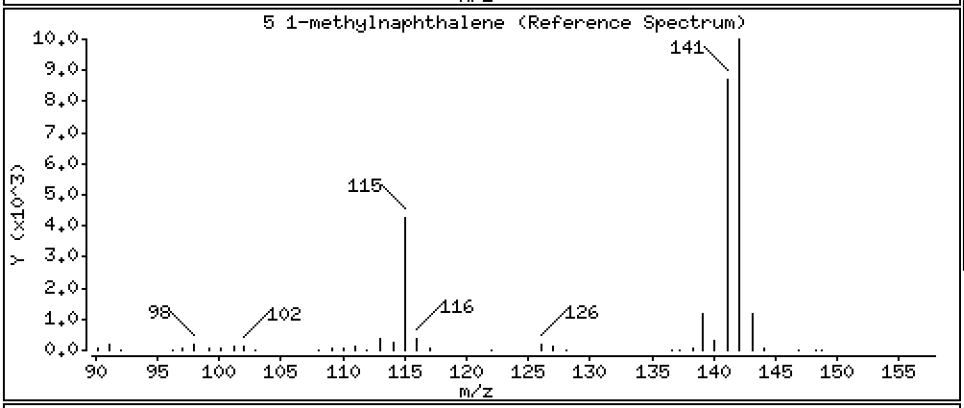
Concentration: 0.08034 ug/mL

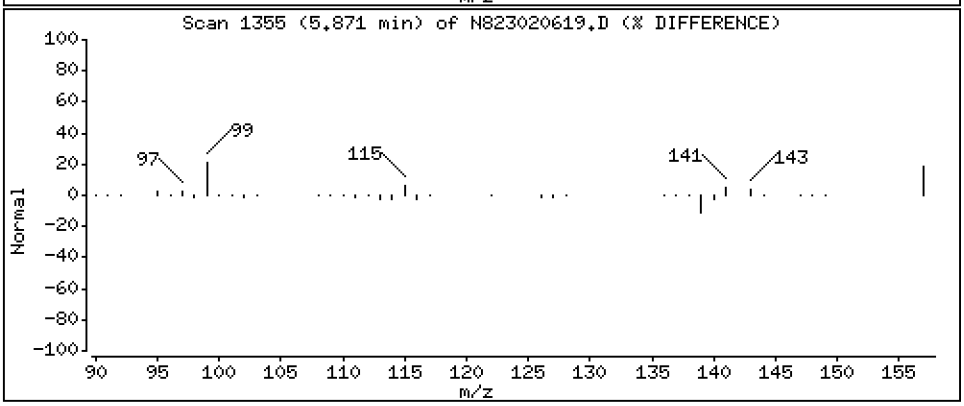












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Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

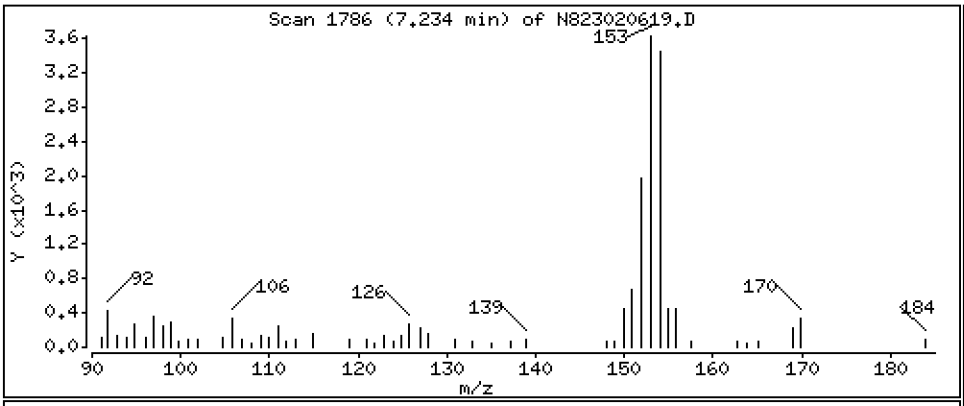
Operator: JZ

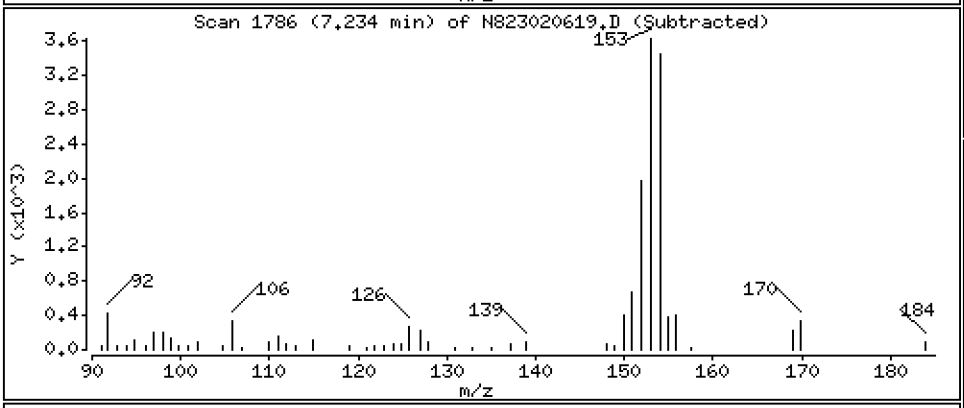
Column phase: Rxi-17sil

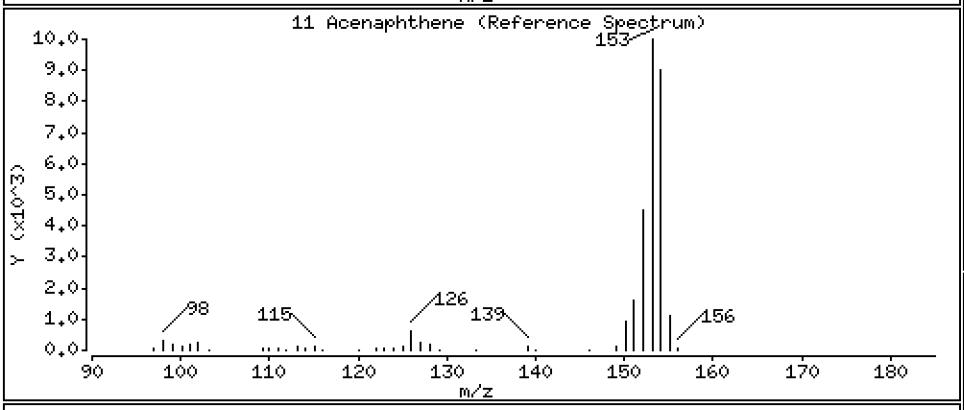
Column diameter: 0.25

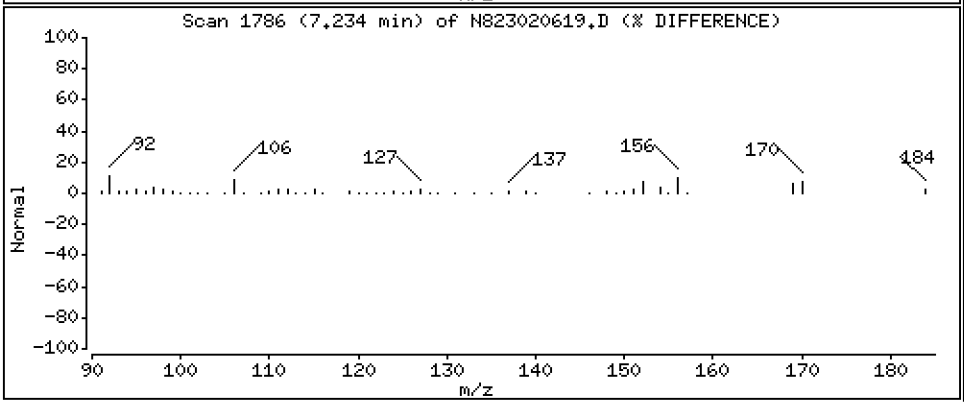
11 Acenaphthene

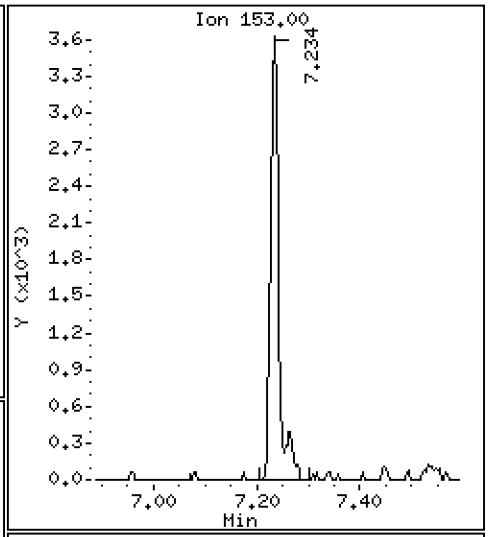
Concentration: 0.7637 ug/mL

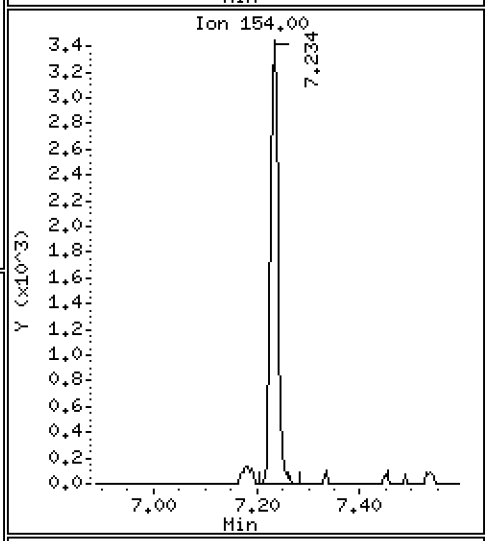


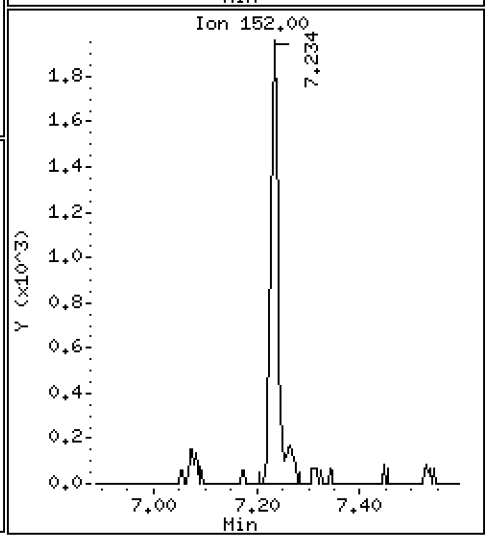












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Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

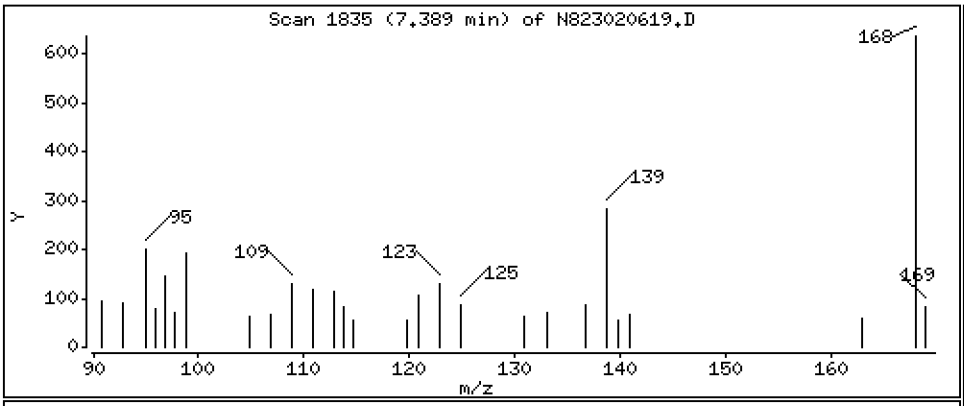
Operator: JZ

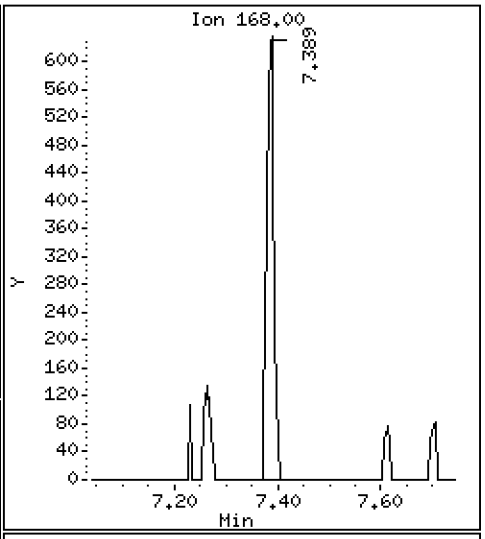
Column phase: Rxi-17sil

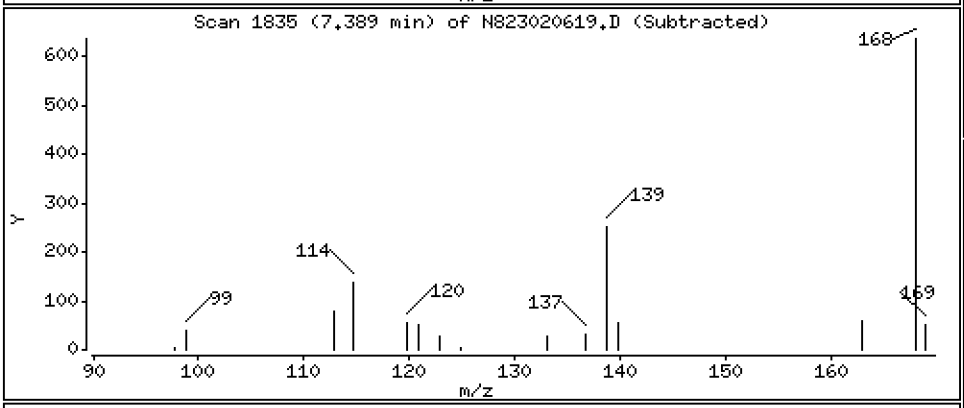
Column diameter: 0.25

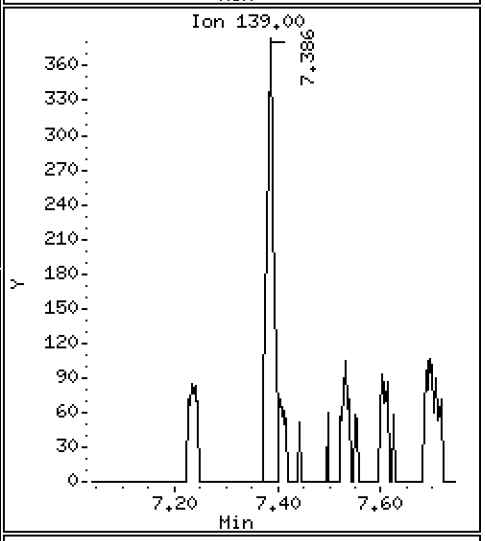
12 Dibenzofuran

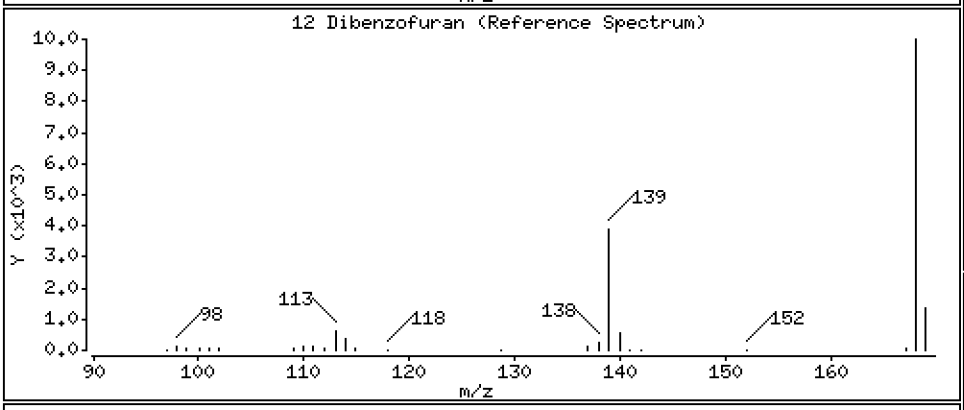
Concentration: 0.08176 ug/mL

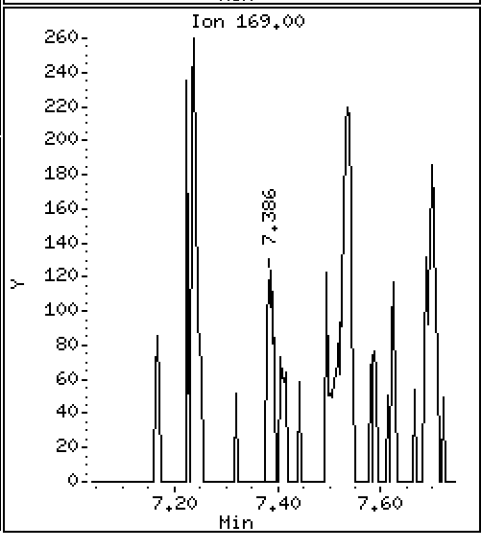


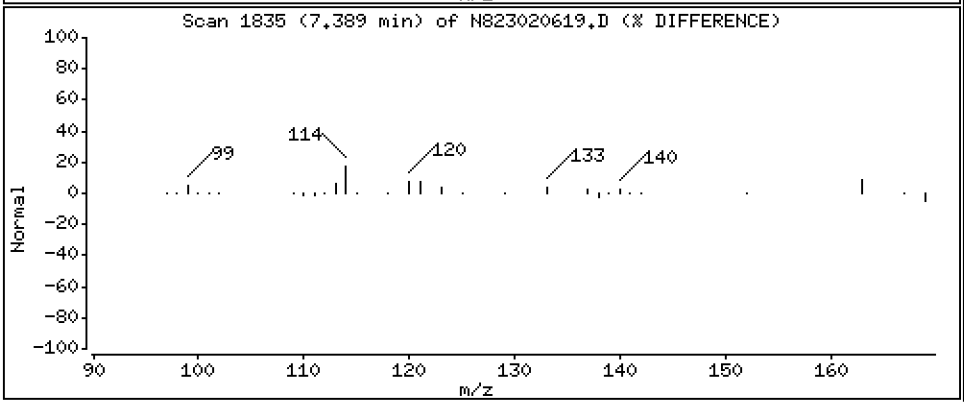












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Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

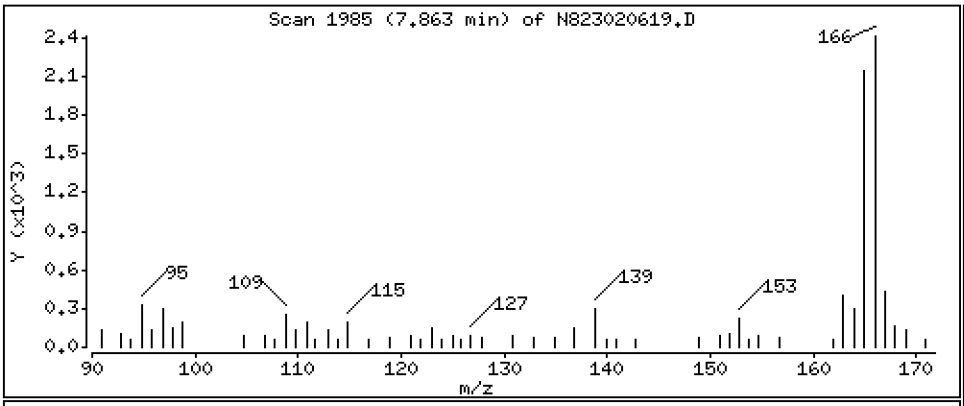
Operator: JZ

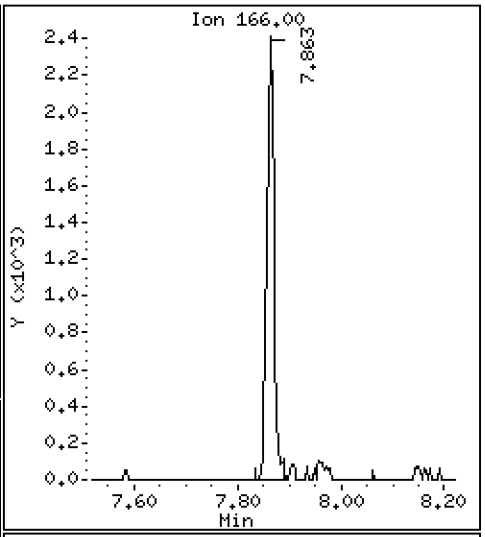
Column phase: Rxi-17sil

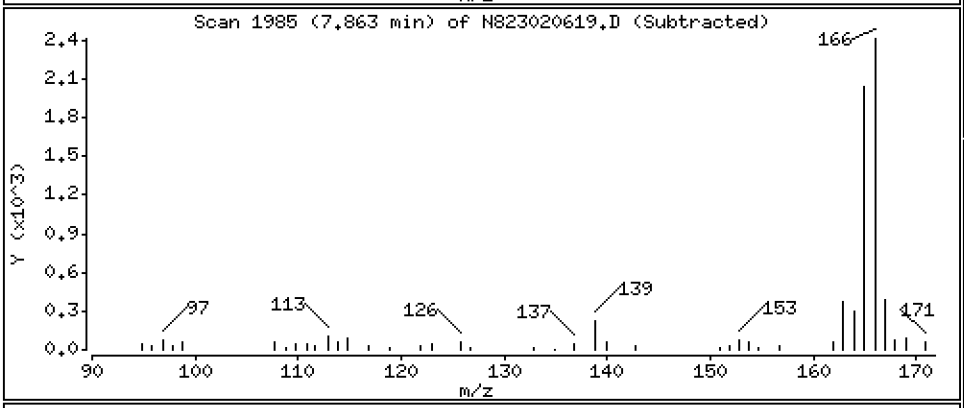
Column diameter: 0.25

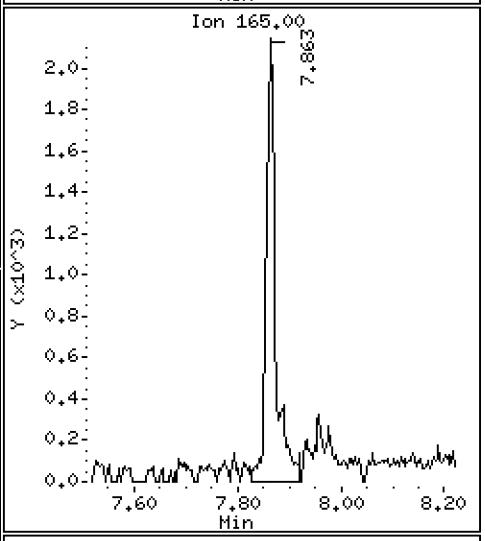
14 Fluorene

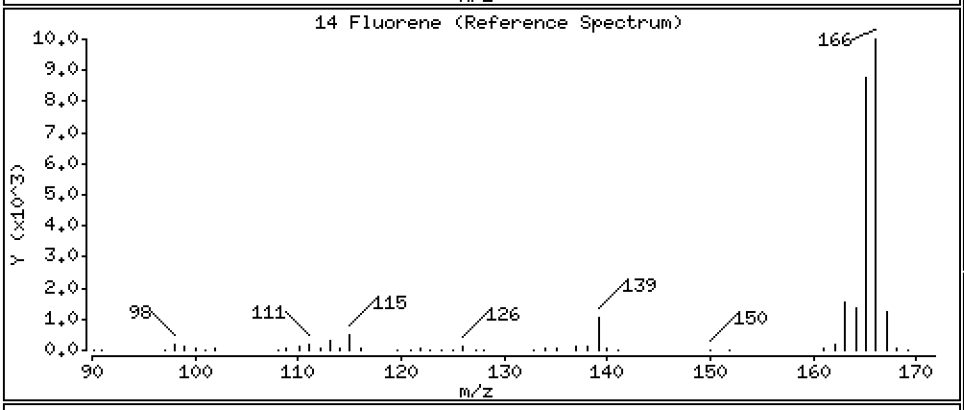
Concentration: 0.3703 ug/mL

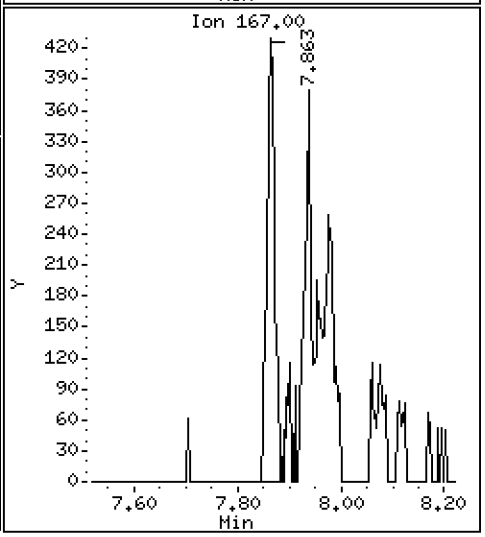


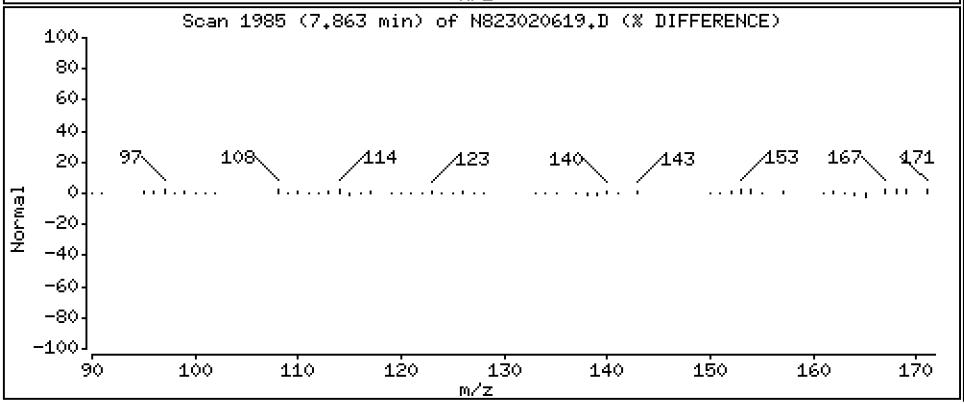












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Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

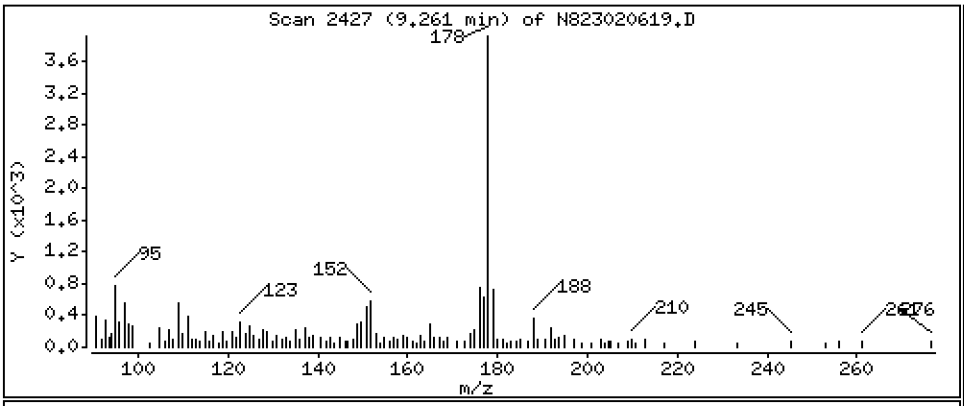
Operator: JZ

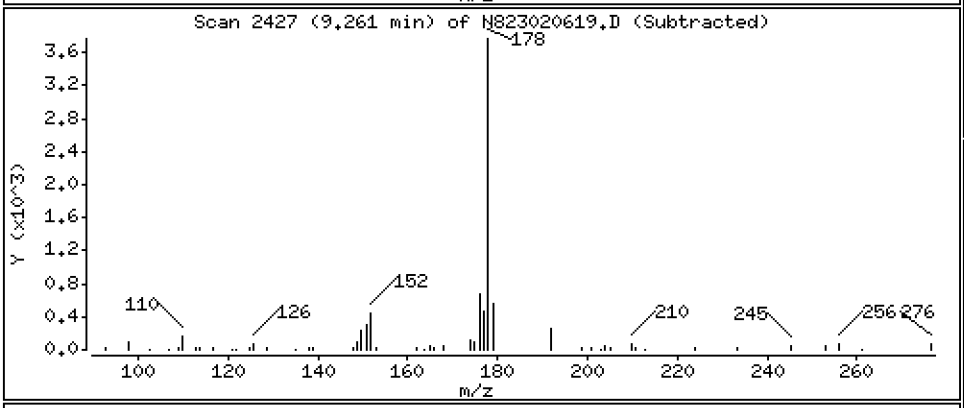
Column phase: Rxi-17sil

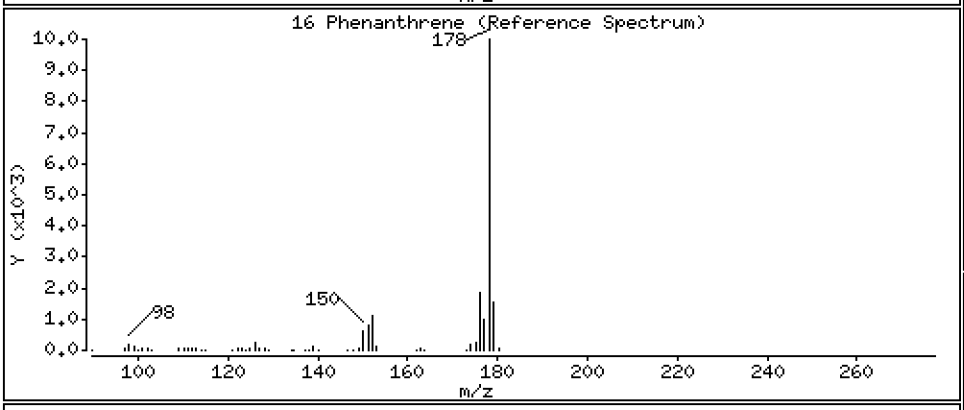
Column diameter: 0.25

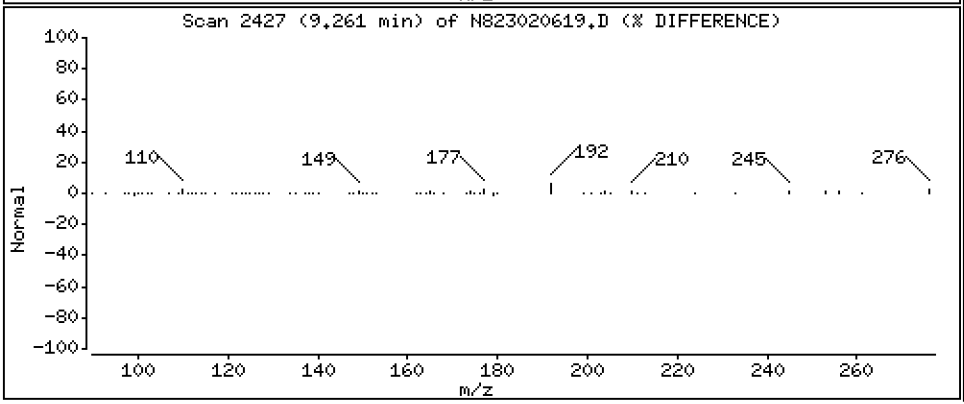
16 Phenanthrene

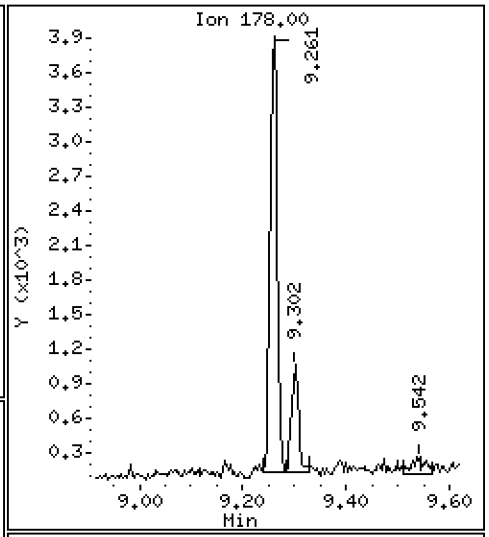
Concentration: 0.4383 ug/mL

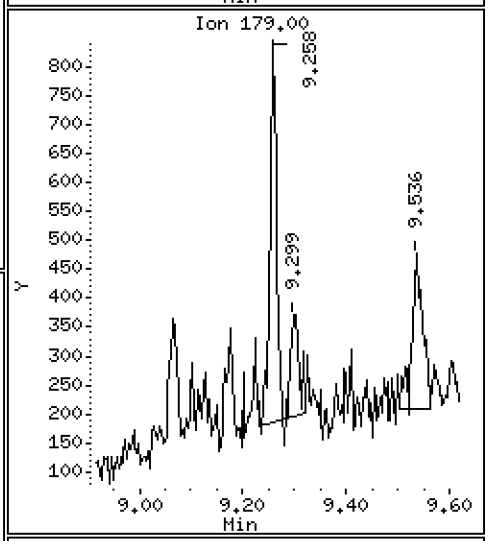


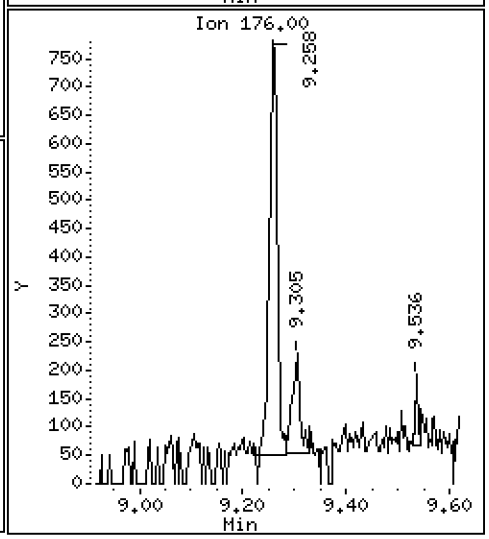












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Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

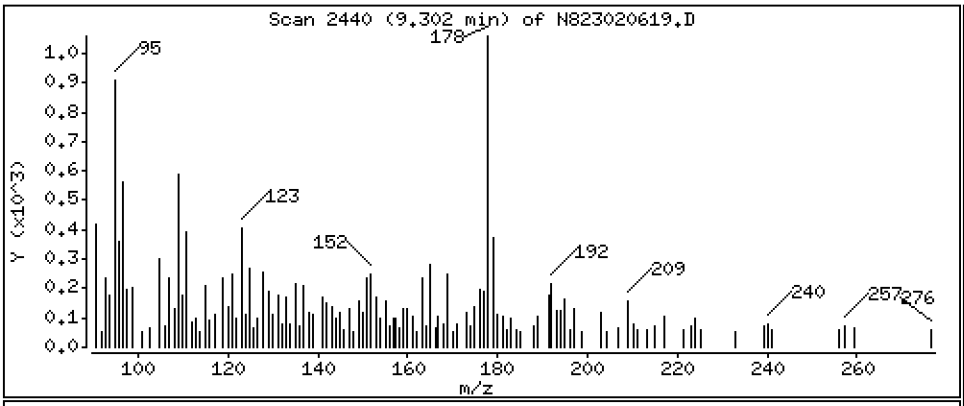
Operator: JZ

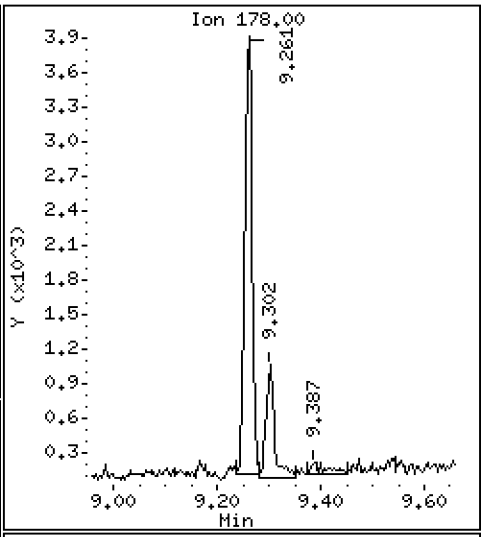
Column phase: Rxi-17sil

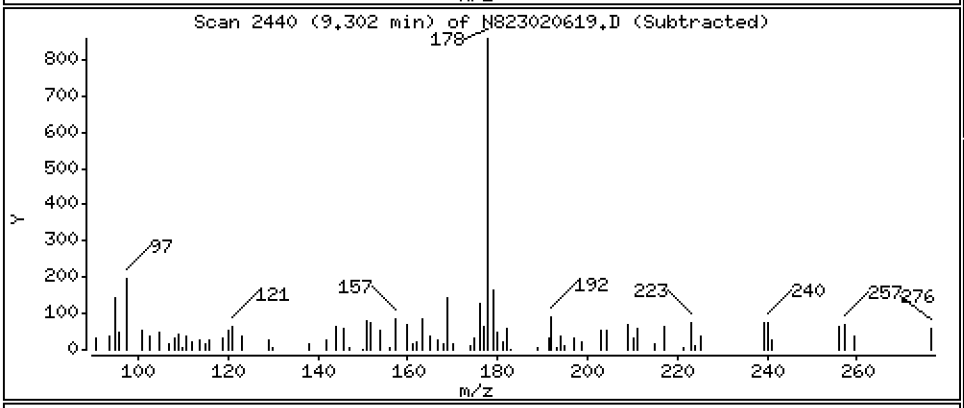
Column diameter: 0.25

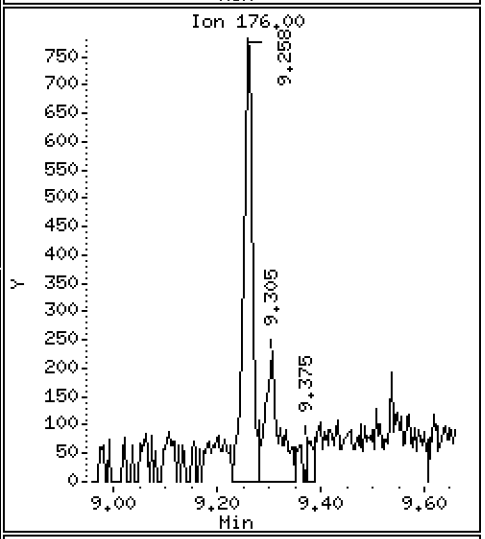
17 Anthracene

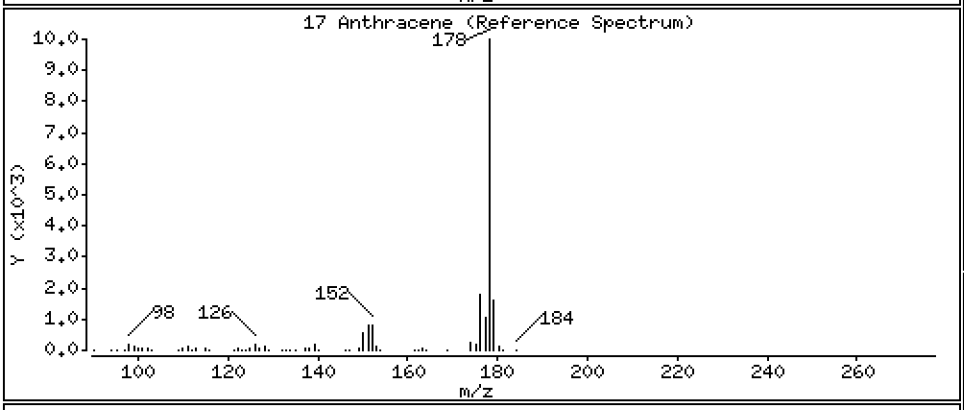
Concentration: 0.1370 ug/mL

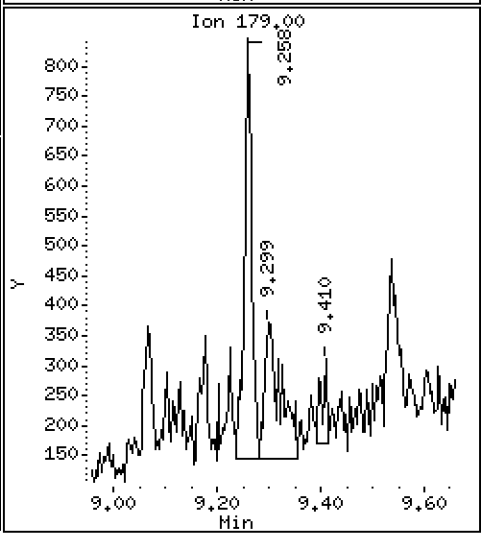


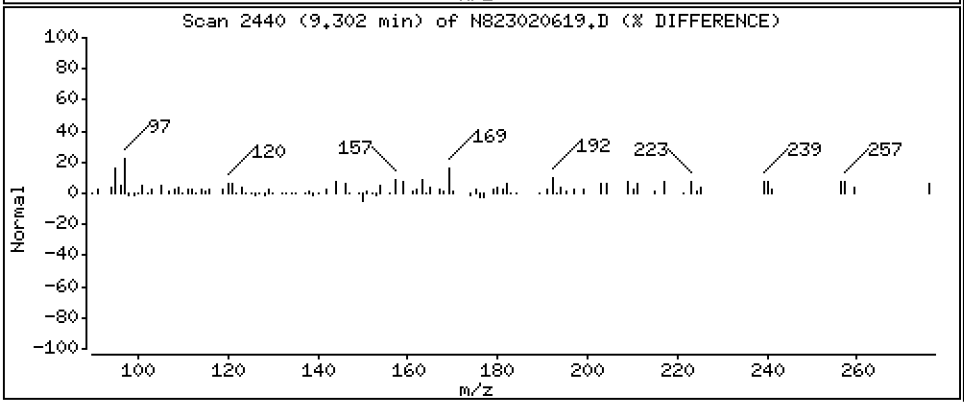












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020619.D

Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

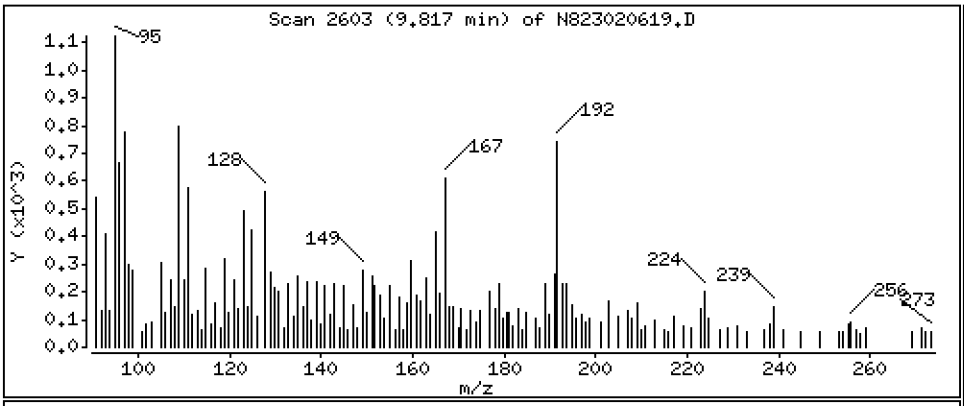
Operator: JZ

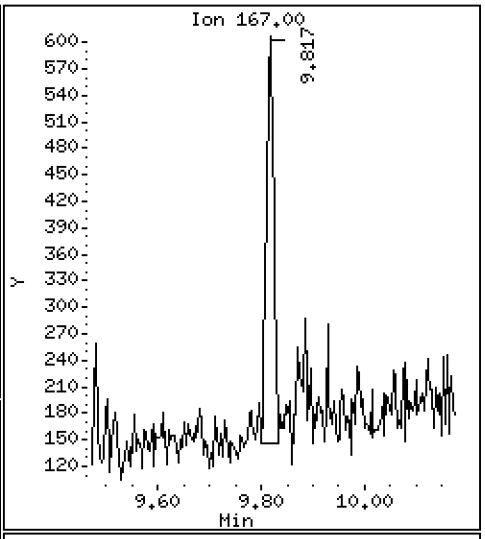
Column phase: Rxi-17sil

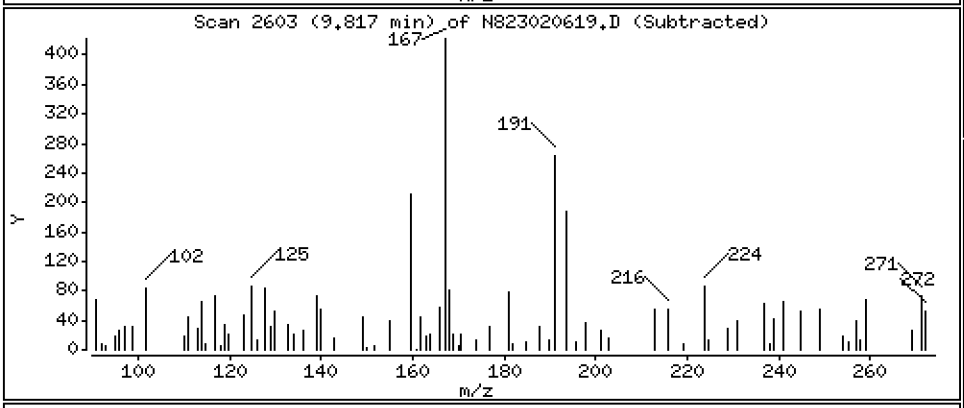
Column diameter: 0.25

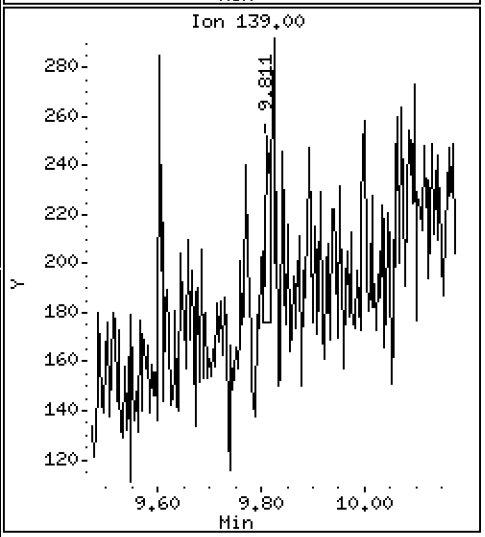
19 Carbazole

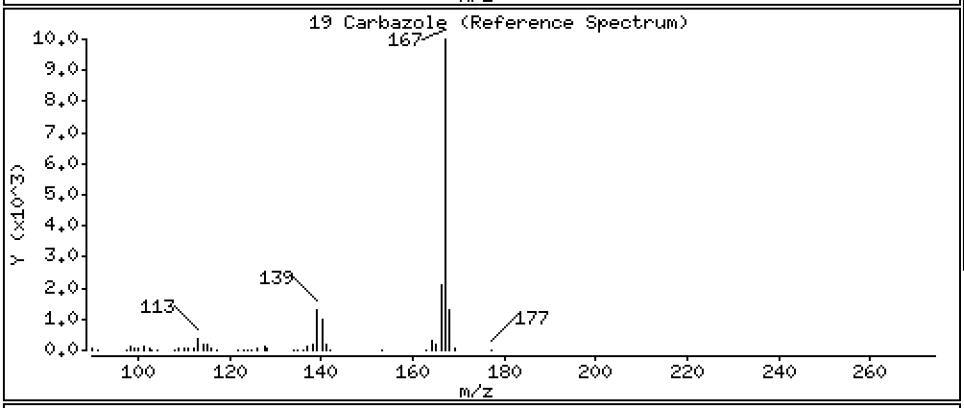
Concentration: 0.06270 ug/mL

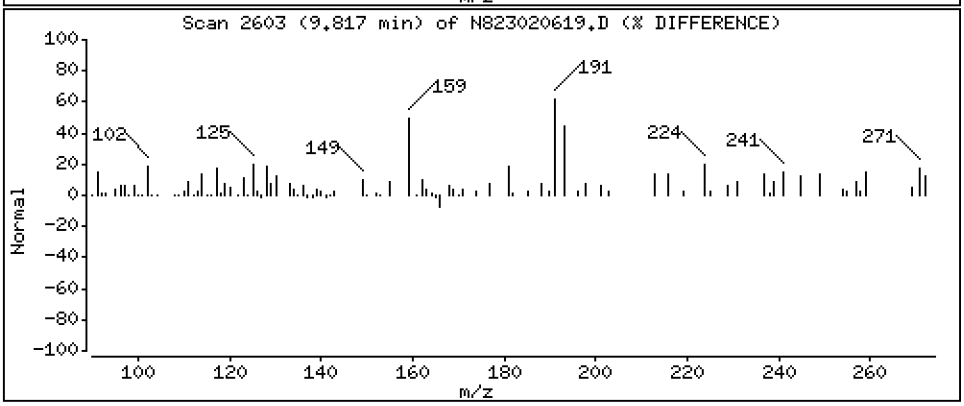












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Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

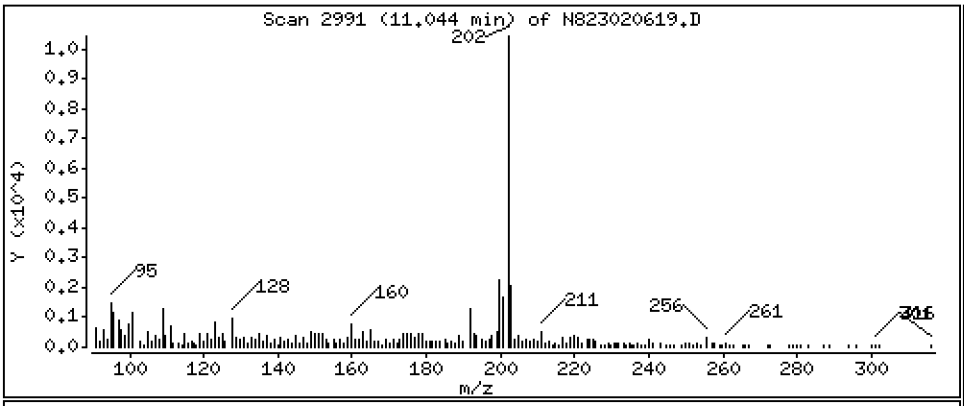
Operator: JZ

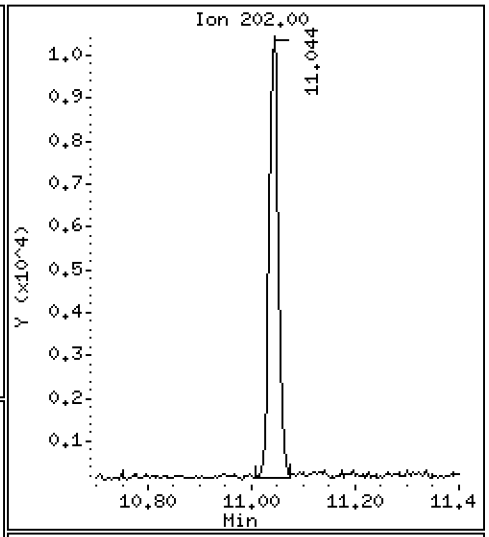
Column phase: Rxi-17sil

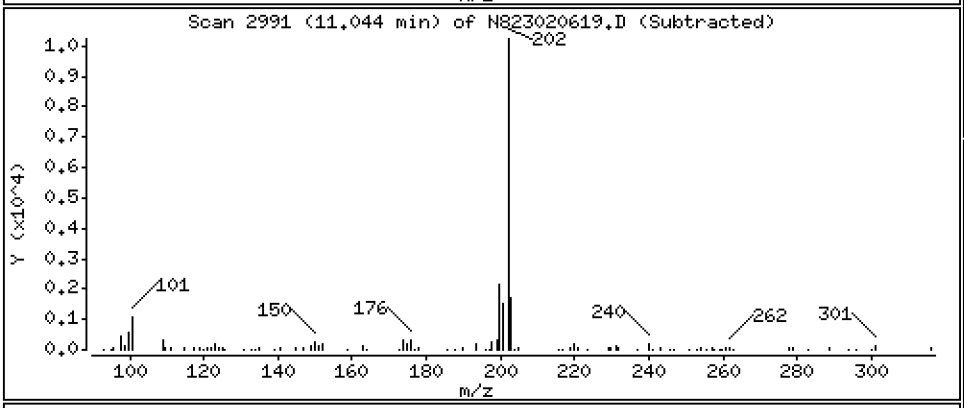
Column diameter: 0.25

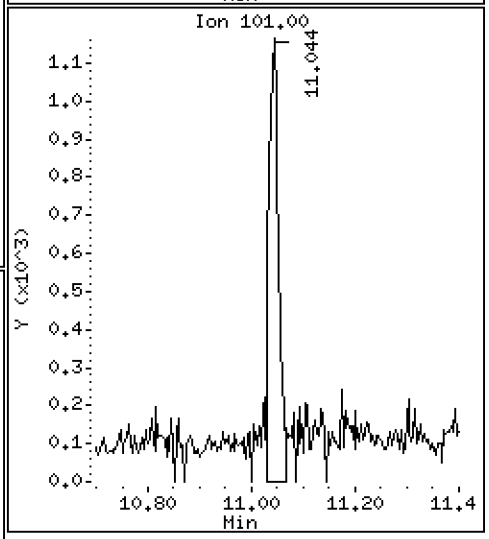
22 Fluoranthene

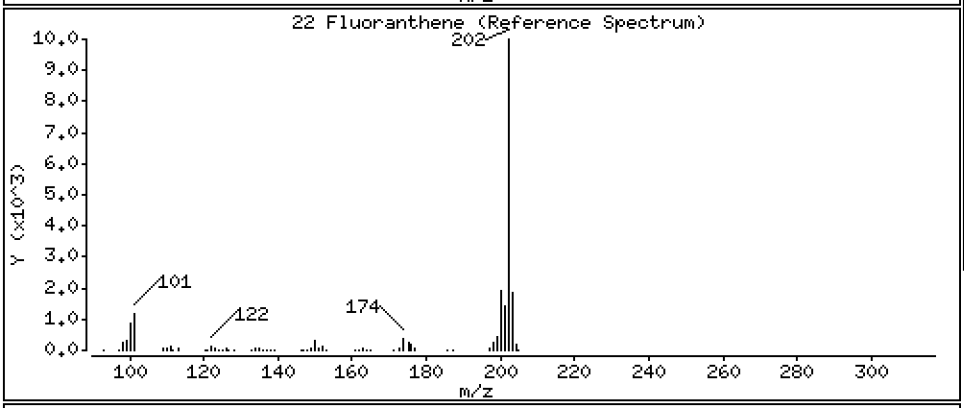
Concentration: 1.424 ug/mL

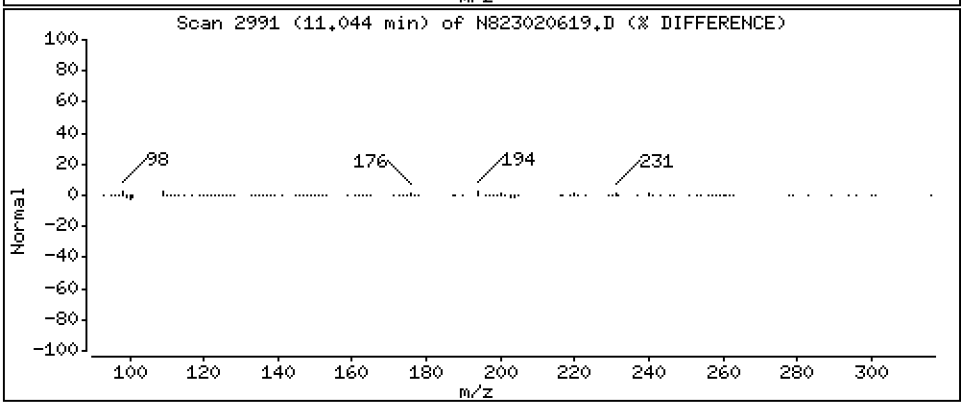












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Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

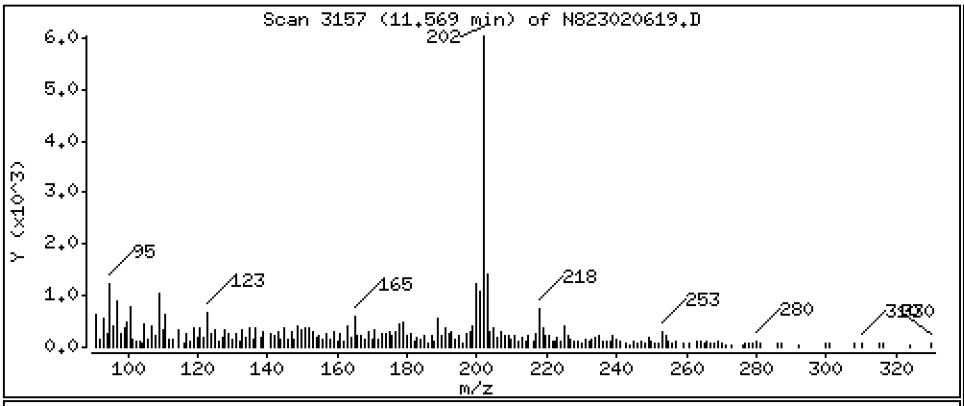
Operator: JZ

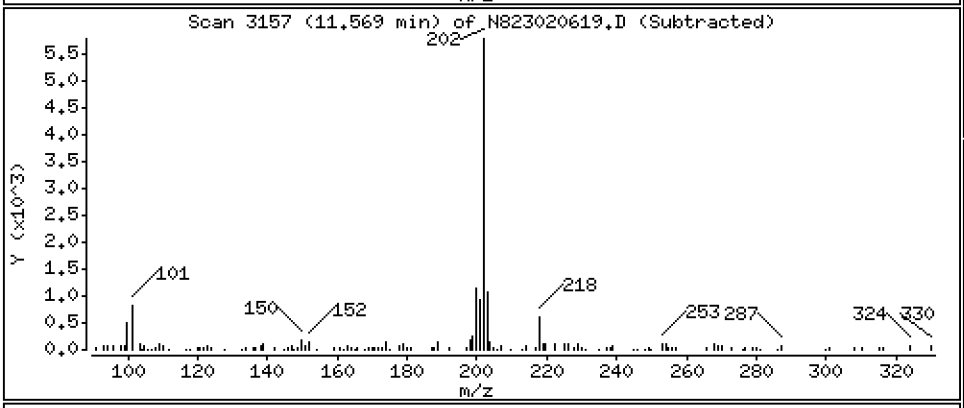
Column phase: Rxi-17sil

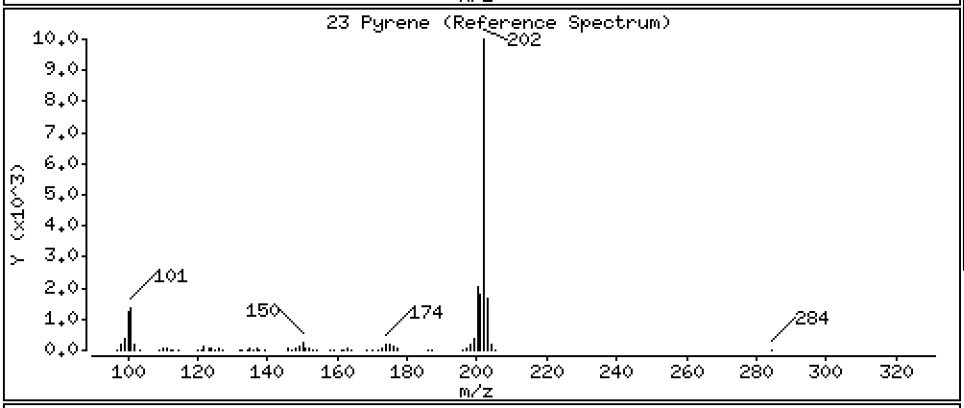
Column diameter: 0.25

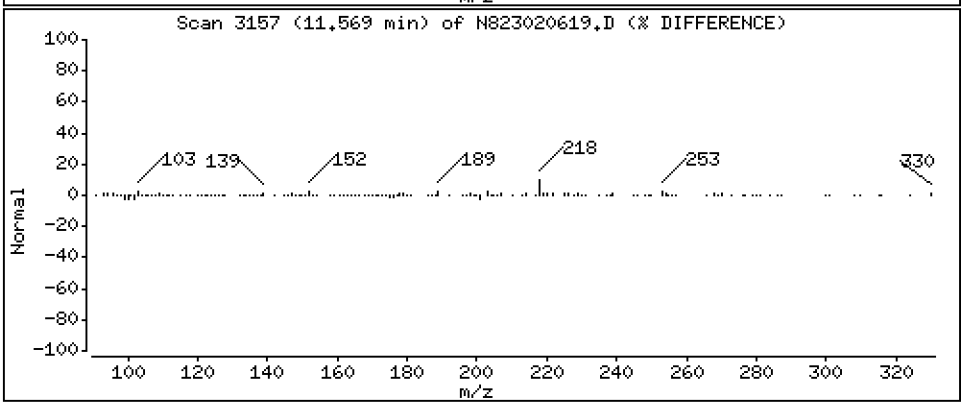
23 Pyrene

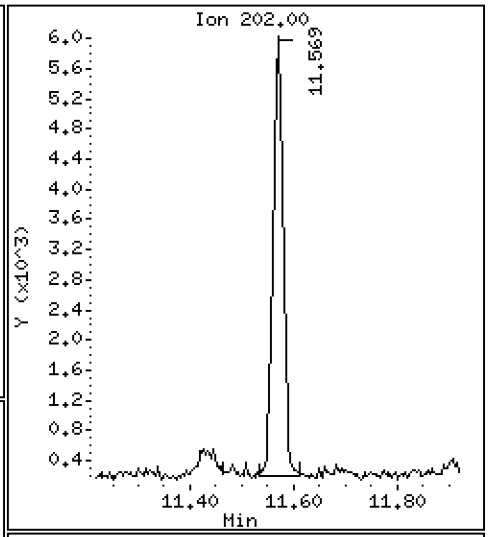
Concentration: 1.646 ug/mL

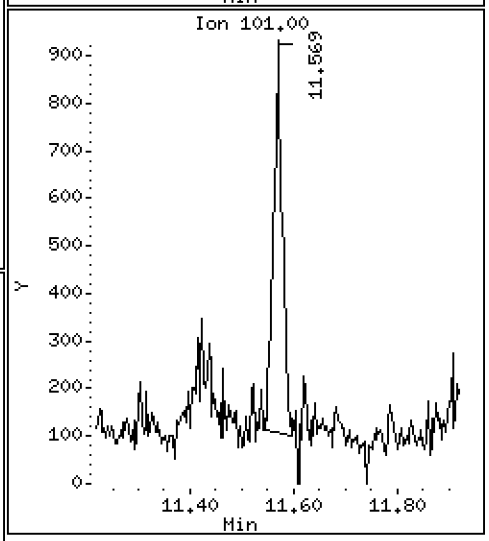












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020619.D

Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

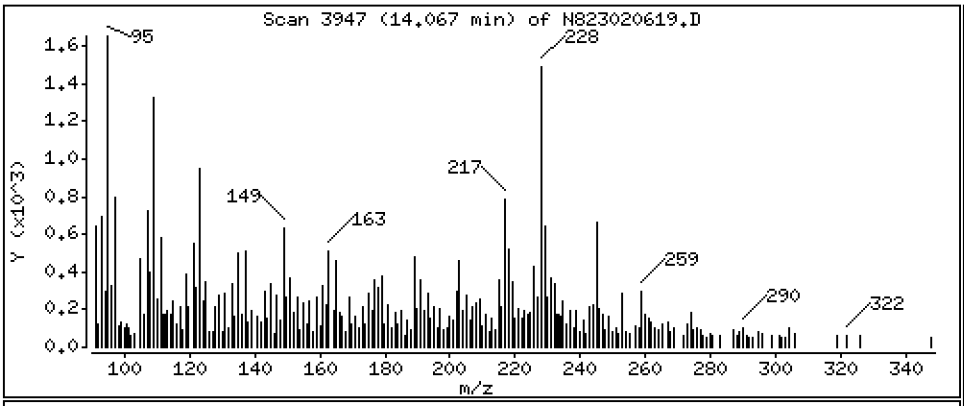
Operator: JZ

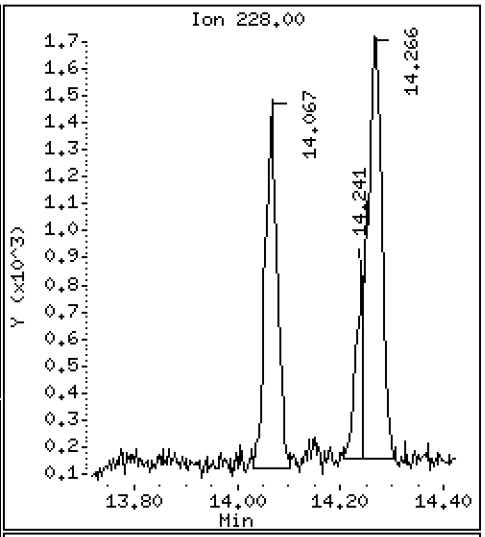
Column phase: Rxi-17sil

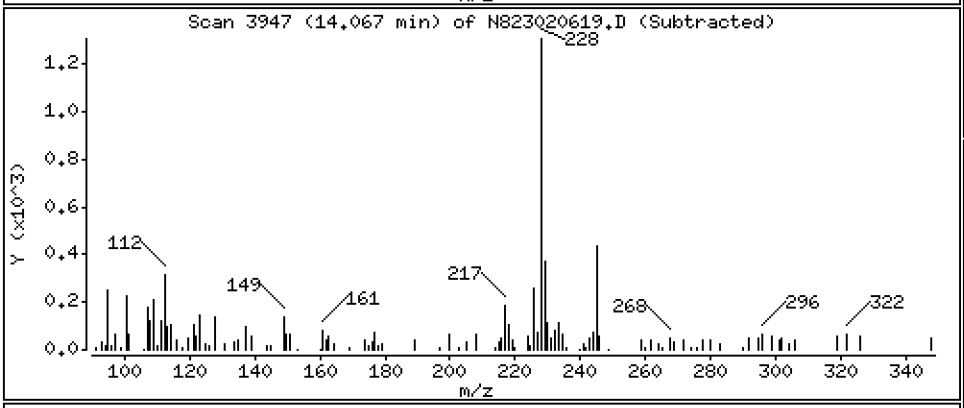
Column diameter: 0.25

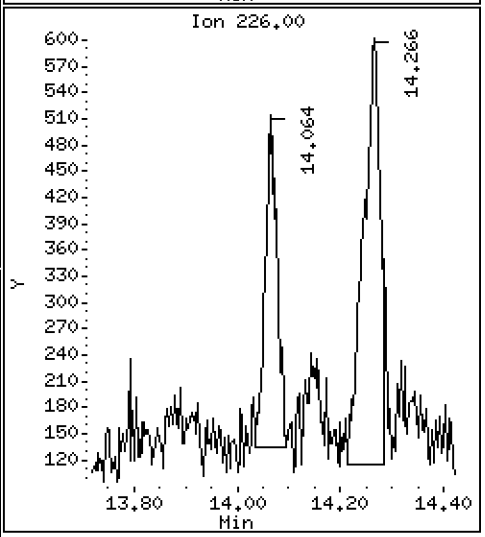
24 Benzo(a)anthracene

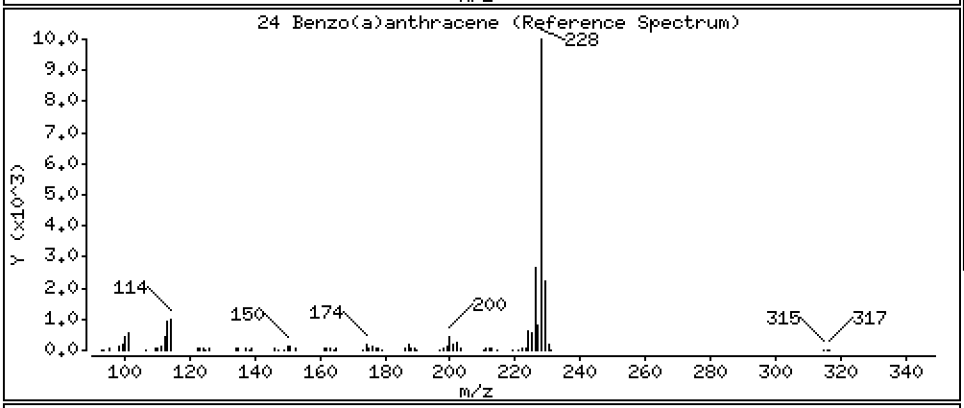
Concentration: 0.4919 ug/mL

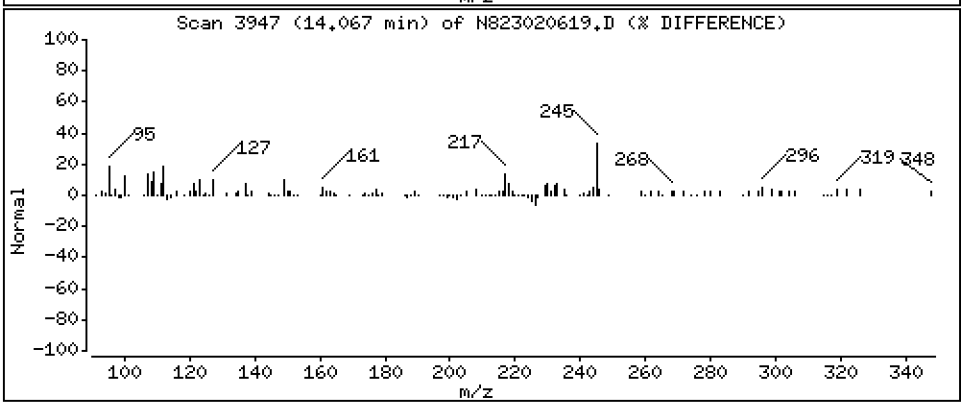












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020619.D

Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

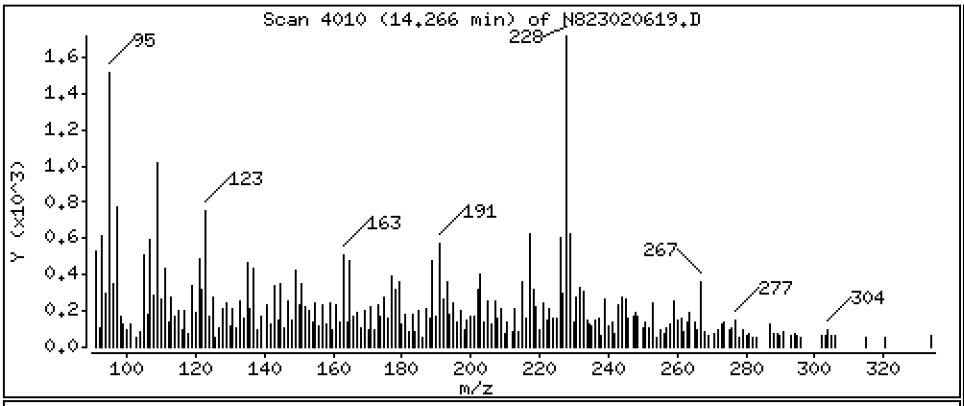
Operator: JZ

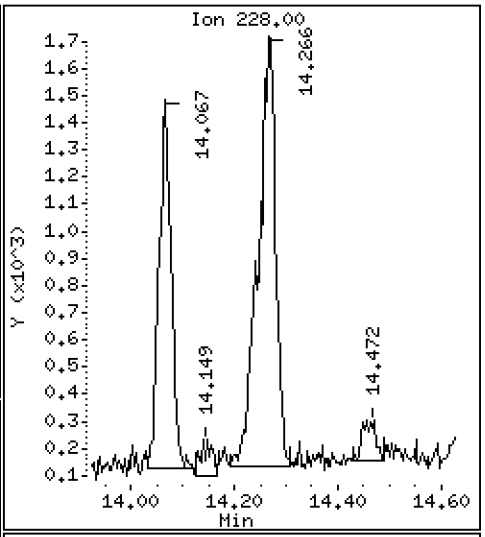
Column phase: Rxi-17sil

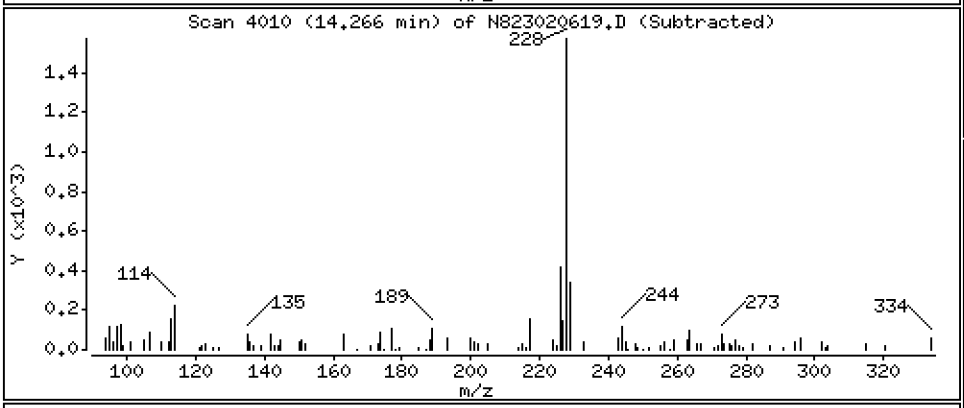
Column diameter: 0.25

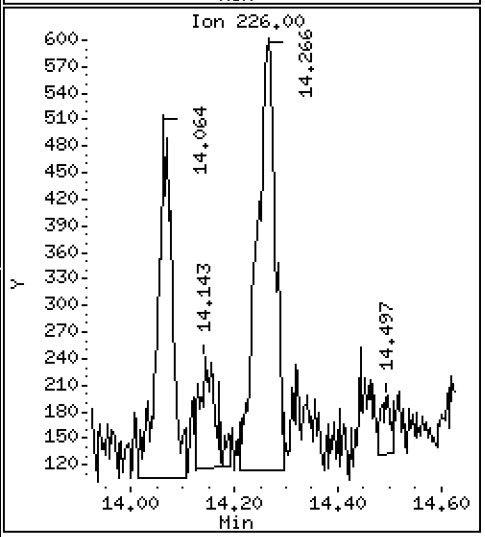
27 Chrysene

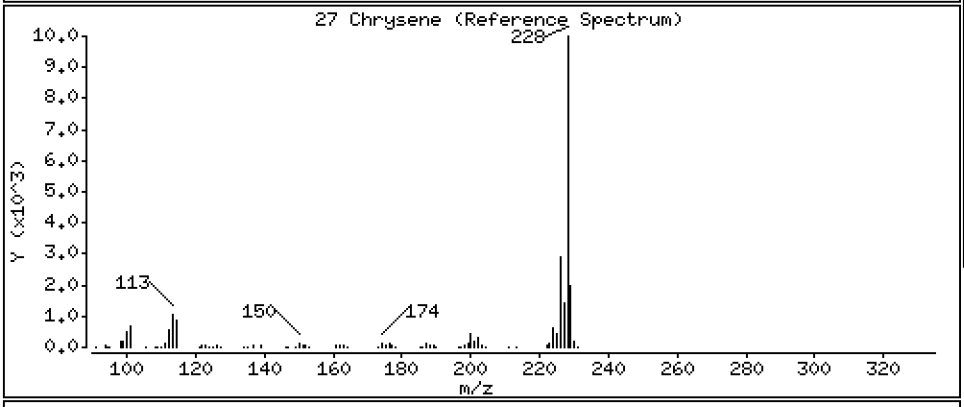
Concentration: 0.7731 ug/mL

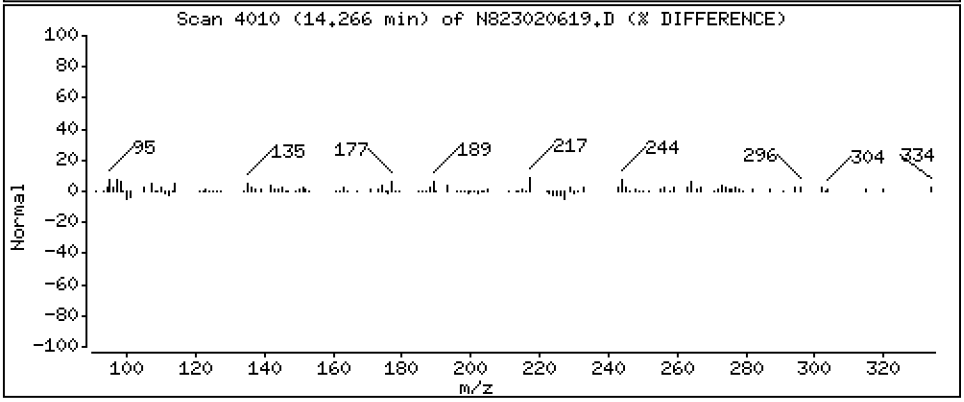












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Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

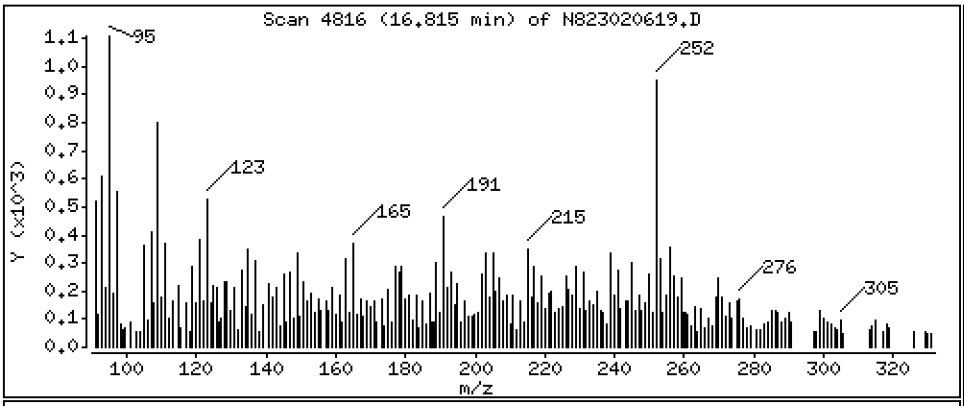
Operator: JZ

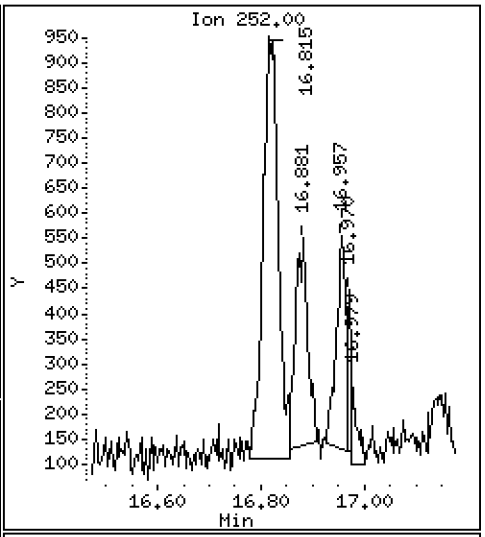
Column phase: Rxi-17sil

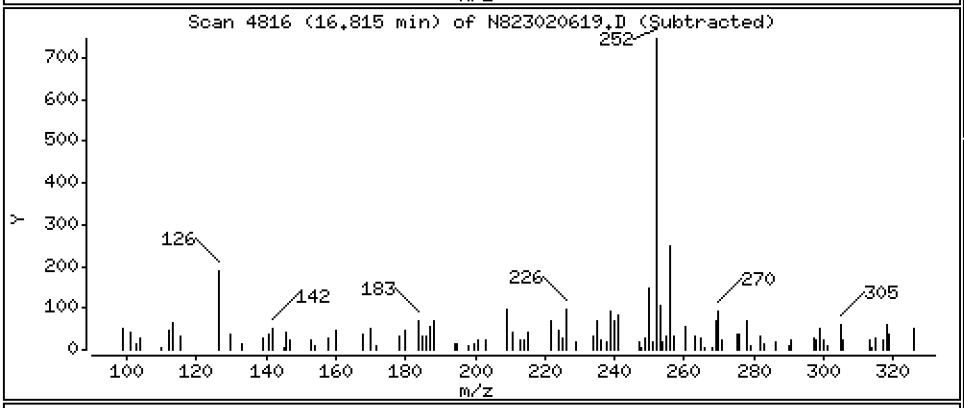
Column diameter: 0.25

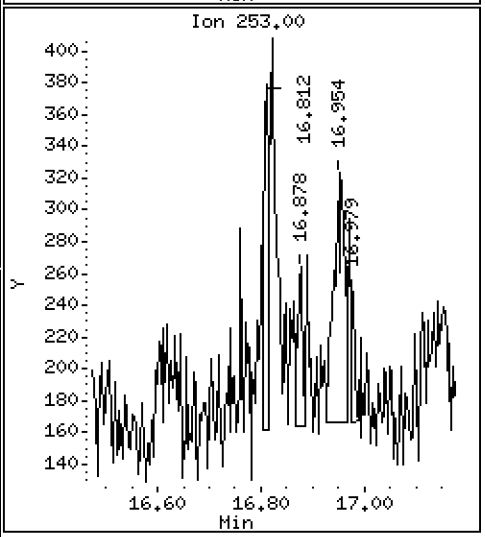
28 Benzo(b)fluoranthene

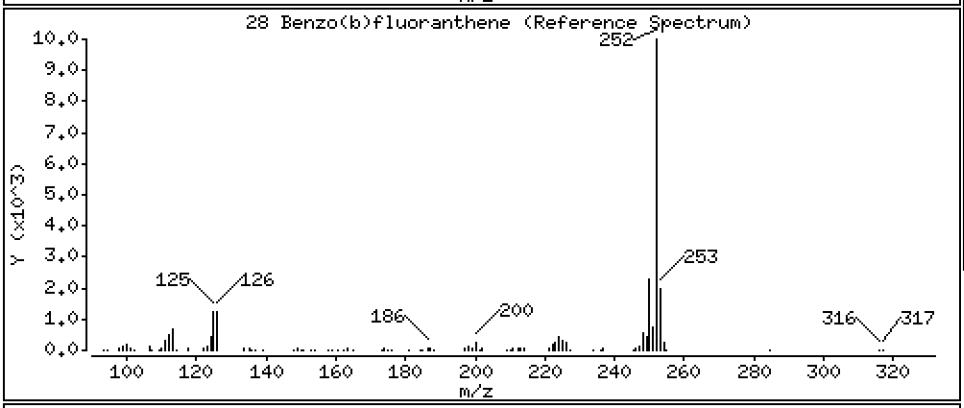
Concentration: 0.4520 ug/mL

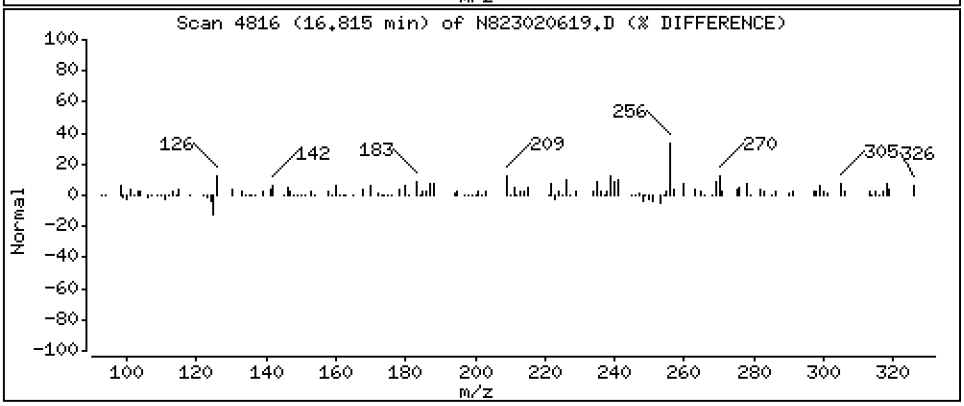












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Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

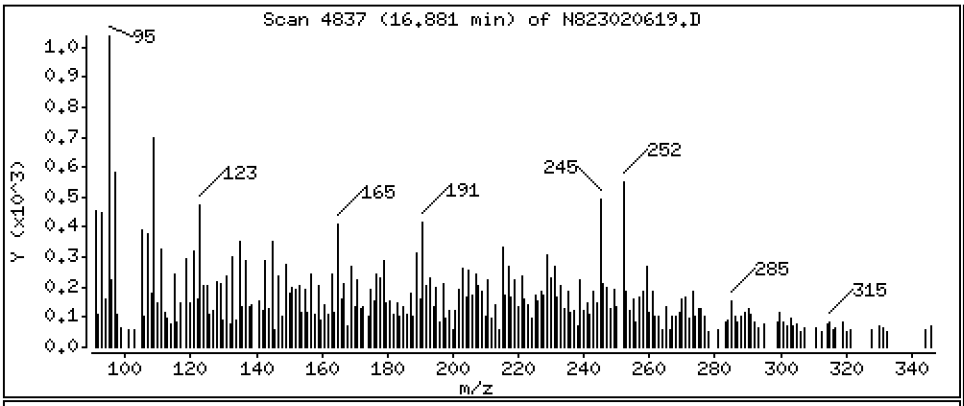
Operator: JZ

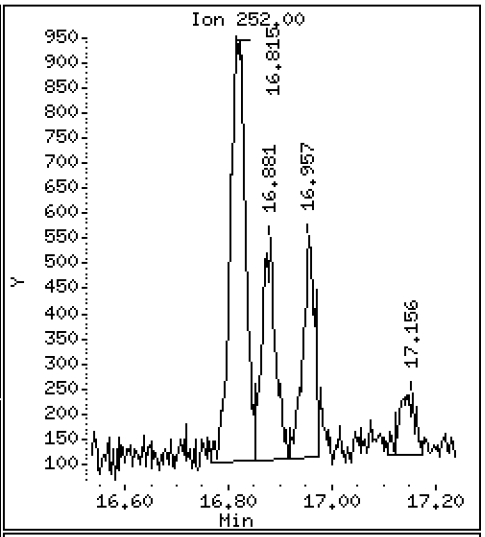
Column phase: Rxi-17sil

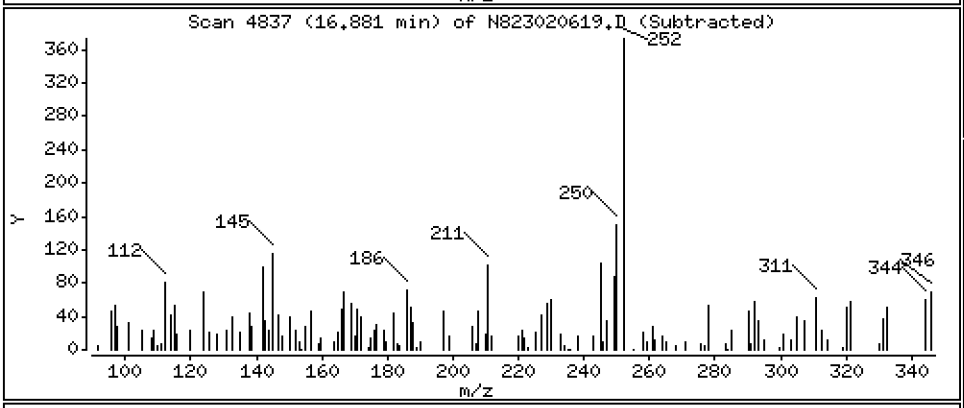
Column diameter: 0.25

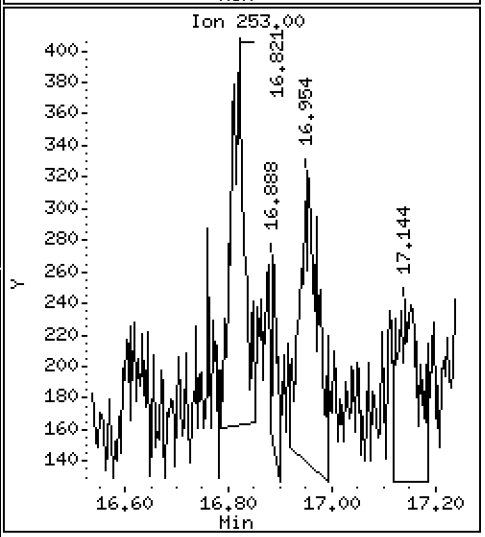
29 Benzo(k)fluoranthene

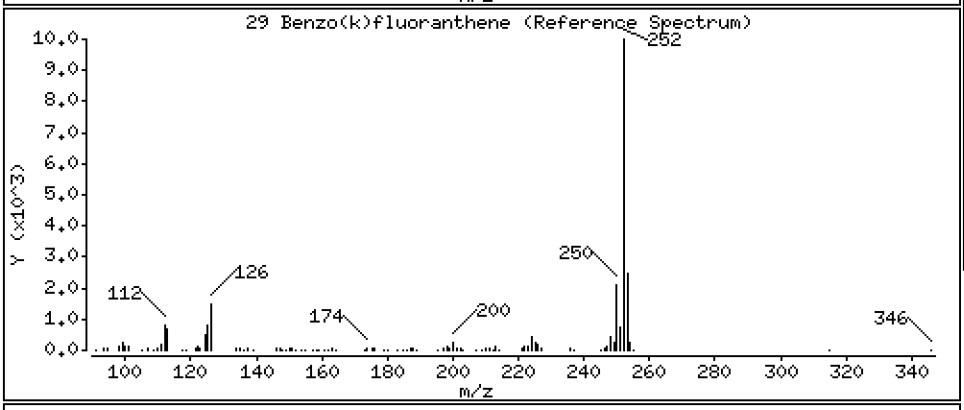
Concentration: 0.2140 ug/mL

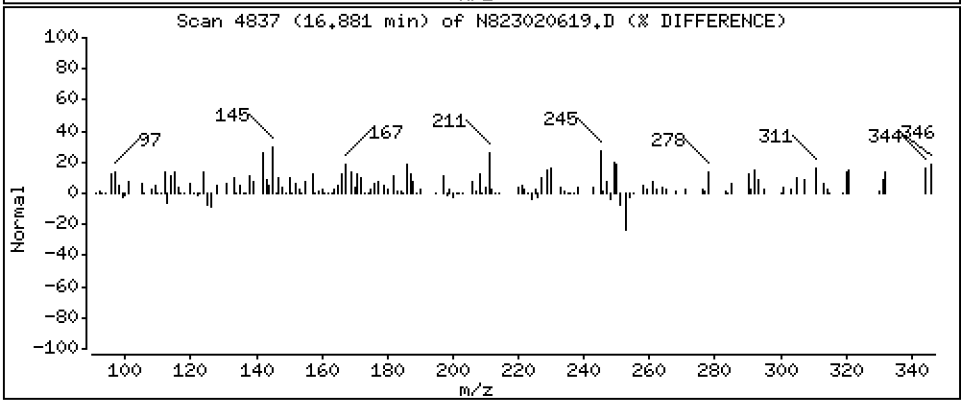












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020619.D

Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

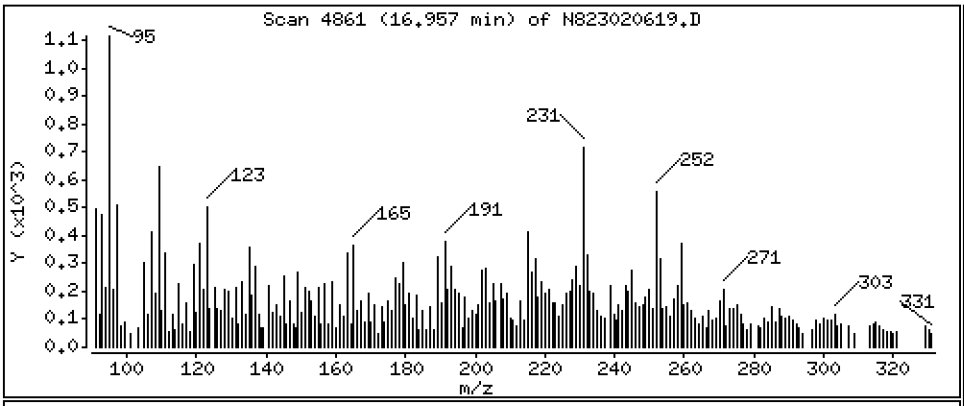
Operator: JZ

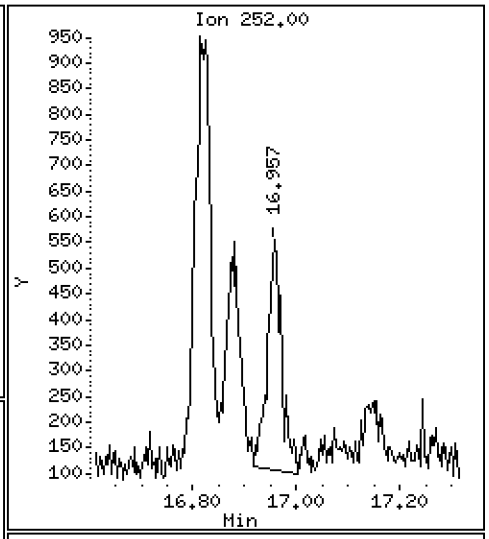
Column phase: Rxi-17sil

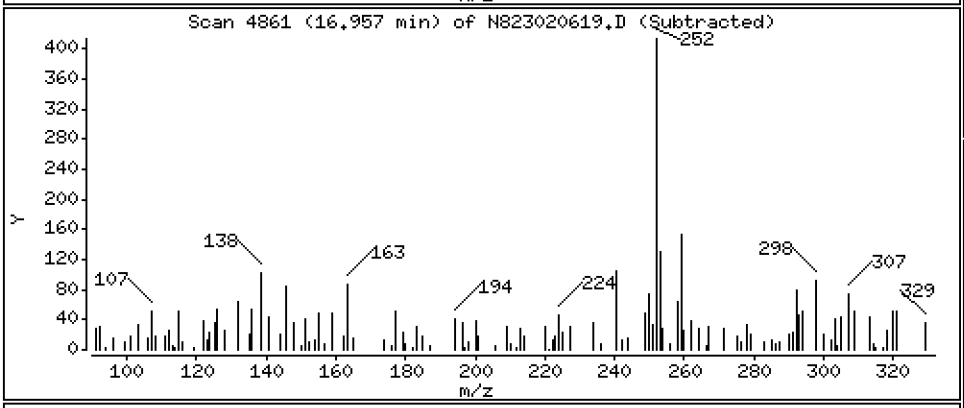
Column diameter: 0.25

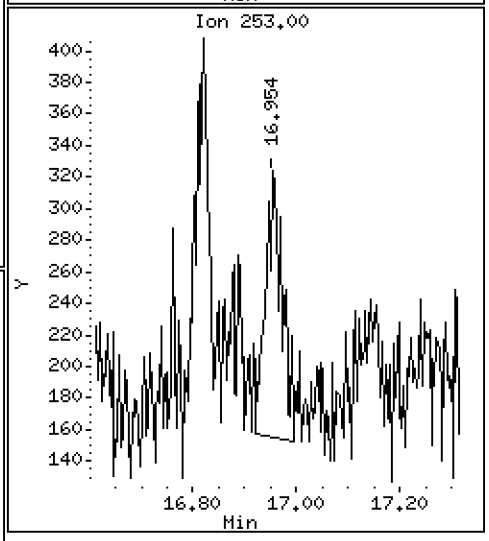
30 Benzo(j)fluoranthene

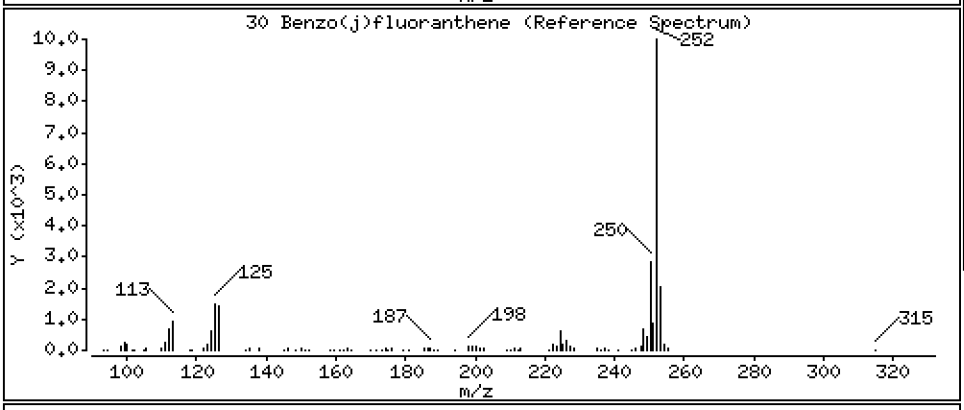
Concentration: 0.2463 ug/mL

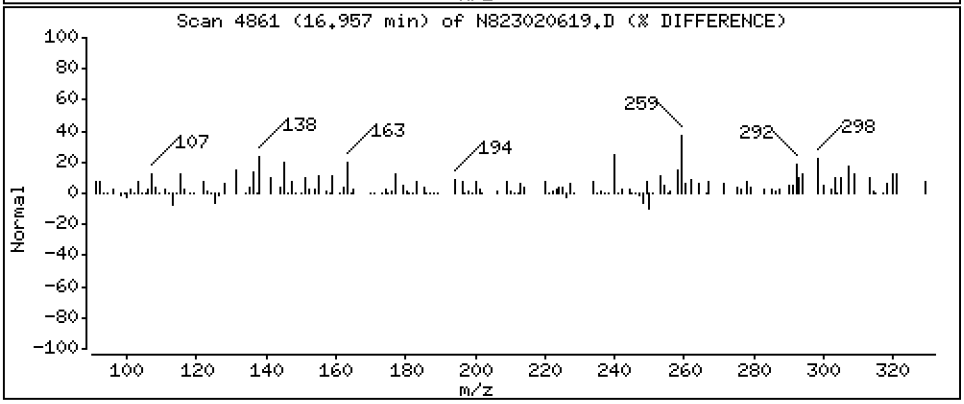












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020619.D

Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

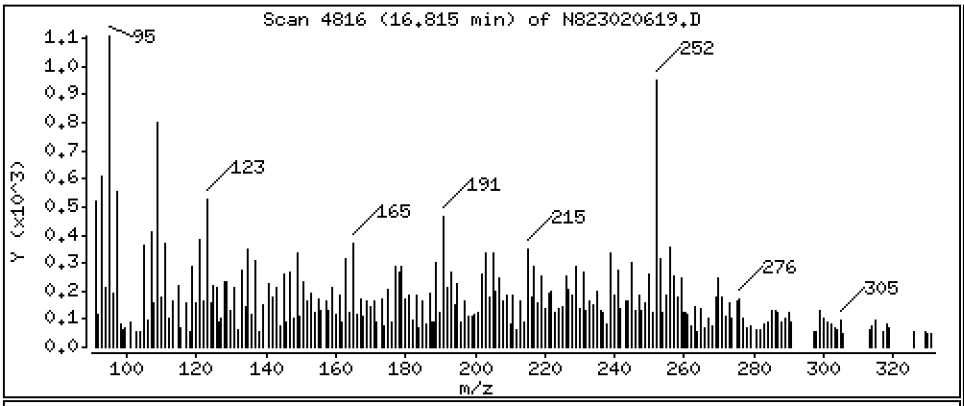
Operator: JZ

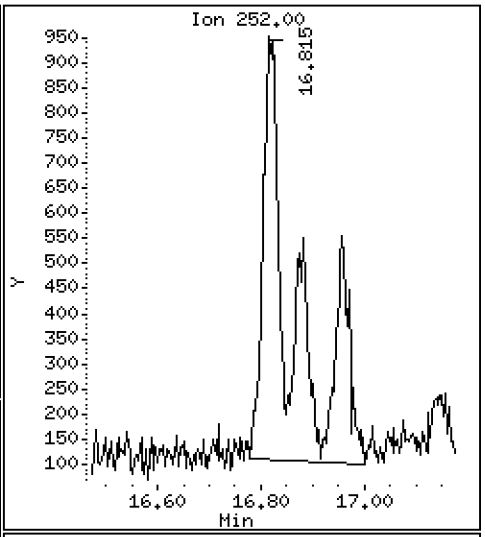
Column phase: Rxi-17sil

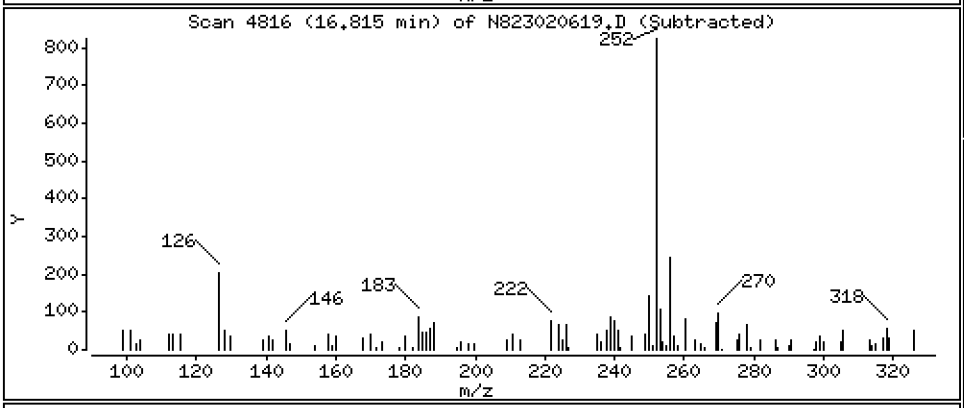
Column diameter: 0.25

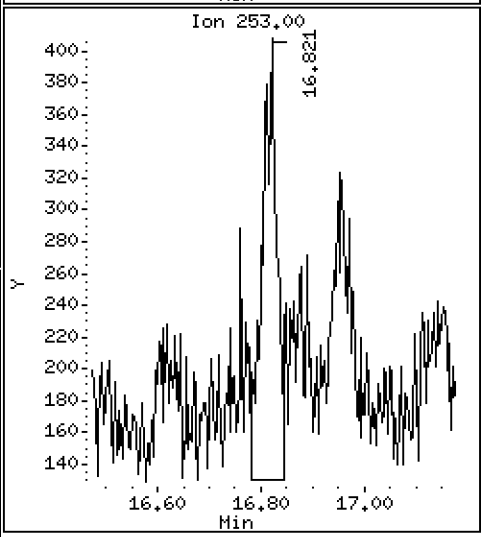
31 Total Benzofluoranthenes

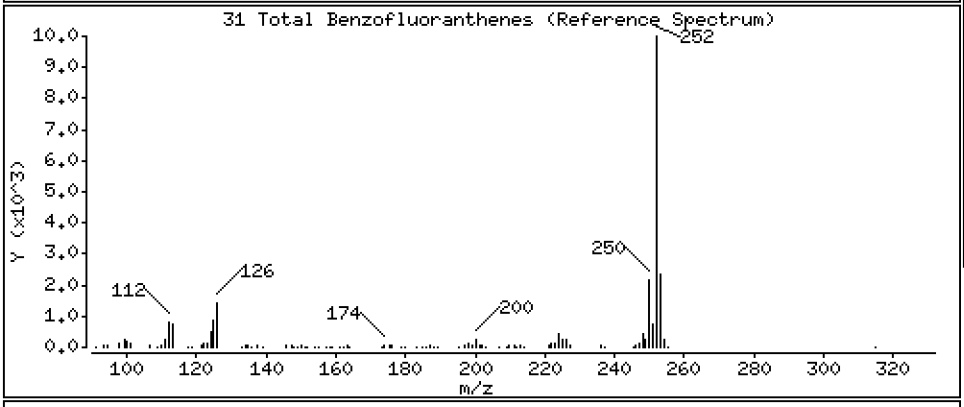
Concentration: 0.9282 ug/mL

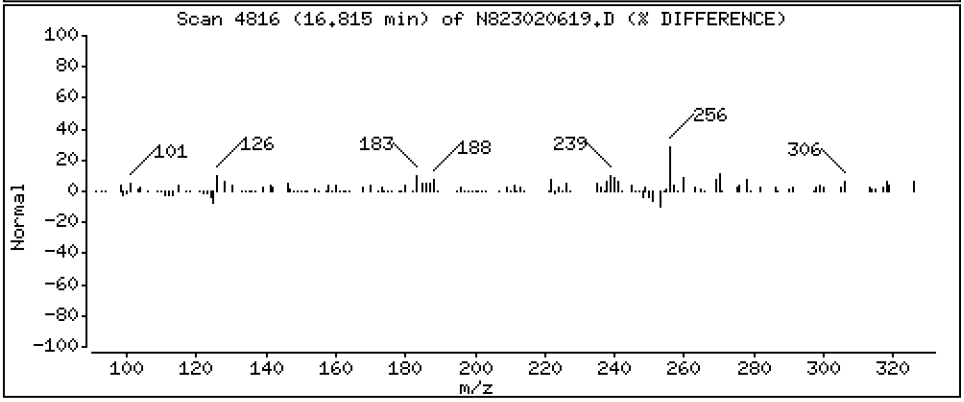












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020619.D

Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

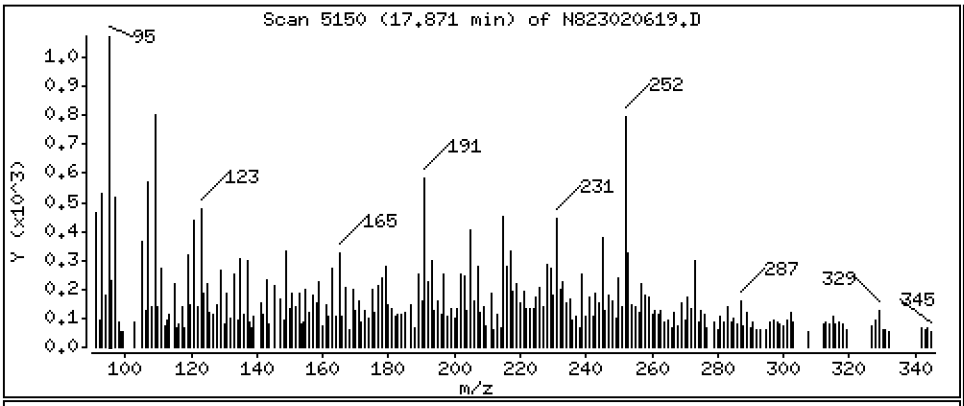
Operator: JZ

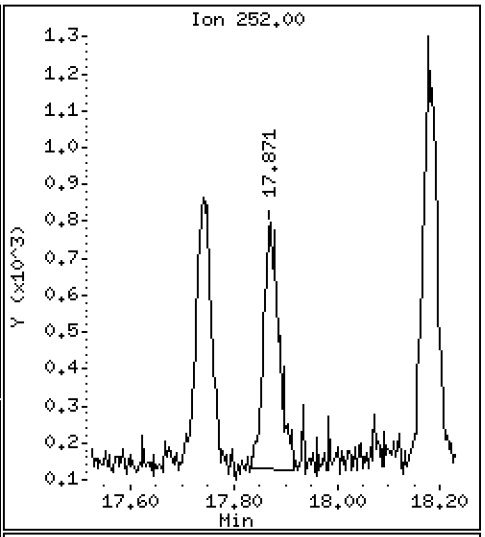
Column phase: Rxi-17sil

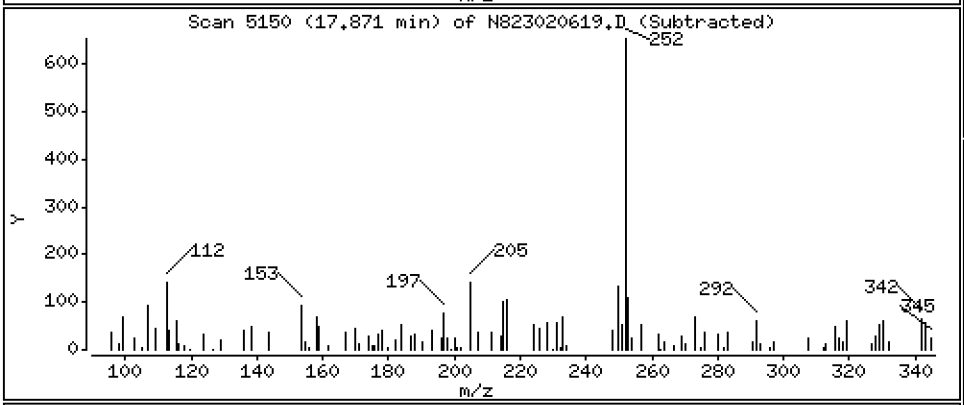
Column diameter: 0.25

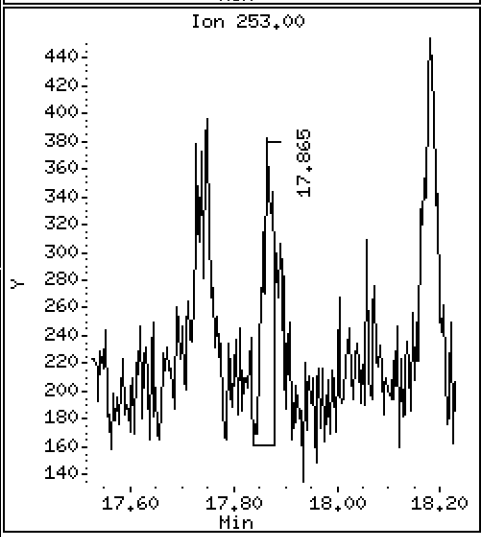
32 Benzo(a)pyrene

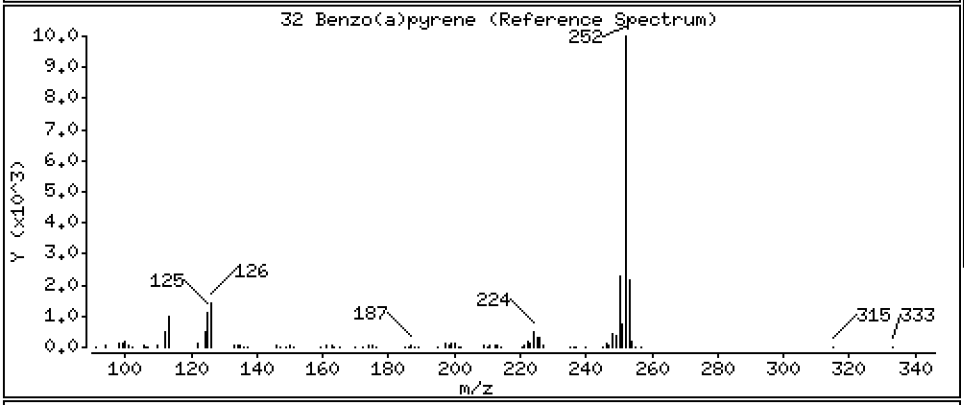
Concentration: 0.4060 ug/mL

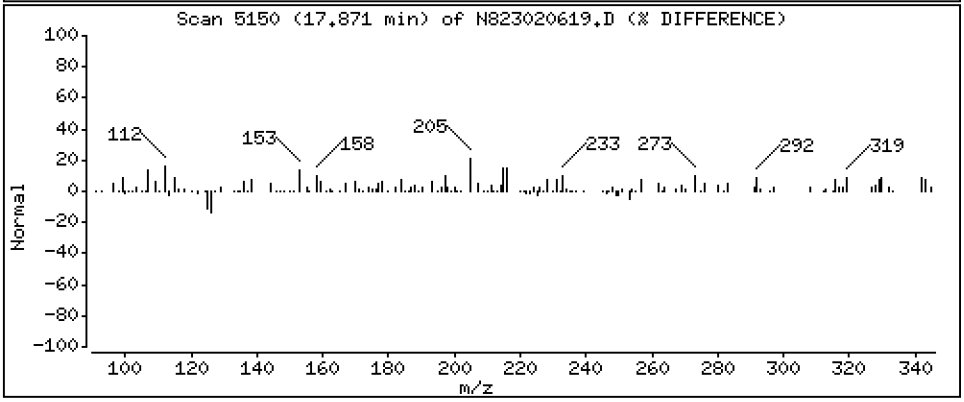












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020619.D

Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

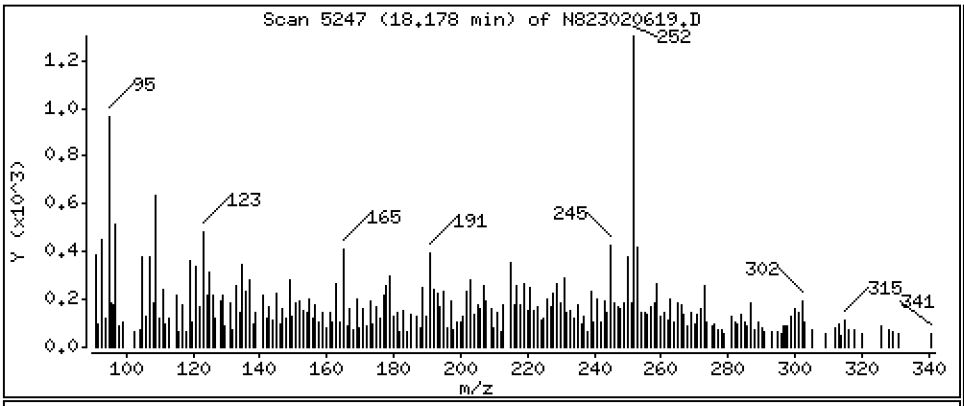
Operator: JZ

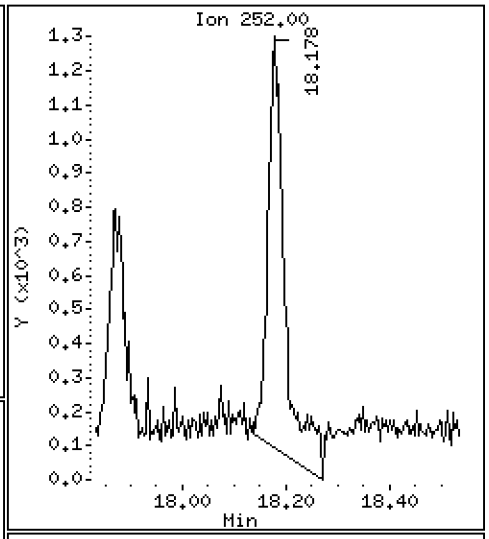
Column phase: Rxi-17sil

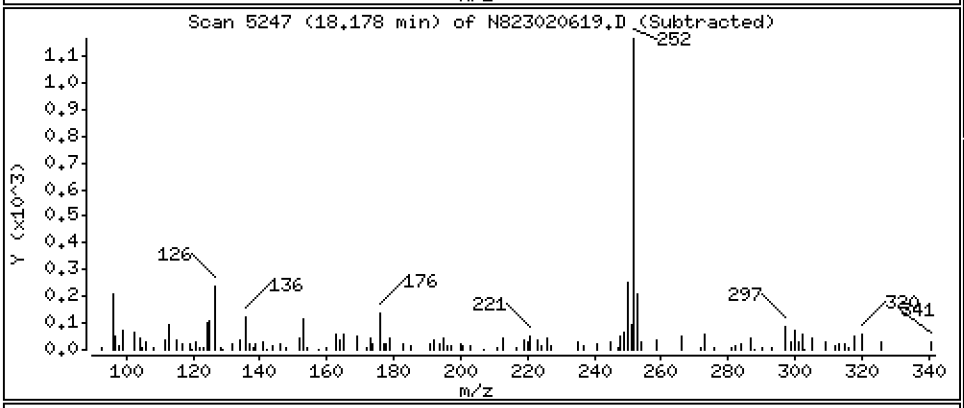
Column diameter: 0.25

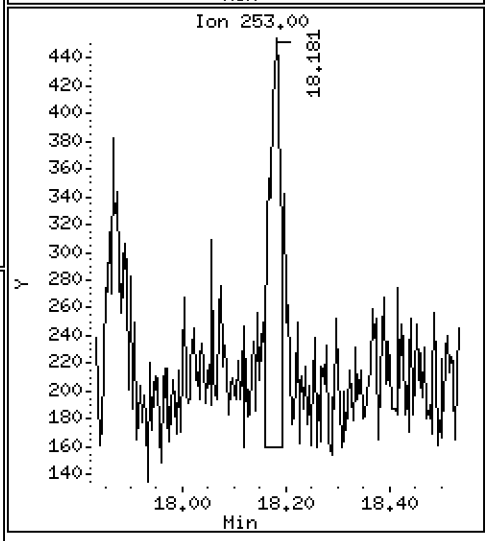
35 Perylene

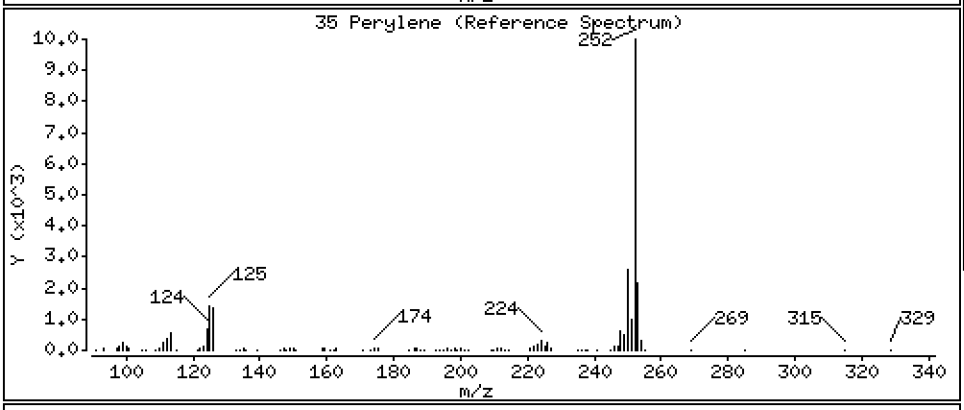
Concentration: 0.7472 ug/mL

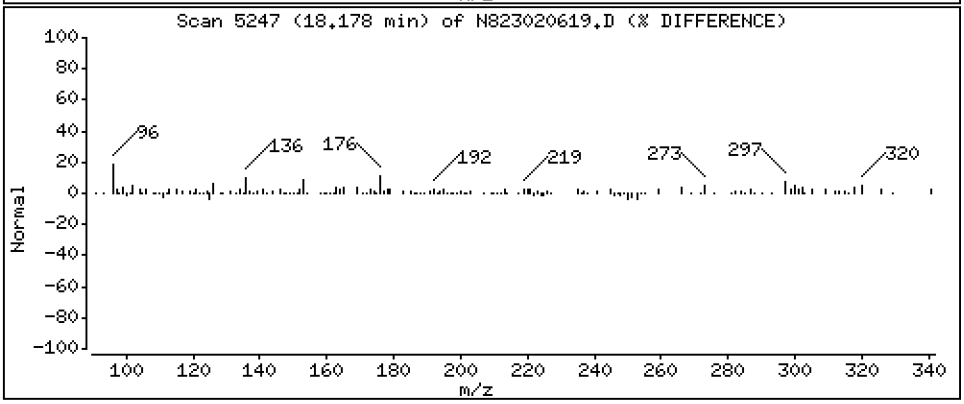












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Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

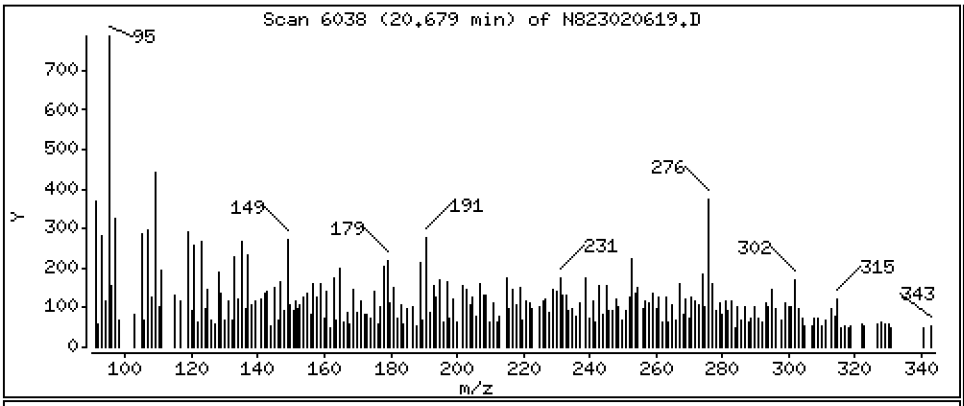
Operator: JZ

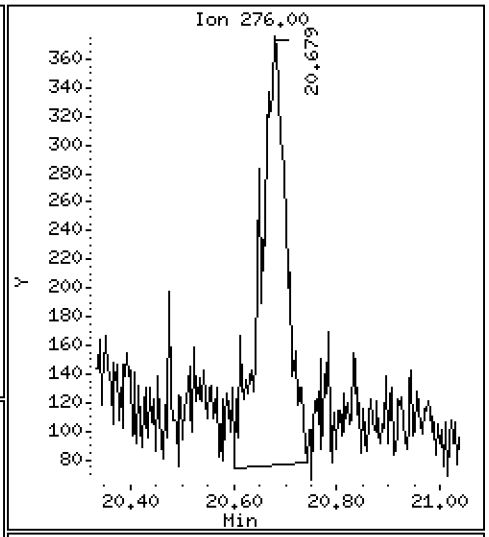
Column phase: Rxi-17sil

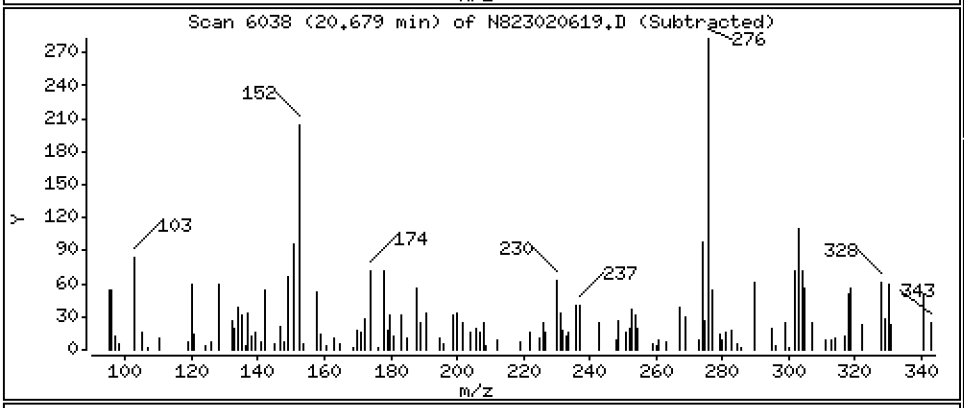
Column diameter: 0.25

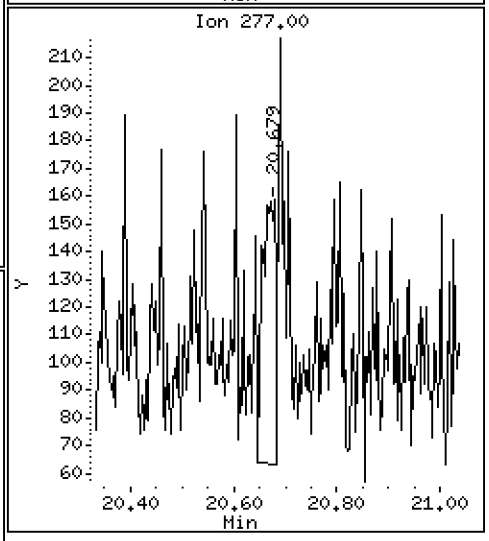
37 Indeno(1,2,3-cd)pyrene

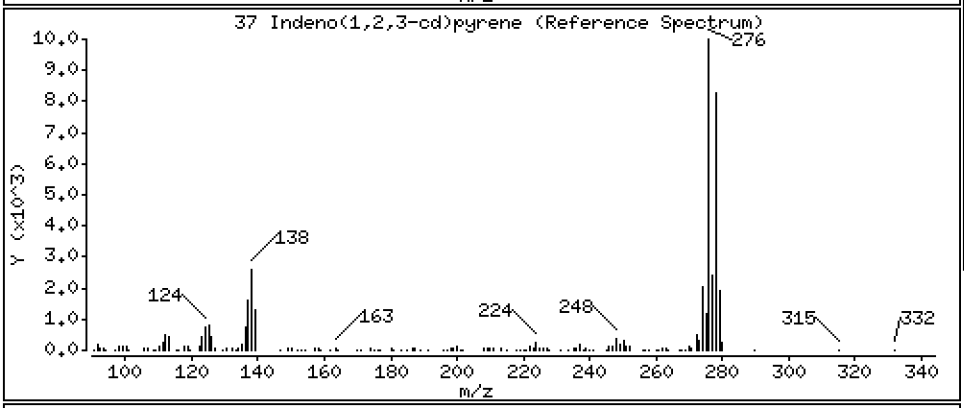
Concentration: 0.2680 ug/mL

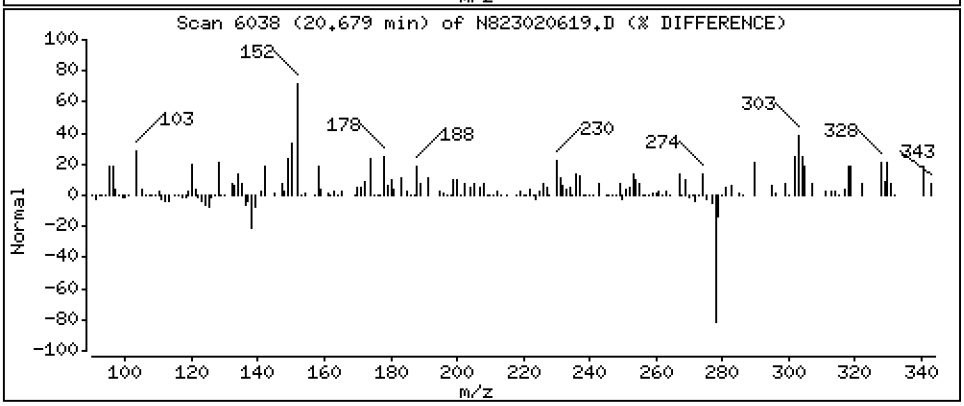












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Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

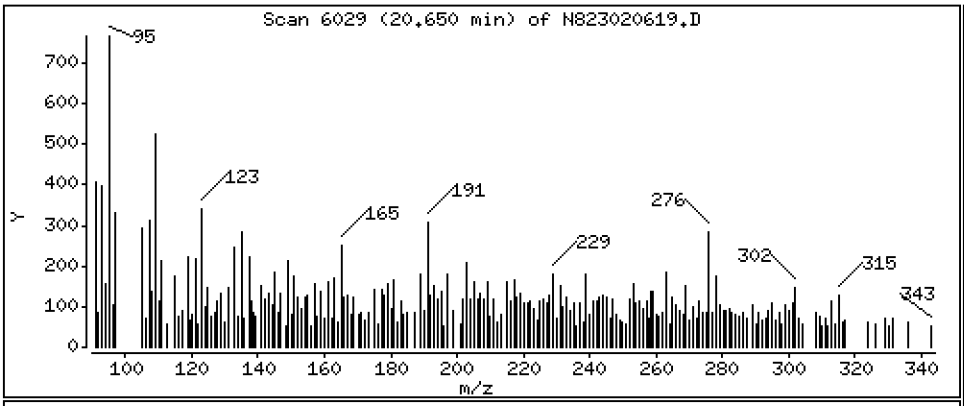
Operator: JZ

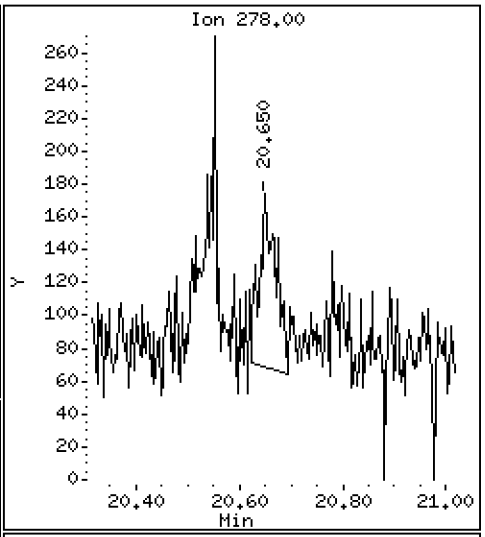
Column phase: Rxi-17sil

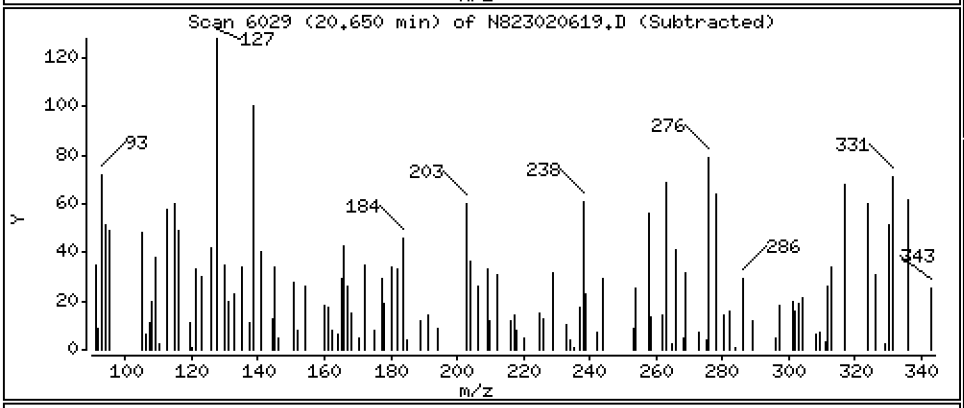
Column diameter: 0.25

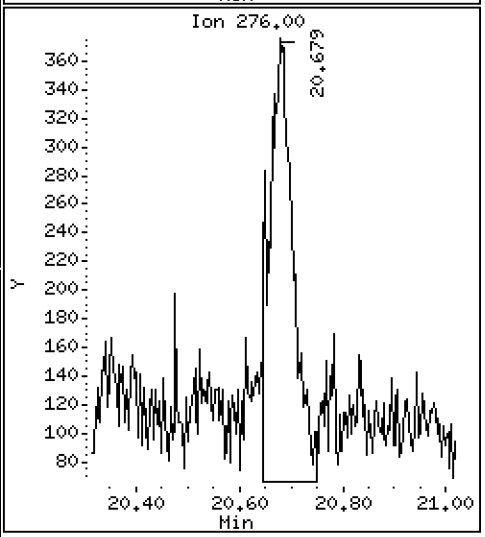
38 Dibenzo(a,h)anthracene

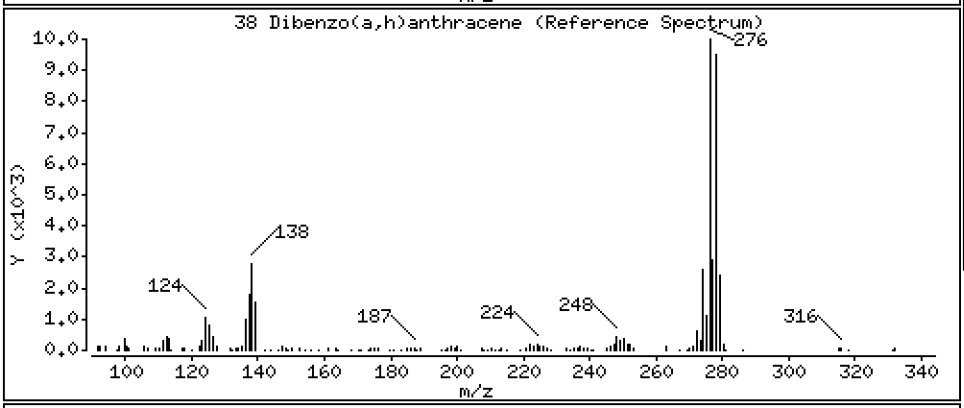
Concentration: 0.07083 ug/mL

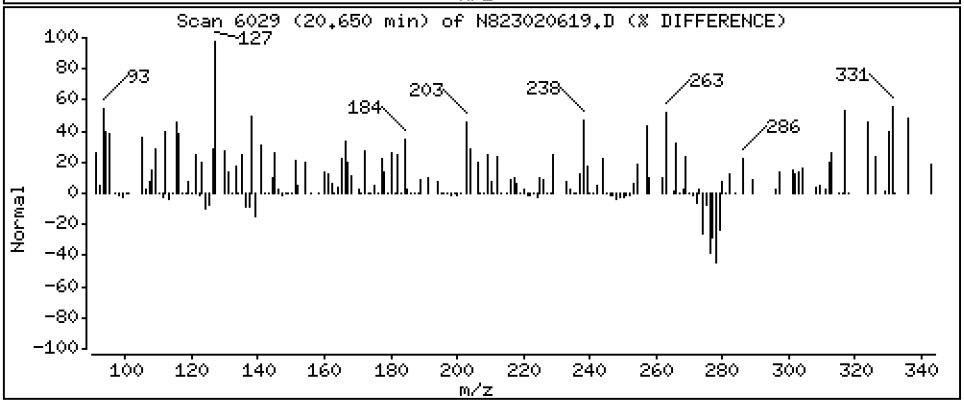












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020619.D

Date : 06-FEB-2023 20:53

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-06,3

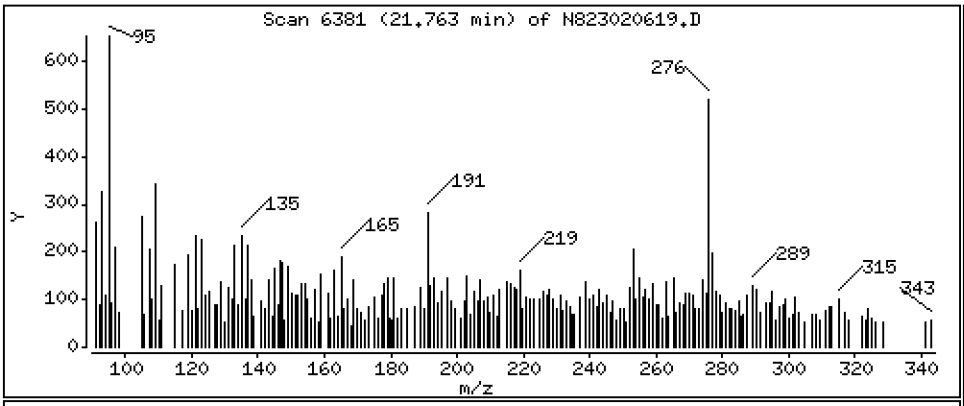
Operator: JZ

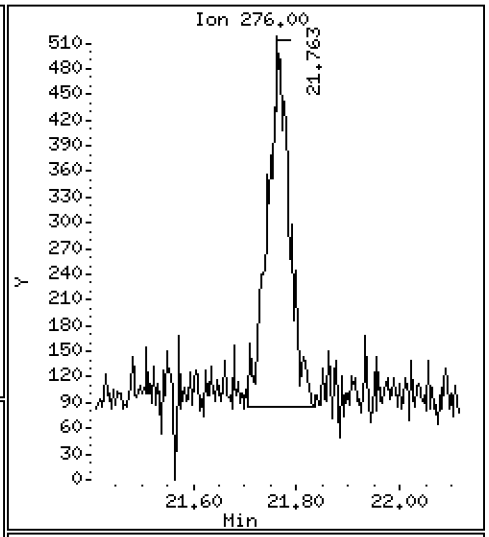
Column phase: Rxi-17sil

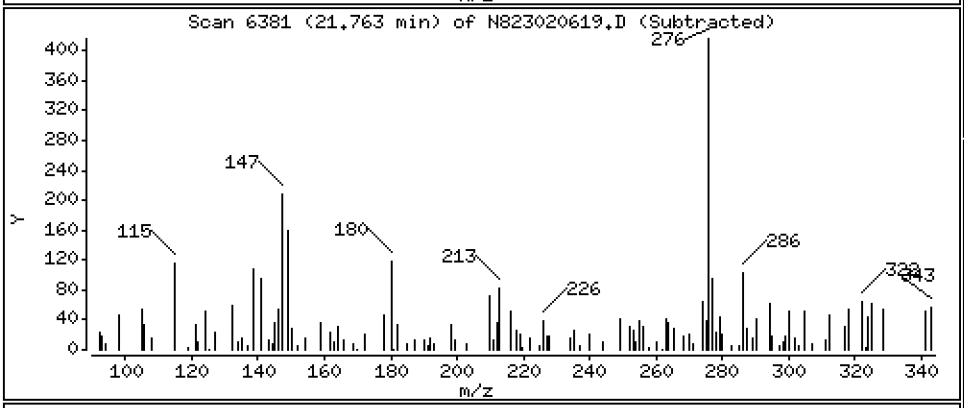
Column diameter: 0.25

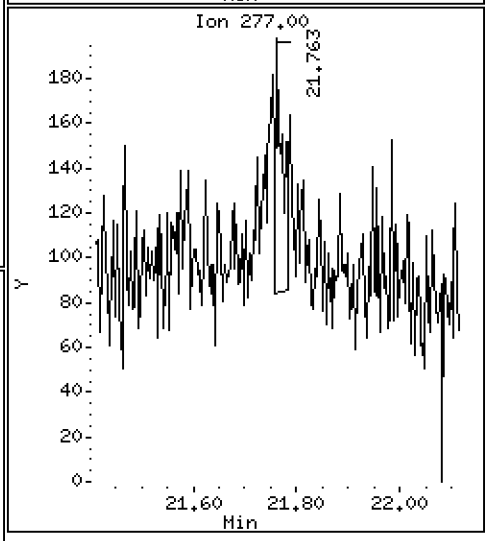
39 Benzo(g,h,i)perylene

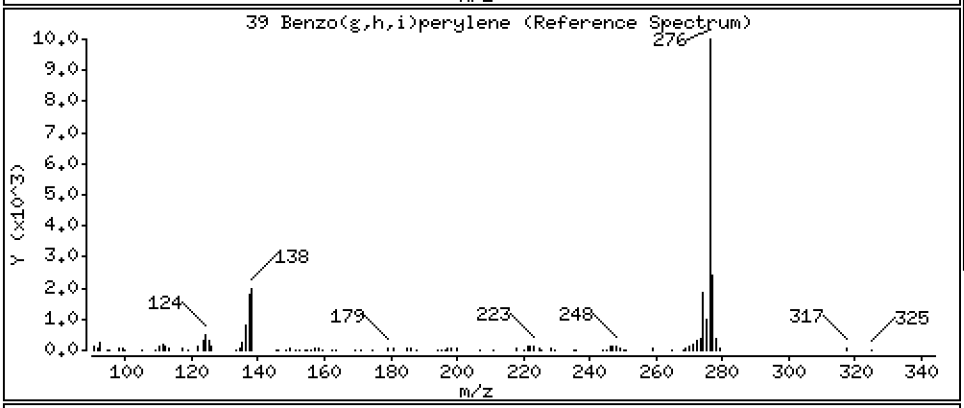
Concentration: 0.3524 ug/mL

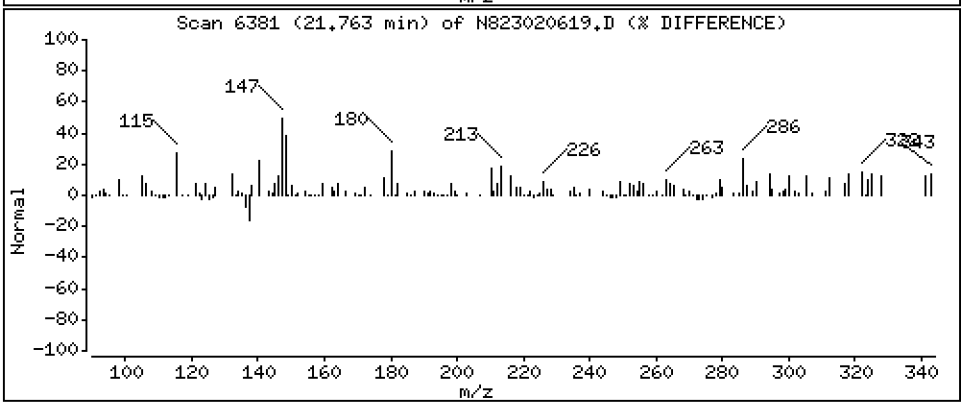












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020619.D
Lab Smp Id: 23A0207-06
Inj Date : 06-FEB-2023 20:53
Operator : JZ Inst ID: nt8.i
Smp Info : 23A0207-06,3
Misc Info : 23-
Comment : 1ul Injection
Method : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 13:04 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 19
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.891	4.900	(1.000)	50637	2.00000	
	2 Naphthalene	128	4.922	4.928	(1.006)	2934	0.12462	0.3739
$	3 2-Methylnaphthalene-d10	152	5.627	5.634	(1.151)	15954	1.15525	3.466
	4 2-Methylnaphthalene	141	5.672	5.681	(1.160)	295	0.02278	0.06834
	5 1-methylnaphthalene	141	5.871	5.880	(1.200)	352	0.02678	0.08034
	9 Acenaphthylene	152	Compound Not Detected.					
*	10 Acenaphthene-d10	164	7.183	7.189	(1.000)	30605	2.00000	
	11 Acenaphthene	153	7.234	7.240	(1.007)	3942	0.25457	0.7637
	12 Dibenzofuran	168	7.389	7.392	(1.029)	641	0.02725	0.08176
	14 Fluorene	166	7.863	7.869	(1.095)	2255	0.12345	0.3703
*	15 Phenanthrene-d10	188	9.226	9.232	(1.000)	52103	2.00000	
	16 Phenanthrene	178	9.260	9.267	(1.004)	3718	0.14608	0.4383
	17 Anthracene	178	9.302	9.308	(1.008)	1056	0.04567	0.1370
	19 Carbazole	167	9.817	9.823	(1.064)	443	0.02090	0.06270
	22 Fluoranthene	202	11.044	11.050	(1.197)	13148	0.47459	1.424
$	21 Fluoranthene-d10	212	11.006	11.009	(1.193)	26105	1.13561	3.407
	23 Pyrene	202	11.569	11.569	(0.815)	8191	0.54856	1.646
	24 Benzo(a)anthracene	228	14.067	14.070	(0.991)	2219	0.16396	0.4919
*	25 Chrysene-d12	240	14.196	14.202	(1.000)	24084	2.00000	
	27 Chrysene	228	14.266	14.275	(1.005)	3713	0.25771	0.7731
	28 Benzo(b)fluoranthene	252	16.814	16.824	(0.929)	1775	0.15066	0.4520
	29 Benzo(k)fluoranthene	252	16.881	16.887	(0.932)	823	0.07132	0.2140
	30 Benzo(j)fluoranthene	252	16.957	16.963	(0.937)	853	0.08211	0.2463(M)
	31 Total Benzofluoranthenes	252	16.814	16.824	(0.929)	3452	0.30938	0.9282(M)
	32 Benzo(a)pyrene	252	17.870	17.877	(0.987)	1403	0.13532	0.4060(M)
*	33 Perylene-d12	264	18.104	18.107	(1.000)	20229	2.00000	
	35 Perylene	252	18.177	18.183	(1.004)	2771	0.24907	0.7472(M)
$	36 Dibenzo(a,h)anthracene-d14	292	20.549	20.549	(1.135)	10733	1.35412	4.062
	37 Indeno(1,2,3-cd)pyrene	276	20.678	20.684	(1.142)	1055	0.08932	0.2680(M)
	38 Dibenzo(a,h)anthracene	278	20.650	20.666	(1.141)	240	0.02361	0.07083(M)
	39 Benzo(g,h,i)perylene	276	21.763	21.763	(1.202)	1257	0.11746	0.3524(M)

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020619.D
Lab Smp Id: 23A0207-06
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44336	22168	88672	50637	14.21
10 Acenaphthene-d10	26127	13064	52254	30605	17.14
15 Phenanthrene-d10	47424	23712	94848	52103	9.87
25 Chrysene-d12	36794	18397	73588	24084	-34.54
33 Perylene-d12	36636	18318	73272	20229	-44.78

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.89	-0.19
10 Acenaphthene-d10	7.19	6.69	7.69	7.18	-0.09
15 Phenanthrene-d10	9.23	8.73	9.73	9.23	-0.07
25 Chrysene-d12	14.20	13.70	14.70	14.20	-0.04
33 Perylene-d12	18.11	17.61	18.61	18.10	-0.02

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

REVIEW SUMMARY FOR FILE - N823020619.D

Lab ID: 23A0207-06
nt8.i, 20230206A.b\FSIMPNA230119.m,   06-FEB-2023 20:53

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

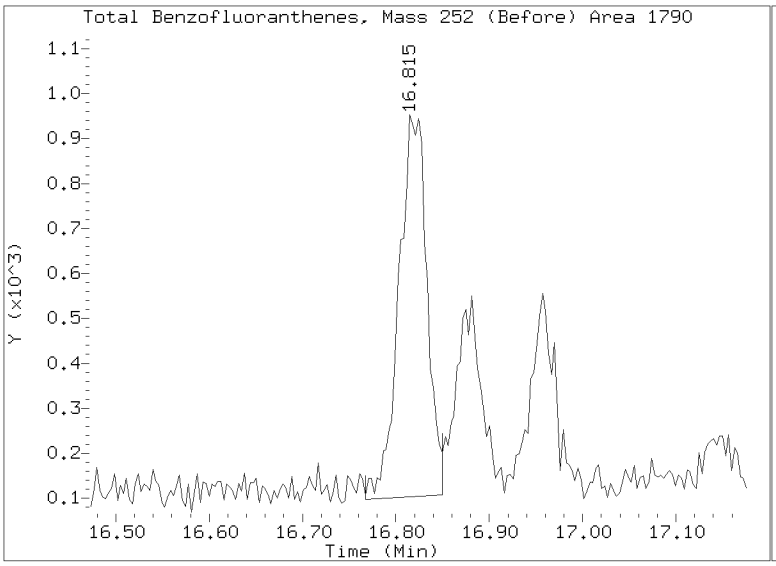
No RRT check performed

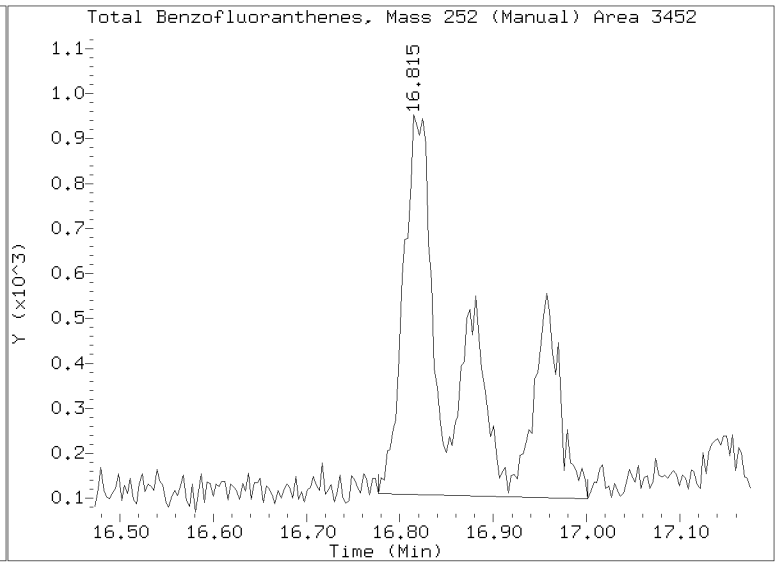
On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

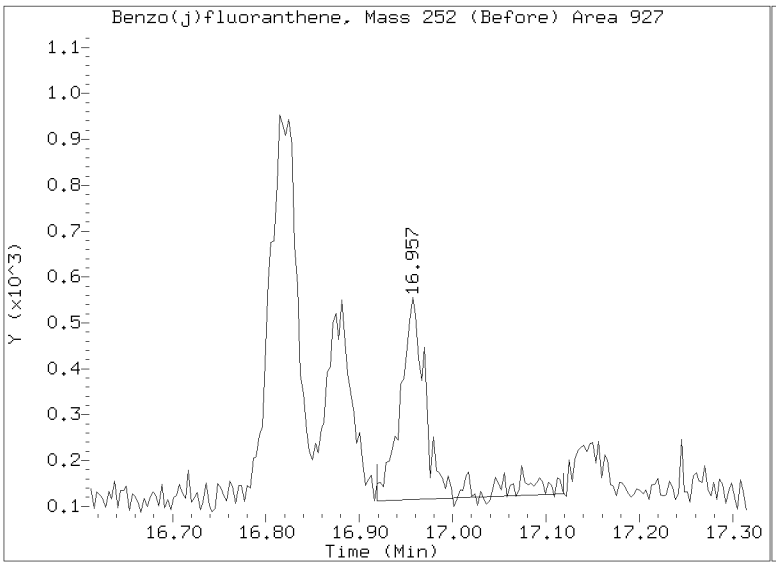
* Only compounds listed in the work order have been verified by the analyst *

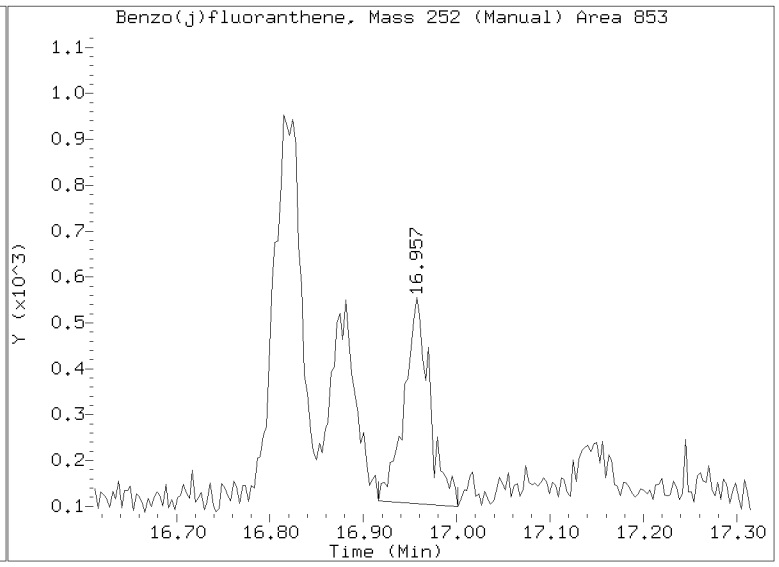
Quant Ion Manual Peak Adjustment Report

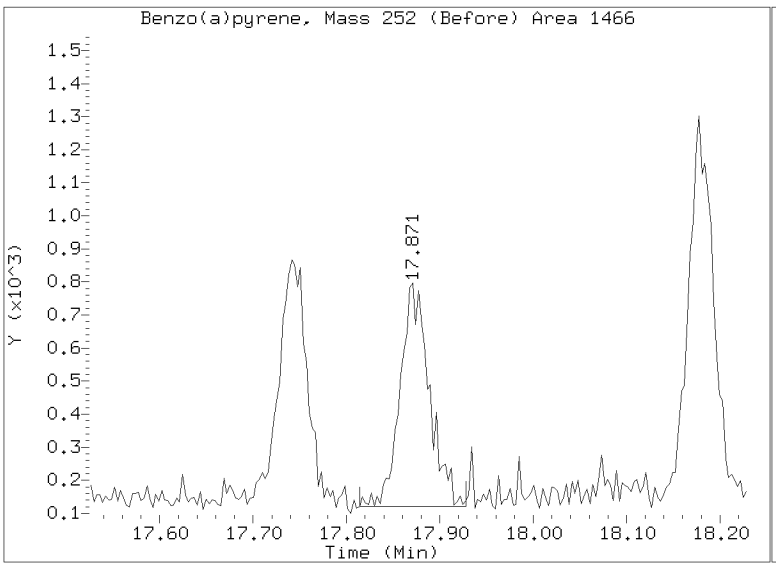
Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020619.D
Injection Date: 06-FEB-2023 20:53
Lab ID:23A0207-06 Client ID:
Report Date: 02/07/2023 15:59

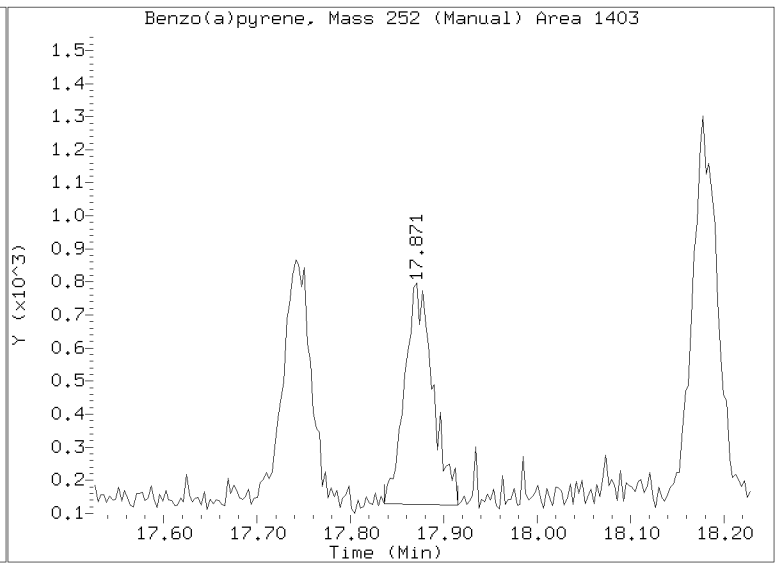












Quant Ion Manual Peak Adjustment Report

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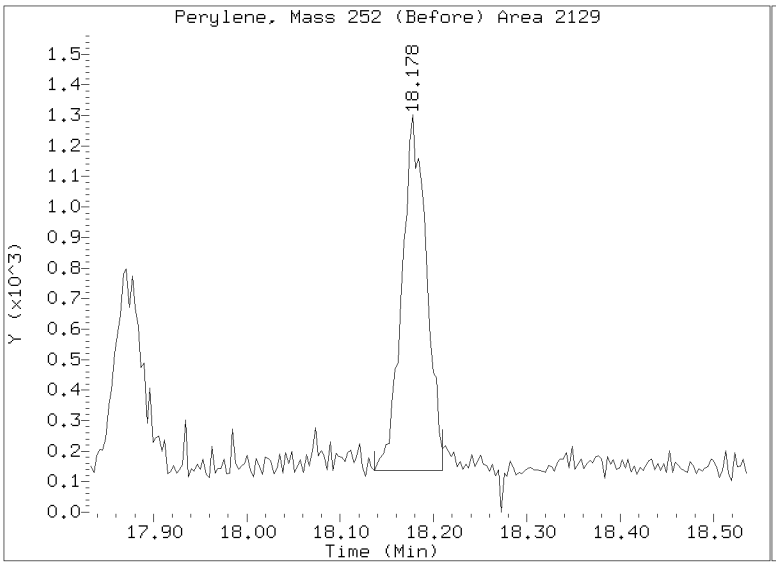
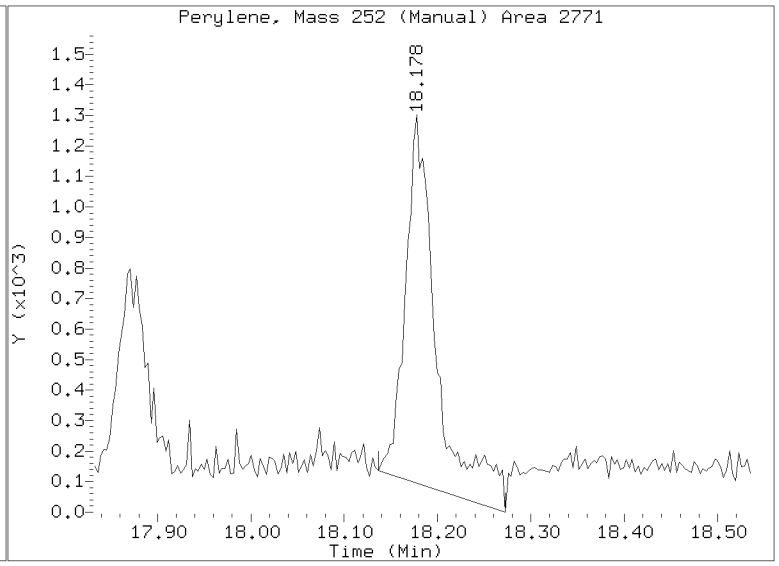
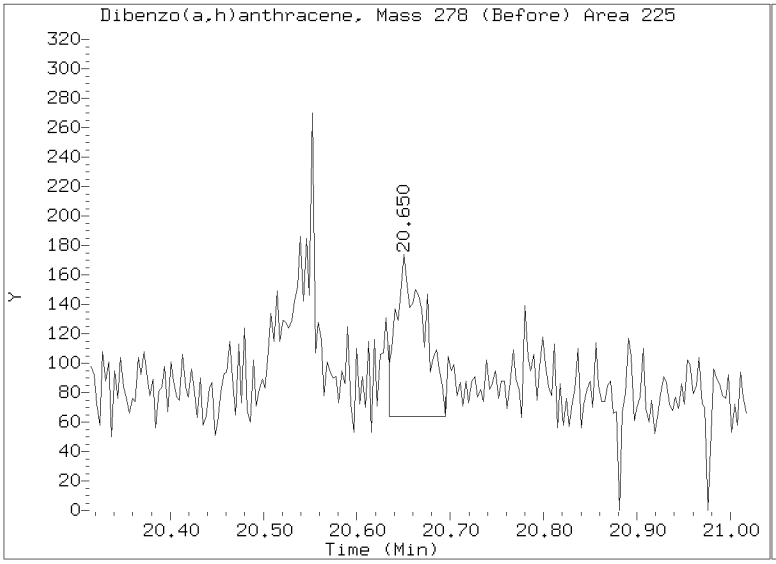
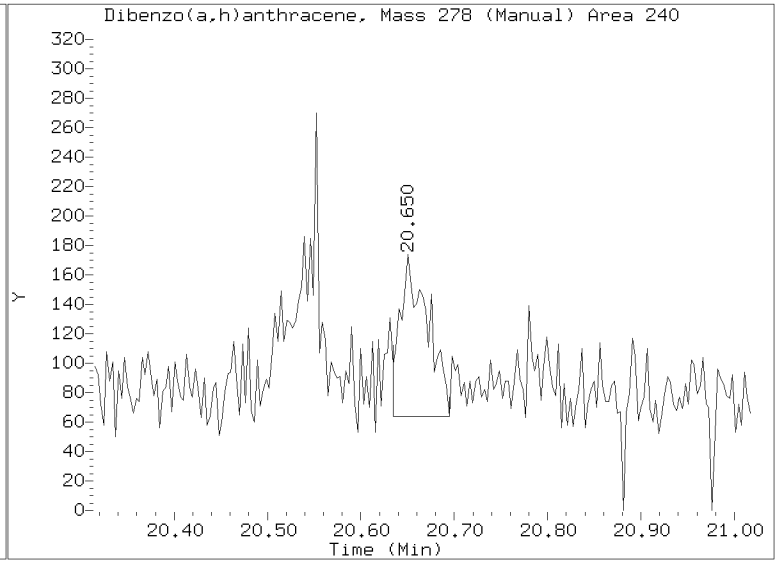
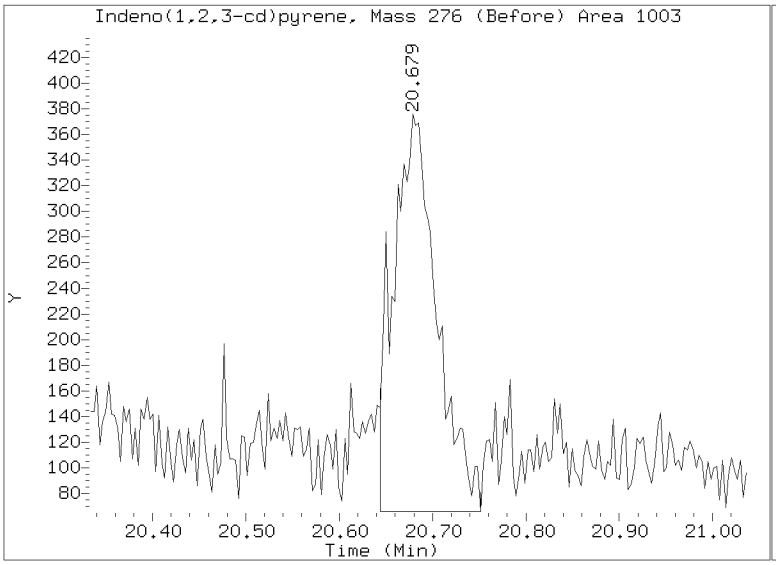
Injection Date: 06-FEB-2023 20:53
Lab ID:23A0207-06 Client ID:
Report Date: 02/07/2023 15:59

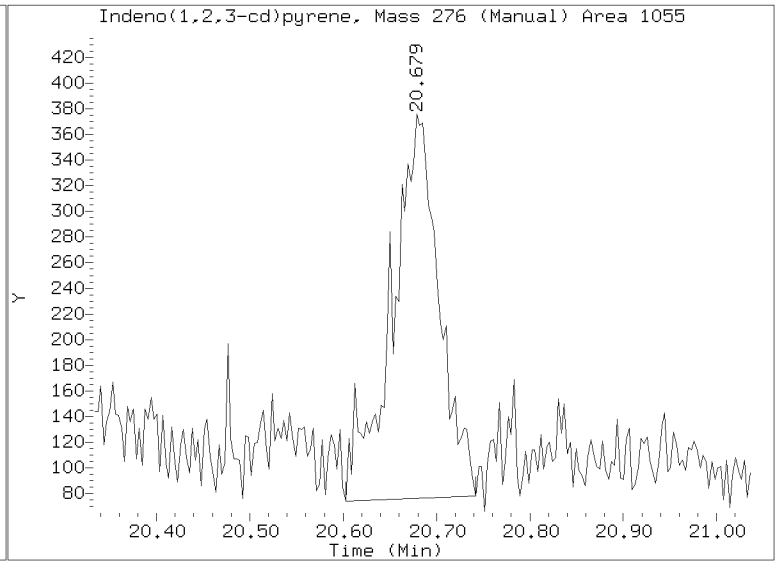












Quant Ion Manual Peak Adjustment Report

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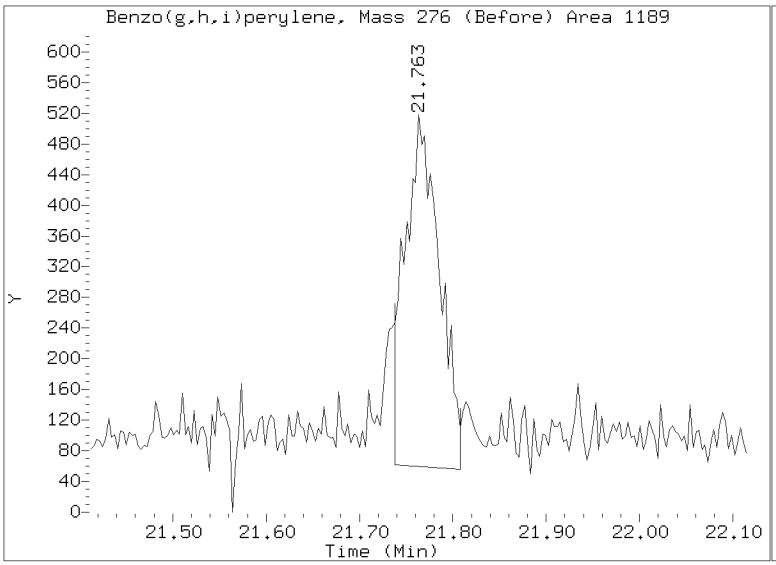
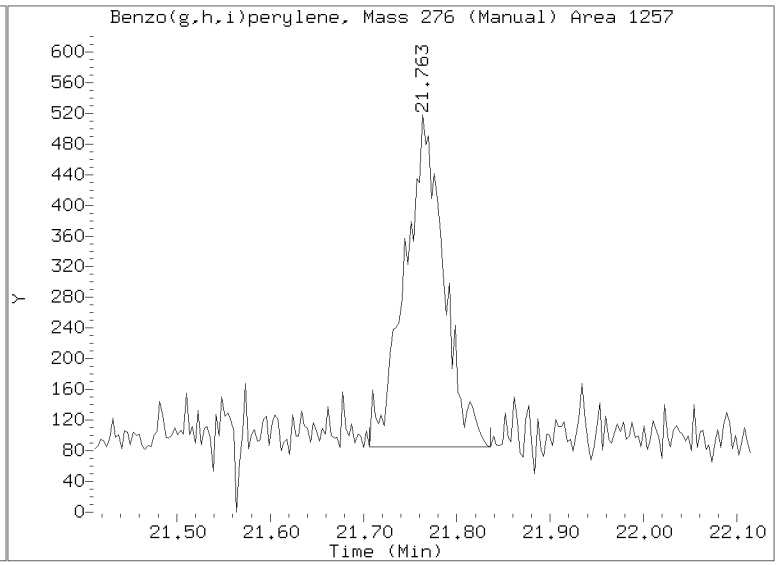
Injection Date: 06-FEB-2023 20:53
Lab ID:23A0207-06 Client ID:
Report Date: 02/07/2023 15:59





Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1081

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

Polynuclear Aromatic Hydrocarbons

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-07 A	SDG:	23A0207
Sampled:	01/11/23 10:15	Prepared:	02/01/23 11:29	File ID:	N823020620.D
% Solids:	78.77	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/06/23 21:20
Batch:	BLA0683	Sequence:	SLB0075	Initial/Final:	12.75 g Wet / 0.5 mL
Instrument:	NT8	Column:	RXI-17Sil ms	Calibration:	GA00050
Cleanups:	GPC, Silica Gel				

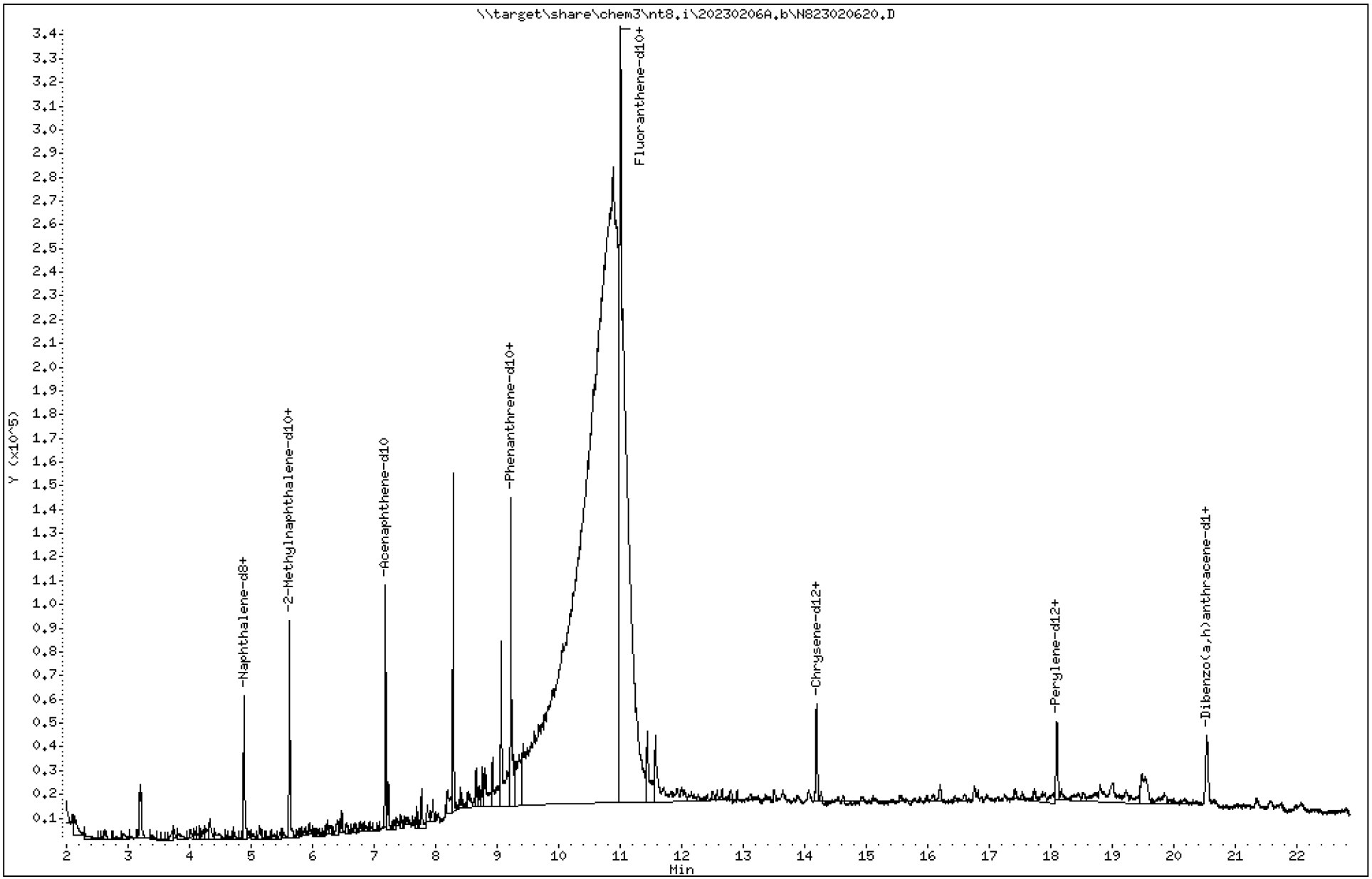
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
56-55-3	Benzo(a)anthracene	1	6.53		0.82	4.98
218-01-9	Chrysene	1	10.7		1.05	4.98
205-99-2	Benzo(b)fluoranthene	1	10.0		1.37	4.98
207-08-9	Benzo(k)fluoranthene	1	4.65	J	0.76	4.98
50-32-8	Benzo(a)pyrene	1	9.32		0.61	4.98
193-39-5	Indeno(1,2,3-cd)pyrene	1	3.78	J	1.05	4.98
53-70-3	Dibenzo(a,h)anthracene	1	2.81	J	0.89	4.98

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	149.36	118	78.9	32 - 120	
Dibenzo[a,h]anthracene-d14	149.36	149	99.8	21 - 133	
Fluoranthene-d10	149.36	129	86.2	36 - 134	

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020620.D
Date : 06-FEB-2023 21:20
Client ID:
Sample Info: 23A0207-07

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

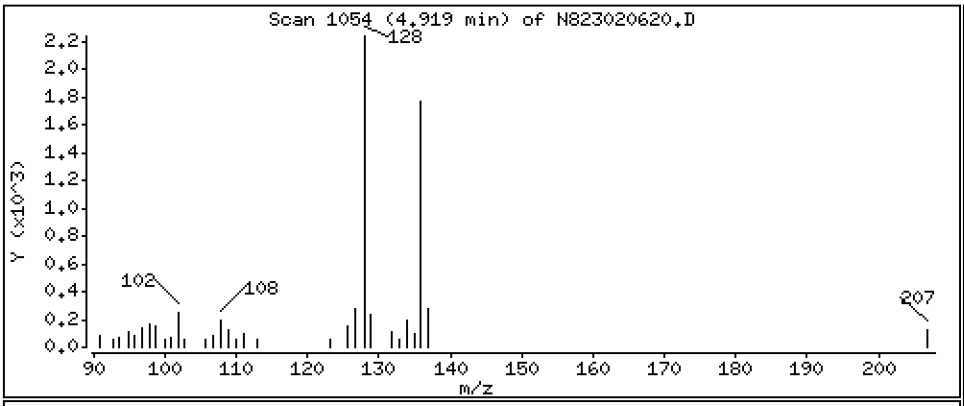
Operator: JZ

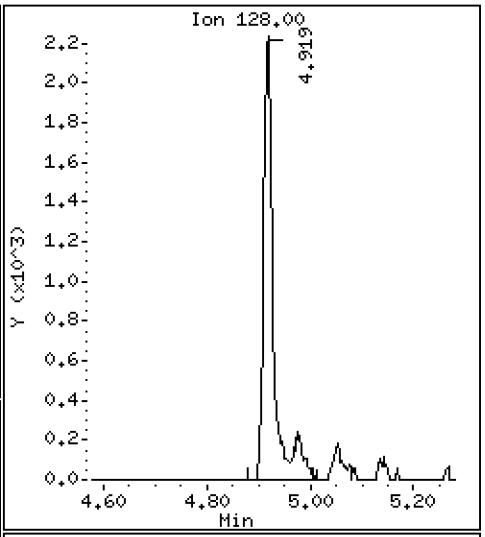
Column phase: Rxi-17sil

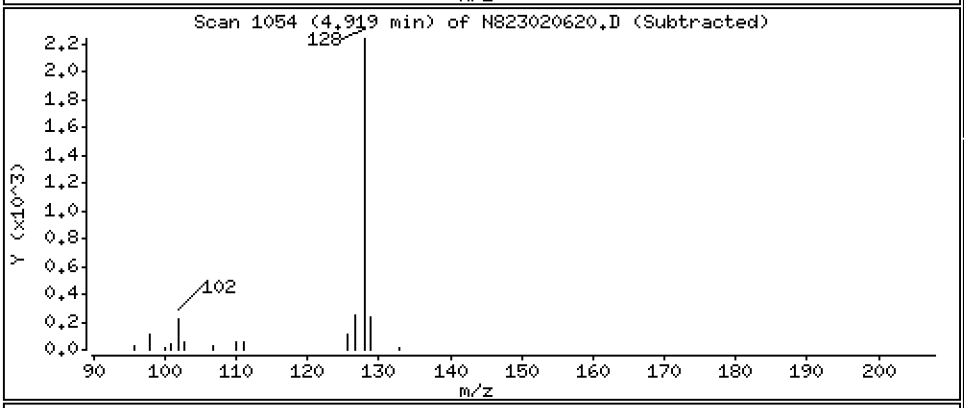
Column diameter: 0.25

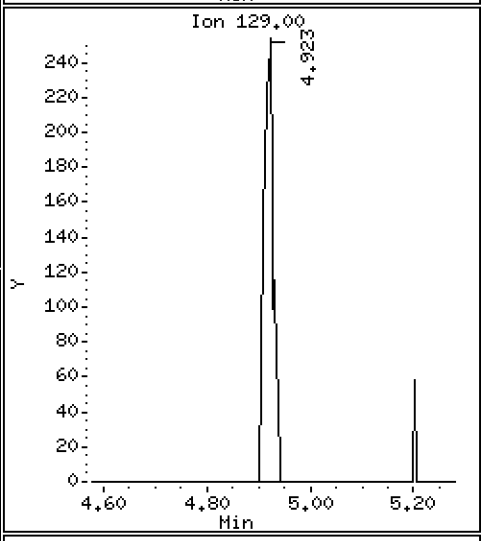
2 Naphthalene

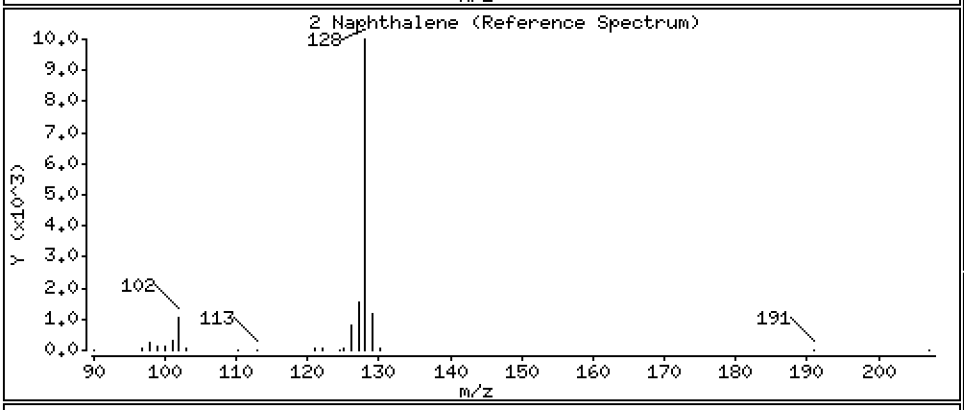
Concentration: 0.1257 ug/mL

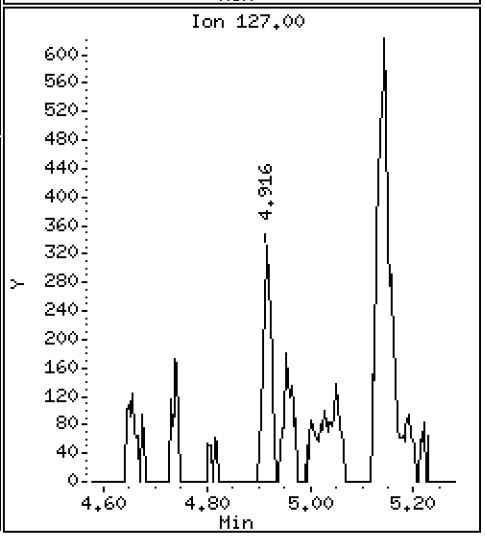


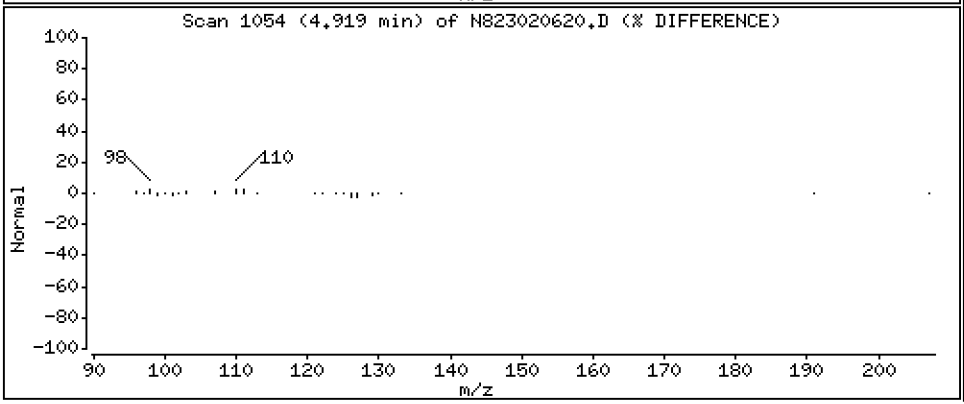












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

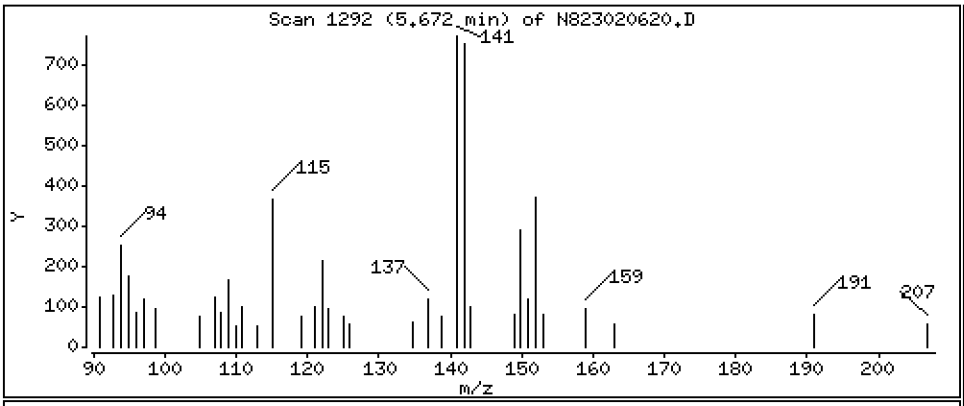
Operator: JZ

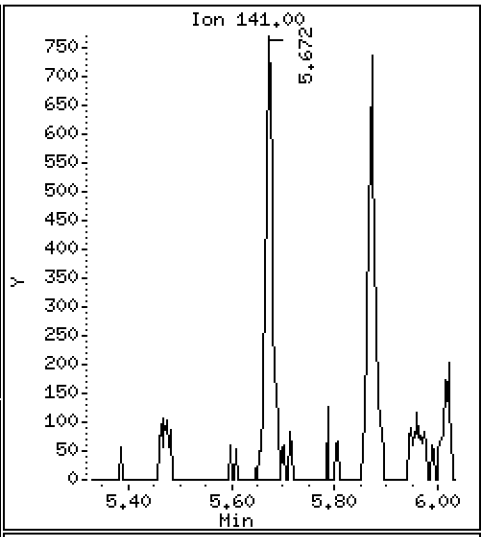
Column phase: Rxi-17sil

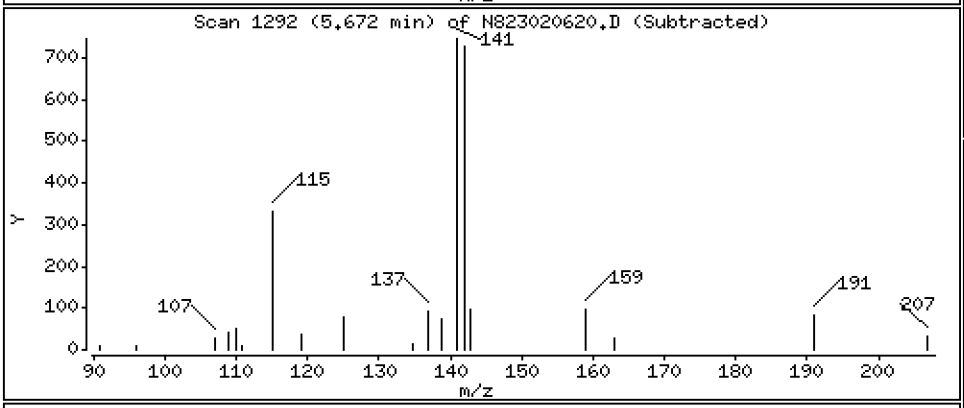
Column diameter: 0.25

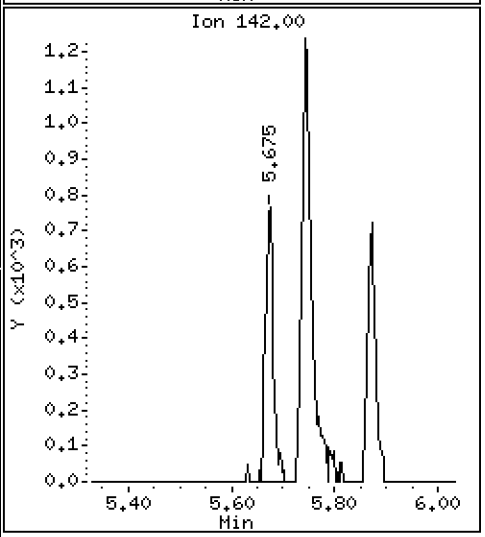
4 2-Methylnaphthalene

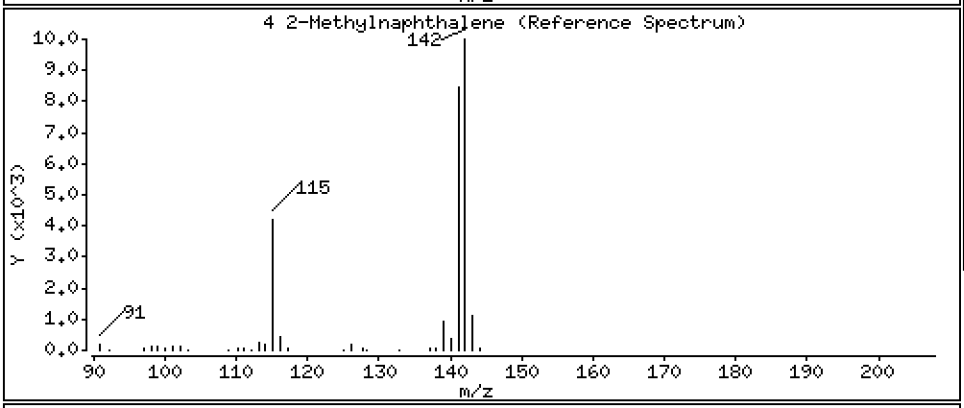
Concentration: 0.05601 ug/mL

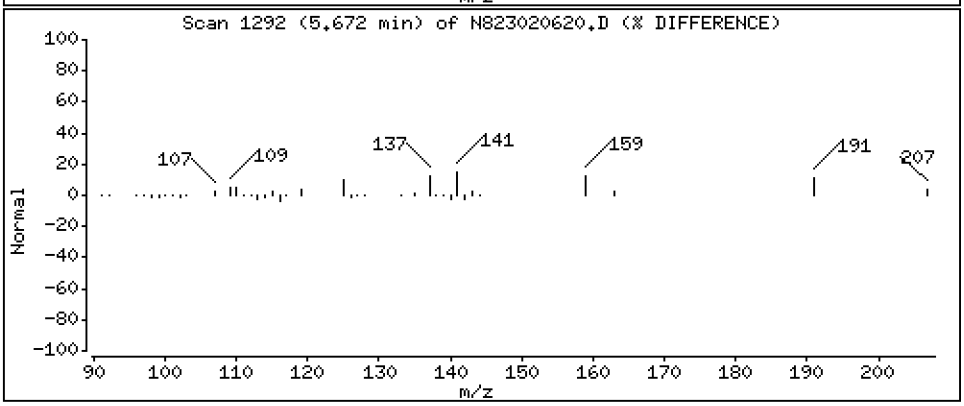












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

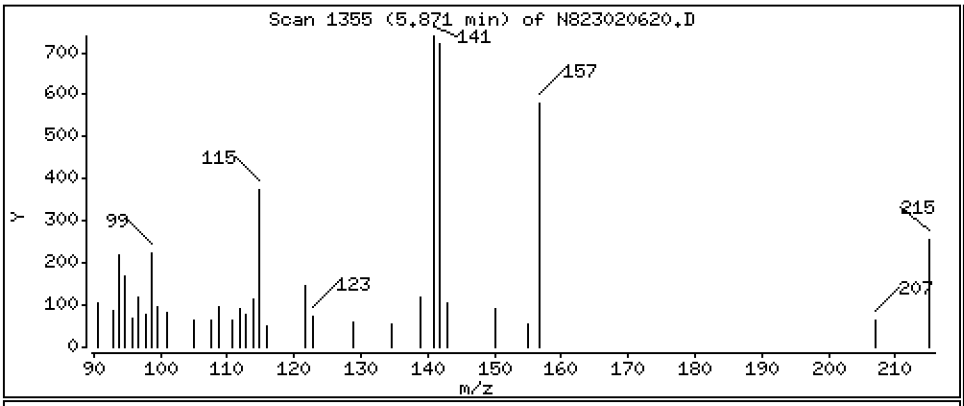
Operator: JZ

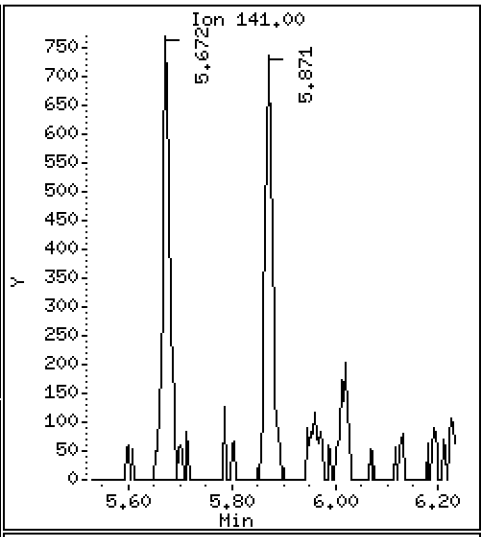
Column phase: Rxi-17sil

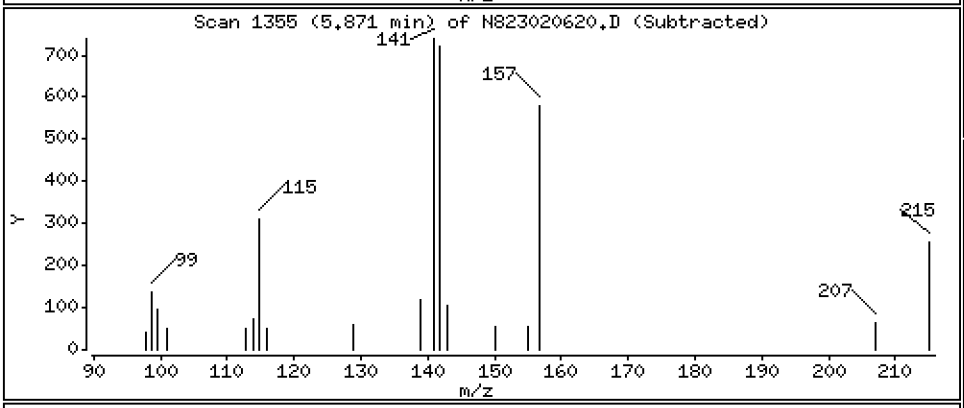
Column diameter: 0.25

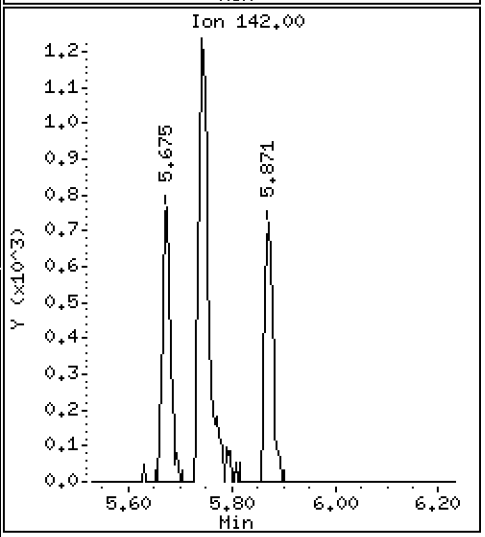
5 1-methylnaphthalene

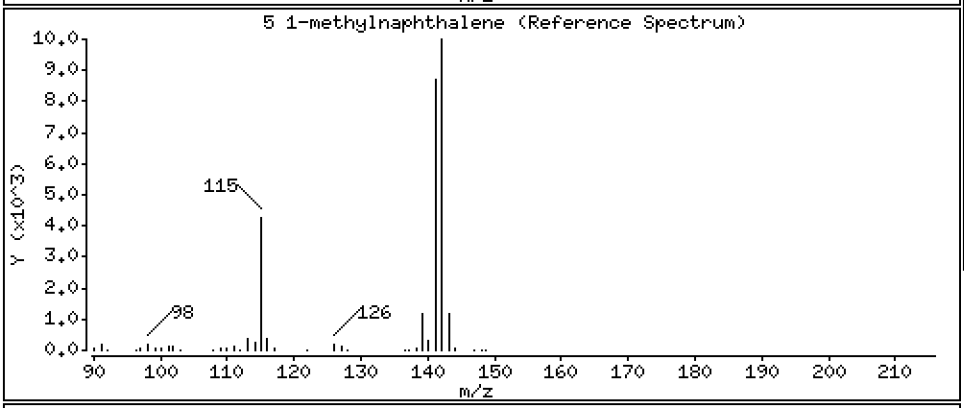
Concentration: 0.05363 ug/mL

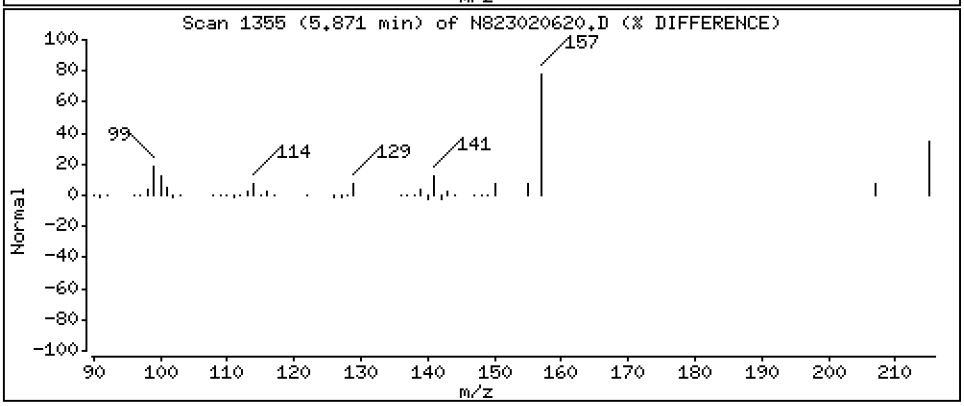












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

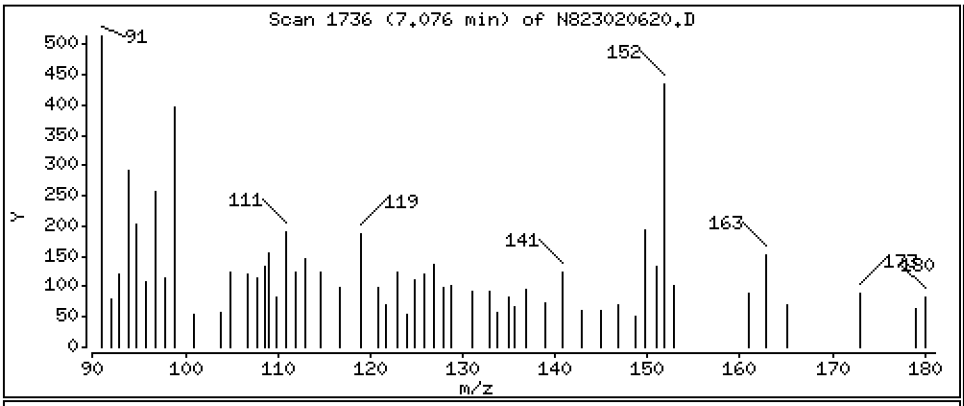
Operator: JZ

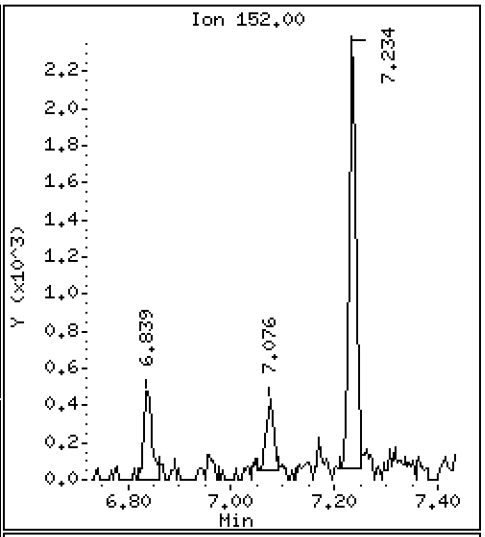
Column phase: Rxi-17sil

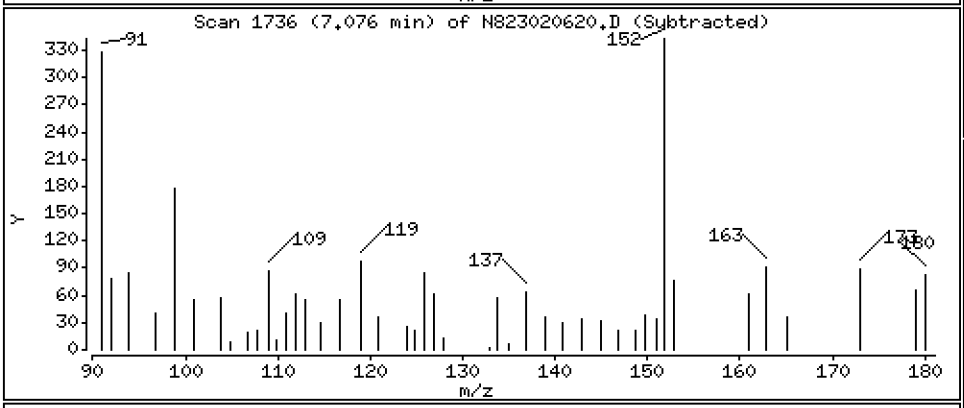
Column diameter: 0.25

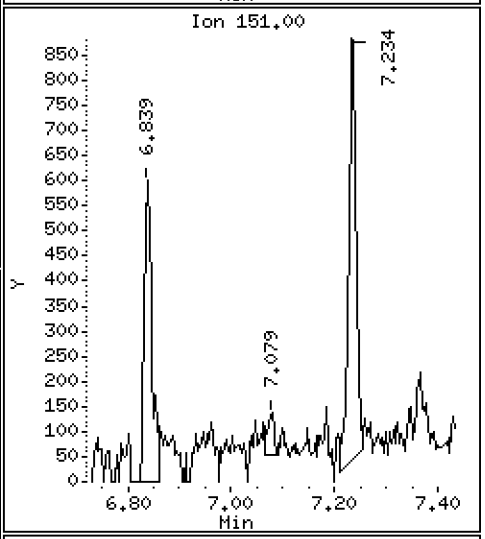
9 Acenaphthylene

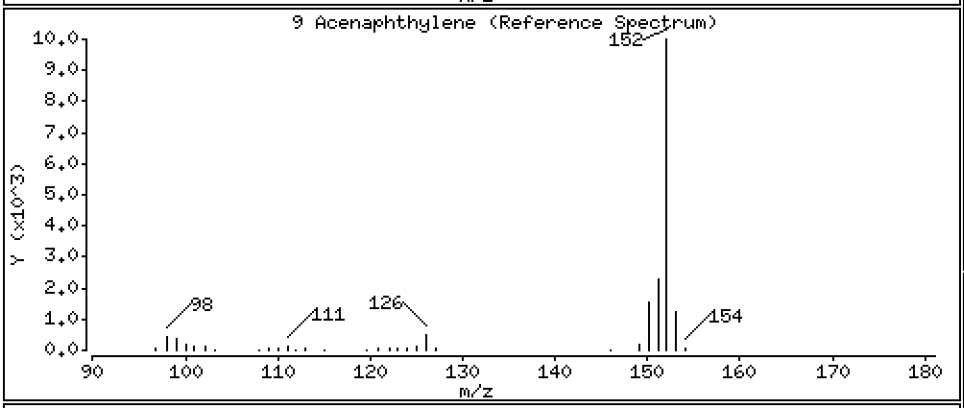
Concentration: 0.01533 ug/mL

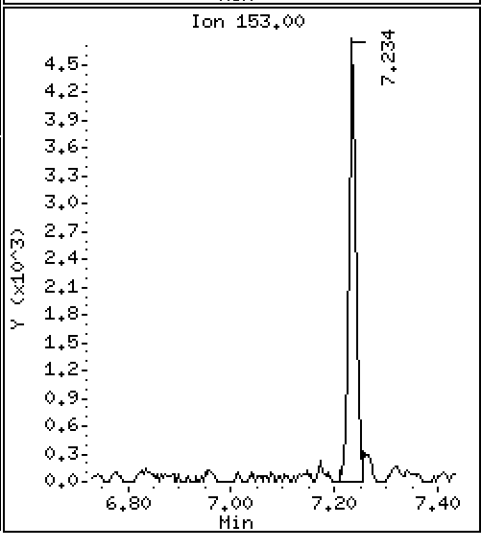


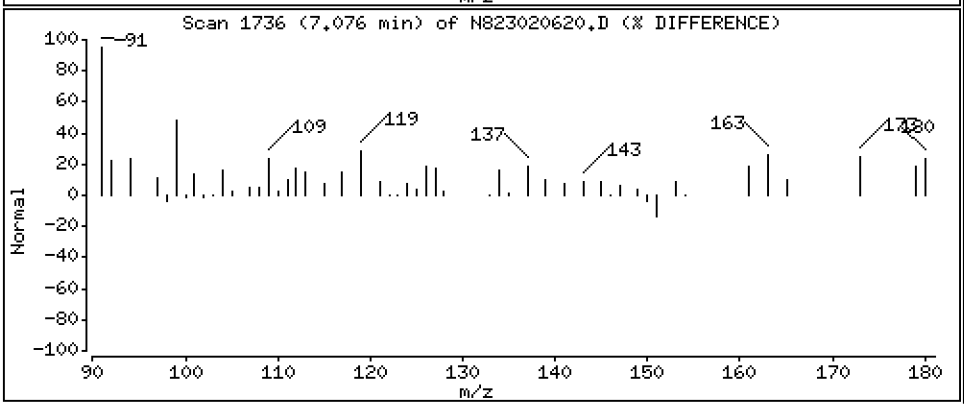












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

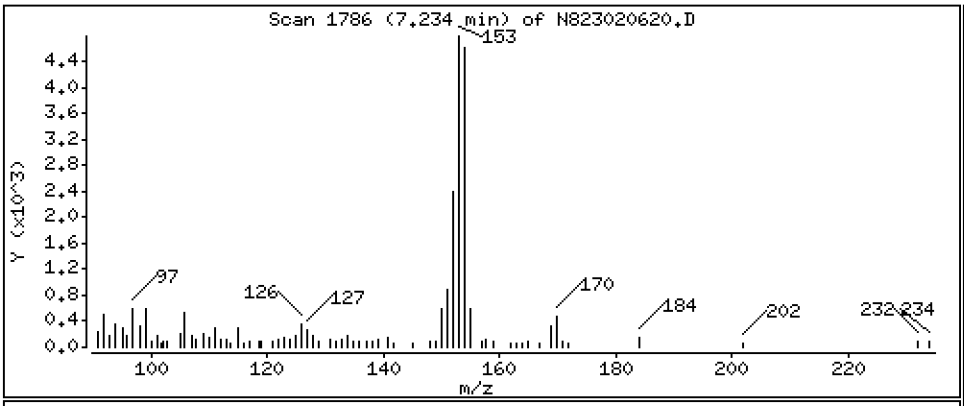
Operator: JZ

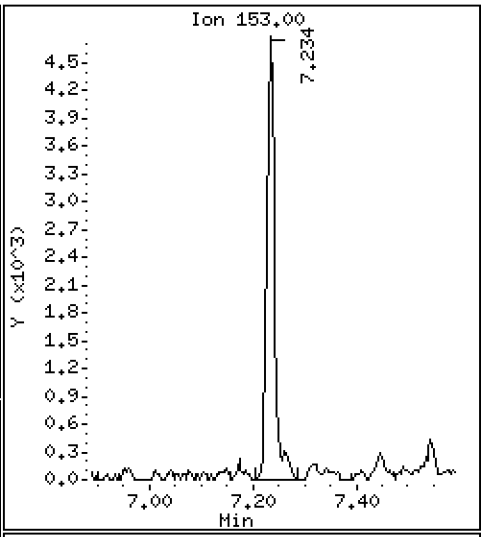
Column phase: Rxi-17sil

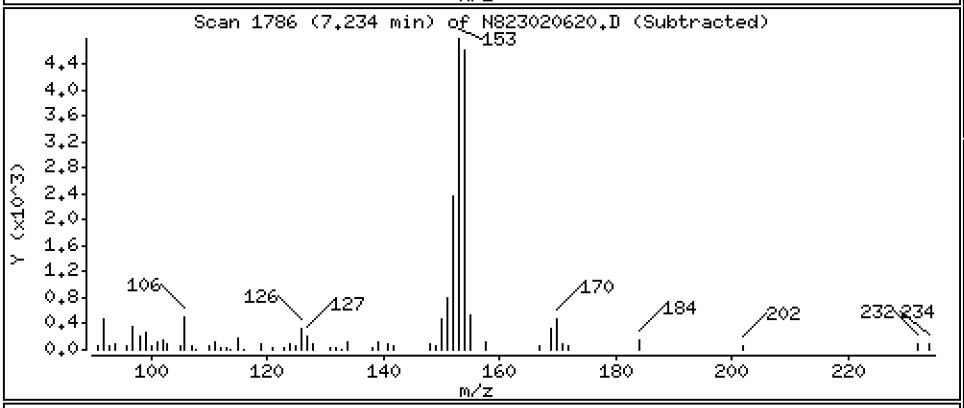
Column diameter: 0.25

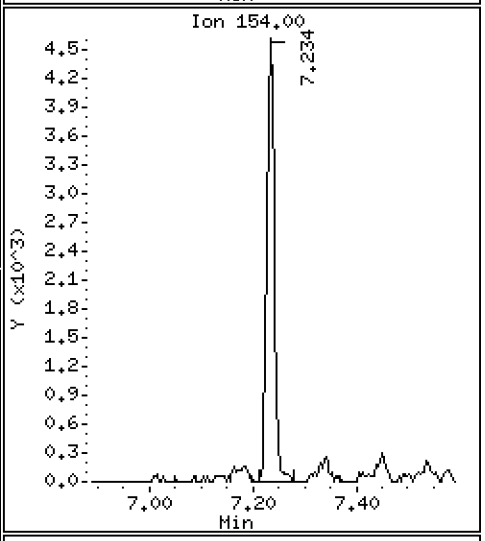
11 Acenaphthene

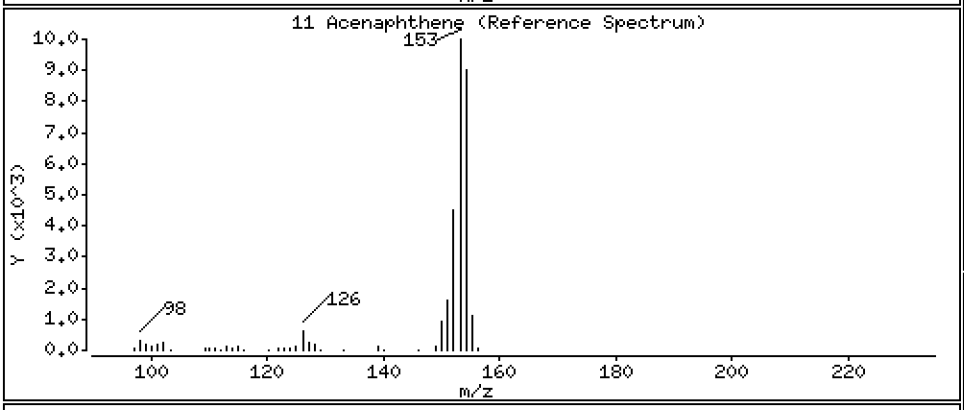
Concentration: 0.3162 ug/mL

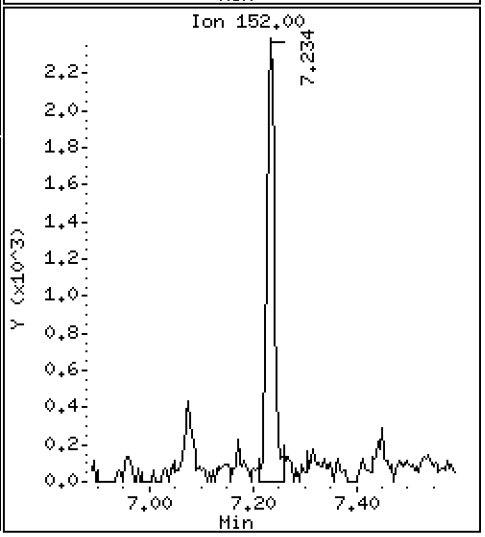


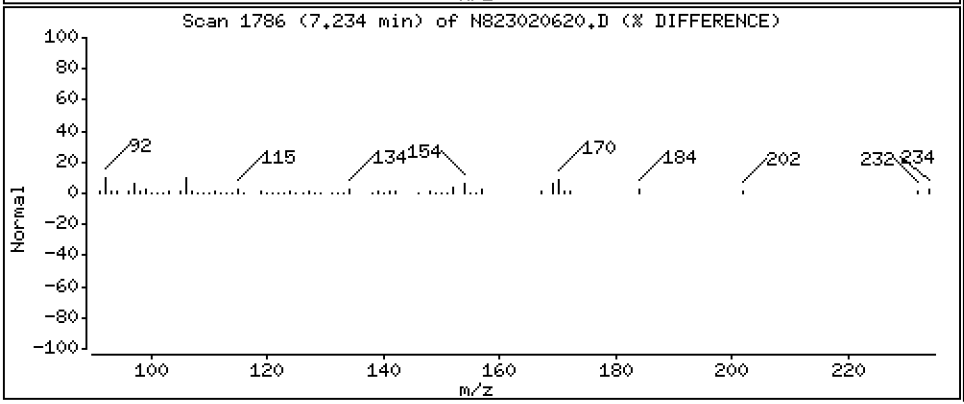












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020620.D

Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

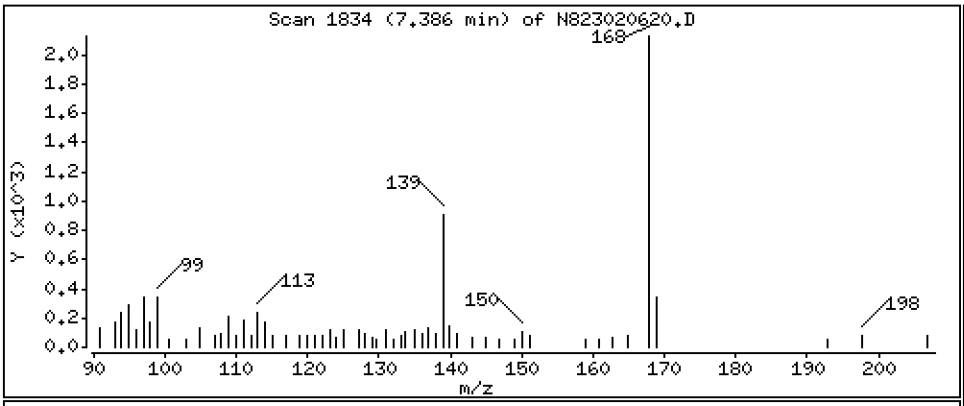
Operator: JZ

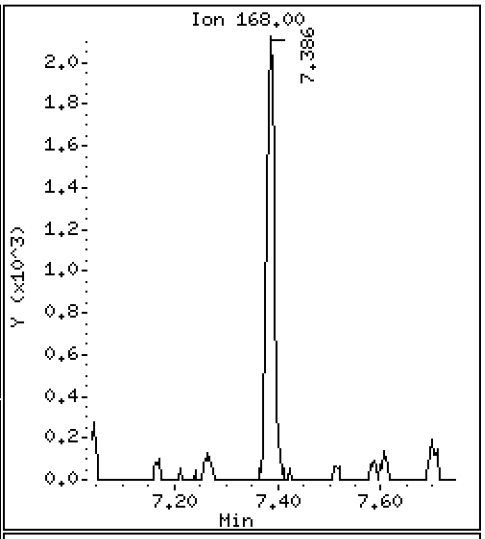
Column phase: Rxi-17sil

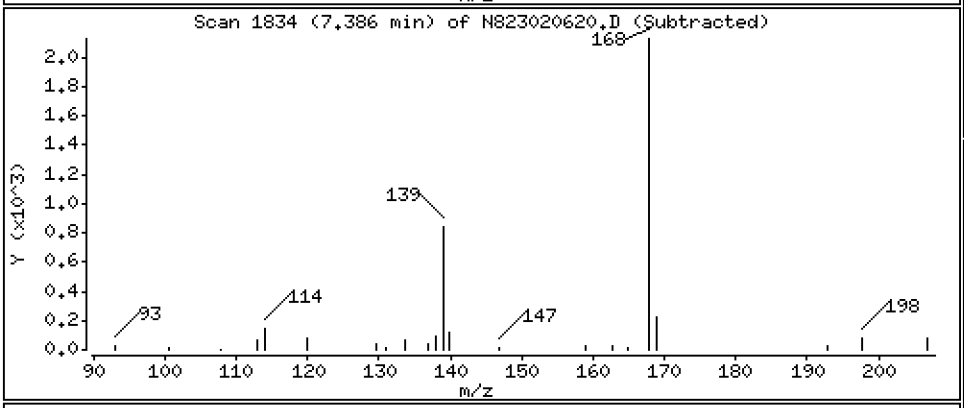
Column diameter: 0.25

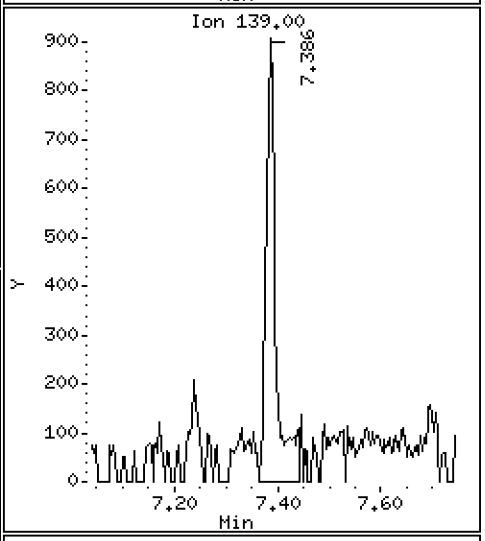
12 Dibenzofuran

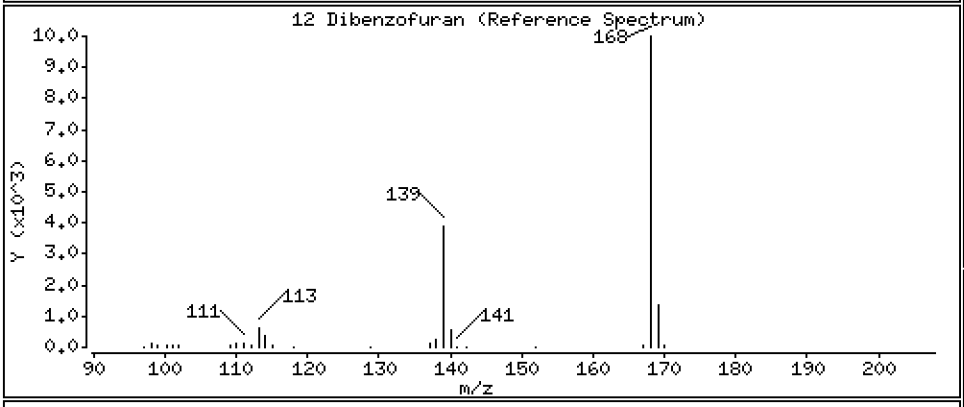
Concentration: 0.09178 ug/mL

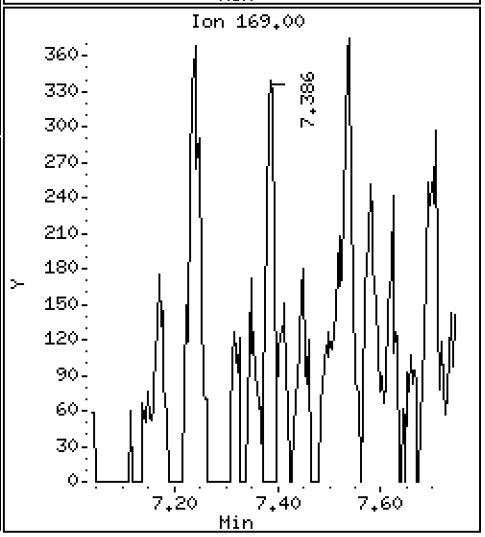


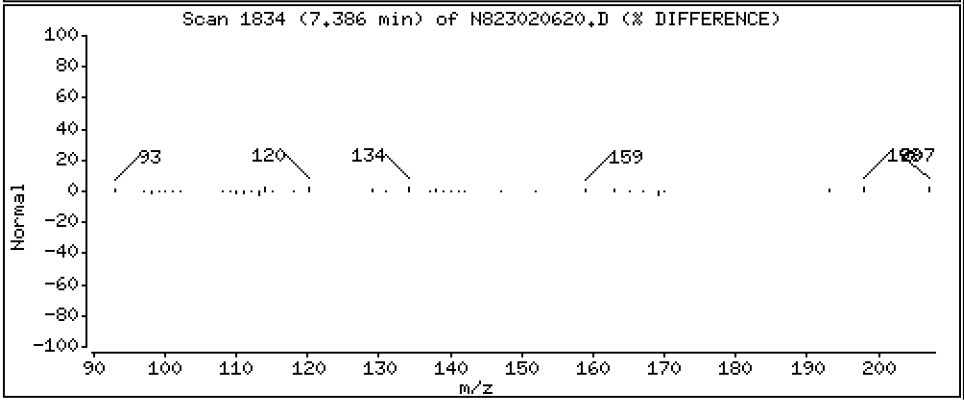












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

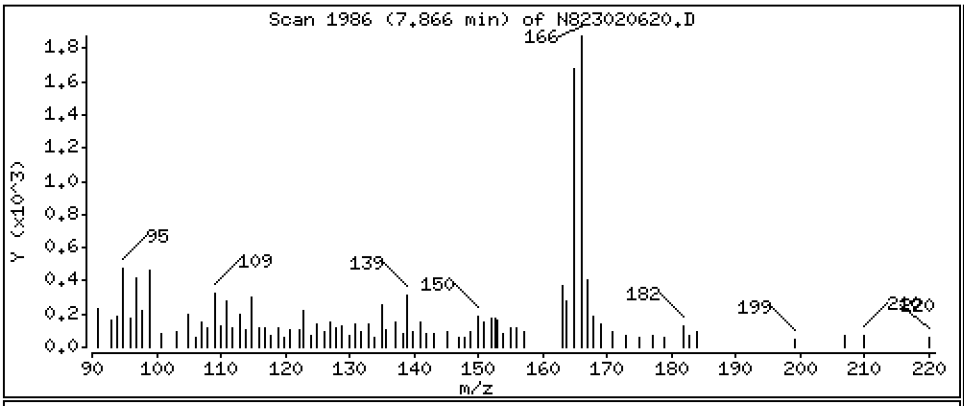
Operator: JZ

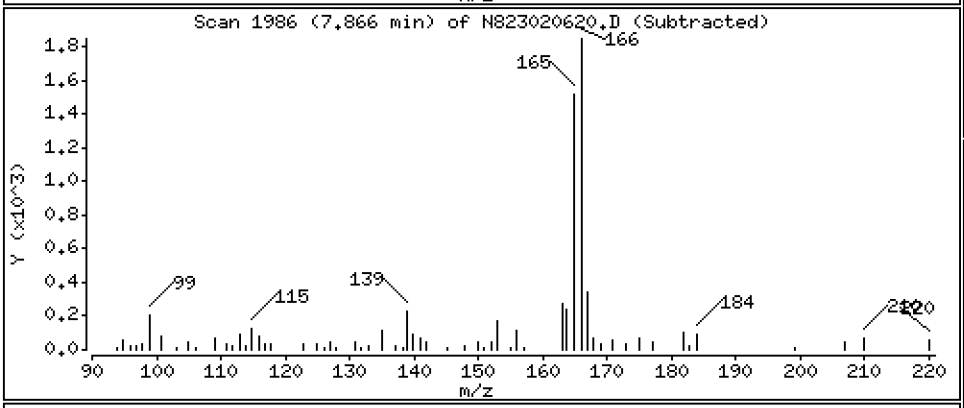
Column phase: Rxi-17sil

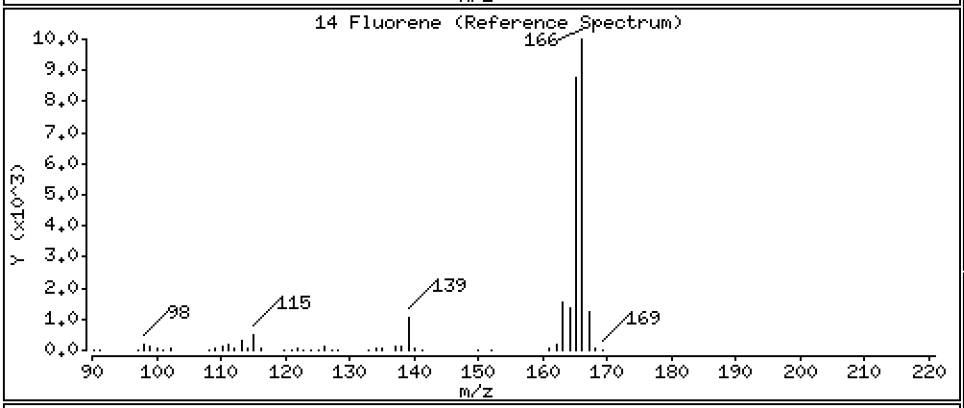
Column diameter: 0.25

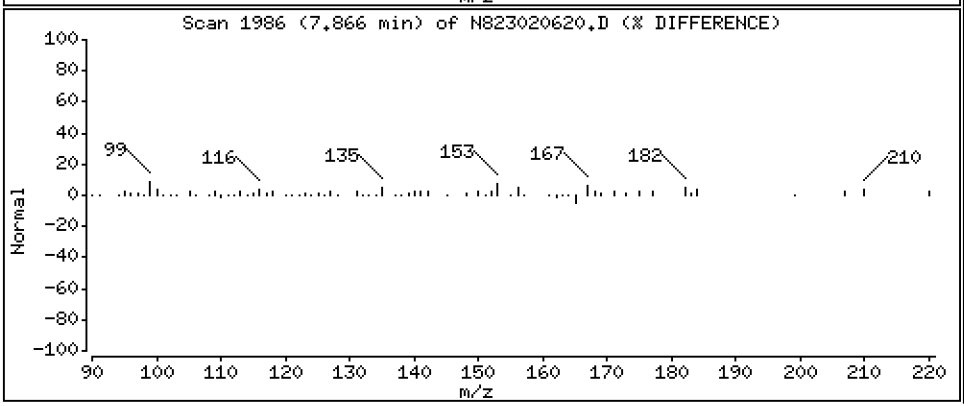
14 Fluorene

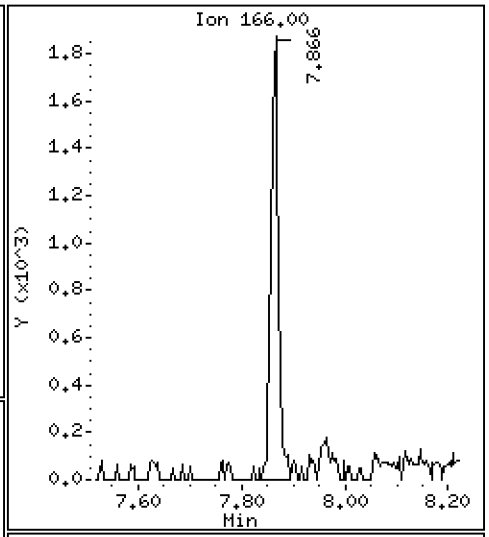
Concentration: 0.1063 ug/mL

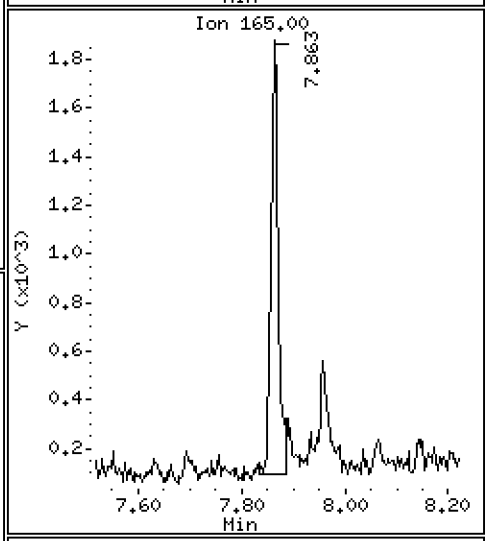


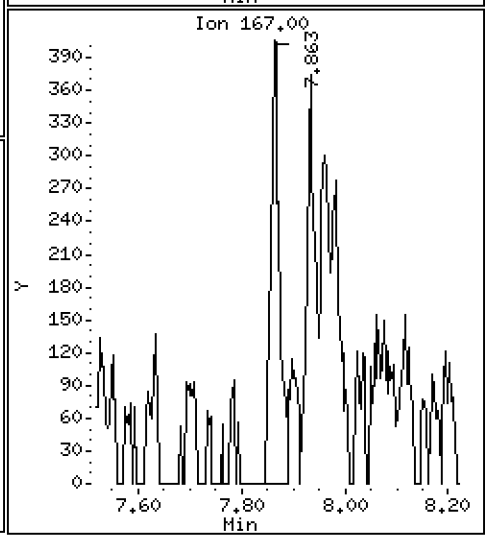












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

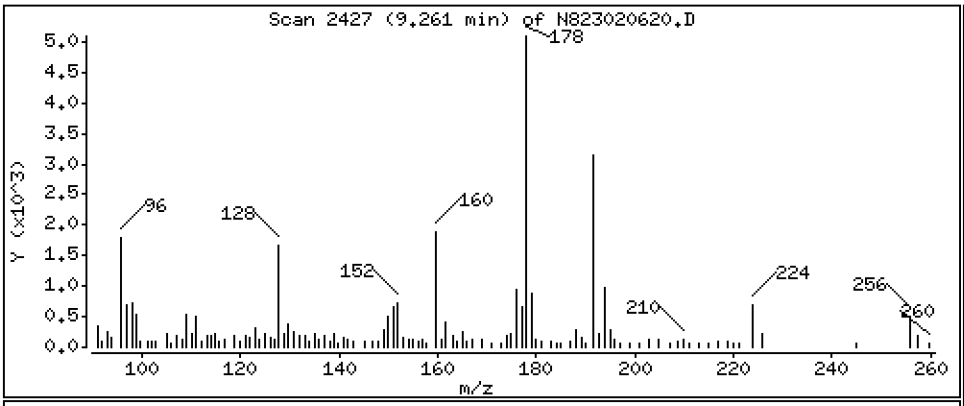
Operator: JZ

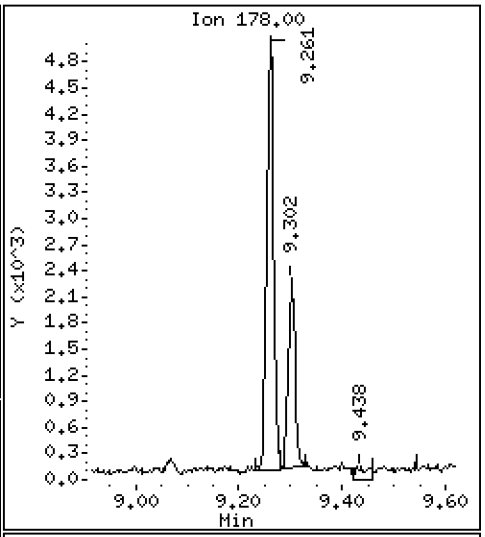
Column phase: Rxi-17sil

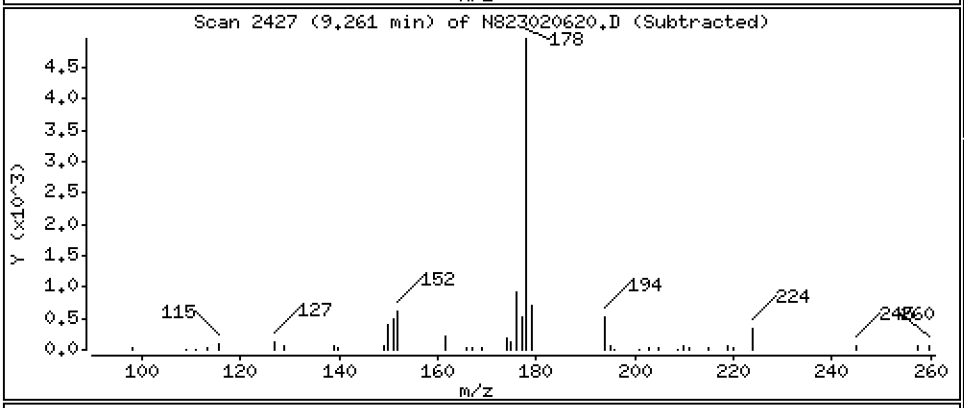
Column diameter: 0.25

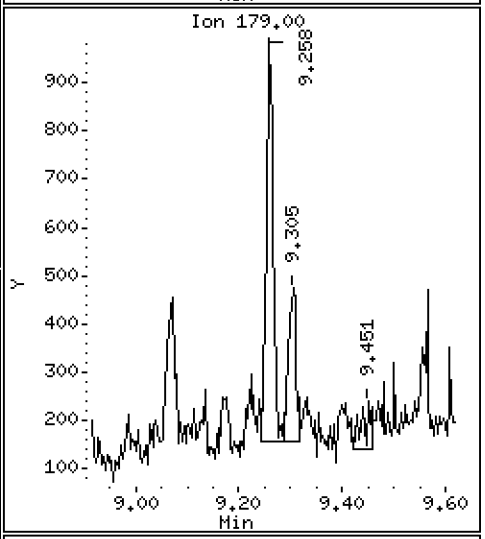
16 Phenanthrene

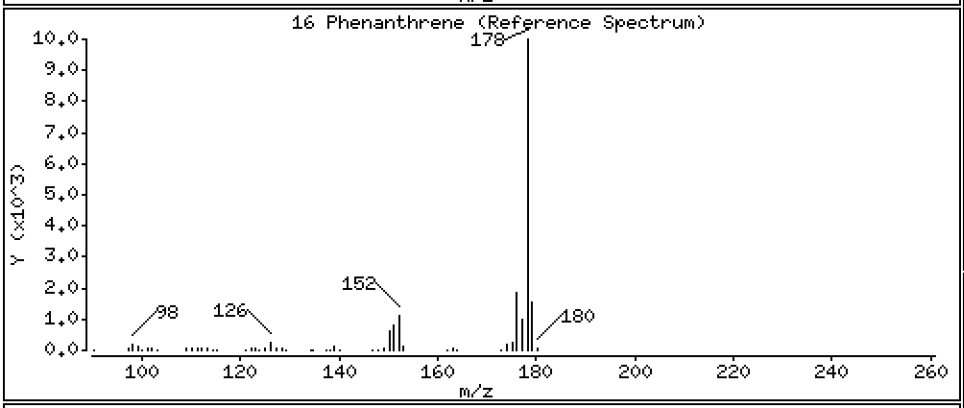
Concentration: 0.1809 ug/mL

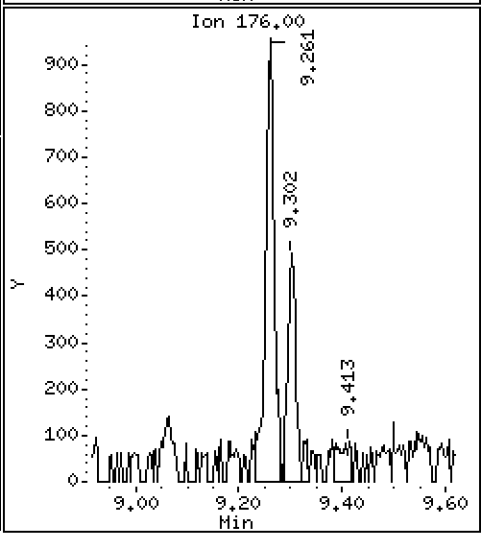


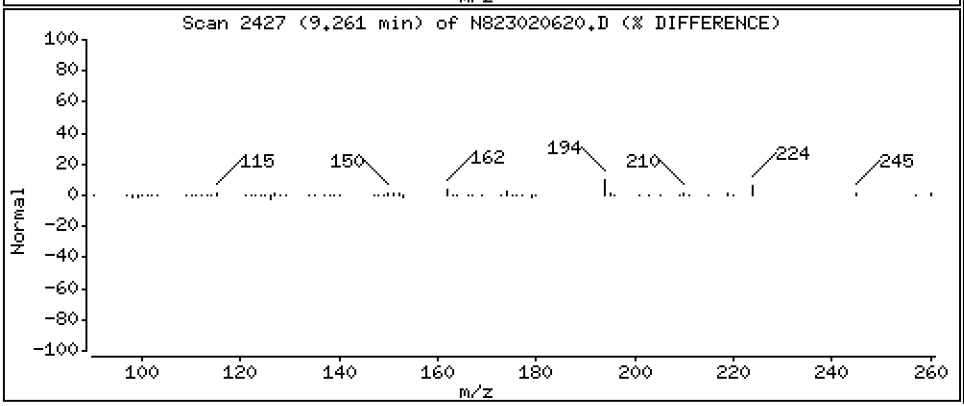












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

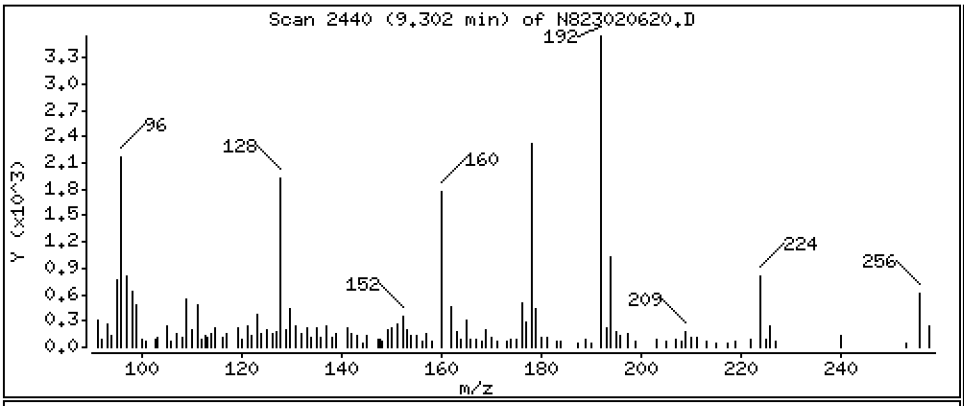
Operator: JZ

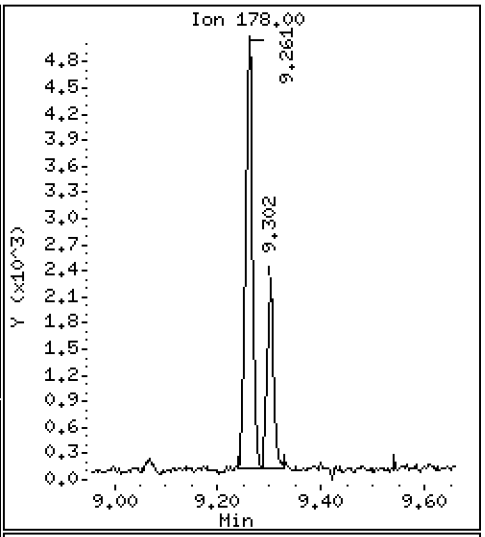
Column phase: Rxi-17sil

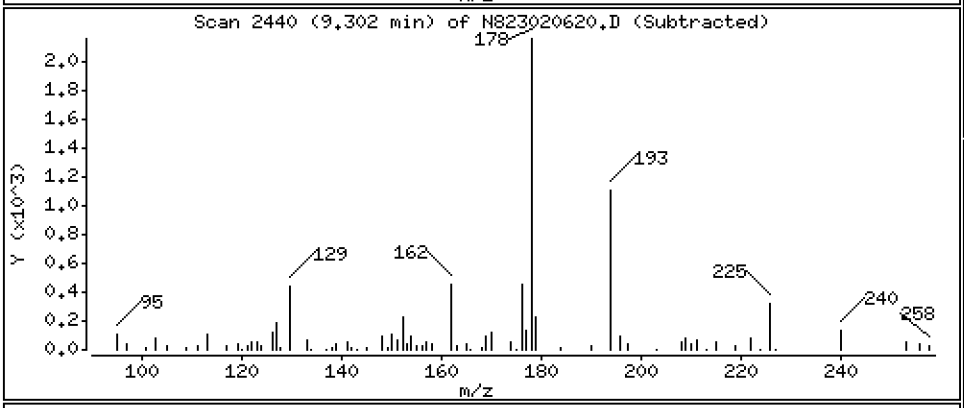
Column diameter: 0.25

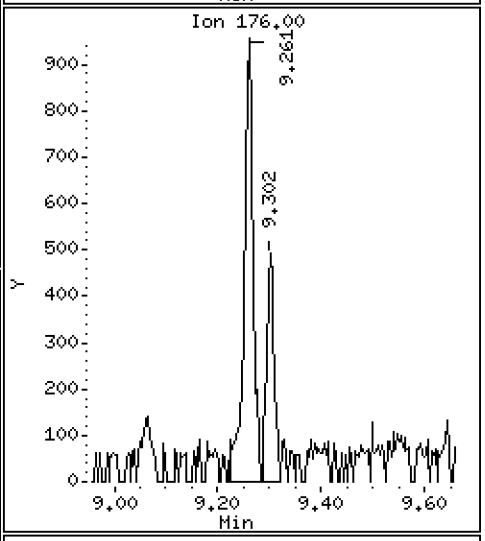
17 Anthracene

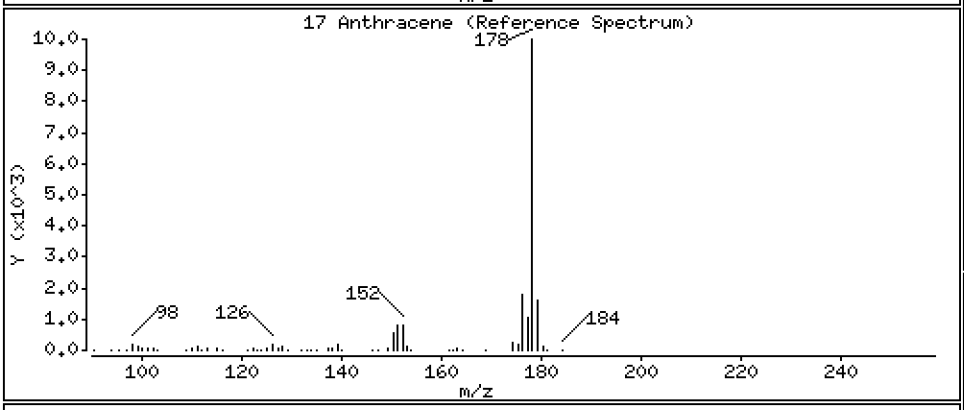
Concentration: 0.08109 ug/mL

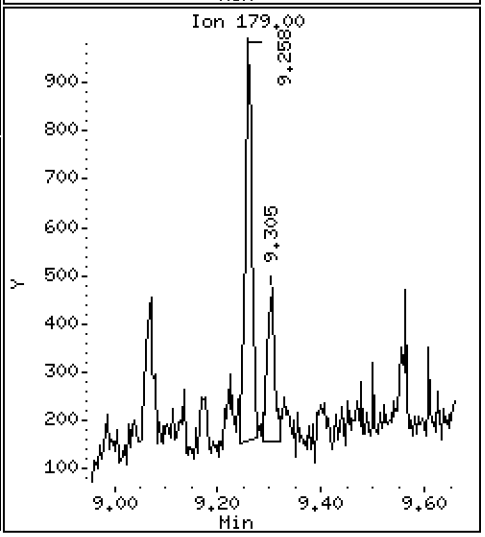


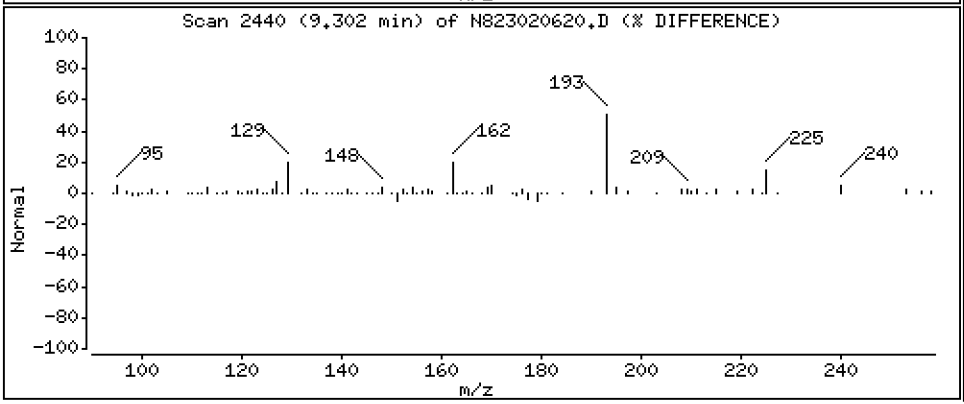












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

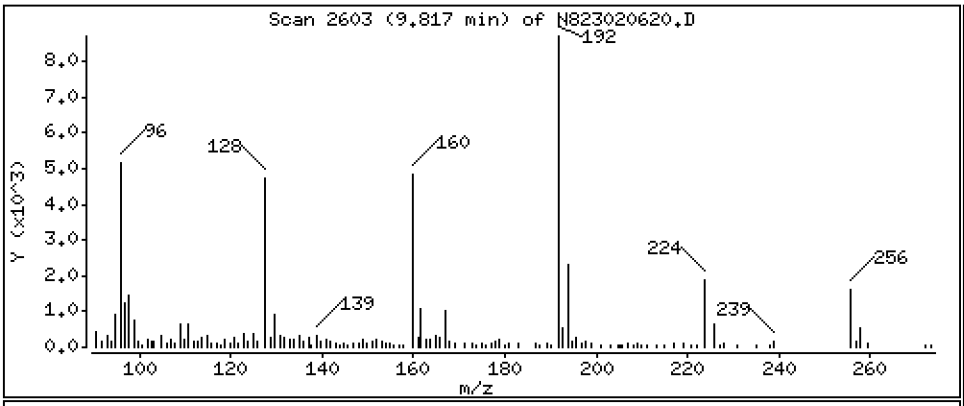
Operator: JZ

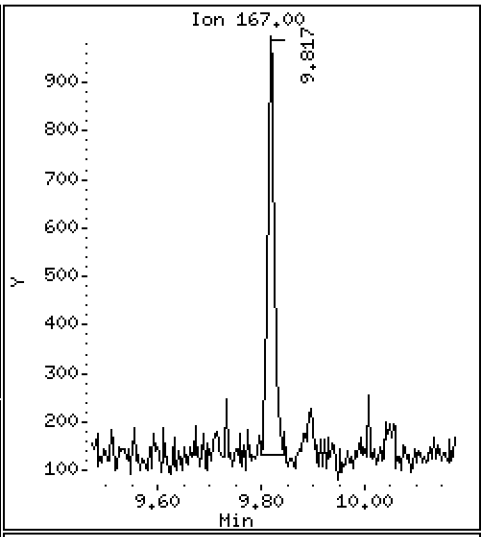
Column phase: Rxi-17sil

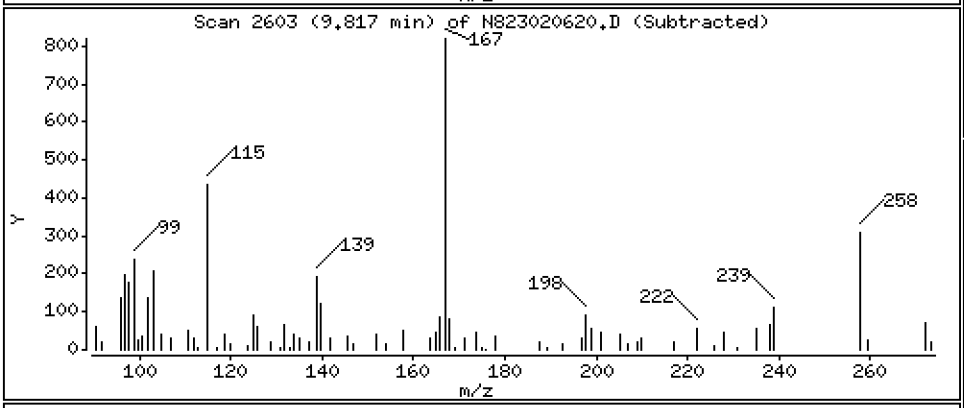
Column diameter: 0.25

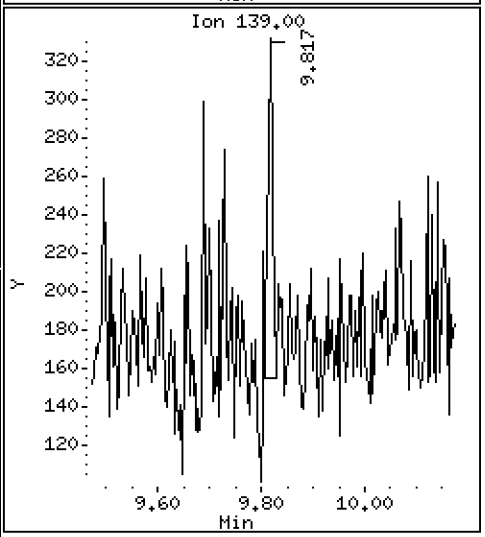
19 Carbazole

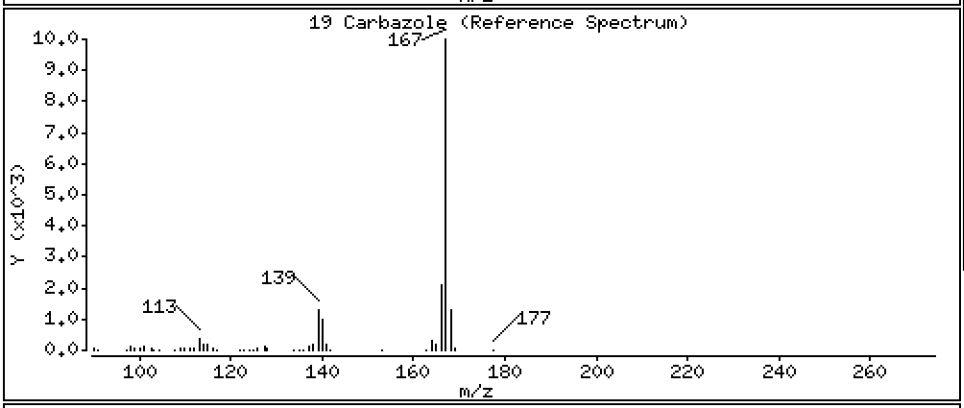
Concentration: 0.03684 ug/mL

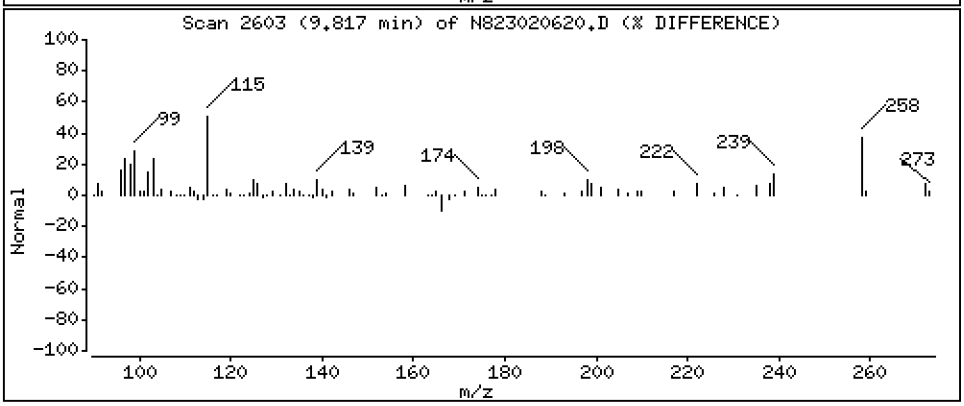












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

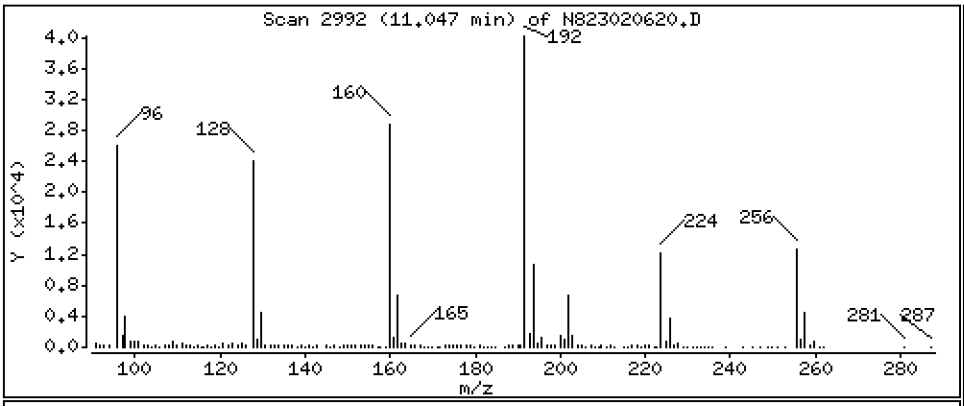
Operator: JZ

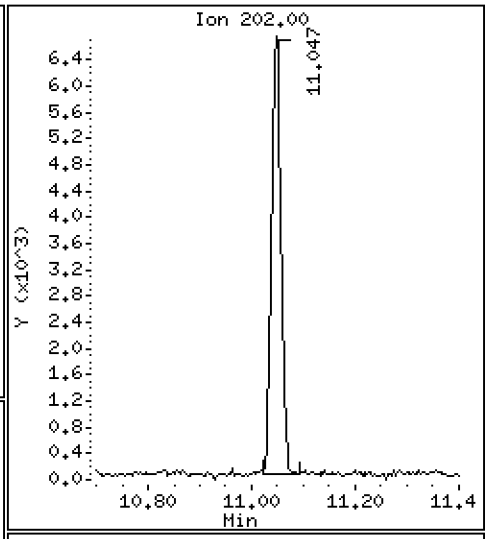
Column phase: Rxi-17sil

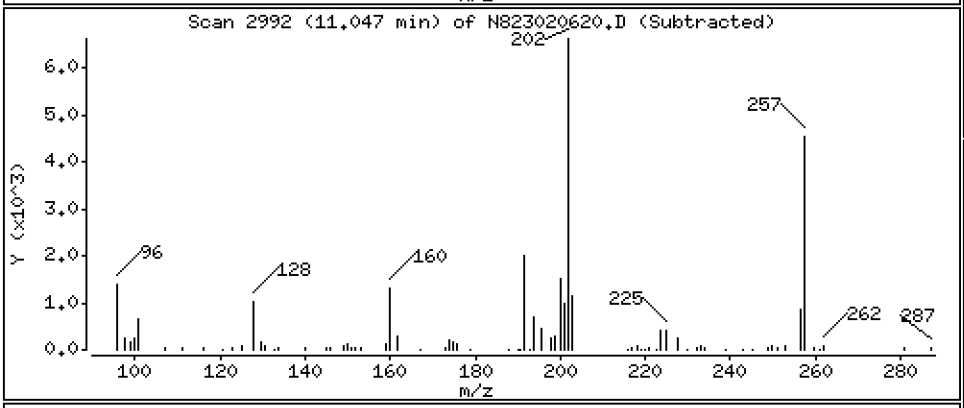
Column diameter: 0.25

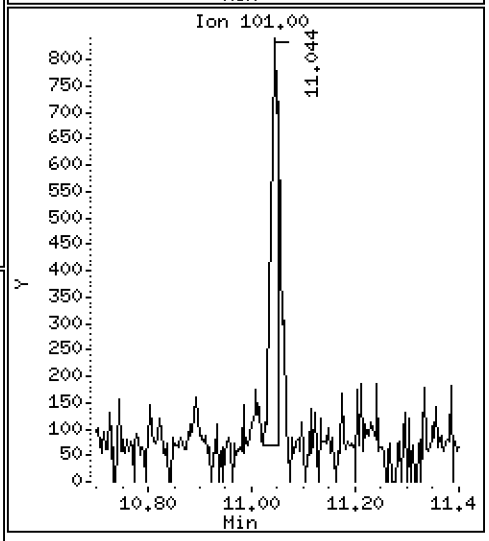
22 Fluoranthene

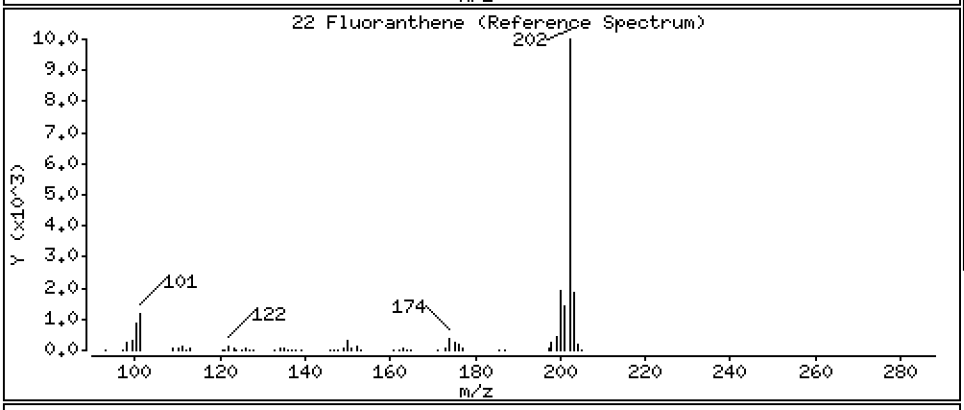
Concentration: 0.3036 ug/mL

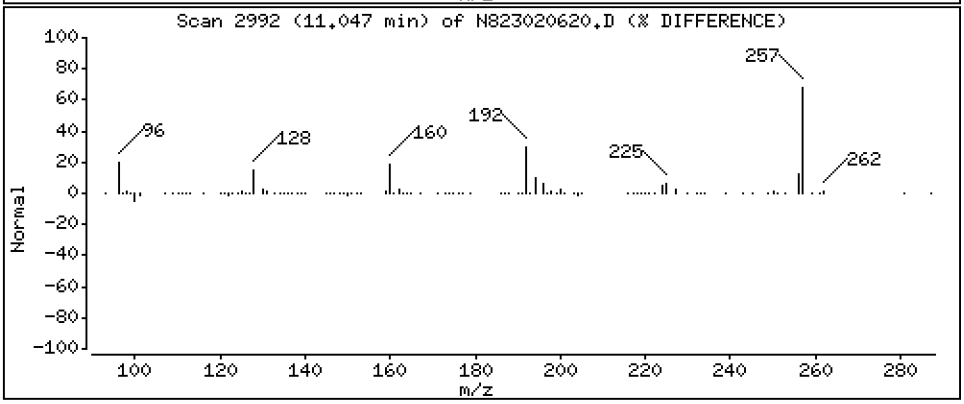












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

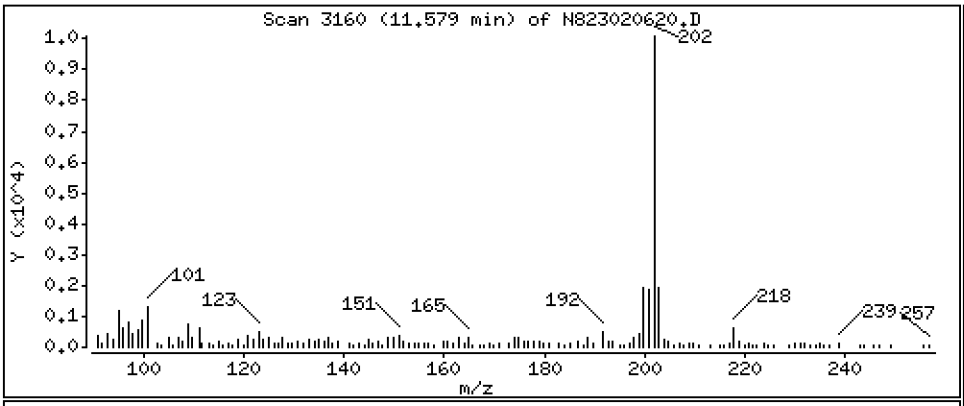
Operator: JZ

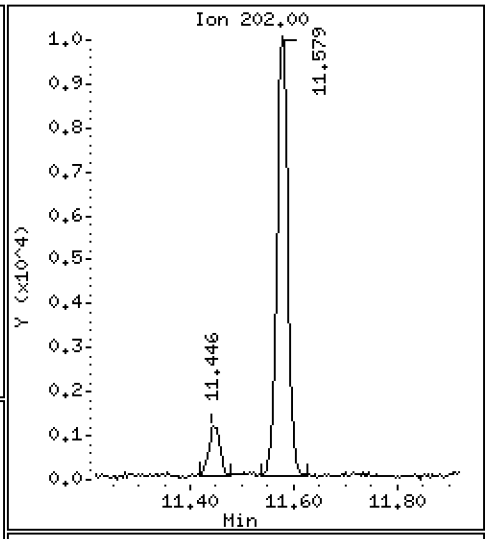
Column phase: Rxi-17sil

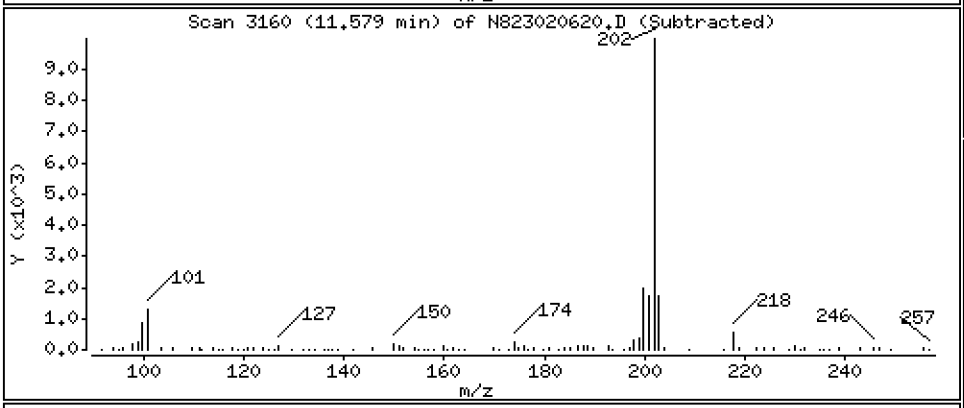
Column diameter: 0.25

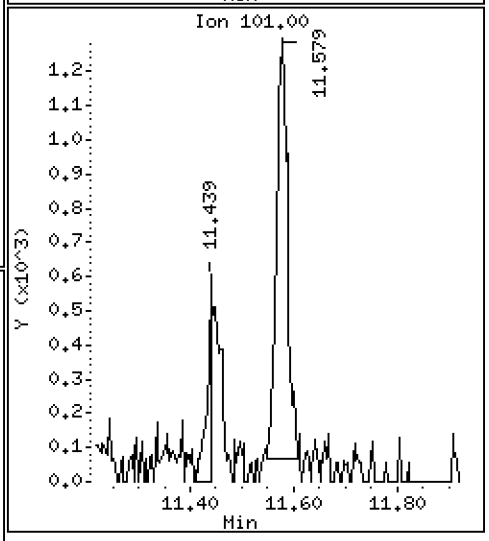
23 Pyrene

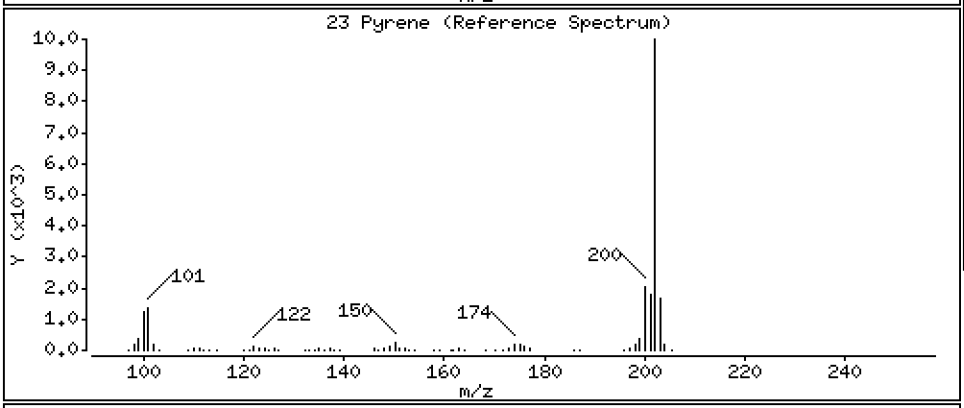
Concentration: 0.9012 ug/mL

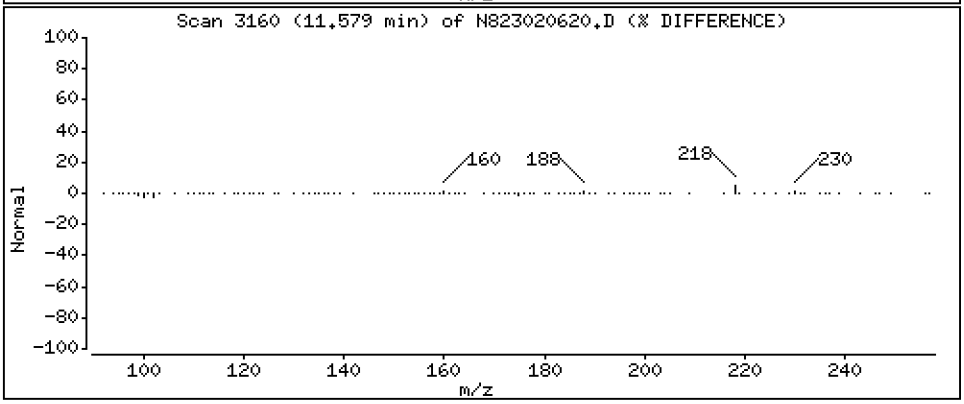












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

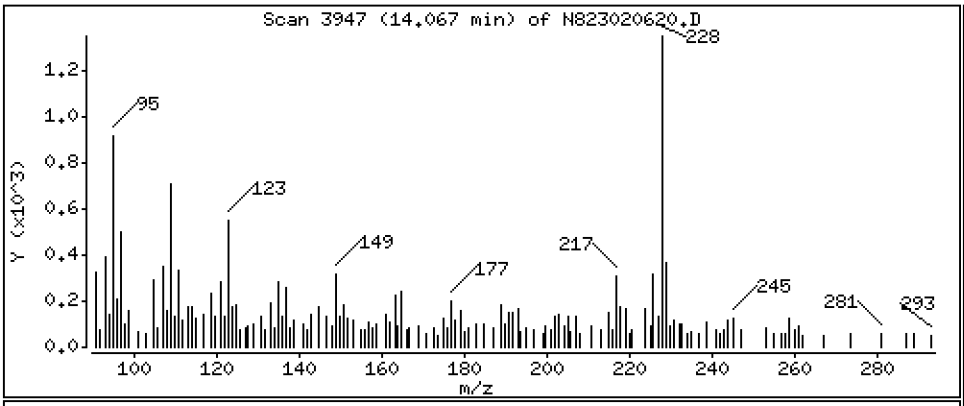
Operator: JZ

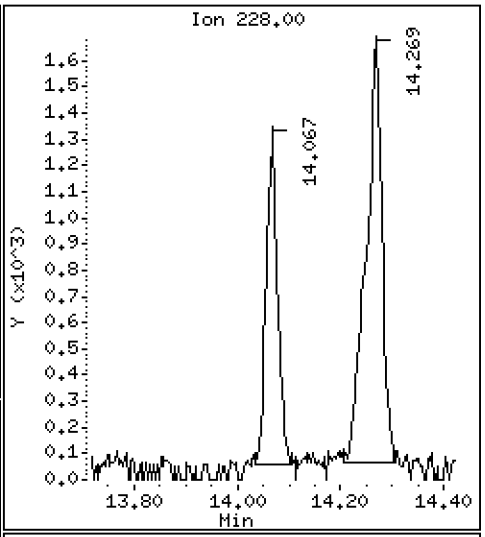
Column phase: Rxi-17sil

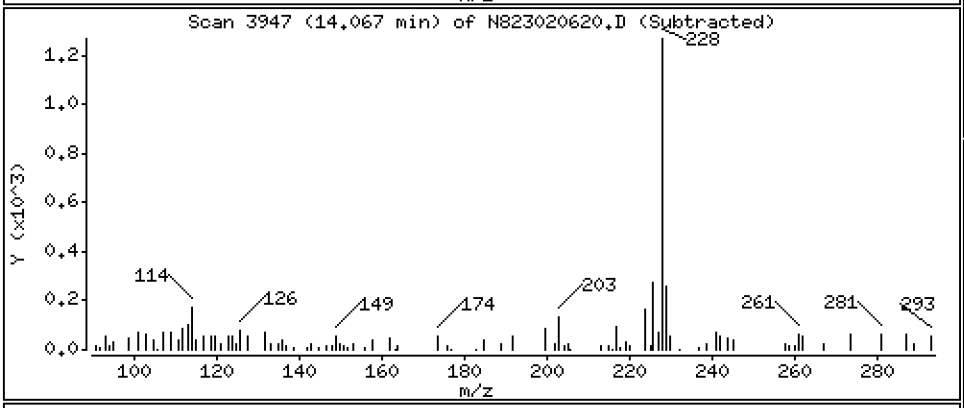
Column diameter: 0.25

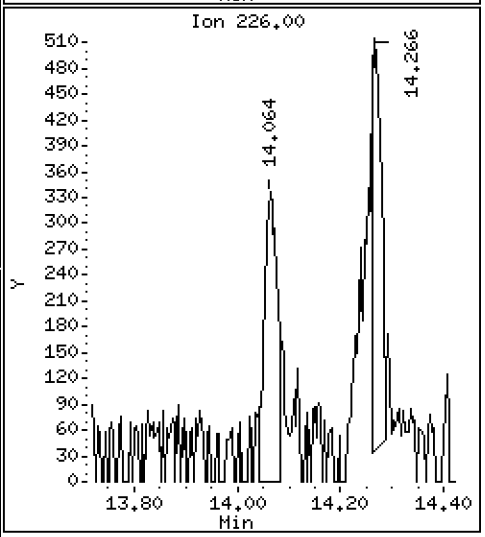
24 Benzo(a)anthracene

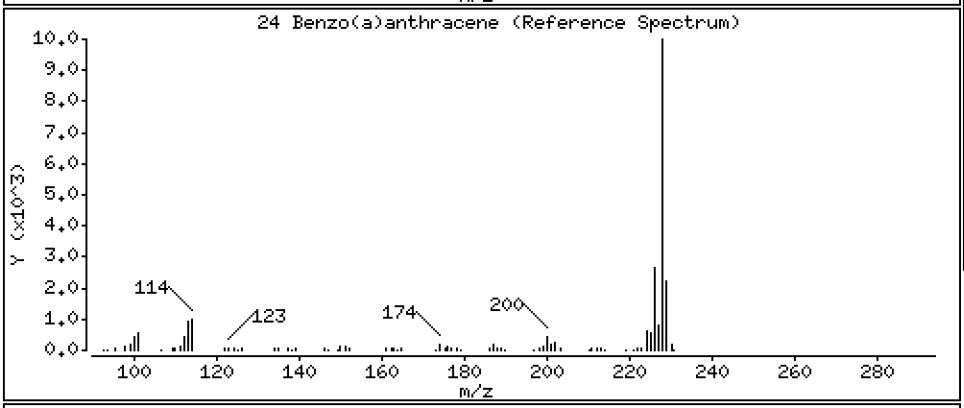
Concentration: 0.1311 ug/mL

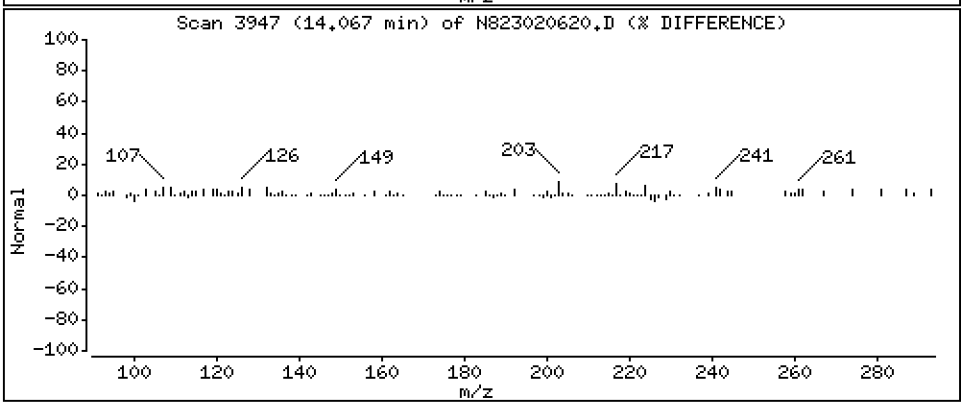












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020620.D

Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

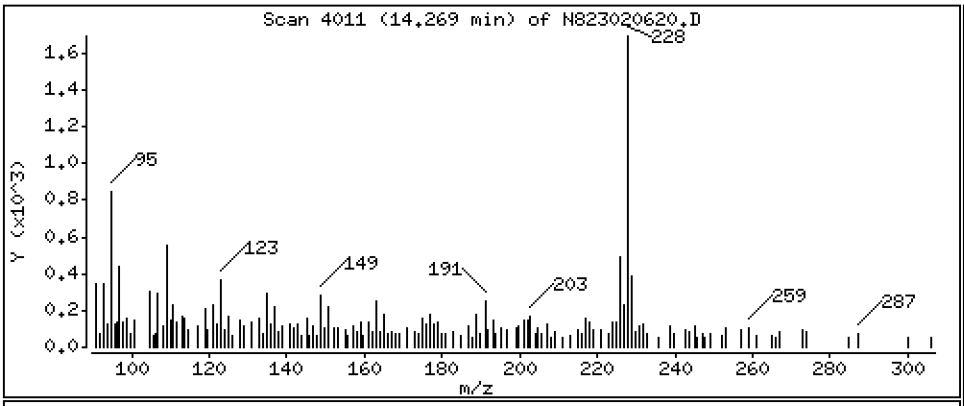
Operator: JZ

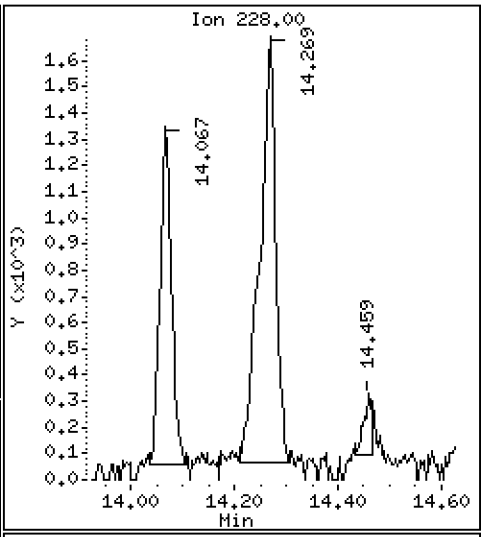
Column phase: Rxi-17sil

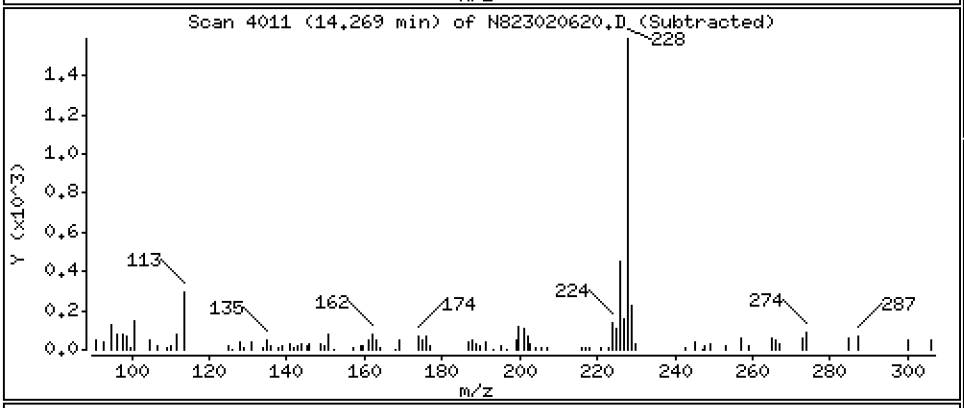
Column diameter: 0.25

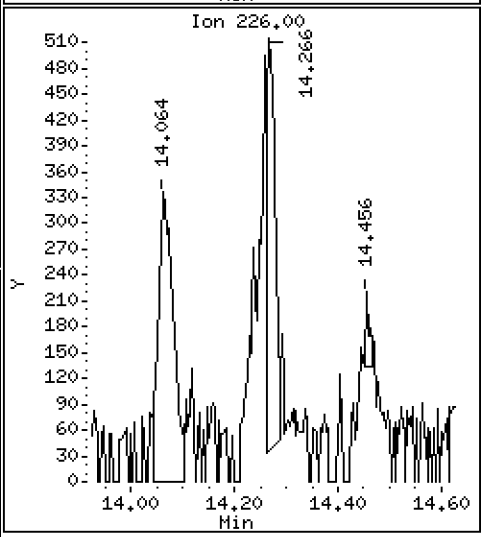
27 Chrysene

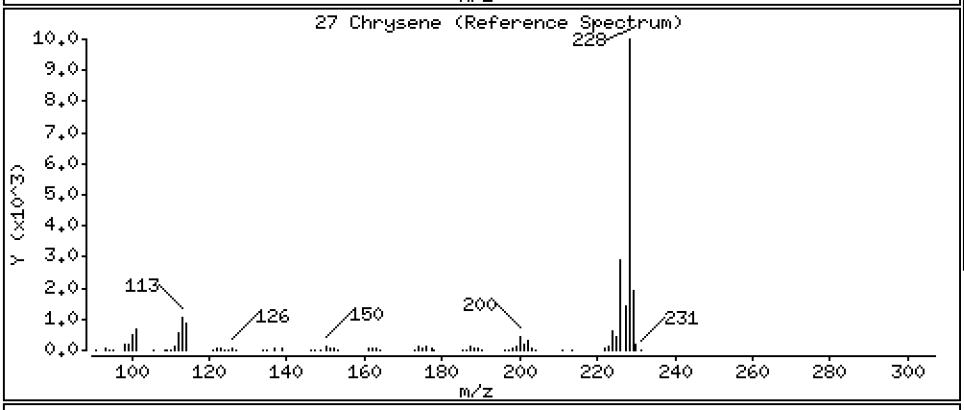
Concentration: 0.2143 ug/mL

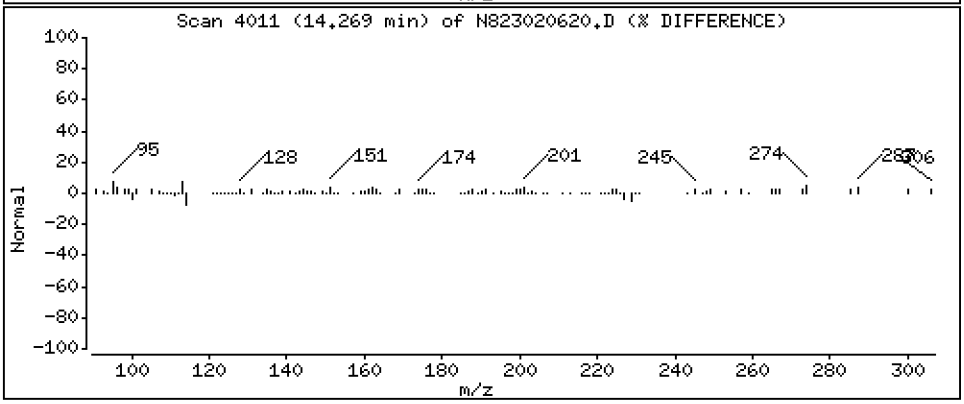












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

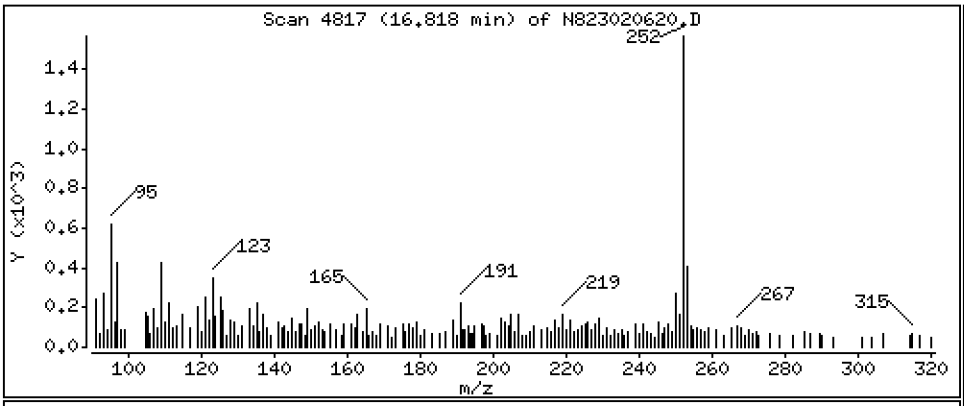
Operator: JZ

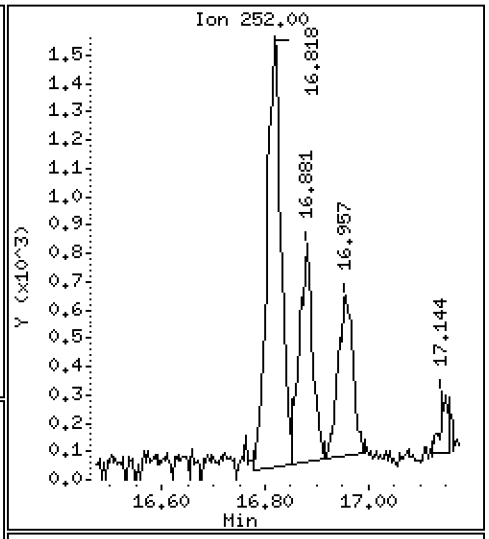
Column phase: Rxi-17sil

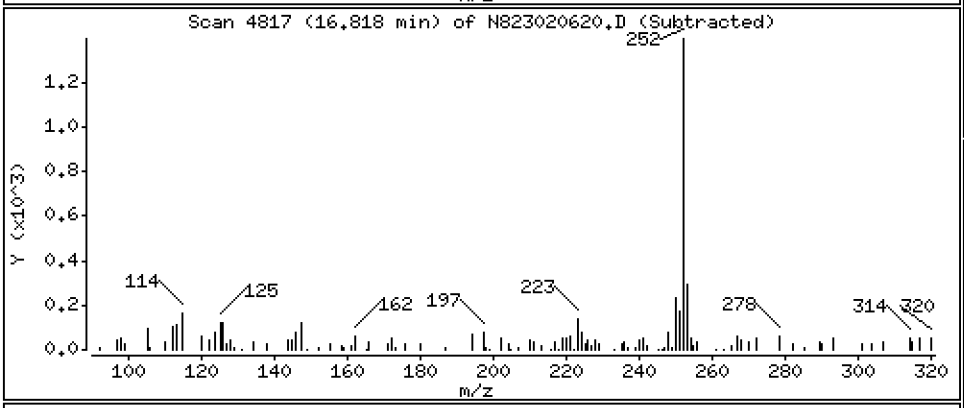
Column diameter: 0.25

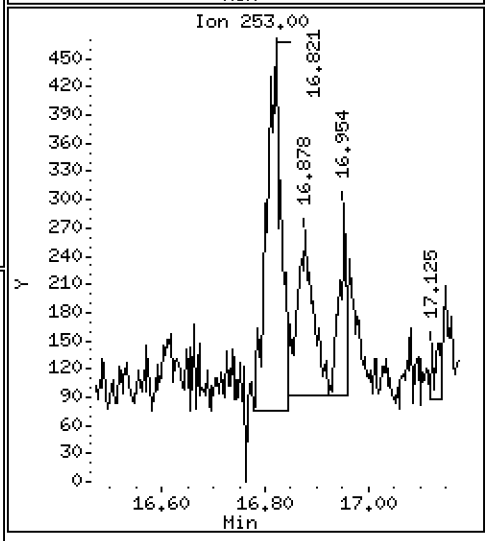
28 Benzo(b)fluoranthene

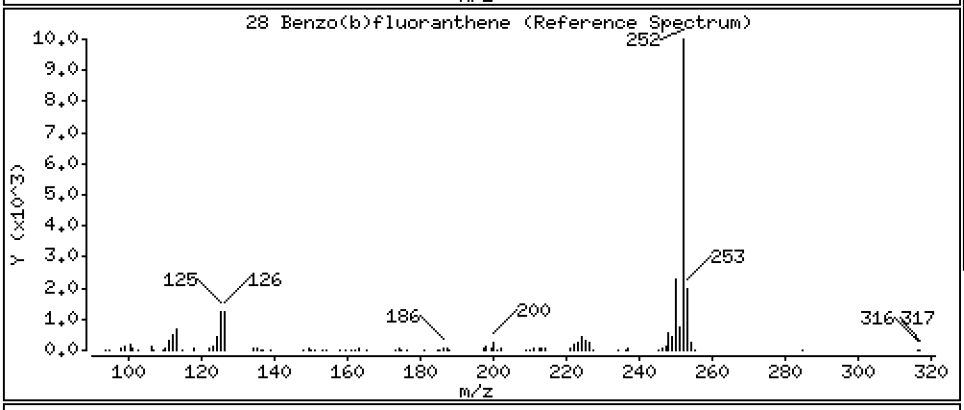
Concentration: 0.2009 ug/mL

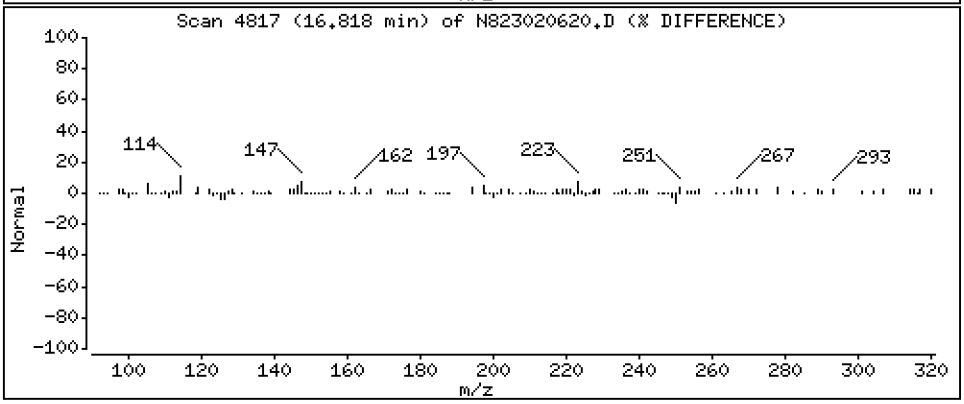












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

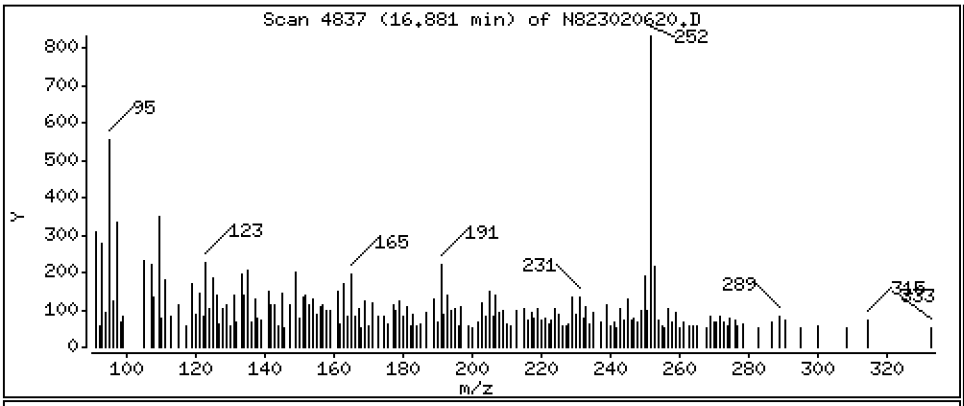
Operator: JZ

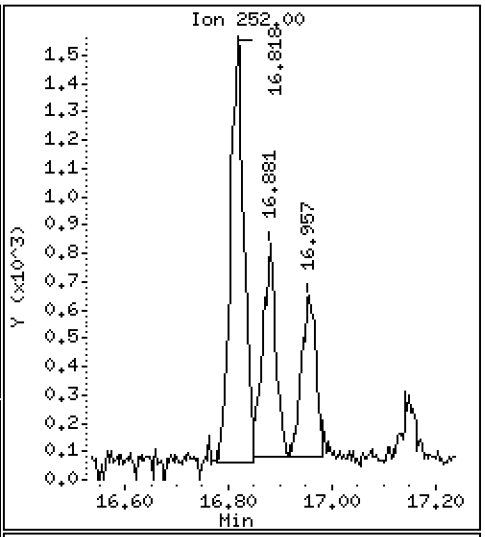
Column phase: Rxi-17sil

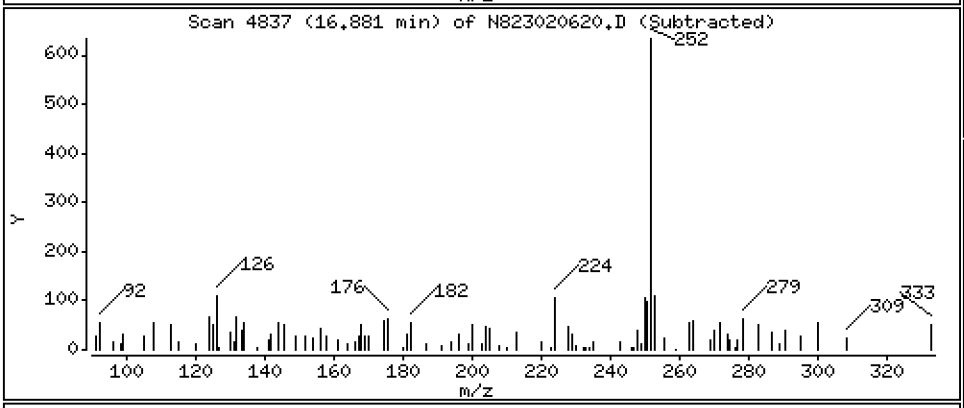
Column diameter: 0.25

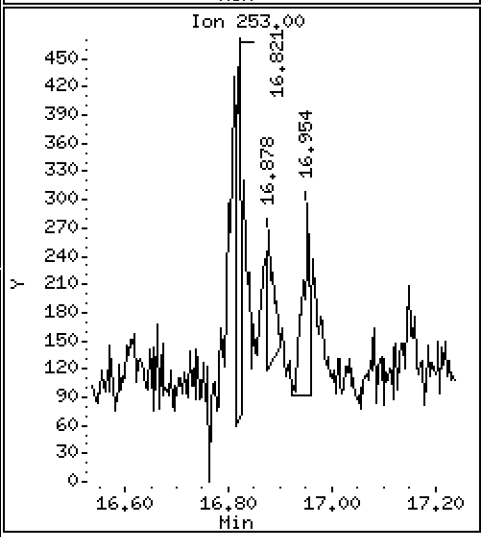
29 Benzo(k)fluoranthene

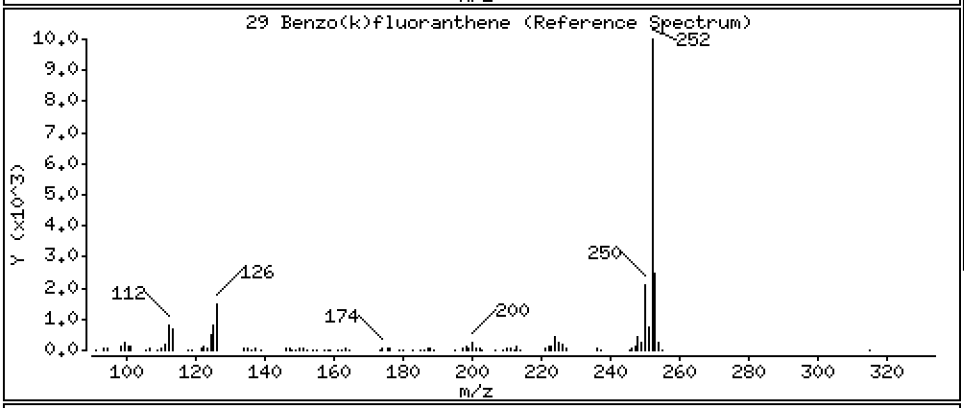
Concentration: 0.09336 ug/mL

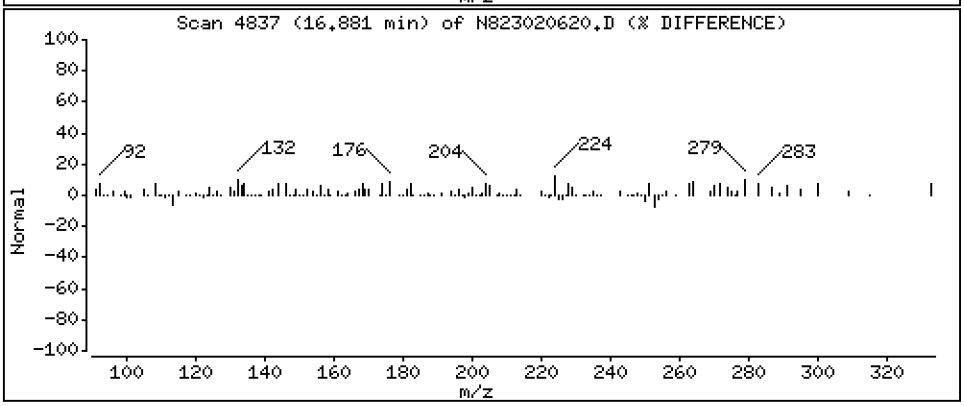












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

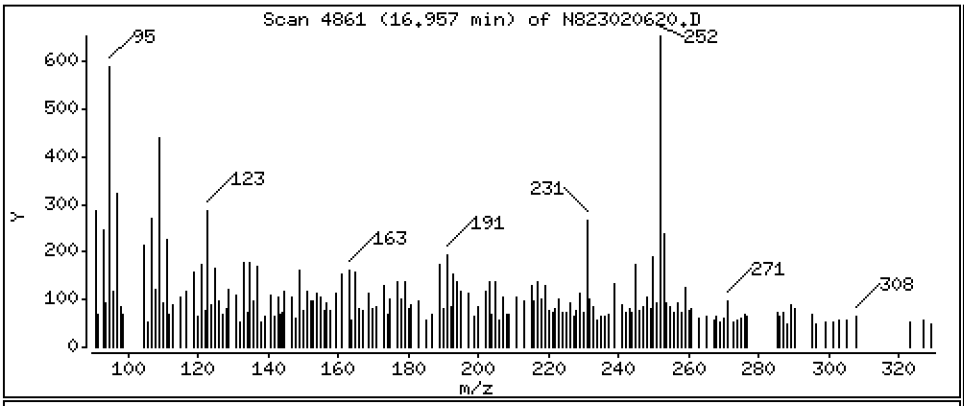
Operator: JZ

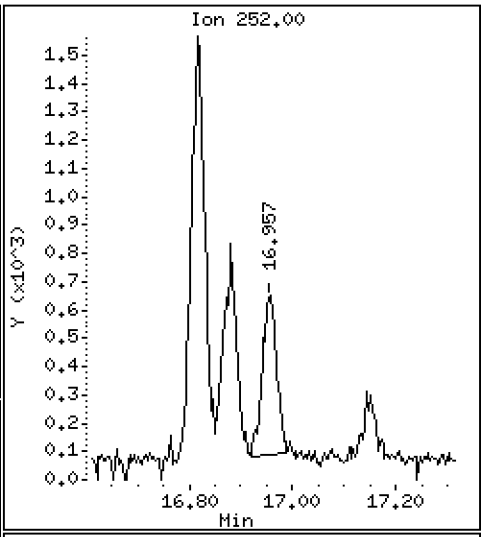
Column phase: Rxi-17sil

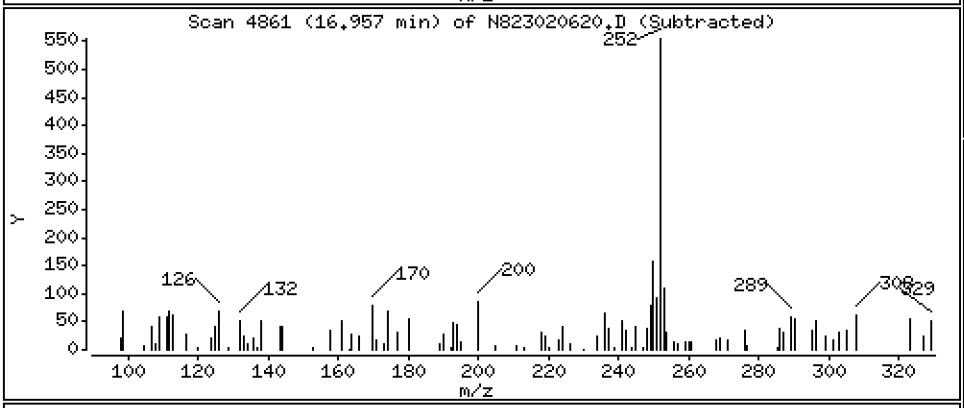
Column diameter: 0.25

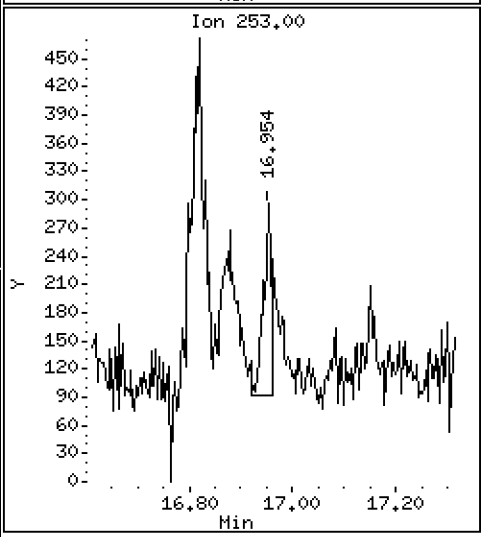
30 Benzo(j)fluoranthene

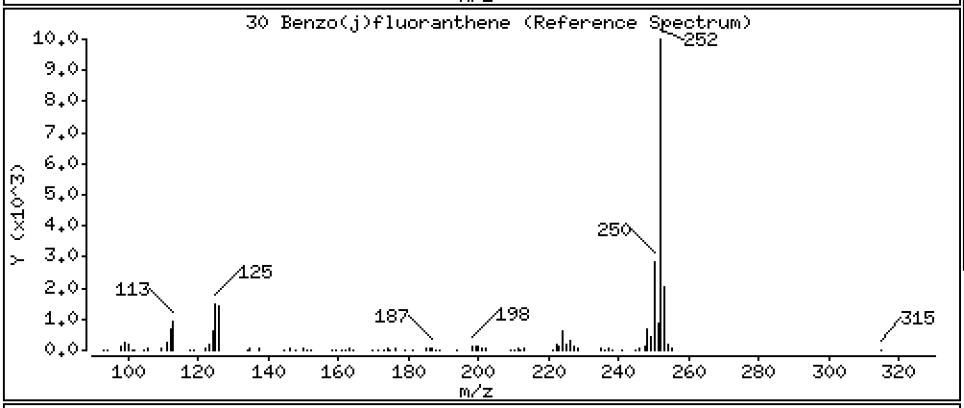
Concentration: 0.08712 ug/mL

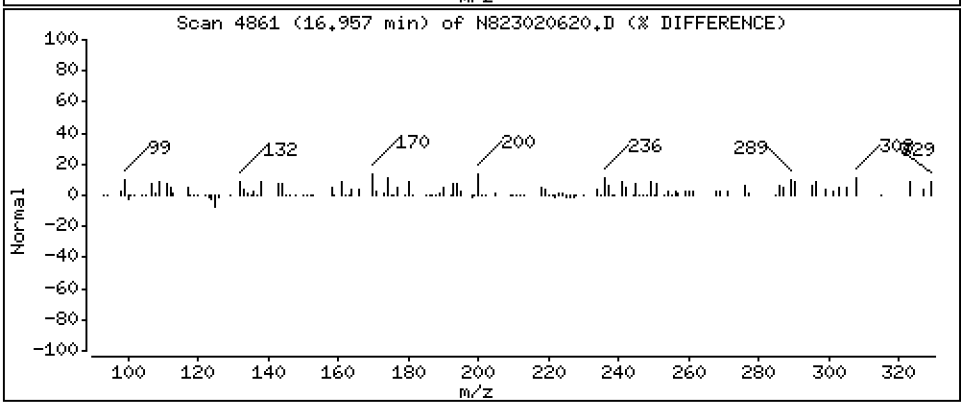












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

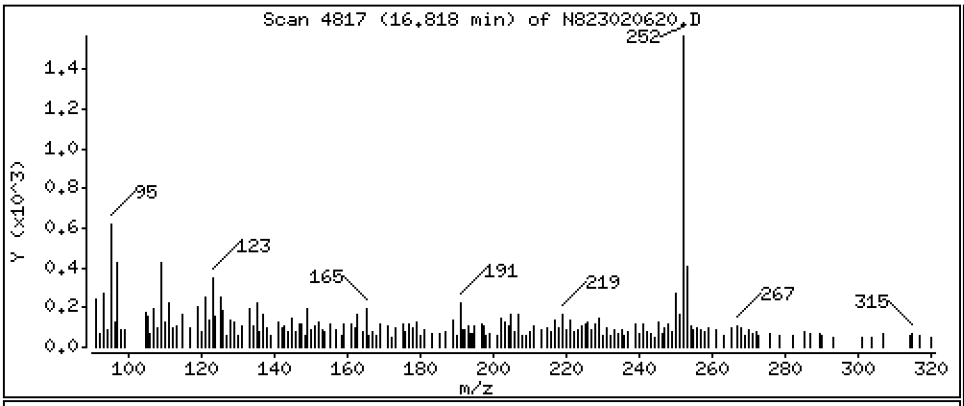
Operator: JZ

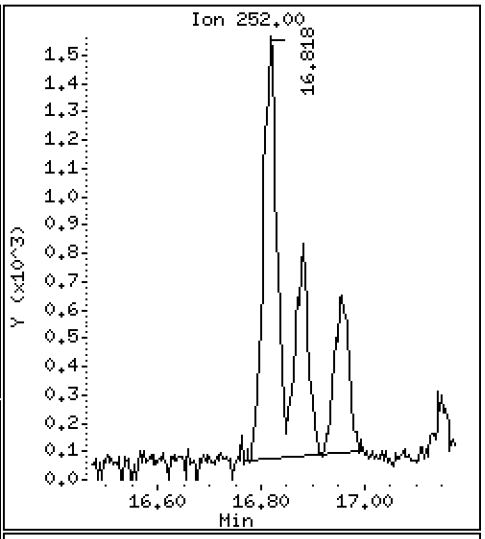
Column phase: Rxi-17sil

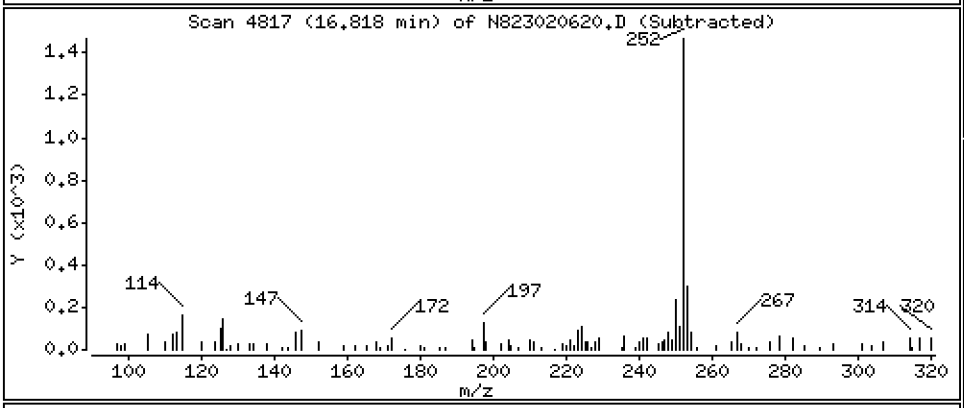
Column diameter: 0.25

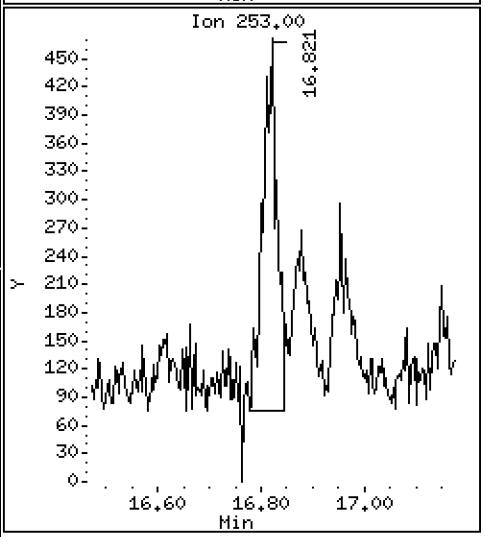
31 Total Benzofluoranthenes

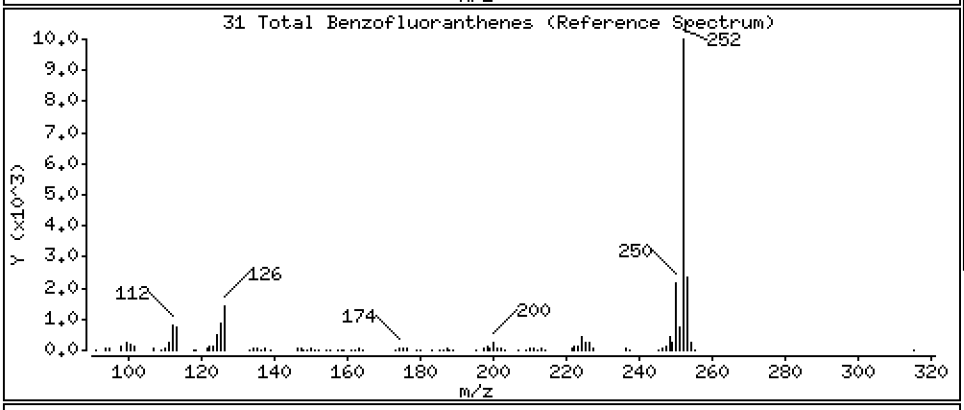
Concentration: 0.3735 ug/mL

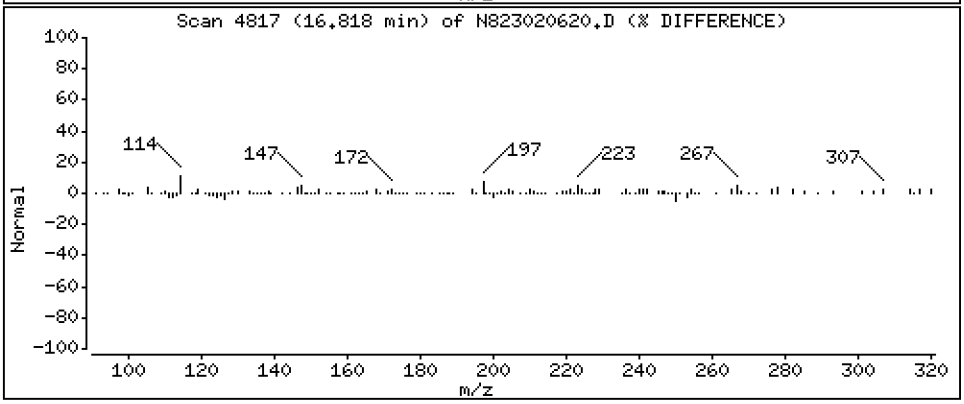












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

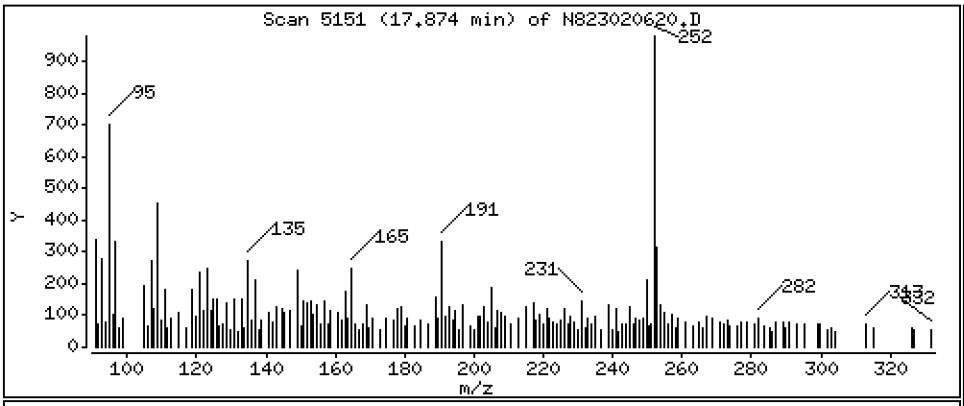
Operator: JZ

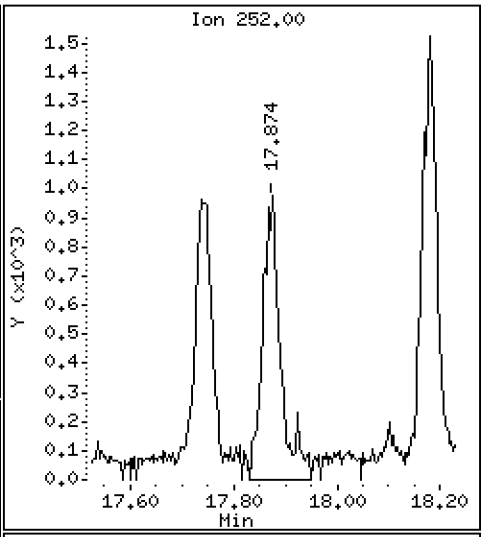
Column phase: Rxi-17sil

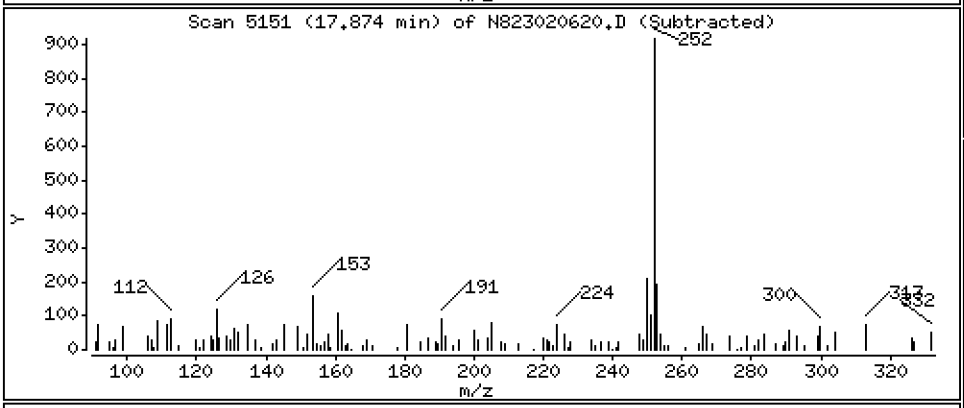
Column diameter: 0.25

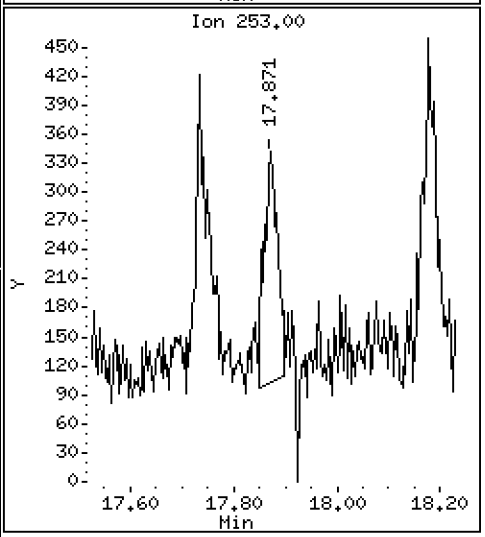
32 Benzo(a)pyrene

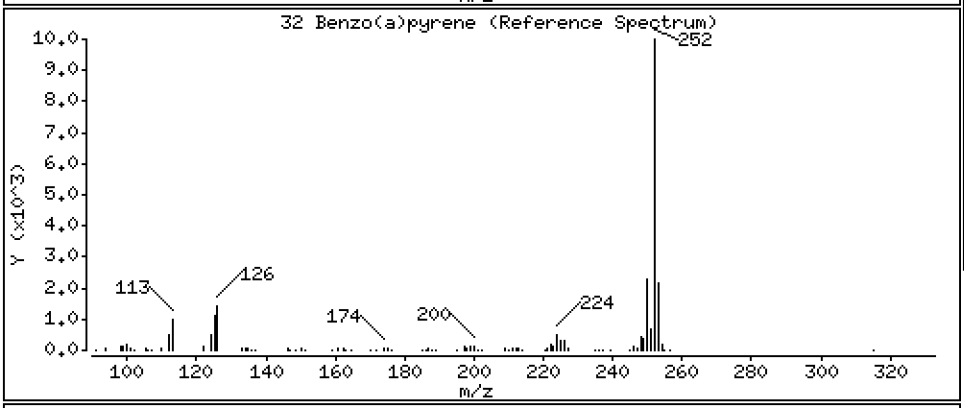
Concentration: 0.1873 ug/mL

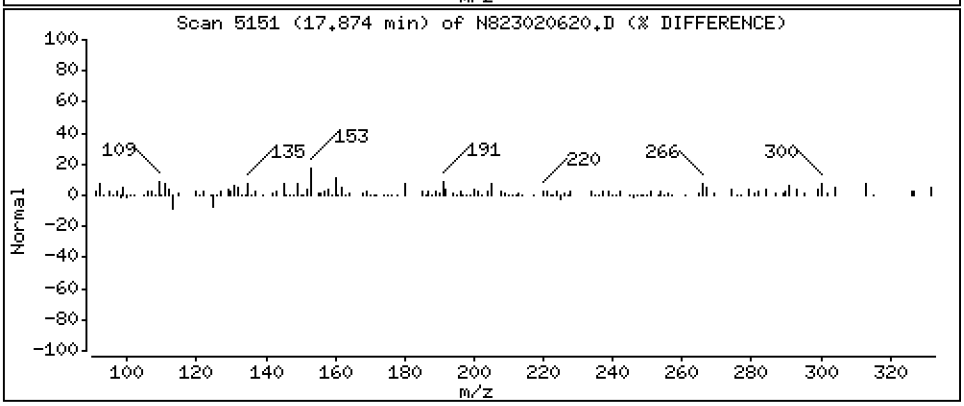












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

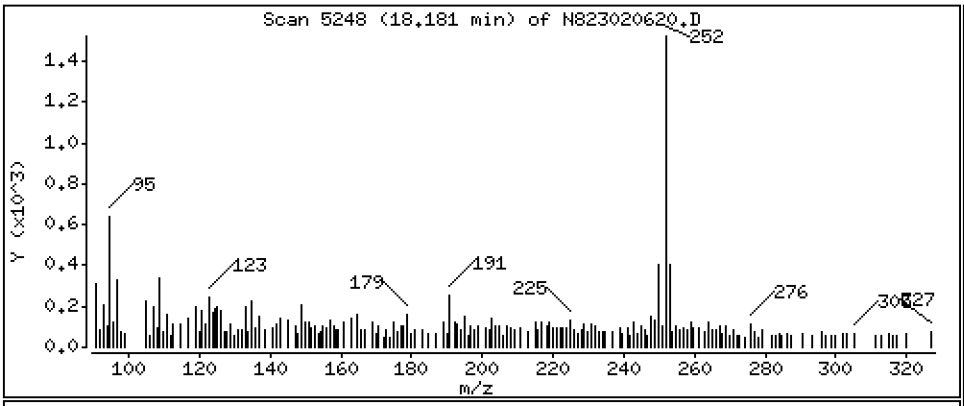
Operator: JZ

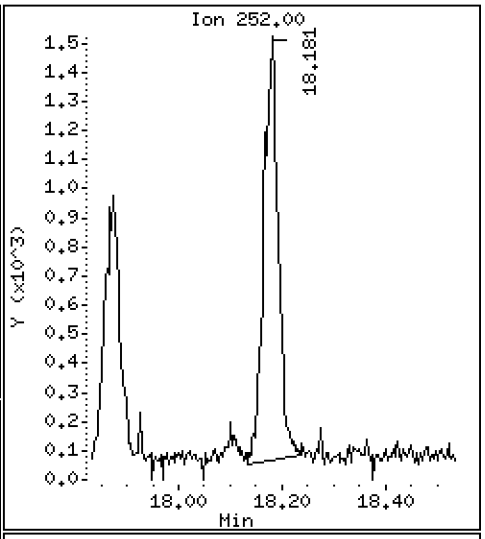
Column phase: Rxi-17sil

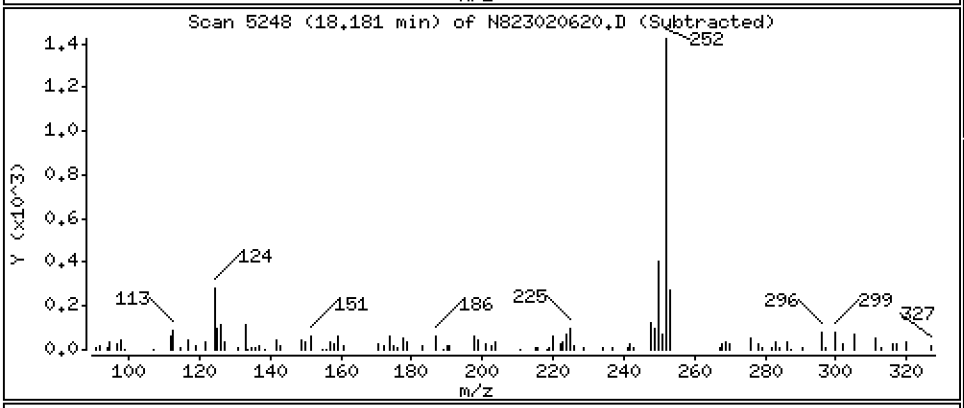
Column diameter: 0.25

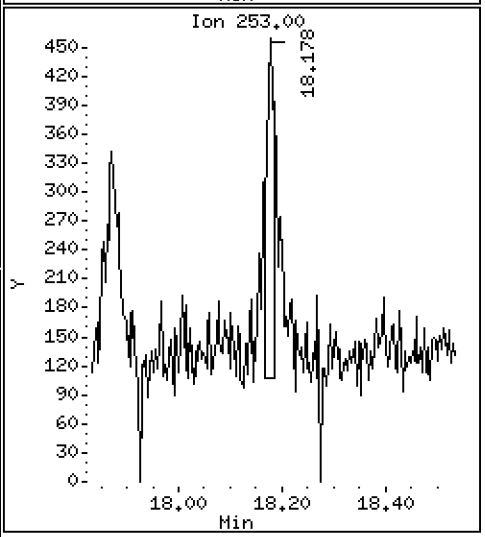
35 Perylene

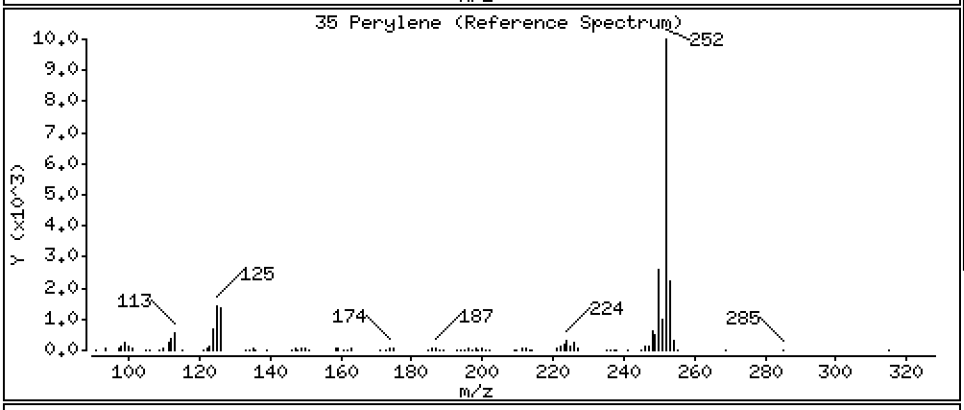
Concentration: 0.2110 ug/mL

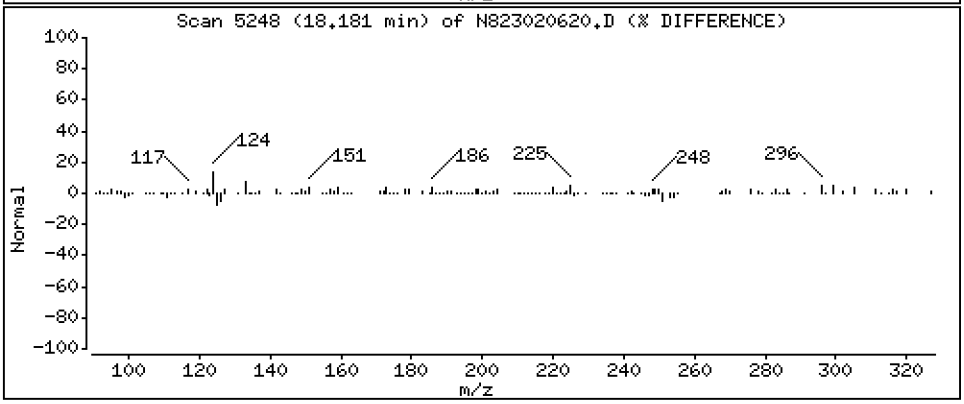












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Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

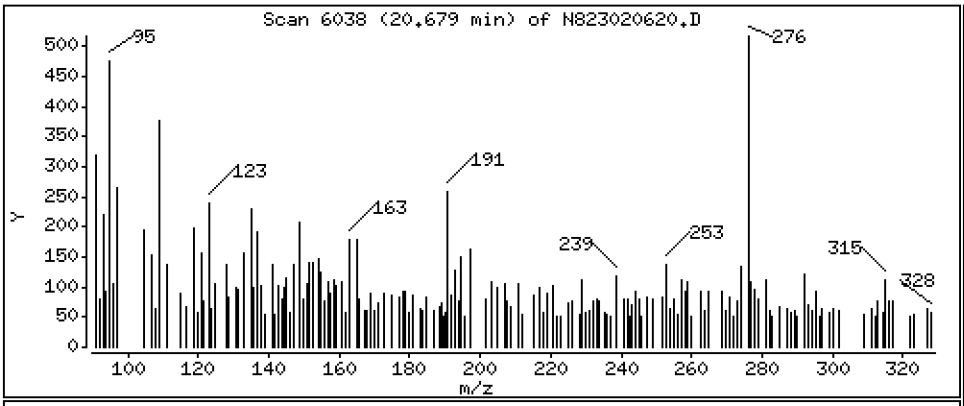
Operator: JZ

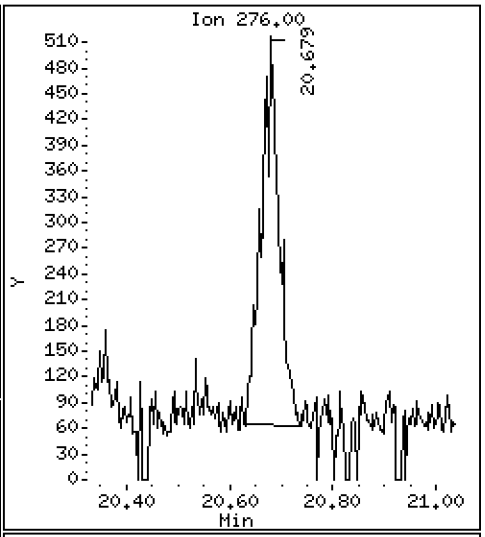
Column phase: Rxi-17sil

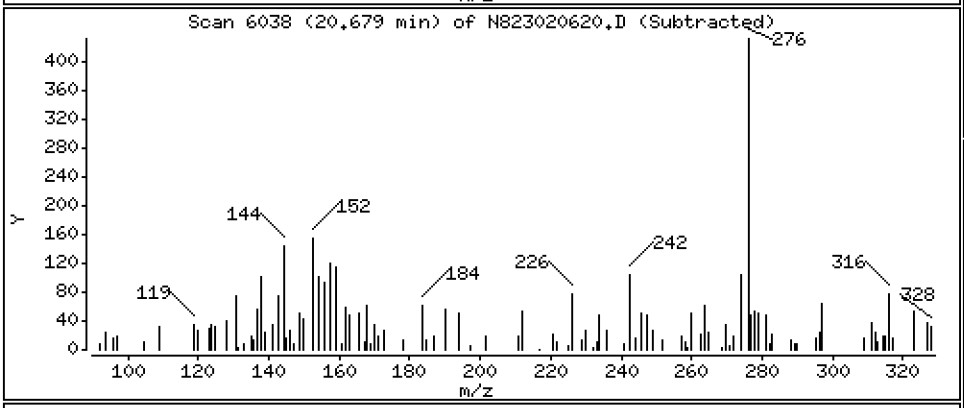
Column diameter: 0.25

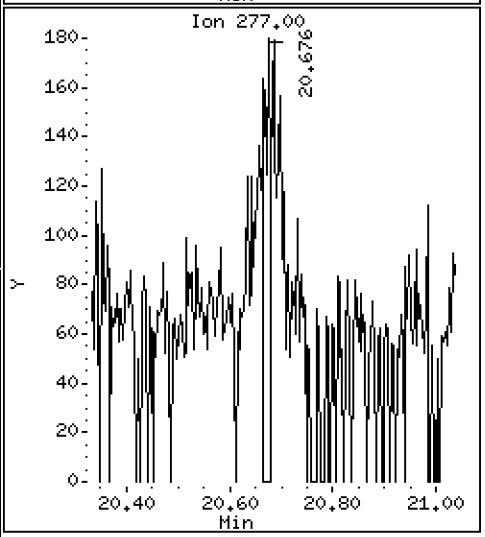
37 Indeno(1,2,3-cd)pyrene

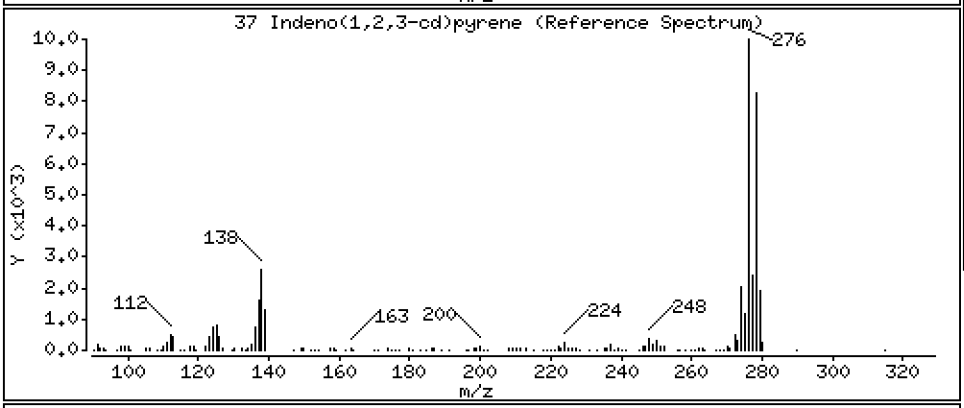
Concentration: 0.07594 ug/mL

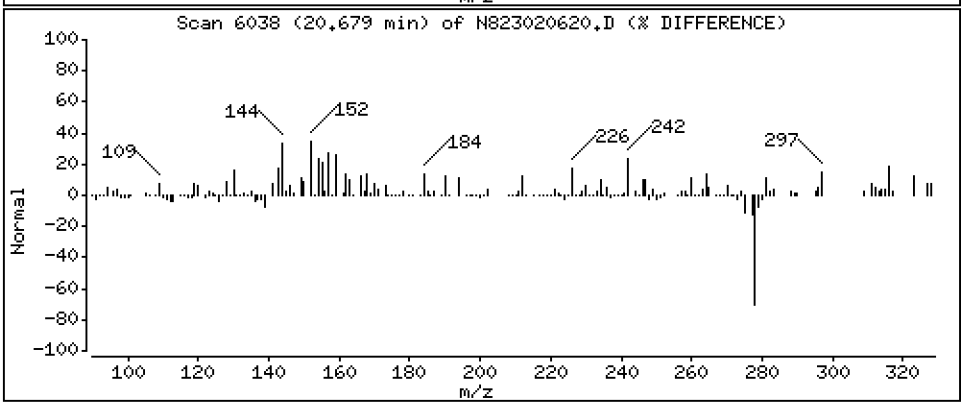












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020620.D

Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

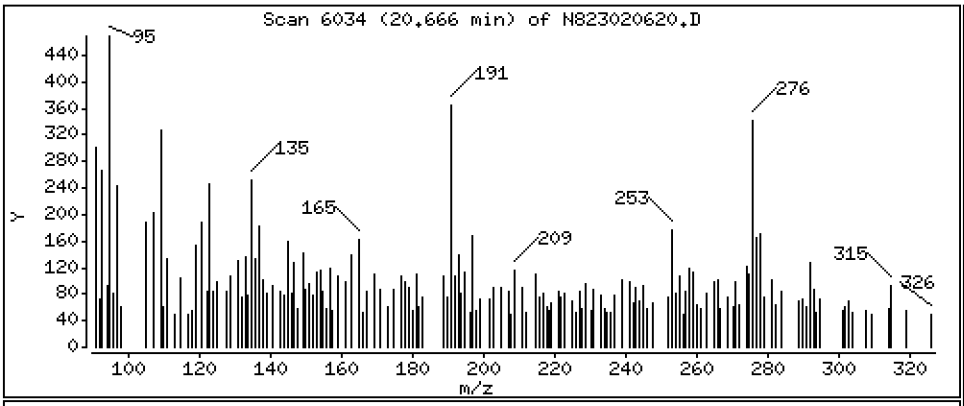
Operator: JZ

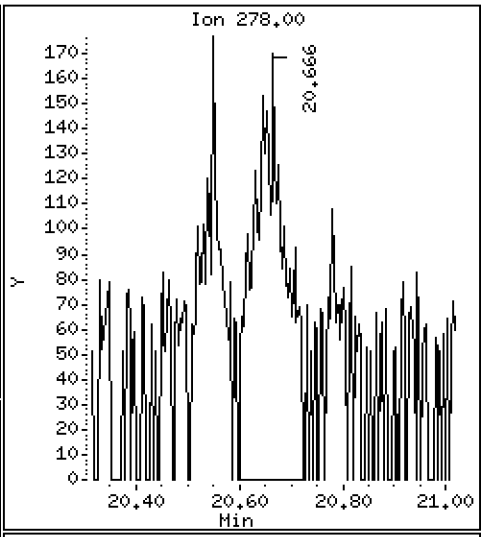
Column phase: Rxi-17sil

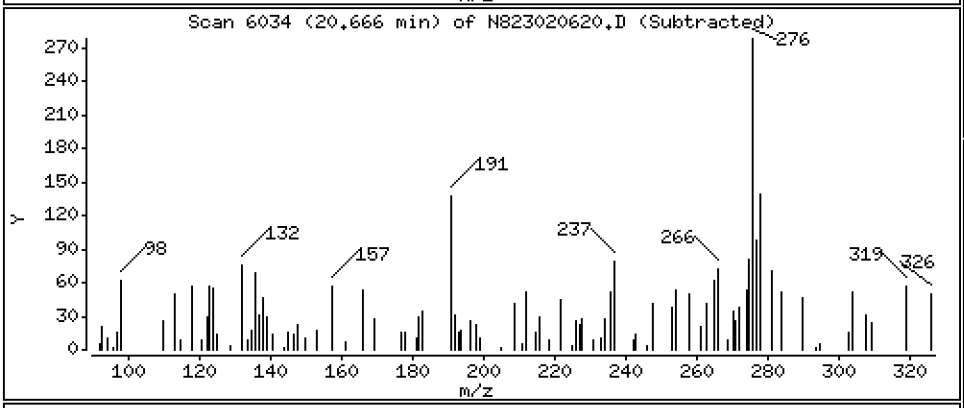
Column diameter: 0.25

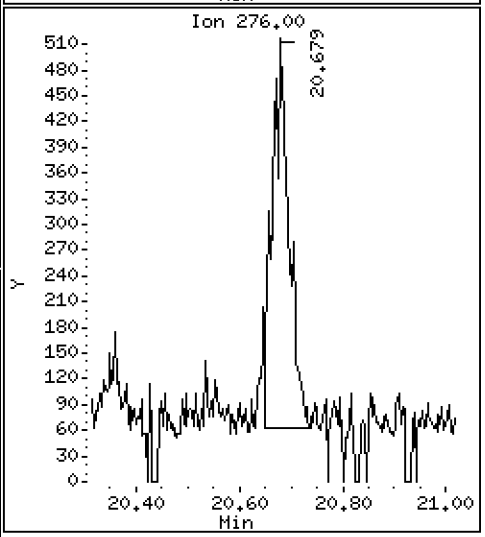
38 Dibenzo(a,h)anthracene

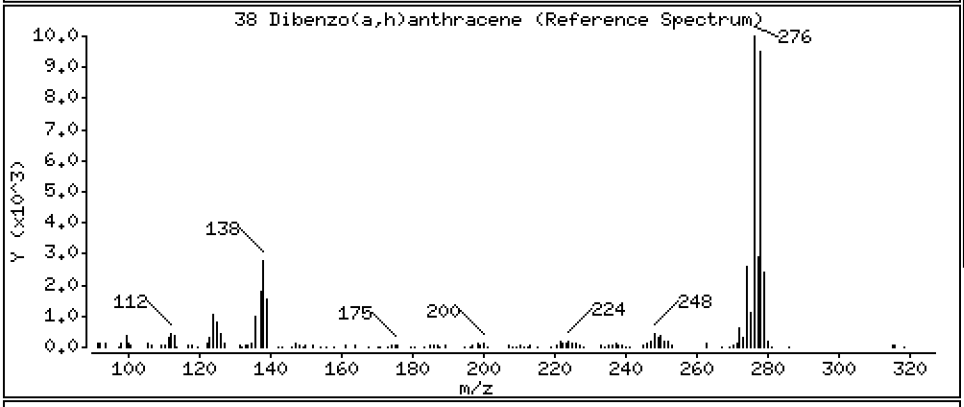
Concentration: 0.05649 ug/mL

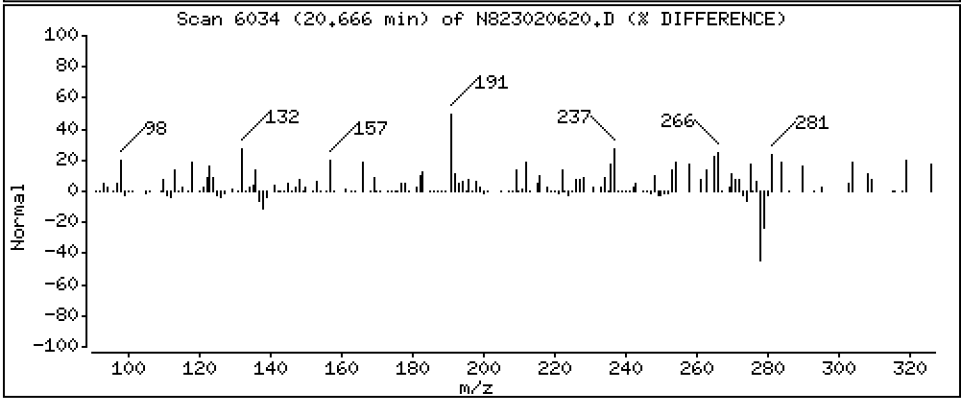












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020620.D

Date : 06-FEB-2023 21:20

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-07

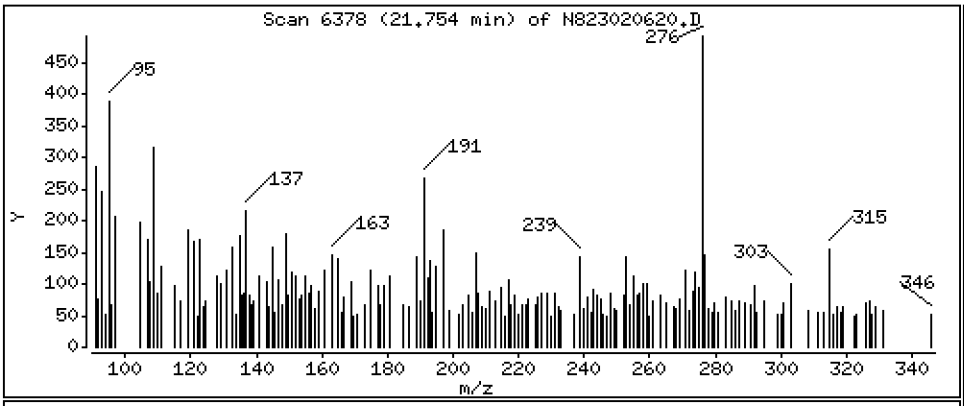
Operator: JZ

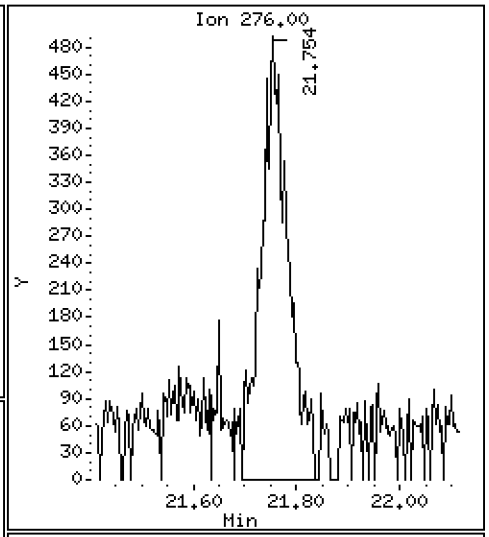
Column phase: Rxi-17sil

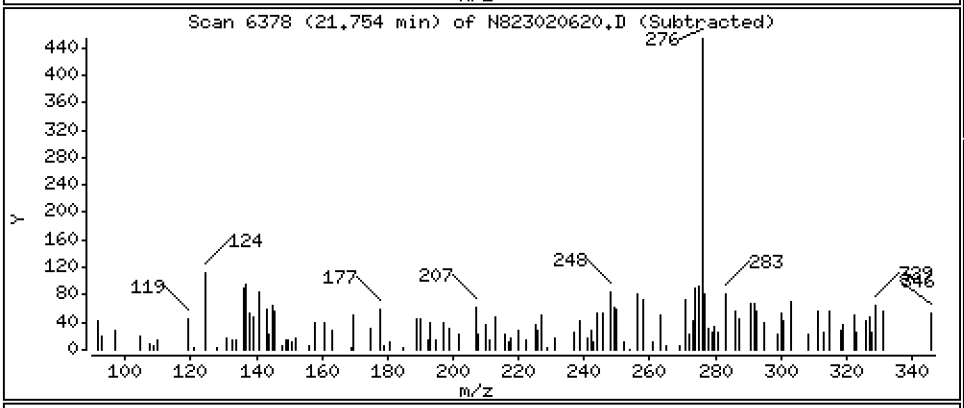
Column diameter: 0.25

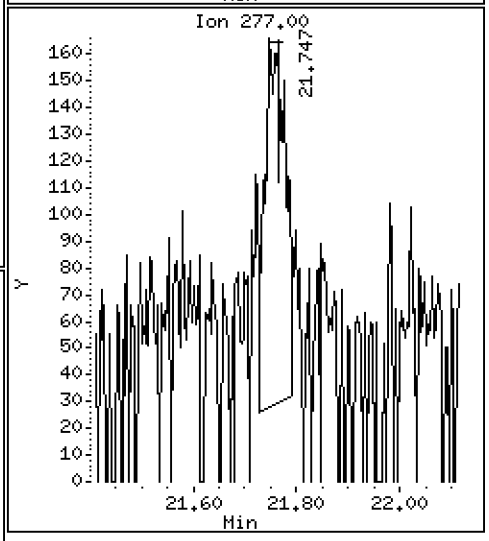
39 Benzo(g,h,i)perylene

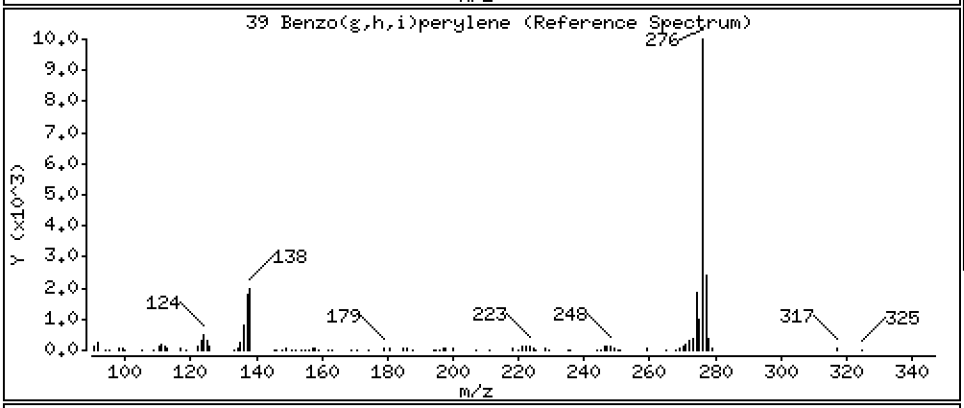
Concentration: 0.1369 ug/mL

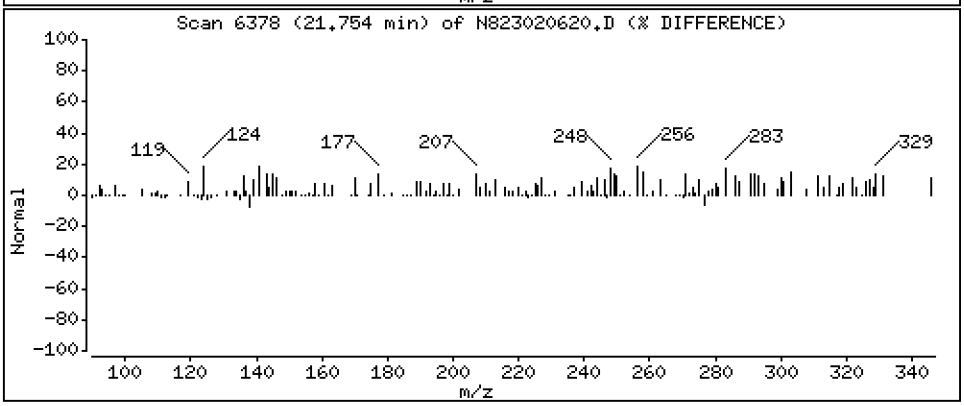












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020620.D
Lab Smp Id: 23A0207-07
Inj Date : 06-FEB-2023 21:20
Operator : JZ Inst ID: nt8.i
Smp Info : 23A0207-07
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 13:04 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

								CONCENTRATIONS	
		QUANT SIG						ON-COLUMN	FINAL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE		(ug/mL)	(ug/mL)
*	1 Naphthalene-d8	136	4.887	4.900	(1.000)	51867		2.00000	
	2 Naphthalene	128	4.919	4.928	(1.006)	3031		0.12568	0.1257(M)
$	3 2-Methylnaphthalene-d10	152	5.624	5.634	(1.151)	33486		2.36727	2.367
	4 2-Methylnaphthalene	141	5.671	5.681	(1.160)	743		0.05601	0.05601(M)
	5 1-methylnaphthalene	141	5.871	5.880	(1.201)	722		0.05363	0.05363
	9 Acenaphthylene	152	7.075	7.082	(0.985)	359		0.01533	0.01533
*	10 Acenaphthene-d10	164	7.183	7.189	(1.000)	31021		2.00000	
	11 Acenaphthene	153	7.233	7.240	(1.007)	4963		0.31621	0.3162(M)
	12 Dibenzofuran	168	7.385	7.392	(1.028)	2188		0.09178	0.09178
	14 Fluorene	166	7.866	7.869	(1.095)	1968		0.10629	0.1063(M)
*	15 Phenanthrene-d10	188	9.226	9.232	(1.000)	53247		2.00000	
	16 Phenanthrene	178	9.260	9.267	(1.004)	4705		0.18089	0.1809
	17 Anthracene	178	9.301	9.308	(1.008)	1916		0.08109	0.08109
	19 Carbazole	167	9.817	9.823	(1.064)	798		0.03684	0.03684
	22 Fluoranthene	202	11.047	11.050	(1.197)	8595		0.30358	0.3036
$	21 Fluoranthene-d10	212	11.009	11.009	(1.193)	60768		2.58671	2.587
	23 Pyrene	202	11.578	11.569	(0.816)	14944		0.90125	0.9012
	24 Benzo(a)anthracene	228	14.066	14.070	(0.991)	1971		0.13114	0.1311
*	25 Chrysene-d12	240	14.196	14.202	(1.000)	26745		2.00000	
	27 Chrysene	228	14.269	14.275	(1.005)	3428		0.21426	0.2143
	28 Benzo(b)fluoranthene	252	16.817	16.824	(0.929)	2898		0.20093	0.2009
	29 Benzo(k)fluoranthene	252	16.881	16.887	(0.932)	1319		0.09336	0.09336
	30 Benzo(j)fluoranthene	252	16.957	16.963	(0.936)	1108		0.08712	0.08712(M)
	31 Total Benzofluoranthenes	252	16.817	16.824	(0.929)	5102		0.37351	0.3735(M)
	32 Benzo(a)pyrene	252	17.874	17.877	(0.987)	2377		0.18728	0.1873(M)
*	33 Perylene-d12	264	18.107	18.107	(1.000)	24765		2.00000	
	35 Perylene	252	18.180	18.183	(1.004)	2874		0.21101	0.2110(M)
$	36 Dibenzo(a,h)anthracene-d14	292	20.542	20.549	(1.134)	29060		2.99481	2.995
	37 Indeno(1,2,3-cd)pyrene	276	20.678	20.684	(1.142)	1098		0.07594	0.07594(M)
	38 Dibenzo(a,h)anthracene	278	20.666	20.666	(1.141)	703		0.05649	0.05649(M)
	39 Benzo(g,h,i)perylene	276	21.753	21.763	(1.201)	1794		0.13694	0.1369(M)

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020620.D
Lab Smp Id: 23A0207-07
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44336	22168	88672	51867	16.99
10 Acenaphthene-d10	26127	13064	52254	31021	18.73
15 Phenanthrene-d10	47424	23712	94848	53247	12.28
25 Chrysene-d12	36794	18397	73588	26745	-27.31
33 Perylene-d12	36636	18318	73272	24765	-32.40

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.89	-0.26
10 Acenaphthene-d10	7.19	6.69	7.69	7.18	-0.09
15 Phenanthrene-d10	9.23	8.73	9.73	9.23	-0.07
25 Chrysene-d12	14.20	13.70	14.70	14.20	-0.04
33 Perylene-d12	18.11	17.61	18.61	18.11	0.00

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

REVIEW SUMMARY FOR FILE - N823020620.D

Lab ID: 23A0207-07
nt8.i, 20230206A.b\FSIMPNA230119.m,   06-FEB-2023 21:20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

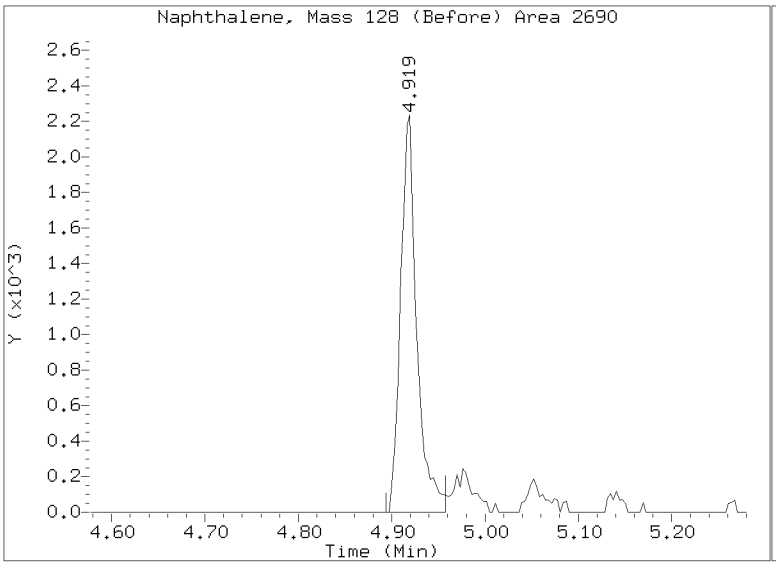
No RRT check performed

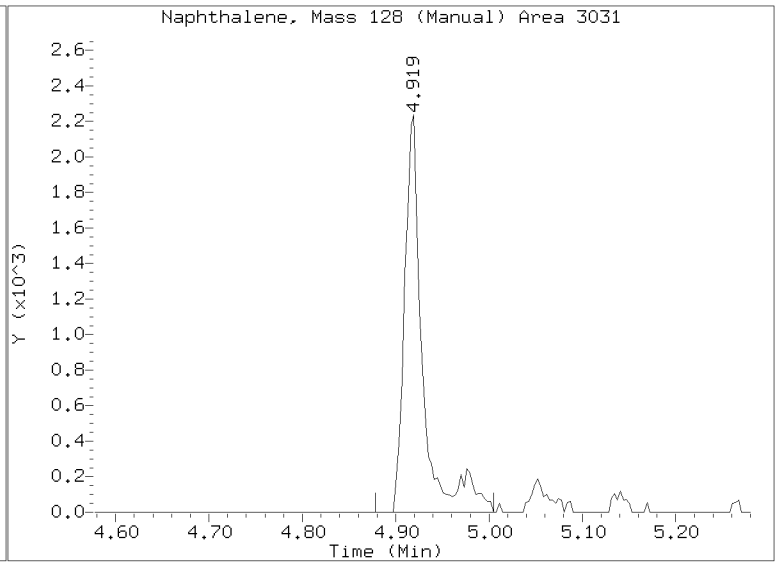
On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

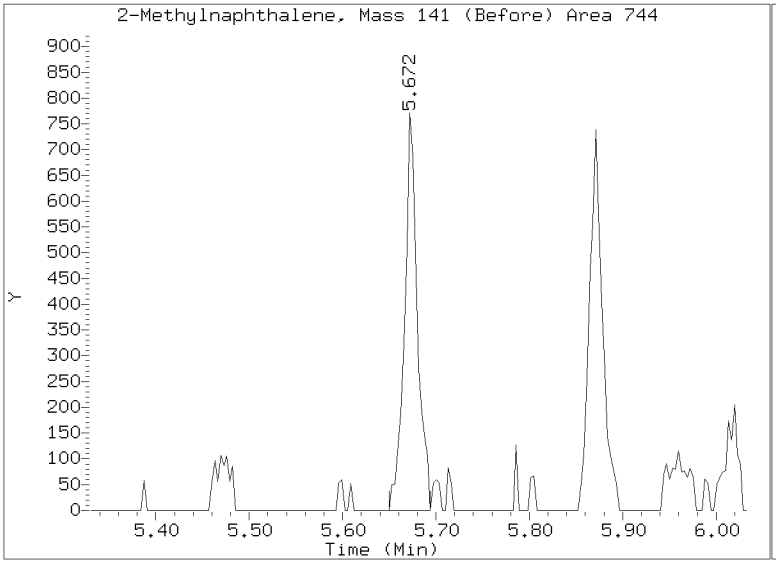
* Only compounds listed in the work order have been verified by the analyst *

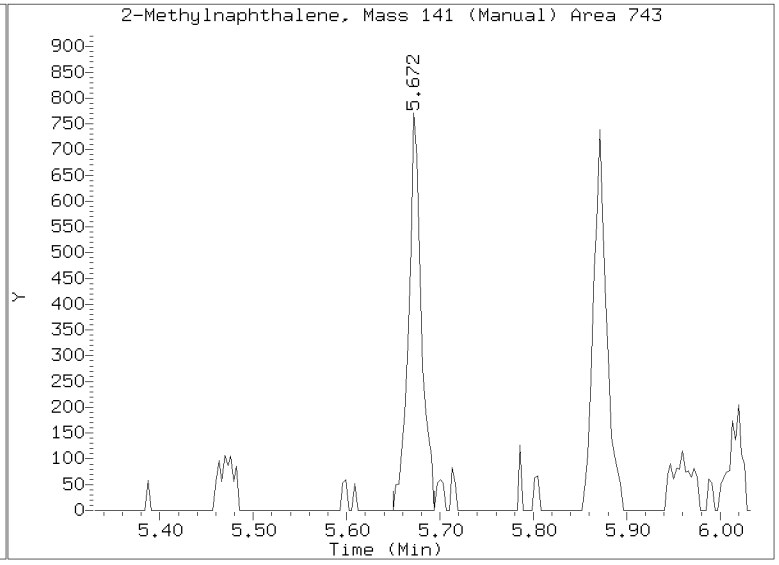
Quant Ion Manual Peak Adjustment Report

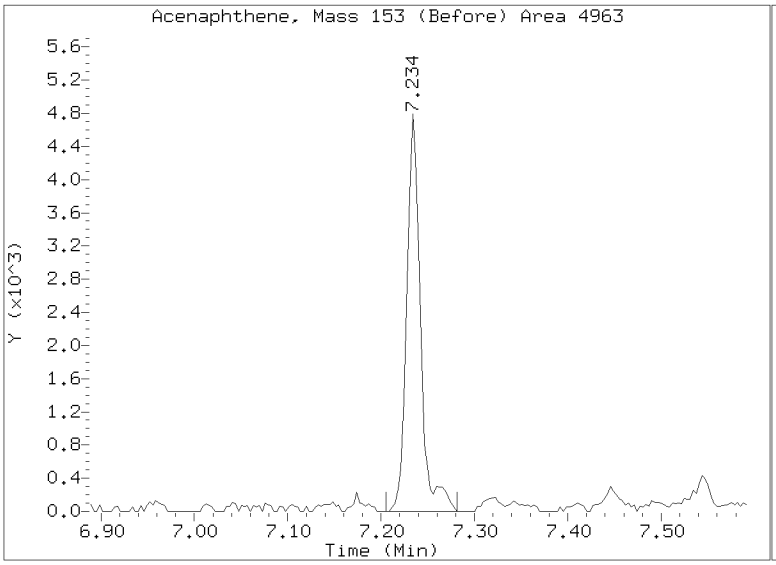
Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020620.D
Injection Date: 06-FEB-2023 21:20
Lab ID:23A0207-07 Client ID:
Report Date: 02/07/2023 15:59

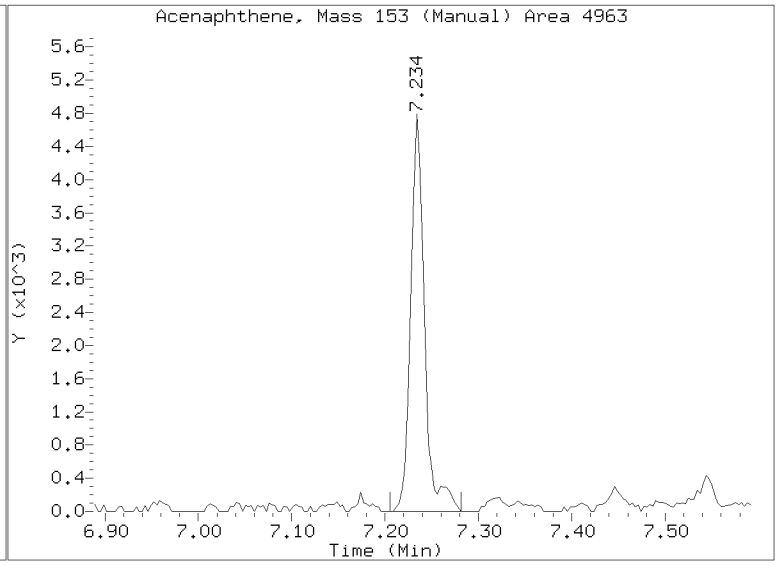












Quant Ion Manual Peak Adjustment Report

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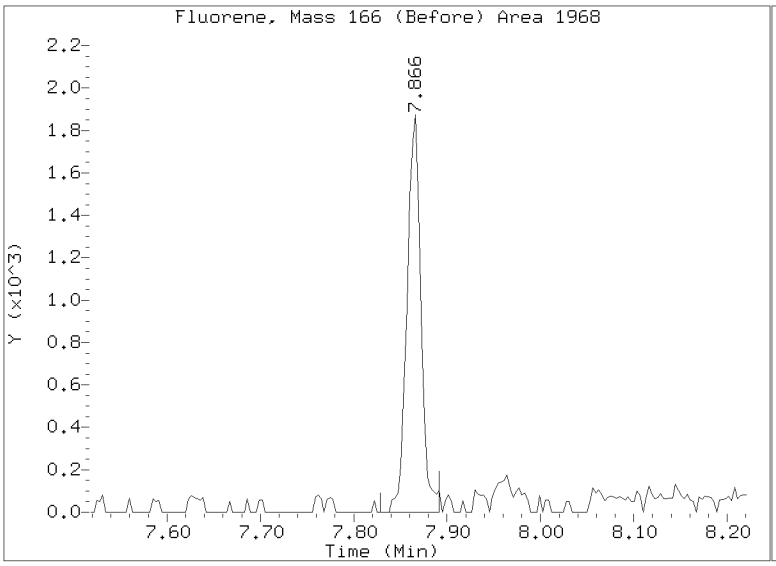
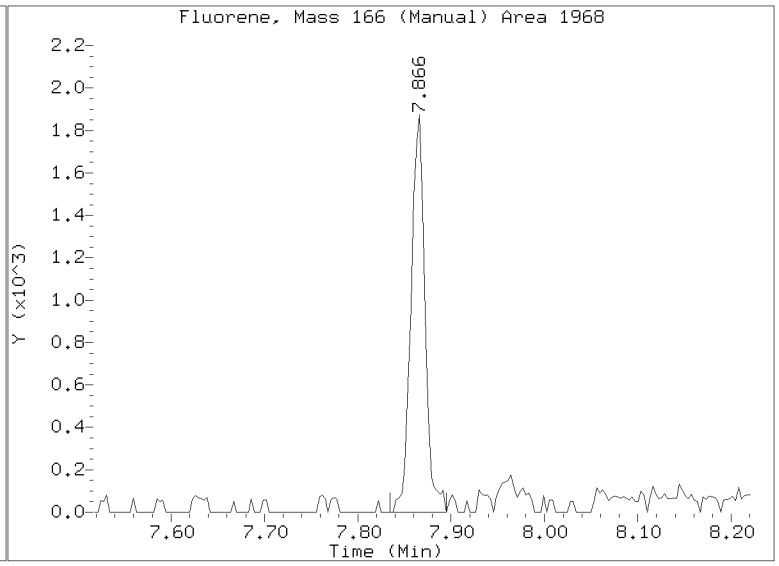
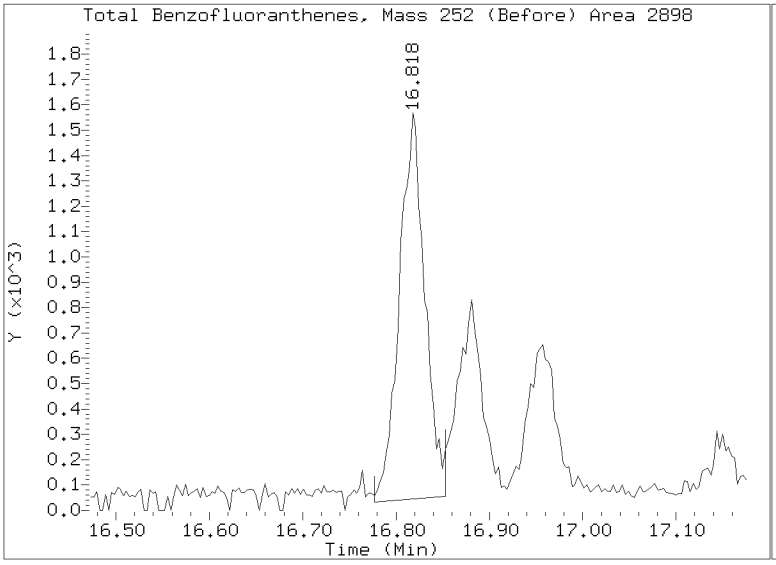
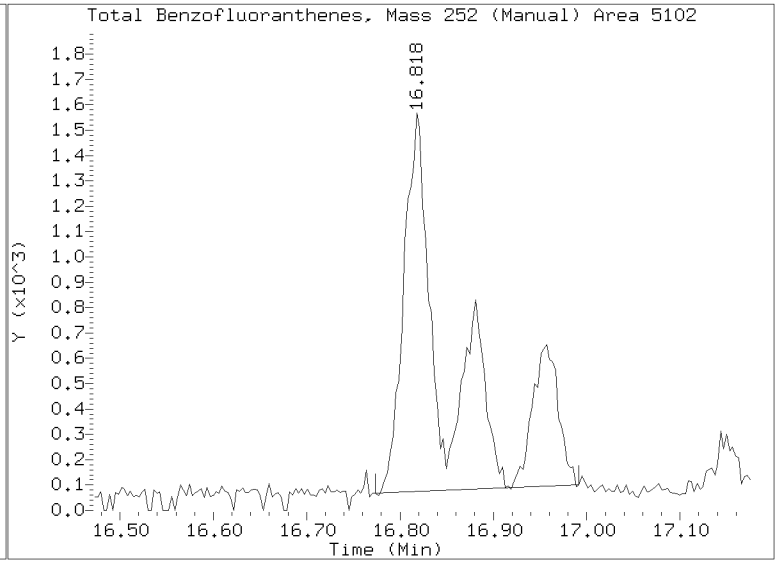
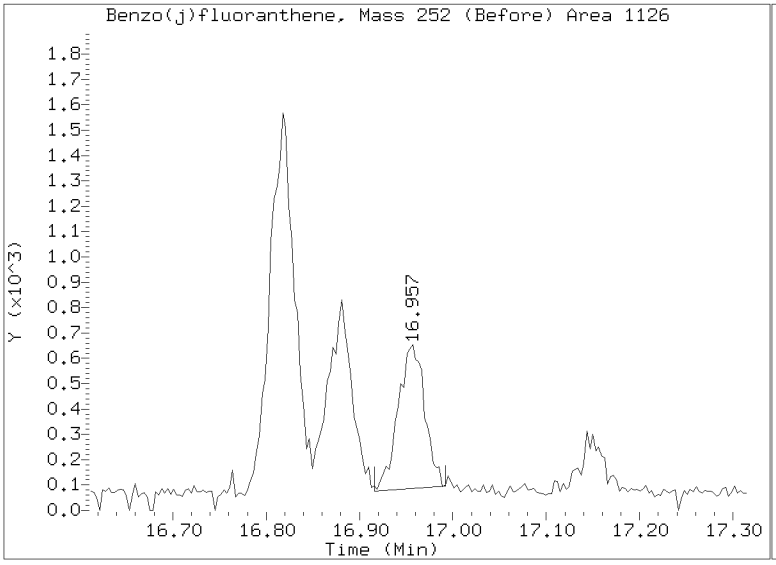
Lab ID:23A0207-07 Client ID:
Report Date: 02/07/2023 15:59

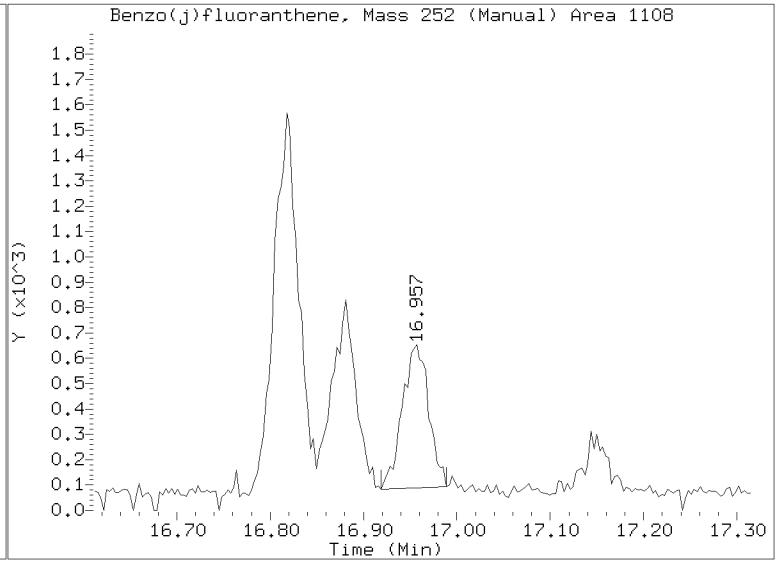












Quant Ion Manual Peak Adjustment Report

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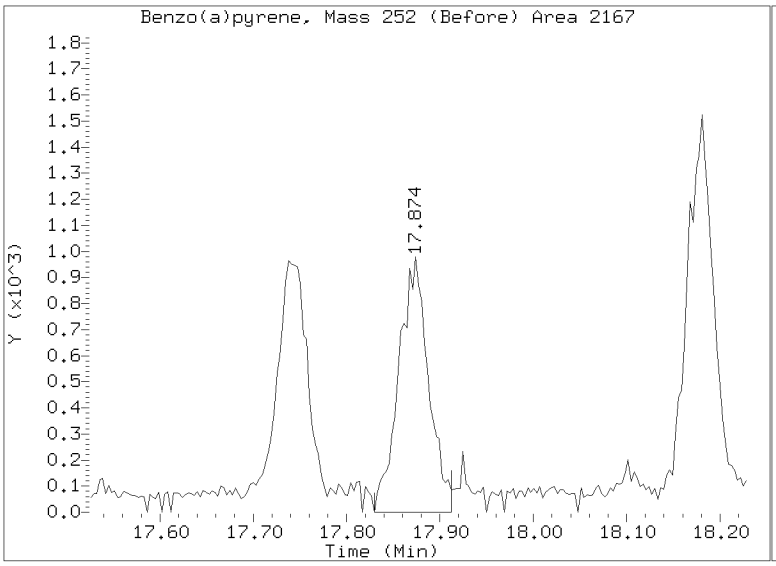
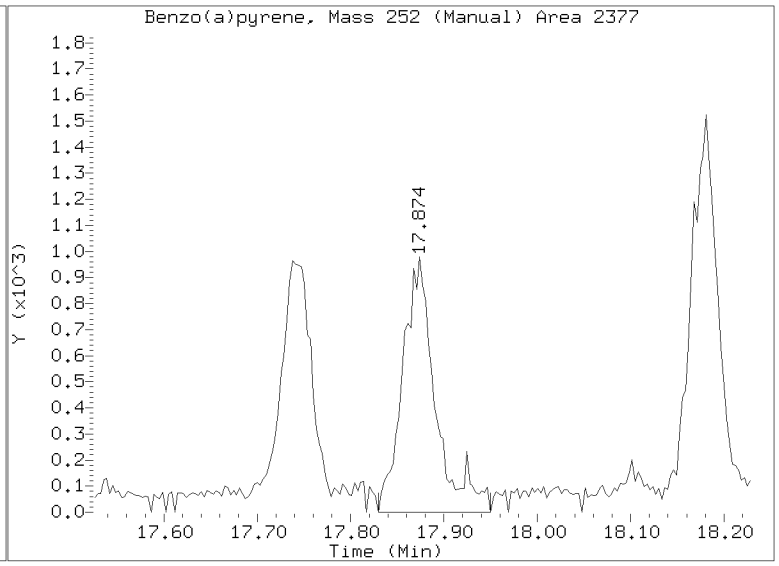
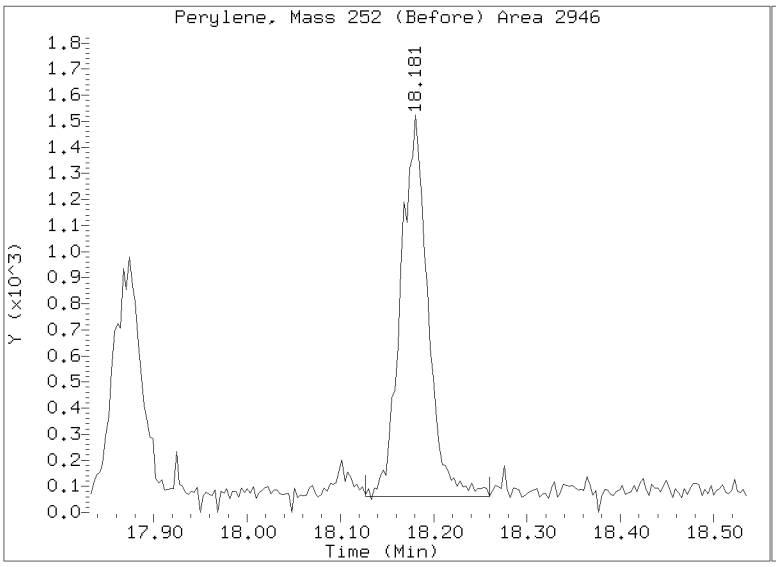
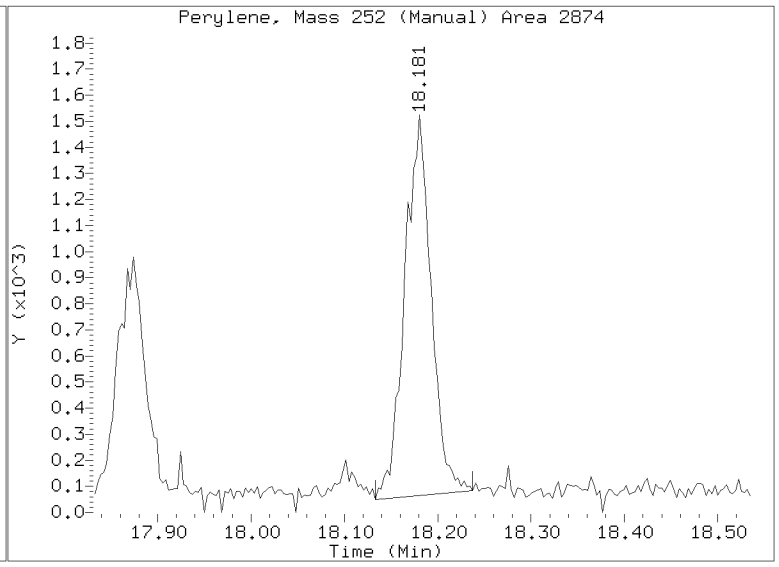
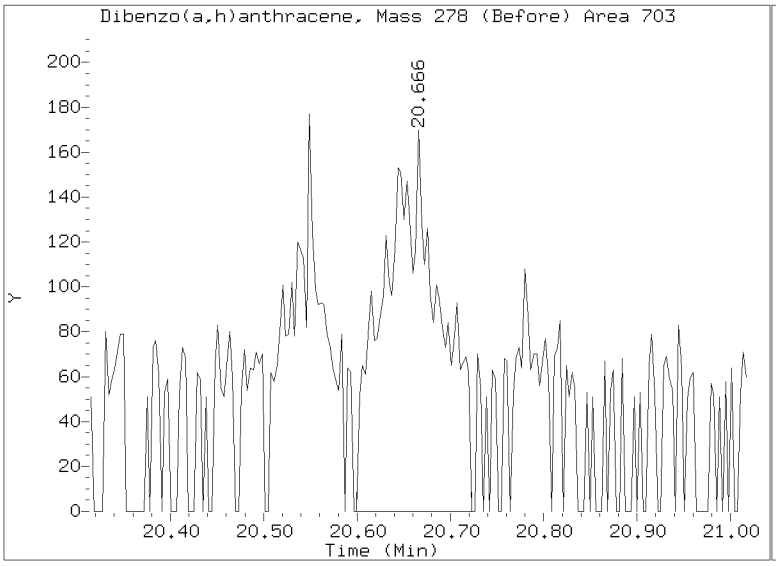
Injection Date: 06-FEB-2023 21:20
Lab ID:23A0207-07 Client ID:
Report Date: 02/07/2023 15:59

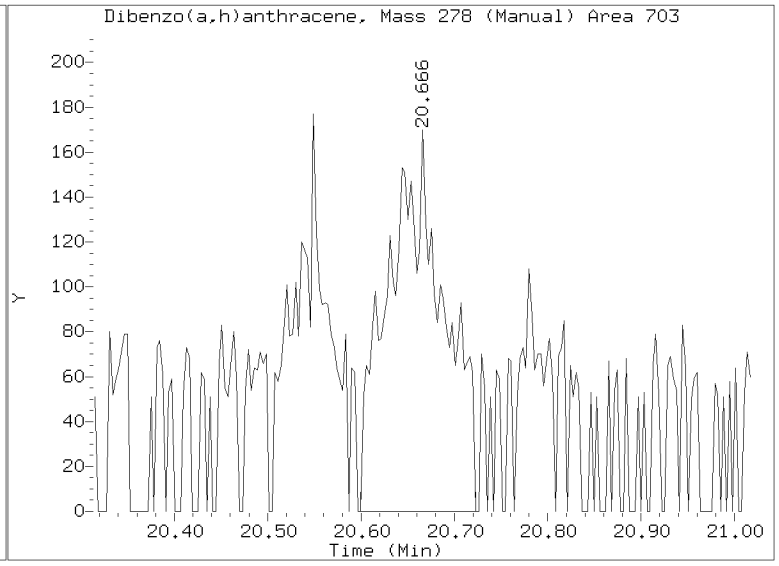












Quant Ion Manual Peak Adjustment Report

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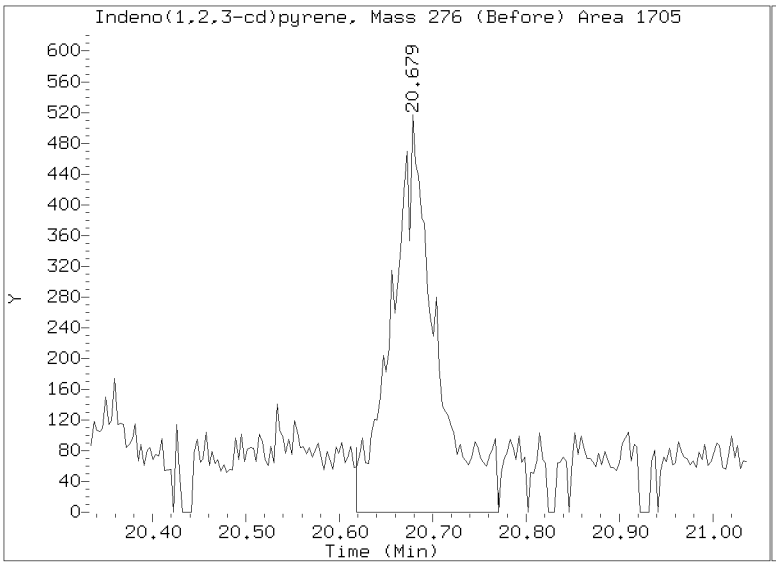
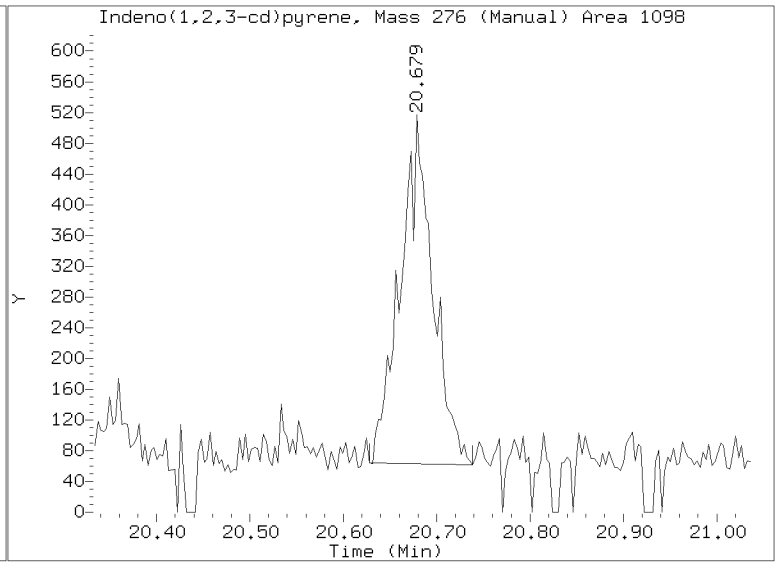
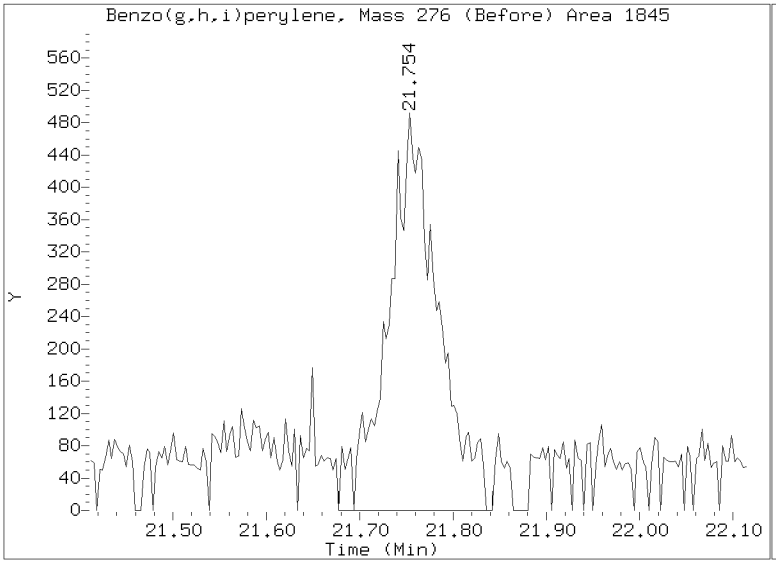
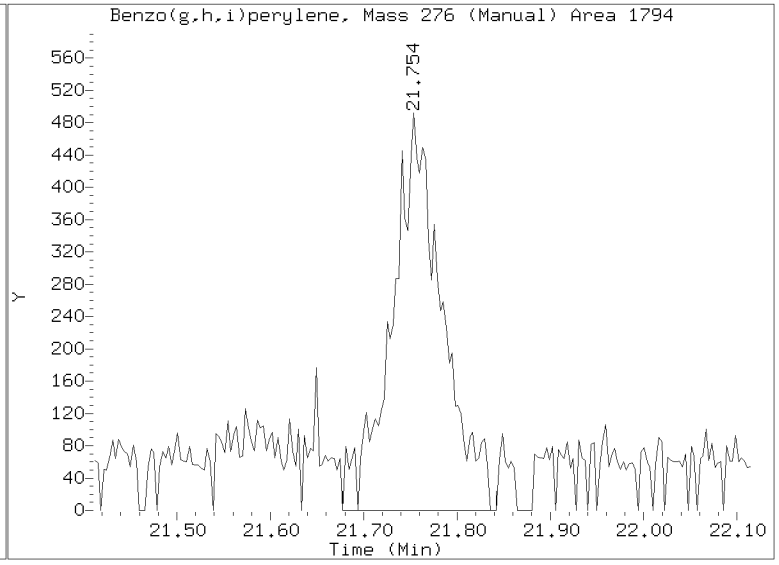
Injection Date: 06-FEB-2023 21:20
Lab ID:23A0207-07 Client ID:
Report Date: 02/07/2023 15:59









Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1068

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

Polynuclear Aromatic Hydrocarbons

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-08 A	SDG:	23A0207
Sampled:	01/11/23 10:45	Prepared:	02/01/23 11:29	File ID:	N823020621.D
% Solids:	72.83	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/06/23 21:47
Batch:	BLA0683	Sequence:	SLB0075	Initial/Final:	13.79 g Wet / 0.5 mL
Instrument:	NT8	Column:	RXI-17Sil ms	Calibration:	GA00050
Cleanups:	GPC, Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
56-55-3	Benzo(a)anthracene	1	0.92	J	0.82	4.98
218-01-9	Chrysene	1	1.49	J	1.05	4.98
205-99-2	Benzo(b)fluoranthene	1	4.98	U	1.37	4.98
207-08-9	Benzo(k)fluoranthene	1	4.98	U	0.76	4.98
50-32-8	Benzo(a)pyrene	1	4.98	U	0.61	4.98
193-39-5	Indeno(1,2,3-cd)pyrene	1	4.98	U	1.05	4.98
53-70-3	Dibenzo(a,h)anthracene	1	4.98	U	0.89	4.98

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	149.35	119	79.5	32 - 120	
Dibenzo[a,h]anthracene-d14	149.35	137	91.7	21 - 133	
Fluoranthene-d10	149.35	130	87.2	36 - 134	

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020621.D

Page 1

Date : 06-FEB-2023 21:47

Client ID:

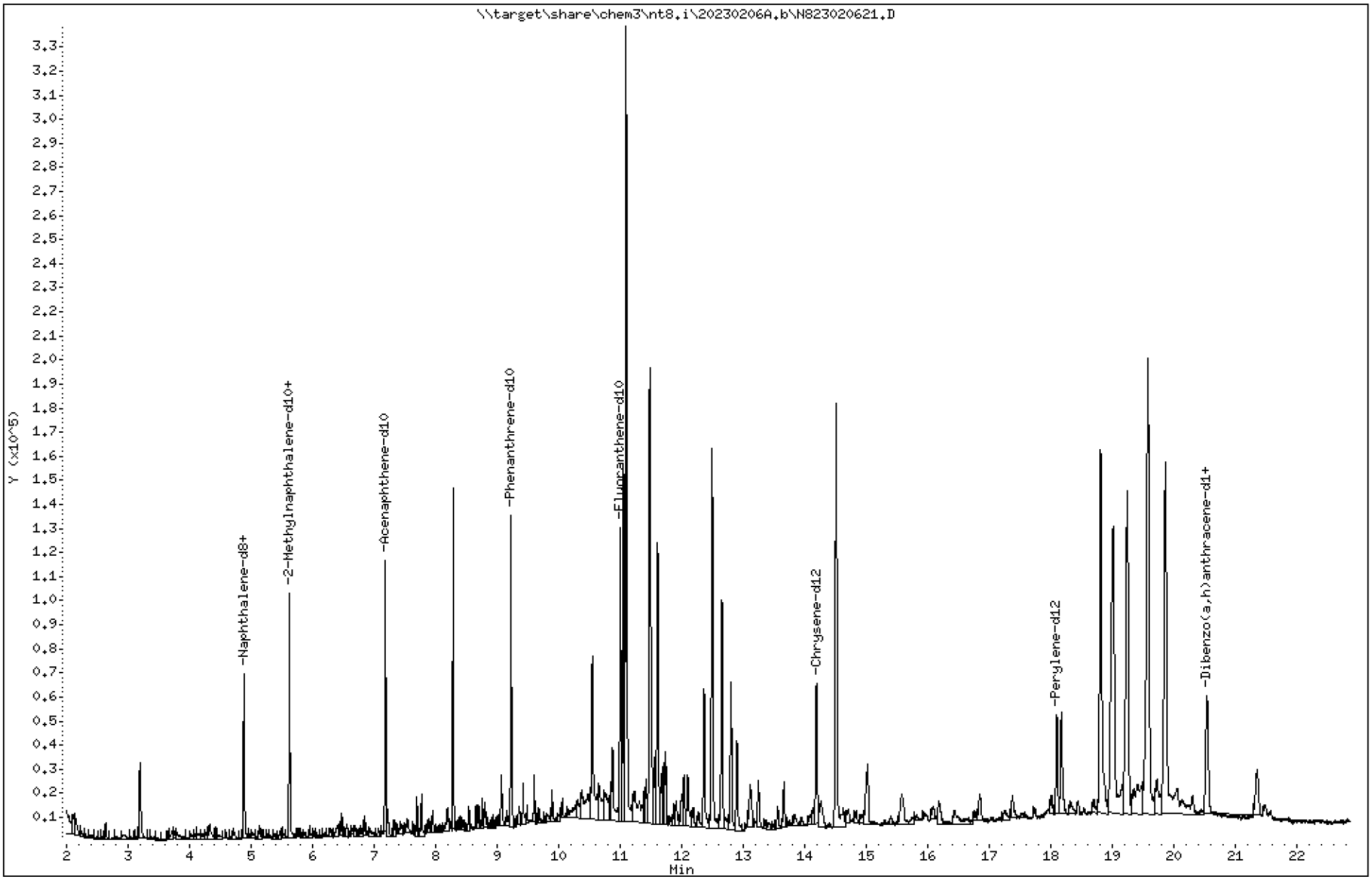
Instrument: nt8.i

Sample Info: 23A0207-08

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020621.D

Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

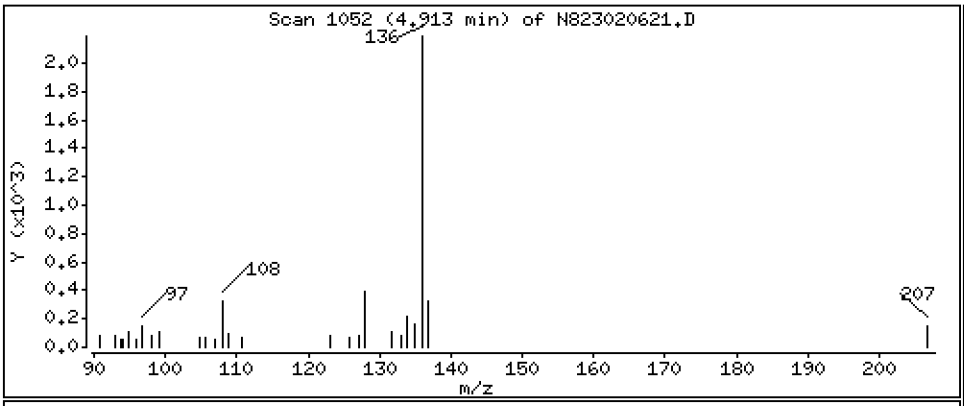
Operator: JZ

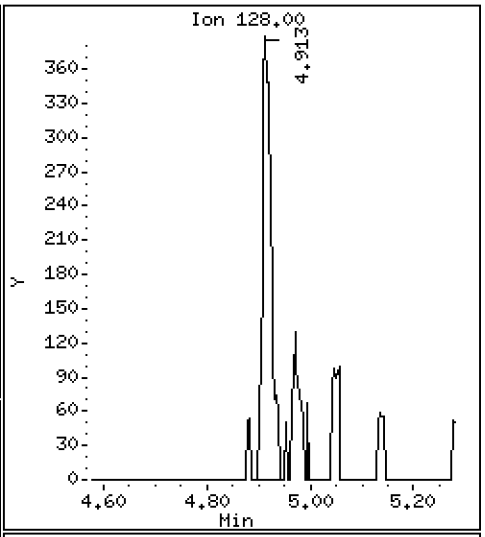
Column phase: Rxi-17sil

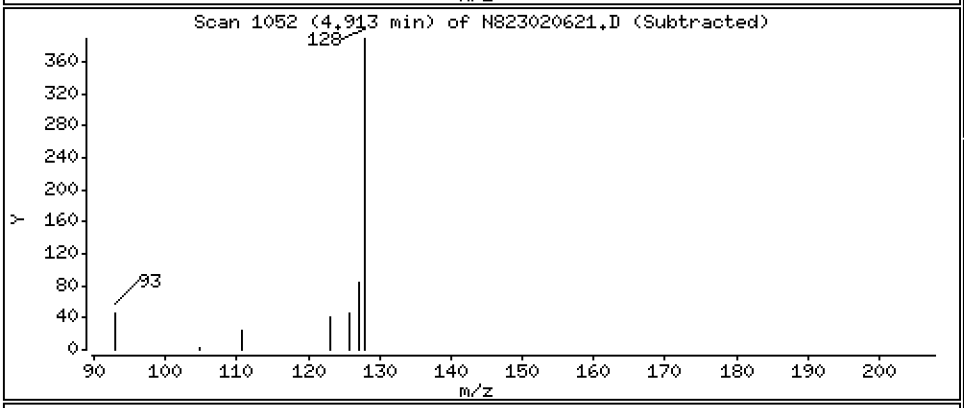
Column diameter: 0.25

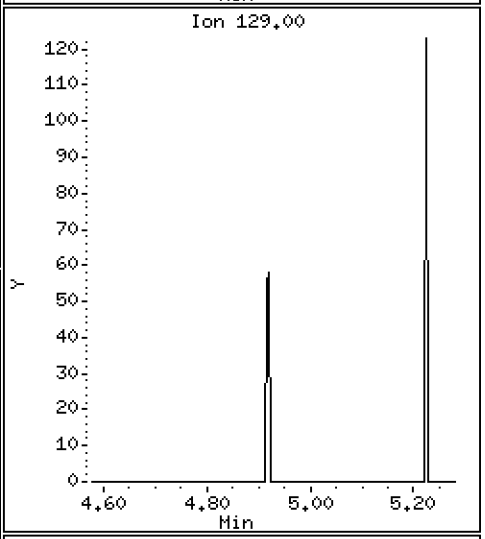
2 Naphthalene

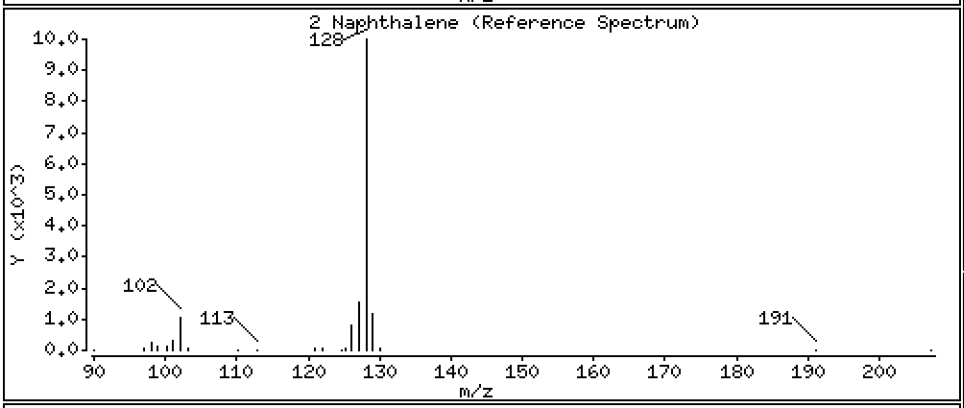
Concentration: 0.01875 ug/mL

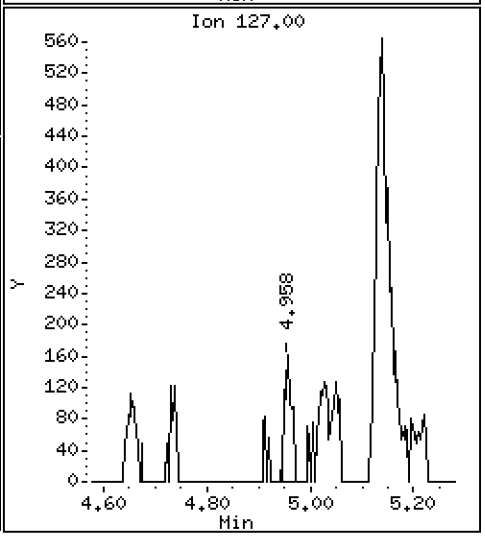


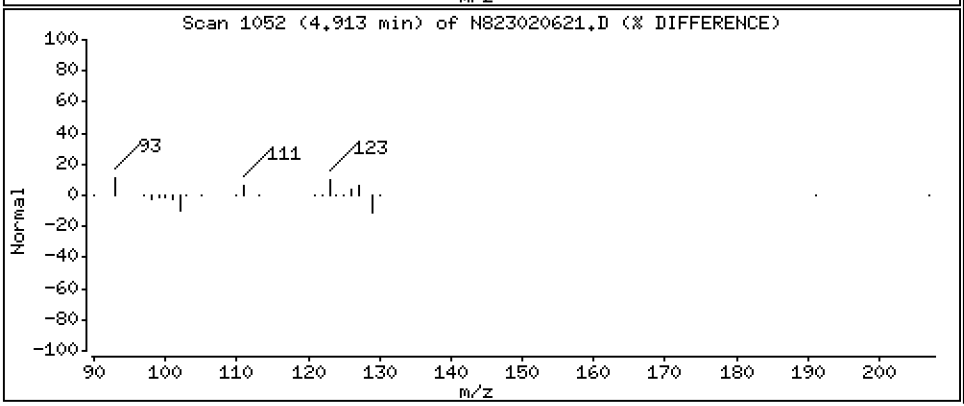












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Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

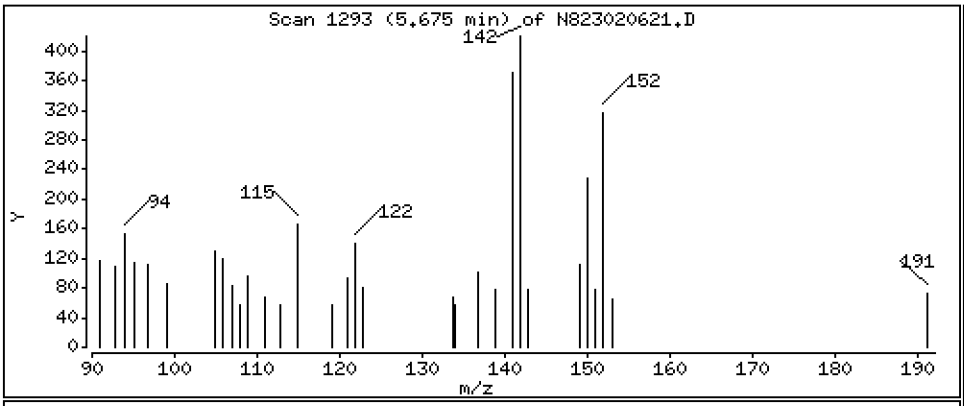
Operator: JZ

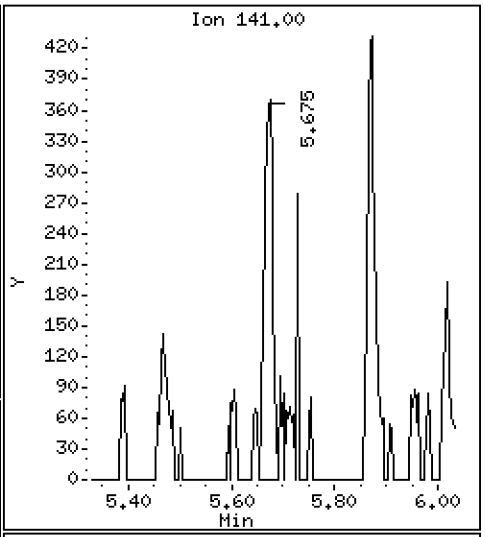
Column phase: Rxi-17sil

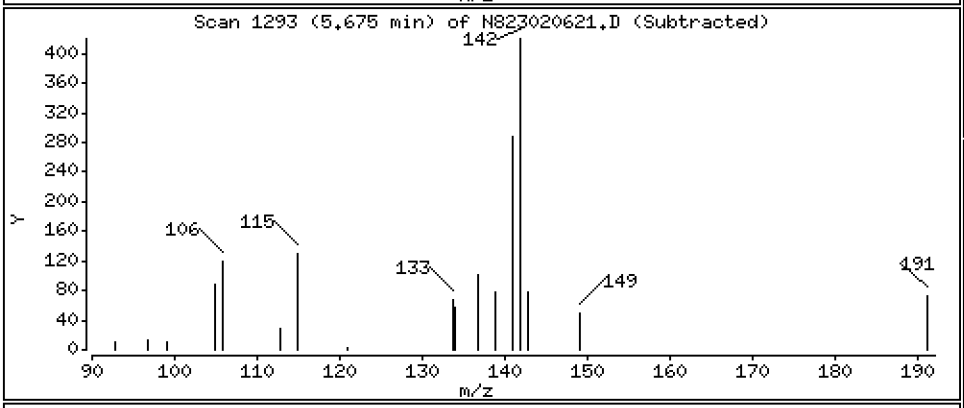
Column diameter: 0.25

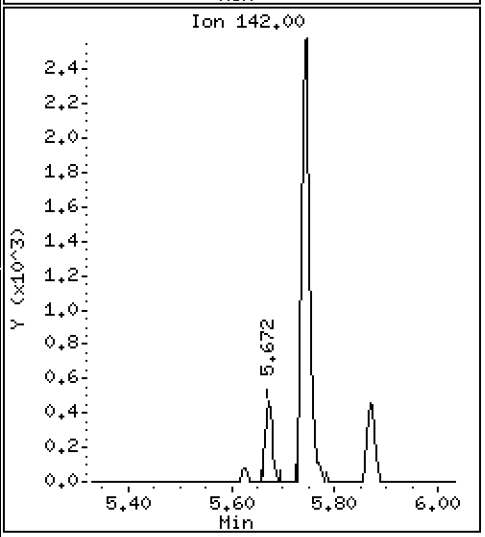
4 2-Methylnaphthalene

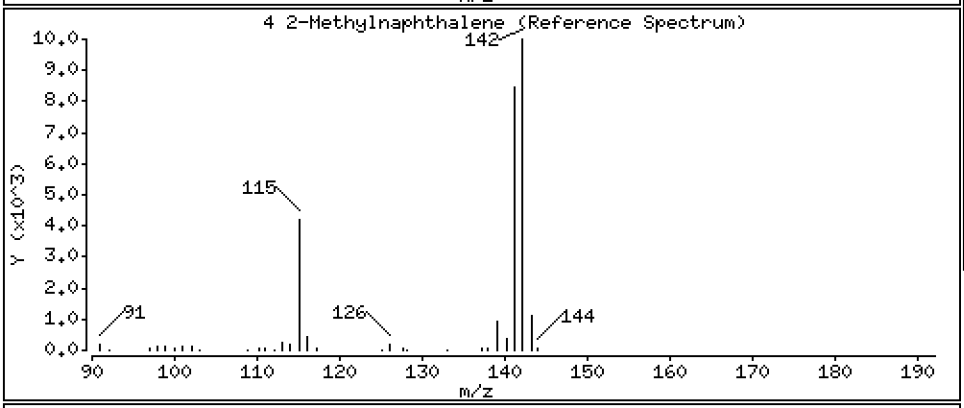
Concentration: 0.03199 ug/mL

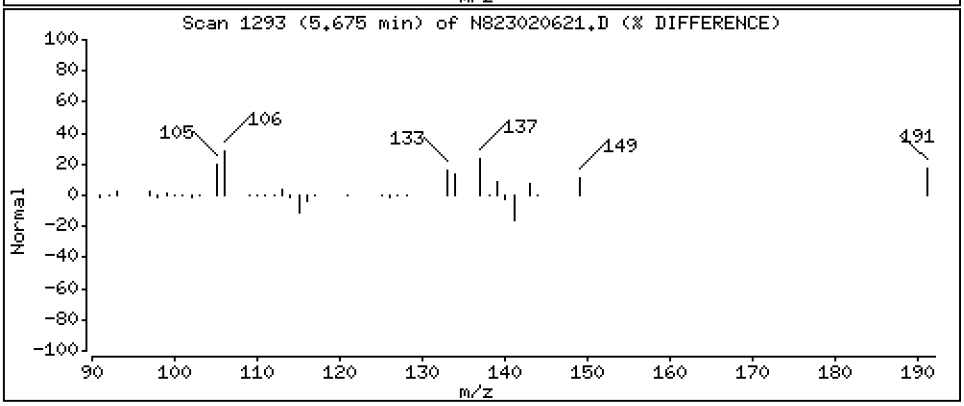












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Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

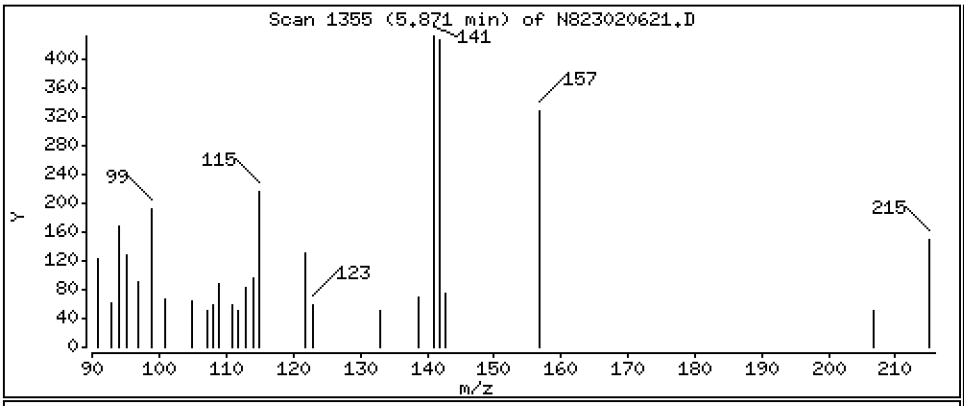
Operator: JZ

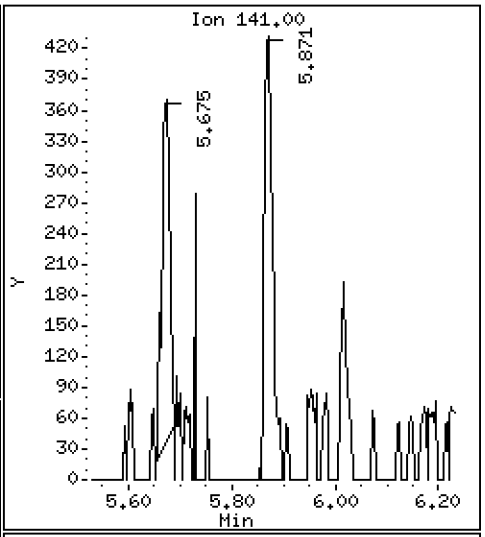
Column phase: Rxi-17sil

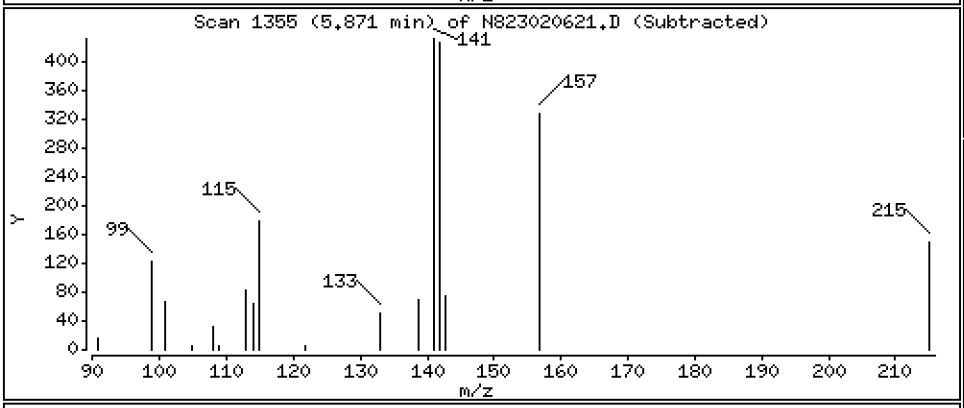
Column diameter: 0.25

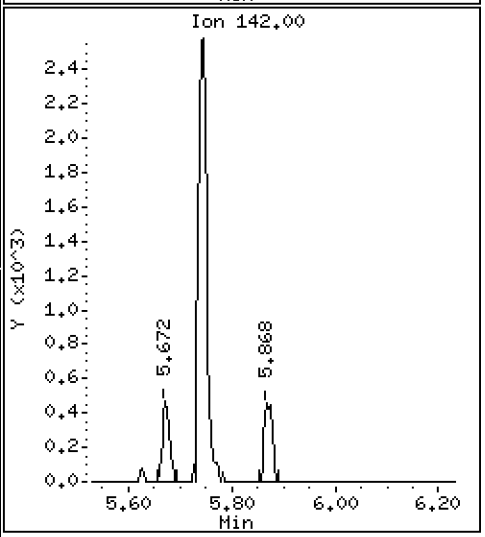
5 1-methylnaphthalene

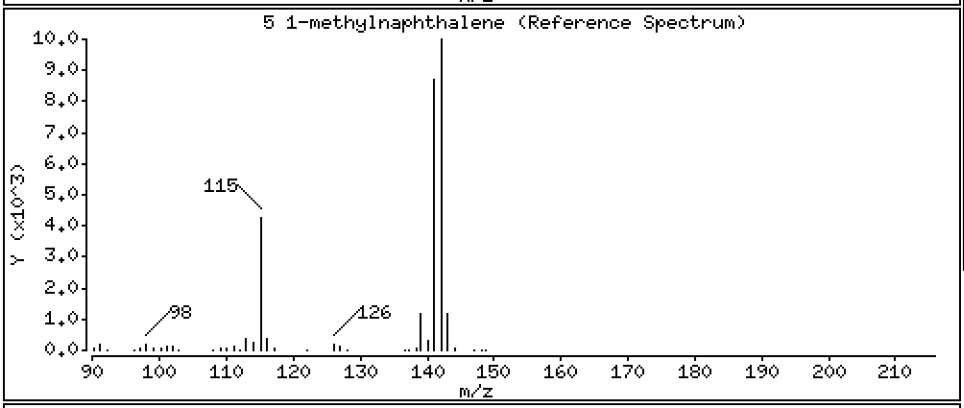
Concentration: 0.03323 ug/mL

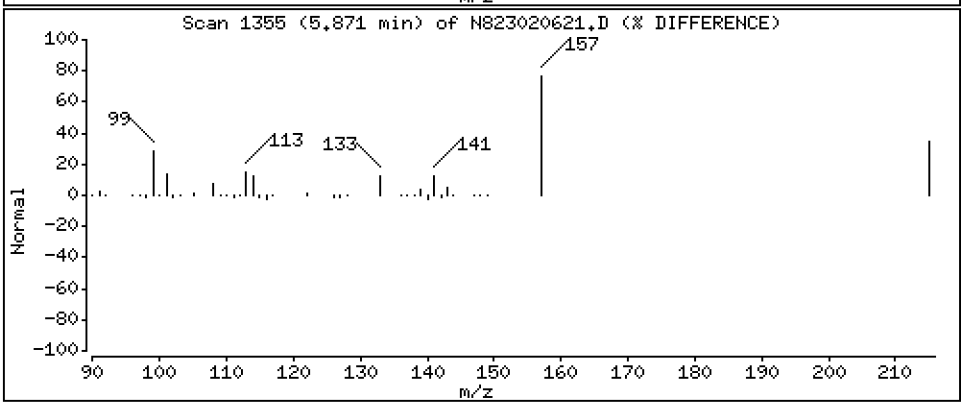












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Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

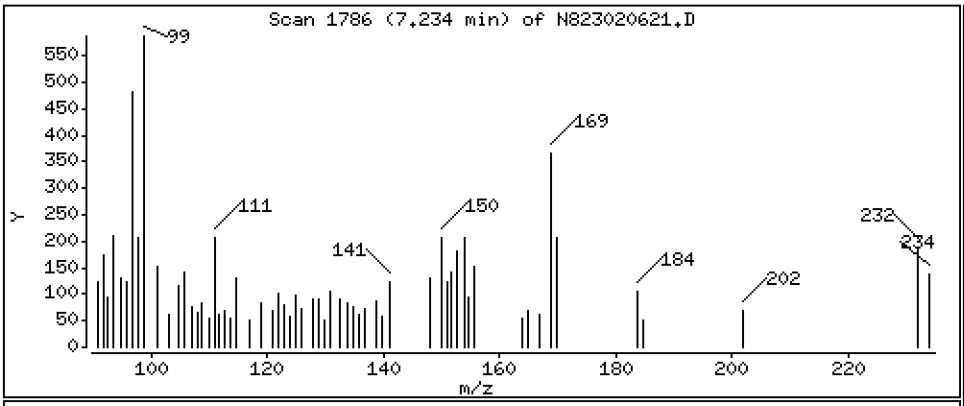
Operator: JZ

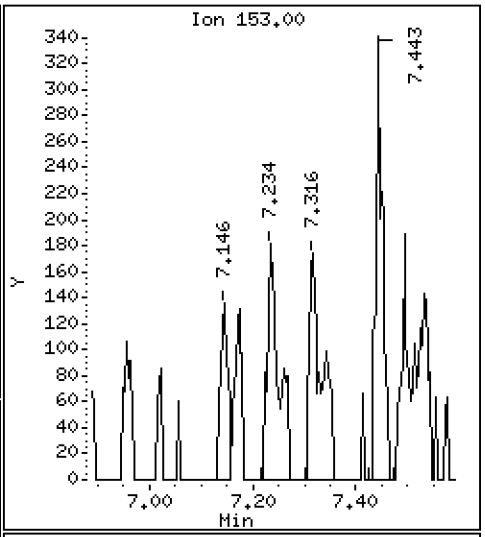
Column phase: Rxi-17sil

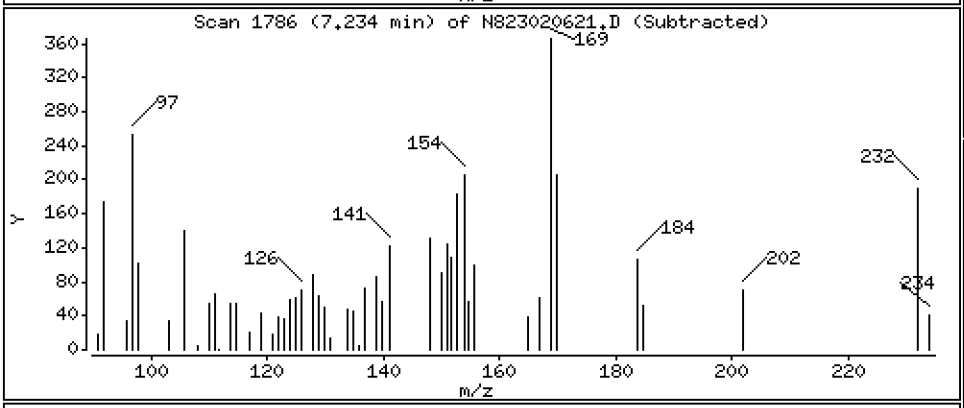
Column diameter: 0.25

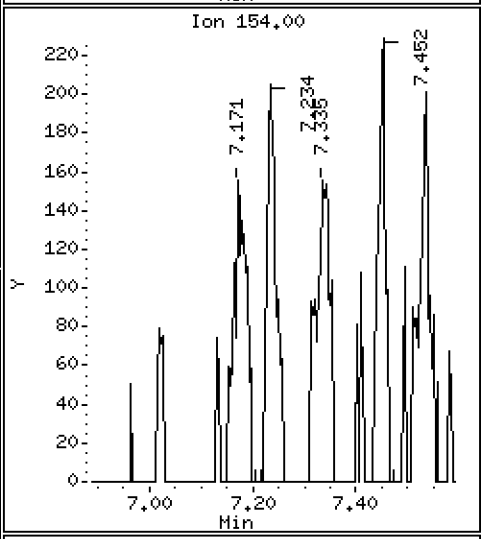
11 Acenaphthene

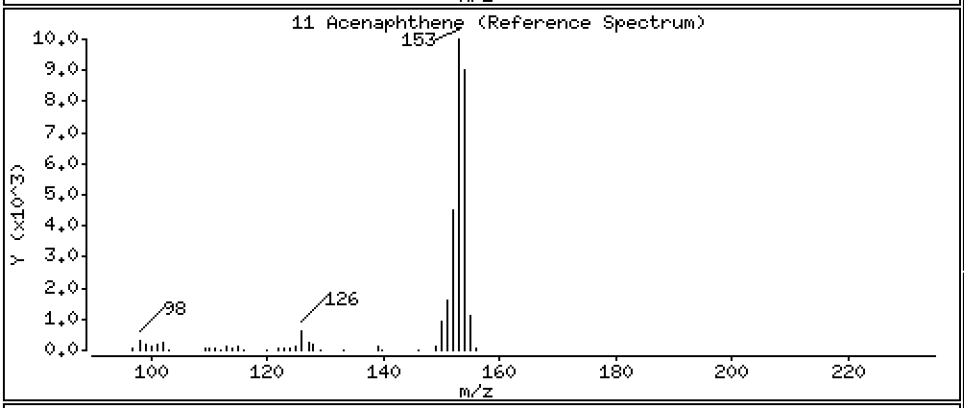
Concentration: 0.01700 ug/mL

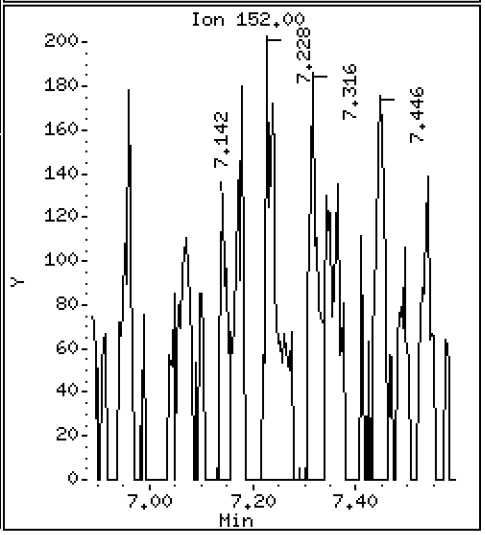


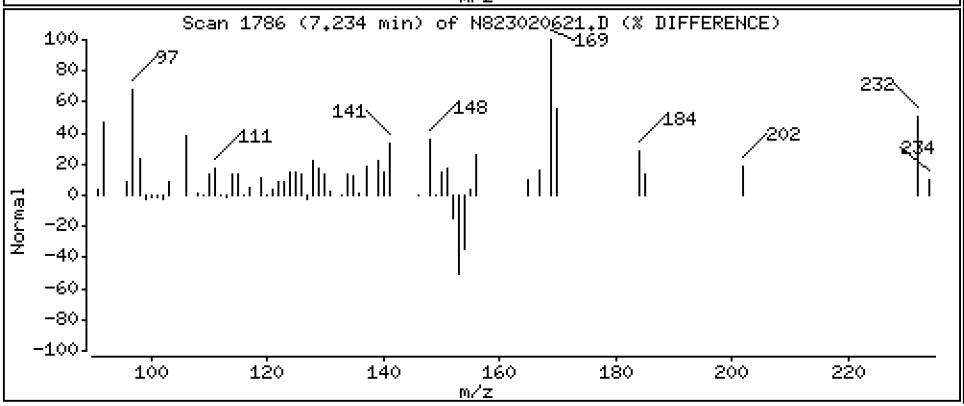












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Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

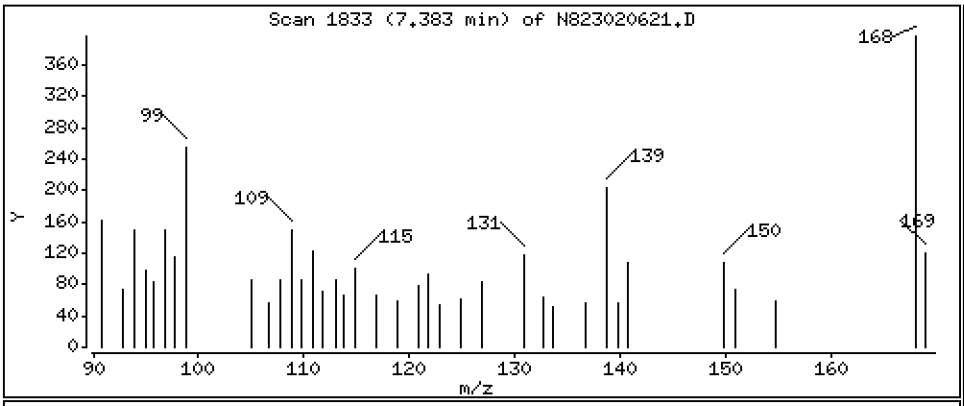
Operator: JZ

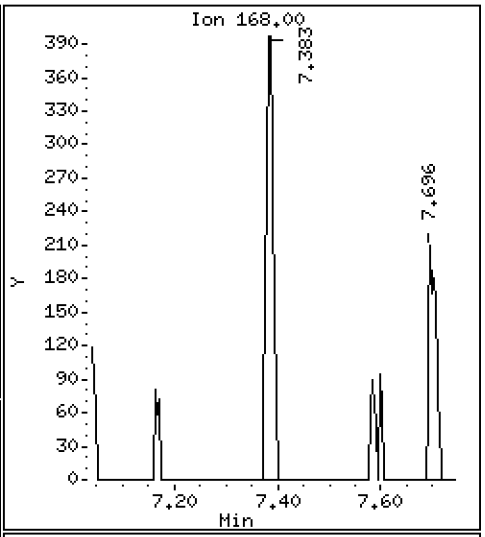
Column phase: Rxi-17sil

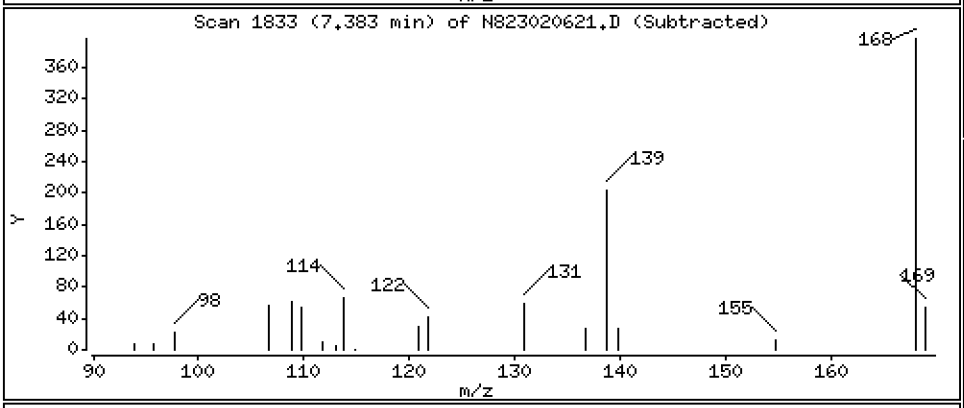
Column diameter: 0.25

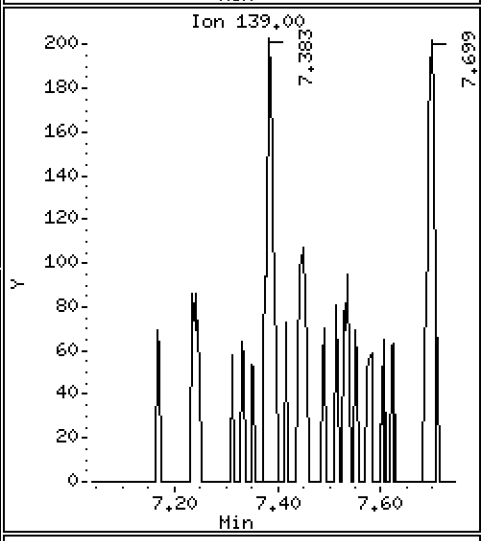
12 Dibenzofuran

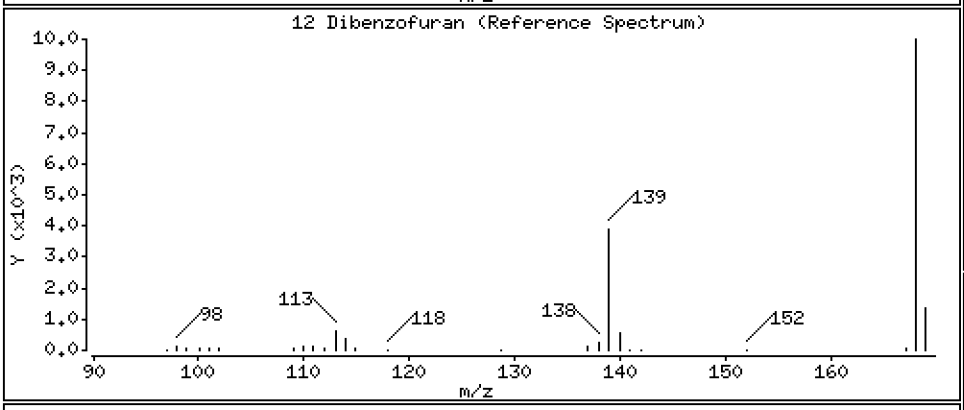
Concentration: 0.01570 ug/mL

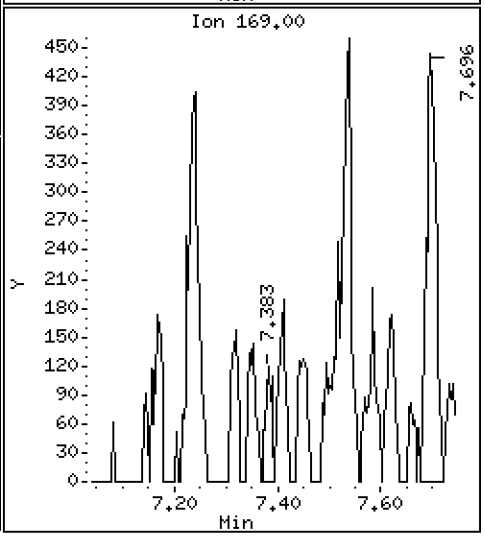


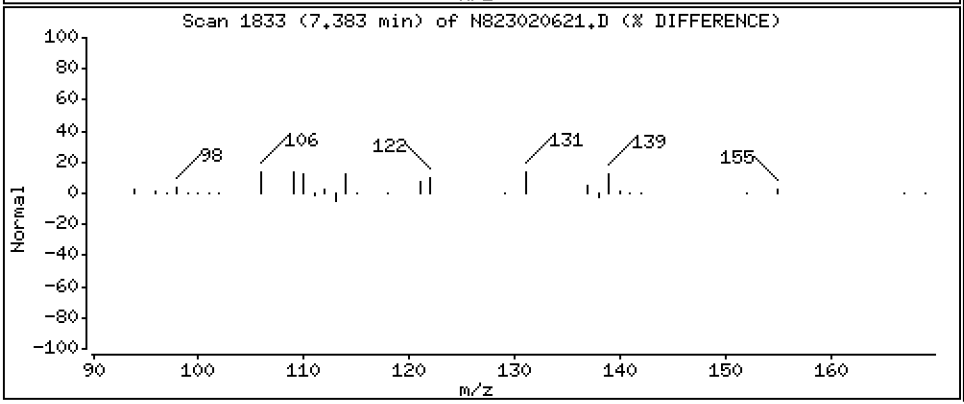












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Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

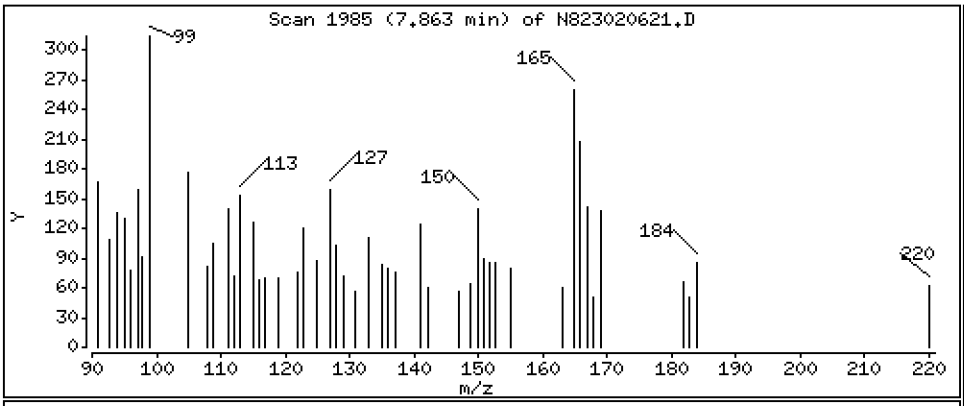
Operator: JZ

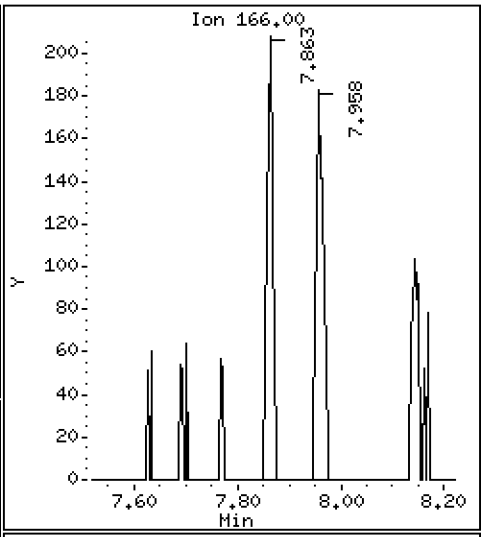
Column phase: Rxi-17sil

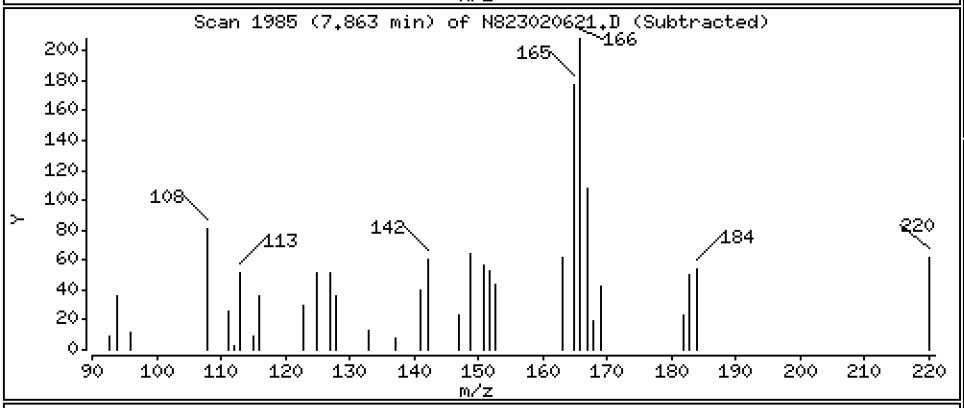
Column diameter: 0.25

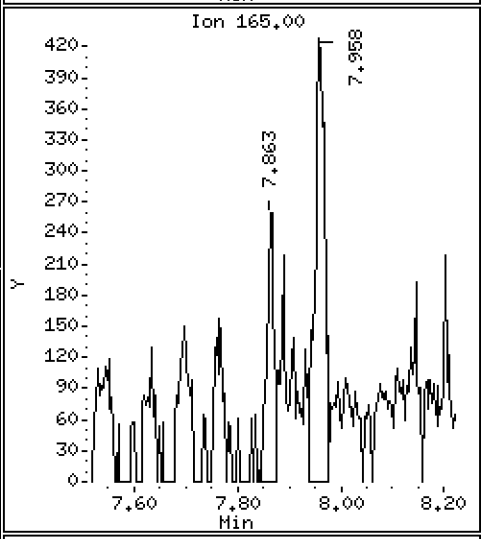
14 Fluorene

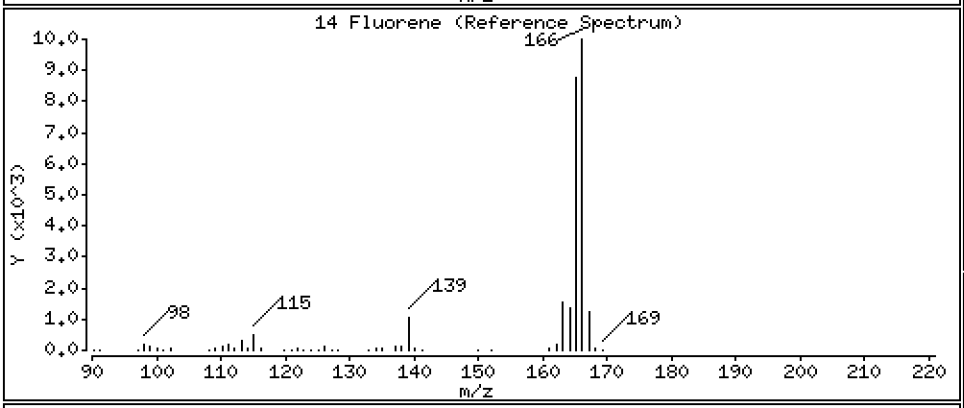
Concentration: 0.008552 ug/mL

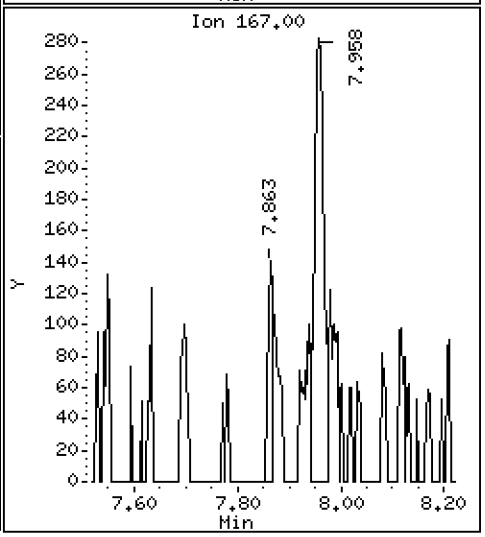


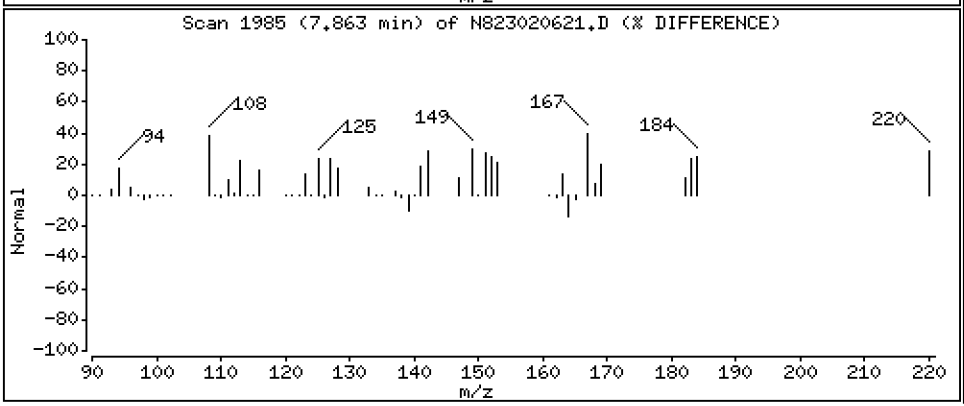












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Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

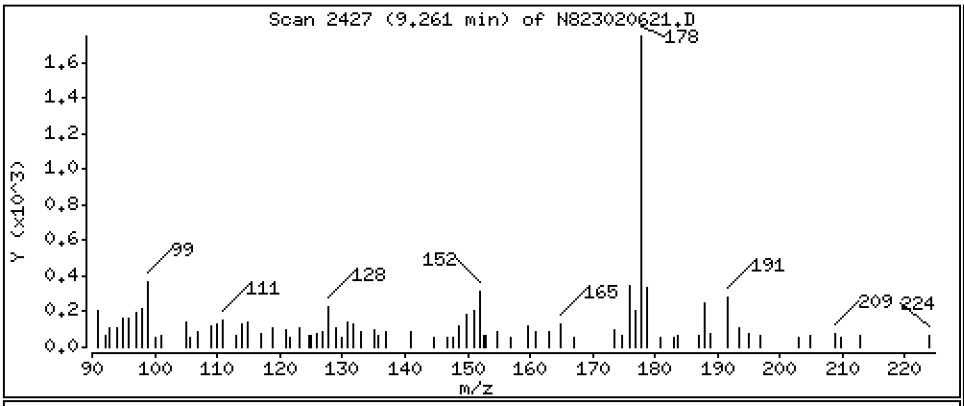
Operator: JZ

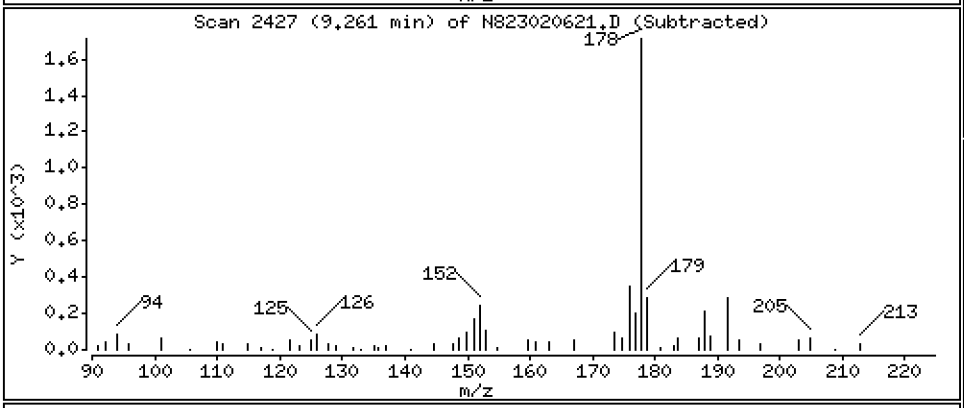
Column phase: Rxi-17sil

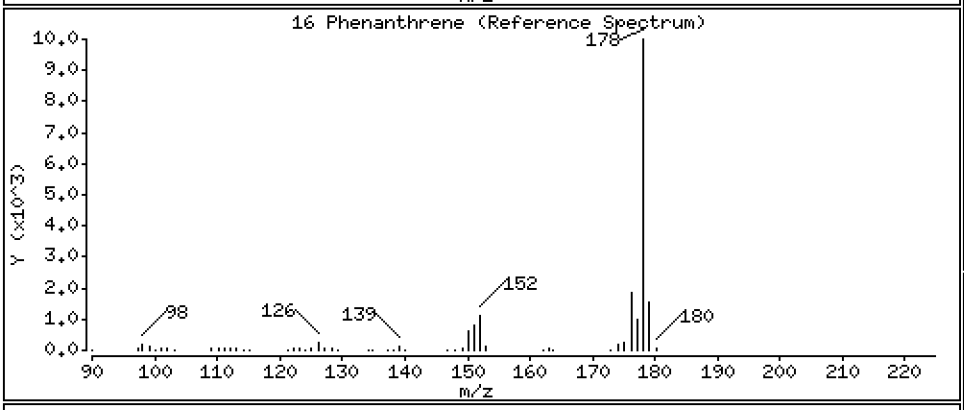
Column diameter: 0.25

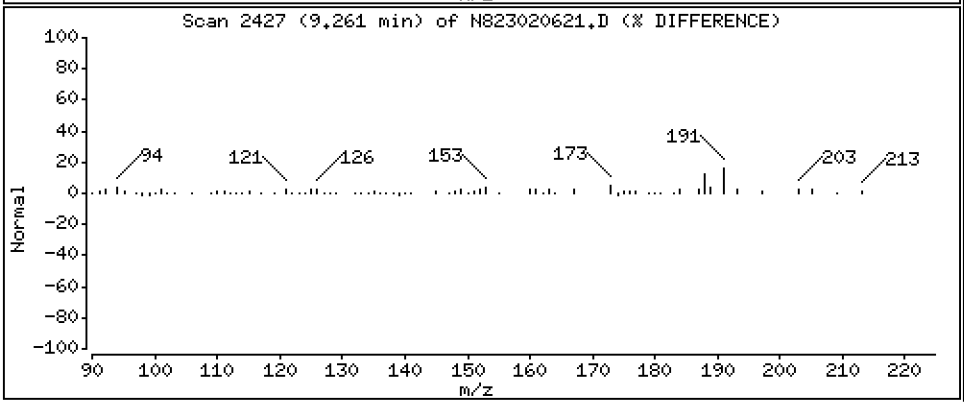
16 Phenanthrene

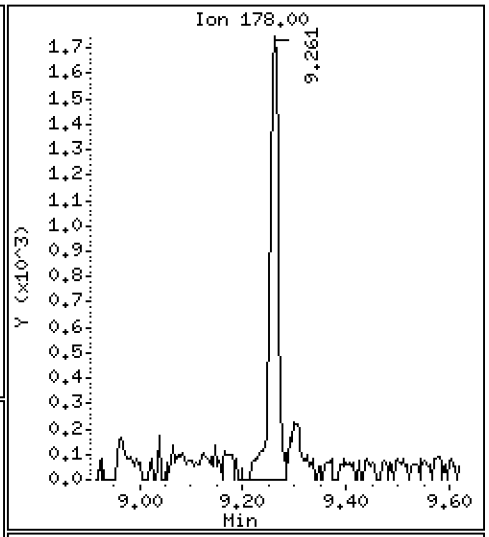
Concentration: 0.07125 ug/mL

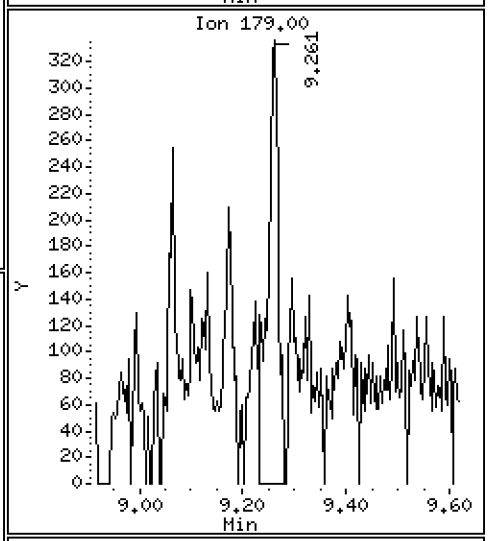


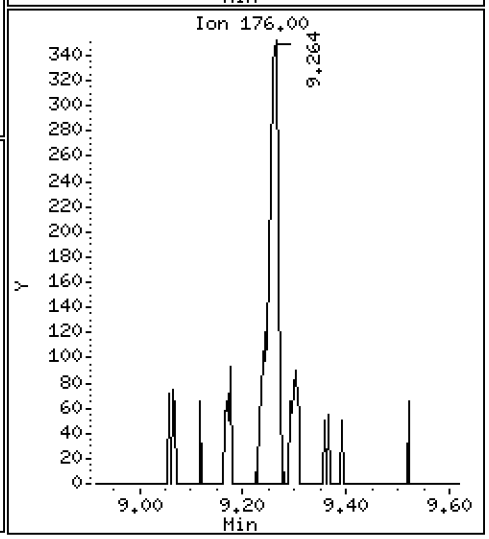












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Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

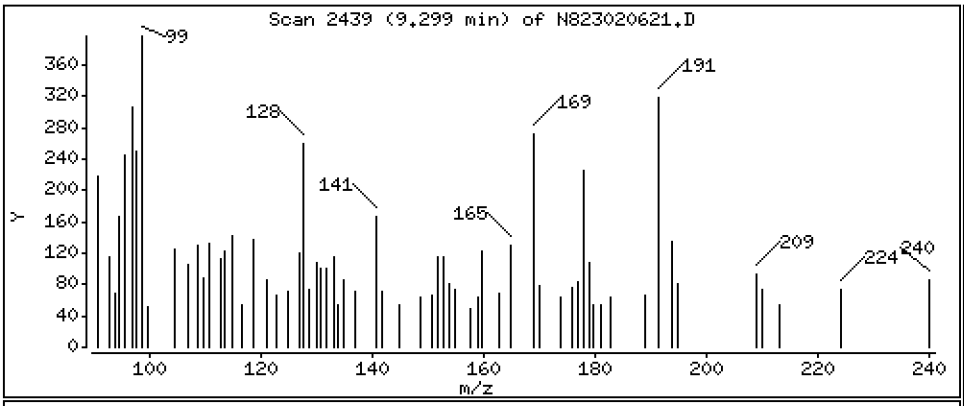
Operator: JZ

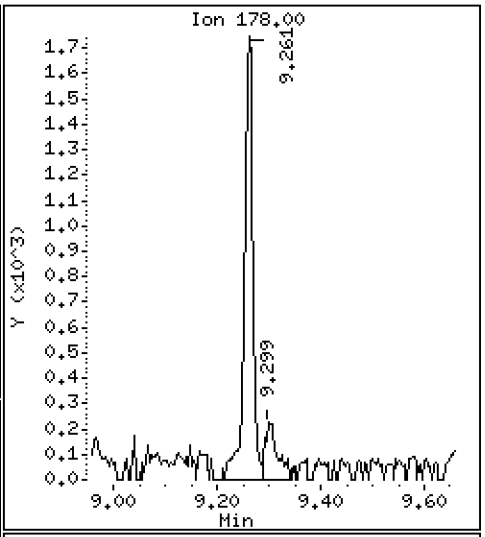
Column phase: Rxi-17sil

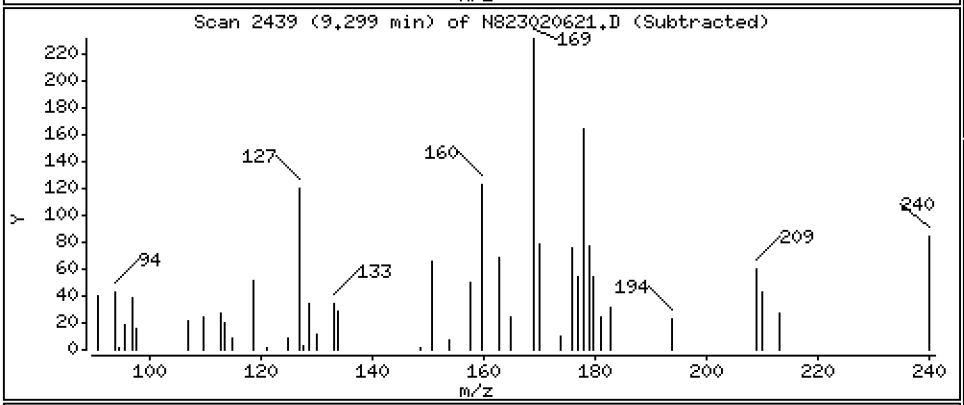
Column diameter: 0.25

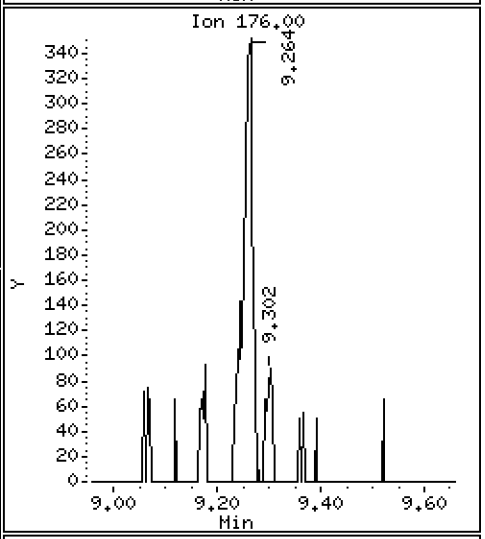
17 Anthracene

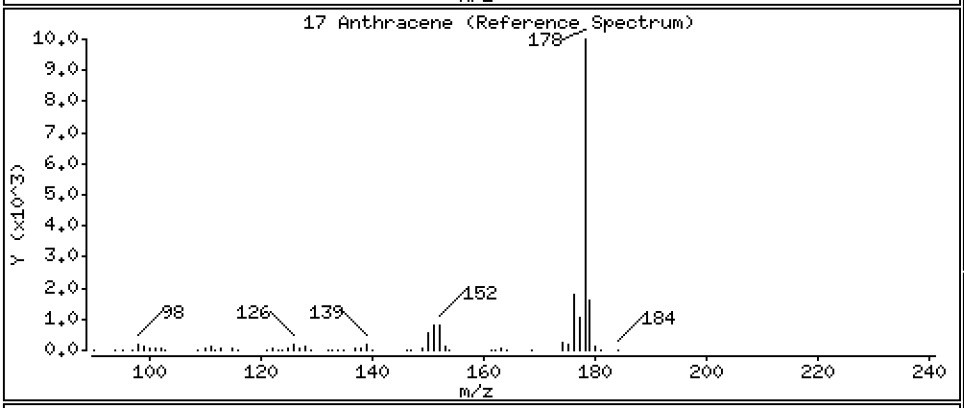
Concentration: 0.01528 ug/mL

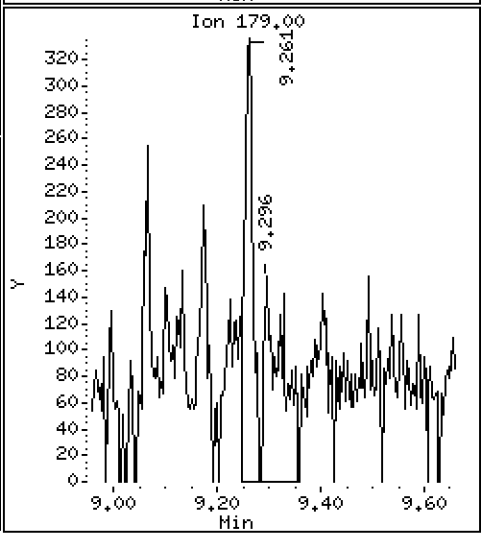


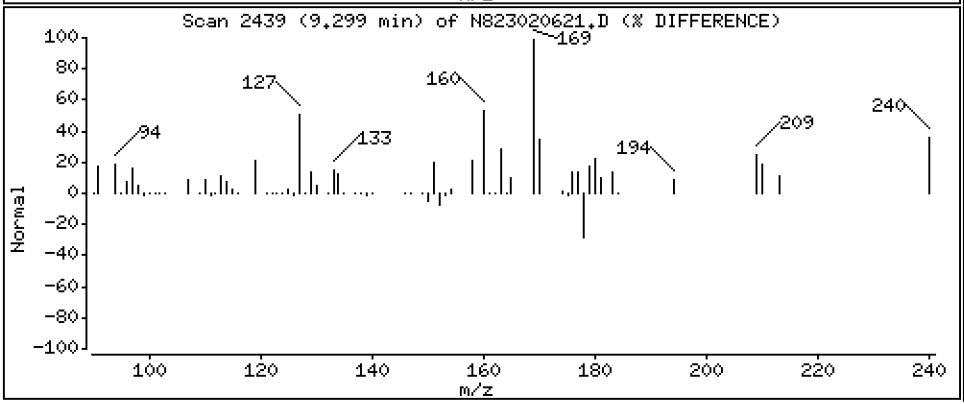












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Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

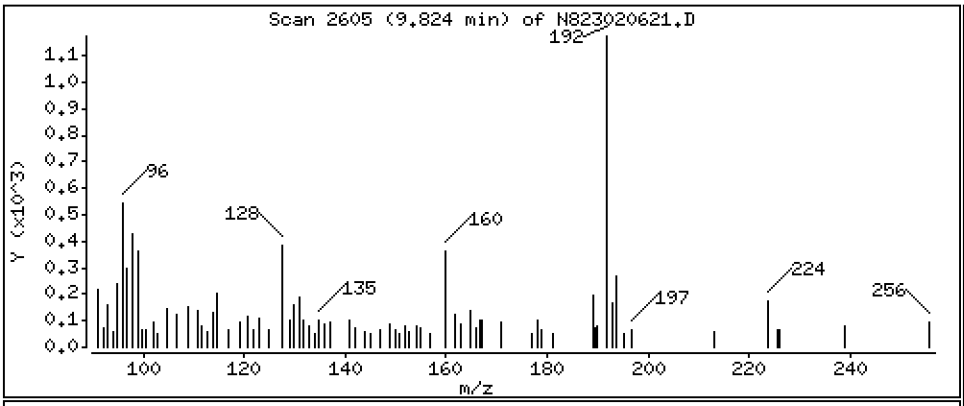
Operator: JZ

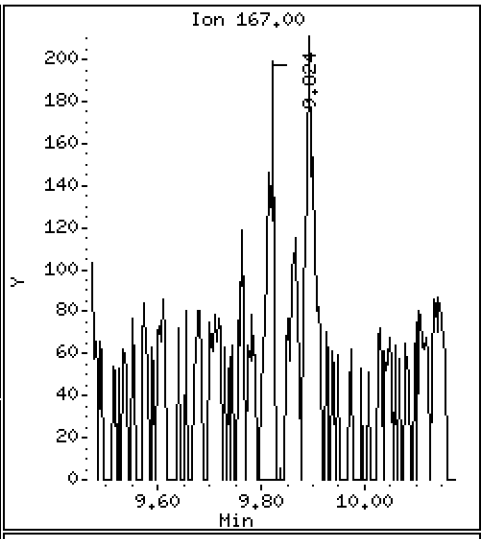
Column phase: Rxi-17sil

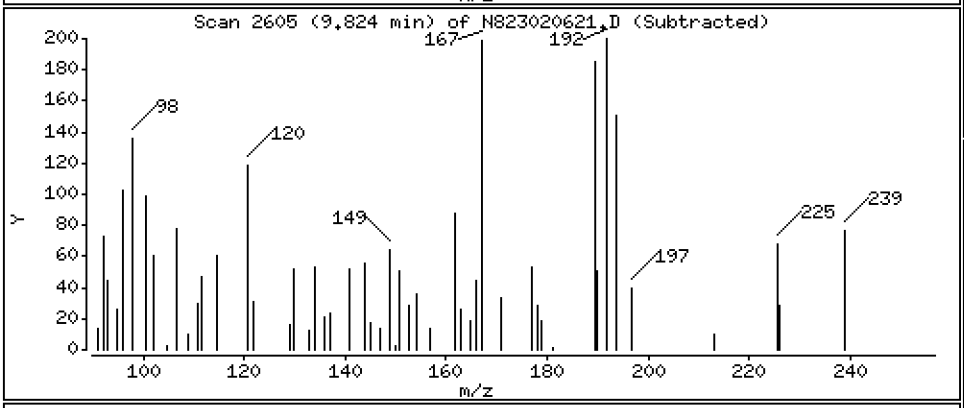
Column diameter: 0.25

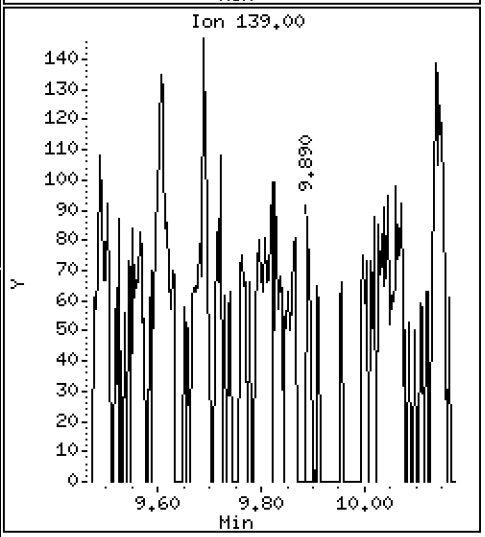
19 Carbazole

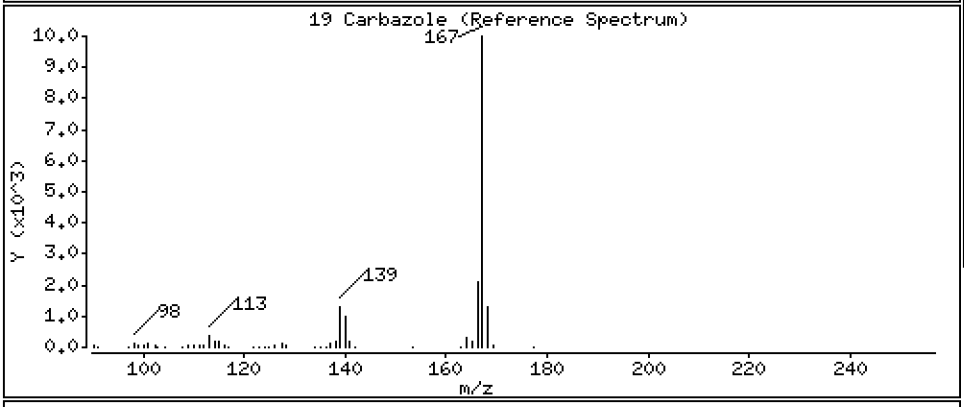
Concentration: 0.008184 ug/mL

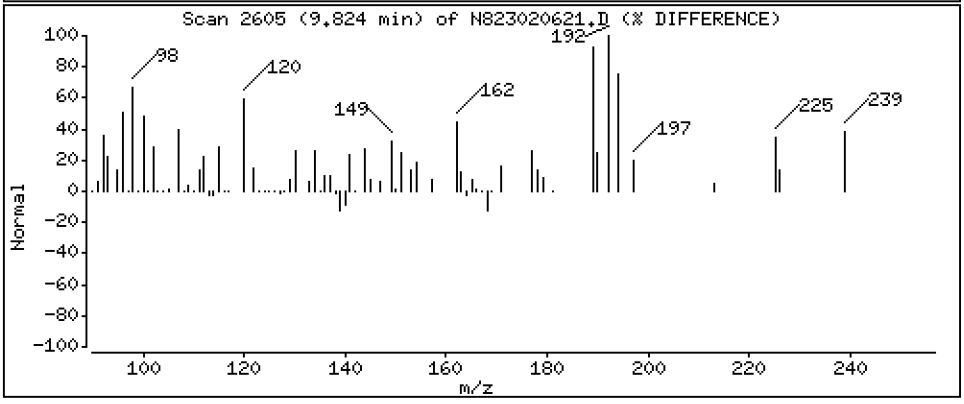












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Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

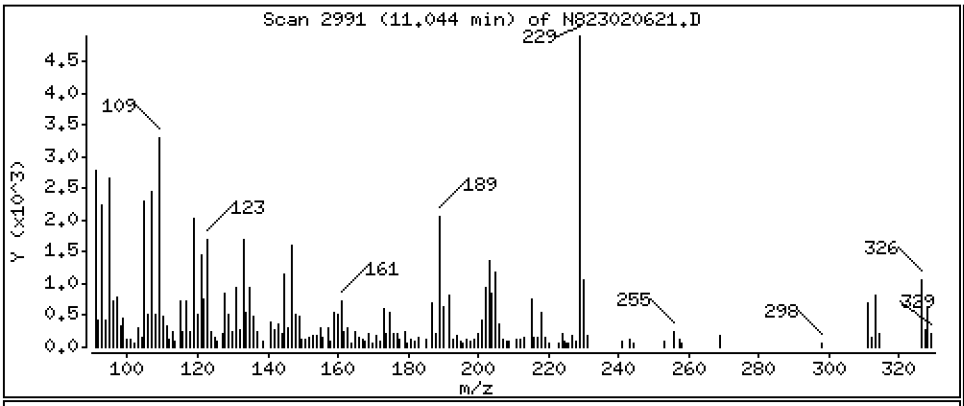
Operator: JZ

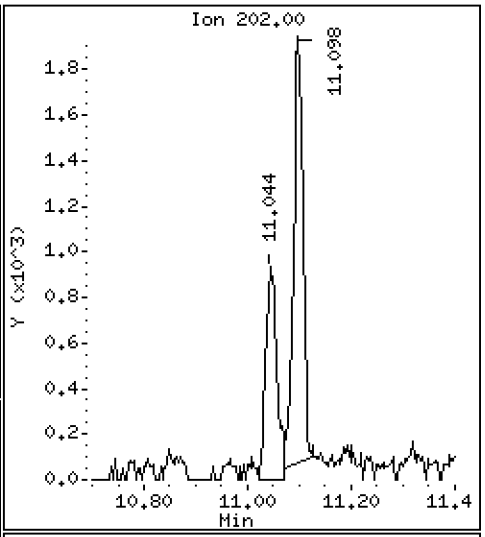
Column phase: Rxi-17sil

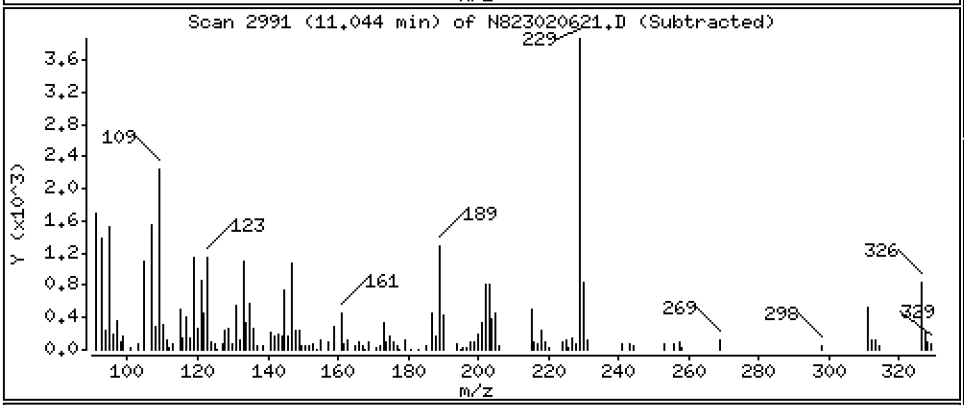
Column diameter: 0.25

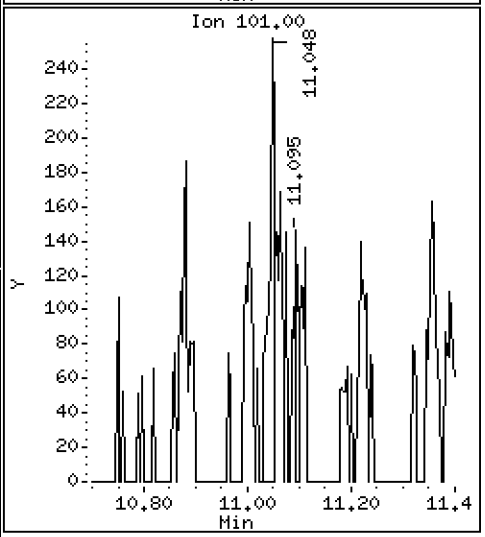
22 Fluoranthene

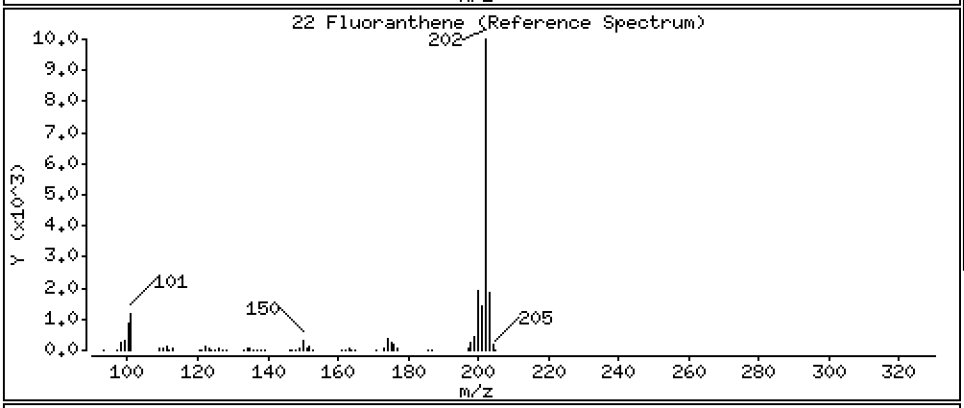
Concentration: 0.04654 ug/mL

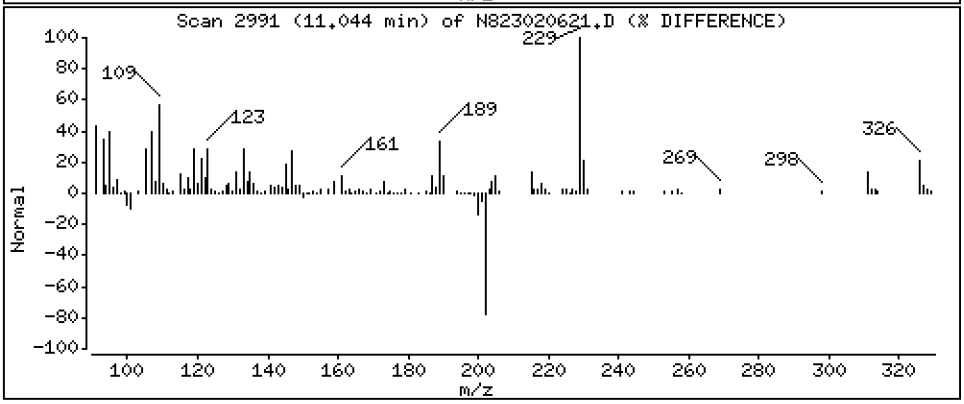












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Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

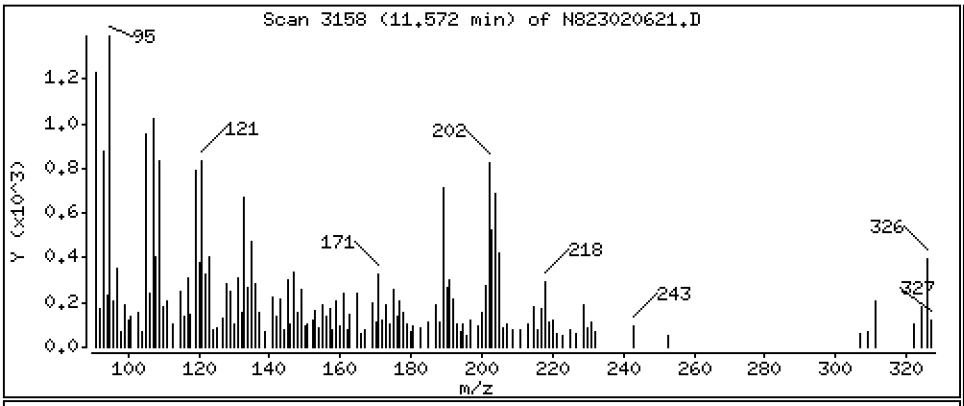
Operator: JZ

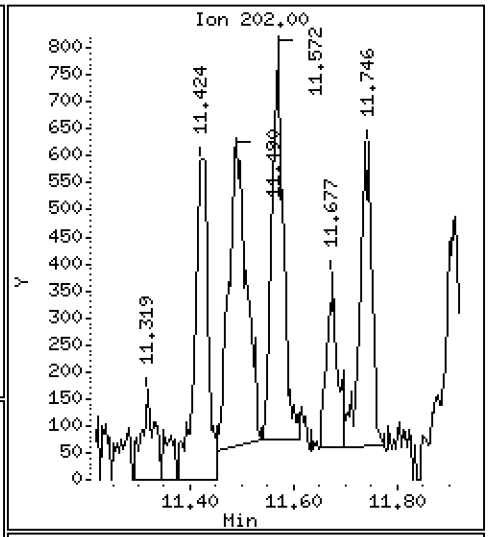
Column phase: Rxi-17sil

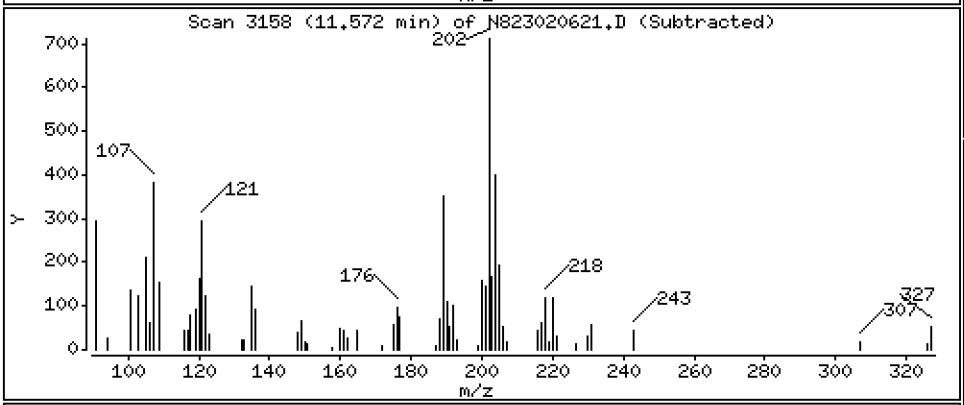
Column diameter: 0.25

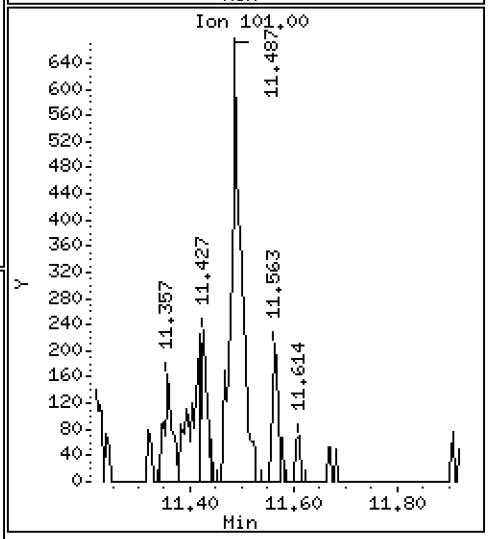
23 Pyrene

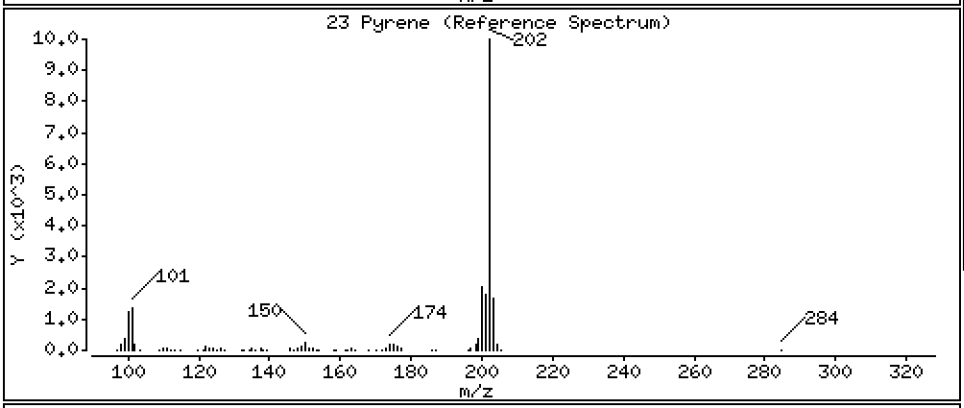
Concentration: 0.04906 ug/mL

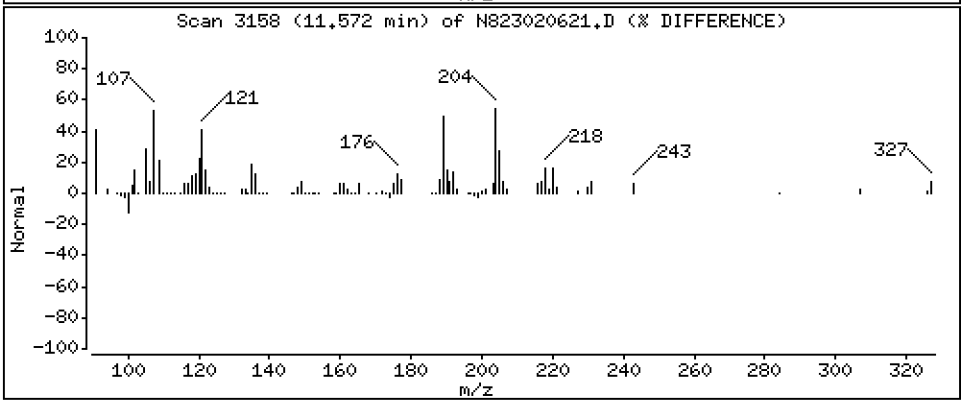












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Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

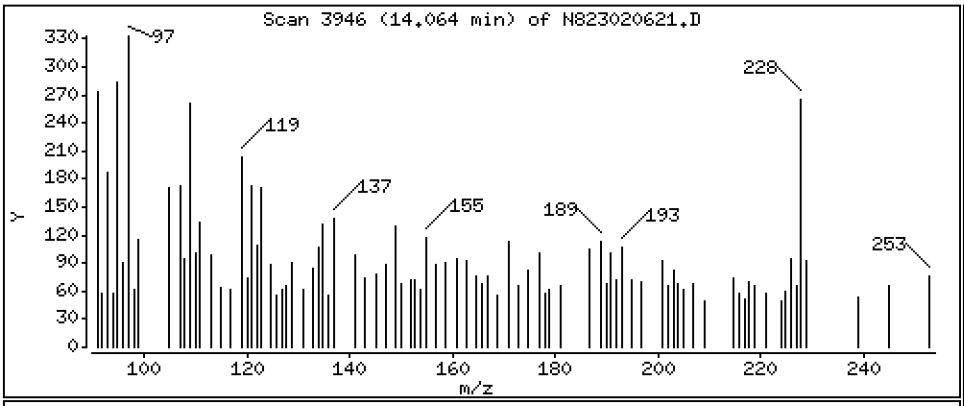
Operator: JZ

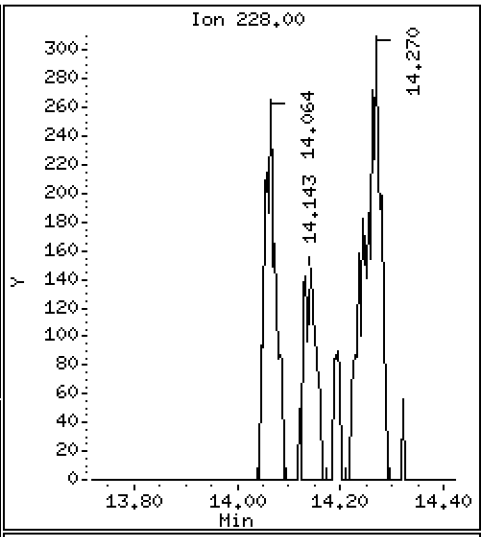
Column phase: Rxi-17sil

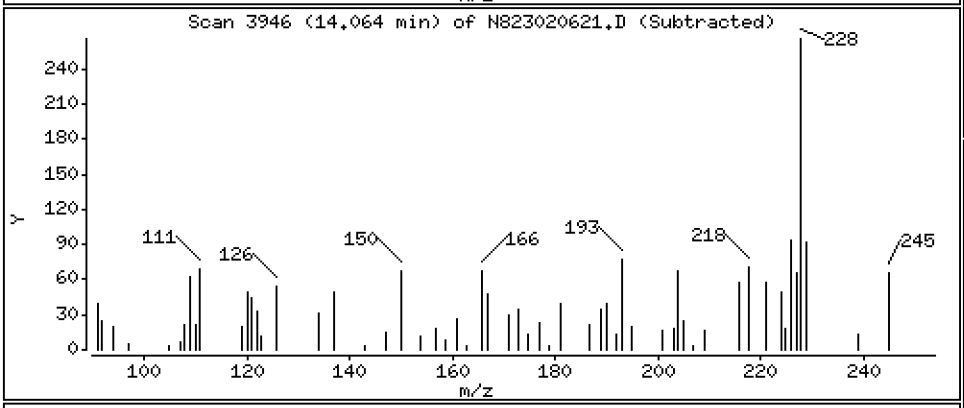
Column diameter: 0.25

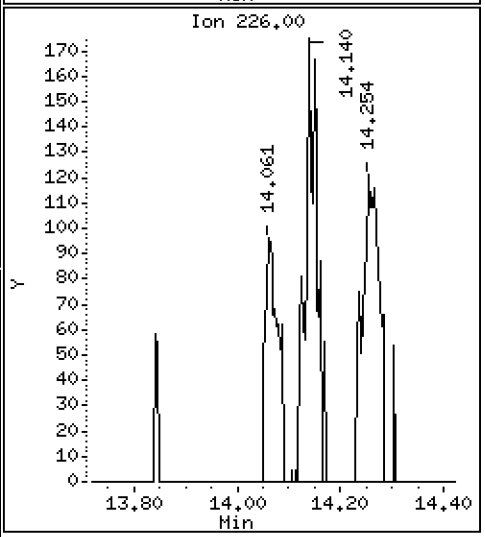
24 Benzo(a)anthracene

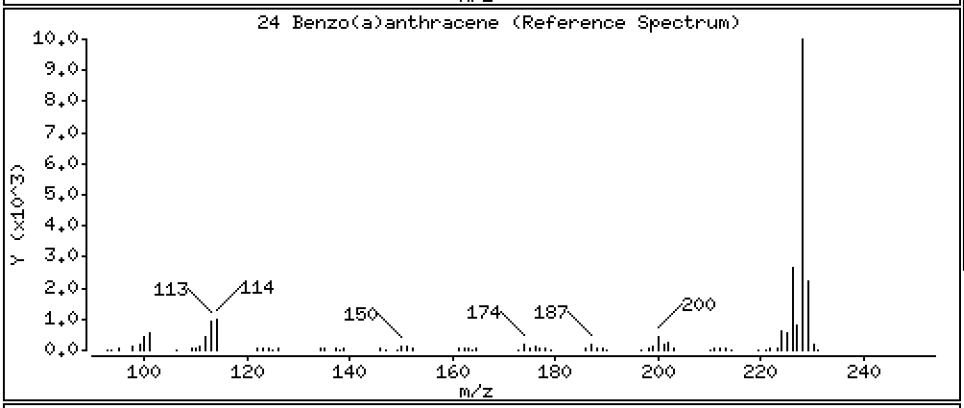
Concentration: 0.01846 ug/mL

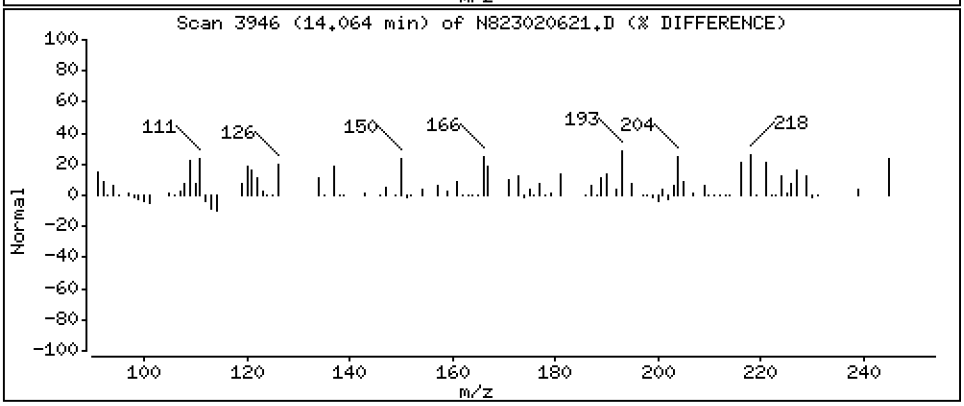












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020621.D

Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

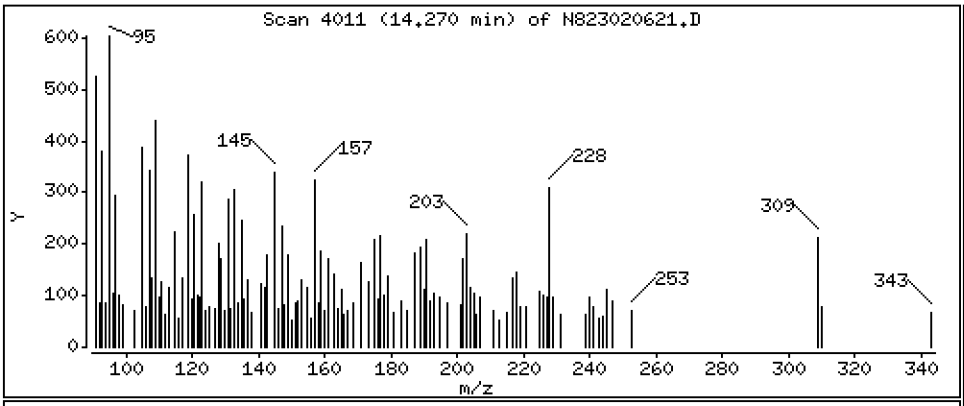
Operator: JZ

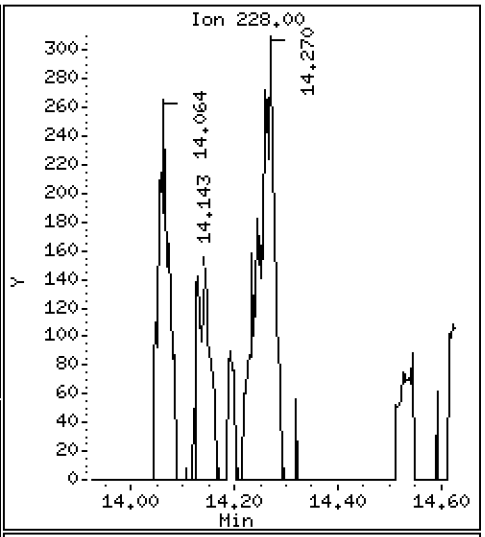
Column phase: Rxi-17sil

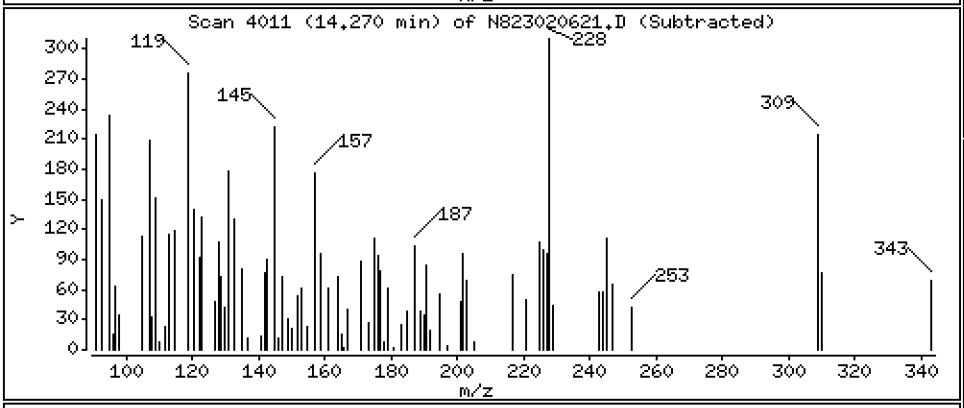
Column diameter: 0.25

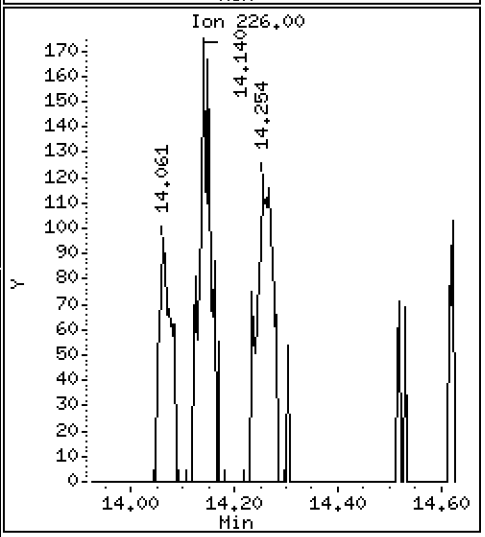
27 Chrysene

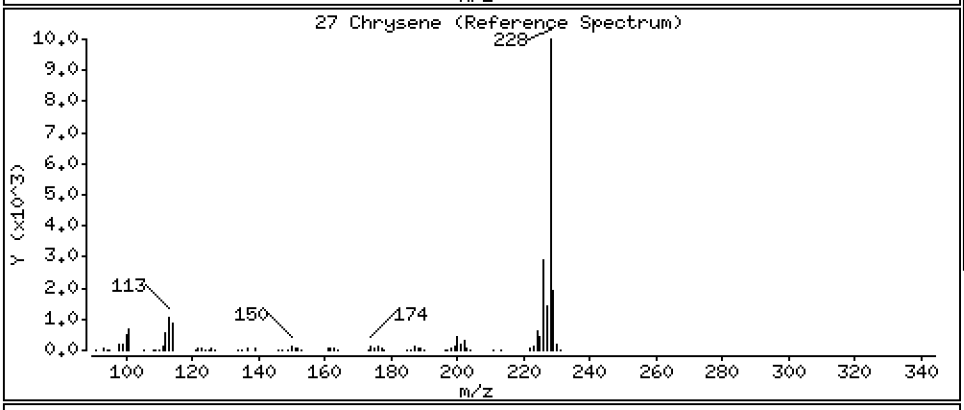
Concentration: 0.02988 ug/mL

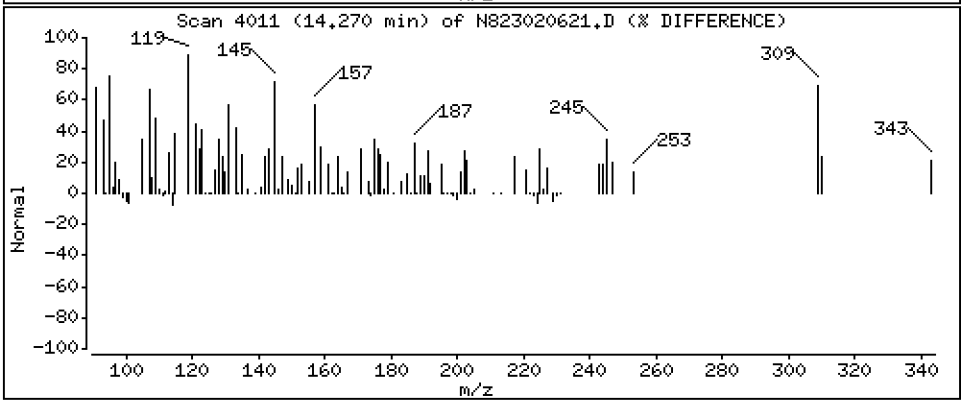












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Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

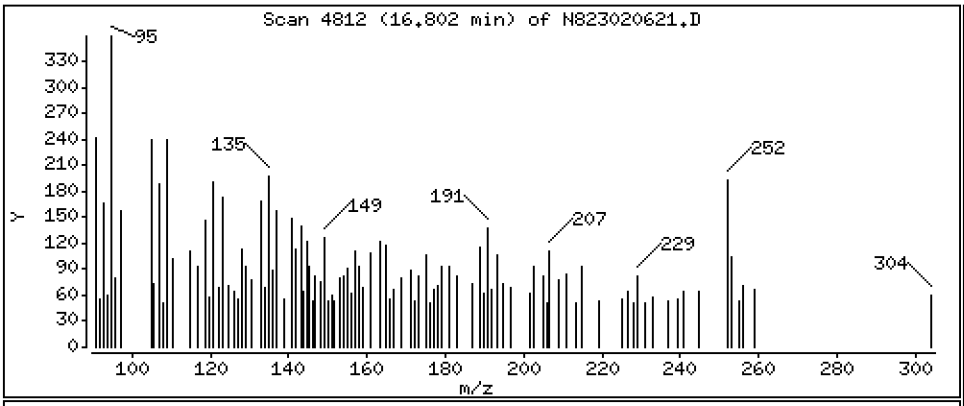
Operator: JZ

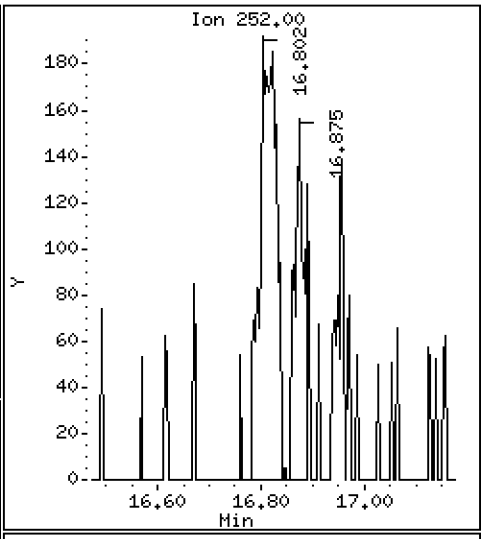
Column phase: Rxi-17sil

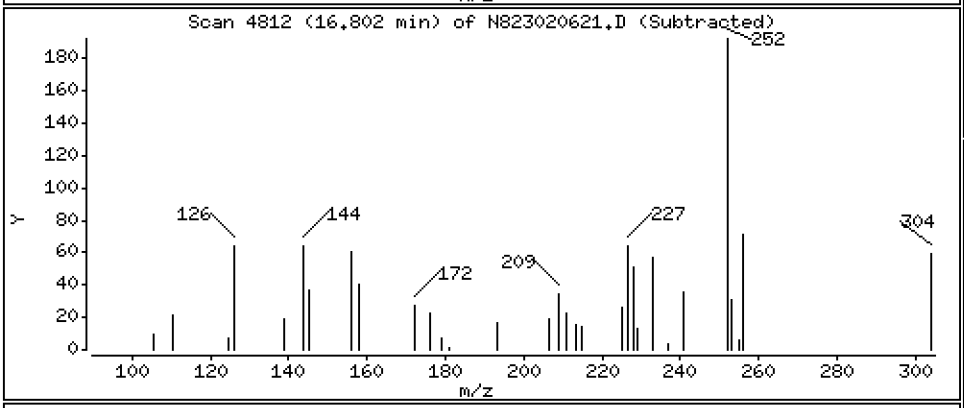
Column diameter: 0.25

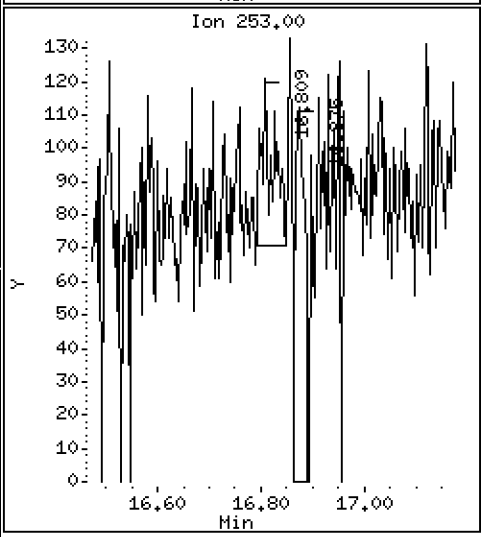
28 Benzo(b)fluoranthene

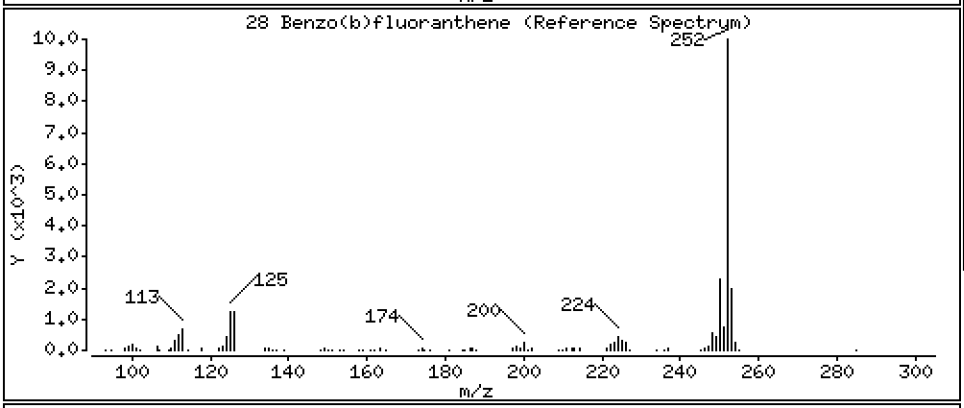
Concentration: 0.02326 ug/mL

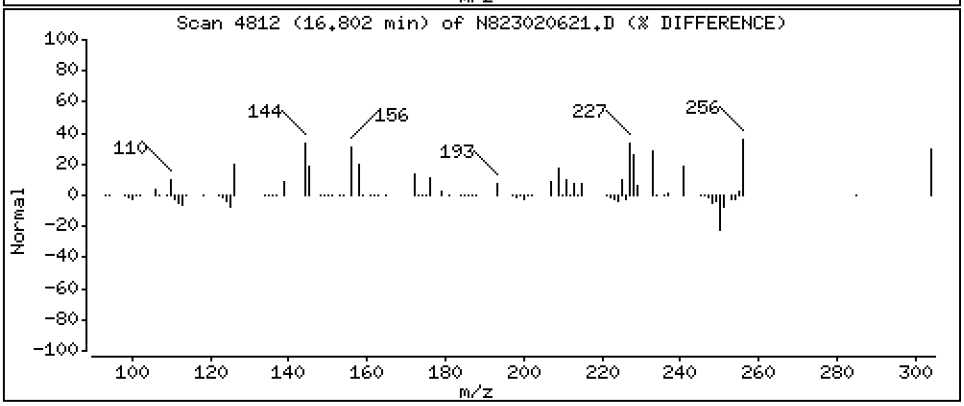












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Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

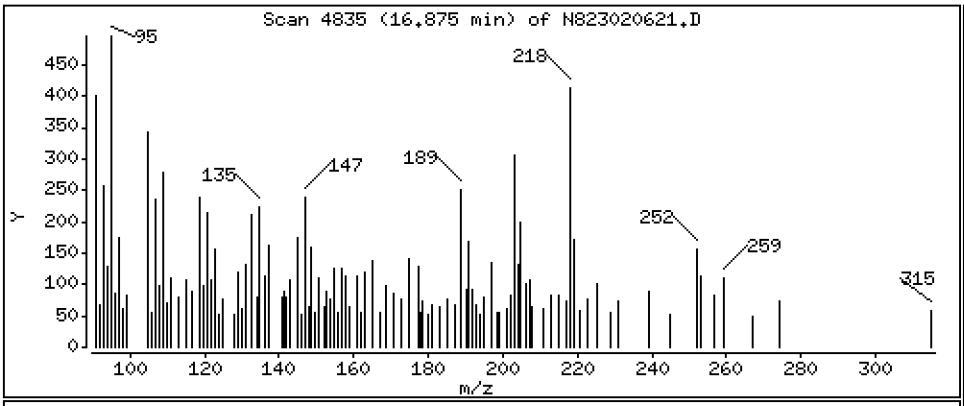
Operator: JZ

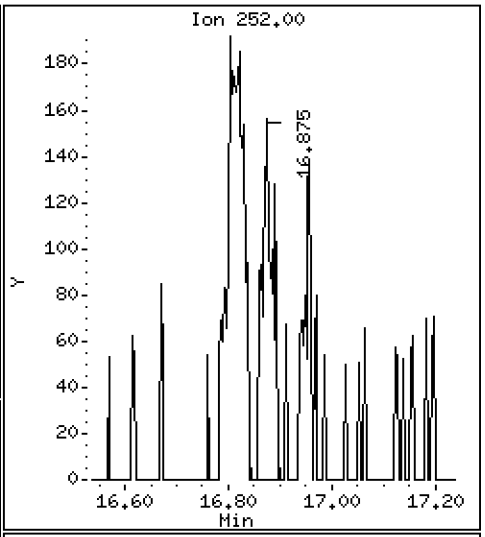
Column phase: Rxi-17sil

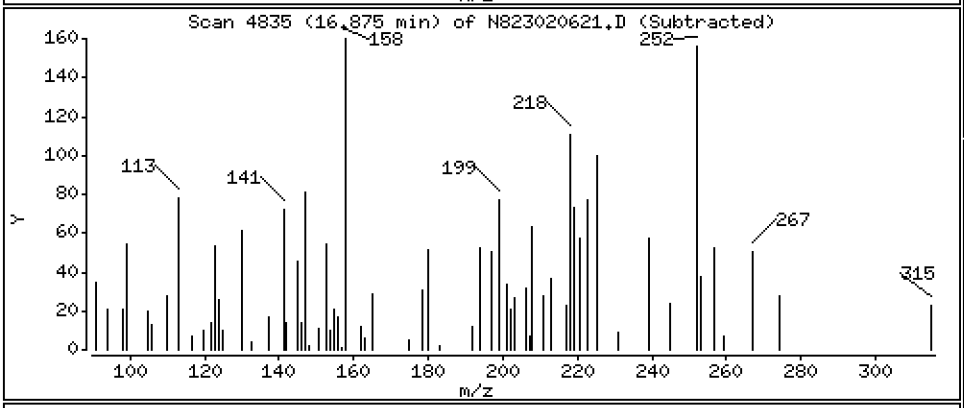
Column diameter: 0.25

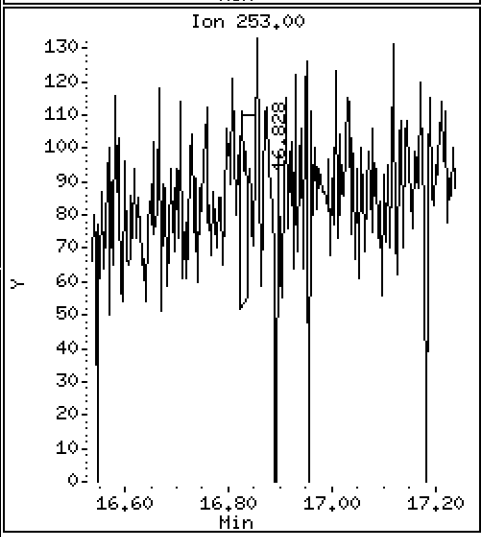
29 Benzo(k)fluoranthene

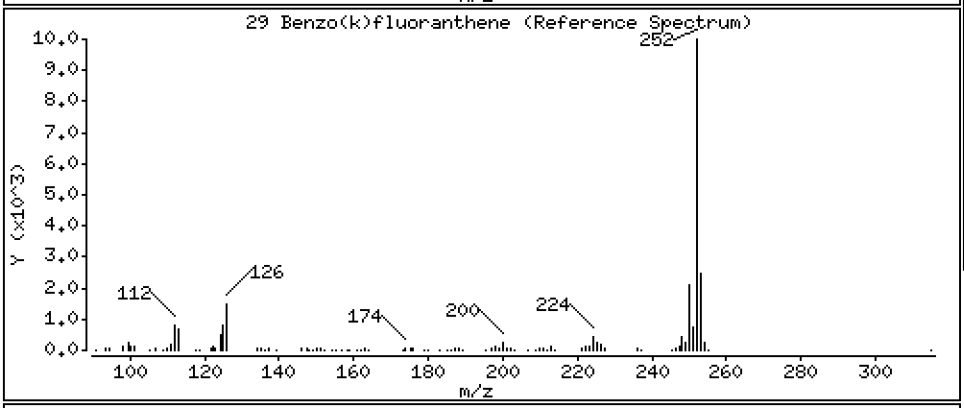
Concentration: 0.01229 ug/mL

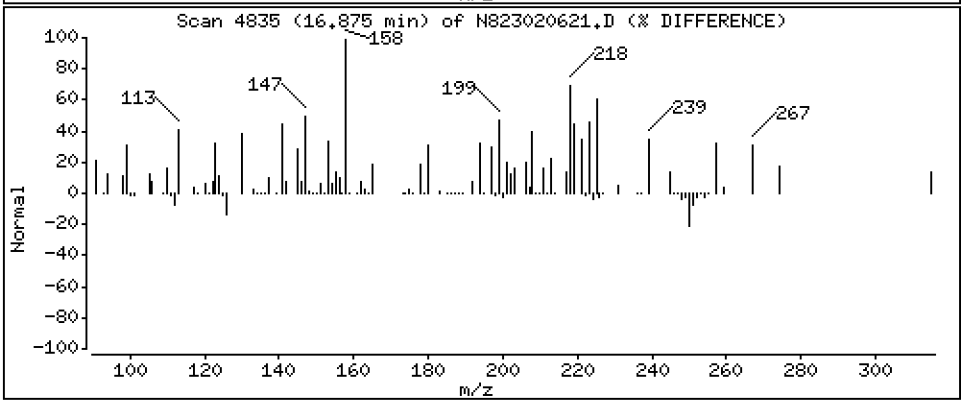












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Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

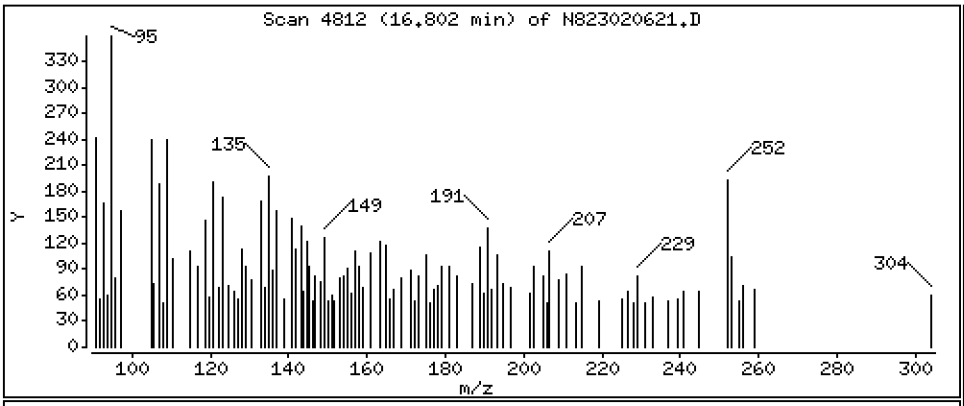
Operator: JZ

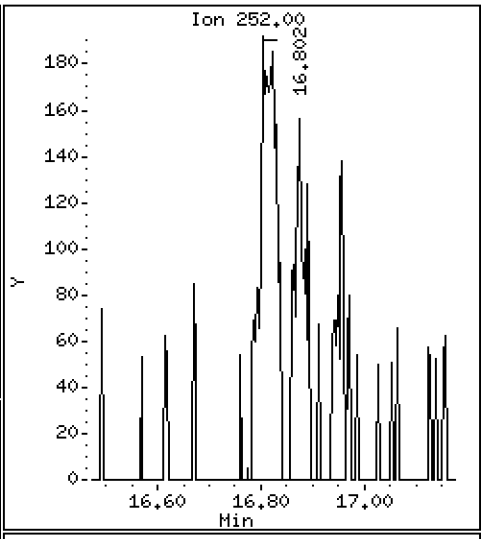
Column phase: Rxi-17sil

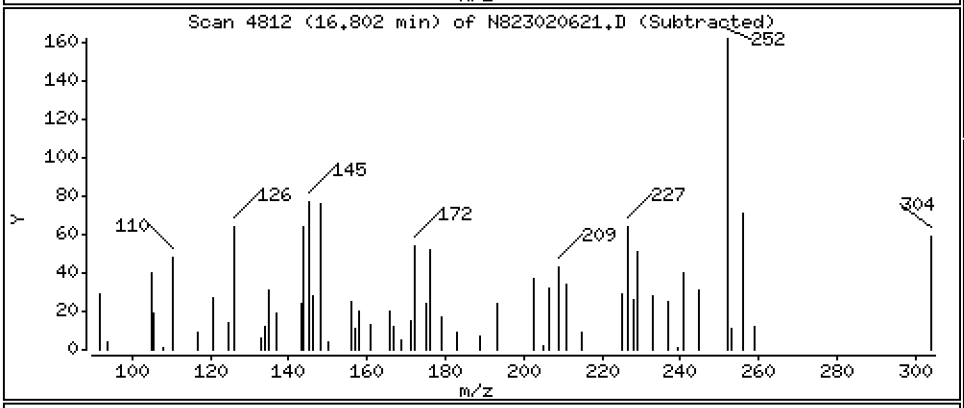
Column diameter: 0.25

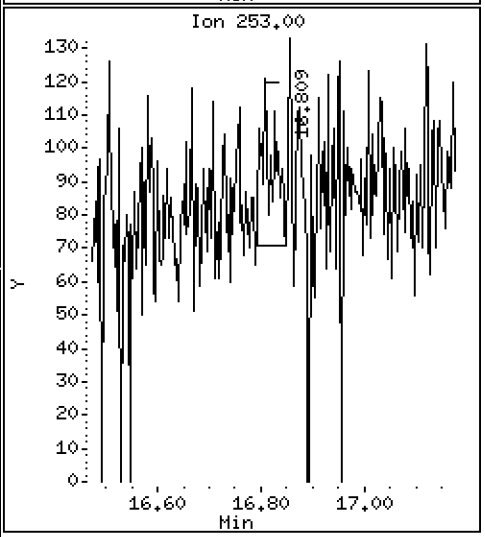
31 Total Benzofluoranthenes

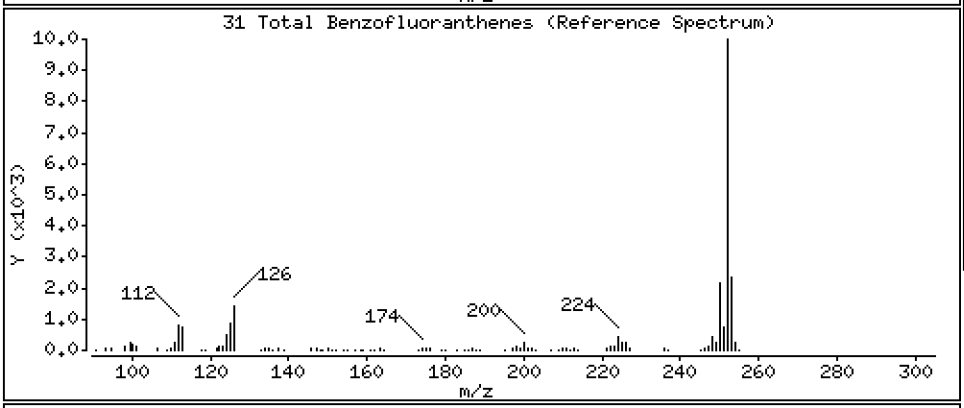
Concentration: 0.04504 ug/mL

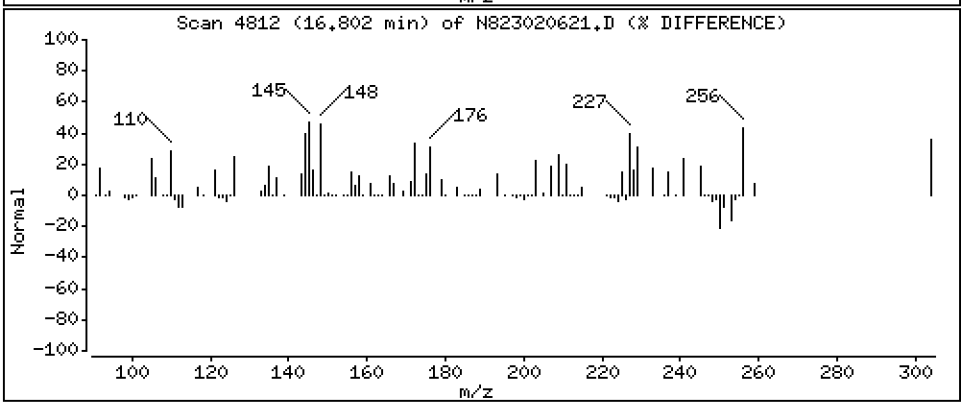












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020621.D

Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

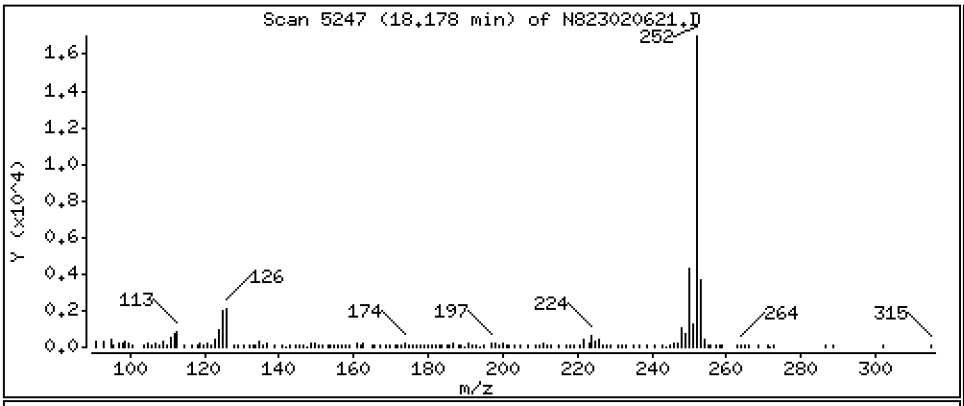
Operator: JZ

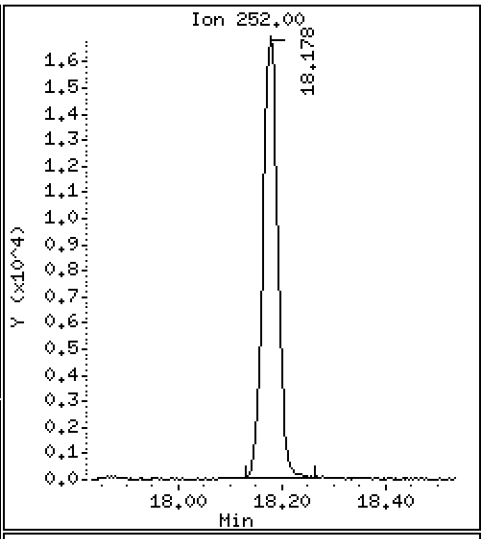
Column phase: Rxi-17sil

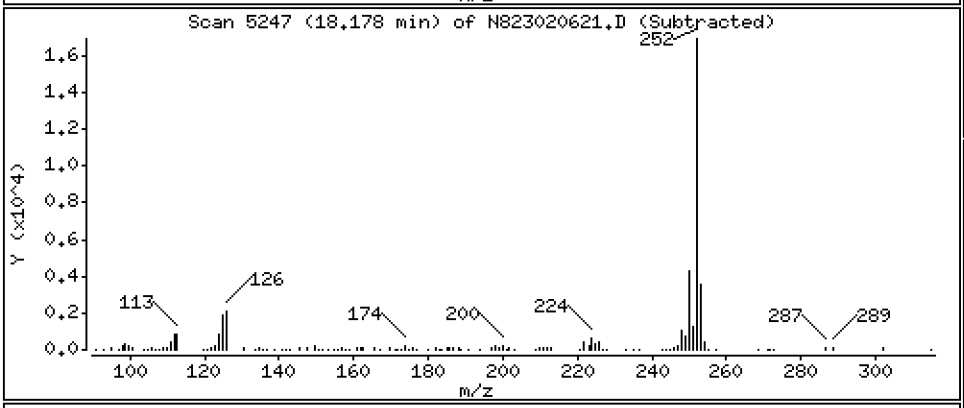
Column diameter: 0.25

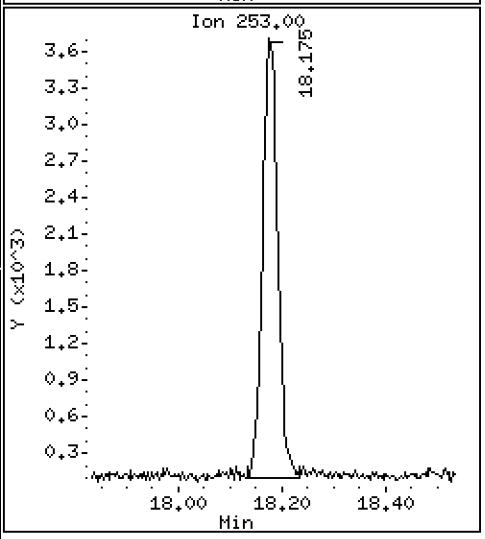
35 Perylene

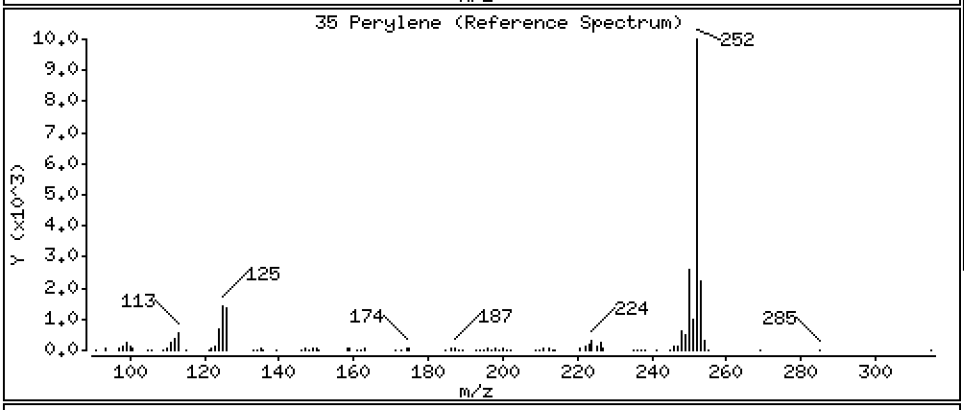
Concentration: 1.945 ug/mL

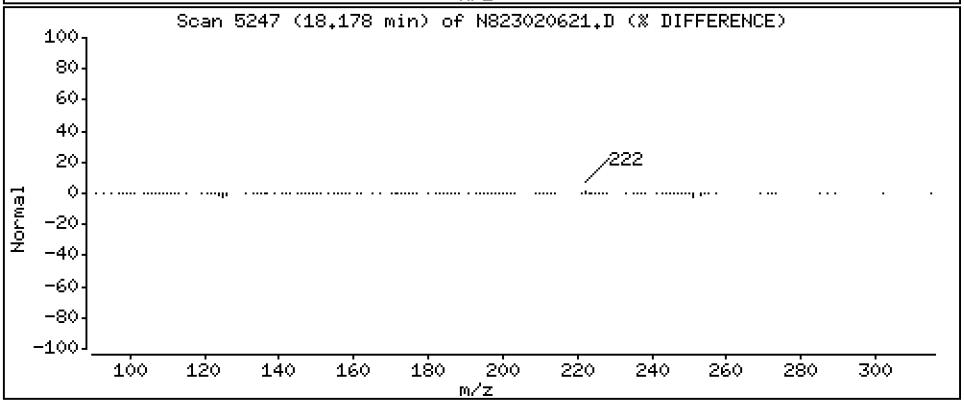












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020621.D

Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

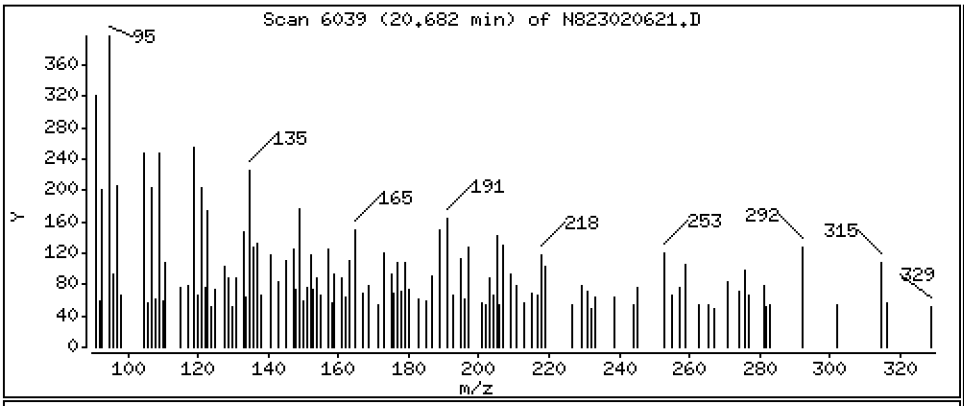
Operator: JZ

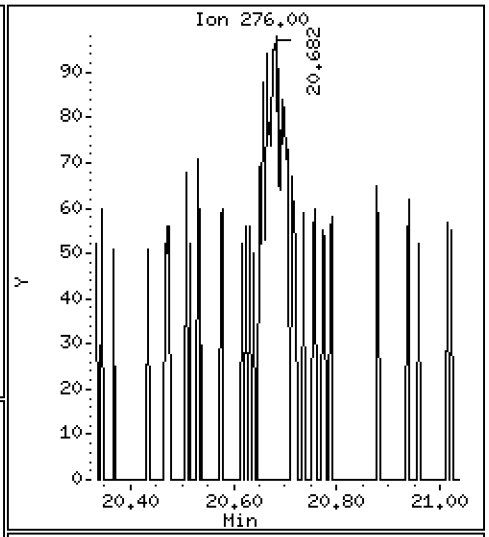
Column phase: Rxi-17sil

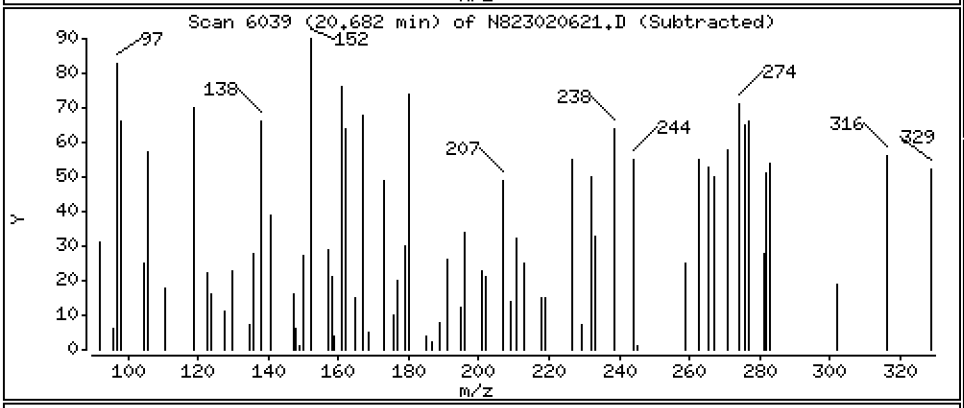
Column diameter: 0.25

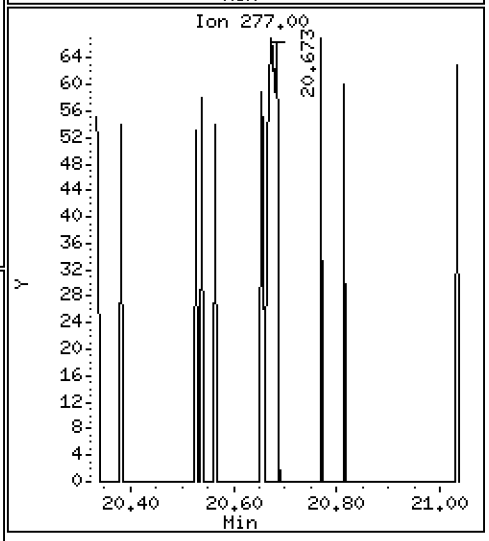
37 Indeno(1,2,3-cd)pyrene

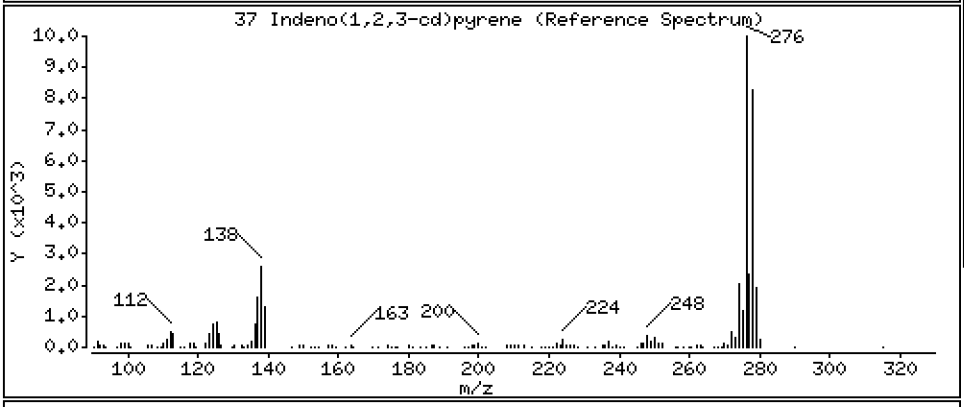
Concentration: 0.01495 ug/mL

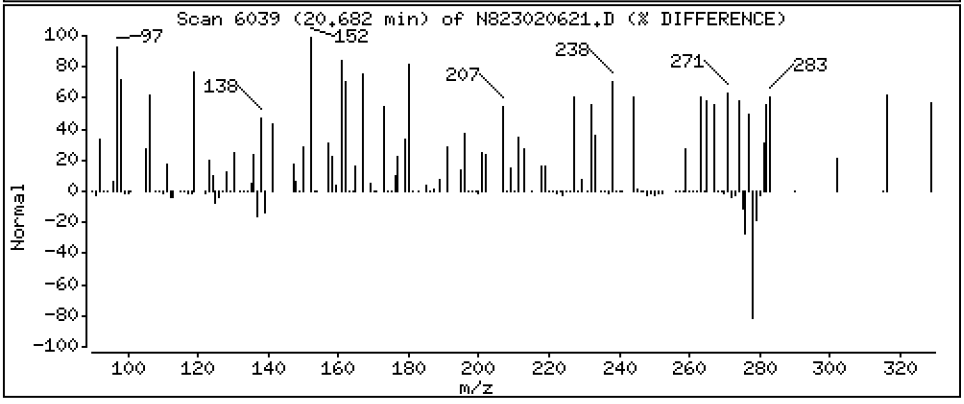












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020621.D

Date : 06-FEB-2023 21:47

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-08

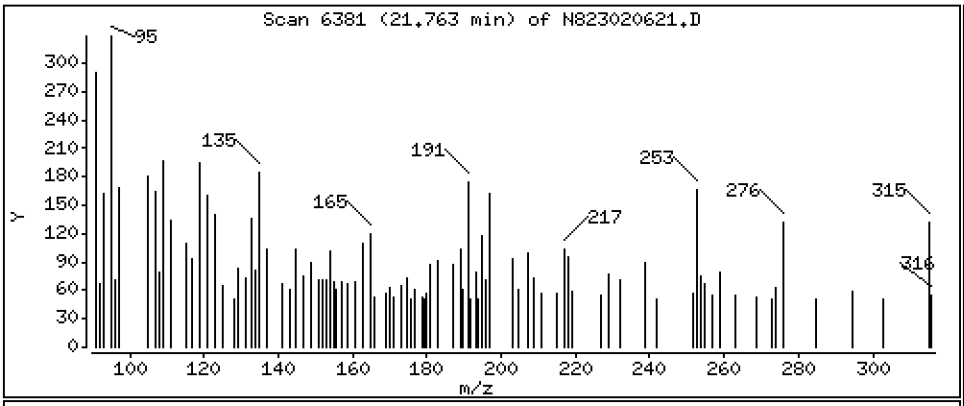
Operator: JZ

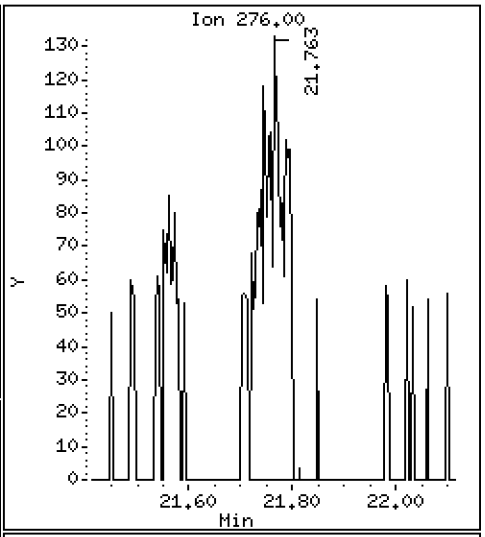
Column phase: Rxi-17sil

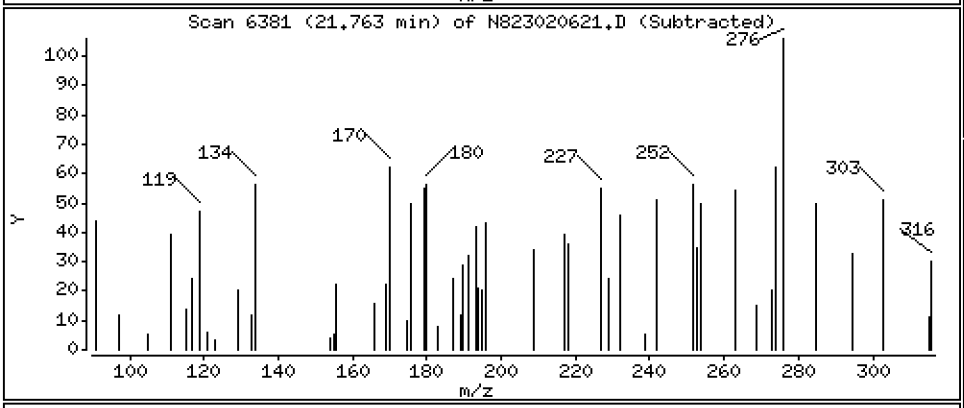
Column diameter: 0.25

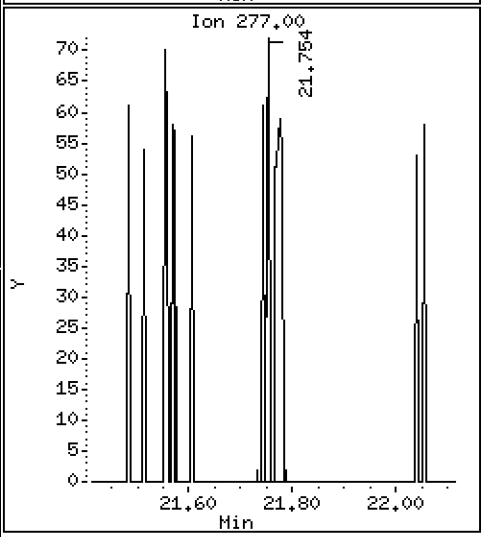
39 Benzo(g,h,i)perylene

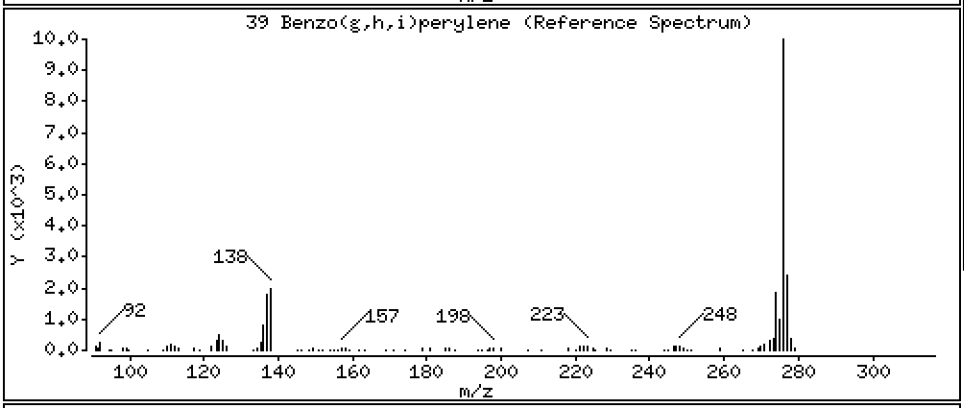
Concentration: 0.02472 ug/mL

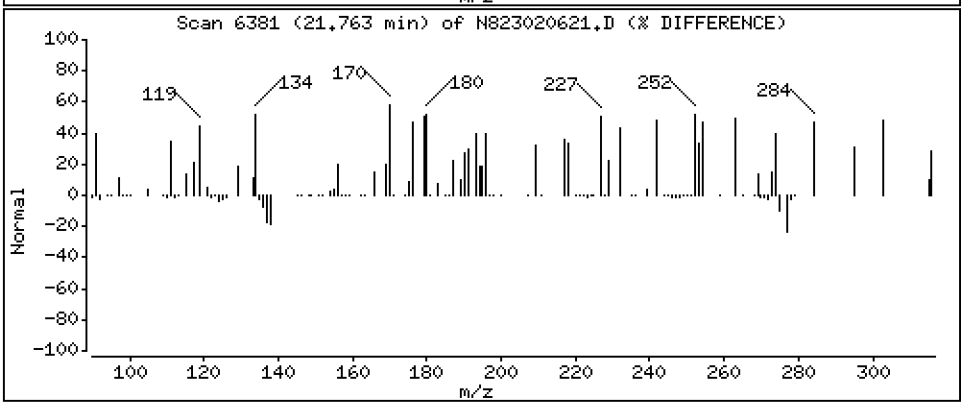












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020621.D
Lab Smp Id: 23A0207-08
Inj Date : 06-FEB-2023 21:47
Operator : JZ Inst ID: nt8.i
Smp Info : 23A0207-08
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 13:04 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.884	4.900	(1.000)	54142	2.00000	
	2 Naphthalene	128	4.913	4.928	(1.006)	472	0.01875	0.01875
$	3 2-Methylnaphthalene-d10	152	5.624	5.634	(1.151)	35208	2.38442	2.384
	4 2-Methylnaphthalene	141	5.675	5.681	(1.162)	443	0.03199	0.03199(M)
	5 1-methylnaphthalene	141	5.871	5.880	(1.202)	467	0.03323	0.03323
	9 Acenaphthylene	152	Compound Not Detected.					
*	10 Acenaphthene-d10	164	7.183	7.189	(1.000)	32326	2.00000	
	11 Acenaphthene	153	7.234	7.240	(1.007)	278	0.01700	0.01700
	12 Dibenzofuran	168	7.382	7.392	(1.028)	390	0.01570	0.01570
	14 Fluorene	166	7.863	7.869	(1.095)	165	0.00855	0.008552
*	15 Phenanthrene-d10	188	9.226	9.232	(1.000)	57668	2.00000	
	16 Phenanthrene	178	9.261	9.267	(1.004)	2007	0.07125	0.07125(M)
	17 Anthracene	178	9.298	9.308	(1.008)	391	0.01528	0.01528
	19 Carbazole	167	9.823	9.823	(1.065)	192	0.00818	0.008184(M)
	22 Fluoranthene	202	11.044	11.050	(1.197)	1427	0.04654	0.04654
$	21 Fluoranthene-d10	212	11.006	11.009	(1.193)	66582	2.61692	2.617
	23 Pyrene	202	11.572	11.569	(0.815)	1135	0.04906	0.04906
	24 Benzo(a)anthracene	228	14.064	14.070	(0.991)	387	0.01846	0.01846
*	25 Chrysene-d12	240	14.193	14.202	(1.000)	37315	2.00000	
	27 Chrysene	228	14.269	14.275	(1.005)	667	0.02988	0.02988
	28 Benzo(b)fluoranthene	252	16.802	16.824	(0.928)	433	0.02326	0.02326
	29 Benzo(k)fluoranthene	252	16.875	16.887	(0.932)	224	0.01229	0.01229(M)
	30 Benzo(j)fluoranthene	252	Compound Not Detected.					
	31 Total Benzofluoranthenes	252	16.802	16.824	(0.928)	794	0.04504	0.04504(M)
	32 Benzo(a)pyrene	252	Compound Not Detected.					
*	33 Perylene-d12	264	18.105	18.107	(1.000)	31960	2.00000	
	35 Perylene	252	18.177	18.183	(1.004)	34191	1.94518	1.945
$	36 Dibenzo(a,h)anthracene-d14	292	20.549	20.549	(1.135)	34454	2.75134	2.751
	37 Indeno(1,2,3-cd)pyrene	276	20.682	20.684	(1.142)	279	0.01495	0.01495
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	21.763	21.763	(1.202)	418	0.02472	0.02472(M)

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020621.D
Lab Smp Id: 23A0207-08
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44336	22168	88672	54142	22.12
10 Acenaphthene-d10	26127	13064	52254	32326	23.73
15 Phenanthrene-d10	47424	23712	94848	57668	21.60
25 Chrysene-d12	36794	18397	73588	37315	1.42
33 Perylene-d12	36636	18318	73272	31960	-12.76

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.88	-0.32
10 Acenaphthene-d10	7.19	6.69	7.69	7.18	-0.08
15 Phenanthrene-d10	9.23	8.73	9.73	9.23	-0.07
25 Chrysene-d12	14.20	13.70	14.70	14.19	-0.07
33 Perylene-d12	18.11	17.61	18.61	18.11	-0.02

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

REVIEW SUMMARY FOR FILE - N823020621.D

Lab ID: 23A0207-08
nt8.i, 20230206A.b\FSIMPNA230119.m,   06-FEB-2023 21:47

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

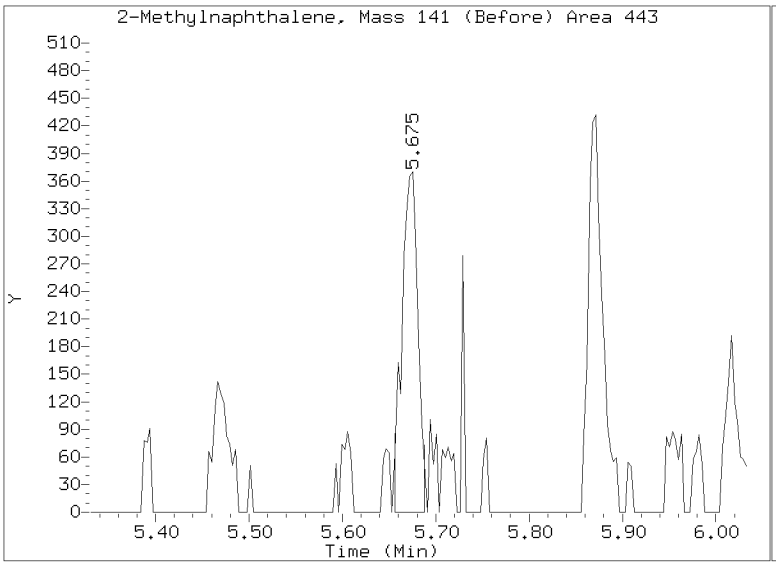
No RRT check performed

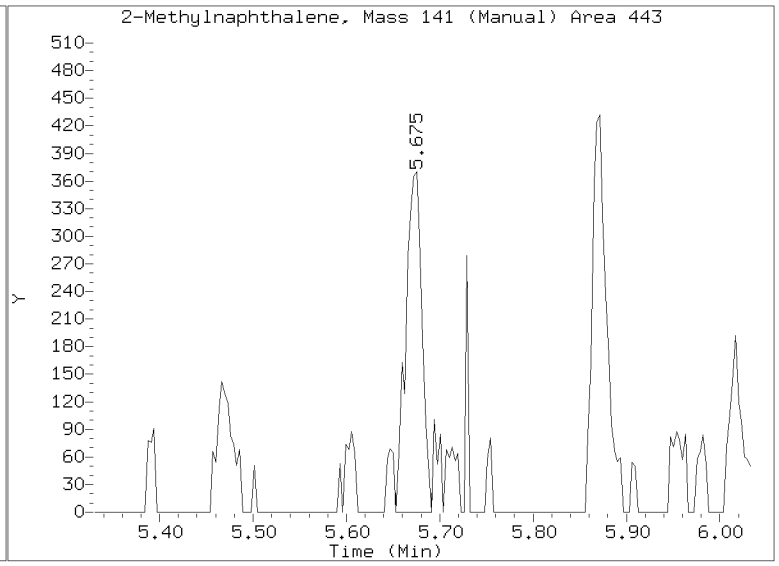
On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

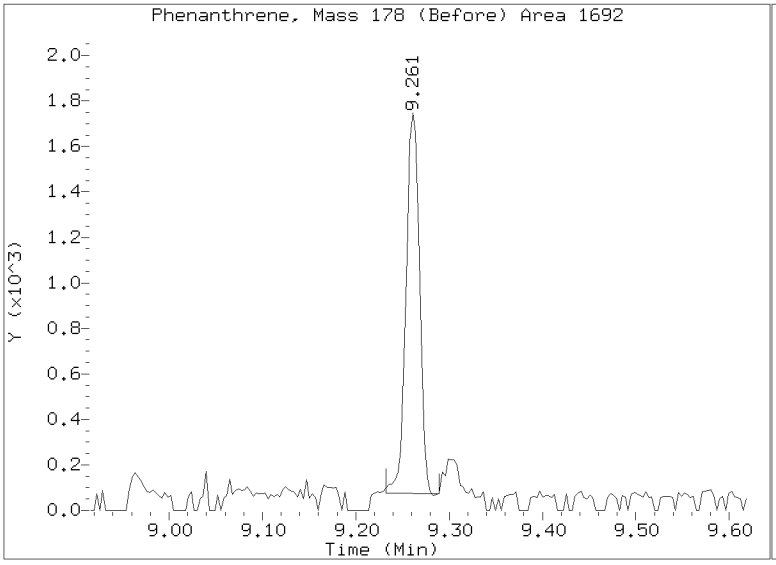
* Only compounds listed in the work order have been verified by the analyst *

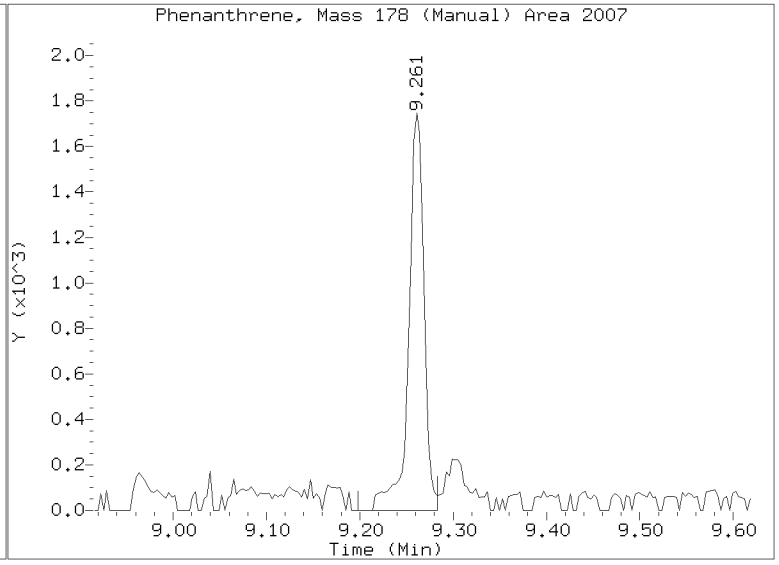
Quant Ion Manual Peak Adjustment Report

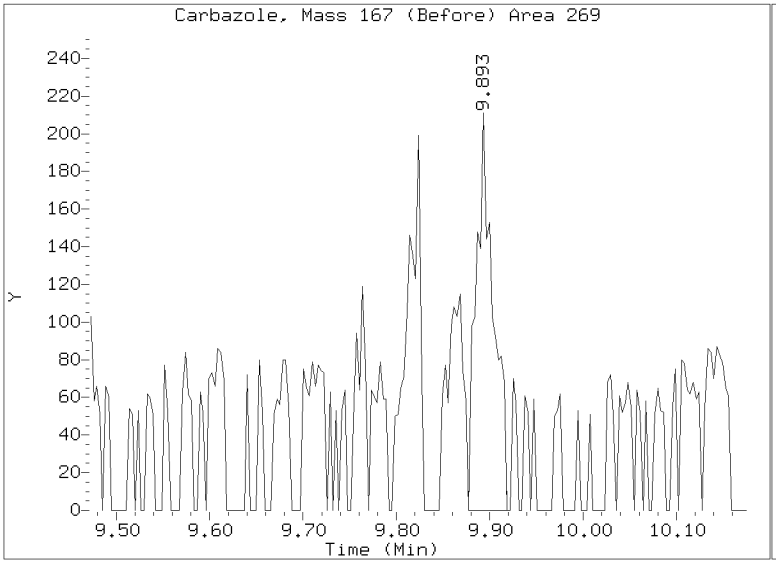
Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020621.D
Injection Date: 06-FEB-2023 21:47
Lab ID:23A0207-08 Client ID:
Report Date: 02/07/2023 15:59

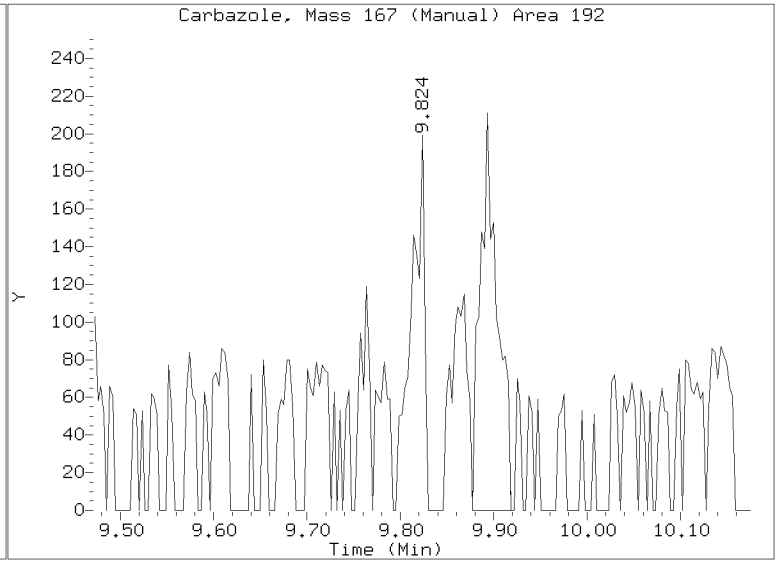






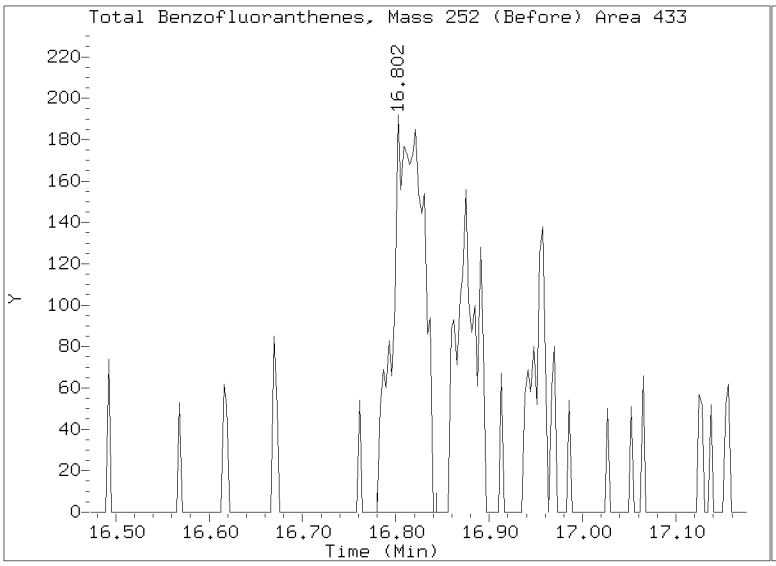


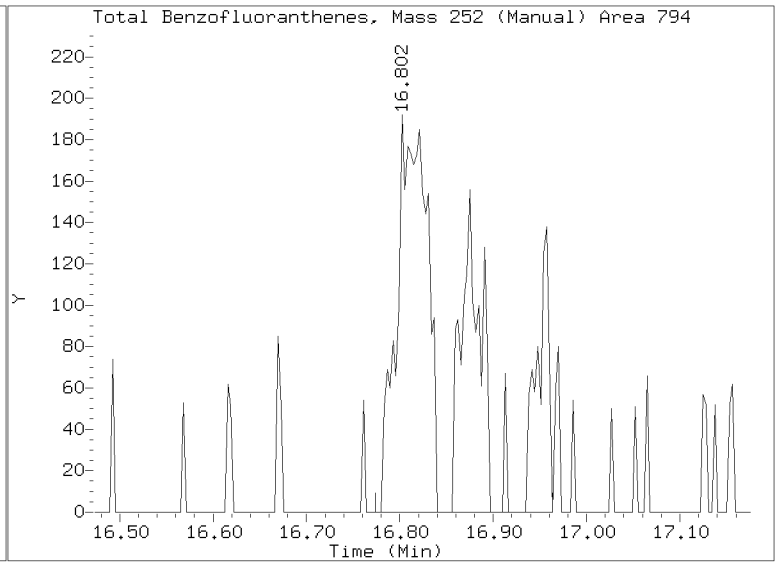


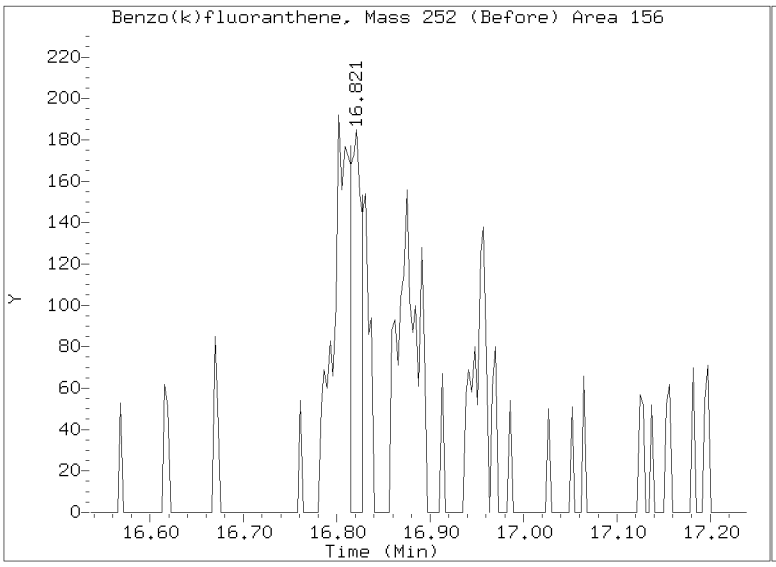


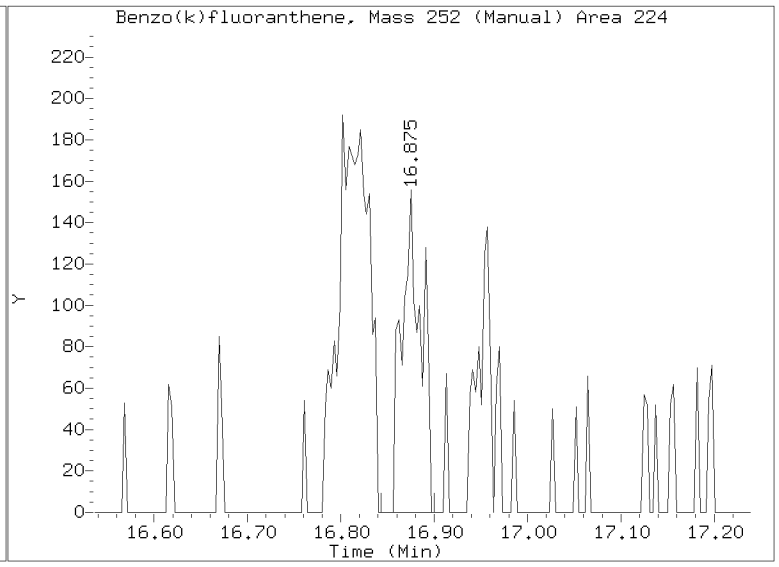
Quant Ion Manual Peak Adjustment Report

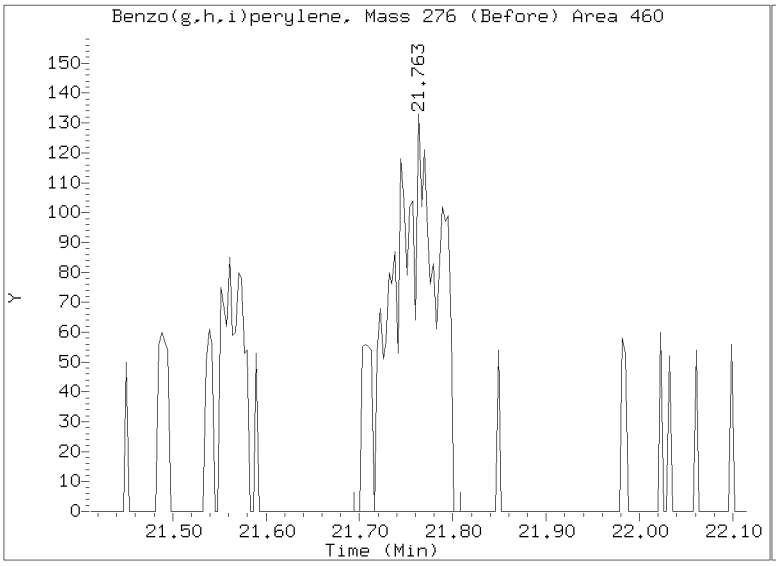
Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020621.D
Injection Date: 06-FEB-2023 21:47
Lab ID:23A0207-08 Client ID:
Report Date: 02/07/2023 15:59

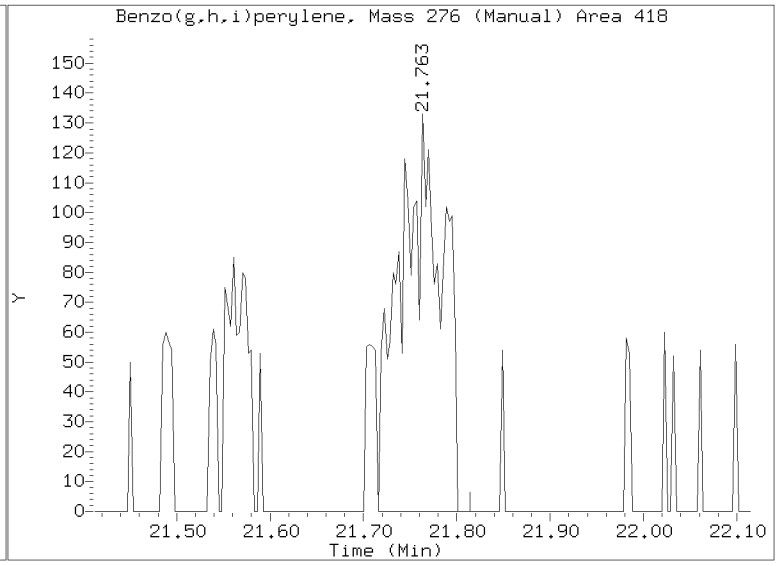












Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

Polynuclear Aromatic Hydrocarbons

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-09 A	SDG:	23A0207
Sampled:	01/11/23 11:03	Prepared:	02/01/23 11:29	File ID:	N823020622.D
% Solids:	73.00	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/06/23 22:14
Batch:	BLA0683	Sequence:	SLB0075	Initial/Final:	13.78 g Wet / 0.5 mL
Instrument:	NT8	Column:	RXI-17Sil ms	Calibration:	GA00050
Cleanups:	GPC, Silica Gel				

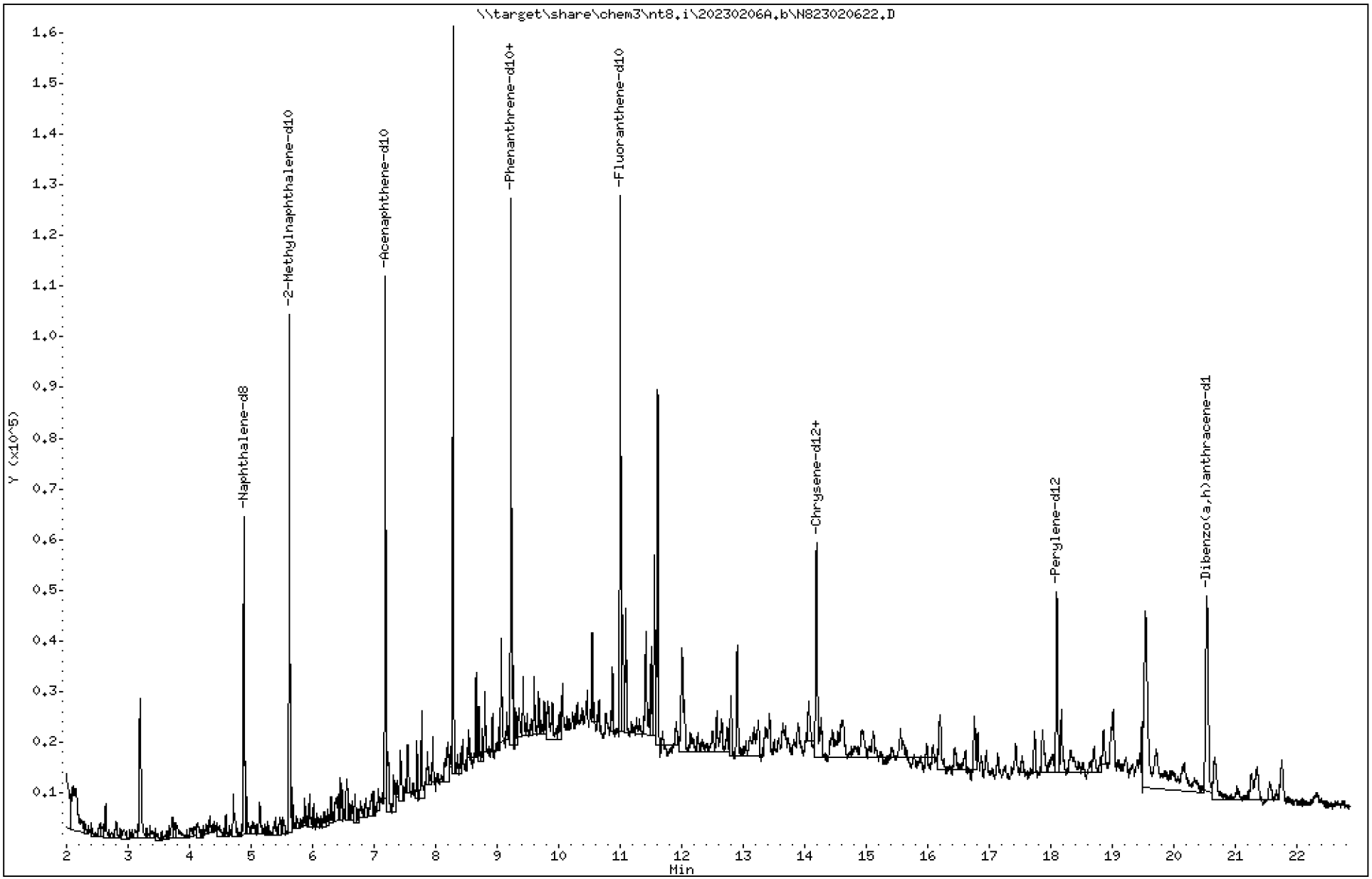
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
56-55-3	Benzo(a)anthracene	1	13.2		0.82	4.97
218-01-9	Chrysene	1	13.5		1.05	4.97
205-99-2	Benzo(b)fluoranthene	1	19.9		1.36	4.97
207-08-9	Benzo(k)fluoranthene	1	10.0		0.76	4.97
50-32-8	Benzo(a)pyrene	1	24.7		0.61	4.97
193-39-5	Indeno(1,2,3-cd)pyrene	1	22.6		1.04	4.97
53-70-3	Dibenzo(a,h)anthracene	1	6.02		0.89	4.97

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	149.11	131	87.9	32 - 120	
Dibenzo[a,h]anthracene-d14	149.11	192	129	21 - 133	
Fluoranthene-d10	149.11	136	91.4	36 - 134	

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020622.D
Date : 06-FEB-2023 22:14
Client ID:
Sample Info: 23A0207-09

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020622.D

Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

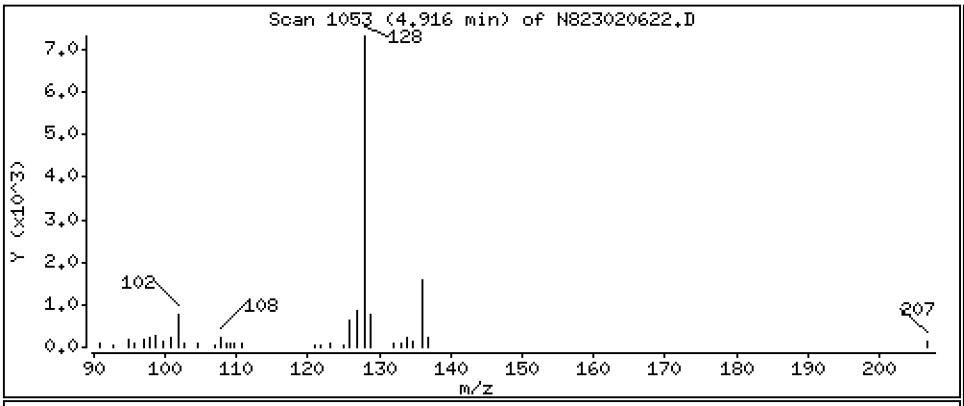
Operator: JZ

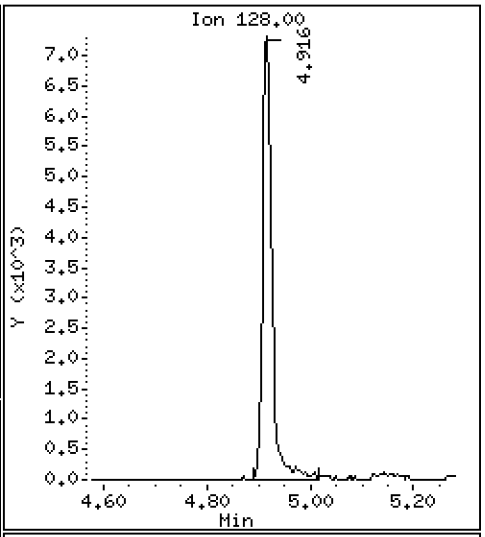
Column phase: Rxi-17sil

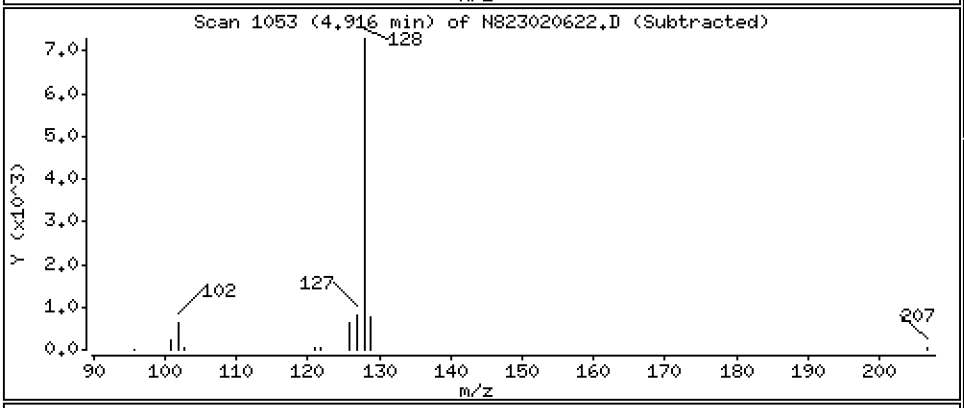
Column diameter: 0.25

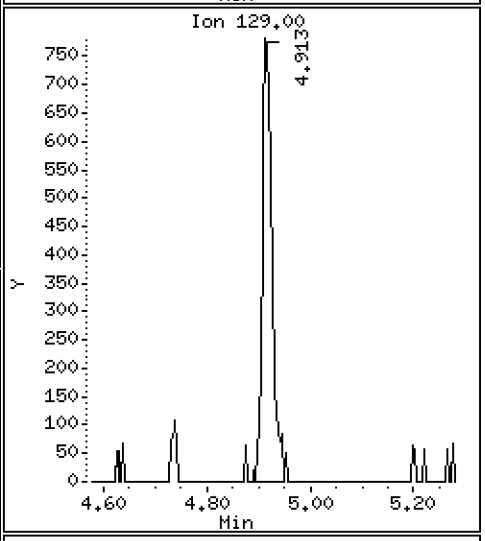
2 Naphthalene

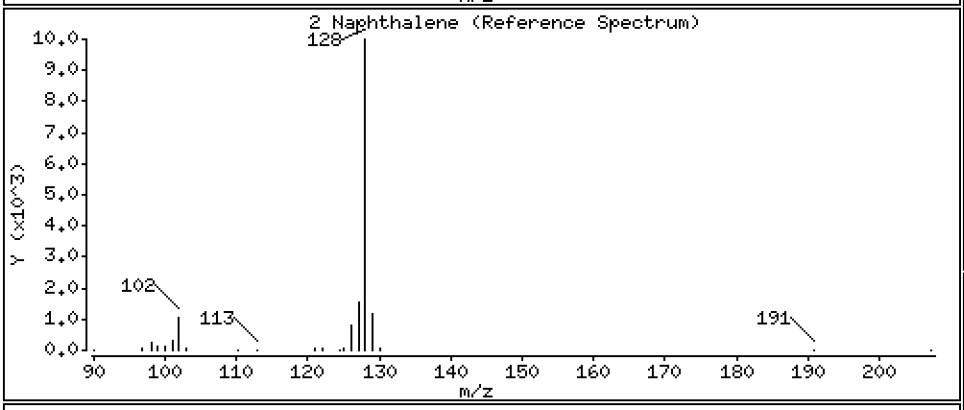
Concentration: 0.3876 ug/mL

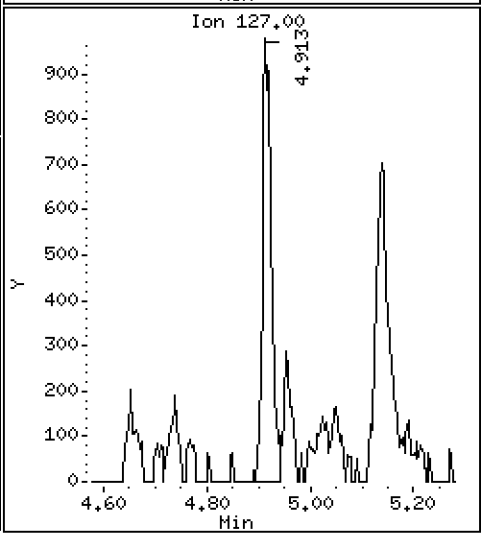


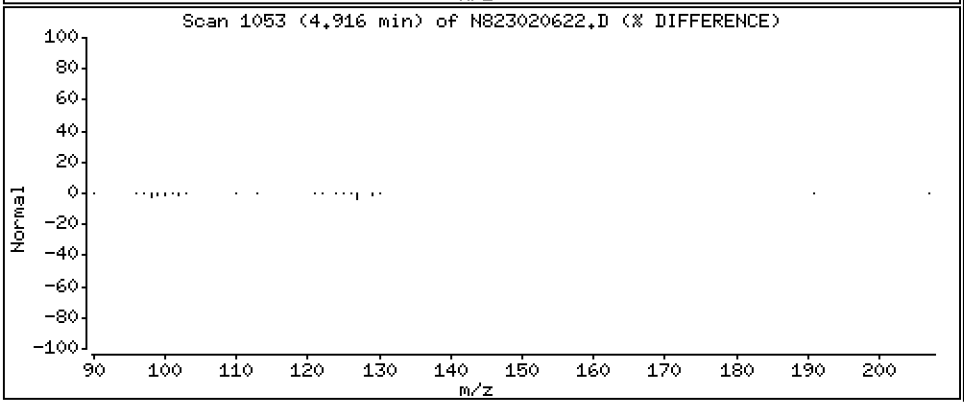












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

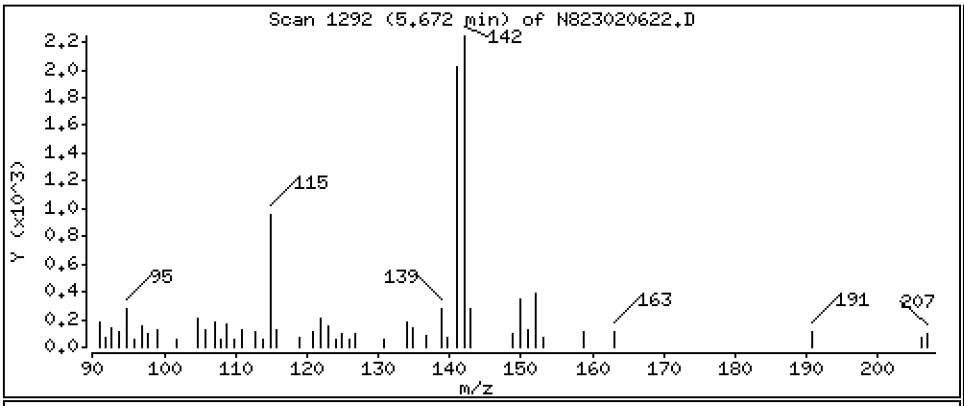
Operator: JZ

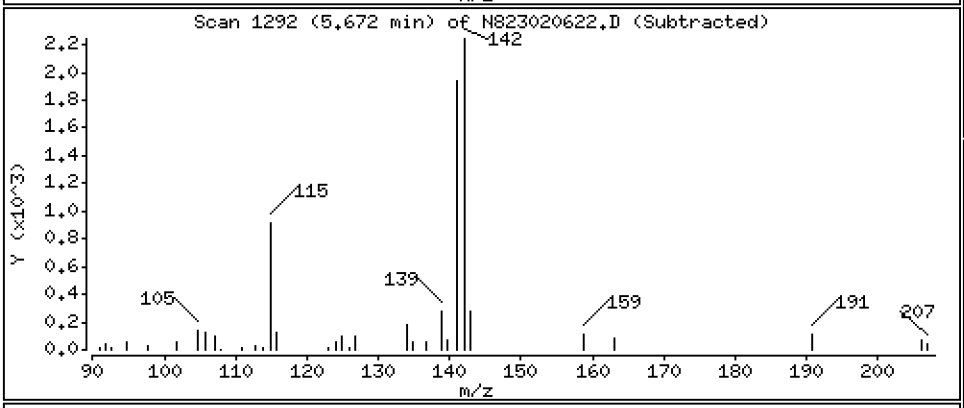
Column phase: Rxi-17sil

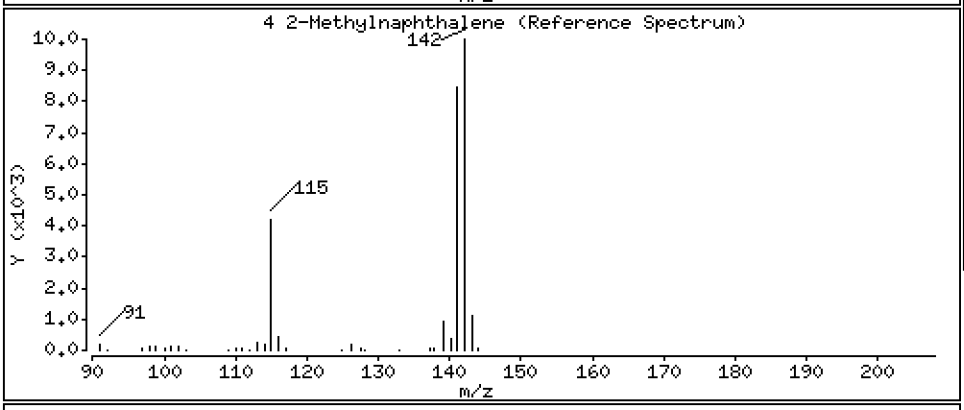
Column diameter: 0.25

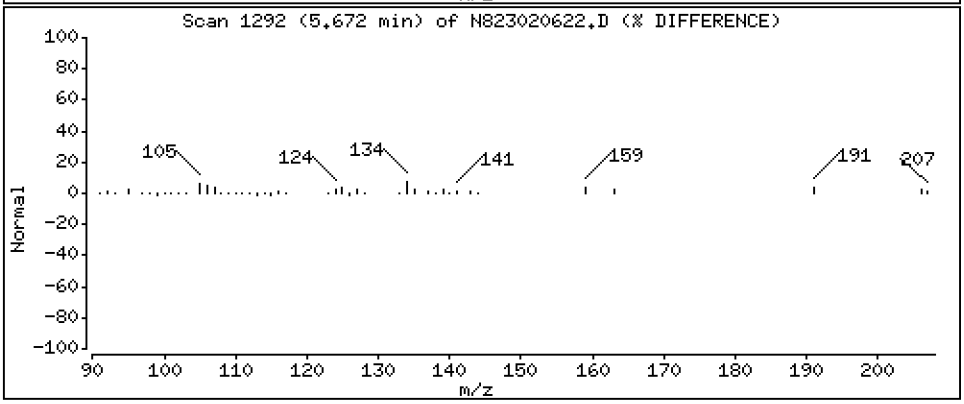
4 2-Methylnaphthalene

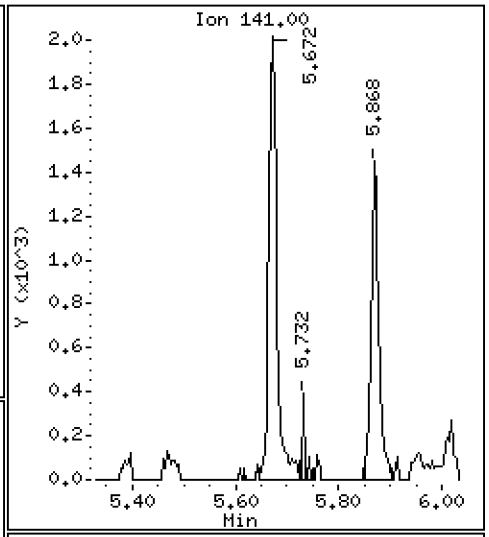
Concentration: 0.1707 ug/mL

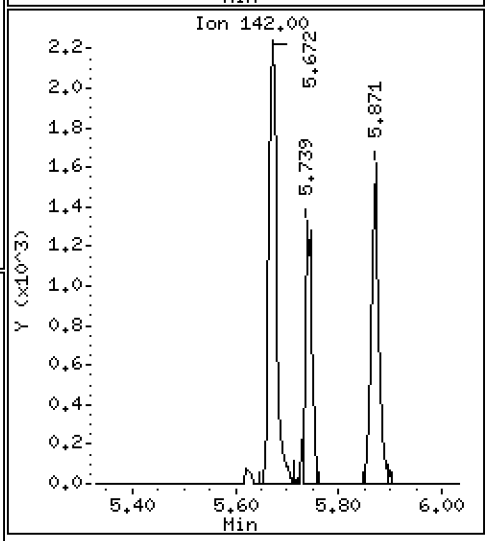












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

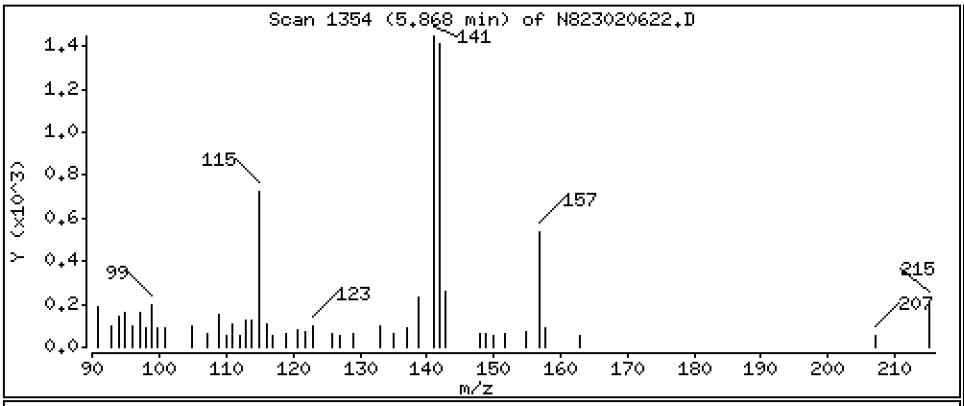
Operator: JZ

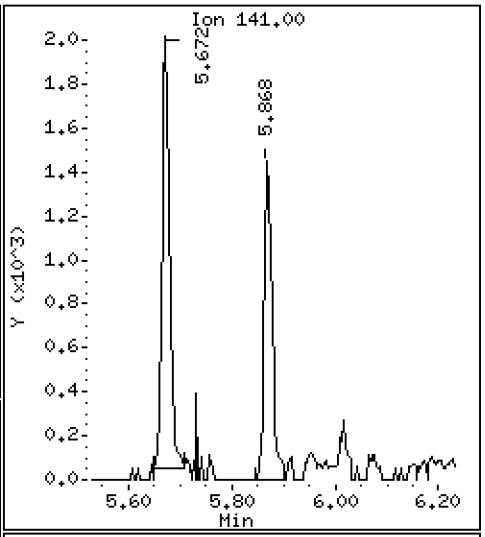
Column phase: Rxi-17sil

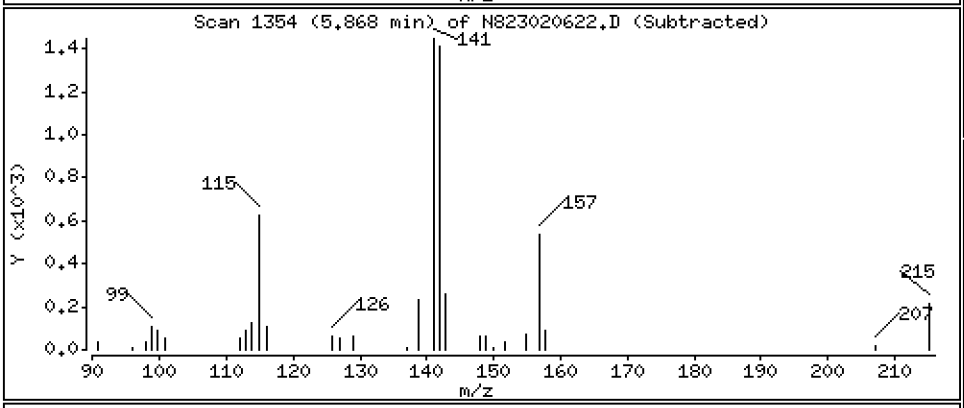
Column diameter: 0.25

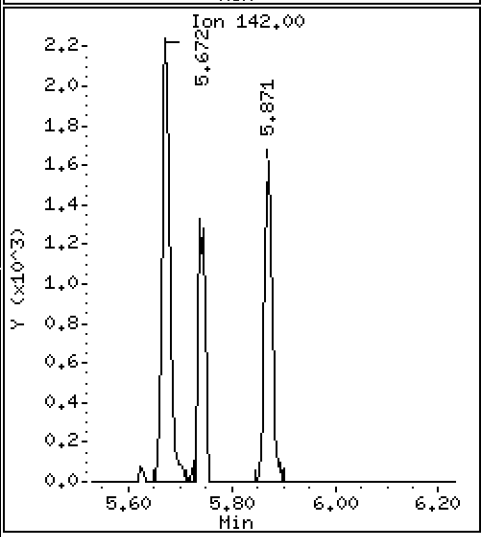
5 1-methylnaphthalene

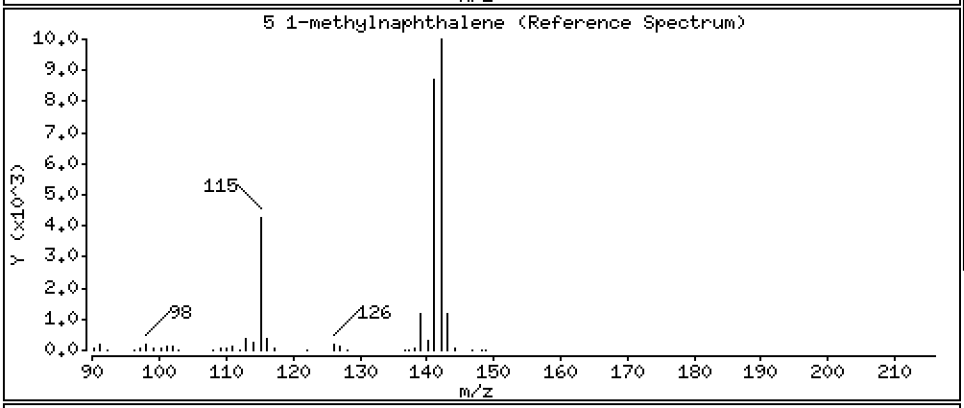
Concentration: 0.1123 ug/mL

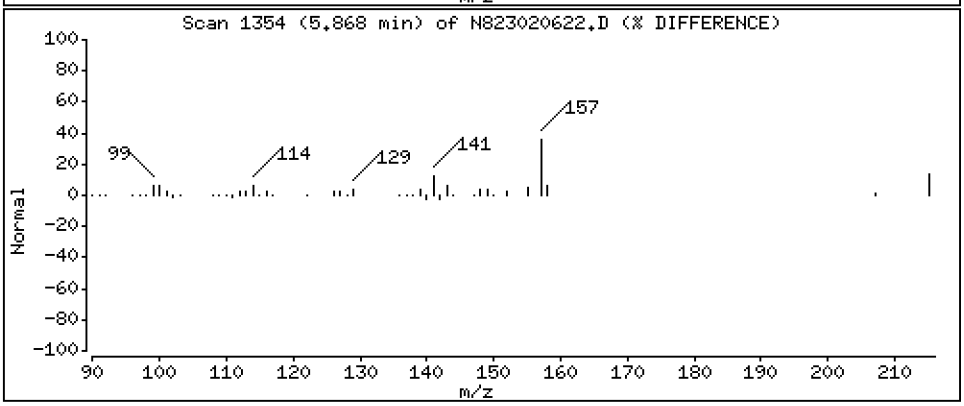












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

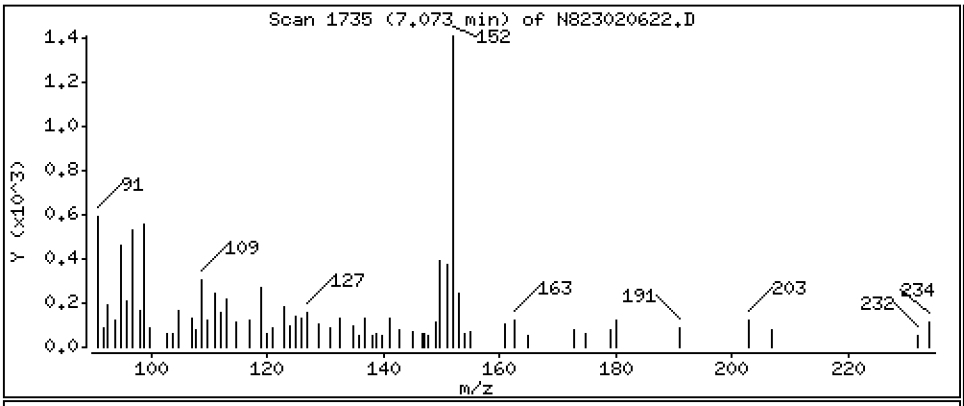
Operator: JZ

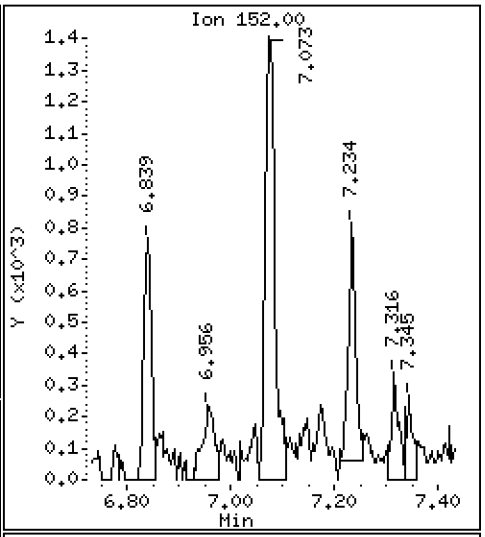
Column phase: Rxi-17sil

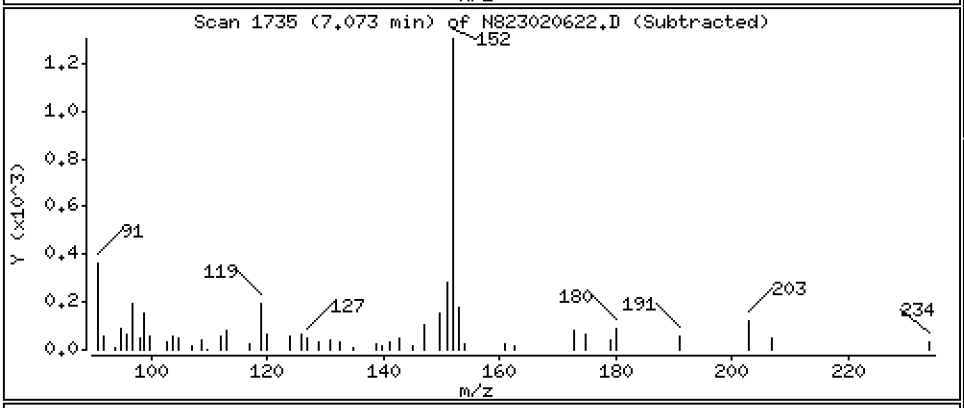
Column diameter: 0.25

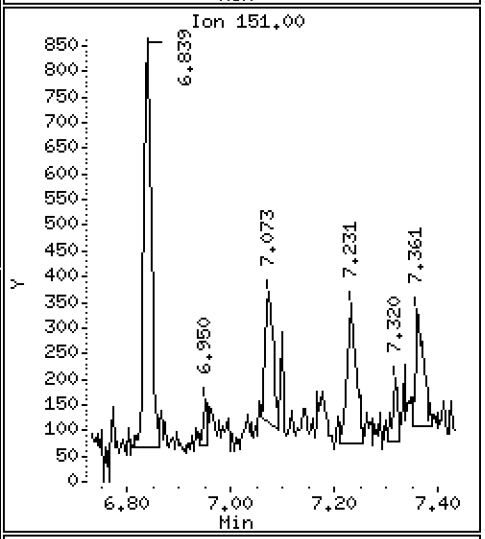
9 Acenaphthylene

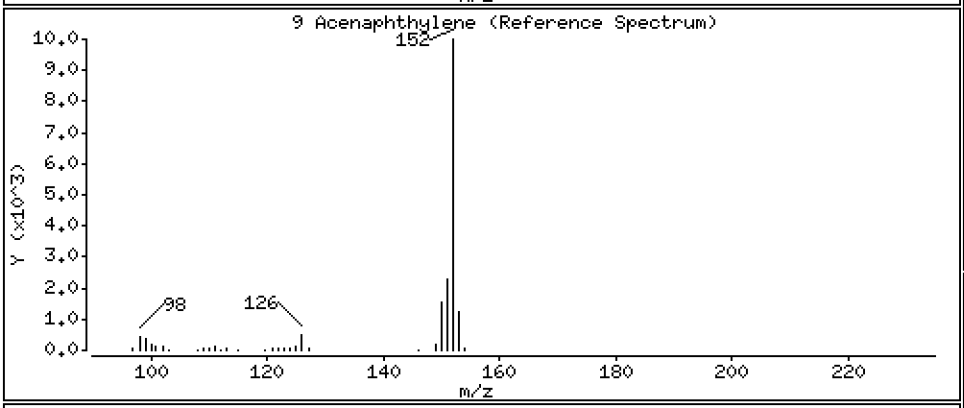
Concentration: 0.07853 ug/mL

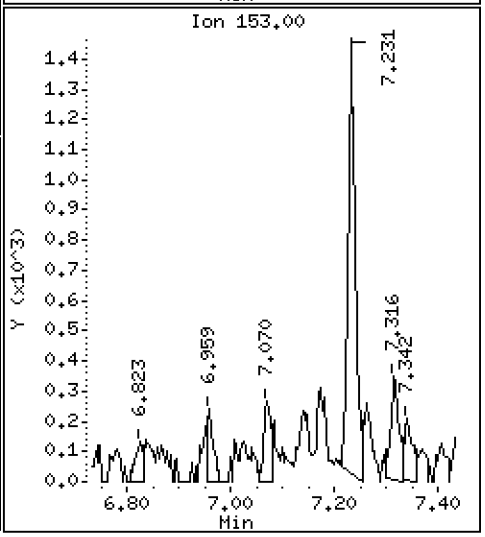


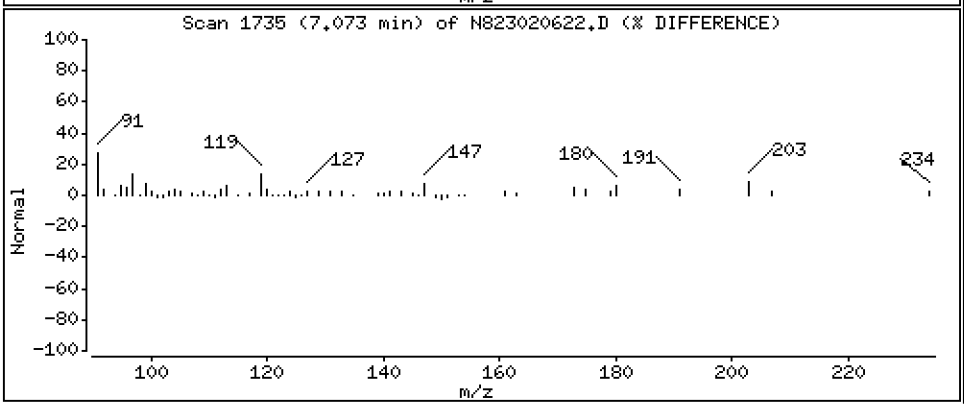












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

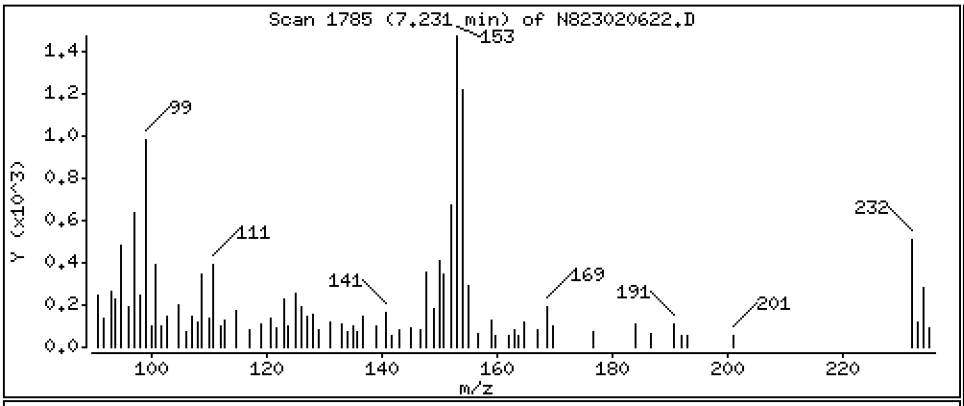
Operator: JZ

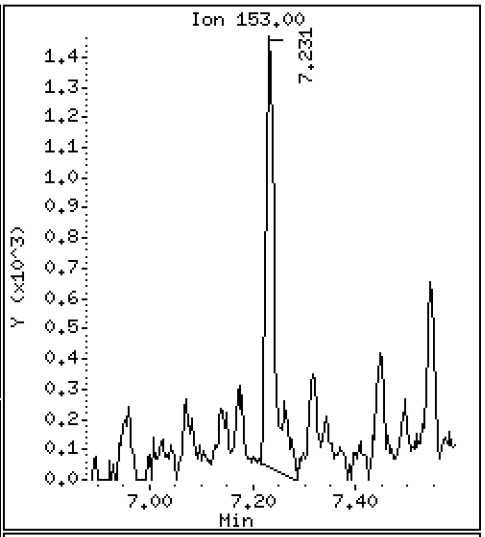
Column phase: Rxi-17sil

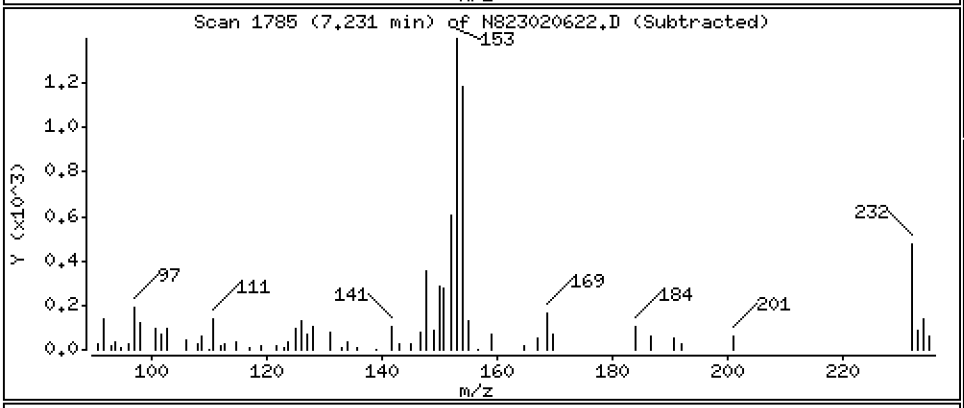
Column diameter: 0.25

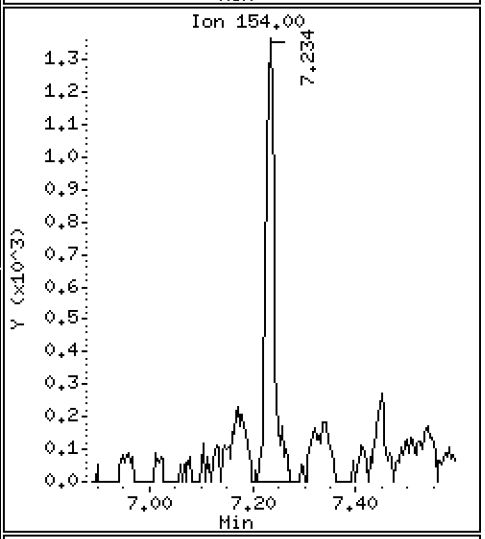
11 Acenaphthene

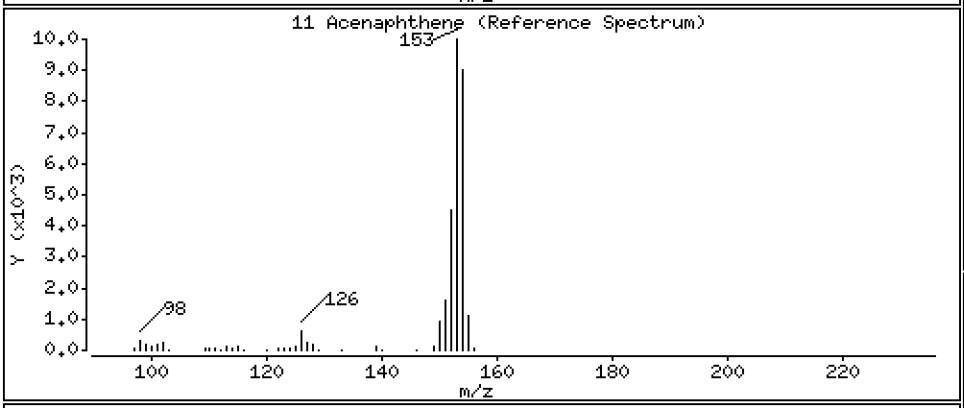
Concentration: 0.1092 ug/mL

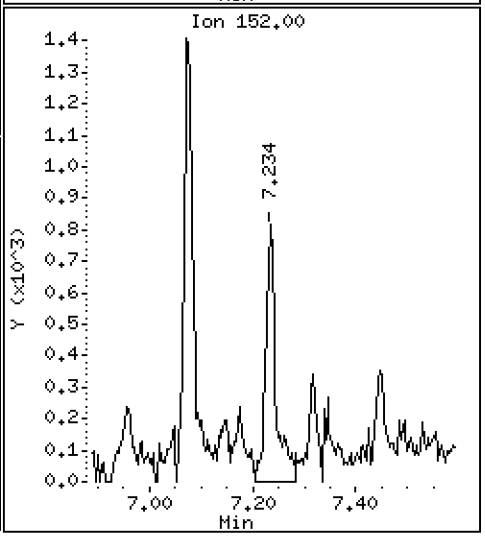


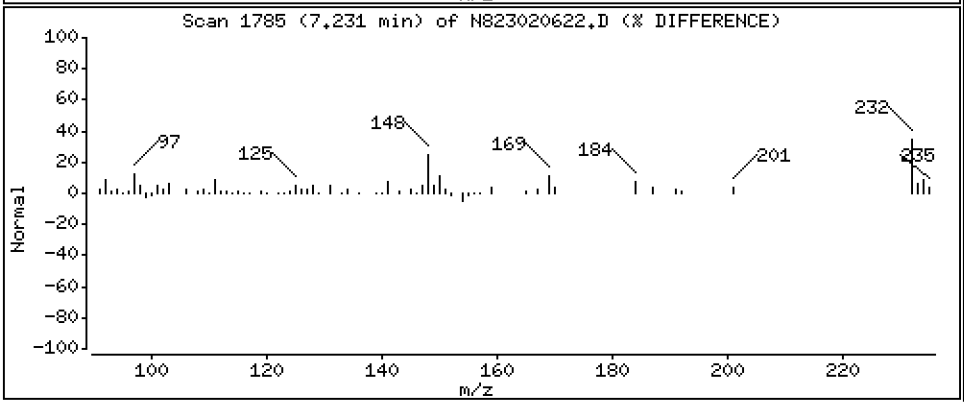












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

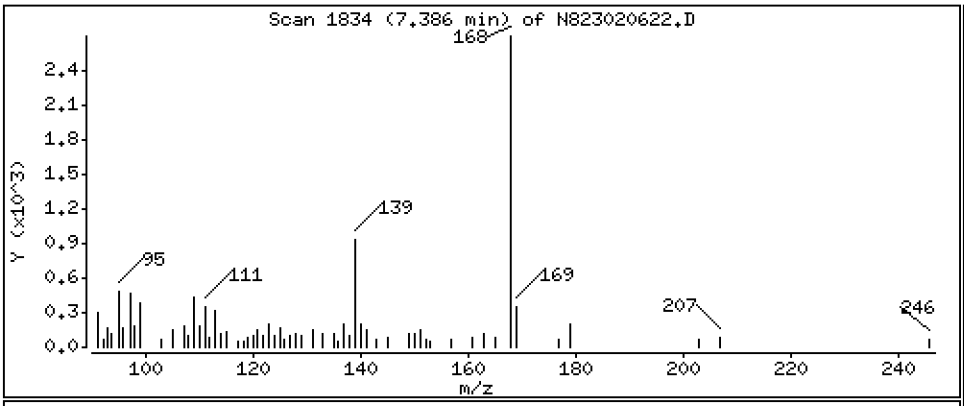
Operator: JZ

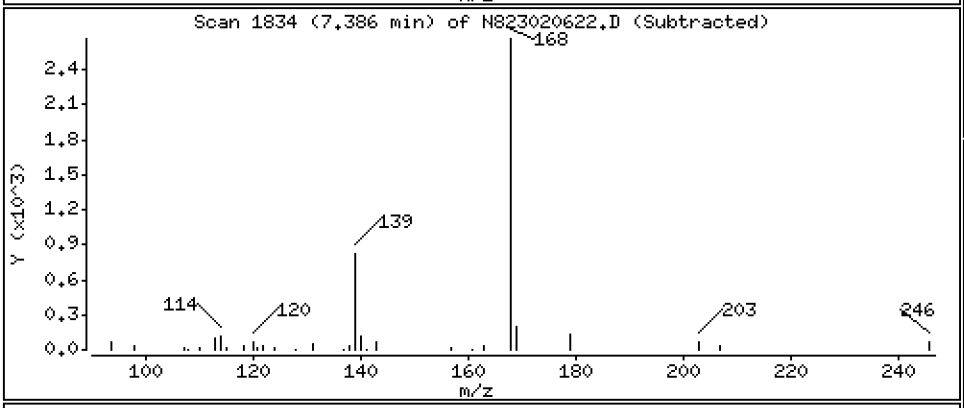
Column phase: Rxi-17sil

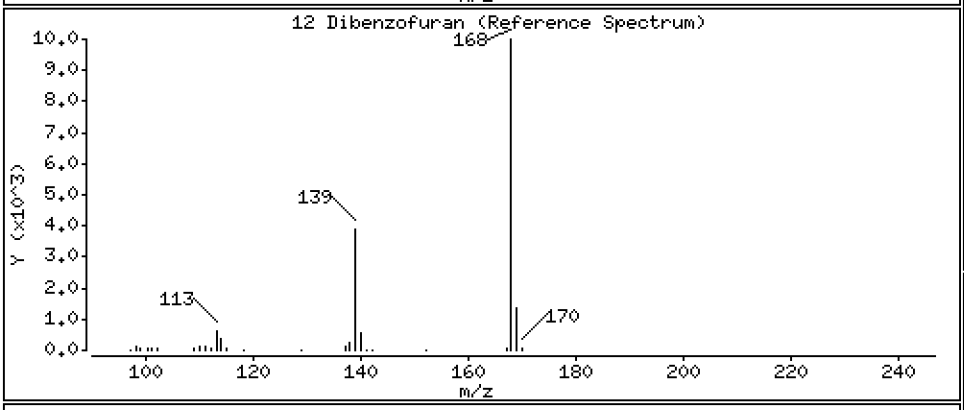
Column diameter: 0.25

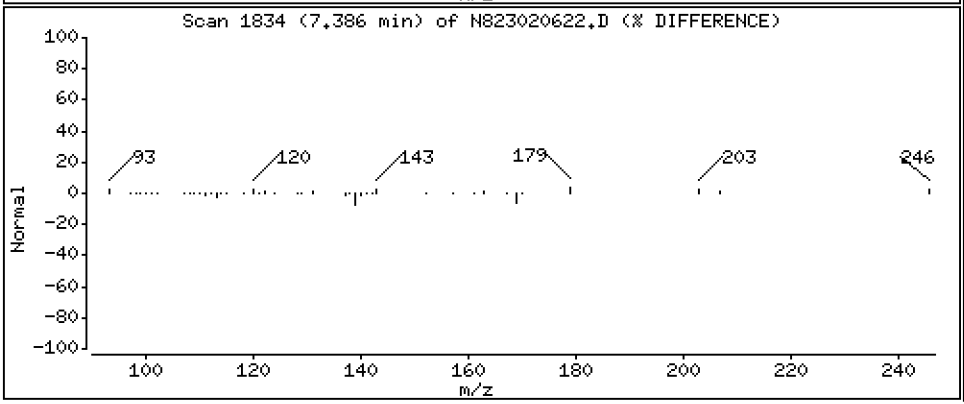
12 Dibenzofuran

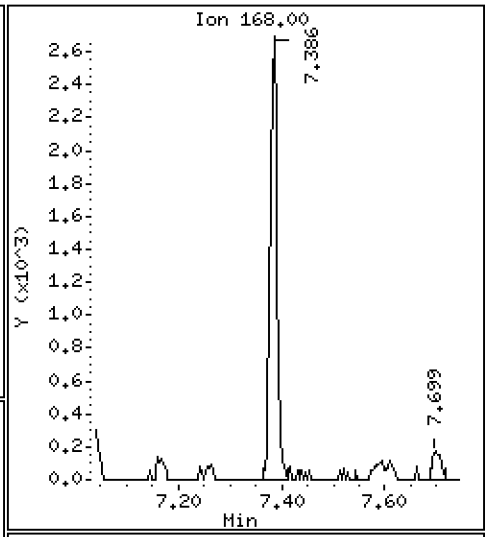
Concentration: 0.1073 ug/mL

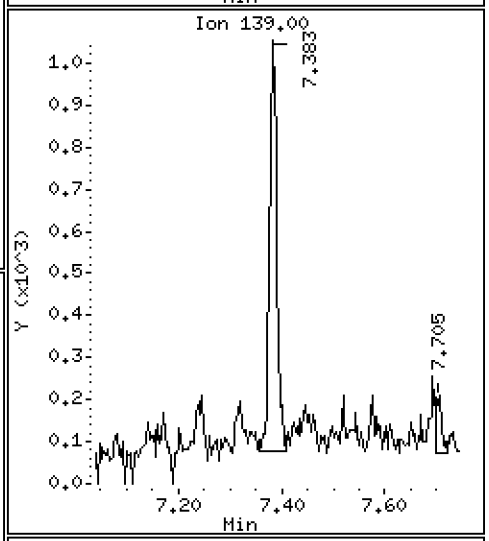


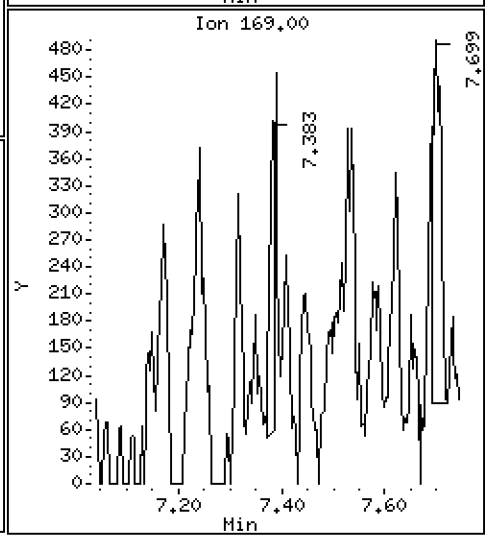












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

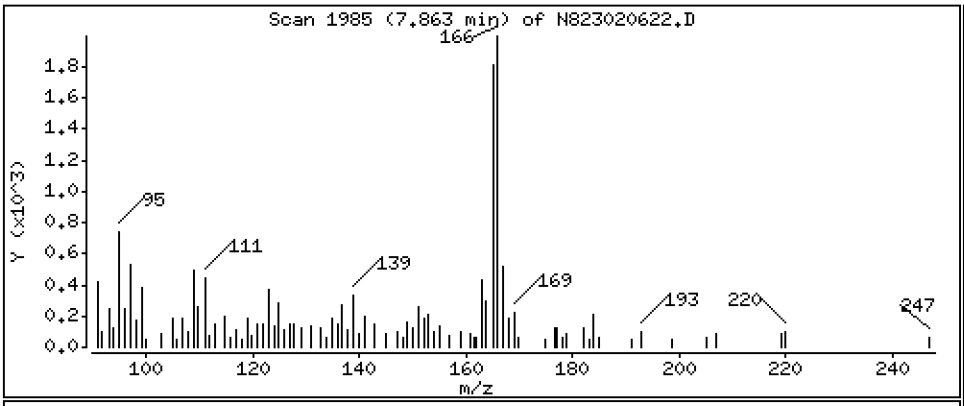
Operator: JZ

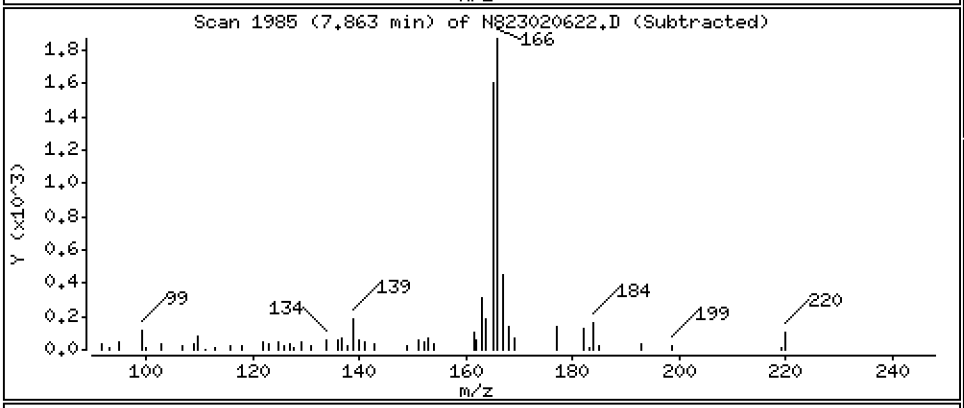
Column phase: Rxi-17sil

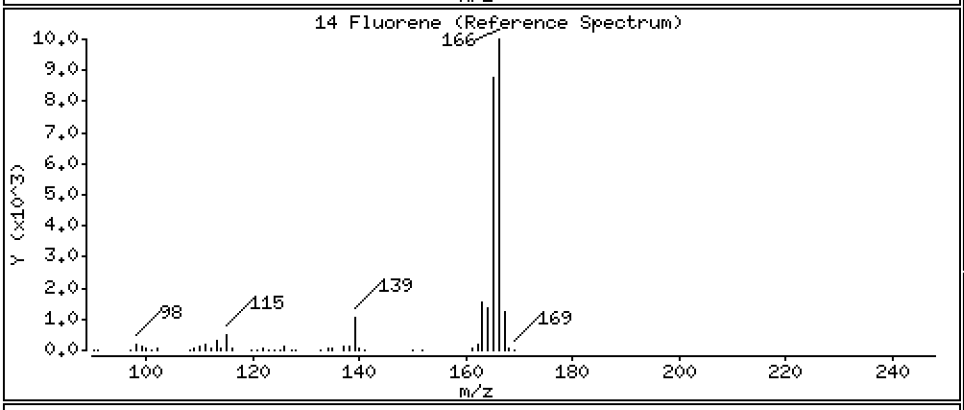
Column diameter: 0.25

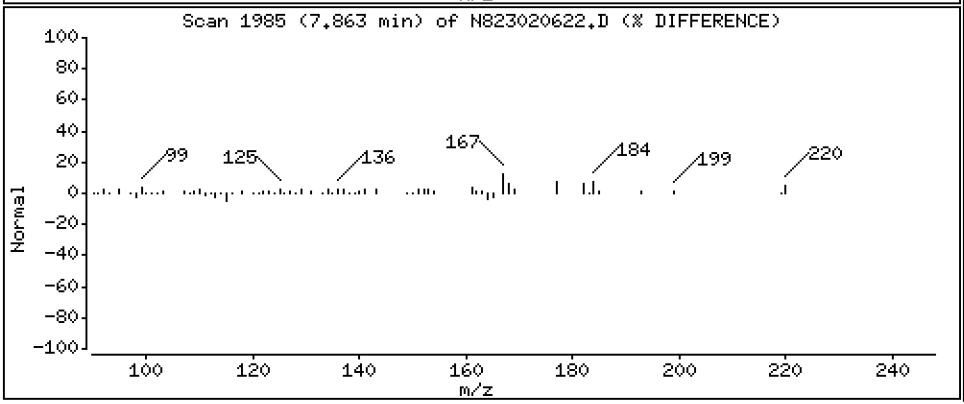
14 Fluorene

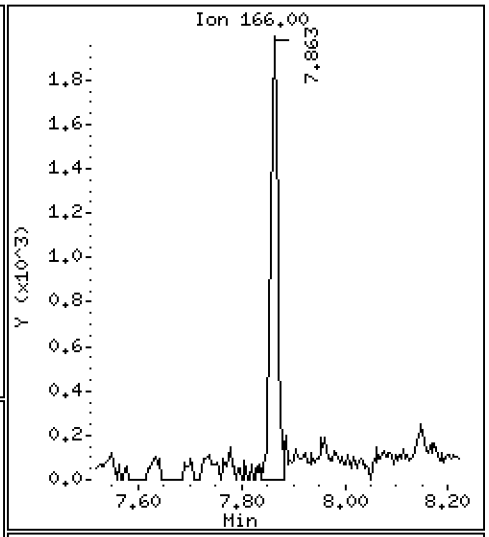
Concentration: 0.1028 ug/mL

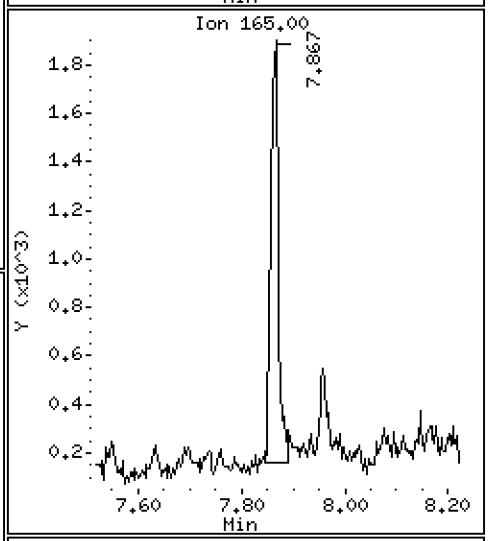


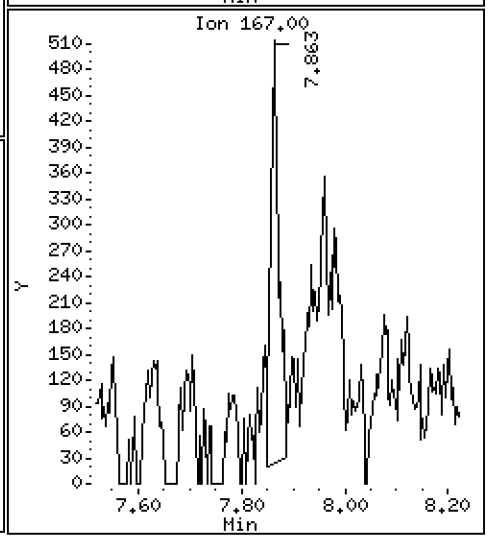












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

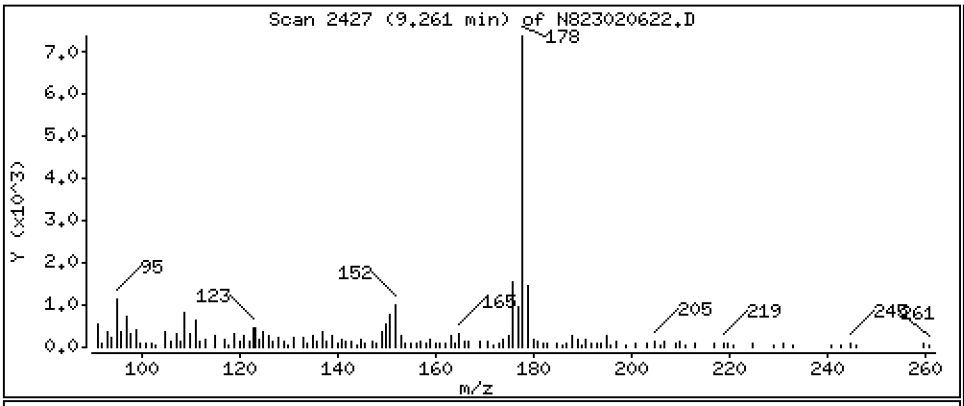
Operator: JZ

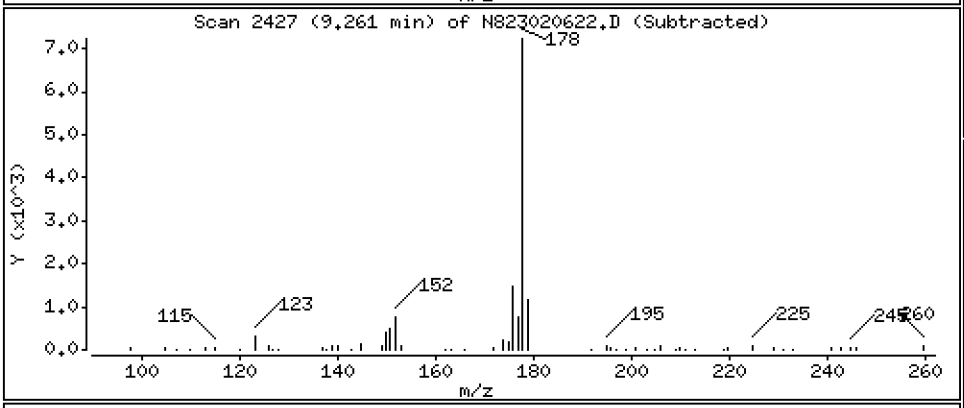
Column phase: Rxi-17sil

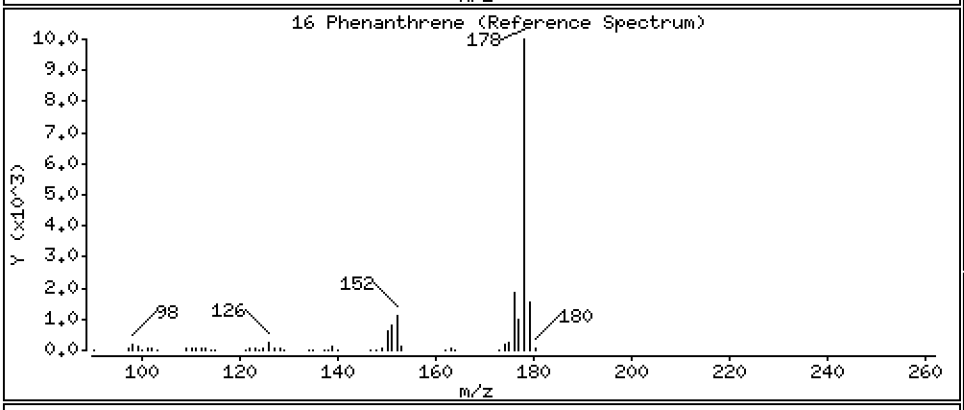
Column diameter: 0.25

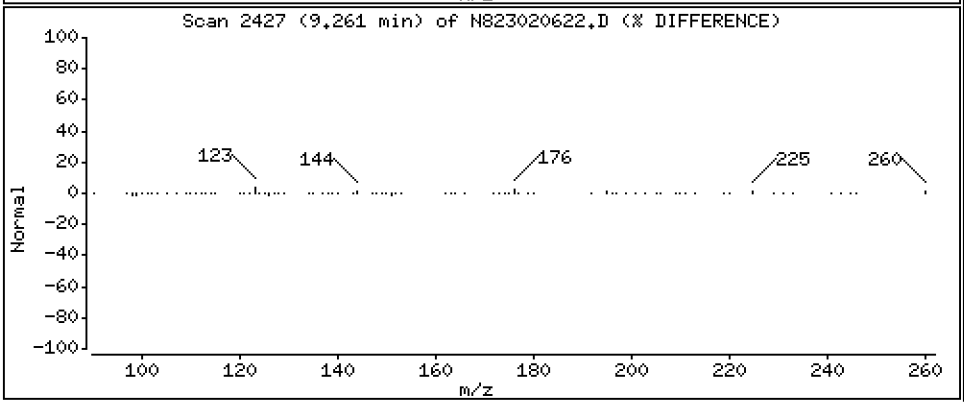
16 Phenanthrene

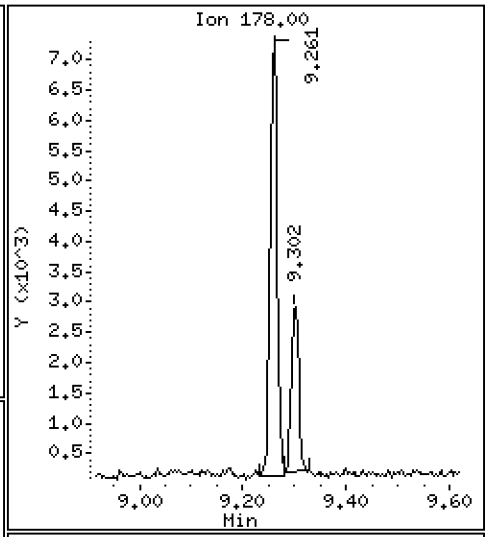
Concentration: 0.2997 ug/mL

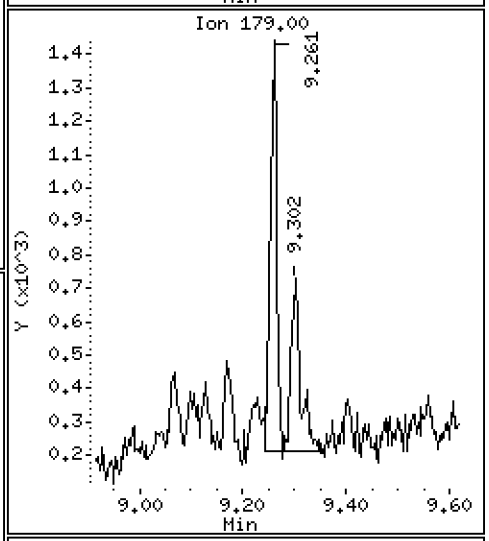


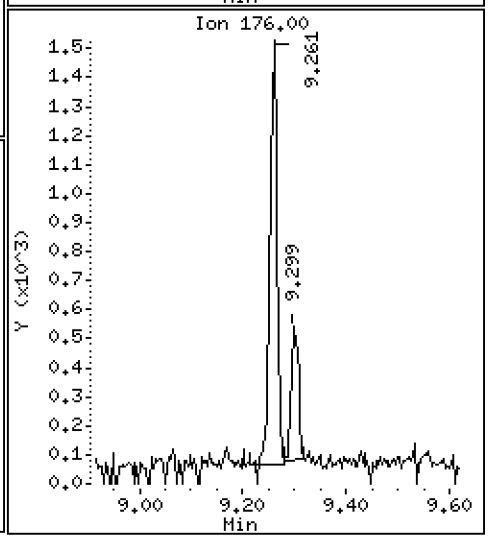












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

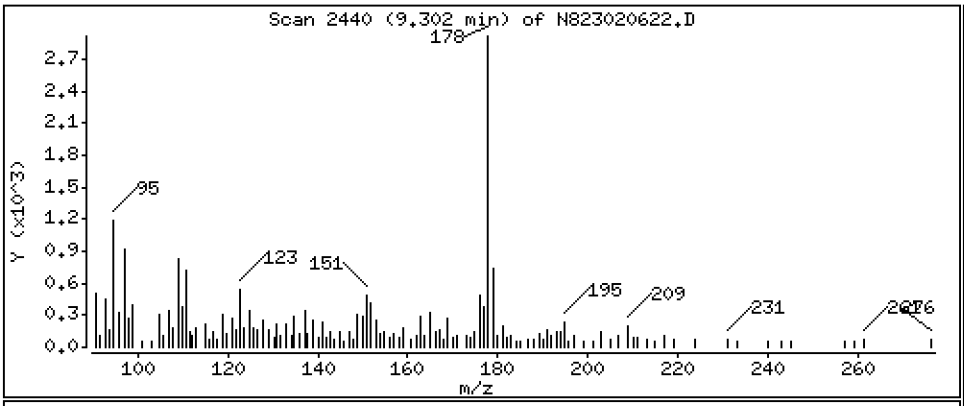
Operator: JZ

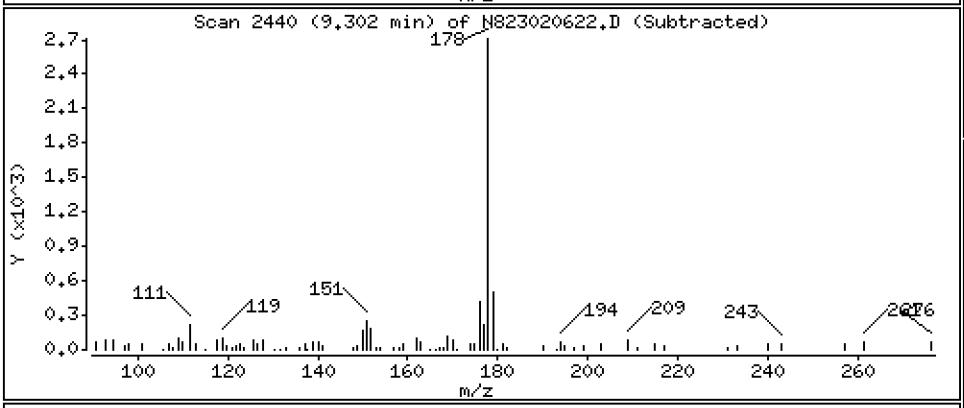
Column phase: Rxi-17sil

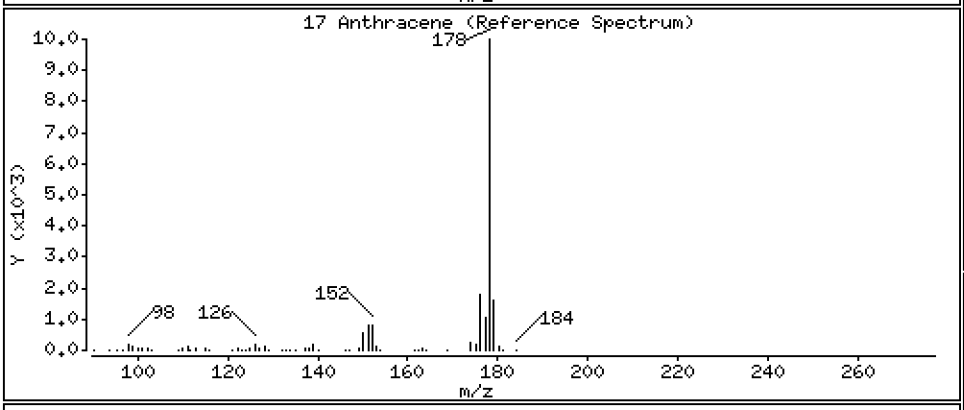
Column diameter: 0.25

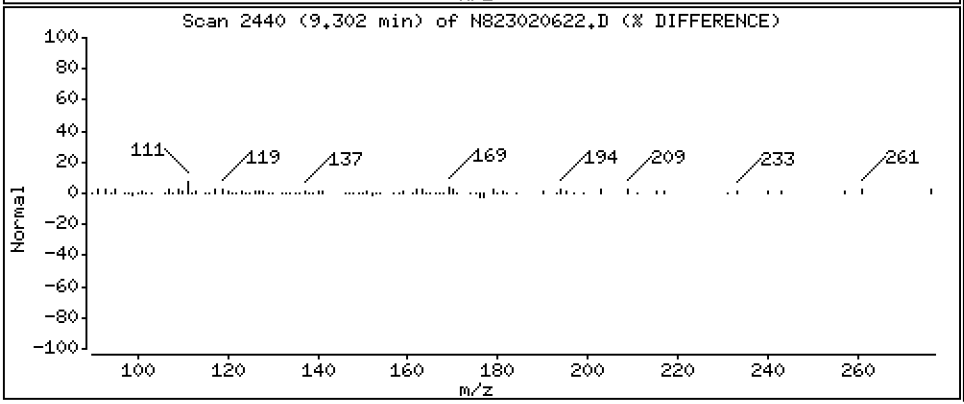
17 Anthracene

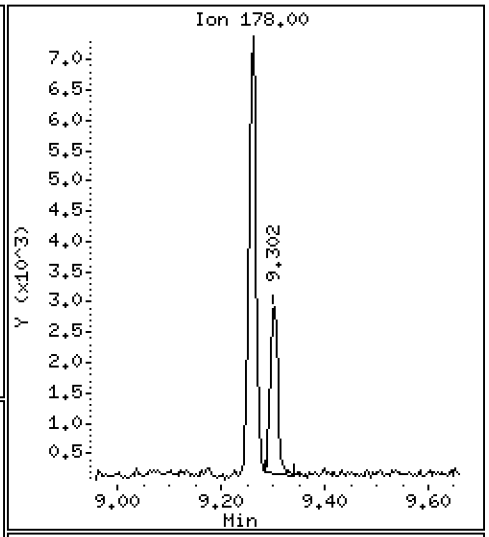
Concentration: 0.1304 ug/mL

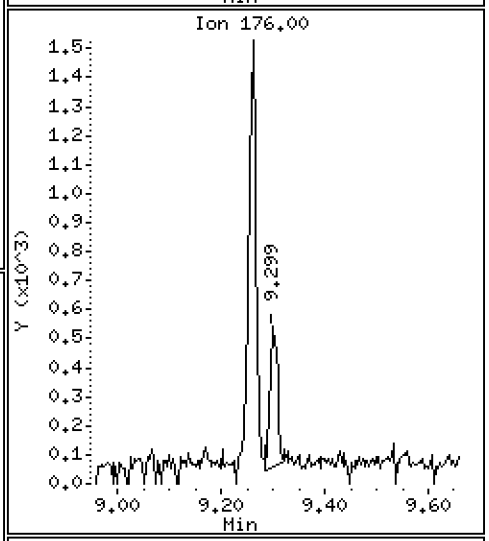


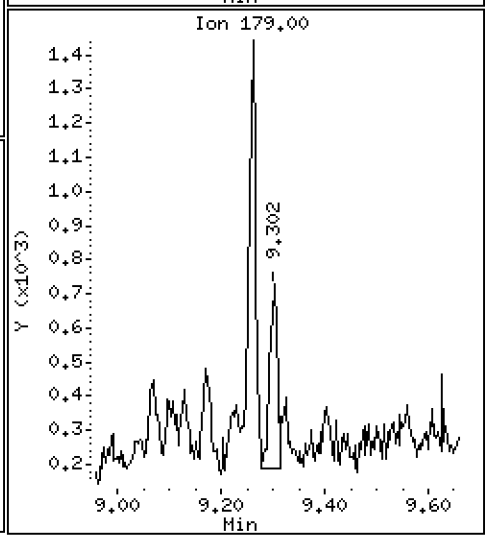












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

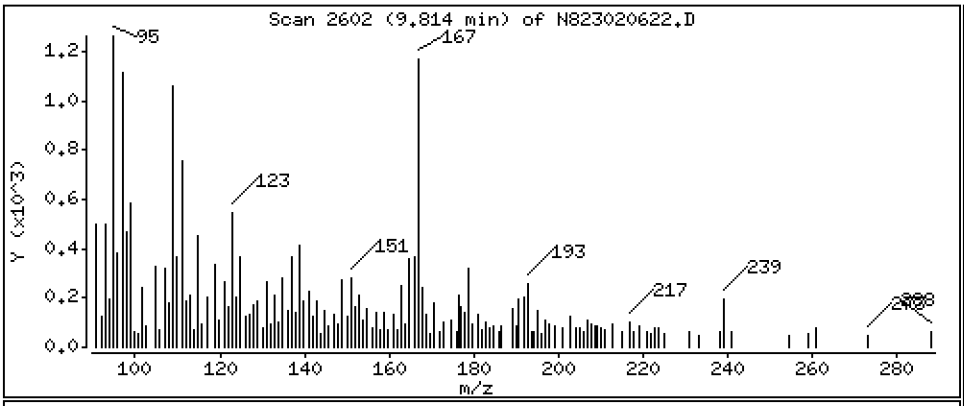
Operator: JZ

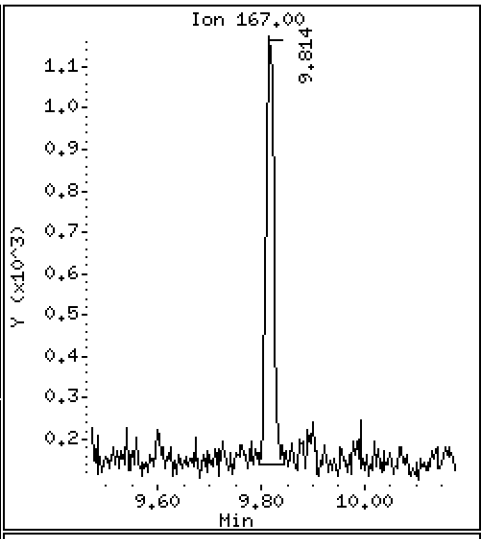
Column phase: Rxi-17sil

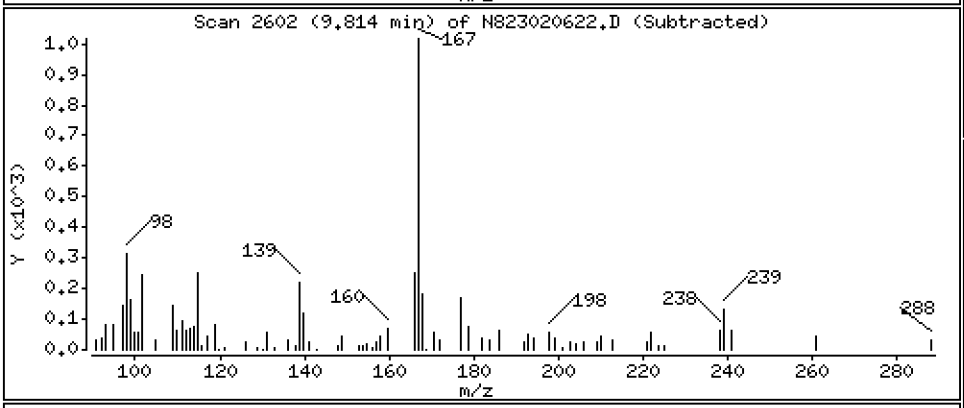
Column diameter: 0.25

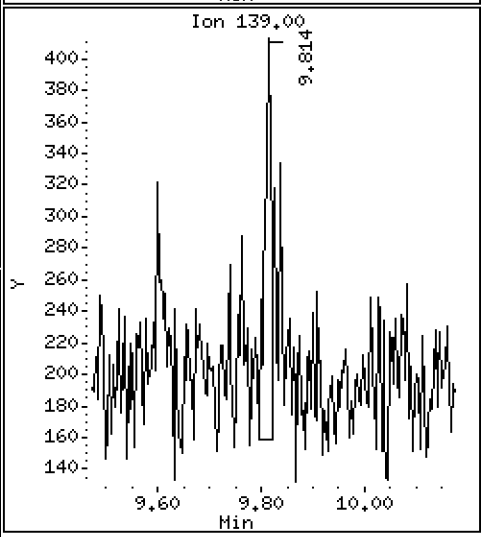
19 Carbazole

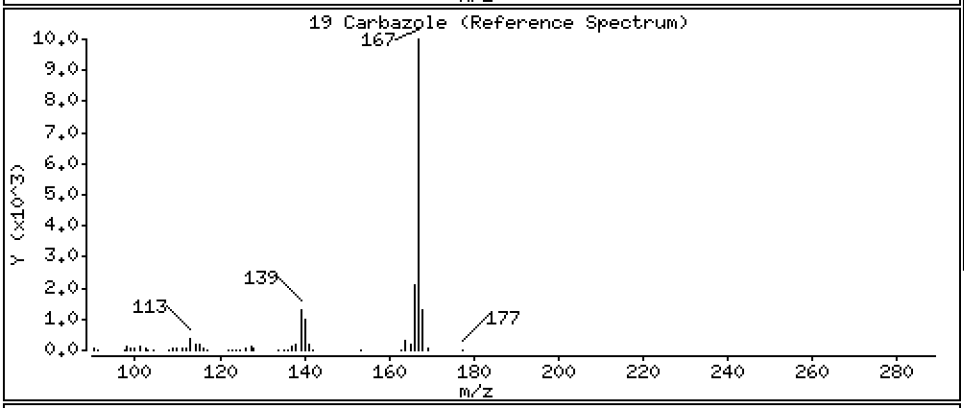
Concentration: 0.05551 ug/mL

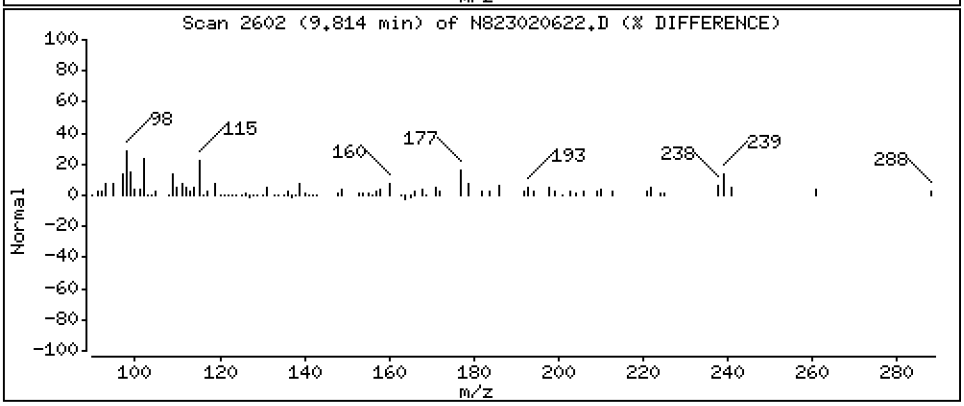












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

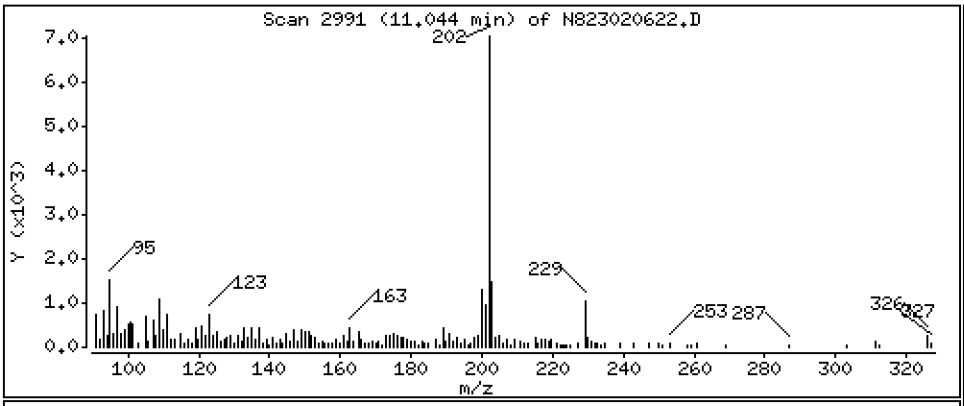
Operator: JZ

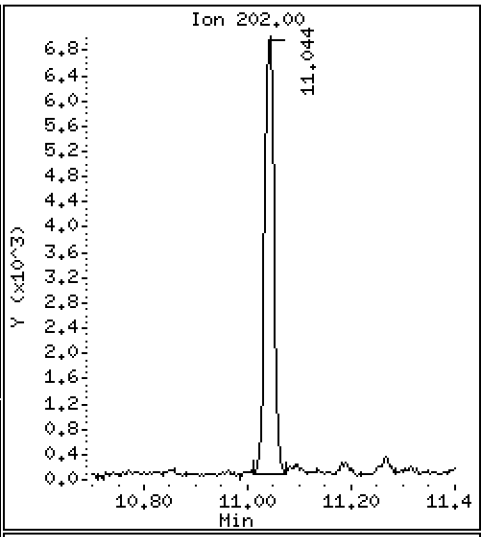
Column phase: Rxi-17sil

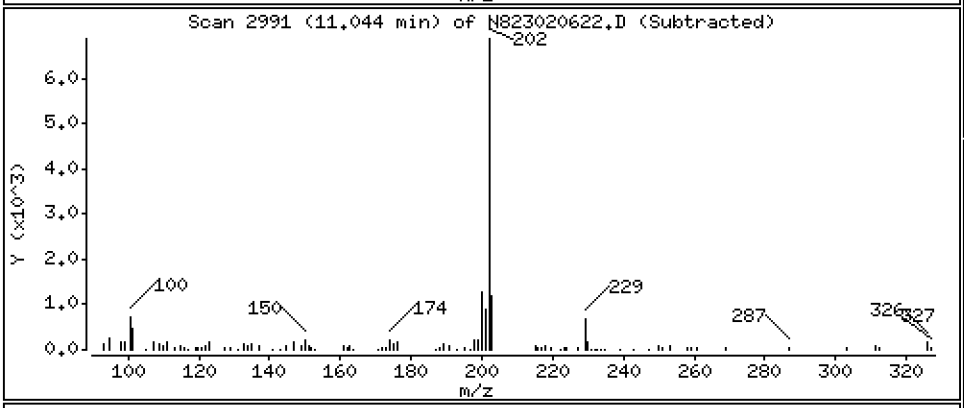
Column diameter: 0.25

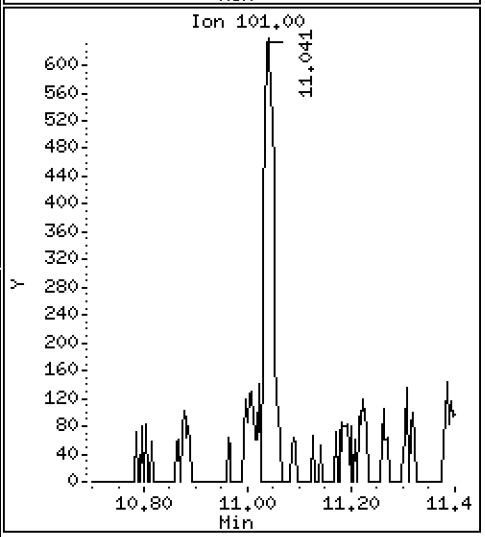
22 Fluoranthene

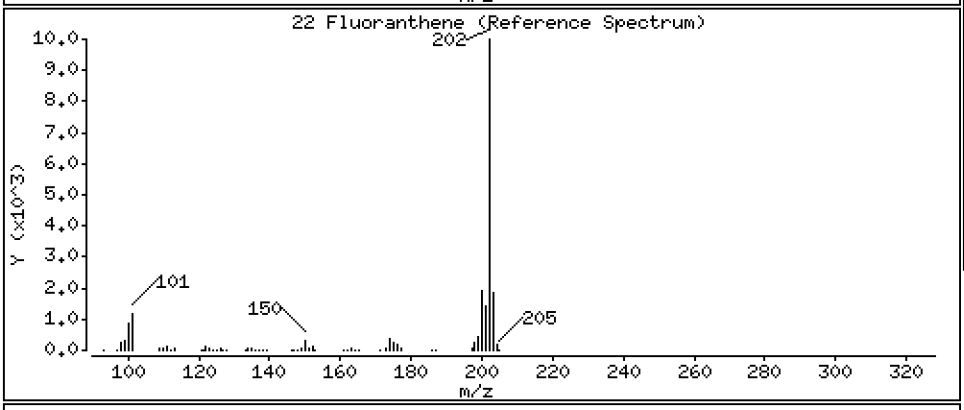
Concentration: 0.3388 ug/mL

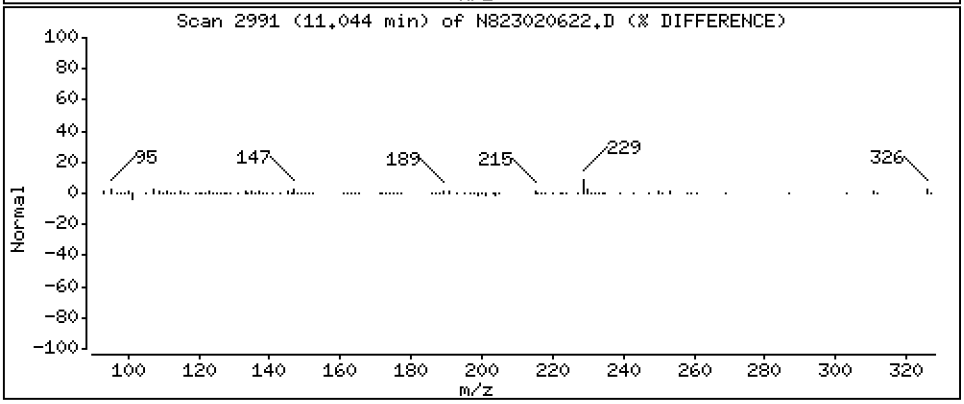












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

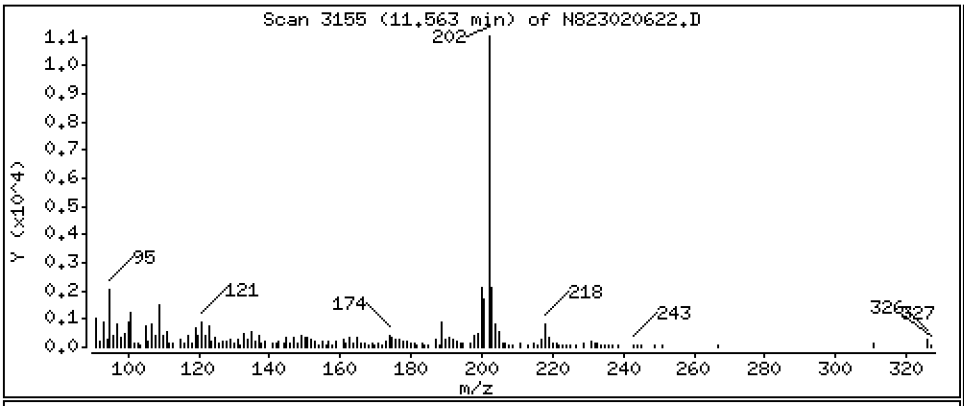
Operator: JZ

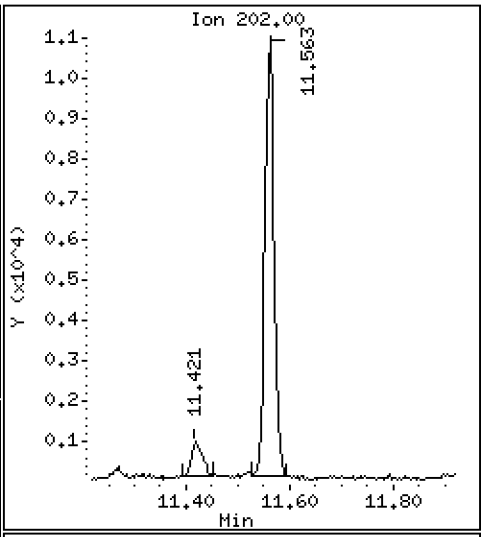
Column phase: Rxi-17sil

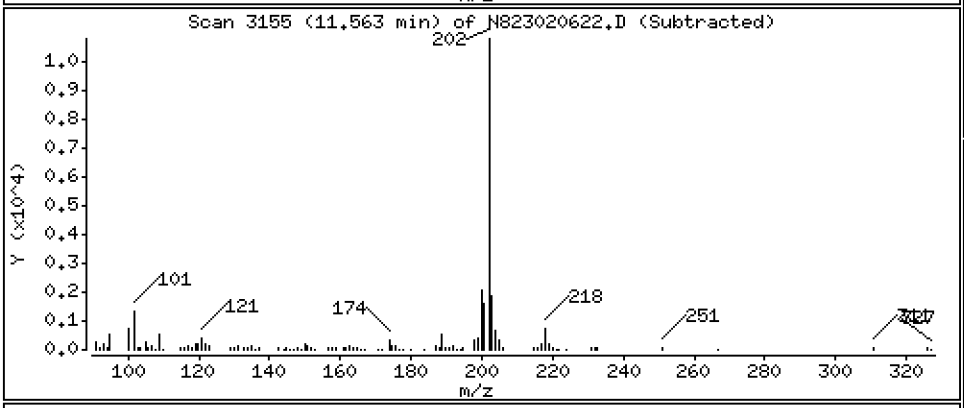
Column diameter: 0.25

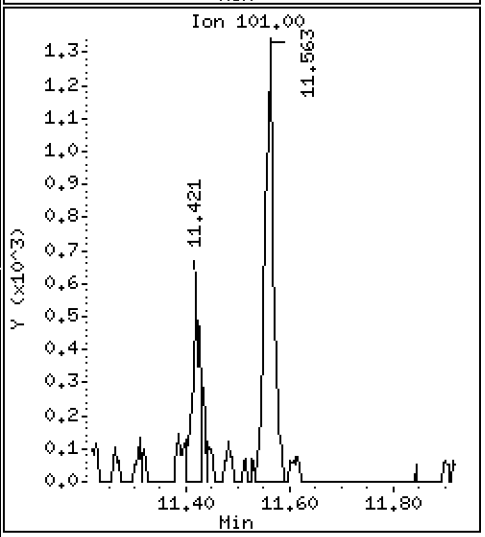
23 Pyrene

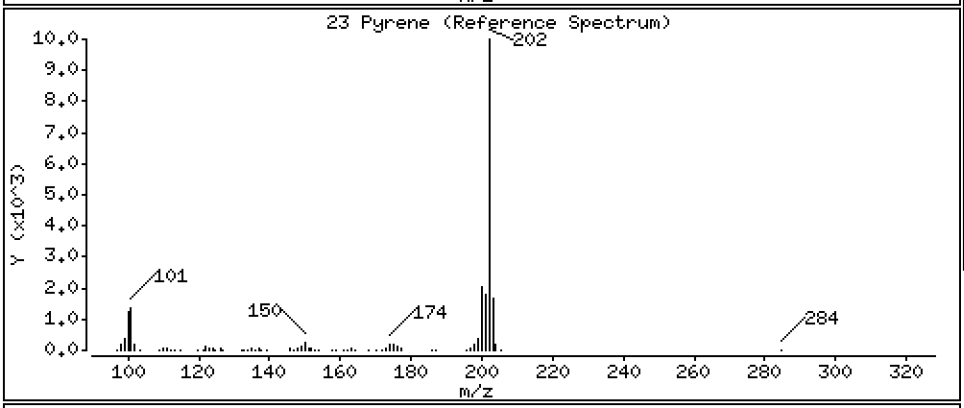
Concentration: 0.8302 ug/mL

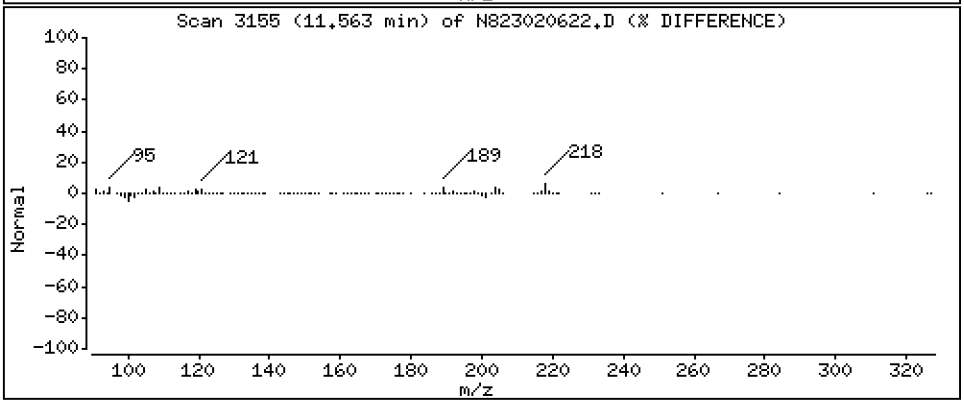












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

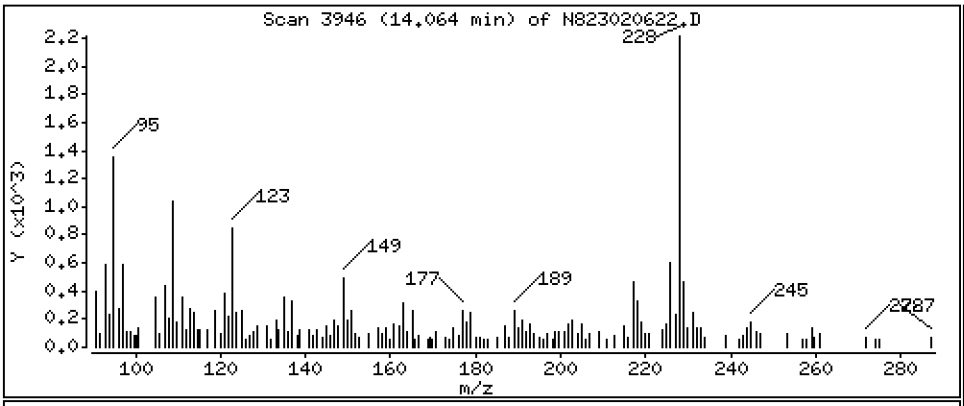
Operator: JZ

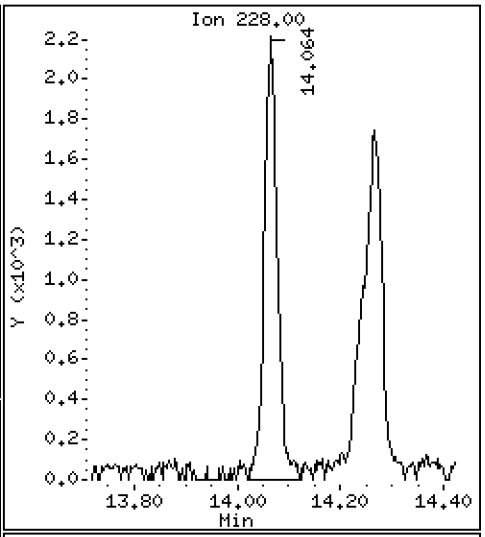
Column phase: Rxi-17sil

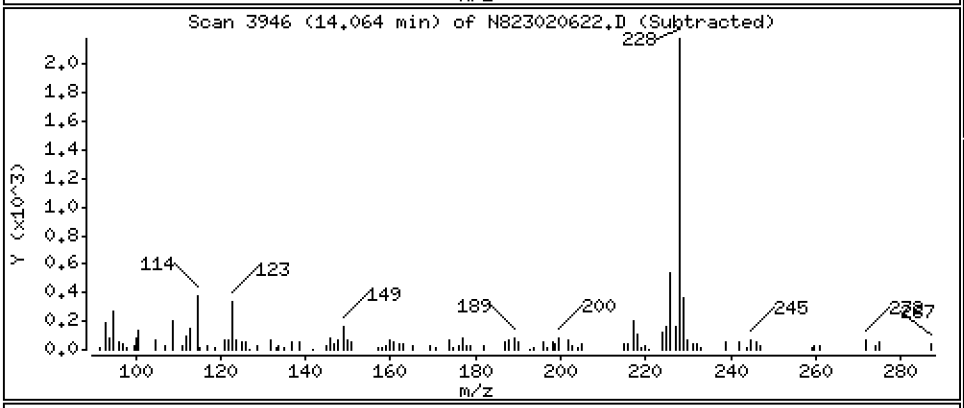
Column diameter: 0.25

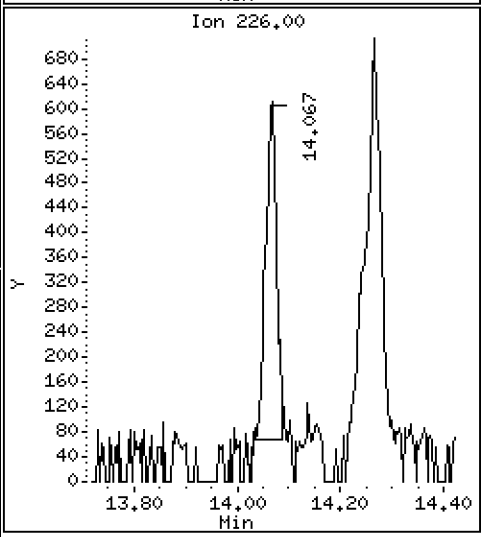
24 Benzo(a)anthracene

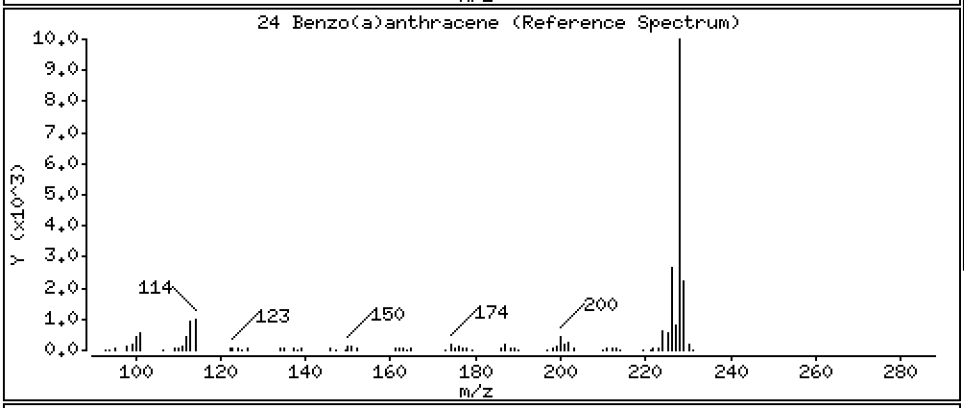
Concentration: 0.2654 ug/mL

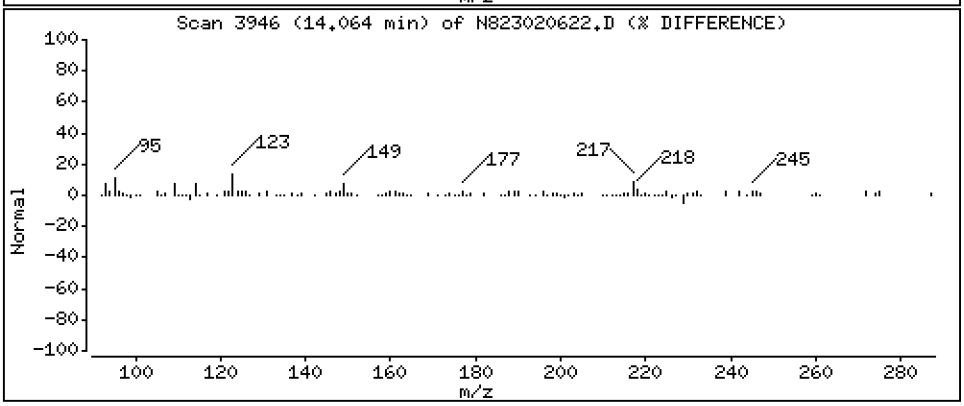












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

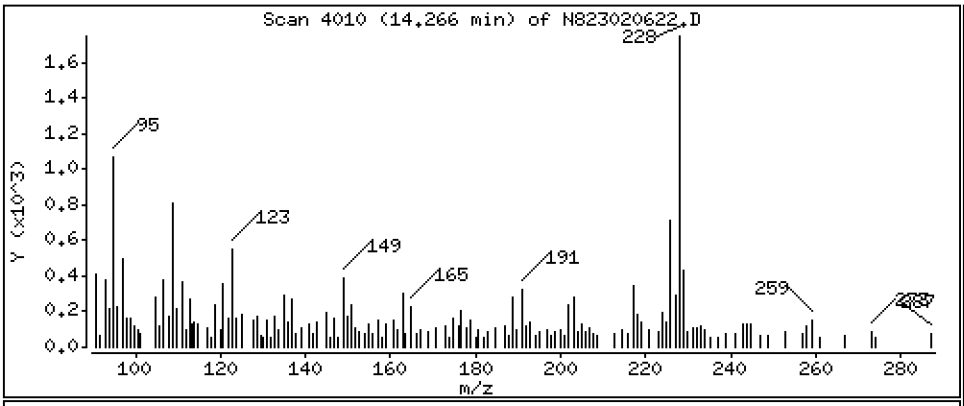
Operator: JZ

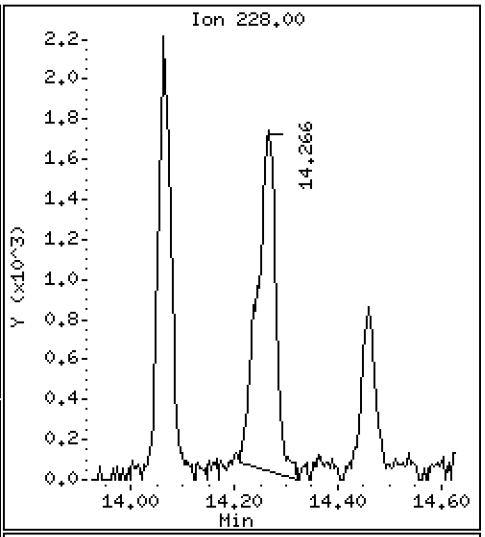
Column phase: Rxi-17sil

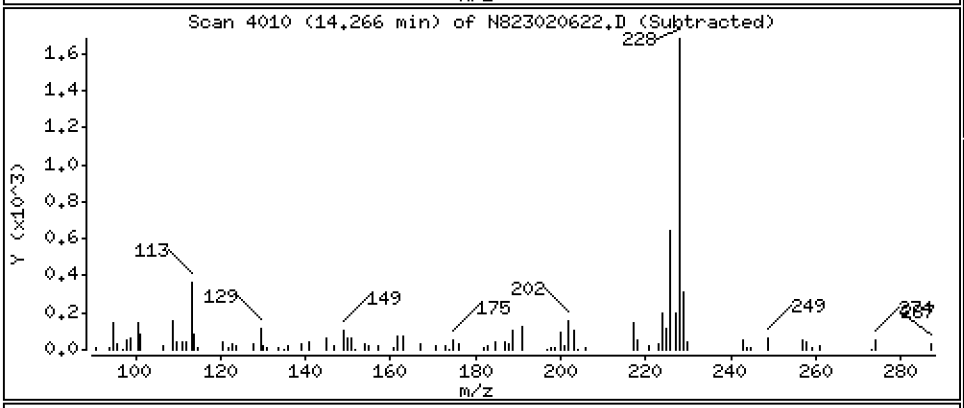
Column diameter: 0.25

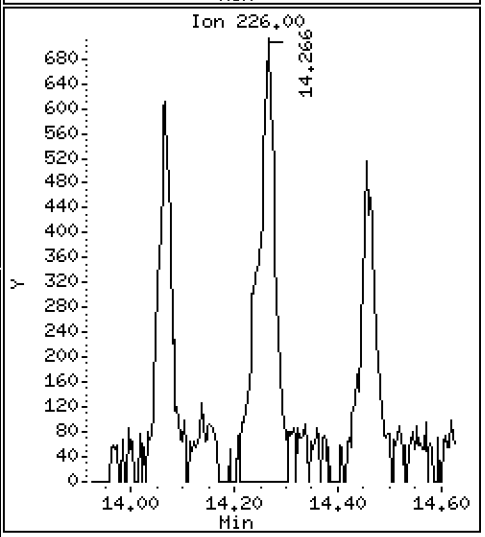
27 Chrysene

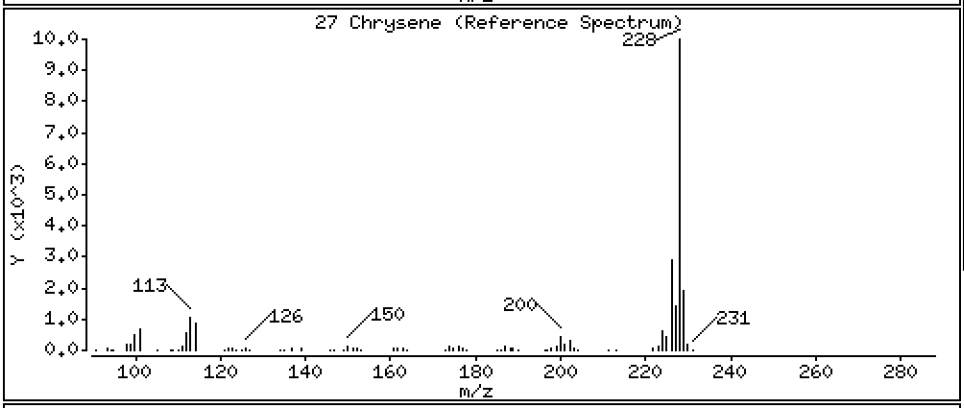
Concentration: 0.2717 ug/mL

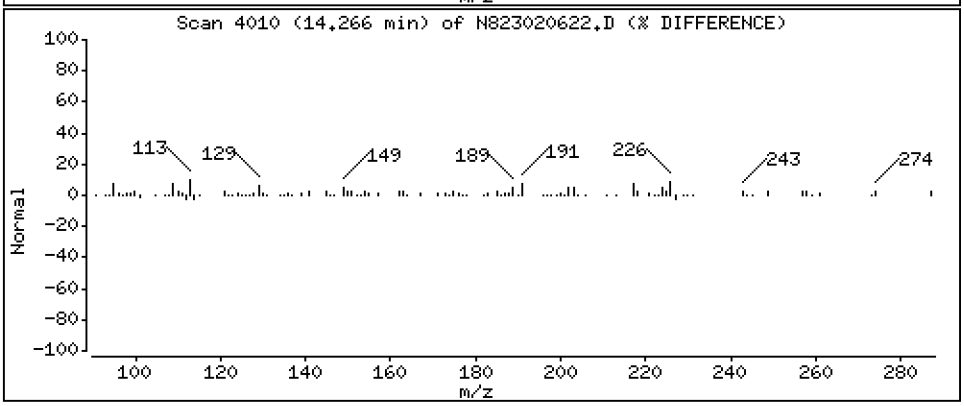












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

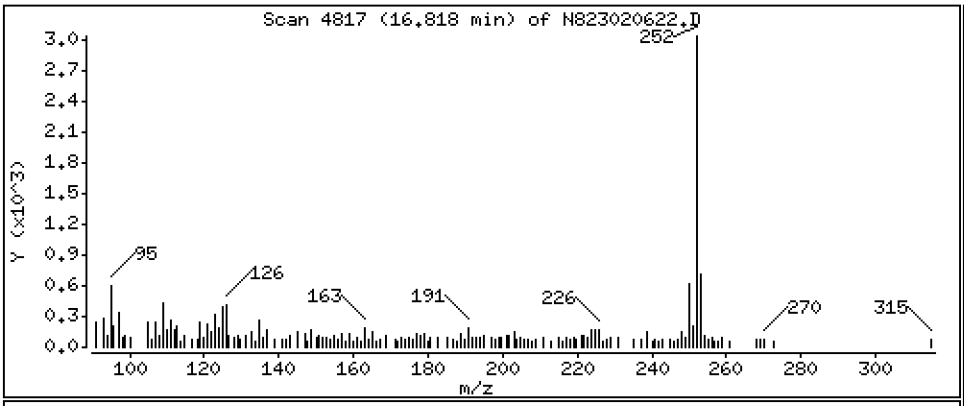
Operator: JZ

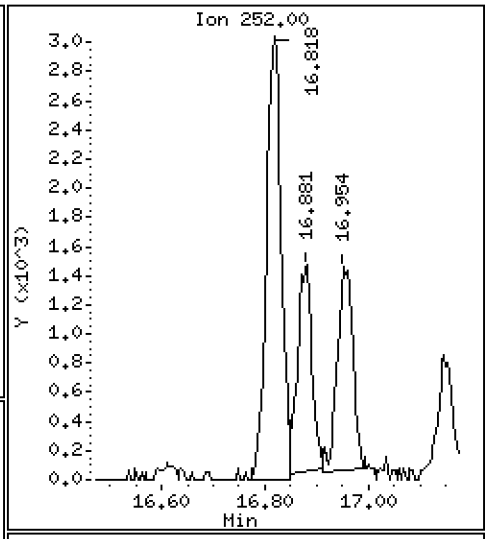
Column phase: Rxi-17sil

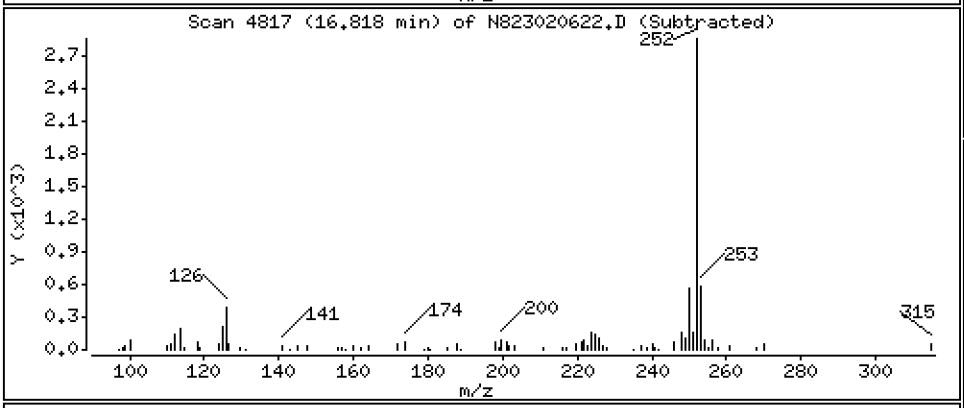
Column diameter: 0.25

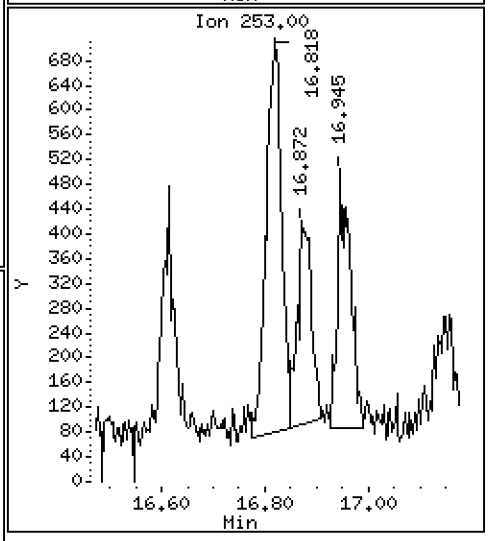
28 Benzo(b)fluoranthene

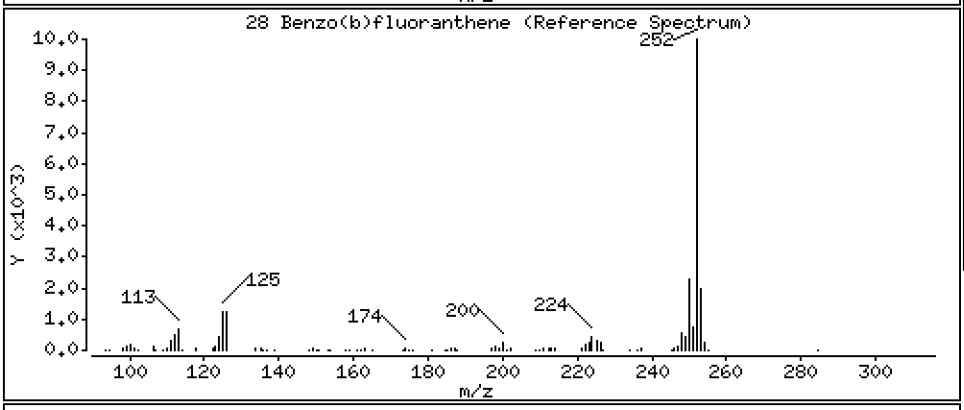
Concentration: 0.4010 ug/mL

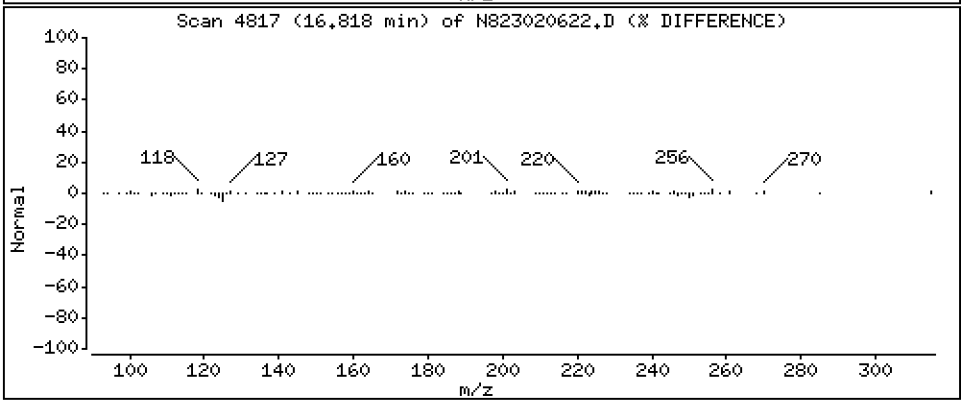












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

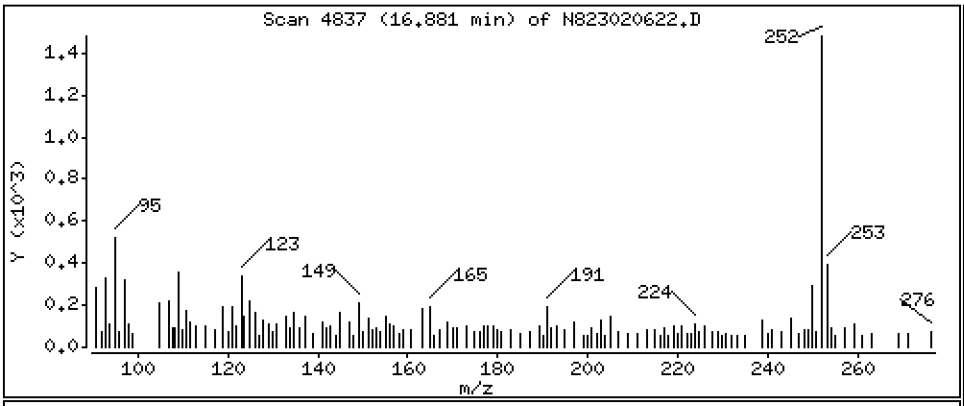
Operator: JZ

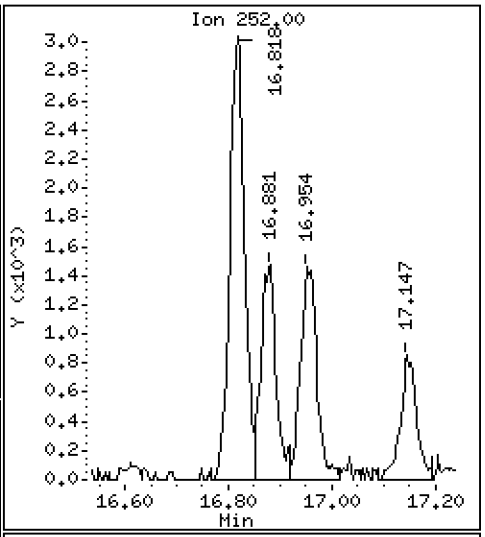
Column phase: Rxi-17sil

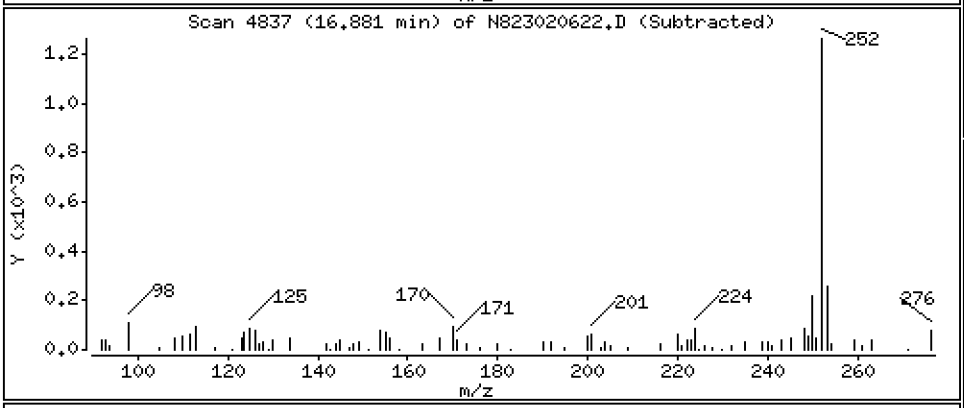
Column diameter: 0.25

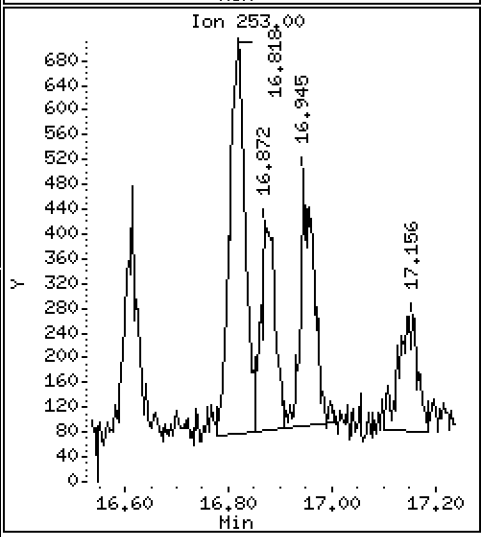
29 Benzo(k)fluoranthene

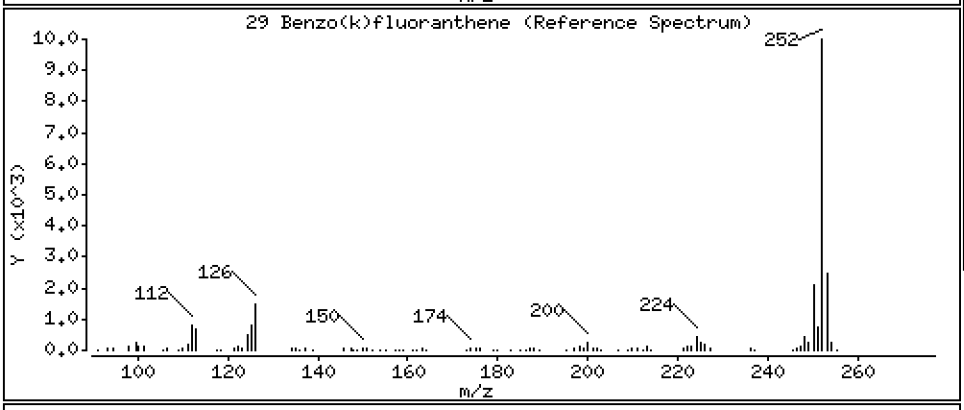
Concentration: 0.2015 ug/mL

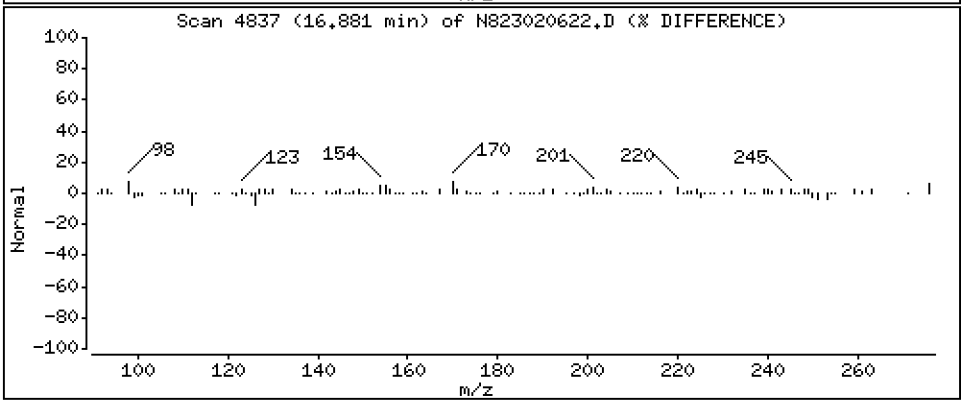












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

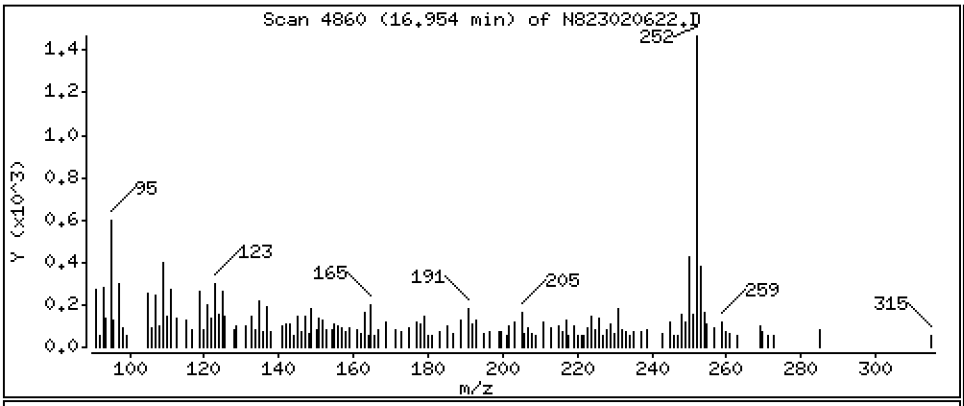
Operator: JZ

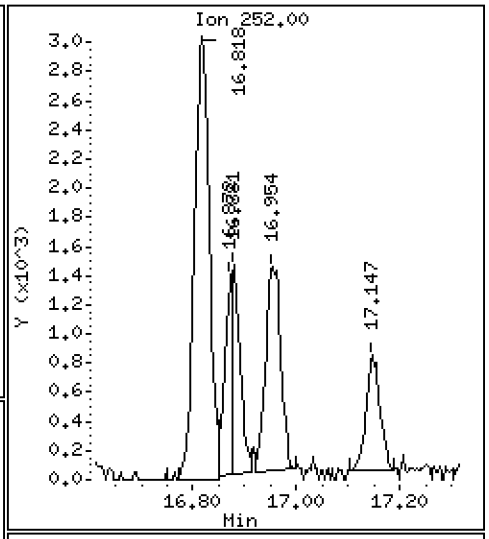
Column phase: Rxi-17sil

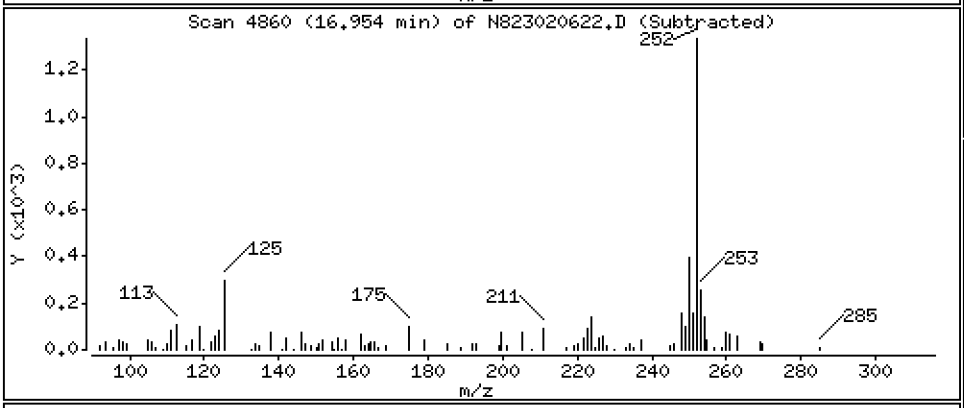
Column diameter: 0.25

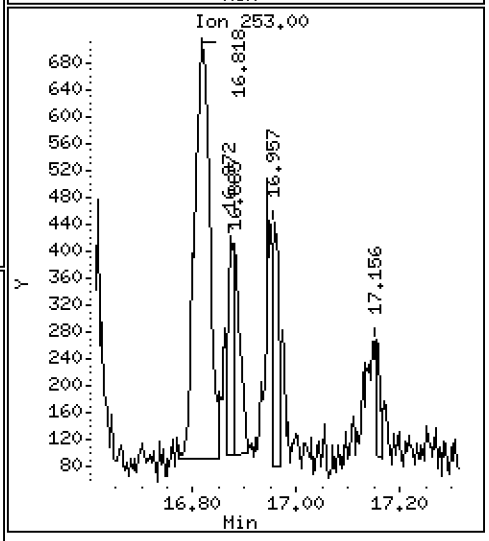
30 Benzo(j)fluoranthene

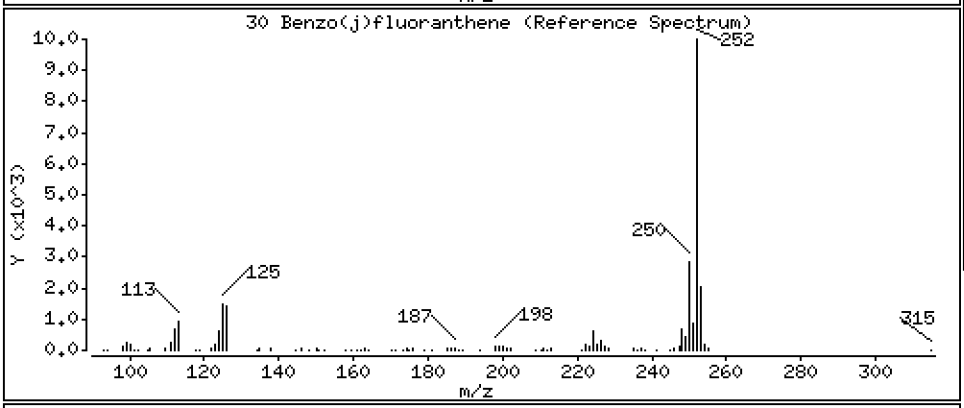
Concentration: 0.2127 ug/mL

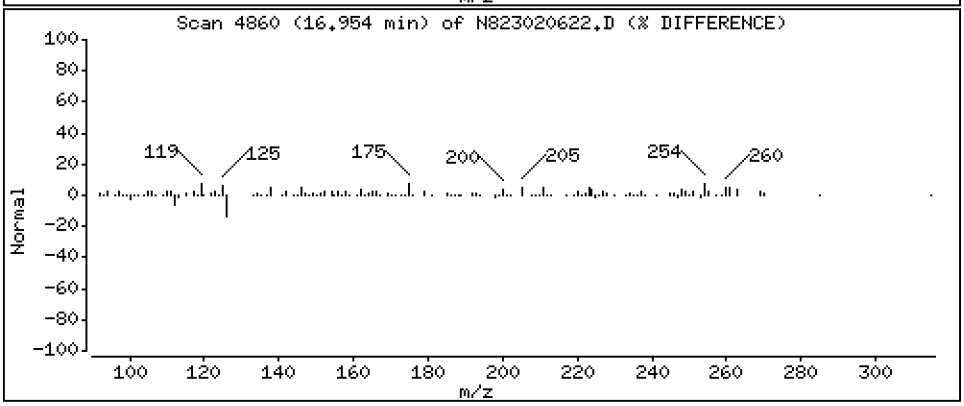












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020622.D

Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

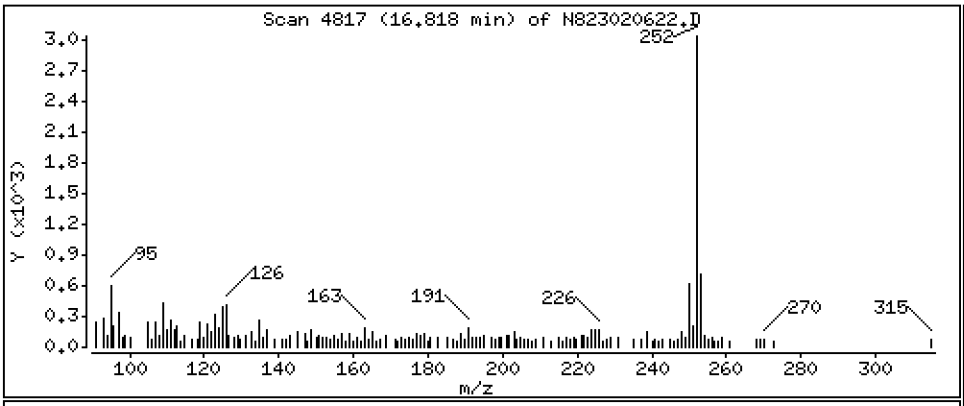
Operator: JZ

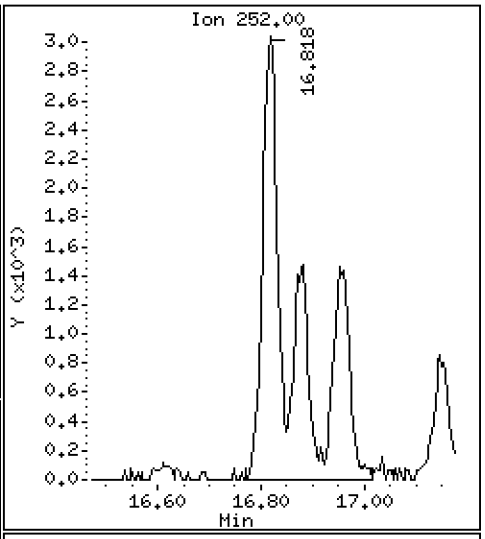
Column phase: Rxi-17sil

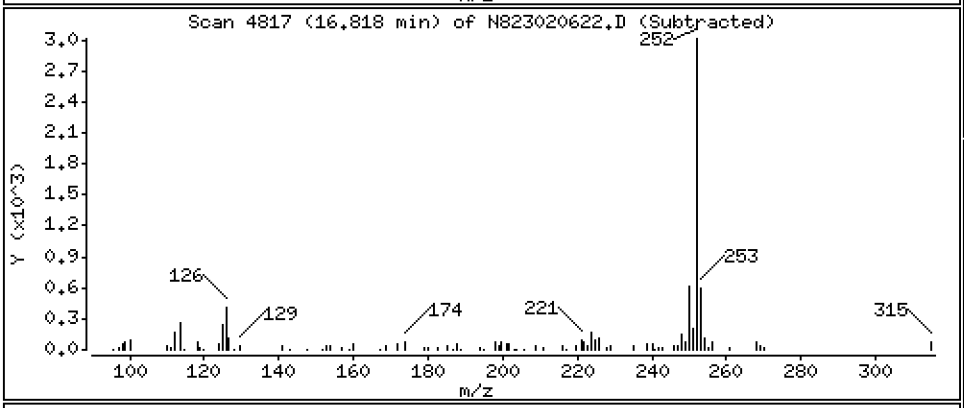
Column diameter: 0.25

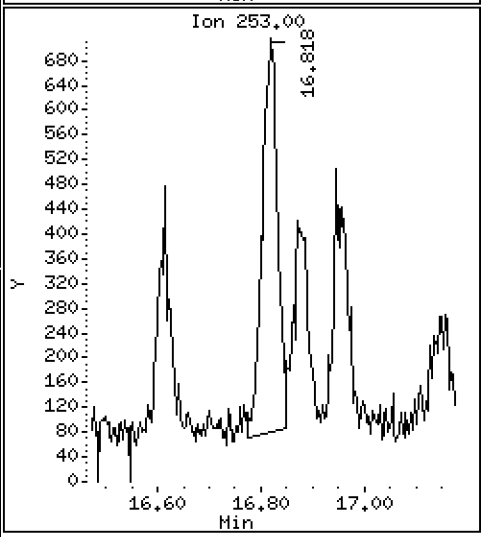
31 Total Benzofluoranthenes

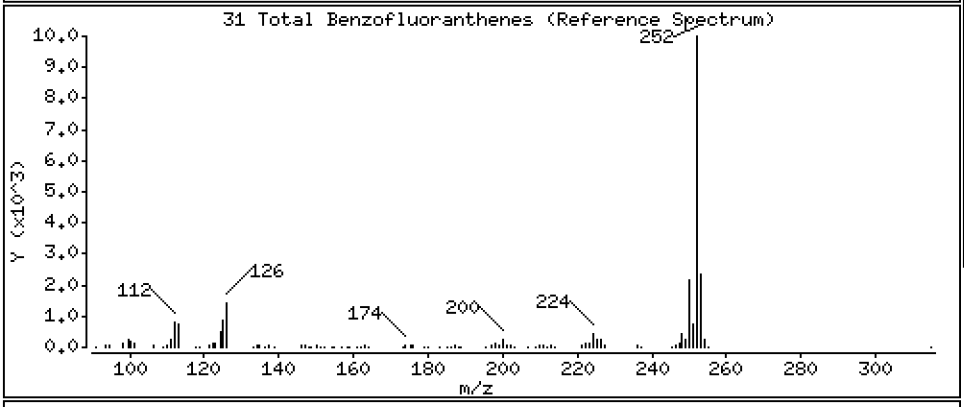
Concentration: 0.8550 ug/mL

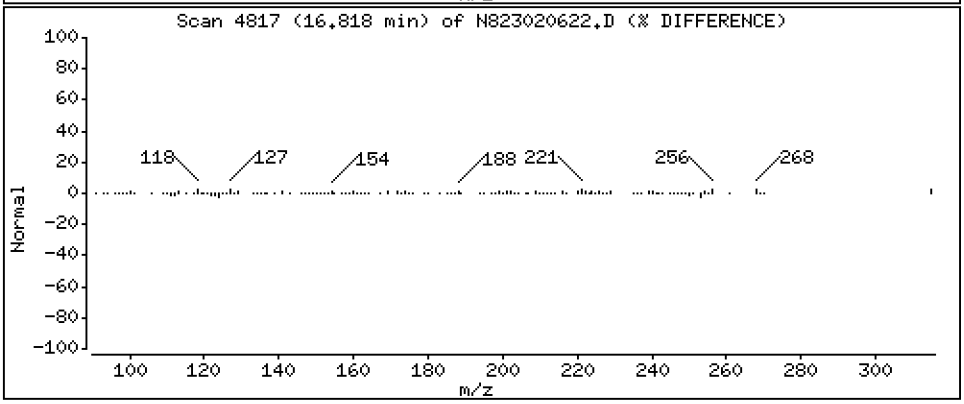












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020622.D

Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

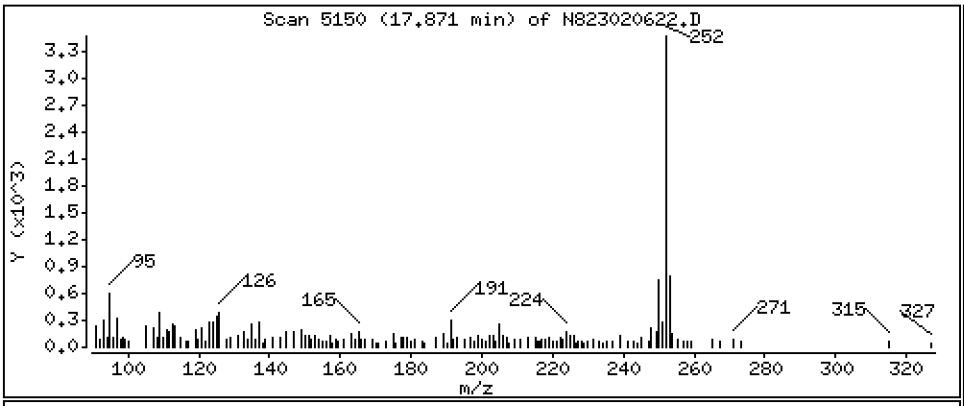
Operator: JZ

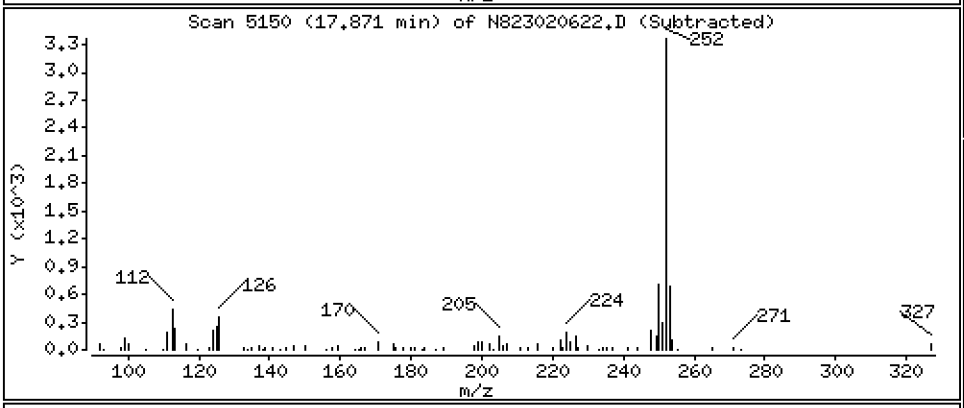
Column phase: Rxi-17sil

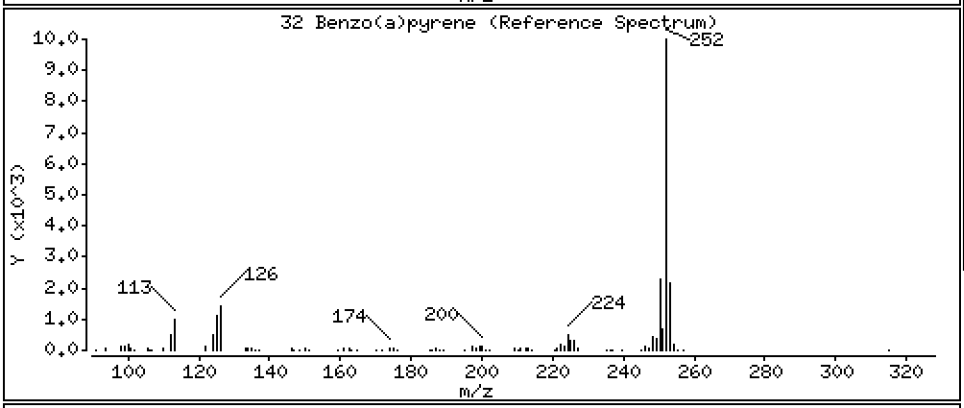
Column diameter: 0.25

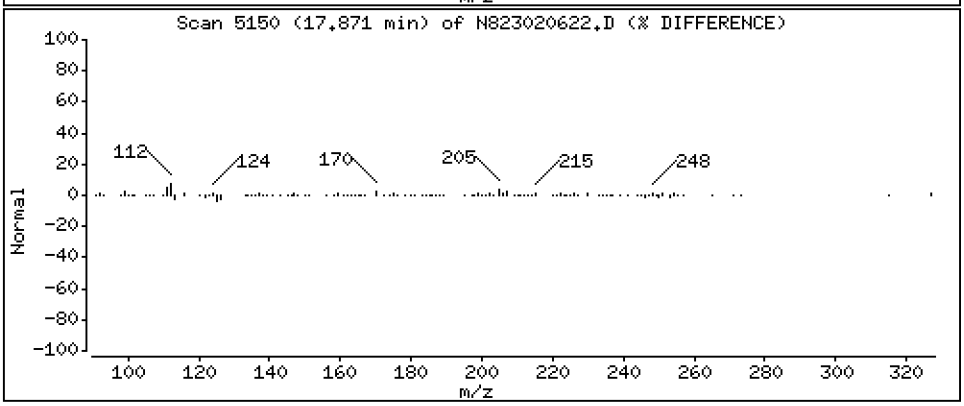
32 Benzo(a)pyrene

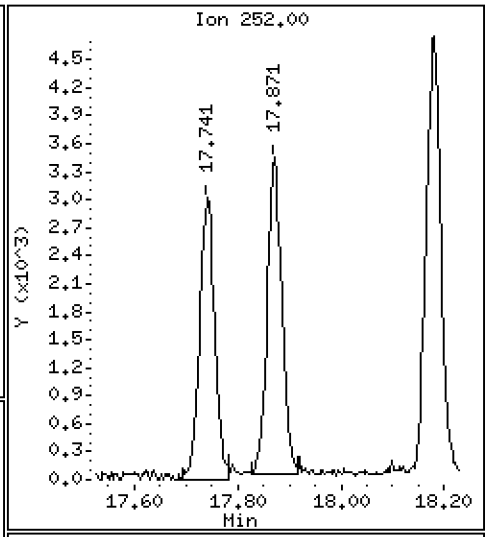
Concentration: 0.4965 ug/mL

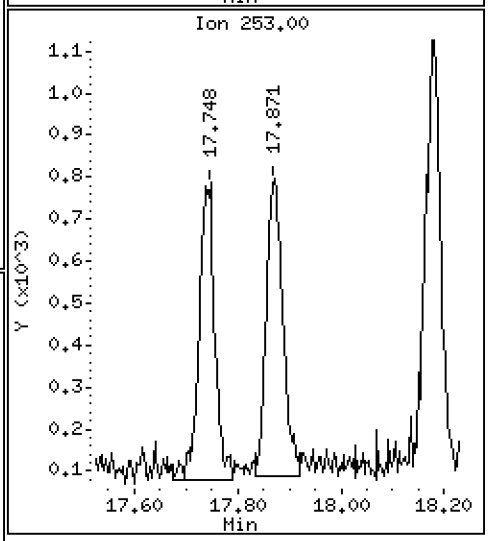












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020622.D

Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

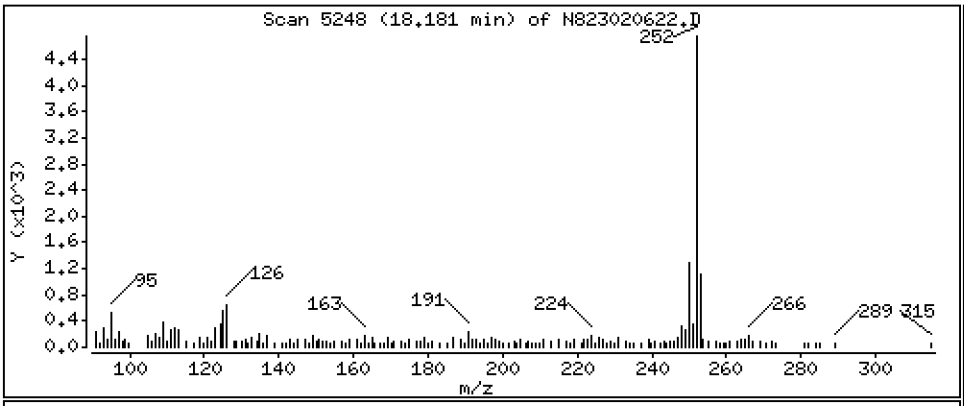
Operator: JZ

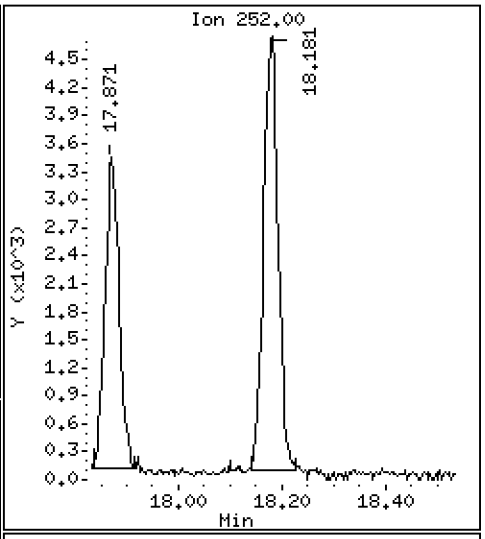
Column phase: Rxi-17sil

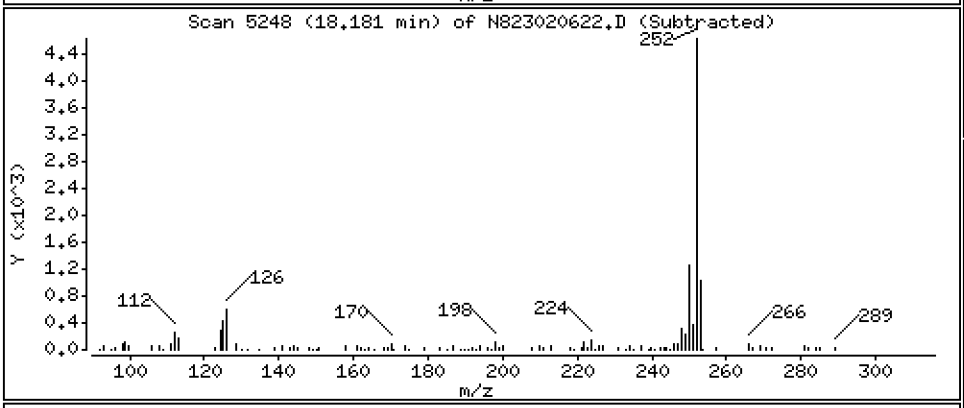
Column diameter: 0.25

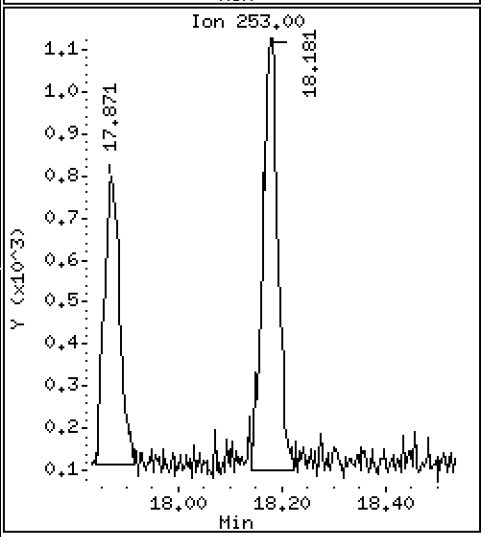
35 Perylene

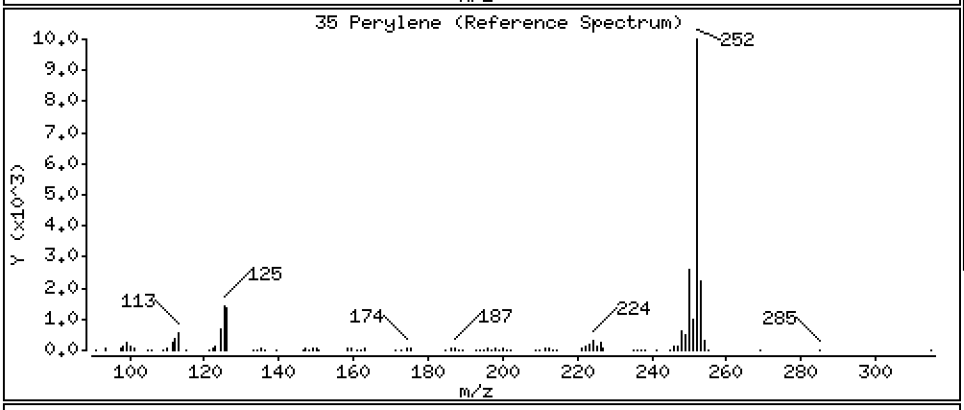
Concentration: 0.6367 ug/mL

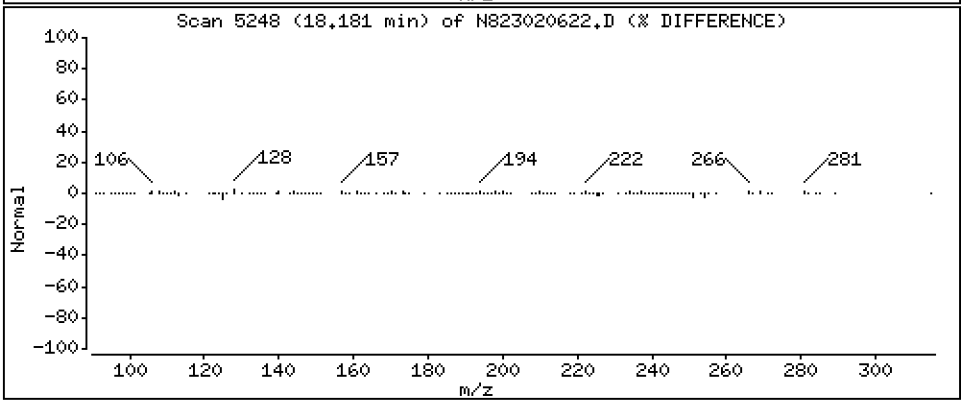












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020622.D

Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

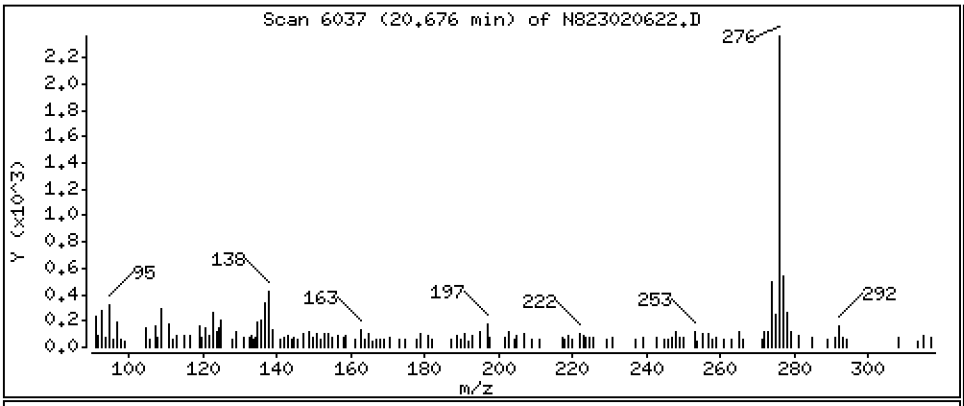
Operator: JZ

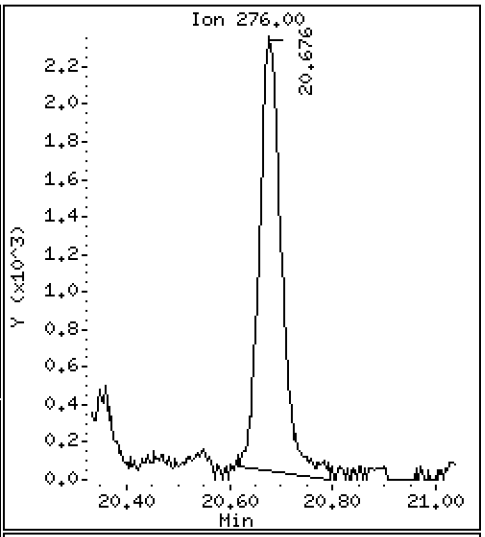
Column phase: Rxi-17sil

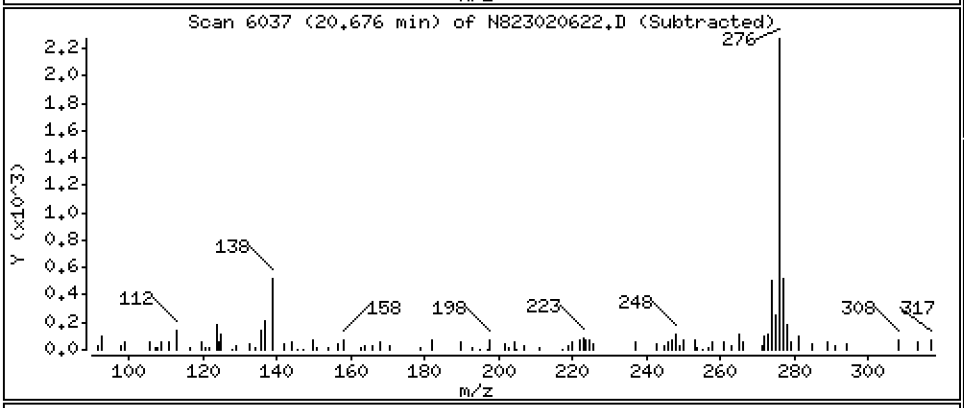
Column diameter: 0.25

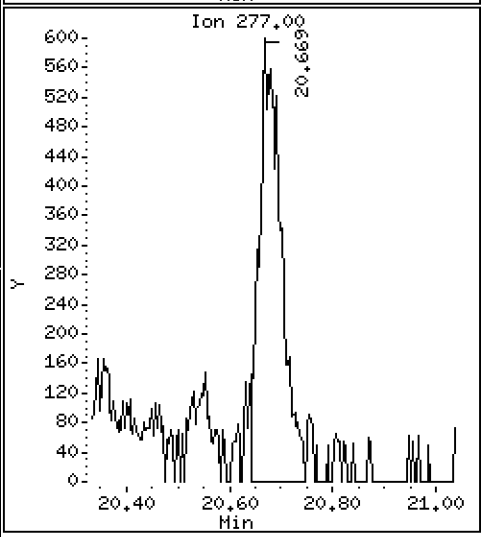
37 Indeno(1,2,3-cd)pyrene

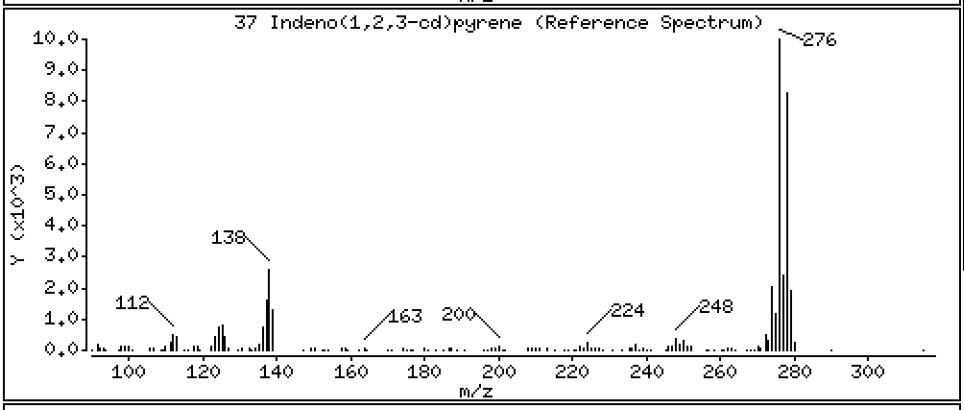
Concentration: 0.4543 ug/mL

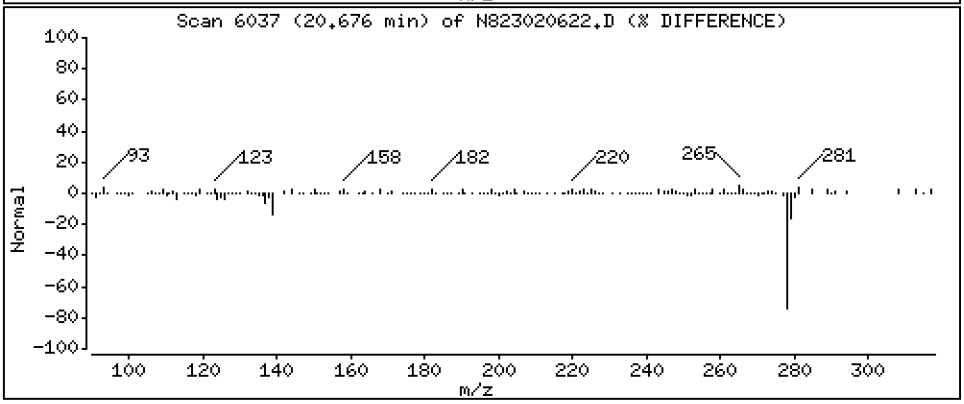












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

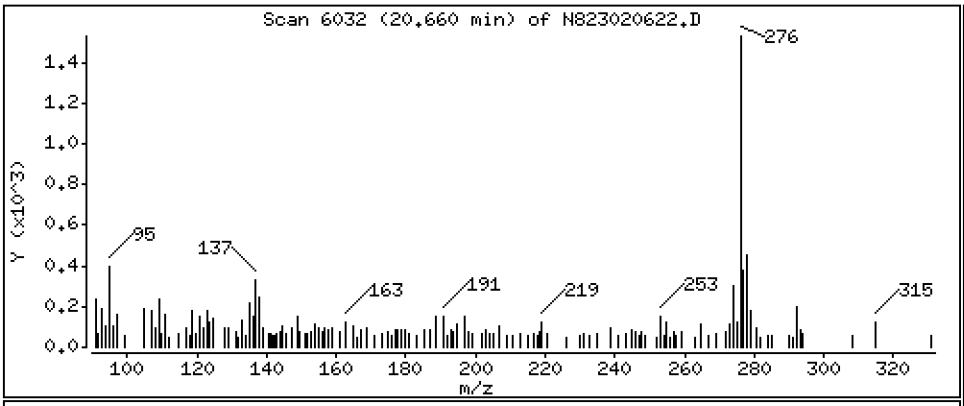
Operator: JZ

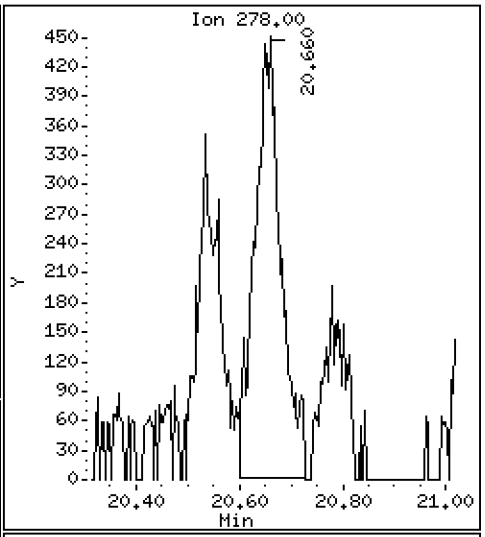
Column phase: Rxi-17sil

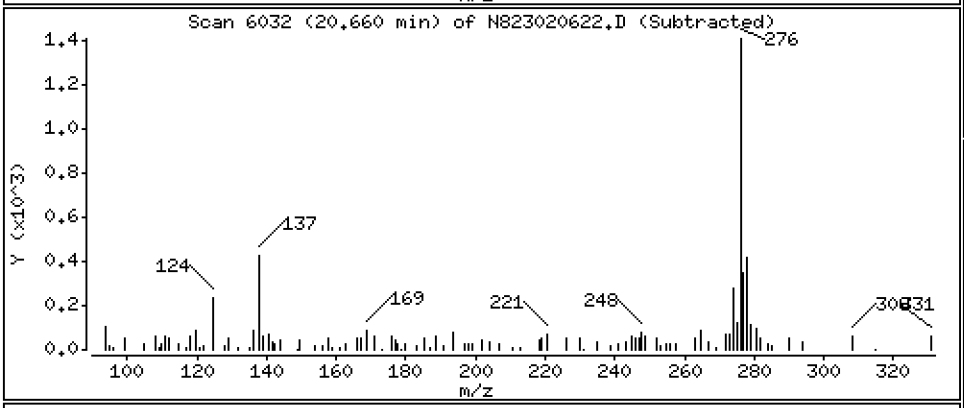
Column diameter: 0.25

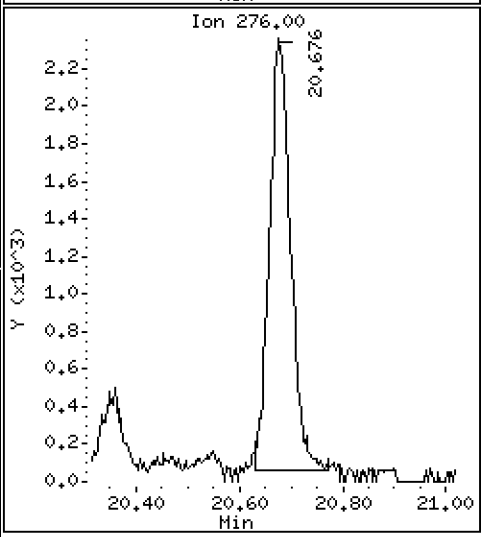
38 Dibenzo(a,h)anthracene

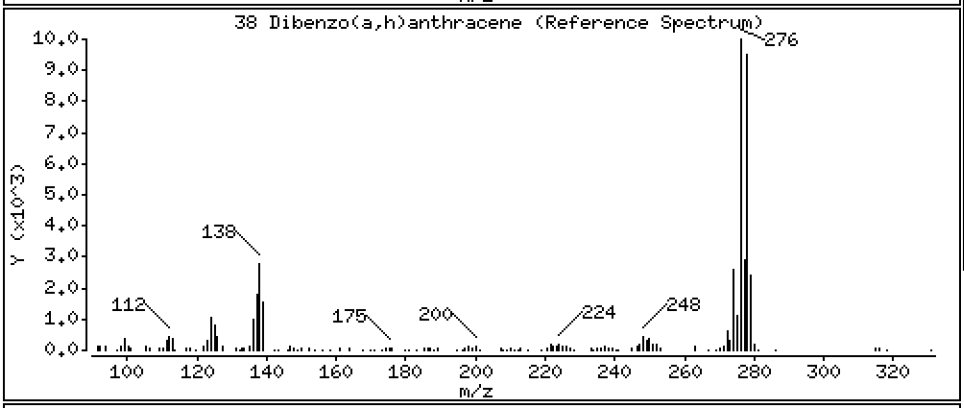
Concentration: 0.1212 ug/mL

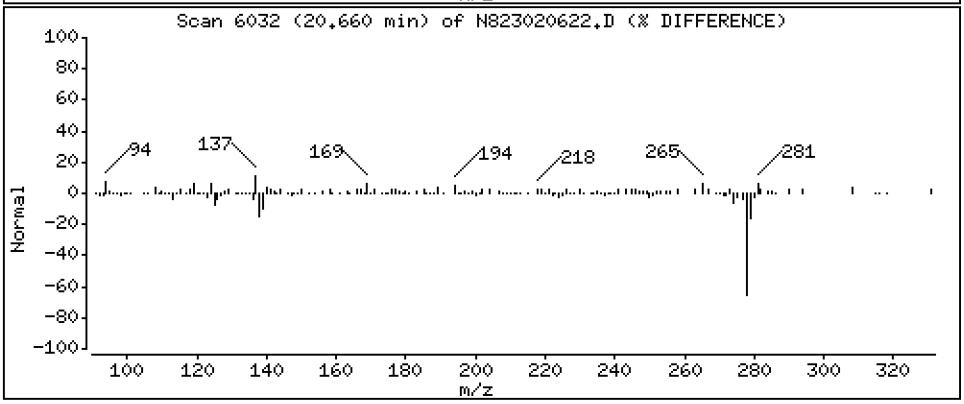












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Date : 06-FEB-2023 22:14

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-09

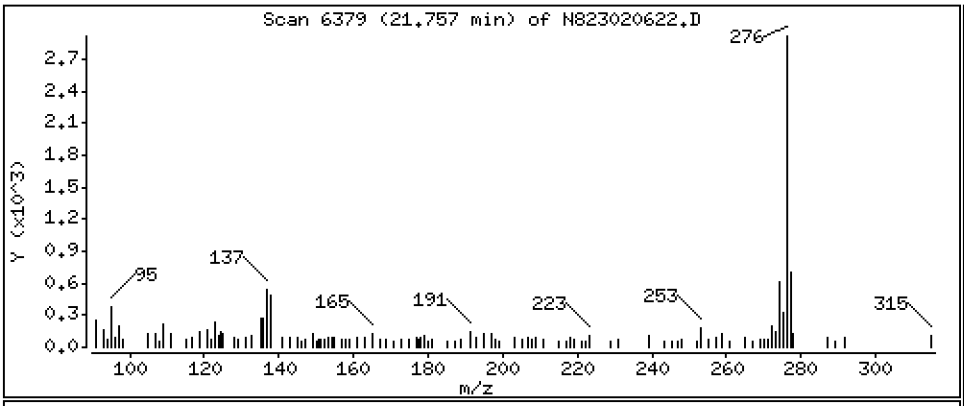
Operator: JZ

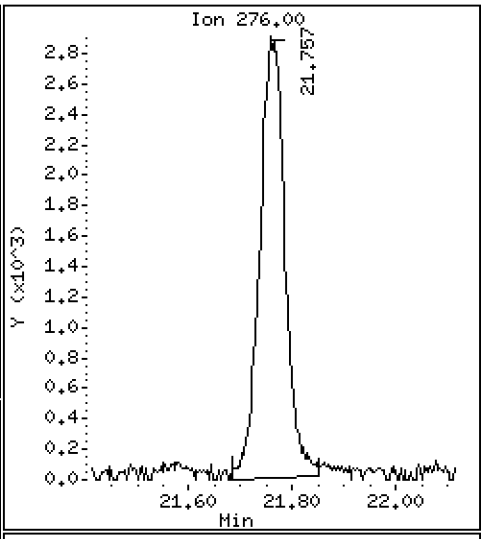
Column phase: Rxi-17sil

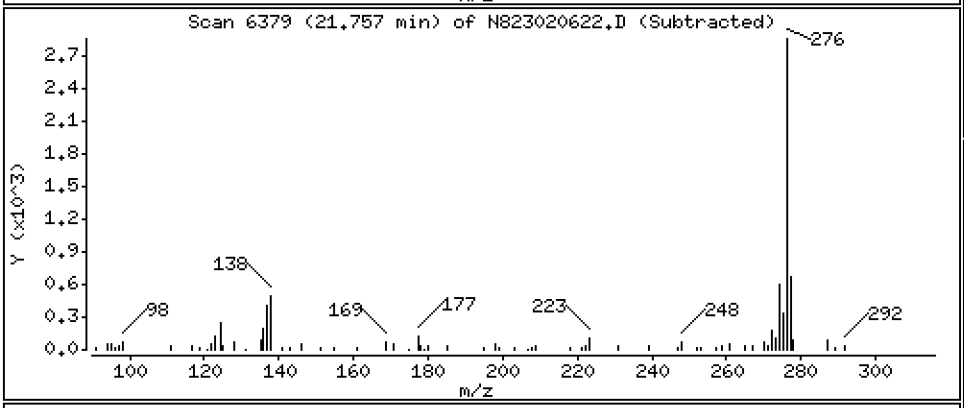
Column diameter: 0.25

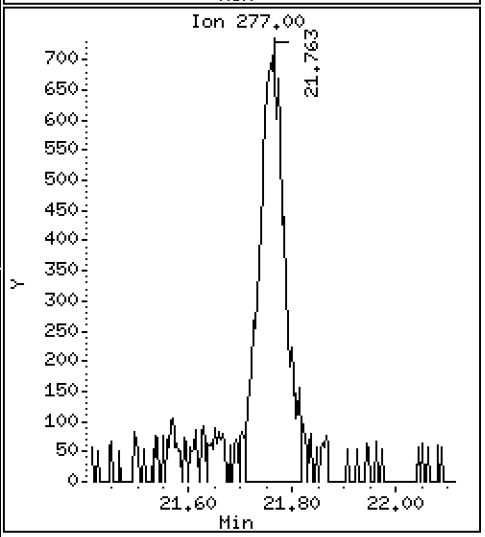
39 Benzo(g,h,i)perylene

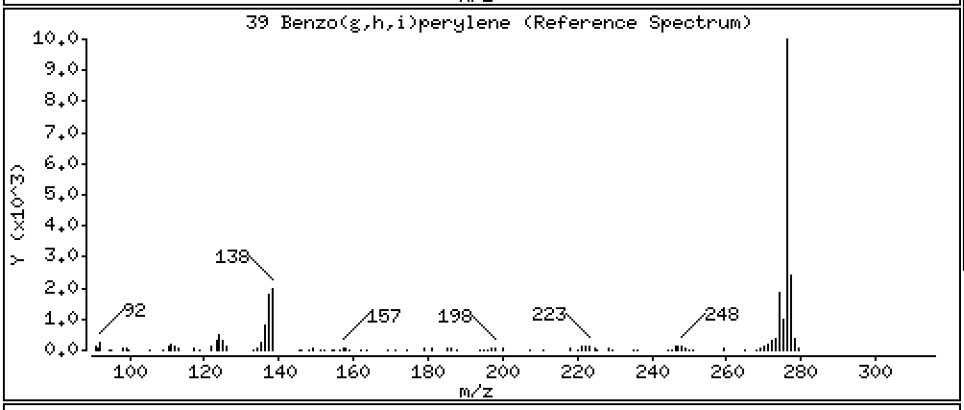
Concentration: 0.7155 ug/mL

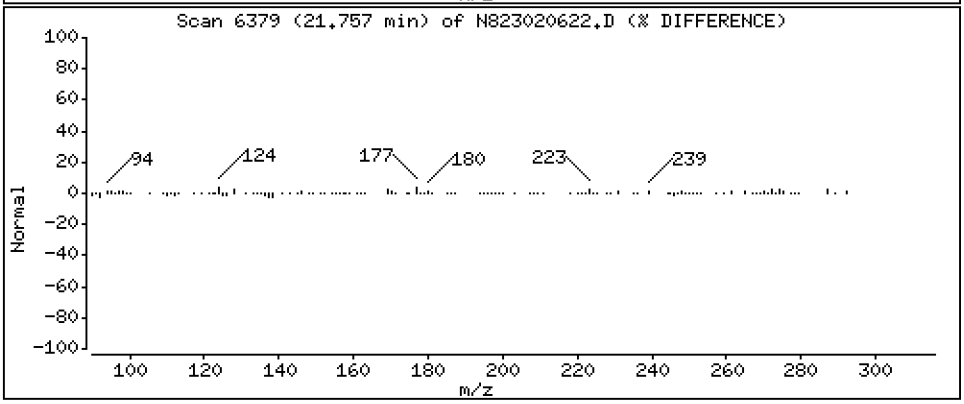












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020622.D
Lab Smp Id: 23A0207-09
Inj Date : 06-FEB-2023 22:14
Operator : JZ Inst ID: nt8.i
Smp Info : 23A0207-09
Misc Info : 23-
Comment : 1ul Injection
Method : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 13:04 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.884	4.900	(1.000)	51253	2.00000	
	2 Naphthalene	128	4.916	4.928	(1.006)	9237	0.38761	0.3876
$	3 2-Methylnaphthalene-d10	152	5.624	5.634	(1.151)	36856	2.63672	2.637
	4 2-Methylnaphthalene	141	5.672	5.681	(1.161)	2238	0.17073	0.1707
	5 1-methylnaphthalene	141	5.868	5.880	(1.201)	1494	0.11230	0.1123
	9 Acenaphthylene	152	7.072	7.082	(0.985)	1810	0.07853	0.07853
*	10 Acenaphthene-d10	164	7.183	7.189	(1.000)	30524	2.00000	
	11 Acenaphthene	153	7.231	7.240	(1.007)	1686	0.10917	0.1092(M)
	12 Dibenzofuran	168	7.385	7.392	(1.028)	2518	0.10734	0.1073
	14 Fluorene	166	7.863	7.869	(1.095)	1872	0.10275	0.1028
*	15 Phenanthrene-d10	188	9.226	9.232	(1.000)	47253	2.00000	
	16 Phenanthrene	178	9.261	9.267	(1.004)	6918	0.29971	0.2997
	17 Anthracene	178	9.302	9.308	(1.008)	2735	0.13043	0.1304(M)
	19 Carbazole	167	9.814	9.823	(1.064)	1067	0.05551	0.05551
	22 Fluoranthene	202	11.044	11.050	(1.197)	8513	0.33883	0.3388
$	21 Fluoranthene-d10	212	11.006	11.009	(1.193)	57172	2.74235	2.742
	23 Pyrene	202	11.562	11.569	(0.815)	13547	0.83016	0.8302
	24 Benzo(a)anthracene	228	14.064	14.070	(0.991)	3926	0.26543	0.2654(M)
*	25 Chrysene-d12	240	14.193	14.202	(1.000)	26321	2.00000	
	27 Chrysene	228	14.266	14.275	(1.005)	4278	0.27169	0.2717(M)
	28 Benzo(b)fluoranthene	252	16.818	16.824	(0.929)	6121	0.40105	0.4010
	29 Benzo(k)fluoranthene	252	16.881	16.887	(0.932)	3013	0.20154	0.2015
	30 Benzo(j)fluoranthene	252	16.954	16.963	(0.936)	2863	0.21273	0.2127
	31 Total Benzofluoranthenes	252	16.818	16.824	(0.929)	12359	0.85503	0.8550(M)
	32 Benzo(a)pyrene	252	17.871	17.877	(0.987)	6668	0.49647	0.4965
*	33 Perylene-d12	264	18.105	18.107	(1.000)	26206	2.00000	
	35 Perylene	252	18.180	18.183	(1.004)	9176	0.63666	0.6367
$	36 Dibenzo(a,h)anthracene-d14	292	20.546	20.549	(1.135)	39717	3.86801	3.868
	37 Indeno(1,2,3-cd)pyrene	276	20.675	20.684	(1.142)	6951	0.45428	0.4543(M)
	38 Dibenzo(a,h)anthracene	278	20.659	20.666	(1.141)	1596	0.12120	0.1212(M)
	39 Benzo(g,h,i)perylene	276	21.757	21.763	(1.202)	9919	0.71550	0.7155(M)

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020622.D
Lab Smp Id: 23A0207-09
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44336	22168	88672	51253	15.60
10 Acenaphthene-d10	26127	13064	52254	30524	16.83
15 Phenanthrene-d10	47424	23712	94848	47253	-0.36
25 Chrysene-d12	36794	18397	73588	26321	-28.46
33 Perylene-d12	36636	18318	73272	26206	-28.47

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.88	-0.32
10 Acenaphthene-d10	7.19	6.69	7.69	7.18	-0.08
15 Phenanthrene-d10	9.23	8.73	9.73	9.23	-0.07
25 Chrysene-d12	14.20	13.70	14.70	14.19	-0.07
33 Perylene-d12	18.11	17.61	18.61	18.11	-0.02

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

REVIEW SUMMARY FOR FILE - N823020622.D

Lab ID: 23A0207-09
nt8.i, 20230206A.b\FSIMPNA230119.m,   06-FEB-2023 22:14

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

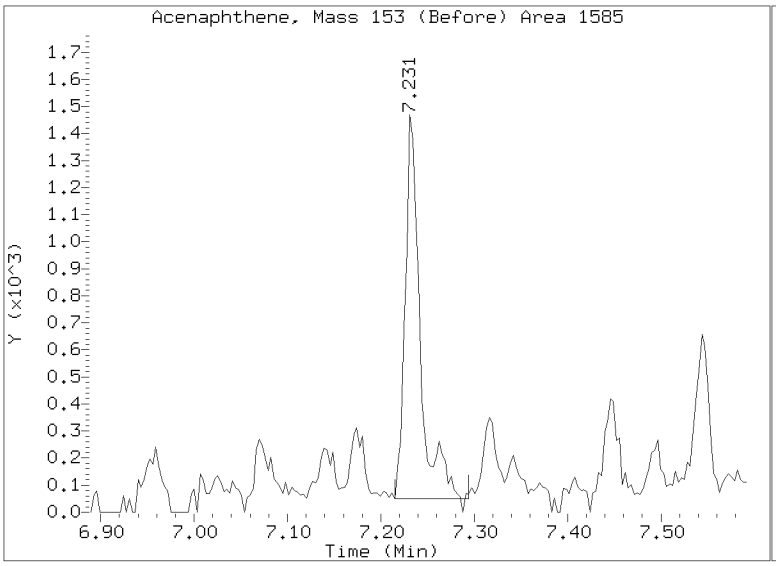
No RRT check performed

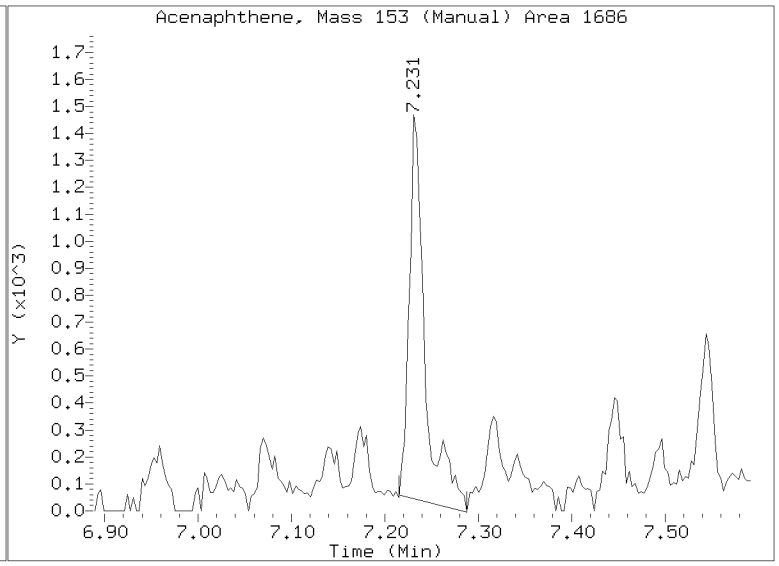
On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

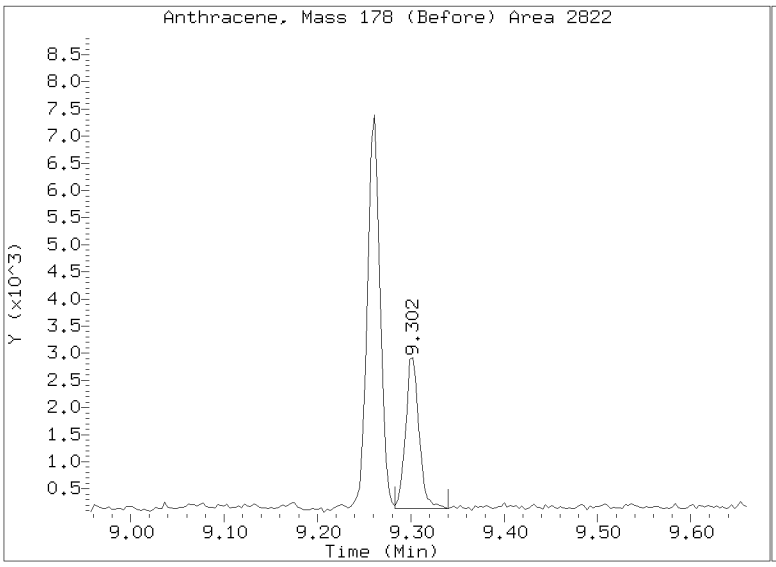
* Only compounds listed in the work order have been verified by the analyst *

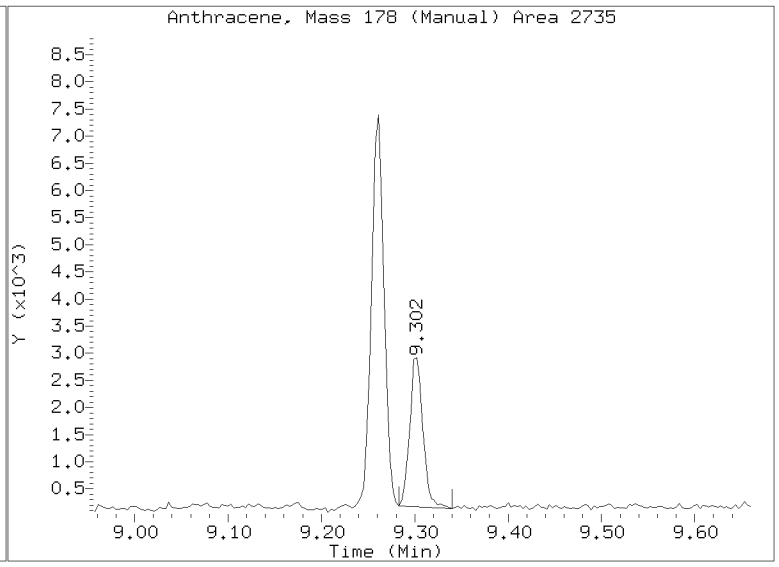
Quant Ion Manual Peak Adjustment Report

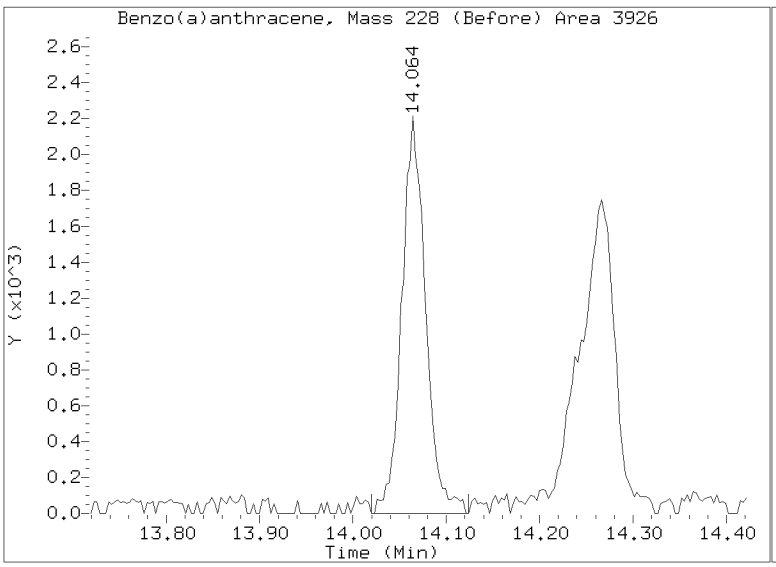
Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020622.D
Injection Date: 06-FEB-2023 22:14
Lab ID:23A0207-09 Client ID:
Report Date: 02/07/2023 15:59

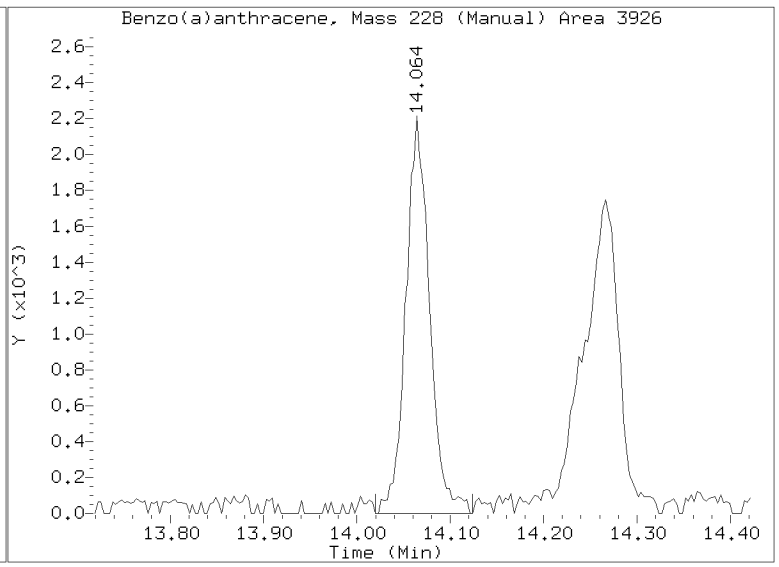












Quant Ion Manual Peak Adjustment Report

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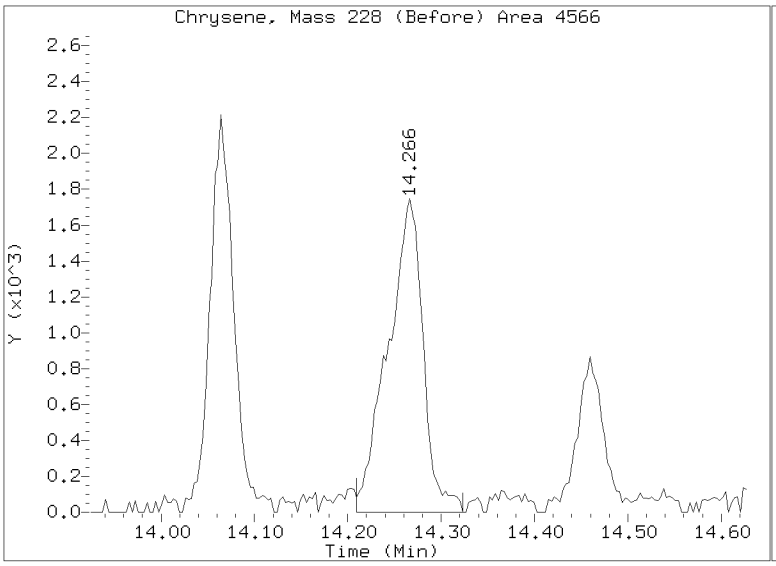
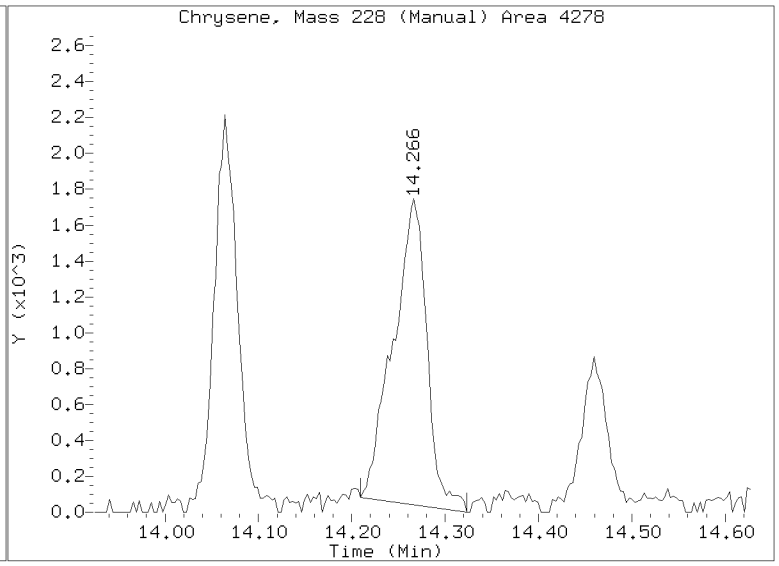
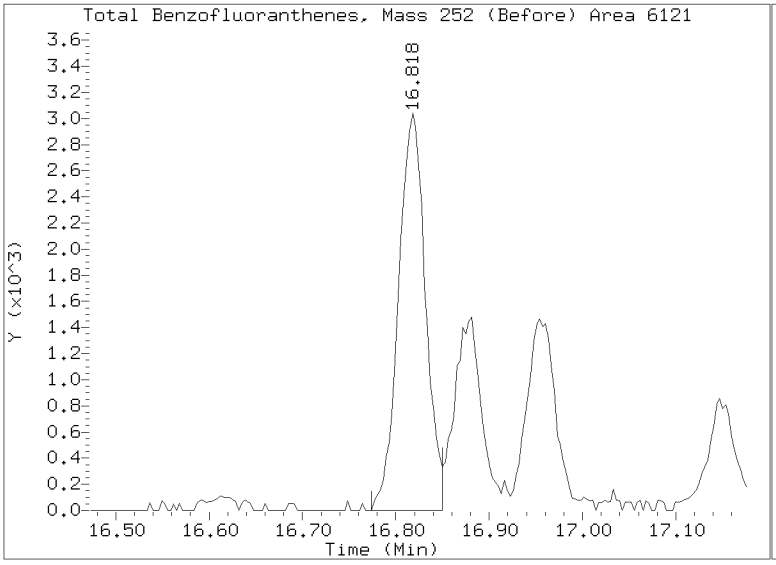
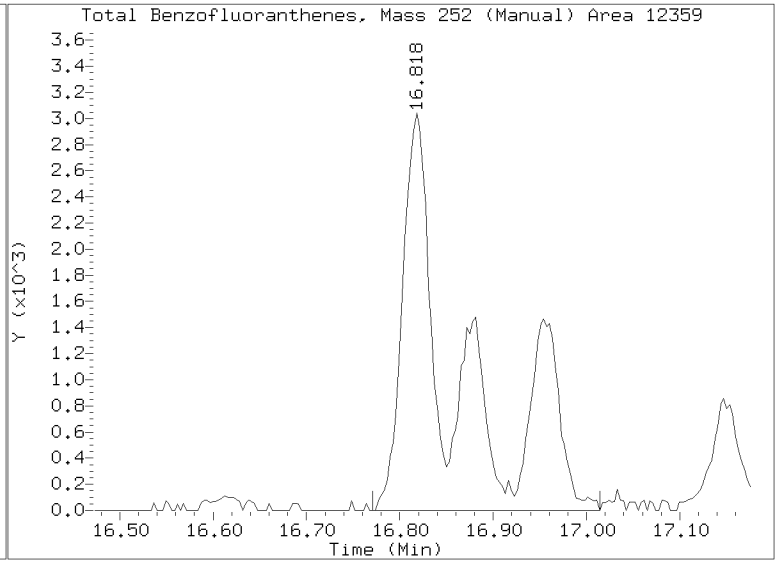
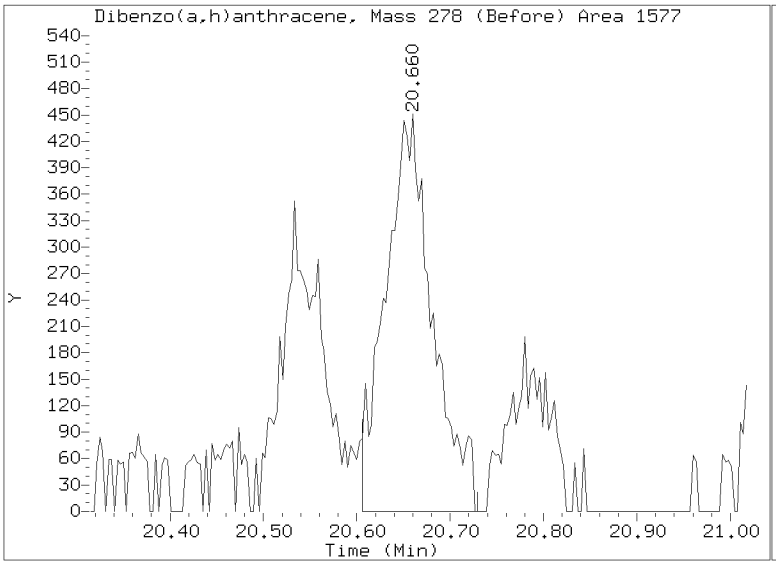
Lab ID:23A0207-09 Client ID:
Report Date: 02/07/2023 15:59

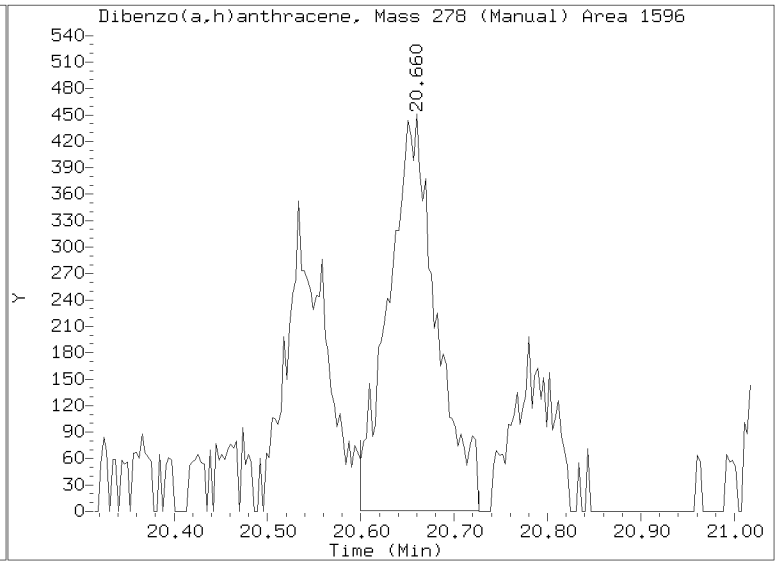












Quant Ion Manual Peak Adjustment Report

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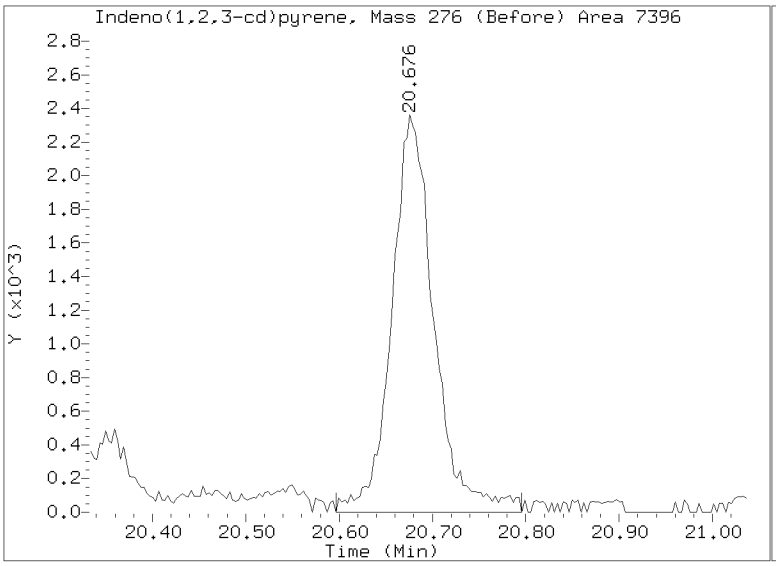
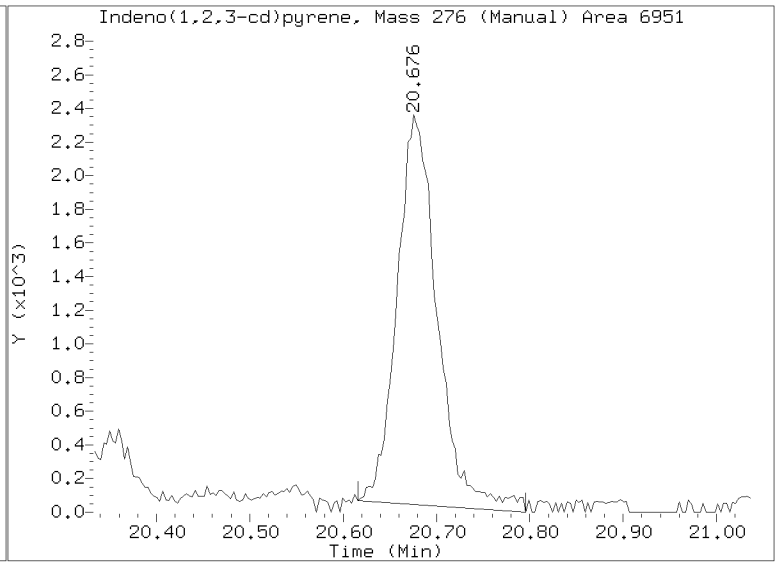
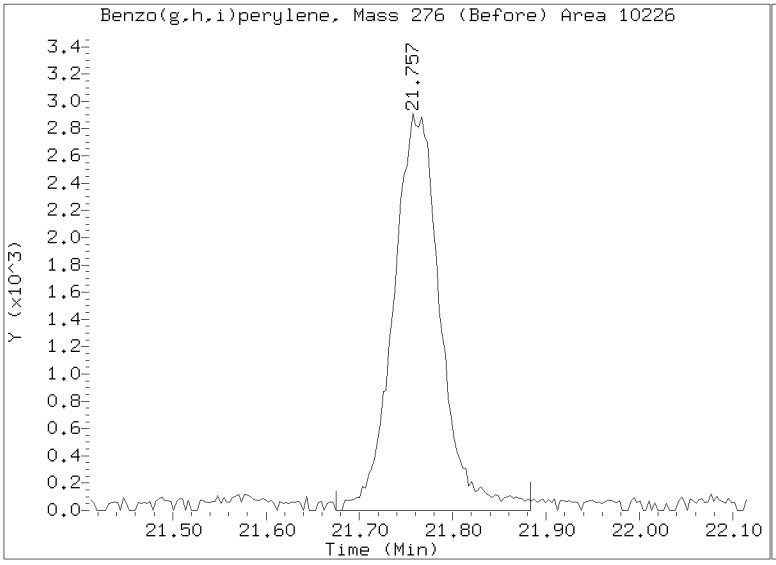
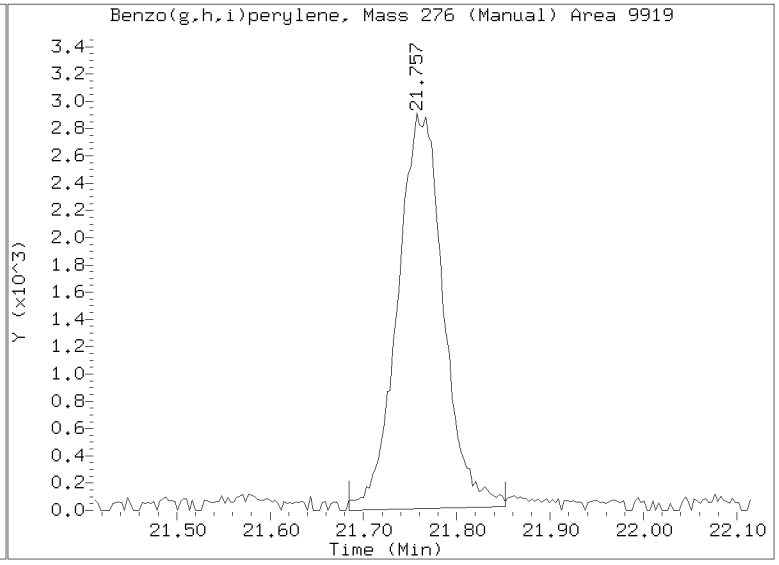
Lab ID:23A0207-09 Client ID:
Report Date: 02/07/2023 15:59









Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1097

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

Polynuclear Aromatic Hydrocarbons

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-10 A	SDG:	23A0207
Sampled:	01/11/23 11:32	Prepared:	05/16/23 13:53	File ID:	N823053011.D
% Solids:	71.52	Preparation:	EPA 3546 (Microwave)	Analyzed:	05/30/23 16:12
Batch:	BLE0421	Sequence:	SLE0448	Initial/Final:	13.99 g Wet / 0.5 mL
Instrument:	NT8	Column:	RXI-17Sil ms	Calibration:	GD00068
Cleanups:	GPC, Silica Gel				

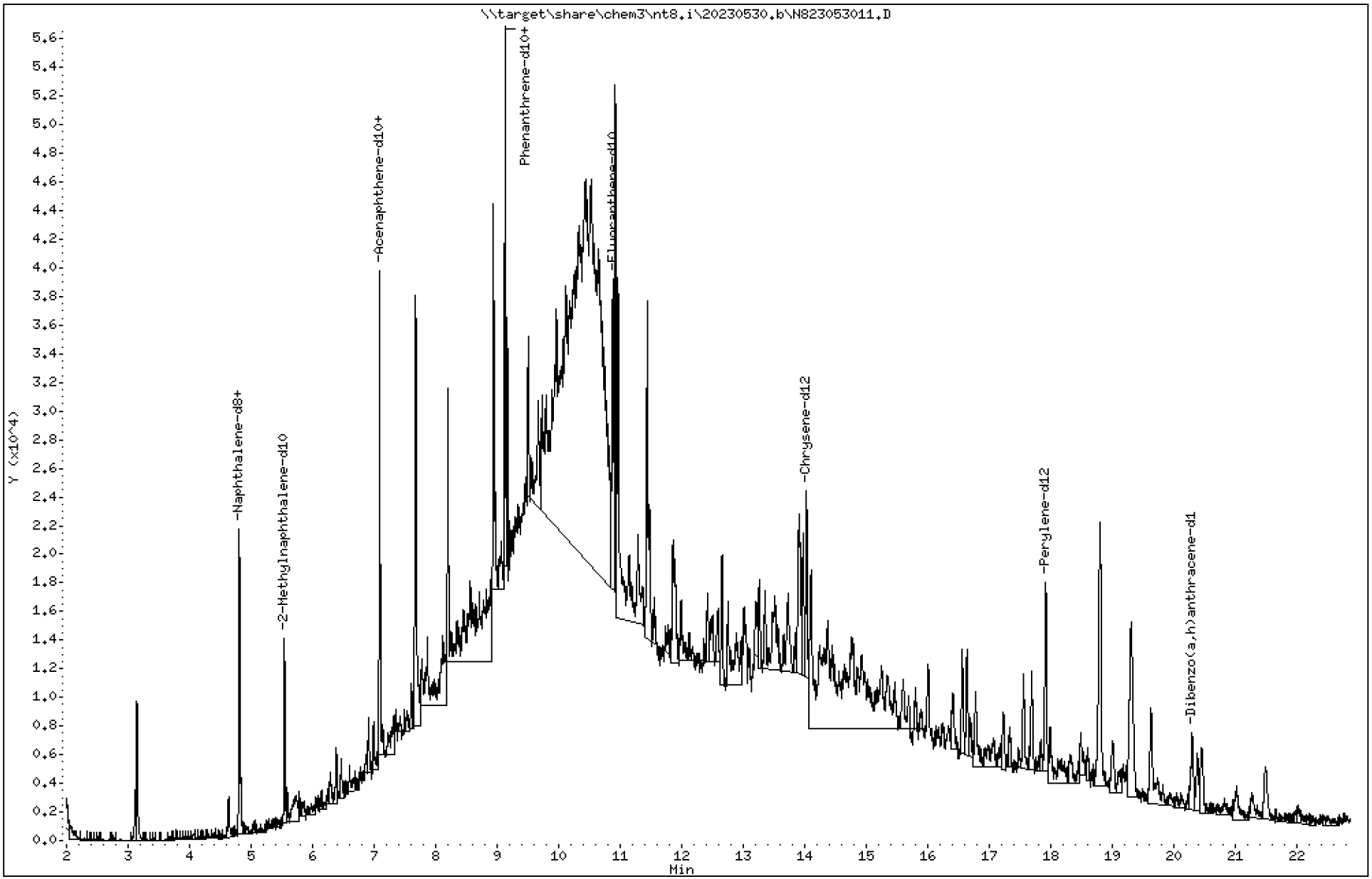
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
56-55-3	Benzo(a)anthracene	3	99.9	D	2.47	15.0
218-01-9	Chrysene	3	159	D	3.16	15.0
205-99-2	Benzo(b)fluoranthene	3	118	D	4.11	15.0
207-08-9	Benzo(k)fluoranthene	3	58.3	D	2.28	15.0
50-32-8	Benzo(a)pyrene	3	103	D	1.84	15.0
193-39-5	Indeno(1,2,3-cd)pyrene	3	94.0	D	3.15	15.0
53-70-3	Dibenzo(a,h)anthracene	3	26.2	D	2.67	15.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	149.92	137	91.3	32 - 120	
Dibenzo[a,h]anthracene-d14	149.92	227	151	21 - 133	*
Fluoranthene-d10	149.92	150	99.9	36 - 134	

Data File: \\target\share\chem3\nt8.i\20230530.b\N823053011.D
Date : 30-MAY-2023 16:12
Client ID:
Sample Info: 23A0207-10,3

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



23A0207 CLPLIKE (Rev3) - Page 291 of 3315

Data File: \\target\share\chem3\nt8.i\20230530.b\N823053011.D

Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

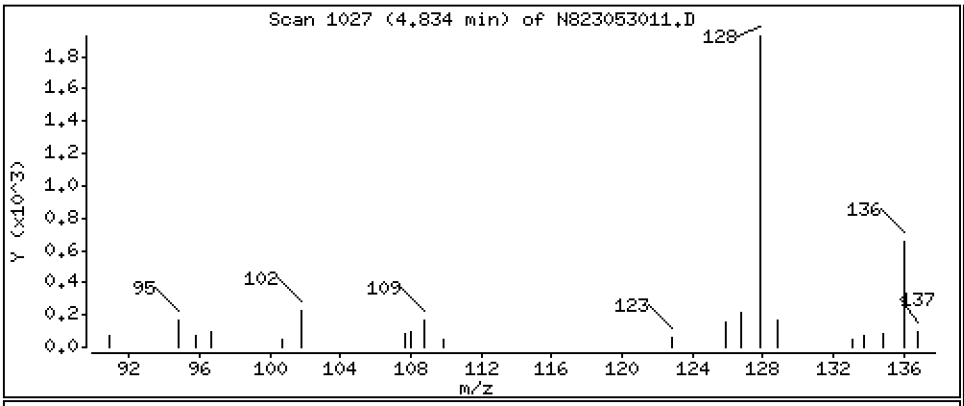
Operator: JZ

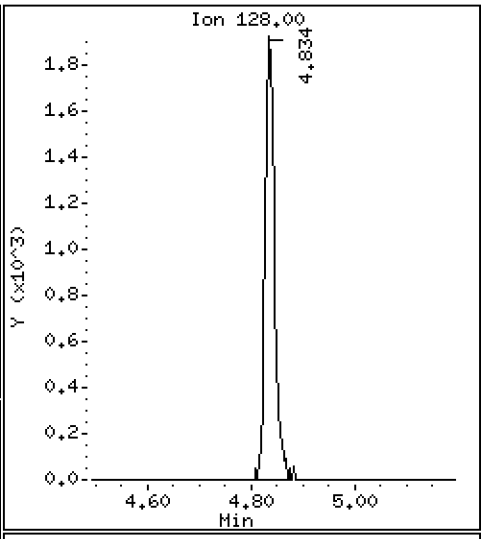
Column phase: Rxi-17sil

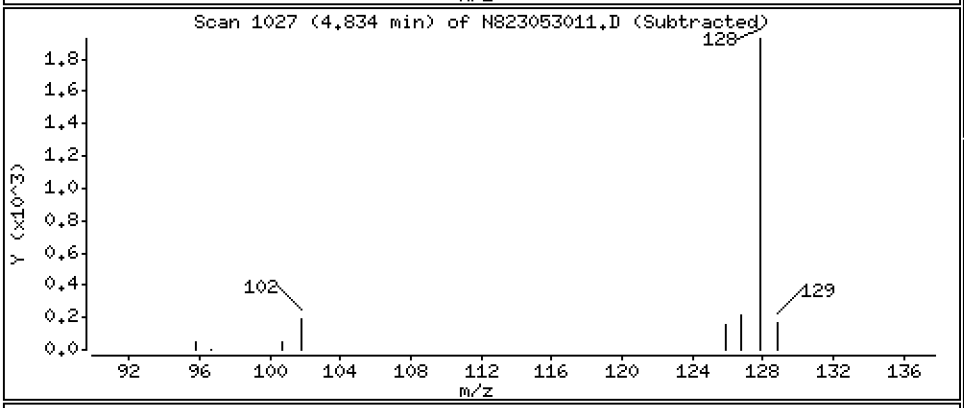
Column diameter: 0.25

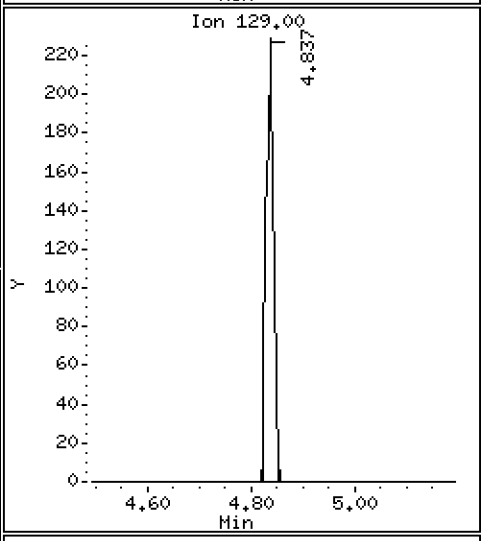
2 Naphthalene

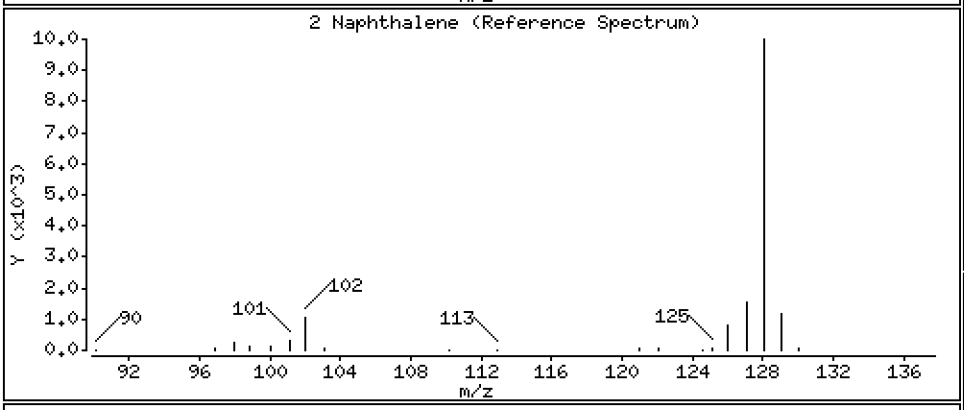
Concentration: 0.7989 ug/mL

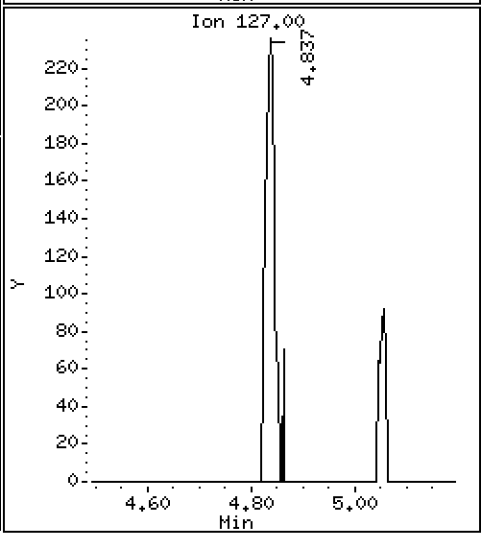


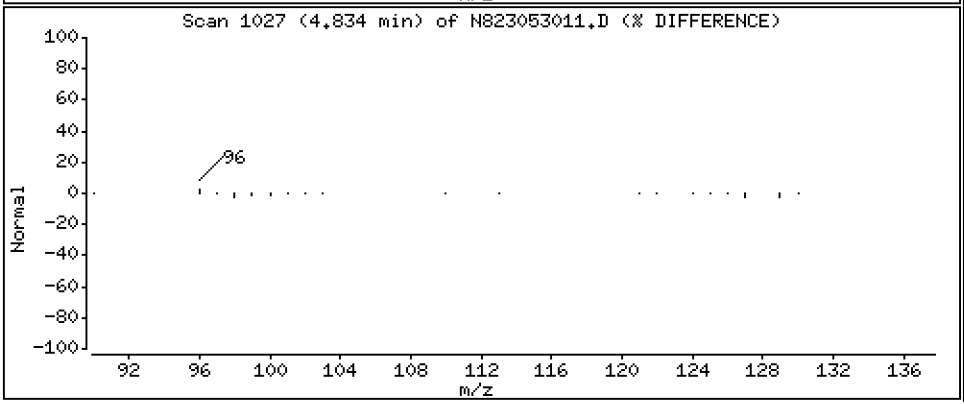












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

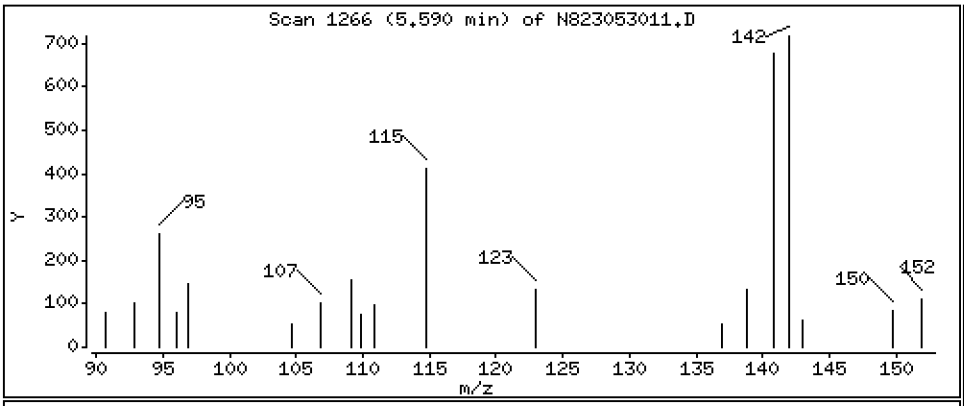
Operator: JZ

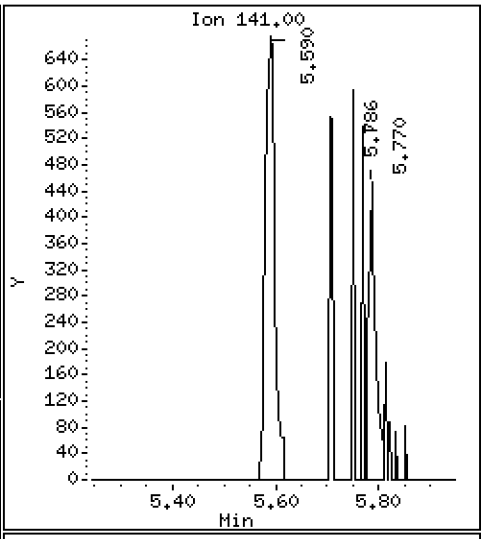
Column phase: Rxi-17sil

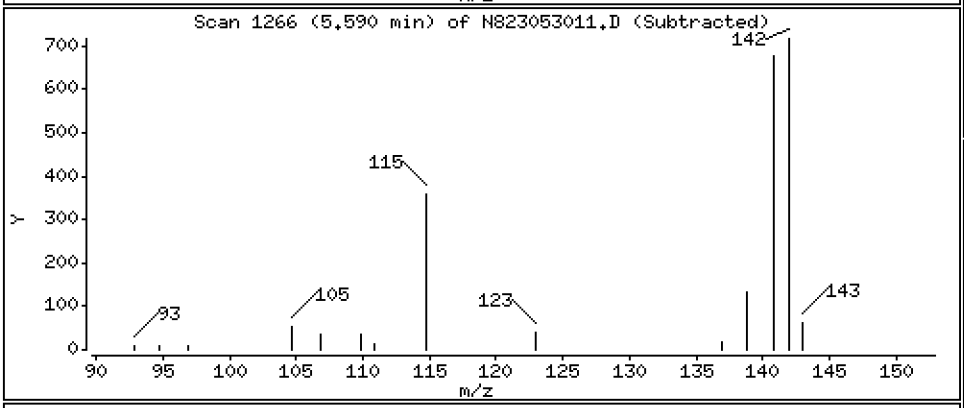
Column diameter: 0.25

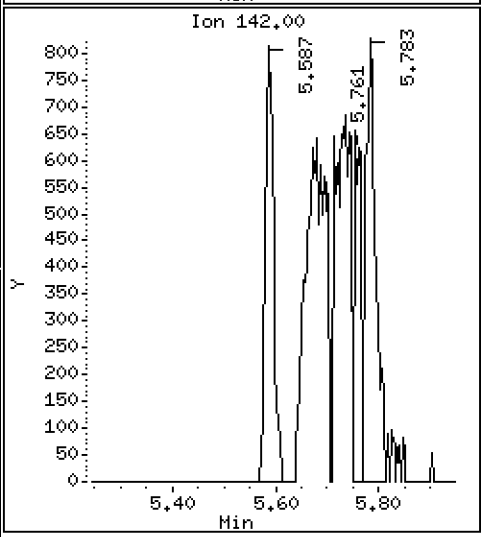
4 2-Methylnaphthalene

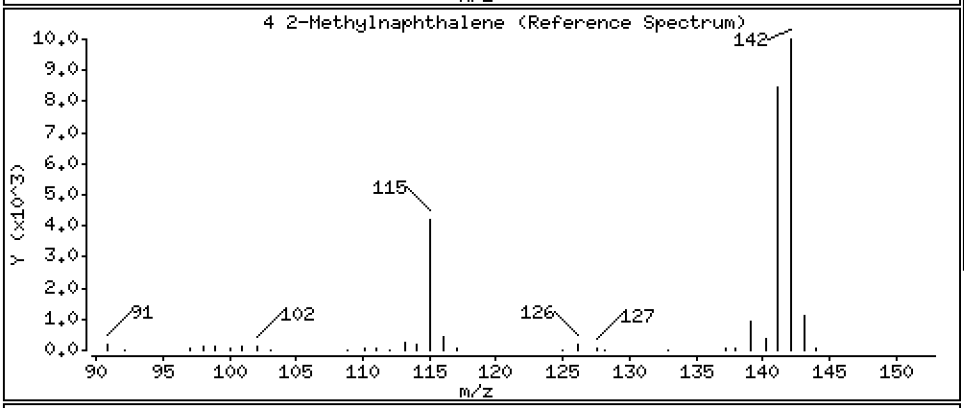
Concentration: 0.4961 ug/mL

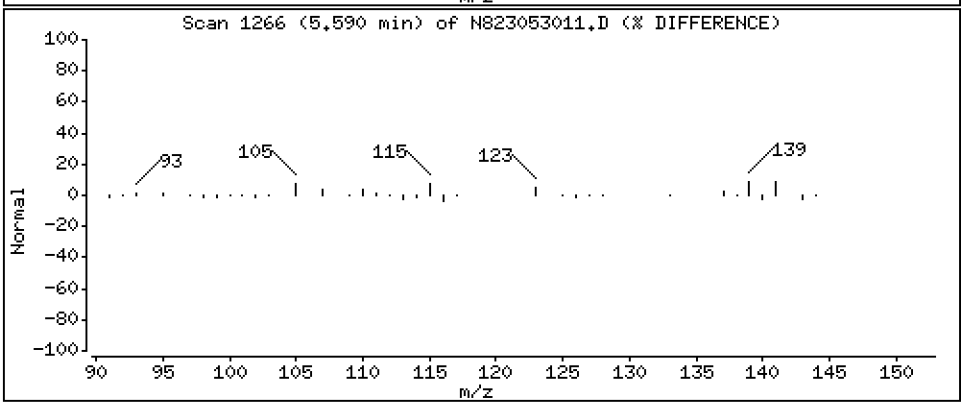












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

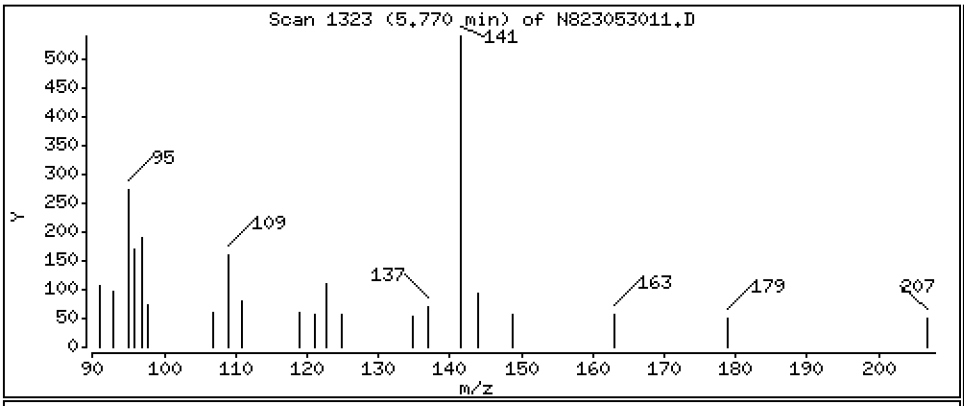
Operator: JZ

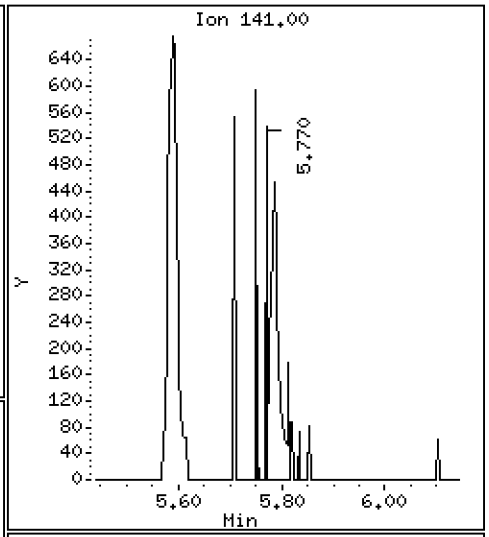
Column phase: Rxi-17sil

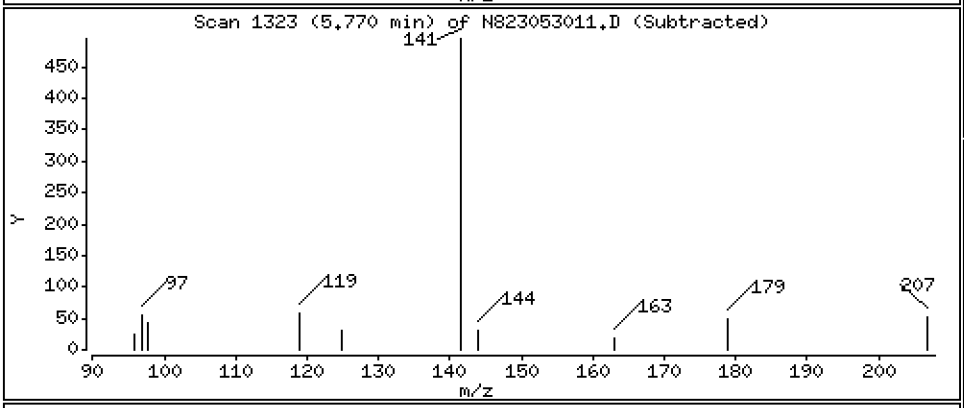
Column diameter: 0.25

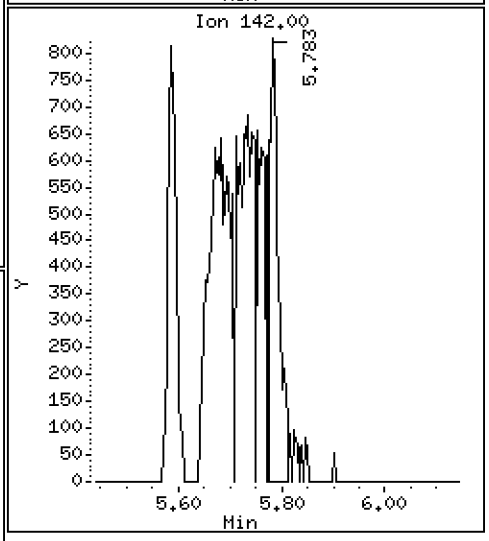
5 1-methylnaphthalene

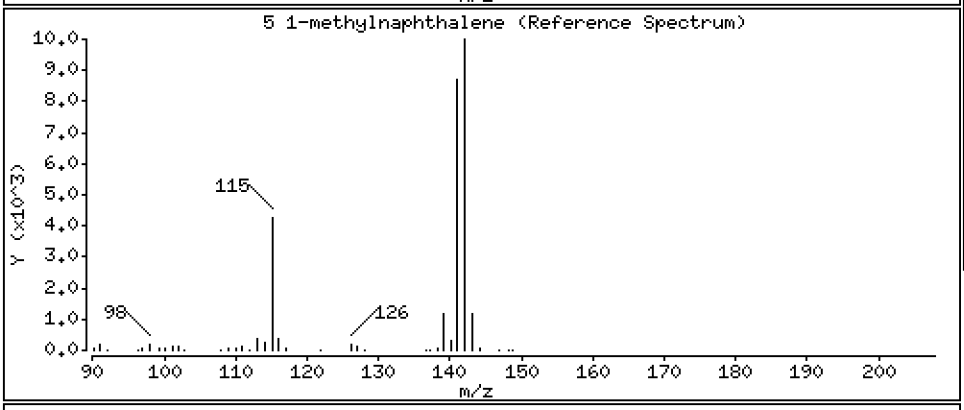
Concentration: 0.3627 ug/mL

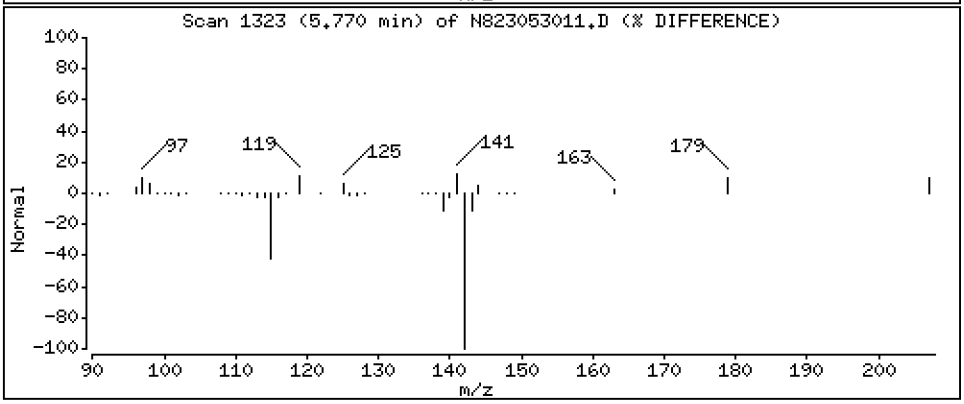












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

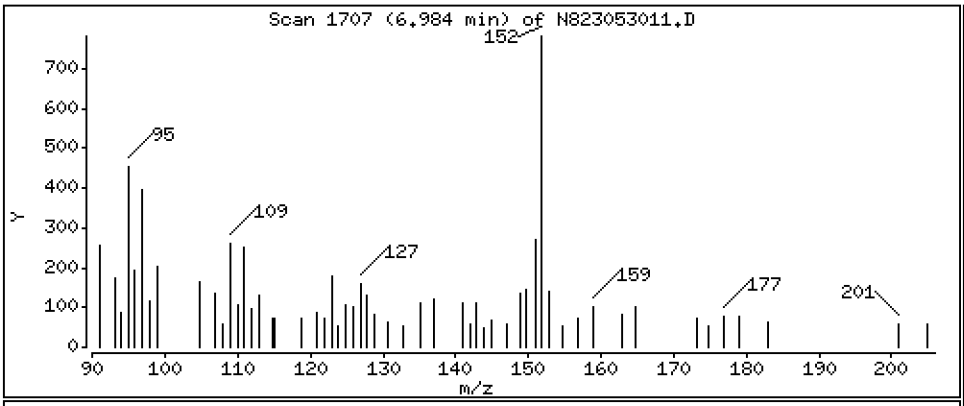
Operator: JZ

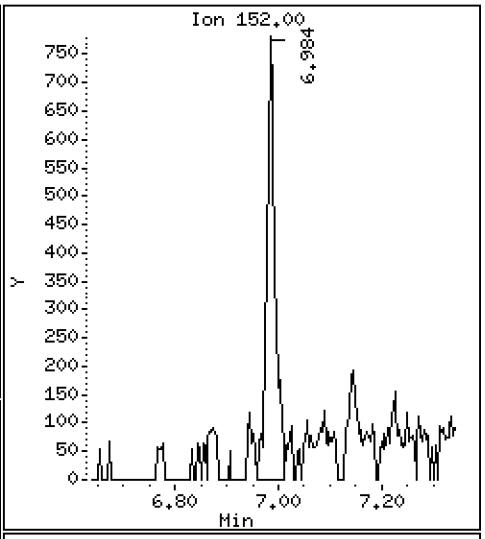
Column phase: Rxi-17sil

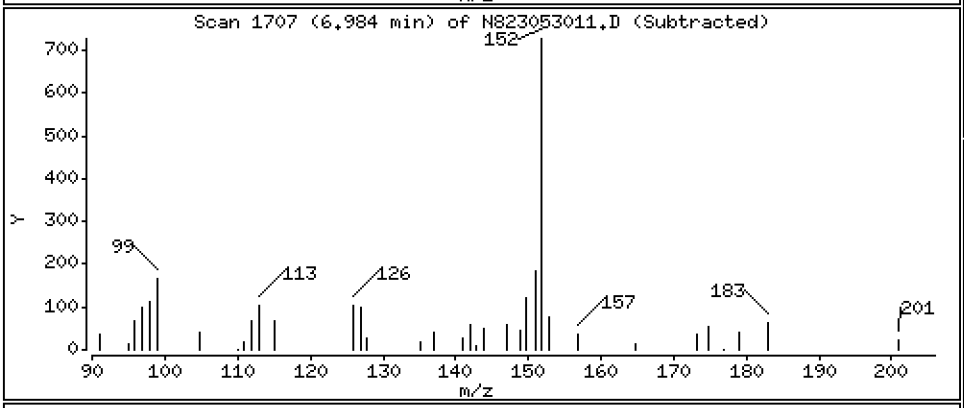
Column diameter: 0.25

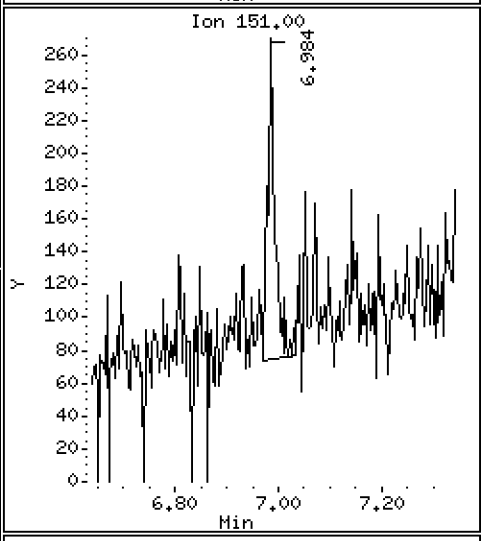
9 Acenaphthylene

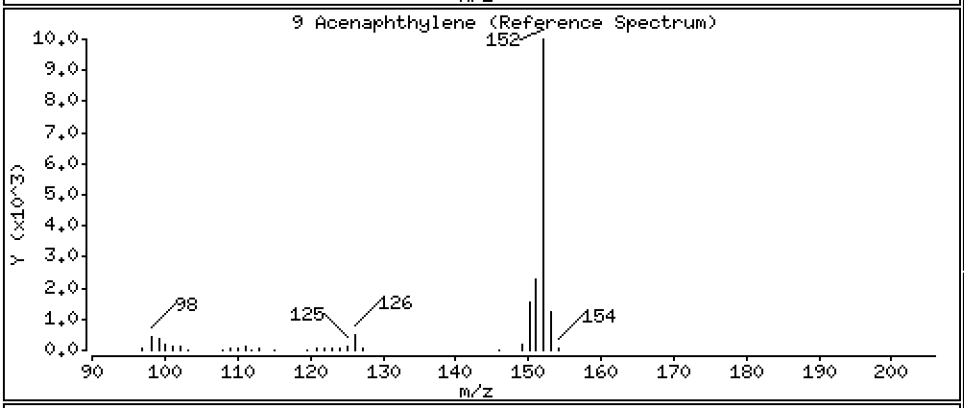
Concentration: 0.3057 ug/mL

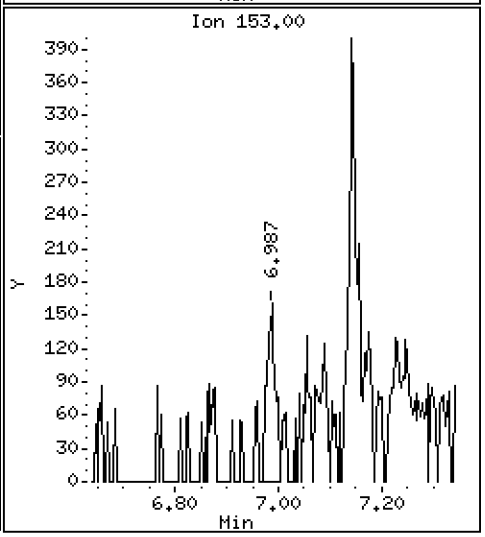


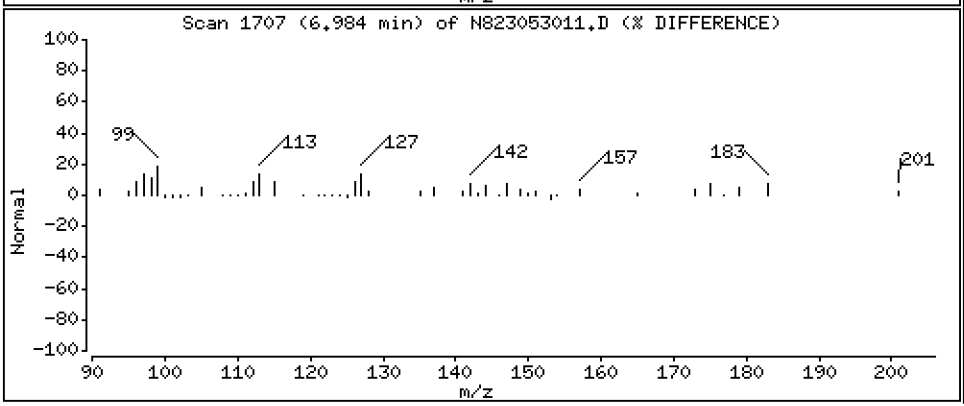












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

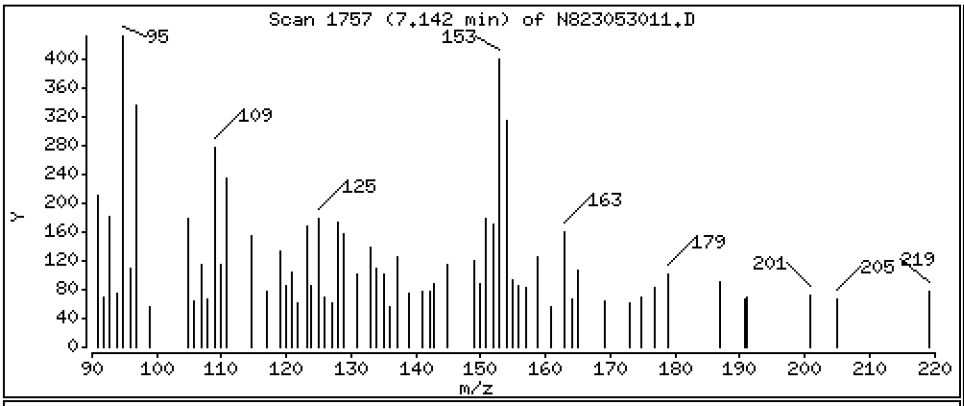
Operator: JZ

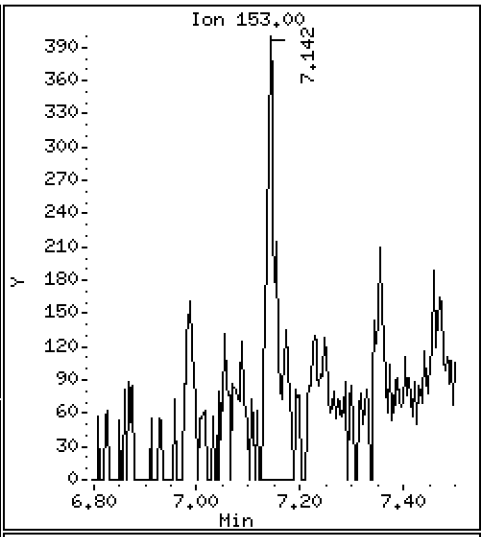
Column phase: Rxi-17sil

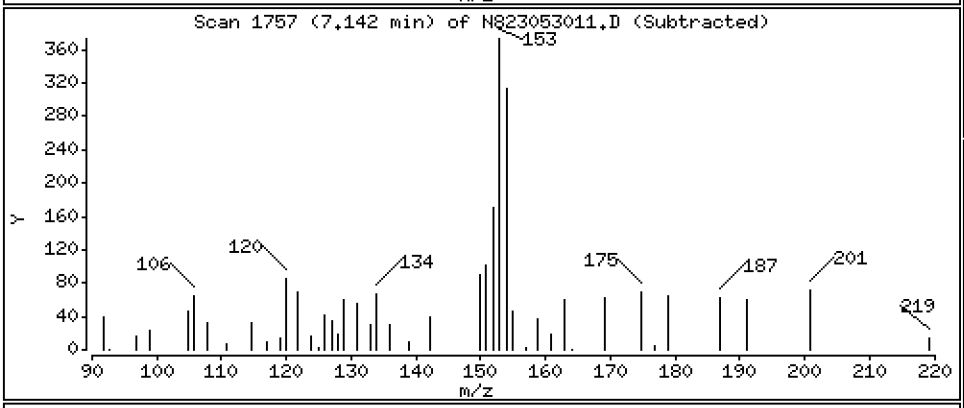
Column diameter: 0.25

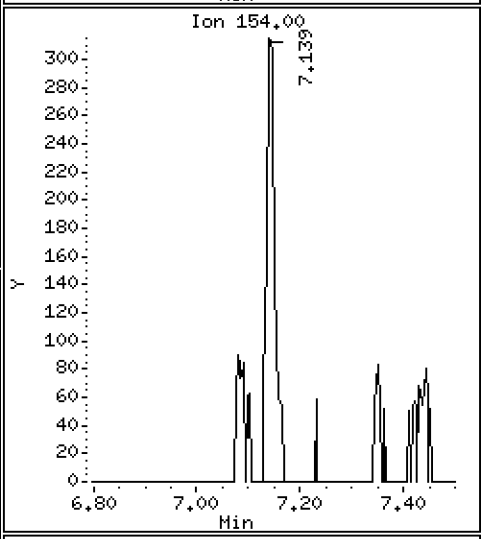
11 Acenaphthene

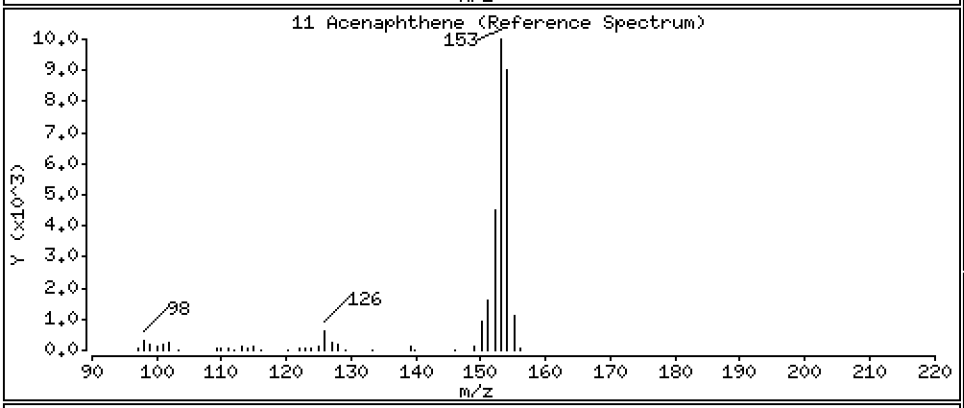
Concentration: 0.3059 ug/mL

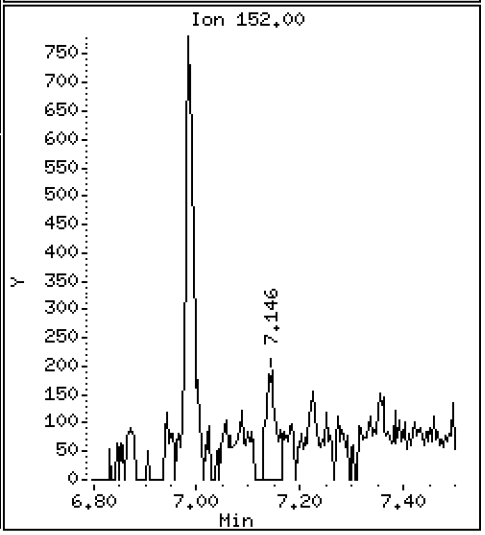


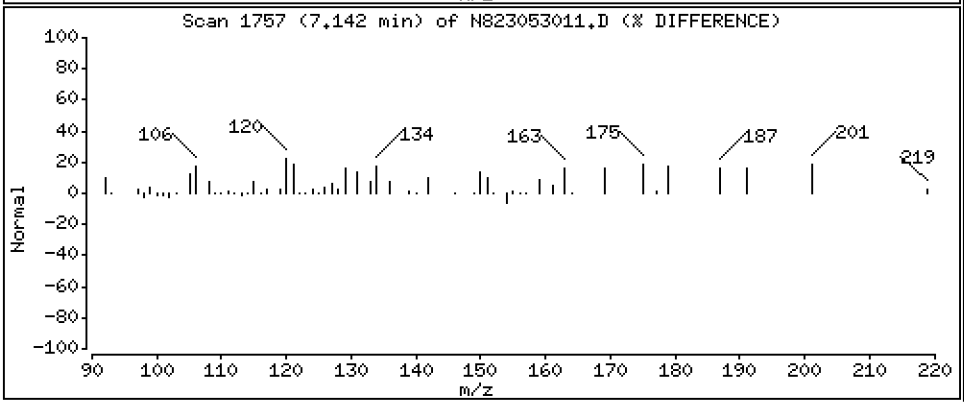












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

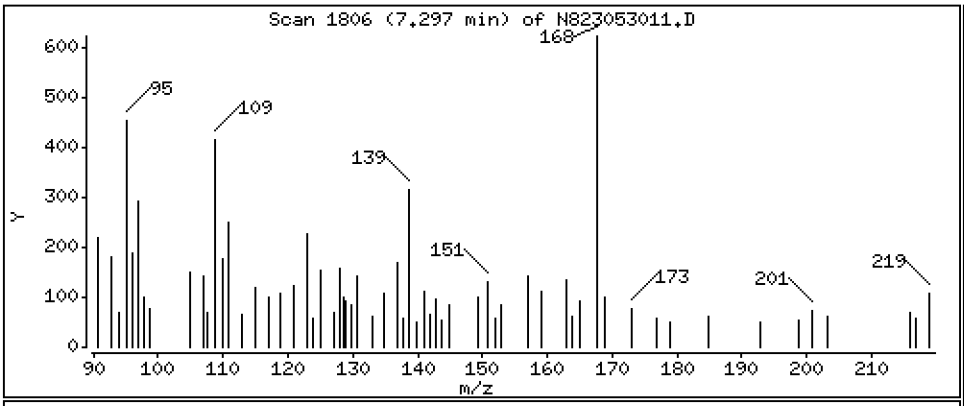
Operator: JZ

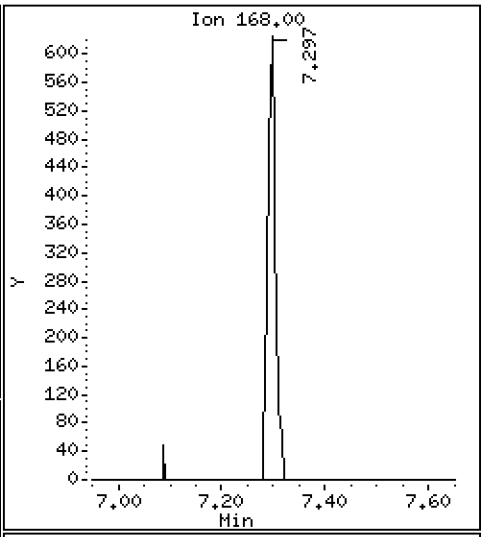
Column phase: Rxi-17sil

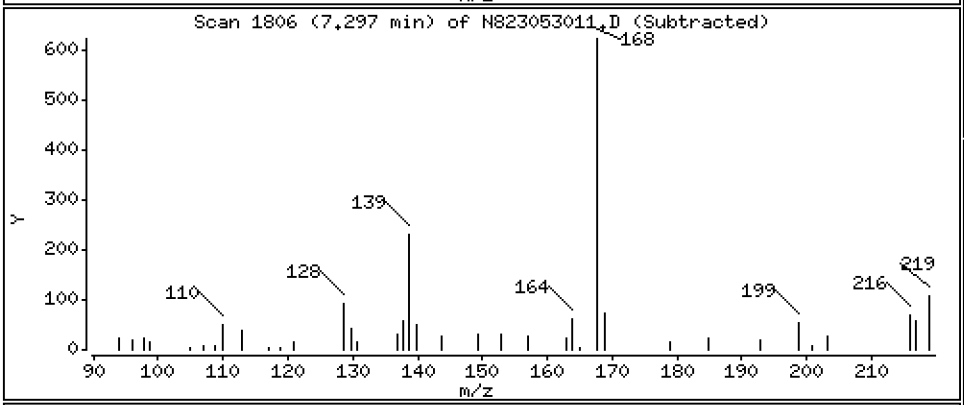
Column diameter: 0.25

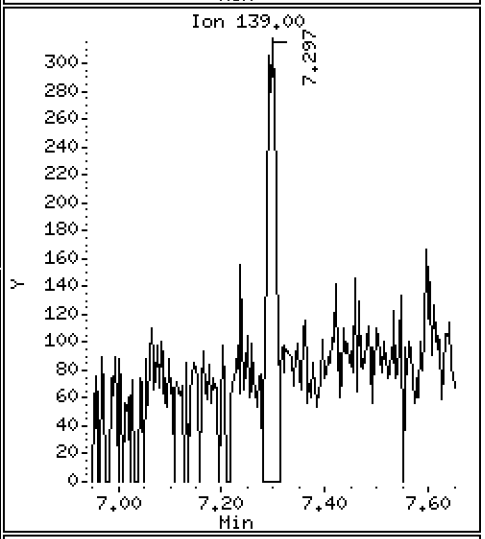
12 Dibenzofuran

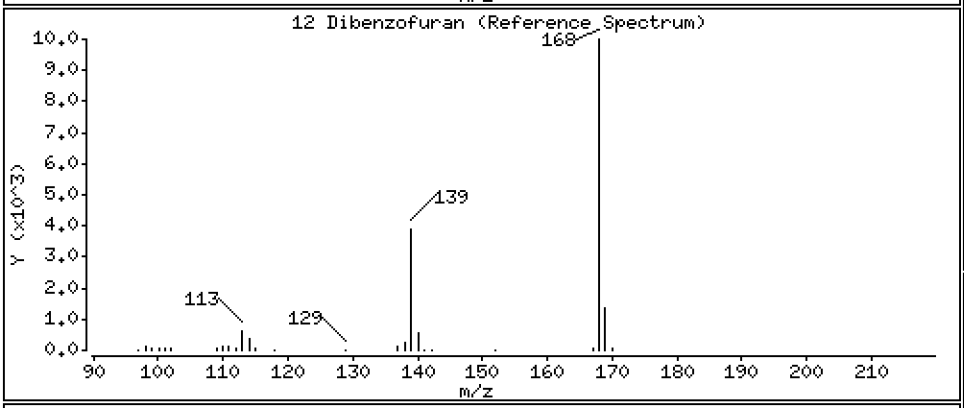
Concentration: 0.2266 ug/mL

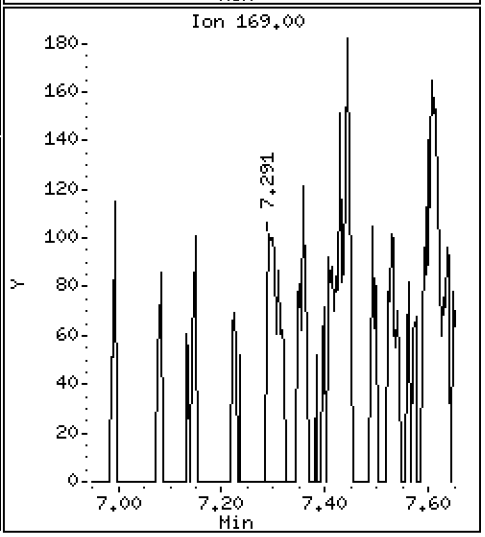


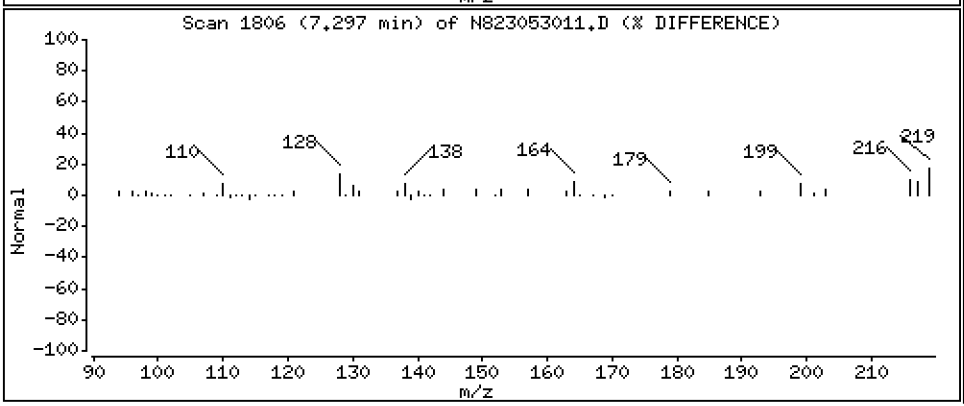












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

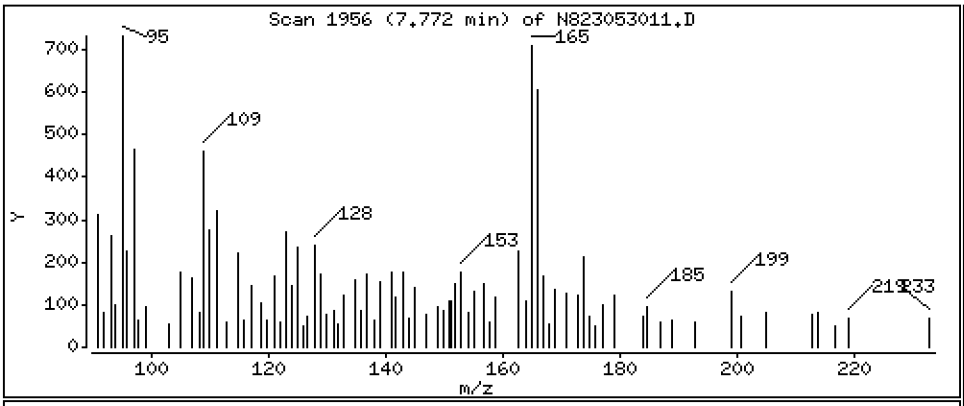
Operator: JZ

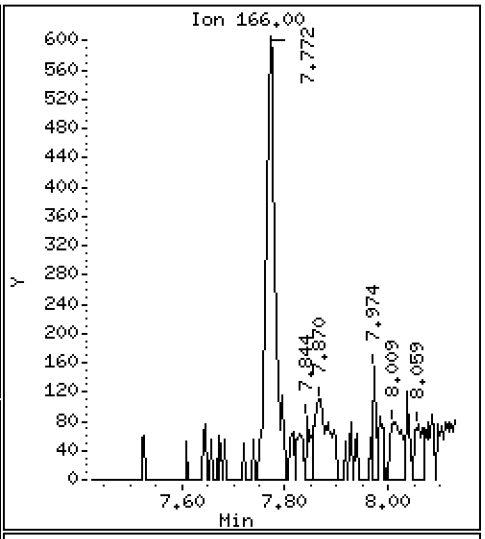
Column phase: Rxi-17sil

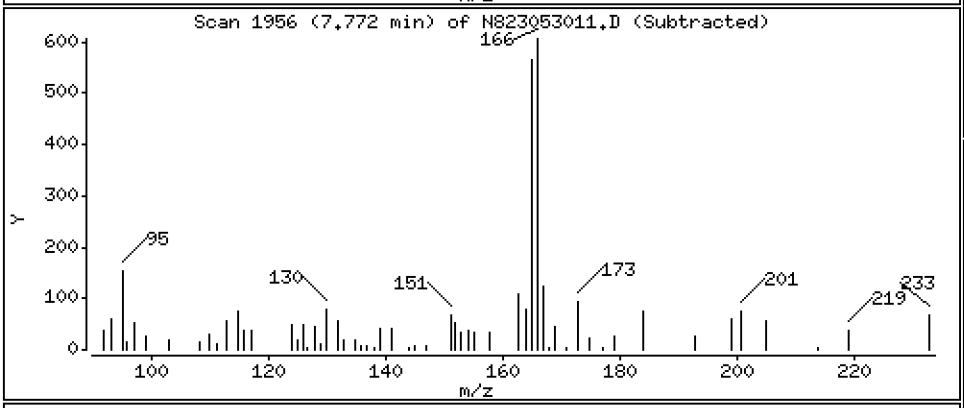
Column diameter: 0.25

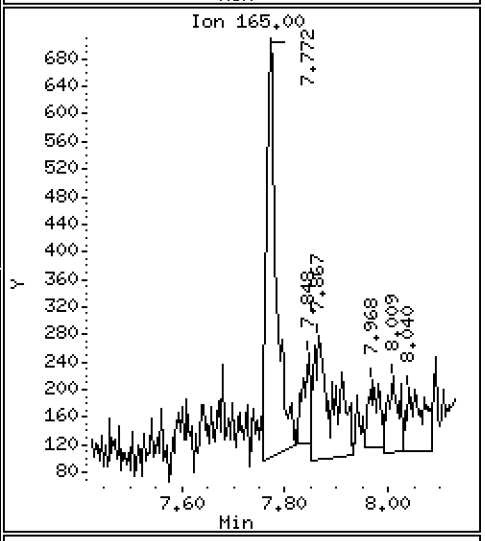
14 Fluorene

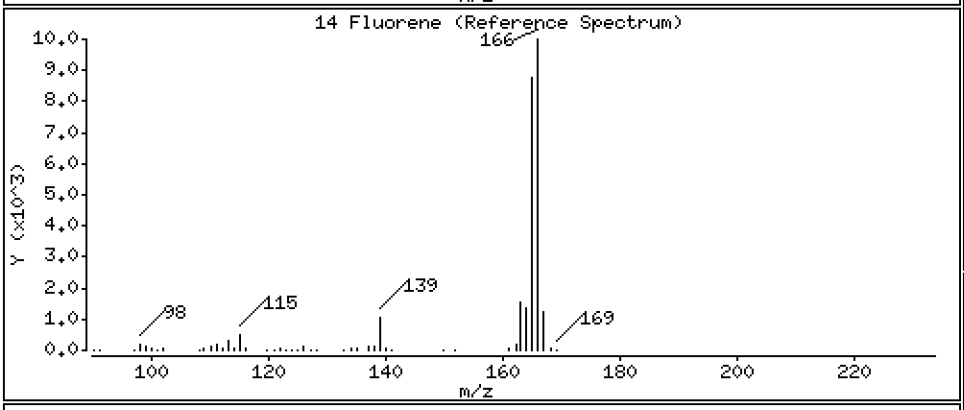
Concentration: 0.3357 ug/mL

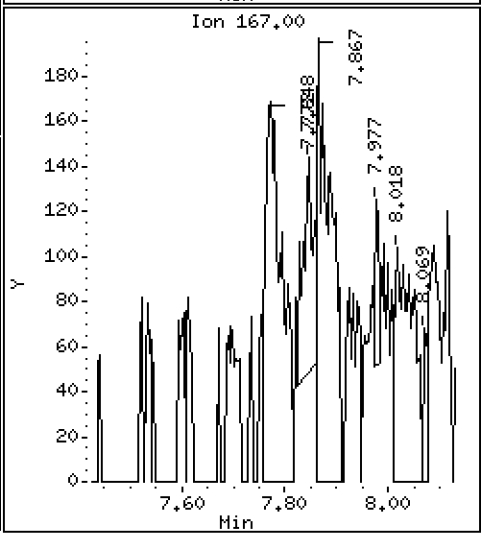


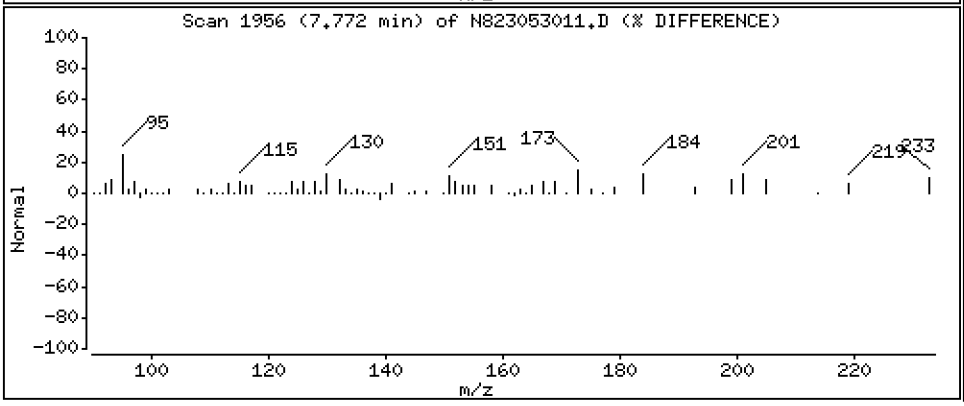












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

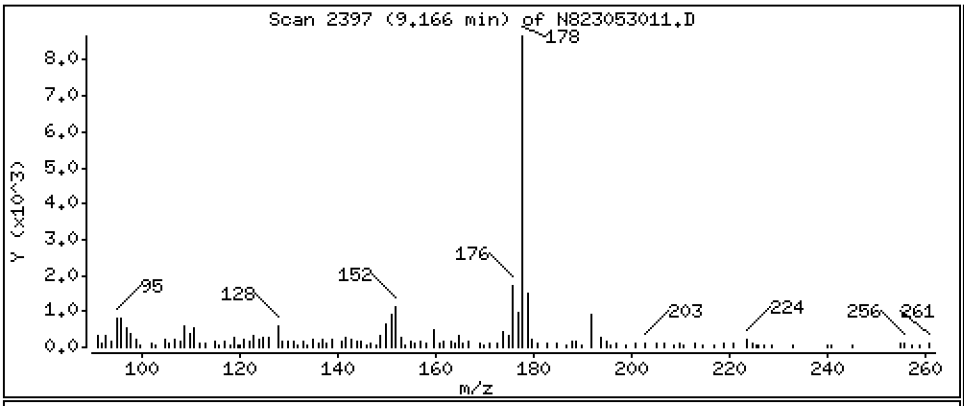
Operator: JZ

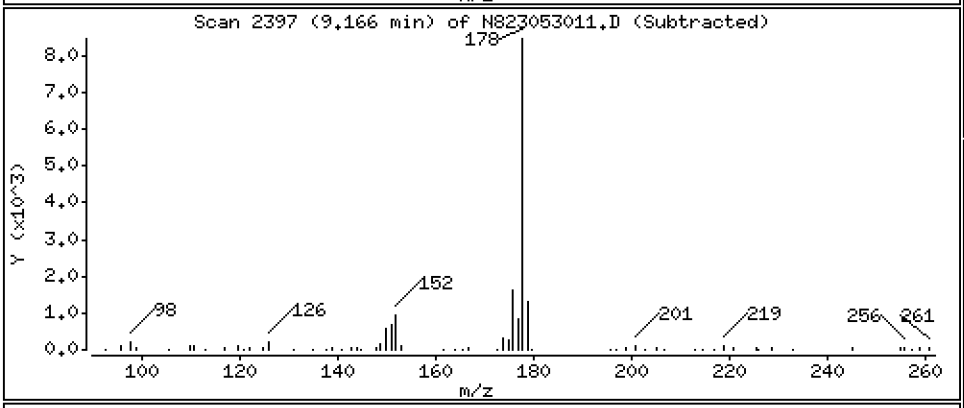
Column phase: Rxi-17sil

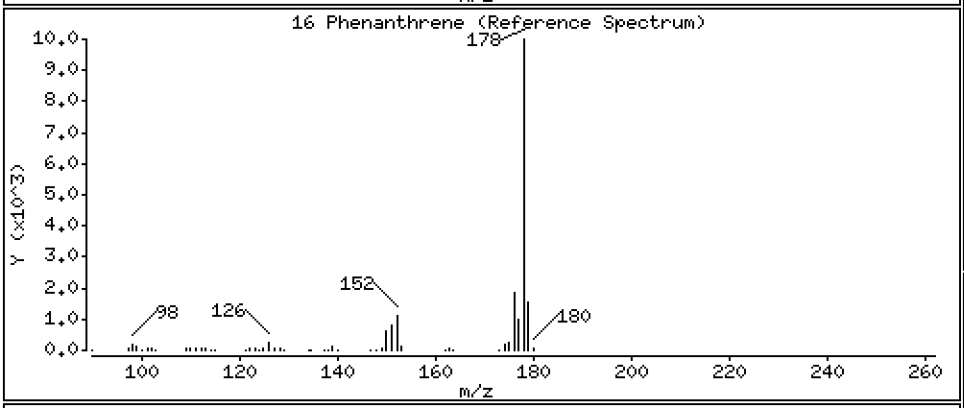
Column diameter: 0.25

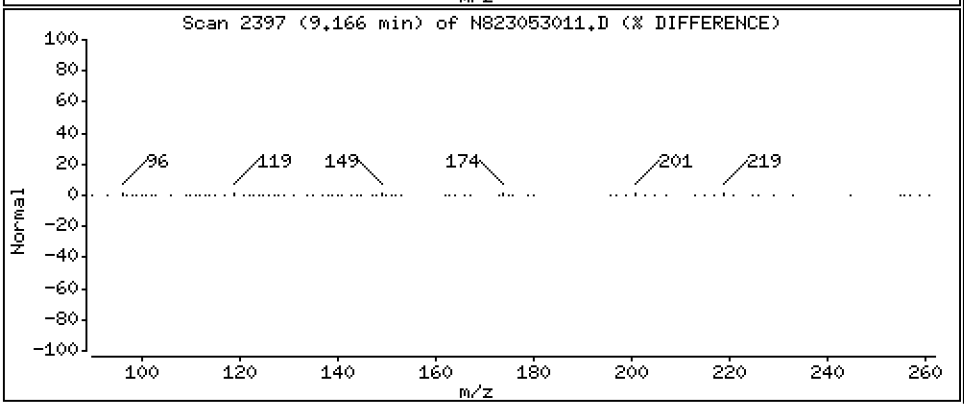
16 Phenanthrene

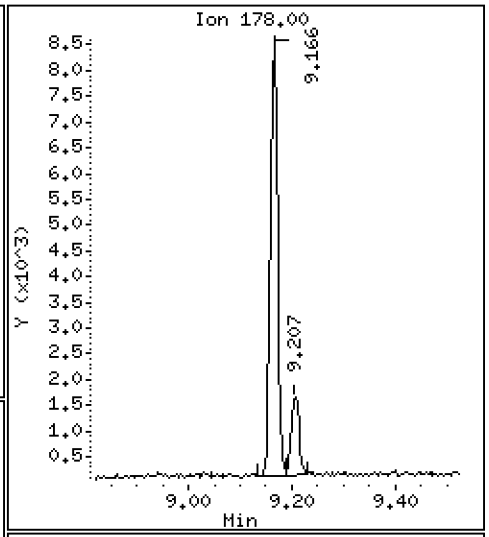
Concentration: 2.531 ug/mL

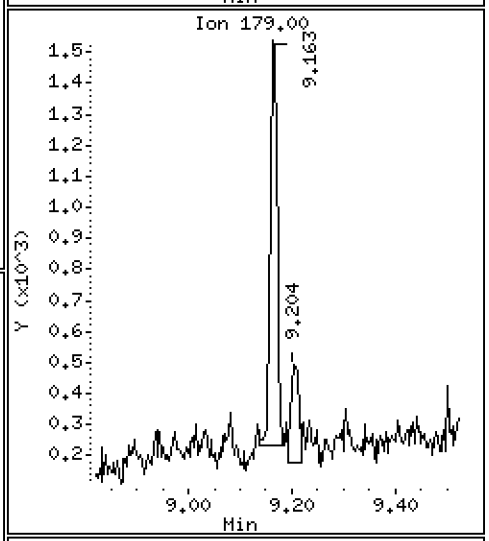


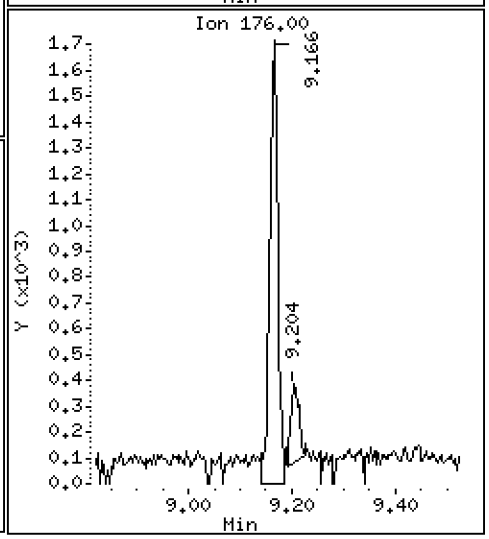












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

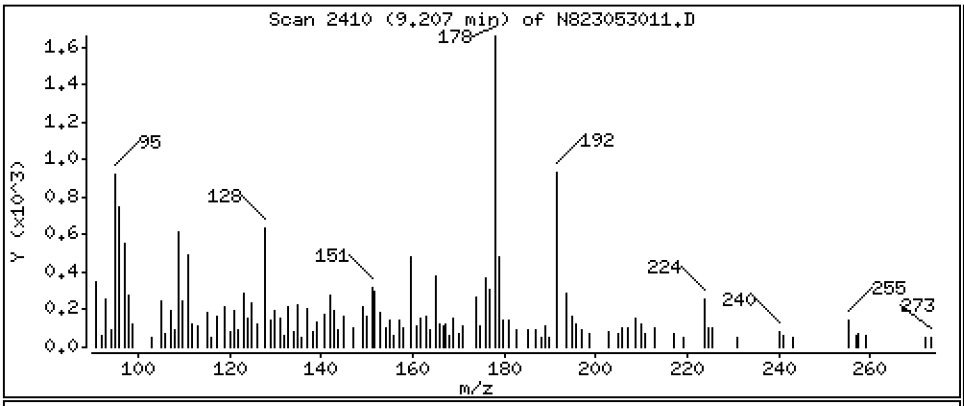
Operator: JZ

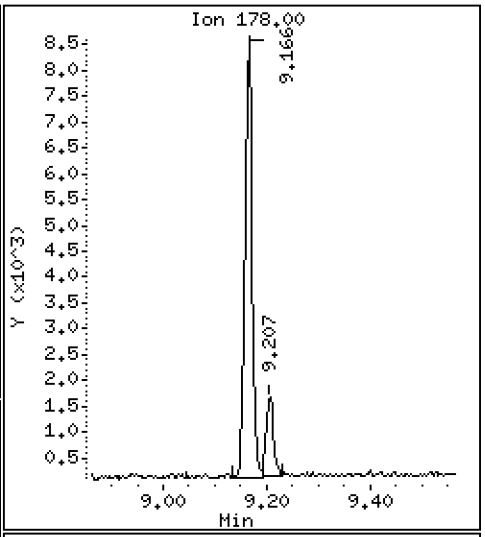
Column phase: Rxi-17sil

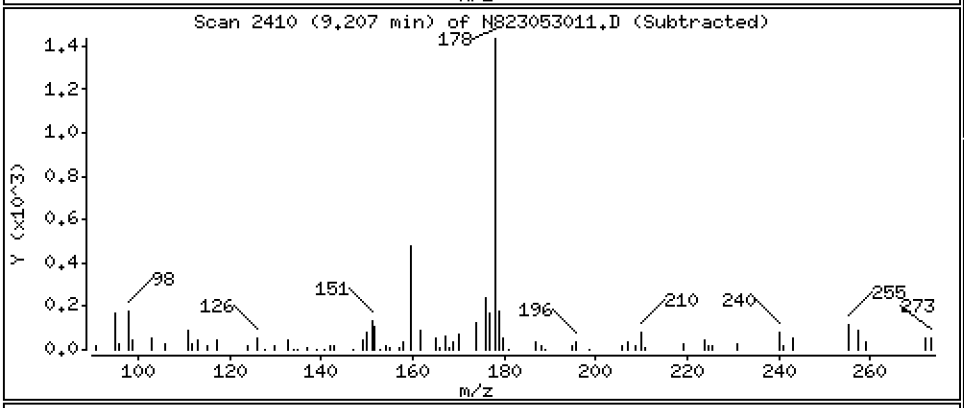
Column diameter: 0.25

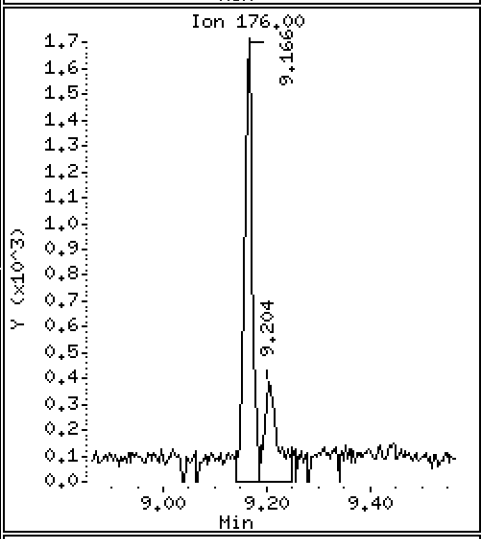
17 Anthracene

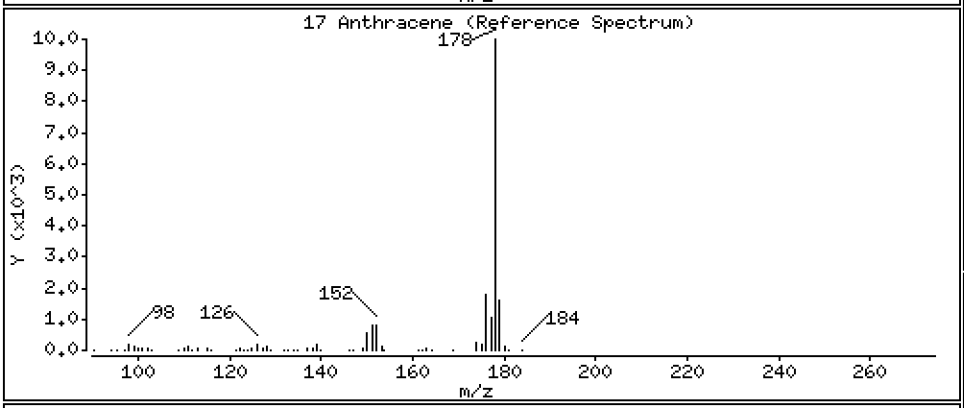
Concentration: 0.5300 ug/mL

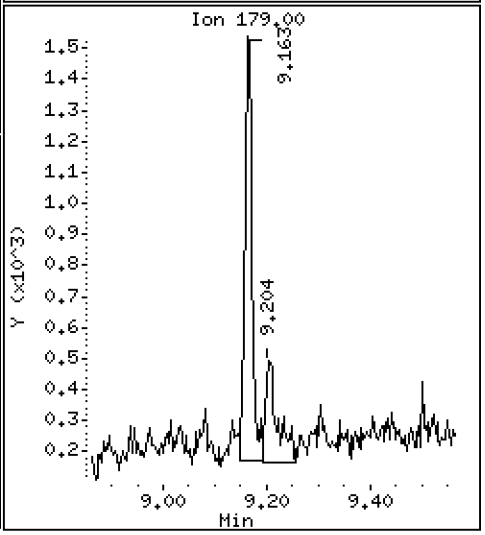


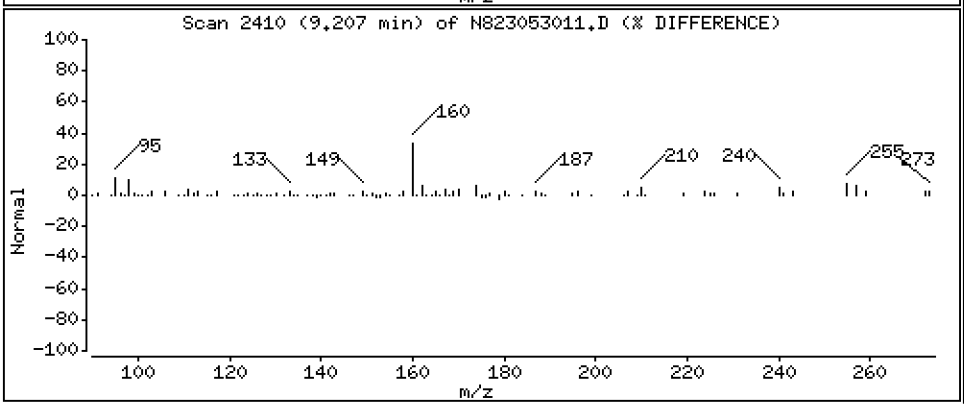












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

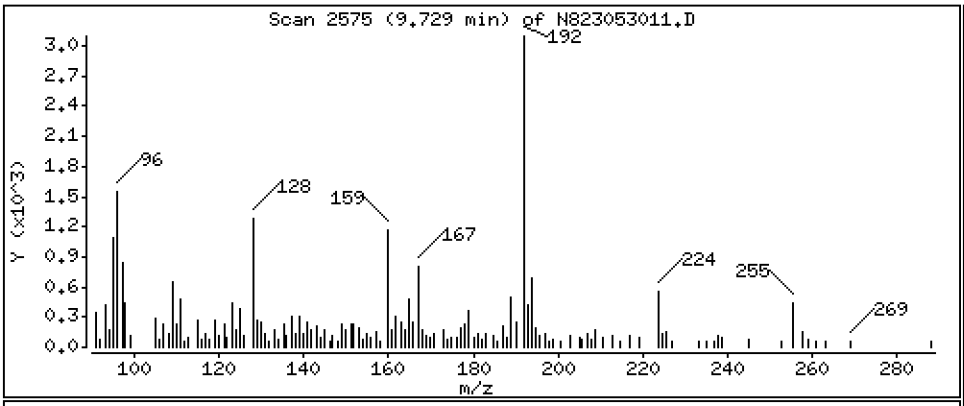
Operator: JZ

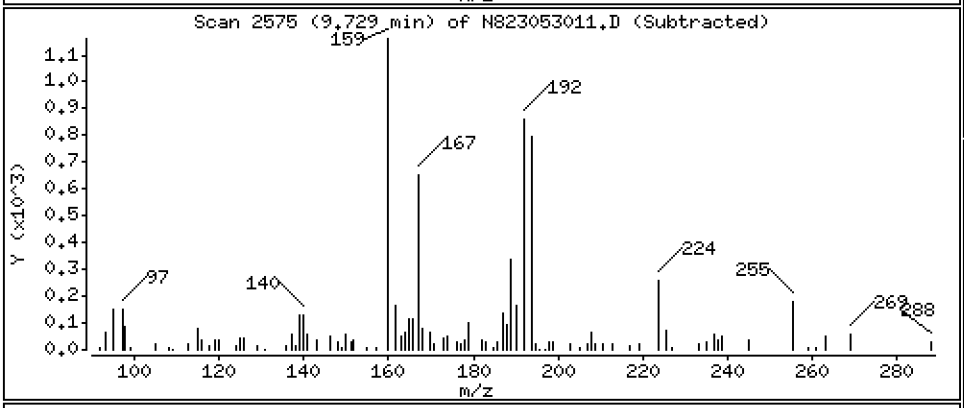
Column phase: Rxi-17sil

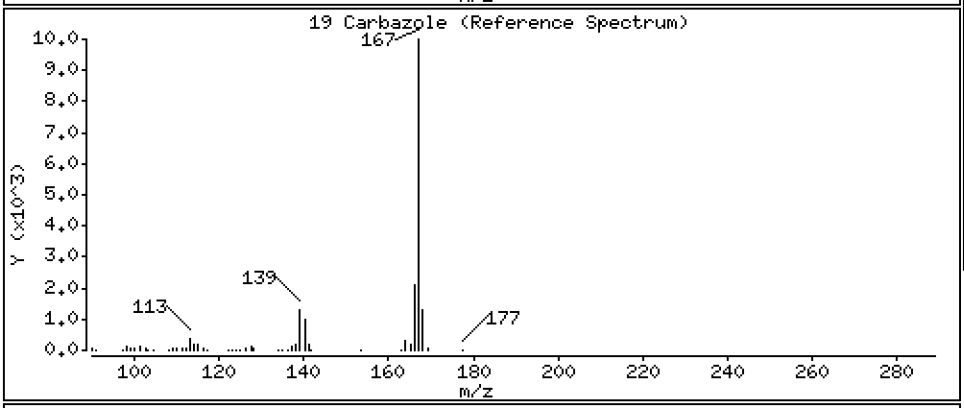
Column diameter: 0.25

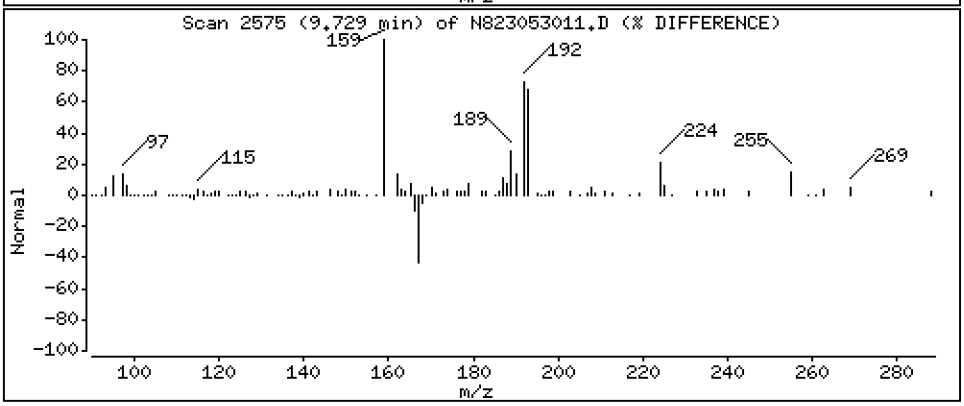
19 Carbazole

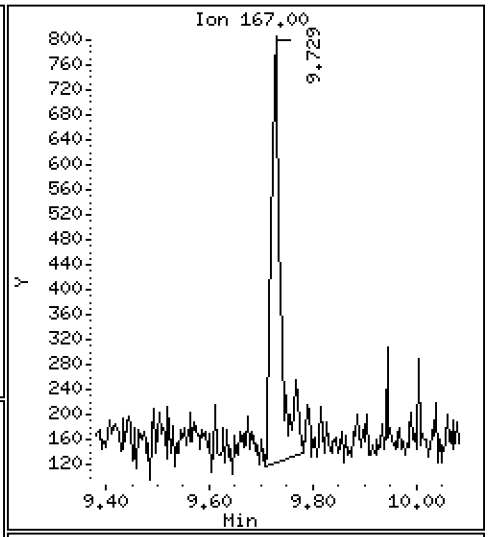
Concentration: 0.3128 ug/mL

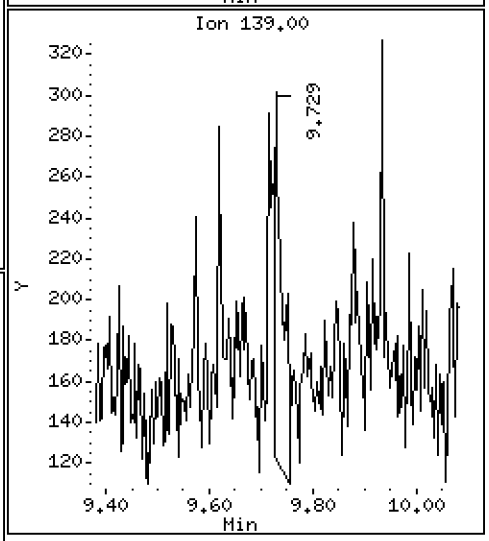












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

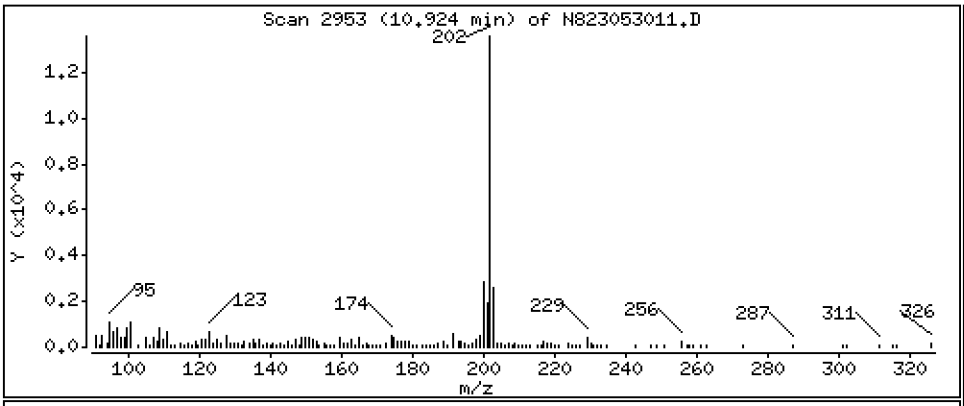
Operator: JZ

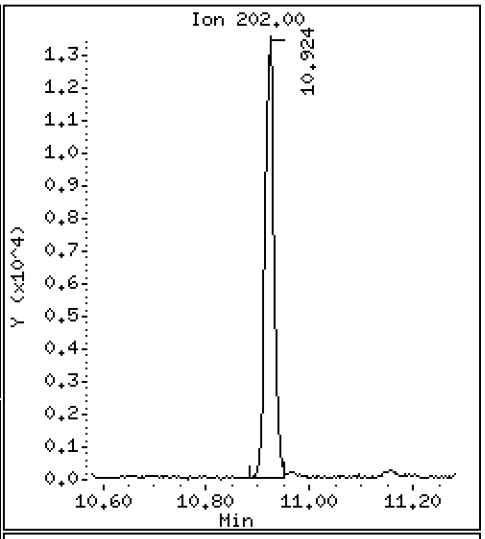
Column phase: Rxi-17sil

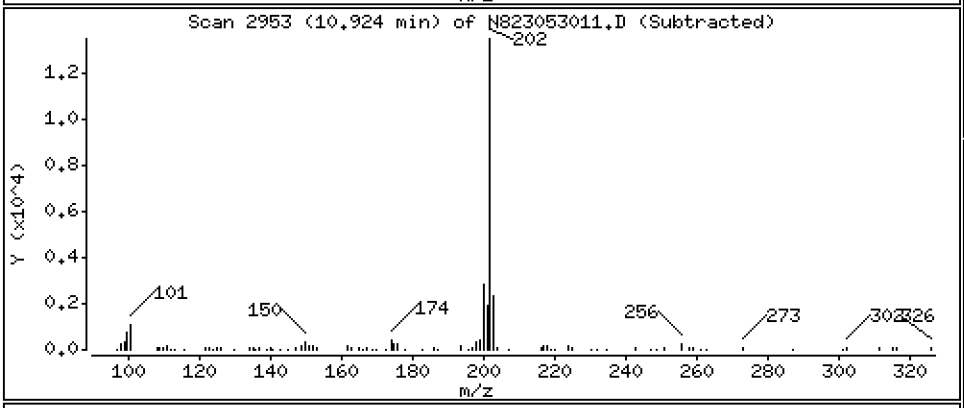
Column diameter: 0.25

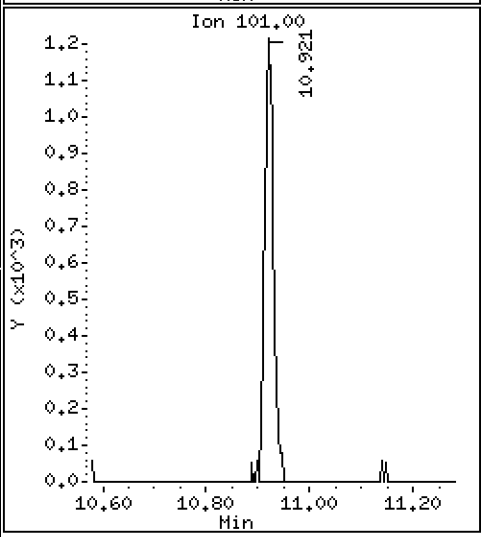
22 Fluoranthene

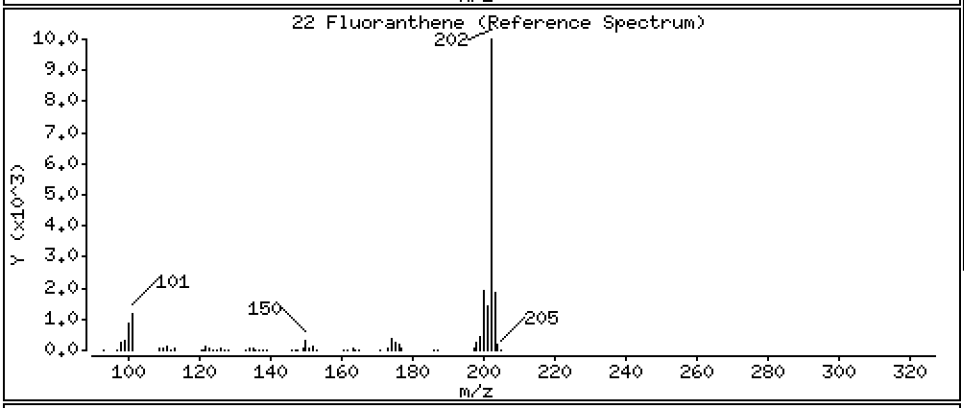
Concentration: 4.554 ug/mL

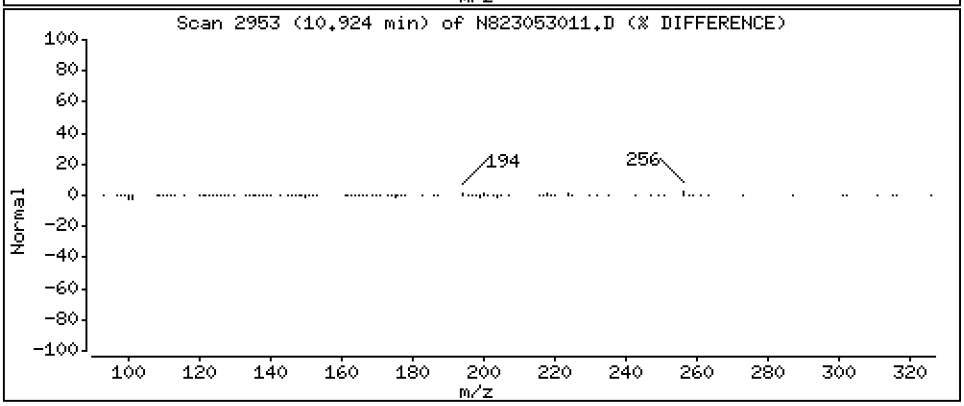












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

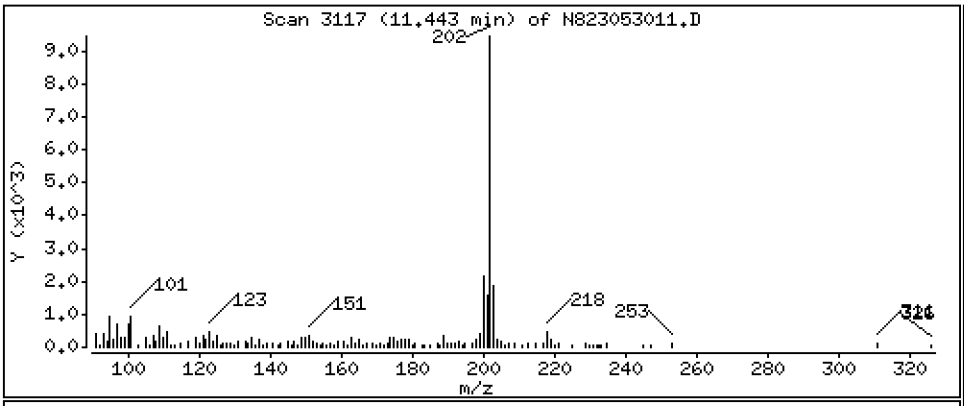
Operator: JZ

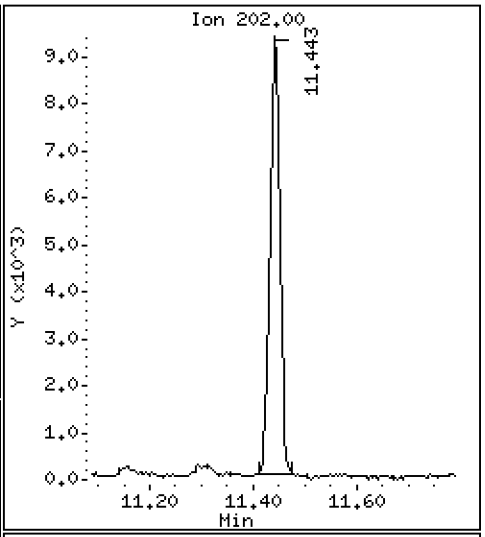
Column phase: Rxi-17sil

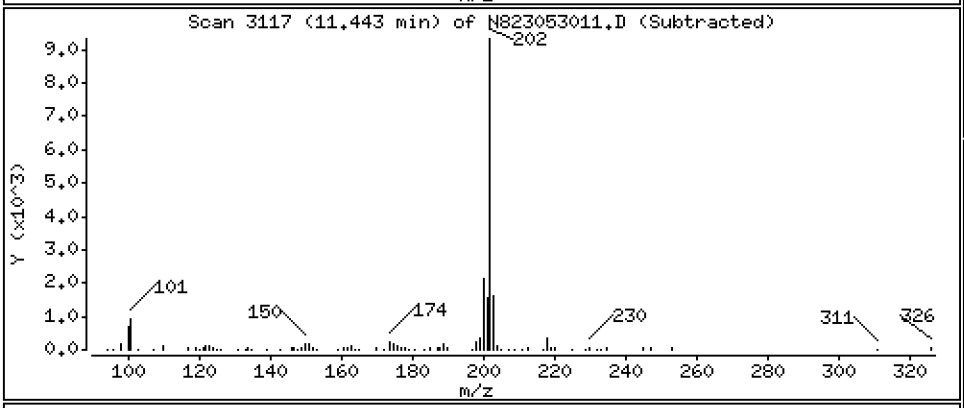
Column diameter: 0.25

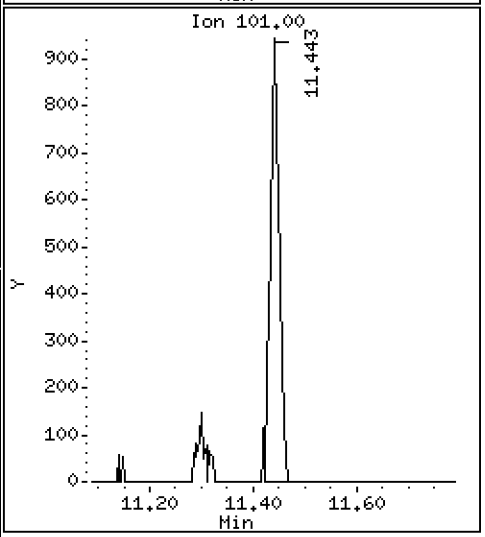
23 Pyrene

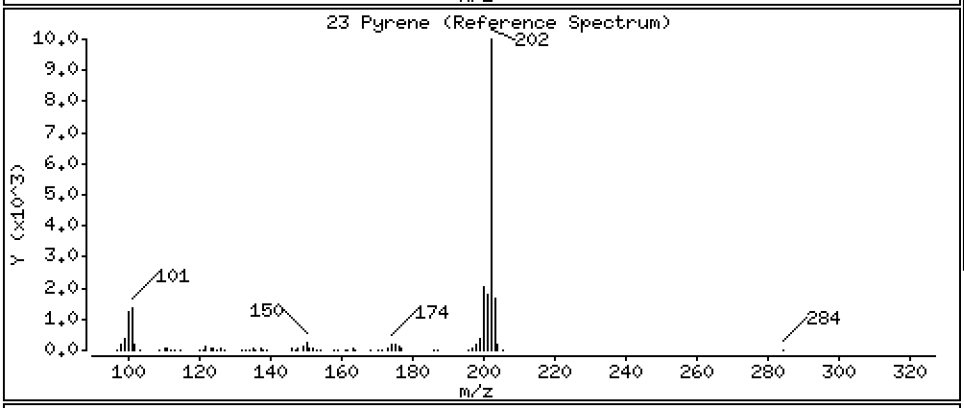
Concentration: 6.867 ug/mL

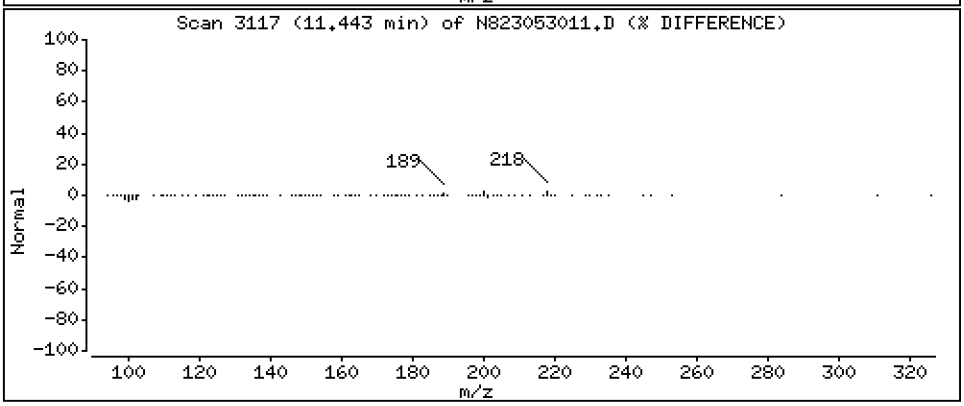












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053011.D

Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

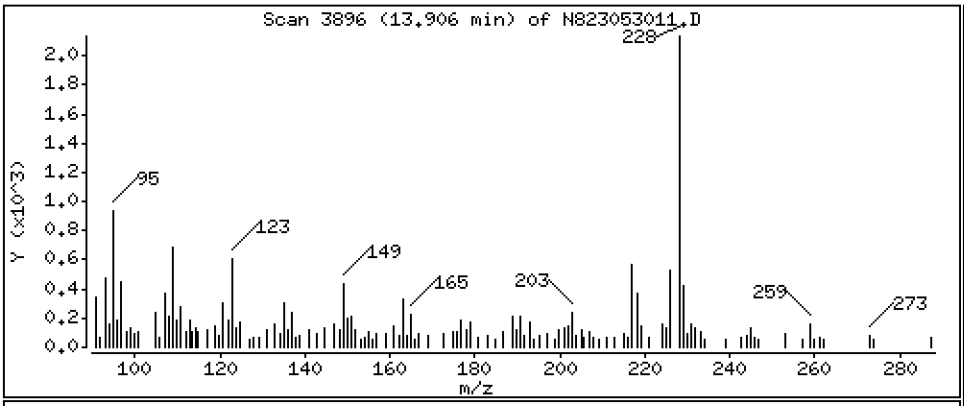
Operator: JZ

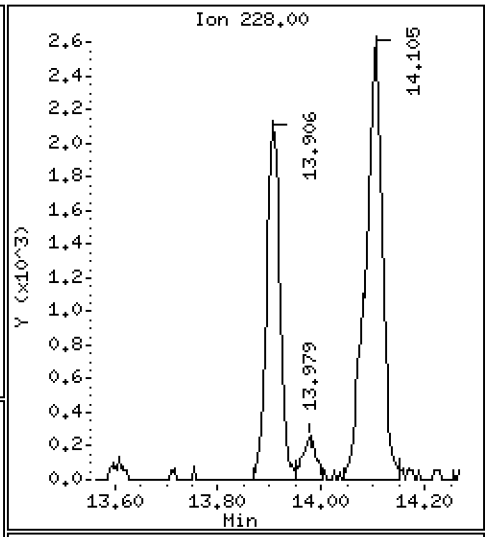
Column phase: Rxi-17sil

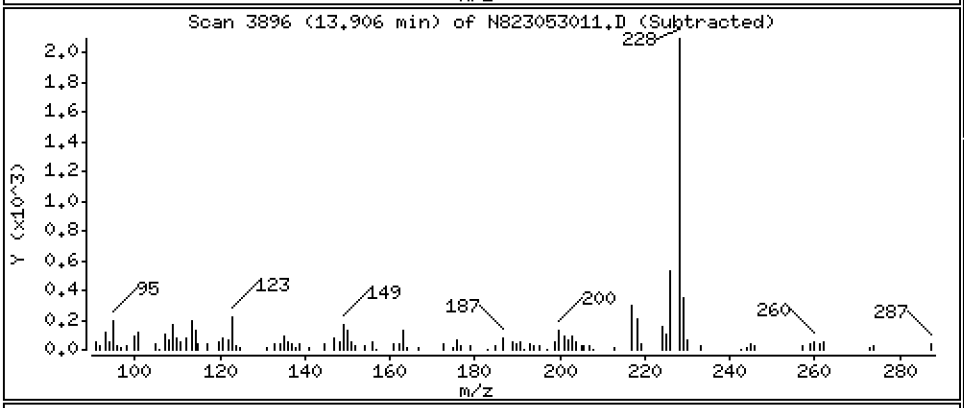
Column diameter: 0.25

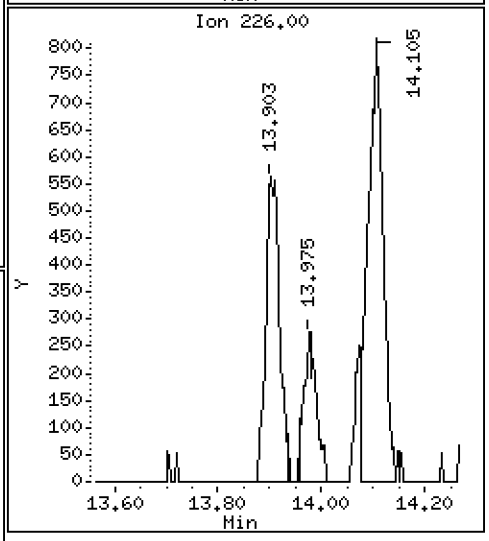
24 Benzo(a)anthracene

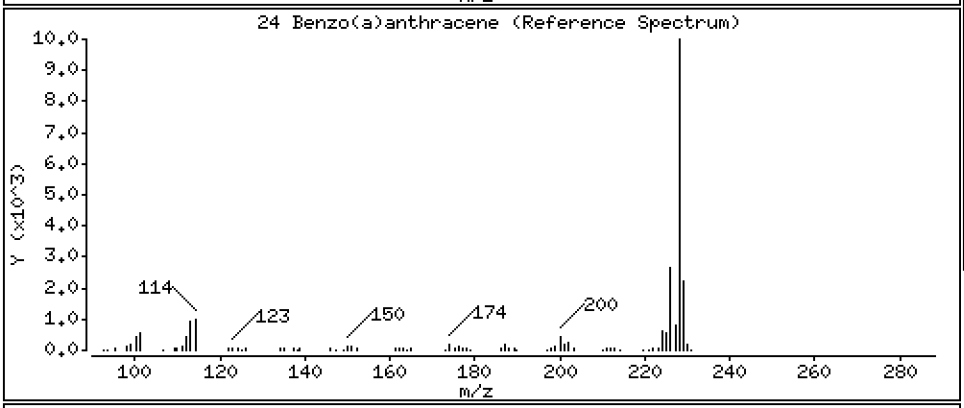
Concentration: 1.998 ug/mL

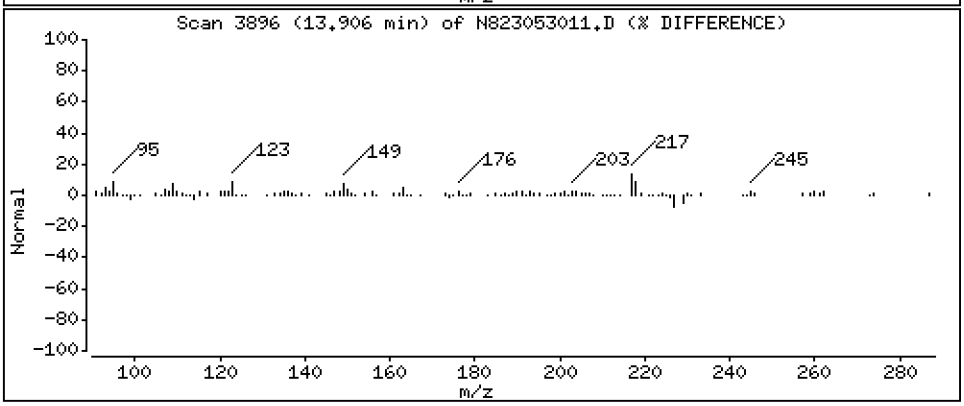












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

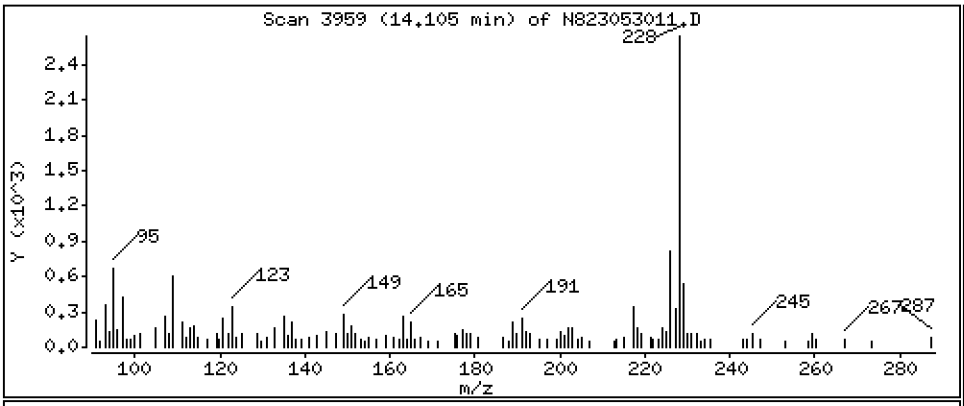
Operator: JZ

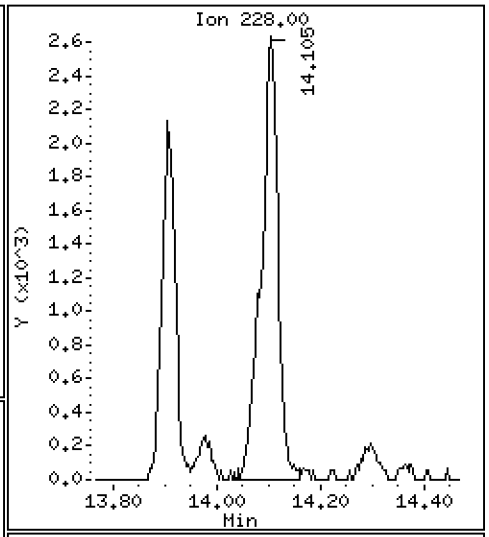
Column phase: Rxi-17sil

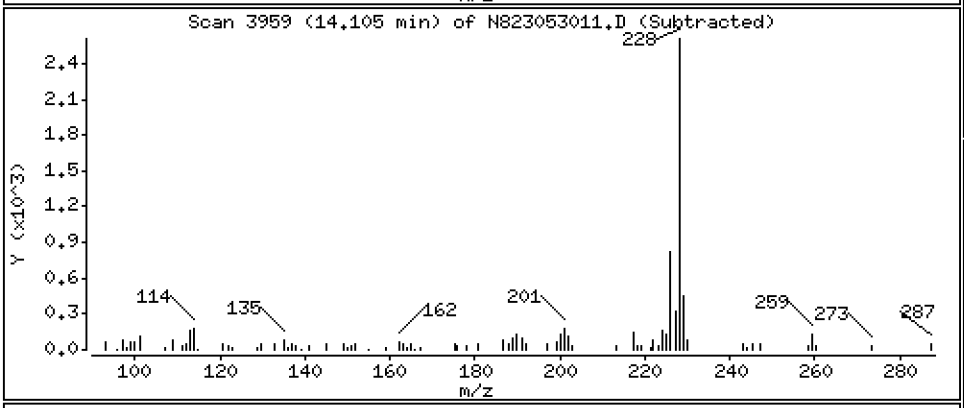
Column diameter: 0.25

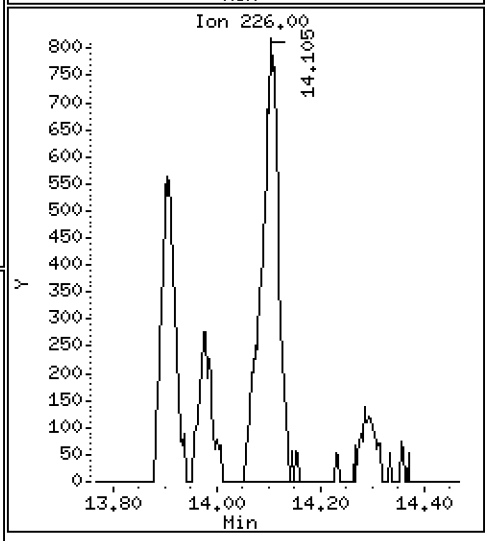
27 Chrysene

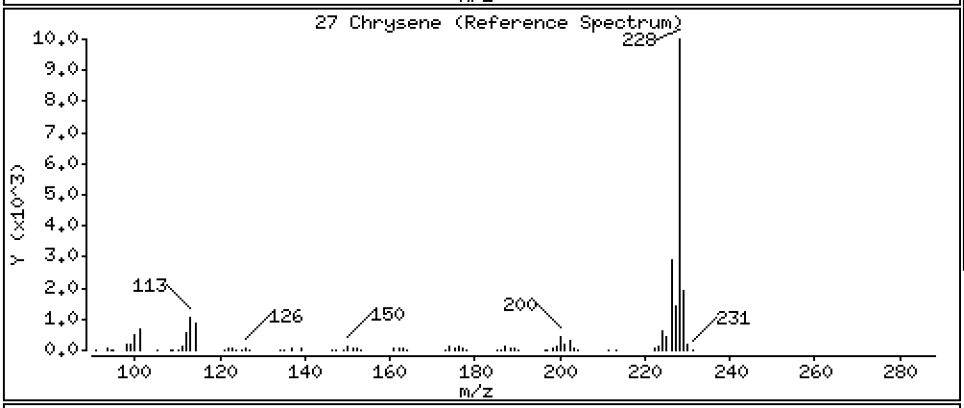
Concentration: 3.181 ug/mL

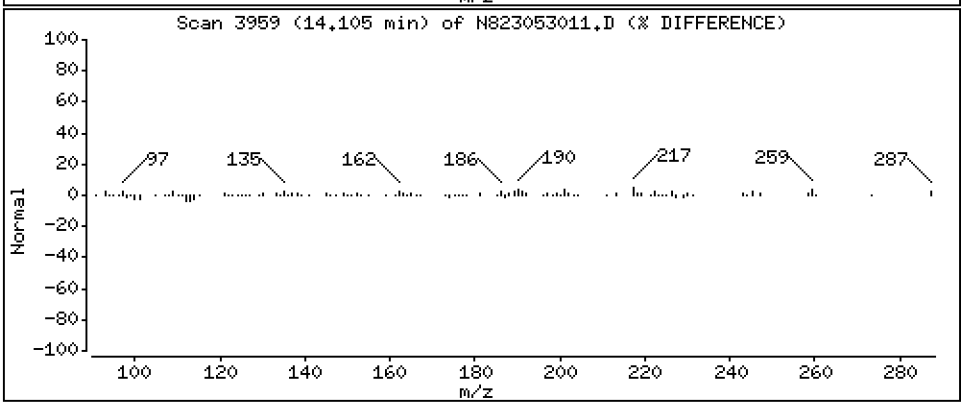












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

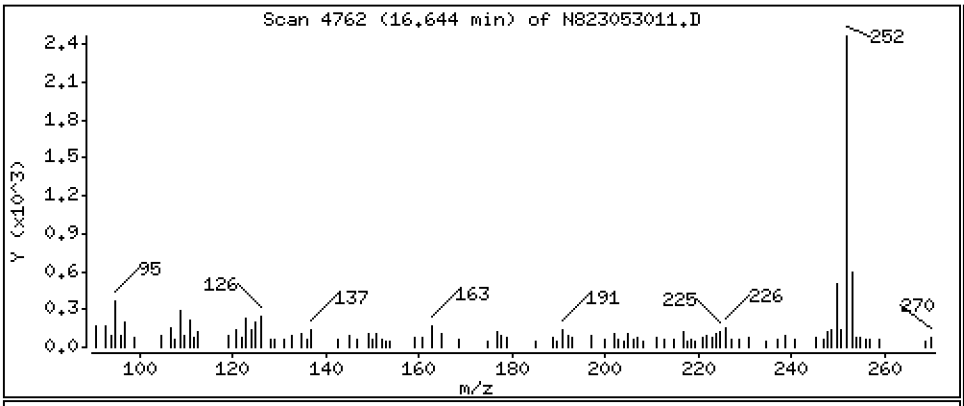
Operator: JZ

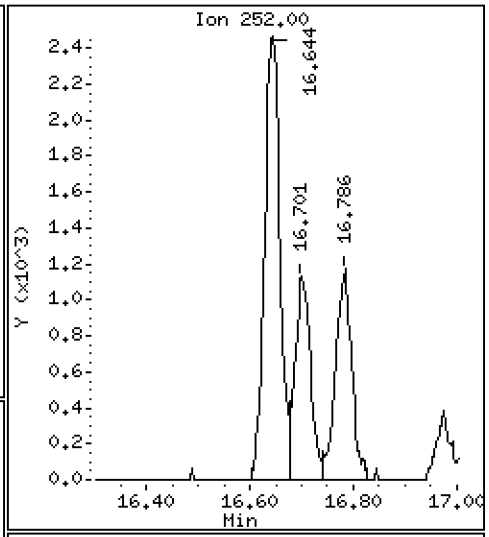
Column phase: Rxi-17sil

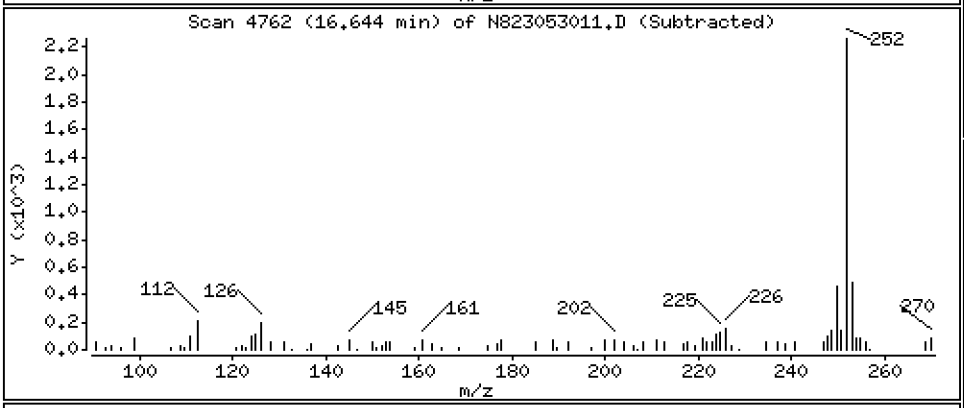
Column diameter: 0.25

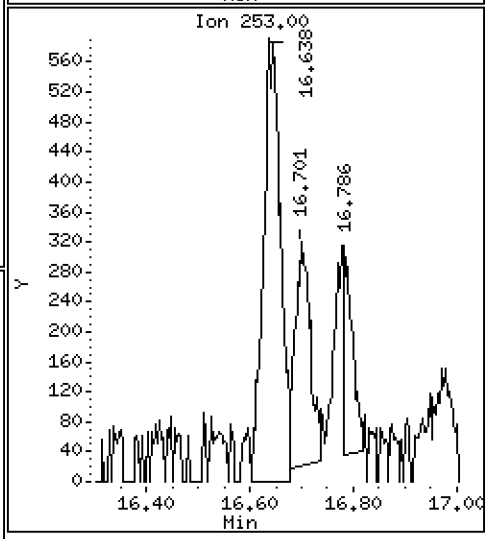
28 Benzo(b)fluoranthene

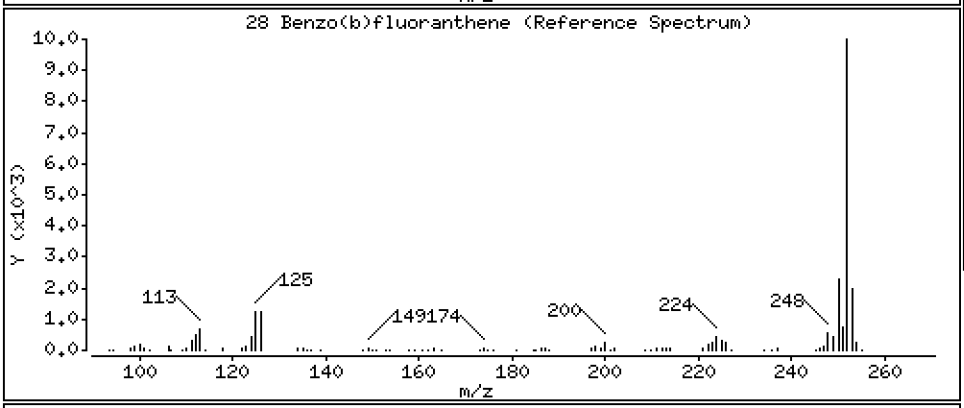
Concentration: 2.356 ug/mL

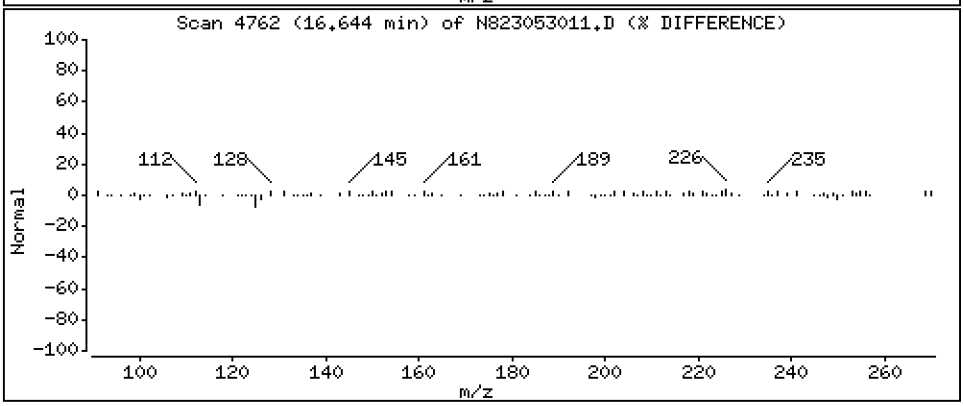












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

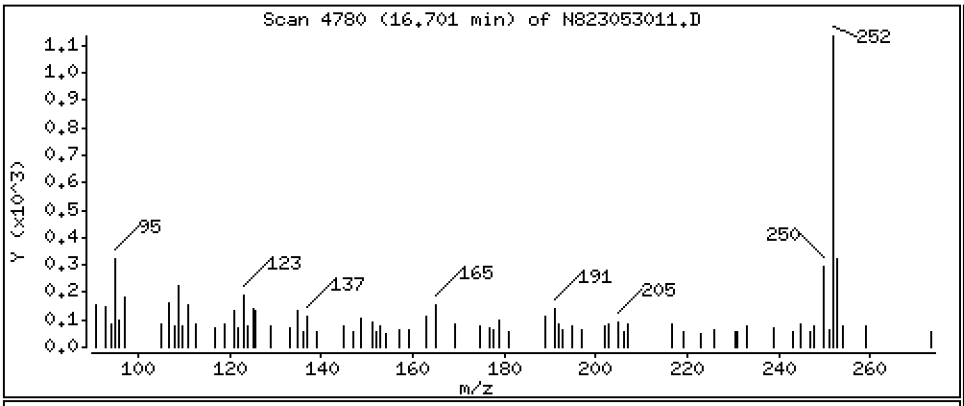
Operator: JZ

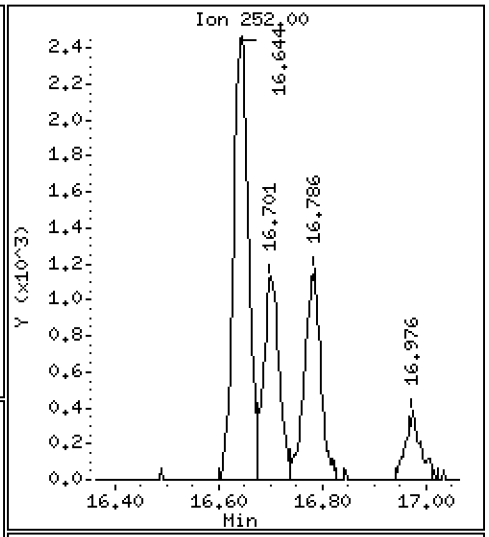
Column phase: Rxi-17sil

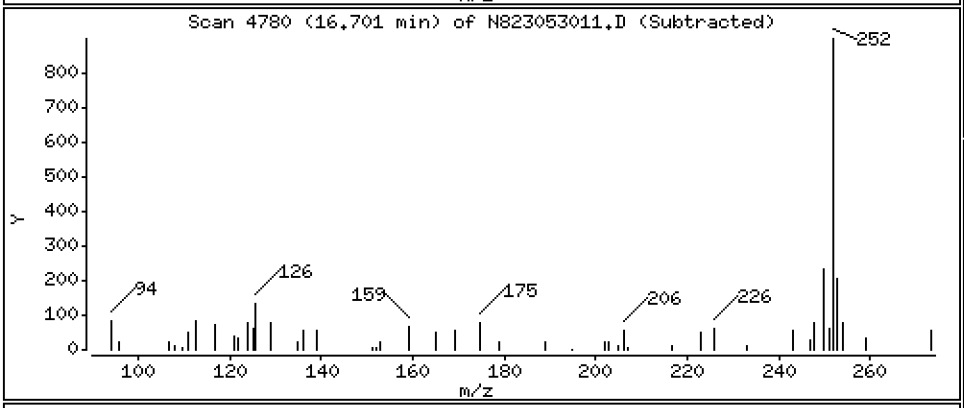
Column diameter: 0.25

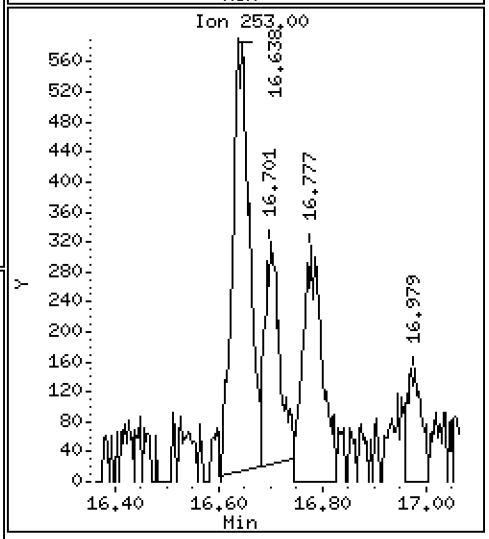
29 Benzo(k)fluoranthene

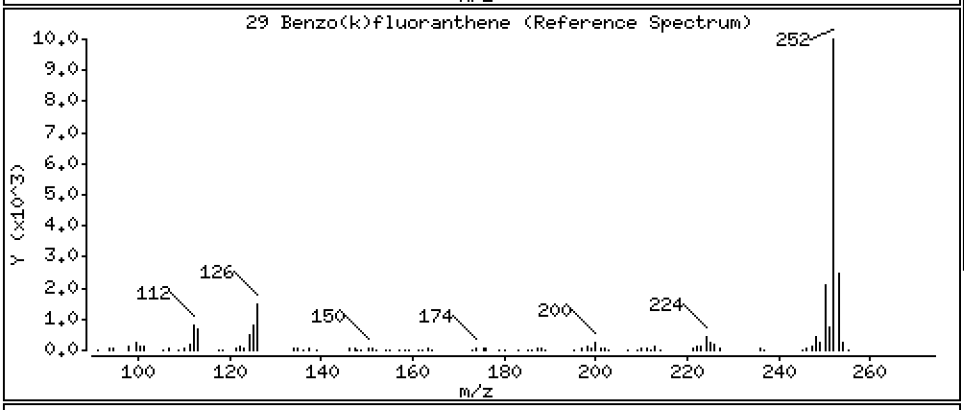
Concentration: 1.167 ug/mL

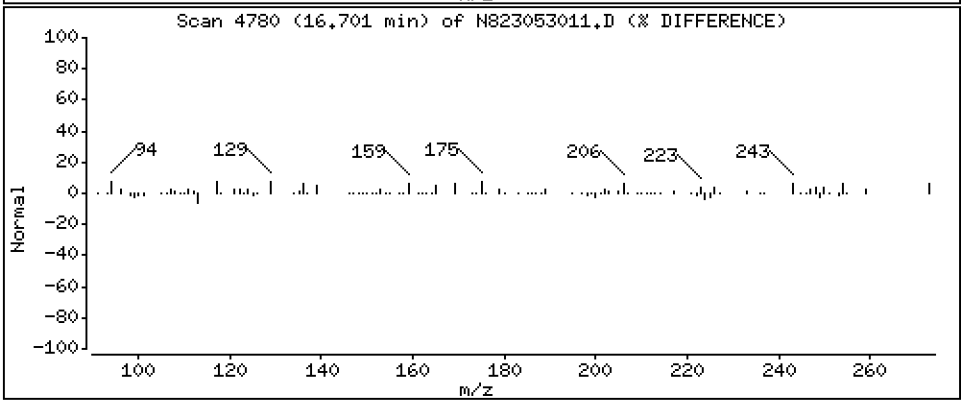












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

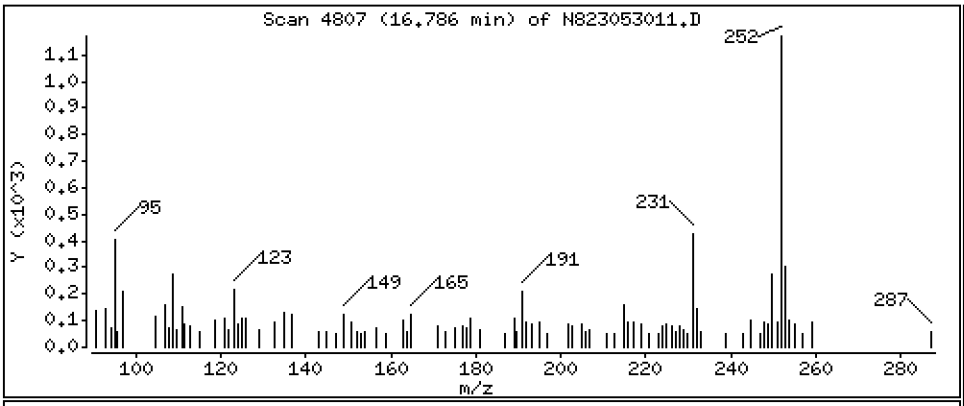
Operator: JZ

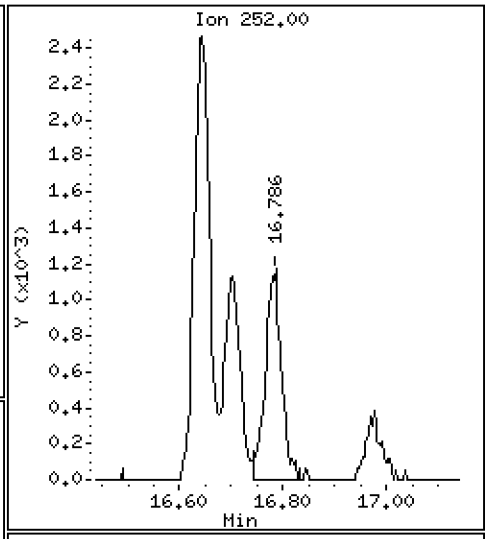
Column phase: Rxi-17sil

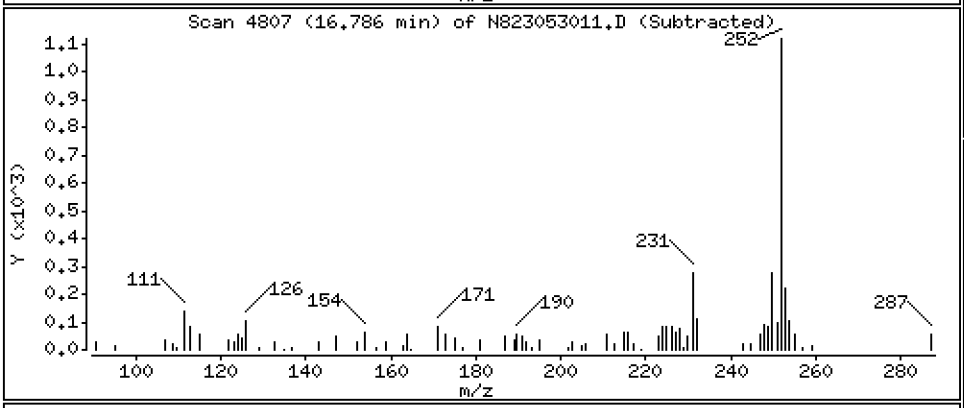
Column diameter: 0.25

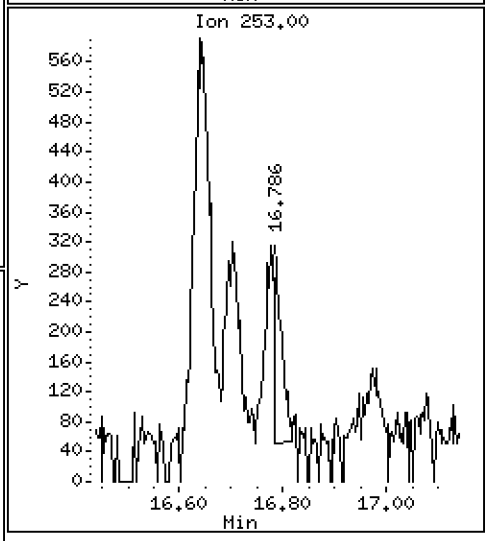
30 Benzo(j)fluoranthene

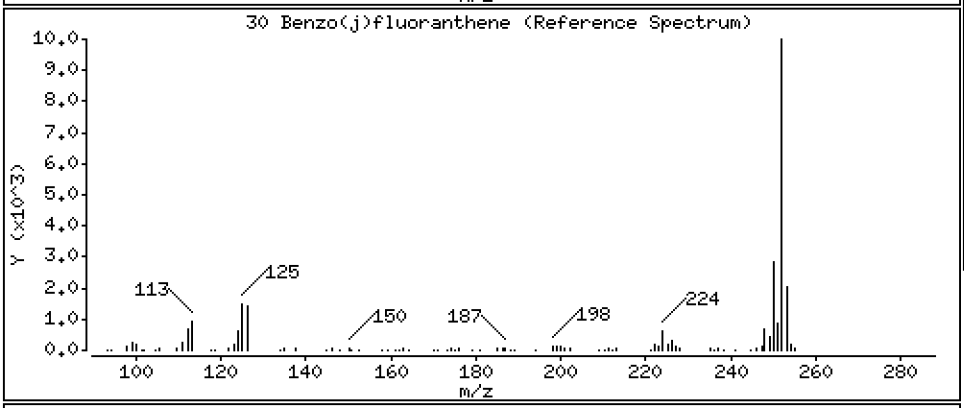
Concentration: 1.326 ug/mL

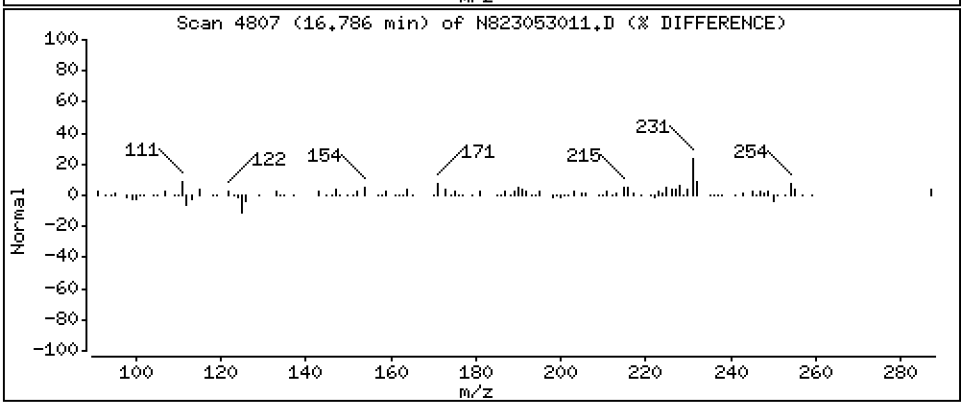












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

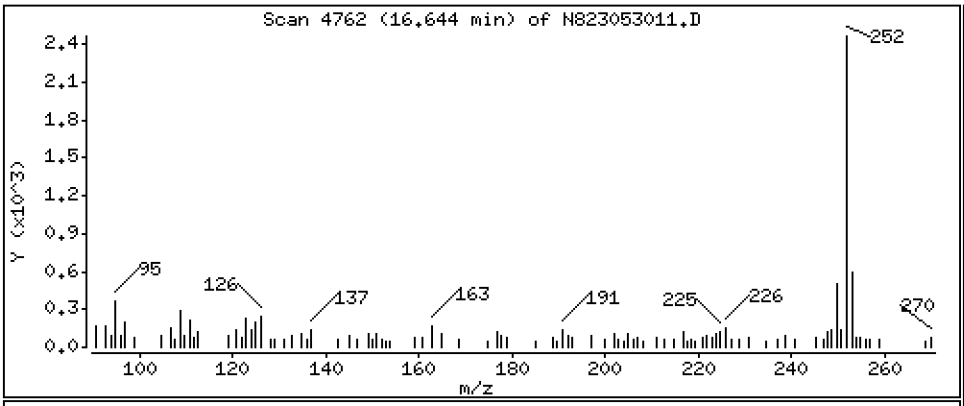
Operator: JZ

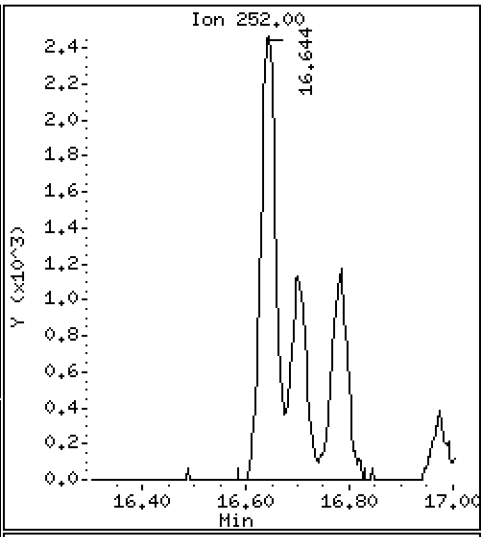
Column phase: Rxi-17sil

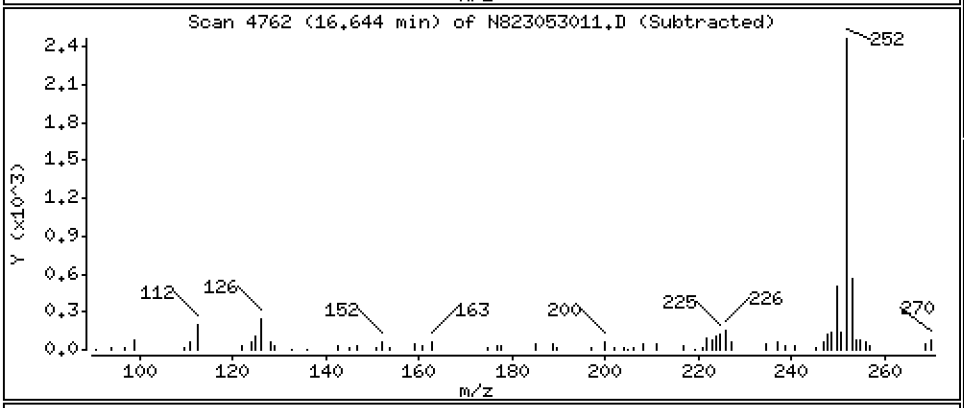
Column diameter: 0.25

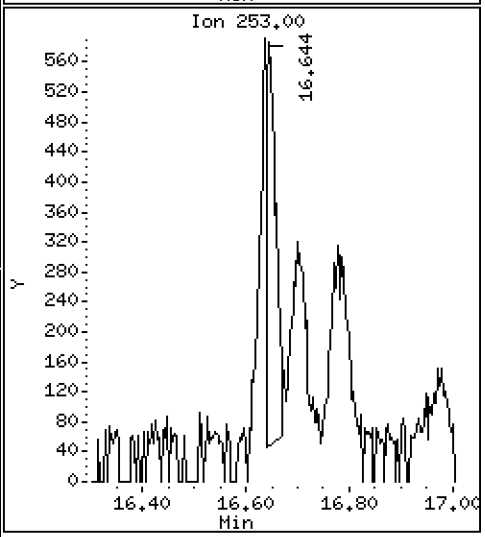
31 Total Benzofluoranthenes

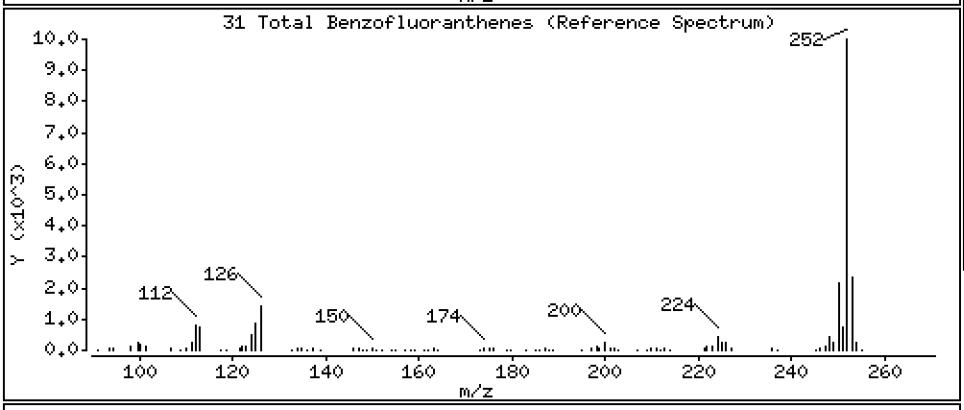
Concentration: 4.890 ug/mL

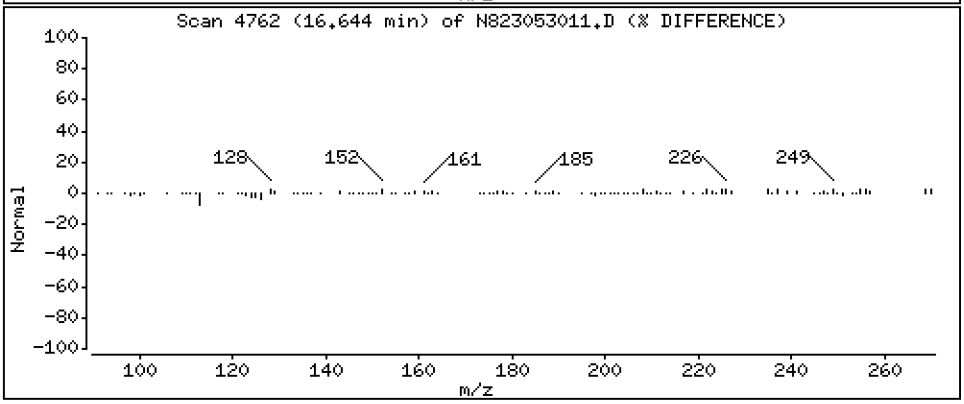












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

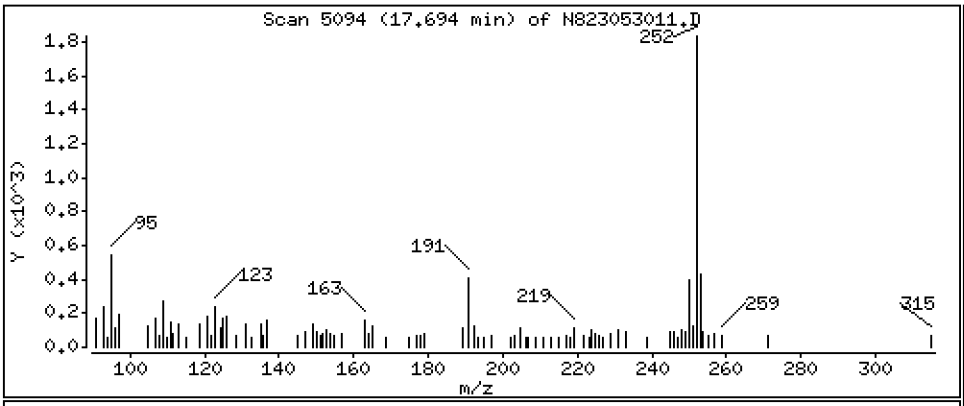
Operator: JZ

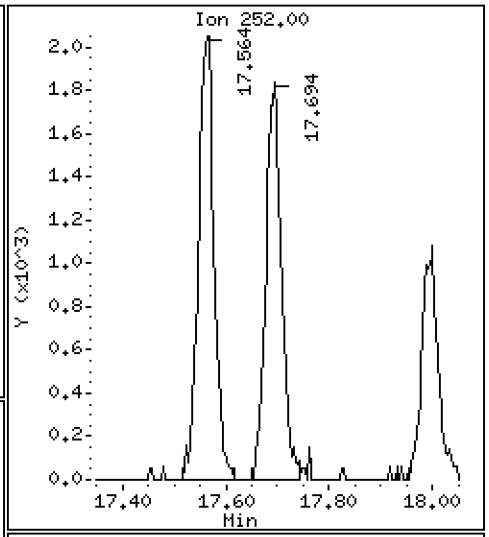
Column phase: Rxi-17sil

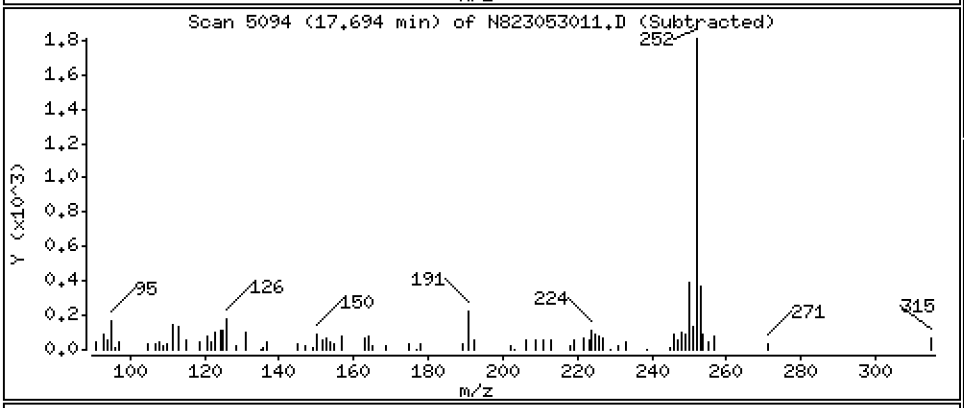
Column diameter: 0.25

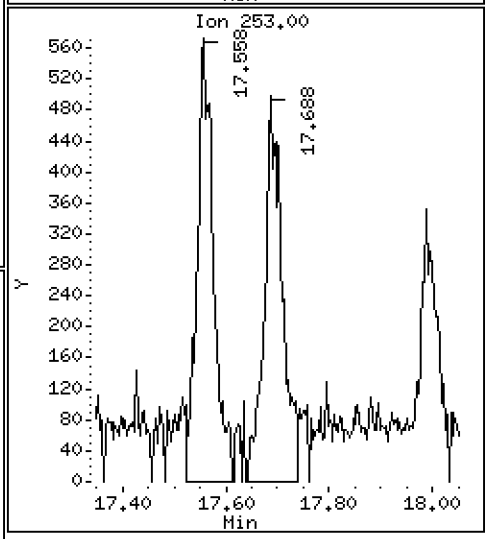
32 Benzo(a)pyrene

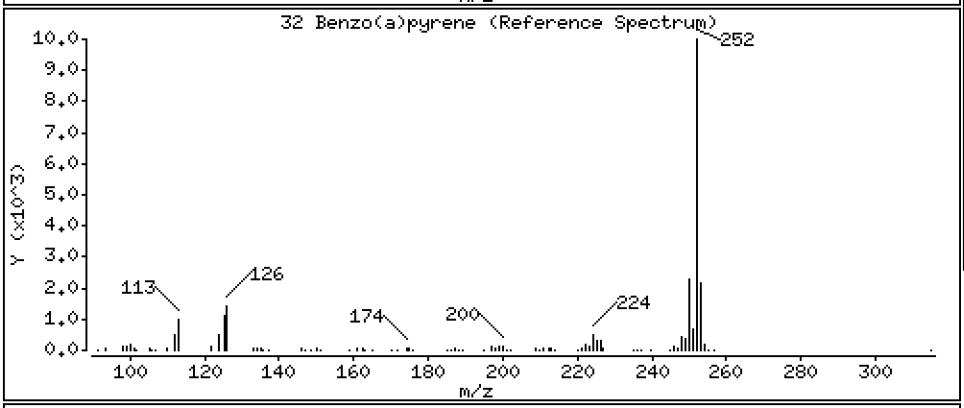
Concentration: 2.055 ug/mL

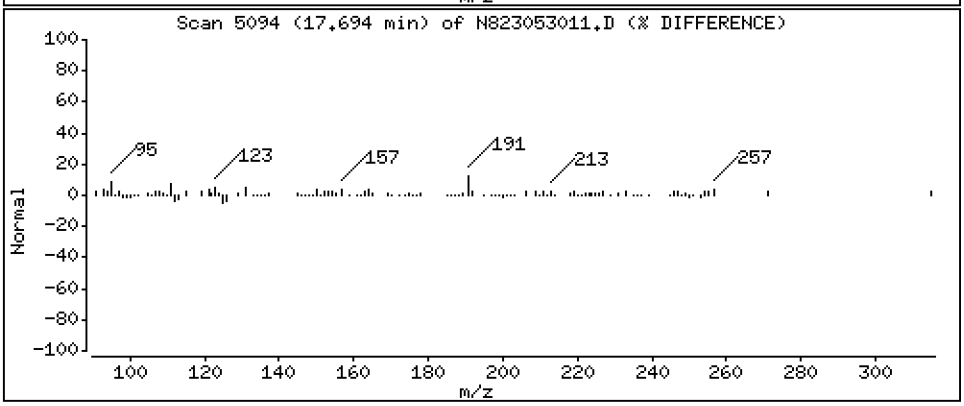












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

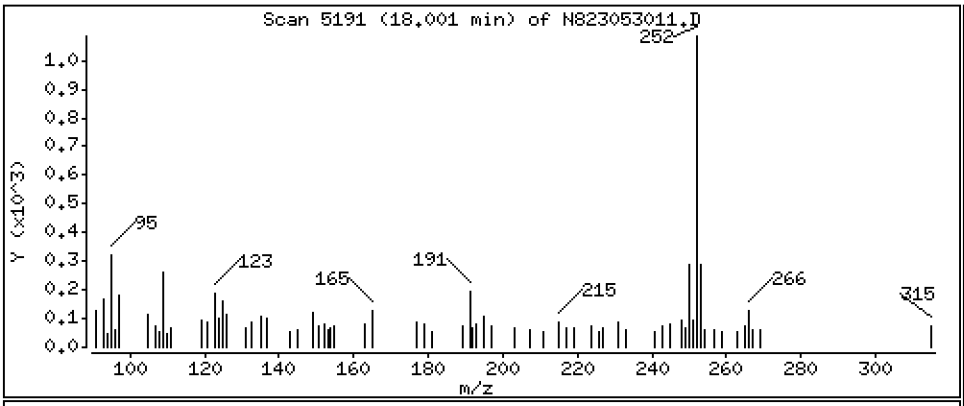
Operator: JZ

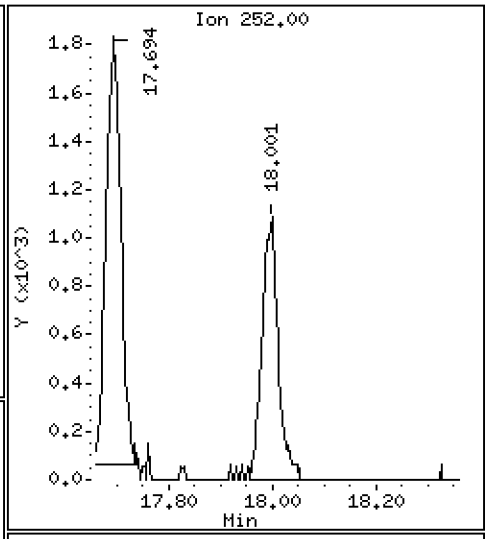
Column phase: Rxi-17sil

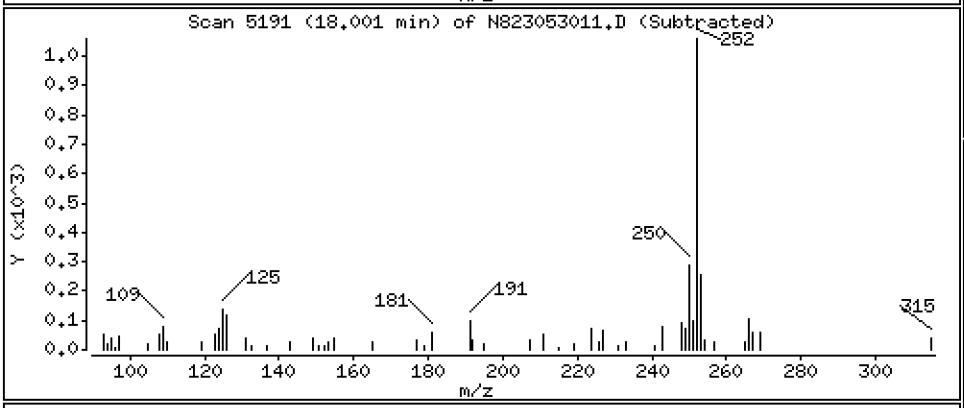
Column diameter: 0.25

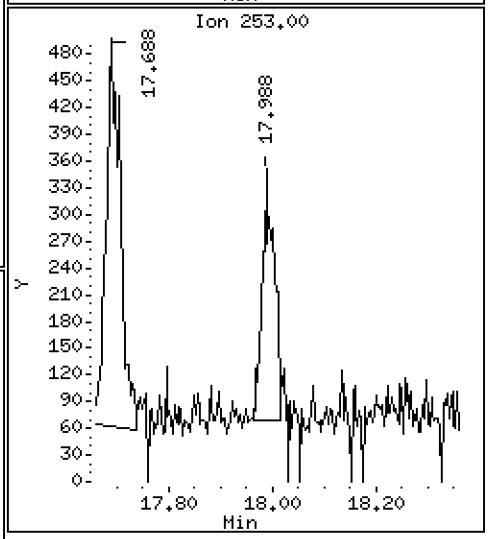
35 Perylene

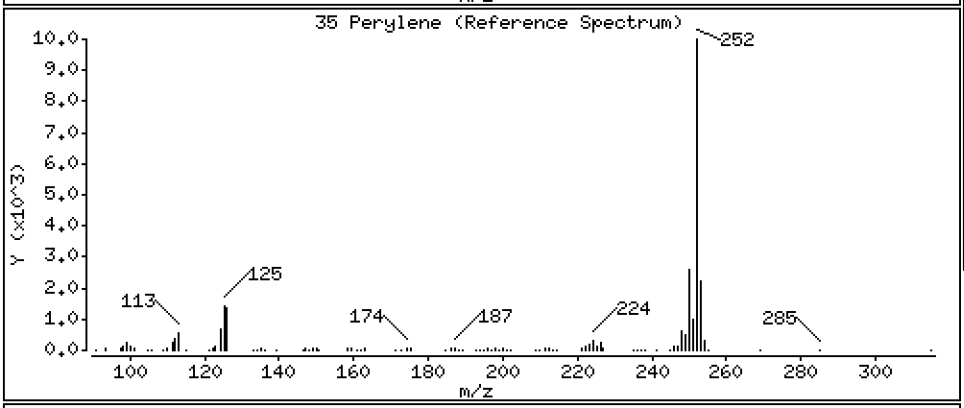
Concentration: 1.225 ug/mL

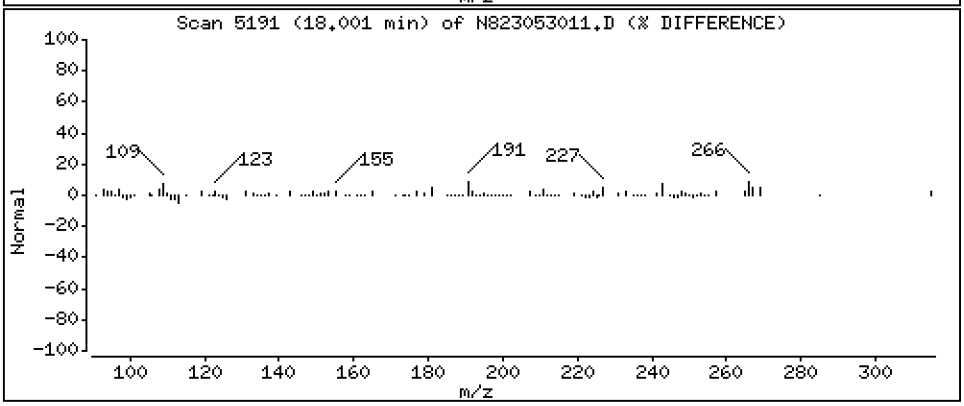












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Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

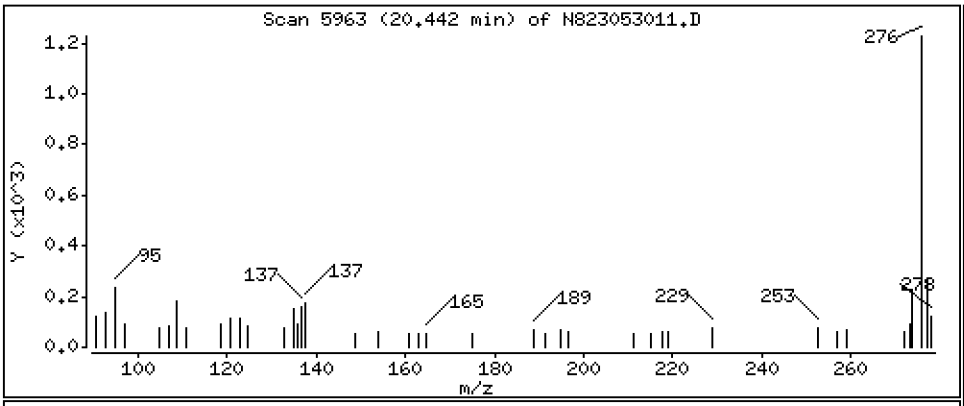
Operator: JZ

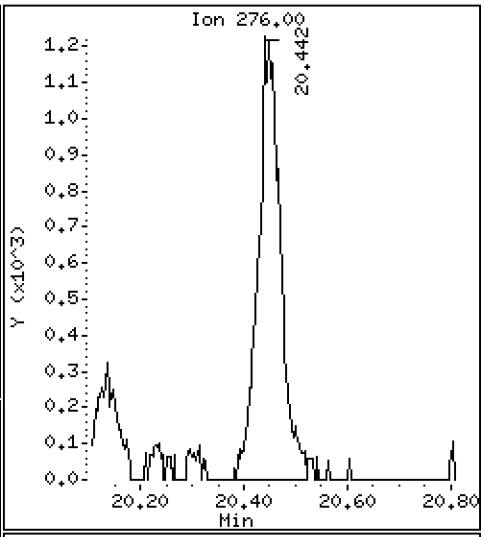
Column phase: Rxi-17sil

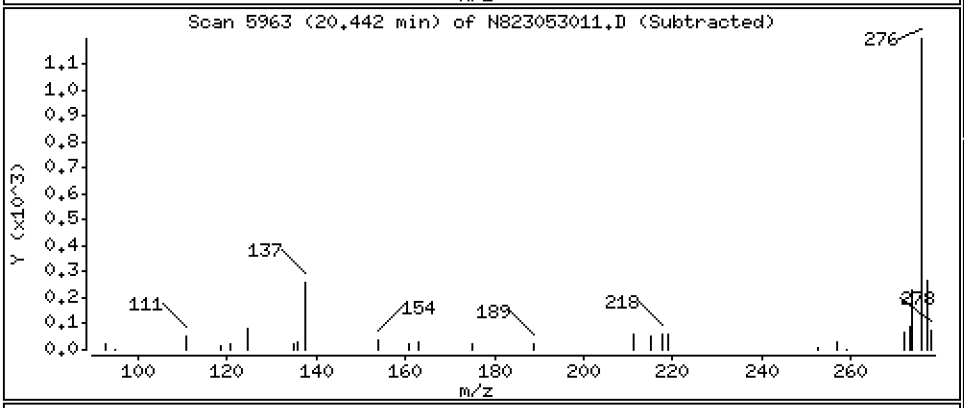
Column diameter: 0.25

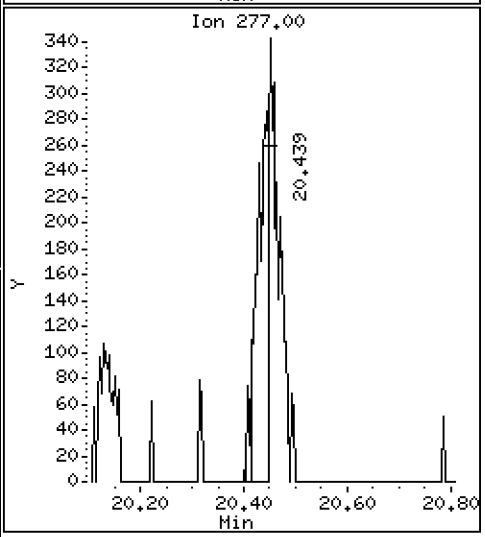
37 Indeno(1,2,3-cd)pyrene

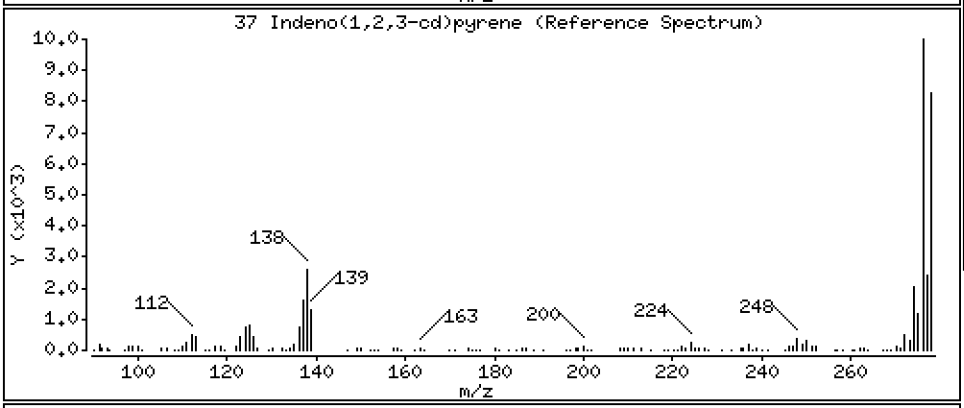
Concentration: 1.881 ug/mL

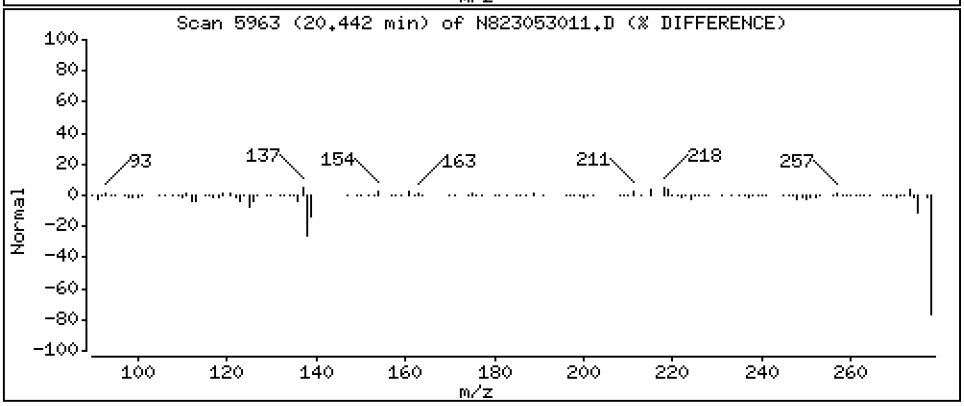












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053011.D

Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

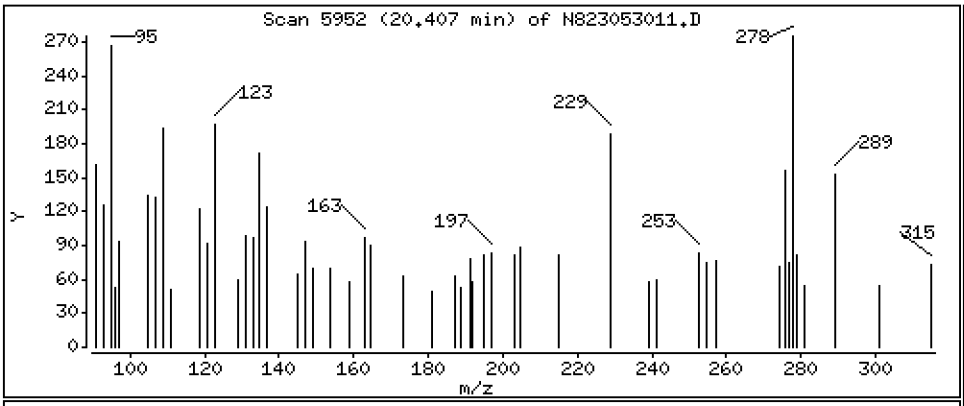
Operator: JZ

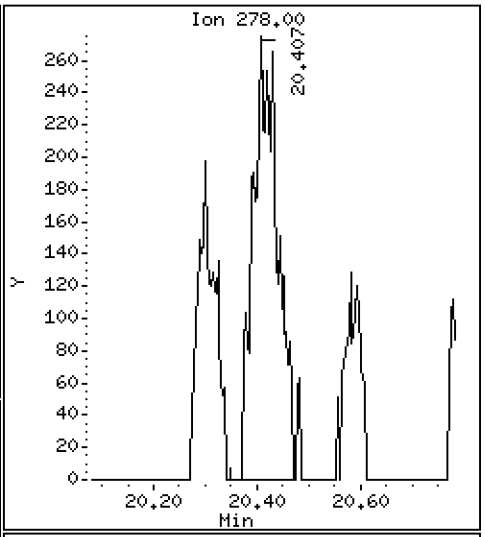
Column phase: Rxi-17sil

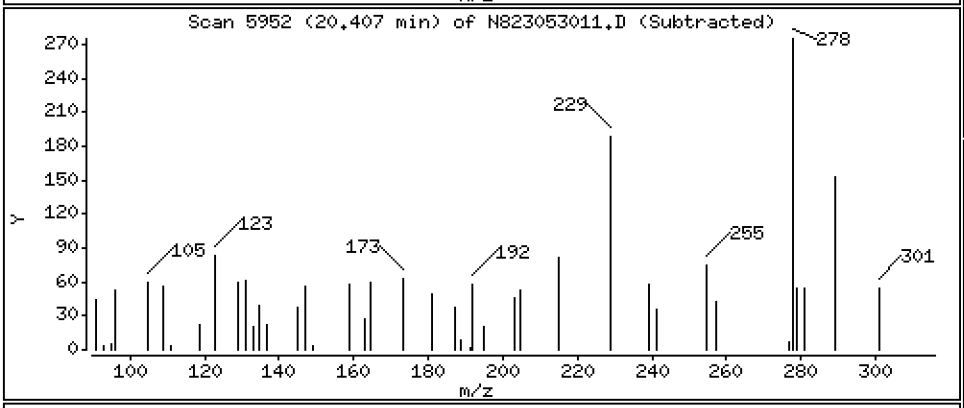
Column diameter: 0.25

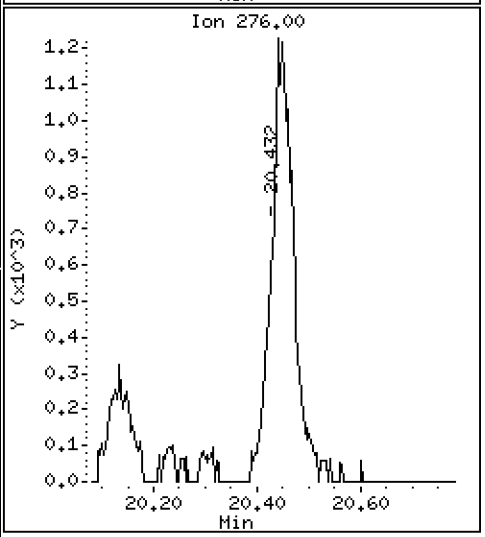
38 Dibenzo(a,h)anthracene

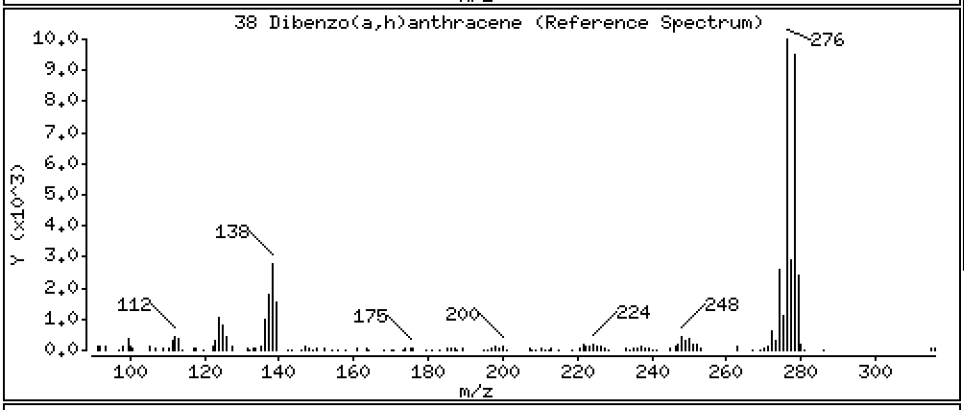
Concentration: 0.5242 ug/mL

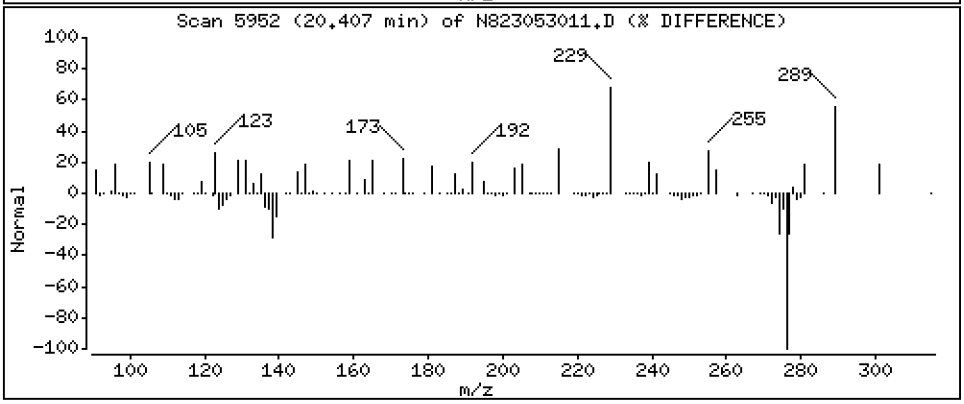












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053011.D

Date : 30-MAY-2023 16:12

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-10,3

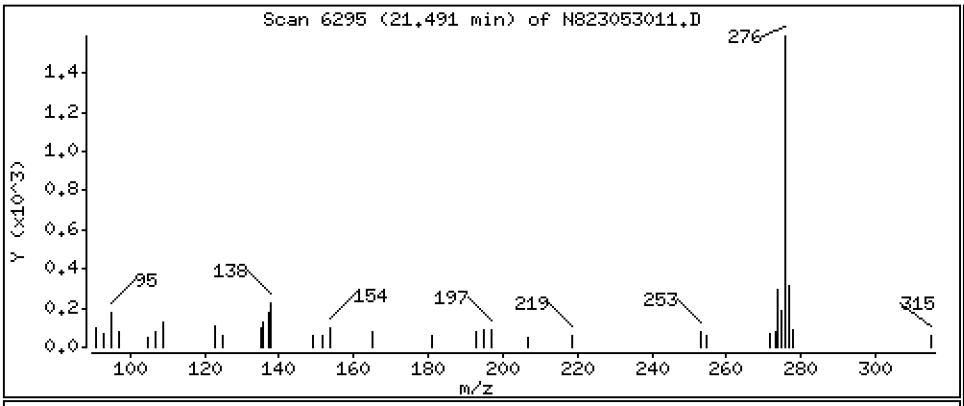
Operator: JZ

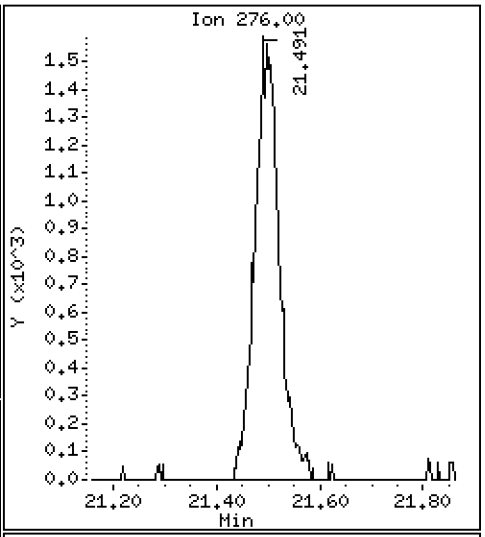
Column phase: Rxi-17sil

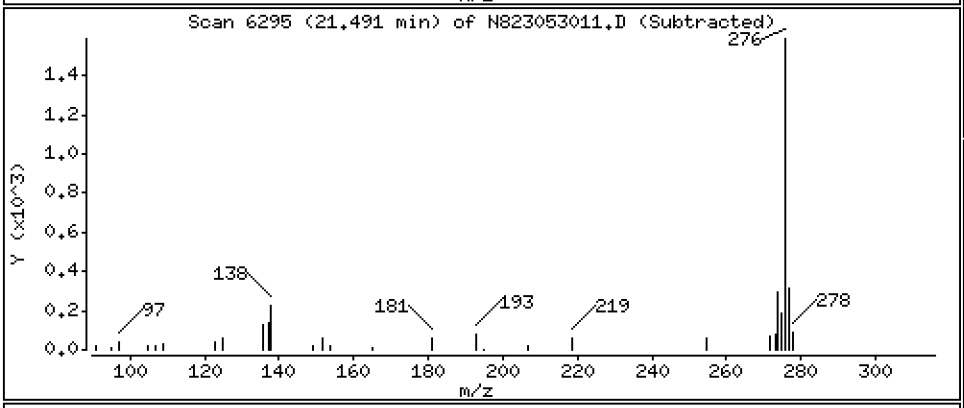
Column diameter: 0.25

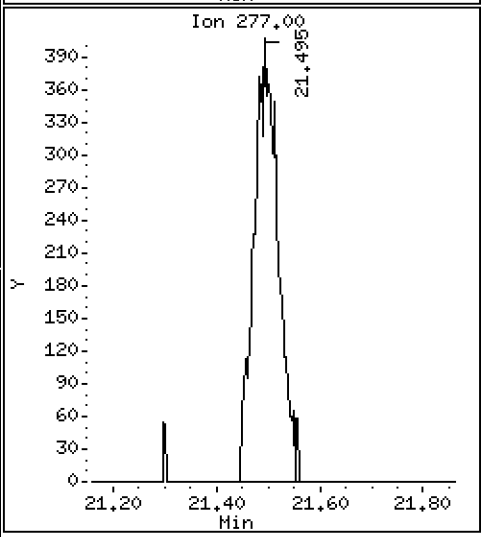
39 Benzo(g,h,i)perylene

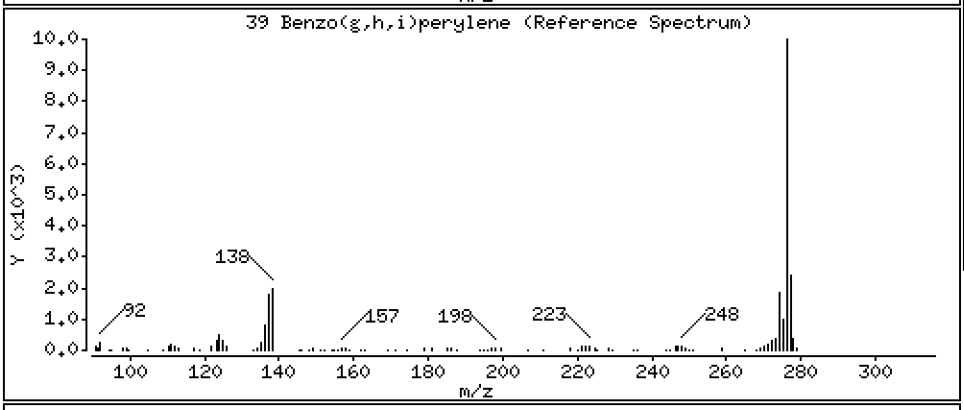
Concentration: 2.905 ug/mL

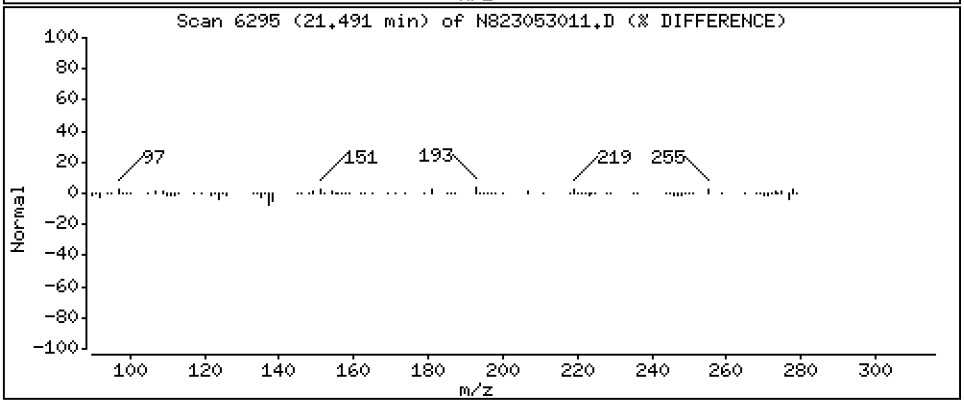












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230530.b\N823053011.D
Lab Smp Id: 23A0207-10
Inj Date : 30-MAY-2023 16:12
Operator : JZ Inst ID: nt8.i
Smp Info : 23A0207-10,3
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230530.b\FSIMPNA230426.m
Meth Date : 30-May-2023 19:51 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 11
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQINGZ-20191

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.808	4.815	(1.000)	17623	2.00000	
	2 Naphthalene	128	4.834	4.843	(1.005)	2391	0.26631	0.7989
$	3 2-Methylnaphthalene-d10	152	5.539	5.548	(1.152)	4971	0.91331	2.740
	4 2-Methylnaphthalene	141	5.589	5.596	(1.162)	843	0.16537	0.4961
	5 1-methylnaphthalene	141	5.770	5.792	(1.200)	611	0.12089	0.3627(M)
	9 Acenaphthylene	152	6.984	6.990	(0.984)	890	0.10190	0.3057(M)
*	10 Acenaphthene-d10	164	7.094	7.101	(1.000)	9866	2.00000	
	11 Acenaphthene	153	7.142	7.148	(1.007)	577	0.10197	0.3059(M)
	12 Dibenzofuran	168	7.297	7.300	(1.029)	642	0.07554	0.2266
	14 Fluorene	166	7.771	7.777	(1.095)	759	0.11190	0.3357
*	15 Phenanthrene-d10	188	9.131	9.137	(1.000)	17866	2.00000	
	16 Phenanthrene	178	9.166	9.172	(1.004)	7983	0.84358	2.531
	17 Anthracene	178	9.207	9.213	(1.008)	1568	0.17667	0.5300
	19 Carbazole	167	9.728	9.732	(1.065)	884	0.10428	0.3128(M)
	22 Fluoranthene	202	10.924	10.930	(1.196)	16521	1.51790	4.554
$	21 Fluoranthene-d10	212	10.886	10.892	(1.192)	9637	0.99927	2.998
	23 Pyrene	202	11.442	11.439	(0.815)	12767	2.28892	6.867
	24 Benzo(a)anthracene	228	13.905	13.915	(0.991)	3818	0.66615	1.998
*	25 Chrysene-d12	240	14.032	14.044	(1.000)	8712	2.00000	
	27 Chrysene	228	14.105	14.117	(1.005)	5971	1.06047	3.181(M)
	28 Benzo(b)fluoranthene	252	16.644	16.653	(0.929)	5177	0.78539	2.356
	29 Benzo(k)fluoranthene	252	16.701	16.713	(0.932)	2415	0.38886	1.167
	30 Benzo(j)fluoranthene	252	16.786	16.789	(0.937)	2537	0.44213	1.326(M)
	31 Total Benzofluoranthenes	252	16.644	16.653	(0.929)	9992	1.63008	4.890(M)
	32 Benzo(a)pyrene	252	17.693	17.700	(0.987)	3925	0.68503	2.055
*	33 Perylene-d12	264	17.921	17.931	(1.000)	10111	2.00000	
	35 Perylene	252	18.000	18.010	(1.004)	2350	0.40845	1.225
$	36 Dibenzo(a,h)anthracene-d14	292	20.305	20.315	(1.133)	5843	1.51364	4.541
	37 Indeno(1,2,3-cd)pyrene	276	20.441	20.457	(1.141)	3657	0.62702	1.881(M)
	38 Dibenzo(a,h)anthracene	278	20.406	20.432	(1.139)	905	0.17474	0.5242(M)
	39 Benzo(g,h,i)perylene	276	21.491	21.510	(1.199)	5232	0.96843	2.905

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823053011.D
Lab Smp Id: 23A0207-10
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230530.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 30-MAY-2023
Calibration Time: 11:43
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	20199	10100	40398	17623	-12.75
10 Acenaphthene-d10	12041	6021	24082	9866	-18.06
15 Phenanthrene-d10	19182	9591	38364	17866	-6.86
25 Chrysene-d12	15943	7972	31886	8712	-45.36
33 Perylene-d12	14317	7159	28634	10111	-29.38

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.82	4.32	5.32	4.81	-0.13
10 Acenaphthene-d10	7.10	6.60	7.60	7.09	-0.09
15 Phenanthrene-d10	9.14	8.64	9.64	9.13	-0.07
25 Chrysene-d12	14.04	13.54	14.54	14.03	-0.09
33 Perylene-d12	17.93	17.43	18.43	17.92	-0.05

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

REVIEW SUMMARY FOR FILE - N823053011.D

Lab ID: 23A0207-10
nt8.i, 20230530.b\FSIMPNA230426.m,   30-MAY-2023 16:12

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

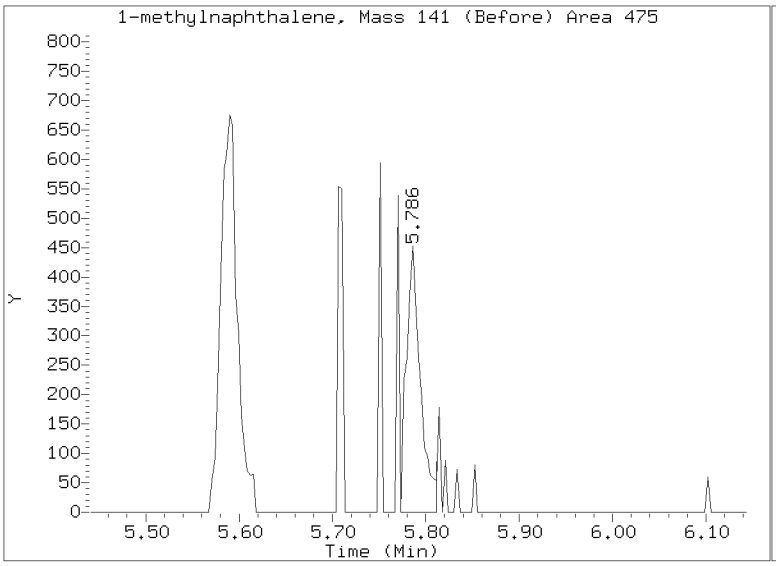
No RRT check performed

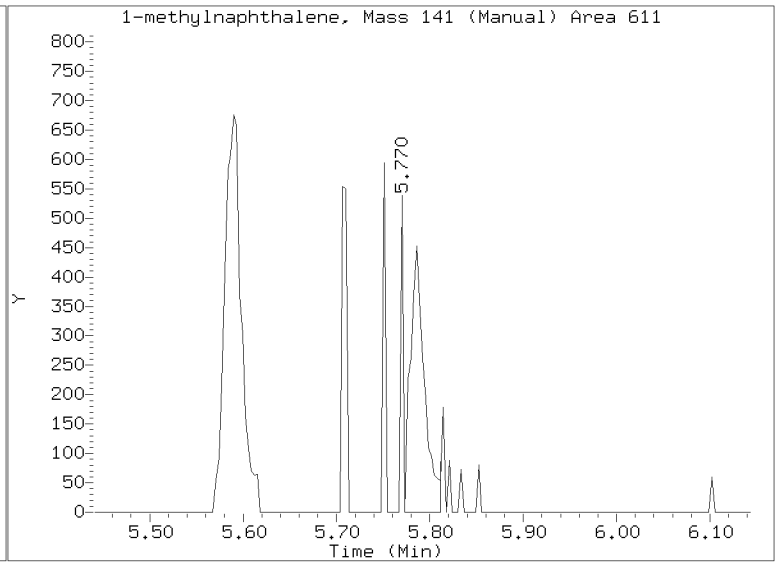
On Column LOD for nt8.i, 20230530.b\FSIMPNA230426.m, PNAXMDL.sub = 0.0080

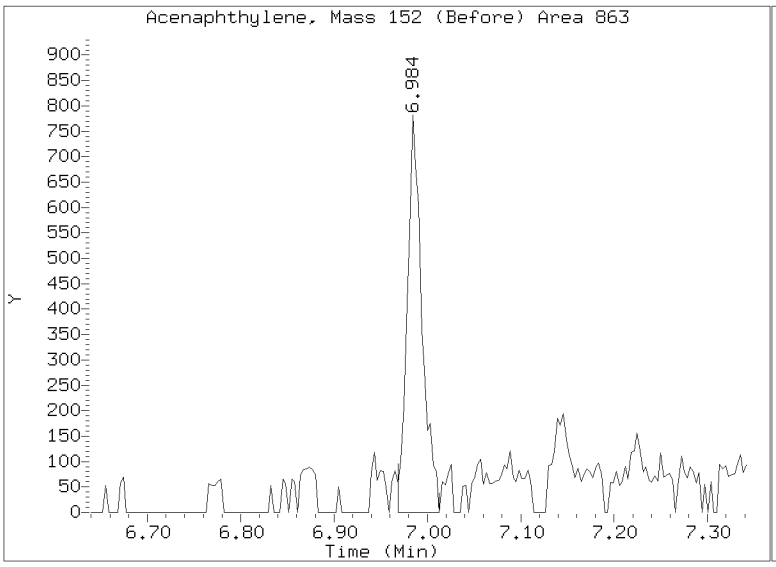
* Only compounds listed in the work order have been verified by the analyst *

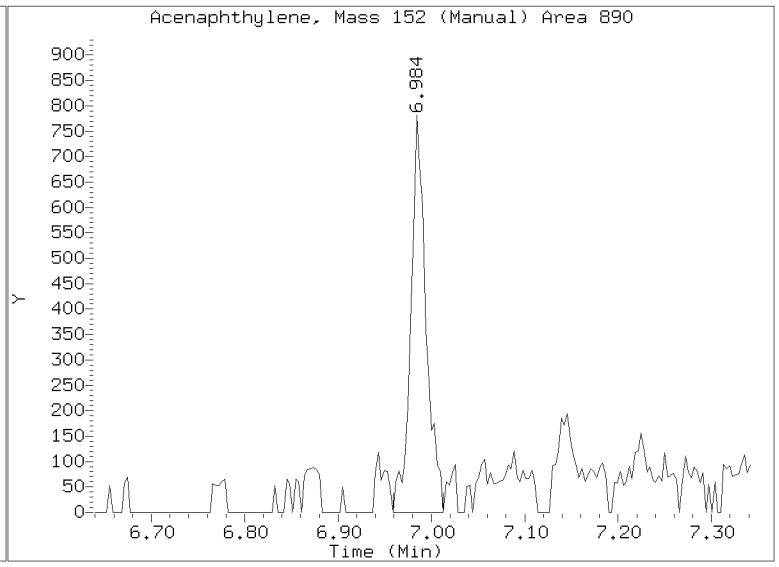
Quant Ion Manual Peak Adjustment Report

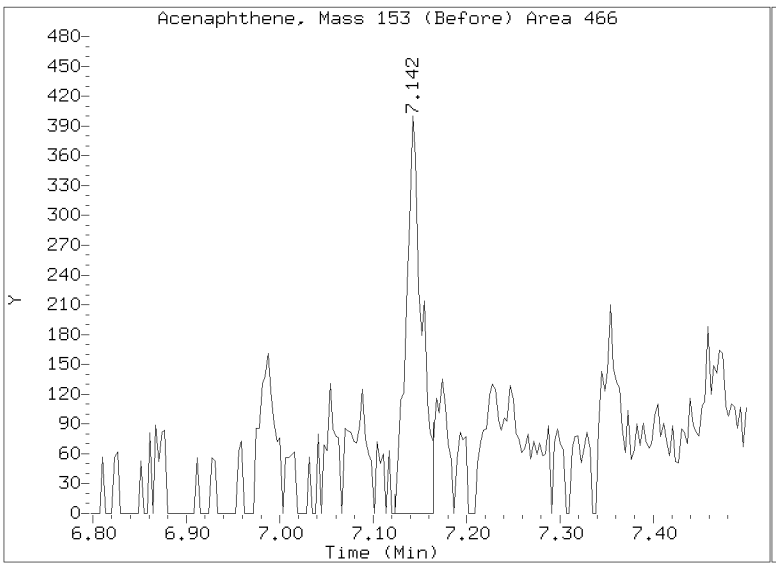
Datafile: //target/share/chem3/nt8.i/20230530.b/N823053011.D
Injection Date: 30-MAY-2023 16:12
Lab ID:23A0207-10 Client ID:
Report Date: 05/30/2023 20:04

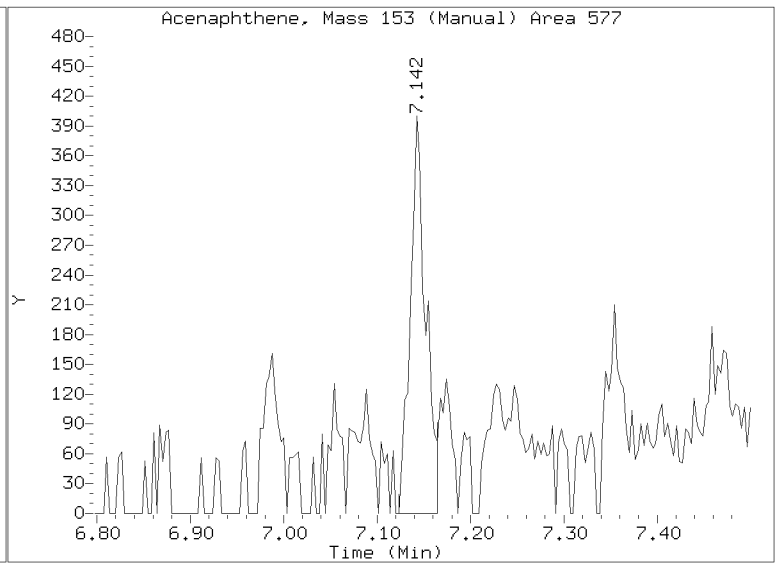






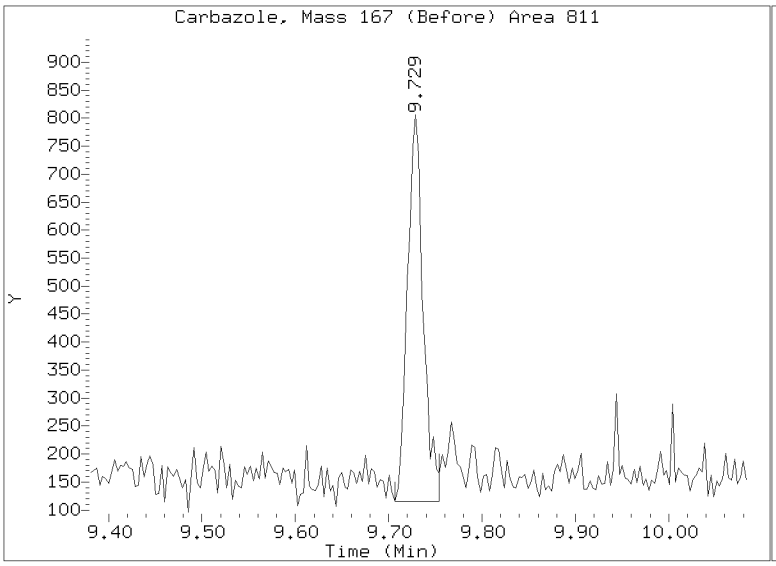


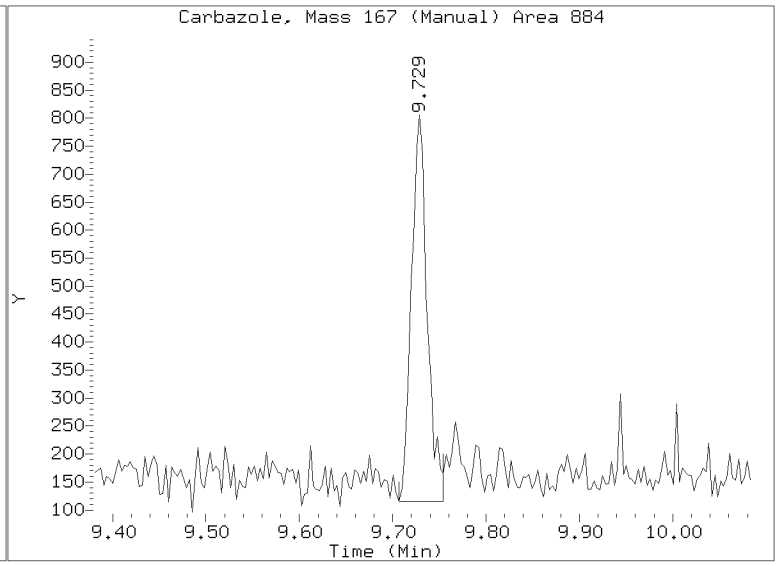


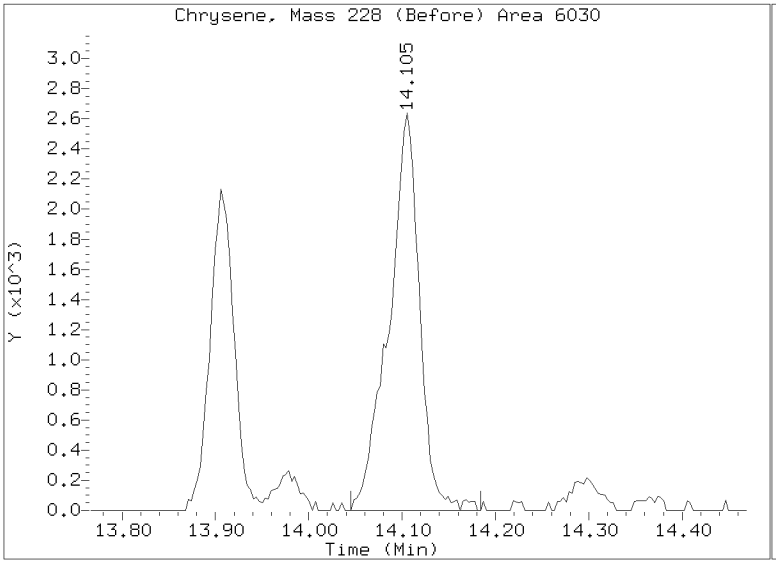


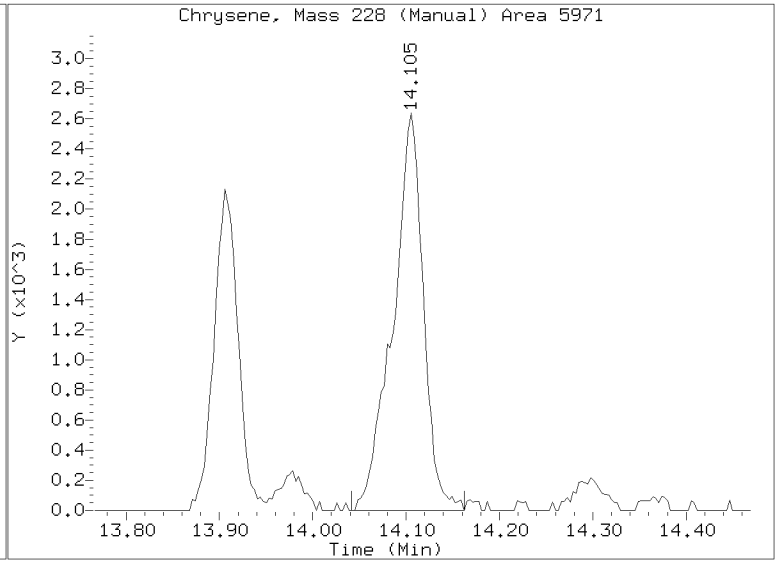
Quant Ion Manual Peak Adjustment Report

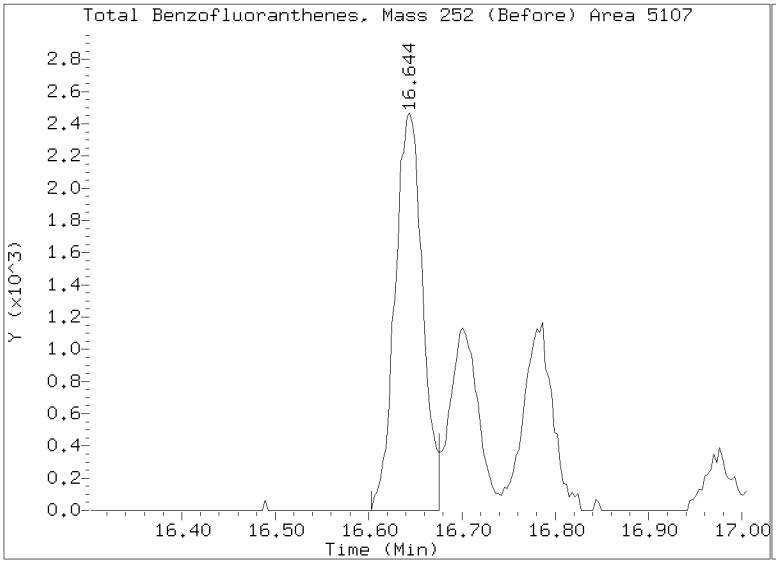
Datafile: //target/share/chem3/nt8.i/20230530.b/N823053011.D
Injection Date: 30-MAY-2023 16:12
Lab ID:23A0207-10 Client ID:
Report Date: 05/30/2023 20:04

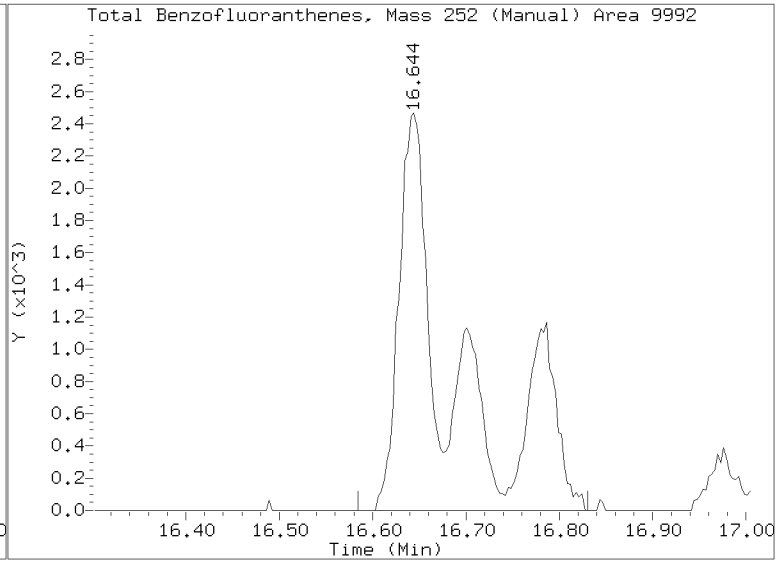












Quant Ion Manual Peak Adjustment Report

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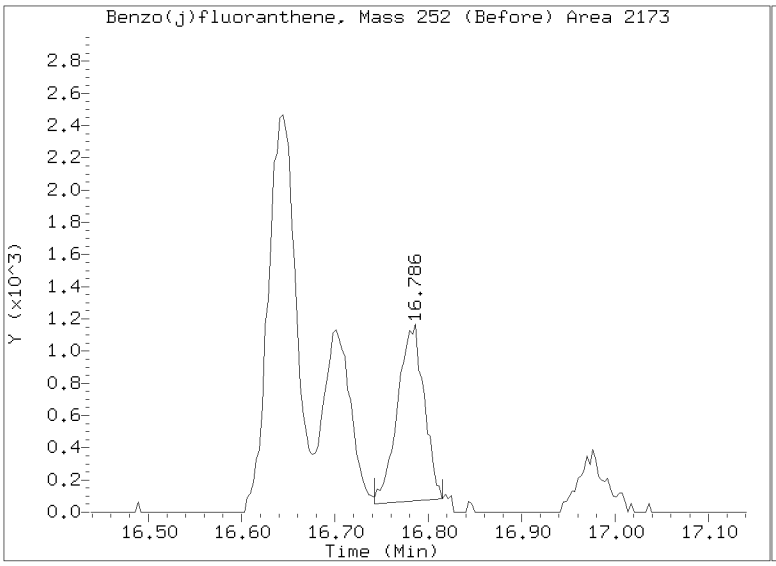
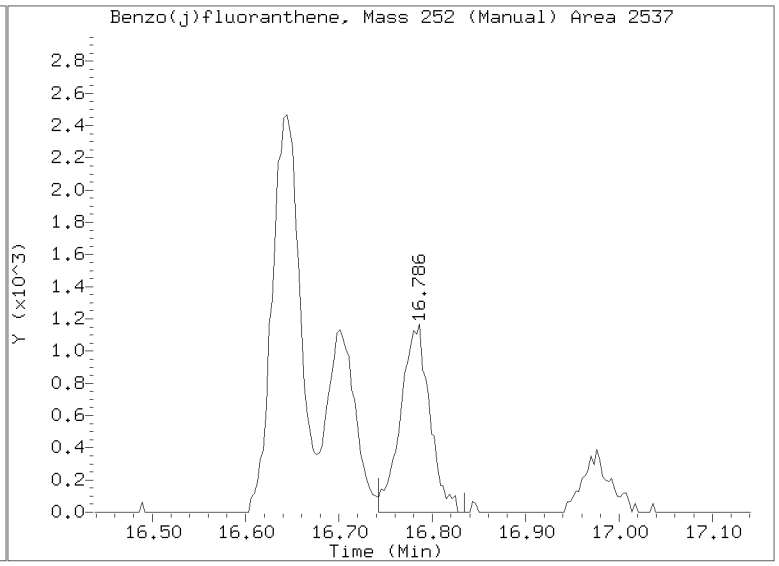
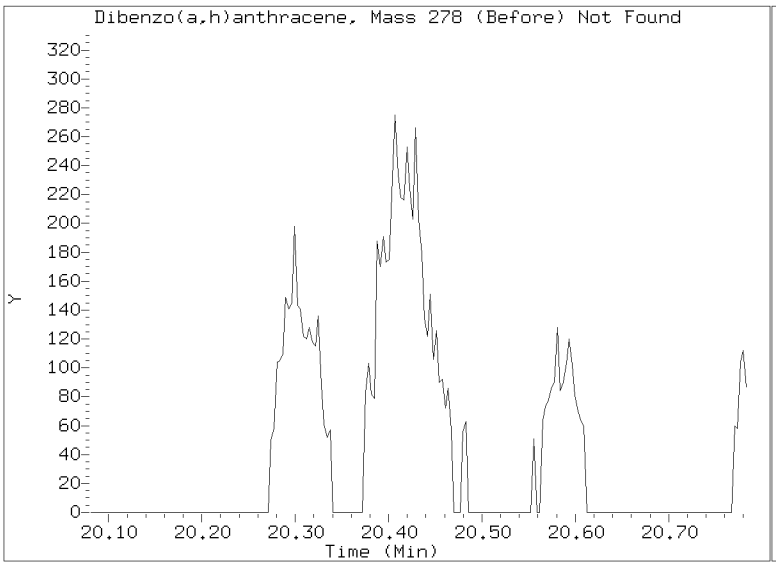
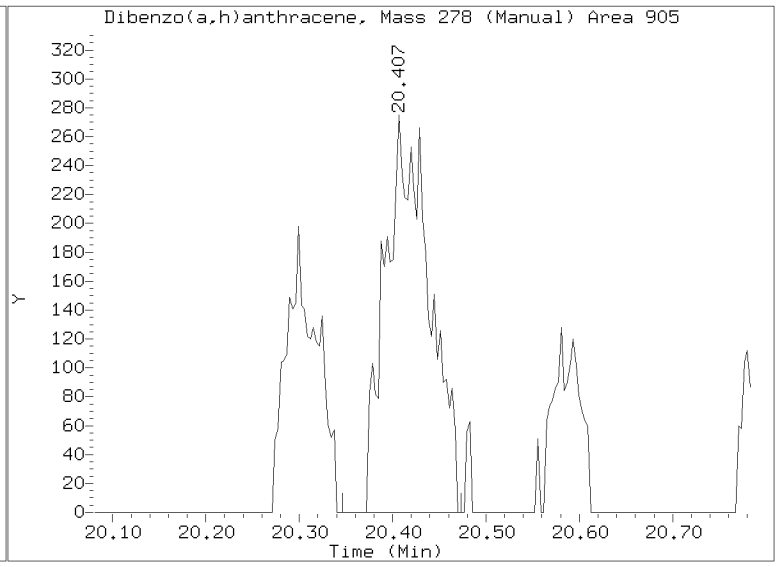
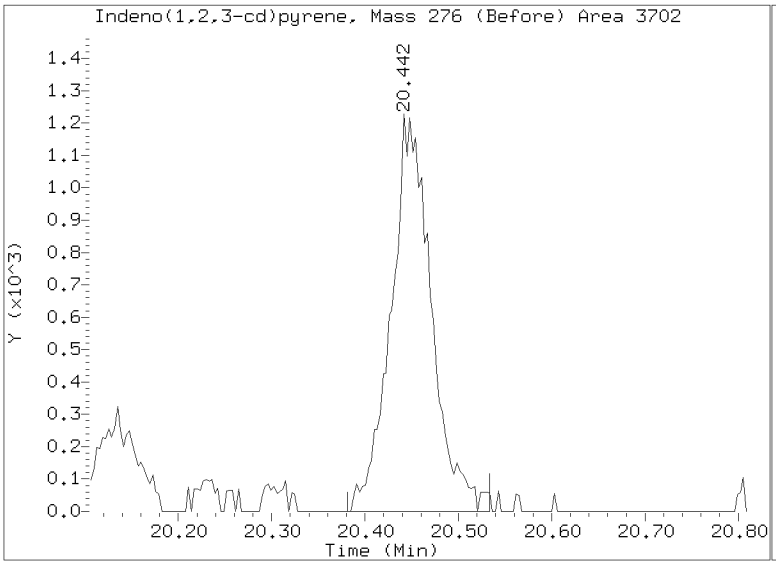
Lab ID:23A0207-10 Client ID:
Report Date: 05/30/2023 20:04

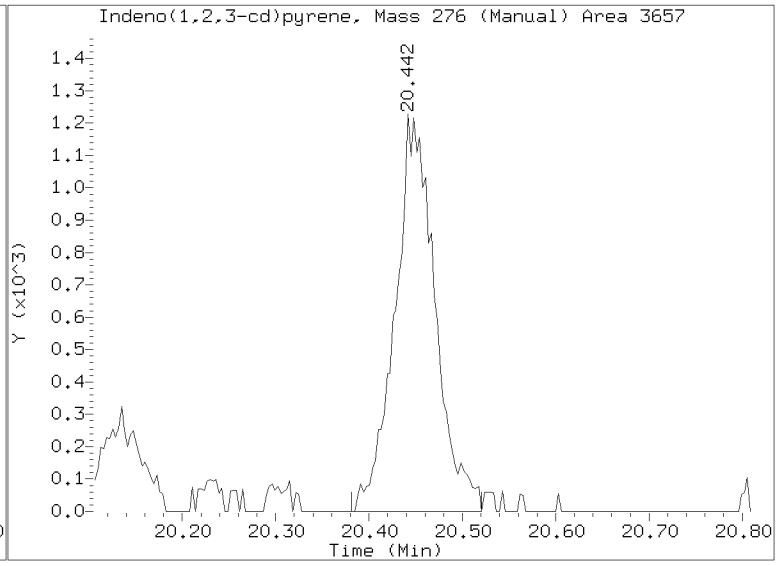












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1078

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

Polynuclear Aromatic Hydrocarbons

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-15 A	SDG:	23A0207
Sampled:	01/11/23 14:13	Prepared:	02/01/23 11:29	File ID:	N823020623.D
% Solids:	77.75	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/06/23 22:41
Batch:	BLA0683	Sequence:	SLB0075	Initial/Final:	12.88 g Wet / 0.5 mL
Instrument:	NT8	Column:	RXI-17Sil ms	Calibration:	GA00050
Cleanups:	GPC, Silica Gel				

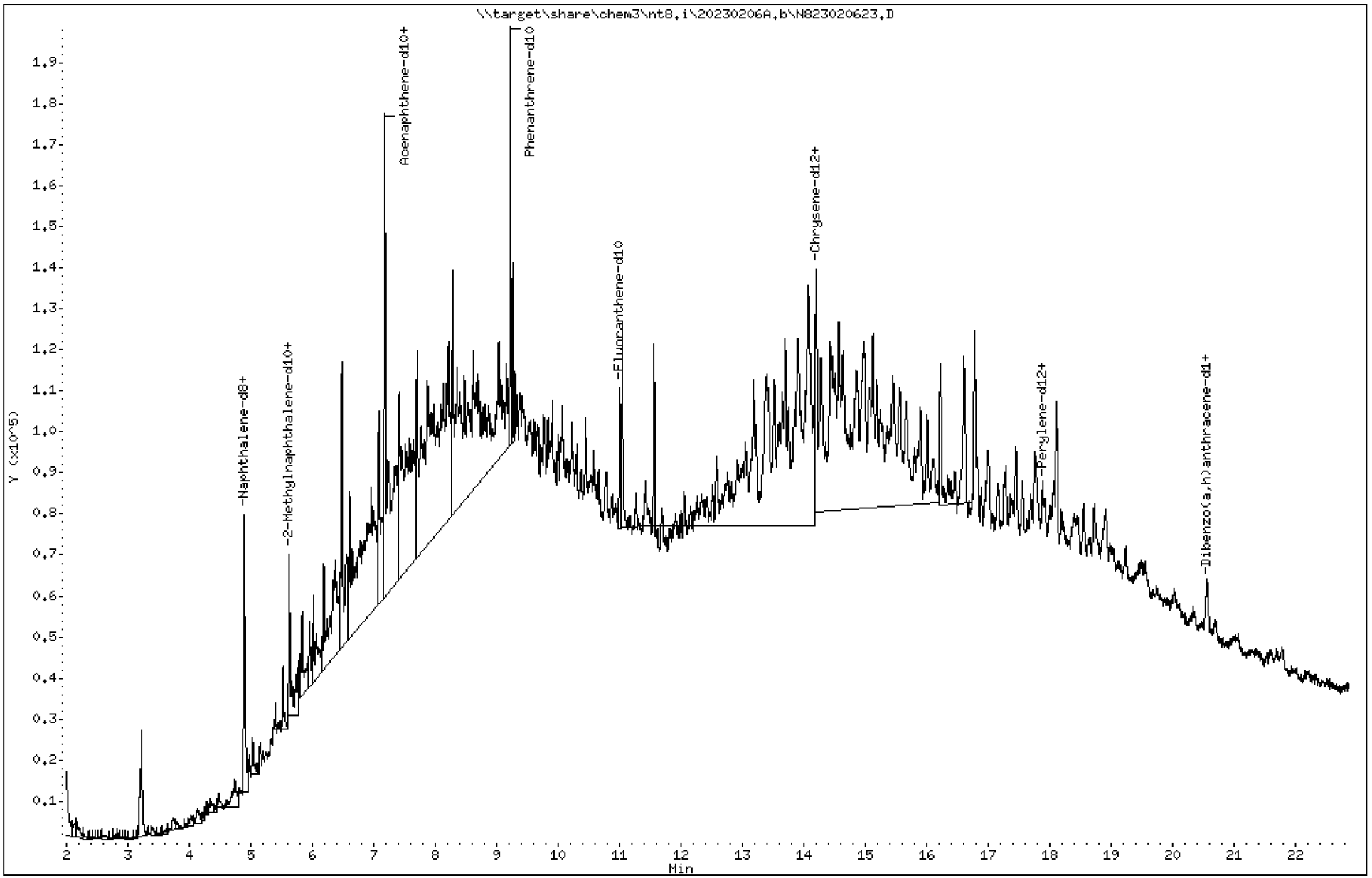
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
56-55-3	Benzo(a)anthracene	3	116	D	2.47	15.0
218-01-9	Chrysene	3	139	D	3.15	15.0
205-99-2	Benzo(b)fluoranthene	3	112	D	4.11	15.0
207-08-9	Benzo(k)fluoranthene	3	52.8	D	2.28	15.0
50-32-8	Benzo(a)pyrene	3	115	D	1.84	15.0
193-39-5	Indeno(1,2,3-cd)pyrene	3	54.5	D	3.15	15.0
53-70-3	Dibenzo(a,h)anthracene	3	19.6	D	2.67	15.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	149.79	133	88.8	32 - 120	
Dibenzo[a,h]anthracene-d14	149.79	158	106	21 - 133	
Fluoranthene-d10	149.79	130	86.5	36 - 134	

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020623.D
Date : 06-FEB-2023 22:41
Client ID:
Sample Info: 23A0207-15,3

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020623.D

Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

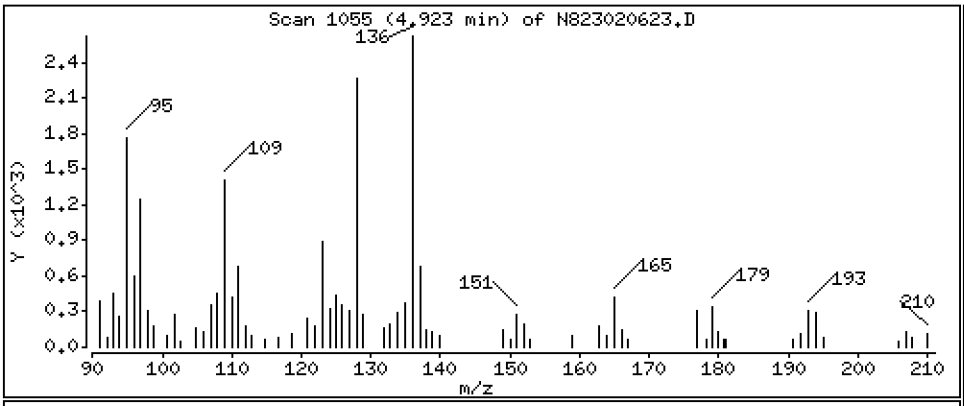
Operator: JZ

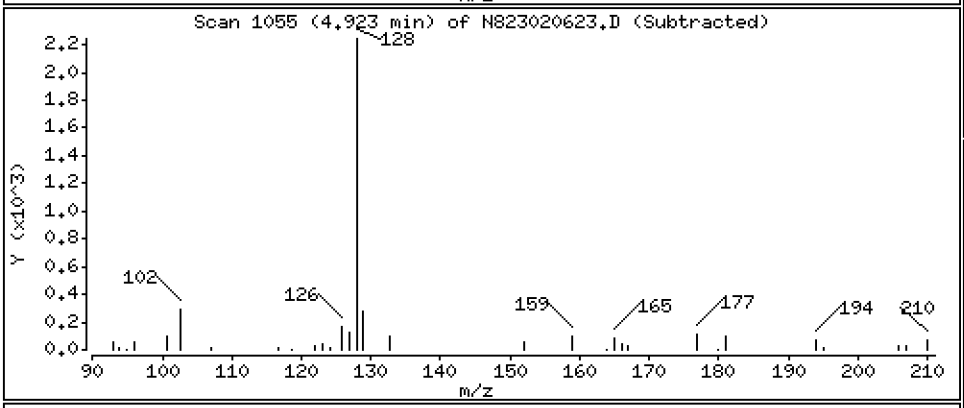
Column phase: Rxi-17sil

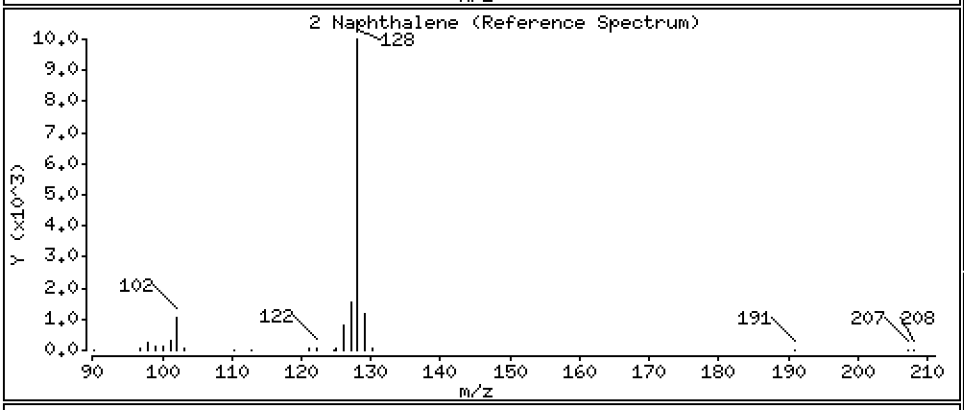
Column diameter: 0.25

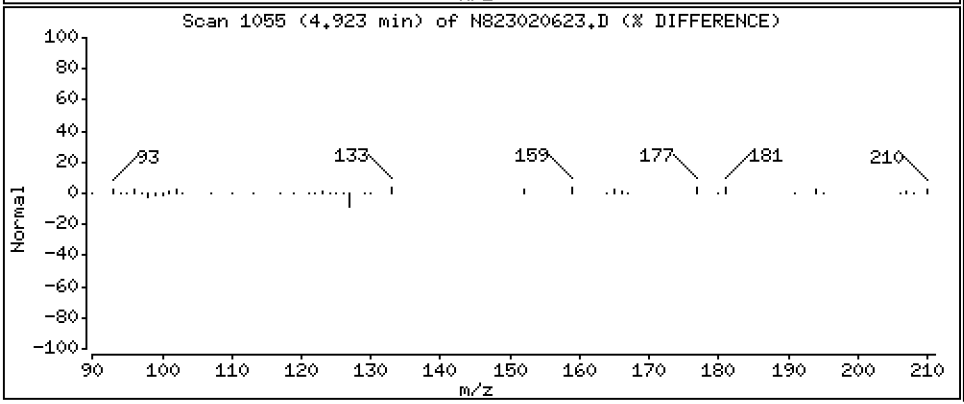
2 Naphthalene

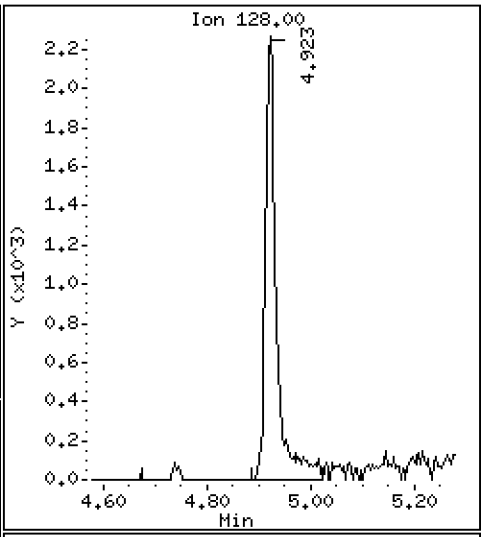
Concentration: 0.4078 ug/mL

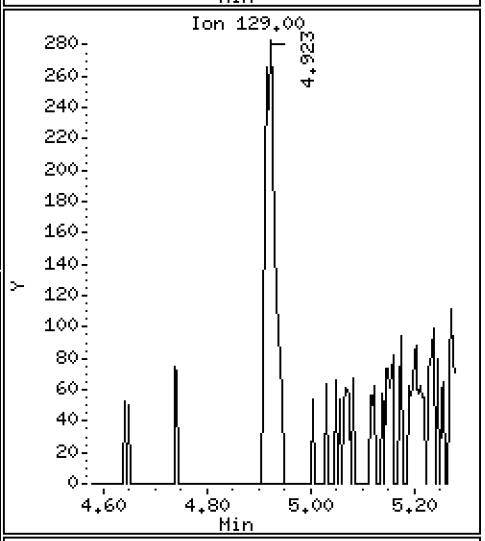


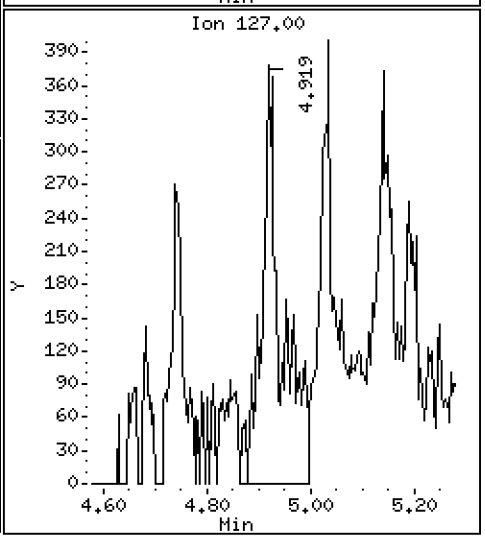












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

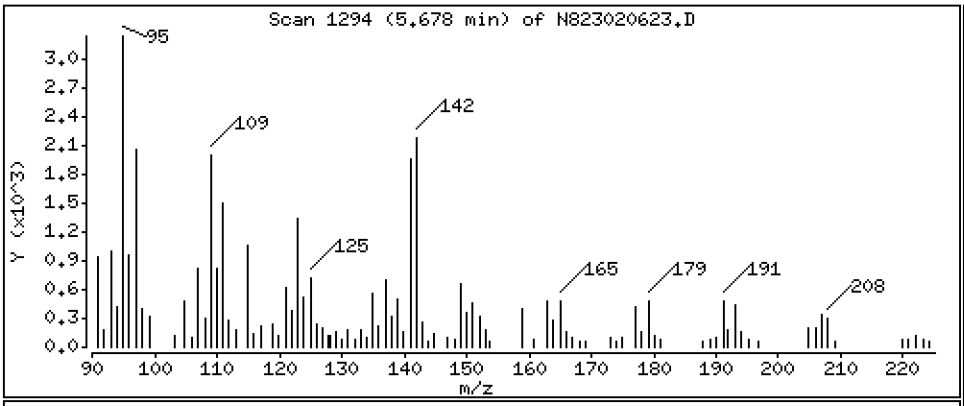
Operator: JZ

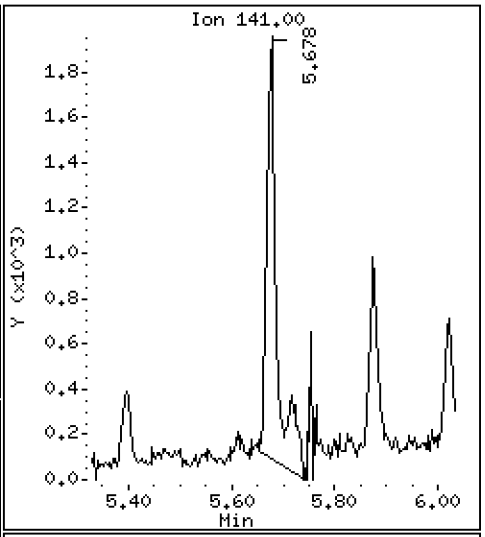
Column phase: Rxi-17sil

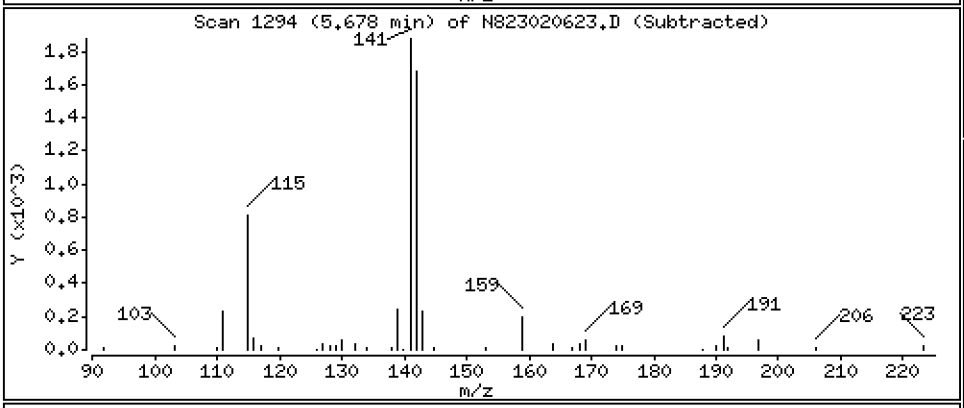
Column diameter: 0.25

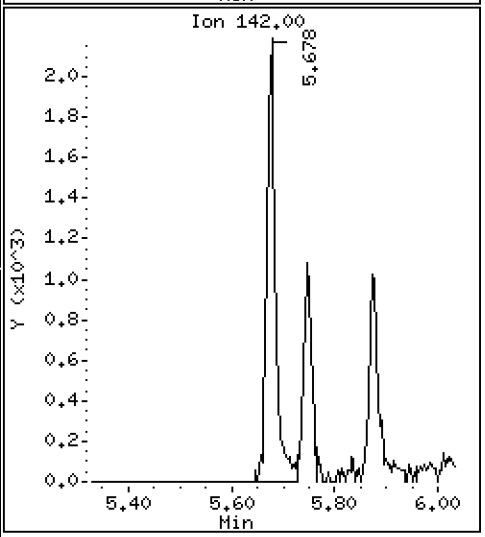
4 2-Methylnaphthalene

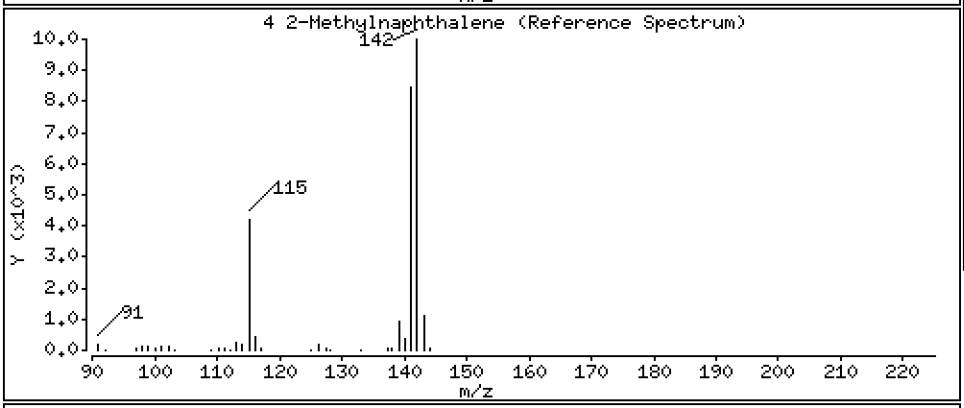
Concentration: 0.5641 ug/mL

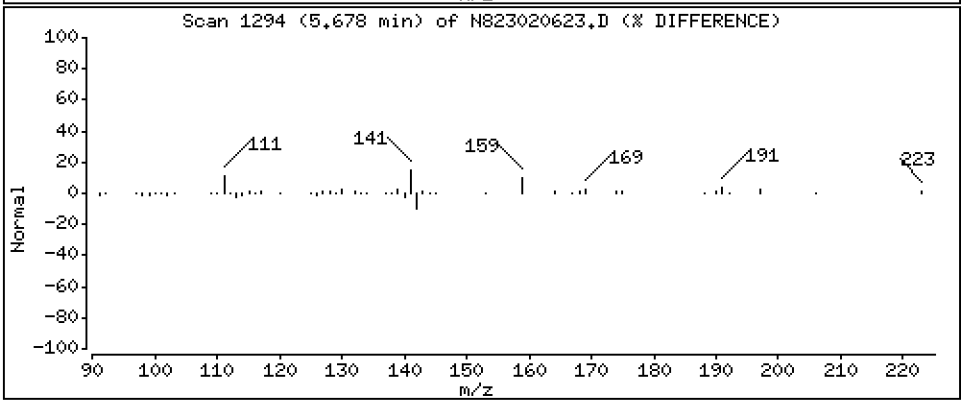












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

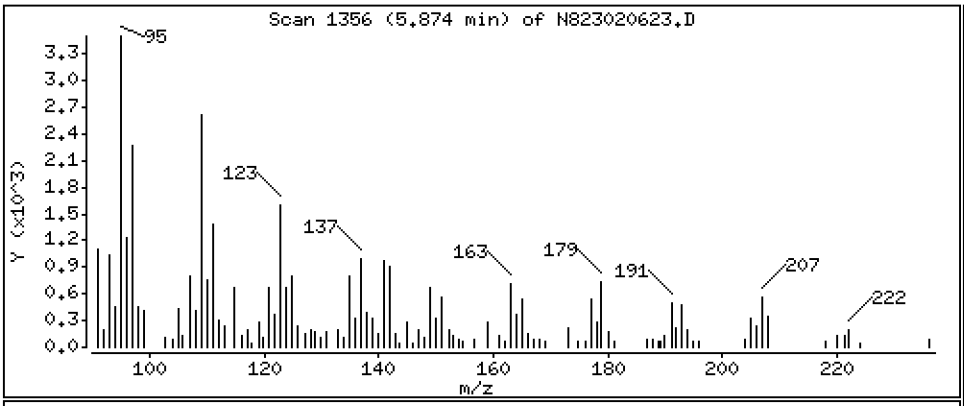
Operator: JZ

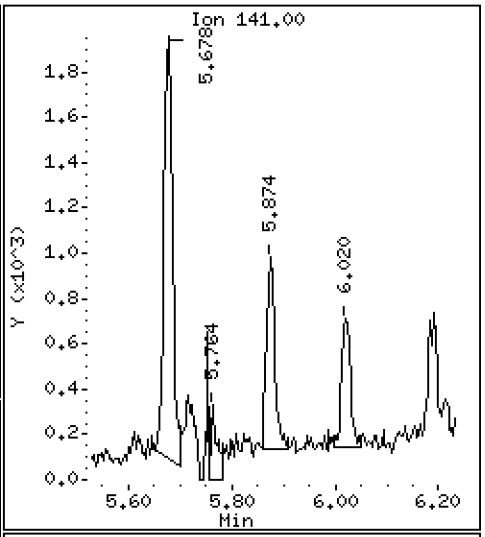
Column phase: Rxi-17sil

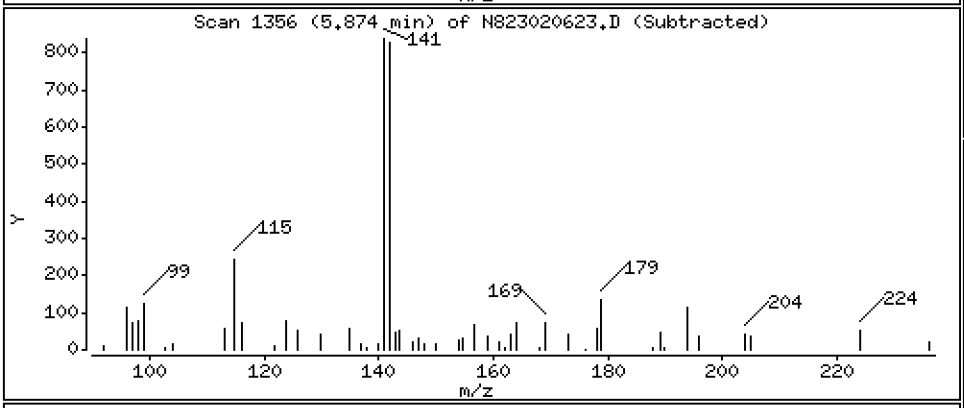
Column diameter: 0.25

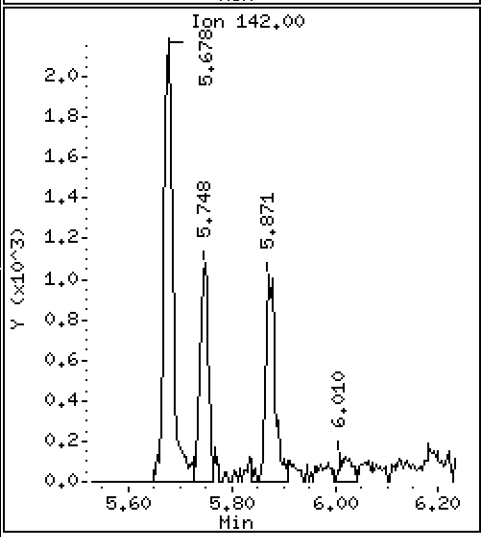
5 1-methylnaphthalene

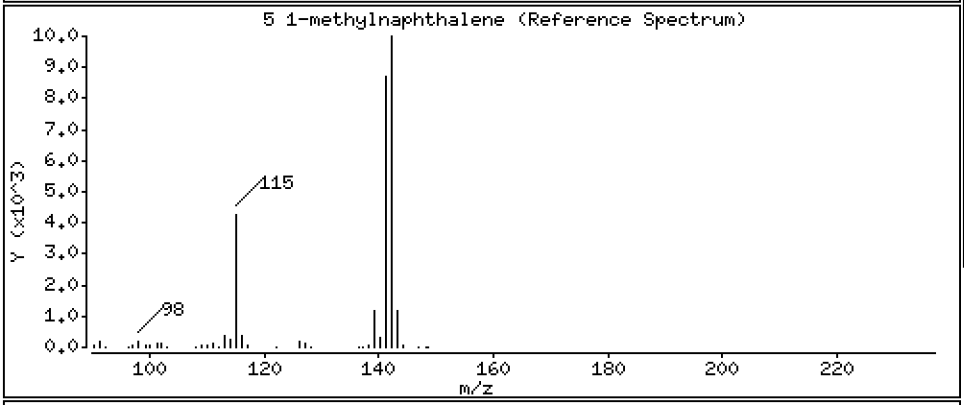
Concentration: 0.1954 ug/mL

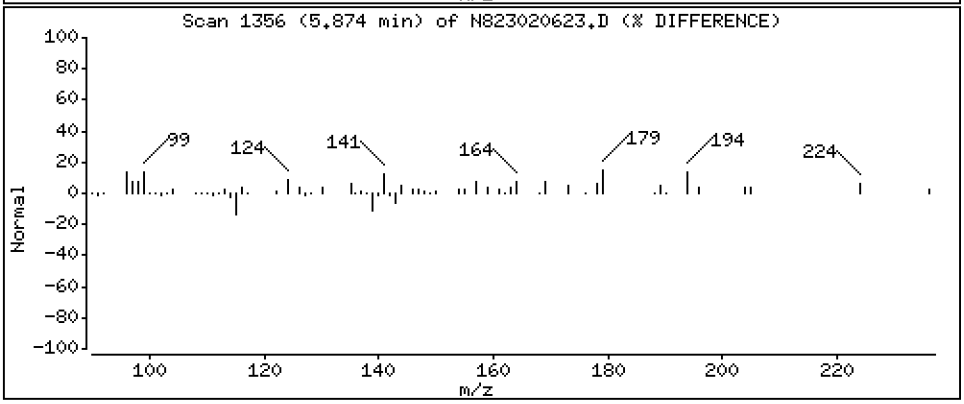












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

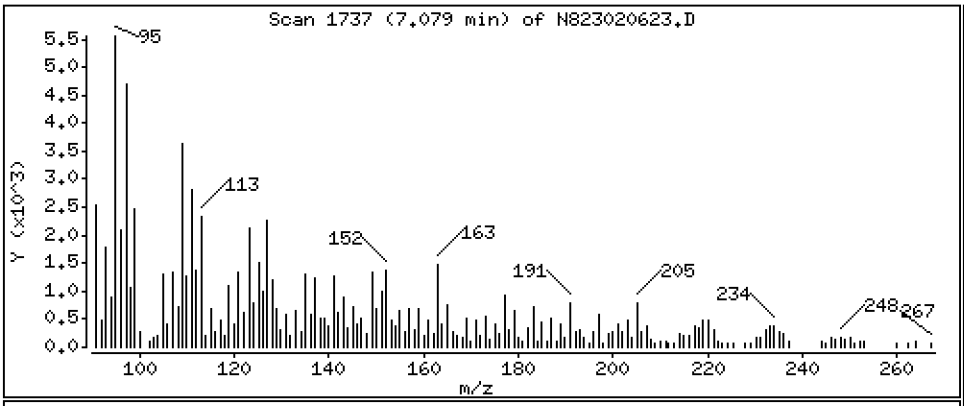
Operator: JZ

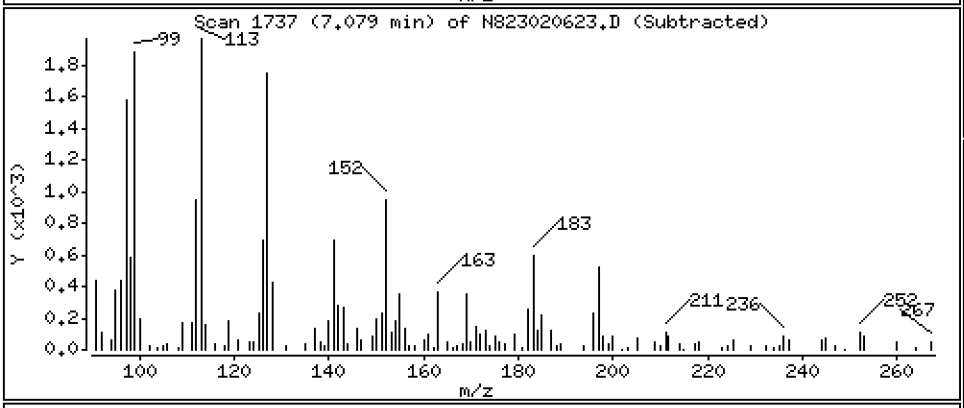
Column phase: Rxi-17sil

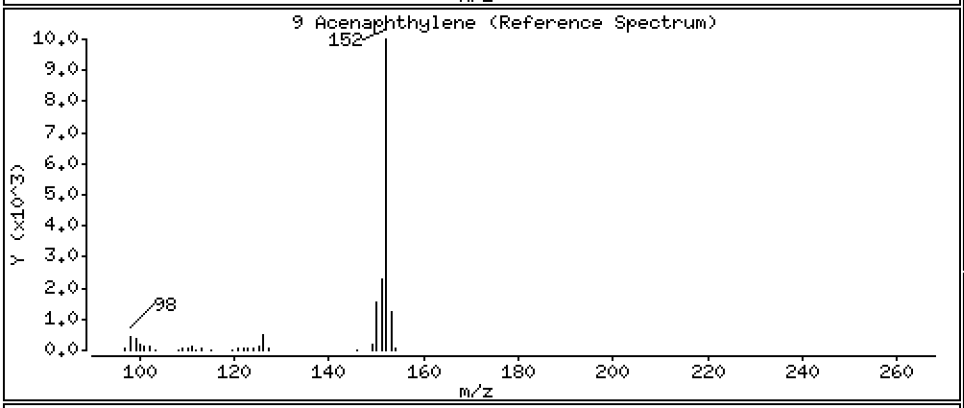
Column diameter: 0.25

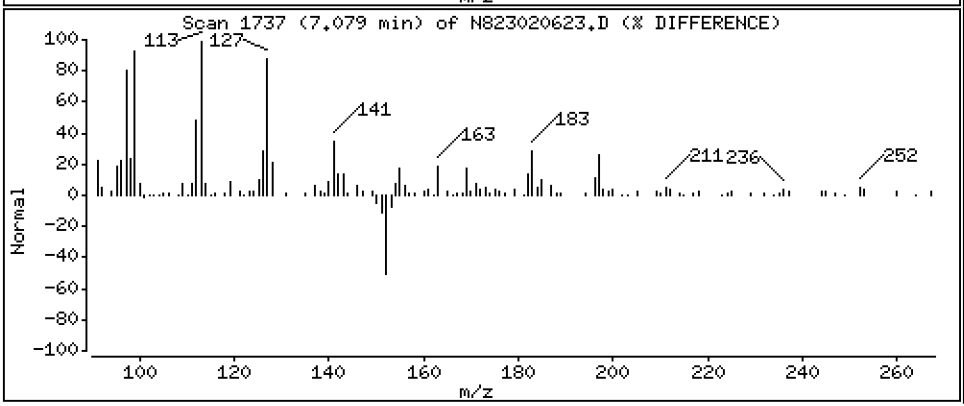
9 Acenaphthylene

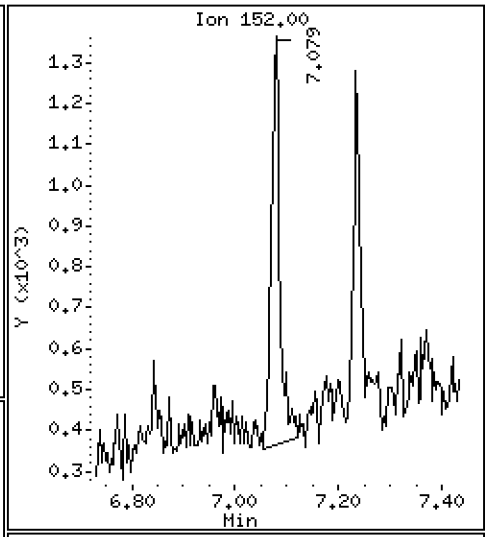
Concentration: 0.1606 ug/mL

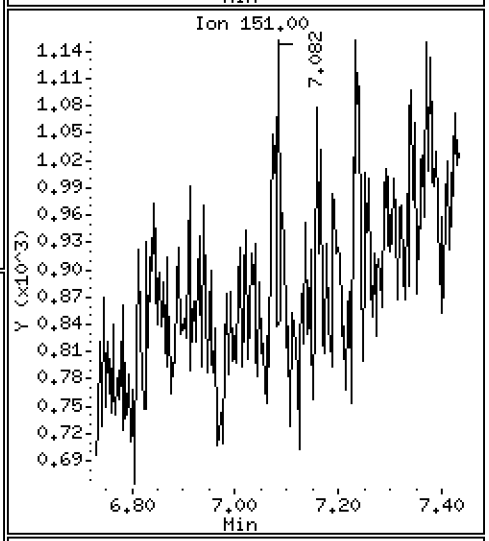


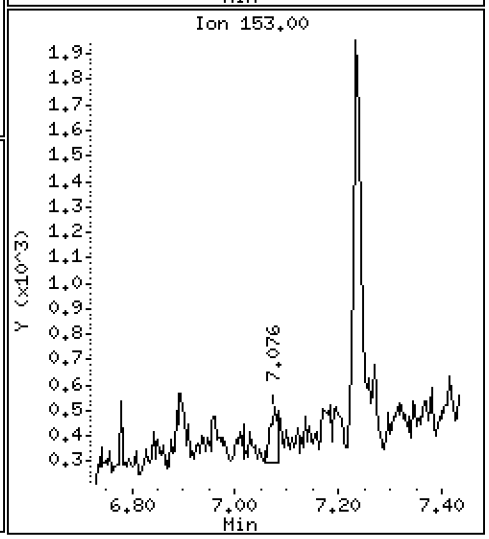












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

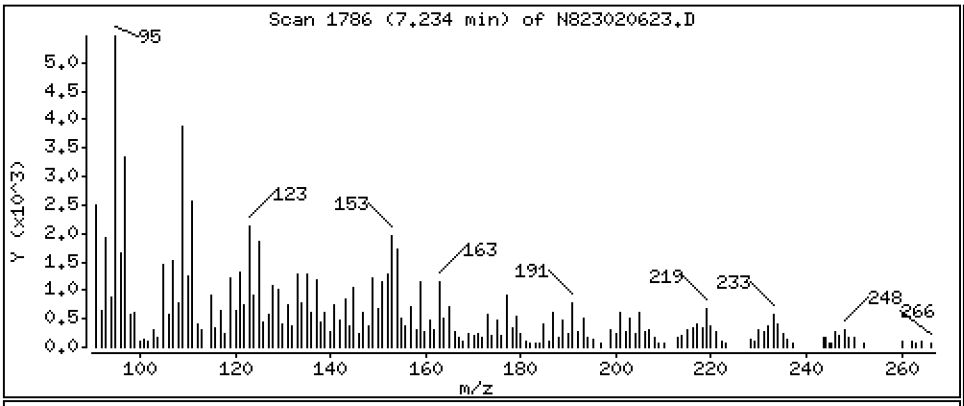
Operator: JZ

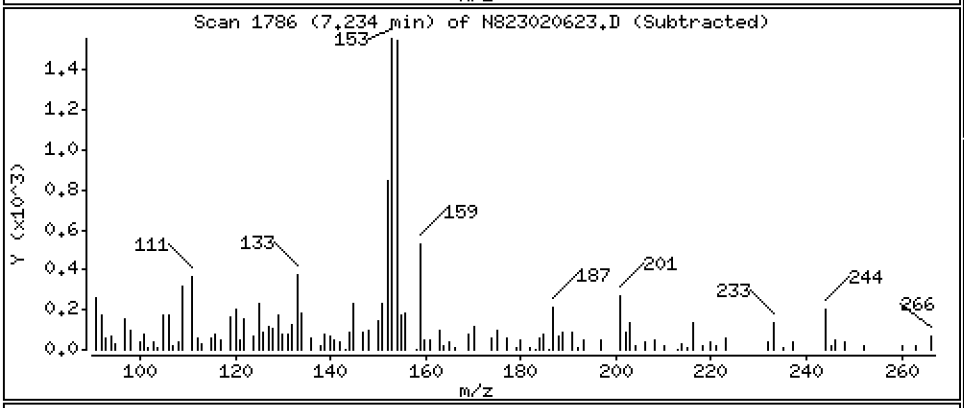
Column phase: Rxi-17sil

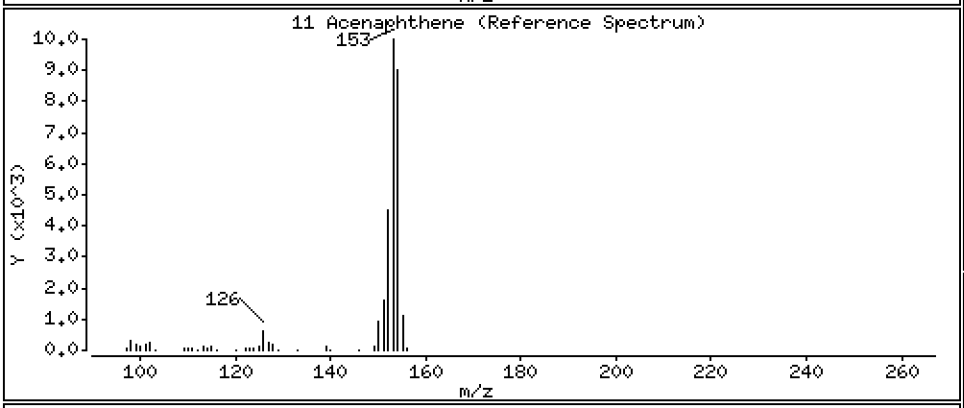
Column diameter: 0.25

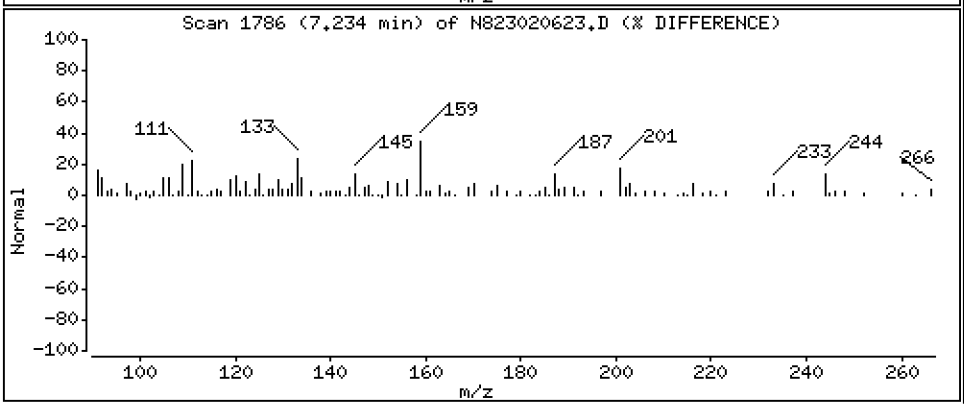
11 Acenaphthene

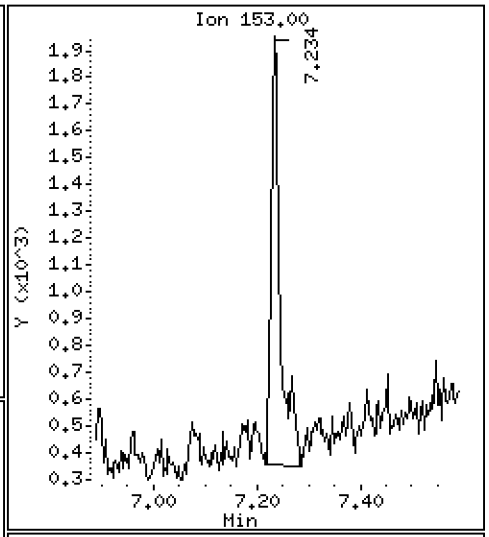
Concentration: 0.4258 ug/mL

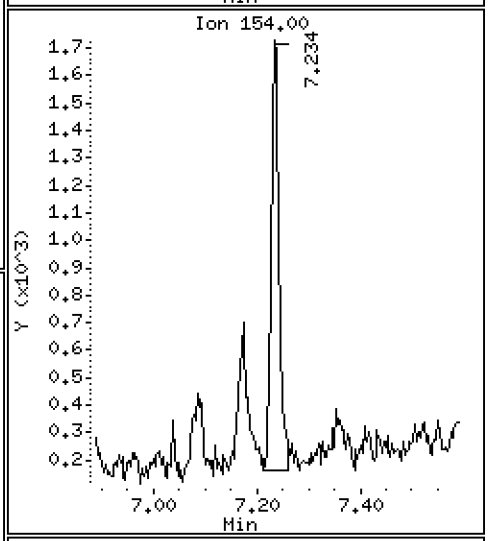


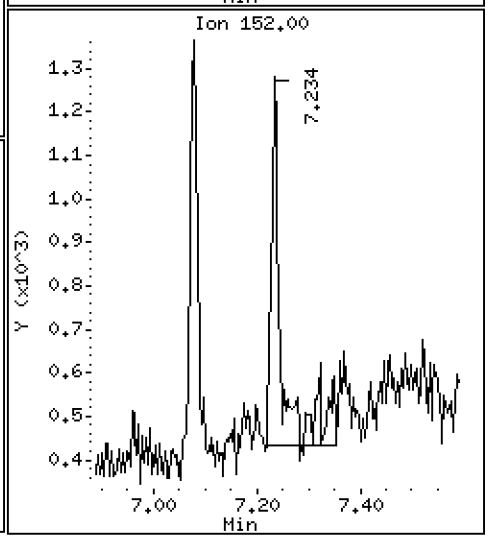












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

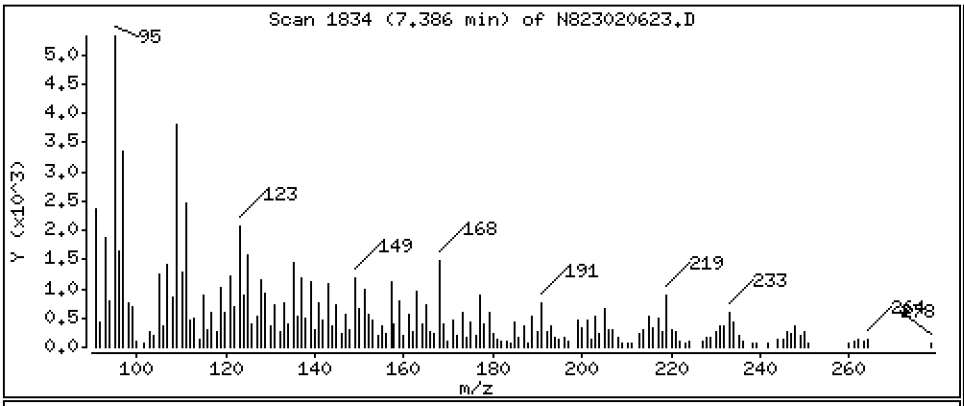
Operator: JZ

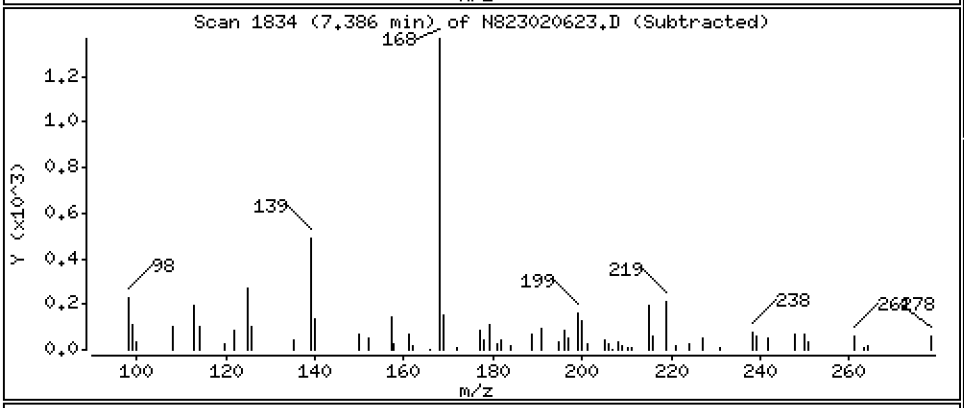
Column phase: Rxi-17sil

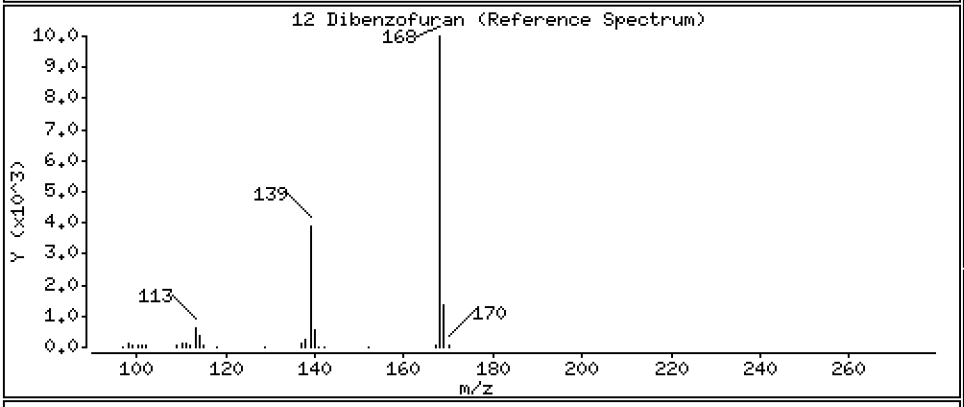
Column diameter: 0.25

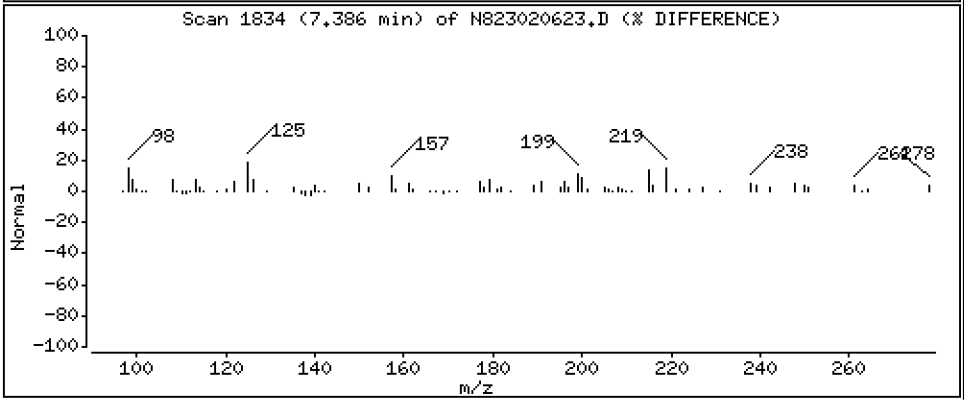
12 Dibenzofuran

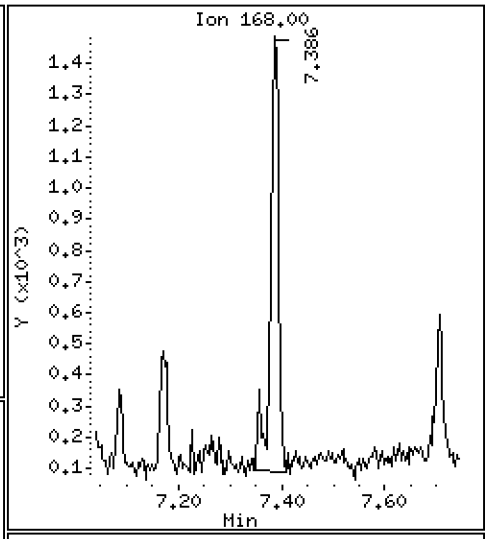
Concentration: 0.2116 ug/mL

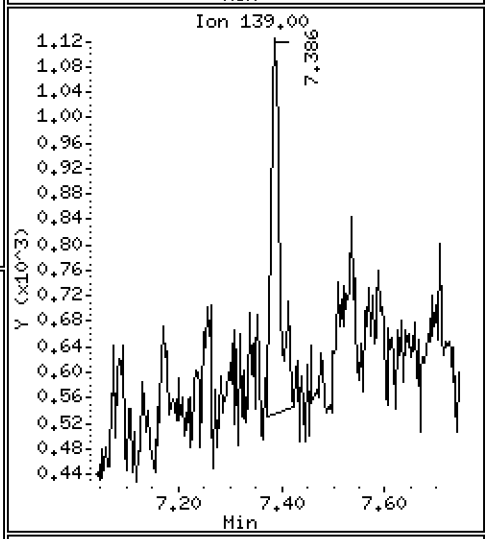


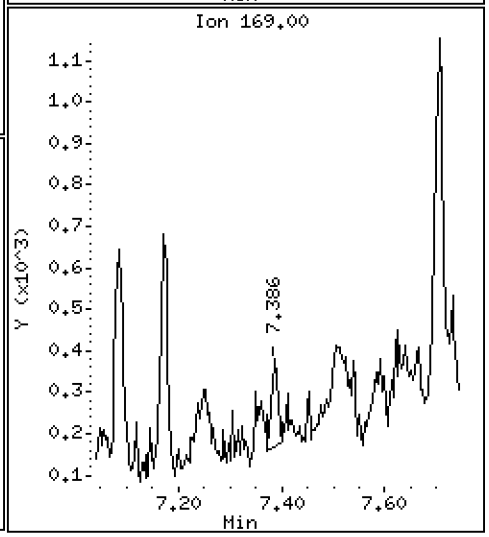












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

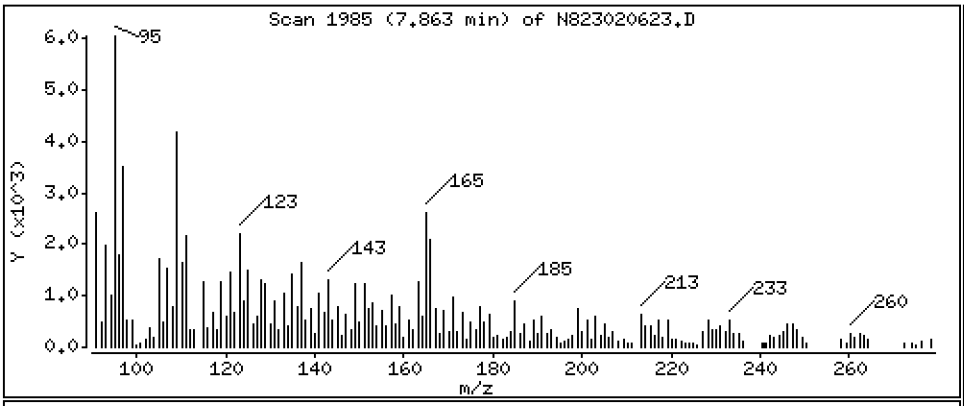
Operator: JZ

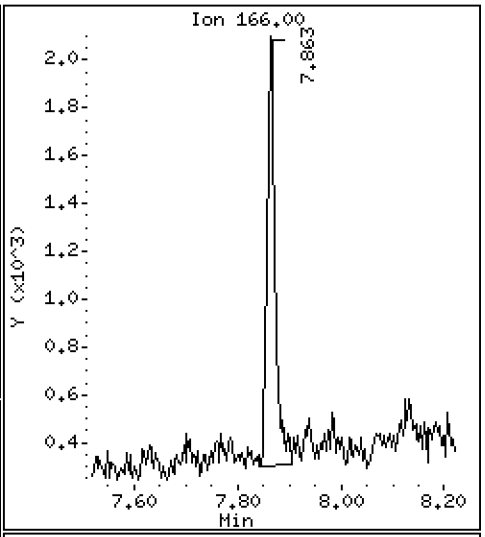
Column phase: Rxi-17sil

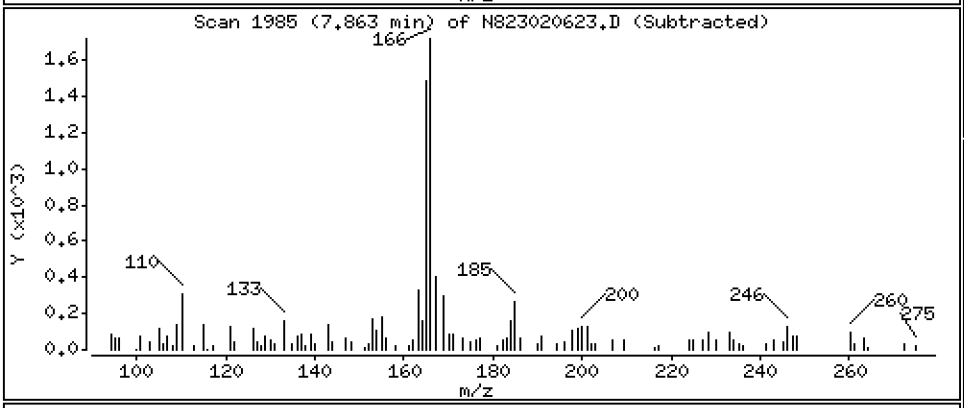
Column diameter: 0.25

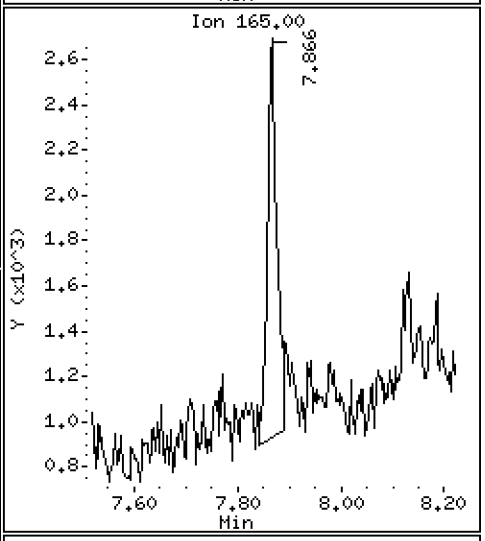
14 Fluorene

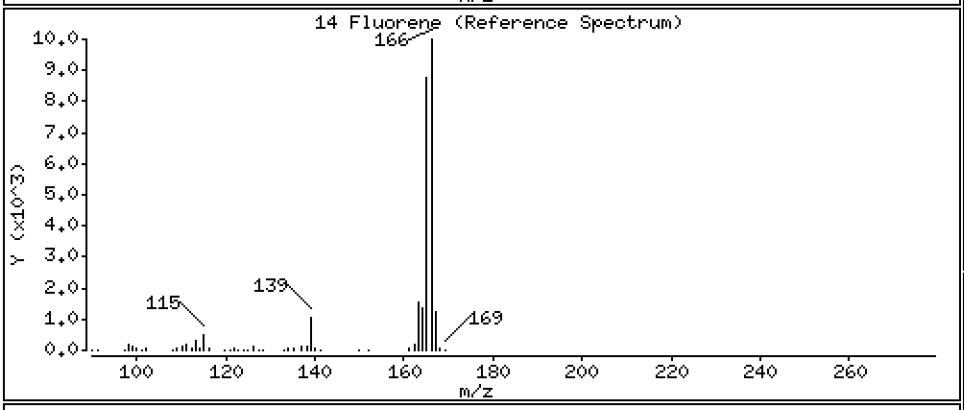
Concentration: 0.3613 ug/mL

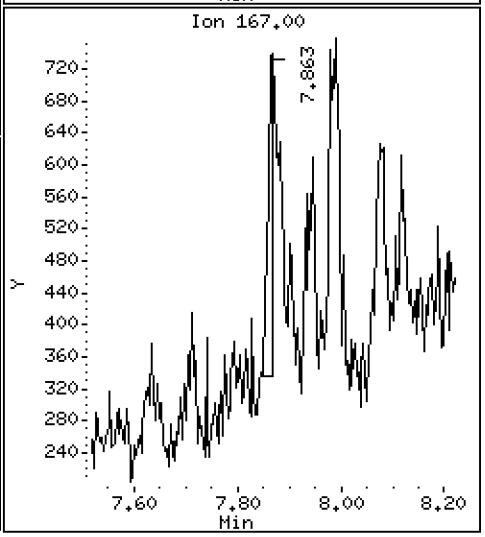


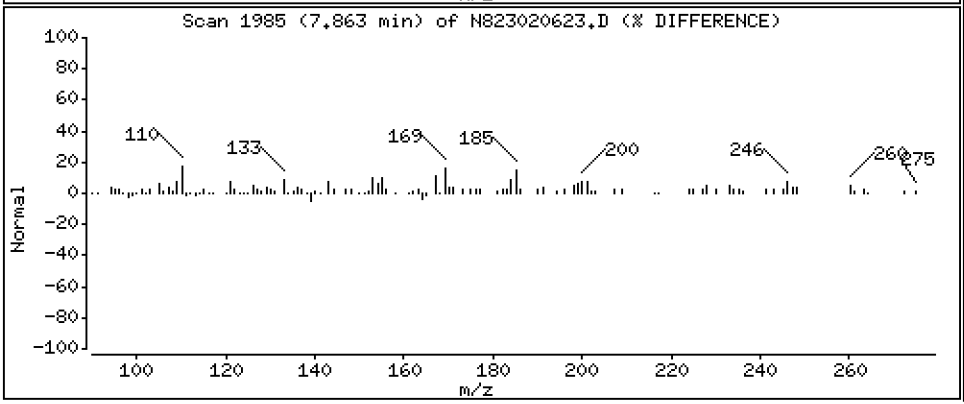












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020623.D

Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

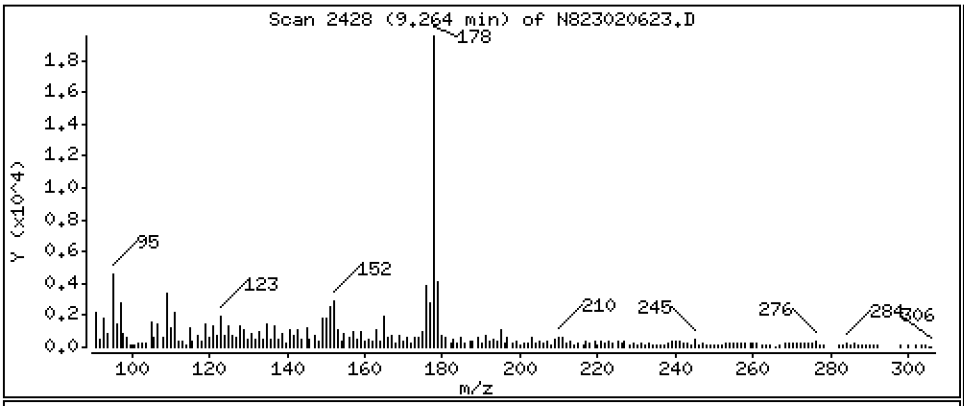
Operator: JZ

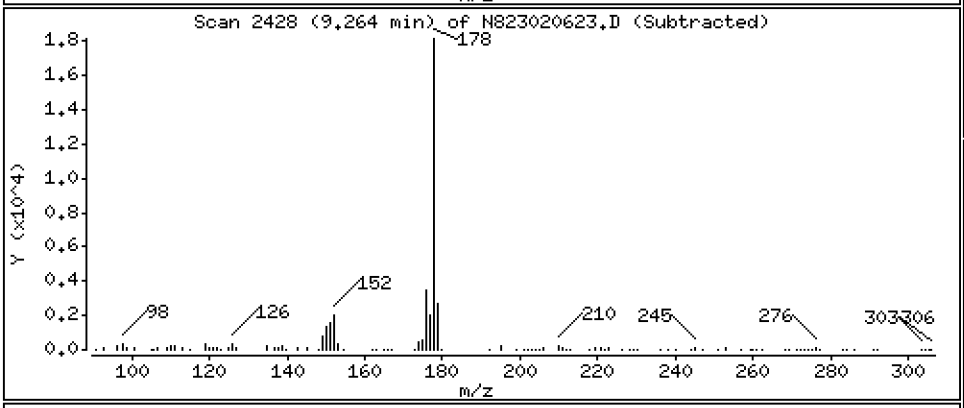
Column phase: Rxi-17sil

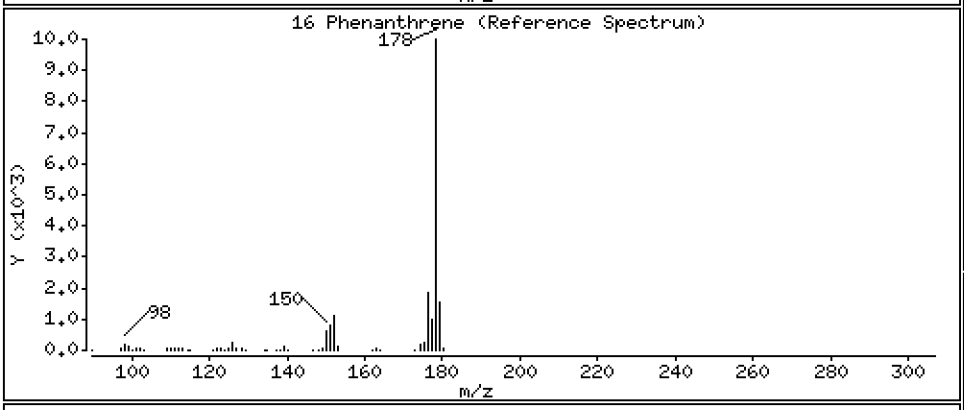
Column diameter: 0.25

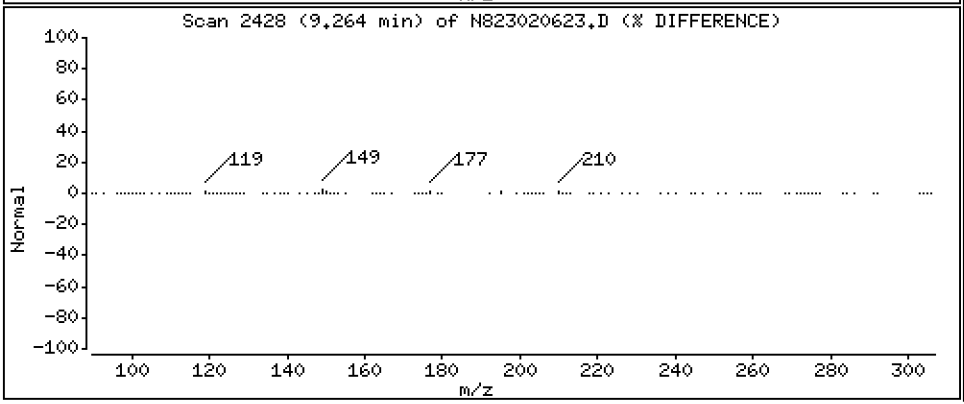
16 Phenanthrene

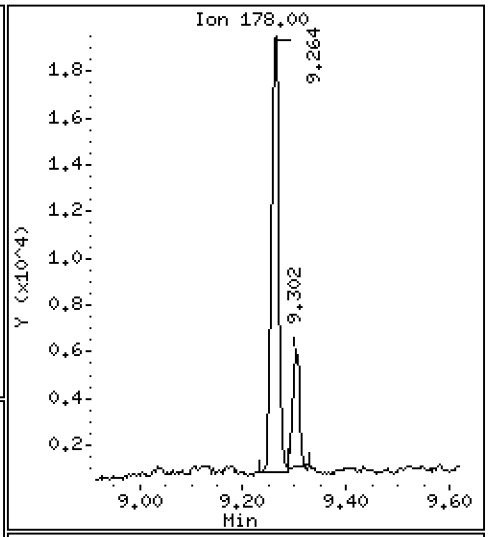
Concentration: 2.568 ug/mL

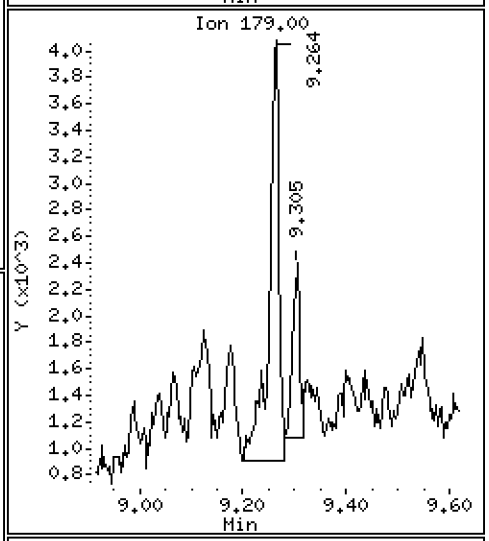


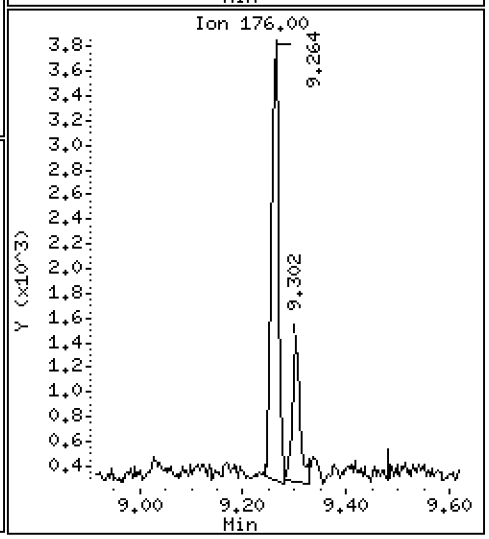












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

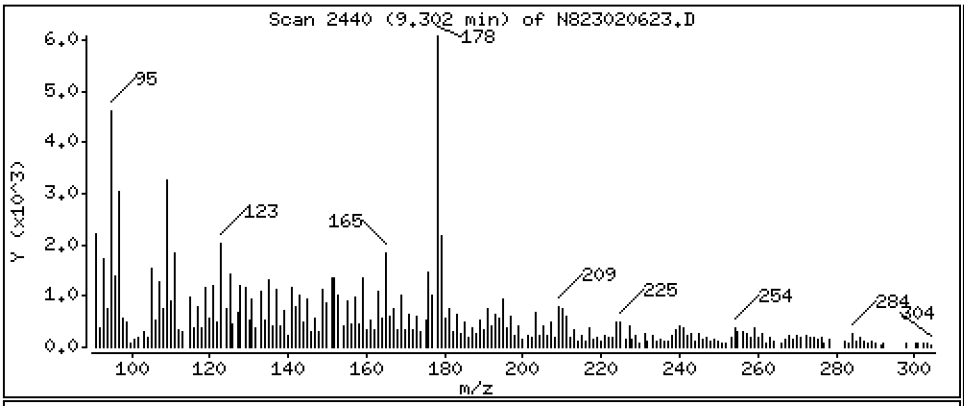
Operator: JZ

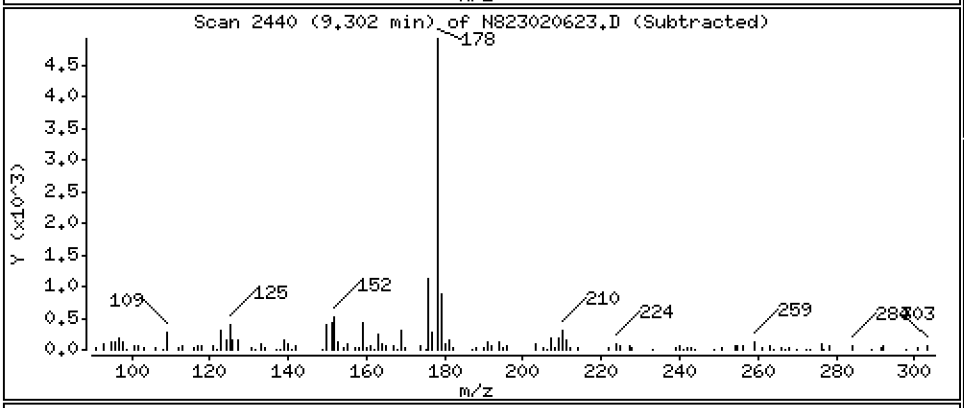
Column phase: Rxi-17sil

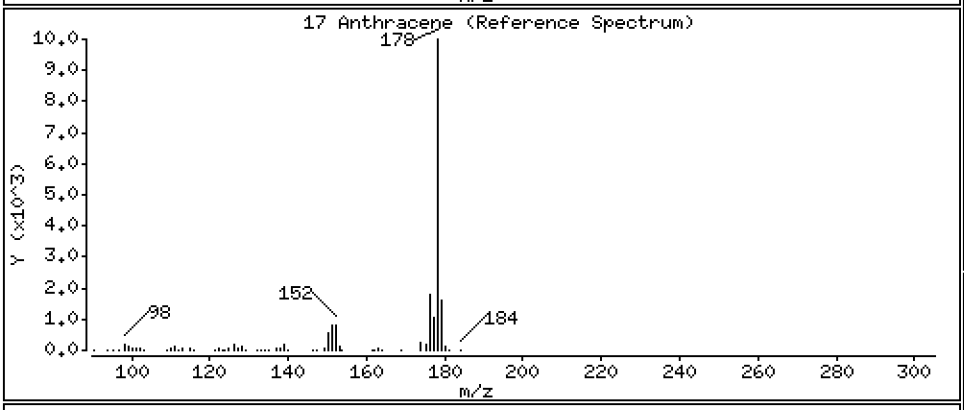
Column diameter: 0.25

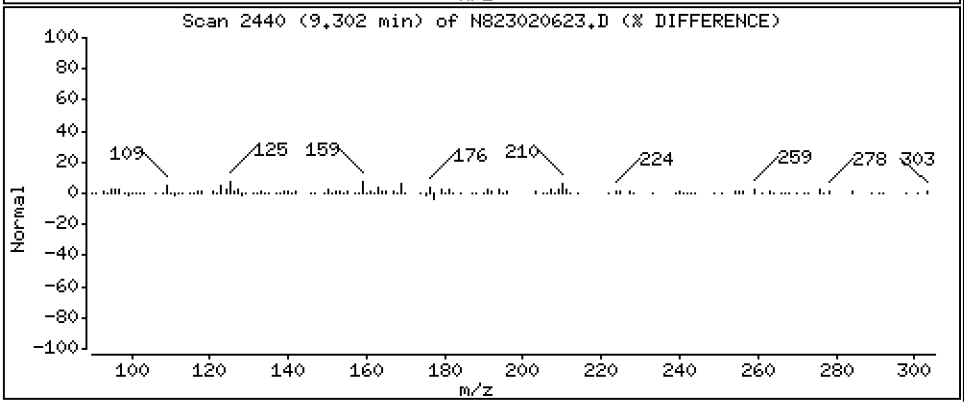
17 Anthracene

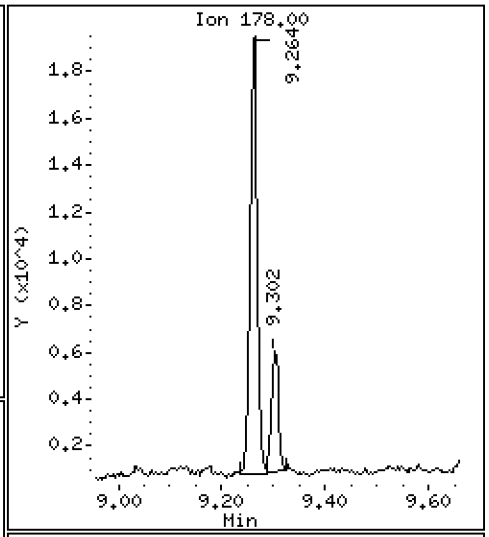
Concentration: 0.7535 ug/mL

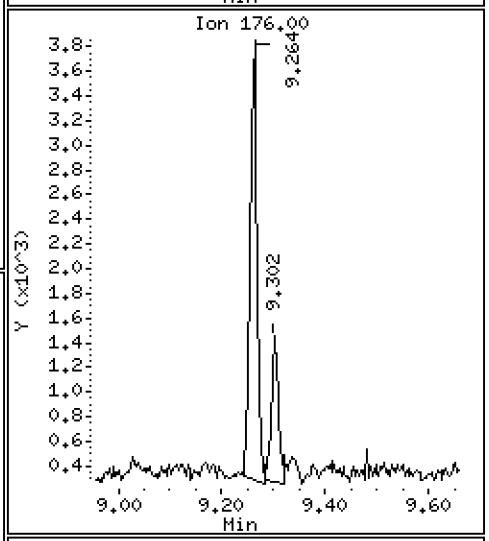


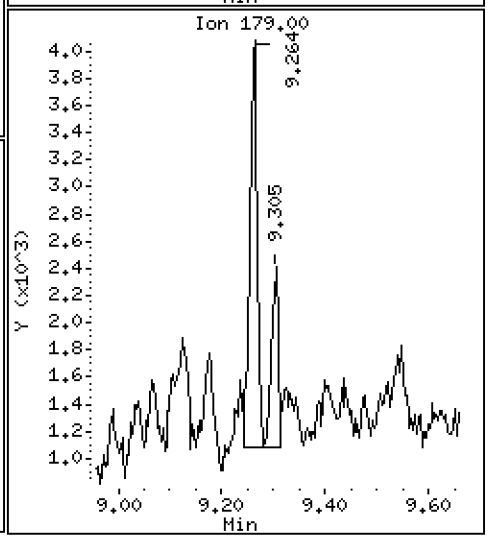












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

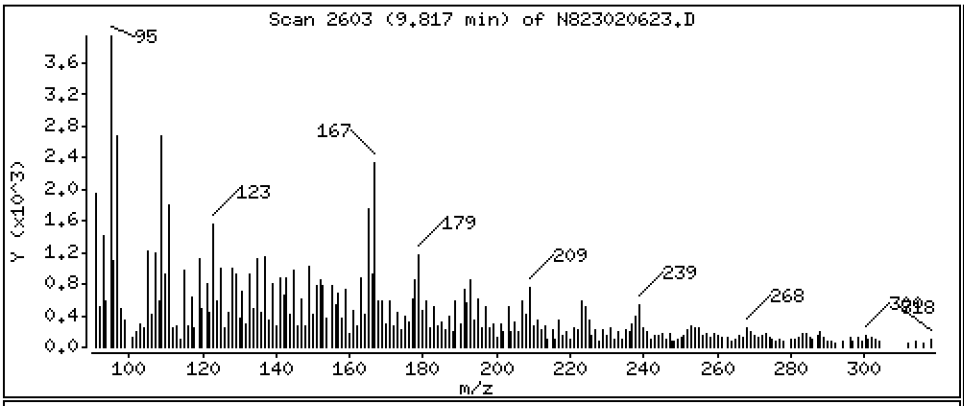
Operator: JZ

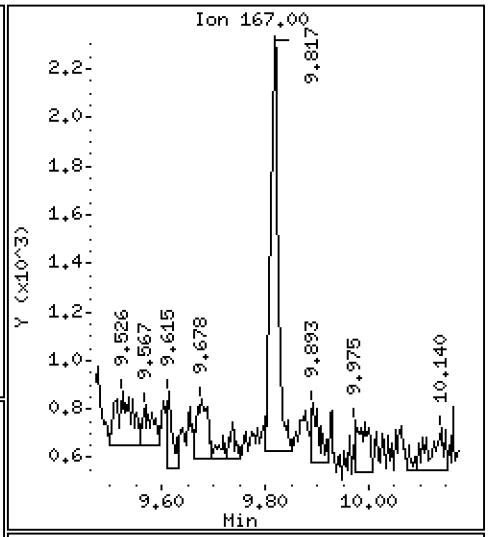
Column phase: Rxi-17sil

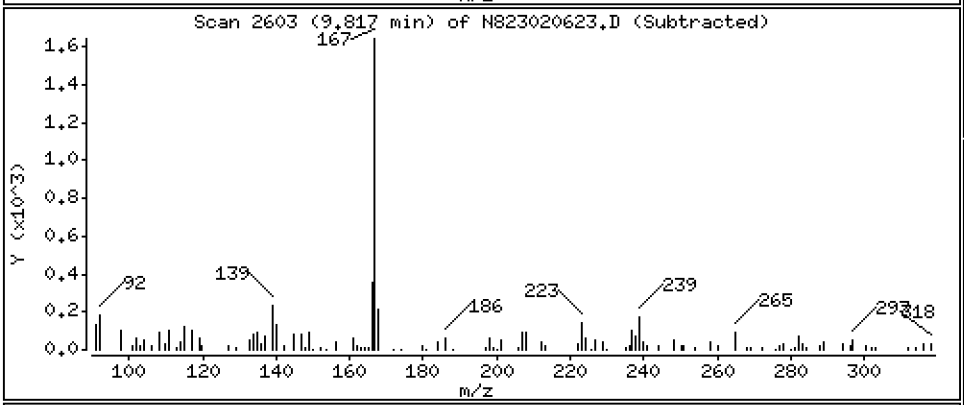
Column diameter: 0.25

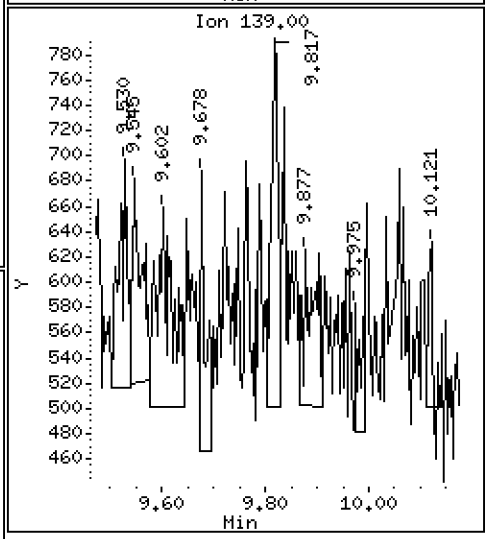
19 Carbazole

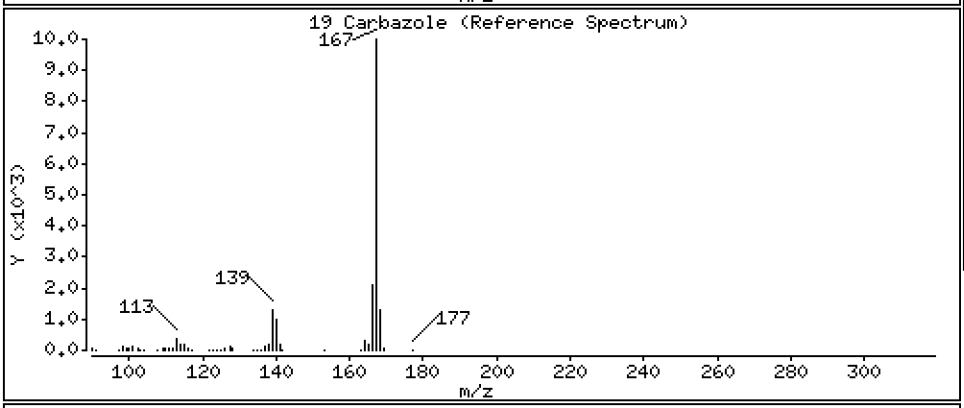
Concentration: 0.3069 ug/mL

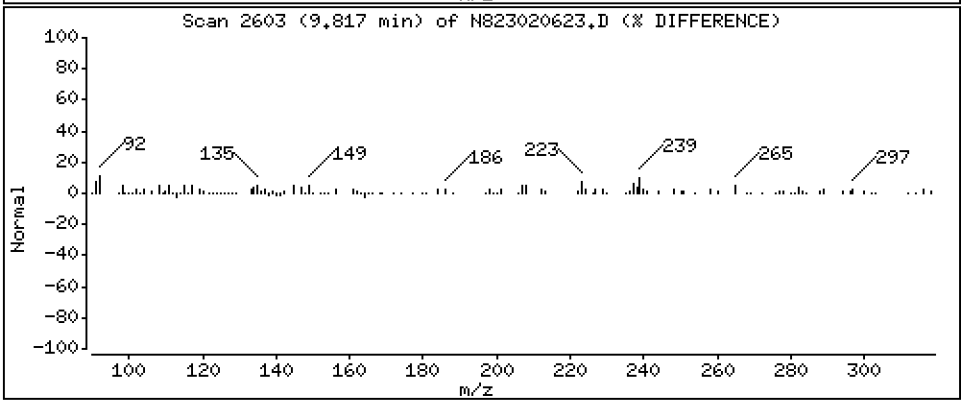












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

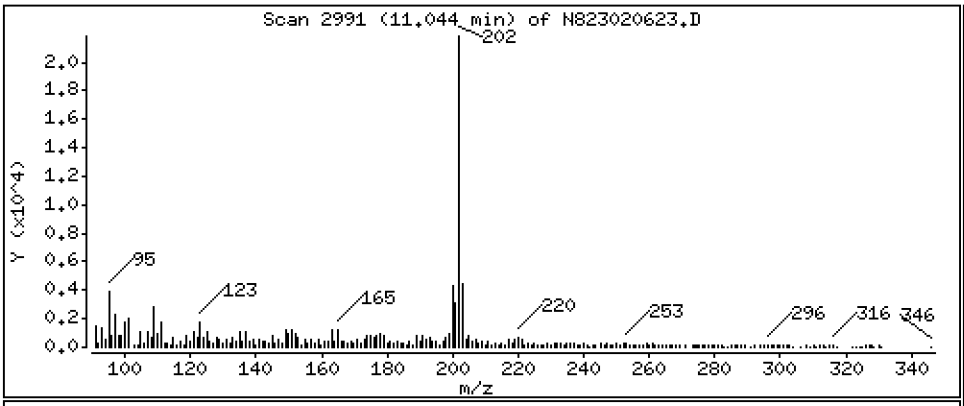
Operator: JZ

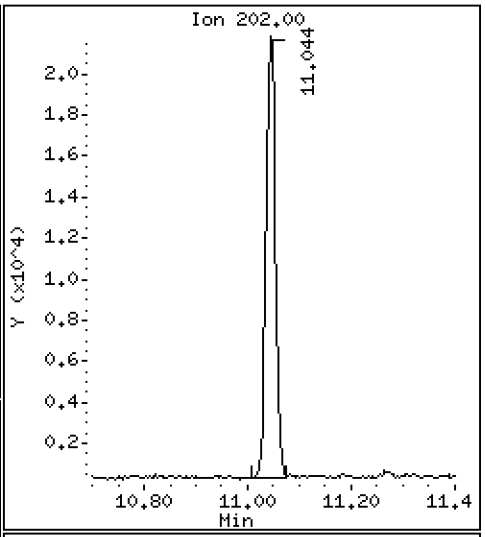
Column phase: Rxi-17sil

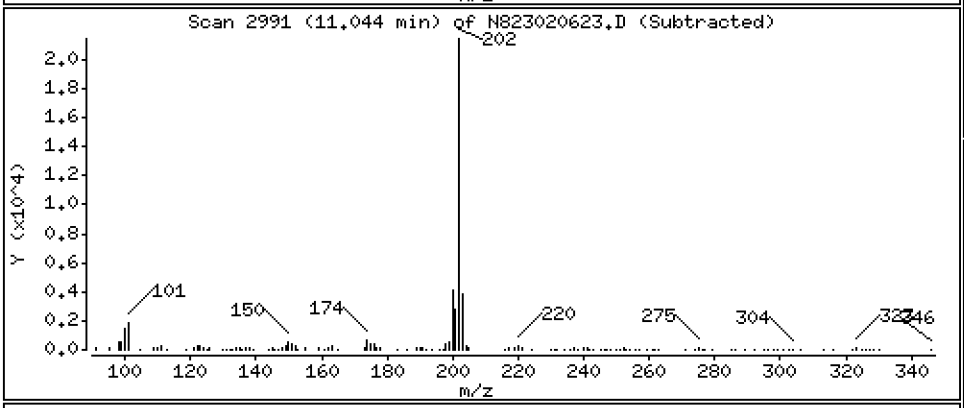
Column diameter: 0.25

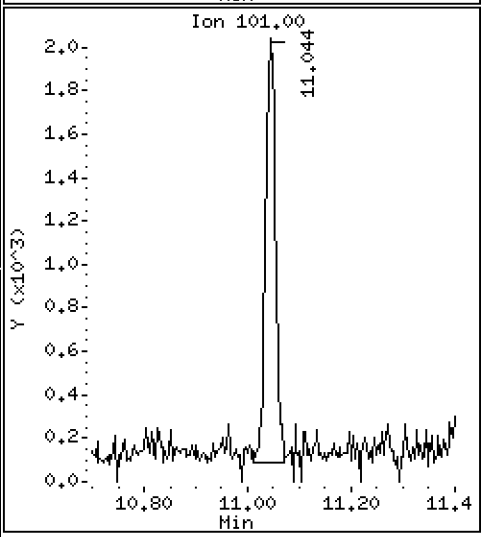
22 Fluoranthene

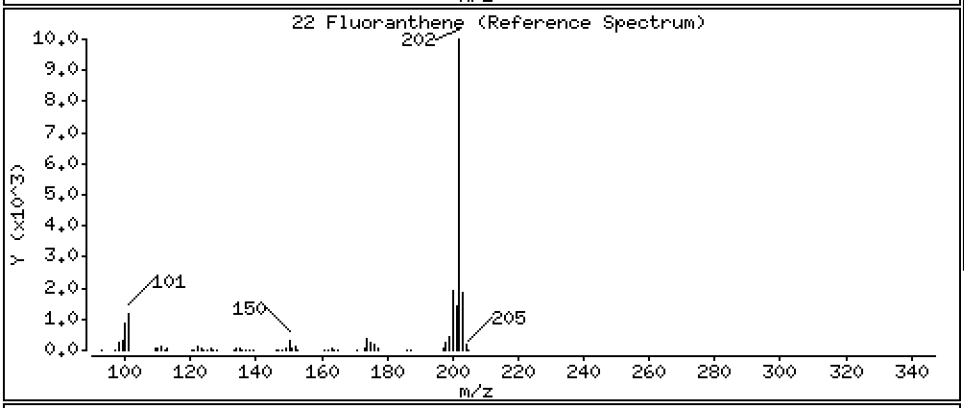
Concentration: 3.506 ug/mL

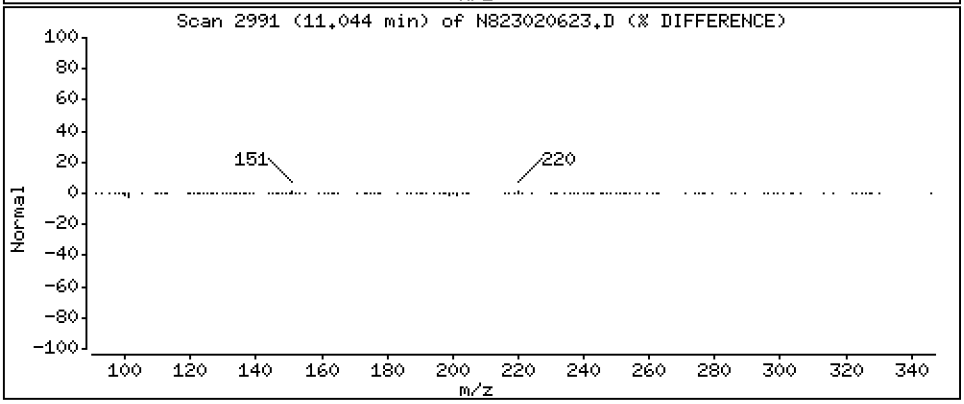












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

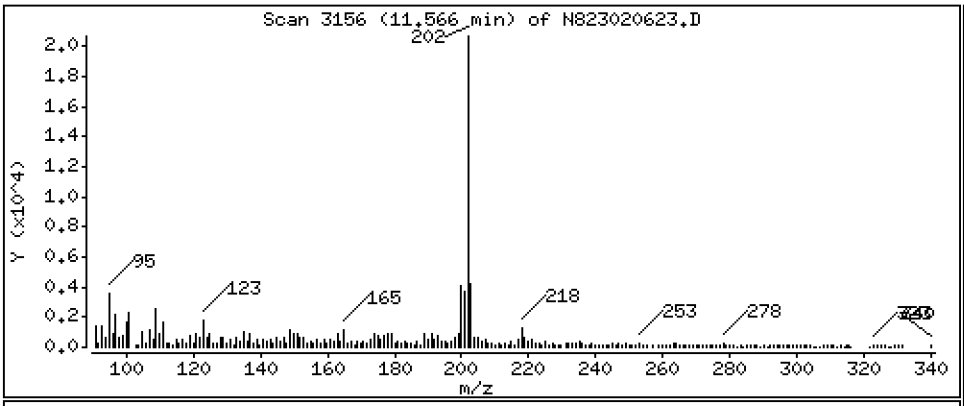
Operator: JZ

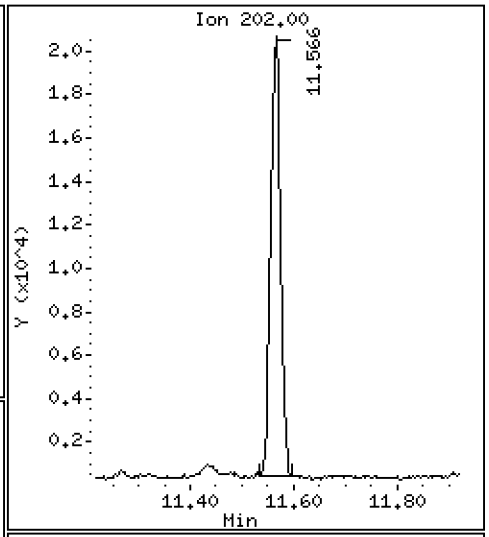
Column phase: Rxi-17sil

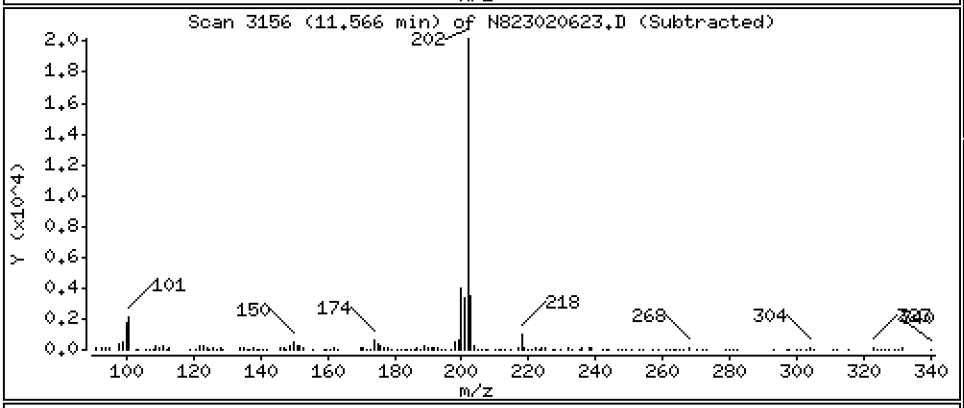
Column diameter: 0.25

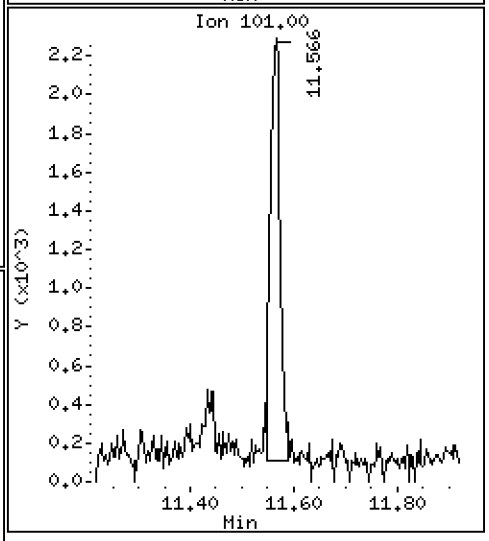
23 Pyrene

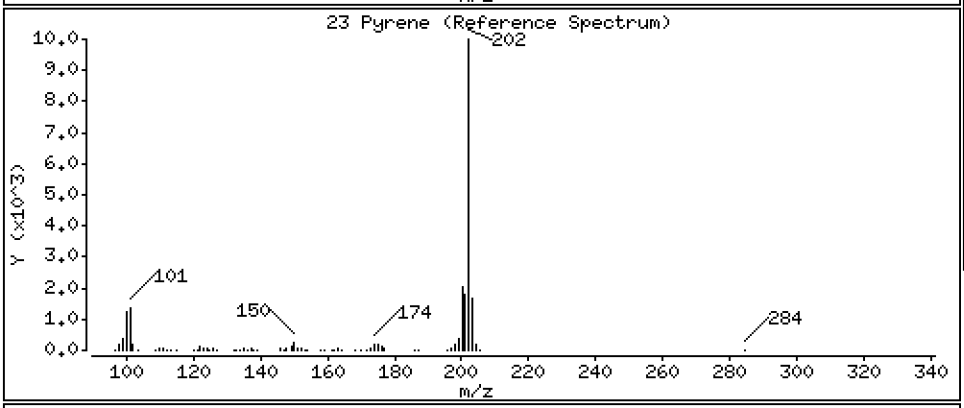
Concentration: 5.606 ug/mL

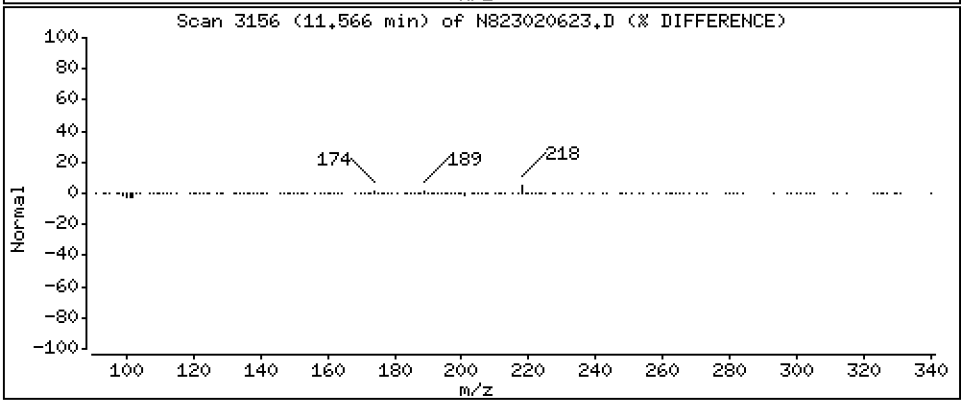












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

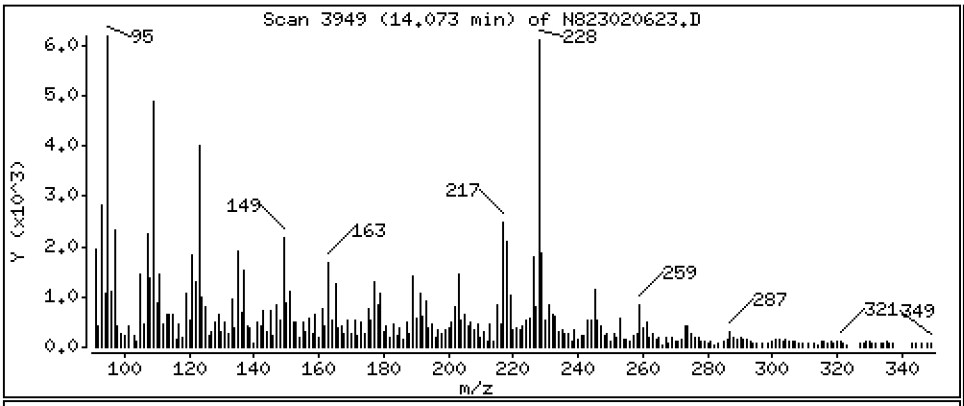
Operator: JZ

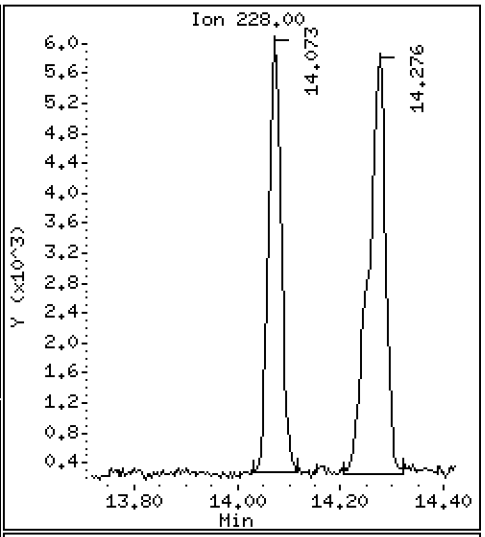
Column phase: Rxi-17sil

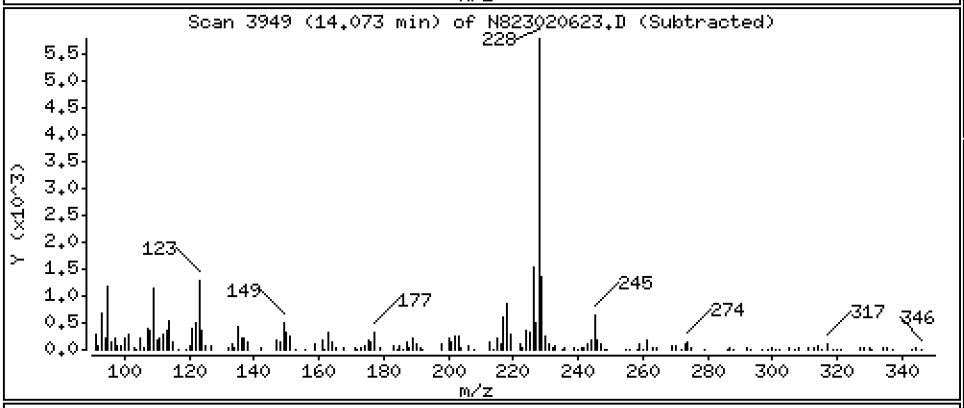
Column diameter: 0.25

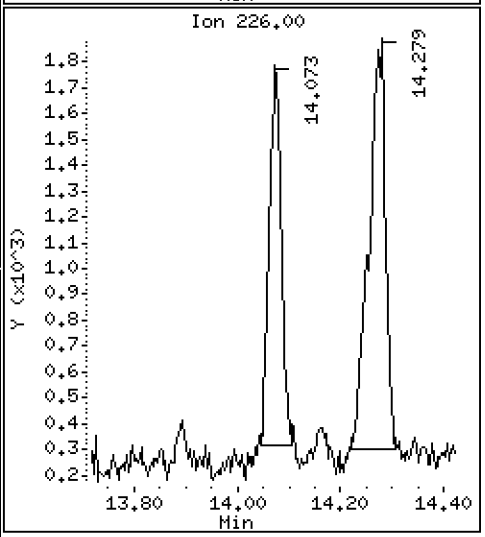
24 Benzo(a)anthracene

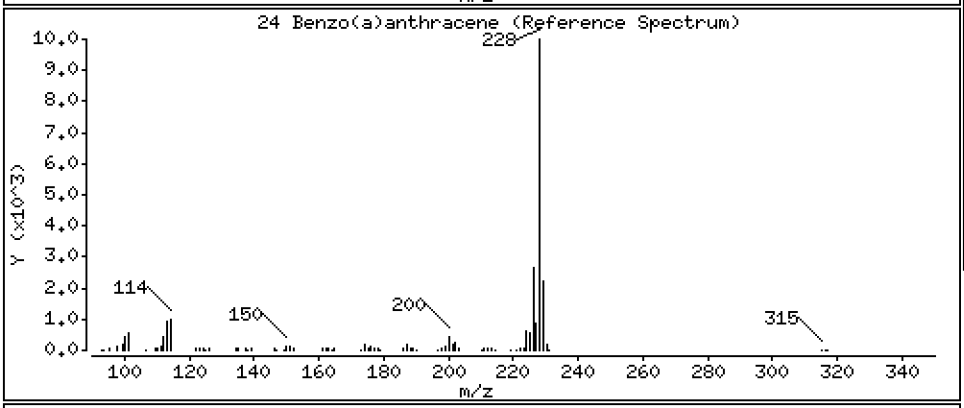
Concentration: 2.323 ug/mL

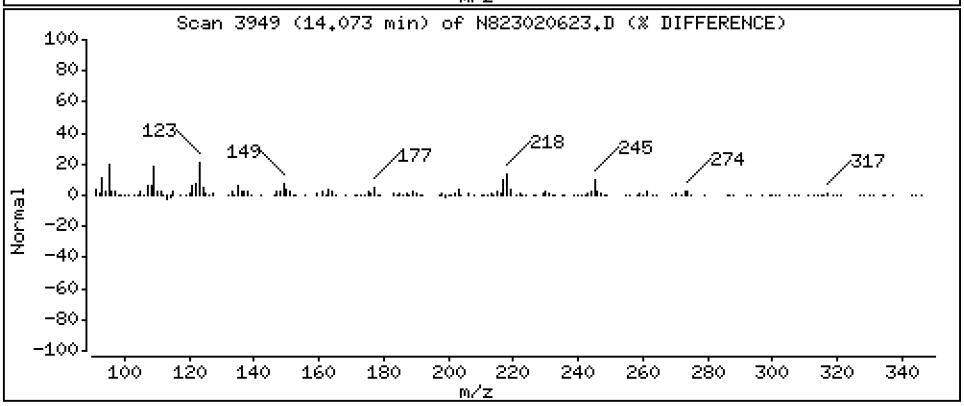












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

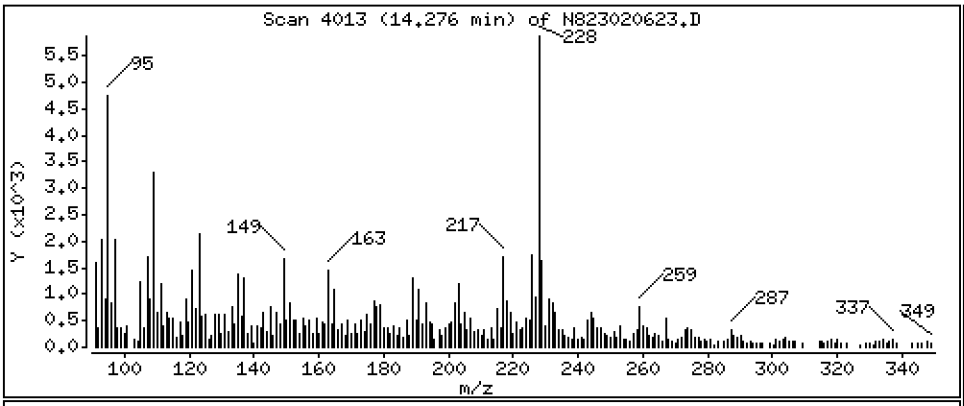
Operator: JZ

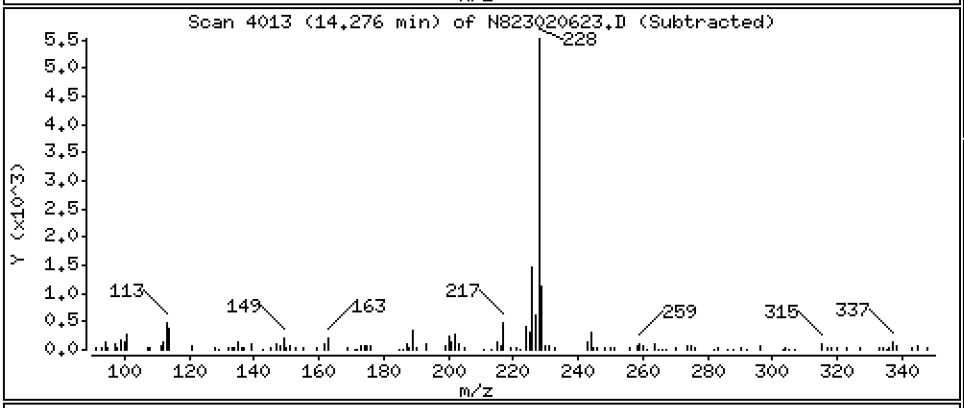
Column phase: Rxi-17sil

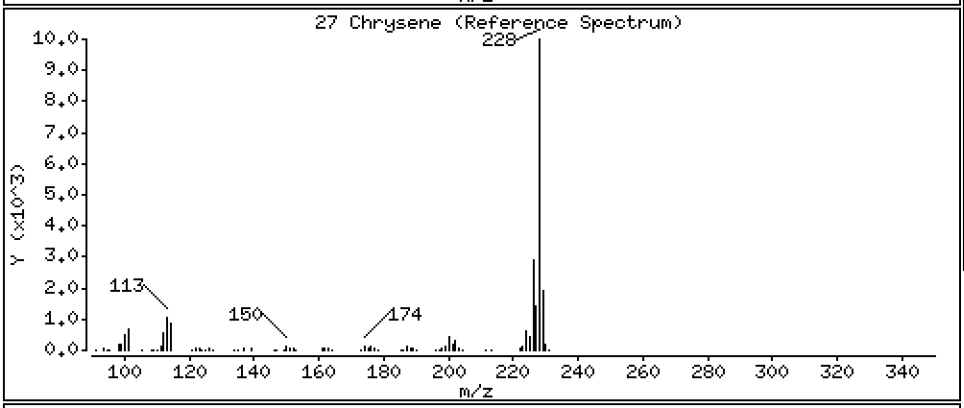
Column diameter: 0.25

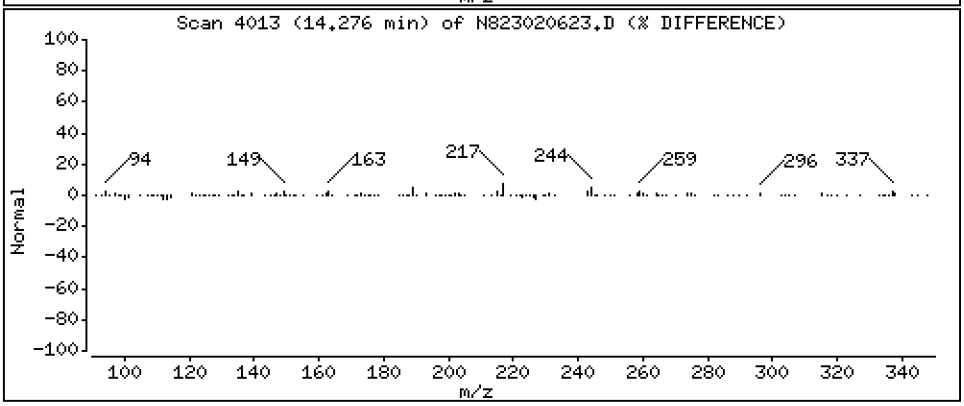
27 Chrysene

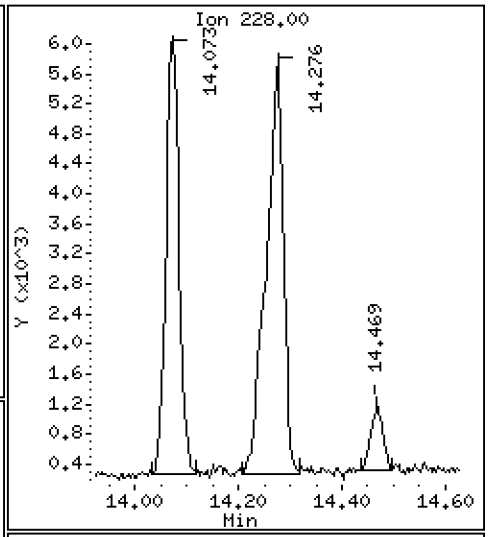
Concentration: 2.777 ug/mL

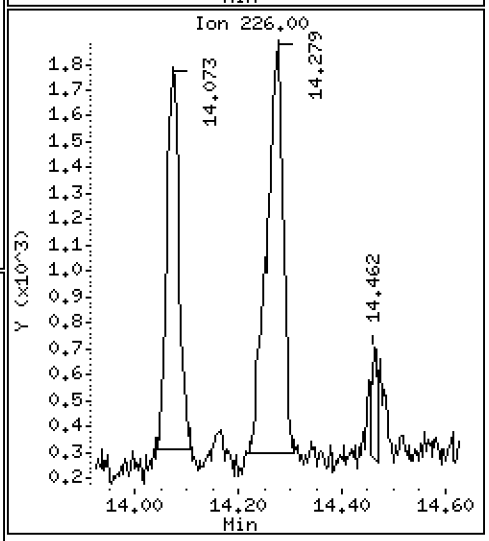












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

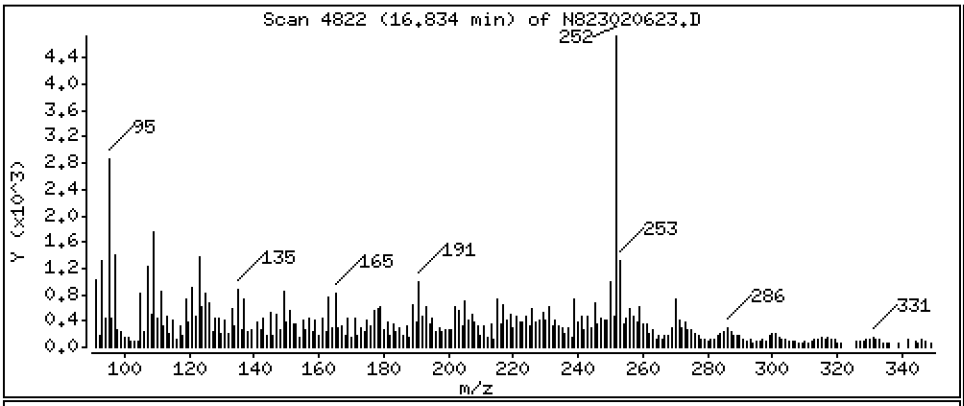
Operator: JZ

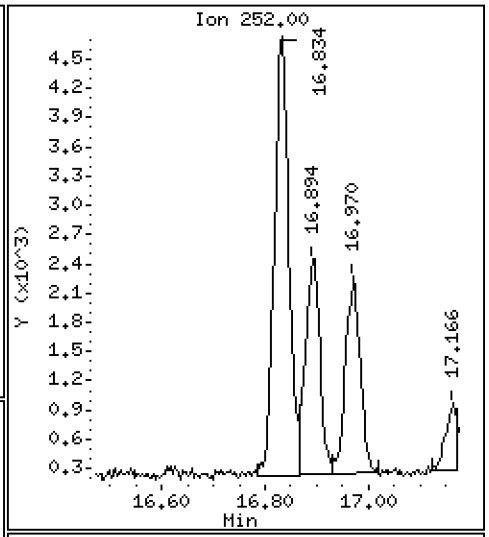
Column phase: Rxi-17sil

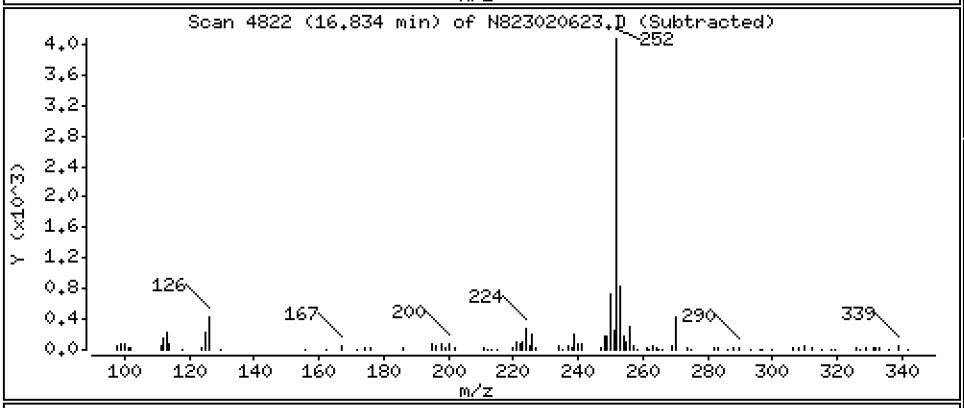
Column diameter: 0.25

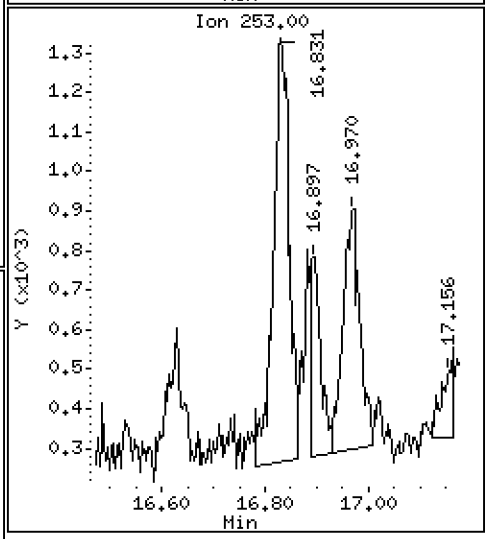
28 Benzo(b)fluoranthene

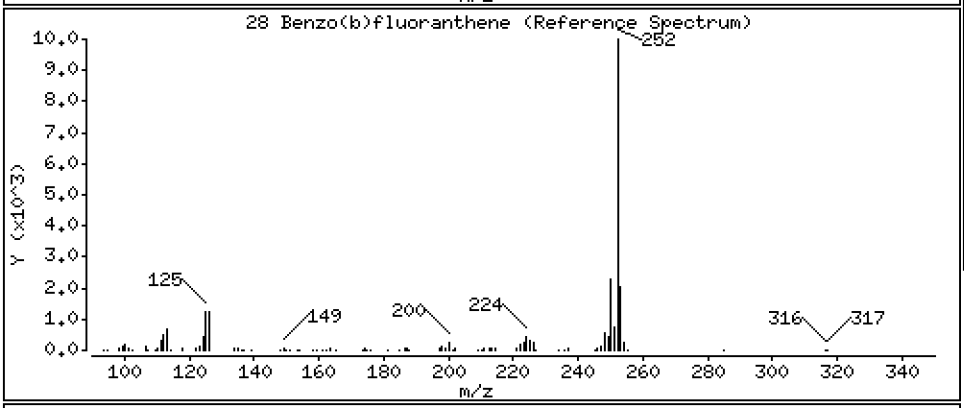
Concentration: 2.237 ug/mL

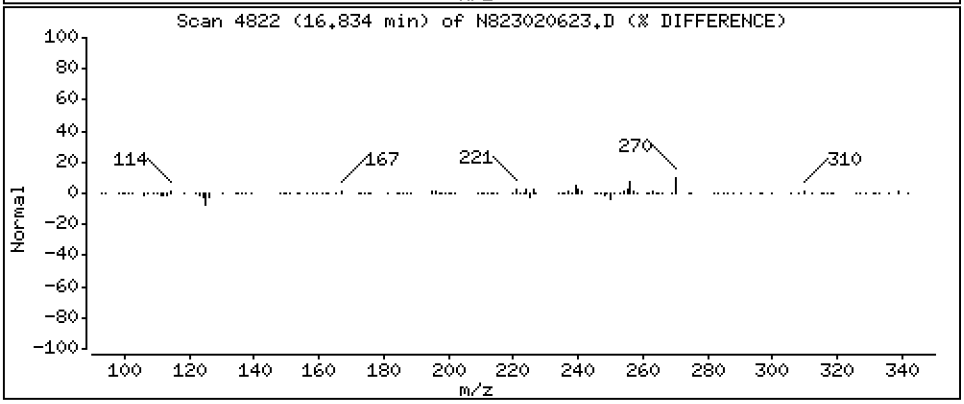












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

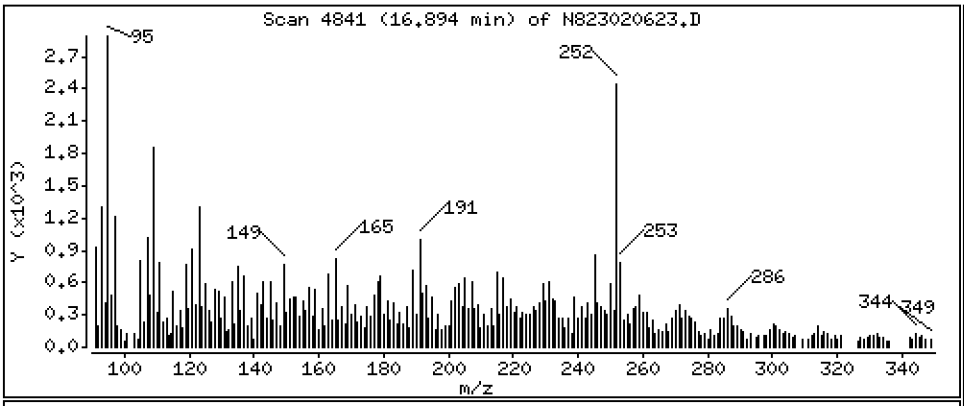
Operator: JZ

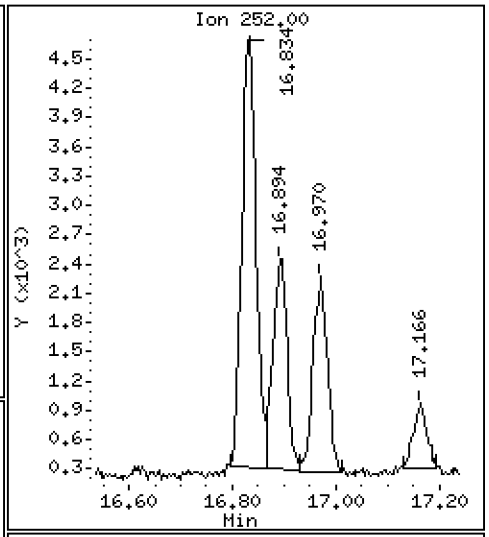
Column phase: Rxi-17sil

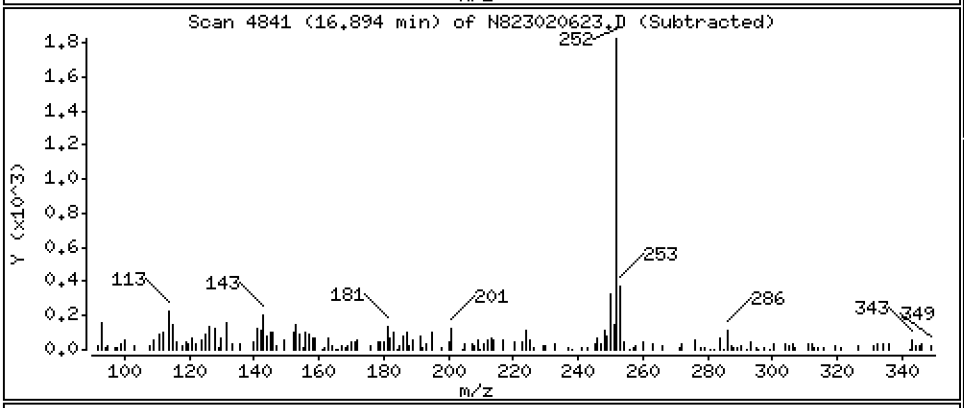
Column diameter: 0.25

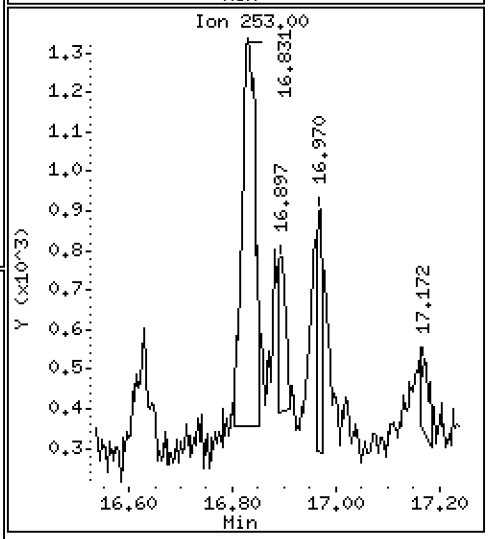
29 Benzo(k)fluoranthene

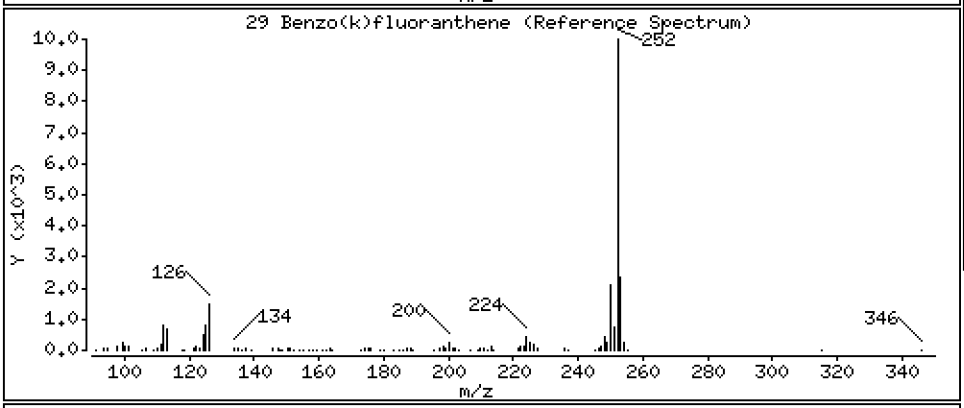
Concentration: 1.058 ug/mL

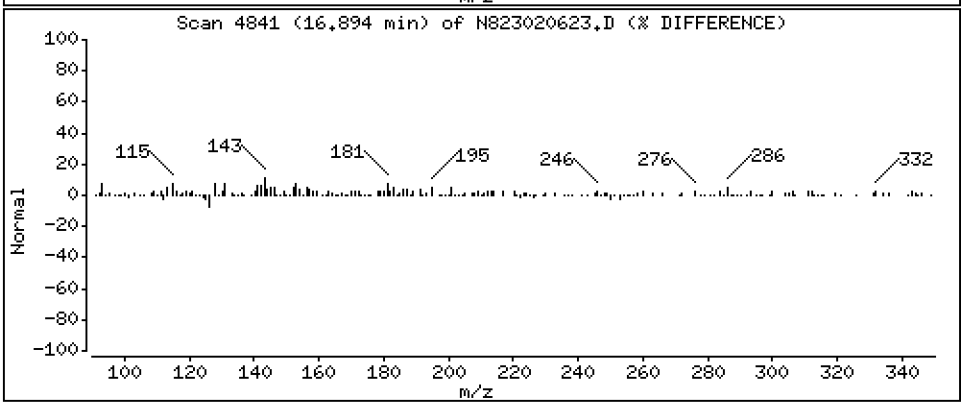












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020623.D

Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

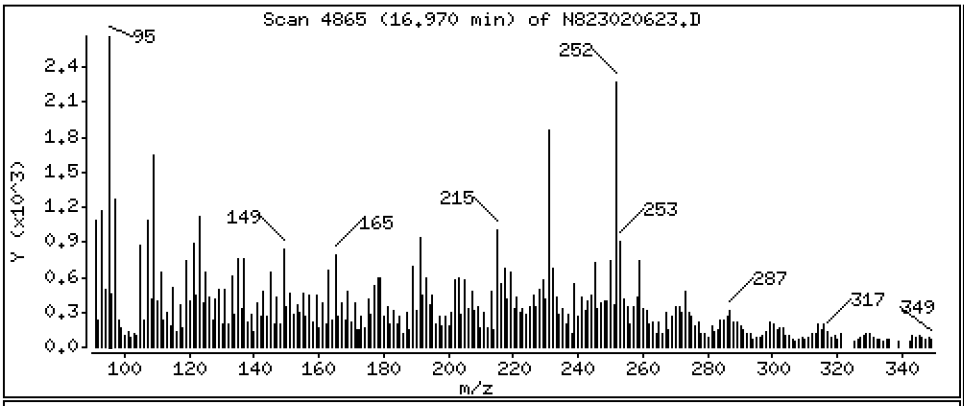
Operator: JZ

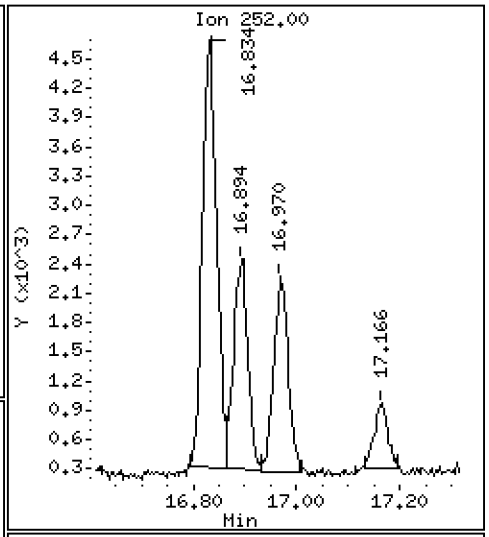
Column phase: Rxi-17sil

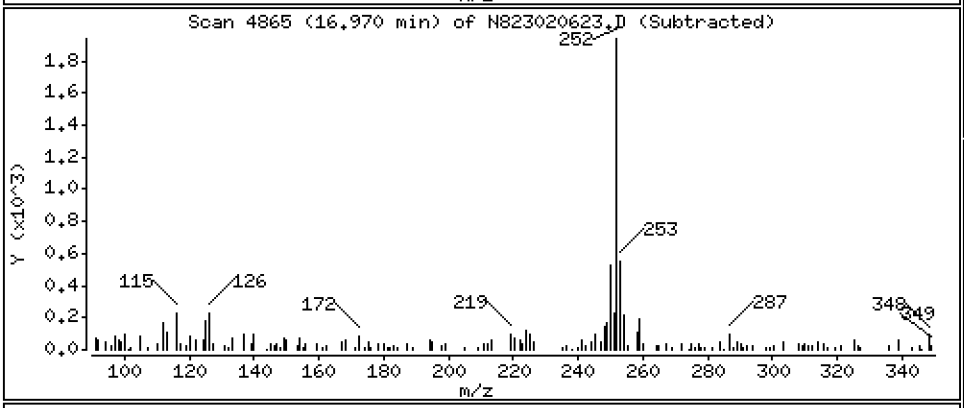
Column diameter: 0.25

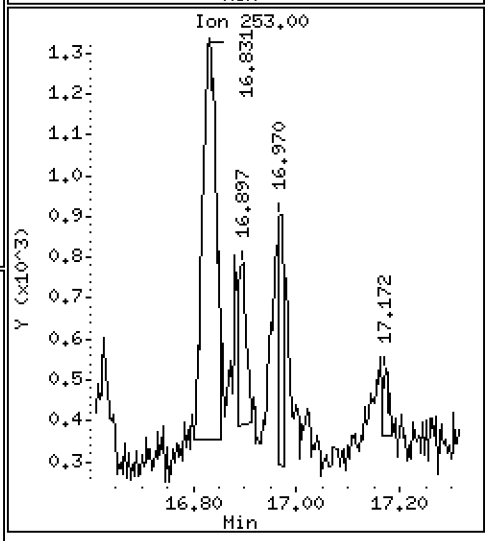
30 Benzo(j)fluoranthene

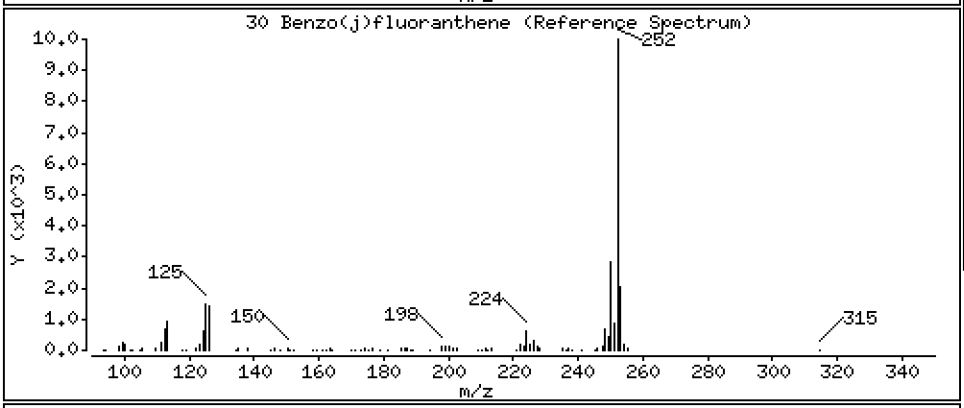
Concentration: 1.095 ug/mL

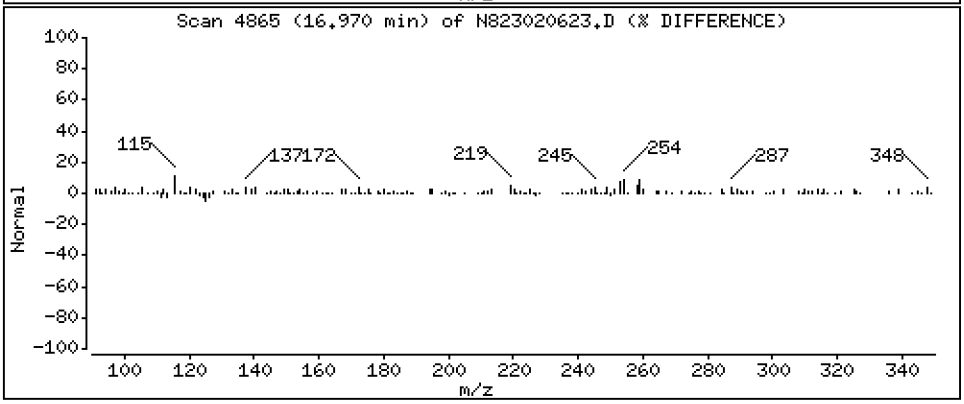












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

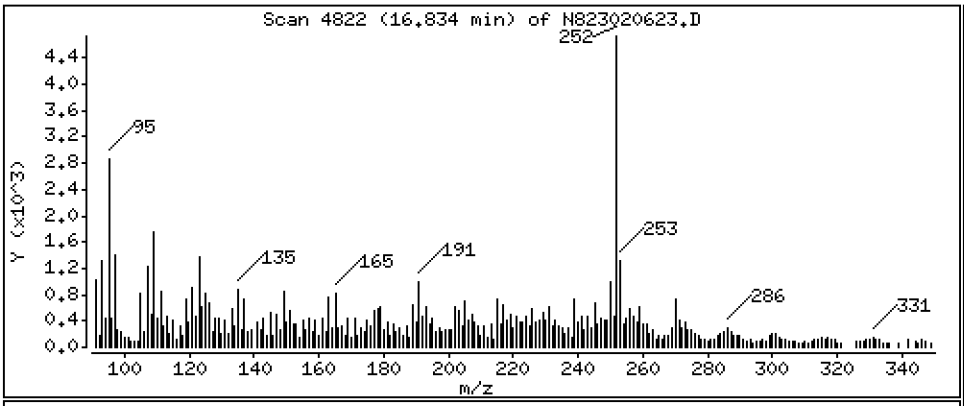
Operator: JZ

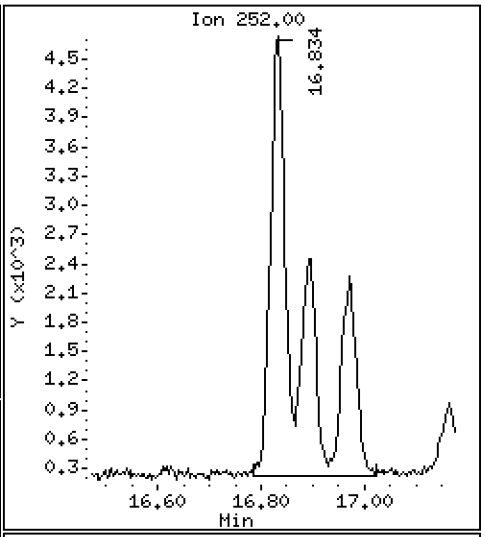
Column phase: Rxi-17sil

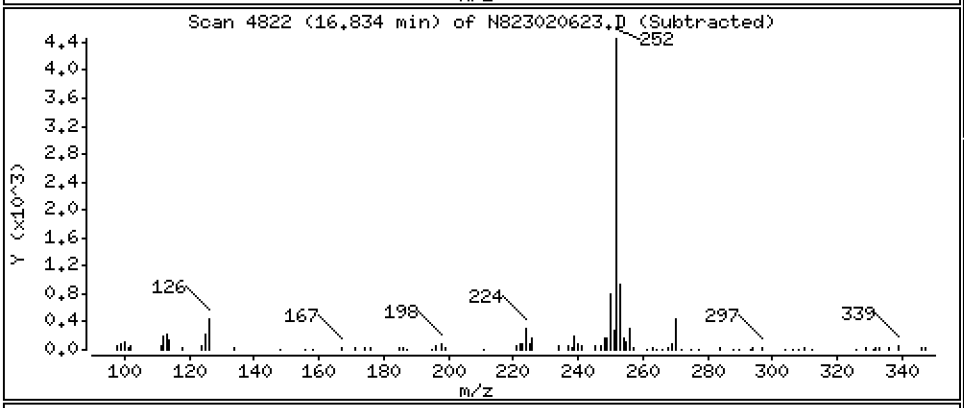
Column diameter: 0.25

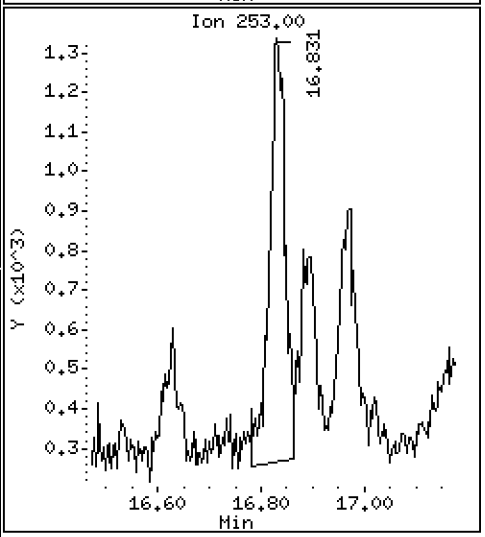
31 Total Benzofluoranthenes

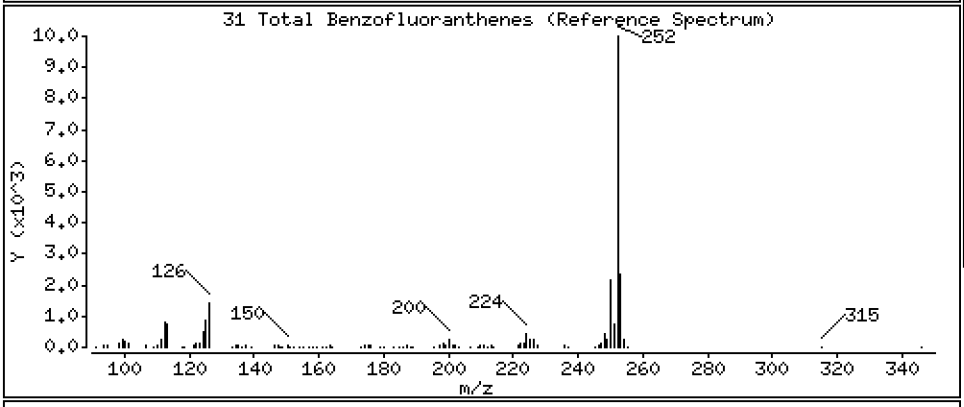
Concentration: 4.584 ug/mL

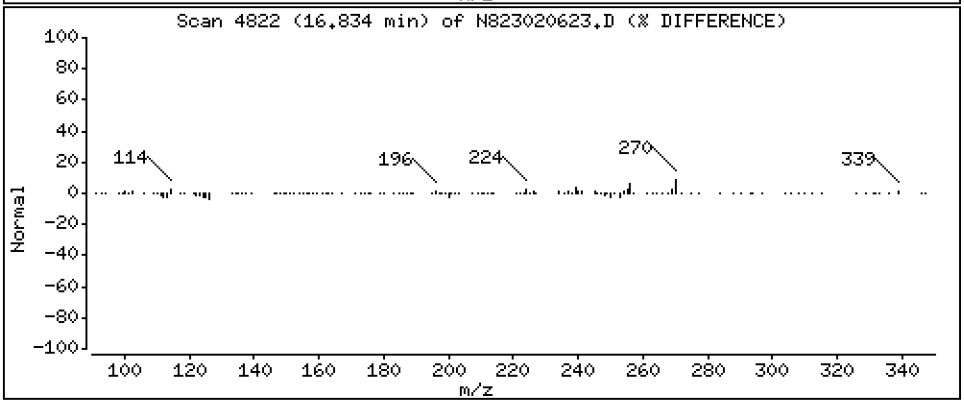












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020623.D

Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

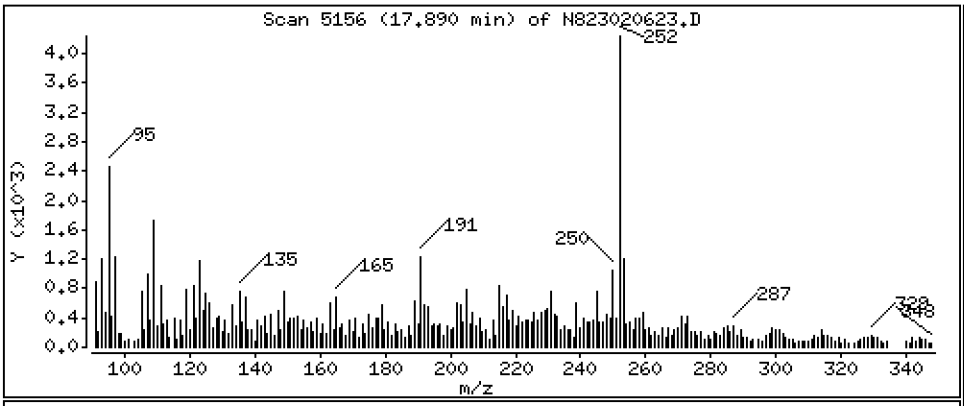
Operator: JZ

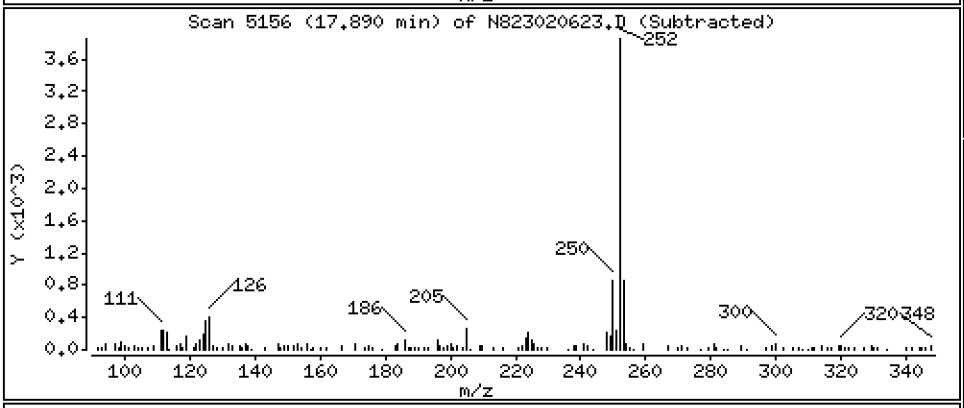
Column phase: Rxi-17sil

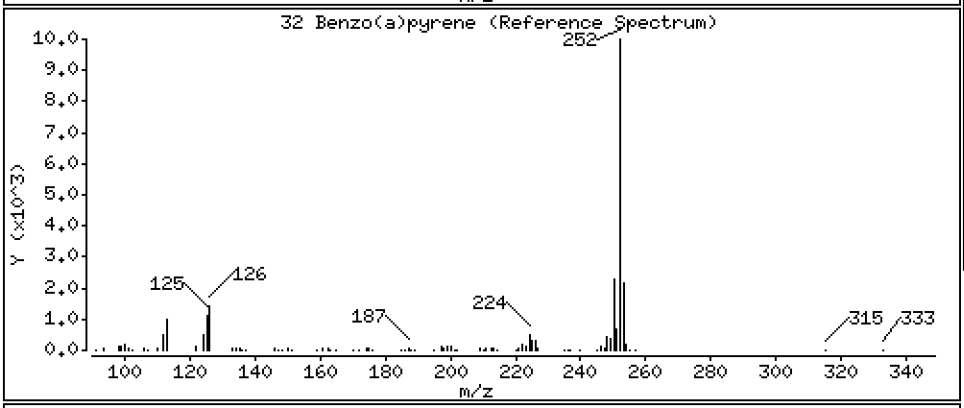
Column diameter: 0.25

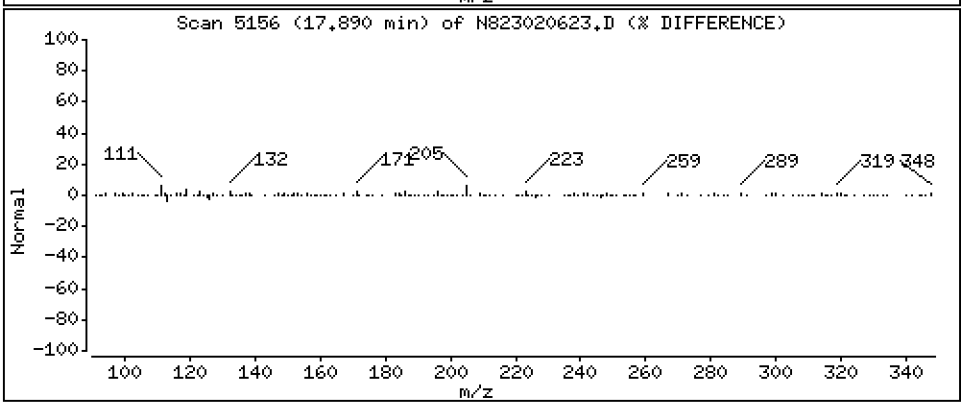
32 Benzo(a)pyrene

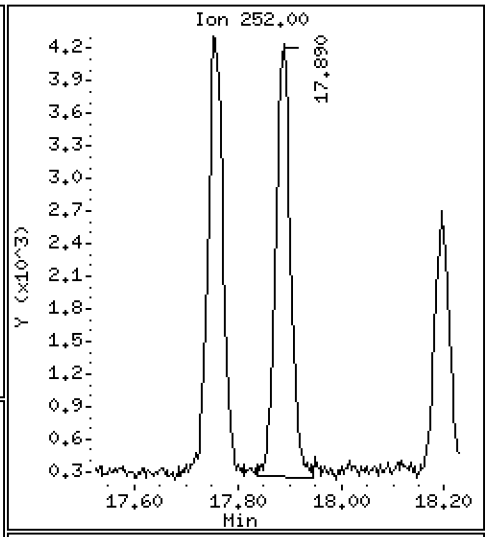
Concentration: 2.313 ug/mL

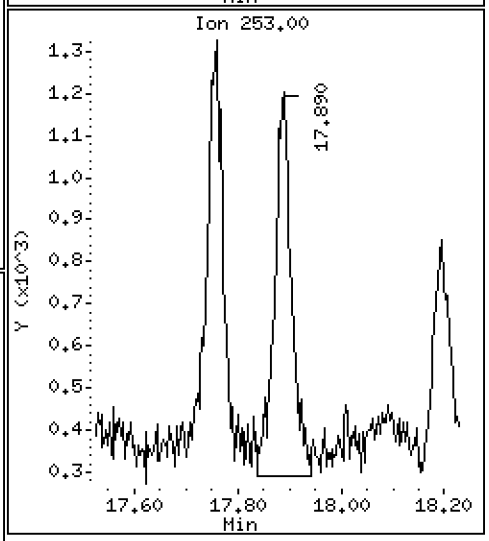












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

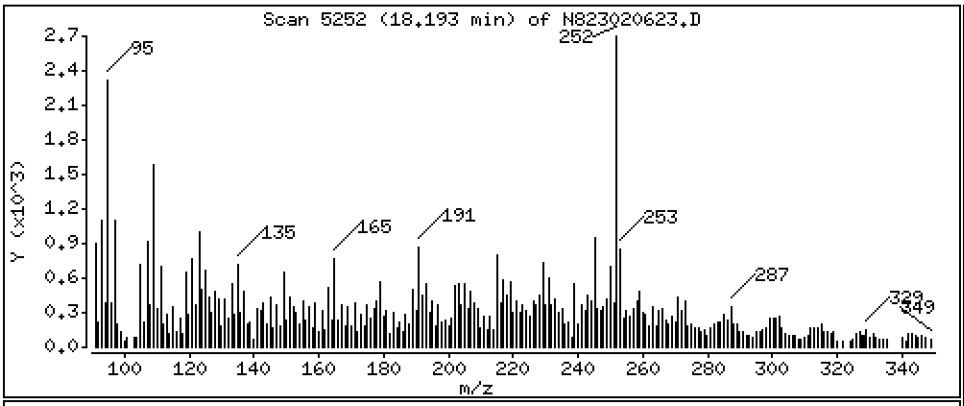
Operator: JZ

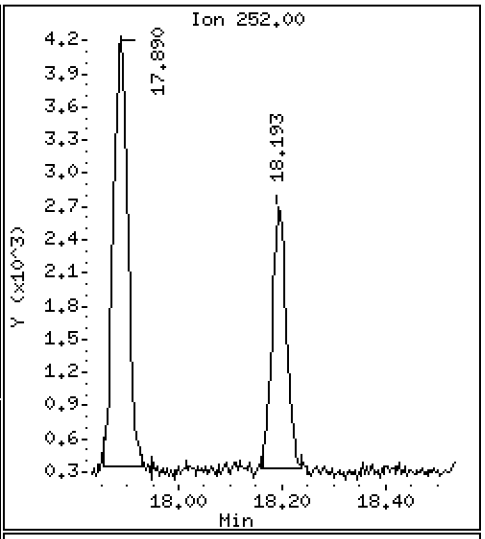
Column phase: Rxi-17sil

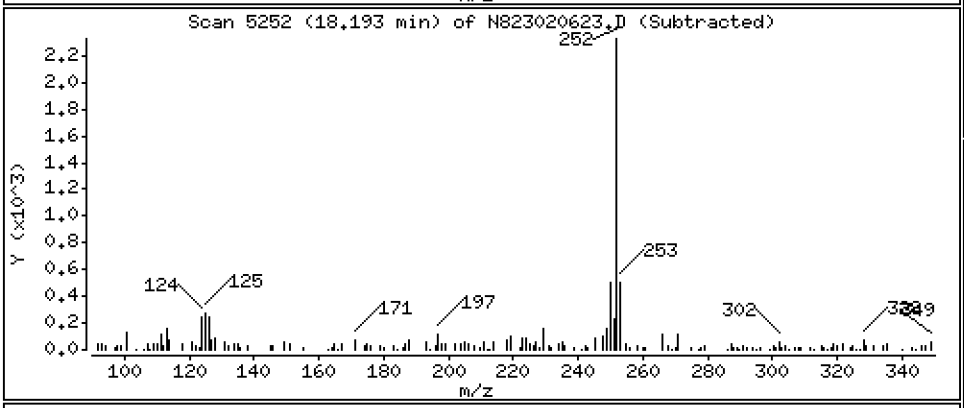
Column diameter: 0.25

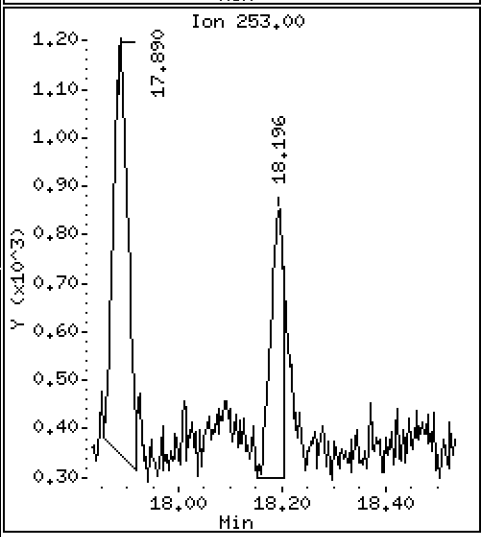
35 Perylene

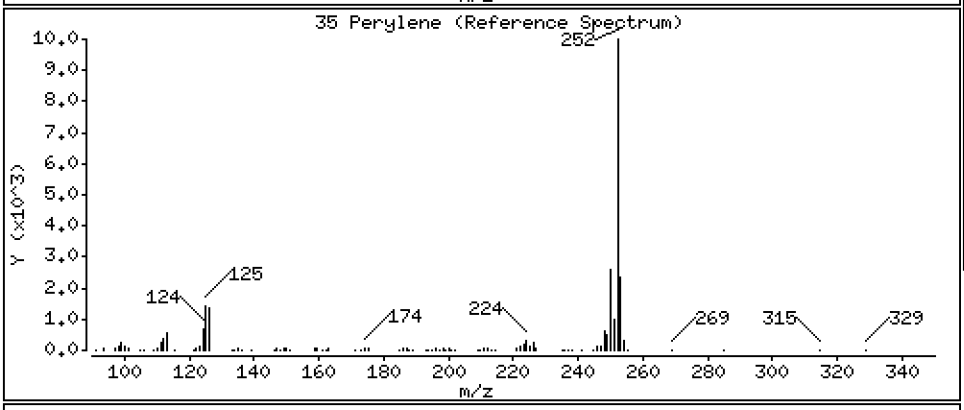
Concentration: 1.197 ug/mL

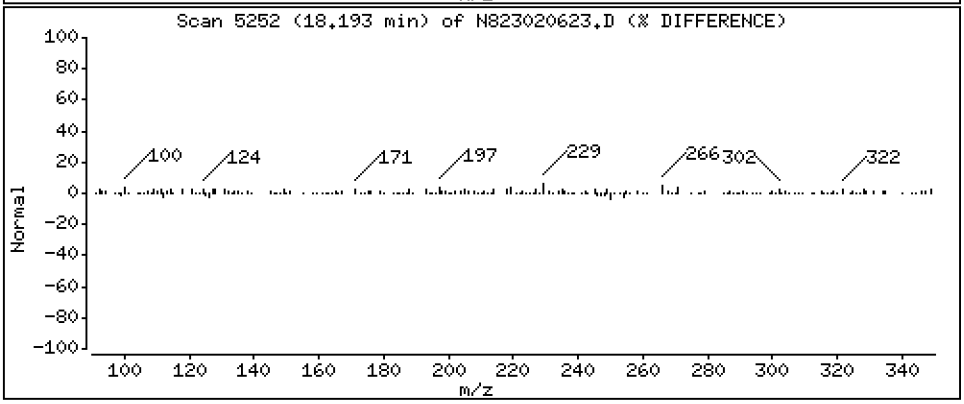












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

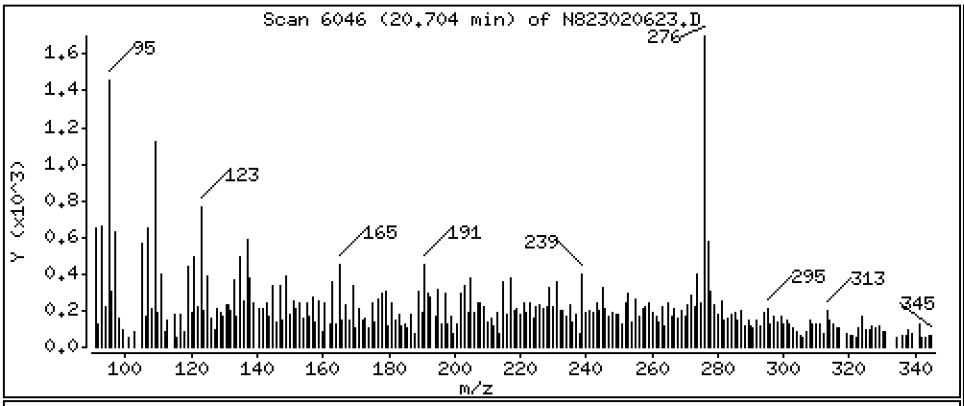
Operator: JZ

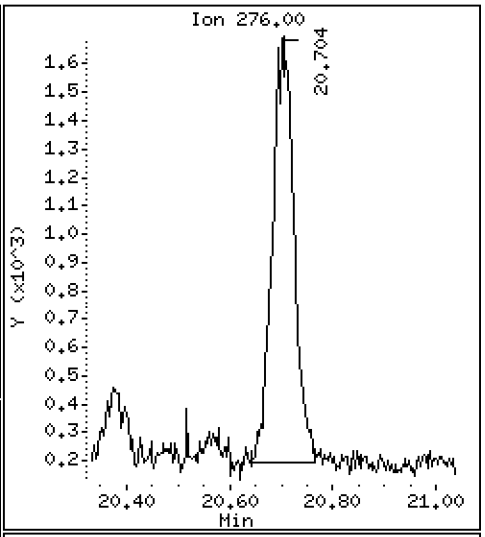
Column phase: Rxi-17sil

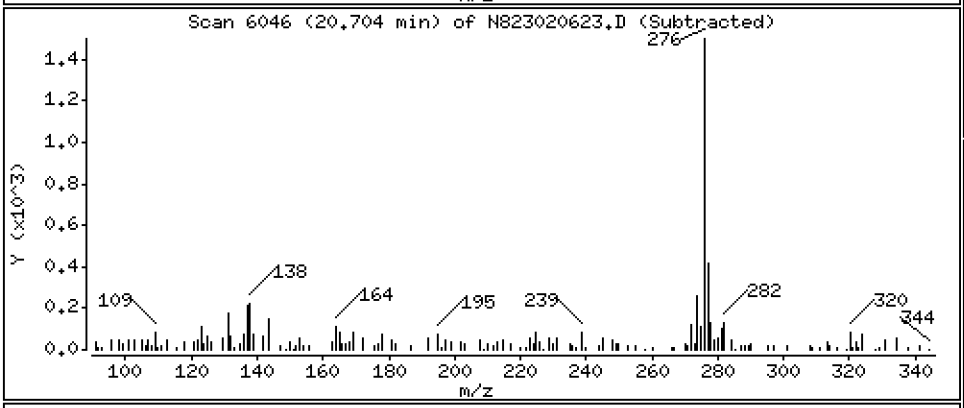
Column diameter: 0.25

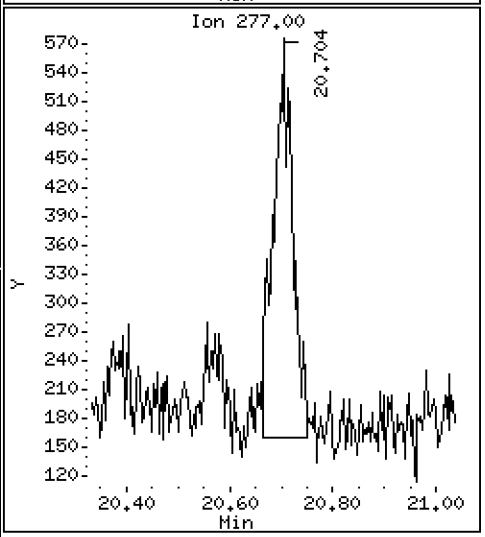
37 Indeno(1,2,3-cd)pyrene

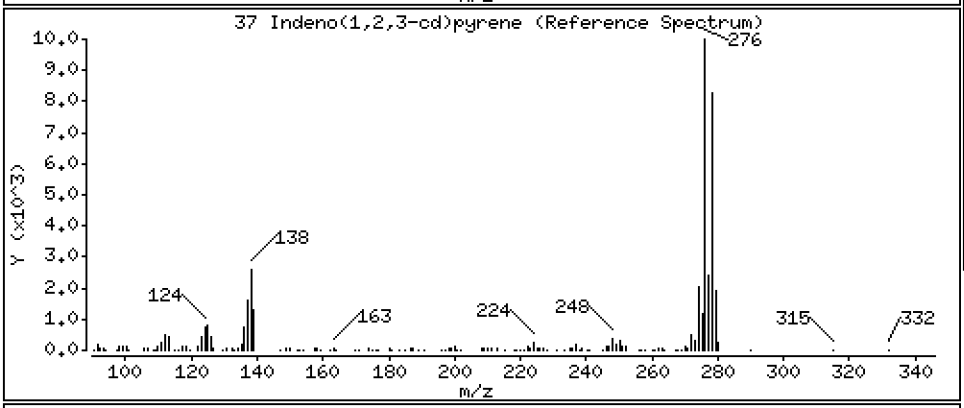
Concentration: 1.091 ug/mL

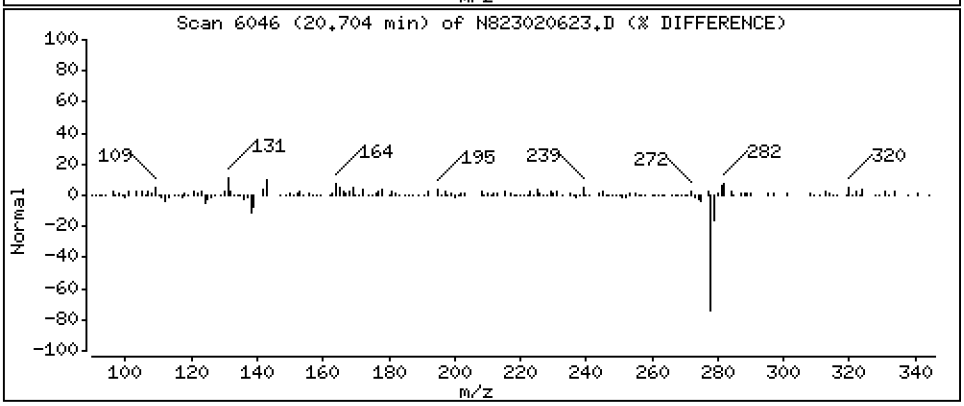












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

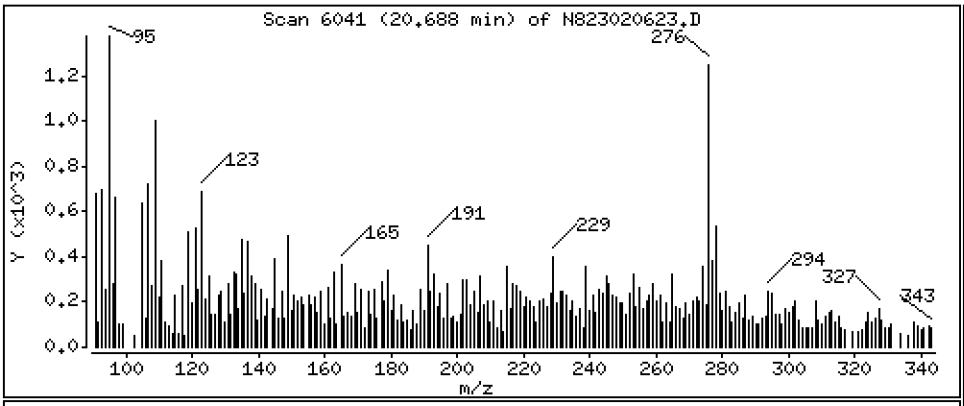
Operator: JZ

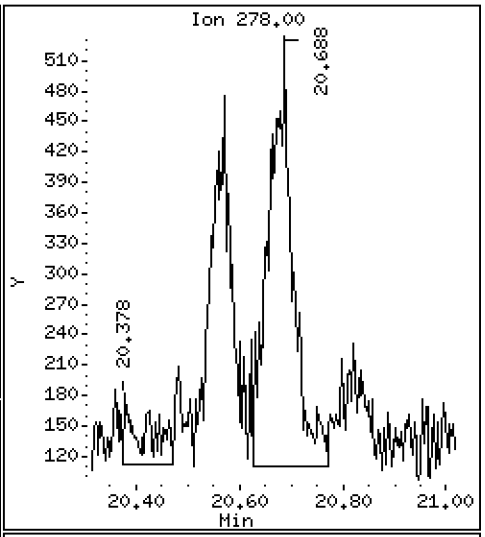
Column phase: Rxi-17sil

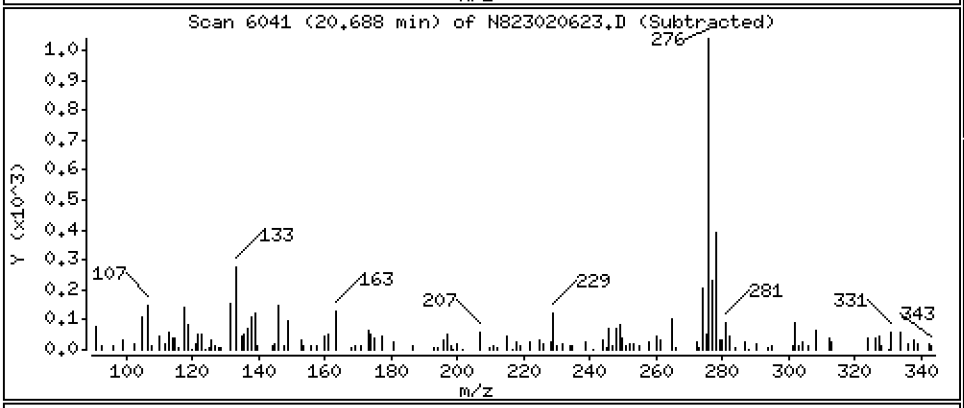
Column diameter: 0.25

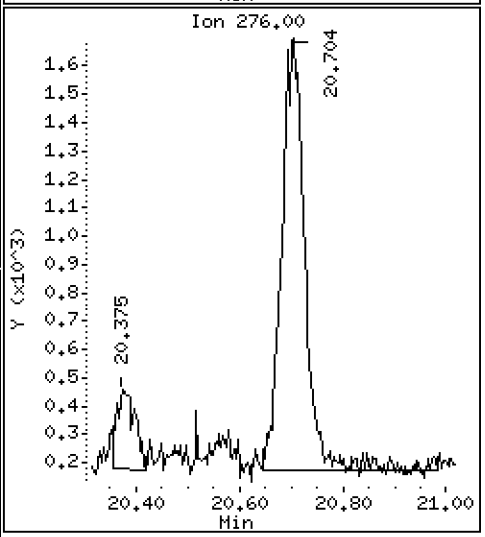
38 Dibenzo(a,h)anthracene

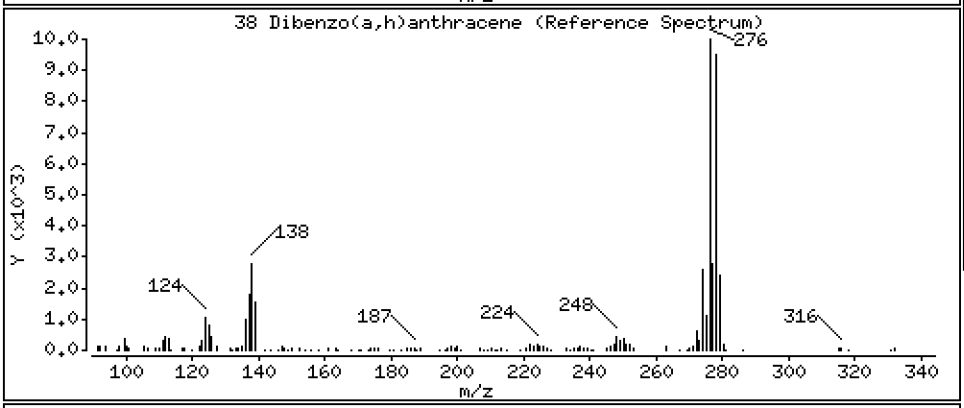
Concentration: 0.3925 ug/mL

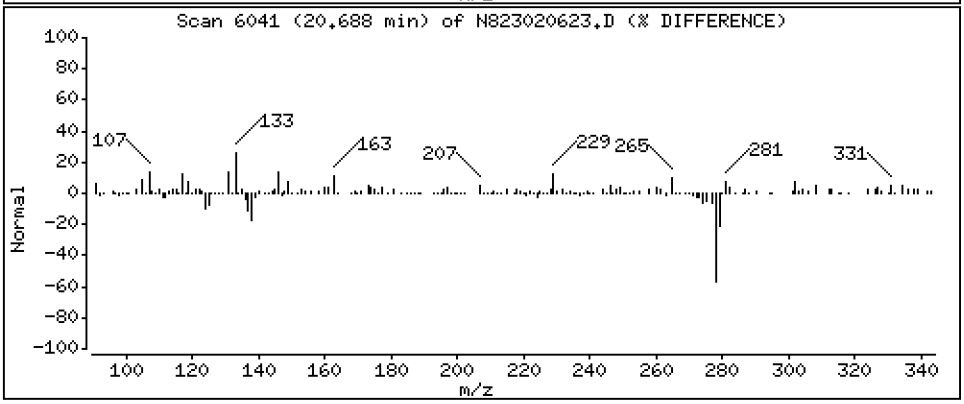












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Date : 06-FEB-2023 22:41

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-15,3

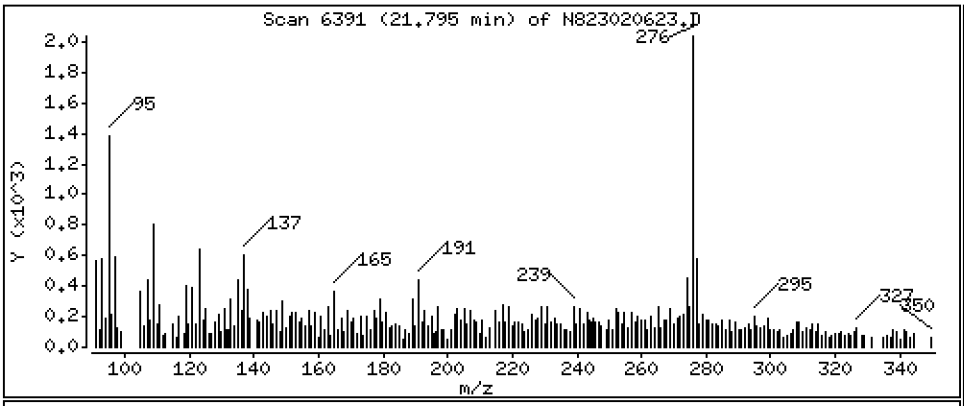
Operator: JZ

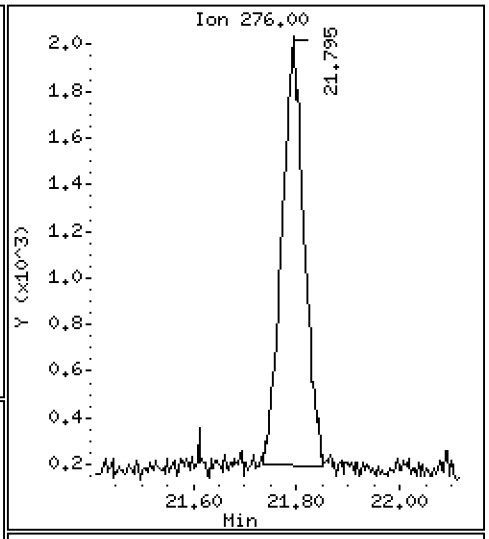
Column phase: Rxi-17sil

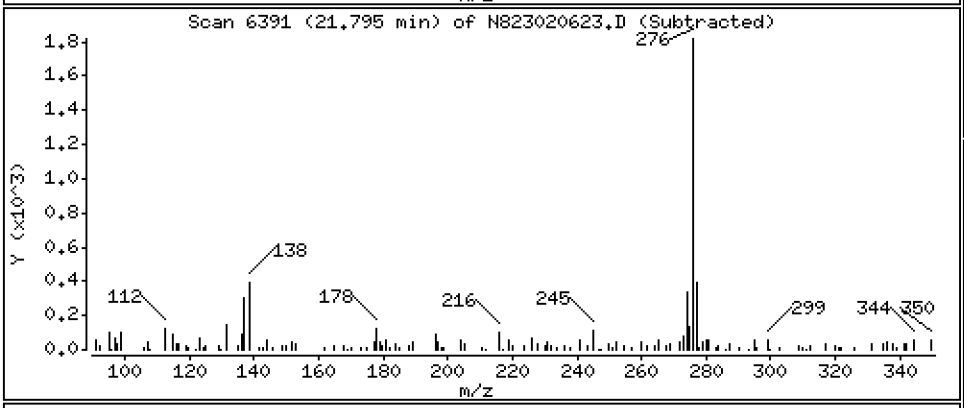
Column diameter: 0.25

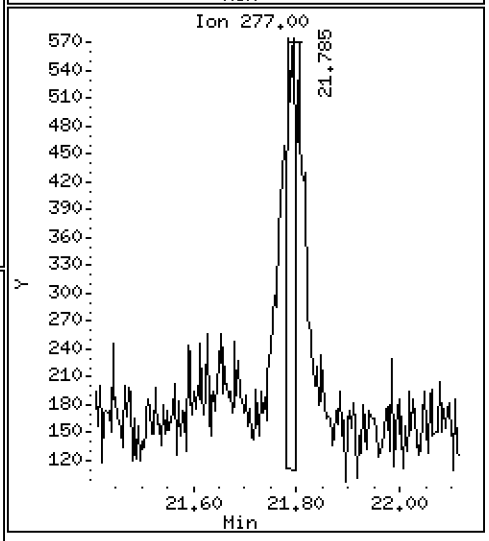
39 Benzo(g,h,i)perylene

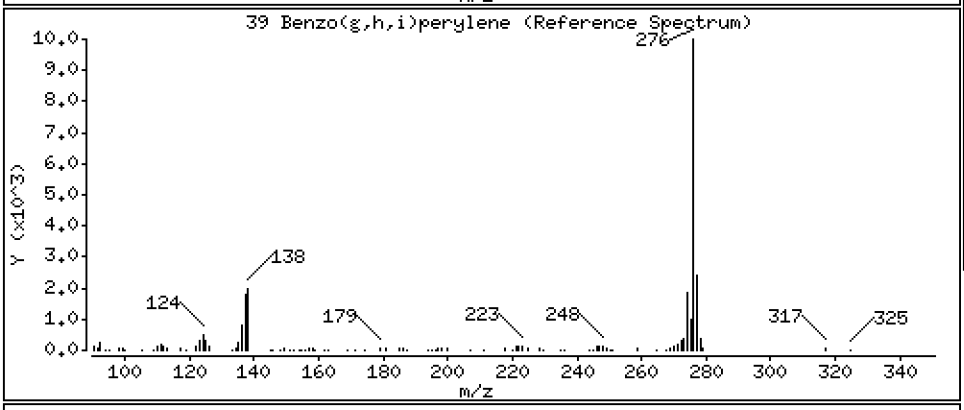
Concentration: 1.500 ug/mL

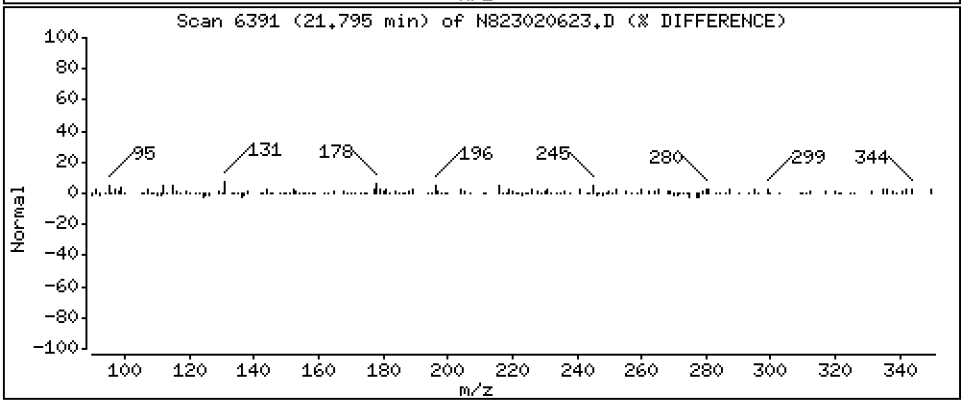












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020623.D
Lab Smp Id: 23A0207-15
Inj Date : 06-FEB-2023 22:41
Operator : JZ Inst ID: nt8.i
Smp Info : 23A0207-15,3
Misc Info : 23-
Comment : 1ul Injection
Method : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 13:04 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 23
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1	Naphthalene-d8	136	4.894	4.900	(1.000)	54069	2.00000	
	2	Naphthalene	128	4.922	4.928	(1.006)	3417	0.13592	0.4078(M)
$	3	2-Methylnaphthalene-d10	152	5.627	5.634	(1.150)	13093	0.88790	2.664
	4	2-Methylnaphthalene	141	5.678	5.681	(1.160)	2600	0.18802	0.5641(M)
	5	1-methylnaphthalene	141	5.874	5.880	(1.200)	914	0.06513	0.1954
	9	Acenaphthylene	152	7.079	7.082	(0.985)	1129	0.05352	0.1606(M)
*	10	Acenaphthene-d10	164	7.186	7.189	(1.000)	27937	2.00000	
	11	Acenaphthene	153	7.233	7.240	(1.007)	2006	0.14192	0.4258(M)
	12	Dibenzofuran	168	7.385	7.392	(1.028)	1514	0.07052	0.2116(M)
	14	Fluorene	166	7.863	7.869	(1.094)	2008	0.12042	0.3613(M)
*	15	Phenanthrene-d10	188	9.225	9.232	(1.000)	43496	2.00000	
	16	Phenanthrene	178	9.263	9.267	(1.004)	18190	0.85613	2.568
	17	Anthracene	178	9.301	9.308	(1.008)	4848	0.25118	0.7535
	19	Carbazole	167	9.817	9.823	(1.064)	1810	0.10229	0.3069
	22	Fluoranthene	202	11.044	11.050	(1.197)	27028	1.16866	3.506
$	21	Fluoranthene-d10	212	11.006	11.009	(1.193)	16603	0.86518	2.596
	23	Pyrene	202	11.565	11.569	(0.814)	26852	1.86869	5.606
	24	Benzo(a)anthracene	228	14.073	14.070	(0.991)	10083	0.77418	2.323
*	25	Chrysene-d12	240	14.202	14.202	(1.000)	23177	2.00000	
	27	Chrysene	228	14.275	14.275	(1.005)	12834	0.92565	2.777
	28	Benzo(b)fluoranthene	252	16.833	16.824	(0.929)	8996	0.74555	2.237
	29	Benzo(k)fluoranthene	252	16.893	16.887	(0.932)	4167	0.35257	1.058
	30	Benzo(j)fluoranthene	252	16.969	16.963	(0.936)	3882	0.36485	1.095
	31	Total Benzofluoranthenes	252	16.833	16.824	(0.929)	17461	1.52800	4.584(M)
	32	Benzo(a)pyrene	252	17.889	17.877	(0.987)	8187	0.77103	2.313(M)
*	33	Perylene-d12	264	18.123	18.107	(1.000)	20718	2.00000	
	35	Perylene	252	18.193	18.183	(1.004)	4546	0.39897	1.197
$	36	Dibenzo(a,h)anthracene-d14	292	20.561	20.549	(1.135)	8584	1.05743	3.172
	37	Indeno(1,2,3-cd)pyrene	276	20.703	20.684	(1.142)	4398	0.36357	1.091
	38	Dibenzo(a,h)anthracene	278	20.688	20.666	(1.141)	1362	0.13083	0.3925
	39	Benzo(g,h,i)perylene	276	21.794	21.763	(1.203)	5479	0.49991	1.500(M)

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020623.D
Lab Smp Id: 23A0207-15
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44336	22168	88672	54069	21.95
10 Acenaphthene-d10	26127	13064	52254	27937	6.93
15 Phenanthrene-d10	47424	23712	94848	43496	-8.28
25 Chrysene-d12	36794	18397	73588	23177	-37.01
33 Perylene-d12	36636	18318	73272	20718	-43.45

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.89	-0.13
10 Acenaphthene-d10	7.19	6.69	7.69	7.19	-0.04
15 Phenanthrene-d10	9.23	8.73	9.73	9.23	-0.07
25 Chrysene-d12	14.20	13.70	14.70	14.20	-0.00
33 Perylene-d12	18.11	17.61	18.61	18.12	0.09

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

REVIEW SUMMARY FOR FILE - N823020623.D

Lab ID: 23A0207-15
nt8.i, 20230206A.b\FSIMPNA230119.m,   06-FEB-2023 22:41

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

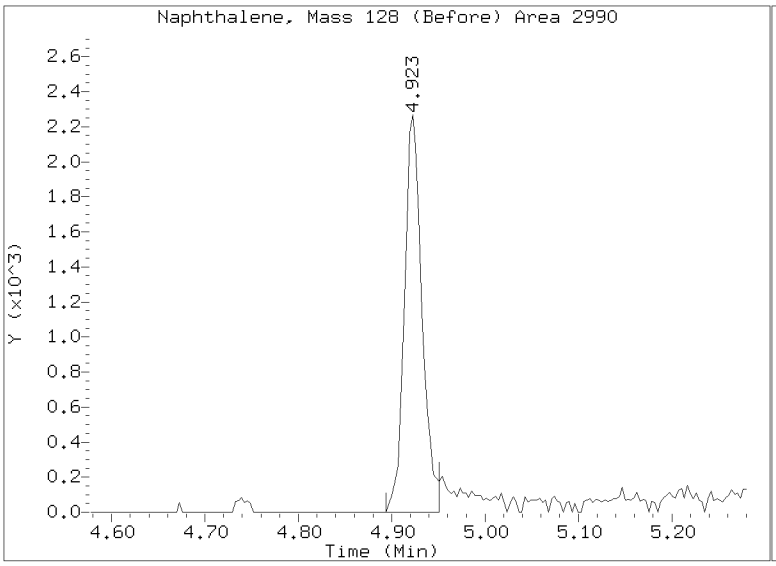
No RRT check performed

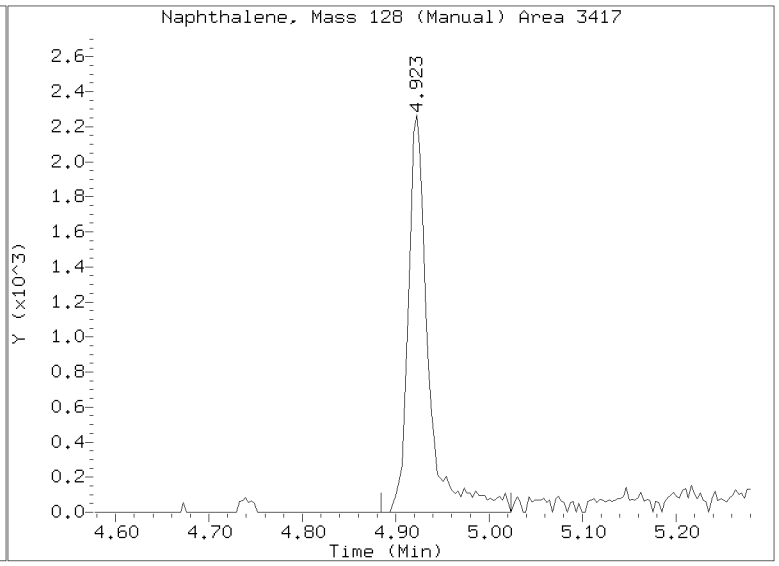
On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

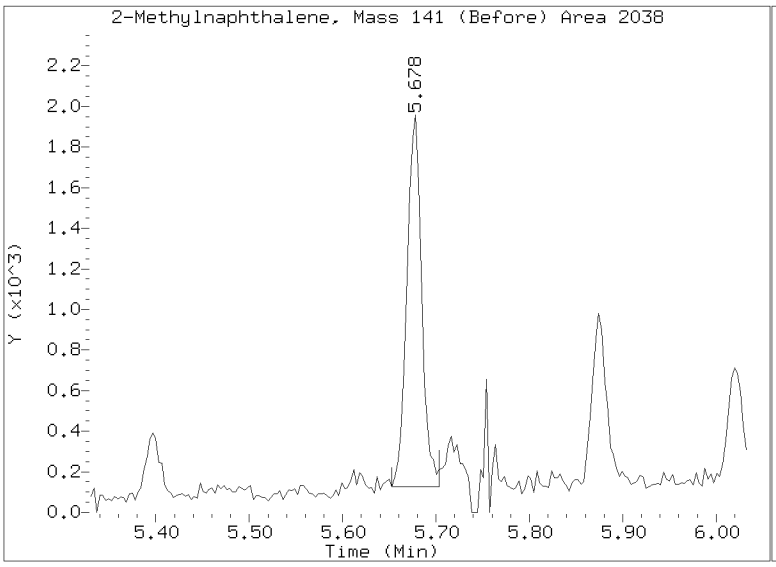
* Only compounds listed in the work order have been verified by the analyst *

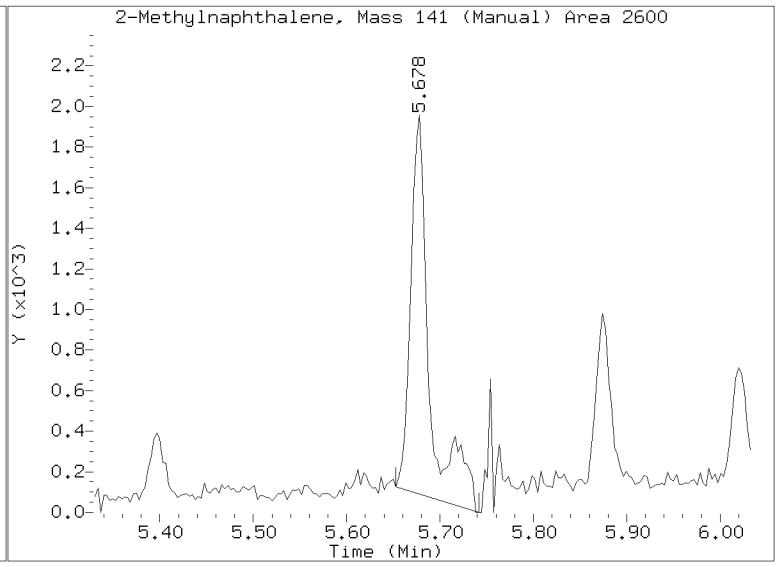
Quant Ion Manual Peak Adjustment Report

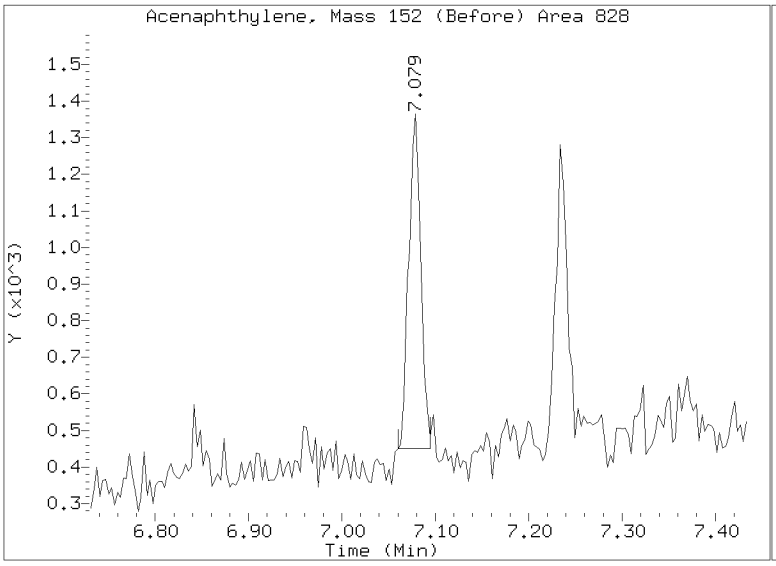
Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020623.D
Injection Date: 06-FEB-2023 22:41
Lab ID:23A0207-15 Client ID:
Report Date: 02/07/2023 15:59

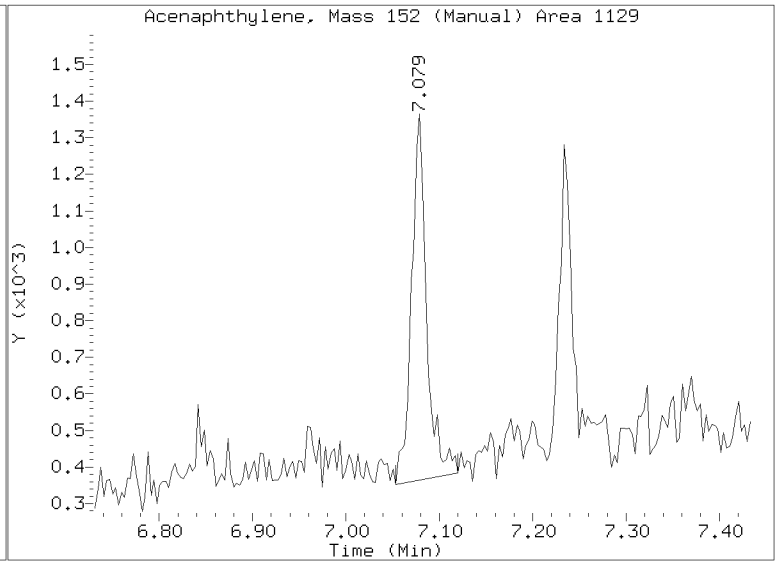












Quant Ion Manual Peak Adjustment Report

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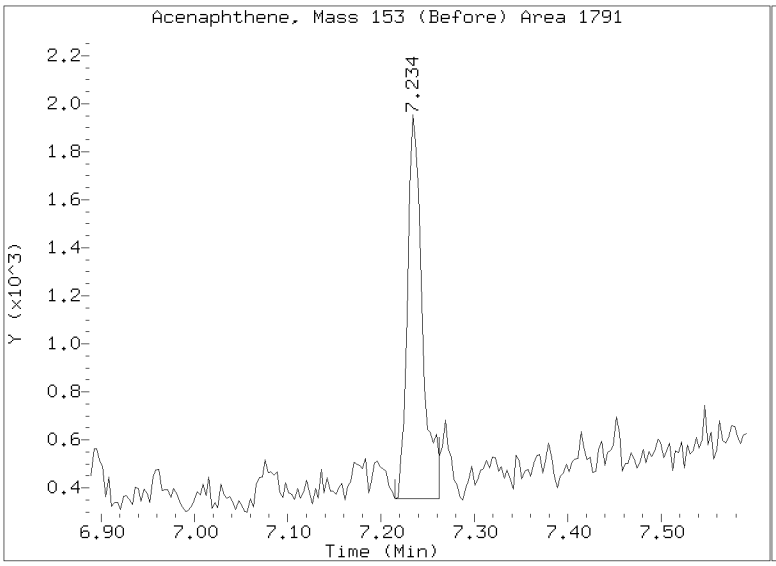
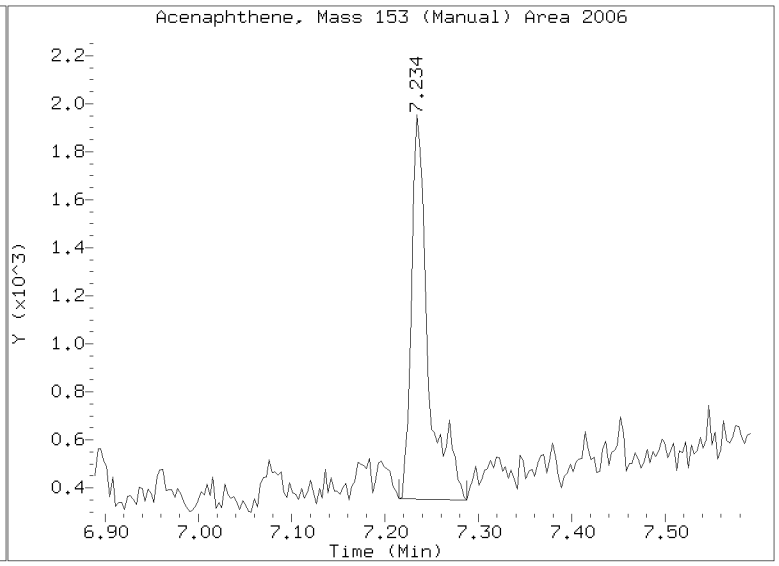
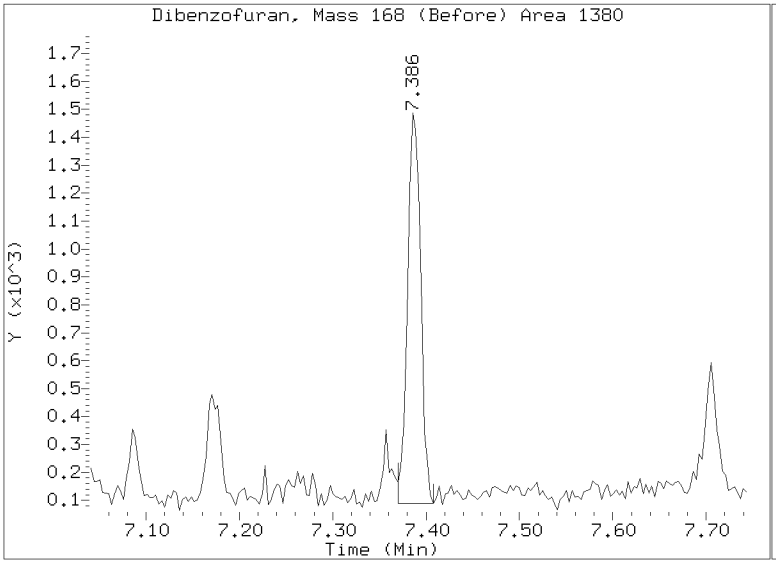
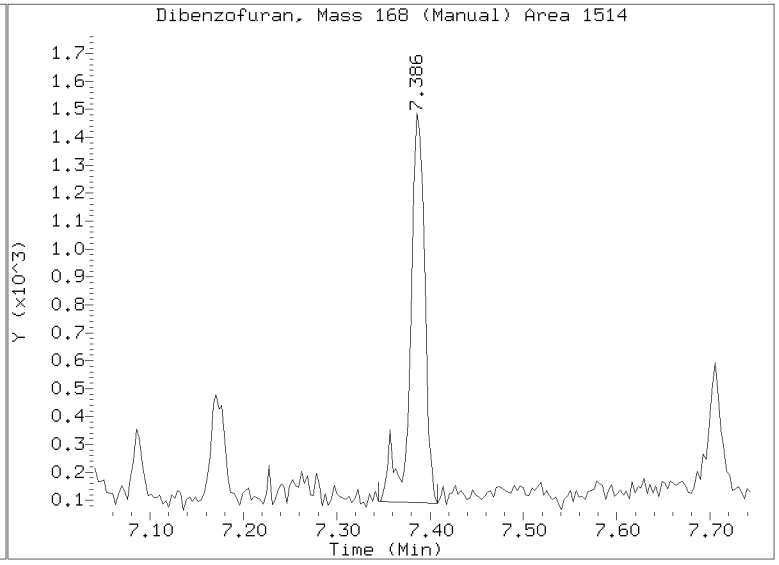
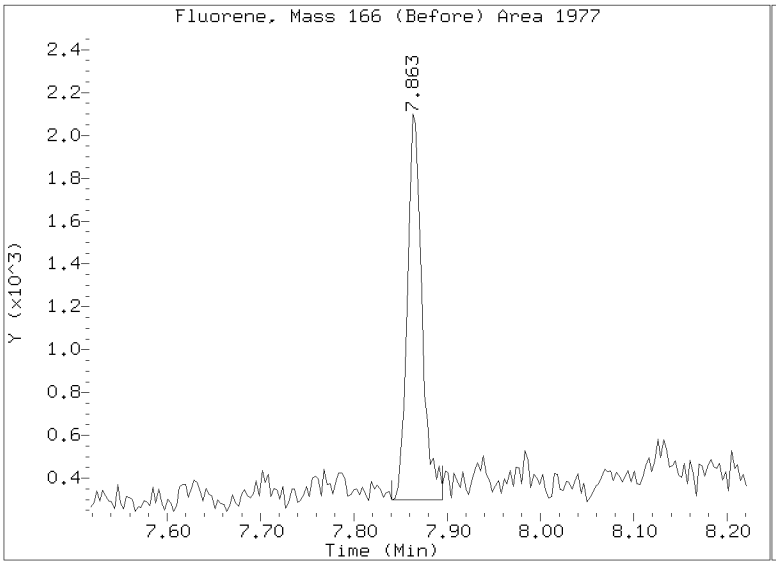
Injection Date: 06-FEB-2023 22:41
Lab ID:23A0207-15 Client ID:
Report Date: 02/07/2023 15:59

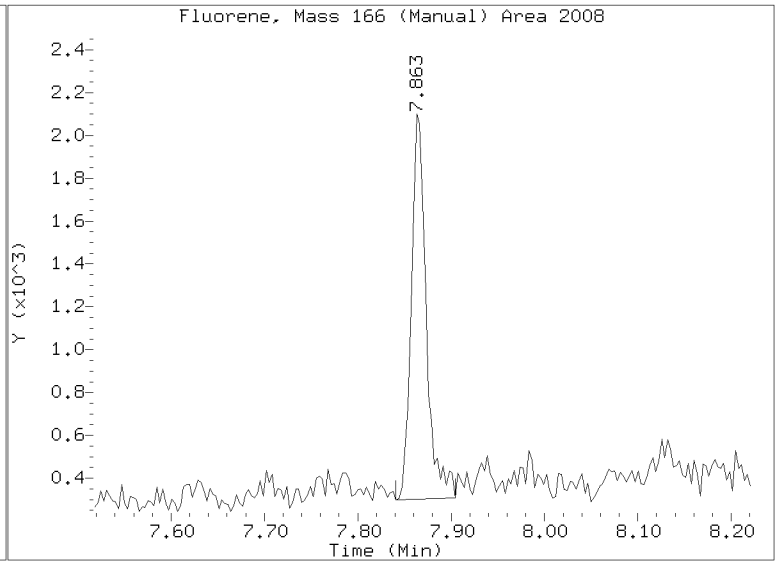












Quant Ion Manual Peak Adjustment Report

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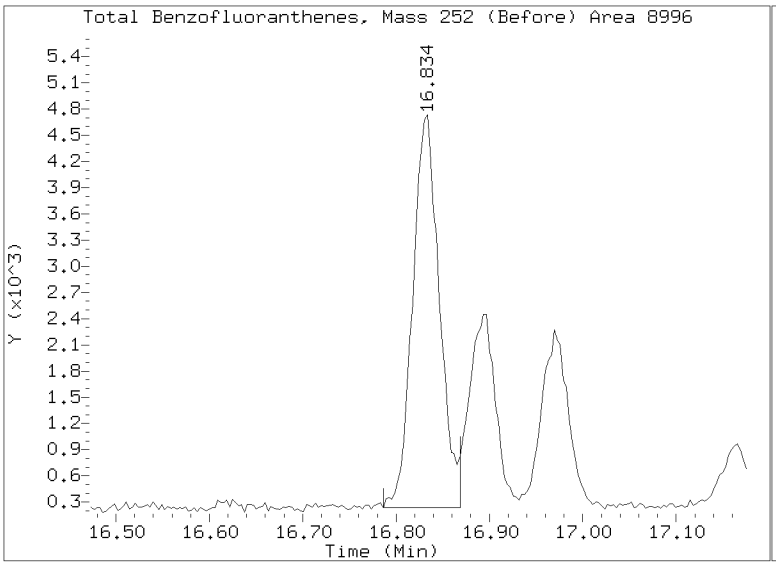
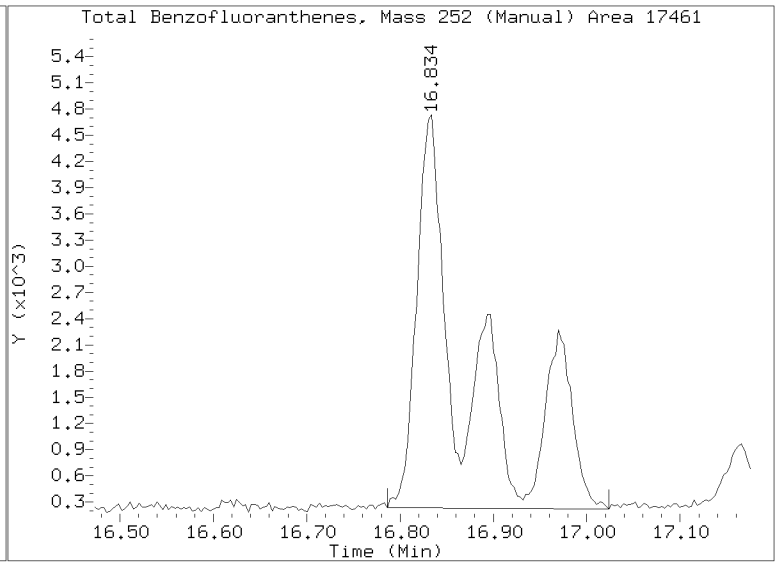
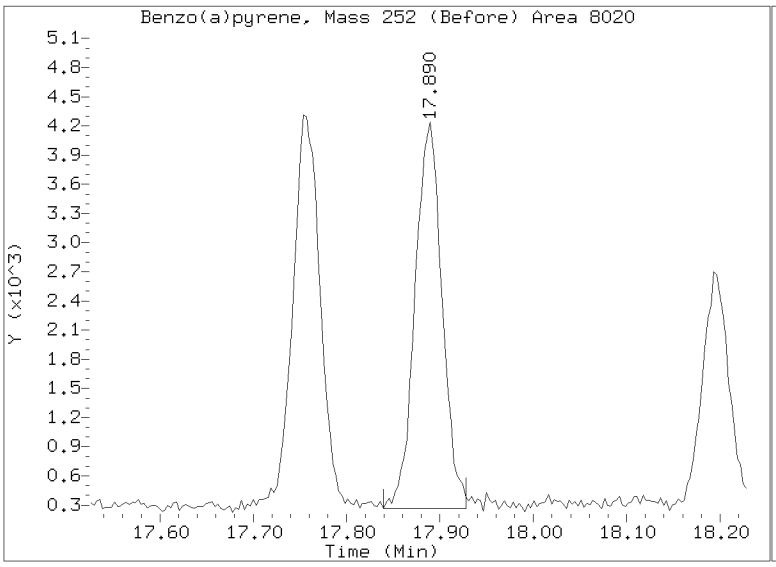
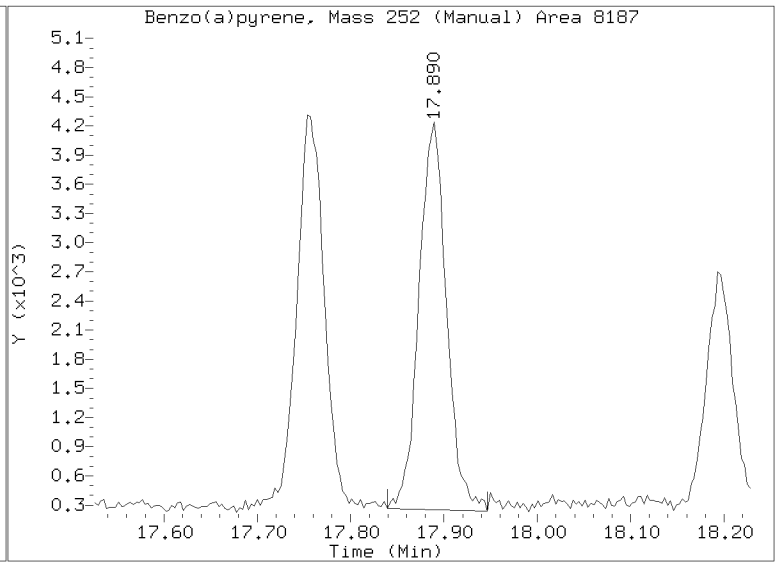
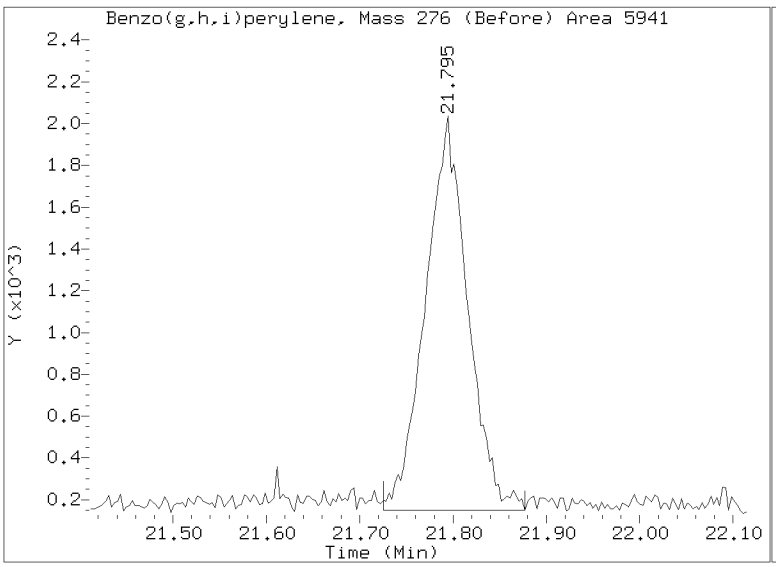
Lab ID:23A0207-15 Client ID:
Report Date: 02/07/2023 15:59

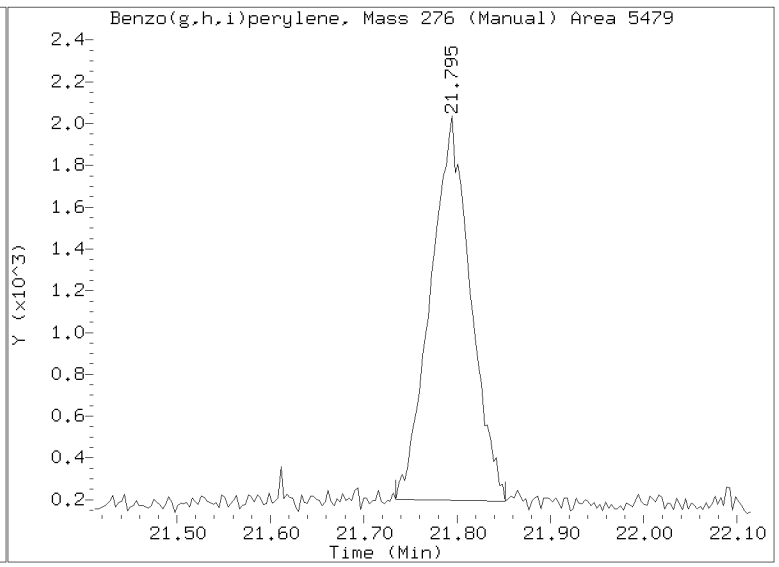












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1201

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

Polynuclear Aromatic Hydrocarbons

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-16 A	SDG:	23A0207
Sampled:	01/11/23 14:54	Prepared:	02/01/23 11:29	File ID:	N823020806.D
% Solids:	62.70	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/08/23 14:00
Batch:	BLA0683	Sequence:	SLB0101	Initial/Final:	15.98 g Wet / 0.5 mL
Instrument:	NT8	Column:	RXI-17Sil ms	Calibration:	GA00050
Cleanups:	GPC, Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
56-55-3	Benzo(a)anthracene	9	949	D	7.40	44.9
218-01-9	Chrysene	9	1170	D	9.46	44.9
205-99-2	Benzo(b)fluoranthene	9	797	D	12.3	44.9
207-08-9	Benzo(k)fluoranthene	9	437	D	6.83	44.9
50-32-8	Benzo(a)pyrene	9	664	D	5.52	44.9
193-39-5	Indeno(1,2,3-cd)pyrene	9	337	D	9.43	44.9
53-70-3	Dibenzo(a,h)anthracene	9	93.4	D	8.00	44.9

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	149.71	156	104	32 - 120	
Dibenzo[a,h]anthracene-d14	149.71	218	145	21 - 133	*
Fluoranthene-d10	149.71	155	103	36 - 134	

Data File: \\target\share\chem3\nt8.i\20230208.b\N823020806.D

Date : 08-FEB-2023 14:00

Client ID:

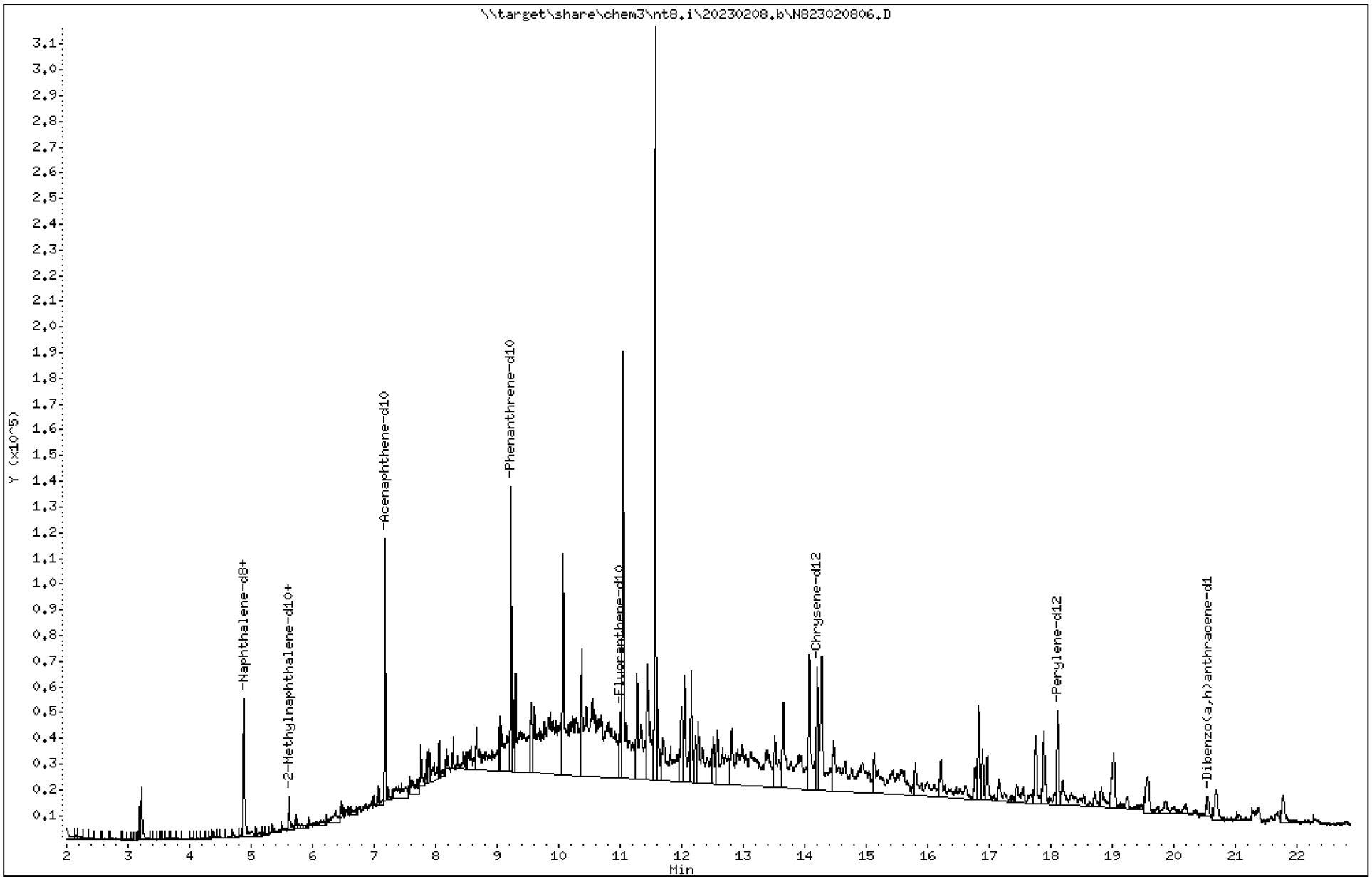
Instrument: nt8.i

Sample Info: 23A0207-16,9,

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



23A0207 CLPLIKE (Rev3) - Page 355 of 3315

Data File: \\target\share\chem3\nt8.i\20230208.b\N823020806.D

Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

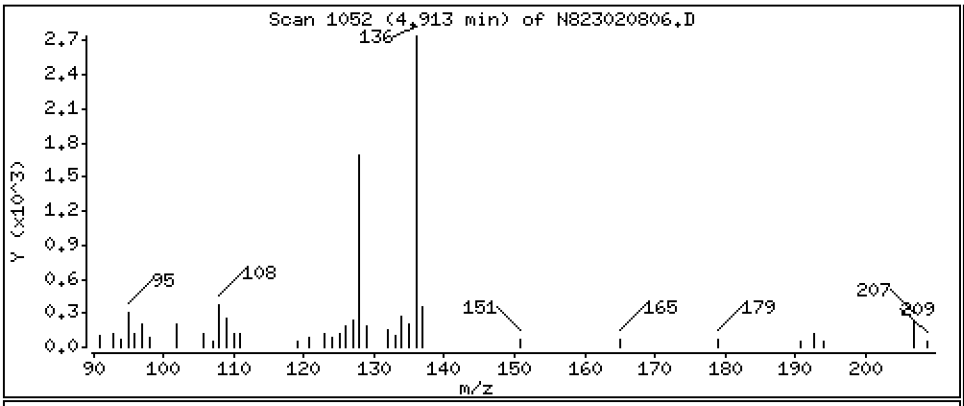
Operator: JZ

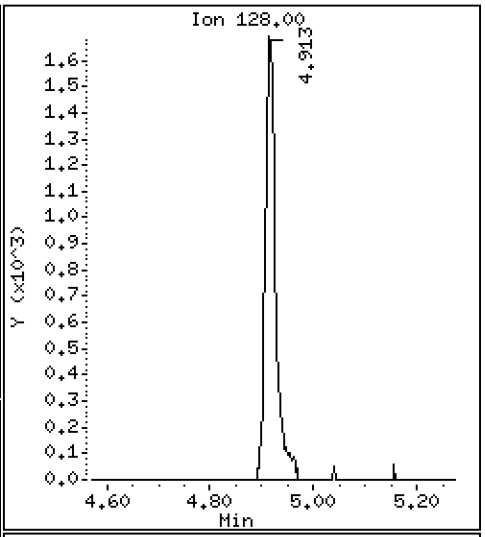
Column phase: Rxi-17sil

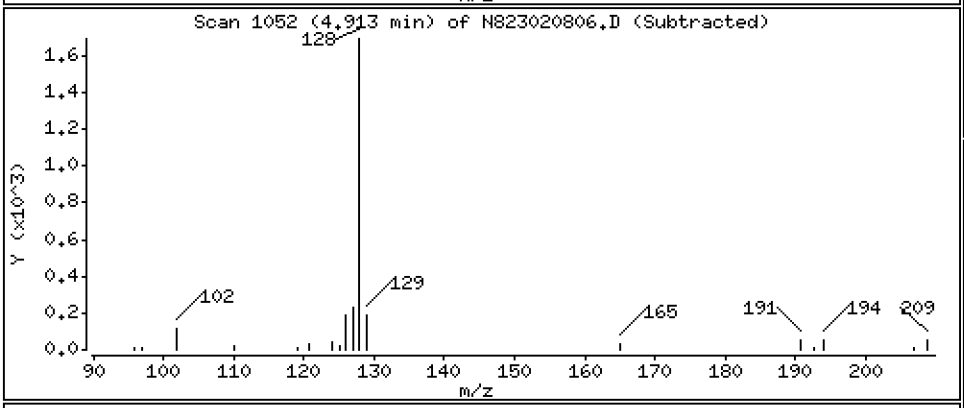
Column diameter: 0.25

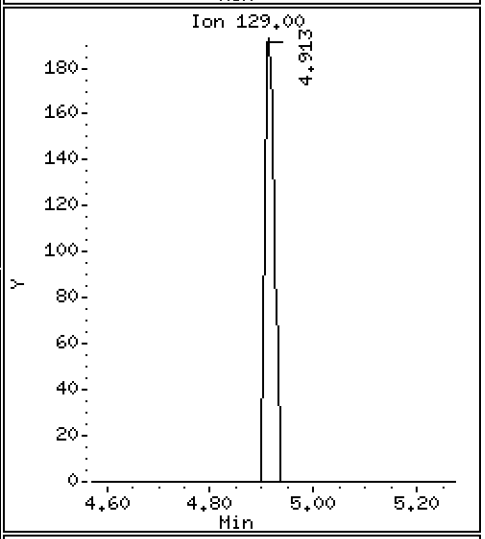
2 Naphthalene

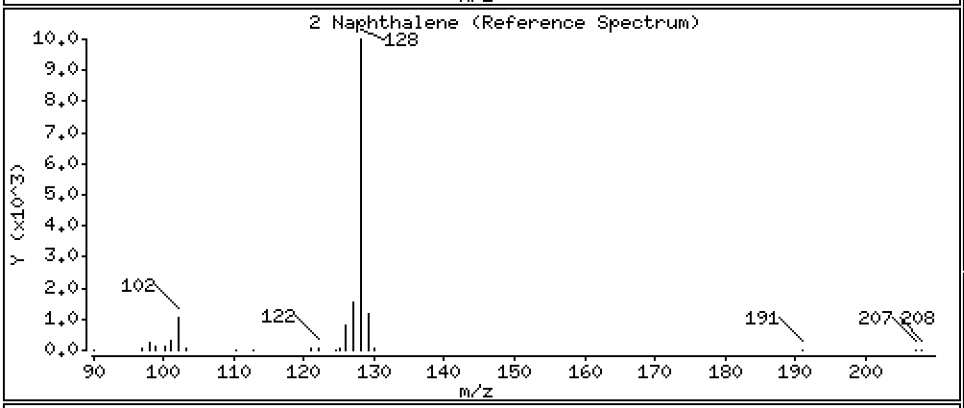
Concentration: 0.9133 ug/mL

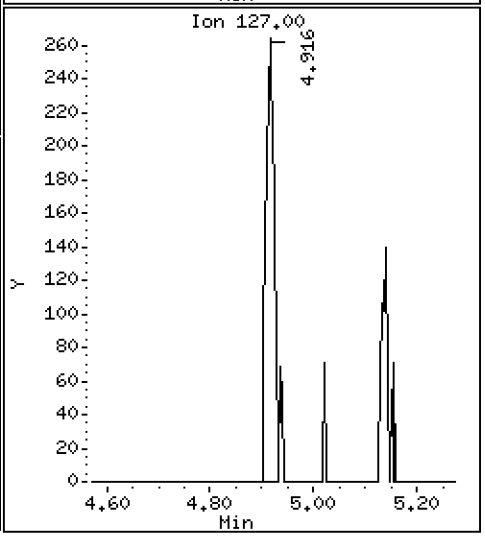


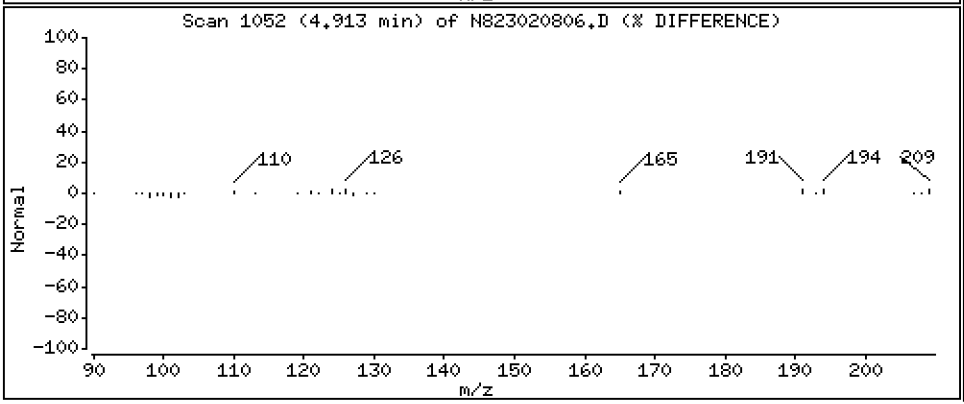












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020806.D

Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

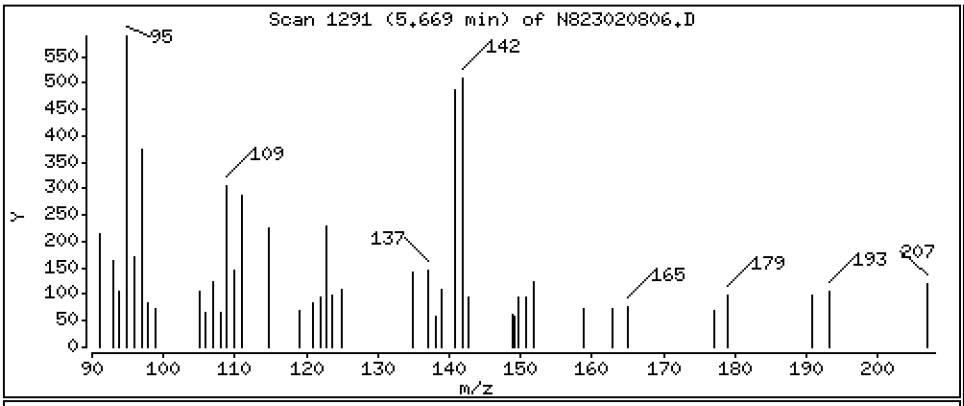
Operator: JZ

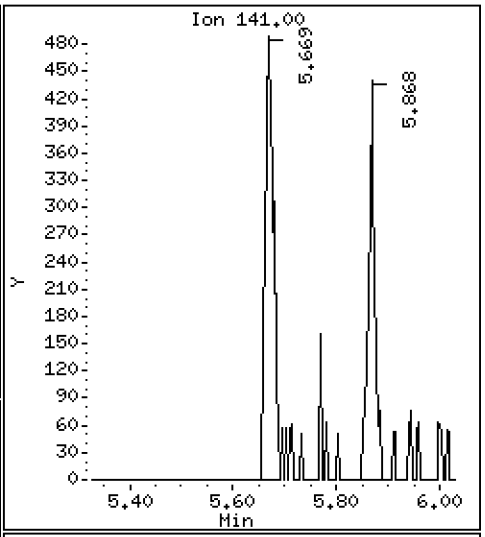
Column phase: Rxi-17sil

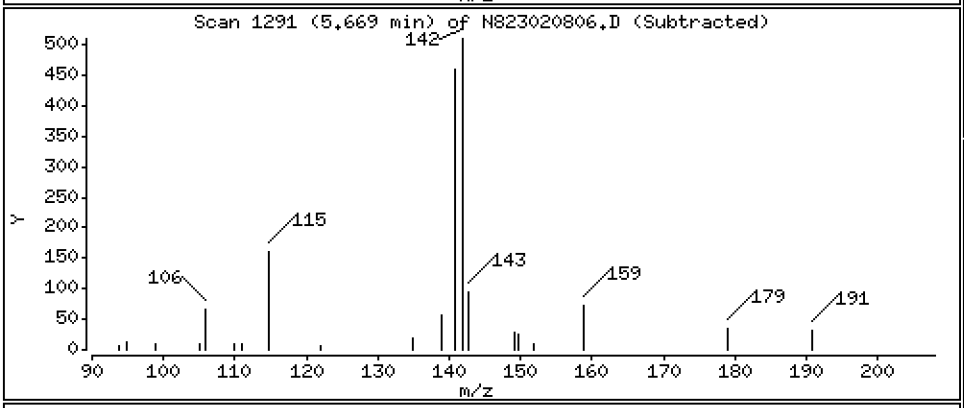
Column diameter: 0.25

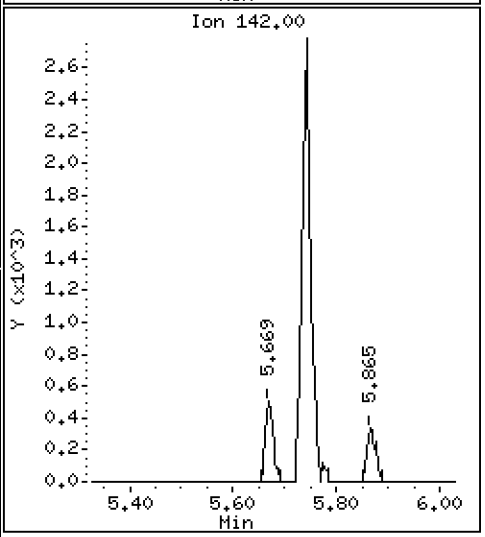
4 2-Methylnaphthalene

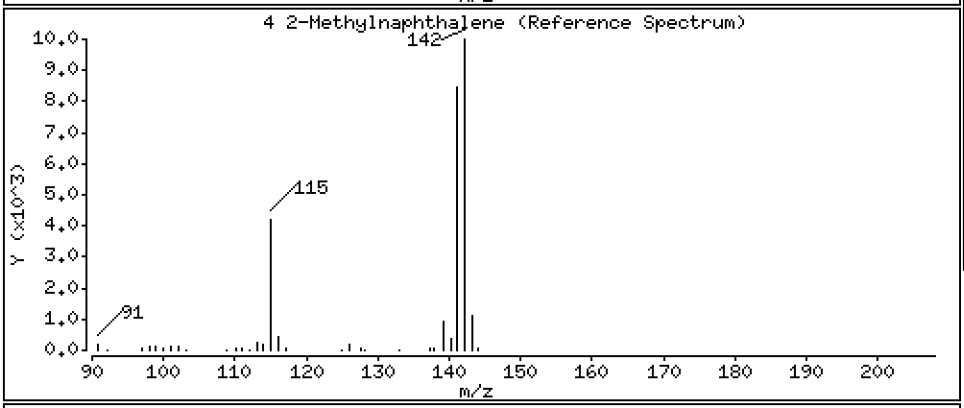
Concentration: 0.3849 ug/mL

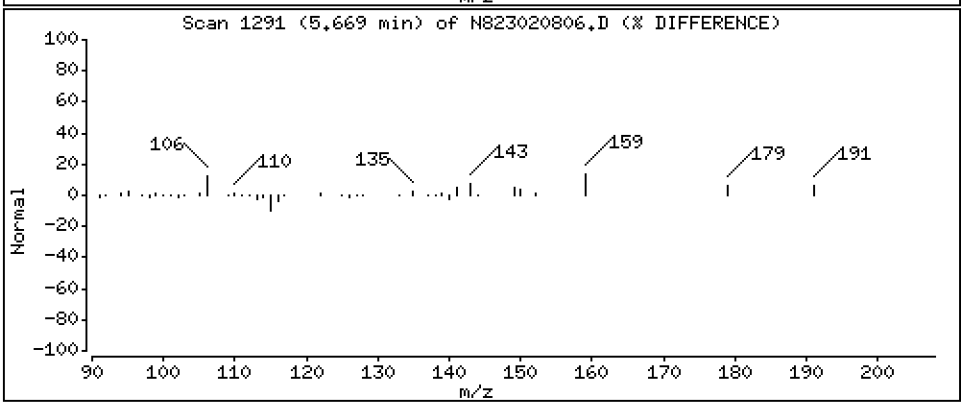












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Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

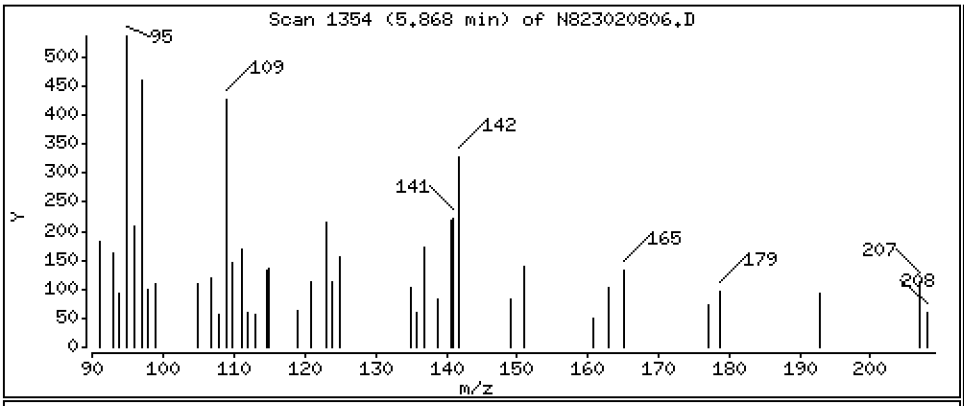
Operator: JZ

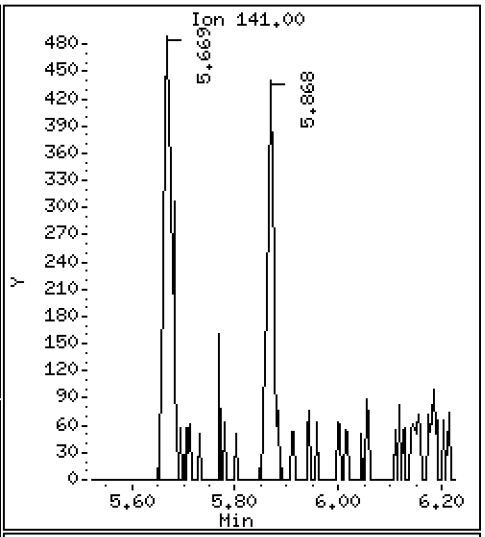
Column phase: Rxi-17sil

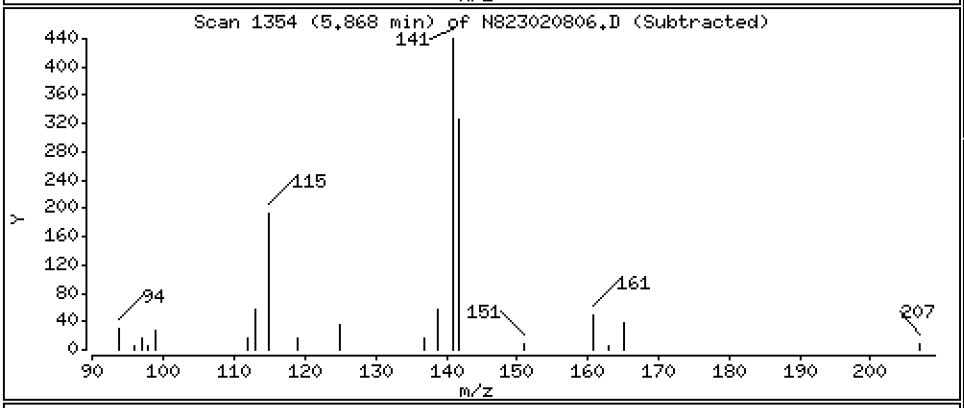
Column diameter: 0.25

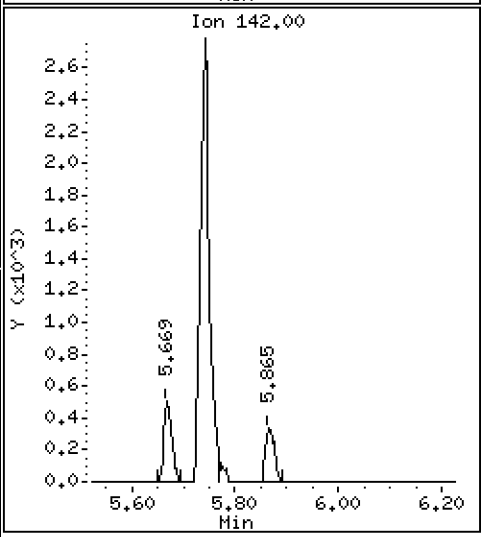
5 1-methylnaphthalene

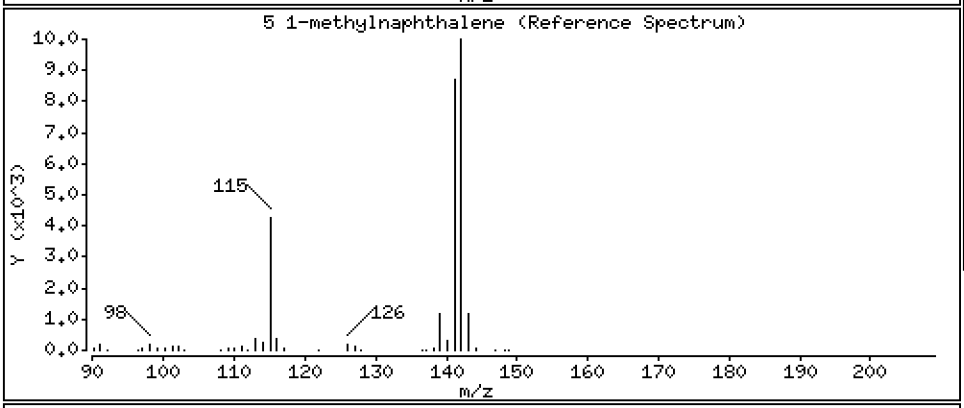
Concentration: 0.2677 ug/mL

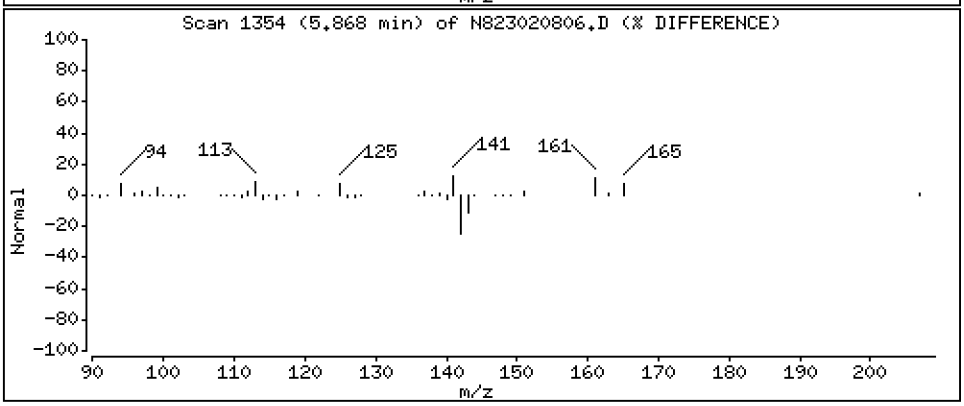












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Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

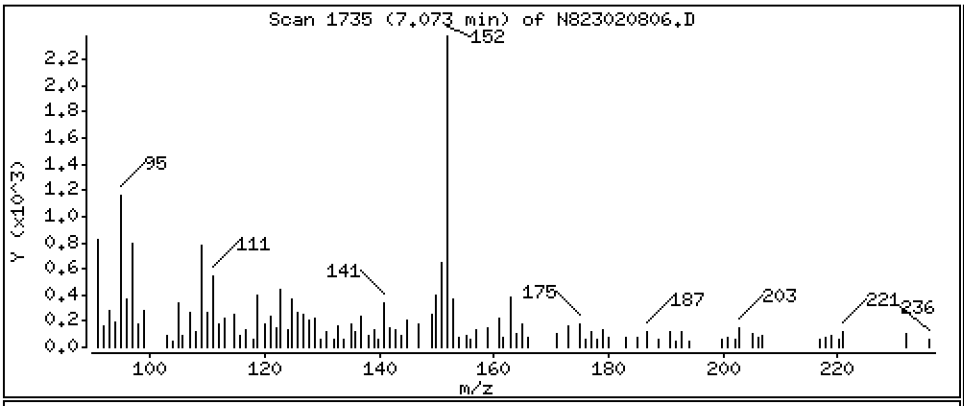
Operator: JZ

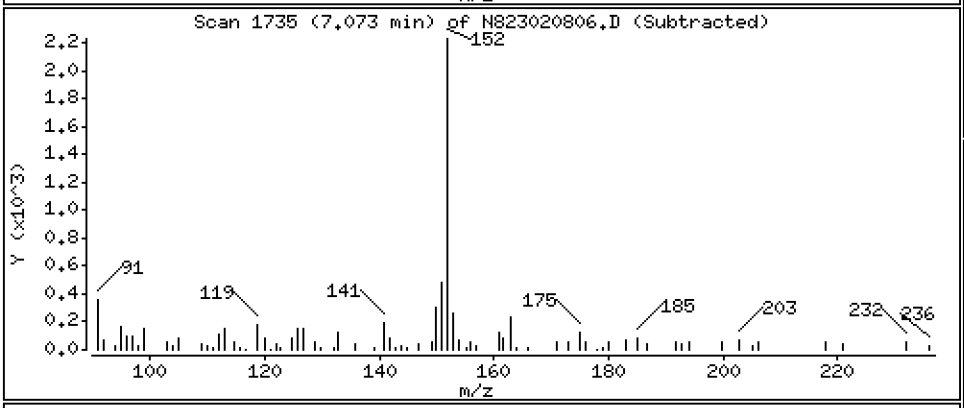
Column phase: Rxi-17sil

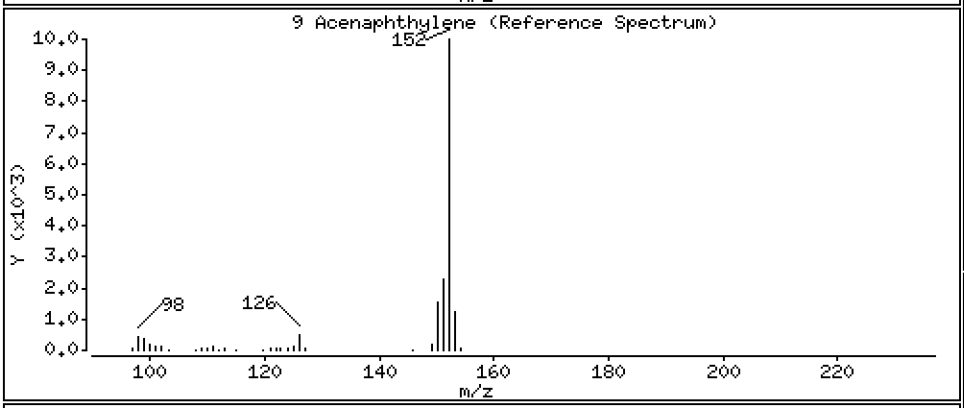
Column diameter: 0.25

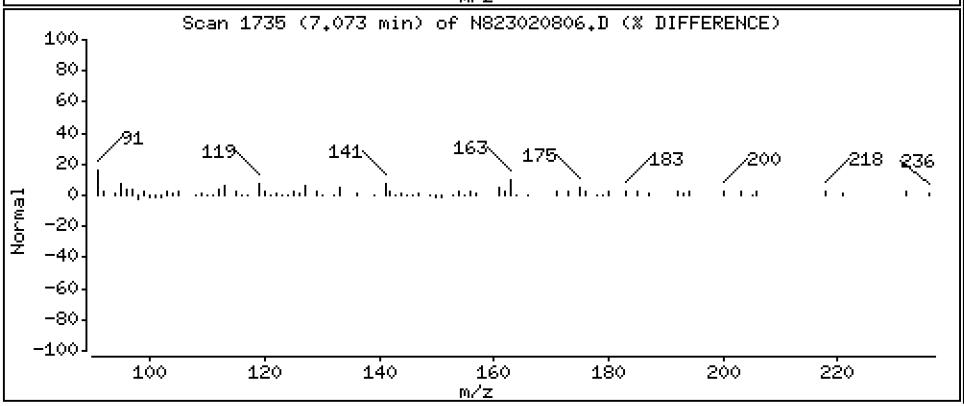
9 Acenaphthylene

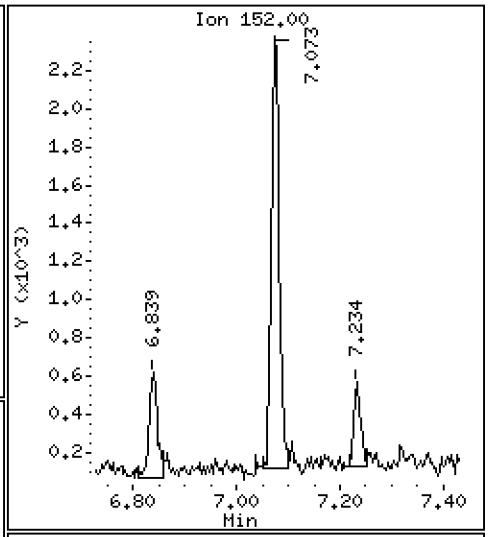
Concentration: 0.9469 ug/mL

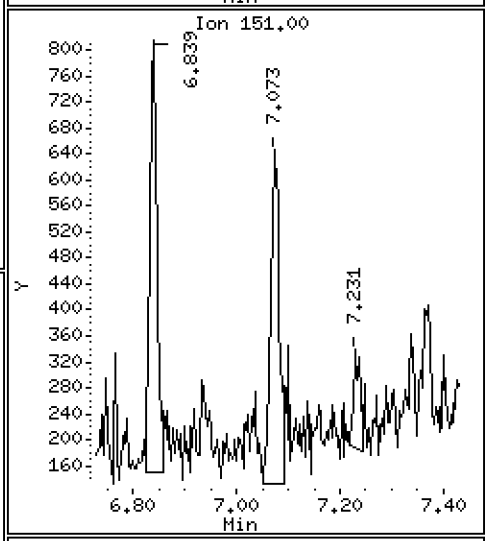


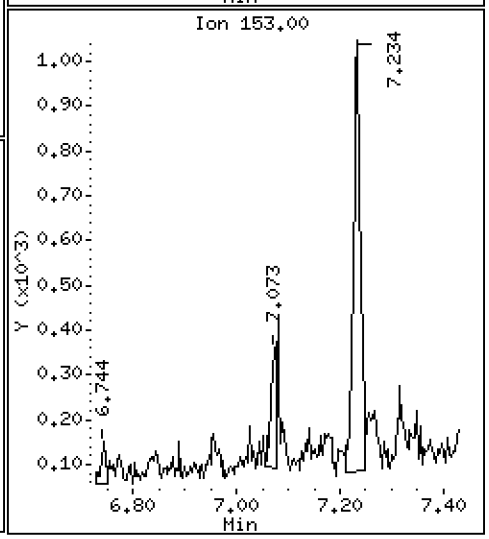












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020806.D

Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

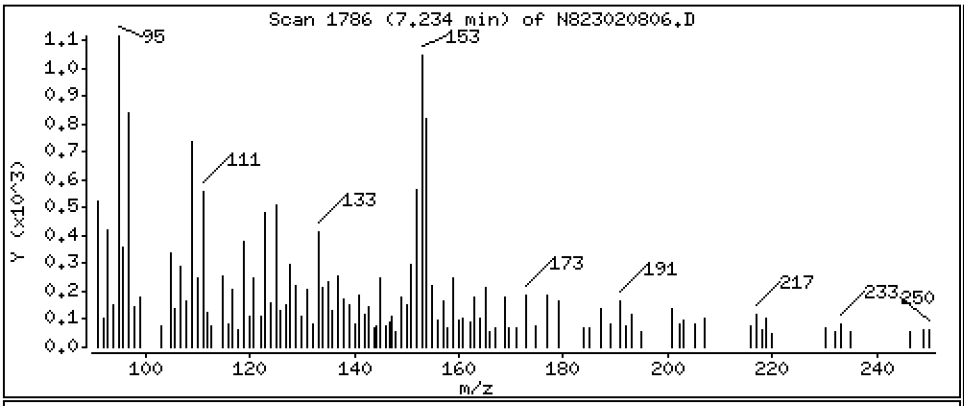
Operator: JZ

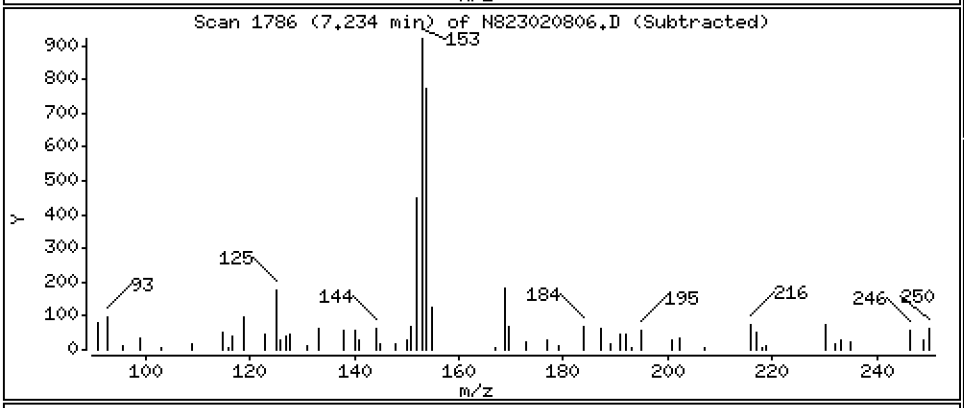
Column phase: Rxi-17sil

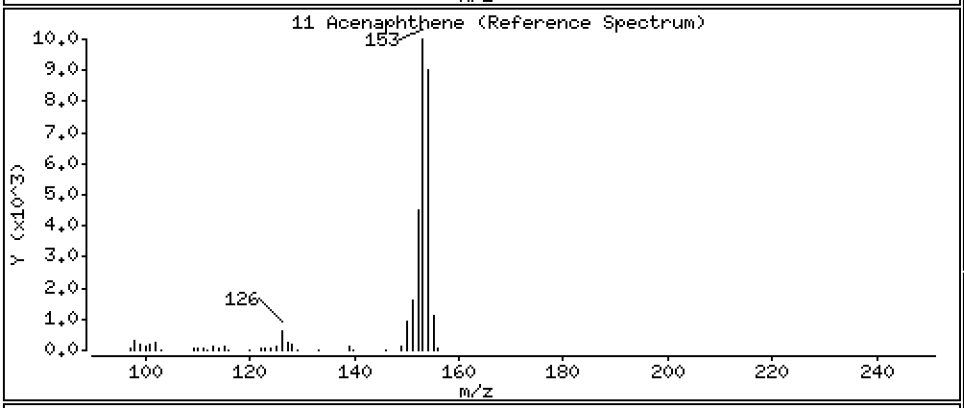
Column diameter: 0.25

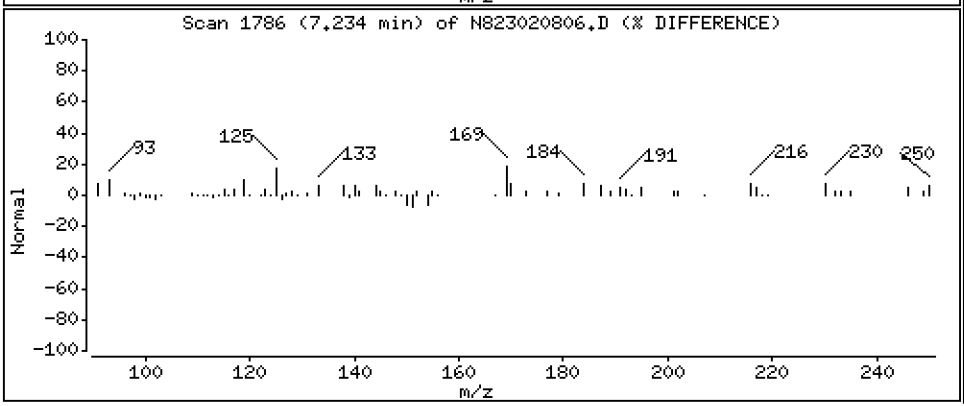
11 Acenaphthene

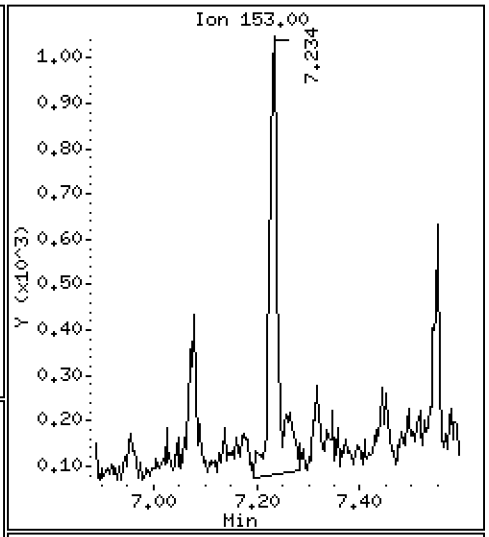
Concentration: 0.7051 ug/mL

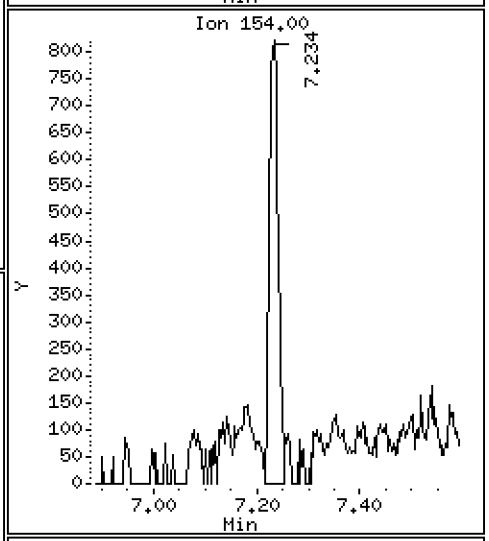


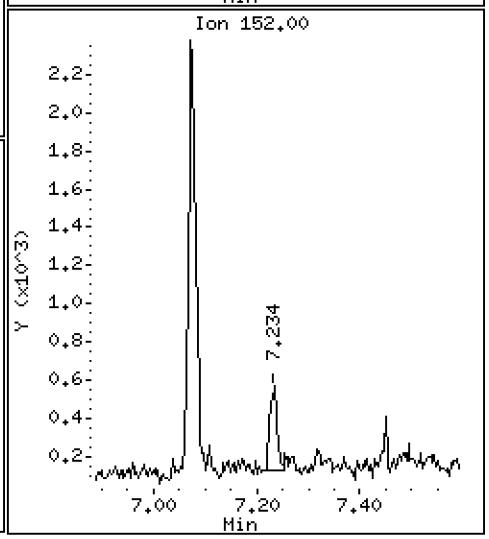












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020806.D

Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

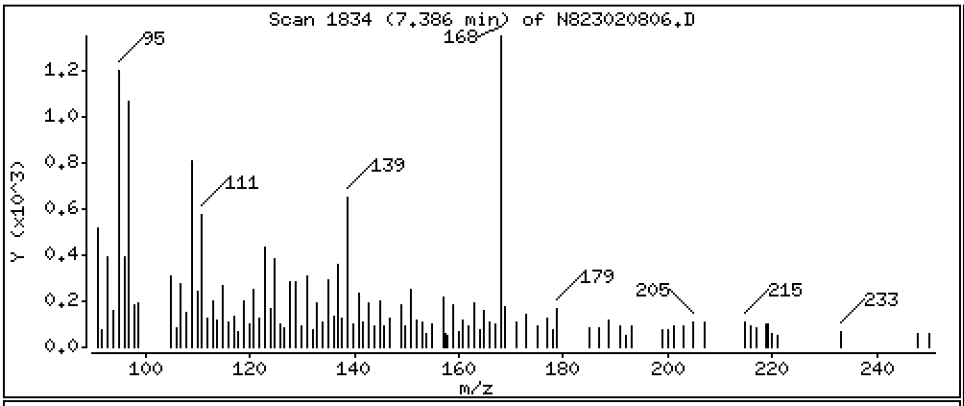
Operator: JZ

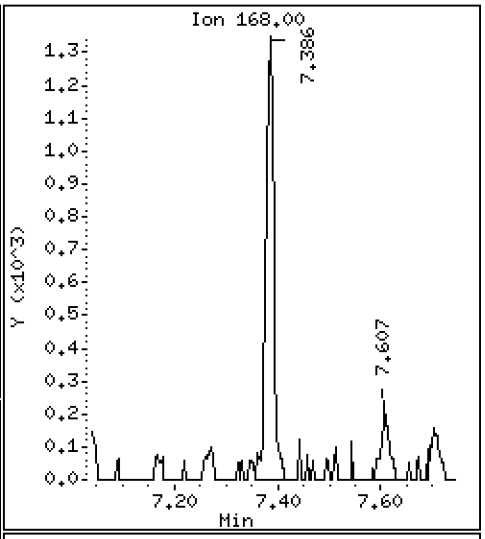
Column phase: Rxi-17sil

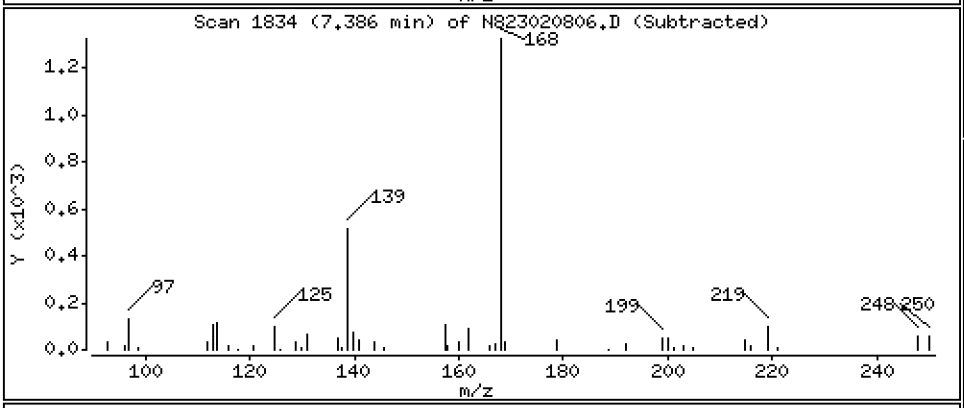
Column diameter: 0.25

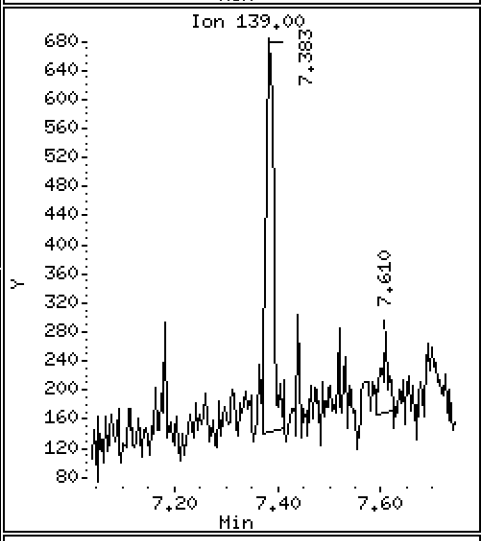
12 Dibenzofuran

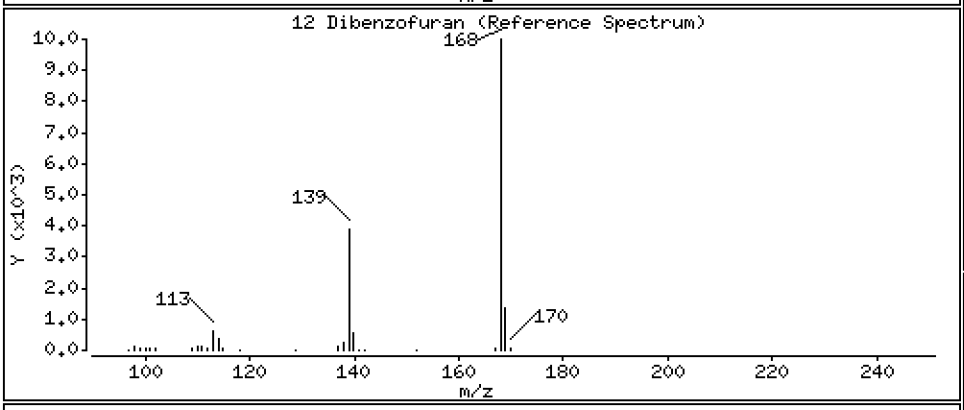
Concentration: 0.5489 ug/mL

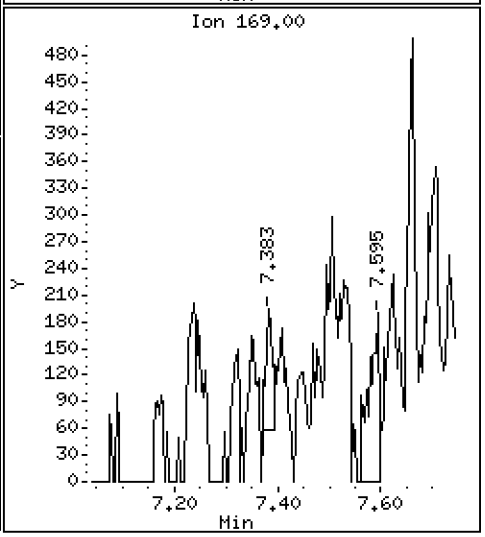


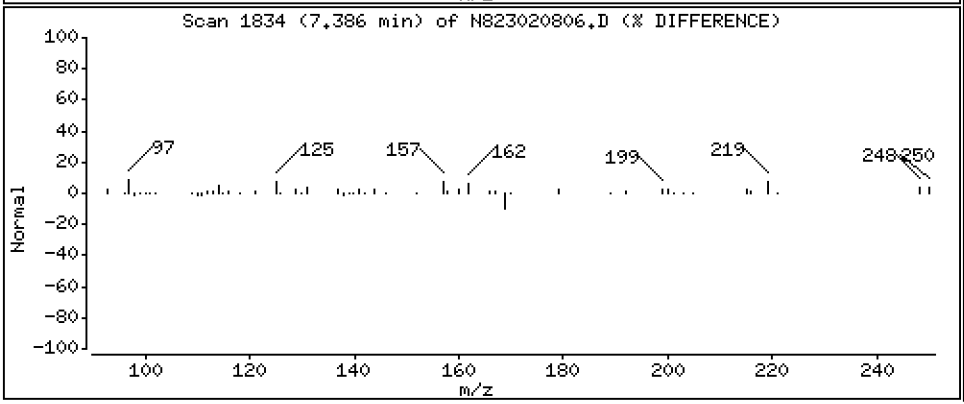












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020806.D

Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

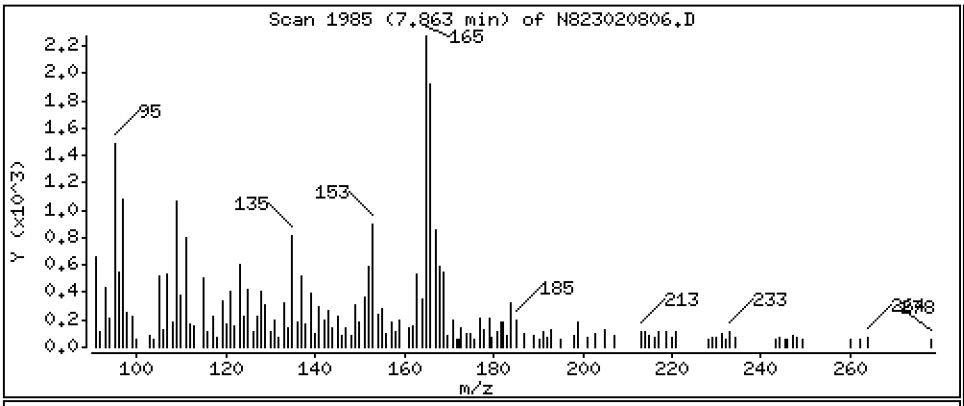
Operator: JZ

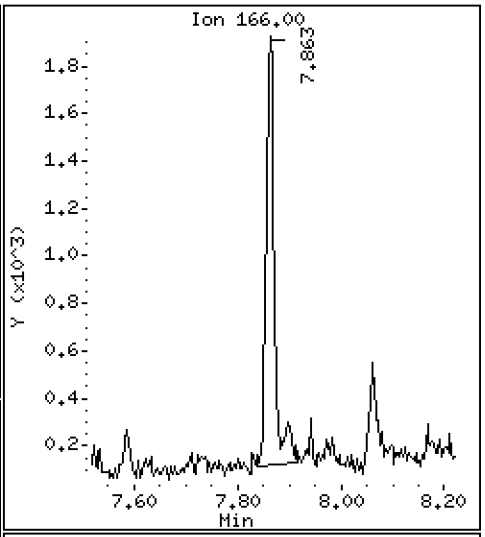
Column phase: Rxi-17sil

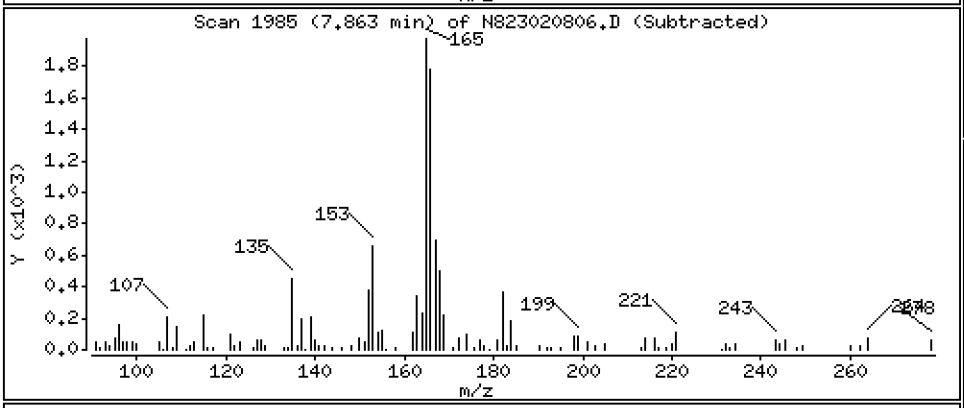
Column diameter: 0.25

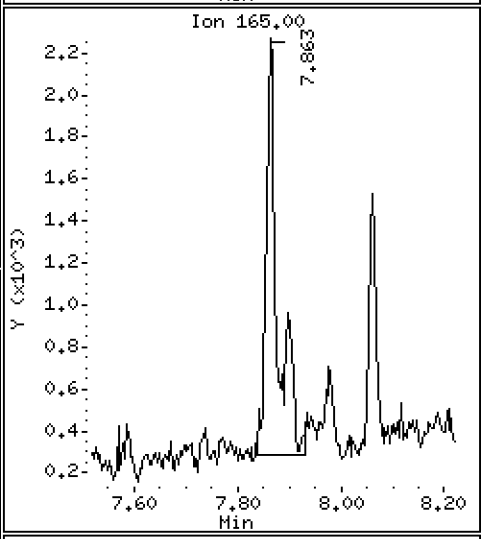
14 Fluorene

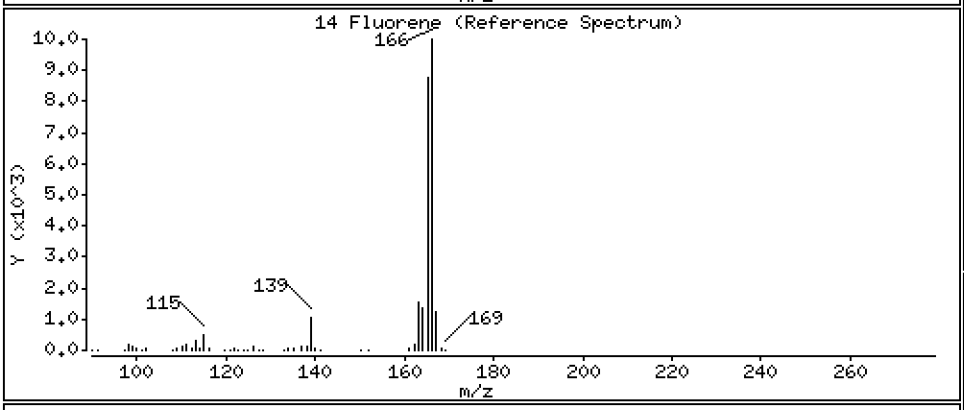
Concentration: 1.047 ug/mL

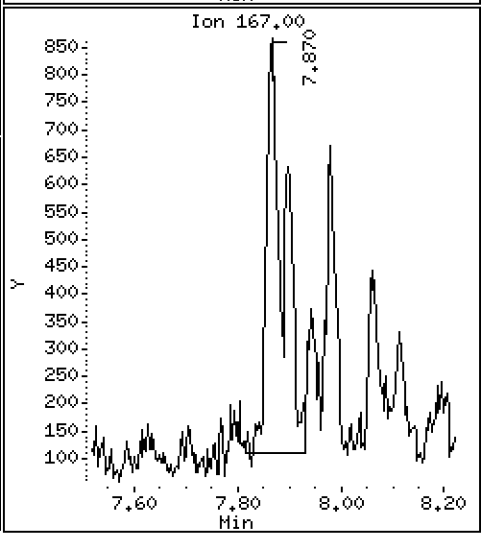


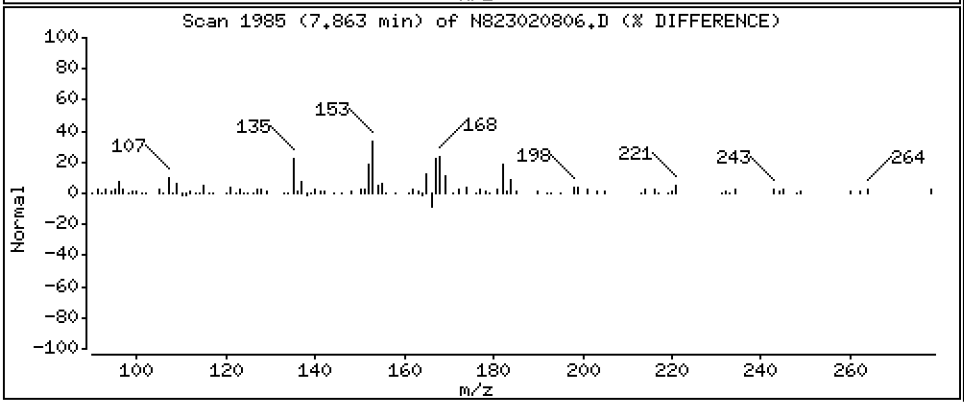












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020806.D

Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

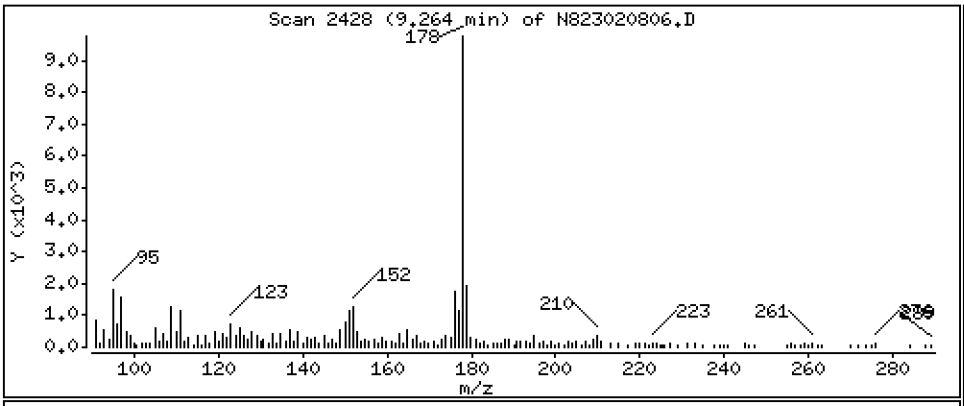
Operator: JZ

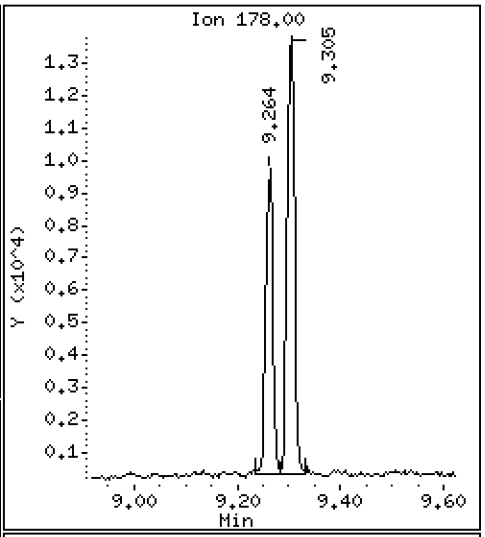
Column phase: Rxi-17sil

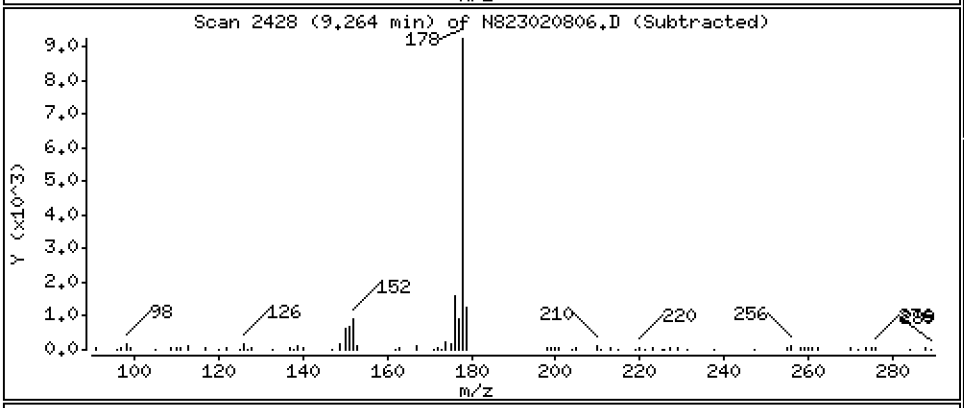
Column diameter: 0.25

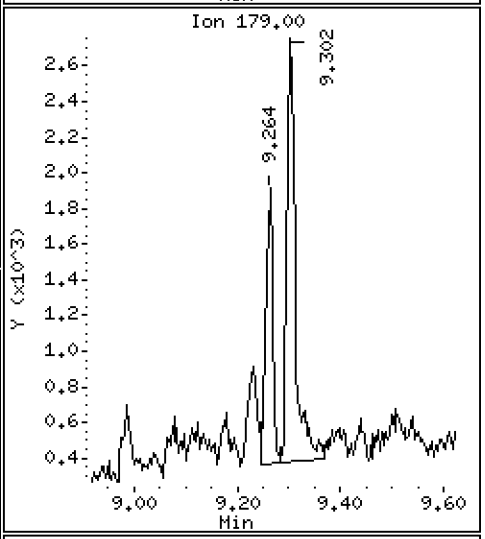
16 Phenanthrene

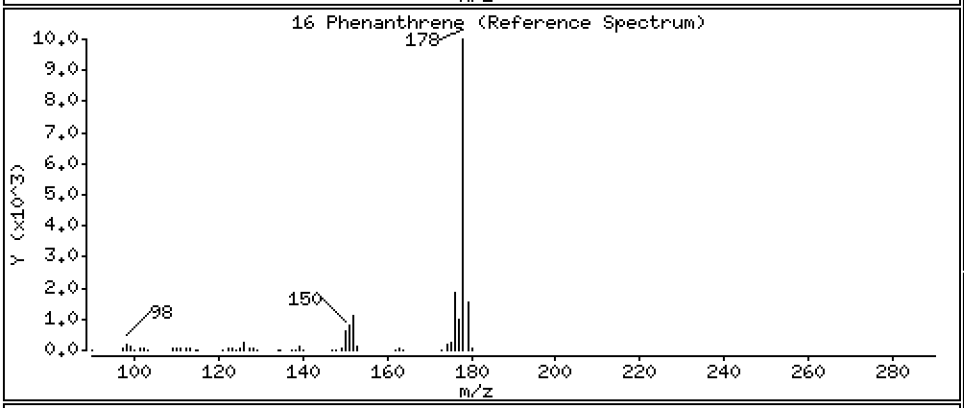
Concentration: 3.778 ug/mL

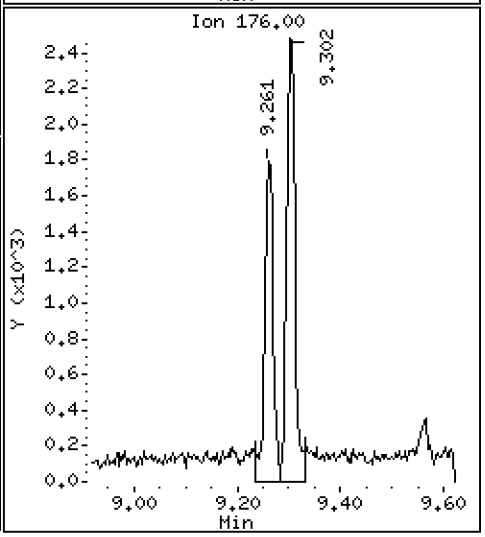


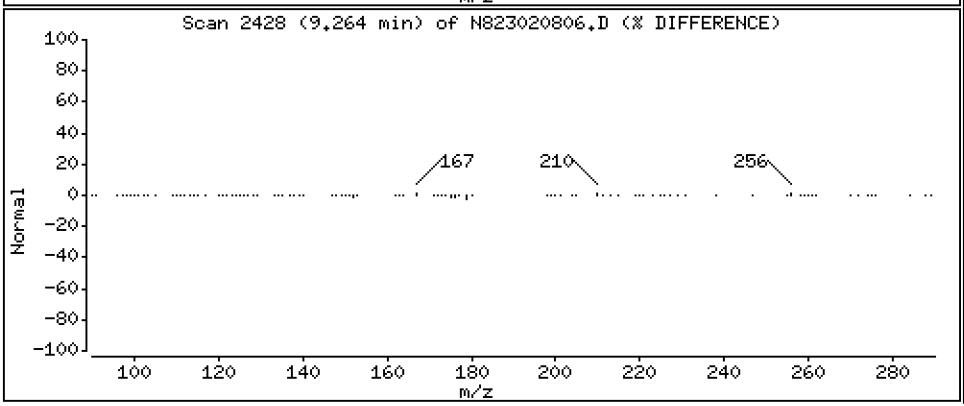












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Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

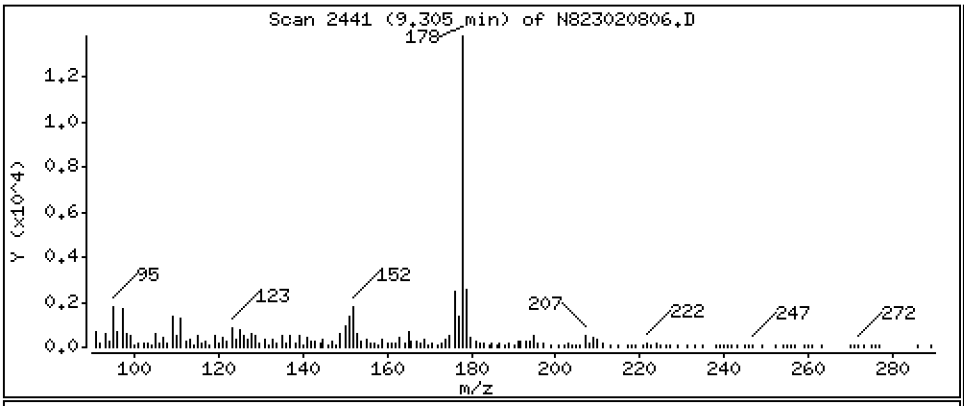
Operator: JZ

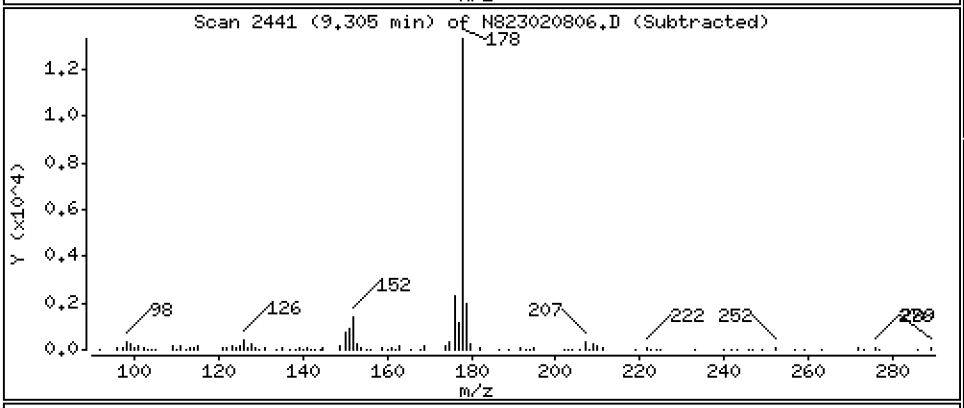
Column phase: Rxi-17sil

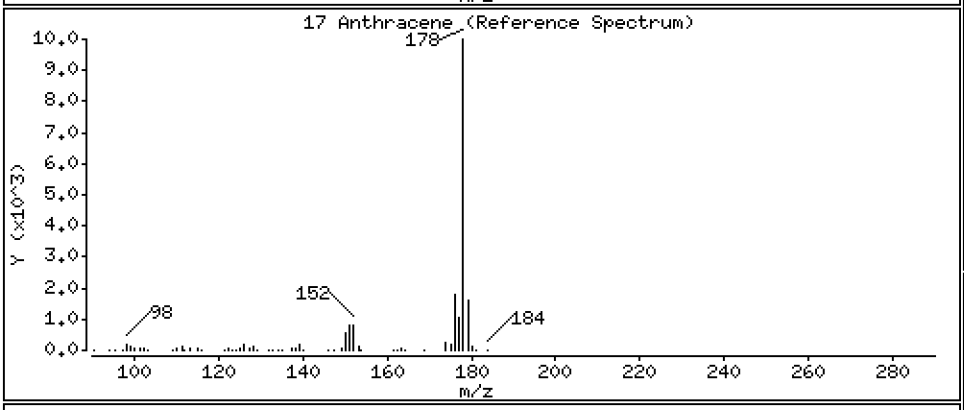
Column diameter: 0.25

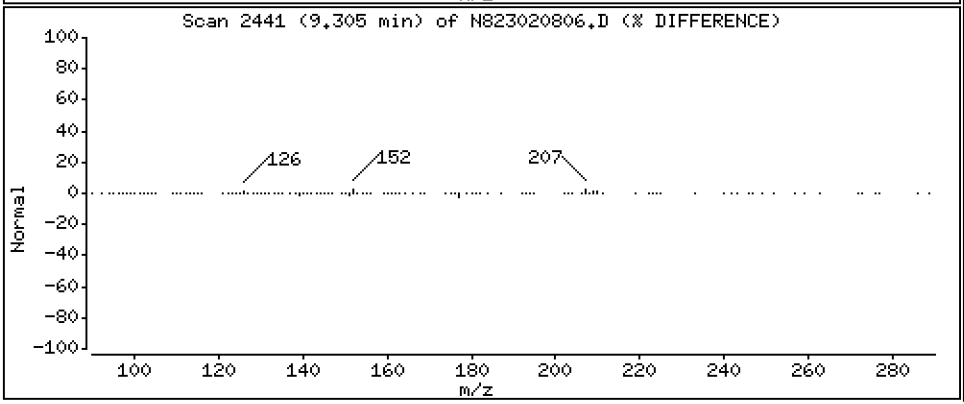
17 Anthracene

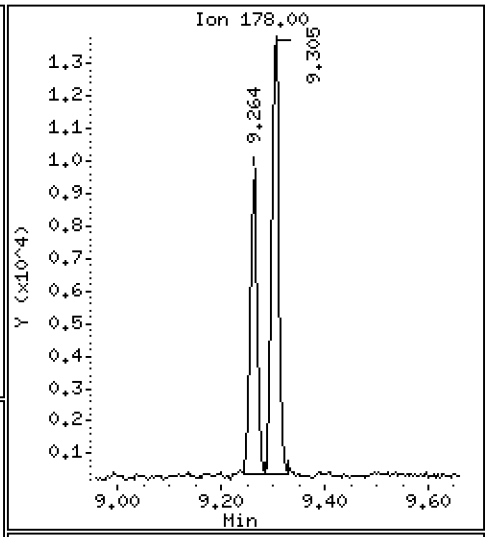
Concentration: 5.948 ug/mL

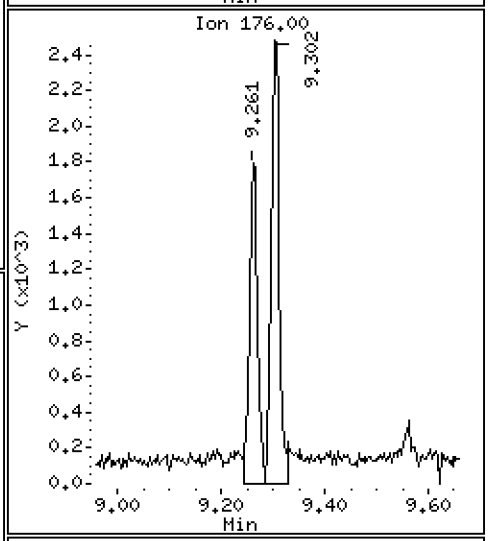


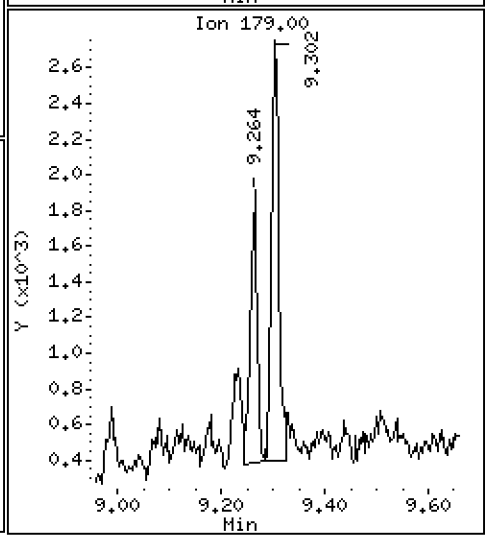












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020806.D

Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

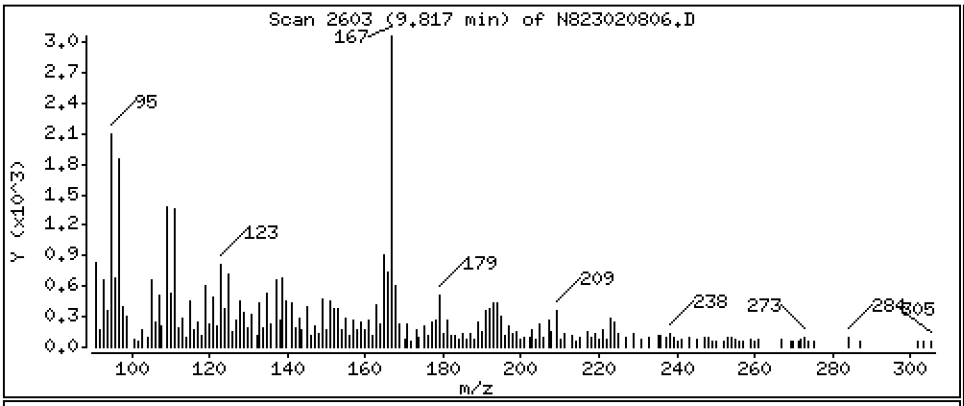
Operator: JZ

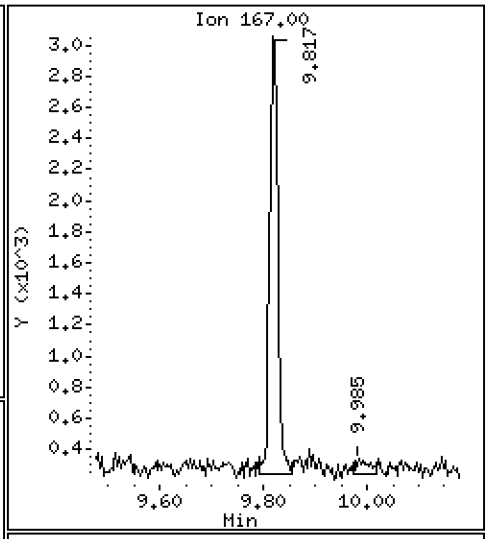
Column phase: Rxi-17sil

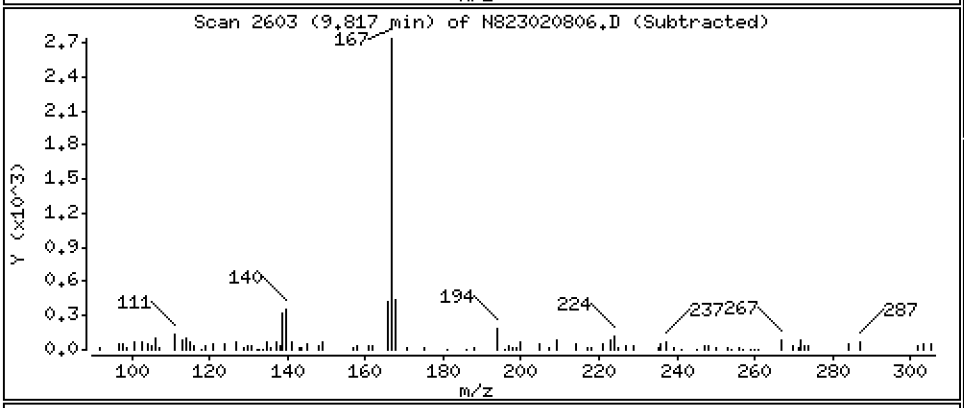
Column diameter: 0.25

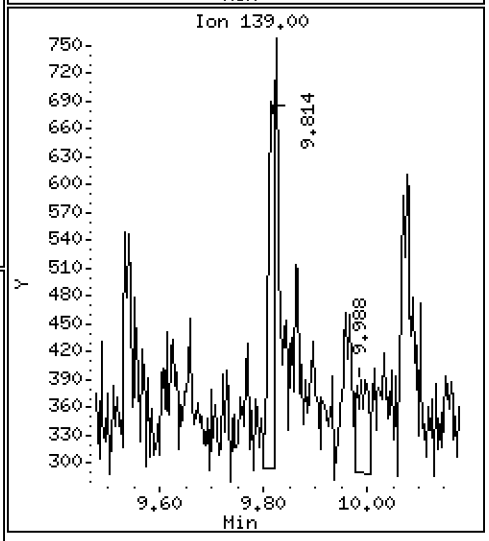
19 Carbazole

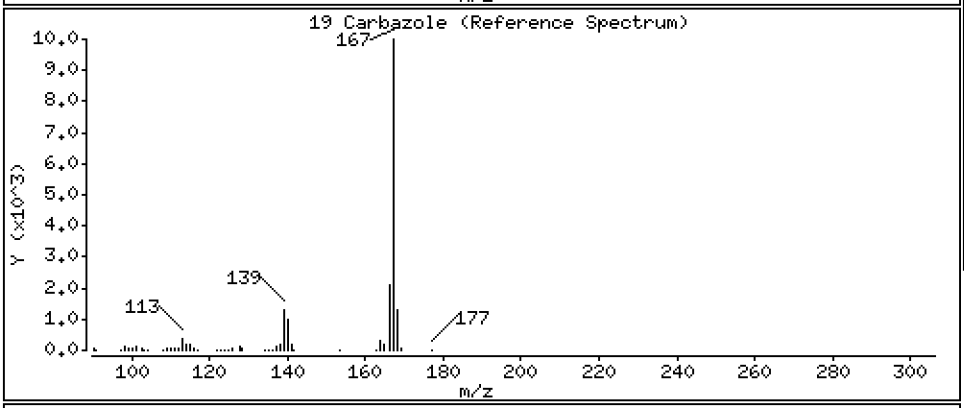
Concentration: 1.532 ug/mL

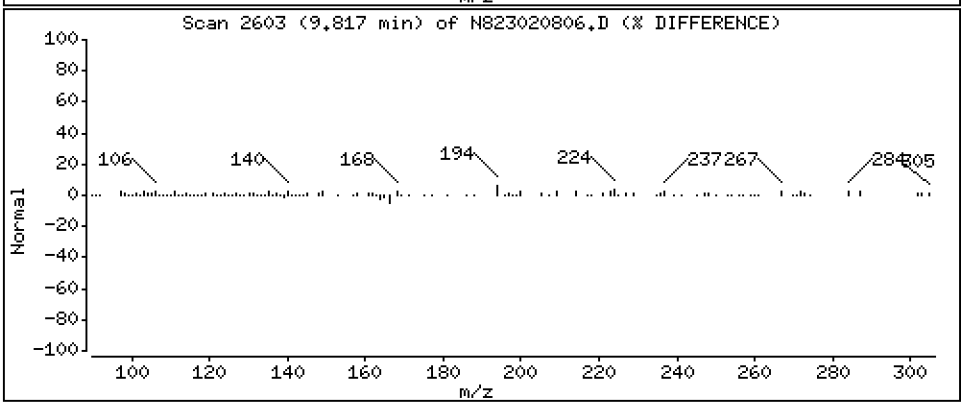












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020806.D

Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

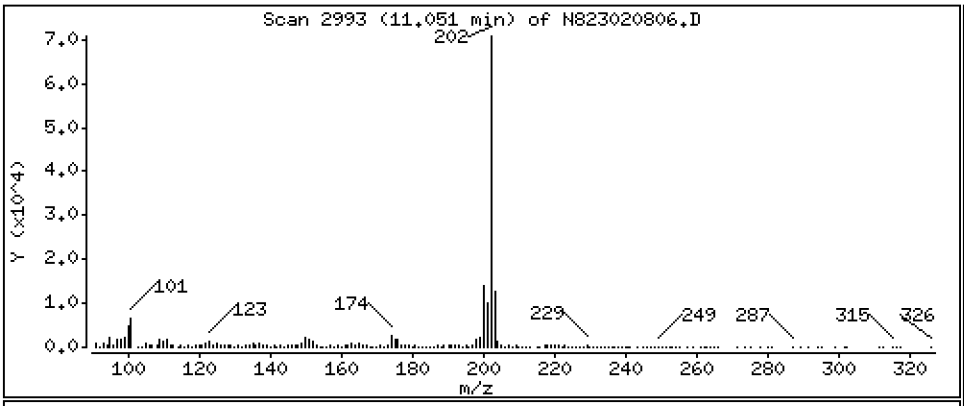
Operator: JZ

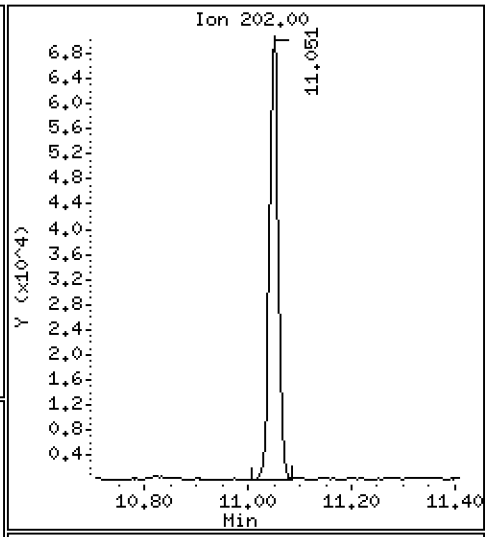
Column phase: Rxi-17sil

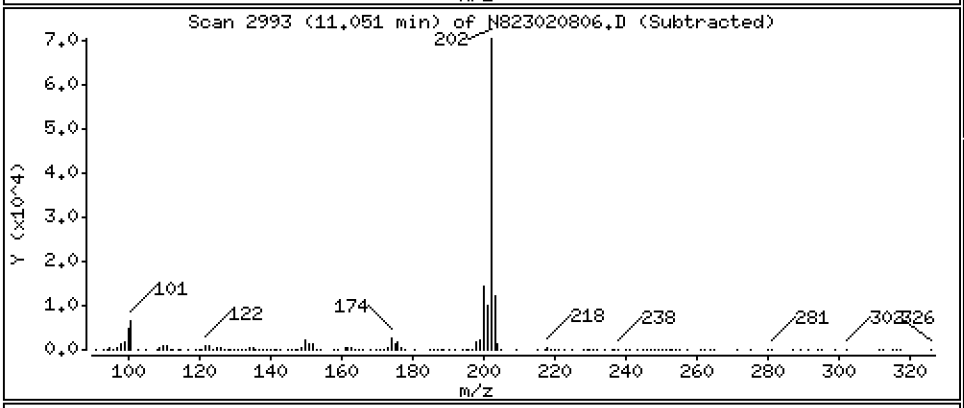
Column diameter: 0.25

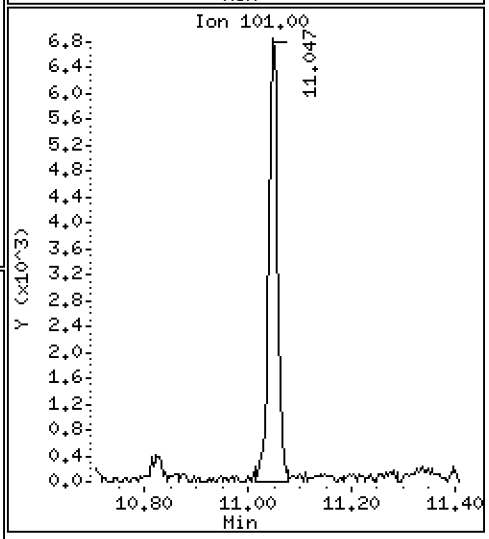
22 Fluoranthene

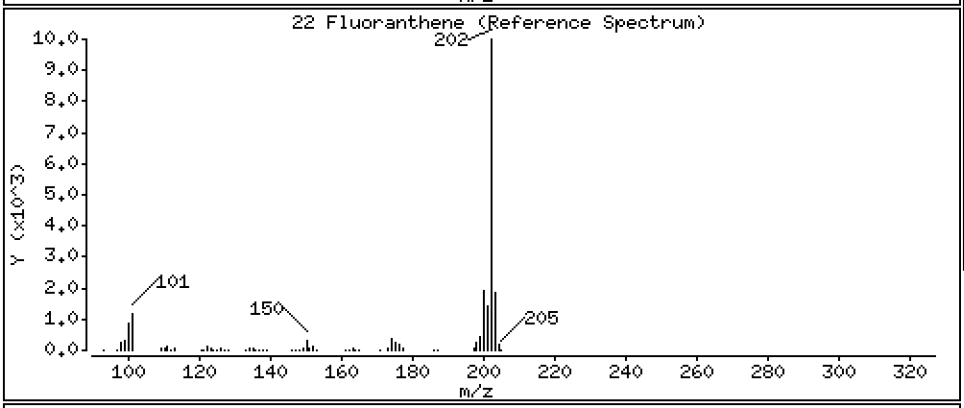
Concentration: 33.27 ug/mL

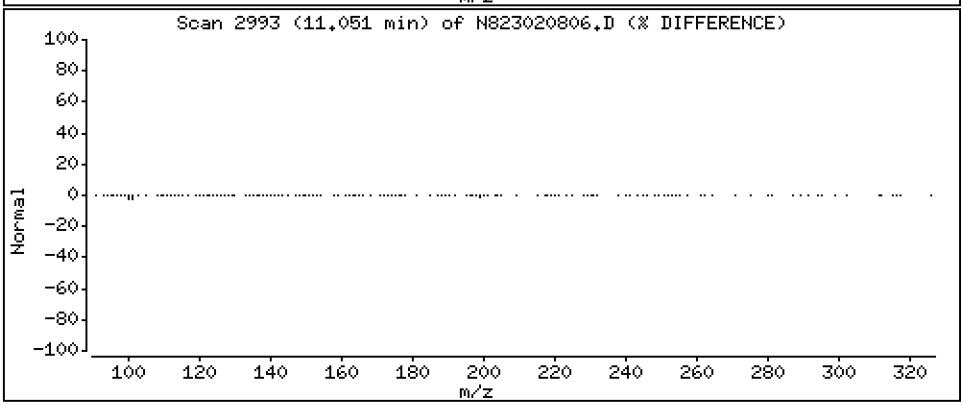












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020806.D

Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

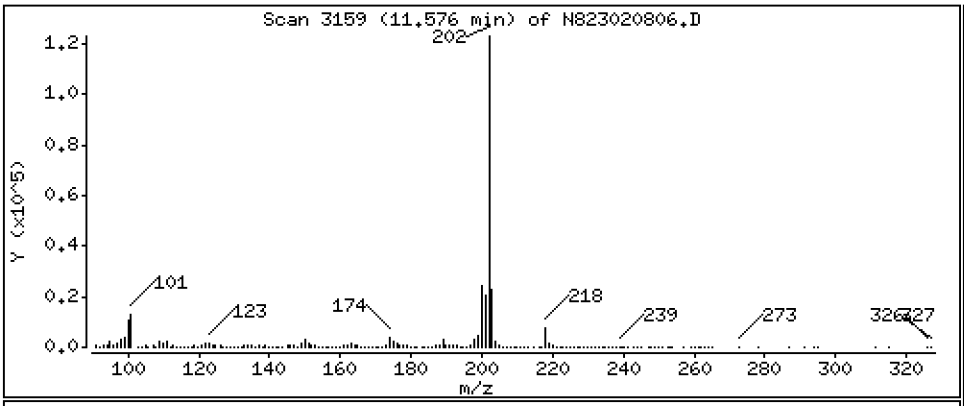
Operator: JZ

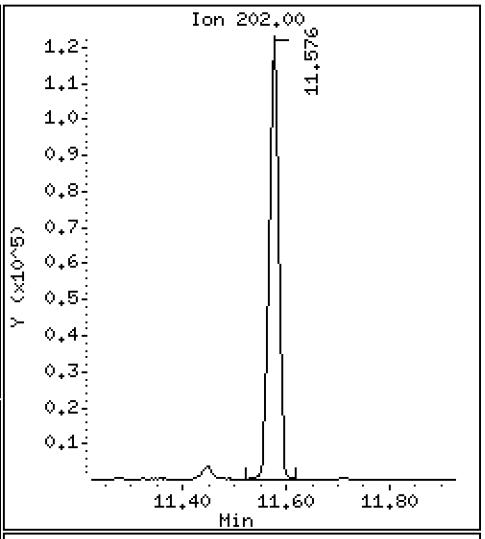
Column phase: Rxi-17sil

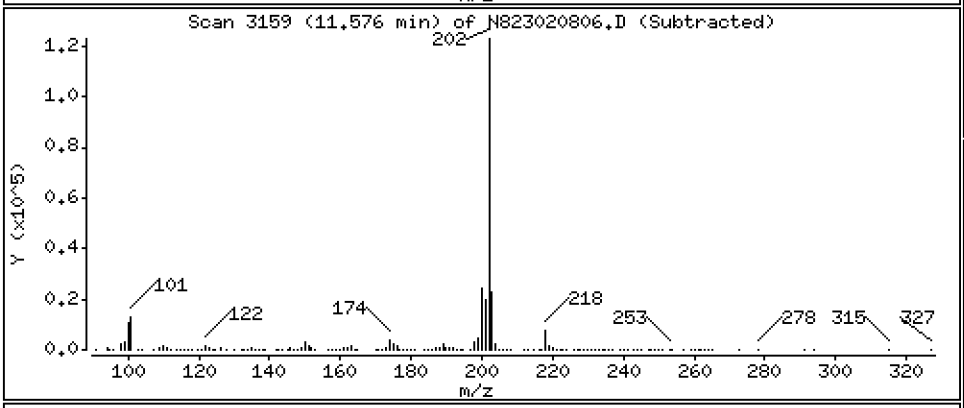
Column diameter: 0.25

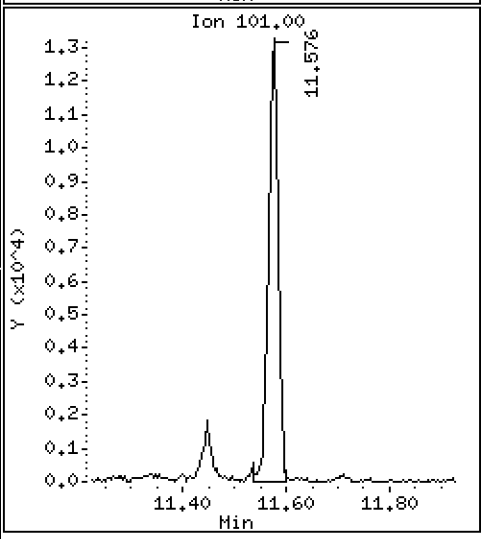
23 Pyrene

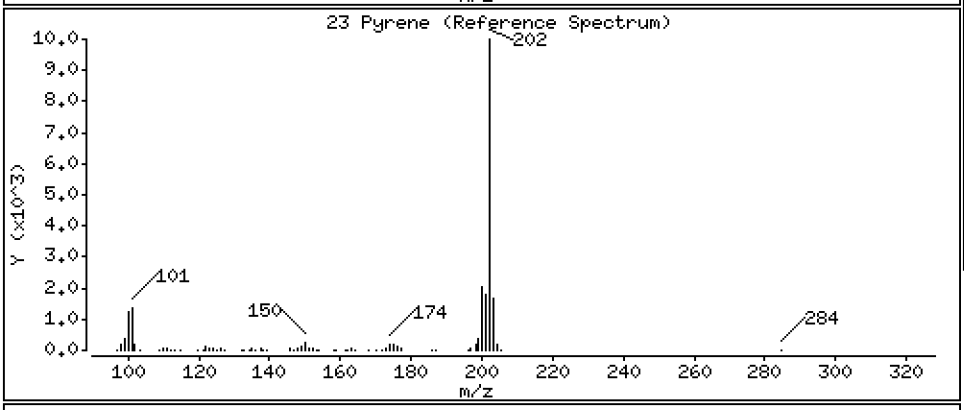
Concentration: 91.40 ug/mL

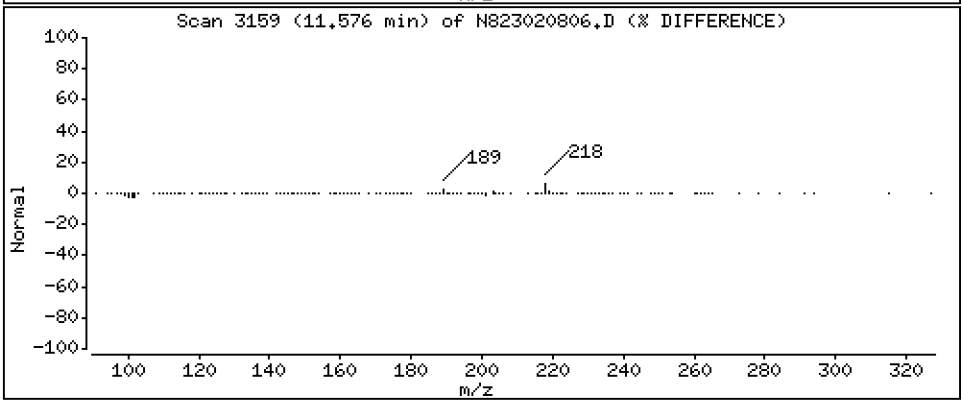












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Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

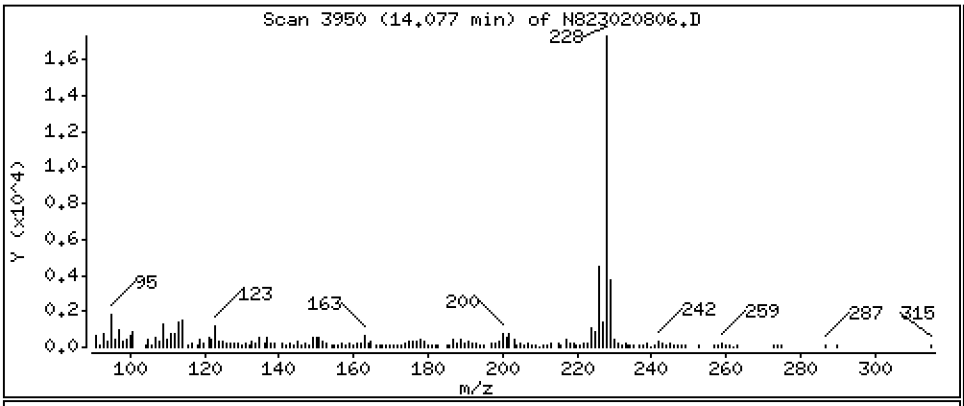
Operator: JZ

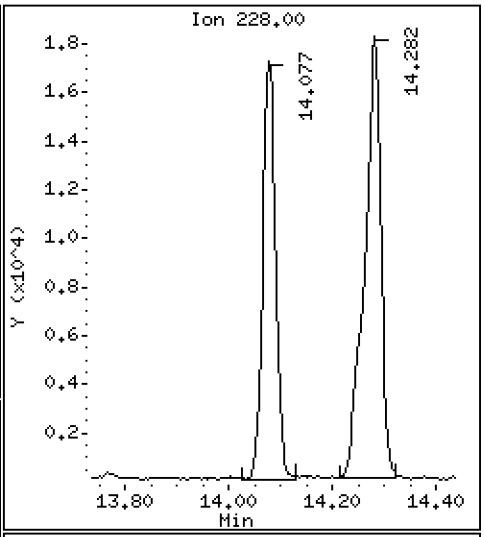
Column phase: Rxi-17sil

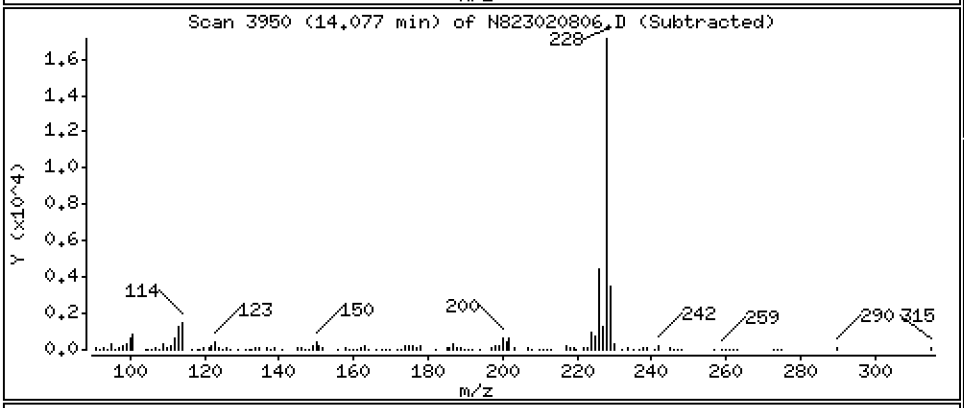
Column diameter: 0.25

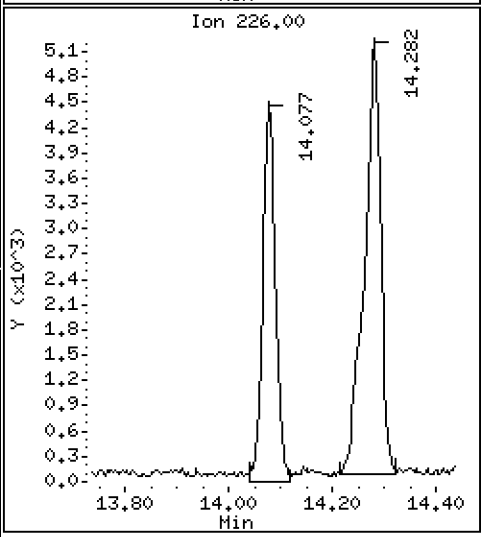
24 Benzo(a)anthracene

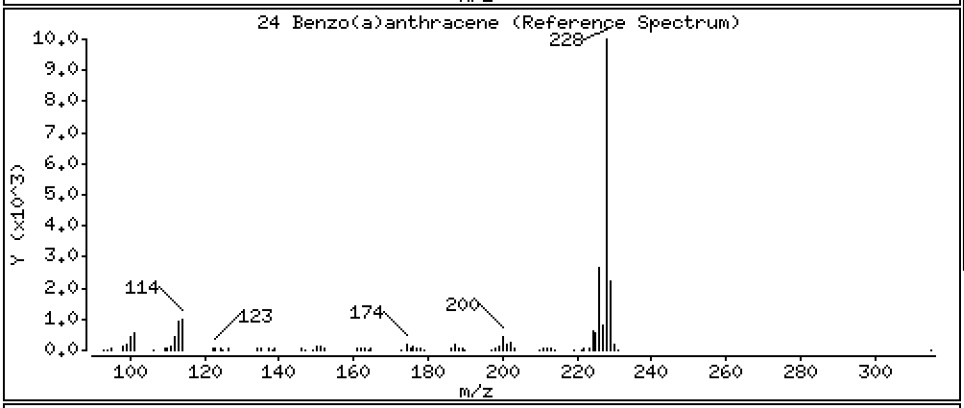
Concentration: 19.02 ug/mL

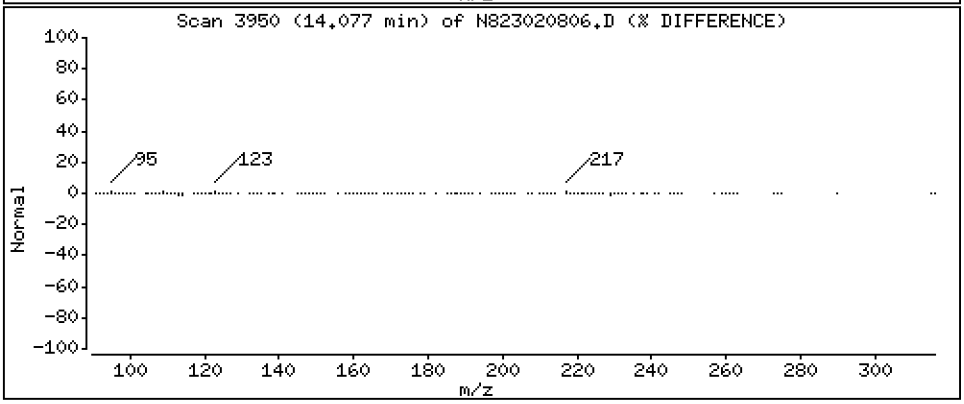












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Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

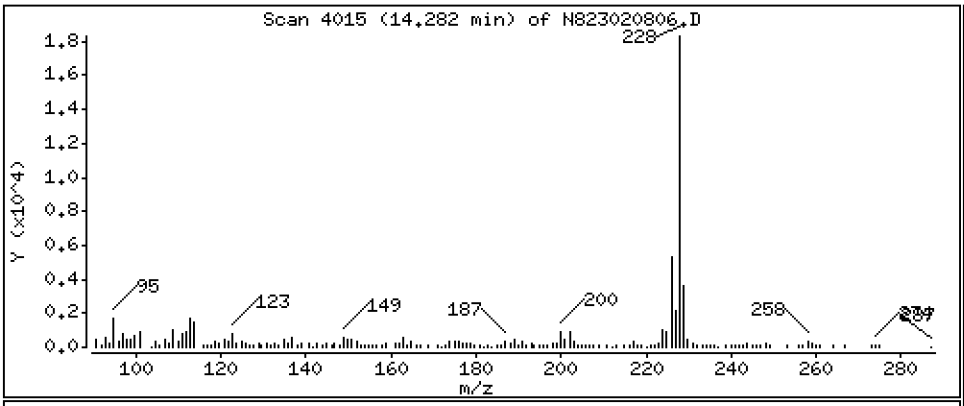
Operator: JZ

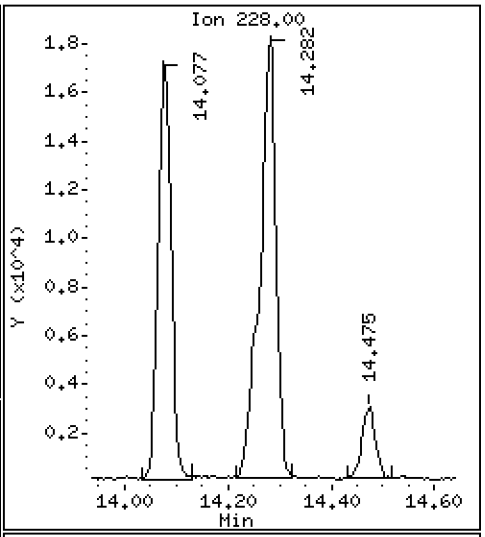
Column phase: Rxi-17sil

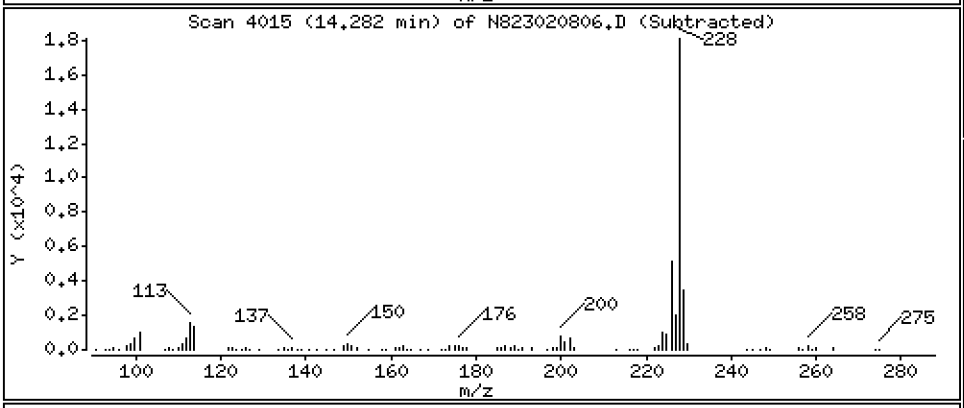
Column diameter: 0.25

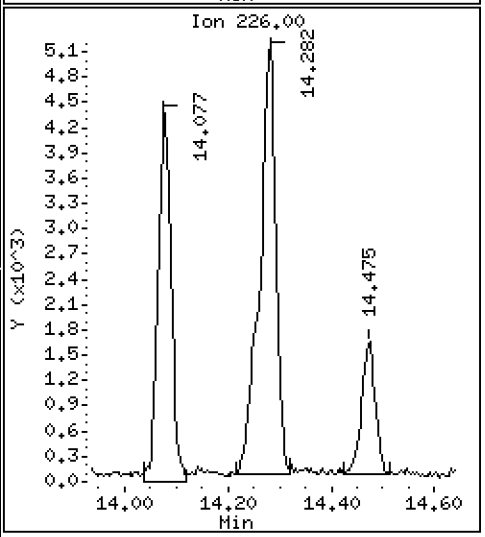
27 Chrysene

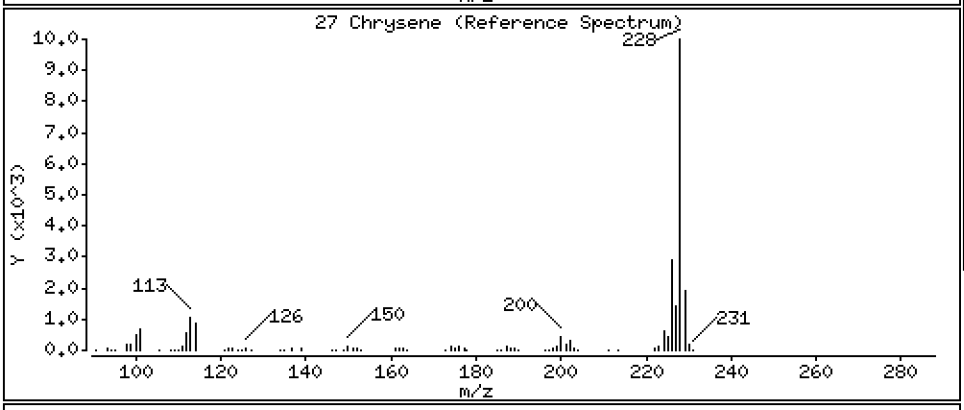
Concentration: 23.41 ug/mL

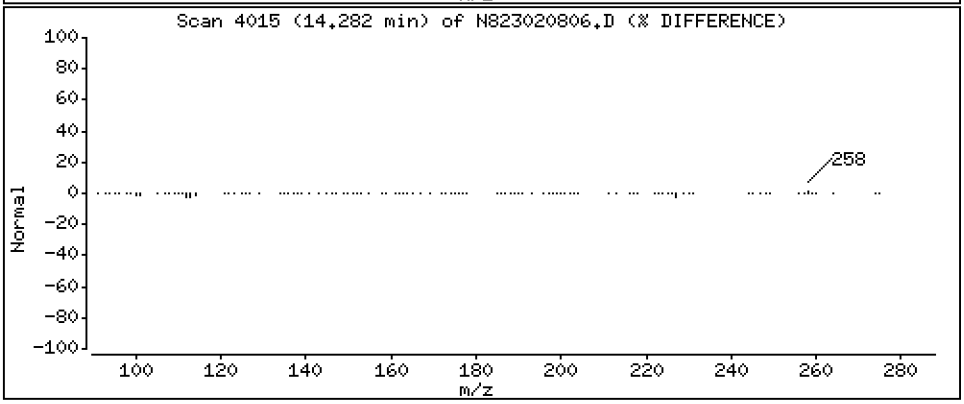












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020806.D

Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

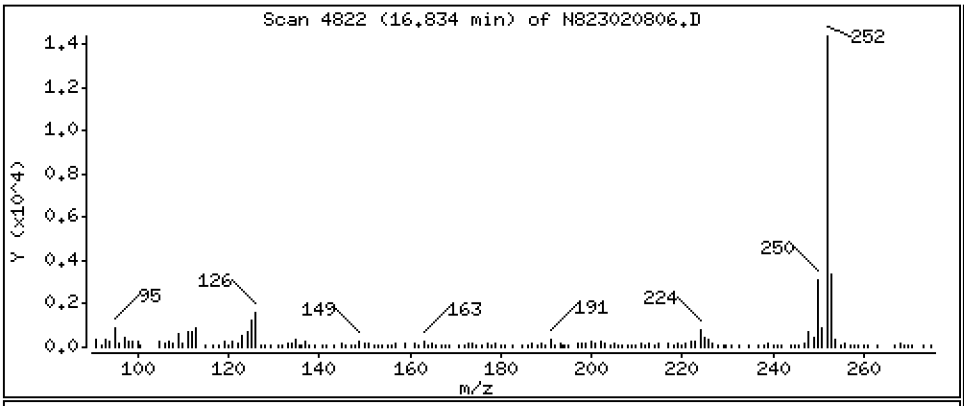
Operator: JZ

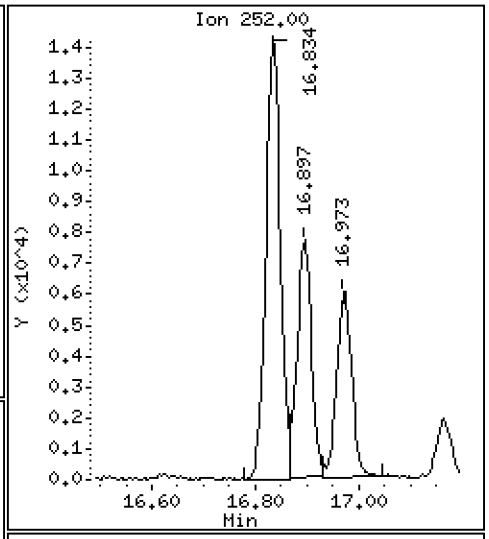
Column phase: Rxi-17sil

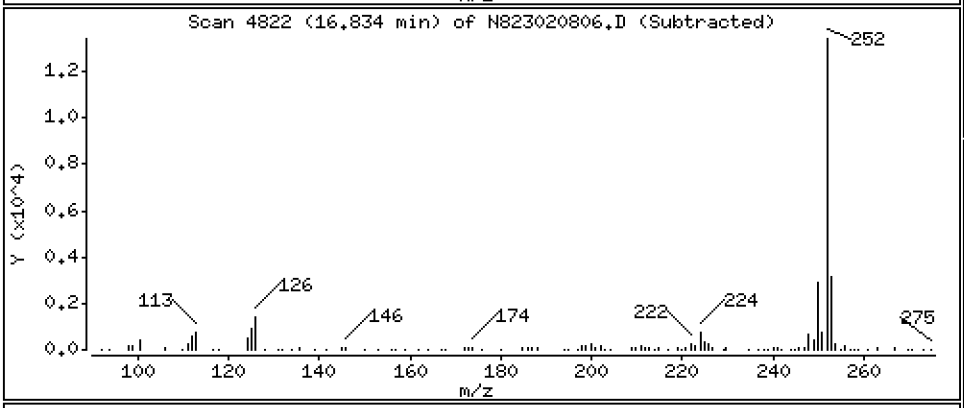
Column diameter: 0.25

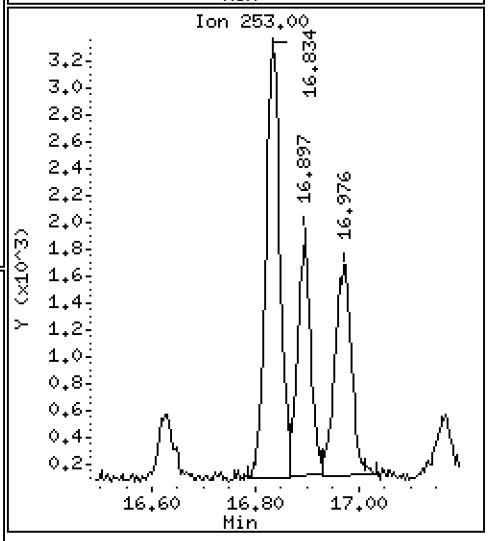
28 Benzo(b)fluoranthene

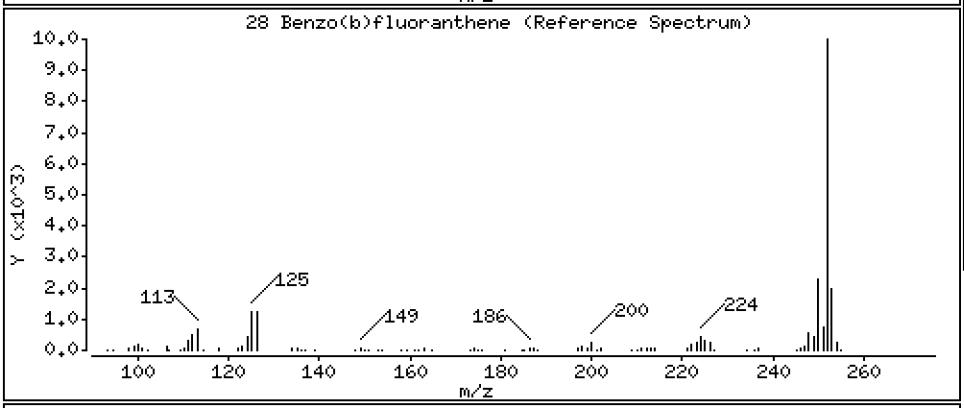
Concentration: 15.97 ug/mL

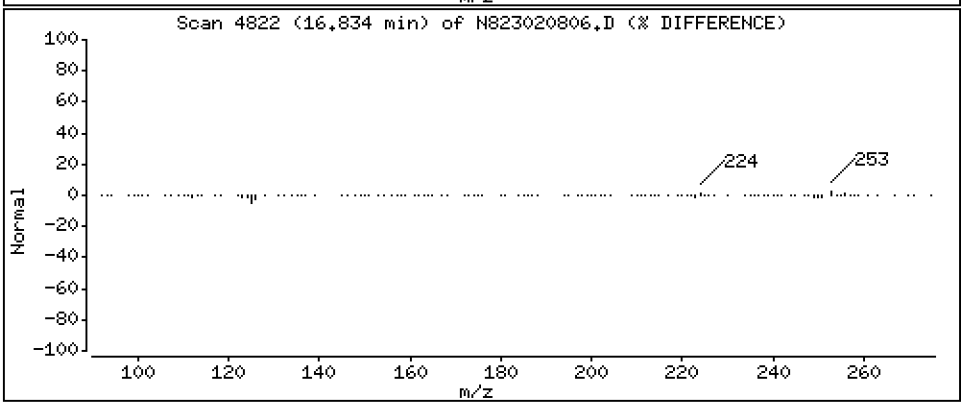












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020806.D

Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

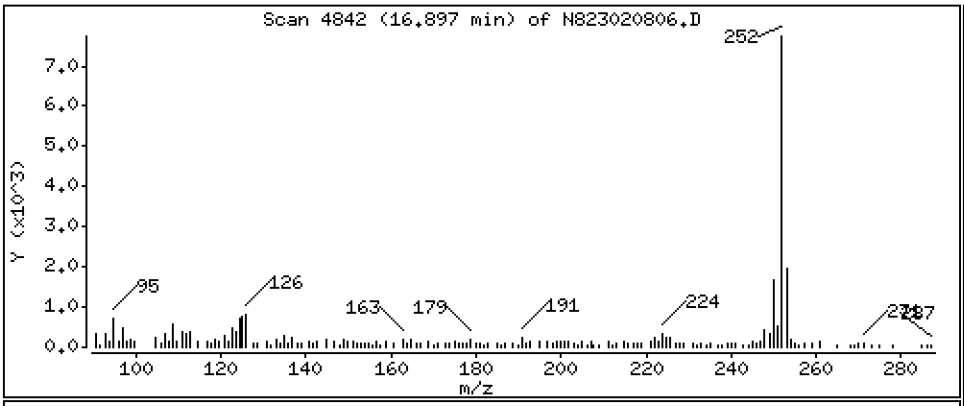
Operator: JZ

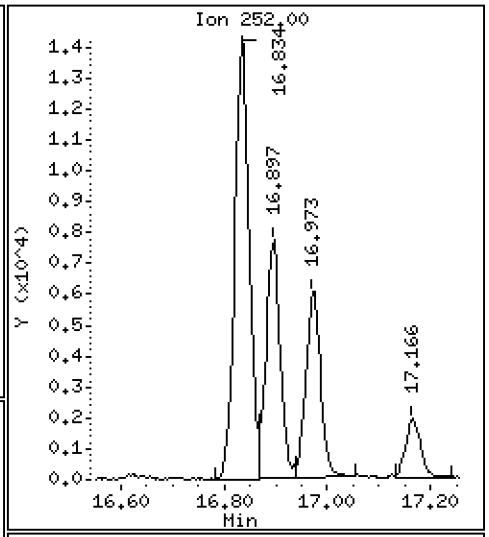
Column phase: Rxi-17sil

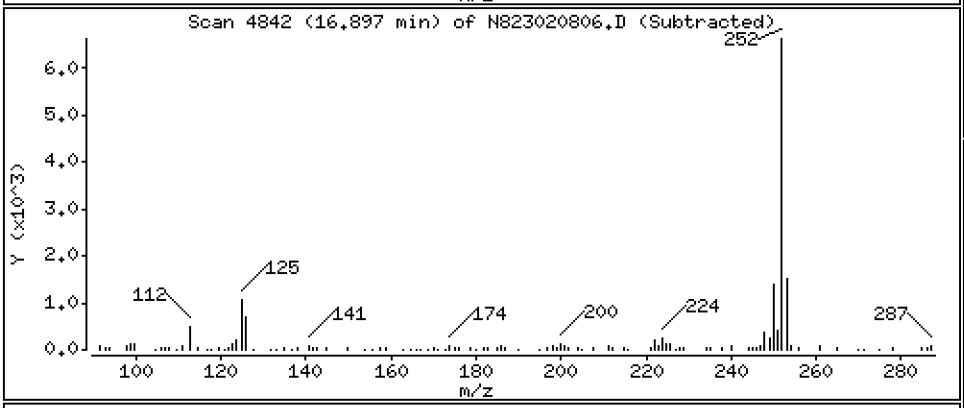
Column diameter: 0.25

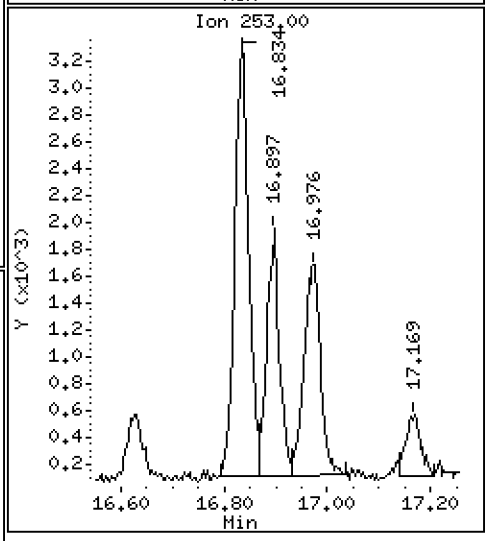
29 Benzo(k)fluoranthene

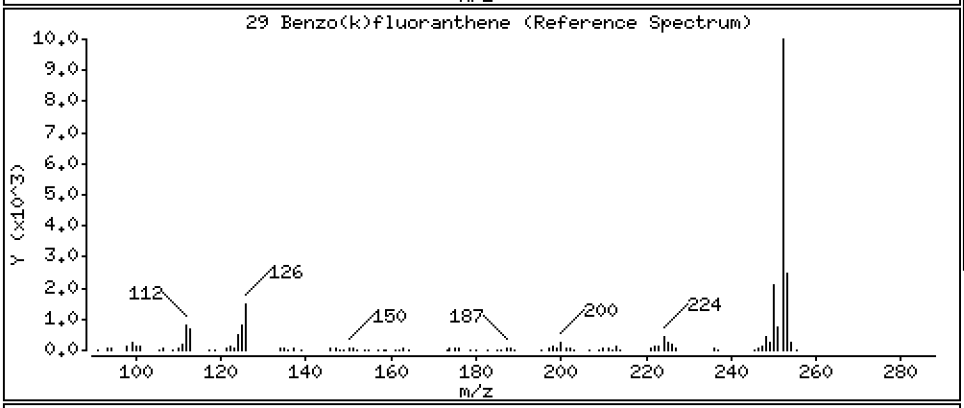
Concentration: 8.750 ug/mL

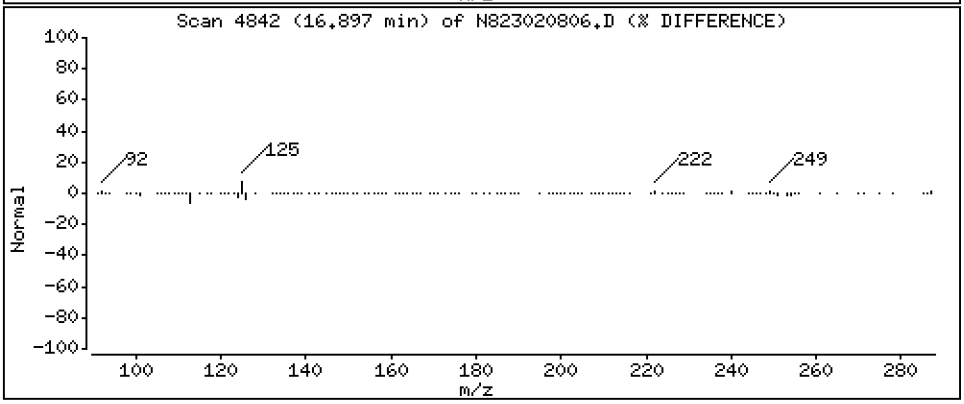












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Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

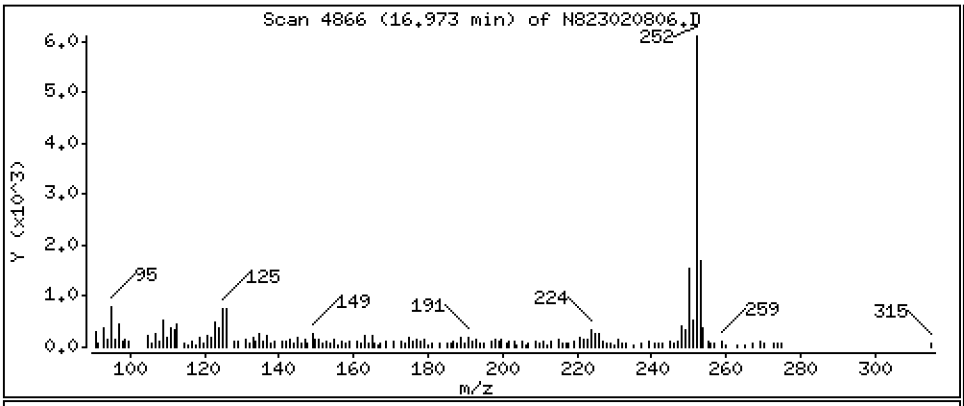
Operator: JZ

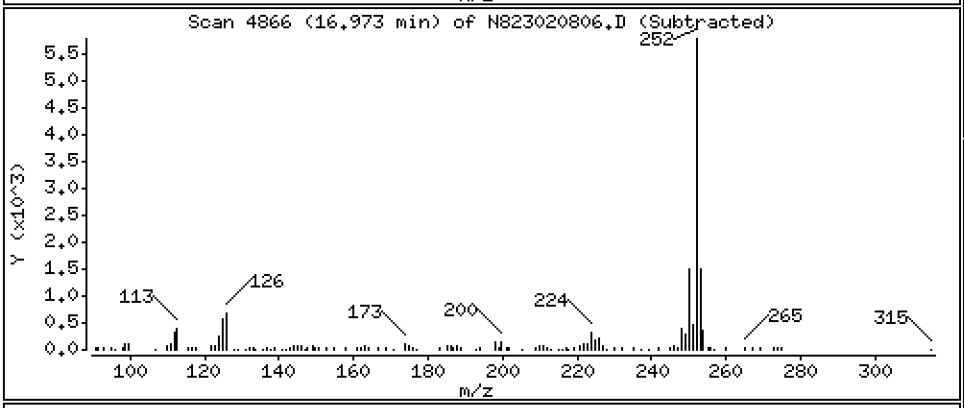
Column phase: Rxi-17sil

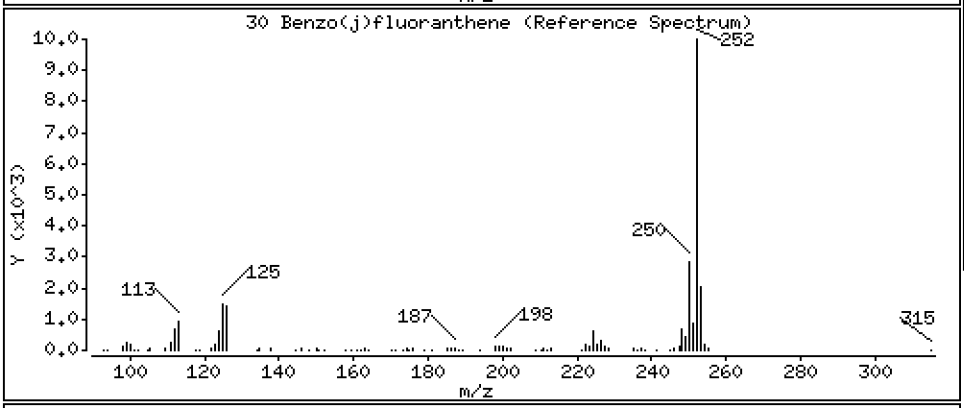
Column diameter: 0.25

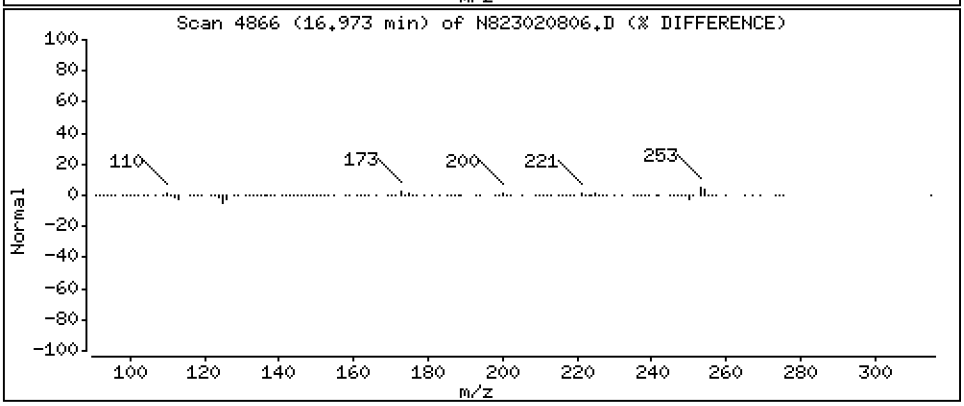
30 Benzo(j)fluoranthene

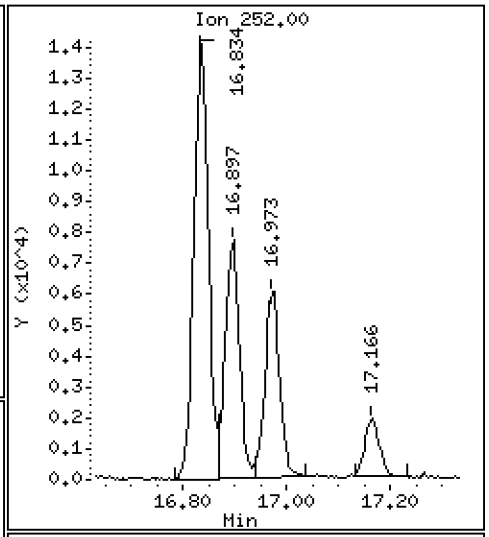
Concentration: 7.723 ug/mL

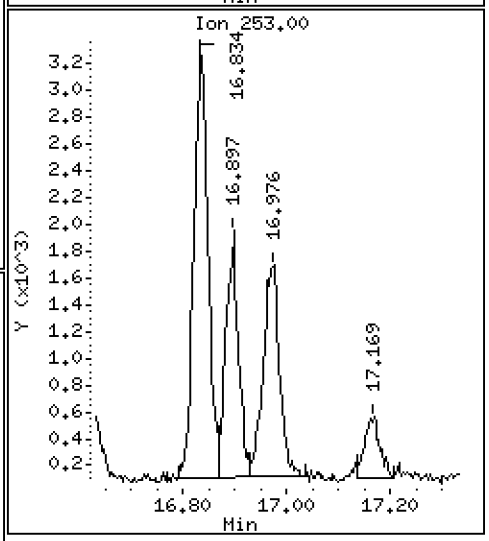












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020806.D

Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

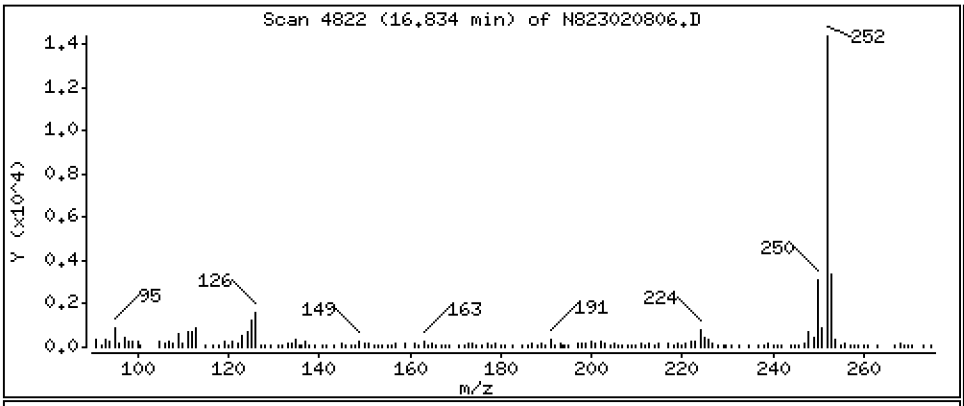
Operator: JZ

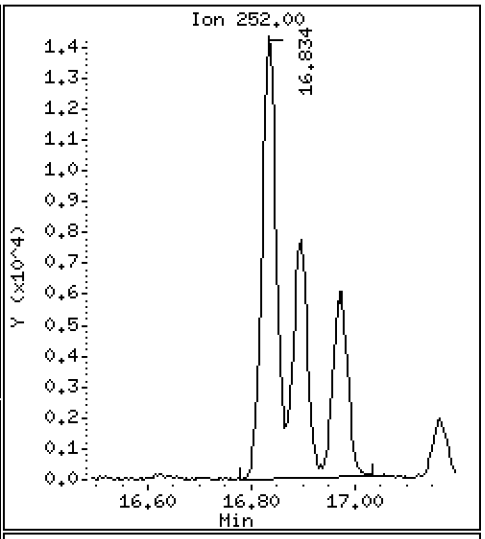
Column phase: Rxi-17sil

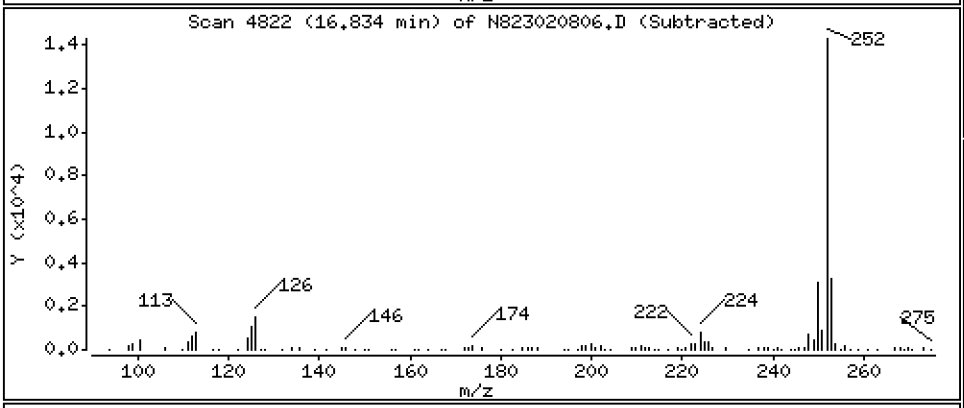
Column diameter: 0.25

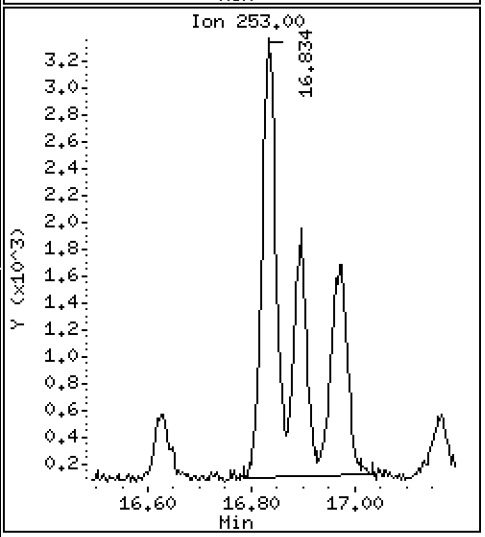
31 Total Benzofluoranthenes

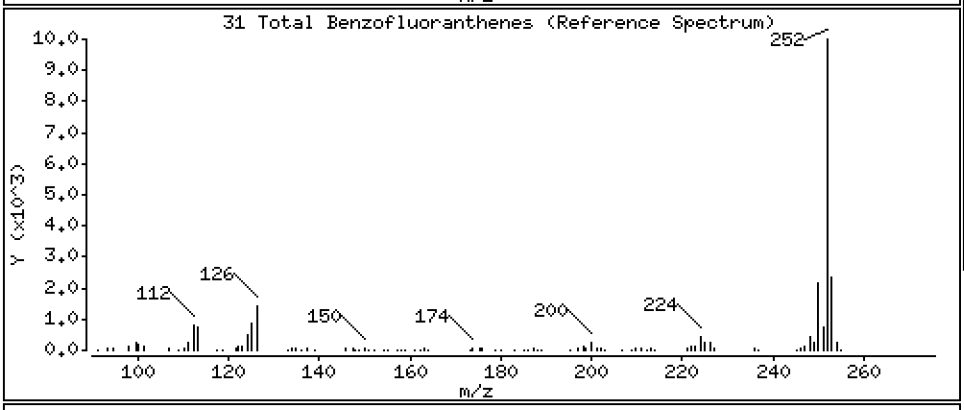
Concentration: 32.75 ug/mL

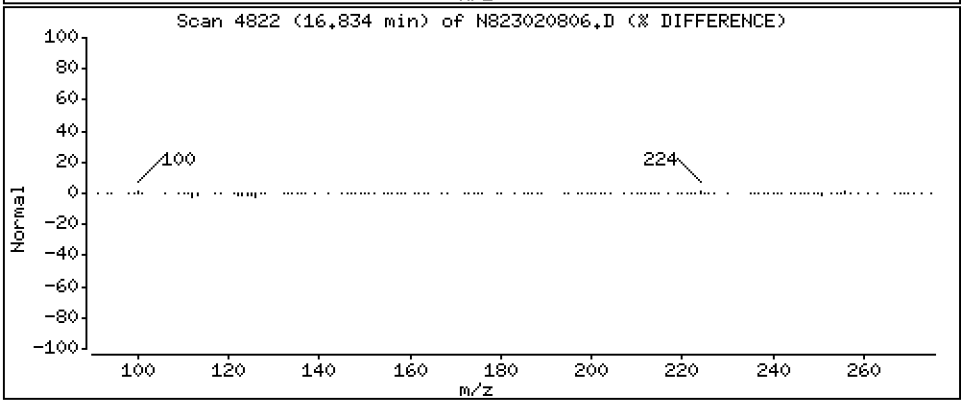












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Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

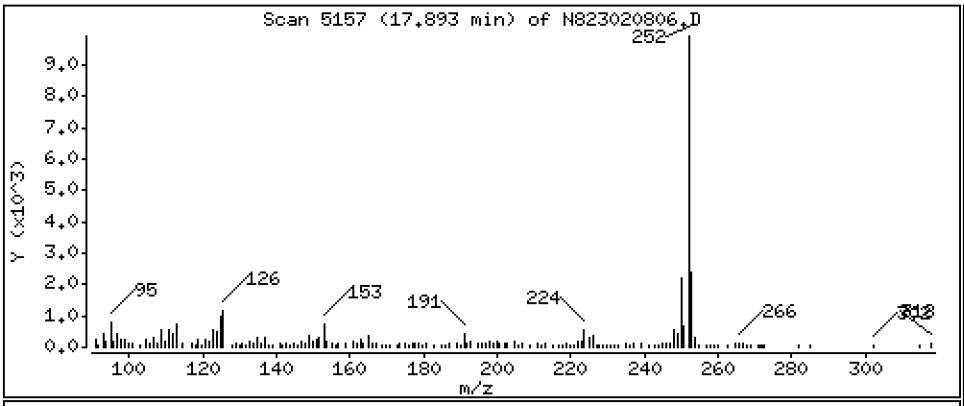
Operator: JZ

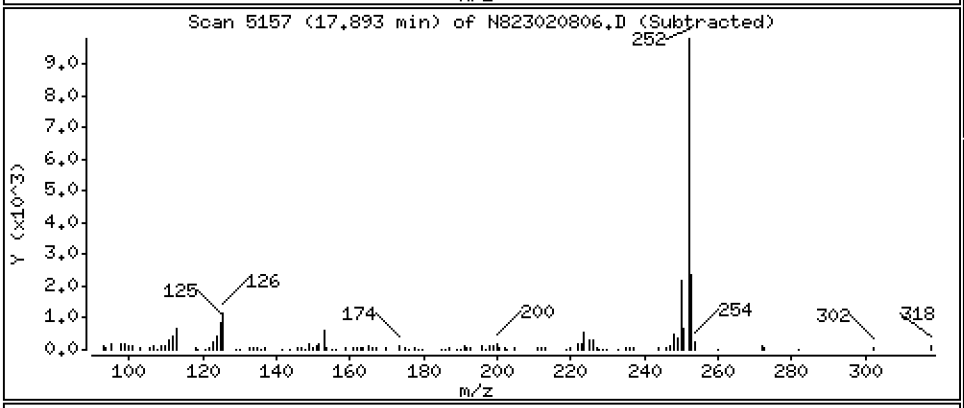
Column phase: Rxi-17sil

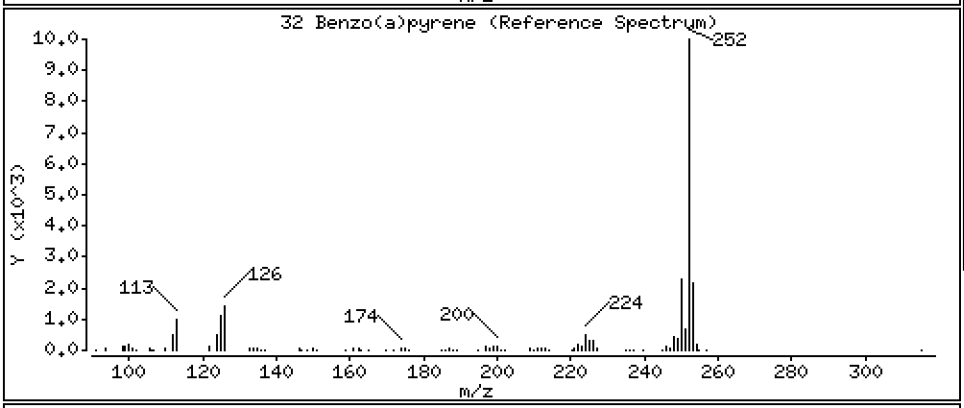
Column diameter: 0.25

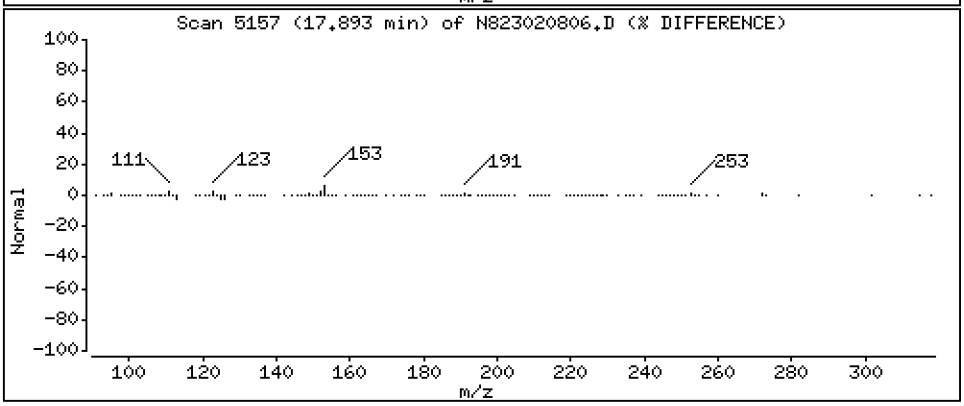
32 Benzo(a)pyrene

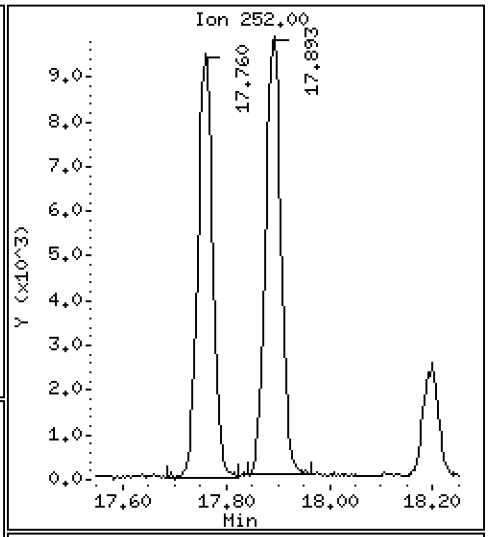
Concentration: 13.30 ug/mL

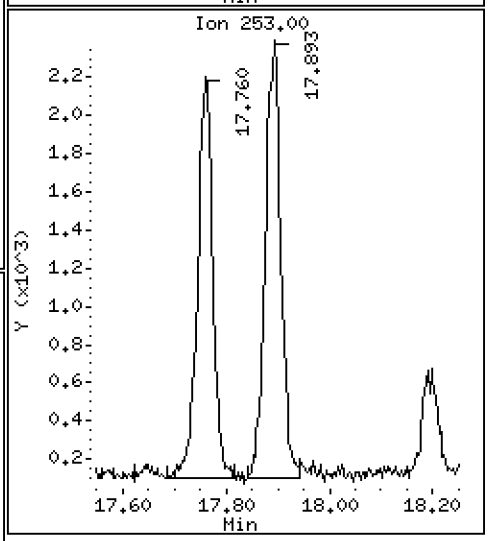












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020806.D

Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

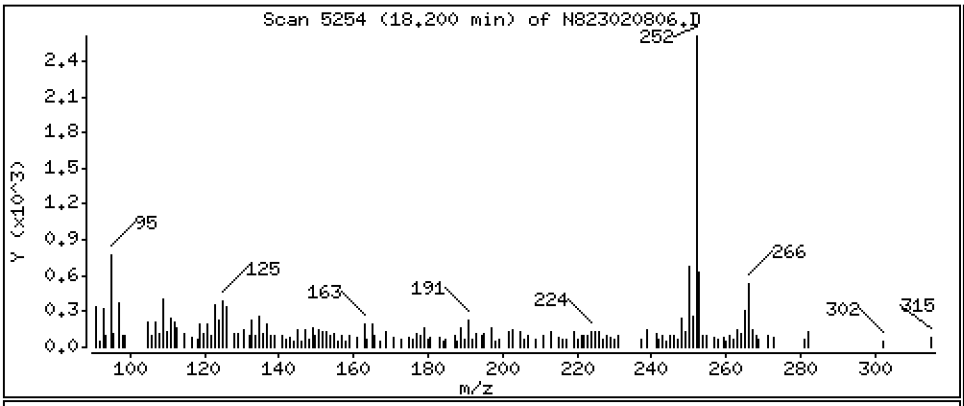
Operator: JZ

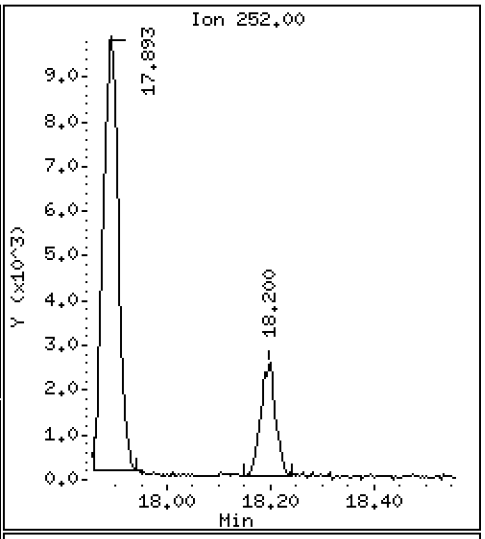
Column phase: Rxi-17sil

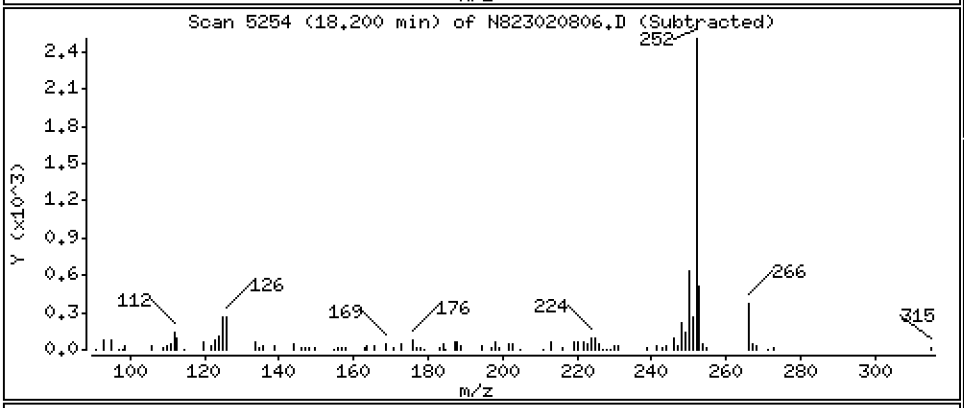
Column diameter: 0.25

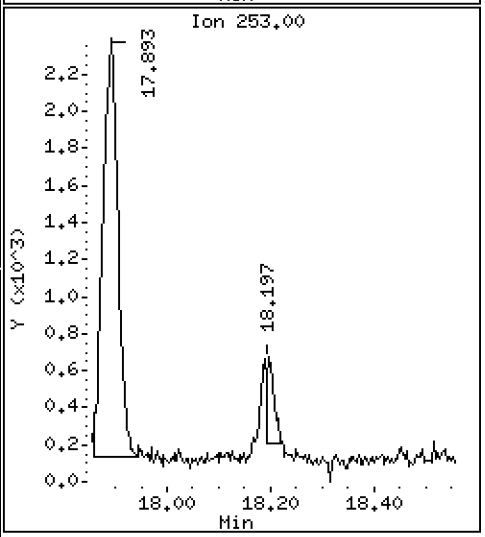
35 Perylene

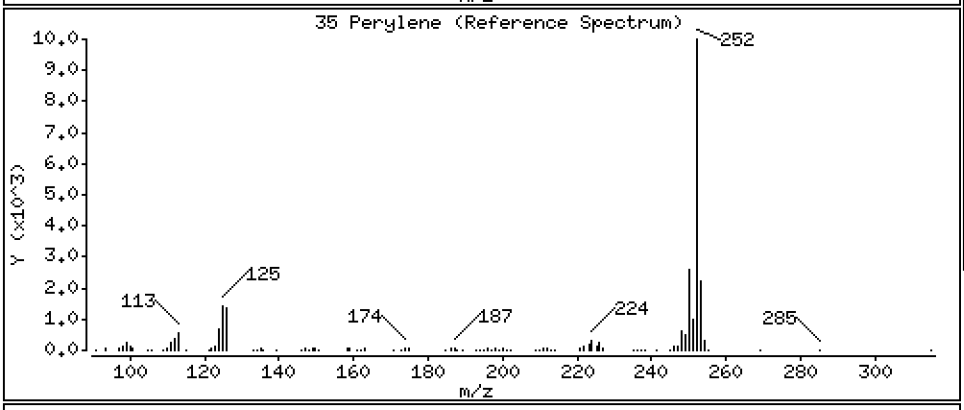
Concentration: 3.094 ug/mL

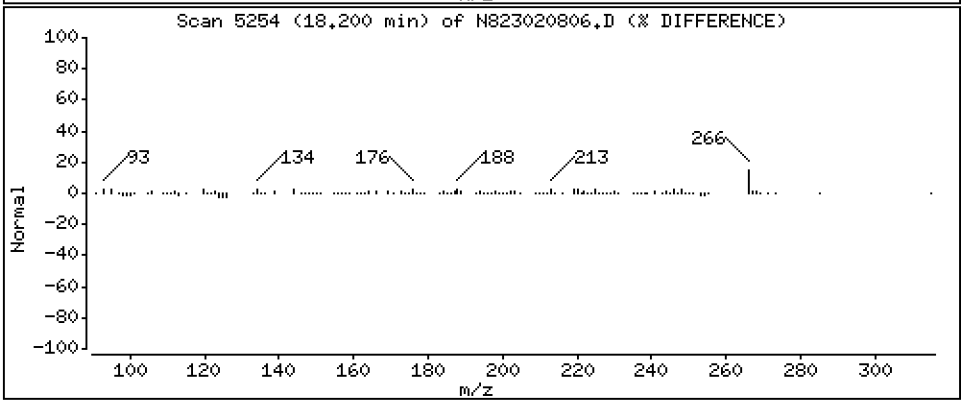












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020806.D

Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

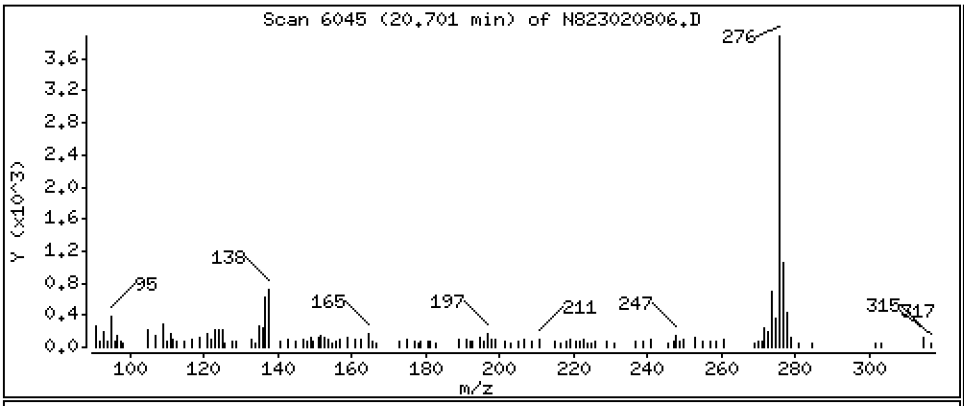
Operator: JZ

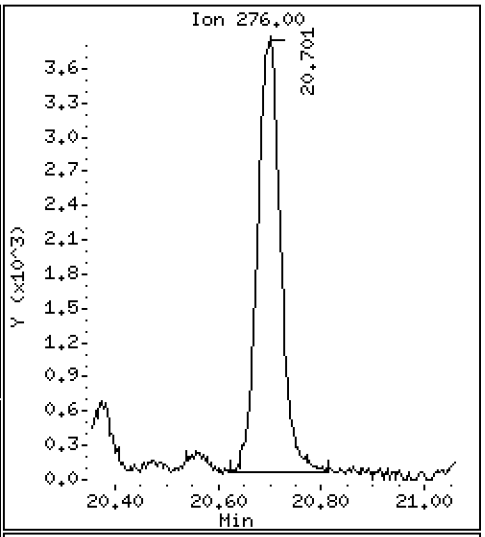
Column phase: Rxi-17sil

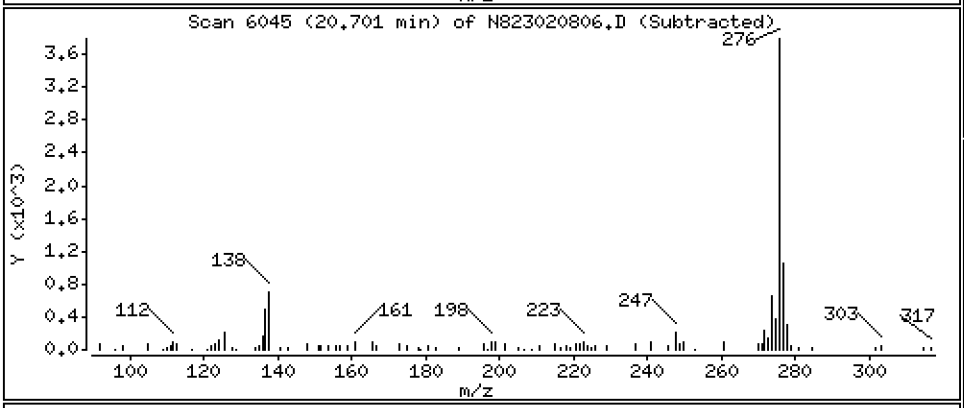
Column diameter: 0.25

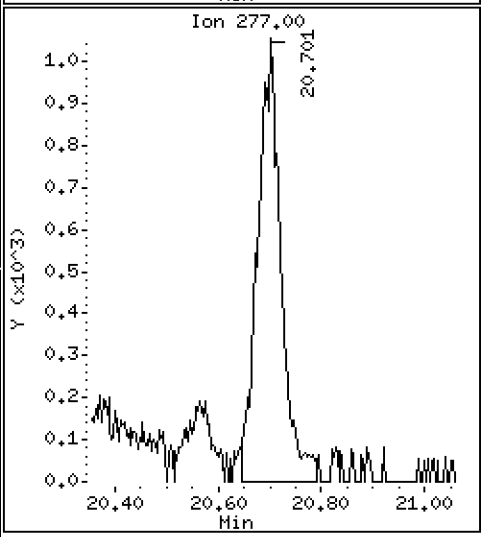
37 Indeno(1,2,3-cd)pyrene

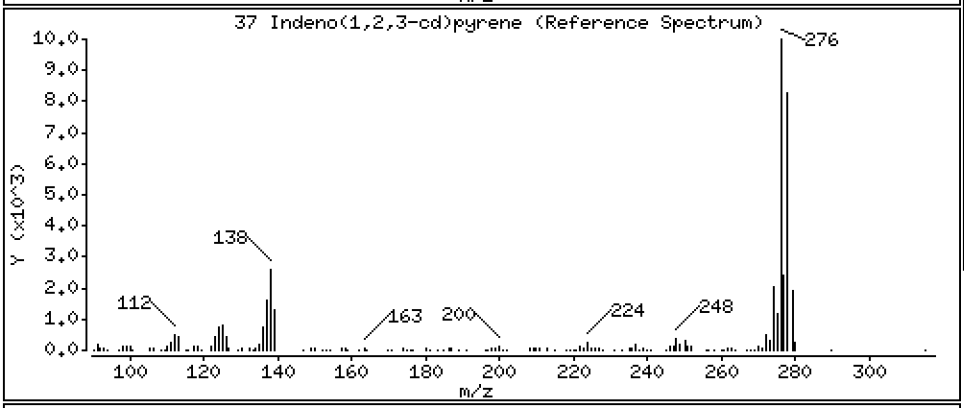
Concentration: 6.755 ug/mL

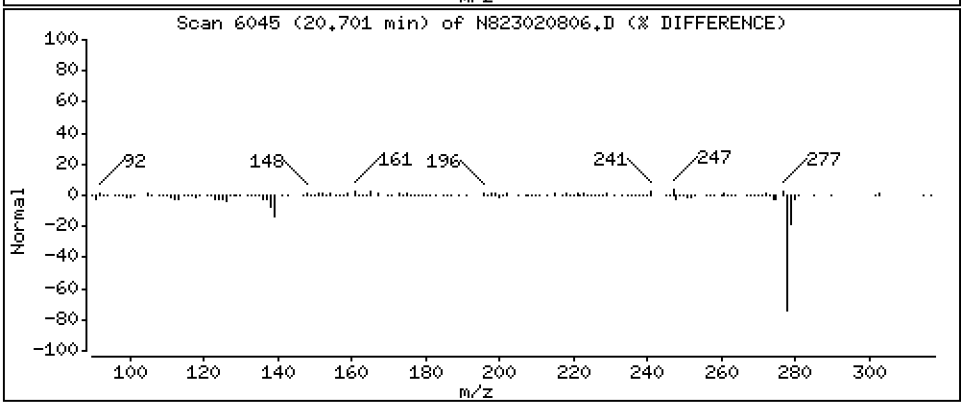












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Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

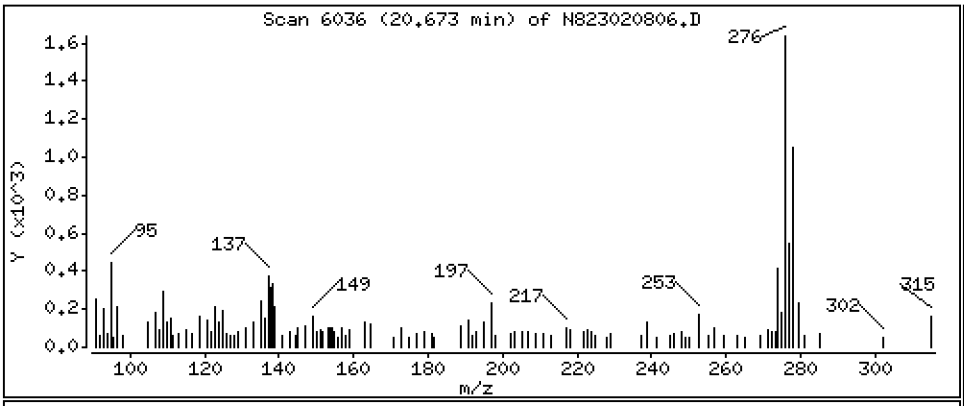
Operator: JZ

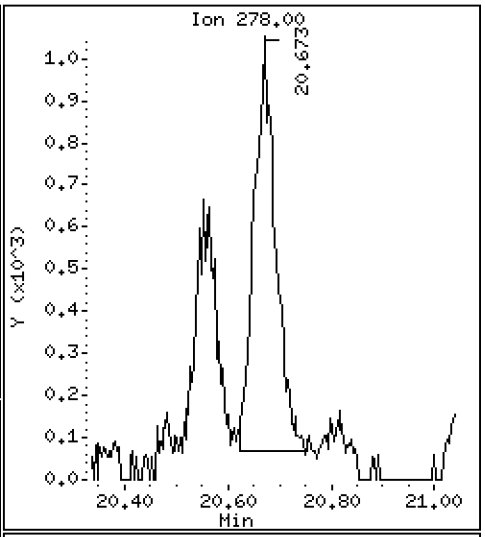
Column phase: Rxi-17sil

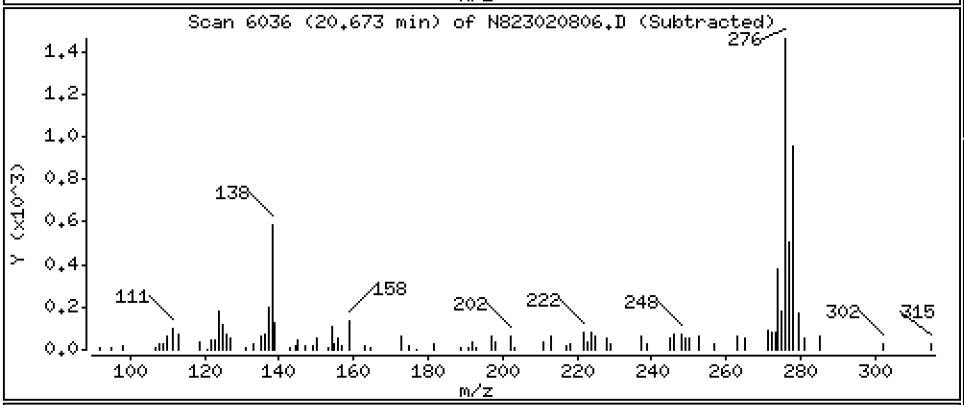
Column diameter: 0.25

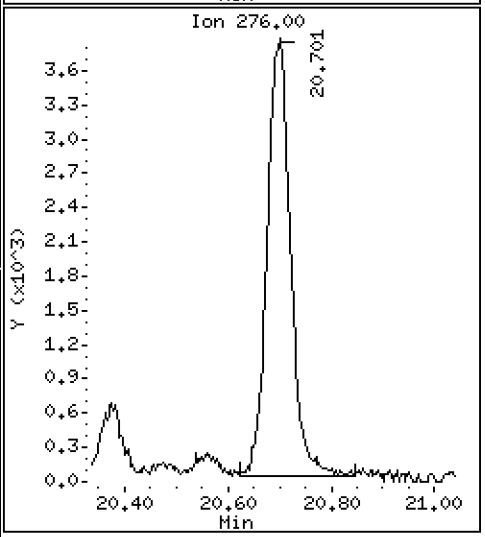
38 Dibenzo(a,h)anthracene

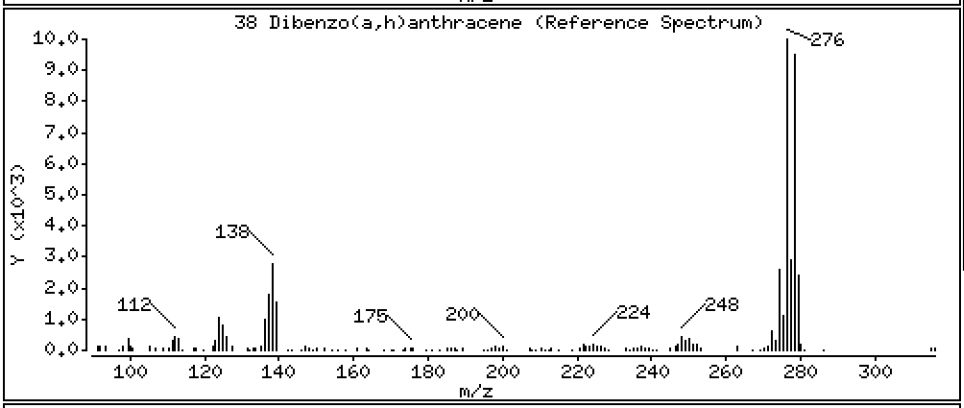
Concentration: 1.871 ug/mL

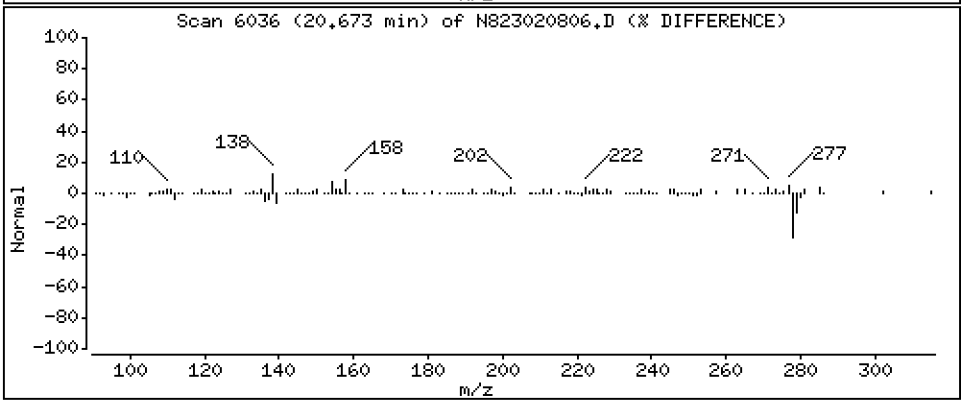












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020806.D

Date : 08-FEB-2023 14:00

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-16,9,

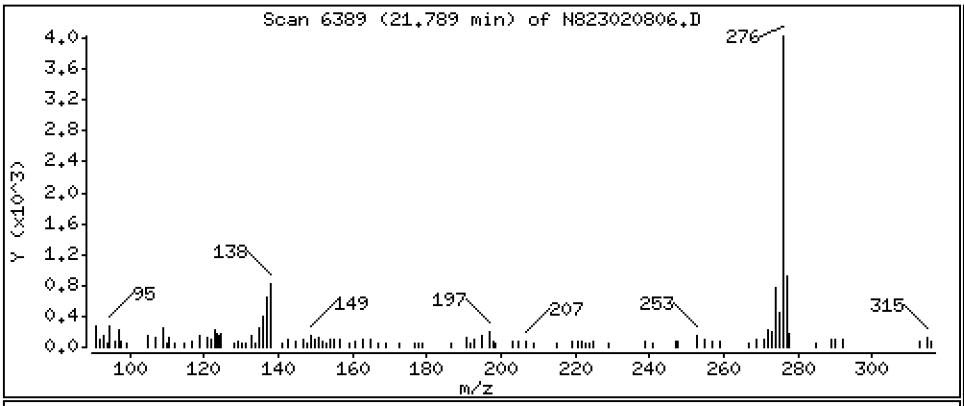
Operator: JZ

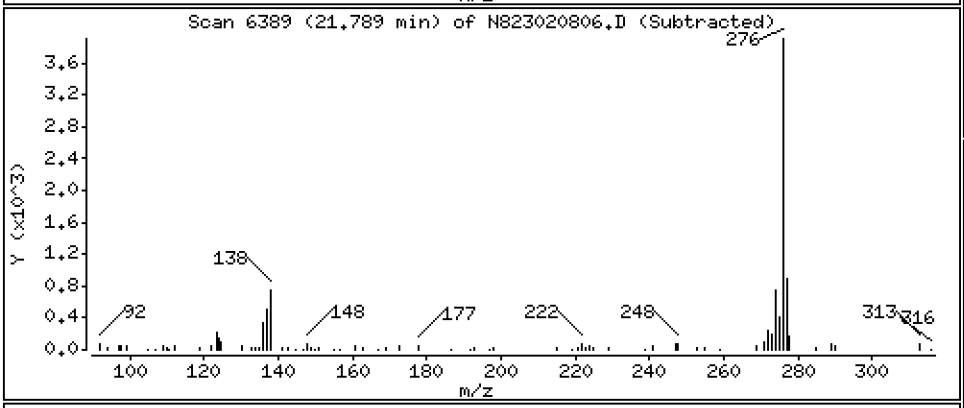
Column phase: Rxi-17sil

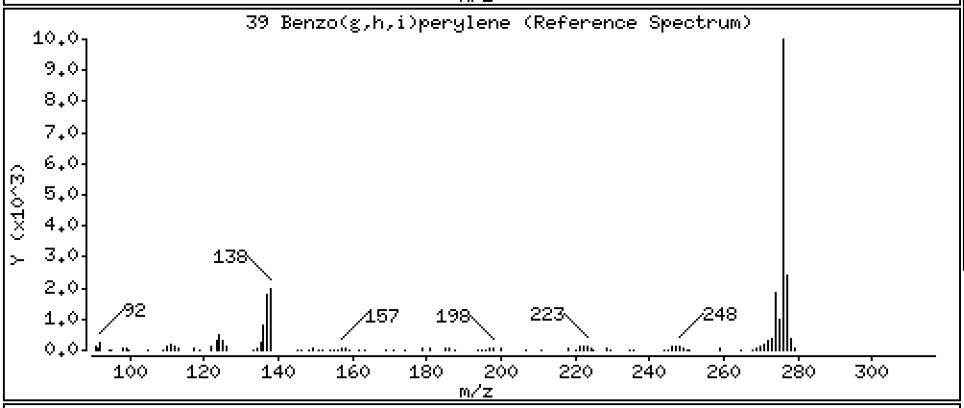
Column diameter: 0.25

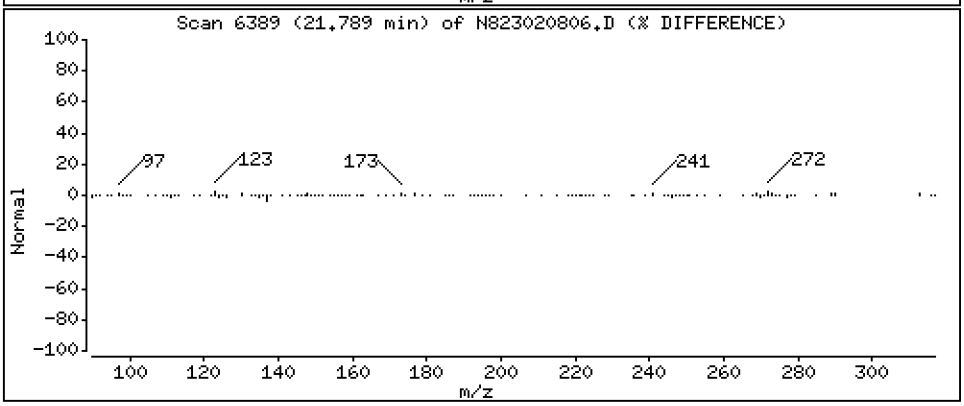
39 Benzo(g,h,i)perylene

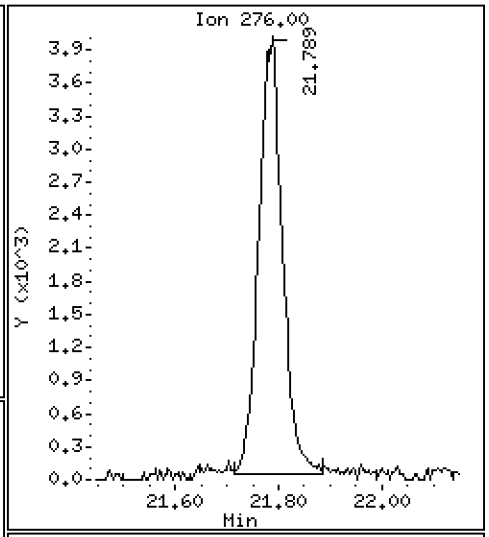
Concentration: 7.888 ug/mL

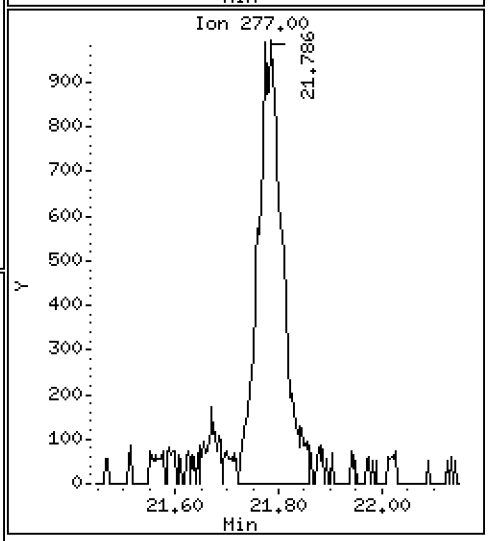












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230208.b\N823020806.D
Lab Smp Id: 23A0207-16
Inj Date : 08-FEB-2023 14:00
Operator : JZ Inst ID: nt8.i
Smp Info : 23A0207-16,9,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230208.b\FSIMPNA230119.m
Meth Date : 08-Feb-2023 21:18 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 6
Dil Factor: 9.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

								CONCENTRATIONS	
		QUANT SIG						ON-COLUMN	FINAL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE		(ug/mL)	(ug/mL)
*	1 Naphthalene-d8	136	4.887	4.894	(1.000)	49742		2.00000	
	2 Naphthalene	128	4.913	4.922	(1.005)	2347		0.10148	0.9133
$	3 2-Methylnaphthalene-d10	152	5.621	5.627	(1.150)	4703		0.34668	3.120(M)
	4 2-Methylnaphthalene	141	5.668	5.678	(1.160)	544		0.04276	0.3849
	5 1-methylnaphthalene	141	5.868	5.874	(1.201)	384		0.02974	0.2677
	9 Acenaphthylene	152	7.072	7.079	(0.985)	2331		0.10521	0.9469
*	10 Acenaphthene-d10	164	7.183	7.189	(1.000)	29339		2.00000	
	11 Acenaphthene	153	7.234	7.240	(1.007)	1163		0.07835	0.7051(M)
	12 Dibenzofuran	168	7.385	7.392	(1.028)	1375		0.06098	0.5489
	14 Fluorene	166	7.863	7.869	(1.095)	2037		0.11632	1.047(M)
*	15 Phenanthrene-d10	188	9.226	9.232	(1.000)	43820		2.00000	
	16 Phenanthrene	178	9.264	9.270	(1.004)	8986		0.41981	3.778
	17 Anthracene	178	9.305	9.308	(1.009)	12852		0.66094	5.948
	19 Carbazole	167	9.817	9.826	(1.064)	3035		0.17026	1.532
	22 Fluoranthene	202	11.050	11.056	(1.198)	86133		3.69675	33.27
$	21 Fluoranthene-d10	212	11.009	11.018	(1.193)	6666		0.34480	3.103
	23 Pyrene	202	11.575	11.575	(0.815)	160327		10.1550	91.40
	24 Benzo(a)anthracene	228	14.076	14.086	(0.991)	30238		2.11309	19.02
*	25 Chrysene-d12	240	14.209	14.215	(1.000)	25465		2.00000	
	27 Chrysene	228	14.282	14.288	(1.005)	39622		2.60096	23.41
	28 Benzo(b)fluoranthene	252	16.833	16.843	(0.929)	28118		1.77418	15.97
	29 Benzo(k)fluoranthene	252	16.897	16.903	(0.932)	15092		0.97220	8.750
	30 Benzo(j)fluoranthene	252	16.973	16.982	(0.936)	11992		0.85811	7.723
	31 Total Benzofluoranthenes	252	16.833	16.843	(0.929)	54612		3.63855	32.75(M)
	32 Benzo(a)pyrene	252	17.893	17.899	(0.987)	20607		1.47757	13.30
*	33 Perylene-d12	264	18.123	18.127	(1.000)	27212		2.00000	
	35 Perylene	252	18.199	18.206	(1.004)	5145		0.34378	3.094
$	36 Dibenzo(a,h)anthracene-d14	292	20.558	20.568	(1.134)	5168		0.48470	4.362
	37 Indeno(1,2,3-cd)pyrene	276	20.700	20.707	(1.142)	11925		0.75055	6.755
	38 Dibenzo(a,h)anthracene	278	20.672	20.688	(1.141)	2843		0.20792	1.871
	39 Benzo(g,h,i)perylene	276	21.788	21.798	(1.202)	12617		0.87647	7.888

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020806.D
Lab Smp Id: 23A0207-16
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230208.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 08-FEB-2023
Calibration Time: 12:05
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	47321	23661	94642	49742	5.12
10 Acenaphthene-d10	28133	14067	56266	29339	4.29
15 Phenanthrene-d10	52447	26224	104894	43820	-16.45
25 Chrysene-d12	43514	21757	87028	25465	-41.48
33 Perylene-d12	39495	19748	78990	27212	-31.10

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.89	4.39	5.39	4.89	-0.13
10 Acenaphthene-d10	7.19	6.69	7.69	7.18	-0.09
15 Phenanthrene-d10	9.23	8.73	9.73	9.23	-0.07
25 Chrysene-d12	14.22	13.72	14.72	14.21	-0.04
33 Perylene-d12	18.13	17.63	18.63	18.12	-0.02

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

REVIEW SUMMARY FOR FILE - N823020806.D

Lab ID: 23A0207-16
nt8.i, 20230208.b\FSIMPNA230119.m,   08-FEB-2023 14:00

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

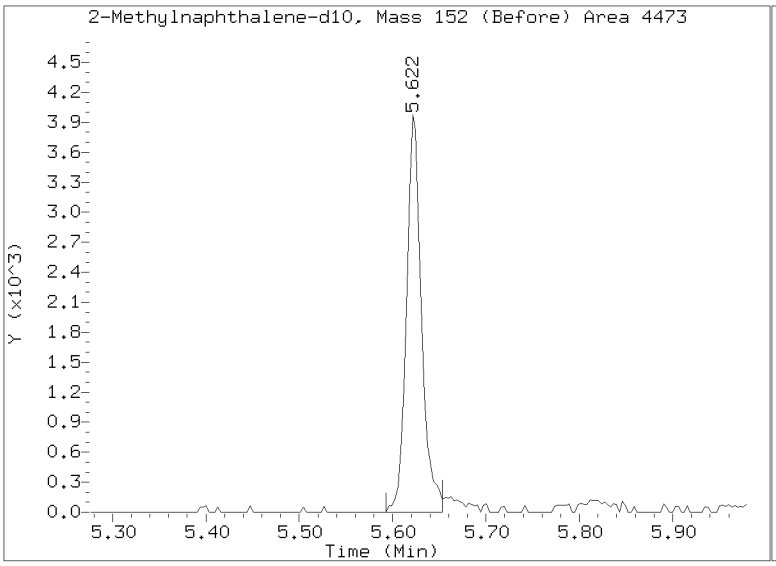
No RRT check performed

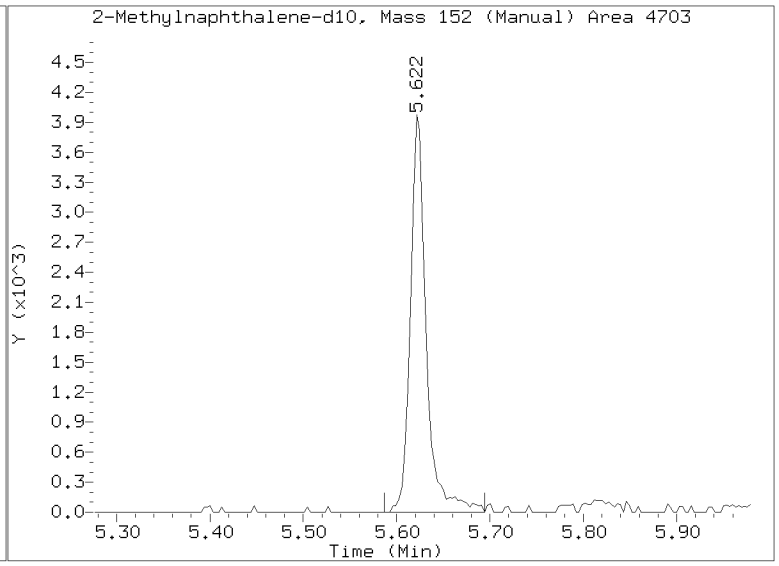
On Column LOD for nt8.i, 20230208.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

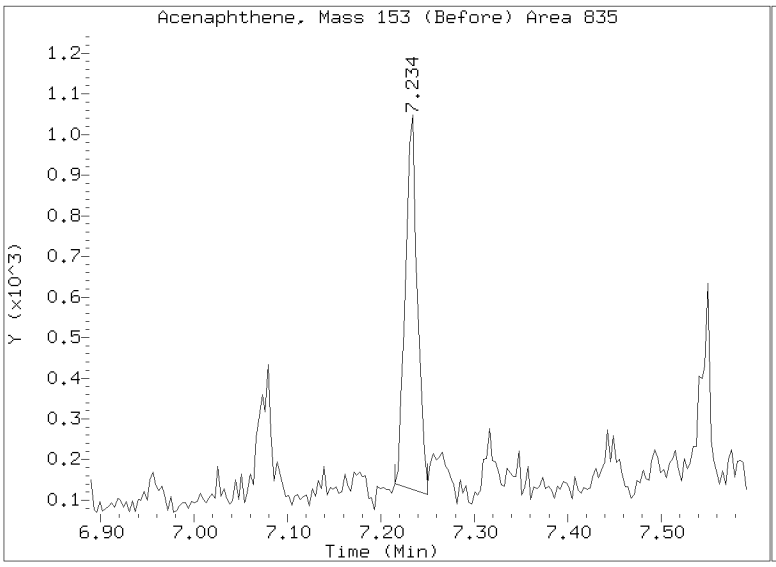
* Only compounds listed in the work order have been verified by the analyst *

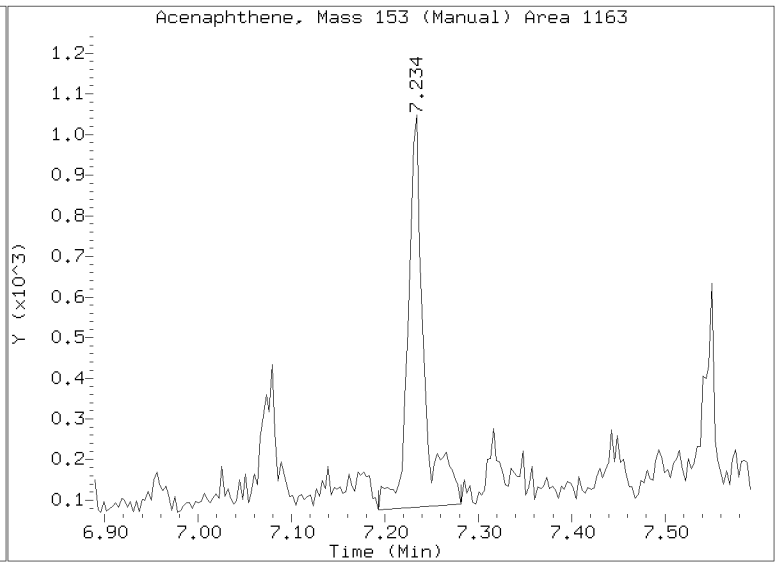
Quant Ion Manual Peak Adjustment Report

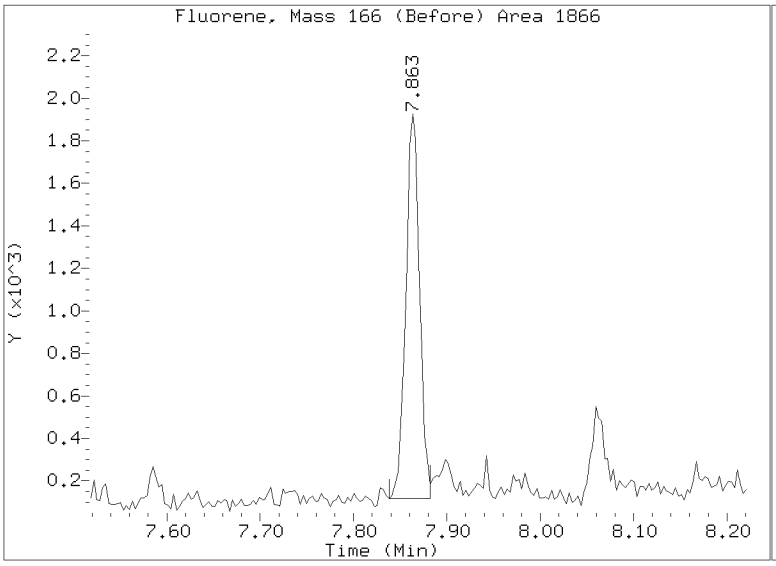
Datafile: //target/share/chem3/nt8.i/20230208.b/N823020806.D
Injection Date: 08-FEB-2023 14:00
Lab ID:23A0207-16 Client ID:
Report Date: 02/08/2023 21:38

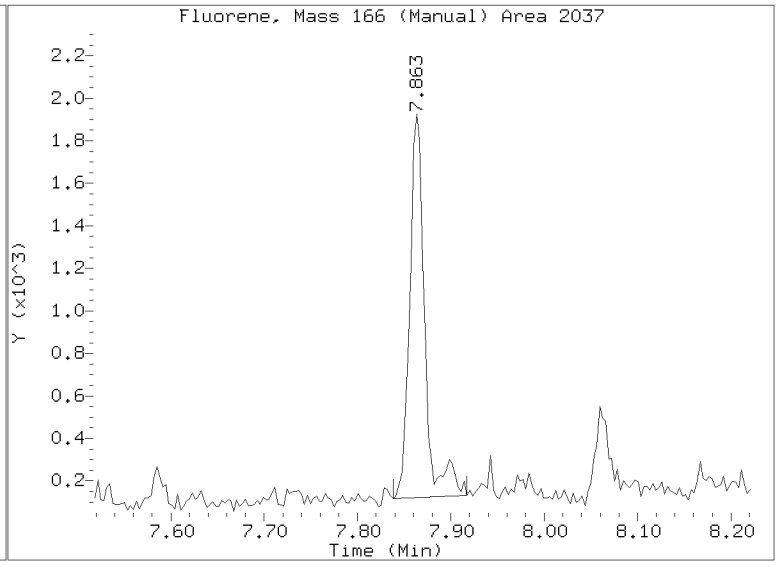






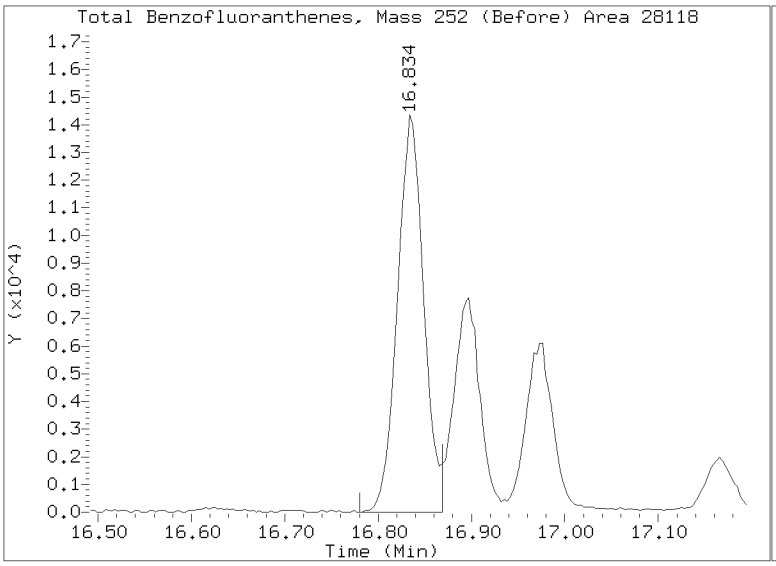


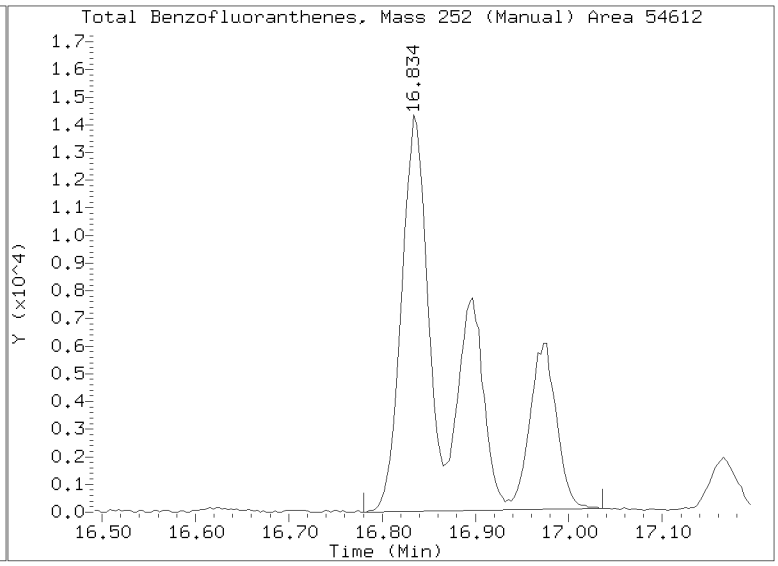




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230208.b/N823020806.D
Injection Date: 08-FEB-2023 14:00
Lab ID:23A0207-16 Client ID:
Report Date: 02/08/2023 21:38





Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1209

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

Polynuclear Aromatic Hydrocarbons

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-17 A	SDG:	23A0207
Sampled:	01/11/23 15:21	Prepared:	02/01/23 11:29	File ID:	N823020625.D
% Solids:	63.22	Preparation:	EPA 3546 (Microwave)	Analyzed:	02/06/23 23:34
Batch:	BLA0683	Sequence:	SLB0075	Initial/Final:	15.83 g Wet / 0.5 mL
Instrument:	NT8	Column:	RXI-17Sil ms	Calibration:	GA00050
Cleanups:	GPC, Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
56-55-3	Benzo(a)anthracene	3	1210	D	2.47	15.0
218-01-9	Chrysene	3	1280	D	3.16	15.0
205-99-2	Benzo(b)fluoranthene	3	709	D	4.11	15.0
207-08-9	Benzo(k)fluoranthene	3	359	D	2.28	15.0
50-32-8	Benzo(a)pyrene	3	585	D	1.84	15.0
193-39-5	Indeno(1,2,3-cd)pyrene	3	210	D	3.15	15.0
53-70-3	Dibenzo(a,h)anthracene	3	69.8	D	2.67	15.0

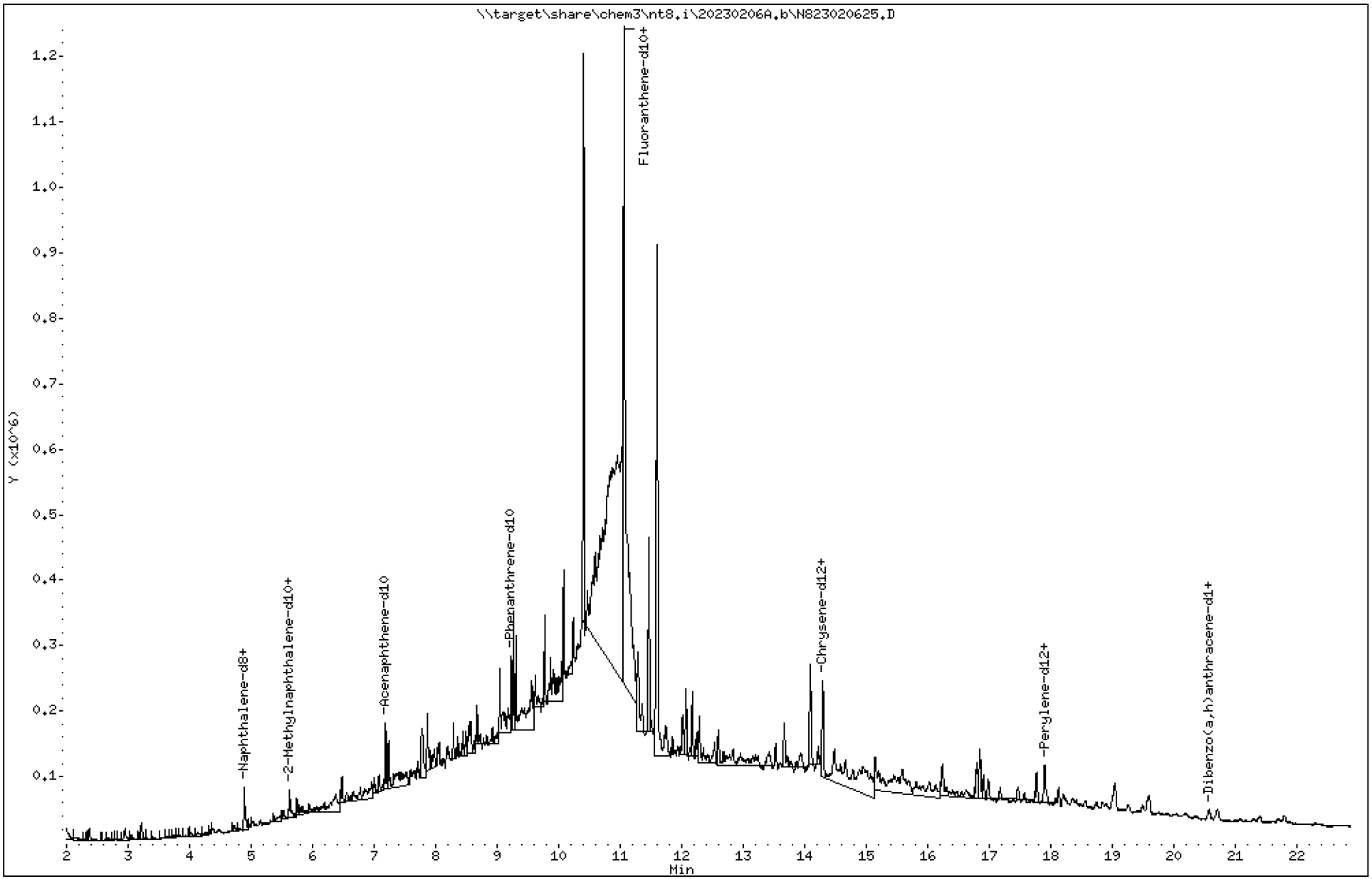
SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	149.88	149	99.3	32 - 120	
Dibenzo[a,h]anthracene-d14	149.88	190	127	21 - 133	
Fluoranthene-d10	149.88	217	145	36 - 134	*

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020625.D
Date : 06-FEB-2023 23:34
Client ID:
Sample Info: 23A0207-17,3

Instrument: nt8.i

Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



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Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

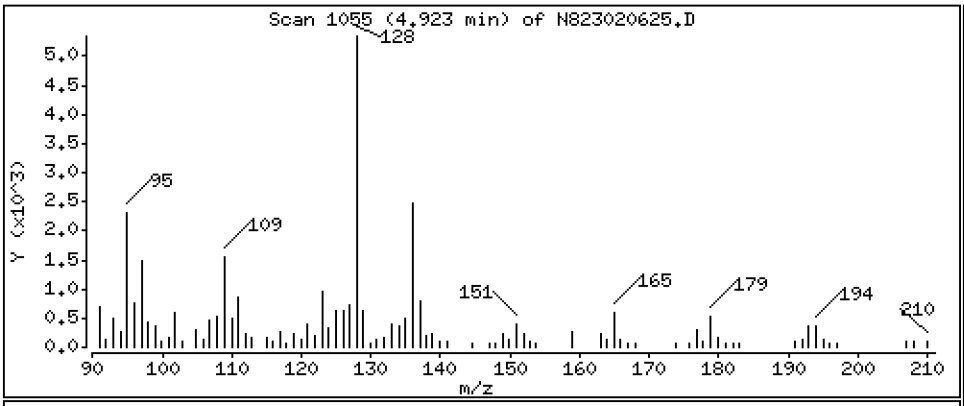
Operator: JZ

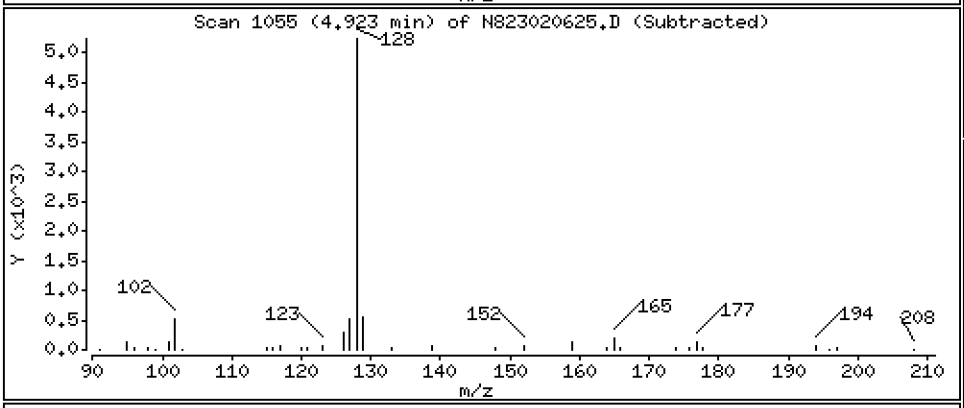
Column phase: Rxi-17sil

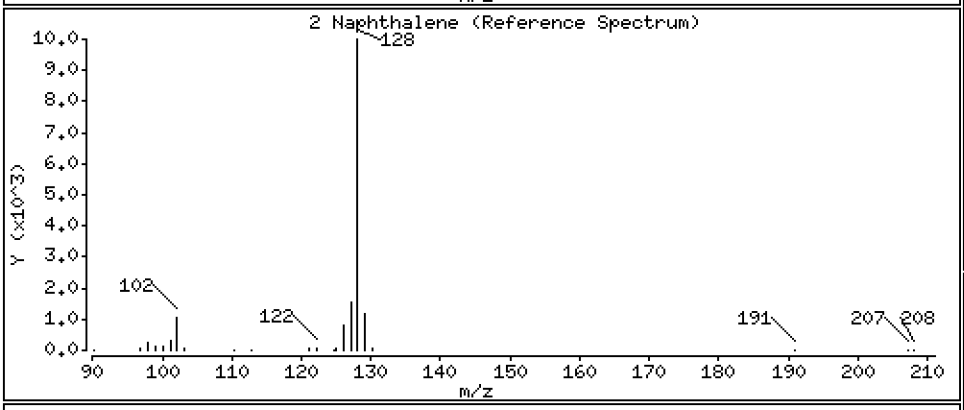
Column diameter: 0.25

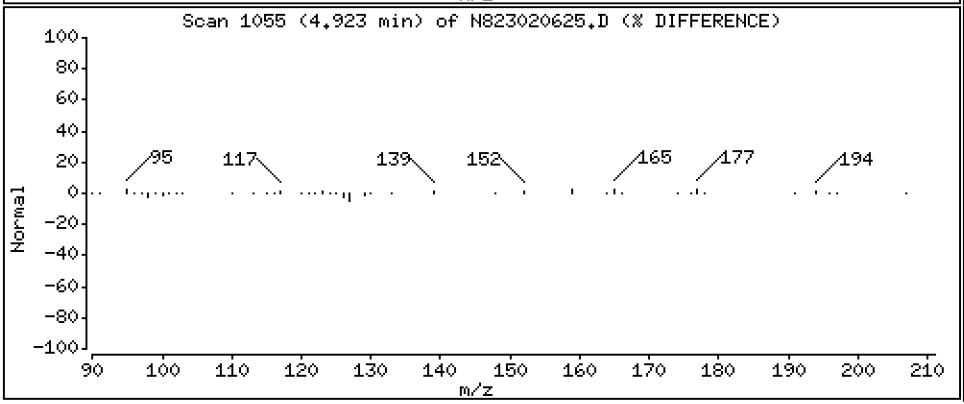
2 Naphthalene

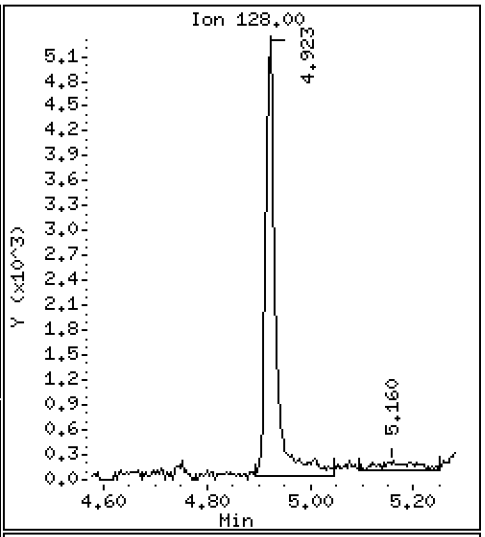
Concentration: 0.8864 ug/mL

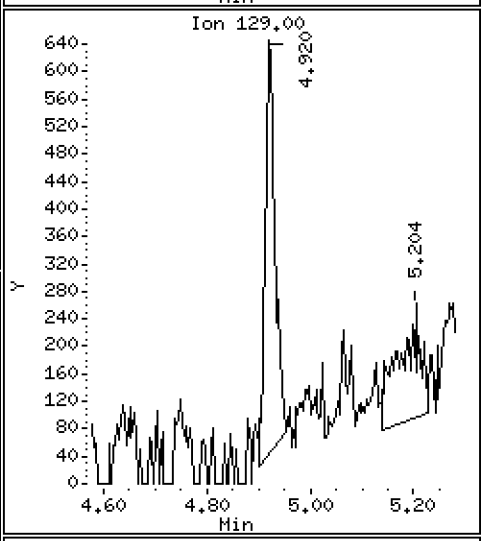


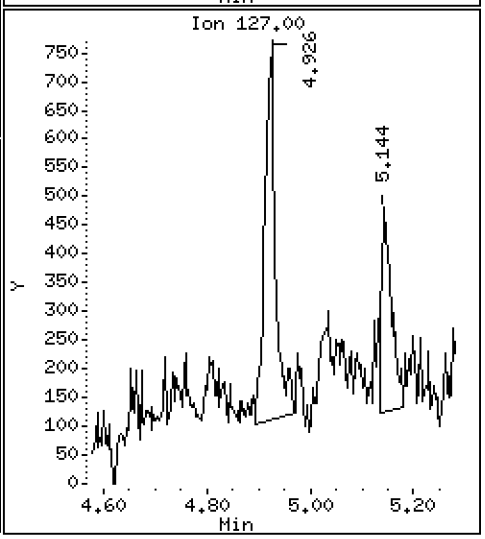












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Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

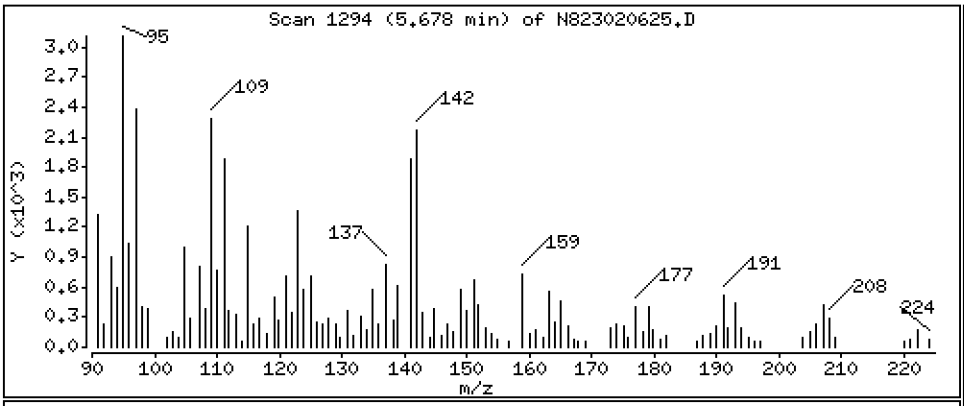
Operator: JZ

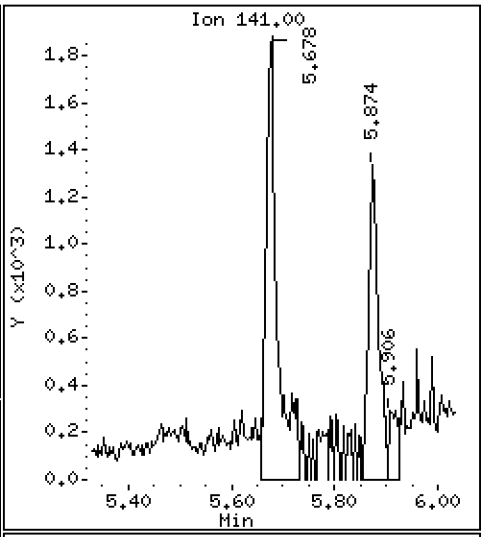
Column phase: Rxi-17sil

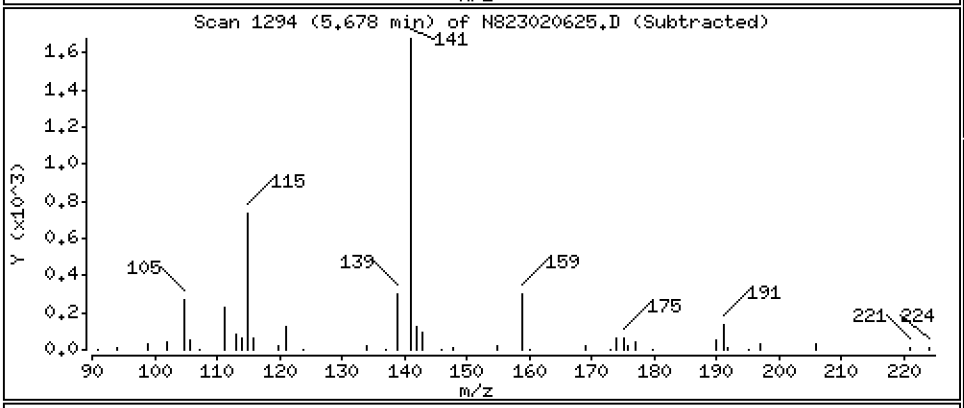
Column diameter: 0.25

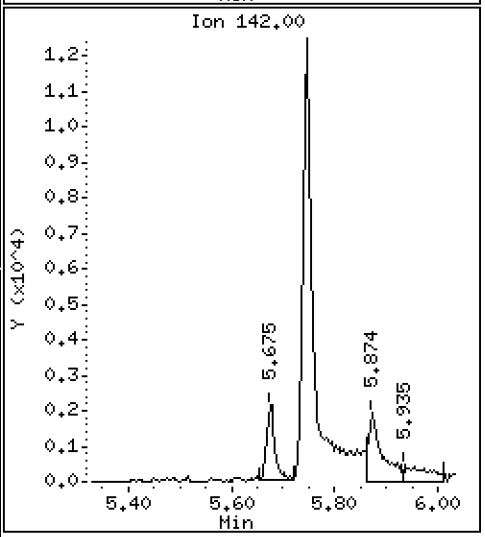
4 2-Methylnaphthalene

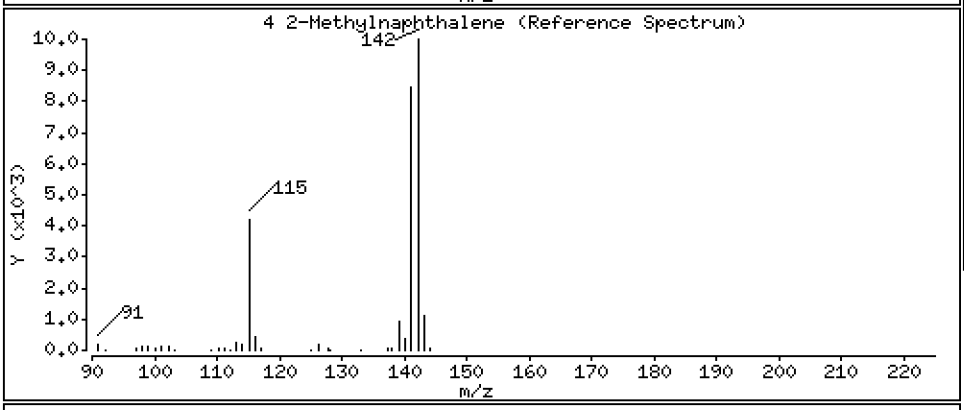
Concentration: 0.6536 ug/mL

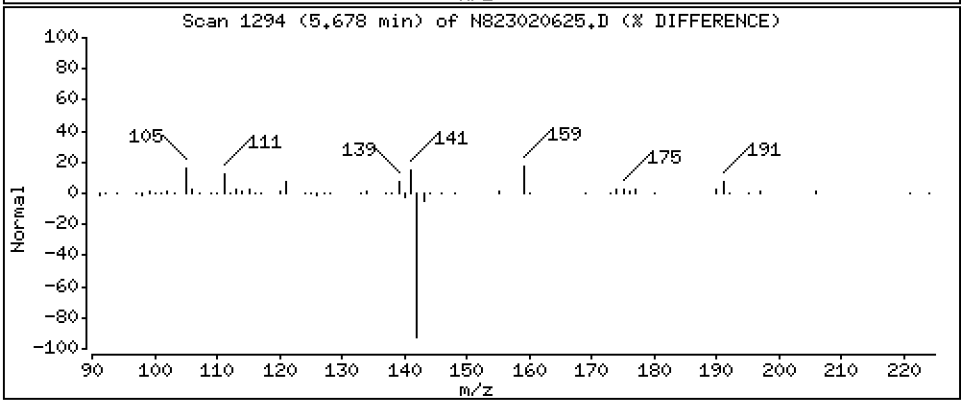












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Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

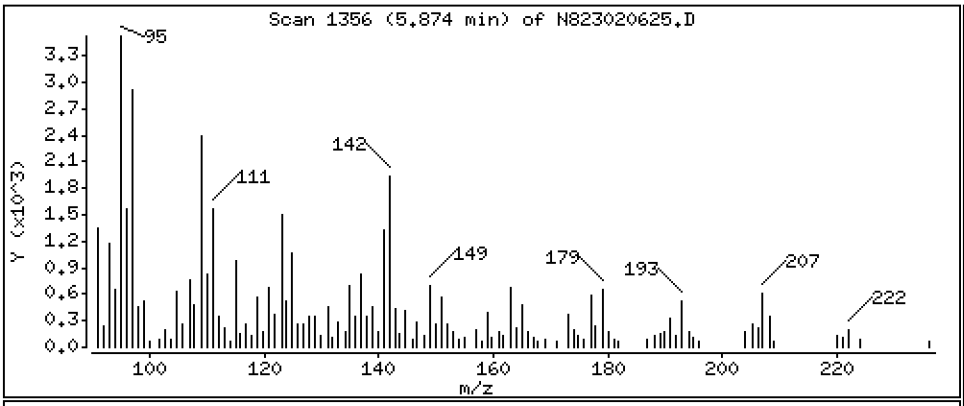
Operator: JZ

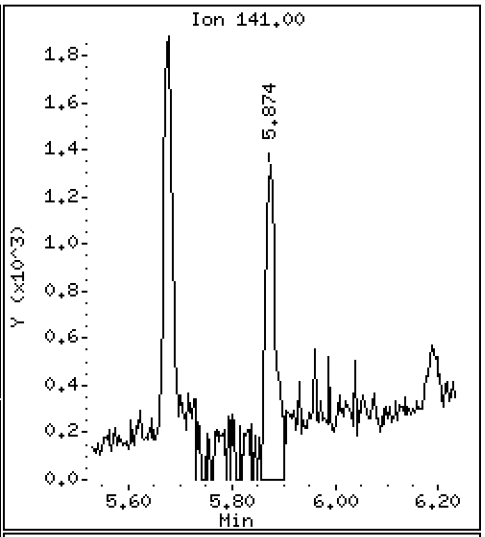
Column phase: Rxi-17sil

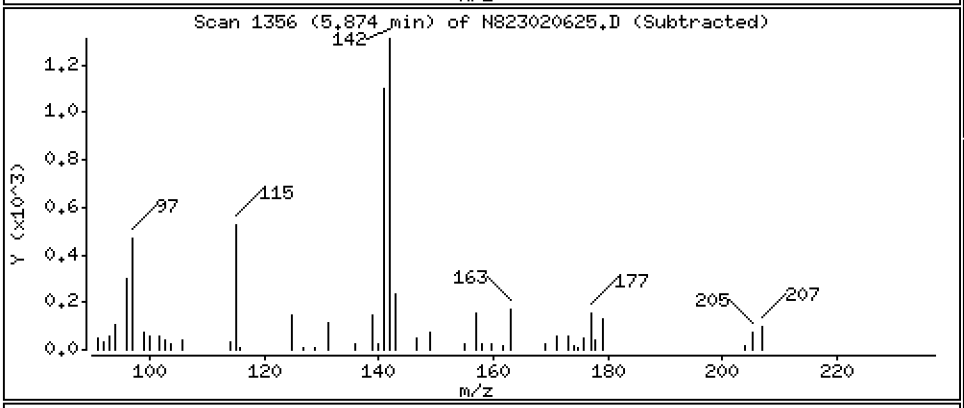
Column diameter: 0.25

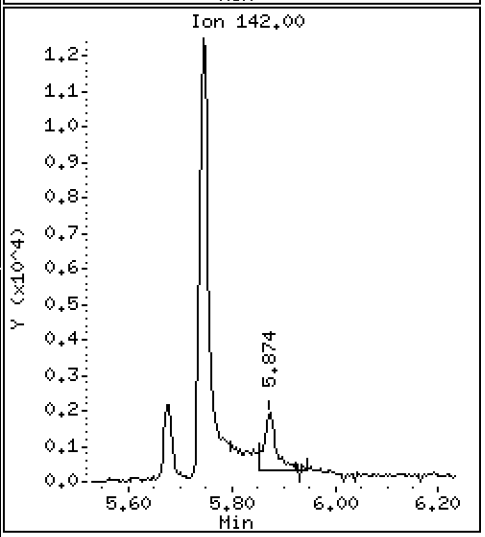
5 1-methylnaphthalene

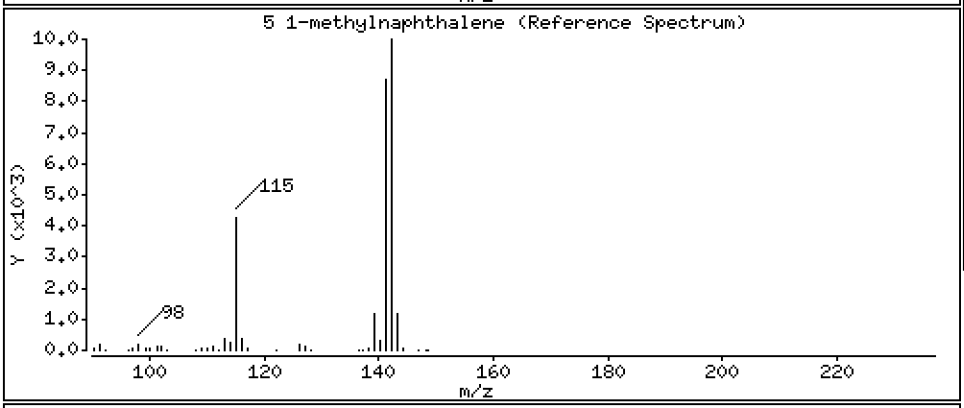
Concentration: 0.4010 ug/mL

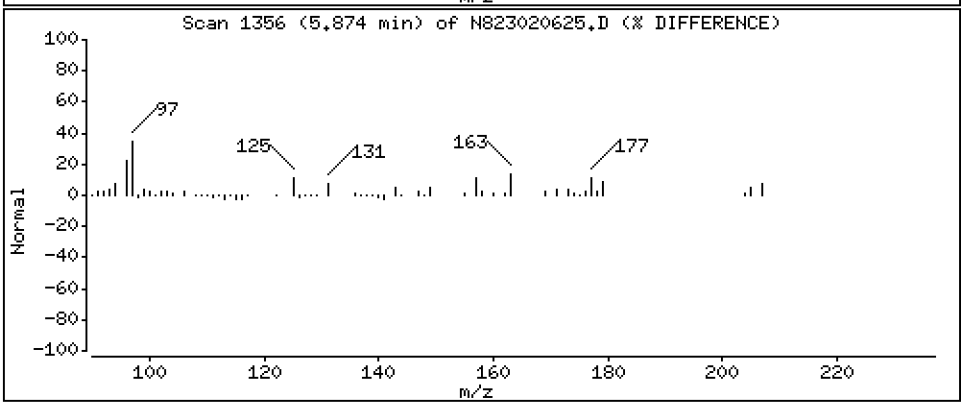












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Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

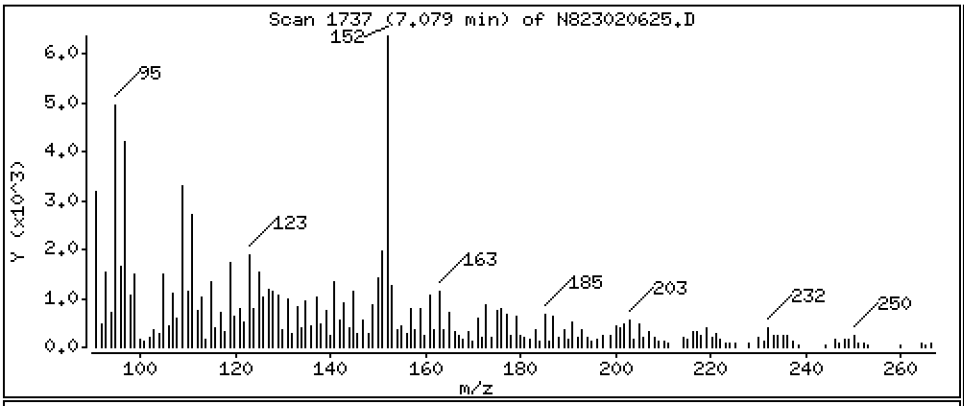
Operator: JZ

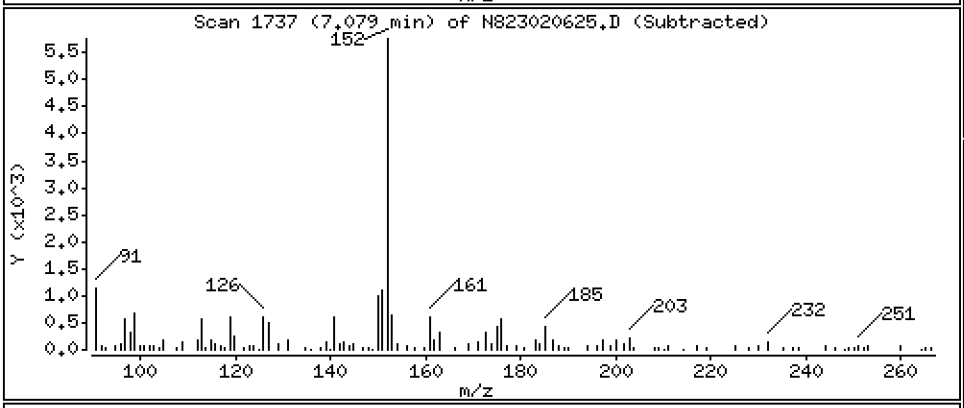
Column phase: Rxi-17sil

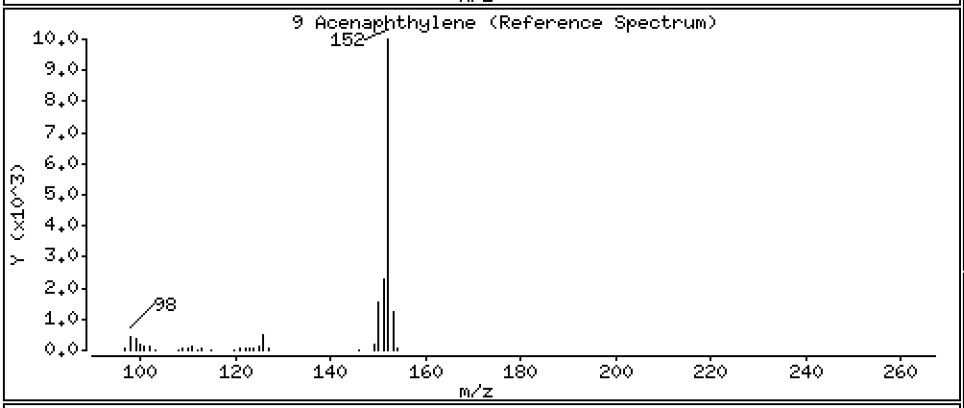
Column diameter: 0.25

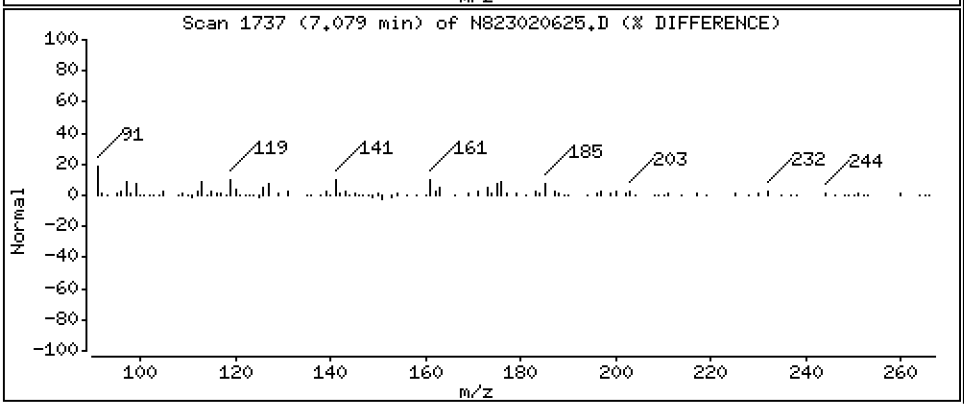
9 Acenaphthylene

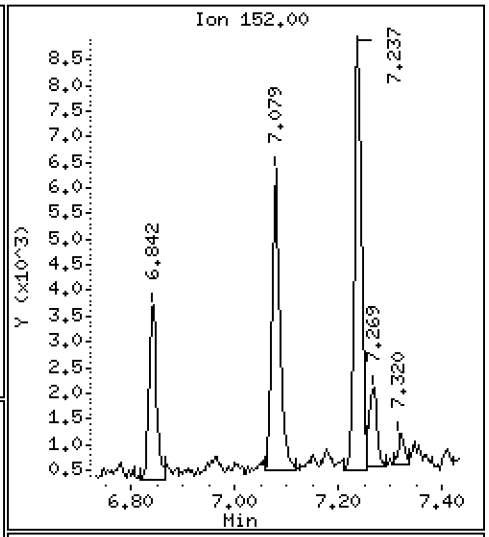
Concentration: 0.8958 ug/mL

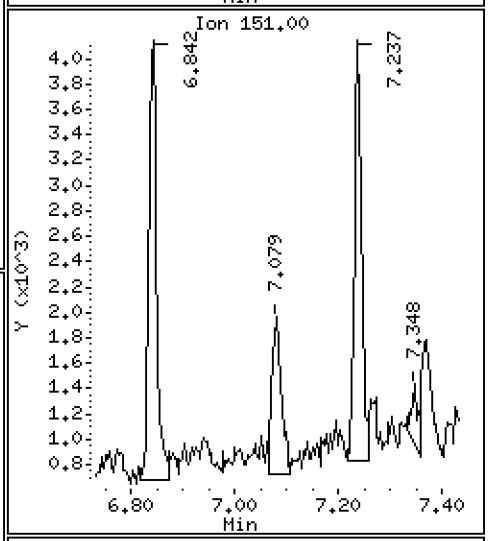


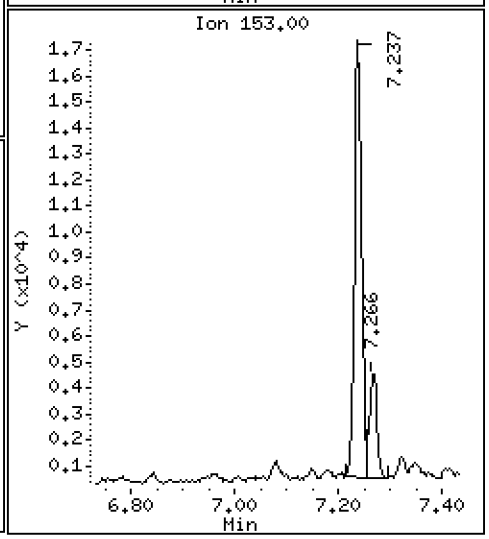












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Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

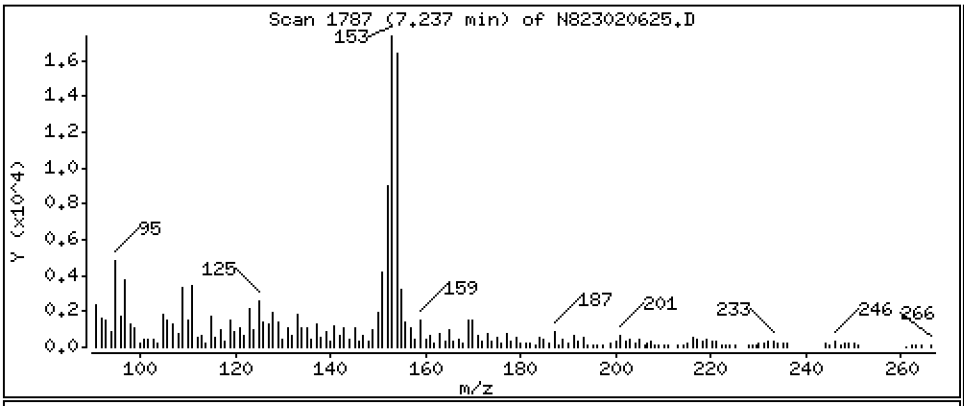
Operator: JZ

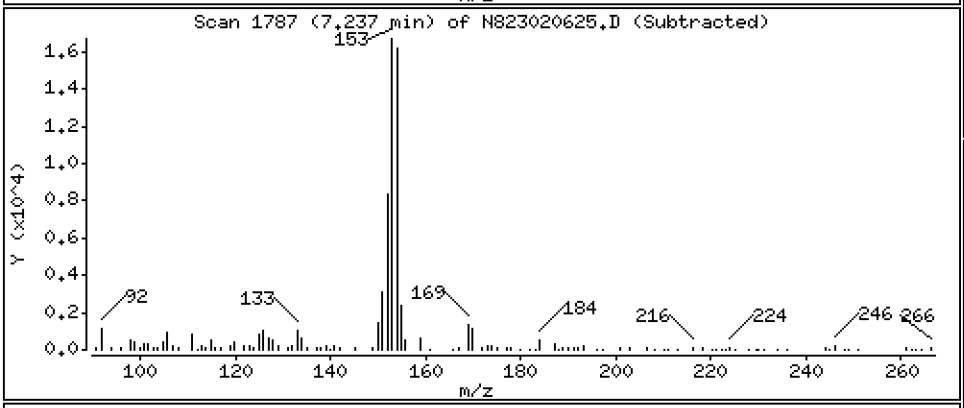
Column phase: Rxi-17sil

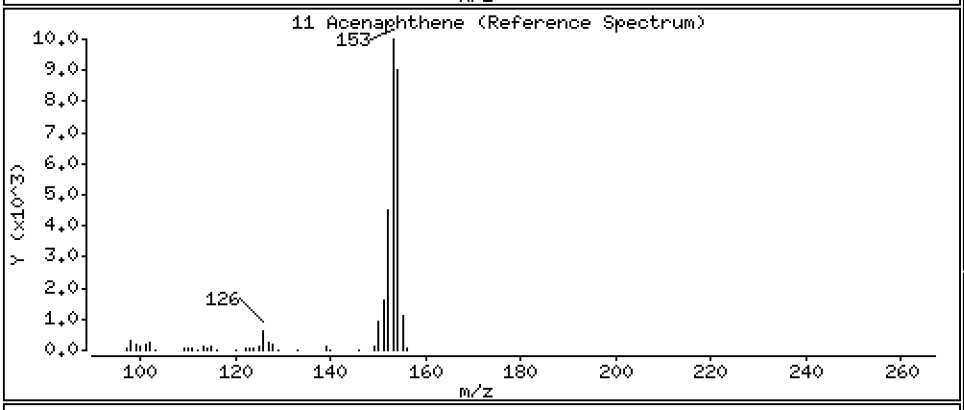
Column diameter: 0.25

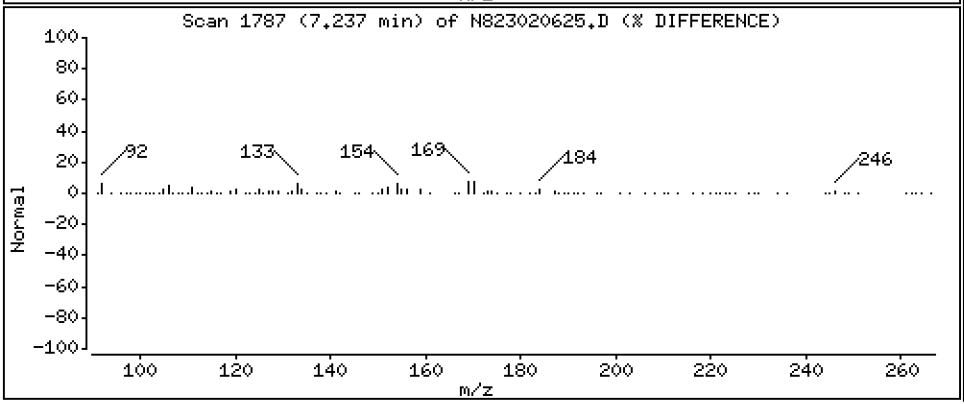
11 Acenaphthene

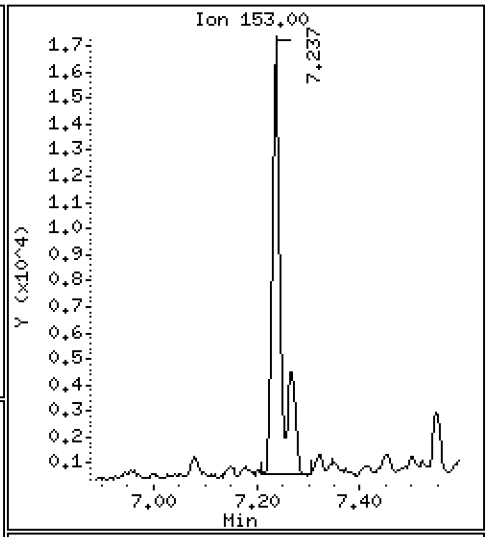
Concentration: 4.249 ug/mL

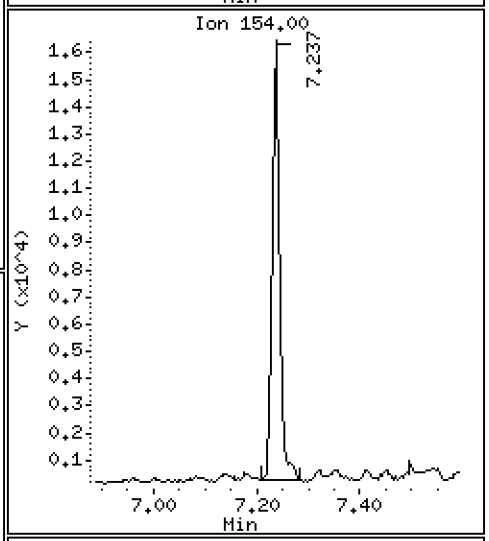


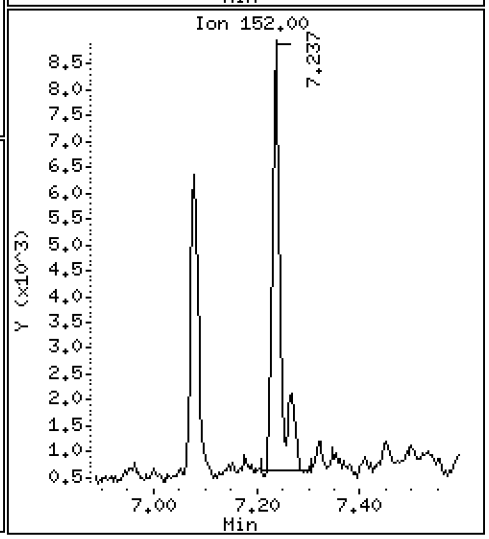












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Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

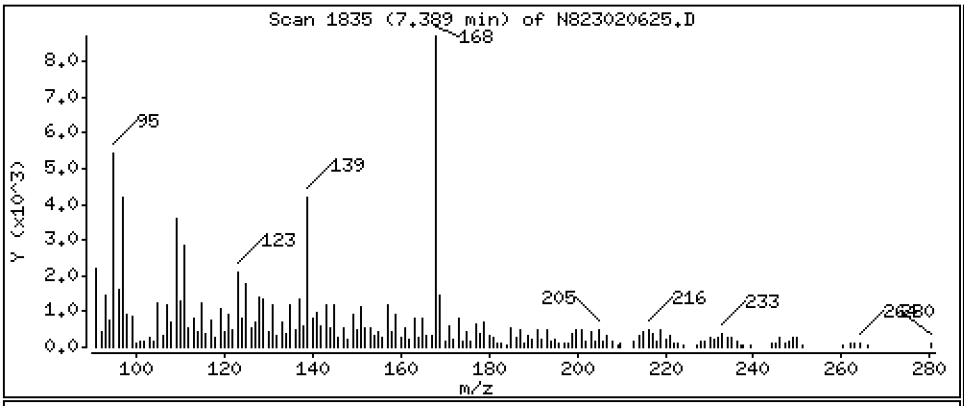
Operator: JZ

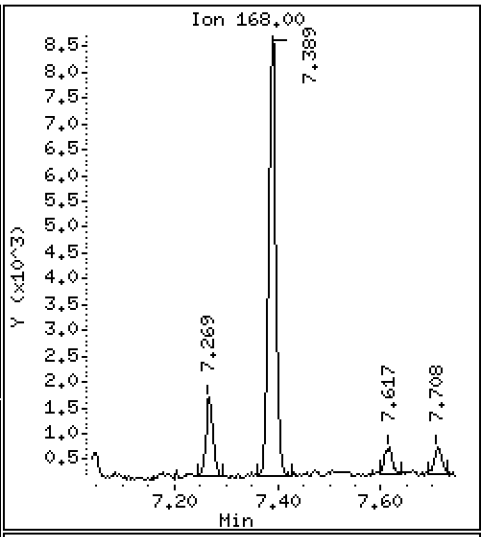
Column phase: Rxi-17sil

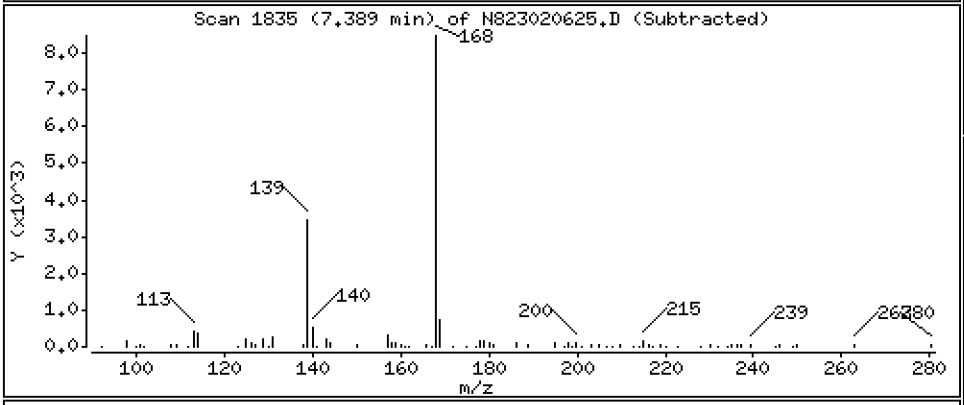
Column diameter: 0.25

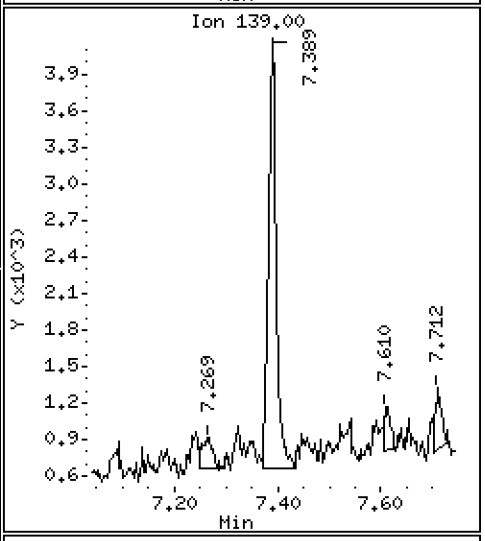
12 Dibenzofuran

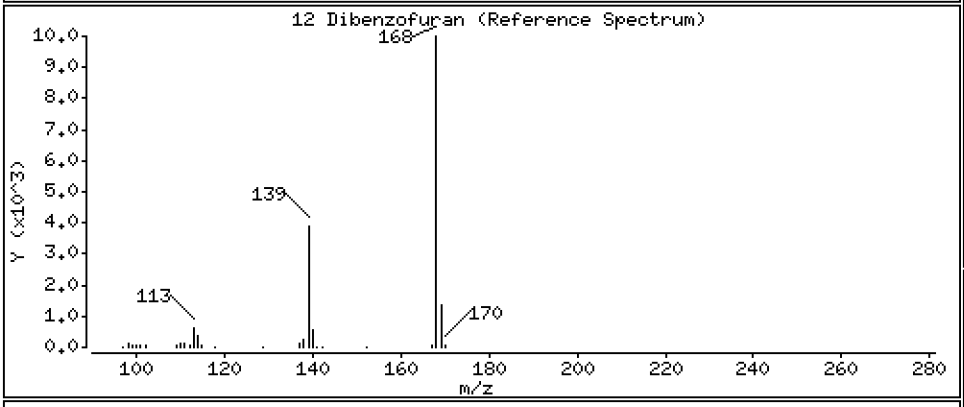
Concentration: 1.160 ug/mL

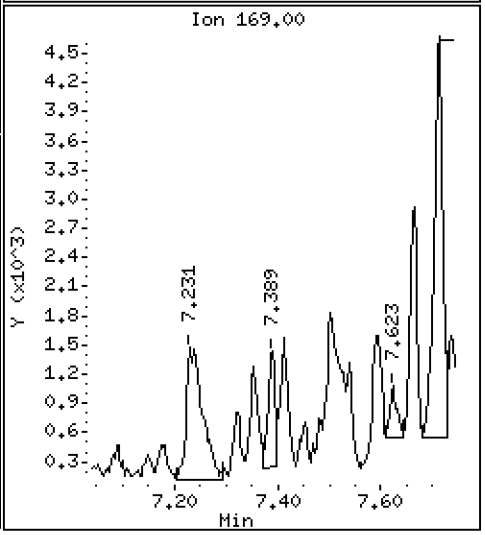


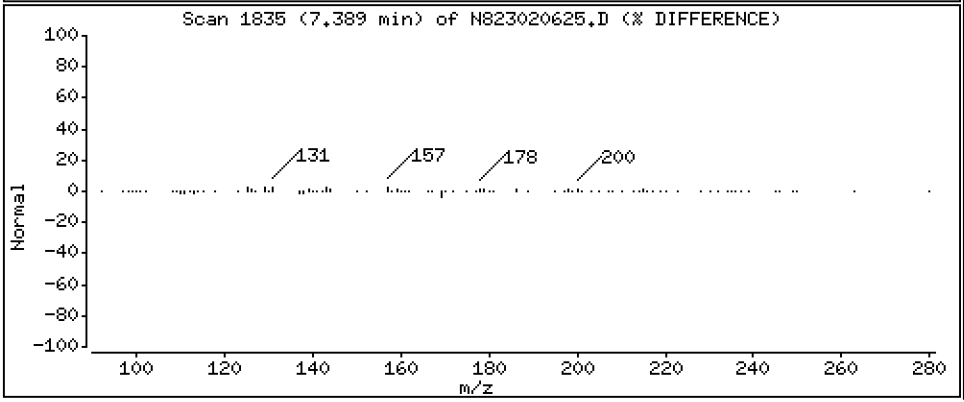












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Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

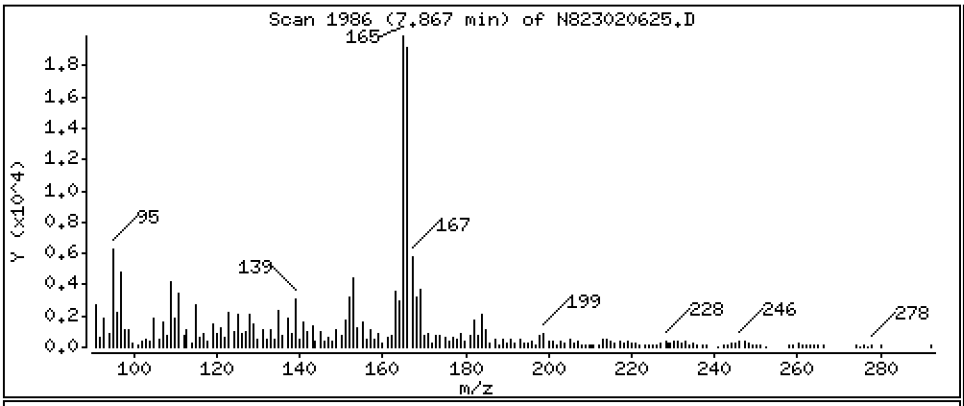
Operator: JZ

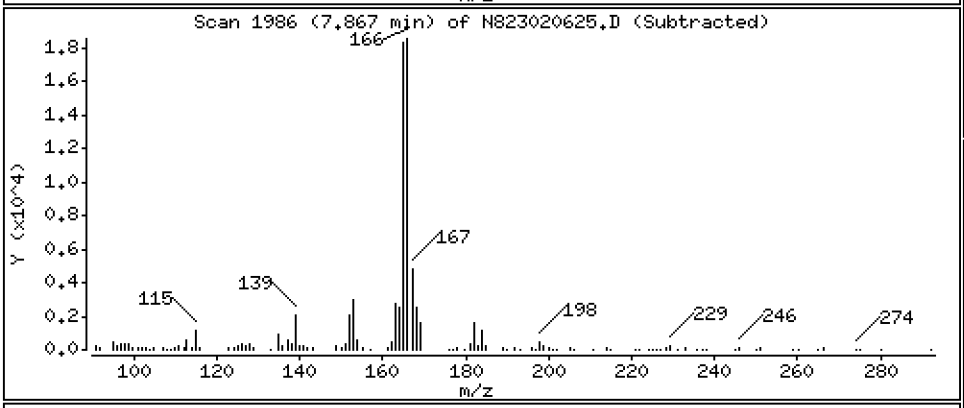
Column phase: Rxi-17sil

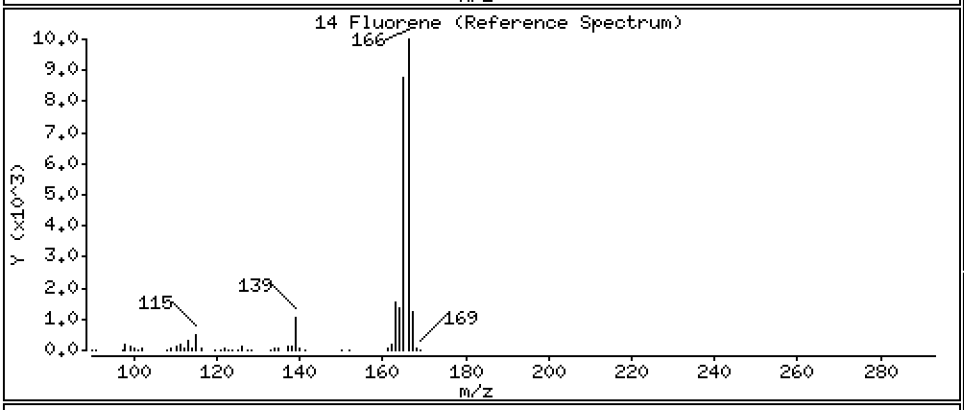
Column diameter: 0.25

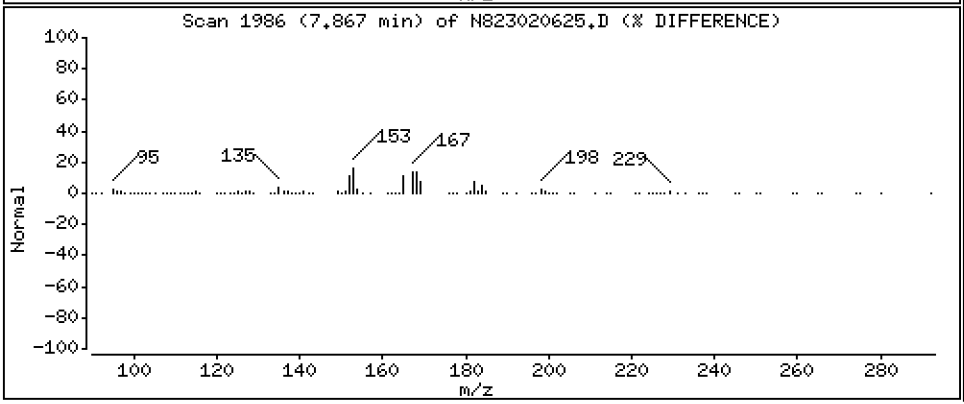
14 Fluorene

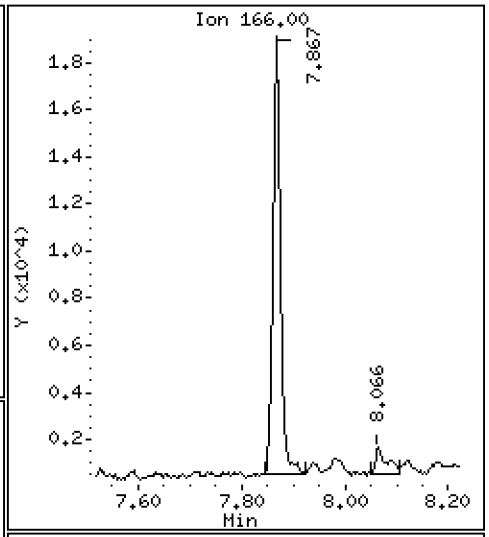
Concentration: 3.479 ug/mL

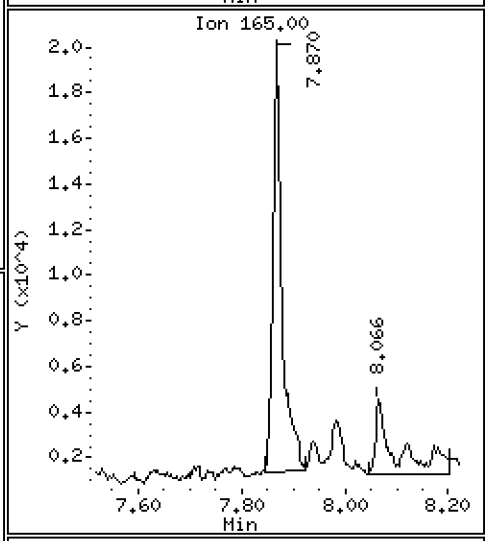


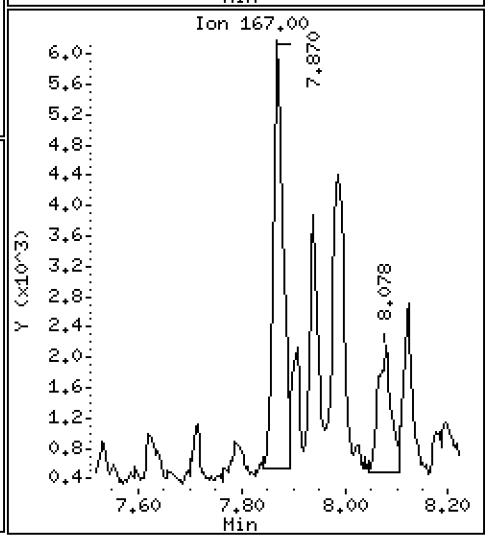












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020625.D

Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

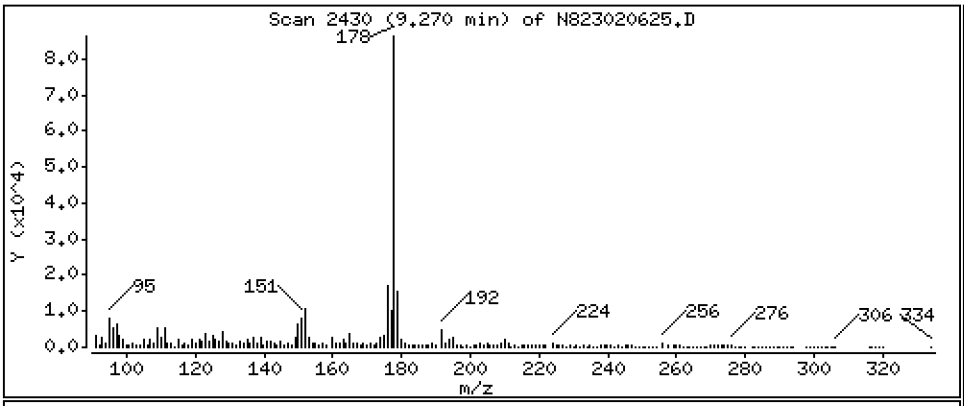
Operator: JZ

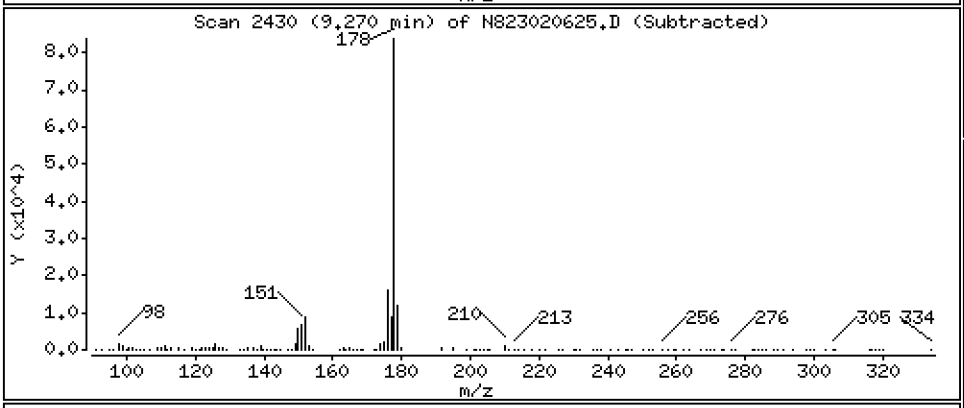
Column phase: Rxi-17sil

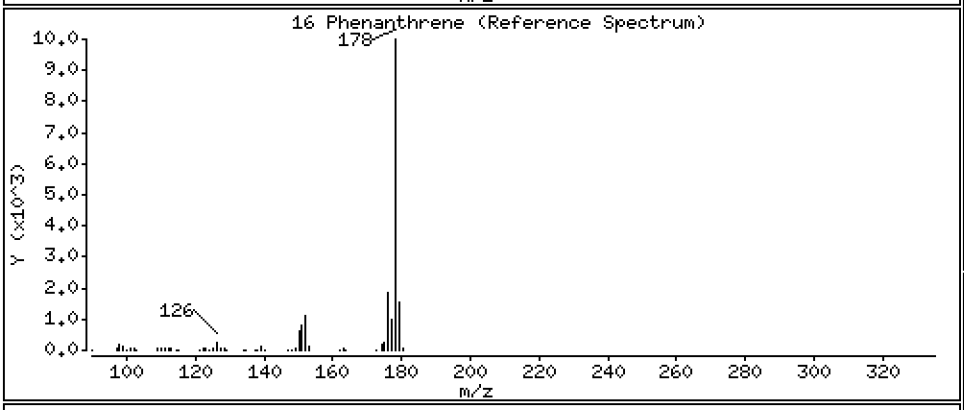
Column diameter: 0.25

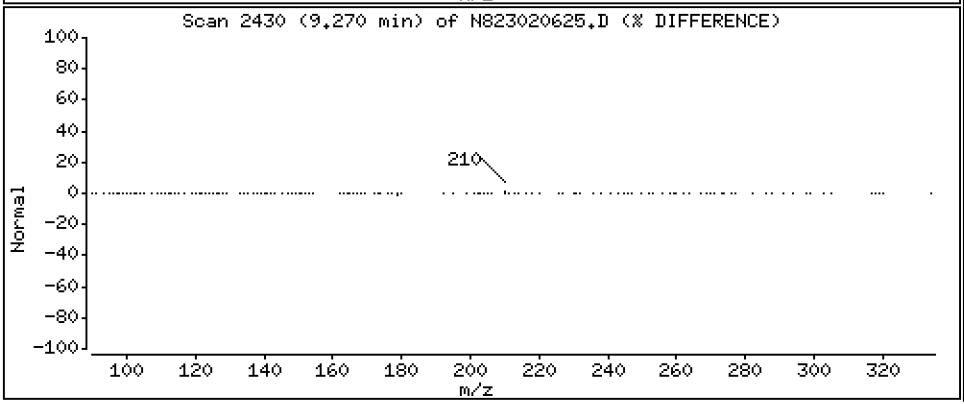
16 Phenanthrene

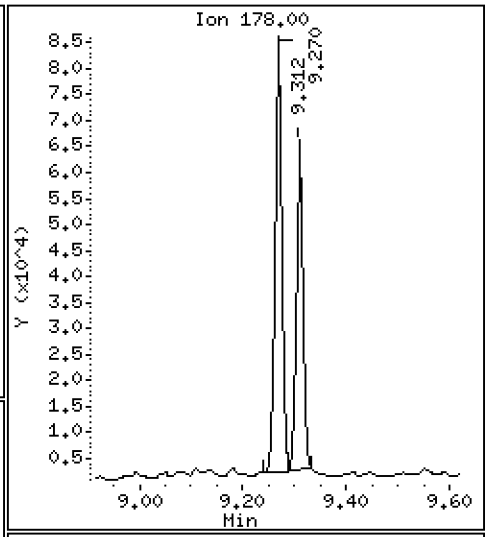
Concentration: 11.09 ug/mL

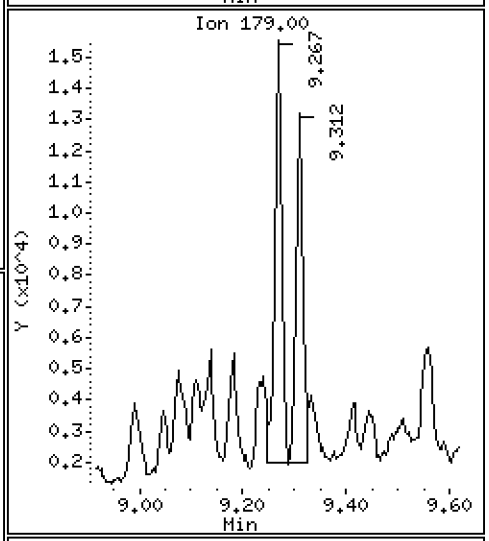


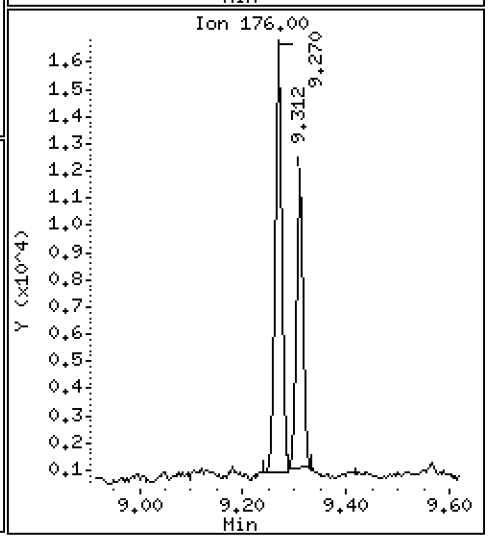












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Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

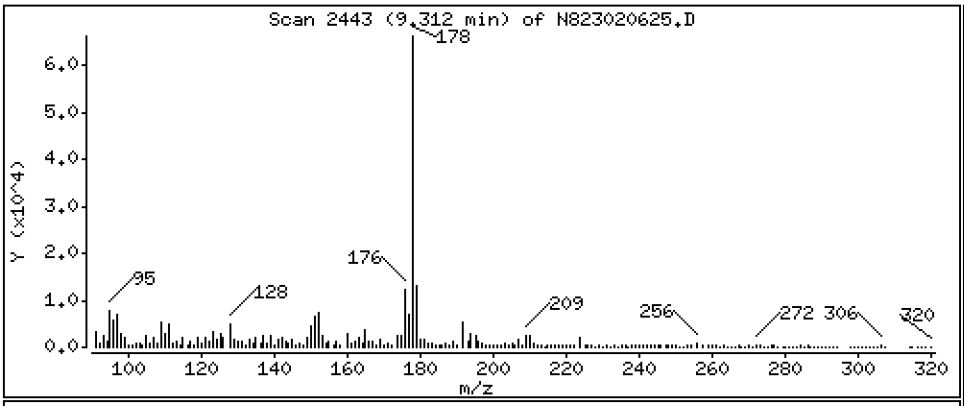
Operator: JZ

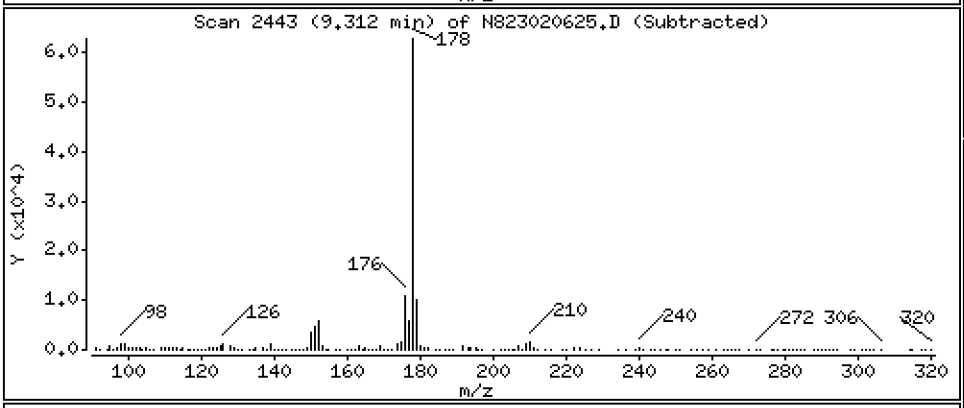
Column phase: Rxi-17sil

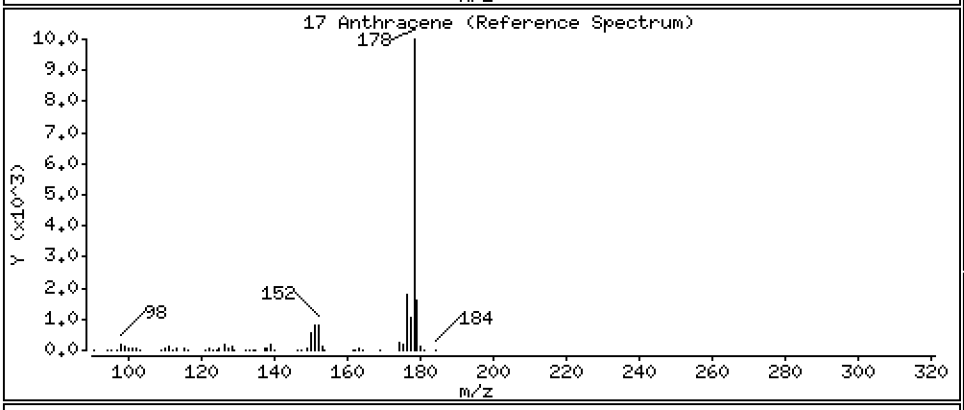
Column diameter: 0.25

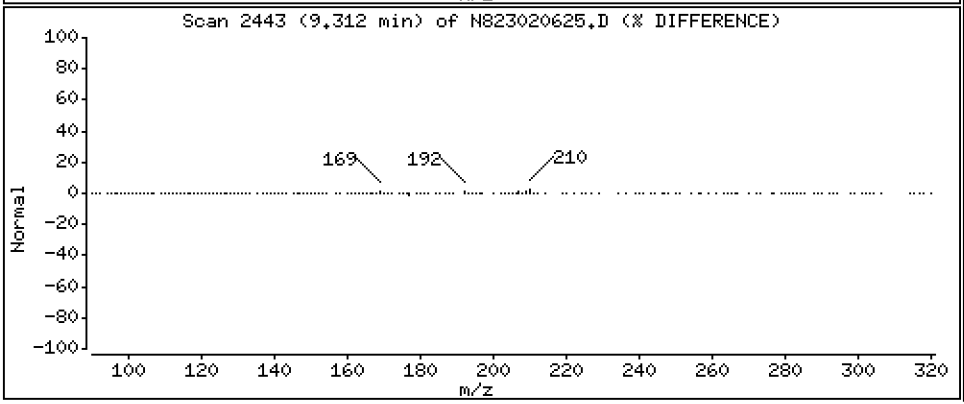
17 Anthracene

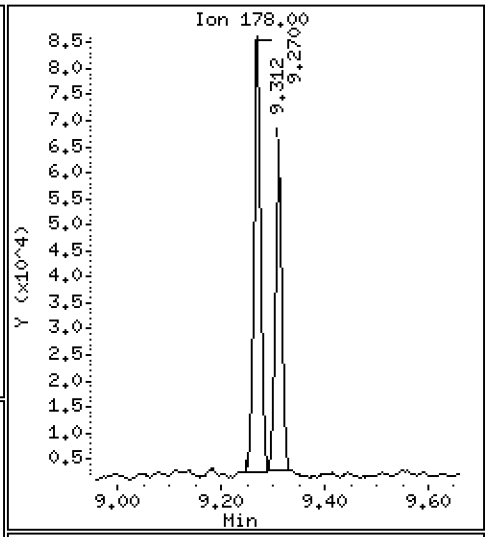
Concentration: 8.979 ug/mL

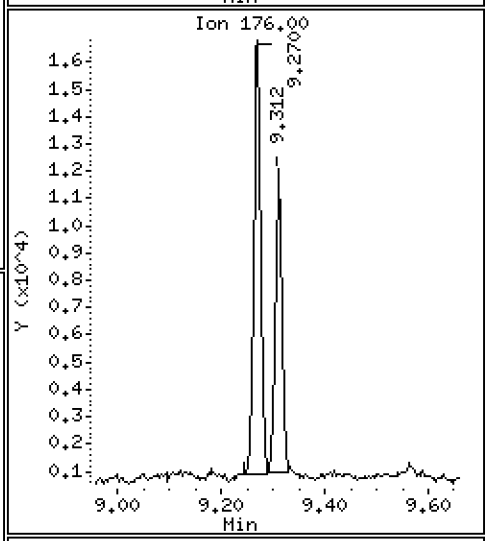


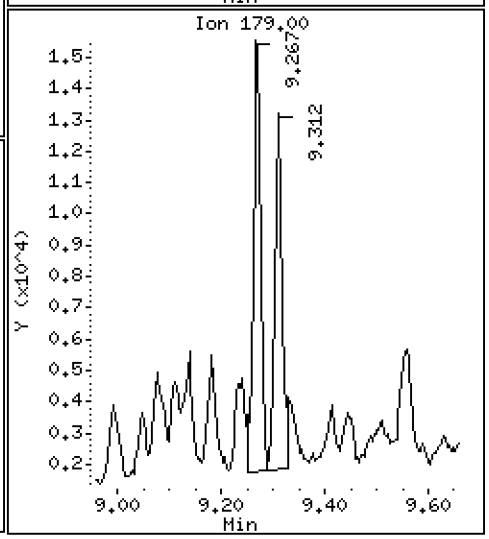












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Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

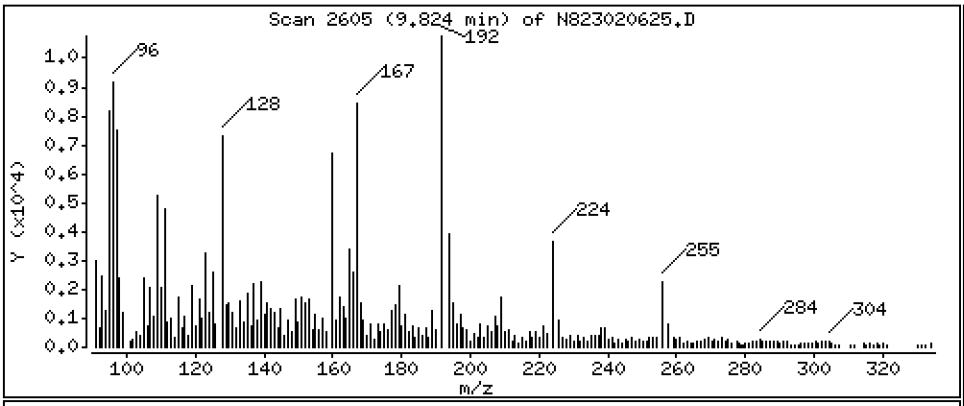
Operator: JZ

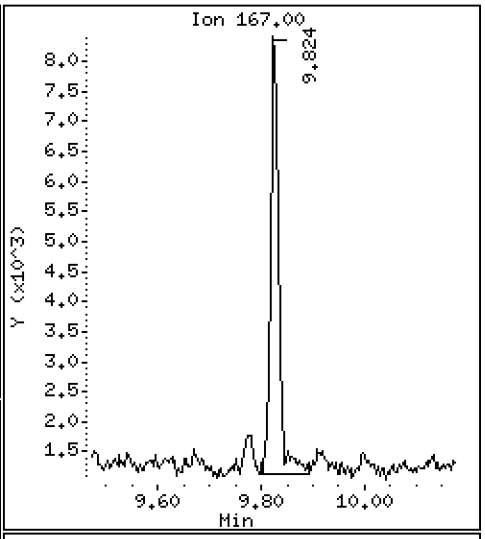
Column phase: Rxi-17sil

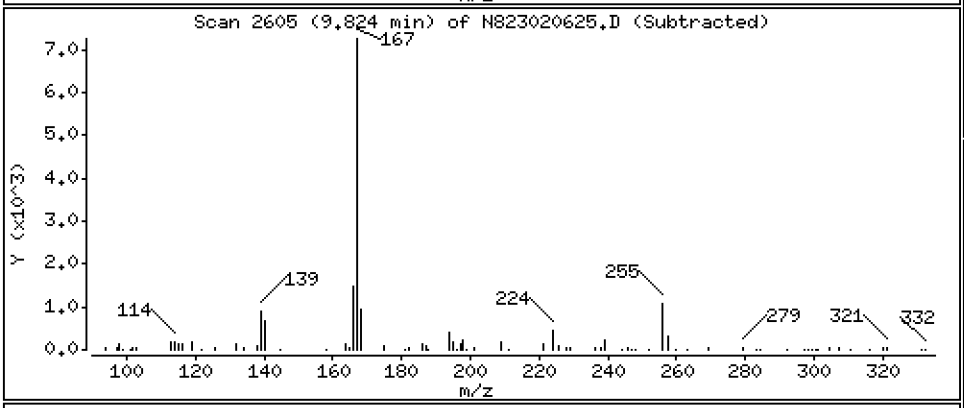
Column diameter: 0.25

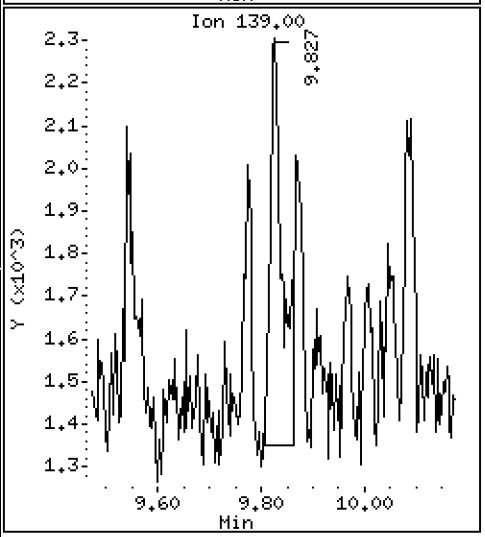
19 Carbazole

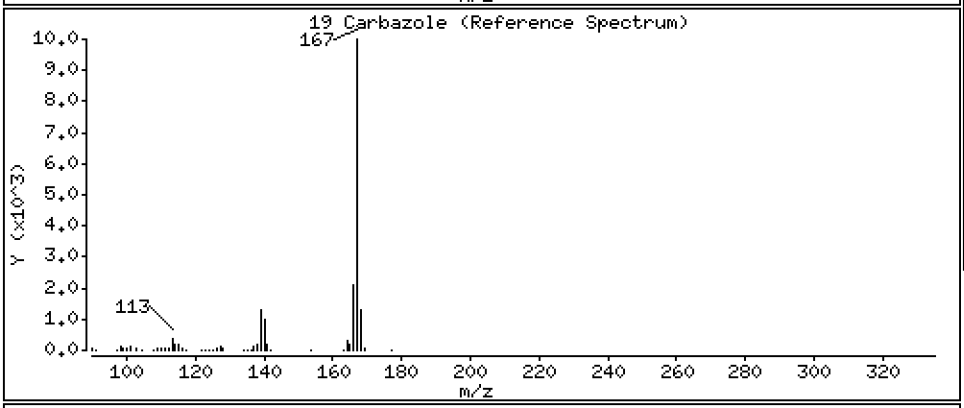
Concentration: 1.396 ug/mL

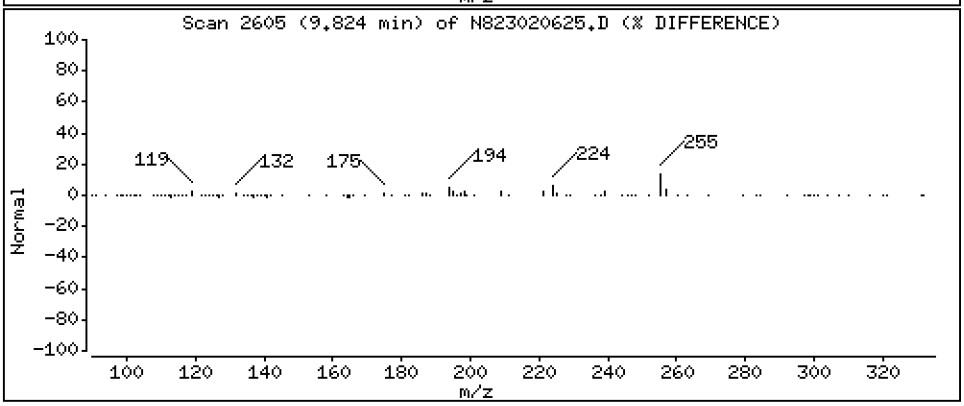












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Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

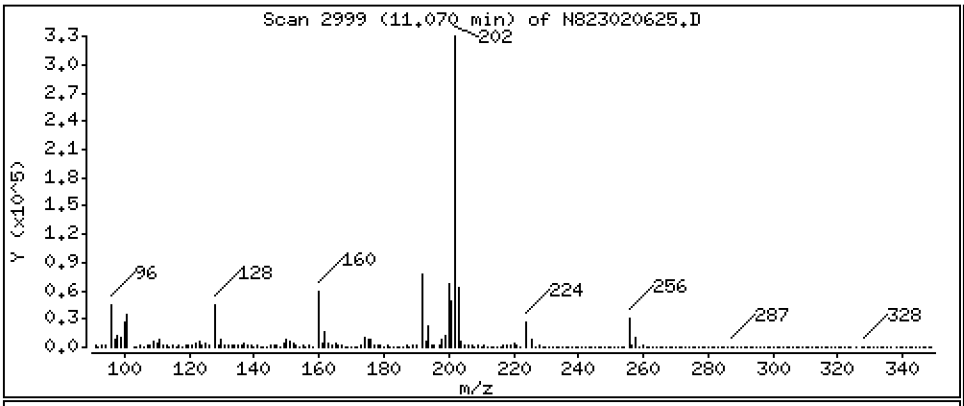
Operator: JZ

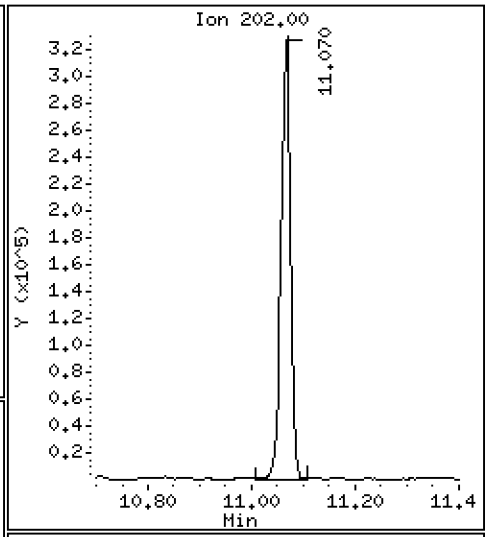
Column phase: Rxi-17sil

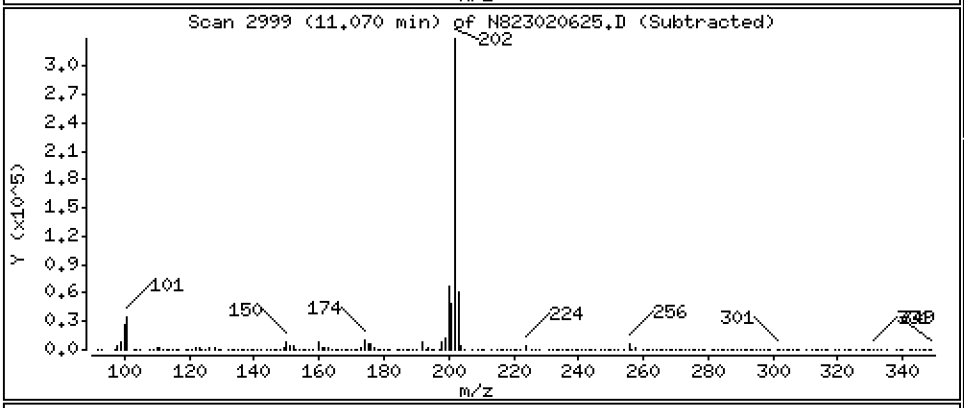
Column diameter: 0.25

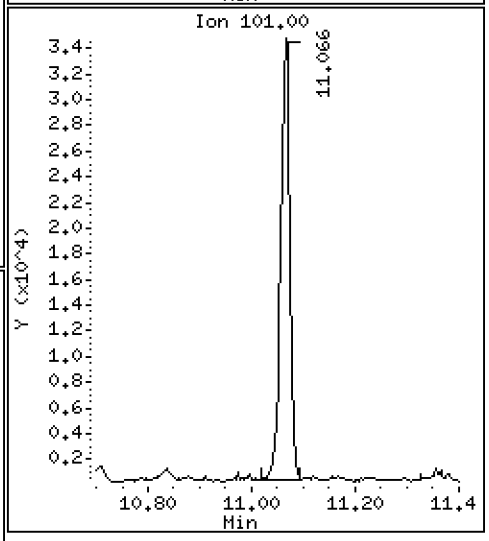
22 Fluoranthene

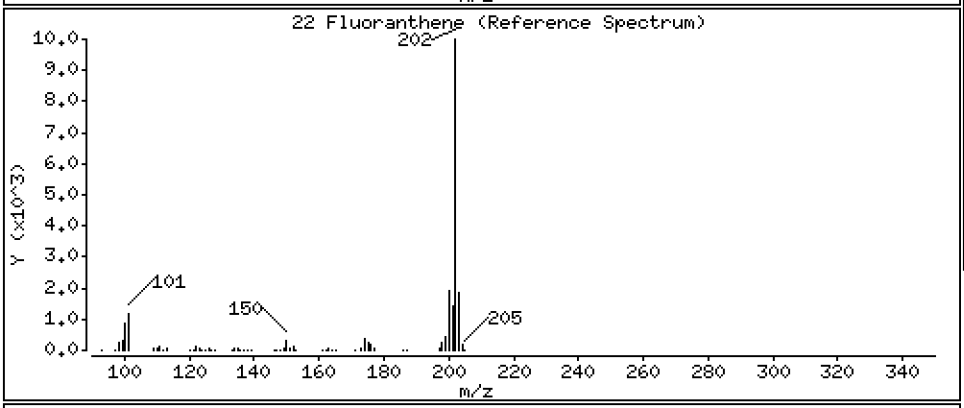
Concentration: 55.75 ug/mL

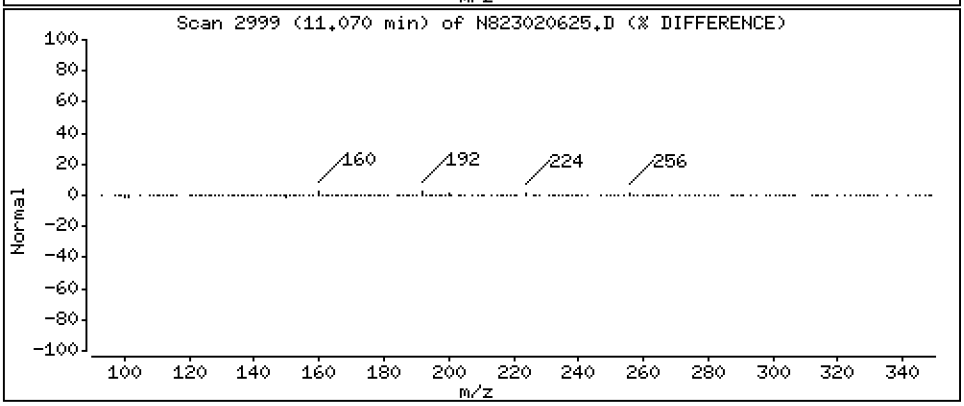












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Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

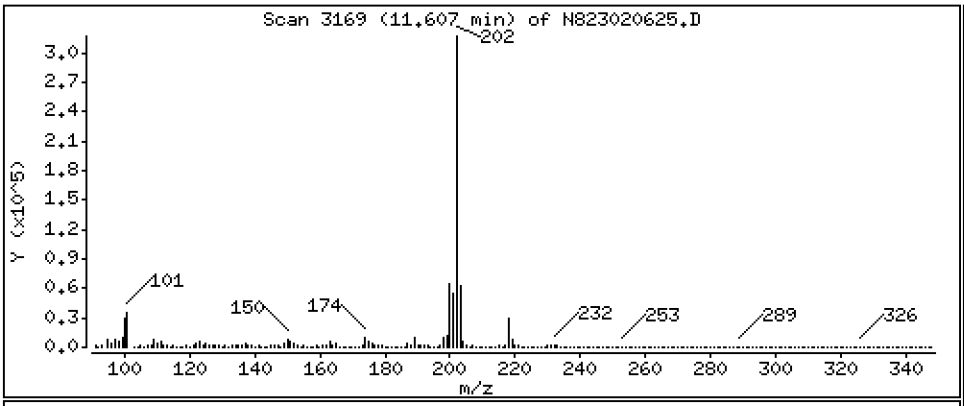
Operator: JZ

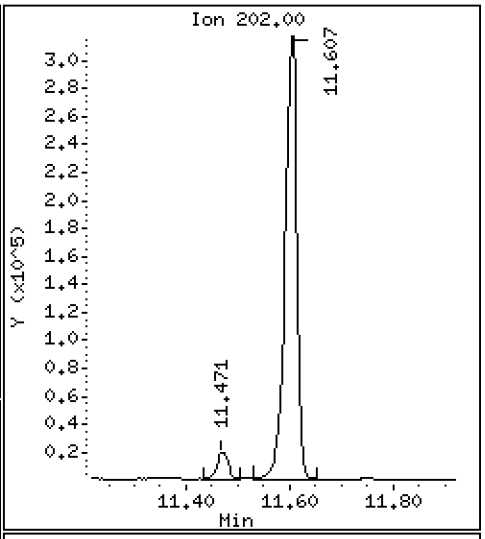
Column phase: Rxi-17sil

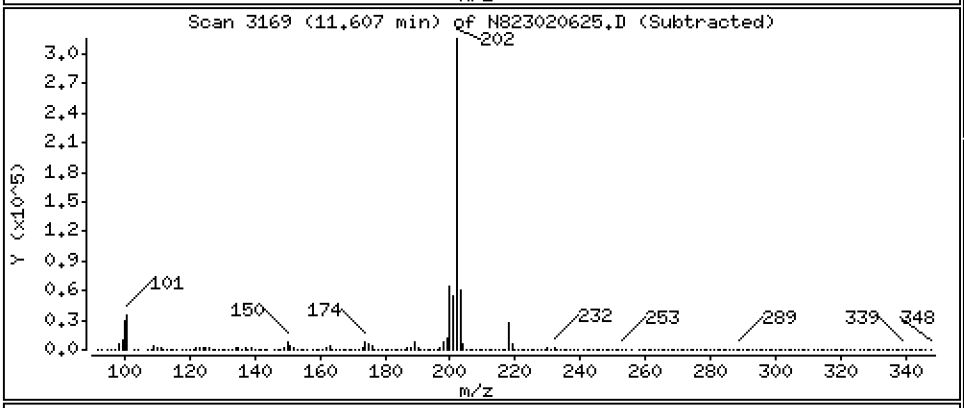
Column diameter: 0.25

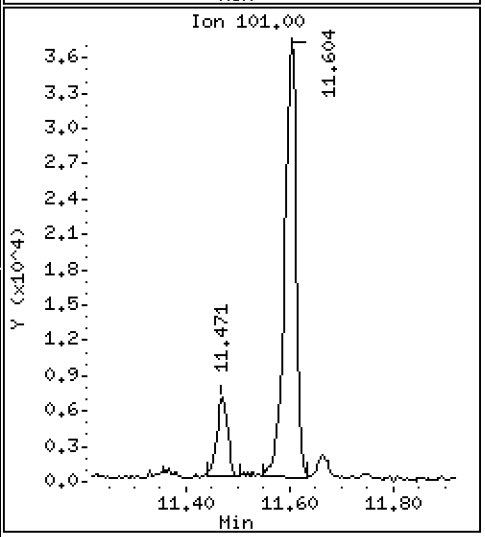
23 Pyrene

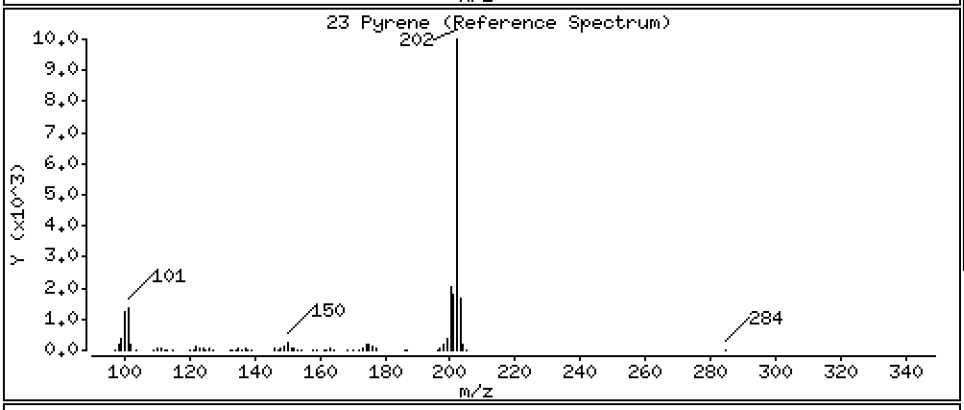
Concentration: 117.9 ug/mL

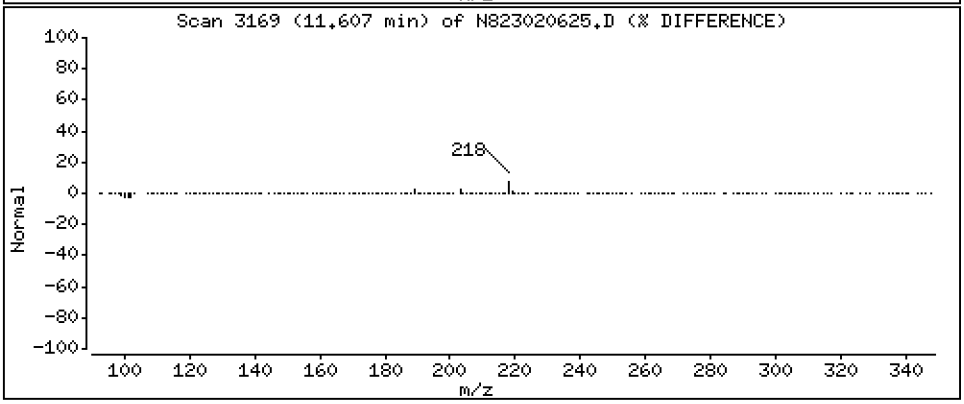












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020625.D

Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

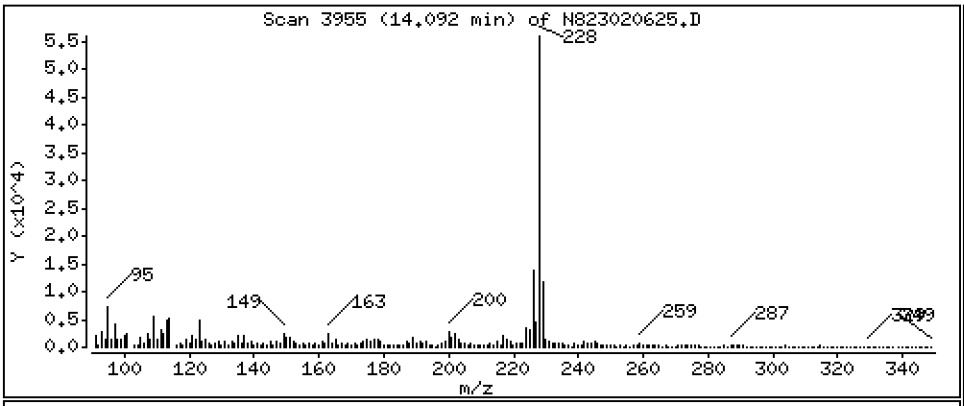
Operator: JZ

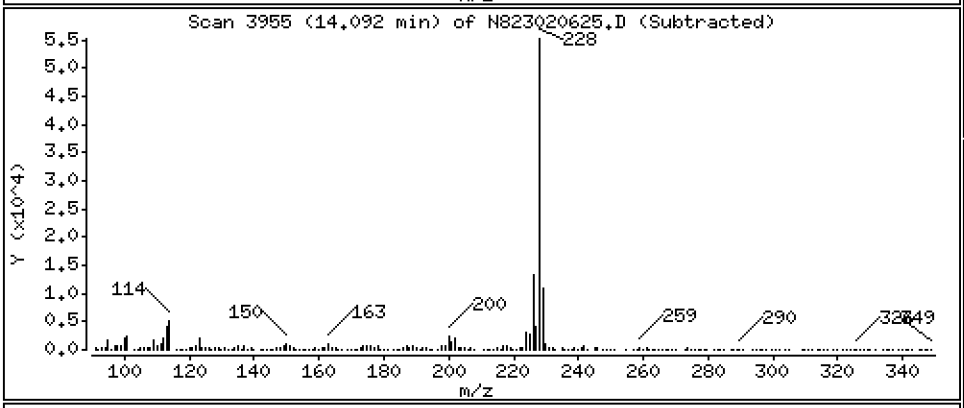
Column phase: Rxi-17sil

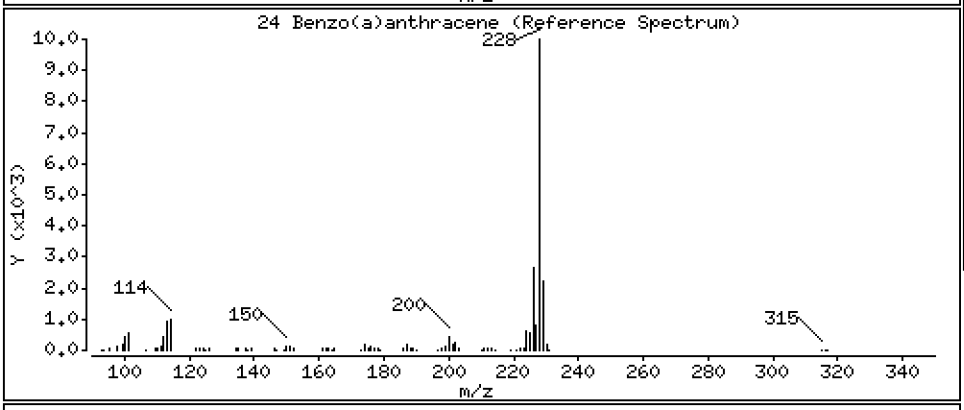
Column diameter: 0.25

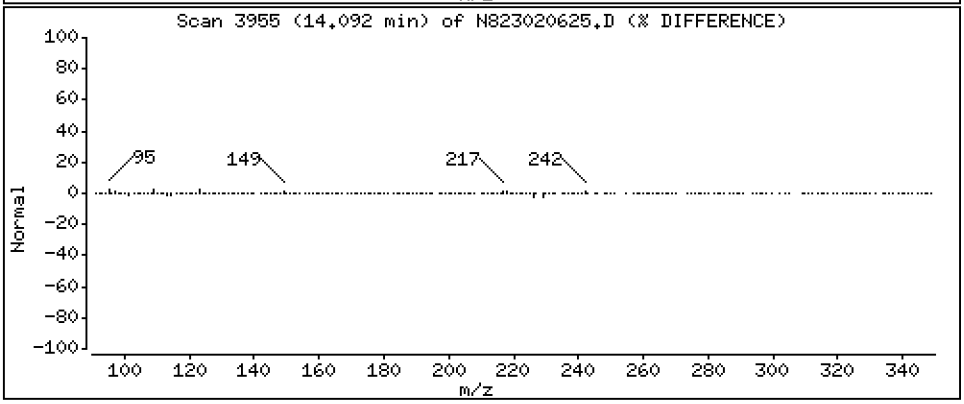
24 Benzo(a)anthracene

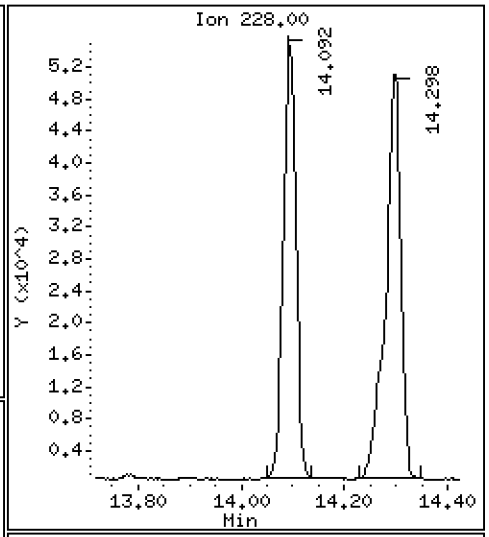
Concentration: 24.26 ug/mL

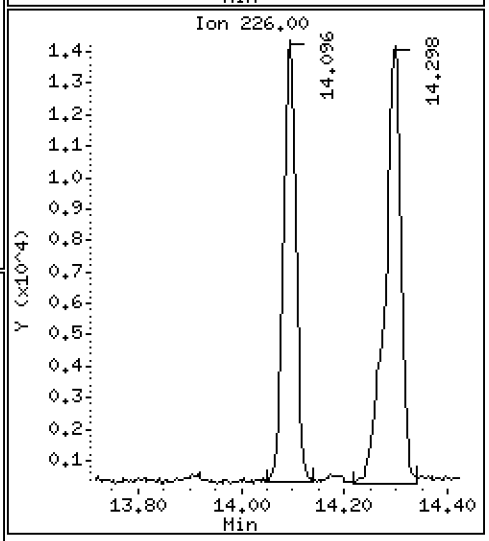












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Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

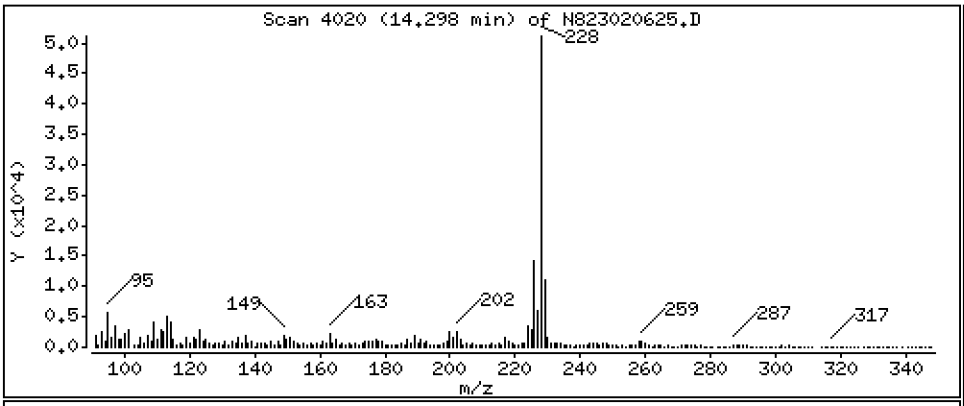
Operator: JZ

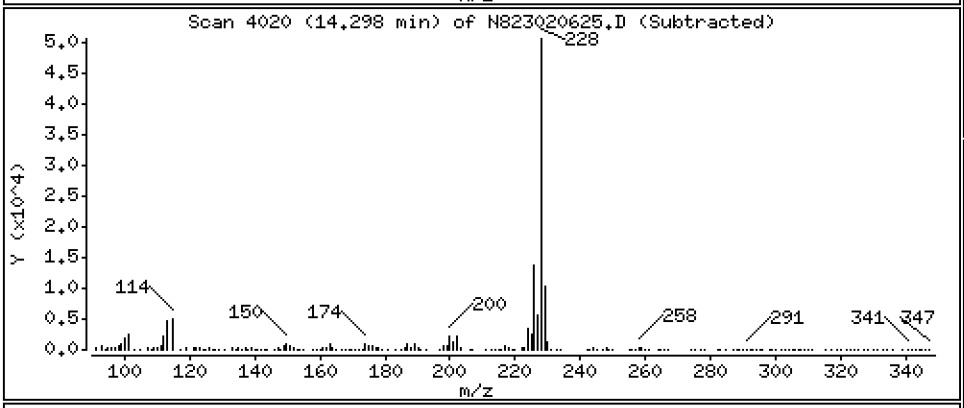
Column phase: Rxi-17sil

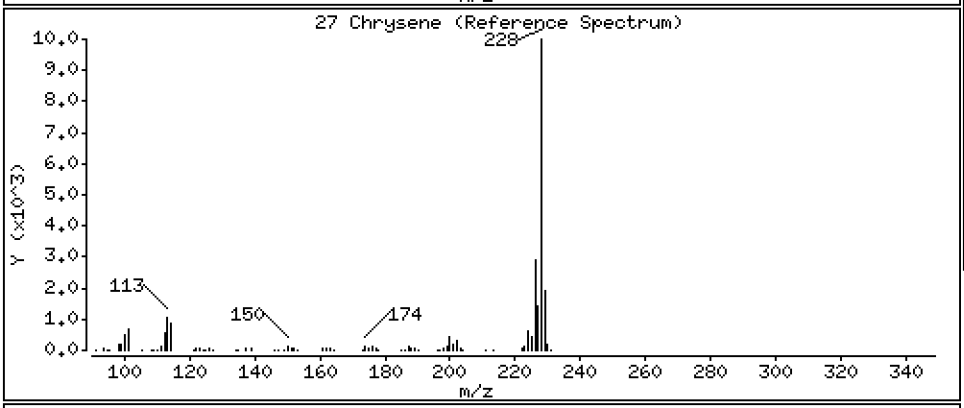
Column diameter: 0.25

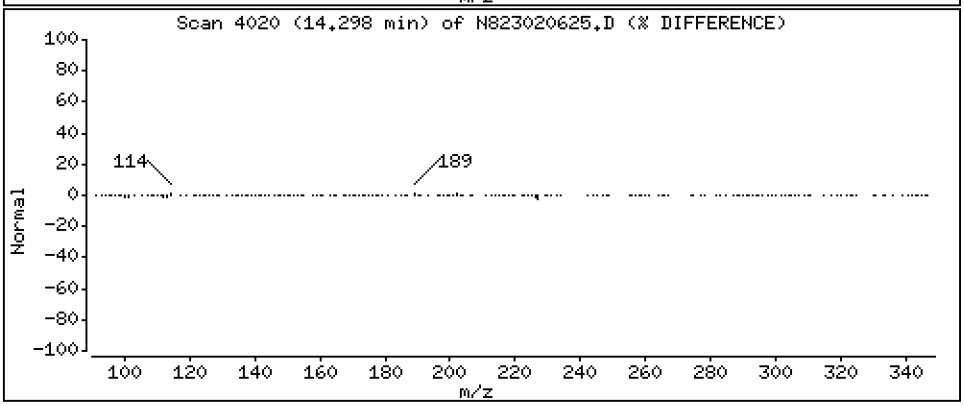
27 Chrysene

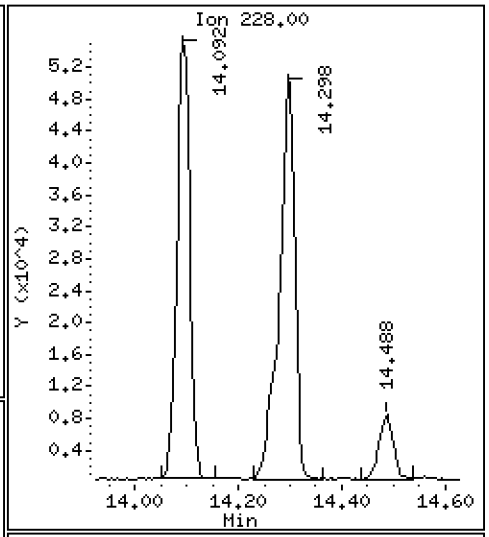
Concentration: 25.67 ug/mL

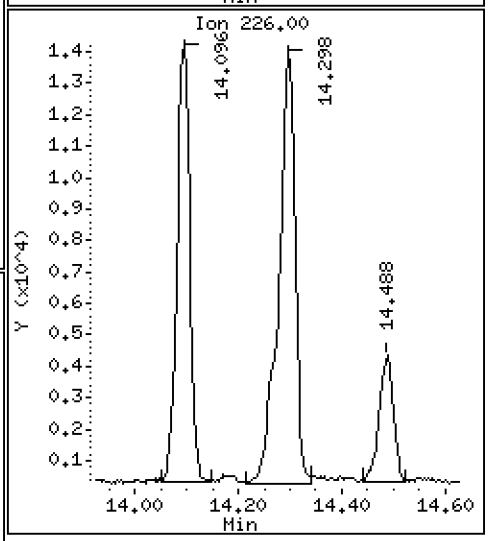












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020625.D

Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

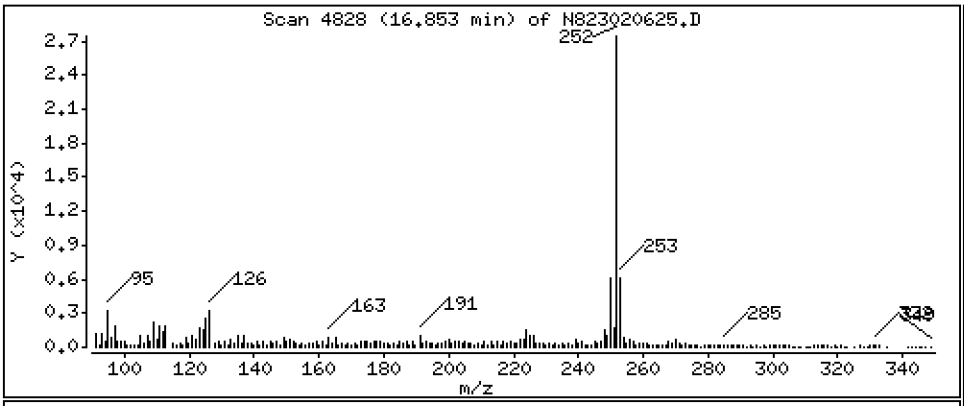
Operator: JZ

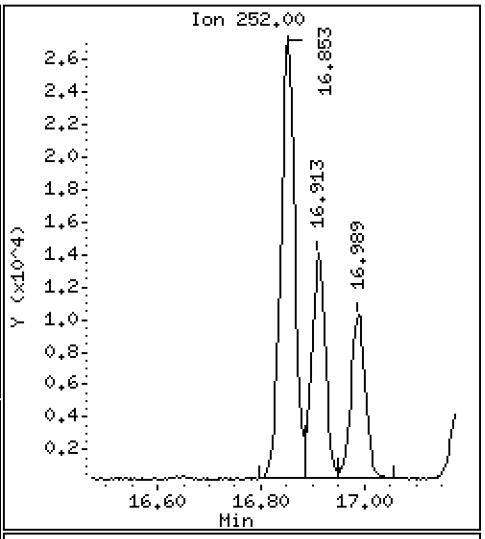
Column phase: Rxi-17sil

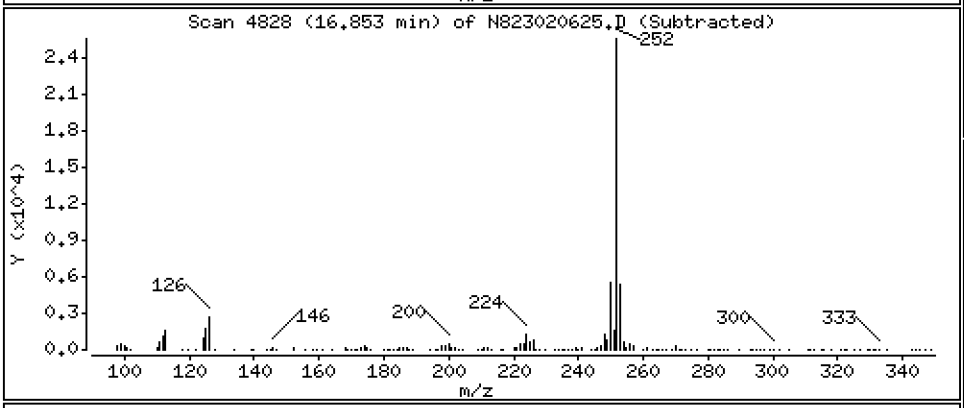
Column diameter: 0.25

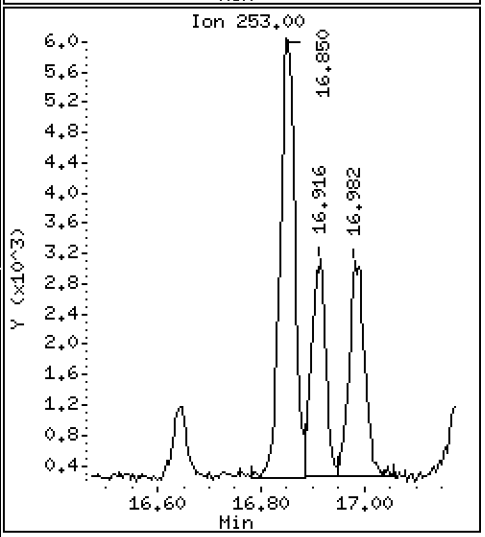
28 Benzo(b)fluoranthene

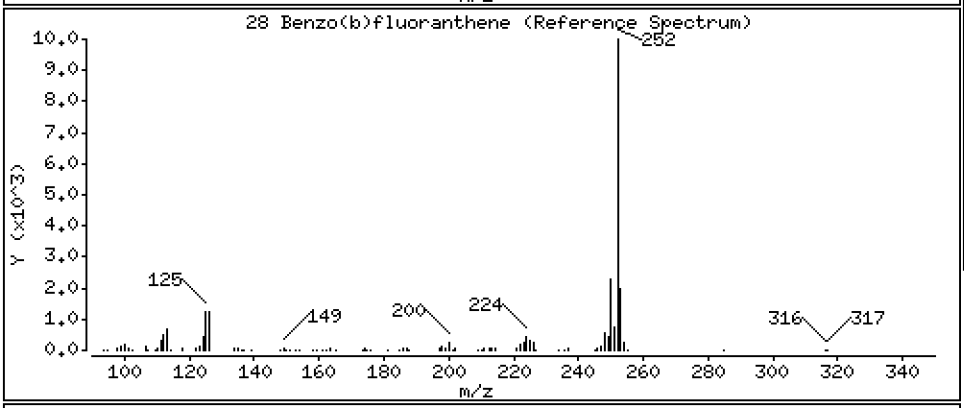
Concentration: 14.20 ug/mL

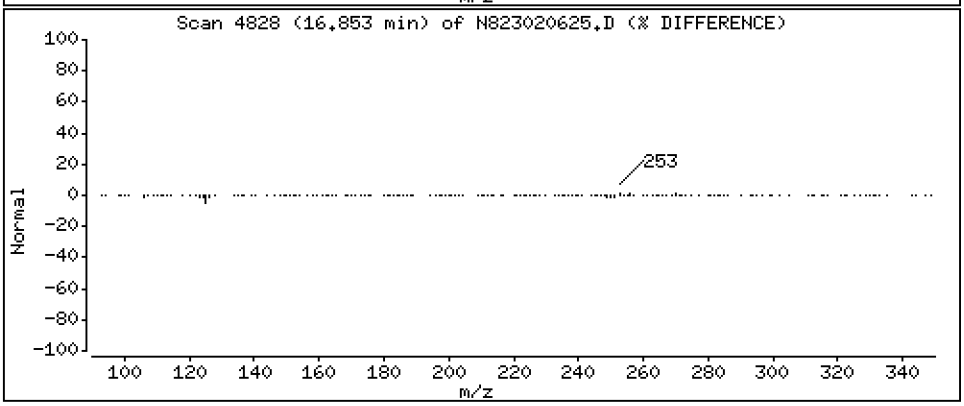












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020625.D

Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

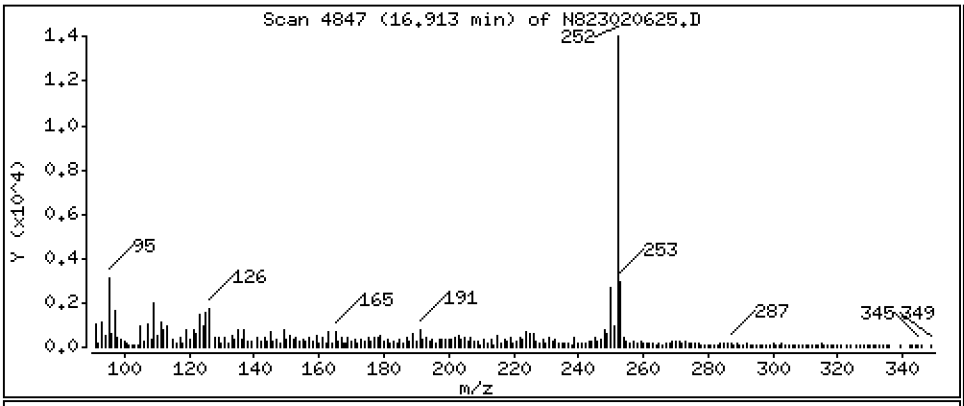
Operator: JZ

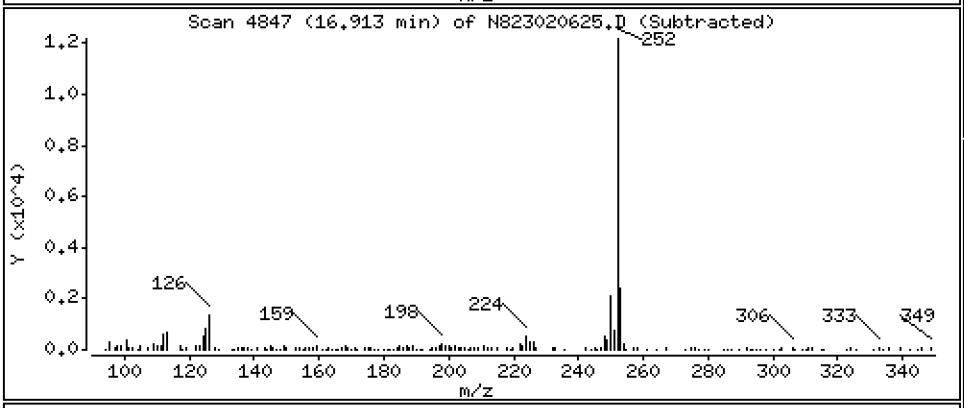
Column phase: Rxi-17sil

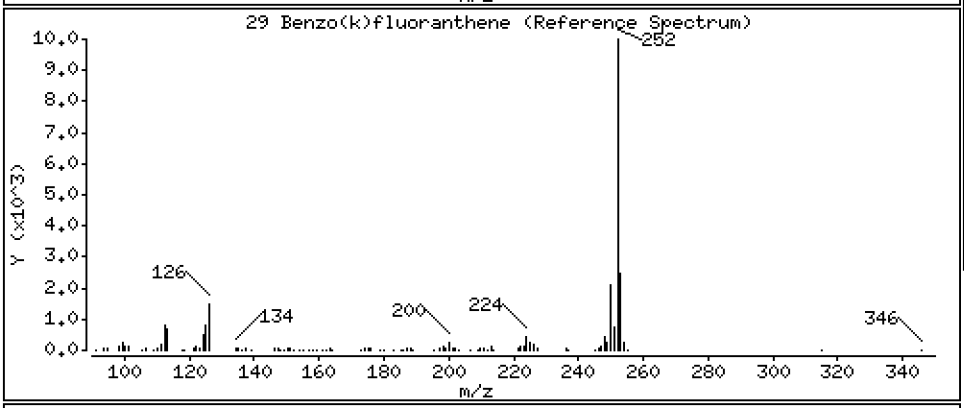
Column diameter: 0.25

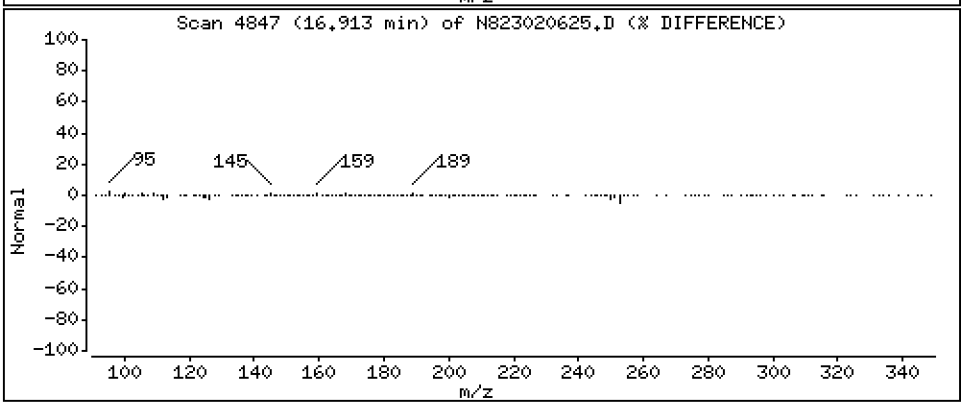
29 Benzo(k)fluoranthene

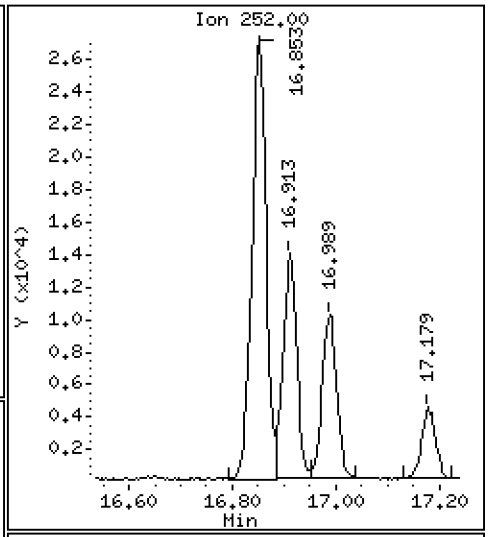
Concentration: 7.187 ug/mL

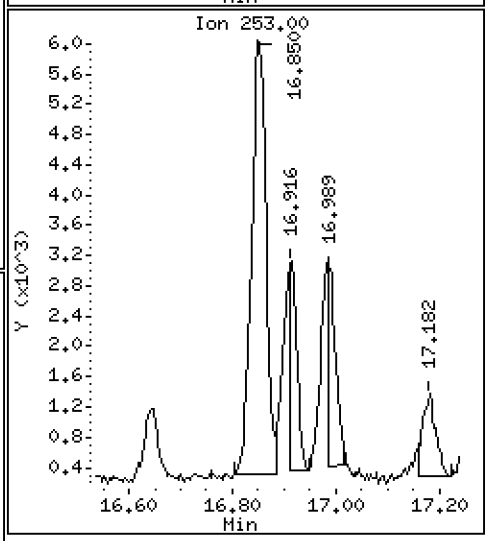












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020625.D

Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

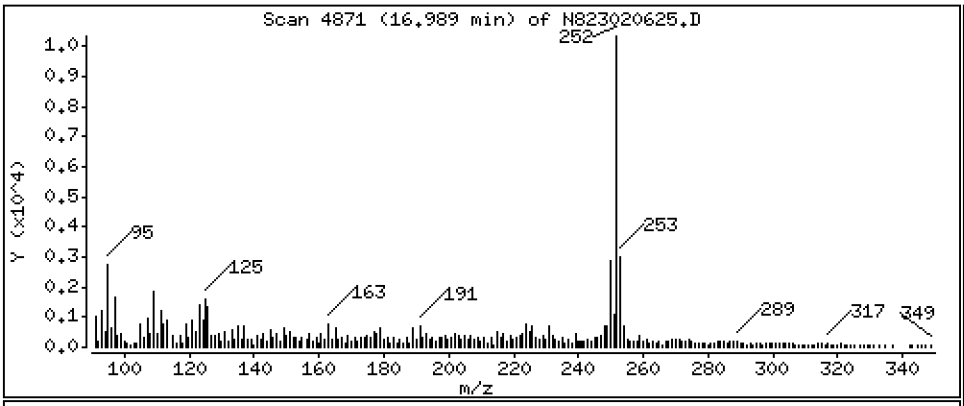
Operator: JZ

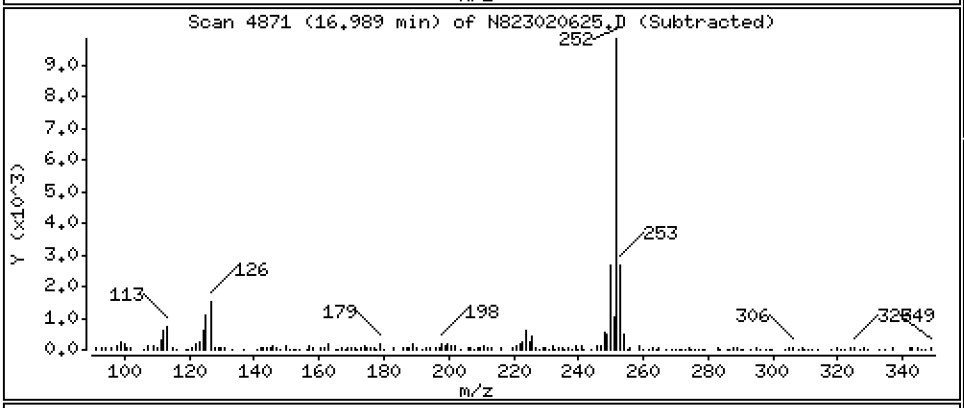
Column phase: Rxi-17sil

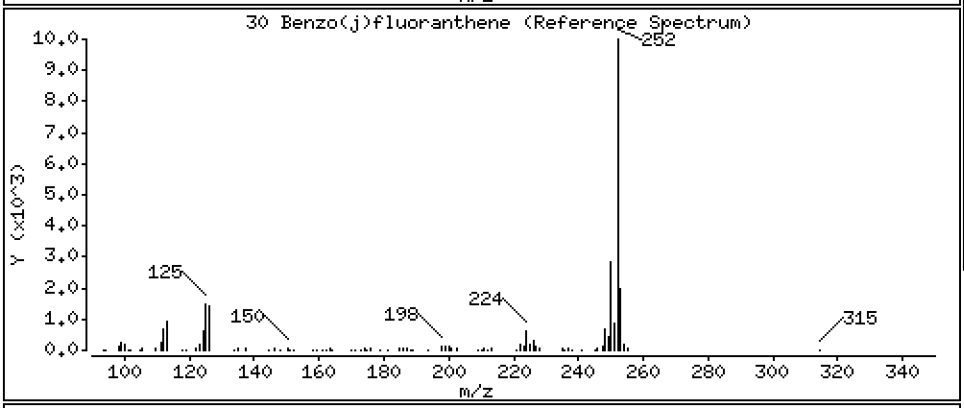
Column diameter: 0.25

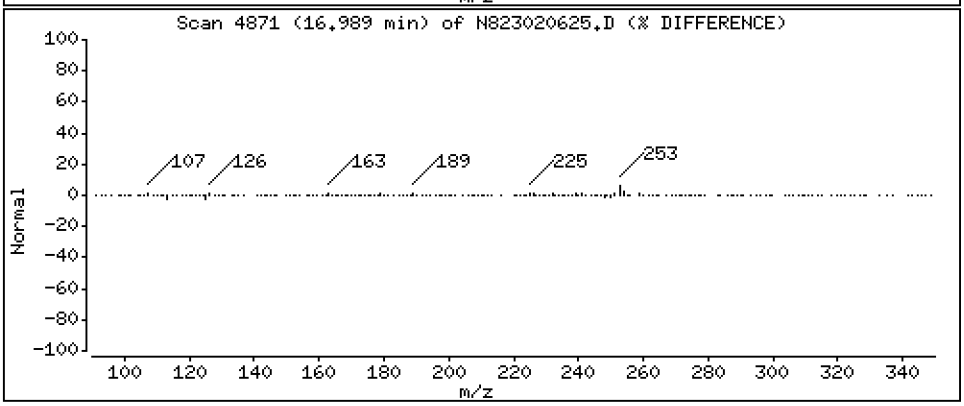
30 Benzo(j)fluoranthene

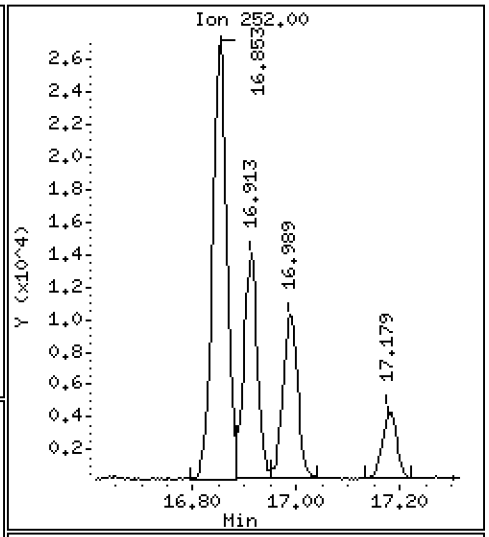
Concentration: 6.221 ug/mL

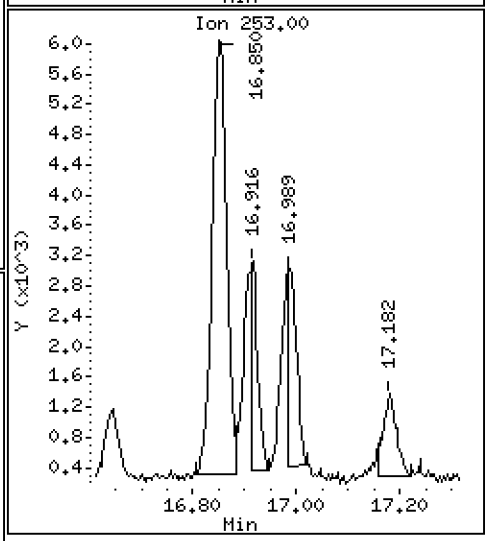












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020625.D

Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

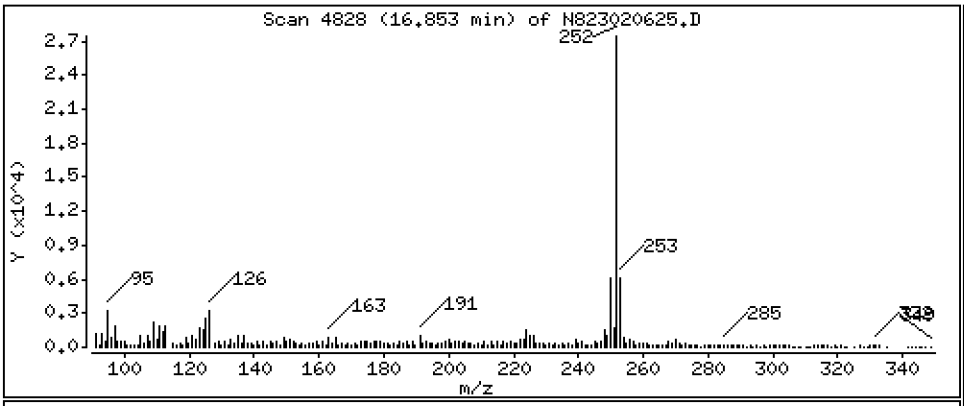
Operator: JZ

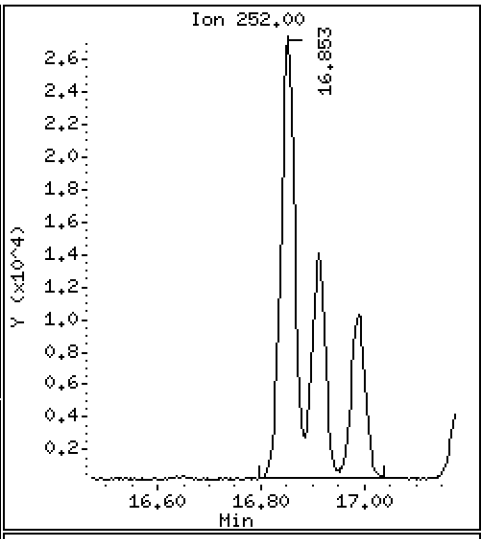
Column phase: Rxi-17sil

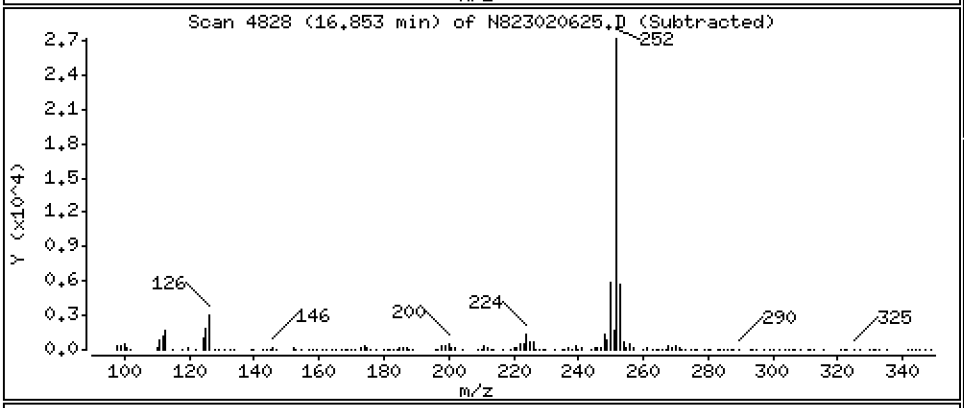
Column diameter: 0.25

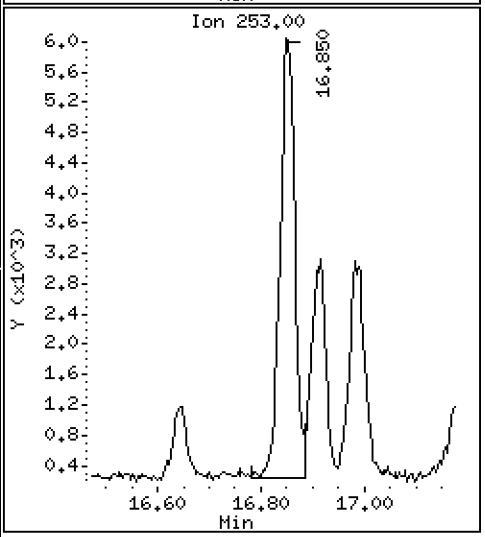
31 Total Benzofluoranthenes

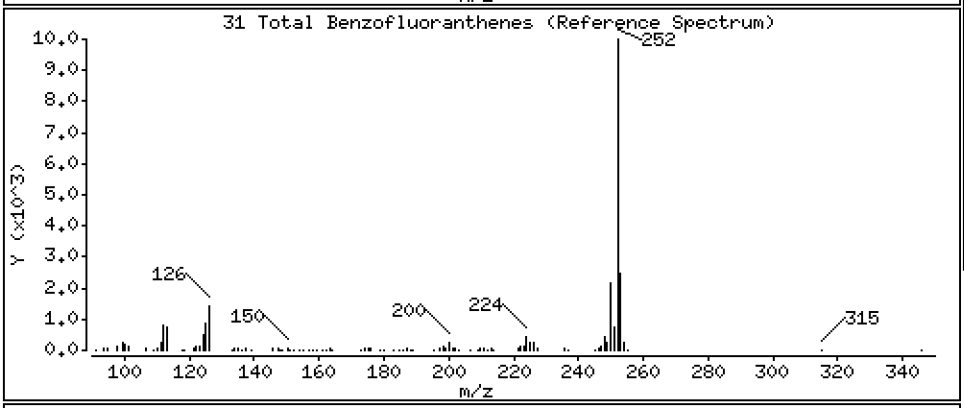
Concentration: 28.03 ug/mL

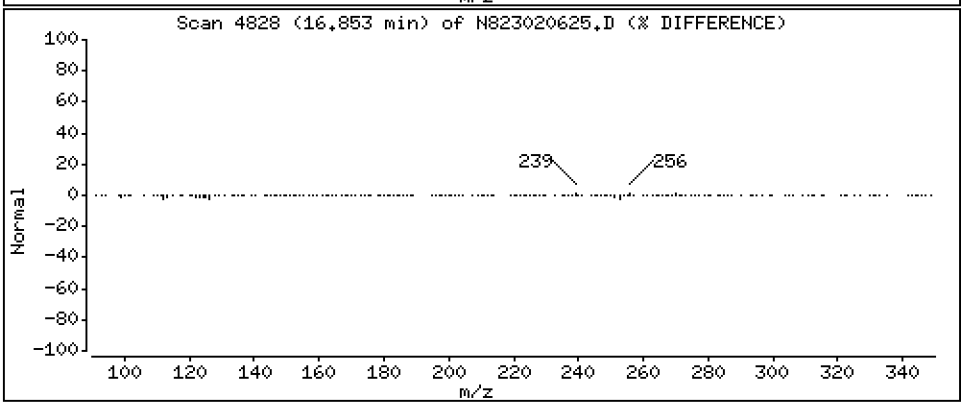












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020625.D

Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

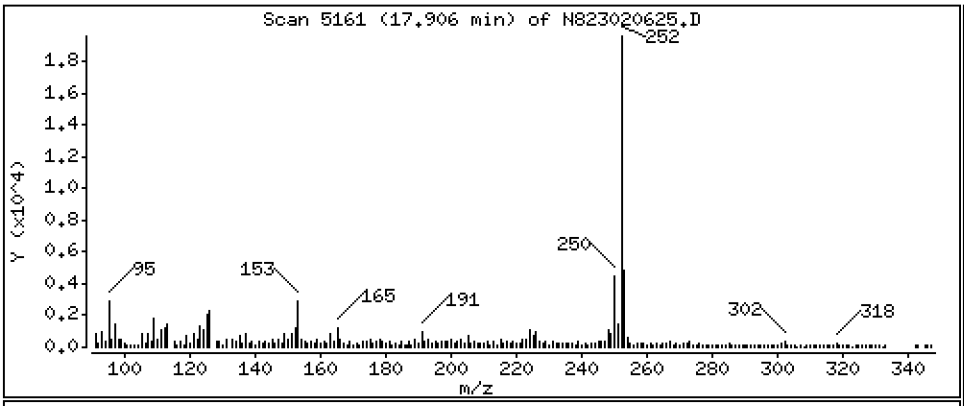
Operator: JZ

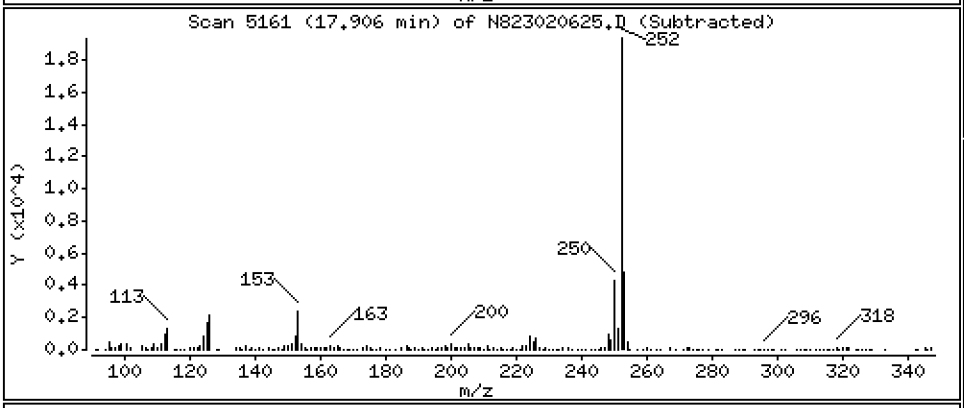
Column phase: Rxi-17sil

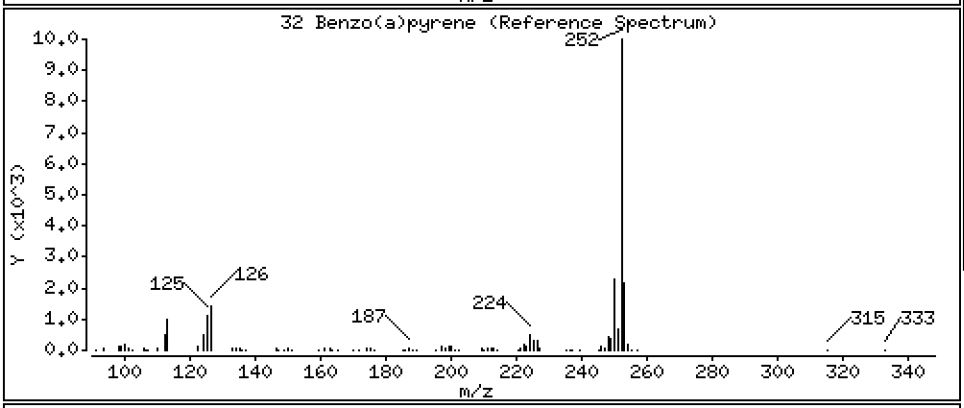
Column diameter: 0.25

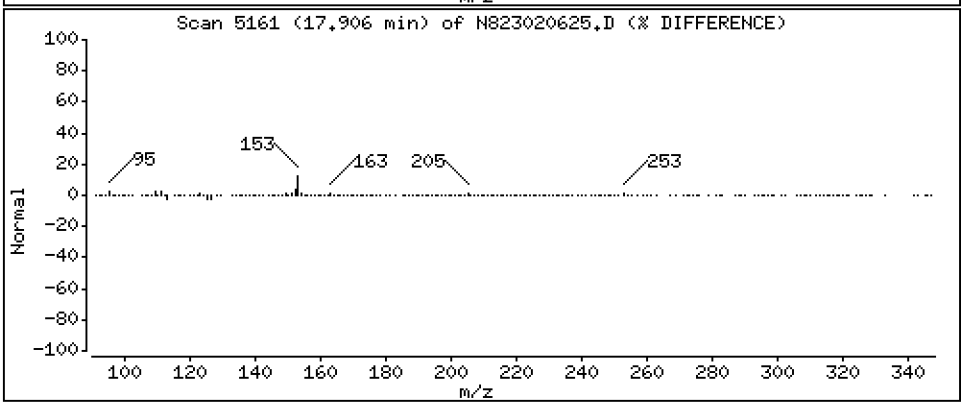
32 Benzo(a)pyrene

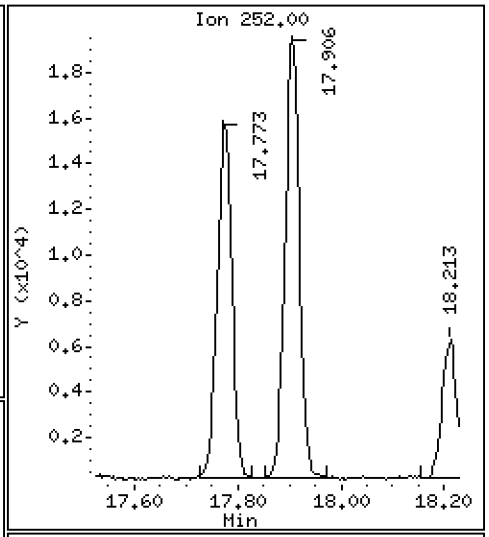
Concentration: 11.70 ug/mL

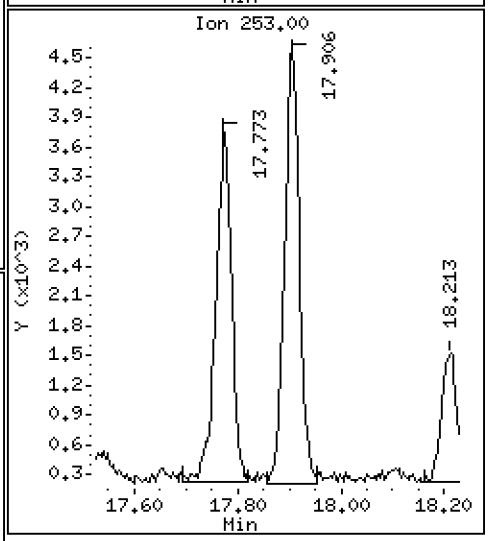












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020625.D

Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

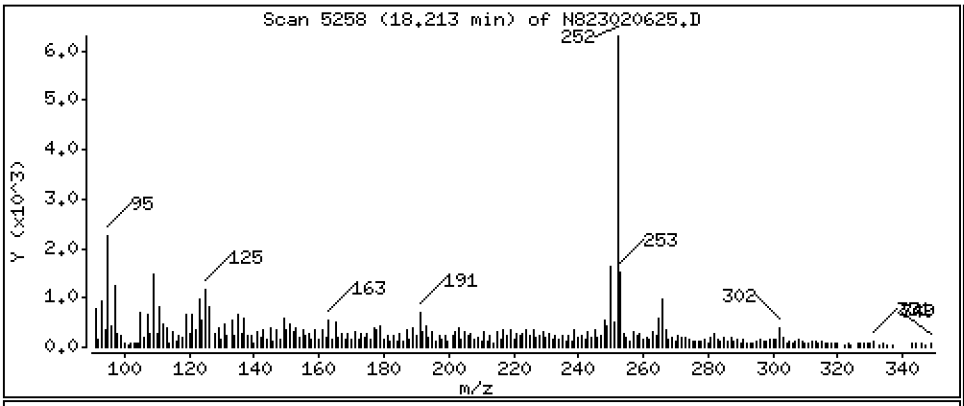
Operator: JZ

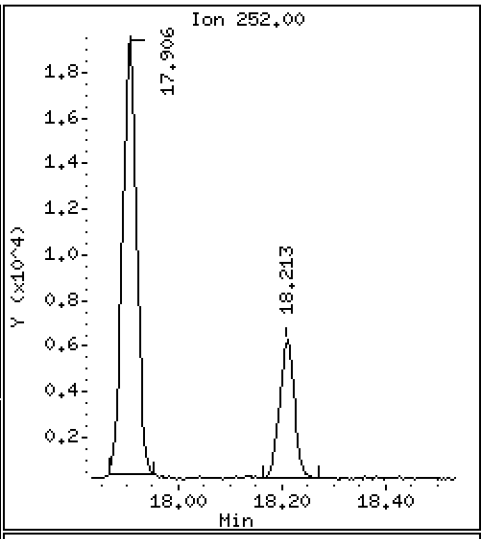
Column phase: Rxi-17sil

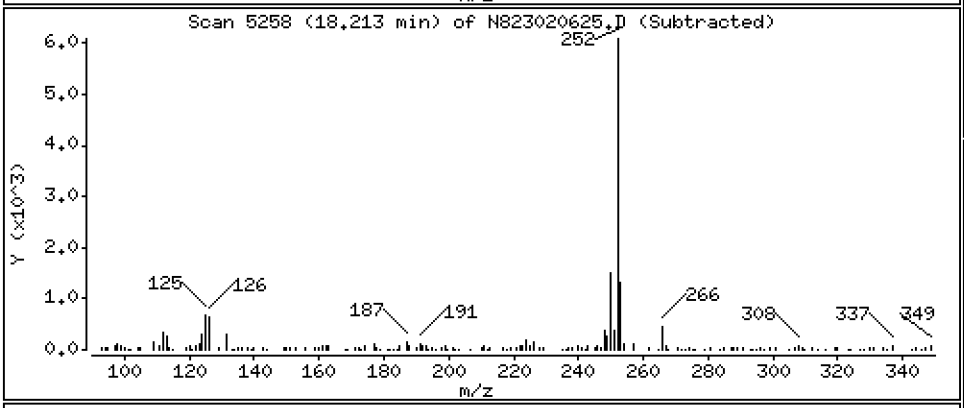
Column diameter: 0.25

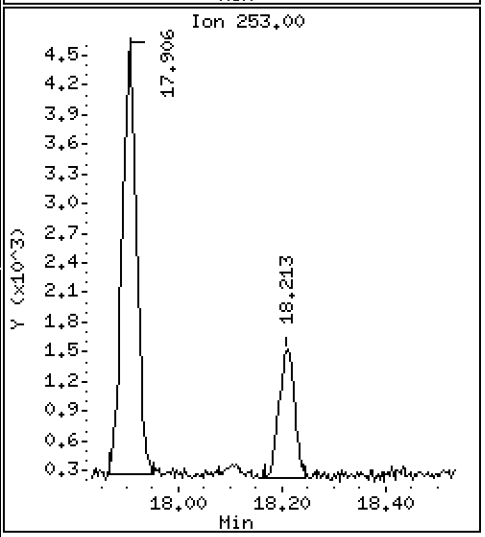
35 Perylene

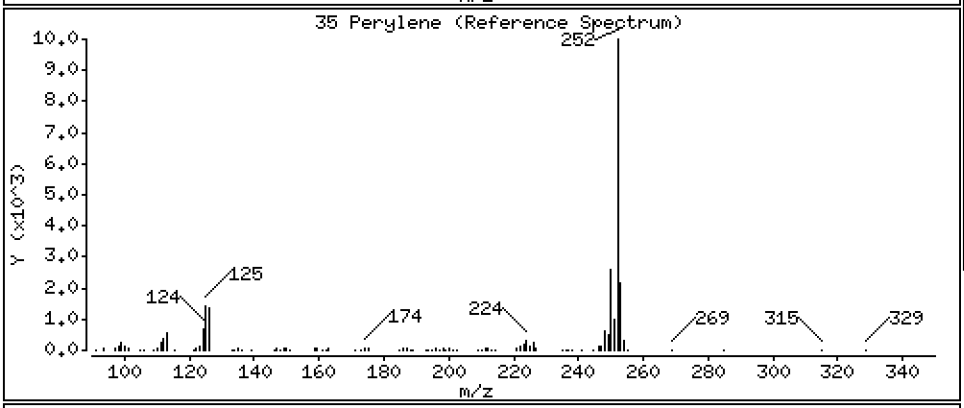
Concentration: 3.578 ug/mL

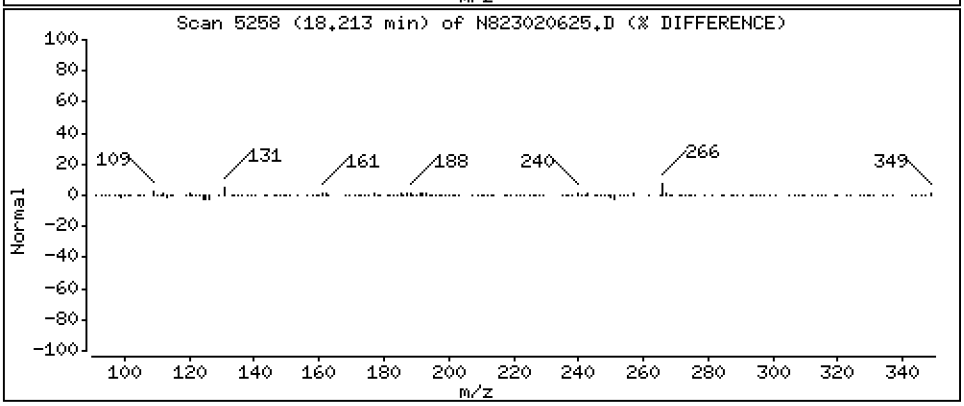












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Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

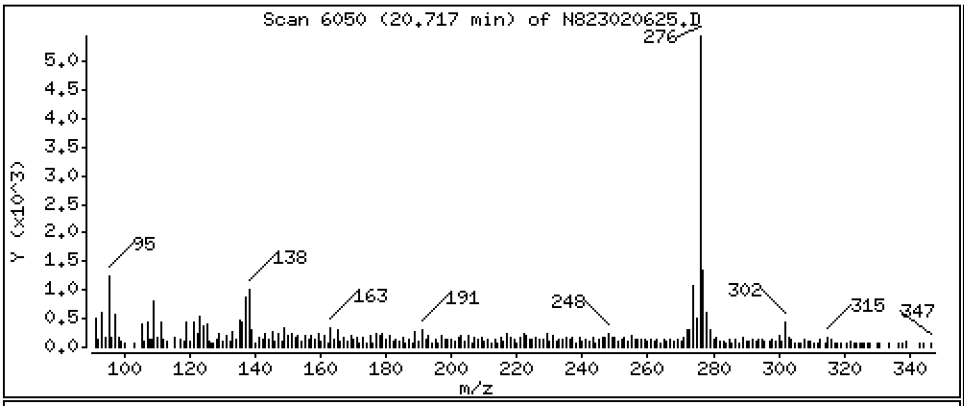
Operator: JZ

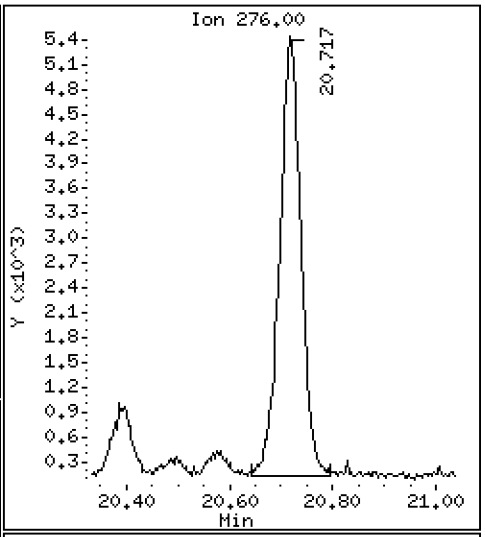
Column phase: Rxi-17sil

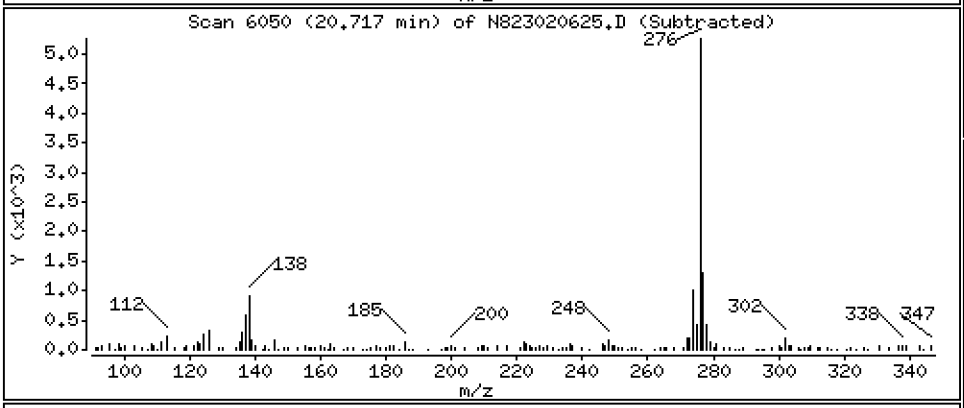
Column diameter: 0.25

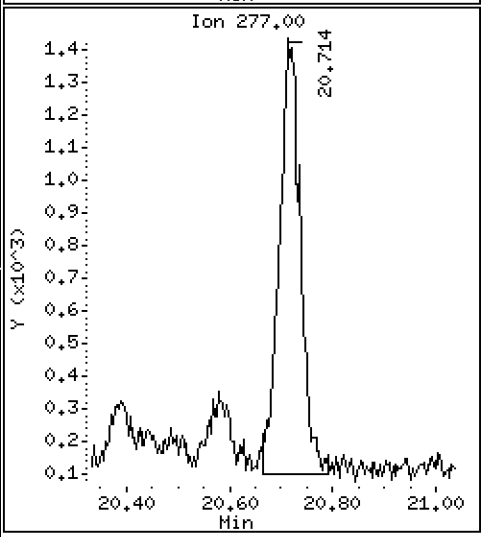
37 Indeno(1,2,3-cd)pyrene

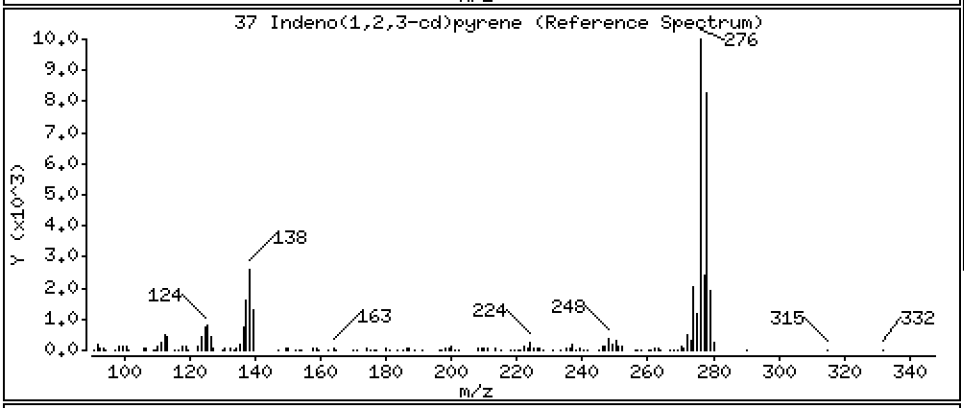
Concentration: 4.211 ug/mL

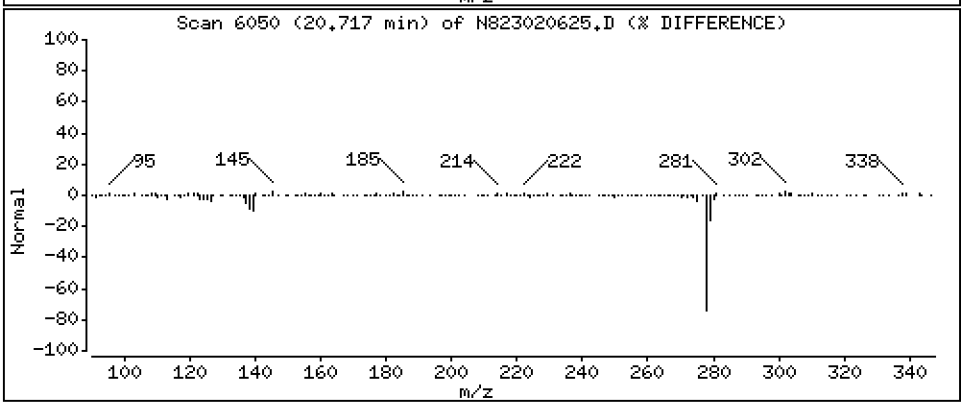












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Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

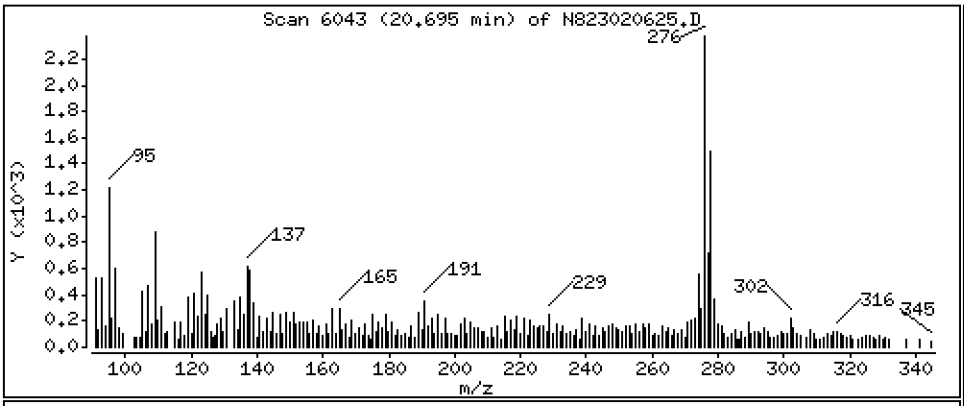
Operator: JZ

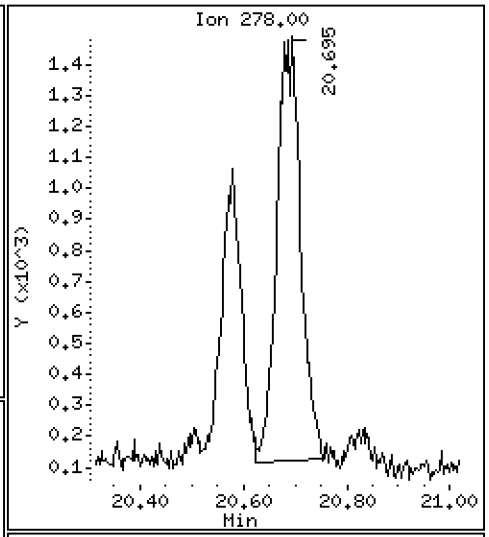
Column phase: Rxi-17sil

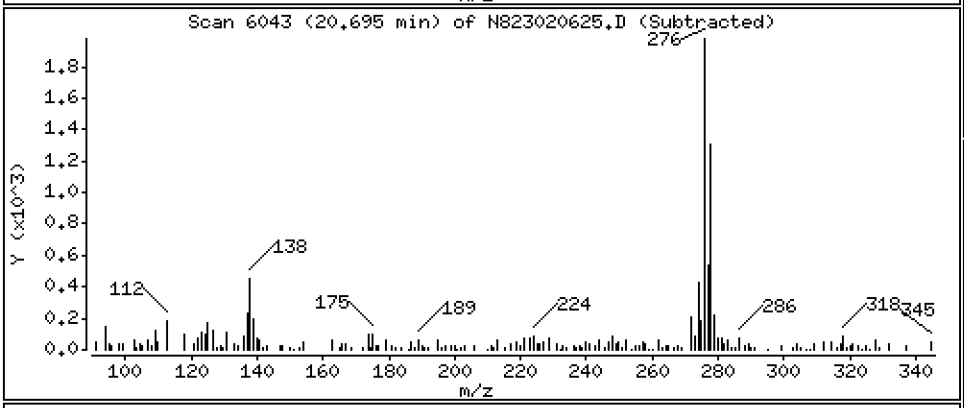
Column diameter: 0.25

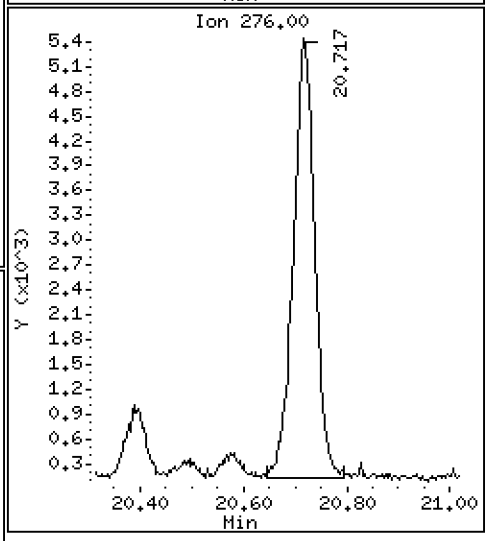
38 Dibenzo(a,h)anthracene

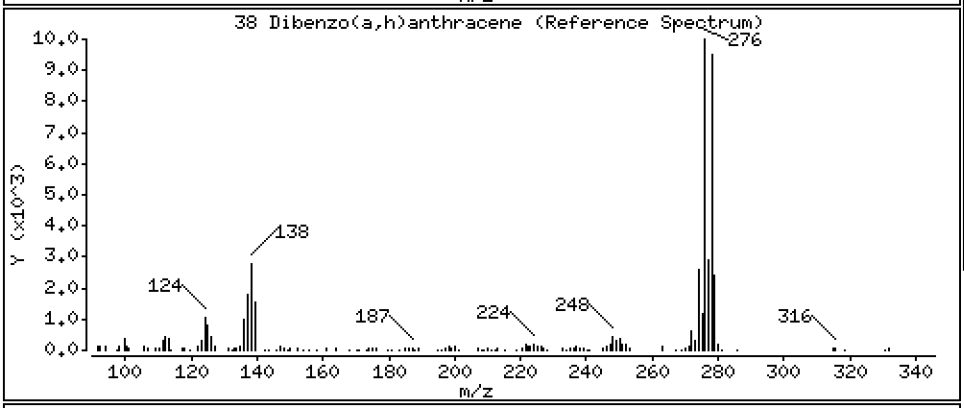
Concentration: 1.397 ug/mL

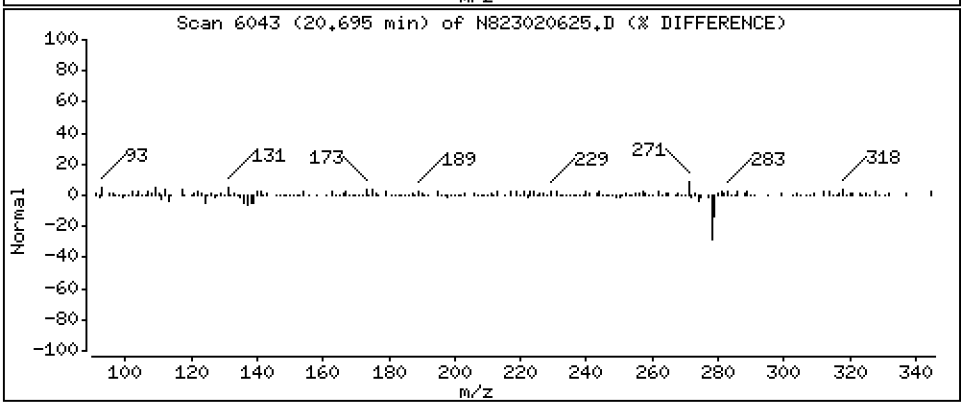












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Date : 06-FEB-2023 23:34

Client ID:

Instrument: nt8.i

Sample Info: 23A0207-17,3

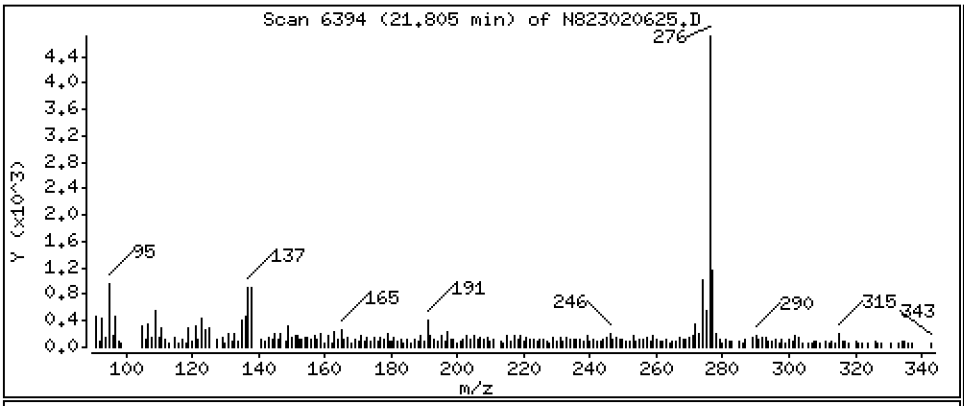
Operator: JZ

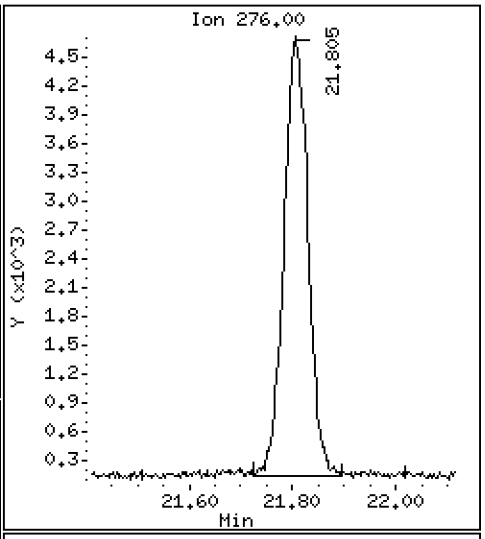
Column phase: Rxi-17sil

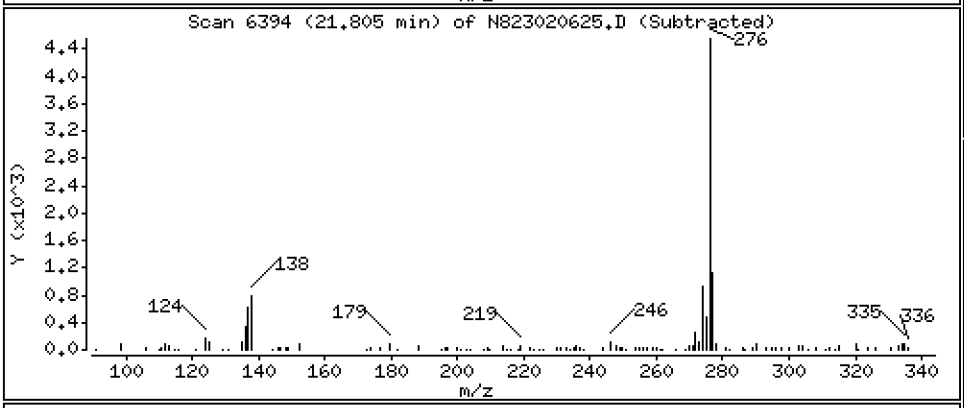
Column diameter: 0.25

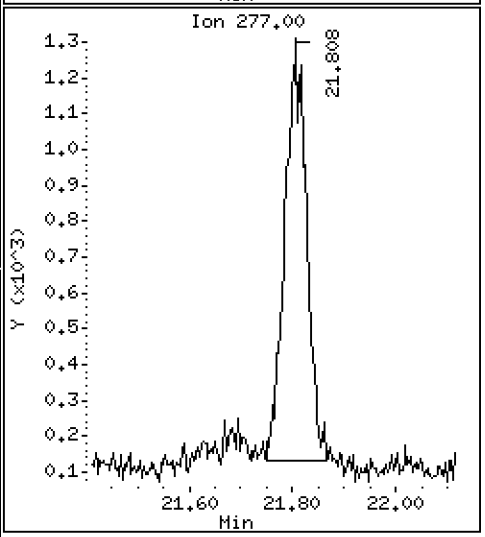
39 Benzo(g,h,i)perylene

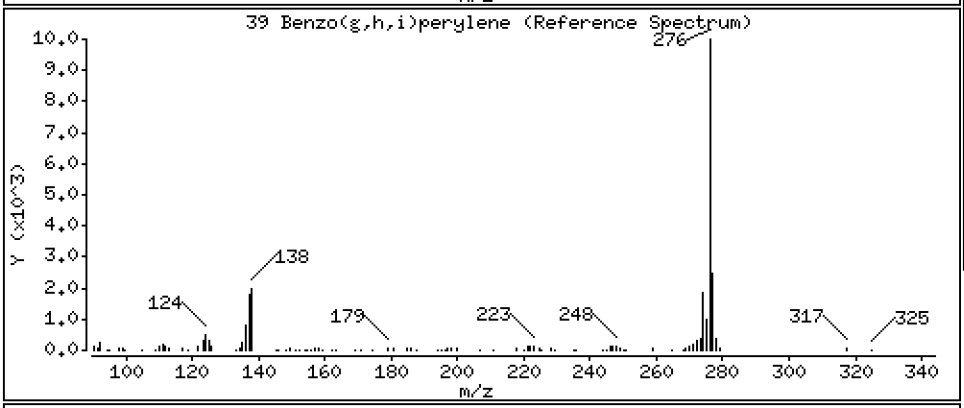
Concentration: 4.513 ug/mL

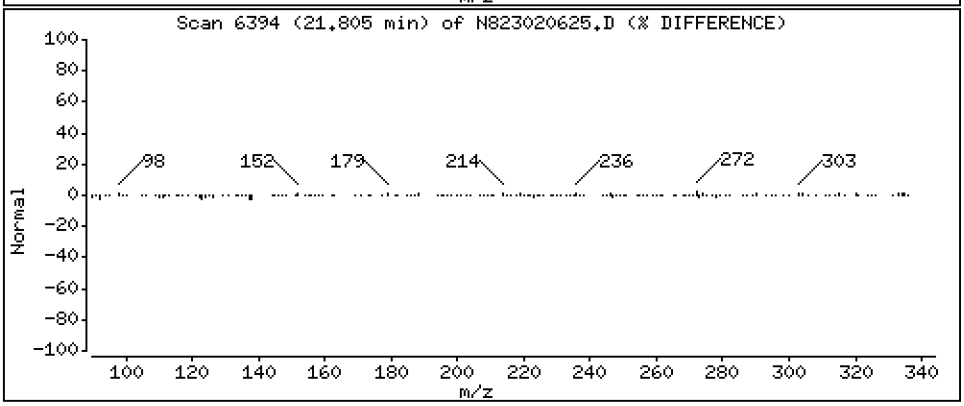












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020625.D
Lab Smp Id: 23A0207-17
Inj Date : 06-FEB-2023 23:34
Operator : JZ Inst ID: nt8.i
Smp Info : 23A0207-17,3
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 13:04 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 25
Dil Factor: 3.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

								CONCENTRATIONS	
		QUANT SIG						ON-COLUMN	FINAL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE		(ug/mL)	(ug/mL)
*	1 Naphthalene-d8	136	4.894	4.900	(1.000)	53176		2.00000	
	2 Naphthalene	128	4.922	4.928	(1.006)	7305		0.29545	0.8864
$	3 2-Methylnaphthalene-d10	152	5.627	5.634	(1.150)	14397		0.99273	2.978
	4 2-Methylnaphthalene	141	5.678	5.681	(1.160)	2963		0.21787	0.6536
	5 1-methylnaphthalene	141	5.874	5.880	(1.200)	1845		0.13367	0.4010(M)
	9 Acenaphthylene	152	7.079	7.082	(0.985)	6403		0.29859	0.8958
*	10 Acenaphthene-d10	164	7.186	7.189	(1.000)	28398		2.00000	
	11 Acenaphthene	153	7.237	7.240	(1.007)	20352		1.41646	4.249
	12 Dibenzofuran	168	7.389	7.392	(1.028)	8437		0.38660	1.160
	14 Fluorene	166	7.866	7.869	(1.095)	19654		1.15955	3.479
*	15 Phenanthrene-d10	188	9.232	9.232	(1.000)	43410		2.00000	
	16 Phenanthrene	178	9.270	9.267	(1.004)	78400		3.69727	11.09
	17 Anthracene	178	9.311	9.308	(1.009)	57656		2.99308	8.979
	19 Carbazole	167	9.823	9.823	(1.064)	8217		0.46530	1.396(M)
	22 Fluoranthene	202	11.069	11.050	(1.199)	428925		18.5829	55.75
$	21 Fluoranthene-d10	212	11.025	11.009	(1.194)	27742		1.44849	4.345
	23 Pyrene	202	11.607	11.569	(0.816)	504411		39.3151	117.9
	24 Benzo(a)anthracene	228	14.092	14.070	(0.991)	94043		8.08704	24.26
*	25 Chrysene-d12	240	14.222	14.202	(1.000)	20694		2.00000	
	27 Chrysene	228	14.297	14.275	(1.005)	105945		8.55809	25.67
	28 Benzo(b)fluoranthene	252	16.852	16.824	(0.929)	51308		4.73333	14.20
	29 Benzo(k)fluoranthene	252	16.912	16.887	(0.933)	25435		2.39556	7.187
	30 Benzo(j)fluoranthene	252	16.988	16.963	(0.937)	19822		2.07380	6.221
	31 Total Benzofluoranthenes	252	16.852	16.824	(0.929)	95901		9.34180	28.03(M)
	32 Benzo(a)pyrene	252	17.905	17.877	(0.987)	37200		3.89982	11.70
*	33 Perylene-d12	264	18.136	18.107	(1.000)	18612		2.00000	
	35 Perylene	252	18.212	18.183	(1.004)	12208		1.19263	3.578
$	36 Dibenzo(a,h)anthracene-d14	292	20.580	20.549	(1.135)	9259		1.26965	3.809
	37 Indeno(1,2,3-cd)pyrene	276	20.716	20.684	(1.142)	15254		1.40369	4.211
	38 Dibenzo(a,h)anthracene	278	20.694	20.666	(1.141)	4354		0.46557	1.397
	39 Benzo(g,h,i)perylene	276	21.804	21.763	(1.202)	14813		1.50449	4.513

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020625.D
Lab Smp Id: 23A0207-17
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44336	22168	88672	53176	19.94
10 Acenaphthene-d10	26127	13064	52254	28398	8.69
15 Phenanthrene-d10	47424	23712	94848	43410	-8.46
25 Chrysene-d12	36794	18397	73588	20694	-43.76
33 Perylene-d12	36636	18318	73272	18612	-49.20

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.89	-0.13
10 Acenaphthene-d10	7.19	6.69	7.69	7.19	-0.04
15 Phenanthrene-d10	9.23	8.73	9.73	9.23	0.00
25 Chrysene-d12	14.20	13.70	14.70	14.22	0.13
33 Perylene-d12	18.11	17.61	18.61	18.14	0.16

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

REVIEW SUMMARY FOR FILE - N823020625.D

Lab ID: 23A0207-17
nt8.i, 20230206A.b\FSIMPNA230119.m,   06-FEB-2023 23:34

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

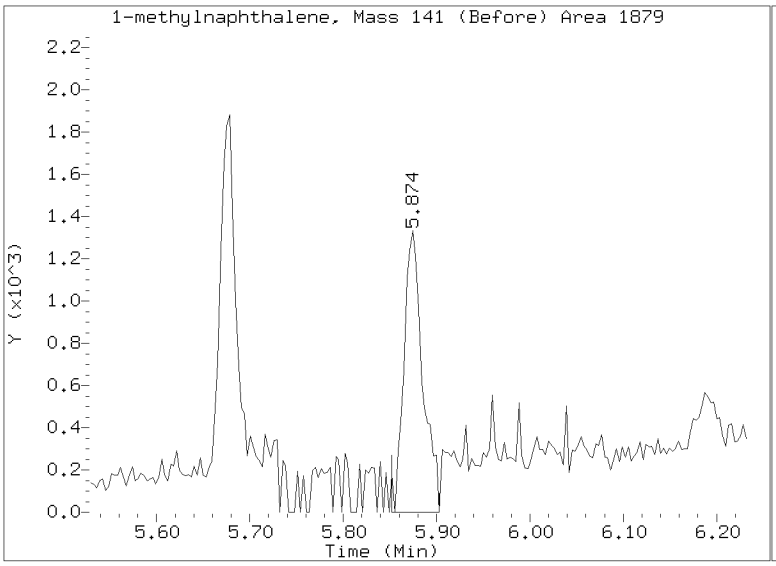
No RRT check performed

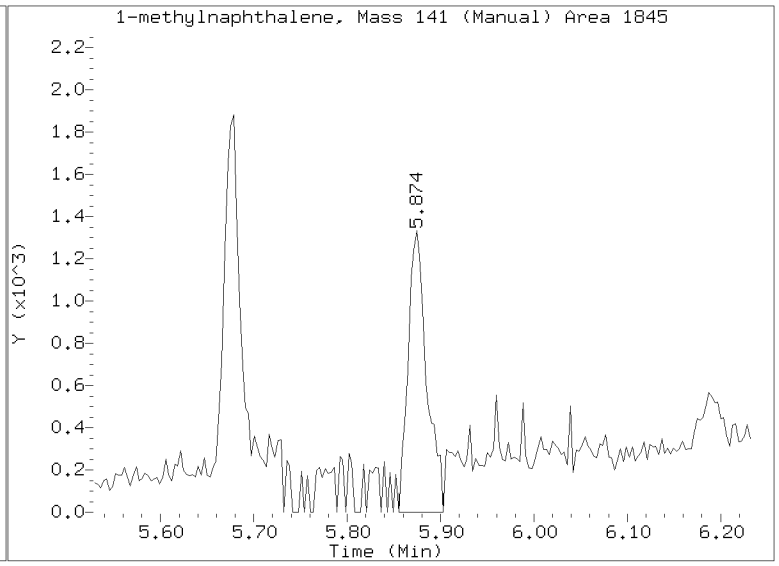
On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

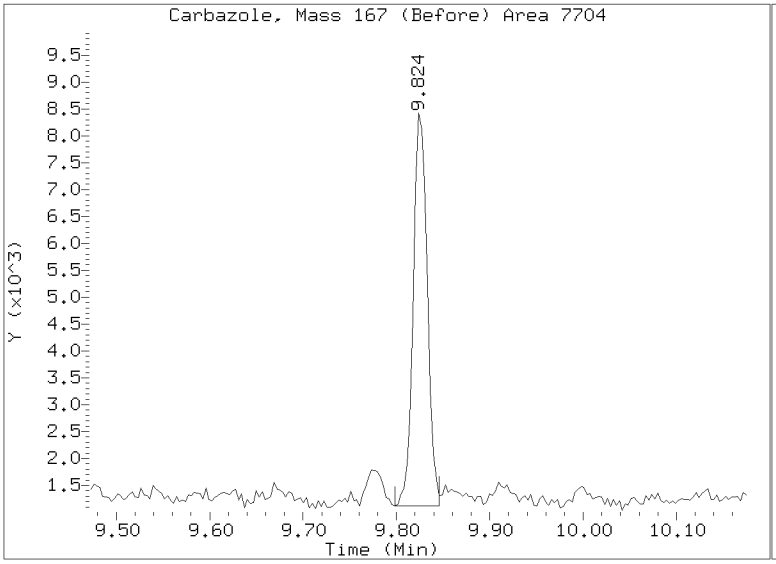
* Only compounds listed in the work order have been verified by the analyst *

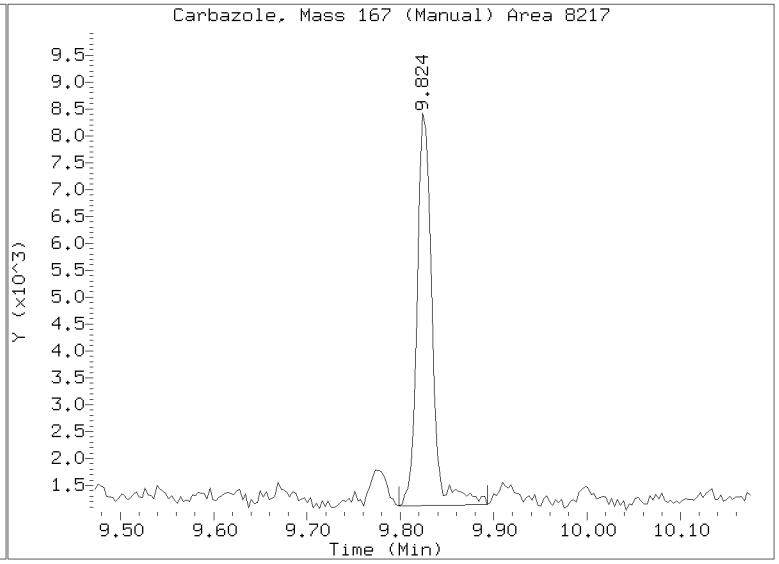
Quant Ion Manual Peak Adjustment Report

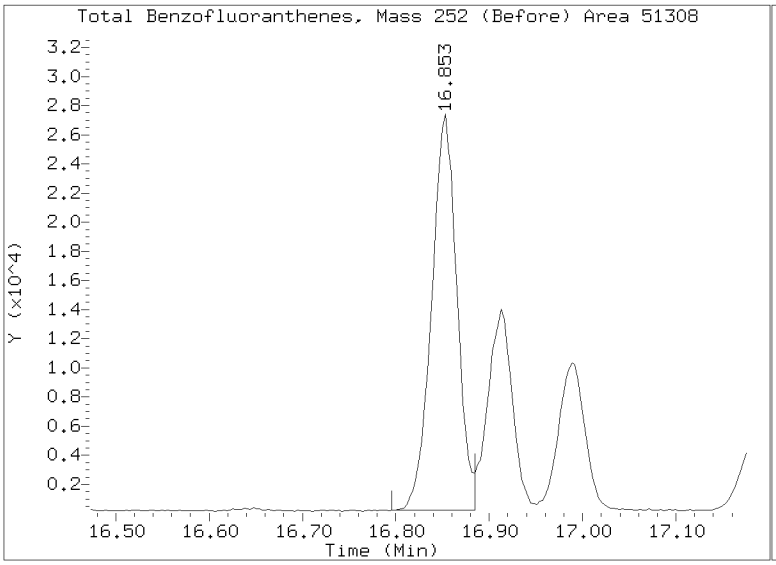
Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020625.D
Injection Date: 06-FEB-2023 23:34
Lab ID:23A0207-17 Client ID:
Report Date: 02/07/2023 16:17

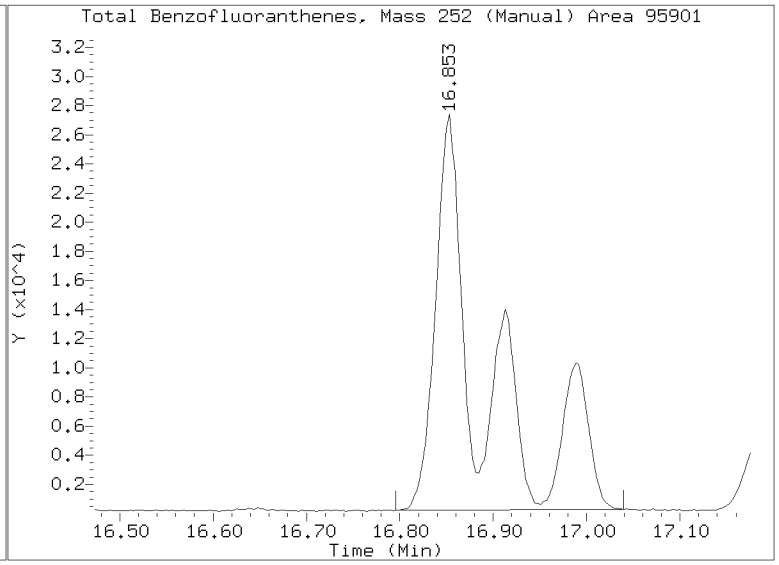












PREPARATION BATCH SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0683 Batch Matrix: Solid
Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1088	23A0207-01	N823020612.D	02/01/23 11:29	
LDW23-IT1089	23A0207-02	N823020613.D	02/01/23 11:29	
LDW23-IT1079	23A0207-03	N823020614.D	02/01/23 11:29	
LDW23-IT1080	23A0207-04	N823020805.D	02/01/23 11:29	
LDW23-IT1080-FD	23A0207-05	N823020618.D	02/01/23 11:29	
LDW23-IT1072	23A0207-06	N823020619.D	02/01/23 11:29	
LDW23-IT1081	23A0207-07	N823020620.D	02/01/23 11:29	
LDW23-IT1068	23A0207-08	N823020621.D	02/01/23 11:29	
LDW23-IT1062	23A0207-09	N823020622.D	02/01/23 11:29	
LDW23-IT1078	23A0207-15	N823020623.D	02/01/23 11:29	
LDW23-IT1201	23A0207-16	N823020806.D	02/01/23 11:29	
LDW23-IT1209	23A0207-17	N823020625.D	02/01/23 11:29	
Blank	BLA0683-BLK1	N823020608.D	02/01/23 11:29	
LCS	BLA0683-BS1	N823020609.D	02/01/23 11:29	
LCS Dup	BLA0683-BSD1	N823020610.D	02/01/23 11:29	
LDW23-IT1079	BLA0683-MS1	N823020615.D	02/01/23 11:29	
LDW23-IT1079	BLA0683-MSD1	N823020616.D	02/01/23 11:29	
Reference	BLA0683-SRM1	N823020611.D	02/01/23 11:29	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0683

Prepared using: EPA 3546 (Microwave)

8270E-SIM PAH (0.1ug/L or 5ug/kg) in Solid (Version:AOC4 cPAH)

WO Comments

23A0207: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0249: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0295: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0313: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0326: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Analysis: 8270E-SIM PAH (0.1ug/L or 5ug/kg)

Lab Number & Container	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ/Opt) GPC C/U (1:1) 1 2 3	(REQ/Opt) Sulfur C/U (1:1) Y/N (Transfer Rinse)	(REQ/Opt) Silica Gel C/U (1:1) Y/N	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23A0207-01 A	78.4	(12.75) 12.78	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0207-02 A	78.6	(12.72) 12.77	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0207-03 A	80.0	(12.50) 12.50	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0207-04 A	73.6	(13.59) 13.60	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0207-05 A	71.3	(14.02) 14.07	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0207-06 A	79.0	(12.67) 12.69	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0207-07 A	78.8	(12.70) 12.75	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0207-08 A	72.8	(13.73) 13.79	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0207-09 A	73.0	(13.70) 13.78	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0207-15 A	77.8	(12.86) 12.88	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0207-16 A	62.7	(15.95) 15.98	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0207-17 A	63.2	(15.82) 15.83	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0249-07 A	74.7	(13.38) 13.40	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0295-08 A	78.0	(12.82) 12.82	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0313-03 A	62.7	(15.95) 15.97	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0313-04 A	69.6	(14.38) 14.39	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0313-12 A	50.0	(19.98) 19.99	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0326-08 A	75.5	(13.24) 13.27	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23A0326-09 A	61.9	(16.15) 16.15	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ/Opt) GPC C/U (1:1) 1 2 3	(REQ/Opt) Sulfur C/U (1:1) Y/N (Transfer Rinse)	(REQ/Opt) Silica Gel C/U (1:1) Y/N	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLA0683-BLK1	100.0	(10.00) 10.00	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
BLA0683-BS1	100.0	(10.00) 10.00	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
BLA0683-BSD1	100.0	(10.00) 10.00	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
BLA0683-MS1	80.0	(12.50) 12.50	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	Use 23A0207-03
BLA0683-MSD1	80.0	(12.50) 12.50	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	Use 23A0207-03

SRM IS ON 3RD PAGE!!!!!!

Printed: 1/28/2023 11:58:35AM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0683

Prepared using: EPA 3546 (Microwave)

8270E-SIM PAH (0.1ug/L or 5ug/kg) in Solid (Version:AOC4 cPAH)

WO Comments

23A0207: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0249: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0295: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0313: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0326: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Steps

Microwave
1 (2) 3
CT 02/01/23
Analyst/Date

Pre-GPC KD 100°C (No Exchange)
(0) 1 2 3 (4) (5) 6
CD 2/2/23
Analyst/Date

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

GPC
1 (2) 3
TWC 2/2/23
Analyst/Date

Post-GPC KD 80°C Hexane Exchange 2 x 20 mL 100°C
(0) 1 (2) (3) (4) 5 6
TWC 2/4/23
Analyst/Date

Pre-Cleanup TurboVap
1 2 (3) (4)
CD 2/4/23
Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: CT/MJ Date: 02/01/23	
Pre-Deactivated Glass Wool	L000252
Anhydrous Sodium Sulfate	L000759
1:1 Methylene Chloride/Acetone	L000281
Methylene Chloride	L000808
Pre GPC KD Analyst: CD Date: 2/2/23	
Methylene Chloride	L000808
Hexane	K011373
GPC Filter Prep Analyst: TWC Date: 2/2/23	
Methylene Chloride	L000808
GPC Analyst: TWC Date: 2/2/23	
Methylene Chloride	L000803
GPC Calibration File	CLA0166
Post GPC KD Analyst: TWC Date: 2/4/23	
Methylene Chloride	L000808
Hexane	K011373
Vialing Analyst: CD Date: 2/6/23	
Hexane	K011373
Methylene Chloride	K000808
Silica Gel (SPE) darts	L001084

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 15/75µg/mL	B K009860 (V) Exp Date: 9/28/2023	100µL	CT	MJ
Spike 15/75µg/mL	15 K009081 (V) Exp Date: 8/4/2023	200µL	CT	MJ

MANUALLY ENTER EXPIRATION DATES!

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

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

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0683

Prepared using: EPA 3546 (Microwave)

8270E-SIM PAH (0.1ug/L or 5ug/kg) in Solid (Version:AOC4 cPAH)

WO Comments

23A0207: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0249: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0295: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0313: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0326: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

BLA0683-SRM1	100.0	~~(10.00)~~ (5.00) 5.04	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5 ____	0.5 ____	Use L000097

+1g DI WATER

02/01/23
Client ID verified By — Date

Preparation Reviewed By — Date 2/6/23

02/01/23 11:29
Extraction Date and Time

Printed: 1/28/2023 11:58:35AM

3060F

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0683

Prepared using: EPA 3546 (Microwave)

8270E-SIM PAH (0.1ug/L or 5ug/kg) in Solid (Version:AOC4 cPAH)

Matrix: Solid **Date Prepared:** 02/01/23 **Balance ID:** B14646261 4 **Set Up By:** CTO 1/28/23

WO Comments

23A0207: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0249: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0295: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0313: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0326: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

The following standards may be missing from this batch!

Designator	Description
QLS 4	QLS 4

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0683

Prepared using: EPA 3546 (Microwave)

8270E-SIM PAH (0.1ug/L or 5ug/kg) in Solid (Version:AOC4 cPAH)

WO Comments

23A0207: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0249: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0295: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0313: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0326: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Post-Cleanup TurboVap

1 2 3 4

CP 1/6/23

Analyst/Date

Sodium Sulfite	N/A
Tetrabutylammonium hydrogensulfate (TBAS)	N/A

Vialing

CP 1/6/23

Analyst/Date

Printed: 1/28/2023 11:58:35AM

3060F

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0683

Prepared using: EPA 3546 (Microwave)

8270E-SIM PAH (0.1ug/L or 5ug/kg) in Solid (Version:AOC4 cPAH)

WO Comments

23A0207: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0249: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0295: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0313: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23A0326: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. 3. Add DCM ONLY to the vessels (until solvent is 3 inches above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-re-homogenize while hot then let cool 10-15 min in Refridgerator 05. Re-homogenize while cool. 7. Decant DCM into Erlenmeyer flask with a funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using 1:1 DCM/ACE. 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. If GPC is Req add 10mL Hexane and KD to 5mL at 100°C (NO EXCHANGE) 12. If GPC is NOT Req = KD to 5mL at 100°C. Exchange to Hexane (2X with 10mL) to 5mL at 100°C. 13. TurboVap. 14. If no GPC then Sulfur clean is REQUIRED. 15. Sulfur clean = Hexane transfer rinse. 16. Silica Clean-up Any Color=REQ (All or none). 17. TurboVap 18. Vial in DCM. A. Need Total Solids Y [N] B. Archive/Freeze [Y] N	

Analytical Resources, Incorporated
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Organic Extractions Laboratory Analyst Notes

Extraction Parameter: SIM Extraction Batch: BLA0683

Total Solids Batch: BLA0589 Work Order(s): 23A0207

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 207-6,7,	DP 1/25/23
☒ Standing Water Decanted (Not shared)= 207-1,2,3,4,5,9,10,12,13,15,11	DP 1/25/23
☐ Standing Water Homogenized (Shared samples)=	
☒ Clay/Clumps (Difficult to homogenize)= 207-8	DP 1/25/23
☒ Rocks (%+size)? 30% ¼" - ½" = 207-3,9,100,12,14 60% ½" - ½" = 207-15	DP 1/25/23
☒ Organics (Leaves/sticks/grass)= 207-10,16	DP 1/25/23
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☒ Previously Frozen =	CTO 1/26/23
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: SIM Extraction Batch DLA0683

Total Solids Batch: BLA0590 Work Order(s): 23A0249

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 02-11	CR 1/26/23
☒ Standing Water Decanted (Not shared)= 03-06, 08, 10	CR 1/26/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☒ Previously Frozen = 02-11	CR 1/26/23
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y (N)	CR 1/26/23
☒ Multiple Jars Y (N)	CR 1/26/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

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Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: SIM Extraction Batch BLA0683

Total Solids Batch: BLA0590 Work Order(s): 23A0295

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 01-10	CR 1/26/23
☒ Standing Water Decanted (Not shared)= 01,02,04,06,07	CR 1/26/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☒ Previously Frozen = 01-10	CR 1/26/23
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / (N)	CR 1/26/23
☒ Multiple Jars Y / (N)	CR 1/26/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

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Analytical Resources, Incorporated
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Organic Extractions Laboratory Analyst Notes

Extraction Parameter: SIM Extraction Batch: BLA0683

Total Solids Batch: BLA0619 Work Order(s): L3A0313

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 12, 11	[initials] 01/27/23
☒ Standing Water Decanted (Not shared)= 01, 02, 05=11, 13 1/27/23	[initials] 01/27/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= sulfur odor = 01, 02, 05 — 11, 13 \ fuel odor 03, 04.	[initials] 01/27/23
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / N	[initials] 01/27/23
☒ Multiple Jars Y / N	[initials] 01/27/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

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Revision 15
07/01/19

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: SIM Extraction Batch BLA0683

Total Solids Batch: BLA0320 Work Order(s): 23A0326

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= ϕ7, ϕ8.	NJ ϕ1/27/23
☒ Standing Water Decanted (Not shared)= ϕ1 – 12	NJ ϕ1/27/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= ϕ1 – ϕ6, ϕ9 – 12.	NJ ϕ1/27/23
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / N	
☒ Multiple Jars Y / N	NJ ϕ1/27/23
☐ Sample Pre-Screens indicate analyte activity=	NJ ϕ1/27/23
☐ Sample weights/volumes reduced based on Pre-Screen=	

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BLA0683 23A0207/249/295/313/326 ~~PSDDA SVOC~~

Date:2023-02-02,8:21:39 PM
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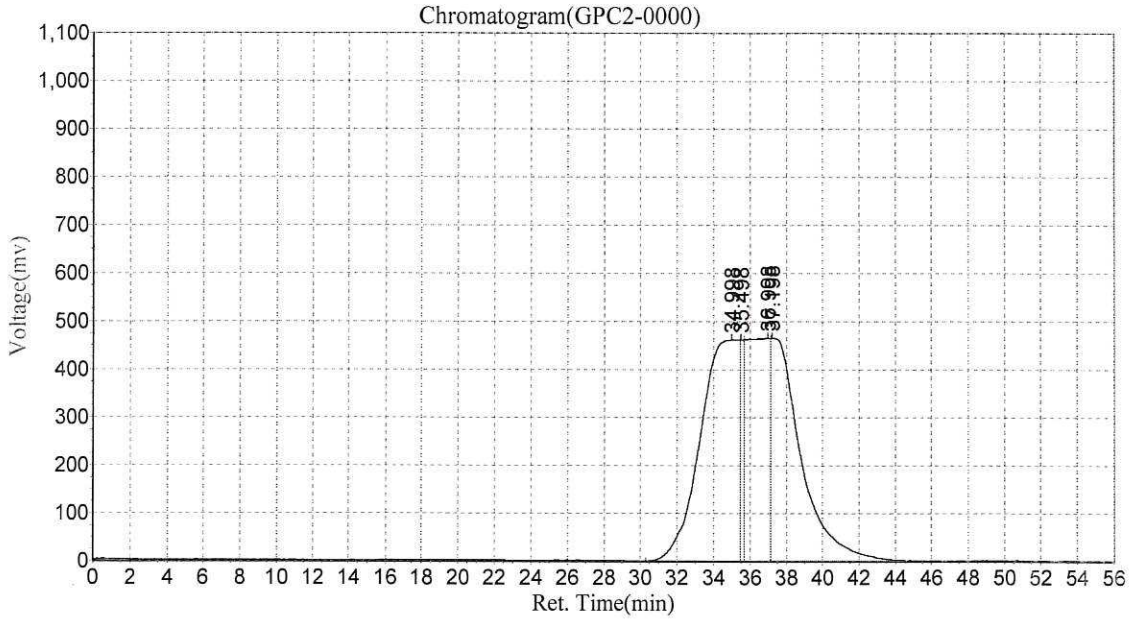
Method File:E:\GPC2_InHouse.mtd

Analyst£°TWC
Date/Time2023-02-02,8:21:39 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		34.998	462779.906	67250400.000	40.3226
2		35.498	462383.969	5546438.500	3.3256
3		36.998	465204.125	40820080.000	24.4753
4		37.198	465312.156	53164016.000	31.8766
Total			1855680.156	166780934.500	100.000

Ingredient Table

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

BLA0683 23A0207/249/295/313/326 ~~PSDDA SVOC~~

Date:2023-02-02,9:19:24 PM
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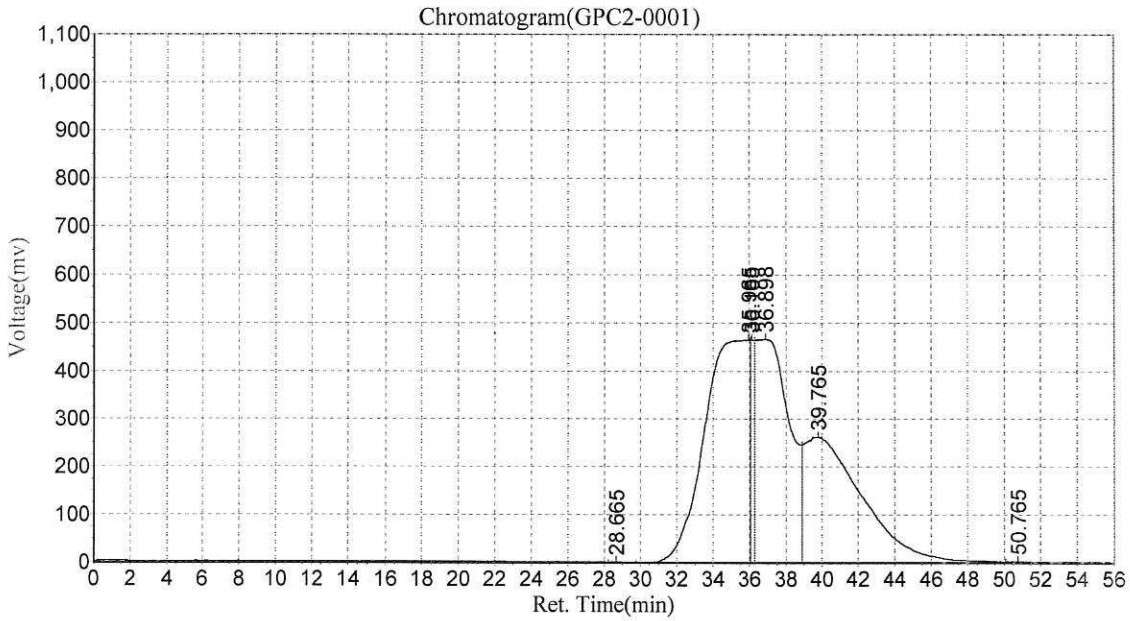
Method File:E:\GPC2_InHouse.mtd

Analyst£ºTWC
Date/Time2023-02-02,9:19:24 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		28.665	1929.831	106790.094	0.0523
2		35.965	466271.906	80026520.000	39.1944
3		36.165	466463.031	5595818.500	2.7406
4		36.898	467998.438	59461916.000	29.1225
5		39.765	263151.000	58778816.000	28.7879
6		50.765	2365.027	208814.094	0.1023
Total			1668179.233	204178674.688	100.000

Ingredient Table

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

BLA0683 23A0207/249/295/313/326 ~~PSDDA SVOC~~

Date:2023-02-02,10:17:06 PM
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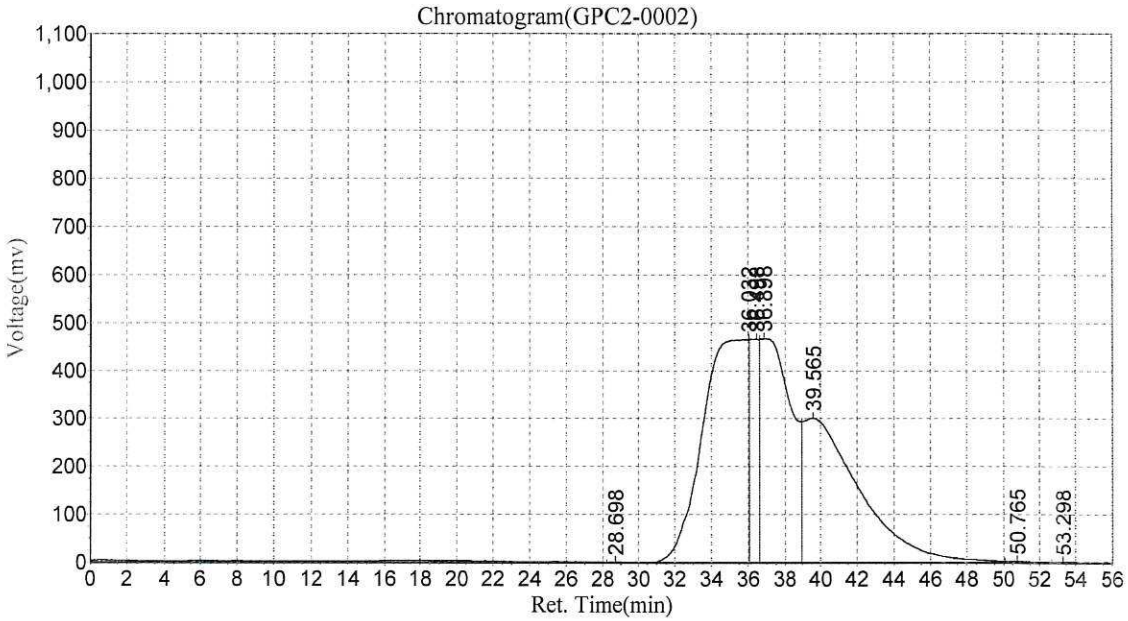
Method File:E:\GPC2_InHouse.mtd

Analyst£ºTWC
Date/Time2023-02-02,10:17:06 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		28.698	2463.859	143297.484	0.0663
2		36.032	467350.656	80045688.000	37.0349
3		36.498	468077.344	14966868.000	6.9247
4		36.898	469001.656	55208184.000	25.5433
5		39.565	301660.969	65301040.000	30.2129
6		50.765	3672.394	355260.875	0.1644
7		53.298	1939.964	115634.453	0.0535
Total			1714166.841	216135972.813	100.000

Ingredient Table

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

BLA0683 23A0207/249/295/313/326 ~~PSDDA~~ SVOC

Date:2023-02-02,11:14:50 PM
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Method File:E:\GPC2_InHouse.mtd

Analyst£ºTWC
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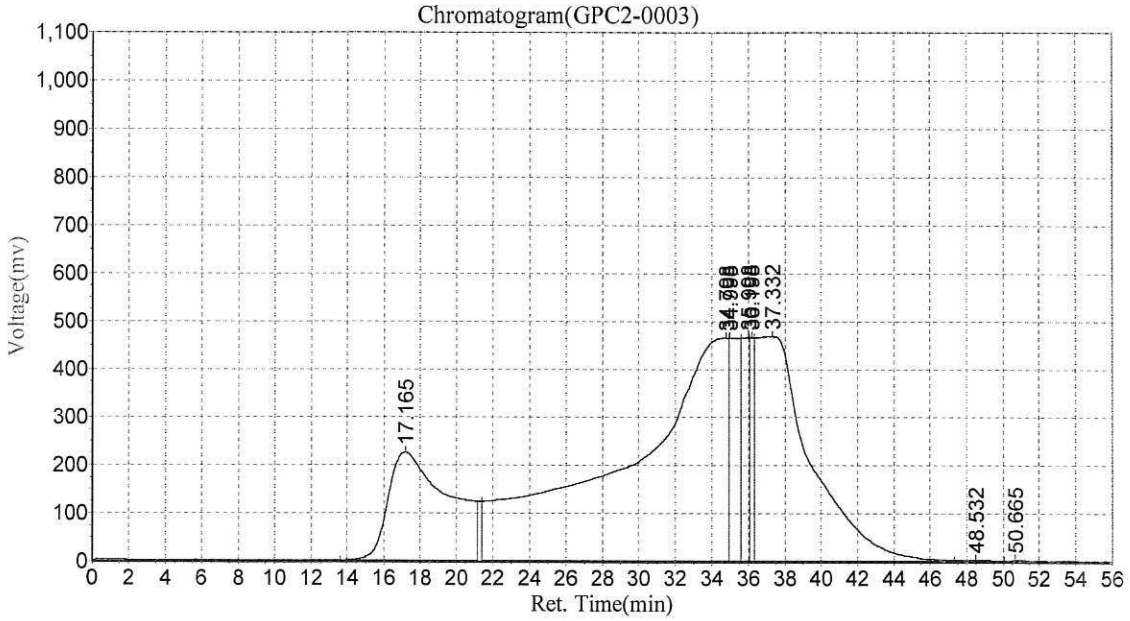

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.165	224601.266	51653576.000	14.0564
2		34.798	464461.281	179650384.000	48.8879
3		34.998	464240.656	18550414.000	5.0481
4		35.998	464909.531	13004145.000	3.5388
5		36.198	465242.906	7439951.000	2.0246
6		37.332	467331.688	96709328.000	26.3173
7		48.532	2622.546	321109.906	0.0874
8		50.665	2085.188	145165.078	0.0395
Total			2555495.063	367474072.984	100.000

Ingredient Table

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

BLA0683 23A0207/249/295/313/326 ~~PSDDA SVOC~~

Date:2023-02-03,12:12:31 AM
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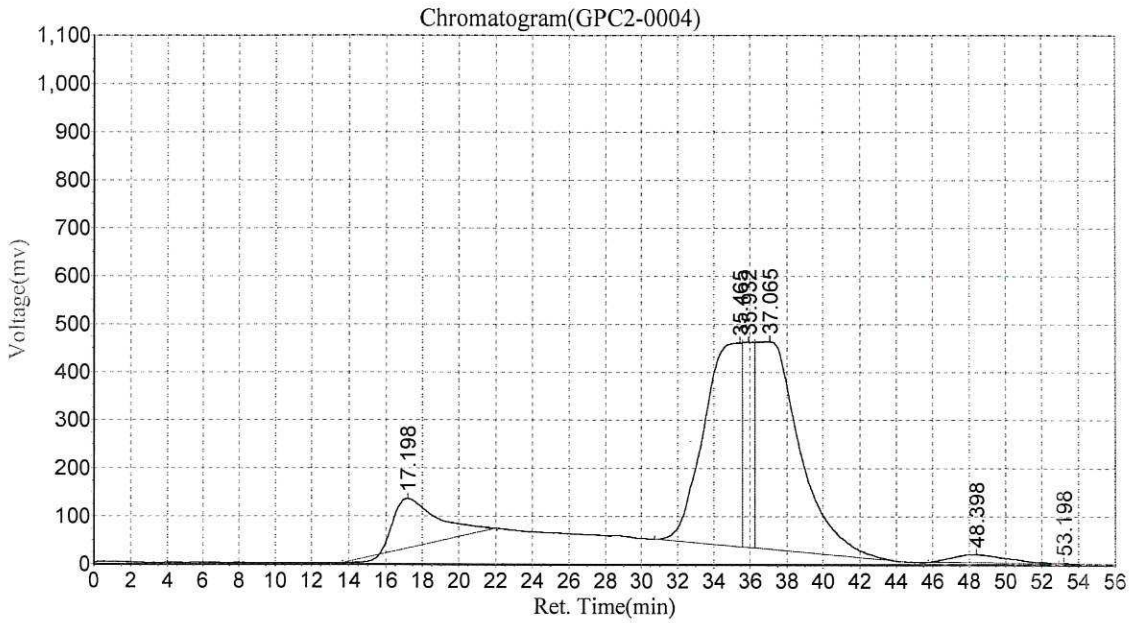

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.198	103859.641	16772050.000	9.9215
2		35.465	423849.281	59973016.000	35.4772
3		35.932	427541.000	17072136.000	10.0991
4		37.065	432420.375	71367624.000	42.2177
5		48.398	17561.232	3733371.000	2.2085
6		53.198	2032.452	128595.063	0.0761
Total			1407263.981	169046792.063	100.000

Ingredient Table

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

BLA0683 23A0207/249/295/313/326 PSDDA SVOC

Date:2023-02-03,1:10:19 AM
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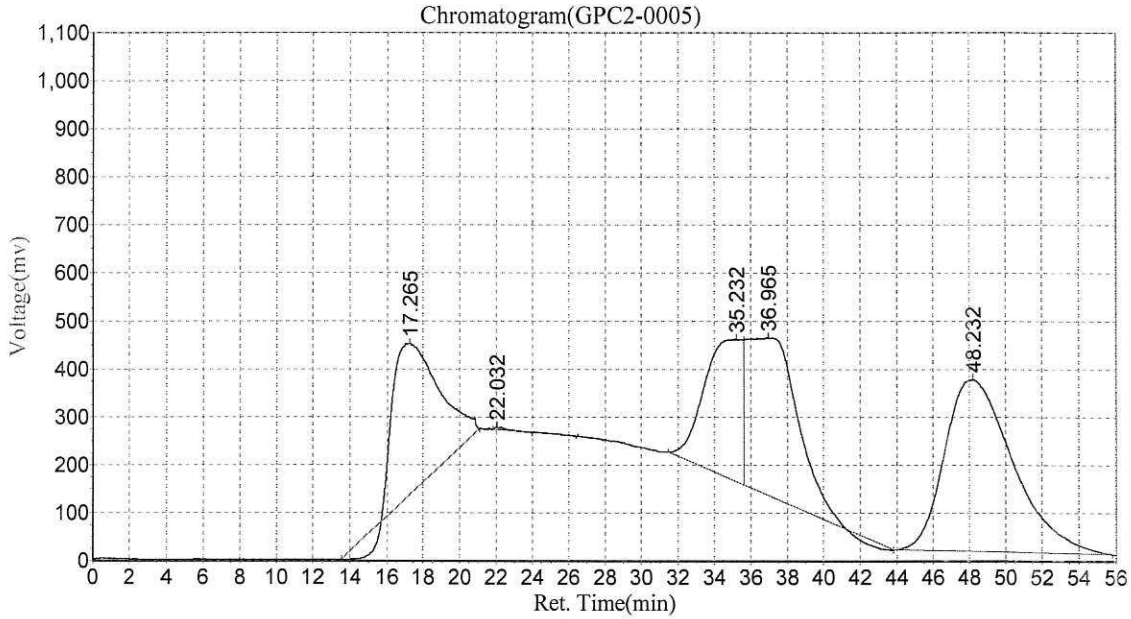
Analyst£ºTWC
Date/Time2023-02-03,1:10:19 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.265	314913.031	52300416.000	20.8043
2		22.032	5661.474	282365.594	0.1123
3		35.232	297091.719	41670928.000	16.5760
4		36.965	328802.625	62632340.000	24.9142
5		48.232	358413.219	94506504.000	37.5932
Total			1304882.067	251392553.594	100.000

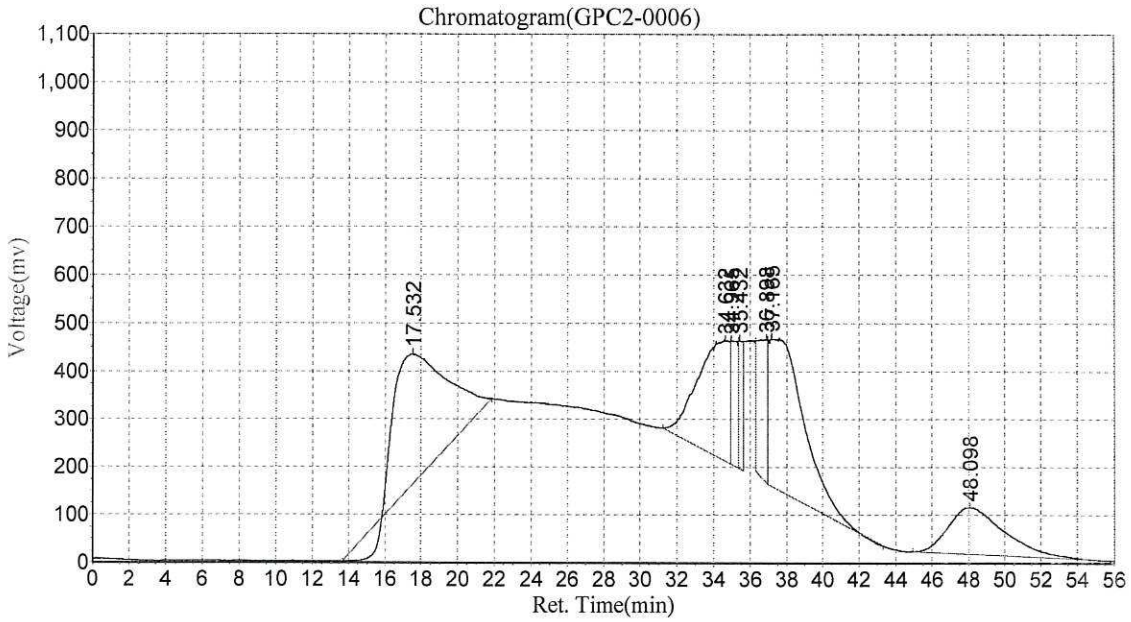
Ingredient Table

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

BLA0683 23A0207/249/295/313/326 PSDDA SVOC

Date:2023-02-03,2:08:00 AM
Data File:c:\n2000\data\gpc2\020223\GPC2-0006
Method File:E:\GPC2_InHouse.mtd

Analyst£ºTWC
Date/Time2023-02-03,2:08:00 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.532	271902.906	49996660.000	30.1162
2		34.632	251321.703	28982862.000	17.4582
3		34.965	257266.750	7278267.500	4.3842
4		35.432	269060.219	4297007.000	2.5884
5		36.898	299770.844	11729887.000	7.0657
6		37.165	307776.688	42546676.000	25.6286
7		48.098	97117.070	21181228.000	12.7588
Total			1754216.180	166012587.500	100.000

Ingredient Table

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

BLA0683 23A0207/249/295/313/326 ~~PSDDA SVOC~~

Date:2023-02-03,3:05:43 AM
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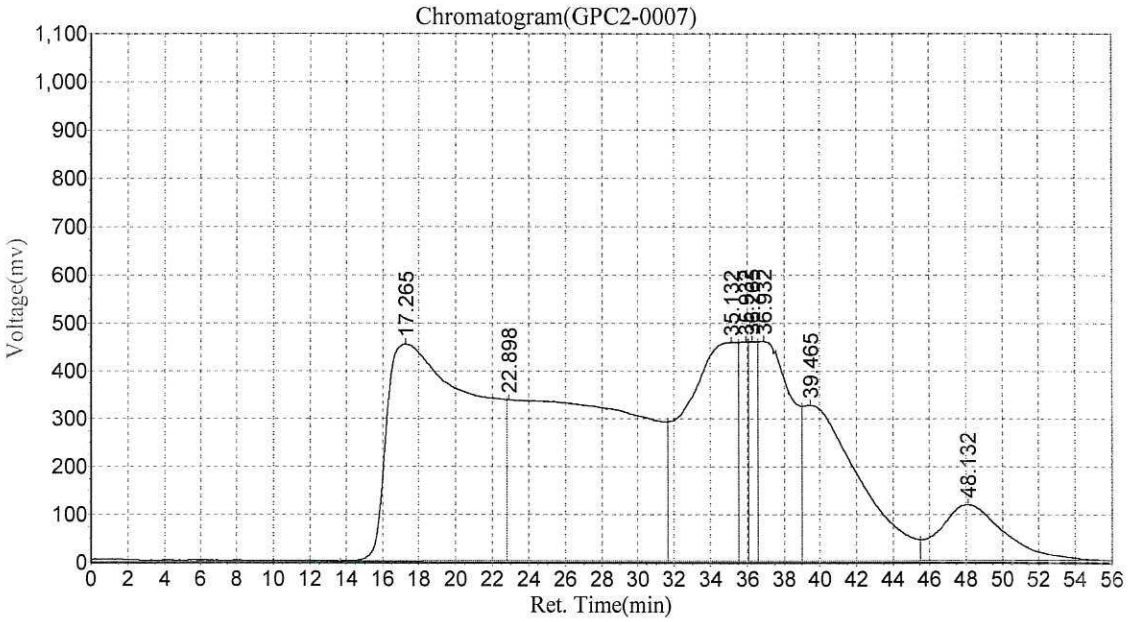
Date/Time2023-02-03,3:05:44 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.265	452407.938	156356352.000	26.0695
2		22.898	336108.969	169868304.000	28.3224
3		35.132	455910.875	89104992.000	14.8566
4		35.932	456753.531	14604799.000	2.4351
5		36.265	457339.969	14630709.000	2.4394
6		36.932	457927.844	57260720.000	9.5472
7		39.465	324297.594	69352872.000	11.5633
8		48.132	116227.008	28588052.000	4.7665
Total			3056973.727	599766800.000	100.000

Ingredient Table

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

BLA0683 23A0207/249/295/313/326 ~~PSDDA~~ SVOC

Date:2023-02-03,4:03:24 AM
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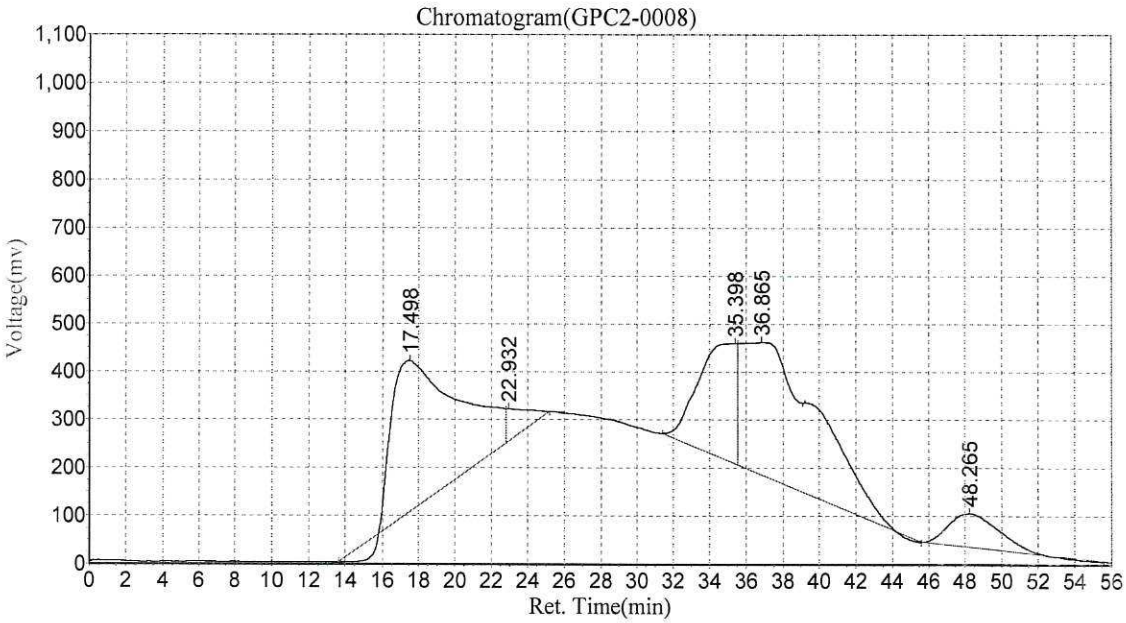

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.498	314550.094	74786392.000	35.3328
2		22.932	67745.508	5143057.500	2.4298
3		35.398	251036.063	34348928.000	16.2282
4		36.865	277122.625	83870256.000	39.6245
5		48.265	70504.664	13513937.000	6.3847
Total			980958.953	211662570.500	100.000

Ingredient Table

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

BLA0683 23A0207/249/295/313/326 PSDDA SVOC

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Method File:E:\GPC2_InHouse.mtd

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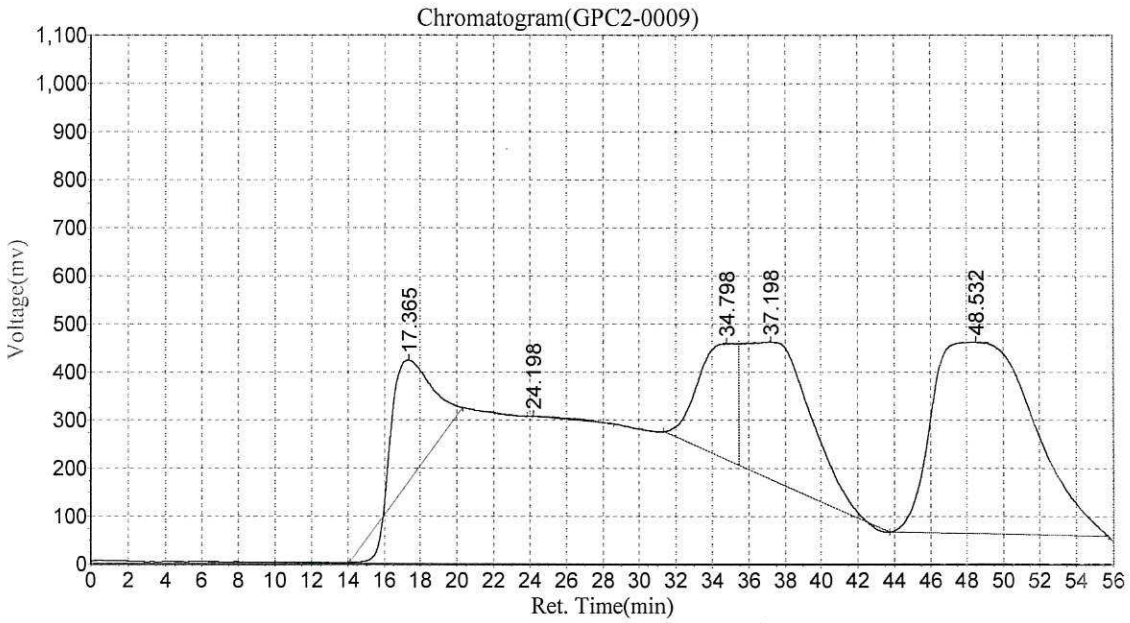

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	253076.938	34035368.000	11.4757
2		24.198	1548.352	551275.625	0.1859
3		34.798	241417.547	34753688.000	11.7179
4		37.198	285579.594	73586008.000	24.8110
5		48.532	396909.406	153659616.000	51.8095
Total			1178531.837	296585955.625	100.000

Ingredient Table

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

BLA0683 23A0207/249/295/313/326 PSDDA SVOC

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Method File:E:\GPC2_InHouse.mtd

Analyst£ºTWC
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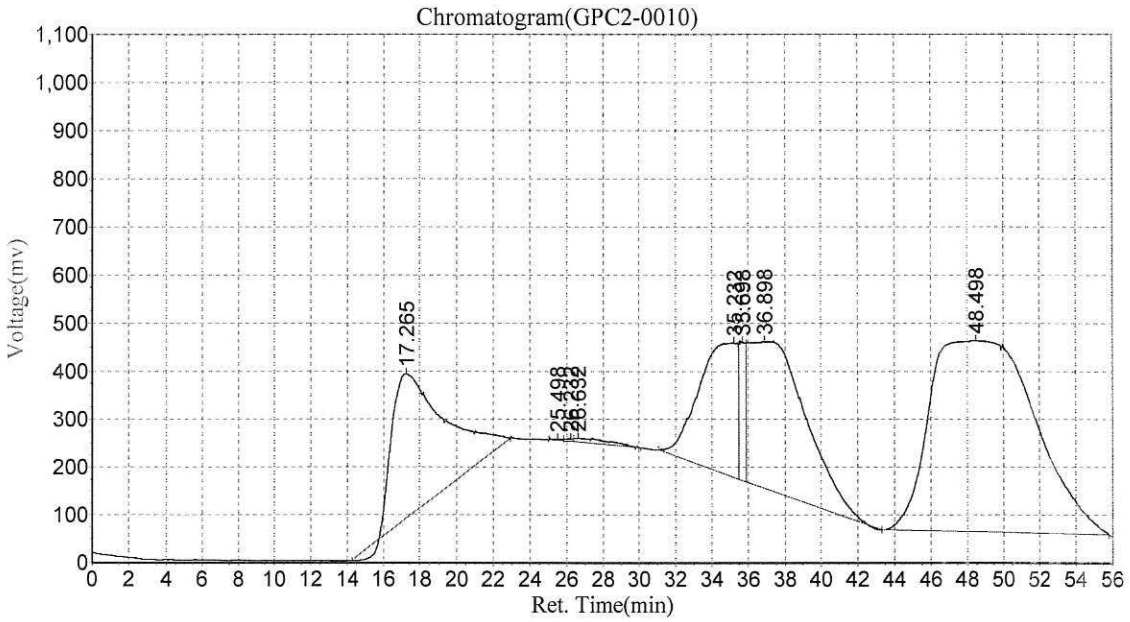

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.265	301585.656	58040020.000	17.2727
2		25.498	4945.564	211897.125	0.0631
3		26.232	7706.532	228023.844	0.0679
4		26.632	9703.787	1523924.250	0.4535
5		35.232	279869.375	40176824.000	11.9566
6		35.698	288066.219	6885327.500	2.0491
7		36.898	305517.188	67790240.000	20.1744
8		48.498	398102.656	161164608.000	47.9627
Total			1595496.977	336020864.719	100.000

Ingredient Table

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

BLA0683 23A0207/249/295/313/326 PSDDA SVOC

Date:2023-02-03,6:56:33 AM
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Method File:E:\GPC2_InHouse.mtd

Analyst£ºTWC
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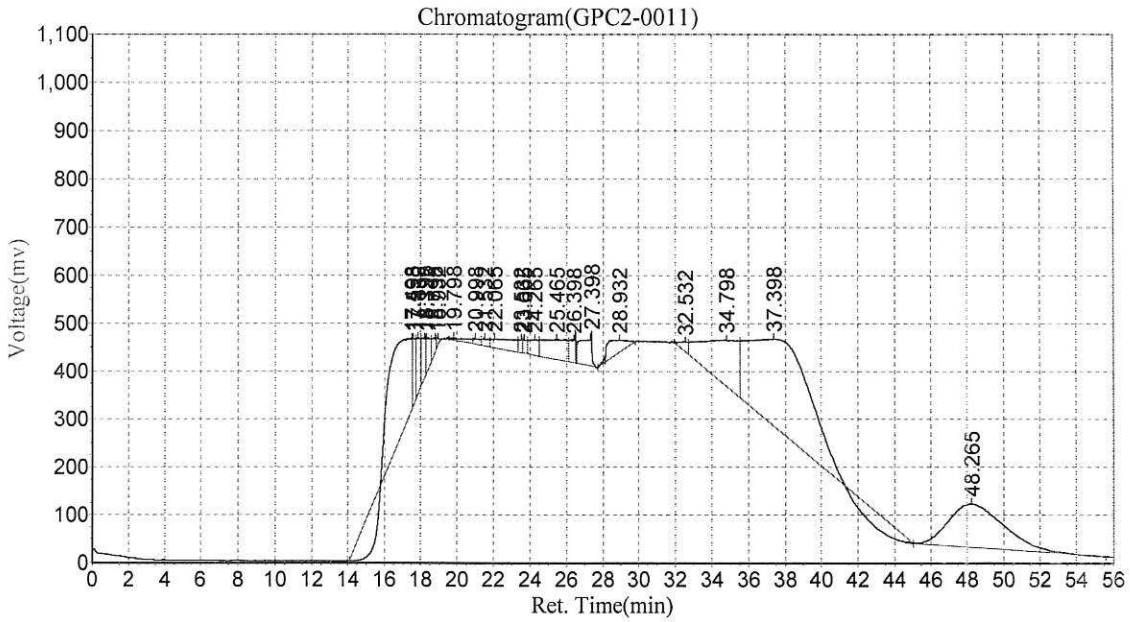

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.498	150156.766	12097292.000	11.4156
2		17.598	140476.156	1645478.500	1.5527
3		17.832	119357.398	2056264.875	1.9404
4		18.198	85322.492	1252242.750	1.1817
5		18.332	72737.344	1161352.625	1.0959
6		18.798	29226.830	654541.313	0.6177
7		18.932	17179.684	163270.047	0.1541
8		19.798	4424.072	503451.313	0.4751
9		20.998	11694.288	334645.313	0.3158
10		21.532	15486.384	427853.938	0.4037
11		22.065	19205.479	2003156.625	1.8903
12		23.532	28287.742	438005.344	0.4133
13		23.665	28841.768	461408.500	0.4354
14		24.265	33595.375	1295721.375	1.2227
15		25.465	42509.590	3904855.500	3.6848
16		26.398	49051.758	1208008.375	1.1399
17		27.398	60342.438	2605926.000	2.4591
18		28.932	29036.000	2720518.500	2.5672
19		32.532	20221.428	634607.125	0.5988
20		34.798	96254.375	12312502.000	11.6186
21		37.398	181448.219	39008568.000	36.8102

22		48.265	90207.734	19082378.000	18.0070
Total			1325063.318	105972048.016	100.000

Ingredient Table

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

BLA0683 23A0207/249/295/313/326 PSDDA SVOC

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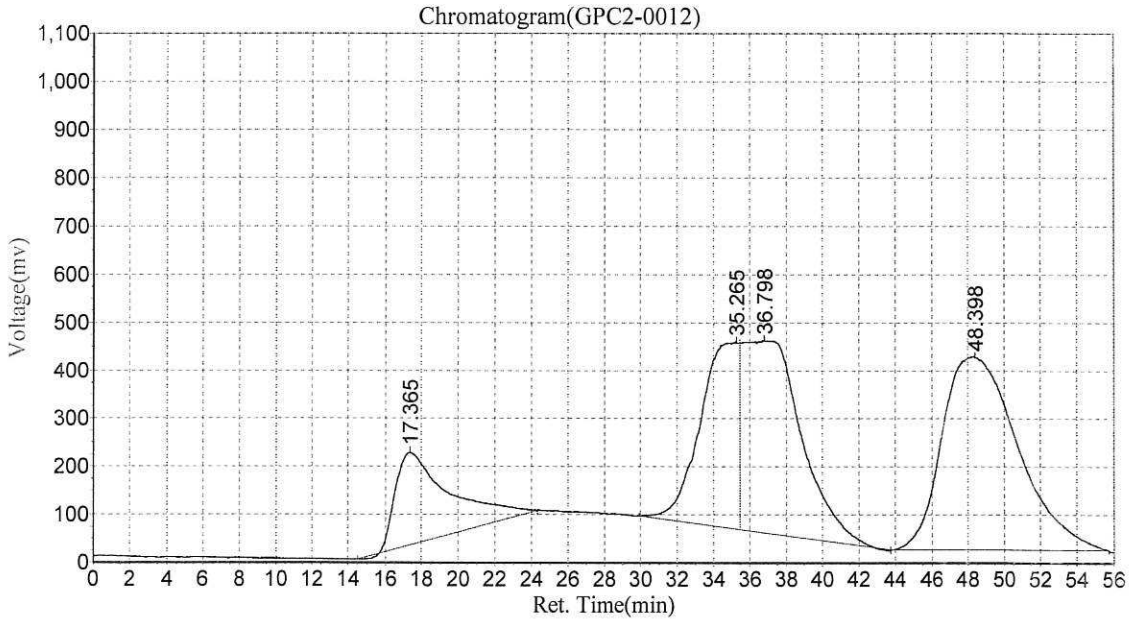

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	192764.609	39357356.000	12.9566
2		35.265	389684.469	56802572.000	18.6996
3		36.798	400426.688	90046592.000	29.6436
4		48.398	402658.625	117557240.000	38.7002
Total			1385534.391	303763760.000	100.000

Ingredient Table

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

BLA0683 23A0207/249/295/313/326 ~~PSDDA SVOC~~

Date:2023-02-03,8:51:58 AM
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Analyst£ºTWC
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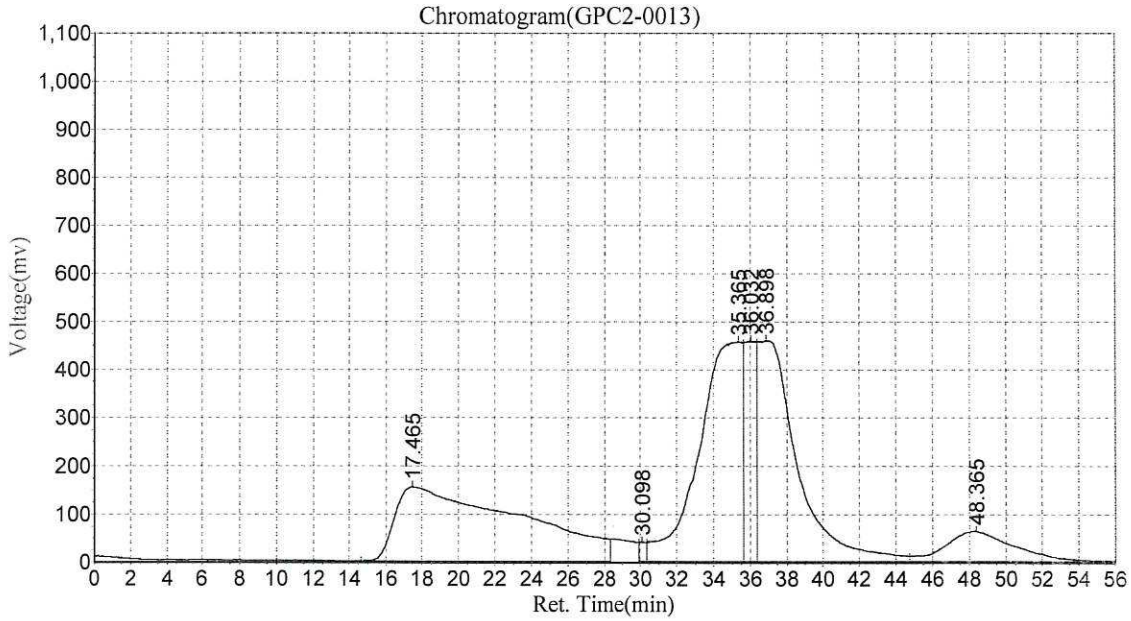

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.465	154916.563	73637648.000	29.1653
2		30.098	39966.410	1115042.750	0.4416
3		35.365	454919.375	73257320.000	29.0147
4		36.032	456558.688	20031644.000	7.9338
5		36.898	457025.906	68557808.000	27.1534
6		48.365	61729.695	15884059.000	6.2911
Total			1625116.637	252483521.750	100.000

Ingredient Table

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

PNA

BLA0683 23A0207/249/295/313/326 PSDDA SVOC

Date:2023-02-03,9:49:39 AM
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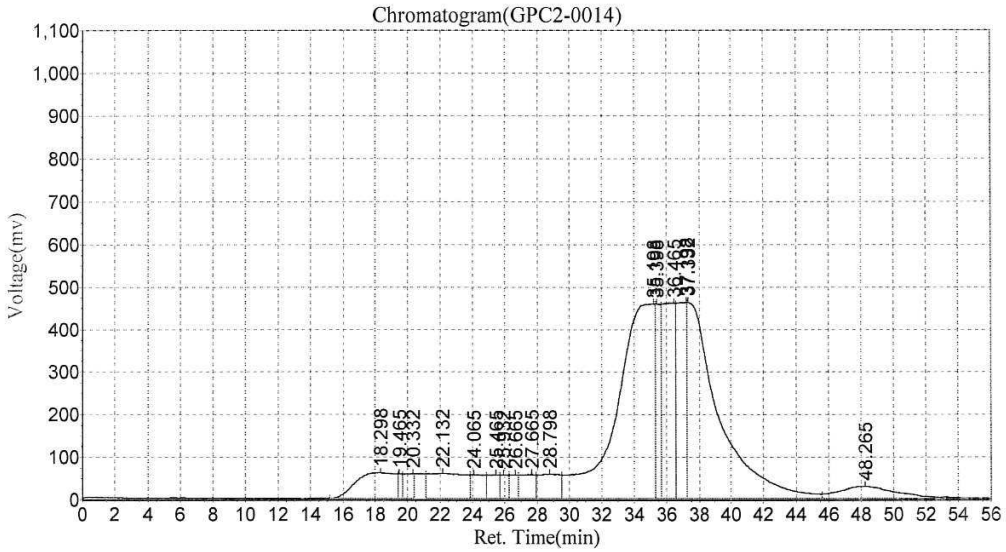
Date/Time2023-02-03,9:49:40 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		18.298	60048.105	9976911.000	4.1927
2		19.465	57496.121	1032012.313	0.4337
3		20.332	57767.902	2407162.250	1.0116
4		22.132	58504.297	9364249.000	3.9353
5		24.065	55681.348	3322191.000	1.3961
6		25.465	55570.766	2872310.500	1.2071
7		25.932	55568.574	1768891.500	0.7434
8		26.665	55674.695	1995675.875	0.8387
9		27.665	56416.137	3564821.250	1.4981
10		28.798	57244.238	5422950.500	2.2790
11		35.198	457051.875	73606272.000	30.9327
12		35.398	457298.344	9130736.000	3.8371
13		36.465	459425.625	25671926.000	10.7885
14		37.198	460735.750	18402272.000	7.7335
15		37.332	460656.406	62422432.000	26.2327
16		48.265	27794.424	6995441.500	2.9398
Total			2892934.607	237956254.688	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.

BLA0683 23A0207/249/295/313/326 PSDDA SVOC

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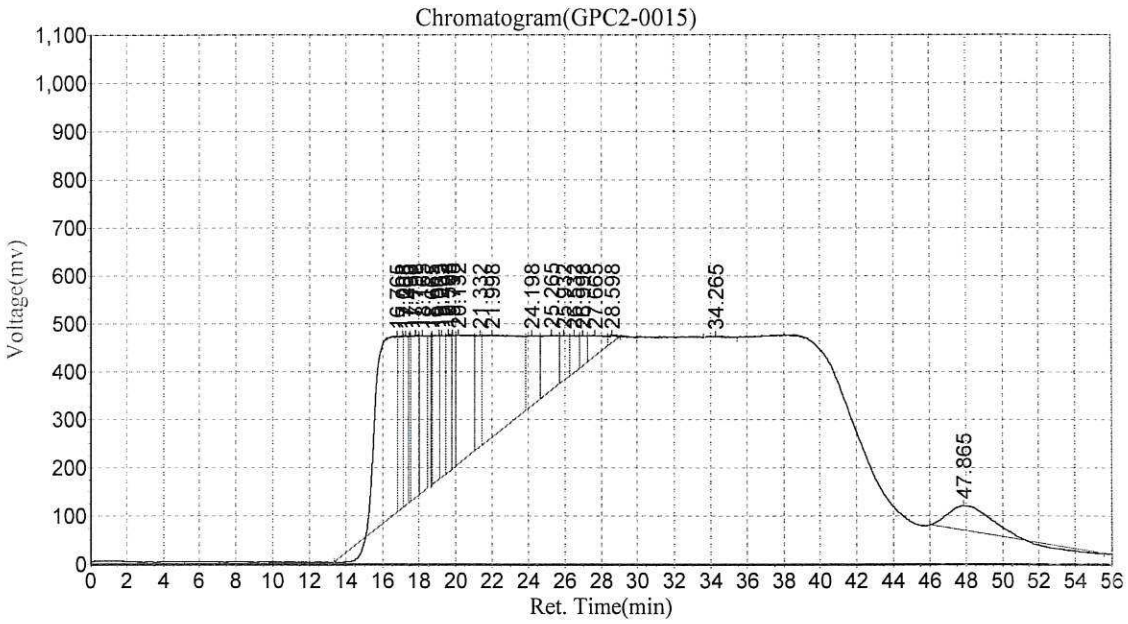
Method File:E:\GPC2_InHouse.mtd

Analyst£°TWC
Date/Time2023-02-03,10:47:24 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.765	366755.031	27846530.000	16.6186
2		17.098	357504.188	6483723.000	3.8694
3		17.265	353105.281	6336659.500	3.7817
4		17.498	345865.625	2076042.250	1.2390
5		17.798	337955.188	10126274.000	6.0433
6		18.165	326858.969	8421210.000	5.0257
7		18.665	311410.250	1864343.500	1.1126
8		19.065	300170.656	7288757.000	4.3499
9		19.232	295165.750	5279274.500	3.1506
10		19.598	284403.531	5684591.500	3.3925
11		19.798	279446.250	3864737.750	2.3064
12		20.132	268987.438	16419343.000	9.7990
13		21.332	232315.672	5617237.500	3.3523
14		21.998	212943.031	27656592.000	16.5053
15		24.198	146117.797	6902572.000	4.1194
16		25.265	115453.578	7447817.000	4.4448
17		25.932	94808.930	2958746.250	1.7658
18		26.532	76900.055	2443072.500	1.4580
19		26.998	62582.703	1717754.750	1.0251
20		27.665	43160.063	2543189.000	1.5178
21		28.598	15553.361	426100.313	0.2543

22		34.265	1755.064	112754.148	0.0673
23		47.865	51972.305	8044898.500	4.8011
Total			4881190.714	167562219.961	100.000

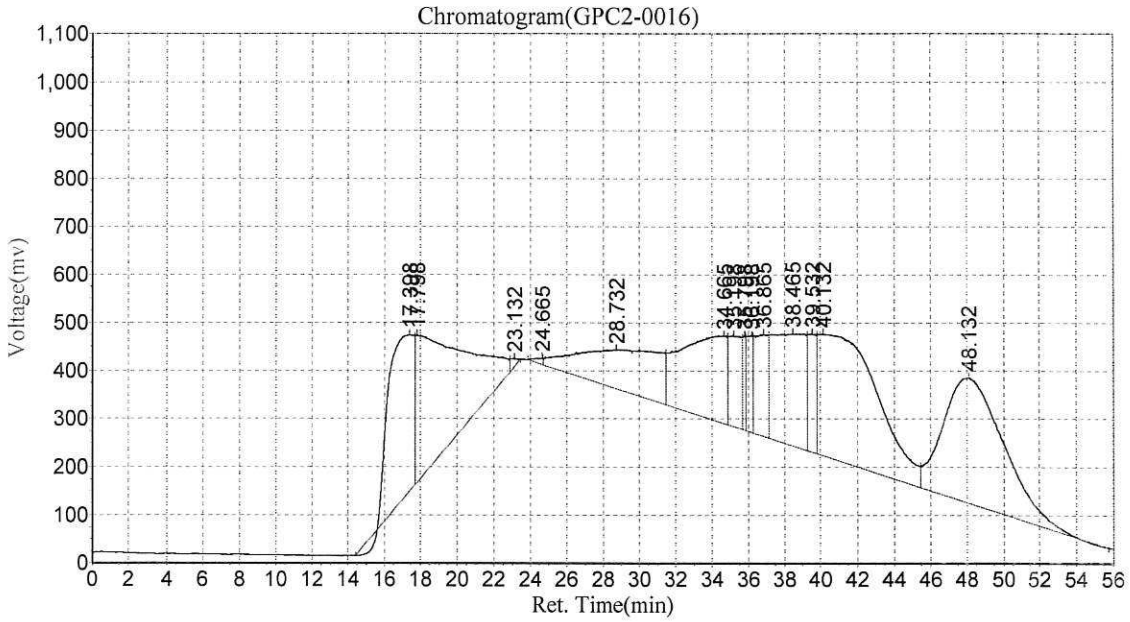
Ingredient Table

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

BLA0683 23A0207/249/295/313/326 ~~PSDDA SVOC~~

Date:2023-02-03,11:45:05 AM
Data File:c:\n2000\data\gpc2\020223\GPC2-0016
Method File:E:\GPC2_InHouse.mtd

Analyst£°TWC
Date/Time2023-02-03,11:45:06 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.398	324336.125	32039514.000	9.9187
2		17.798	305546.000	50962064.000	15.7767
3		23.132	16512.959	516093.500	0.1598
4		24.665	12271.665	353445.594	0.1094
5		28.732	79824.297	26664902.000	8.2549
6		34.665	181378.484	30154842.000	9.3353
7		35.198	187763.922	8999736.000	2.7861
8		35.798	194910.672	2327127.500	0.7204
9		36.198	199988.500	4749149.500	1.4702
10		36.865	211014.563	10773333.000	3.3352
11		38.465	231982.891	29139394.000	9.0209
12		39.532	244471.781	7808018.500	2.4172
13		40.132	251630.516	58841484.000	18.2160
14		48.132	257314.172	59691644.000	18.4792
Total			2698946.546	323020747.594	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2						
3						

2023-02-03 **Analytical Resources, Inc.**

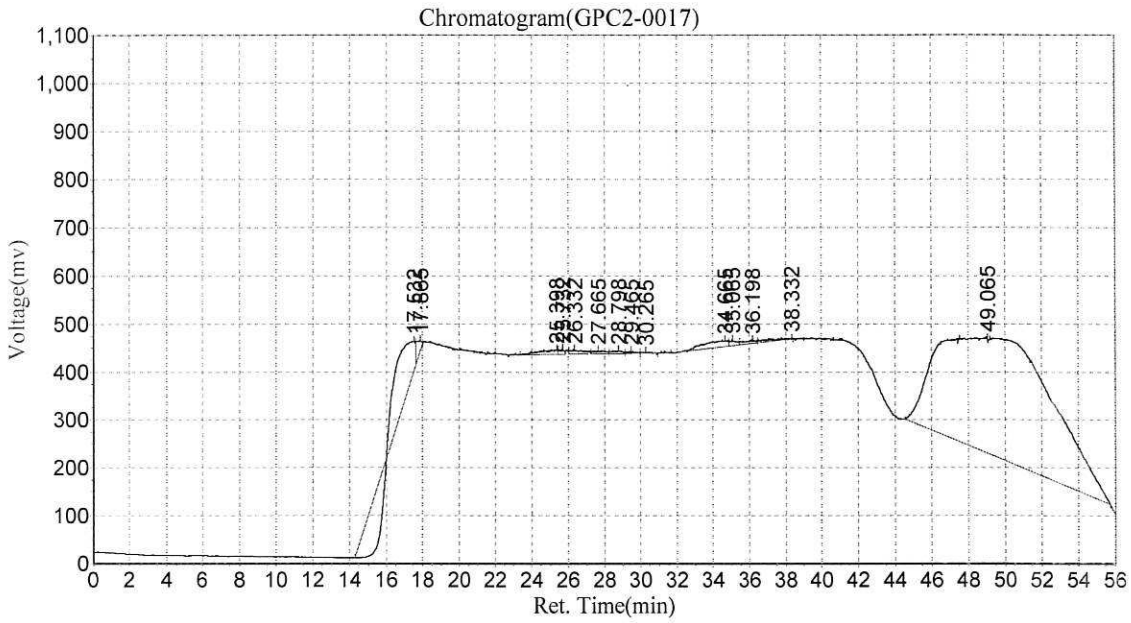
4	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

-1617 PNA

BLA0683 23A0207/249/295/313/326 PSDDA SVOC

Date:2023-02-03,12:42:48 PM
Data File:c:\n2000\data\gpc2\020223\GPC2-0017
Method File:E:\GPC2_InHouse.mtd

Analyst£°TWC
Date/Time2023-02-03,12:42:48 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.532	62962.734	2069155.875	1.8043
2		17.865	23356.572	640010.125	0.5581
3		25.398	9312.584	698289.563	0.6089
4		25.732	9808.682	208419.906	0.1817
5		26.332	8977.257	440951.313	0.3845
6		27.665	6698.646	345836.688	0.3016
7		28.798	5973.177	269666.188	0.2352
8		29.465	4193.372	166344.641	0.1451
9		30.265	2563.805	106823.953	0.0932
10		34.665	13693.869	1498502.000	1.3067
11		35.065	12427.252	388743.188	0.3390
12		36.198	8756.669	483430.156	0.4216
13		38.332	4223.042	692287.750	0.6037
14		49.065	238951.469	106668840.000	93.0165
Total			411899.131	114677301.344	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2						
3						

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Analytical Resources, Inc.

4	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0683 23A0207/249/295/313/326 PSDDA SVOC

Date:2023-02-03,1:40:30 PM
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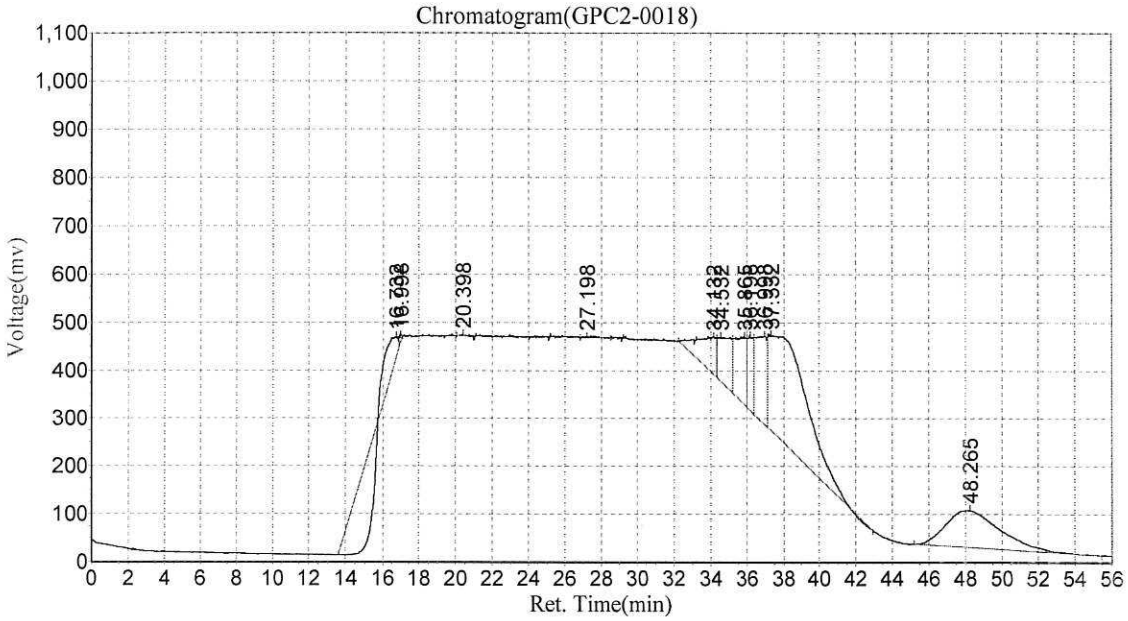
Method File:E:\GPC2_InHouse.mtd

Analyst£°TWC
Date/Time2023-02-03,1:40:30 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		16.732	45919.352	8523812.000	10.0726
2		16.998	15925.276	155252.969	0.1835
3		20.398	3516.694	143889.734	0.1700
4		27.198	2094.000	163273.594	0.1929
5		34.132	76292.023	5178846.500	6.1199
6		34.532	90319.391	5111082.000	6.0398
7		35.865	139968.266	6171932.000	7.2934
8		36.198	153349.234	3645020.000	4.3073
9		36.998	183074.953	7632789.500	9.0197
10		37.332	197526.922	31824870.000	37.6077
11		48.265	77143.633	16072590.000	18.9931
Total			985129.744	84623358.297	100.000

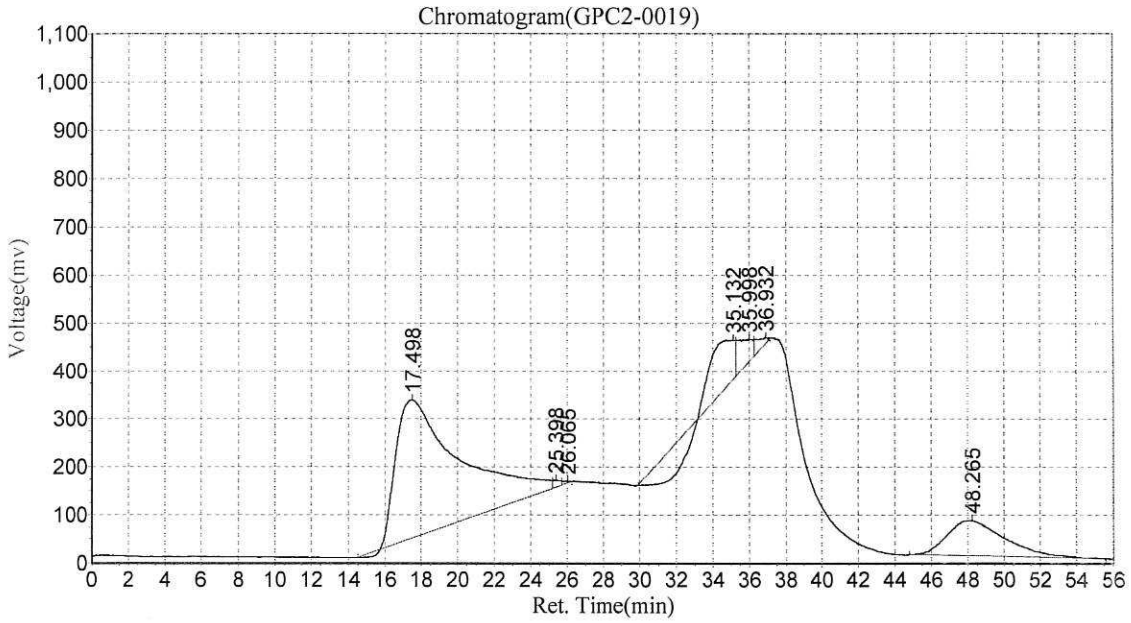
Ingredient Table

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

BLA0683 23A0207/249/295/313/326 PSDDA SVOC

Date:2023-02-03,2:38:13 PM
Data File:c:\n2000\data\gpc2\020223\GPC2-0019
Method File:E:\GPC2_InHouse.mtd

Analyst£°TWC
Date/Time2023-02-03,2:38:14 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.498	288790.219	69298784.000	74.3576
2		25.398	14576.957	418597.844	0.4492
3		26.065	3898.218	139971.906	0.1502
4		35.132	82011.219	2749233.500	2.9499
5		35.998	46565.590	3319897.250	3.5622
6		36.932	9886.218	931136.250	0.9991
7		48.265	73244.594	16339092.000	17.5318
Total			518973.014	93196712.750	100.000

Ingredient Table

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

BLA0683 23A0207/249/295/313/326 ~~PSDDA SVOC~~

Date:2023-02-03,3:35:55 PM
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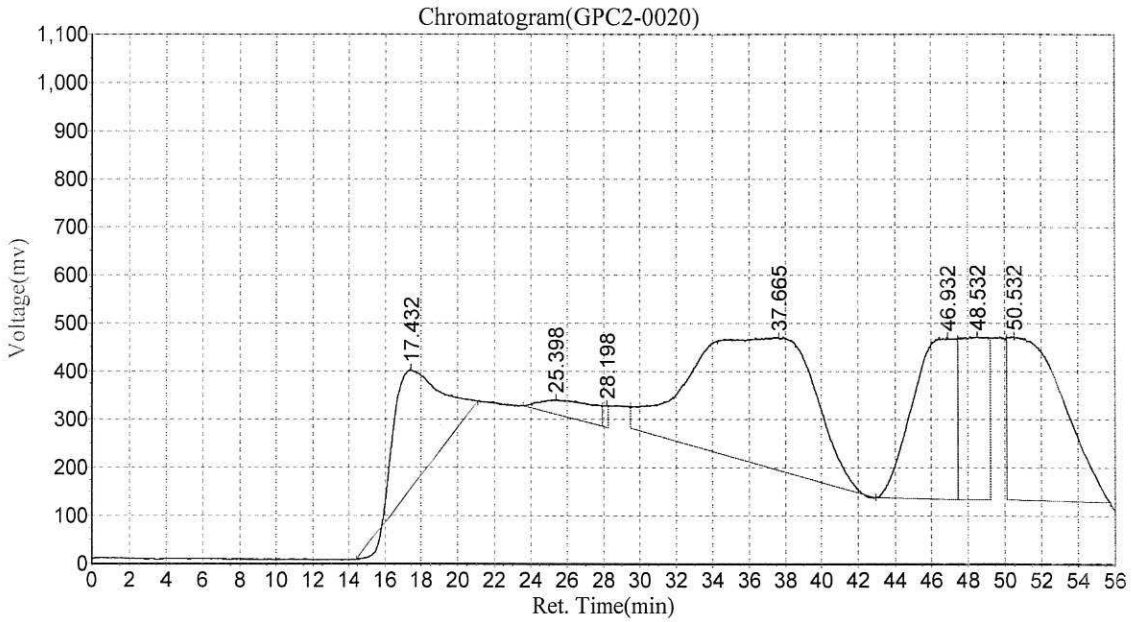
Method File:E:\GPC2_InHouse.mtd

Analyst£ºTWC
Date/Time2023-02-03,3:35:56 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.432	246907.359	39977740.000	11.8431
2		25.398	29472.152	7166949.000	2.1232
3		28.198	45714.168	888203.500	0.2631
4		37.665	280352.594	130623968.000	38.6964
5		46.932	331494.438	54702460.000	16.2052
6		48.532	334813.813	34697888.000	10.2790
7		50.532	335731.531	69504168.000	20.5901
Total			1604486.055	337561376.500	100.000

Ingredient Table

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

BLA0683 23A0207/249/295/313/326 PSDDA SVOC

Date:2023-02-03,4:33:38 PM
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Method File:E:\GPC2_InHouse.mtd

Analyst£°TWC
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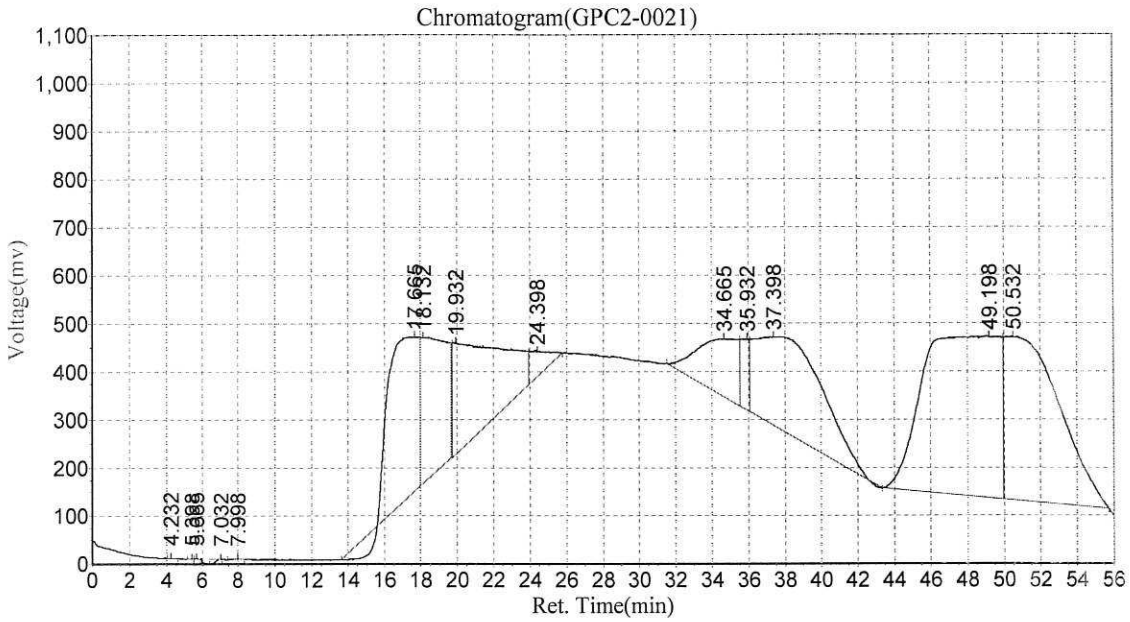


Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		4.232	2923.735	102155.758	0.0296
2		5.398	6411.877	126159.086	0.0365
3		5.665	7692.510	166386.672	0.0481
4		7.032	6402.068	143318.547	0.0415
5		7.998	2383.118	145098.828	0.0420
6		17.665	320849.281	37015128.000	10.7086
7		18.132	303389.031	27385254.000	7.9227
8		19.932	228741.828	38189688.000	11.0484
9		24.398	53874.801	3971512.250	1.1490
10		34.665	119432.836	17935770.000	5.1889
11		35.932	147077.063	4601548.500	1.3312
12		37.398	182894.750	50871432.000	14.7173
13		49.198	332663.313	95740272.000	27.6980
14		50.532	336072.063	69263712.000	20.0383
Total			2050808.273	345657435.641	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2						
3						

2023-02-03

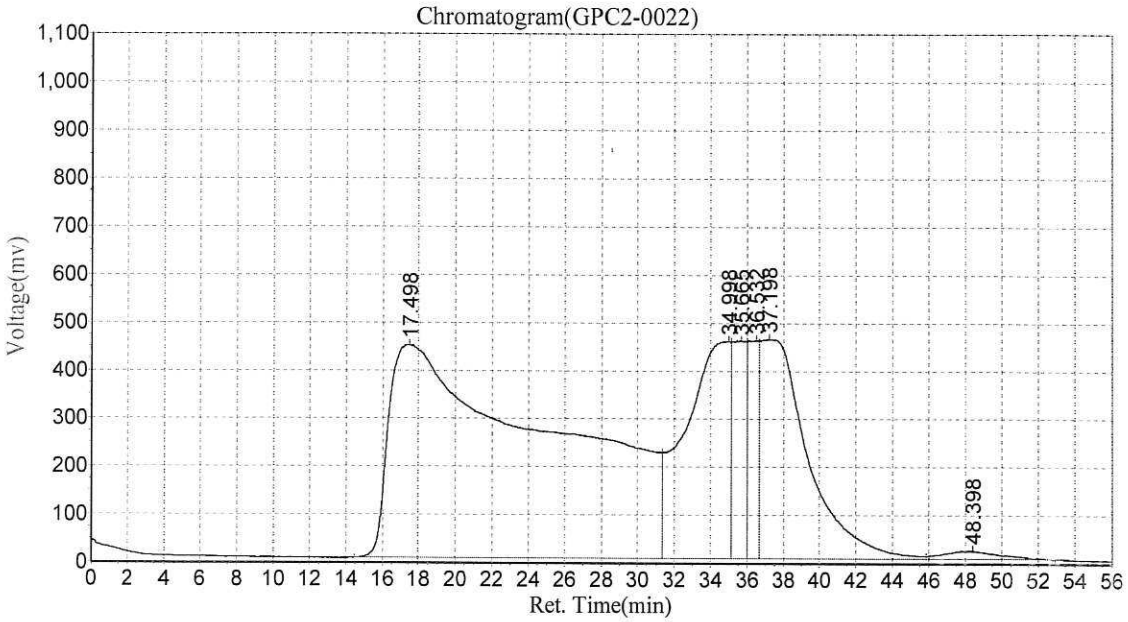
Analytical Resources, Inc.

4	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

BLA0683 23A0207/249/295/313/326 PSDDA SVOC

Date:2023-02-03,5:31:19 PM
Data File:c:\n2000\data\gpc2\020223\GPC2-0022
Method File:E:\GPC2_InHouse.mtd

Analyst£°TWC
Date/Time2023-02-03,5:31:20 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.498	443615.781	273805472.000	57.0171
2		34.998	453027.906	77459216.000	16.1301
3		35.665	453917.656	23558834.000	4.9059
4		36.532	454958.625	18174318.000	3.7846
5		37.198	457432.375	83429976.000	17.3734
6		48.398	16758.920	3788306.750	0.7889
Total			2279711.264	480216122.750	100.000

Ingredient Table

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

BLA0683 23A0207/249/295/313/326 PSDDA SVOC

Date:2023-02-03,6:29:02 PM
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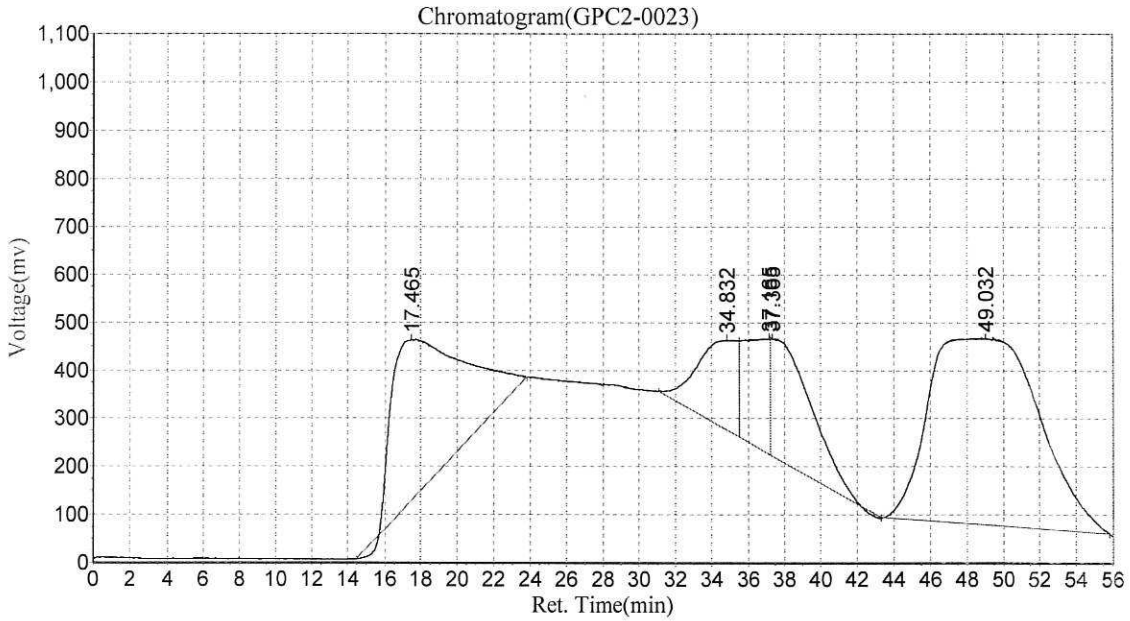
Method File:E:\GPC2_InHouse.mtd

Analyst£°TWC
Date/Time2023-02-03,6:29:03 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.465	337520.375	88754104.000	25.9983
2		34.832	186786.047	27407800.000	8.0284
3		37.165	240168.063	23002038.000	6.7379
4		37.365	245067.641	39192672.000	11.4805
5		49.032	387579.313	163027232.000	47.7548
Total			1397121.438	341383846.000	100.000

Ingredient Table

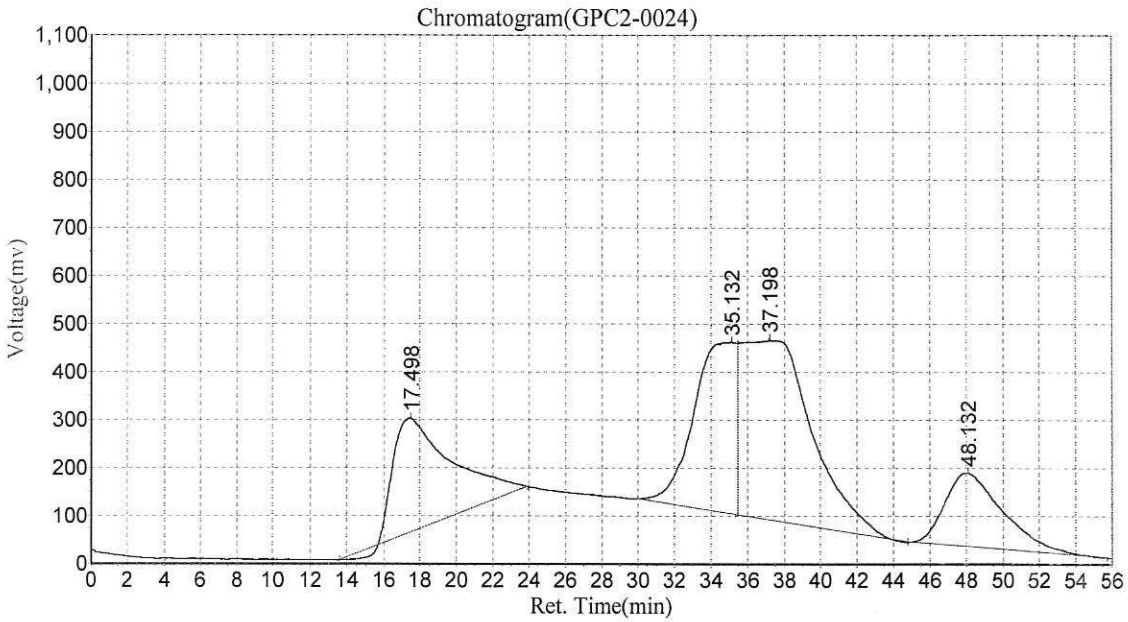
No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	Collect Pest	29.000	0.010	0.00E+000	0.00E+000	0.0000
2	Dump Pest	46.000	0.010	0.00E+000	0.00E+000	0.0000
3	Dump BAN	48.000	0.010	0.00E+000	0.00E+000	0.0000
4	Collect BAN	24.000	0.010	0.00E+000	0.00E+000	0.0000

-09 PNA

BLA0683 23A0207/249/295/313/326 PSDDA SVOC

Date:2023-02-03,7:26:44 PM
Data File:c:\n2000\data\gpc2\020223\GPC2-0024
Method File:E:\GPC2_InHouse.mtd

Analyst£ºTWC
Date/Time2023-02-03,7:26:45 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.498	237727.203	51635180.000	21.2819
2		35.132	357614.375	56225404.000	23.1738
3		37.198	373828.469	100445344.000	41.3994
4		48.132	153996.641	34318940.000	14.1449
Total			1123166.688	242624868.000	100.000

Ingredient Table

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

PREPARATION BATCH SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLE0421 Batch Matrix: Solid
Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1097	23A0207-10	N823053011.D	05/16/23 13:53	
Blank	BLE0421-BLK1	N823053007.D	05/16/23 13:13	
LCS	BLE0421-BS1	N823053008.D	05/16/23 13:13	
LCS Dup	BLE0421-BSD1	N823053009.D	05/16/23 13:13	
Reference	BLE0421-SRM1	N823053010.D	05/16/23 13:13	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0421

Prepared using: EPA 3546 (Microwave)

8270E-SIM PAH (0.1ug/L or 5ug/kg) in Solid (Version:AOC4 cPAH)

Matrix: Solid **Date Prepared:** 05/16/23 **Balance ID:** B14646614 **Set Up By:** CTO 5/15/23

WO Comments

23A0207: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23E0219: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L004753-54, Dup </H> Store in freezer (except GS)

The following standards may be missing from this batch!

Designator	Description
QLS 4	QLS 4

Analysis: 8270E-SIM PAH (0.1ug/L or 5ug/kg)

Lab Number & Container	% Solids	Initial (g) Target Dry: 10 (Wet)	Actual	(REQ/Opt) GPC C/U (1:1) 1 2 3	(REQ/Opt) Sulfur C/U (1:1) Y/N (Transfer Rinse)	(REQ/Opt) Silica Gel C/U (1:1) Y / N	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23A0207-10 A	71.5	(13.98)	13.99	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23E0219-04 A	68.8	(14.53)	14.60	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23E0219-06 A	79.3	(12.60)	12.67	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23E0219-08 A	60.8	(16.45)	16.45	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23E0219-11 A	85.7	(11.66)	11.69	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
23E0219-12 A	84.9	(11.79)	11.81	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	

5/16/23

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 10 (Wet)	Actual	(REQ/Opt) GPC C/U (1:1) 1 2 3	(REQ/Opt) Sulfur C/U (1:1) Y/N (Transfer Rinse)	(REQ/Opt) Silica Gel C/U (1:1) Y / N	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLE0421-BLK1	100.0	(10.00)	10.00	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
BLE0421-BS1	100.0	(10.00)	10.00	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
BLE0421-BSD1	100.0	(10.00)	10.00	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	
BLE0421-MS1	85.7	(11.66)	11.66	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	Use 23E0219-11
BLE0421-MSD1	85.7	(11.66)	11.66	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	Use 23E0219-11
BLE0421-SRM1	100.0	~~(10.00)~~ (5.00) +1g DI WATER	5.00	(1:1) Y / N	(1:1) Y / N	(1:1) Y / N	0.5	0.5	Use ~~J007238~~ I009127

05/16/23
Client ID verified By Date

CTO 5/16/23
Preparation Reviewed By Date

05/16/23 13:53
Extraction Date and Time

Printed: 5/15/2023 9:01:56AM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0421

Prepared using: EPA 3546 (Microwave)

8270E-SIM PAH (0.1ug/L or 5ug/kg) in Solid (Version:AOC4 cPAH)

WO Comments

23A0207: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

23E0219: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L004753-54, Dup </H> Store in freezer (except GS)

Prep Steps	Reagents Used		
Microwave CT (1) 2 3 CT 05/23 Analyst/Date	**Station/Reagent**		**Standard ID**
	Microwave **Analyst:** CT **Date:** 05/23		
	Anhydrous Sodium Sulfate		L005416
	1:1 Methylene Chloride/Acetone		L005472
	Methylene Chloride		K005941
	Pre-Deactivated Glass Wool		L004621
Pre-GPC KD 100°C (No Exchange) 1 2 3 4 (5) (6) CR 5/23/23 Analyst/Date	**Pre GPC KD** **Analyst:** CR **Date:** 5/23/23		
	Hexane		L003500
	Methylene Chloride		K005941
Pre GPC TurboVap 1 (2) 3 4 SH 05/24/23 Analyst/Date	**GPC Filter Prep** **Analyst:** SH **Date:** 05/24/23		
	Methylene Chloride		L005941
	GPC Filter		L001799
GPC (1) 2 3 SH 05/24/23 Analyst/Date	**GPC** **Analyst:** SH **Date:** 05/24/23		
	Methylene Chloride		L005941
	GPC Calibration File		CL L0287 - GPC2
Post-GPC KD 80°C Hexane Exchange 2 x 20 mL 100°C 0 (1) (2) 4 (5) (6) CR 5/25/23 Analyst/Date	**Post GPC KD** **Analyst:** CR **Date:** 5/26/23		
	Methylene Chloride		L005941
	Hexane		L003500
Pre-Cleanup TurboVap 1 2 3 (4) CTO 5/26/23 Analyst/Date	**Vialing** **Analyst:** CTO **Date:** 5/26/23		
	Methylene Chloride		L005941
	Silica Gel (SPE) darts		L003133
Post-Cleanup TurboVap 1 2 (3) 4 CTO 5/26/23 Analyst/Date	Sodium Sulfite		N/A
	Tetrabutylammonium hydrogensulfate (TBAS)		N/A
	Hexane		L003500
Vialing			

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID		Vol uL	Analyst	Witness
Surrogate	**B**	L002091	100µL	CT	
15/75µg/mL	Exp Date: 9/28/2023				
Spike	**15**	L005139	200µL	CT	
15/75µg/mL	Exp Date: 8/4/2023				

MANUALLY ENTER EXPIRATION DATES!

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

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

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0421

Prepared using: EPA 3546 (Microwave)

8270E-SIM PAH (0.1ug/L or 5ug/kg) in Solid (Version:AOC4 cPAH)

WO Comments

23A0207: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23E0219: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L004753-54, Dup </H> Store in freezer (except GS)

Analyst/Date

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLE0421

Prepared using: EPA 3546 (Microwave)

8270E-SIM PAH (0.1ug/L or 5ug/kg) in Solid (Version:AOC4 cPAH)

WO Comments

23A0207: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23E0219: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR L004753-54, Dup </H> Store in freezer (except GS)

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. 3. Add DCM ONLY to the vessels (until solvent is 3 inches above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-re-homogenize while hot then let cool 10-15 min in Refridgerator 05. Re-homogenize while cool. 7. Decant DCM into Erlenmeyer flask with a funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using 1:1 DCM/ACE. 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. If GPC is Req add 10mL Hexane and KD to 5mL at 100°C (NO EXCHANGE) 12. If GPC is NOT Req = KD to 5mL at 100°C. Exchange to Hexane (2X with 10mL) to 5mL at 100°C. 13. TurboVap. 14. If no GPC then Sulfur clean is REQUIRED. 15. Sulfur clean = Hexane transfer rinse. 16. Silica Clean-up Any Color=REQ (All or none). 17. TurboVap 18. Vial in DCM. A. Need Total Solids Y / N B. Archive/Freeze Y / N	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: SIM PAH Extraction Batch BLE0421

Total Solids Batch: BLE0311 Work Order(s): 23E0219

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 01, 02 — 09, 10, 11/12,	05/10/23
☒ Standing Water Decanted (Not shared)= Decant 01, 07, 08, ~~04~~ 12. 5/23/23	05/05/02
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☒ Organics (Leaves/sticks/grass)= 5/4/23	
☒ Oily, obvious fuel/sulfur odors= 30%/ 08, 09, 40%/ 10, 11, 30%/ 12, 13.	05/10/23
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☑ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / N	05/10/23
☒ Multiple Jars Y / N	05/10/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0043	Cleanup Type:	GPC
Cleanup Method:	EPA 3640A GPC Cleanup 1:1	Analysis:	EPA 8270E-SIM

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1062	23A0207-09	N823020622.D	02/06/2023	
Matrix Spike Dup	BLA0683-MSD1	N823020616.D	02/06/2023	
Matrix Spike	BLA0683-MS1	N823020615.D	02/06/2023	
LCS Dup	BLA0683-BSD1	N823020610.D	02/06/2023	
LCS	BLA0683-BS1	N823020609.D	02/06/2023	
Blank	BLA0683-BLK1	N823020608.D	02/06/2023	
LDW23-IT1079	23A0207-03	N823020614.D	02/06/2023	
LDW23-IT1068	23A0207-08	N823020621.D	02/06/2023	
LDW23-IT1072	23A0207-06	N823020619.D	02/06/2023	
LDW23-IT1088	23A0207-01	N823020612.D	02/06/2023	
LDW23-IT1080	23A0207-04	N823020805.D	02/06/2023	
LDW23-IT1209	23A0207-17	N823020625.D	02/06/2023	
LDW23-IT1078	23A0207-15	N823020623.D	02/06/2023	
LDW23-IT1080-FD	23A0207-05	N823020618.D	02/06/2023	
LDW23-IT1089	23A0207-02	N823020613.D	02/06/2023	
LDW23-IT1201	23A0207-16	N823020806.D	02/06/2023	
LDW23-IT1081	23A0207-07	N823020620.D	02/06/2023	
Reference	BLA0683-SRM1	N823020611.D	02/06/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0043

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLA0166-GPC1** **Printed: 2/6/2023 3:58:25PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0207-01	A	LDW23-IT1088	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-02	A	LDW23-IT1089	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-03	A	LDW23-IT1079	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-04	A	LDW23-IT1080	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-05	A	LDW23-IT1080-FD	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-06	A	LDW23-IT1072	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-07	A	LDW23-IT1081	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-08	A	LDW23-IT1068	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-09	A	LDW23-IT1062	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-15	A	LDW23-IT1078	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-16	A	LDW23-IT1201	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-17	A	LDW23-IT1209	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0249-07	A	LDW23-IT1034	A 01	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0295-08	A	LDW23-IT1027	A 01	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0313-03	A	LDW23-IT1114	A 01	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0313-04	A	LDW23-IT1120	A 01	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0313-12	A	LDW23-IT1148	A 01	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0326-08	A	LDW23-IT1181	A 01	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0326-09	A	LDW23-IT1127	A 01	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
BLA0683-BLK1	-	Blank	-	0.5	0.5	-	2/6/2023	CTO	
BLA0683-BS1	-	LCS	-	0.5	0.5	-	2/6/2023	CTO	
BLA0683-BSD1	-	LCS Dup	-	0.5	0.5	-	2/6/2023	CTO	

CLEANUP BENCH SHEET

CLB0043

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLA0166-GPC1** **Printed: 2/6/2023 3:58:25PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
BLA0683-MS1	-	Matrix Spike	-	0.5	0.5	-	2/6/2023	CTO	
BLA0683-MSD1	-	Matrix Spike Dup	-	0.5	0.5	-	2/6/2023	CTO	
BLA0683-SRM1	-	Reference	-	0.5	0.5	-	2/6/2023	CTO	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0044	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 8270E-SIM

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1201	23A0207-16	N823020806.D	02/06/2023	
LDW23-IT1068	23A0207-08	N823020621.D	02/06/2023	
LDW23-IT1072	23A0207-06	N823020619.D	02/06/2023	
LDW23-IT1078	23A0207-15	N823020623.D	02/06/2023	
LDW23-IT1080	23A0207-04	N823020805.D	02/06/2023	
LDW23-IT1080-FD	23A0207-05	N823020618.D	02/06/2023	
LDW23-IT1081	23A0207-07	N823020620.D	02/06/2023	
Blank	BLA0683-BLK1	N823020608.D	02/06/2023	
LDW23-IT1089	23A0207-02	N823020613.D	02/06/2023	
Matrix Spike	BLA0683-MS1	N823020615.D	02/06/2023	
LDW23-IT1209	23A0207-17	N823020625.D	02/06/2023	
LDW23-IT1079	23A0207-03	N823020614.D	02/06/2023	
Reference	BLA0683-SRM1	N823020611.D	02/06/2023	
LCS	BLA0683-BS1	N823020609.D	02/06/2023	
LCS Dup	BLA0683-BSD1	N823020610.D	02/06/2023	
LDW23-IT1088	23A0207-01	N823020612.D	02/06/2023	
Matrix Spike Dup	BLA0683-MSD1	N823020616.D	02/06/2023	
LDW23-IT1062	23A0207-09	N823020622.D	02/06/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0044

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup - uL** **Printed: 2/6/2023 3:58:56PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0207-01	A	LDW23-IT1088	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-02	A	LDW23-IT1089	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-03	A	LDW23-IT1079	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-04	A	LDW23-IT1080	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-05	A	LDW23-IT1080-FD	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-06	A	LDW23-IT1072	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-07	A	LDW23-IT1081	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-08	A	LDW23-IT1068	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-09	A	LDW23-IT1062	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-15	A	LDW23-IT1078	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-16	A	LDW23-IT1201	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0207-17	A	LDW23-IT1209	A 02	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0249-07	A	LDW23-IT1034	A 01	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0295-08	A	LDW23-IT1027	A 01	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0313-03	A	LDW23-IT1114	A 01	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0313-04	A	LDW23-IT1120	A 01	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0313-12	A	LDW23-IT1148	A 01	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0326-08	A	LDW23-IT1181	A 01	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
23A0326-09	A	LDW23-IT1127	A 01	0.5	0.5	270E-SIM PAH (0.1ug/L or 5ug/kg	2/6/2023	CTO	
BLA0683-BLK1	-	Blank	-	0.5	0.5	-	2/6/2023	CTO	
BLA0683-BS1	-	LCS	-	0.5	0.5	-	2/6/2023	CTO	
BLA0683-BSD1	-	LCS Dup	-	0.5	0.5	-	2/6/2023	CTO	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0044

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup - uL** **Printed: 2/6/2023 3:58:56PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
BLA0683-MS1	-	Matrix Spike	-	0.5	0.5	-	2/6/2023	CTO	
BLA0683-MSD1	-	Matrix Spike Dup	-	0.5	0.5	-	2/6/2023	CTO	
BLA0683-SRM1	-	Reference	-	0.5	0.5	-	2/6/2023	CTO	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLE0236	Cleanup Type:	GPC
Cleanup Method:	EPA 3640A GPC Cleanup 1:1	Analysis:	EPA 8270E-SIM

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1097	23A0207-10	N823053011.D	05/26/2023	
LCS	BLE0421-BS1	N823053008.D	05/26/2023	
LCS Dup	BLE0421-BSD1	N823053009.D	05/26/2023	
Reference	BLE0421-SRM1	N823053010.D	05/26/2023	
Blank	BLE0421-BLK1	N823053007.D	05/26/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLE0236

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLC0092-GPC1** **Printed: 5/26/2023 3:32:41PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0207-10	A	LDW23-IT1097	A 02	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/26/2023	CTO	
23E0219-04	A	LDW23-IT1167	A 01	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/26/2023	CTO	
23E0219-06	A	LDW23-IT1814	A 01	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/26/2023	CTO	
23E0219-08	A	LDW23-IT1815	A 01	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/26/2023	CTO	
23E0219-11	A	LDW23-IT1146	A 01	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/26/2023	CTO	
23E0219-12	A	LDW23-IT1121	A 01	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/26/2023	CTO	
BLE0421-BLK1	-	Blank	-	0.5	0.5	-	5/26/2023	CTO	
BLE0421-BS1	-	LCS	-	0.5	0.5	-	5/26/2023	CTO	
BLE0421-BSD1	-	LCS Dup	-	0.5	0.5	-	5/26/2023	CTO	
BLE0421-MS1	-	Matrix Spike	-	0.5	0.5	-	5/26/2023	CTO	
BLE0421-MSD1	-	Matrix Spike Dup	-	0.5	0.5	-	5/26/2023	CTO	
BLE0421-SRM1	-	Reference	-	0.5	0.5	-	5/26/2023	CTO	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLE0237	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 8270E-SIM

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Reference	BLE0421-SRM1	N823053010.D	05/26/2023	
LCS Dup	BLE0421-BSD1	N823053009.D	05/26/2023	
LCS	BLE0421-BS1	N823053008.D	05/26/2023	
Blank	BLE0421-BLK1	N823053007.D	05/26/2023	
LDW23-IT1097	23A0207-10	N823053011.D	05/26/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLE0237

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup - uL** **Printed: 5/26/2023 3:33:16PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0207-10	A	LDW23-IT1097	A 02	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/26/2023	CTO	
23E0219-04	A	LDW23-IT1167	A 01	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/26/2023	CTO	
23E0219-06	A	LDW23-IT1814	A 01	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/26/2023	CTO	
23E0219-08	A	LDW23-IT1815	A 01	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/26/2023	CTO	
23E0219-11	A	LDW23-IT1146	A 01	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/26/2023	CTO	
23E0219-12	A	LDW23-IT1121	A 01	0.5	0.5	8270E-SIM PAH (0.1ug/L or 5ug/kg)	5/26/2023	CTO	
BLE0421-BLK1	-	Blank	-	0.5	0.5	-	5/26/2023	CTO	
BLE0421-BS1	-	LCS	-	0.5	0.5	-	5/26/2023	CTO	
BLE0421-BSD1	-	LCS Dup	-	0.5	0.5	-	5/26/2023	CTO	
BLE0421-MS1	-	Matrix Spike	-	0.5	0.5	-	5/26/2023	CTO	
BLE0421-MSD1	-	Matrix Spike Dup	-	0.5	0.5	-	5/26/2023	CTO	
BLE0421-SRM1	-	Reference	-	0.5	0.5	-	5/26/2023	CTO	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8270E-SIM

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLA0683-BLK1	File ID:	N823020608.D
Sampled:	N/A	Prepared:	02/01/23 11:29	Analyzed:	02/06/23 15:57
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 0.5 mL
Batch:	BLA0683	Sequence:	SLB0075	Calibration:	GA00050
Instrument:	NT8	Column:	RXI-17Sil ms	Cleanups:	GPC, Silica Gel

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
56-55-3	Benzo(a)anthracene	1	5.00	U	0.82	5.00
218-01-9	Chrysene	1	5.00	U	1.05	5.00
205-99-2	Benzo(b)fluoranthene	1	5.00	U	1.37	5.00
207-08-9	Benzo(k)fluoranthene	1	5.00	U	0.76	5.00
50-32-8	Benzo(a)pyrene	1	5.00	U	0.61	5.00
193-39-5	Indeno(1,2,3-cd)pyrene	1	5.00	U	1.05	5.00
53-70-3	Dibenzo(a,h)anthracene	1	5.00	U	0.89	5.00

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	150.00	125	83.2	32 - 120	
Dibenzo[a,h]anthracene-d14	150.00	232	154	21 - 133	*
Fluoranthene-d10	150.00	149	99.4	36 - 134	

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020608.D

Date : 06-FEB-2023 15:57

Client ID:

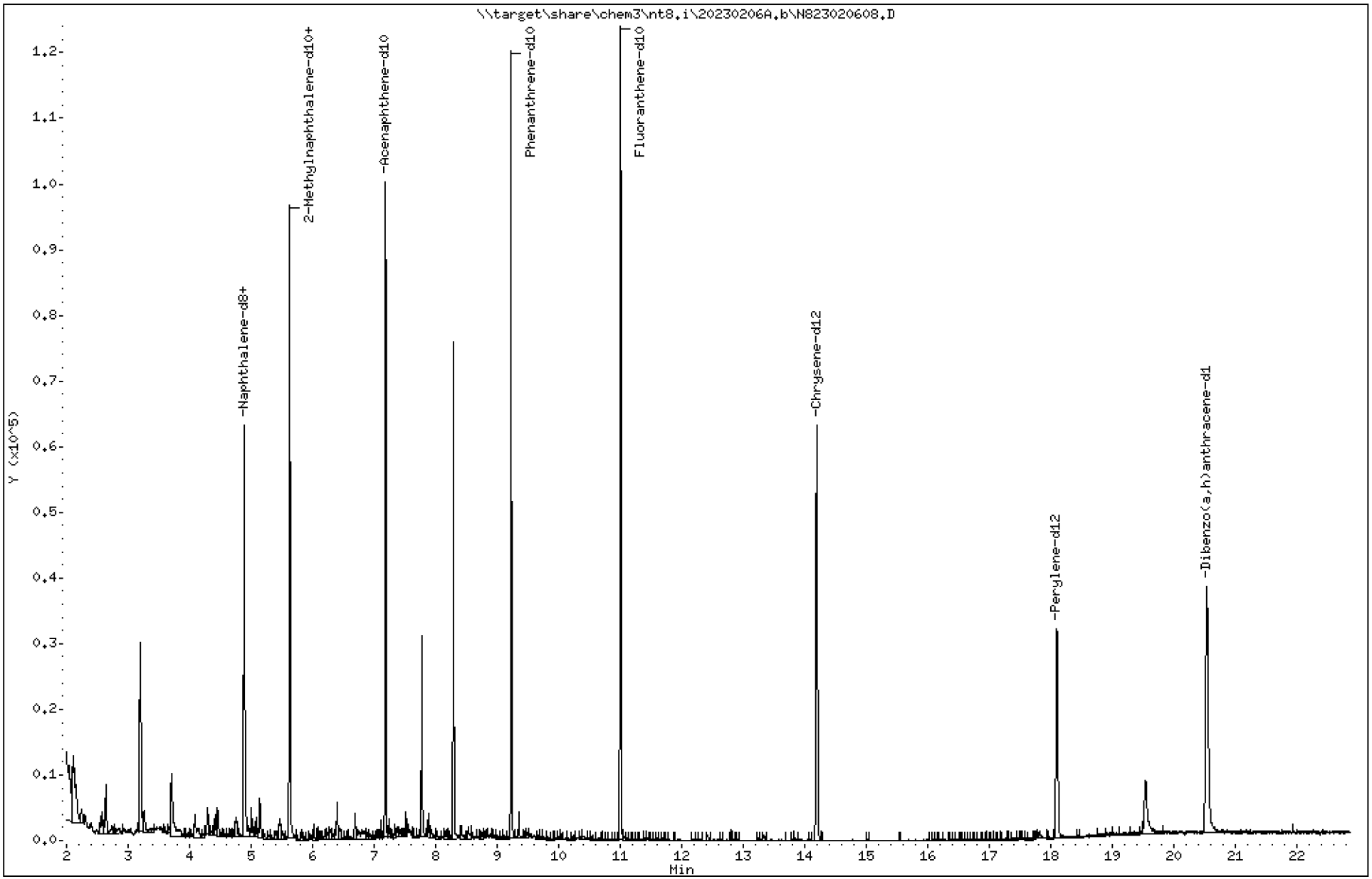
Instrument: nt8.i

Sample Info: BLA0683-BLK1,

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



23A0207 CLPLIKE (Rev3) - Page 474 of 3315

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020608.D

Date : 06-FEB-2023 15:57

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BLK1,

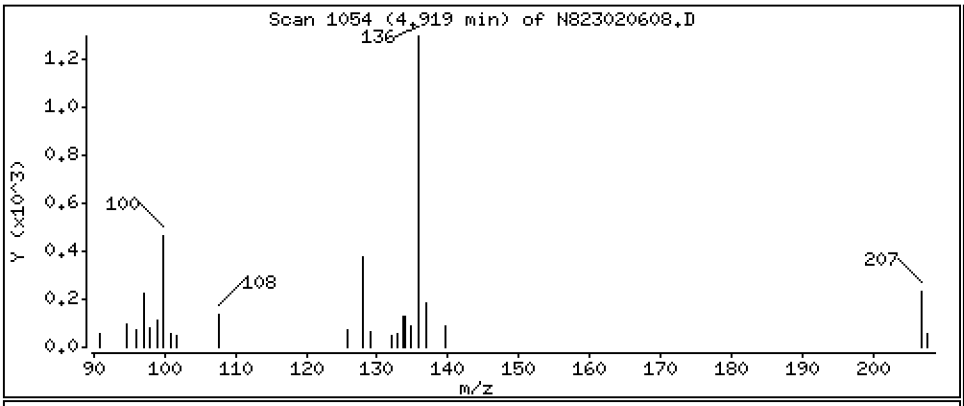
Operator: JZ

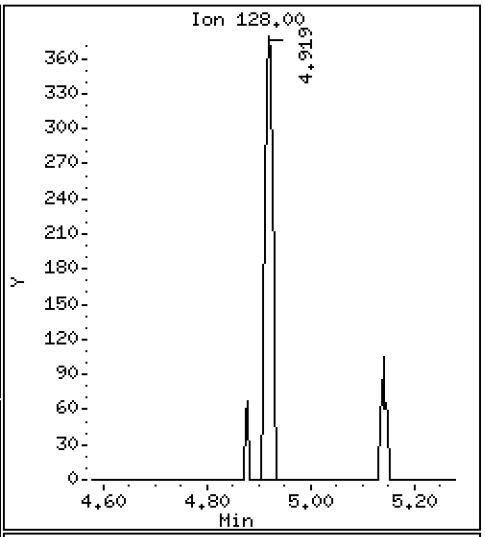
Column phase: Rxi-17sil

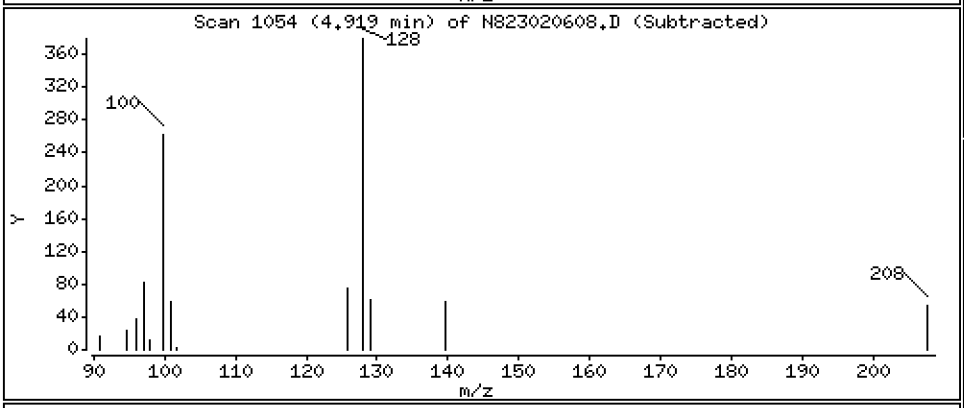
Column diameter: 0.25

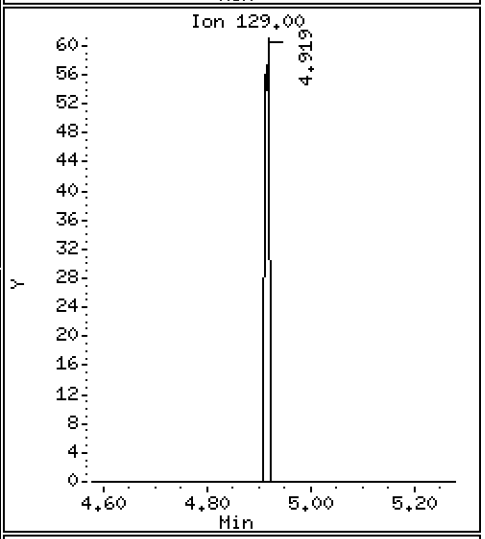
2 Naphthalene

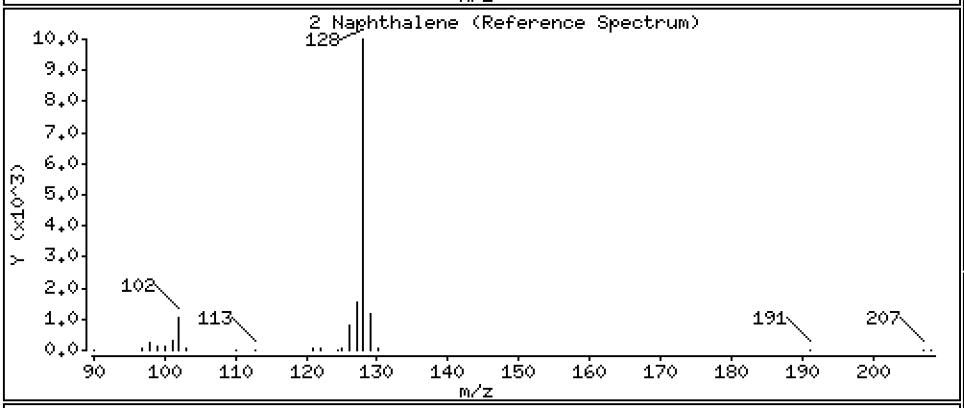
Concentration: 0.01704 ug/mL

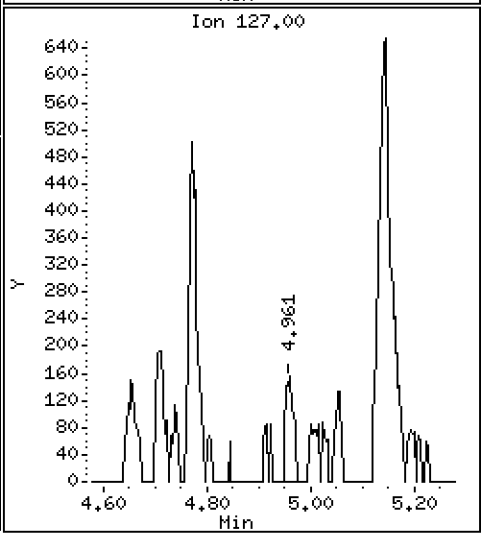


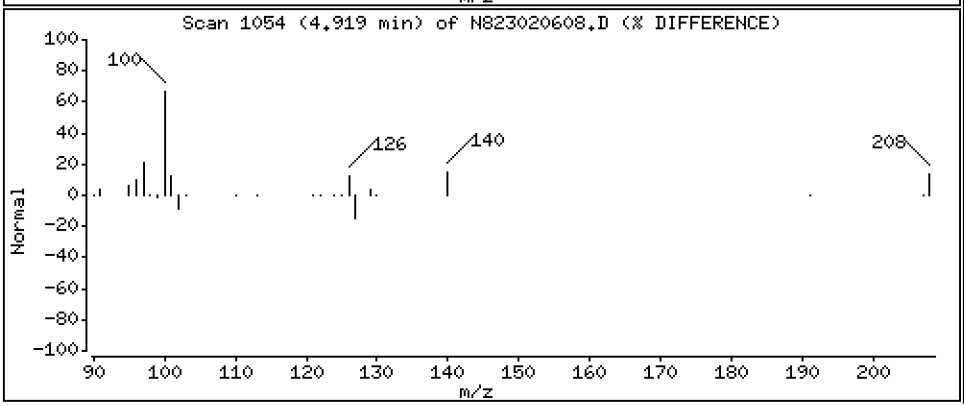












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020608.D

Date : 06-FEB-2023 15:57

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BLK1,

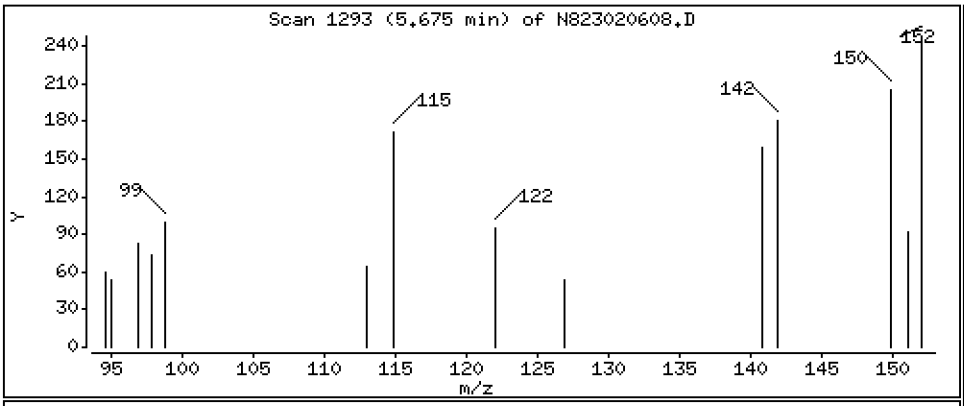
Operator: JZ

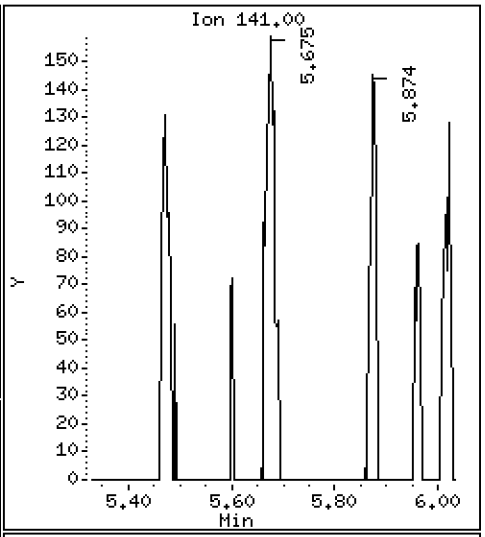
Column phase: Rxi-17sil

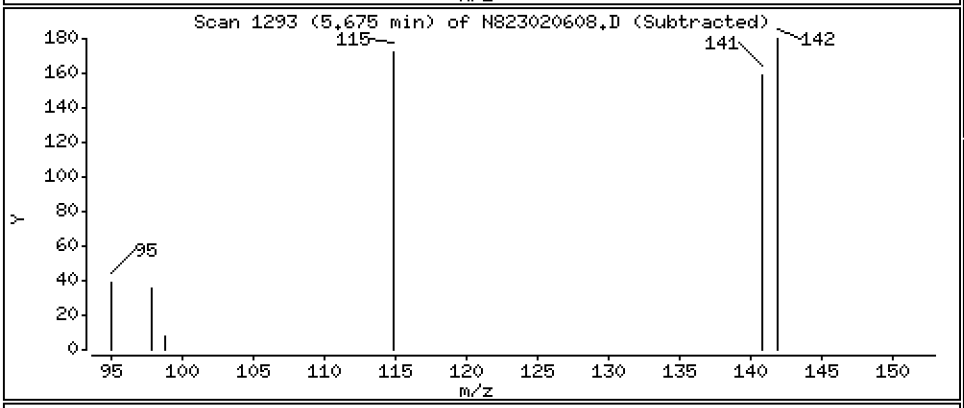
Column diameter: 0.25

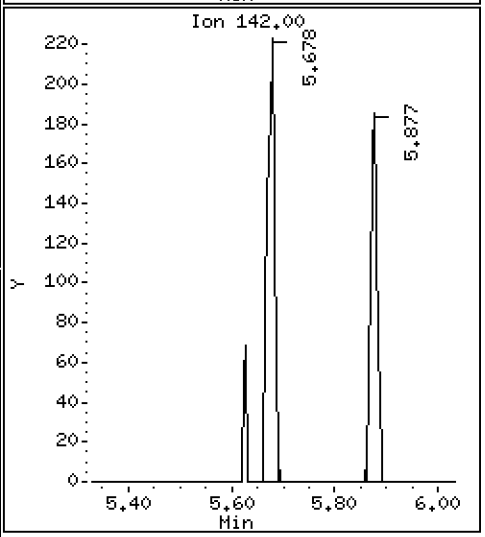
4 2-Methylnaphthalene

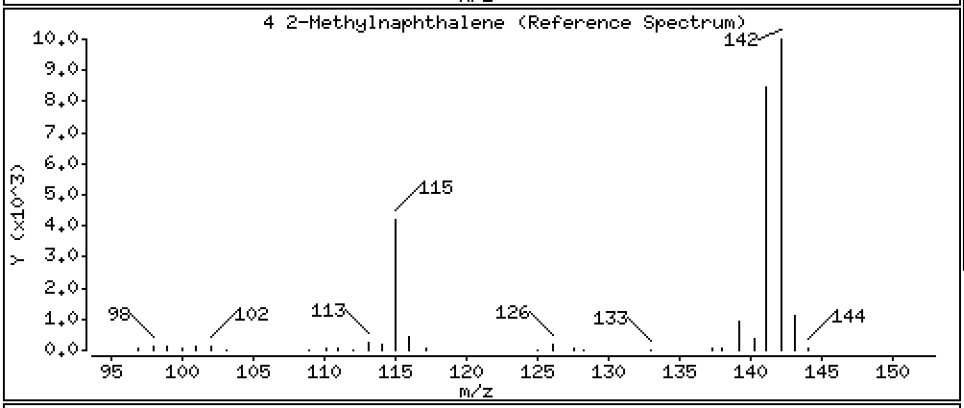
Concentration: 0.01541 ug/mL

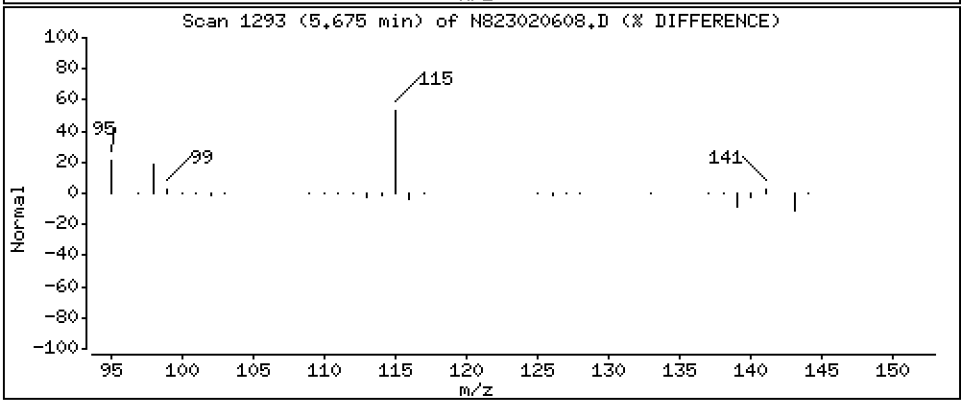












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020608.D

Date : 06-FEB-2023 15:57

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BLK1,

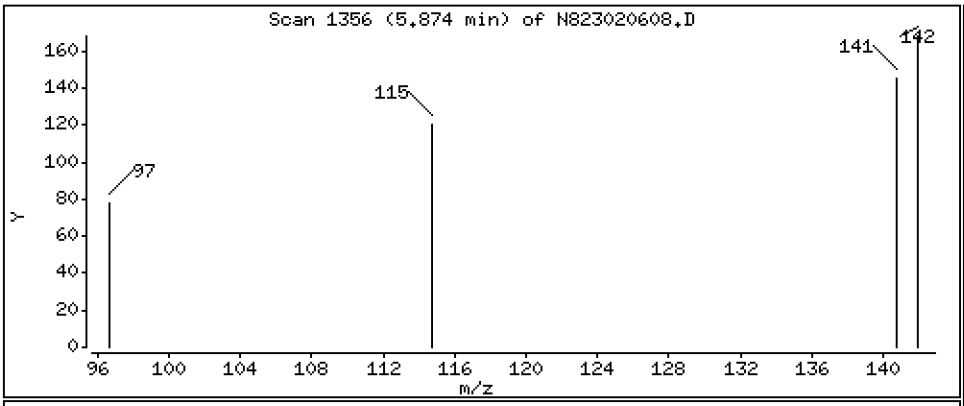
Operator: JZ

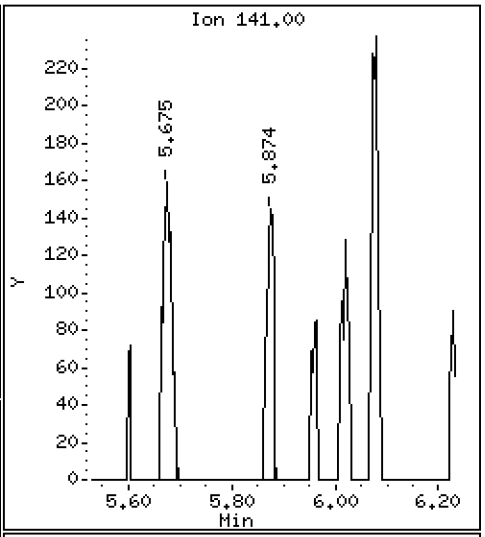
Column phase: Rxi-17sil

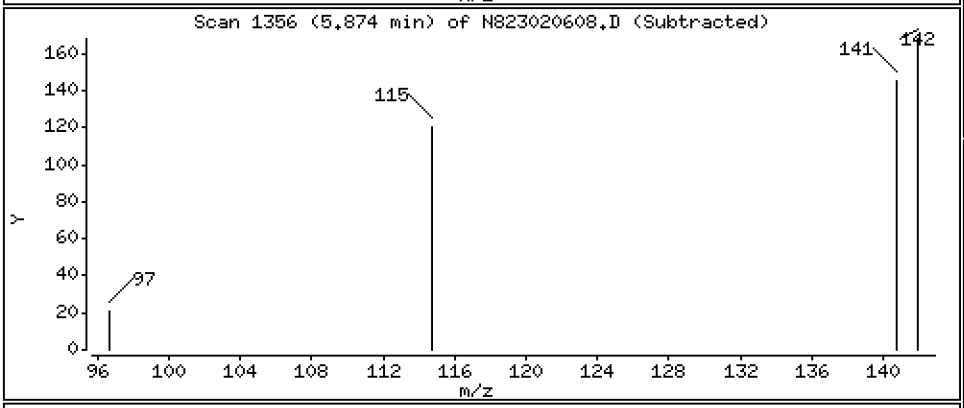
Column diameter: 0.25

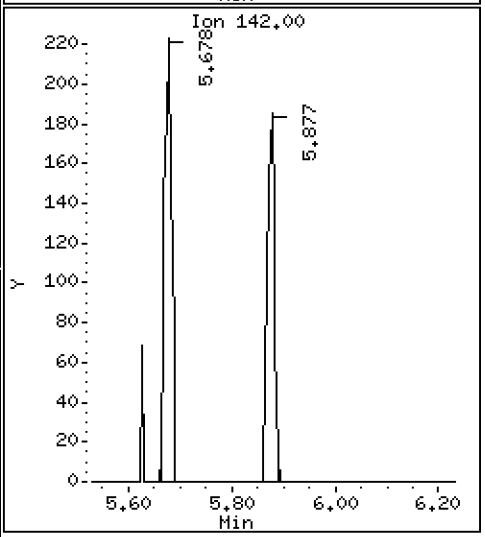
5 1-methylnaphthalene

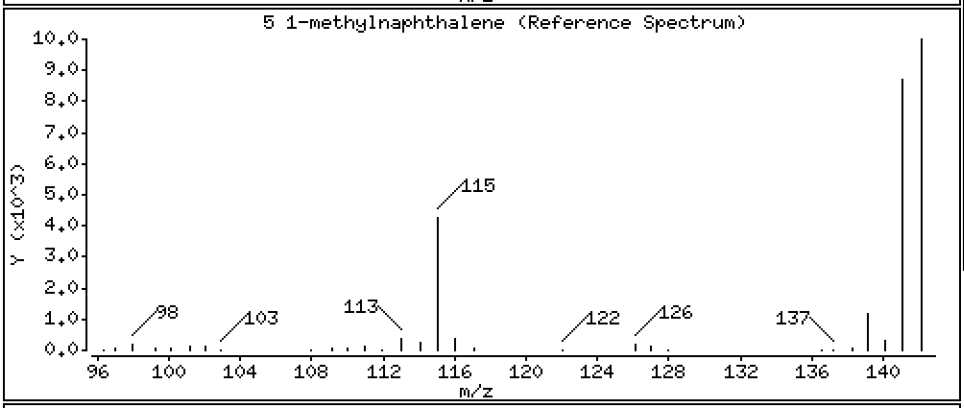
Concentration: 0.009910 ug/mL

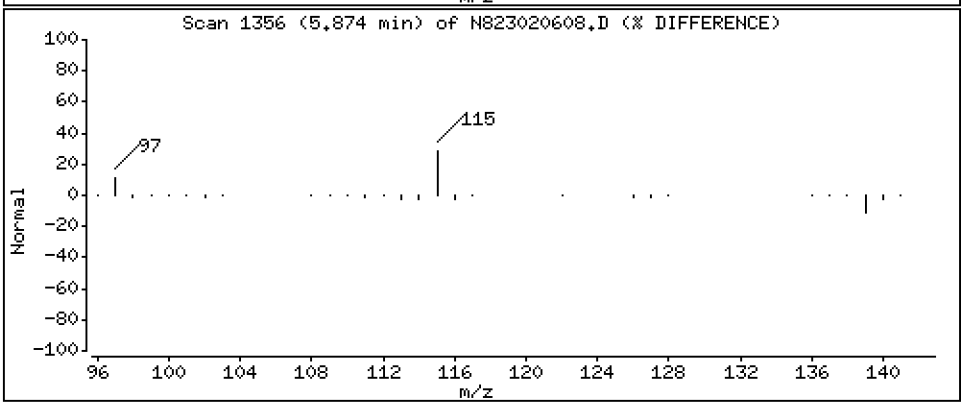












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020608.D

Date : 06-FEB-2023 15:57

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BLK1,

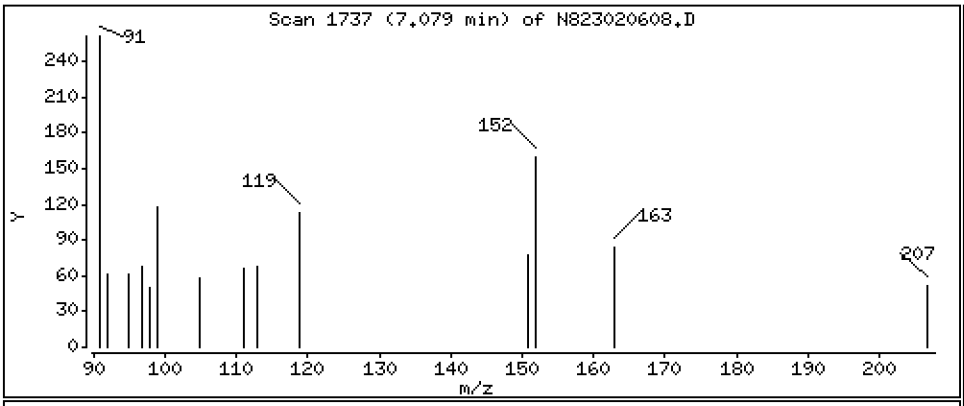
Operator: JZ

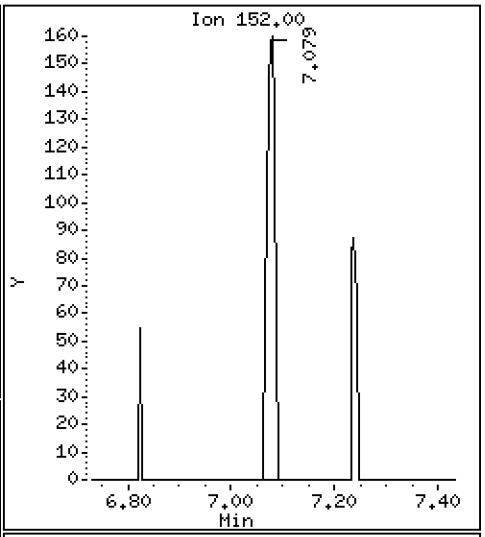
Column phase: Rxi-17sil

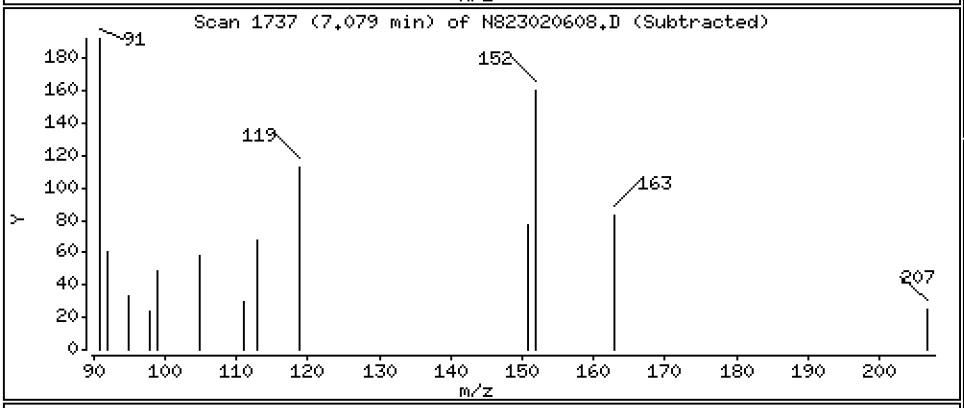
Column diameter: 0.25

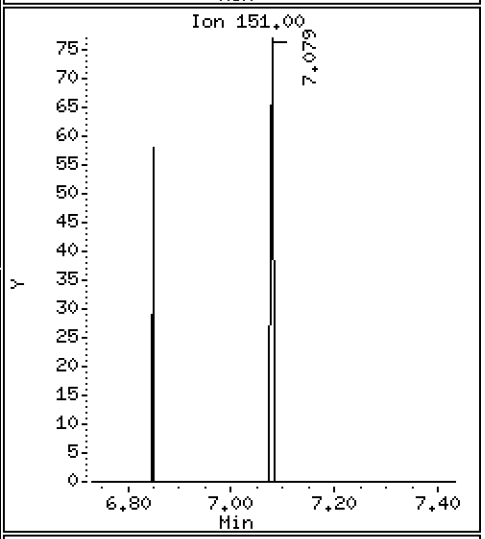
9 Acenaphthylene

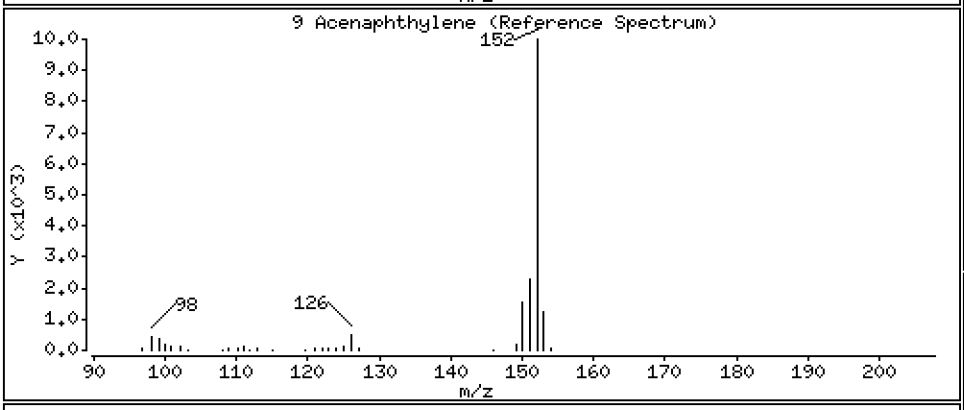
Concentration: 0.008068 ug/mL

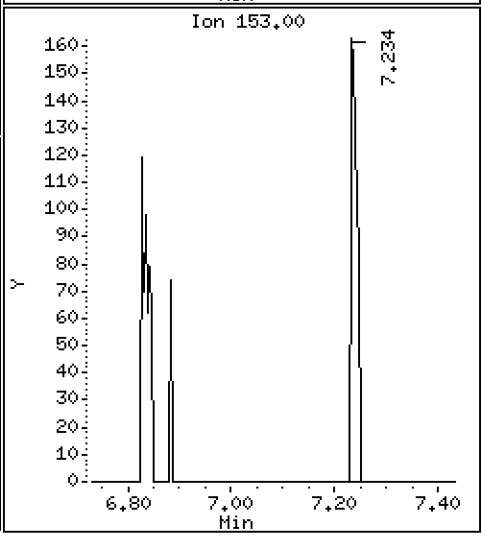


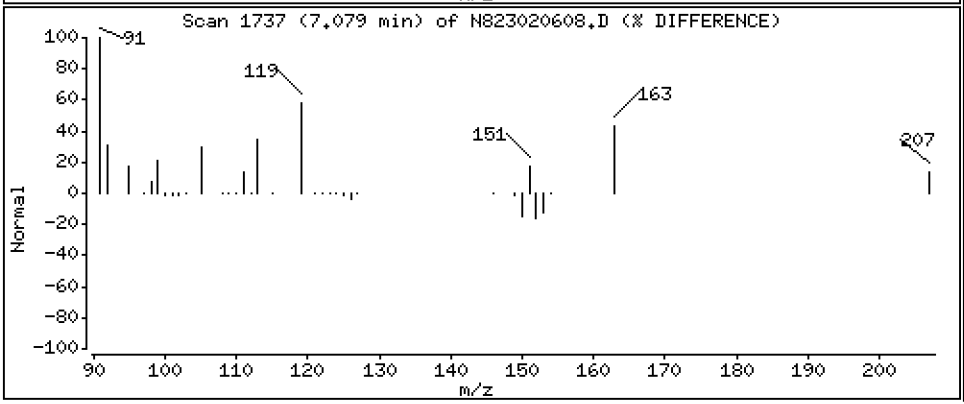












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Date : 06-FEB-2023 15:57

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BLK1,

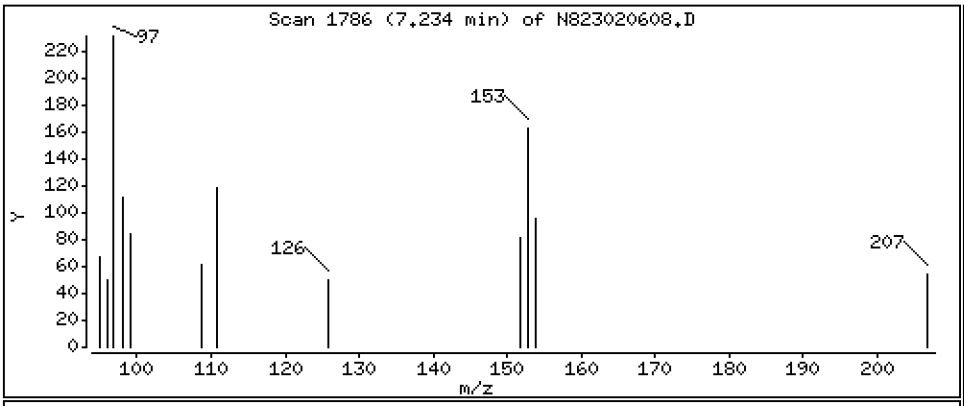
Operator: JZ

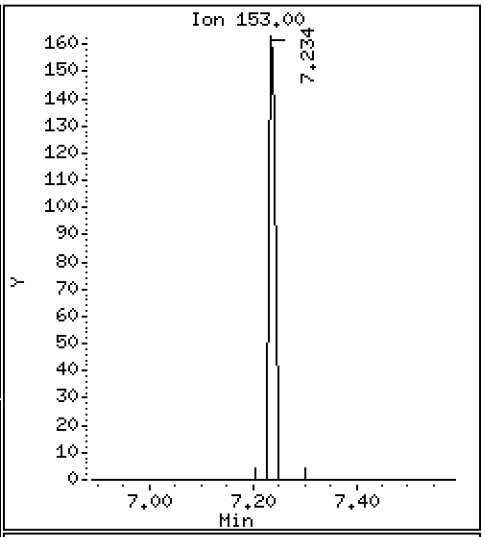
Column phase: Rxi-17sil

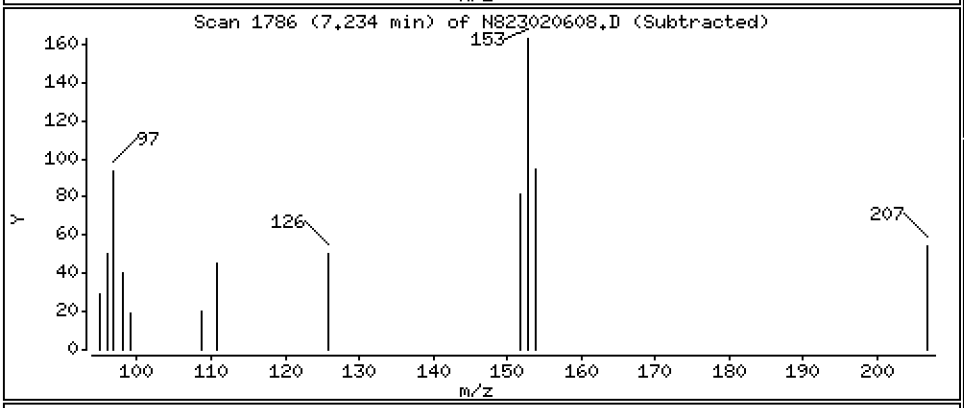
Column diameter: 0.25

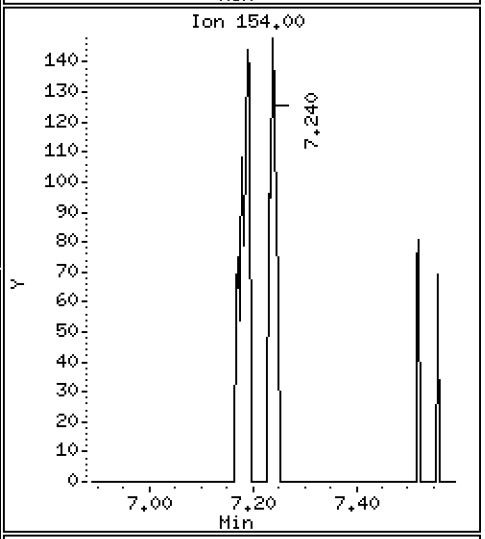
11 Acenaphthene

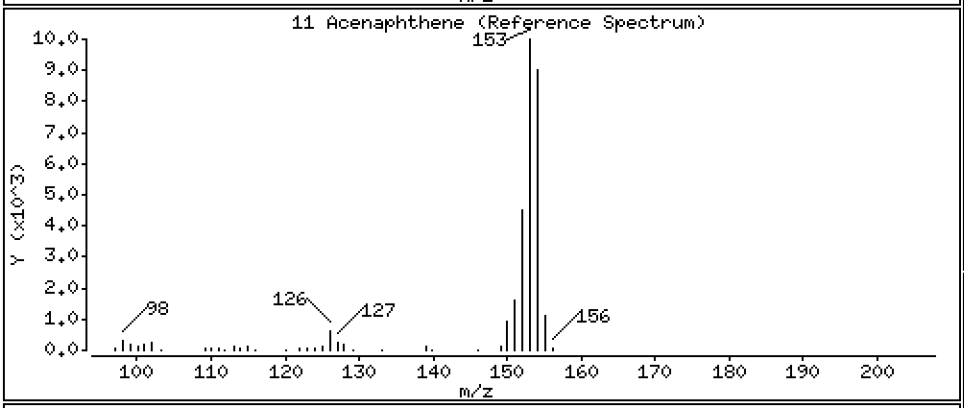
Concentration: 0.009619 ug/mL

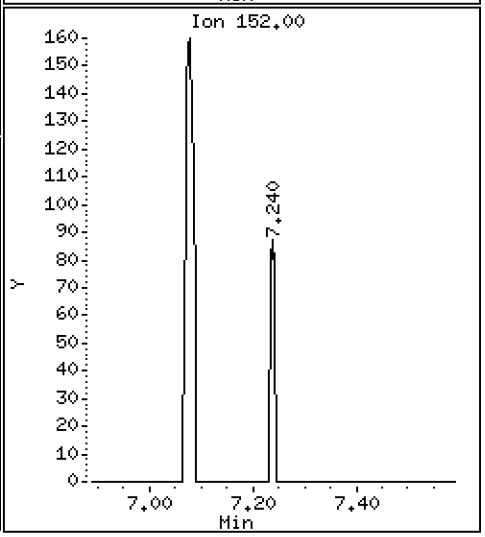


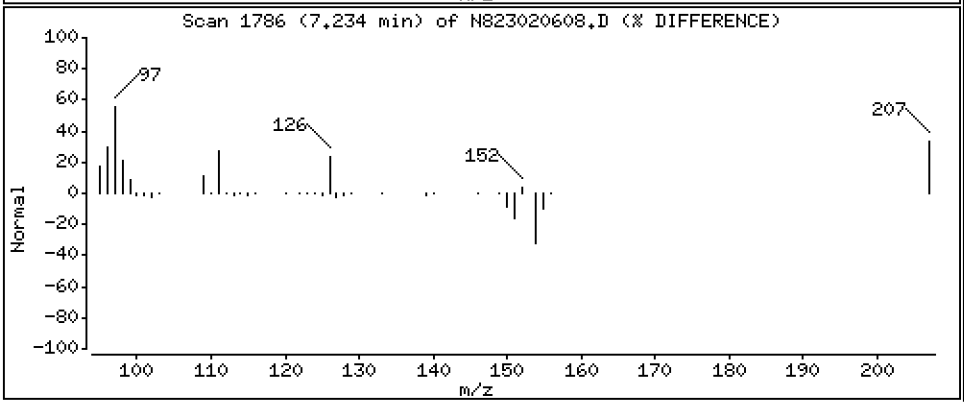












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Date : 06-FEB-2023 15:57

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BLK1,

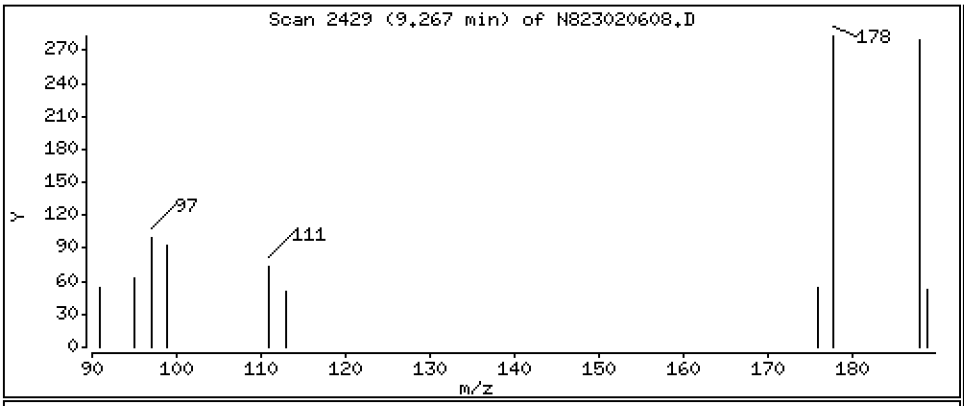
Operator: JZ

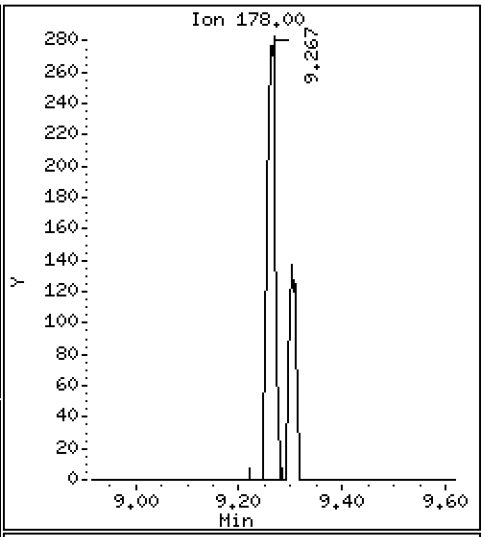
Column phase: Rxi-17sil

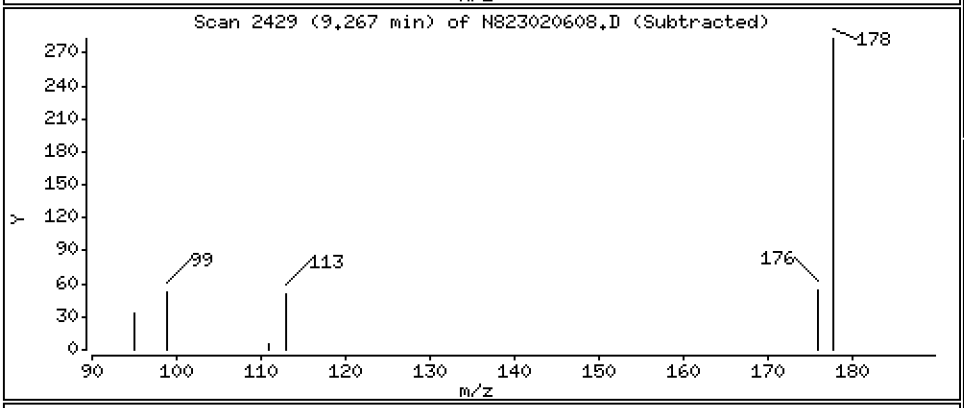
Column diameter: 0.25

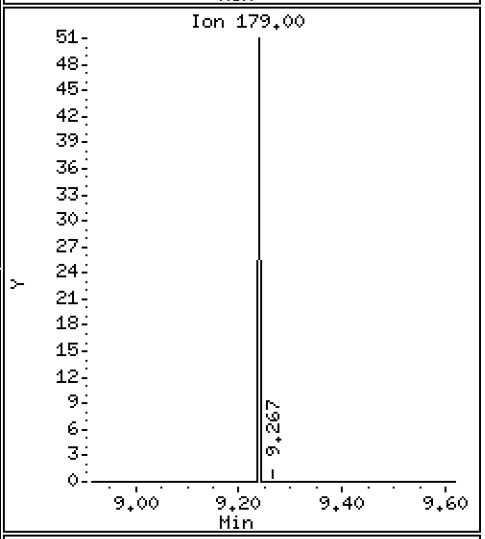
16 Phenanthrene

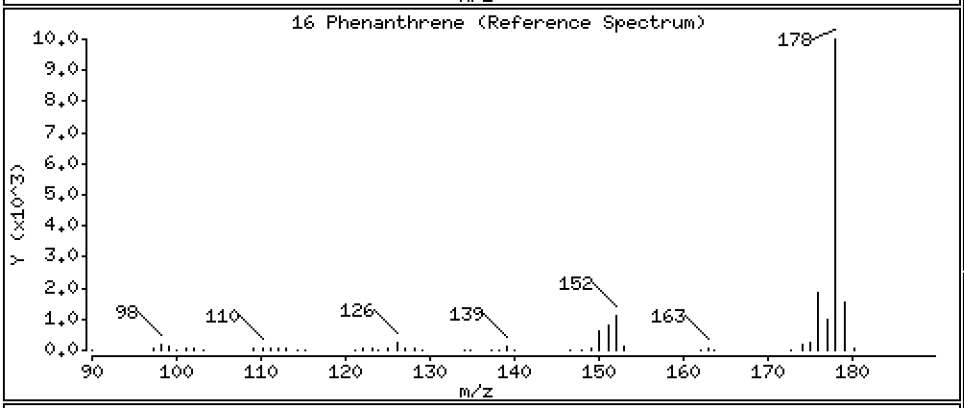
Concentration: 0.01235 ug/mL

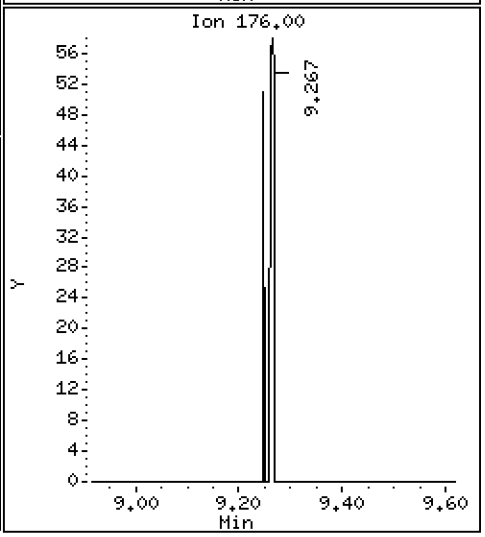


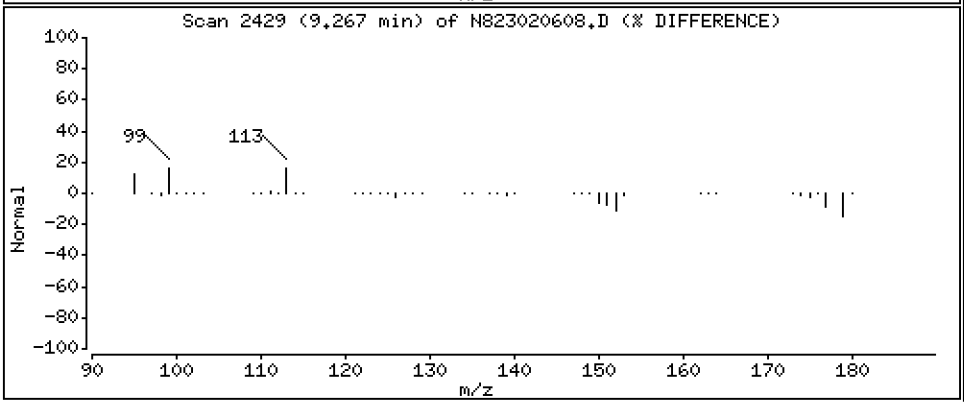












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020608.D
Lab Smp Id: BLA0683-BLK1
Inj Date : 06-FEB-2023 15:57
Operator : JZ Inst ID: nt8.i
Smp Info : BLA0683-BLK1,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 13:04 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.890	4.900	(1.000)	48985	2.00000	
	2 Naphthalene	128	4.919	4.928	(1.006)	388	0.01704	0.01704
$	3 2-Methylnaphthalene-d10	152	5.627	5.634	(1.151)	33328	2.49472	2.495
	4 2-Methylnaphthalene	141	5.675	5.681	(1.160)	193	0.01541	0.01541
	5 1-methylnaphthalene	141	5.874	5.880	(1.201)	126	0.00991	0.009910
	9 Acenaphthylene	152	7.079	7.082	(0.985)	174	0.00807	0.008068
*	10 Acenaphthene-d10	164	7.189	7.189	(1.000)	28561	2.00000	
	11 Acenaphthene	153	7.233	7.240	(1.006)	139	0.00962	0.009619(M)
	12 Dibenzofuran	168	Compound Not Detected.					
	14 Fluorene	166	Compound Not Detected.					
*	15 Phenanthrene-d10	188	9.229	9.232	(1.000)	52393	2.00000	
	16 Phenanthrene	178	9.267	9.267	(1.004)	316	0.01235	0.01235(M)
	17 Anthracene	178	Compound Not Detected.					
	19 Carbazole	167	Compound Not Detected.					
	22 Fluoranthene	202	Compound Not Detected.					
$	21 Fluoranthene-d10	212	11.009	11.009	(1.193)	68900	2.98067	2.981
	23 Pyrene	202	Compound Not Detected.					
	24 Benzo(a)anthracene	228	Compound Not Detected.					
*	25 Chrysene-d12	240	14.196	14.202	(1.000)	40654	2.00000	
	27 Chrysene	228	Compound Not Detected.					
	28 Benzo(b)fluoranthene	252	Compound Not Detected.					
	29 Benzo(k)fluoranthene	252	Compound Not Detected.					
	30 Benzo(j)fluoranthene	252	Compound Not Detected.					
	31 Total Benzofluoranthenes	252	Compound Not Detected.					
	32 Benzo(a)pyrene	252	Compound Not Detected.					
*	33 Perylene-d12	264	18.104	18.107	(1.000)	24723	2.00000	
	35 Perylene	252	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	20.545	20.549	(1.135)	44884	4.63342	4.633
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020608.D
Lab Smp Id: BLA0683-BLK1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44336	22168	88672	48985	10.49
10 Acenaphthene-d10	26127	13064	52254	28561	9.32
15 Phenanthrene-d10	47424	23712	94848	52393	10.48
25 Chrysene-d12	36794	18397	73588	40654	10.49
33 Perylene-d12	36636	18318	73272	24723	-32.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.89	-0.19
10 Acenaphthene-d10	7.19	6.69	7.69	7.19	0.00
15 Phenanthrene-d10	9.23	8.73	9.73	9.23	-0.03
25 Chrysene-d12	14.20	13.70	14.70	14.20	-0.04
33 Perylene-d12	18.11	17.61	18.61	18.10	-0.02

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

REVIEW SUMMARY FOR FILE - N823020608.D

Lab ID: BLA0683-BLK1
nt8.i, 20230206A.b\FSIMPNA230119.m,   06-FEB-2023 15:57

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

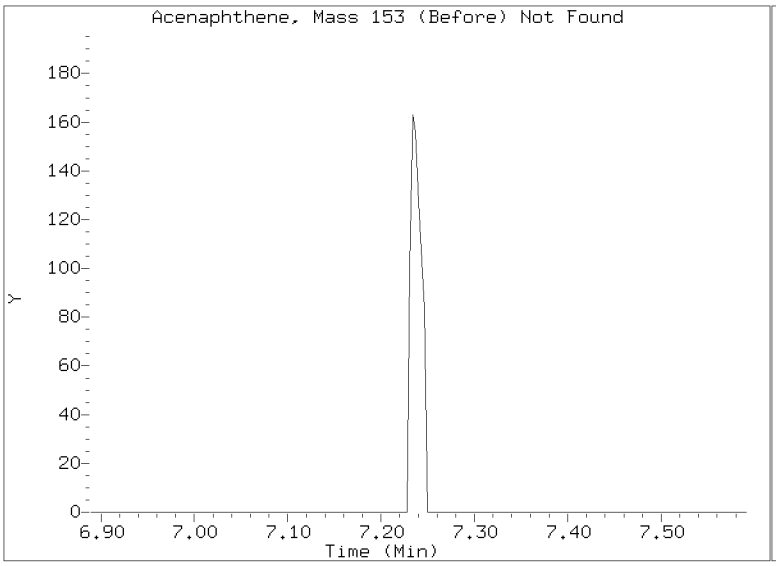
No RRT check performed

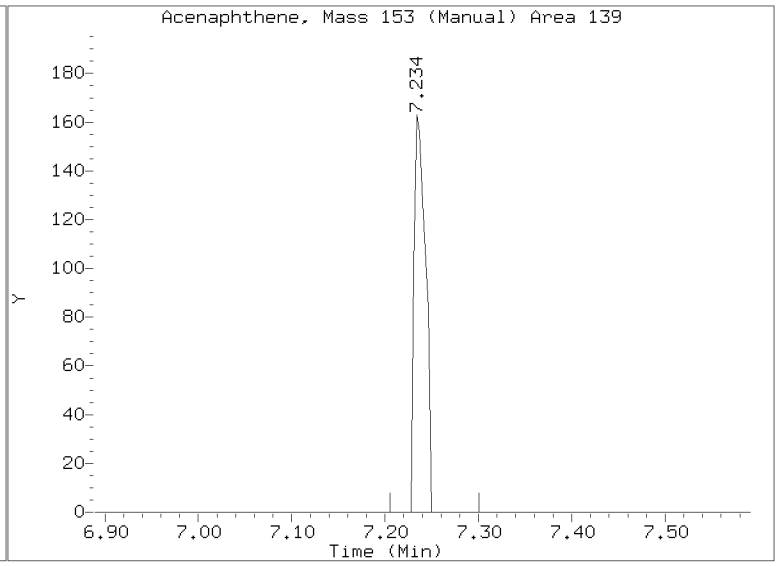
On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

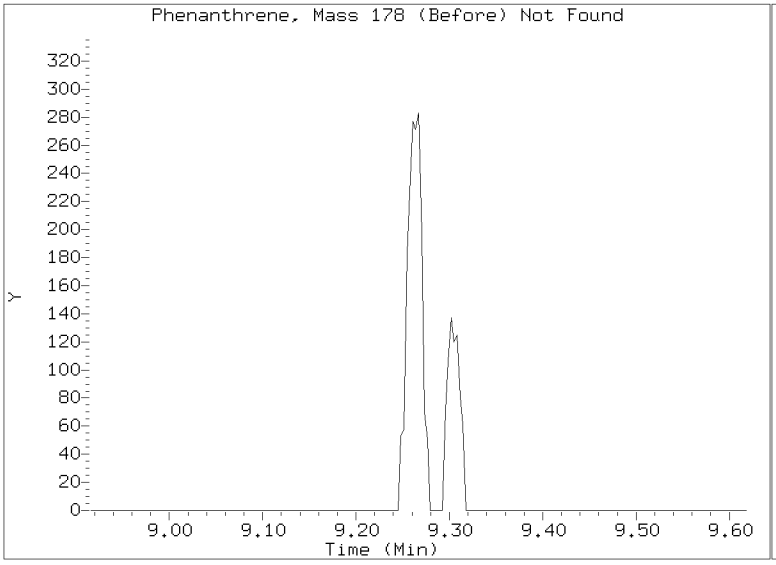
* Only compounds listed in the work order have been verified by the analyst *

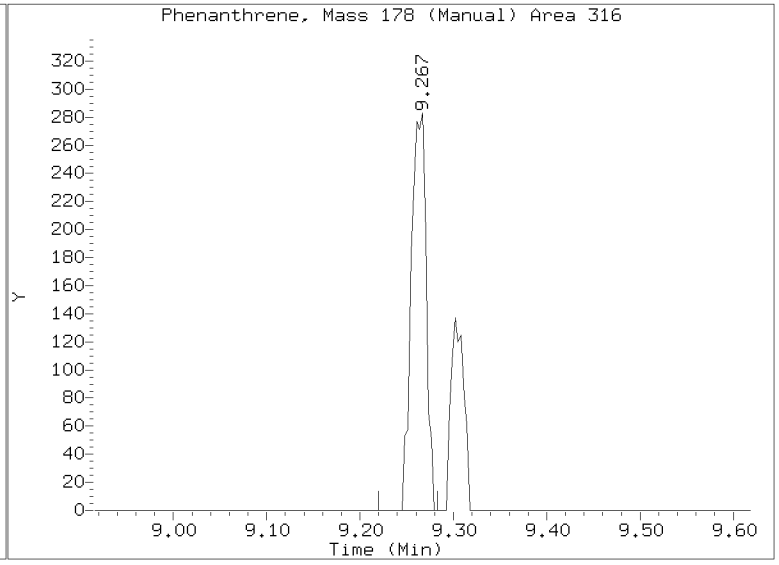
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020608.D
Injection Date: 06-FEB-2023 15:57
Lab ID:BLA0683-BLK1 Client ID:
Report Date: 02/07/2023 13:19









Form I

METHOD BLANK DATA SHEET

EPA 8270E-SIM

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLE0421-BLK1	File ID:	N823053007.D
Sampled:	N/A	Prepared:	05/16/23 13:13	Analyzed:	05/30/23 14:23
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 0.5 mL
Batch:	BLE0421	Sequence:	SLE0448	Calibration:	GD00068
Instrument:	NT8	Column:	RXI-17Sil ms	Cleanups:	GPC, Silica Gel

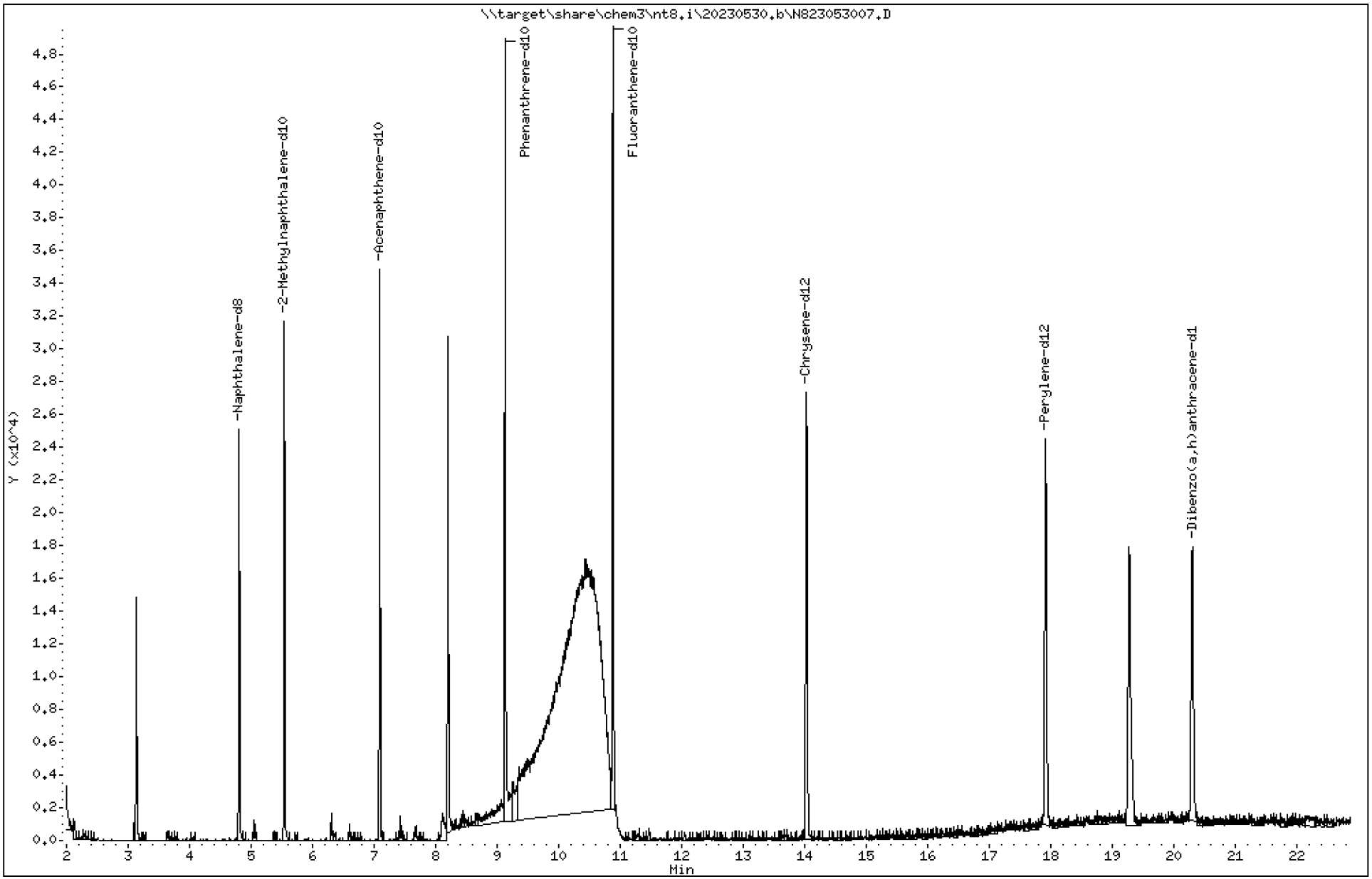
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
56-55-3	Benzo(a)anthracene	1	5.00	U	0.82	5.00
218-01-9	Chrysene	1	5.00	U	1.05	5.00
205-99-2	Benzo(b)fluoranthene	1	5.00	U	1.37	5.00
207-08-9	Benzo(k)fluoranthene	1	5.00	U	0.76	5.00
50-32-8	Benzo(a)pyrene	1	5.00	U	0.61	5.00
193-39-5	Indeno(1,2,3-cd)pyrene	1	5.00	U	1.05	5.00
53-70-3	Dibenzo(a,h)anthracene	1	5.00	U	0.89	5.00

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	150.00	99.8	66.5	32 - 120	
Dibenzo[a,h]anthracene-d14	150.00	140	93.6	21 - 133	
Fluoranthene-d10	150.00	113	75.4	36 - 134	

Data File: \\target\share\chem3\nt8.i\20230530.b\N823053007.D
Date : 30-MAY-2023 14:23
Client ID:
Sample Info: BLE0421-BLK1,

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



23A0207 CLPLIKE (Rev3) - Page 487 of 3315

ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230530.b\N823053007.D
Lab Smp Id: BLE0421-BLK1
Inj Date : 30-MAY-2023 14:23
Operator : JZ Inst ID: nt8.i
Smp Info : BLE0421-BLK1,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230530.b\FSIMPNA230426.m
Meth Date : 30-May-2023 19:51 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQINGZ-20191

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.805	4.815	(1.000)	18366	2.00000	
	2 Naphthalene	128	Compound Not Detected.					
$	3 2-Methylnaphthalene-d10	152	5.539	5.548	(1.153)	11319	1.99547	1.995
	4 2-Methylnaphthalene	141	Compound Not Detected.					
	5 1-methylnaphthalene	141	Compound Not Detected.					
	9 Acenaphthylene	152	Compound Not Detected.					
*	10 Acenaphthene-d10	164	7.091	7.101	(1.000)	10973	2.00000	
	11 Acenaphthene	153	Compound Not Detected.					
	12 Dibenzofuran	168	Compound Not Detected.					
	14 Fluorene	166	Compound Not Detected.					
*	15 Phenanthrene-d10	188	9.131	9.137	(1.000)	22417	2.00000	
	16 Phenanthrene	178	Compound Not Detected.					
	17 Anthracene	178	Compound Not Detected.					
	19 Carbazole	167	Compound Not Detected.					
	22 Fluoranthene	202	Compound Not Detected.					
$	21 Fluoranthene-d10	212	10.886	10.892	(1.192)	27374	2.26218	2.262
	23 Pyrene	202	Compound Not Detected.					
	24 Benzo(a)anthracene	228	Compound Not Detected.					
*	25 Chrysene-d12	240	14.032	14.044	(1.000)	20176	2.00000	
	27 Chrysene	228	Compound Not Detected.					
	28 Benzo(b)fluoranthene	252	Compound Not Detected.					
	29 Benzo(k)fluoranthene	252	Compound Not Detected.					
	30 Benzo(j)fluoranthene	252	Compound Not Detected.					
	31 Total Benzofluoranthenes	252	Compound Not Detected.					
	32 Benzo(a)pyrene	252	Compound Not Detected.					
*	33 Perylene-d12	264	17.921	17.931	(1.000)	19519	2.00000	
	35 Perylene	252	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	20.302	20.315	(1.133)	20919	2.80715	2.807
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823053007.D
Lab Smp Id: BLE0421-BLK1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230530.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 30-MAY-2023
Calibration Time: 11:43
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	20199	10100	40398	18366	-9.07
10 Acenaphthene-d10	12041	6021	24082	10973	-8.87
15 Phenanthrene-d10	19182	9591	38364	22417	16.86
25 Chrysene-d12	15943	7972	31886	20176	26.55
33 Perylene-d12	14317	7159	28634	19519	36.33

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.82	4.32	5.32	4.81	-0.20
10 Acenaphthene-d10	7.10	6.60	7.60	7.09	-0.13
15 Phenanthrene-d10	9.14	8.64	9.64	9.13	-0.07
25 Chrysene-d12	14.04	13.54	14.54	14.03	-0.09
33 Perylene-d12	17.93	17.43	18.43	17.92	-0.05

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

REVIEW SUMMARY FOR FILE - N823053007.D

Lab ID: BLE0421-BLK1
nt8.i, 20230530.b\FSIMPNA230426.m,   30-MAY-2023 14:23

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check performed

On Column LOD for nt8.i, 20230530.b\FSIMPNA230426.m, PNAXMDL.sub = 0.0080

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

LCS / LCS DUPLICATE RECOVERY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/06/23 16:24
Batch:	BLA0683	Laboratory ID:	BLA0683-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	10 g / 0.5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Benzo(a)anthracene	300	167		55.7	42 - 120
Chrysene	300	167		55.6	48 - 120
Benzo(b)fluoranthene	300	233		77.7	52 - 137
Benzo(k)fluoranthene	300	222		74.1	37 - 129
Benzo(a)pyrene	300	154		51.4	36 - 120
Indeno(1,2,3-cd)pyrene	300	213		71.0	67 - 132
Dibenzo(a,h)anthracene	300	235		78.4	66 - 139

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzo(a)anthracene	300	200		66.8	18.1	30	42 - 120
Chrysene	300	199		66.3	17.6	30	48 - 120
Benzo(b)fluoranthene	300	278		92.7	17.7	30	52 - 137
Benzo(k)fluoranthene	300	265		88.2	17.4	30	37 - 129
Benzo(a)pyrene	300	186		62.1	18.9	30	36 - 120
Indeno(1,2,3-cd)pyrene	300	249		83.1	15.7	30	67 - 132
Dibenzo(a,h)anthracene	300	280		93.2	17.3	30	66 - 139

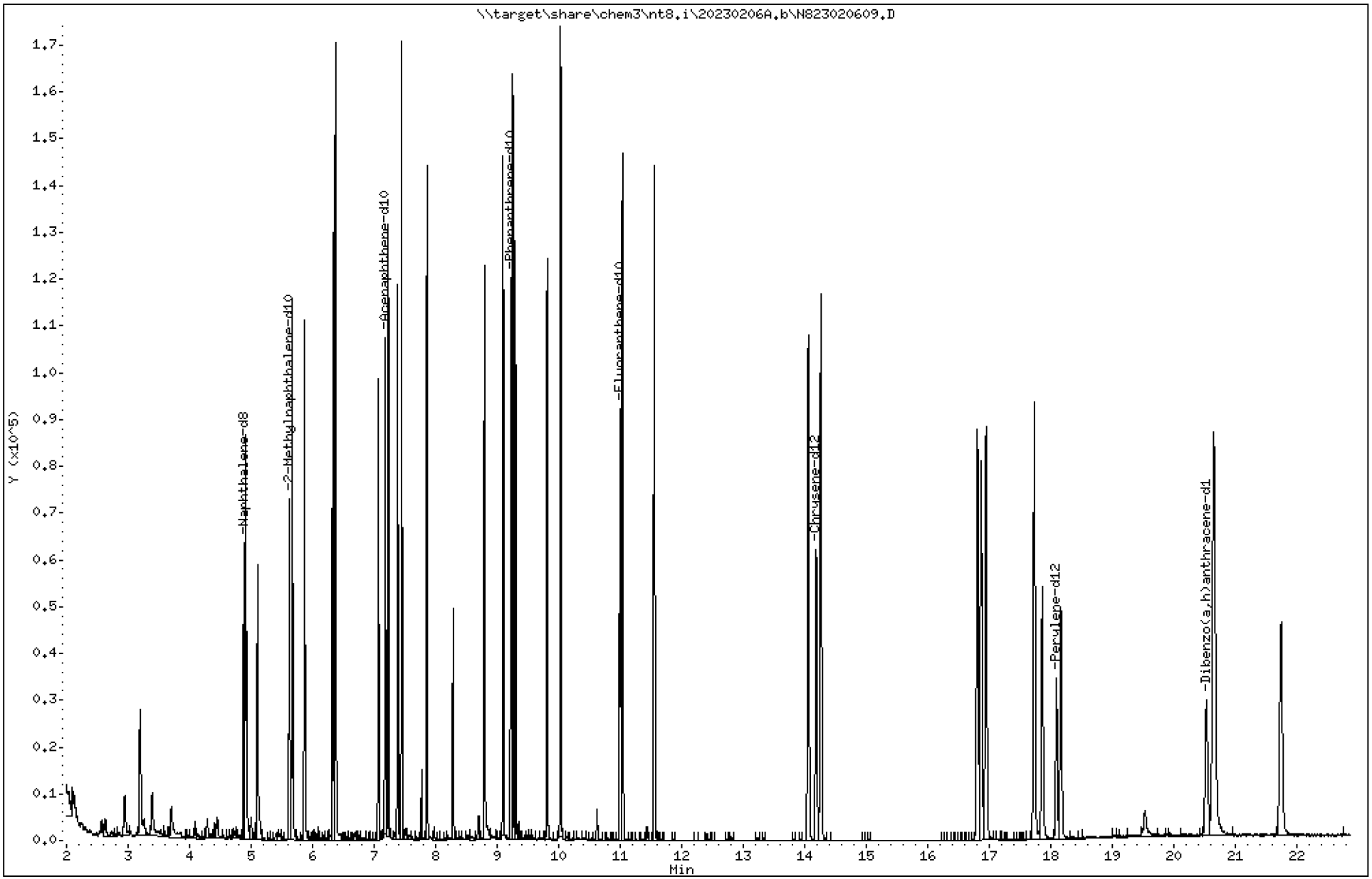
* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020609.D
Date : 06-FEB-2023 16:24
Client ID:
Sample Info: BLA0683-BS1,

Column phase: Rxi-17sil

Instrument: nt8.i

Operator: JZ
Column diameter: 0.25



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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

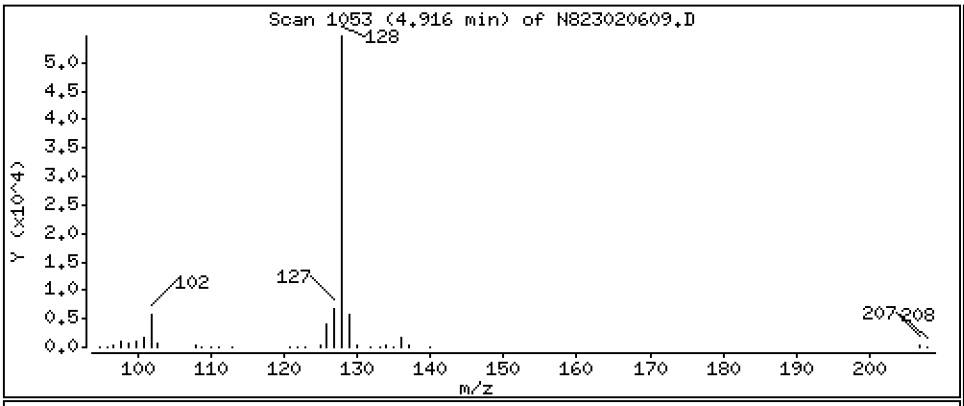
Operator: JZ

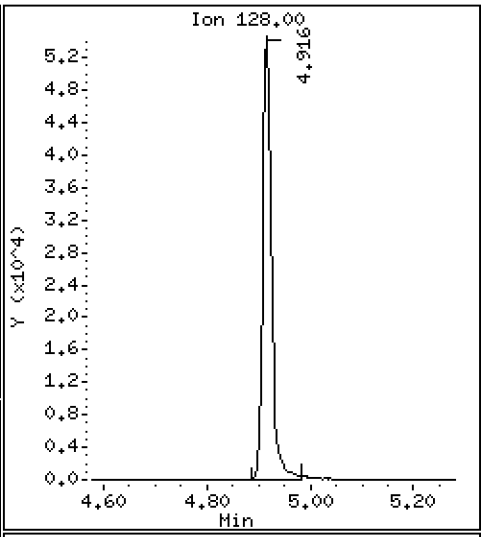
Column phase: Rxi-17sil

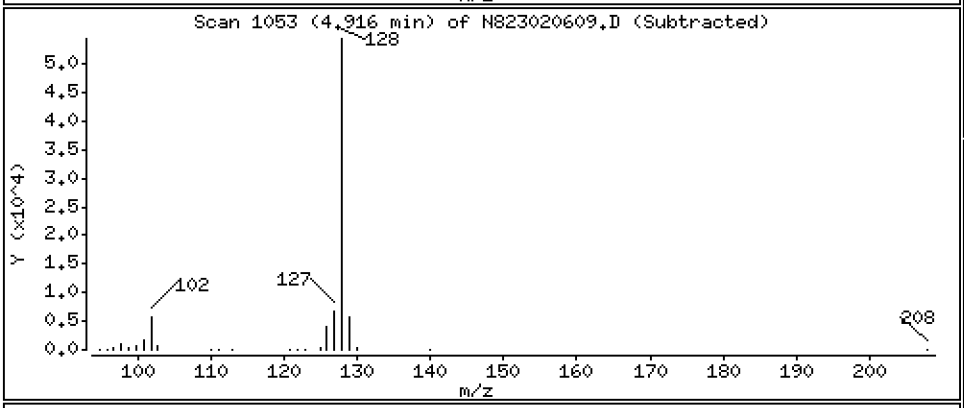
Column diameter: 0.25

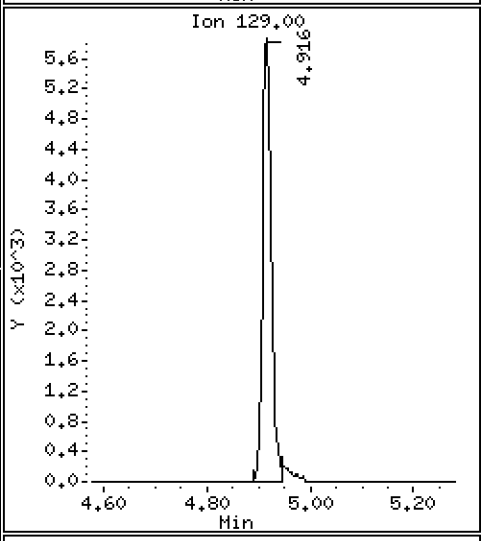
2 Naphthalene

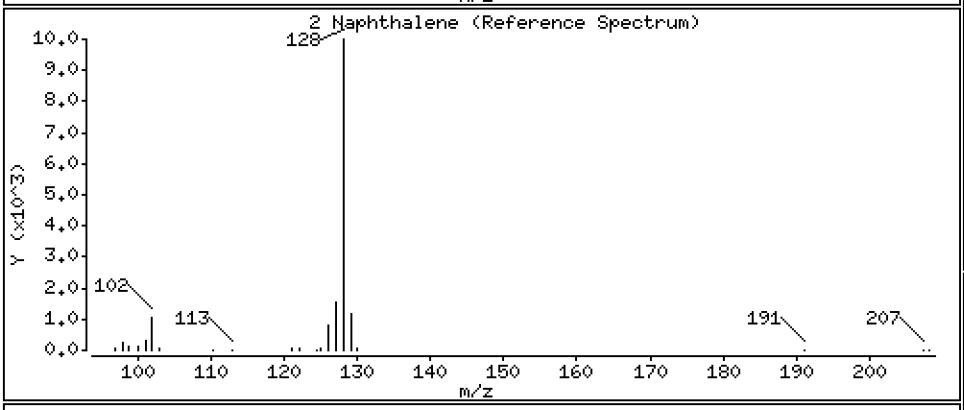
Concentration: 2.731 ug/mL

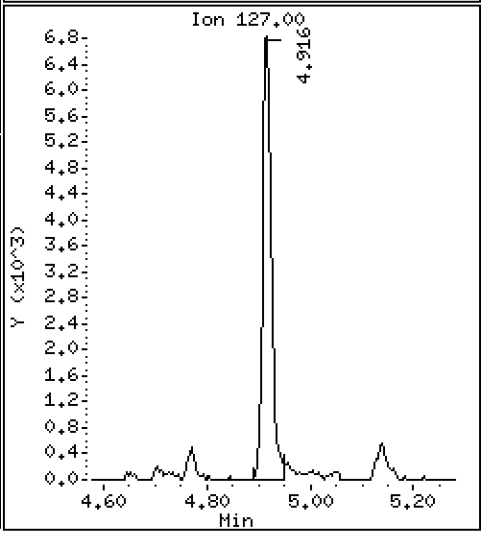


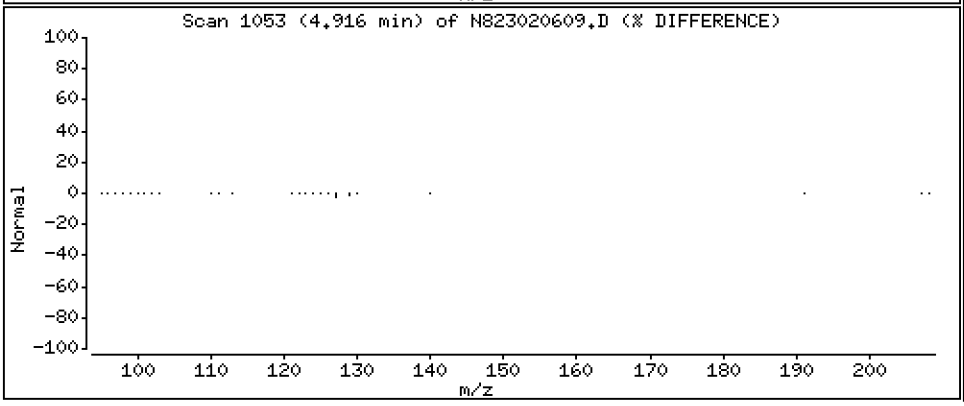












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

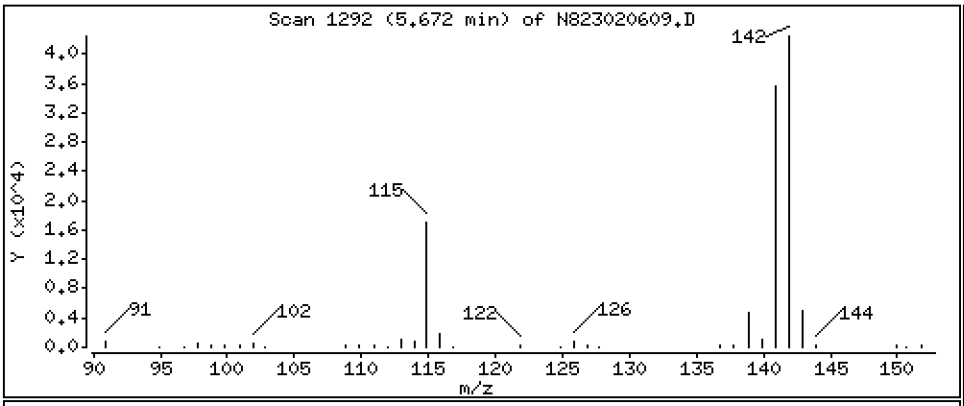
Operator: JZ

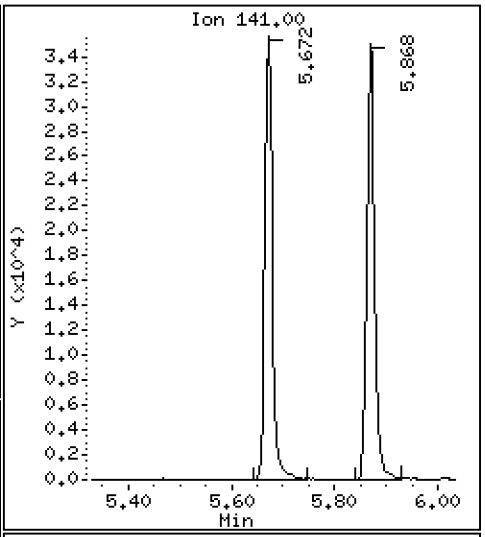
Column phase: Rxi-17sil

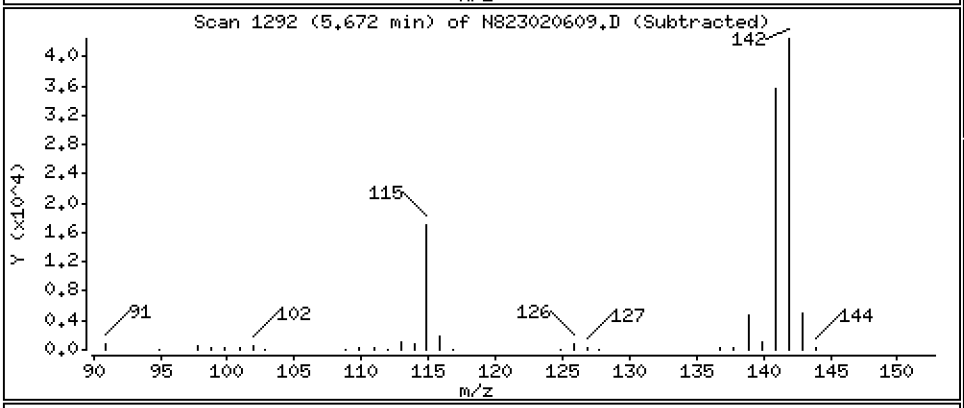
Column diameter: 0.25

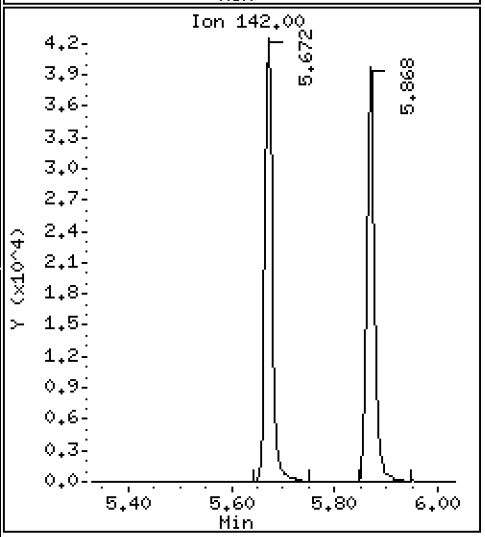
4 2-Methylnaphthalene

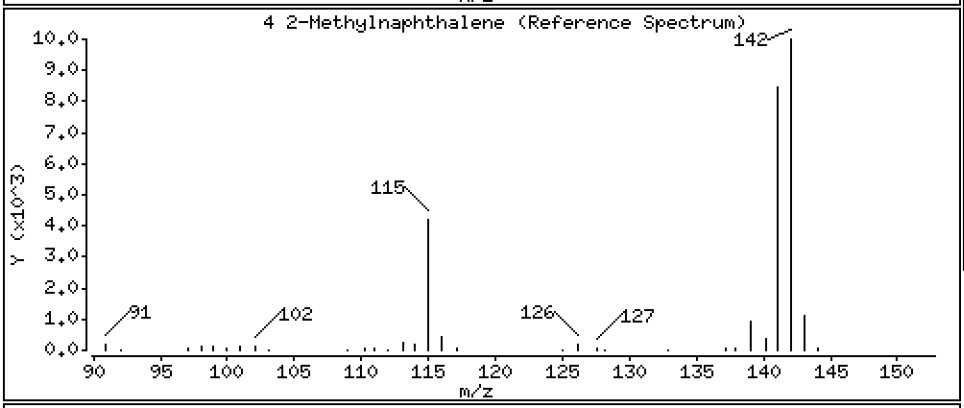
Concentration: 2.825 ug/mL

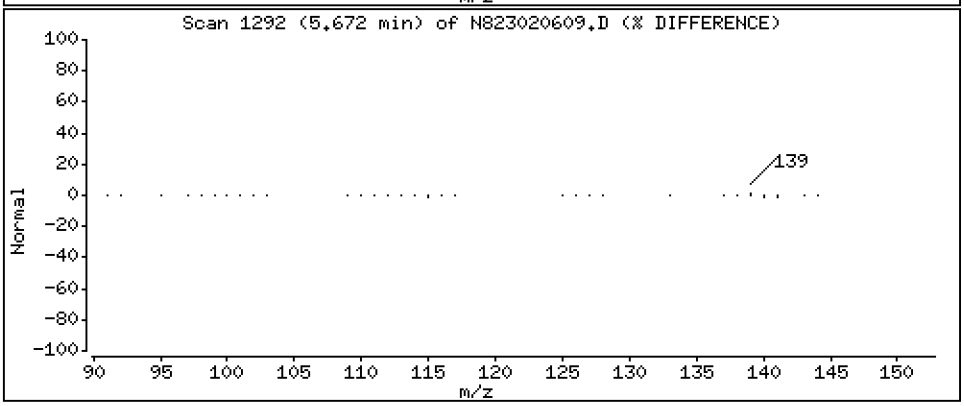












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

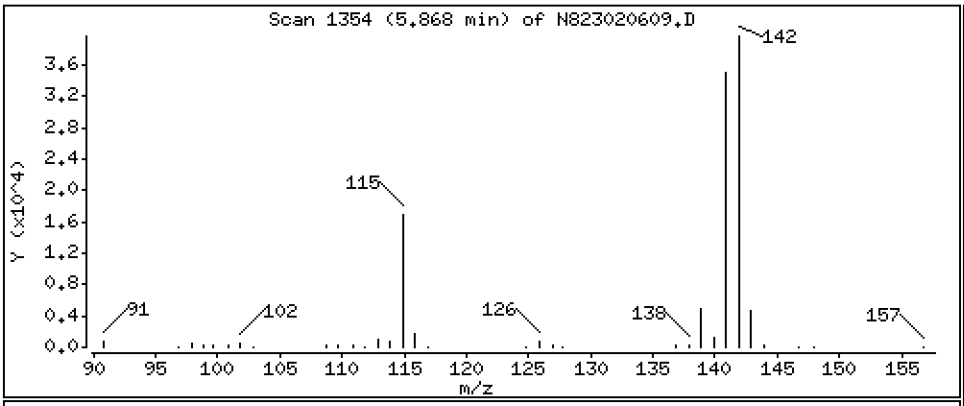
Operator: JZ

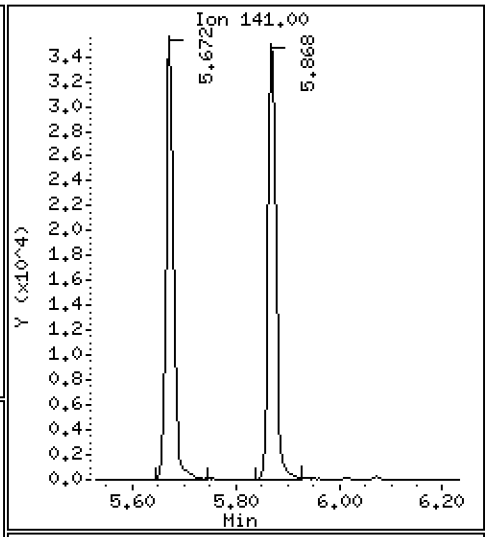
Column phase: Rxi-17sil

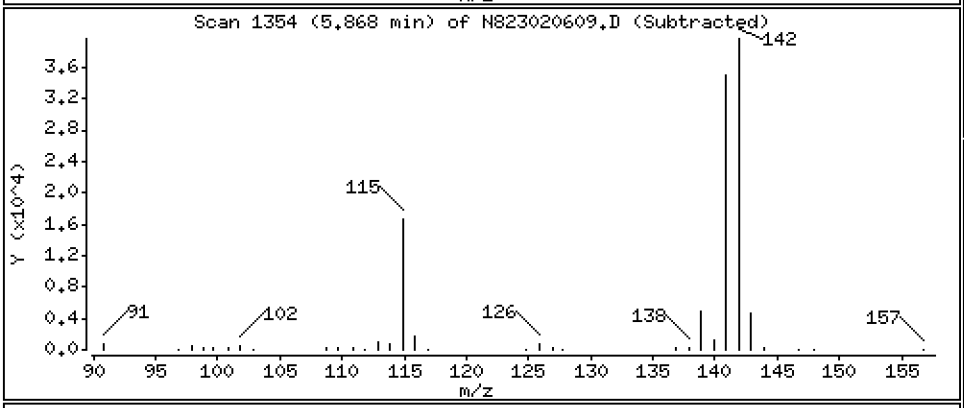
Column diameter: 0.25

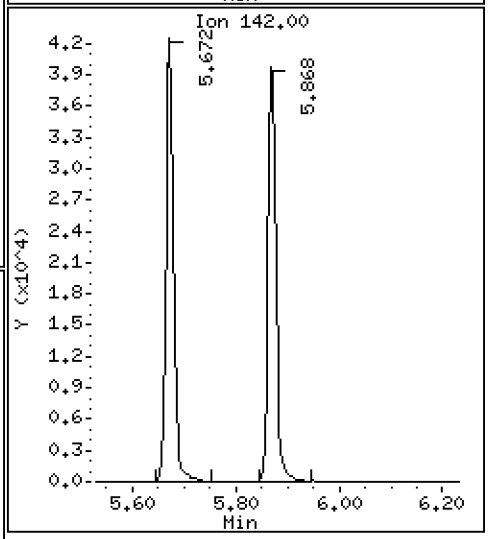
5 1-methylnaphthalene

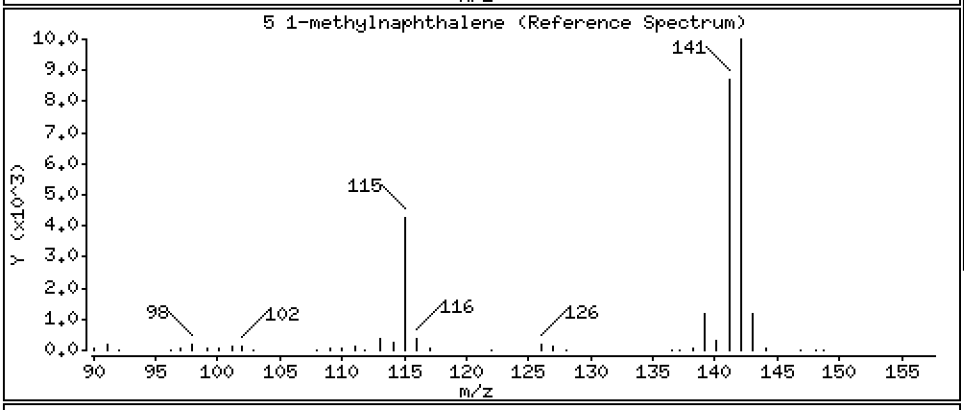
Concentration: 2.796 ug/mL

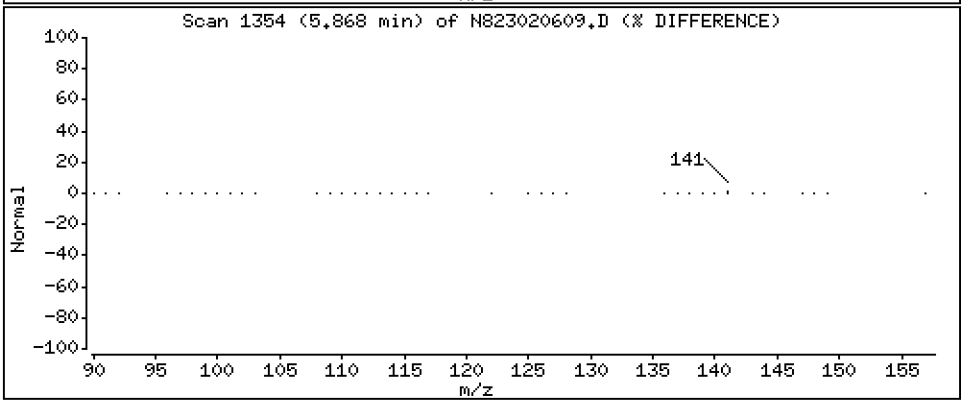












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

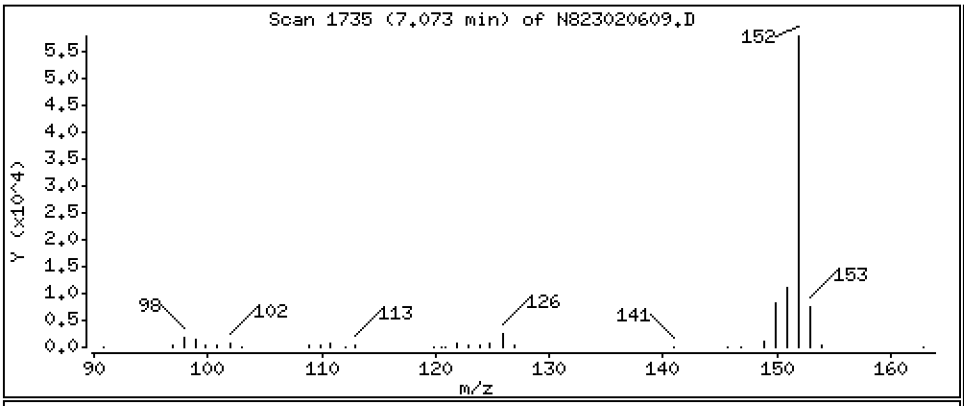
Operator: JZ

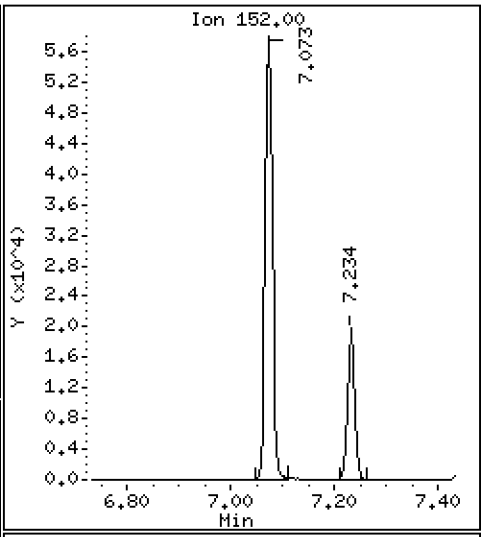
Column phase: Rxi-17sil

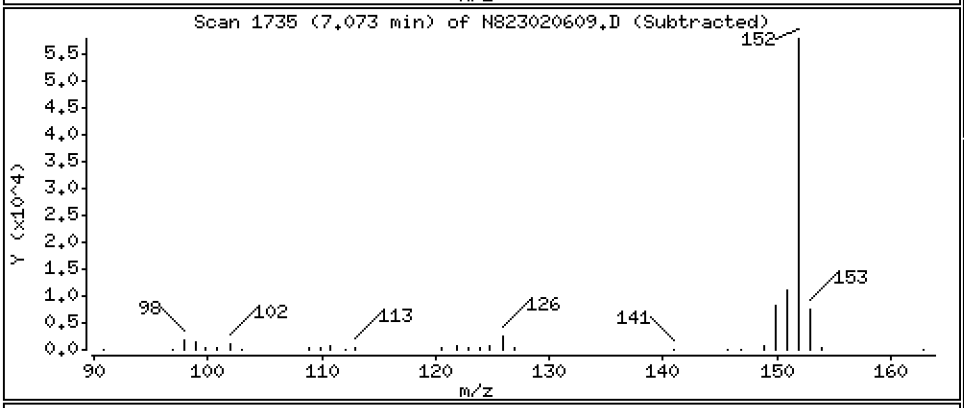
Column diameter: 0.25

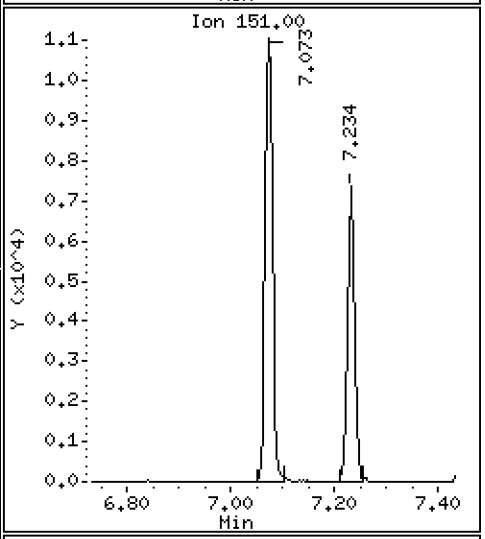
9 Acenaphthylene

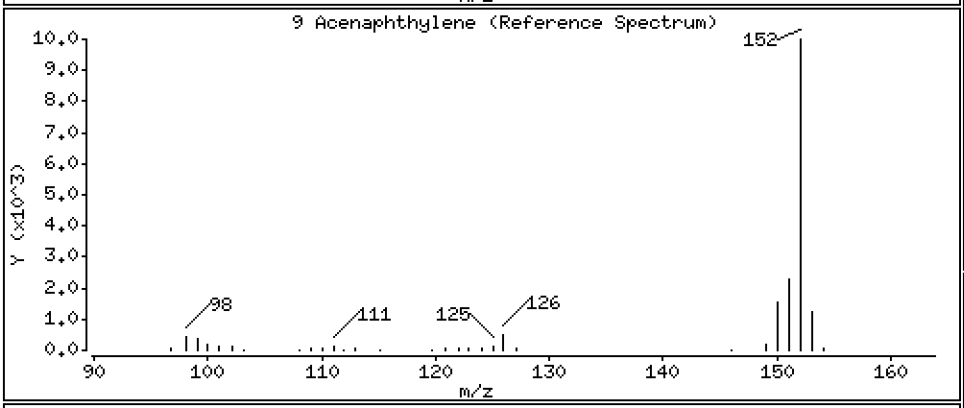
Concentration: 2.446 ug/mL

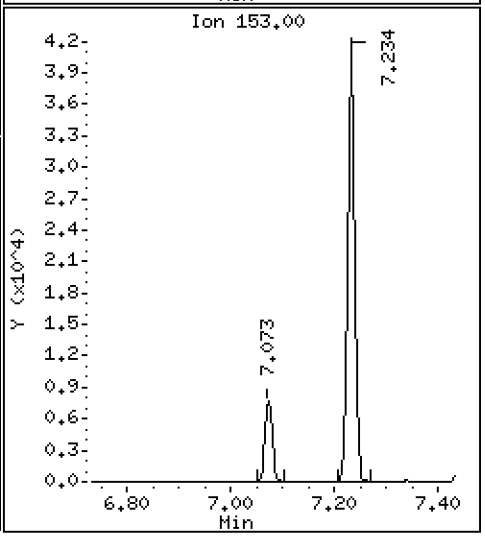


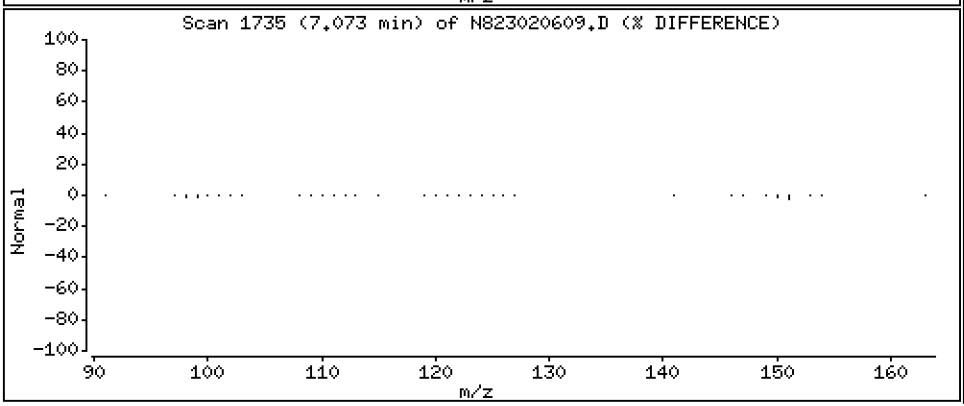












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

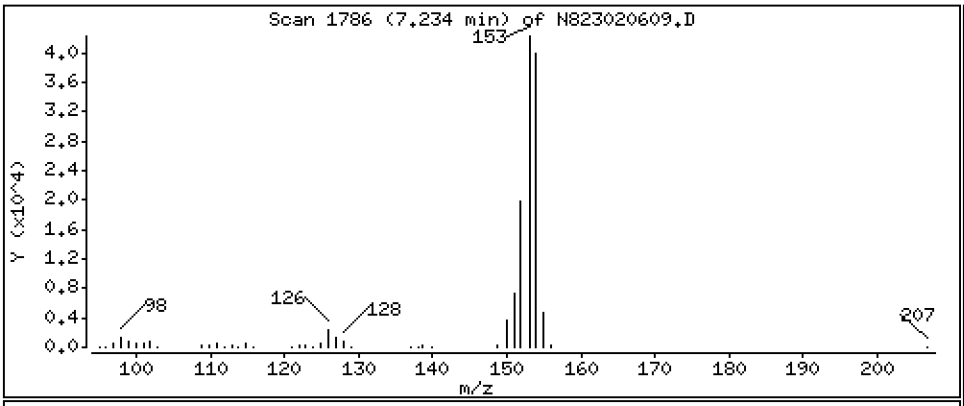
Operator: JZ

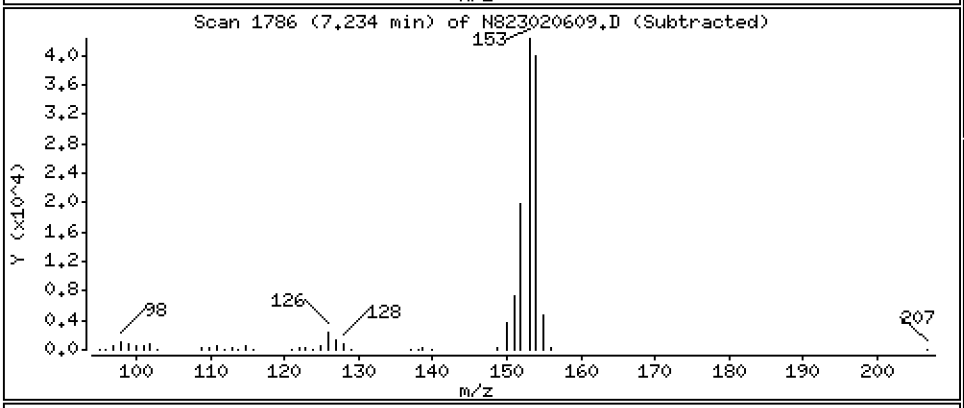
Column phase: Rxi-17sil

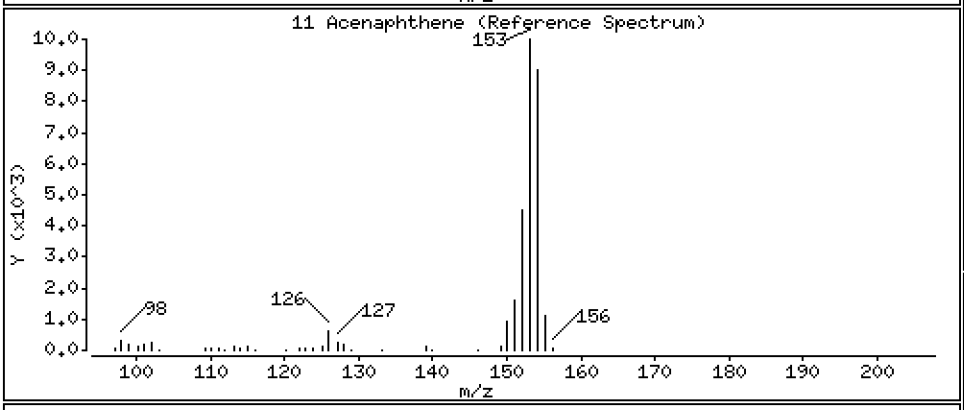
Column diameter: 0.25

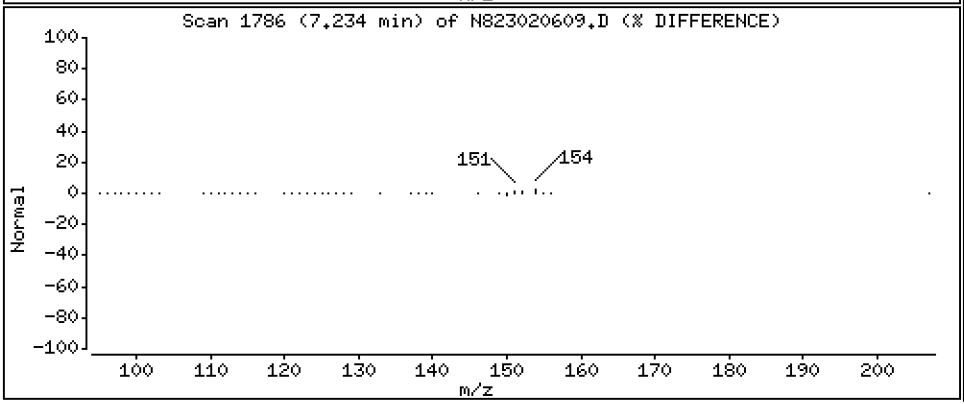
11 Acenaphthene

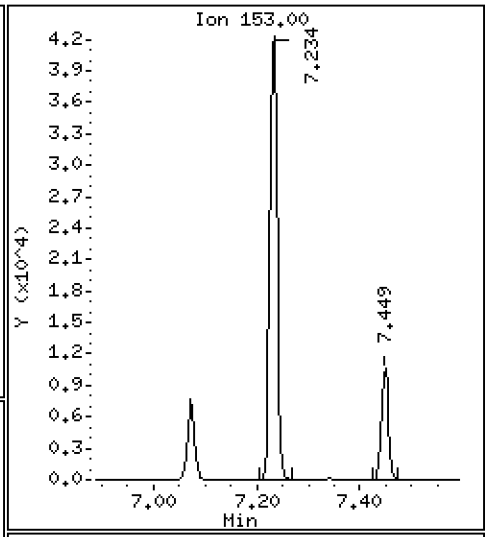
Concentration: 2.690 ug/mL

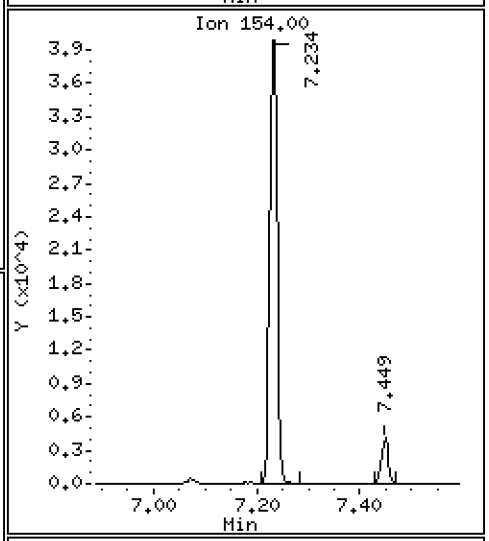


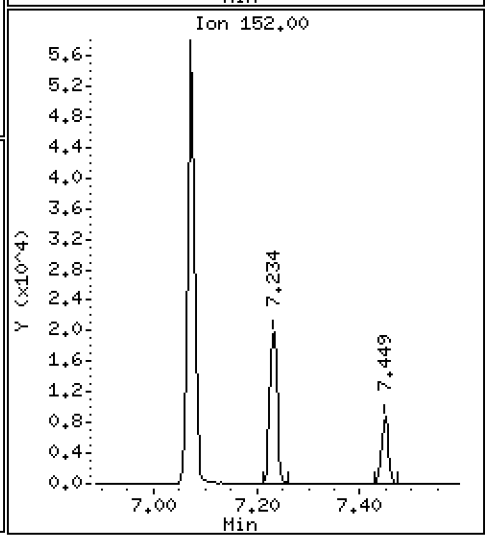












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

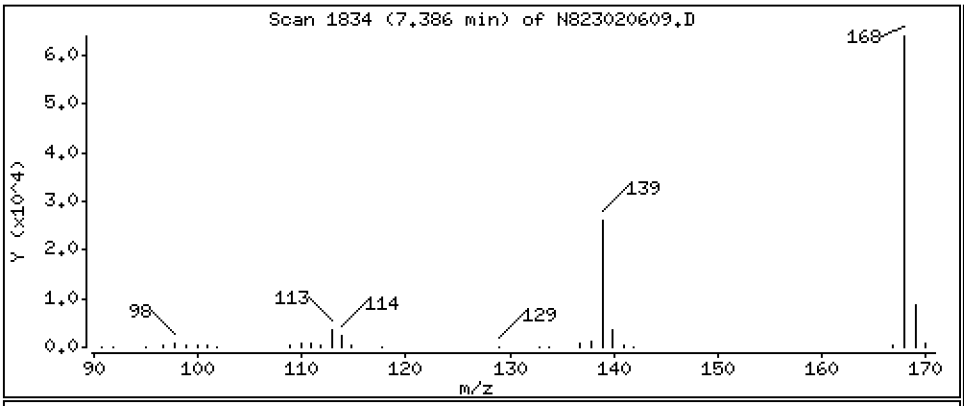
Operator: JZ

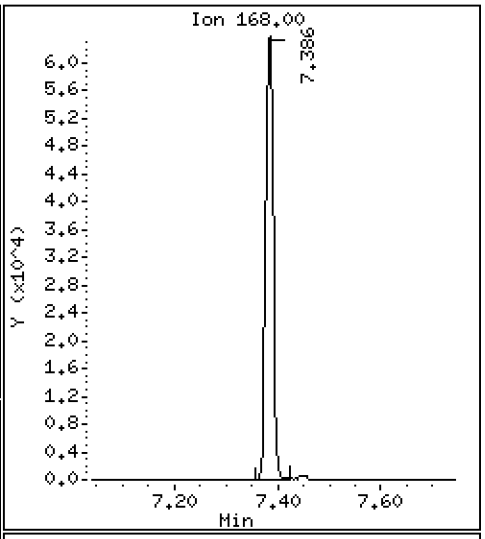
Column phase: Rxi-17sil

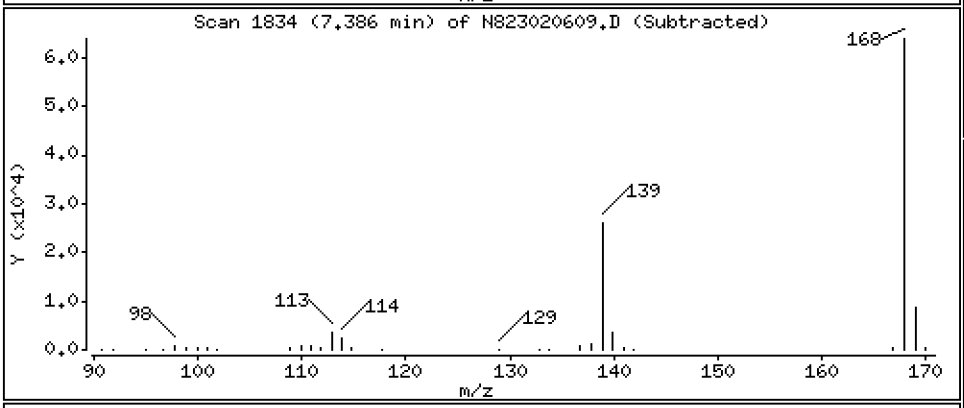
Column diameter: 0.25

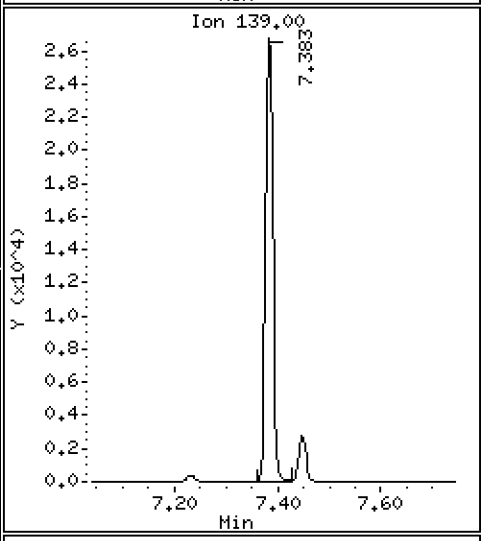
12 Dibenzofuran

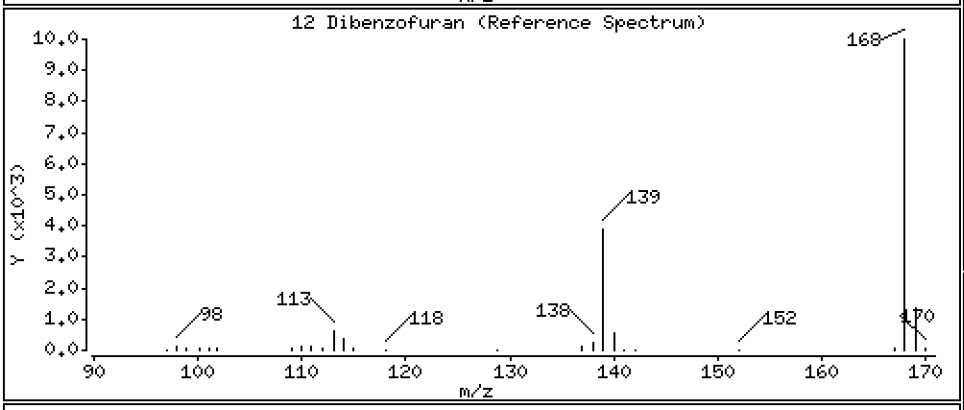
Concentration: 2.696 ug/mL

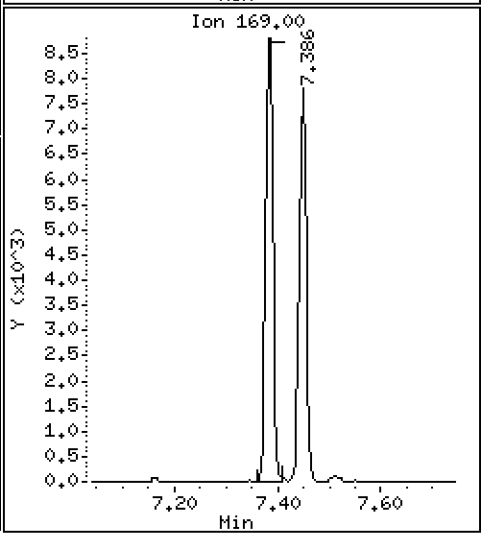


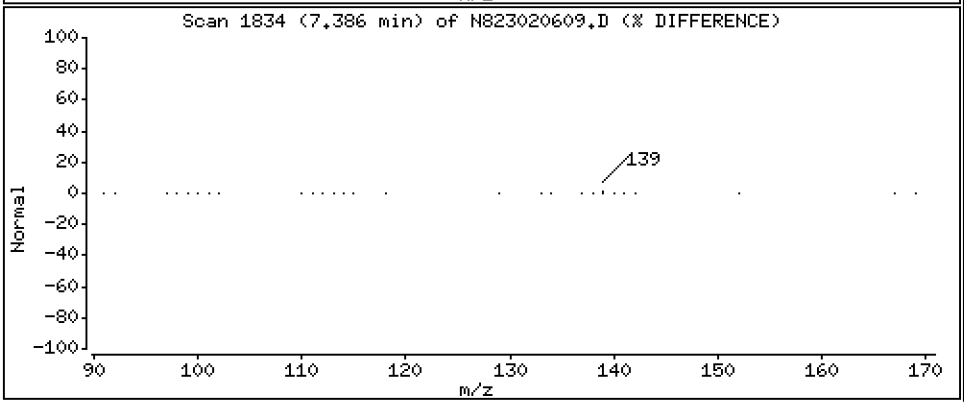












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

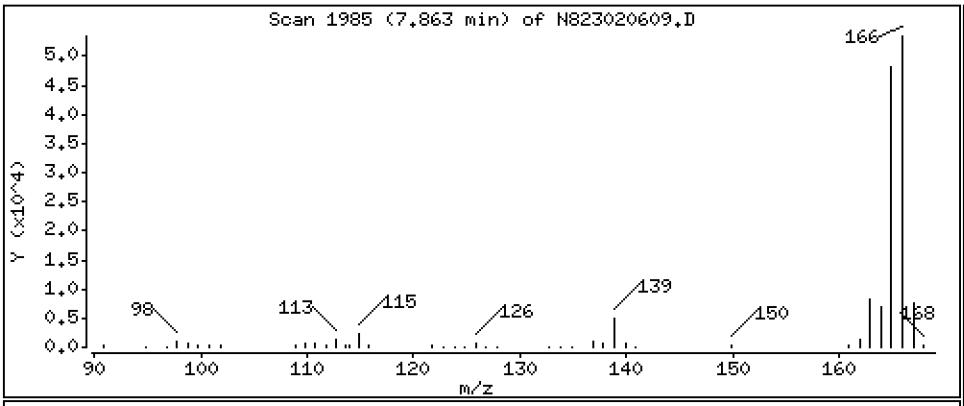
Operator: JZ

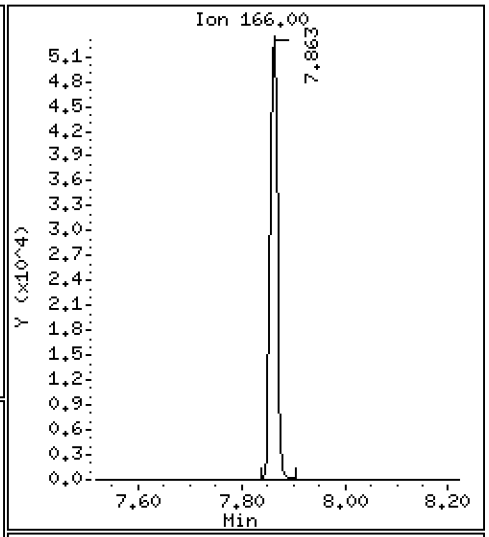
Column phase: Rxi-17sil

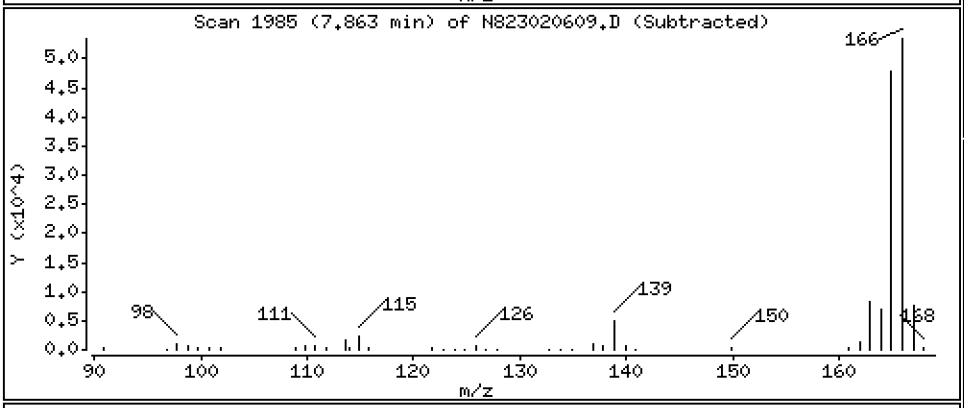
Column diameter: 0.25

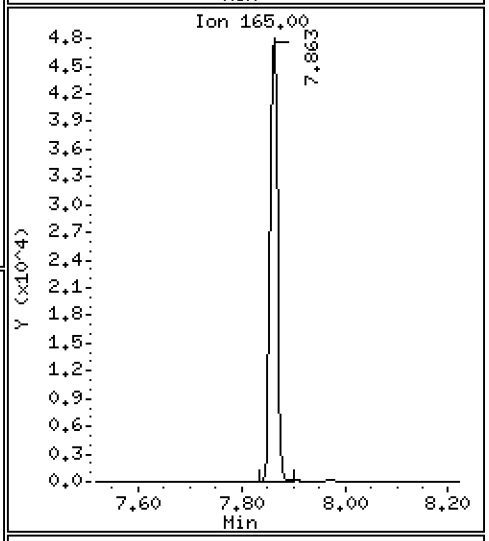
14 Fluorene

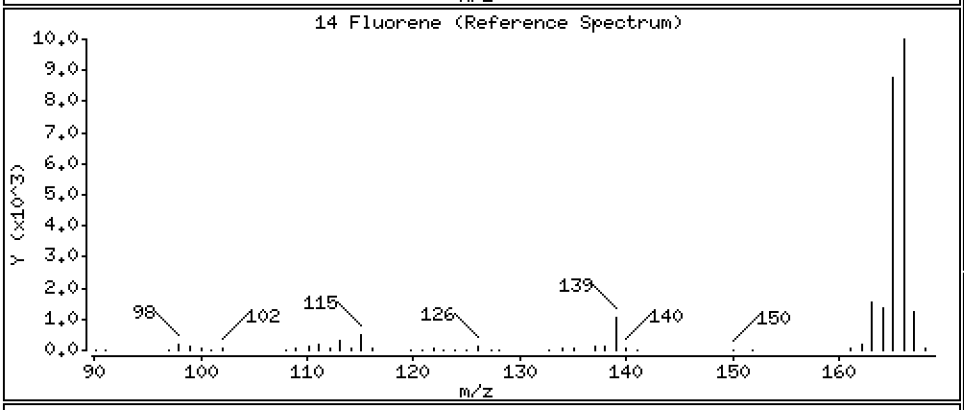
Concentration: 2.828 ug/mL

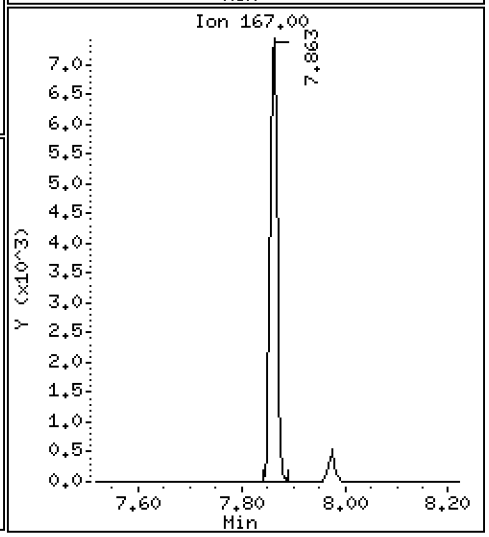


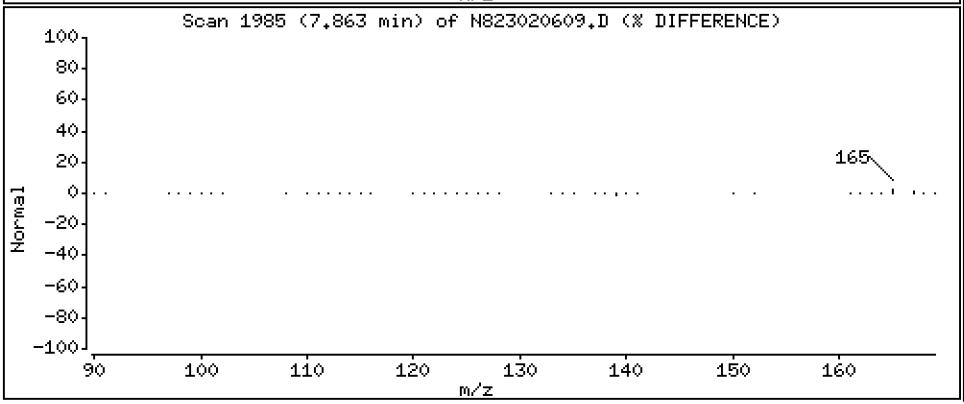












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

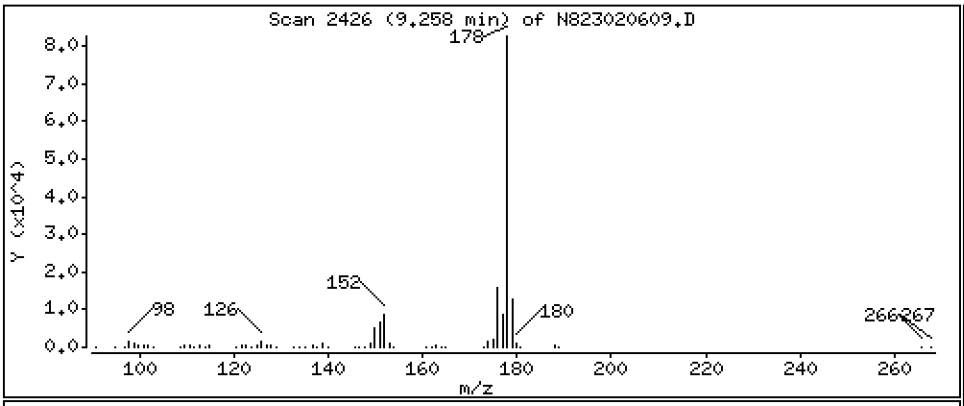
Operator: JZ

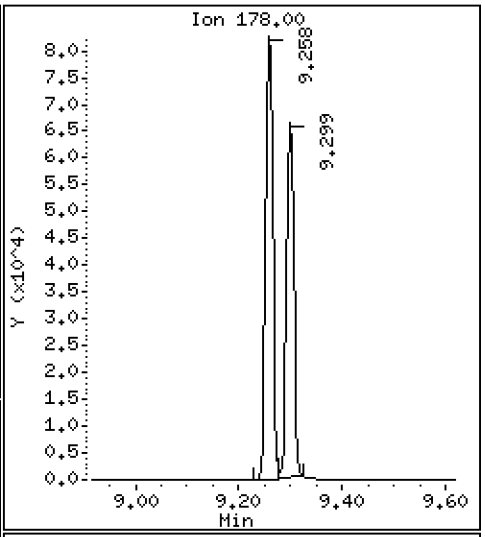
Column phase: Rxi-17sil

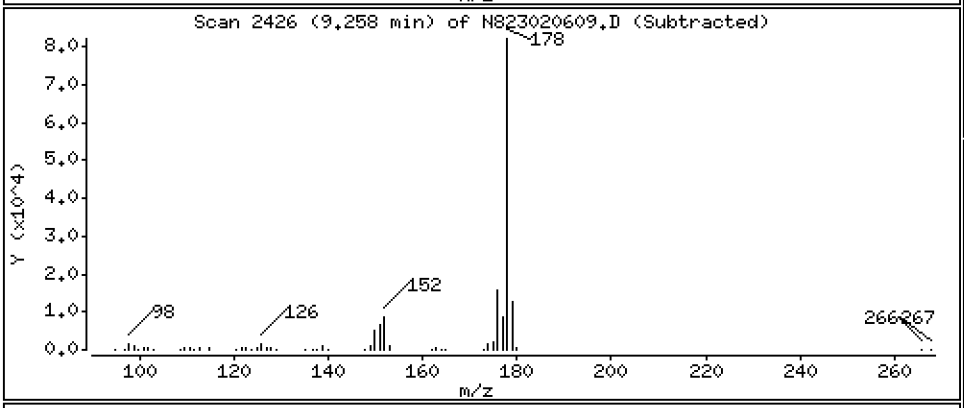
Column diameter: 0.25

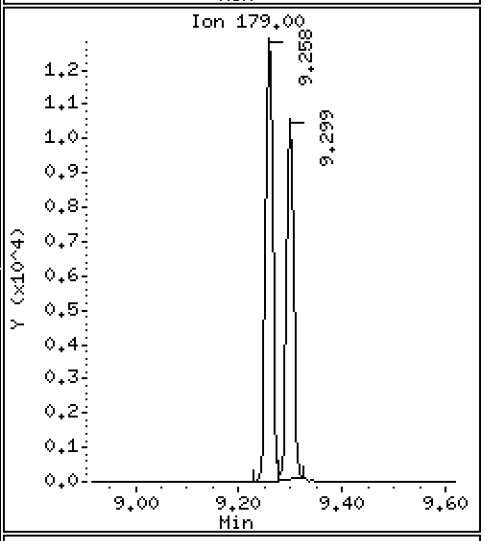
16 Phenanthrene

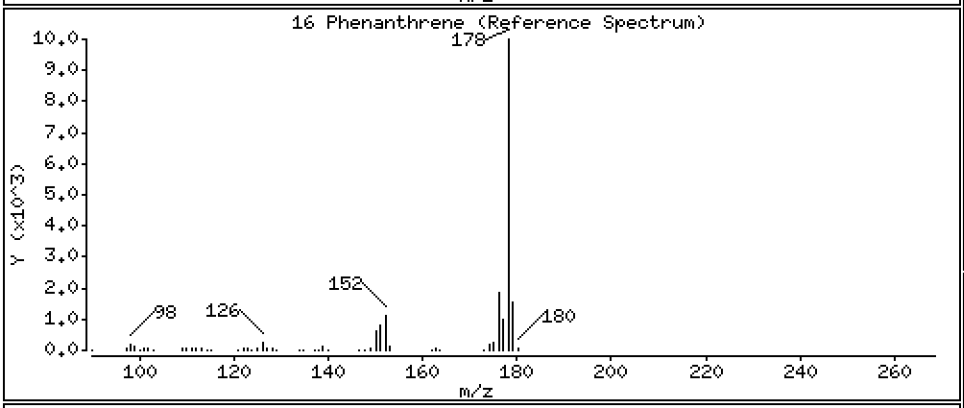
Concentration: 2.914 ug/mL

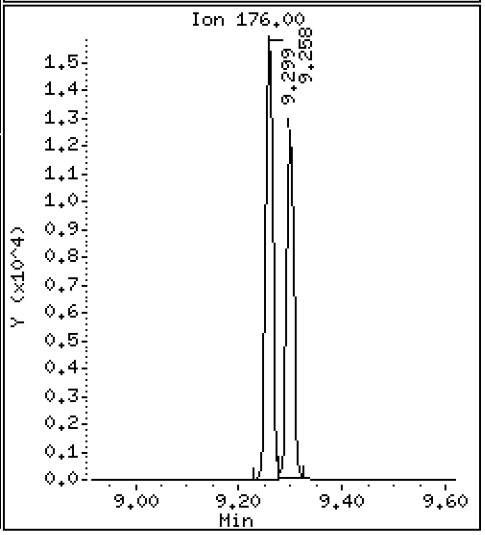


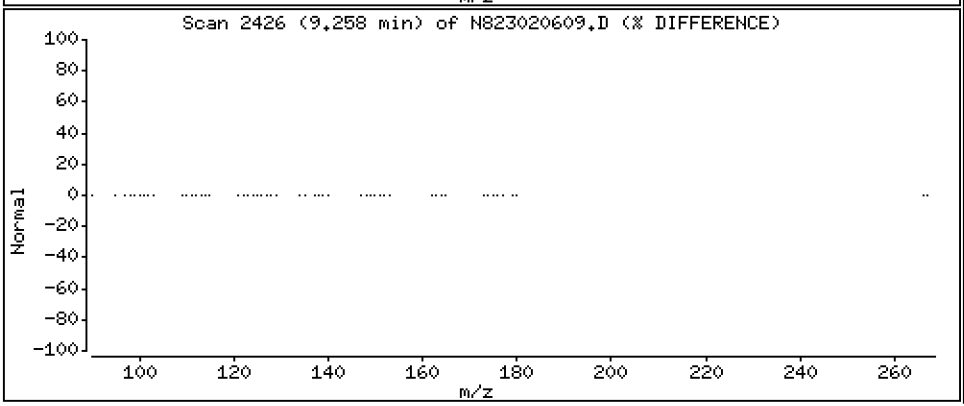












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

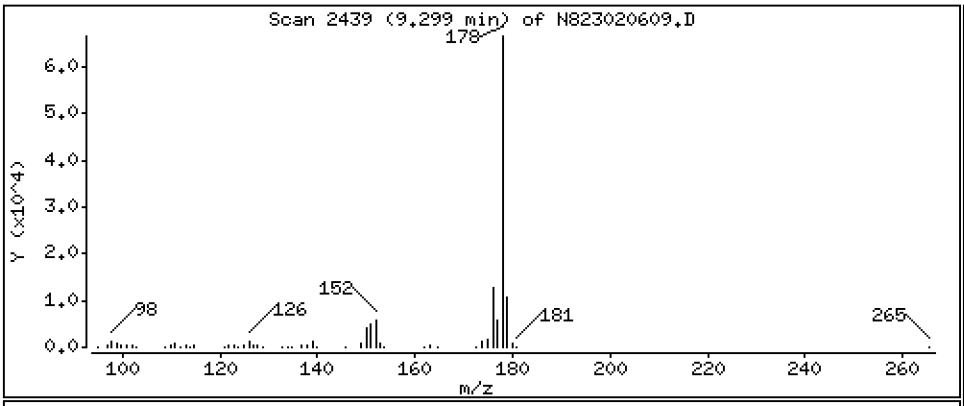
Operator: JZ

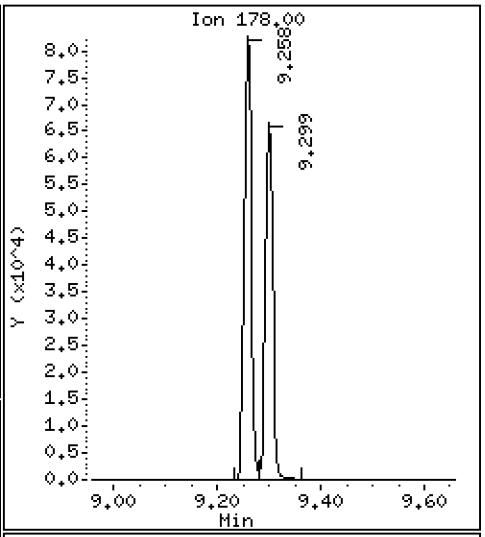
Column phase: Rxi-17sil

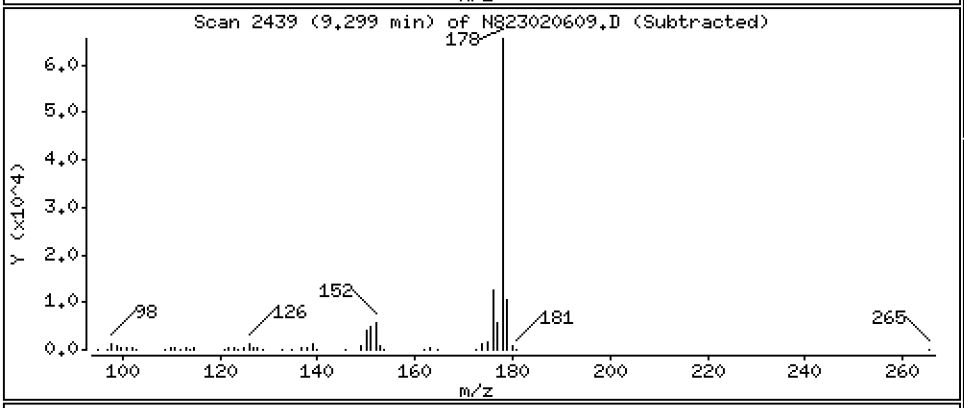
Column diameter: 0.25

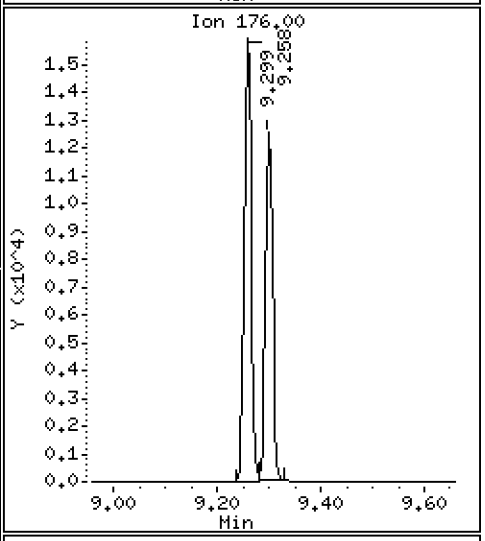
17 Anthracene

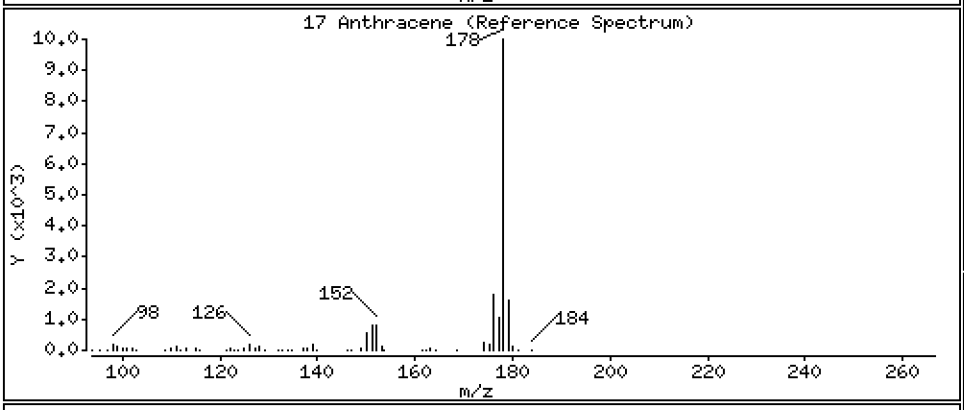
Concentration: 2.654 ug/mL

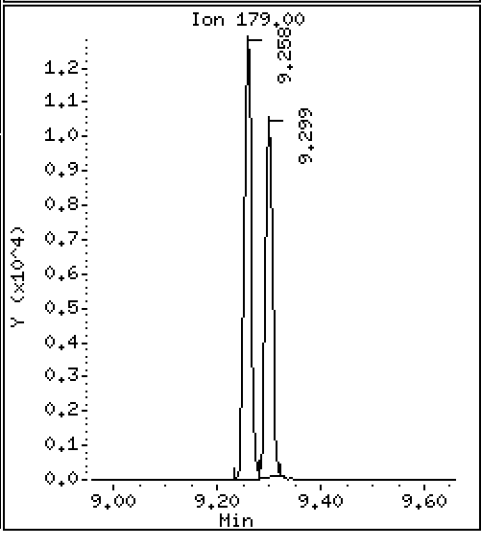


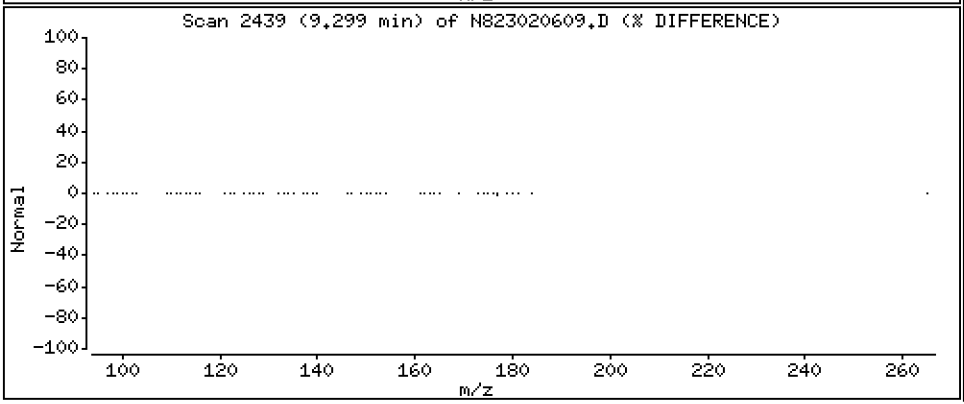












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

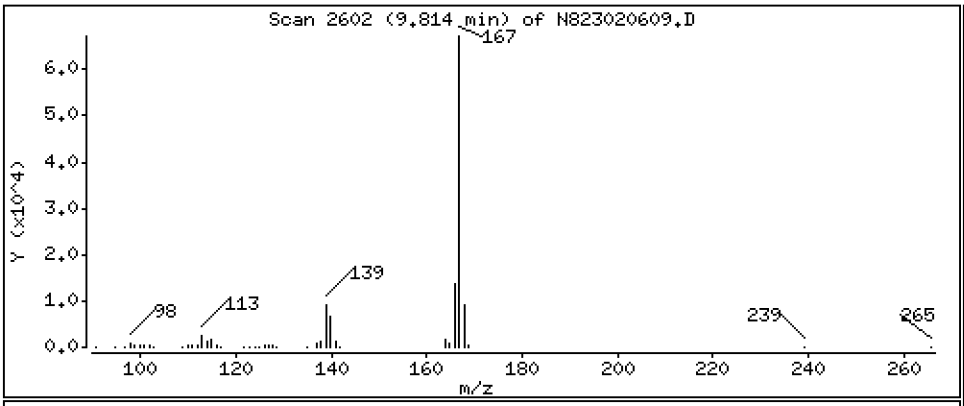
Operator: JZ

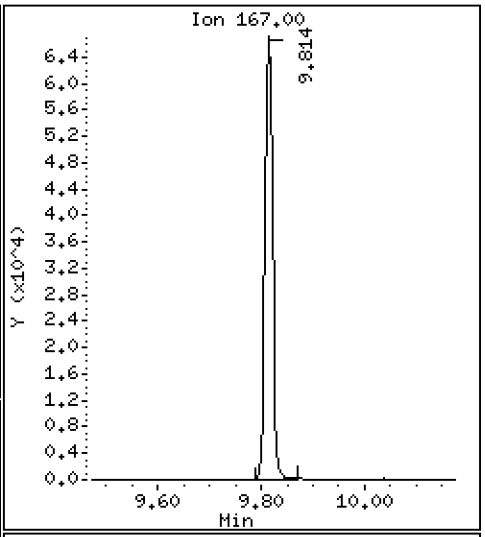
Column phase: Rxi-17sil

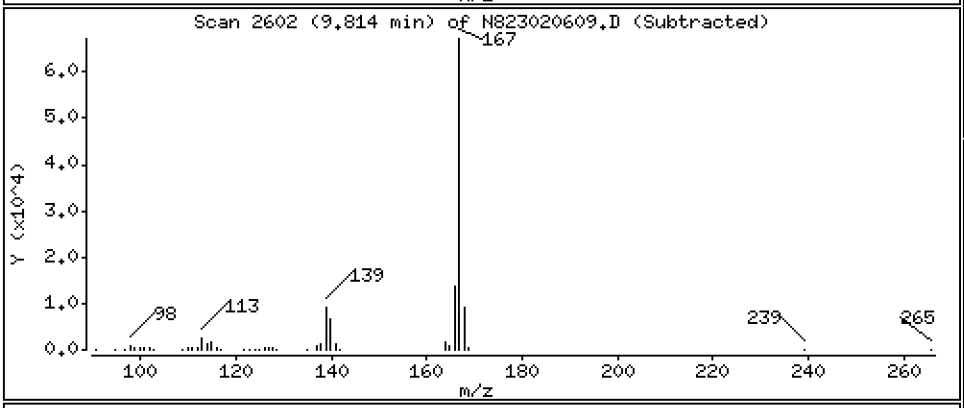
Column diameter: 0.25

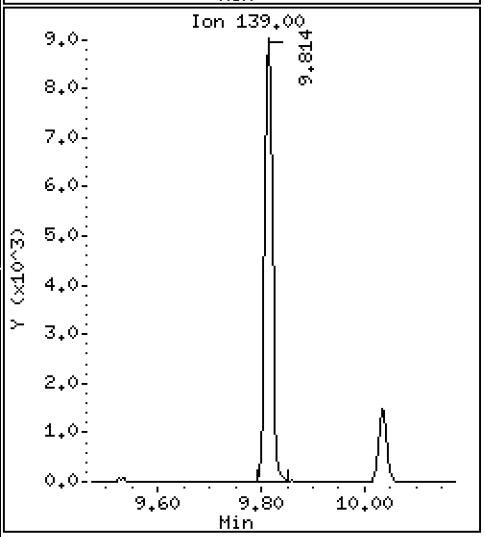
19 Carbazole

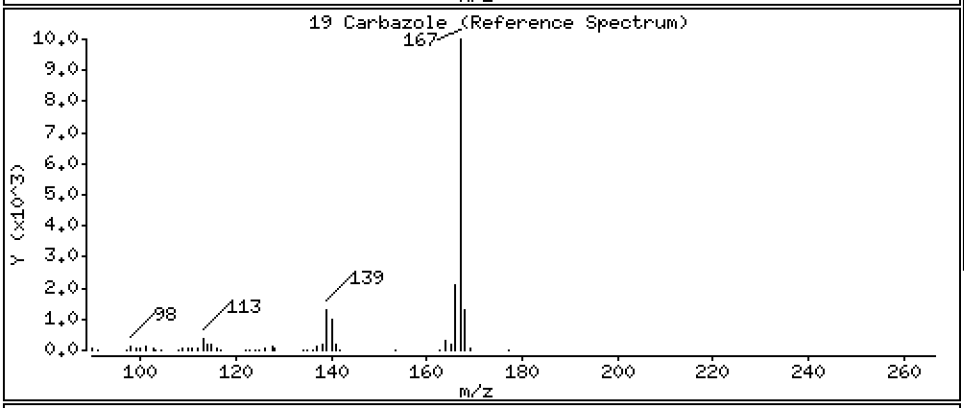
Concentration: 3.038 ug/mL

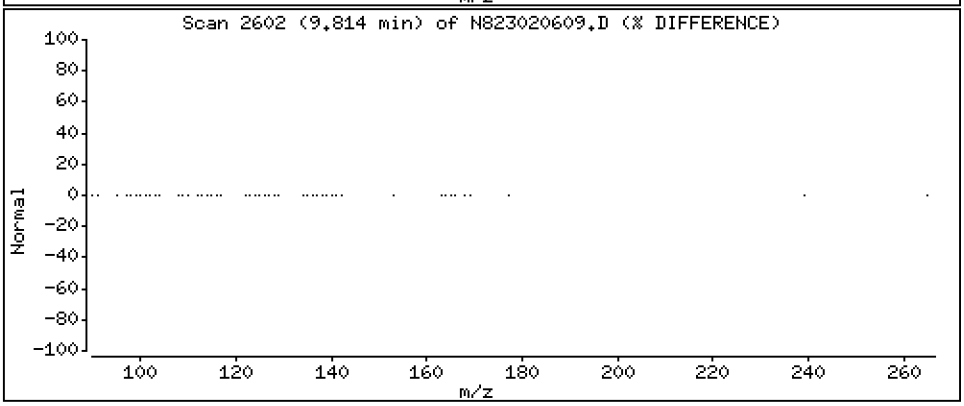












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

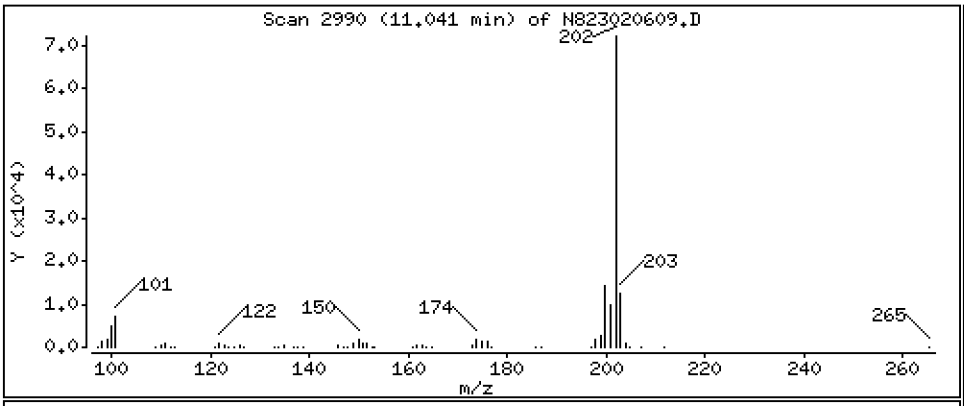
Operator: JZ

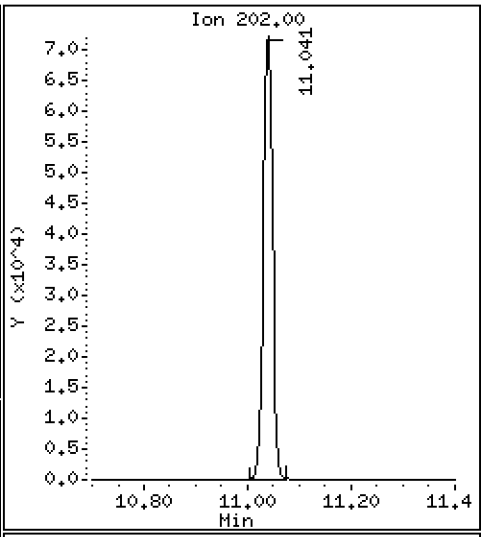
Column phase: Rxi-17sil

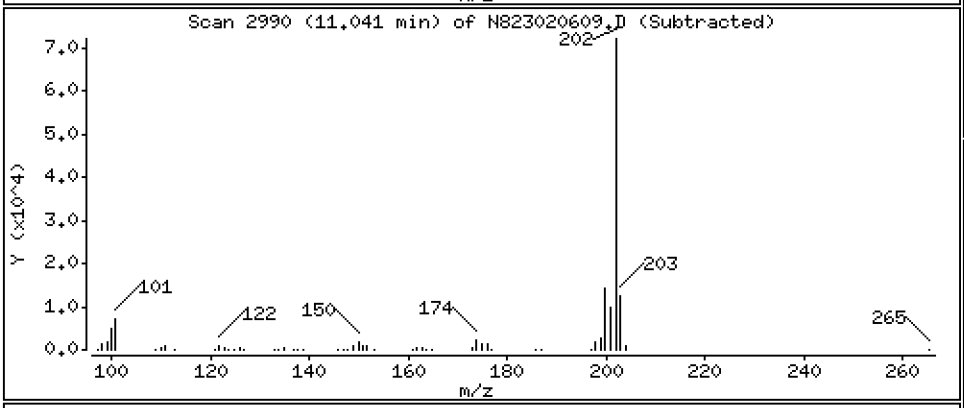
Column diameter: 0.25

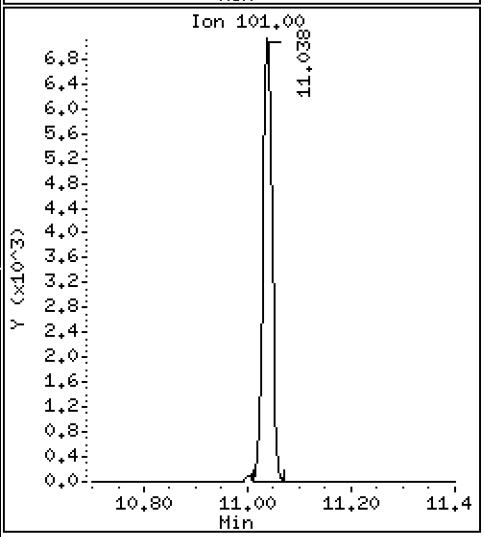
22 Fluoranthene

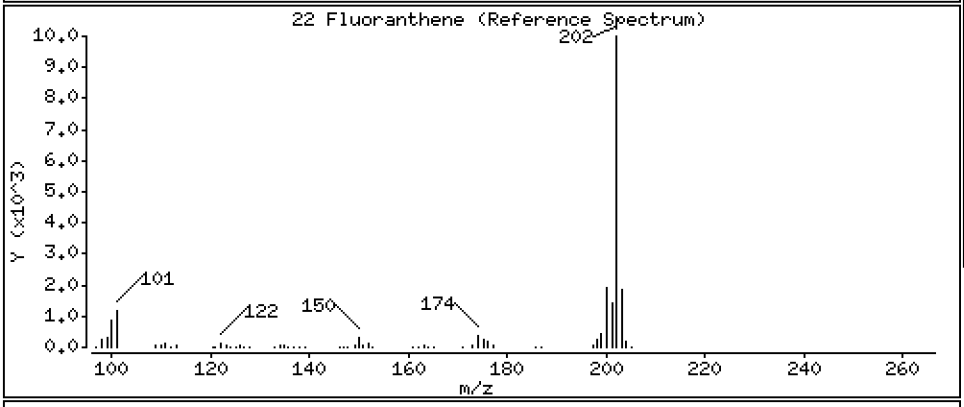
Concentration: 3.073 ug/mL

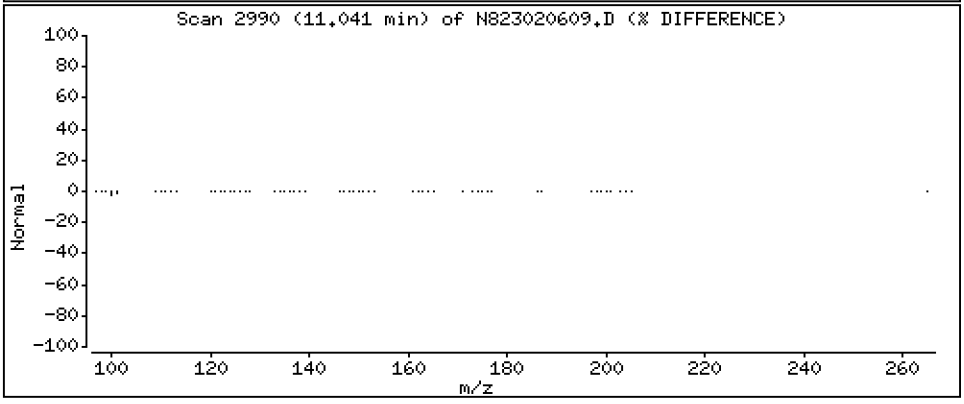












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

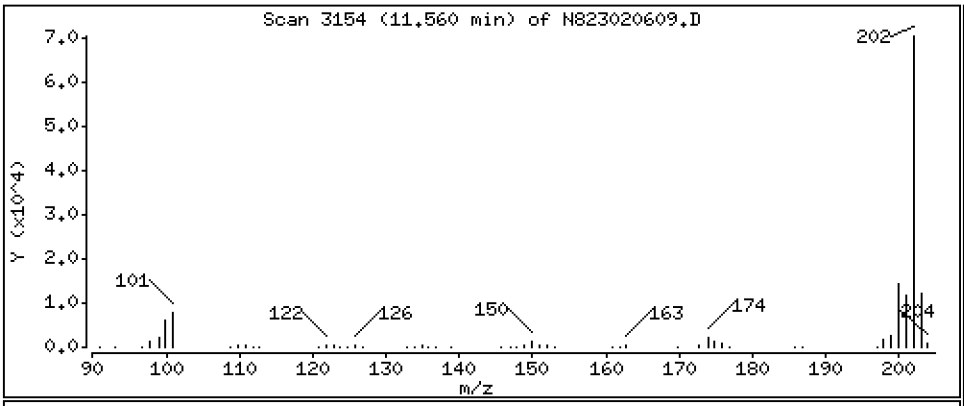
Operator: JZ

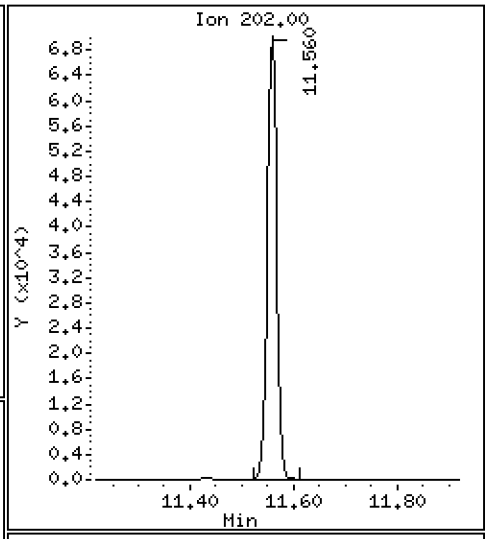
Column phase: Rxi-17sil

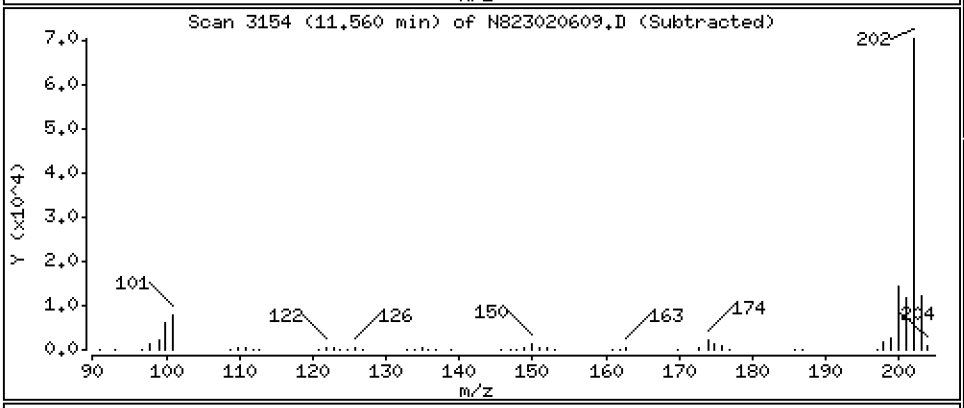
Column diameter: 0.25

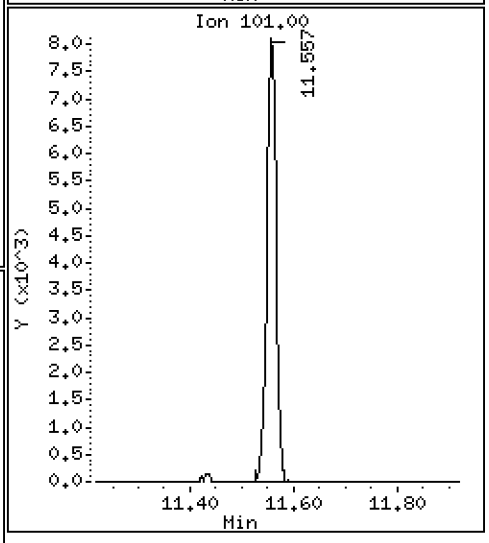
23 Pyrene

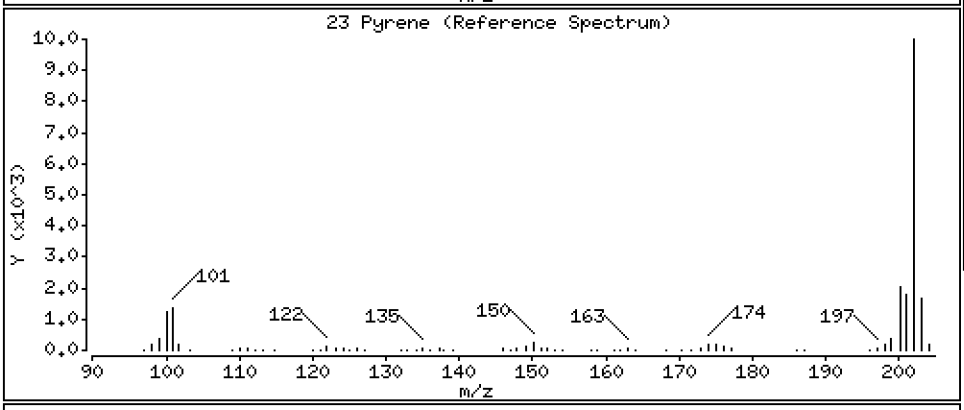
Concentration: 3.566 ug/mL

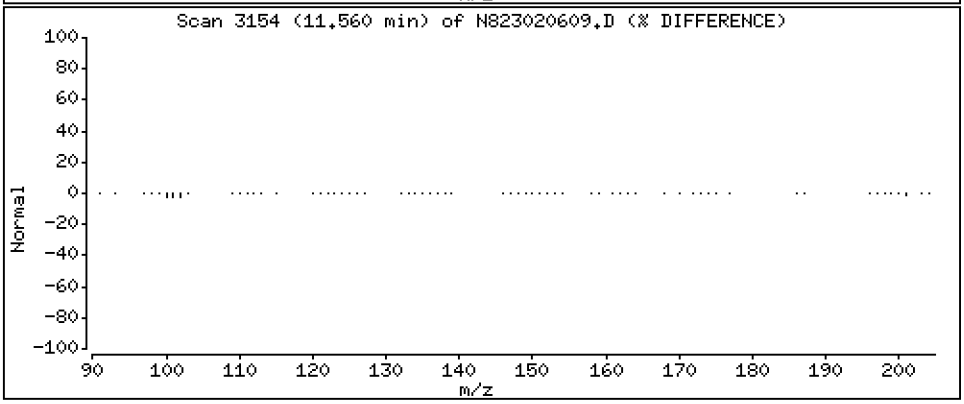












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020609.D

Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

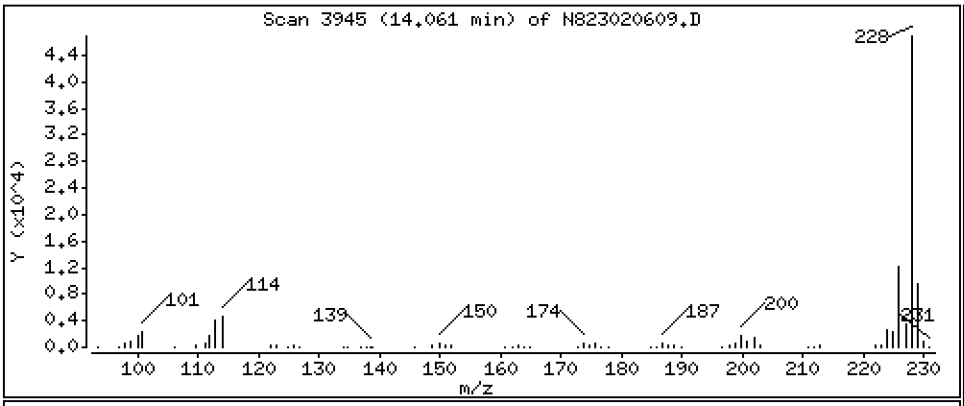
Operator: JZ

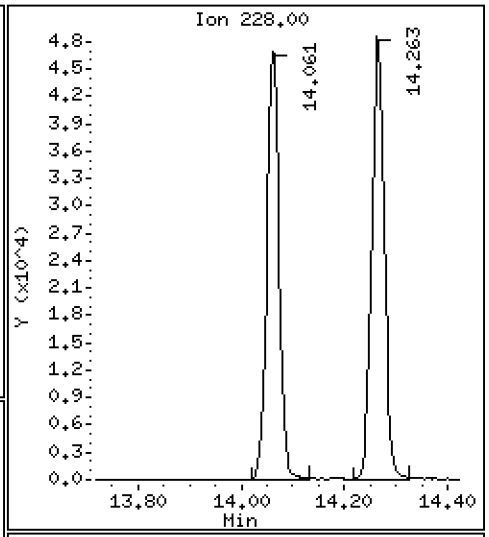
Column phase: Rxi-17sil

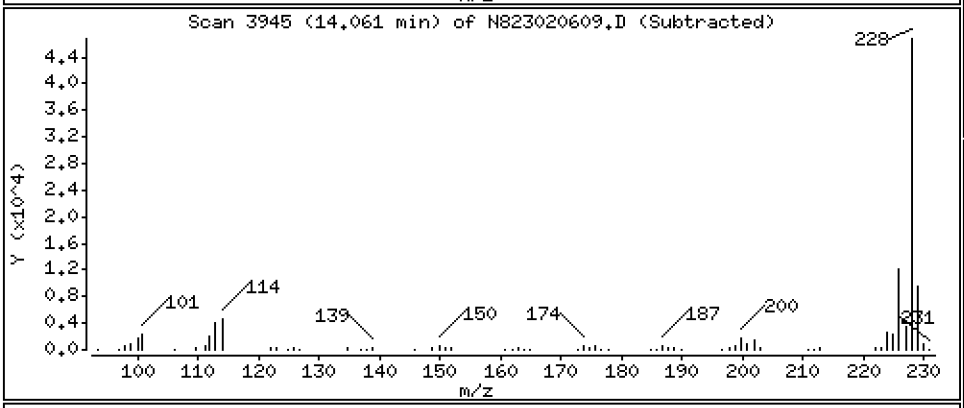
Column diameter: 0.25

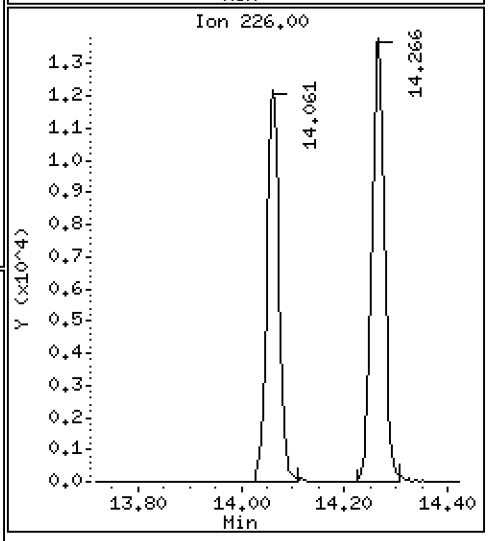
24 Benzo(a)anthracene

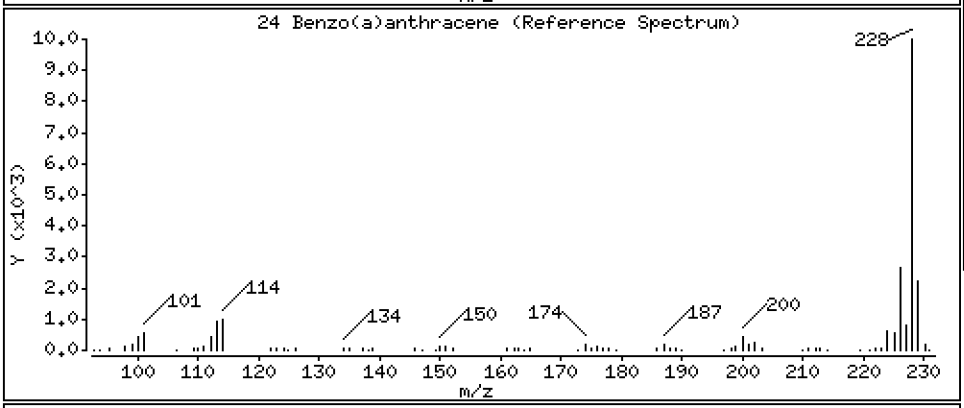
Concentration: 3.343 ug/mL

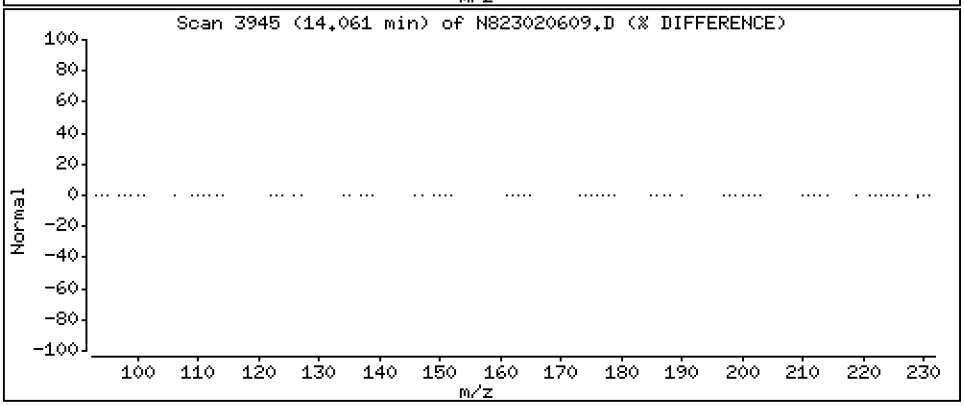












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

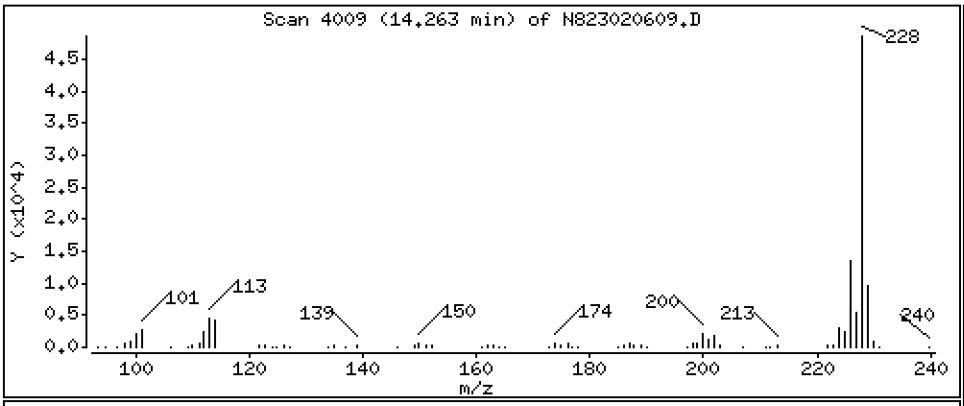
Operator: JZ

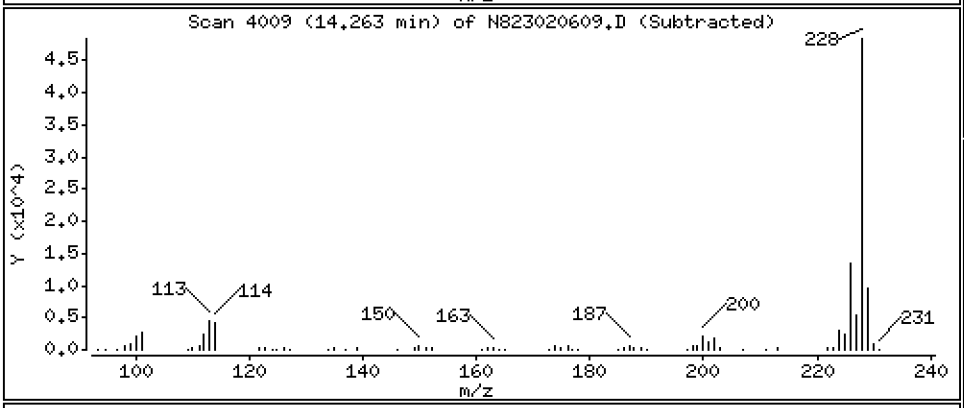
Column phase: Rxi-17sil

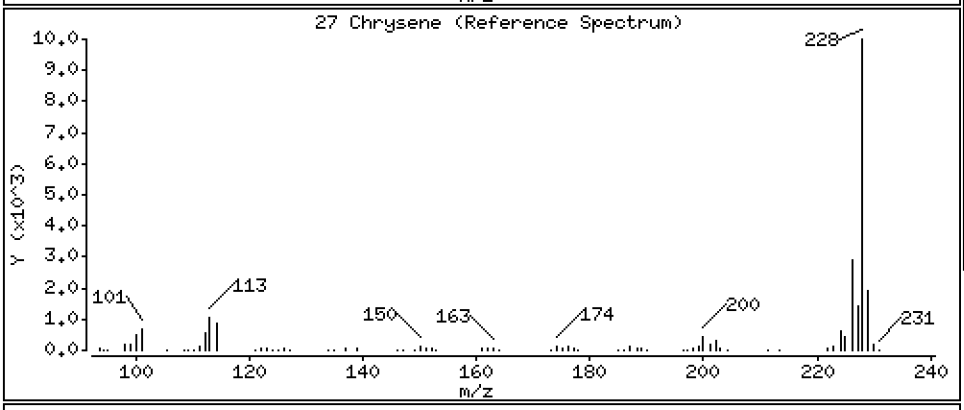
Column diameter: 0.25

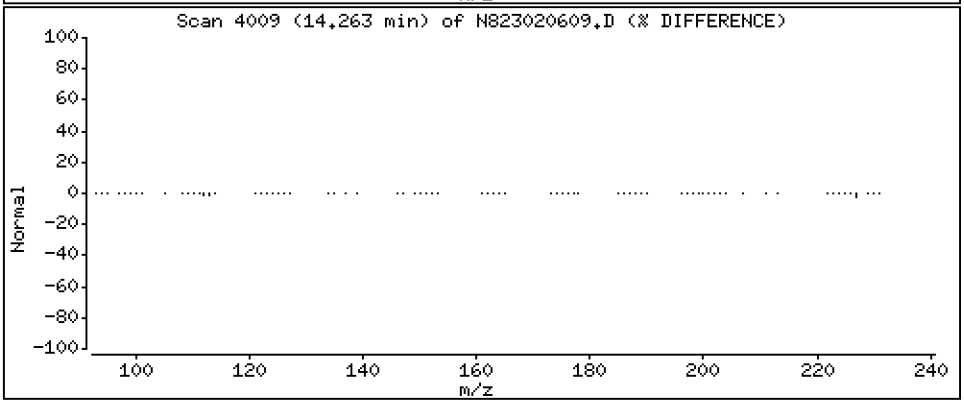
27 Chrysene

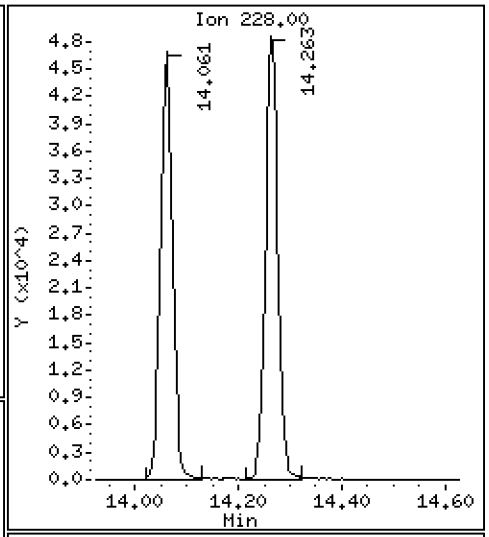
Concentration: 3.335 ug/mL

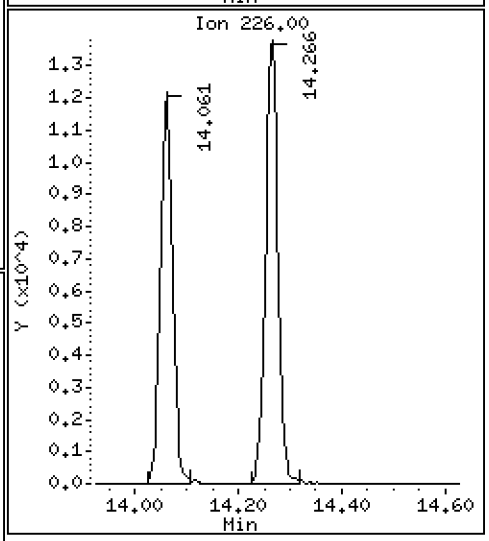












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

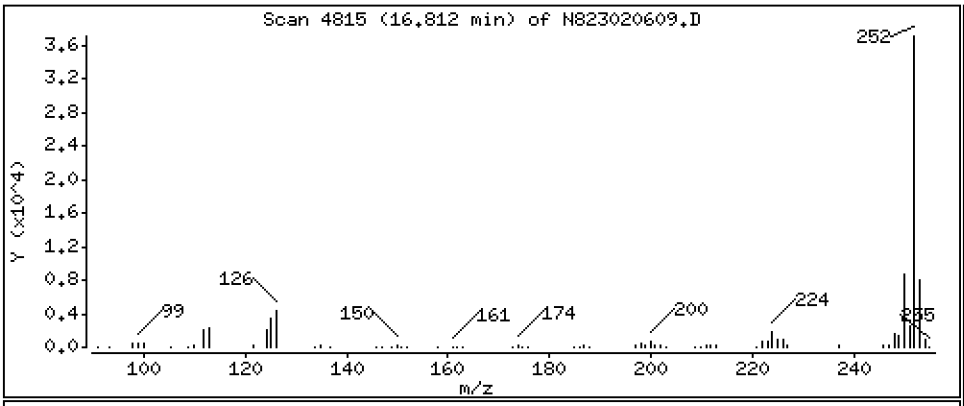
Operator: JZ

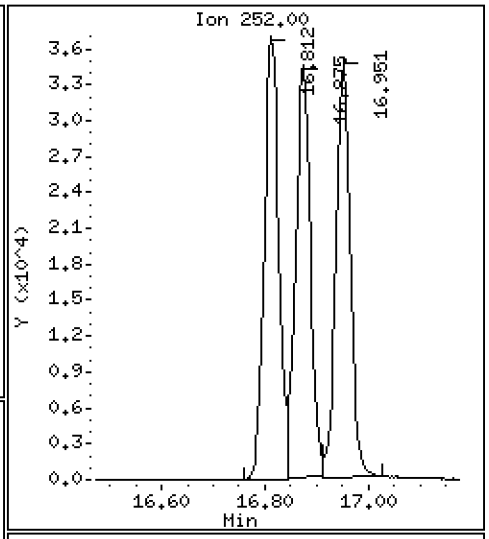
Column phase: Rxi-17sil

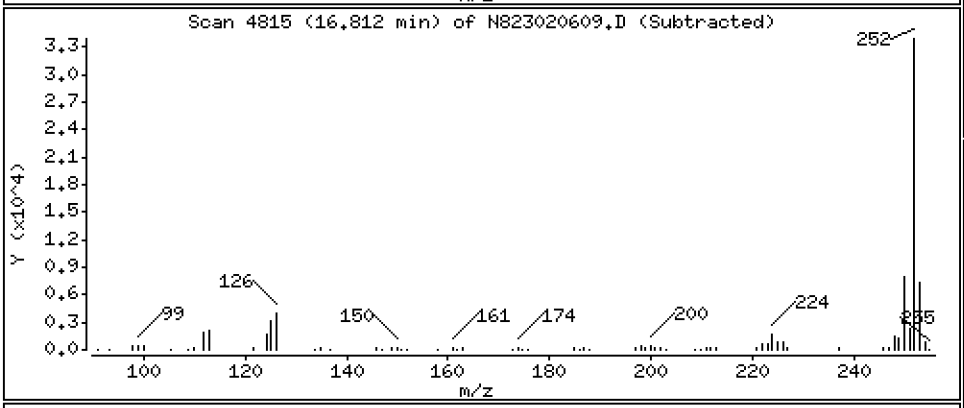
Column diameter: 0.25

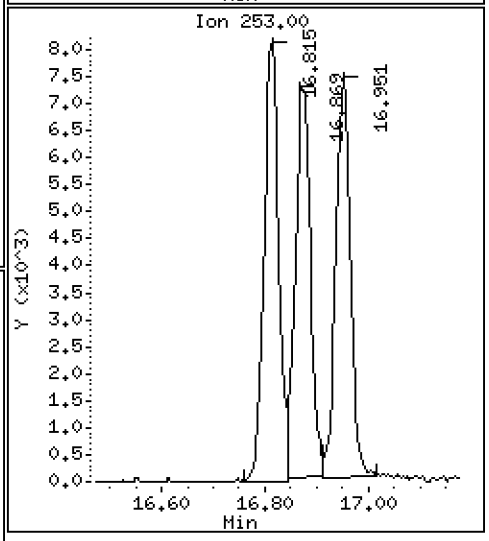
28 Benzo(b)fluoranthene

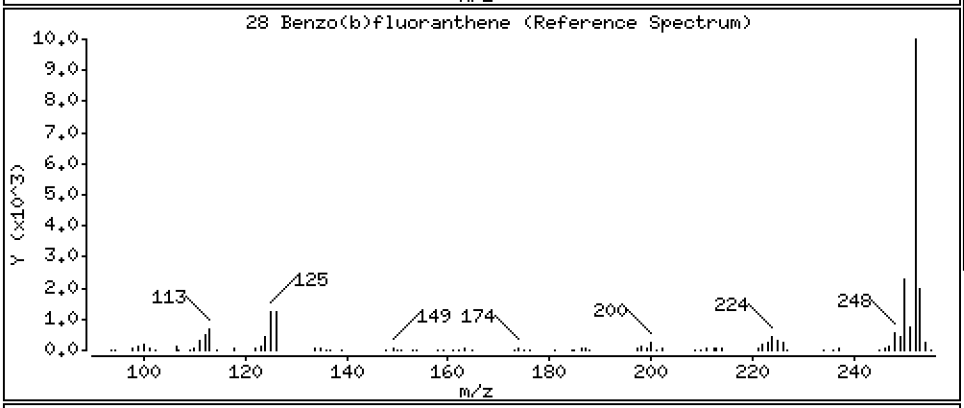
Concentration: 4.661 ug/mL

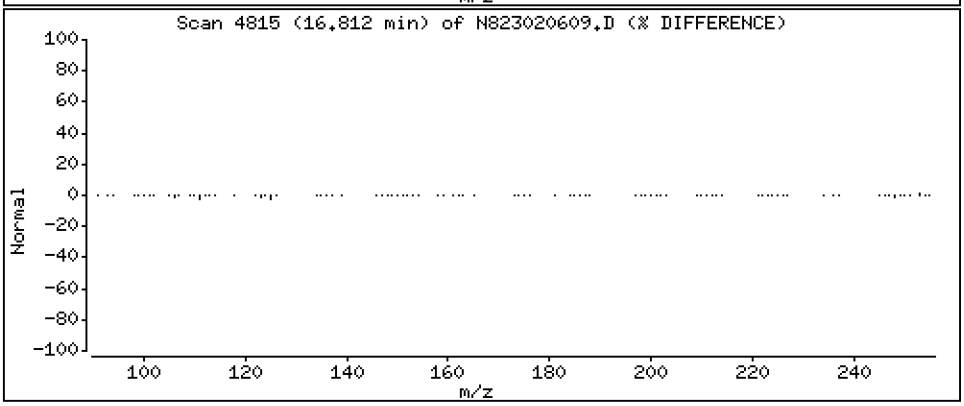












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

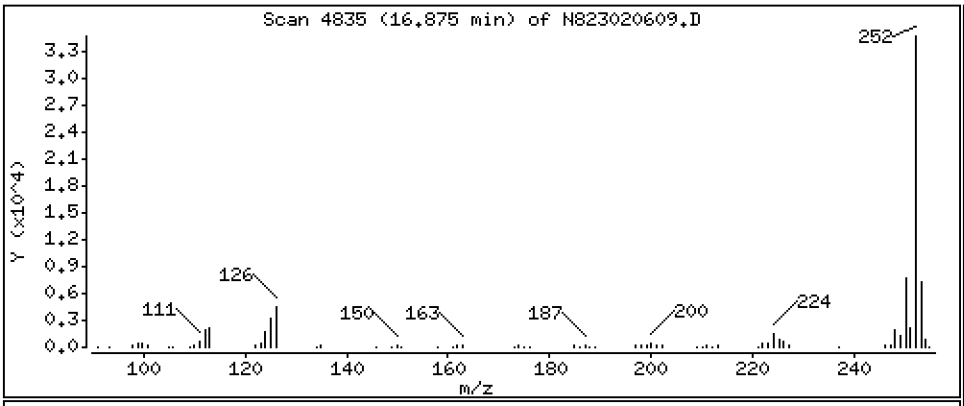
Operator: JZ

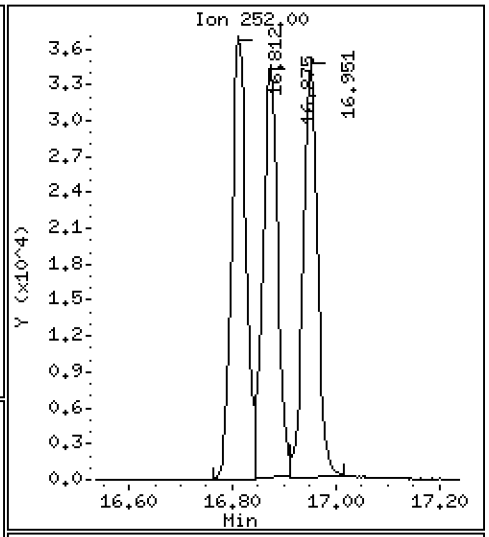
Column phase: Rxi-17sil

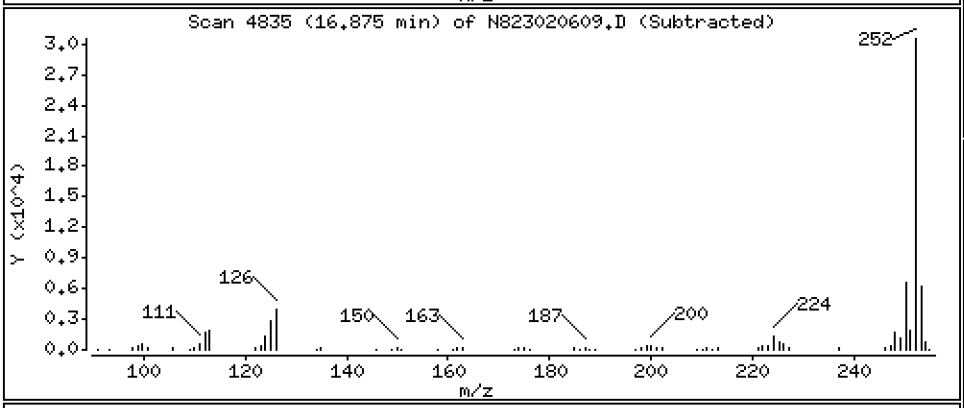
Column diameter: 0.25

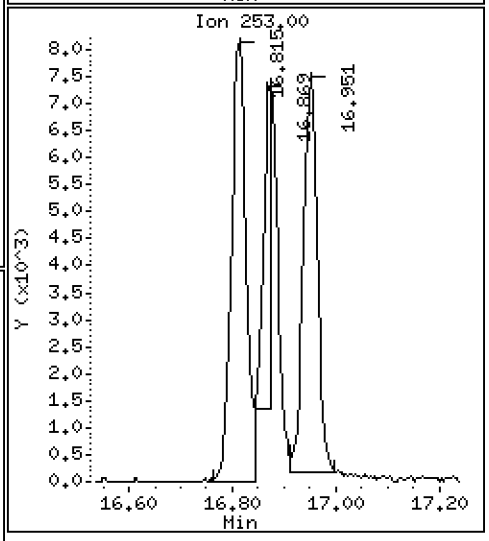
29 Benzo(k)fluoranthene

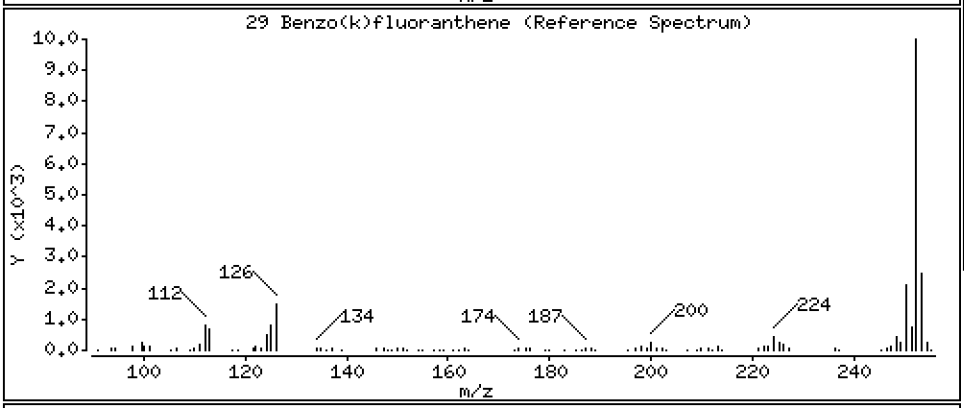
Concentration: 4.445 ug/mL

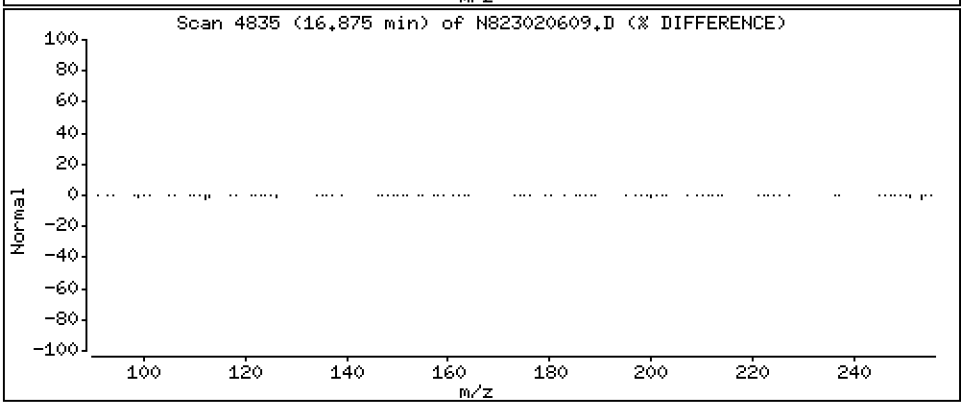












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

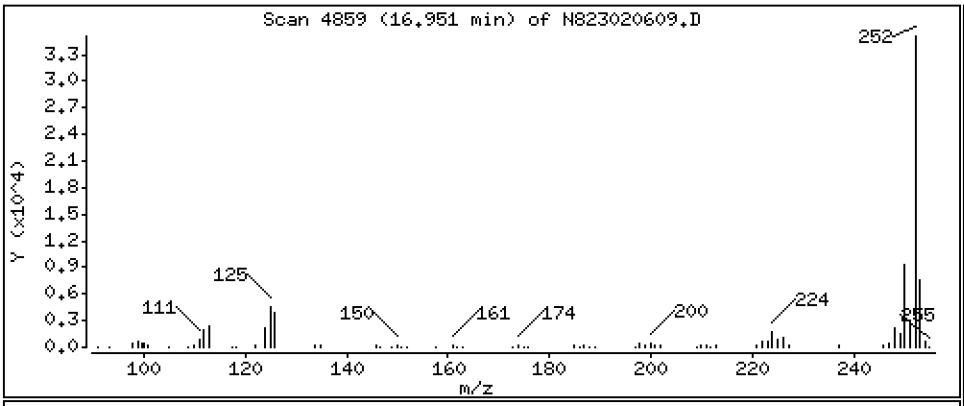
Operator: JZ

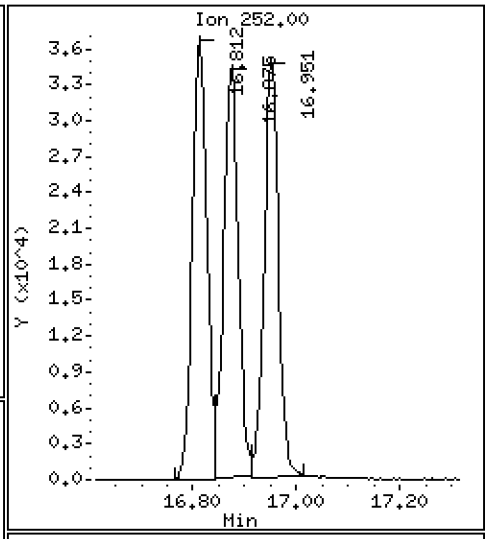
Column phase: Rxi-17sil

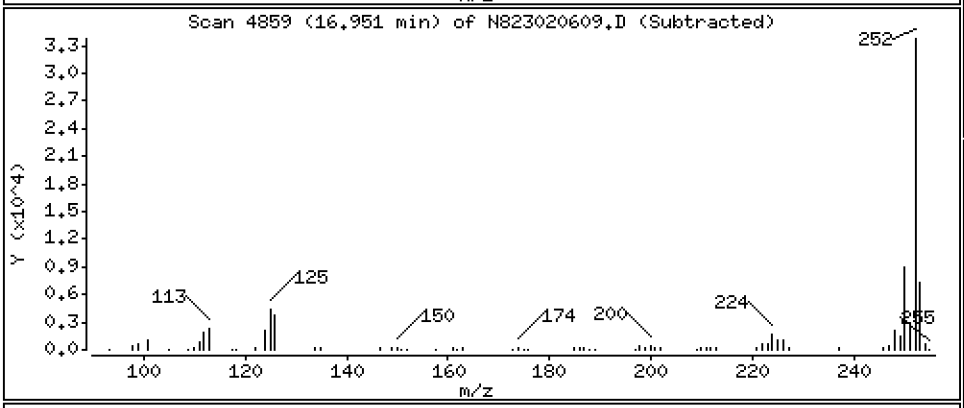
Column diameter: 0.25

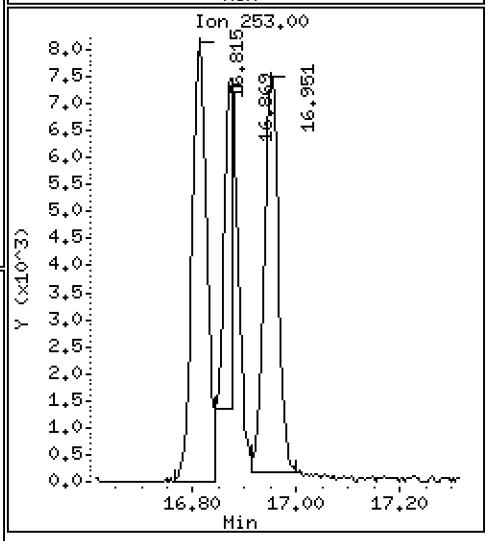
30 Benzo(j)fluoranthene

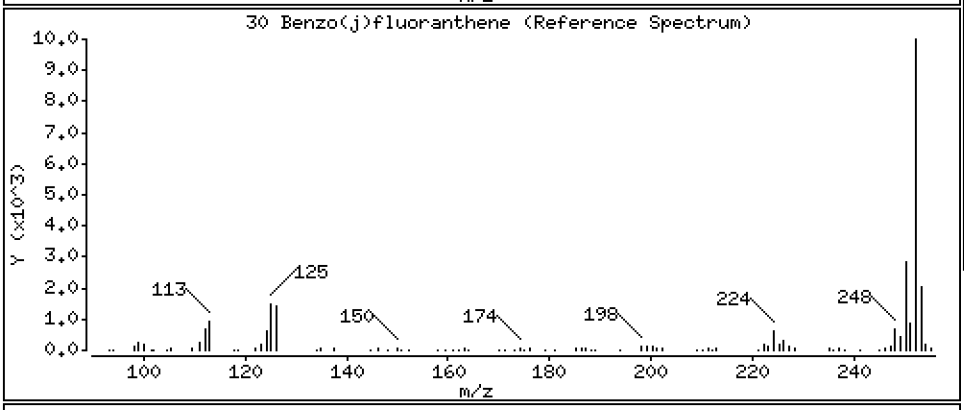
Concentration: 4.826 ug/mL

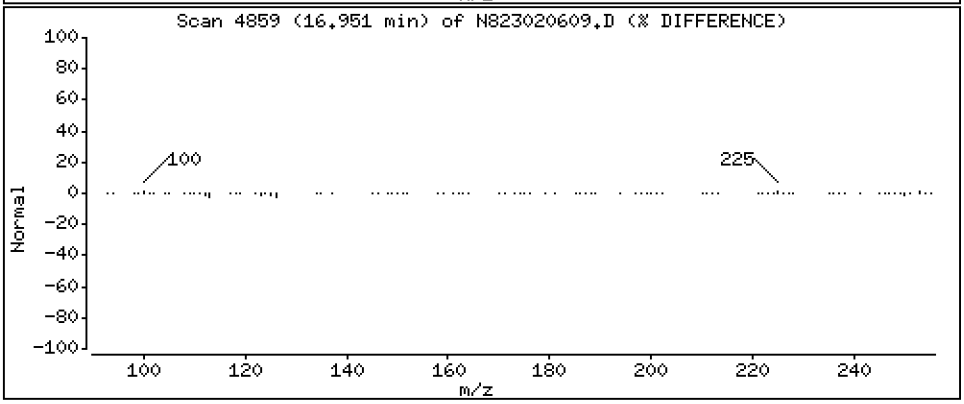












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

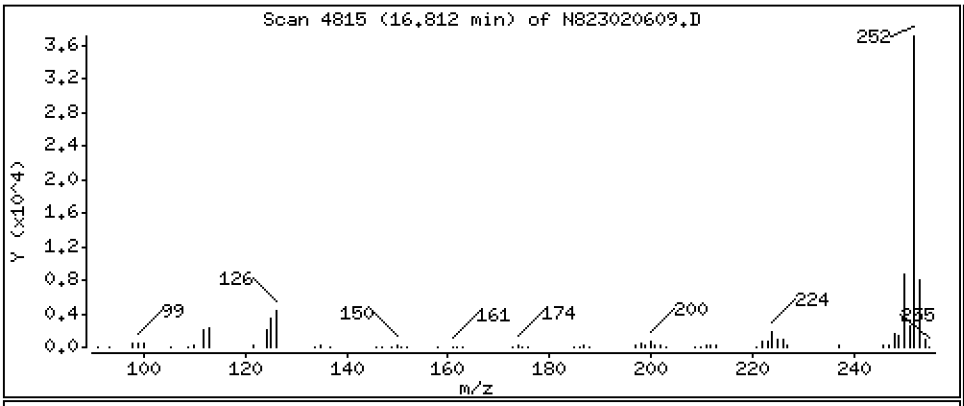
Operator: JZ

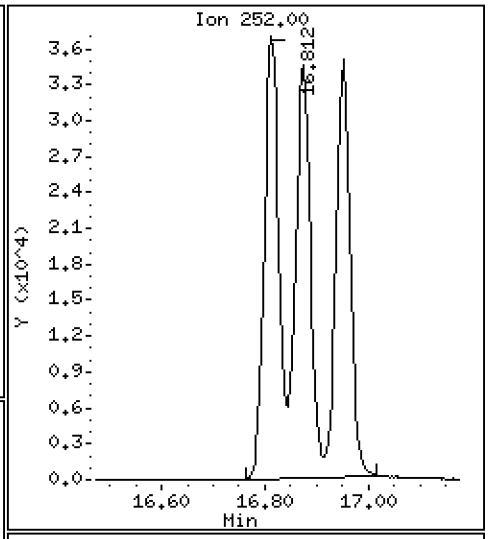
Column phase: Rxi-17sil

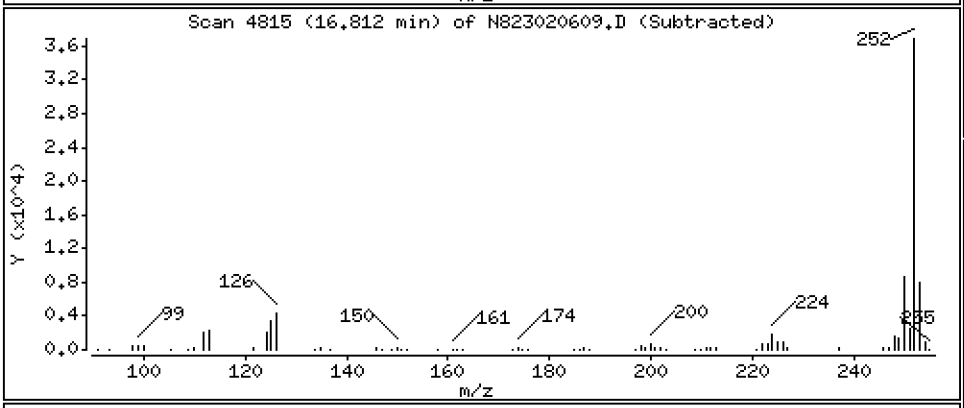
Column diameter: 0.25

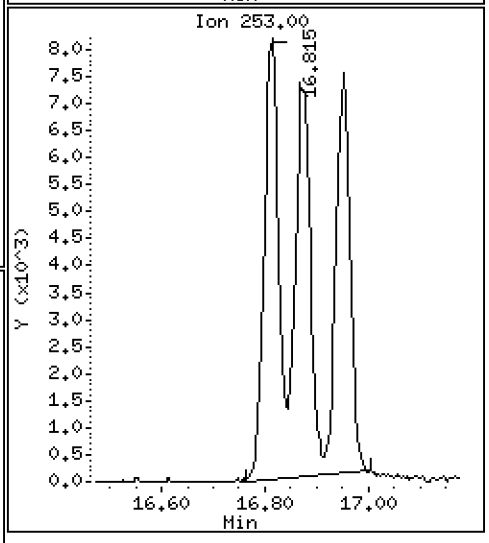
31 Total Benzofluoranthenes

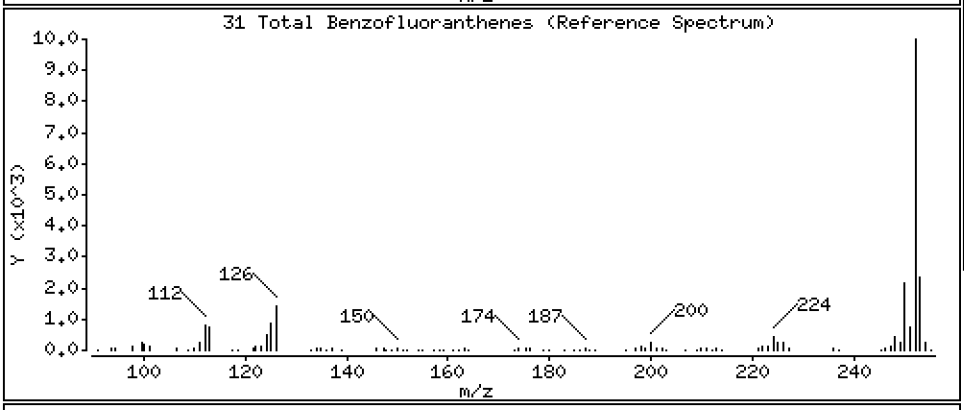
Concentration: 13.91 ug/mL

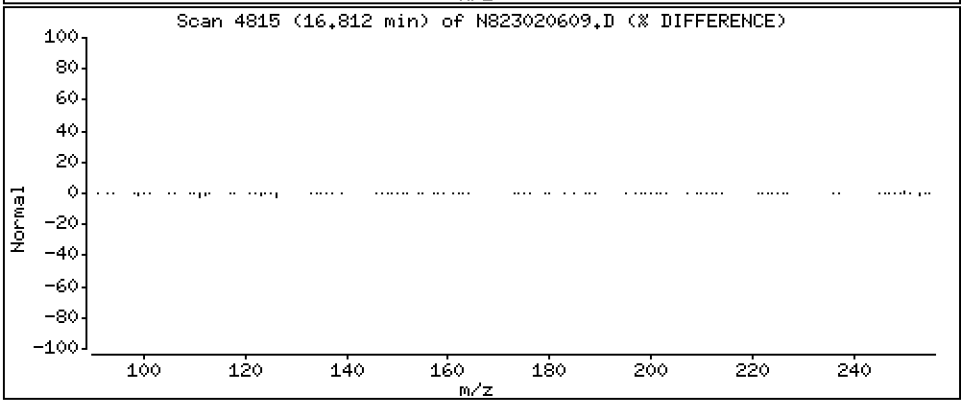












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

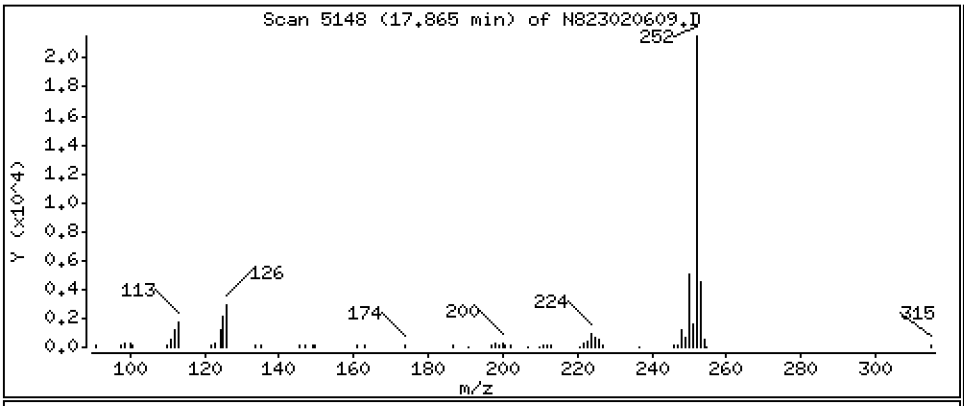
Operator: JZ

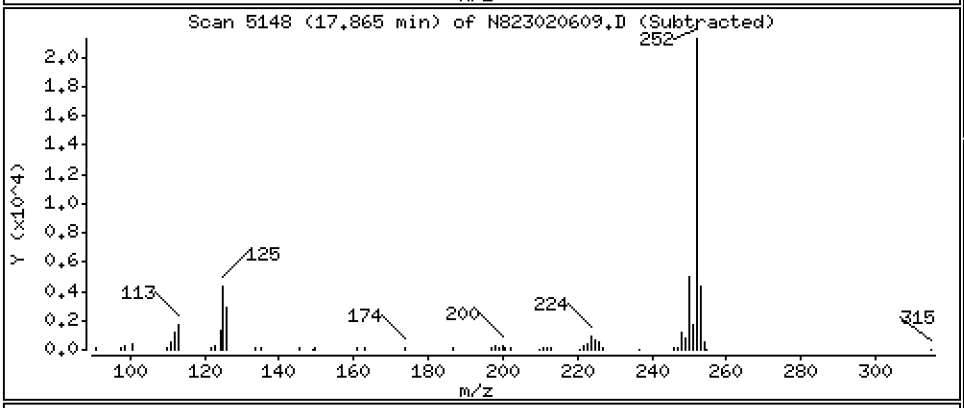
Column phase: Rxi-17sil

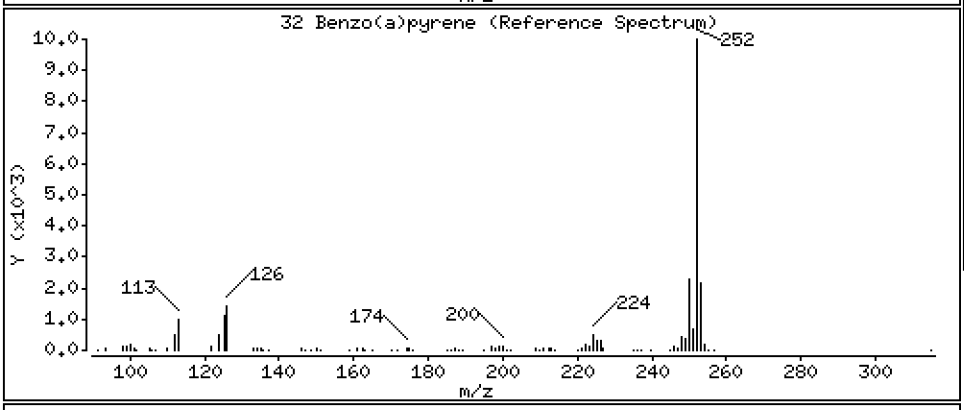
Column diameter: 0.25

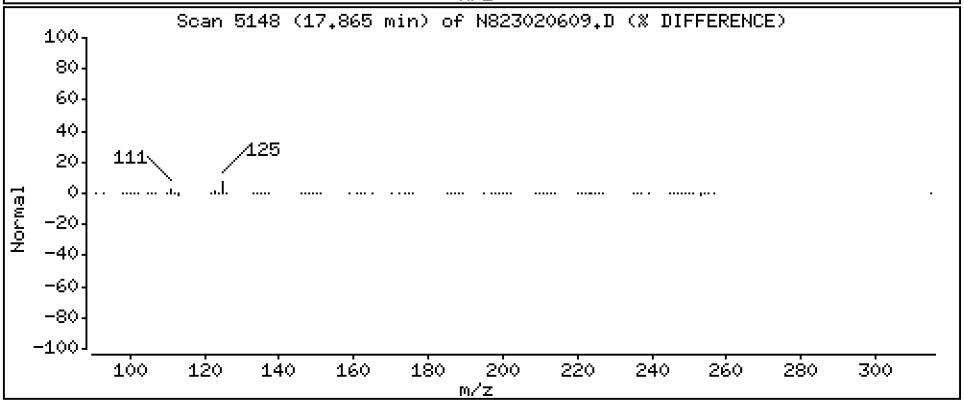
32 Benzo(a)pyrene

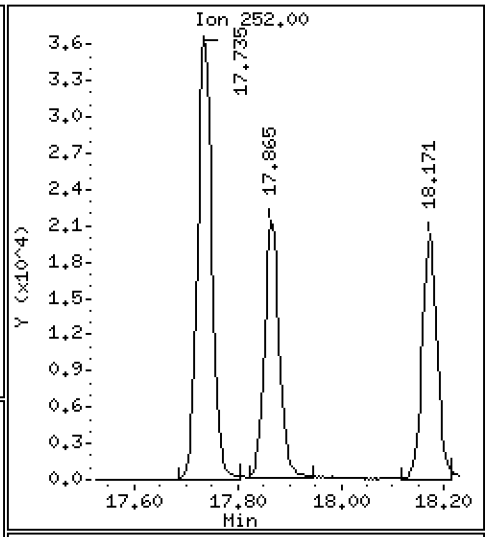
Concentration: 3.084 ug/mL

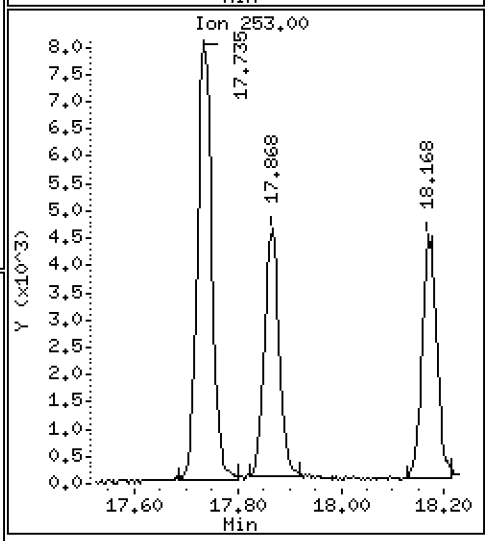












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

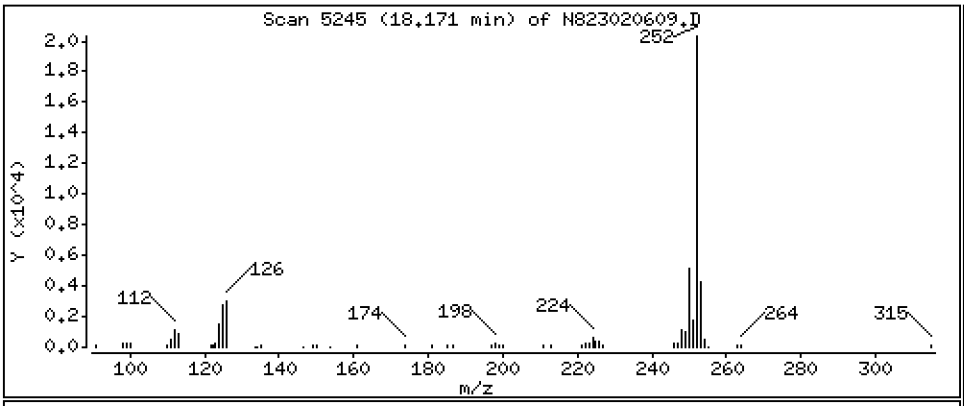
Operator: JZ

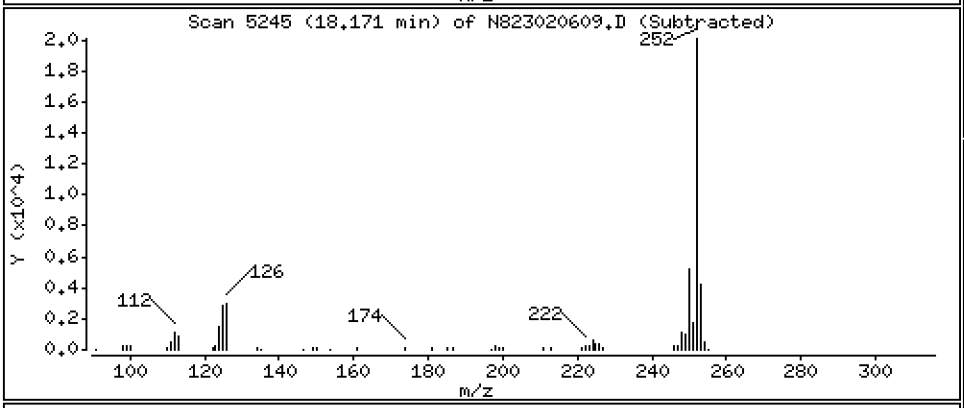
Column phase: Rxi-17sil

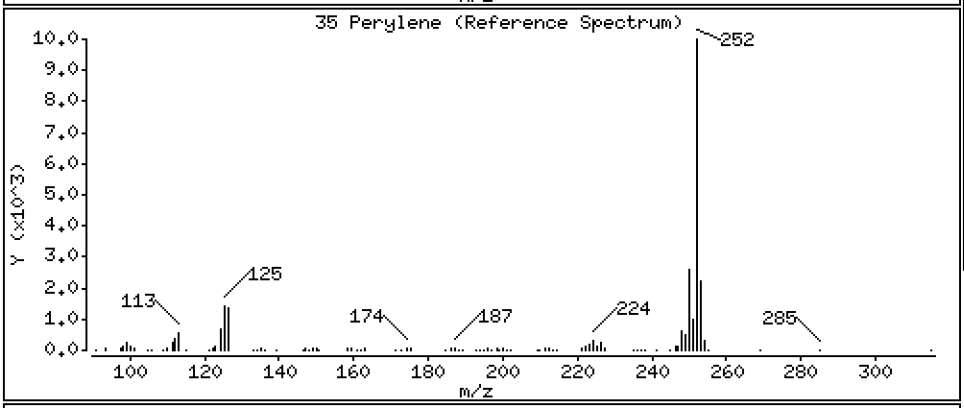
Column diameter: 0.25

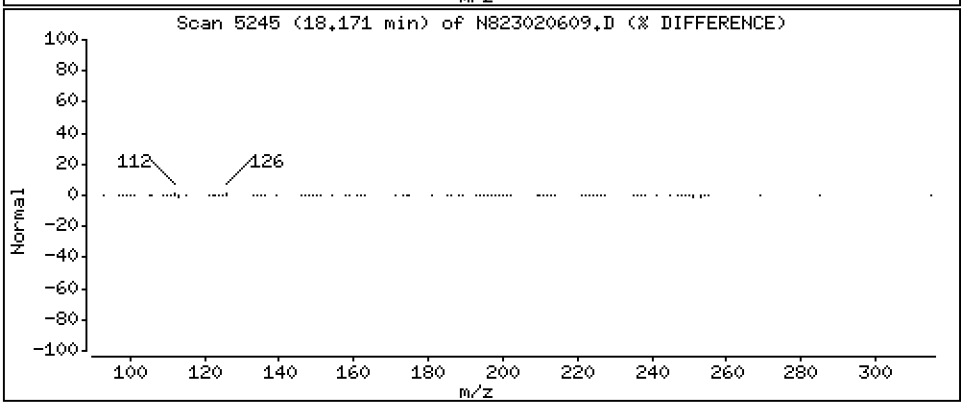
35 Perylene

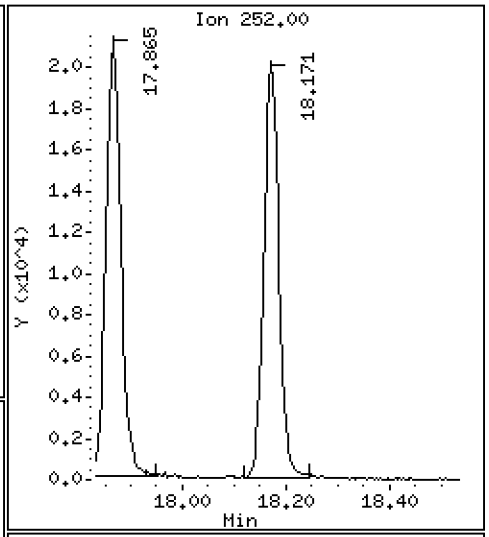
Concentration: 2.727 ug/mL

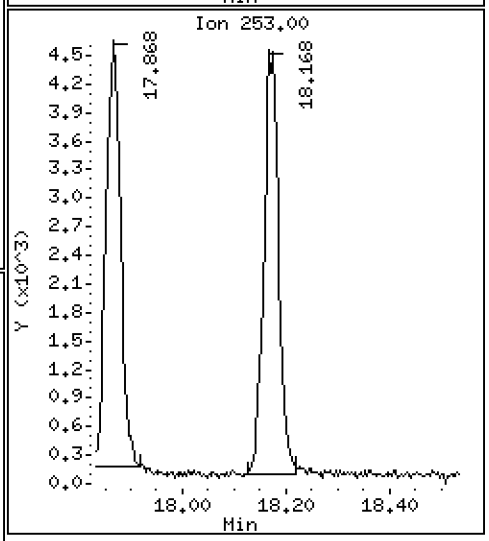












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

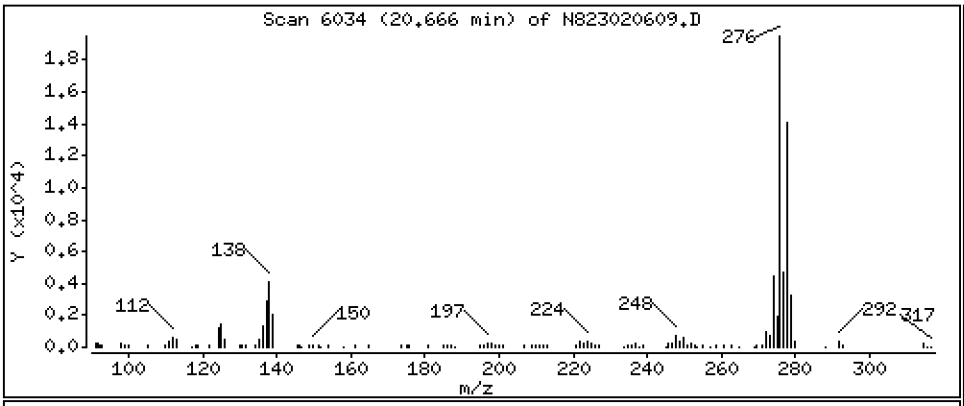
Operator: JZ

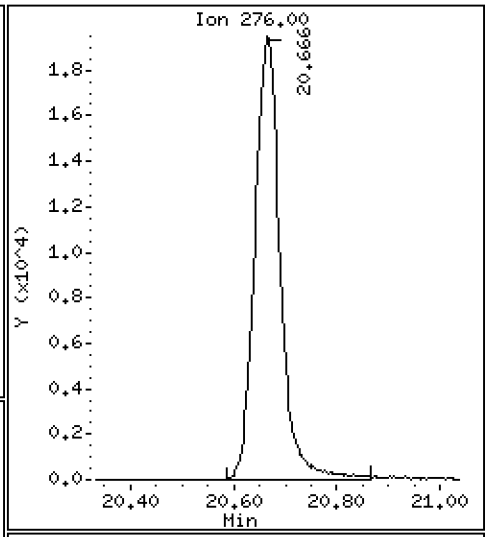
Column phase: Rxi-17sil

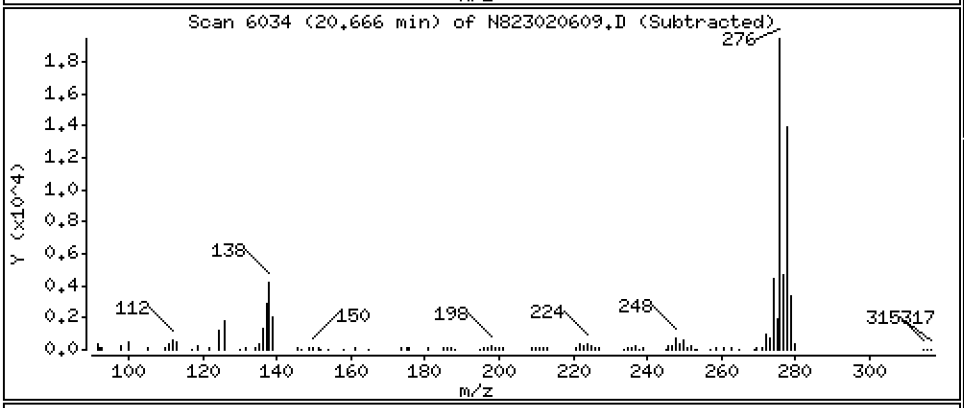
Column diameter: 0.25

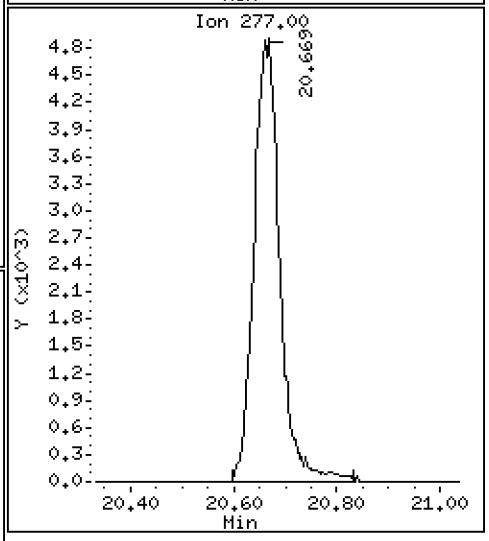
37 Indeno(1,2,3-cd)pyrene

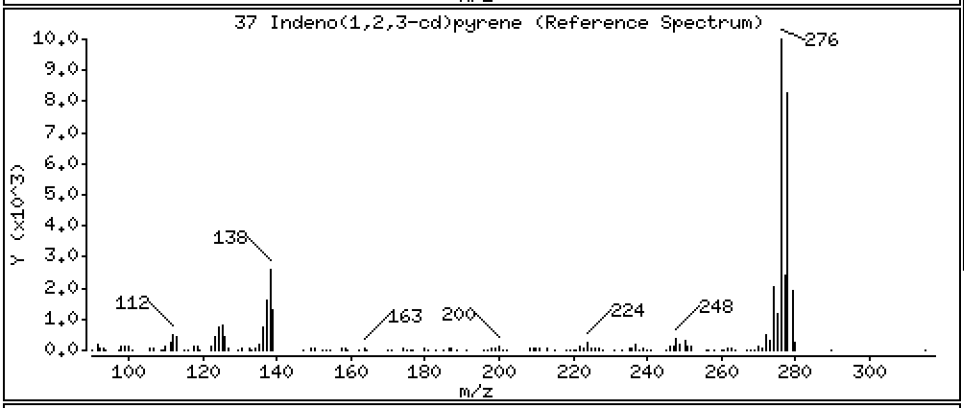
Concentration: 4.258 ug/mL

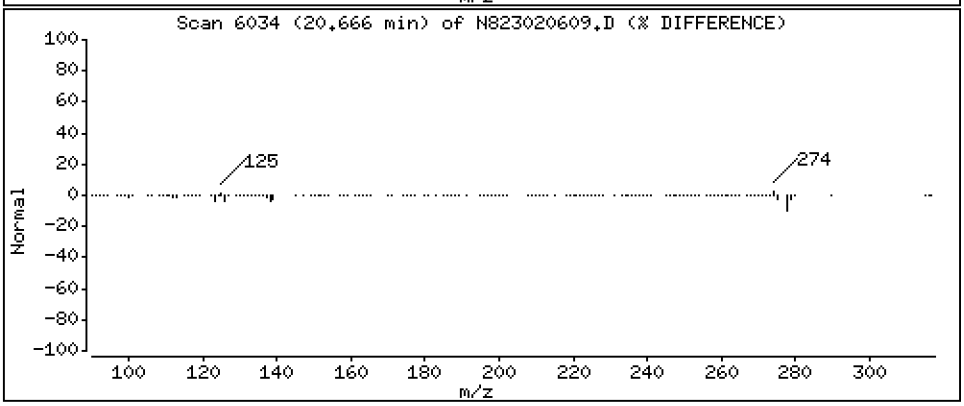












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

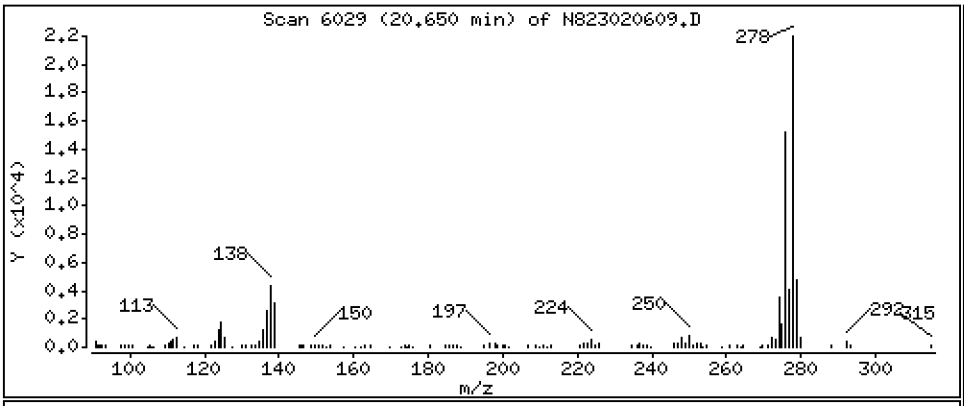
Operator: JZ

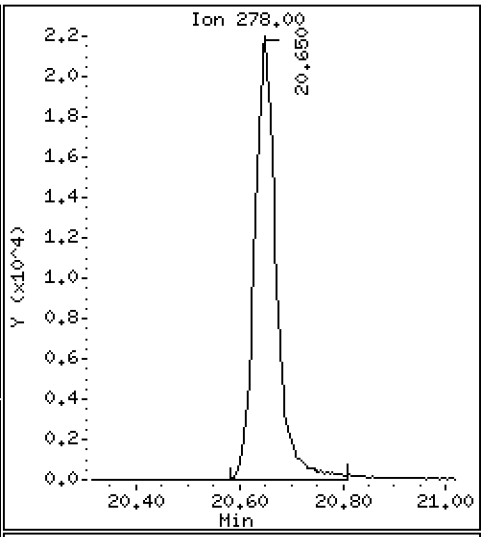
Column phase: Rxi-17sil

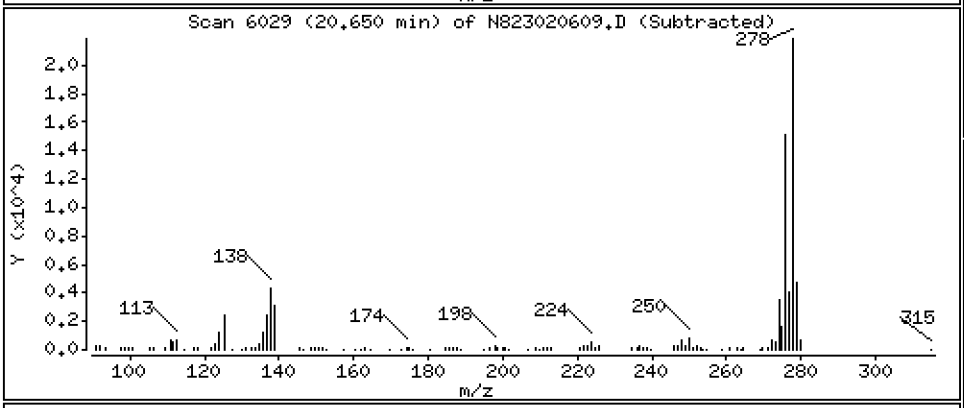
Column diameter: 0.25

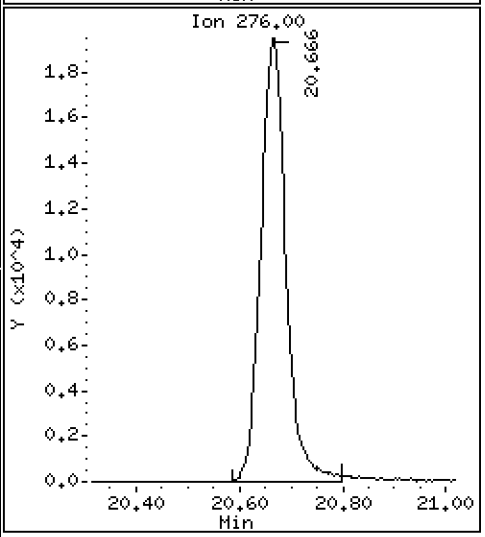
38 Dibenzo(a,h)anthracene

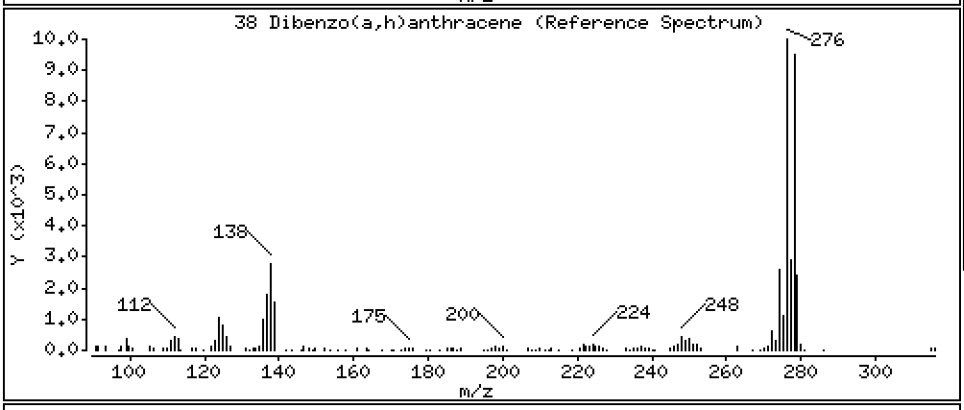
Concentration: 4.702 ug/mL

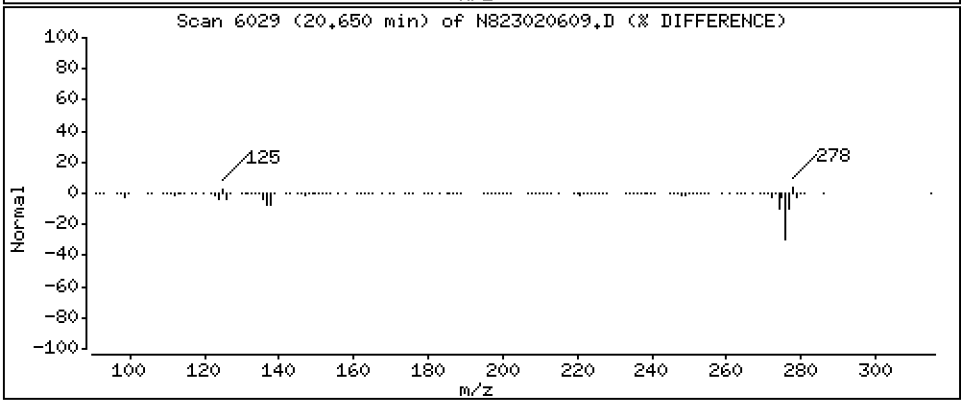












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Date : 06-FEB-2023 16:24

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BS1,

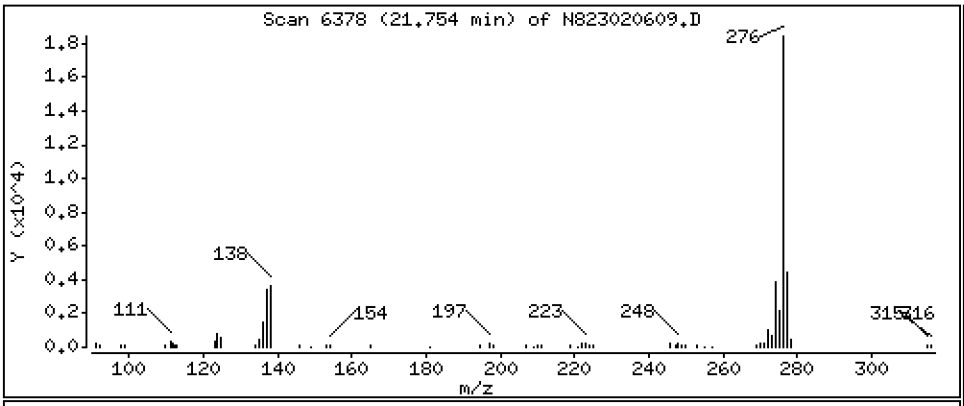
Operator: JZ

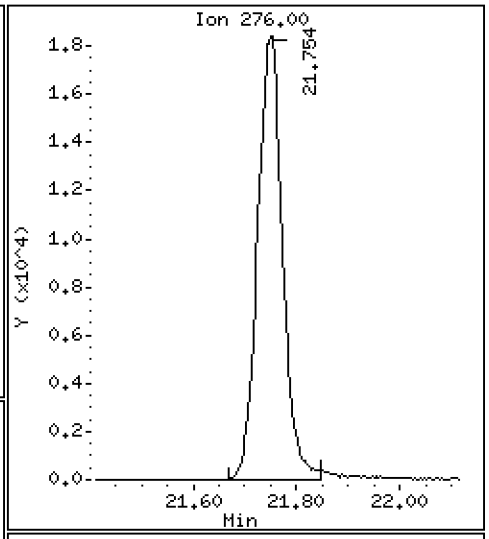
Column phase: Rxi-17sil

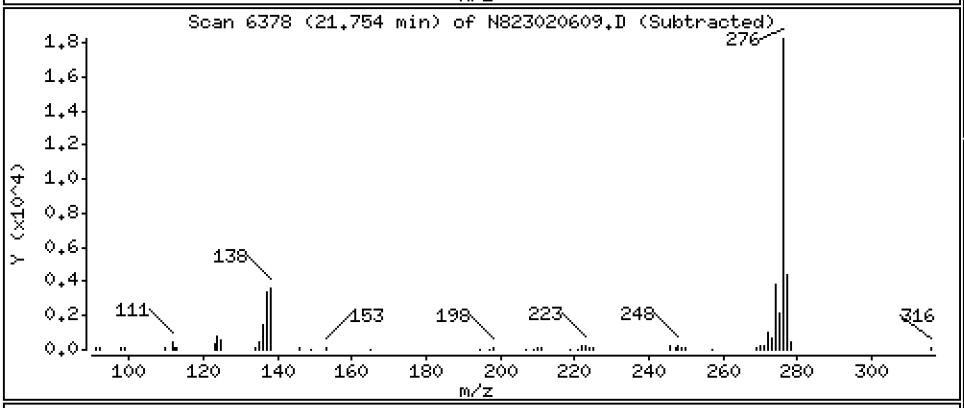
Column diameter: 0.25

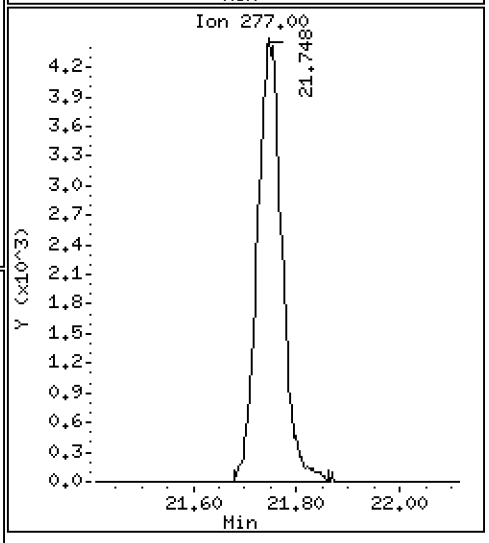
39 Benzo(g,h,i)perylene

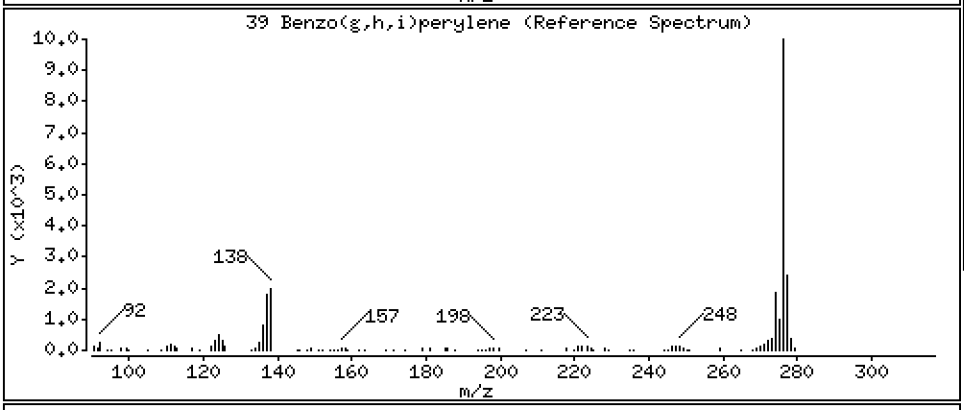
Concentration: 4.340 ug/mL

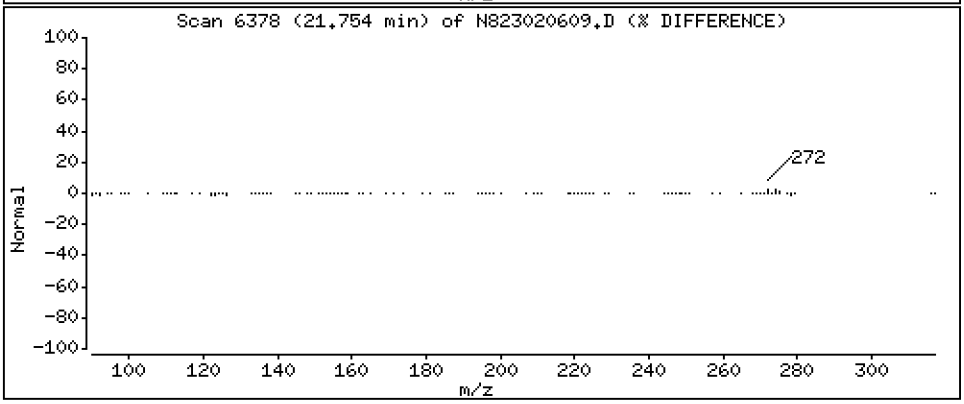












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020609.D
Lab Smp Id: BLA0683-BS1
Inj Date : 06-FEB-2023 16:24
Operator : JZ Inst ID: nt8.i
Smp Info : BLA0683-BS1,
Misc Info : 23-
Comment : 1ul Injection
Method : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 13:04 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.884	4.900	(1.000)	50596	2.00000	
	2 Naphthalene	128	4.916	4.928	(1.006)	64251	2.73117	2.731
$	3 2-Methylnaphthalene-d10	152	5.624	5.634	(1.151)	26212	1.89959	1.900
	4 2-Methylnaphthalene	141	5.672	5.681	(1.161)	36550	2.82457	2.825
	5 1-methylnaphthalene	141	5.868	5.880	(1.201)	36725	2.79639	2.796
	9 Acenaphthylene	152	7.072	7.082	(0.985)	55125	2.44558	2.446
*	10 Acenaphthene-d10	164	7.183	7.189	(1.000)	29850	2.00000	
	11 Acenaphthene	153	7.234	7.240	(1.007)	40621	2.68963	2.690
	12 Dibenzofuran	168	7.385	7.392	(1.028)	61844	2.69599	2.696
	14 Fluorene	166	7.863	7.869	(1.095)	50388	2.82819	2.828
*	15 Phenanthrene-d10	188	9.222	9.232	(1.000)	54061	2.00000	
	16 Phenanthrene	178	9.257	9.267	(1.004)	76953	2.91404	2.914
	17 Anthracene	178	9.298	9.308	(1.008)	63665	2.65387	2.654
	19 Carbazole	167	9.814	9.823	(1.064)	66808	3.03779	3.038
	22 Fluoranthene	202	11.041	11.050	(1.197)	88334	3.07303	3.073
$	21 Fluoranthene-d10	212	11.000	11.009	(1.193)	52525	2.20217	2.202
	23 Pyrene	202	11.559	11.569	(0.815)	90758	3.56642	3.566
	24 Benzo(a)anthracene	228	14.060	14.070	(0.991)	77098	3.34257	3.343
*	25 Chrysene-d12	240	14.190	14.202	(1.000)	41046	2.00000	
	27 Chrysene	228	14.263	14.275	(1.005)	81897	3.33532	3.335
	28 Benzo(b)fluoranthene	252	16.811	16.824	(0.929)	73568	4.66065	4.661
	29 Benzo(k)fluoranthene	252	16.874	16.887	(0.932)	68729	4.44520	4.445
	30 Benzo(j)fluoranthene	252	16.950	16.963	(0.937)	67176	4.82624	4.826
	31 Total Benzofluoranthenes	252	16.811	16.824	(0.929)	207984	13.9128	13.91(M)
	32 Benzo(a)pyrene	252	17.864	17.877	(0.987)	42834	3.08366	3.084
*	33 Perylene-d12	264	18.098	18.107	(1.000)	27103	2.00000	
	35 Perylene	252	18.171	18.183	(1.004)	40651	2.72714	2.727
$	36 Dibenzo(a,h)anthracene-d14	292	20.536	20.549	(1.135)	36282	3.41653	3.417
	37 Indeno(1,2,3-cd)pyrene	276	20.666	20.684	(1.142)	67386	4.25826	4.258
	38 Dibenzo(a,h)anthracene	278	20.650	20.666	(1.141)	64030	4.70170	4.702
	39 Benzo(g,h,i)perylene	276	21.753	21.763	(1.202)	62220	4.33963	4.340

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020609.D
Lab Smp Id: BLA0683-BS1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44336	22168	88672	50596	14.12
10 Acenaphthene-d10	26127	13064	52254	29850	14.25
15 Phenanthrene-d10	47424	23712	94848	54061	14.00
25 Chrysene-d12	36794	18397	73588	41046	11.56
33 Perylene-d12	36636	18318	73272	27103	-26.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.88	-0.32
10 Acenaphthene-d10	7.19	6.69	7.69	7.18	-0.09
15 Phenanthrene-d10	9.23	8.73	9.73	9.22	-0.10
25 Chrysene-d12	14.20	13.70	14.70	14.19	-0.09
33 Perylene-d12	18.11	17.61	18.61	18.10	-0.05

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

REVIEW SUMMARY FOR FILE - N823020609.D

Lab ID: BLA0683-BS1
nt8.i, 20230206A.b\FSIMPNA230119.m,   06-FEB-2023 16:24

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

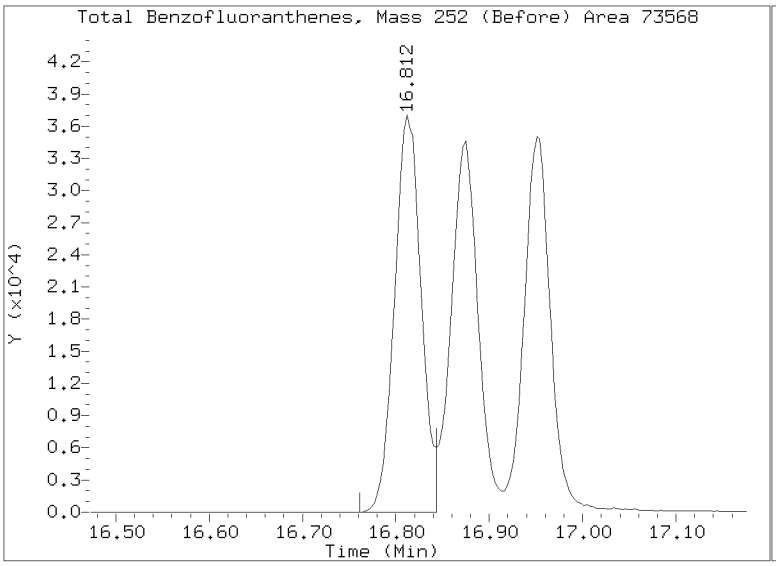
No RRT check performed

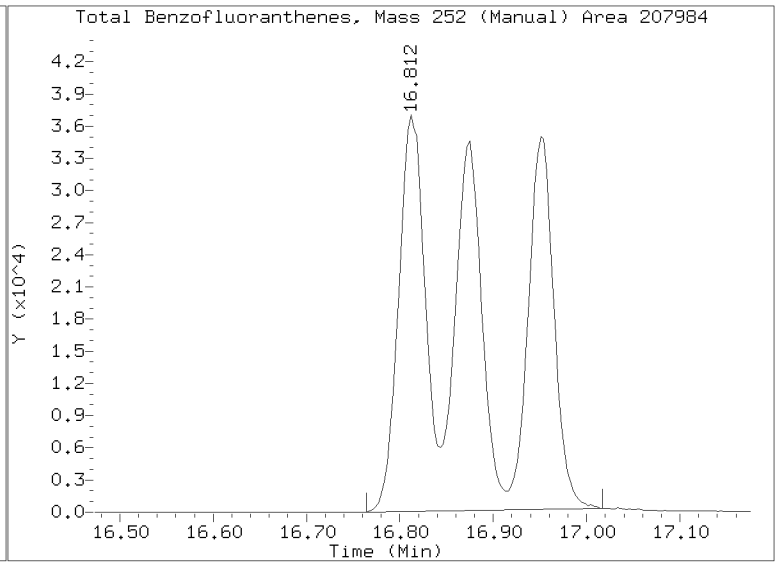
On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020609.D
Injection Date: 06-FEB-2023 16:24
Lab ID:BLA0683-BS1 Client ID:
Report Date: 02/07/2023 13:19





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Date : 06-FEB-2023 16:51

Client ID:

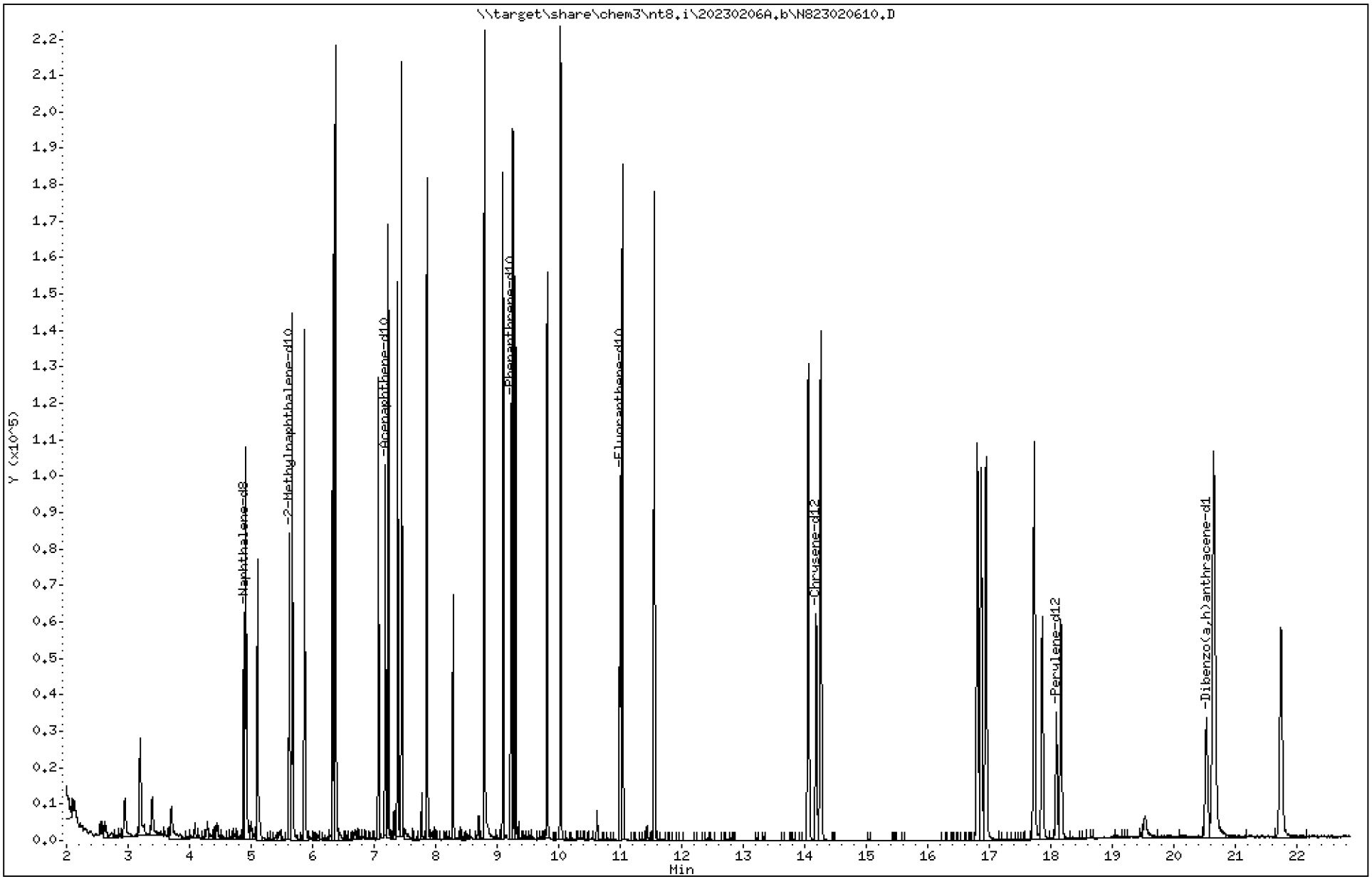
Instrument: nt8.i

Sample Info: BLA0683-BSD1,

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



23A0207 CLPLIKE (Rev3) - Page 521 of 3315

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020610.D

Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

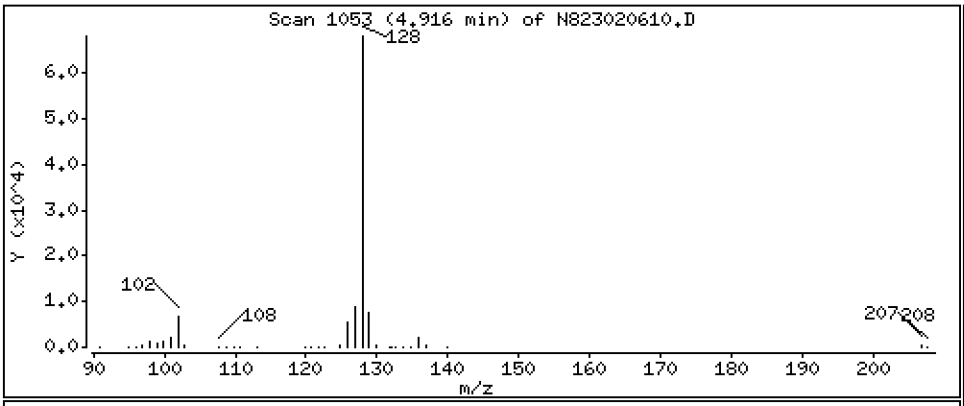
Operator: JZ

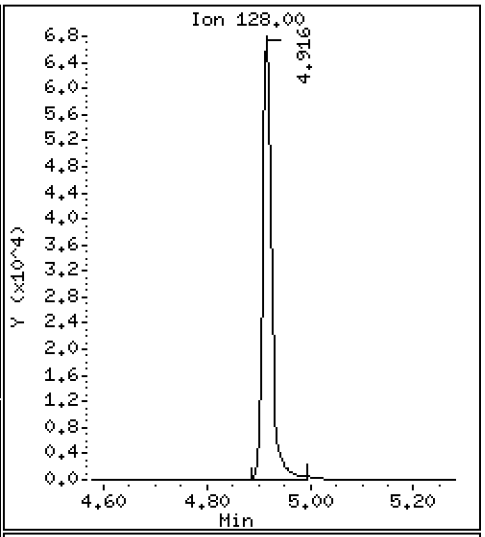
Column phase: Rxi-17sil

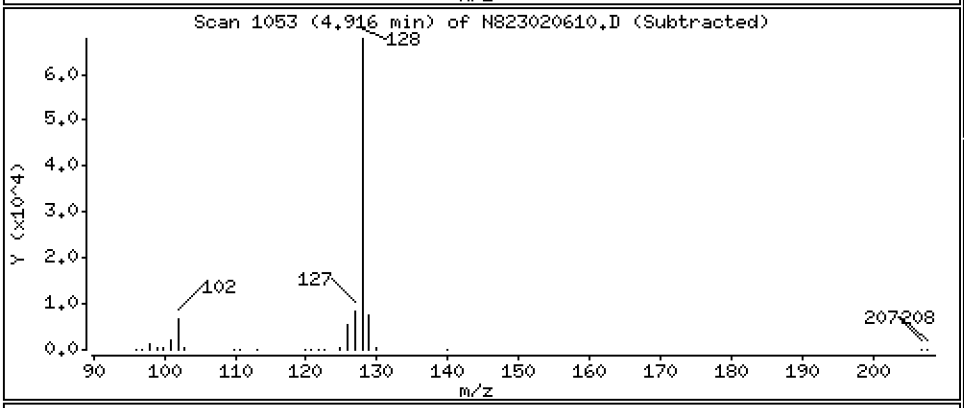
Column diameter: 0.25

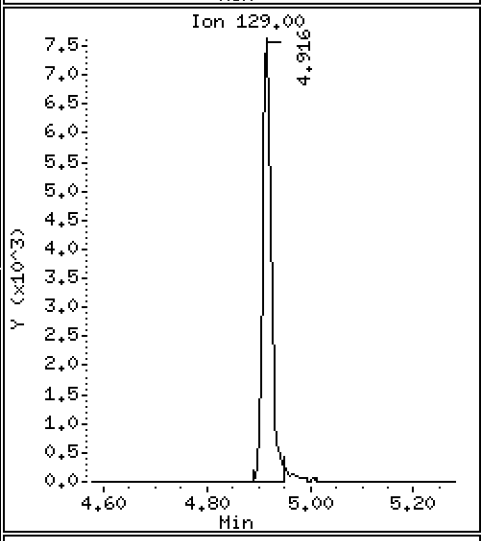
2 Naphthalene

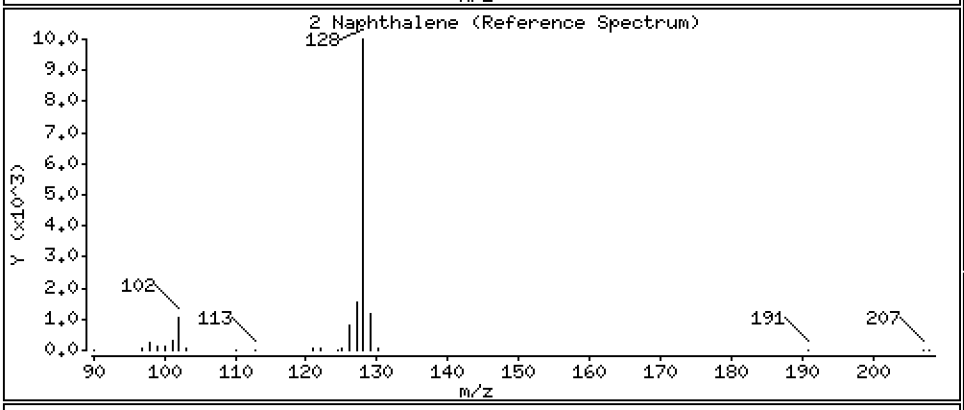
Concentration: 3.398 ug/mL

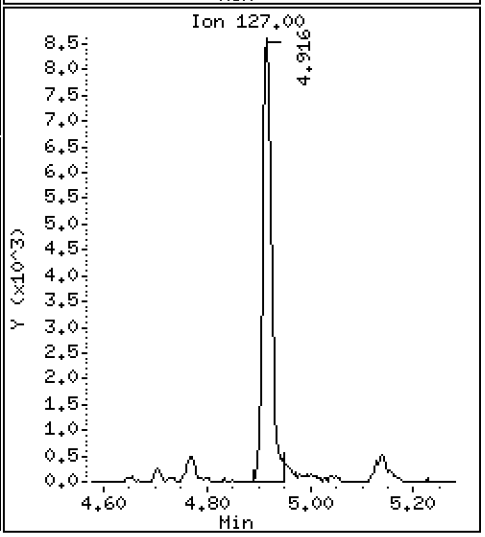


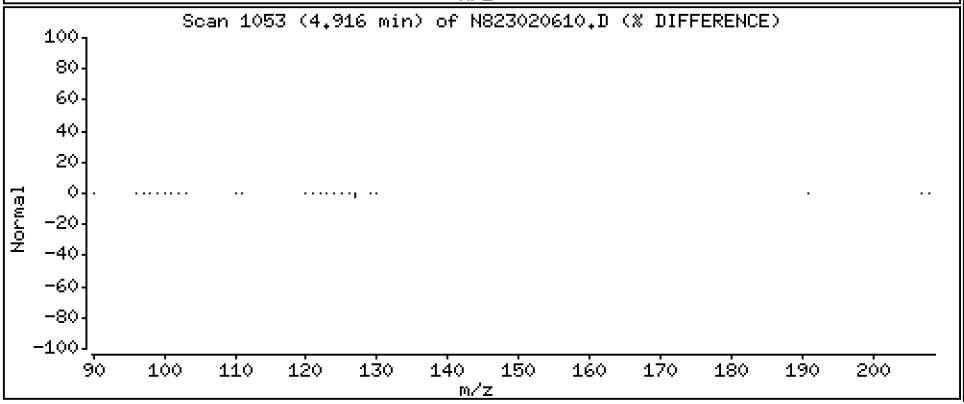












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Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

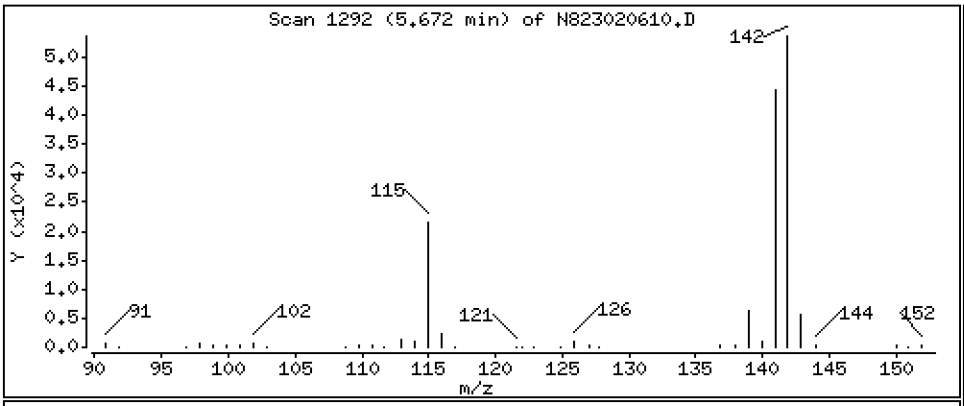
Operator: JZ

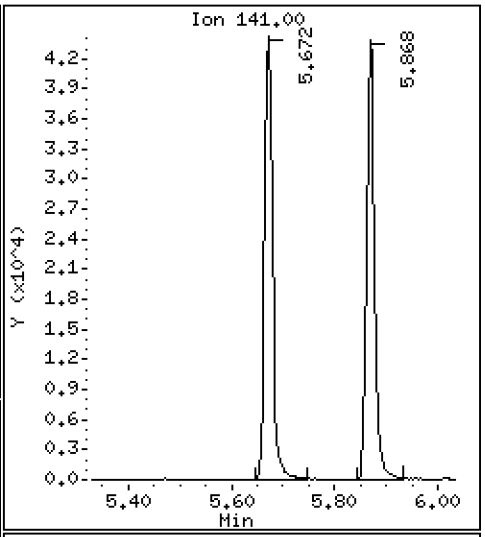
Column phase: Rxi-17sil

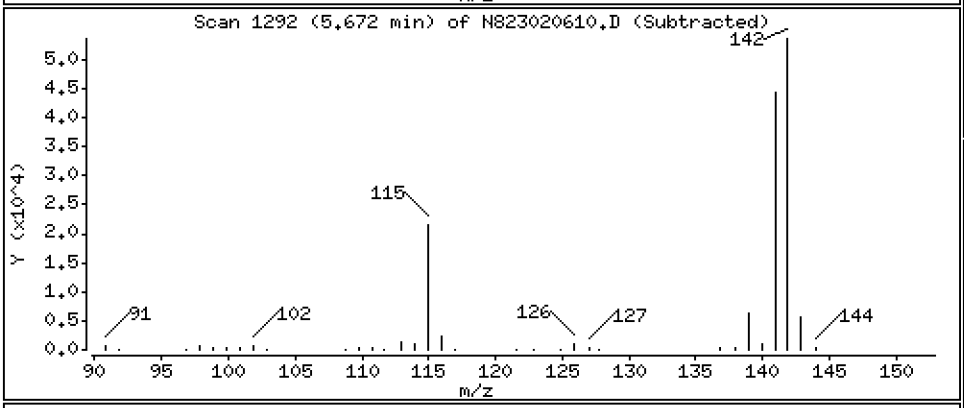
Column diameter: 0.25

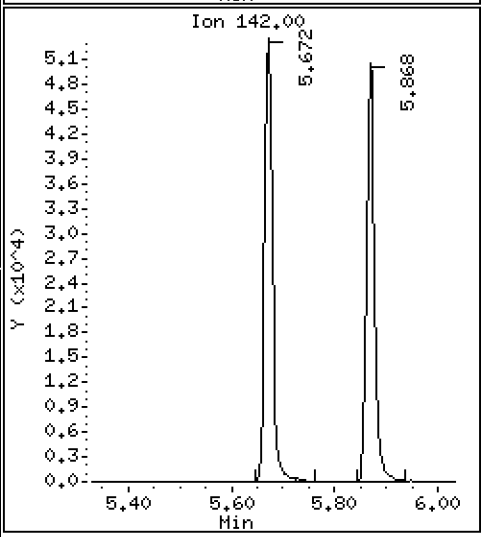
4 2-Methylnaphthalene

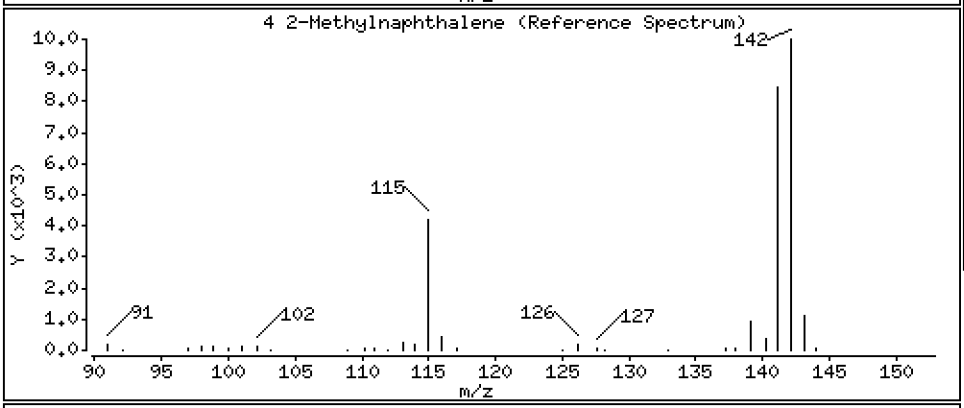
Concentration: 3.501 ug/mL

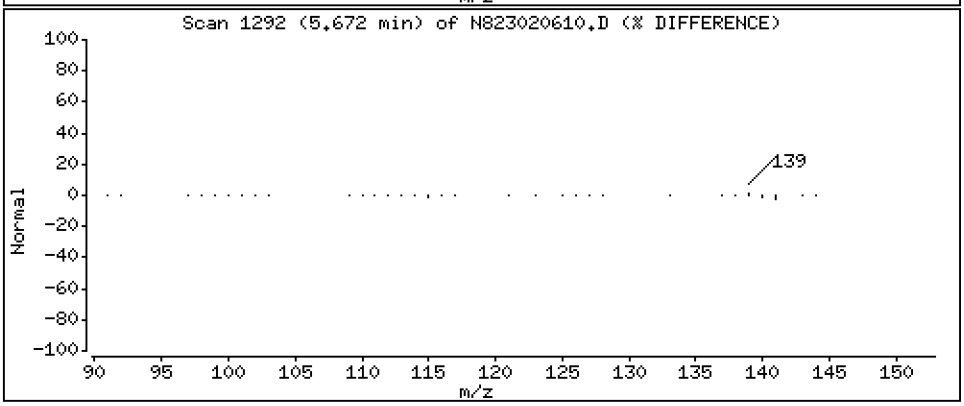












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020610.D

Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

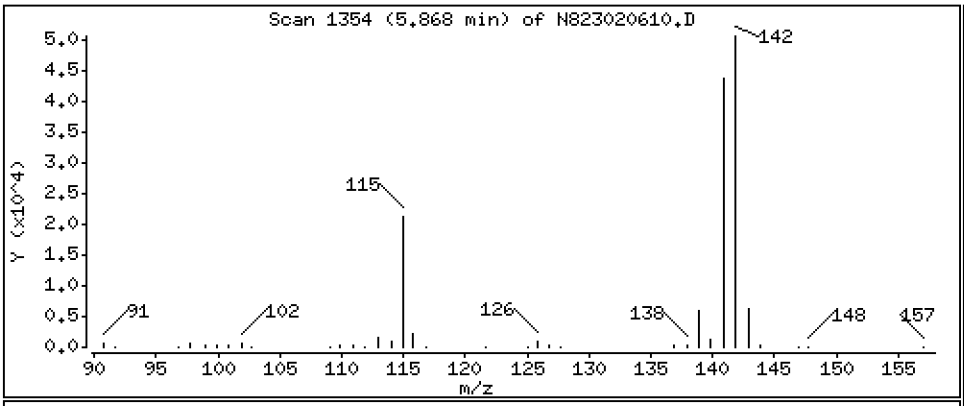
Operator: JZ

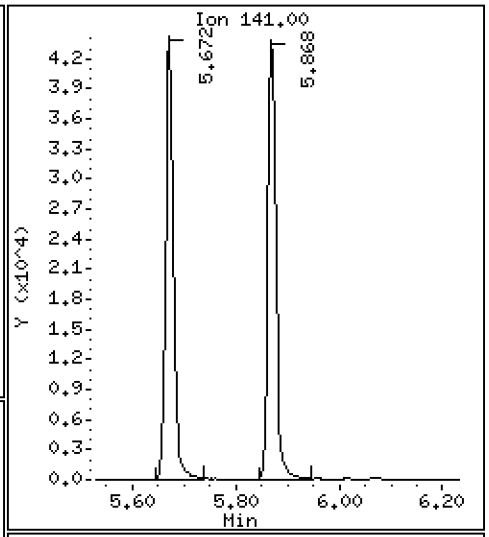
Column phase: Rxi-17sil

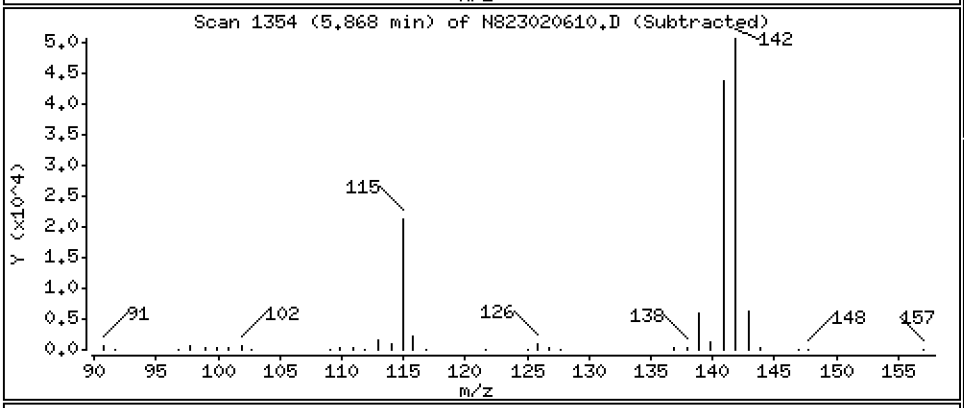
Column diameter: 0.25

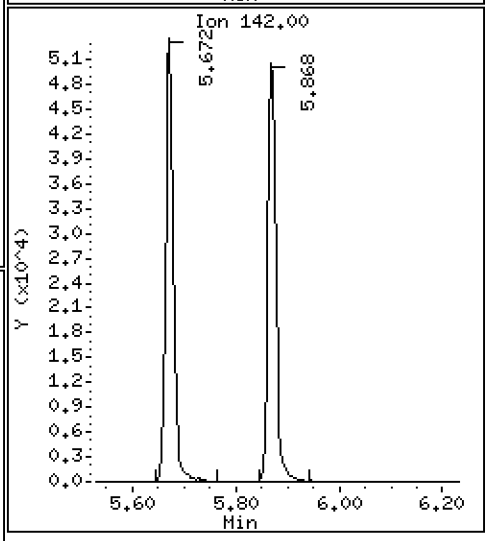
5 1-methylnaphthalene

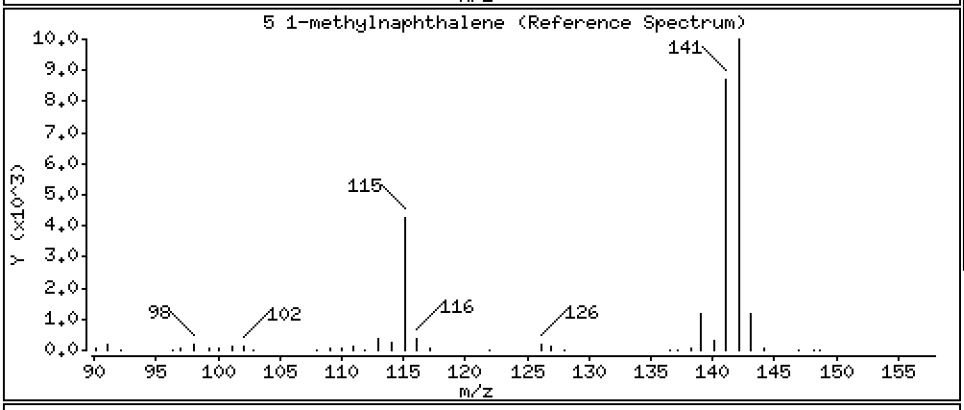
Concentration: 3.468 ug/mL

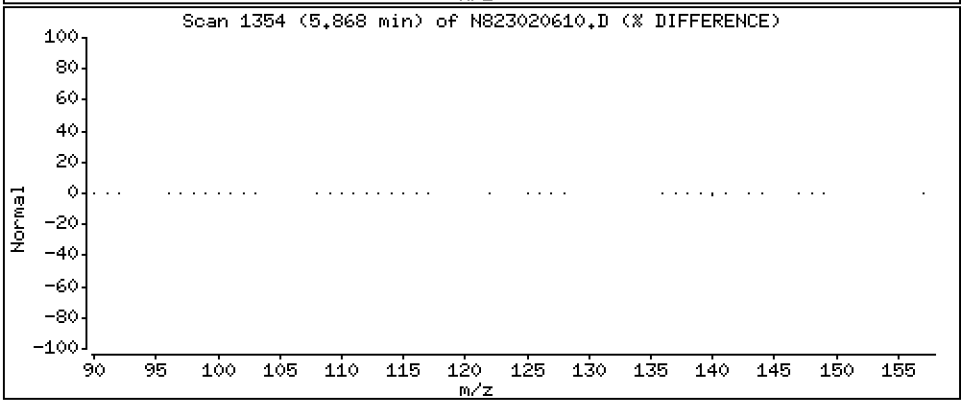












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Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

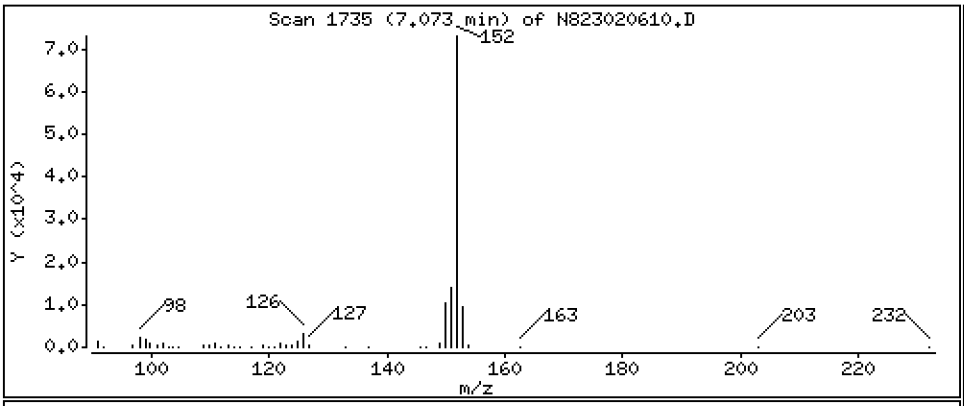
Operator: JZ

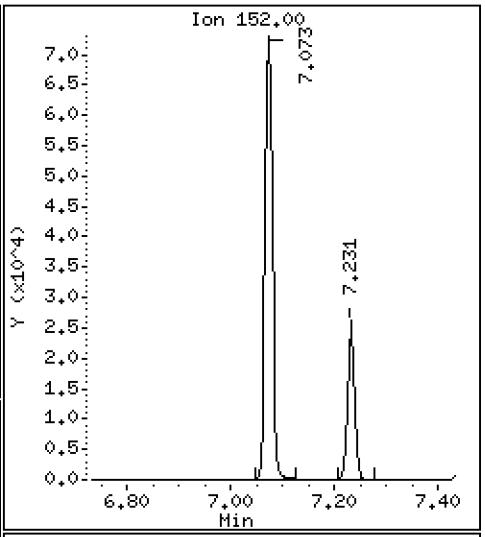
Column phase: Rxi-17sil

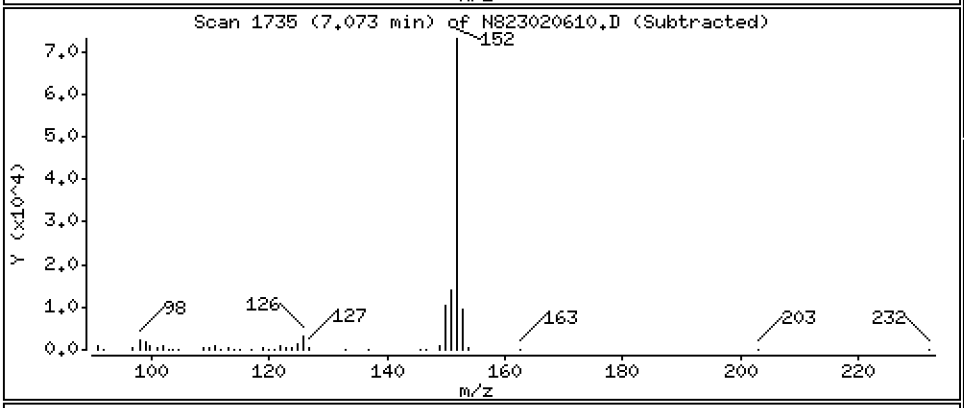
Column diameter: 0.25

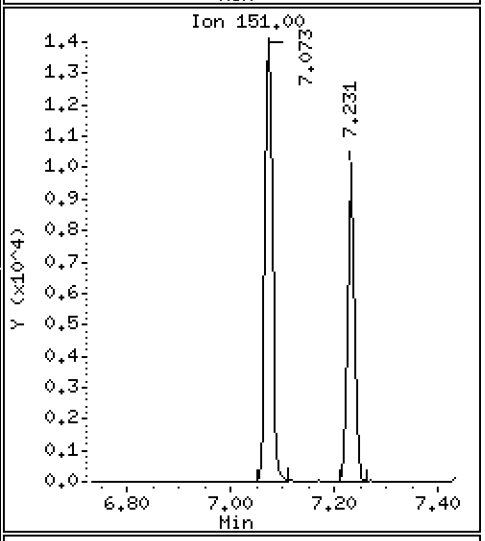
9 Acenaphthylene

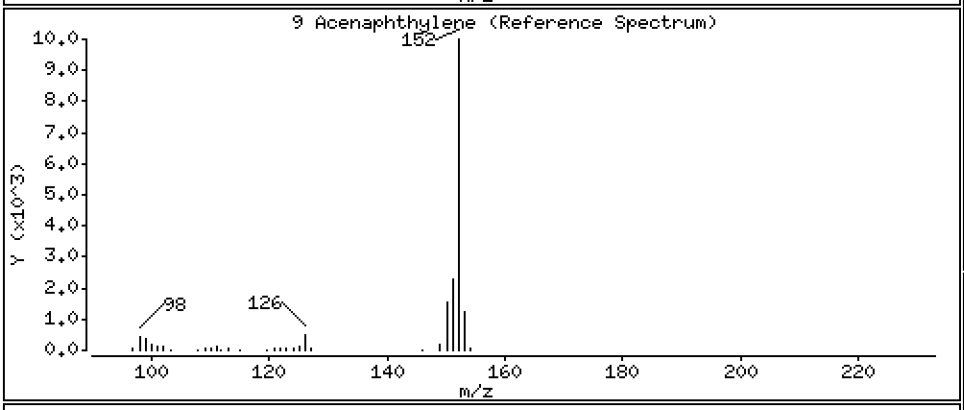
Concentration: 3.121 ug/mL

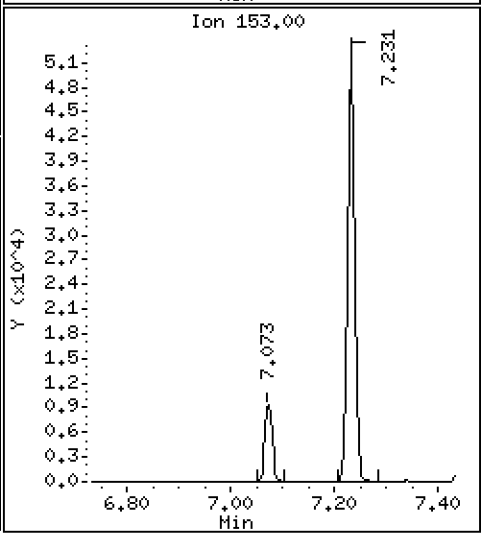


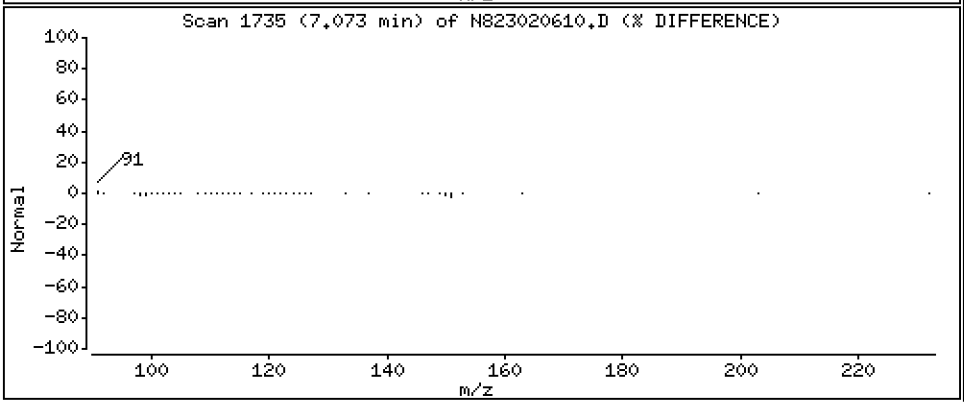












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Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

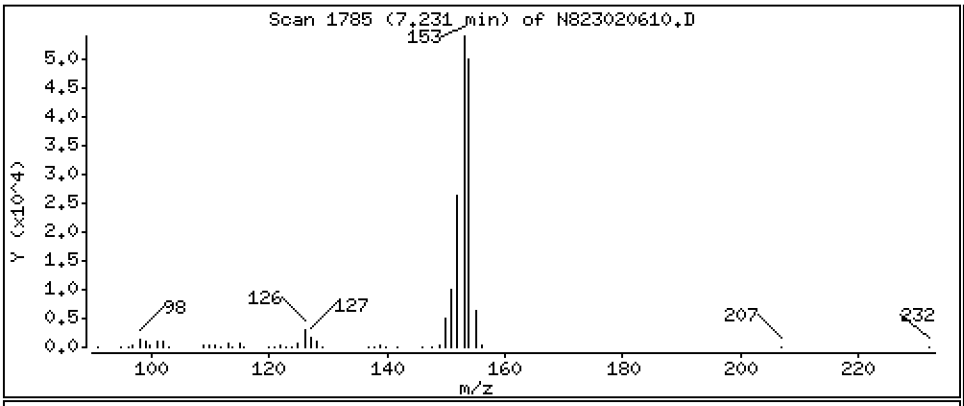
Operator: JZ

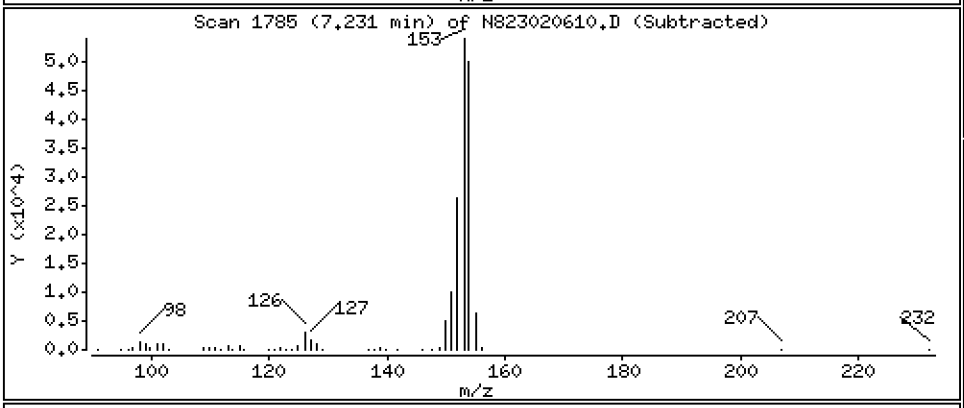
Column phase: Rxi-17sil

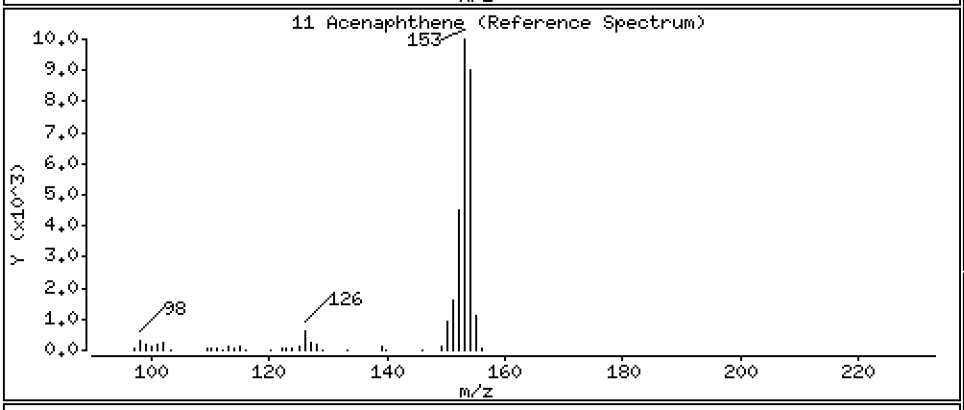
Column diameter: 0.25

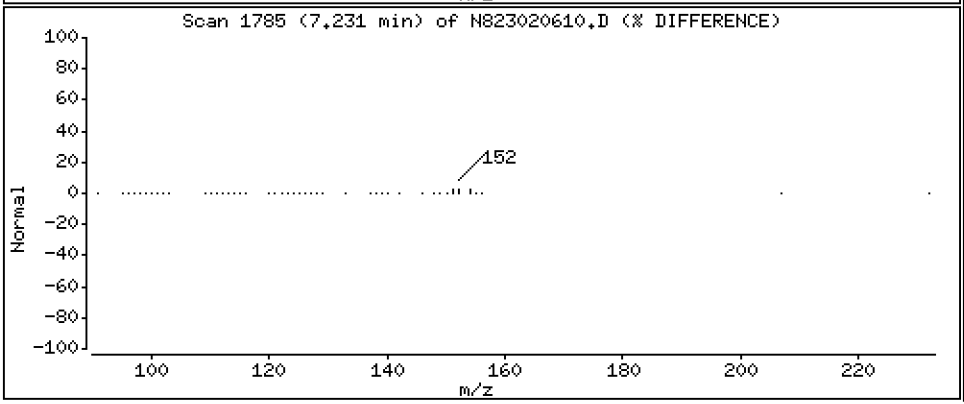
11 Acenaphthene

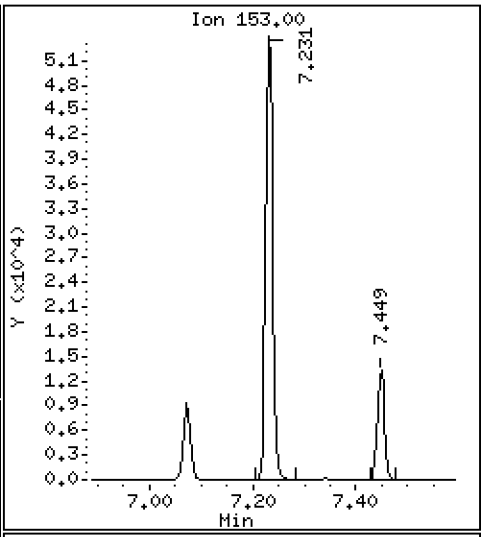
Concentration: 3.432 ug/mL

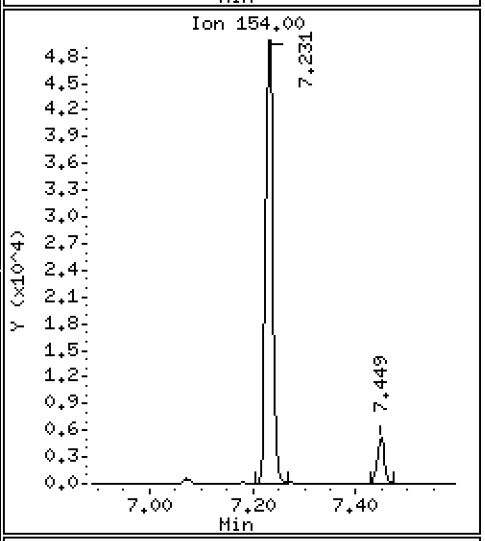


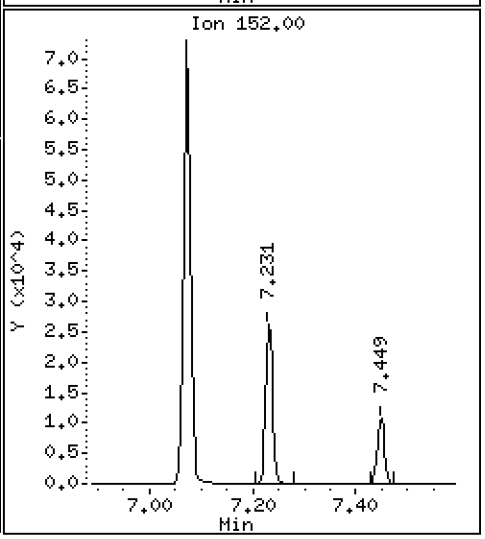












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Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

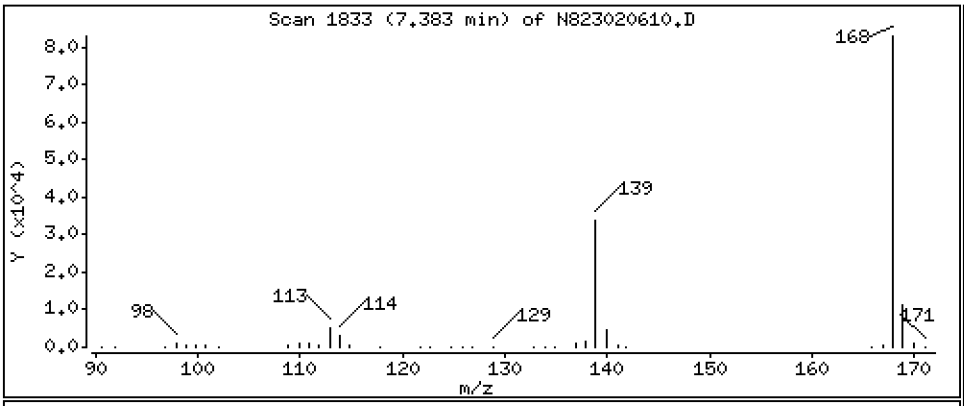
Operator: JZ

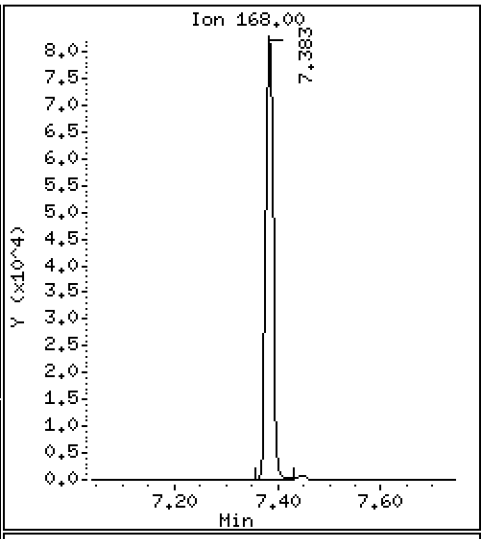
Column phase: Rxi-17sil

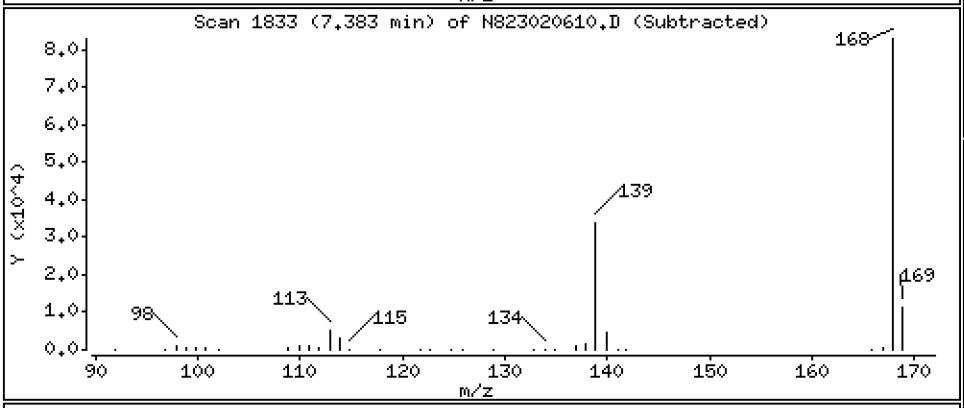
Column diameter: 0.25

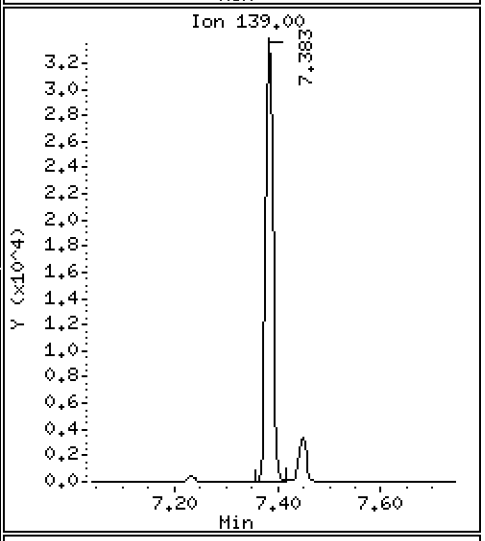
12 Dibenzofuran

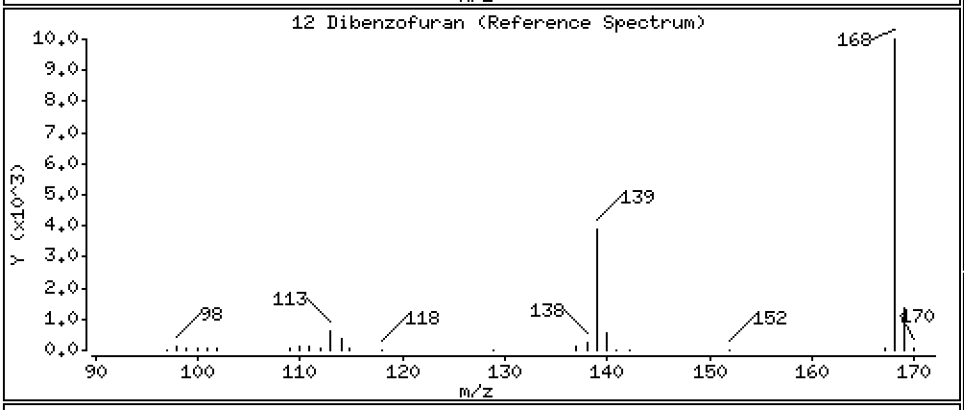
Concentration: 3.432 ug/mL

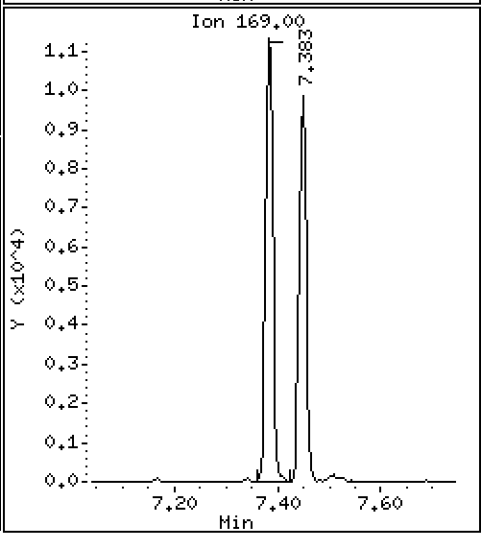


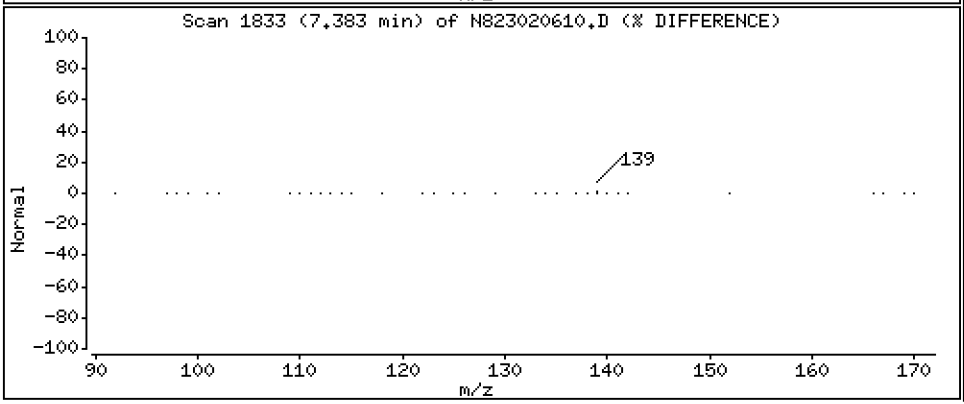












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Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

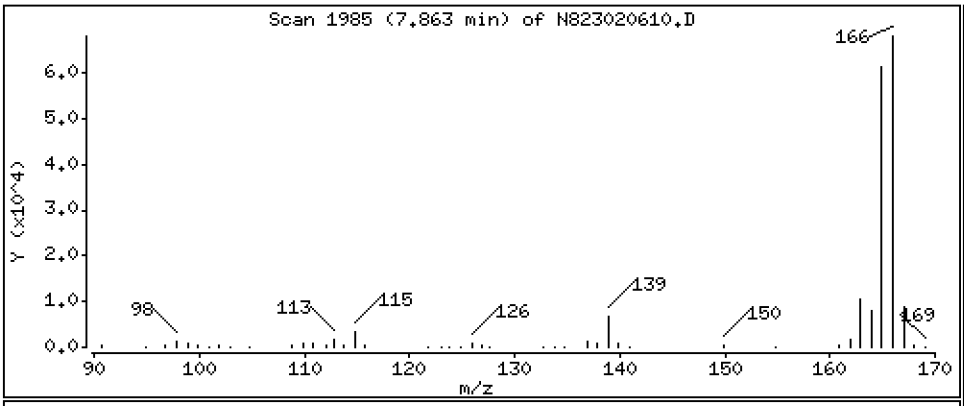
Operator: JZ

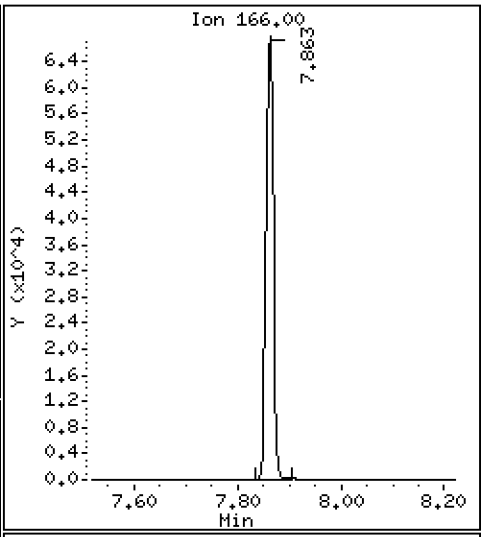
Column phase: Rxi-17sil

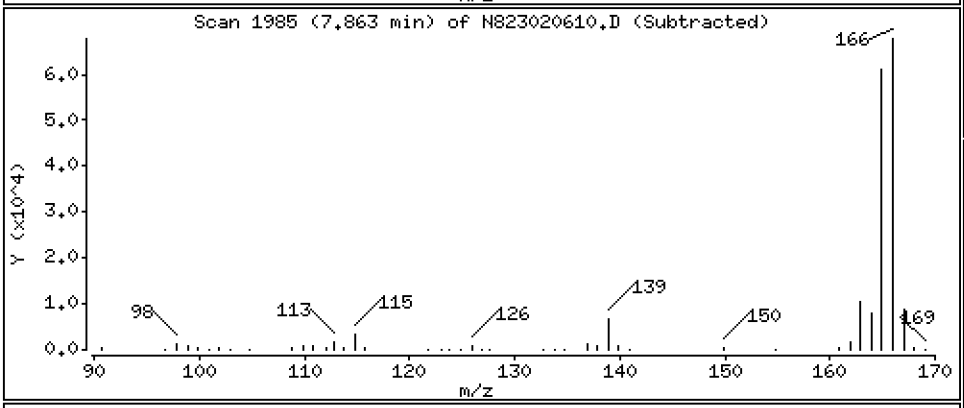
Column diameter: 0.25

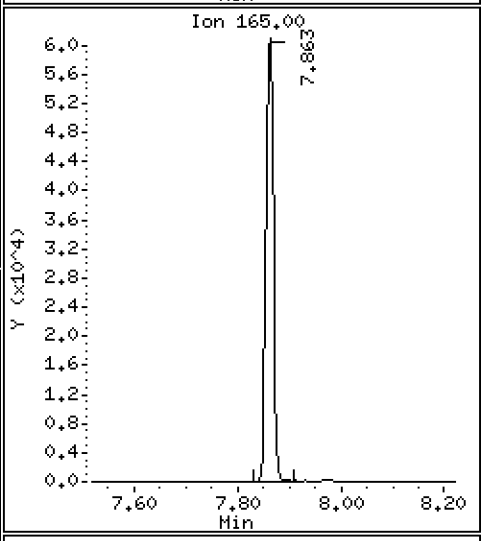
14 Fluorene

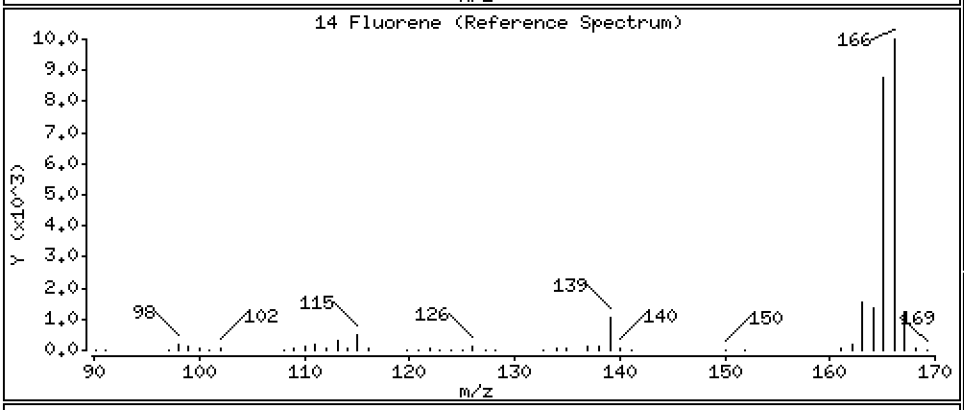
Concentration: 3.602 ug/mL

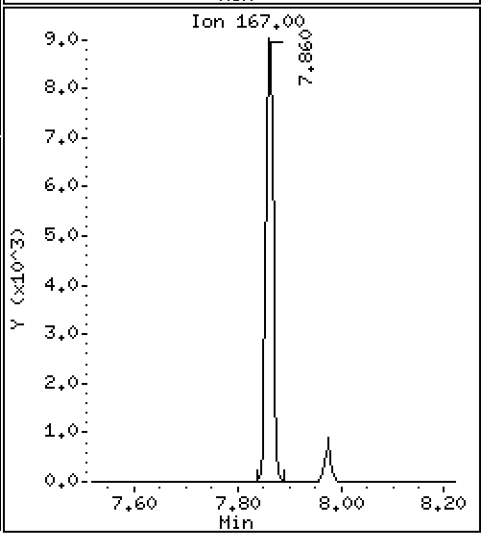


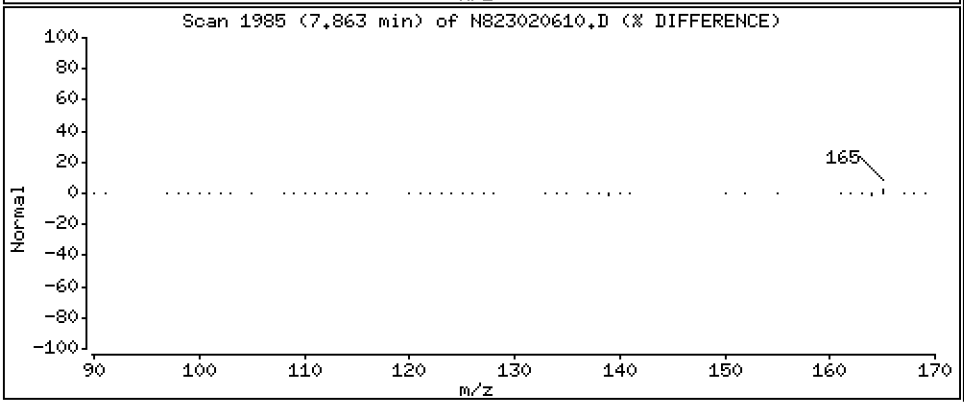












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Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

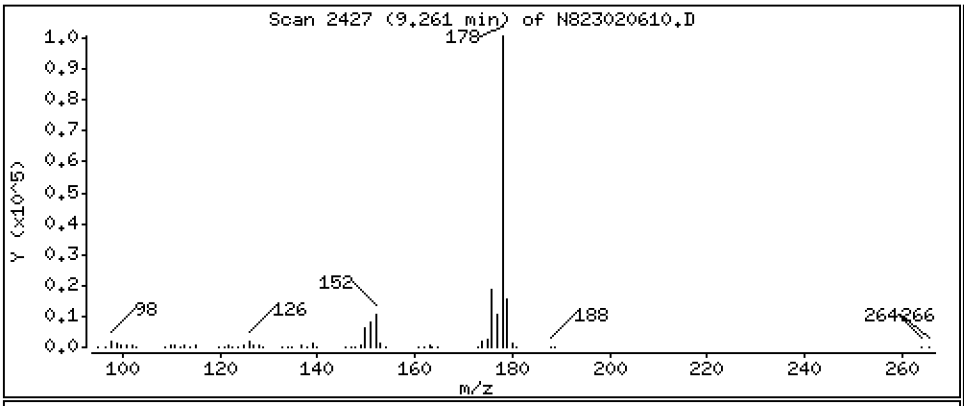
Operator: JZ

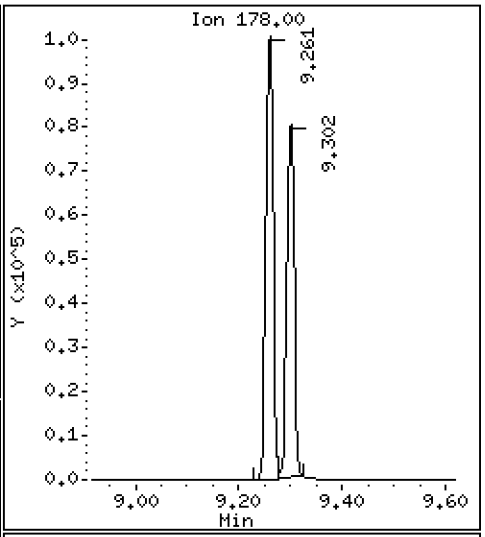
Column phase: Rxi-17sil

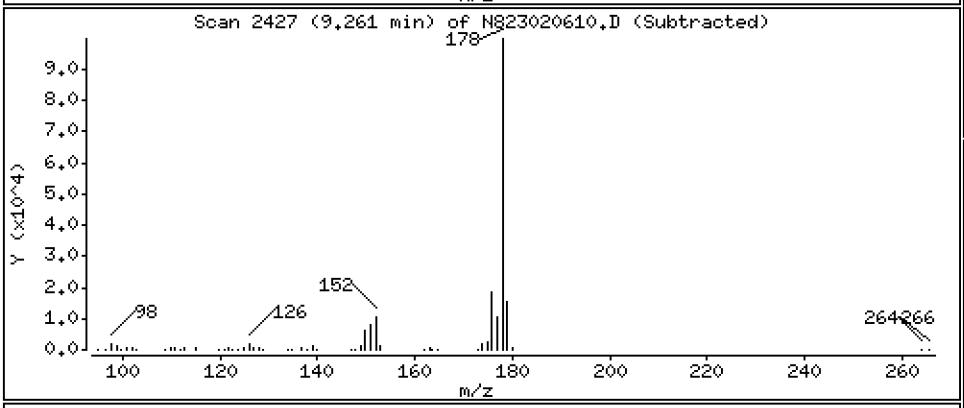
Column diameter: 0.25

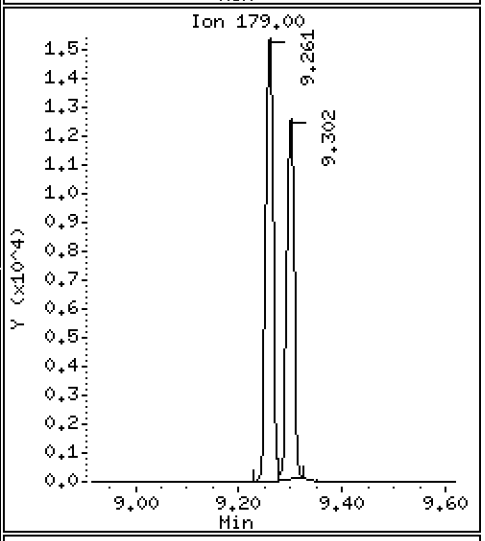
16 Phenanthrene

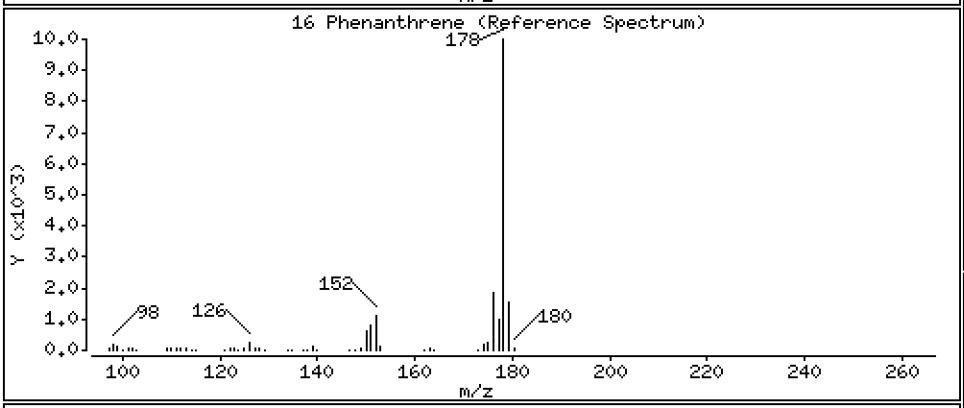
Concentration: 3.573 ug/mL

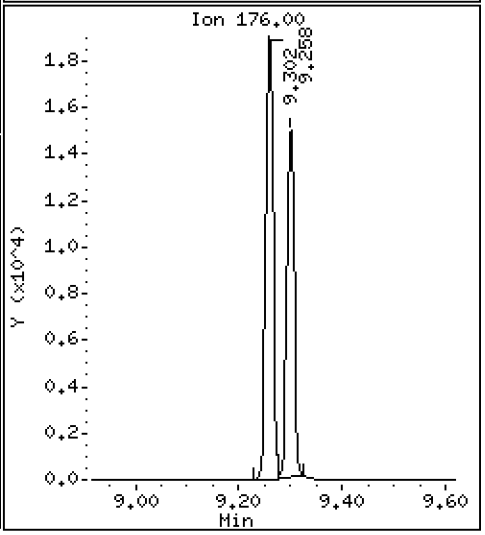


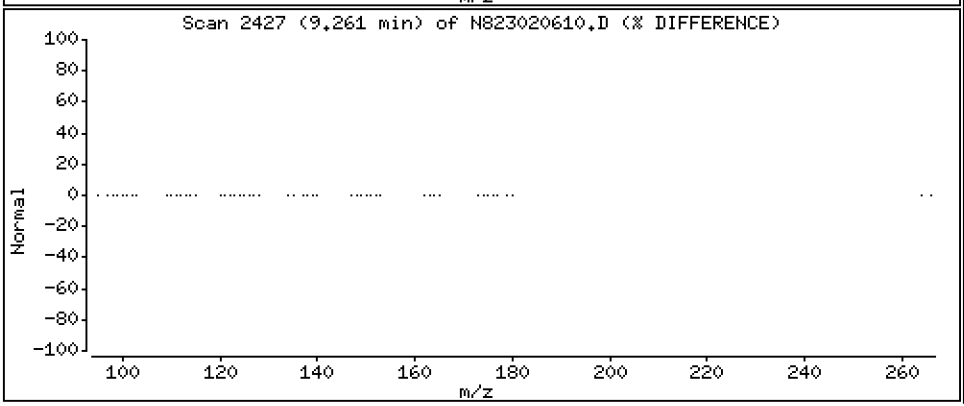












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Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

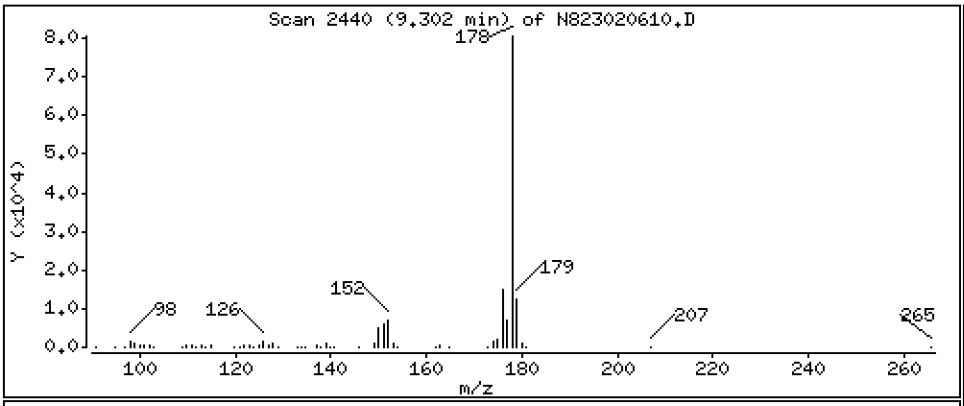
Operator: JZ

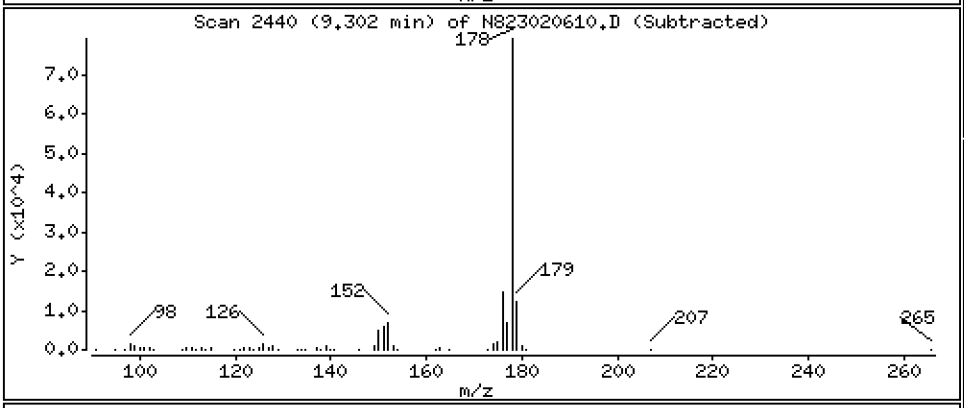
Column phase: Rxi-17sil

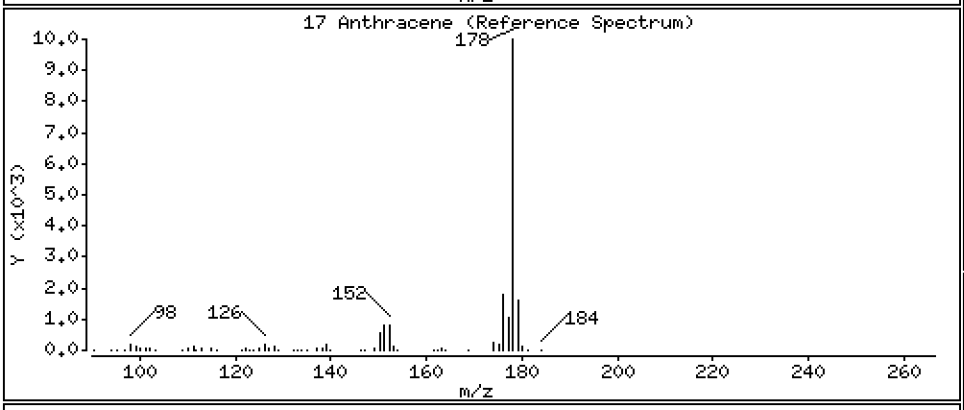
Column diameter: 0.25

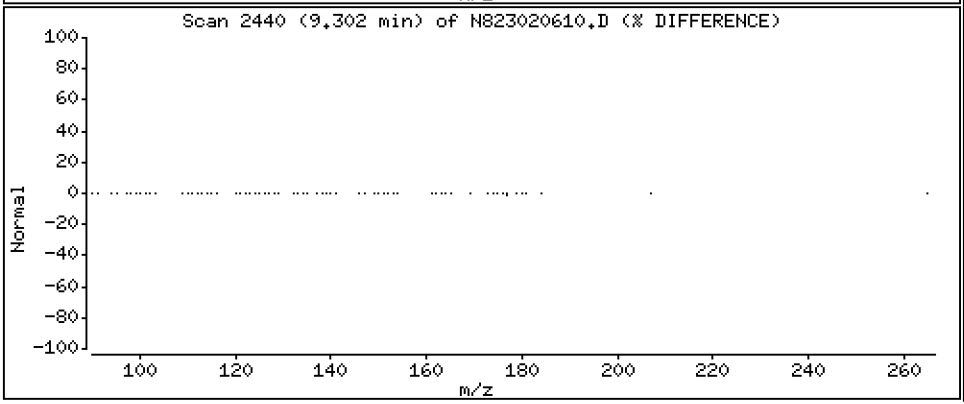
17 Anthracene

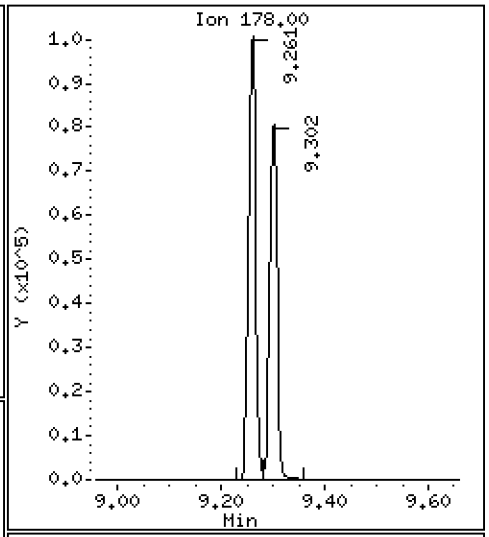
Concentration: 3.237 ug/mL

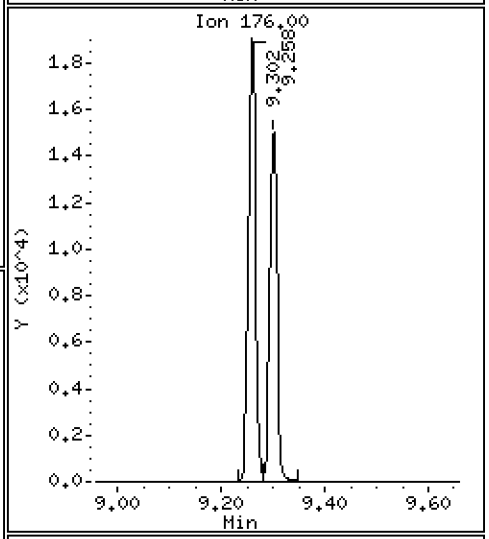


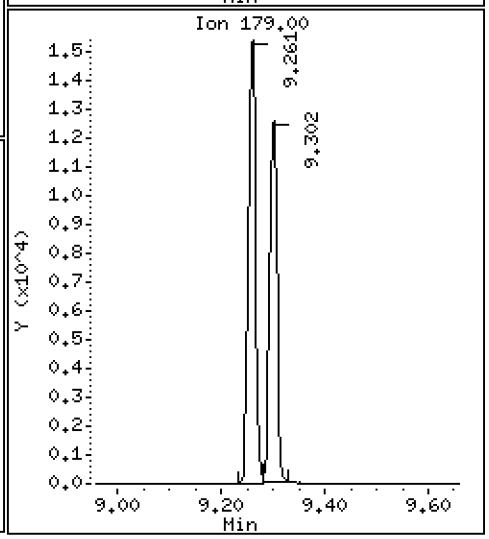












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Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

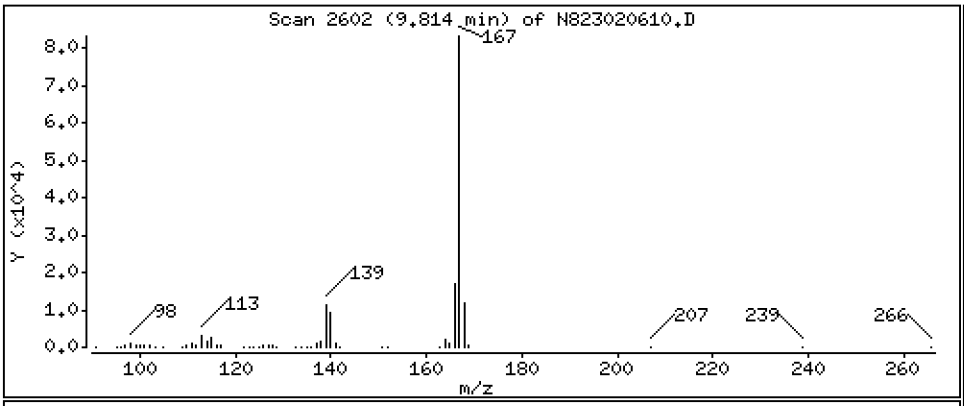
Operator: JZ

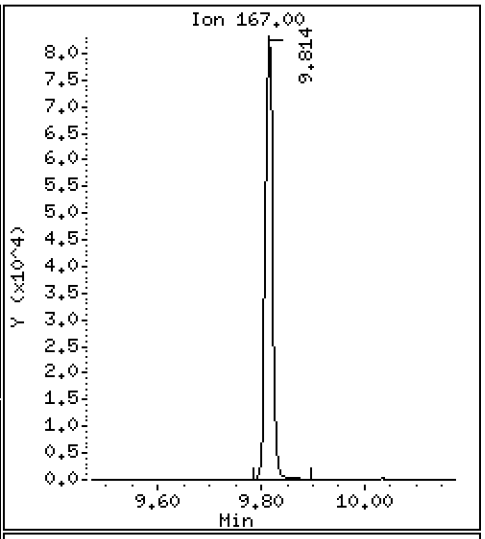
Column phase: Rxi-17sil

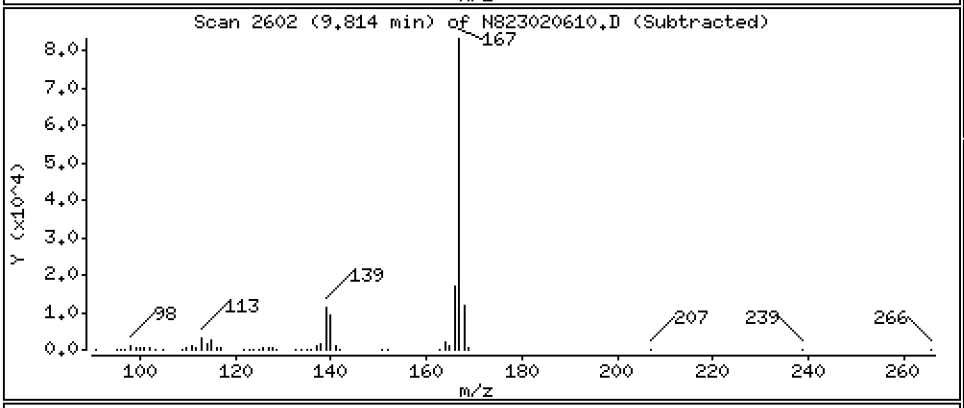
Column diameter: 0.25

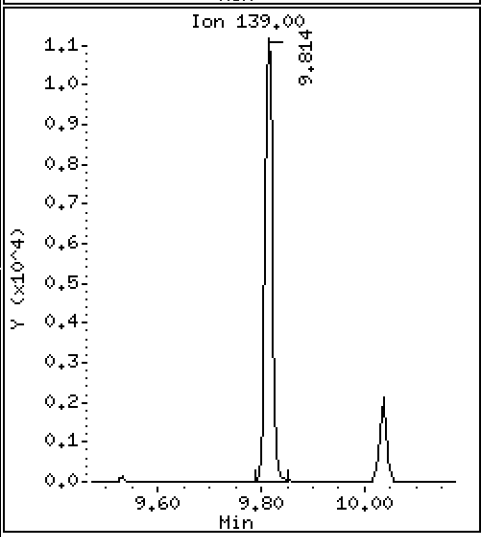
19 Carbazole

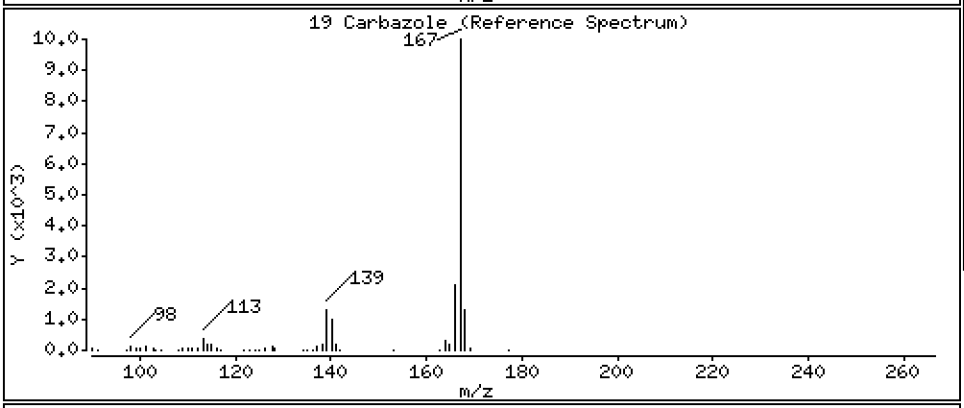
Concentration: 3.739 ug/mL

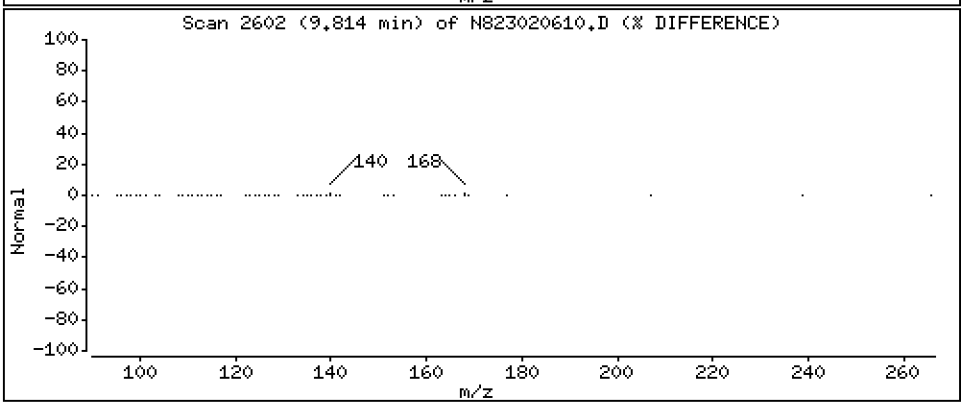












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020610.D

Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

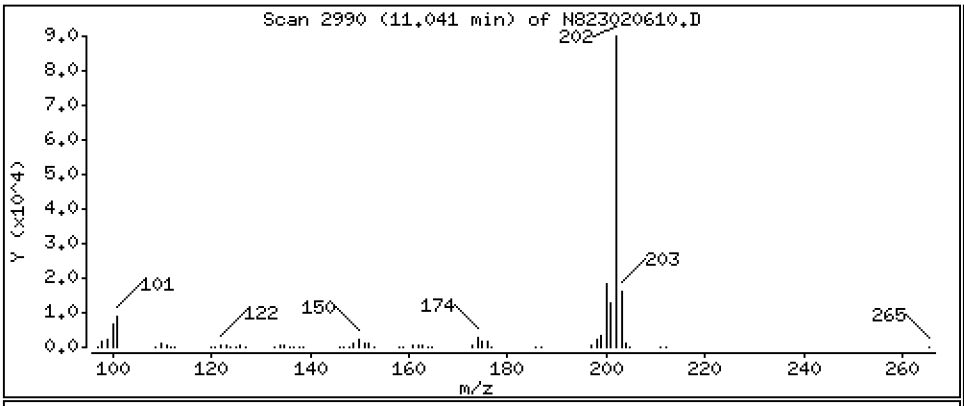
Operator: JZ

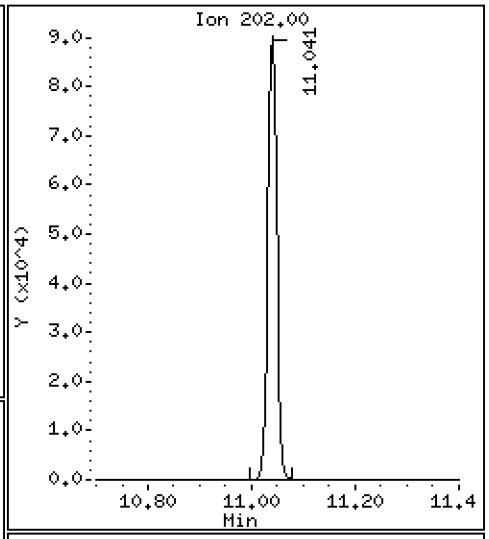
Column phase: Rxi-17sil

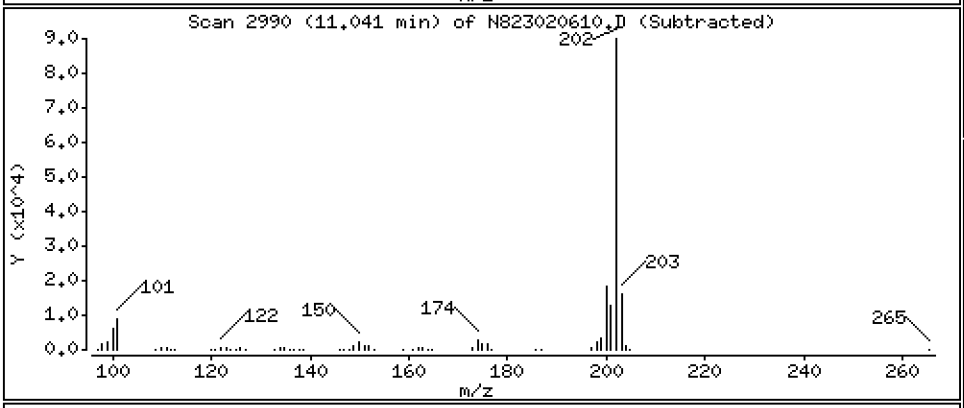
Column diameter: 0.25

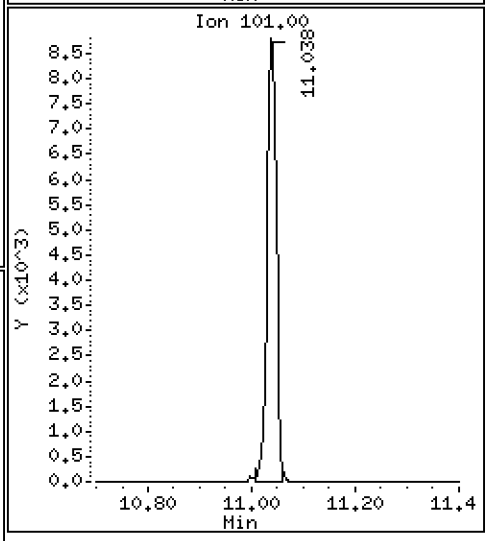
22 Fluoranthene

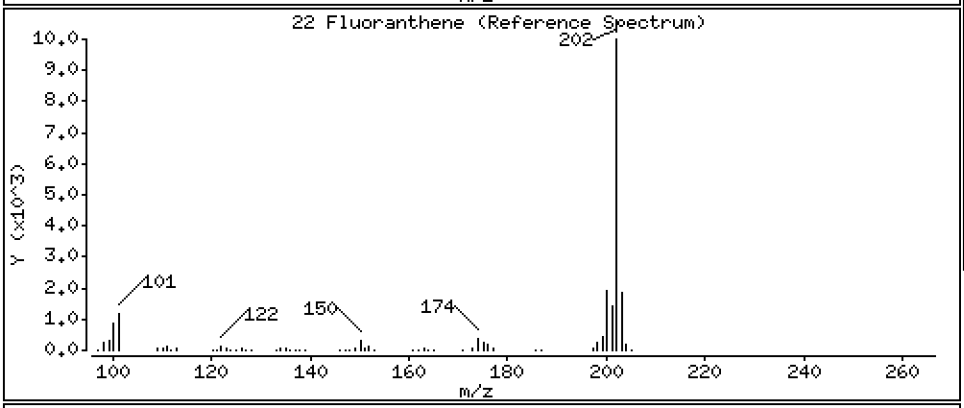
Concentration: 3.715 ug/mL

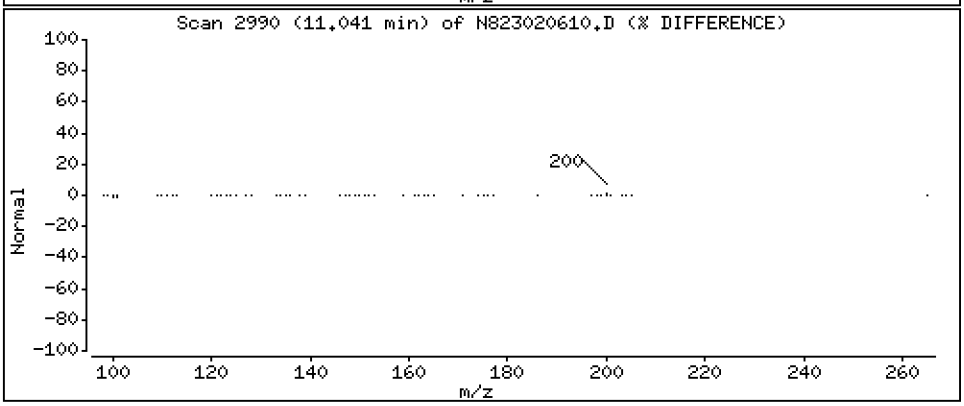












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Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

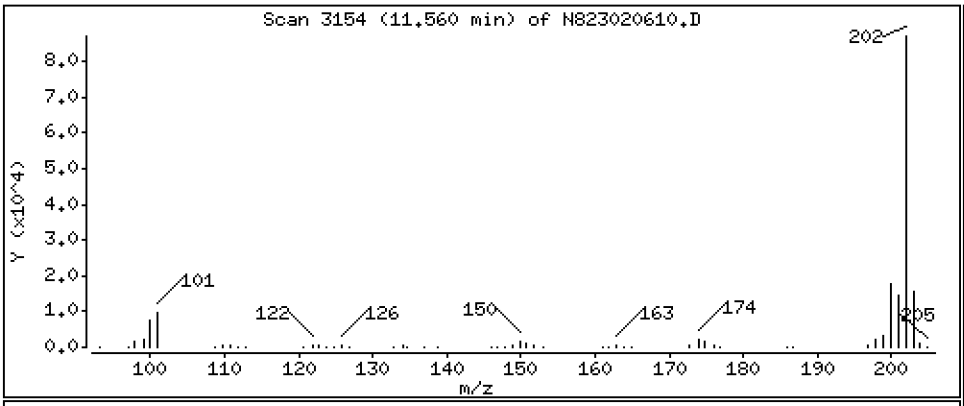
Operator: JZ

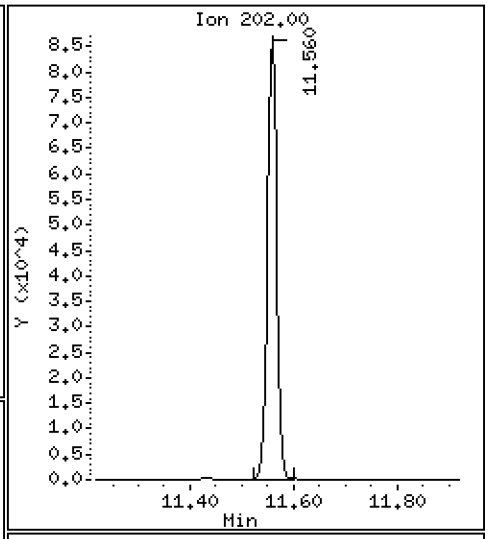
Column phase: Rxi-17sil

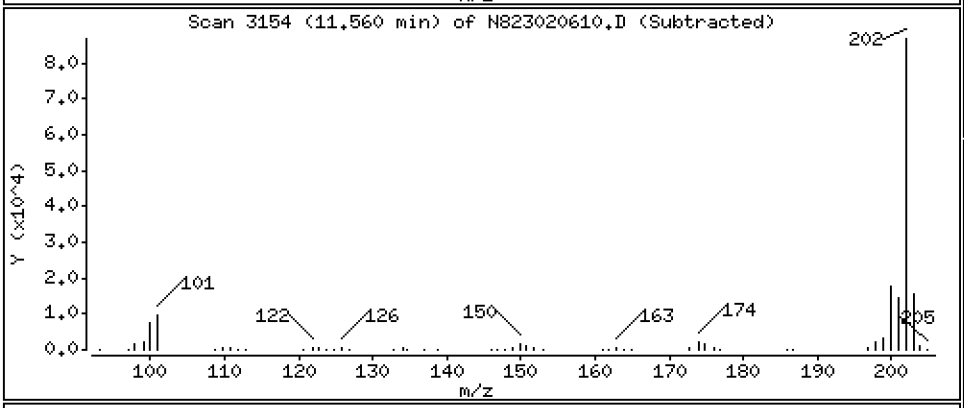
Column diameter: 0.25

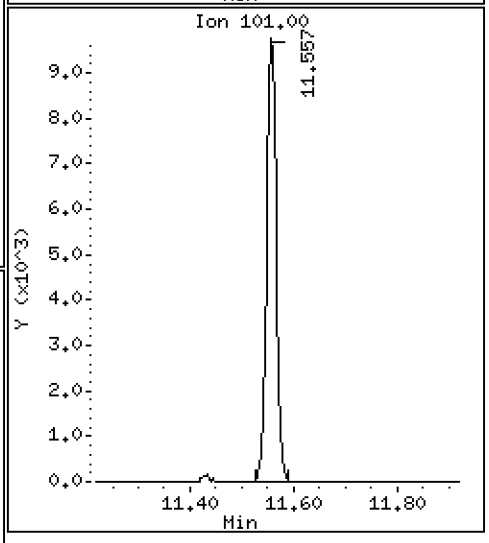
23 Pyrene

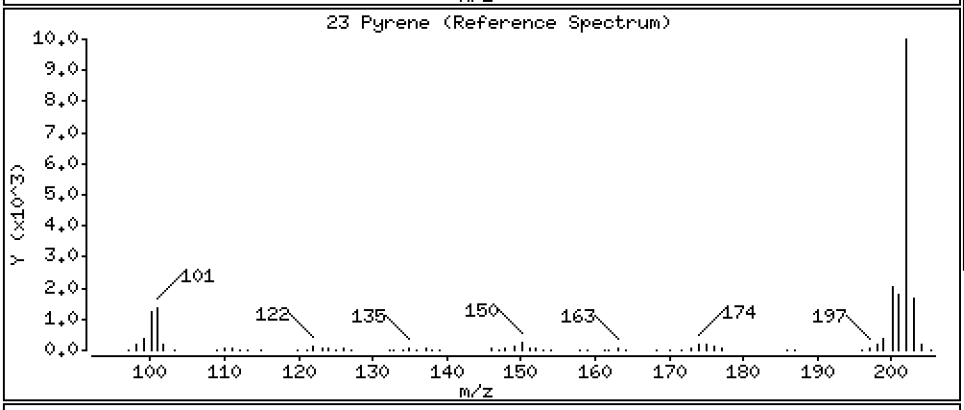
Concentration: 4.283 ug/mL

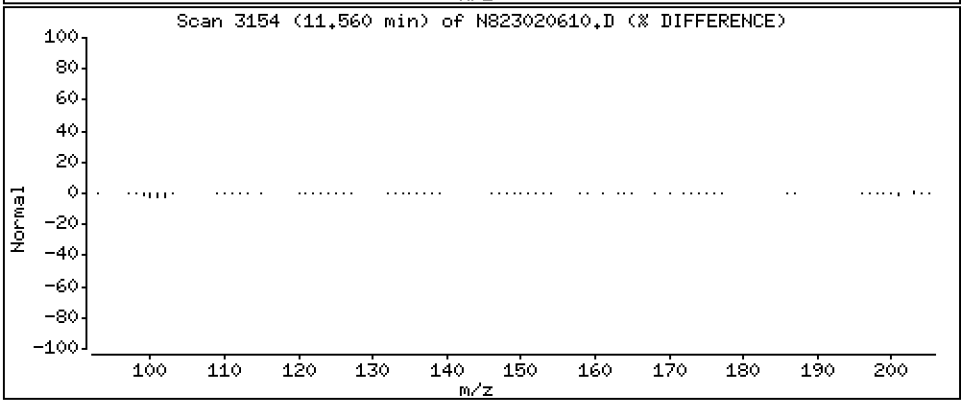












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020610.D

Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

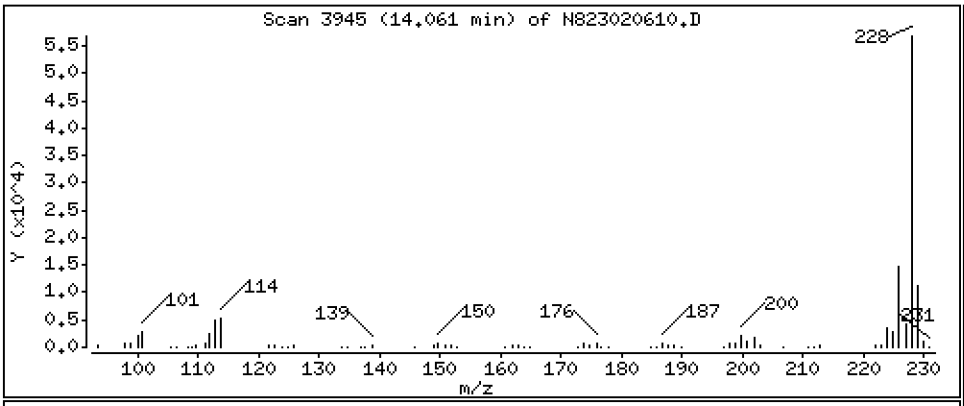
Operator: JZ

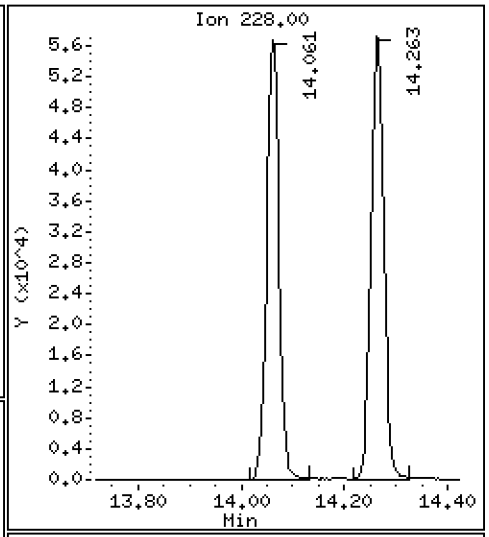
Column phase: Rxi-17sil

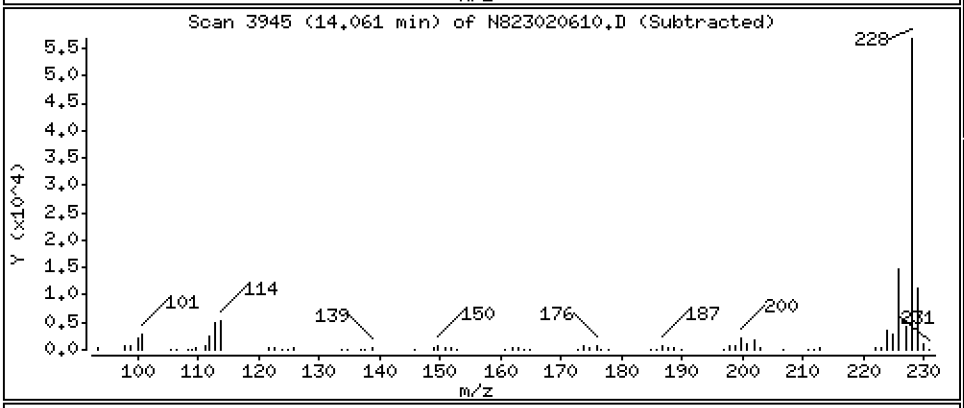
Column diameter: 0.25

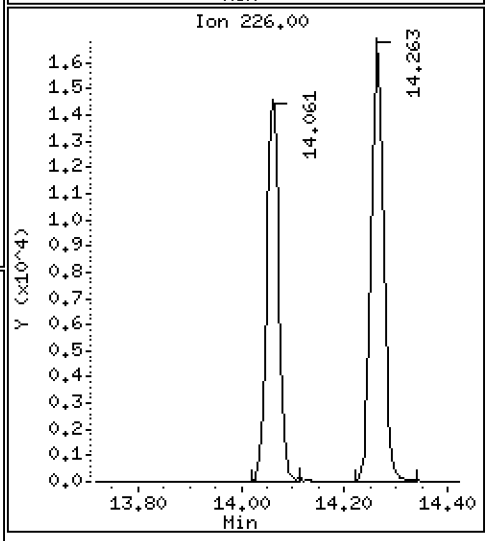
24 Benzo(a)anthracene

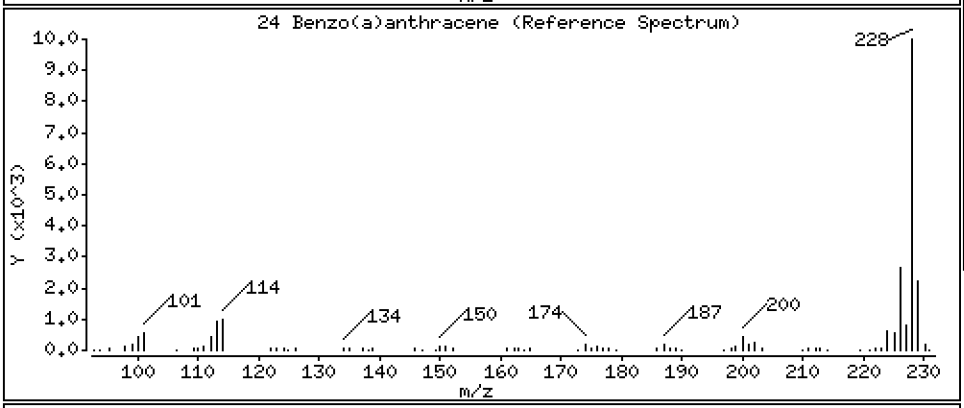
Concentration: 4.009 ug/mL

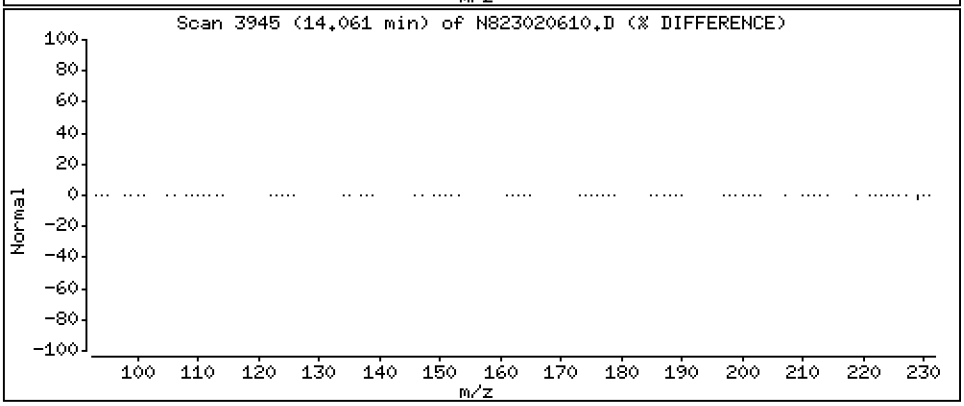












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020610.D

Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

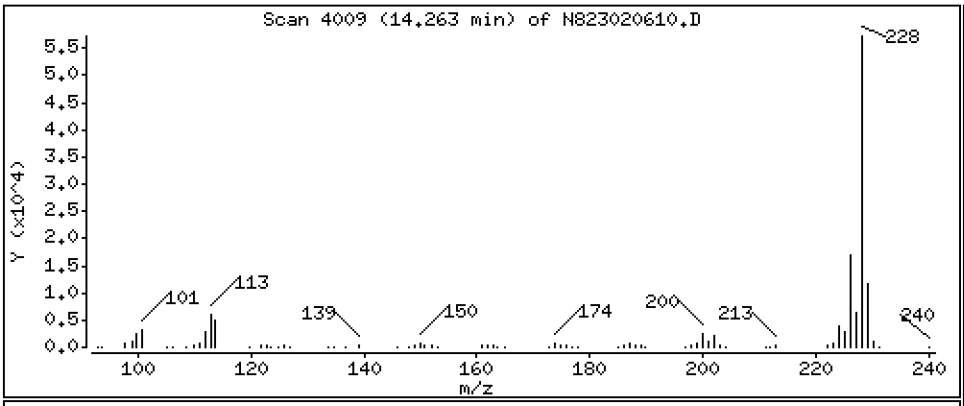
Operator: JZ

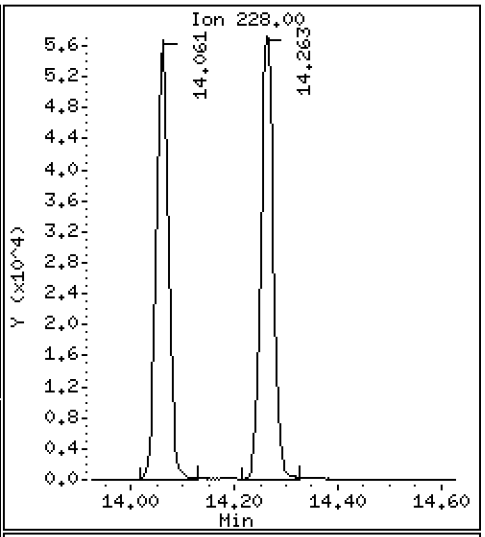
Column phase: Rxi-17sil

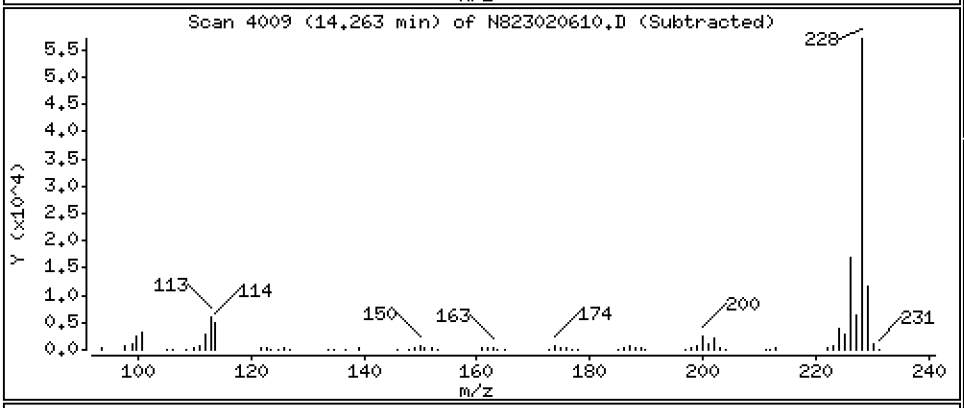
Column diameter: 0.25

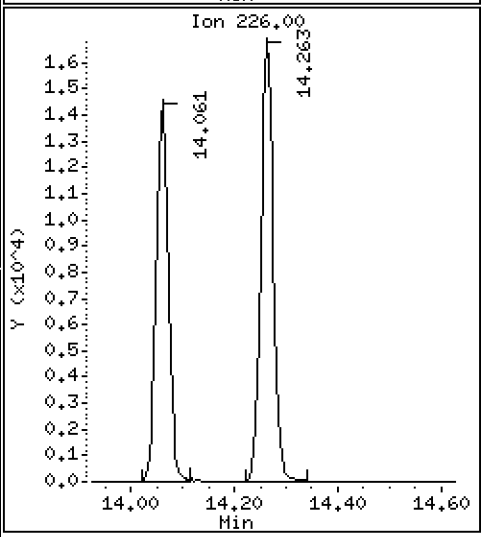
27 Chrysene

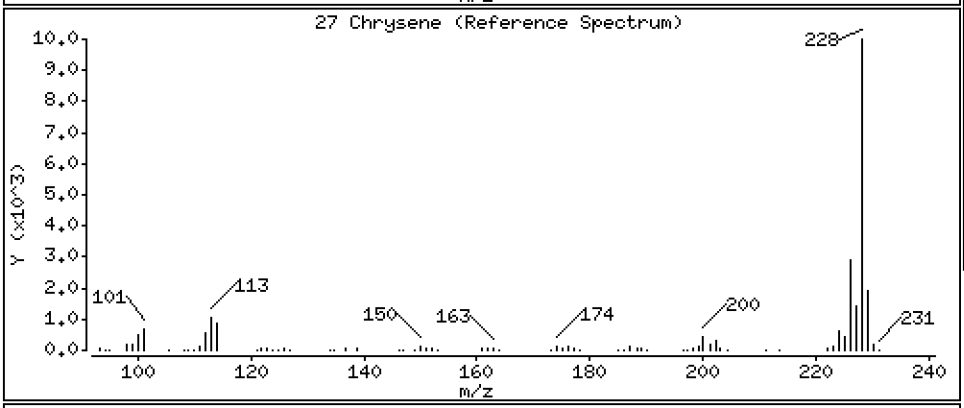
Concentration: 3.980 ug/mL

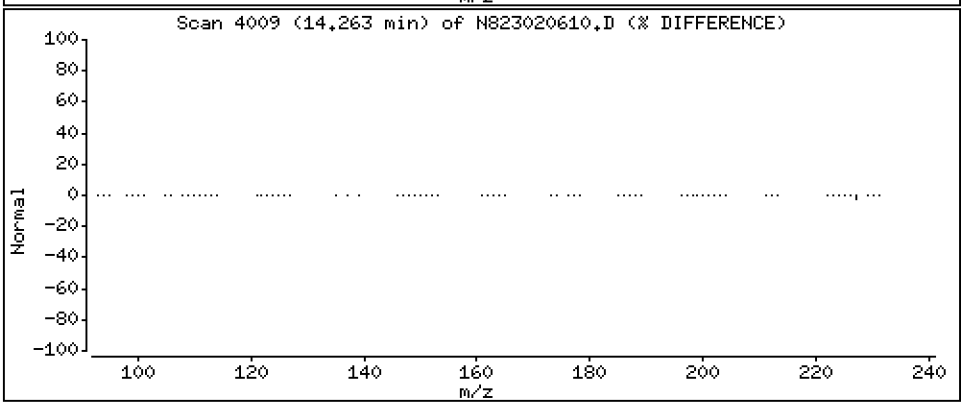












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020610.D

Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

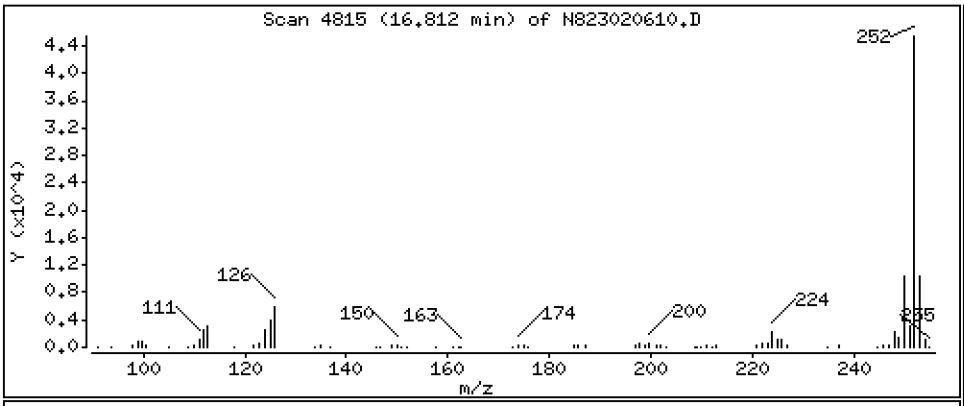
Operator: JZ

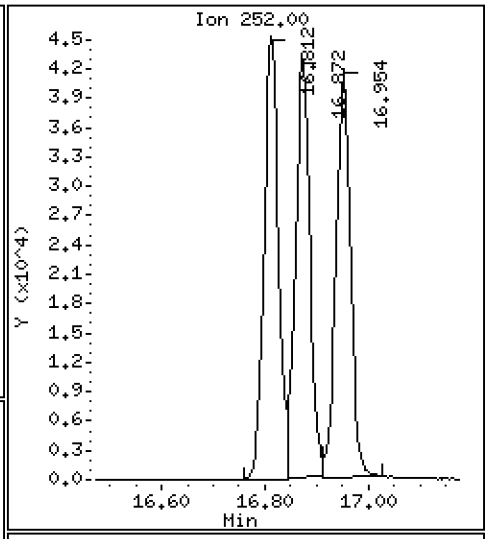
Column phase: Rxi-17sil

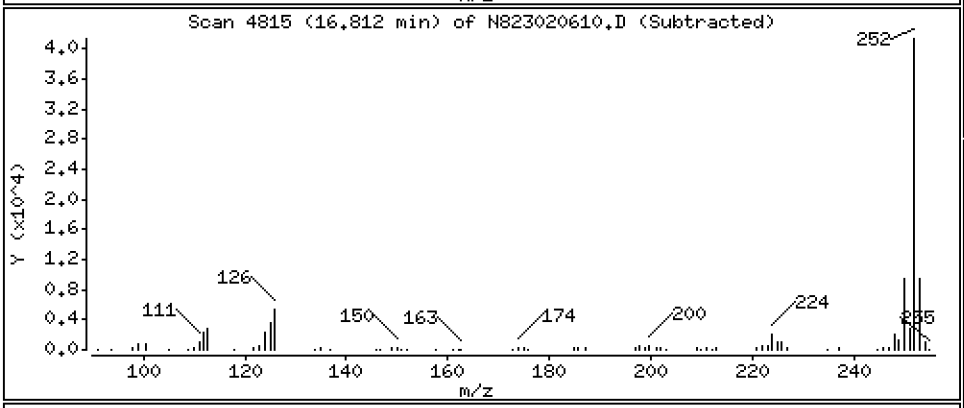
Column diameter: 0.25

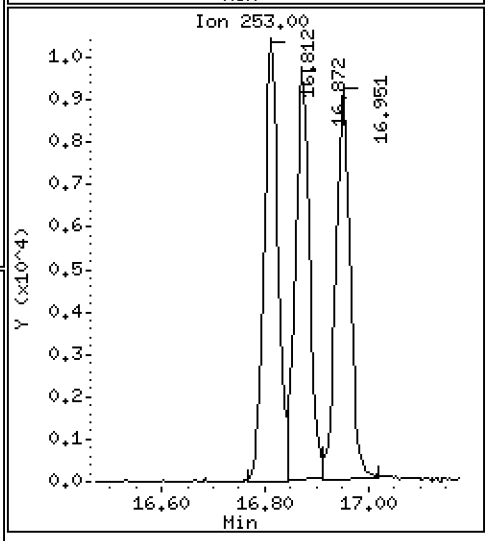
28 Benzo(b)fluoranthene

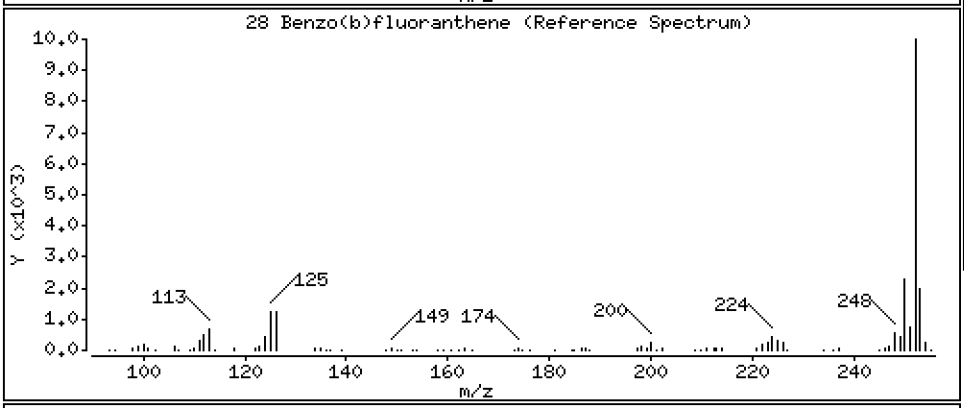
Concentration: 5.565 ug/mL

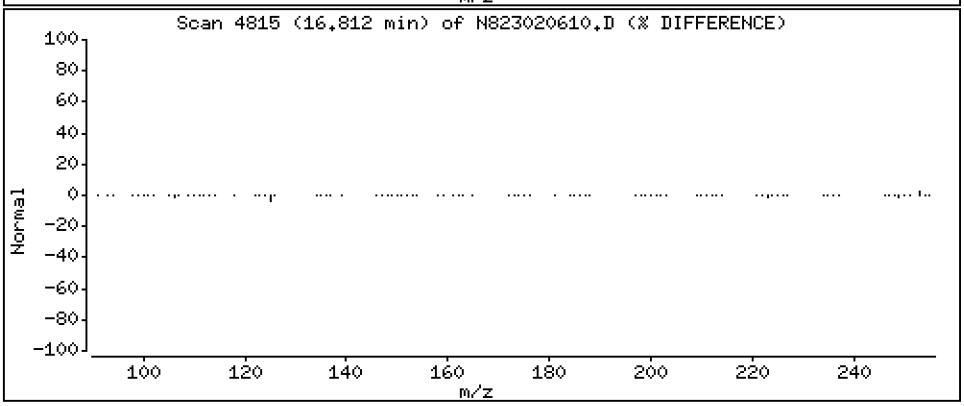












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020610.D

Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

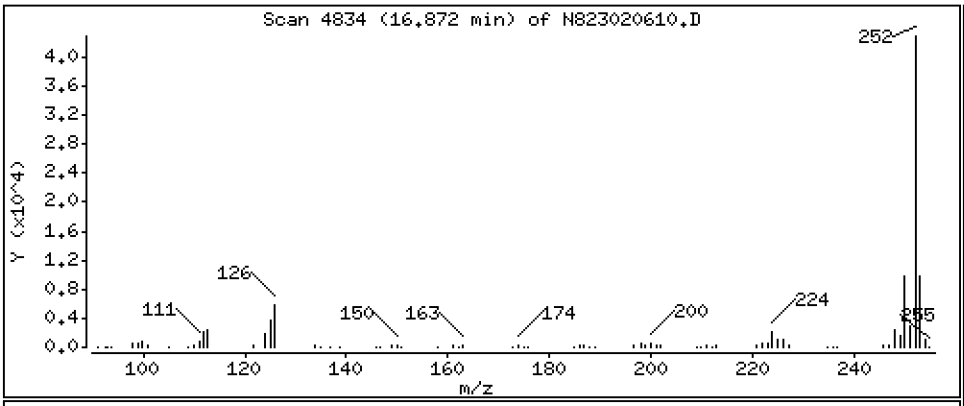
Operator: JZ

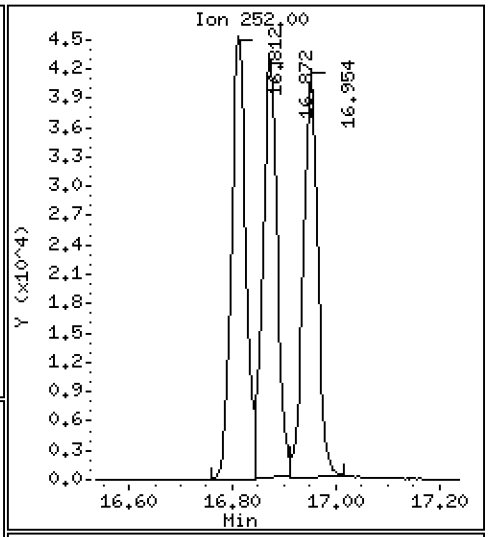
Column phase: Rxi-17sil

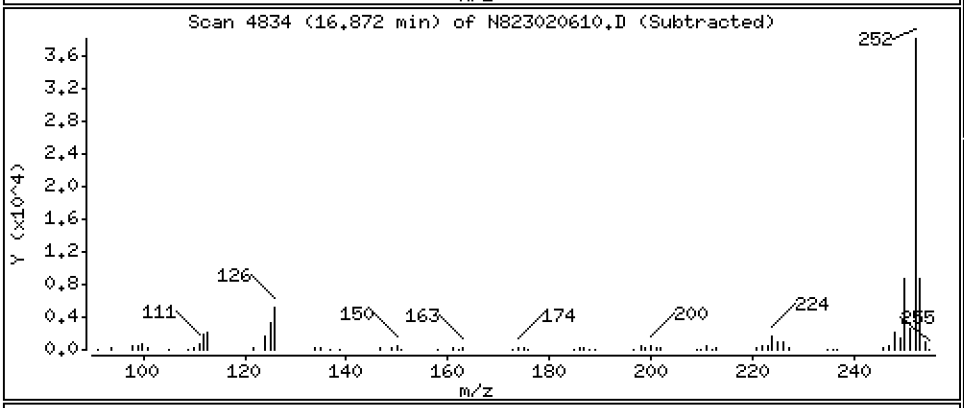
Column diameter: 0.25

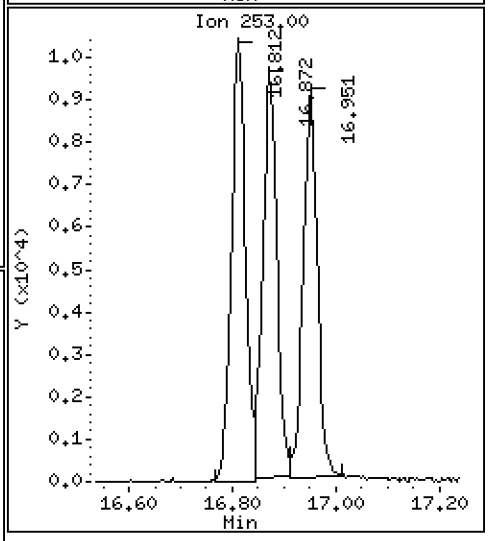
29 Benzo(k)fluoranthene

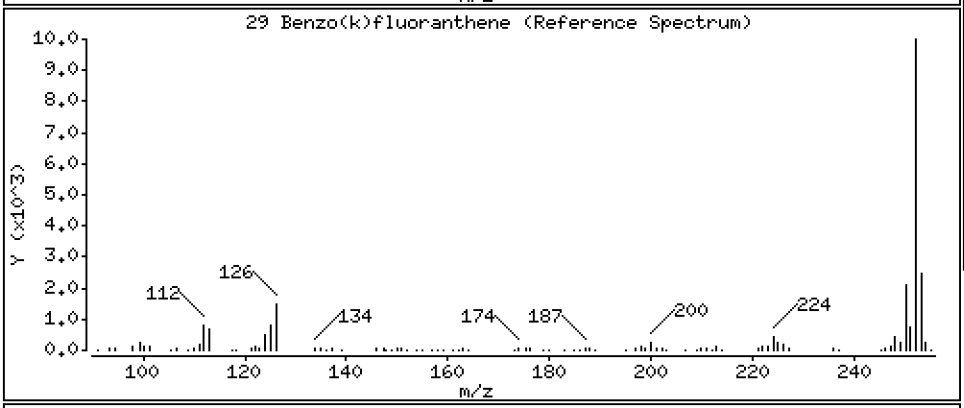
Concentration: 5.294 ug/mL

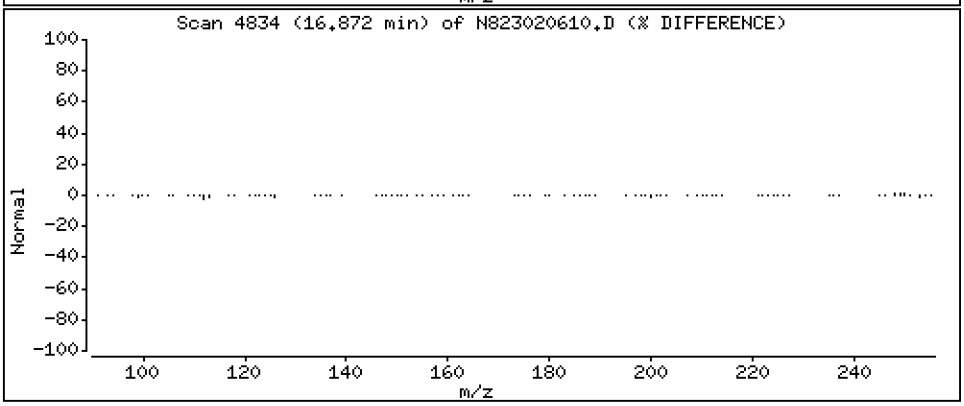












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020610.D

Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

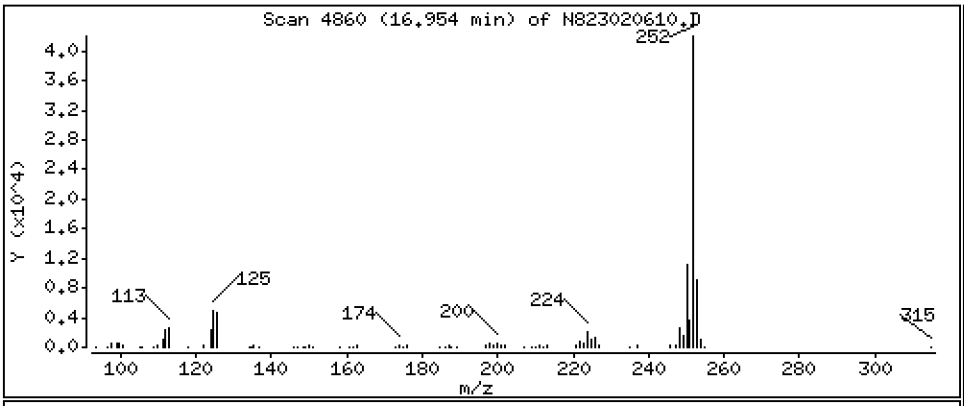
Operator: JZ

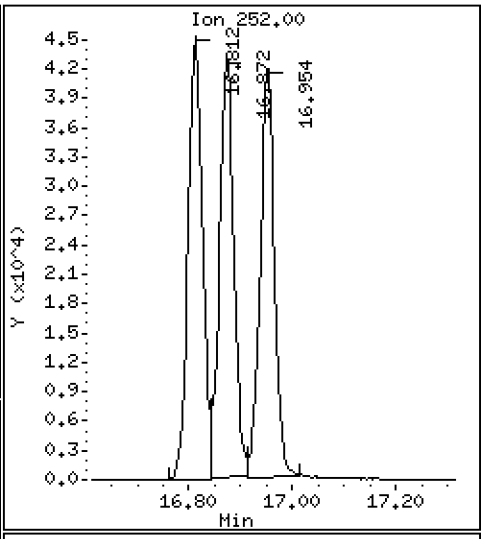
Column phase: Rxi-17sil

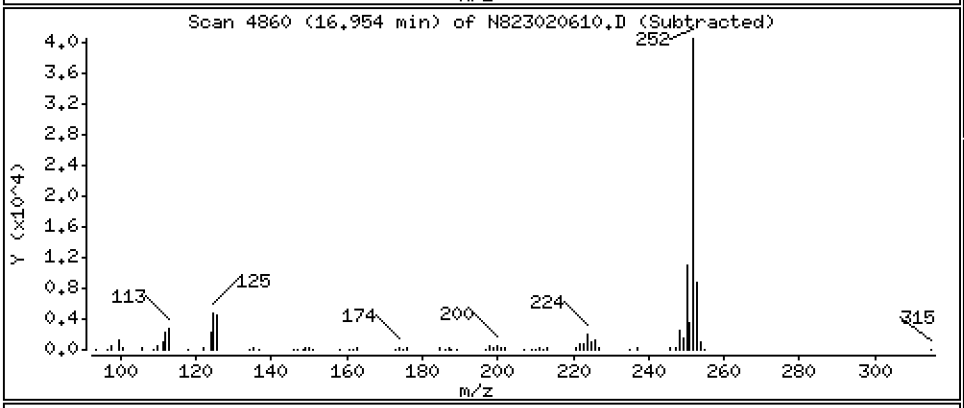
Column diameter: 0.25

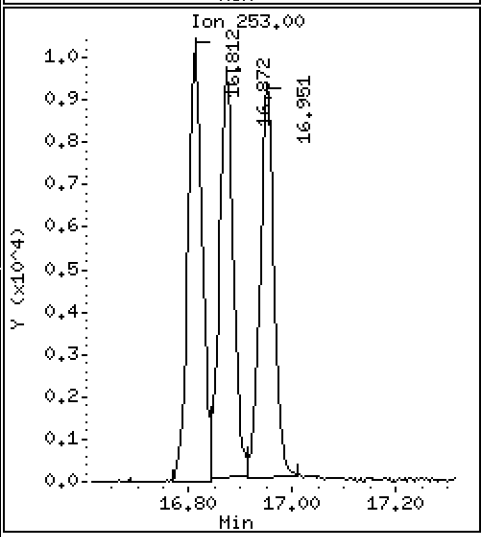
30 Benzo(j)fluoranthene

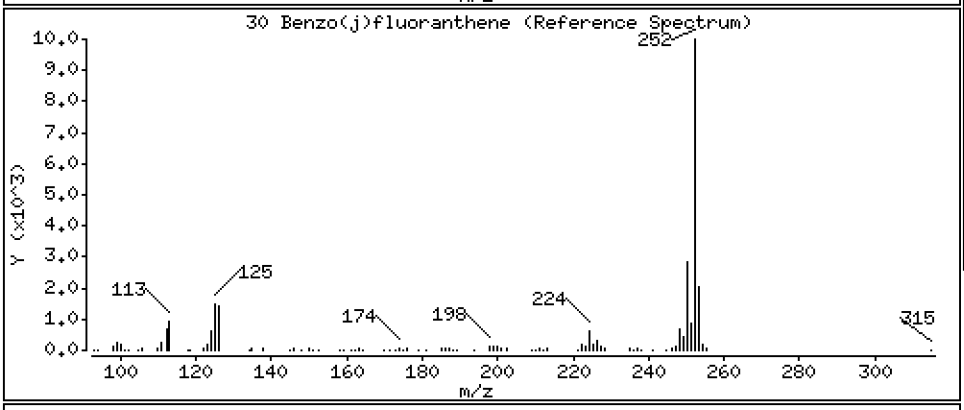
Concentration: 5.699 ug/mL

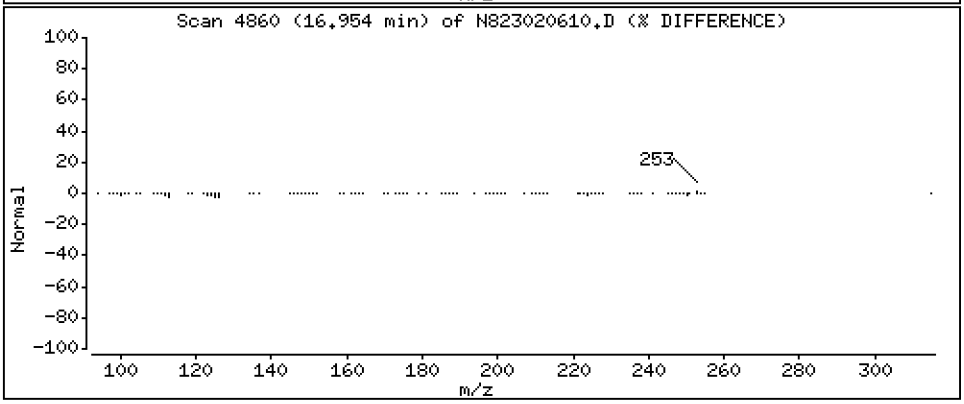












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020610.D

Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

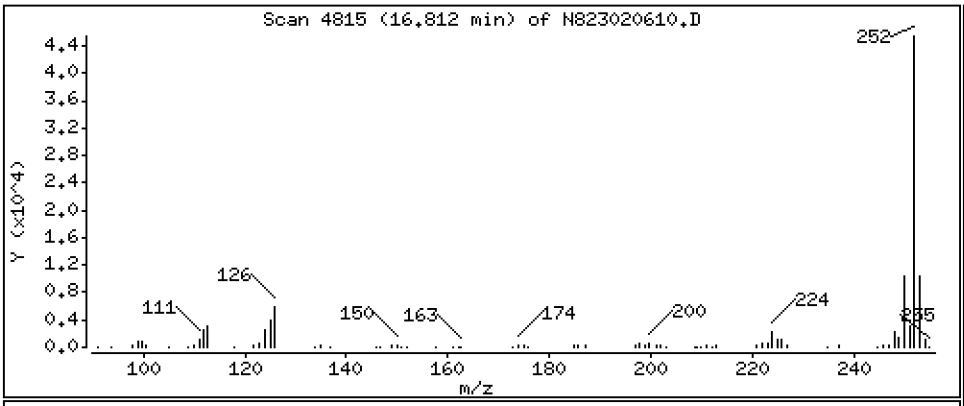
Operator: JZ

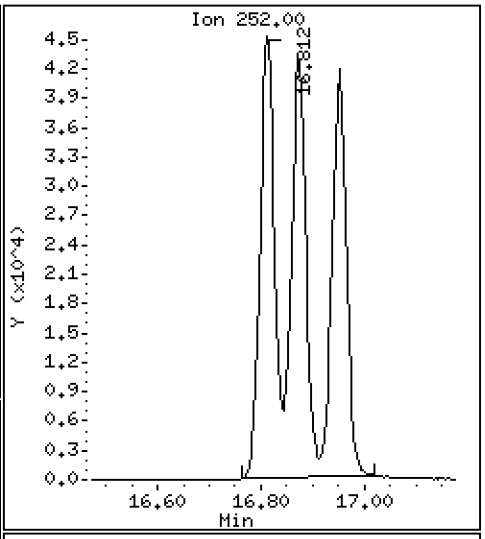
Column phase: Rxi-17sil

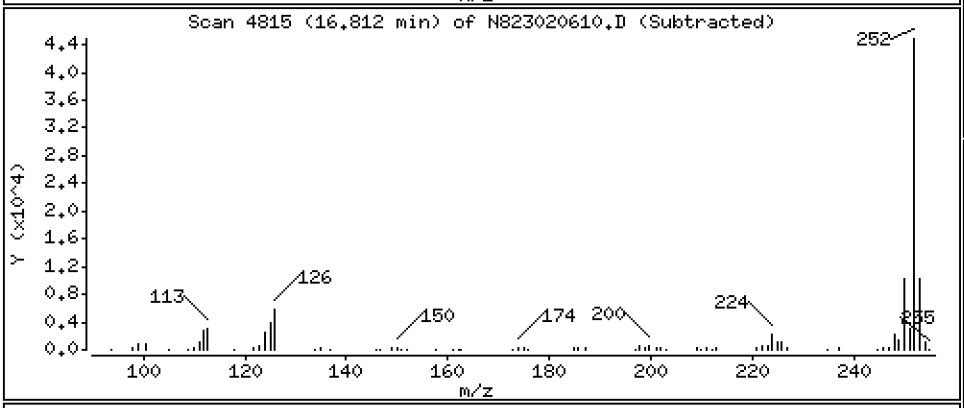
Column diameter: 0.25

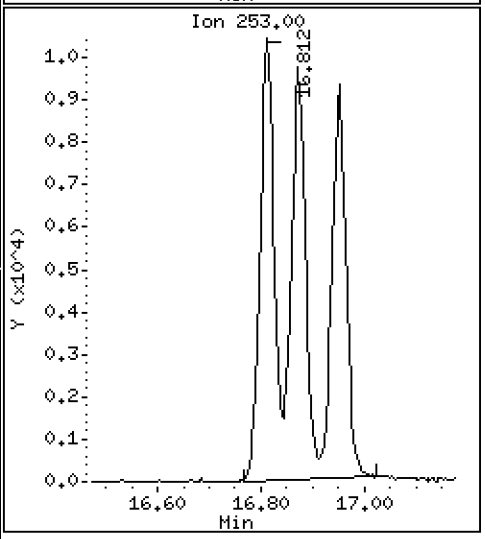
31 Total Benzofluoranthenes

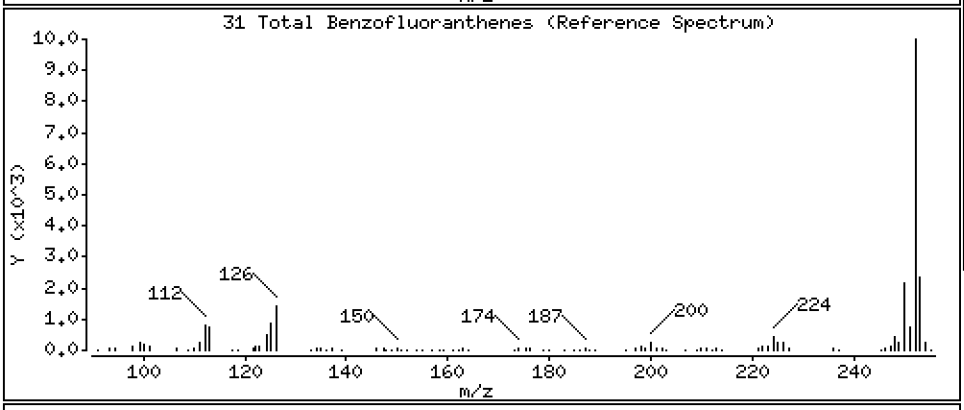
Concentration: 16.54 ug/mL

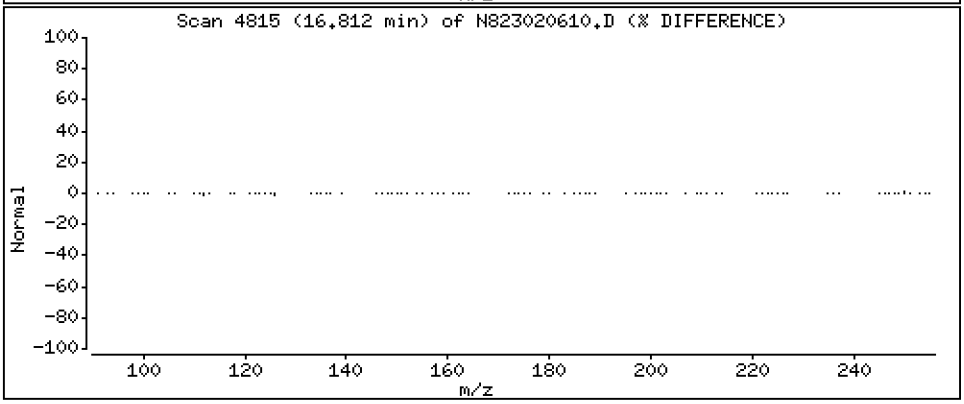












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020610.D

Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

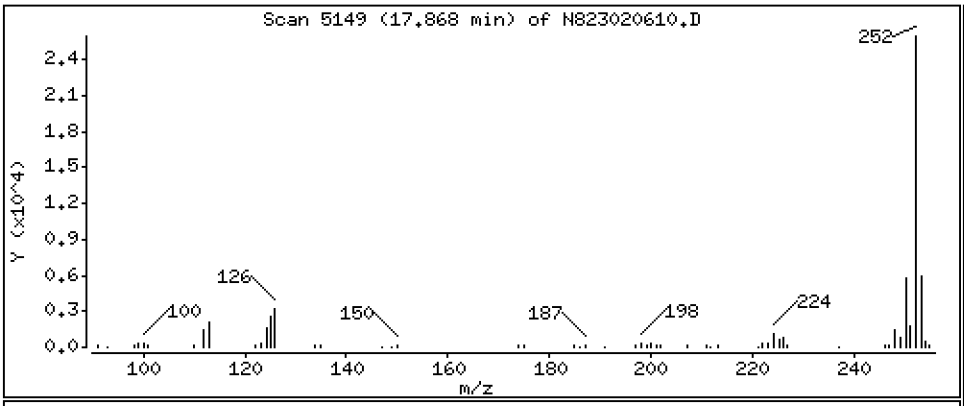
Operator: JZ

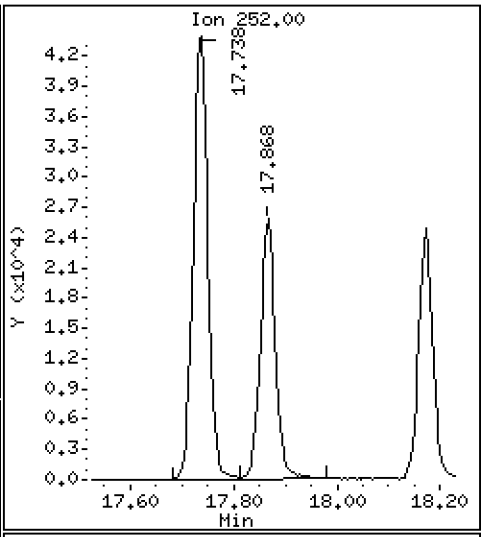
Column phase: Rxi-17sil

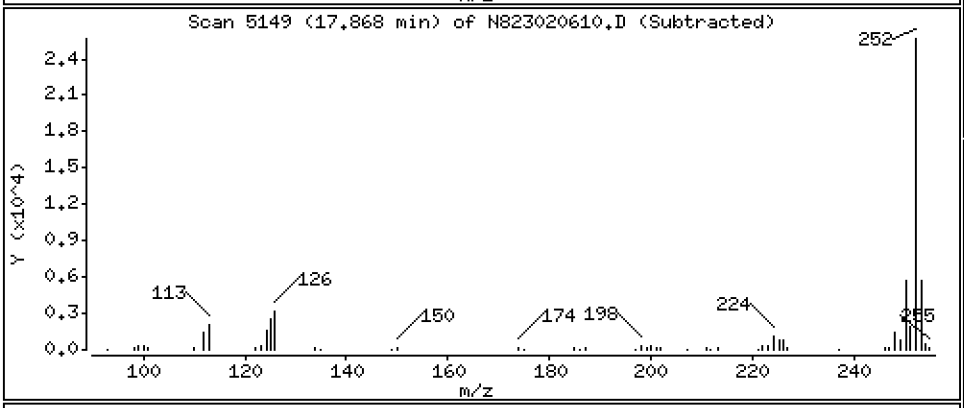
Column diameter: 0.25

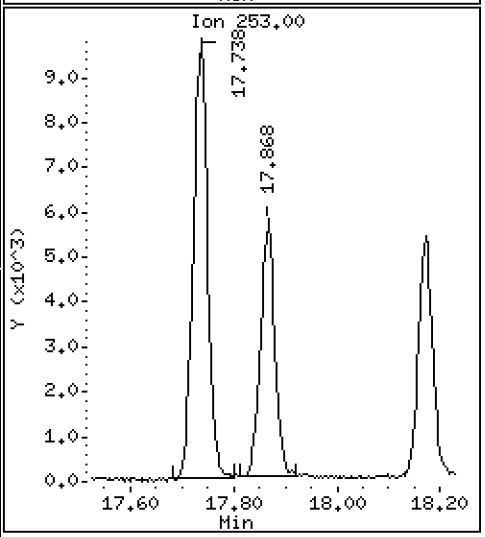
32 Benzo(a)pyrene

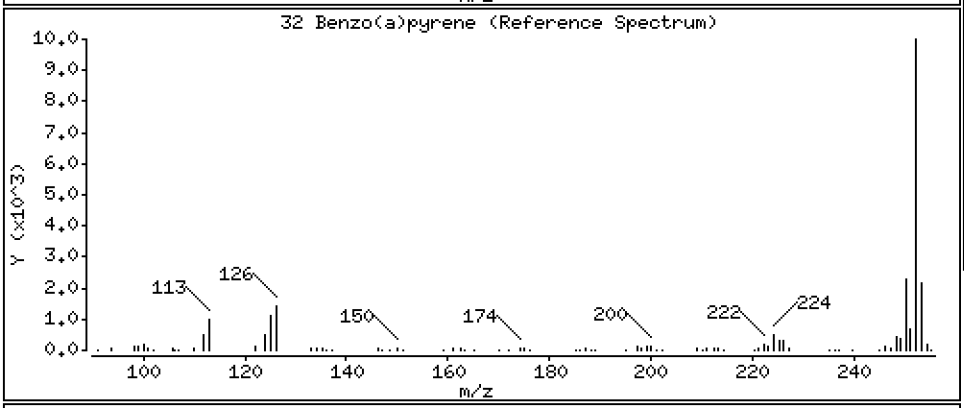
Concentration: 3.726 ug/mL

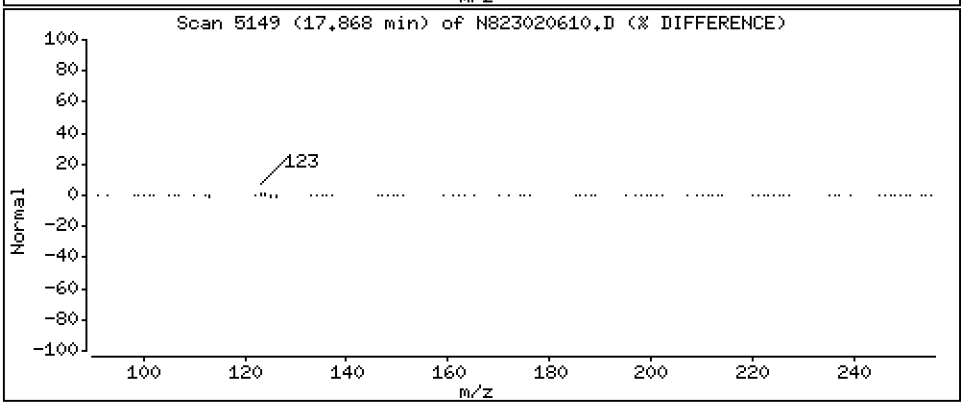












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020610.D

Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

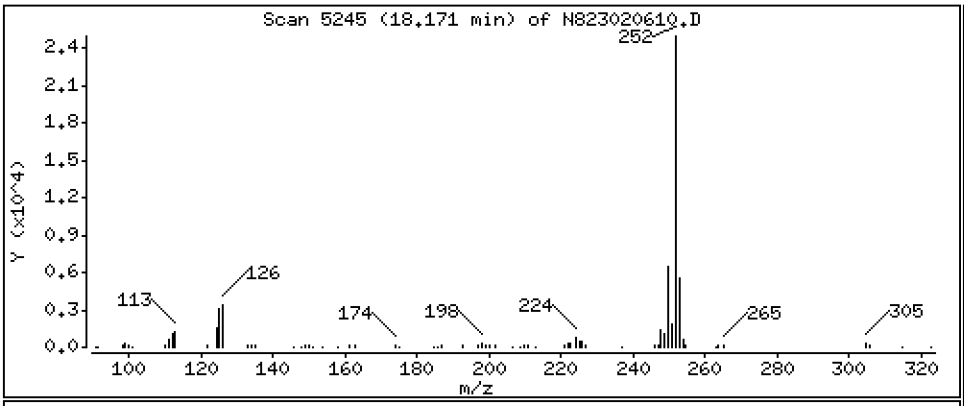
Operator: JZ

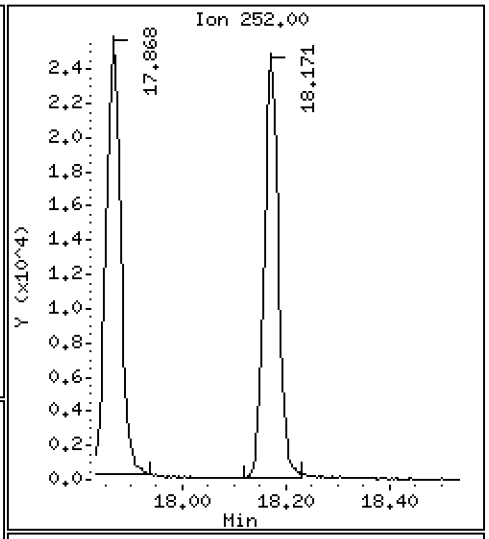
Column phase: Rxi-17sil

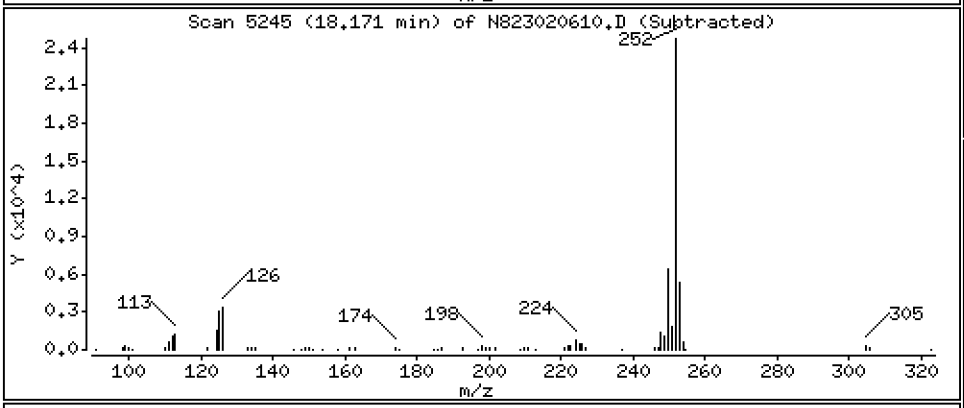
Column diameter: 0.25

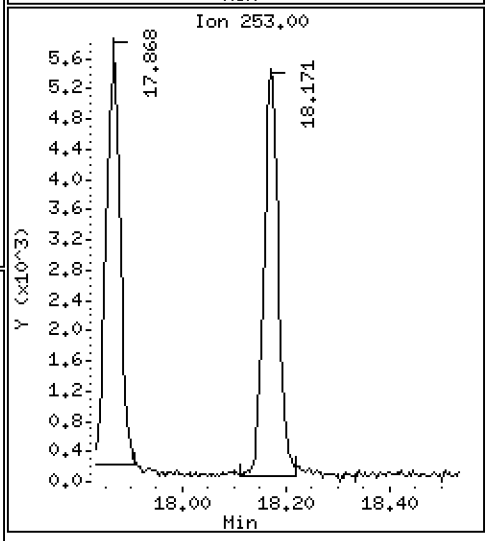
35 Perylene

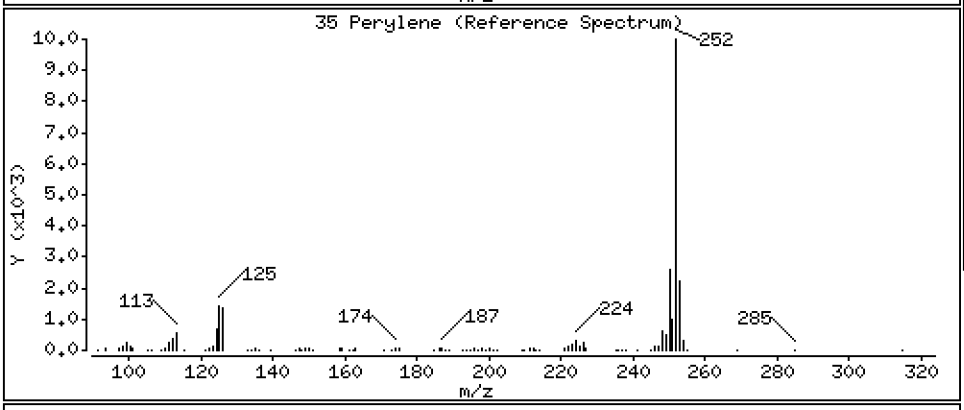
Concentration: 3.115 ug/mL

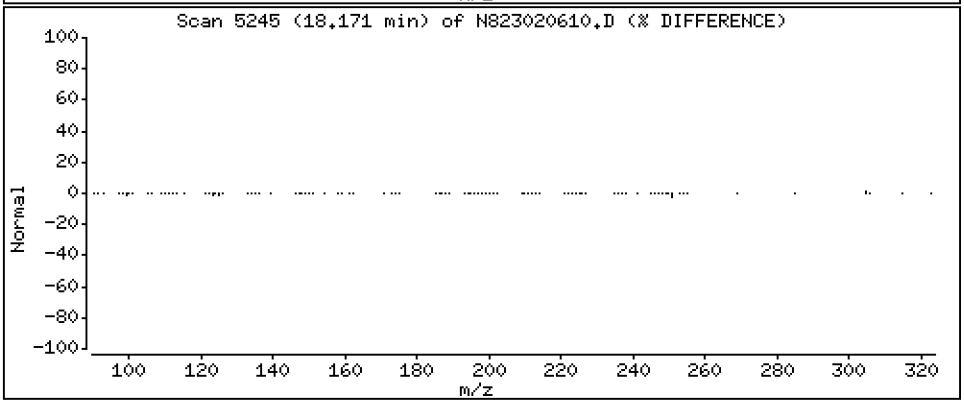












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020610.D

Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

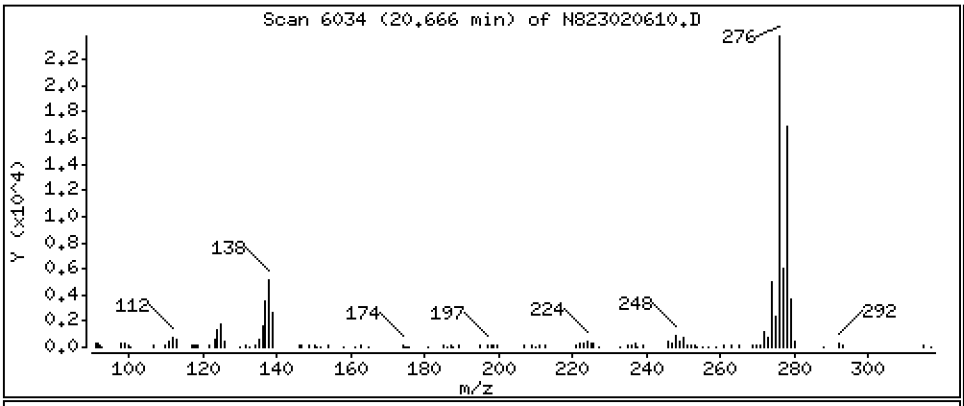
Operator: JZ

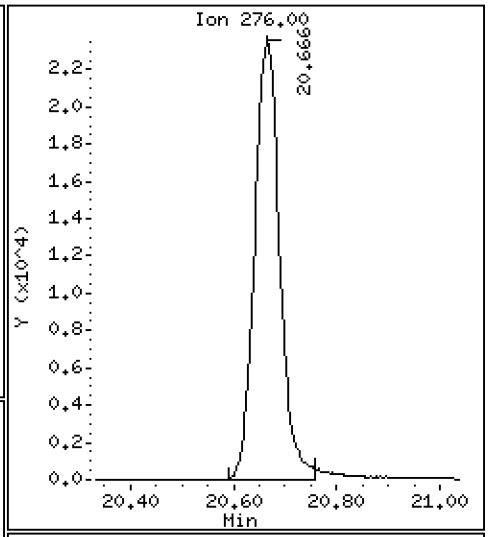
Column phase: Rxi-17sil

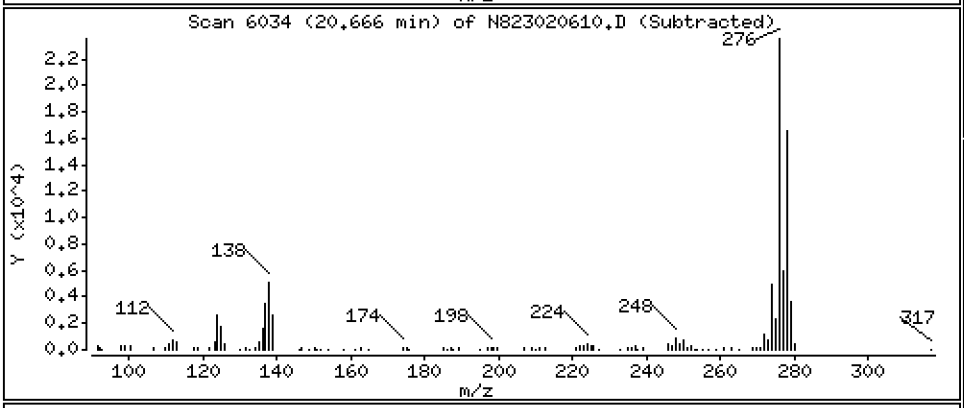
Column diameter: 0.25

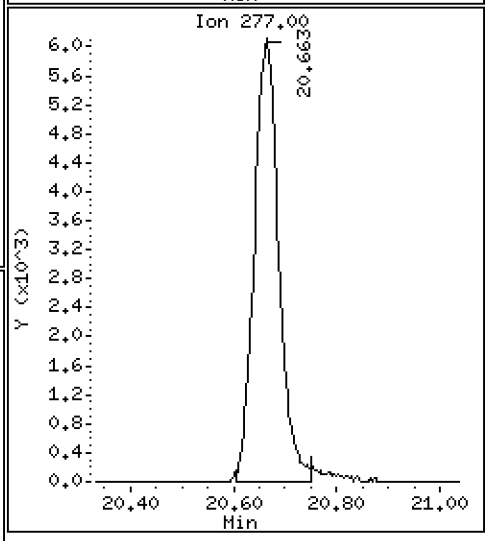
37 Indeno(1,2,3-cd)pyrene

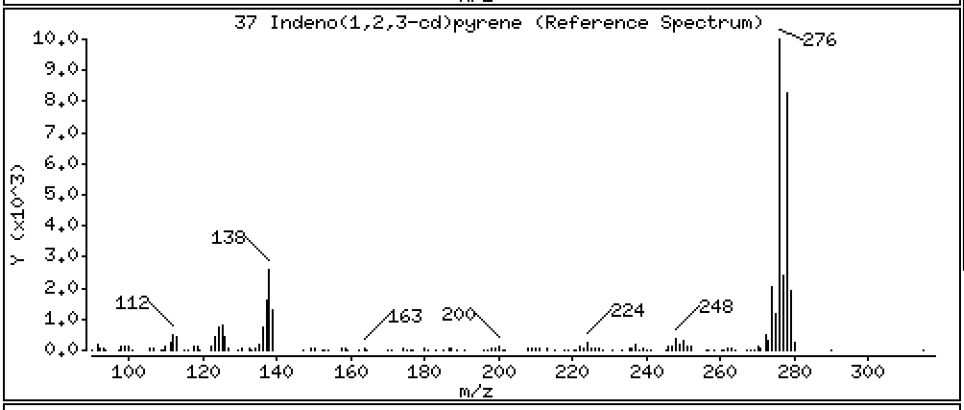
Concentration: 4.985 ug/mL

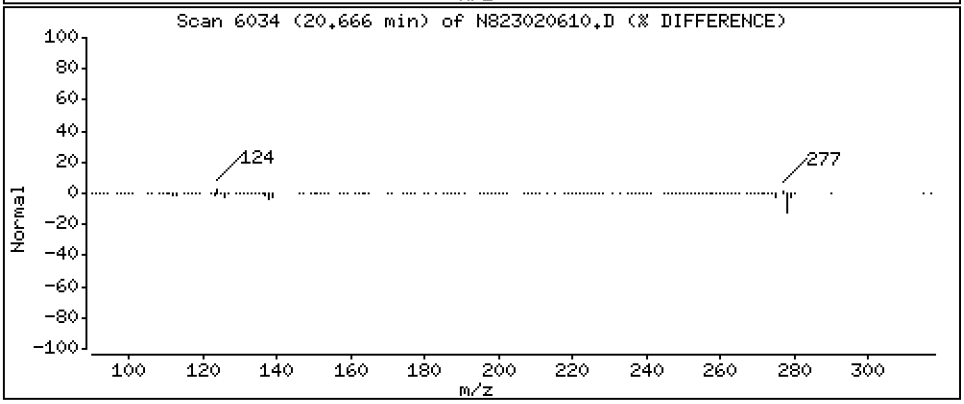












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020610.D

Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

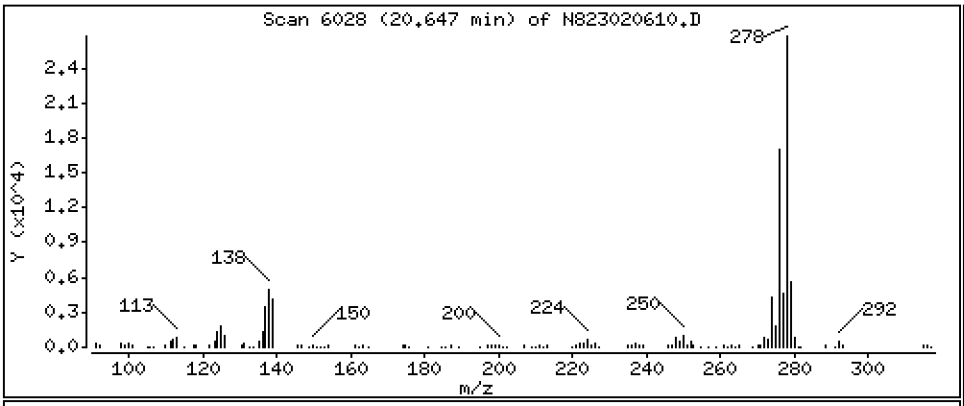
Operator: JZ

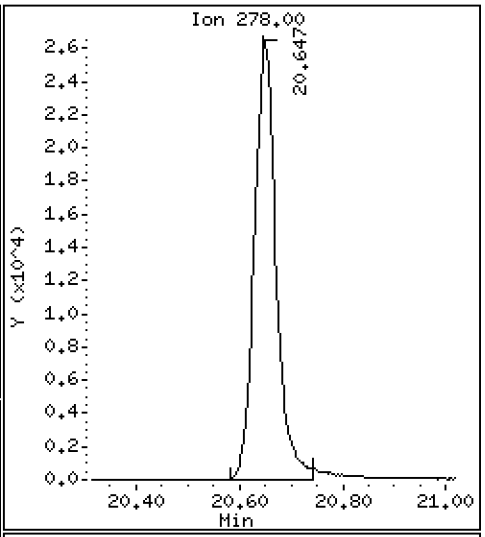
Column phase: Rxi-17sil

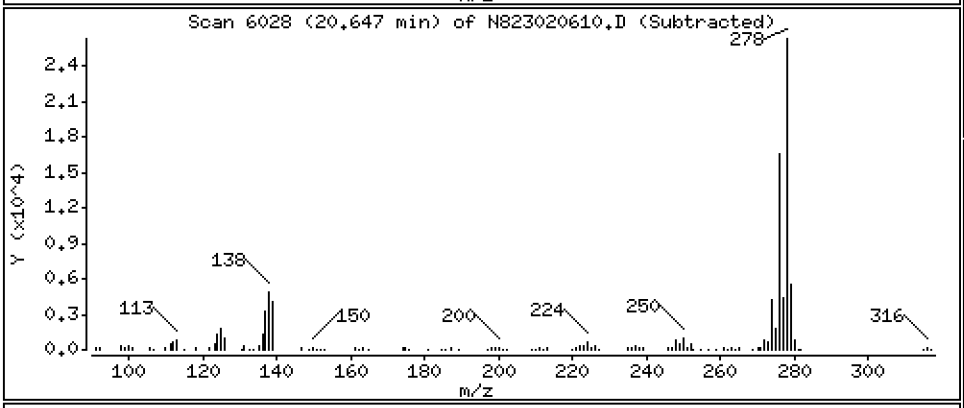
Column diameter: 0.25

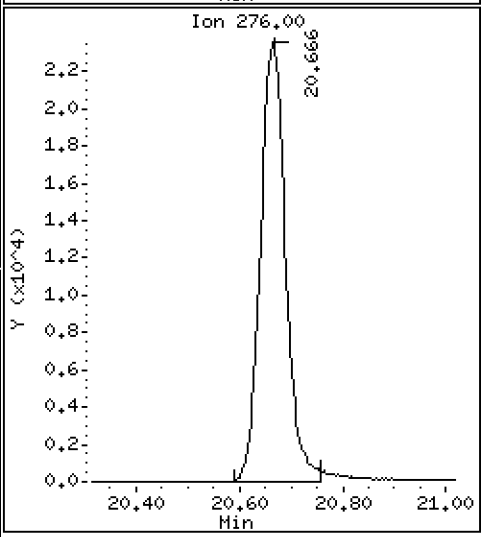
38 Dibenzo(a,h)anthracene

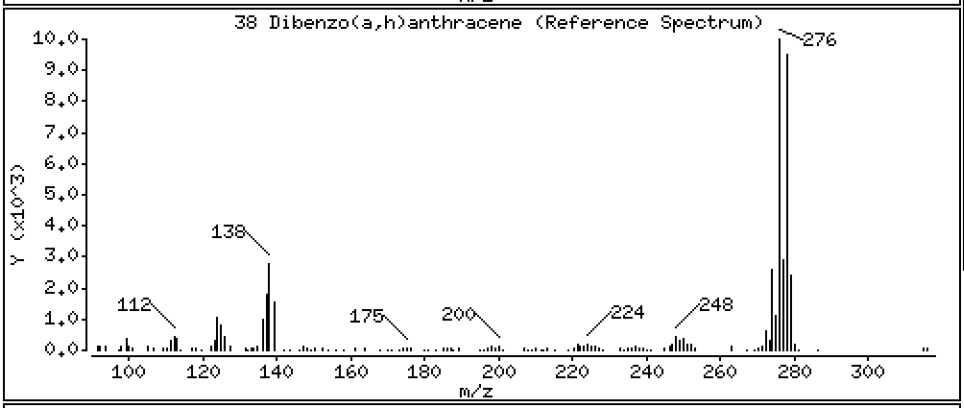
Concentration: 5.593 ug/mL

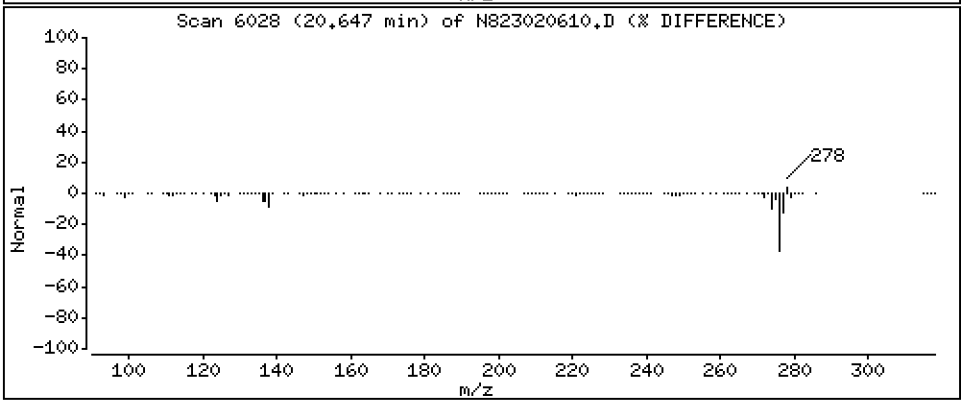












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020610.D

Date : 06-FEB-2023 16:51

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-BSD1,

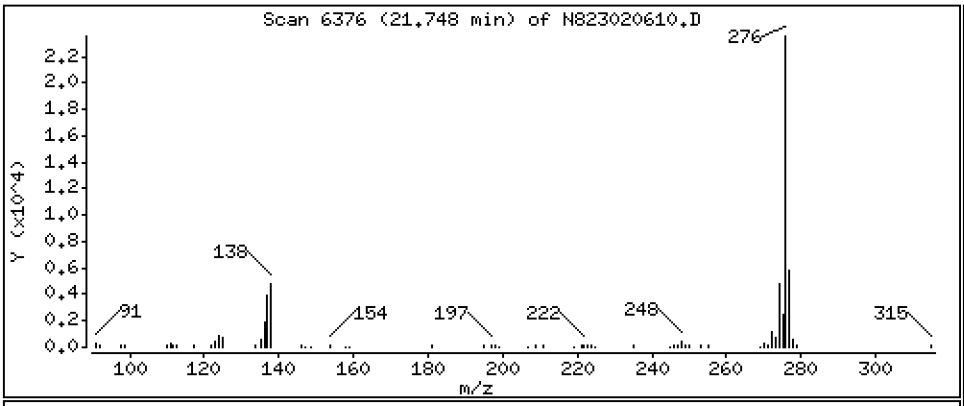
Operator: JZ

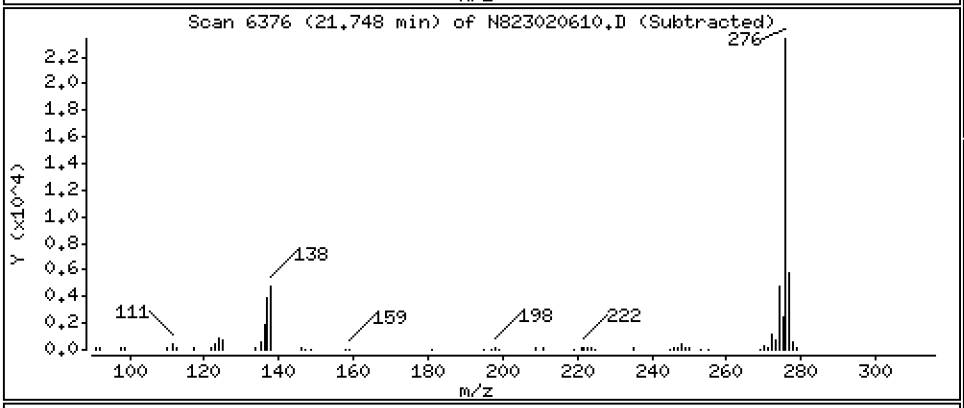
Column phase: Rxi-17sil

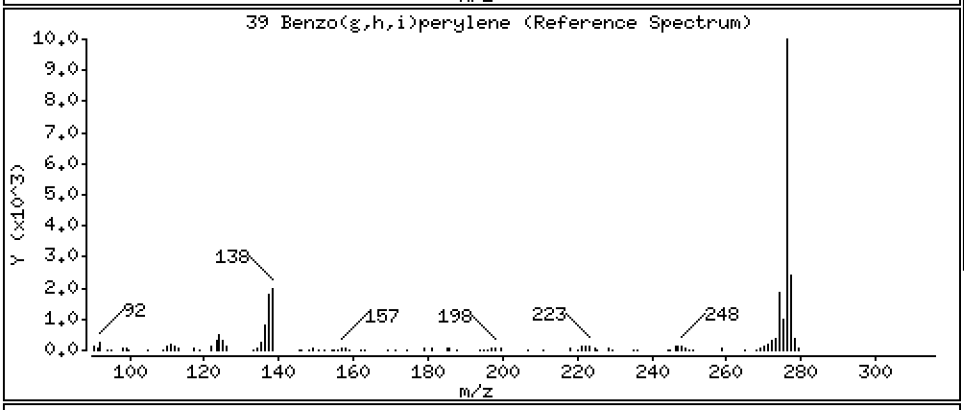
Column diameter: 0.25

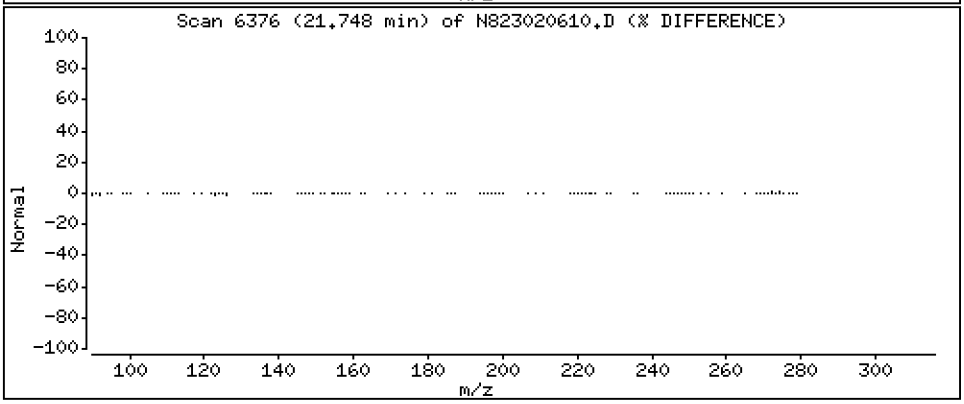
39 Benzo(g,h,i)perylene

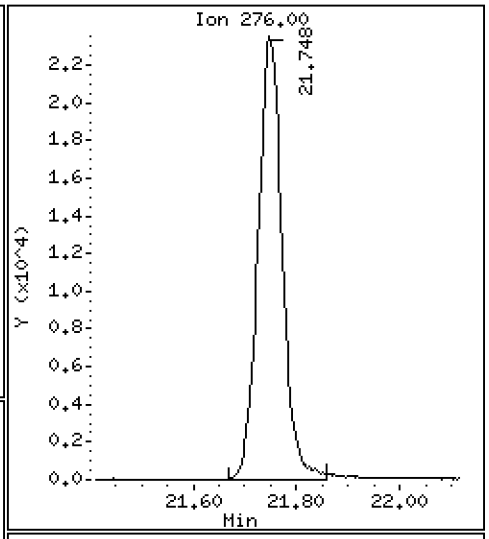
Concentration: 5.263 ug/mL

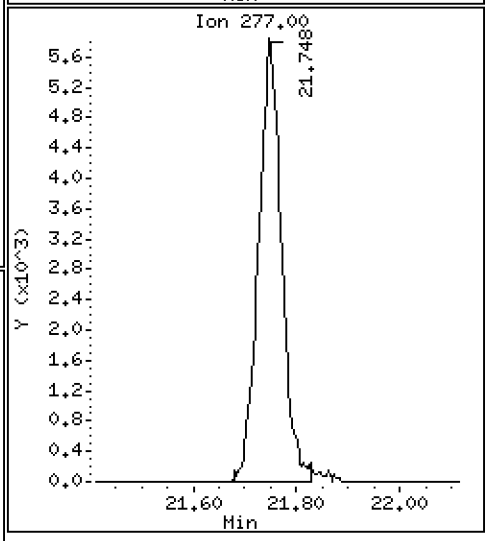












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020610.D
Lab Smp Id: BLA0683-BSD1
Inj Date : 06-FEB-2023 16:51
Operator : JZ Inst ID: nt8.i
Smp Info : BLA0683-BSD1,
Misc Info : 23-
Comment : 1ul Injection
Method : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 13:04 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.887	4.900	(1.000)	52018	2.00000	
	2 Naphthalene	128	4.916	4.928	(1.006)	82183	3.39792	3.398
$	3 2-Methylnaphthalene-d10	152	5.624	5.634	(1.151)	30576	2.15527	2.155
	4 2-Methylnaphthalene	141	5.672	5.681	(1.160)	46582	3.50143	3.501
	5 1-methylnaphthalene	141	5.868	5.880	(1.201)	46831	3.46842	3.468
	9 Acenaphthylene	152	7.072	7.082	(0.985)	70701	3.12134	3.121
*	10 Acenaphthene-d10	164	7.183	7.189	(1.000)	29996	2.00000	
	11 Acenaphthene	153	7.230	7.240	(1.007)	52081	3.43164	3.432
	12 Dibenzofuran	168	7.382	7.392	(1.028)	79103	3.43158	3.432
	14 Fluorene	166	7.863	7.869	(1.095)	64484	3.60176	3.602
*	15 Phenanthrene-d10	188	9.223	9.232	(1.000)	54697	2.00000	
	16 Phenanthrene	178	9.260	9.267	(1.004)	95476	3.57343	3.573
	17 Anthracene	178	9.302	9.308	(1.009)	78566	3.23694	3.237
	19 Carbazole	167	9.814	9.823	(1.064)	83189	3.73866	3.739
	22 Fluoranthene	202	11.041	11.050	(1.197)	108034	3.71467	3.715
$	21 Fluoranthene-d10	212	11.003	11.009	(1.193)	57921	2.40016	2.400
	23 Pyrene	202	11.559	11.569	(0.815)	110605	4.28330	4.283
	24 Benzo(a)anthracene	228	14.060	14.070	(0.991)	93819	4.00851	4.009
*	25 Chrysene-d12	240	14.187	14.202	(1.000)	41650	2.00000	
	27 Chrysene	228	14.263	14.275	(1.005)	99165	3.98001	3.980
	28 Benzo(b)fluoranthene	252	16.811	16.824	(0.929)	89367	5.56463	5.565
	29 Benzo(k)fluoranthene	252	16.871	16.887	(0.932)	83285	5.29444	5.294
	30 Benzo(j)fluoranthene	252	16.954	16.963	(0.937)	80710	5.69933	5.699
	31 Total Benzofluoranthenes	252	16.811	16.824	(0.929)	251601	16.5424	16.54(M)
	32 Benzo(a)pyrene	252	17.867	17.877	(0.987)	52656	3.72586	3.726
*	33 Perylene-d12	264	18.098	18.107	(1.000)	27575	2.00000	
	35 Perylene	252	18.171	18.183	(1.004)	47243	3.11513	3.115
$	36 Dibenzo(a,h)anthracene-d14	292	20.533	20.549	(1.135)	38676	3.57963	3.580
	37 Indeno(1,2,3-cd)pyrene	276	20.666	20.684	(1.142)	80264	4.98523	4.985
	38 Dibenzo(a,h)anthracene	278	20.647	20.666	(1.141)	77498	5.59324	5.593
	39 Benzo(g,h,i)perylene	276	21.747	21.763	(1.202)	76779	5.26340	5.263

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020610.D
Lab Smp Id: BLA0683-BSD1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44336	22168	88672	52018	17.33
10 Acenaphthene-d10	26127	13064	52254	29996	14.81
15 Phenanthrene-d10	47424	23712	94848	54697	15.34
25 Chrysene-d12	36794	18397	73588	41650	13.20
33 Perylene-d12	36636	18318	73272	27575	-24.73

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.89	-0.25
10 Acenaphthene-d10	7.19	6.69	7.69	7.18	-0.09
15 Phenanthrene-d10	9.23	8.73	9.73	9.22	-0.10
25 Chrysene-d12	14.20	13.70	14.70	14.19	-0.11
33 Perylene-d12	18.11	17.61	18.61	18.10	-0.05

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

REVIEW SUMMARY FOR FILE - N823020610.D

Lab ID: BLA0683-BSD1
nt8.i, 20230206A.b\FSIMPNA230119.m,   06-FEB-2023 16:51

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

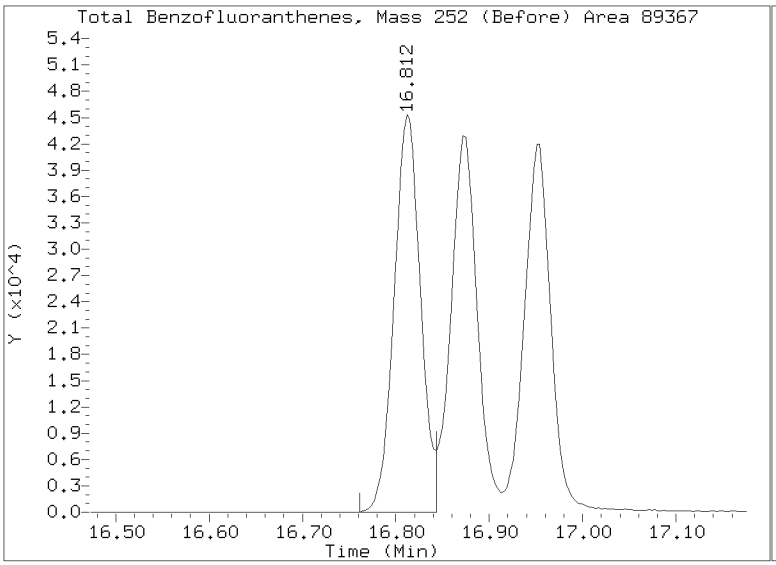
No RRT check performed

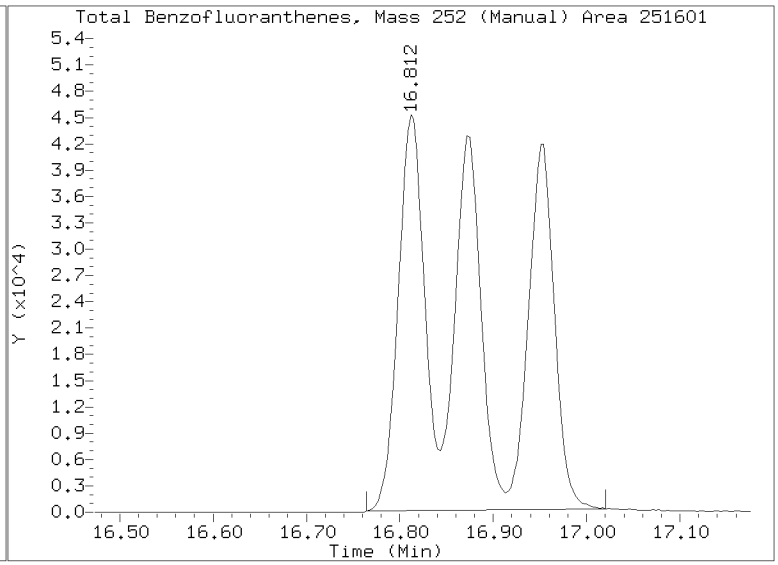
On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020610.D
Injection Date: 06-FEB-2023 16:51
Lab ID:BLA0683-BSD1 Client ID:
Report Date: 02/07/2023 13:19





LCS / LCS DUPLICATE RECOVERY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/30/23 14:51
Batch:	BLE0421	Laboratory ID:	BLE0421-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	10 g / 0.5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Benzo(a)anthracene	300	193		64.4	42 - 120
Chrysene	300	187		62.3	48 - 120
Benzo(b)fluoranthene	300	218		72.6	52 - 137
Benzo(k)fluoranthene	300	212		70.7	37 - 129
Benzo(a)pyrene	300	171		56.9	36 - 120
Indeno(1,2,3-cd)pyrene	300	201		67.0	67 - 132
Dibenzo(a,h)anthracene	300	209		69.6	66 - 139

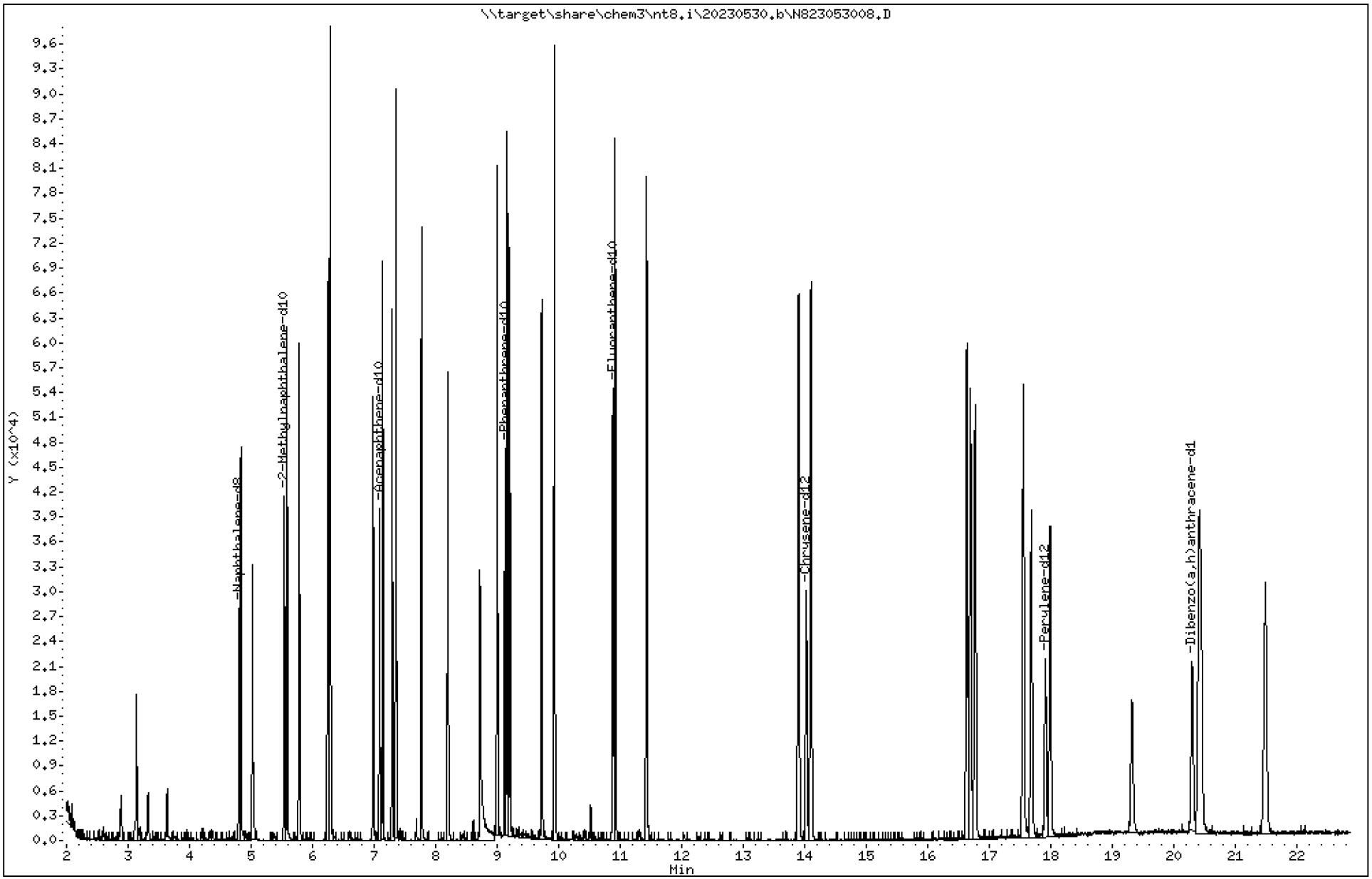
* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzo(a)anthracene	300	192		63.9	0.768	30	42 - 120
Chrysene	300	189		63.0	1.04	30	48 - 120
Benzo(b)fluoranthene	300	221		73.7	1.57	30	52 - 137
Benzo(k)fluoranthene	300	222		74.0	4.56	30	37 - 129
Benzo(a)pyrene	300	170		56.7	0.348	30	36 - 120
Indeno(1,2,3-cd)pyrene	300	207		69.0	2.91	30	67 - 132
Dibenzo(a,h)anthracene	300	217		72.4	4.00	30	66 - 139

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230530.b\N823053008.D
Date : 30-MAY-2023 14:51
Client ID:
Sample Info: BLE0421-BS1,

Instrument: nt8.i
Operator: JZ
Column phase: Rxi-17sil
Column diameter: 0.25



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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

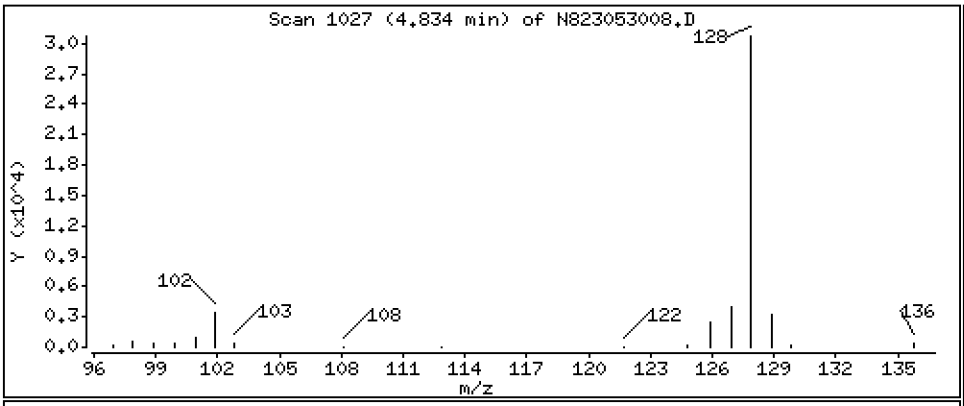
Operator: JZ

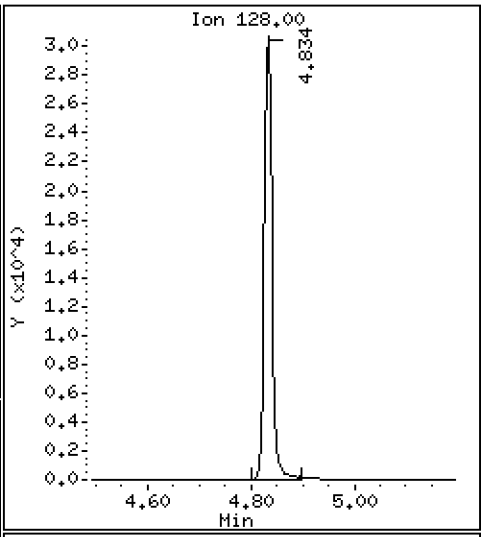
Column phase: Rxi-17sil

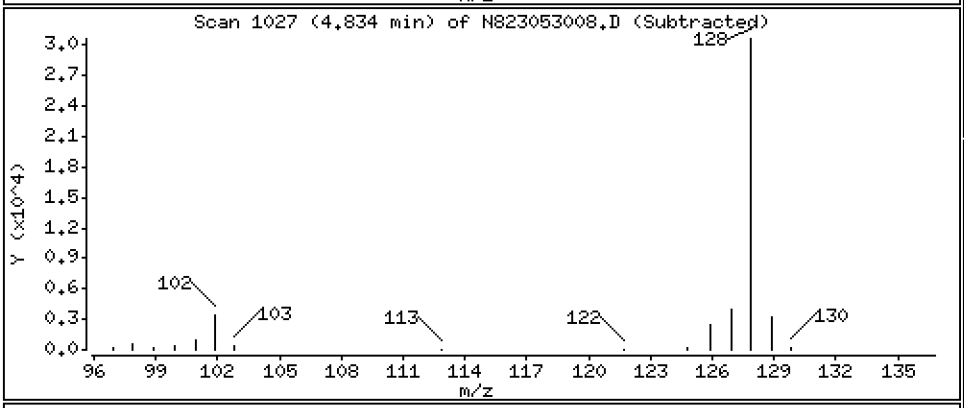
Column diameter: 0.25

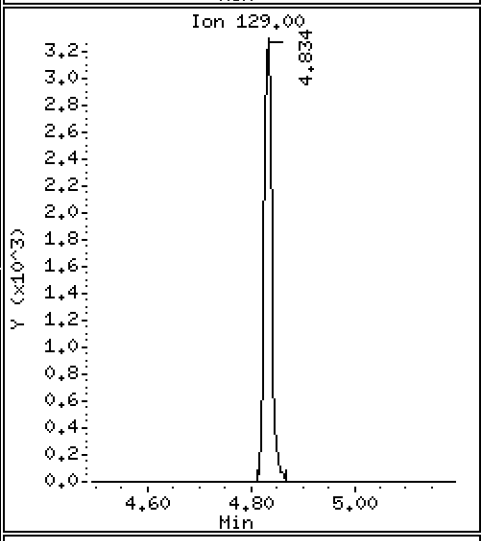
2 Naphthalene

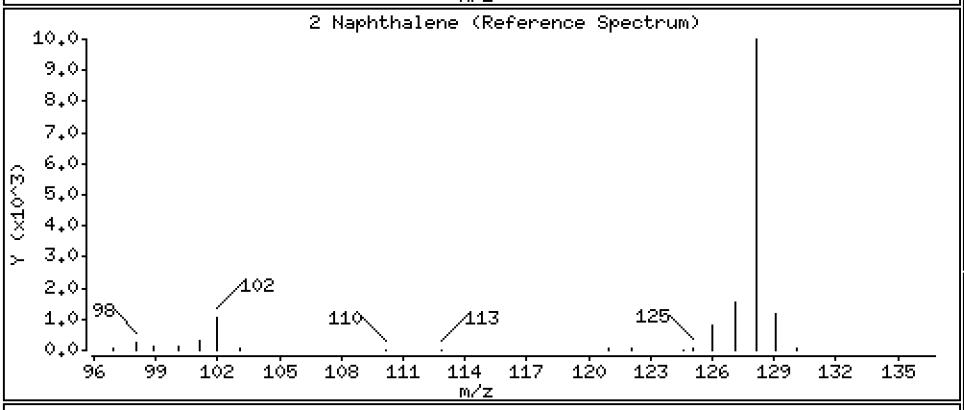
Concentration: 3.257 ug/mL

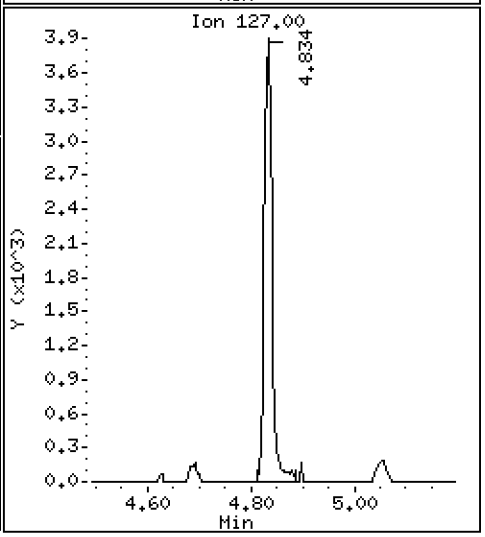


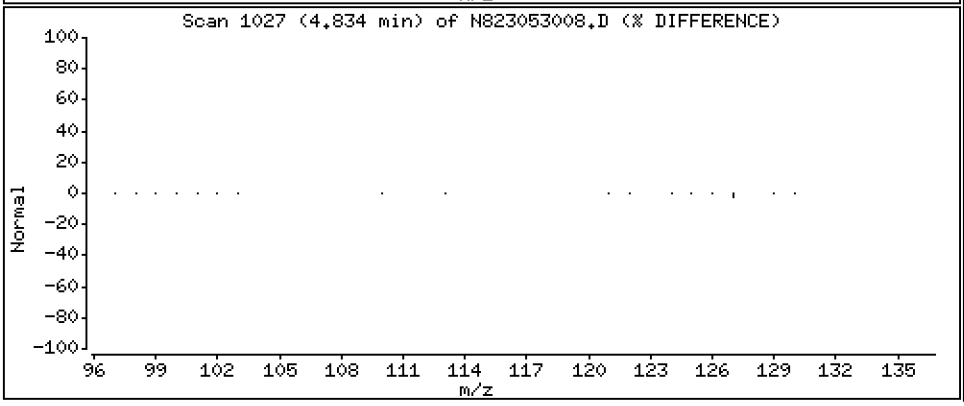












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

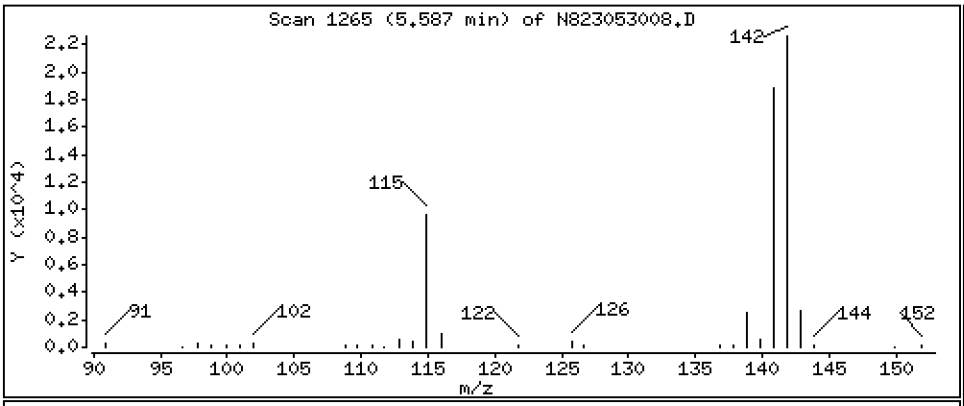
Operator: JZ

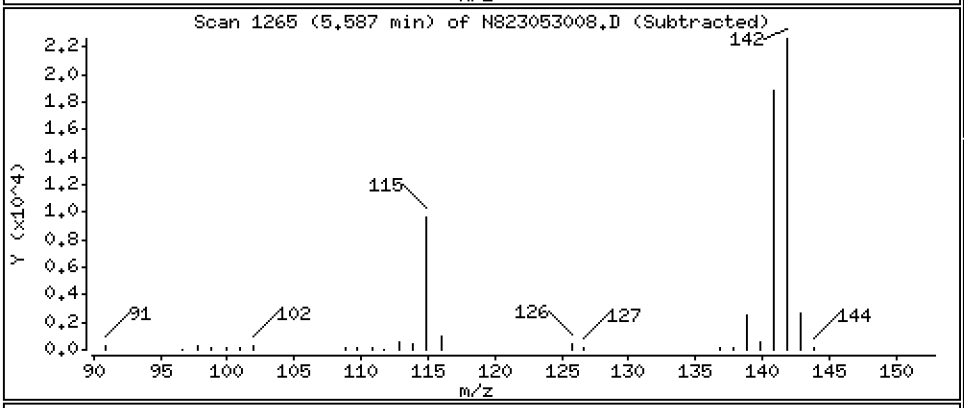
Column phase: Rxi-17sil

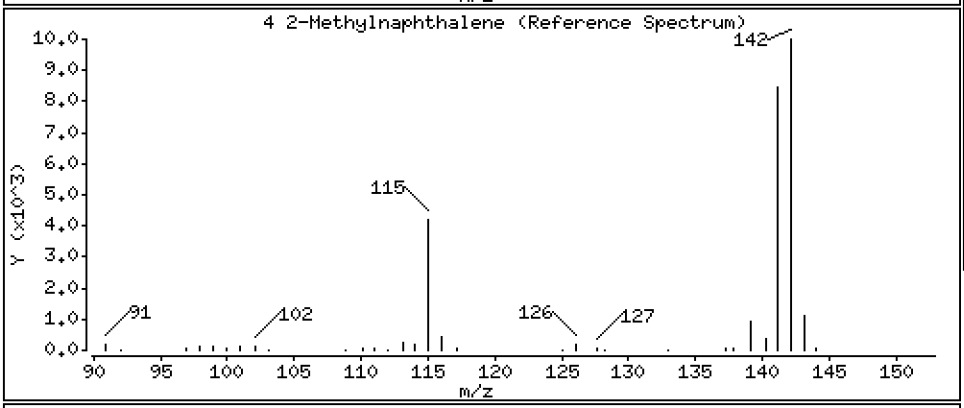
Column diameter: 0.25

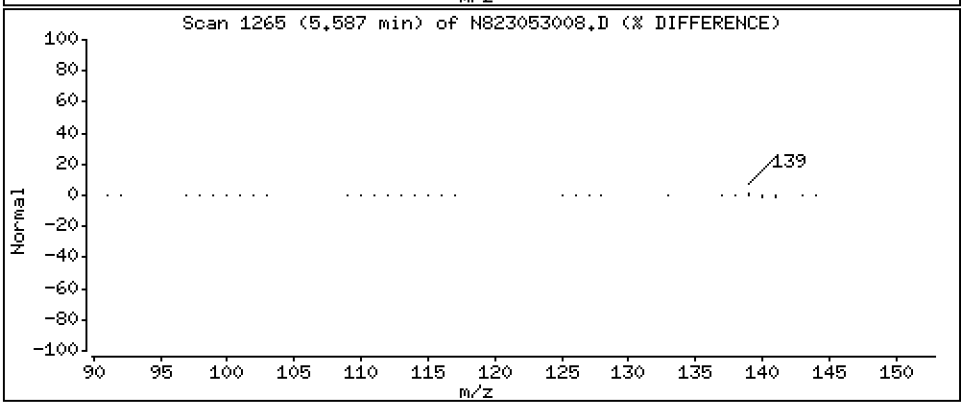
4 2-Methylnaphthalene

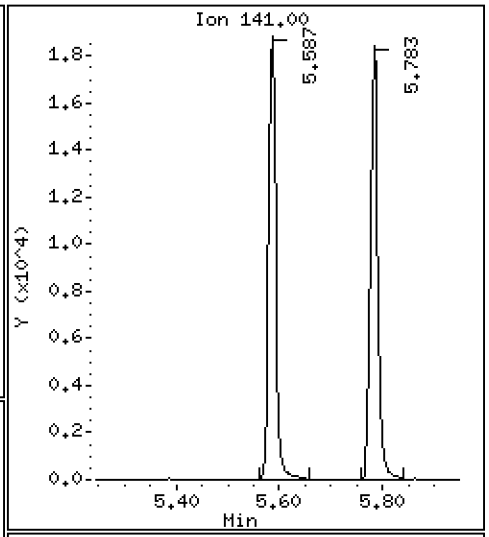
Concentration: 3.313 ug/mL

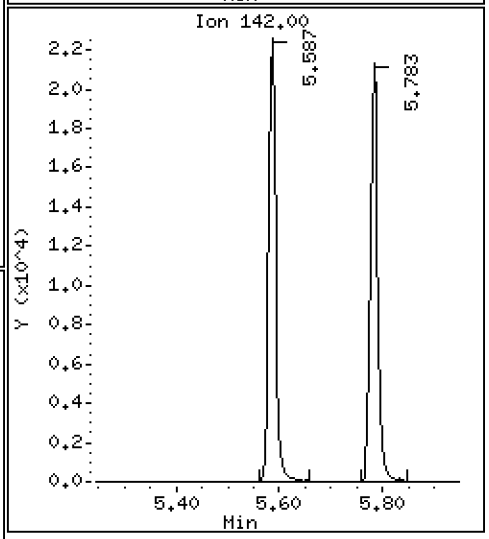












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

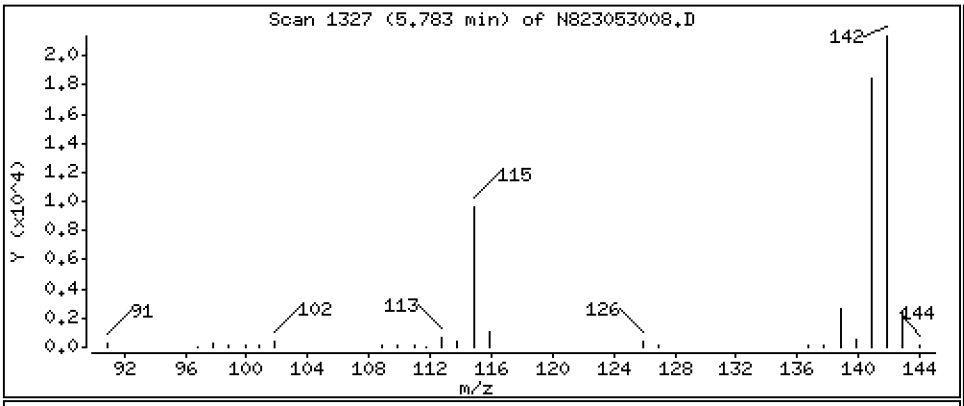
Operator: JZ

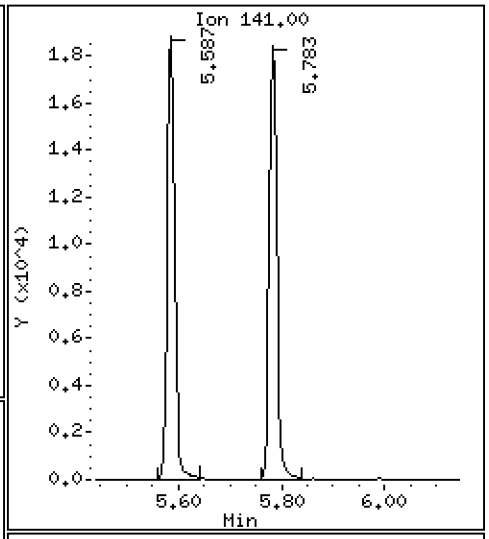
Column phase: Rxi-17sil

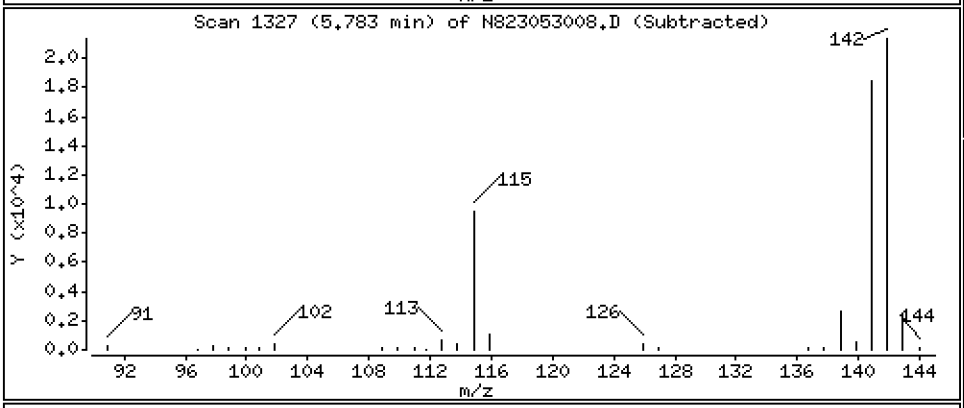
Column diameter: 0.25

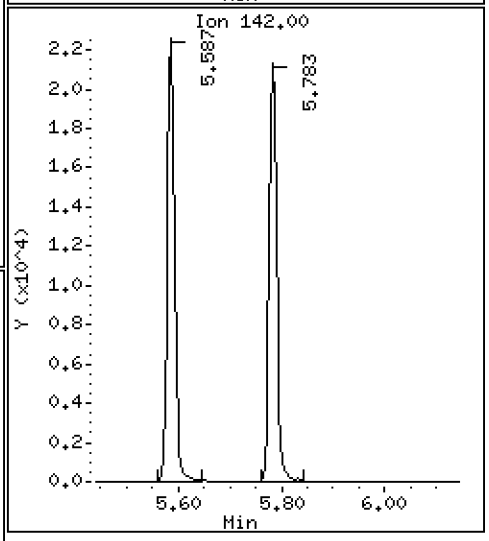
5 1-methylnaphthalene

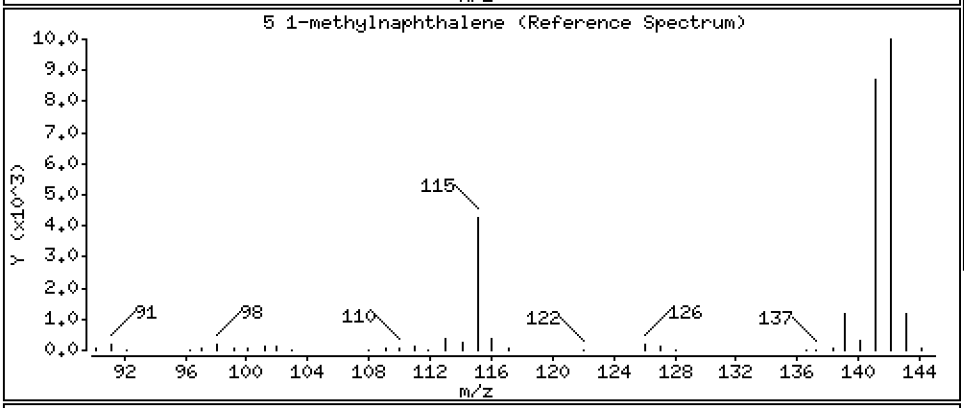
Concentration: 3.342 ug/mL

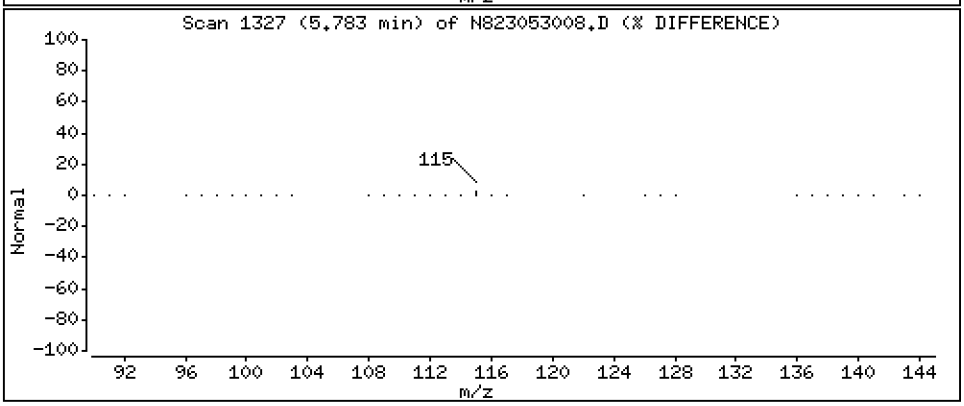












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

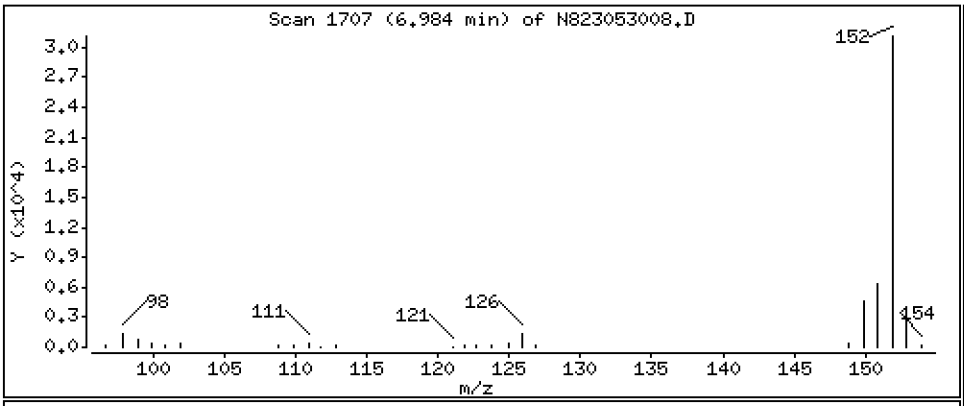
Operator: JZ

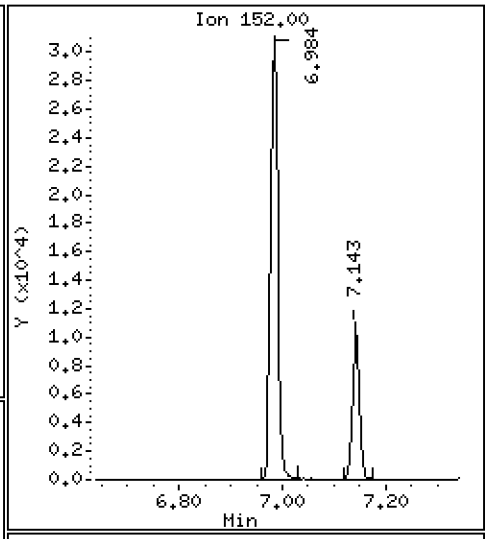
Column phase: Rxi-17sil

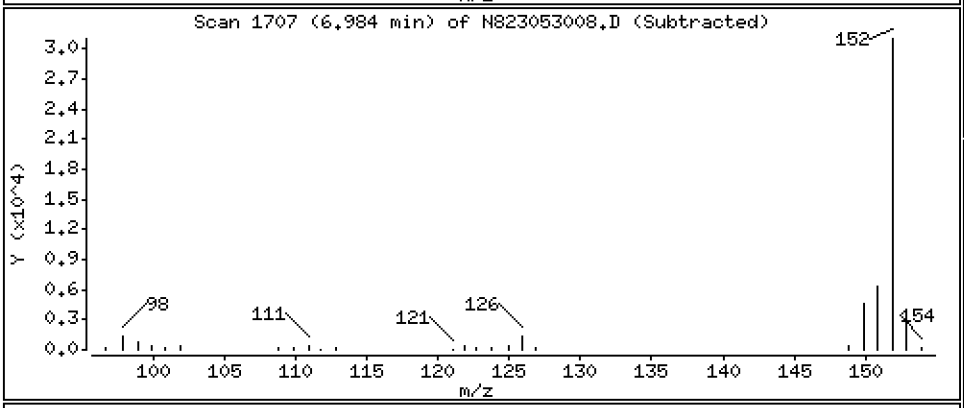
Column diameter: 0.25

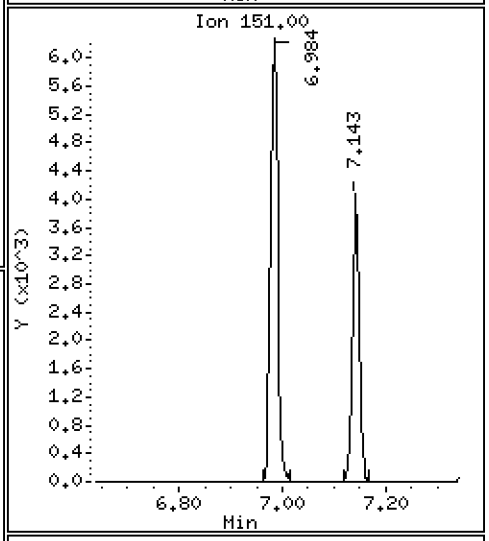
9 Acenaphthylene

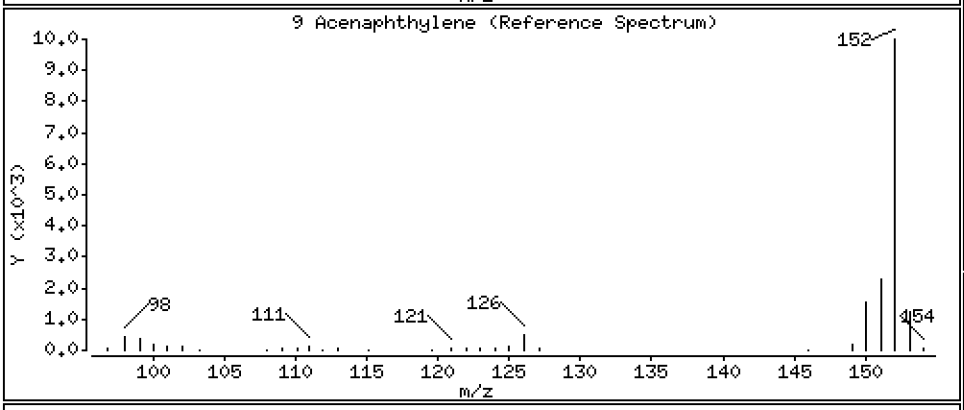
Concentration: 2.961 ug/mL

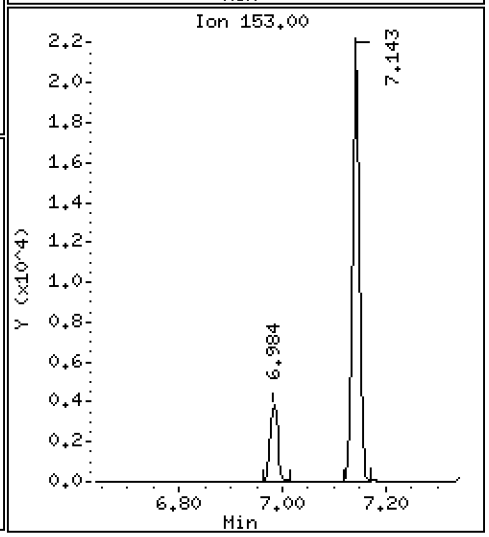


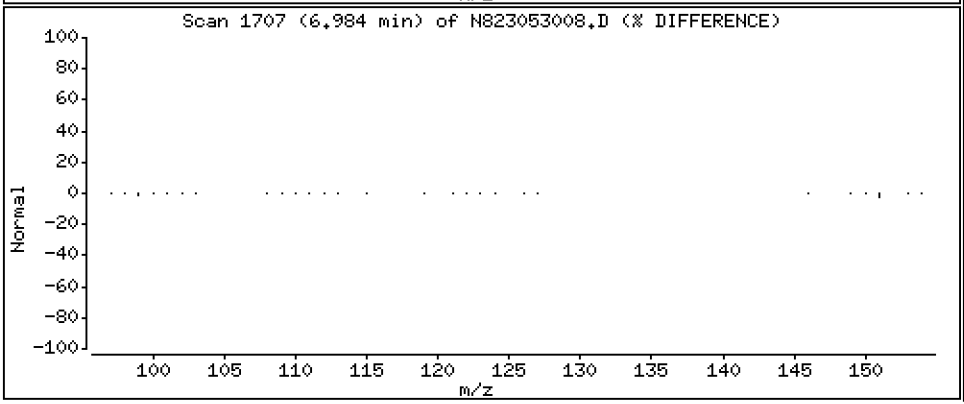












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

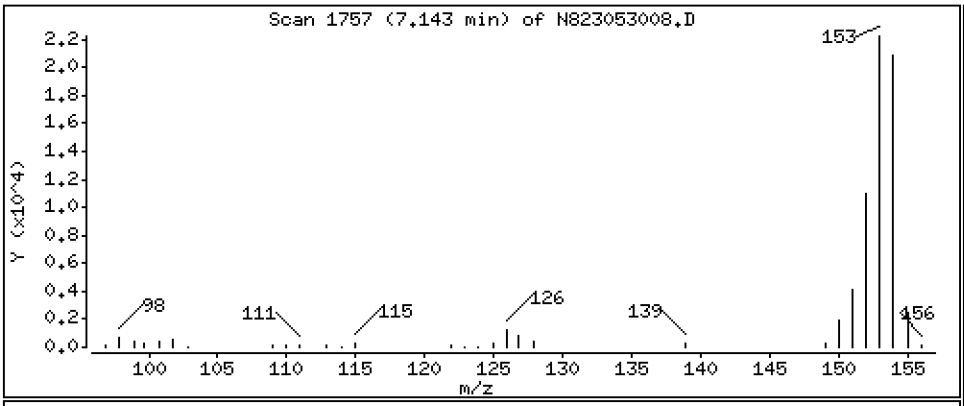
Operator: JZ

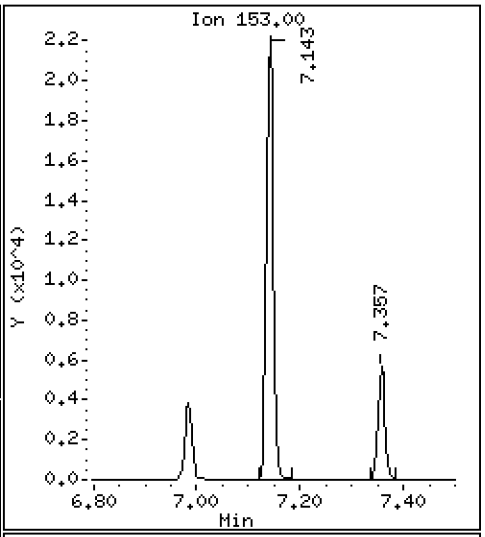
Column phase: Rxi-17sil

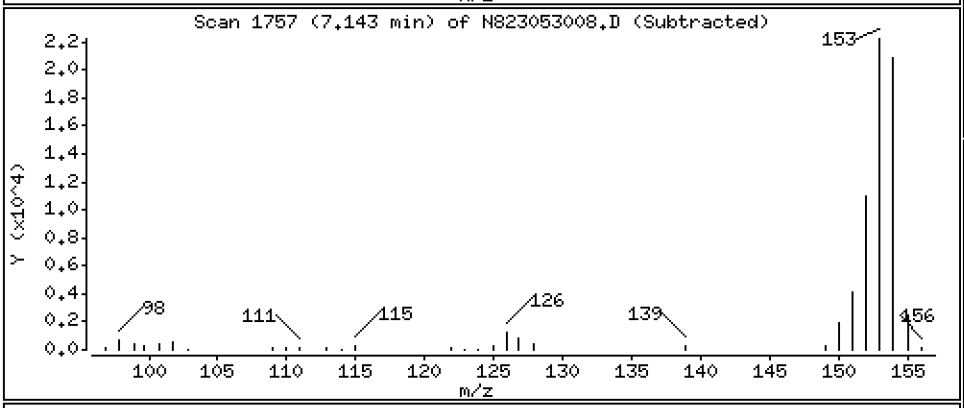
Column diameter: 0.25

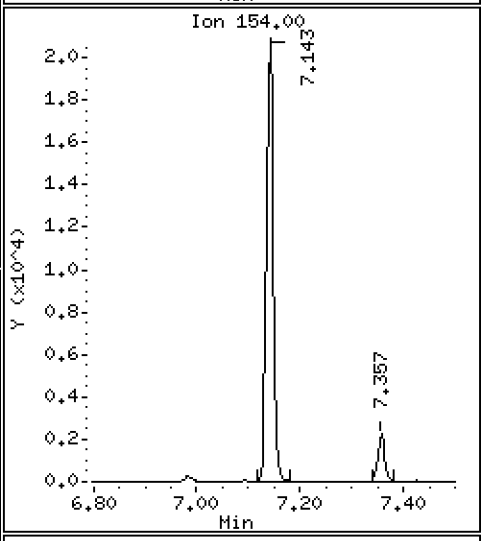
11 Acenaphthene

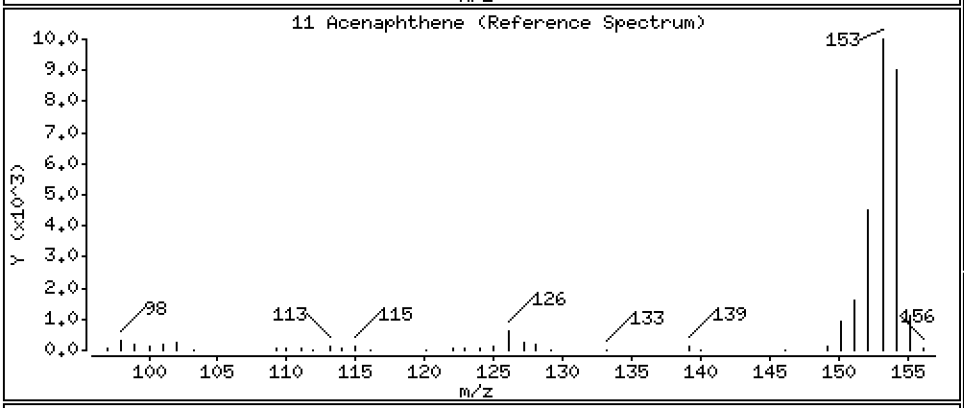
Concentration: 3.242 ug/mL

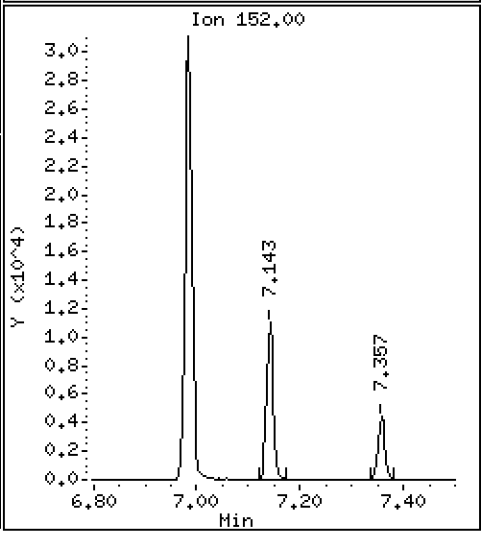


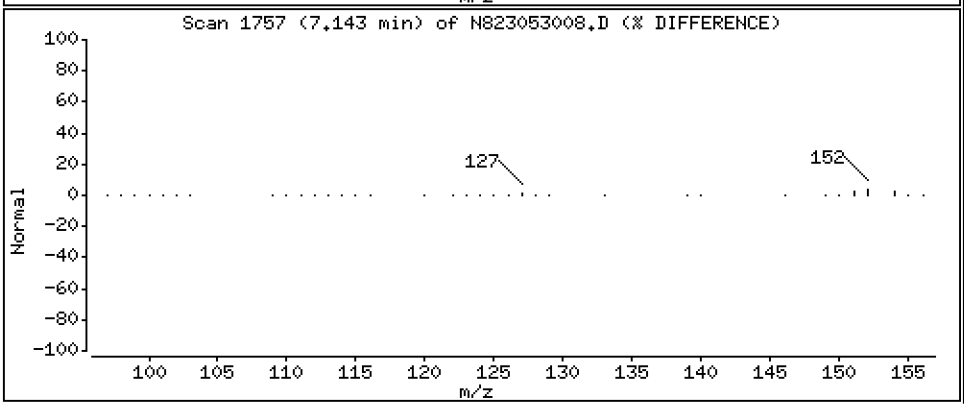












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

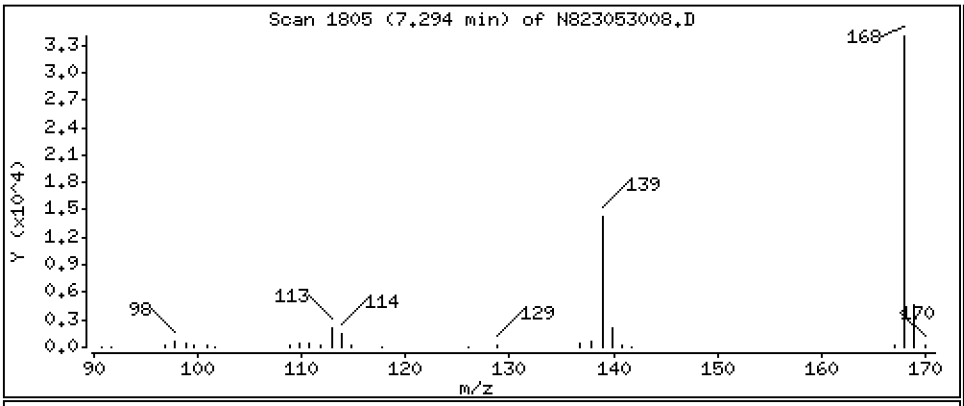
Operator: JZ

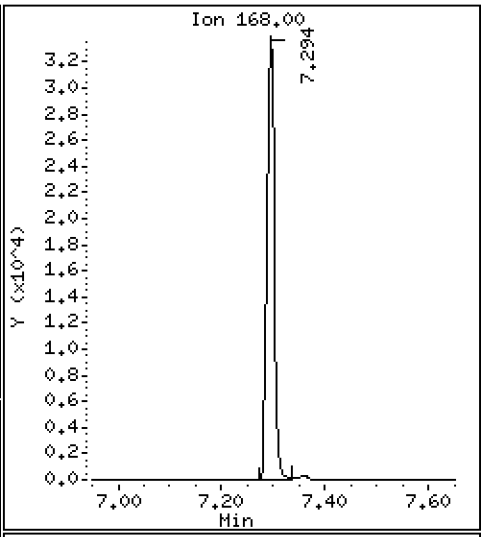
Column phase: Rxi-17sil

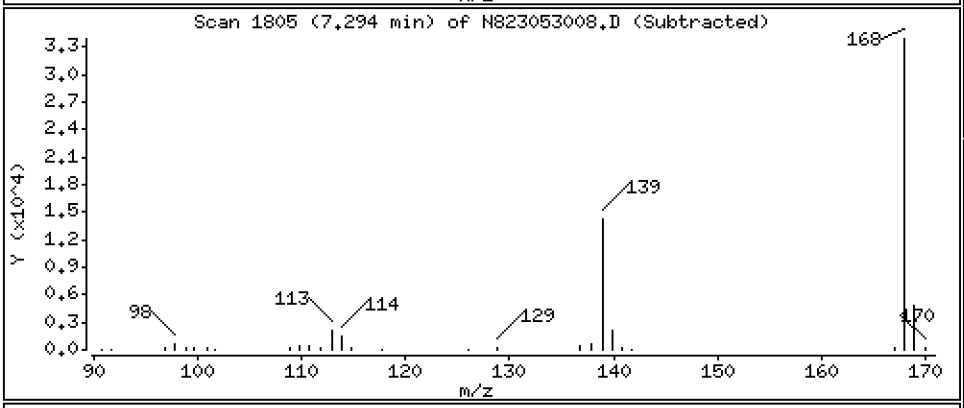
Column diameter: 0.25

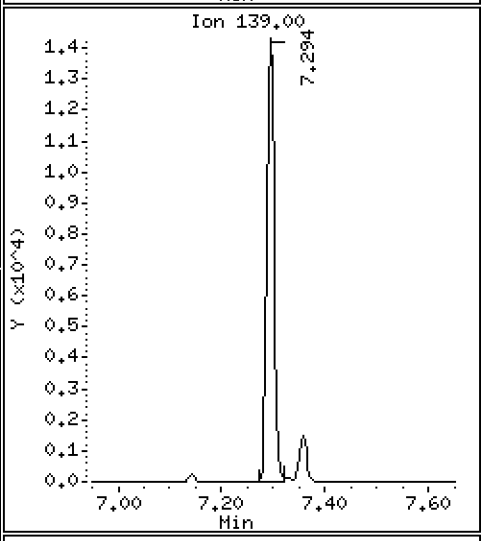
12 Dibenzofuran

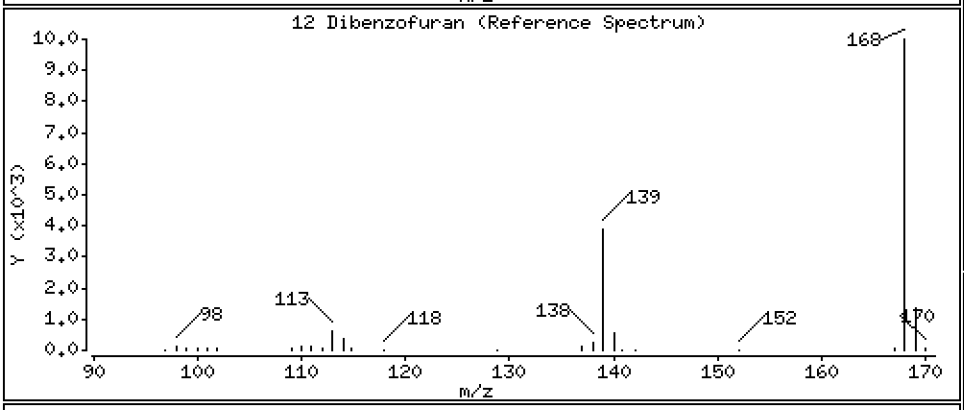
Concentration: 3.338 ug/mL

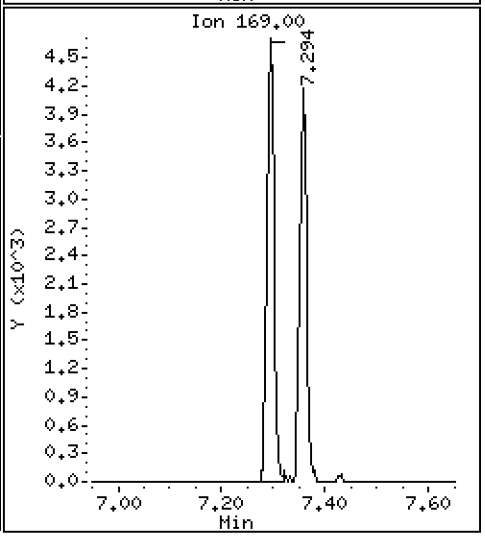


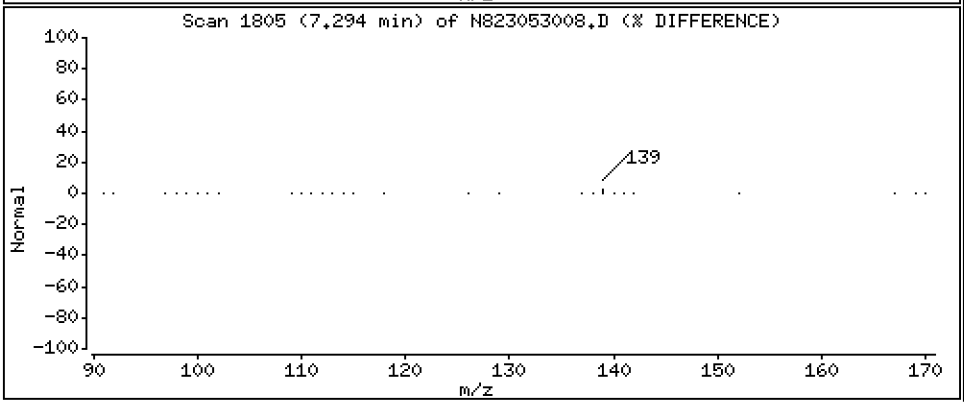












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

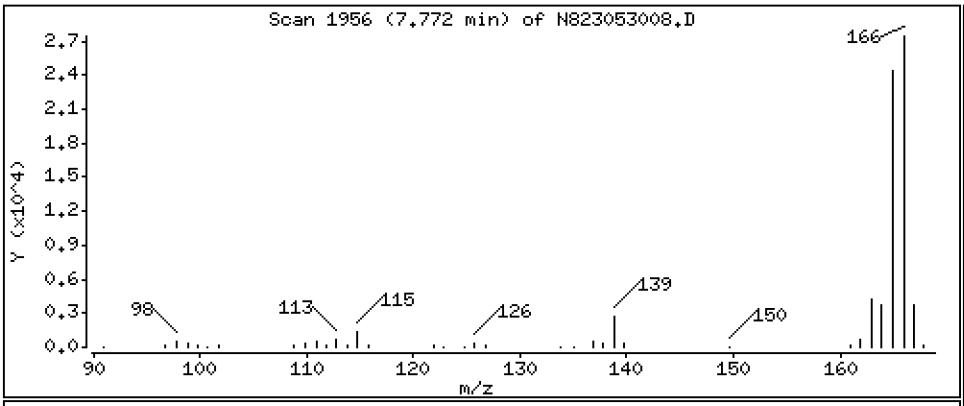
Operator: JZ

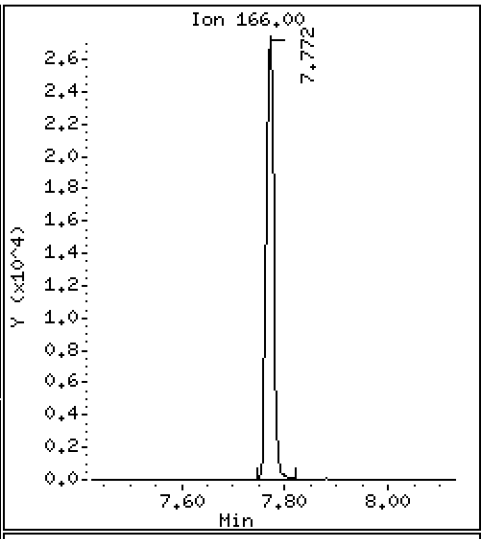
Column phase: Rxi-17sil

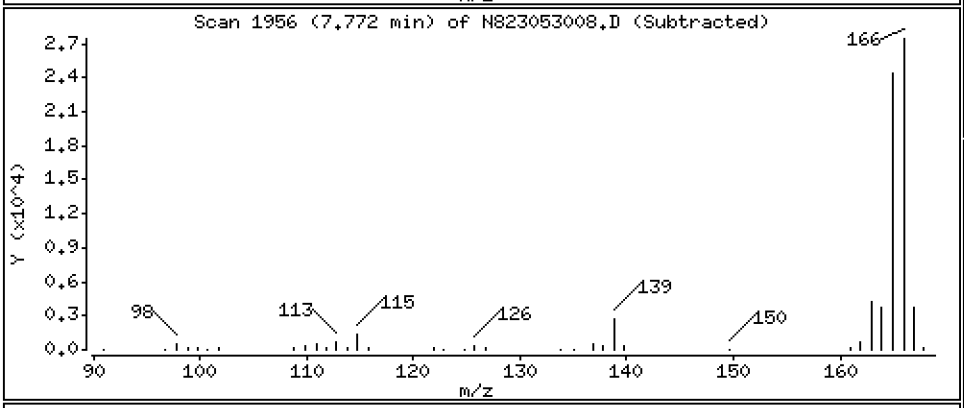
Column diameter: 0.25

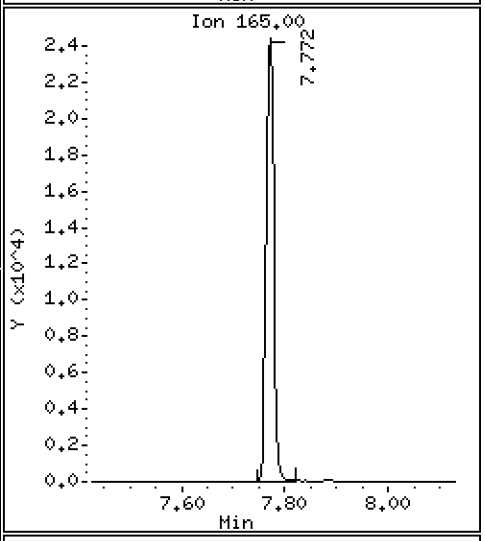
14 Fluorene

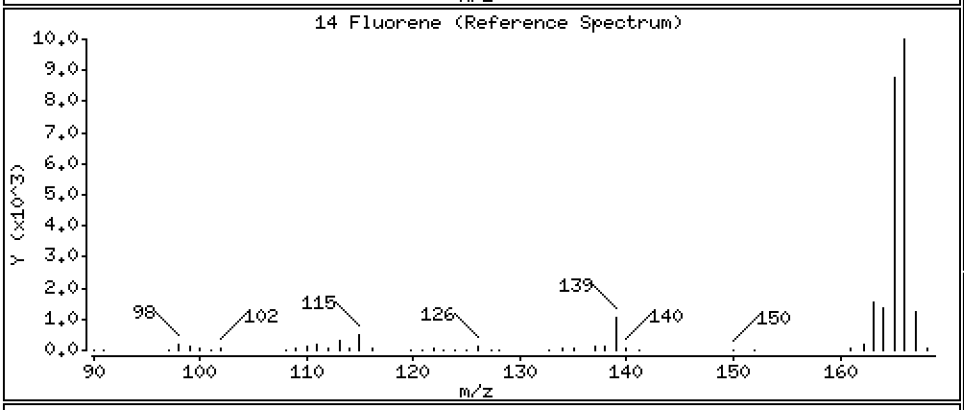
Concentration: 3.450 ug/mL

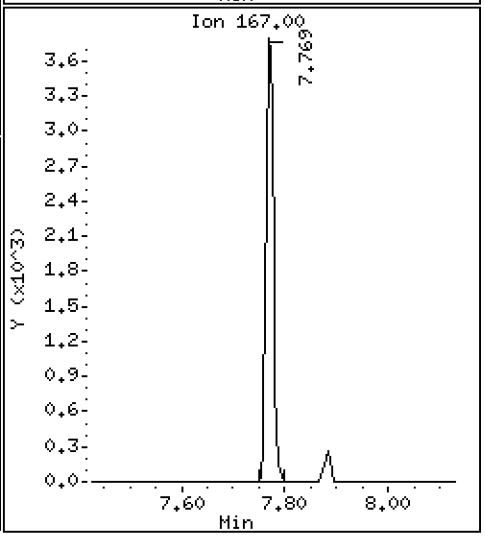


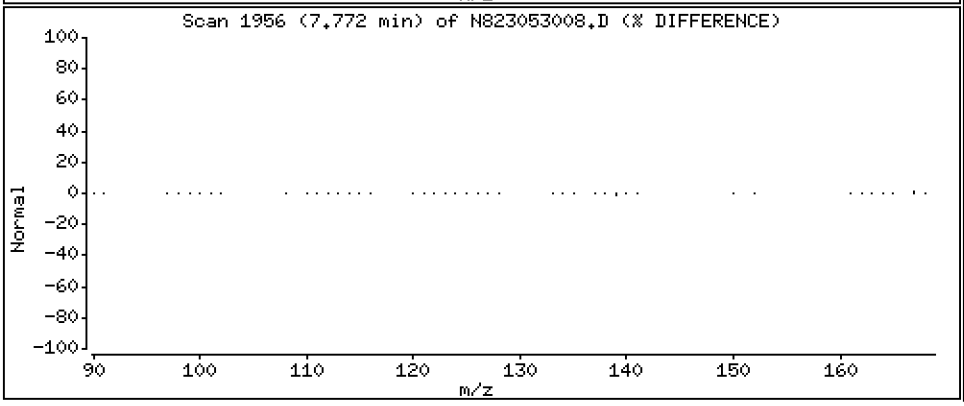












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

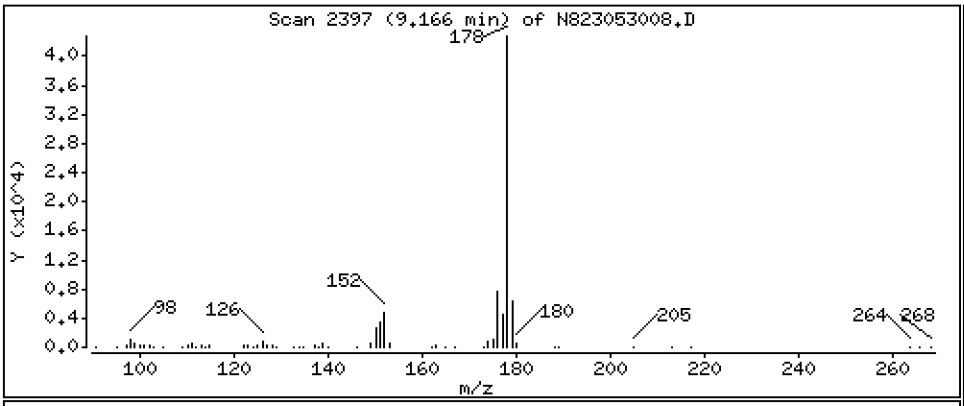
Operator: JZ

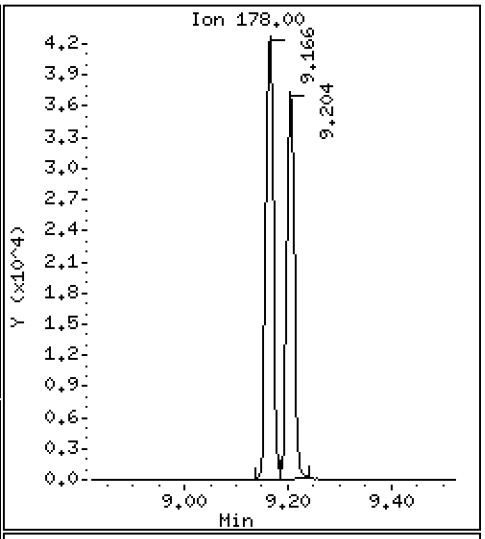
Column phase: Rxi-17sil

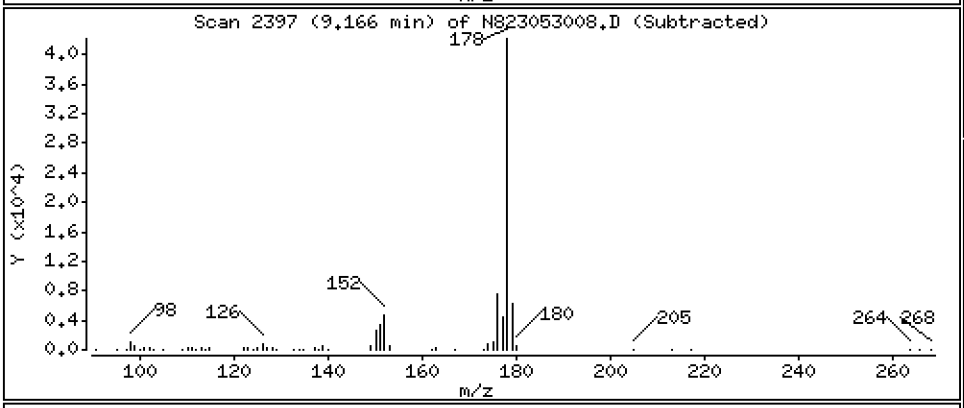
Column diameter: 0.25

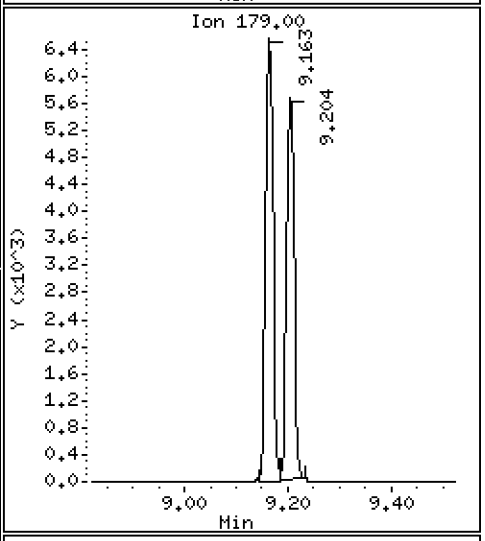
16 Phenanthrene

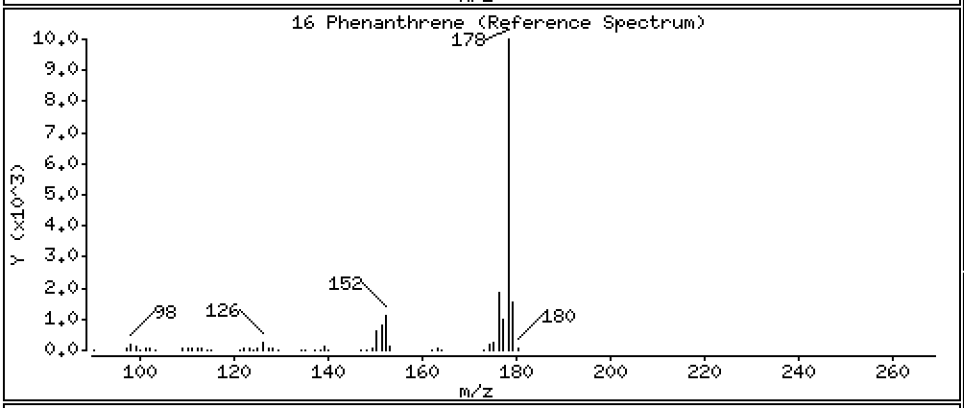
Concentration: 3.571 ug/mL

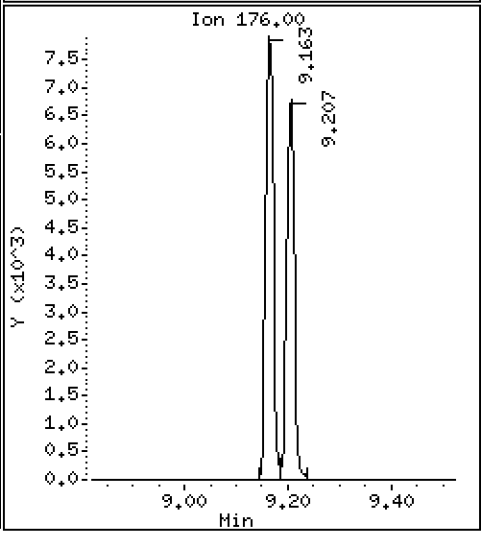


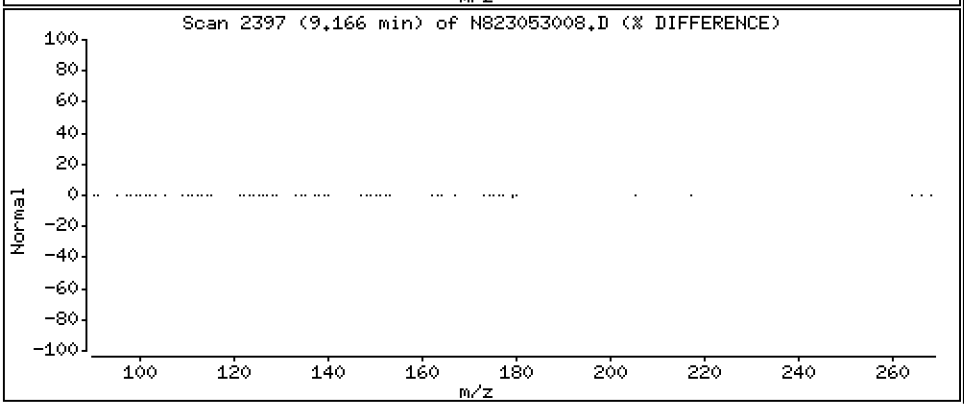












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053008.D

Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

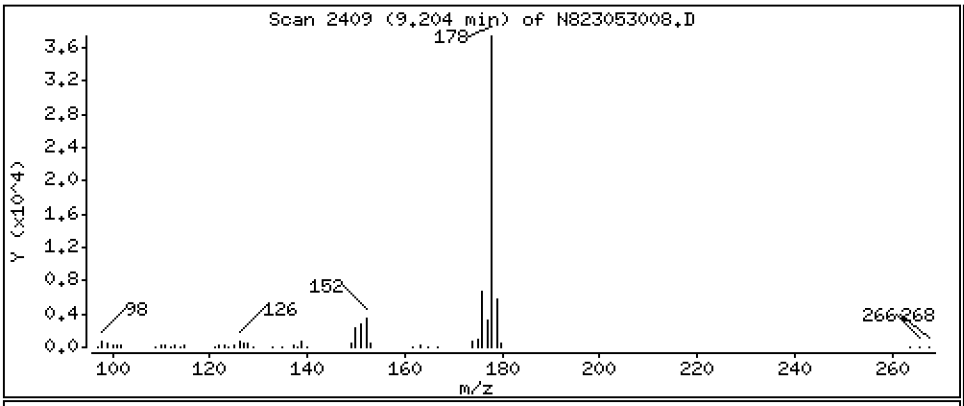
Operator: JZ

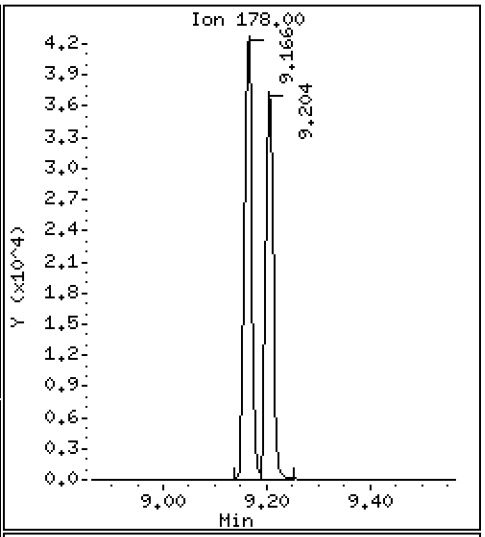
Column phase: Rxi-17sil

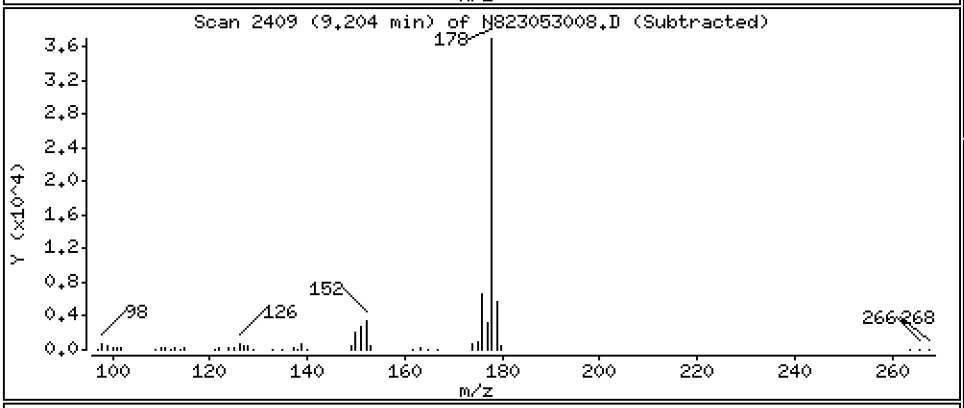
Column diameter: 0.25

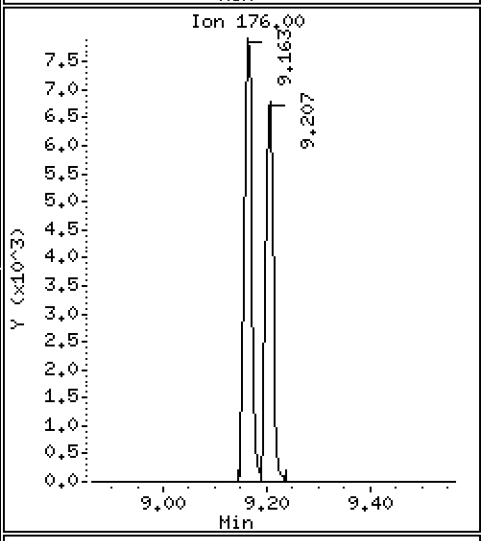
17 Anthracene

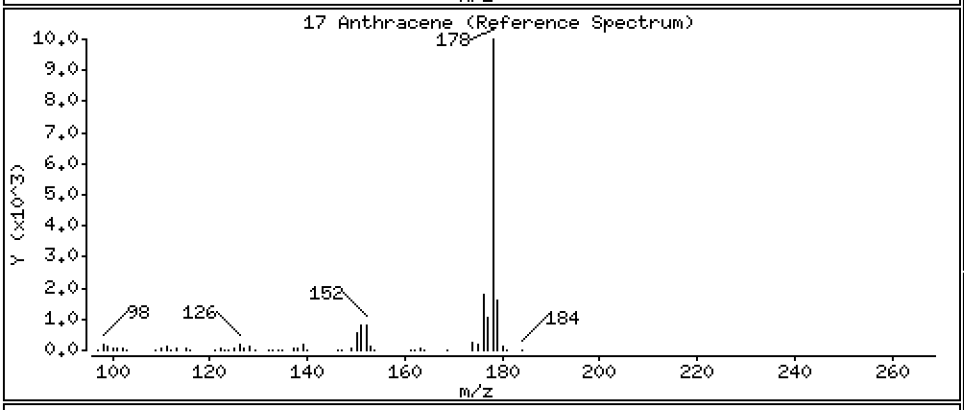
Concentration: 3.280 ug/mL

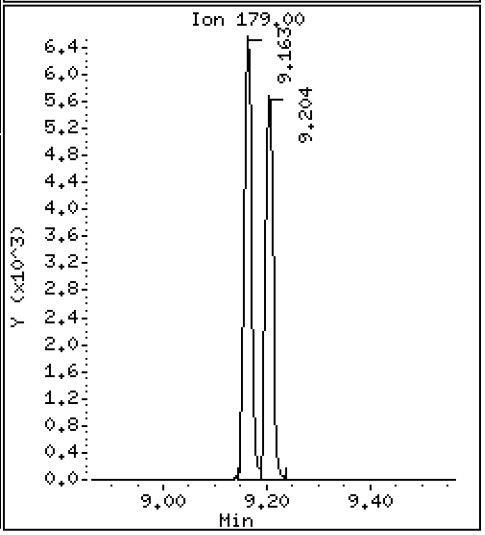


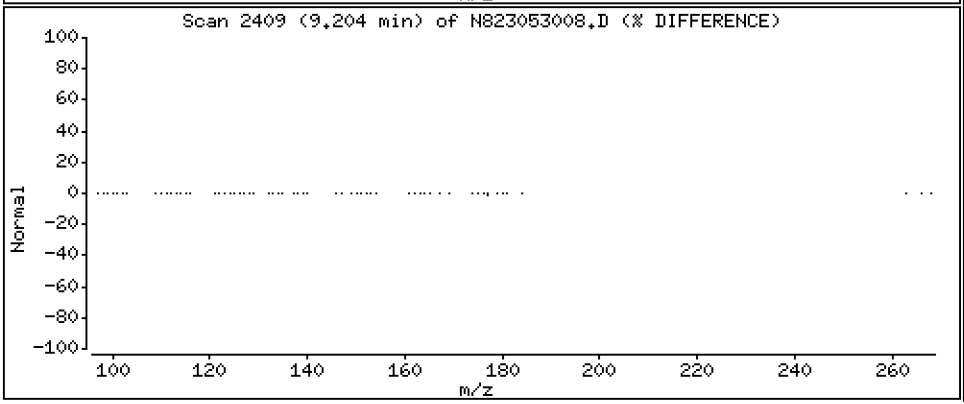












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

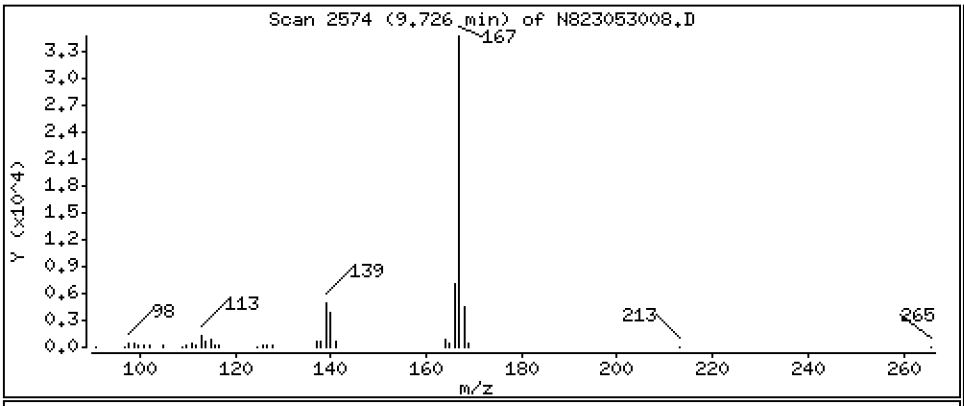
Operator: JZ

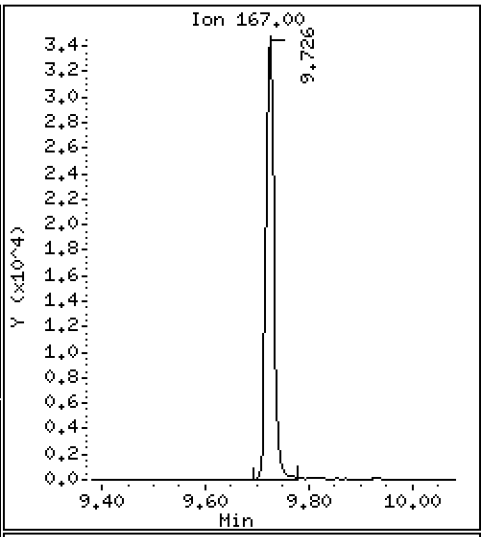
Column phase: Rxi-17sil

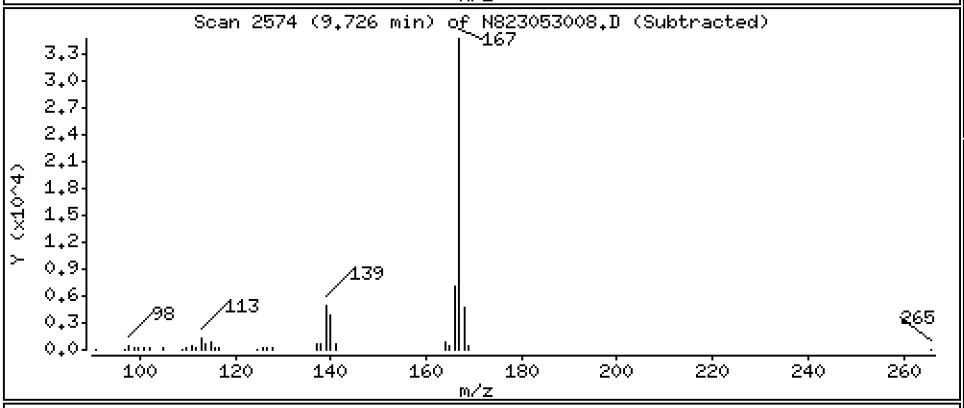
Column diameter: 0.25

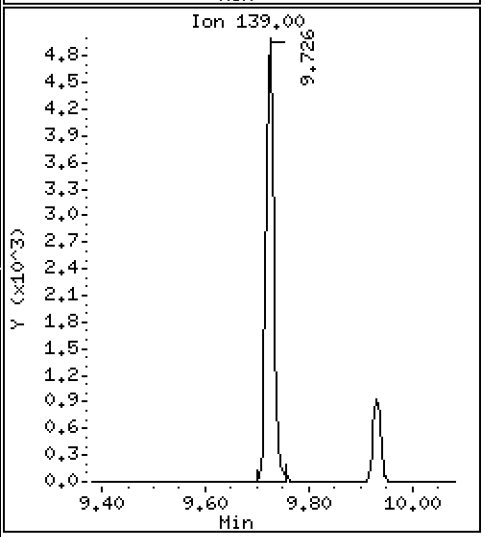
19 Carbazole

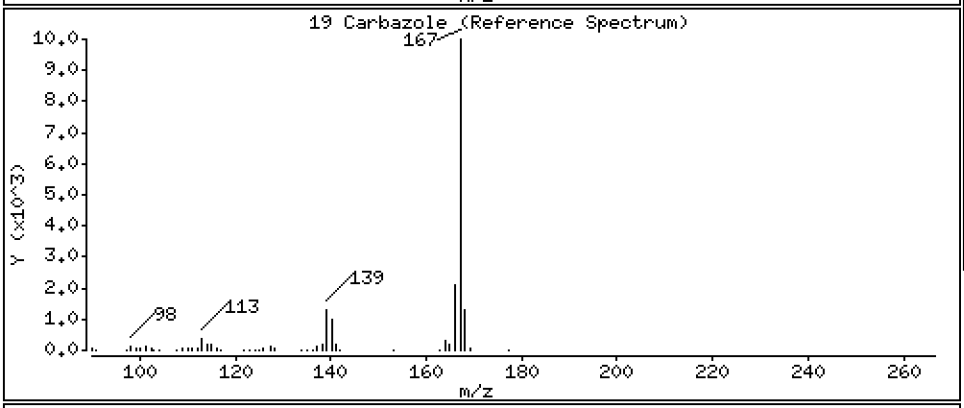
Concentration: 3.490 ug/mL

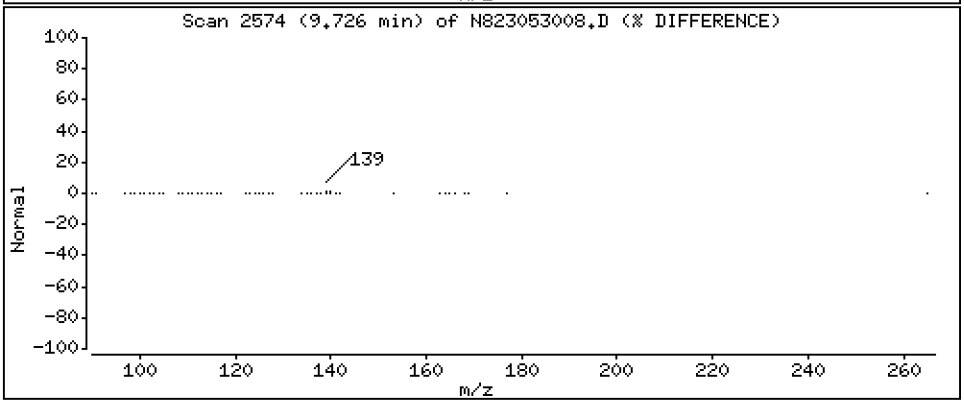












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

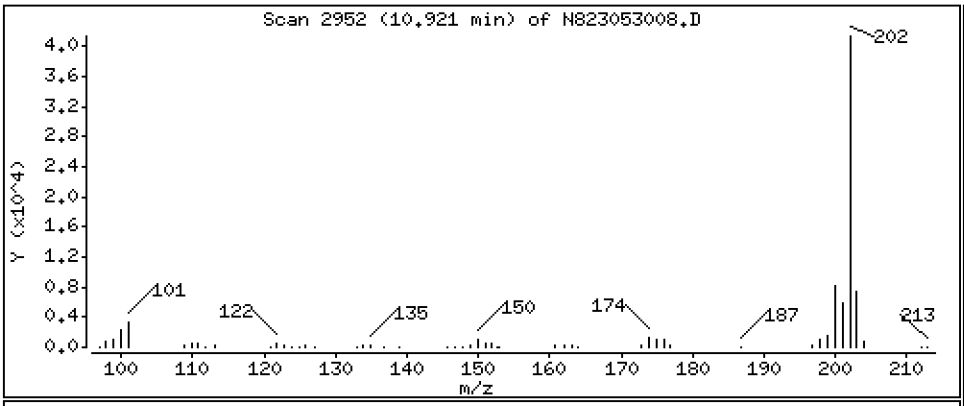
Operator: JZ

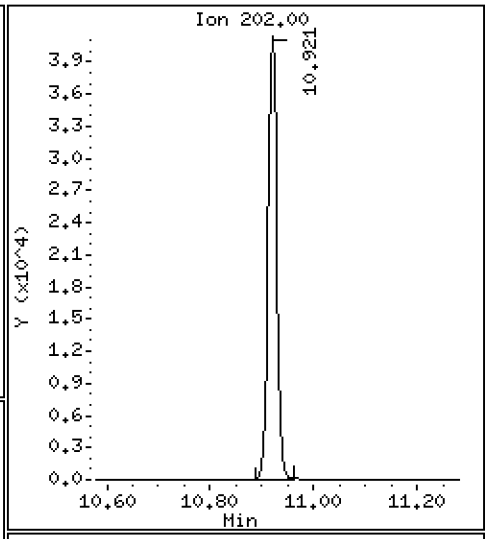
Column phase: Rxi-17sil

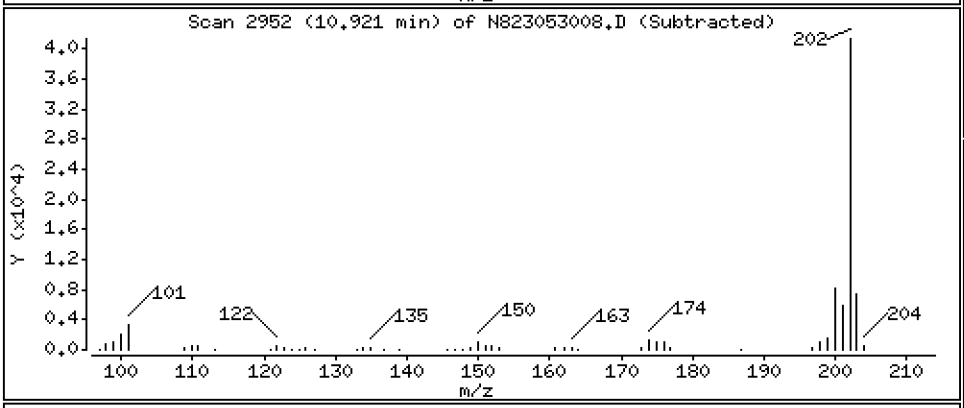
Column diameter: 0.25

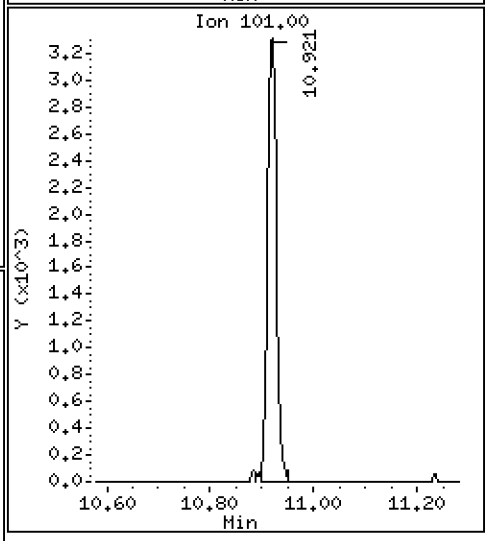
22 Fluoranthene

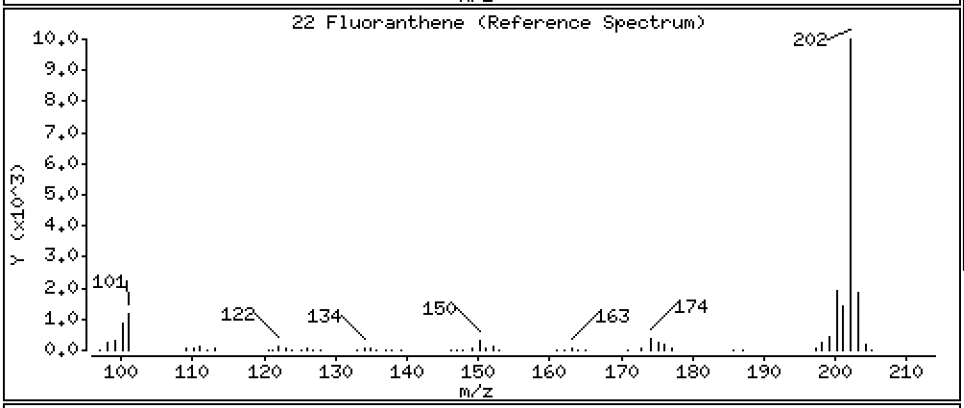
Concentration: 3.690 ug/mL

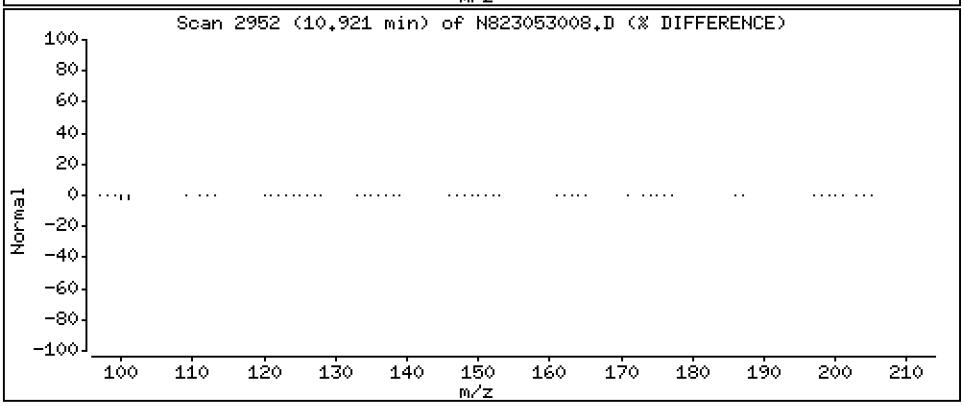












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

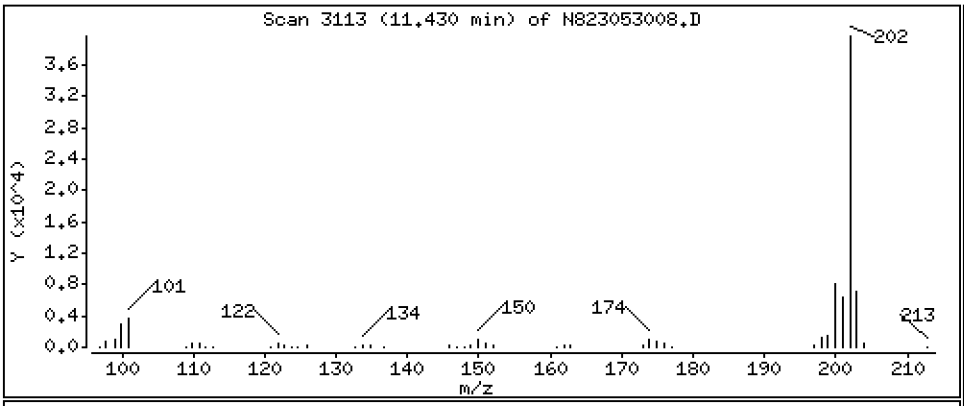
Operator: JZ

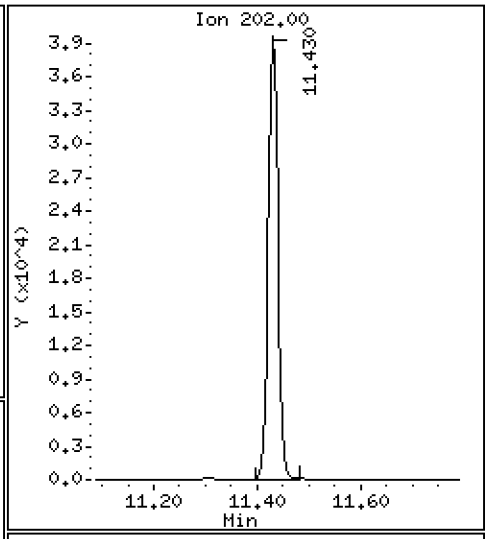
Column phase: Rxi-17sil

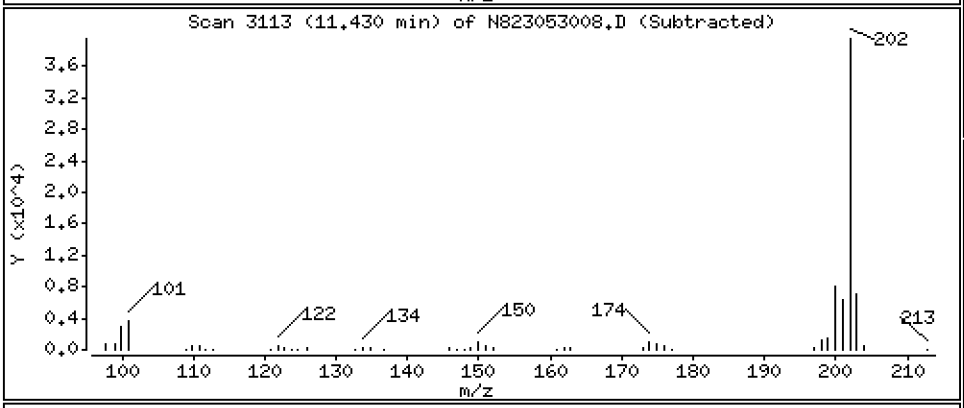
Column diameter: 0.25

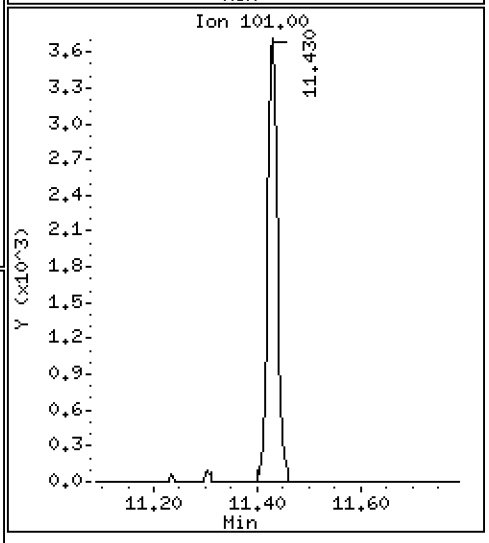
23 Pyrene

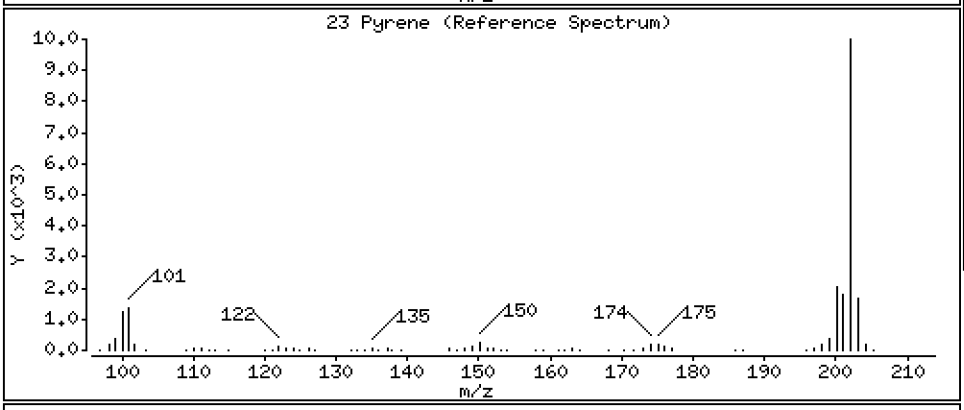
Concentration: 3.909 ug/mL

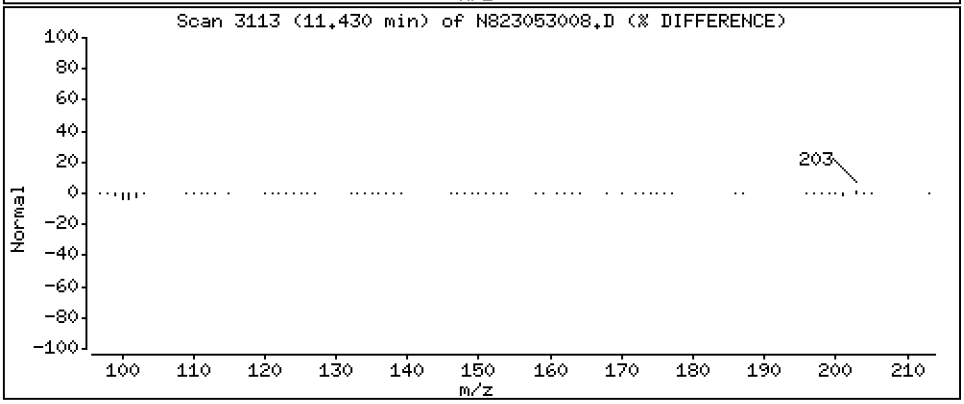












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

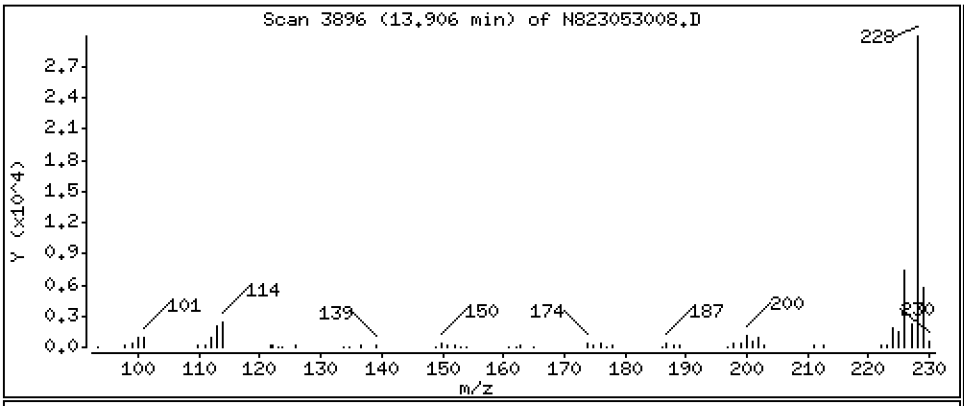
Operator: JZ

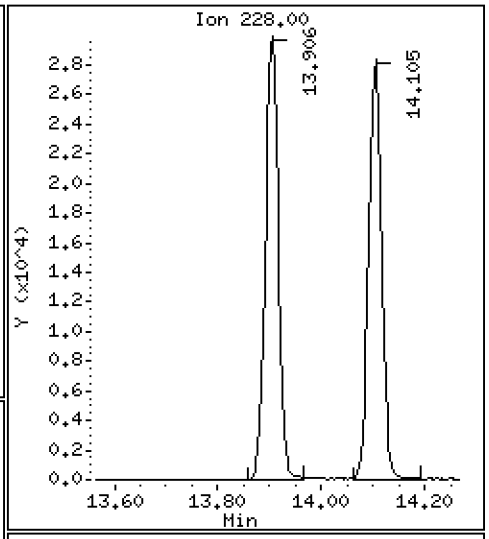
Column phase: Rxi-17sil

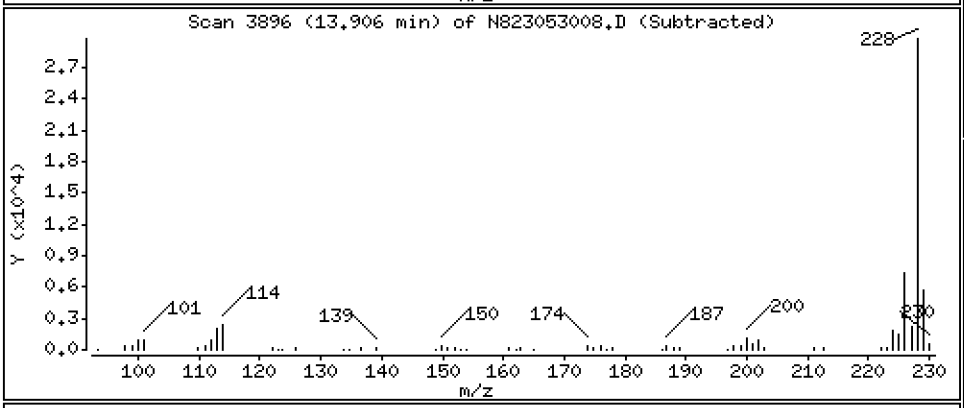
Column diameter: 0.25

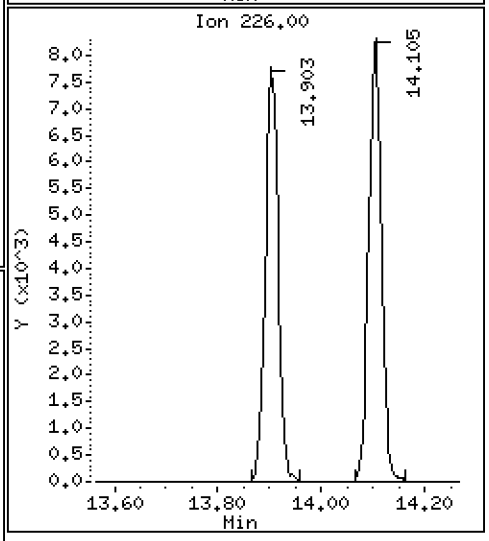
24 Benzo(a)anthracene

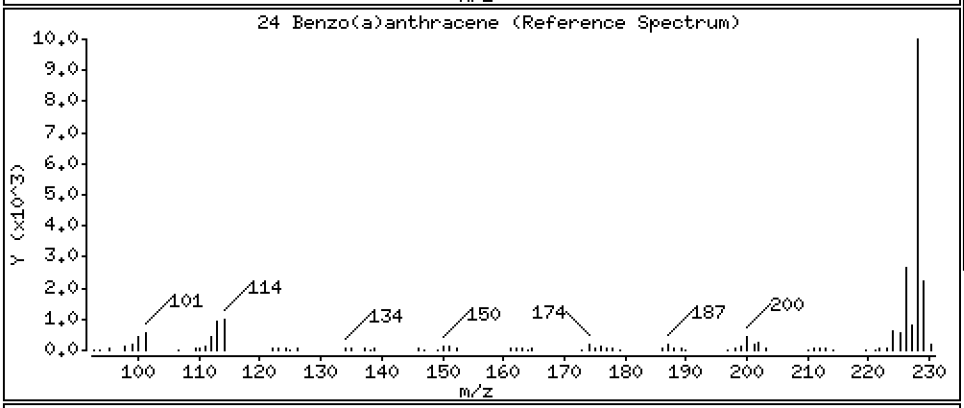
Concentration: 3.865 ug/mL

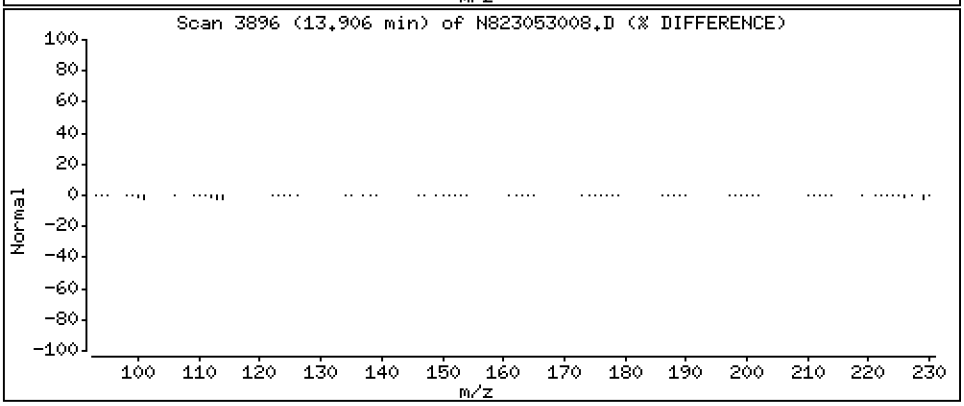












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

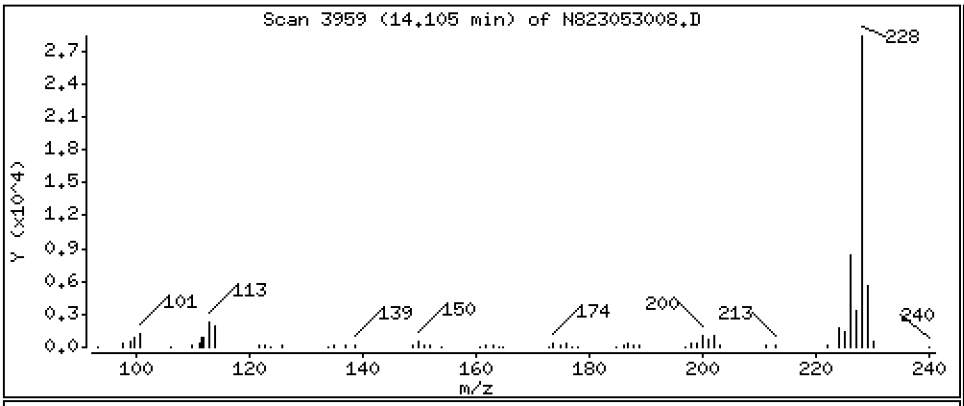
Operator: JZ

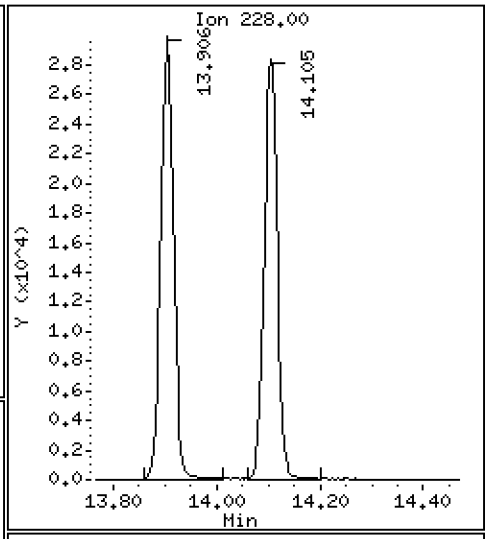
Column phase: Rxi-17sil

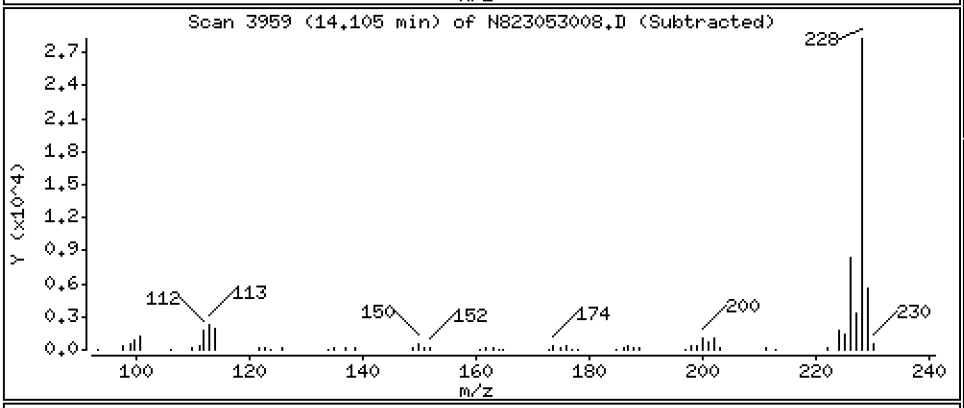
Column diameter: 0.25

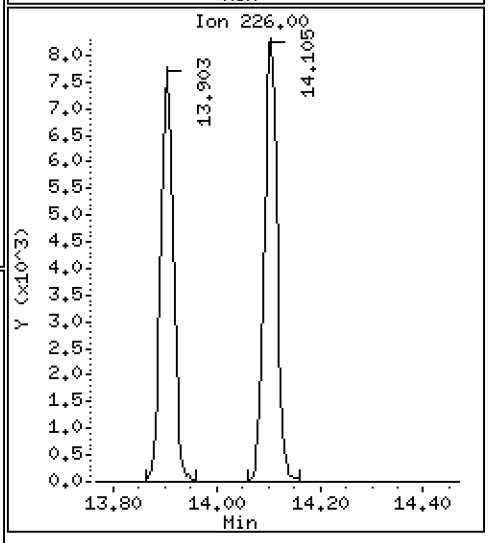
27 Chrysene

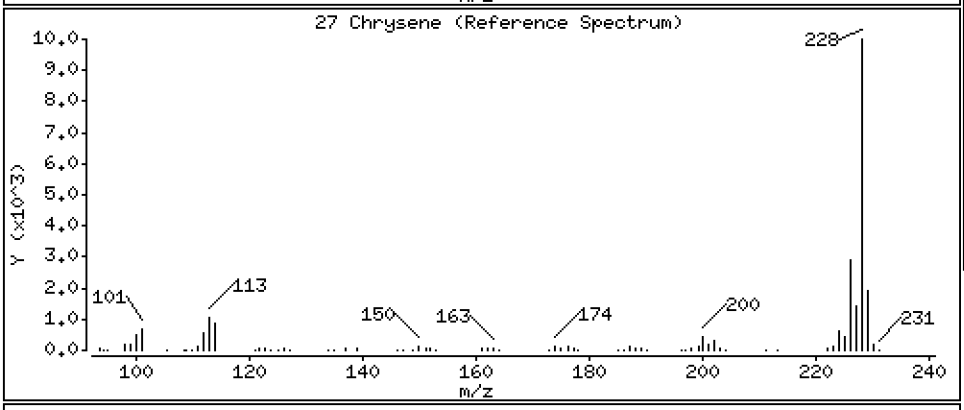
Concentration: 3.739 ug/mL

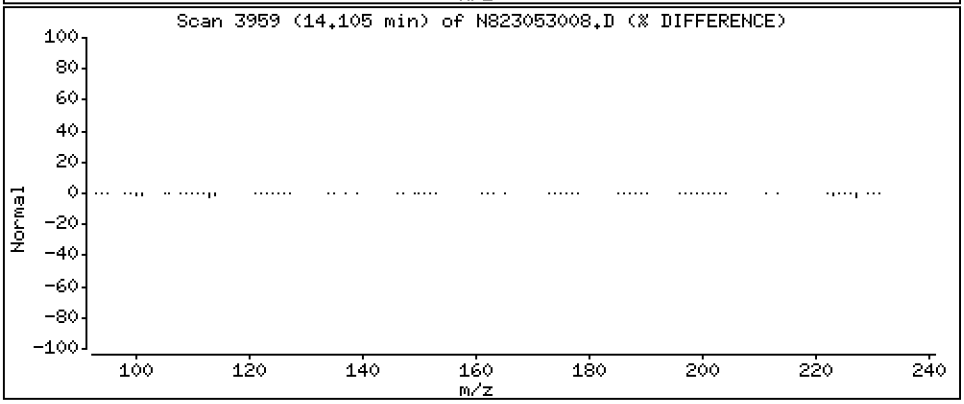












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

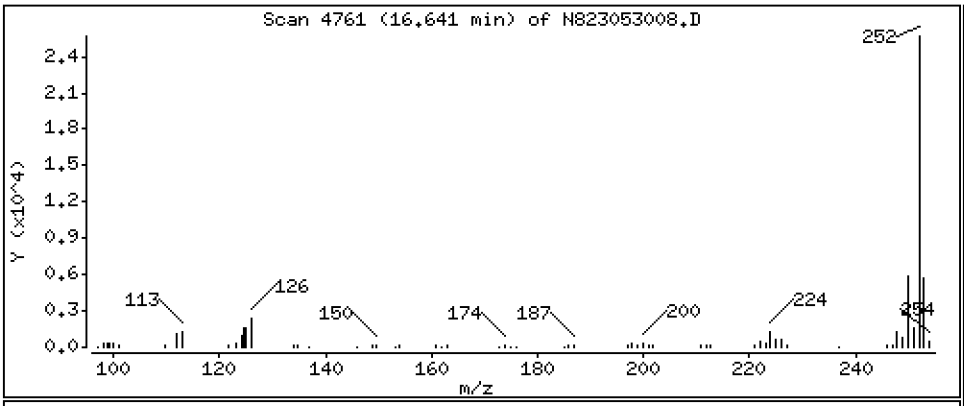
Operator: JZ

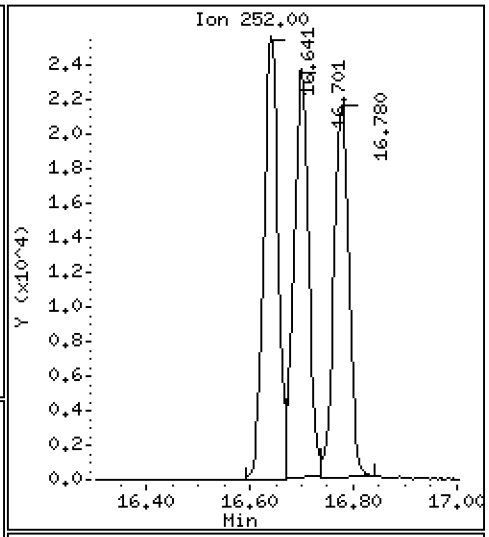
Column phase: Rxi-17sil

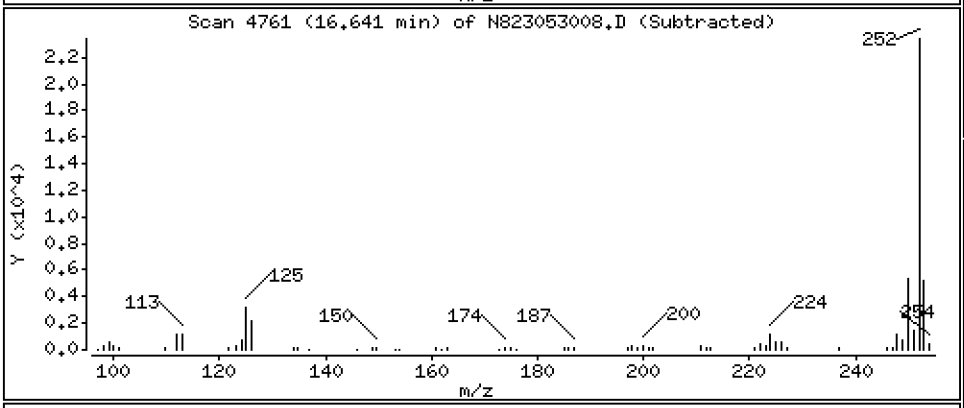
Column diameter: 0.25

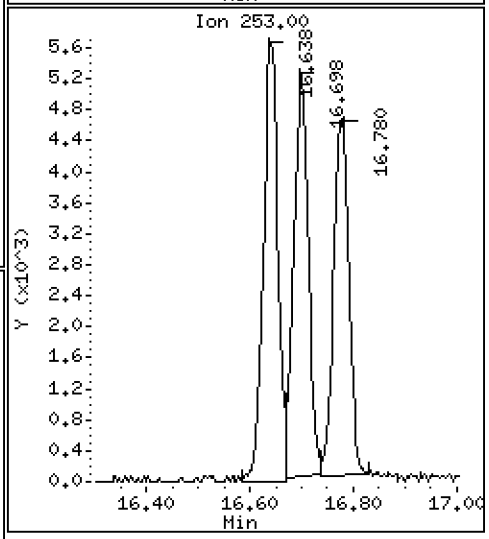
28 Benzo(b)fluoranthene

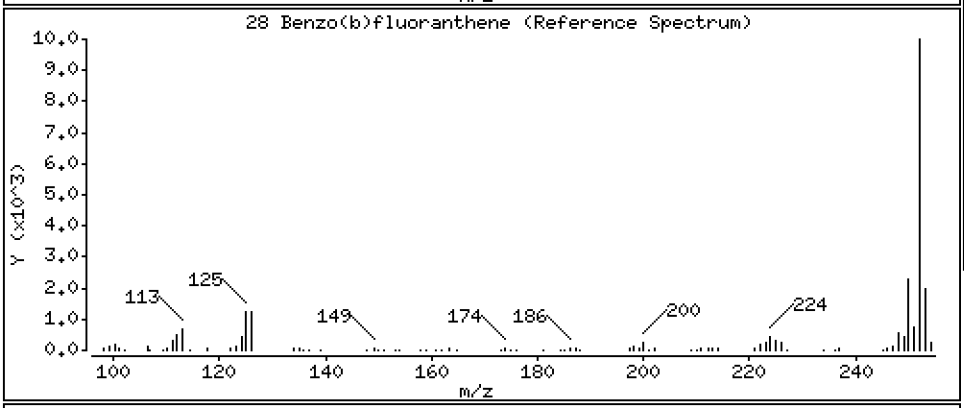
Concentration: 4.354 ug/mL

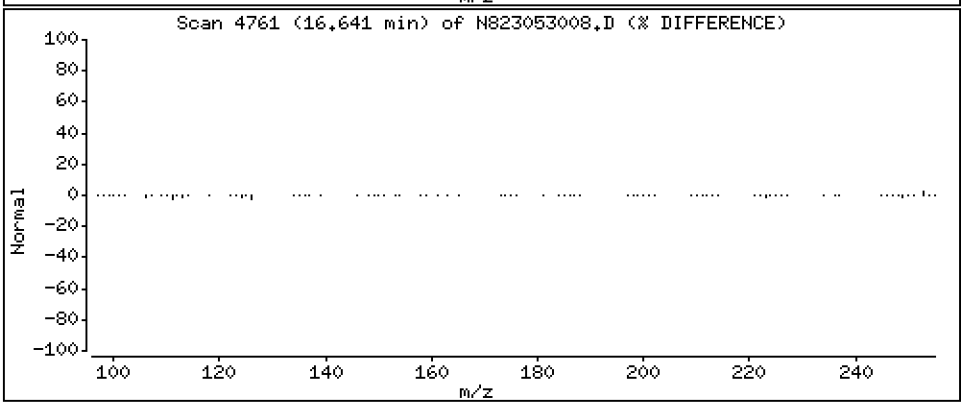












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

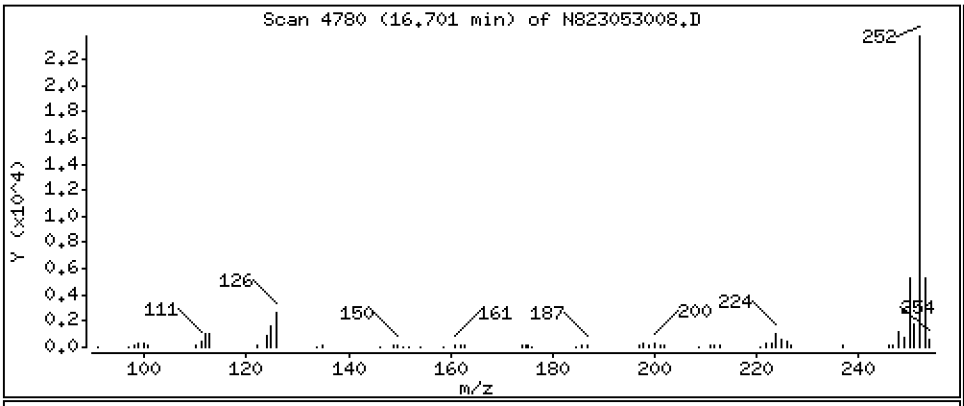
Operator: JZ

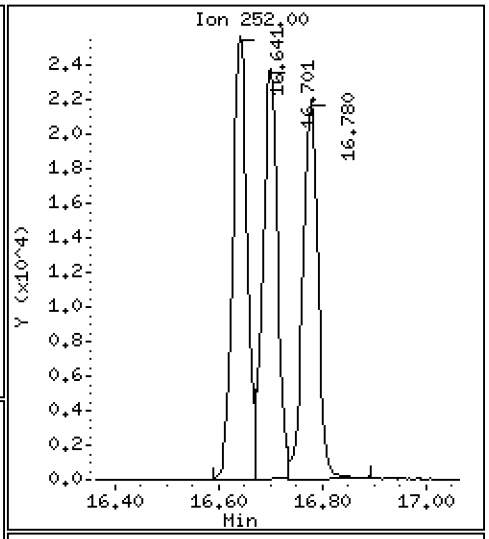
Column phase: Rxi-17sil

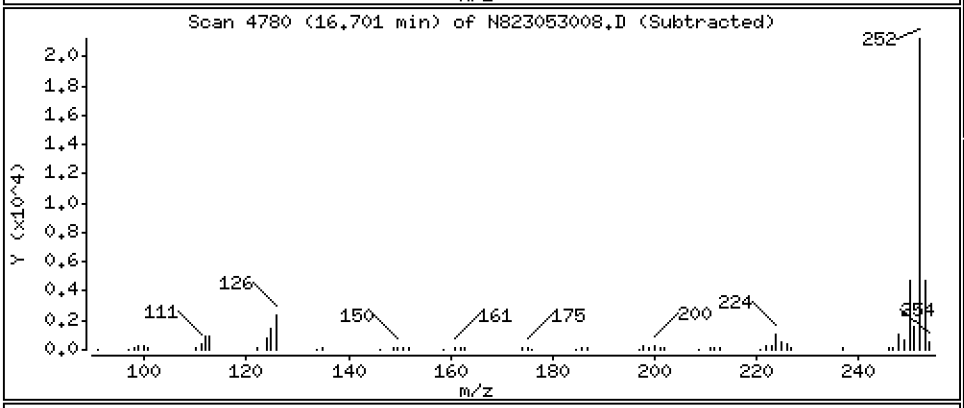
Column diameter: 0.25

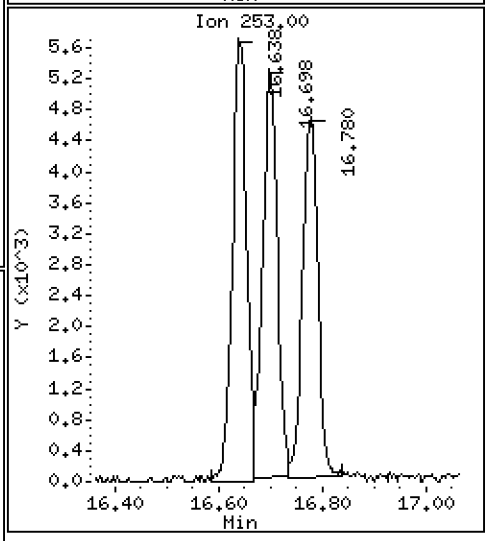
29 Benzo(k)fluoranthene

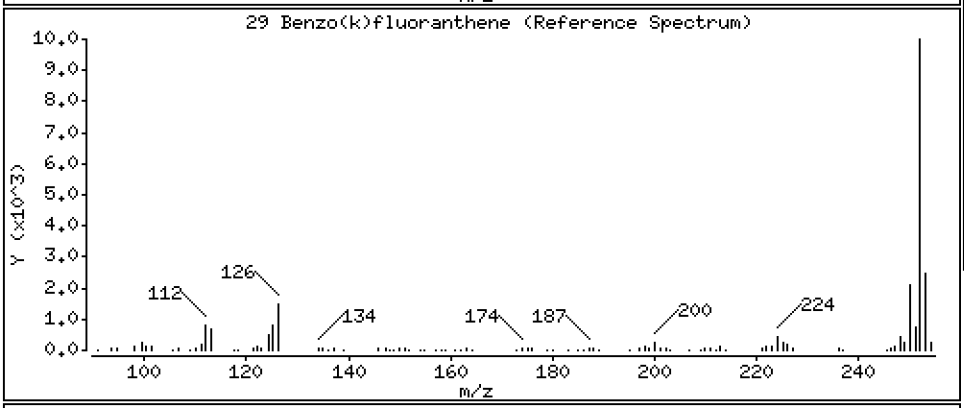
Concentration: 4.240 ug/mL

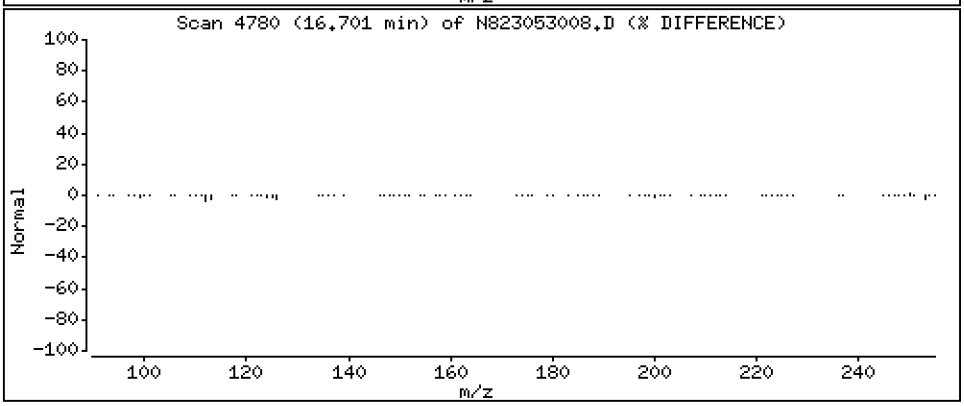












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

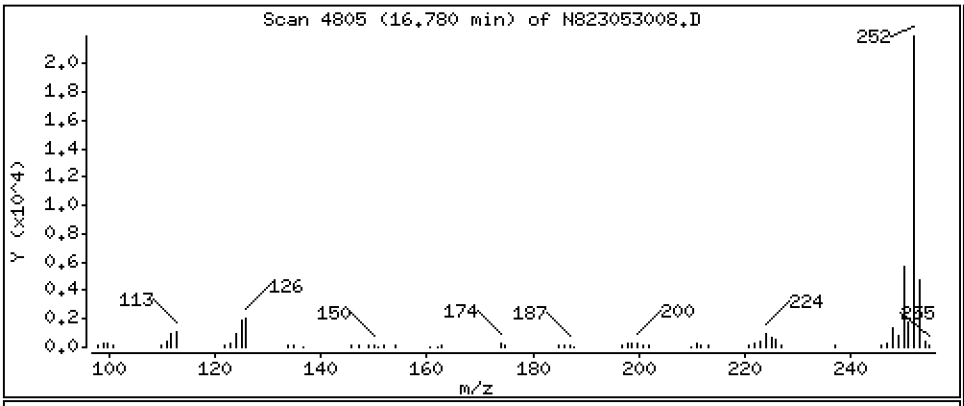
Operator: JZ

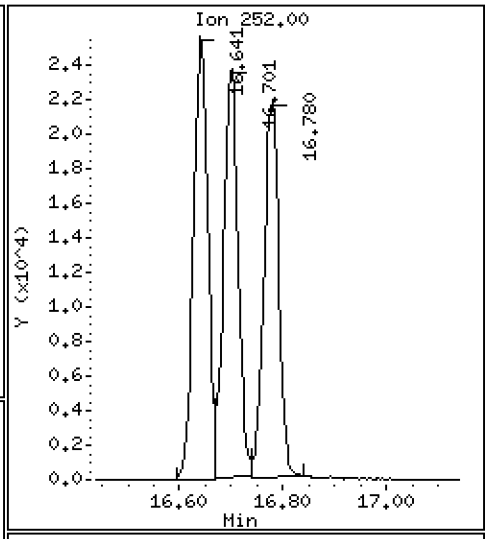
Column phase: Rxi-17sil

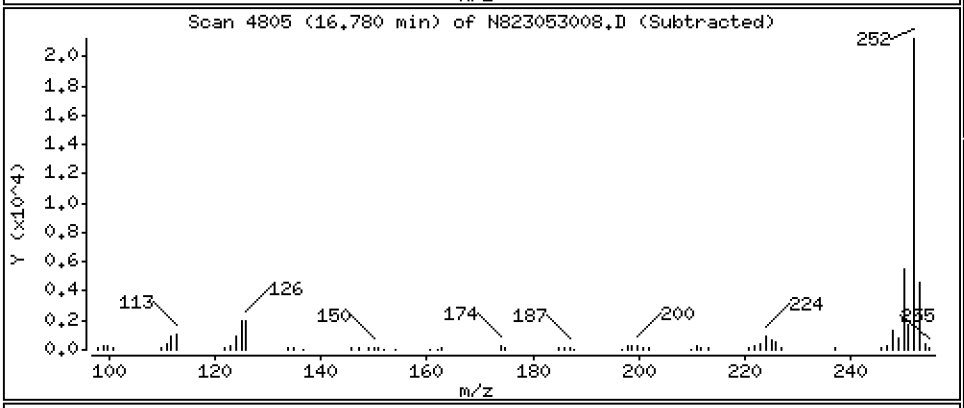
Column diameter: 0.25

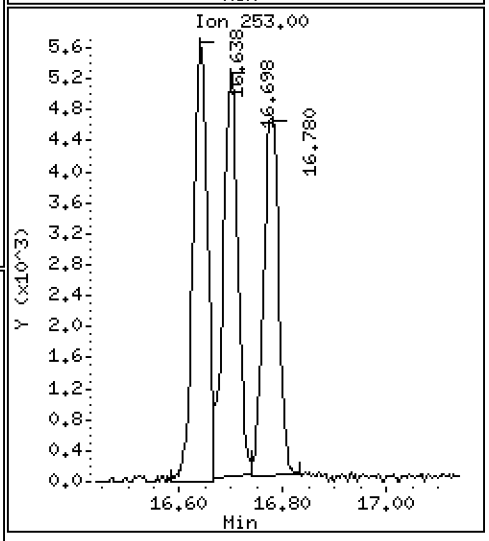
30 Benzo(j)fluoranthene

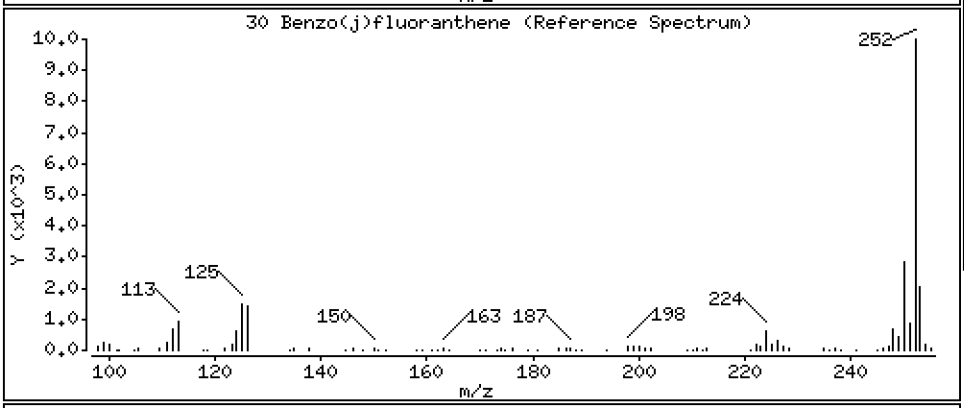
Concentration: 4.341 ug/mL

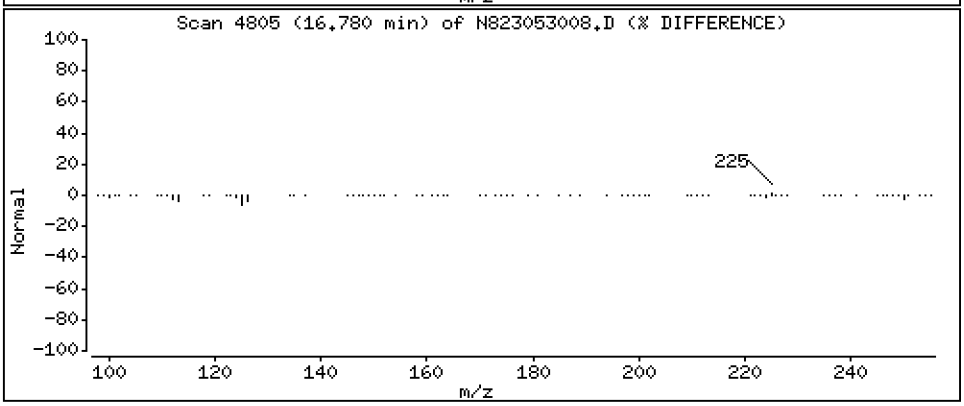












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053008.D

Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

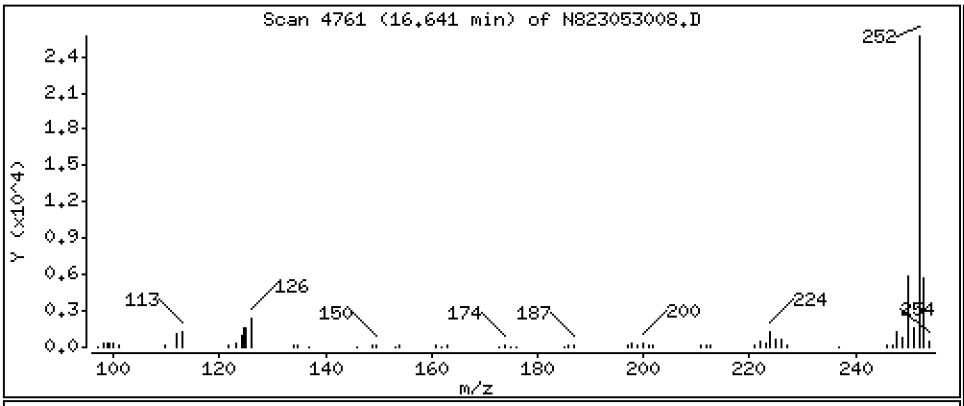
Operator: JZ

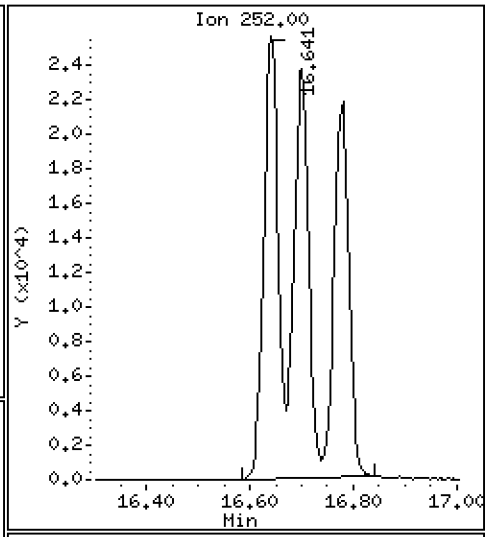
Column phase: Rxi-17sil

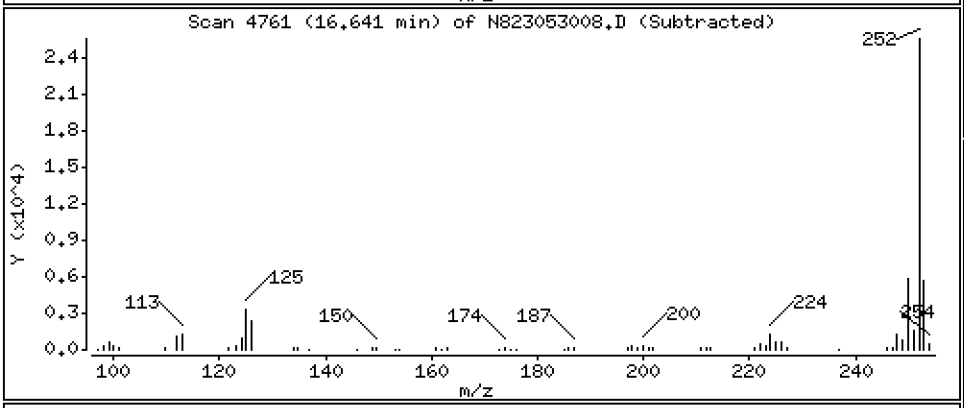
Column diameter: 0.25

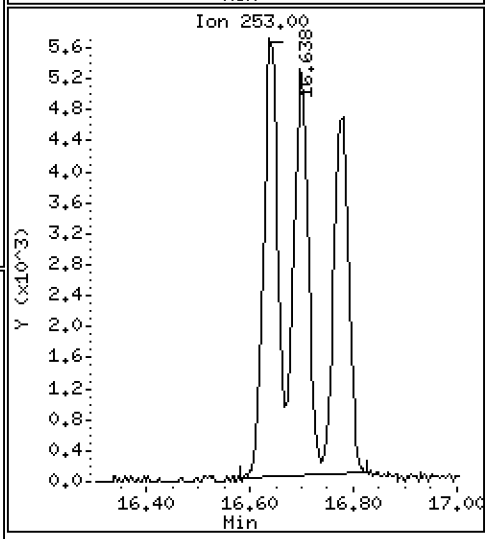
31 Total Benzofluoranthenes

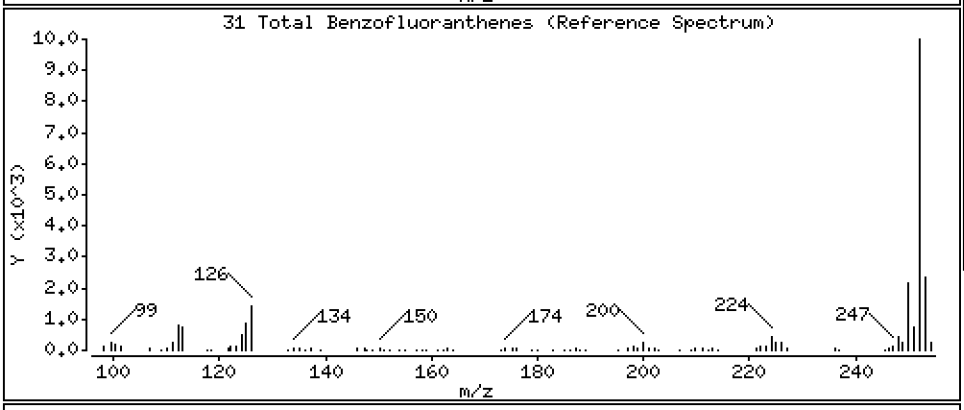
Concentration: 13.01 ug/mL

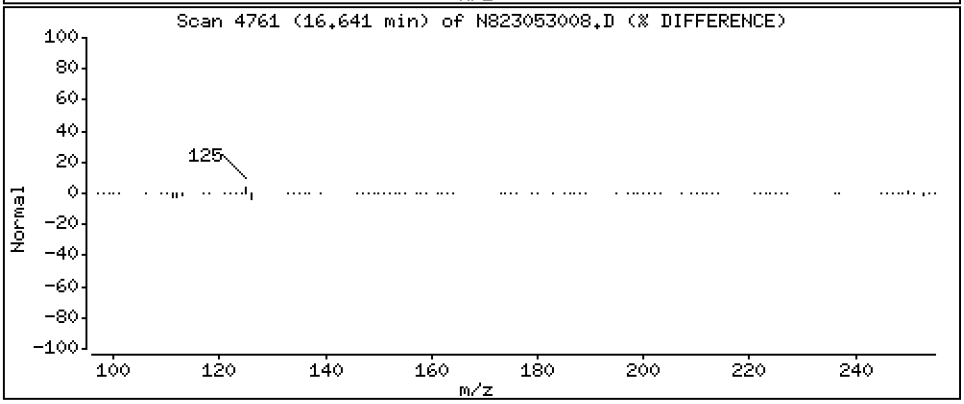












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

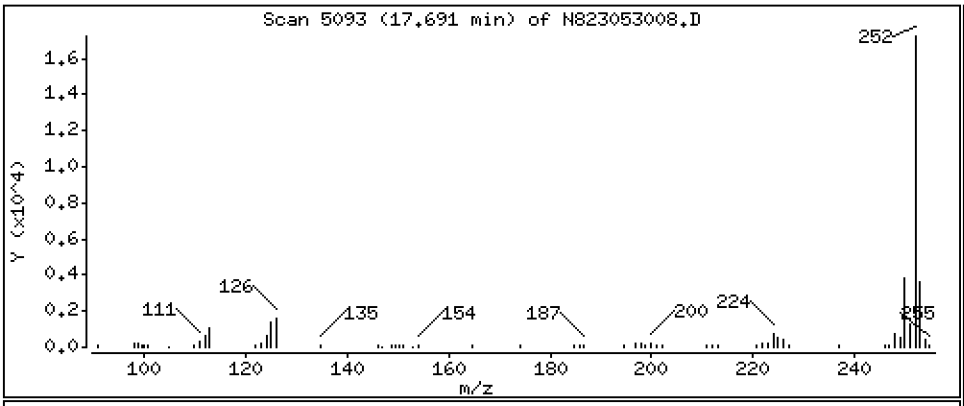
Operator: JZ

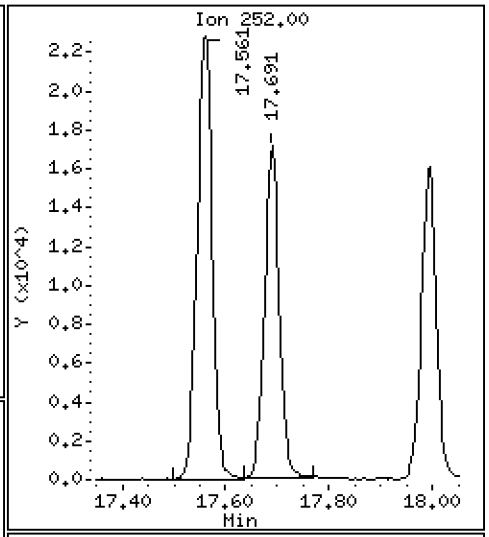
Column phase: Rxi-17sil

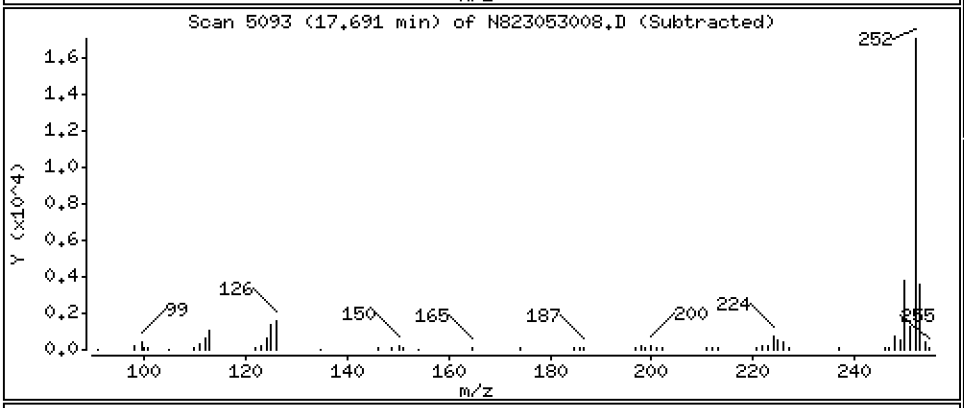
Column diameter: 0.25

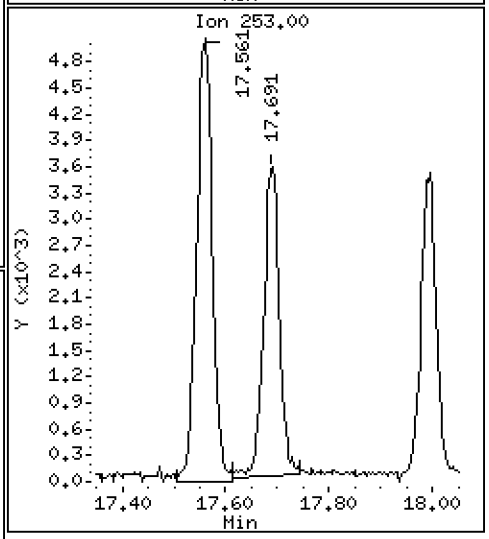
32 Benzo(a)pyrene

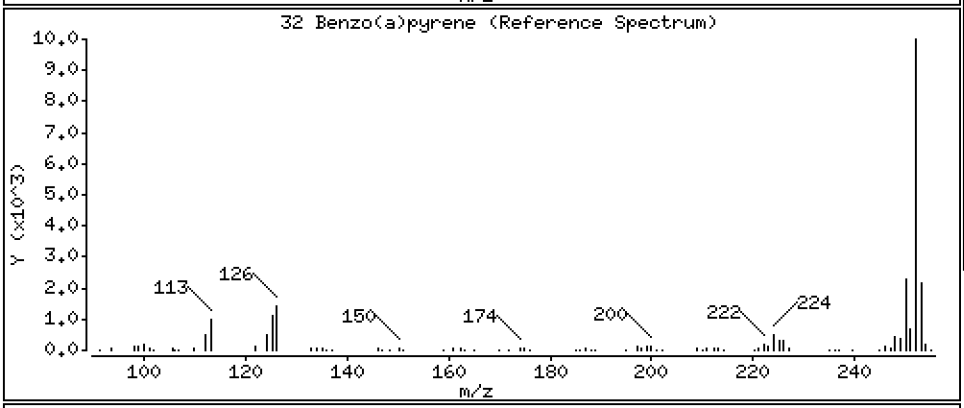
Concentration: 3.415 ug/mL

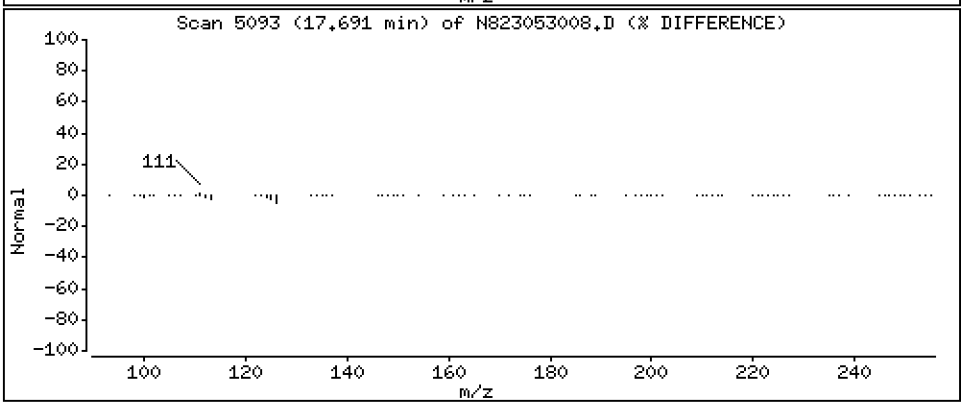












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053008.D

Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

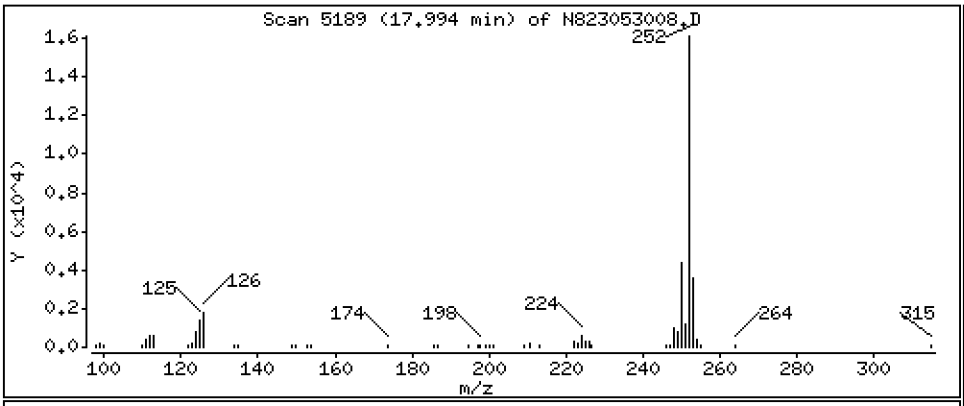
Operator: JZ

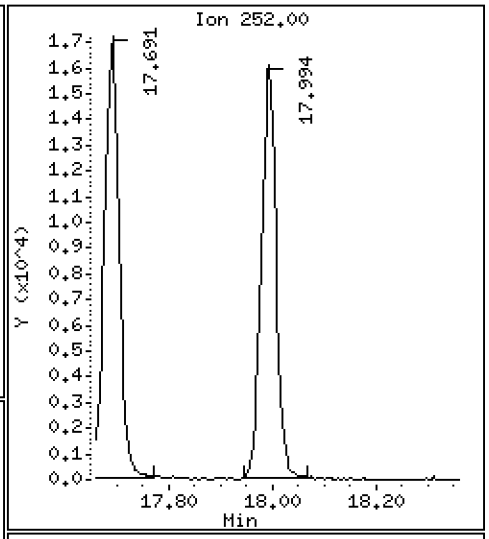
Column phase: Rxi-17sil

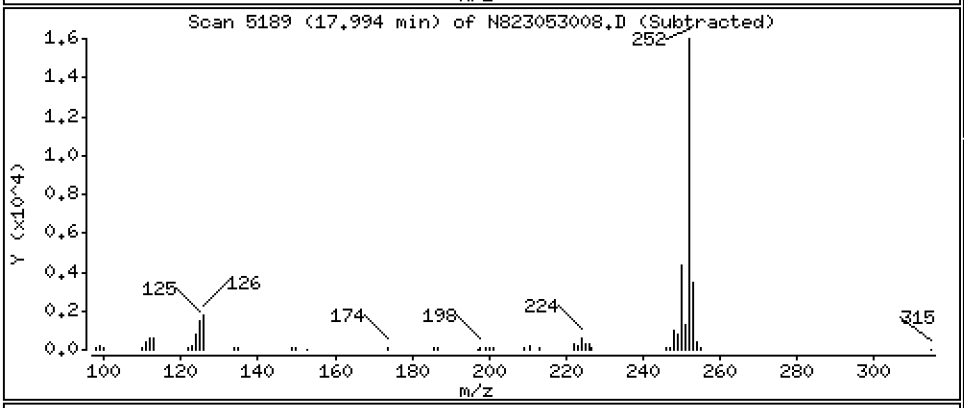
Column diameter: 0.25

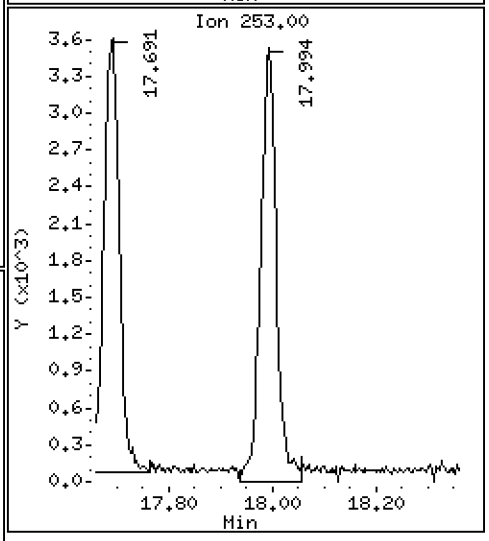
35 Perylene

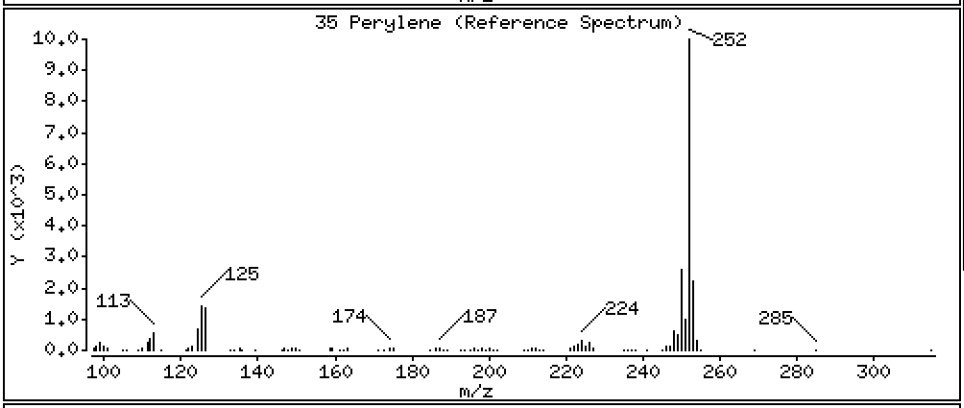
Concentration: 3.151 ug/mL

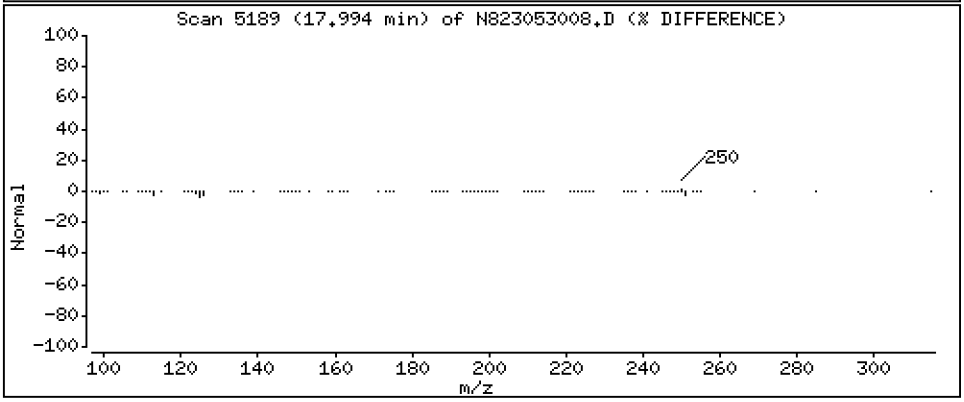












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

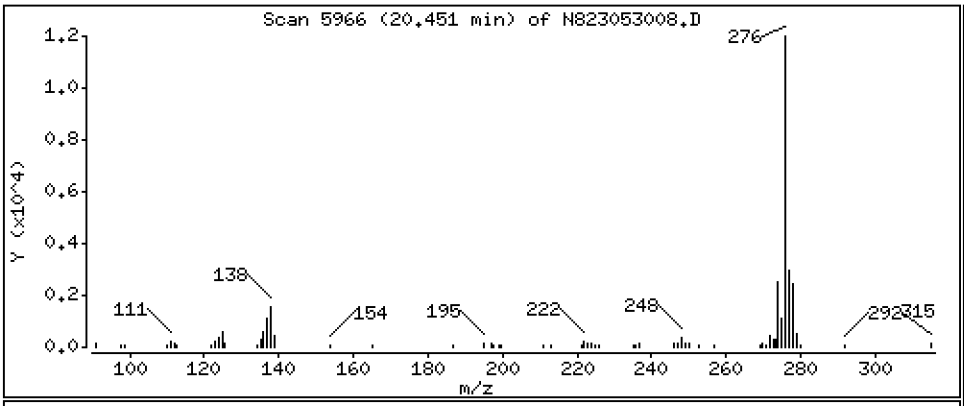
Operator: JZ

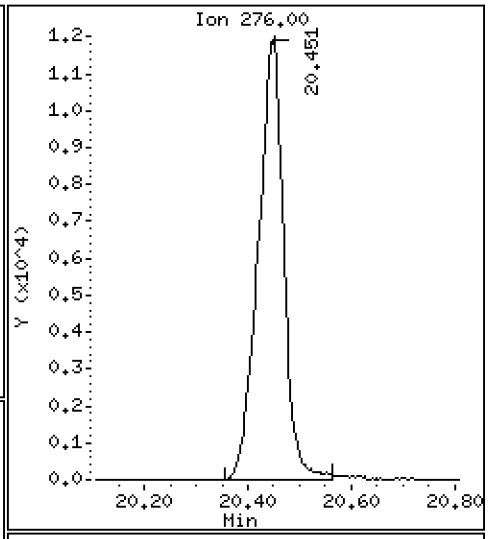
Column phase: Rxi-17sil

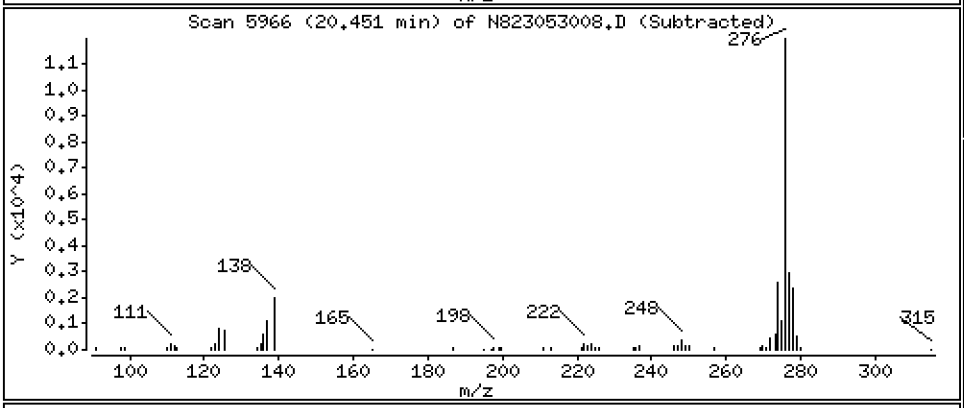
Column diameter: 0.25

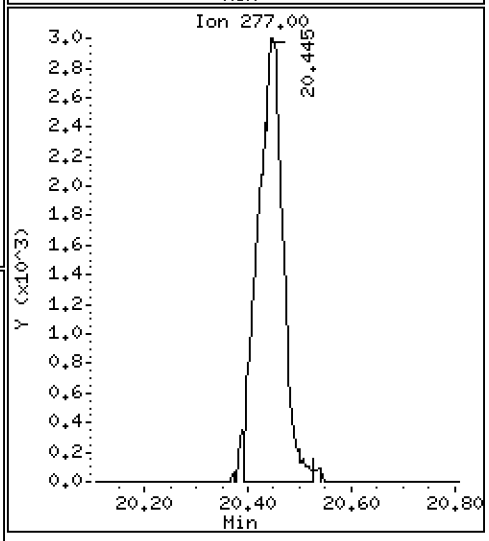
37 Indeno(1,2,3-cd)pyrene

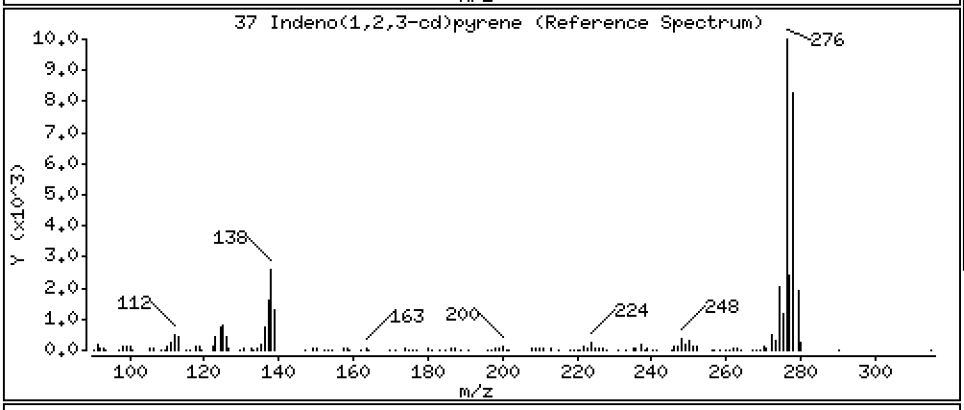
Concentration: 4.022 ug/mL

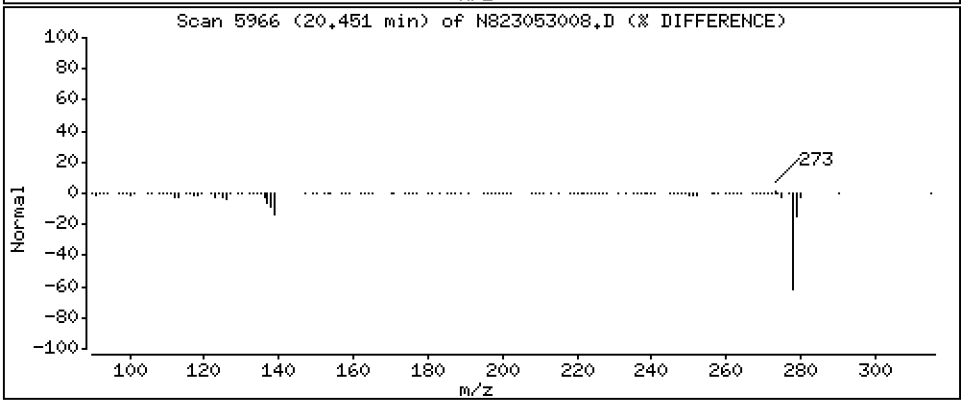












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

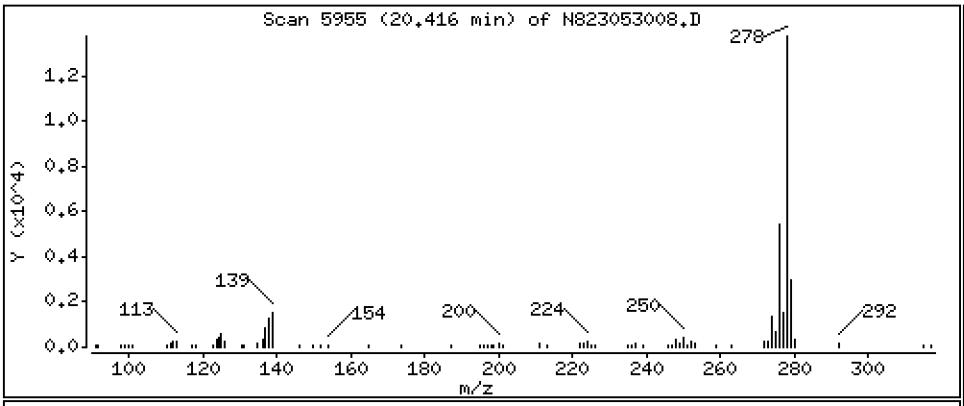
Operator: JZ

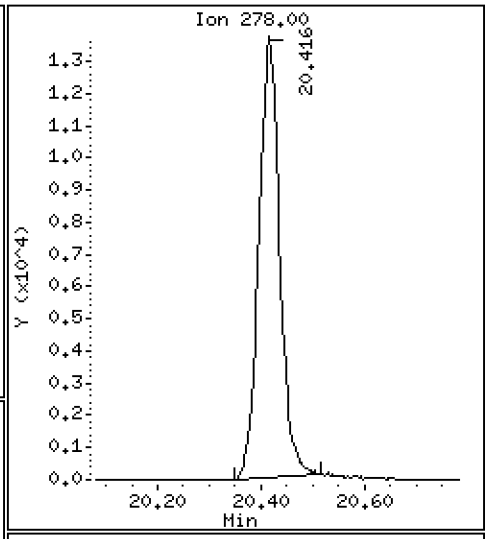
Column phase: Rxi-17sil

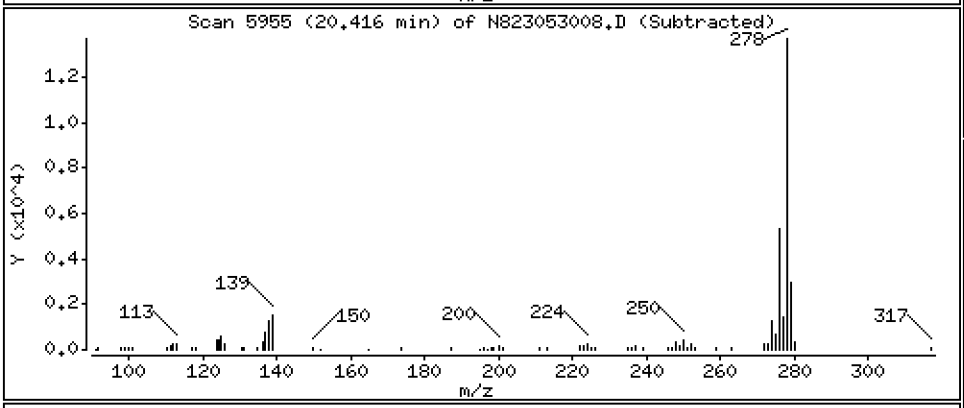
Column diameter: 0.25

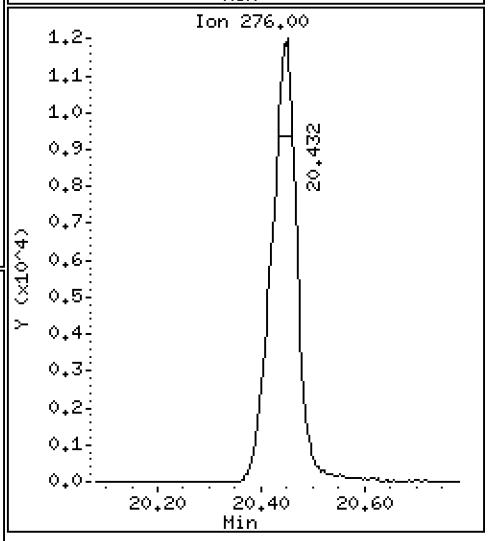
38 Dibenzo(a,h)anthracene

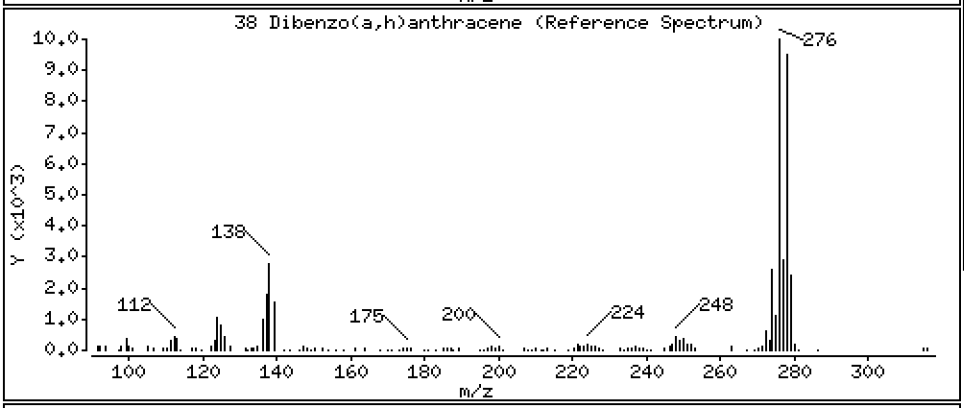
Concentration: 4.175 ug/mL

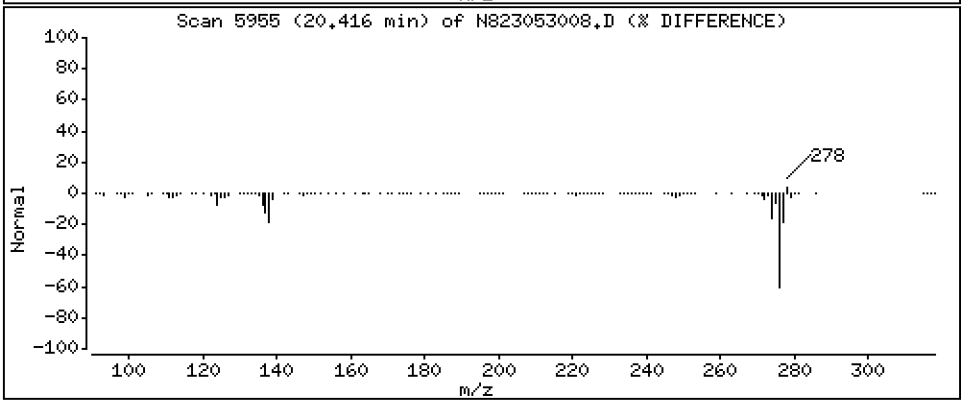












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Date : 30-MAY-2023 14:51

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BS1,

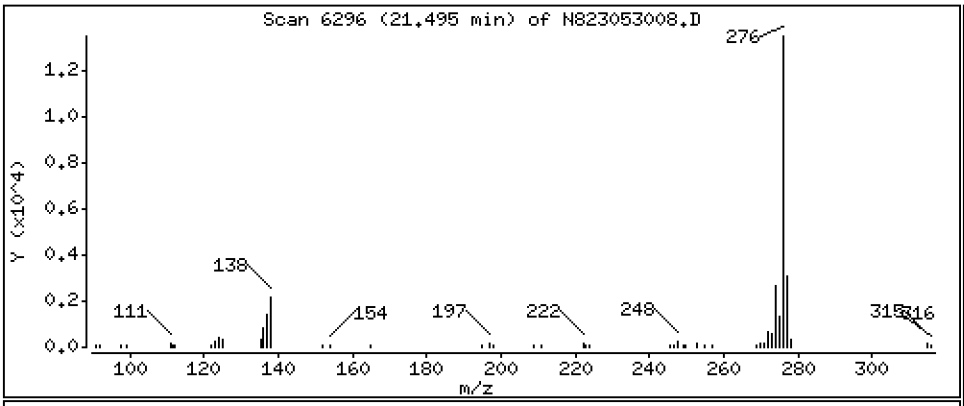
Operator: JZ

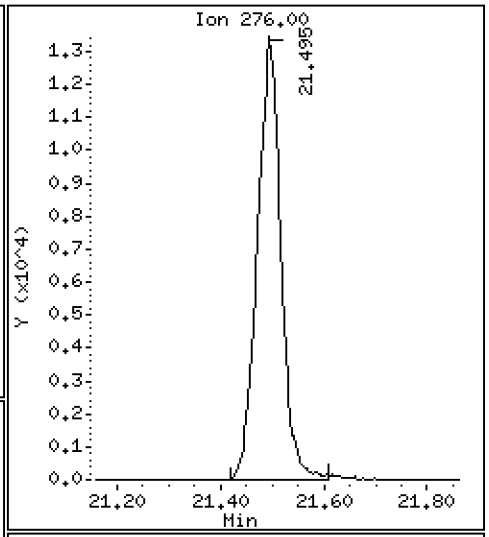
Column phase: Rxi-17sil

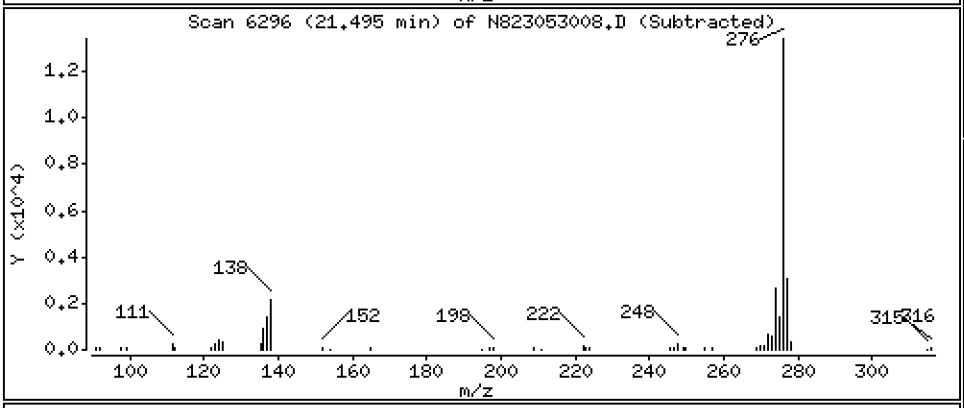
Column diameter: 0.25

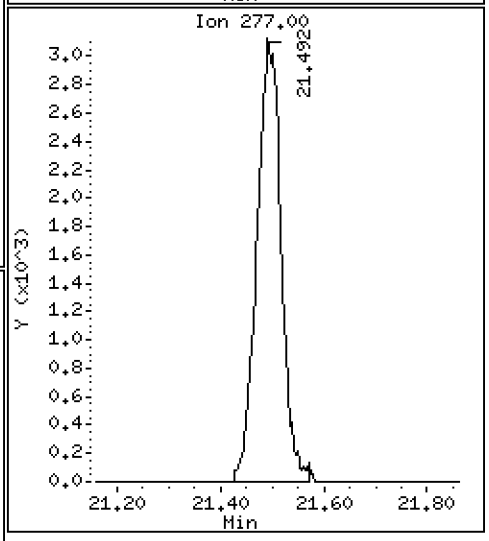
39 Benzo(g,h,i)perylene

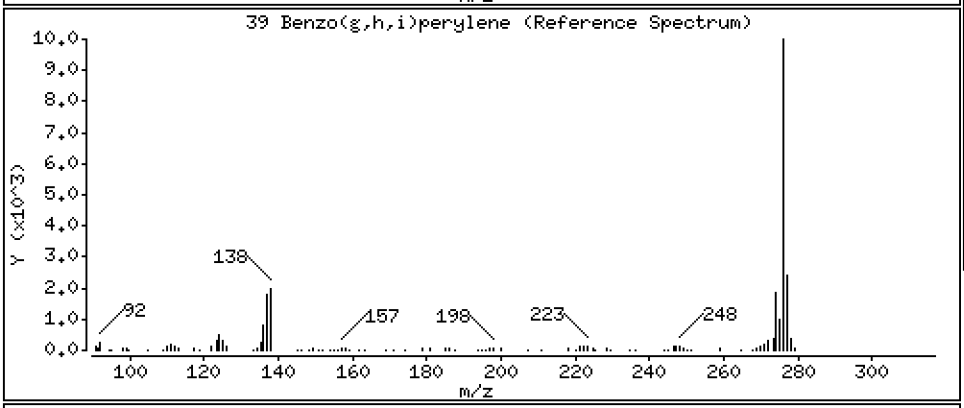
Concentration: 4.451 ug/mL

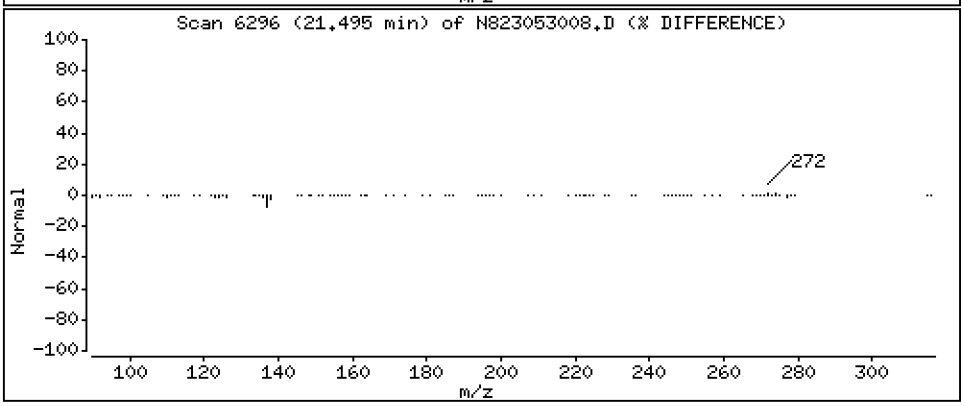












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230530.b\N823053008.D
Lab Smp Id: BLE0421-BS1
Inj Date : 30-MAY-2023 14:51
Operator : JZ Inst ID: nt8.i
Smp Info : BLE0421-BS1,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230530.b\FSIMPNA230426.m
Meth Date : 30-May-2023 19:51 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQINGZ-20191

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.802	4.815	(1.000)	19536	2.00000	
	2 Naphthalene	128	4.834	4.843	(1.007)	32421	3.25742	3.257
$	3 2-Methylnaphthalene-d10	152	5.539	5.548	(1.153)	13868	2.29843	2.298
	4 2-Methylnaphthalene	141	5.586	5.596	(1.163)	18722	3.31304	3.313
	5 1-methylnaphthalene	141	5.782	5.792	(1.204)	18723	3.34160	3.342
	9 Acenaphthylene	152	6.984	6.990	(0.985)	29689	2.96051	2.961
*	10 Acenaphthene-d10	164	7.091	7.101	(1.000)	11328	2.00000	
	11 Acenaphthene	153	7.142	7.148	(1.007)	21062	3.24166	3.242
	12 Dibenzofuran	168	7.294	7.300	(1.029)	32578	3.33833	3.338
	14 Fluorene	166	7.771	7.777	(1.096)	26871	3.45023	3.450
*	15 Phenanthrene-d10	188	9.128	9.137	(1.000)	22273	2.00000	
	16 Phenanthrene	178	9.166	9.172	(1.004)	42130	3.57110	3.571
	17 Anthracene	178	9.204	9.213	(1.008)	36288	3.27967	3.280
	19 Carbazole	167	9.725	9.732	(1.065)	36879	3.48952	3.490
	22 Fluoranthene	202	10.921	10.930	(1.196)	50065	3.68969	3.690
$	21 Fluoranthene-d10	212	10.883	10.892	(1.192)	31250	2.59919	2.599
	23 Pyrene	202	11.430	11.439	(0.815)	51413	3.90883	3.909
	24 Benzo(a)anthracene	228	13.905	13.915	(0.991)	52236	3.86489	3.865
*	25 Chrysene-d12	240	14.029	14.044	(1.000)	20544	2.00000	
	27 Chrysene	228	14.105	14.117	(1.005)	49640	3.73867	3.739
	28 Benzo(b)fluoranthene	252	16.641	16.653	(0.929)	50547	4.35368	4.354
	29 Benzo(k)fluoranthene	252	16.701	16.713	(0.932)	46378	4.23976	4.240
	30 Benzo(j)fluoranthene	252	16.780	16.789	(0.937)	43869	4.34050	4.341
	31 Total Benzofluoranthenes	252	16.641	16.653	(0.929)	140495	13.0129	13.01(M)
	32 Benzo(a)pyrene	252	17.690	17.700	(0.987)	34463	3.41489	3.415
*	33 Perylene-d12	264	17.915	17.931	(1.000)	17809	2.00000	
	35 Perylene	252	17.994	18.010	(1.004)	31928	3.15059	3.151
$	36 Dibenzo(a,h)anthracene-d14	292	20.305	20.315	(1.133)	24972	3.67279	3.673
	37 Indeno(1,2,3-cd)pyrene	276	20.451	20.457	(1.142)	41316	4.02188	4.022
	38 Dibenzo(a,h)anthracene	278	20.416	20.432	(1.140)	38087	4.17529	4.175(M)
	39 Benzo(g,h,i)perylene	276	21.494	21.510	(1.200)	42359	4.45142	4.451

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823053008.D
Lab Smp Id: BLE0421-BS1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230530.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 30-MAY-2023
Calibration Time: 11:43
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	20199	10100	40398	19536	-3.28
10 Acenaphthene-d10	12041	6021	24082	11328	-5.92
15 Phenanthrene-d10	19182	9591	38364	22273	16.11
25 Chrysene-d12	15943	7972	31886	20544	28.86
33 Perylene-d12	14317	7159	28634	17809	24.39

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.82	4.32	5.32	4.80	-0.26
10 Acenaphthene-d10	7.10	6.60	7.60	7.09	-0.13
15 Phenanthrene-d10	9.14	8.64	9.64	9.13	-0.10
25 Chrysene-d12	14.04	13.54	14.54	14.03	-0.11
33 Perylene-d12	17.93	17.43	18.43	17.92	-0.09

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

REVIEW SUMMARY FOR FILE - N823053008.D

Lab ID: BLE0421-BS1
nt8.i, 20230530.b\FSIMPNA230426.m,   30-MAY-2023 14:51

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

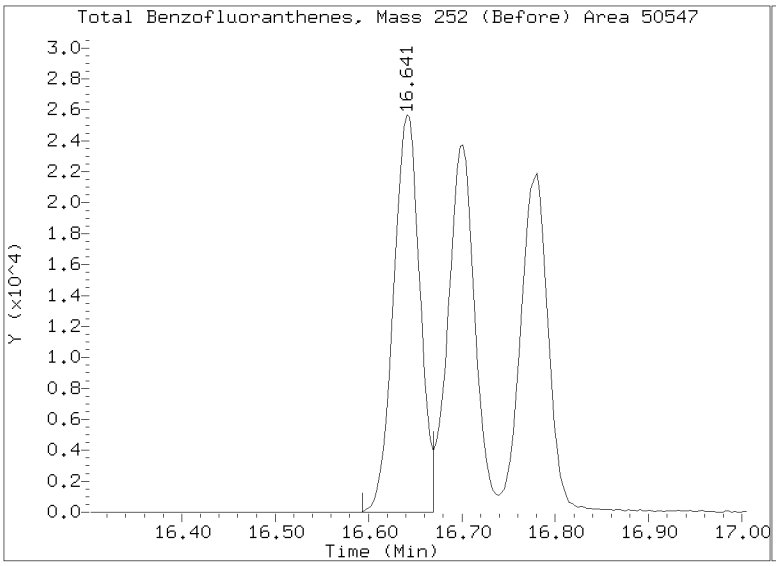
No RRT check performed

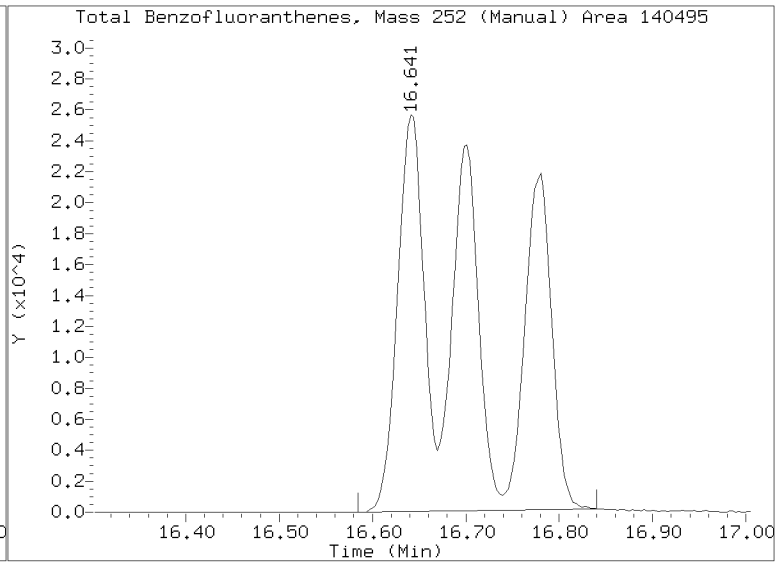
On Column LOD for nt8.i, 20230530.b\FSIMPNA230426.m, PNAXMDL.sub = 0.0080

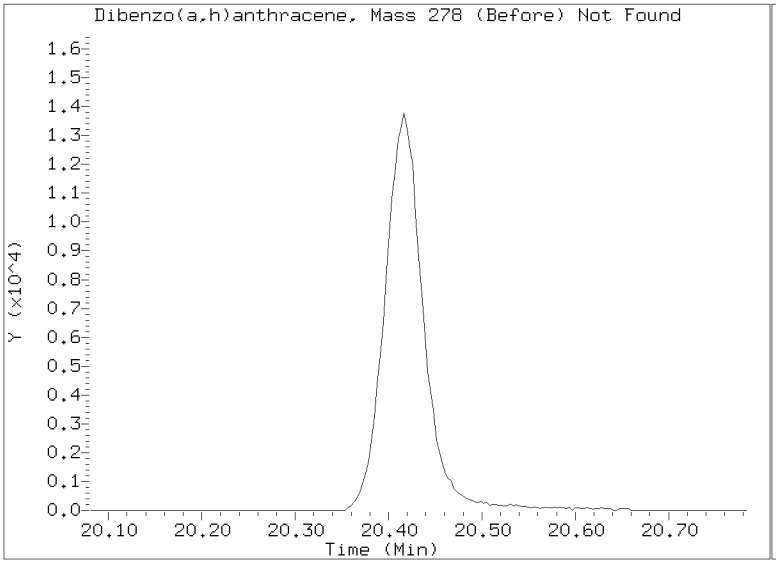
* Only compounds listed in the work order have been verified by the analyst *

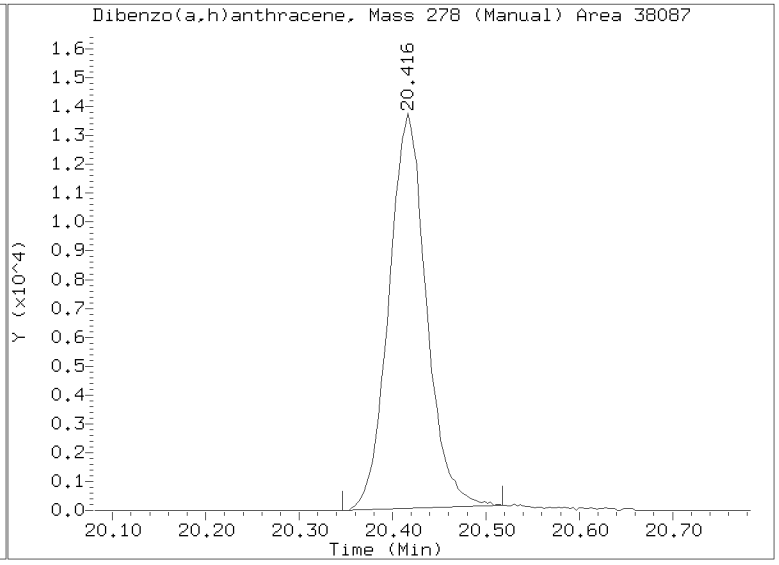
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230530.b/N823053008.D
Injection Date: 30-MAY-2023 14:51
Lab ID:BLE0421-BS1 Client ID:
Report Date: 05/30/2023 20:04









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Date : 30-MAY-2023 15:18

Client ID:

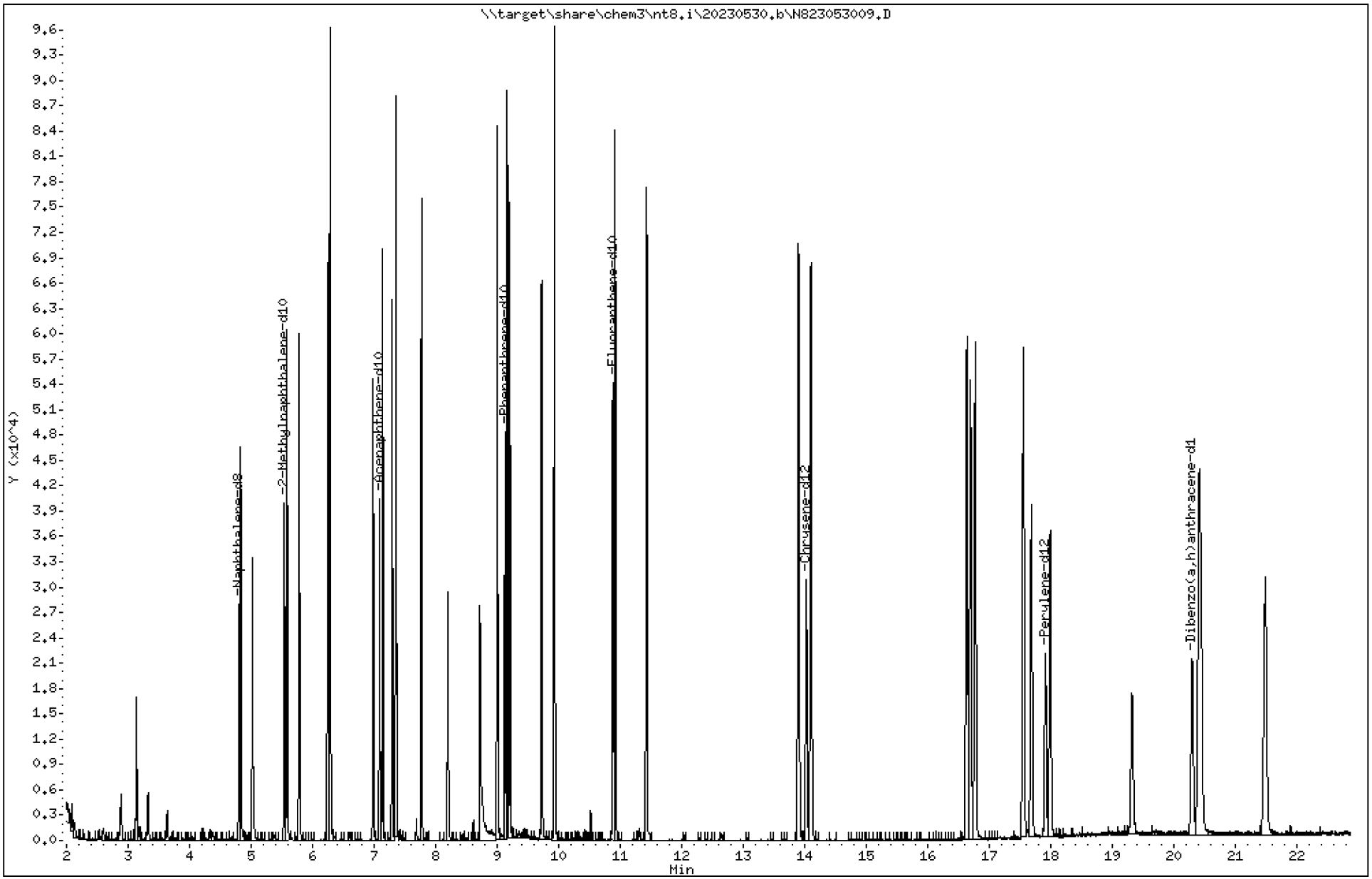
Instrument: nt8.i

Sample Info: BLE0421-BSD1,

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



23A0207 CLPLIKE (Rev3) - Page 580 of 3315

Data File: \\target\share\chem3\nt8.i\20230530.b\N823053009.D

Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

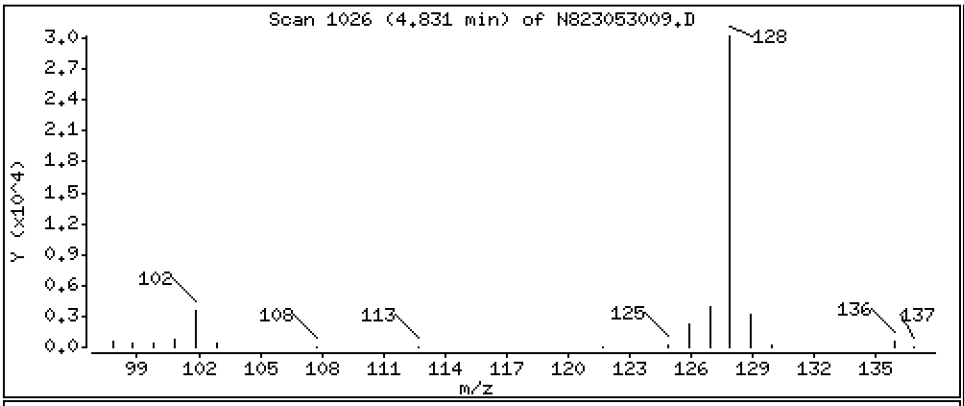
Operator: JZ

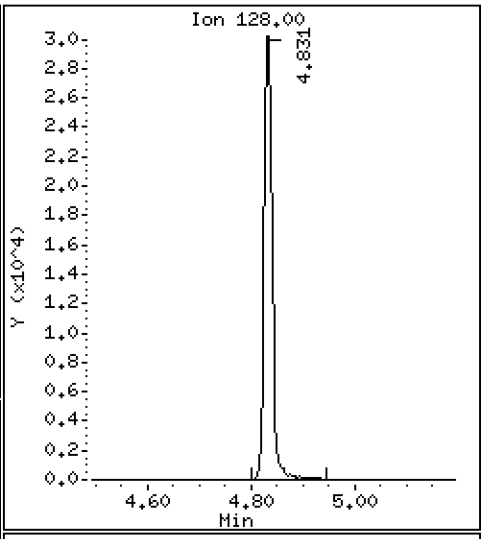
Column phase: Rxi-17sil

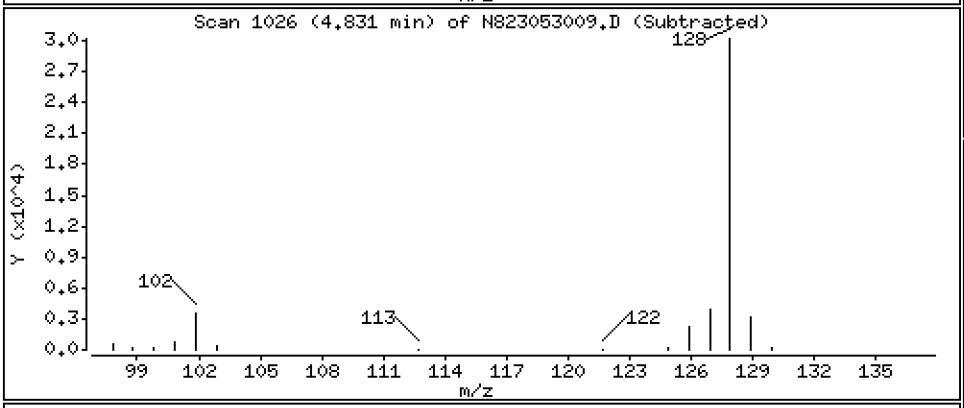
Column diameter: 0.25

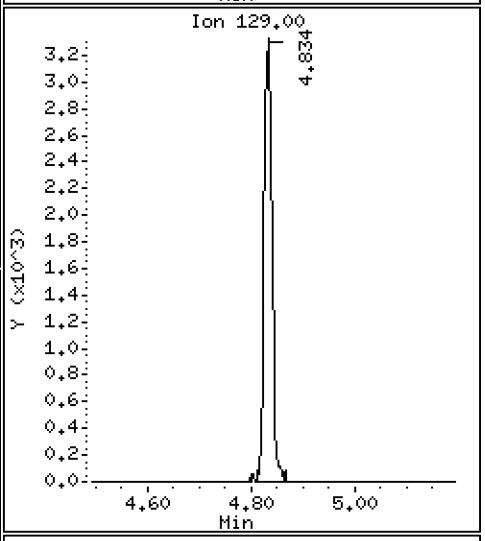
2 Naphthalene

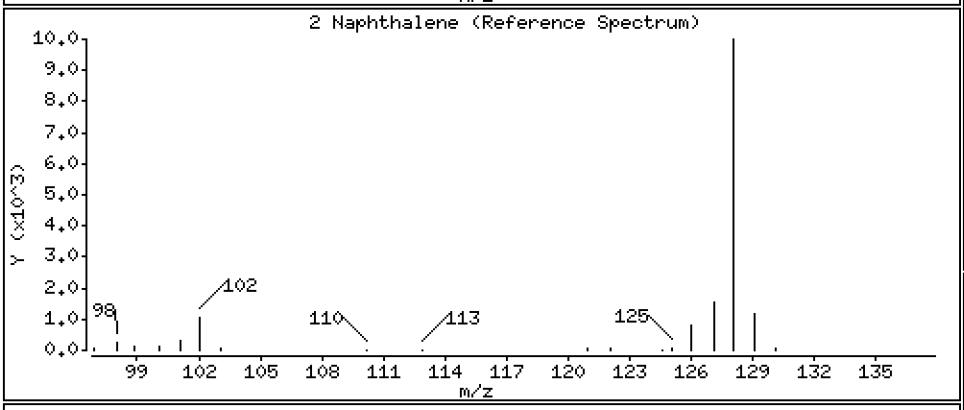
Concentration: 3.271 ug/mL

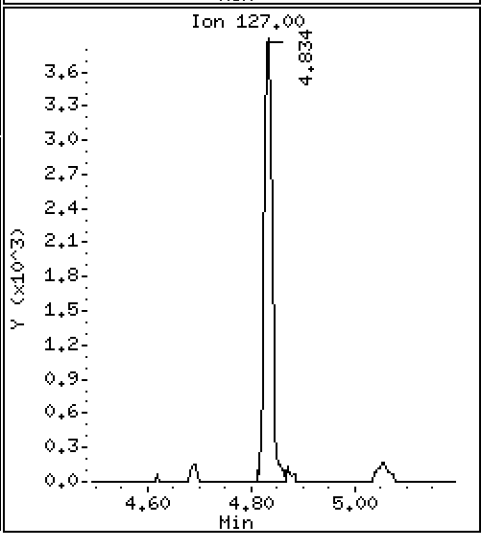


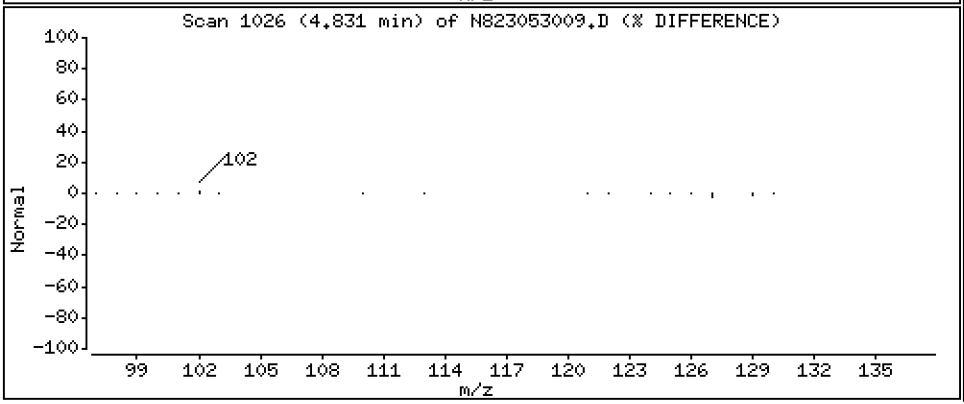












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Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

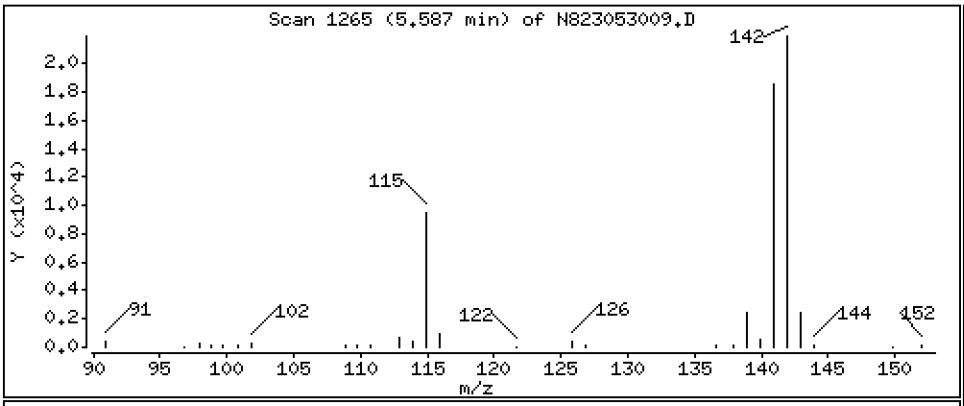
Operator: JZ

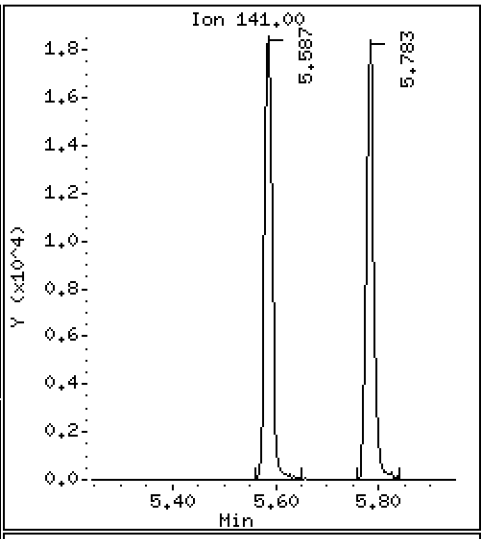
Column phase: Rxi-17sil

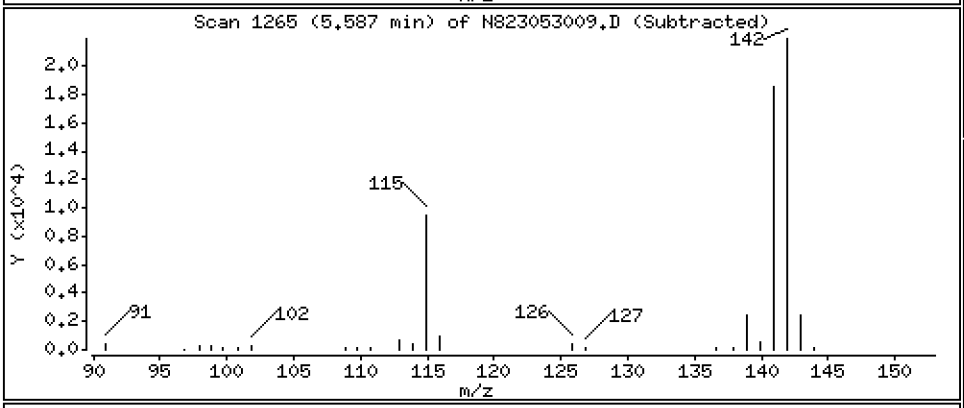
Column diameter: 0.25

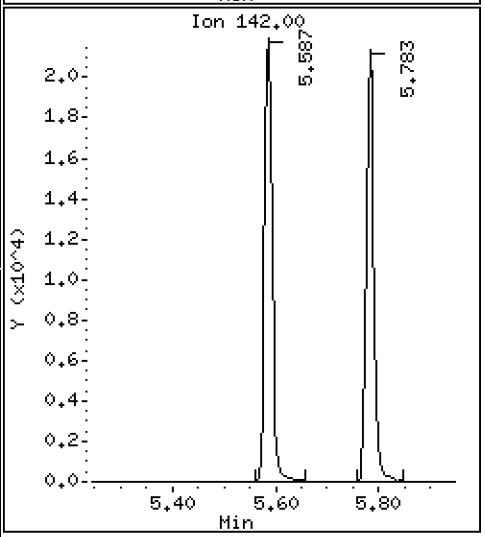
4 2-Methylnaphthalene

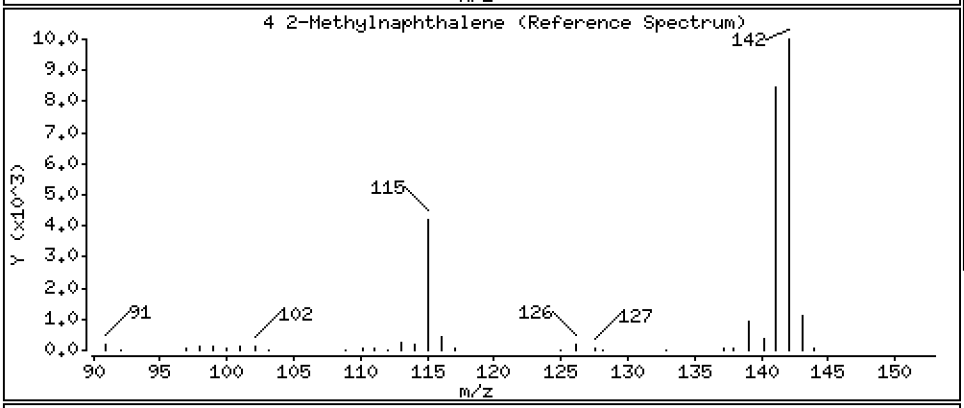
Concentration: 3.331 ug/mL

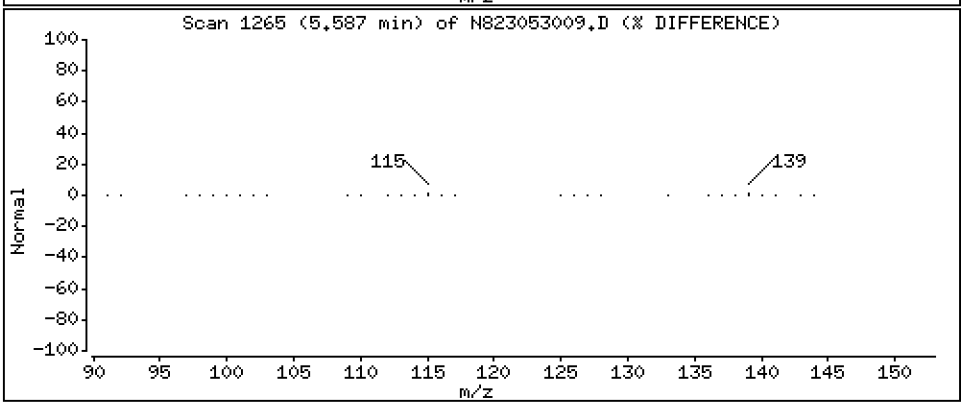












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Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

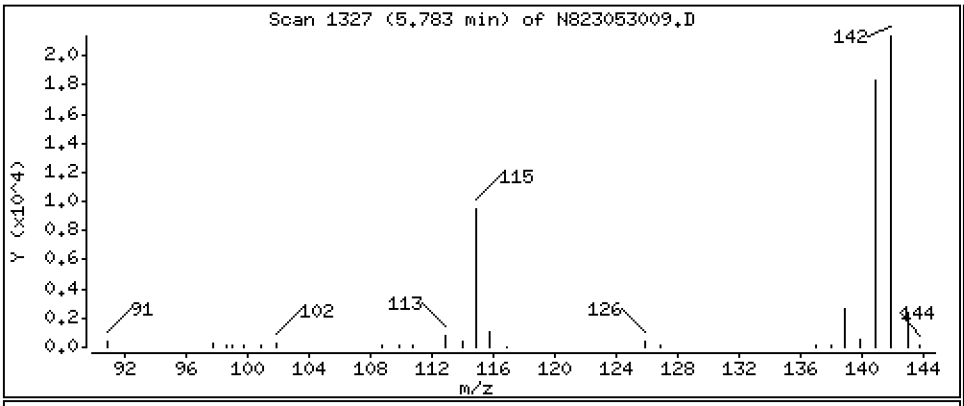
Operator: JZ

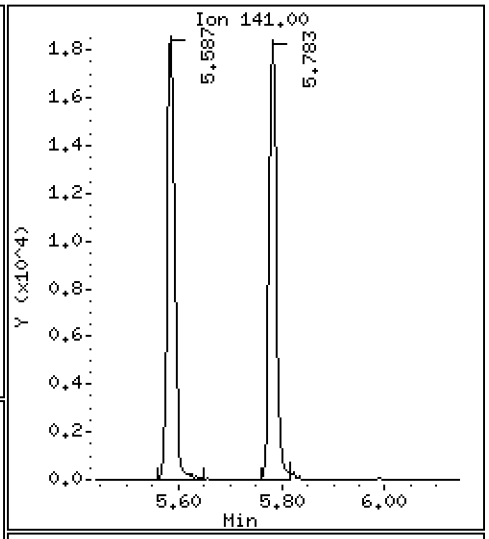
Column phase: Rxi-17sil

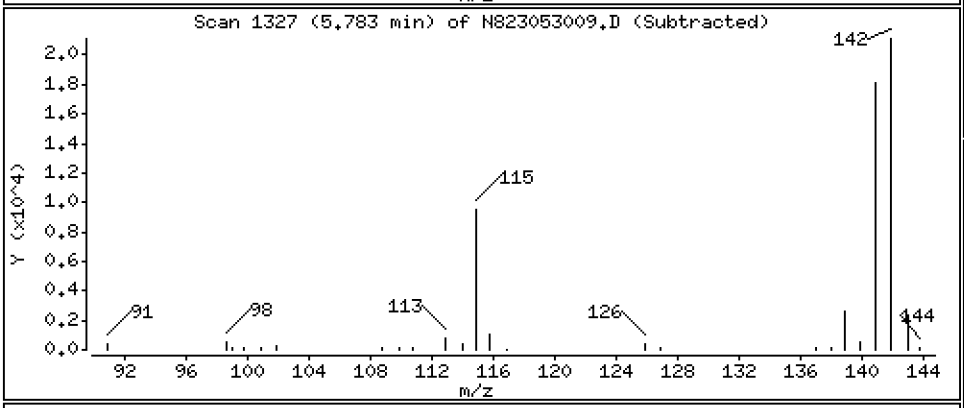
Column diameter: 0.25

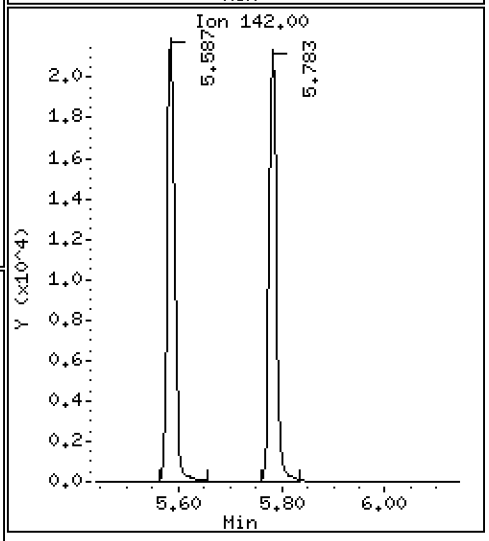
5 1-methylnaphthalene

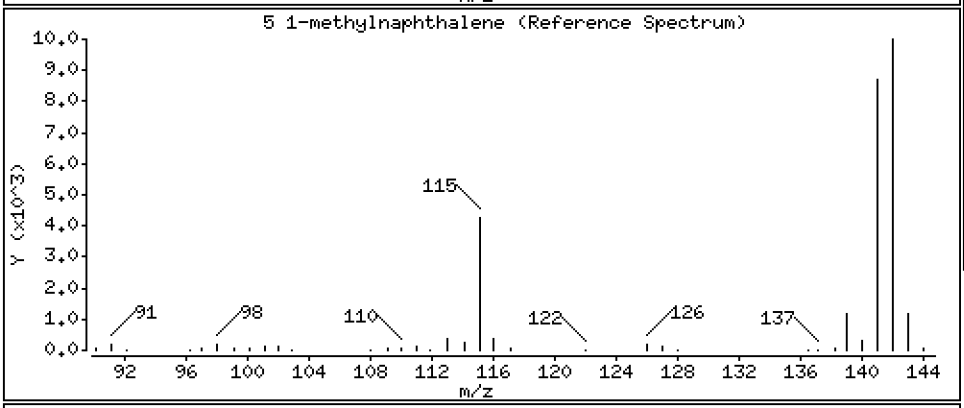
Concentration: 3.302 ug/mL

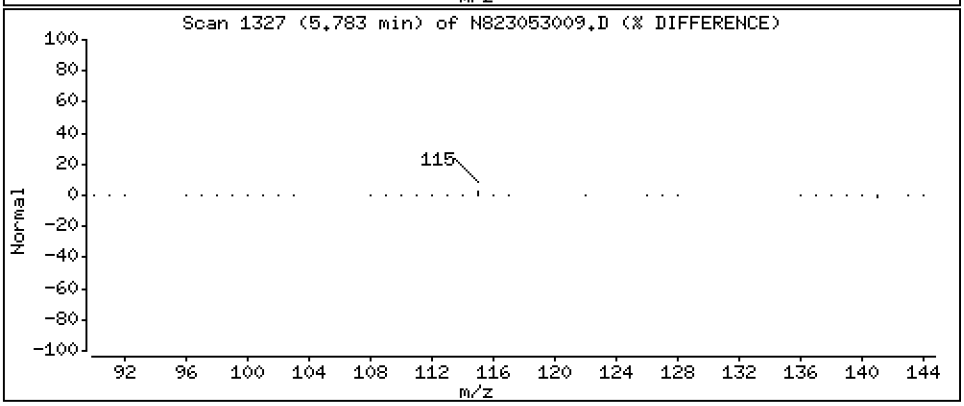












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Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

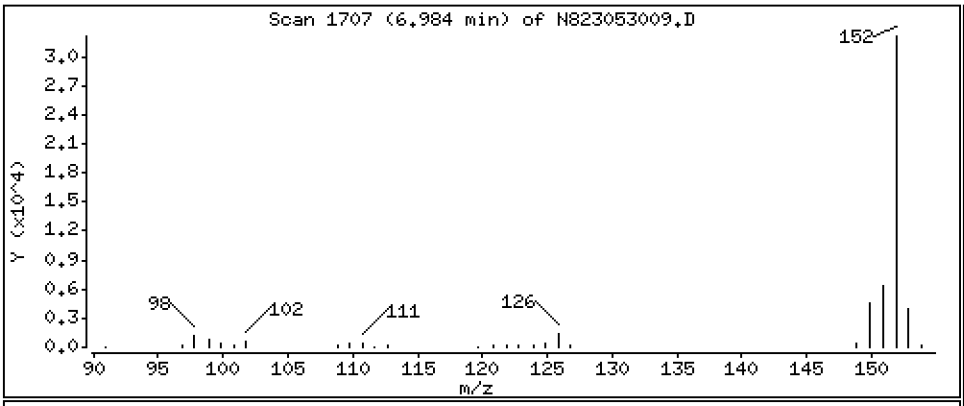
Operator: JZ

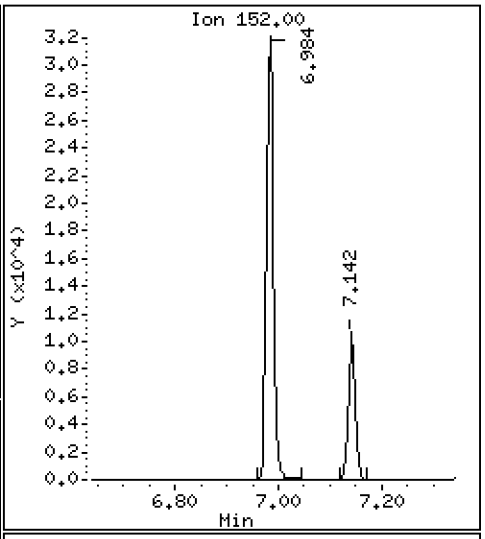
Column phase: Rxi-17sil

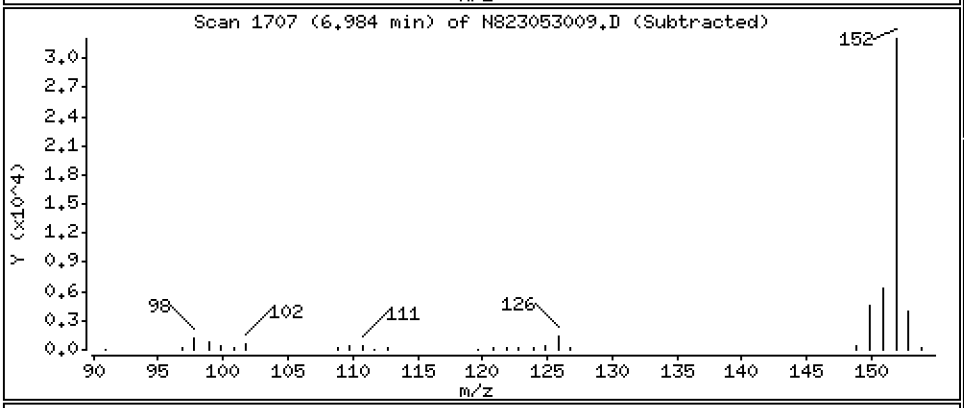
Column diameter: 0.25

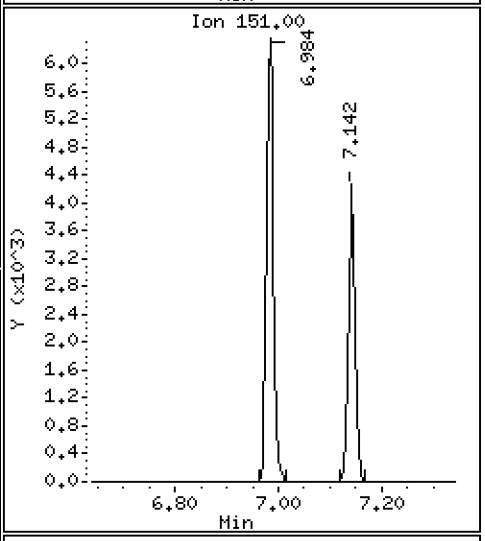
9 Acenaphthylene

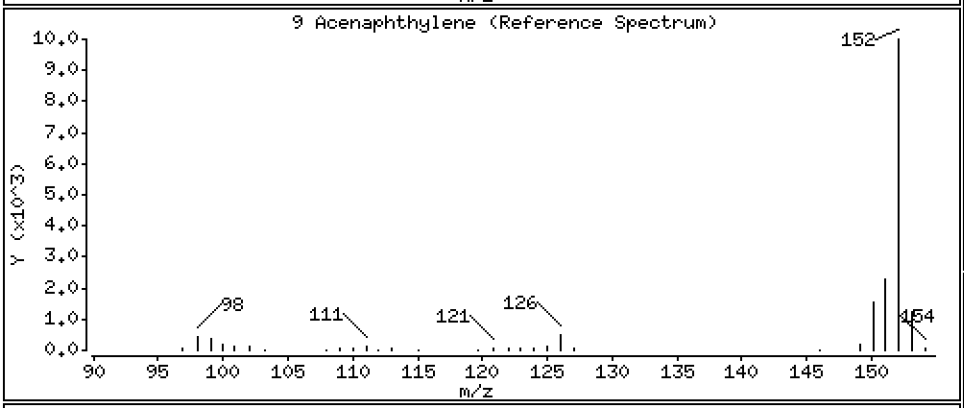
Concentration: 3.020 ug/mL

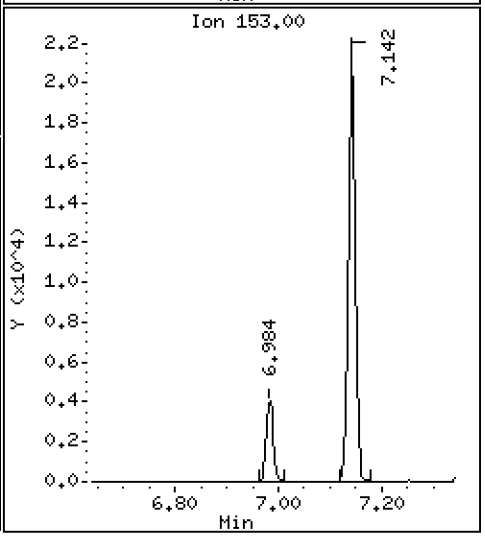


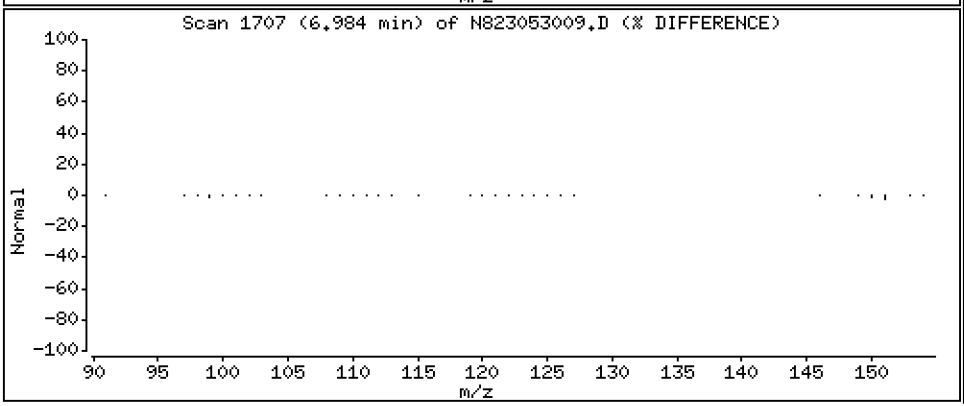












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Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

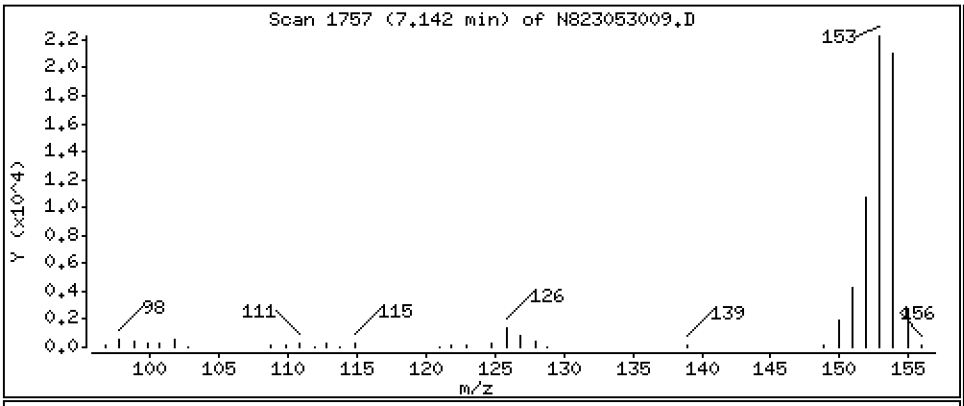
Operator: JZ

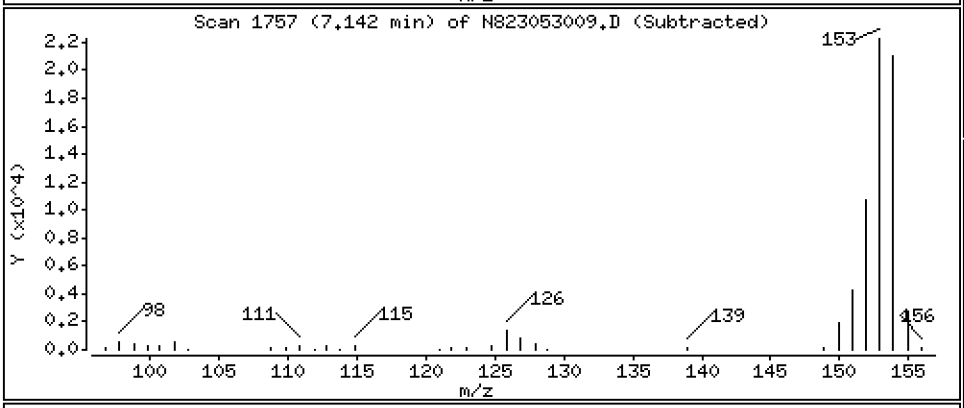
Column phase: Rxi-17sil

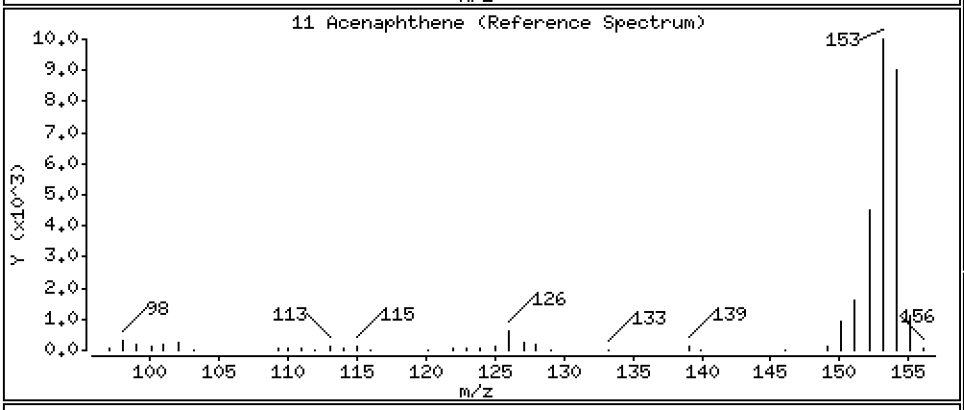
Column diameter: 0.25

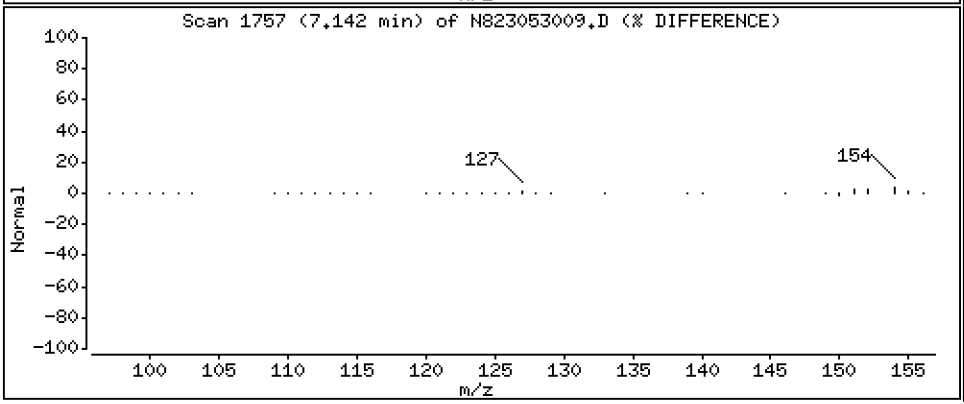
11 Acenaphthene

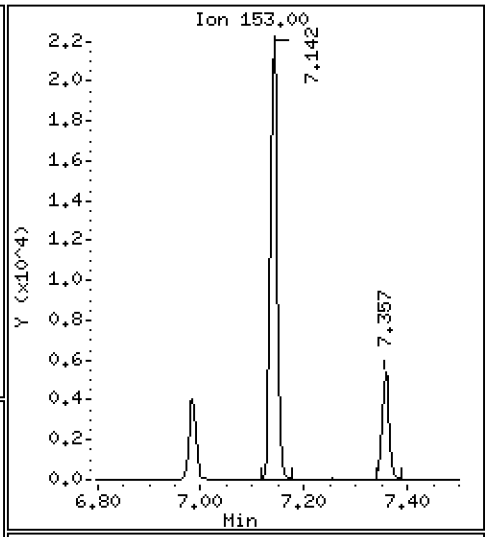
Concentration: 3.191 ug/mL

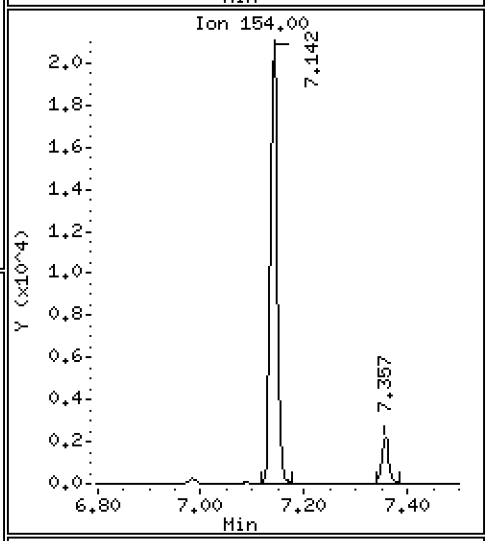


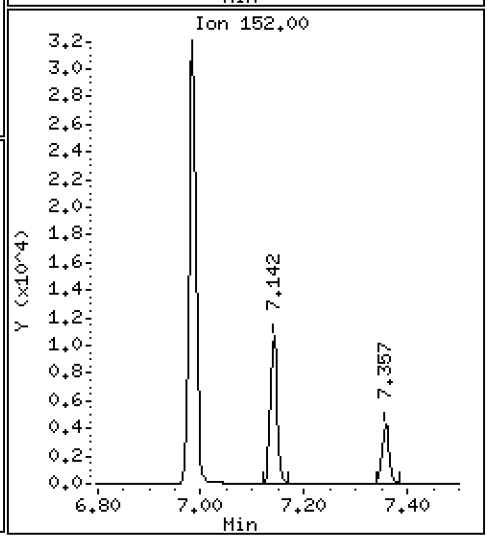












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Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

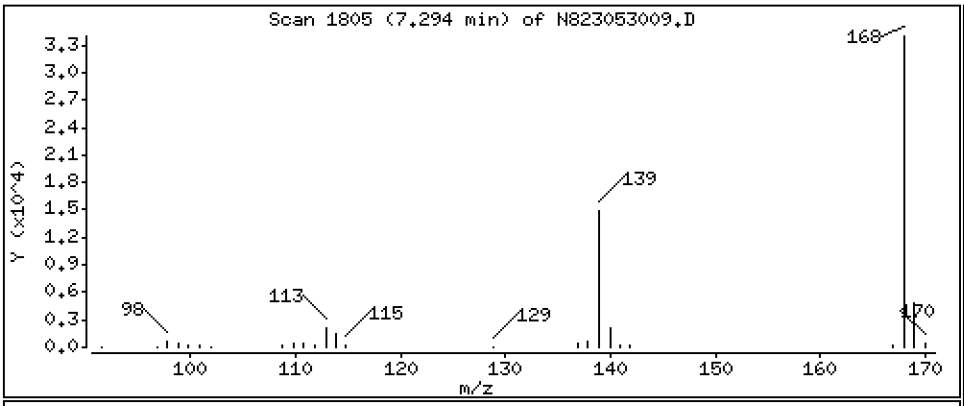
Operator: JZ

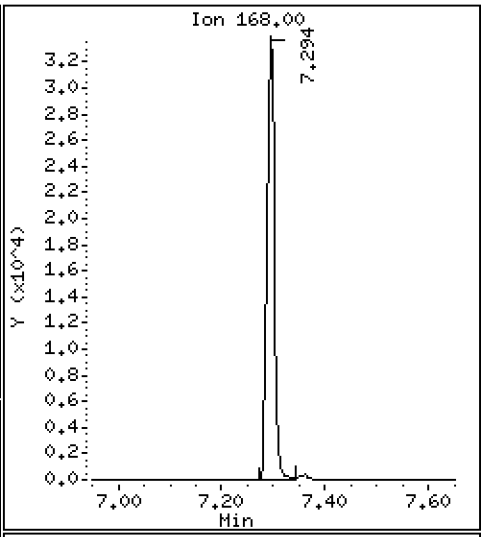
Column phase: Rxi-17sil

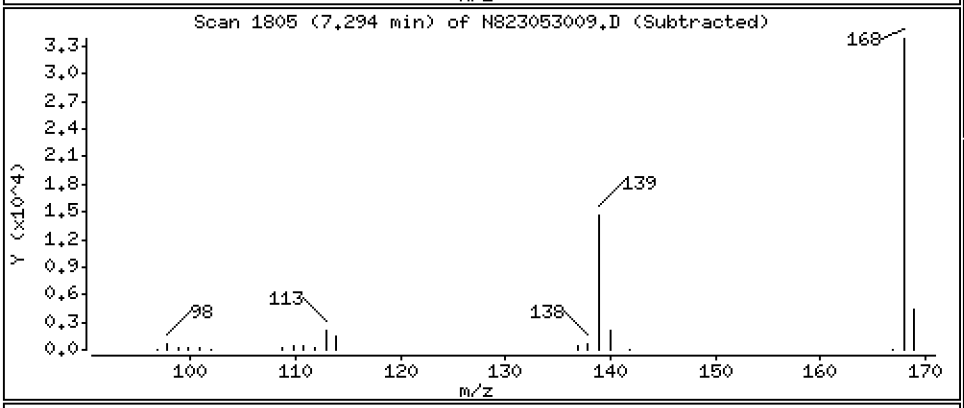
Column diameter: 0.25

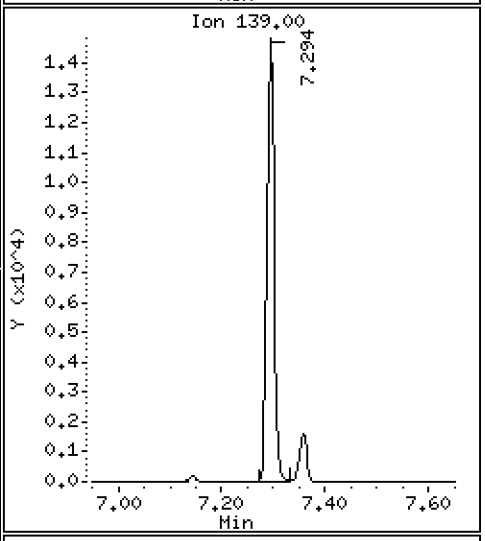
12 Dibenzofuran

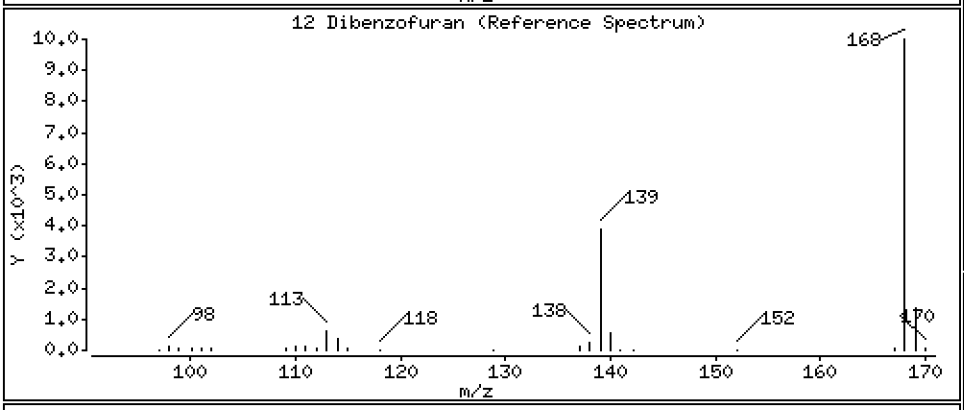
Concentration: 3.331 ug/mL

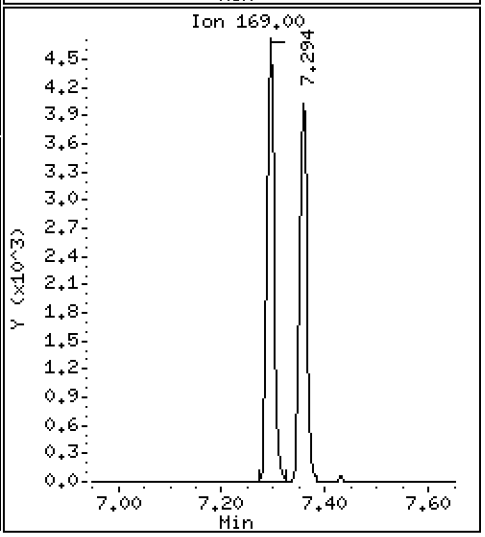


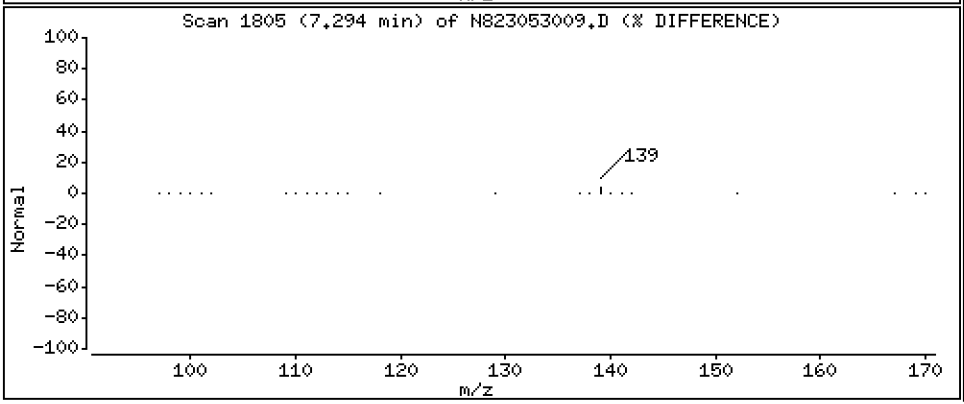












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Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

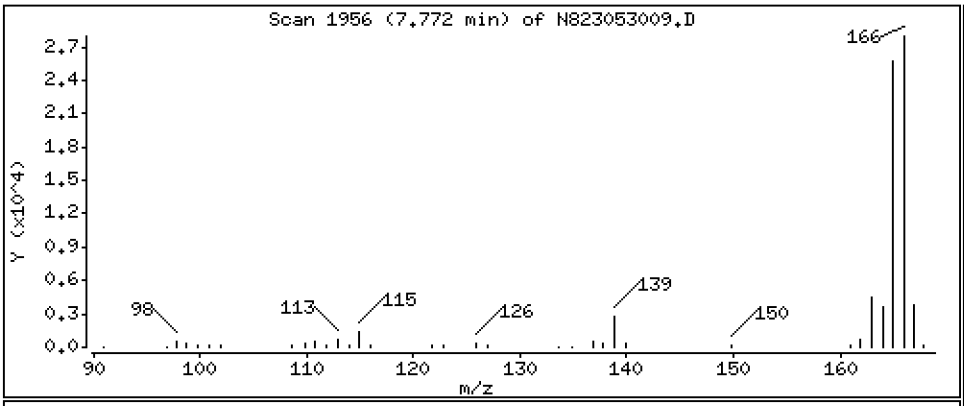
Operator: JZ

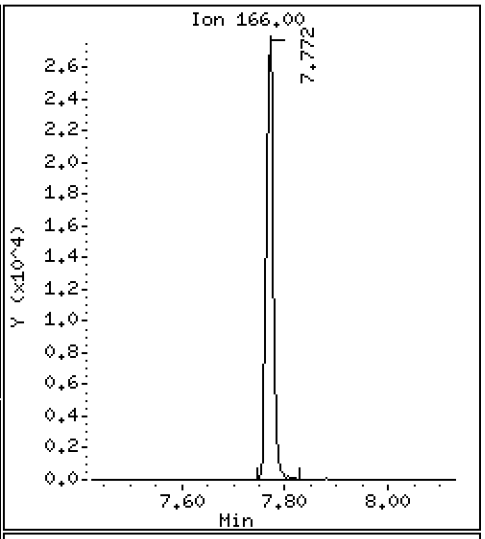
Column phase: Rxi-17sil

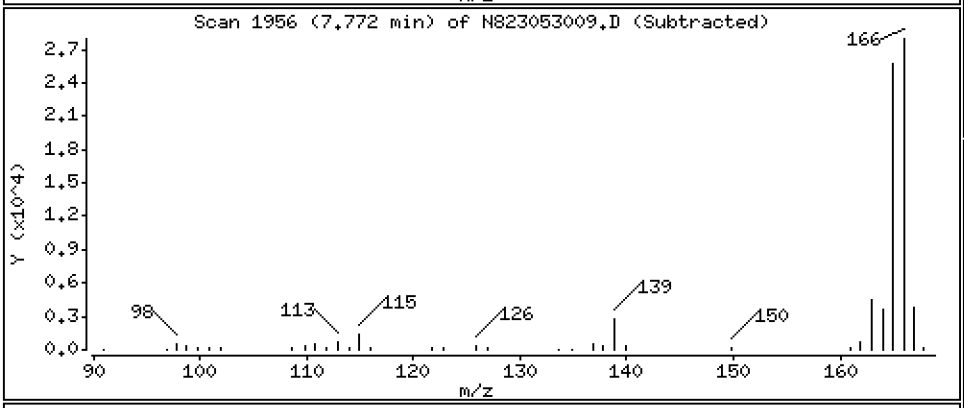
Column diameter: 0.25

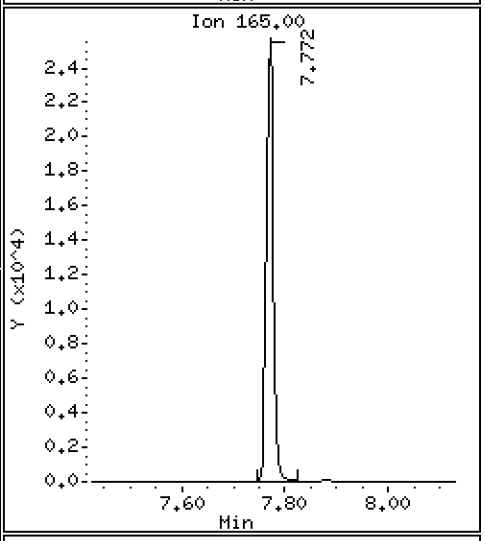
14 Fluorene

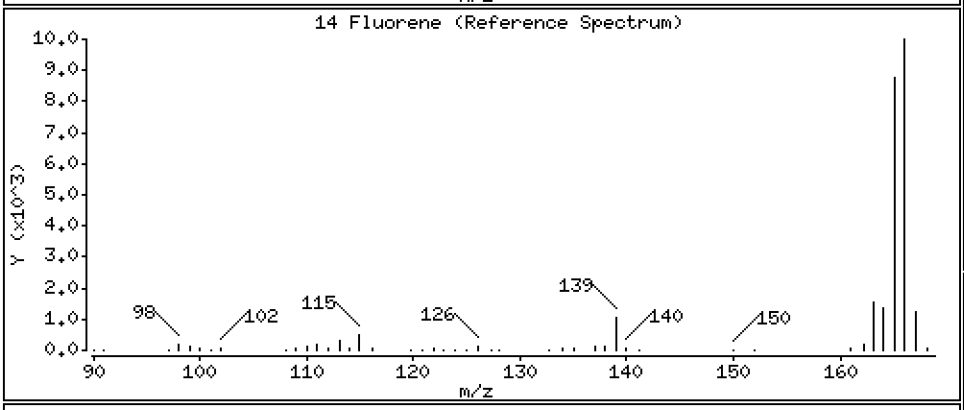
Concentration: 3.421 ug/mL

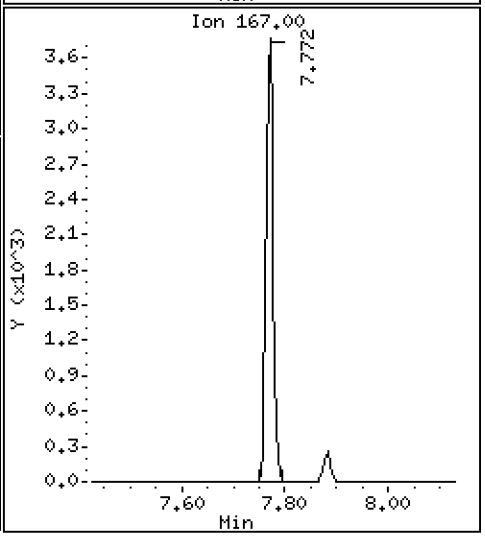


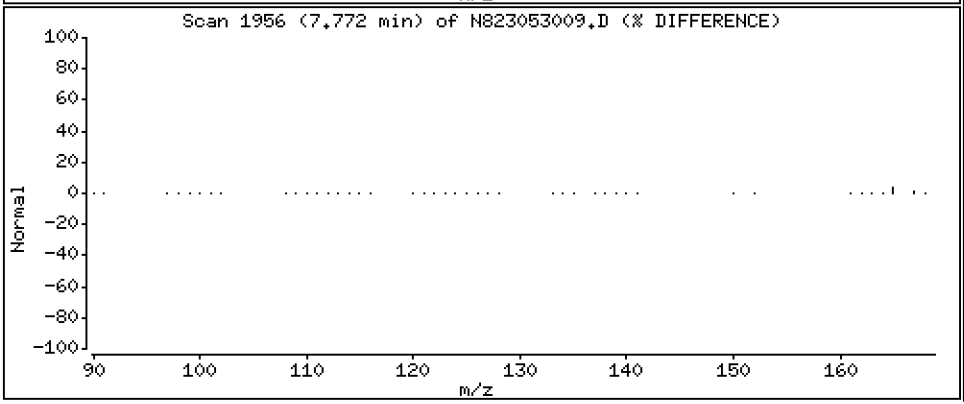












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053009.D

Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

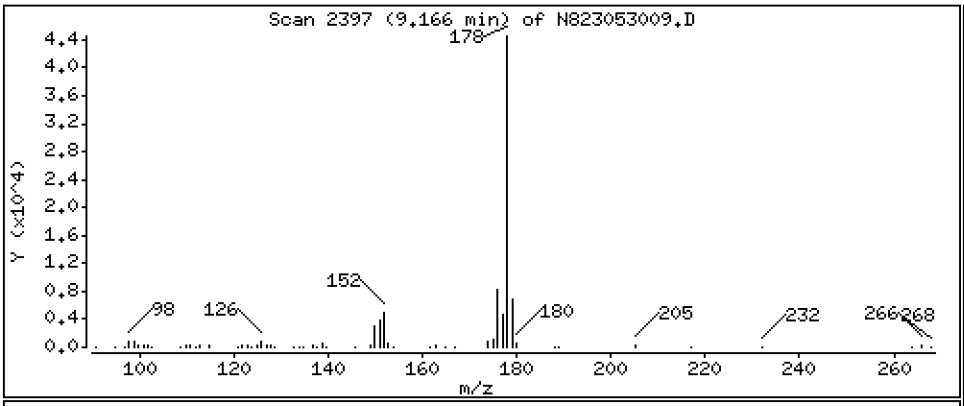
Operator: JZ

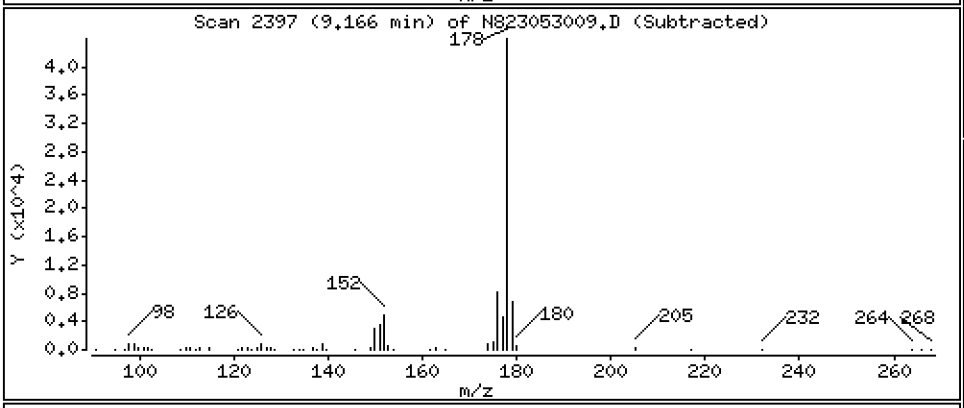
Column phase: Rxi-17sil

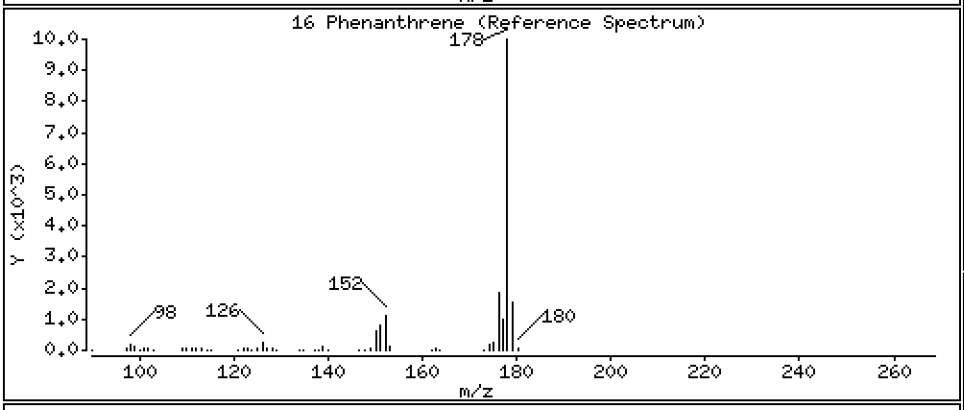
Column diameter: 0.25

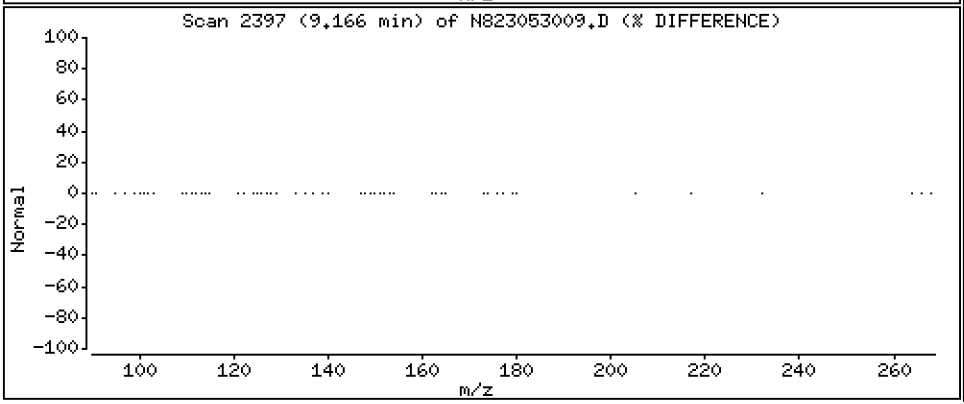
16 Phenanthrene

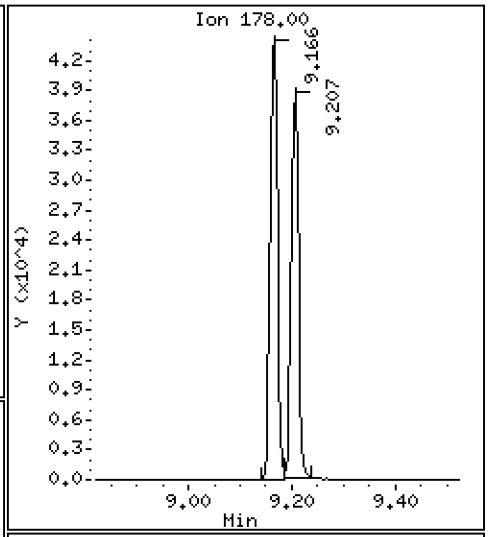
Concentration: 3.514 ug/mL

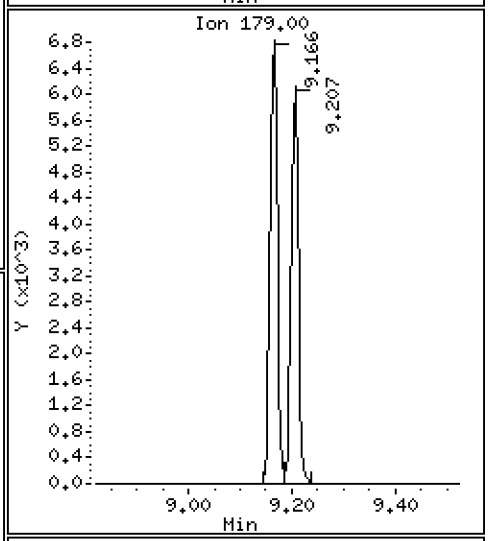


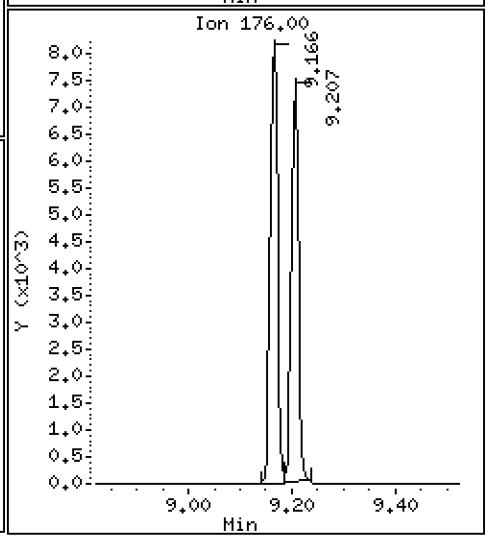












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053009.D

Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

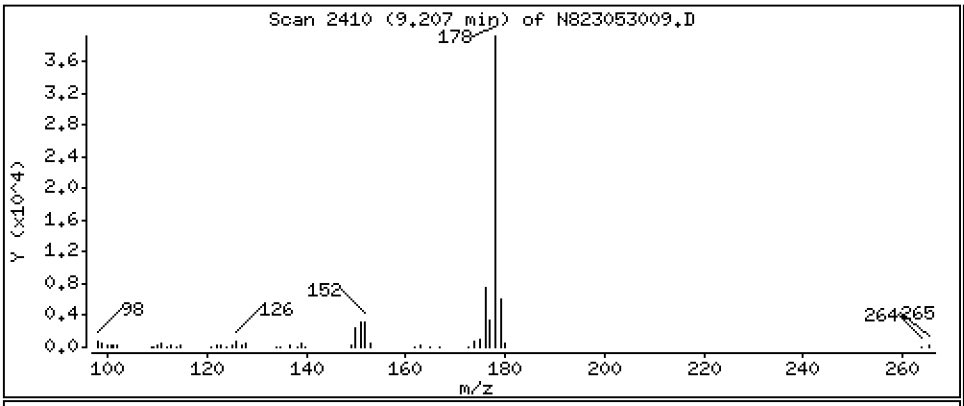
Operator: JZ

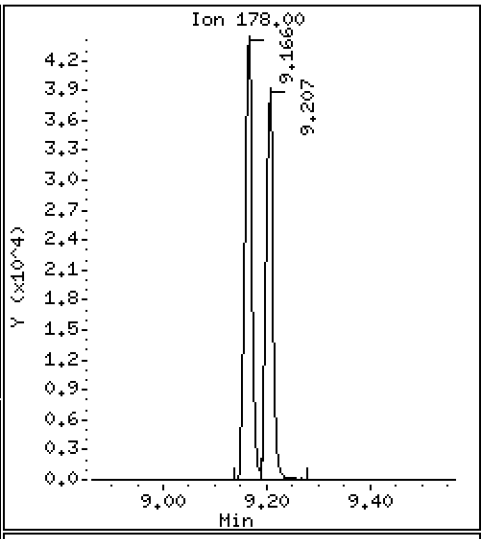
Column phase: Rxi-17sil

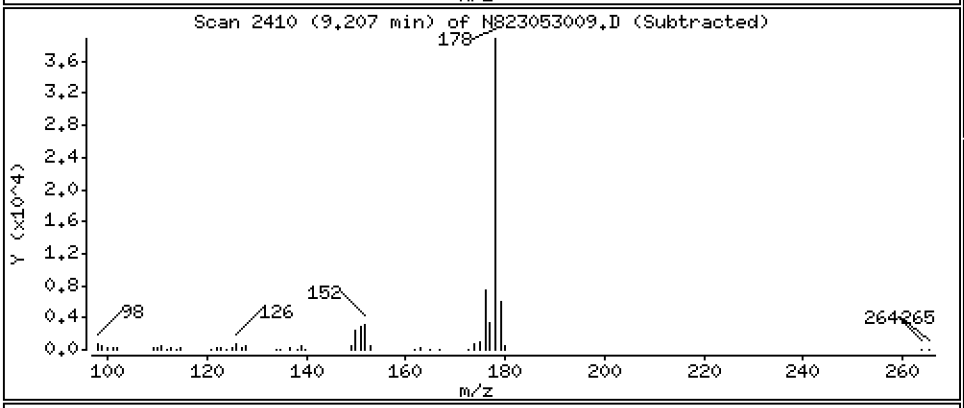
Column diameter: 0.25

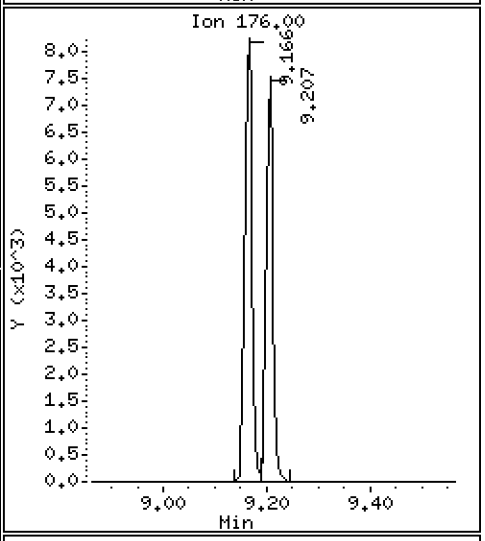
17 Anthracene

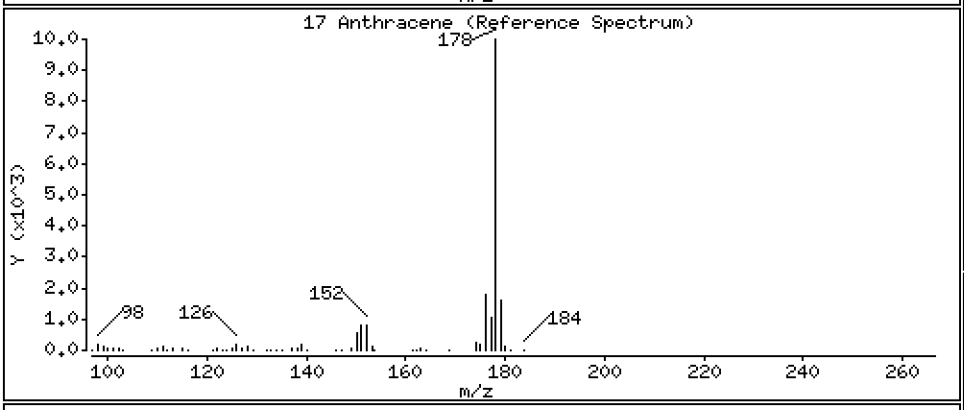
Concentration: 3.314 ug/mL

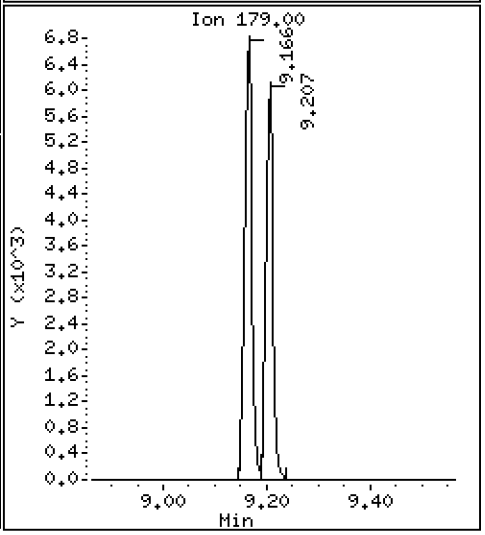


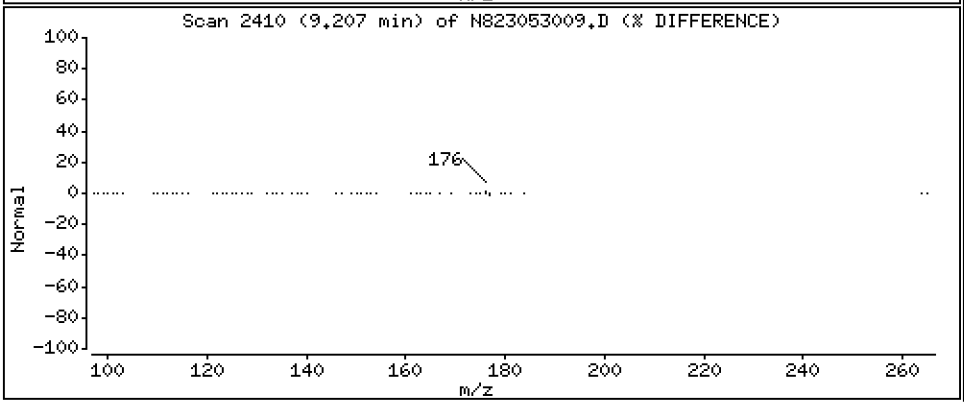












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053009.D

Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

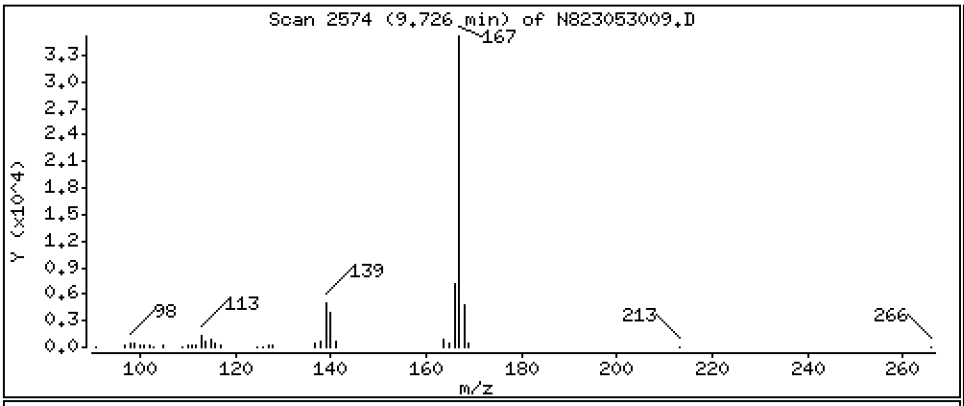
Operator: JZ

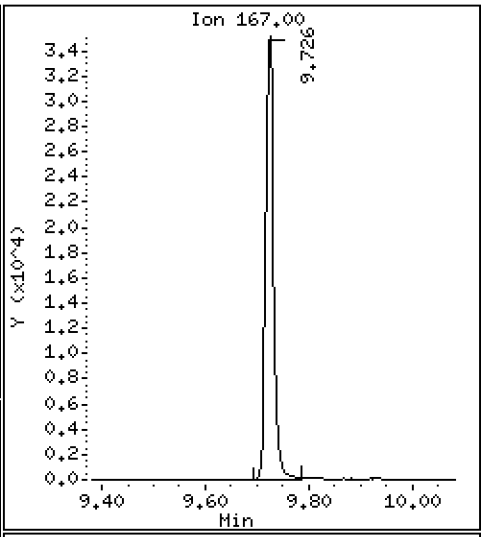
Column phase: Rxi-17sil

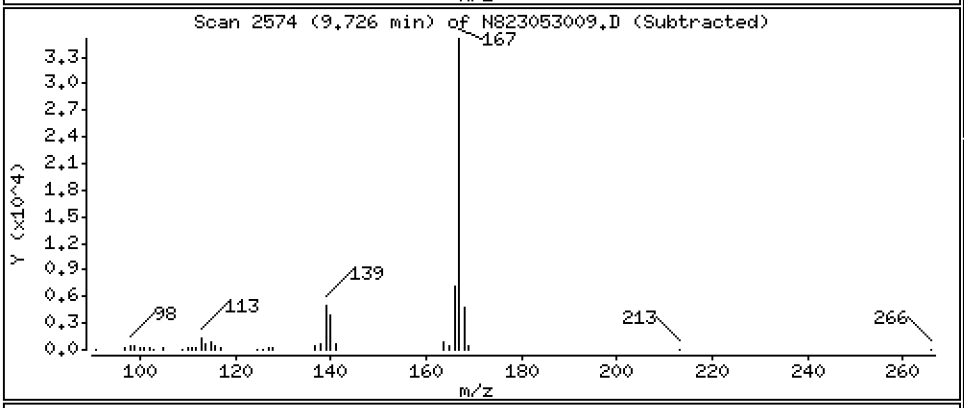
Column diameter: 0.25

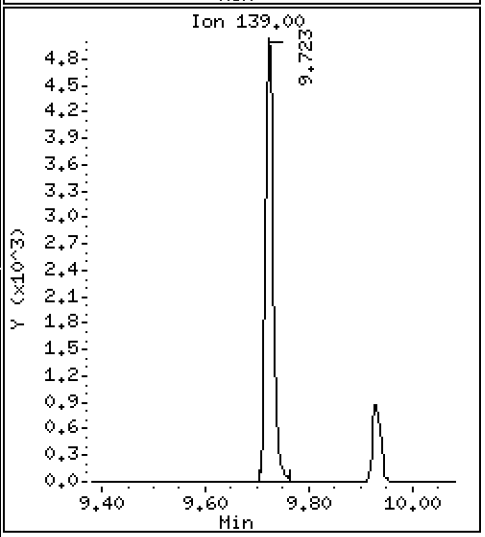
19 Carbazole

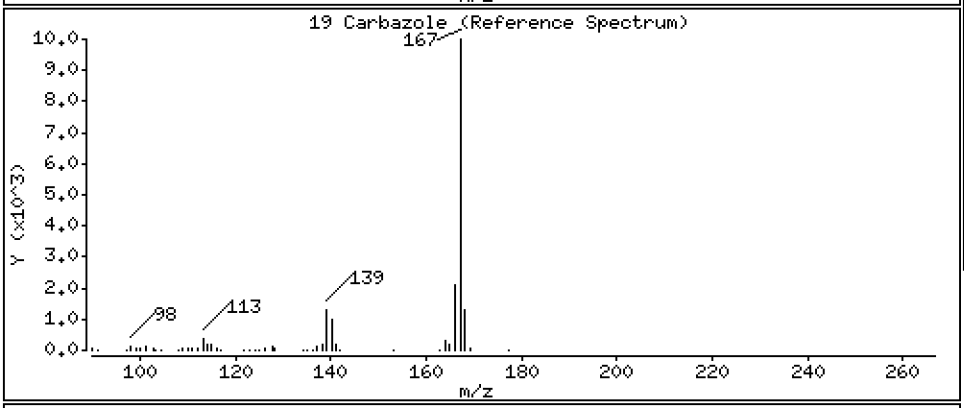
Concentration: 3.555 ug/mL

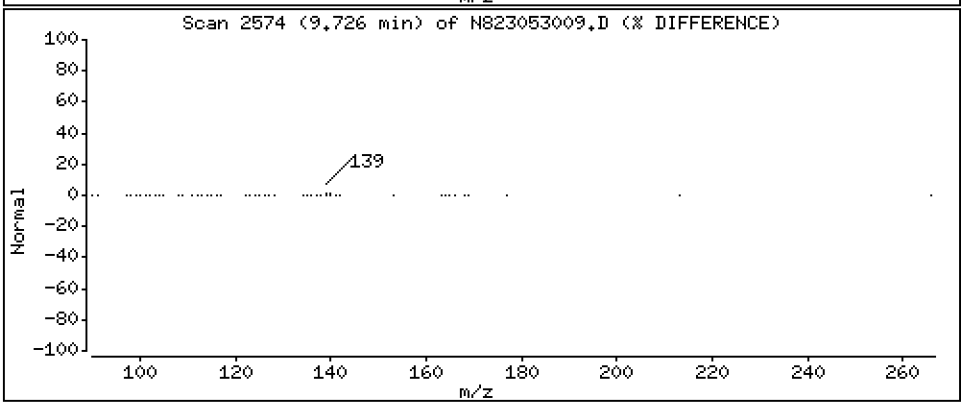












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Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

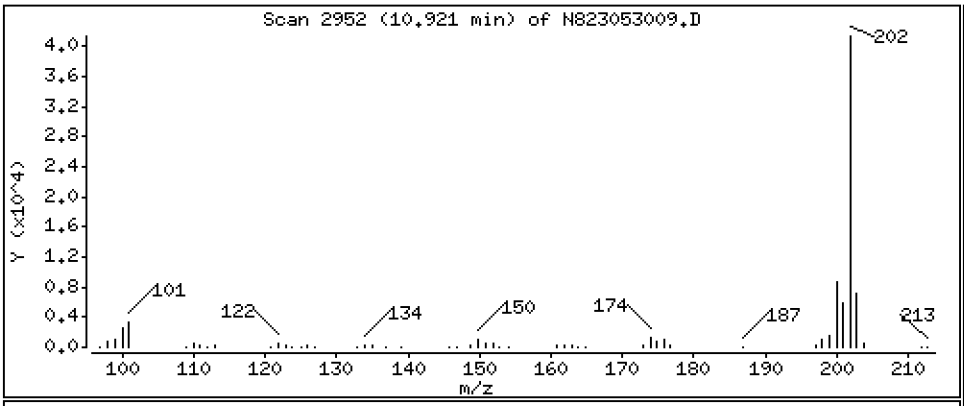
Operator: JZ

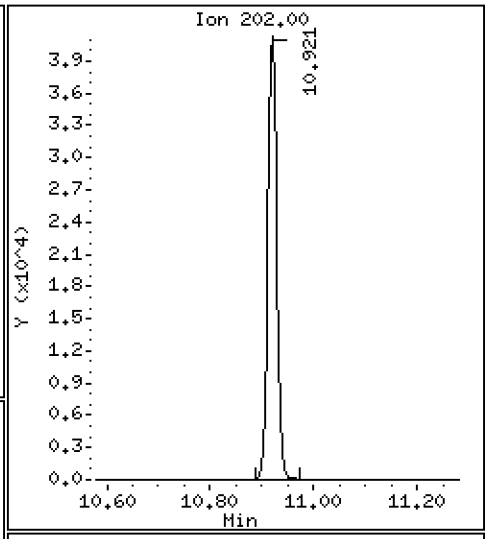
Column phase: Rxi-17sil

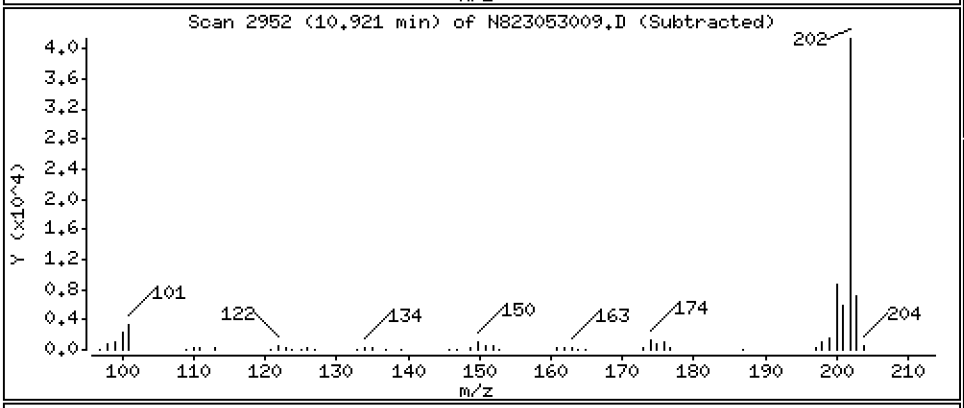
Column diameter: 0.25

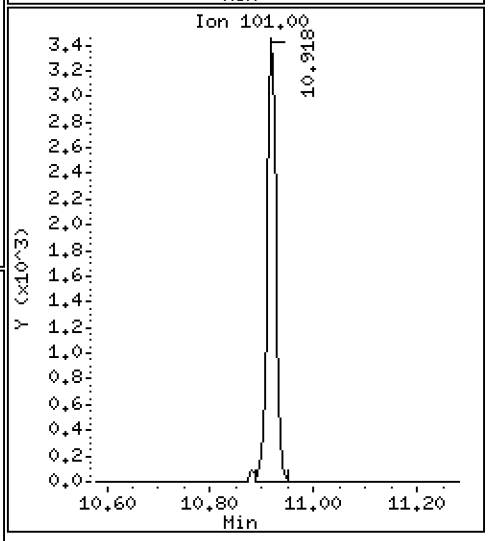
22 Fluoranthene

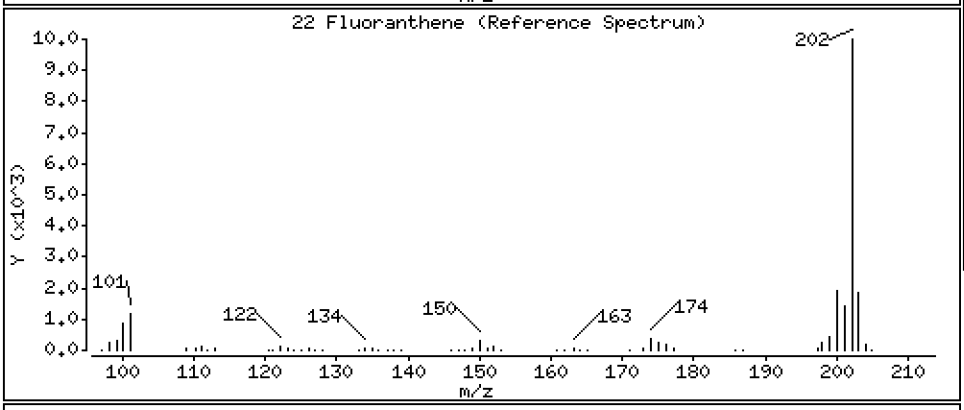
Concentration: 3.687 ug/mL

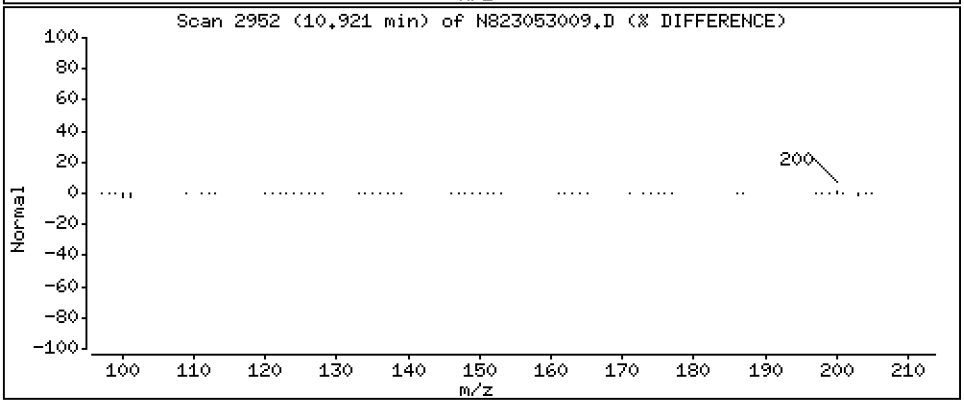












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Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

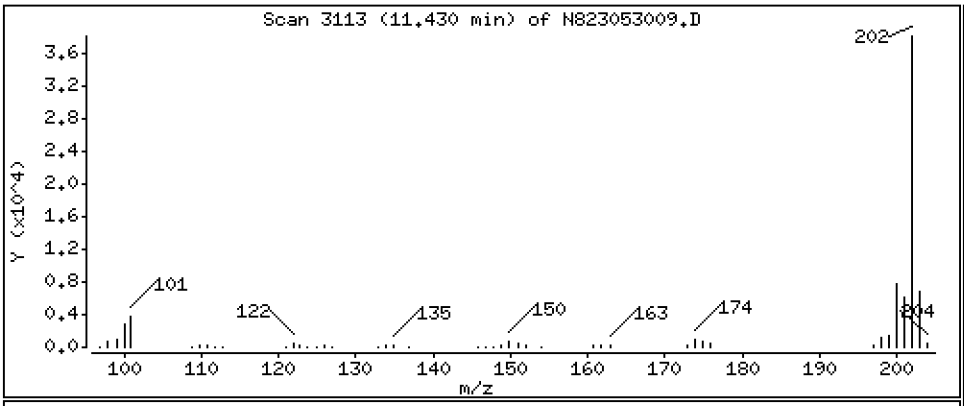
Operator: JZ

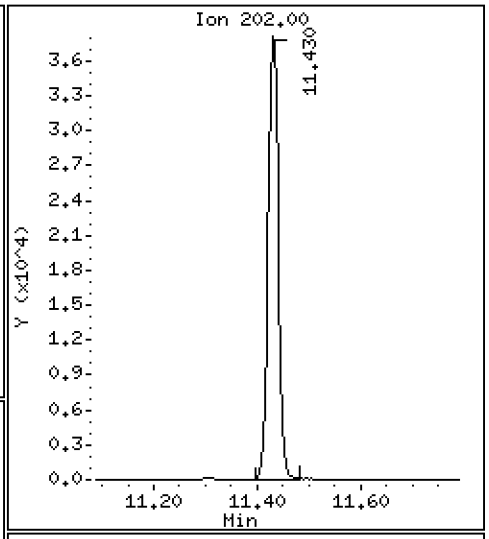
Column phase: Rxi-17sil

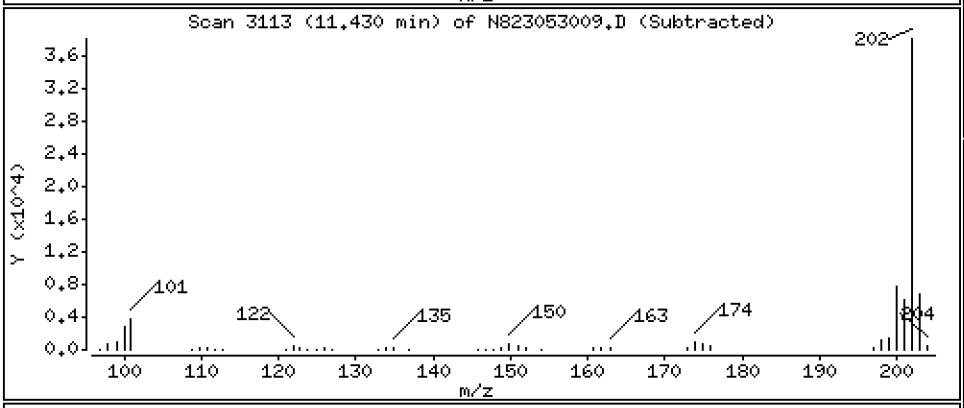
Column diameter: 0.25

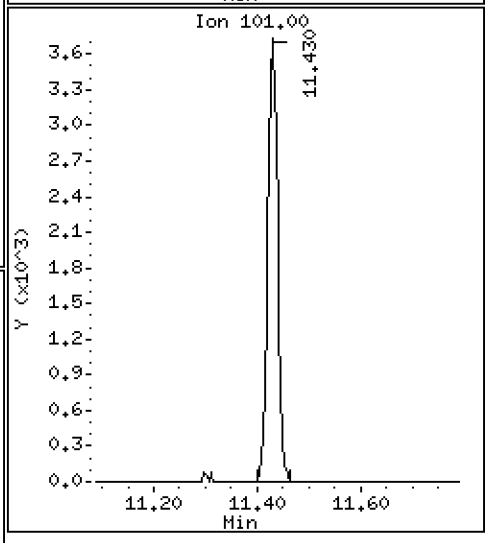
23 Pyrene

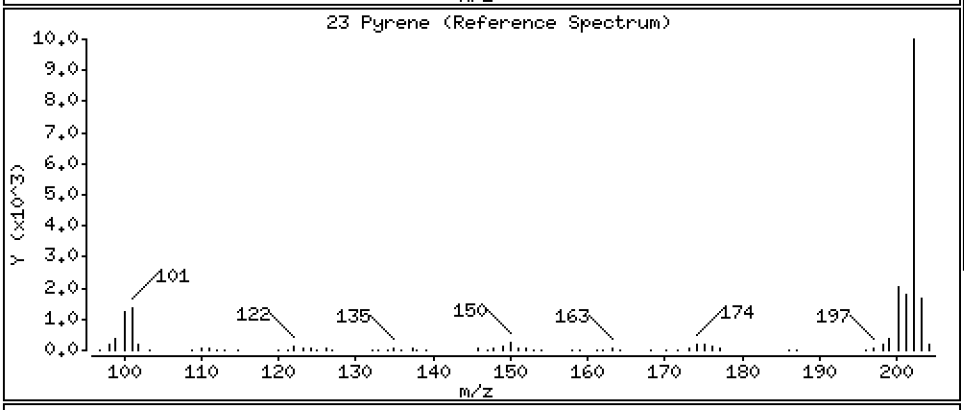
Concentration: 3.871 ug/mL

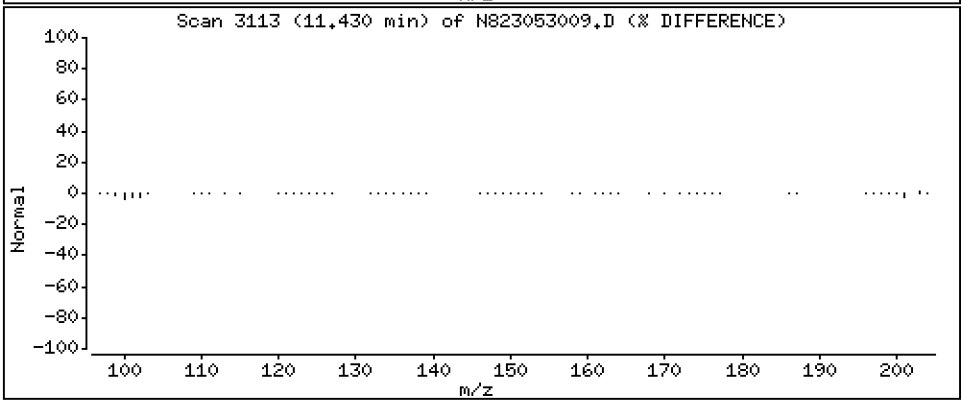












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053009.D

Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

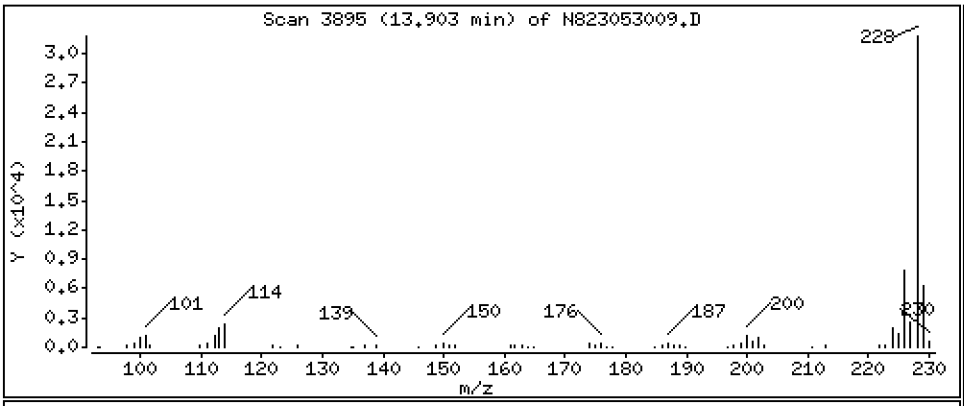
Operator: JZ

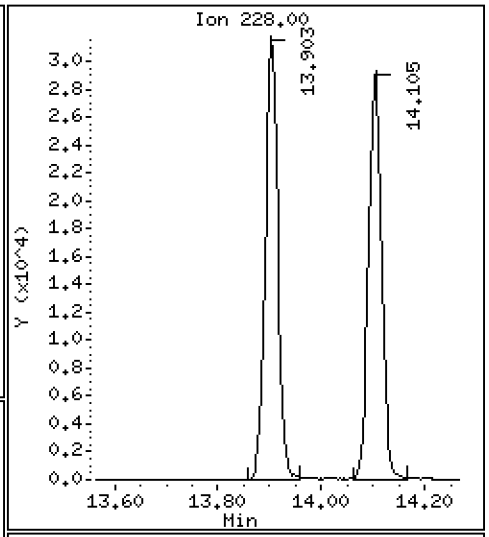
Column phase: Rxi-17sil

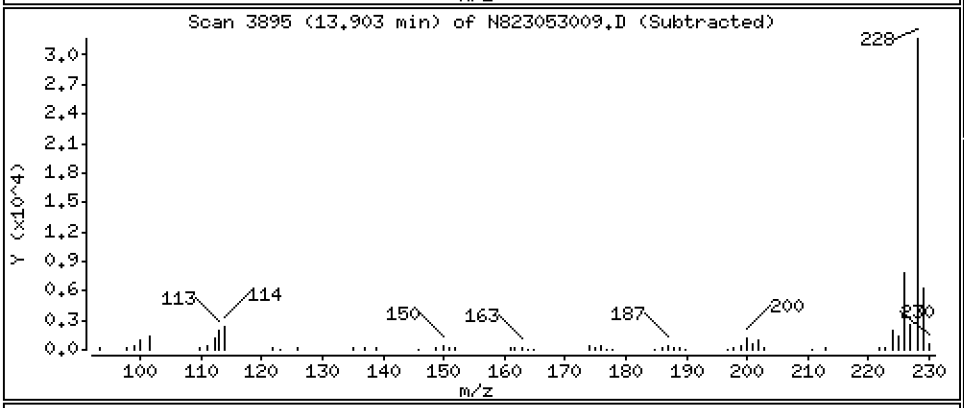
Column diameter: 0.25

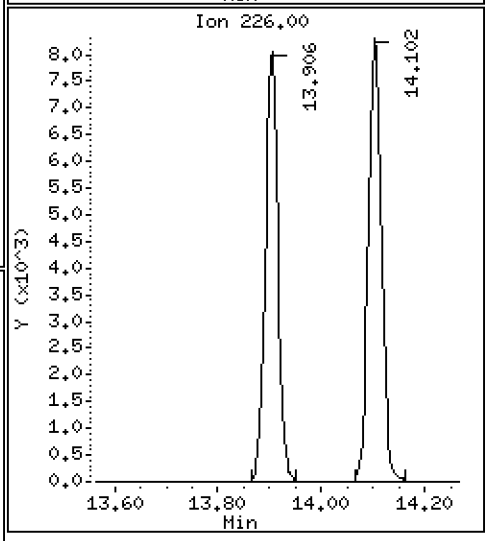
24 Benzo(a)anthracene

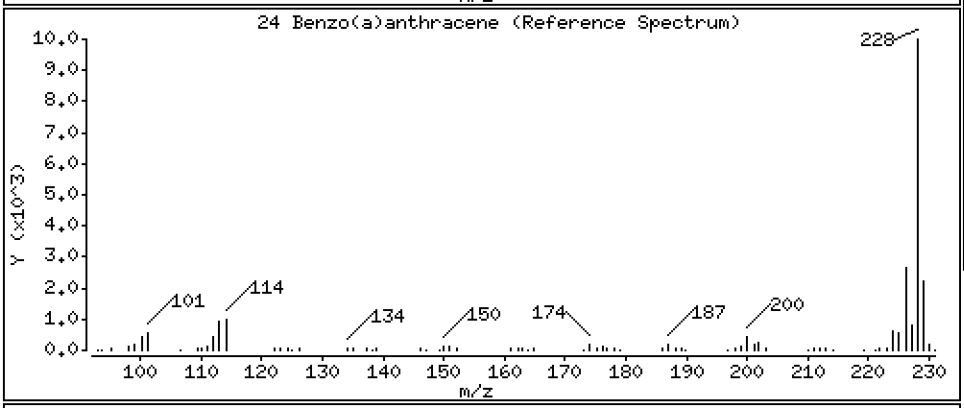
Concentration: 3.835 ug/mL

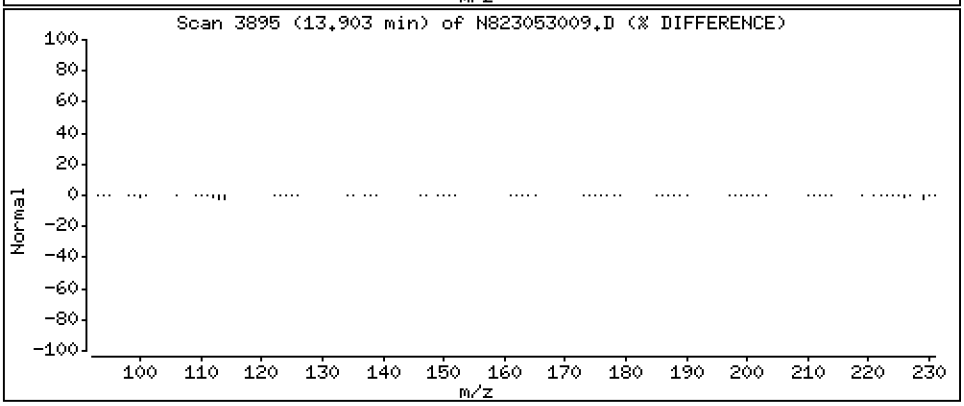












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Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

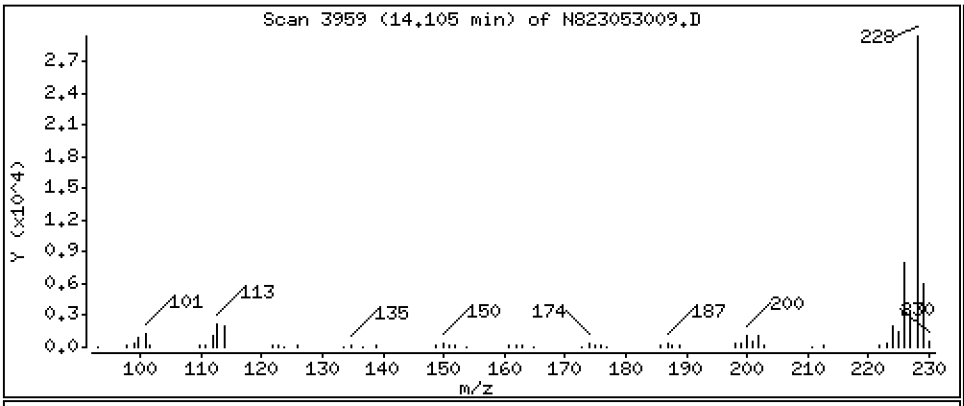
Operator: JZ

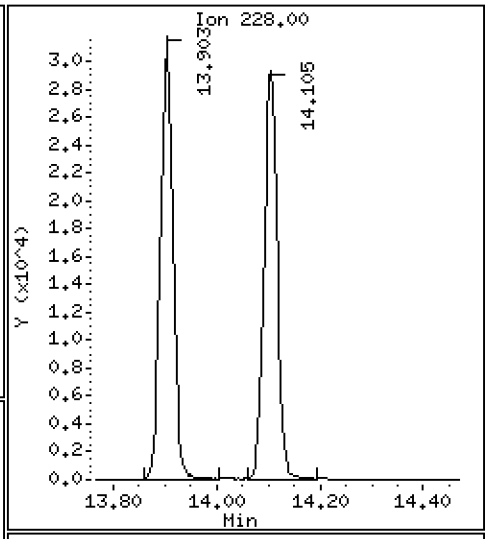
Column phase: Rxi-17sil

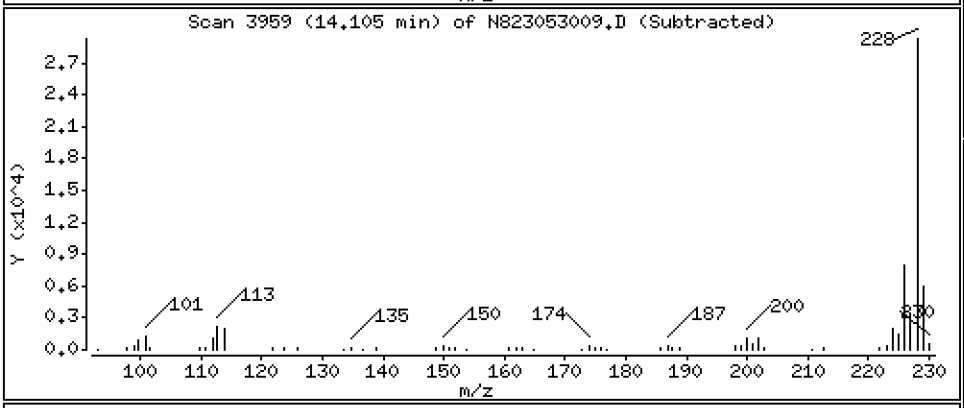
Column diameter: 0.25

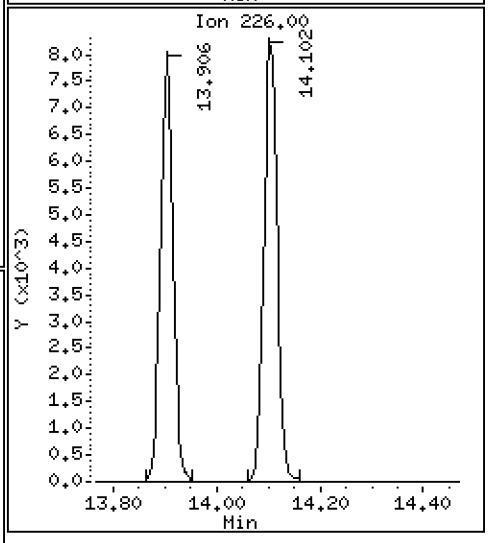
27 Chrysene

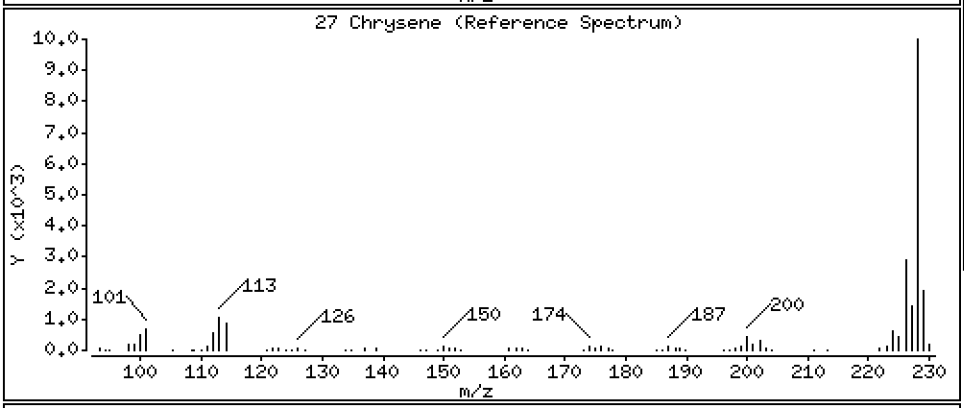
Concentration: 3.778 ug/mL

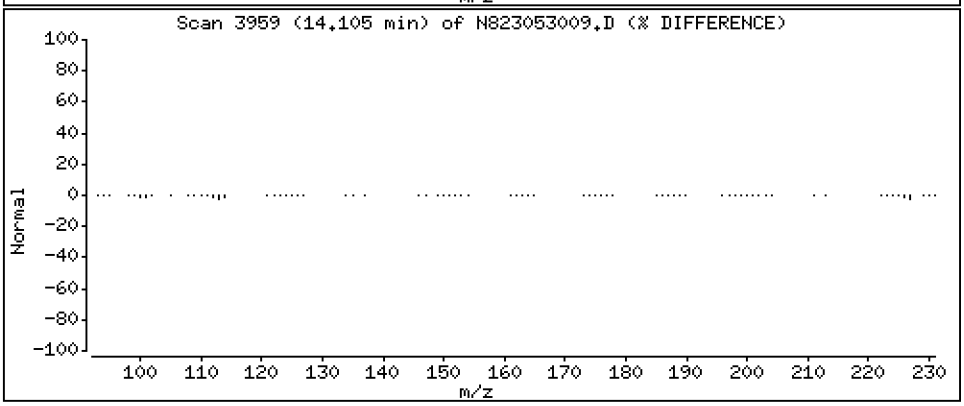












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Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

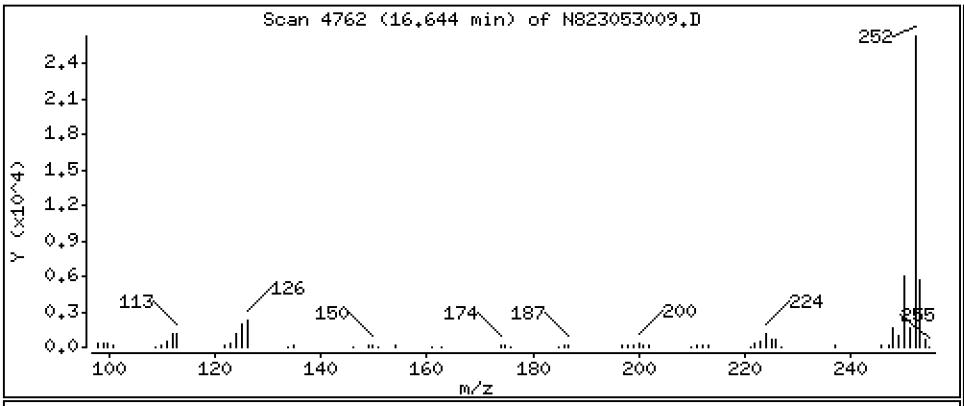
Operator: JZ

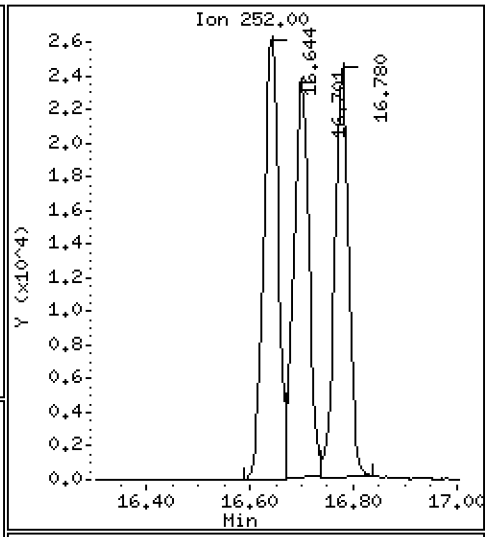
Column phase: Rxi-17sil

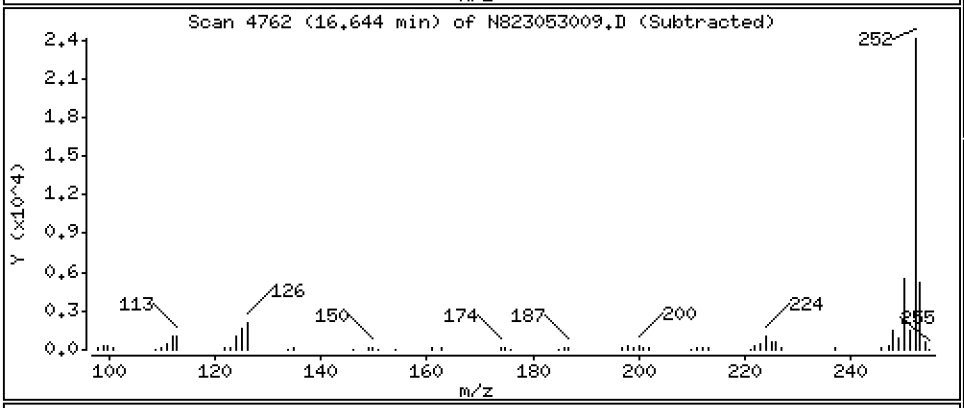
Column diameter: 0.25

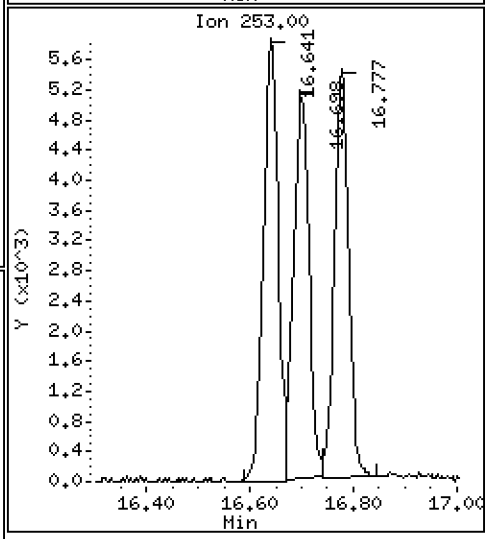
28 Benzo(b)fluoranthene

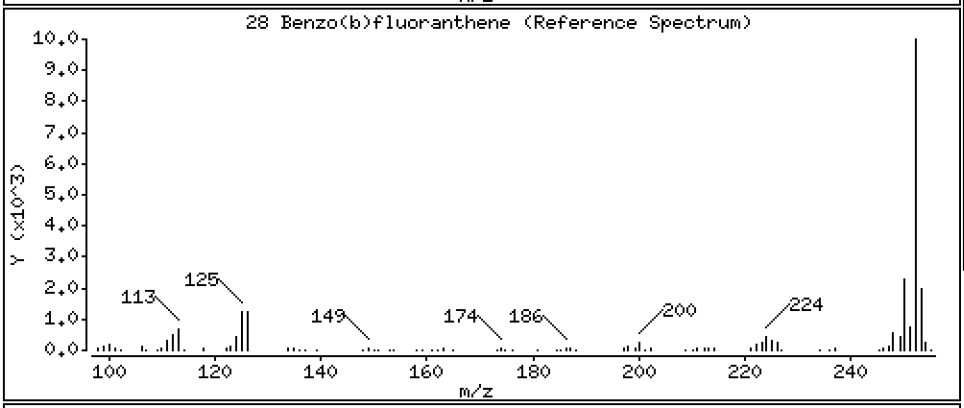
Concentration: 4.422 ug/mL

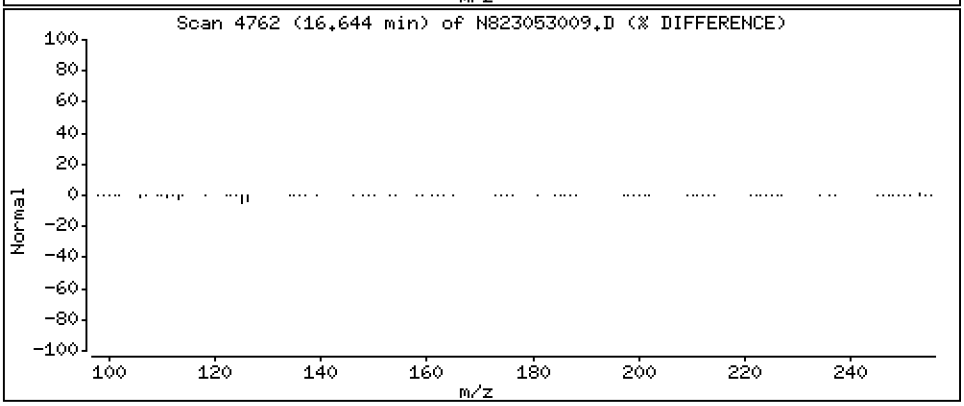












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053009.D

Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

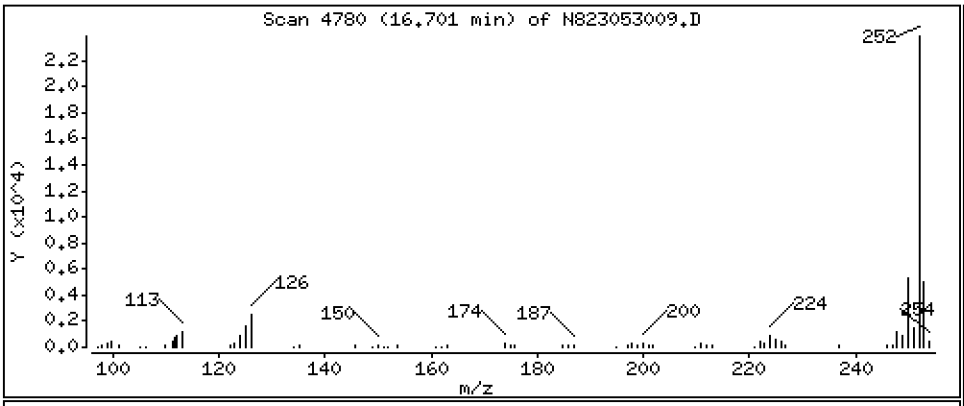
Operator: JZ

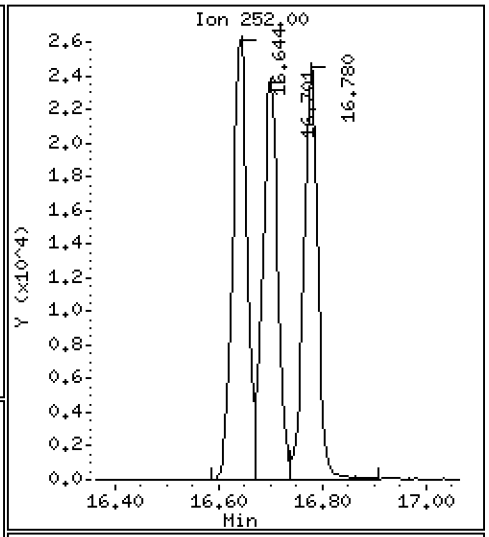
Column phase: Rxi-17sil

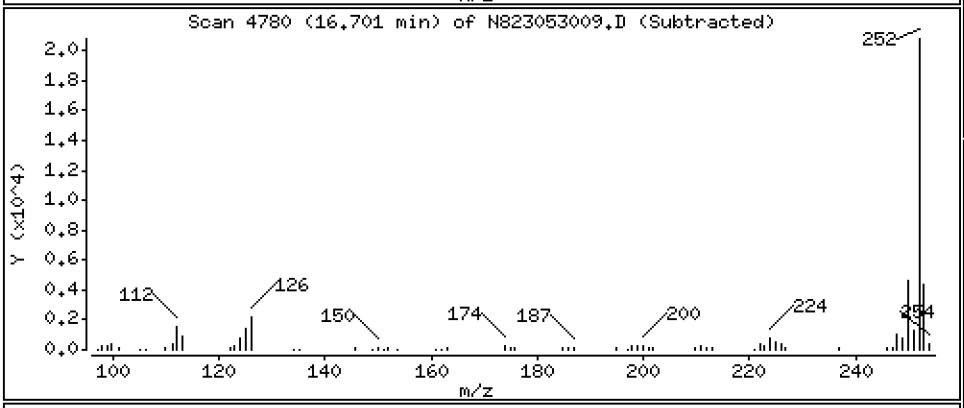
Column diameter: 0.25

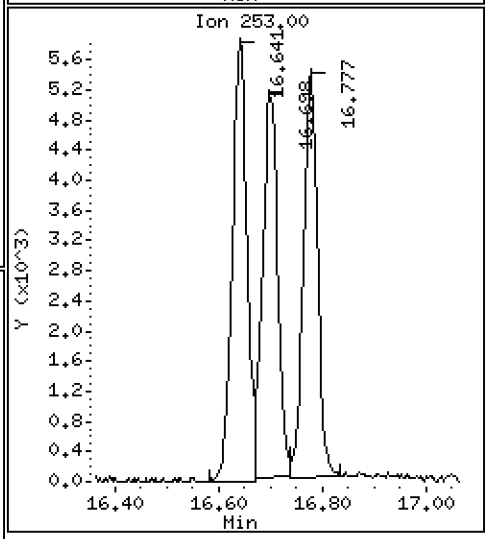
29 Benzo(k)fluoranthene

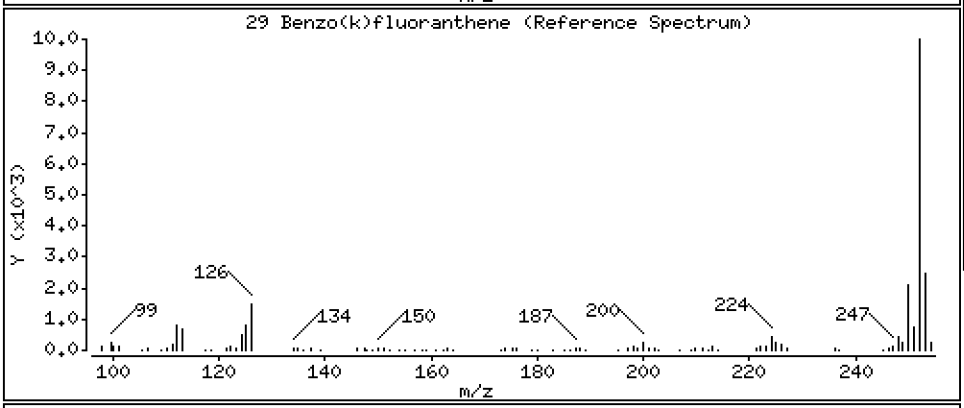
Concentration: 4.438 ug/mL

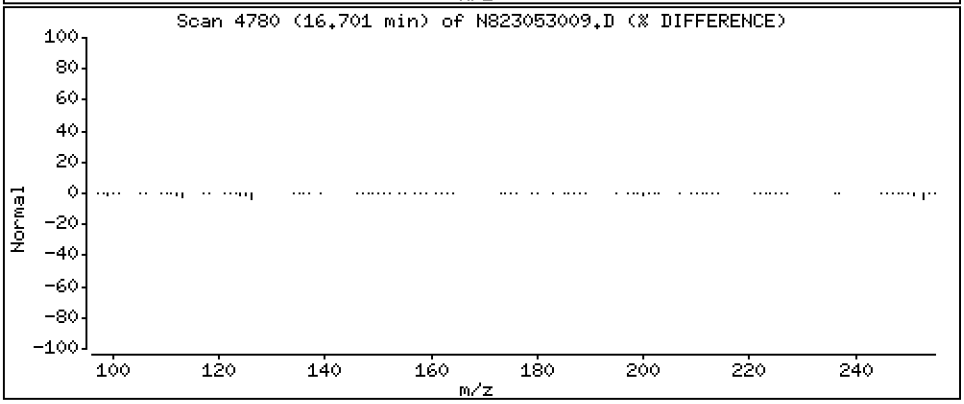












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Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

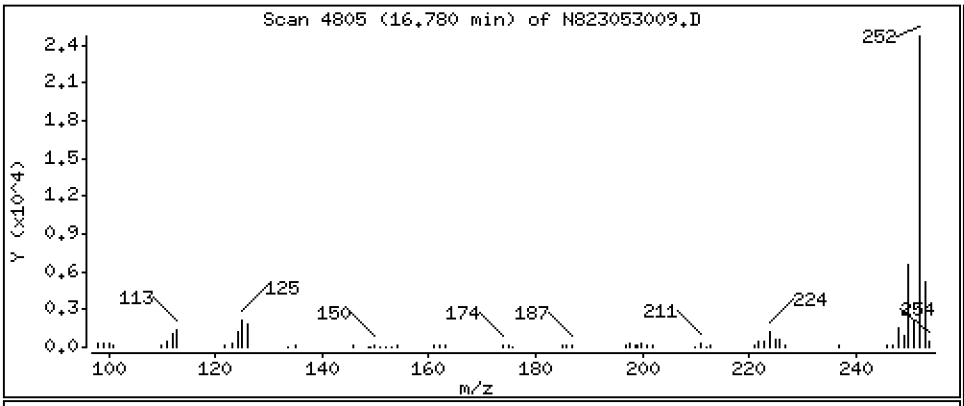
Operator: JZ

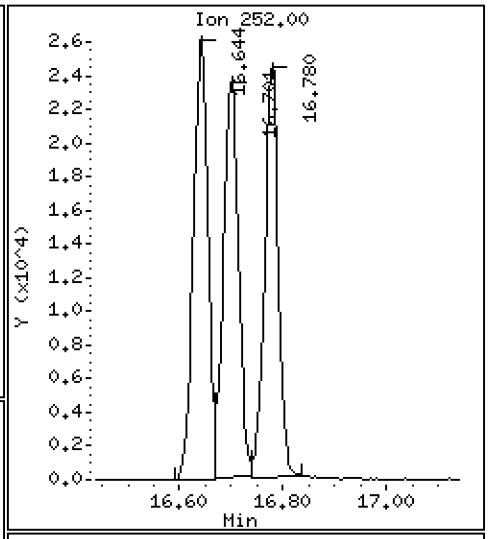
Column phase: Rxi-17sil

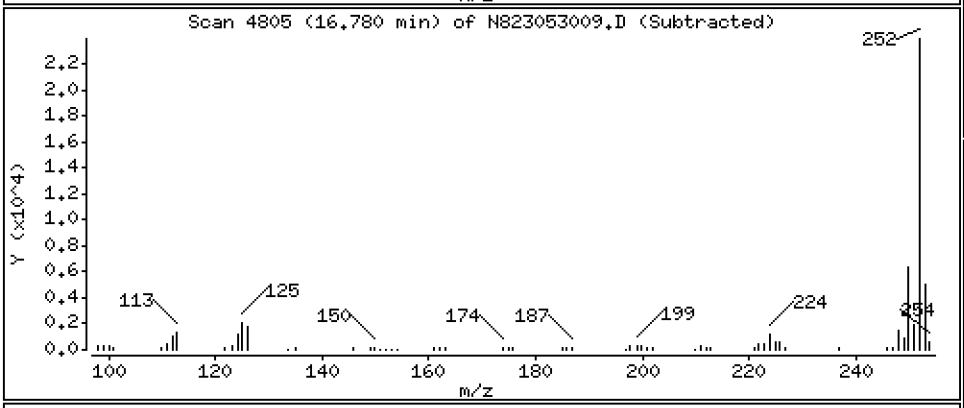
Column diameter: 0.25

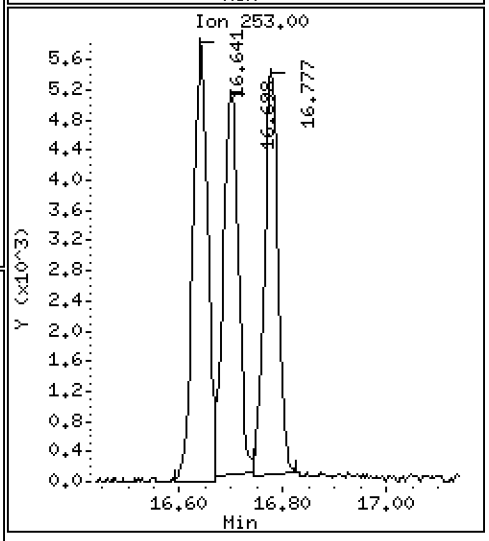
30 Benzo(j)fluoranthene

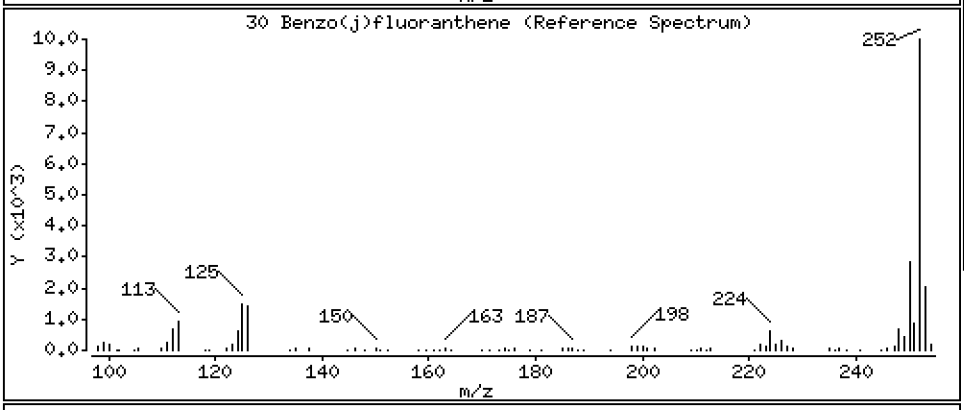
Concentration: 4.447 ug/mL

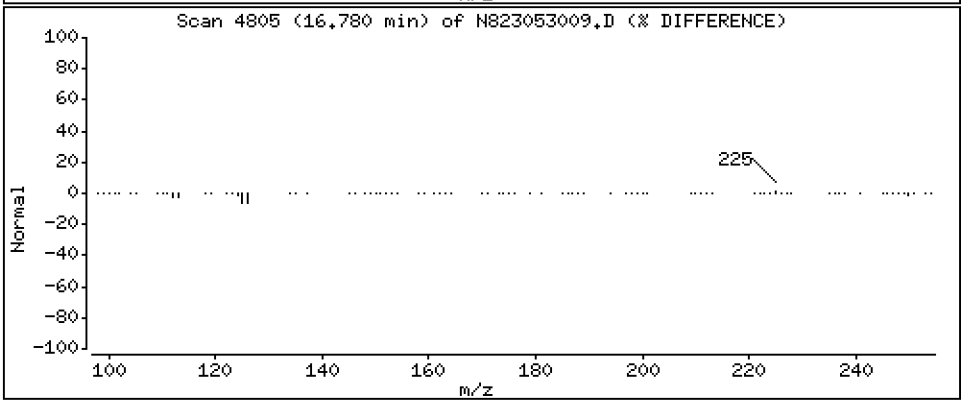












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053009.D

Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

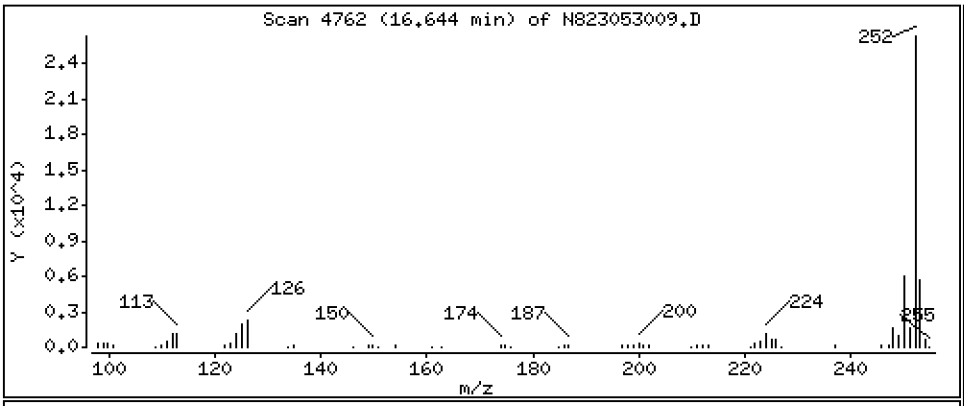
Operator: JZ

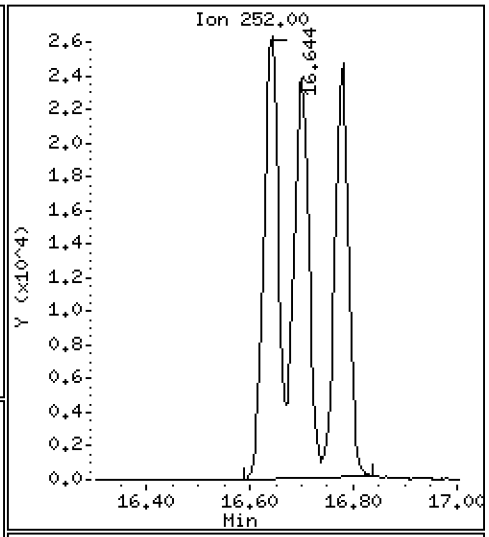
Column phase: Rxi-17sil

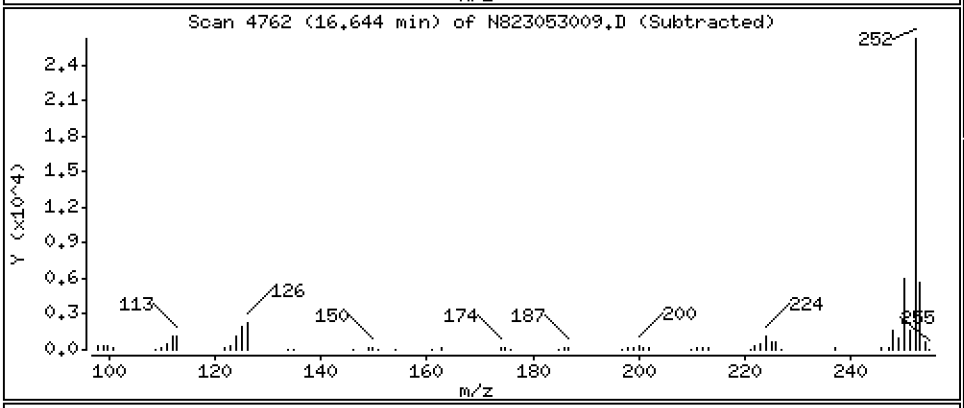
Column diameter: 0.25

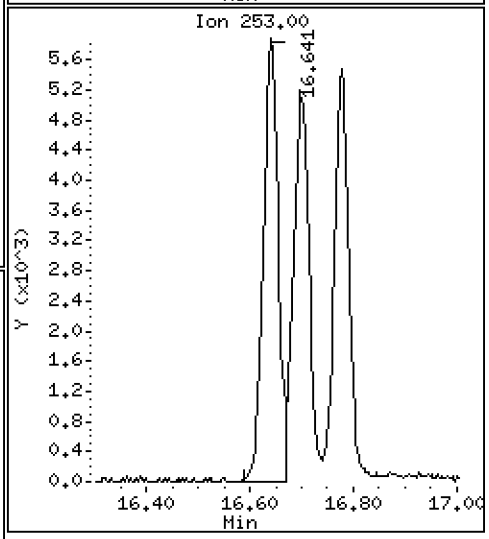
31 Total Benzofluoranthenes

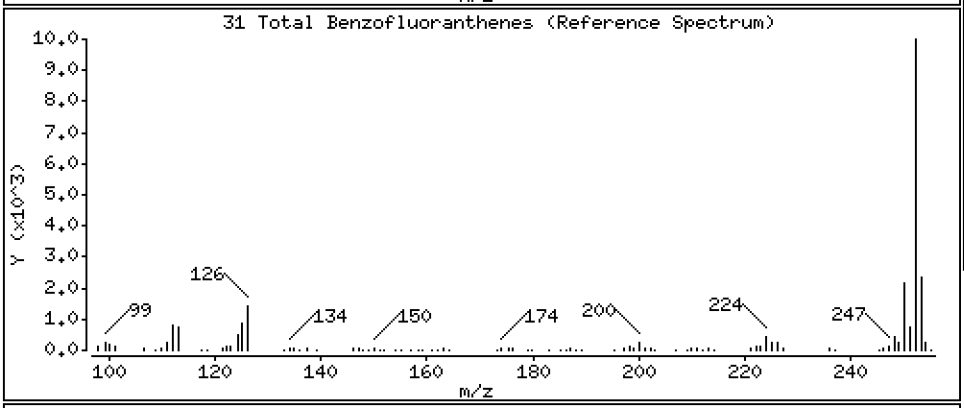
Concentration: 13.27 ug/mL

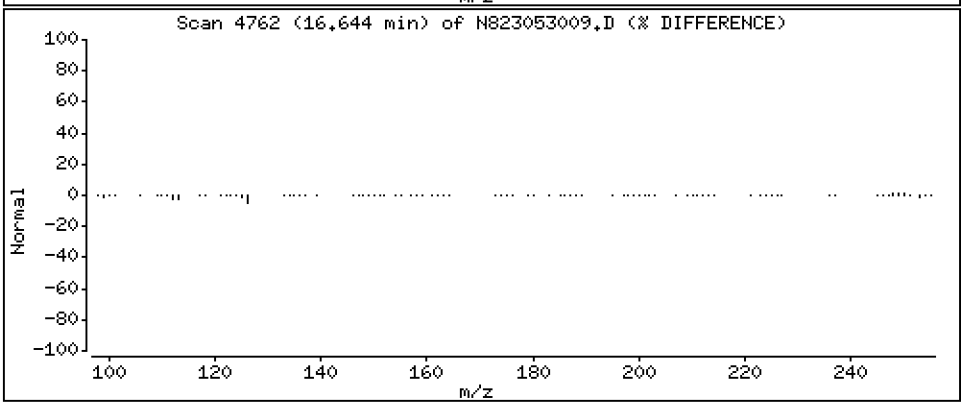












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053009.D

Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

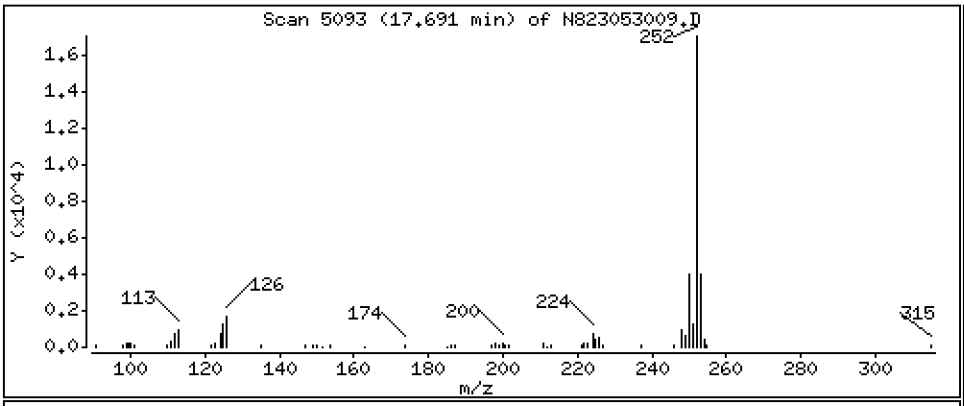
Operator: JZ

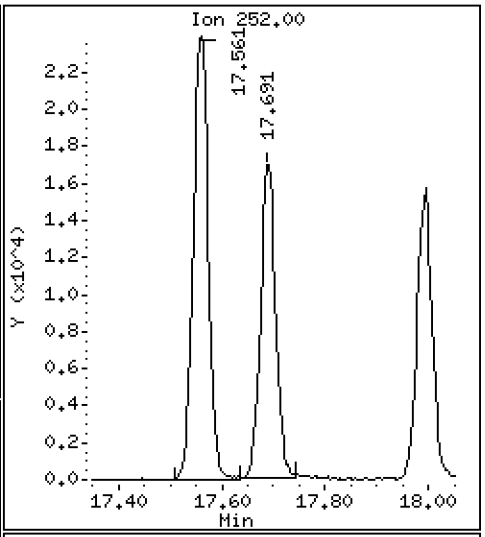
Column phase: Rxi-17sil

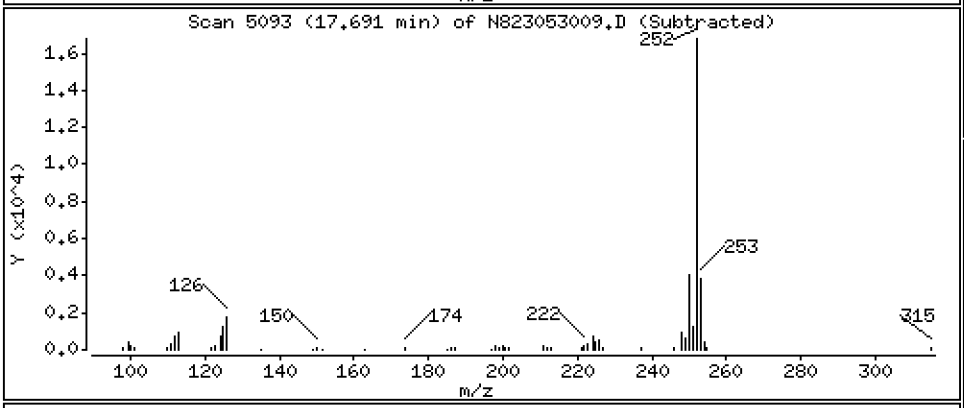
Column diameter: 0.25

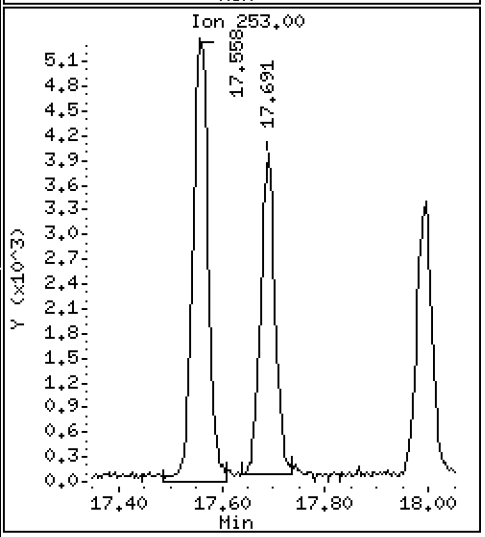
32 Benzo(a)pyrene

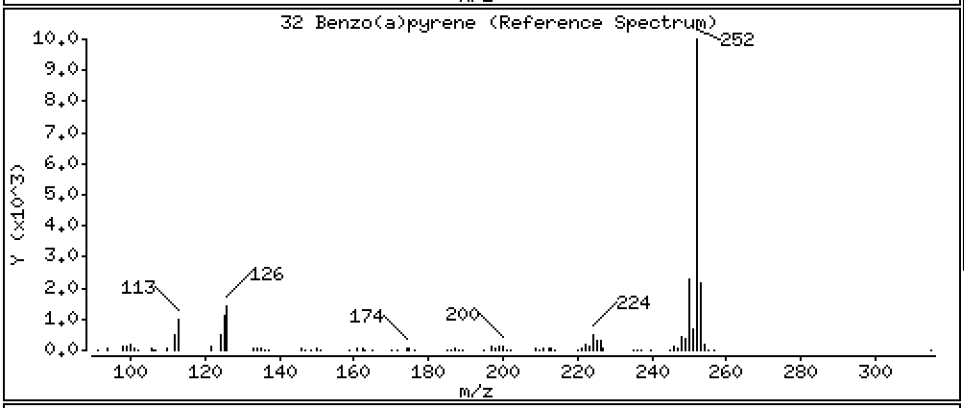
Concentration: 3.403 ug/mL

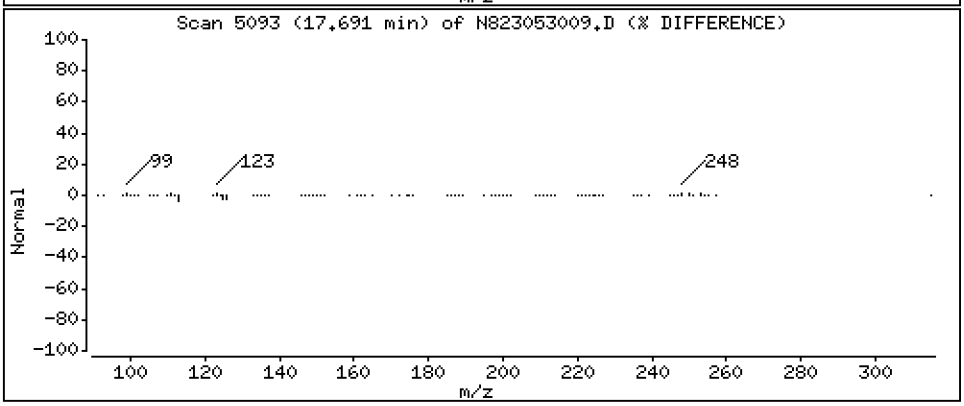












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Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

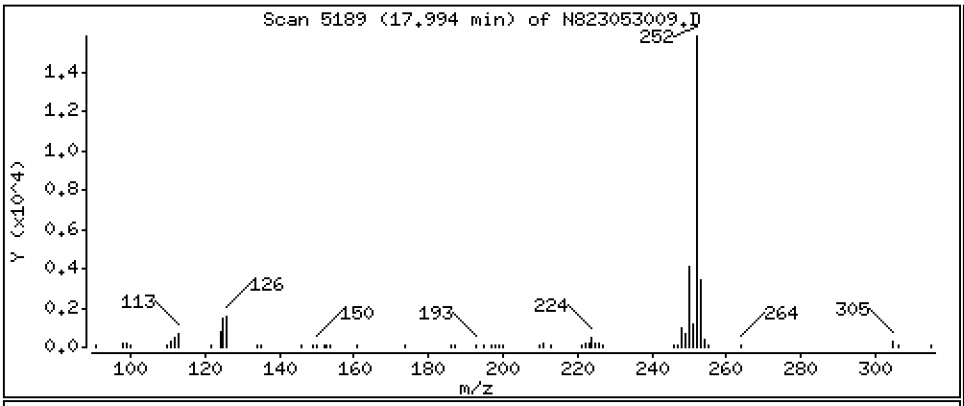
Operator: JZ

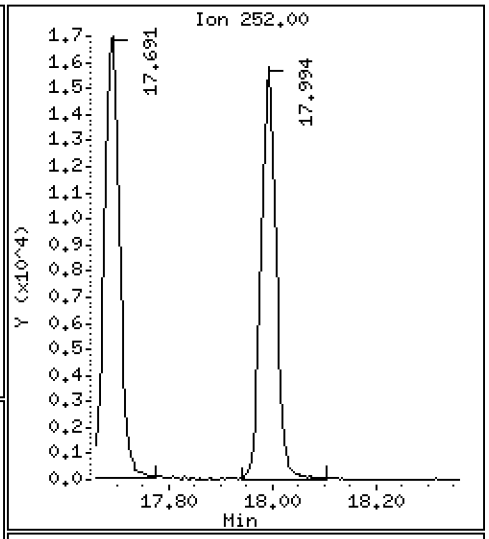
Column phase: Rxi-17sil

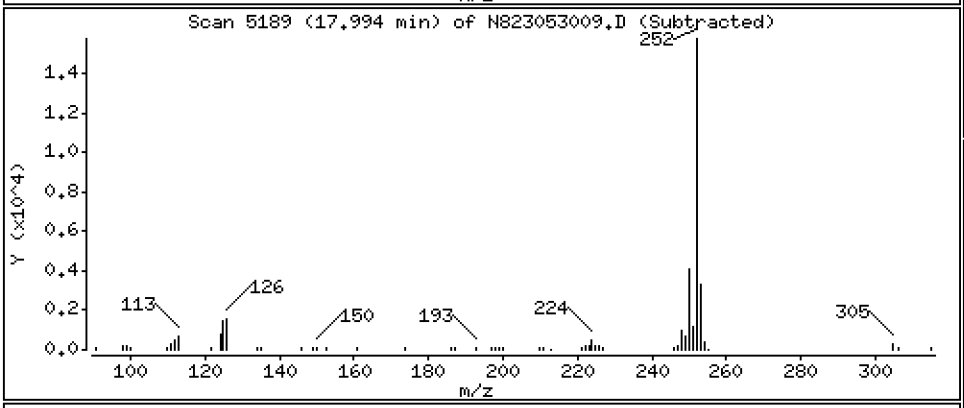
Column diameter: 0.25

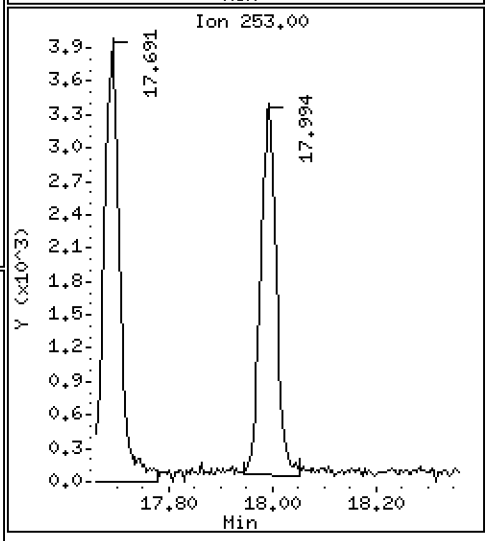
35 Perylene

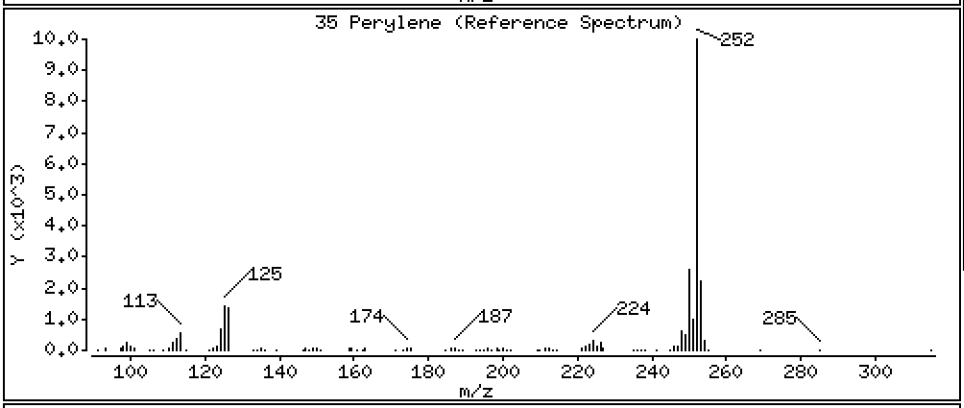
Concentration: 3.136 ug/mL

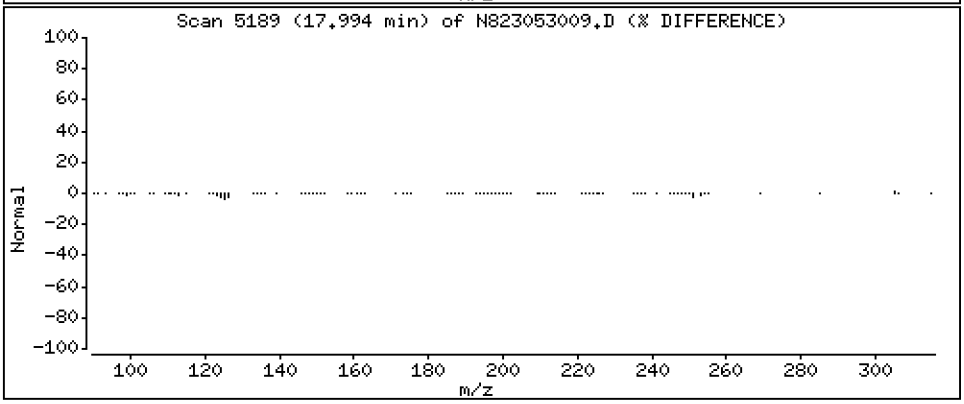












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Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

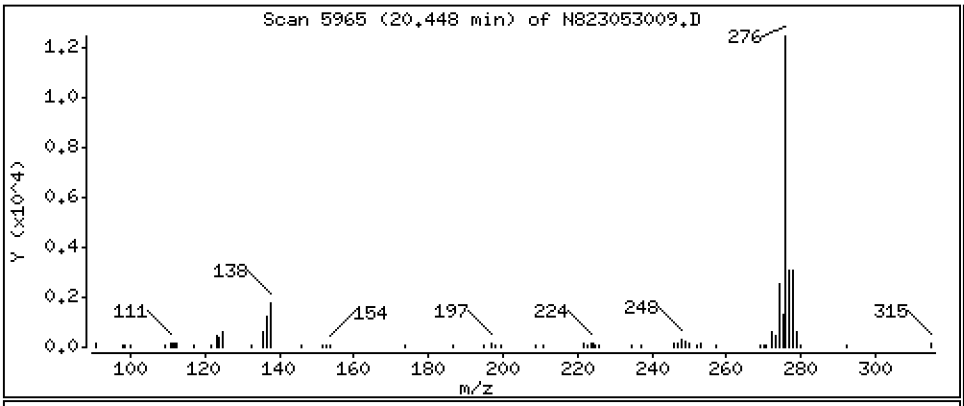
Operator: JZ

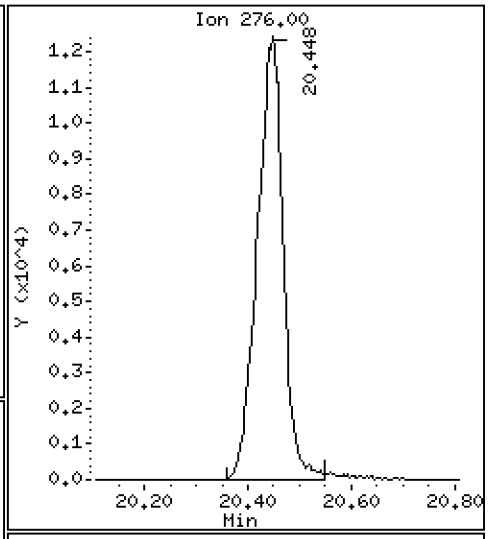
Column phase: Rxi-17sil

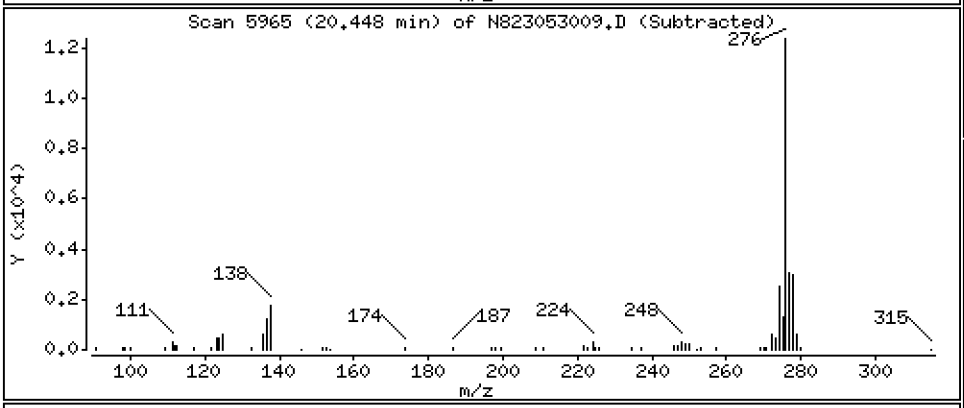
Column diameter: 0.25

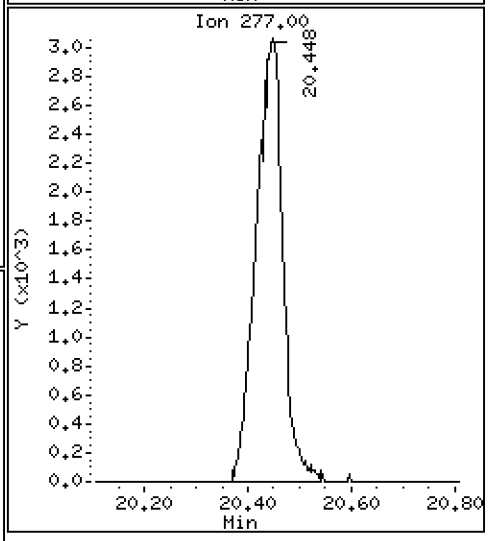
37 Indeno(1,2,3-cd)pyrene

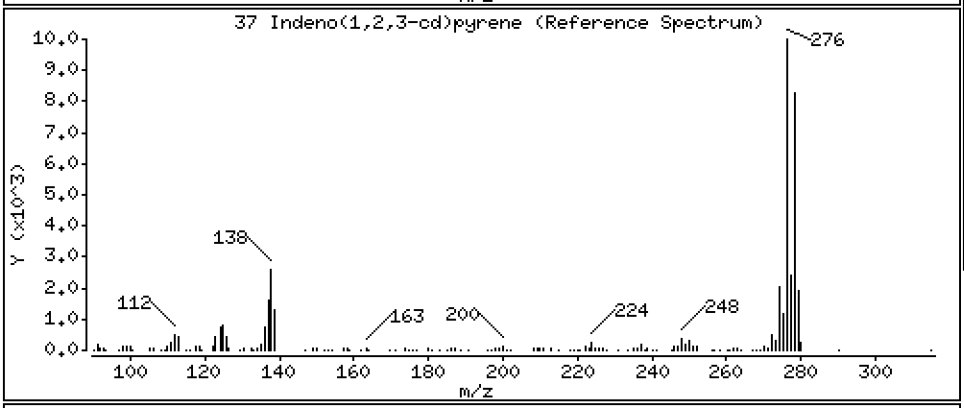
Concentration: 4.141 ug/mL

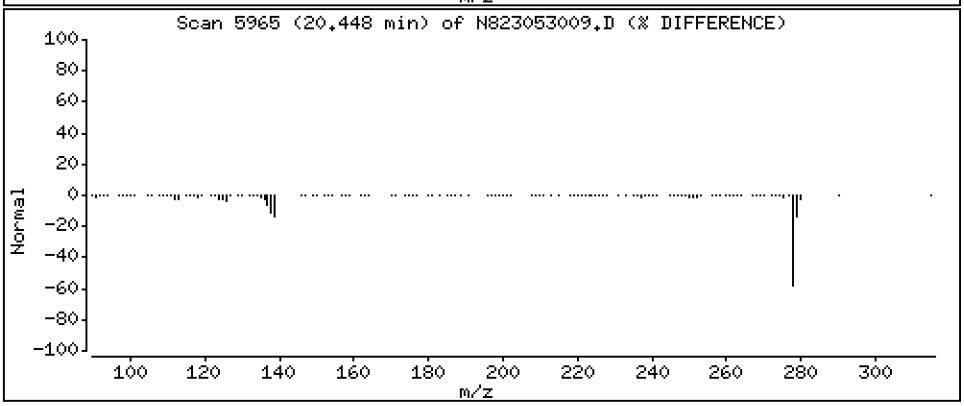












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Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

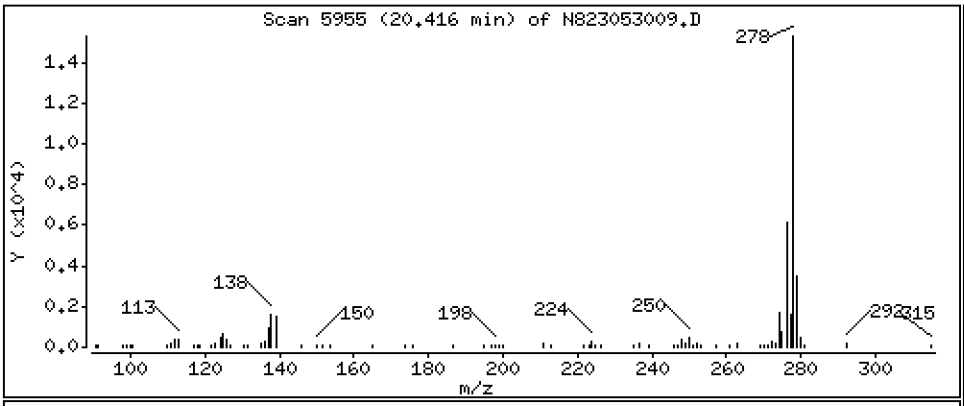
Operator: JZ

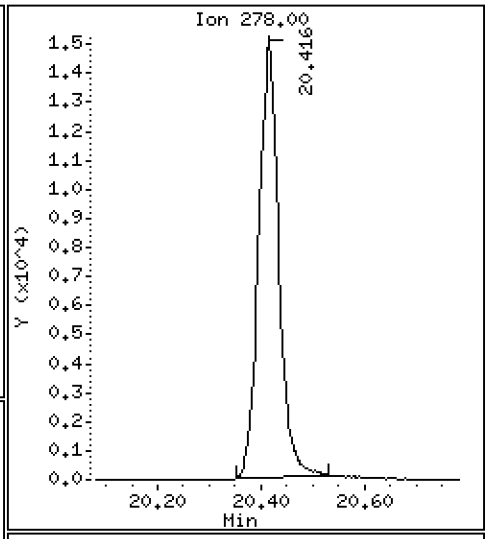
Column phase: Rxi-17sil

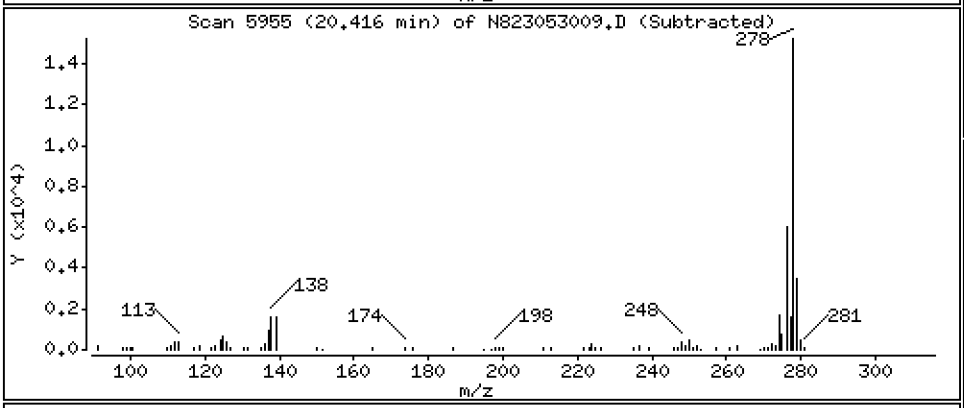
Column diameter: 0.25

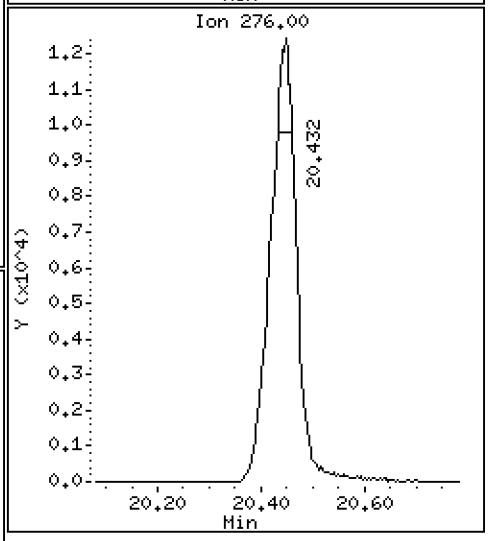
38 Dibenzo(a,h)anthracene

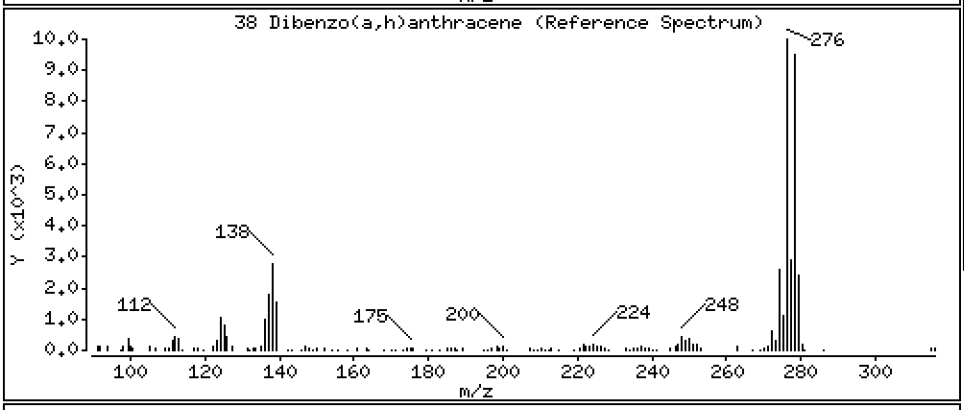
Concentration: 4.346 ug/mL

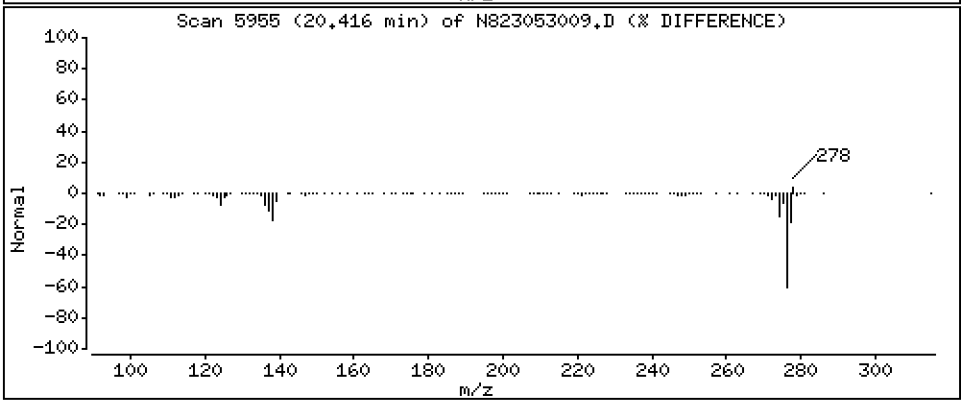












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Date : 30-MAY-2023 15:18

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-BSD1,

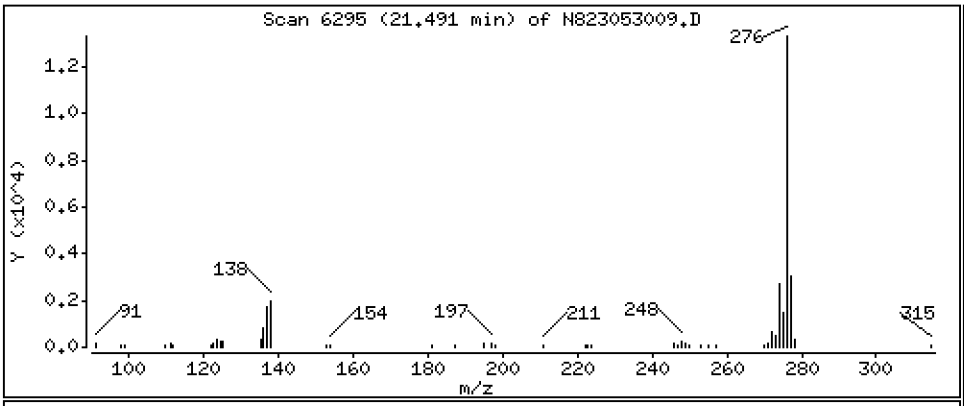
Operator: JZ

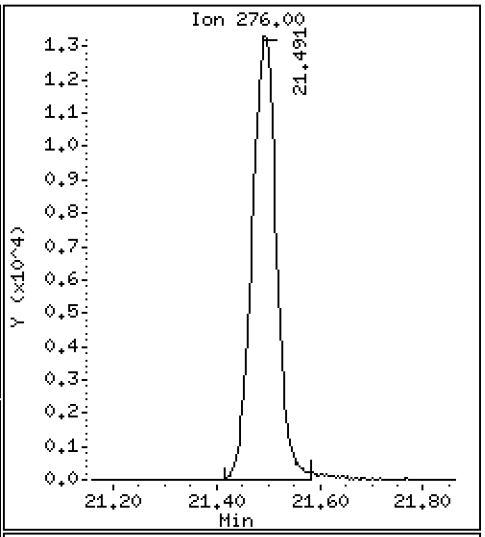
Column phase: Rxi-17sil

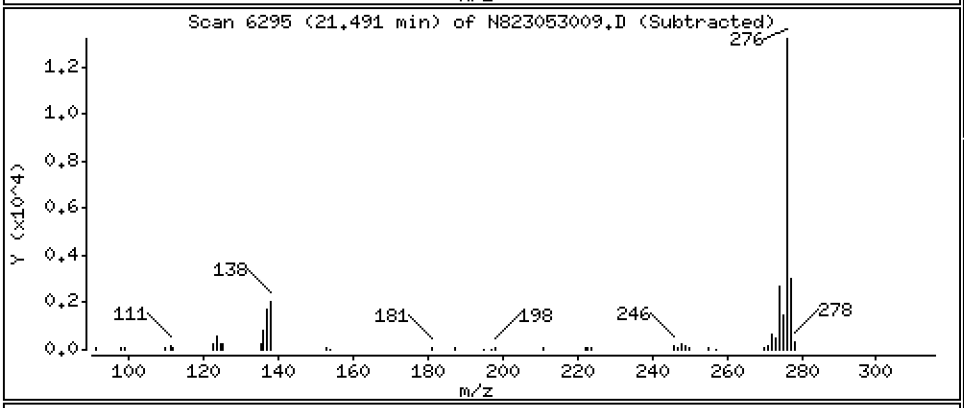
Column diameter: 0.25

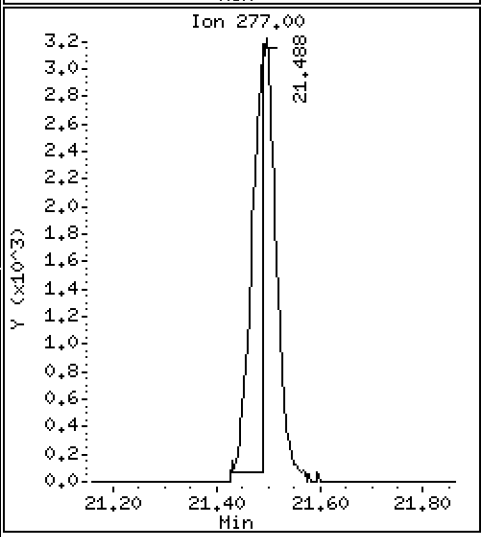
39 Benzo(g,h,i)perylene

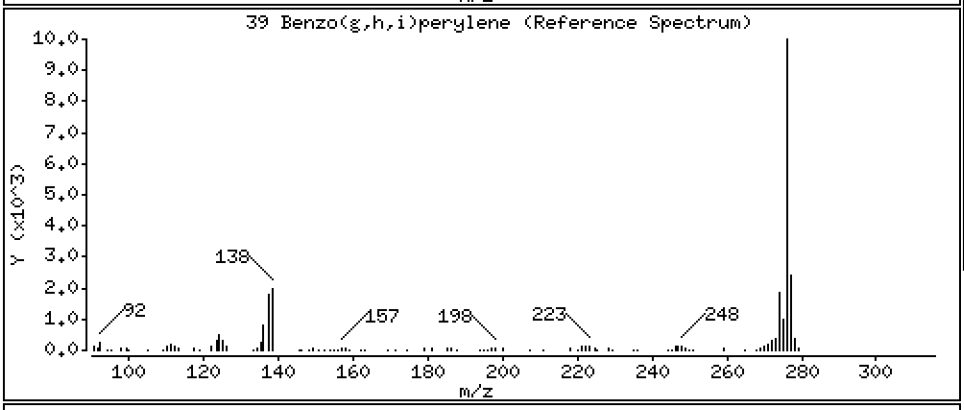
Concentration: 4.544 ug/mL

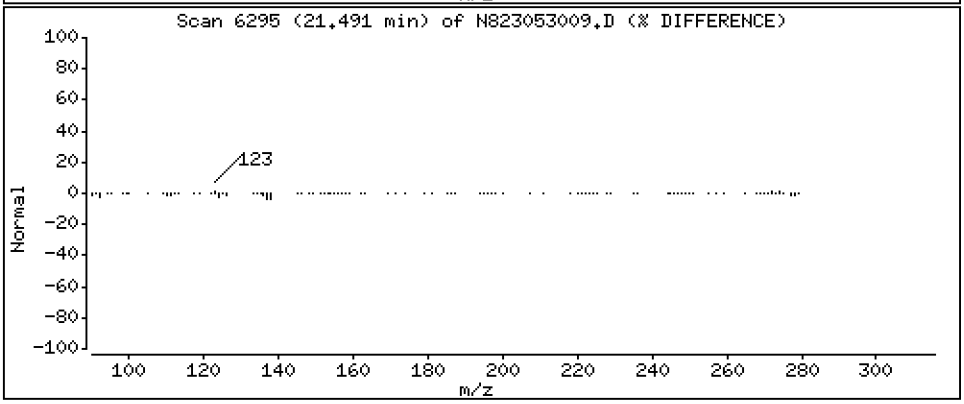












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230530.b\N823053009.D
Lab Smp Id: BLE0421-BSD1
Inj Date : 30-MAY-2023 15:18
Operator : JZ Inst ID: nt8.i
Smp Info : BLE0421-BSD1,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230530.b\FSIMPNA230426.m
Meth Date : 30-May-2023 19:51 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQINGZ-20191

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.802	4.815	(1.000)	19445	2.00000	
	2 Naphthalene	128	4.831	4.843	(1.006)	32403	3.27085	3.271
$	3 2-Methylnaphthalene-d10	152	5.539	5.548	(1.153)	13664	2.27522	2.275
	4 2-Methylnaphthalene	141	5.586	5.596	(1.163)	18738	3.33139	3.331
	5 1-methylnaphthalene	141	5.782	5.792	(1.204)	18414	3.30183	3.302
	9 Acenaphthylene	152	6.984	6.990	(0.985)	30543	3.01955	3.020
*	10 Acenaphthene-d10	164	7.091	7.101	(1.000)	11426	2.00000	
	11 Acenaphthene	153	7.142	7.148	(1.007)	20912	3.19097	3.191
	12 Dibenzofuran	168	7.294	7.300	(1.029)	32788	3.33104	3.331
	14 Fluorene	166	7.771	7.777	(1.096)	26876	3.42128	3.421
*	15 Phenanthrene-d10	188	9.128	9.137	(1.000)	22700	2.00000	
	16 Phenanthrene	178	9.166	9.172	(1.004)	42257	3.51449	3.514
	17 Anthracene	178	9.207	9.213	(1.009)	37374	3.31429	3.314
	19 Carbazole	167	9.725	9.732	(1.065)	38294	3.55525	3.555
	22 Fluoranthene	202	10.920	10.930	(1.196)	50984	3.68674	3.687
$	21 Fluoranthene-d10	212	10.883	10.892	(1.192)	31630	2.58131	2.581
	23 Pyrene	202	11.430	11.439	(0.815)	52288	3.87060	3.871
	24 Benzo(a)anthracene	228	13.902	13.915	(0.991)	53239	3.83531	3.835
*	25 Chrysene-d12	240	14.029	14.044	(1.000)	21100	2.00000	
	27 Chrysene	228	14.105	14.117	(1.005)	51518	3.77787	3.778
	28 Benzo(b)fluoranthene	252	16.644	16.653	(0.929)	52241	4.42236	4.422
	29 Benzo(k)fluoranthene	252	16.701	16.713	(0.932)	49391	4.43770	4.438
	30 Benzo(j)fluoranthene	252	16.780	16.789	(0.936)	45729	4.44688	4.447
	31 Total Benzofluoranthenes	252	16.644	16.653	(0.929)	145728	13.2659	13.27(M)
	32 Benzo(a)pyrene	252	17.690	17.700	(0.987)	34943	3.40303	3.403
*	33 Perylene-d12	264	17.918	17.931	(1.000)	18120	2.00000	
	35 Perylene	252	17.994	18.010	(1.004)	32330	3.13551	3.136
$	36 Dibenzo(a,h)anthracene-d14	292	20.308	20.315	(1.133)	25263	3.65182	3.652
	37 Indeno(1,2,3-cd)pyrene	276	20.448	20.457	(1.141)	43280	4.14075	4.141
	38 Dibenzo(a,h)anthracene	278	20.416	20.432	(1.139)	40332	4.34551	4.346(M)
	39 Benzo(g,h,i)perylene	276	21.491	21.510	(1.199)	43995	4.54400	4.544

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823053009.D
Lab Smp Id: BLE0421-BSD1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230530.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 30-MAY-2023
Calibration Time: 11:43
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	20199	10100	40398	19445	-3.73
10 Acenaphthene-d10	12041	6021	24082	11426	-5.11
15 Phenanthrene-d10	19182	9591	38364	22700	18.34
25 Chrysene-d12	15943	7972	31886	21100	32.35
33 Perylene-d12	14317	7159	28634	18120	26.56

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.82	4.32	5.32	4.80	-0.26
10 Acenaphthene-d10	7.10	6.60	7.60	7.09	-0.13
15 Phenanthrene-d10	9.14	8.64	9.64	9.13	-0.10
25 Chrysene-d12	14.04	13.54	14.54	14.03	-0.11
33 Perylene-d12	17.93	17.43	18.43	17.92	-0.07

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

REVIEW SUMMARY FOR FILE - N823053009.D

Lab ID: BLE0421-BSD1
nt8.i, 20230530.b\FSIMPNA230426.m,   30-MAY-2023 15:18

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

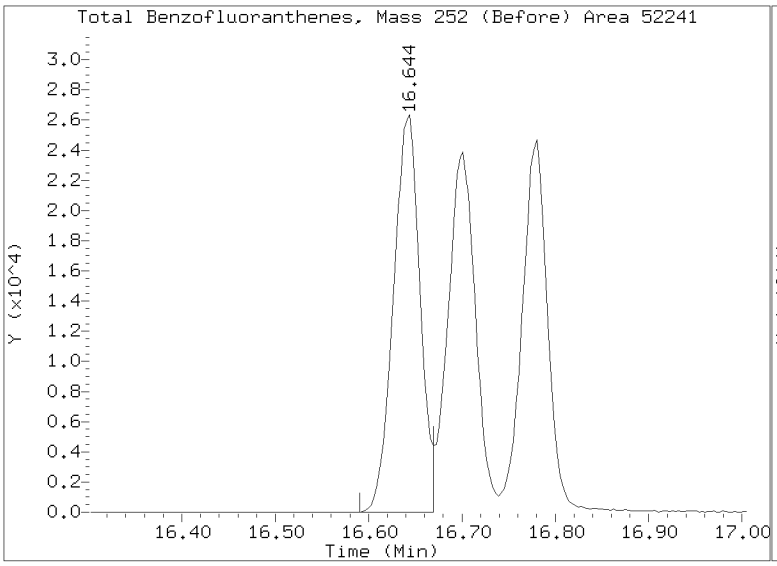
No RRT check performed

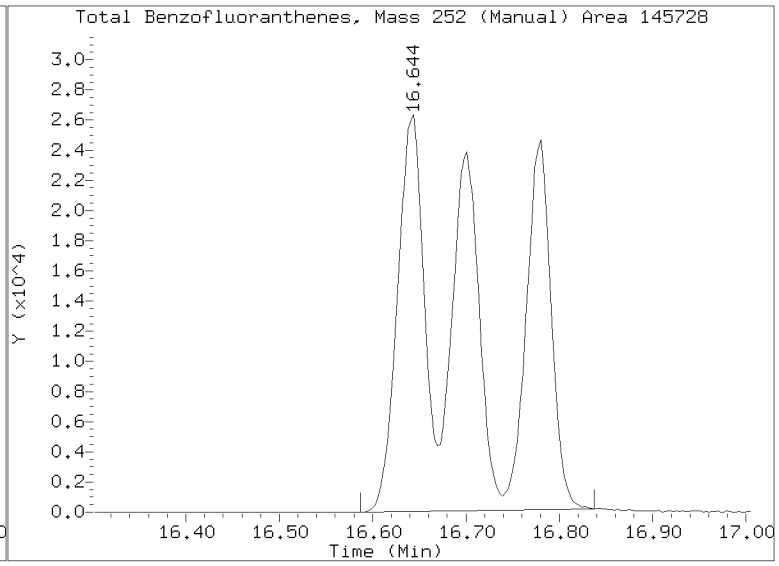
On Column LOD for nt8.i, 20230530.b\FSIMPNA230426.m, PNAXMDL.sub = 0.0080

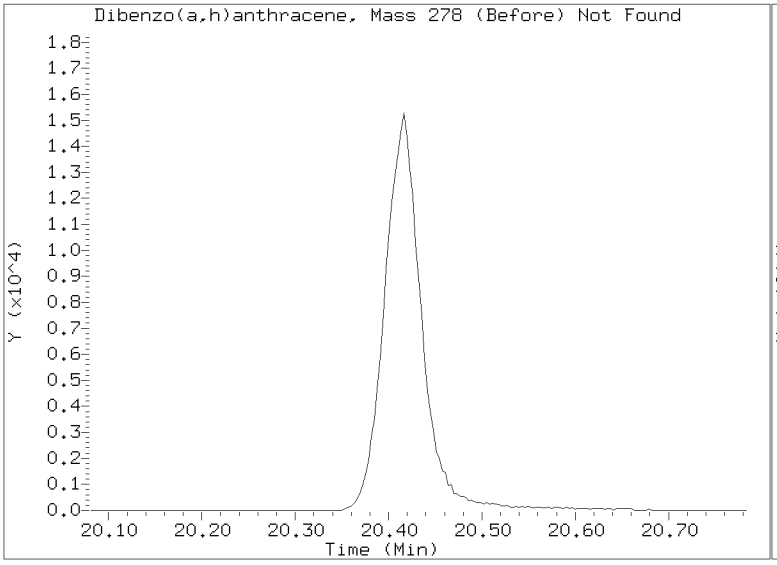
* Only compounds listed in the work order have been verified by the analyst *

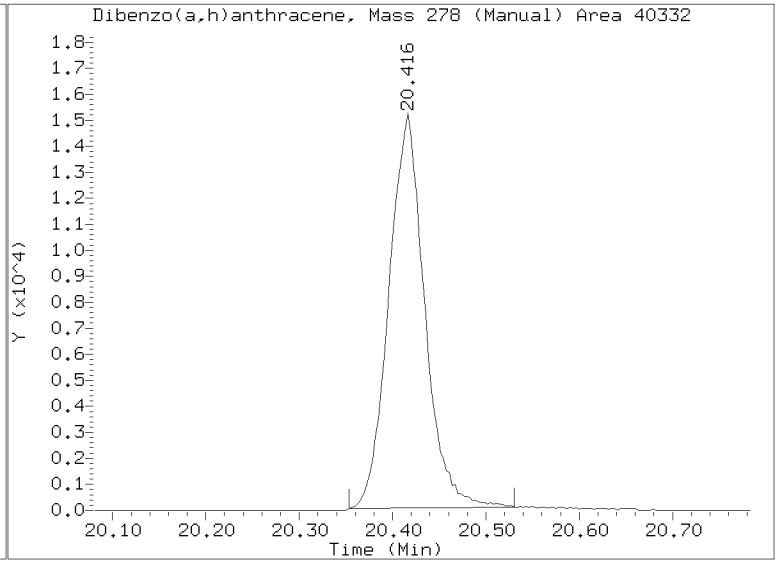
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230530.b/N823053009.D
Injection Date: 30-MAY-2023 15:18
Lab ID:BLE0421-BSD1 Client ID:
Report Date: 05/30/2023 20:04









MS / MS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/06/23 19:06
Batch:	BLA0683	Laboratory ID:	BLA0683-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	12.5 g / 0.5 mL	Source Sample:	LDW23-IT1079

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Benzo(a)anthracene	300	18.8		243		74.8	42 - 120
Chrysene	300	20.6		224		67.8	48 - 120
Benzo(b)fluoranthene	300	15.4		229		71.1	52 - 137
Benzo(k)fluoranthene	300	8.03		212		68.0	37 - 129
Benzo(a)pyrene	300	16.4		218		67.4	36 - 120
Indeno(1,2,3-cd)pyrene	300	14.3		243		76.1	67 - 132
Dibenzo(a,h)anthracene	300	4.98	J	244		79.7	66 - 139

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY
EPA 8270E-SIM

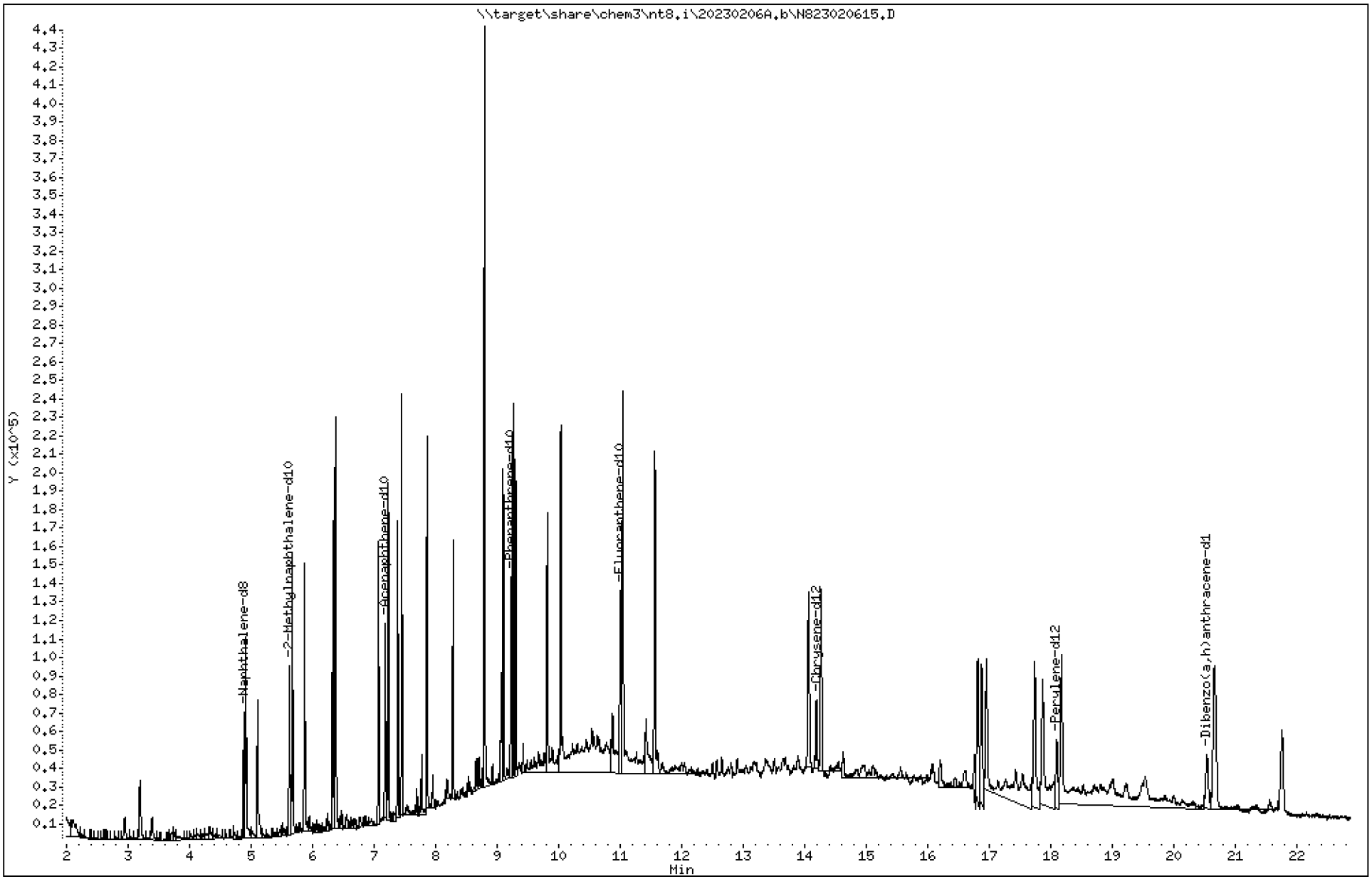
Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/06/23 19:33
Batch:	BLA0683	Laboratory ID:	BLA0683-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	12.5 g / 0.5 mL	Source Sample:	LDW23-IT1079

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzo(a)anthracene	300	243		74.5	0.327	30	42 - 120
Chrysene	300	217		65.6	3.10	30	48 - 120
Benzo(b)fluoranthene	300	221		68.4	3.57	30	52 - 137
Benzo(k)fluoranthene	300	202		64.5	5.09	30	37 - 129
Benzo(a)pyrene	300	212		65.1	3.22	30	36 - 120
Indeno(1,2,3-cd)pyrene	300	228		71.3	6.16	30	67 - 132
Dibenzo(a,h)anthracene	300	228		74.3	6.87	30	66 - 139

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020615.D
Date : 06-FEB-2023 19:06
Client ID:
Sample Info: BLA0683-MS1,

Instrument: nt8.i
Operator: JZ
Column phase: Rxi-17sil
Column diameter: 0.25



23A0207 CLPLIKE (Rev3) - Page 611 of 3315

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020615.D

Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

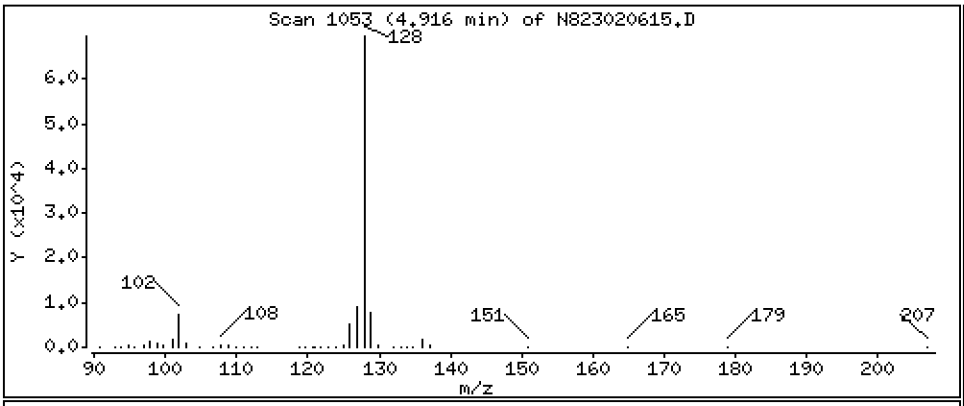
Operator: JZ

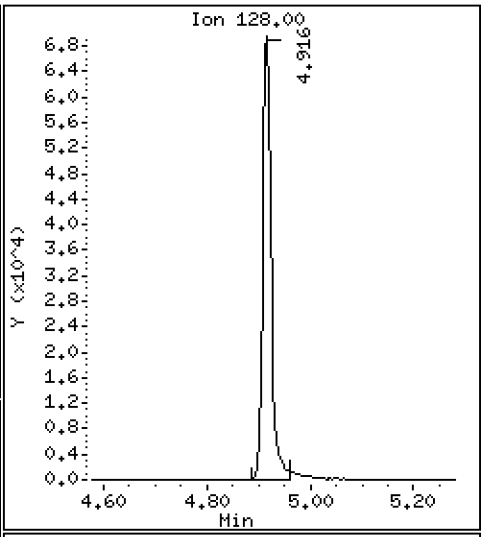
Column phase: Rxi-17sil

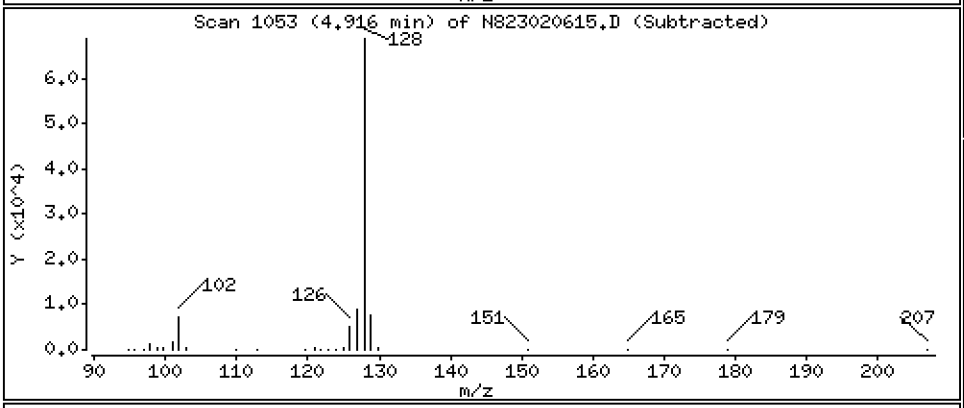
Column diameter: 0.25

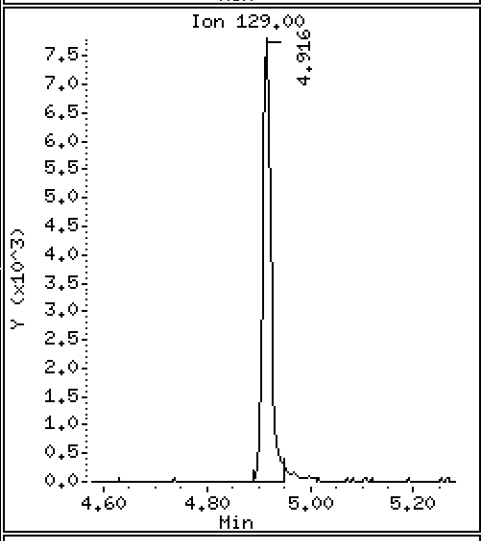
2 Naphthalene

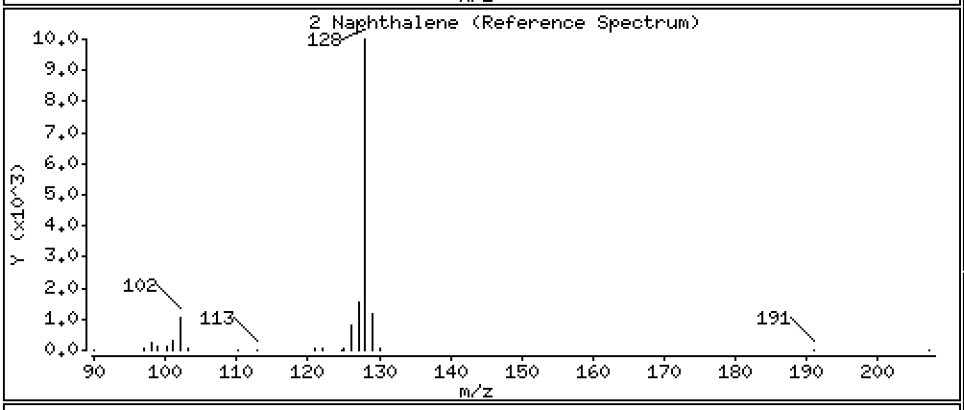
Concentration: 3.165 ug/mL

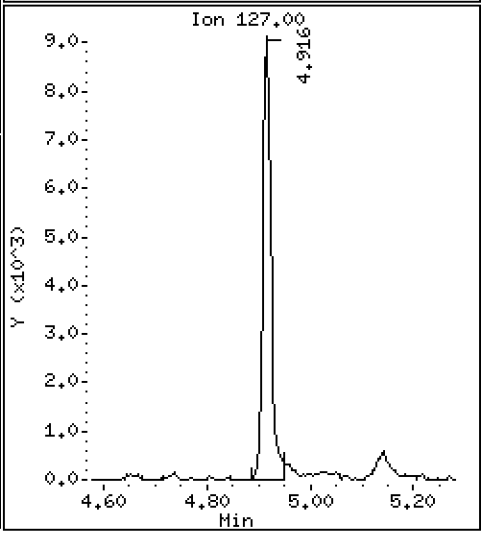


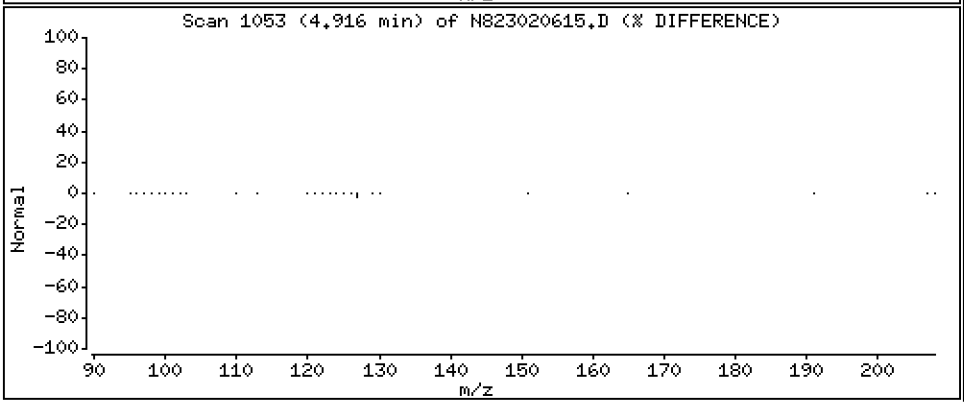












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

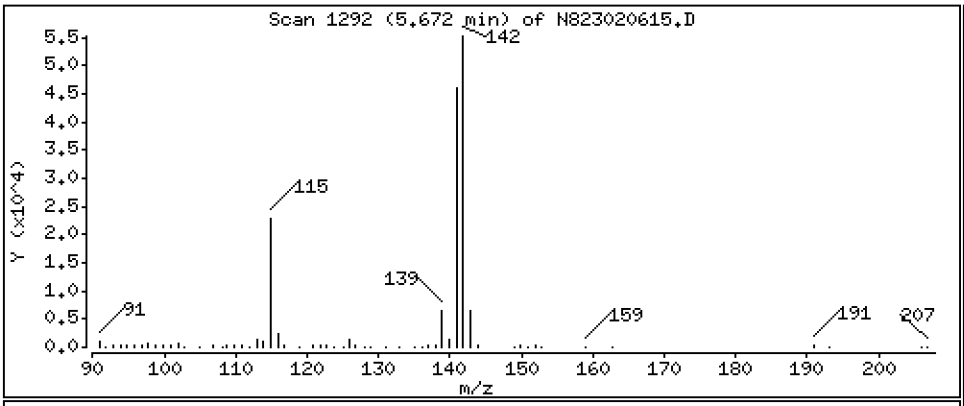
Operator: JZ

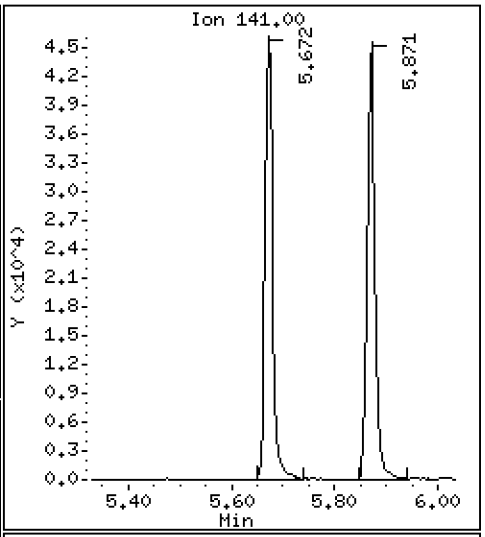
Column phase: Rxi-17sil

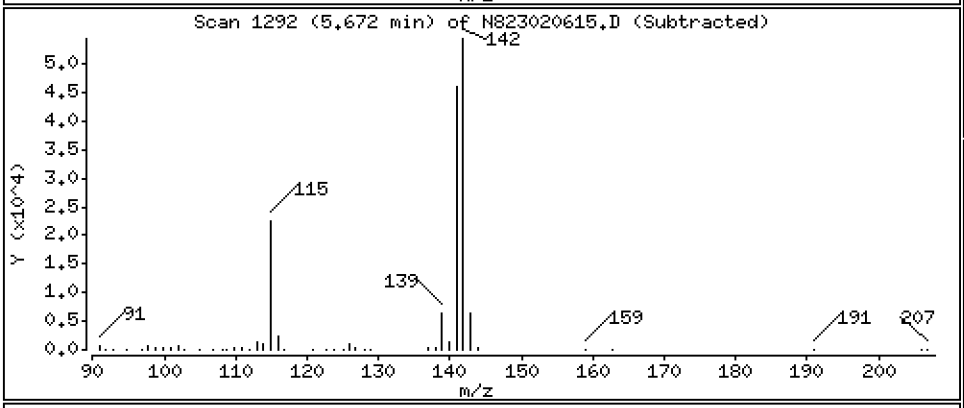
Column diameter: 0.25

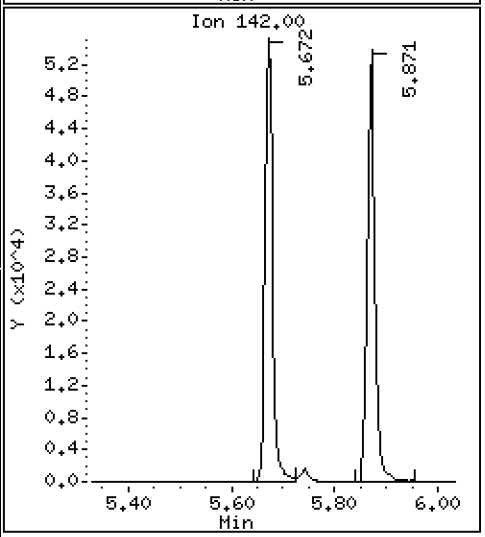
4 2-Methylnaphthalene

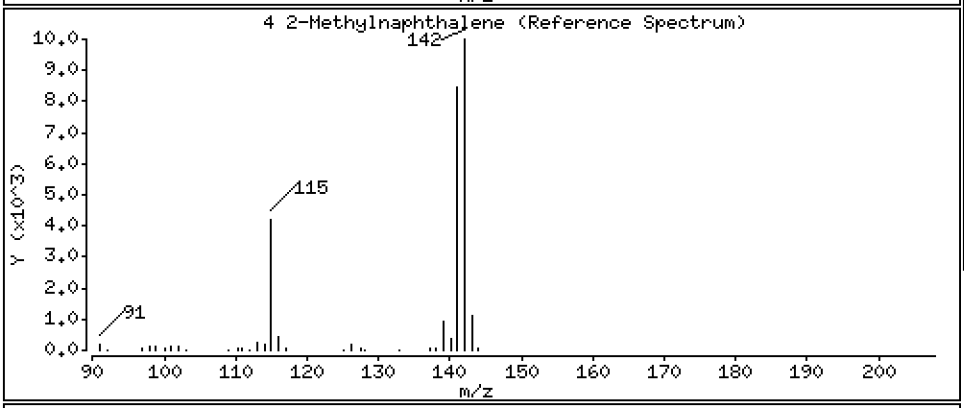
Concentration: 3.438 ug/mL

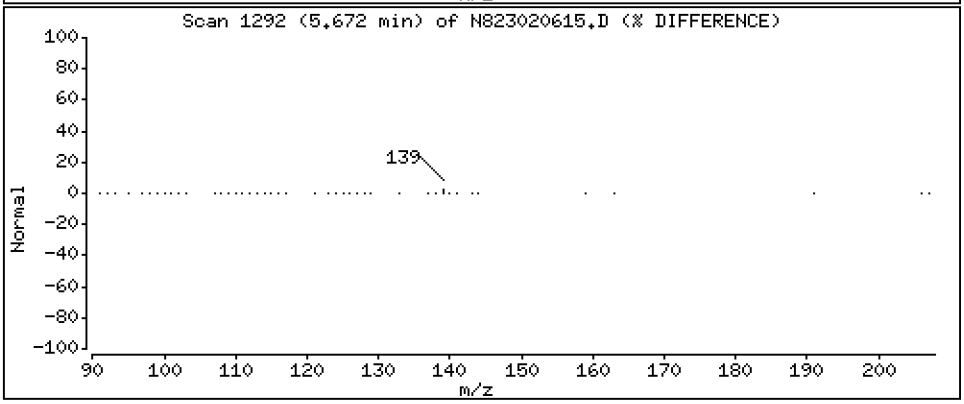












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

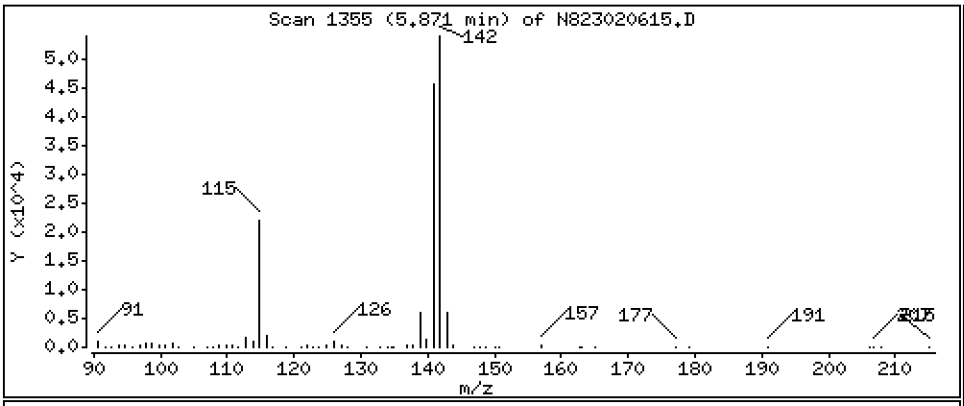
Operator: JZ

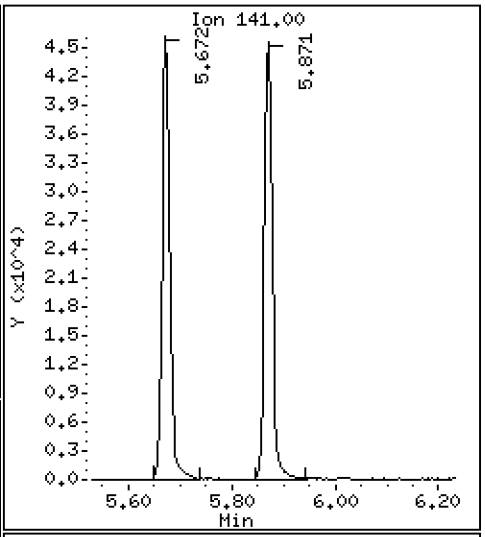
Column phase: Rxi-17sil

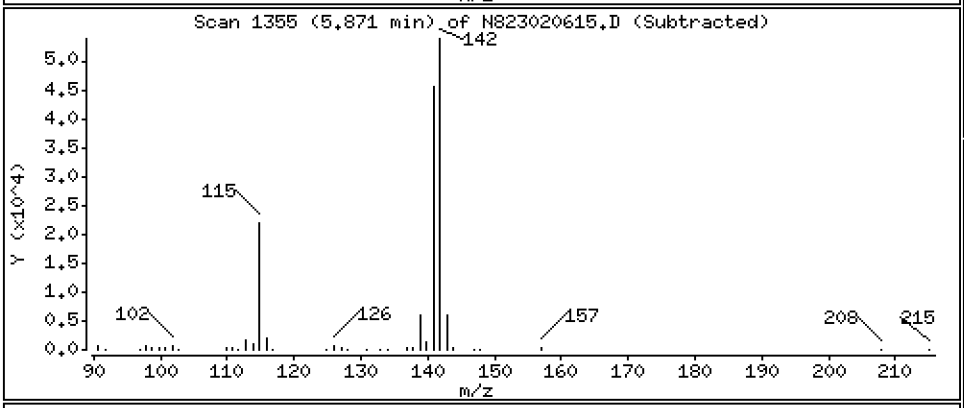
Column diameter: 0.25

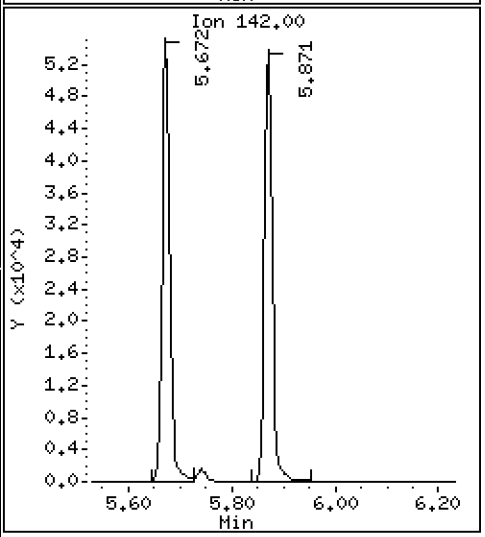
5 1-methylnaphthalene

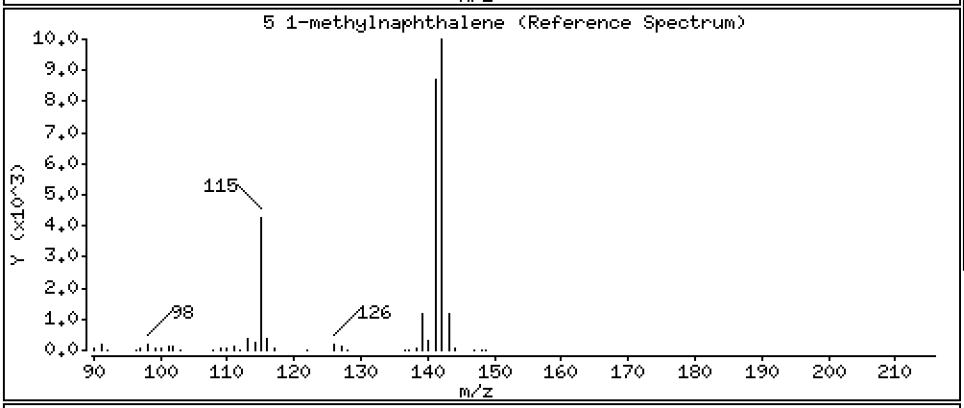
Concentration: 3.373 ug/mL

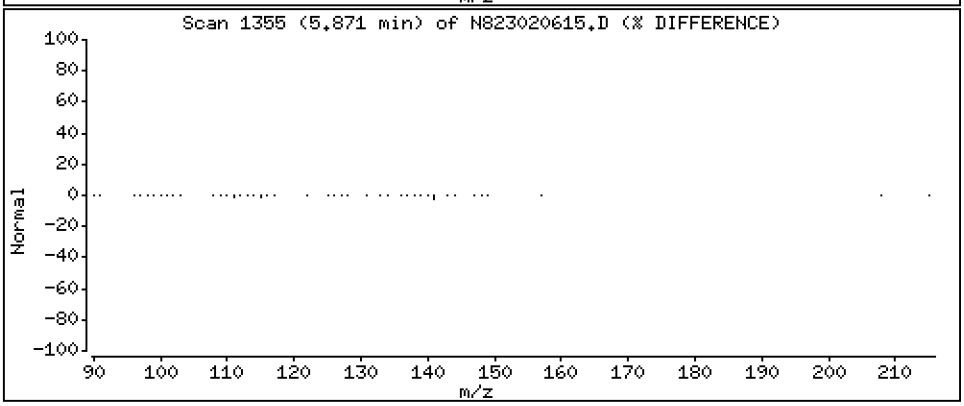












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020615.D

Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

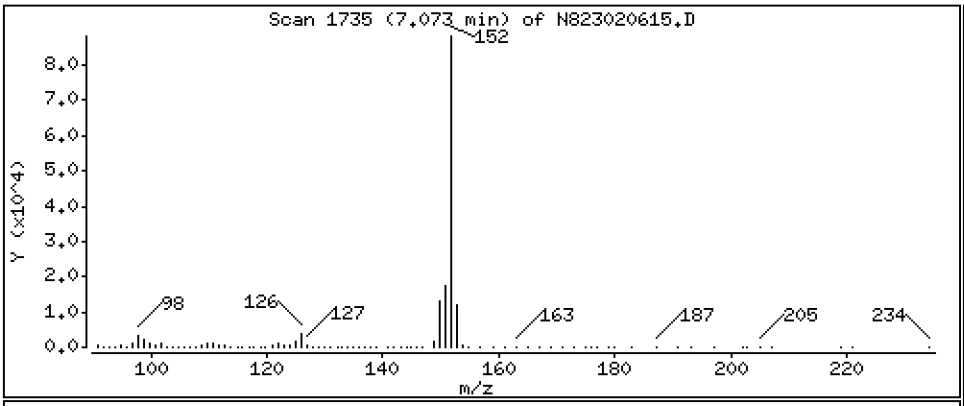
Operator: JZ

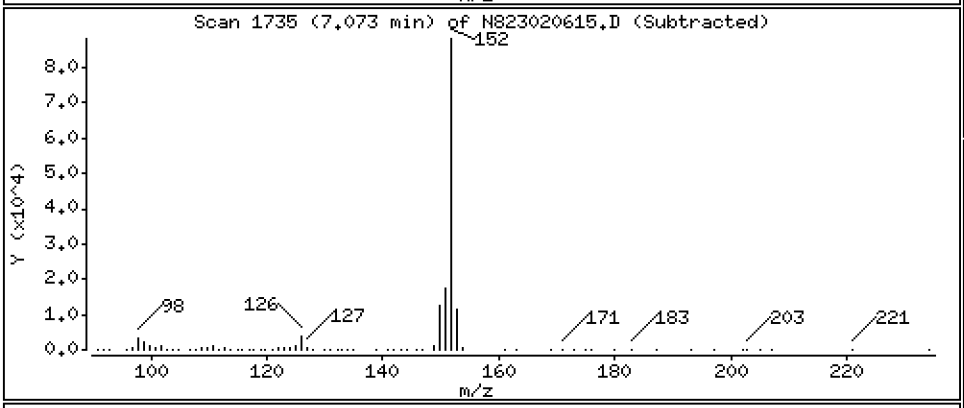
Column phase: Rxi-17sil

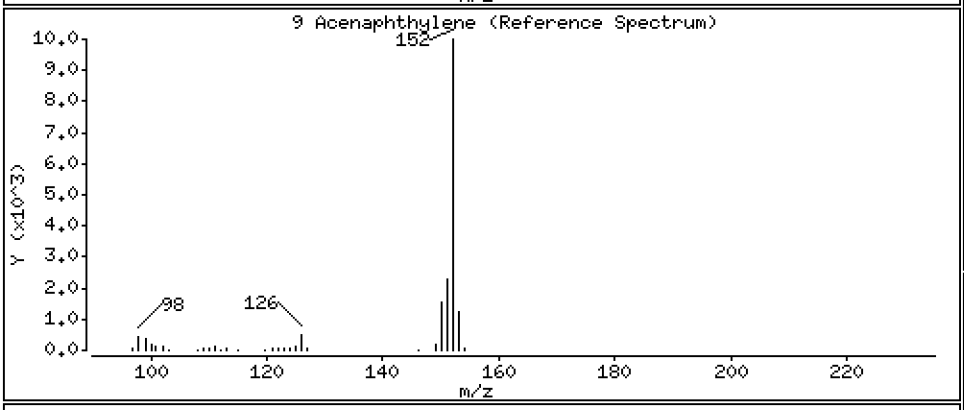
Column diameter: 0.25

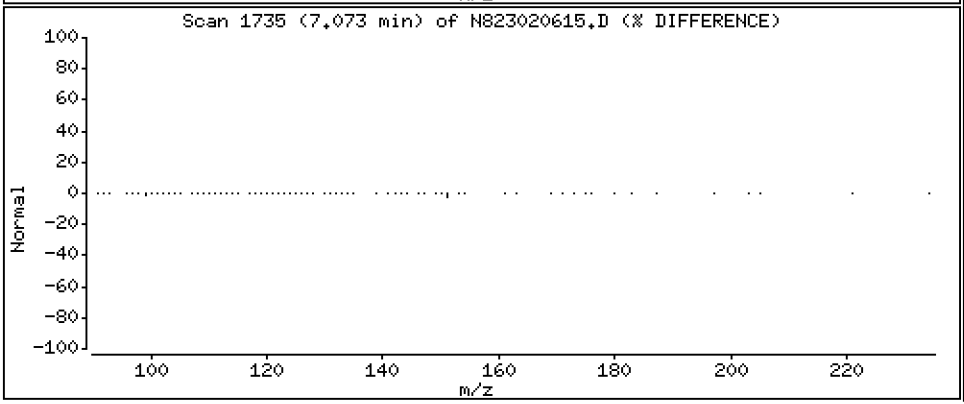
9 Acenaphthylene

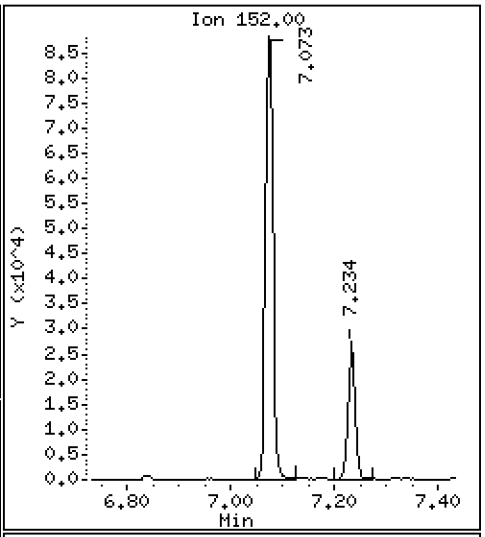
Concentration: 3.720 ug/mL

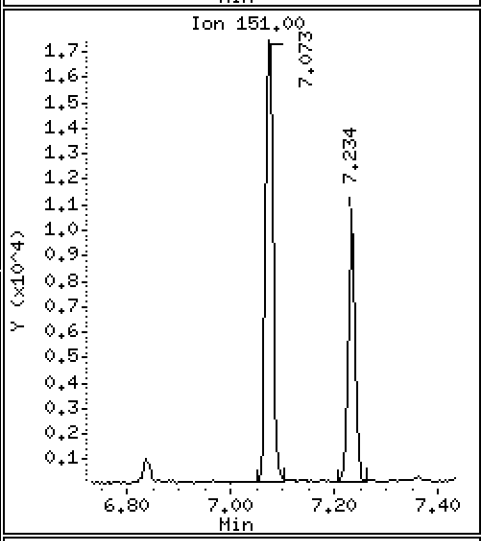


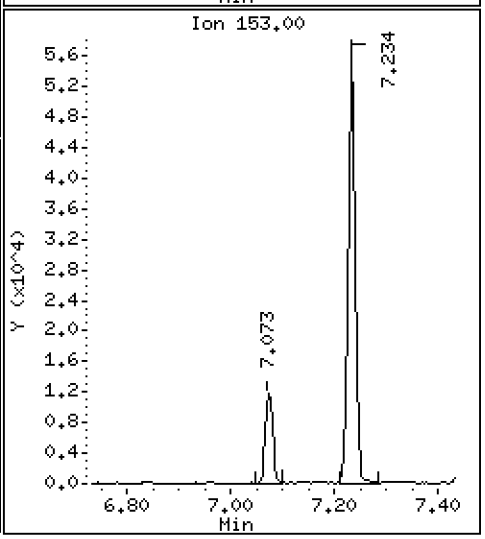












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

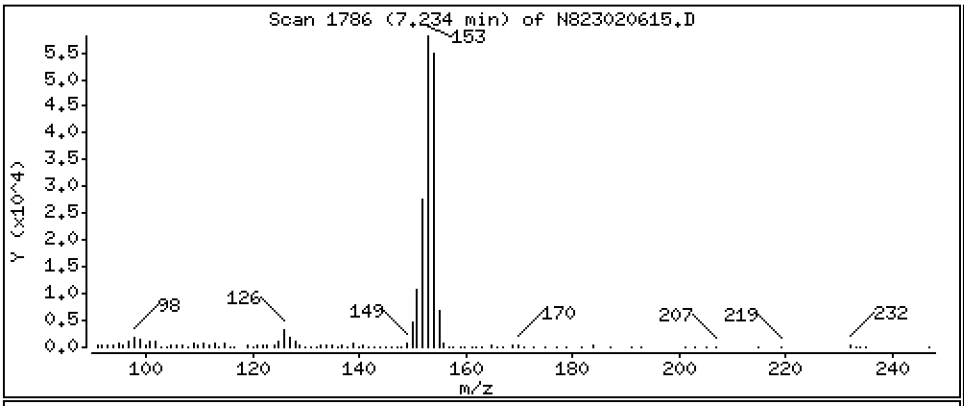
Operator: JZ

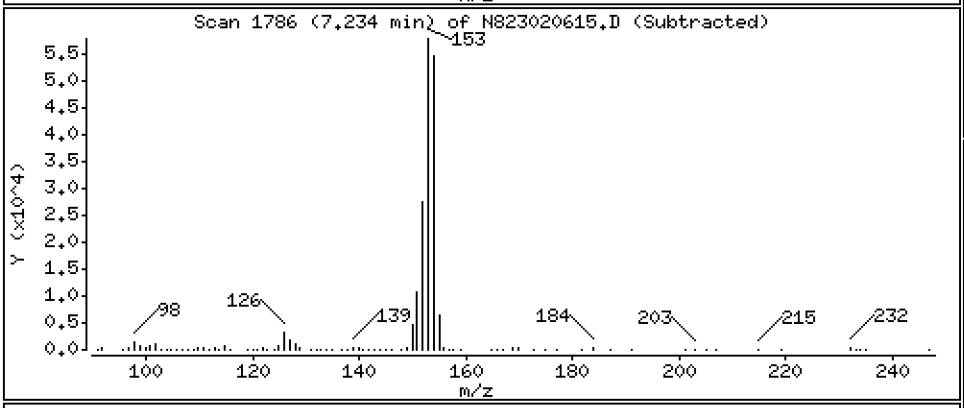
Column phase: Rxi-17sil

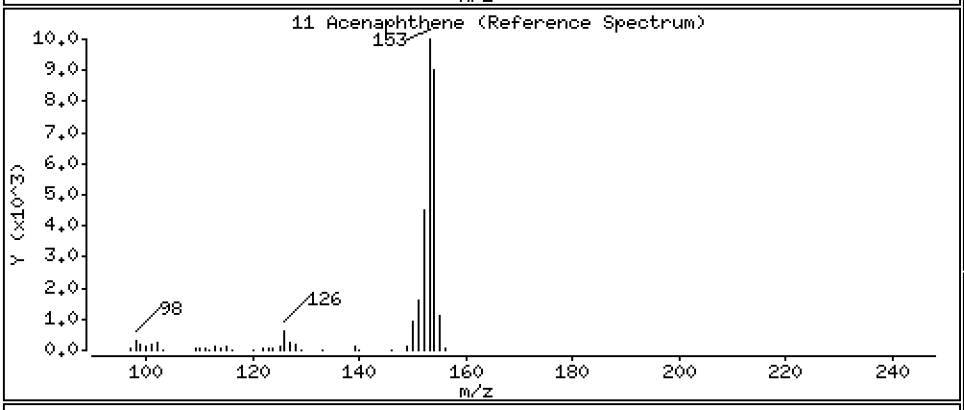
Column diameter: 0.25

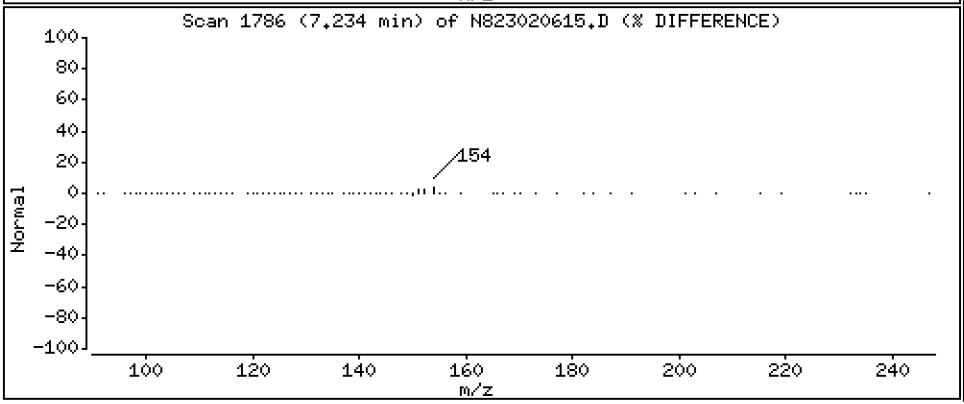
11 Acenaphthene

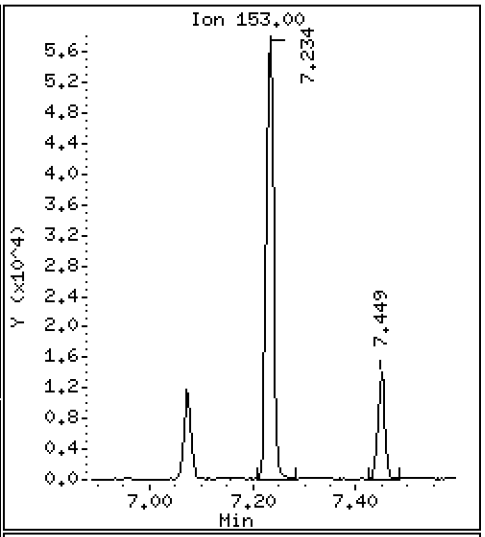
Concentration: 3.559 ug/mL

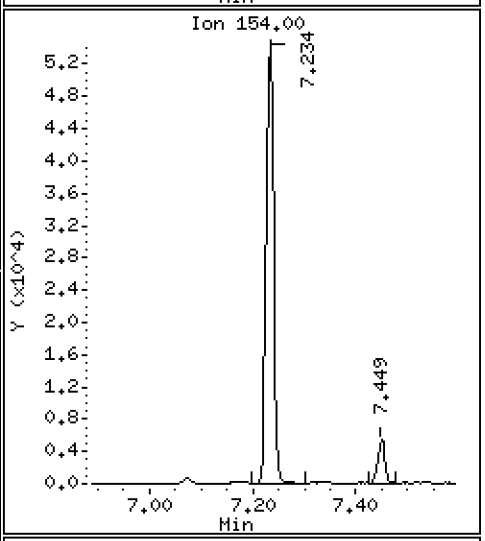


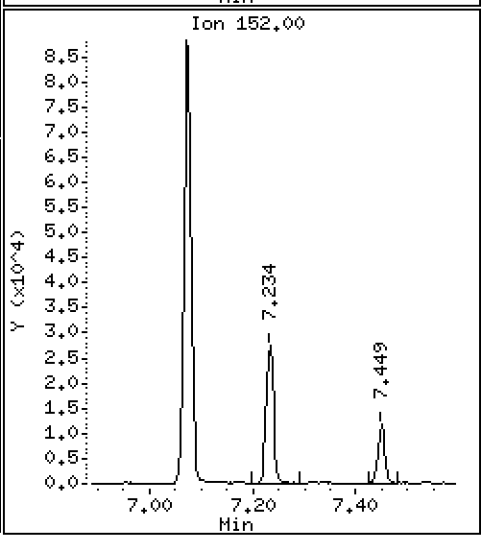












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

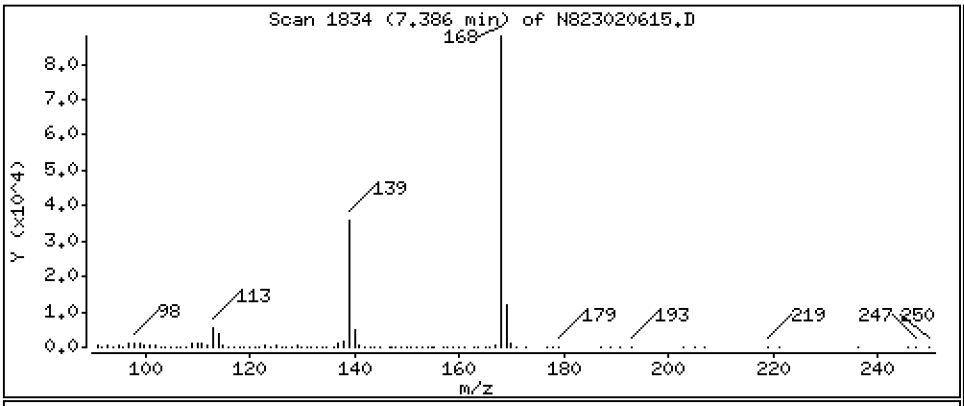
Operator: JZ

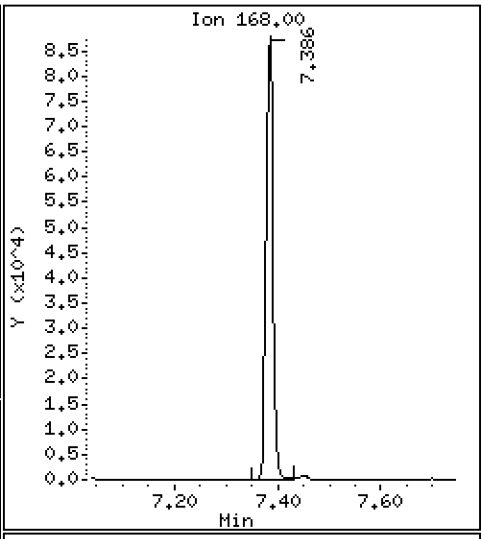
Column phase: Rxi-17sil

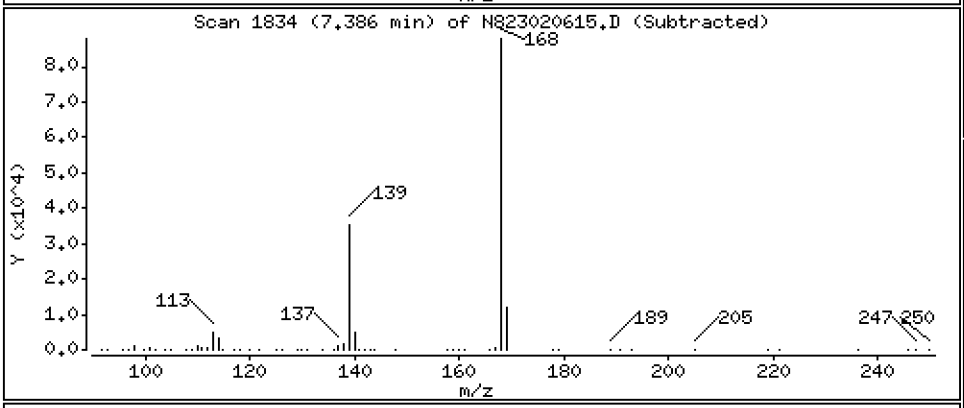
Column diameter: 0.25

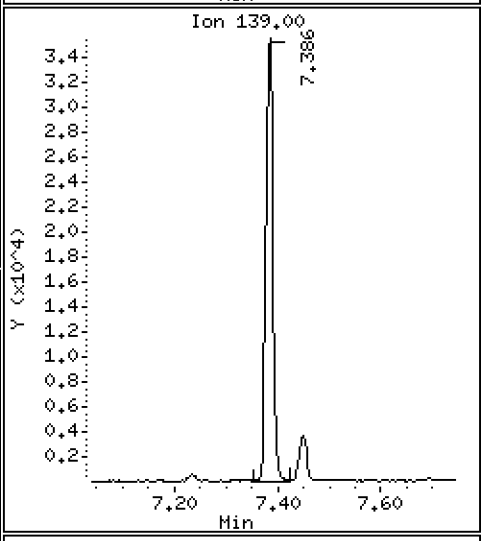
12 Dibenzofuran

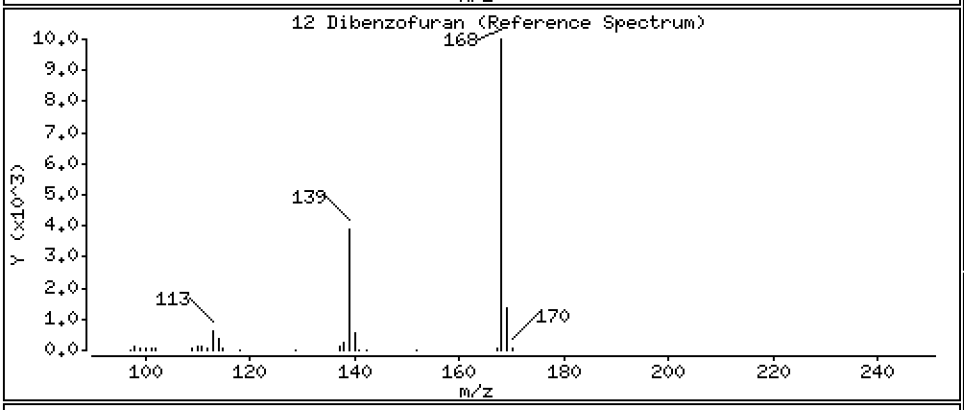
Concentration: 3.514 ug/mL

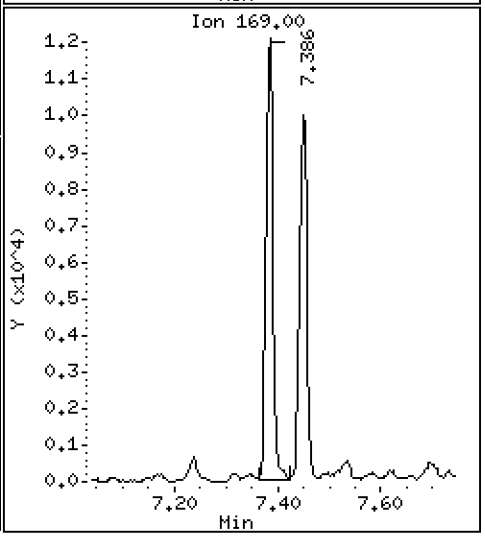


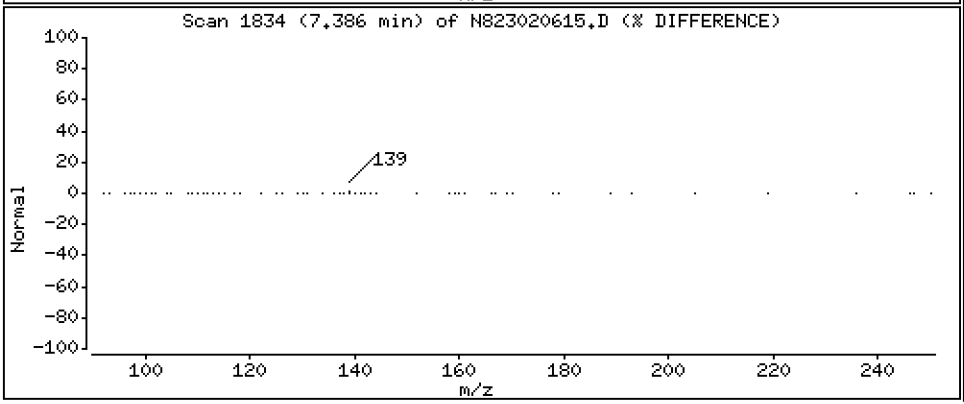












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

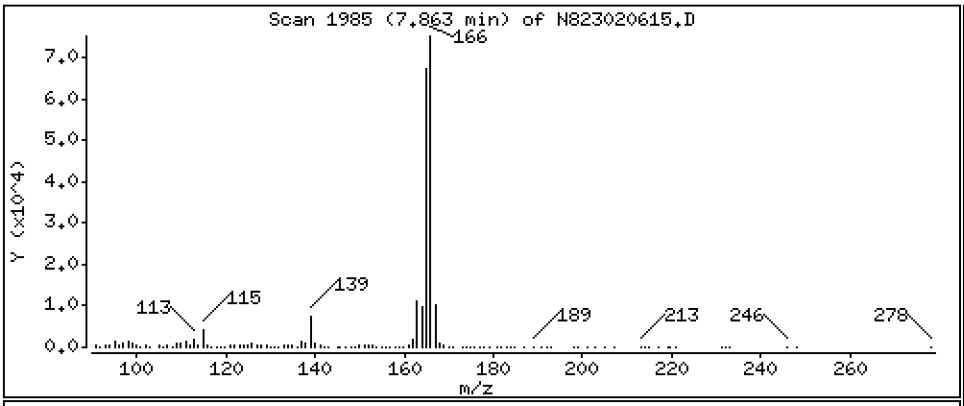
Operator: JZ

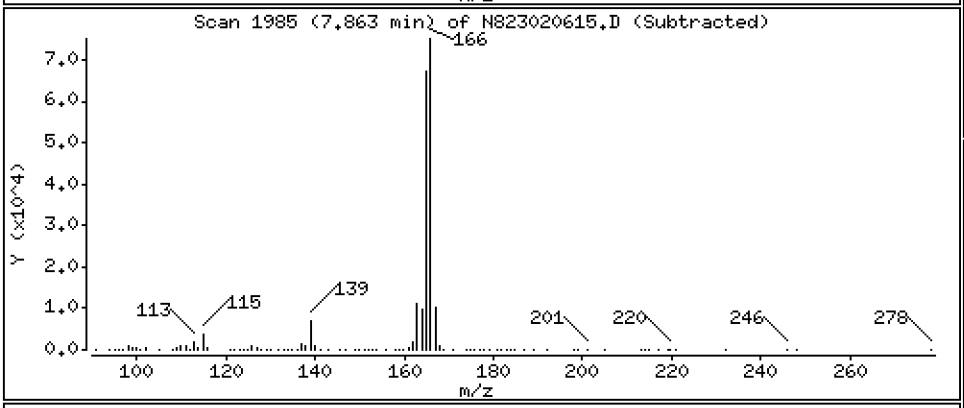
Column phase: Rxi-17sil

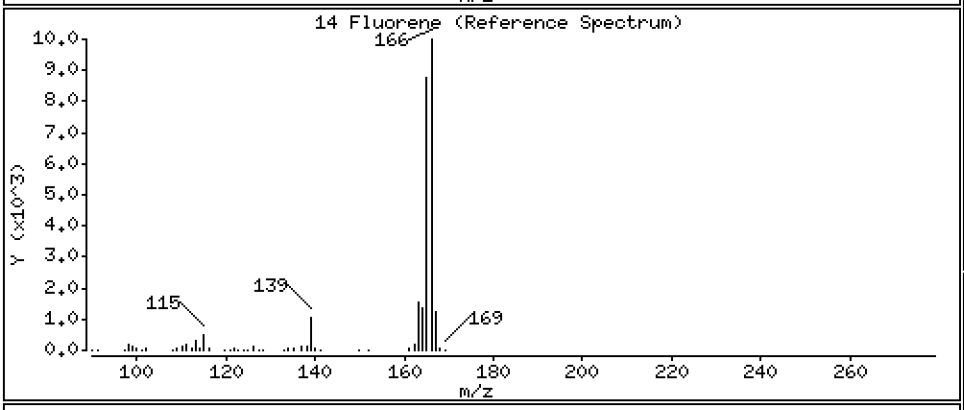
Column diameter: 0.25

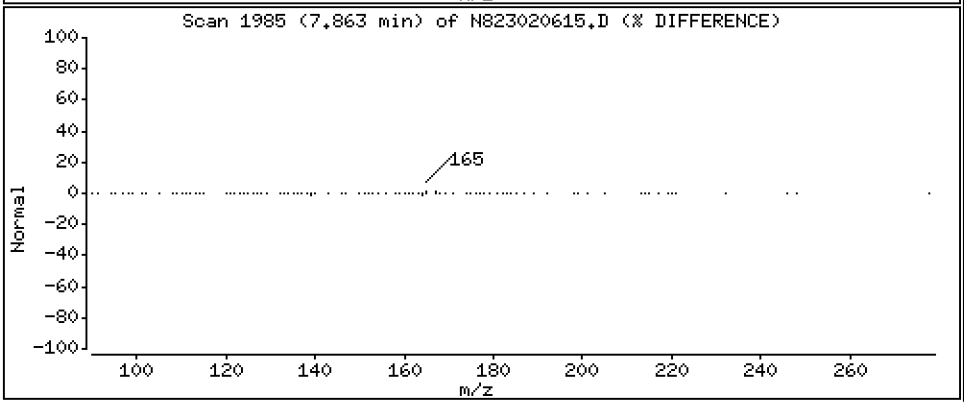
14 Fluorene

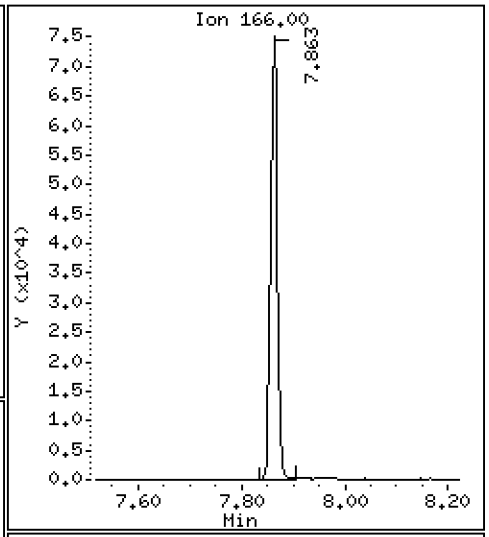
Concentration: 3.738 ug/mL

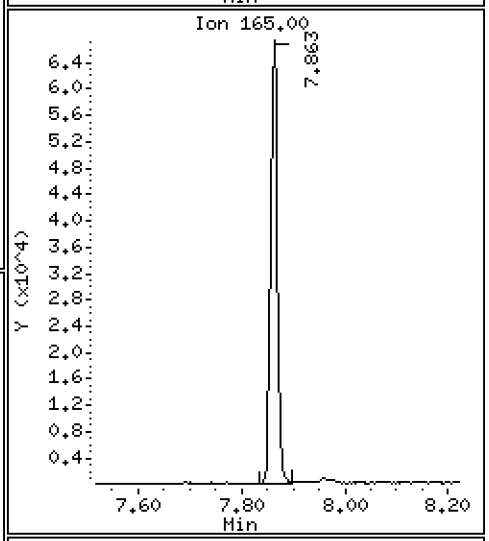


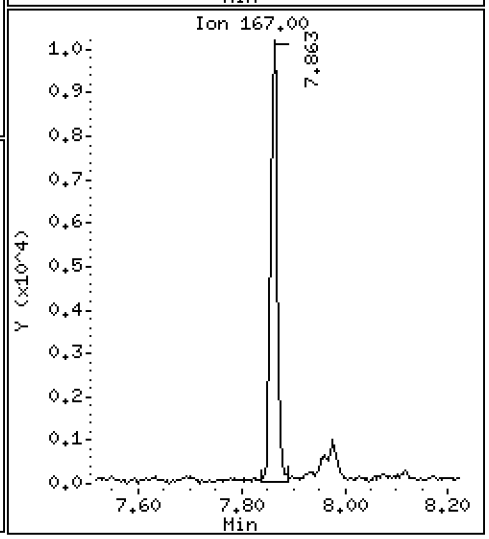












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

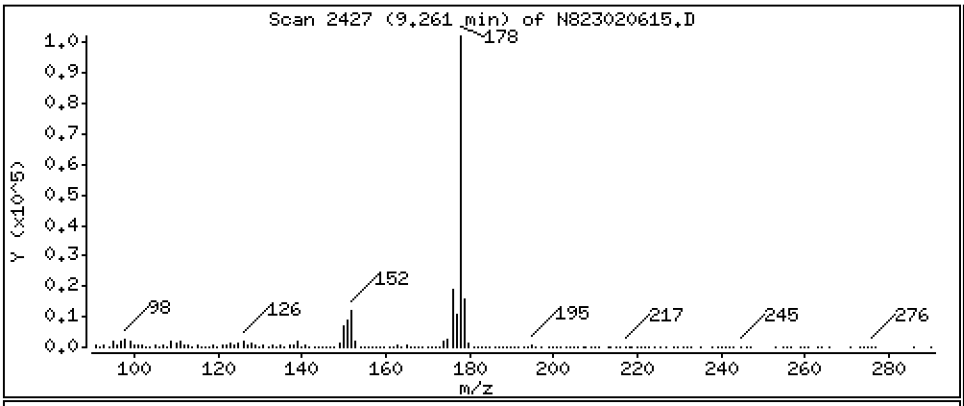
Operator: JZ

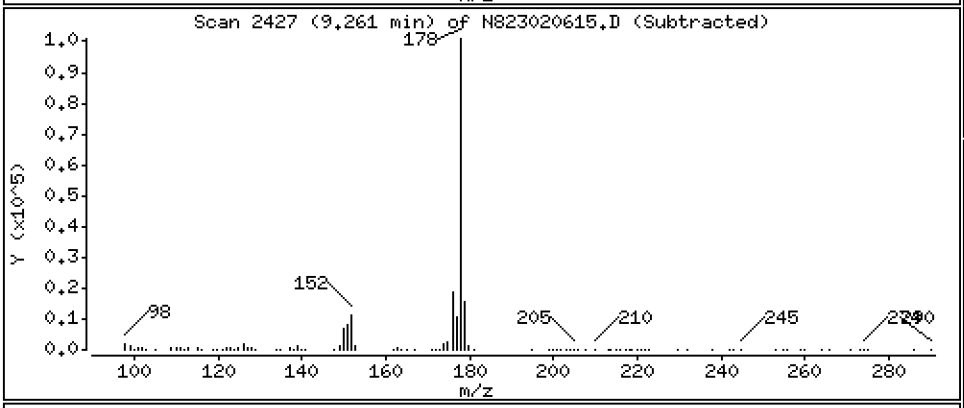
Column phase: Rxi-17sil

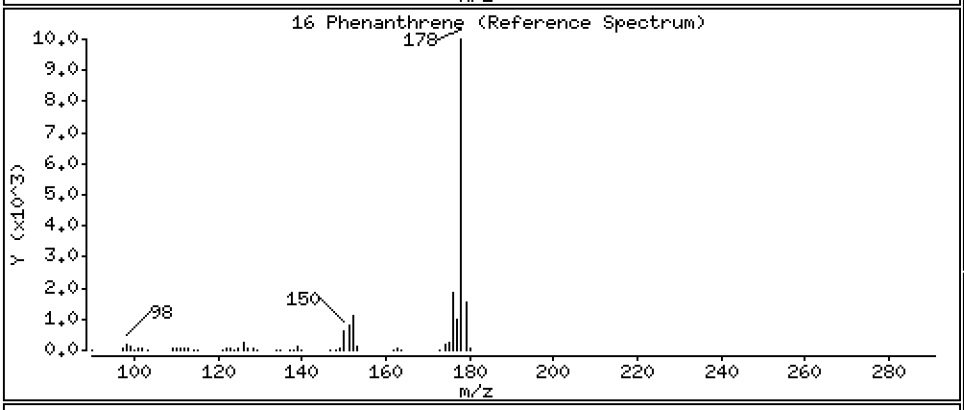
Column diameter: 0.25

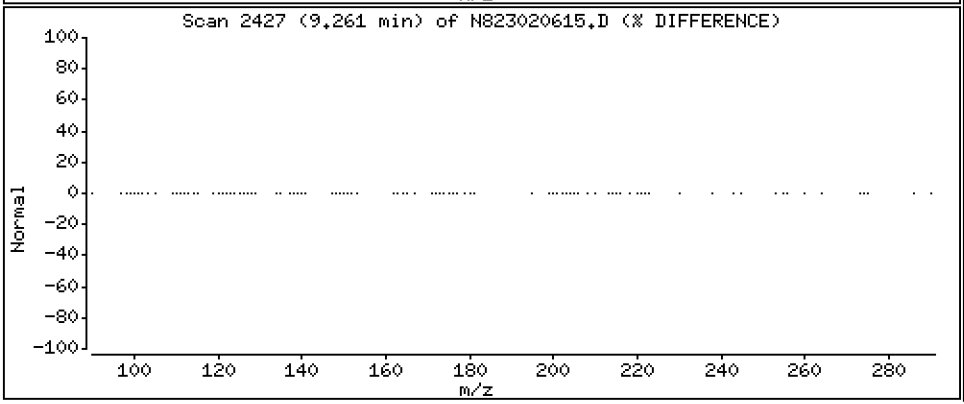
16 Phenanthrene

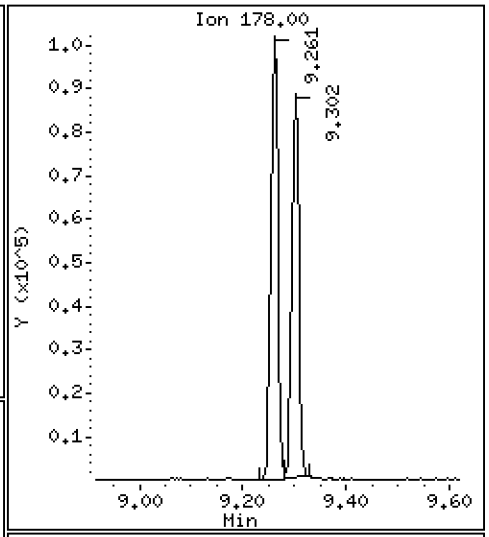
Concentration: 4.120 ug/mL

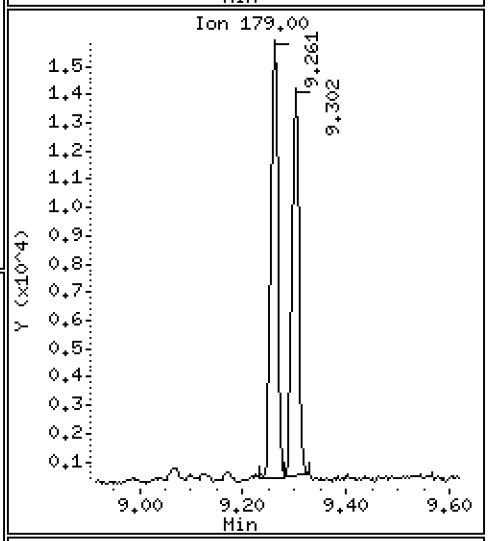


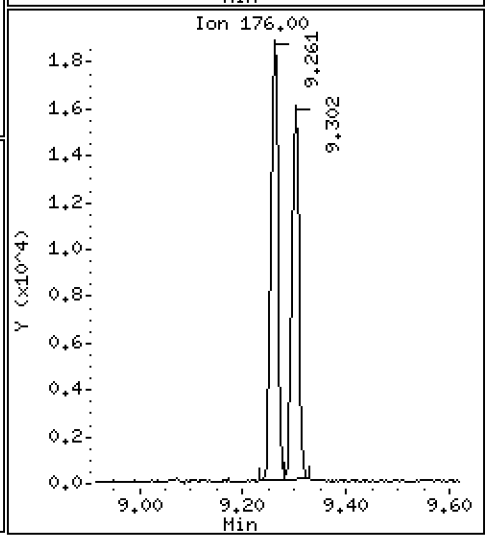












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

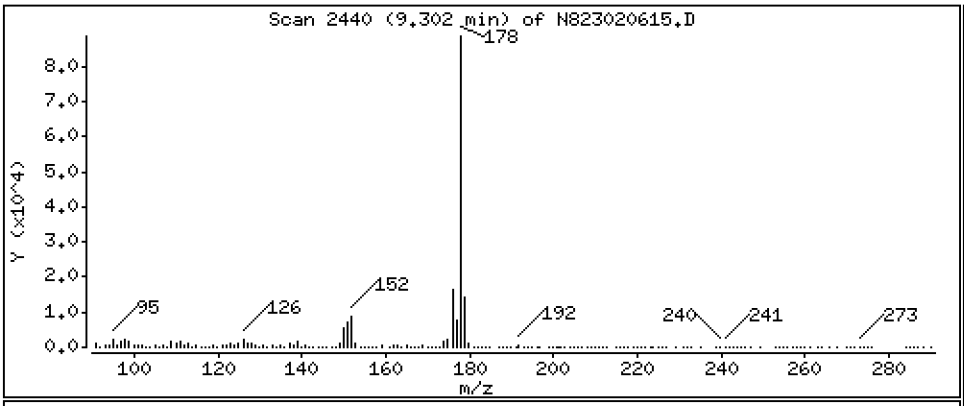
Operator: JZ

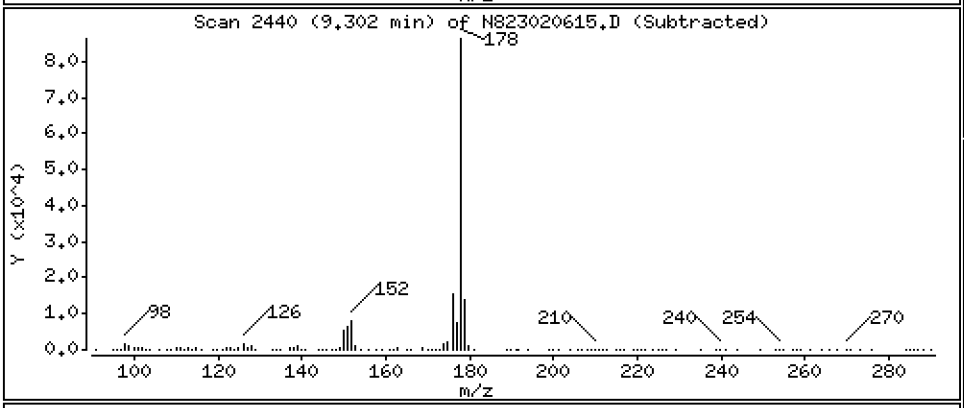
Column phase: Rxi-17sil

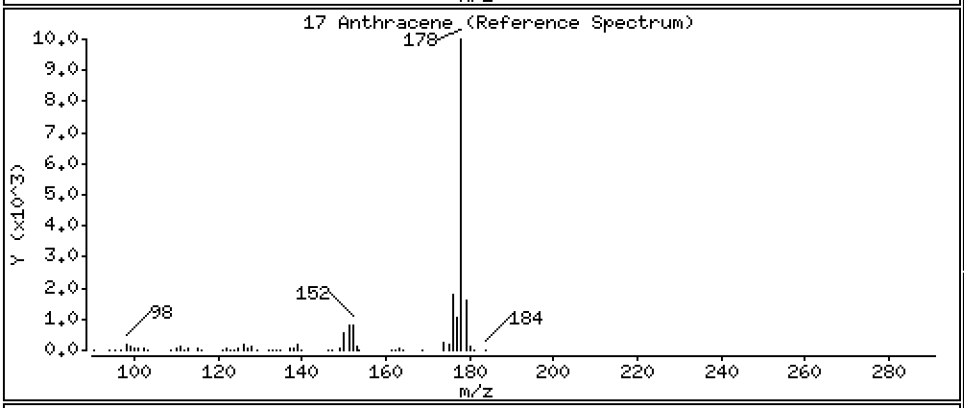
Column diameter: 0.25

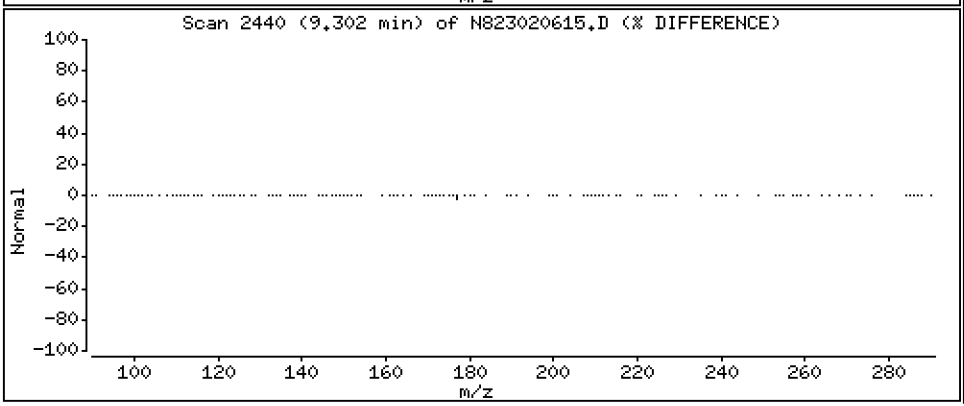
17 Anthracene

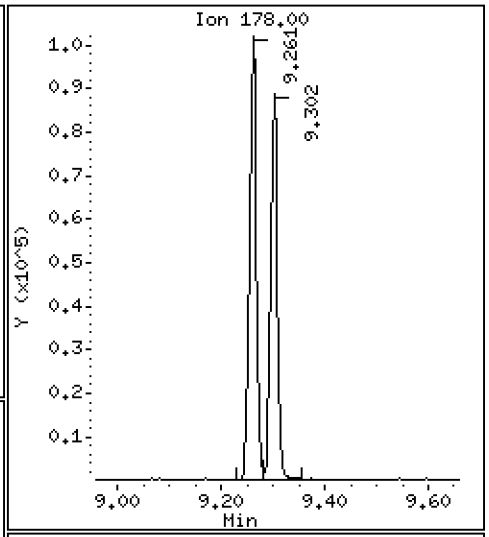
Concentration: 3.977 ug/mL

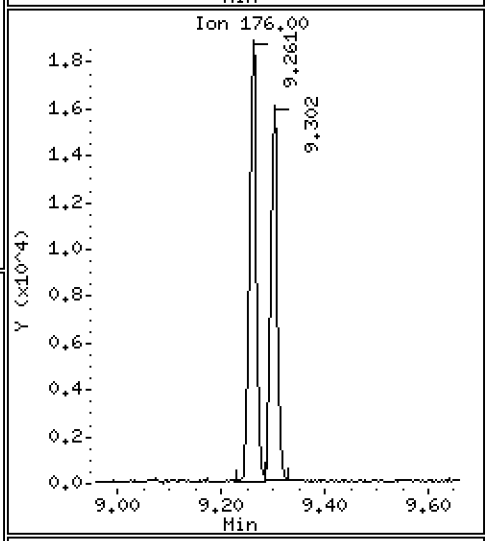


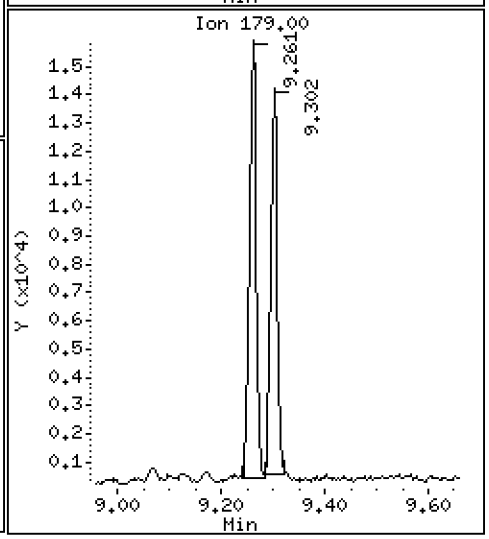












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

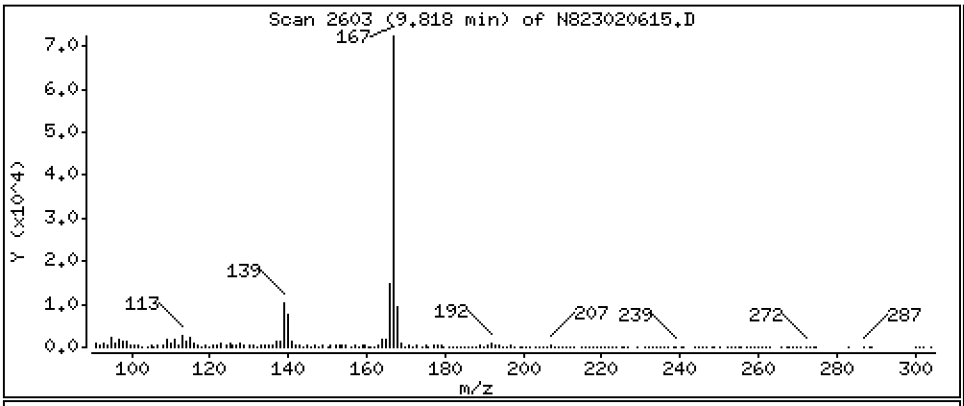
Operator: JZ

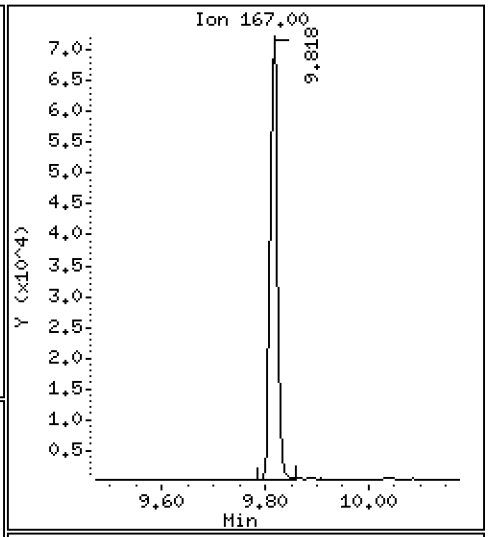
Column phase: Rxi-17sil

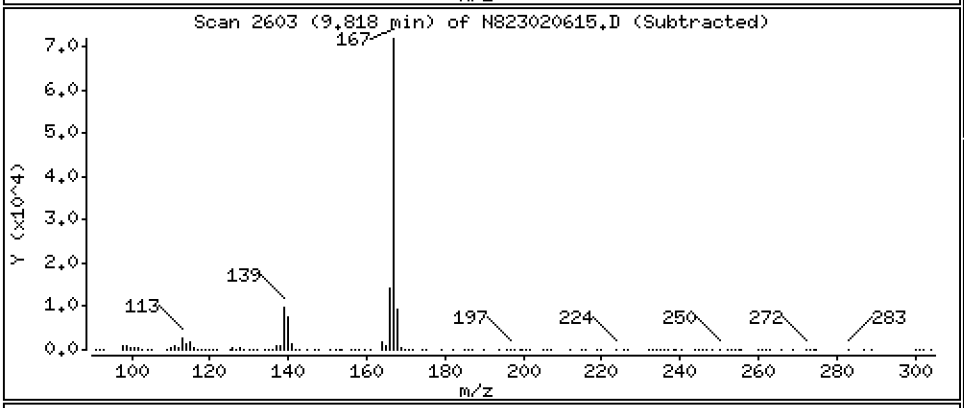
Column diameter: 0.25

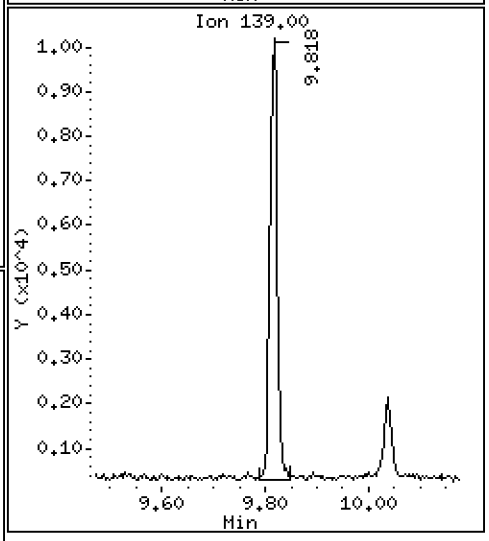
19 Carbazole

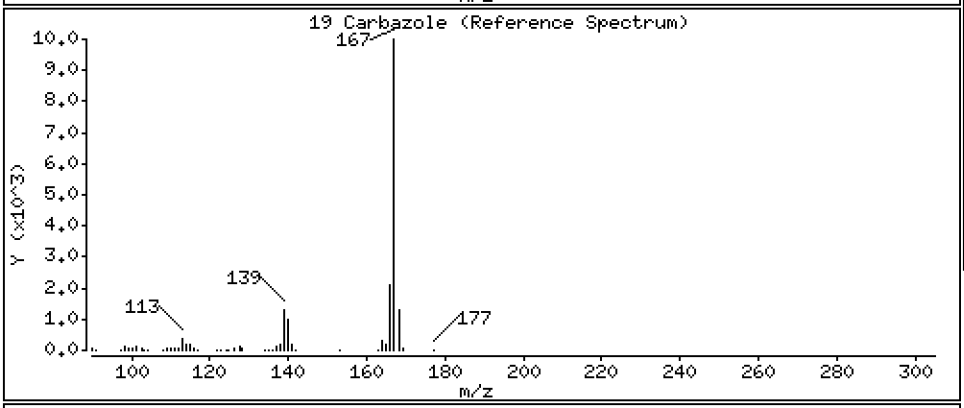
Concentration: 3.810 ug/mL

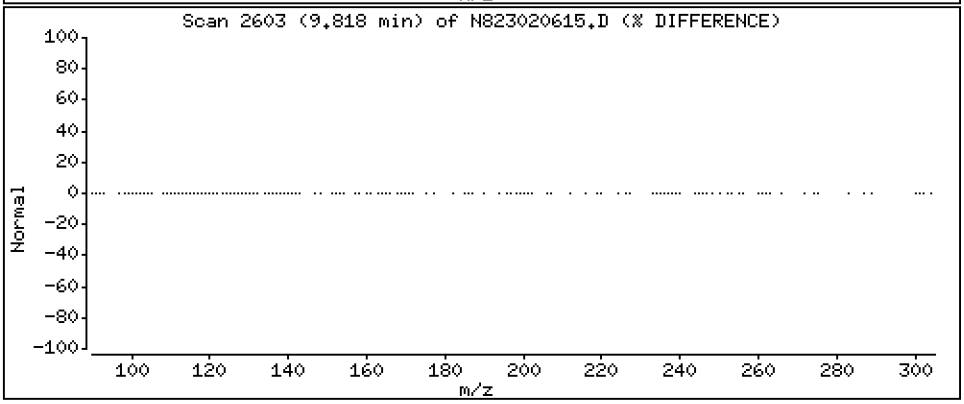












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

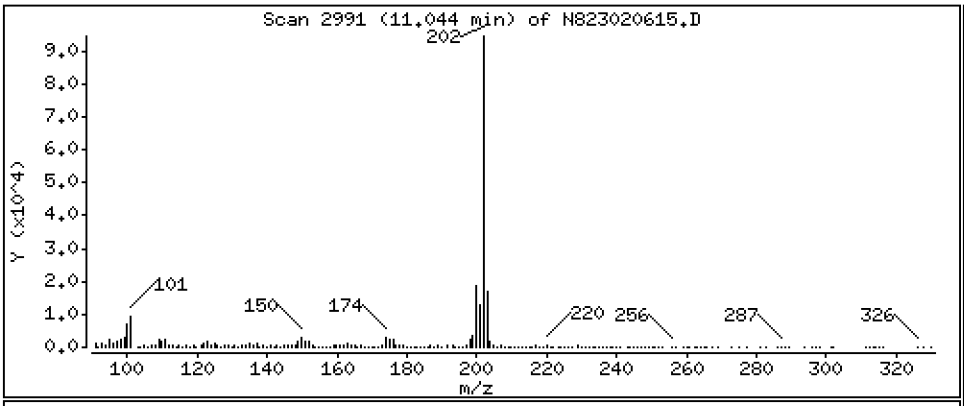
Operator: JZ

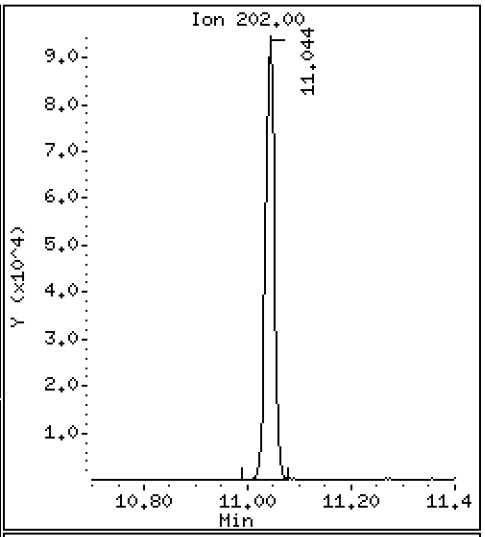
Column phase: Rxi-17sil

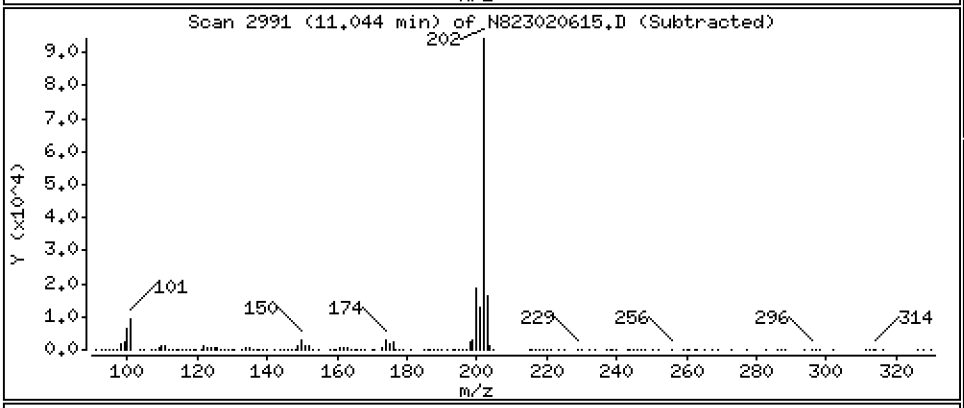
Column diameter: 0.25

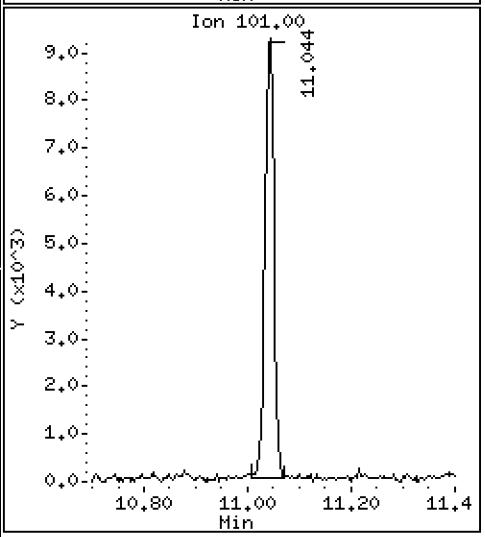
22 Fluoranthene

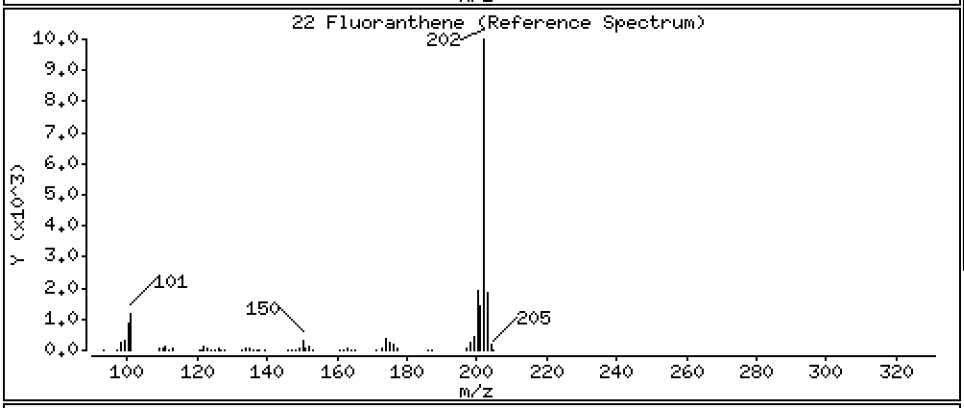
Concentration: 4.511 ug/mL

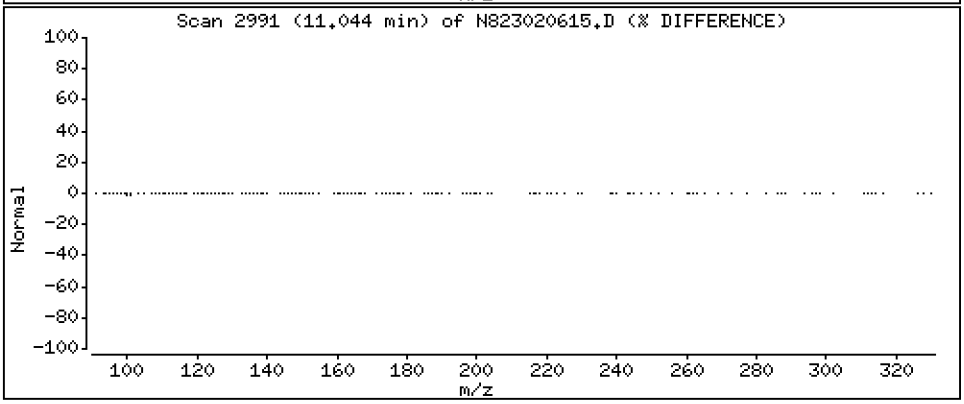












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020615.D

Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

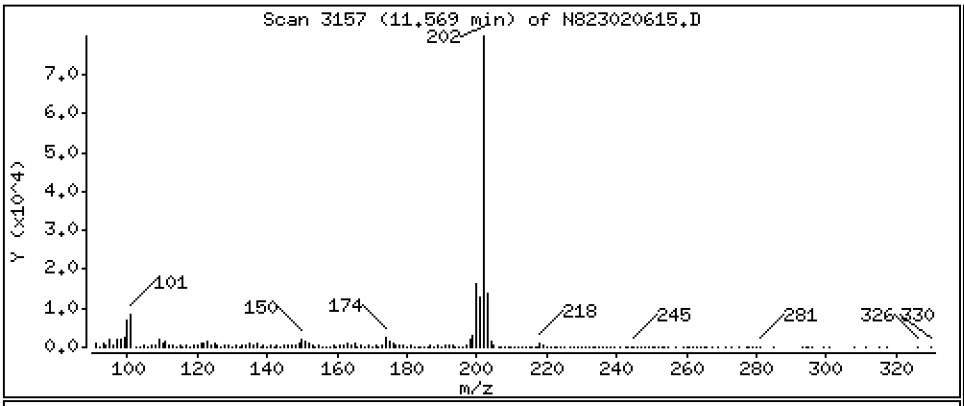
Operator: JZ

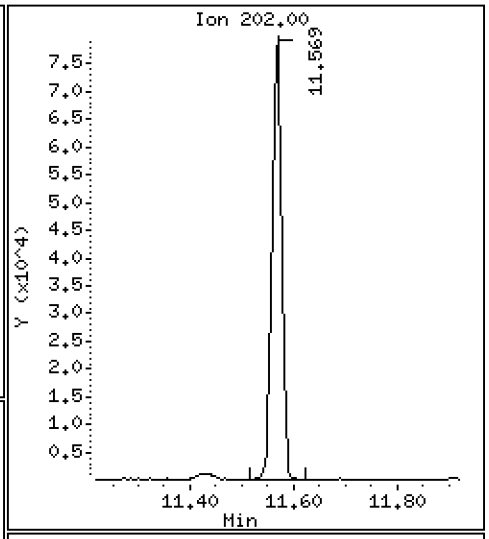
Column phase: Rxi-17sil

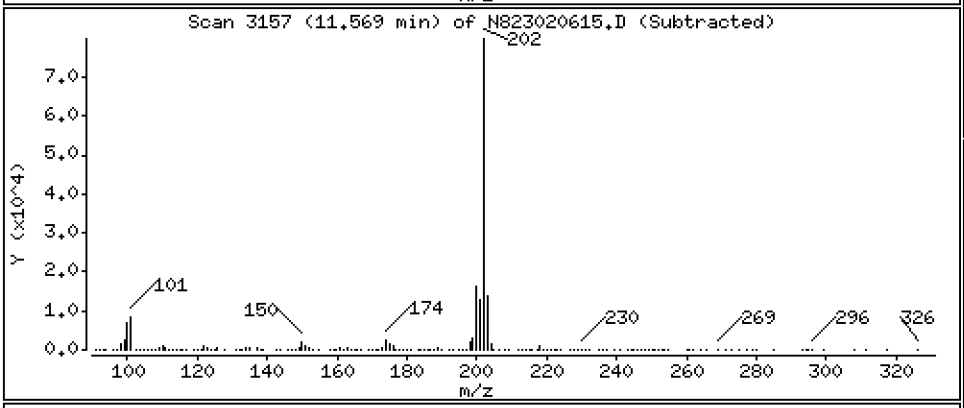
Column diameter: 0.25

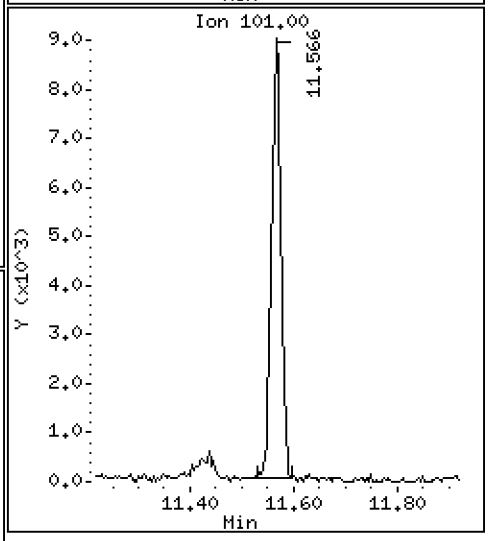
23 Pyrene

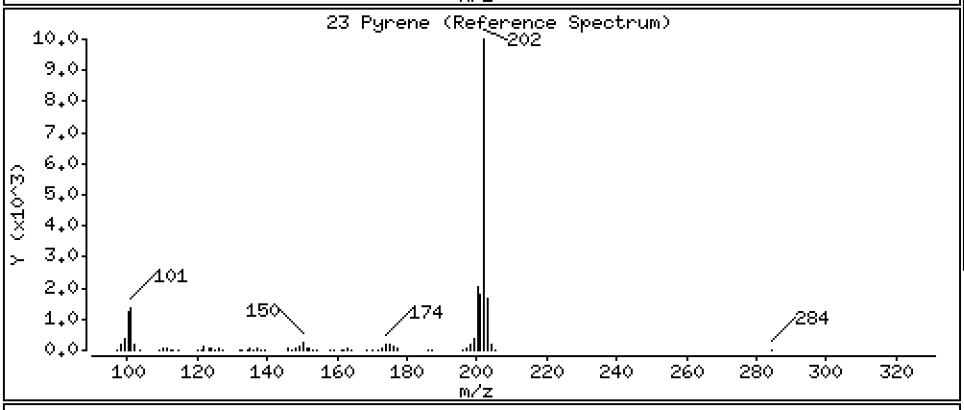
Concentration: 6.997 ug/mL

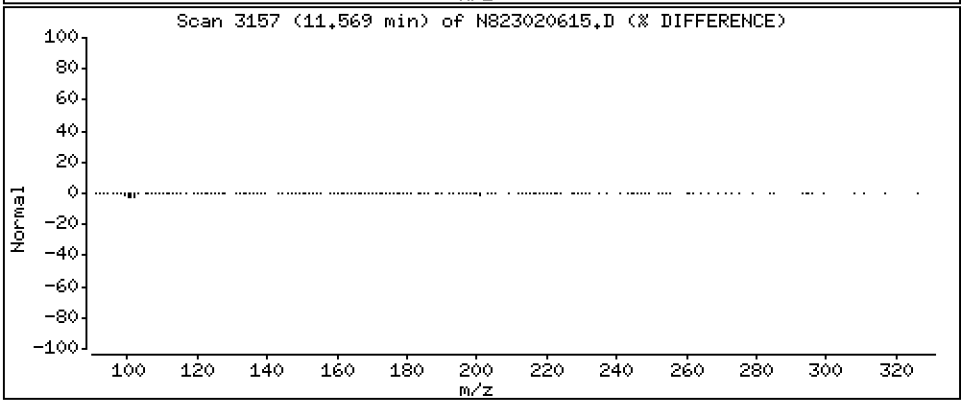












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

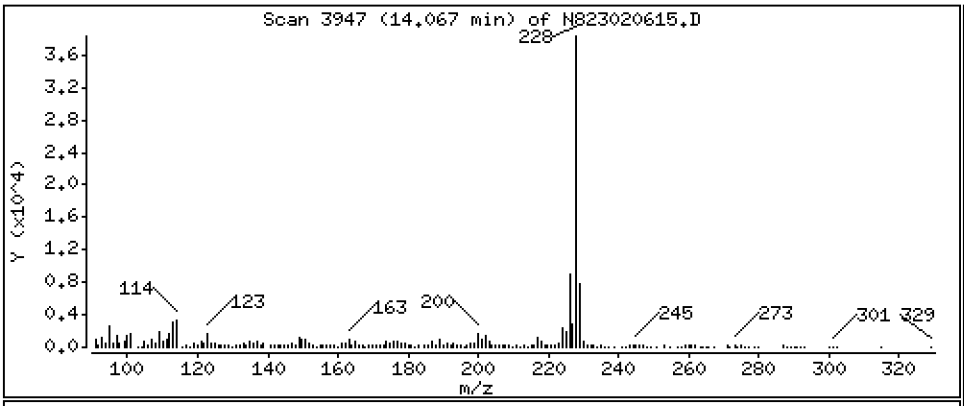
Operator: JZ

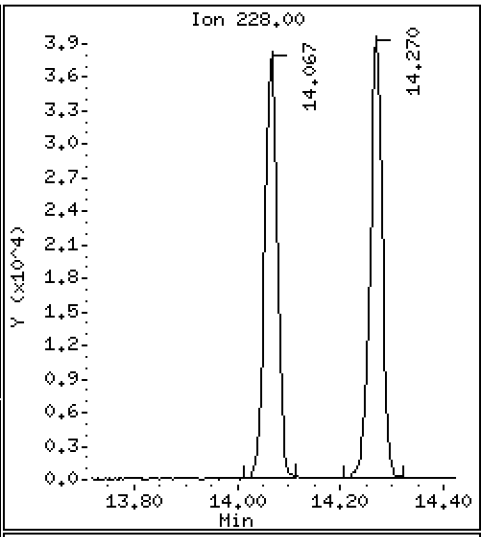
Column phase: Rxi-17sil

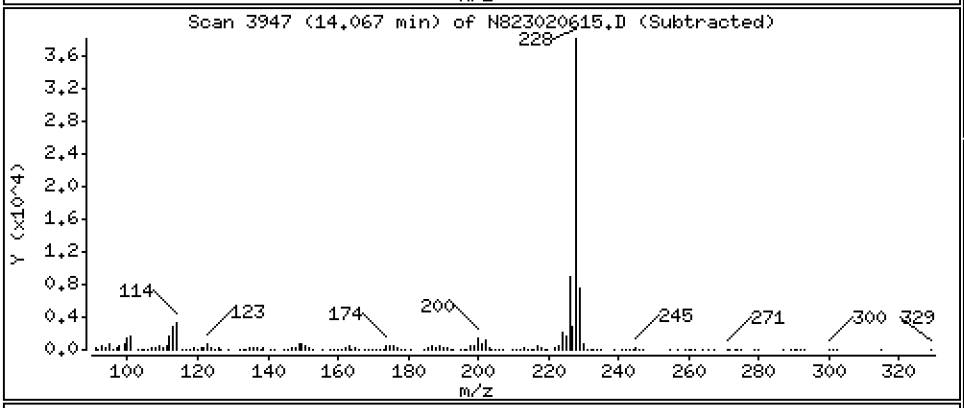
Column diameter: 0.25

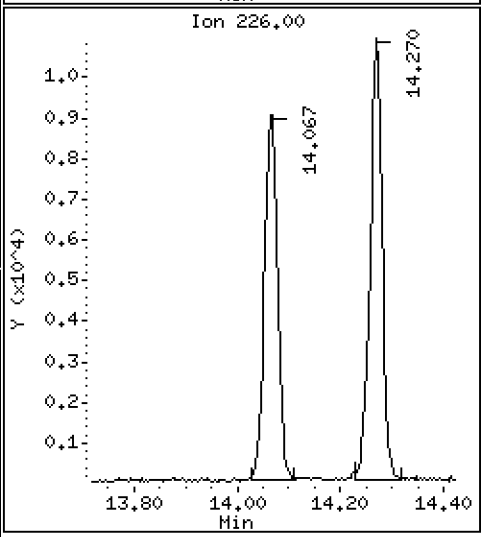
24 Benzo(a)anthracene

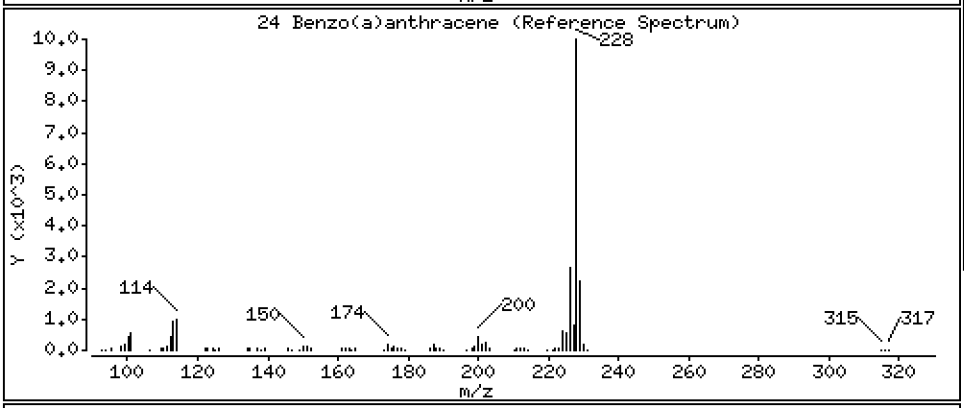
Concentration: 4.865 ug/mL

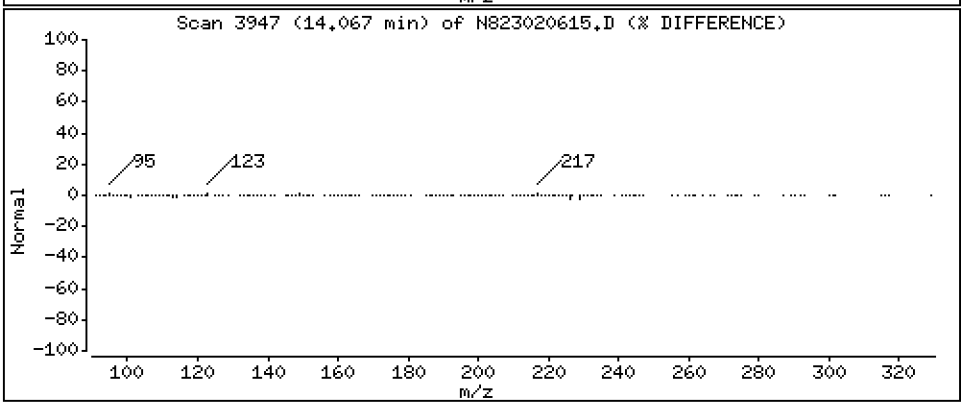












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

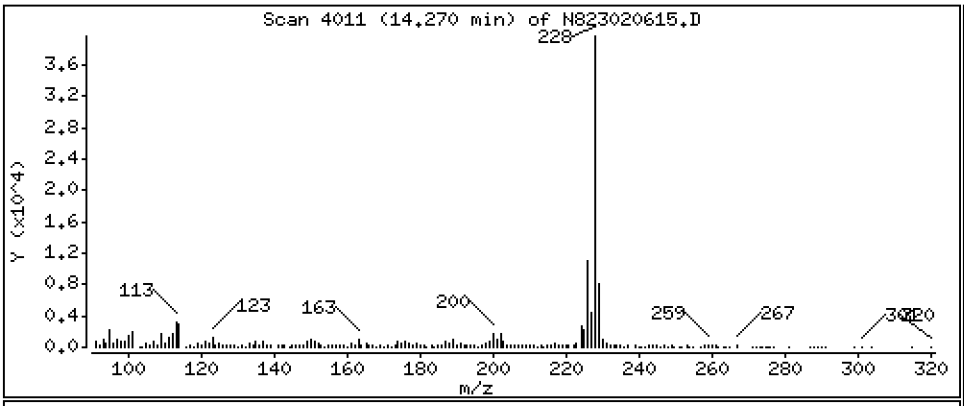
Operator: JZ

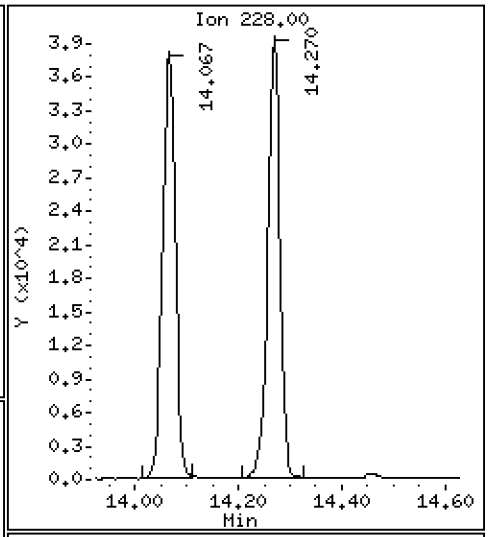
Column phase: Rxi-17sil

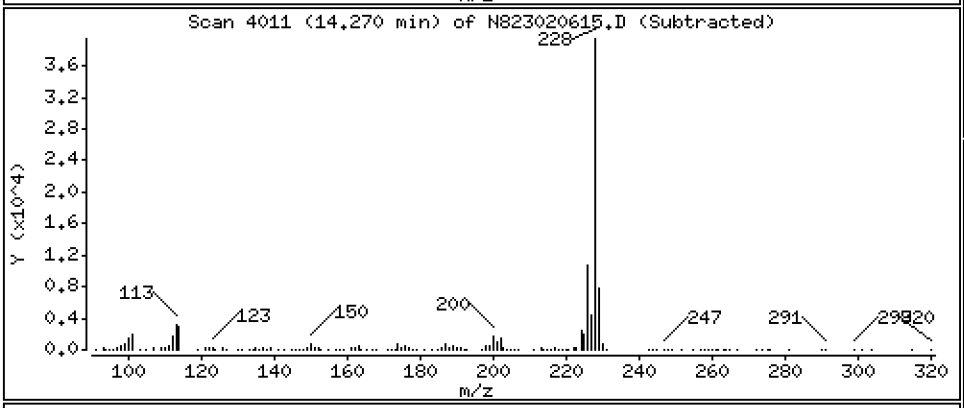
Column diameter: 0.25

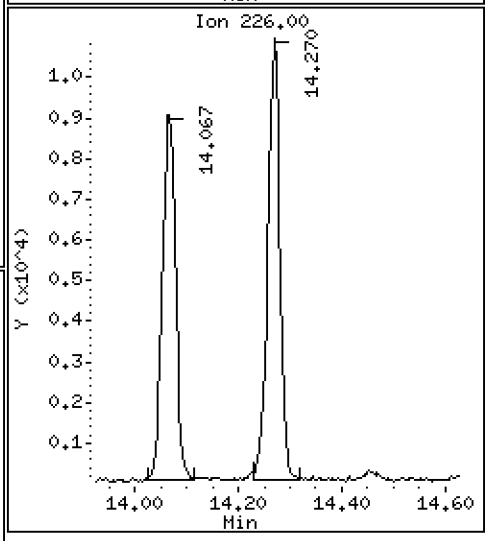
27 Chrysene

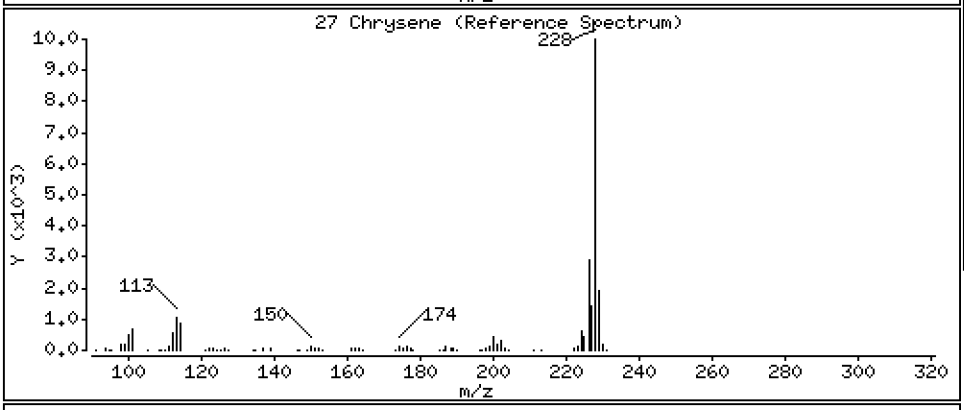
Concentration: 4.482 ug/mL

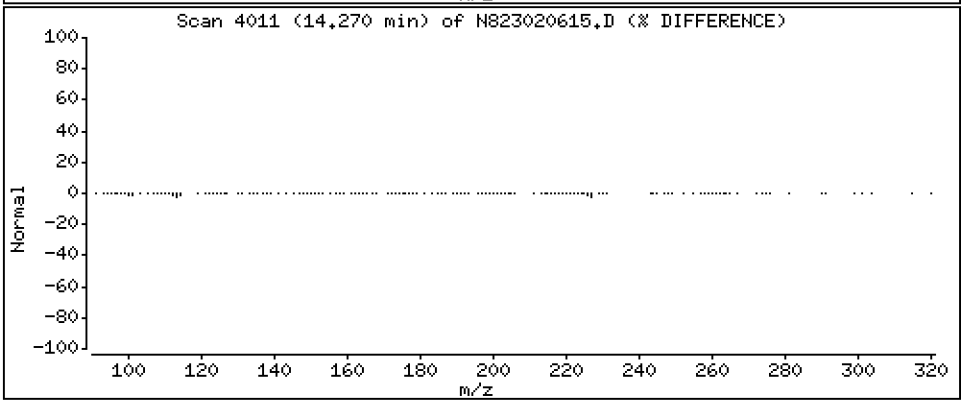












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

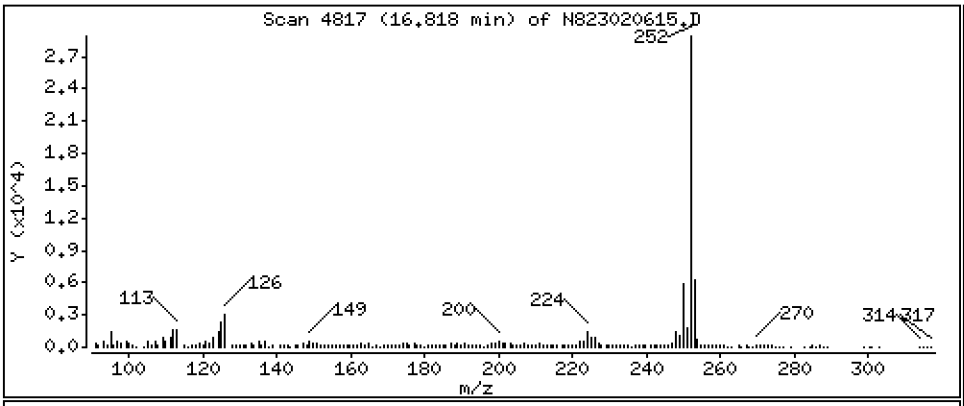
Operator: JZ

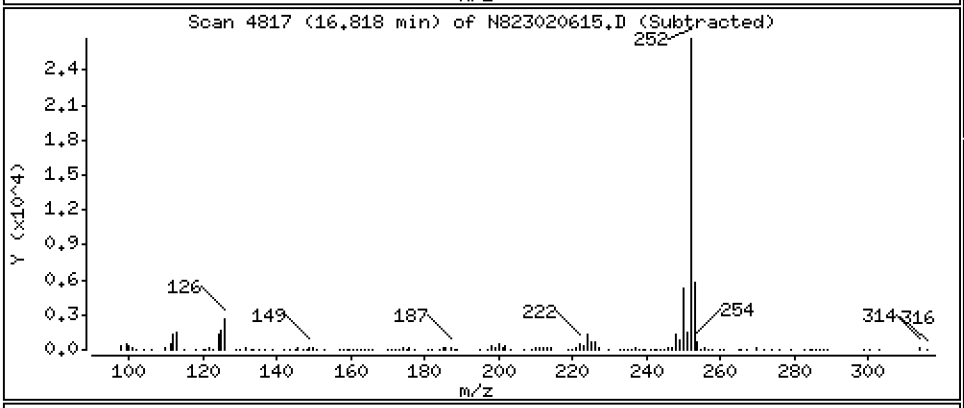
Column phase: Rxi-17sil

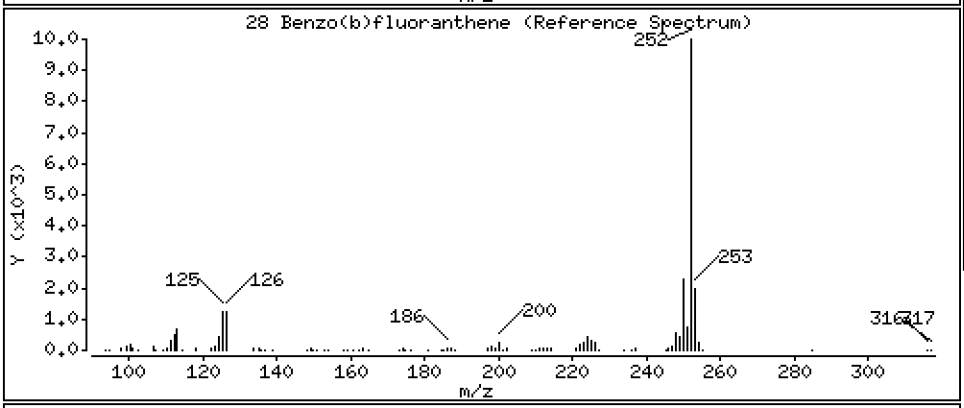
Column diameter: 0.25

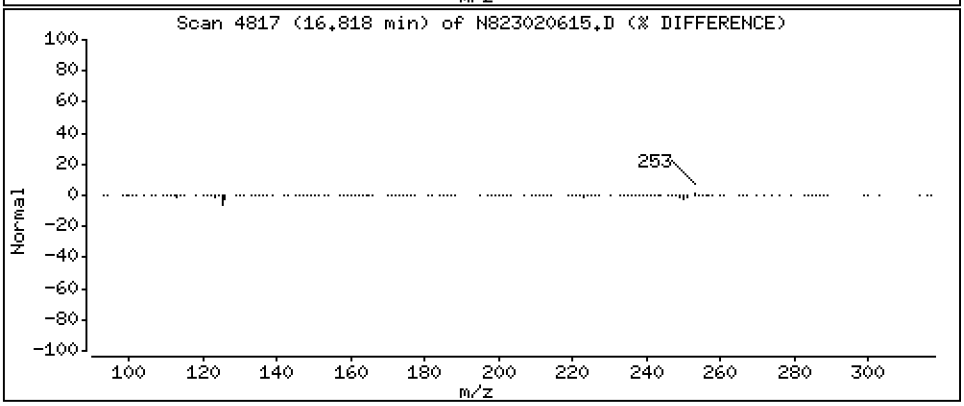
28 Benzo(b)fluoranthene

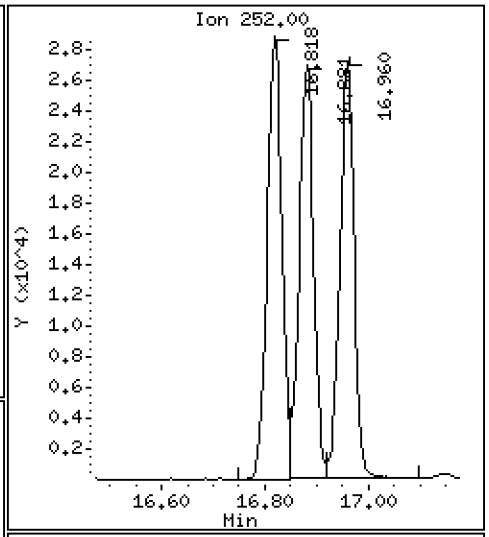
Concentration: 4.573 ug/mL

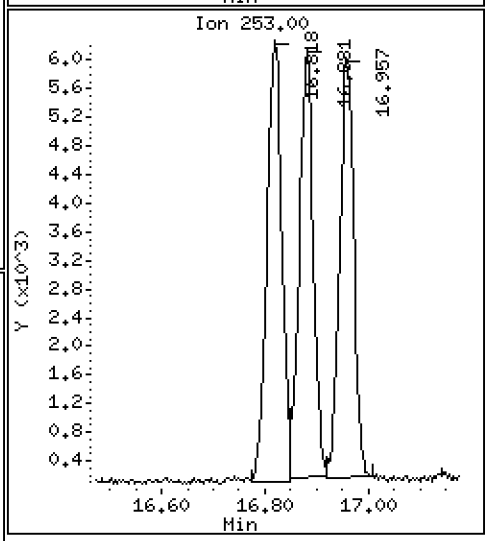












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

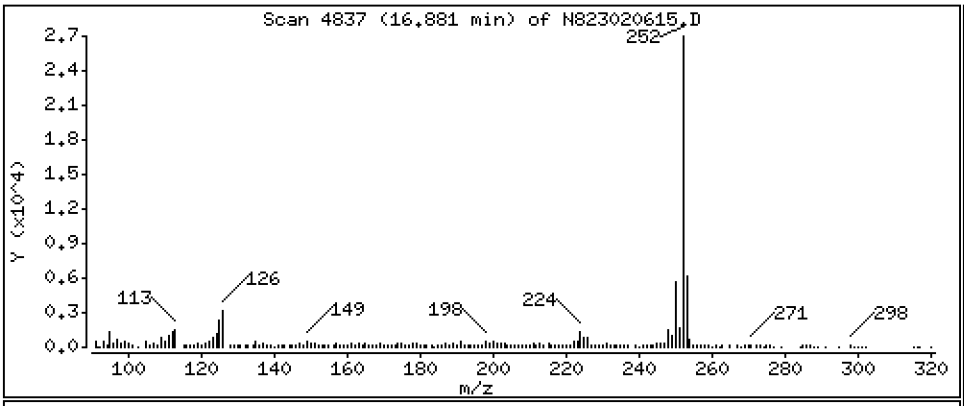
Operator: JZ

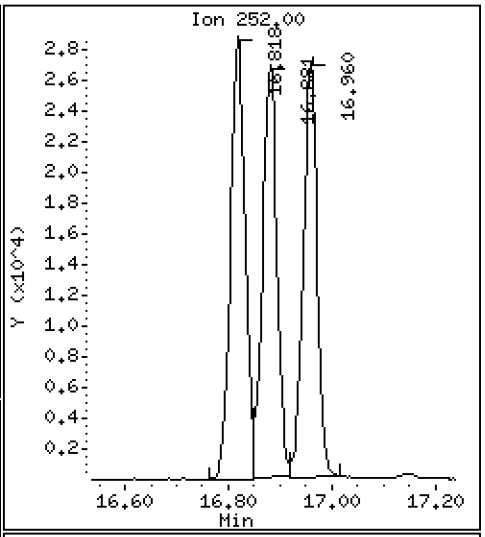
Column phase: Rxi-17sil

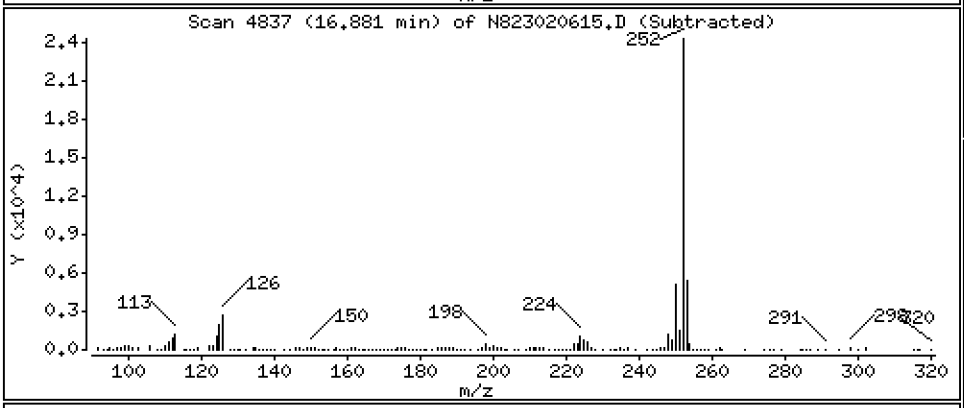
Column diameter: 0.25

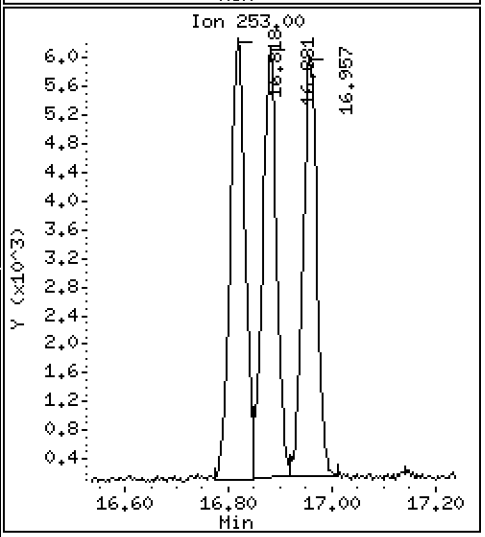
29 Benzo(k)fluoranthene

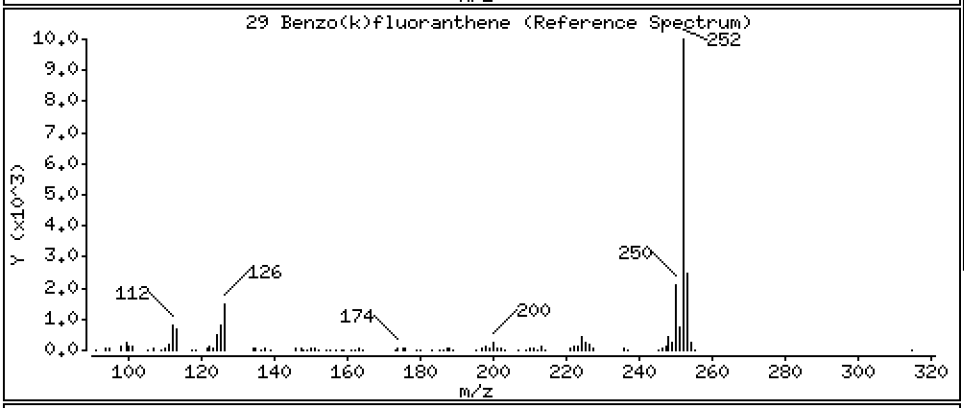
Concentration: 4.240 ug/mL

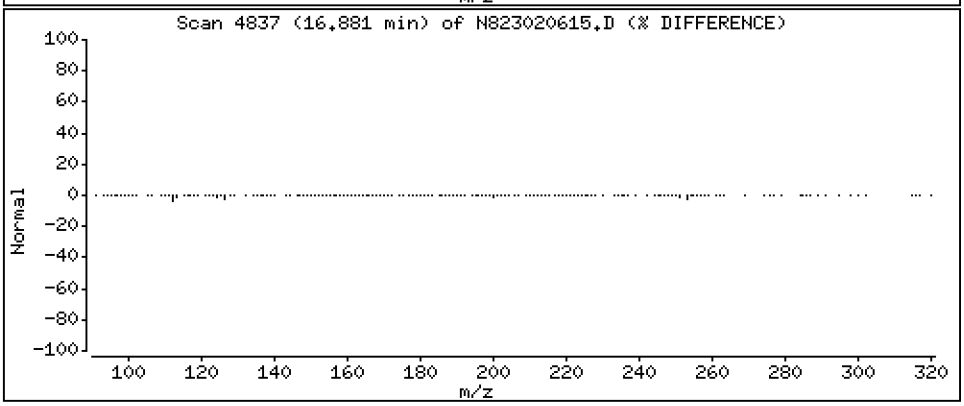












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

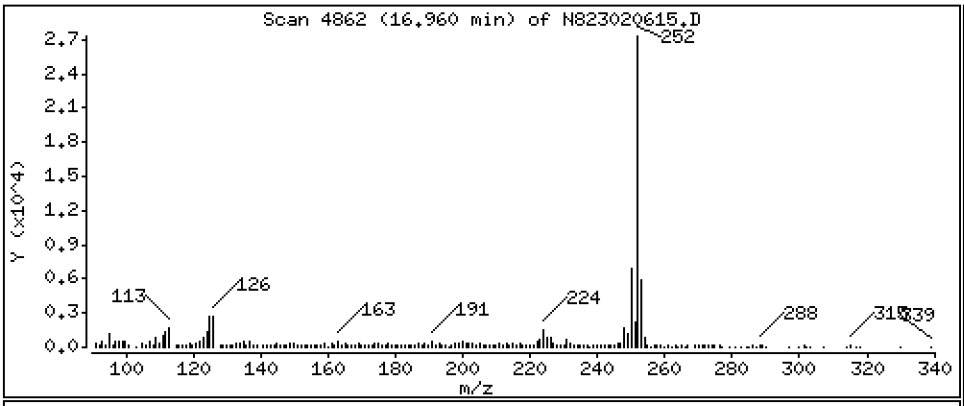
Operator: JZ

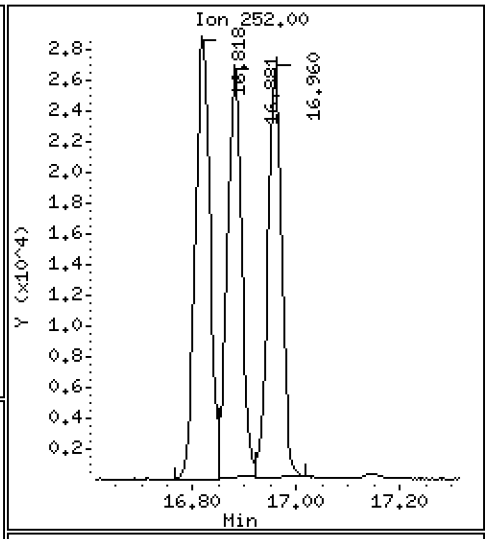
Column phase: Rxi-17sil

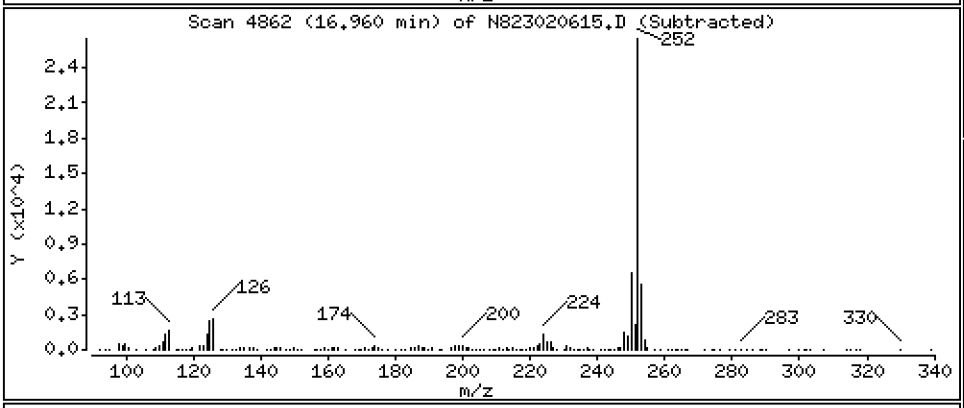
Column diameter: 0.25

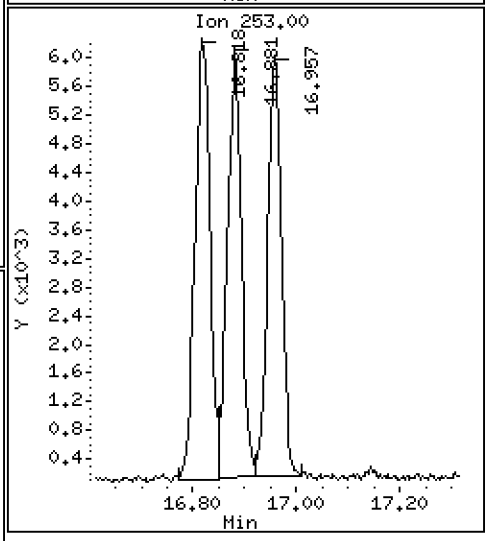
30 Benzo(j)fluoranthene

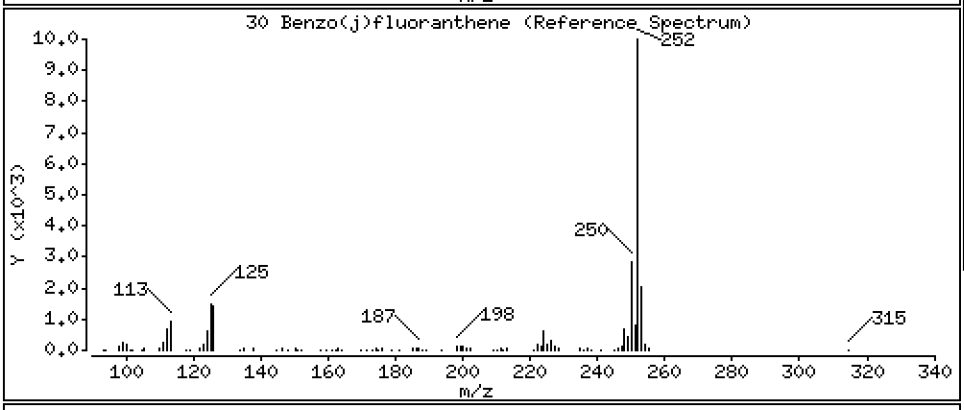
Concentration: 4.587 ug/mL

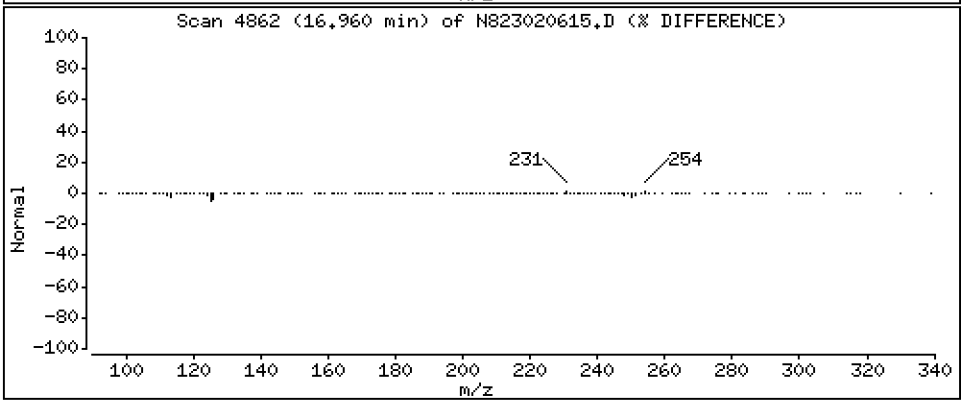












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

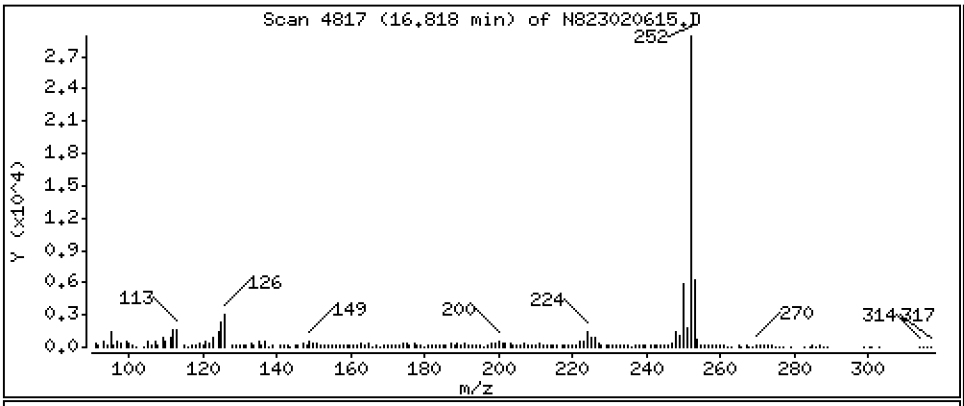
Operator: JZ

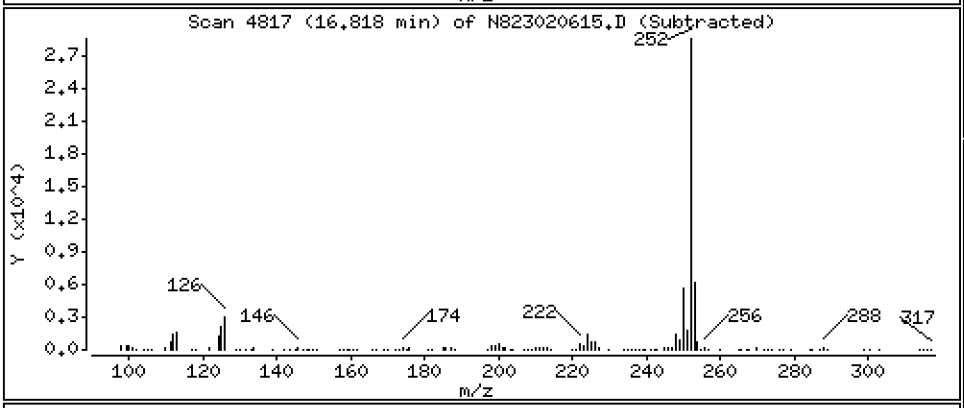
Column phase: Rxi-17sil

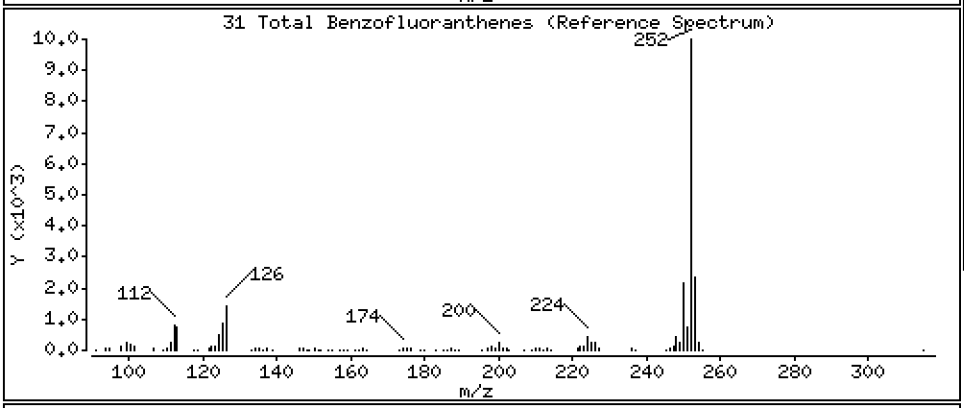
Column diameter: 0.25

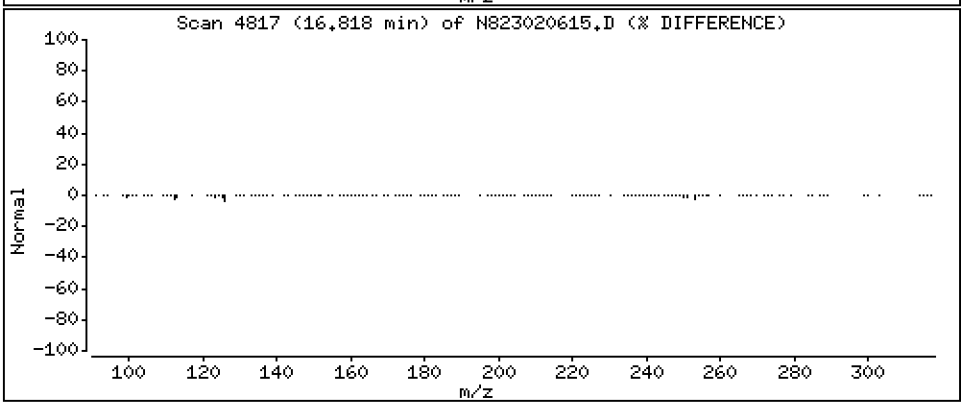
31 Total Benzofluoranthenes

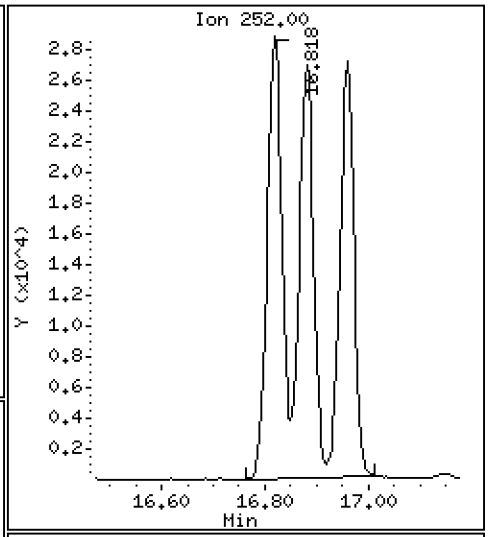
Concentration: 13.41 ug/mL

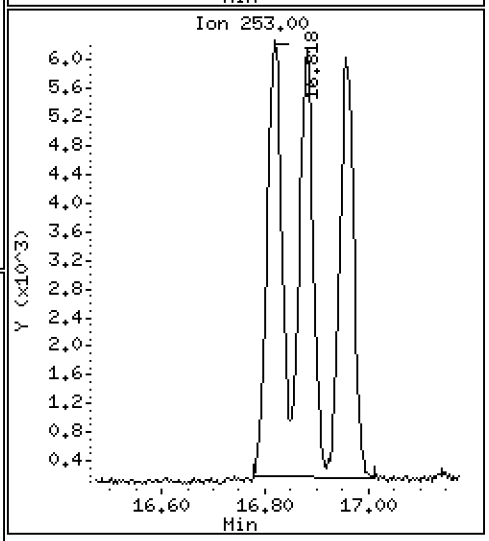












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

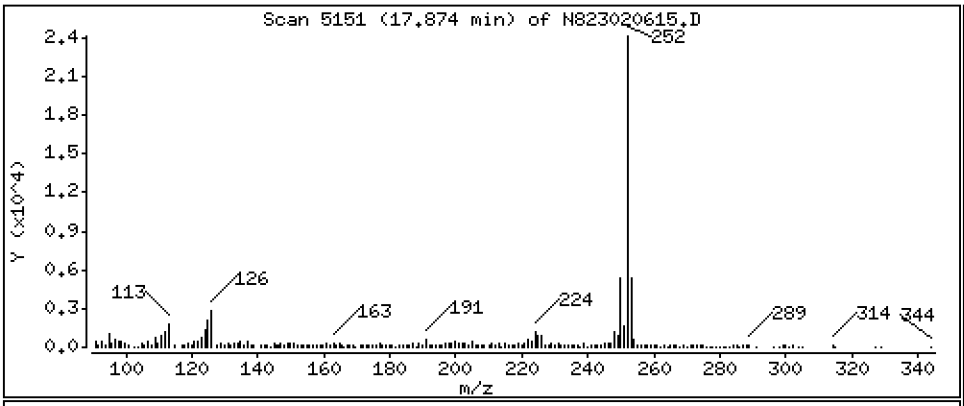
Operator: JZ

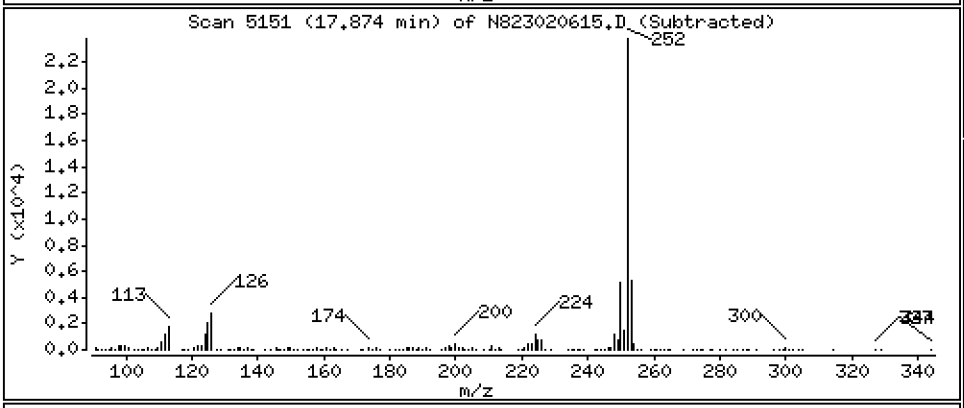
Column phase: Rxi-17sil

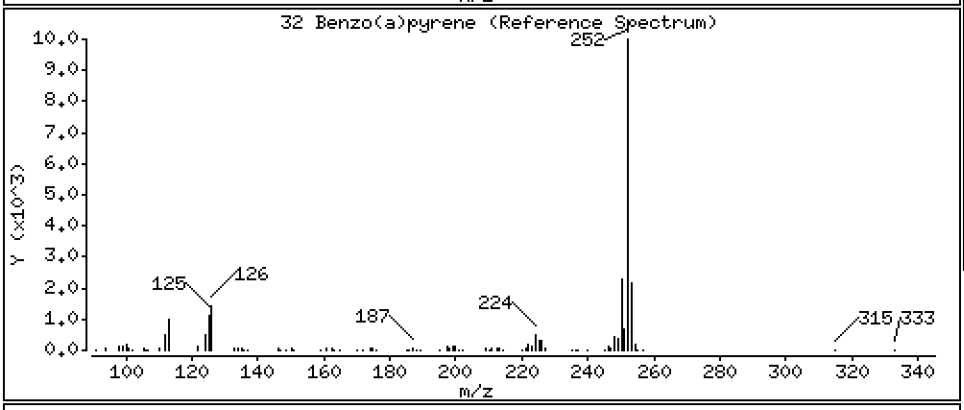
Column diameter: 0.25

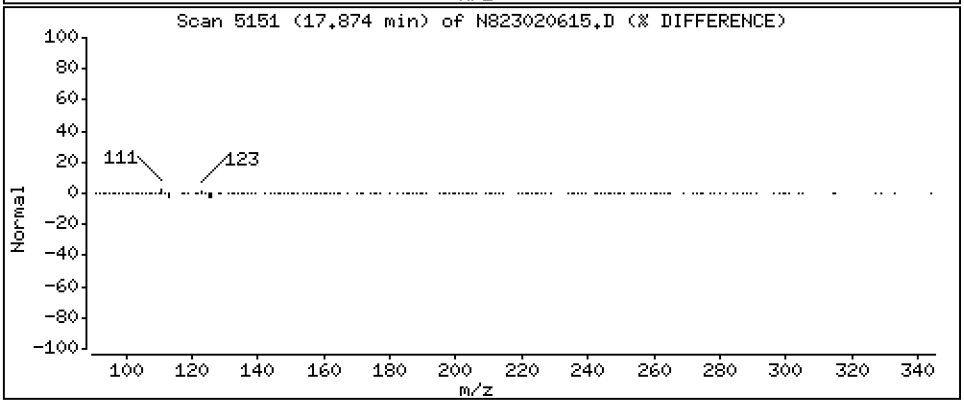
32 Benzo(a)pyrene

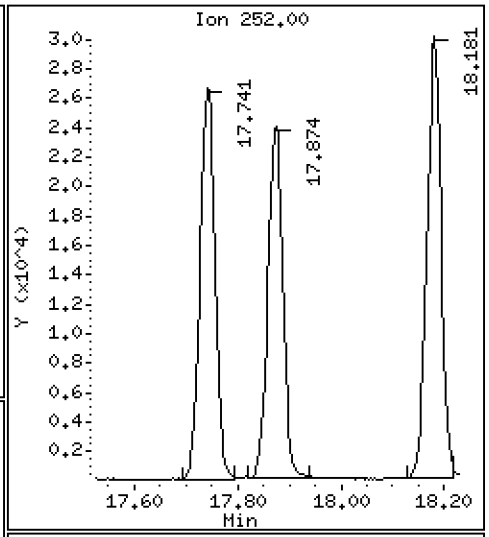
Concentration: 4.369 ug/mL

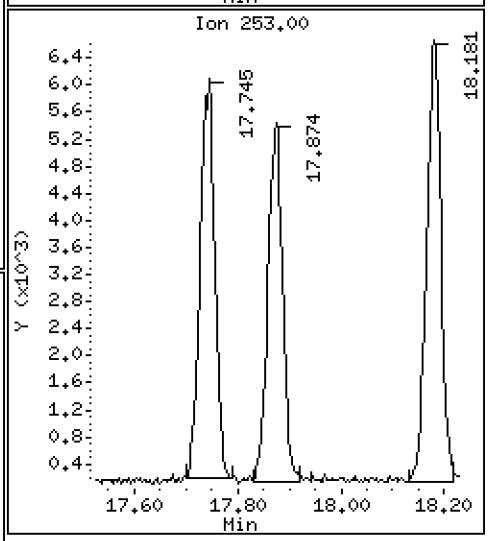












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

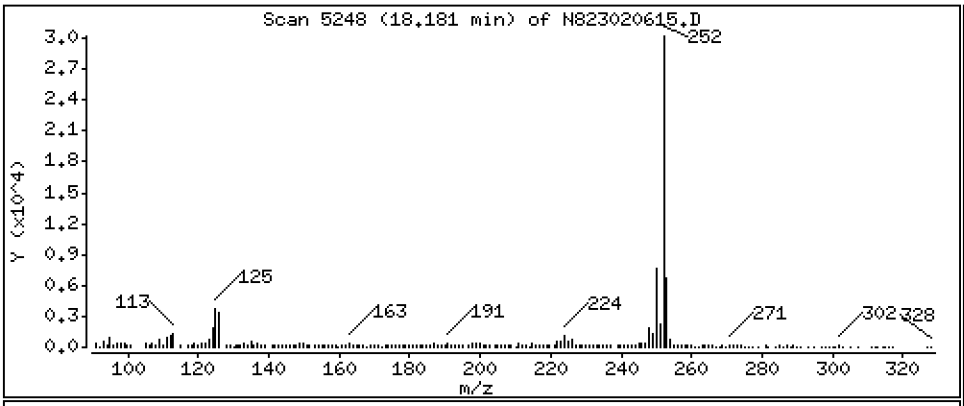
Operator: JZ

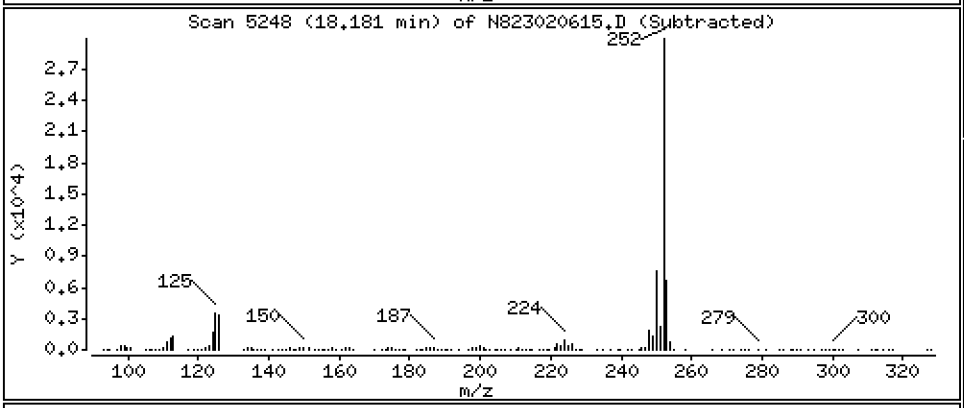
Column phase: Rxi-17sil

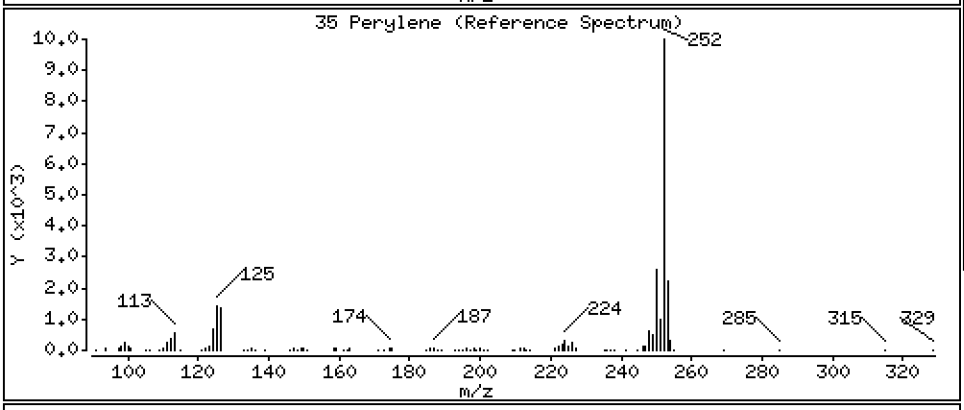
Column diameter: 0.25

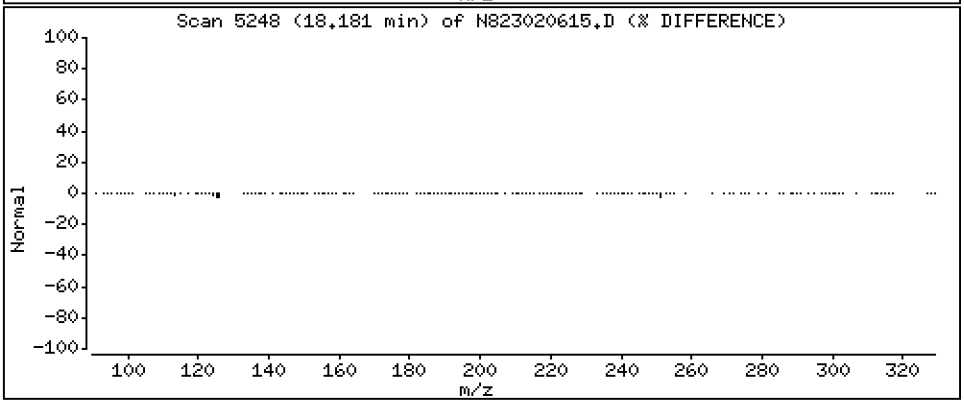
35 Perylene

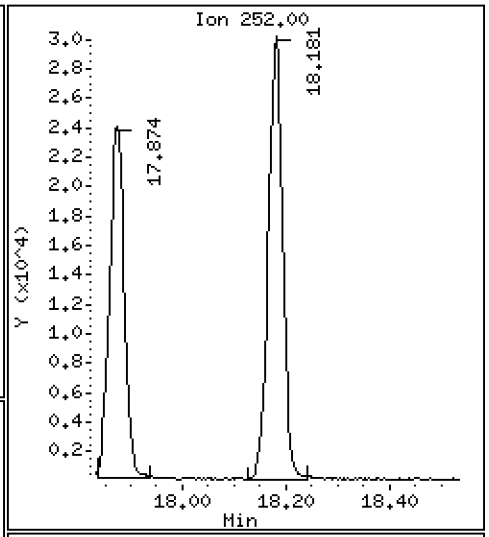
Concentration: 4.900 ug/mL

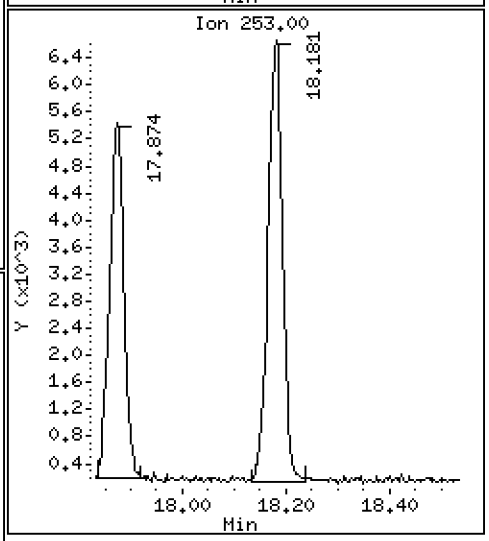












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020615.D

Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

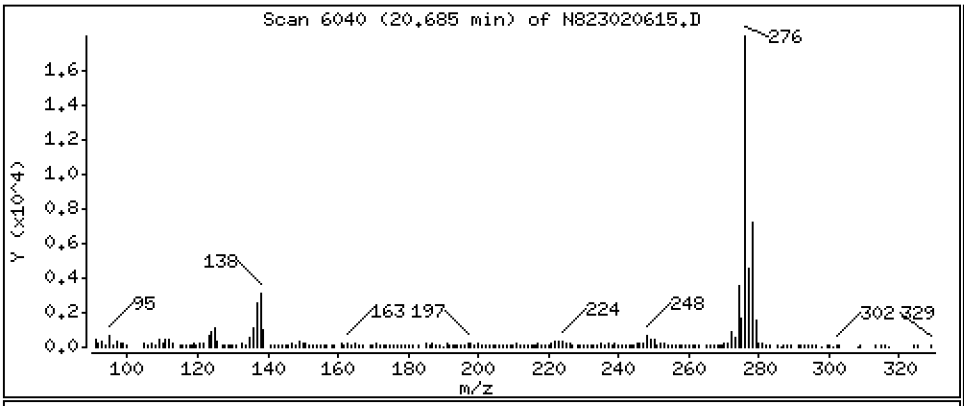
Operator: JZ

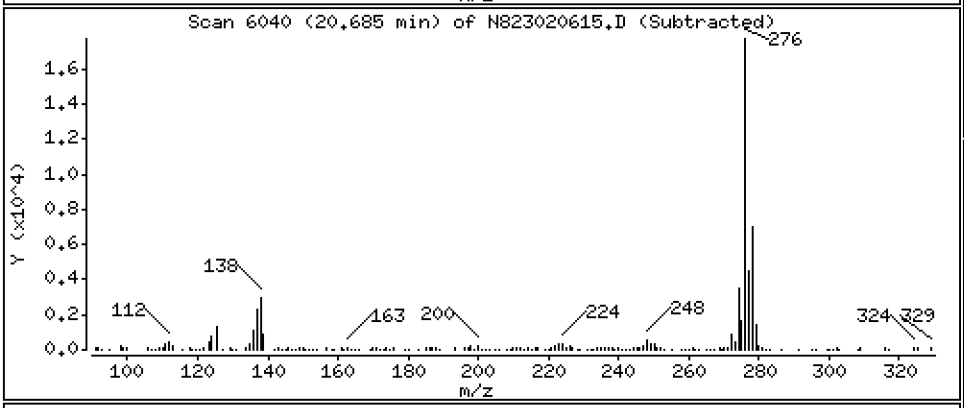
Column phase: Rxi-17sil

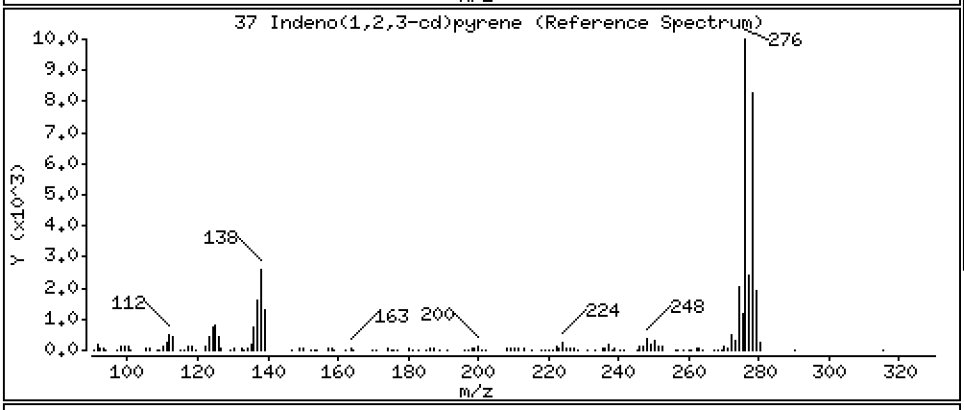
Column diameter: 0.25

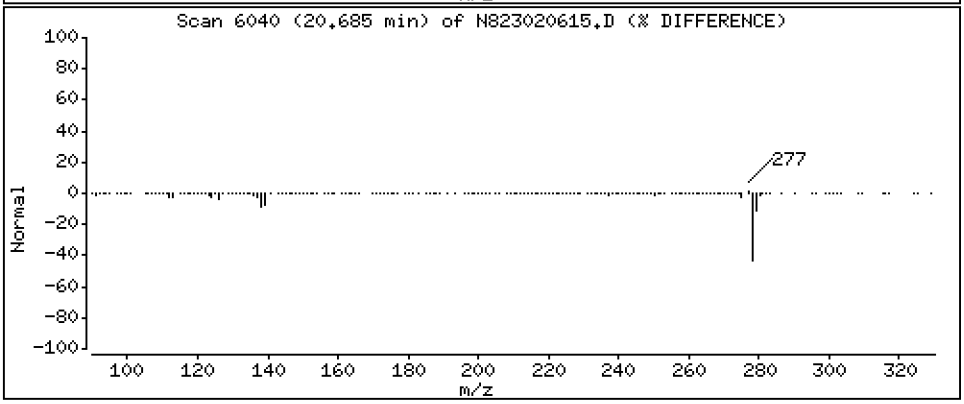
37 Indeno(1,2,3-cd)pyrene

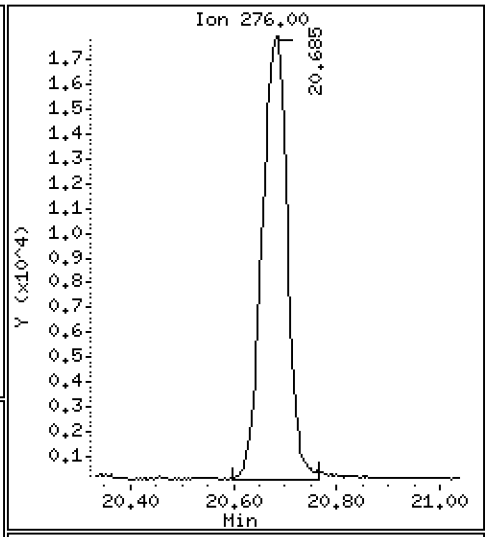
Concentration: 4.852 ug/mL

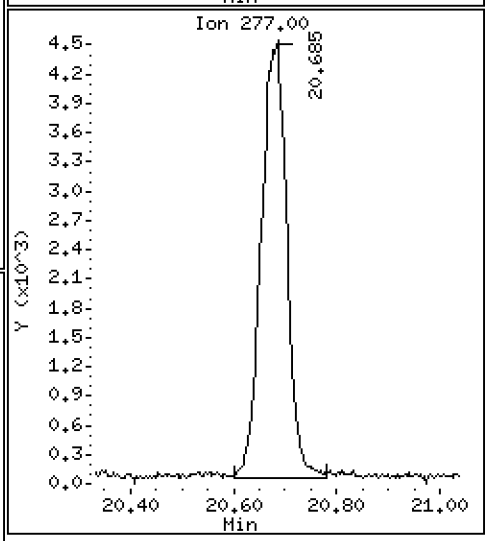












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

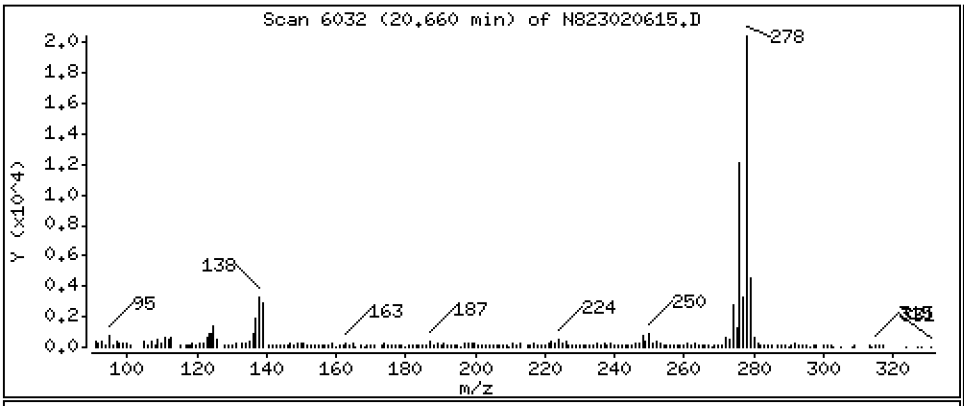
Operator: JZ

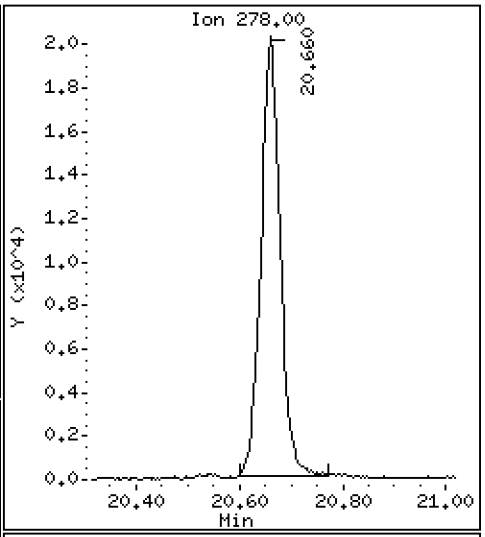
Column phase: Rxi-17sil

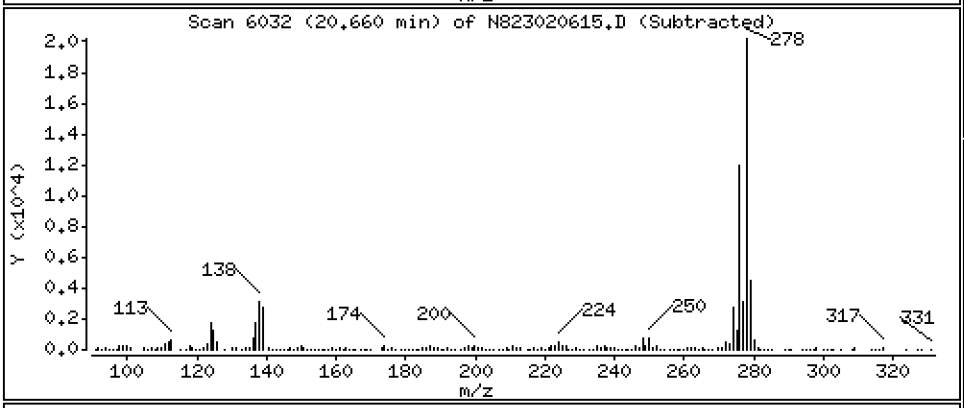
Column diameter: 0.25

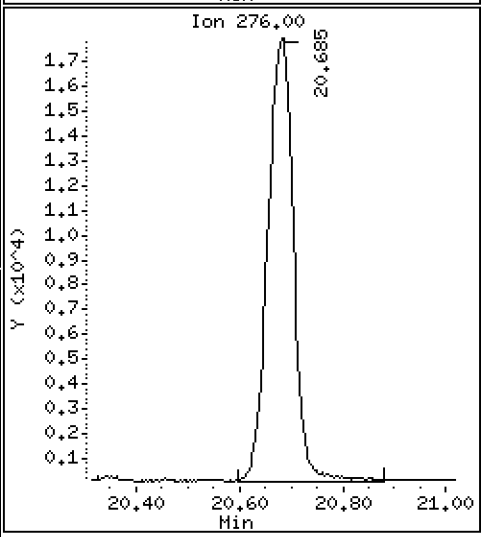
38 Dibenzo(a,h)anthracene

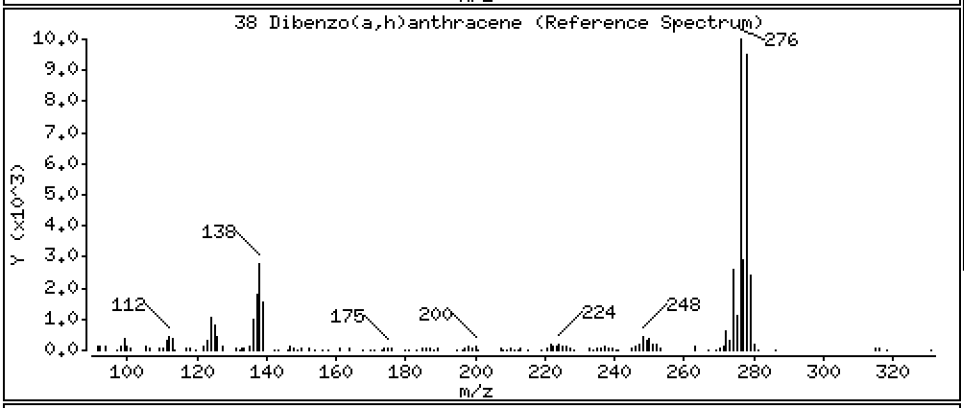
Concentration: 4.883 ug/mL

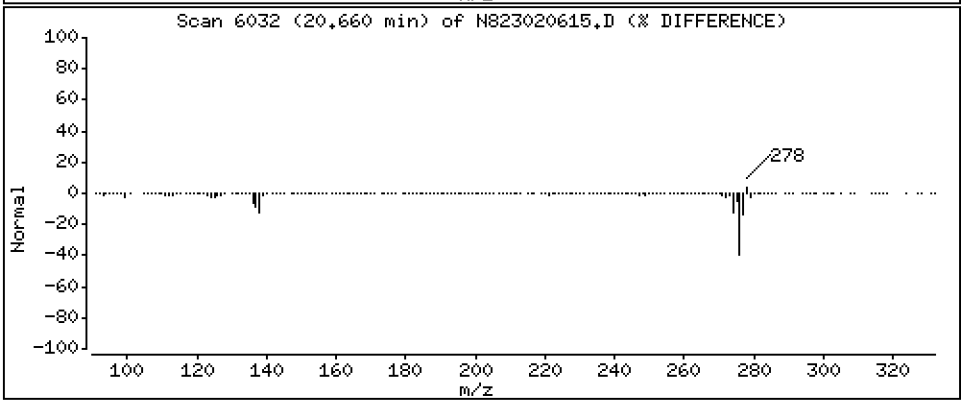












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Date : 06-FEB-2023 19:06

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MS1,

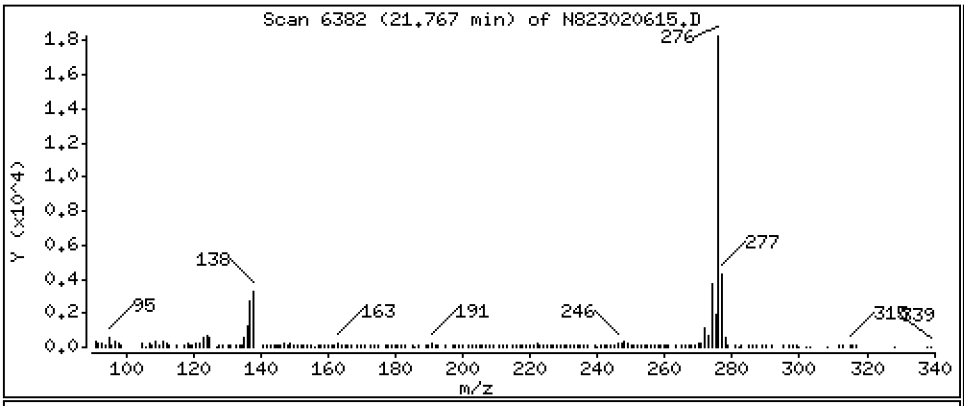
Operator: JZ

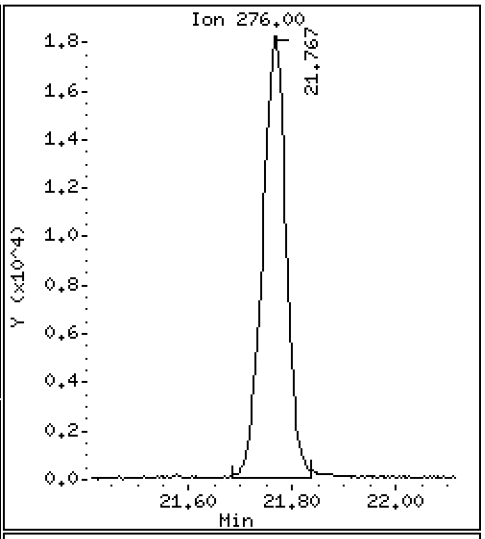
Column phase: Rxi-17sil

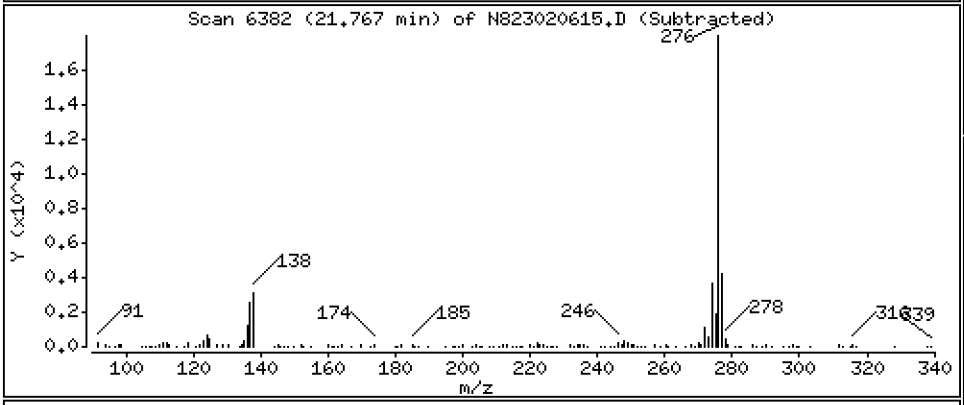
Column diameter: 0.25

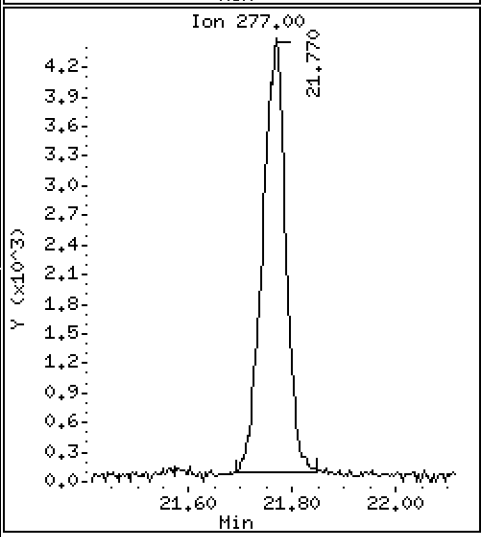
39 Benzo(g,h,i)perylene

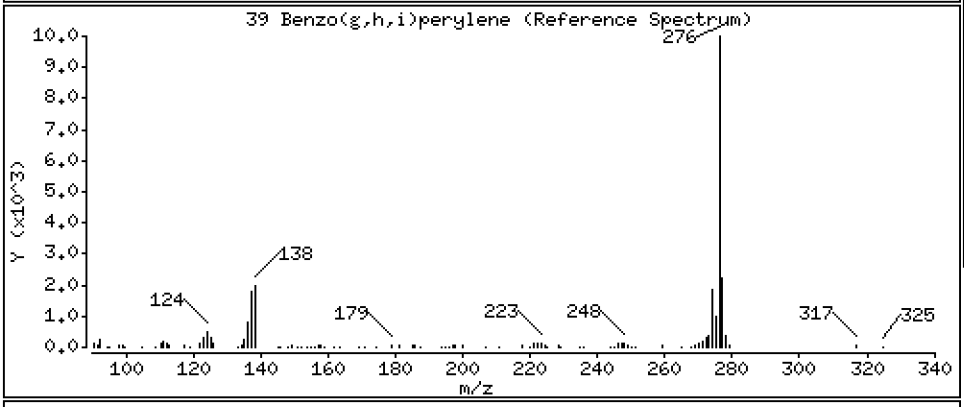
Concentration: 5.087 ug/mL

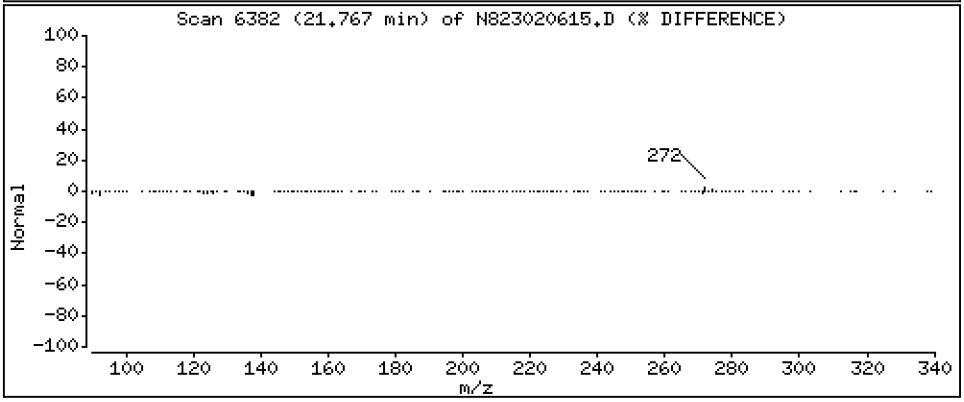












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020615.D
Lab Smp Id: BLA0683-MS1
Inj Date : 06-FEB-2023 19:06
Operator : JZ Inst ID: nt8.i
Smp Info : BLA0683-MS1,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 13:04 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1	Naphthalene-d8	136	4.884	4.900	(1.000)	54388	2.00000	
	2	Naphthalene	128	4.916	4.928	(1.006)	80039	3.16507	3.165
$	3	2-Methylnaphthalene-d10	152	5.624	5.634	(1.151)	33590	2.26455	2.265
	4	2-Methylnaphthalene	141	5.672	5.681	(1.161)	47817	3.43764	3.438
	5	1-methylnaphthalene	141	5.871	5.880	(1.202)	47611	3.37254	3.373
	9	Acenaphthylene	152	7.072	7.082	(0.985)	86318	3.72014	3.720
*	10	Acenaphthene-d10	164	7.183	7.189	(1.000)	30727	2.00000	
	11	Acenaphthene	153	7.234	7.240	(1.007)	55335	3.55931	3.559
	12	Dibenzofuran	168	7.385	7.392	(1.028)	82970	3.51371	3.514
	14	Fluorene	166	7.863	7.869	(1.095)	68561	3.73838	3.738
*	15	Phenanthrene-d10	188	9.226	9.232	(1.000)	46335	2.00000	
	16	Phenanthrene	178	9.261	9.267	(1.004)	93247	4.11984	4.120
	17	Anthracene	178	9.302	9.308	(1.008)	81776	3.97723	3.977
	19	Carbazole	167	9.817	9.823	(1.064)	71816	3.81001	3.810
	22	Fluoranthene	202	11.044	11.050	(1.197)	111149	4.51148	4.511
$	21	Fluoranthene-d10	212	11.006	11.009	(1.193)	51348	2.51179	2.512
	23	Pyrene	202	11.569	11.569	(0.815)	104630	6.99735	6.997
	24	Benzo(a)anthracene	228	14.067	14.070	(0.991)	65937	4.86514	4.865
*	25	Chrysene-d12	240	14.193	14.202	(1.000)	24118	2.00000	
	27	Chrysene	228	14.269	14.275	(1.005)	64665	4.48197	4.482
	28	Benzo(b)fluoranthene	252	16.818	16.824	(0.929)	57432	4.57319	4.573
	29	Benzo(k)fluoranthene	252	16.881	16.887	(0.932)	52155	4.23990	4.240
	30	Benzo(j)fluoranthene	252	16.960	16.963	(0.937)	50794	4.58686	4.587
	31	Total Benzofluoranthenes	252	16.818	16.824	(0.929)	159464	13.4077	13.41(M)
	32	Benzo(a)pyrene	252	17.874	17.877	(0.987)	48278	4.36852	4.369
*	33	Perylene-d12	264	18.105	18.107	(1.000)	21563	2.00000	
	35	Perylene	252	18.180	18.183	(1.004)	58110	4.89999	4.900
$	36	Dibenzo(a,h)anthracene-d14	292	20.546	20.549	(1.135)	28282	3.34744	3.347
	37	Indeno(1,2,3-cd)pyrene	276	20.685	20.684	(1.143)	61085	4.85182	4.852
	38	Dibenzo(a,h)anthracene	278	20.659	20.666	(1.141)	52904	4.88279	4.883
	39	Benzo(g,h,i)perylene	276	21.766	21.763	(1.202)	58032	5.08742	5.087

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020615.D
Lab Smp Id: BLA0683-MS1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44336	22168	88672	54388	22.67
10 Acenaphthene-d10	26127	13064	52254	30727	17.61
15 Phenanthrene-d10	47424	23712	94848	46335	-2.30
25 Chrysene-d12	36794	18397	73588	24118	-34.45
33 Perylene-d12	36636	18318	73272	21563	-41.14

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.88	-0.32
10 Acenaphthene-d10	7.19	6.69	7.69	7.18	-0.08
15 Phenanthrene-d10	9.23	8.73	9.73	9.23	-0.07
25 Chrysene-d12	14.20	13.70	14.70	14.19	-0.07
33 Perylene-d12	18.11	17.61	18.61	18.11	-0.02

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

REVIEW SUMMARY FOR FILE - N823020615.D

Lab ID: BLA0683-MS1
nt8.i, 20230206A.b\FSIMPNA230119.m,   06-FEB-2023 19:06

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

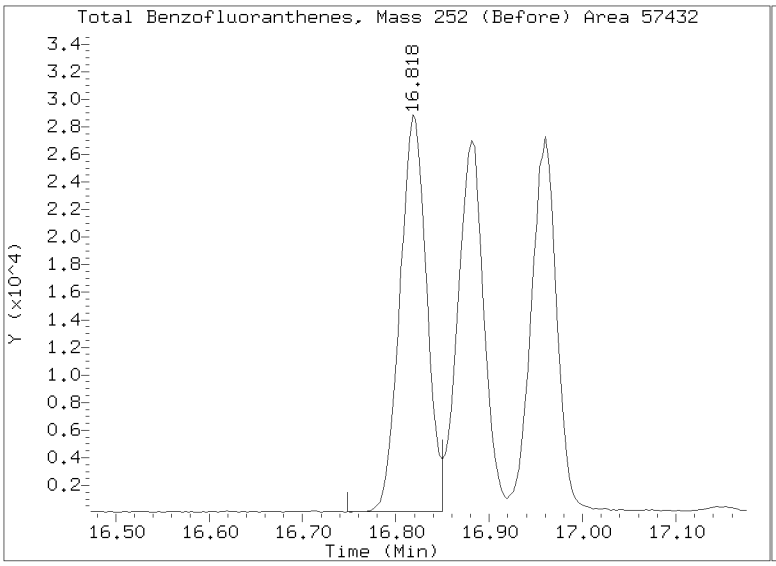
No RRT check performed

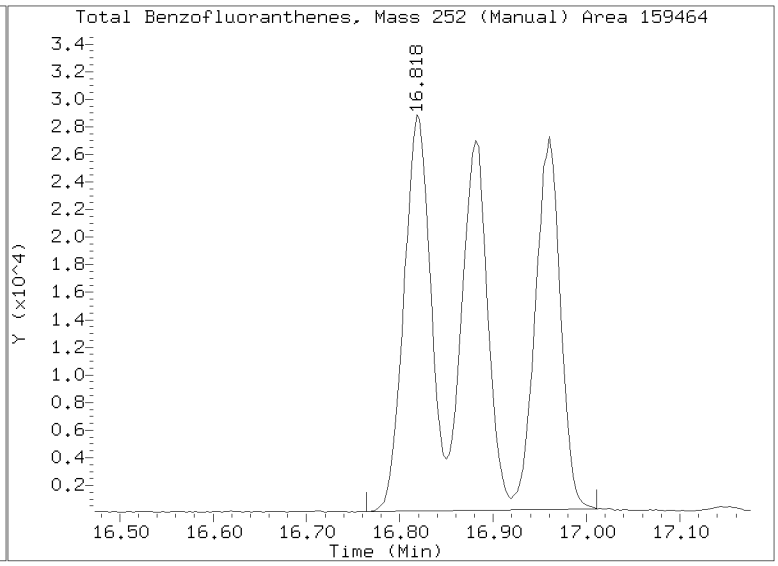
On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020615.D
Injection Date: 06-FEB-2023 19:06
Lab ID:BLA0683-MS1 Client ID:
Report Date: 02/07/2023 14:35





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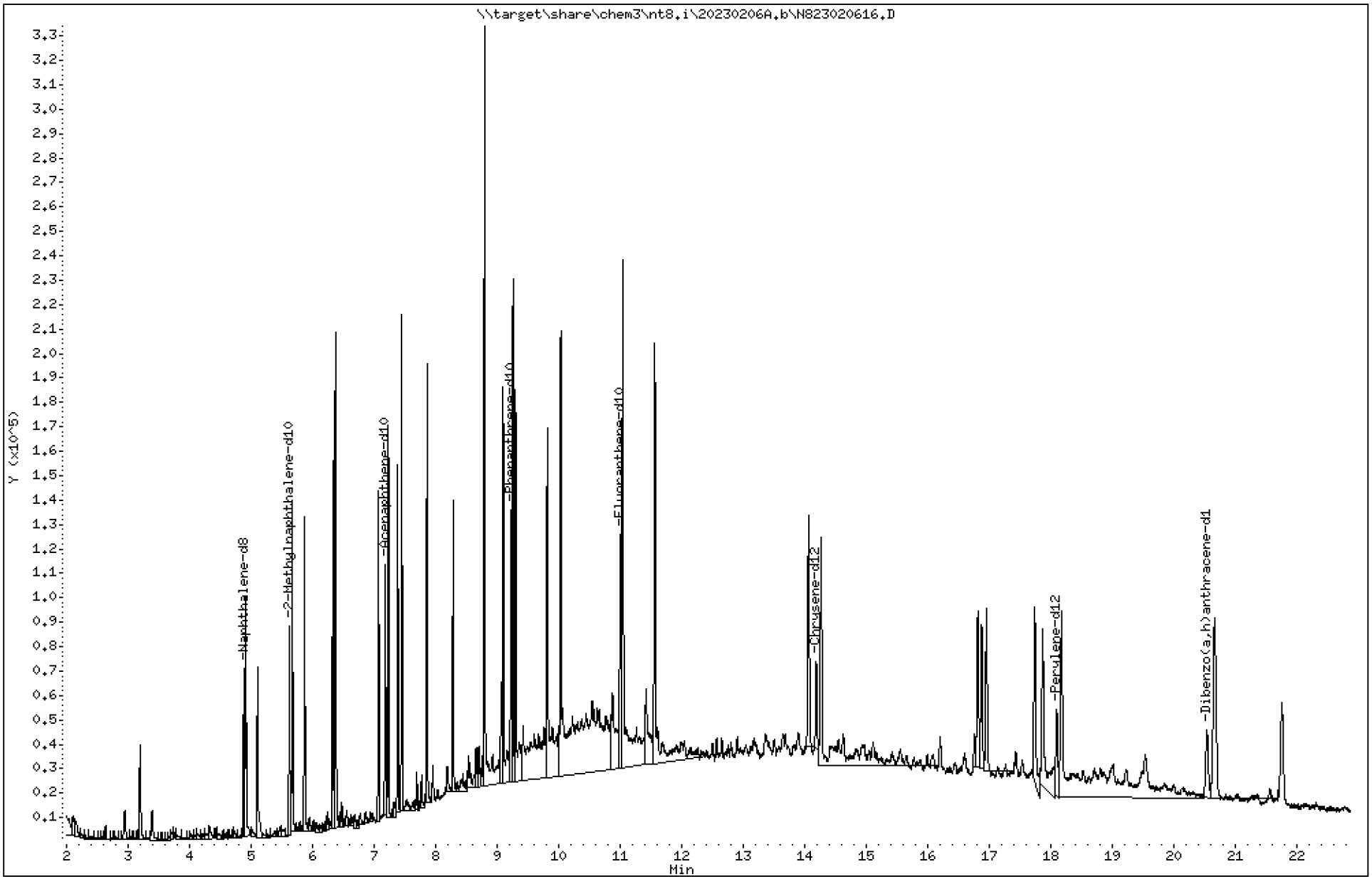
Date : 06-FEB-2023 19:33
Client ID:
Sample Info: BLA0683-MSD1,

Column phase: Rxi-17sil

Instrument: nt8.i

Operator: JZ
Column diameter: 0.25



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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

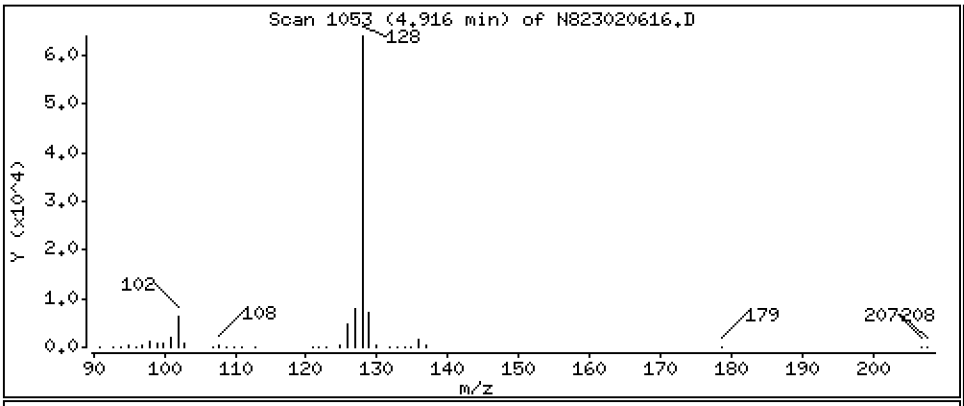
Operator: JZ

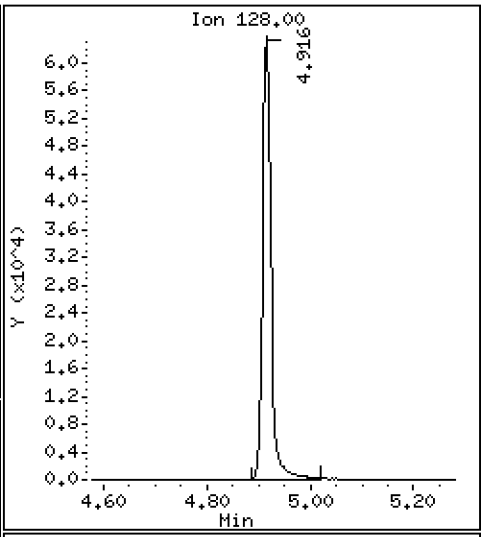
Column phase: Rxi-17sil

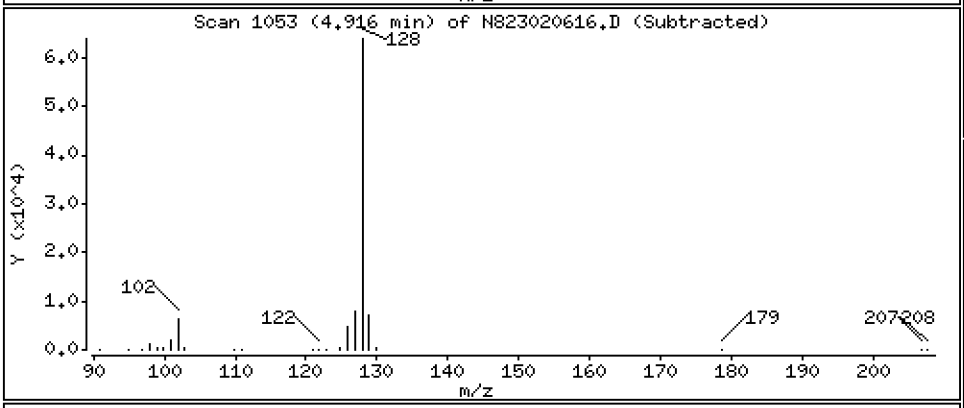
Column diameter: 0.25

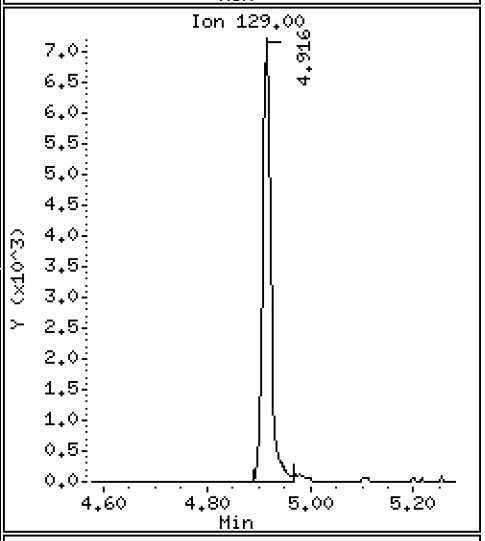
2 Naphthalene

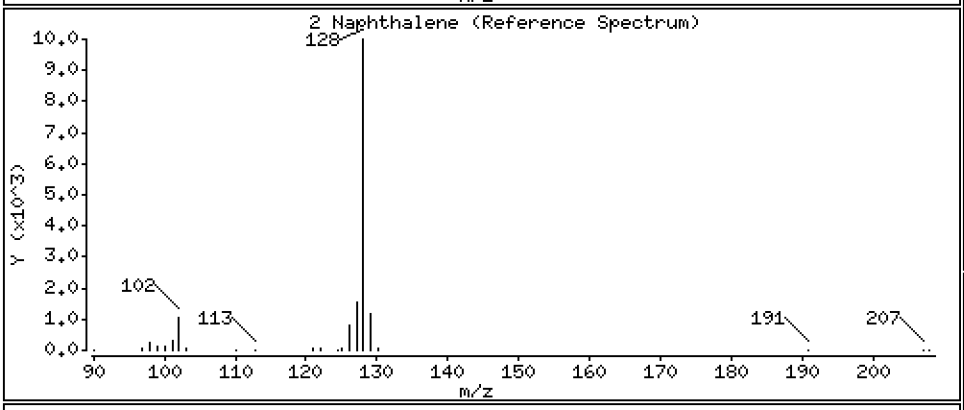
Concentration: 3.044 ug/mL

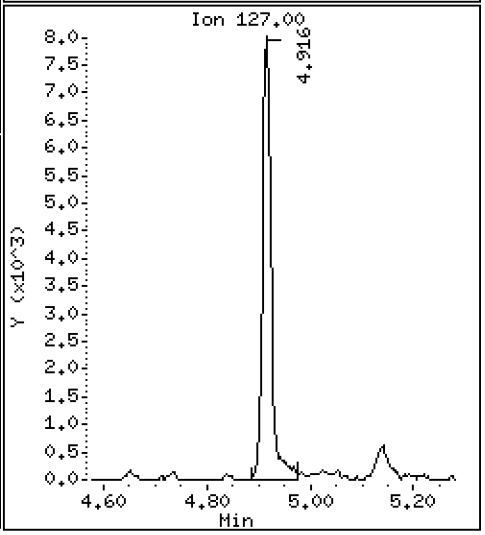


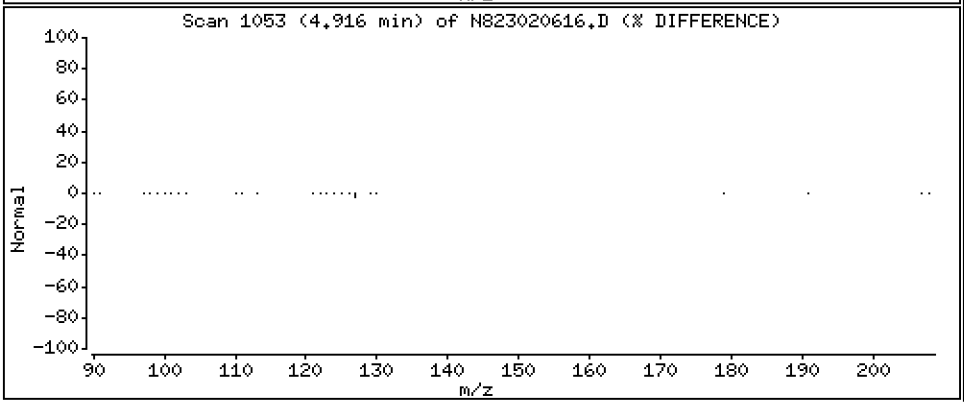












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020616.D

Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

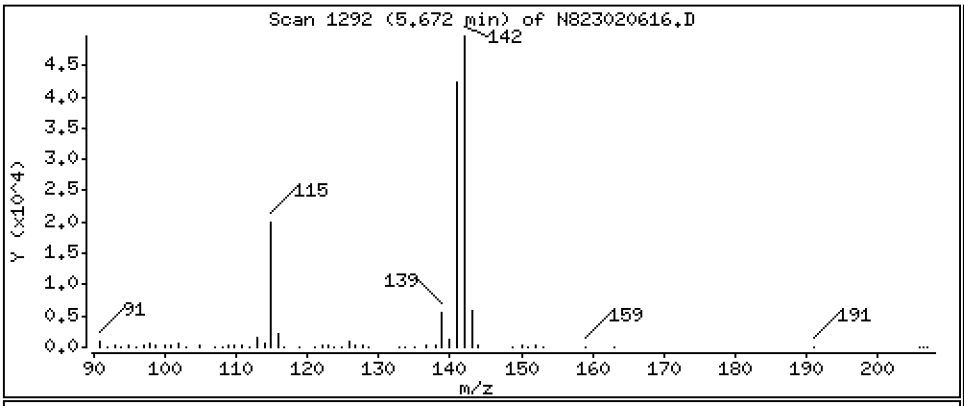
Operator: JZ

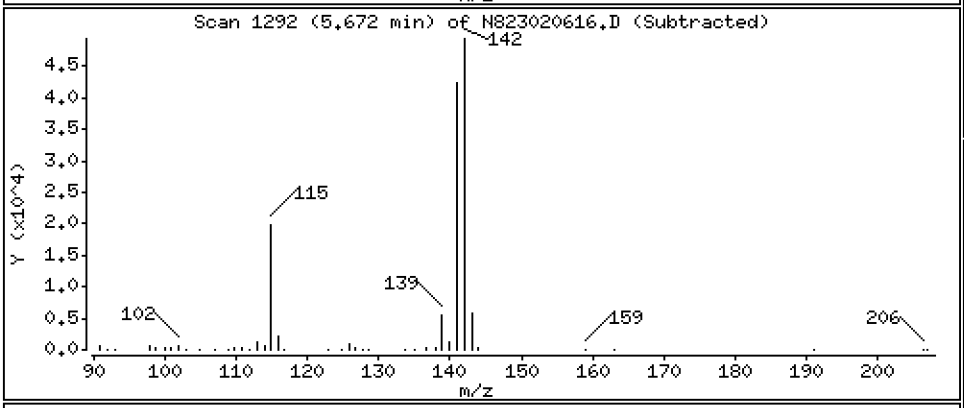
Column phase: Rxi-17sil

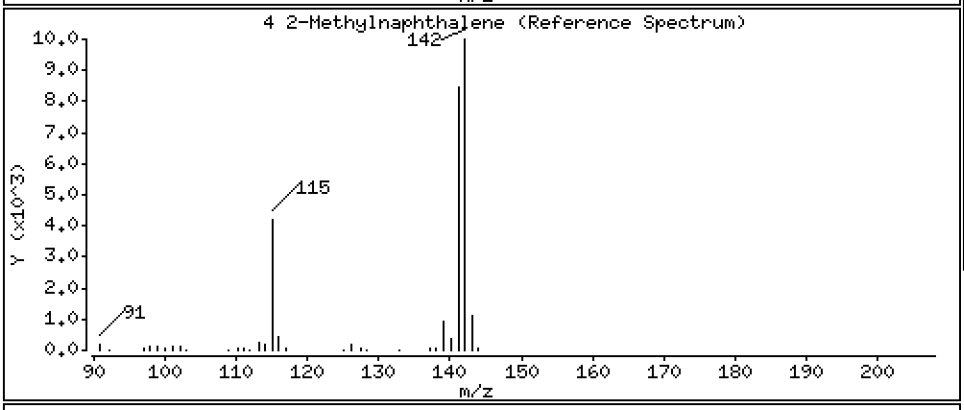
Column diameter: 0.25

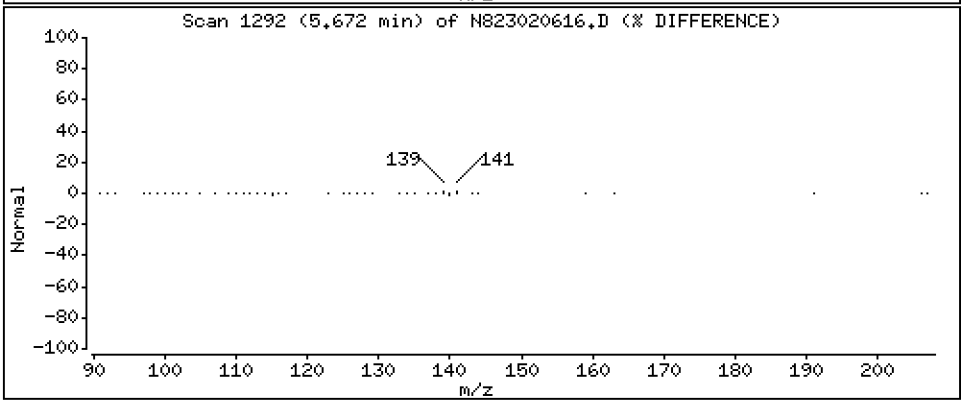
4 2-Methylnaphthalene

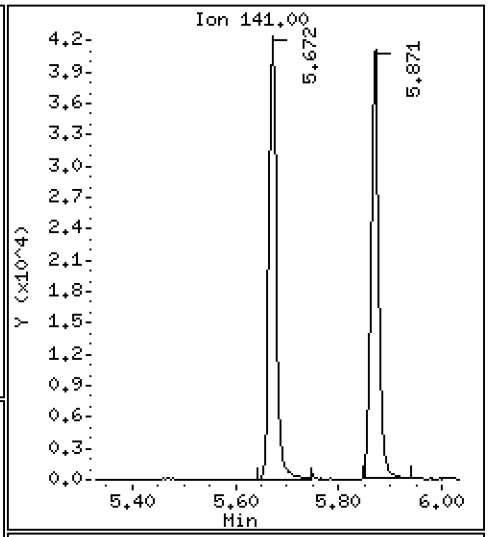
Concentration: 3.195 ug/mL

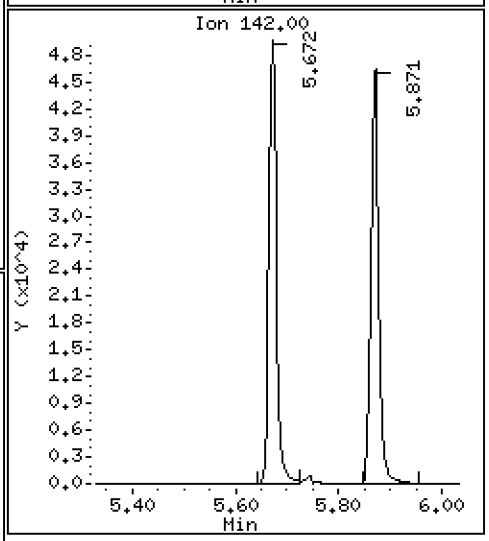












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

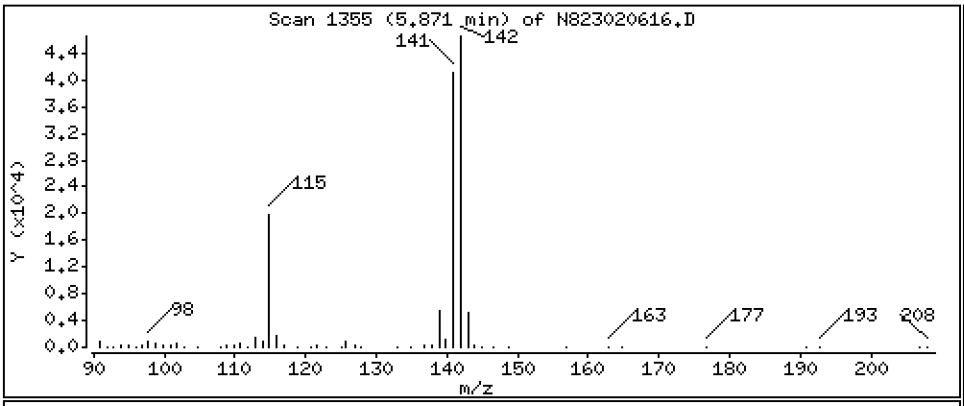
Operator: JZ

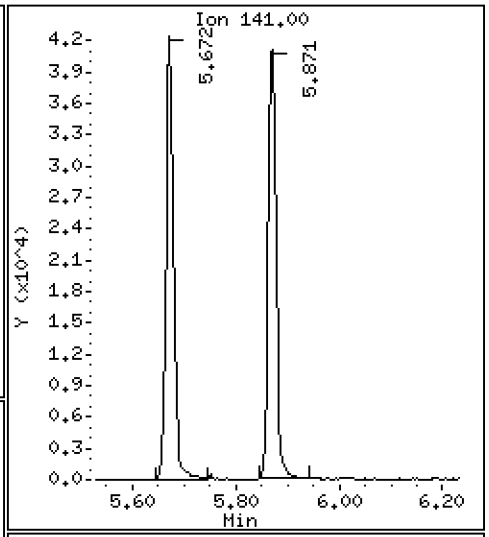
Column phase: Rxi-17sil

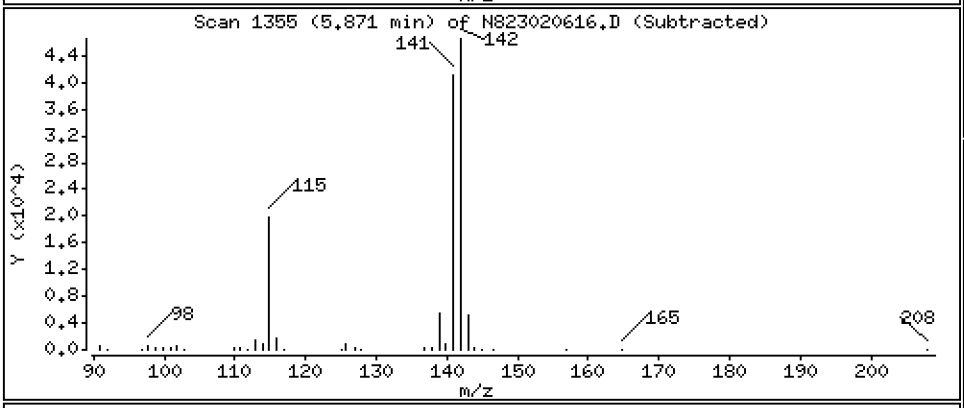
Column diameter: 0.25

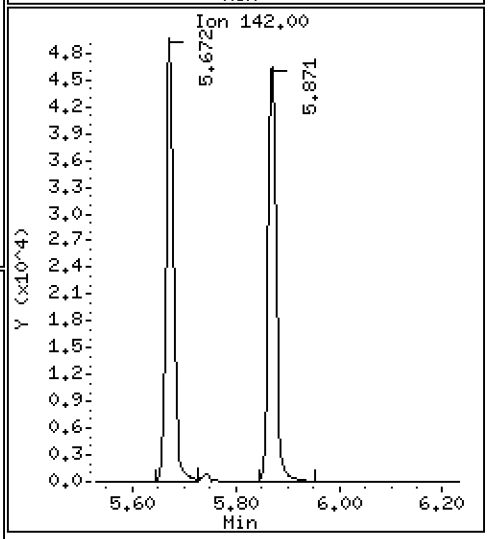
5 1-methylnaphthalene

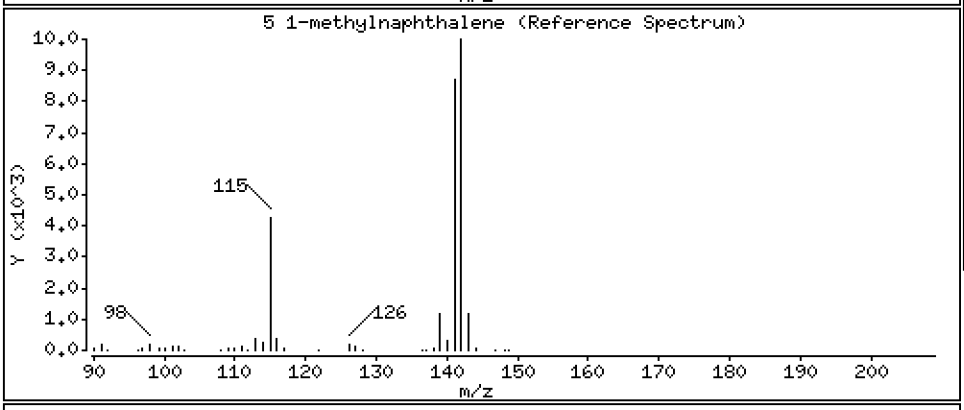
Concentration: 3.143 ug/mL

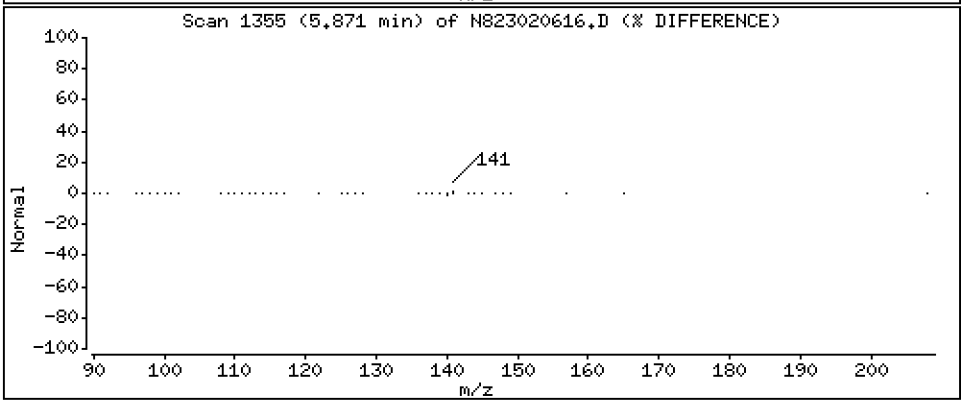












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

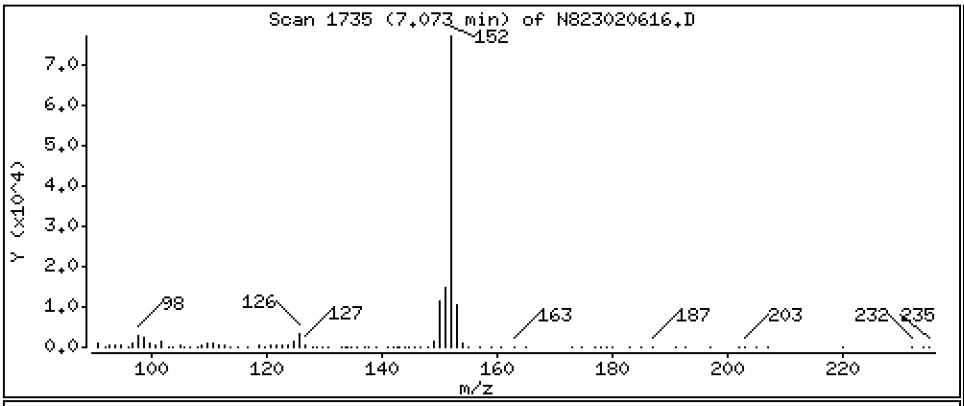
Operator: JZ

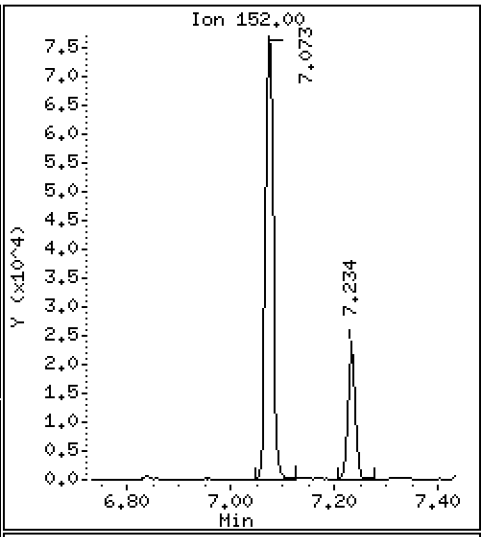
Column phase: Rxi-17sil

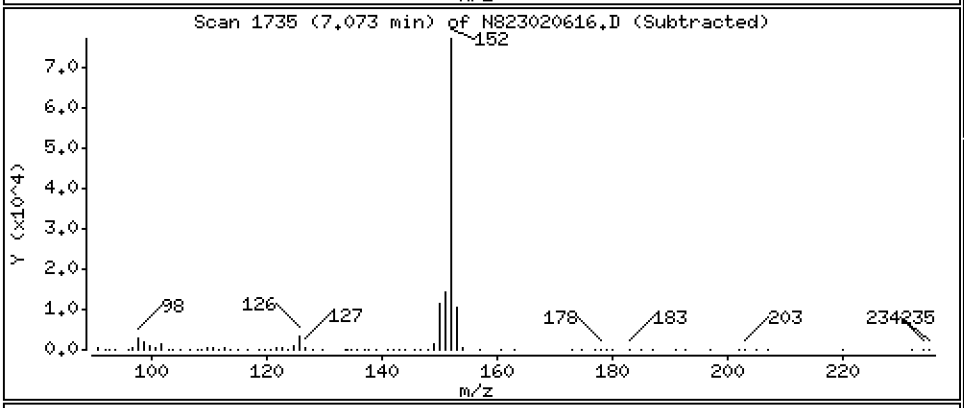
Column diameter: 0.25

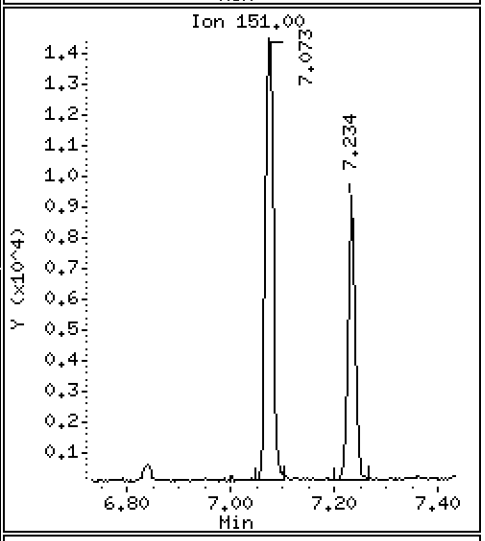
9 Acenaphthylene

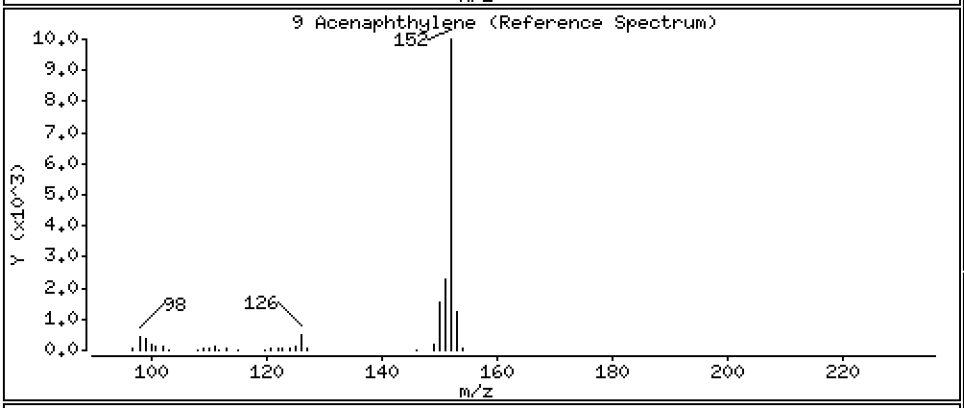
Concentration: 3.344 ug/mL

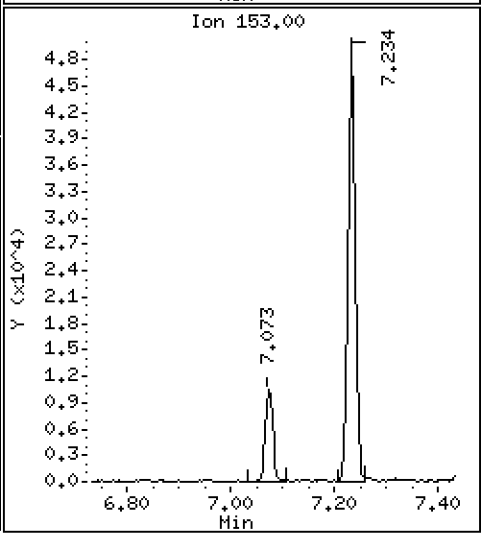


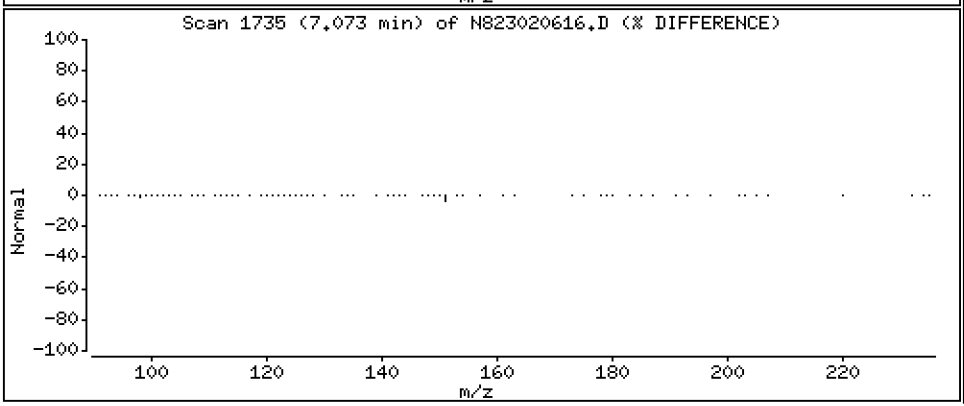












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

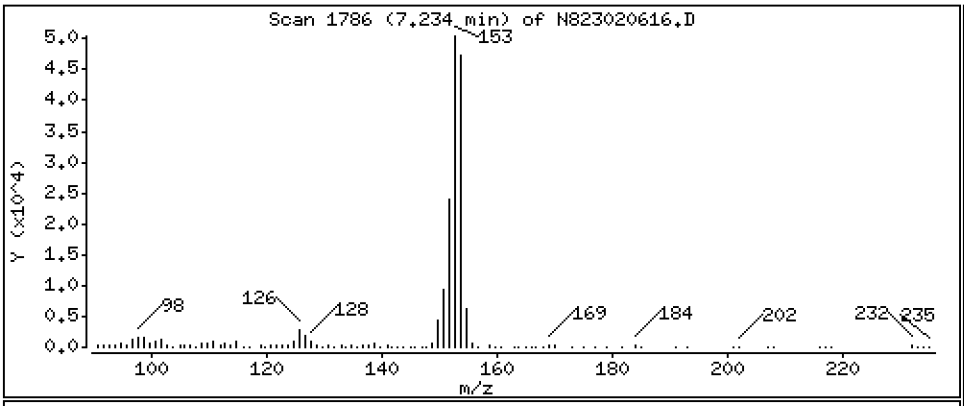
Operator: JZ

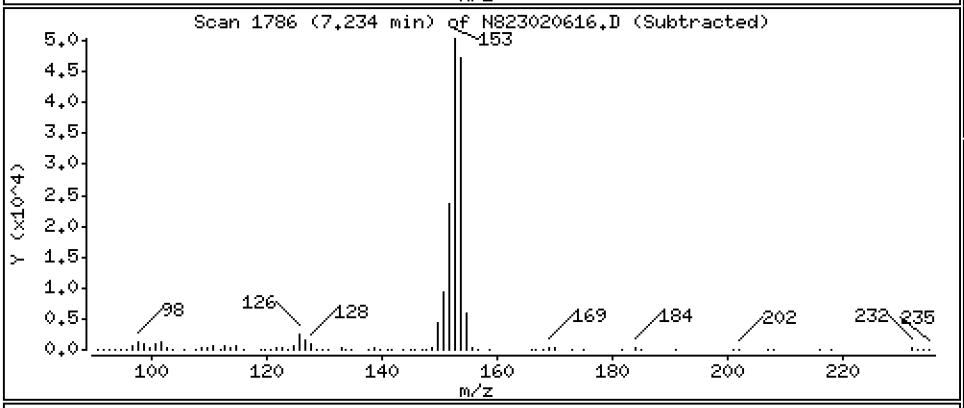
Column phase: Rxi-17sil

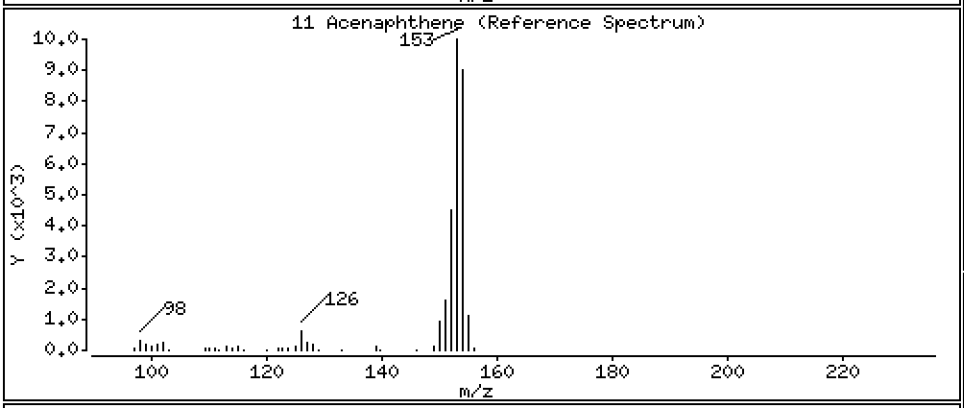
Column diameter: 0.25

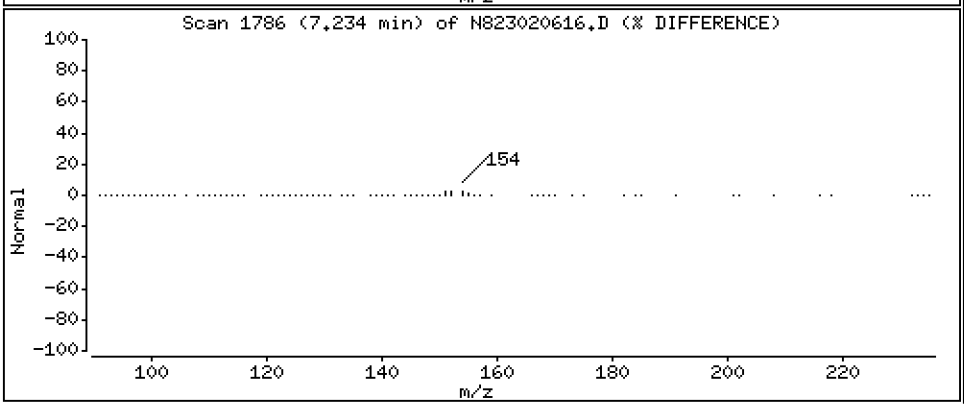
11 Acenaphthene

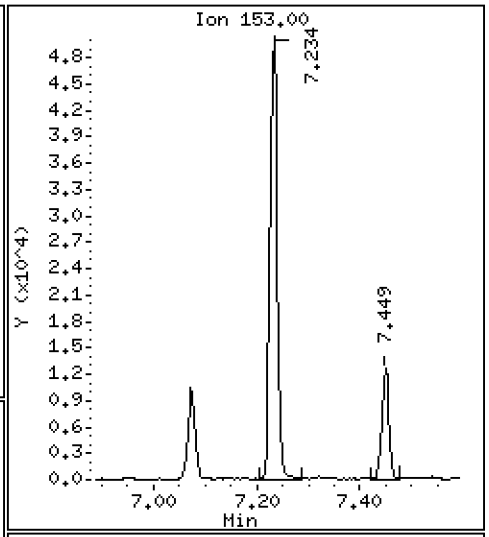
Concentration: 3.218 ug/mL

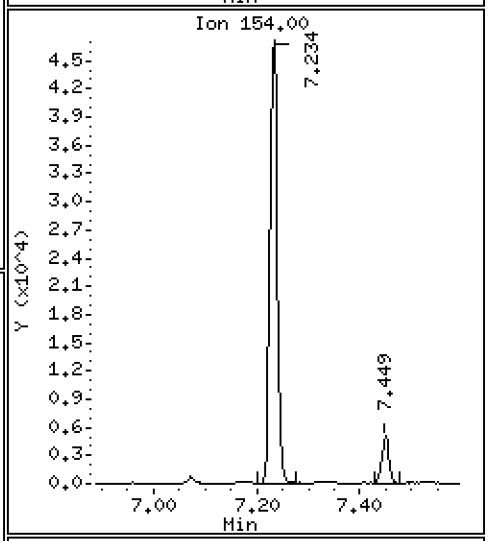


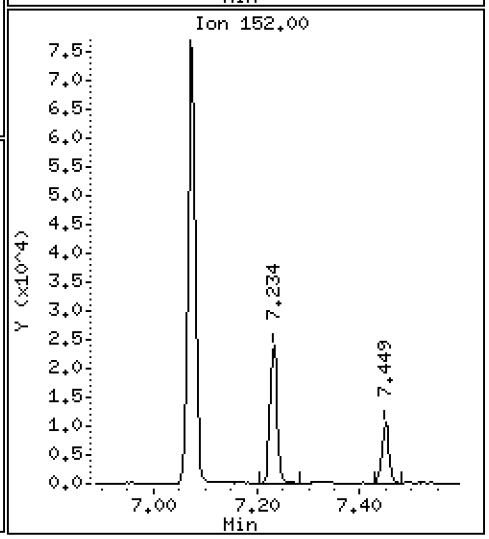












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

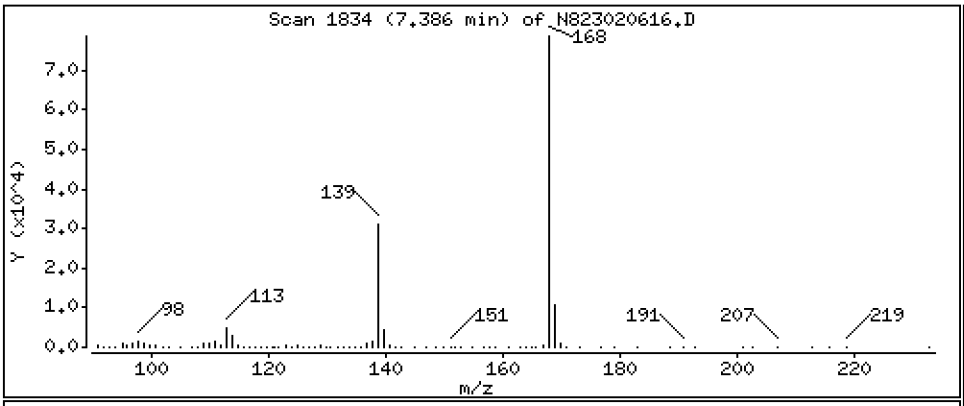
Operator: JZ

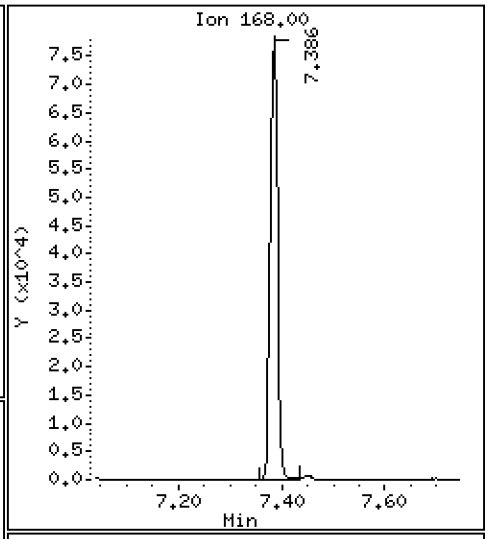
Column phase: Rxi-17sil

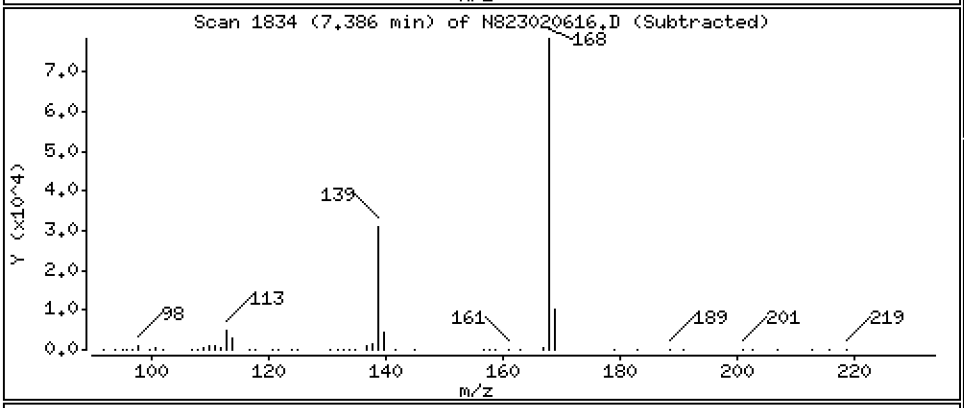
Column diameter: 0.25

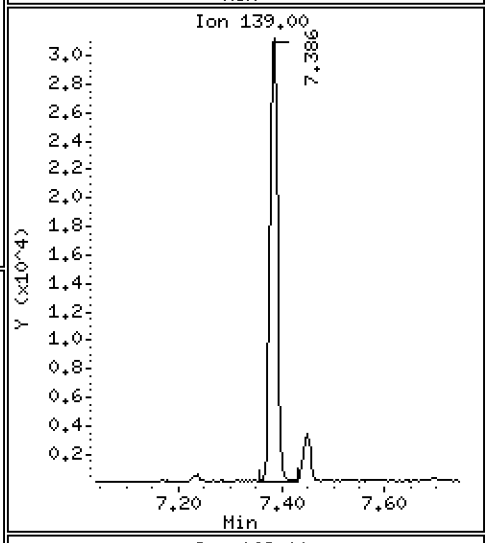
12 Dibenzofuran

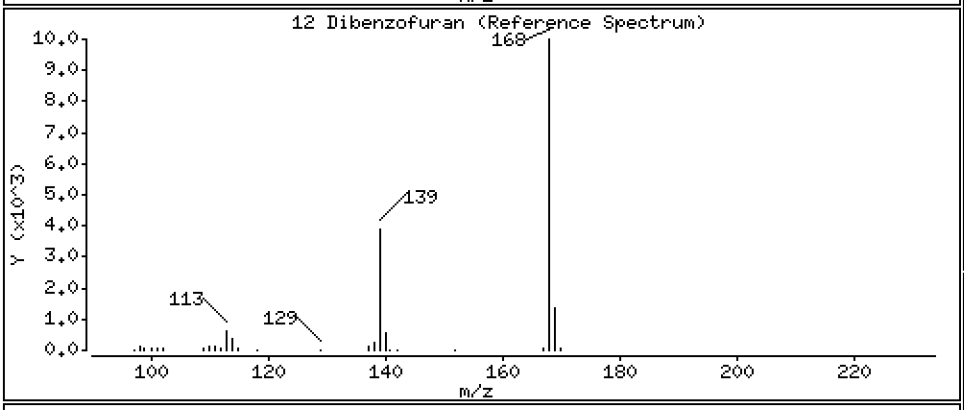
Concentration: 3.182 ug/mL

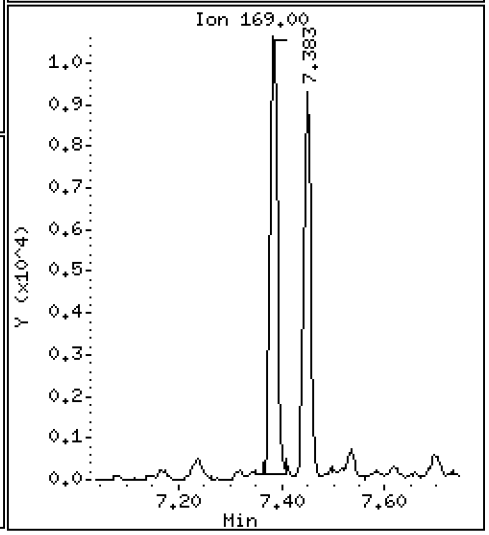


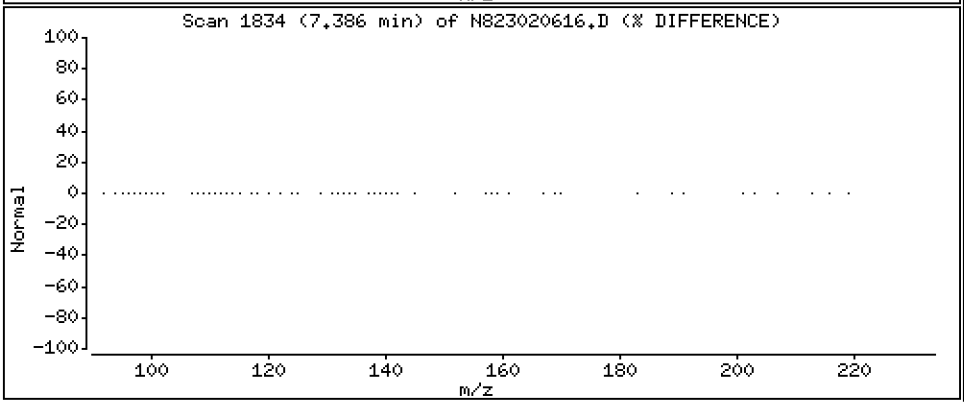












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

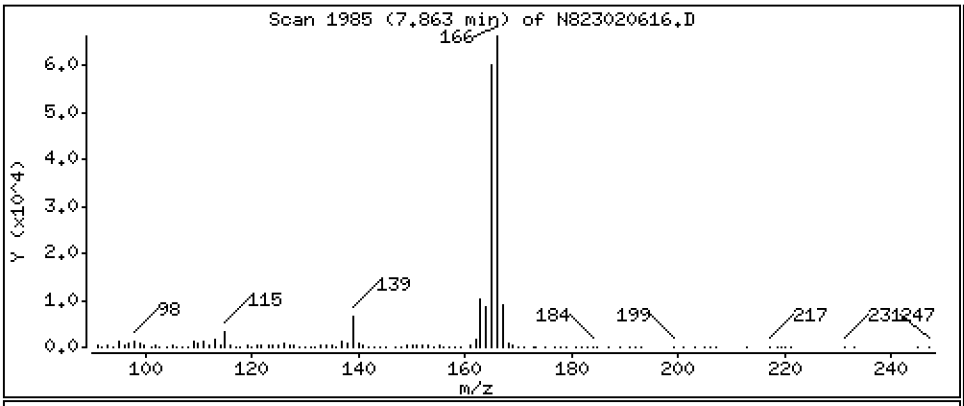
Operator: JZ

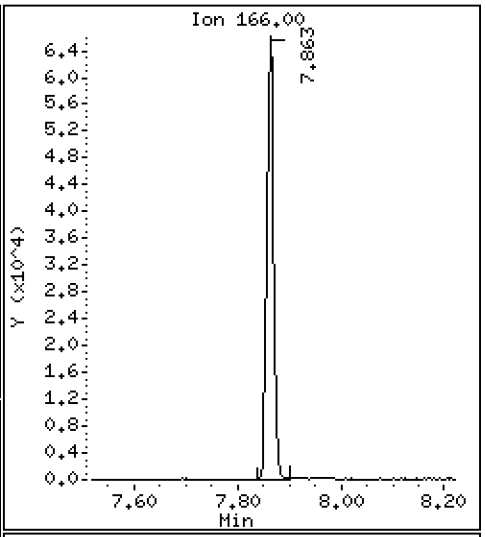
Column phase: Rxi-17sil

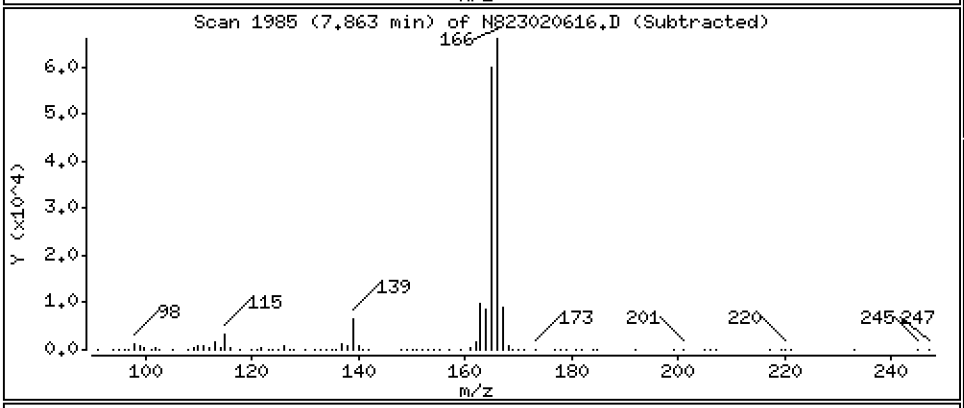
Column diameter: 0.25

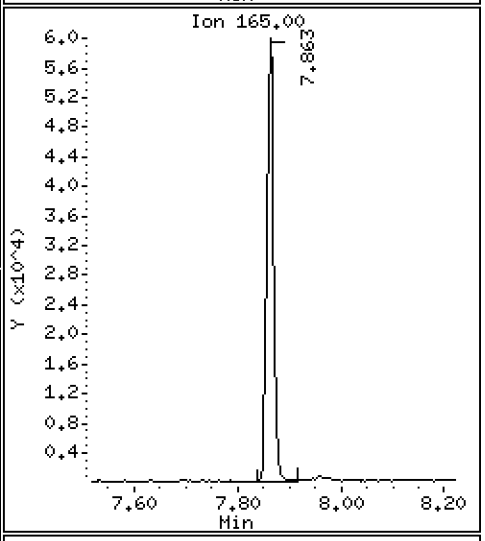
14 Fluorene

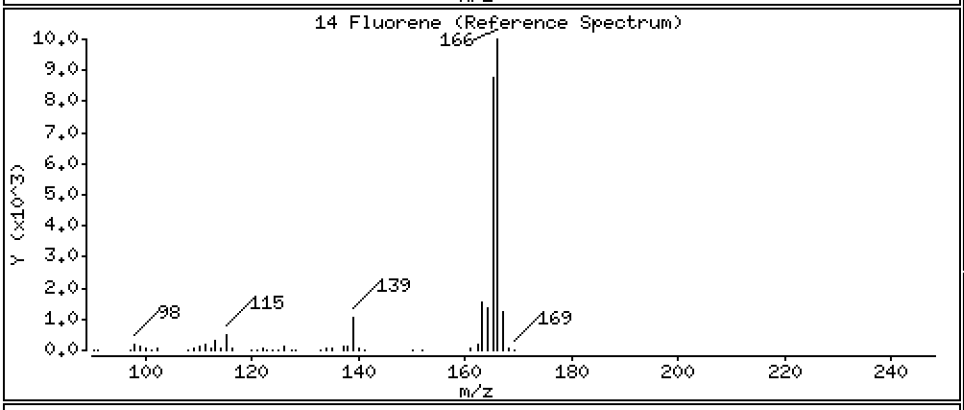
Concentration: 3.373 ug/mL

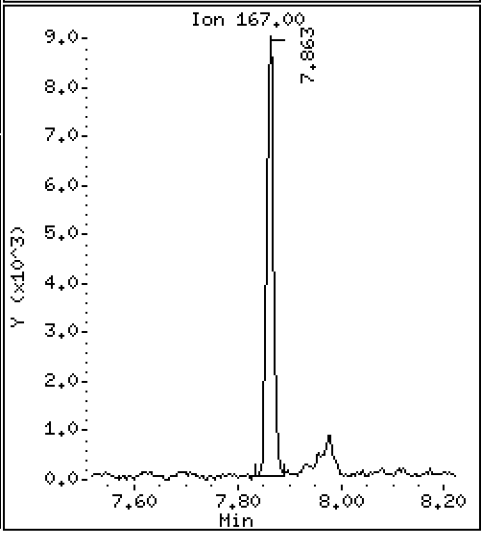


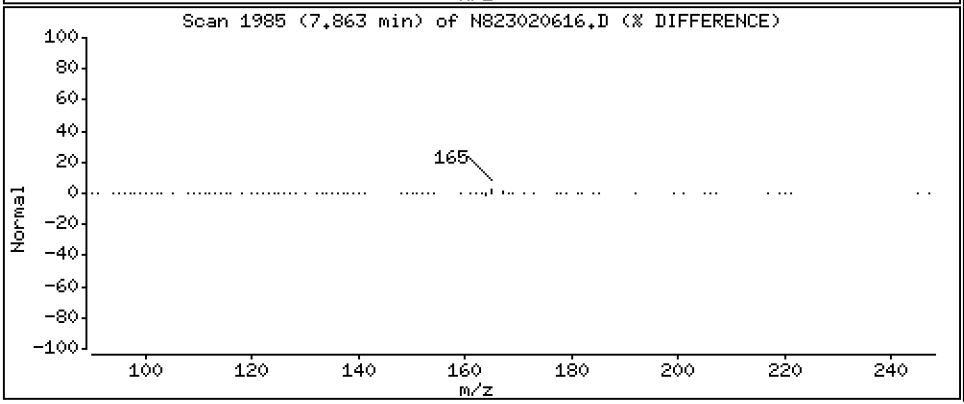












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

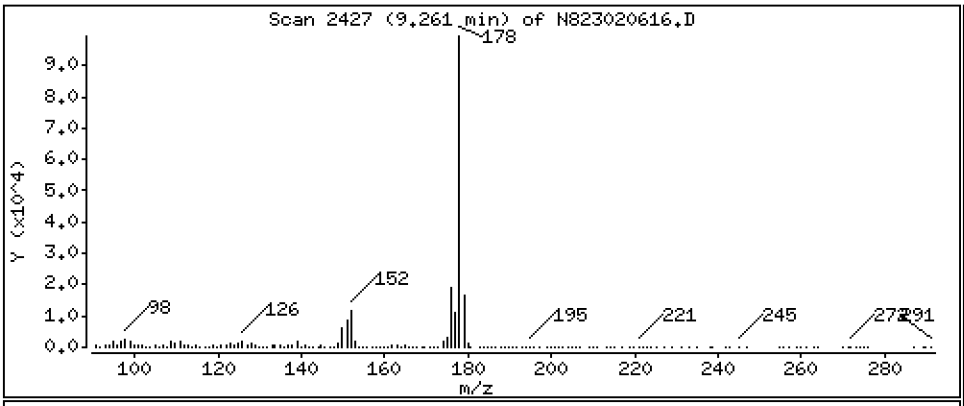
Operator: JZ

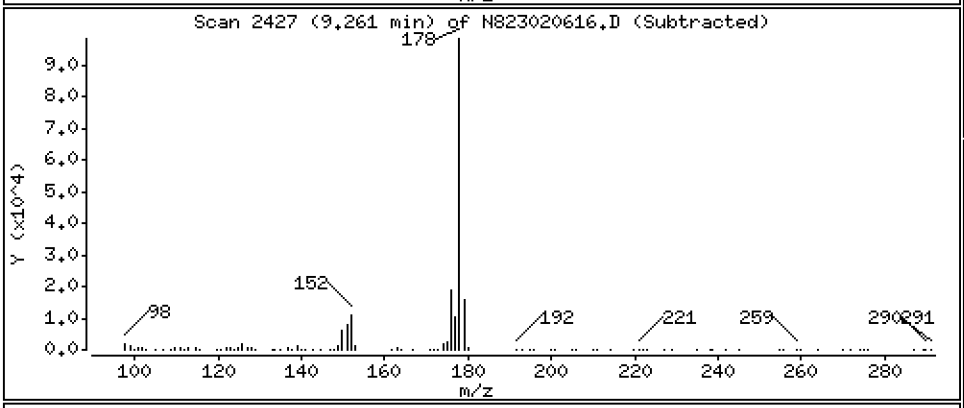
Column phase: Rxi-17sil

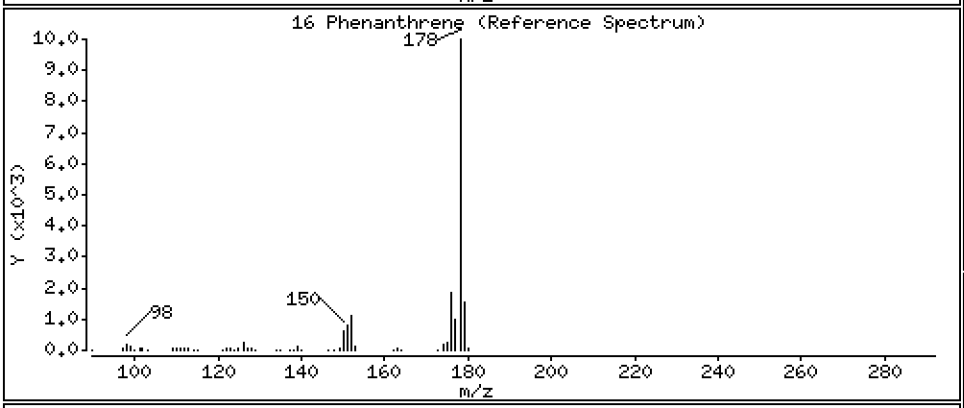
Column diameter: 0.25

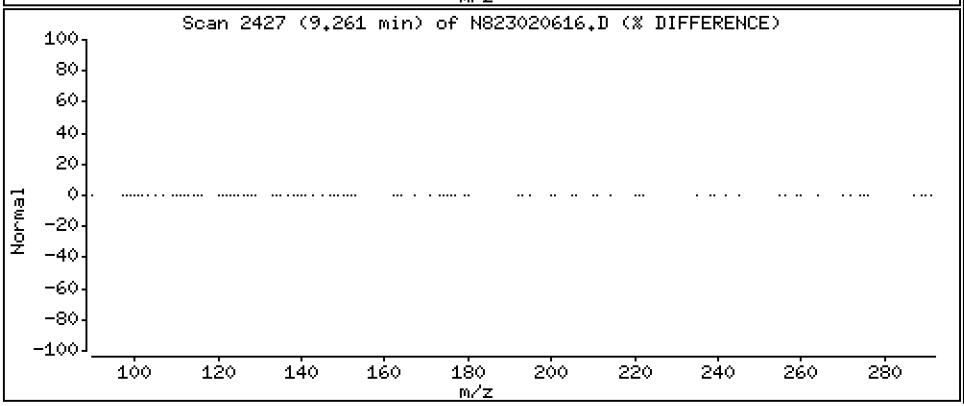
16 Phenanthrene

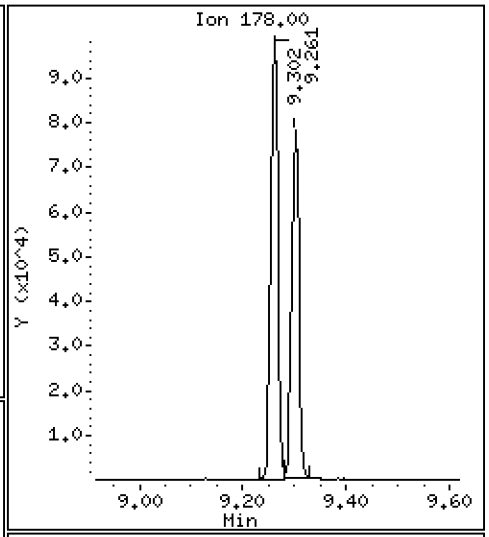
Concentration: 4.130 ug/mL

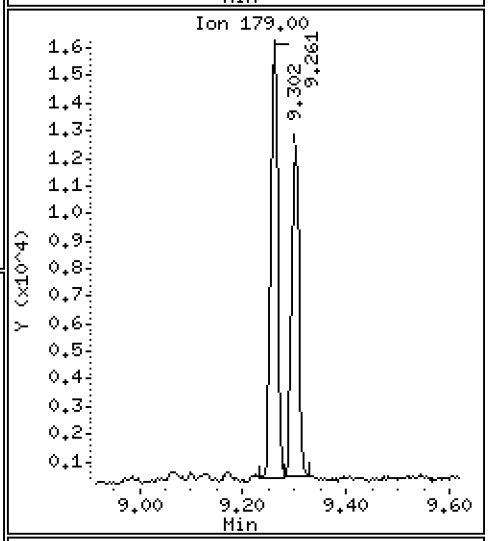


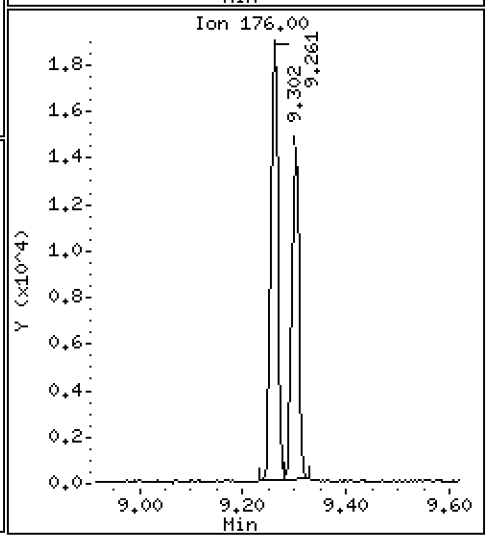












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

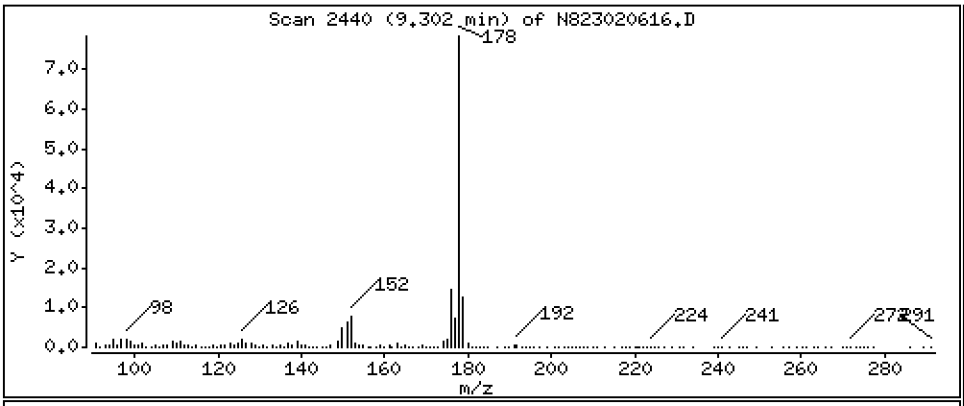
Operator: JZ

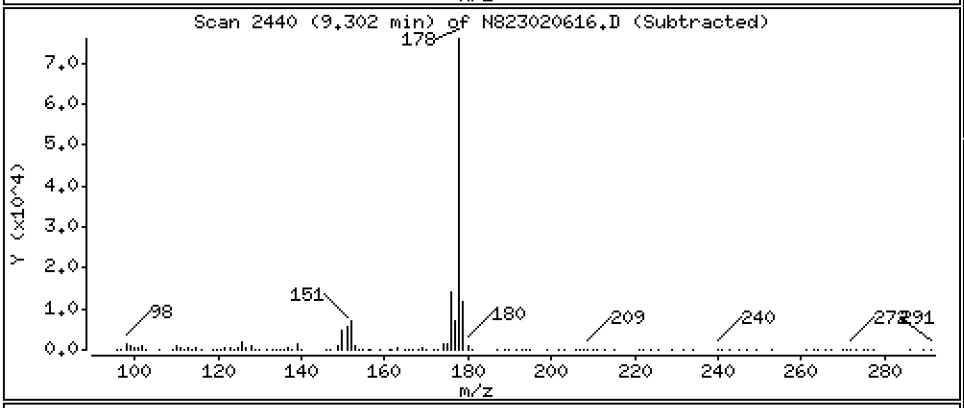
Column phase: Rxi-17sil

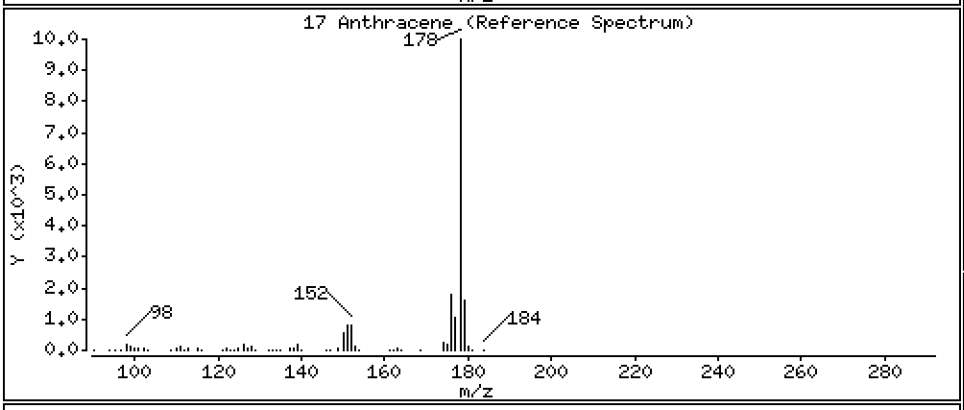
Column diameter: 0.25

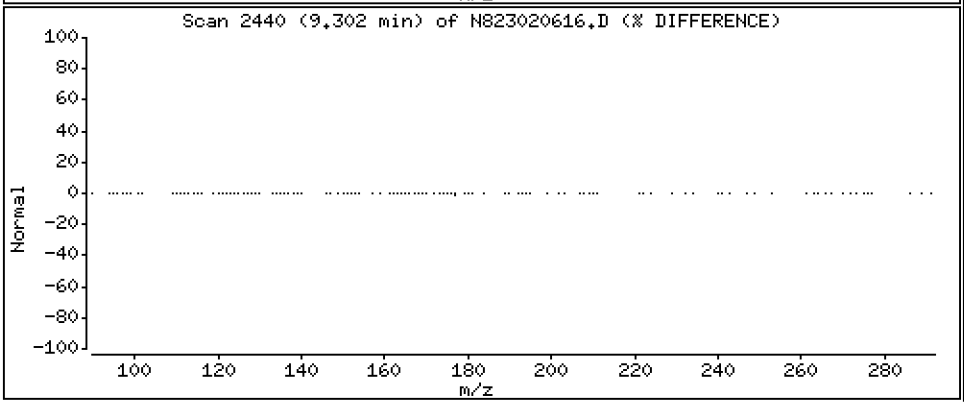
17 Anthracene

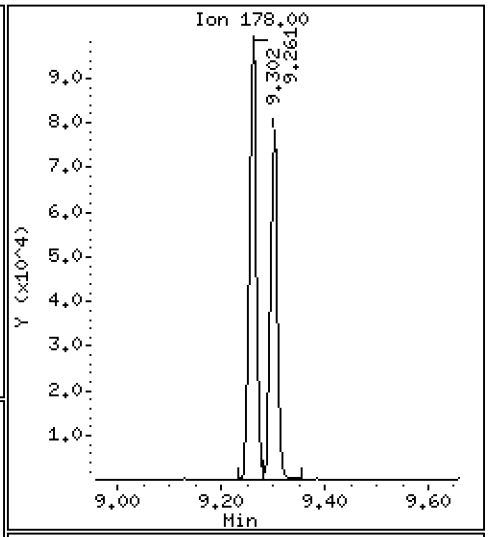
Concentration: 3.700 ug/mL

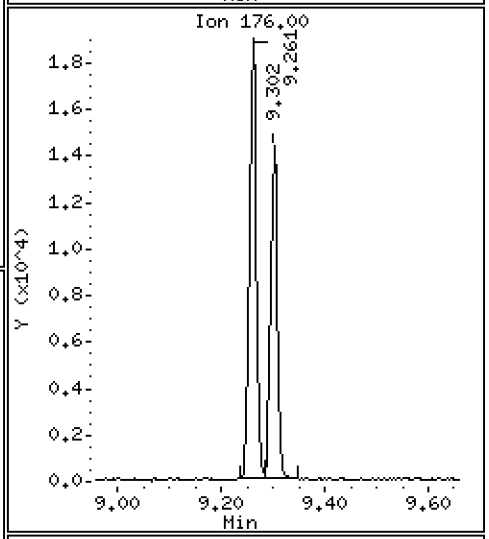


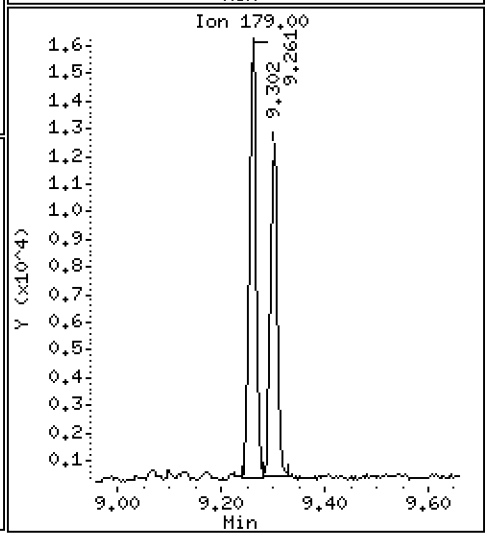












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

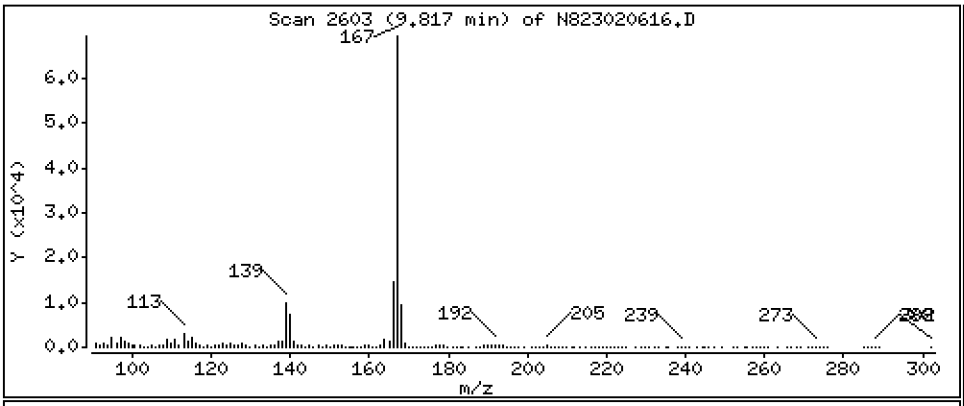
Operator: JZ

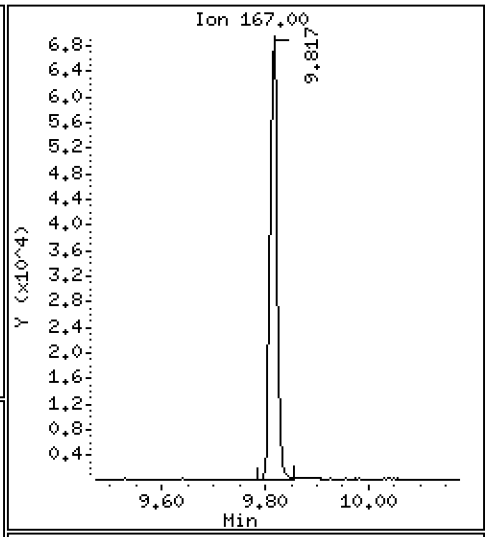
Column phase: Rxi-17sil

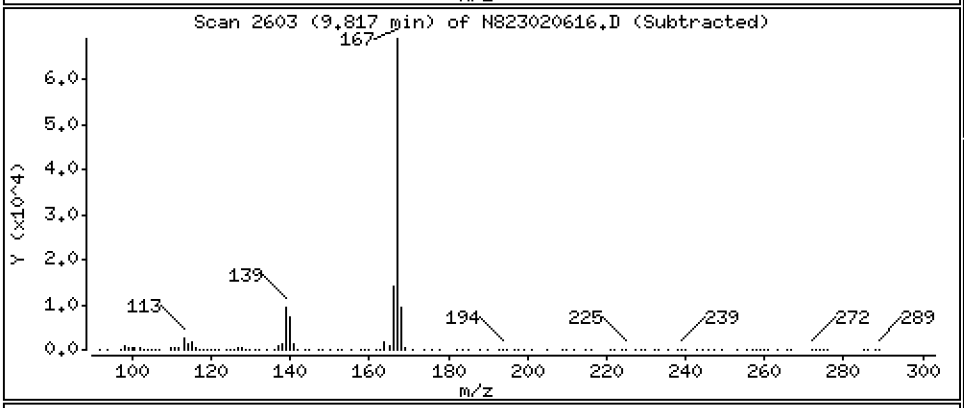
Column diameter: 0.25

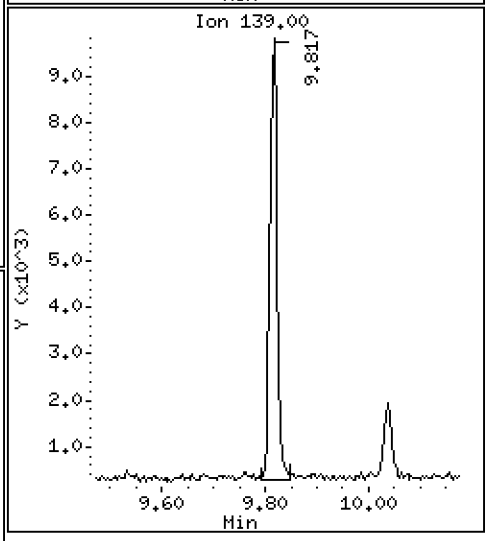
19 Carbazole

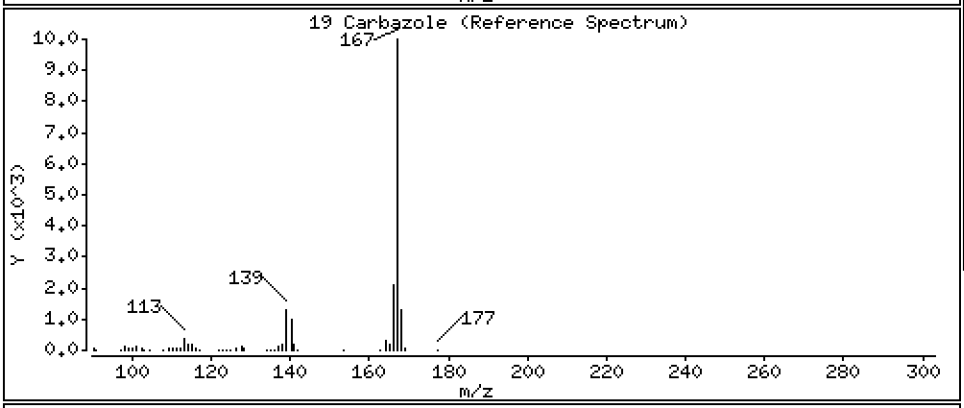
Concentration: 3.605 ug/mL

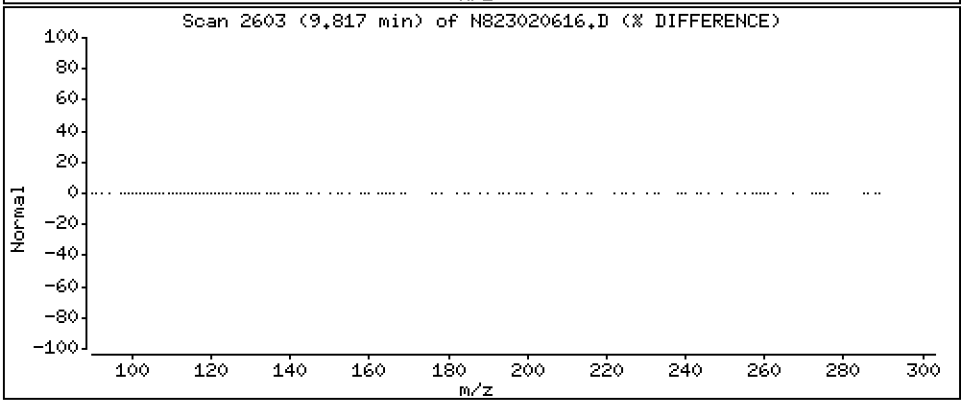












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

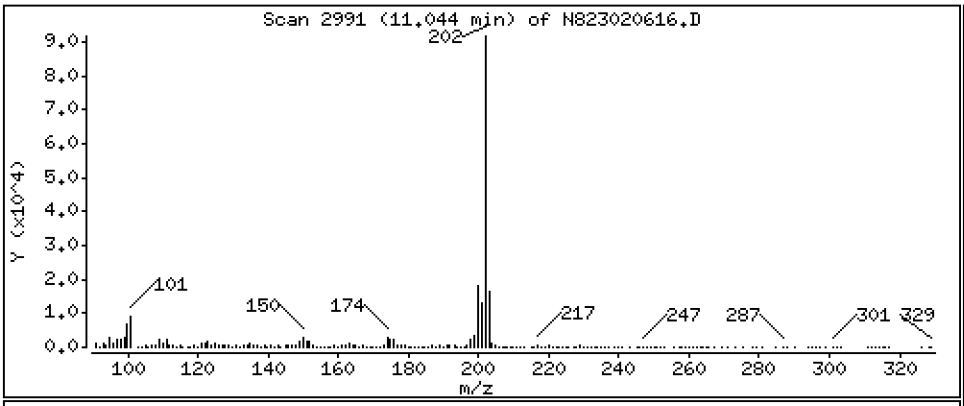
Operator: JZ

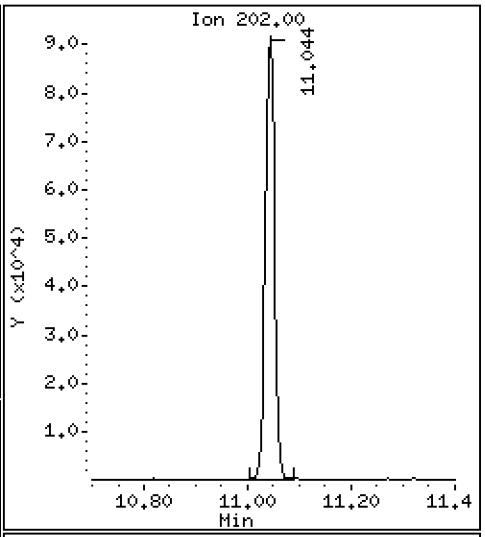
Column phase: Rxi-17sil

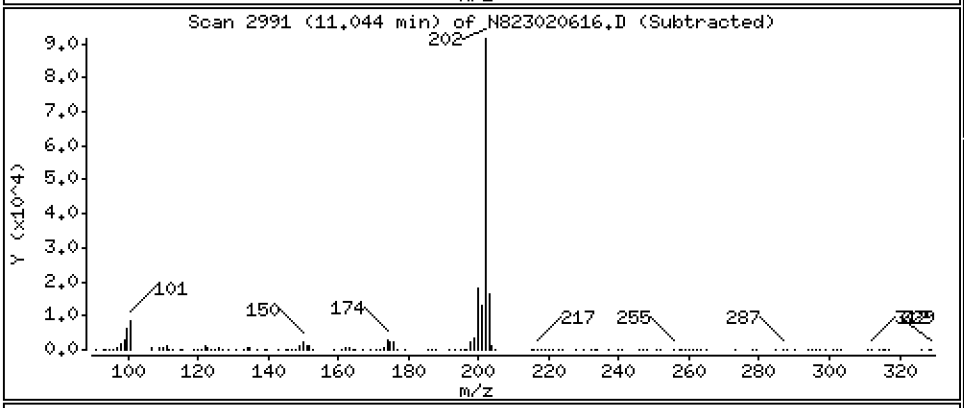
Column diameter: 0.25

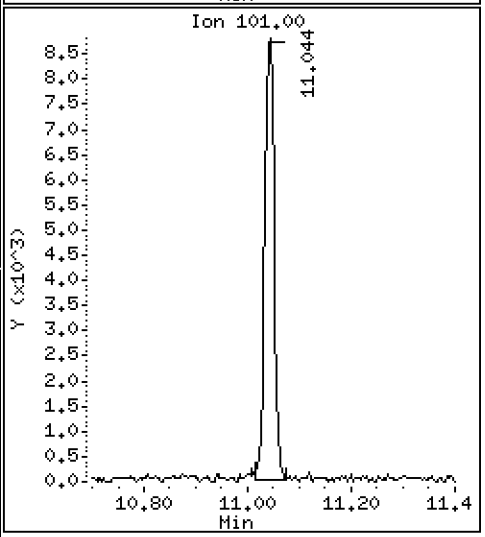
22 Fluoranthene

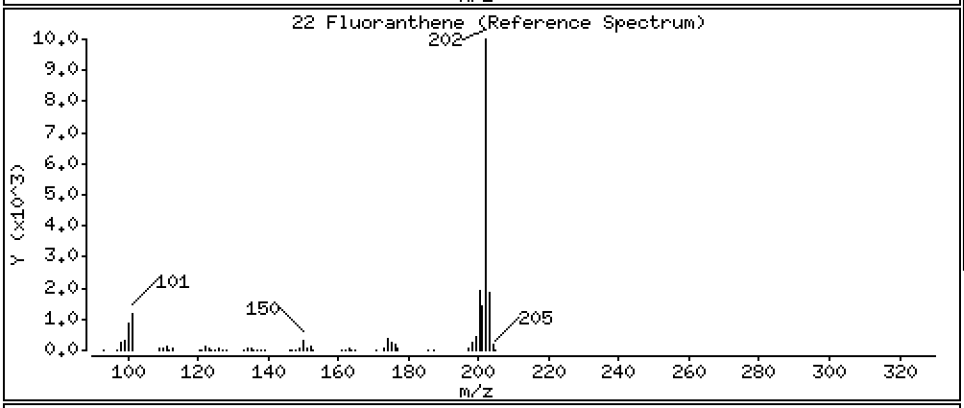
Concentration: 4.591 ug/mL

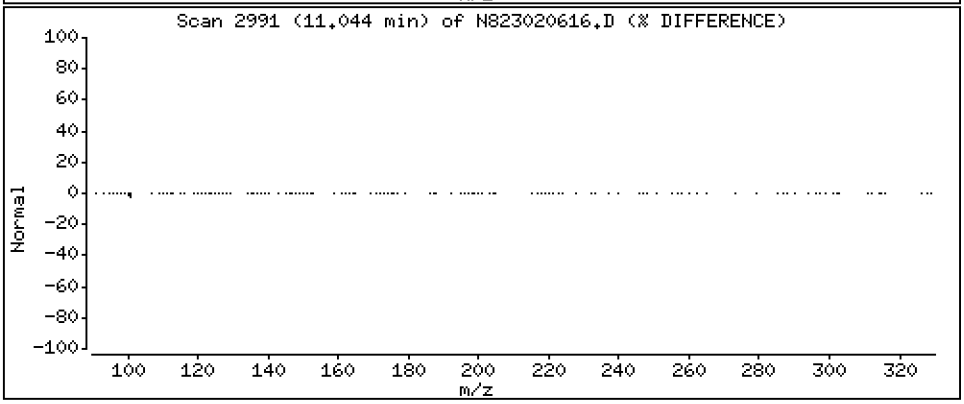












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

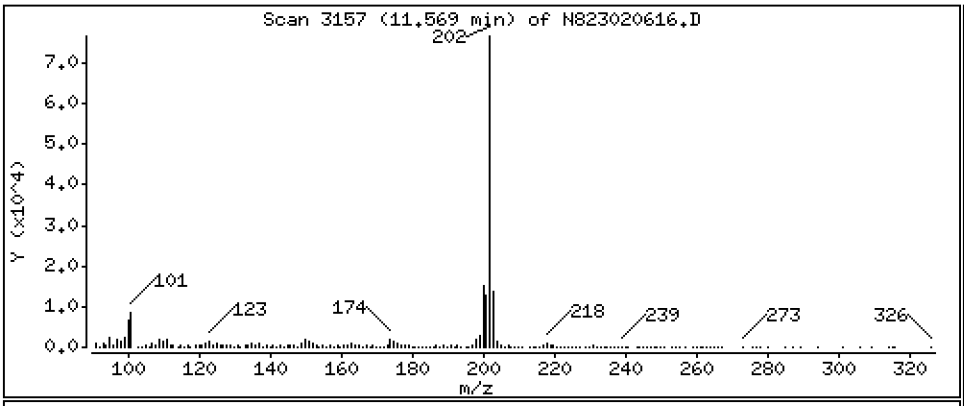
Operator: JZ

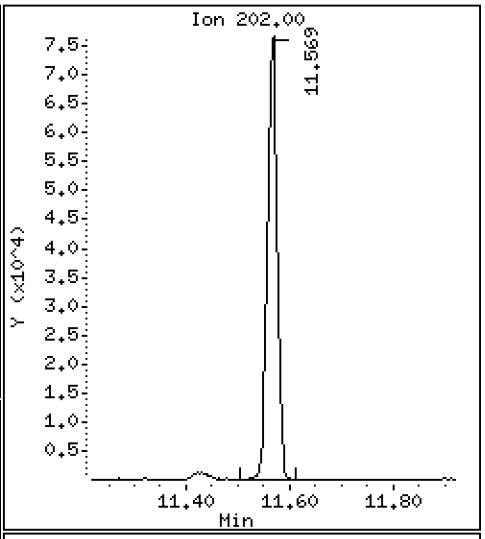
Column phase: Rxi-17sil

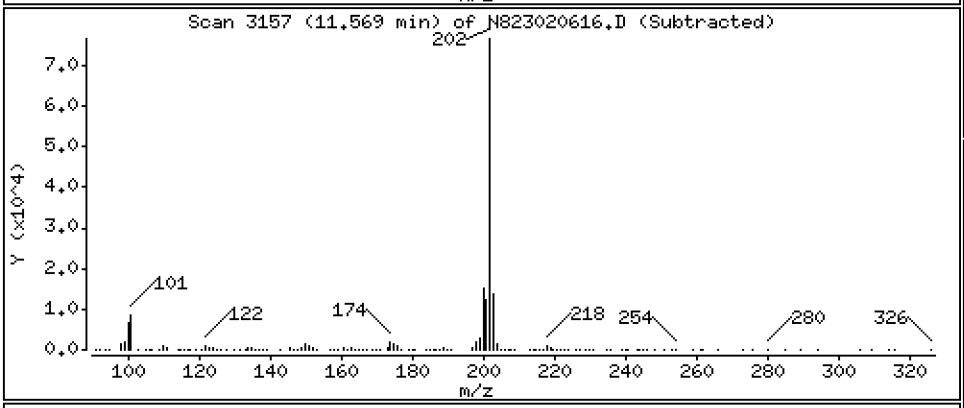
Column diameter: 0.25

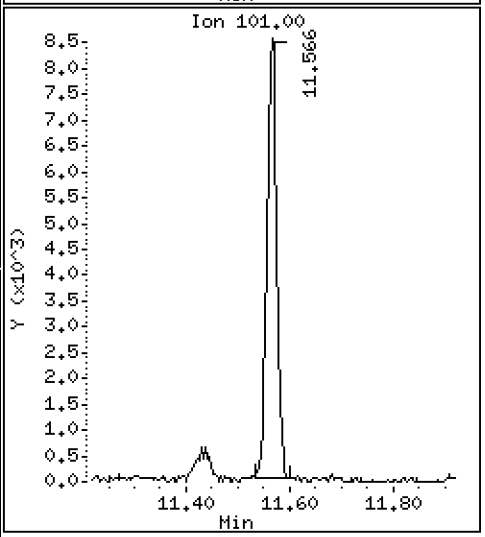
23 Pyrene

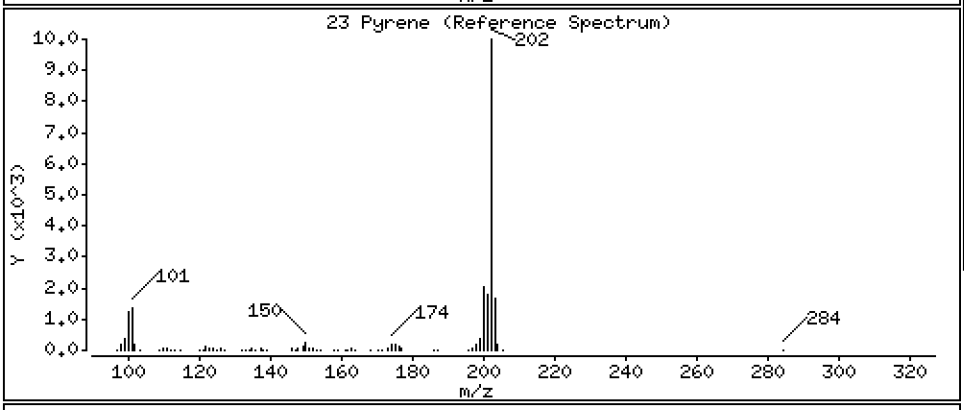
Concentration: 7.010 ug/mL

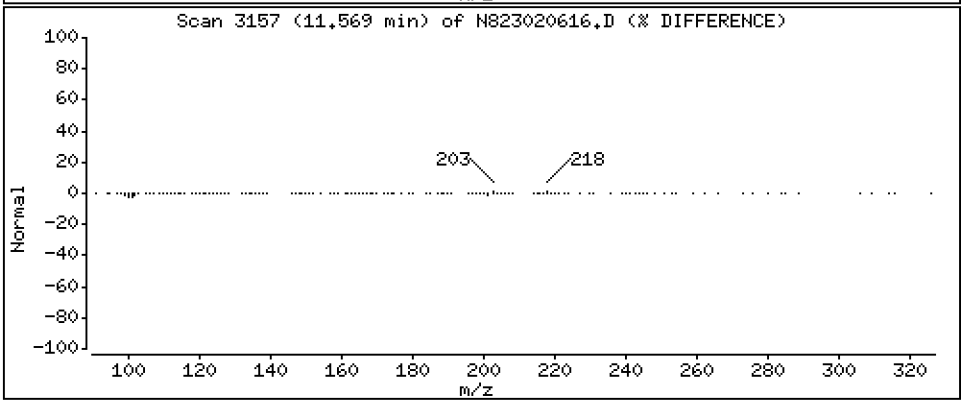












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

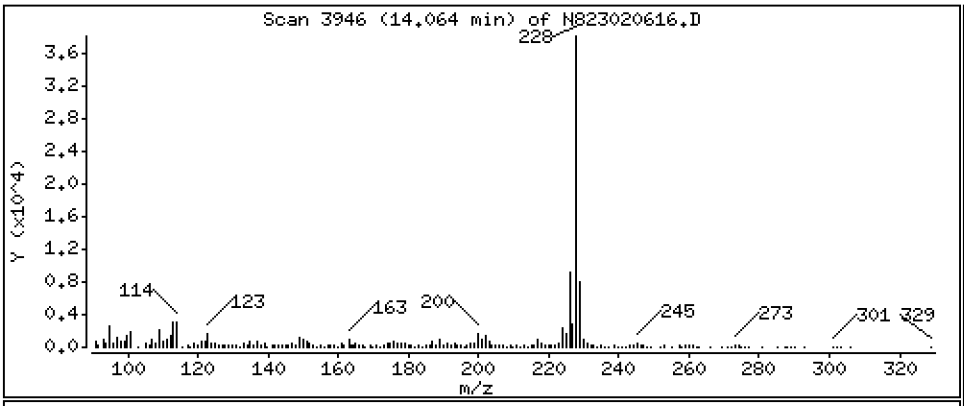
Operator: JZ

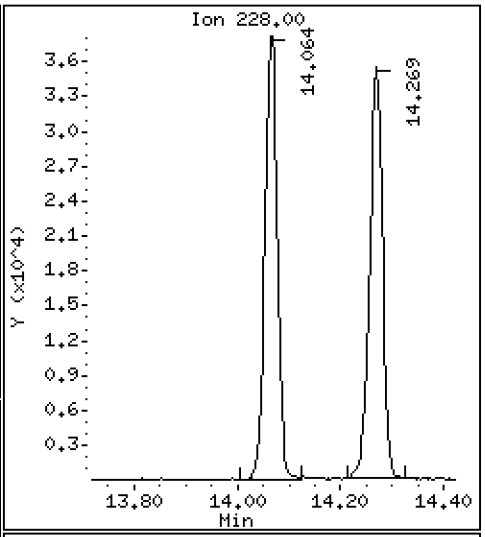
Column phase: Rxi-17sil

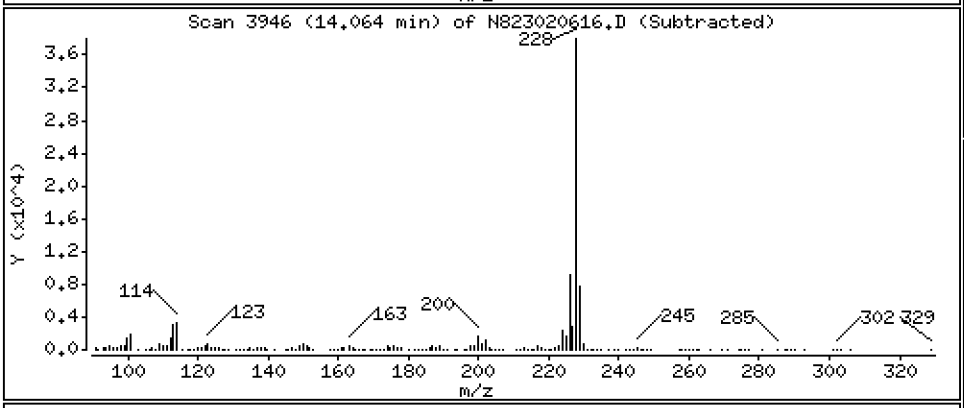
Column diameter: 0.25

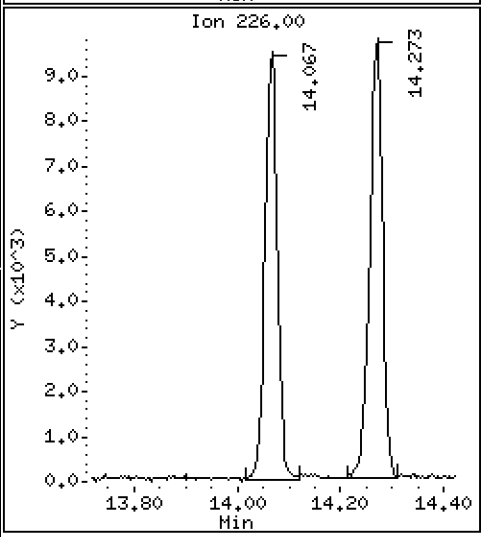
24 Benzo(a)anthracene

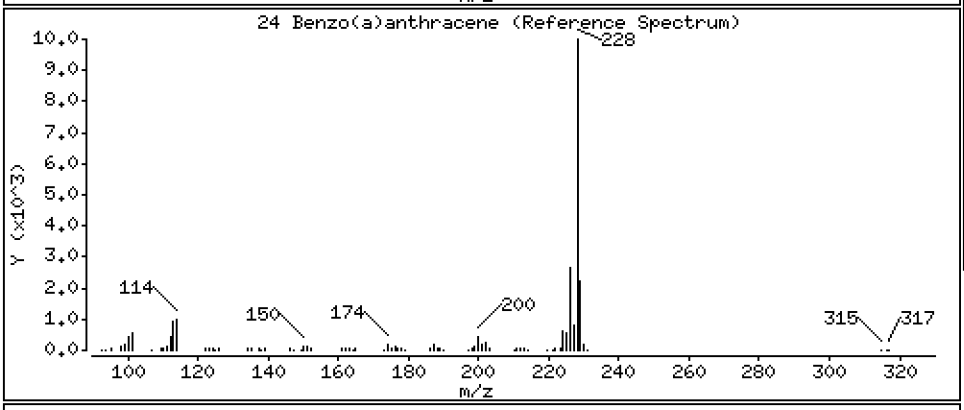
Concentration: 4.849 ug/mL

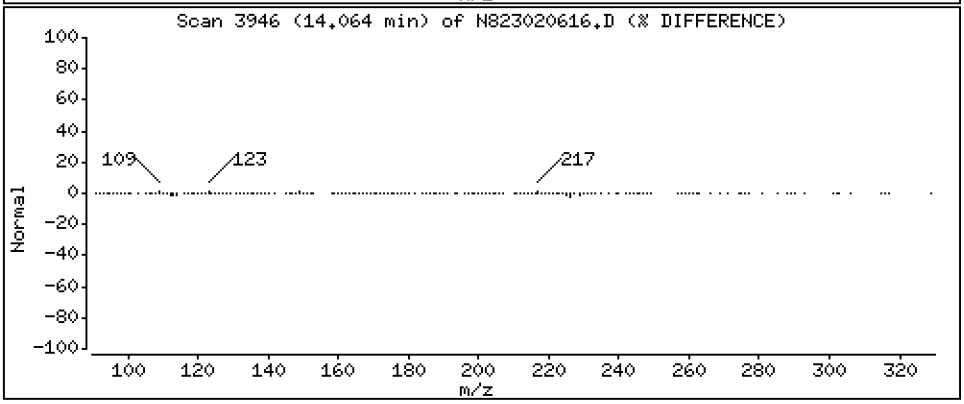












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

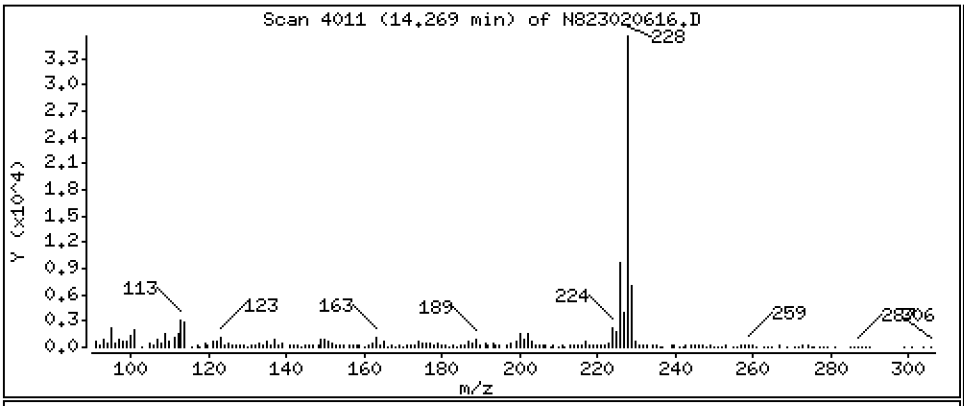
Operator: JZ

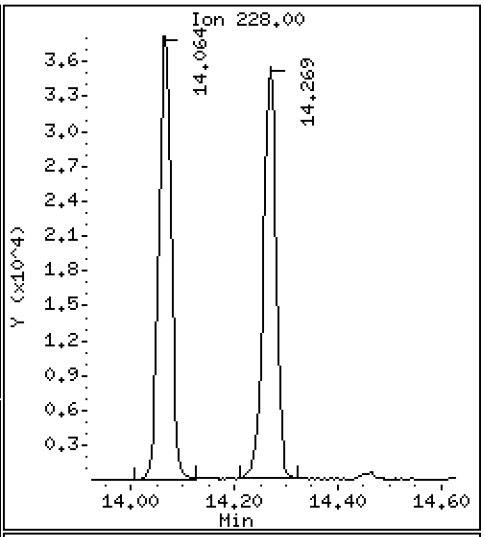
Column phase: Rxi-17sil

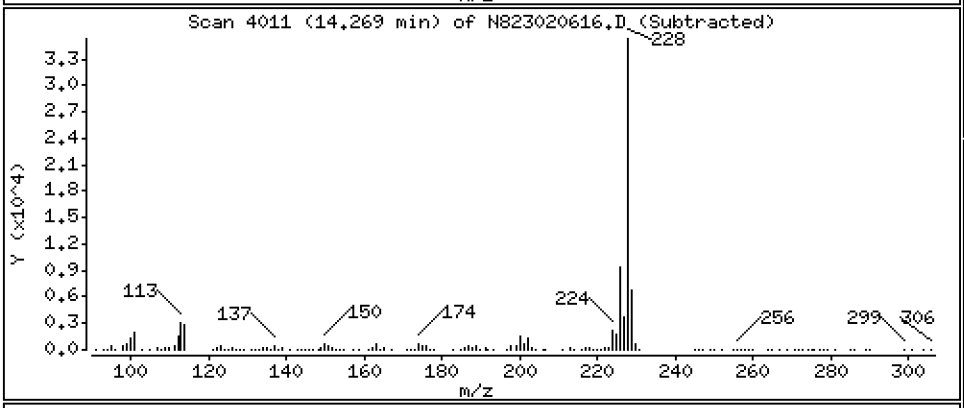
Column diameter: 0.25

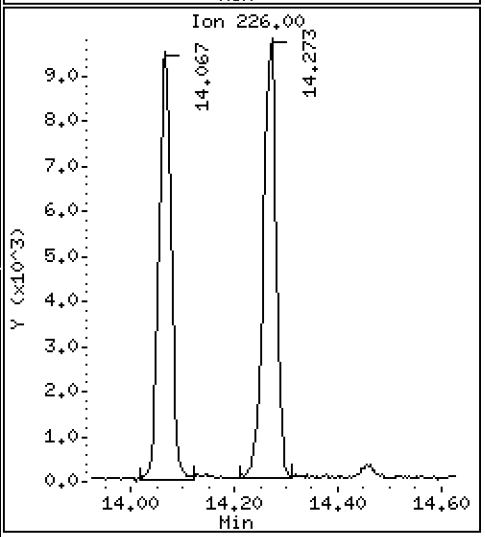
27 Chrysene

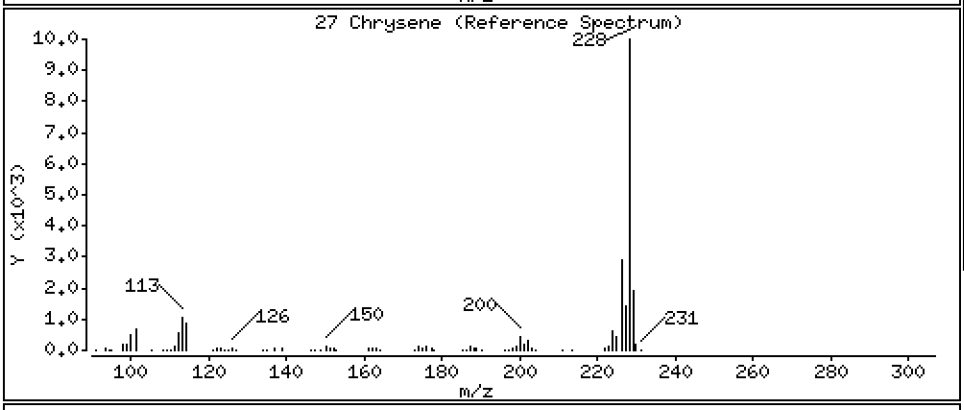
Concentration: 4.345 ug/mL

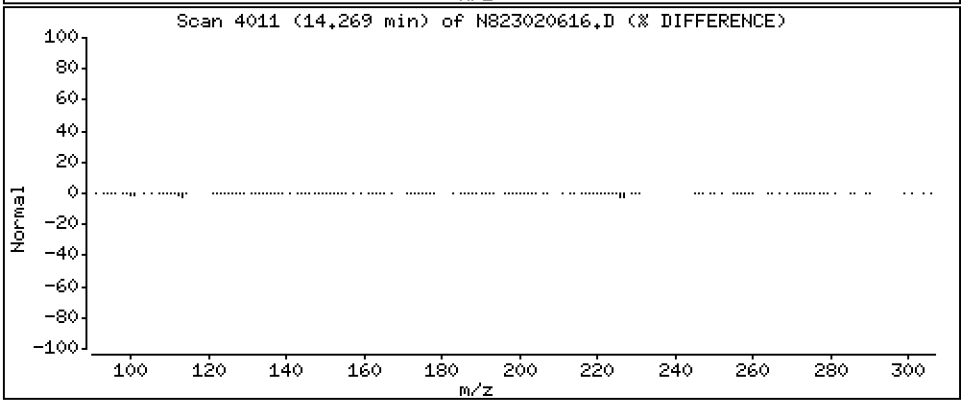












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

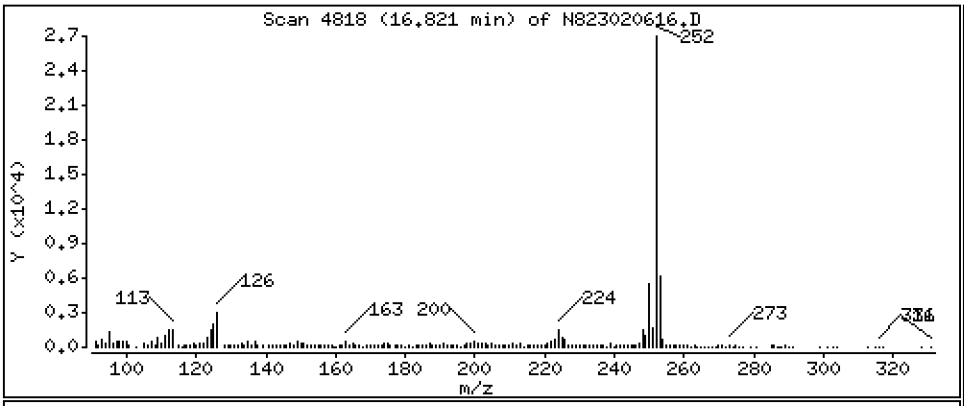
Operator: JZ

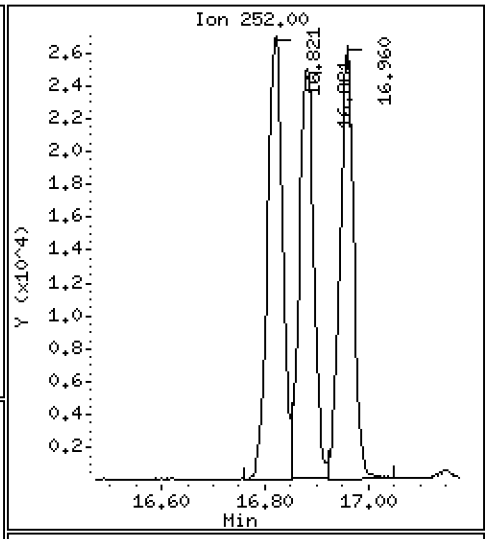
Column phase: Rxi-17sil

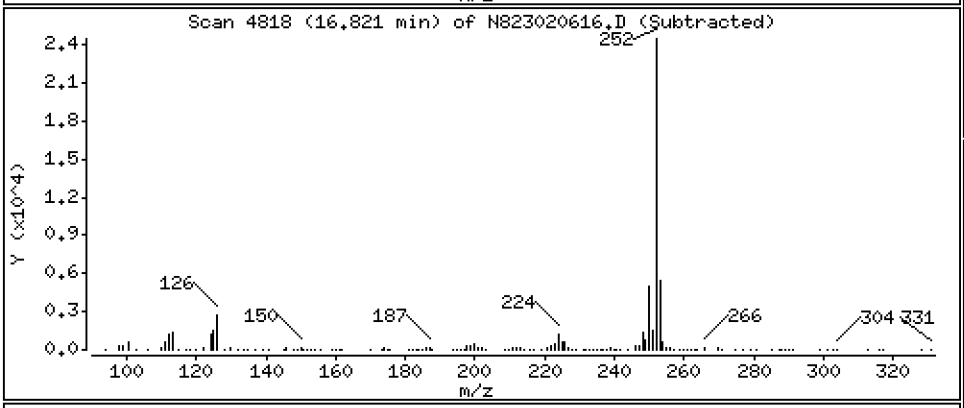
Column diameter: 0.25

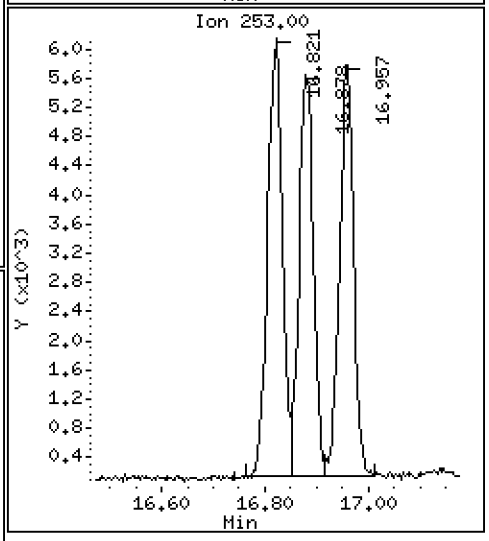
28 Benzo(b)fluoranthene

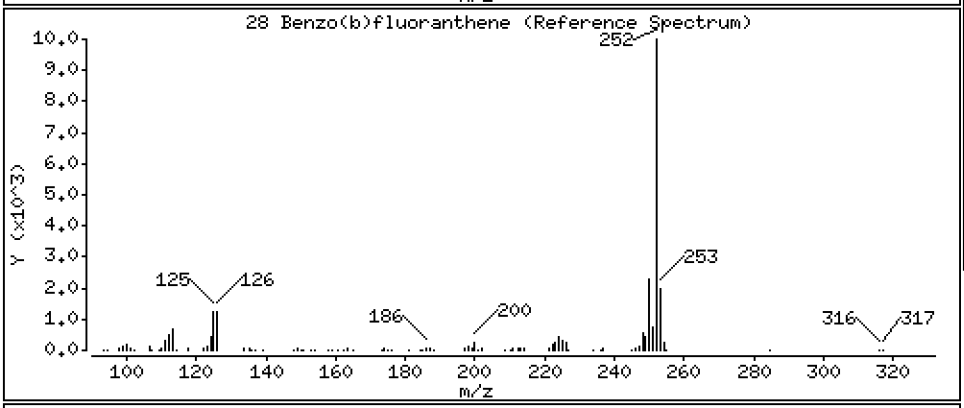
Concentration: 4.413 ug/mL

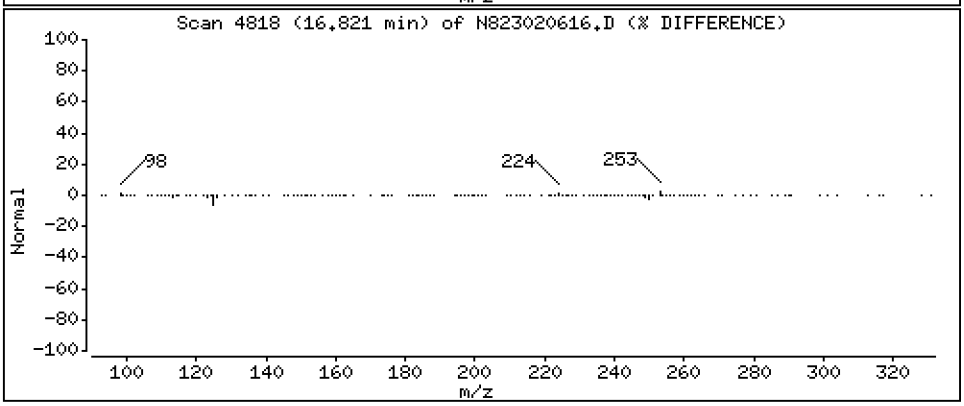












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

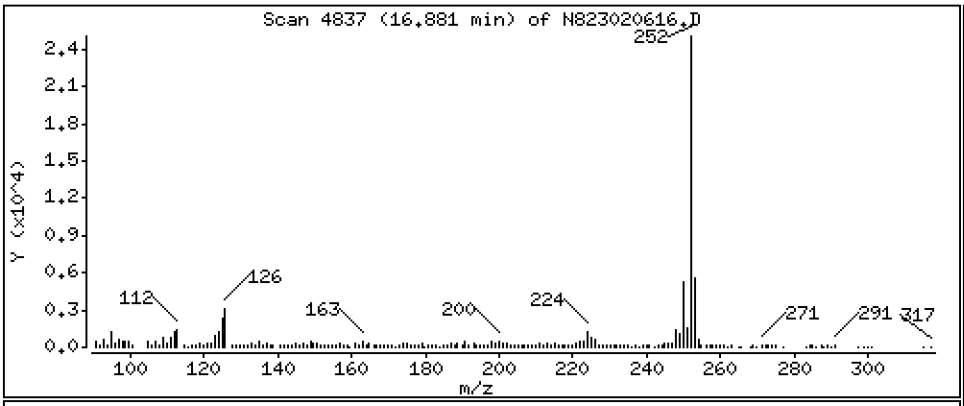
Operator: JZ

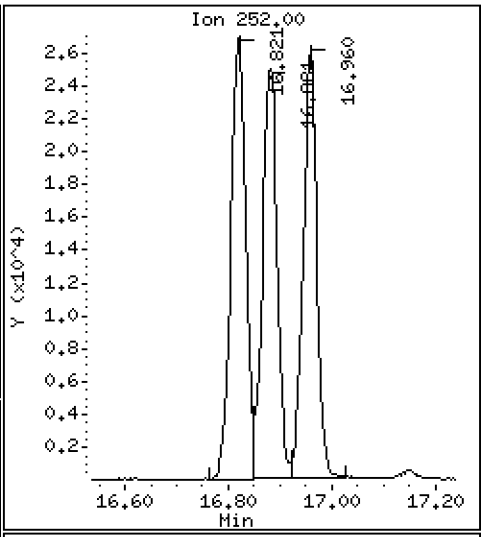
Column phase: Rxi-17sil

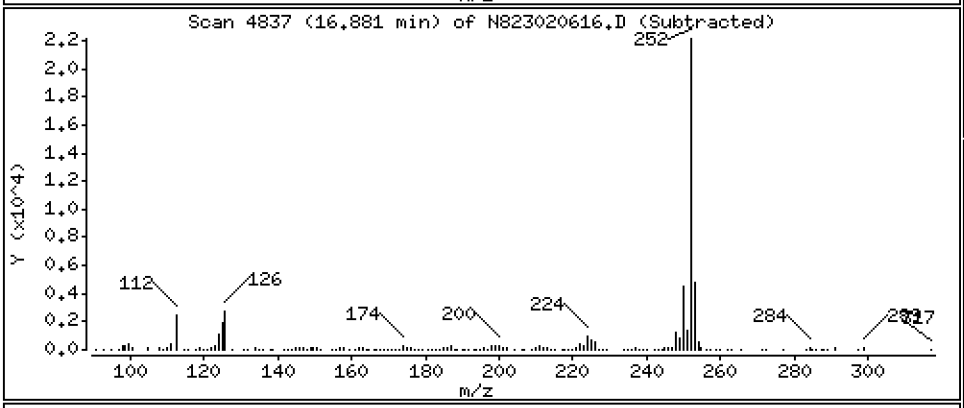
Column diameter: 0.25

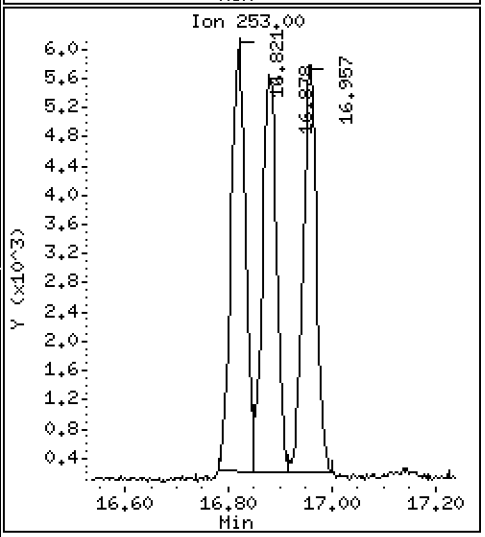
29 Benzo(k)fluoranthene

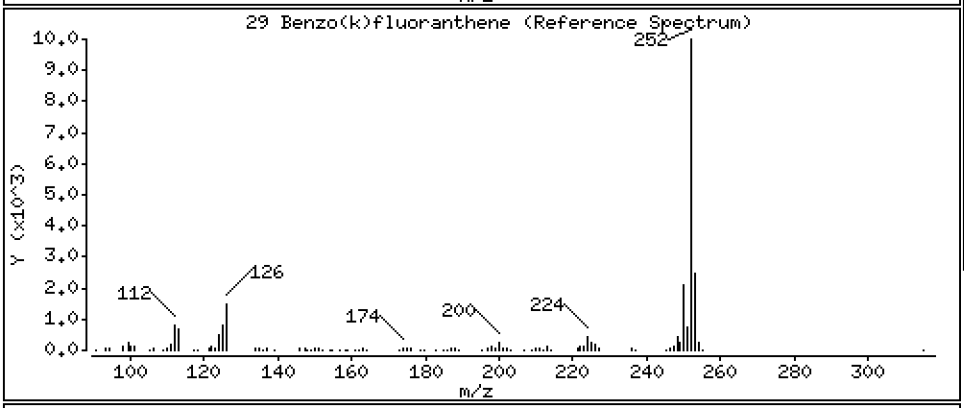
Concentration: 4.030 ug/mL

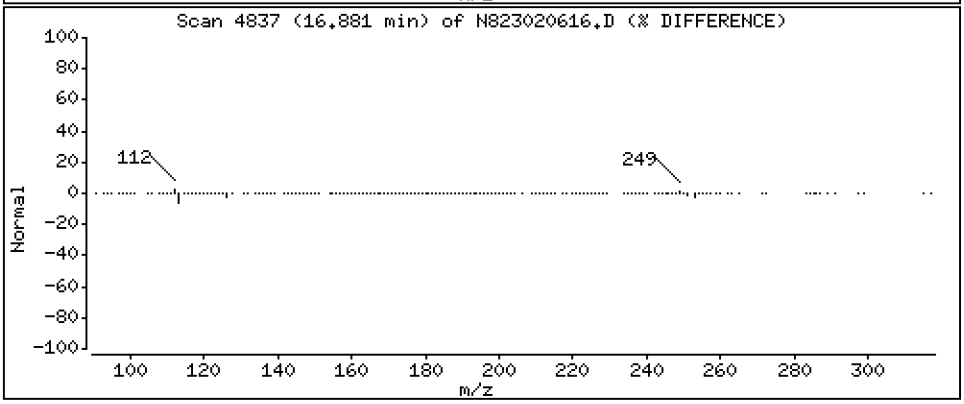












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

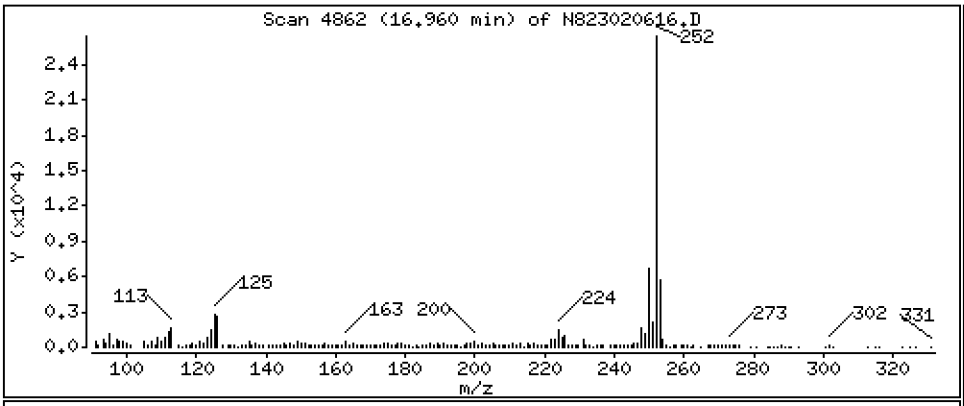
Operator: JZ

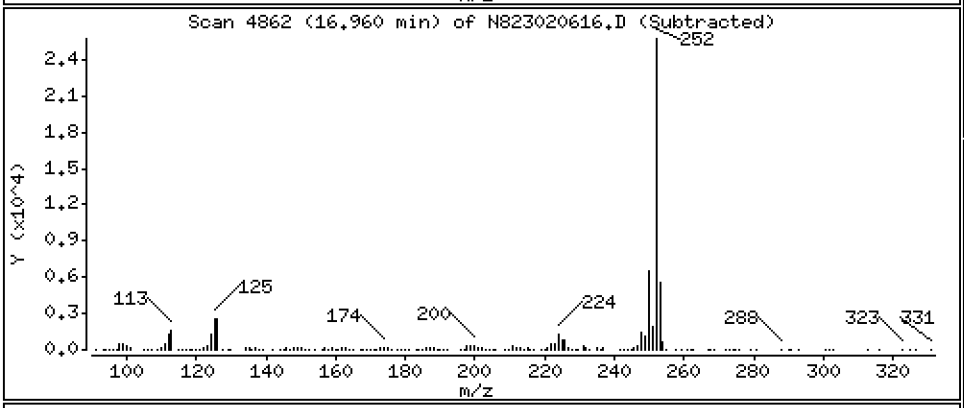
Column phase: Rxi-17sil

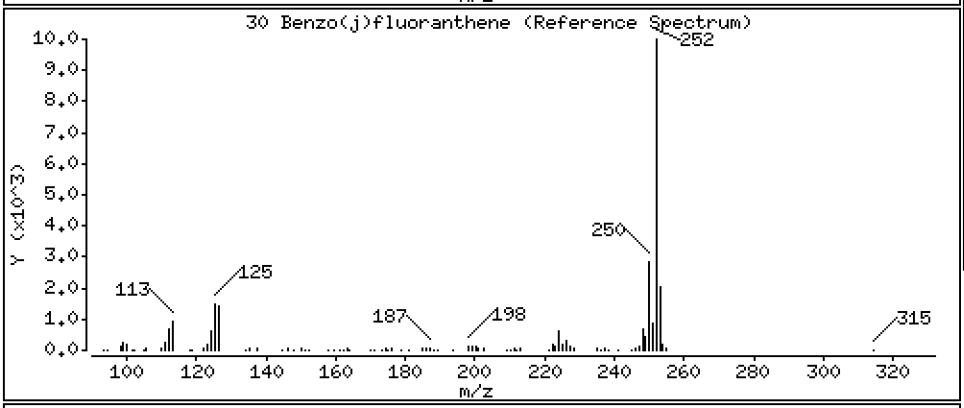
Column diameter: 0.25

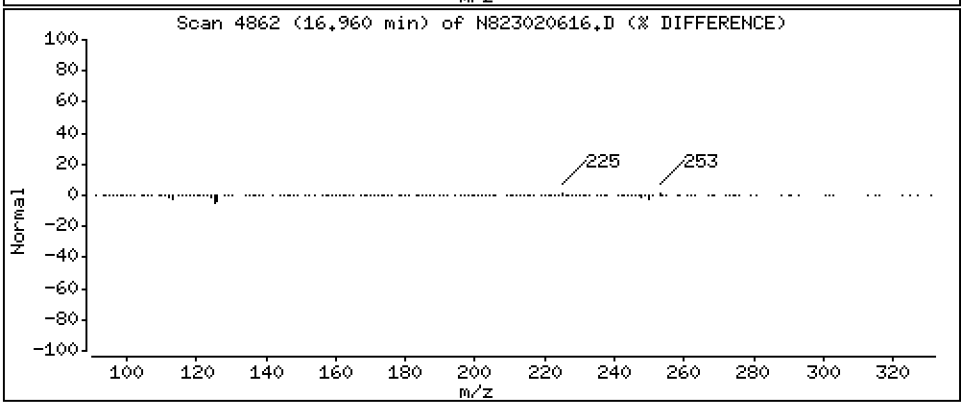
30 Benzo(j)fluoranthene

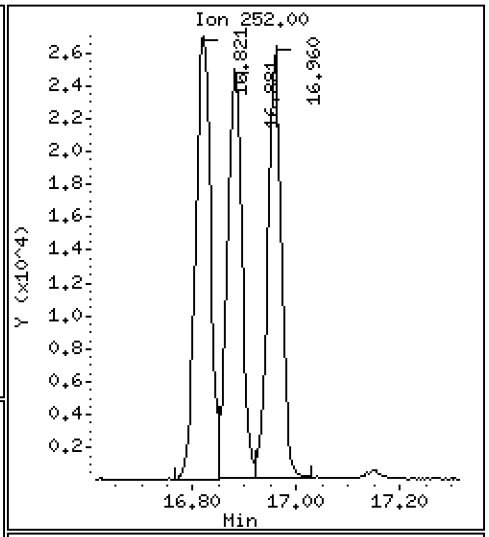
Concentration: 4.318 ug/mL

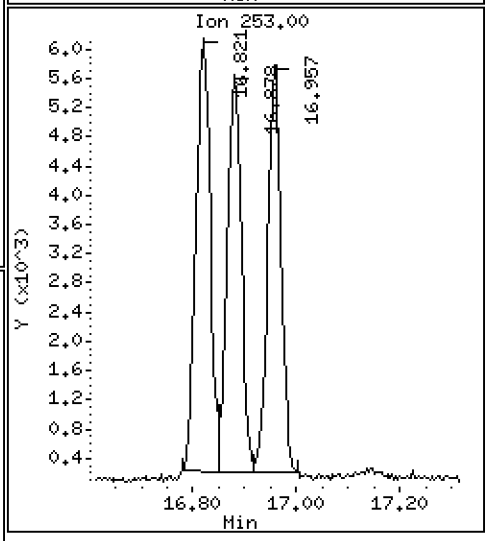












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

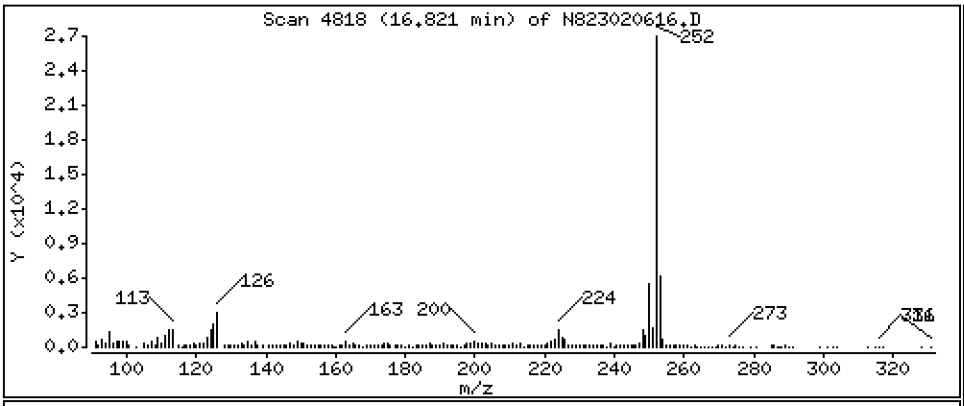
Operator: JZ

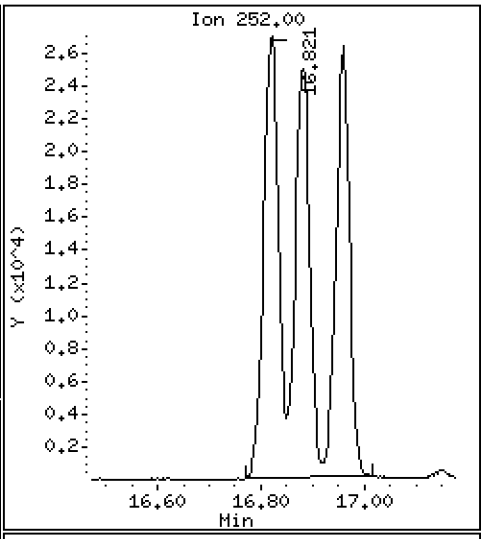
Column phase: Rxi-17sil

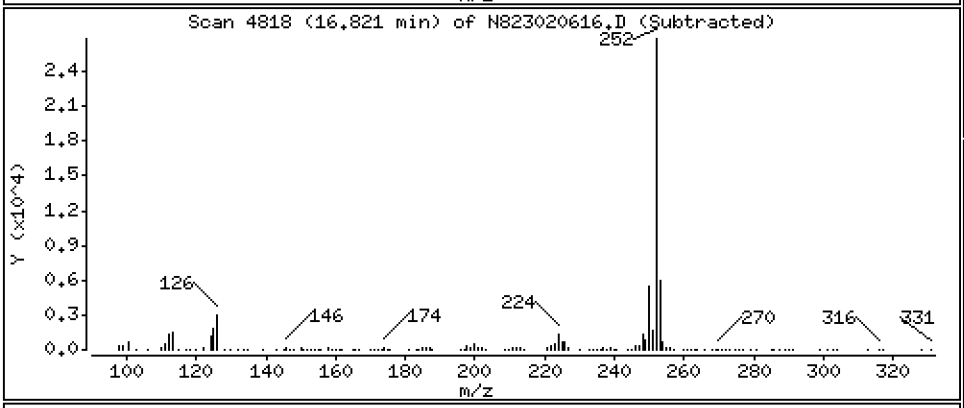
Column diameter: 0.25

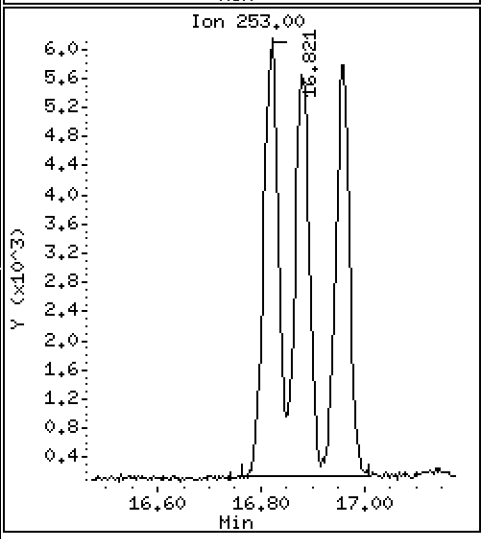
31 Total Benzofluoranthenes

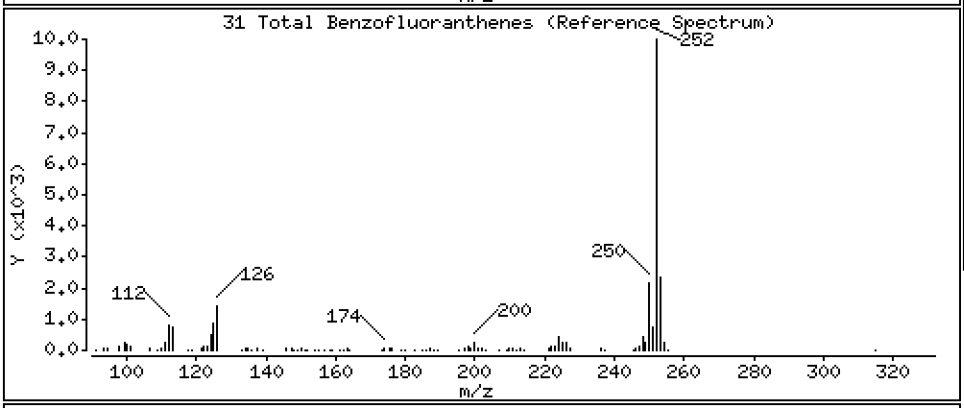
Concentration: 12.59 ug/mL

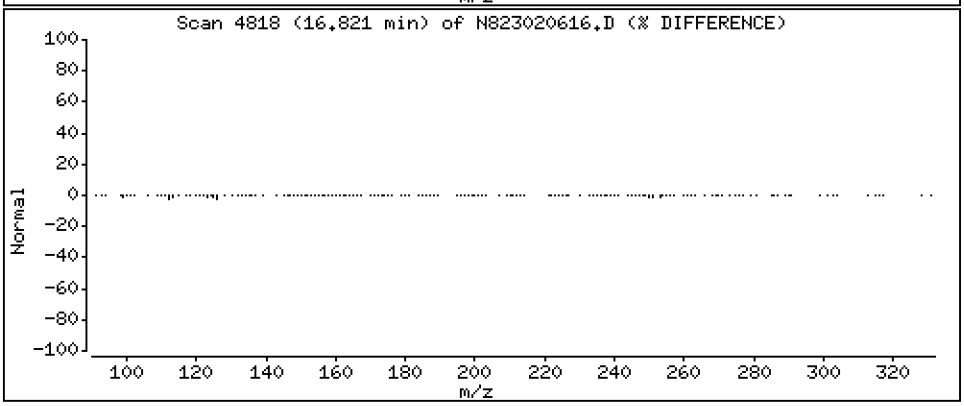












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020616.D

Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

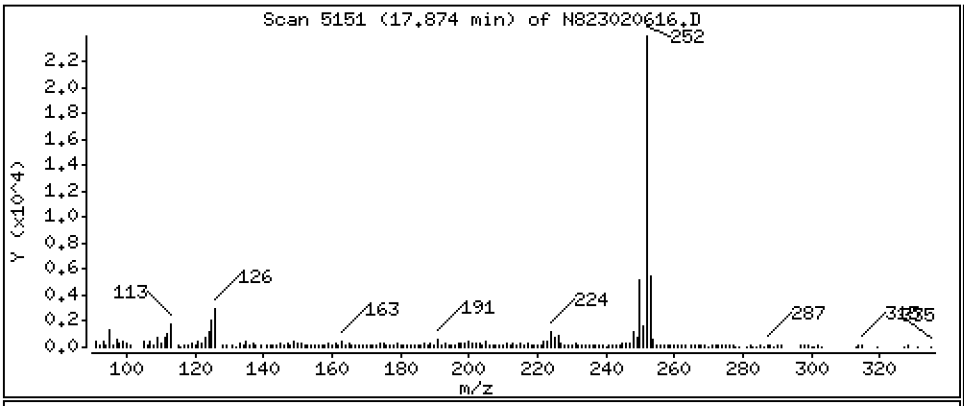
Operator: JZ

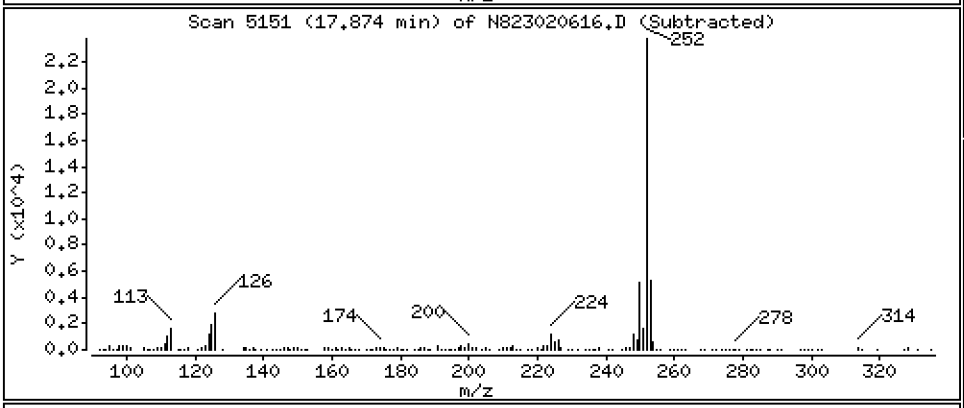
Column phase: Rxi-17sil

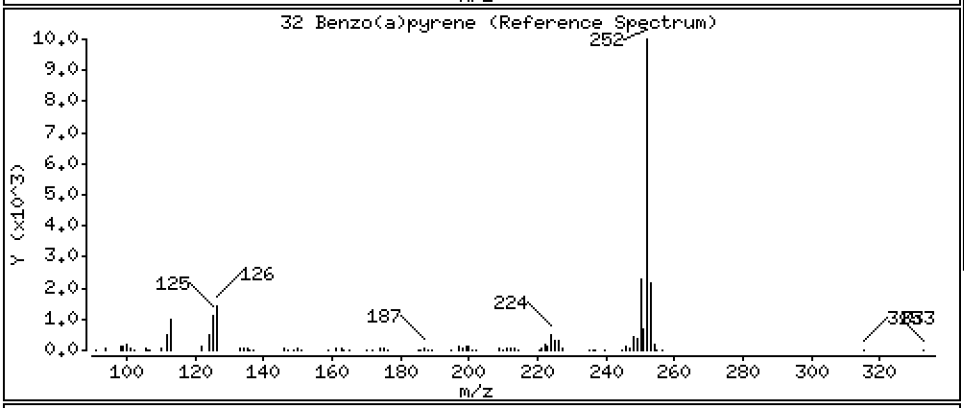
Column diameter: 0.25

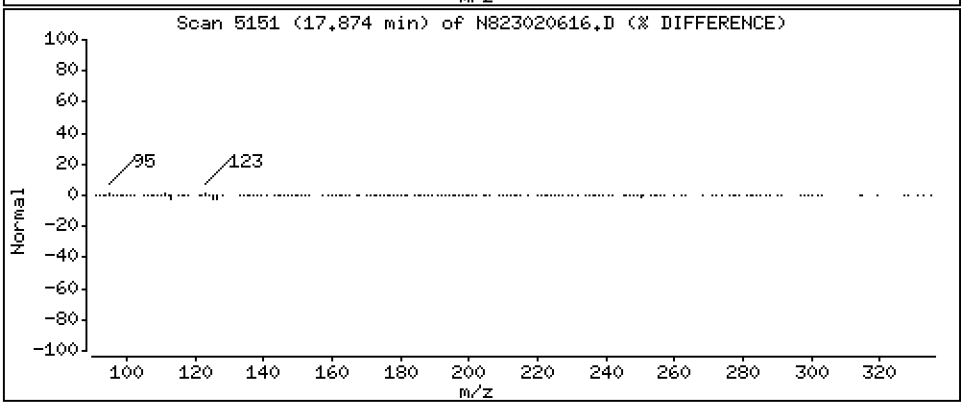
32 Benzo(a)pyrene

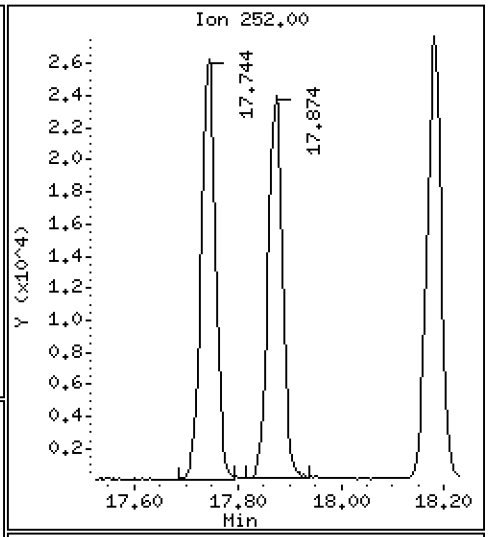
Concentration: 4.230 ug/mL

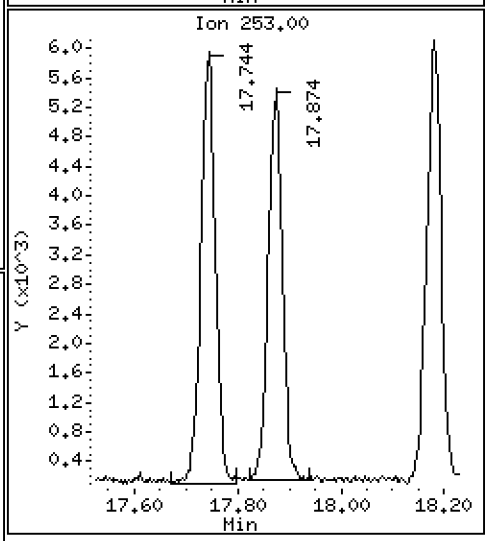












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020616.D

Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

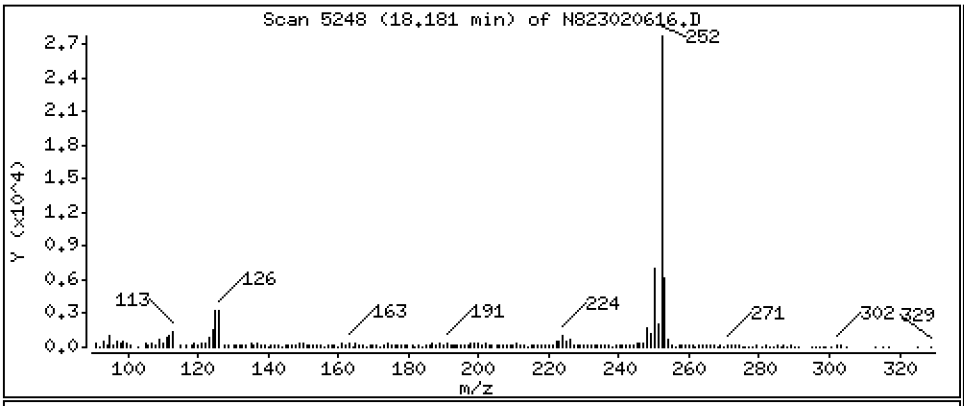
Operator: JZ

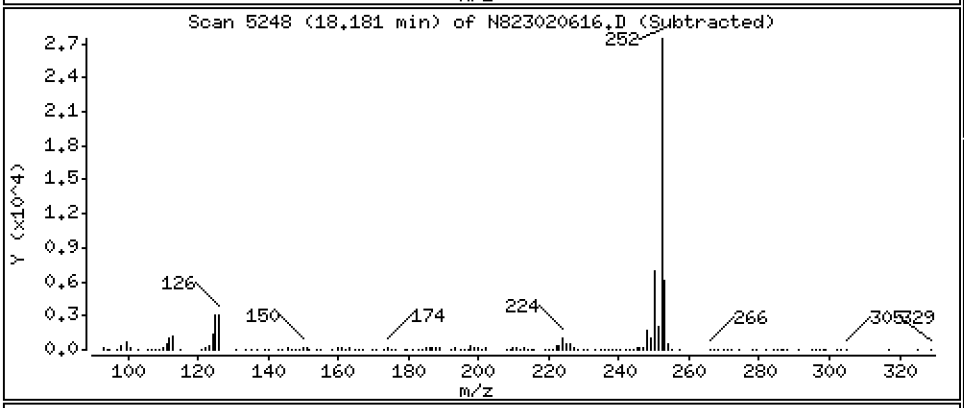
Column phase: Rxi-17sil

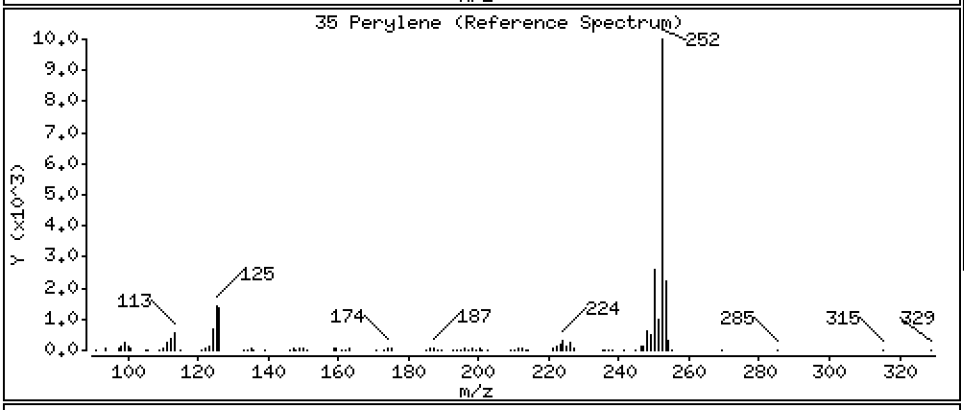
Column diameter: 0.25

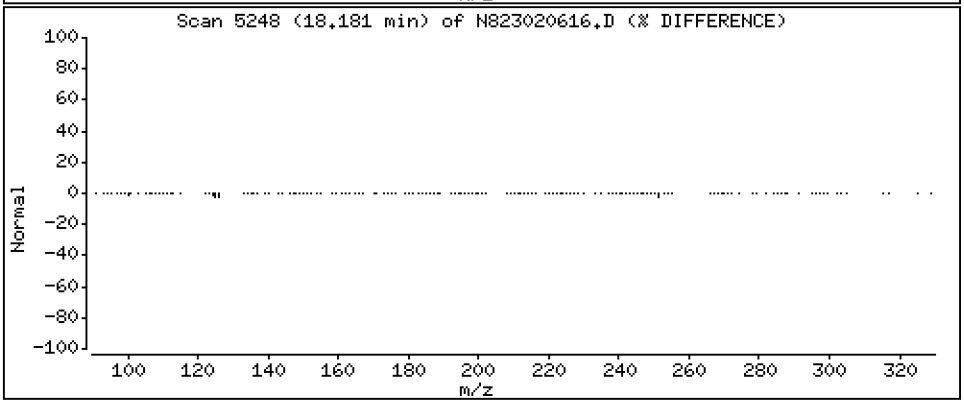
35 Perylene

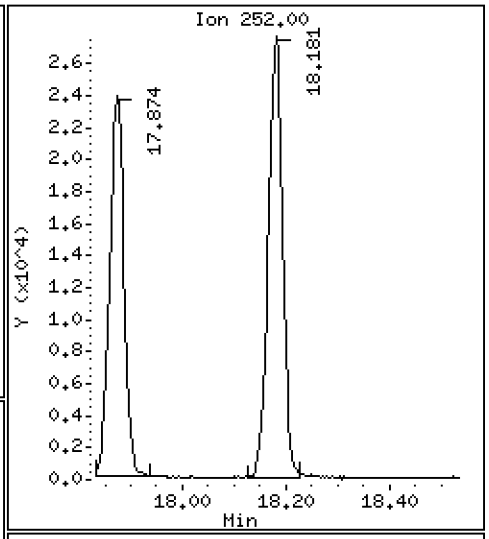
Concentration: 4.471 ug/mL

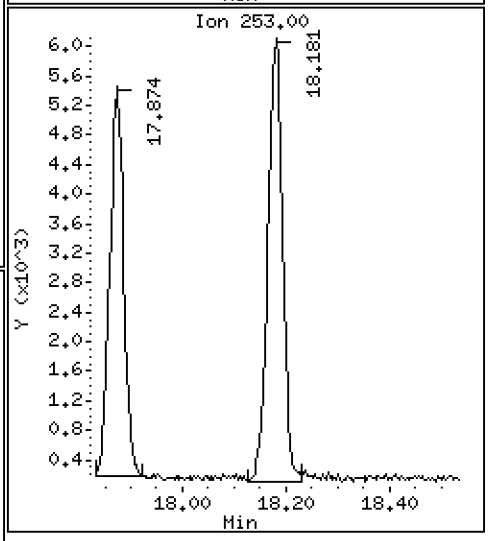












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

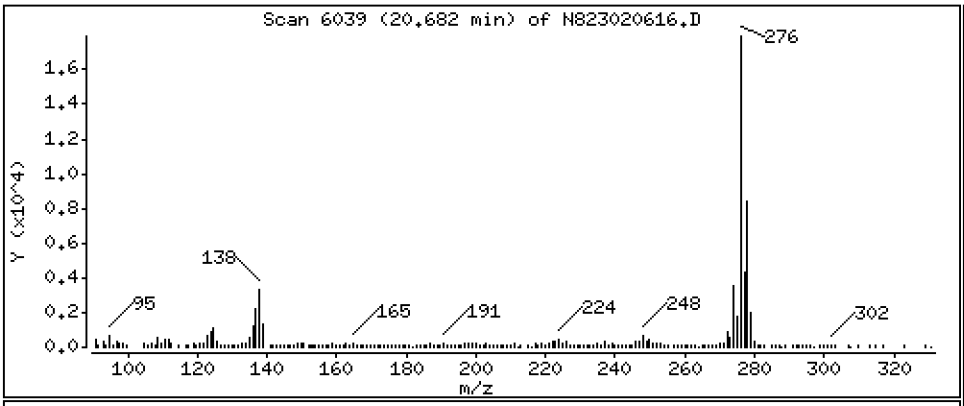
Operator: JZ

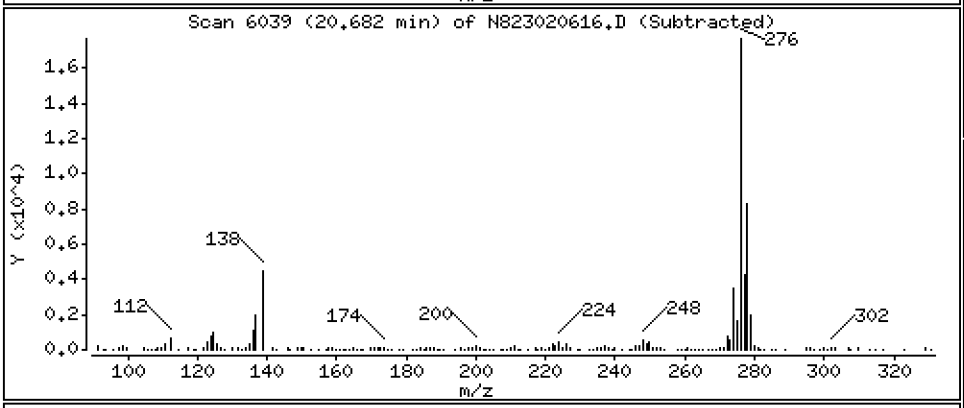
Column phase: Rxi-17sil

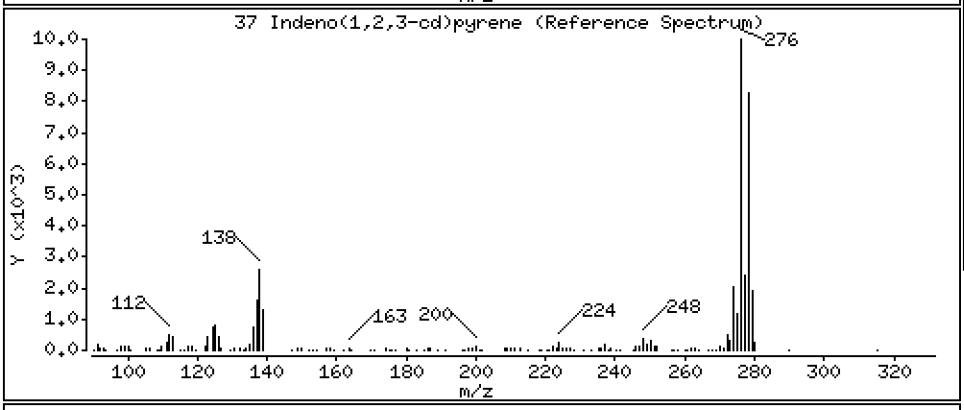
Column diameter: 0.25

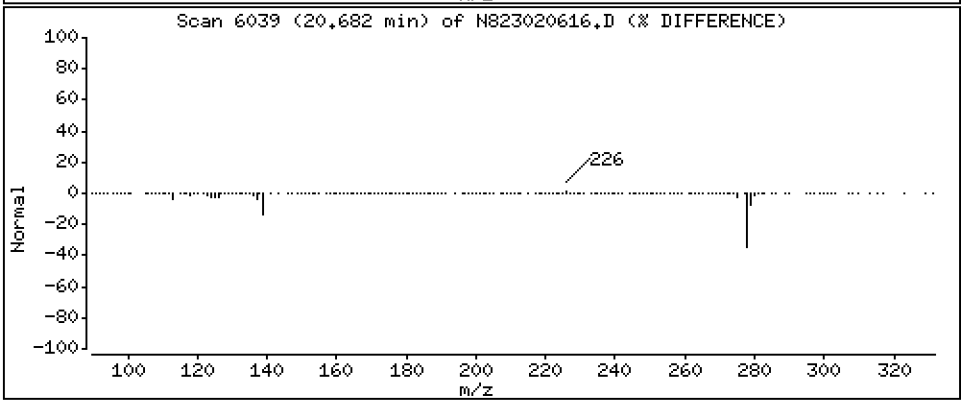
37 Indeno(1,2,3-cd)pyrene

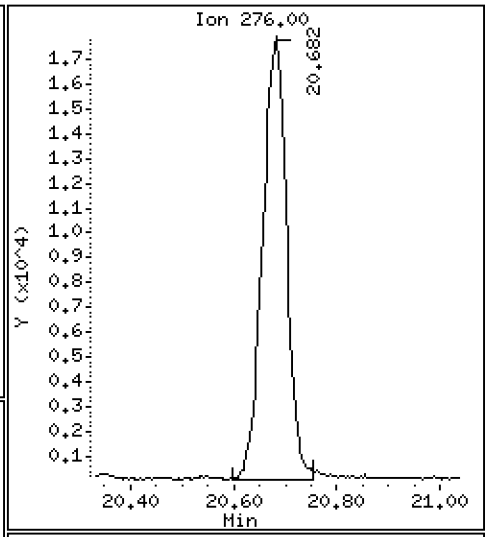
Concentration: 4.562 ug/mL

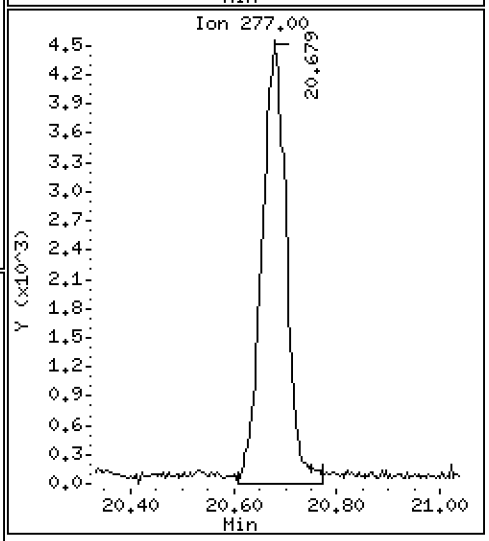












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Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

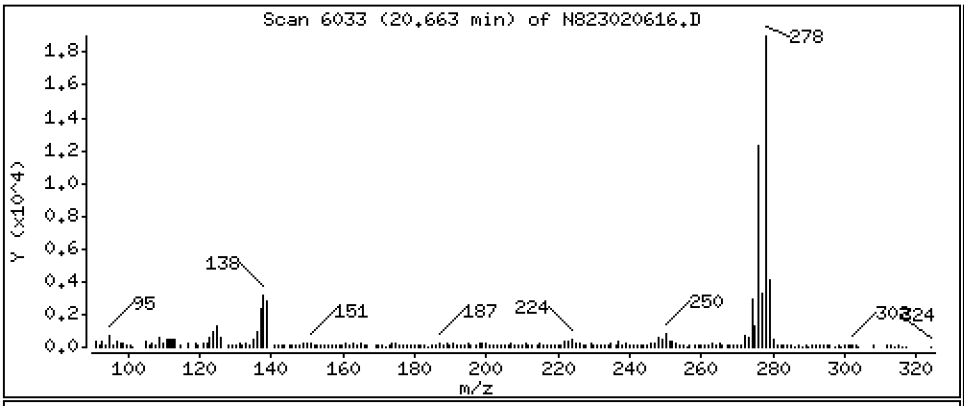
Operator: JZ

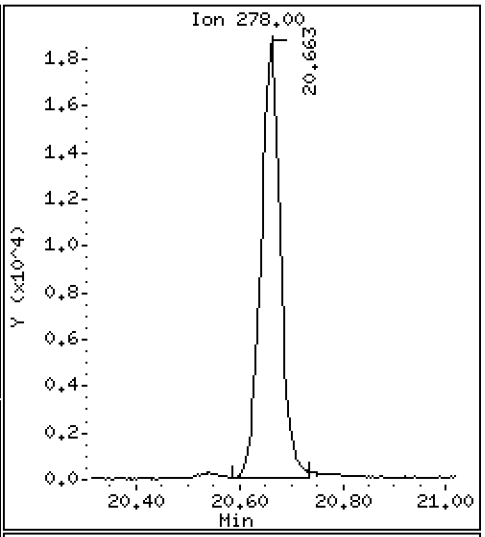
Column phase: Rxi-17sil

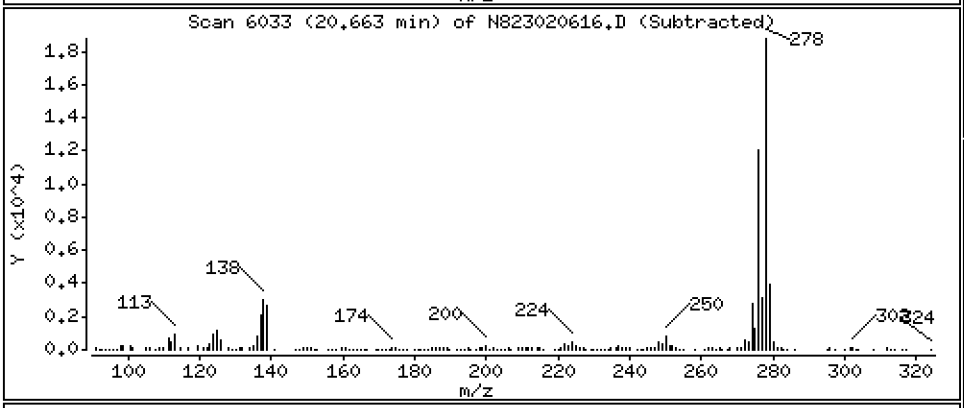
Column diameter: 0.25

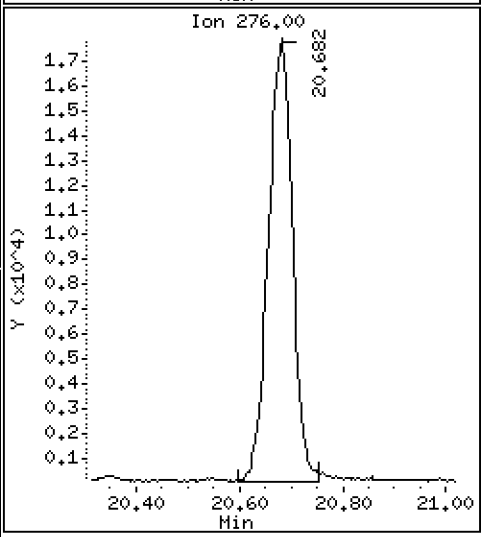
38 Dibenzo(a,h)anthracene

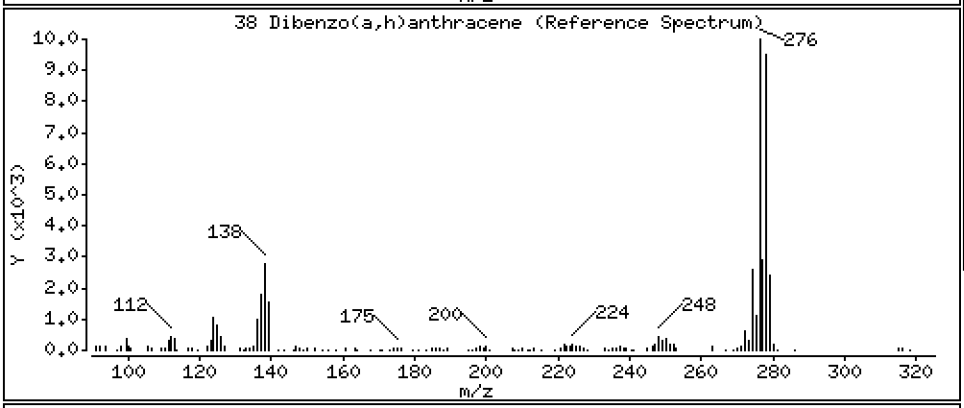
Concentration: 4.559 ug/mL

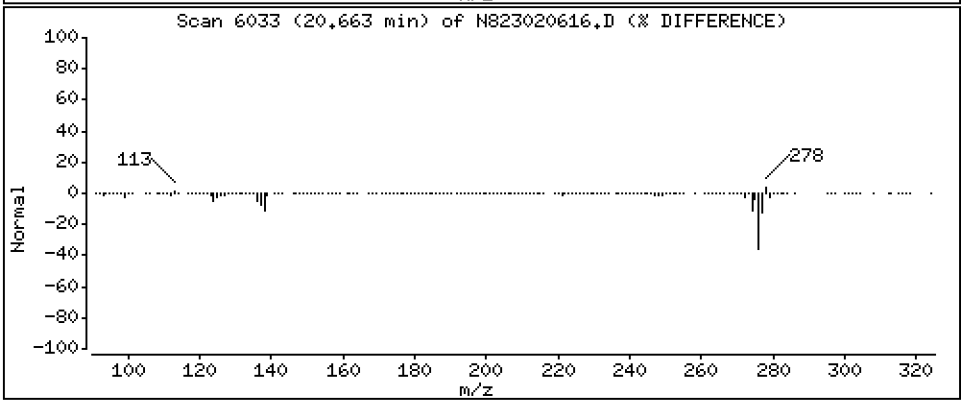












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020616.D

Date : 06-FEB-2023 19:33

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-MSD1,

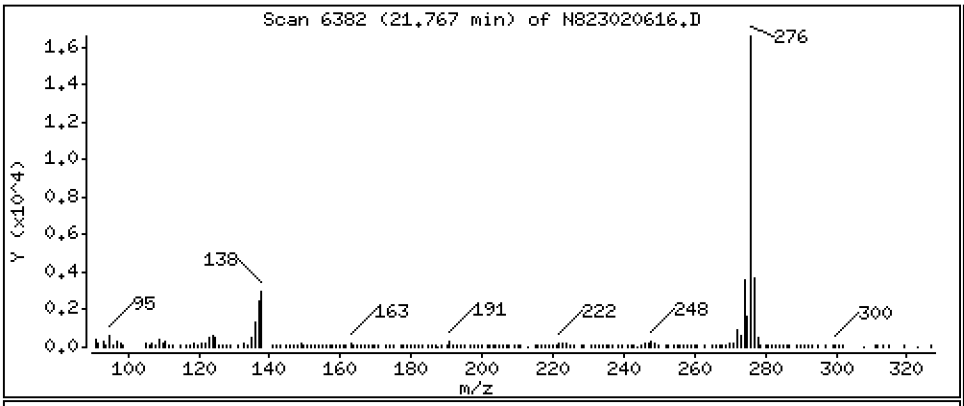
Operator: JZ

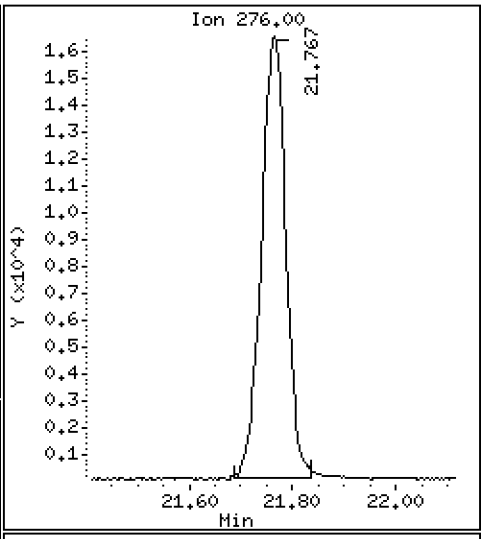
Column phase: Rxi-17sil

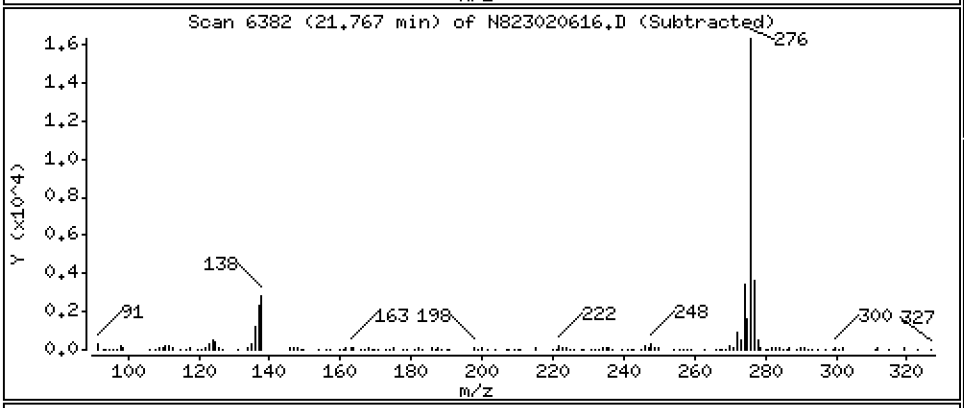
Column diameter: 0.25

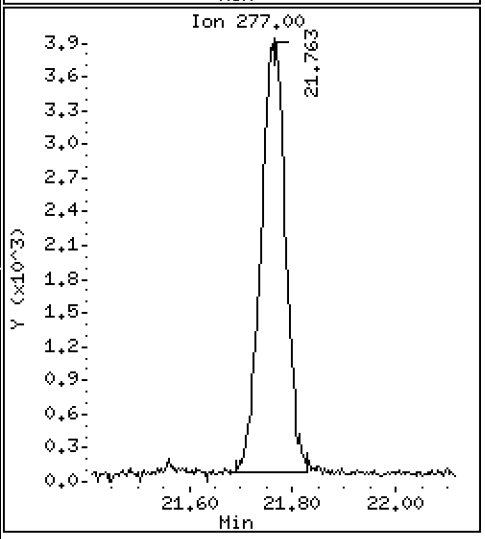
39 Benzo(g,h,i)perylene

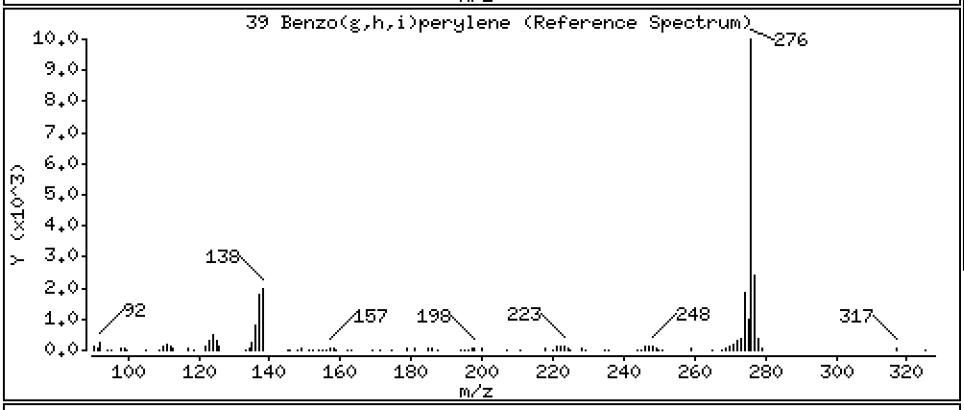
Concentration: 4.750 ug/mL

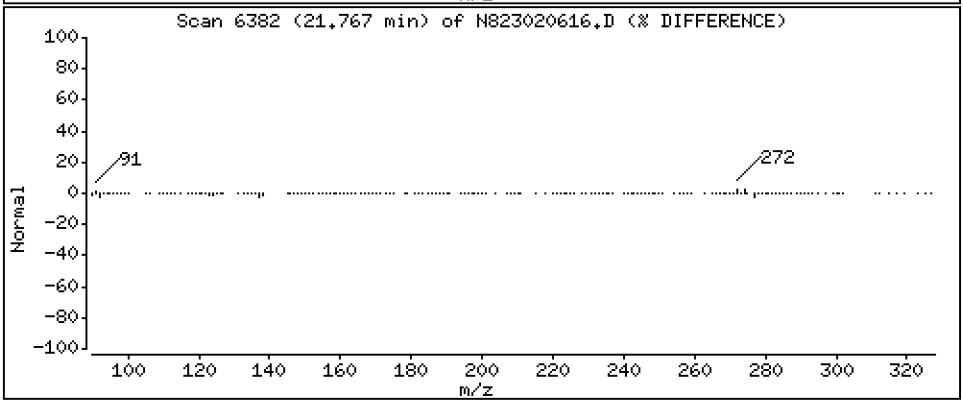












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020616.D
Lab Smp Id: BLA0683-MSD1
Inj Date : 06-FEB-2023 19:33
Operator : JZ Inst ID: nt8.i
Smp Info : BLA0683-MSD1,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 13:04 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1	Naphthalene-d8	136	4.884	4.900	(1.000)	52636	2.00000	
	2	Naphthalene	128	4.916	4.928	(1.006)	74496	3.04394	3.044
$	3	2-Methylnaphthalene-d10	152	5.624	5.634	(1.151)	30943	2.15553	2.156
	4	2-Methylnaphthalene	141	5.672	5.681	(1.161)	43013	3.19520	3.195
	5	1-methylnaphthalene	141	5.871	5.880	(1.202)	42943	3.14313	3.143
	9	Acenaphthylene	152	7.072	7.082	(0.985)	77167	3.34360	3.344
*	10	Acenaphthene-d10	164	7.183	7.189	(1.000)	30563	2.00000	
	11	Acenaphthene	153	7.234	7.240	(1.007)	49759	3.21782	3.218
	12	Dibenzofuran	168	7.385	7.392	(1.028)	74742	3.18224	3.182
	14	Fluorene	166	7.863	7.869	(1.095)	61533	3.37317	3.373
*	15	Phenanthrene-d10	188	9.226	9.232	(1.000)	45924	2.00000	
	16	Phenanthrene	178	9.260	9.267	(1.004)	92656	4.13037	4.130
	17	Anthracene	178	9.302	9.308	(1.008)	75408	3.70034	3.700
	19	Carbazole	167	9.817	9.823	(1.064)	67352	3.60516	3.605
	22	Fluoranthene	202	11.044	11.050	(1.197)	112109	4.59117	4.591
$	21	Fluoranthene-d10	212	11.006	11.009	(1.193)	47619	2.35022	2.350
	23	Pyrene	202	11.569	11.569	(0.815)	102062	7.00959	7.010
	24	Benzo(a)anthracene	228	14.063	14.070	(0.991)	63997	4.84927	4.849
*	25	Chrysene-d12	240	14.193	14.202	(1.000)	23485	2.00000	
	27	Chrysene	228	14.269	14.275	(1.005)	61043	4.34496	4.345
	28	Benzo(b)fluoranthene	252	16.821	16.824	(0.929)	55550	4.41269	4.413
	29	Benzo(k)fluoranthene	252	16.881	16.887	(0.933)	49687	4.02954	4.030
	30	Benzo(j)fluoranthene	252	16.960	16.963	(0.937)	47928	4.31764	4.318
	31	Total Benzofluoranthenes	252	16.821	16.824	(0.929)	150071	12.5876	12.59(M)
	32	Benzo(a)pyrene	252	17.874	17.877	(0.987)	46863	4.23028	4.230
*	33	Perylene-d12	264	18.101	18.107	(1.000)	21615	2.00000	
	35	Perylene	252	18.180	18.183	(1.004)	53147	4.47072	4.471
$	36	Dibenzo(a,h)anthracene-d14	292	20.545	20.549	(1.135)	26285	3.10359	3.104
	37	Indeno(1,2,3-cd)pyrene	276	20.681	20.684	(1.143)	57575	4.56203	4.562
	38	Dibenzo(a,h)anthracene	278	20.662	20.666	(1.141)	49510	4.55854	4.559
	39	Benzo(g,h,i)perylene	276	21.766	21.763	(1.202)	54311	4.74977	4.750

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020616.D
Lab Smp Id: BLA0683-MSD1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44336	22168	88672	52636	18.72
10 Acenaphthene-d10	26127	13064	52254	30563	16.98
15 Phenanthrene-d10	47424	23712	94848	45924	-3.16
25 Chrysene-d12	36794	18397	73588	23485	-36.17
33 Perylene-d12	36636	18318	73272	21615	-41.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.88	-0.32
10 Acenaphthene-d10	7.19	6.69	7.69	7.18	-0.09
15 Phenanthrene-d10	9.23	8.73	9.73	9.23	-0.07
25 Chrysene-d12	14.20	13.70	14.70	14.19	-0.07
33 Perylene-d12	18.11	17.61	18.61	18.10	-0.03

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

REVIEW SUMMARY FOR FILE - N823020616.D

Lab ID: BLA0683-MSD1
nt8.i, 20230206A.b\FSIMPNA230119.m,   06-FEB-2023 19:33

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

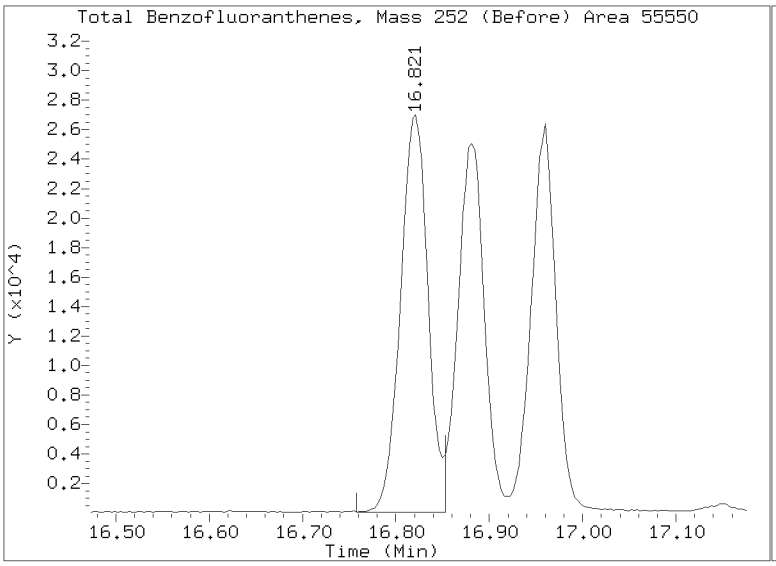
No RRT check performed

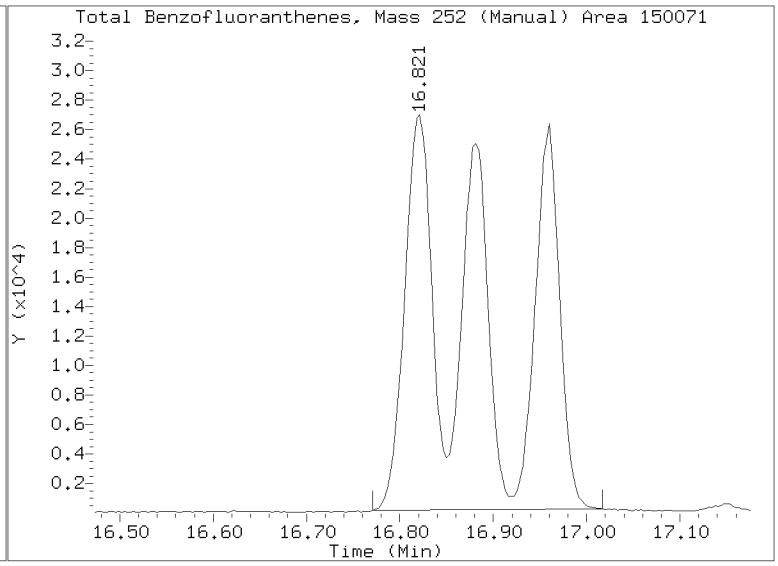
On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020616.D
Injection Date: 06-FEB-2023 19:33
Lab ID:BLA0683-MSD1 Client ID:
Report Date: 02/07/2023 14:35





Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 8270E-SIM

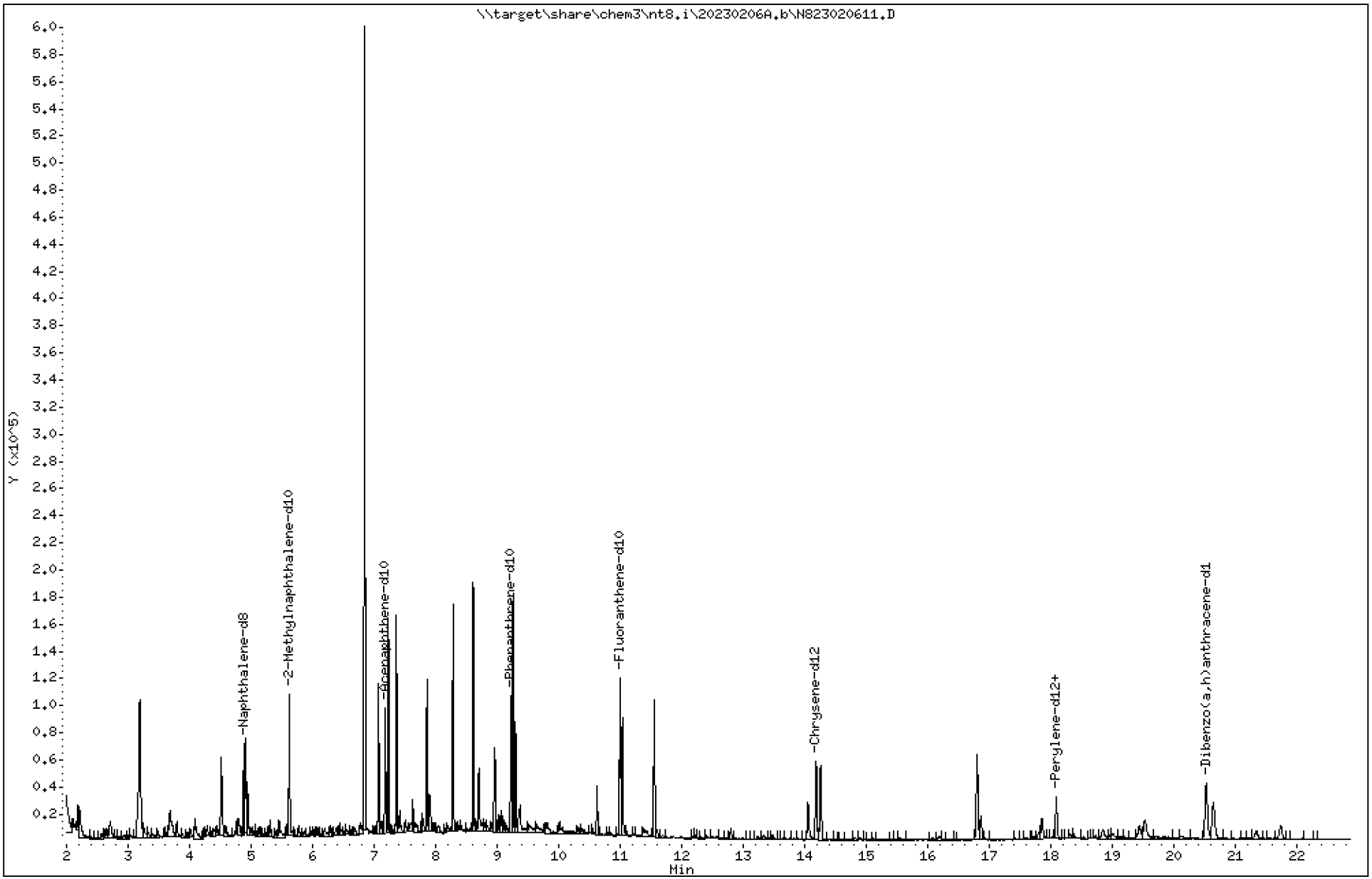
Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0683-SRM1
Batch: BLA0683
Initial/Final: 5 g / 0.5 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 02/06/2023 17:18
Standard ID: L000097
Expires: 10/31/2025
Standard Lot#: SQC017 (LRAD3953)
Description: SQC017-40G PAHs by HPLC40g

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Benzo(a)anthracene	110.00	88.7	1.65	10.0		80.6	26 - 174
Chrysene	231.00	176	2.11	10.0		76.3	43 - 156
Benzo(b)fluoranthene	318.00	383	2.74	10.0		120	0 - 211
Benzo(k)fluoranthene	95.100	109	1.52	10.0		114	0 - 226
Benzo(a)pyrene	159.00	109	1.23	10.0		68.8	0 - 206
Indeno(1,2,3-cd)pyrene	119.00	106	2.10	10.0		88.7	44 - 155
Dibenzo(a,h)anthracene	220.00	226	1.78	10.0		103	45 - 155

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020611.D
Date : 06-FEB-2023 17:18
Client ID:
Sample Info: BLA0683-SRM1,

Instrument: nt8.i
Operator: JZ
Column phase: Rxi-17sil
Column diameter: 0.25



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Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

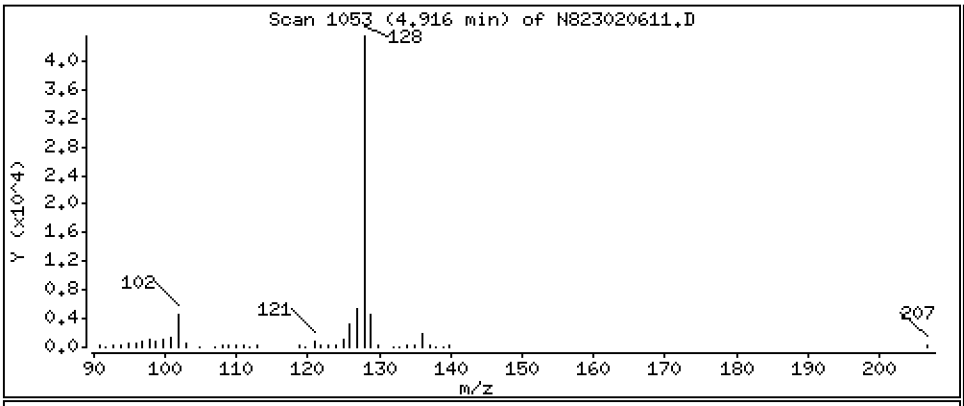
Operator: JZ

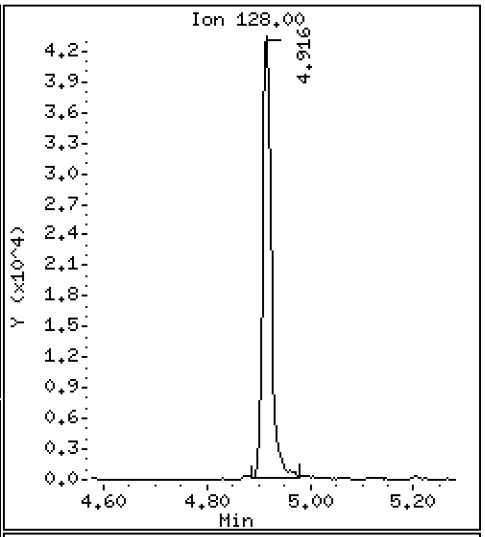
Column phase: Rxi-17sil

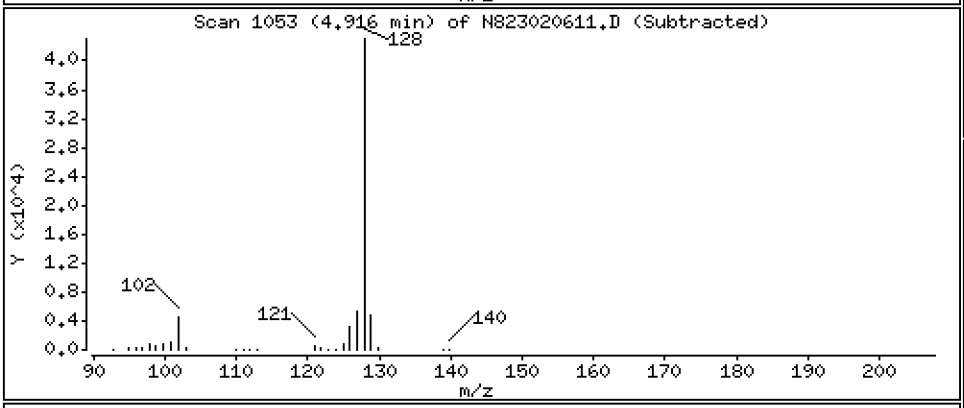
Column diameter: 0.25

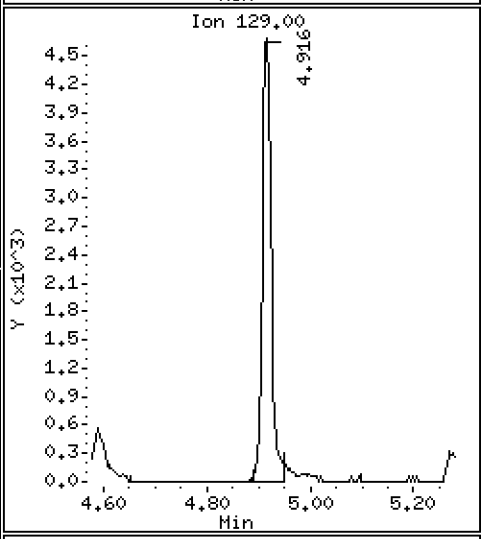
2 Naphthalene

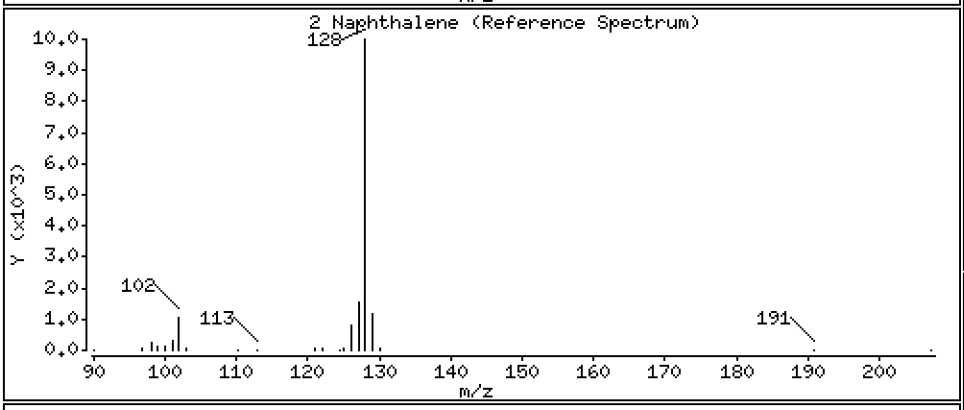
Concentration: 2.317 ug/mL

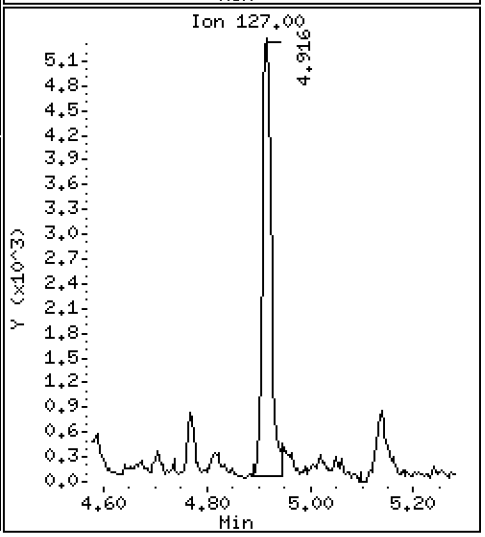


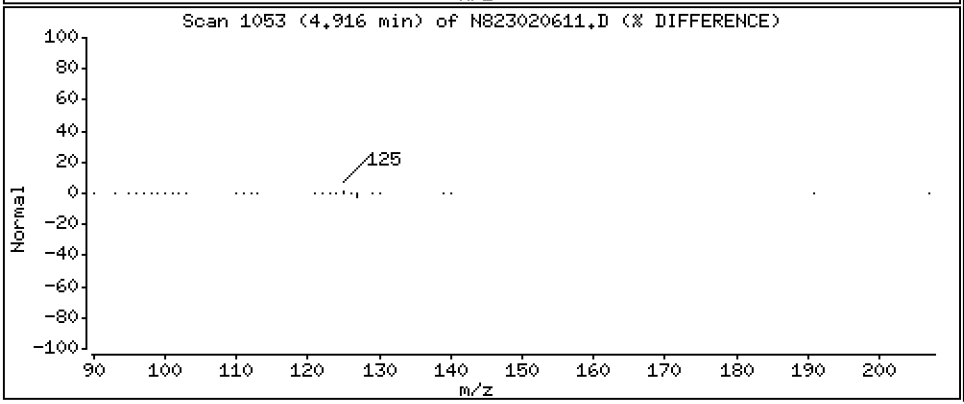












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Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

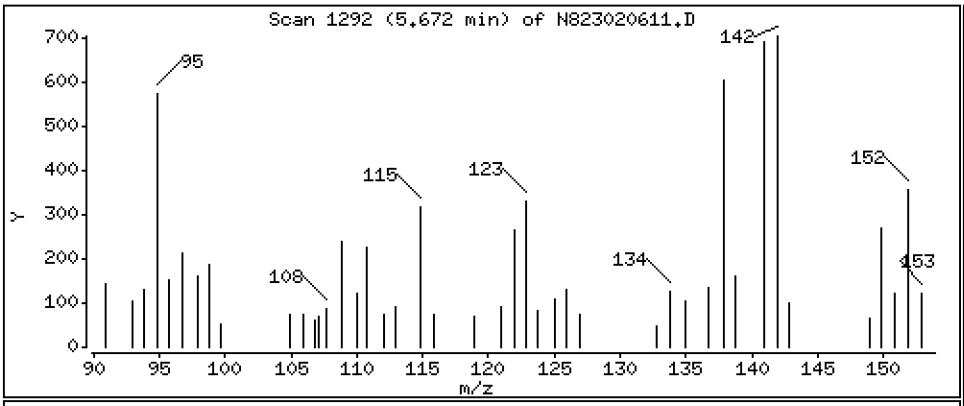
Operator: JZ

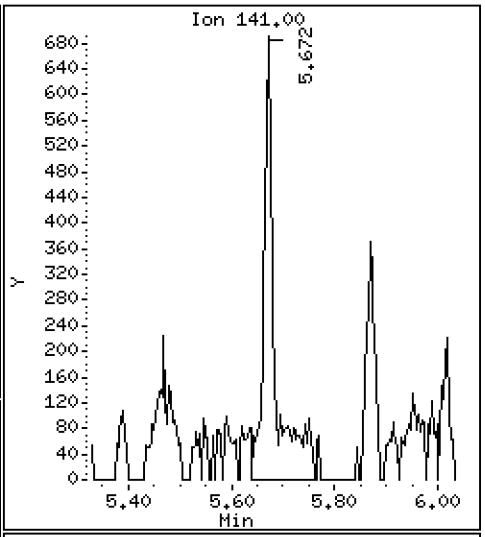
Column phase: Rxi-17sil

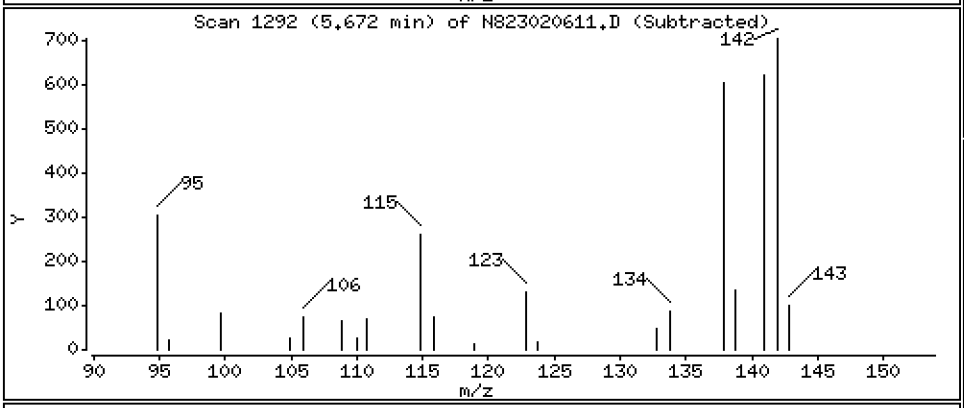
Column diameter: 0.25

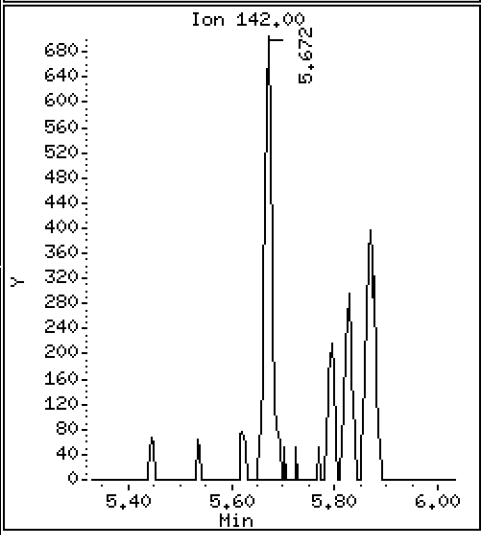
4 2-Methylnaphthalene

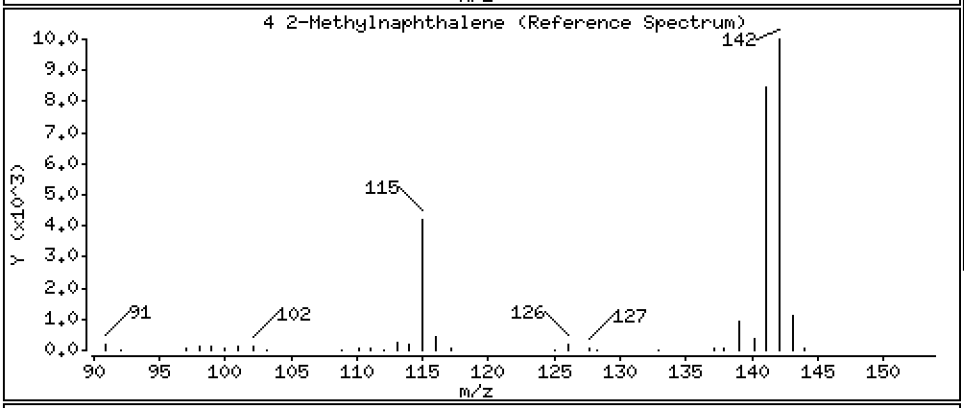
Concentration: 0.08433 ug/mL

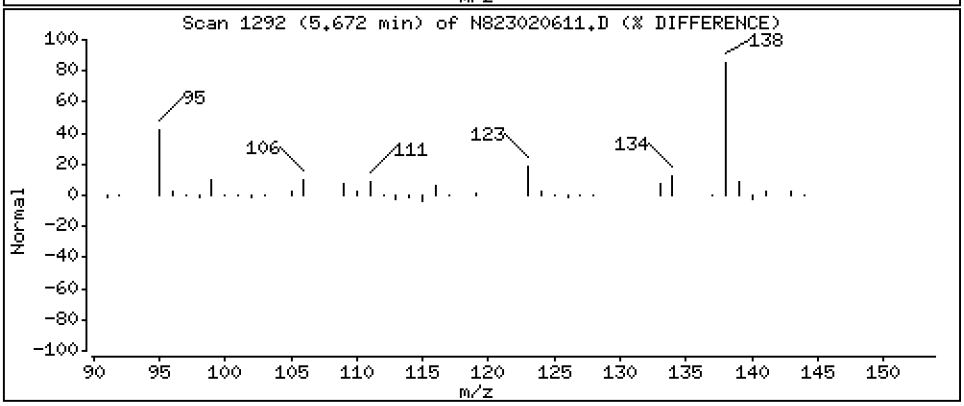












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020611.D

Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

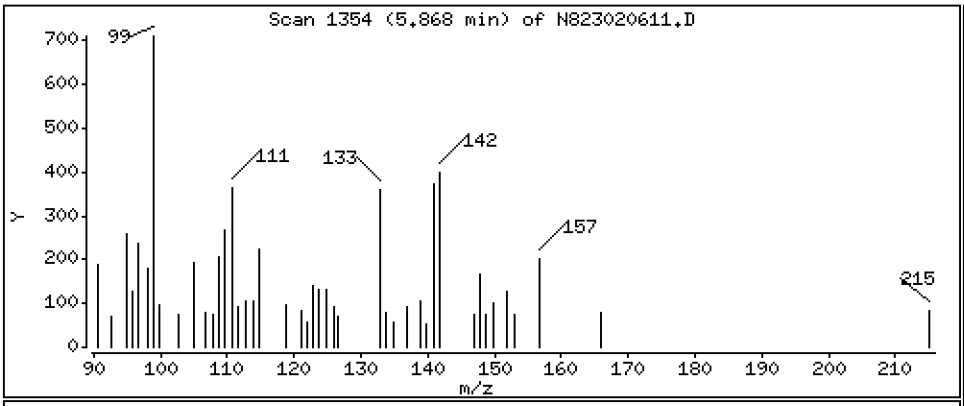
Operator: JZ

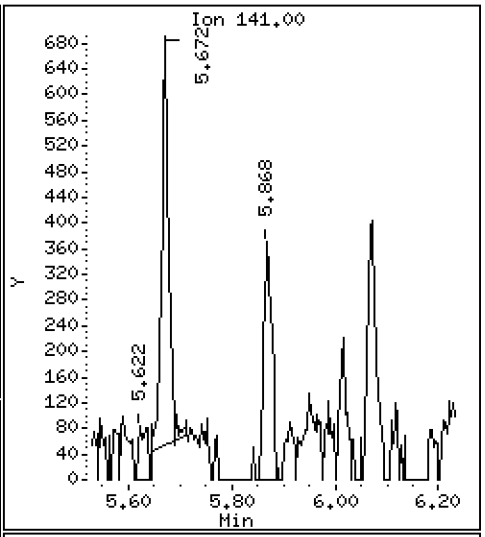
Column phase: Rxi-17sil

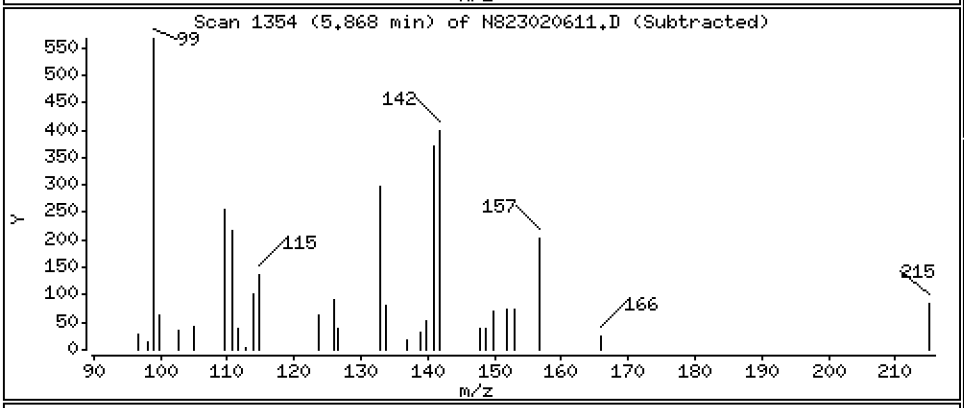
Column diameter: 0.25

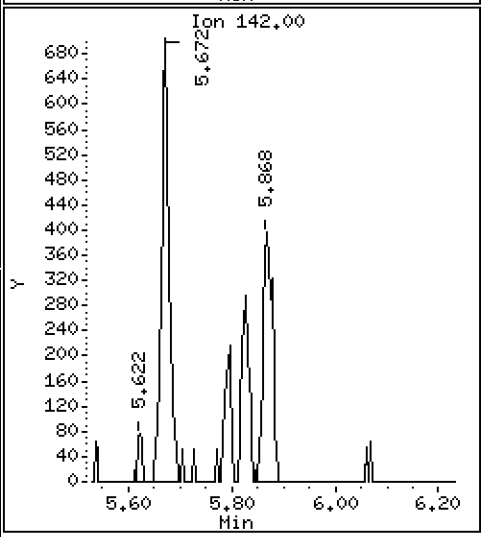
5 1-methylnaphthalene

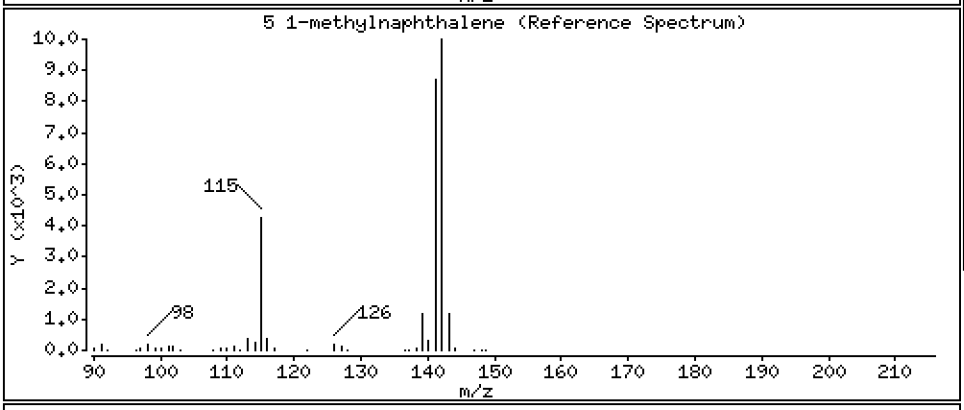
Concentration: 0.03258 ug/mL

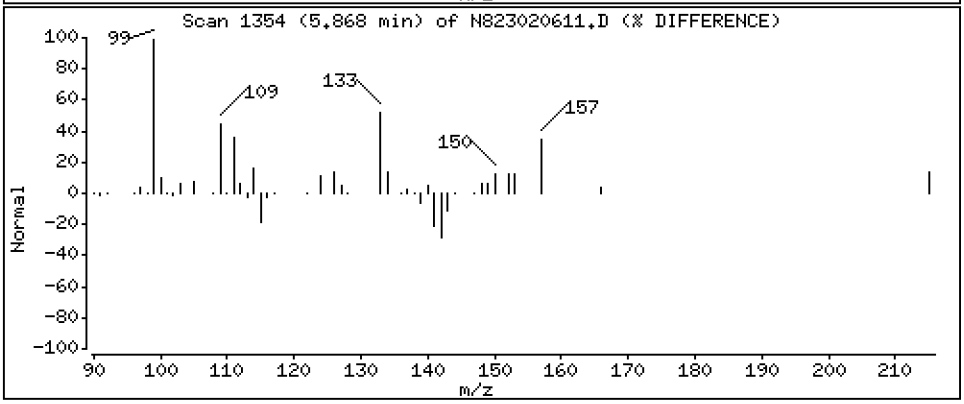












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Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

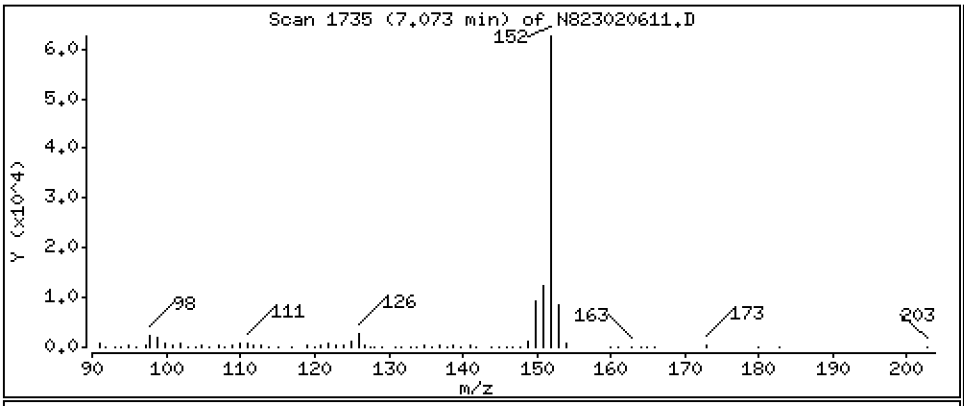
Operator: JZ

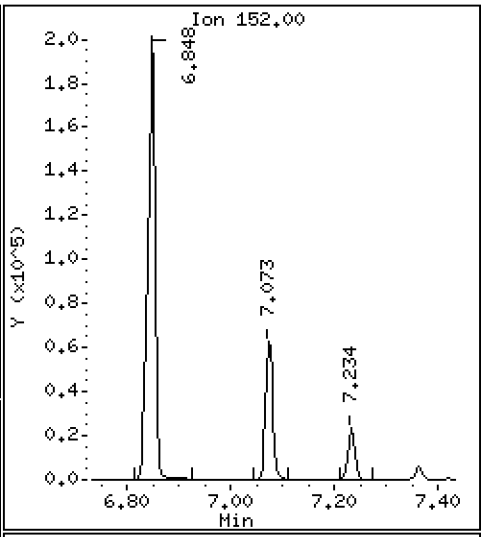
Column phase: Rxi-17sil

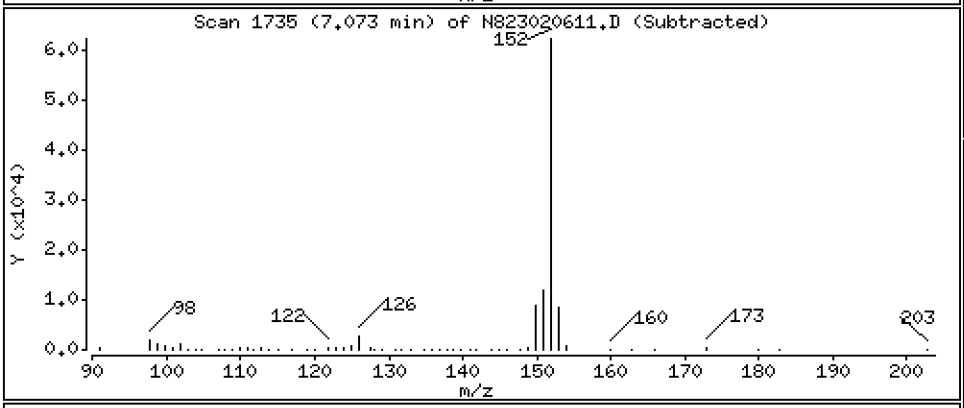
Column diameter: 0.25

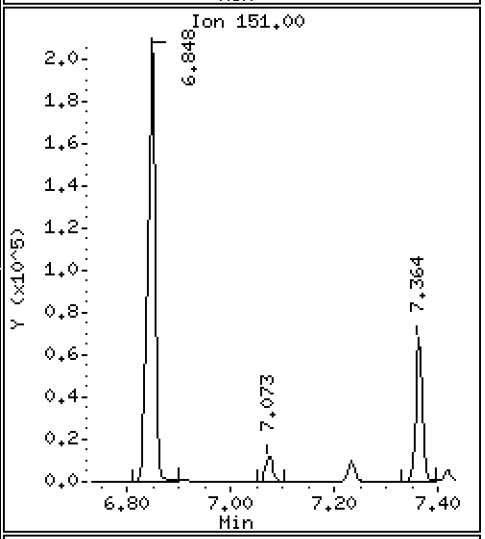
9 Acenaphthylene

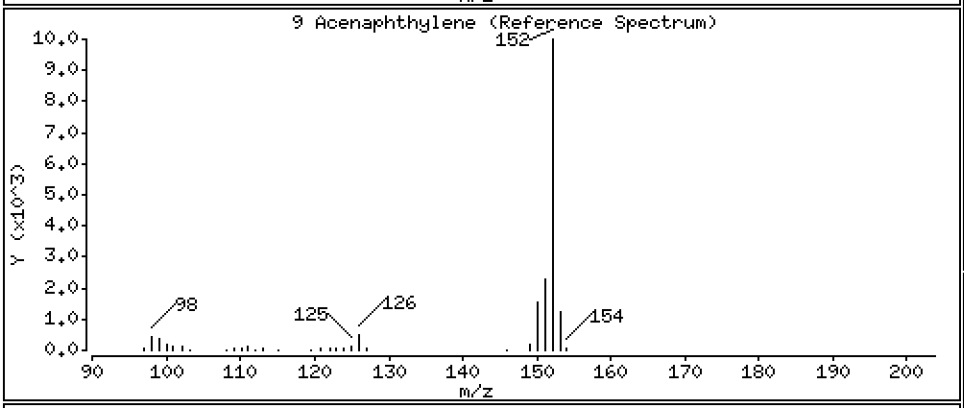
Concentration: 3.068 ug/mL

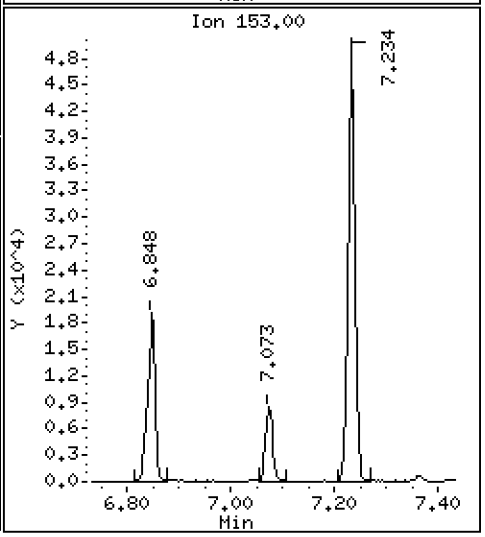


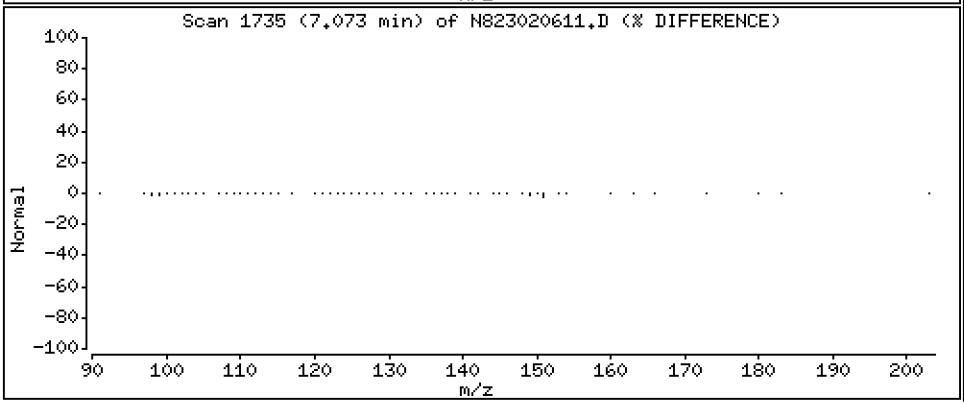












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Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

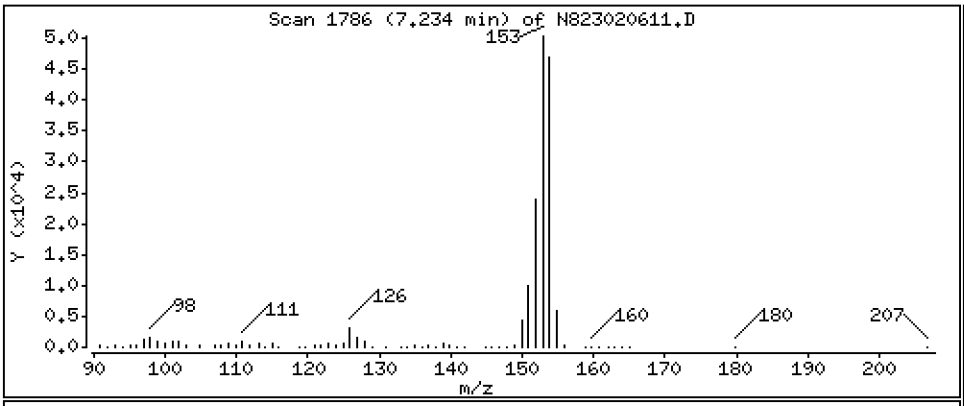
Operator: JZ

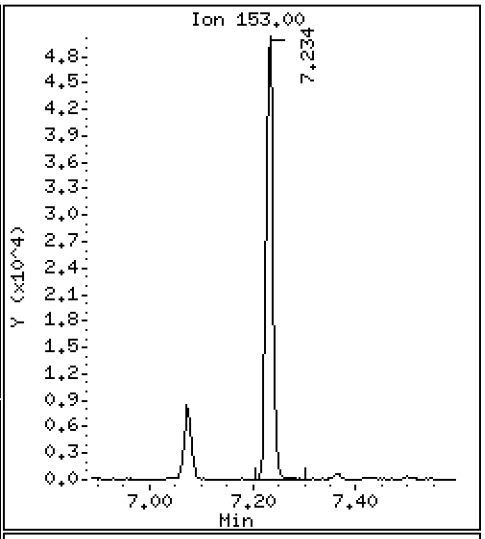
Column phase: Rxi-17sil

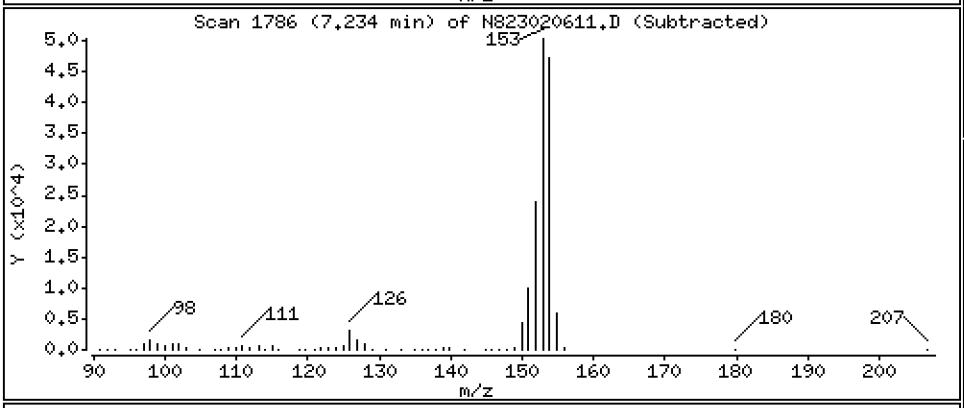
Column diameter: 0.25

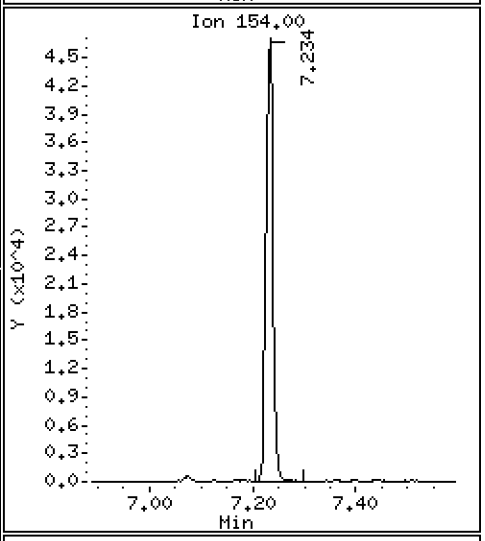
11 Acenaphthene

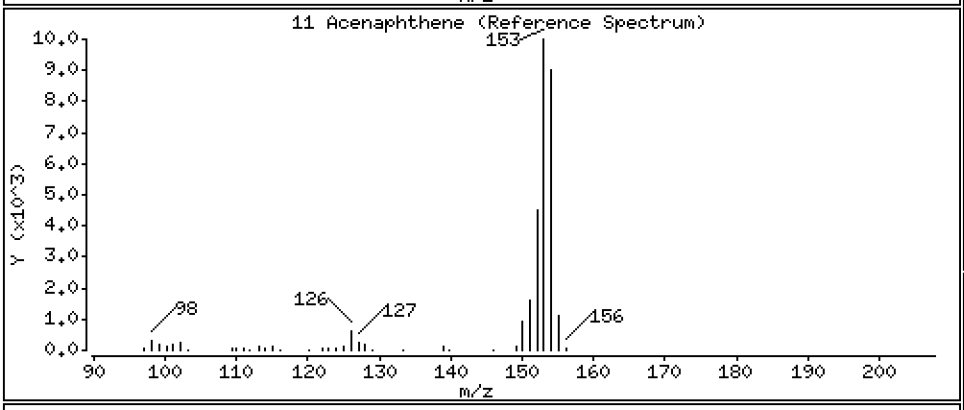
Concentration: 3.505 ug/mL

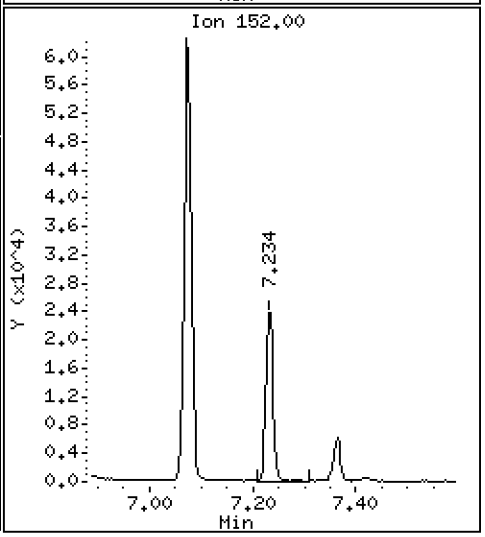


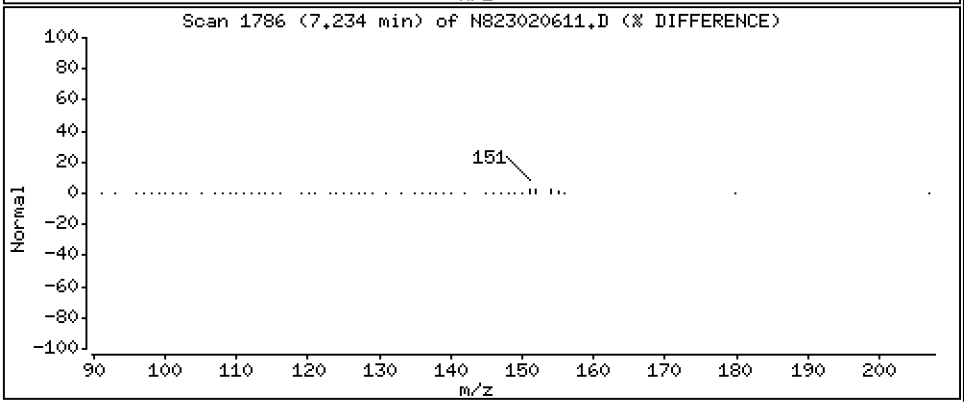












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Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

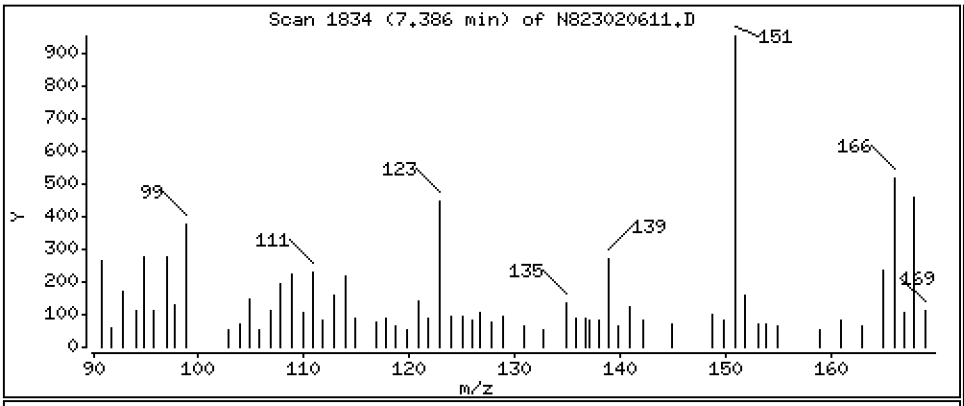
Operator: JZ

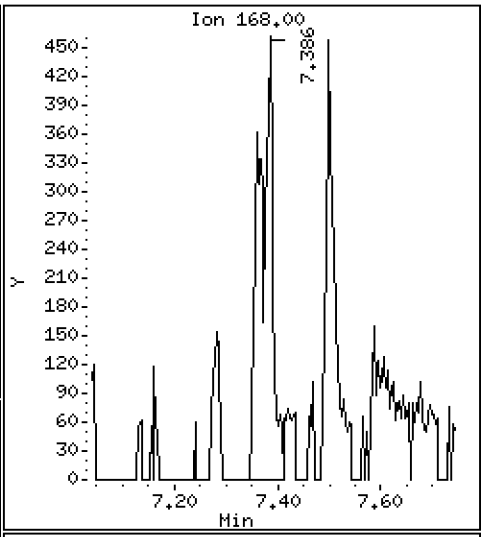
Column phase: Rxi-17sil

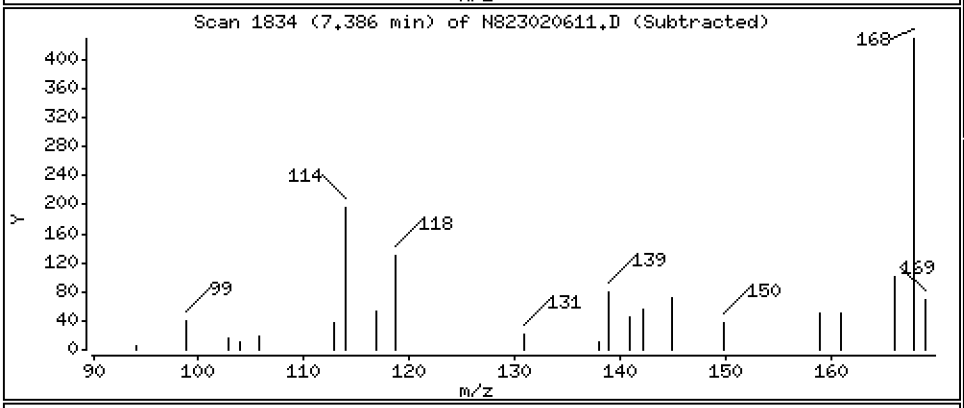
Column diameter: 0.25

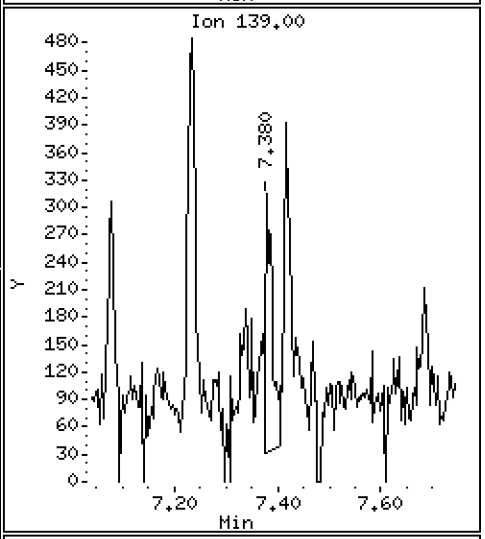
12 Dibenzofuran

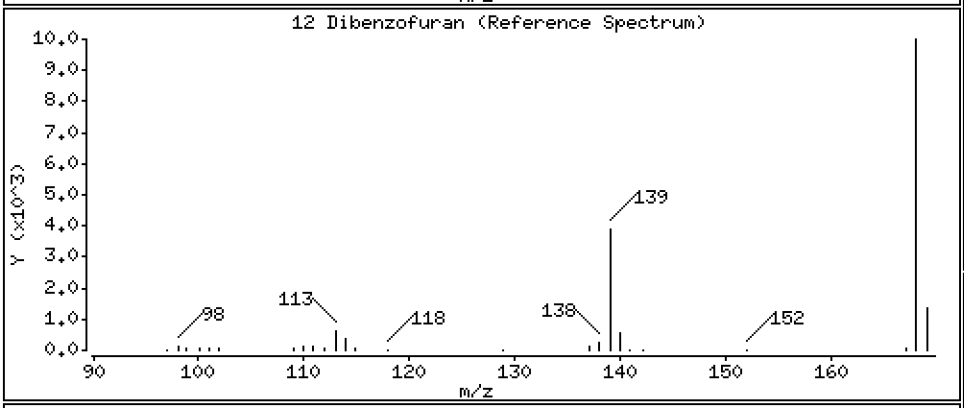
Concentration: 0.04013 ug/mL

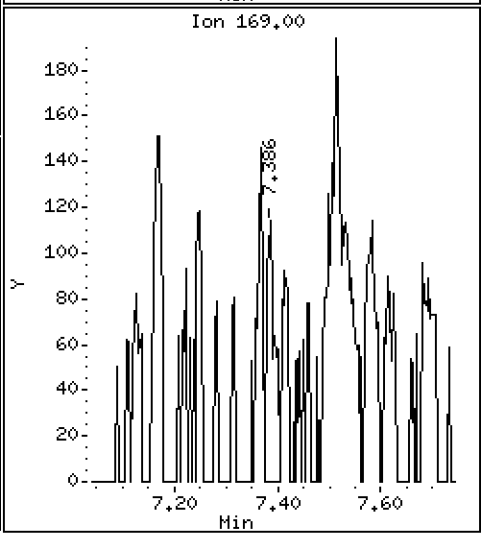


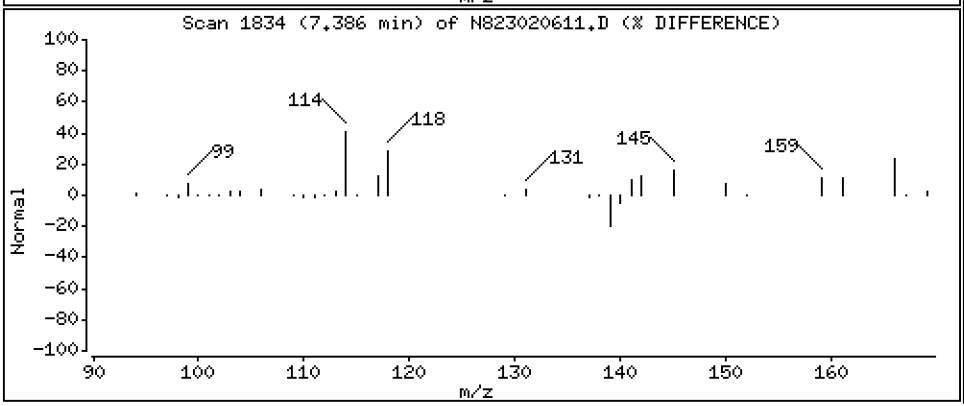












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Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

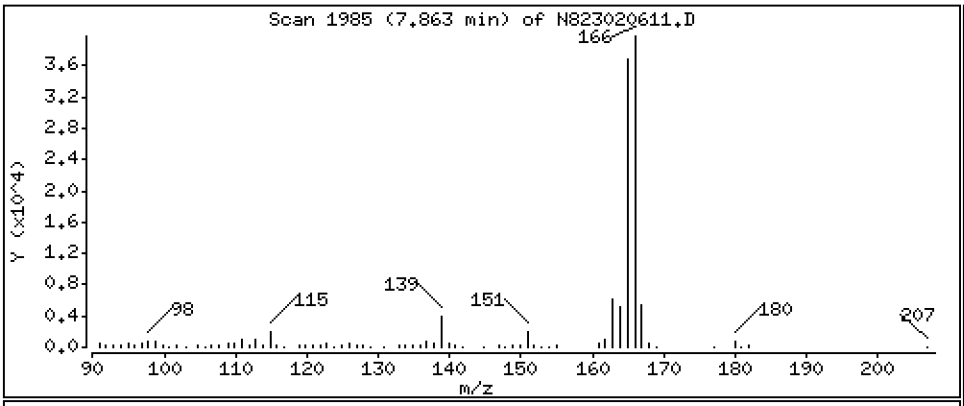
Operator: JZ

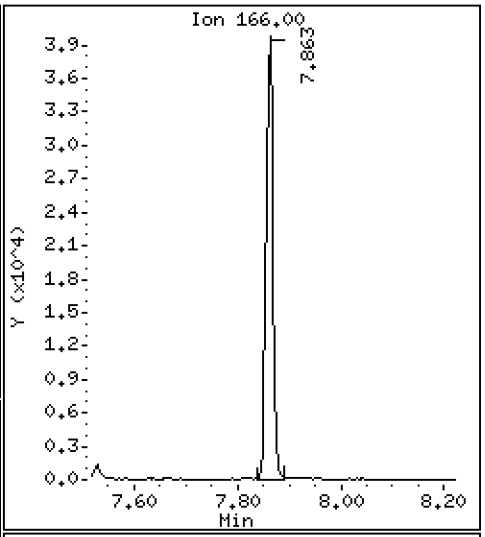
Column phase: Rxi-17sil

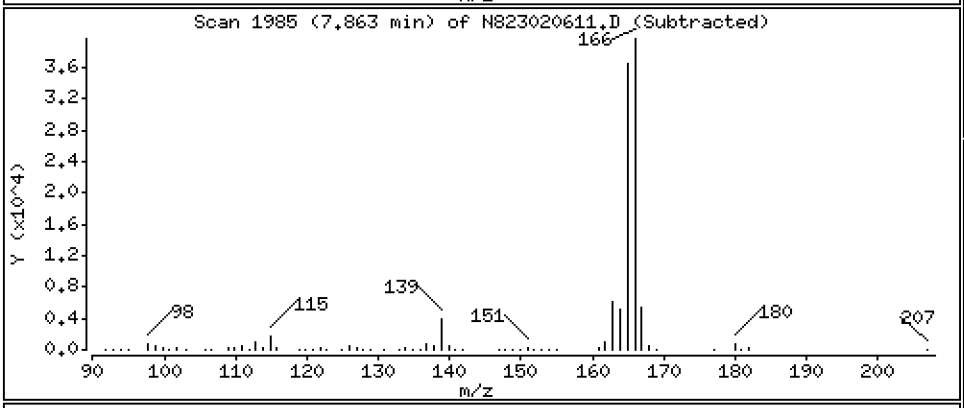
Column diameter: 0.25

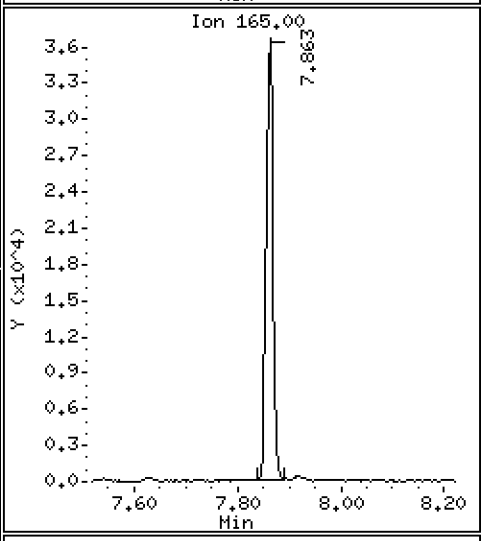
14 Fluorene

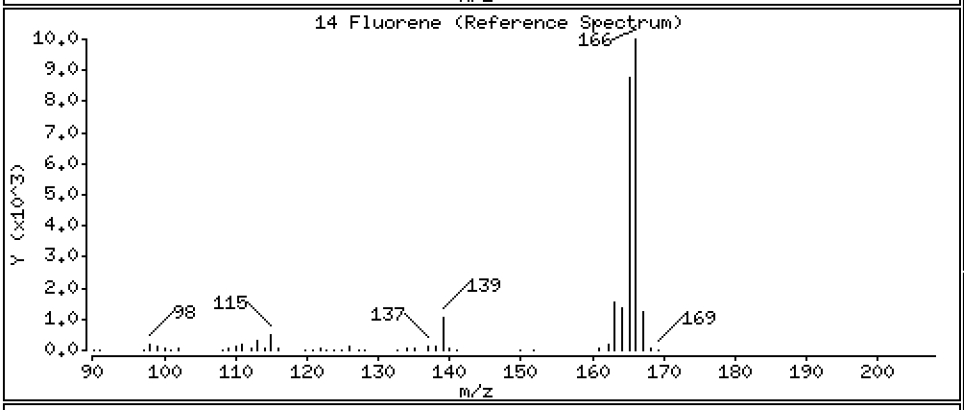
Concentration: 2.306 ug/mL

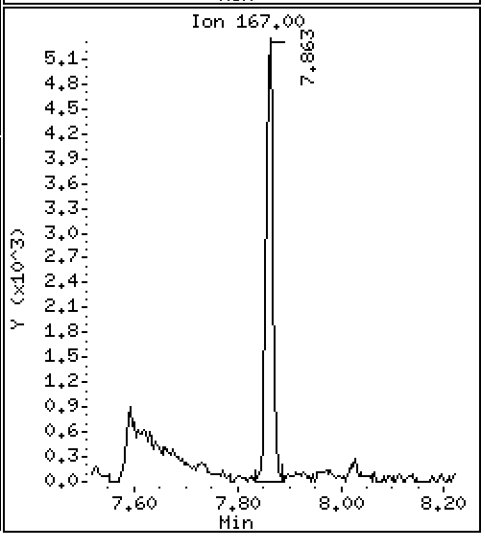


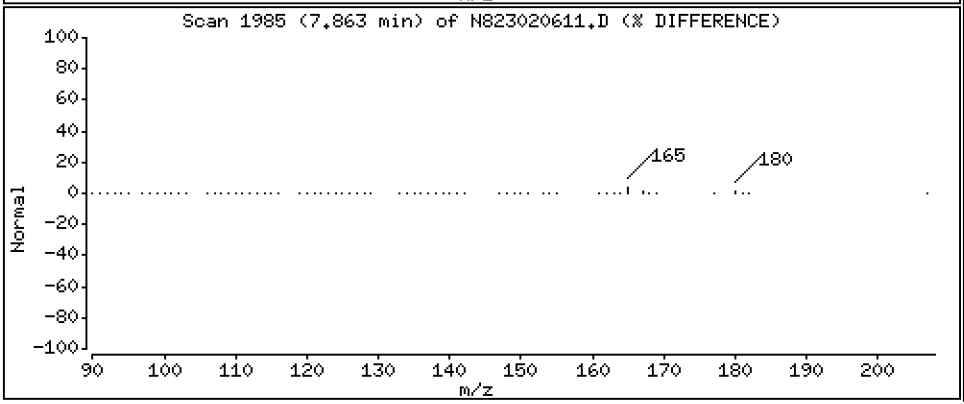












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Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

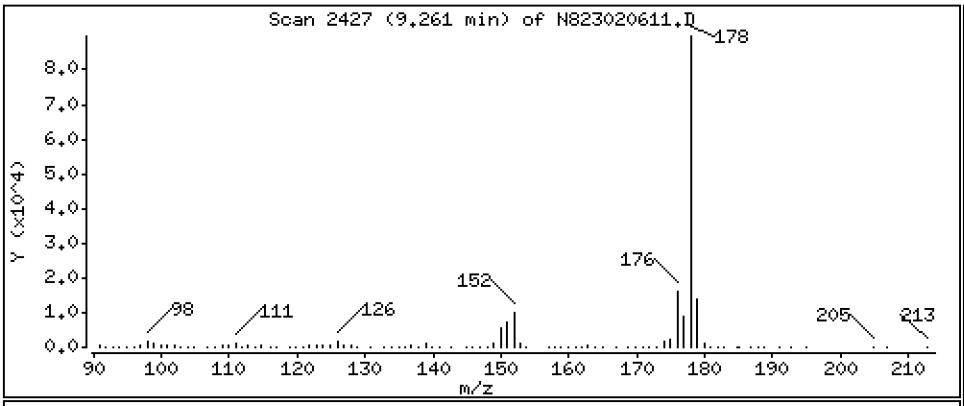
Operator: JZ

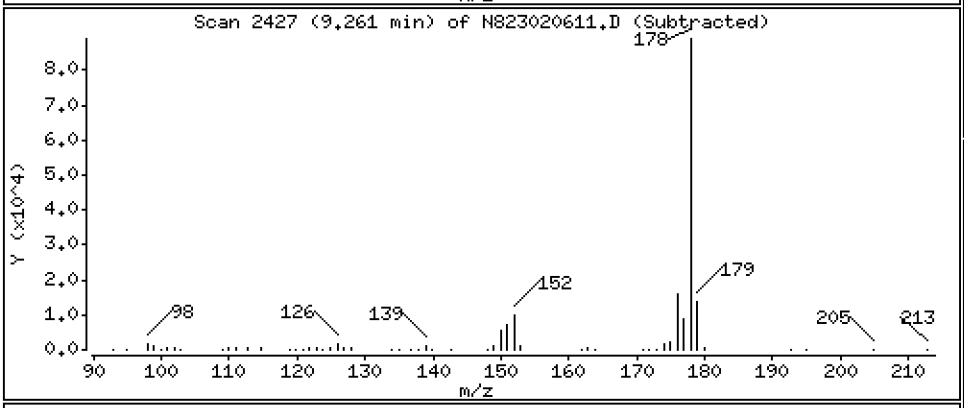
Column phase: Rxi-17sil

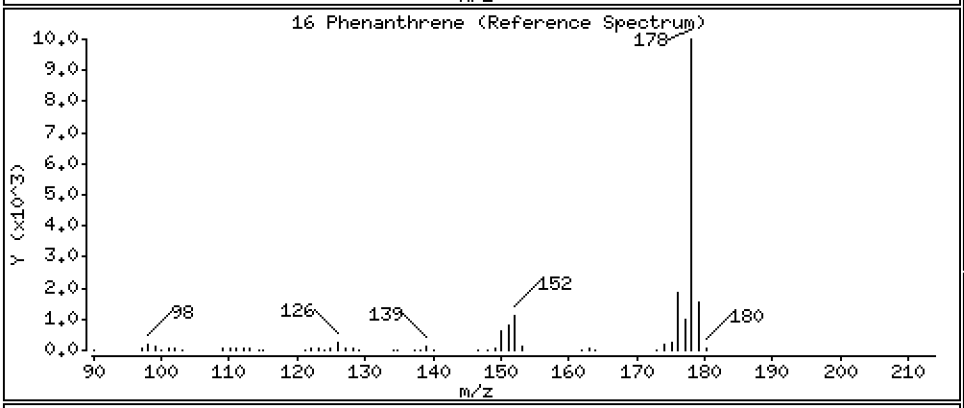
Column diameter: 0.25

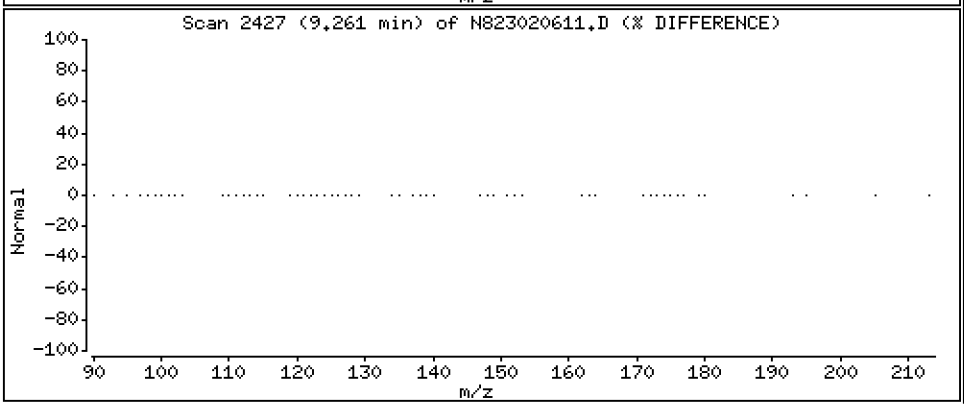
16 Phenanthrene

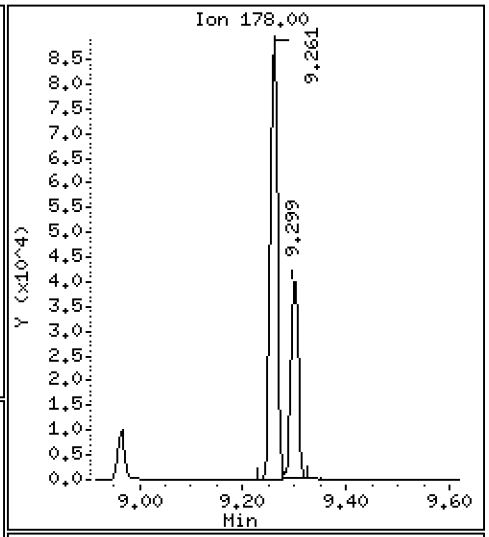
Concentration: 3.781 ug/mL

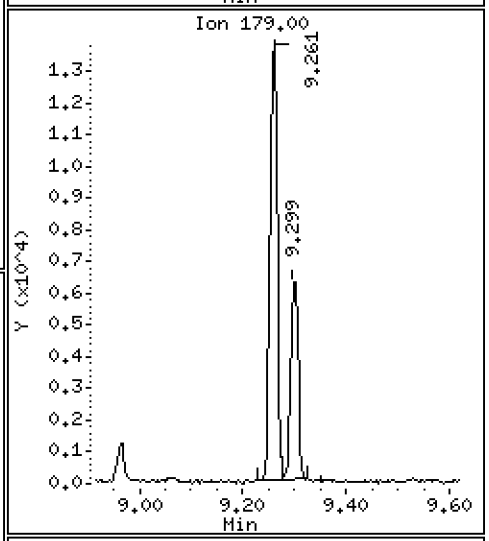


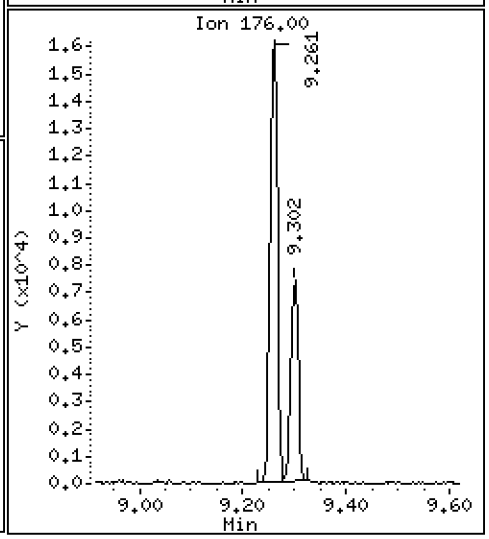












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Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

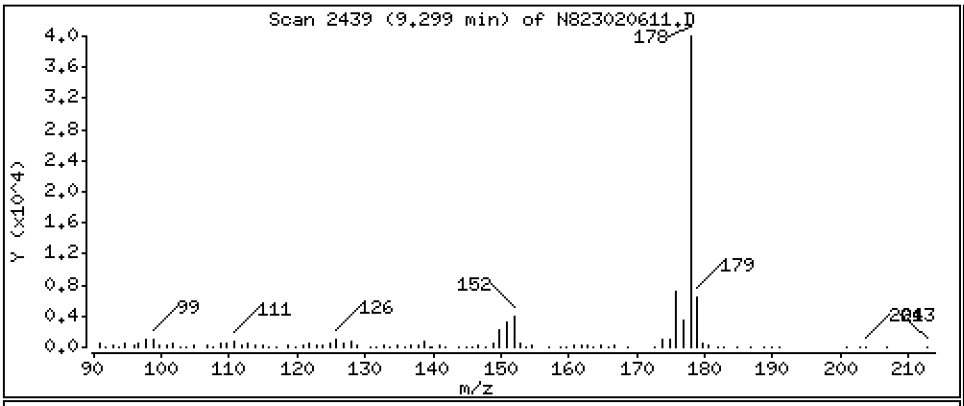
Operator: JZ

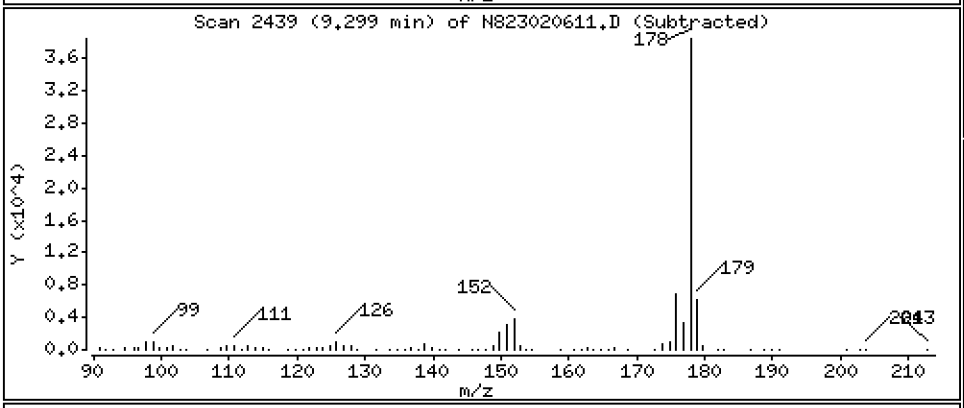
Column phase: Rxi-17sil

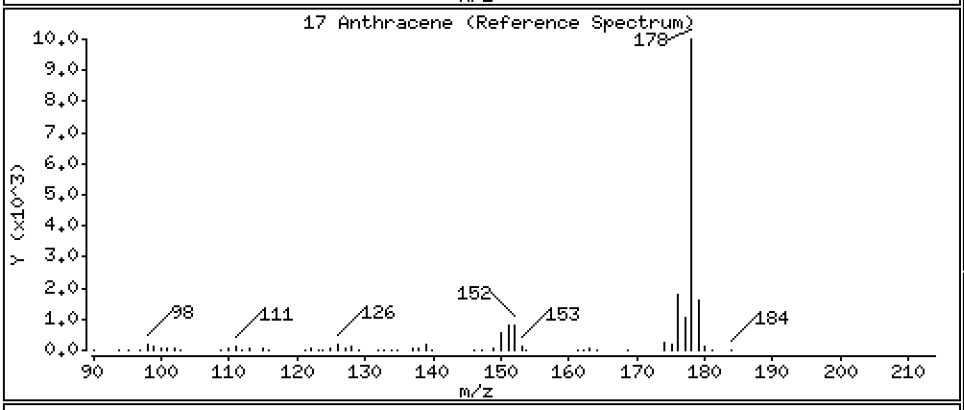
Column diameter: 0.25

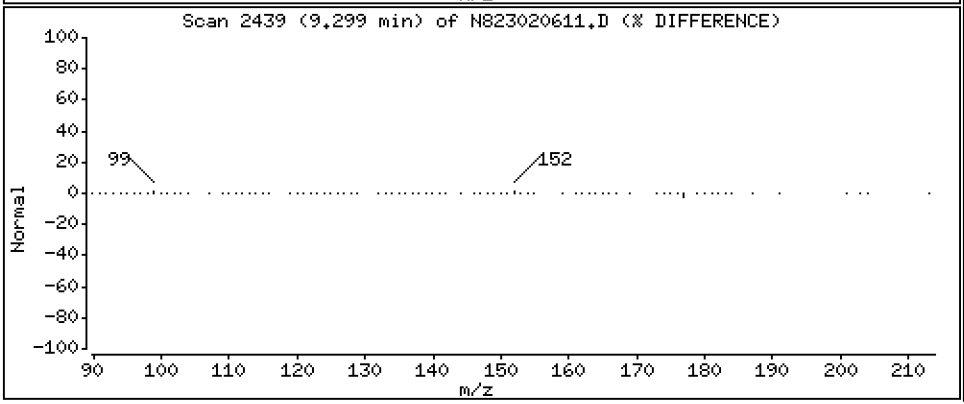
17 Anthracene

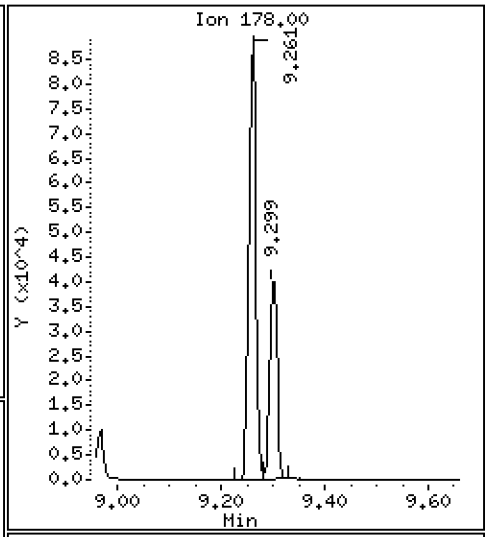
Concentration: 1.932 ug/mL

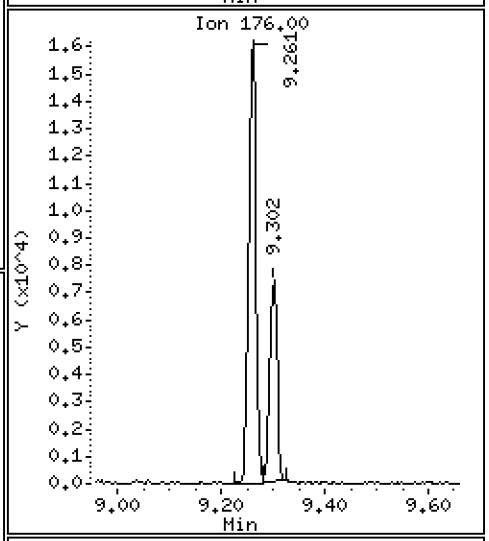


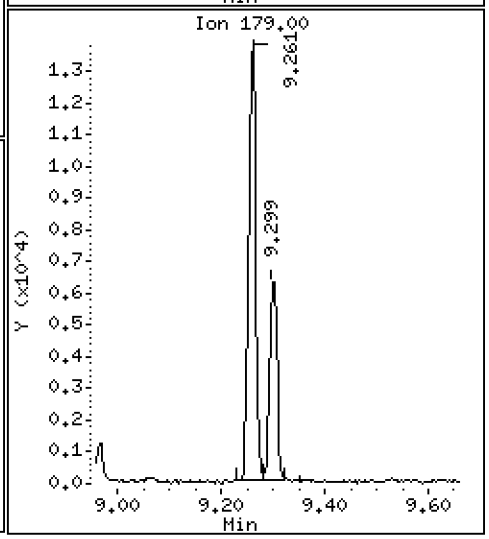












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Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

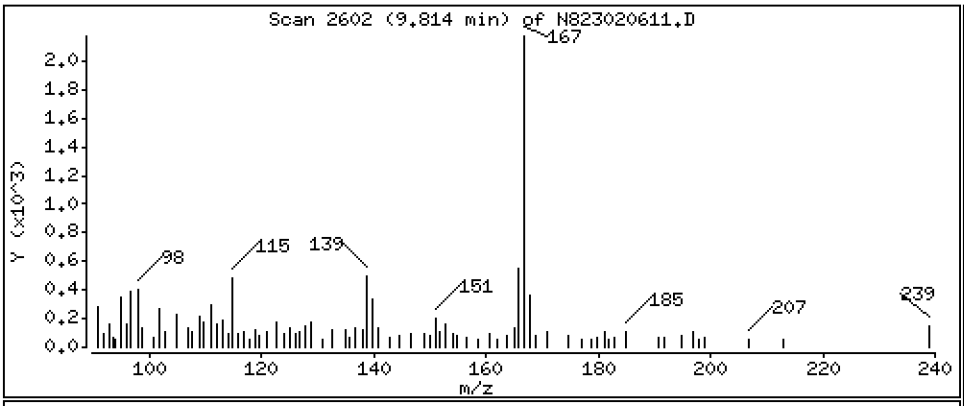
Operator: JZ

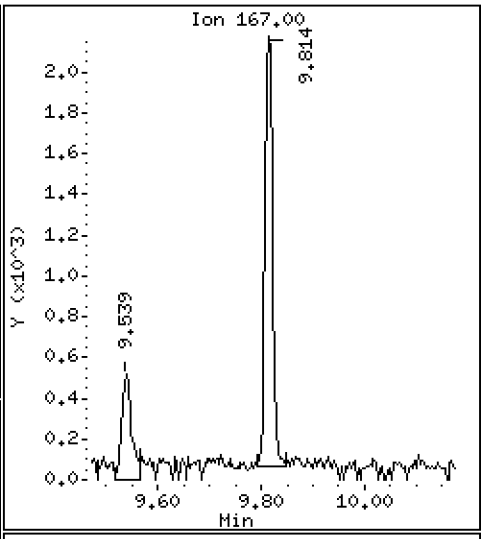
Column phase: Rxi-17sil

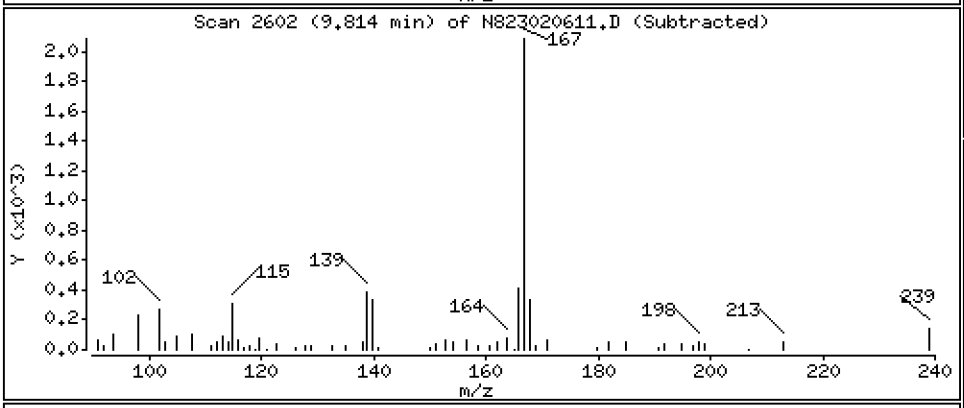
Column diameter: 0.25

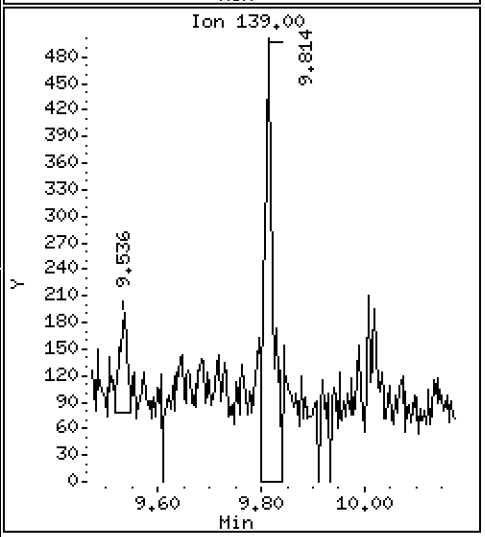
19 Carbazole

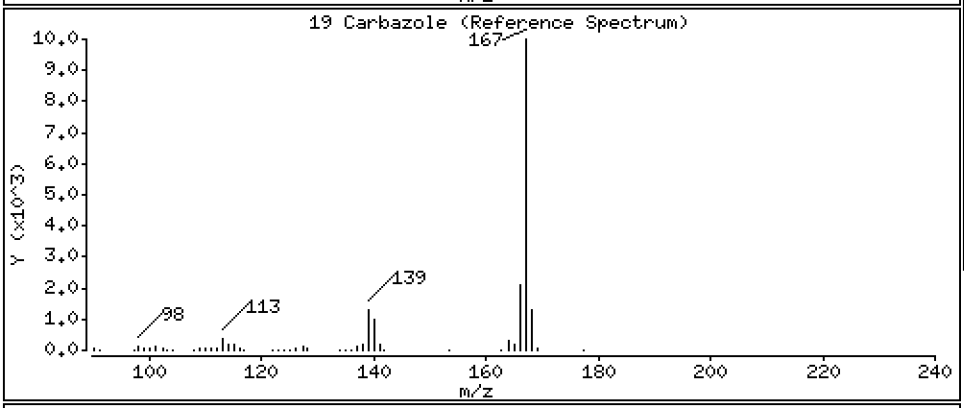
Concentration: 0.1191 ug/mL

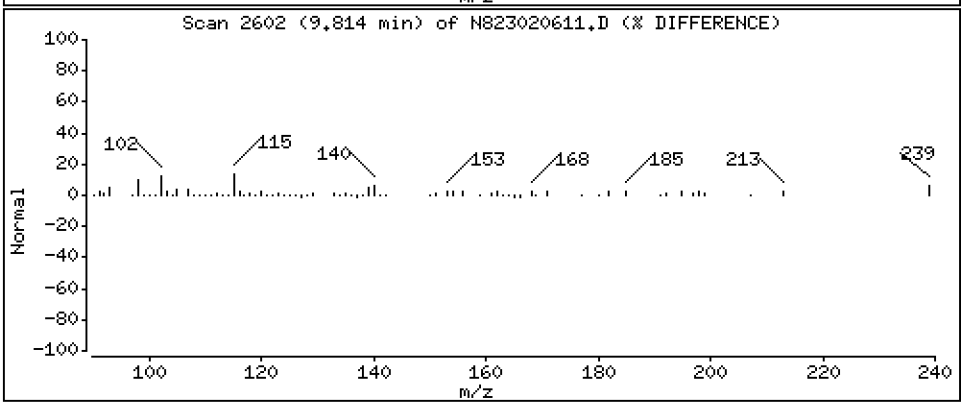












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Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

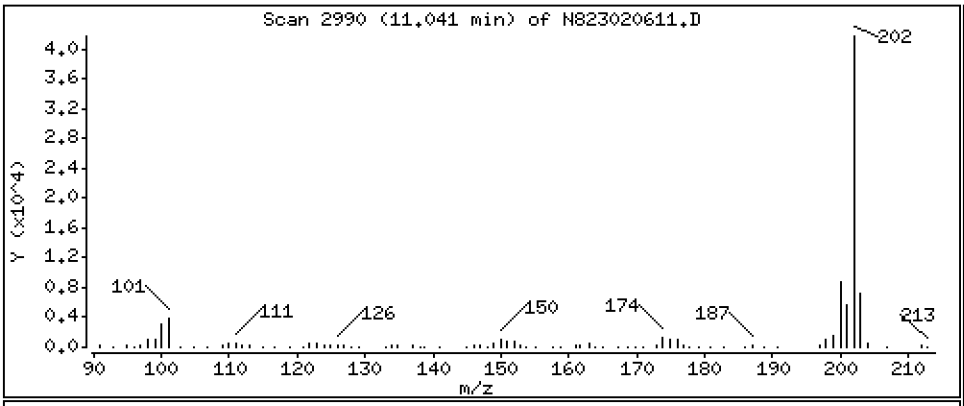
Operator: JZ

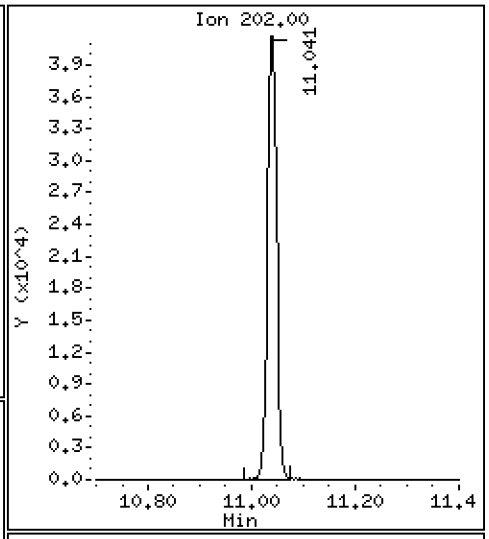
Column phase: Rxi-17sil

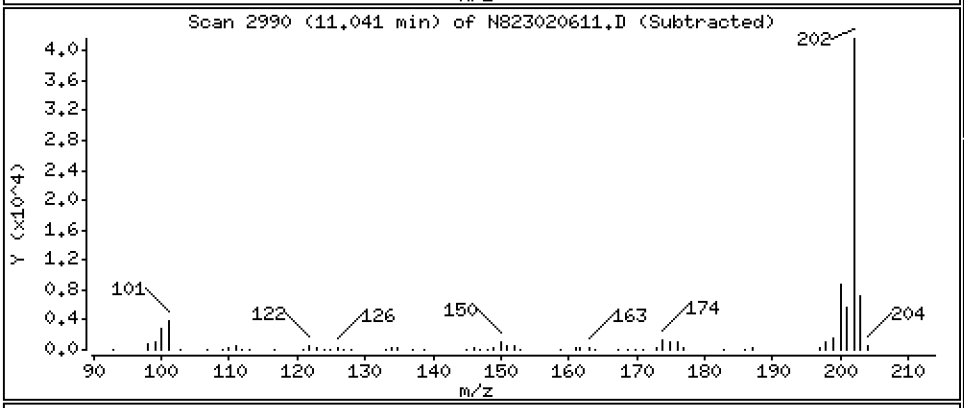
Column diameter: 0.25

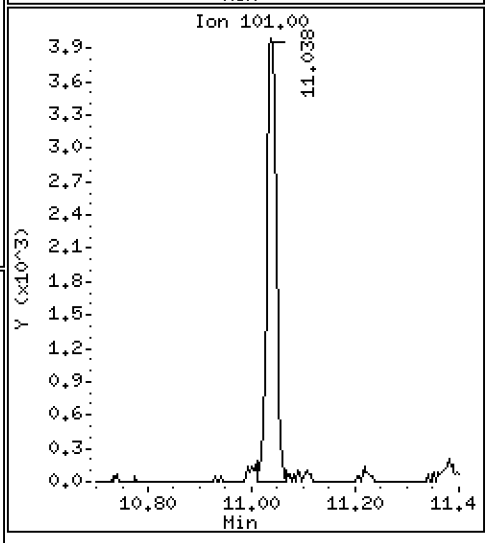
22 Fluoranthene

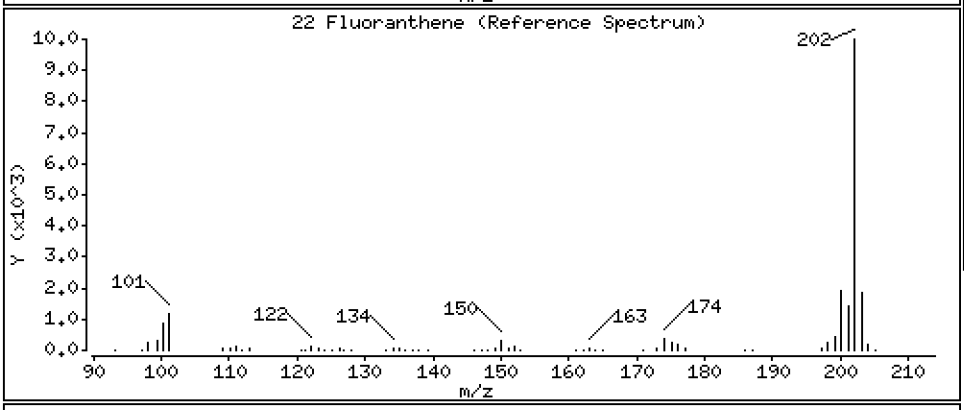
Concentration: 2.131 ug/mL

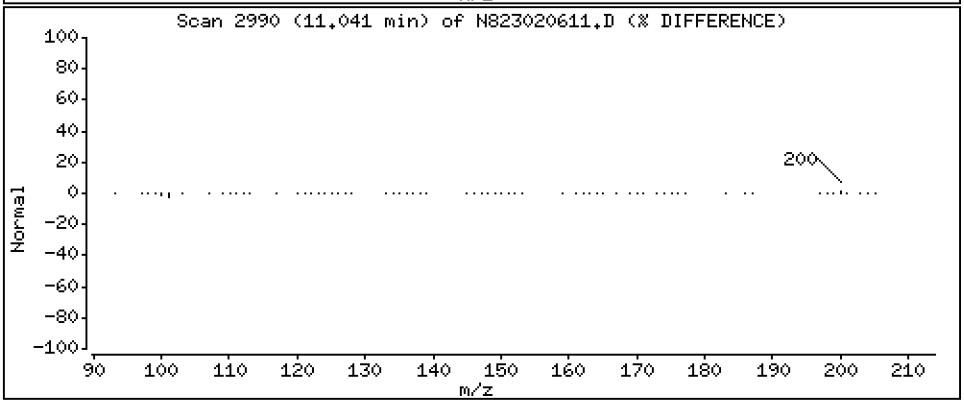












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Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

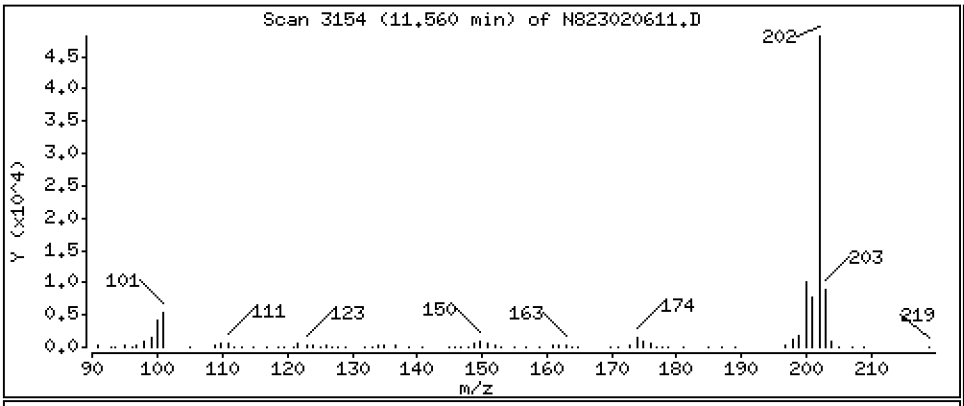
Operator: JZ

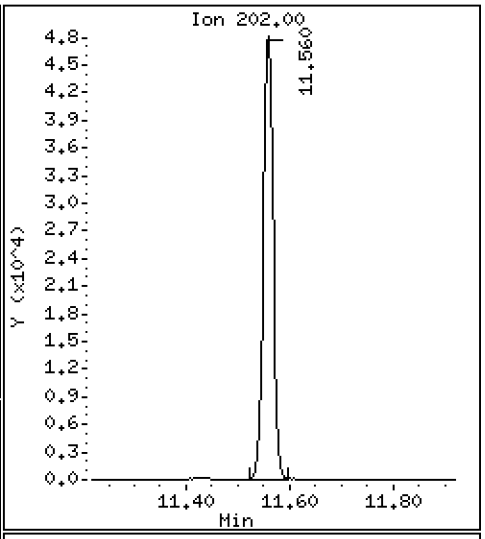
Column phase: Rxi-17sil

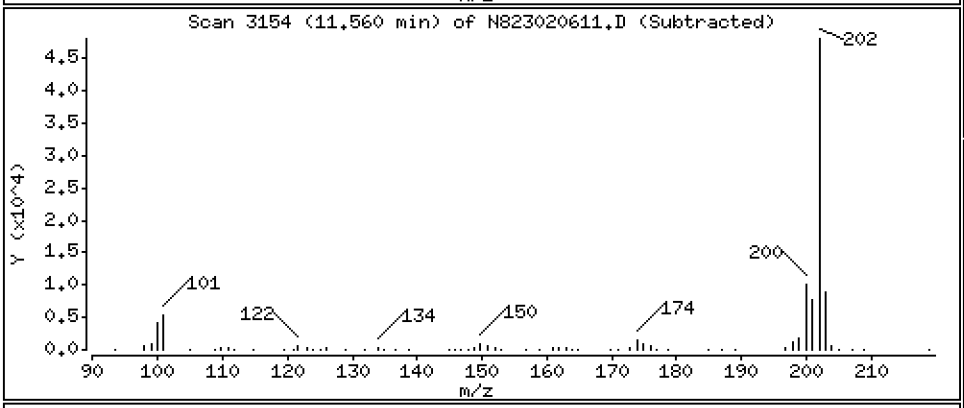
Column diameter: 0.25

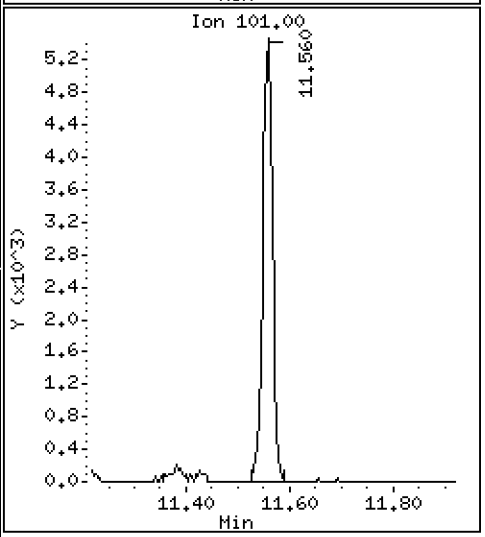
23 Pyrene

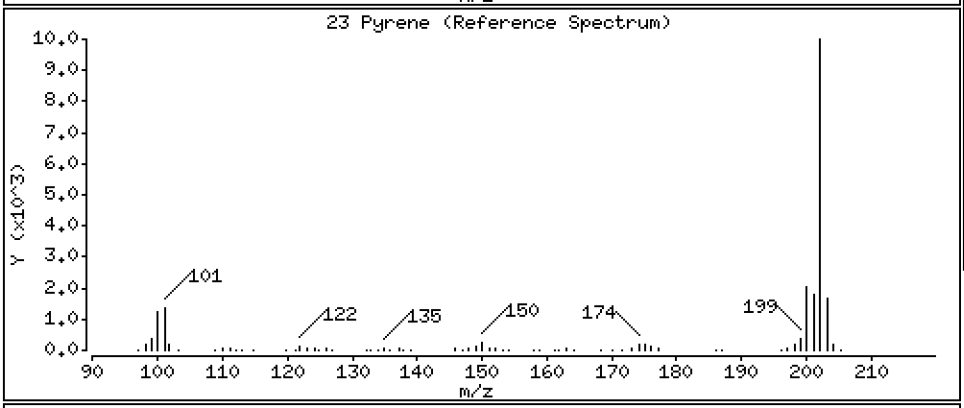
Concentration: 2.777 ug/mL

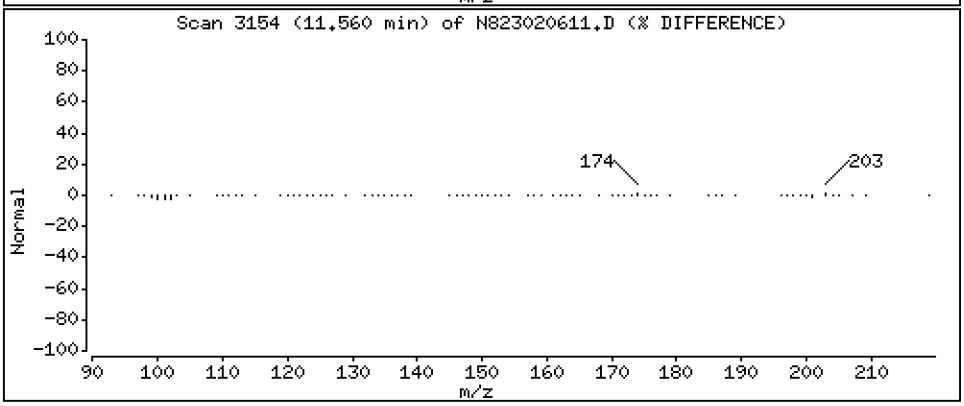












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Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

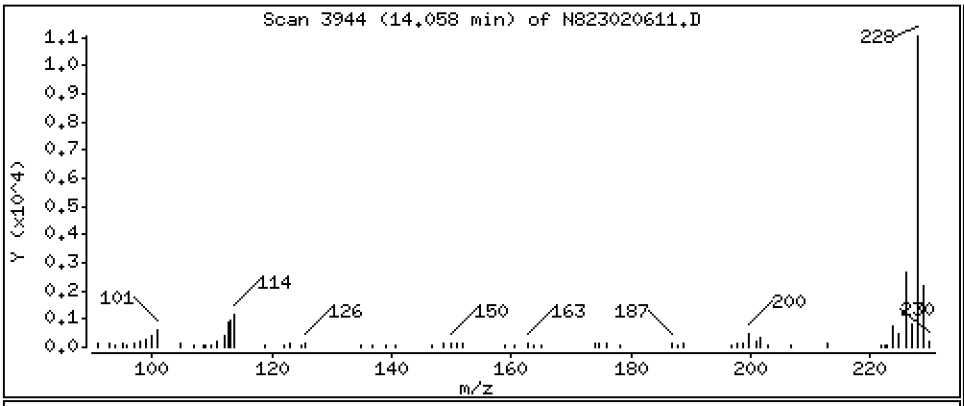
Operator: JZ

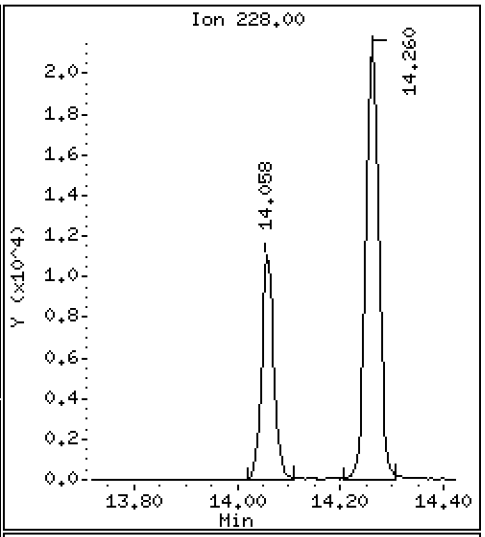
Column phase: Rxi-17sil

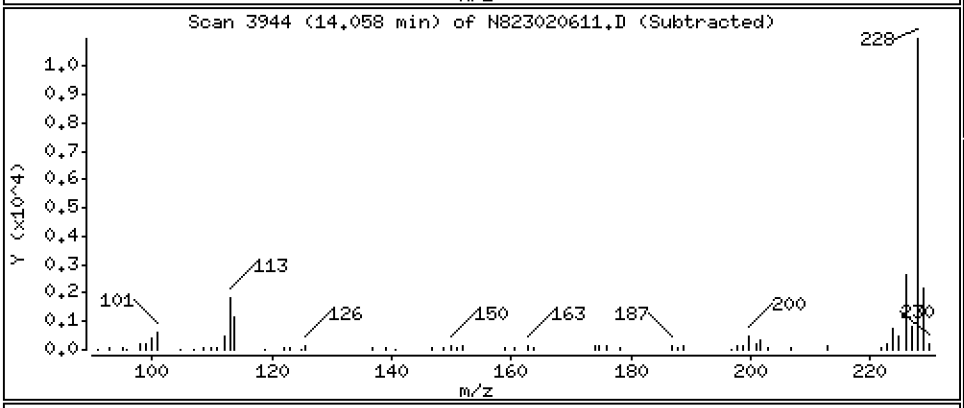
Column diameter: 0.25

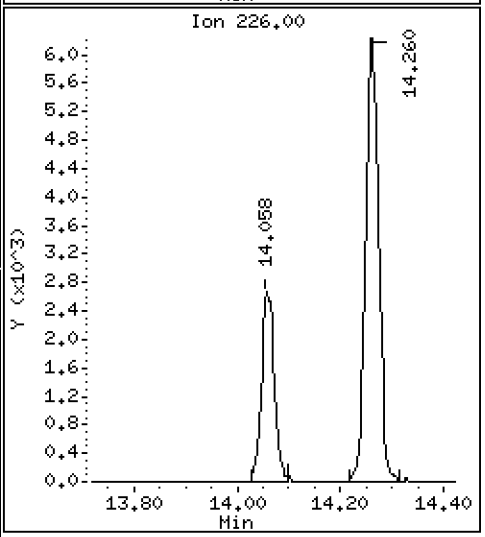
24 Benzo(a)anthracene

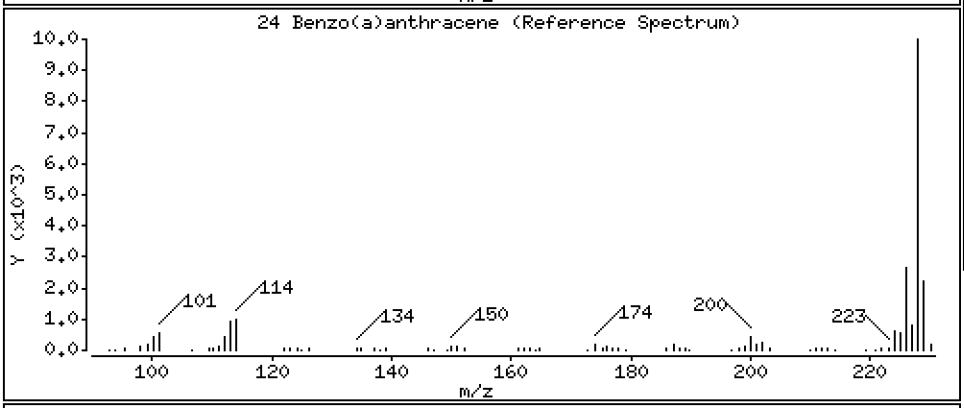
Concentration: 0.8869 ug/mL

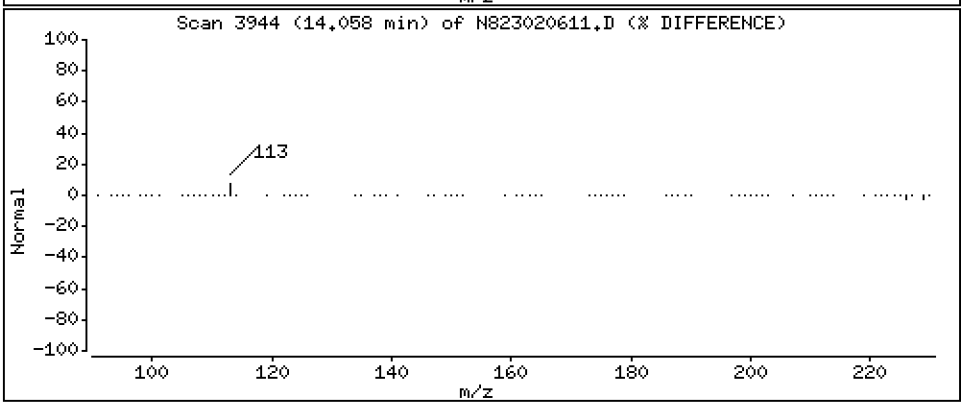












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Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

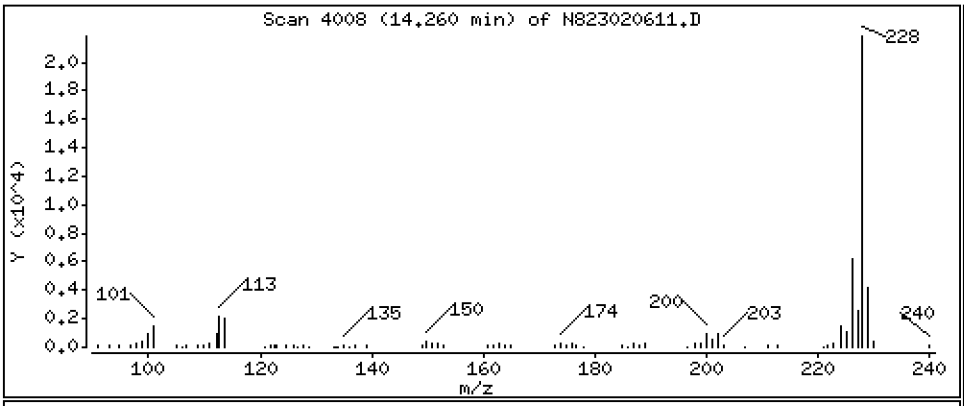
Operator: JZ

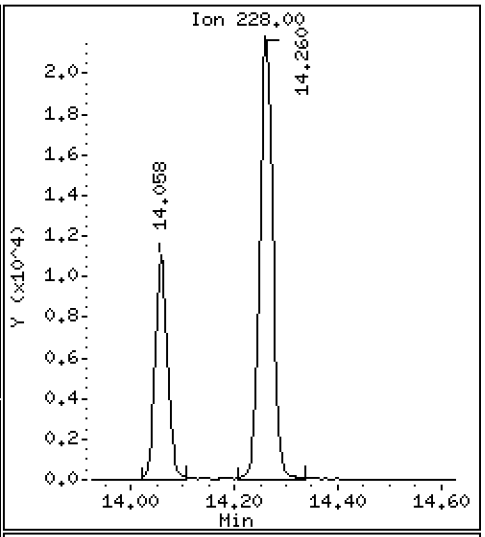
Column phase: Rxi-17sil

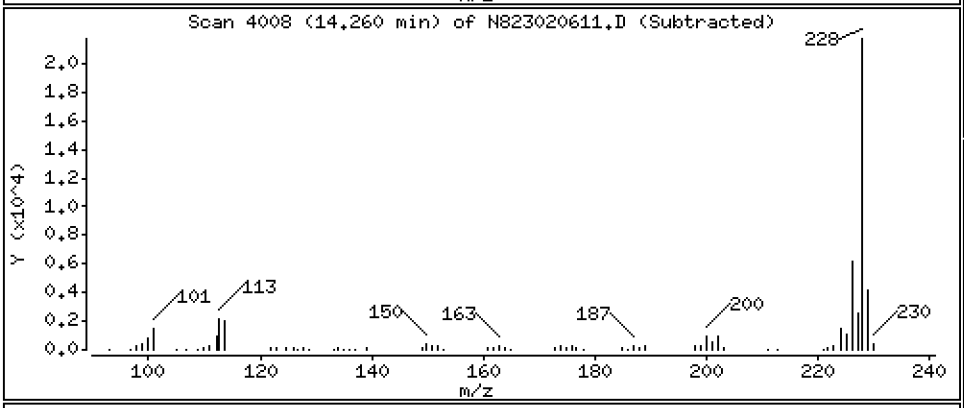
Column diameter: 0.25

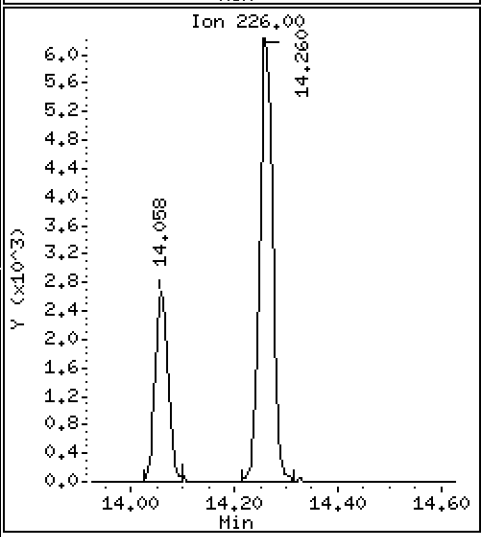
27 Chrysene

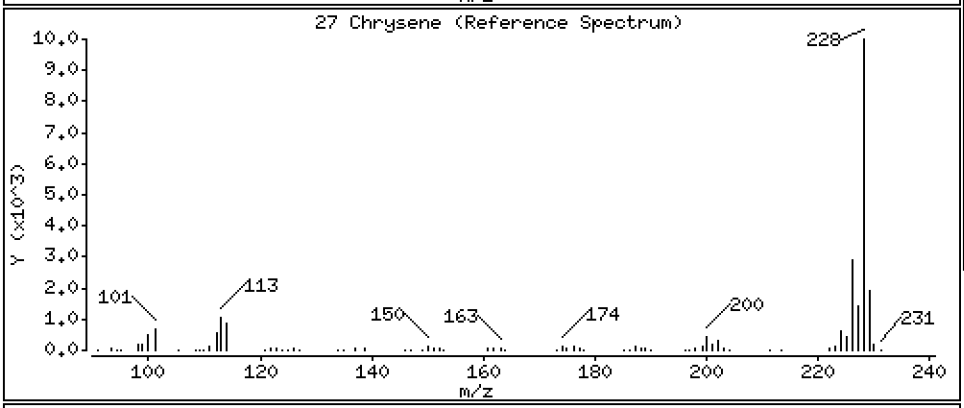
Concentration: 1.762 ug/mL

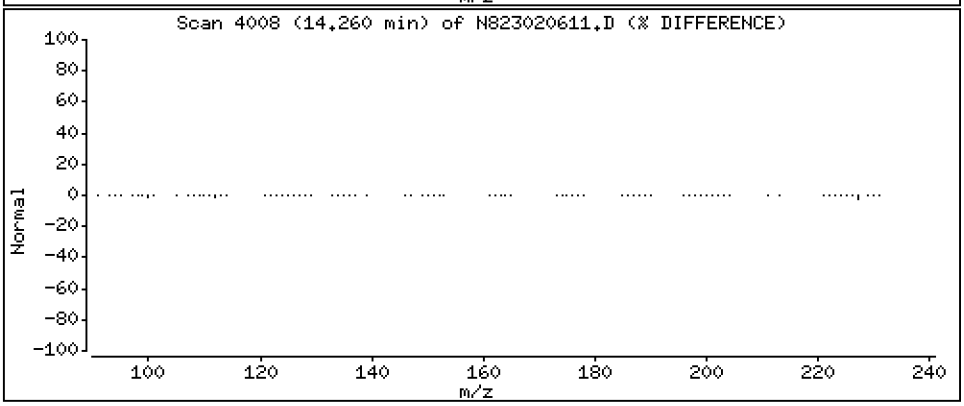












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Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

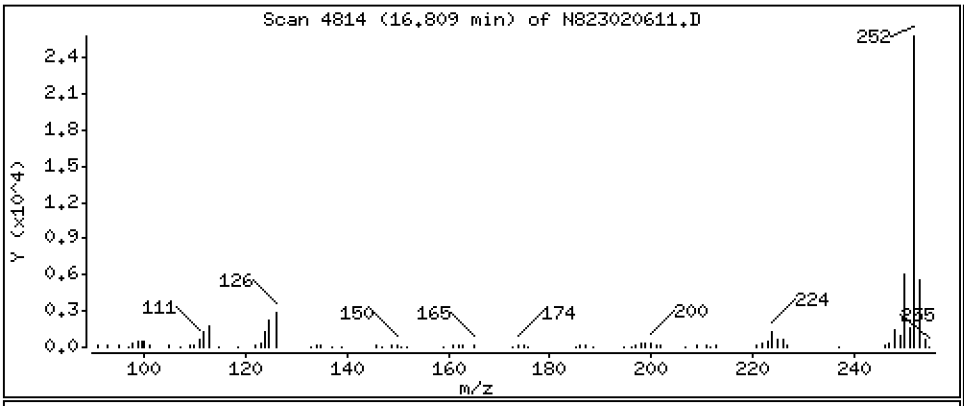
Operator: JZ

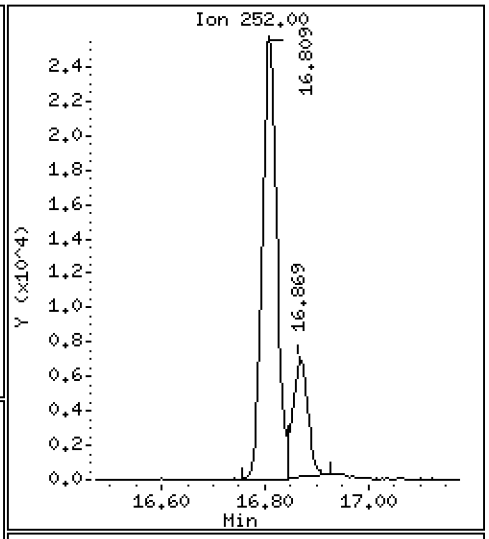
Column phase: Rxi-17sil

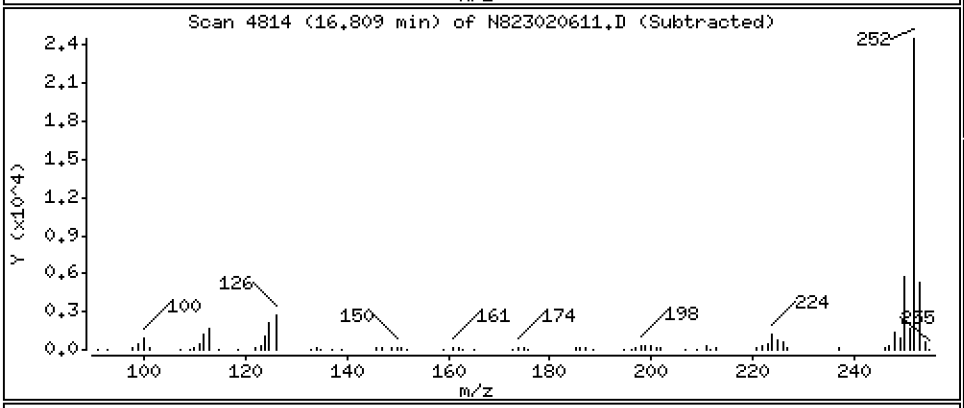
Column diameter: 0.25

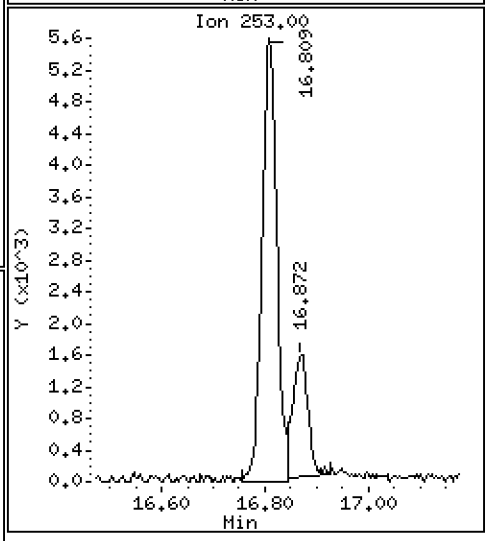
28 Benzo(b)fluoranthene

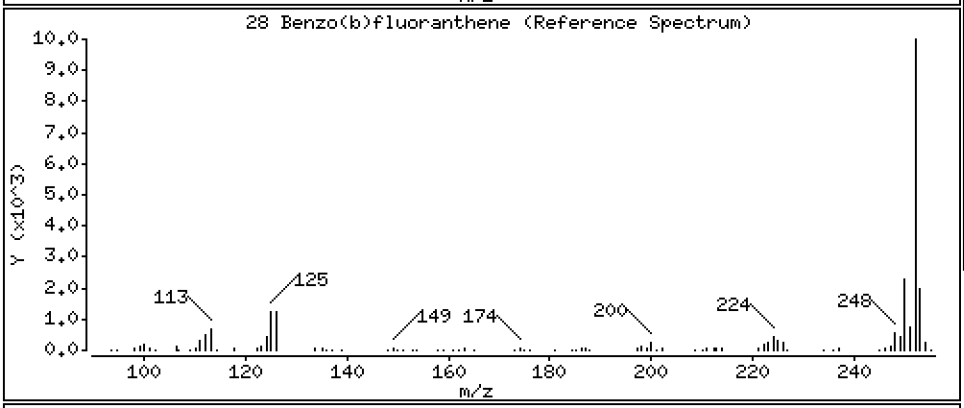
Concentration: 3.832 ug/mL

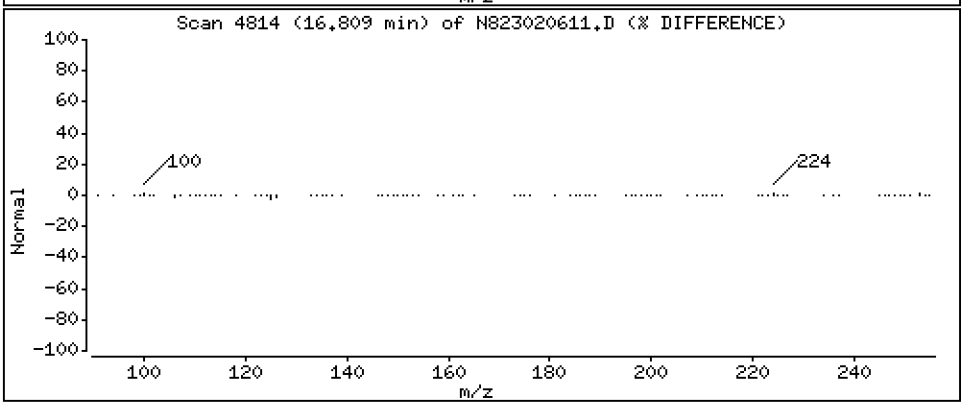












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Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

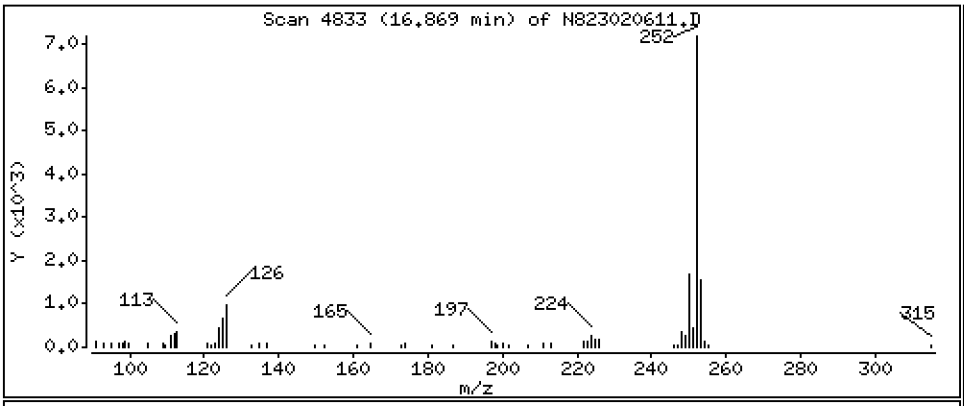
Operator: JZ

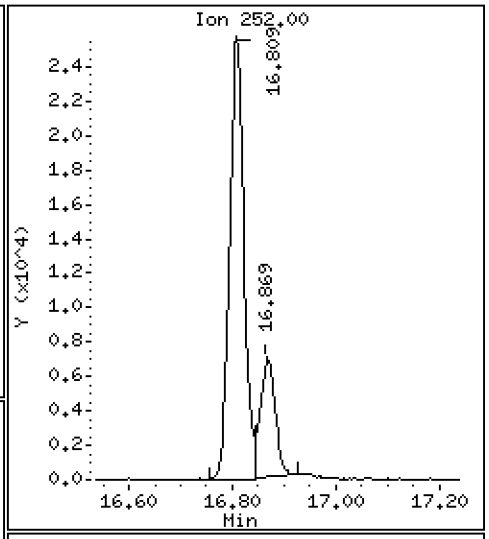
Column phase: Rxi-17sil

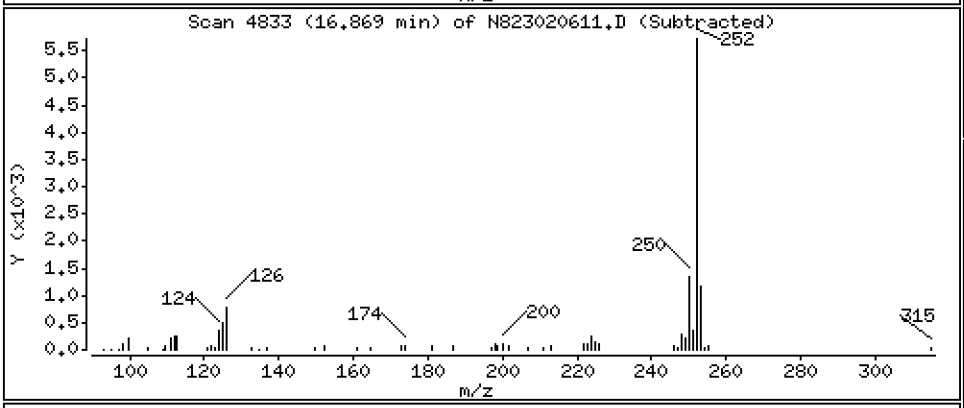
Column diameter: 0.25

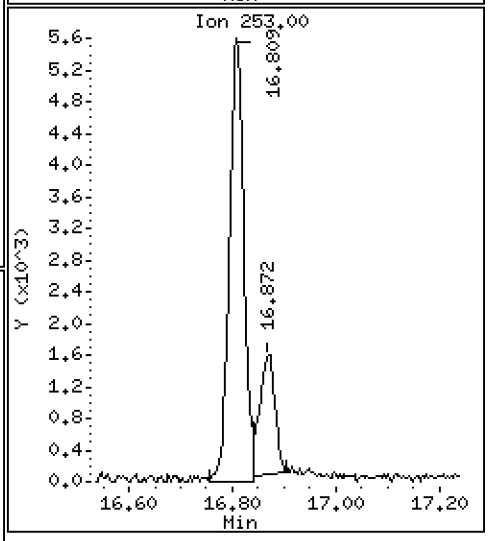
29 Benzo(k)fluoranthene

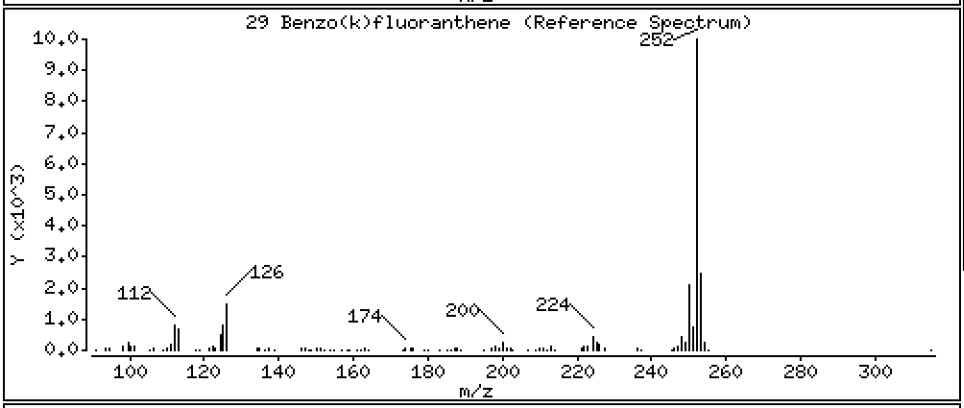
Concentration: 1.085 ug/mL

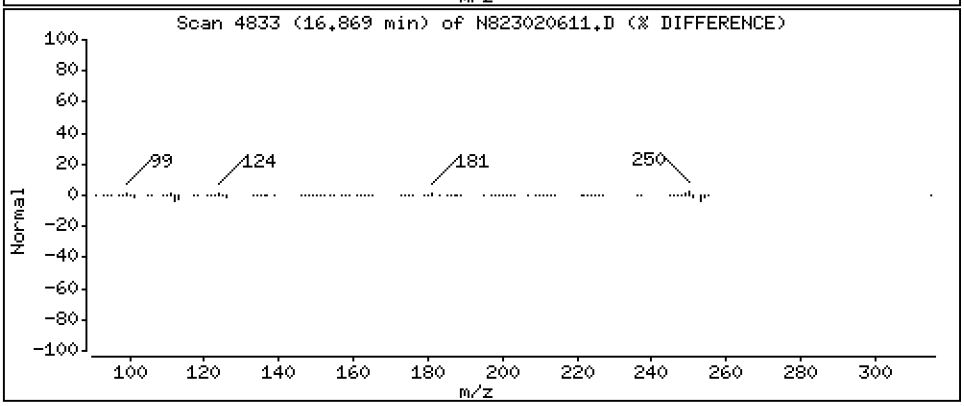












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020611.D

Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

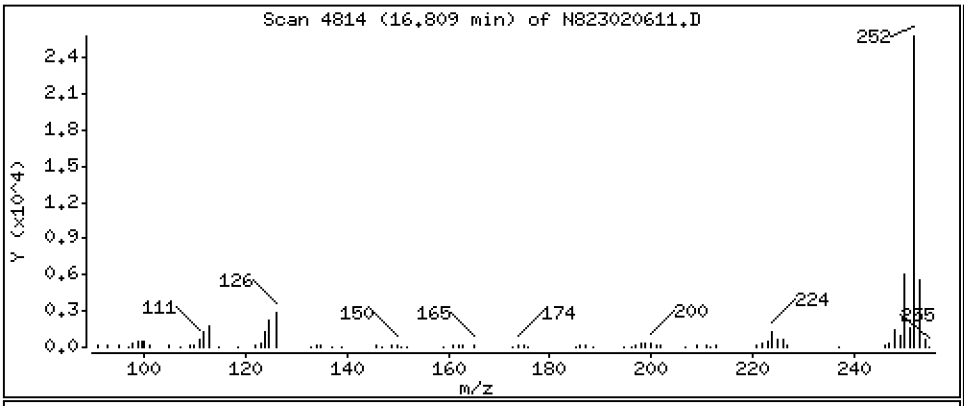
Operator: JZ

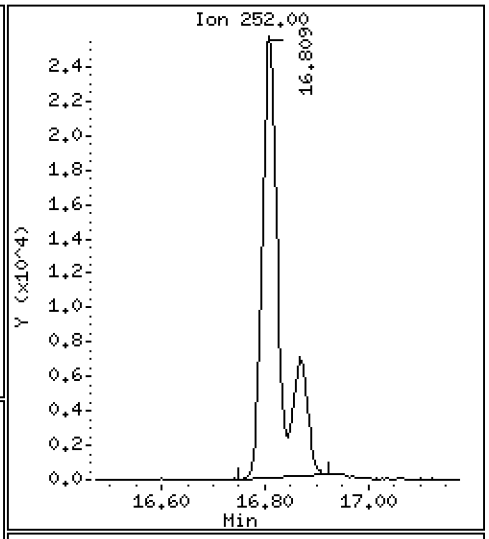
Column phase: Rxi-17sil

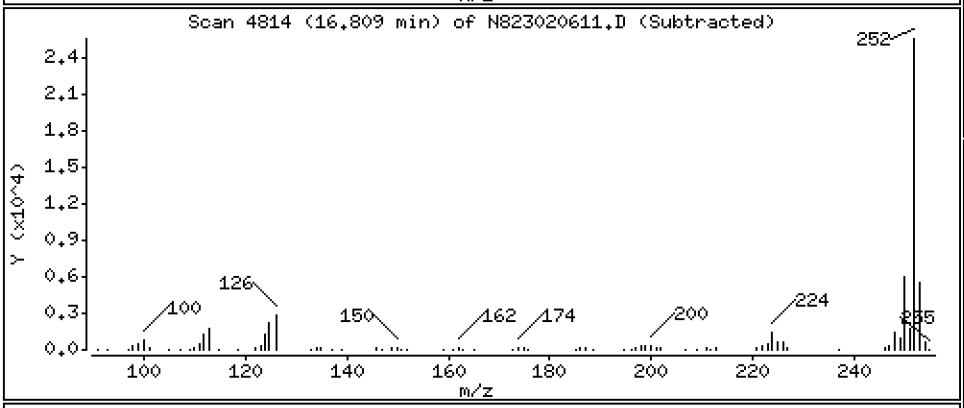
Column diameter: 0.25

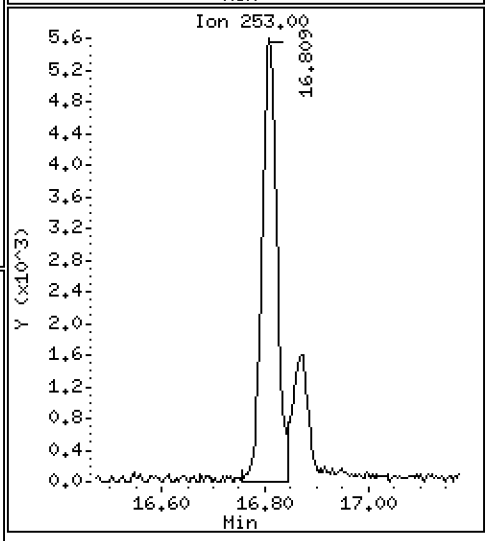
31 Total Benzofluoranthenes

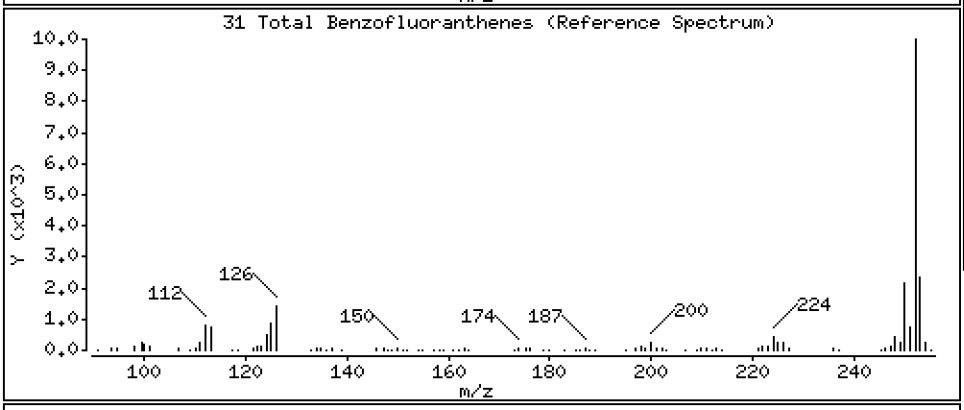
Concentration: 5.092 ug/mL

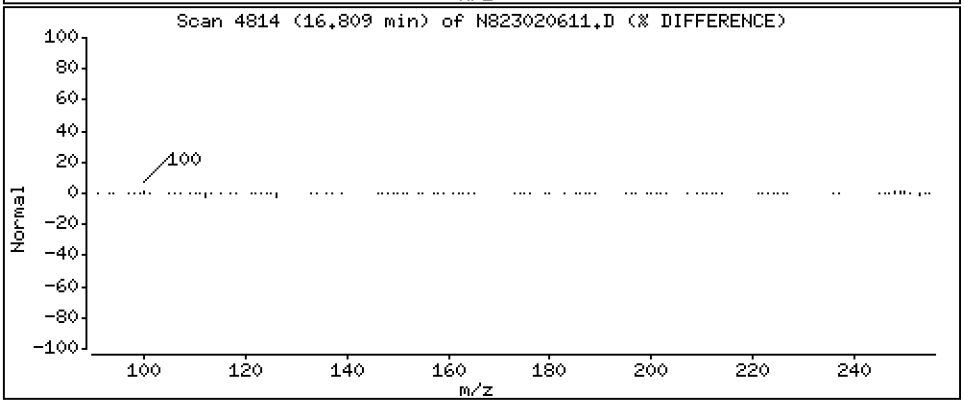












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020611.D

Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

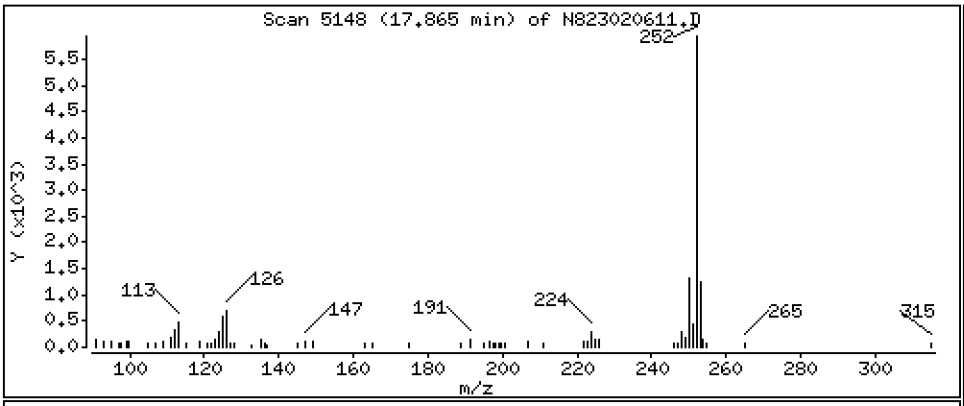
Operator: JZ

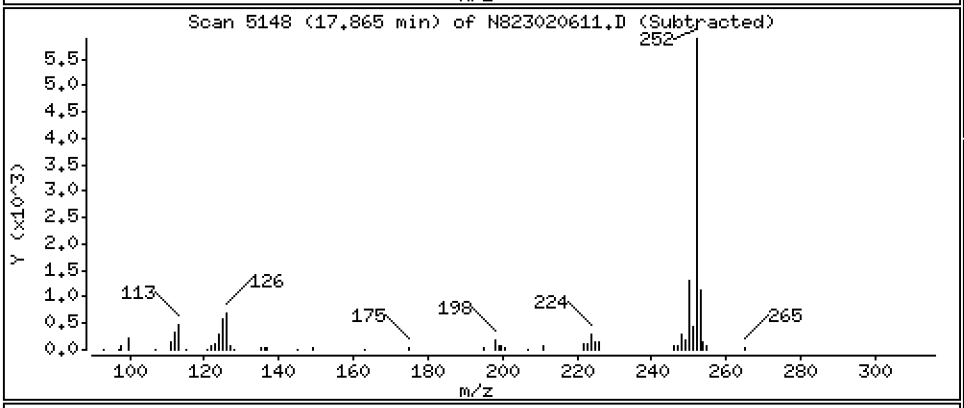
Column phase: Rxi-17sil

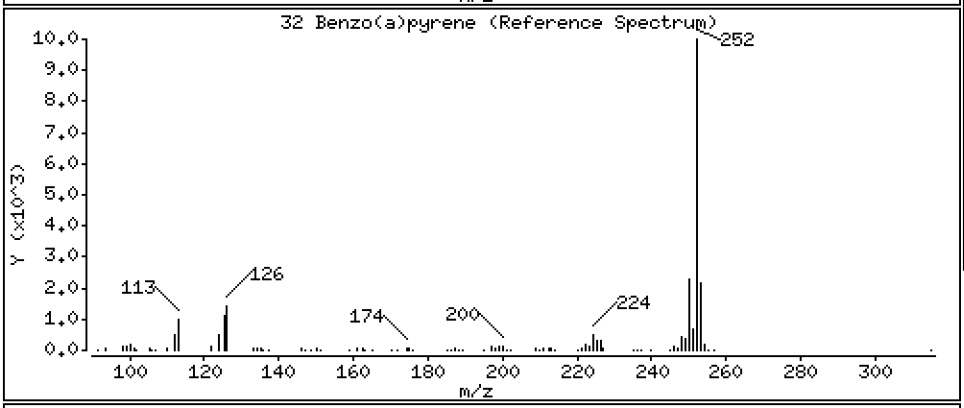
Column diameter: 0.25

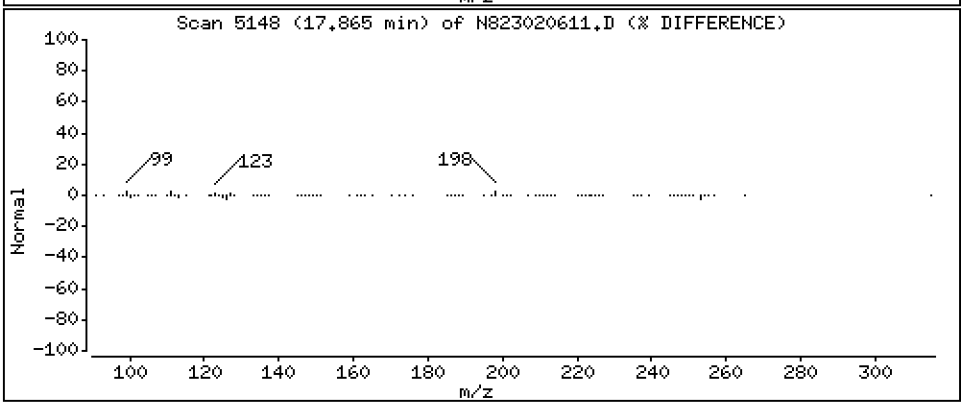
32 Benzo(a)pyrene

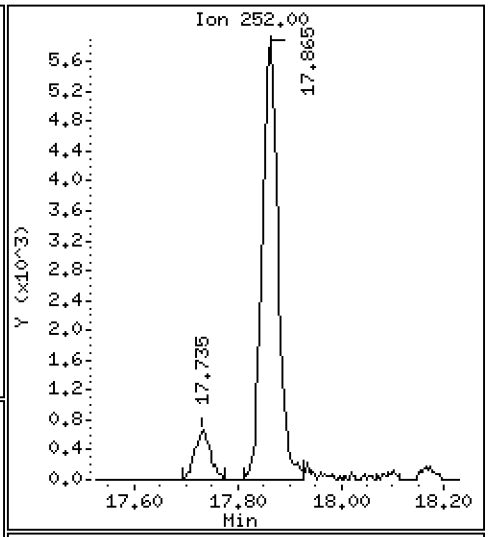
Concentration: 1.094 ug/mL

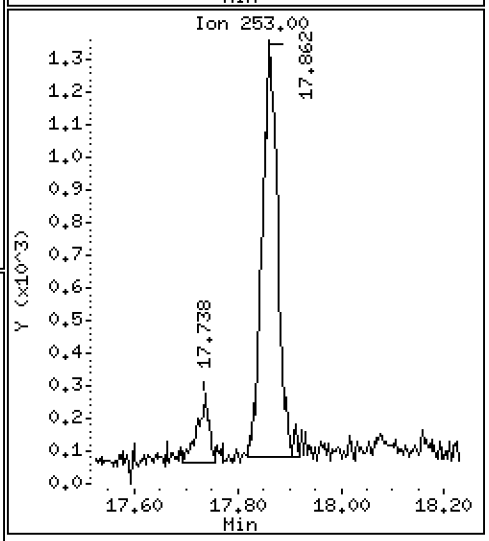












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020611.D

Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

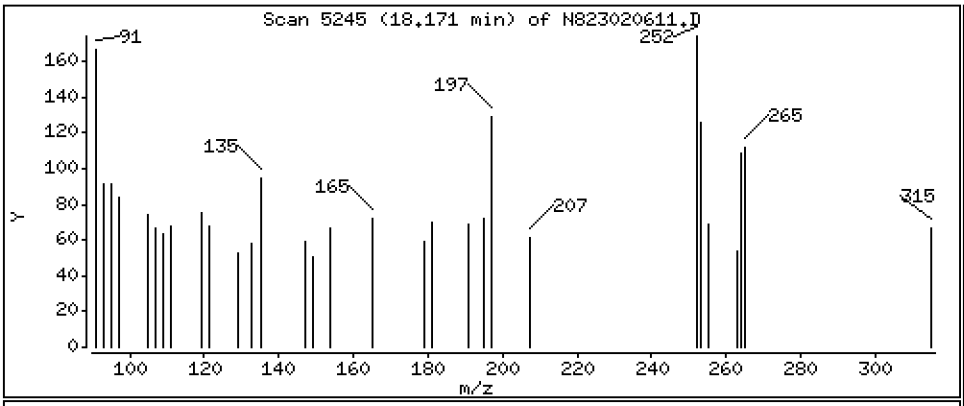
Operator: JZ

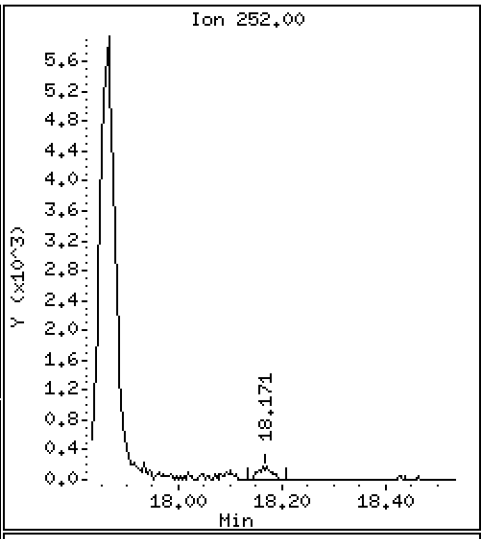
Column phase: Rxi-17sil

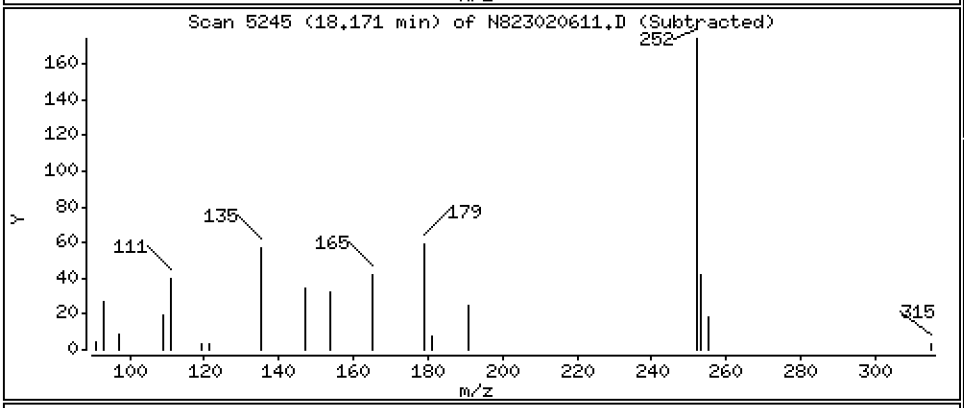
Column diameter: 0.25

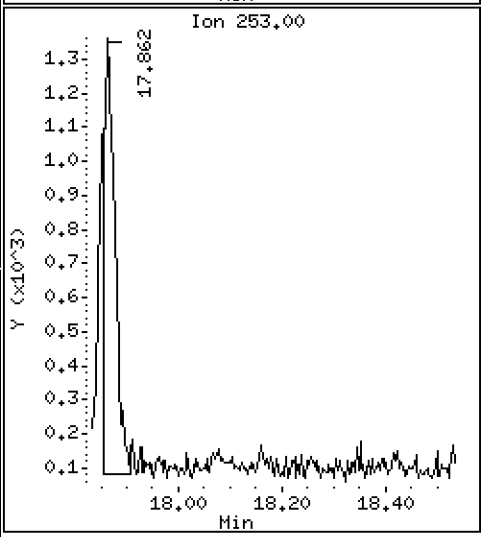
35 Perylene

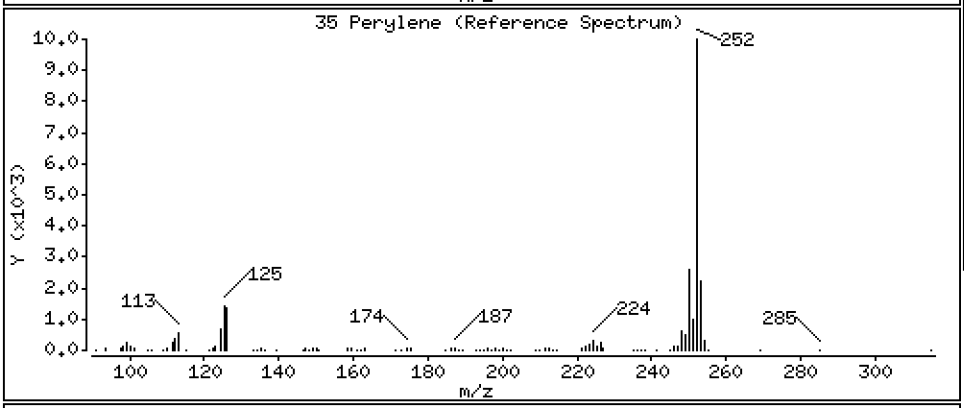
Concentration: 0.02446 ug/mL

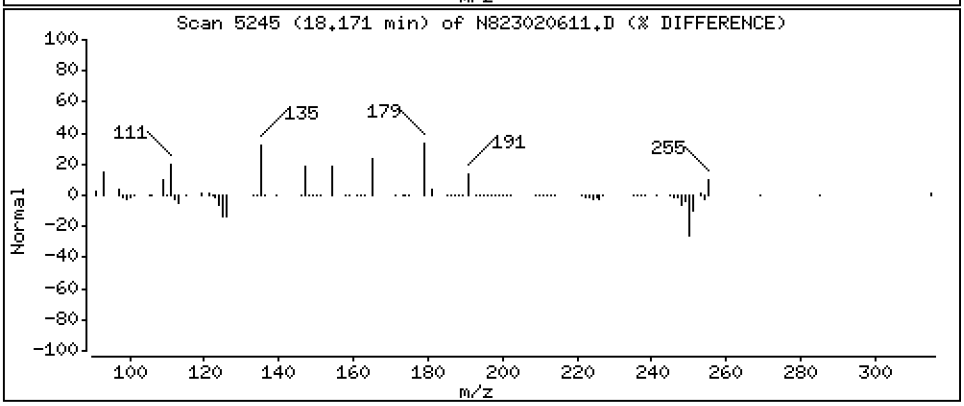












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020611.D

Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

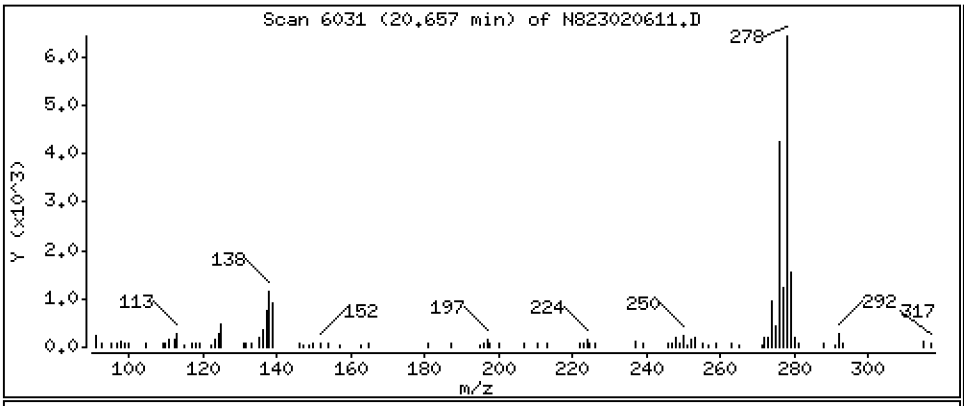
Operator: JZ

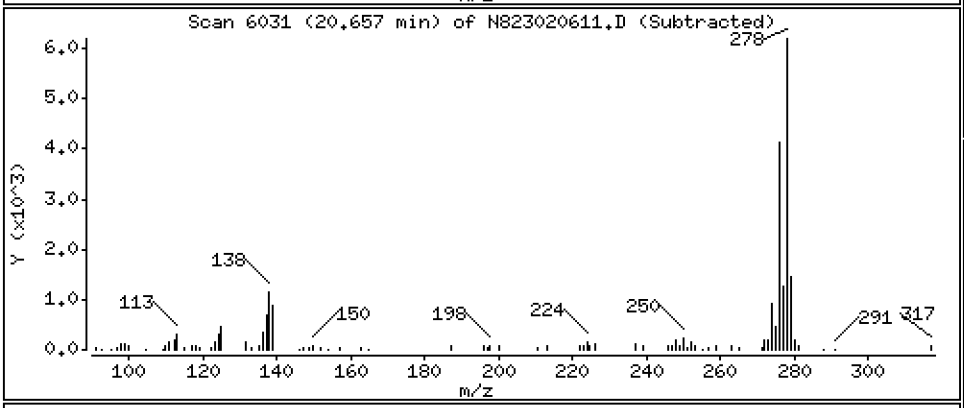
Column phase: Rxi-17sil

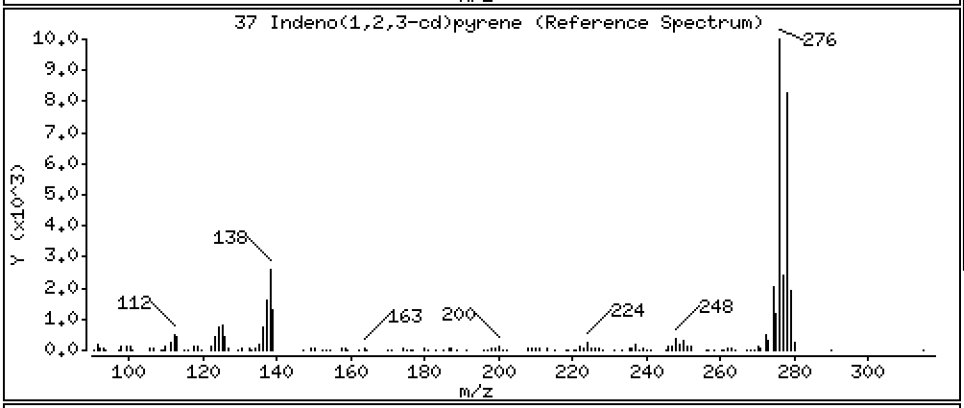
Column diameter: 0.25

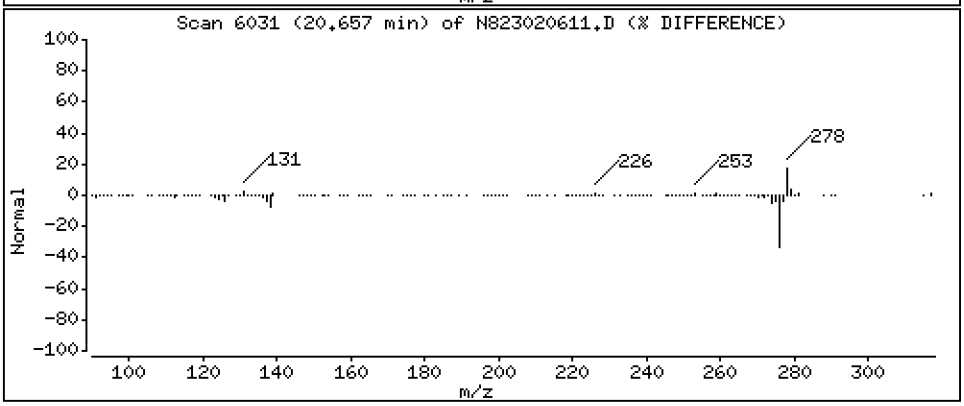
37 Indeno(1,2,3-cd)pyrene

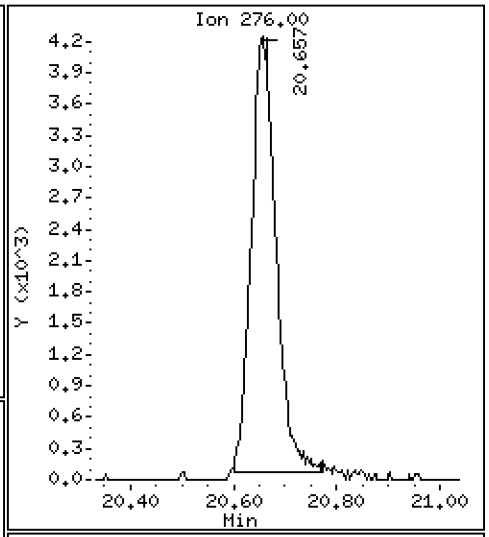
Concentration: 1.056 ug/mL

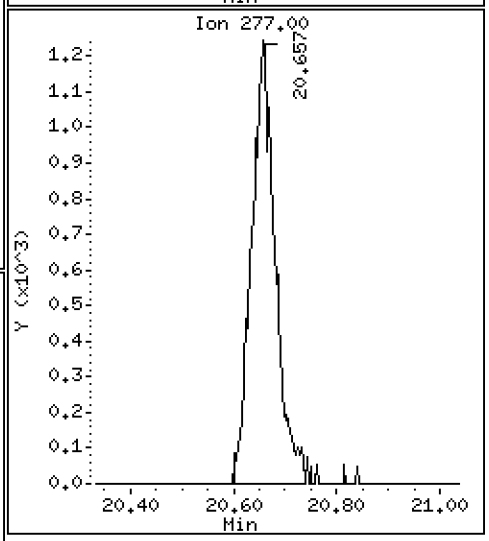












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Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

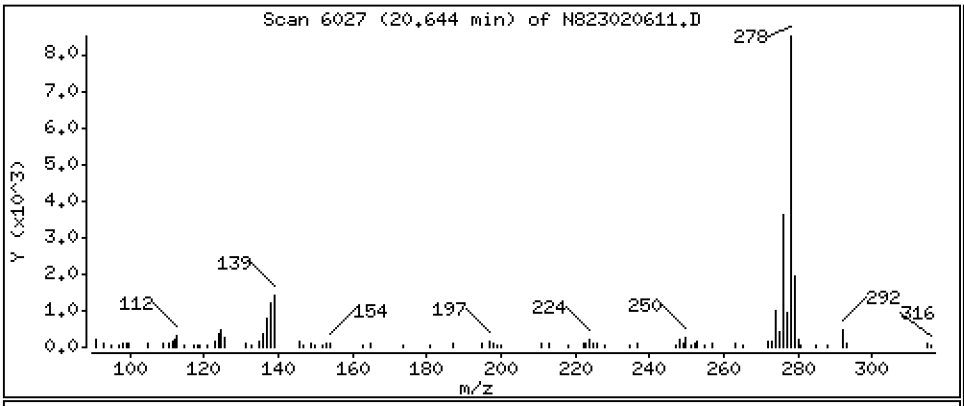
Operator: JZ

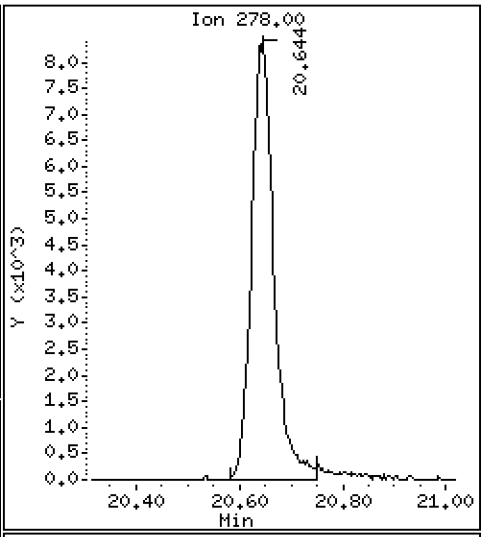
Column phase: Rxi-17sil

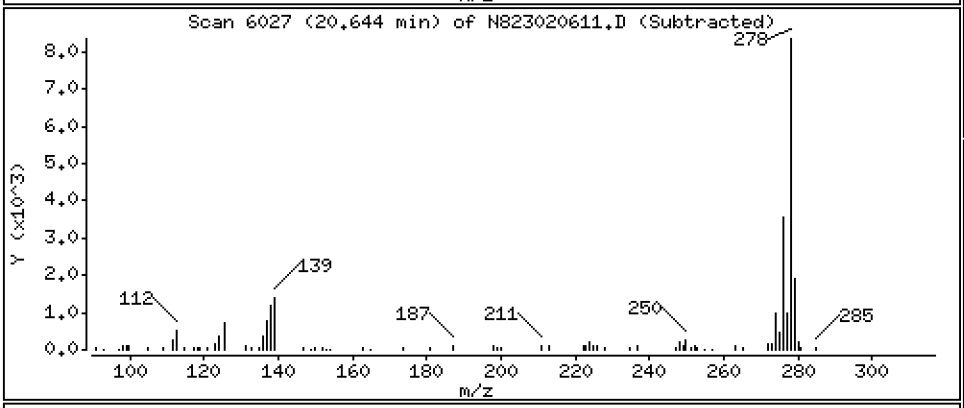
Column diameter: 0.25

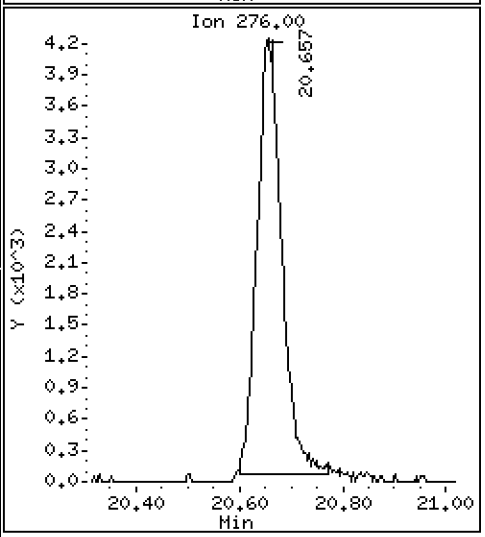
38 Dibenzo(a,h)anthracene

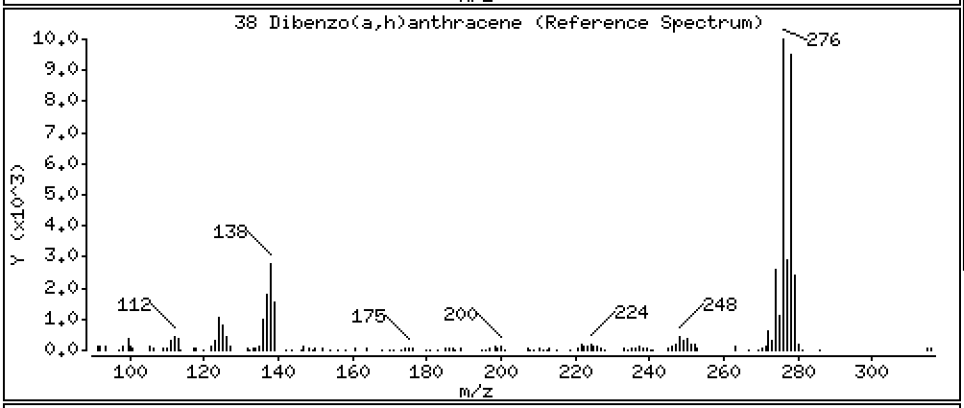
Concentration: 2.259 ug/mL

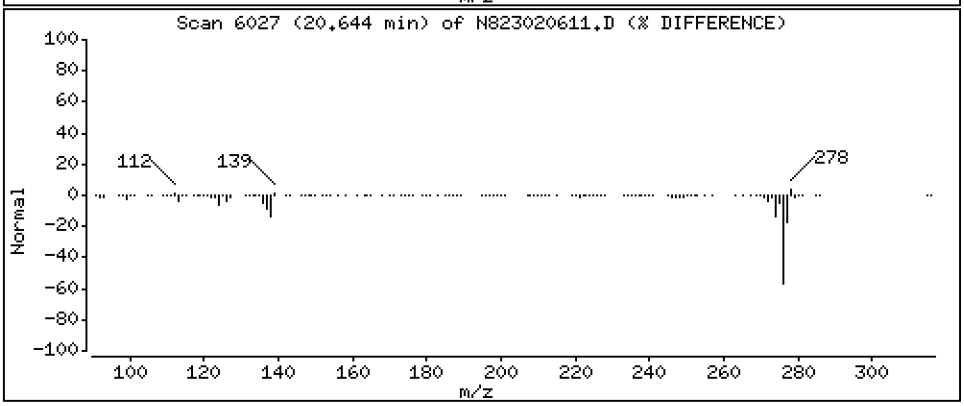












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Date : 06-FEB-2023 17:18

Client ID:

Instrument: nt8.i

Sample Info: BLA0683-SRM1,

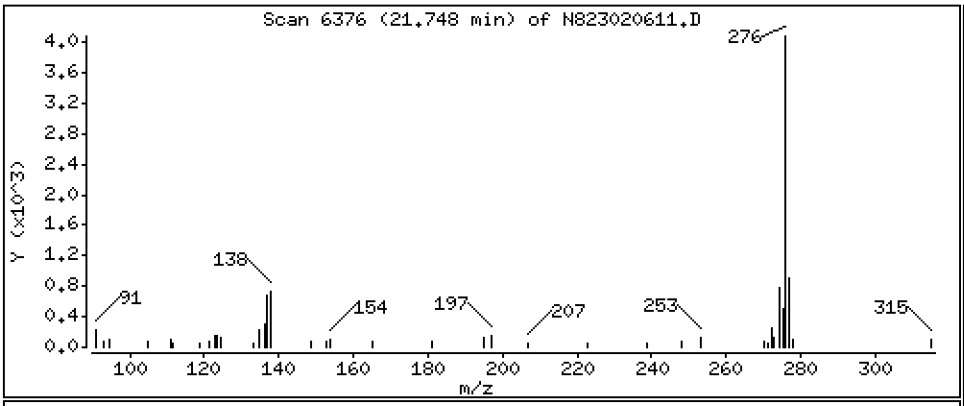
Operator: JZ

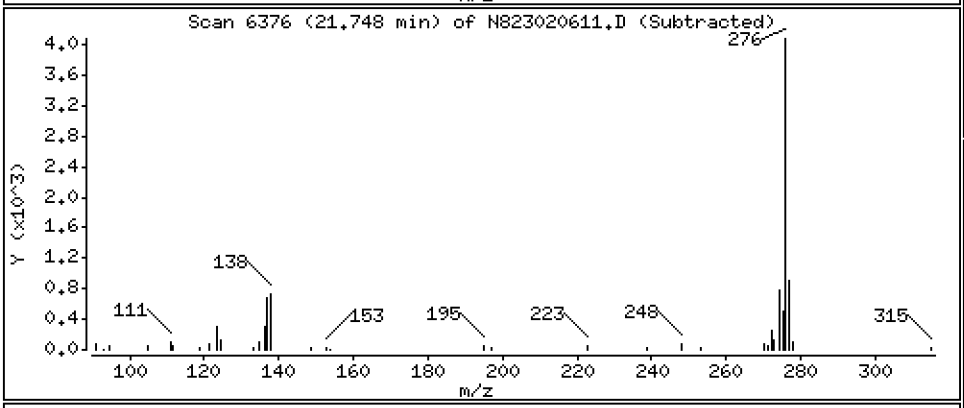
Column phase: Rxi-17sil

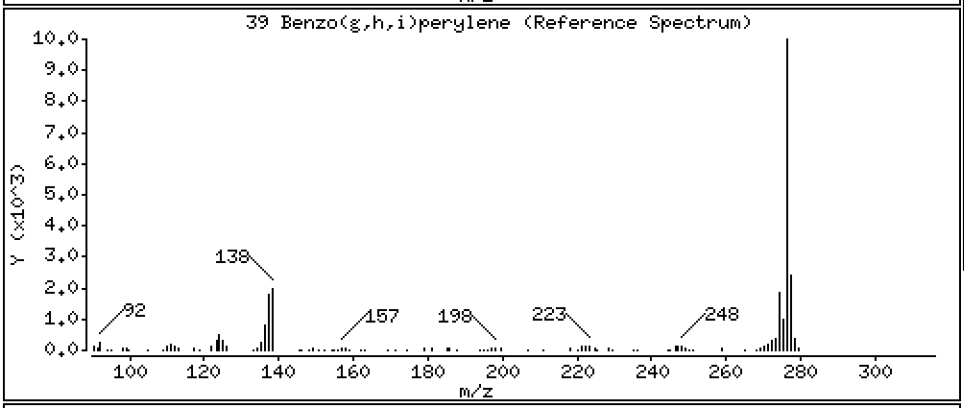
Column diameter: 0.25

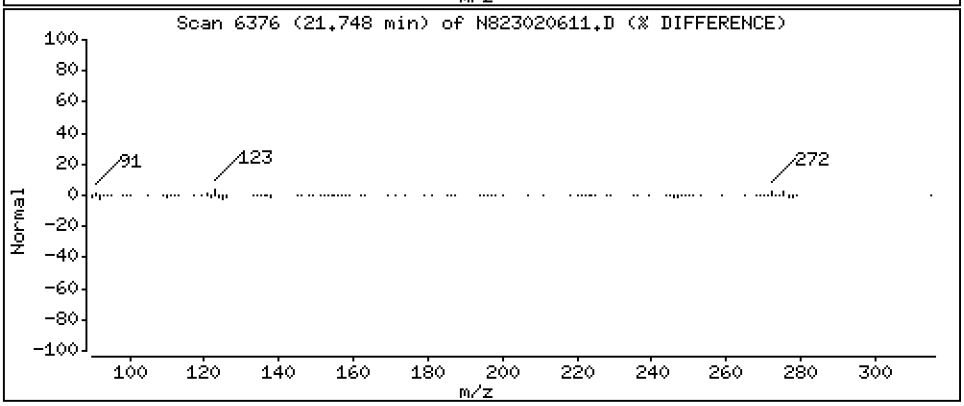
39 Benzo(g,h,i)perylene

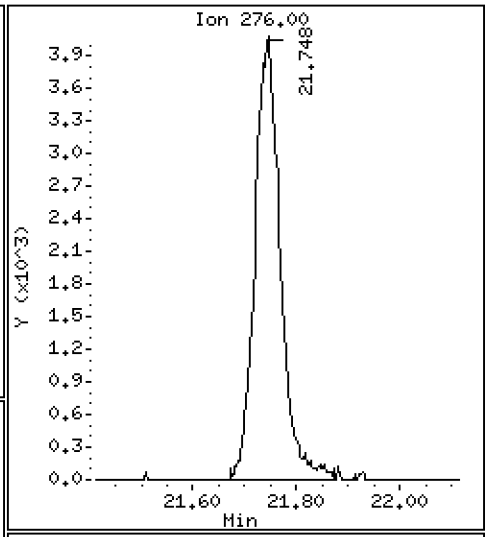
Concentration: 1.173 ug/mL

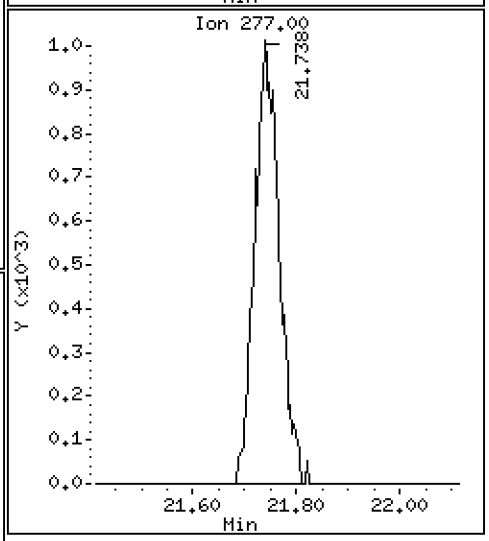












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020611.D
Lab Smp Id: BLA0683-SRM1
Inj Date : 06-FEB-2023 17:18
Operator : JZ Inst ID: nt8.i
Smp Info : BLA0683-SRM1,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 13:04 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.884	4.900	(1.000)	47898	2.00000	
	2 Naphthalene	128	4.916	4.928	(1.006)	51592	2.31660	2.317
$	3 2-Methylnaphthalene-d10	152	5.624	5.634	(1.151)	37554	2.87484	2.875
	4 2-Methylnaphthalene	141	5.672	5.681	(1.161)	1033	0.08433	0.08433(M)
	5 1-methylnaphthalene	141	5.868	5.880	(1.201)	405	0.03258	0.03258
	9 Acenaphthylene	152	7.072	7.082	(0.985)	61602	3.06777	3.068
*	10 Acenaphthene-d10	164	7.183	7.189	(1.000)	26592	2.00000	
	11 Acenaphthene	153	7.234	7.240	(1.007)	47159	3.50509	3.505
	12 Dibenzofuran	168	7.385	7.392	(1.028)	820	0.04013	0.04013(M)
	14 Fluorene	166	7.863	7.869	(1.095)	36596	2.30573	2.306
*	15 Phenanthrene-d10	188	9.223	9.232	(1.000)	44776	2.00000	
	16 Phenanthrene	178	9.261	9.267	(1.004)	82696	3.78089	3.781
	17 Anthracene	178	9.298	9.308	(1.008)	38382	1.93173	1.932
	19 Carbazole	167	9.814	9.823	(1.064)	2170	0.11913	0.1191
	22 Fluoranthene	202	11.041	11.050	(1.197)	50733	2.13092	2.131
$	21 Fluoranthene-d10	212	11.003	11.009	(1.193)	64973	3.28894	3.289
	23 Pyrene	202	11.559	11.569	(0.815)	62928	2.77685	2.777
	24 Benzo(a)anthracene	228	14.057	14.070	(0.991)	18218	0.88695	0.8869
*	25 Chrysene-d12	240	14.190	14.202	(1.000)	36552	2.00000	
	27 Chrysene	228	14.260	14.275	(1.005)	38533	1.76223	1.762
	28 Benzo(b)fluoranthene	252	16.808	16.824	(0.929)	50267	3.83154	3.832
	29 Benzo(k)fluoranthene	252	16.868	16.887	(0.932)	13946	1.08526	1.085
	30 Benzo(j)fluoranthene	252	Compound Not Detected.					
	31 Total Benzofluoranthenes	252	16.808	16.824	(0.929)	63266	5.09198	5.092(M)
	32 Benzo(a)pyrene	252	17.864	17.877	(0.987)	12629	1.09390	1.094
*	33 Perylene-d12	264	18.092	18.107	(1.000)	22526	2.00000	
	35 Perylene	252	18.171	18.183	(1.004)	303	0.02446	0.02446(M)
$	36 Dibenzo(a,h)anthracene-d14	292	20.530	20.549	(1.135)	45685	5.17608	5.176
	37 Indeno(1,2,3-cd)pyrene	276	20.656	20.684	(1.142)	13884	1.05563	1.056
	38 Dibenzo(a,h)anthracene	278	20.644	20.666	(1.141)	25570	2.25910	2.259
	39 Benzo(g,h,i)perylene	276	21.747	21.763	(1.202)	13979	1.17309	1.173

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020611.D
Lab Smp Id: BLA0683-SRM1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44336	22168	88672	47898	8.03
10 Acenaphthene-d10	26127	13064	52254	26592	1.78
15 Phenanthrene-d10	47424	23712	94848	44776	-5.58
25 Chrysene-d12	36794	18397	73588	36552	-0.66
33 Perylene-d12	36636	18318	73272	22526	-38.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.88	-0.32
10 Acenaphthene-d10	7.19	6.69	7.69	7.18	-0.08
15 Phenanthrene-d10	9.23	8.73	9.73	9.22	-0.10
25 Chrysene-d12	14.20	13.70	14.70	14.19	-0.09
33 Perylene-d12	18.11	17.61	18.61	18.09	-0.09

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

REVIEW SUMMARY FOR FILE - N823020611.D

Lab ID: BLA0683-SRM1
nt8.i, 20230206A.b\FSIMPNA230119.m,   06-FEB-2023 17:18

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

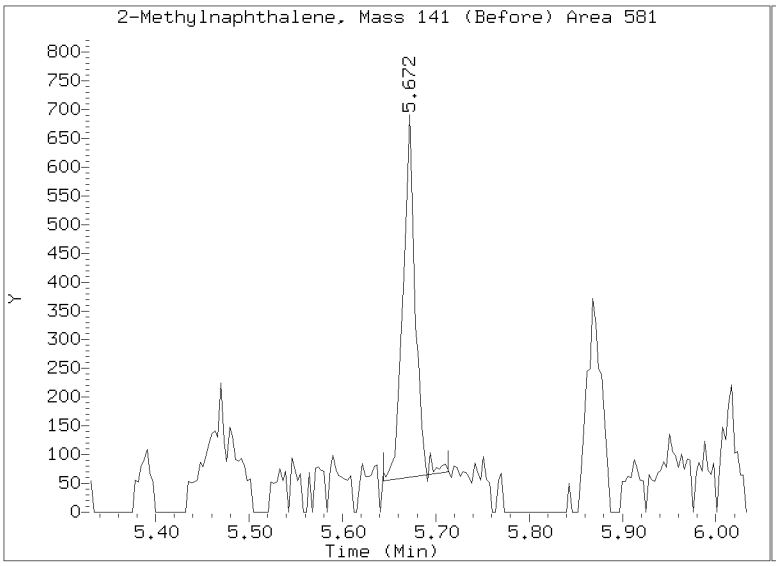
No RRT check performed

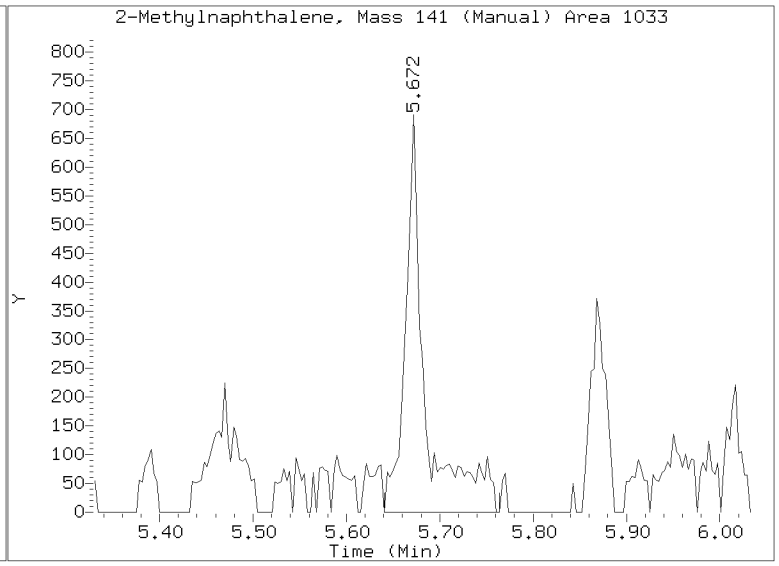
On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, PNAXMDL.sub = 0.0080

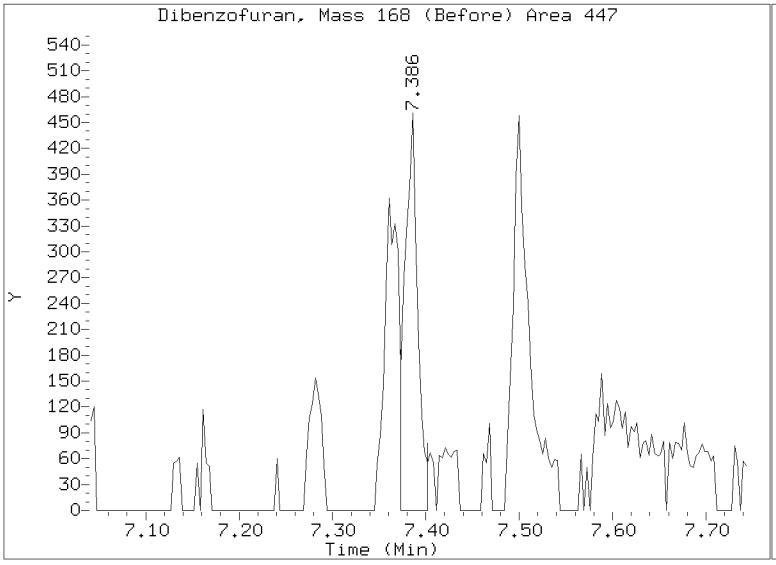
* Only compounds listed in the work order have been verified by the analyst *

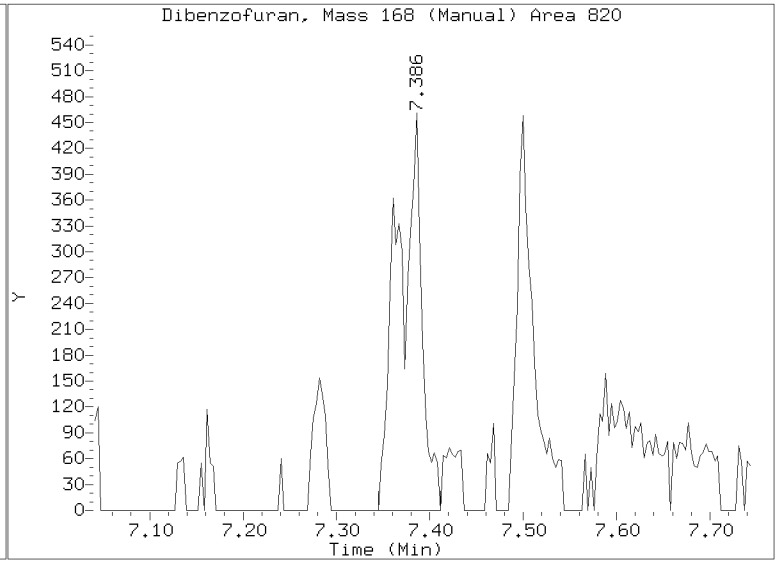
Quant Ion Manual Peak Adjustment Report

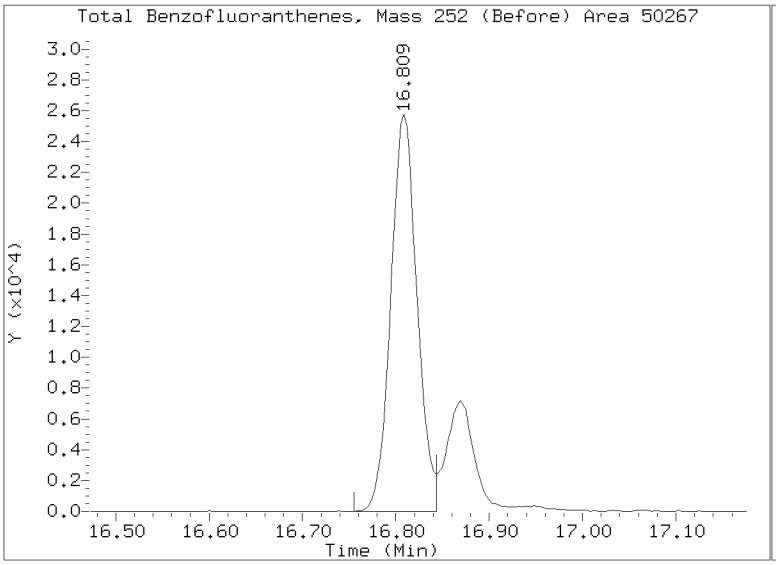
Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020611.D
Injection Date: 06-FEB-2023 17:18
Lab ID:BLA0683-SRM1 Client ID:
Report Date: 02/07/2023 13:19

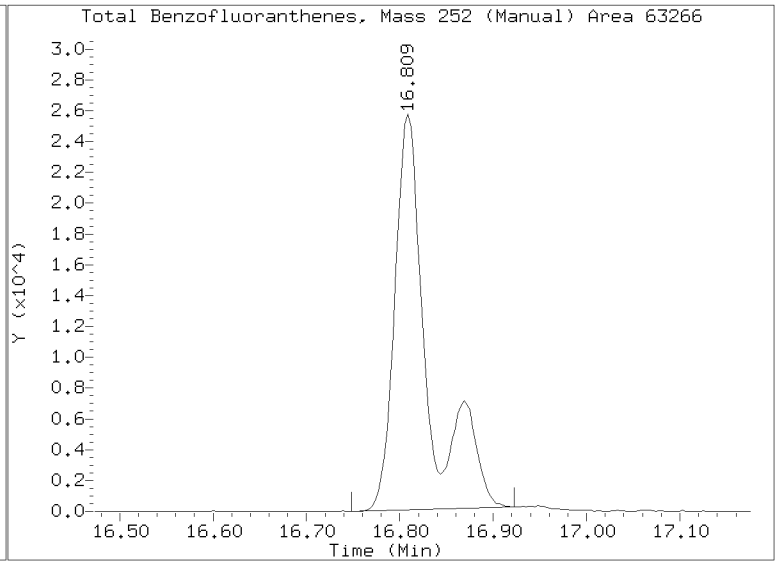






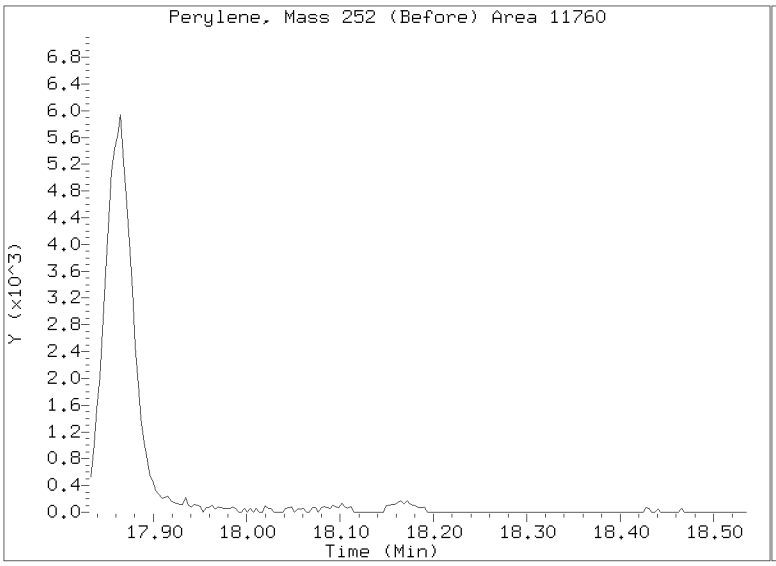


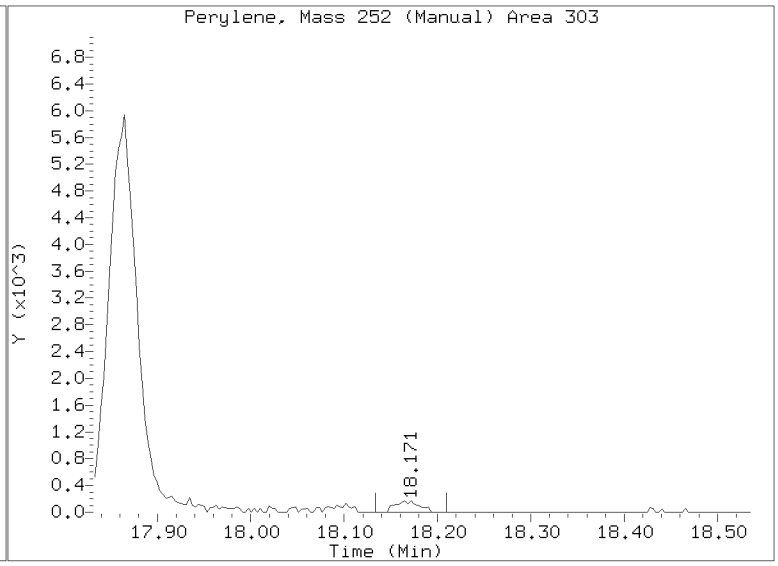




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020611.D
Injection Date: 06-FEB-2023 17:18
Lab ID:BLA0683-SRM1 Client ID:
Report Date: 02/07/2023 13:19





STANDARD REFERENCE MATERIAL RECOVERY

EPA 8270E-SIM

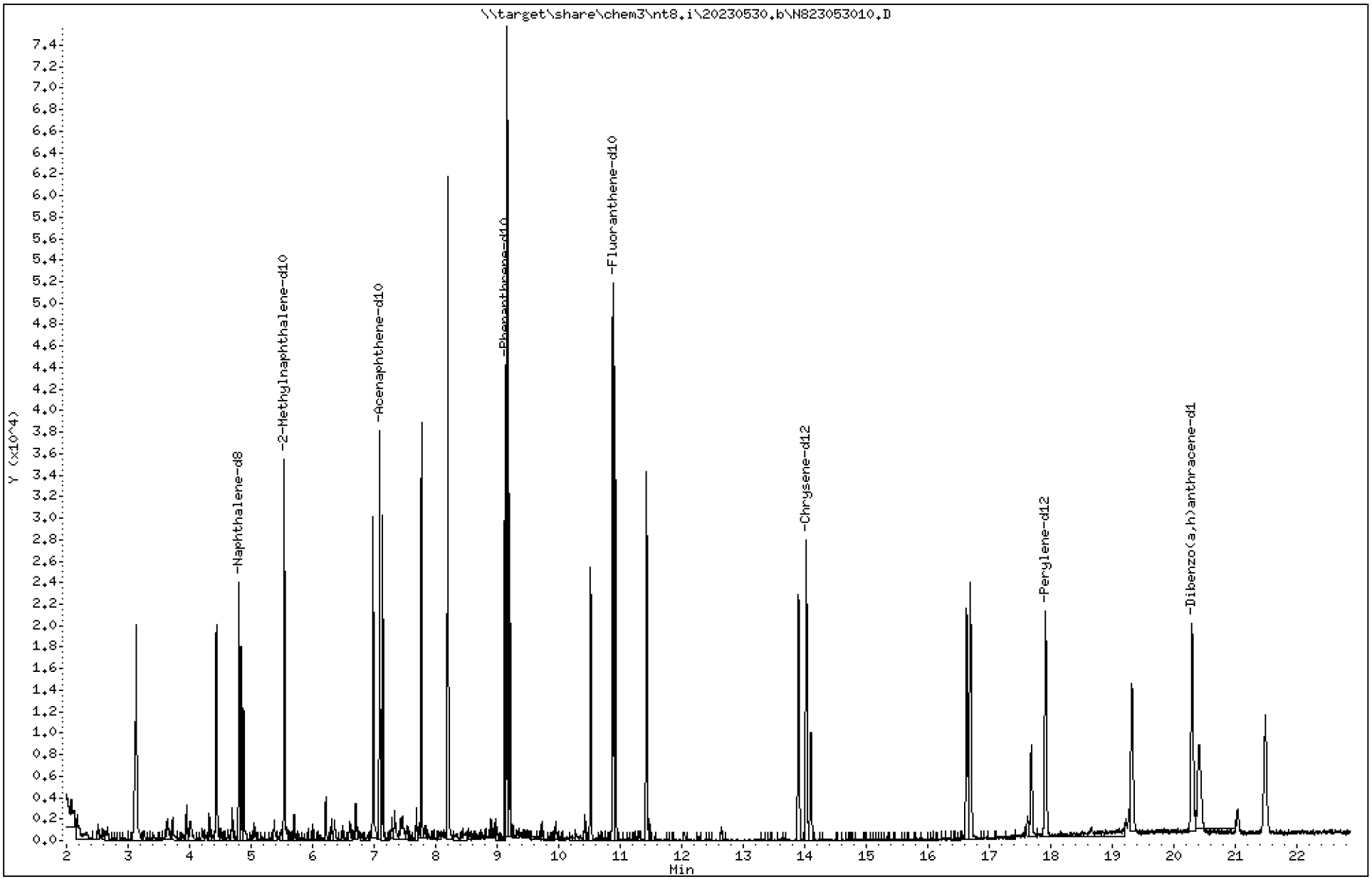
Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLE0421-SRM1
Batch: BLE0421
Initial/Final: 5 g / 0.5 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 05/30/2023 15:45
Standard ID: J007238
Expires: 01/09/2026
Standard Lot#: SQC017 (LRAC9745)
Description: SQC017-40G PAHs by HPLC40g

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Benzo(a)anthracene	109.00	135	1.65	10.0		124	31 - 170
Chrysene	210.00	63.1	2.11	10.0		30.1	13 - 186
Benzo(b)fluoranthene	295.00	162	2.74	10.0		54.9	33 - 167
Benzo(k)fluoranthene	259.00	201	1.52	10.0		77.5	14 - 186
Benzo(a)pyrene	65.500	79.6	1.23	10.0		122	24 - 176
Indeno(1,2,3-cd)pyrene	208.00	67.5	2.10	10.0		32.4	0 - 208
Dibenzo(a,h)anthracene	177.00	110	1.78	10.0		62.1	0 - 214

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230530.b\N823053010.D
Date : 30-MAY-2023 15:45
Client ID:
Sample Info: BLE0421-SRM1,

Instrument: nt8.i
Operator: JZ
Column phase: Rxi-17sil
Column diameter: 0.25



23A0207 CLPLIKE (Rev3) - Page 700 of 3315

Data File: \\target\share\chem3\nt8.i\20230530.b\N823053010.D

Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

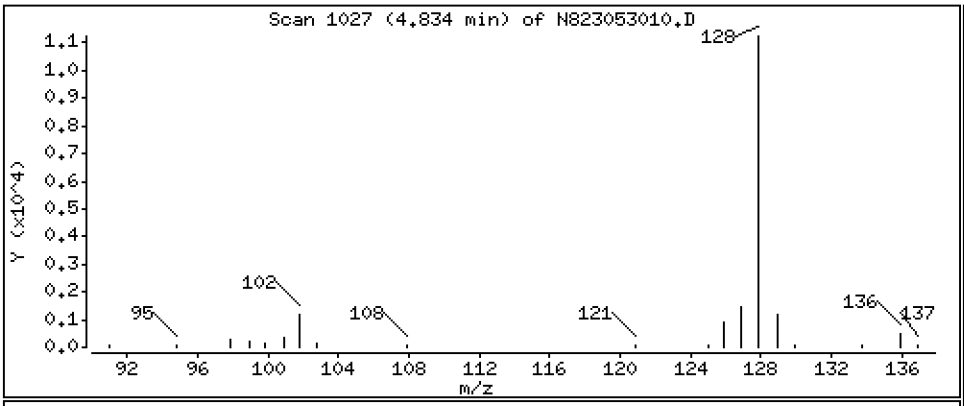
Operator: JZ

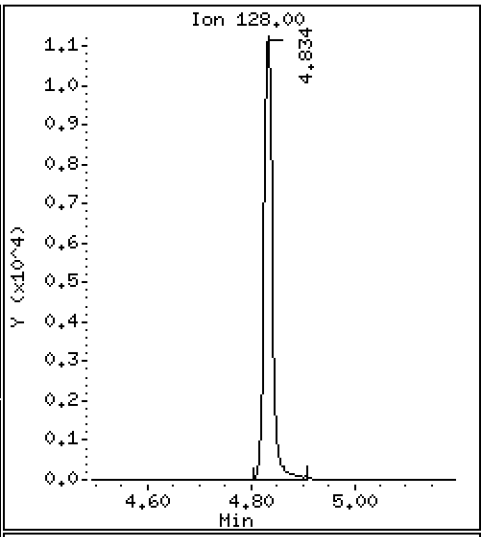
Column phase: Rxi-17sil

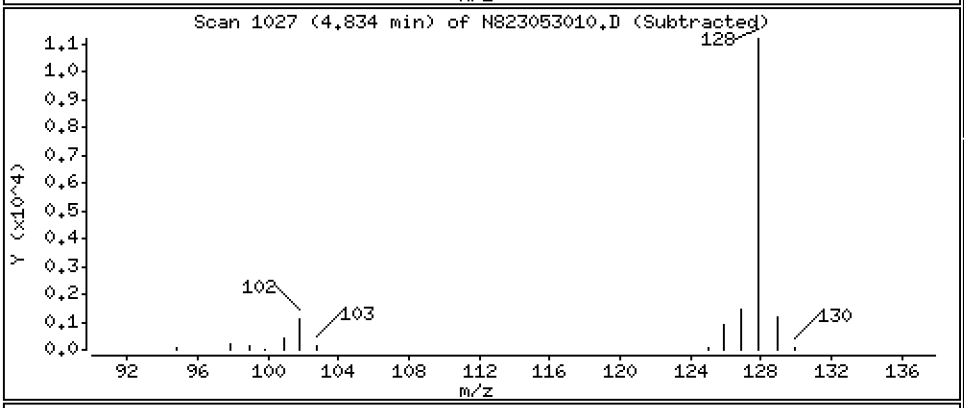
Column diameter: 0.25

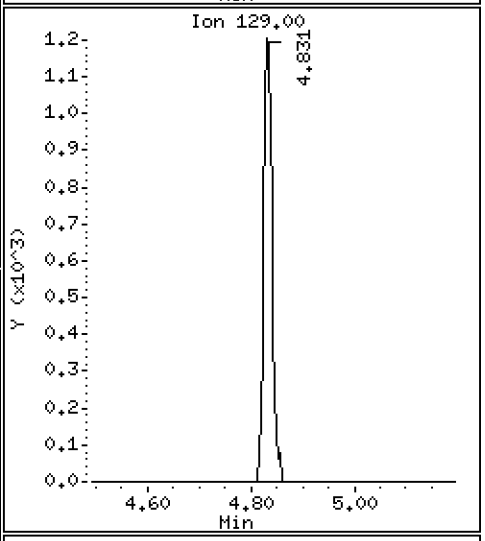
2 Naphthalene

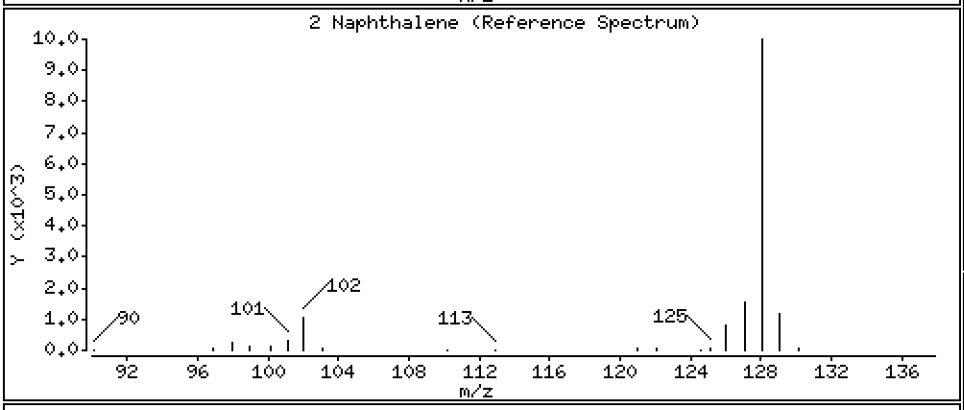
Concentration: 1.394 ug/mL

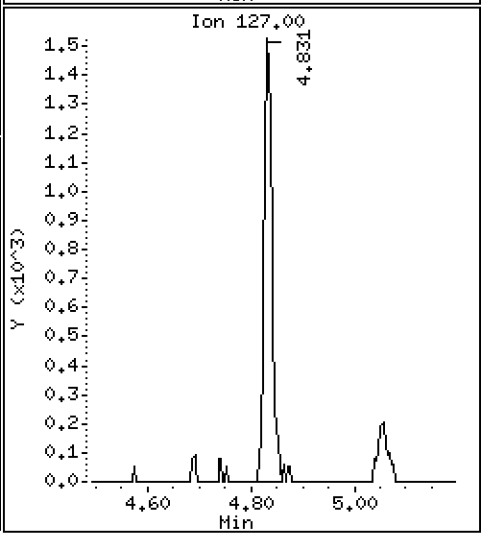


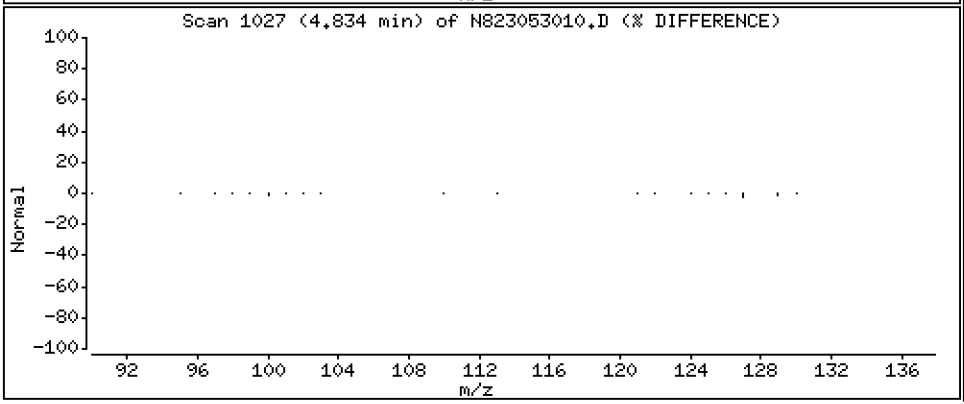












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Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

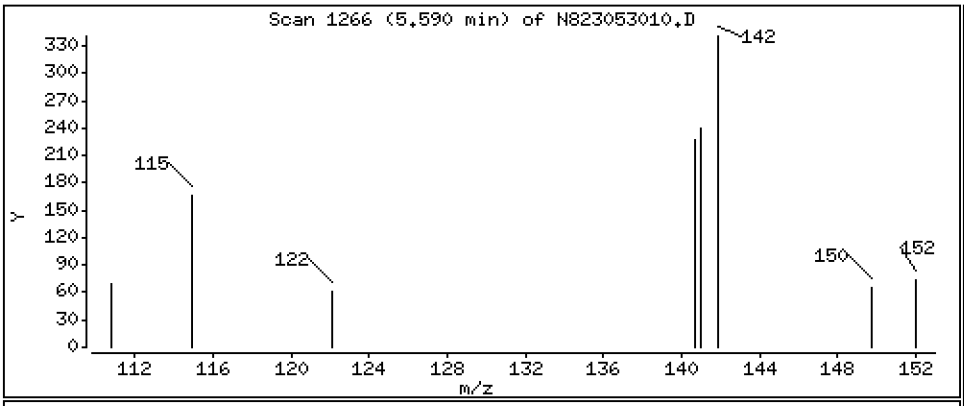
Operator: JZ

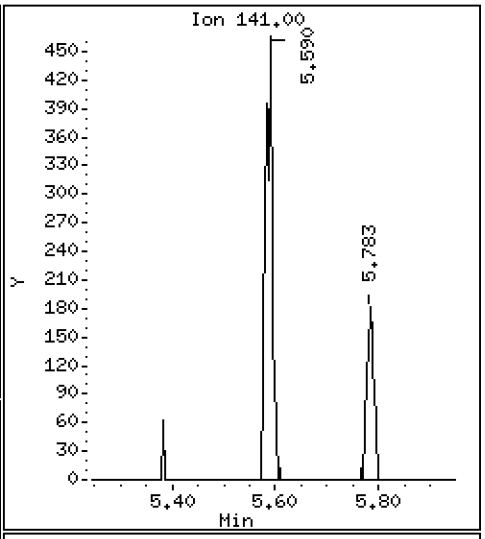
Column phase: Rxi-17sil

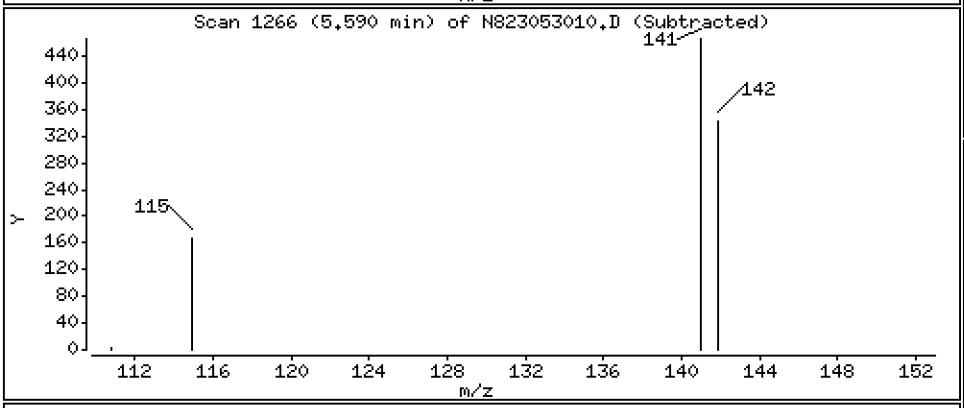
Column diameter: 0.25

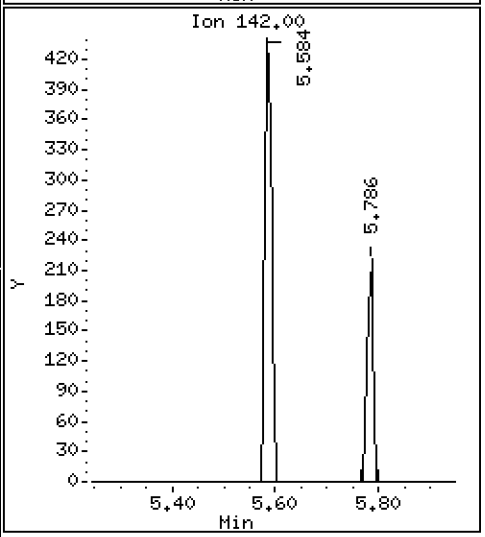
4 2-Methylnaphthalene

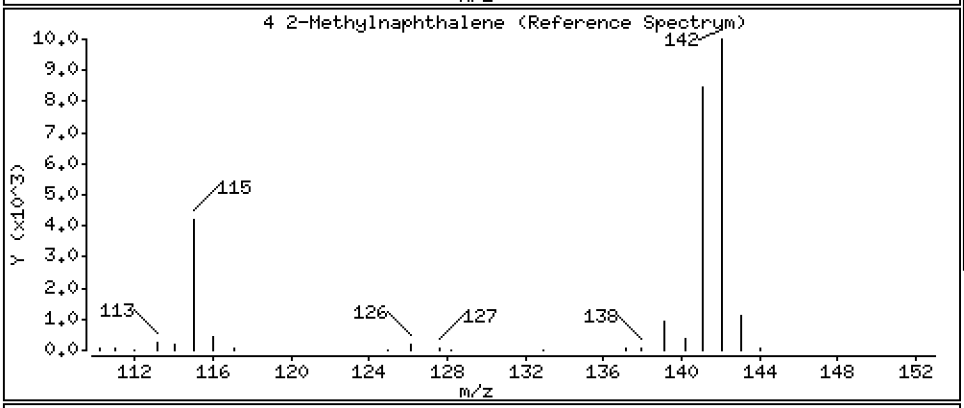
Concentration: 0.08059 ug/mL

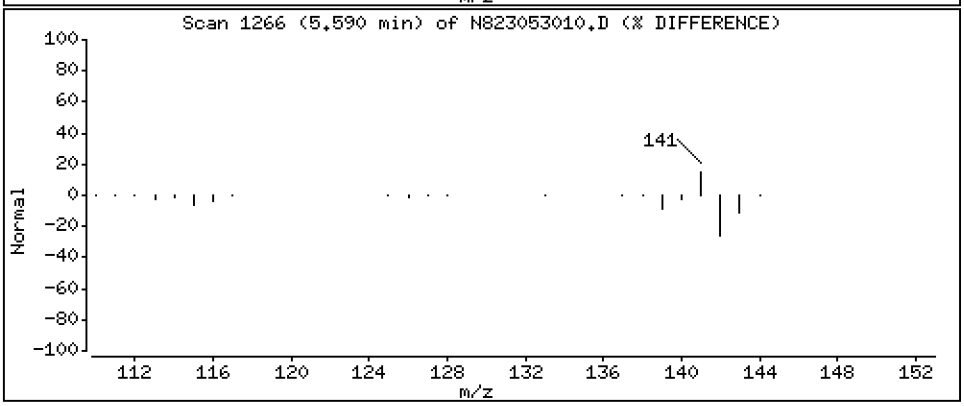












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053010.D

Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

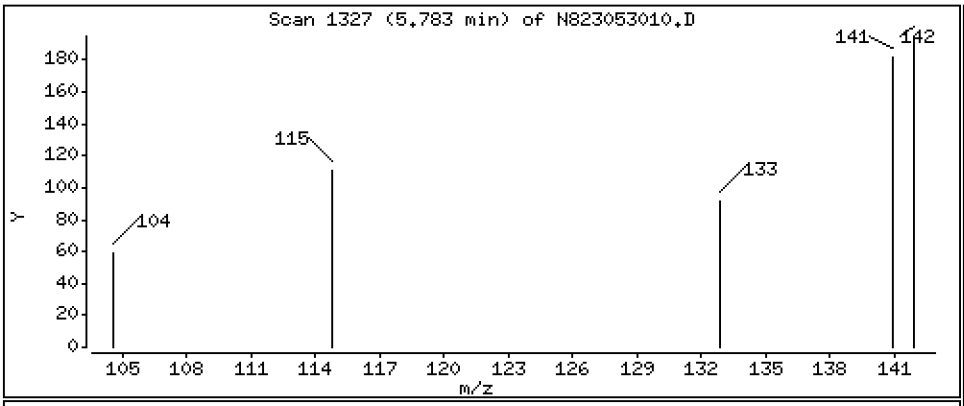
Operator: JZ

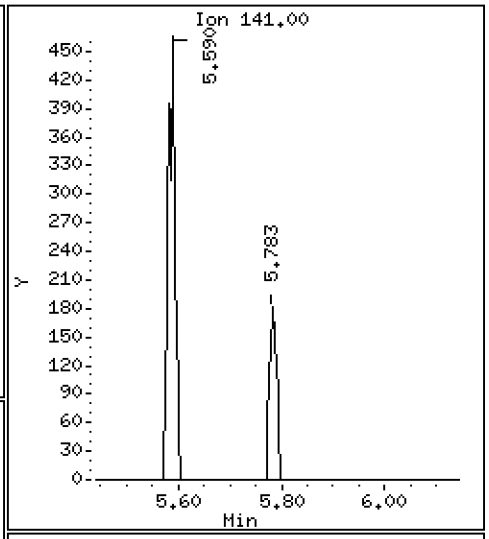
Column phase: Rxi-17sil

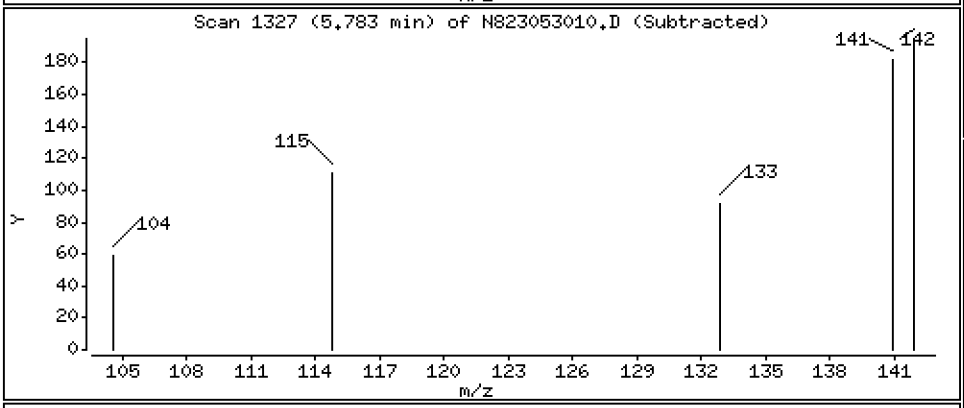
Column diameter: 0.25

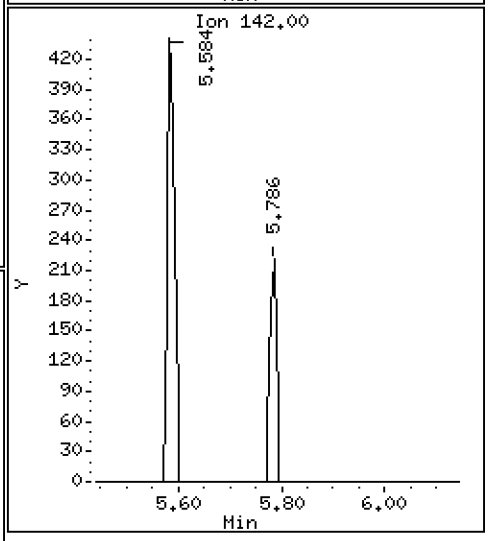
5 1-methylnaphthalene

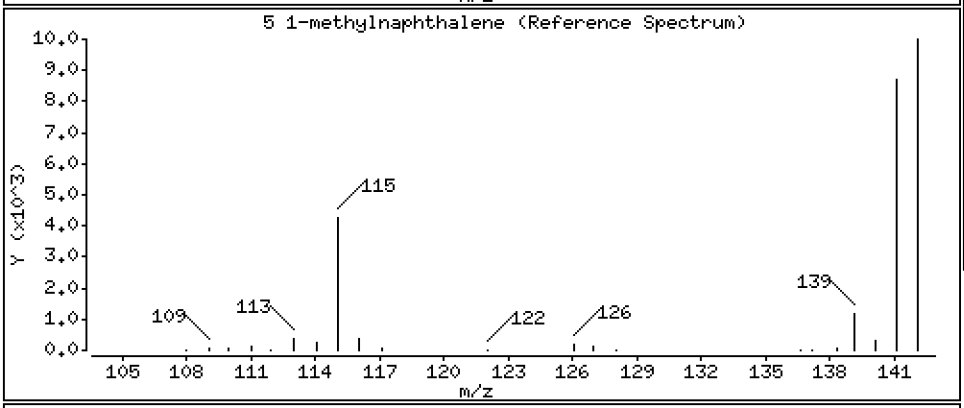
Concentration: 0.03255 ug/mL

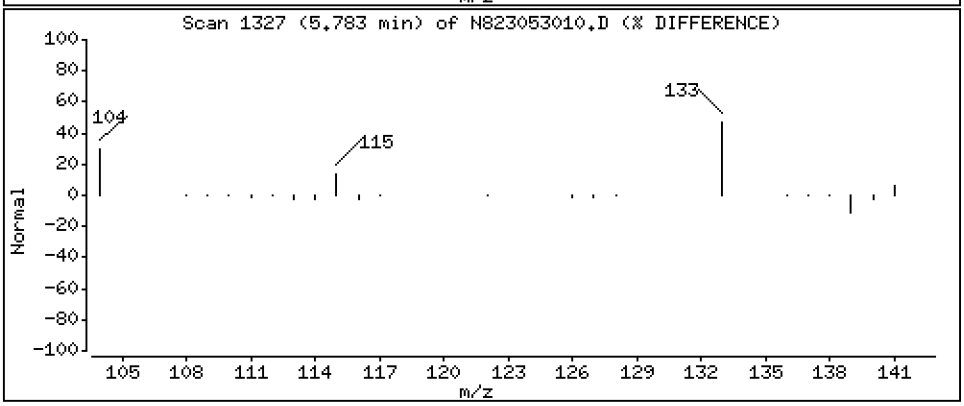












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Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

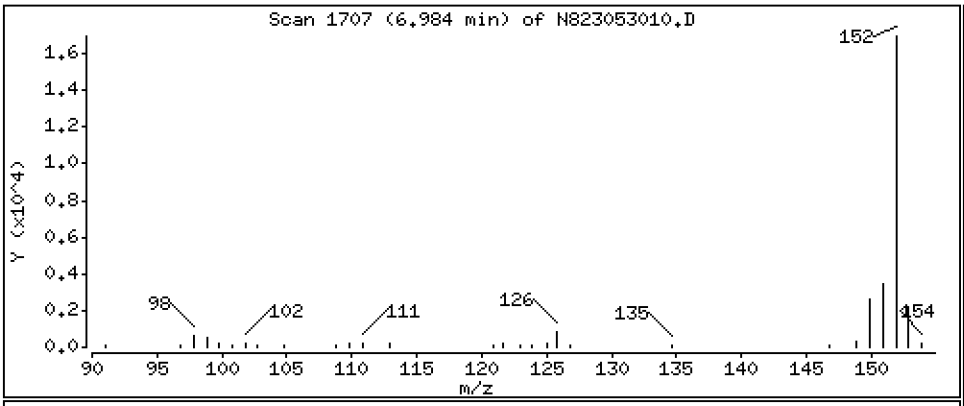
Operator: JZ

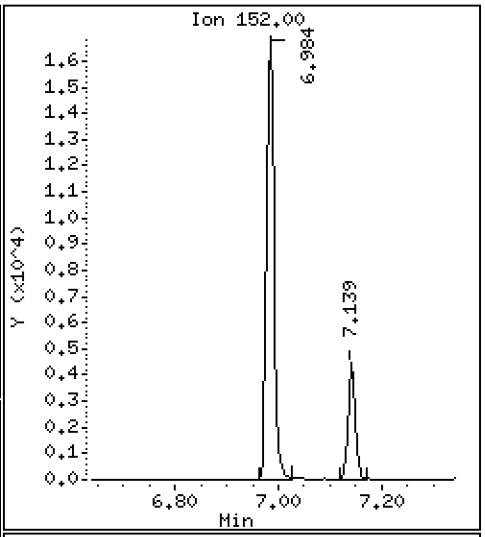
Column phase: Rxi-17sil

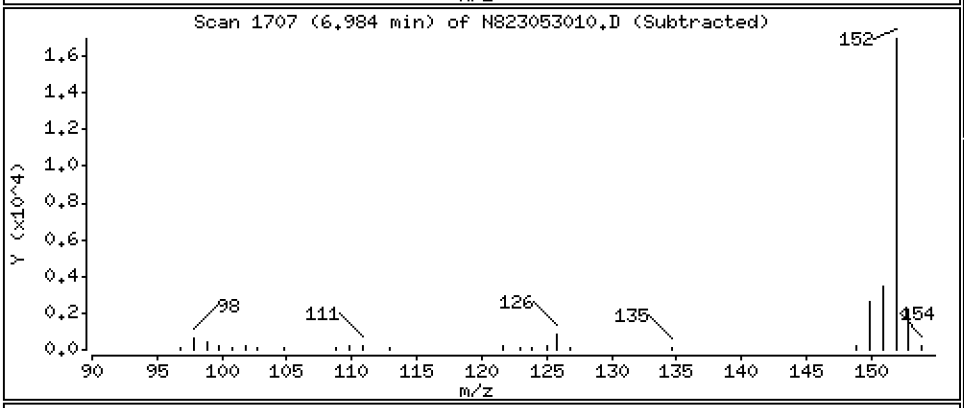
Column diameter: 0.25

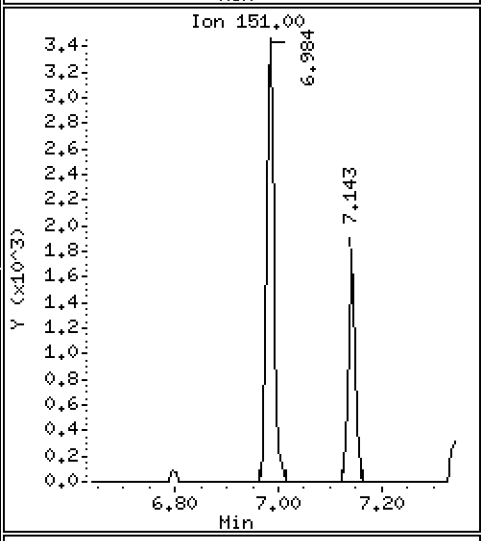
9 Acenaphthylene

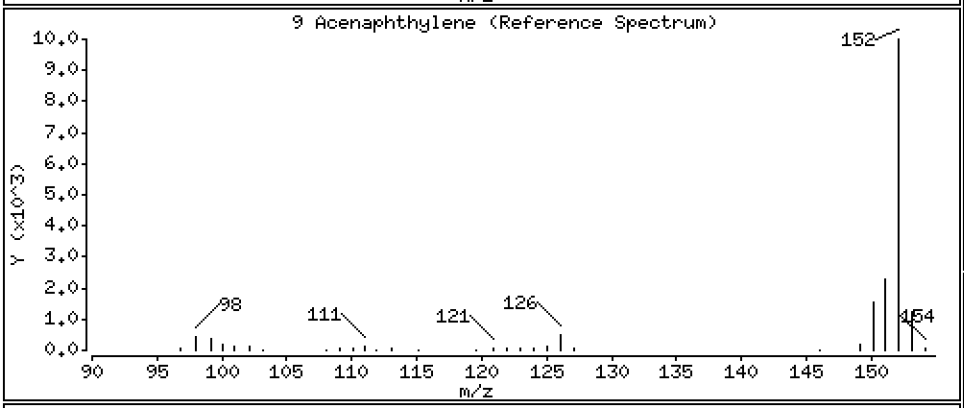
Concentration: 1.723 ug/mL

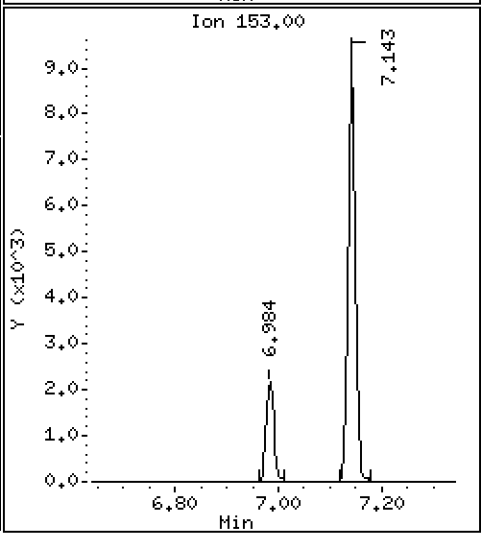


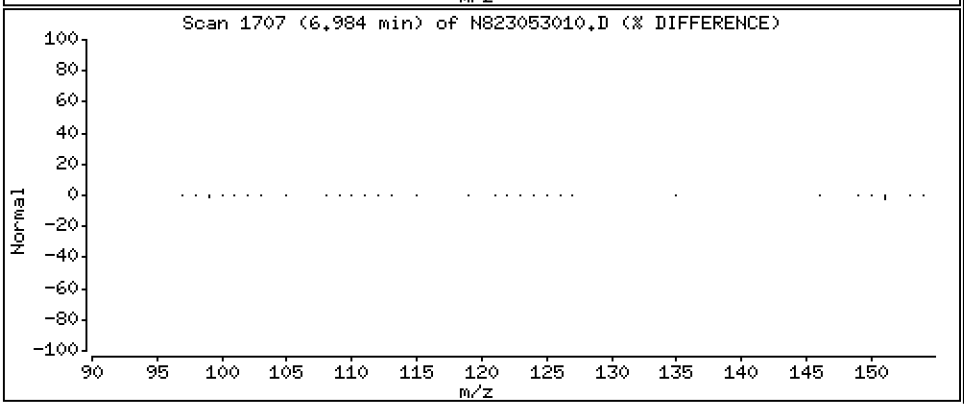












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053010.D

Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

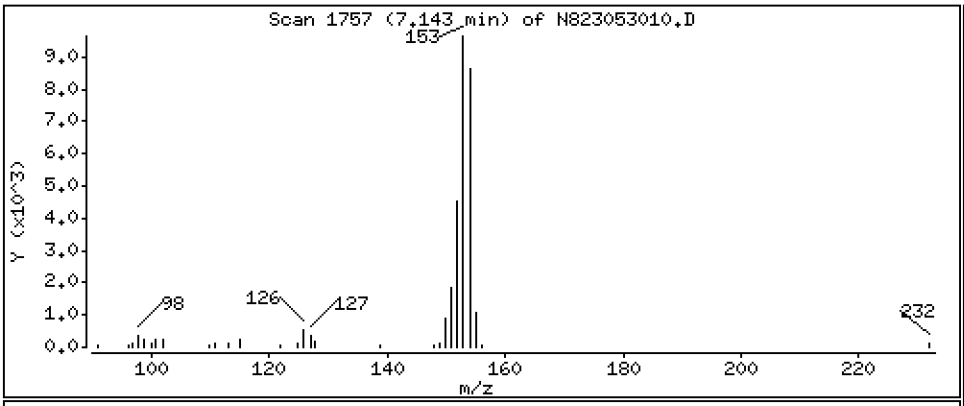
Operator: JZ

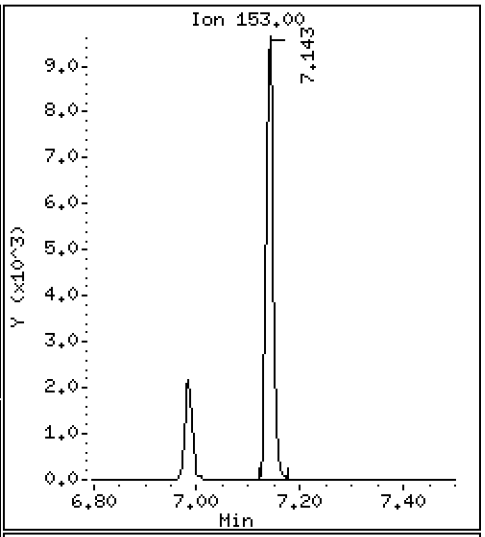
Column phase: Rxi-17sil

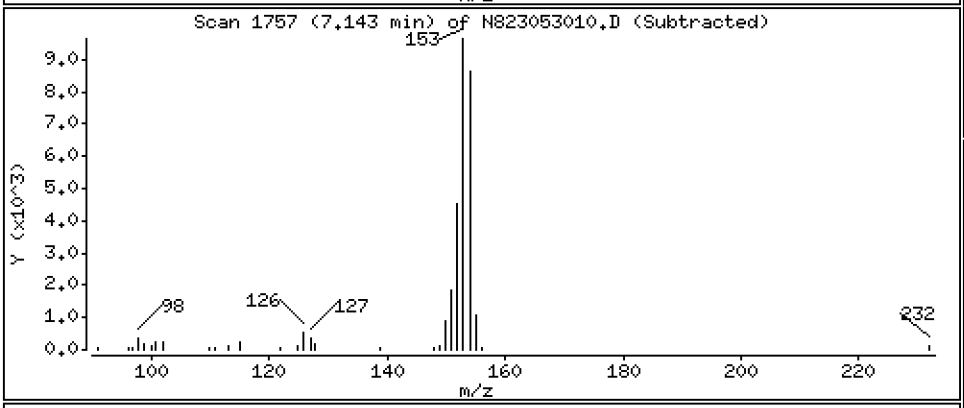
Column diameter: 0.25

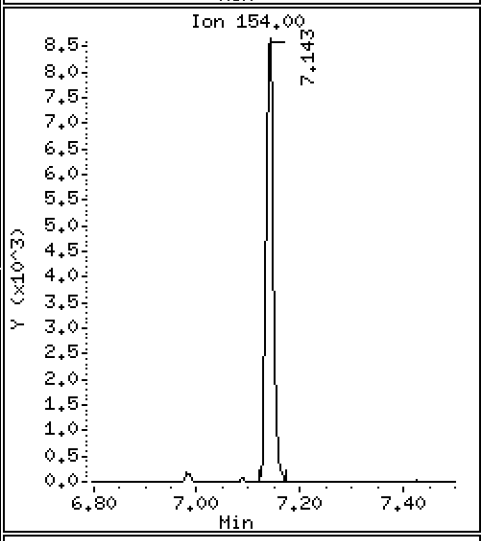
11 Acenaphthene

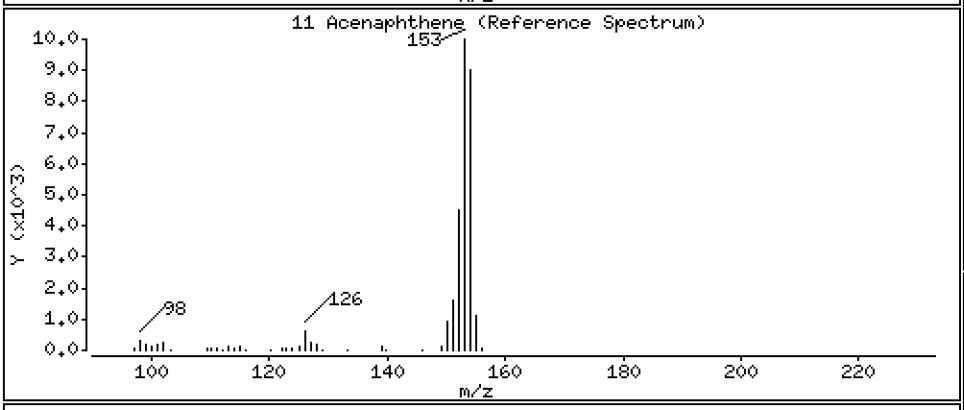
Concentration: 1.508 ug/mL

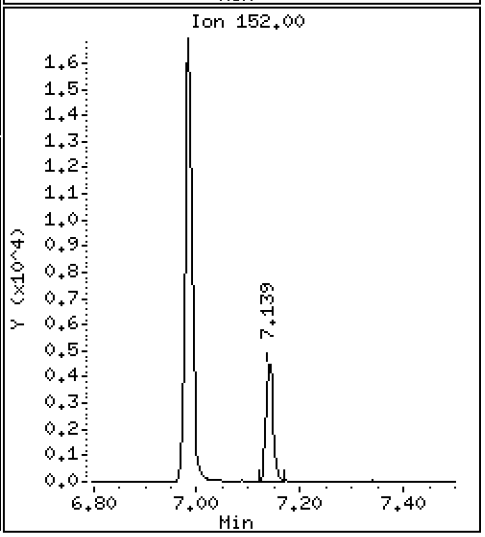


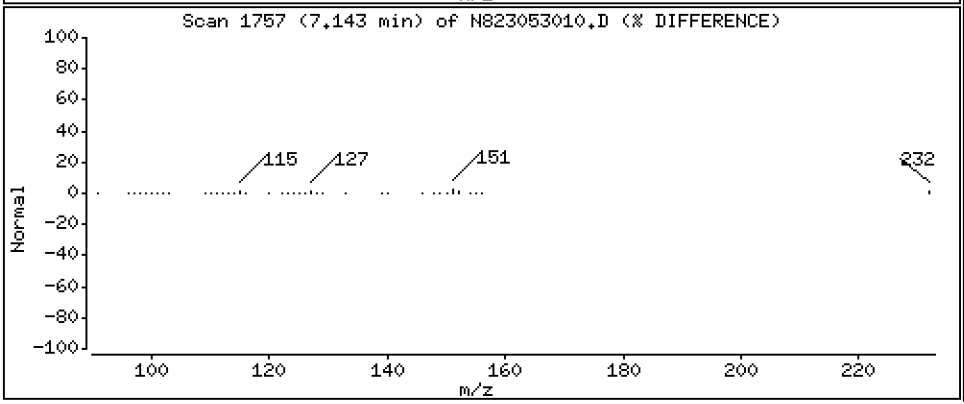












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053010.D

Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

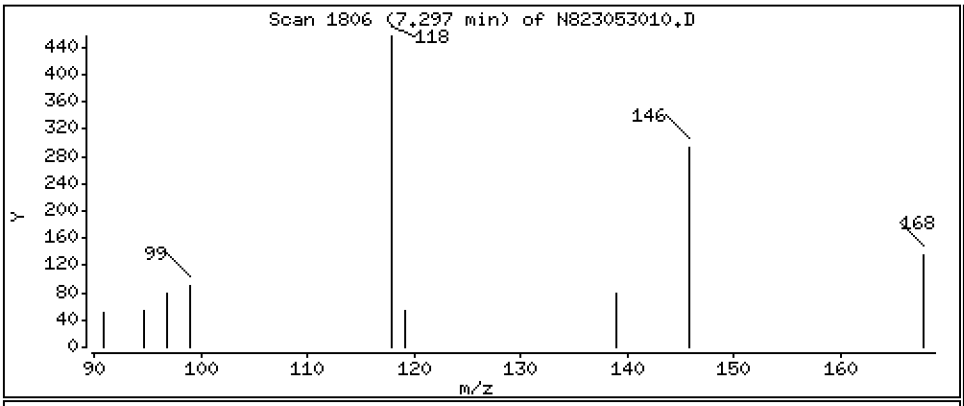
Operator: JZ

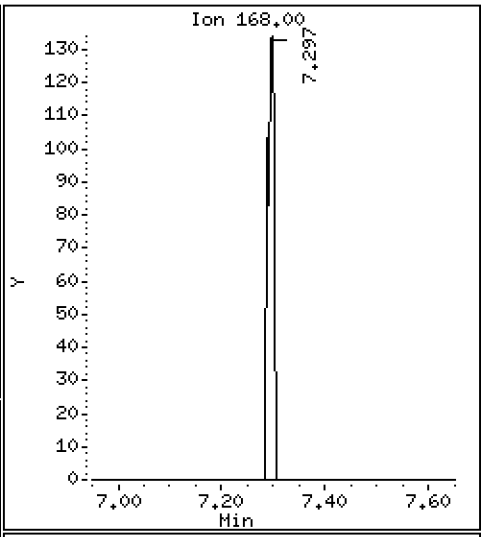
Column phase: Rxi-17sil

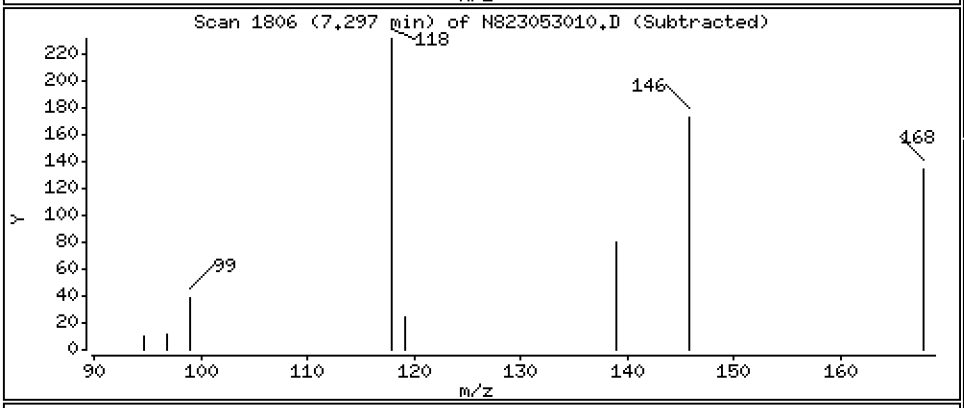
Column diameter: 0.25

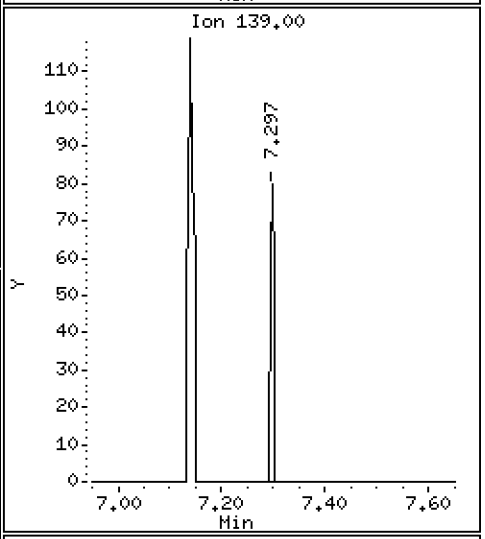
12 Dibenzofuran

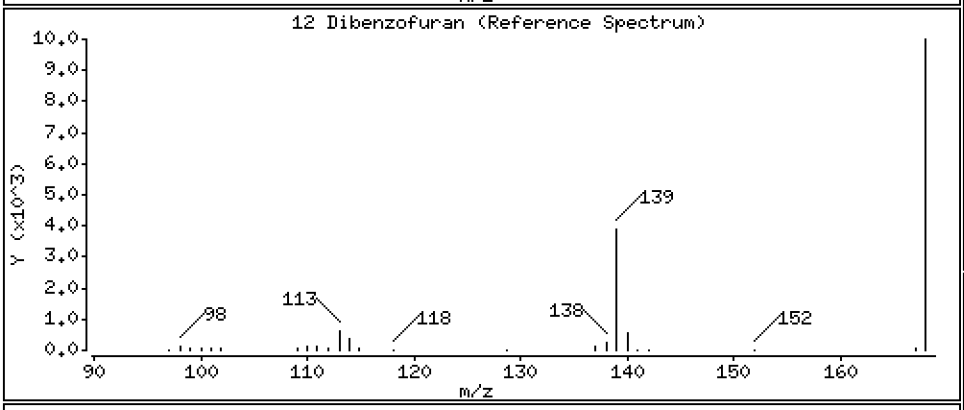
Concentration: 0.01257 ug/mL

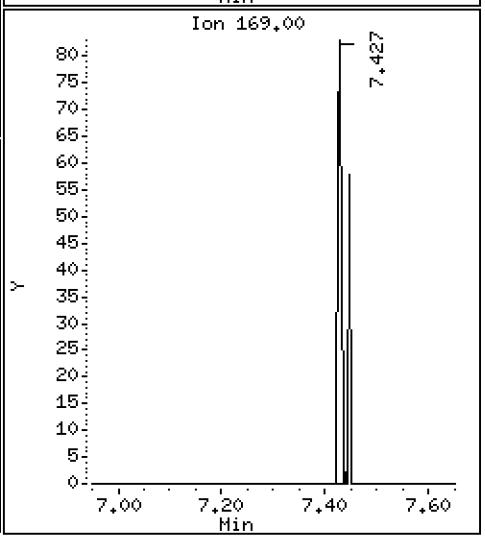


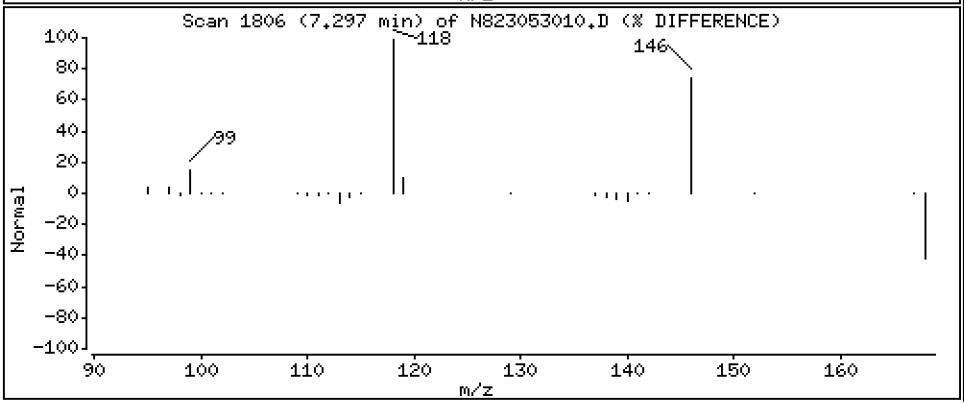












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Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

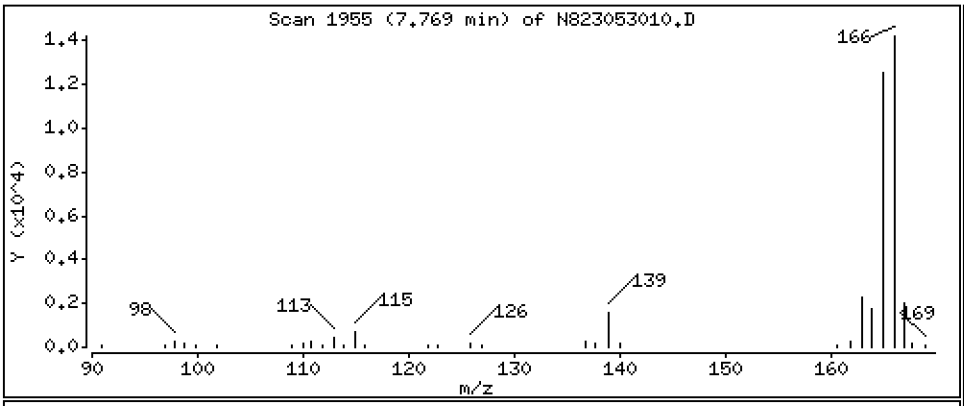
Operator: JZ

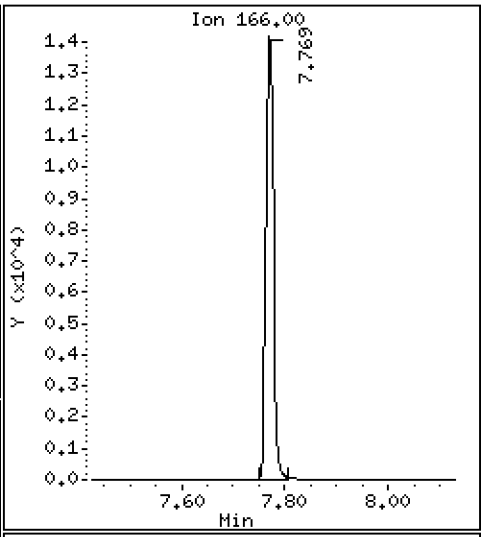
Column phase: Rxi-17sil

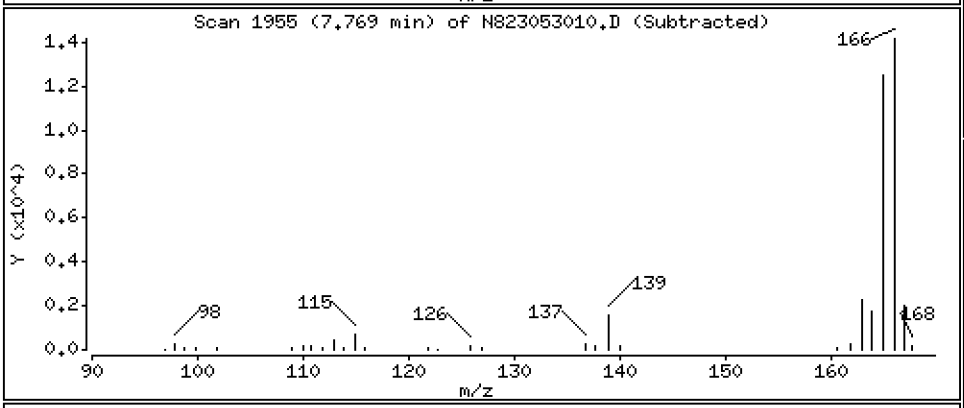
Column diameter: 0.25

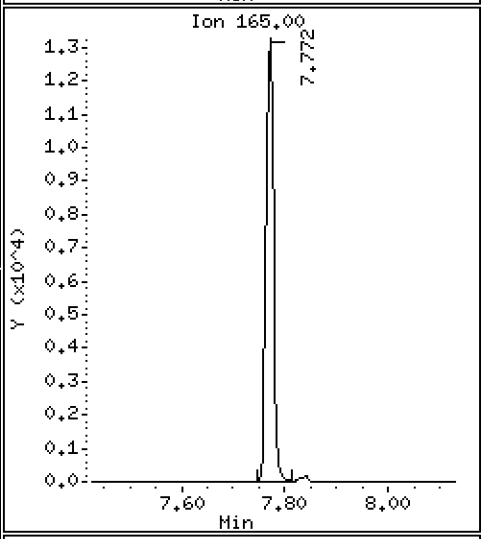
14 Fluorene

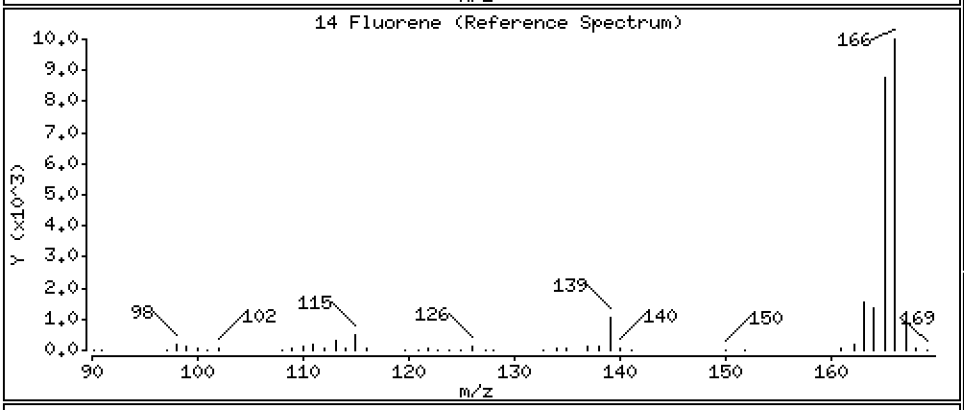
Concentration: 1.867 ug/mL

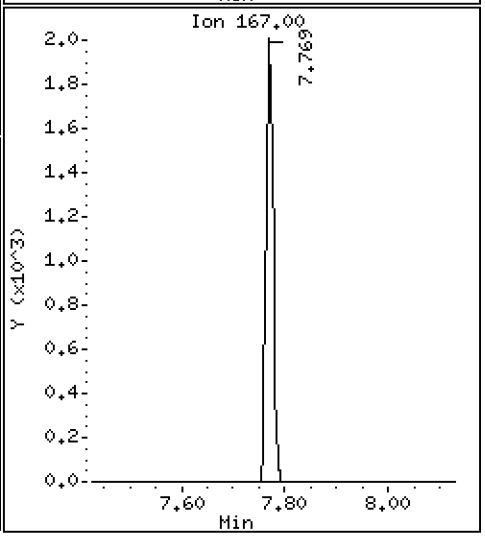


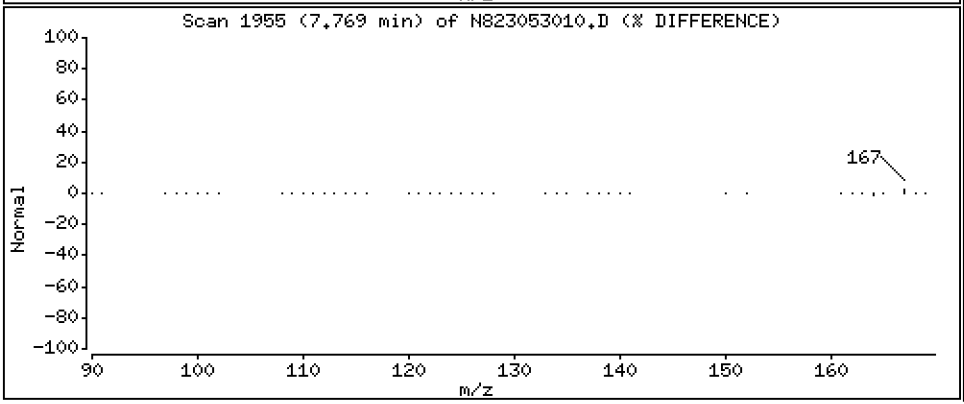












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Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

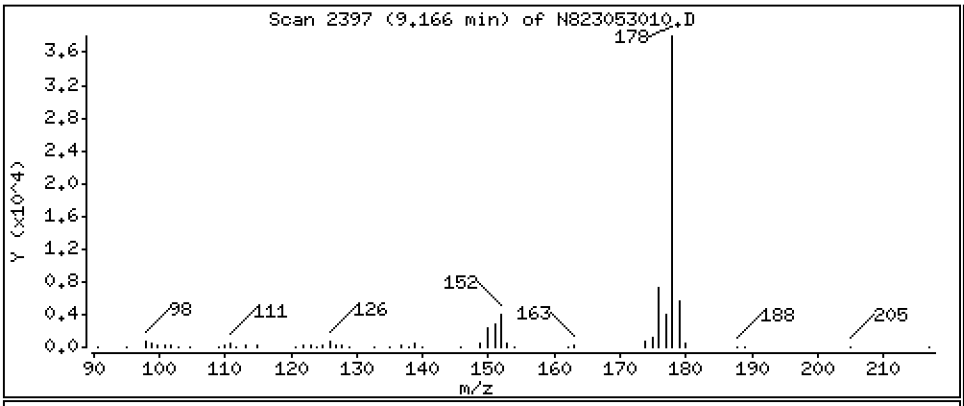
Operator: JZ

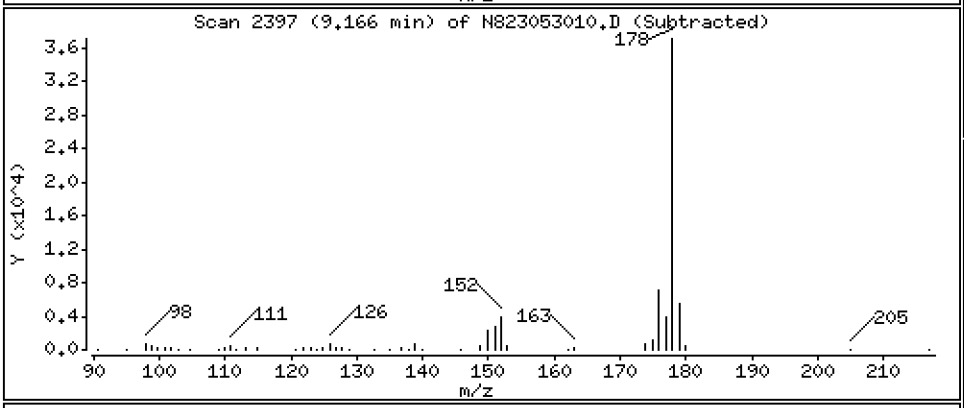
Column phase: Rxi-17sil

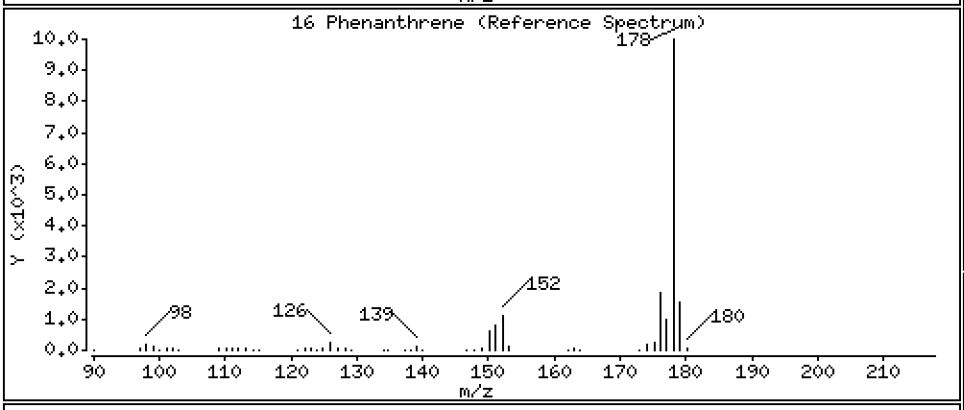
Column diameter: 0.25

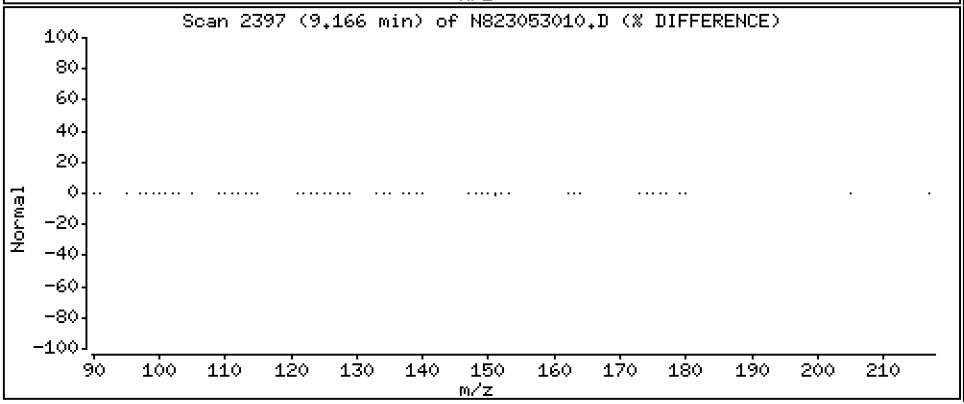
16 Phenanthrene

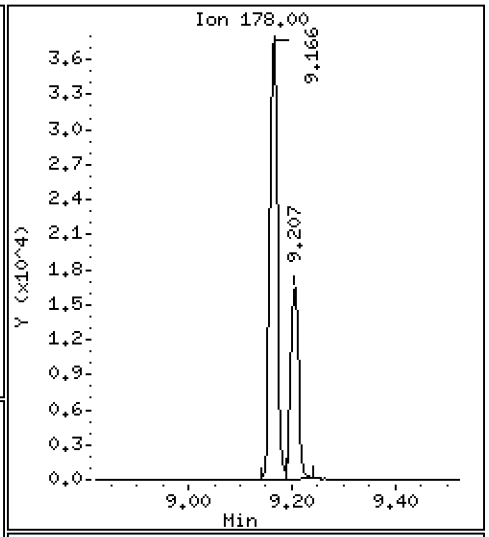
Concentration: 3.413 ug/mL

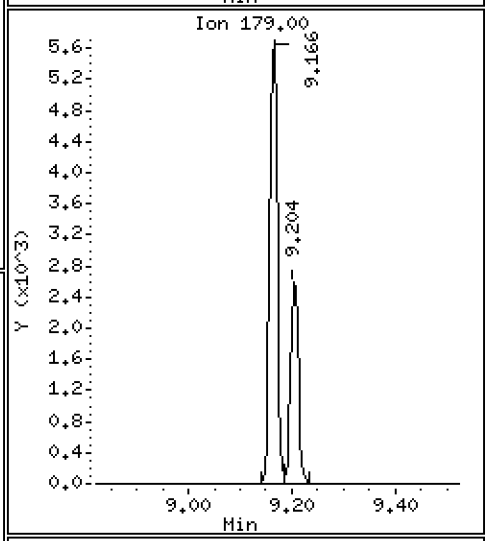


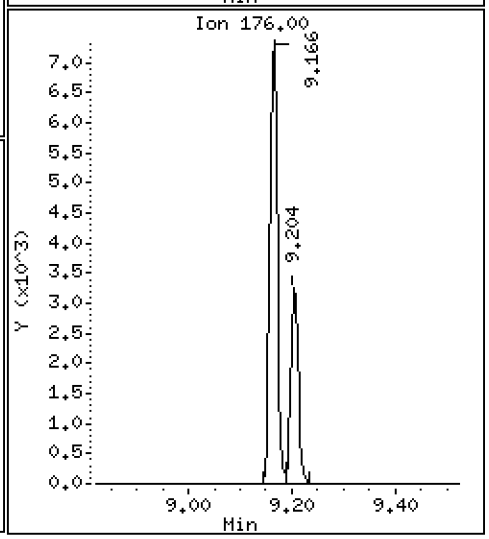












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Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

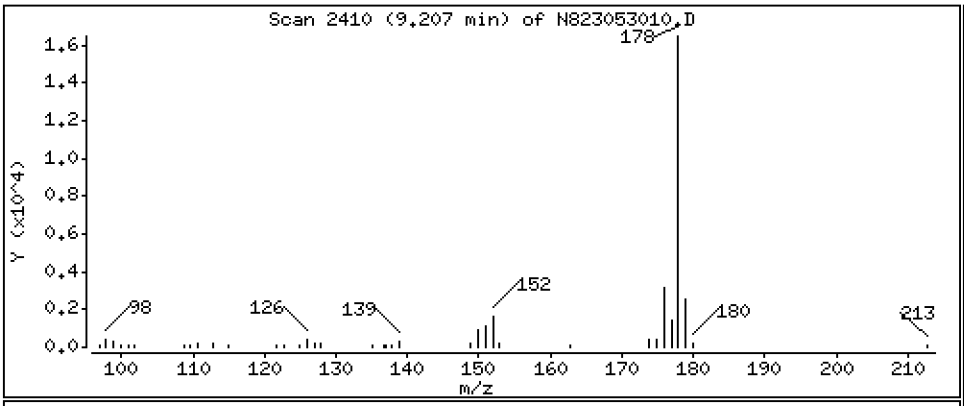
Operator: JZ

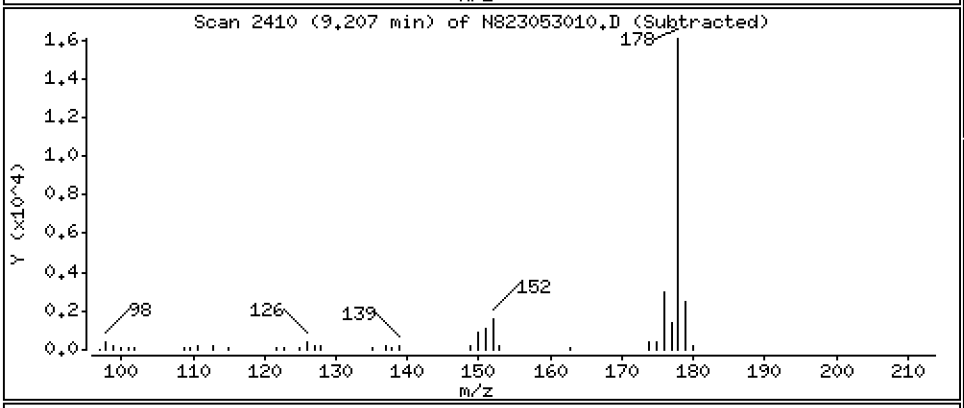
Column phase: Rxi-17sil

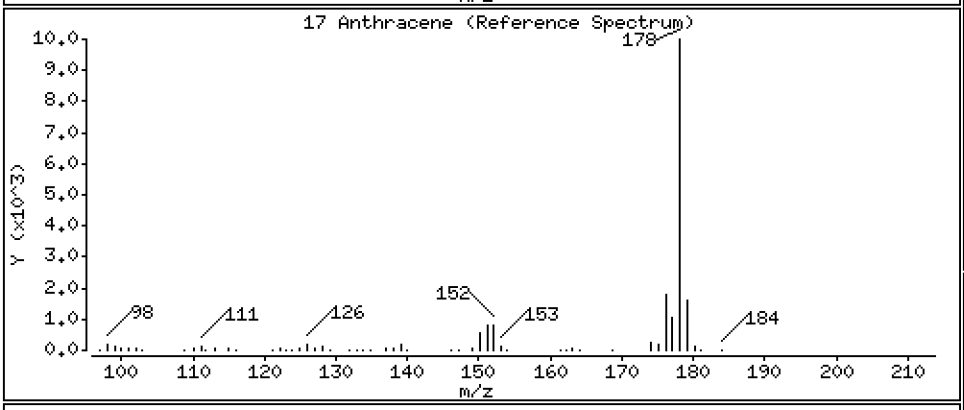
Column diameter: 0.25

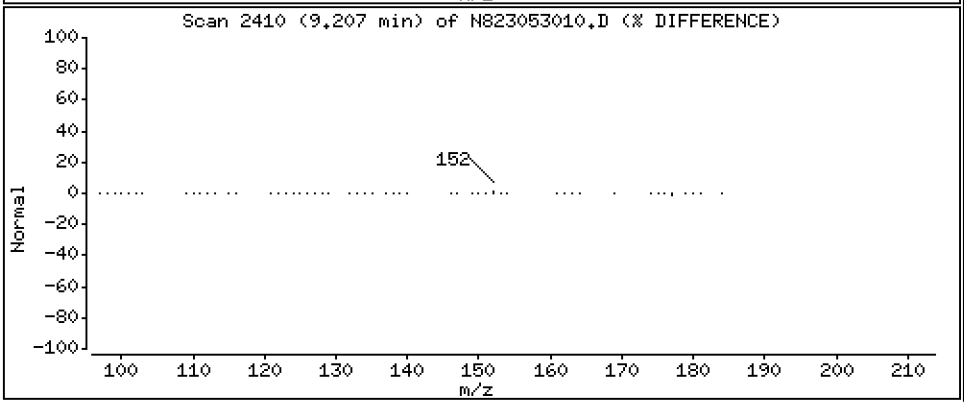
17 Anthracene

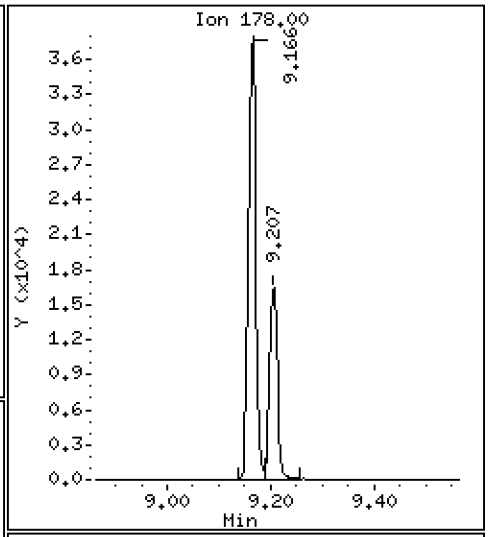
Concentration: 1.655 ug/mL

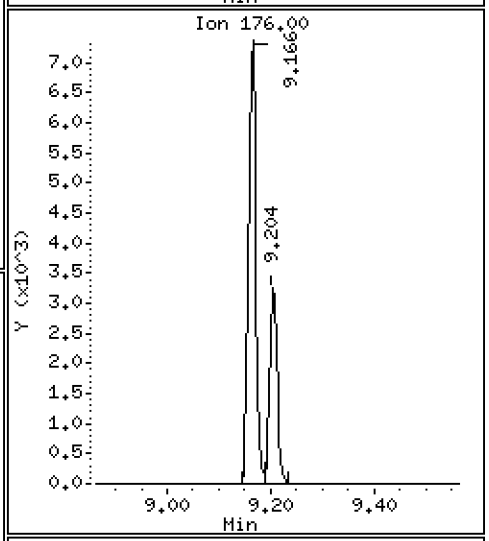


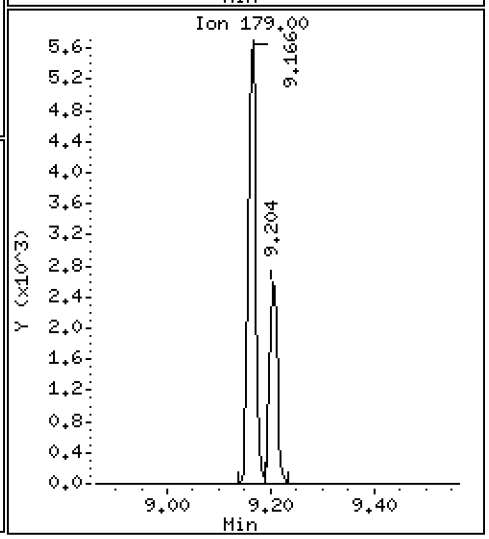












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Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

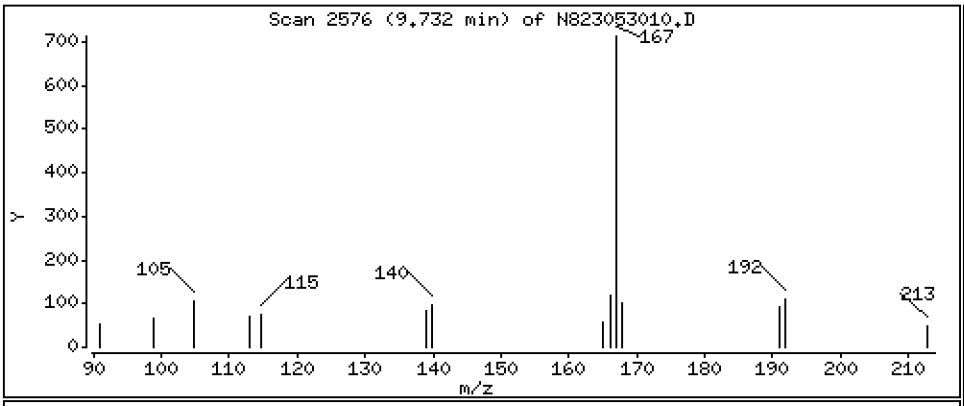
Operator: JZ

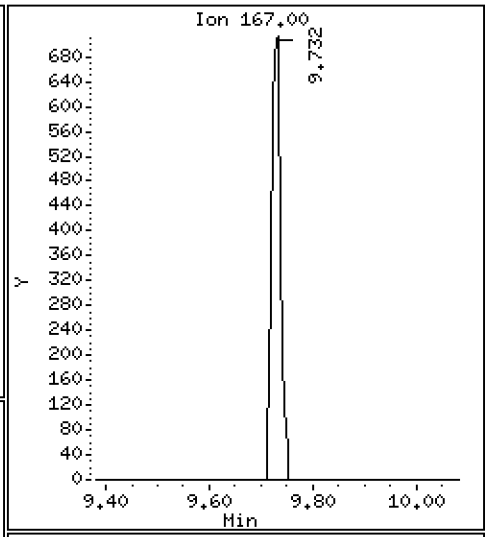
Column phase: Rxi-17sil

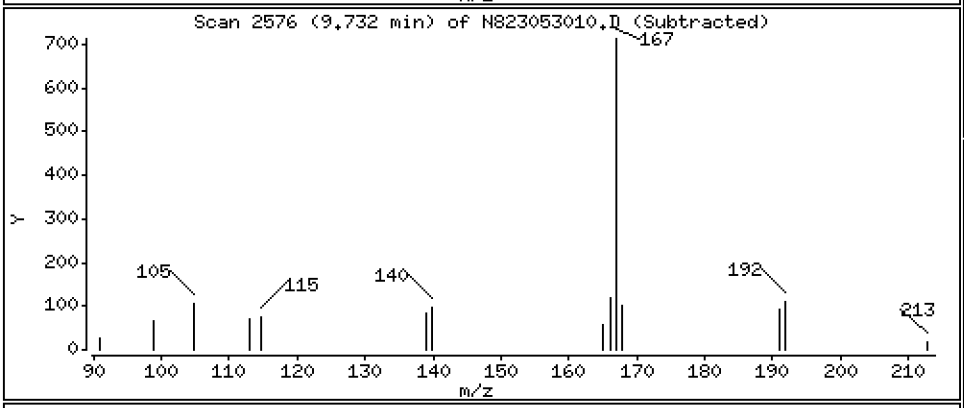
Column diameter: 0.25

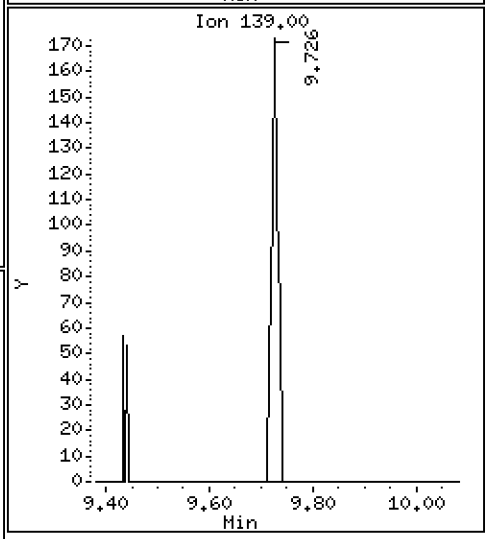
19 Carbazole

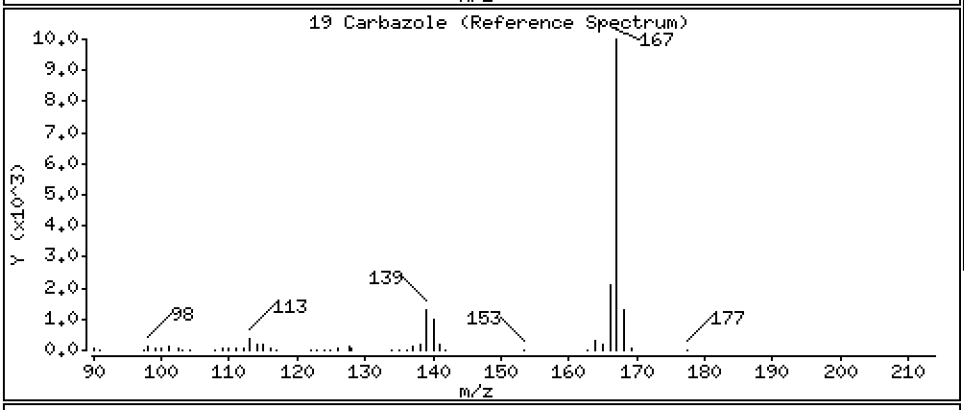
Concentration: 0.09209 ug/mL

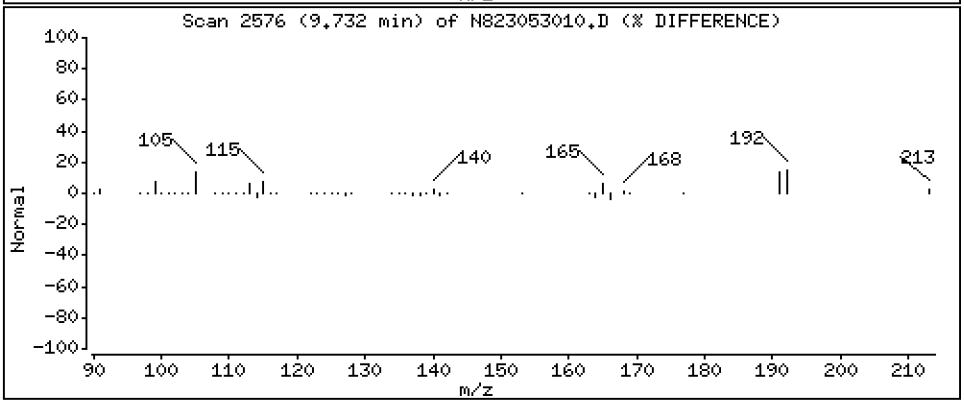












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Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

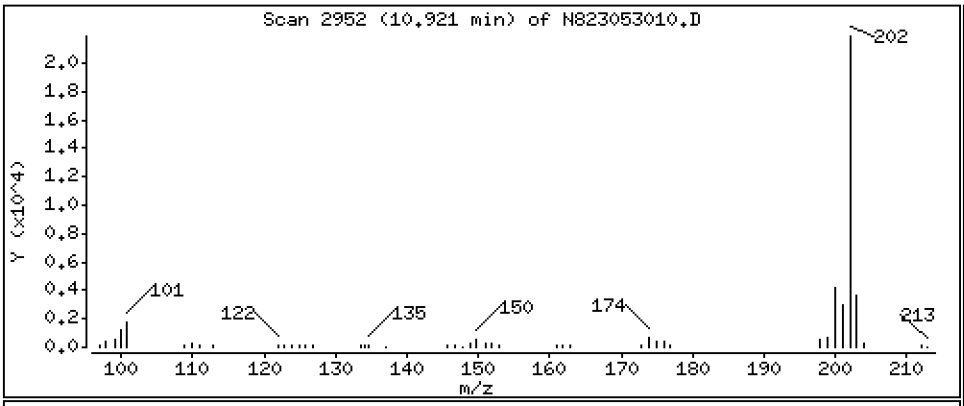
Operator: JZ

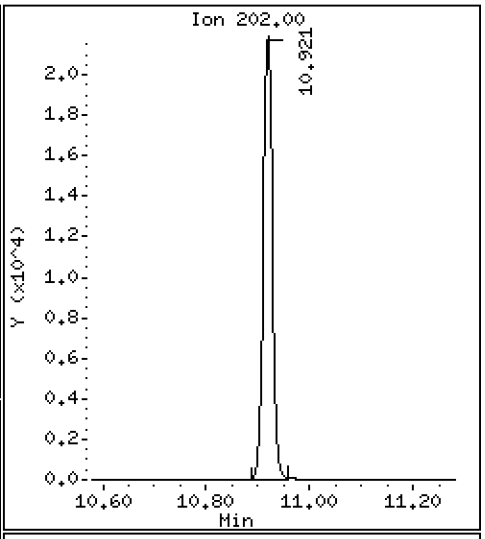
Column phase: Rxi-17sil

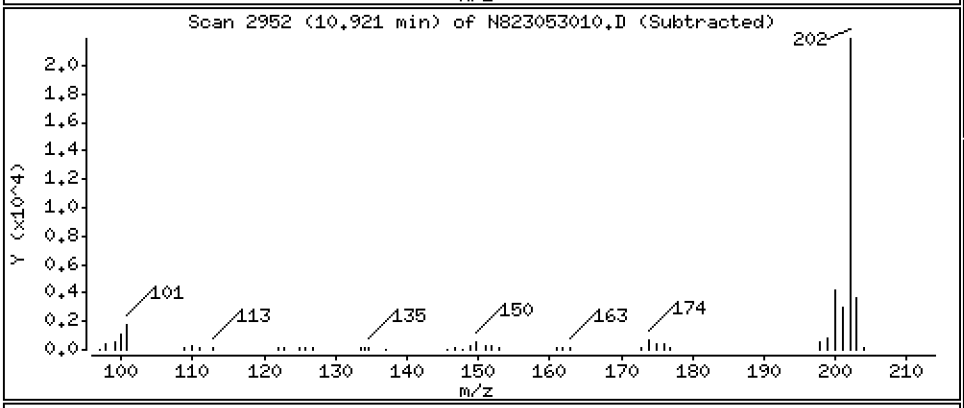
Column diameter: 0.25

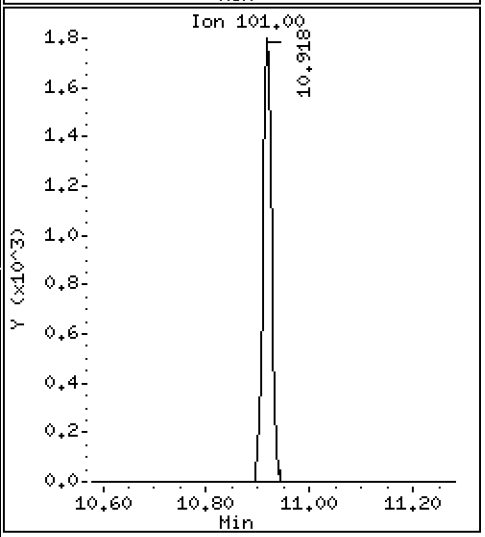
22 Fluoranthene

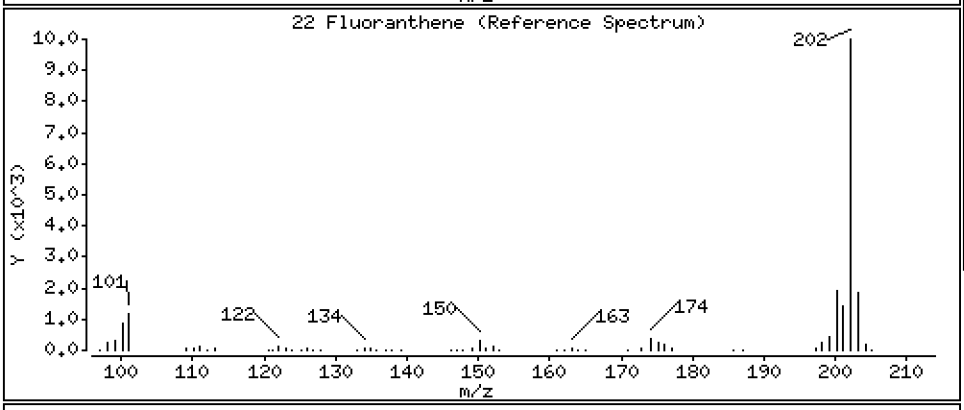
Concentration: 2.192 ug/mL

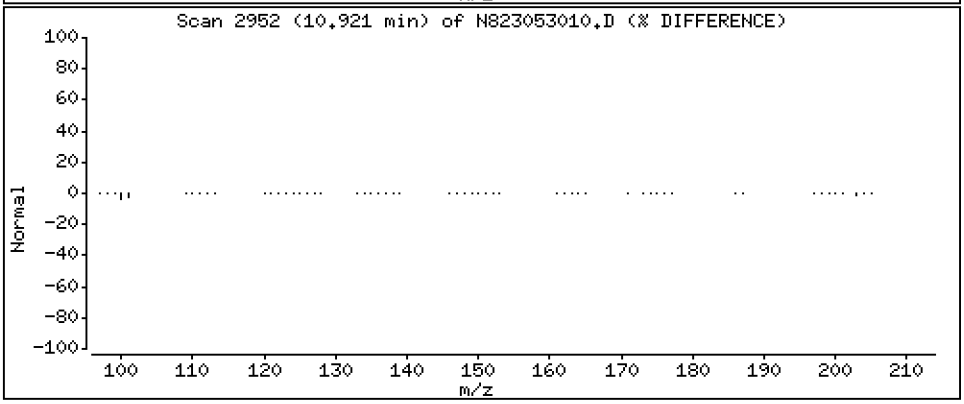












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Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

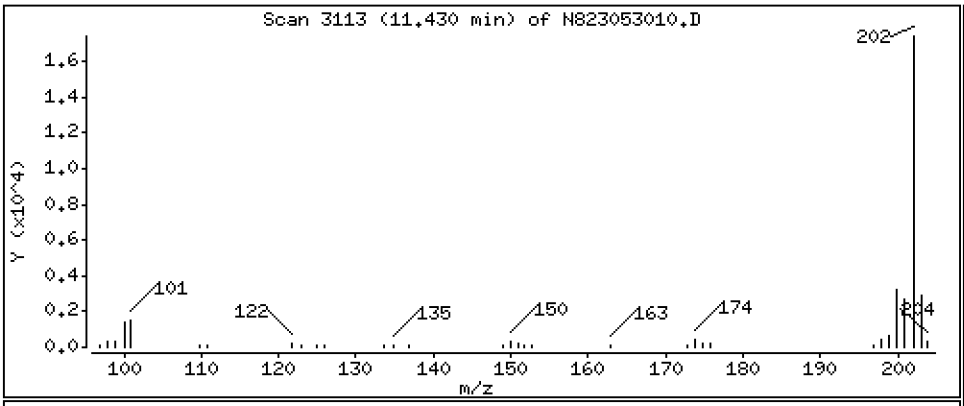
Operator: JZ

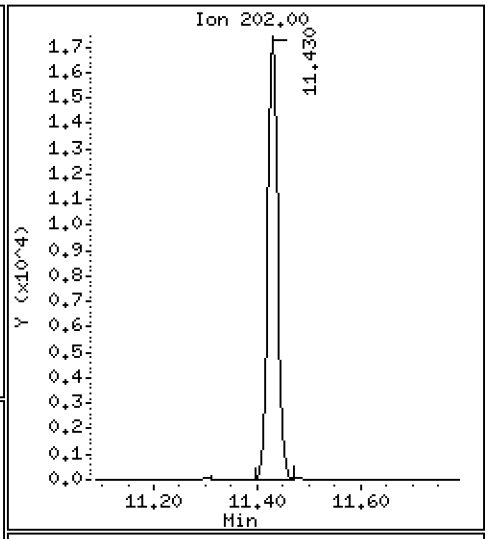
Column phase: Rxi-17sil

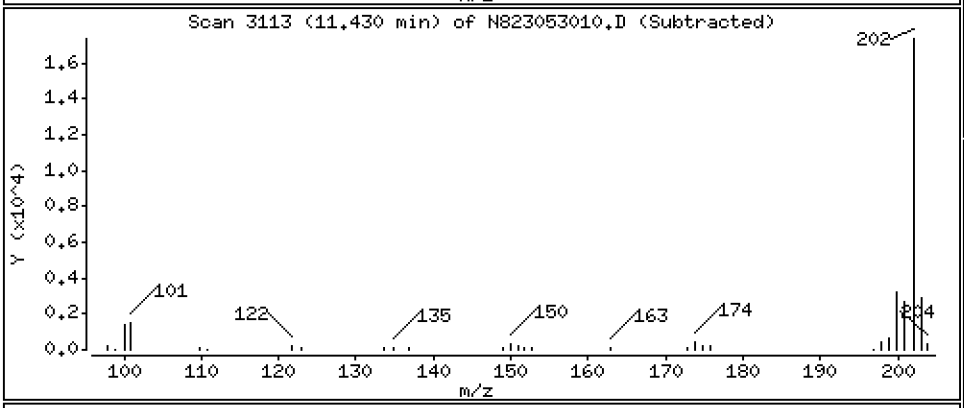
Column diameter: 0.25

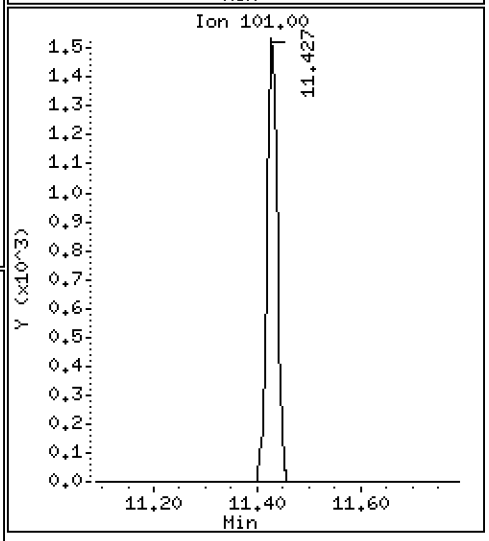
23 Pyrene

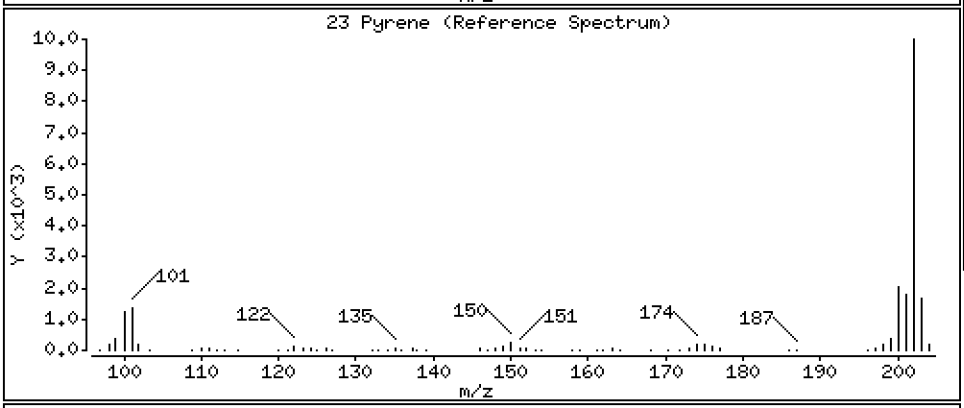
Concentration: 1.825 ug/mL

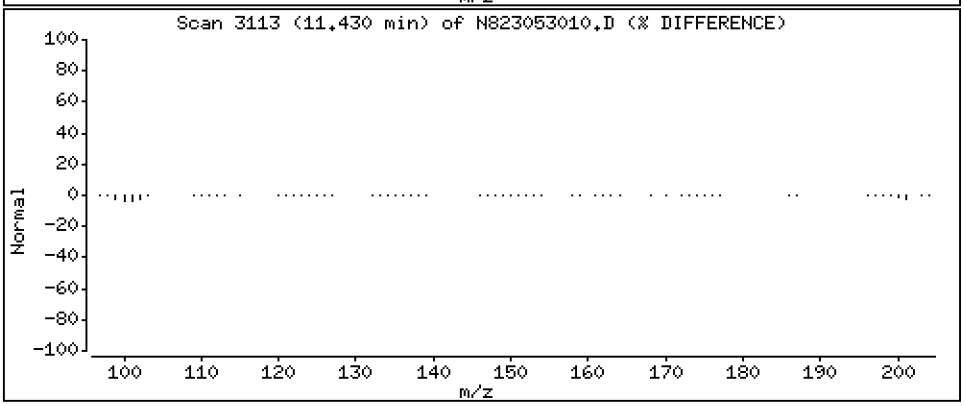












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Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

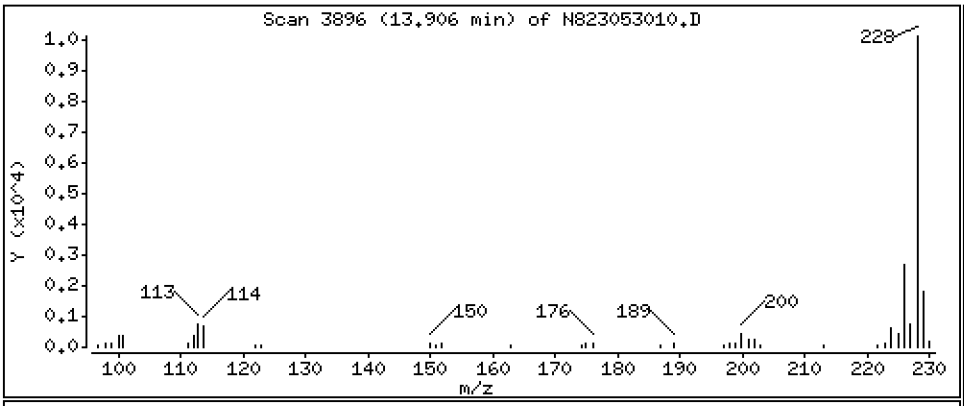
Operator: JZ

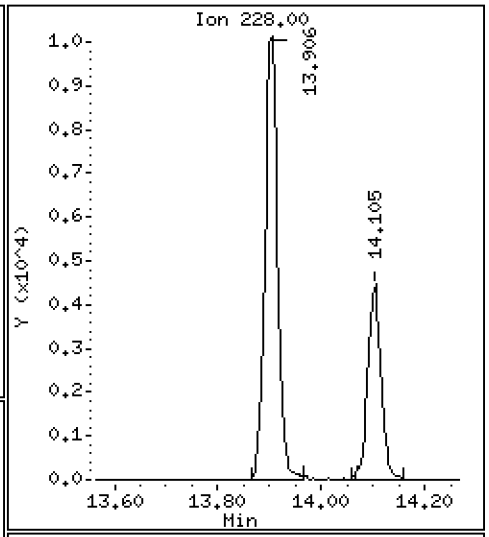
Column phase: Rxi-17sil

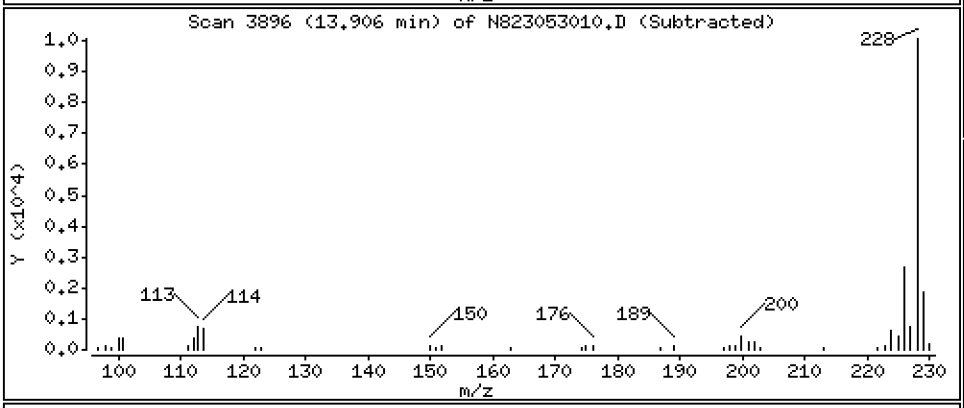
Column diameter: 0.25

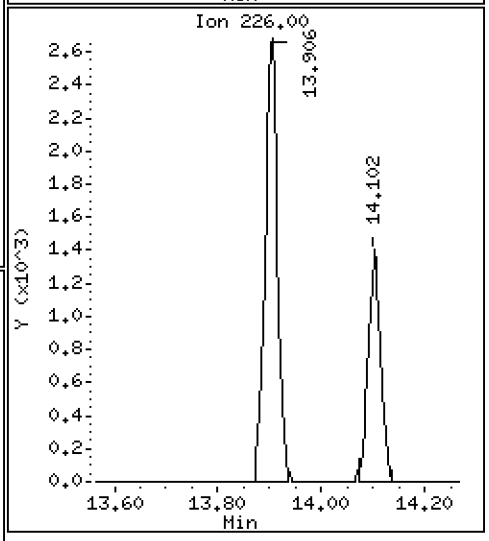
24 Benzo(a)anthracene

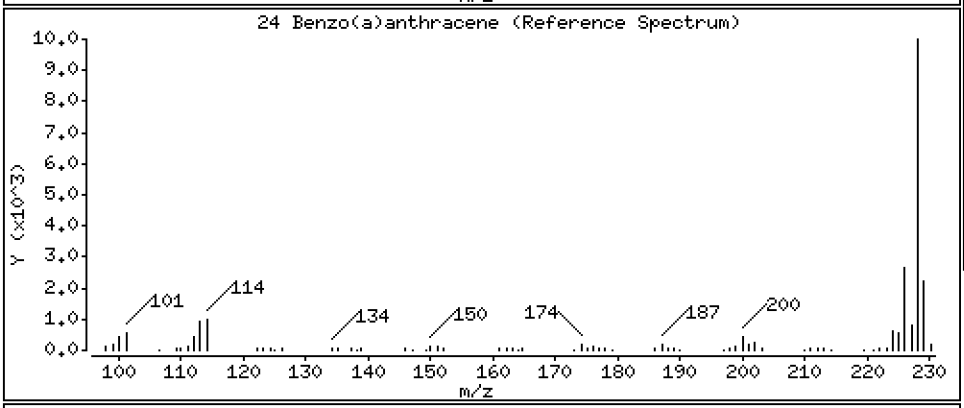
Concentration: 1.353 ug/mL

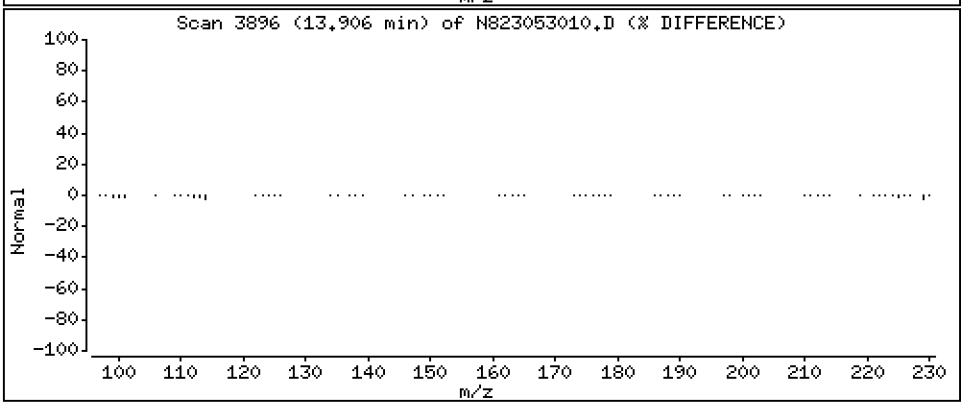












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Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

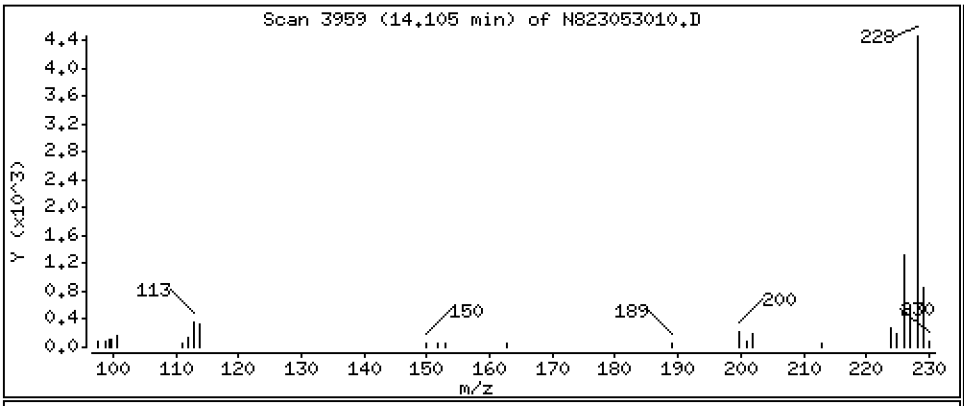
Operator: JZ

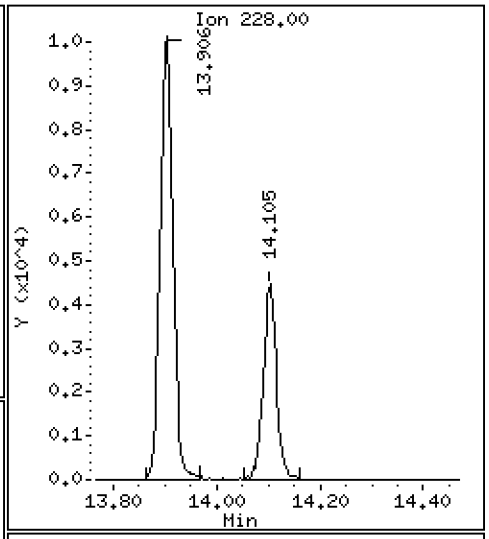
Column phase: Rxi-17sil

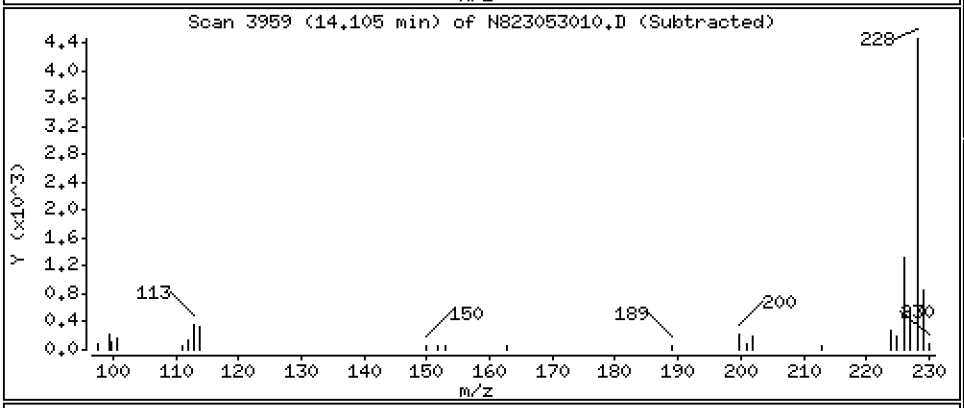
Column diameter: 0.25

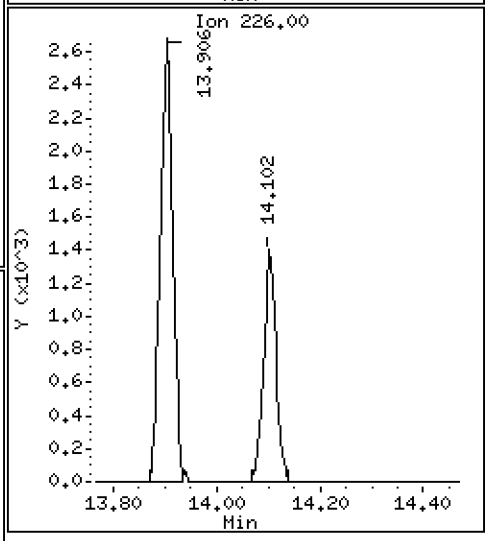
27 Chrysene

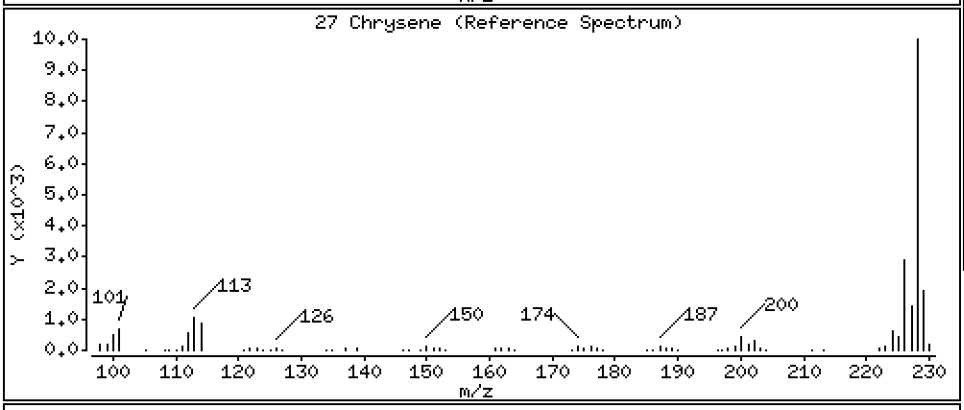
Concentration: 0.6311 ug/mL

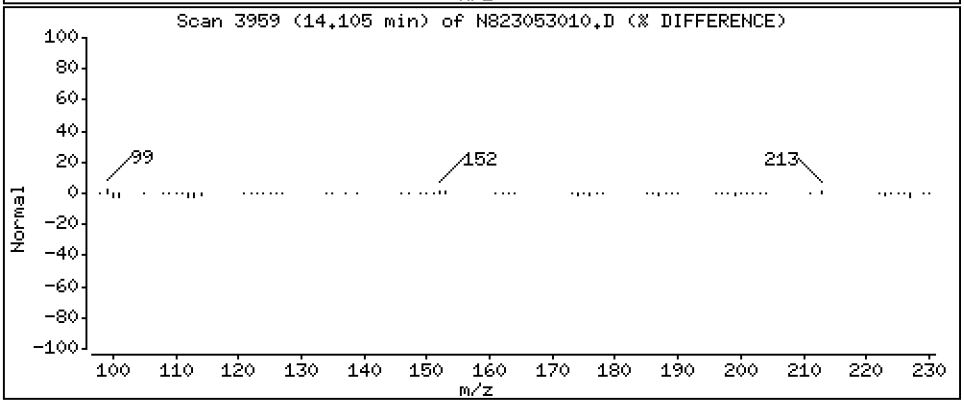












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Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

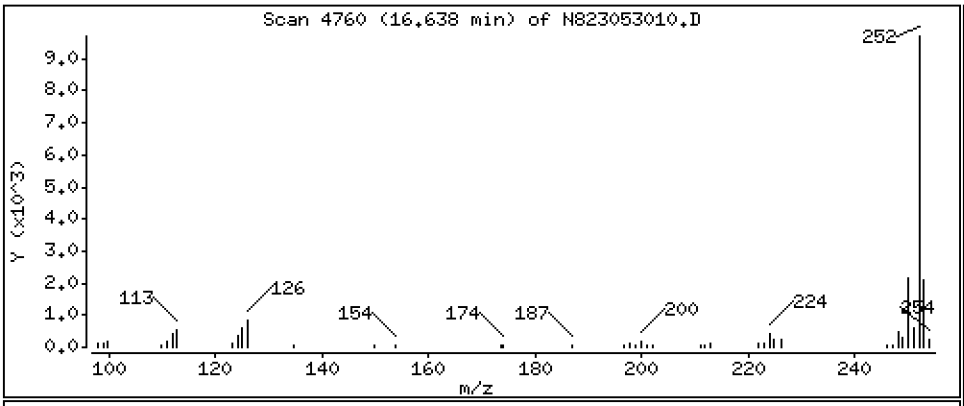
Operator: JZ

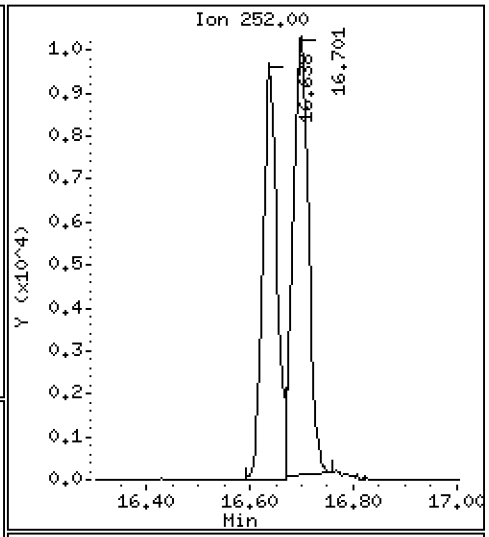
Column phase: Rxi-17sil

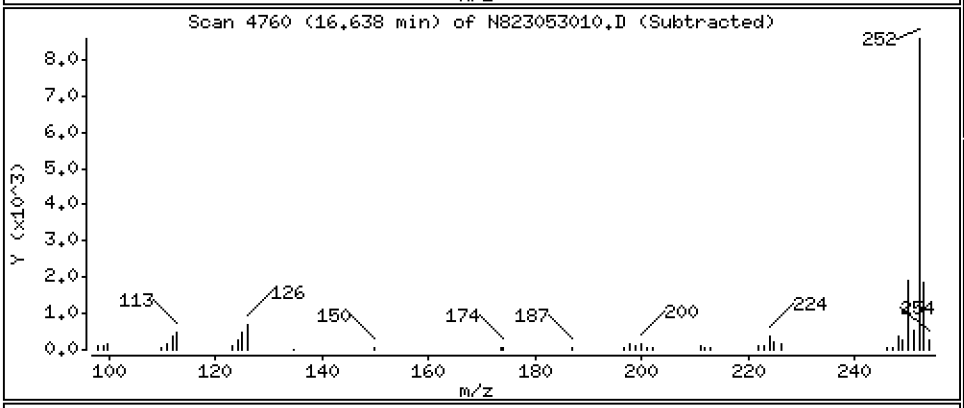
Column diameter: 0.25

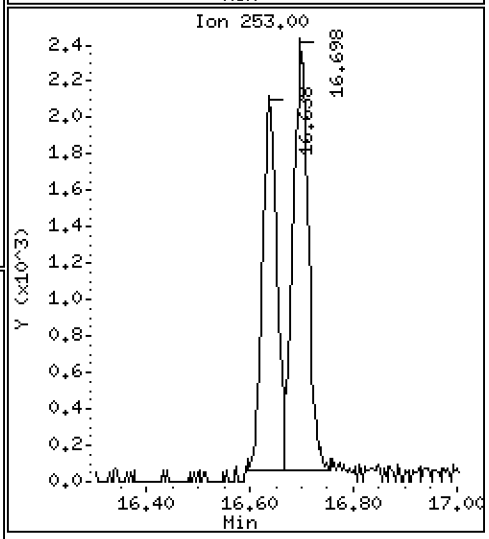
28 Benzo(b)fluoranthene

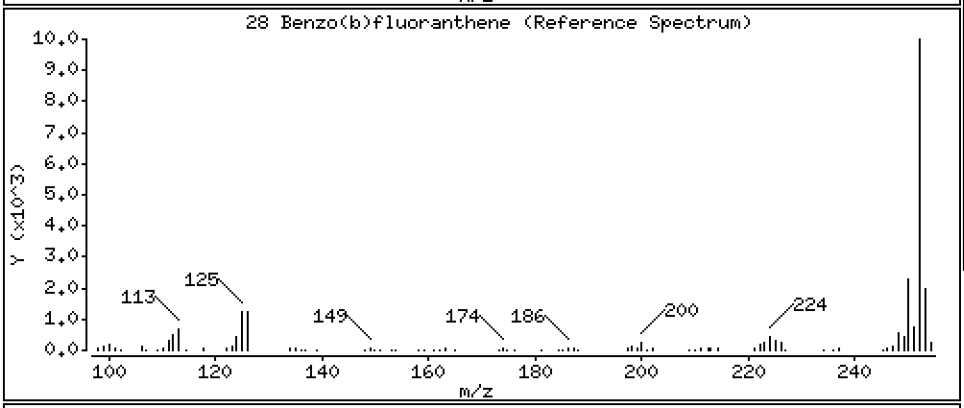
Concentration: 1.619 ug/mL

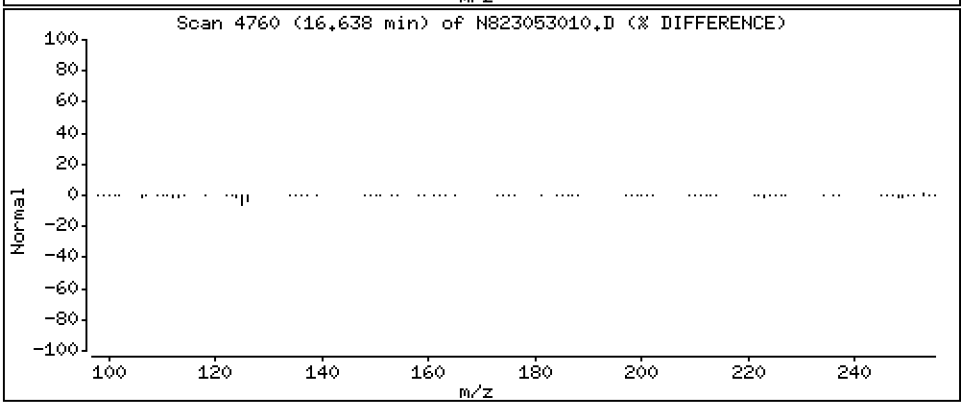












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Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

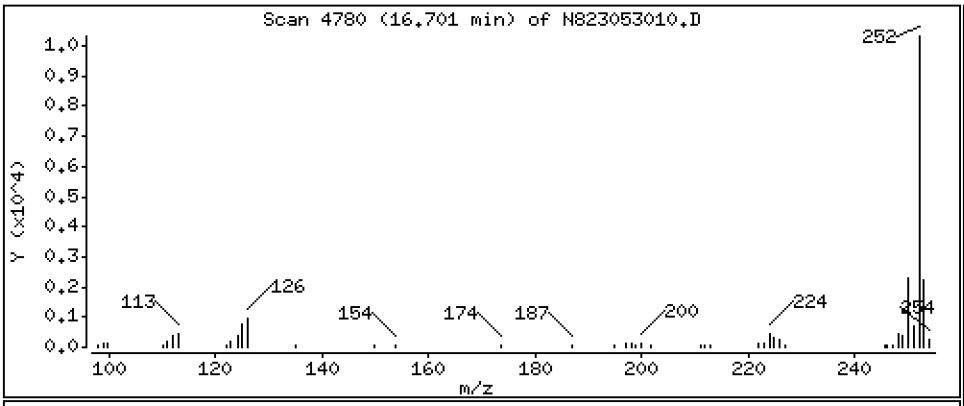
Operator: JZ

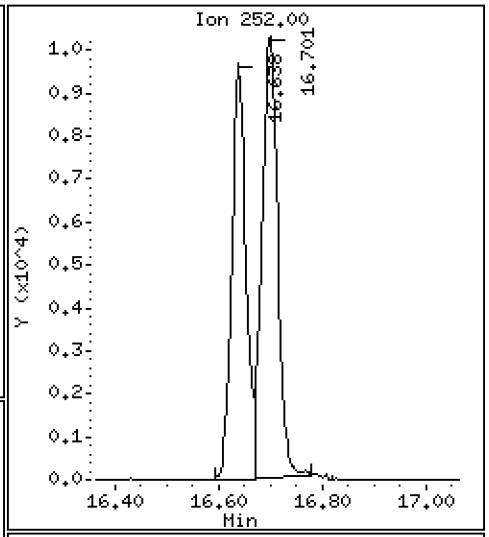
Column phase: Rxi-17sil

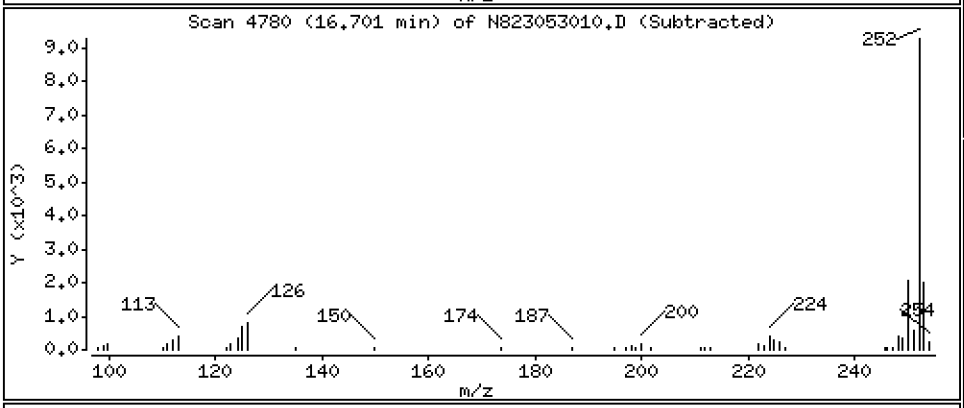
Column diameter: 0.25

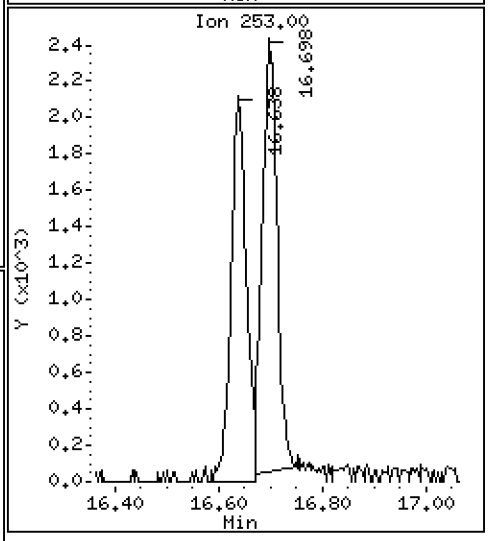
29 Benzo(k)fluoranthene

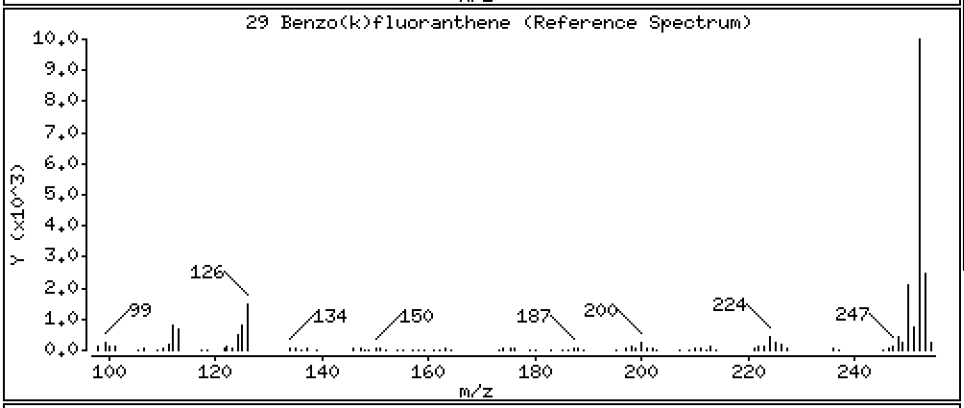
Concentration: 2.007 ug/mL

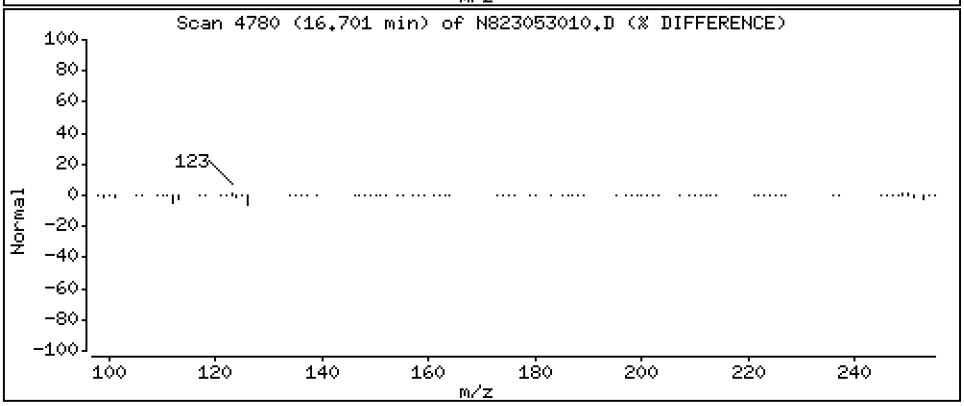












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Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

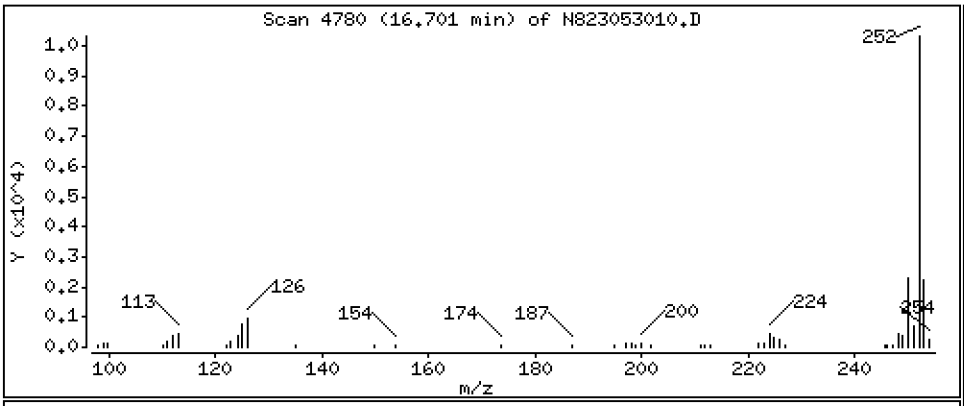
Operator: JZ

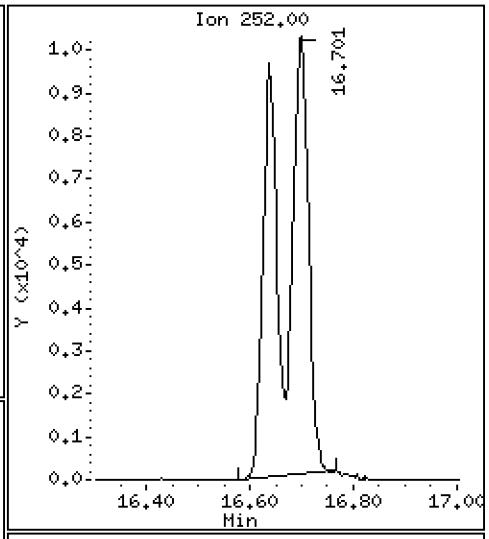
Column phase: Rxi-17sil

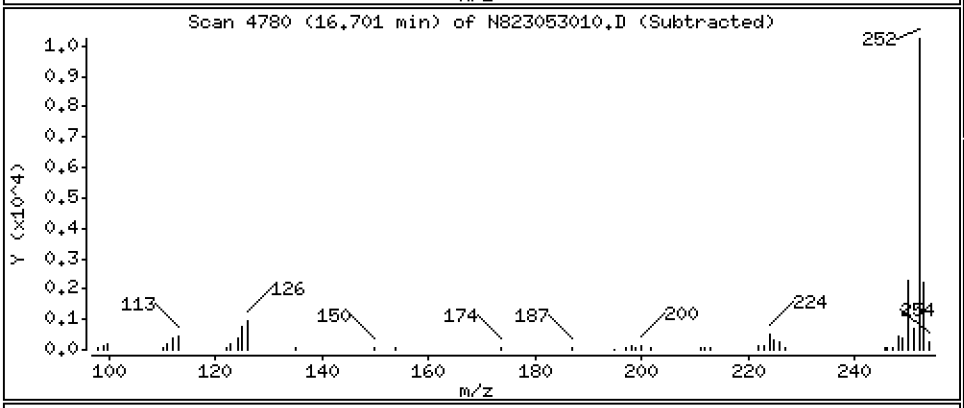
Column diameter: 0.25

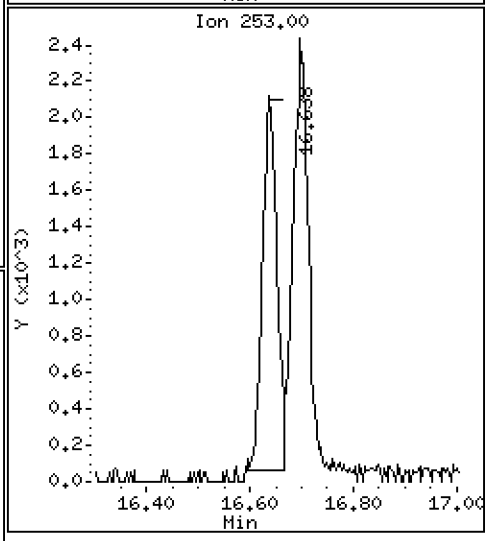
31 Total Benzofluoranthenes

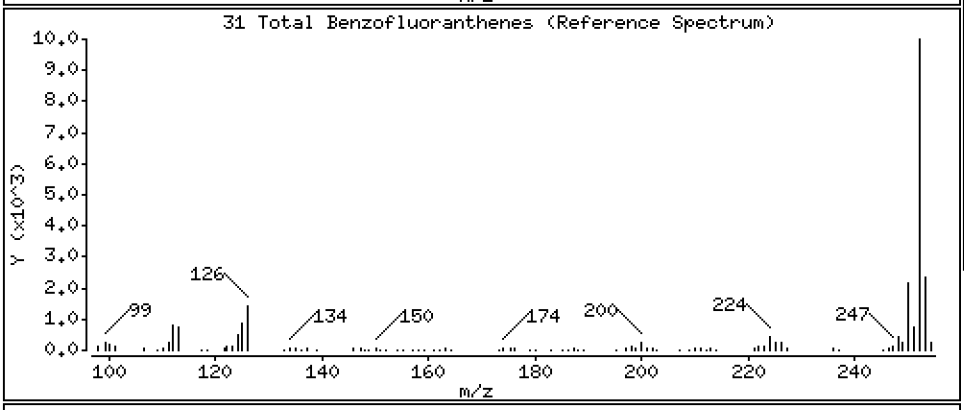
Concentration: 3.661 ug/mL

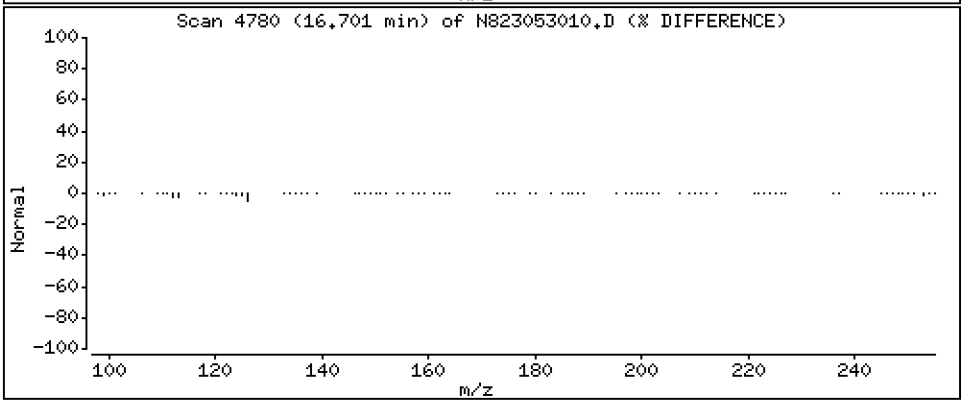












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Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

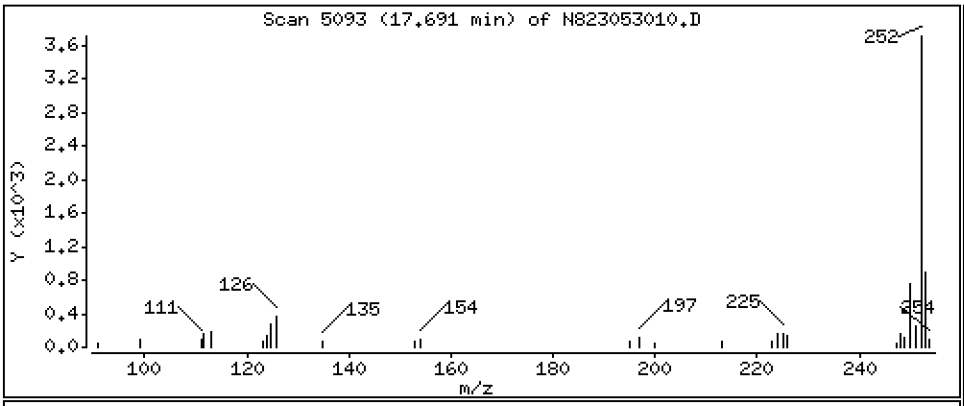
Operator: JZ

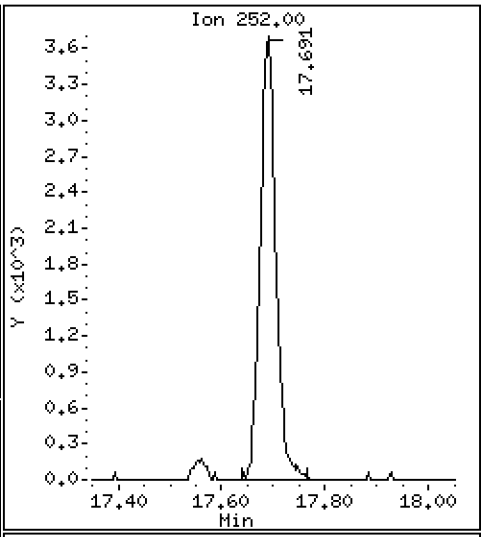
Column phase: Rxi-17sil

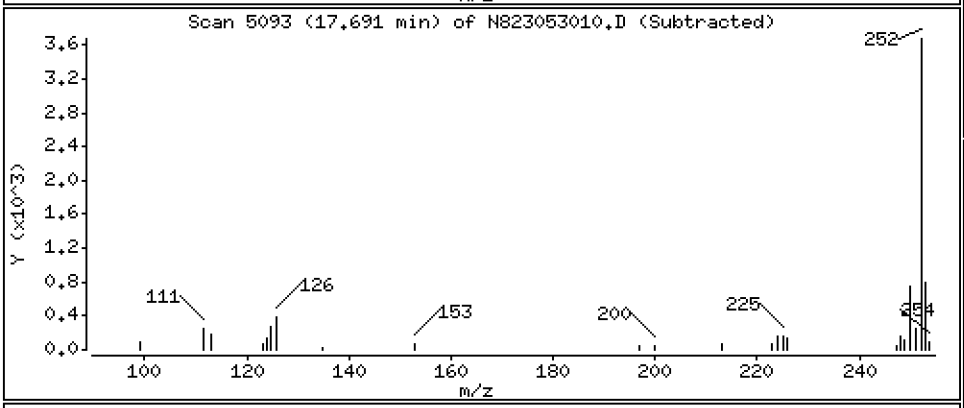
Column diameter: 0.25

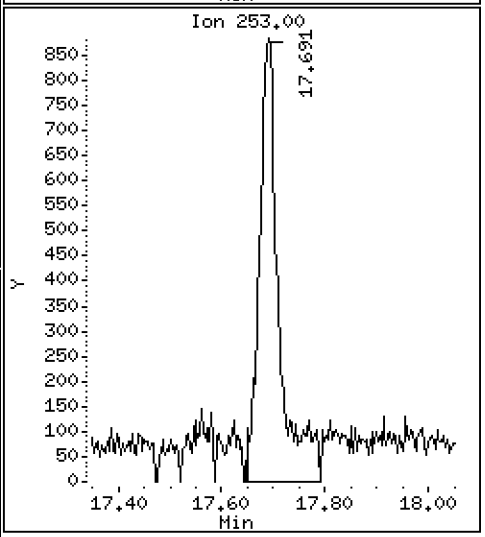
32 Benzo(a)pyrene

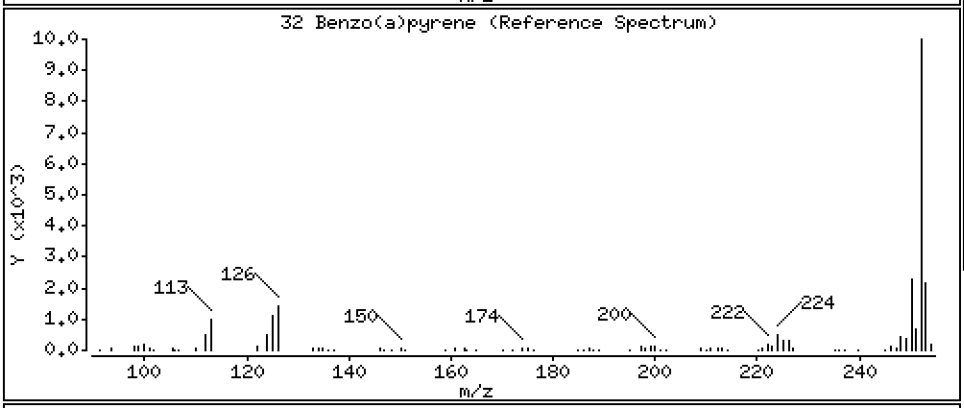
Concentration: 0.7960 ug/mL

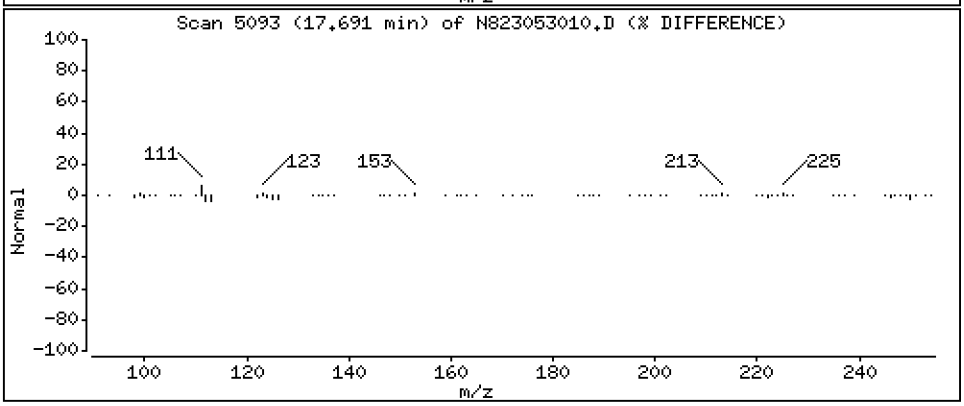












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Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

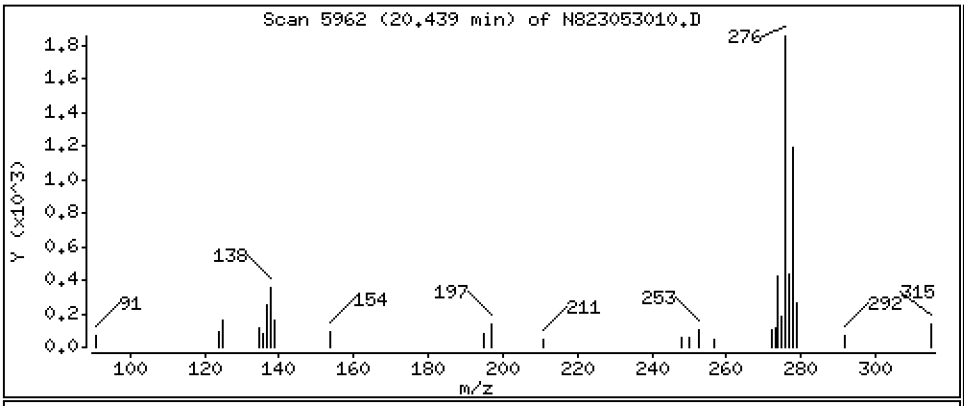
Operator: JZ

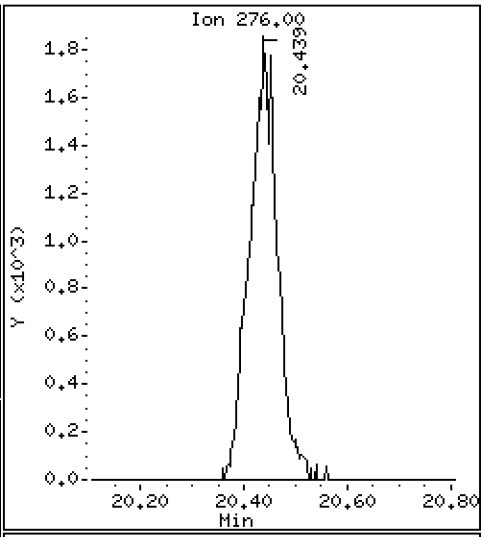
Column phase: Rxi-17sil

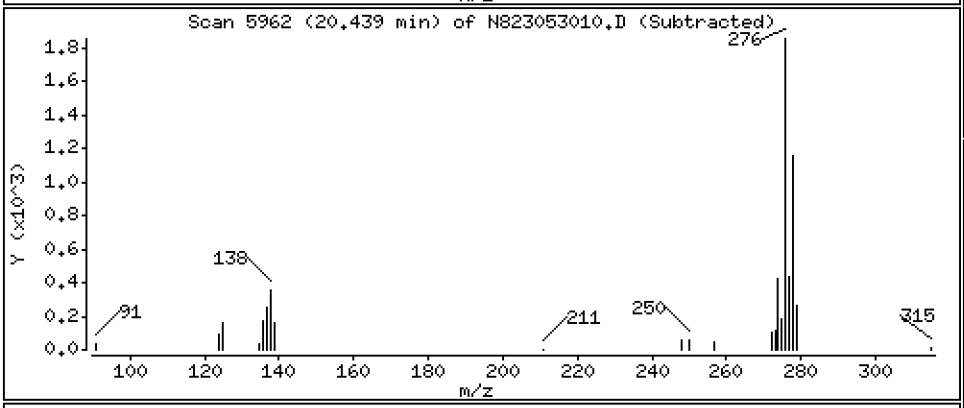
Column diameter: 0.25

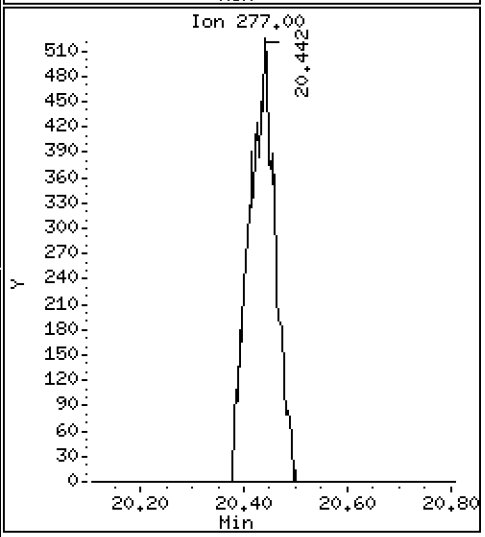
37 Indeno(1,2,3-cd)pyrene

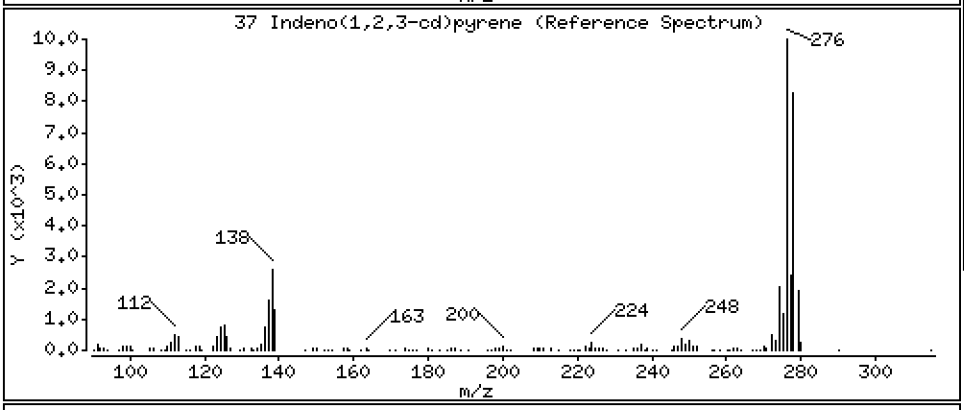
Concentration: 0.6747 ug/mL

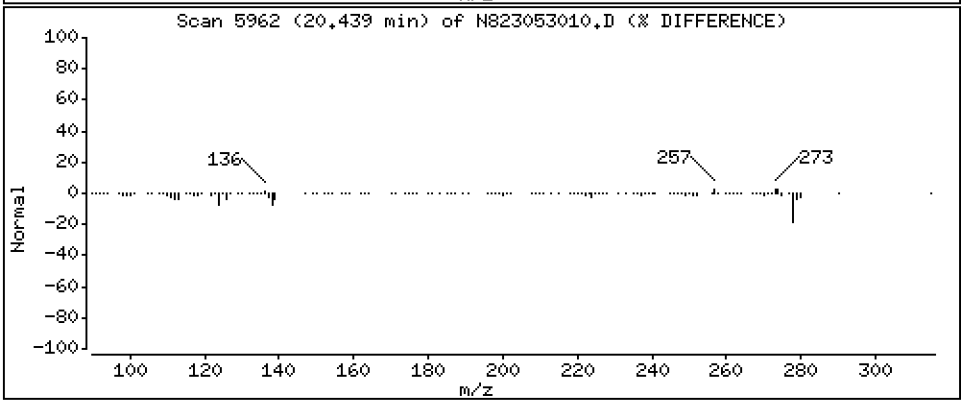












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Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

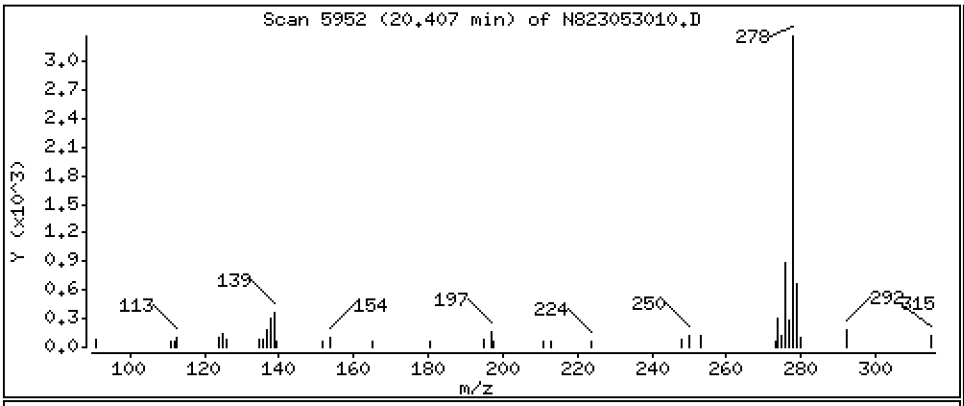
Operator: JZ

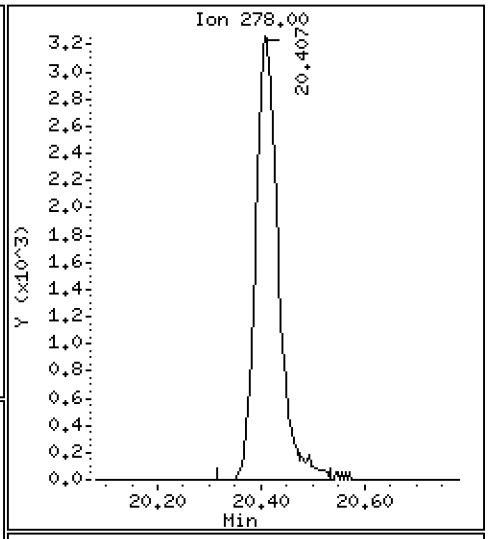
Column phase: Rxi-17sil

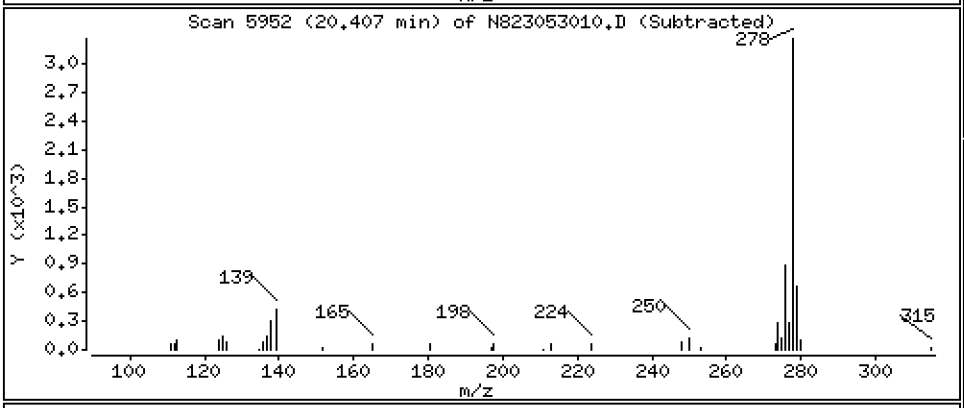
Column diameter: 0.25

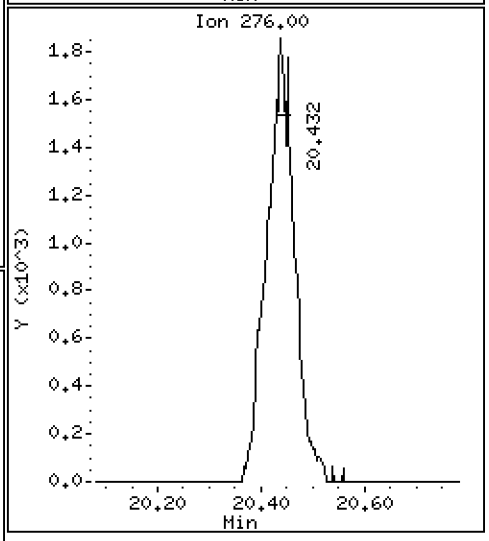
38 Dibenzo(a,h)anthracene

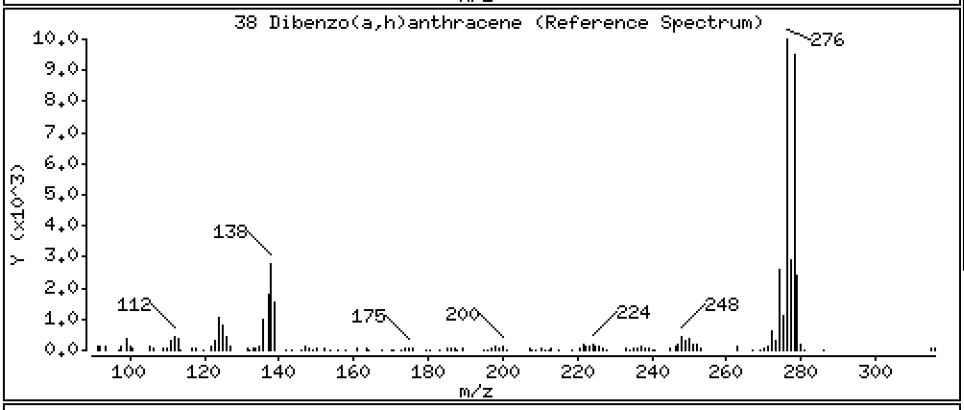
Concentration: 1.100 ug/mL

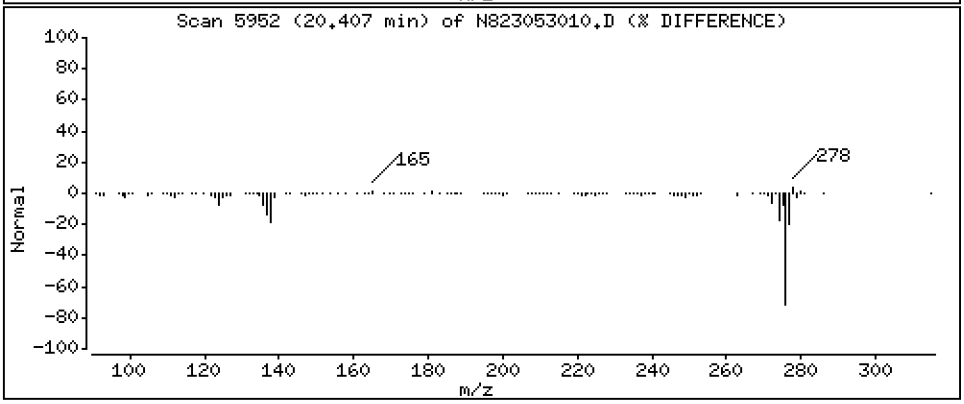












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Date : 30-MAY-2023 15:45

Client ID:

Instrument: nt8.i

Sample Info: BLE0421-SRM1,

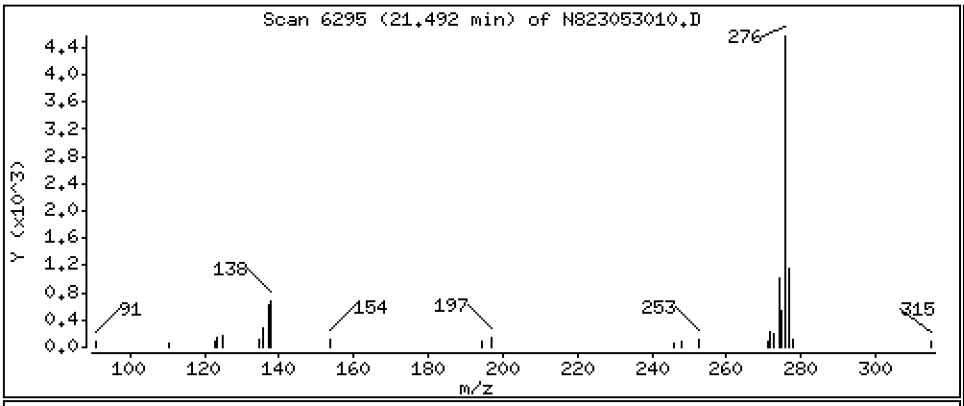
Operator: JZ

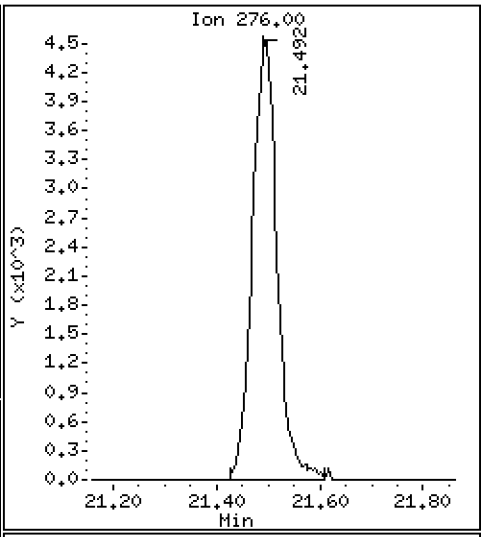
Column phase: Rxi-17sil

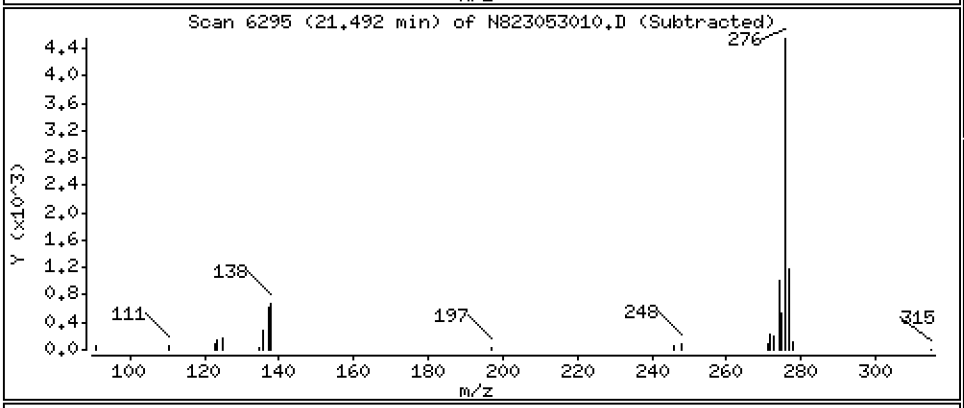
Column diameter: 0.25

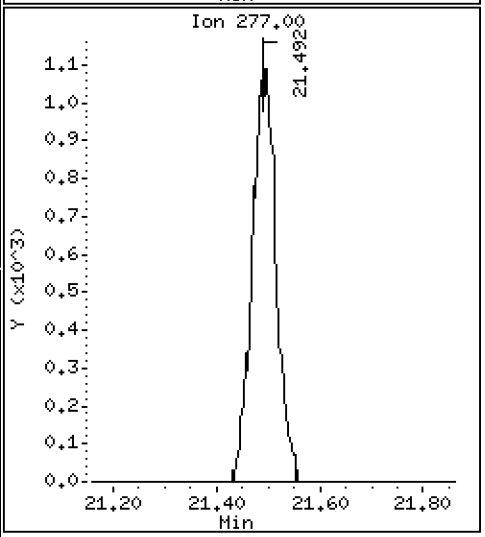
39 Benzo(g,h,i)perylene

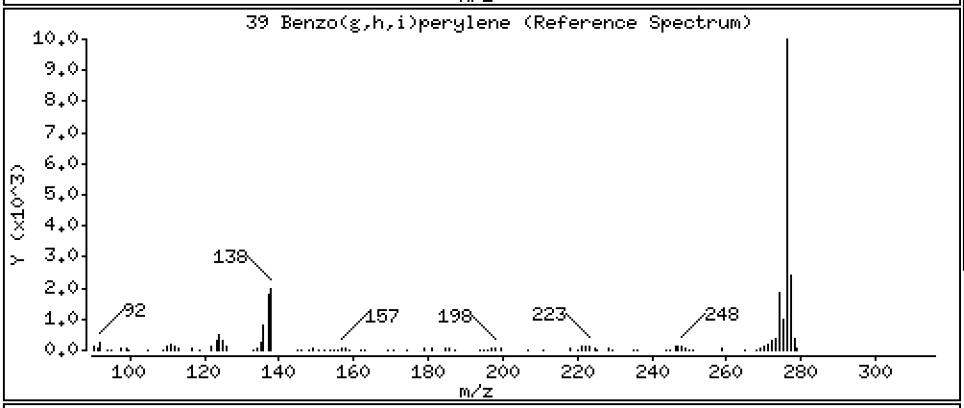
Concentration: 1.598 ug/mL

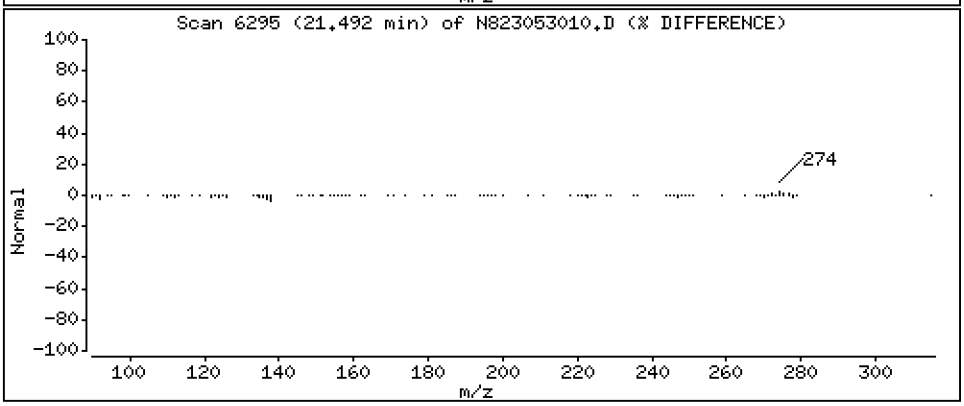












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230530.b\N823053010.D
Lab Smp Id: BLE0421-SRM1
Inj Date : 30-MAY-2023 15:45
Operator : JZ Inst ID: nt8.i
Smp Info : BLE0421-SRM1,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230530.b\FSIMPNA230426.m
Meth Date : 30-May-2023 19:51 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PNAXMDL.sub
Target Version: 4.14
Processing Host: JIANQINGZ-20191

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.805	4.815	(1.000)	18318	2.00000	
	2 Naphthalene	128	4.834	4.843	(1.006)	13013	1.39438	1.394
$	3 2-Methylnaphthalene-d10	152	5.539	5.548	(1.153)	12682	2.24162	2.242
	4 2-Methylnaphthalene	141	5.589	5.596	(1.163)	427	0.08059	0.08059
	5 1-methylnaphthalene	141	5.782	5.792	(1.203)	171	0.03255	0.03255
	9 Acenaphthylene	152	6.984	6.990	(0.985)	16481	1.72315	1.723
*	10 Acenaphthene-d10	164	7.091	7.101	(1.000)	10804	2.00000	
	11 Acenaphthene	153	7.142	7.148	(1.007)	9347	1.50837	1.508
	12 Dibenzofuran	168	7.297	7.300	(1.029)	117	0.01257	0.01257
	14 Fluorene	166	7.768	7.777	(1.095)	13870	1.86728	1.867
*	15 Phenanthrene-d10	188	9.128	9.137	(1.000)	20619	2.00000	
	16 Phenanthrene	178	9.166	9.172	(1.004)	37276	3.41312	3.413
	17 Anthracene	178	9.207	9.213	(1.009)	16957	1.65549	1.655
	19 Carbazole	167	9.732	9.732	(1.066)	901	0.09209	0.09209
	22 Fluoranthene	202	10.921	10.930	(1.196)	27529	2.19158	2.192
$	21 Fluoranthene-d10	212	10.883	10.892	(1.192)	28381	2.54992	2.550
	23 Pyrene	202	11.430	11.439	(0.815)	23008	1.82540	1.825
	24 Benzo(a)anthracene	228	13.905	13.915	(0.991)	17527	1.35326	1.353
*	25 Chrysene-d12	240	14.029	14.044	(1.000)	19687	2.00000	
	27 Chrysene	228	14.105	14.117	(1.005)	8030	0.63111	0.6311
	28 Benzo(b)fluoranthene	252	16.637	16.653	(0.929)	18735	1.61894	1.619
	29 Benzo(k)fluoranthene	252	16.701	16.713	(0.932)	21879	2.00666	2.007
	30 Benzo(j)fluoranthene	252	Compound Not Detected.					
	31 Total Benzofluoranthenes	252	16.701	16.653	(0.932)	39394	3.66066	3.661(M)
	32 Benzo(a)pyrene	252	17.690	17.700	(0.987)	8007	0.79599	0.7960
*	33 Perylene-d12	264	17.918	17.931	(1.000)	17751	2.00000	
	35 Perylene	252	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	20.302	20.315	(1.133)	23753	3.50492	3.505
	37 Indeno(1,2,3-cd)pyrene	276	20.438	20.457	(1.141)	6909	0.67475	0.6747
	38 Dibenzo(a,h)anthracene	278	20.406	20.432	(1.139)	10002	1.10005	1.100(M)
	39 Benzo(g,h,i)perylene	276	21.491	21.510	(1.199)	15160	1.59834	1.598

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823053010.D
Lab Smp Id: BLE0421-SRM1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230530.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 30-MAY-2023
Calibration Time: 11:43
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	20199	10100	40398	18318	-9.31
10 Acenaphthene-d10	12041	6021	24082	10804	-10.27
15 Phenanthrene-d10	19182	9591	38364	20619	7.49
25 Chrysene-d12	15943	7972	31886	19687	23.48
33 Perylene-d12	14317	7159	28634	17751	23.99

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.82	4.32	5.32	4.81	-0.19
10 Acenaphthene-d10	7.10	6.60	7.60	7.09	-0.13
15 Phenanthrene-d10	9.14	8.64	9.64	9.13	-0.10
25 Chrysene-d12	14.04	13.54	14.54	14.03	-0.11
33 Perylene-d12	17.93	17.43	18.43	17.92	-0.07

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

REVIEW SUMMARY FOR FILE - N823053010.D

Lab ID: BLE0421-SRM1
nt8.i, 20230530.b\FSIMPNA230426.m,   30-MAY-2023 15:45

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

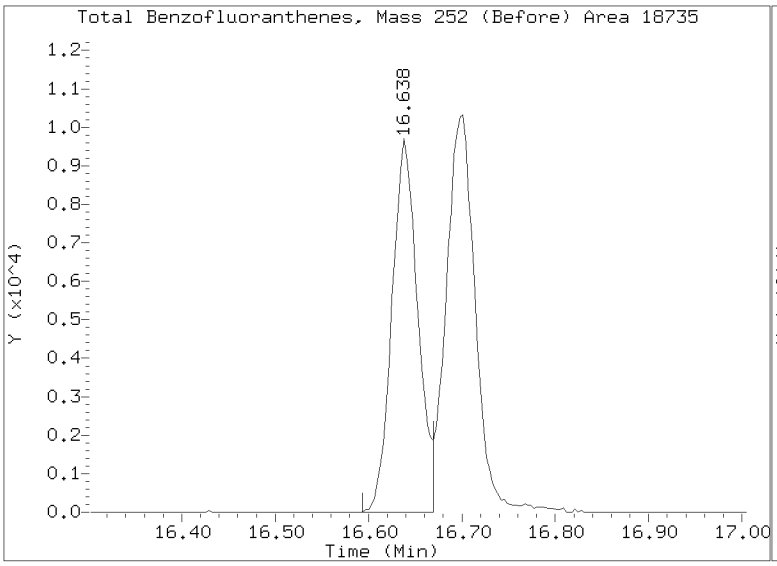
No RRT check performed

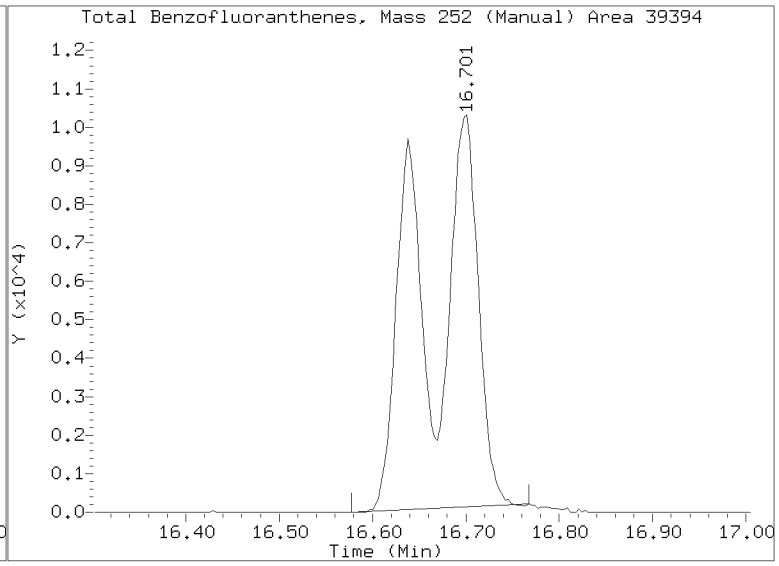
On Column LOD for nt8.i, 20230530.b\FSIMPNA230426.m, PNAXMDL.sub = 0.0080

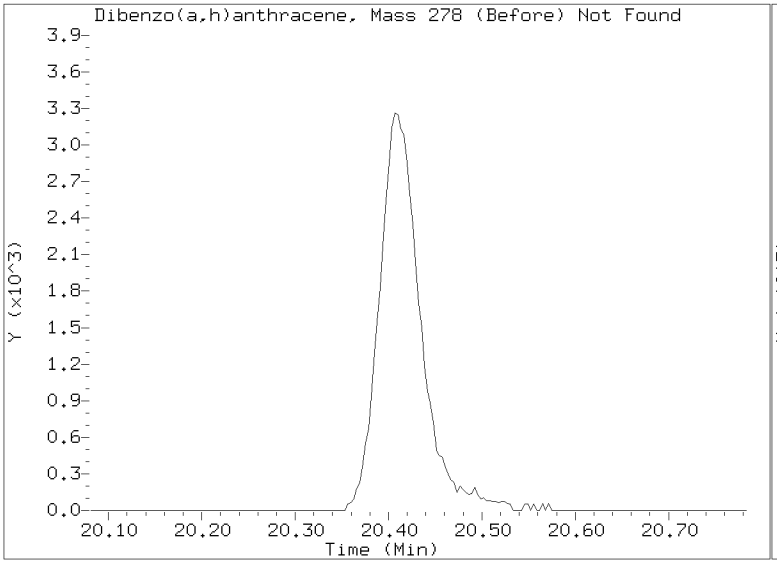
* Only compounds listed in the work order have been verified by the analyst *

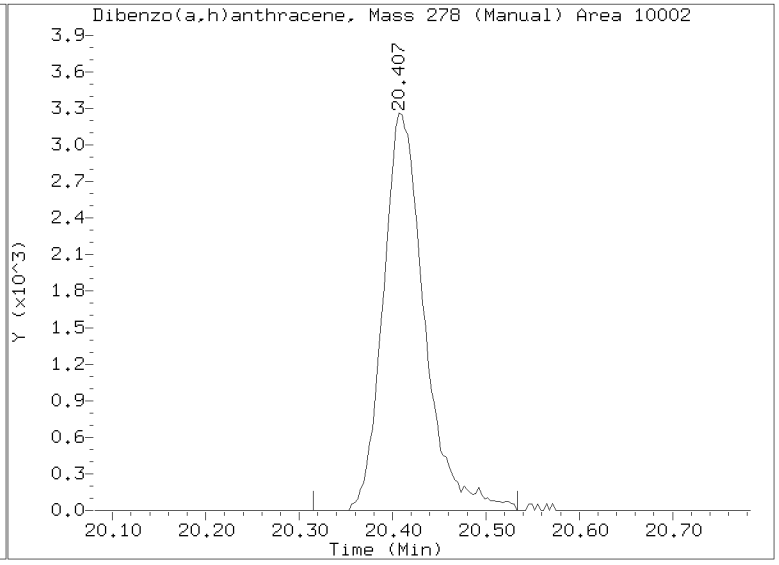
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230530.b/N823053010.D
Injection Date: 30-MAY-2023 15:45
Lab ID:BLE0421-SRM1 Client ID:
Report Date: 05/30/2023 20:04









Analytical Resources, LLC
Analytical Chemists and Consultants

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270E-SIM

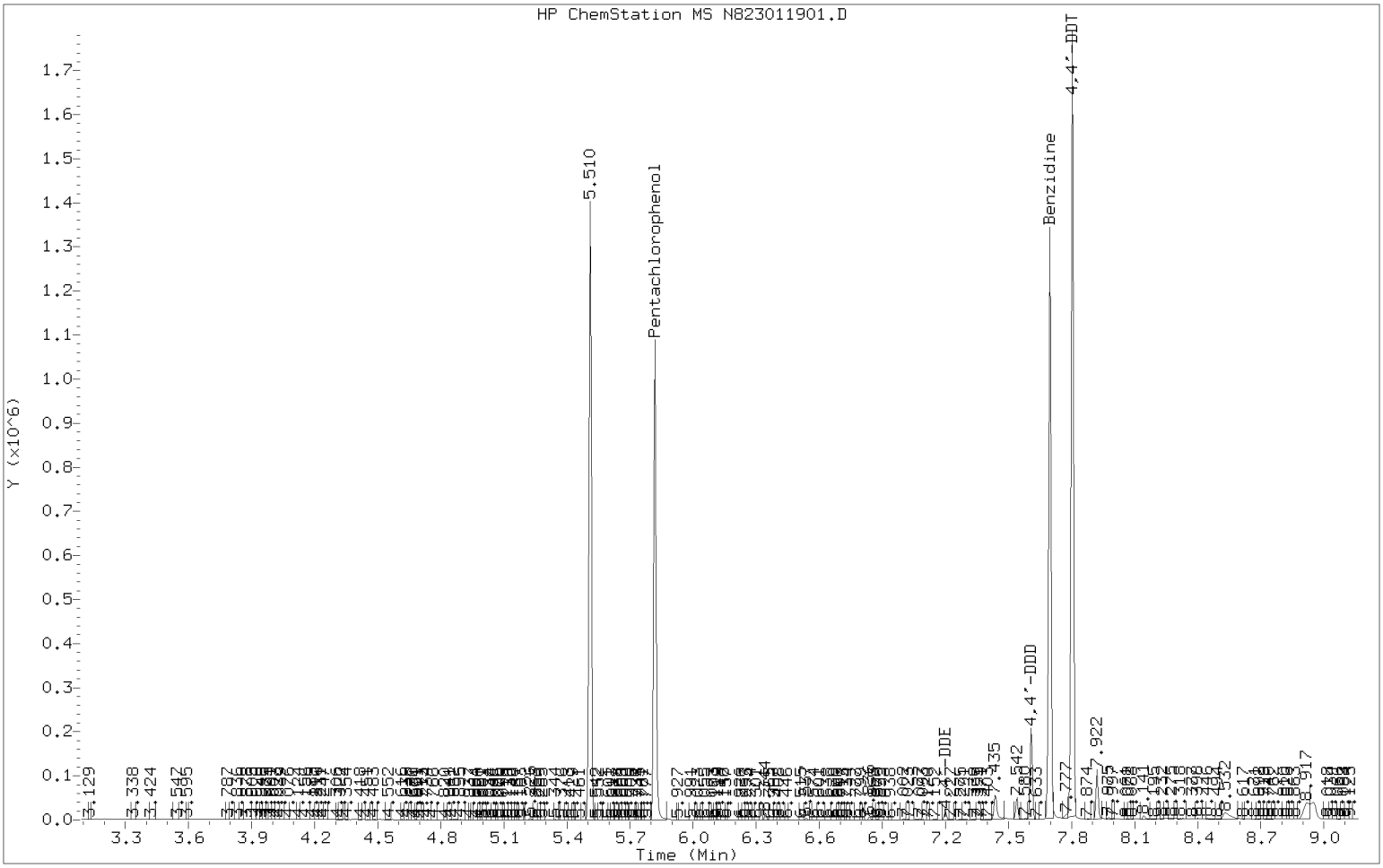
Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Lab File ID:	N823011901.D	Injection Date:	01/19/23
Instrument ID:	NT8	Injection Time:	10:28
Sequence:	SLA0213	Lab Sample ID:	SLA0213-TUN1

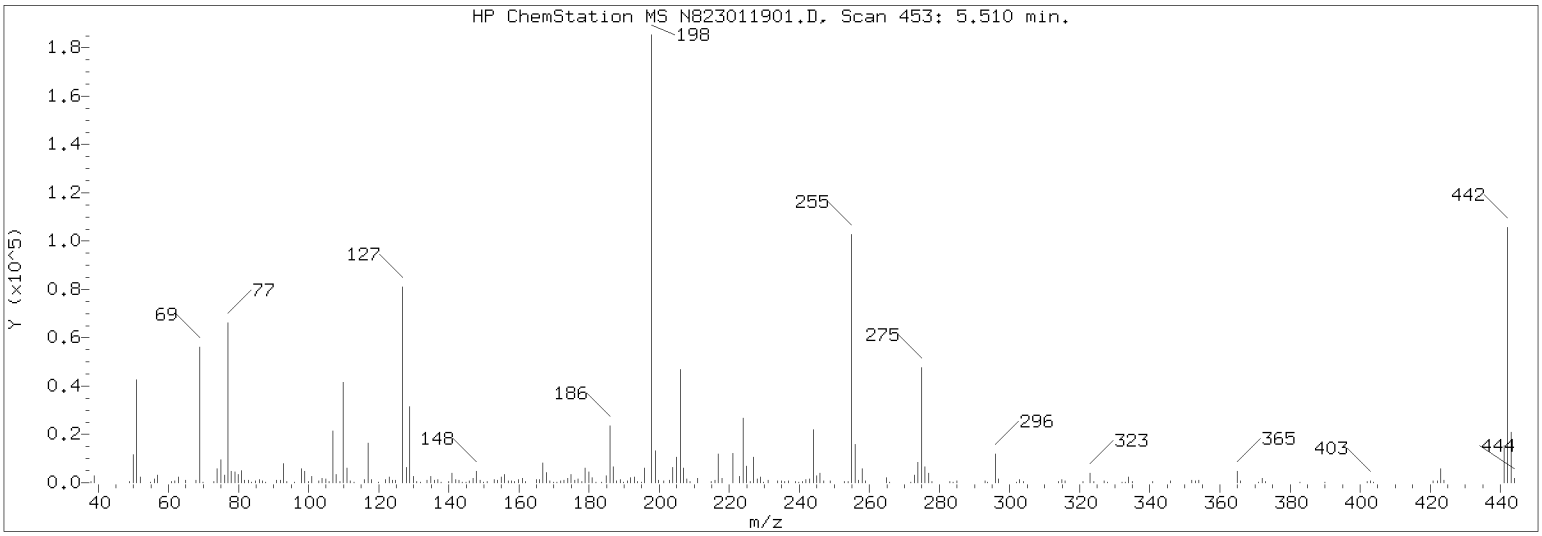
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
68	Less than 2% of 69	1.25	PASS
69	Less than 100% of 198	30.9	PASS
70	Less than 2% of 69	0.208	PASS
197	Less than 2% of 198	0.168	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.89	PASS
365	1 - 100% of 198	2.85	PASS
441	Less than 150% of 443	72.9	PASS
442	1 - 200% of 198	67.9	PASS
443	15 - 24% of 442	19.6	PASS
4,4'-DDD	Less than 20% of		
4,4'-DDE	Less than 20% of 4,4'-DDT		
4,4'-DDT	Base peak, 100% relative abundance		

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SLA0213-TUN1	N823011901.D	01/19/2023	10:28
Initial Cal Blank	SLA0213-ICB1	N823011902.D	01/19/2023	10:59
Cal Standard	SLA0213-CAL1	N823011903.D	01/19/2023	11:26
Cal Standard	SLA0213-CAL2	N823011904.D	01/19/2023	11:58
Cal Standard	SLA0213-CAL3	N823011905.D	01/19/2023	12:25
Cal Standard	SLA0213-CAL4	N823011906.D	01/19/2023	12:52
Cal Standard	SLA0213-CAL5	N823011907.D	01/19/2023	13:19
Cal Standard	SLA0213-CAL6	N823011908.D	01/19/2023	13:46
Secondary Cal Check	SLA0213-SCV1	N823011909.D	01/19/2023	14:58

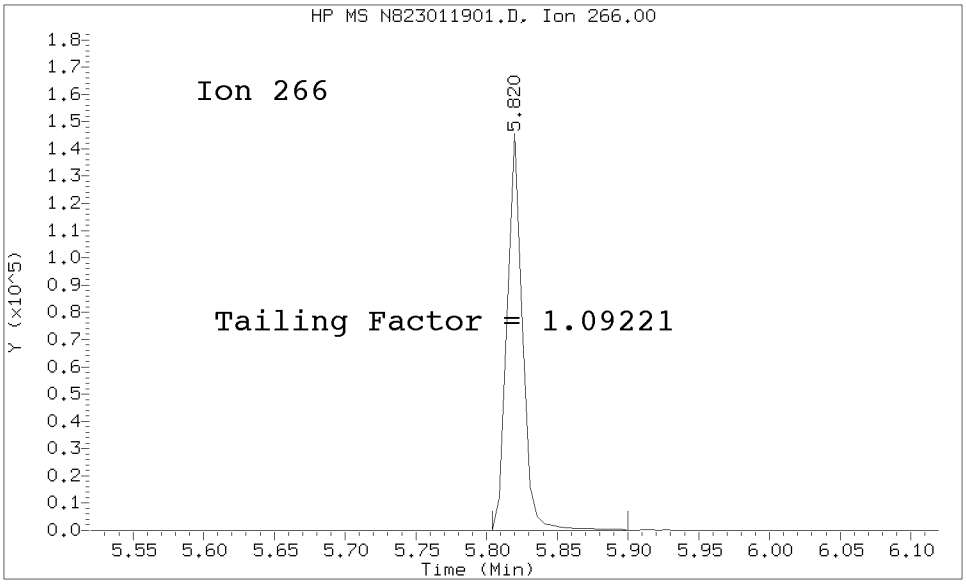
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230119.b/tune.b/N823011901.D/N823011901.D
Method Used: \20230119.b\tune.b\DFTPP.m Inst: nt8
Injection Date: 19-JAN-2023 10:28 Operator: JZ
Sample Info: SLA0213-TUN1 DFTPP230119
Report Date: 01/19/2023 20:14



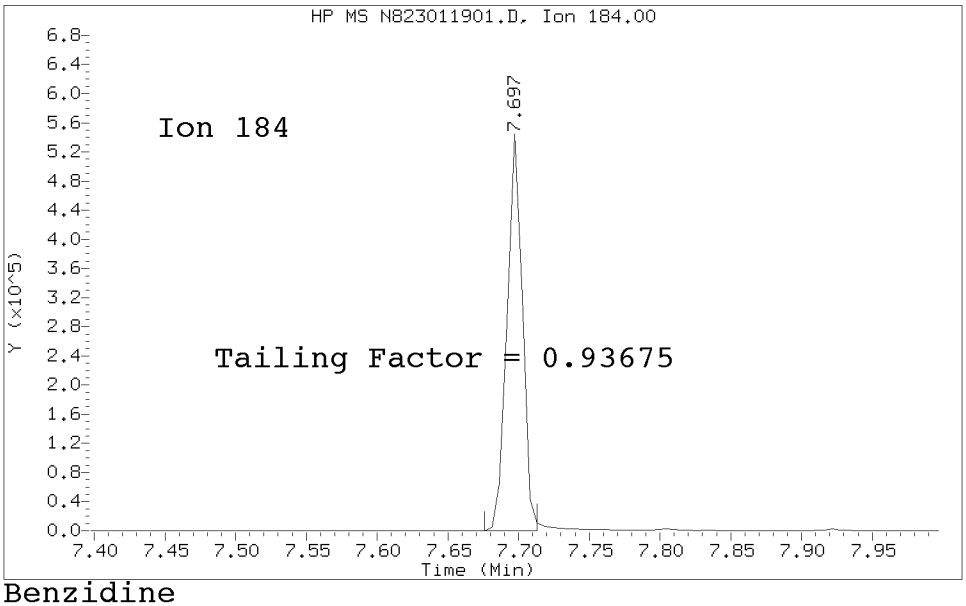


Datafile Analyzed: /20230119.b/tune.b/N823011901.D/N823011901.D
Method Used: \20230119.b\tune.b\DFTPP.m\sw846ddt.m Inst: nt8
Injection Date: 19-JAN-2023 10:28 Operator: JZ
Sample Info: DFTPP230119
Report Date: 01/19/2023 20:14



Pentachlorophenol
==========
Exp. RT = 5.825
Found RT = 5.820

Tail Factor = 1.092 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.703
Found RT = 7.697

Tail Factor = 0.937 Maximum Allowed = 2.0

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	23.71
68	Less than 2.00% of mass 69	0.39 (1.25)
69	Mass 69 relative abundance	30.92
70	Less than 2.00% of mass 69	0.06 (0.21)
127	10.00 - 80.00% of mass 198	44.20
197	Less than 2.00% of mass 198	0.17
199	5.00 - 9.00% of mass 198	6.89
275	10.00 - 60.00% of mass 198	26.96
365	Greater than 1.00% of mass 198	2.85
441	0.01 - 24.00% of mass 442	9.72 (14.32)
442	50.00 - 200.00% of mass 198	67.89
443	15.00 - 24.00% of mass 442	13.33 (19.64)

Data File: N823011901.D
Spectrum: Avg. Scans 452-454 (5.51), Background Scan 448
Location of Maximum: 198.00
Number of points: 228

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	424	124.00	727	188.00	466	265.00	1738
39.00	2285	125.00	694	189.00	1088	266.00	231
49.00	389	127.00	59064	190.00	92	272.00	97
50.00	8567	128.00	4618	191.00	538	273.00	2435
51.00	31688	129.00	23208	192.00	1501	274.00	6434
52.00	1694	130.00	1967	193.00	1652	275.00	36032
55.00	89	131.00	387	194.00	339	276.00	4936
56.00	1081	132.00	92	195.00	108	277.00	3133
57.00	2353	134.00	695	196.00	4417	278.00	496
61.00	487	135.00	1887	197.00	224	283.00	243
62.00	511	136.00	770	198.00	133632	284.00	200
63.00	1627	137.00	979	199.00	9210	285.00	536
65.00	865	138.00	101	200.00	711	293.00	678
68.00	518	140.00	220	201.00	653	294.00	83
69.00	41320	141.00	2913	203.00	891	296.00	9364
70.00	86	142.00	931	204.00	4715	297.00	1310
73.00	274	143.00	728	205.00	8070	302.00	96
74.00	4327	144.00	83	206.00	34104	303.00	1146
75.00	6885	145.00	91	207.00	4557	304.00	262
76.00	2362	146.00	508	208.00	1177	314.00	364
77.00	48072	147.00	1540	209.00	387	315.00	1068
78.00	3441	148.00	3391	210.00	236	316.00	588
79.00	3296	149.00	690	211.00	1430	321.00	250
80.00	2464	150.00	90	215.00	376	323.00	3145
81.00	3741	151.00	458	216.00	746	324.00	501
82.00	872	152.00	181	217.00	9085	327.00	540
83.00	845	153.00	893	218.00	1189	328.00	201
84.00	287	154.00	764	221.00	8442	332.00	178
85.00	621	155.00	1756	223.00	2039	333.00	129
86.00	1039	156.00	2503	224.00	19544	334.00	1893
87.00	481	157.00	527	225.00	5122	335.00	518
88.00	91	158.00	516	226.00	502	341.00	275
91.00	866	159.00	410	227.00	8274	346.00	674
92.00	878	160.00	955	228.00	1174	352.00	945
93.00	5816	161.00	1421	229.00	1712	353.00	630
94.00	409	162.00	445	230.00	111	354.00	910
96.00	203	165.00	1085	231.00	685	365.00	3802
98.00	4243	166.00	1023	234.00	538	366.00	580
99.00	3501	167.00	5993	235.00	568	371.00	91
100.00	344	168.00	3082	236.00	394	372.00	1475
101.00	1983	169.00	490	237.00	657	373.00	292
103.00	704	170.00	94	239.00	327	383.00	290
104.00	1275	171.00	194	240.00	187	390.00	177
105.00	1230	172.00	595	241.00	468	402.00	468
106.00	379	173.00	732	242.00	1090	403.00	736
107.00	15826	174.00	1319	243.00	1102	404.00	243
108.00	2447	175.00	2491	244.00	16206	421.00	649
109.00	331	176.00	751	245.00	2245	422.00	226
110.00	30008	177.00	1175	246.00	3000	423.00	4860

111.00	4456	178.00	288	247.00	624	424.00	978
112.00	513	179.00	4561	249.00	587	441.00	12991
113.00	89	180.00	3271	253.00	239	442.00	90720
116.00	935	181.00	1513	254.00	438	443.00	17816
117.00	12513	182.00	106	255.00	76904	444.00	1584
118.00	931	184.00	333	256.00	11699		
120.00	104	185.00	2153	257.00	880		
122.00	1003	186.00	17336	258.00	4539		
123.00	1682	187.00	4916	259.00	746		

Analytical Resources, LLC
Analytical Chemists and Consultants

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270E-SIM

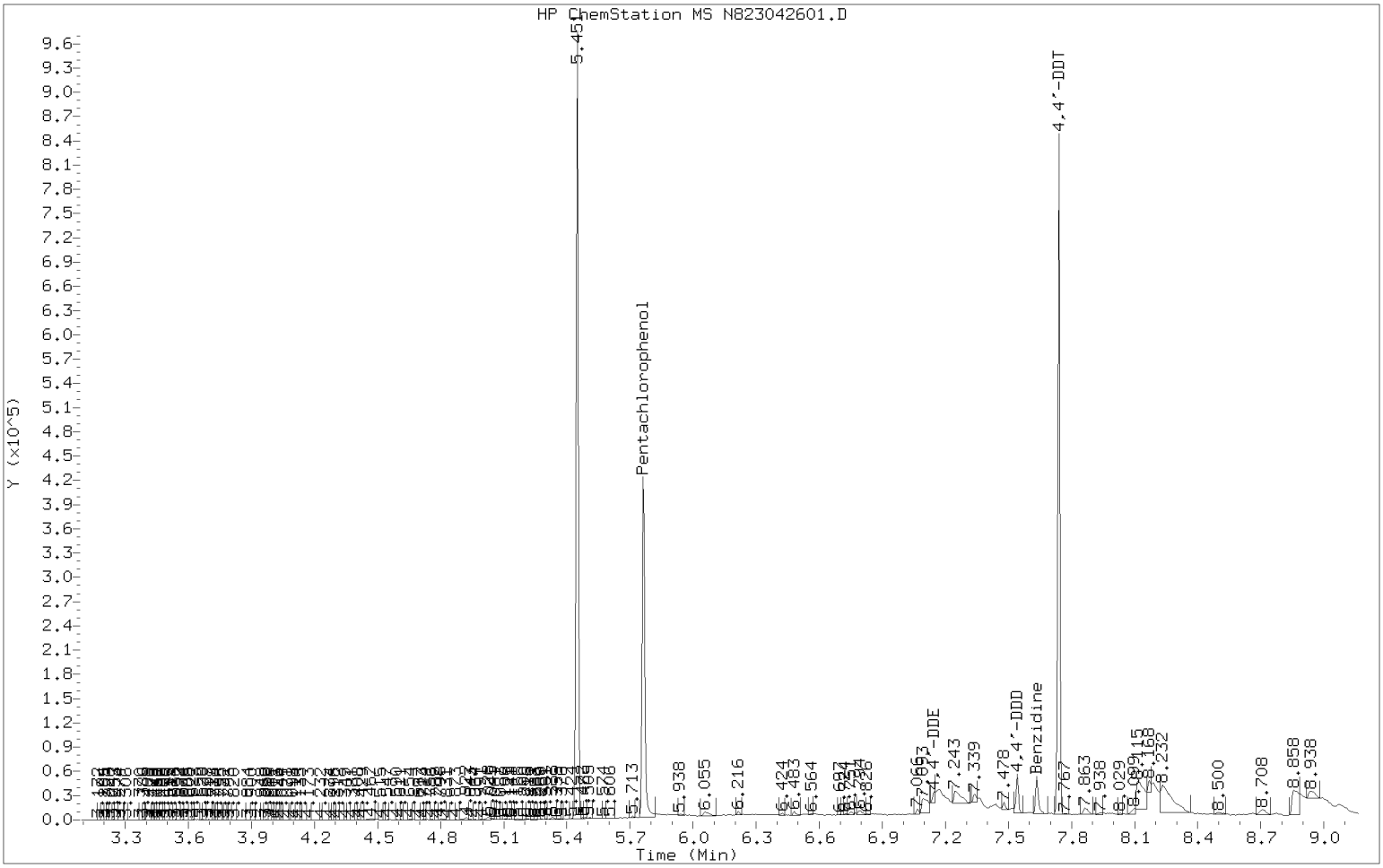
Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Lab File ID:	N823042601.D	Injection Date:	04/26/23
Instrument ID:	NT8	Injection Time:	17:16
Sequence:	SLD0372	Lab Sample ID:	SLD0372-TUN1

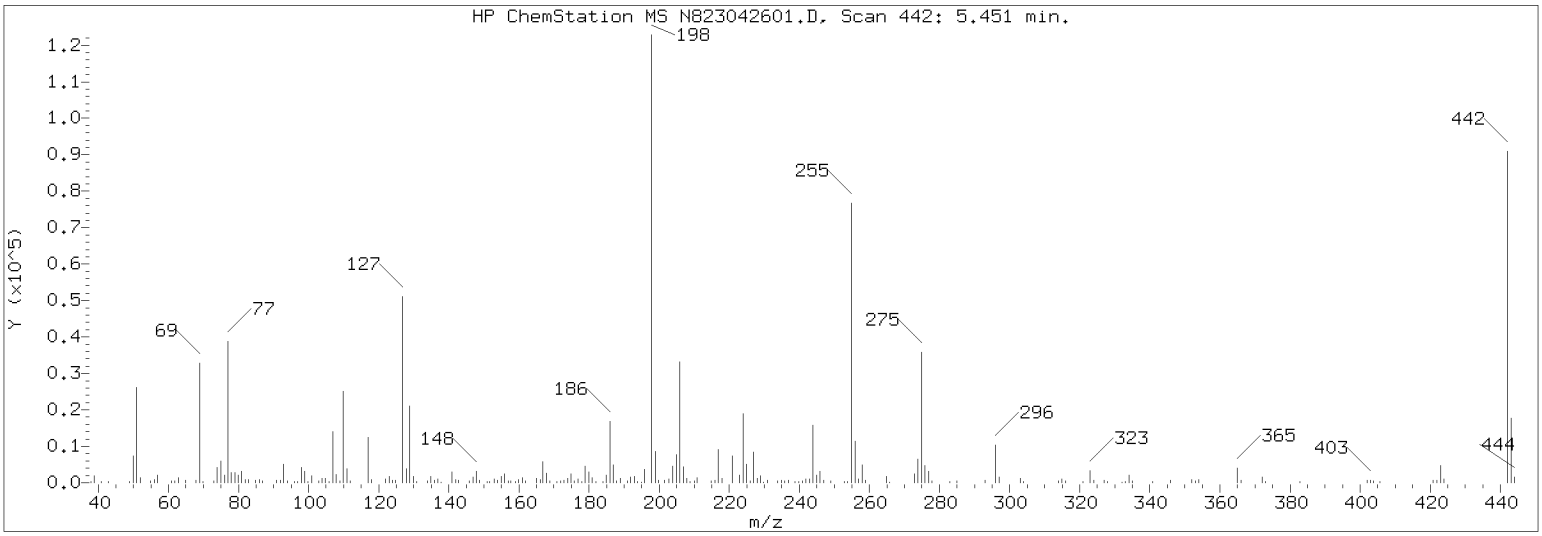
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
68	Less than 2% of 69	1.88	PASS
69	Less than 100% of 198	30.1	PASS
70	Less than 2% of 69	0.804	PASS
197	Less than 2% of 198	0.212	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.97	PASS
365	1 - 100% of 198	3.65	PASS
441	Less than 150% of 443	10.9	PASS
442	1 - 200% of 198	76.9	PASS
443	15 - 24% of 442	19.5	PASS
4,4'-DDD	Less than 20% of		
4,4'-DDE	Less than 20% of 4,4'-DDT		
4,4'-DDT	Base peak, 100% relative abundance		

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SLD0372-TUN1	N823042601.D	04/26/2023	17:16
Cal Standard	SLD0372-CAL1	N823042603.D	04/26/2023	18:06
Cal Standard	SLD0372-CAL2	N823042604.D	04/26/2023	18:33
Cal Standard	SLD0372-CAL3	N823042605.D	04/26/2023	19:00
Cal Standard	SLD0372-CAL4	N823042606.D	04/26/2023	19:27
Cal Standard	SLD0372-CAL5	N823042607.D	04/26/2023	19:55
Cal Standard	SLD0372-CAL6	N823042608.D	04/26/2023	20:22
Secondary Cal Check	SLD0372-SCV1	N823042609.D	04/26/2023	20:49

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230426.b/tune.b/N823042601.D/N823042601.D
Method Used: \20230426.b\tune.b\DFTPP.m Inst: nt8
Injection Date: 26-APR-2023 17:16 Operator: JZ
Sample Info: SLD0372-TUN1 DFTPP2304026
Report Date: 04/27/2023 10:37





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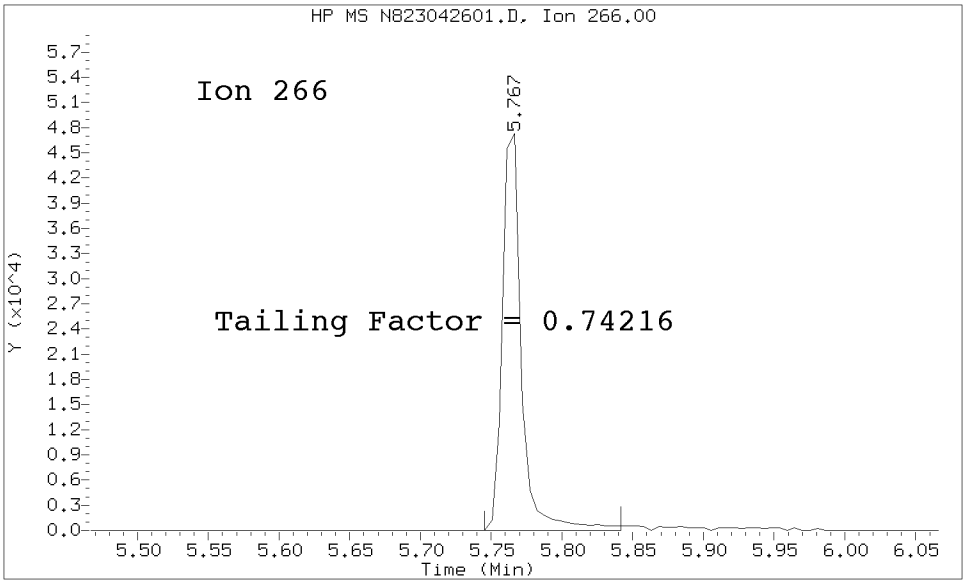
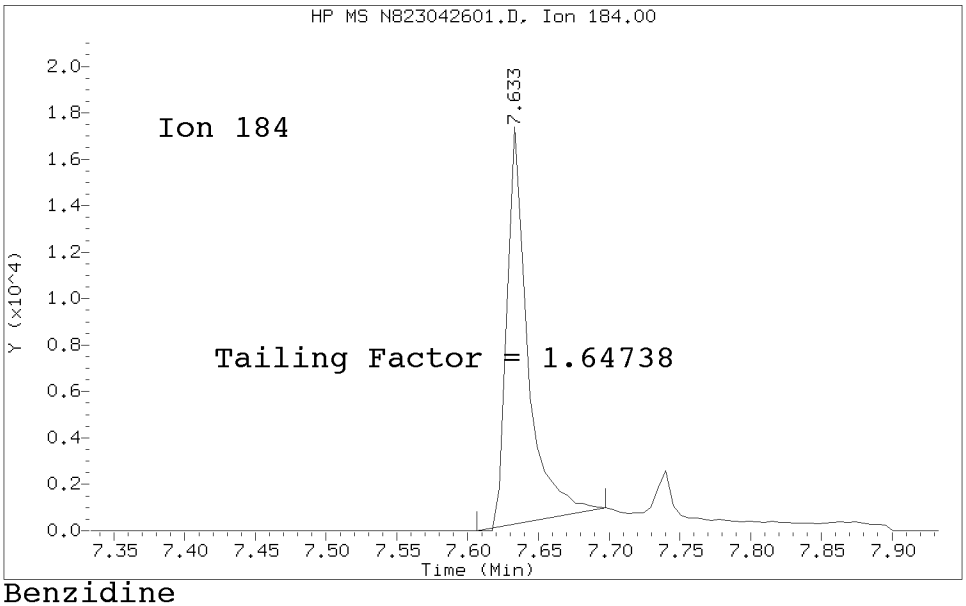
Method Used: \20230426.b\tune.b\DFTPP.m\sw846ddt.m Inst: nt8
Injection Date: 26-APR-2023 17:16 Operator: JZ
Sample Info: DFTPP2304026
Report Date: 04/27/2023 10:37



Pentachlorophenol
==========
Exp. RT = 5.831
Found RT = 5.767

Tail Factor = 0.742 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.548
Found RT = 7.633

Tail Factor = 1.647 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	0.7421603	2.000	PASS
Benzidine	1.6473779	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	88678			N/A
4,4-DDE	335	0.4	20.0	PASS
4,4-DDD	4965	5.3	20.0	PASS
4,4-DDD + DDE	5300	5.6	20.0	PASS

Tuning Sample, /nt8.i/20230426.b/tune.b/N823042601.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	25.12
68	Less than 2.00% of mass 69	0.57 (1.88)
69	Mass 69 relative abundance	30.15
70	Less than 2.00% of mass 69	0.24 (0.80)
127	10.00 - 80.00% of mass 198	44.51
197	Less than 2.00% of mass 198	0.21
199	5.00 - 9.00% of mass 198	6.97
275	10.00 - 60.00% of mass 198	28.71
365	Greater than 1.00% of mass 198	3.65
441	0.01 - 24.00% of mass 442	1.63 (2.12)
442	50.00 - 200.00% of mass 198	76.92
443	15.00 - 24.00% of mass 442	15.01 (19.51)

Data File: N823042601.D
Spectrum: Avg. Scans 441-443 (5.45), Background Scan 436
Location of Maximum: 198.00
Number of points: 216

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	259	122.00	629	189.00	763	258.00	3259
39.00	1543	123.00	1219	191.00	328	259.00	496
41.00	45	124.00	436	192.00	981	265.00	1218
43.00	2	125.00	433	193.00	1146	266.00	83
49.00	200	127.00	33968	194.00	133	273.00	1546
50.00	5356	128.00	2606	195.00	86	274.00	3984
51.00	19168	129.00	14073	196.00	2266	275.00	21912
52.00	1084	130.00	1224	197.00	162	276.00	2866
55.00	108	131.00	237	198.00	76320	277.00	2050
56.00	631	134.00	386	199.00	5317	278.00	264
57.00	1606	135.00	1187	200.00	361	283.00	133
61.00	298	136.00	428	201.00	393	285.00	277
62.00	392	137.00	773	203.00	697	293.00	424
63.00	1112	138.00	83	204.00	3031	296.00	6797
65.00	420	141.00	1993	205.00	4940	297.00	1078
68.00	432	142.00	616	206.00	20904	303.00	809
69.00	23008	143.00	440	207.00	2891	304.00	105
70.00	185	146.00	315	208.00	771	314.00	235
73.00	503	147.00	1039	209.00	225	315.00	728
74.00	3010	148.00	2177	210.00	339	316.00	386
75.00	4222	149.00	467	211.00	891	321.00	97
76.00	1466	151.00	231	215.00	239	323.00	2060
77.00	27280	152.00	216	216.00	499	324.00	326
78.00	1990	153.00	720	217.00	6004	327.00	427
79.00	2001	154.00	548	218.00	803	328.00	114
80.00	1522	155.00	1215	221.00	4276	332.00	87
81.00	2196	156.00	1571	222.00	300	333.00	115
82.00	531	157.00	272	223.00	1396	334.00	1361
83.00	682	158.00	292	224.00	12094	335.00	260
85.00	507	159.00	243	225.00	3156	341.00	119
86.00	661	160.00	509	226.00	269	346.00	497
87.00	320	161.00	936	227.00	5671	352.00	630
91.00	491	162.00	247	228.00	861	353.00	436
92.00	499	165.00	753	229.00	1152	354.00	558
93.00	3714	166.00	537	230.00	86	365.00	2785
94.00	257	167.00	3891	231.00	407	366.00	441
96.00	205	168.00	1823	234.00	399	372.00	970
97.00	92	169.00	279	235.00	339	373.00	131
98.00	2984	171.00	96	236.00	239	383.00	218
99.00	2258	172.00	341	237.00	381	402.00	459
100.00	183	173.00	433	239.00	129	403.00	493
101.00	1298	174.00	816	240.00	95	404.00	385
103.00	370	175.00	1572	241.00	287	406.00	97
104.00	735	176.00	336	242.00	712	421.00	465
105.00	831	177.00	751	243.00	725	422.00	209
106.00	144	178.00	218	244.00	9627	423.00	3075
107.00	9655	179.00	3020	245.00	1226	424.00	621
108.00	1527	180.00	1973	246.00	2064	441.00	1245
109.00	343	181.00	912	247.00	468	442.00	58704

110.00	16832	182.00	91	249.00	290	443.00	11455
111.00	2728	184.00	117	253.00	104	444.00	1029
112.00	350	185.00	1424	254.00	219		
116.00	337	186.00	10793	255.00	47768		
117.00	8906	187.00	3130	256.00	7127		
118.00	589	188.00	302	257.00	582		

INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00050	Instrument:	NT8
Calibration Date:	01/19/2023	Column (1):	RXI-17Sil ms

Calibration Comments: SS, Dibenzo(a,h)anthracene-d14, highest point included. Changed curve fit from "AVG" to "LRO" on 1/25/23 by JZ.

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
Naphthalene	0.1	1.051331	0.5	0.8804155	1	0.9140738	2.5	0.9442377	5	0.9059688	10	0.8834817
2-Methylnaphthalene	0.1	0.5583976	0.5	0.483576	1	0.4966087	2.5	0.5321582	5	0.5081776	10	0.490102
1-Methylnaphthalene	0.1	0.567502	0.5	0.4881925	1	0.5073336	2.5	0.5386185	5	0.5123544	10	0.5007901
Acenaphthylene	0.1	1.569275	0.5	1.288567	1	1.419627	2.5	1.612722	5	1.573862	10	1.597505
Acenaphthene	0.1	1.159165	0.5	0.9399536	1	0.9690137	2.5	1.040021	5	0.9826181	10	0.9807186
Dibenzofuran	0.1	1.856131	0.5	1.449189	1	1.468766	2.5	1.539056	5	1.458398	10	1.450275
Fluorene	0.1	1.333774	0.5	1.066627	1	1.134936	2.5	1.226731	5	1.19285	10	1.207426
Phenanthrene	0.1	1.200199	0.5	0.9068737	1	0.925967	2.5	0.9922048	5	0.9288855	10	0.90761
Anthracene	0.1	0.9900686	0.5	0.7891408	1	0.8362482	2.5	0.9415647	5	0.895227	10	0.8727266
Fluoranthene	0.1	1.200966	0.5	0.9720444	1	1.022937	2.5	1.114343	5	1.05358	10	1.016684
Pyrene	0.1	1.416146	0.5	1.066416	1	1.156217	2.5	1.294823	5	1.256828	10	1.249389
Benzo(a)anthracene	0.1	1.200365	0.5	0.9419141	1	1.006861	2.5	1.18718	5	1.184592	10	1.222407
Chrysene	0.1	1.382333	0.5	1.081643	1	1.128342	2.5	1.227241	5	1.185771	10	1.173282
Benzo(b)fluoranthene	0.1	1.335895	0.5	0.9774708	1	1.022944	2.5	1.220494	5	1.192377	10	1.239686
Benzo(k)fluoranthene	0.1	1.327249	0.5	0.9937275	1	1.005899	2.5	1.178993	5	1.164539	10	1.175213
Benzo(j)fluoranthene	0.1	1.092831	0.5	0.9205253	1	0.9228699	2.5	1.084778	5	1.075203	10	1.066465
Benzofluoranthenes, Total	0.3	1.255354	1.5	0.9344954	3	0.9716584	7.5	1.159079	15	1.142352	30	1.155882
Benzo(a)pyrene	0.1	1.139906	0.5	0.8777692	1	0.8951488	2.5	1.077374	5	1.063086	10	1.096879
Indeno(1,2,3-cd)pyrene	0.1	1.208599	0.5	0.995325	1	1.072555	2.5	1.257473	5	1.228578	10	1.24398
Dibenzo(a,h)anthracene	0.1	1.049117	0.5	0.8348251	1	0.8950591	2.5	1.081382	5	1.068557	10	1.100721
Benzo(g,h,i)perylene	0.1	1.162964	0.5	0.9102826	1	0.9409469	2.5	1.106673	5	1.088733	10	1.138469
2-Methylnaphthalene-d10	0.1	0.5857106	0.5	0.4932528	1	0.5345061	2.5	0.5674481	5	0.5504276	10	0.5413545
Dibenzo[a,h]anthracene-d14	0.1	0.580281	0.5	0.5471844	1	0.6076211	2.5	0.7324975	5	0.7420675	10	0.7980029
Fluoranthene-d10	0.1	0.9007247	0.5	0.754546	1	0.8247891	2.5	0.9550254	5	0.9291815	10	0.930087

INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00050	Instrument:	NT8
Calibration Date:	01/19/2023	Column (1):	RXI-17Sil ms

Calibration Comments: SS, Dibenzo(a,h)anthracene-d14, highest point included. Changed curve fit from "AVG" to "LRO" on 1/25/23 by JZ.

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Naphthalene	0.9299181	6.9			RSD (15)	
2-Methylnaphthalene	0.5115033	5.6			RSD (15)	
1-Methylnaphthalene	0.5191318	5.6			RSD (15)	
Acenaphthylene	1.51026	8.5			RSD (15)	
Acenaphthene	1.011915	7.8			RSD (15)	
Dibenzofuran	1.536969	10.4			RSD (15)	
Fluorene	1.193724	7.5			RSD (15)	
Phenanthrene	0.9769567	11.6			RSD (15)	
Anthracene	0.887496	8.1			RSD (15)	
Fluoranthene	1.063426	7.7			RSD (15)	
Pyrene	1.23997	9.6			RSD (15)	
Benzo(a)anthracene	1.123887	10.5			RSD (15)	
Chrysene	1.196435	8.7			RSD (15)	
Benzo(b)fluoranthene	1.164811	11.8			RSD (15)	
Benzo(k)fluoranthene	1.140937	10.9			RSD (15)	
Benzo(j)fluoranthene	1.027112	8.0			RSD (15)	
Benzofluoranthenes, Total	1.103137	11.2			RSD (15)	
Benzo(a)pyrene	1.025027	10.8			RSD (15)	
Indeno(1,2,3-cd)pyrene	1.167752	9.2			RSD (15)	
Dibenzo(a,h)anthracene	1.004944	11.1			RSD (15)	
Benzo(g,h,i)perylene	1.058011	10.0			RSD (15)	
2-Methylnaphthalene-d10	0.5454499	5.8			RSD (15)	
Dibenzo[a,h]anthracene-d14	0.6679424	15.3	0.9971		LCOD (0.99)	
Fluoranthene-d10	0.8823923	8.7			RSD (15)	

Printed: 1/19/2023 8:45:16PM

ANALYSIS SEQUENCE

SLA0213

Instrument: NT8 Element Column ID: J006458
Calibration ID: GA00050

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SLA0213-TUN1	MS Tune	QC		1	K004775			
SLA0213-ICB1	Initial Cal Blank	QC		2		K008540		
SLA0213-CAL1	8270 SIM PNA 0.1	QC		3	L000603	K008540		
SLA0213-CAL2	8270 SIM PNA 0.5	QC		4	L000604	K008540		
SLA0213-CAL3	8270 SIM PNA 1.0	QC		5	L000605	K008540		
SLA0213-CAL4	8270 SIM PNA 2.5	QC		6	L000606	K008540		
SLA0213-CAL5	8270 SIM PNA 5	QC		7	L000607	K008540		
SLA0213-CAL6	8270 SIM PNA 10	QC		8	L000608	K008540		
SLA0213-SCV1	8270 SIM PNA SCV	QC		9	L000686	K008540		

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230119.b

	Time	Filename	LabID	ClientId	DF											
1	1028	N823011901.D	SLA0213-TUN1		1	|NO ISTDS FOUND||										
2	1059	N823011902.D	SLA0213-ICB1		1	| 4.92	52082||	7.20	30936||	9.24	59030||	14.22	50944||	18.12	47418|
3	1126	N823011903.D	SLA0213-CAL1		1	| 4.91	46132||	7.20	27261||	9.24	52158||	14.20	44953||	18.11	41635|
4	1158	N823011904.D	SLA0213-CAL2		1	| 4.91	45056||	7.20	26746||	9.24	50759||	14.21	44658||	18.11	42567|
5	1225	N823011905.D	SLA0213-CAL3		1	| 4.91	47180||	7.20	28206||	9.24	53233||	14.20	46493||	18.11	44587|
6	1252	N823011906.D	SLA0213-CAL4		1	| 4.91	44704||	7.20	26411||	9.24	49210||	14.20	42994||	18.11	40520|
7	1319	N823011907.D	SLA0213-CAL5		1	| 4.91	46542||	7.20	27638||	9.23	51351||	14.20	44781||	18.11	42187|
8	1346	N823011908.D	SLA0213-CAL6		1	| 4.91	46070||	7.20	26689||	9.24	50683||	14.21	43880||	18.11	40659|
9	1458	N823011909.D	SLA0213-SCV1		1	| 4.91	46346||	7.20	27709||	9.24	51685||	14.21	46582||	18.12	41743|

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230119.b

ARI Job No.: SLA0 Method: FSIMPNA230119.m Instrument: nt8.i Date: 19-JAN-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1059	N823011902.D	SLA0213-ICB1		1	NO MANUAL INTEGRATION
1126	N823011903.D	SLA0213-CAL1		1	Total Benzofluoranthenes, Dibenzo(a,h)anthracene-d14,
1158	N823011904.D	SLA0213-CAL2		1	Total Benzofluoranthenes, Dibenzo(a,h)anthracene, Dibenzo(a,h)anthracene-d14,
1225	N823011905.D	SLA0213-CAL3		1	Total Benzofluoranthenes,
1252	N823011906.D	SLA0213-CAL4		1	Total Benzofluoranthenes,
1319	N823011907.D	SLA0213-CAL5		1	Total Benzofluoranthenes,
1346	N823011908.D	SLA0213-CAL6		1	Total Benzofluoranthenes,
1458	N823011909.D	SLA0213-SCV1		1	Total Benzofluoranthenes,

Security Status Report

Date: 19-Jan-2023 20:43

N823011901.D	Data Locked	jianqing, 19-Jan-2023 20:43
N823011902.D	Data Locked	jianqing, 19-Jan-2023 20:43
N823011903.D	Data Locked	jianqing, 19-Jan-2023 20:43
N823011904.D	Data Locked	jianqing, 19-Jan-2023 20:43
N823011905.D	Data Locked	jianqing, 19-Jan-2023 20:43
N823011906.D	Data Locked	jianqing, 19-Jan-2023 20:43
N823011907.D	Data Locked	jianqing, 19-Jan-2023 20:43
N823011908.D	Data Locked	jianqing, 19-Jan-2023 20:43
N823011909.D	Data Locked	jianqing, 19-Jan-2023 20:43

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JAN-2023 11:26
End Cal Date : 19-JAN-2023 13:46
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Last Edit : 19-Jan-2023 20:20 jianqing
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem3\nt8.i\20230119.b\N823011903.D
Level 2: \\target\share\chem3\nt8.i\20230119.b\N823011904.D
Level 3: \\target\share\chem3\nt8.i\20230119.b\N823011905.D
Level 4: \\target\share\chem3\nt8.i\20230119.b\N823011906.D
Level 5: \\target\share\chem3\nt8.i\20230119.b\N823011907.D
Level 6: \\target\share\chem3\nt8.i\20230119.b\N823011908.D

	0.10000	0.50000	1.000	2.500	5.000	10.000	___	
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	% RSD
2 Naphthalene	1.05133	0.88042	0.91407	0.94424	0.90597	0.88348	0.92992	6.865
4 2-Methylnaphthalene	0.55840	0.48358	0.49661	0.53216	0.50818	0.49010	0.51150	5.596
5 1-methylnaphthalene	0.56750	0.48819	0.50733	0.53862	0.51235	0.50079	0.51913	5.582
6 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
7 Biphenyl	1.53553	1.22381	1.26186	1.35447	1.27381	1.26708	1.31943	8.655
8 2,6-Dimethylnaphthalene	1.00657	0.84902	0.90342	0.98129	0.93327	0.92936	0.93382	5.997
9 Acenaphthylene	1.56927	1.28857	1.41963	1.61272	1.57386	1.59750	1.51026	8.531
11 Acenaphthene	1.15917	0.93995	0.96901	1.04002	0.98262	0.98072	1.01192	7.822
12 Dibenzofuran	1.85613	1.44919	1.46877	1.53906	1.45840	1.45028	1.53697	10.407
13 1,6,7-Trimethylnaphthalene	1.10194	0.88028	0.91555	1.00758	0.95392	0.95592	0.96920	8.030
14 Fluorene	1.33377	1.06663	1.13494	1.22673	1.19285	1.20743	1.19372	7.540
16 Phenanthrene	1.20020	0.90687	0.92597	0.99220	0.92889	0.90761	0.97696	11.644
17 Anthracene	0.99007	0.78914	0.83625	0.94156	0.89523	0.87273	0.88750	8.129
18 Dibenzothiophene	1.00464	0.81097	0.83858	0.91687	0.87432	0.85731	0.88378	7.813
19 Carbazole	0.89689	0.71317	0.75168	0.85950	0.83159	0.82882	0.81361	8.430
20 1-Methylphenanthrene	0.79489	0.62625	0.65095	0.73891	0.70849	0.70462	0.70402	8.607

22 Fluoranthene	1.20097	0.97204	1.02294	1.11434	1.05358	1.01668	1.06343	7.729
23 Pyrene	1.41615	1.06642	1.15622	1.29482	1.25683	1.24939	1.23997	9.648
24 Benzo(a)anthracene	1.20036	0.94191	1.00686	1.18718	1.18459	1.22241	1.12389	10.532
27 Chrysene	1.38233	1.08164	1.12834	1.22724	1.18577	1.17328	1.19644	8.684
28 Benzo(b)fluoranthene	1.33590	0.97747	1.02294	1.22049	1.19238	1.23969	1.16481	11.769
29 Benzo(k)fluoranthene	1.32725	0.99373	1.00590	1.17899	1.16454	1.17521	1.14094	10.933
30 Benzo(j)fluoranthene	1.09283	0.92053	0.92287	1.08478	1.07520	1.06646	1.02711	7.997
31 Total Benzofluoranthenes	1.25535	0.93450	0.97166	1.15908	1.14235	1.15588	1.10314	11.202
32 Benzo(a)pyrene	1.13991	0.87777	0.89515	1.07737	1.06309	1.09688	1.02503	10.785
34 Benzo(e)pyrene	1.38633	1.02276	1.03286	1.18813	1.15641	1.18275	1.16154	11.391
35 Perylene	1.28978	0.96103	0.98751	1.14448	1.10241	1.11455	1.09996	10.771
37 Indeno(1,2,3-cd)pyrene	1.20860	0.99533	1.07255	1.25747	1.22858	1.24398	1.16775	9.225

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JAN-2023 11:26
End Cal Date : 19-JAN-2023 13:46
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Last Edit : 19-Jan-2023 20:20 jianqing
Curve Type : Average

Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	___ RRF	% RSD
38 Dibenzo(a,h)anthracene	1.04912	0.83483	0.89506	1.08138	1.06856	1.10072	1.00494	11.083
39 Benzo(g,h,i)perylene	1.16296	0.91028	0.94095	1.10667	1.08873	1.13847	1.05801	10.032
$ 3 2-Methylnaphthalene-d10	0.58571	0.49325	0.53451	0.56745	0.55043	0.54135	0.54545	5.792
$ 21 Fluoranthene-d10	0.90072	0.75455	0.82479	0.95503	0.92918	0.93009	0.88239	8.740
$ 36 Dibenzo(a,h)anthracene-d14	0.58028	0.54718	0.60762	0.73250	0.74207	+++++	0.64193	13.973

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Batch File: \\target\share\chem3\nt8.i\20230119.b
Inst ID: nt8.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	N823011903	N823011904	N823011905	N823011906	N823011907	N823011908
INJ.DATE:	19-JAN-2023	19-JAN-2023	19-JAN-2023	19-JAN-2023	19-JAN-2023	19-JAN-2023
INJ.TIME:	11:26	11:58	12:25	12:52	13:19	13:46

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 1 Naphthalene-d8	4.907	4.913	4.907	4.907	4.910	4.907	4.907	1.907-7.907	4.908	0.003
2 Naphthalene	4.939	4.942	4.939	4.938	4.938	4.938	4.938	1.938-7.938	4.939	0.001
$ 3 2-Methylnaphthalene-d1	5.644	5.647	5.640	5.640	5.640	5.640	5.640	2.640-8.640	5.642	0.003
4 2-Methylnaphthalene	5.691	5.694	5.688	5.688	5.688	5.688	5.688	2.688-8.688	5.689	0.003
5 1-methylnaphthalene	5.884	5.890	5.887	5.884	5.887	5.887	5.887	2.887-8.887	5.887	0.002
6 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	6.377	3.377-9.377	+++++	+++++
7 Biphenyl	6.346	6.352	6.346	6.345	6.346	6.349	6.349	3.349-9.349	6.347	0.003
8 2,6-Dimethylnaphthalen	6.390	6.396	6.390	6.390	6.390	6.393	6.393	3.393-9.393	6.391	0.003
9 Acenaphthylene	7.086	7.092	7.085	7.085	7.085	7.089	7.089	4.089-10.089	7.087	0.003
* 10 Acenaphthene-d10	7.196	7.199	7.196	7.196	7.196	7.196	7.196	4.196-10.196	7.197	0.001
11 Acenaphthene	7.247	7.250	7.247	7.247	7.247	7.247	7.247	4.247-10.247	7.247	0.001
12 Dibenzofuran	7.395	7.402	7.395	7.395	7.395	7.398	7.398	4.398-10.398	7.397	0.003
13 1,6,7-Trimethylnaphtha	7.462	7.465	7.462	7.462	7.462	7.465	7.465	4.465-10.465	7.463	0.002
14 Fluorene	7.876	7.879	7.876	7.873	7.876	7.876	7.876	4.876-10.876	7.876	0.002
* 15 Phenanthrene-d10	9.236	9.239	9.236	9.236	9.232	9.236	9.236	6.236-12.236	9.236	0.002
16 Phenanthrene	9.270	9.273	9.270	9.270	9.270	9.274	9.274	6.274-12.274	9.271	0.002
17 Anthracene	9.312	9.315	9.312	9.311	9.311	9.315	9.315	6.315-12.315	9.313	0.002

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

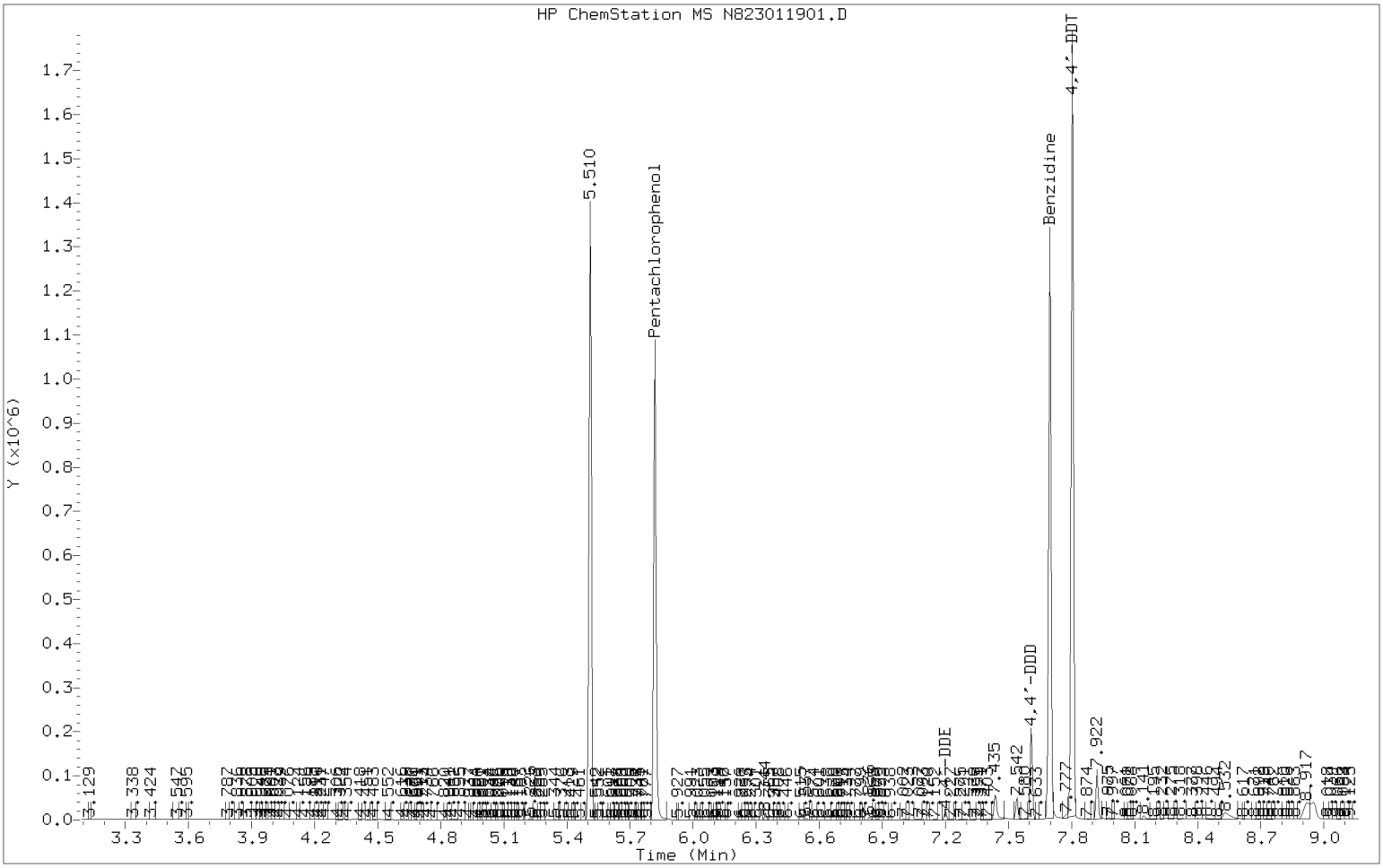
ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

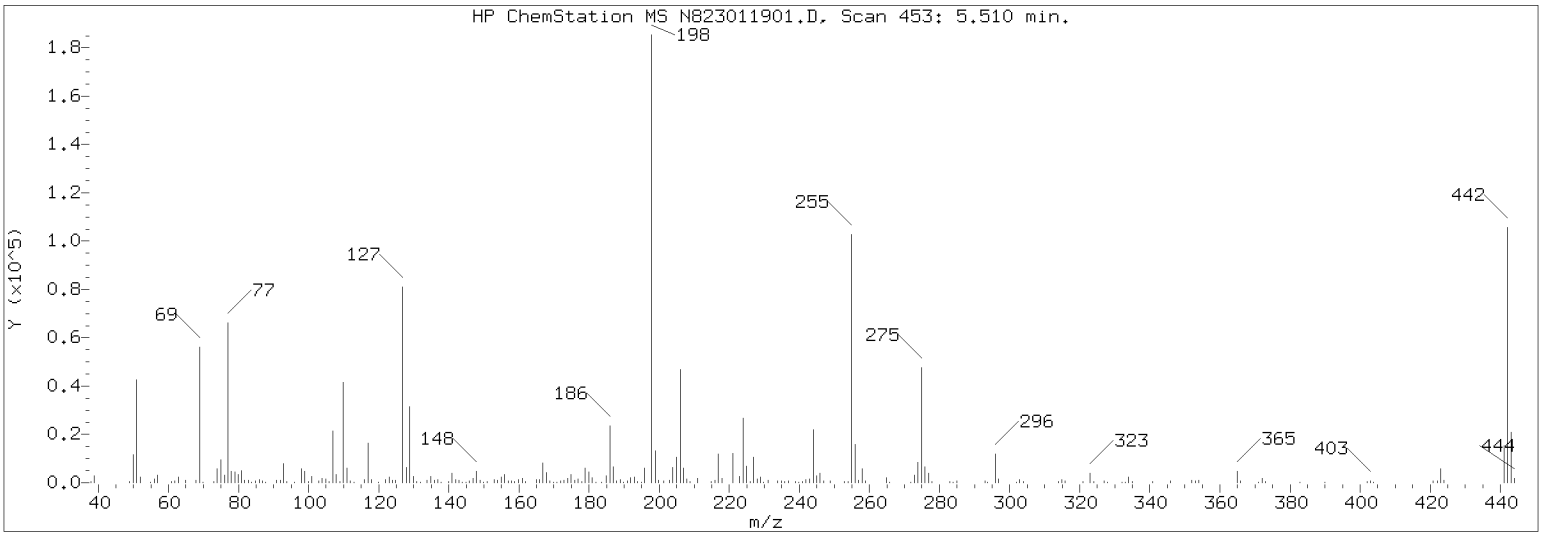
Method File: \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Batch File: \\target\share\chem3\nt8.i\20230119.b
Inst ID: nt8.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 Dibenzothiophene	9.109	9.112	9.109	9.109	9.109	9.112	9.112	6.112-12.112	9.110	0.002
	19 Carbazole	9.824	9.830	9.824	9.824	9.824	9.827	9.827	6.827-12.827	9.825	0.003
	20 1-Methylphenanthrene	10.048	10.051	10.048	10.048	10.048	10.051	10.051	7.051-13.051	10.049	0.002
$	21 Fluoranthene-d10	11.016	11.019	11.016	11.016	11.016	11.019	11.019	8.019-14.019	11.017	0.002
	22 Fluoranthene	11.054	11.057	11.051	11.054	11.054	11.057	11.057	8.057-14.057	11.054	0.002
	23 Pyrene	11.572	11.575	11.572	11.572	11.572	11.575	11.575	8.575-14.575	11.573	0.002
	24 Benzo(a)anthracene	14.073	14.080	14.077	14.077	14.077	14.080	14.080	11.080-17.080	14.077	0.002
*	25 Chrysene-d12	14.203	14.209	14.203	14.203	14.203	14.206	14.206	11.206-17.206	14.205	0.003
	27 Chrysene	14.276	14.279	14.276	14.279	14.279	14.282	14.282	11.282-17.282	14.278	0.002
	28 Benzo(b)fluoranthene	16.821	16.827	16.824	16.821	16.827	16.834	16.834	13.834-19.834	16.826	0.005
	29 Benzo(k)fluoranthene	16.881	16.887	16.881	16.884	16.888	16.897	16.897	13.897-19.897	16.886	0.006
	30 Benzo(j)fluoranthene	16.960	16.963	16.960	16.963	16.967	16.973	16.973	13.973-19.973	16.964	0.005
	31 Total Benzofluoranthen	16.821	16.827	16.824	16.821	16.827	16.834	16.834	13.834-19.834	16.826	0.005
	32 Benzo(a)pyrene	17.874	17.883	17.877	17.877	17.884	17.890	17.890	14.890-20.890	17.881	0.006
*	33 Perylene-d12	18.111	18.114	18.111	18.111	18.111	18.114	18.114	15.114-21.114	18.112	0.002
	34 Benzo(e)pyrene	17.748	17.754	17.751	17.748	17.751	17.760	17.760	14.760-20.760	17.752	0.005
	35 Perylene	18.184	18.187	18.184	18.184	18.187	18.193	18.193	15.193-21.193	18.187	0.004
$	36 Dibenzo(a,h)anthracene	20.546	20.549	20.549	20.552	20.555	20.565	20.565	17.565-23.565	20.553	0.007
	37 Indeno(1,2,3-cd)pyrene	20.666	20.676	20.672	20.676	20.682	20.691	20.691	17.691-23.691	20.677	0.009
	38 Dibenzo(a,h)anthracene	20.666	20.666	20.657	20.663	20.669	20.685	20.685	17.685-23.685	20.668	0.010
	39 Benzo(g,h,i)perylene	21.757	21.760	21.748	21.757	21.763	21.782	21.782	18.782-24.782	21.761	0.012

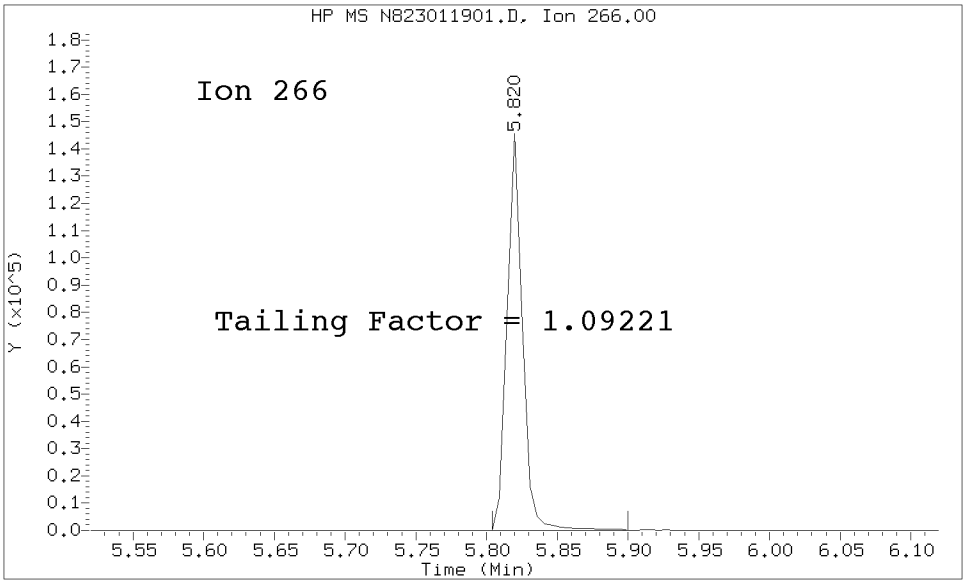
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230119.b/tune.b/N823011901.D/N823011901.D
Method Used: \20230119.b\tune.b\DFTPP.m Inst: nt8
Injection Date: 19-JAN-2023 10:28 Operator: JZ
Sample Info: SLA0213-TUN1 DFTPP230119
Report Date: 01/19/2023 20:14



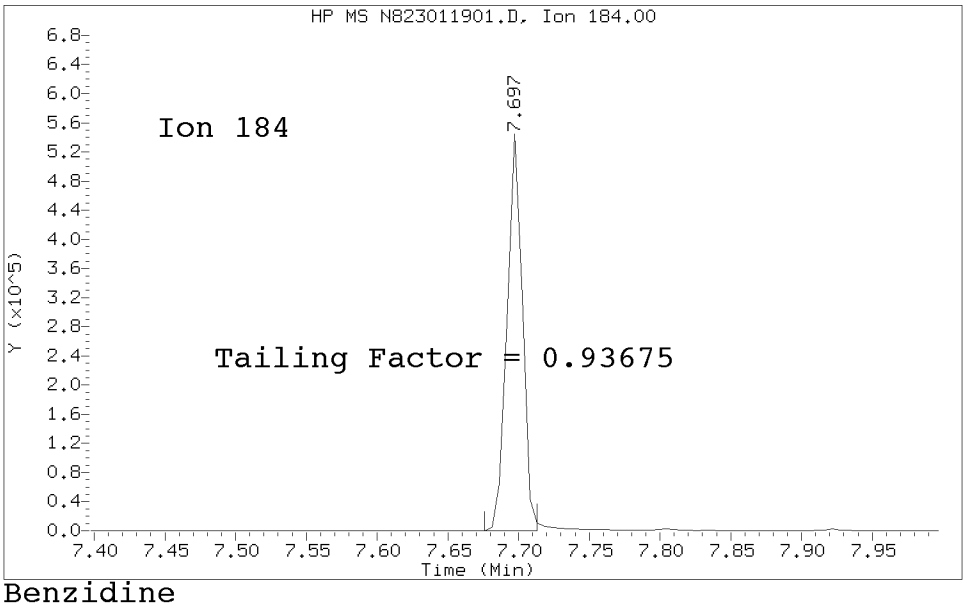


Datafile Analyzed: /20230119.b/tune.b/N823011901.D/N823011901.D
Method Used: \20230119.b\tune.b\DFTPP.m\sw846ddt.m Inst: nt8
Injection Date: 19-JAN-2023 10:28 Operator: JZ
Sample Info: DFTPP230119
Report Date: 01/19/2023 20:14



Pentachlorophenol
==========
Exp. RT = 5.825
Found RT = 5.820

Tail Factor = 1.092 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.703
Found RT = 7.697

Tail Factor = 0.937 Maximum Allowed = 2.0

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	23.71
68	Less than 2.00% of mass 69	0.39 (1.25)
69	Mass 69 relative abundance	30.92
70	Less than 2.00% of mass 69	0.06 (0.21)
127	10.00 - 80.00% of mass 198	44.20
197	Less than 2.00% of mass 198	0.17
199	5.00 - 9.00% of mass 198	6.89
275	10.00 - 60.00% of mass 198	26.96
365	Greater than 1.00% of mass 198	2.85
441	0.01 - 24.00% of mass 442	9.72 (14.32)
442	50.00 - 200.00% of mass 198	67.89
443	15.00 - 24.00% of mass 442	13.33 (19.64)

Data File: N823011901.D
Spectrum: Avg. Scans 452-454 (5.51), Background Scan 448
Location of Maximum: 198.00
Number of points: 228

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	424	124.00	727	188.00	466	265.00	1738
39.00	2285	125.00	694	189.00	1088	266.00	231
49.00	389	127.00	59064	190.00	92	272.00	97
50.00	8567	128.00	4618	191.00	538	273.00	2435
51.00	31688	129.00	23208	192.00	1501	274.00	6434
52.00	1694	130.00	1967	193.00	1652	275.00	36032
55.00	89	131.00	387	194.00	339	276.00	4936
56.00	1081	132.00	92	195.00	108	277.00	3133
57.00	2353	134.00	695	196.00	4417	278.00	496
61.00	487	135.00	1887	197.00	224	283.00	243
62.00	511	136.00	770	198.00	133632	284.00	200
63.00	1627	137.00	979	199.00	9210	285.00	536
65.00	865	138.00	101	200.00	711	293.00	678
68.00	518	140.00	220	201.00	653	294.00	83
69.00	41320	141.00	2913	203.00	891	296.00	9364
70.00	86	142.00	931	204.00	4715	297.00	1310
73.00	274	143.00	728	205.00	8070	302.00	96
74.00	4327	144.00	83	206.00	34104	303.00	1146
75.00	6885	145.00	91	207.00	4557	304.00	262
76.00	2362	146.00	508	208.00	1177	314.00	364
77.00	48072	147.00	1540	209.00	387	315.00	1068
78.00	3441	148.00	3391	210.00	236	316.00	588
79.00	3296	149.00	690	211.00	1430	321.00	250
80.00	2464	150.00	90	215.00	376	323.00	3145
81.00	3741	151.00	458	216.00	746	324.00	501
82.00	872	152.00	181	217.00	9085	327.00	540
83.00	845	153.00	893	218.00	1189	328.00	201
84.00	287	154.00	764	221.00	8442	332.00	178
85.00	621	155.00	1756	223.00	2039	333.00	129
86.00	1039	156.00	2503	224.00	19544	334.00	1893
87.00	481	157.00	527	225.00	5122	335.00	518
88.00	91	158.00	516	226.00	502	341.00	275
91.00	866	159.00	410	227.00	8274	346.00	674
92.00	878	160.00	955	228.00	1174	352.00	945
93.00	5816	161.00	1421	229.00	1712	353.00	630
94.00	409	162.00	445	230.00	111	354.00	910
96.00	203	165.00	1085	231.00	685	365.00	3802
98.00	4243	166.00	1023	234.00	538	366.00	580
99.00	3501	167.00	5993	235.00	568	371.00	91
100.00	344	168.00	3082	236.00	394	372.00	1475
101.00	1983	169.00	490	237.00	657	373.00	292
103.00	704	170.00	94	239.00	327	383.00	290
104.00	1275	171.00	194	240.00	187	390.00	177
105.00	1230	172.00	595	241.00	468	402.00	468
106.00	379	173.00	732	242.00	1090	403.00	736
107.00	15826	174.00	1319	243.00	1102	404.00	243
108.00	2447	175.00	2491	244.00	16206	421.00	649
109.00	331	176.00	751	245.00	2245	422.00	226
110.00	30008	177.00	1175	246.00	3000	423.00	4860

111.00	4456	178.00	288	247.00	624	424.00	978
112.00	513	179.00	4561	249.00	587	441.00	12991
113.00	89	180.00	3271	253.00	239	442.00	90720
116.00	935	181.00	1513	254.00	438	443.00	17816
117.00	12513	182.00	106	255.00	76904	444.00	1584
118.00	931	184.00	333	256.00	11699		
120.00	104	185.00	2153	257.00	880		
122.00	1003	186.00	17336	258.00	4539		
123.00	1682	187.00	4916	259.00	746		

Data File: \\target\share\chem3\nt8.i\20230119.b\N823011902.D

Date : 19-JAN-2023 10:59

Client ID:

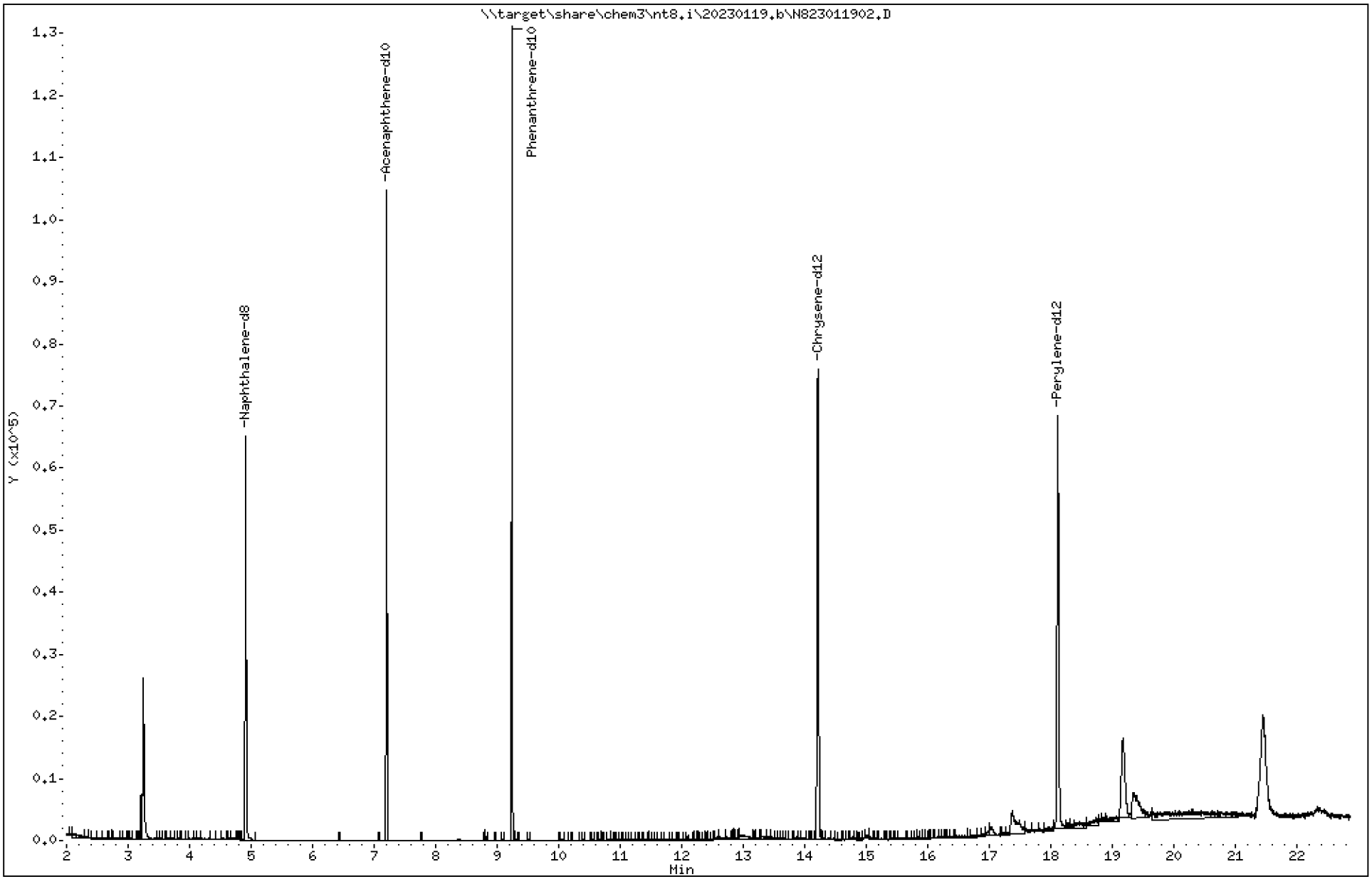
Instrument: nt8.i

Sample Info: ICB230119

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



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ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230119.b\N823011902.D
Lab Smp Id: SLA0213-ICB1
Inj Date : 19-JAN-2023 10:59
Operator : JZ Inst ID: nt8.i
Smp Info : ICB230119
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Meth Date : 19-Jan-2023 20:20 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.916	4.906	(1.000)	52082	2.00000	
	2 Naphthalene	128	Compound Not Detected.					
$	3 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	4 2-Methylnaphthalene	141	Compound Not Detected.					
	5 1-methylnaphthalene	141	Compound Not Detected.					
	7 Biphenyl	154	Compound Not Detected.					
	8 2,6-Dimethylnaphthalene	156	Compound Not Detected.					
	9 Acenaphthylene	152	Compound Not Detected.					
*	10 Acenaphthene-d10	164	7.202	7.196	(1.000)	30936	2.00000	
	11 Acenaphthene	153	Compound Not Detected.					
	12 Dibenzofuran	168	Compound Not Detected.					
	13 1,6,7-Trimethylnaphthalene	170	Compound Not Detected.					
	14 Fluorene	166	Compound Not Detected.					
	18 Dibenzothiophene	184	Compound Not Detected.					
*	15 Phenanthrene-d10	188	9.241	9.235	(1.000)	59030	2.00000	
	16 Phenanthrene	178	Compound Not Detected.					
	17 Anthracene	178	Compound Not Detected.					
	19 Carbazole	167	Compound Not Detected.					
	20 1-Methylphenanthrene	192	Compound Not Detected.					
	22 Fluoranthene	202	Compound Not Detected.					
$	21 Fluoranthene-d10	212	Compound Not Detected.					
	23 Pyrene	202	Compound Not Detected.					
	24 Benzo(a)anthracene	228	Compound Not Detected.					
*	25 Chrysene-d12	240	14.215	14.202	(1.000)	50944	2.00000	
	27 Chrysene	228	Compound Not Detected.					
	28 Benzo(b)fluoranthene	252	Compound Not Detected.					
	29 Benzo(k)fluoranthene	252	Compound Not Detected.					
	30 Benzo(j)fluoranthene	252	Compound Not Detected.					
	31 Total Benzofluoranthenes	252	Compound Not Detected.					
	34 Benzo(e)pyrene	252	Compound Not Detected.					
	32 Benzo(a)pyrene	252	Compound Not Detected.					
*	33 Perylene-d12	264	18.120	18.111	(1.000)	47418	2.00000	
	35 Perylene	252	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
39 Benzo(g,h,i)perylene	276	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823011902.D
Lab Smp Id: SLA0213-ICB1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 19-JAN-2023
Calibration Time: 12:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44704	22352	89408	52082	16.50
10 Acenaphthene-d10	26411	13206	52822	30936	17.13
15 Phenanthrene-d10	49210	24605	98420	59030	19.96
25 Chrysene-d12	42994	21497	85988	50944	18.49
33 Perylene-d12	40520	20260	81040	47418	17.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.91	4.41	5.41	4.92	0.19
10 Acenaphthene-d10	7.20	6.70	7.70	7.20	0.09
15 Phenanthrene-d10	9.24	8.74	9.74	9.24	0.07
25 Chrysene-d12	14.20	13.70	14.70	14.22	0.09
33 Perylene-d12	18.11	17.61	18.61	18.12	0.05

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

REVIEW SUMMARY FOR FILE - N823011902.D

Lab ID: SLA0213-ICB1
nt8.i, 20230119.b\FSIMPNA230119.m,   19-JAN-2023 10:59

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

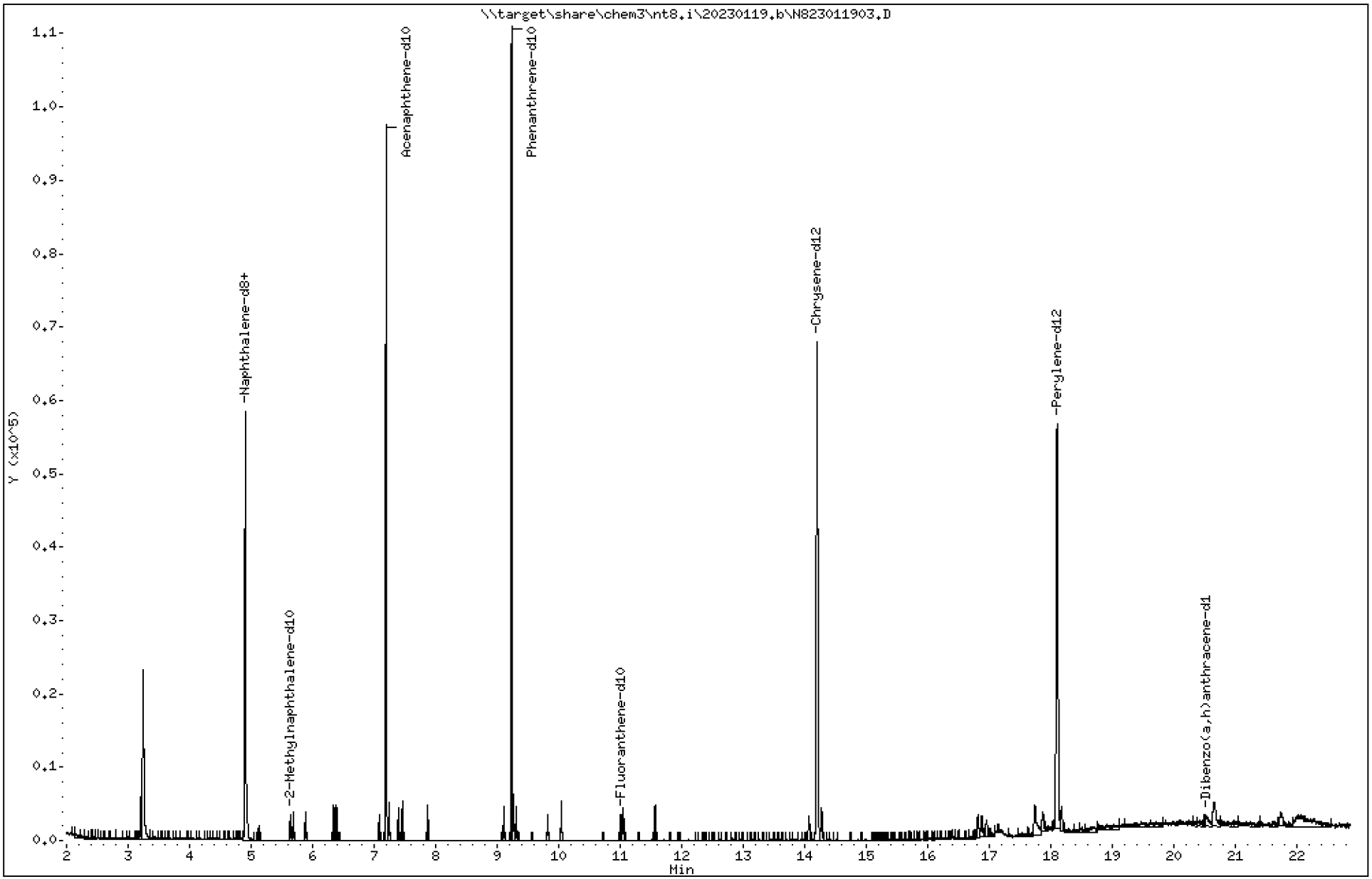
No RRT check performed

On Column LOD for nt8.i, 20230119.b\FSIMPNA230119.m, FSIMPNAICLA.sub = 0.0000

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

Data File: \\target\share\chem3\nt8.i\20230119.b\N823011903.D
Date : 19-JAN-2023 11:26
Client ID:
Sample Info: IC01230119,

Instrument: nt8.i
Operator: JZ
Column phase: Rxi-17sil
Column diameter: 0.25



23A0207 CLPLIKE (Rev3) - Page 761 of 3315

ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230119.b\N823011903.D
Lab Smp Id: SLA0213-CAL1
Inj Date : 19-JAN-2023 11:26
Operator : JZ Inst ID: nt8.i
Smp Info : IC01230119,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Meth Date : 19-Jan-2023 20:10 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.906	4.906	(1.000)	46132	2.00000	
	2 Naphthalene	128	4.938	4.938	(1.006)	2425	0.10000	0.1131
$	3 2-Methylnaphthalene-d10	152	5.643	5.640	(1.150)	1351	0.10000	0.1074
	4 2-Methylnaphthalene	141	5.691	5.687	(1.160)	1288	0.10000	0.1092
	5 1-methylnaphthalene	141	5.883	5.887	(1.199)	1309	0.10000	0.1093
	7 Biphenyl	154	6.345	6.348	(0.882)	2093	0.10000	0.1164
	8 2,6-Dimethylnaphthalene	156	6.389	6.392	(0.888)	1372	0.10000	0.1078
	9 Acenaphthylene	152	7.085	7.088	(0.985)	2139	0.10000	0.1039
*	10 Acenaphthene-d10	164	7.196	7.196	(1.000)	27261	2.00000	
	11 Acenaphthene	153	7.246	7.246	(1.007)	1580	0.10000	0.1146
	12 Dibenzofuran	168	7.395	7.398	(1.028)	2530	0.10000	0.1208
	13 1,6,7-Trimethylnaphthalene	170	7.461	7.464	(1.037)	1502	0.10000	0.1137
	14 Fluorene	166	7.876	7.875	(1.094)	1818	0.10000	0.1117
	18 Dibenzothiophene	184	9.109	9.112	(0.986)	2620	0.10000	0.1137
*	15 Phenanthrene-d10	188	9.235	9.235	(1.000)	52158	2.00000	
	16 Phenanthrene	178	9.270	9.273	(1.004)	3130	0.10000	0.1229
	17 Anthracene	178	9.311	9.314	(1.008)	2582	0.10000	0.1116
	19 Carbazole	167	9.823	9.826	(1.064)	2339	0.10000	0.1102
	20 1-Methylphenanthrene	192	10.048	10.051	(1.088)	2073	0.10000	0.1129
	22 Fluoranthene	202	11.053	11.056	(1.197)	3132	0.10000	0.1129
$	21 Fluoranthene-d10	212	11.015	11.018	(1.193)	2349	0.10000	0.1021
	23 Pyrene	202	11.572	11.575	(0.815)	3183	0.10000	0.1142
	24 Benzo(a)anthracene	228	14.073	14.079	(0.991)	2698	0.10000	0.1068
*	25 Chrysene-d12	240	14.203	14.206	(1.000)	44953	2.00000	
	27 Chrysene	228	14.275	14.282	(1.005)	3107	0.10000	0.1155
	28 Benzo(b)fluoranthene	252	16.821	16.833	(0.929)	2781	0.10000	0.1147
	29 Benzo(k)fluoranthene	252	16.881	16.897	(0.932)	2763	0.10000	0.1163
	30 Benzo(j)fluoranthene	252	16.960	16.972	(0.936)	2275	0.10000	0.1064
	31 Total Benzofluoranthenes	252	16.821	16.833	(0.929)	7840	0.30000	0.3414(M)
	34 Benzo(e)pyrene	252	17.747	17.760	(0.980)	2886	0.10000	0.1194
	32 Benzo(a)pyrene	252	17.874	17.889	(0.987)	2373	0.10000	0.1112
*	33 Perylene-d12	264	18.111	18.114	(1.000)	41635	2.00000	
	35 Perylene	252	18.184	18.193	(1.004)	2685	0.10000	0.1173

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.546	20.565	(1.134)	1208	0.10000	0.09040(M)
37 Indeno(1,2,3-cd)pyrene	276	20.666	20.691	(1.141)	2516	0.10000	0.1035
38 Dibenzo(a,h)anthracene	278	20.666	20.685	(1.141)	2184	0.10000	0.1044
39 Benzo(g,h,i)perylene	276	21.757	21.782	(1.201)	2421	0.10000	0.1099

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823011903.D
Lab Smp Id: SLA0213-CAL1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 19-JAN-2023
Calibration Time: 12:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44704	22352	89408	46132	3.19
10 Acenaphthene-d10	26411	13206	52822	27261	3.22
15 Phenanthrene-d10	49210	24605	98420	52158	5.99
25 Chrysene-d12	42994	21497	85988	44953	4.56
33 Perylene-d12	40520	20260	81040	41635	2.75

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.91	4.41	5.41	4.91	0.00
10 Acenaphthene-d10	7.20	6.70	7.70	7.20	0.00
15 Phenanthrene-d10	9.24	8.74	9.74	9.24	0.00
25 Chrysene-d12	14.20	13.70	14.70	14.20	0.00
33 Perylene-d12	18.11	17.61	18.61	18.11	0.00

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

REVIEW SUMMARY FOR FILE - N823011903.D

Lab ID: SLA0213-CAL1
nt8.i, 20230119.b\FSIMPNA230119.m,   19-JAN-2023 11:26

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

Quant Method: ICAL

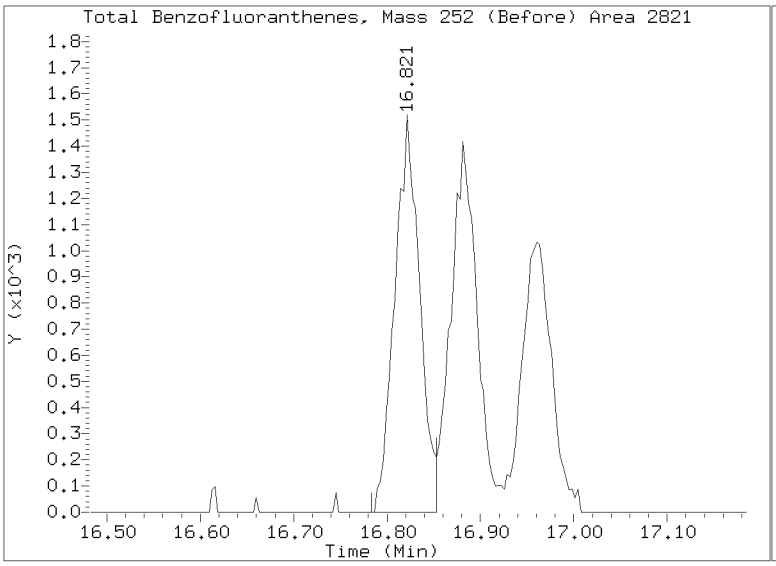
No RRT check performed

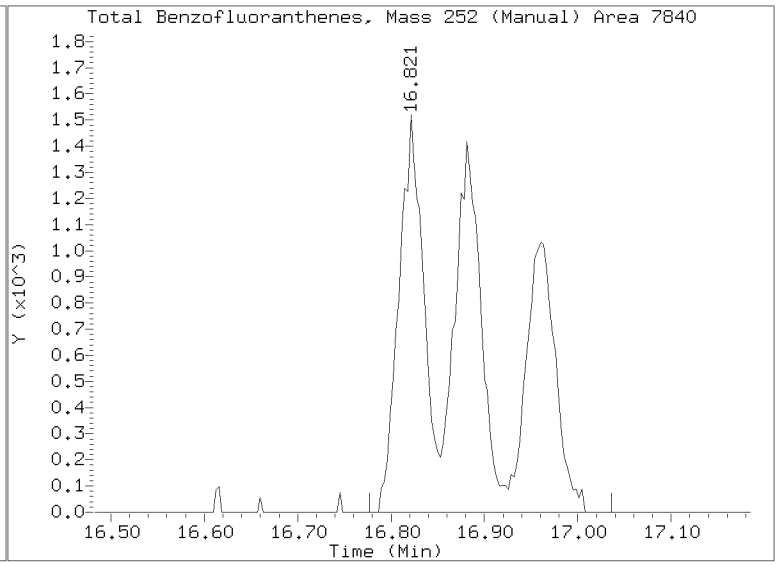
On Column LOD for nt8.i, 20230119.b\FSIMPNA230119.m, FSIMPNAICLA.sub = 0.0000

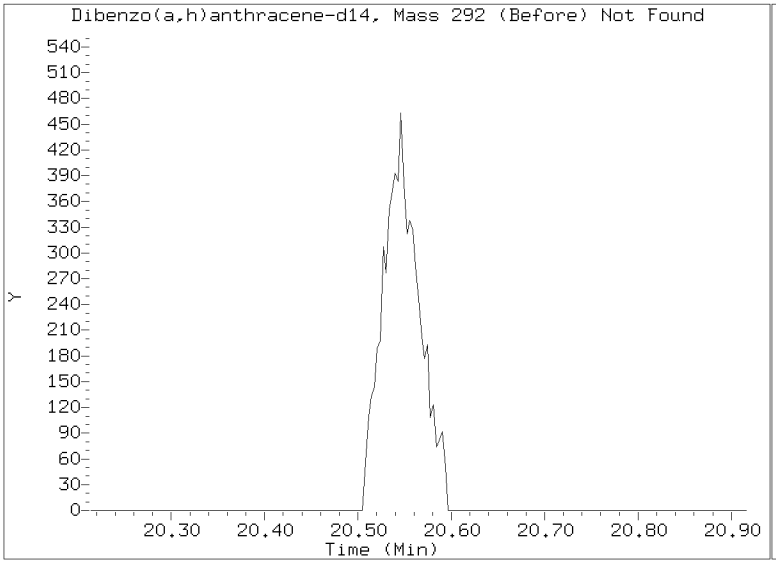
* Only compounds listed in the work order have been verified by the analyst *

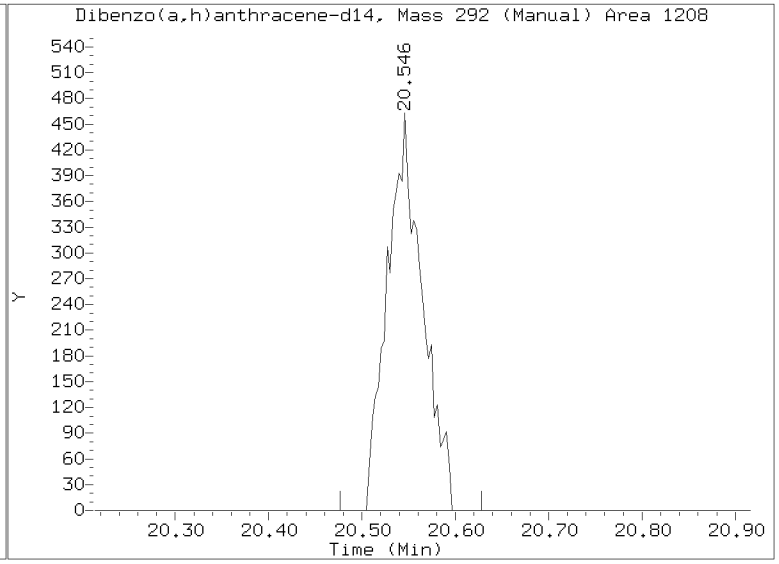
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230119.b/N823011903.D
Injection Date: 19-JAN-2023 11:26
Lab ID:SLA0213-CAL1 Client ID:
Report Date: 01/19/2023 20:12



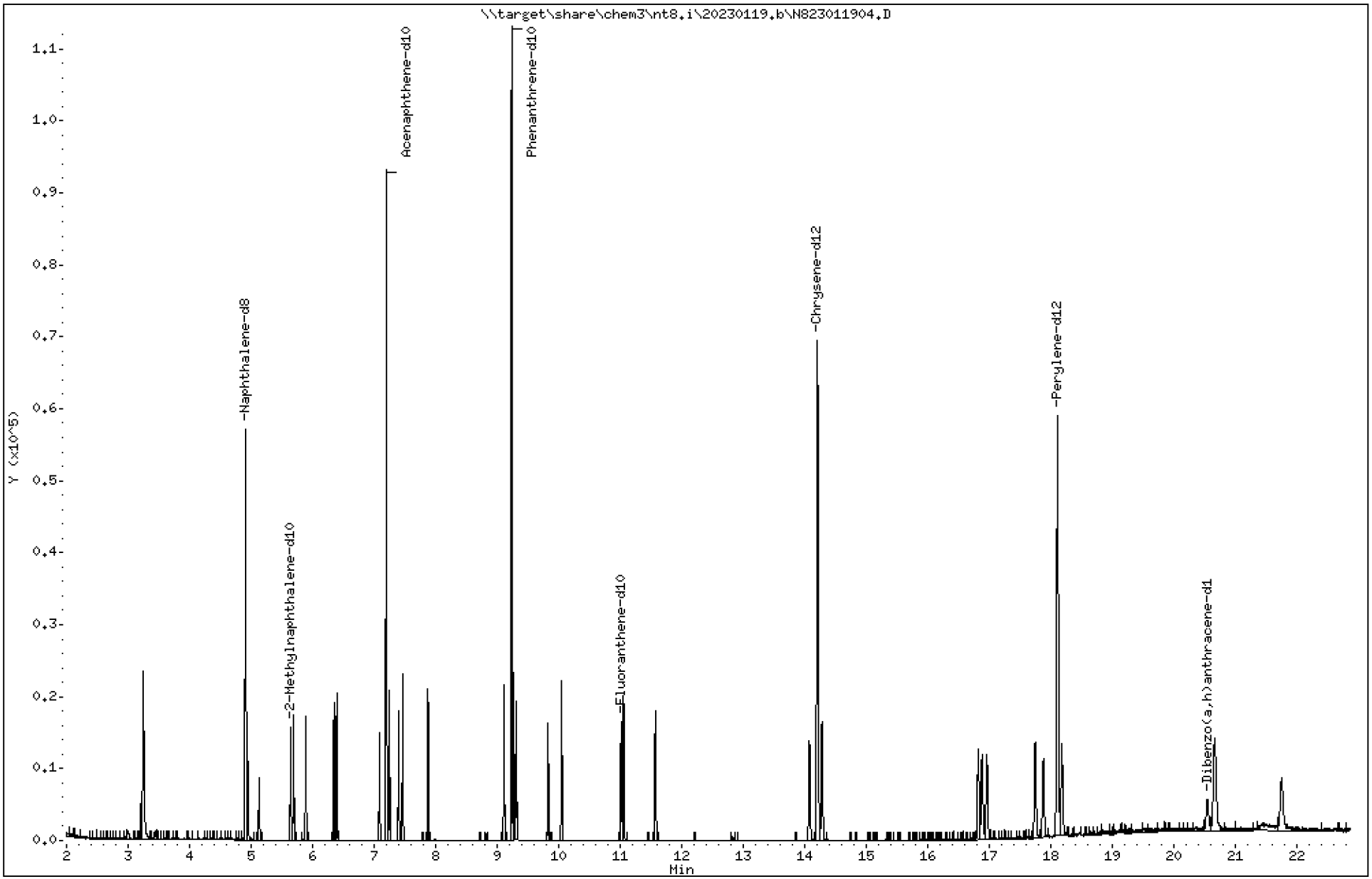






Data File: \\target\share\chem3\nt8.i\20230119.b\N823011904.D
Date : 19-JAN-2023 11:58
Client ID:
Sample Info: IC05230119,

Instrument: nt8.i
Operator: JZ
Column phase: Rxi-17sil
Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230119.b\N823011904.D
Lab Smp Id: SLA0213-CAL2
Inj Date : 19-JAN-2023 11:58
Operator : JZ Inst ID: nt8.i
Smp Info : IC05230119,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Meth Date : 19-Jan-2023 20:10 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.913	4.906	(1.000)	45056	2.00000	
	2 Naphthalene	128	4.941	4.938	(1.006)	9917	0.50000	0.4734
$	3 2-Methylnaphthalene-d10	152	5.646	5.640	(1.149)	5556	0.50000	0.4522
	4 2-Methylnaphthalene	141	5.694	5.687	(1.159)	5447	0.50000	0.4727
	5 1-methylnaphthalene	141	5.890	5.887	(1.199)	5499	0.50000	0.4702
	7 Biphenyl	154	6.351	6.348	(0.882)	8183	0.50000	0.4638
	8 2,6-Dimethylnaphthalene	156	6.396	6.392	(0.888)	5677	0.50000	0.4546
	9 Acenaphthylene	152	7.091	7.088	(0.985)	8616	0.50000	0.4266
*	10 Acenaphthene-d10	164	7.199	7.196	(1.000)	26746	2.00000	
	11 Acenaphthene	153	7.249	7.246	(1.007)	6285	0.50000	0.4644
	12 Dibenzofuran	168	7.401	7.398	(1.028)	9690	0.50000	0.4714
	13 1,6,7-Trimethylnaphthalene	170	7.464	7.464	(1.037)	5886	0.50000	0.4541
	14 Fluorene	166	7.879	7.875	(1.094)	7132	0.50000	0.4468
	18 Dibenzothiophene	184	9.112	9.112	(0.986)	10291	0.50000	0.4588
*	15 Phenanthrene-d10	188	9.238	9.235	(1.000)	50759	2.00000	
	16 Phenanthrene	178	9.273	9.273	(1.004)	11508	0.50000	0.4641
	17 Anthracene	178	9.314	9.314	(1.008)	10014	0.50000	0.4446
	19 Carbazole	167	9.829	9.826	(1.064)	9050	0.50000	0.4383
	20 1-Methylphenanthrene	192	10.051	10.051	(1.088)	7947	0.50000	0.4448
	22 Fluoranthene	202	11.056	11.056	(1.197)	12335	0.50000	0.4570
$	21 Fluoranthene-d10	212	11.018	11.018	(1.193)	9575	0.50000	0.4276
	23 Pyrene	202	11.575	11.575	(0.815)	11906	0.50000	0.4300
	24 Benzo(a)anthracene	228	14.079	14.079	(0.991)	10516	0.50000	0.4190
*	25 Chrysene-d12	240	14.209	14.206	(1.000)	44658	2.00000	
	27 Chrysene	228	14.278	14.282	(1.005)	12076	0.50000	0.4520
	28 Benzo(b)fluoranthene	252	16.827	16.833	(0.929)	10402	0.50000	0.4196
	29 Benzo(k)fluoranthene	252	16.887	16.897	(0.932)	10575	0.50000	0.4355
	30 Benzo(j)fluoranthene	252	16.963	16.972	(0.936)	9796	0.50000	0.4481
	31 Total Benzofluoranthenes	252	16.827	16.833	(0.929)	29834	1.50000	1.271(M)
	34 Benzo(e)pyrene	252	17.753	17.760	(0.980)	10884	0.50000	0.4403
	32 Benzo(a)pyrene	252	17.883	17.889	(0.987)	9341	0.50000	0.4282
*	33 Perylene-d12	264	18.114	18.114	(1.000)	42567	2.00000	
	35 Perylene	252	18.187	18.193	(1.004)	10227	0.50000	0.4368

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.549	20.565	(1.134)	5823	0.50000	0.4262(M)
37 Indeno(1,2,3-cd)pyrene	276	20.675	20.691	(1.141)	10592	0.50000	0.4262
38 Dibenzo(a,h)anthracene	278	20.666	20.685	(1.141)	8884	0.50000	0.4154(M)
39 Benzo(g,h,i)perylene	276	21.760	21.782	(1.201)	9687	0.50000	0.4302

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823011904.D
Lab Smp Id: SLA0213-CAL2
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 19-JAN-2023
Calibration Time: 12:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44704	22352	89408	45056	0.79
10 Acenaphthene-d10	26411	13206	52822	26746	1.27
15 Phenanthrene-d10	49210	24605	98420	50759	3.15
25 Chrysene-d12	42994	21497	85988	44658	3.87
33 Perylene-d12	40520	20260	81040	42567	5.05

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.91	4.41	5.41	4.91	0.13
10 Acenaphthene-d10	7.20	6.70	7.70	7.20	0.04
15 Phenanthrene-d10	9.24	8.74	9.74	9.24	0.03
25 Chrysene-d12	14.20	13.70	14.70	14.21	0.04
33 Perylene-d12	18.11	17.61	18.61	18.11	0.02

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

REVIEW SUMMARY FOR FILE - N823011904.D

Lab ID: SLA0213-CAL2
nt8.i, 20230119.b\FSIMPNA230119.m,   19-JAN-2023 11:58

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

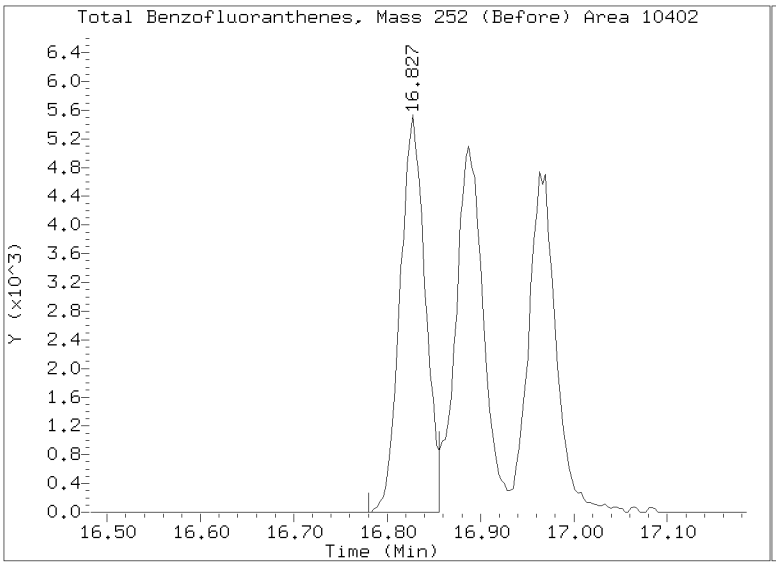
No RRT check performed

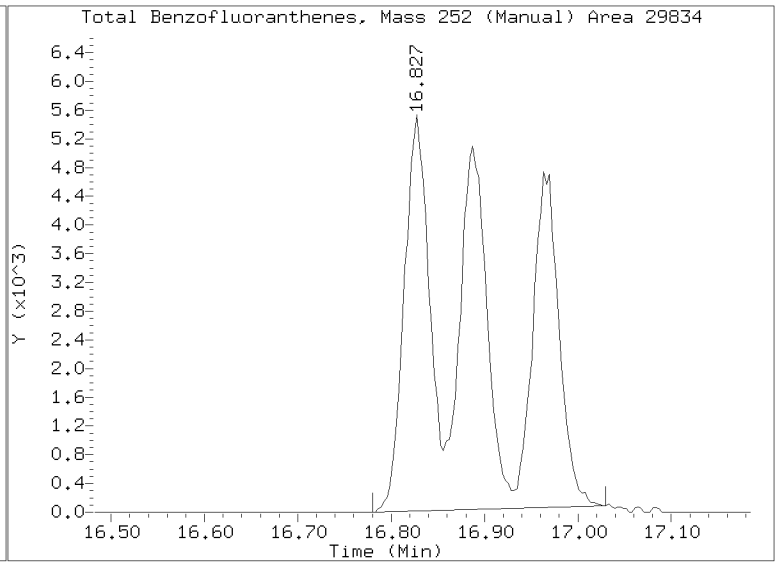
On Column LOD for nt8.i, 20230119.b\FSIMPNA230119.m, FSIMPNAICLA.sub = 0.0000

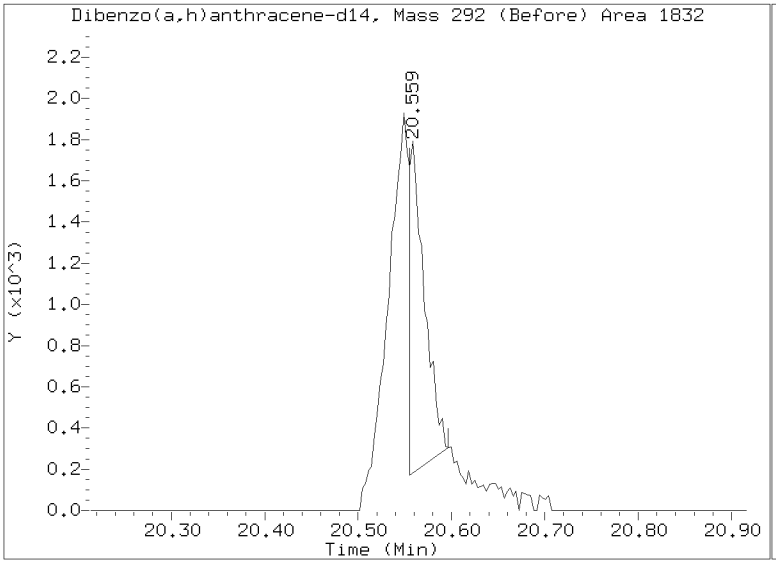
* Only compounds listed in the work order have been verified by the analyst *

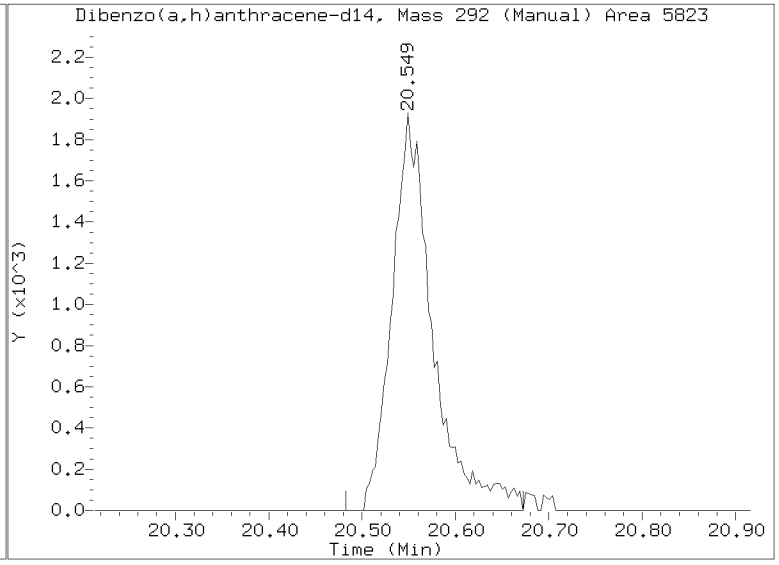
Quant Ion Manual Peak Adjustment Report

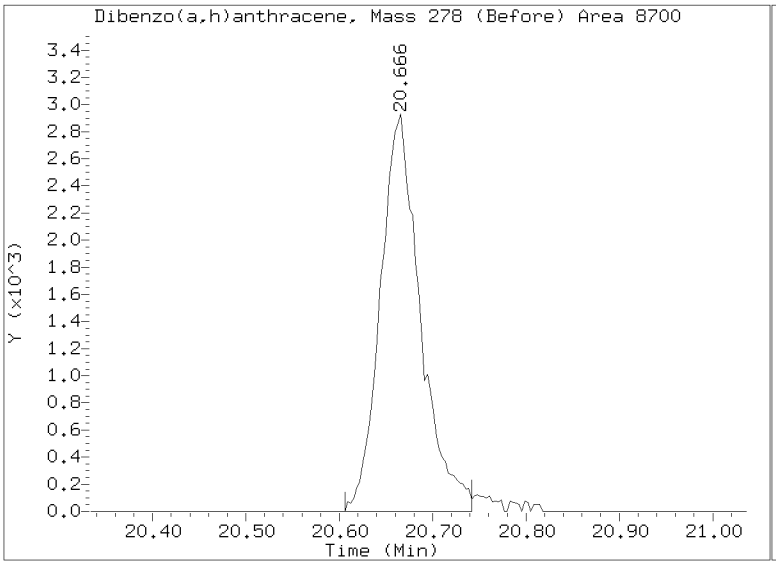
Datafile: //target/share/chem3/nt8.i/20230119.b/N823011904.D
Injection Date: 19-JAN-2023 11:58
Lab ID:SLA0213-CAL2 Client ID:
Report Date: 01/19/2023 20:12

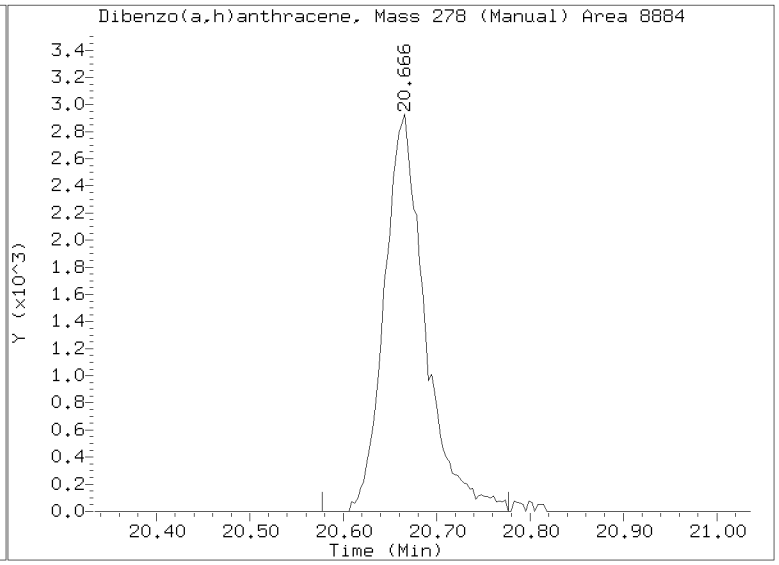






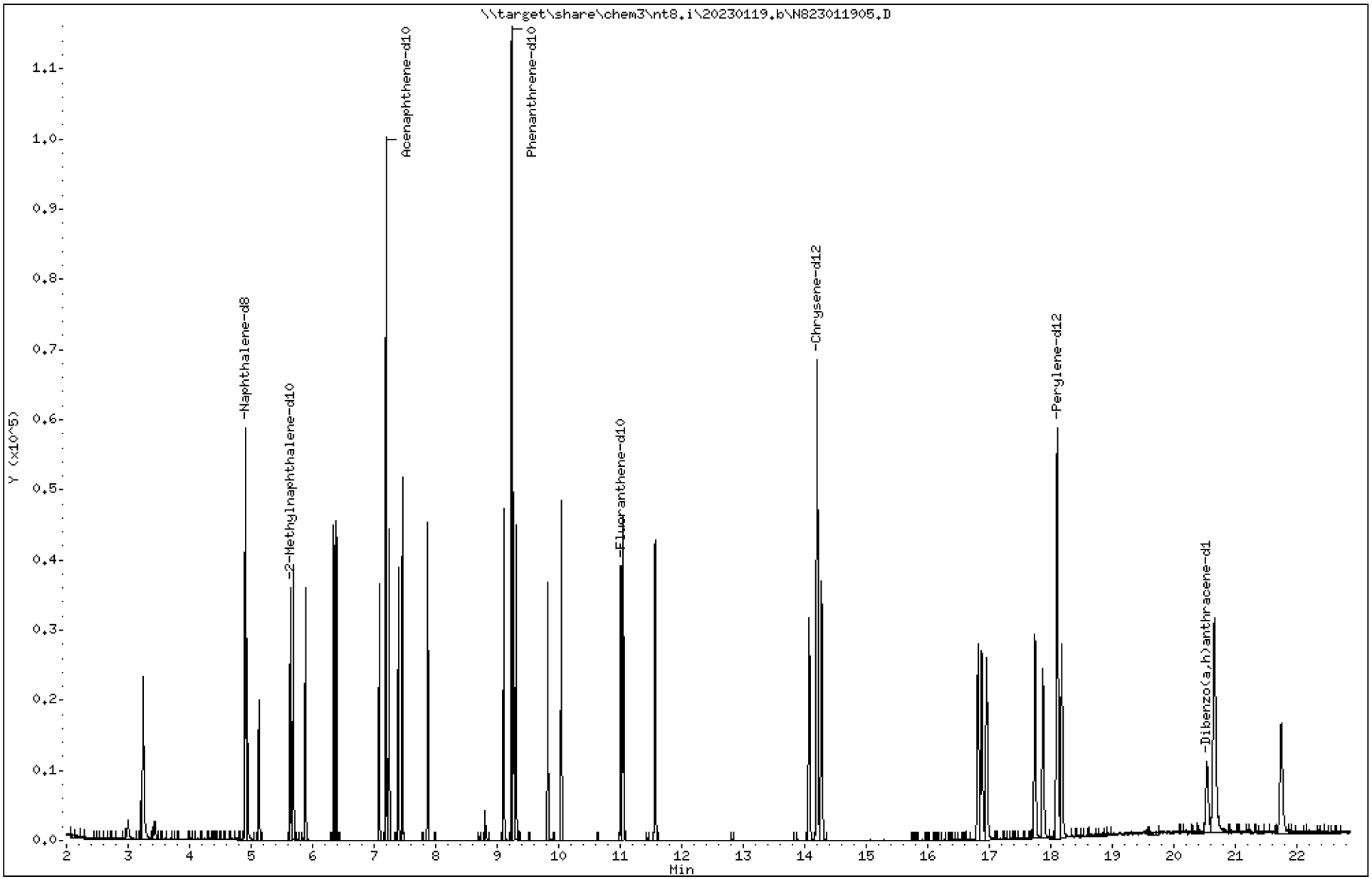






Data File: \\target\share\chem3\nt8.i\20230119.b\N823011905.D
Date : 19-JAN-2023 12:25
Client ID:
Sample Info: IC1230119,

Instrument: nt8.i
Operator: JZ
Column phase: Rxi-17sil
Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230119.b\N823011905.D
Lab Smp Id: SLA0213-CAL3
Inj Date : 19-JAN-2023 12:25
Operator : JZ Inst ID: nt8.i
Smp Info : IC1230119,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Meth Date : 19-Jan-2023 20:10 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.906	4.906	(1.000)	47180	2.00000	
	2 Naphthalene	128	4.938	4.938	(1.006)	21563	1.00000	0.9830
$	3 2-Methylnaphthalene-d10	152	5.640	5.640	(1.150)	12609	1.00000	0.9799
	4 2-Methylnaphthalene	141	5.687	5.687	(1.159)	11715	1.00000	0.9709
	5 1-methylnaphthalene	141	5.887	5.887	(1.200)	11968	1.00000	0.9773
	7 Biphenyl	154	6.345	6.348	(0.882)	17796	1.00000	0.9564
	8 2,6-Dimethylnaphthalene	156	6.389	6.392	(0.888)	12741	1.00000	0.9674
	9 Acenaphthylene	152	7.085	7.088	(0.985)	20021	1.00000	0.9400
*	10 Acenaphthene-d10	164	7.196	7.196	(1.000)	28206	2.00000	
	11 Acenaphthene	153	7.246	7.246	(1.007)	13666	1.00000	0.9576
	12 Dibenzofuran	168	7.395	7.398	(1.028)	20714	1.00000	0.9556
	13 1,6,7-Trimethylnaphthalene	170	7.461	7.464	(1.037)	12912	1.00000	0.9446
	14 Fluorene	166	7.875	7.875	(1.094)	16006	1.00000	0.9508
	18 Dibenzothiophene	184	9.109	9.112	(0.986)	22320	1.00000	0.9489
*	15 Phenanthrene-d10	188	9.235	9.235	(1.000)	53233	2.00000	
	16 Phenanthrene	178	9.270	9.273	(1.004)	24646	1.00000	0.9478
	17 Anthracene	178	9.311	9.314	(1.008)	22258	1.00000	0.9423
	19 Carbazole	167	9.823	9.826	(1.064)	20007	1.00000	0.9239
	20 1-Methylphenanthrene	192	10.048	10.051	(1.088)	17326	1.00000	0.9246
	22 Fluoranthene	202	11.050	11.056	(1.197)	27227	1.00000	0.9619
$	21 Fluoranthene-d10	212	11.015	11.018	(1.193)	21953	1.00000	0.9347
	23 Pyrene	202	11.572	11.575	(0.815)	26878	1.00000	0.9325
	24 Benzo(a)anthracene	228	14.076	14.079	(0.991)	23406	1.00000	0.8959
*	25 Chrysene-d12	240	14.203	14.206	(1.000)	46493	2.00000	
	27 Chrysene	228	14.275	14.282	(1.005)	26230	1.00000	0.9431
	28 Benzo(b)fluoranthene	252	16.824	16.833	(0.929)	22805	1.00000	0.8782
	29 Benzo(k)fluoranthene	252	16.881	16.897	(0.932)	22425	1.00000	0.8816
	30 Benzo(j)fluoranthene	252	16.960	16.972	(0.936)	20574	1.00000	0.8985
	31 Total Benzofluoranthenes	252	16.824	16.833	(0.929)	64985	3.00000	2.642(M)
	34 Benzo(e)pyrene	252	17.750	17.760	(0.980)	23026	1.00000	0.8892
	32 Benzo(a)pyrene	252	17.877	17.889	(0.987)	19956	1.00000	0.8733
*	33 Perylene-d12	264	18.111	18.114	(1.000)	44587	2.00000	
	35 Perylene	252	18.184	18.193	(1.004)	22015	1.00000	0.8978

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.549	20.565	(1.135)	13546	1.00000	0.9466
37 Indeno(1,2,3-cd)pyrene	276	20.672	20.691	(1.141)	23911	1.00000	0.9185
38 Dibenzo(a,h)anthracene	278	20.656	20.685	(1.141)	19954	1.00000	0.8907
39 Benzo(g,h,i)perylene	276	21.747	21.782	(1.201)	20977	1.00000	0.8894

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823011905.D
Lab Smp Id: SLA0213-CAL3
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 19-JAN-2023
Calibration Time: 12:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44704	22352	89408	47180	5.54
10 Acenaphthene-d10	26411	13206	52822	28206	6.80
15 Phenanthrene-d10	49210	24605	98420	53233	8.18
25 Chrysene-d12	42994	21497	85988	46493	8.14
33 Perylene-d12	40520	20260	81040	44587	10.04

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.91	4.41	5.41	4.91	0.00
10 Acenaphthene-d10	7.20	6.70	7.70	7.20	0.00
15 Phenanthrene-d10	9.24	8.74	9.74	9.24	0.00
25 Chrysene-d12	14.20	13.70	14.70	14.20	0.00
33 Perylene-d12	18.11	17.61	18.61	18.11	0.00

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

REVIEW SUMMARY FOR FILE - N823011905.D

Lab ID: SLA0213-CAL3
nt8.i, 20230119.b\FSIMPNA230119.m,   19-JAN-2023 12:25

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

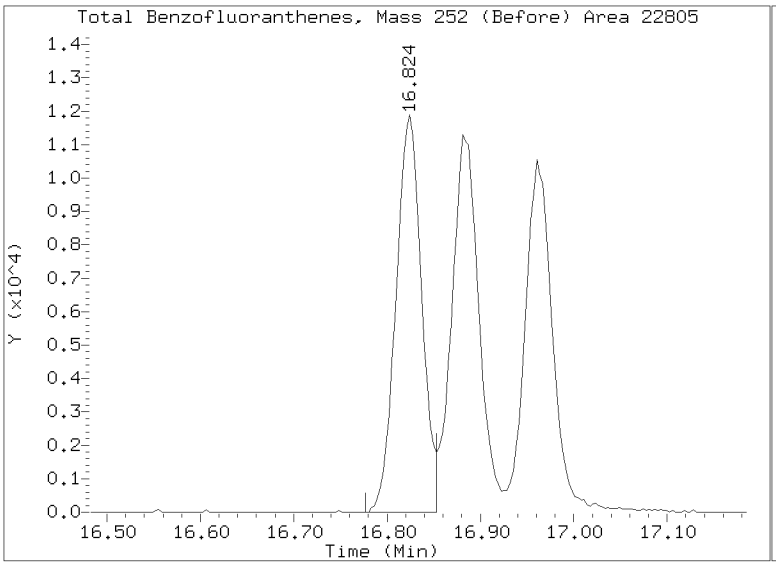
No RRT check performed

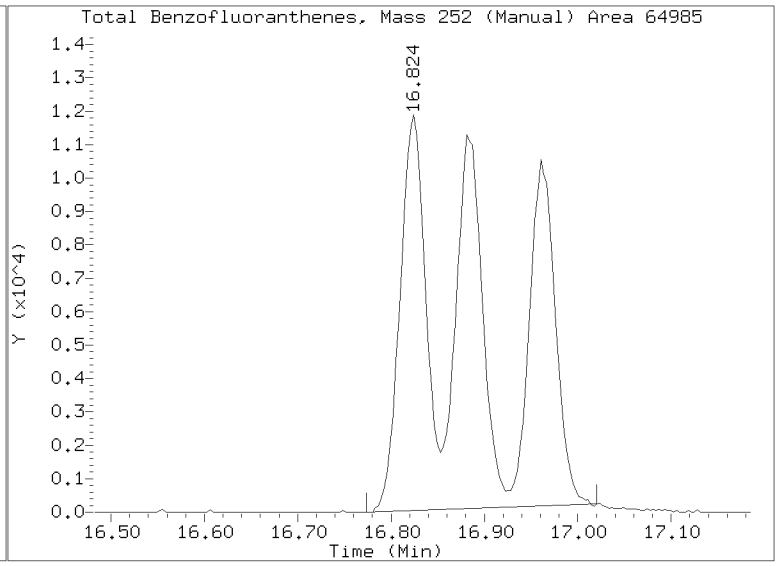
On Column LOD for nt8.i, 20230119.b\FSIMPNA230119.m, FSIMPNAICLA.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230119.b/N823011905.D
Injection Date: 19-JAN-2023 12:25
Lab ID:SLA0213-CAL3 Client ID:
Report Date: 01/19/2023 20:12

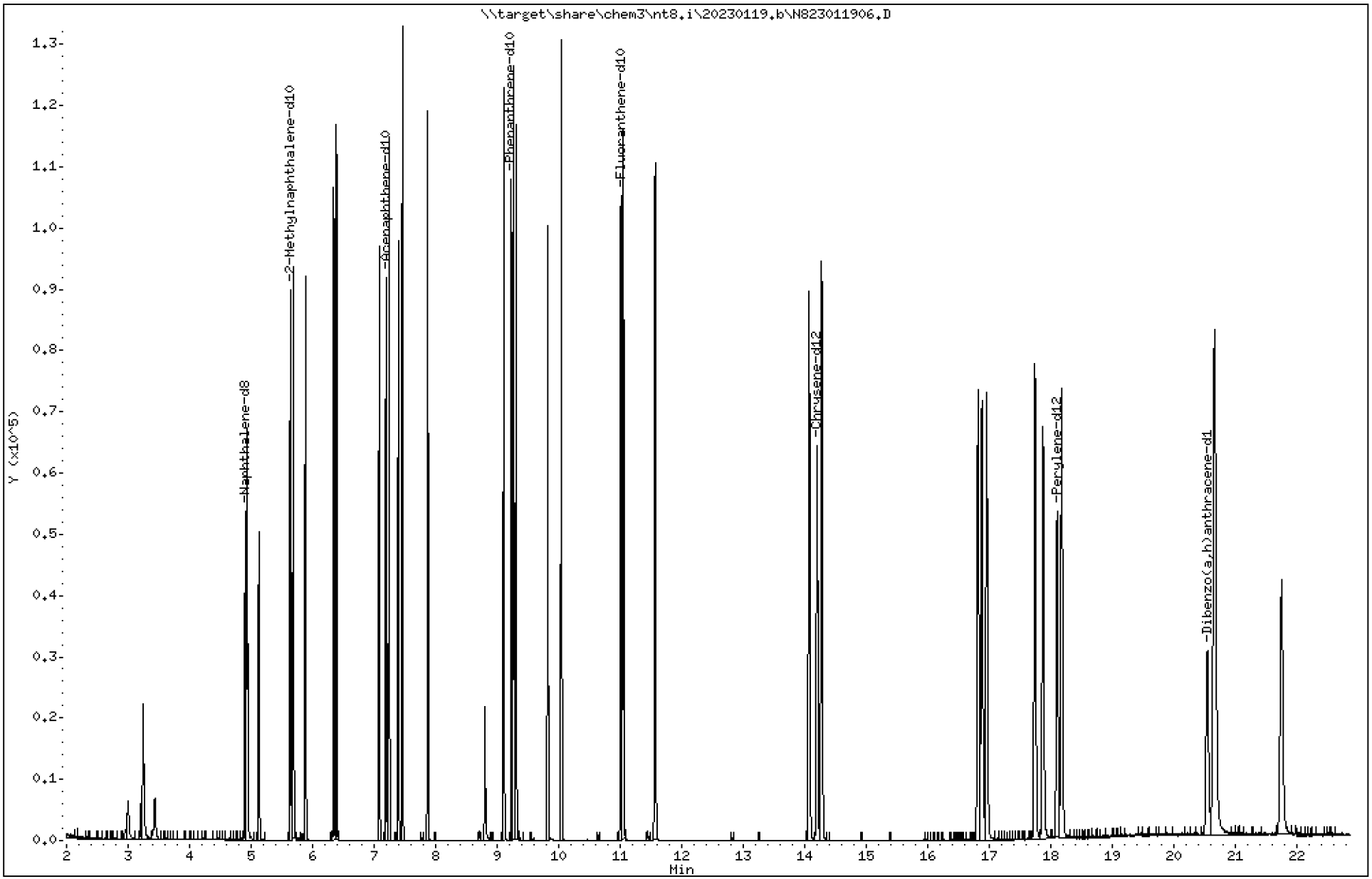




Data File: \\target\share\chem3\nt8.i\20230119.b\N823011906.D
Date : 19-JAN-2023 12:52
Client ID:
Sample Info: IC25230119,

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230119.b\N823011906.D
Lab Smp Id: SLA0213-CAL4
Inj Date : 19-JAN-2023 12:52
Operator : JZ Inst ID: nt8.i
Smp Info : IC25230119,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Meth Date : 19-Jan-2023 20:10 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.906	4.906	(1.000)	44704	2.00000	
	2 Naphthalene	128	4.938	4.938	(1.006)	52764	2.50000	2.538
$	3 2-Methylnaphthalene-d10	152	5.640	5.640	(1.150)	31709	2.50000	2.601
	4 2-Methylnaphthalene	141	5.687	5.687	(1.159)	29737	2.50000	2.601
	5 1-methylnaphthalene	141	5.883	5.887	(1.199)	30098	2.50000	2.594
	7 Biphenyl	154	6.345	6.348	(0.882)	44716	2.50000	2.566
	8 2,6-Dimethylnaphthalene	156	6.389	6.392	(0.888)	32396	2.50000	2.627
	9 Acenaphthylene	152	7.085	7.088	(0.985)	53242	2.50000	2.670
*	10 Acenaphthene-d10	164	7.196	7.196	(1.000)	26411	2.00000	
	11 Acenaphthene	153	7.246	7.246	(1.007)	34335	2.50000	2.569
	12 Dibenzofuran	168	7.395	7.398	(1.028)	50810	2.50000	2.503
	13 1,6,7-Trimethylnaphthalene	170	7.461	7.464	(1.037)	33264	2.50000	2.599
	14 Fluorene	166	7.872	7.875	(1.094)	40499	2.50000	2.569
	18 Dibenzothiophene	184	9.109	9.112	(0.986)	56399	2.50000	2.594
*	15 Phenanthrene-d10	188	9.235	9.235	(1.000)	49210	2.00000	
	16 Phenanthrene	178	9.270	9.273	(1.004)	61033	2.50000	2.539
	17 Anthracene	178	9.311	9.314	(1.008)	57918	2.50000	2.652
	19 Carbazole	167	9.823	9.826	(1.064)	52870	2.50000	2.641
	20 1-Methylphenanthrene	192	10.048	10.051	(1.088)	45452	2.50000	2.624
	22 Fluoranthene	202	11.053	11.056	(1.197)	68546	2.50000	2.620
$	21 Fluoranthene-d10	212	11.015	11.018	(1.193)	58746	2.50000	2.706
	23 Pyrene	202	11.572	11.575	(0.815)	69587	2.50000	2.611
	24 Benzo(a)anthracene	228	14.076	14.079	(0.991)	63802	2.50000	2.641
*	25 Chrysene-d12	240	14.202	14.206	(1.000)	42994	2.00000	
	27 Chrysene	228	14.278	14.282	(1.005)	65955	2.50000	2.564
	28 Benzo(b)fluoranthene	252	16.821	16.833	(0.929)	61818	2.50000	2.620
	29 Benzo(k)fluoranthene	252	16.884	16.897	(0.932)	59716	2.50000	2.583
	30 Benzo(j)fluoranthene	252	16.963	16.972	(0.937)	54944	2.50000	2.640
	31 Total Benzofluoranthenes	252	16.821	16.833	(0.929)	176122	7.50000	7.880(M)
	34 Benzo(e)pyrene	252	17.747	17.760	(0.980)	60179	2.50000	2.557
	32 Benzo(a)pyrene	252	17.877	17.889	(0.987)	54569	2.50000	2.628
*	33 Perylene-d12	264	18.111	18.114	(1.000)	40520	2.00000	
	35 Perylene	252	18.183	18.193	(1.004)	57968	2.50000	2.601

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.552	20.565	(1.135)	37101	2.50000	2.853
37 Indeno(1,2,3-cd)pyrene	276	20.675	20.691	(1.142)	63691	2.50000	2.692
38 Dibenzo(a,h)anthracene	278	20.662	20.685	(1.141)	54772	2.50000	2.690
39 Benzo(g,h,i)perylene	276	21.756	21.782	(1.201)	56053	2.50000	2.615

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823011906.D
Lab Smp Id: SLA0213-CAL4
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 19-JAN-2023
Calibration Time: 12:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44704	22352	89408	44704	0.00
10 Acenaphthene-d10	26411	13206	52822	26411	0.00
15 Phenanthrene-d10	49210	24605	98420	49210	0.00
25 Chrysene-d12	42994	21497	85988	42994	0.00
33 Perylene-d12	40520	20260	81040	40520	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.91	4.41	5.41	4.91	0.00
10 Acenaphthene-d10	7.20	6.70	7.70	7.20	0.00
15 Phenanthrene-d10	9.24	8.74	9.74	9.24	0.00
25 Chrysene-d12	14.20	13.70	14.70	14.20	0.00
33 Perylene-d12	18.11	17.61	18.61	18.11	0.00

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

REVIEW SUMMARY FOR FILE - N823011906.D

Lab ID: SLA0213-CAL4
nt8.i, 20230119.b\FSIMPNA230119.m,   19-JAN-2023 12:52

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

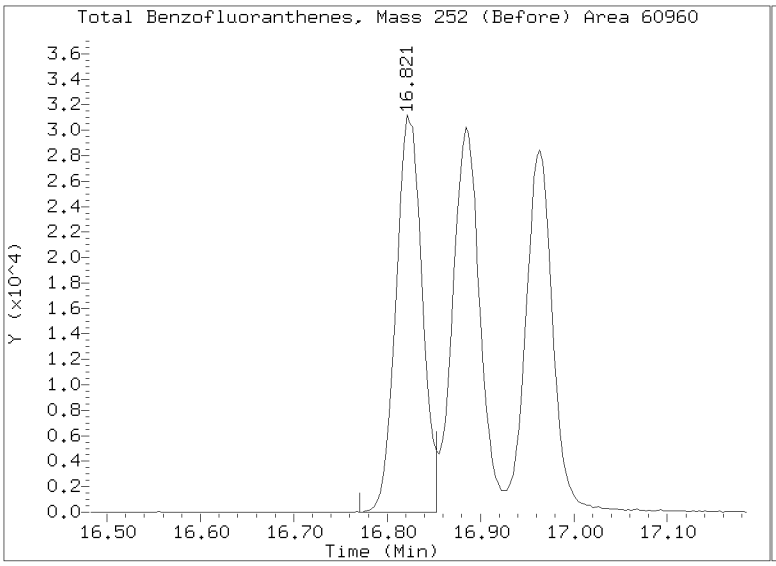
No RRT check performed

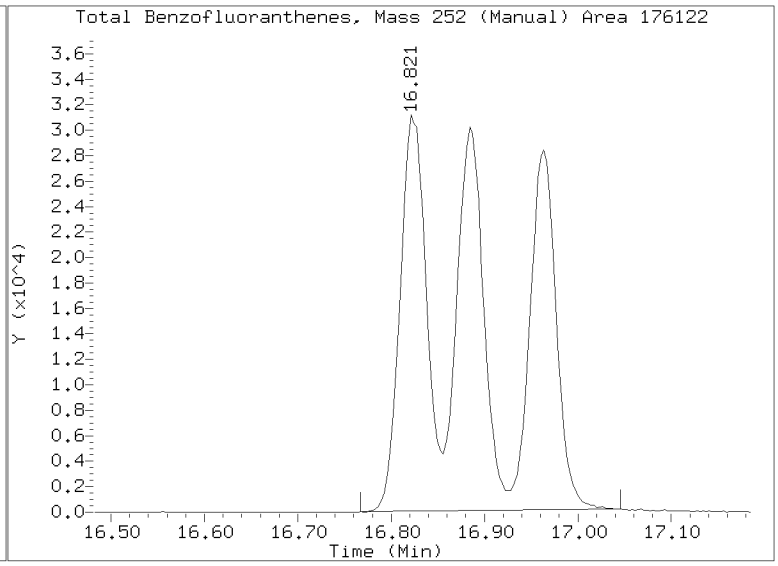
On Column LOD for nt8.i, 20230119.b\FSIMPNA230119.m, FSIMPNAICLA.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230119.b/N823011906.D
Injection Date: 19-JAN-2023 12:52
Lab ID:SLA0213-CAL4 Client ID:
Report Date: 01/19/2023 20:12

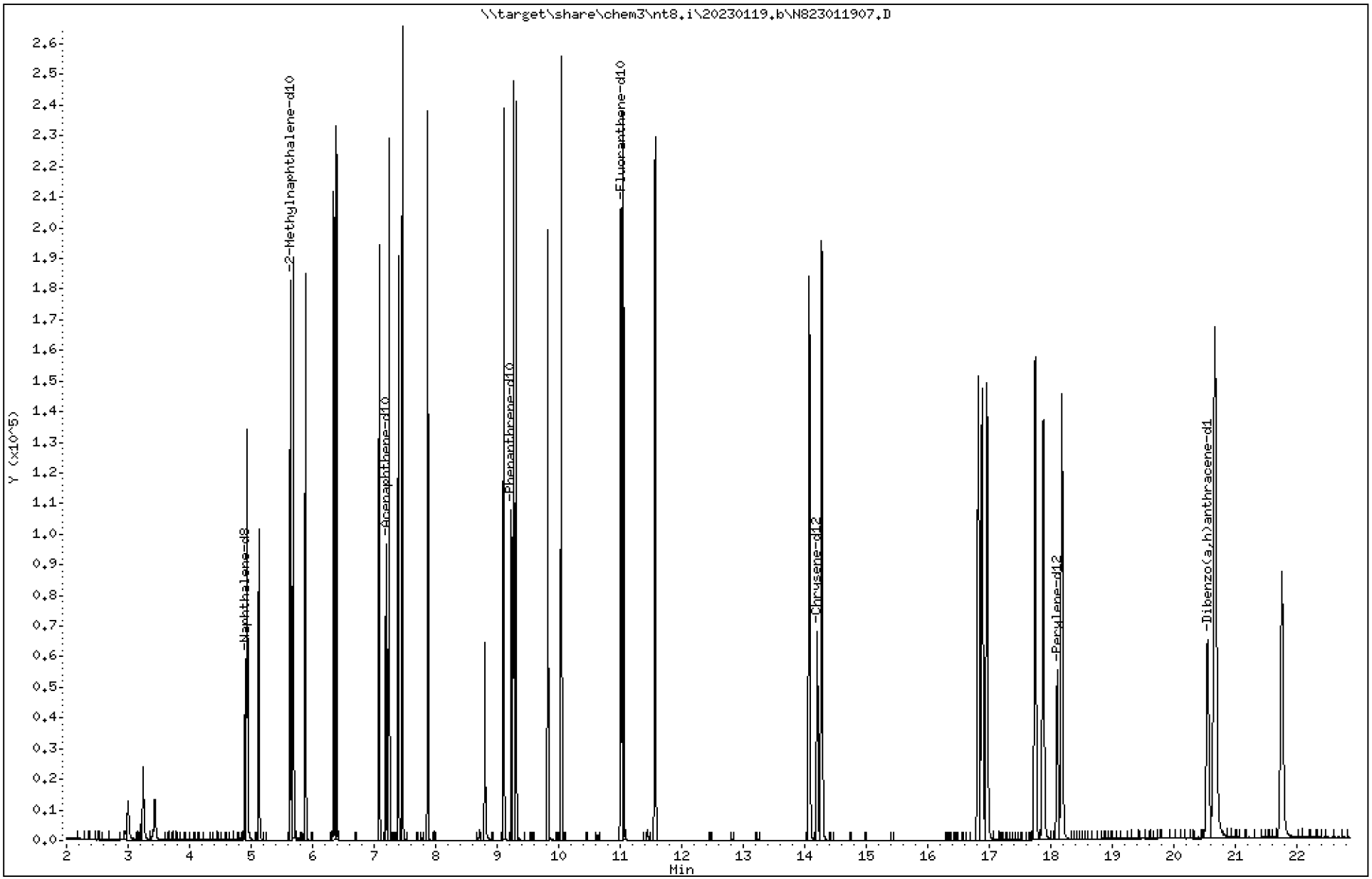




Data File: \\target\share\chem3\nt8.i\20230119.b\N823011907.D
Date : 19-JAN-2023 13:19
Client ID:
Sample Info: IC5230119,

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230119.b\N823011907.D
Lab Smp Id: SLA0213-CAL5
Inj Date : 19-JAN-2023 13:19
Operator : JZ Inst ID: nt8.i
Smp Info : IC5230119,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Meth Date : 19-Jan-2023 20:10 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.909	4.906	(1.000)	46542	2.00000	
	2 Naphthalene	128	4.938	4.938	(1.006)	105414	5.00000	4.871
$	3 2-Methylnaphthalene-d10	152	5.640	5.640	(1.149)	64045	5.00000	5.046
	4 2-Methylnaphthalene	141	5.687	5.687	(1.158)	59129	5.00000	4.967
	5 1-methylnaphthalene	141	5.887	5.887	(1.199)	59615	5.00000	4.935
	7 Biphenyl	154	6.345	6.348	(0.882)	88014	5.00000	4.827
	8 2,6-Dimethylnaphthalene	156	6.389	6.392	(0.888)	64484	5.00000	4.997
	9 Acenaphthylene	152	7.085	7.088	(0.985)	108746	5.00000	5.211
*	10 Acenaphthene-d10	164	7.196	7.196	(1.000)	27638	2.00000	
	11 Acenaphthene	153	7.246	7.246	(1.007)	67894	5.00000	4.855
	12 Dibenzofuran	168	7.395	7.398	(1.028)	100768	5.00000	4.744
	13 1,6,7-Trimethylnaphthalene	170	7.461	7.464	(1.037)	65911	5.00000	4.921
	14 Fluorene	166	7.875	7.875	(1.094)	82420	5.00000	4.996
	18 Dibenzothiophene	184	9.109	9.112	(0.987)	112243	5.00000	4.946
*	15 Phenanthrene-d10	188	9.232	9.235	(1.000)	51351	2.00000	
	16 Phenanthrene	178	9.270	9.273	(1.004)	119248	5.00000	4.754
	17 Anthracene	178	9.311	9.314	(1.009)	114927	5.00000	5.044
	19 Carbazole	167	9.823	9.826	(1.064)	106758	5.00000	5.111
	20 1-Methylphenanthrene	192	10.048	10.051	(1.088)	90954	5.00000	5.032
	22 Fluoranthene	202	11.053	11.056	(1.197)	135256	5.00000	4.954
$	21 Fluoranthene-d10	212	11.015	11.018	(1.193)	119286	5.00000	5.265
	23 Pyrene	202	11.572	11.575	(0.815)	140705	5.00000	5.068
	24 Benzo(a)anthracene	228	14.076	14.079	(0.991)	132618	5.00000	5.270
*	25 Chrysene-d12	240	14.203	14.206	(1.000)	44781	2.00000	
	27 Chrysene	228	14.278	14.282	(1.005)	132750	5.00000	4.955
	28 Benzo(b)fluoranthene	252	16.827	16.833	(0.929)	125757	5.00000	5.118
	29 Benzo(k)fluoranthene	252	16.887	16.897	(0.932)	122821	5.00000	5.103
	30 Benzo(j)fluoranthene	252	16.966	16.972	(0.937)	113399	5.00000	5.234
	31 Total Benzofluoranthenes	252	16.827	16.833	(0.929)	361443	15.0000	15.53(M)
	34 Benzo(e)pyrene	252	17.750	17.760	(0.980)	121964	5.00000	4.978
	32 Benzo(a)pyrene	252	17.883	17.889	(0.987)	112121	5.00000	5.186
*	33 Perylene-d12	264	18.111	18.114	(1.000)	42187	2.00000	
	35 Perylene	252	18.187	18.193	(1.004)	116268	5.00000	5.011

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.555	20.565	(1.135)	78264	5.00000	5.780
37 Indeno(1,2,3-cd)pyrene	276	20.681	20.691	(1.142)	129575	5.00000	5.260
38 Dibenzo(a,h)anthracene	278	20.669	20.685	(1.141)	112698	5.00000	5.317
39 Benzo(g,h,i)perylene	276	21.763	21.782	(1.202)	114826	5.00000	5.145

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823011907.D
Lab Smp Id: SLA0213-CAL5
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 19-JAN-2023
Calibration Time: 12:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44704	22352	89408	46542	4.11
10 Acenaphthene-d10	26411	13206	52822	27638	4.65
15 Phenanthrene-d10	49210	24605	98420	51351	4.35
25 Chrysene-d12	42994	21497	85988	44781	4.16
33 Perylene-d12	40520	20260	81040	42187	4.11

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.91	4.41	5.41	4.91	0.06
10 Acenaphthene-d10	7.20	6.70	7.70	7.20	0.00
15 Phenanthrene-d10	9.24	8.74	9.74	9.23	-0.03
25 Chrysene-d12	14.20	13.70	14.70	14.20	0.00
33 Perylene-d12	18.11	17.61	18.61	18.11	0.00

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

REVIEW SUMMARY FOR FILE - N823011907.D

Lab ID: SLA0213-CAL5
nt8.i, 20230119.b\FSIMPNA230119.m,   19-JAN-2023 13:19

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

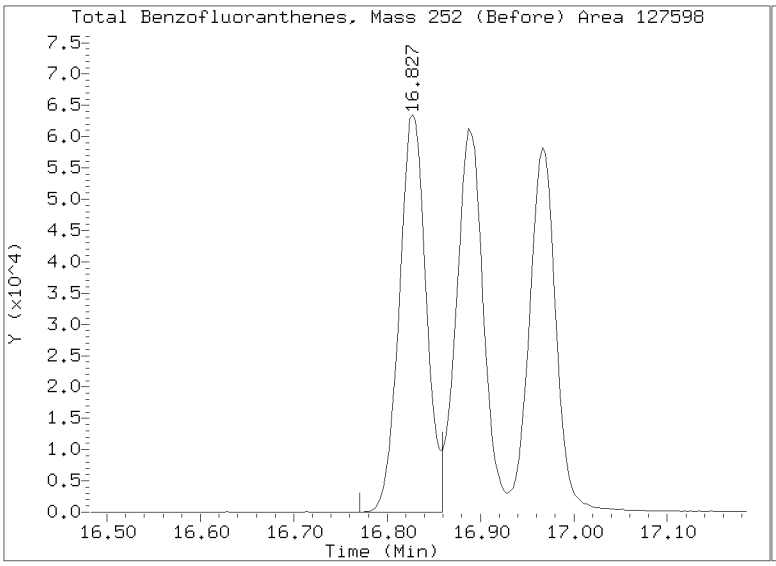
No RRT check performed

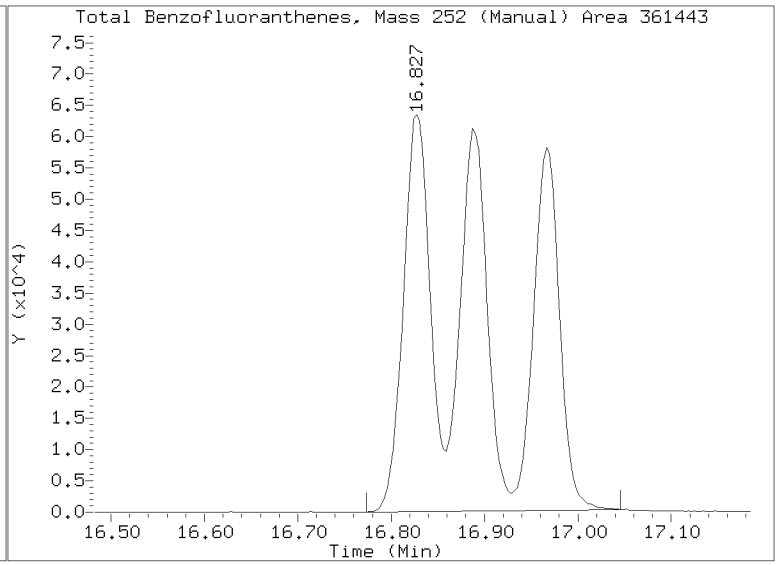
On Column LOD for nt8.i, 20230119.b\FSIMPNA230119.m, FSIMPNAICLA.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230119.b/N823011907.D
Injection Date: 19-JAN-2023 13:19
Lab ID:SLA0213-CAL5 Client ID:
Report Date: 01/19/2023 20:12





Data File: \\target\share\chem3\nt8.i\20230119.b\N823011908.D

Date : 19-JAN-2023 13:46

Client ID:

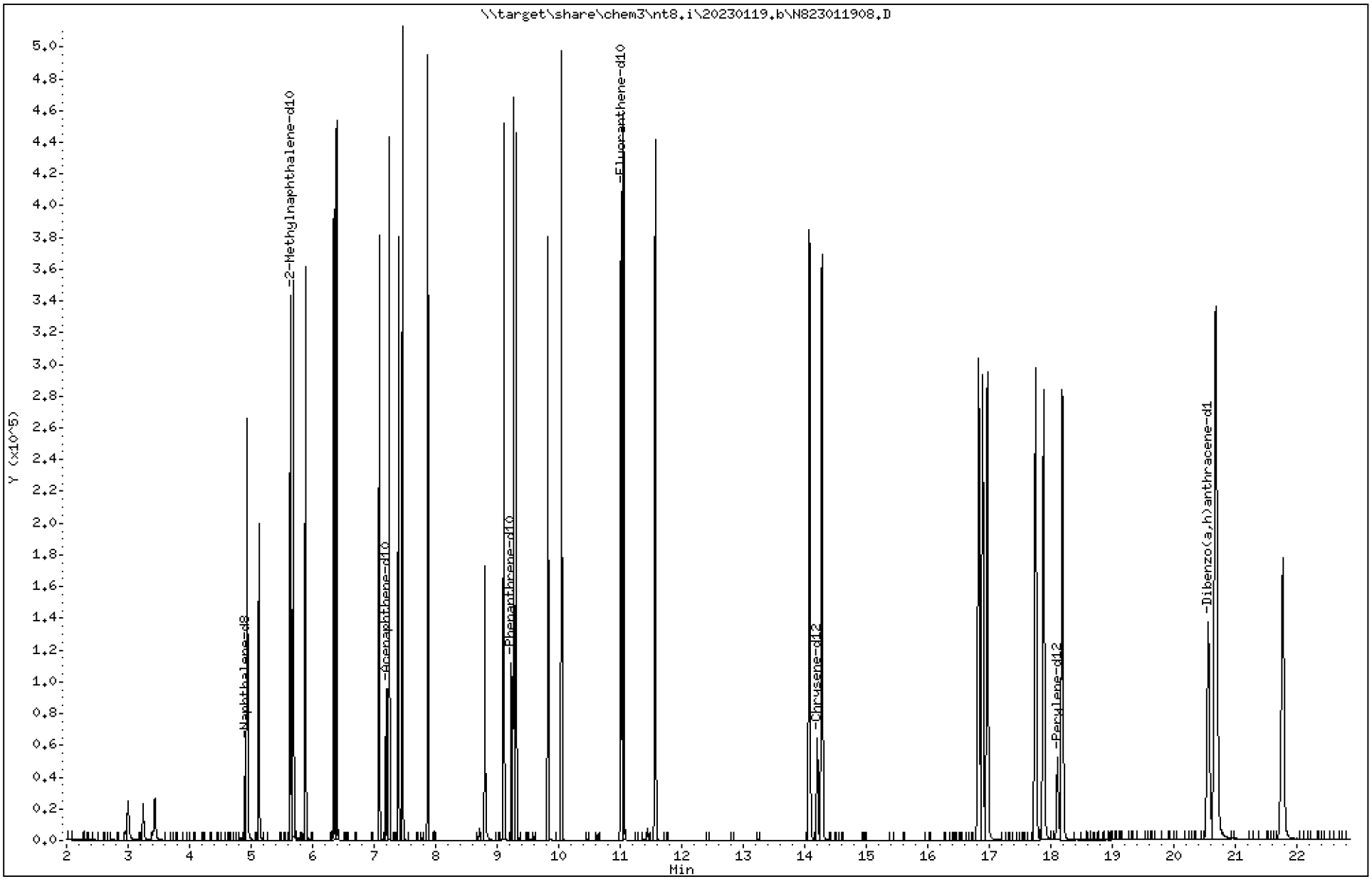
Instrument: nt8.i

Sample Info: IC10230119,

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



23A0207 CLPLIKE (Rev3) - Page 791 of 3315

ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230119.b\N823011908.D
Lab Smp Id: SLA0213-CAL6
Inj Date : 19-JAN-2023 13:46
Operator : JZ Inst ID: nt8.i
Smp Info : IC10230119,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Meth Date : 19-Jan-2023 20:10 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.906	4.906	(1.000)	46070	2.00000	
	2 Naphthalene	128	4.938	4.938	(1.006)	203510	10.0000	9.501
$	3 2-Methylnaphthalene-d10	152	5.640	5.640	(1.149)	124701	10.0000	9.925
	4 2-Methylnaphthalene	141	5.687	5.687	(1.159)	112895	10.0000	9.582
	5 1-methylnaphthalene	141	5.887	5.887	(1.200)	115357	10.0000	9.647
	7 Biphenyl	154	6.348	6.348	(0.882)	169086	10.0000	9.603
	8 2,6-Dimethylnaphthalene	156	6.392	6.392	(0.888)	124019	10.0000	9.952
	9 Acenaphthylene	152	7.088	7.088	(0.985)	213179	10.0000	10.58
*	10 Acenaphthene-d10	164	7.196	7.196	(1.000)	26689	2.00000	
	11 Acenaphthene	153	7.246	7.246	(1.007)	130872	10.0000	9.692
	12 Dibenzofuran	168	7.398	7.398	(1.028)	193532	10.0000	9.436
	13 1,6,7-Trimethylnaphthalene	170	7.464	7.464	(1.037)	127563	10.0000	9.863
	14 Fluorene	166	7.875	7.875	(1.094)	161125	10.0000	10.11
	18 Dibenzothiophene	184	9.112	9.112	(0.987)	217256	10.0000	9.701
*	15 Phenanthrene-d10	188	9.235	9.235	(1.000)	50683	2.00000	
	16 Phenanthrene	178	9.273	9.273	(1.004)	230002	10.0000	9.290
	17 Anthracene	178	9.314	9.314	(1.009)	221162	10.0000	9.834
	19 Carbazole	167	9.826	9.826	(1.064)	210036	10.0000	10.19
	20 1-Methylphenanthrene	192	10.051	10.051	(1.088)	178561	10.0000	10.01
	22 Fluoranthene	202	11.056	11.056	(1.197)	257643	10.0000	9.560
$	21 Fluoranthene-d10	212	11.018	11.018	(1.193)	235698	10.0000	10.54
	23 Pyrene	202	11.575	11.575	(0.815)	274116	10.0000	10.08
	24 Benzo(a)anthracene	228	14.079	14.079	(0.991)	268196	10.0000	10.88
*	25 Chrysene-d12	240	14.206	14.206	(1.000)	43880	2.00000	
	27 Chrysene	228	14.282	14.282	(1.005)	257418	10.0000	9.806
	28 Benzo(b)fluoranthene	252	16.833	16.833	(0.929)	252022	10.0000	10.64
	29 Benzo(k)fluoranthene	252	16.897	16.897	(0.933)	238915	10.0000	10.30
	30 Benzo(j)fluoranthene	252	16.972	16.972	(0.937)	216807	10.0000	10.38
	31 Total Benzofluoranthenes	252	16.833	16.833	(0.929)	704955	30.0000	31.43(M)
	34 Benzo(e)pyrene	252	17.760	17.760	(0.980)	240447	10.0000	10.18
	32 Benzo(a)pyrene	252	17.889	17.889	(0.988)	222990	10.0000	10.70
*	33 Perylene-d12	264	18.114	18.114	(1.000)	40659	2.00000	
	35 Perylene	252	18.193	18.193	(1.004)	226582	10.0000	10.13

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.564	20.565	(1.135)	162230	10.0000	12.43
37 Indeno(1,2,3-cd)pyrene	276	20.691	20.691	(1.142)	252895	10.0000	10.65
38 Dibenzo(a,h)anthracene	278	20.685	20.685	(1.142)	223771	10.0000	10.95
39 Benzo(g,h,i)perylene	276	21.782	21.782	(1.202)	231445	10.0000	10.76

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823011908.D
Lab Smp Id: SLA0213-CAL6
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 19-JAN-2023
Calibration Time: 12:52
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44704	22352	89408	46070	3.06
10 Acenaphthene-d10	26411	13206	52822	26689	1.05
15 Phenanthrene-d10	49210	24605	98420	50683	2.99
25 Chrysene-d12	42994	21497	85988	43880	2.06
33 Perylene-d12	40520	20260	81040	40659	0.34

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.91	4.41	5.41	4.91	0.00
10 Acenaphthene-d10	7.20	6.70	7.70	7.20	0.00
15 Phenanthrene-d10	9.24	8.74	9.74	9.24	0.00
25 Chrysene-d12	14.20	13.70	14.70	14.21	0.02
33 Perylene-d12	18.11	17.61	18.61	18.11	0.02

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

REVIEW SUMMARY FOR FILE - N823011908.D

Lab ID: SLA0213-CAL6
nt8.i, 20230119.b\FSIMPNA230119.m,   19-JAN-2023 13:46

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

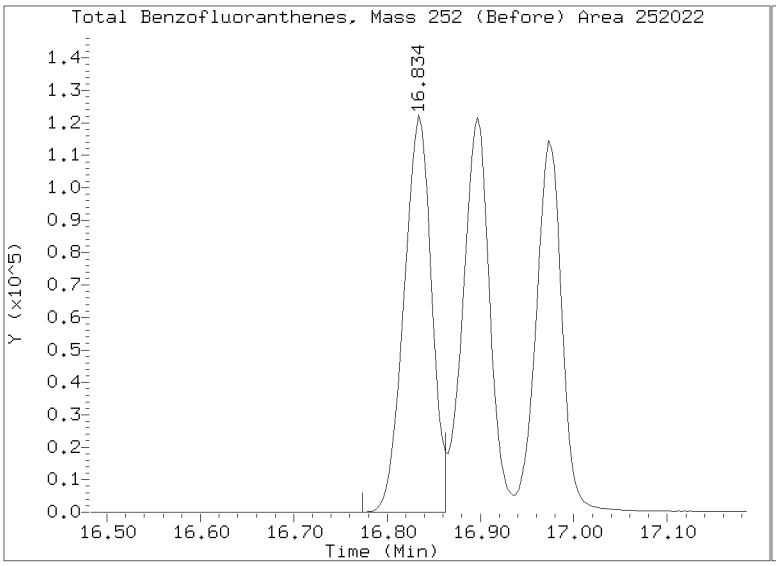
No RRT check performed

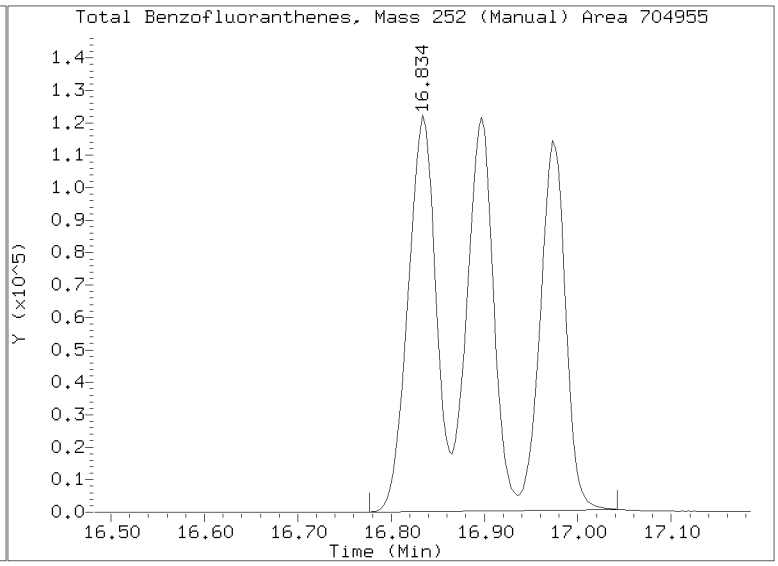
On Column LOD for nt8.i, 20230119.b\FSIMPNA230119.m, FSIMPNAICLA.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

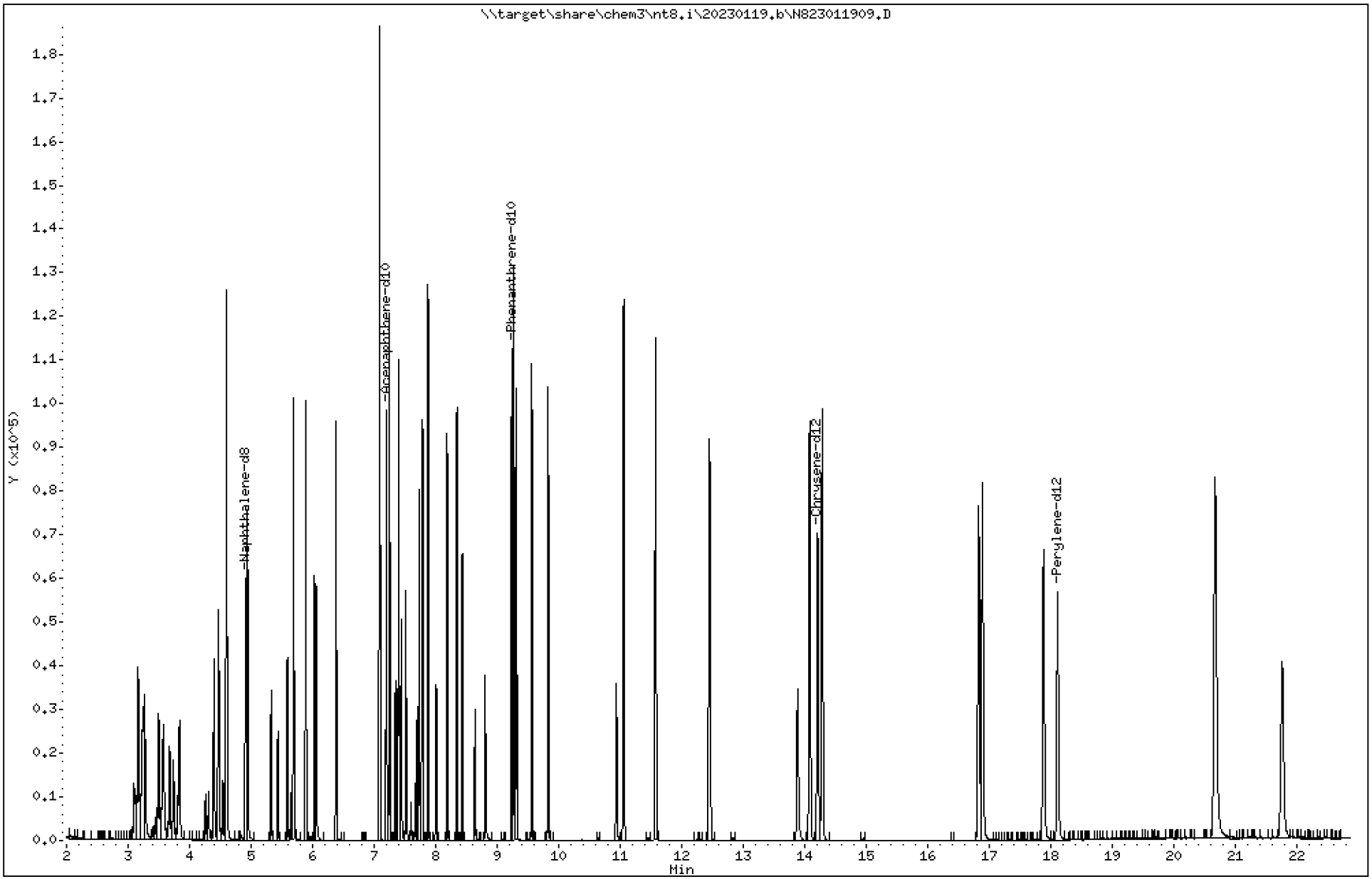
Datafile: //target/share/chem3/nt8.i/20230119.b/N823011908.D
Injection Date: 19-JAN-2023 13:46
Lab ID:SLA0213-CAL6 Client ID:
Report Date: 01/19/2023 20:12





Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D
Date : 19-JAN-2023 14:58
Client ID:
Sample Info: SCV230119
Volume Injected (uL): 1.0
Column phase: Rxi-17sil

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25



Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

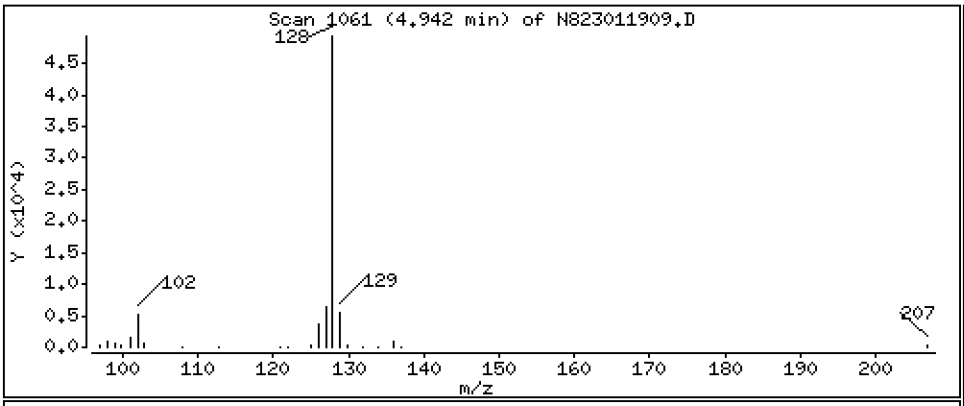
Operator: JZ

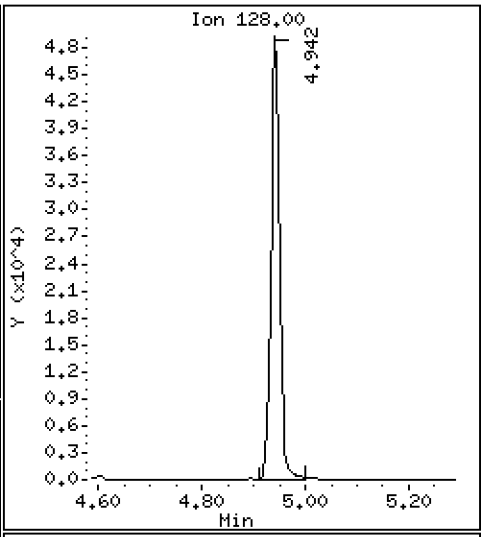
Column phase: Rxi-17sil

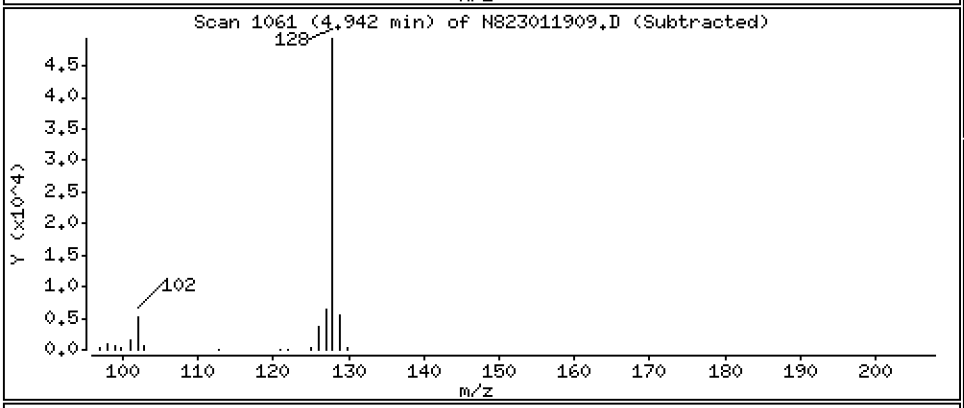
Column diameter: 0.25

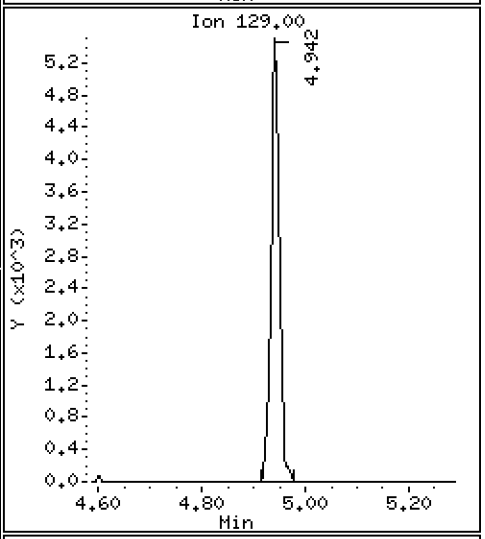
2 Naphthalene

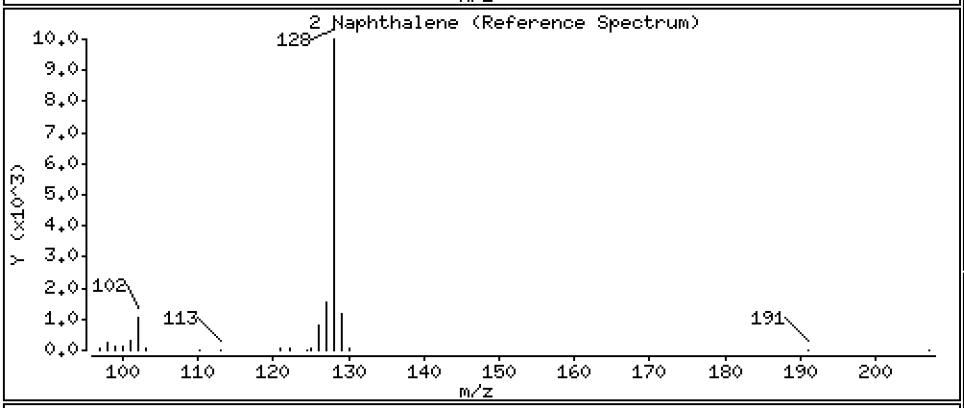
Concentration: 2.626 ug/L

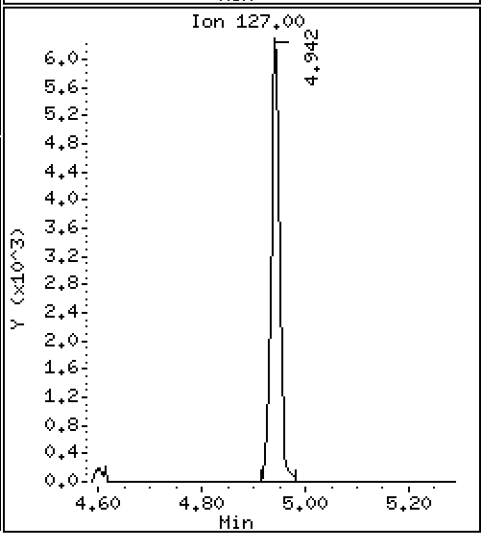


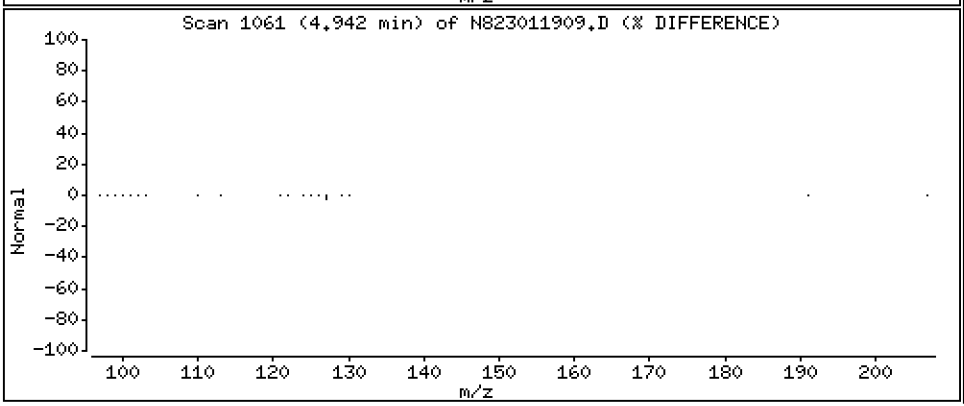












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

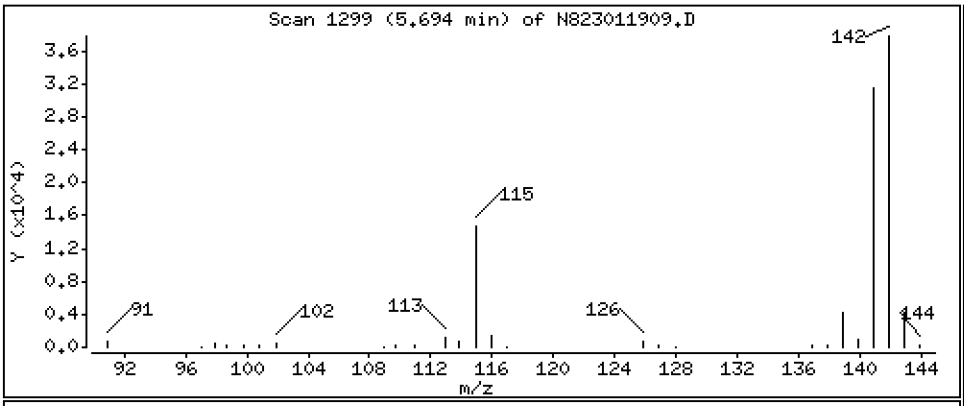
Operator: JZ

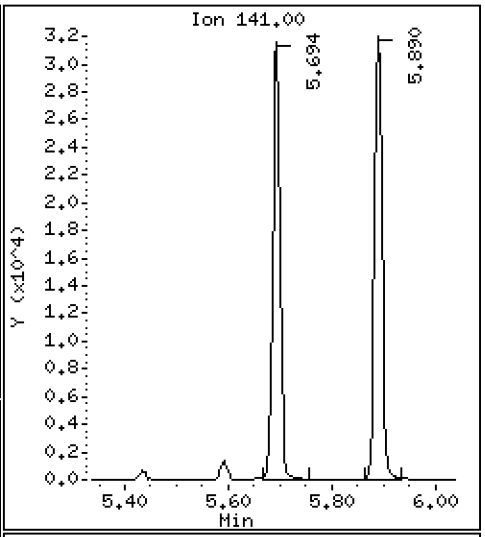
Column phase: Rxi-17sil

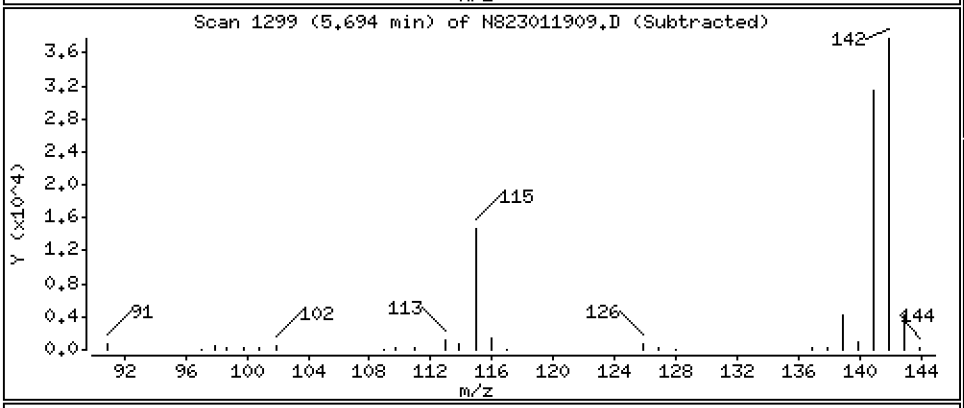
Column diameter: 0.25

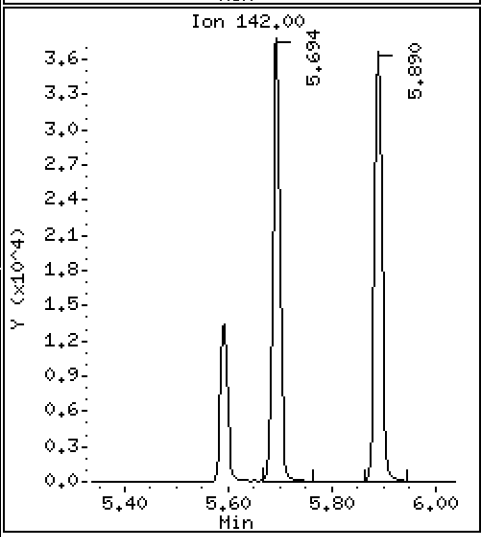
4 2-Methylnaphthalene

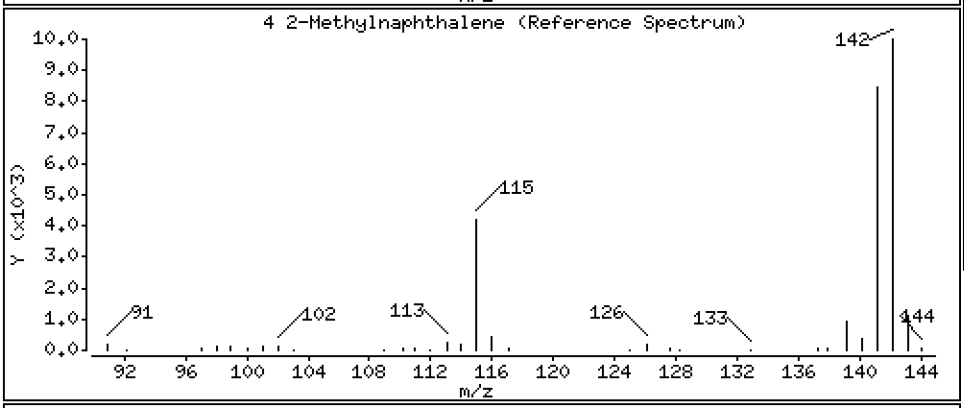
Concentration: 2.670 ug/L

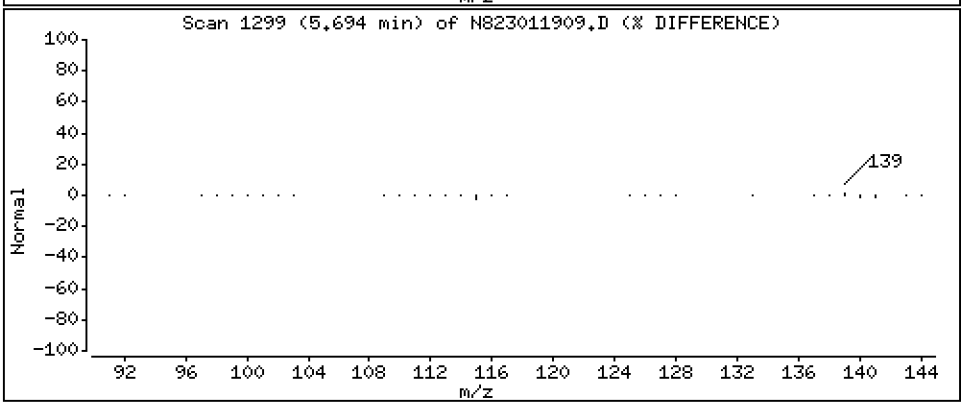












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

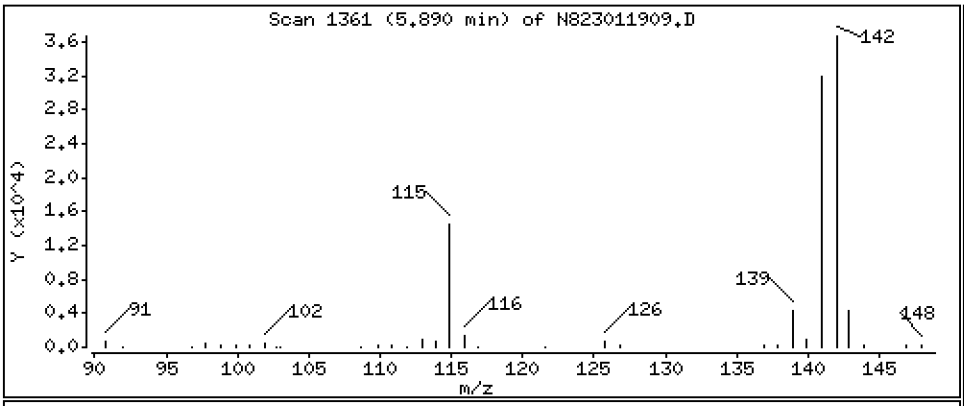
Operator: JZ

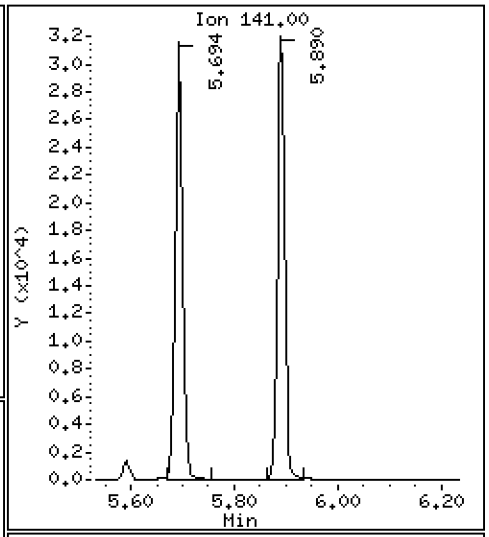
Column phase: Rxi-17sil

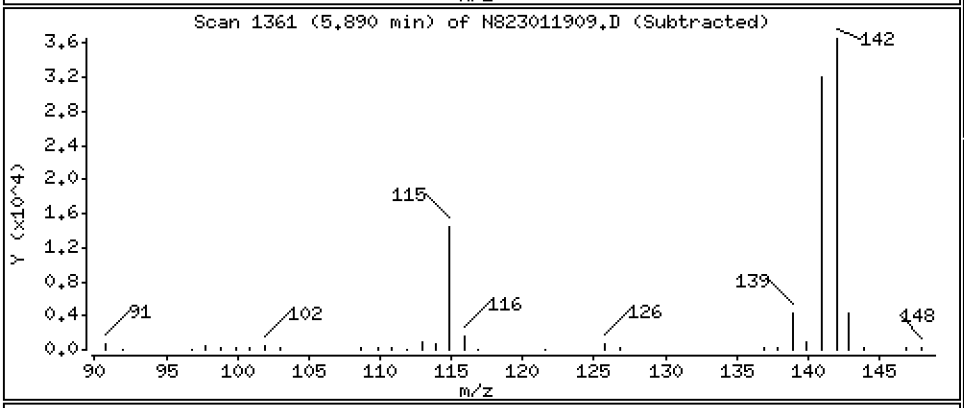
Column diameter: 0.25

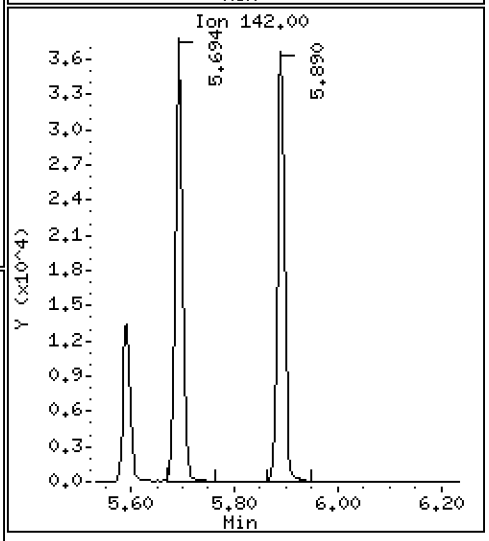
5 1-methylnaphthalene

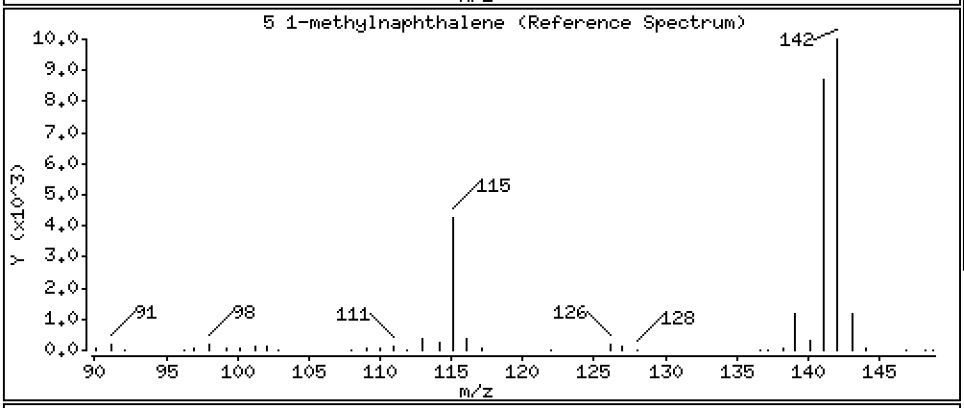
Concentration: 2.649 ug/L

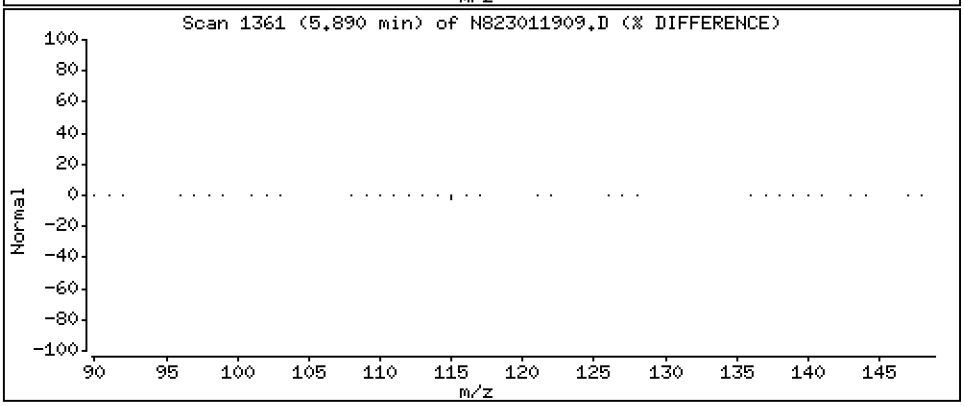












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

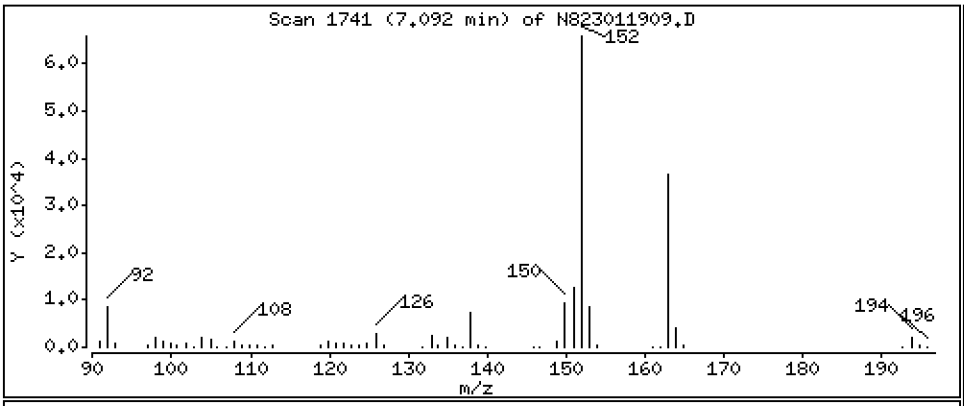
Operator: JZ

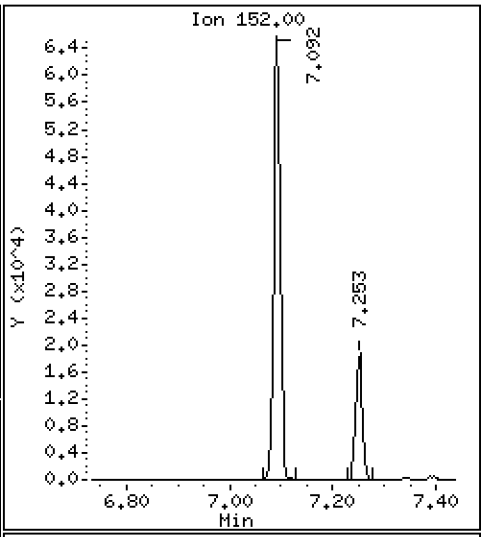
Column phase: Rxi-17sil

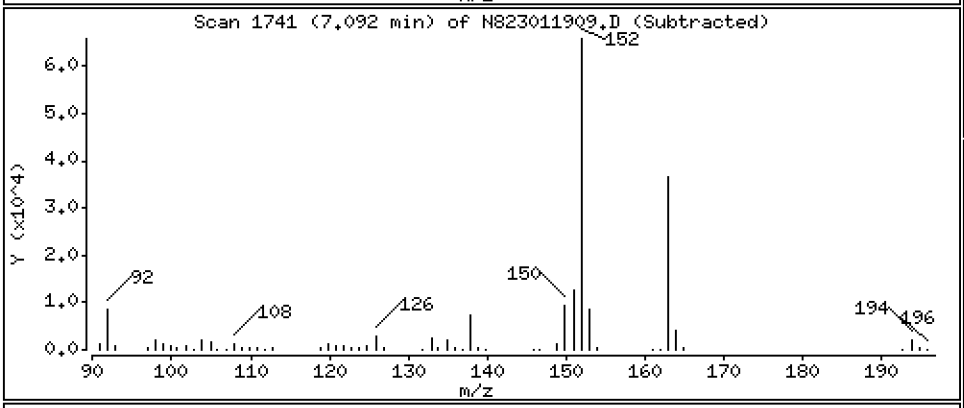
Column diameter: 0.25

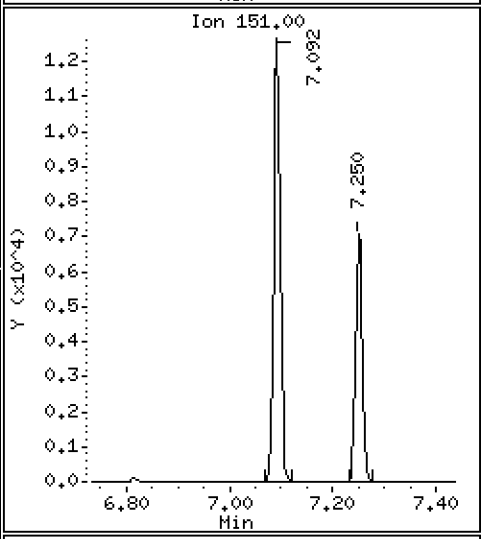
9 Acenaphthylene

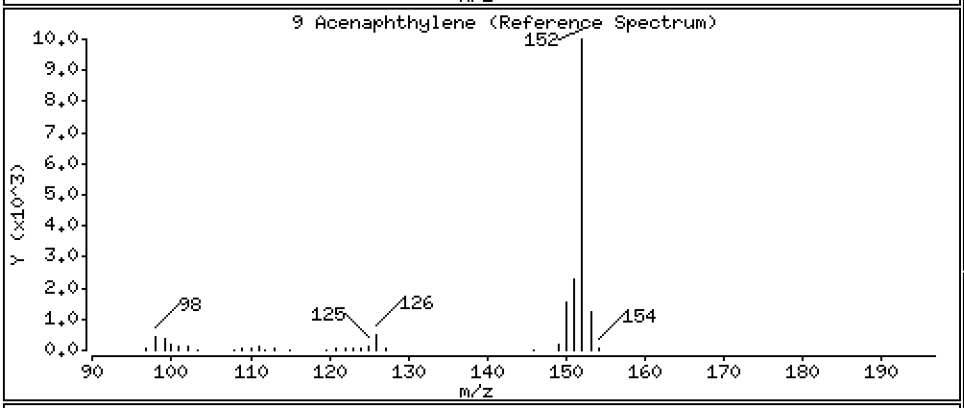
Concentration: 2.821 ug/L

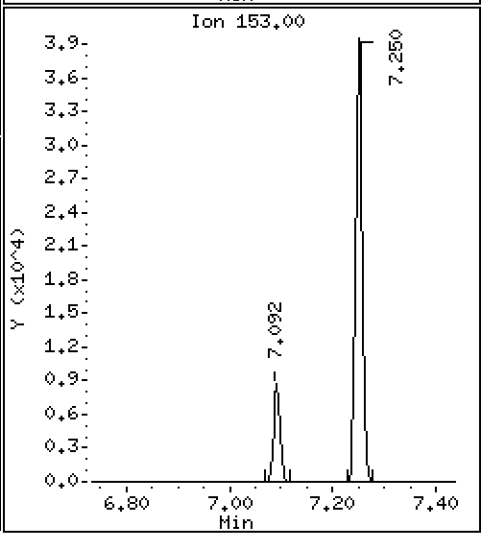


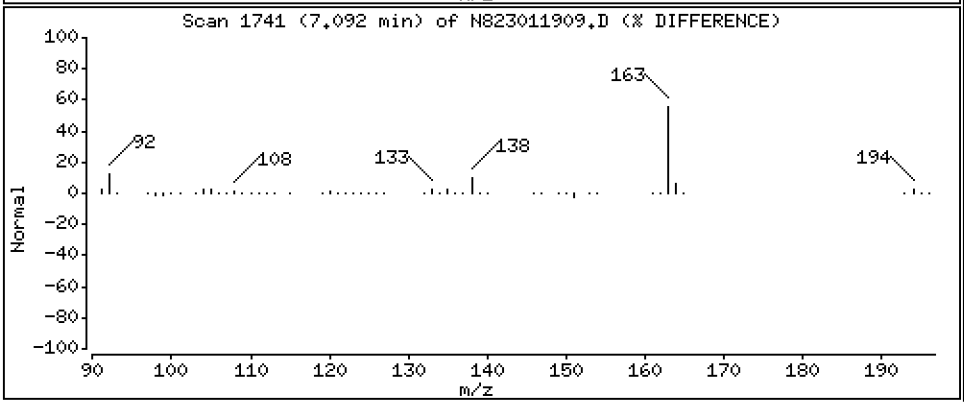












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

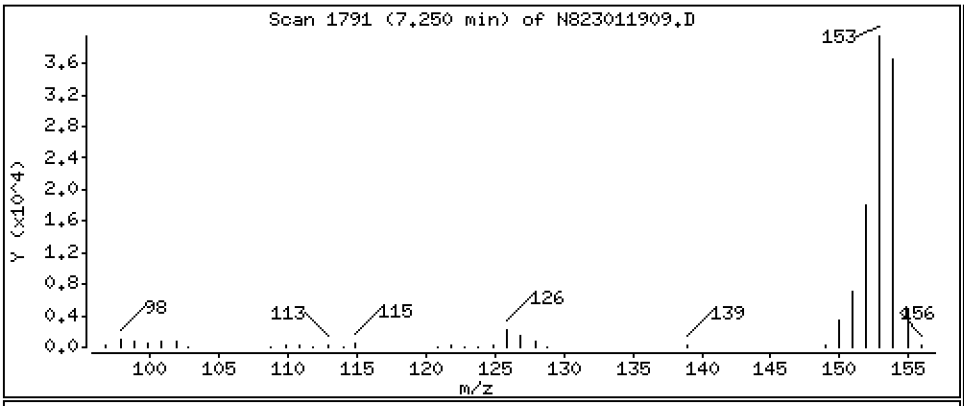
Operator: JZ

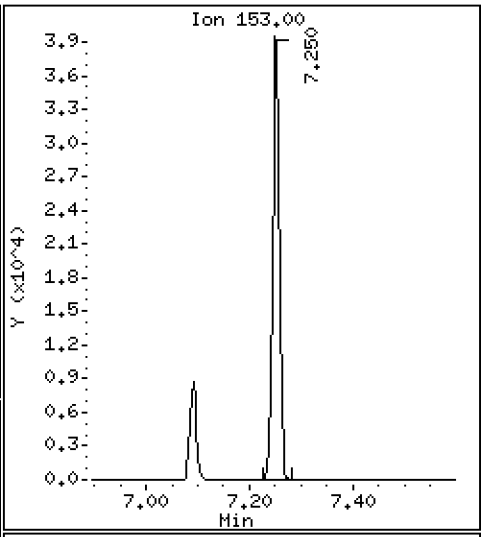
Column phase: Rxi-17sil

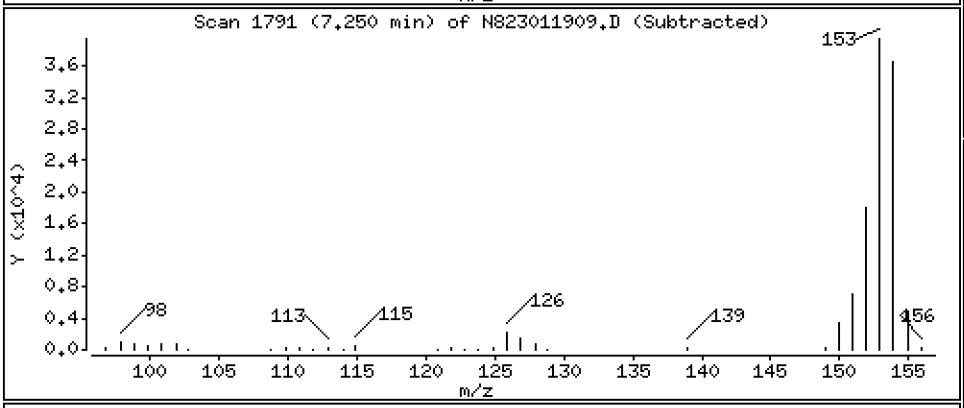
Column diameter: 0.25

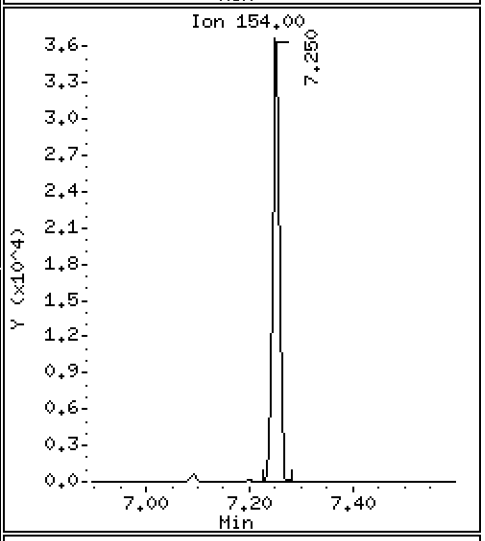
11 Acenaphthene

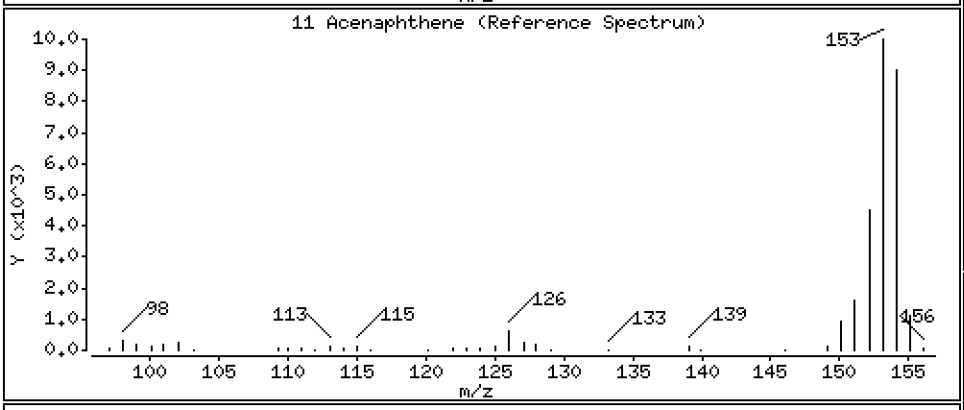
Concentration: 2.600 ug/L

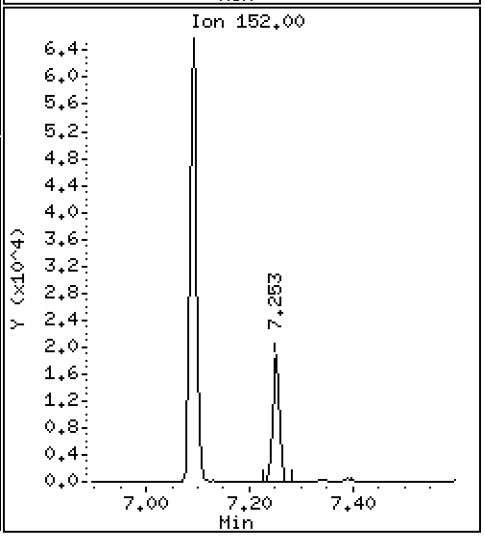


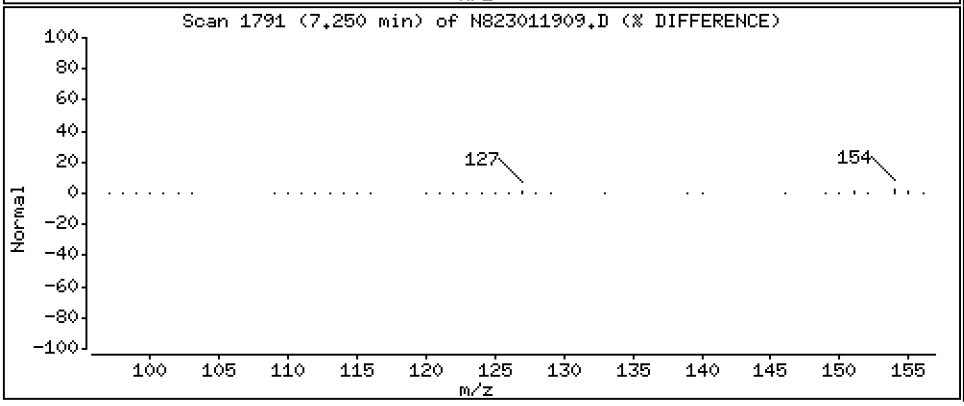












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

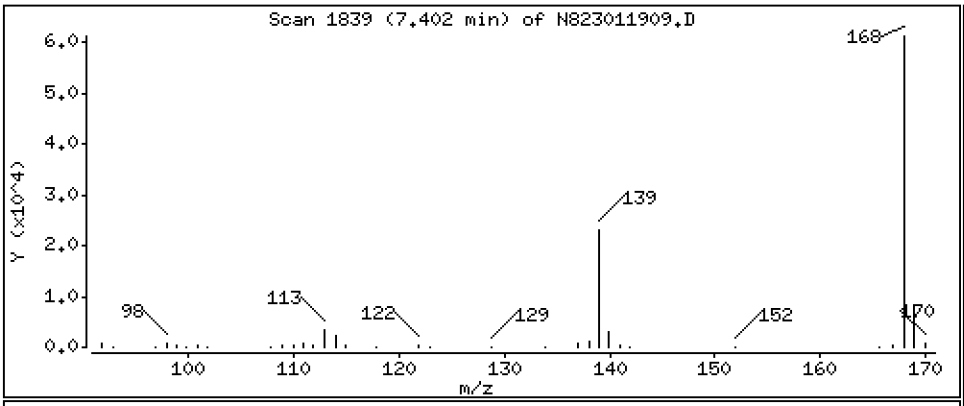
Operator: JZ

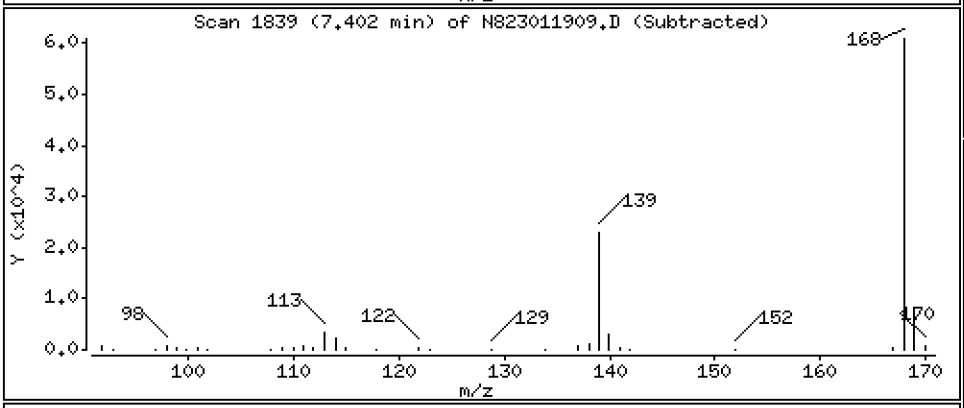
Column phase: Rxi-17sil

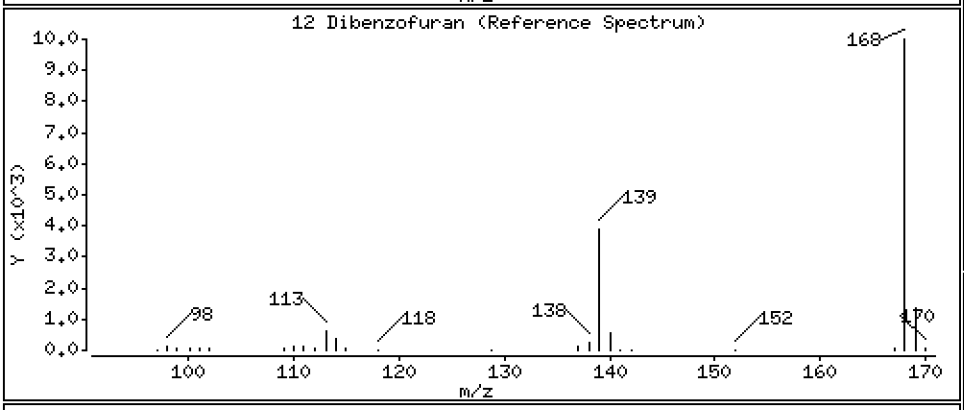
Column diameter: 0.25

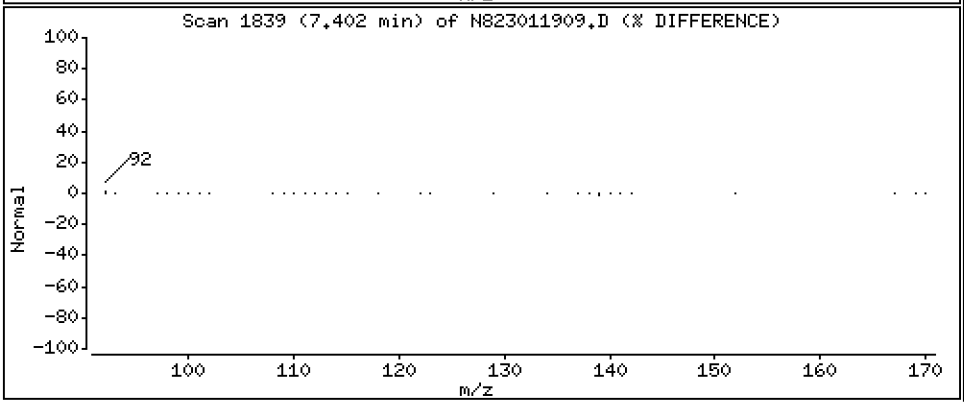
12 Dibenzofuran

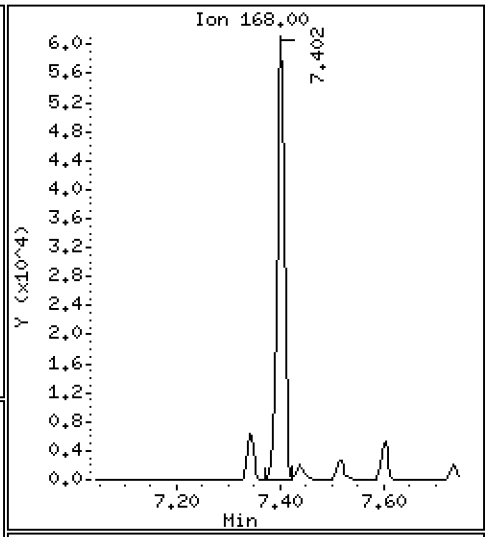
Concentration: 2.860 ug/L

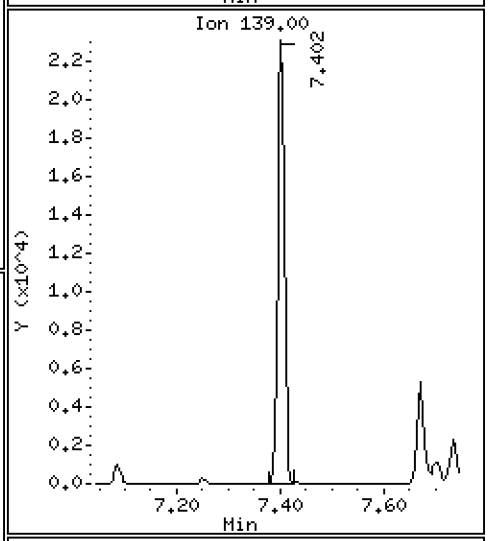


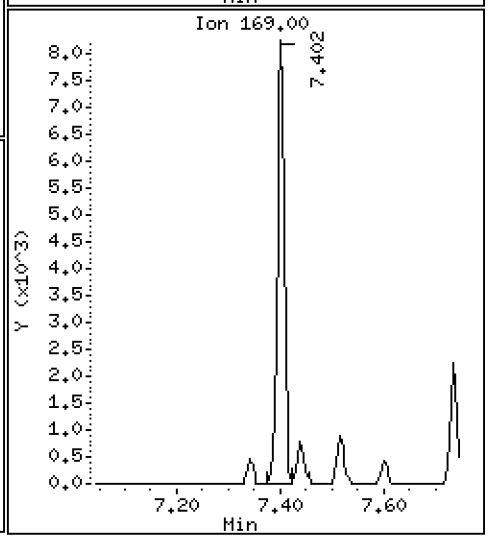












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

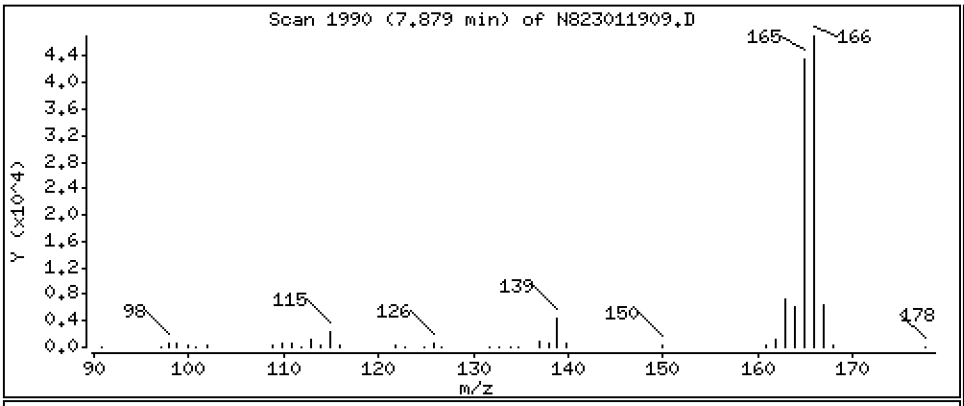
Operator: JZ

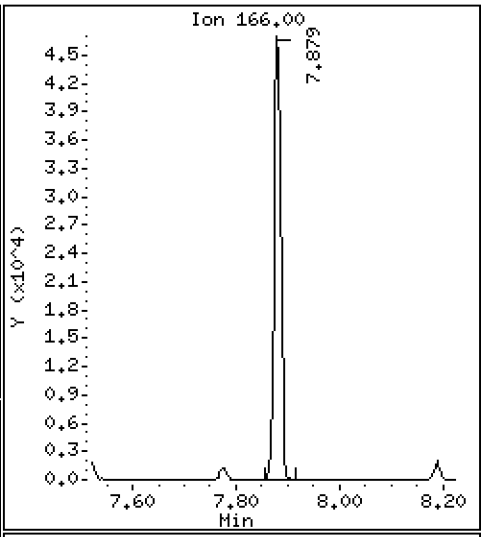
Column phase: Rxi-17sil

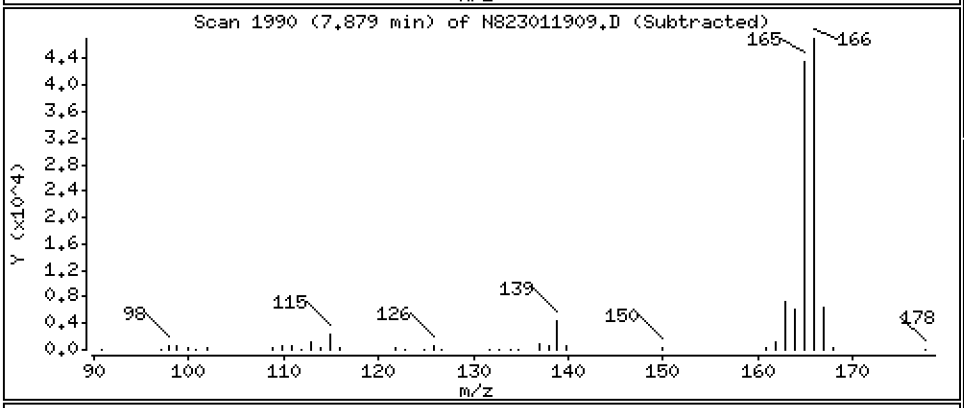
Column diameter: 0.25

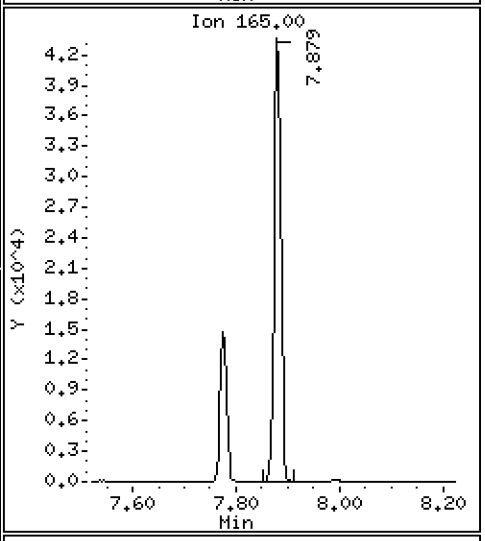
14 Fluorene

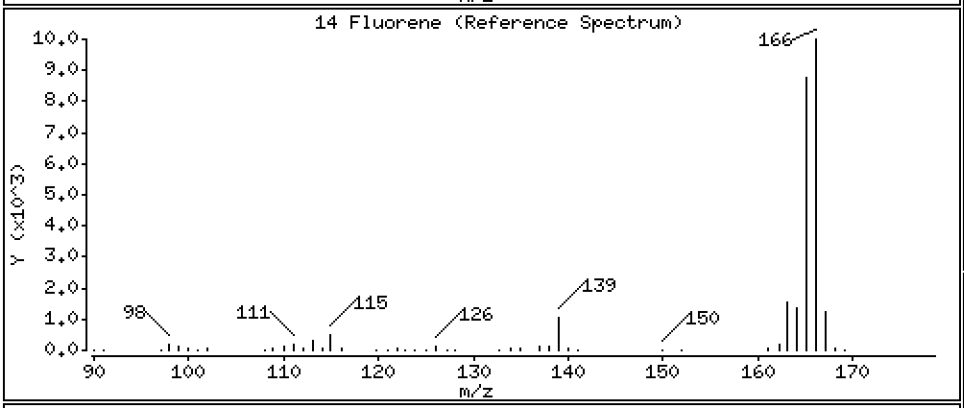
Concentration: 2.631 ug/L

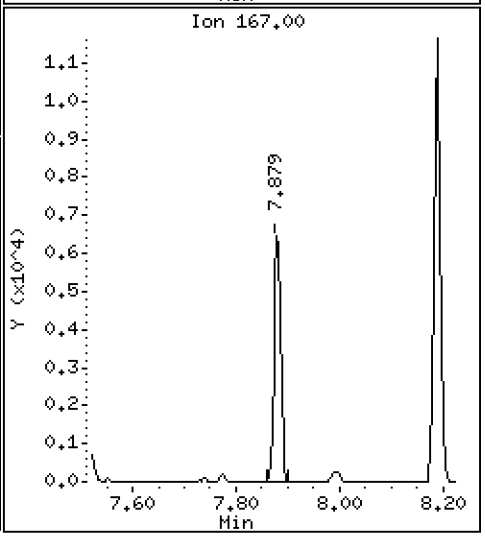


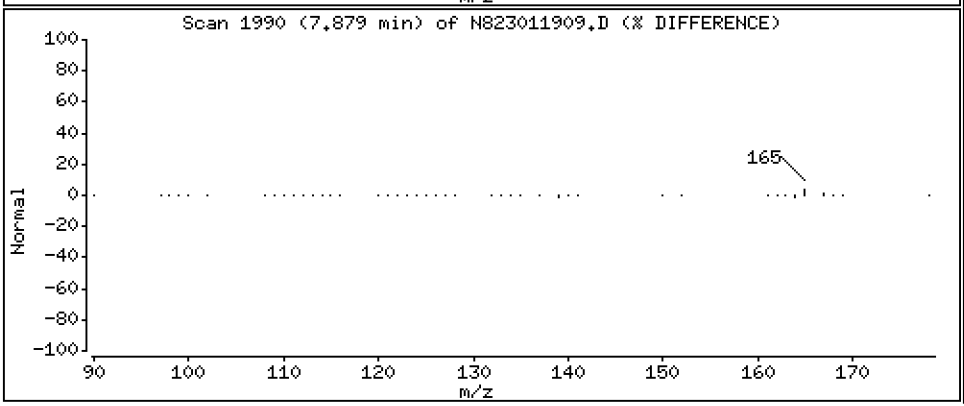












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

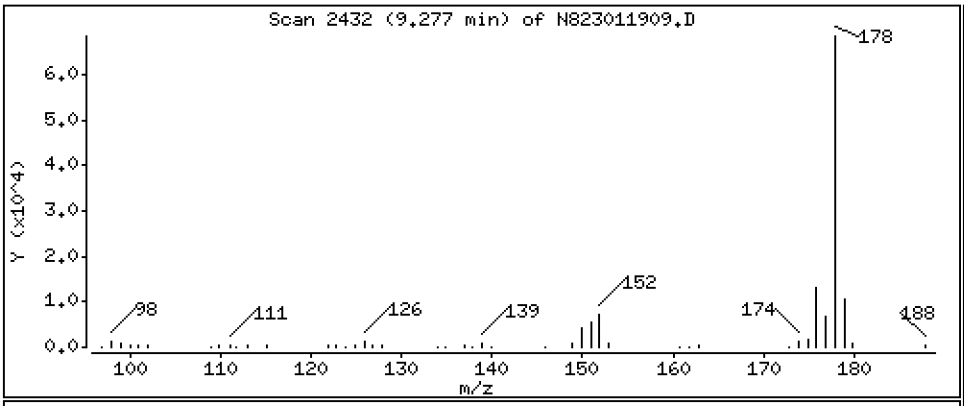
Operator: JZ

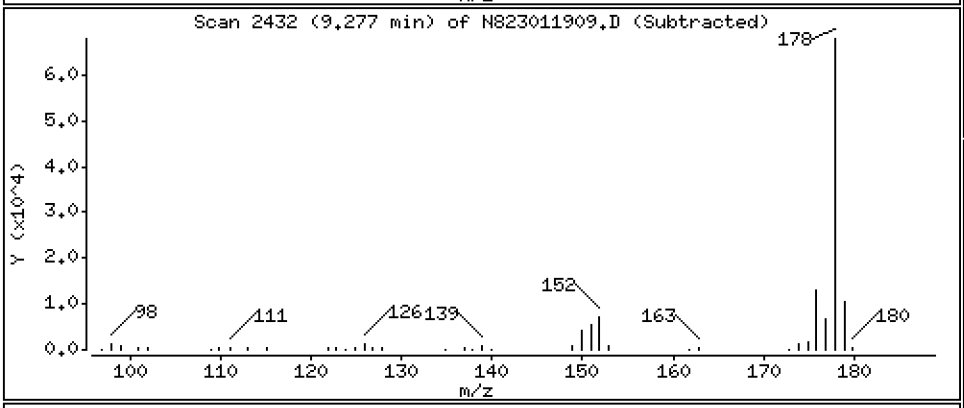
Column phase: Rxi-17sil

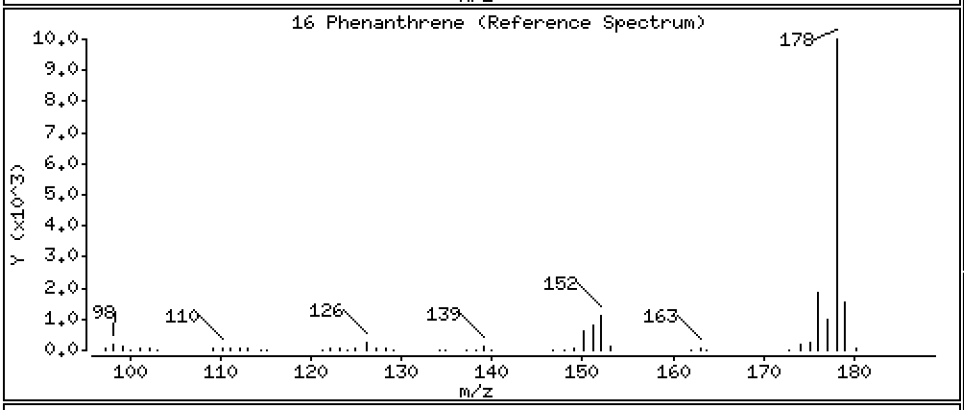
Column diameter: 0.25

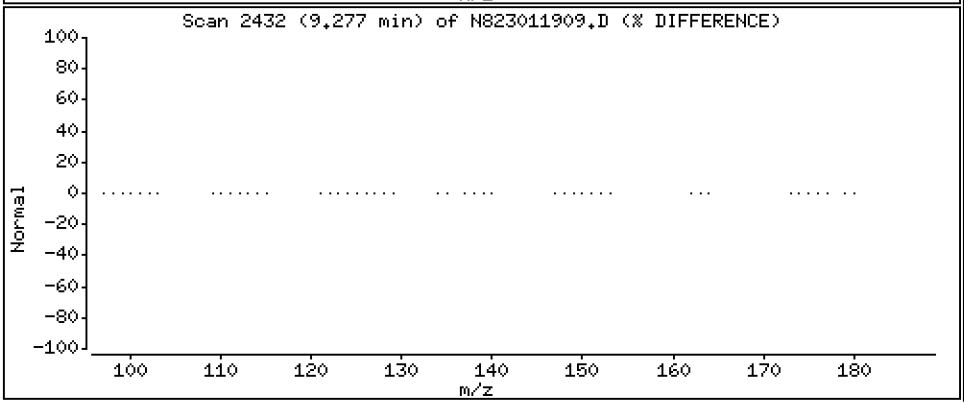
16 Phenanthrene

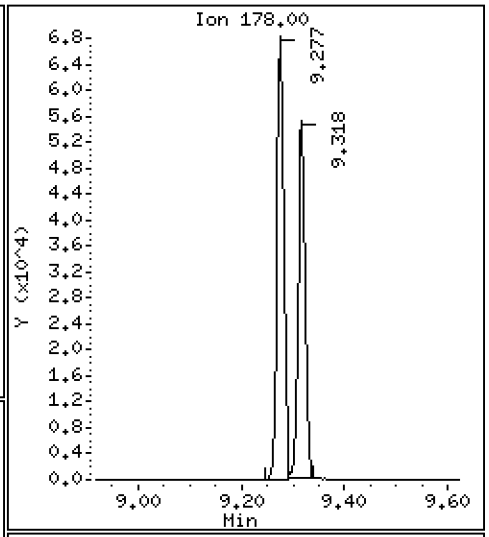
Concentration: 2.448 ug/L

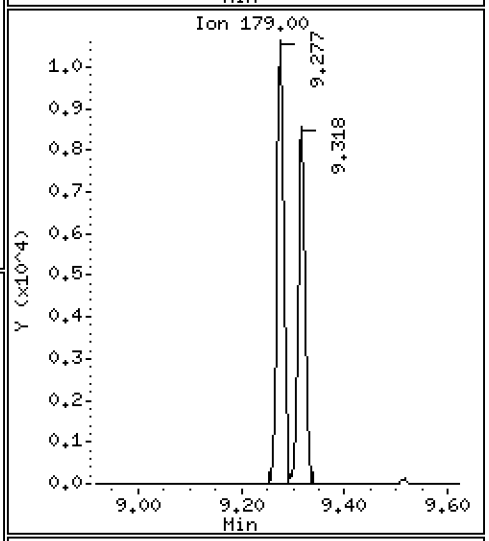


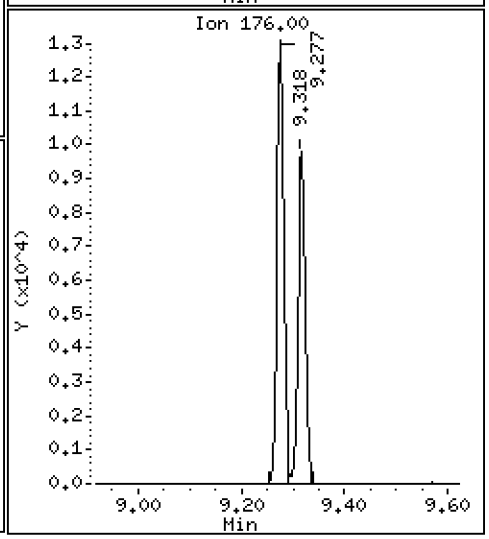












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

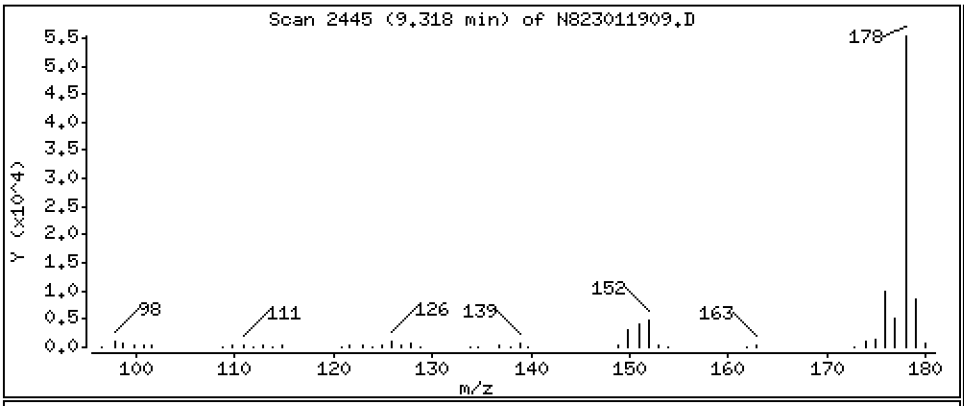
Operator: JZ

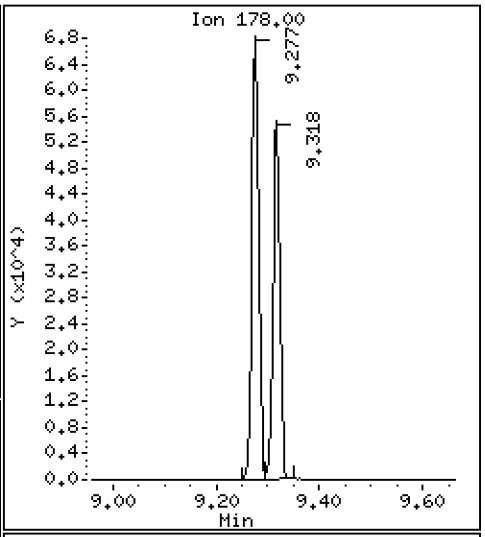
Column phase: Rxi-17sil

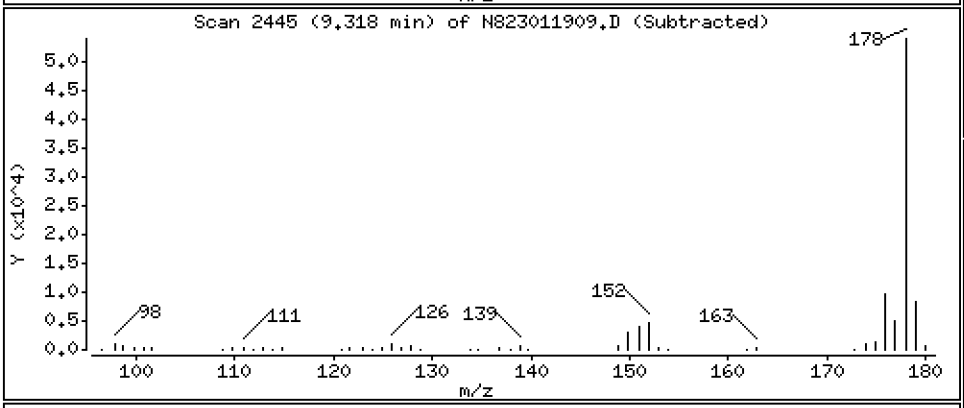
Column diameter: 0.25

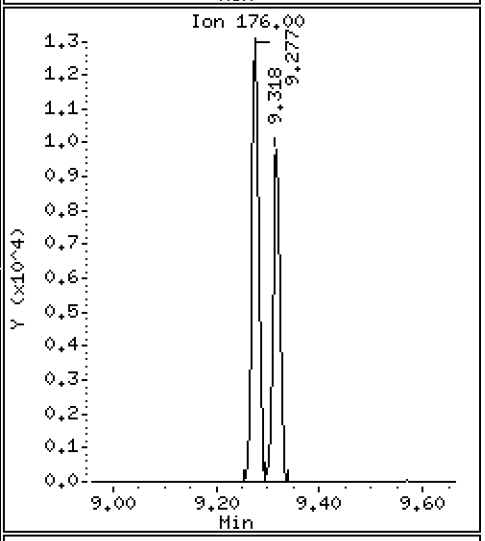
17 Anthracene

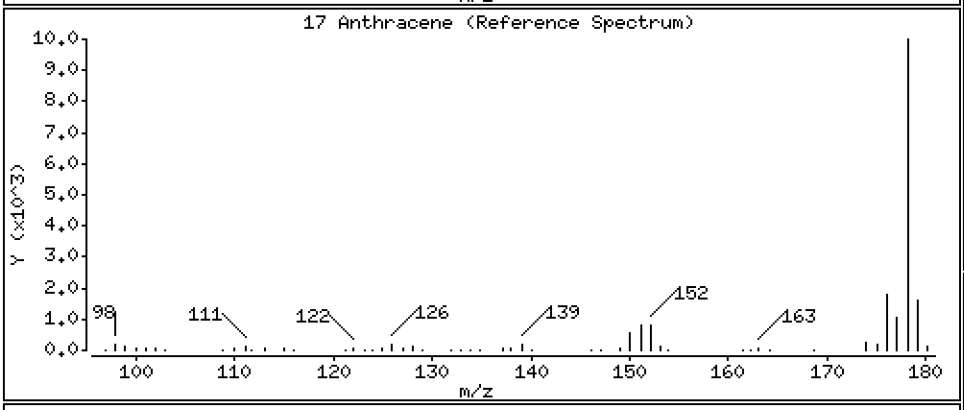
Concentration: 2.270 ug/L

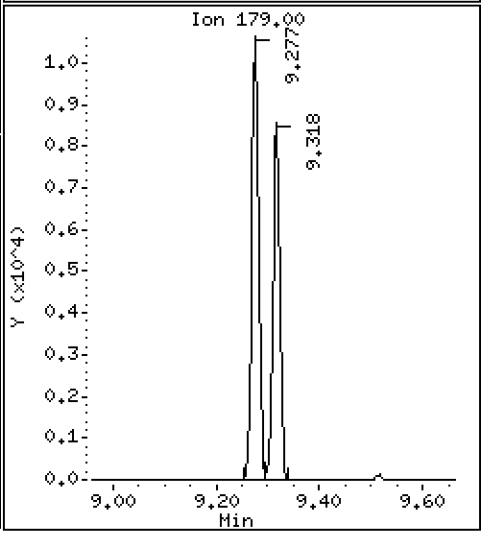


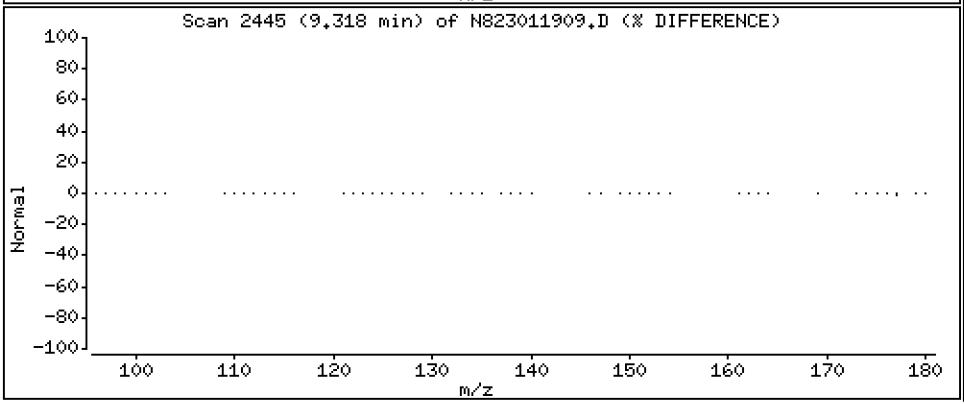












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

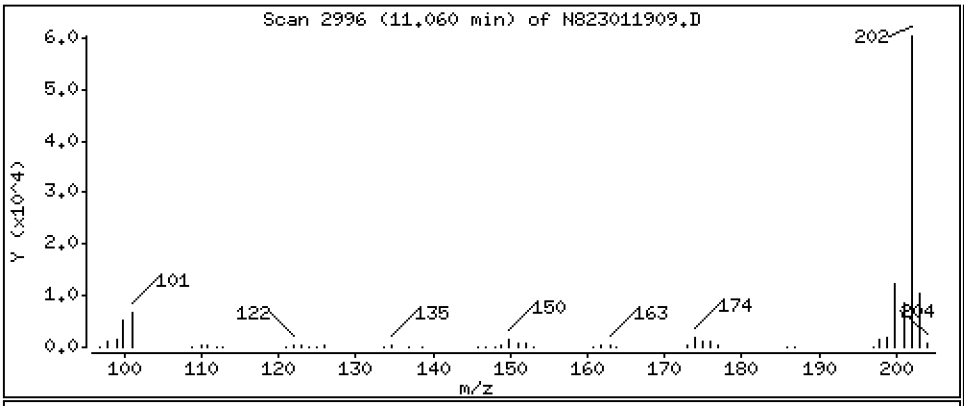
Operator: JZ

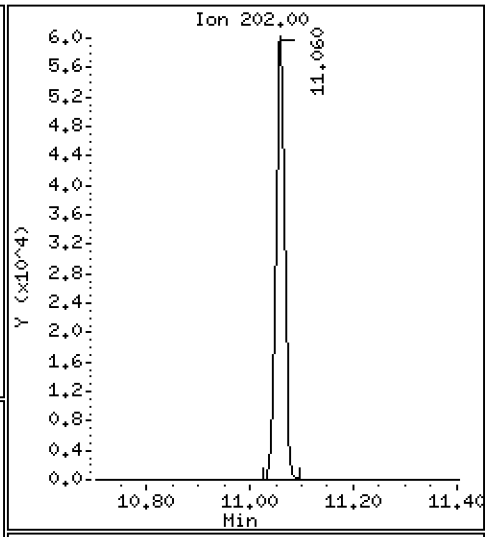
Column phase: Rxi-17sil

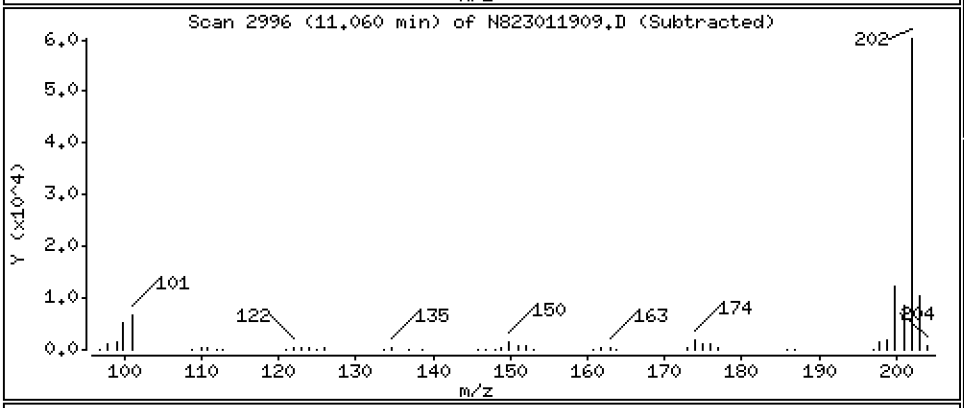
Column diameter: 0.25

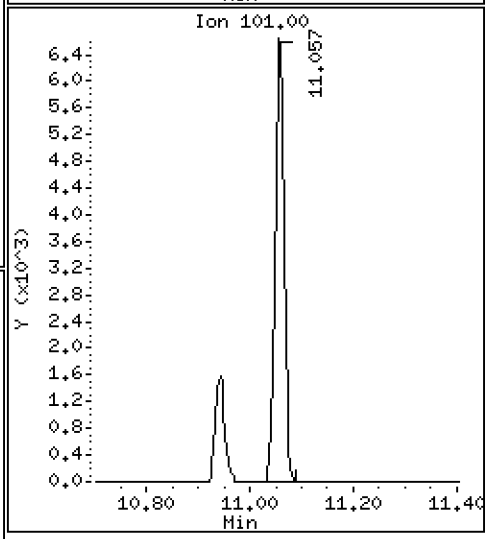
22 Fluoranthene

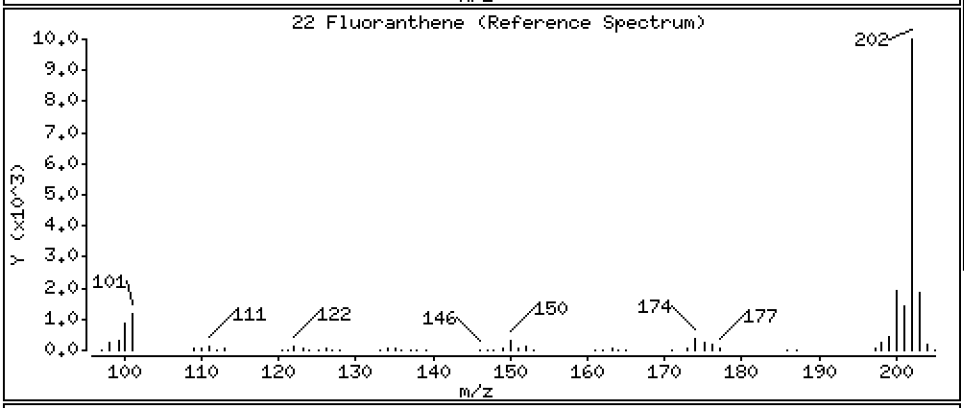
Concentration: 2.653 ug/L

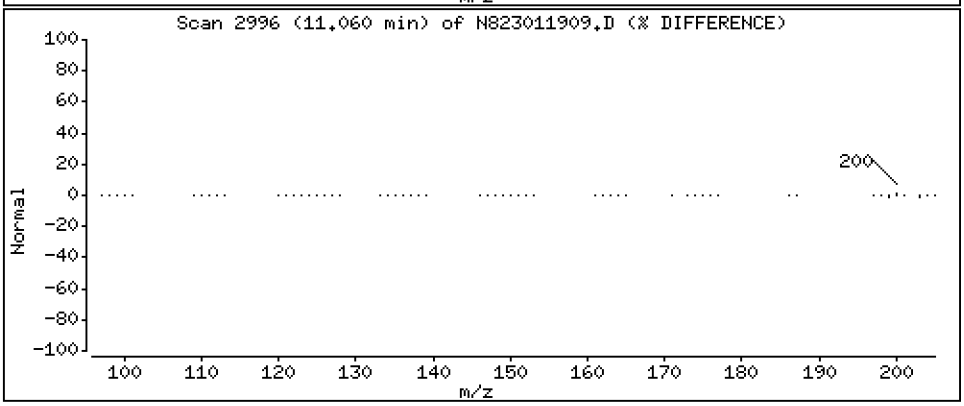












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

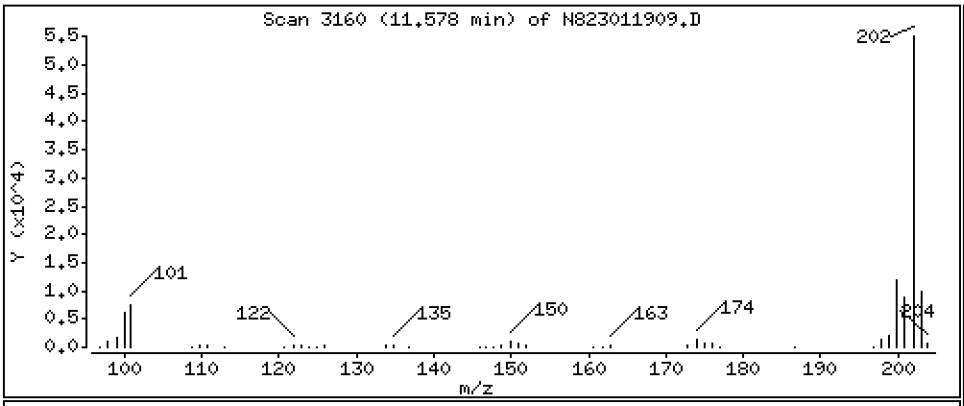
Operator: JZ

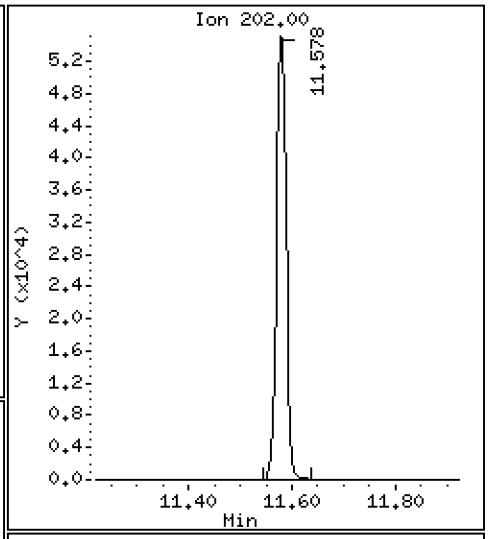
Column phase: Rxi-17sil

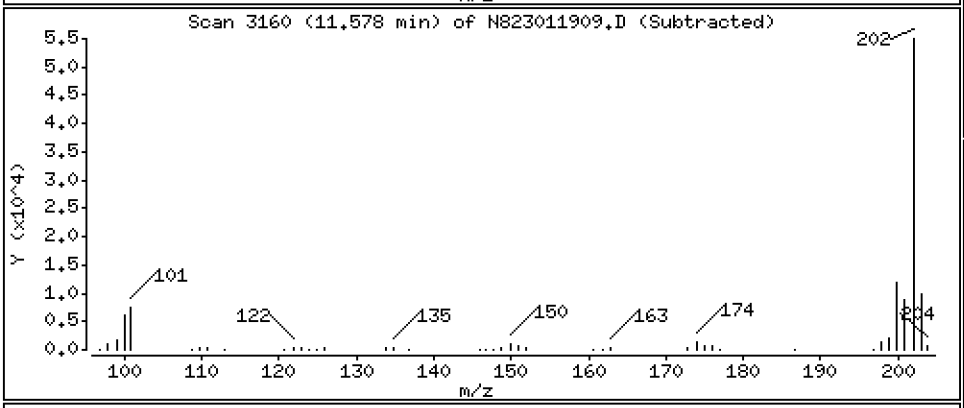
Column diameter: 0.25

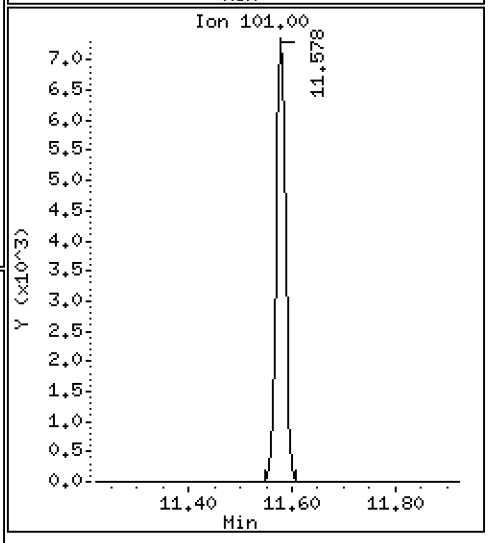
23 Pyrene

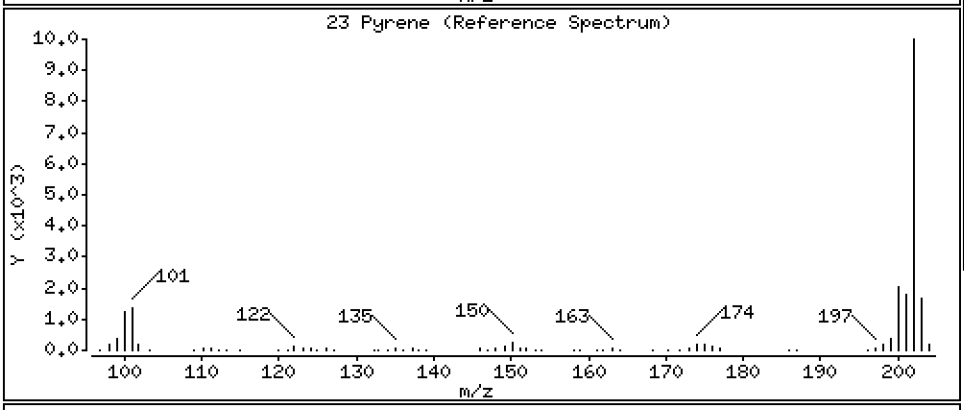
Concentration: 2.462 ug/L

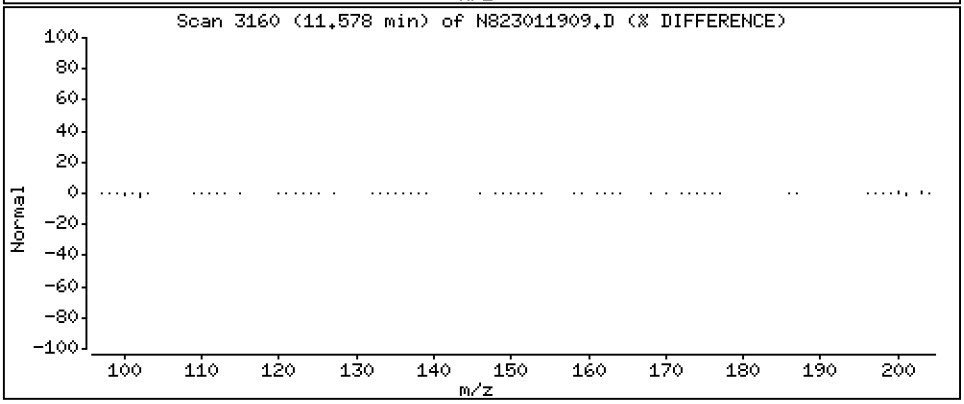












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

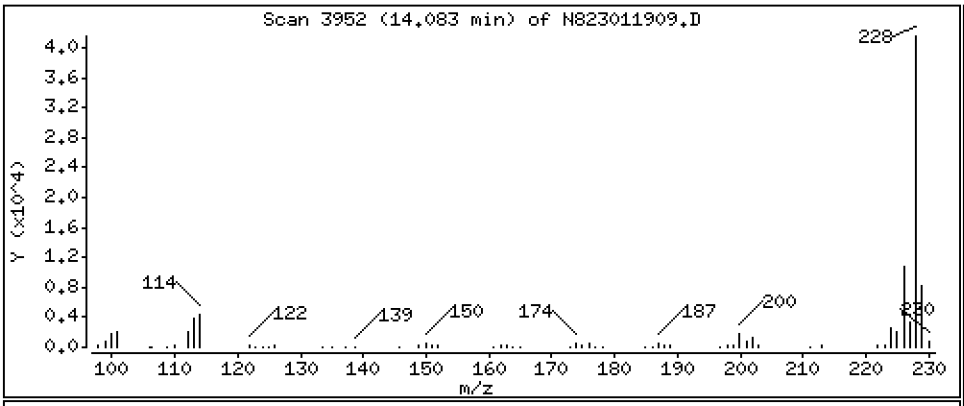
Operator: JZ

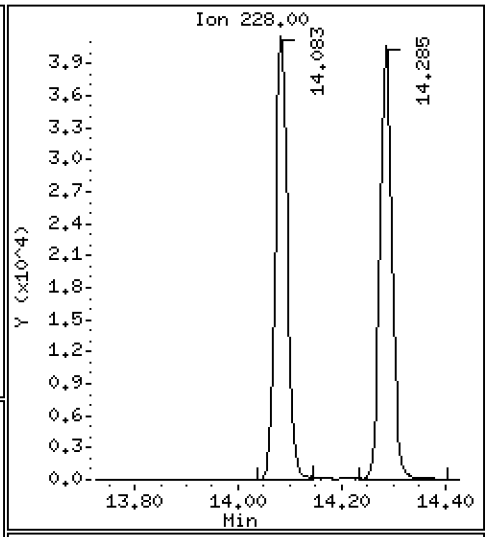
Column phase: Rxi-17sil

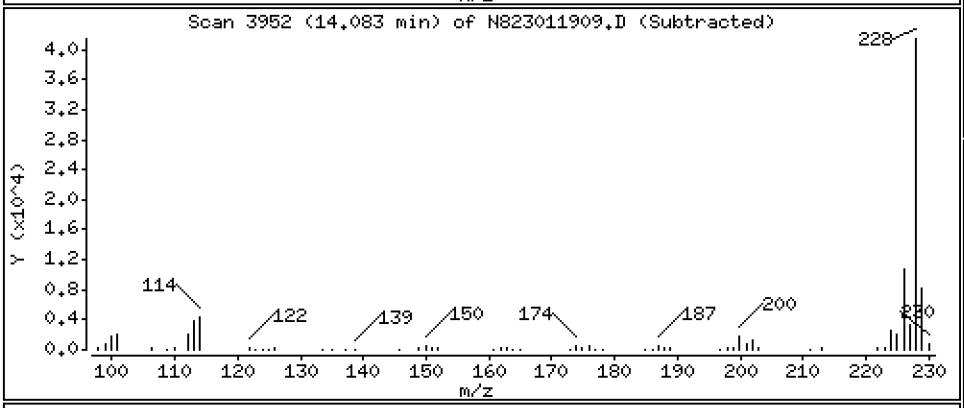
Column diameter: 0.25

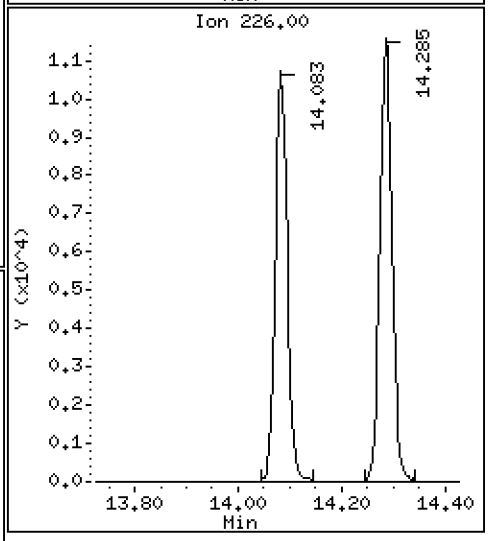
24 Benzo(a)anthracene

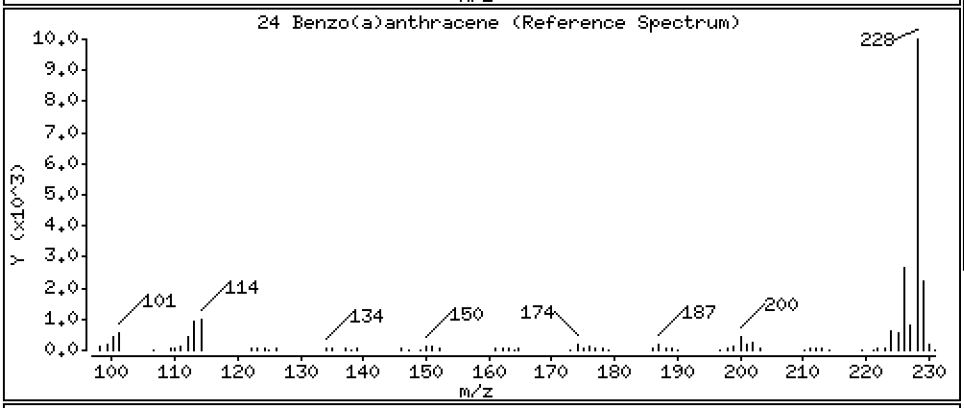
Concentration: 2.587 ug/L

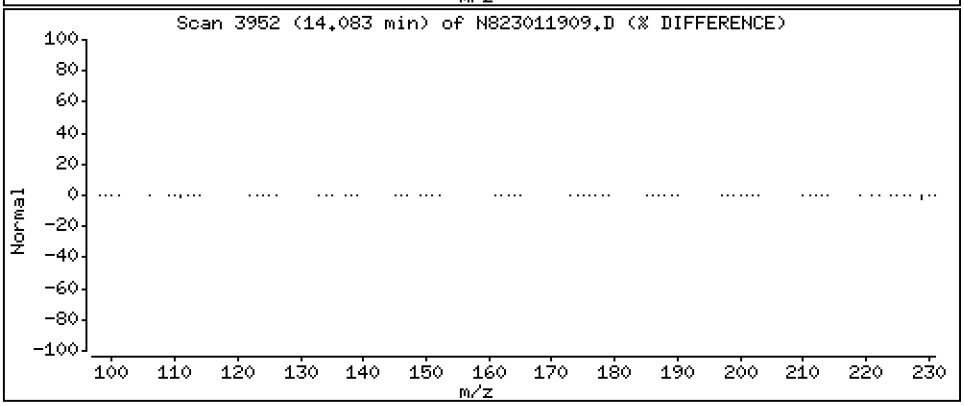












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

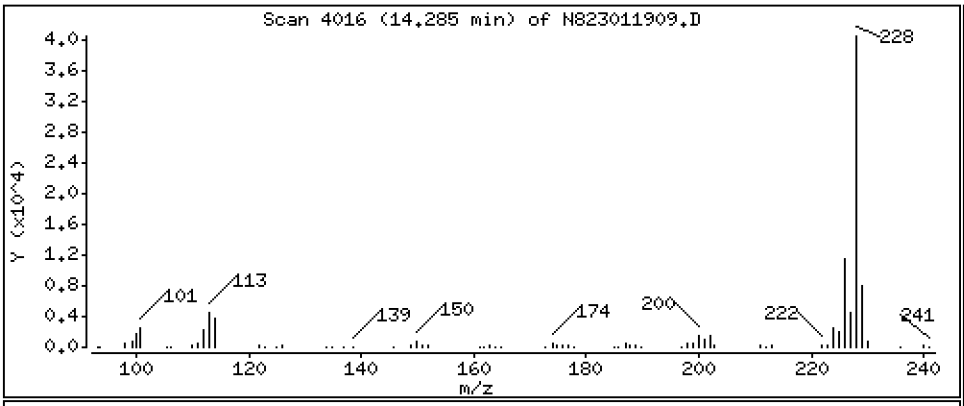
Operator: JZ

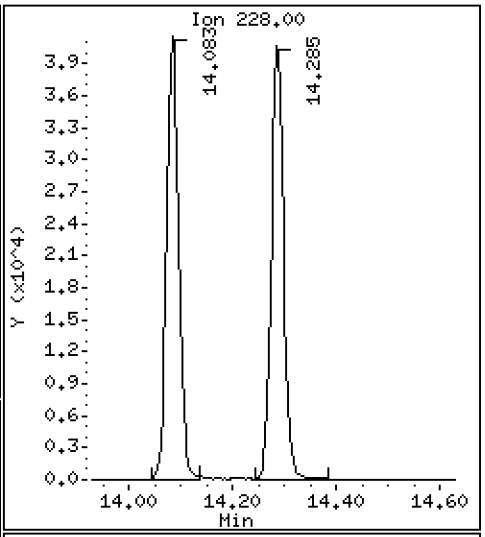
Column phase: Rxi-17sil

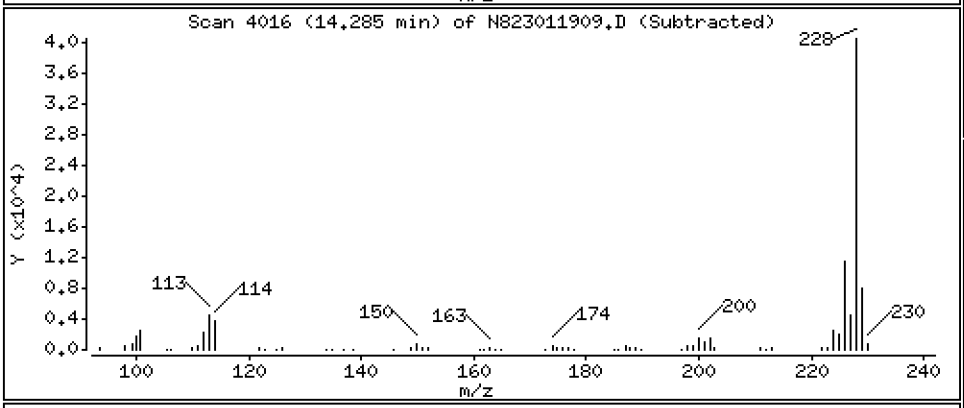
Column diameter: 0.25

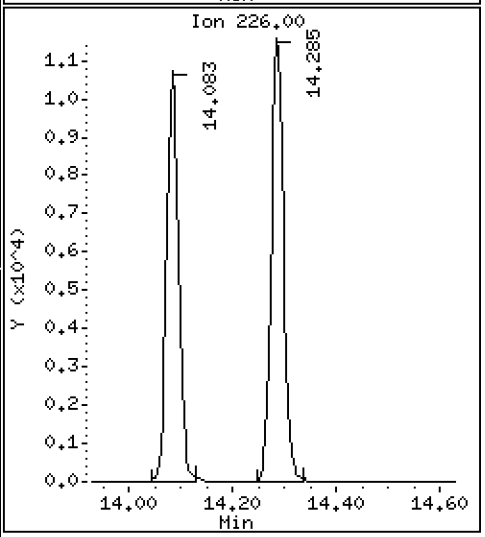
27 Chrysene

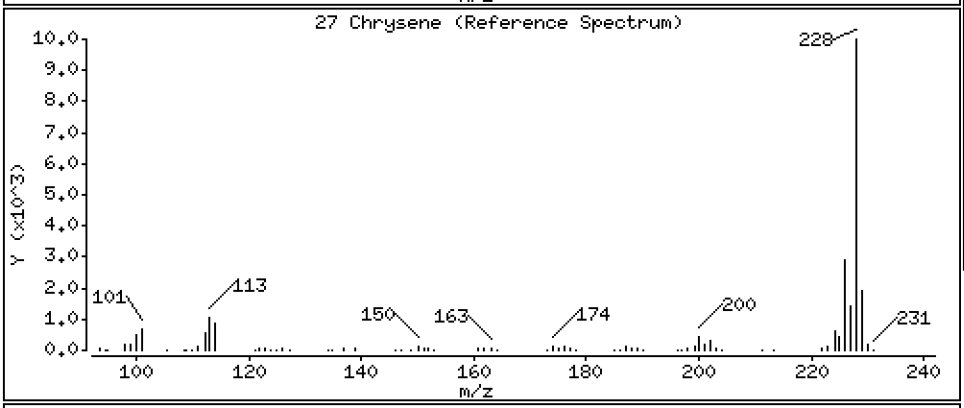
Concentration: 2.400 ug/L

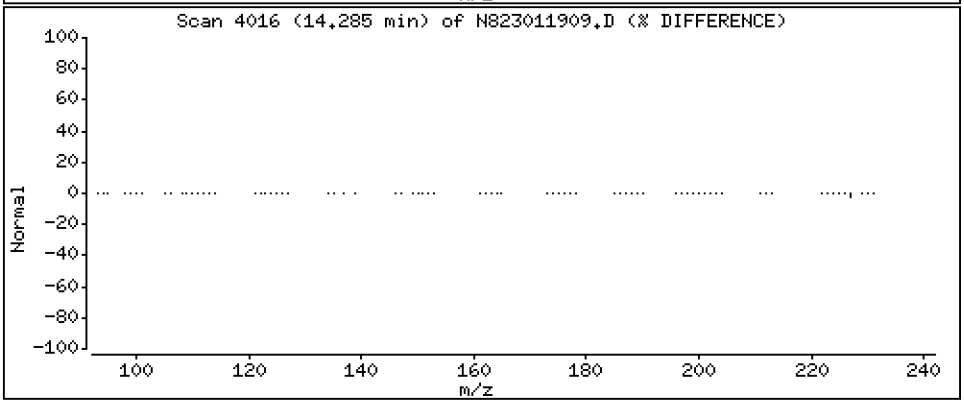












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

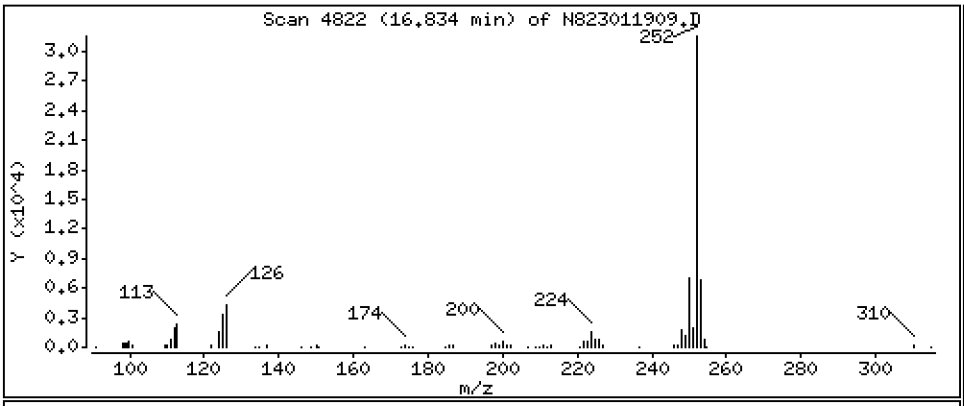
Operator: JZ

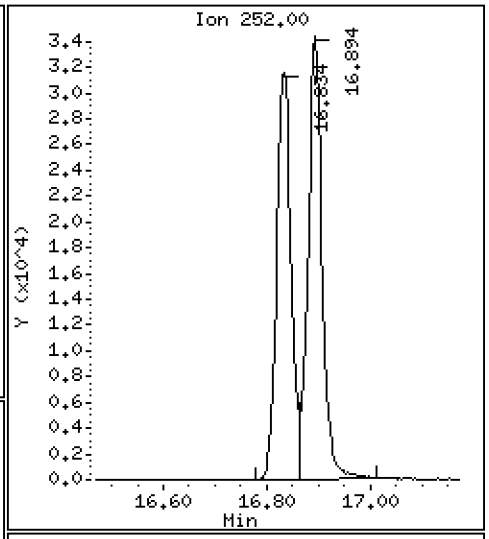
Column phase: Rxi-17sil

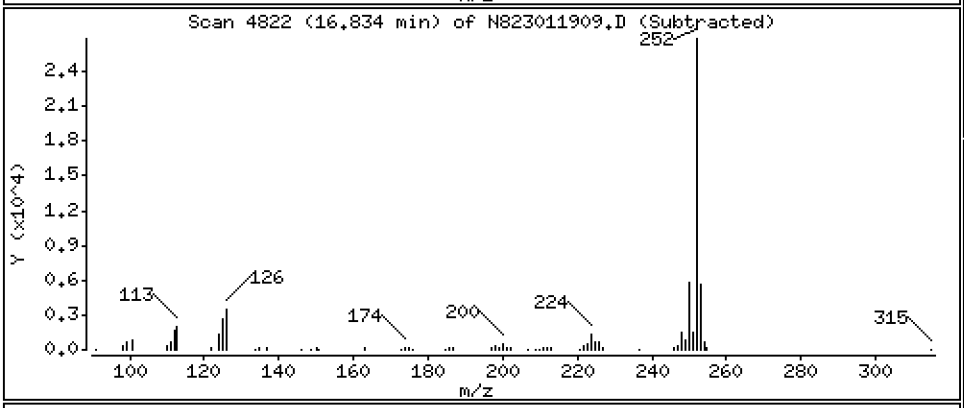
Column diameter: 0.25

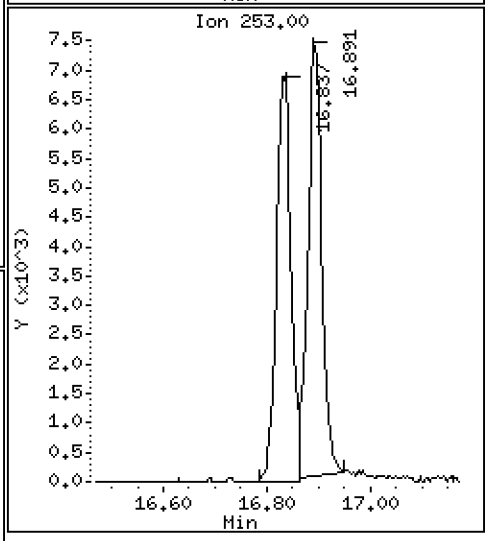
28 Benzo(b)fluoranthene

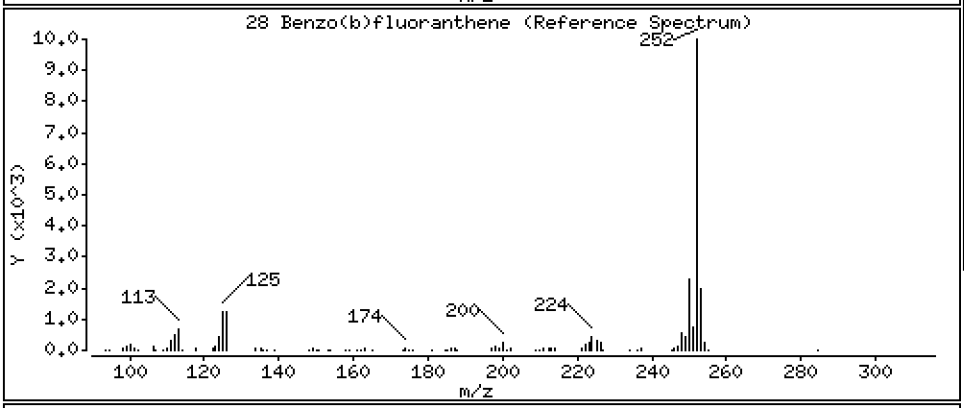
Concentration: 2.507 ug/L

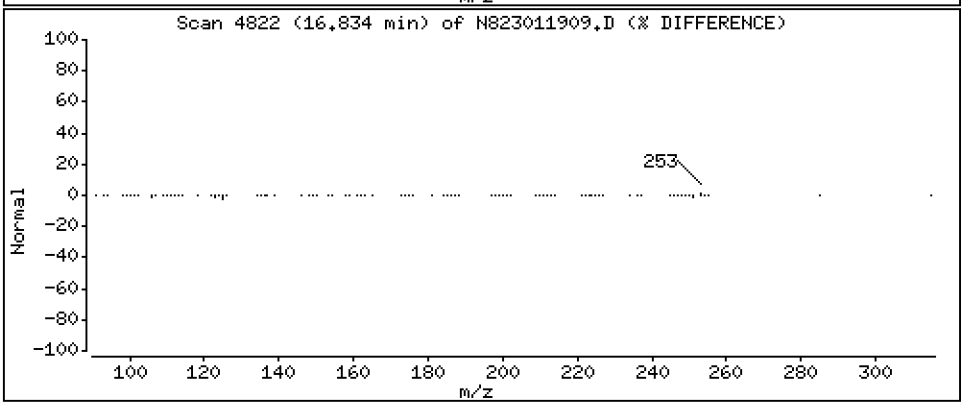












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

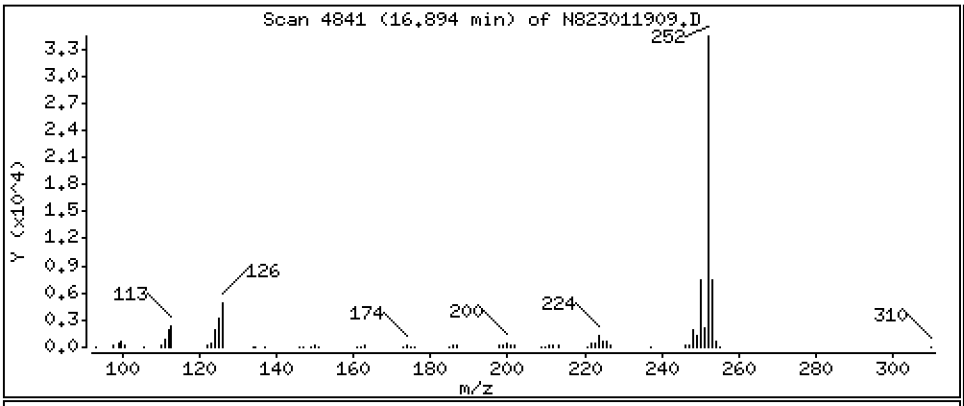
Operator: JZ

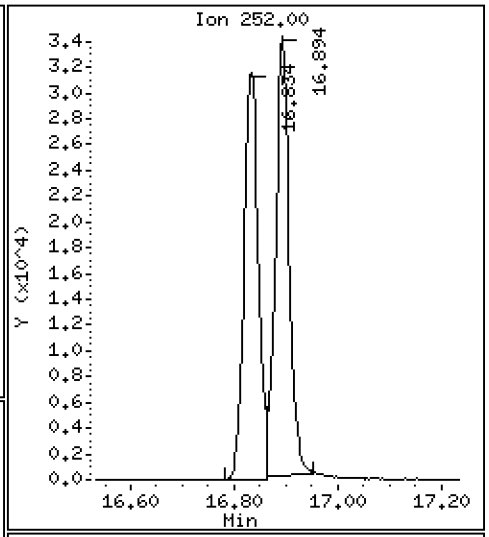
Column phase: Rxi-17sil

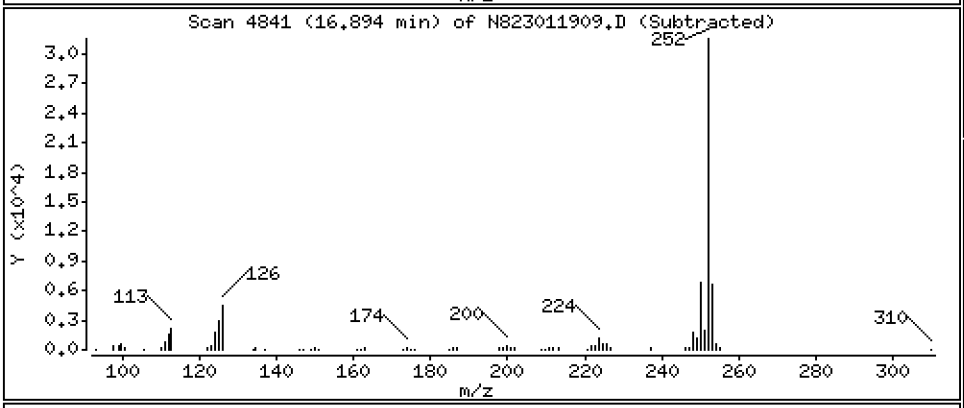
Column diameter: 0.25

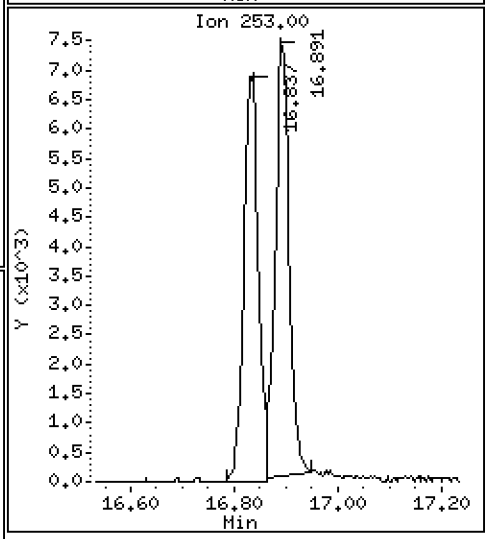
29 Benzo(k)fluoranthene

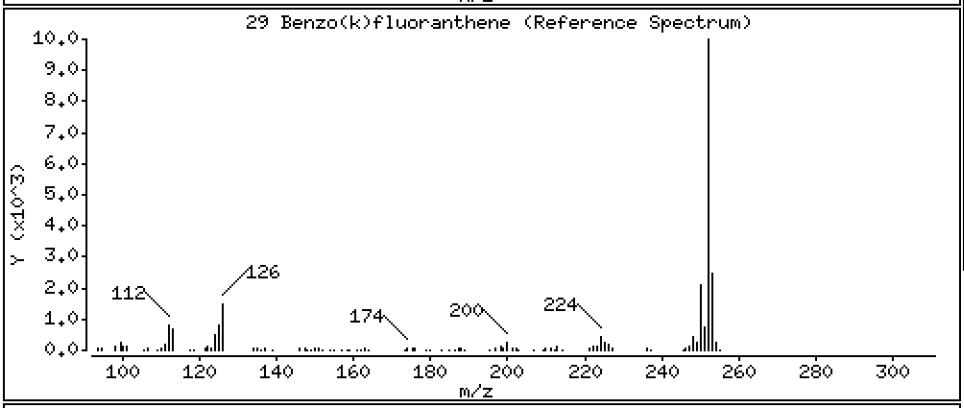
Concentration: 2.656 ug/L

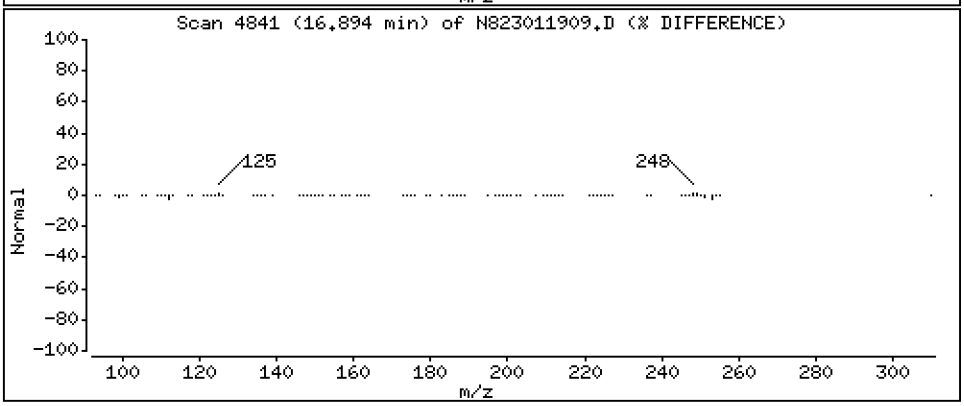












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

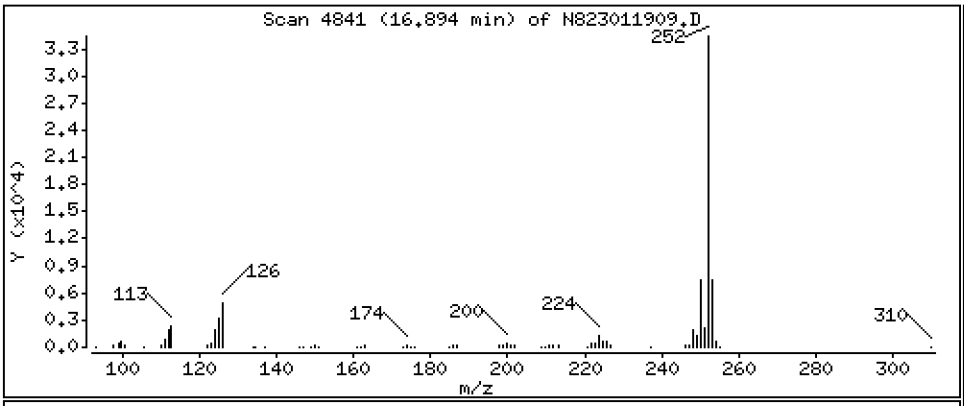
Operator: JZ

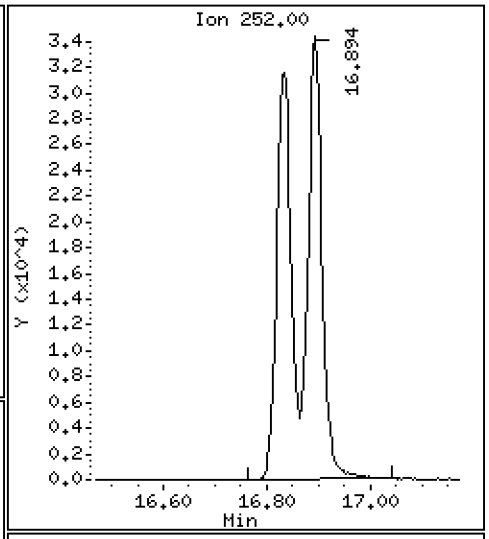
Column phase: Rxi-17sil

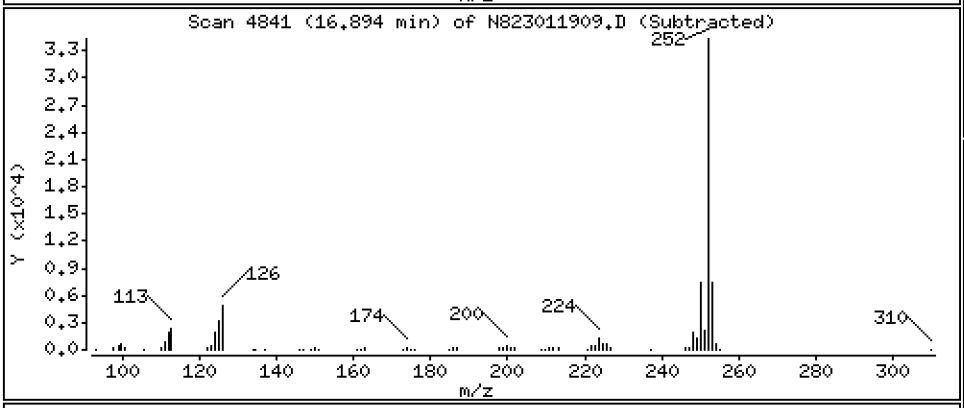
Column diameter: 0.25

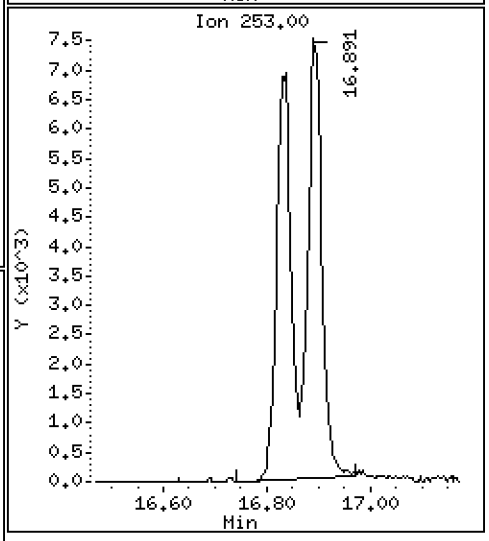
31 Total Benzofluoranthenes

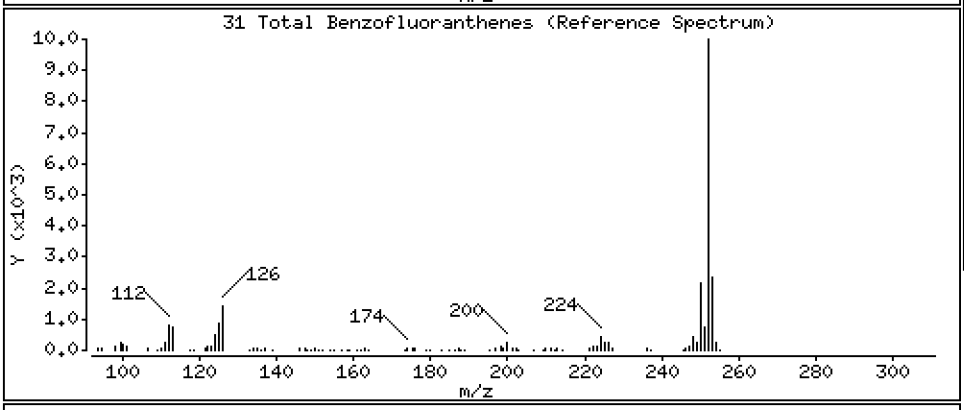
Concentration: 5.480 ug/L

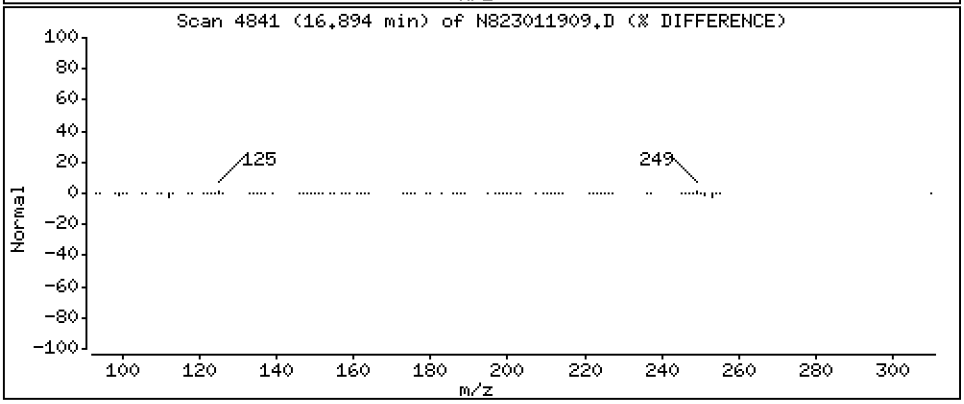












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

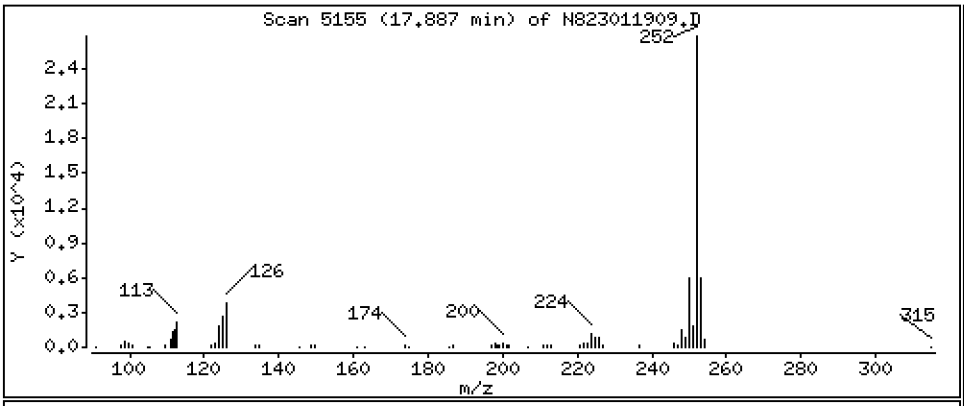
Operator: JZ

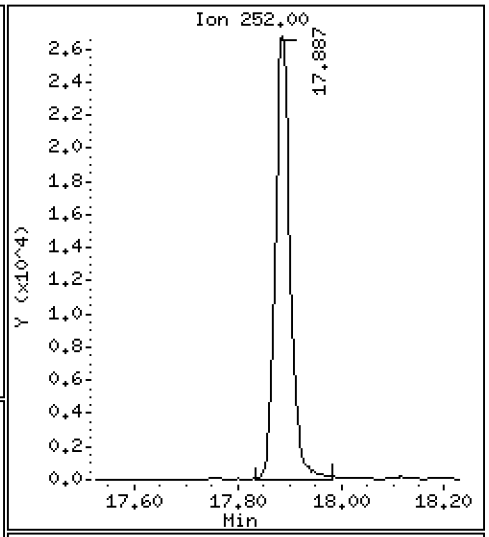
Column phase: Rxi-17sil

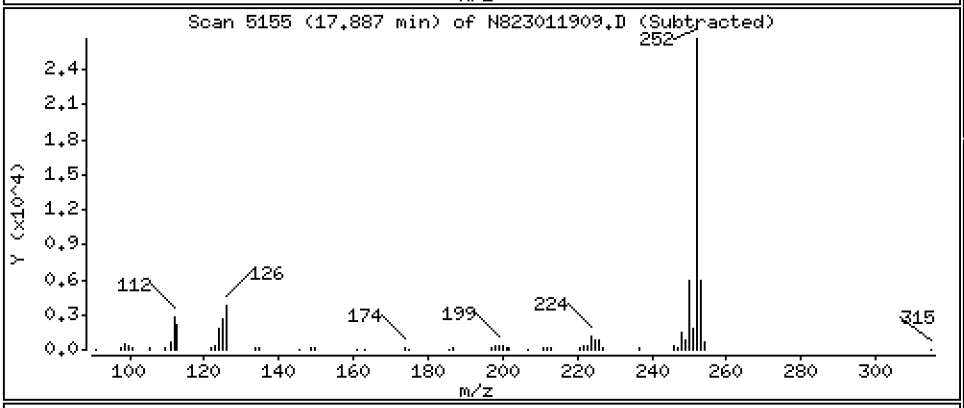
Column diameter: 0.25

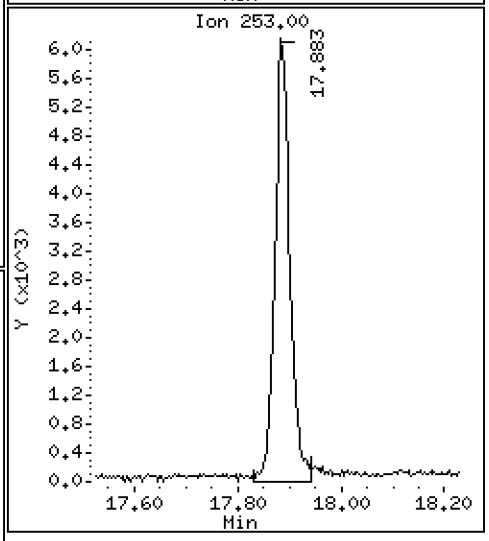
32 Benzo(a)pyrene

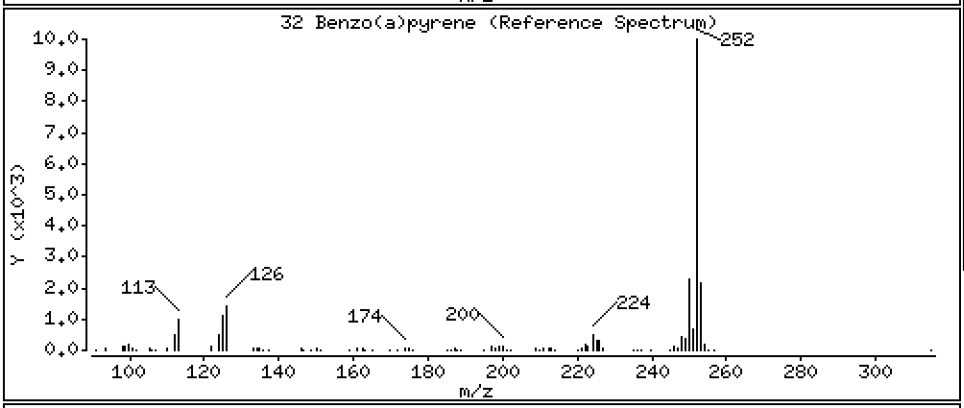
Concentration: 2.572 ug/L

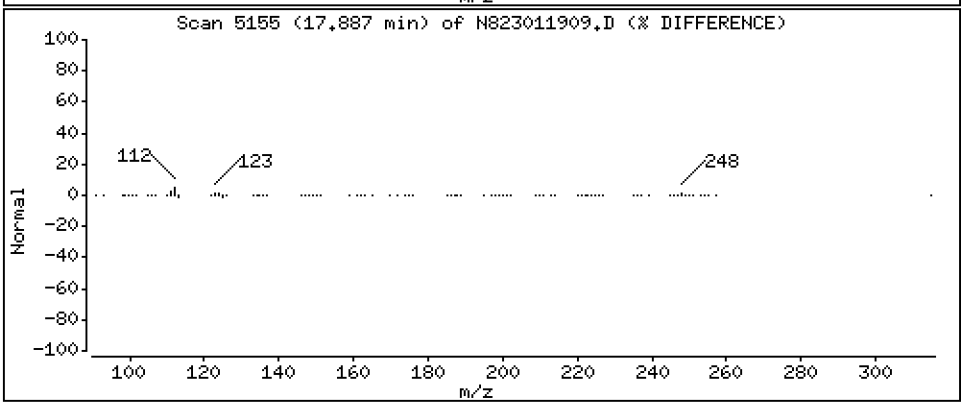












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

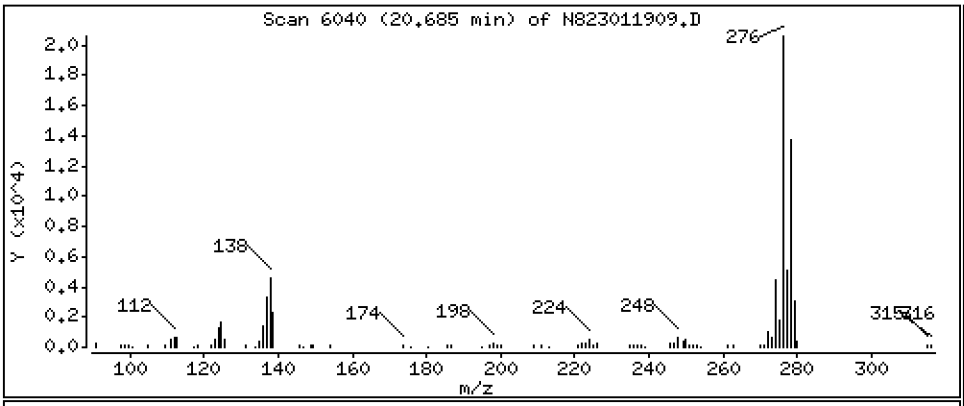
Operator: JZ

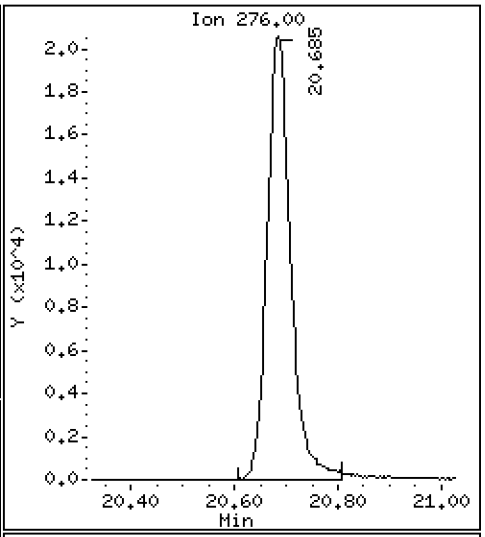
Column phase: Rxi-17sil

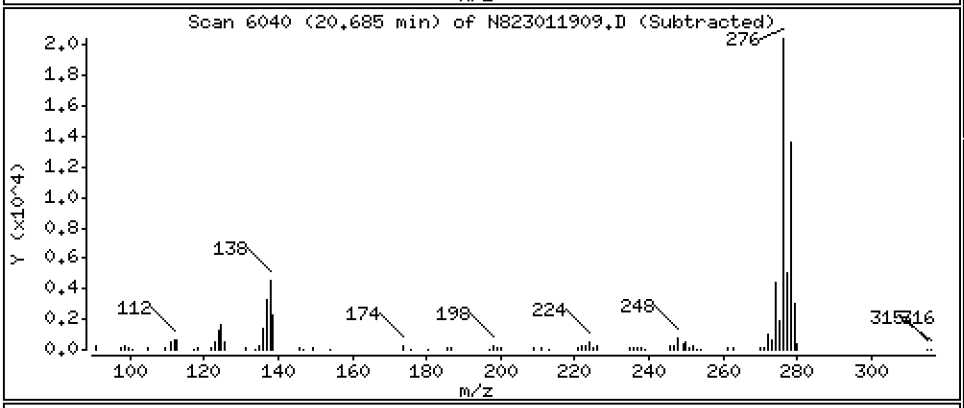
Column diameter: 0.25

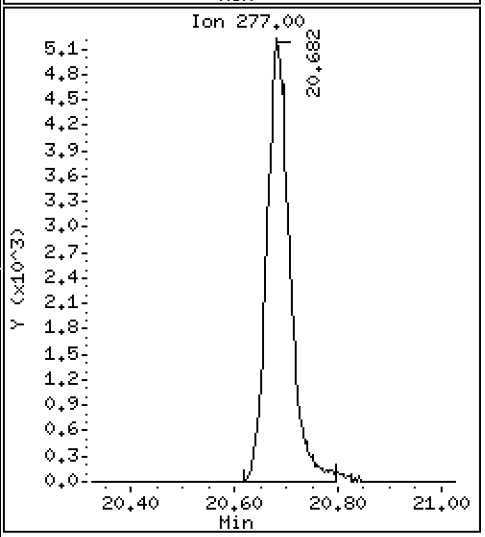
37 Indeno(1,2,3-cd)pyrene

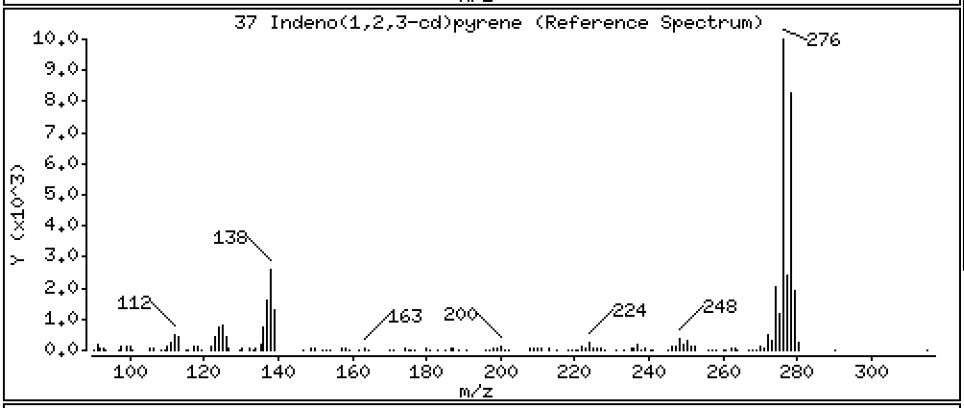
Concentration: 2.689 ug/L

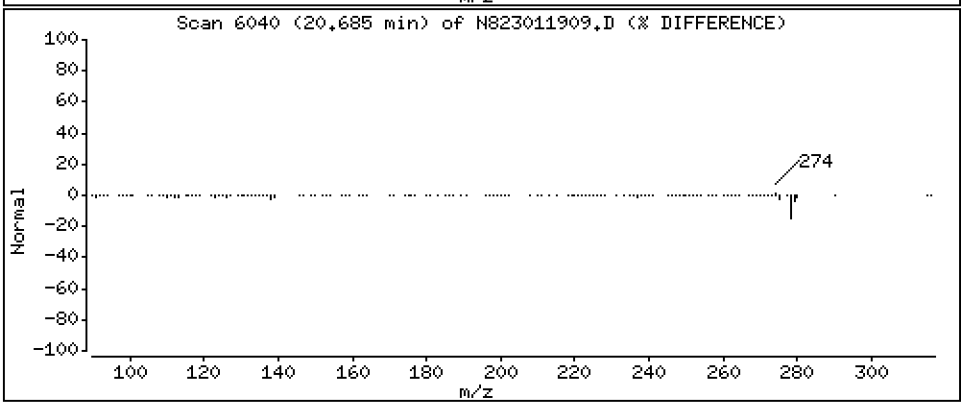












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

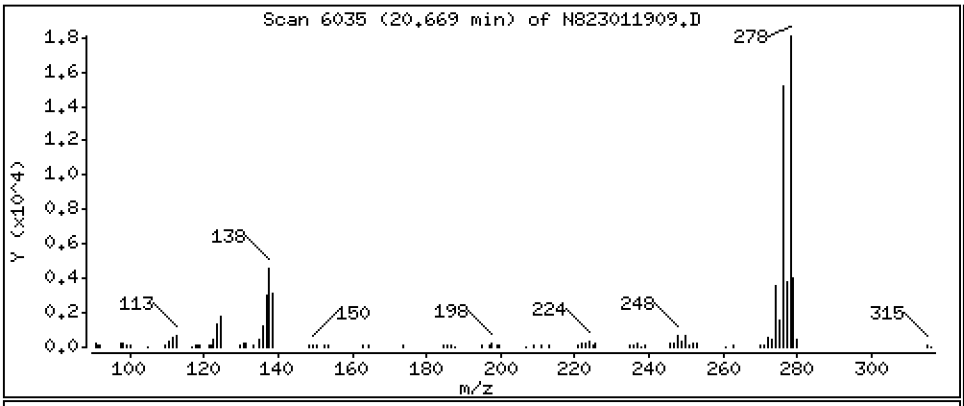
Operator: JZ

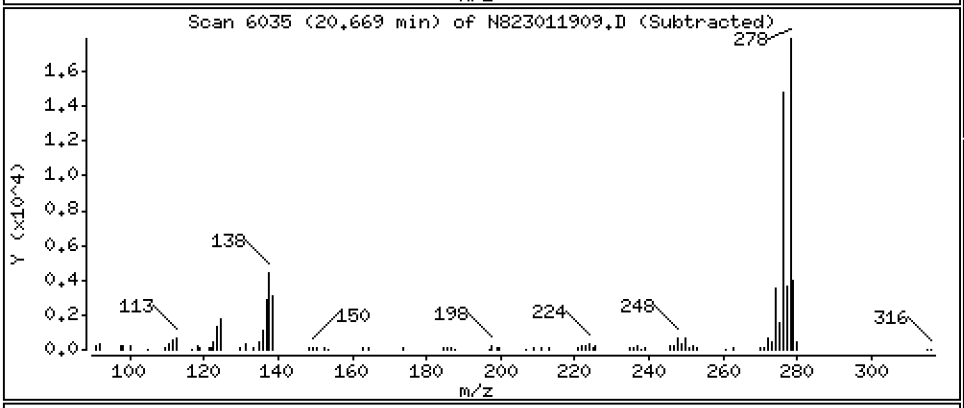
Column phase: Rxi-17sil

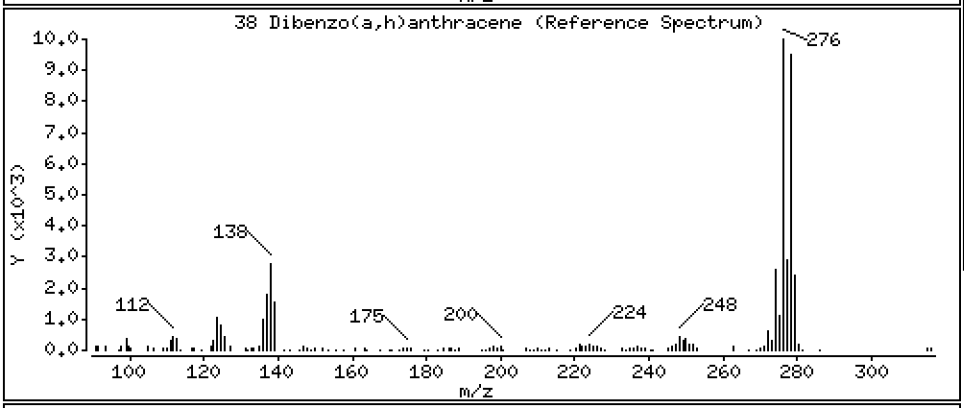
Column diameter: 0.25

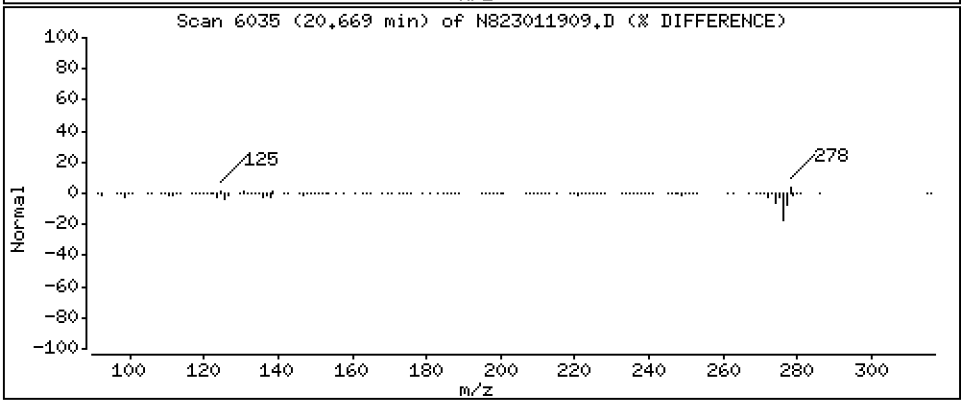
38 Dibenzo(a,h)anthracene

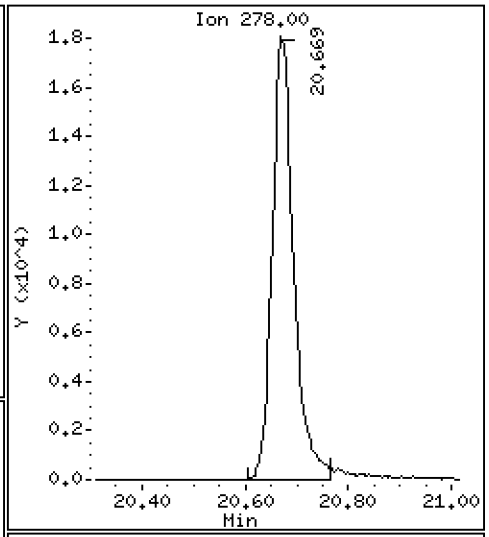
Concentration: 2.493 ug/L

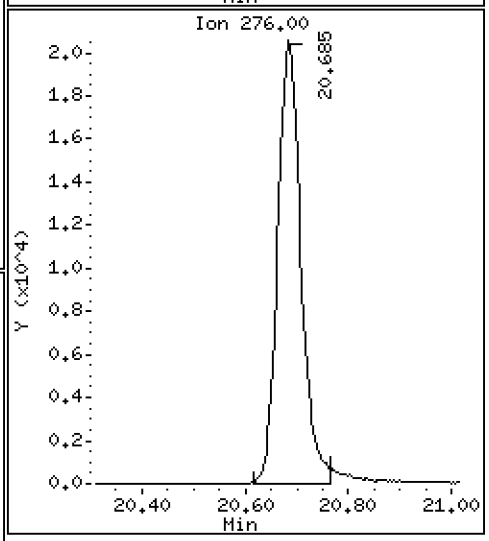












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

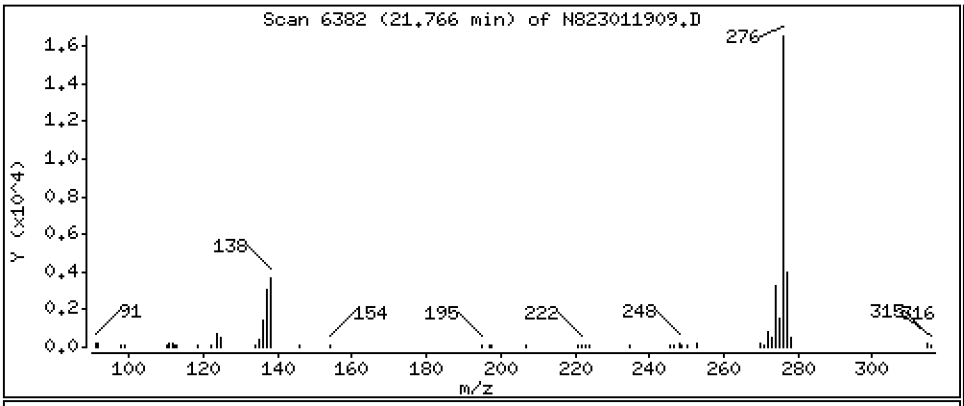
Operator: JZ

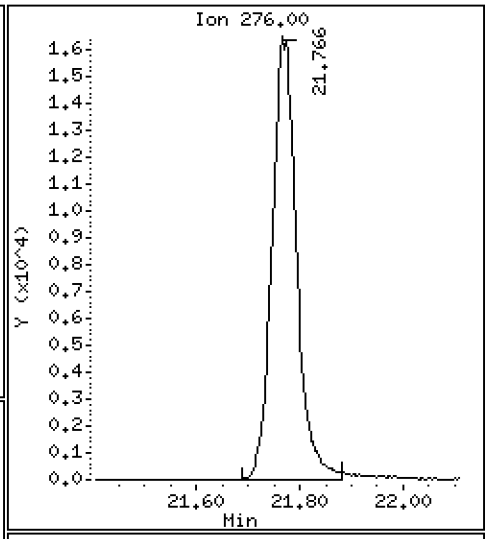
Column phase: Rxi-17sil

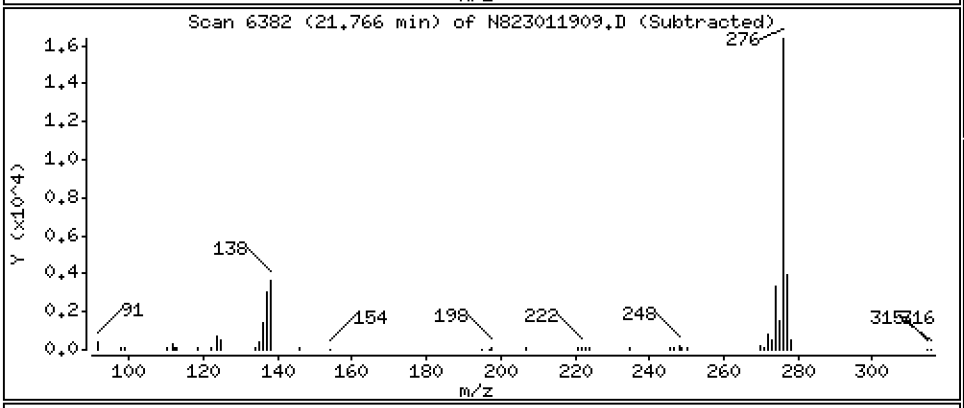
Column diameter: 0.25

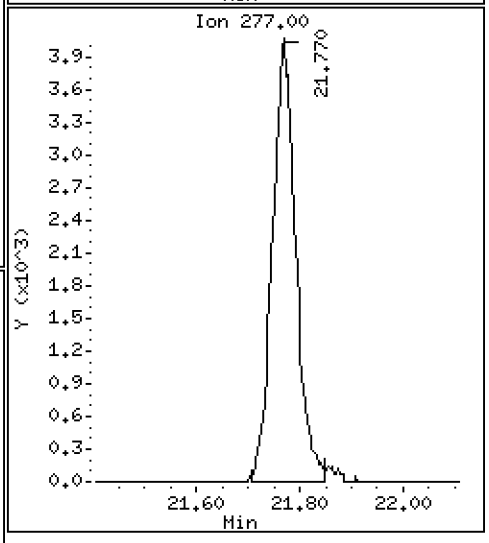
39 Benzo(g,h,i)perylene

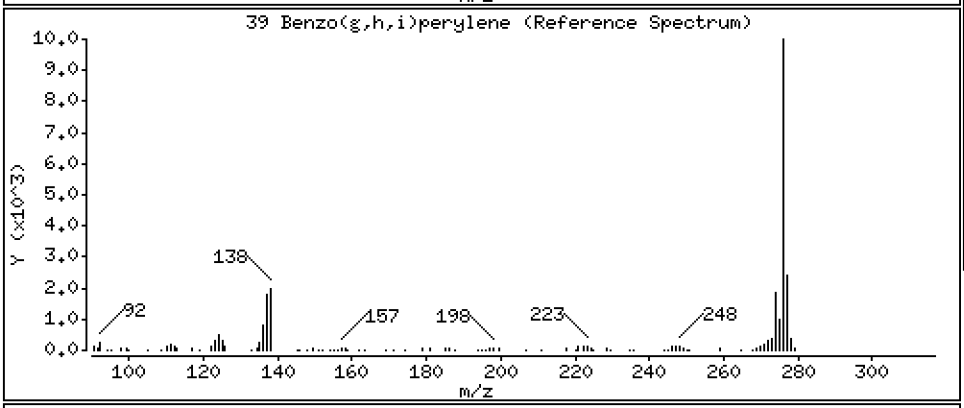
Concentration: 2.483 ug/L

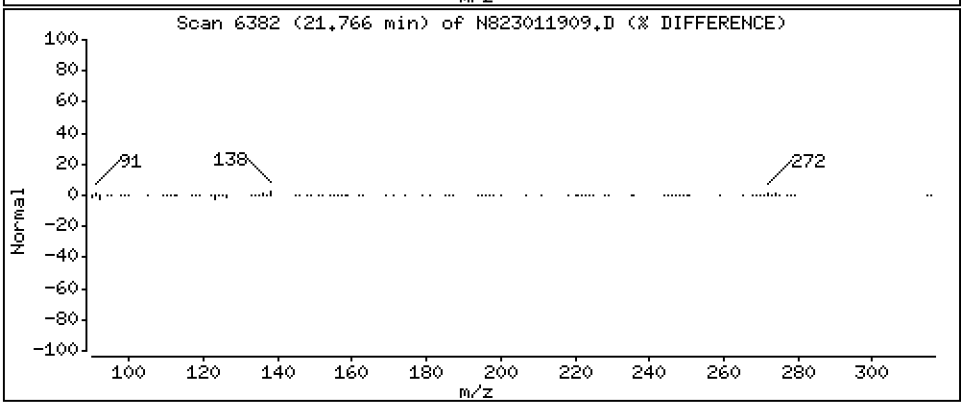












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230119.b\N823011909.D
Lab Smp Id: SLA0213-SCV1
Inj Date : 19-JAN-2023 14:58
Operator : JZ Inst ID: nt8.i
Smp Info : SCV230119
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Meth Date : 19-Jan-2023 20:20 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnascv.sub
Target Version: 4.14
Processing Host: JIANQING-202105

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Vo	500.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
* 1 Naphthalene-d8	136	4.913	4.906	(1.000)	46346	2.00000	
2 Naphthalene	128	4.941	4.938	(1.006)	56587	2.62597	2.626
$ 3 2-Methylnaphthalene-d10	152	Compound Not Detected.					
4 2-Methylnaphthalene	141	5.694	5.687	(1.159)	31650	2.67019	2.670
5 1-methylnaphthalene	141	5.890	5.883	(1.199)	31873	2.64949	2.649
9 Acenaphthylene	152	7.091	7.085	(0.985)	59018	2.82060	2.821
* 10 Acenaphthene-d10	164	7.202	7.196	(1.000)	27709	2.00000	
11 Acenaphthene	153	7.249	7.246	(1.007)	36454	2.60022	2.600
12 Dibenzofuran	168	7.401	7.395	(1.028)	60898	2.85987	2.860
14 Fluorene	166	7.878	7.872	(1.094)	43507	2.63066	2.631
* 15 Phenanthrene-d10	188	9.238	9.235	(1.000)	51685	2.00000	
16 Phenanthrene	178	9.276	9.270	(1.004)	61815	2.44841	2.448
17 Anthracene	178	9.317	9.311	(1.009)	52064	2.27006	2.270
22 Fluoranthene	202	11.059	11.053	(1.197)	72902	2.65276	2.653
$ 21 Fluoranthene-d10	212	Compound Not Detected.					
23 Pyrene	202	11.578	11.572	(0.815)	71115	2.46242	2.462
24 Benzo(a)anthracene	228	14.082	14.076	(0.991)	67725	2.58725	2.587
* 25 Chrysene-d12	240	14.212	14.202	(1.000)	46582	2.00000	
27 Chrysene	228	14.285	14.278	(1.005)	66872	2.39976	2.400
28 Benzo(b)fluoranthene	252	16.833	16.821	(0.929)	60946	2.50689	2.507
29 Benzo(k)fluoranthene	252	16.893	16.884	(0.932)	63249	2.65606	2.656
31 Total Benzofluoranthenes	252	16.893	16.821	(0.932)	126178	5.48025	5.480(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	32 Benzo(a)pyrene	252	17.886	17.877	(0.987)	55026	2.57205	2.572
*	33 Perylene-d12	264	18.117	18.111	(1.000)	41743	2.00000	
	37 Indeno(1,2,3-cd)pyrene	276	20.684	20.675	(1.142)	65545	2.68928	2.689
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	20.669	20.662	(1.141)	52293	2.49315	2.493
	39 Benzo(g,h,i)perylene	276	21.766	21.756	(1.201)	54821	2.48258	2.483
	35 Perylene	252	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823011909.D
Lab Smp Id: SLA0213-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 19-JAN-2023
Calibration Time: 12:52
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44704	22352	89408	46346	3.67
10 Acenaphthene-d10	26411	13206	52822	27709	4.91
15 Phenanthrene-d10	49210	24605	98420	51685	5.03
25 Chrysene-d12	42994	21497	85988	46582	8.35
33 Perylene-d12	40520	20260	81040	41743	3.02

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.91	4.41	5.41	4.91	0.13
10 Acenaphthene-d10	7.20	6.70	7.70	7.20	0.09
15 Phenanthrene-d10	9.24	8.74	9.74	9.24	0.03
25 Chrysene-d12	14.20	13.70	14.70	14.21	0.07
33 Perylene-d12	18.11	17.61	18.61	18.12	0.03

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

REVIEW SUMMARY FOR FILE - N823011909.D

Lab ID: SLA0213-SCV1
nt8.i, 20230119.b\FSIMPNA230119.m,   19-JAN-2023 14:58

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

No RRT check performed

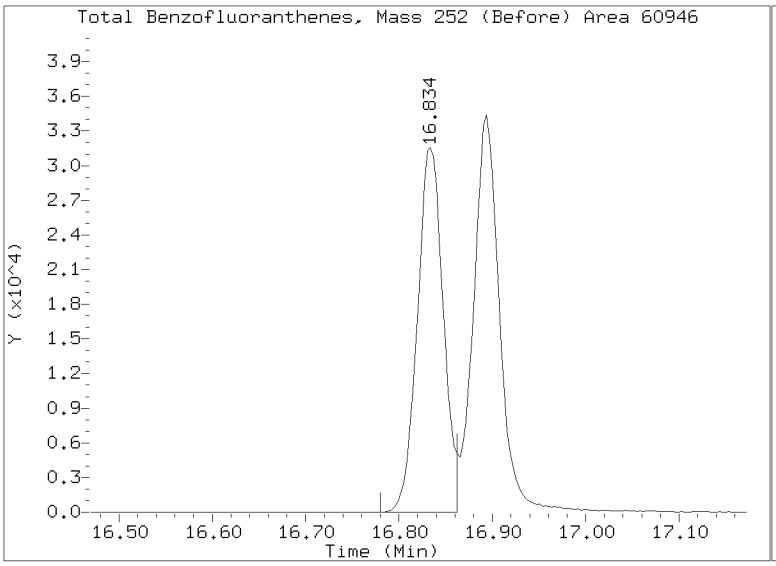
On Column LOD for nt8.i, 20230119.b\FSIMPNA230119.m, pnascv.sub = 0.0500

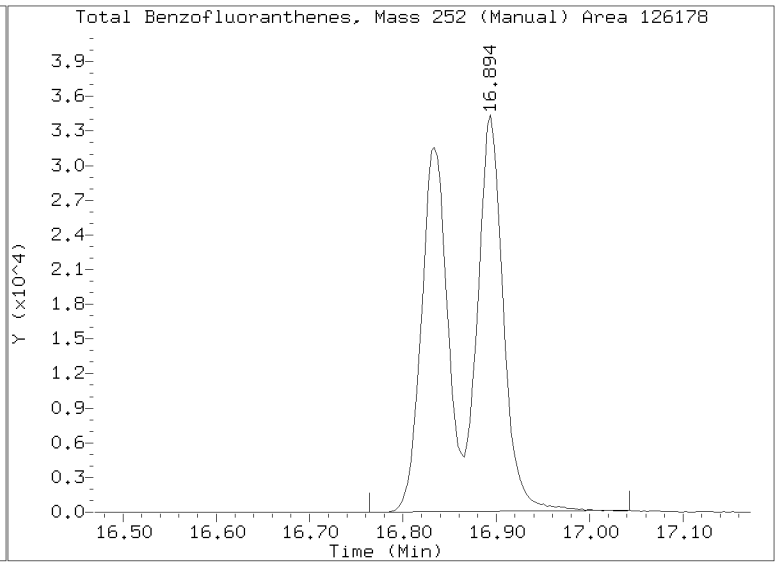
Exception: Benzo(b)fluoranthene 0.0300
Exception: Benzo(k)fluoranthene 0.0300
Exception: Total Benzofluoranthenes 0.0300
Exception: Fluoranthene-d10 (Surr) 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230119.b/N823011909.D
Injection Date: 19-JAN-2023 14:58
Lab ID:SLA0213-SCV1 Client ID:
Report Date: 01/19/2023 20:27





INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GD00068	Instrument:	NT8
Calibration Date:	04/26/2023	Column (1):	RXI-17Sil ms

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Naphthalene	0.1	0.9731738	0.5	1.000485	1	1.070869	2.5	1.002449	5	1.028182	10	1.038458
2-Methylnaphthalene	0.1	0.5307165	0.5	0.5738934	1	0.6241908	2.5	0.5674742	5	0.5827577	10	0.5920999
1-Methylnaphthalene	0.1	0.5260713	0.5	0.5469348	1	0.6264622	2.5	0.5708541	5	0.5837739	10	0.5875494
Acenaphthylene	0.1	1.631377	0.5	1.607036	1	1.873475	2.5	1.762923	5	1.837153	10	1.91126
Acenaphthene	0.1	1.094979	0.5	1.103668	1	1.224715	2.5	1.108174	5	1.156803	10	1.194379
Dibenzofuran	0.1	1.59508	0.5	1.681138	1	1.860094	2.5	1.708342	5	1.711025	10	1.781988
Fluorene	0.1	1.278484	0.5	1.303892	1	1.464187	2.5	1.34939	5	1.383937	10	1.470294
Phenanthrene	0.1	1.007302	0.5	1.02867	1	1.130073	2.5	1.030384	5	1.061717	10	1.09797
Anthracene	0.1	0.8474125	0.5	0.9253415	1	1.105824	2.5	1.002236	5	1.033611	10	1.04679
Fluoranthene	0.1	1.140543	0.5	1.152203	1	1.32082	2.5	1.204434	5	1.242159	10	1.25034
Pyrene	0.1	1.200712	0.5	1.240022	1	1.309355	2.5	1.238408	5	1.321045	10	1.373308
Benzo(a)anthracene	0.1	1.22984	0.5	1.216005	1	1.322239	2.5	1.294913	5	1.380062	10	1.451517
Chrysene	0.1	1.324775	0.5	1.233132	1	1.312088	2.5	1.252954	5	1.29968	10	1.332893
Benzo(b)fluoranthene	0.1	1.288997	0.5	1.229528	1	1.328081	2.5	1.231665	5	1.330833	10	1.41402
Benzo(k)fluoranthene	0.1	1.193836	0.5	1.150185	1	1.274292	2.5	1.214154	5	1.243234	10	1.295064
Benzo(j)fluoranthene	0.1	1.088943	0.5	1.119639	1	1.205525	2.5	1.109753	5	1.134833	10	1.151499
Benzofluoranthenes, Total	0.3	1.184464	1.5	1.156589	3	1.262588	7.5	1.175062	15	1.221321	30	1.274916
Benzo(a)pyrene	0.1	1.032712	0.5	1.079103	1	1.201829	2.5	1.127932	5	1.154545	10	1.204021
Indeno(1,2,3-cd)pyrene	0.1	0.9537713	0.5	1.097162	1	1.242681	2.5	1.192932	5	1.203885	10	1.23156
Dibenzo(a,h)anthracene	0.1	0.8477967	0.5	0.9607608	1	1.101255	2.5	1.043343	5	1.086067	10	1.107335
Benzo(g,h,i)perylene	0.1	0.9213301	0.5	0.9964939	1	1.114775	2.5	1.08382	5	1.118622	10	1.176885
2-Methylnaphthalene-d10	0.1	0.5365231	0.5	0.5937348	1	0.6707553	2.5	0.6147495	5	0.6367872	10	0.6536472
Dibenzo[a,h]anthracene-d14	0.1	0.6282779	0.5	0.6933385	1	0.7729793	2.5	0.7807077	5	0.829378	10	0.876728
Fluoranthene-d10	0.1	0.9774556	0.5	1.02463	1	1.151684	2.5	1.059649	5	1.112037	10	1.152158

INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GD00068	Instrument:	NT8
Calibration Date:	04/26/2023	Column (1):	RXI-17Sil ms

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Naphthalene	1.018936	3.4			RSD (15)	
2-Methylnaphthalene	0.5785221	5.3			RSD (15)	
1-Methylnaphthalene	0.5736076	6.1			RSD (15)	
Acenaphthylene	1.770537	7.2			RSD (15)	
Acenaphthene	1.14712	4.7			RSD (15)	
Dibenzofuran	1.722944	5.2			RSD (15)	
Fluorene	1.375031	5.8			RSD (15)	
Phenanthrene	1.059353	4.4			RSD (15)	
Anthracene	0.9935358	9.3			RSD (15)	
Fluoranthene	1.218416	5.5			RSD (15)	
Pyrene	1.280475	5.0			RSD (15)	
Benzo(a)anthracene	1.315763	6.8			RSD (15)	
Chrysene	1.292587	3.1			RSD (15)	
Benzo(b)fluoranthene	1.303854	5.4			RSD (15)	
Benzo(k)fluoranthene	1.228461	4.4			RSD (15)	
Benzo(j)fluoranthene	1.135032	3.6			RSD (15)	
Benzofluoranthenes, Total	1.21249	4.0			RSD (15)	
Benzo(a)pyrene	1.133357	6.0			RSD (15)	
Indeno(1,2,3-cd)pyrene	1.153665	9.6			RSD (15)	
Dibenzo(a,h)anthracene	1.024426	10.0			RSD (15)	
Benzo(g,h,i)perylene	1.068654	8.7			RSD (15)	
2-Methylnaphthalene-d10	0.6176995	7.8			RSD (15)	
Dibenzo[a,h]anthracene-d14	0.7635682	11.8			RSD (15)	
Fluoranthene-d10	1.079602	6.6			RSD (15)	

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLD0372

Instrument: NT8
Calibration ID: GD00068

Printed: 4/27/2023 12:20:00PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLD0372-TUN1	QC		1		K004775			
SLD0372-ICB1	QC		2			L004537		
SLD0372-CAL1	QC		3		L000603	L004537		
SLD0372-CAL2	QC		4		L000604	L004537		
SLD0372-CAL3	QC		5		L000605	L004537		
SLD0372-CAL4	QC		6		L000606	L004537		
SLD0372-CAL5	QC		7		L000607	L004537		
SLD0372-CAL6	QC		8		L000608	L004537		
SLD0372-SCV1	QC		9		L000686	L004537		

Samples Loaded By Date

Data Processed By Date

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230426.b

	Time	Filename	LabID	ClientId	DF											
1	1716	N823042601.D	SLD0372-TUN1		1	NO ISTDS FOUND										
2	1738	N823042602.D	SLD0372-ICB1		1	4.83	16370	7.12	9360	9.16	15764	14.08	15736	17.97	13577	
3	1806	N823042603.D	SLD0372-CAL1		1	4.83	17222	7.11	9918	9.15	18763	14.07	18539	17.96	18495	
4	1833	N823042604.D	SLD0372-CAL2		1	4.83	18547	7.11	10688	9.15	20788	14.07	20319	17.96	20821	
5	1900	N823042605.D	SLD0372-CAL3		1	4.83	17610	7.11	10164	9.15	19712	14.07	20491	17.96	20562	
6	1927	N823042606.D	SLD0372-CAL4		1	4.83	18699	7.11	10729	9.15	20748	14.07	20954	17.96	21563	
7	1955	N823042607.D	SLD0372-CAL5		1	4.83	18501	7.11	10621	9.15	20636	14.07	20333	17.96	20900	
8	2022	N823042608.D	SLD0372-CAL6		1	4.83	18987	7.11	10604	9.15	20735	14.07	20141	17.96	20342	
9	2049	N823042609.D	SLD0372-SCV1		1	4.83	20718	7.11	12642	9.15	24547	14.07	24217	17.96	24956	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230426.b

ARI Job No.: SLD0 Method: FSIMPNA230426.m Instrument: nt8.i Date: 26-APR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1738	N823042602.D	SLD0372-ICB1		1	NO MANUAL INTEGRATION
1806	N823042603.D	SLD0372-CAL1		1	Total Benzofluoranthenes, Dibenzo(a,h)anthracene-d14,
1833	N823042604.D	SLD0372-CAL2		1	Total Benzofluoranthenes, Dibenzo(a,h)anthracene-d14,
1900	N823042605.D	SLD0372-CAL3		1	Total Benzofluoranthenes, Perylene, Dibenzo(a,h)anthracene,
1927	N823042606.D	SLD0372-CAL4		1	Total Benzofluoranthenes,
1955	N823042607.D	SLD0372-CAL5		1	Total Benzofluoranthenes,
2022	N823042608.D	SLD0372-CAL6		1	Total Benzofluoranthenes, Dibenzo(a,h)anthracene,
2049	N823042609.D	SLD0372-SCV1		1	Total Benzofluoranthenes,

Security Status Report

Date: 27-Apr-2023 12:21

N823042601.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042602.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042603.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042604.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042605.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042606.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042607.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042608.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042609.D	Data Locked	jianqing, 27-Apr-2023 12:21

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2023 18:06
End Cal Date : 26-APR-2023 20:22
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Last Edit : 27-Apr-2023 10:35 Jianqing
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem3\nt8.i\20230426.b\N823042603.D
Level 2: \\target\share\chem3\nt8.i\20230426.b\N823042604.D
Level 3: \\target\share\chem3\nt8.i\20230426.b\N823042605.D
Level 4: \\target\share\chem3\nt8.i\20230426.b\N823042606.D
Level 5: \\target\share\chem3\nt8.i\20230426.b\N823042607.D
Level 6: \\target\share\chem3\nt8.i\20230426.b\N823042608.D

Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	___ RRF	% RSD
2 Naphthalene	0.97317	1.00049	1.07087	1.00245	1.02818	1.03846	1.01894	3.363
4 2-Methylnaphthalene	0.53072	0.57389	0.62419	0.56747	0.58276	0.59210	0.57852	5.309
5 1-methylnaphthalene	0.52607	0.54693	0.62646	0.57085	0.58377	0.58755	0.57361	6.074
6 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
7 Biphenyl	1.54265	1.48466	1.61590	1.48286	1.51654	1.58872	1.53855	3.561
8 2,6-Dimethylnaphthalene	0.98205	1.05651	1.17119	1.08670	1.11323	1.16298	1.09544	6.463
9 Acenaphthylene	1.63138	1.60704	1.87348	1.76292	1.83715	1.91126	1.77054	7.188
11 Acenaphthene	1.09498	1.10367	1.22471	1.10817	1.15680	1.19438	1.14712	4.690
12 Dibenzofuran	1.59508	1.68114	1.86009	1.70834	1.71103	1.78199	1.72294	5.240
13 1,6,7-Trimethylnaphthalene	0.94979	1.03593	1.18044	1.09341	1.11602	1.16181	1.08956	7.853
14 Fluorene	1.27848	1.30389	1.46419	1.34939	1.38394	1.47029	1.37503	5.831
16 Phenanthrene	1.00730	1.02867	1.13007	1.03038	1.06172	1.09797	1.05935	4.425
17 Anthracene	0.84741	0.92534	1.10582	1.00224	1.03361	1.04679	0.99354	9.348
18 Dibenzothiophene	0.90391	0.91649	1.06341	0.97058	1.00019	1.03959	0.98236	6.565
19 Carbazole	0.91137	0.89975	1.01116	0.91594	0.96121	0.99454	0.94900	4.947
20 1-Methylphenanthrene	0.74935	0.74428	0.86323	0.78959	0.81710	0.85815	0.80362	6.435

22 Fluoranthene	1.14054	1.15220	1.32082	1.20443	1.24216	1.25034	1.21842	5.532
23 Pyrene	1.20071	1.24002	1.30936	1.23841	1.32104	1.37331	1.28047	5.045
24 Benzo(a)anthracene	1.22984	1.21600	1.32224	1.29491	1.38006	1.45152	1.31576	6.830
27 Chrysene	1.32477	1.23313	1.31209	1.25295	1.29968	1.33289	1.29259	3.132
28 Benzo(b)fluoranthene	1.28900	1.22953	1.32808	1.23167	1.33083	1.41402	1.30385	5.359
29 Benzo(k)fluoranthene	1.19384	1.15018	1.27429	1.21415	1.24323	1.29506	1.22846	4.351
30 Benzo(j)fluoranthene	1.08894	1.11964	1.20552	1.10975	1.13483	1.15150	1.13503	3.577
31 Total Benzofluoranthenes	1.18446	1.15659	1.26259	1.17506	1.22132	1.27492	1.21249	4.006
32 Benzo(a)pyrene	1.03271	1.07910	1.20183	1.12793	1.15455	1.20402	1.13336	6.015
34 Benzo(e)pyrene	1.12895	1.17670	1.26291	1.18948	1.24278	1.30697	1.21797	5.320
35 Perylene	1.02514	1.10619	1.19881	1.13487	1.15114	1.21228	1.13807	5.978
37 Indeno(1,2,3-cd)pyrene	0.95377	1.09716	1.24268	1.19293	1.20389	1.23156	1.15367	9.590

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-APR-2023 18:06
End Cal Date : 26-APR-2023 20:22
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Last Edit : 27-Apr-2023 10:35 Jianqing
Curve Type : Average

Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	___ RRF	% RSD
38 Dibenzo(a,h)anthracene	0.84780	0.96076	1.10125	1.04334	1.08607	1.10733	1.02443	9.973
39 Benzo(g,h,i)perylene	0.92133	0.99649	1.11477	1.08382	1.11862	1.17689	1.06865	8.726
$ 3 2-Methylnaphthalene-d10	0.53652	0.59373	0.67076	0.61475	0.63679	0.65365	0.61770	7.813
$ 21 Fluoranthene-d10	0.97746	1.02463	1.15168	1.05965	1.11204	1.15216	1.07960	6.597
$ 36 Dibenzo(a,h)anthracene-d14	0.62828	0.69334	0.77298	0.78071	0.82938	0.87673	0.76357	11.824

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Batch File: \\target\share\chem3\nt8.i\20230426.b
Inst ID: nt8.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	N823042603	N823042604	N823042605	N823042606	N823042607	N823042608
INJ.DATE:	26-APR-2023	26-APR-2023	26-APR-2023	26-APR-2023	26-APR-2023	26-APR-2023
INJ.TIME:	18:06	18:33	19:00	19:27	19:55	20:22

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	1 Naphthalene-d8	4.828	4.828	4.828	4.828	4.828	4.828	4.828	1.828-7.828	4.828	0.000
	2 Naphthalene	4.856	4.856	4.856	4.856	4.856	4.856	4.856	1.856-7.856	4.856	0.000
$	3 2-Methylnaphthalene-d1	5.561	5.561	5.558	5.558	5.558	5.558	5.558	2.558-8.558	5.559	0.002
	4 2-Methylnaphthalene	5.609	5.606	5.606	5.606	5.606	5.606	5.606	2.606-8.606	5.606	0.001
	5 1-methylnaphthalene	5.805	5.802	5.802	5.802	5.802	5.805	5.805	2.805-8.805	5.803	0.002
	6 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	7.152	4.152-10.152	+++++	+++++
	7 Biphenyl	6.263	6.263	6.263	6.263	6.263	6.263	6.263	3.263-9.263	6.263	0.000
	8 2,6-Dimethylnaphthalen	6.311	6.308	6.308	6.308	6.308	6.308	6.308	3.308-9.308	6.308	0.001
	9 Acenaphthylene	7.006	7.003	7.007	7.003	7.003	7.003	7.003	4.003-10.003	7.004	0.002
*	10 Acenaphthene-d10	7.114	7.111	7.111	7.111	7.111	7.111	7.111	4.111-10.111	7.111	0.001
	11 Acenaphthene	7.161	7.161	7.161	7.161	7.161	7.161	7.161	4.161-10.161	7.161	0.000
	12 Dibenzofuran	7.320	7.316	7.316	7.313	7.313	7.316	7.316	4.316-10.316	7.316	0.002
	13 1,6,7-Trimethylnaphtha	7.383	7.380	7.380	7.380	7.380	7.380	7.380	4.380-10.380	7.380	0.001
	14 Fluorene	7.797	7.791	7.791	7.791	7.791	7.791	7.791	4.791-10.791	7.792	0.003
*	15 Phenanthrene-d10	9.153	9.150	9.150	9.150	9.150	9.150	9.150	6.150-12.150	9.151	0.001
	16 Phenanthrene	9.188	9.185	9.185	9.185	9.185	9.188	9.188	6.188-12.188	9.186	0.002
	17 Anthracene	9.229	9.226	9.226	9.226	9.226	9.229	9.229	6.229-12.229	9.227	0.002

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

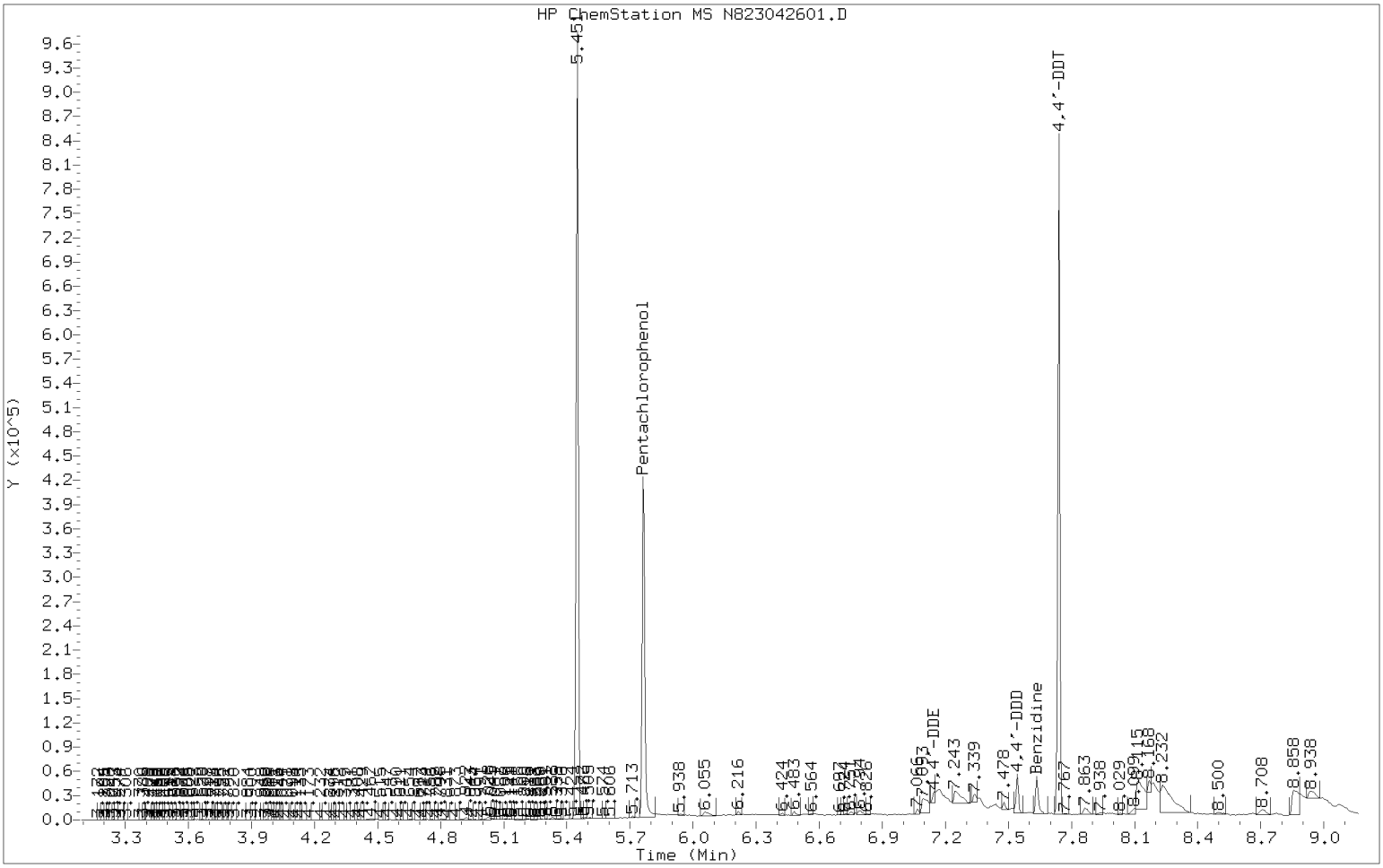
ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

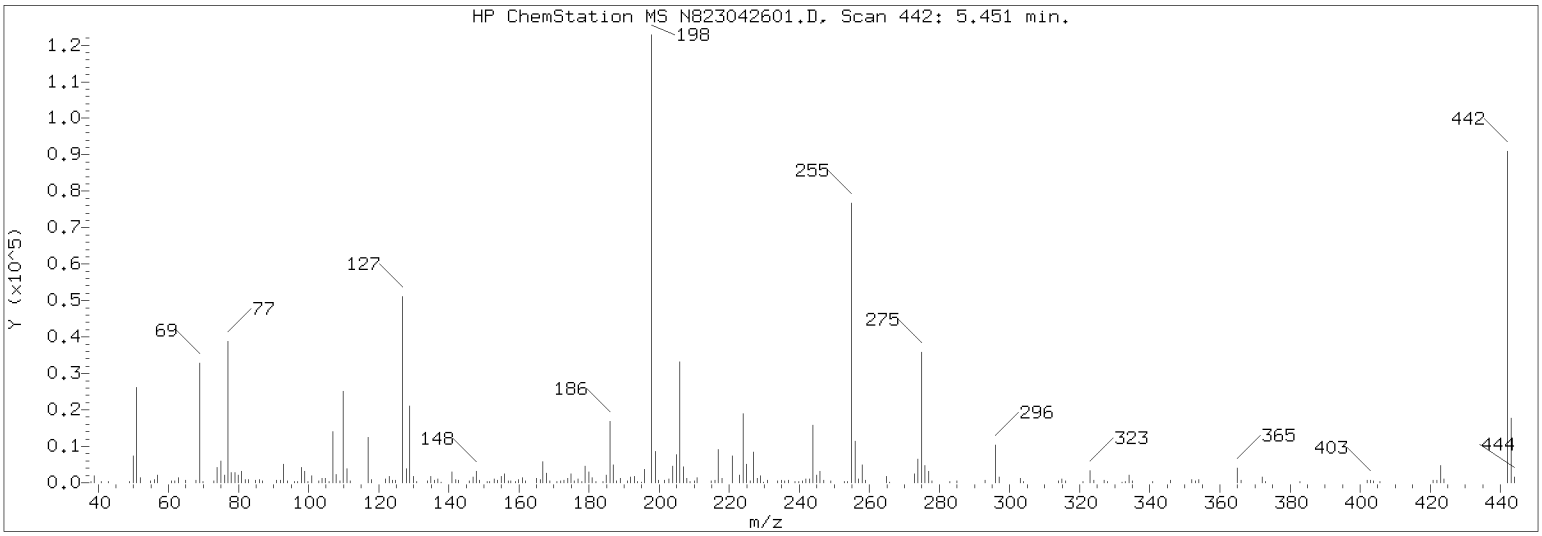
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Batch File: \\target\share\chem3\nt8.i\20230426.b
Inst ID: nt8.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 Dibenzothiophene	9.027	9.027	9.024	9.024	9.024	9.027	9.027	6.027-12.027	9.025	0.002
	19 Carbazole	9.745	9.745	9.742	9.745	9.742	9.745	9.745	6.745-12.745	9.744	0.002
	20 1-Methylphenanthrene	9.960	9.957	9.957	9.957	9.957	9.957	9.957	6.957-12.957	9.957	0.001
$	21 Fluoranthene-d10	10.915	10.911	10.912	10.912	10.912	10.915	10.915	7.915-13.915	10.913	0.002
	22 Fluoranthene	10.953	10.949	10.950	10.950	10.949	10.953	10.953	7.953-13.953	10.951	0.002
	23 Pyrene	11.462	11.462	11.462	11.462	11.462	11.465	11.465	8.465-14.465	11.462	0.001
	24 Benzo(a)anthracene	13.941	13.941	13.941	13.941	13.944	13.947	13.947	10.947-16.947	13.942	0.003
*	25 Chrysene-d12	14.070	14.070	14.070	14.067	14.067	14.070	14.070	11.070-17.070	14.069	0.002
	27 Chrysene	14.146	14.143	14.143	14.140	14.143	14.146	14.146	11.146-17.146	14.144	0.002
	28 Benzo(b)fluoranthene	16.676	16.679	16.682	16.682	16.685	16.692	16.692	13.692-19.692	16.683	0.005
	29 Benzo(k)fluoranthene	16.742	16.739	16.739	16.739	16.742	16.752	16.752	13.752-19.752	16.742	0.005
	30 Benzo(j)fluoranthene	16.818	16.815	16.815	16.818	16.821	16.831	16.831	13.831-19.831	16.820	0.006
	31 Total Benzofluoranthen	16.676	16.679	16.682	16.682	16.685	16.692	16.692	13.692-19.692	16.683	0.005
	32 Benzo(a)pyrene	17.729	17.729	17.732	17.732	17.732	17.738	17.738	14.738-20.738	17.732	0.003
*	33 Perylene-d12	17.960	17.959	17.963	17.960	17.963	17.963	17.963	14.963-20.963	17.961	0.002
	34 Benzo(e)pyrene	17.605	17.602	17.599	17.599	17.602	17.608	17.608	14.609-20.608	17.603	0.004
	35 Perylene	18.039	18.035	18.035	18.032	18.039	18.042	18.042	15.042-21.042	18.037	0.003
$	36 Dibenzo(a,h)anthracene	20.353	20.356	20.350	20.356	20.363	20.372	20.372	17.372-23.372	20.358	0.008
	37 Indeno(1,2,3-cd)pyrene	20.495	20.489	20.496	20.492	20.502	20.521	20.521	17.521-23.521	20.499	0.011
	38 Dibenzo(a,h)anthracene	20.470	20.467	20.464	20.467	20.473	20.486	20.486	17.486-23.486	20.471	0.008
	39 Benzo(g,h,i)perylene	21.558	21.545	21.552	21.552	21.558	21.570	21.570	18.570-24.570	21.556	0.009

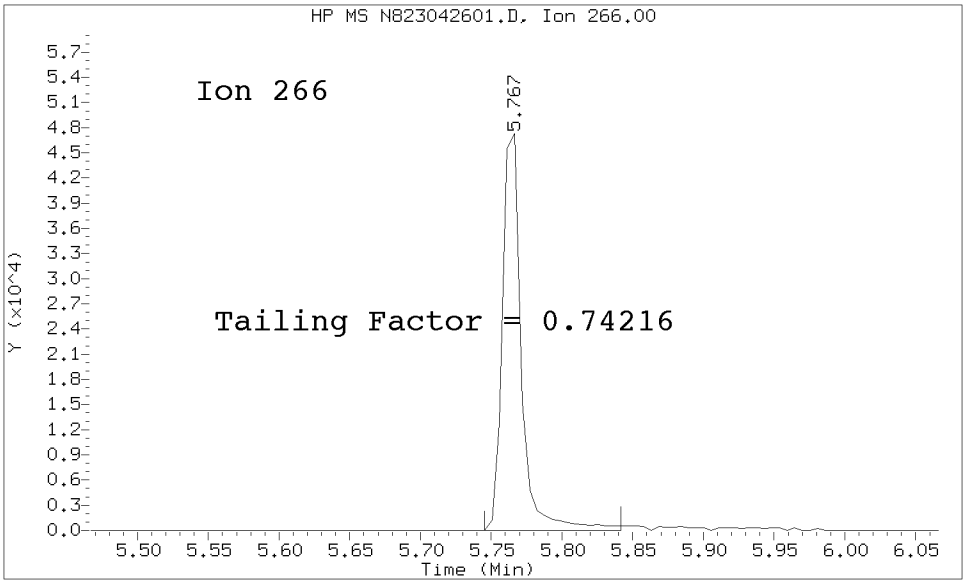
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230426.b/tune.b/N823042601.D/N823042601.D
Method Used: \20230426.b\tune.b\DFTPP.m Inst: nt8
Injection Date: 26-APR-2023 17:16 Operator: JZ
Sample Info: SLD0372-TUN1 DFTPP2304026
Report Date: 04/27/2023 10:37



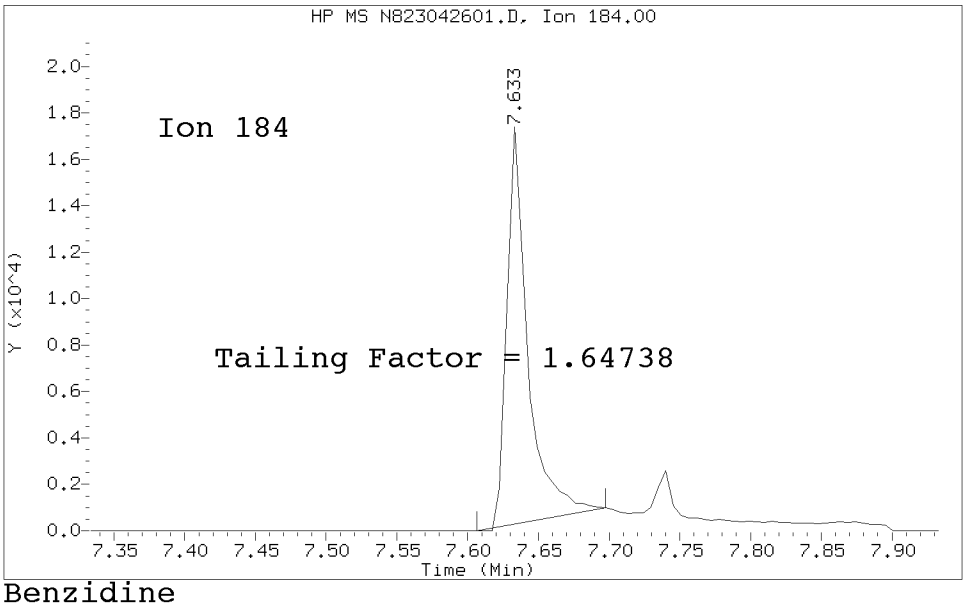


Datafile Analyzed: /20230426.b/tune.b/N823042601.D/N823042601.D
Method Used: \20230426.b\tune.b\DFTPP.m\sw846ddt.m Inst: nt8
Injection Date: 26-APR-2023 17:16 Operator: JZ
Sample Info: DFTPP2304026
Report Date: 04/27/2023 10:37



Pentachlorophenol
==========
Exp. RT = 5.831
Found RT = 5.767

Tail Factor = 0.742 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.548
Found RT = 7.633

Tail Factor = 1.647 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	0.7421603	2.000	PASS
Benzidine	1.6473779	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	88678			N/A
4,4-DDE	335	0.4	20.0	PASS
4,4-DDD	4965	5.3	20.0	PASS
4,4-DDD + DDE	5300	5.6	20.0	PASS

Tuning Sample, /nt8.i/20230426.b/tune.b/N823042601.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	25.12
68	Less than 2.00% of mass 69	0.57 (1.88)
69	Mass 69 relative abundance	30.15
70	Less than 2.00% of mass 69	0.24 (0.80)
127	10.00 - 80.00% of mass 198	44.51
197	Less than 2.00% of mass 198	0.21
199	5.00 - 9.00% of mass 198	6.97
275	10.00 - 60.00% of mass 198	28.71
365	Greater than 1.00% of mass 198	3.65
441	0.01 - 24.00% of mass 442	1.63 (2.12)
442	50.00 - 200.00% of mass 198	76.92
443	15.00 - 24.00% of mass 442	15.01 (19.51)

Data File: N823042601.D
Spectrum: Avg. Scans 441-443 (5.45), Background Scan 436
Location of Maximum: 198.00
Number of points: 216

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	259	122.00	629	189.00	763	258.00	3259
39.00	1543	123.00	1219	191.00	328	259.00	496
41.00	45	124.00	436	192.00	981	265.00	1218
43.00	2	125.00	433	193.00	1146	266.00	83
49.00	200	127.00	33968	194.00	133	273.00	1546
50.00	5356	128.00	2606	195.00	86	274.00	3984
51.00	19168	129.00	14073	196.00	2266	275.00	21912
52.00	1084	130.00	1224	197.00	162	276.00	2866
55.00	108	131.00	237	198.00	76320	277.00	2050
56.00	631	134.00	386	199.00	5317	278.00	264
57.00	1606	135.00	1187	200.00	361	283.00	133
61.00	298	136.00	428	201.00	393	285.00	277
62.00	392	137.00	773	203.00	697	293.00	424
63.00	1112	138.00	83	204.00	3031	296.00	6797
65.00	420	141.00	1993	205.00	4940	297.00	1078
68.00	432	142.00	616	206.00	20904	303.00	809
69.00	23008	143.00	440	207.00	2891	304.00	105
70.00	185	146.00	315	208.00	771	314.00	235
73.00	503	147.00	1039	209.00	225	315.00	728
74.00	3010	148.00	2177	210.00	339	316.00	386
75.00	4222	149.00	467	211.00	891	321.00	97
76.00	1466	151.00	231	215.00	239	323.00	2060
77.00	27280	152.00	216	216.00	499	324.00	326
78.00	1990	153.00	720	217.00	6004	327.00	427
79.00	2001	154.00	548	218.00	803	328.00	114
80.00	1522	155.00	1215	221.00	4276	332.00	87
81.00	2196	156.00	1571	222.00	300	333.00	115
82.00	531	157.00	272	223.00	1396	334.00	1361
83.00	682	158.00	292	224.00	12094	335.00	260
85.00	507	159.00	243	225.00	3156	341.00	119
86.00	661	160.00	509	226.00	269	346.00	497
87.00	320	161.00	936	227.00	5671	352.00	630
91.00	491	162.00	247	228.00	861	353.00	436
92.00	499	165.00	753	229.00	1152	354.00	558
93.00	3714	166.00	537	230.00	86	365.00	2785
94.00	257	167.00	3891	231.00	407	366.00	441
96.00	205	168.00	1823	234.00	399	372.00	970
97.00	92	169.00	279	235.00	339	373.00	131
98.00	2984	171.00	96	236.00	239	383.00	218
99.00	2258	172.00	341	237.00	381	402.00	459
100.00	183	173.00	433	239.00	129	403.00	493
101.00	1298	174.00	816	240.00	95	404.00	385
103.00	370	175.00	1572	241.00	287	406.00	97
104.00	735	176.00	336	242.00	712	421.00	465
105.00	831	177.00	751	243.00	725	422.00	209
106.00	144	178.00	218	244.00	9627	423.00	3075
107.00	9655	179.00	3020	245.00	1226	424.00	621
108.00	1527	180.00	1973	246.00	2064	441.00	1245
109.00	343	181.00	912	247.00	468	442.00	58704

110.00	16832	182.00	91	249.00	290	443.00	11455
111.00	2728	184.00	117	253.00	104	444.00	1029
112.00	350	185.00	1424	254.00	219		
116.00	337	186.00	10793	255.00	47768		
117.00	8906	187.00	3130	256.00	7127		
118.00	589	188.00	302	257.00	582		

Data File: \\target\share\chem3\nt8.i\20230426.b\N823042602.D

Date : 26-APR-2023 17:38

Client ID:

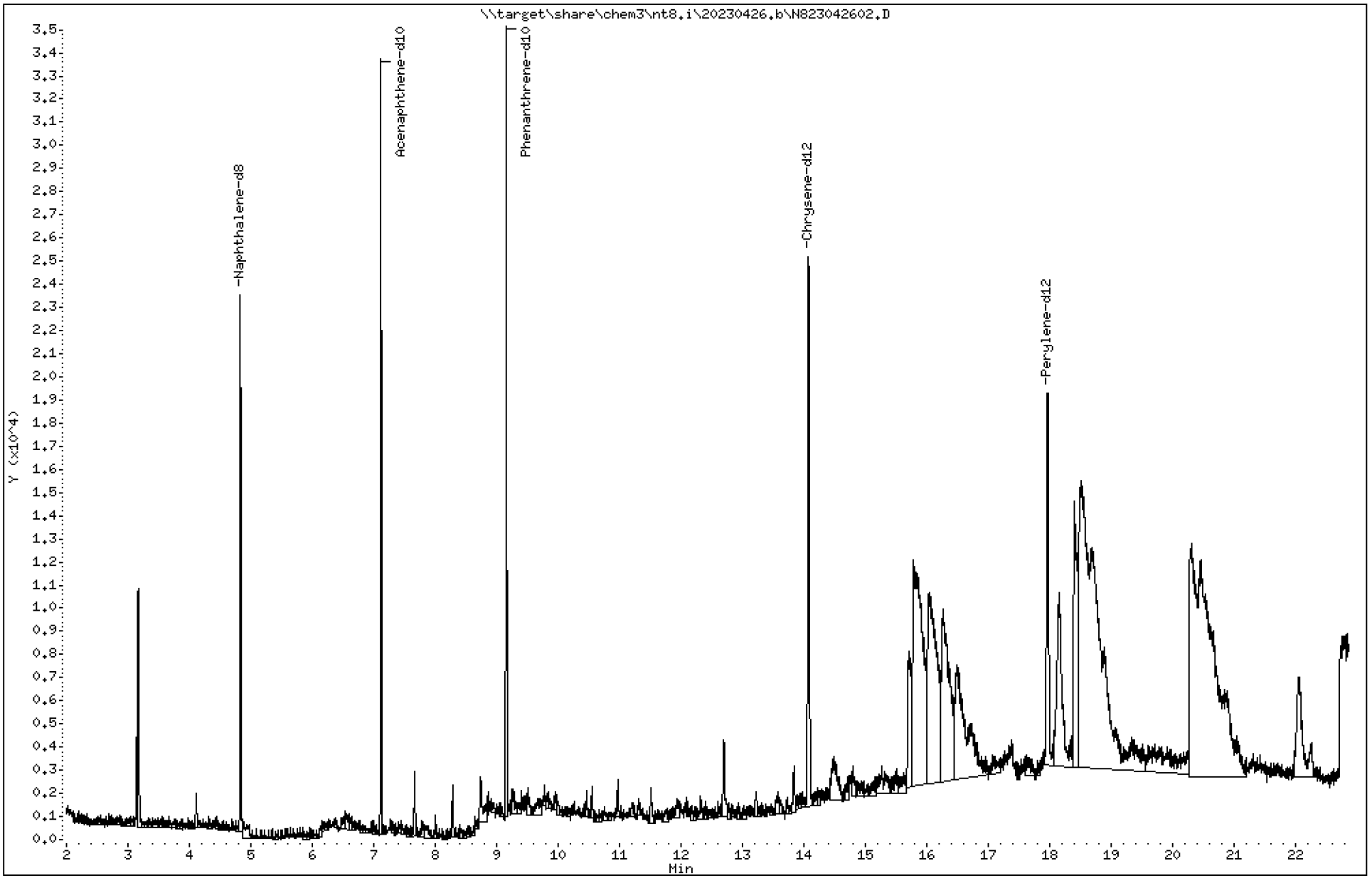
Instrument: nt8.i

Sample Info: ICB230426

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230426.b\N823042602.D
Lab Smp Id: SLD0372-ICB1
Inj Date : 26-APR-2023 17:38
Operator : JZ Inst ID: nt8.i
Smp Info : ICB230426
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Meth Date : 27-Apr-2023 11:00 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.831	4.827	(1.000)	16370	2.00000	
	2 Naphthalene	128	Compound Not Detected.					
$	3 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	4 2-Methylnaphthalene	141	Compound Not Detected.					
	5 1-methylnaphthalene	141	Compound Not Detected.					
	7 Biphenyl	154	Compound Not Detected.					
	8 2,6-Dimethylnaphthalene	156	Compound Not Detected.					
	9 Acenaphthylene	152	Compound Not Detected.					
*	10 Acenaphthene-d10	164	7.120	7.110	(1.000)	9360	2.00000	
	11 Acenaphthene	153	Compound Not Detected.					
	12 Dibenzofuran	168	Compound Not Detected.					
	13 1,6,7-Trimethylnaphthalene	170	Compound Not Detected.					
	14 Fluorene	166	Compound Not Detected.					
	18 Dibenzothiophene	184	Compound Not Detected.					
*	15 Phenanthrene-d10	188	9.156	9.150	(1.000)	15764	2.00000	
	16 Phenanthrene	178	Compound Not Detected.					
	17 Anthracene	178	Compound Not Detected.					
	19 Carbazole	167	Compound Not Detected.					
	20 1-Methylphenanthrene	192	Compound Not Detected.					
	22 Fluoranthene	202	Compound Not Detected.					
$	21 Fluoranthene-d10	212	Compound Not Detected.					
	23 Pyrene	202	Compound Not Detected.					
	24 Benzo(a)anthracene	228	Compound Not Detected.					
*	25 Chrysene-d12	240	14.079	14.067	(1.000)	15736	2.00000	
	27 Chrysene	228	Compound Not Detected.					
	28 Benzo(b)fluoranthene	252	Compound Not Detected.					
	29 Benzo(k)fluoranthene	252	Compound Not Detected.					
	30 Benzo(j)fluoranthene	252	Compound Not Detected.					
	31 Total Benzofluoranthenes	252	Compound Not Detected.					
	34 Benzo(e)pyrene	252	Compound Not Detected.					
	32 Benzo(a)pyrene	252	Compound Not Detected.					
*	33 Perylene-d12	264	17.972	17.959	(1.000)	13577	2.00000	
	35 Perylene	252	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
39 Benzo(g,h,i)perylene	276	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042602.D
Lab Smp Id: SLD0372-ICB1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	16370	-12.46
10 Acenaphthene-d10	10729	5365	21458	9360	-12.76
15 Phenanthrene-d10	20748	10374	41496	15764	-24.02
25 Chrysene-d12	20954	10477	41908	15736	-24.90
33 Perylene-d12	21563	10782	43126	13577	-37.04

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	0.06
10 Acenaphthene-d10	7.11	6.61	7.61	7.12	0.13
15 Phenanthrene-d10	9.15	8.65	9.65	9.16	0.07
25 Chrysene-d12	14.07	13.57	14.57	14.08	0.09
33 Perylene-d12	17.96	17.46	18.46	17.97	0.07

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

REVIEW SUMMARY FOR FILE - N823042602.D

Lab ID: SLD0372-ICB1
nt8.i, 20230426.b\FSIMPNA230426.m,   26-APR-2023 17:38

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

No RRT check performed

On Column LOD for nt8.i, 20230426.b\FSIMPNA230426.m, FSIMPNAICLA.sub = 0.0000

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

Data File: \\target\share\chem3\nt8.i\20230426.b\N823042603.D

Date : 26-APR-2023 18:06

Client ID:

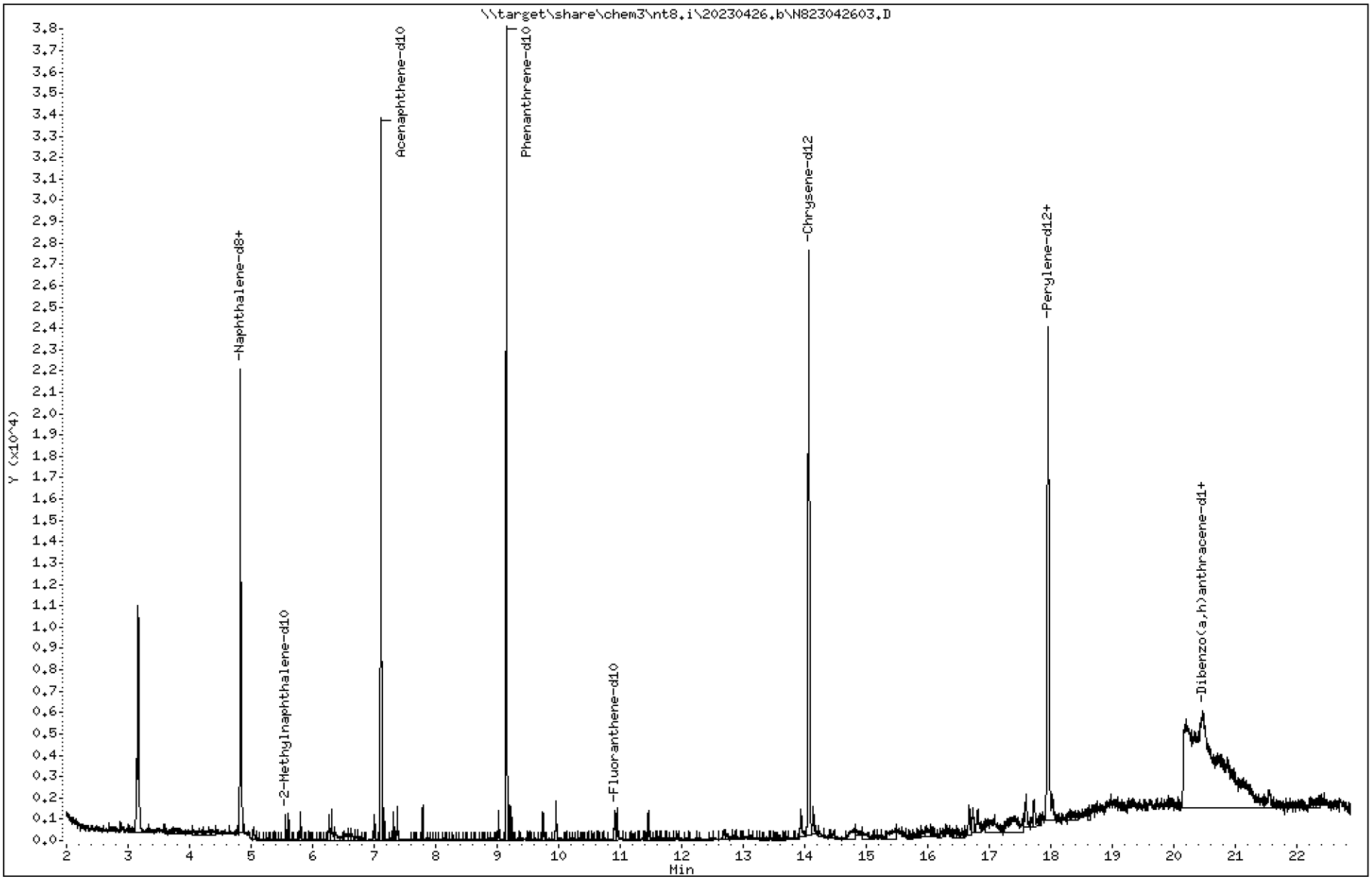
Instrument: nt8.i

Sample Info: IC01230426,

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



23A0207 CLPLIKE (Rev3) - Page 845 of 3315

ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230426.b\N823042603.D
Lab Smp Id: SLD0372-CAL1
Inj Date : 26-APR-2023 18:06
Operator : JZ Inst ID: nt8.i
Smp Info : IC01230426,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Meth Date : 27-Apr-2023 10:36 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.827	4.827	(1.000)	17222	2.00000	
	2 Naphthalene	128	4.856	4.856	(1.006)	838	0.10000	0.09551
$	3 2-Methylnaphthalene-d10	152	5.561	5.558	(1.152)	462	0.10000	0.08686
	4 2-Methylnaphthalene	141	5.608	5.605	(1.162)	457	0.10000	0.09174
	5 1-methylnaphthalene	141	5.804	5.804	(1.202)	453	0.10000	0.09171
	7 Biphenyl	154	6.263	6.263	(0.880)	765	0.10000	0.1003
	8 2,6-Dimethylnaphthalene	156	6.310	6.307	(0.887)	487	0.10000	0.08965
	9 Acenaphthylene	152	7.006	7.003	(0.985)	809	0.10000	0.09214
*	10 Acenaphthene-d10	164	7.113	7.110	(1.000)	9918	2.00000	
	11 Acenaphthene	153	7.161	7.161	(1.007)	543	0.10000	0.09545
	12 Dibenzofuran	168	7.319	7.316	(1.029)	791	0.10000	0.09258
	13 1,6,7-Trimethylnaphthalene	170	7.382	7.379	(1.038)	471	0.10000	0.08717
	14 Fluorene	166	7.796	7.790	(1.096)	634	0.10000	0.09298
	18 Dibenzothiophene	184	9.026	9.026	(0.986)	848	0.10000	0.09201
*	15 Phenanthrene-d10	188	9.153	9.150	(1.000)	18763	2.00000	
	16 Phenanthrene	178	9.188	9.188	(1.004)	945	0.10000	0.09509
	17 Anthracene	178	9.229	9.229	(1.008)	795	0.10000	0.08529
	19 Carbazole	167	9.744	9.744	(1.065)	855	0.10000	0.09603
	20 1-Methylphenanthrene	192	9.959	9.956	(1.088)	703	0.10000	0.09325
	22 Fluoranthene	202	10.952	10.952	(1.197)	1070	0.10000	0.09361
$	21 Fluoranthene-d10	212	10.914	10.914	(1.192)	917	0.10000	0.09054
	23 Pyrene	202	11.461	11.464	(0.815)	1113	0.10000	0.09377
	24 Benzo(a)anthracene	228	13.940	13.946	(0.991)	1140	0.10000	0.09347
*	25 Chrysene-d12	240	14.070	14.070	(1.000)	18539	2.00000	
	27 Chrysene	228	14.146	14.146	(1.005)	1228	0.10000	0.1025
	28 Benzo(b)fluoranthene	252	16.675	16.691	(0.929)	1192	0.10000	0.09886
	29 Benzo(k)fluoranthene	252	16.742	16.751	(0.932)	1104	0.10000	0.09718
	30 Benzo(j)fluoranthene	252	16.818	16.830	(0.936)	1007	0.10000	0.09594
	31 Total Benzofluoranthenes	252	16.675	16.691	(0.929)	3286	0.30000	0.2931(M)
	34 Benzo(e)pyrene	252	17.605	17.608	(0.980)	1044	0.10000	0.09269
	32 Benzo(a)pyrene	252	17.728	17.738	(0.987)	955	0.10000	0.09112
*	33 Perylene-d12	264	17.959	17.962	(1.000)	18495	2.00000	
	35 Perylene	252	18.038	18.041	(1.004)	948	0.10000	0.09008

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.353	20.372	(1.133)	581	0.10000	0.08228(M)
37 Indeno(1,2,3-cd)pyrene	276	20.495	20.520	(1.141)	882	0.10000	0.08267
38 Dibenzo(a,h)anthracene	278	20.470	20.485	(1.140)	784	0.10000	0.08276
39 Benzo(g,h,i)perylene	276	21.557	21.570	(1.200)	852	0.10000	0.08621

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042603.D
Lab Smp Id: SLD0372-CAL1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	17222	-7.90
10 Acenaphthene-d10	10729	5365	21458	9918	-7.56
15 Phenanthrene-d10	20748	10374	41496	18763	-9.57
25 Chrysene-d12	20954	10477	41908	18539	-11.53
33 Perylene-d12	21563	10782	43126	18495	-14.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.00
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	0.04
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	0.03
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.02
33 Perylene-d12	17.96	17.46	18.46	17.96	-0.00

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

REVIEW SUMMARY FOR FILE - N823042603.D

Lab ID: SLD0372-CAL1
nt8.i, 20230426.b\FSIMPNA230426.m,   26-APR-2023 18:06

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

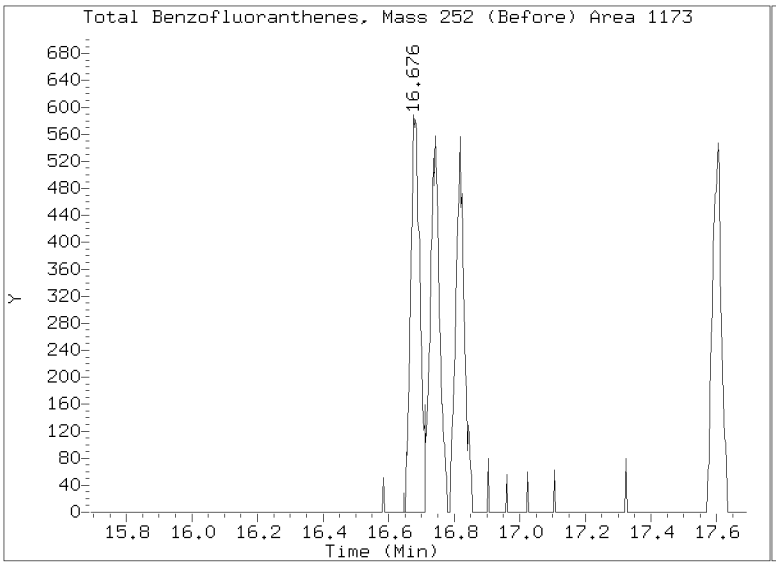
No RRT check performed

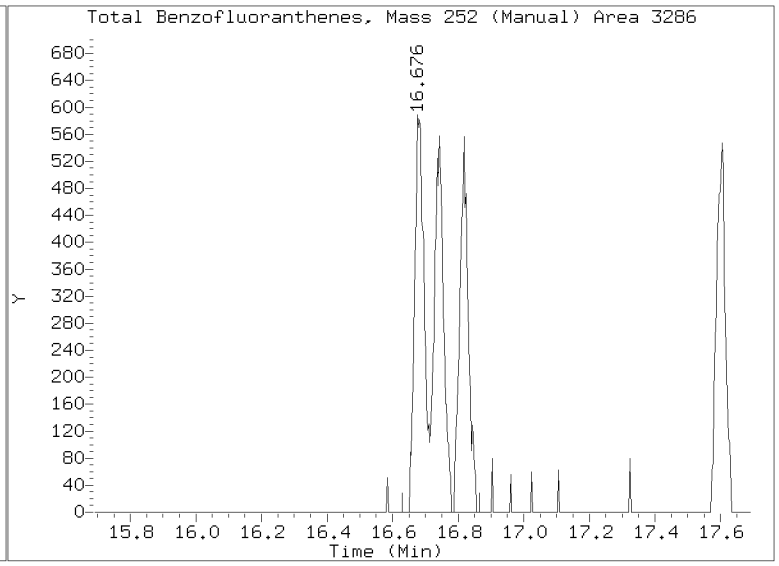
On Column LOD for nt8.i, 20230426.b\FSIMPNA230426.m, FSIMPNAICLA.sub = 0.0000

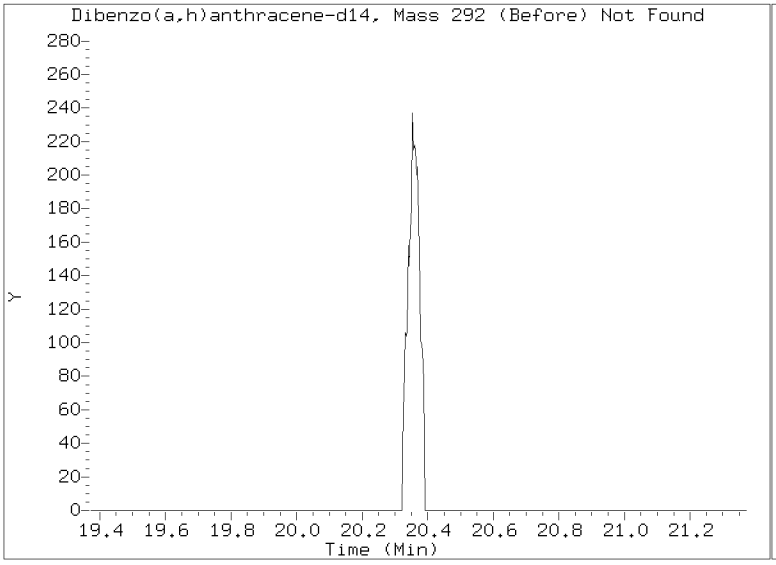
* Only compounds listed in the work order have been verified by the analyst *

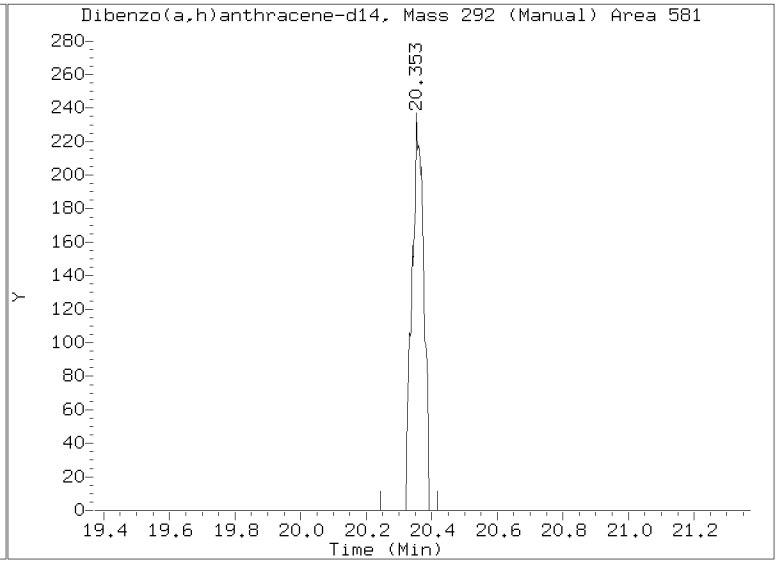
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230426.b/N823042603.D
Injection Date: 26-APR-2023 18:06
Lab ID:SLD0372-CAL1 Client ID:
Report Date: 04/27/2023 10:37









Data File: \\target\share\chem3\nt8.i\20230426.b\N823042604.D

Date : 26-APR-2023 18:33

Client ID:

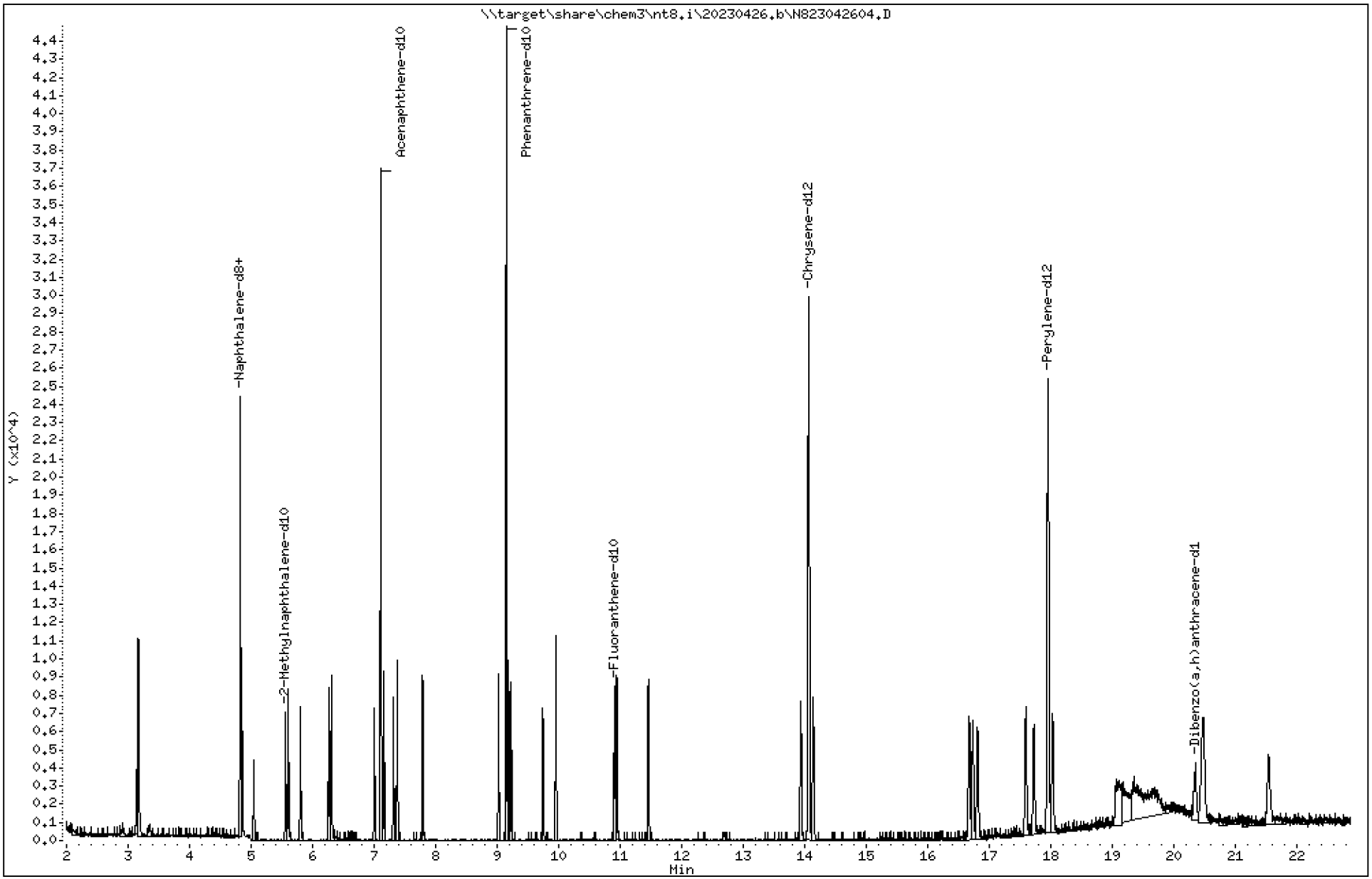
Instrument: nt8.i

Sample Info: IC05230426,

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



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ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230426.b\N823042604.D
Lab Smp Id: SLD0372-CAL2
Inj Date : 26-APR-2023 18:33
Operator : JZ Inst ID: nt8.i
Smp Info : IC05230426,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Meth Date : 27-Apr-2023 10:36 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.827	4.827	(1.000)	18547	2.00000	
	2 Naphthalene	128	4.856	4.856	(1.006)	4639	0.50000	0.4909
$	3 2-Methylnaphthalene-d10	152	5.561	5.558	(1.152)	2753	0.50000	0.4806
	4 2-Methylnaphthalene	141	5.605	5.605	(1.161)	2661	0.50000	0.4960
	5 1-methylnaphthalene	141	5.801	5.804	(1.202)	2536	0.50000	0.4767
	7 Biphenyl	154	6.263	6.263	(0.881)	3967	0.50000	0.4825
	8 2,6-Dimethylnaphthalene	156	6.307	6.307	(0.887)	2823	0.50000	0.4822
	9 Acenaphthylene	152	7.003	7.003	(0.985)	4294	0.50000	0.4538
*	10 Acenaphthene-d10	164	7.110	7.110	(1.000)	10688	2.00000	
	11 Acenaphthene	153	7.161	7.161	(1.007)	2949	0.50000	0.4811
	12 Dibenzofuran	168	7.316	7.316	(1.029)	4492	0.50000	0.4879
	13 1,6,7-Trimethylnaphthalene	170	7.379	7.379	(1.038)	2768	0.50000	0.4754
	14 Fluorene	166	7.790	7.790	(1.096)	3484	0.50000	0.4741
	18 Dibenzothiophene	184	9.026	9.026	(0.987)	4763	0.50000	0.4665
*	15 Phenanthrene-d10	188	9.150	9.150	(1.000)	20788	2.00000	
	16 Phenanthrene	178	9.185	9.188	(1.004)	5346	0.50000	0.4855
	17 Anthracene	178	9.226	9.229	(1.008)	4809	0.50000	0.4657
	19 Carbazole	167	9.744	9.744	(1.065)	4676	0.50000	0.4741
	20 1-Methylphenanthrene	192	9.956	9.956	(1.088)	3868	0.50000	0.4631
	22 Fluoranthene	202	10.949	10.952	(1.197)	5988	0.50000	0.4728
$	21 Fluoranthene-d10	212	10.911	10.914	(1.192)	5325	0.50000	0.4745
	23 Pyrene	202	11.461	11.464	(0.815)	6299	0.50000	0.4842
	24 Benzo(a)anthracene	228	13.940	13.946	(0.991)	6177	0.50000	0.4621
*	25 Chrysene-d12	240	14.070	14.070	(1.000)	20319	2.00000	
	27 Chrysene	228	14.142	14.146	(1.005)	6264	0.50000	0.4770
	28 Benzo(b)fluoranthene	252	16.678	16.691	(0.929)	6400	0.50000	0.4715
	29 Benzo(k)fluoranthene	252	16.738	16.751	(0.932)	5987	0.50000	0.4681
	30 Benzo(j)fluoranthene	252	16.814	16.830	(0.936)	5828	0.50000	0.4932
	31 Total Benzofluoranthenes	252	16.678	16.691	(0.929)	18061	1.50000	1.431(M)
	34 Benzo(e)pyrene	252	17.602	17.608	(0.980)	6125	0.50000	0.4831
	32 Benzo(a)pyrene	252	17.728	17.738	(0.987)	5617	0.50000	0.4761
*	33 Perylene-d12	264	17.959	17.962	(1.000)	20821	2.00000	
	35 Perylene	252	18.035	18.041	(1.004)	5758	0.50000	0.4860

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.356	20.372	(1.133)	3609	0.50000	0.4540(M)
37 Indeno(1,2,3-cd)pyrene	276	20.489	20.520	(1.141)	5711	0.50000	0.4755
38 Dibenzo(a,h)anthracene	278	20.466	20.485	(1.140)	5001	0.50000	0.4689
39 Benzo(g,h,i)perylene	276	21.545	21.570	(1.200)	5187	0.50000	0.4662

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042604.D
Lab Smp Id: SLD0372-CAL2
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	18547	-0.81
10 Acenaphthene-d10	10729	5365	21458	10688	-0.38
15 Phenanthrene-d10	20748	10374	41496	20788	0.19
25 Chrysene-d12	20954	10477	41908	20319	-3.03
33 Perylene-d12	21563	10782	43126	20821	-3.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.00
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	-0.00
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	-0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.02
33 Perylene-d12	17.96	17.46	18.46	17.96	-0.00

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

REVIEW SUMMARY FOR FILE - N823042604.D

Lab ID: SLD0372-CAL2
nt8.i, 20230426.b\FSIMPNA230426.m,   26-APR-2023 18:33

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

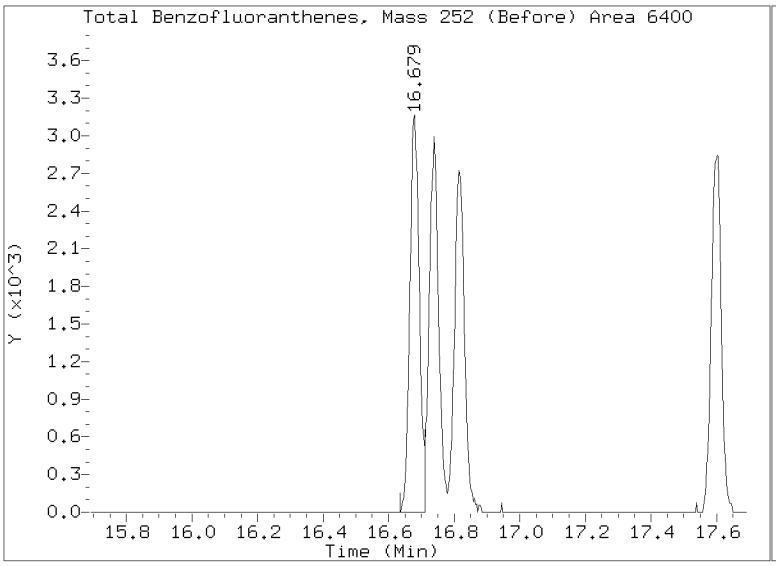
No RRT check performed

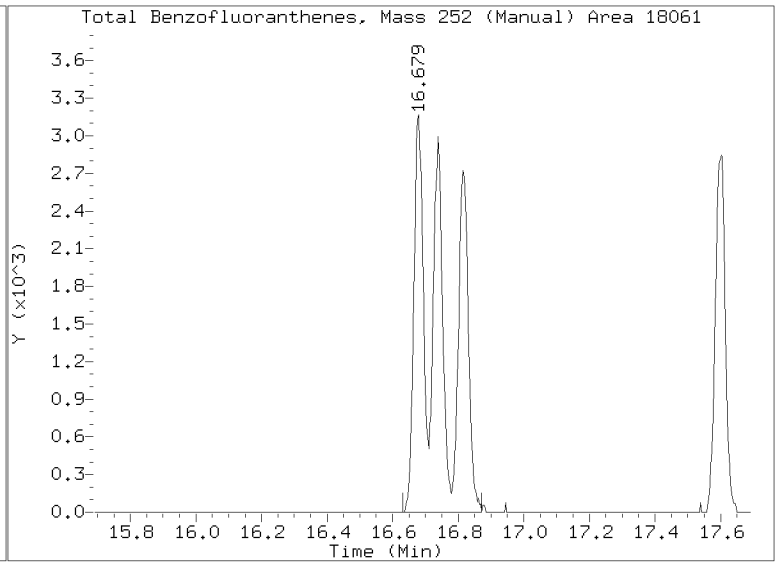
On Column LOD for nt8.i, 20230426.b\FSIMPNA230426.m, FSIMPNAICLA.sub = 0.0000

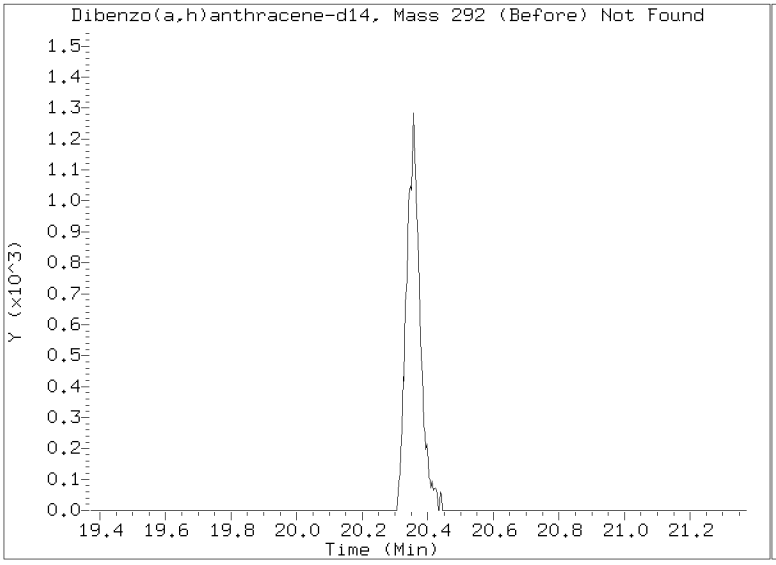
* Only compounds listed in the work order have been verified by the analyst *

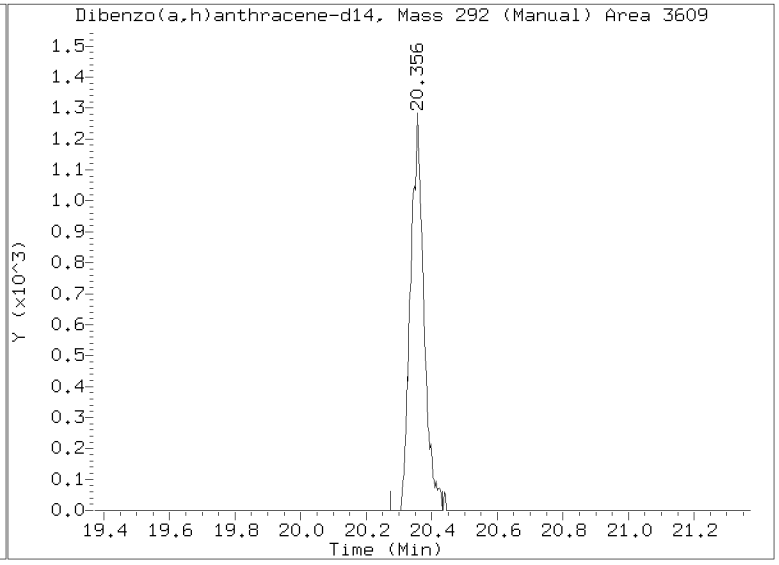
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230426.b/N823042604.D
Injection Date: 26-APR-2023 18:33
Lab ID:SLD0372-CAL2 Client ID:
Report Date: 04/27/2023 10:37









Data File: \\target\share\chem3\nt8.i\20230426.b\N823042605.D

Date : 26-APR-2023 19:00

Client ID:

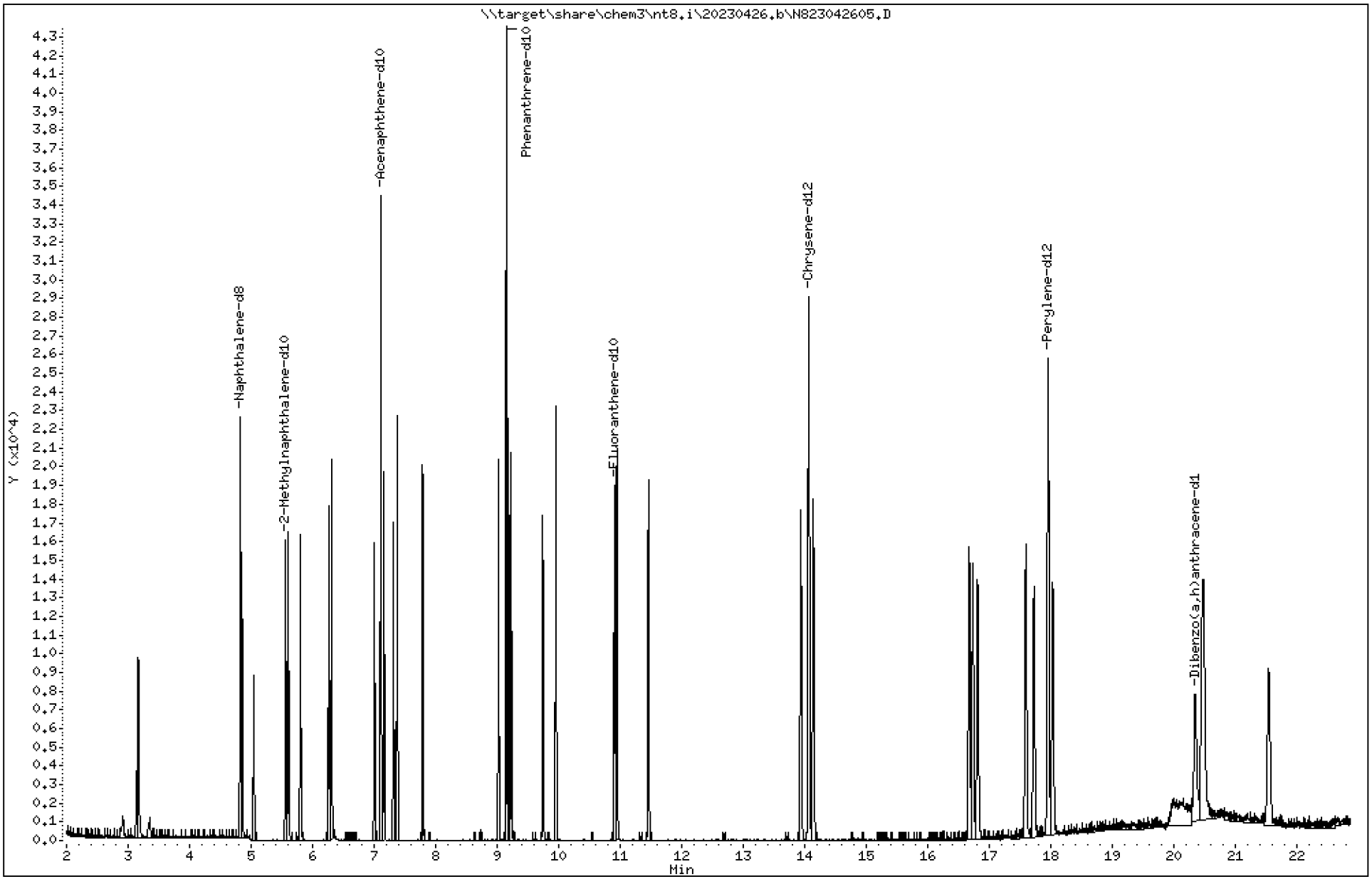
Instrument: nt8.i

Sample Info: IC1230426,

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



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ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230426.b\N823042605.D
Lab Smp Id: SLD0372-CAL3
Inj Date : 26-APR-2023 19:00
Operator : JZ Inst ID: nt8.i
Smp Info : IC1230426,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Meth Date : 27-Apr-2023 10:36 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.827	4.827	(1.000)	17610	2.00000	
	2 Naphthalene	128	4.856	4.856	(1.006)	9429	1.00000	1.051
$	3 2-Methylnaphthalene-d10	152	5.558	5.558	(1.151)	5906	1.00000	1.086
	4 2-Methylnaphthalene	141	5.605	5.605	(1.161)	5496	1.00000	1.079
	5 1-methylnaphthalene	141	5.801	5.804	(1.202)	5516	1.00000	1.092
	7 Biphenyl	154	6.263	6.263	(0.881)	8212	1.00000	1.050
	8 2,6-Dimethylnaphthalene	156	6.307	6.307	(0.887)	5952	1.00000	1.069
	9 Acenaphthylene	152	7.006	7.003	(0.985)	9521	1.00000	1.058
*	10 Acenaphthene-d10	164	7.110	7.110	(1.000)	10164	2.00000	
	11 Acenaphthene	153	7.161	7.161	(1.007)	6224	1.00000	1.068
	12 Dibenzofuran	168	7.316	7.316	(1.029)	9453	1.00000	1.080
	13 1,6,7-Trimethylnaphthalene	170	7.379	7.379	(1.038)	5999	1.00000	1.083
	14 Fluorene	166	7.790	7.790	(1.096)	7441	1.00000	1.065
	18 Dibenzothiophene	184	9.023	9.026	(0.986)	10481	1.00000	1.083
*	15 Phenanthrene-d10	188	9.150	9.150	(1.000)	19712	2.00000	
	16 Phenanthrene	178	9.185	9.188	(1.004)	11138	1.00000	1.067
	17 Anthracene	178	9.226	9.229	(1.008)	10899	1.00000	1.113
	19 Carbazole	167	9.741	9.744	(1.065)	9966	1.00000	1.066
	20 1-Methylphenanthrene	192	9.956	9.956	(1.088)	8508	1.00000	1.074
	22 Fluoranthene	202	10.949	10.952	(1.197)	13018	1.00000	1.084
$	21 Fluoranthene-d10	212	10.911	10.914	(1.192)	11351	1.00000	1.067
	23 Pyrene	202	11.461	11.464	(0.815)	13415	1.00000	1.023
	24 Benzo(a)anthracene	228	13.940	13.946	(0.991)	13547	1.00000	1.005
*	25 Chrysene-d12	240	14.070	14.070	(1.000)	20491	2.00000	
	27 Chrysene	228	14.143	14.146	(1.005)	13443	1.00000	1.015
	28 Benzo(b)fluoranthene	252	16.682	16.691	(0.929)	13654	1.00000	1.019
	29 Benzo(k)fluoranthene	252	16.739	16.751	(0.932)	13101	1.00000	1.037
	30 Benzo(j)fluoranthene	252	16.814	16.830	(0.936)	12394	1.00000	1.062
	31 Total Benzofluoranthenes	252	16.682	16.691	(0.929)	38942	3.00000	3.124(M)
	34 Benzo(e)pyrene	252	17.599	17.608	(0.980)	12984	1.00000	1.037
	32 Benzo(a)pyrene	252	17.731	17.738	(0.987)	12356	1.00000	1.060
*	33 Perylene-d12	264	17.962	17.962	(1.000)	20562	2.00000	
	35 Perylene	252	18.035	18.041	(1.004)	12325	1.00000	1.053(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.350	20.372	(1.133)	7947	1.00000	1.012
37 Indeno(1,2,3-cd)pyrene	276	20.495	20.520	(1.141)	12776	1.00000	1.077
38 Dibenzo(a,h)anthracene	278	20.463	20.485	(1.139)	11322	1.00000	1.075(M)
39 Benzo(g,h,i)perylene	276	21.551	21.570	(1.200)	11461	1.00000	1.043

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042605.D
Lab Smp Id: SLD0372-CAL3
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	17610	-5.82
10 Acenaphthene-d10	10729	5365	21458	10164	-5.27
15 Phenanthrene-d10	20748	10374	41496	19712	-4.99
25 Chrysene-d12	20954	10477	41908	20491	-2.21
33 Perylene-d12	21563	10782	43126	20562	-4.64

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.00
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	-0.00
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	-0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.02
33 Perylene-d12	17.96	17.46	18.46	17.96	0.02

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

REVIEW SUMMARY FOR FILE - N823042605.D

Lab ID: SLD0372-CAL3
nt8.i, 20230426.b\FSIMPNA230426.m,   26-APR-2023 19:00

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

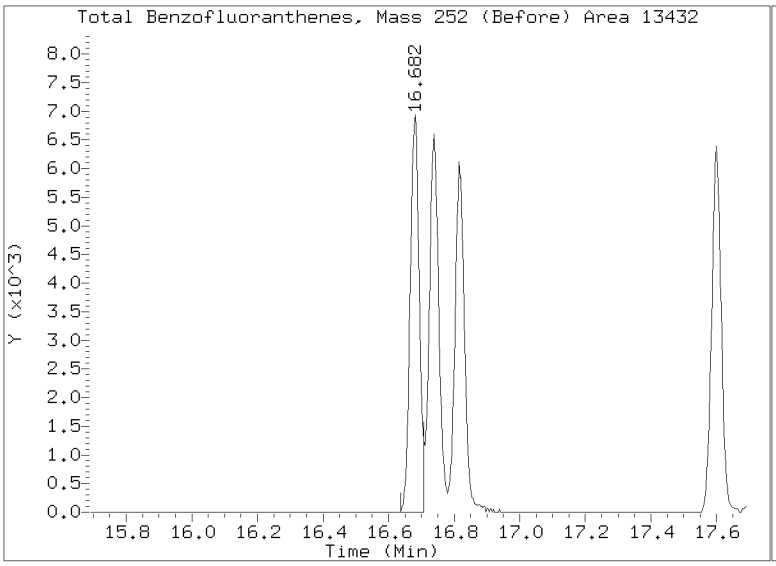
No RRT check performed

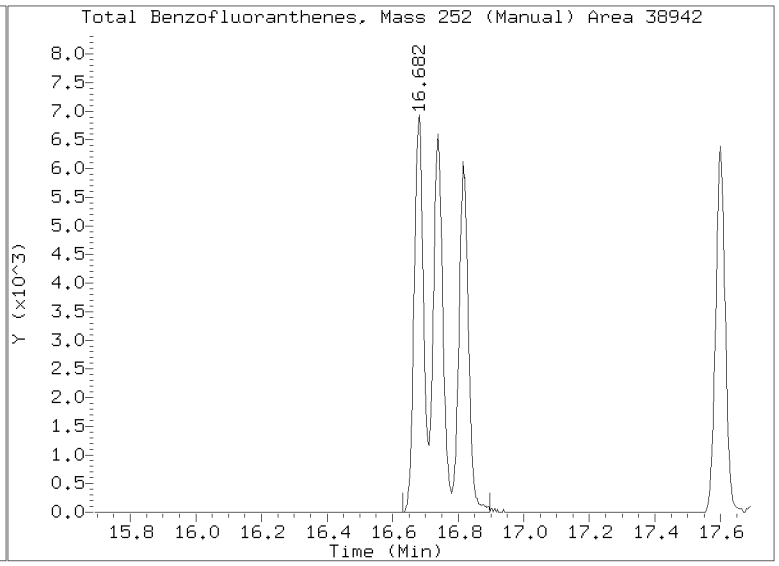
On Column LOD for nt8.i, 20230426.b\FSIMPNA230426.m, FSIMPNAICLA.sub = 0.0000

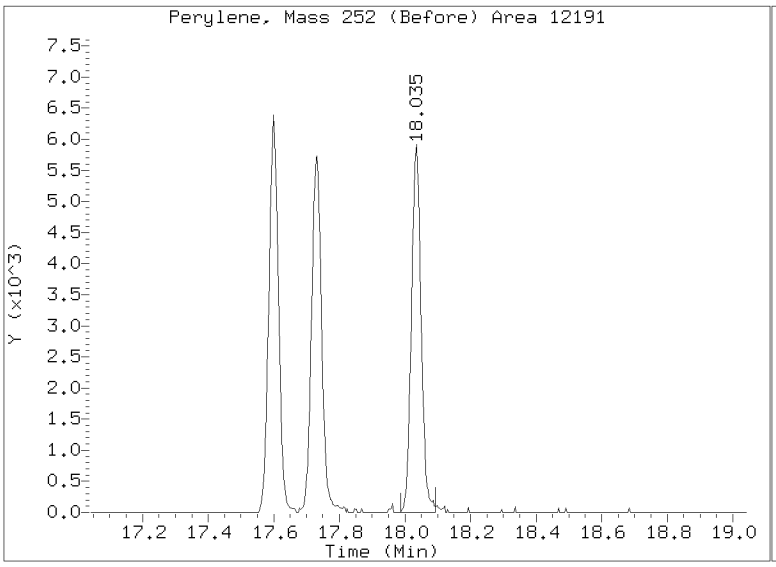
* Only compounds listed in the work order have been verified by the analyst *

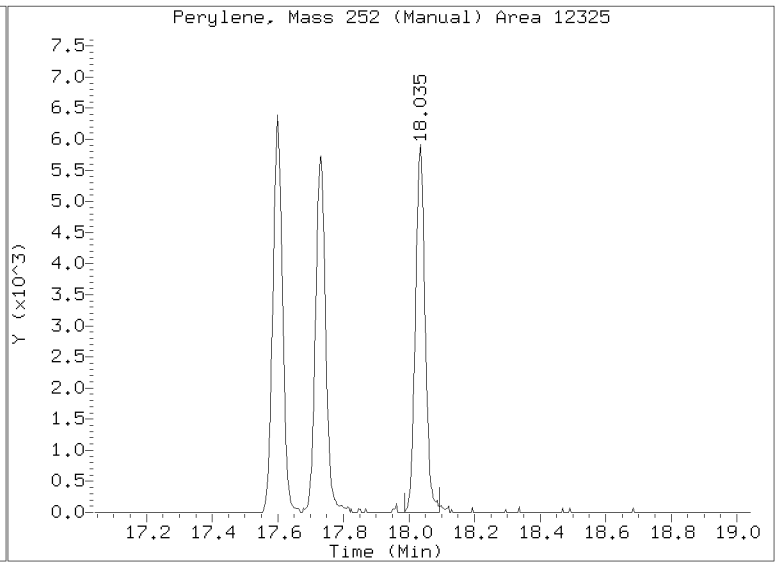
Quant Ion Manual Peak Adjustment Report

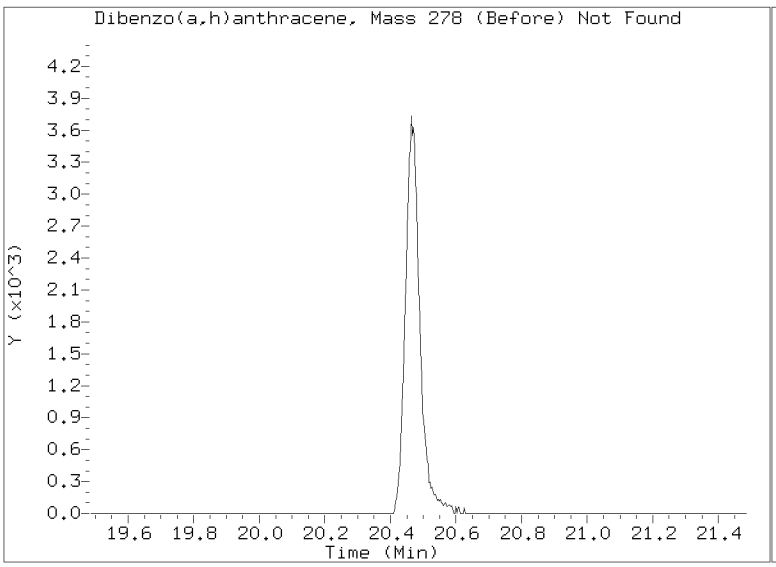
Datafile: //target/share/chem3/nt8.i/20230426.b/N823042605.D
Injection Date: 26-APR-2023 19:00
Lab ID:SLD0372-CAL3 Client ID:
Report Date: 04/27/2023 10:37

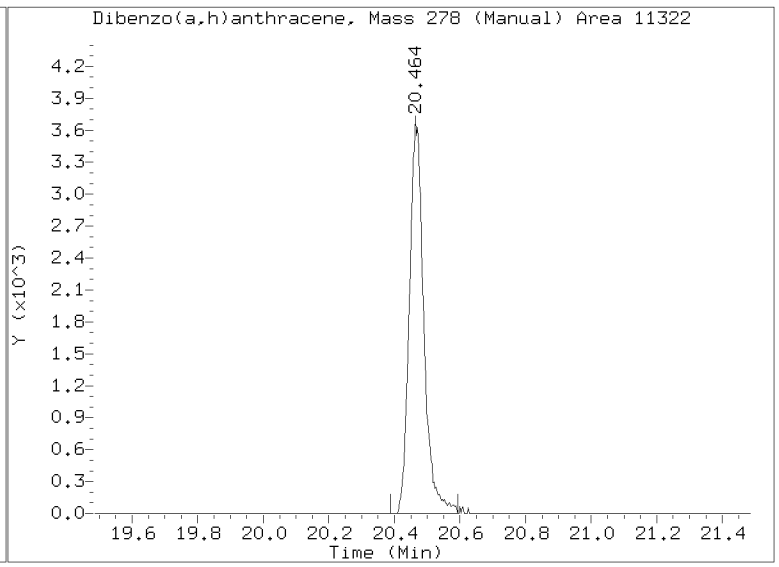












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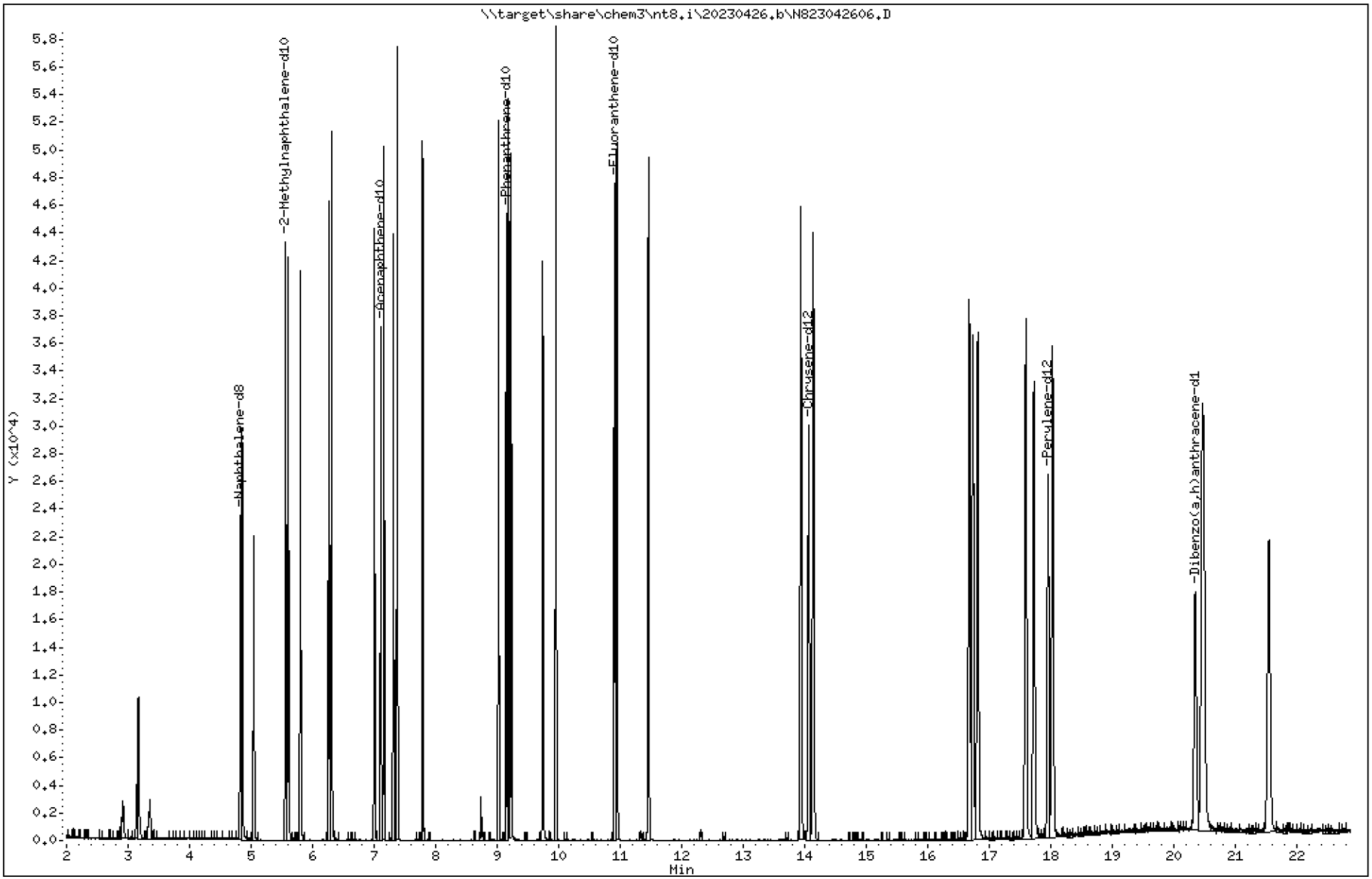
Date : 26-APR-2023 19:27
Client ID:
Sample Info: IC25230426,

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



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ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230426.b\N823042606.D
Lab Smp Id: SLD0372-CAL4
Inj Date : 26-APR-2023 19:27
Operator : JZ Inst ID: nt8.i
Smp Info : IC25230426,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Meth Date : 27-Apr-2023 10:36 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.827	4.827	(1.000)	18699	2.00000	
	2 Naphthalene	128	4.856	4.856	(1.006)	23431	2.50000	2.460
$	3 2-Methylnaphthalene-d10	152	5.558	5.558	(1.151)	14369	2.50000	2.488
	4 2-Methylnaphthalene	141	5.605	5.605	(1.161)	13264	2.50000	2.452
	5 1-methylnaphthalene	141	5.801	5.804	(1.202)	13343	2.50000	2.488
	7 Biphenyl	154	6.263	6.263	(0.881)	19887	2.50000	2.410
	8 2,6-Dimethylnaphthalene	156	6.307	6.307	(0.887)	14574	2.50000	2.480
	9 Acenaphthylene	152	7.003	7.003	(0.985)	23643	2.50000	2.489
*	10 Acenaphthene-d10	164	7.110	7.110	(1.000)	10729	2.00000	
	11 Acenaphthene	153	7.161	7.161	(1.007)	14862	2.50000	2.415
	12 Dibenzofuran	168	7.313	7.316	(1.028)	22911	2.50000	2.479
	13 1,6,7-Trimethylnaphthalene	170	7.379	7.379	(1.038)	14664	2.50000	2.509
	14 Fluorene	166	7.790	7.790	(1.096)	18097	2.50000	2.453
	18 Dibenzothiophene	184	9.023	9.026	(0.986)	25172	2.50000	2.470
*	15 Phenanthrene-d10	188	9.150	9.150	(1.000)	20748	2.00000	
	16 Phenanthrene	178	9.185	9.188	(1.004)	26723	2.50000	2.432
	17 Anthracene	178	9.226	9.229	(1.008)	25993	2.50000	2.522
	19 Carbazole	167	9.744	9.744	(1.065)	23755	2.50000	2.413
	20 1-Methylphenanthrene	192	9.956	9.956	(1.088)	20478	2.50000	2.456
	22 Fluoranthene	202	10.949	10.952	(1.197)	31237	2.50000	2.471
$	21 Fluoranthene-d10	212	10.911	10.914	(1.192)	27482	2.50000	2.454
	23 Pyrene	202	11.461	11.464	(0.815)	32437	2.50000	2.418
	24 Benzo(a)anthracene	228	13.940	13.946	(0.991)	33917	2.50000	2.460
*	25 Chrysene-d12	240	14.067	14.070	(1.000)	20954	2.00000	
	27 Chrysene	228	14.139	14.146	(1.005)	32818	2.50000	2.423
	28 Benzo(b)fluoranthene	252	16.682	16.691	(0.929)	33198	2.50000	2.362
	29 Benzo(k)fluoranthene	252	16.739	16.751	(0.932)	32726	2.50000	2.471
	30 Benzo(j)fluoranthene	252	16.818	16.830	(0.936)	29912	2.50000	2.444
	31 Total Benzofluoranthenes	252	16.682	16.691	(0.929)	95017	7.50000	7.268(M)
	34 Benzo(e)pyrene	252	17.599	17.608	(0.980)	32061	2.50000	2.442
	32 Benzo(a)pyrene	252	17.731	17.738	(0.987)	30402	2.50000	2.488
*	33 Perylene-d12	264	17.959	17.962	(1.000)	21563	2.00000	
	35 Perylene	252	18.032	18.041	(1.004)	30589	2.50000	2.493

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.356	20.372	(1.133)	21043	2.50000	2.556
37 Indeno(1,2,3-cd)pyrene	276	20.492	20.520	(1.141)	32154	2.50000	2.585
38 Dibenzo(a,h)anthracene	278	20.467	20.485	(1.140)	28122	2.50000	2.546
39 Benzo(g,h,i)perylene	276	21.551	21.570	(1.200)	29213	2.50000	2.535

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042606.D
Lab Smp Id: SLD0372-CAL4
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	18699	0.00
10 Acenaphthene-d10	10729	5365	21458	10729	0.00
15 Phenanthrene-d10	20748	10374	41496	20748	0.00
25 Chrysene-d12	20954	10477	41908	20954	0.00
33 Perylene-d12	21563	10782	43126	21563	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	0.00
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	0.00
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.00
33 Perylene-d12	17.96	17.46	18.46	17.96	0.00

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

REVIEW SUMMARY FOR FILE - N823042606.D

Lab ID: SLD0372-CAL4
nt8.i, 20230426.b\FSIMPNA230426.m,   26-APR-2023 19:27

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

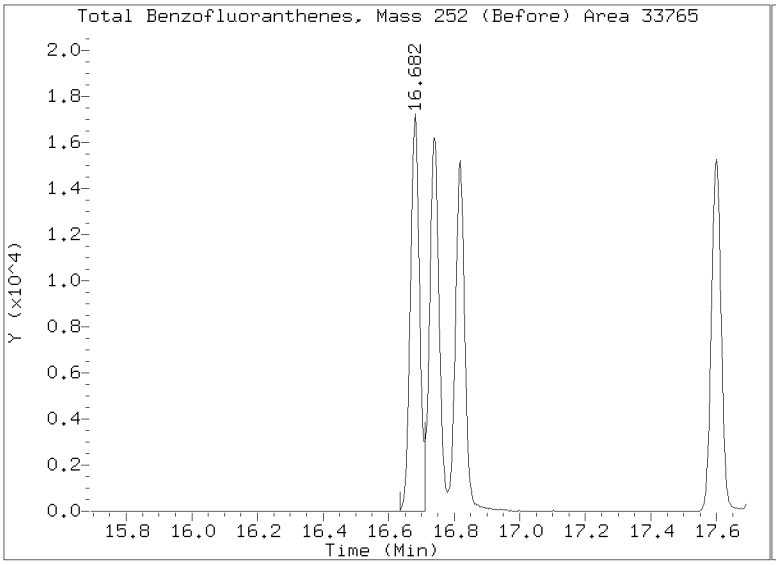
No RRT check performed

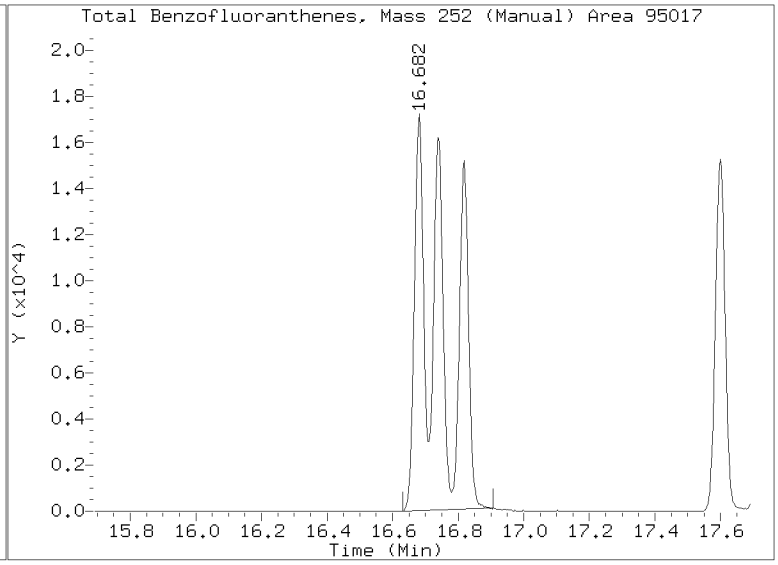
On Column LOD for nt8.i, 20230426.b\FSIMPNA230426.m, FSIMPNAICLA.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230426.b/N823042606.D
Injection Date: 26-APR-2023 19:27
Lab ID:SLD0372-CAL4 Client ID:
Report Date: 04/27/2023 10:37





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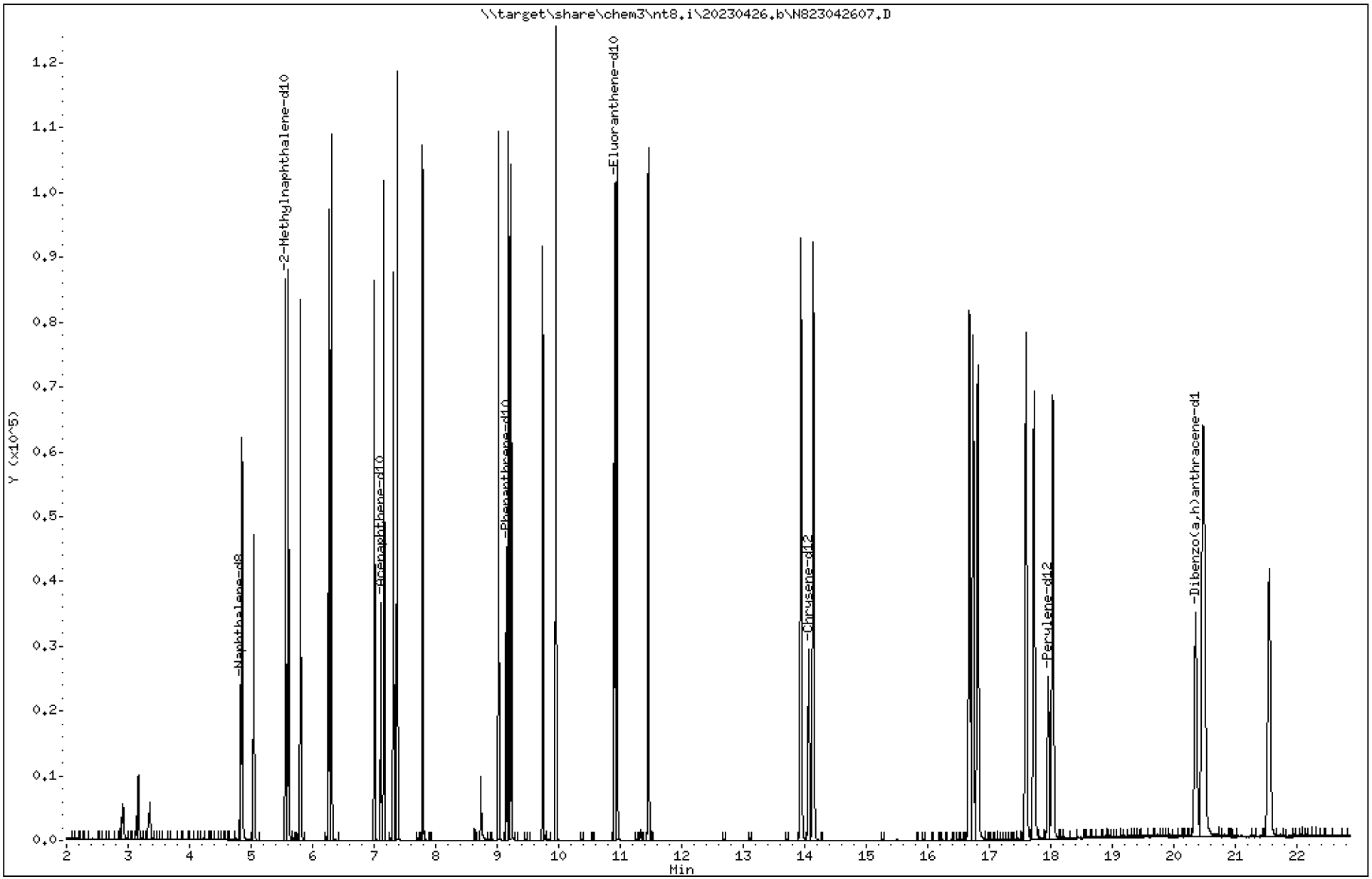
Date : 26-APR-2023 19:55
Client ID:
Sample Info: IC5230426,

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230426.b\N823042607.D
Lab Smp Id: SLD0372-CAL5
Inj Date : 26-APR-2023 19:55
Operator : JZ Inst ID: nt8.i
Smp Info : IC5230426,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Meth Date : 27-Apr-2023 10:36 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.827	4.827	(1.000)	18501	2.00000	
	2 Naphthalene	128	4.856	4.856	(1.006)	47556	5.00000	5.045
$	3 2-Methylnaphthalene-d10	152	5.558	5.558	(1.151)	29453	5.00000	5.155
	4 2-Methylnaphthalene	141	5.605	5.605	(1.161)	26954	5.00000	5.037
	5 1-methylnaphthalene	141	5.801	5.804	(1.202)	27001	5.00000	5.089
	7 Biphenyl	154	6.263	6.263	(0.881)	40268	5.00000	4.928
	8 2,6-Dimethylnaphthalene	156	6.307	6.307	(0.887)	29559	5.00000	5.081
	9 Acenaphthylene	152	7.003	7.003	(0.985)	48781	5.00000	5.188
*	10 Acenaphthene-d10	164	7.110	7.110	(1.000)	10621	2.00000	
	11 Acenaphthene	153	7.161	7.161	(1.007)	30716	5.00000	5.042
	12 Dibenzofuran	168	7.313	7.316	(1.028)	45432	5.00000	4.965
	13 1,6,7-Trimethylnaphthalene	170	7.379	7.379	(1.038)	29633	5.00000	5.121
	14 Fluorene	166	7.790	7.790	(1.096)	36747	5.00000	5.032
	18 Dibenzothiophene	184	9.023	9.026	(0.986)	51600	5.00000	5.091
*	15 Phenanthrene-d10	188	9.150	9.150	(1.000)	20636	2.00000	
	16 Phenanthrene	178	9.185	9.188	(1.004)	54774	5.00000	5.011
	17 Anthracene	178	9.226	9.229	(1.008)	53324	5.00000	5.202
	19 Carbazole	167	9.741	9.744	(1.065)	49589	5.00000	5.064
	20 1-Methylphenanthrene	192	9.956	9.956	(1.088)	42154	5.00000	5.084
	22 Fluoranthene	202	10.949	10.952	(1.197)	64083	5.00000	5.097
$	21 Fluoranthene-d10	212	10.911	10.914	(1.192)	57370	5.00000	5.150
	23 Pyrene	202	11.461	11.464	(0.815)	67152	5.00000	5.158
	24 Benzo(a)anthracene	228	13.943	13.946	(0.991)	70152	5.00000	5.244
*	25 Chrysene-d12	240	14.067	14.070	(1.000)	20333	2.00000	
	27 Chrysene	228	14.143	14.146	(1.005)	66066	5.00000	5.027
	28 Benzo(b)fluoranthene	252	16.685	16.691	(0.929)	69536	5.00000	5.103
	29 Benzo(k)fluoranthene	252	16.742	16.751	(0.932)	64959	5.00000	5.060
	30 Benzo(j)fluoranthene	252	16.821	16.830	(0.936)	59295	5.00000	4.999
	31 Total Benzofluoranthenes	252	16.685	16.691	(0.929)	191442	15.0000	15.11(M)
	34 Benzo(e)pyrene	252	17.602	17.608	(0.980)	64935	5.00000	5.102
	32 Benzo(a)pyrene	252	17.731	17.738	(0.987)	60325	5.00000	5.093
*	33 Perylene-d12	264	17.962	17.962	(1.000)	20900	2.00000	
	35 Perylene	252	18.038	18.041	(1.004)	60147	5.00000	5.057

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.362	20.372	(1.134)	43335	5.00000	5.431
37 Indeno(1,2,3-cd)pyrene	276	20.501	20.520	(1.141)	62903	5.00000	5.218
38 Dibenzo(a,h)anthracene	278	20.473	20.485	(1.140)	56747	5.00000	5.301
39 Benzo(g,h,i)perylene	276	21.557	21.570	(1.200)	58448	5.00000	5.234

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042607.D
Lab Smp Id: SLD0372-CAL5
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	18501	-1.06
10 Acenaphthene-d10	10729	5365	21458	10621	-1.01
15 Phenanthrene-d10	20748	10374	41496	20636	-0.54
25 Chrysene-d12	20954	10477	41908	20333	-2.96
33 Perylene-d12	21563	10782	43126	20900	-3.07

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.00
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	-0.00
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	-0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	-0.00
33 Perylene-d12	17.96	17.46	18.46	17.96	0.02

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

REVIEW SUMMARY FOR FILE - N823042607.D

Lab ID: SLD0372-CAL5
nt8.i, 20230426.b\FSIMPNA230426.m,   26-APR-2023 19:55

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

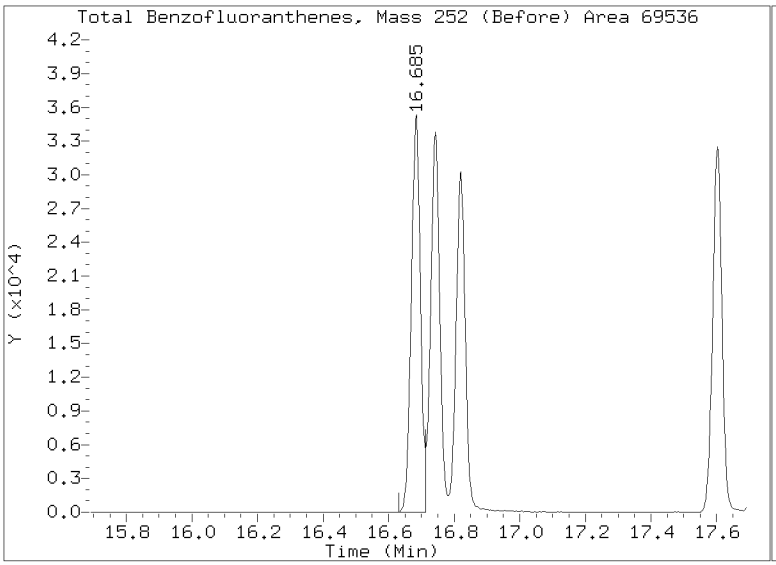
No RRT check performed

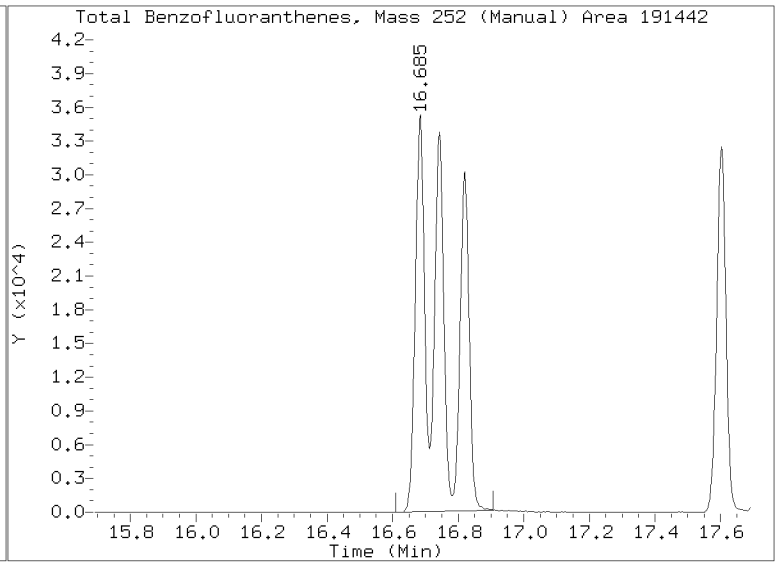
On Column LOD for nt8.i, 20230426.b\FSIMPNA230426.m, FSIMPNAICLA.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230426.b/N823042607.D
Injection Date: 26-APR-2023 19:55
Lab ID:SLD0372-CAL5 Client ID:
Report Date: 04/27/2023 10:37

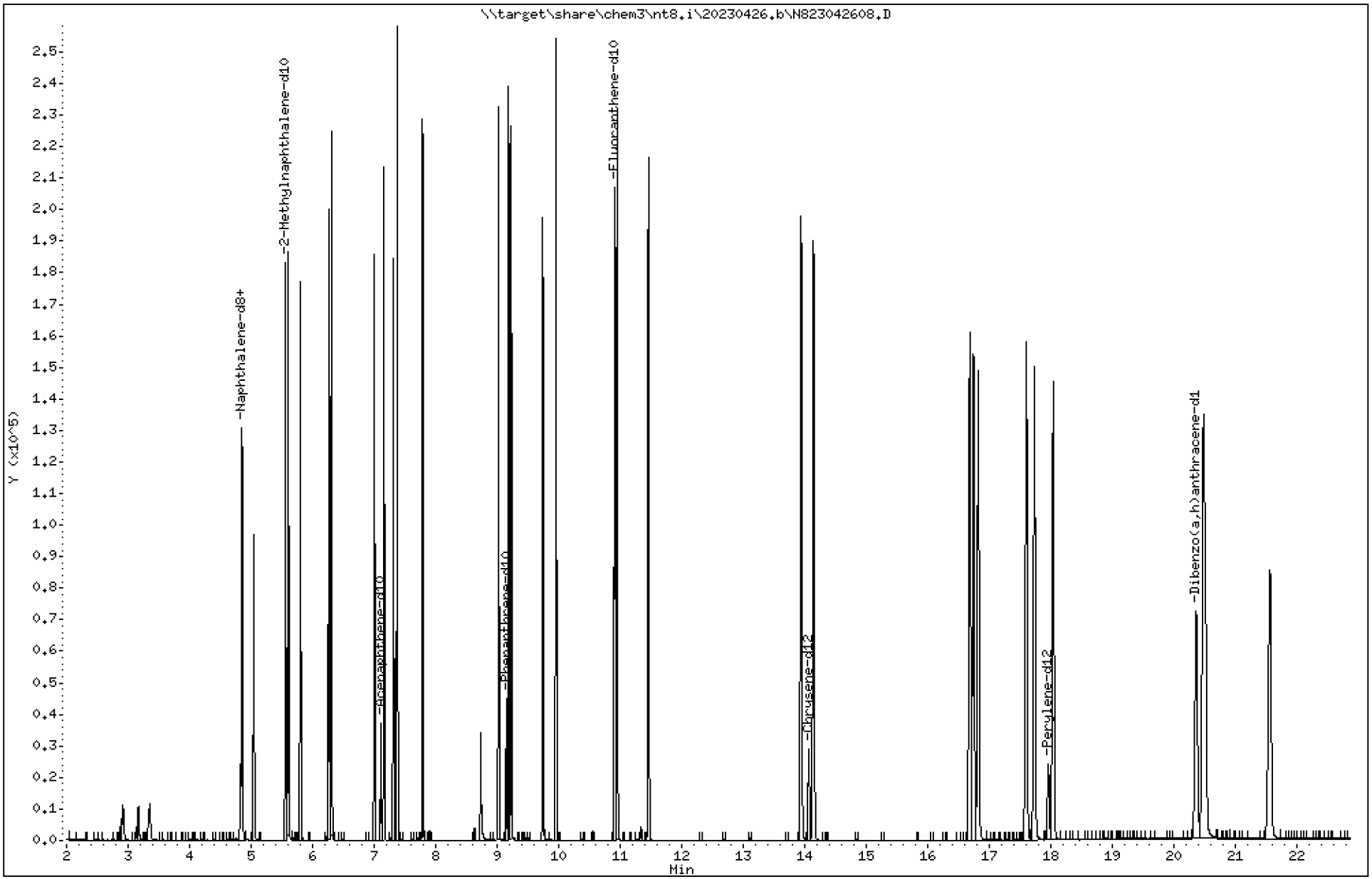




Data File: \\target\share\chem3\nt8.i\20230426.b\N823042608.D
Date : 26-APR-2023 20:22
Client ID:
Sample Info: IC10230426,

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



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ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230426.b\N823042608.D
Lab Smp Id: SLD0372-CAL6
Inj Date : 26-APR-2023 20:22
Operator : JZ Inst ID: nt8.i
Smp Info : IC10230426,
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Meth Date : 27-Apr-2023 10:36 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.827	4.827	(1.000)	18987	2.00000	
	2 Naphthalene	128	4.856	4.856	(1.006)	98586	10.0000	10.19
$	3 2-Methylnaphthalene-d10	152	5.558	5.558	(1.151)	62054	10.0000	10.58
	4 2-Methylnaphthalene	141	5.605	5.605	(1.161)	56211	10.0000	10.23
	5 1-methylnaphthalene	141	5.804	5.804	(1.202)	55779	10.0000	10.24
	7 Biphenyl	154	6.263	6.263	(0.881)	84234	10.0000	10.33
	8 2,6-Dimethylnaphthalene	156	6.307	6.307	(0.887)	61661	10.0000	10.62
	9 Acenaphthylene	152	7.003	7.003	(0.985)	101335	10.0000	10.79
*	10 Acenaphthene-d10	164	7.110	7.110	(1.000)	10604	2.00000	
	11 Acenaphthene	153	7.161	7.161	(1.007)	63326	10.0000	10.41
	12 Dibenzofuran	168	7.316	7.316	(1.029)	94481	10.0000	10.34
	13 1,6,7-Trimethylnaphthalene	170	7.379	7.379	(1.038)	61599	10.0000	10.66
	14 Fluorene	166	7.790	7.790	(1.096)	77955	10.0000	10.69
	18 Dibenzothiophene	184	9.026	9.026	(0.987)	107780	10.0000	10.58
*	15 Phenanthrene-d10	188	9.150	9.150	(1.000)	20735	2.00000	
	16 Phenanthrene	178	9.188	9.188	(1.004)	113832	10.0000	10.36
	17 Anthracene	178	9.229	9.229	(1.009)	108526	10.0000	10.54
	19 Carbazole	167	9.744	9.744	(1.065)	103109	10.0000	10.48
	20 1-Methylphenanthrene	192	9.956	9.956	(1.088)	88969	10.0000	10.68
	22 Fluoranthene	202	10.952	10.952	(1.197)	129629	10.0000	10.26
$	21 Fluoranthene-d10	212	10.914	10.914	(1.193)	119450	10.0000	10.67
	23 Pyrene	202	11.464	11.464	(0.815)	138299	10.0000	10.72
	24 Benzo(a)anthracene	228	13.946	13.946	(0.991)	146175	10.0000	11.03
*	25 Chrysene-d12	240	14.070	14.070	(1.000)	20141	2.00000	
	27 Chrysene	228	14.146	14.146	(1.005)	134229	10.0000	10.31
	28 Benzo(b)fluoranthene	252	16.691	16.691	(0.929)	143820	10.0000	10.84
	29 Benzo(k)fluoranthene	252	16.751	16.751	(0.933)	131721	10.0000	10.54
	30 Benzo(j)fluoranthene	252	16.830	16.830	(0.937)	117119	10.0000	10.15
	31 Total Benzofluoranthenes	252	16.691	16.691	(0.929)	389015	30.0000	31.54(M)
	34 Benzo(e)pyrene	252	17.608	17.608	(0.980)	132932	10.0000	10.73
	32 Benzo(a)pyrene	252	17.738	17.738	(0.988)	122461	10.0000	10.62
*	33 Perylene-d12	264	17.962	17.962	(1.000)	20342	2.00000	
	35 Perylene	252	18.041	18.041	(1.004)	123301	10.0000	10.65

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.372	20.372	(1.134)	89172	10.0000	11.48
37 Indeno(1,2,3-cd)pyrene	276	20.520	20.520	(1.142)	125262	10.0000	10.68
38 Dibenzo(a,h)anthracene	278	20.485	20.485	(1.140)	112627	10.0000	10.81(M)
39 Benzo(g,h,i)perylene	276	21.570	21.570	(1.201)	119701	10.0000	11.01

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042608.D
Lab Smp Id: SLD0372-CAL6
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	18987	1.54
10 Acenaphthene-d10	10729	5365	21458	10604	-1.17
15 Phenanthrene-d10	20748	10374	41496	20735	-0.06
25 Chrysene-d12	20954	10477	41908	20141	-3.88
33 Perylene-d12	21563	10782	43126	20342	-5.66

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.00
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	-0.00
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	-0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.02
33 Perylene-d12	17.96	17.46	18.46	17.96	0.02

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

REVIEW SUMMARY FOR FILE - N823042608.D

Lab ID: SLD0372-CAL6
nt8.i, 20230426.b\FSIMPNA230426.m,   26-APR-2023 20:22

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

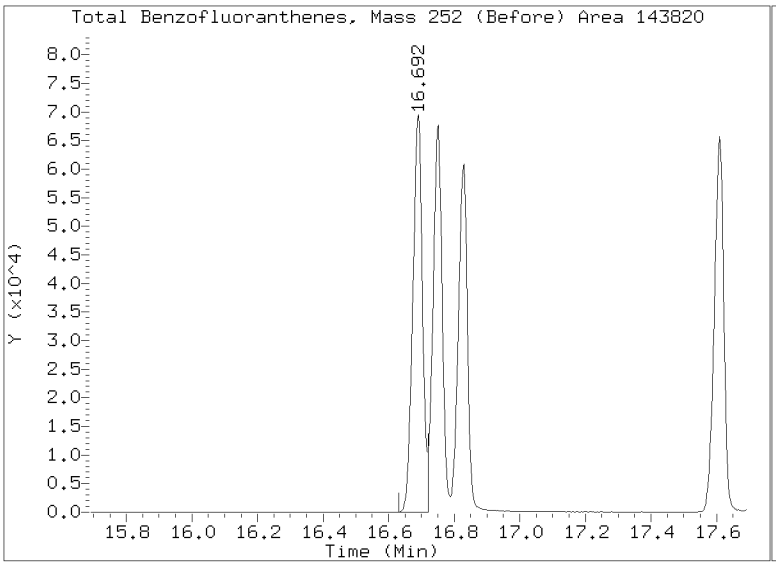
No RRT check performed

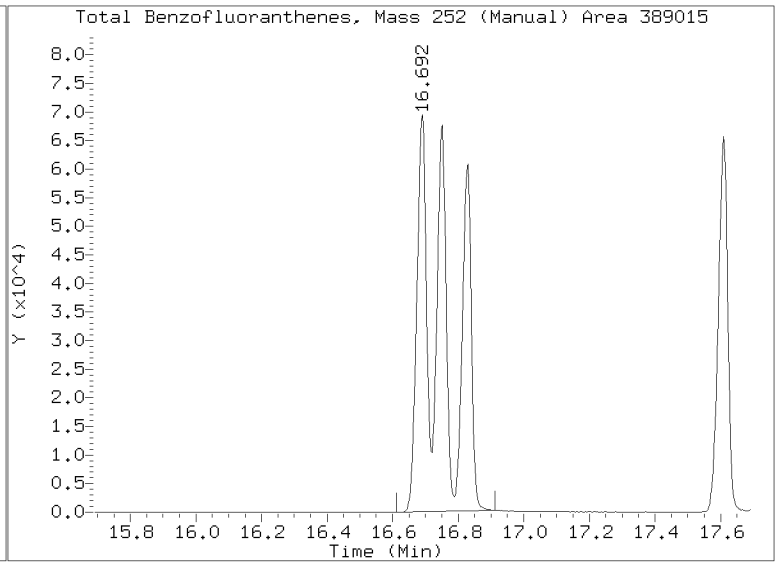
On Column LOD for nt8.i, 20230426.b\FSIMPNA230426.m, FSIMPNAICLA.sub = 0.0000

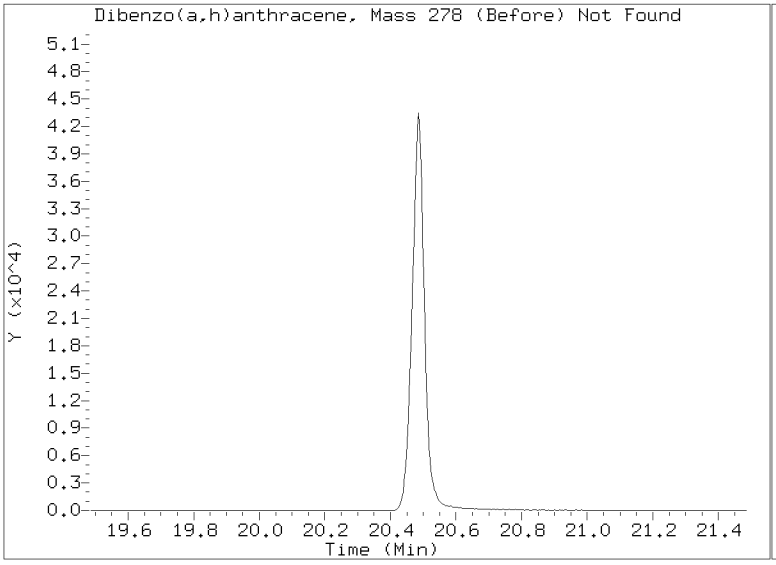
* Only compounds listed in the work order have been verified by the analyst *

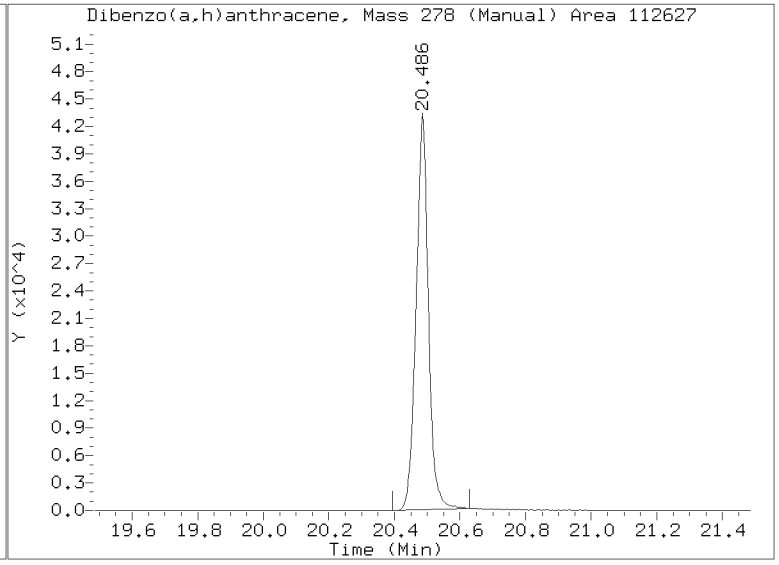
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230426.b/N823042608.D
Injection Date: 26-APR-2023 20:22
Lab ID:SLD0372-CAL6 Client ID:
Report Date: 04/27/2023 10:37









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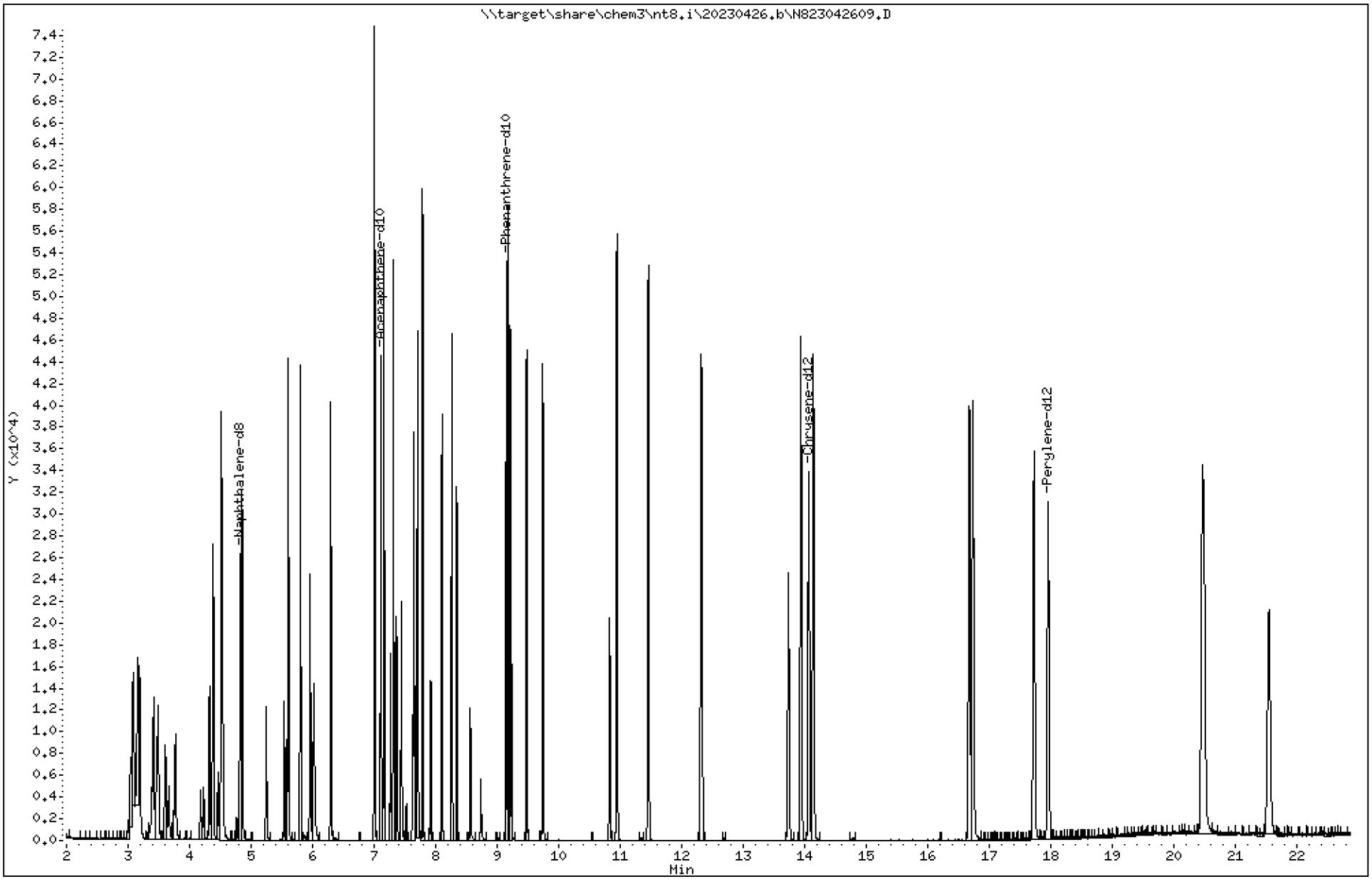
Date : 26-APR-2023 20:49
Client ID:
Sample Info: SCV230426
Volume Injected (uL): 1.0
Column phase: Rxi-17sil

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25



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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

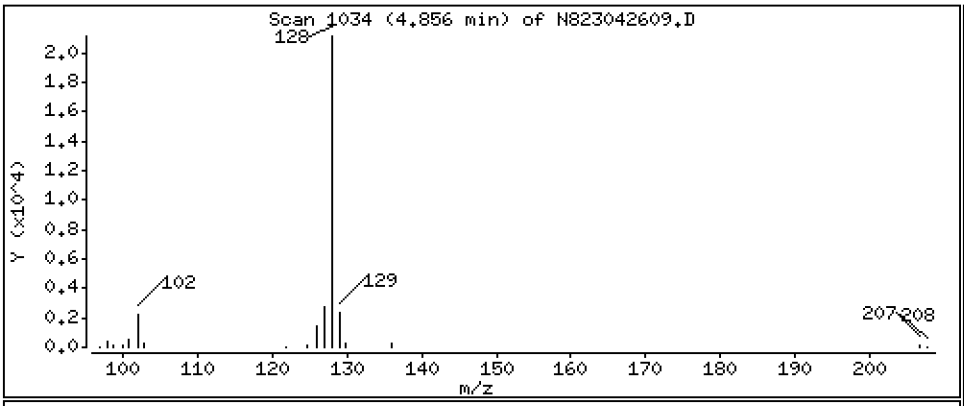
Operator: JZ

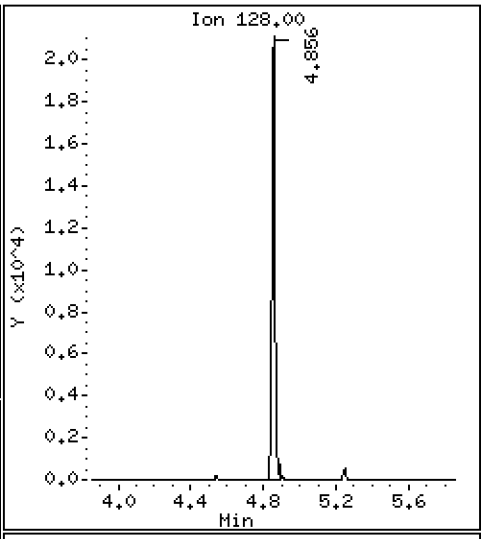
Column phase: Rxi-17sil

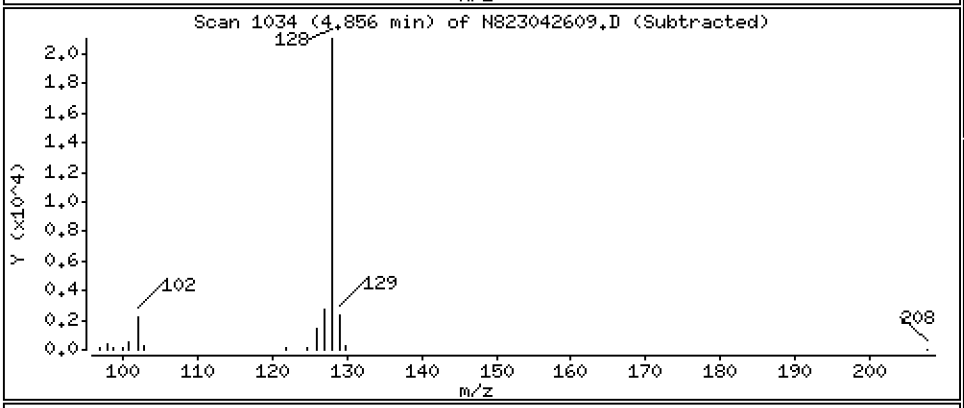
Column diameter: 0.25

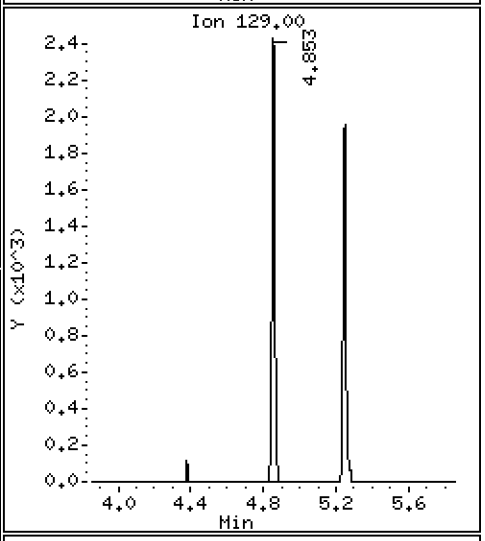
2 Naphthalene

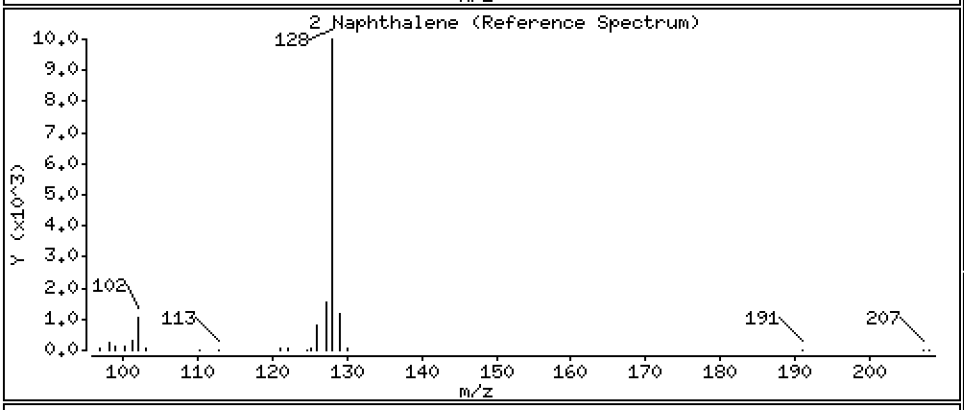
Concentration: 2.363 ug/L

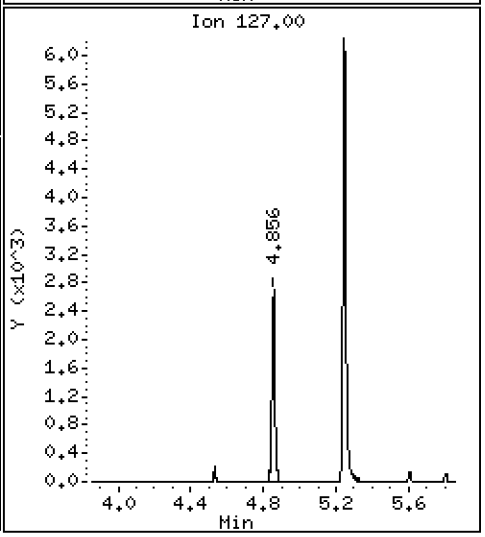


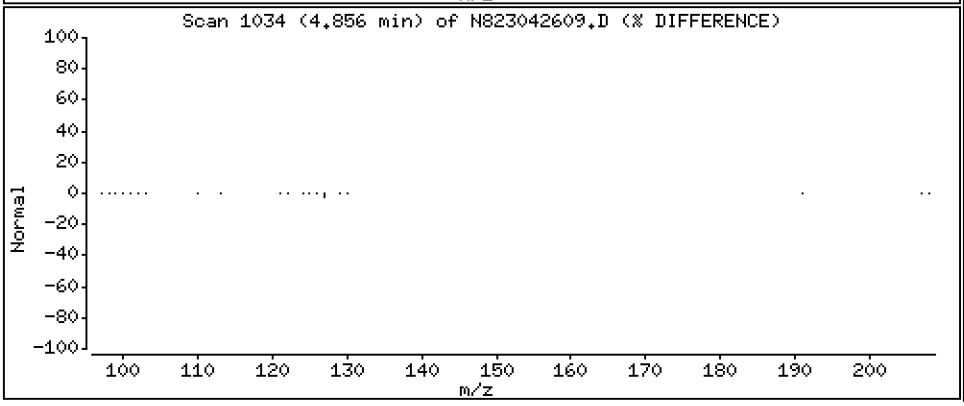












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

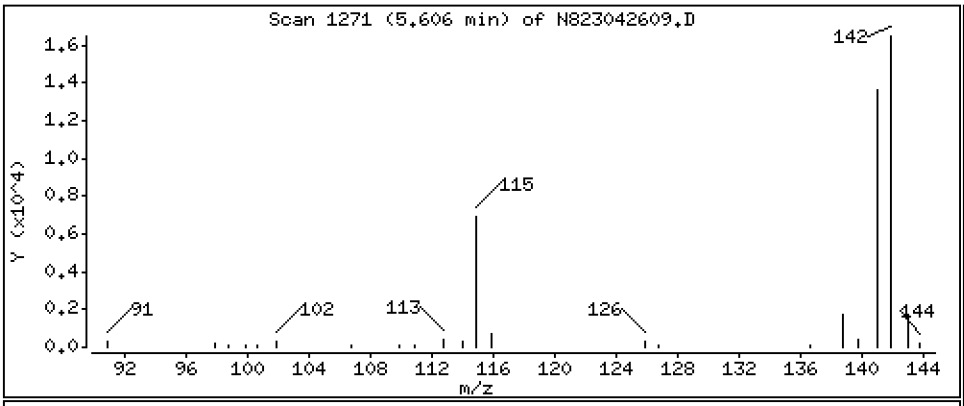
Operator: JZ

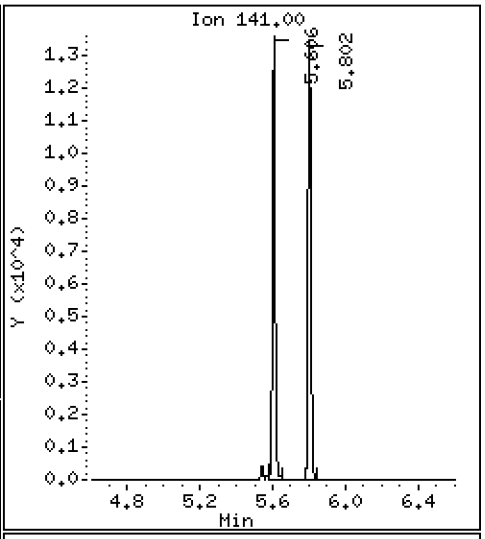
Column phase: Rxi-17sil

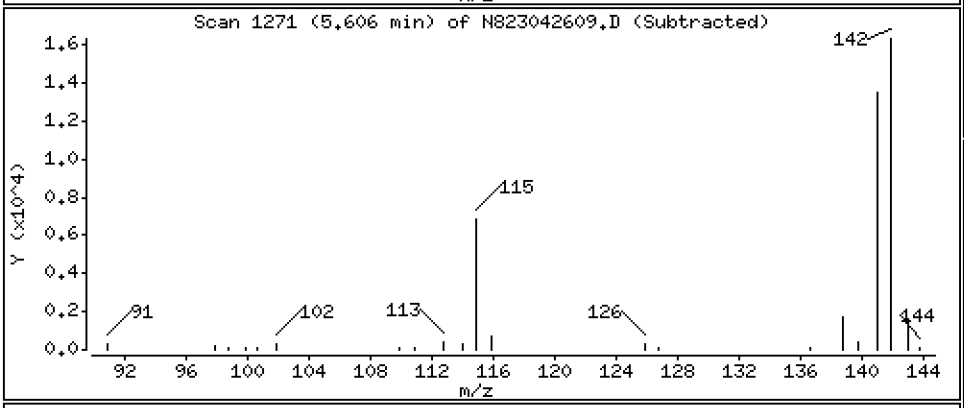
Column diameter: 0.25

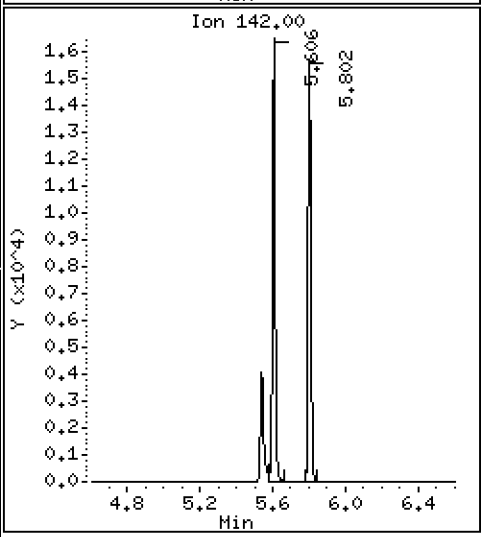
4 2-Methylnaphthalene

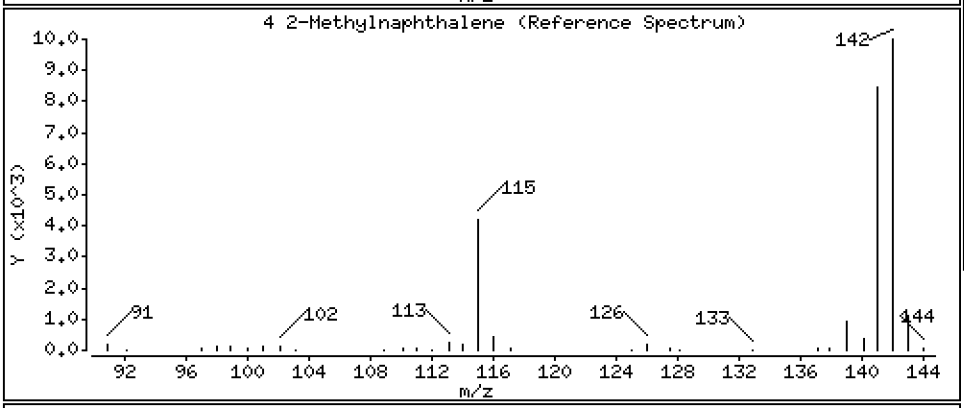
Concentration: 2.392 ug/L

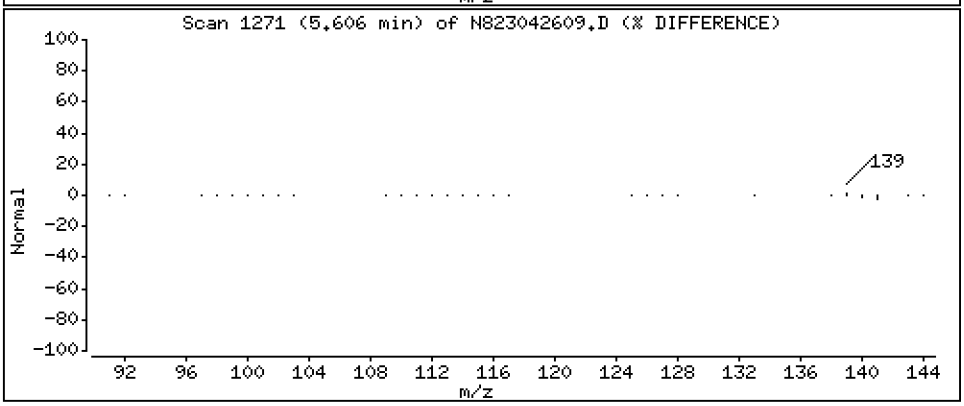












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

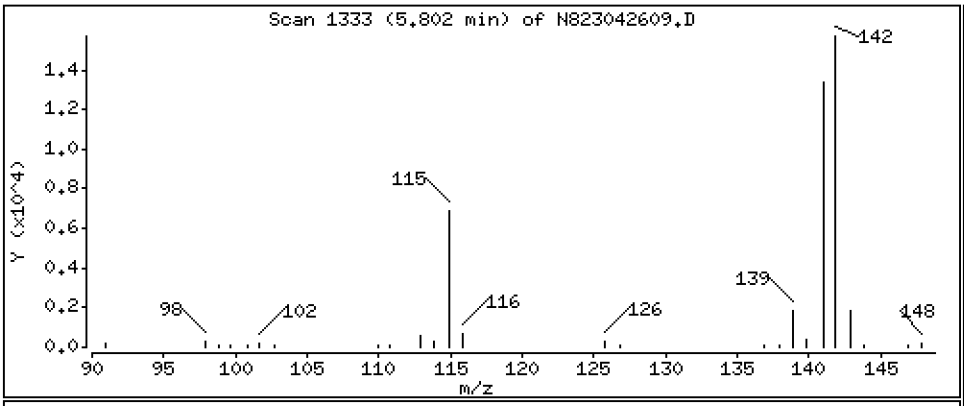
Operator: JZ

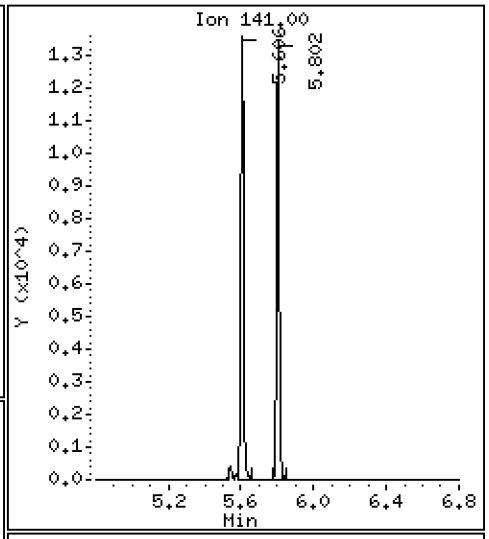
Column phase: Rxi-17sil

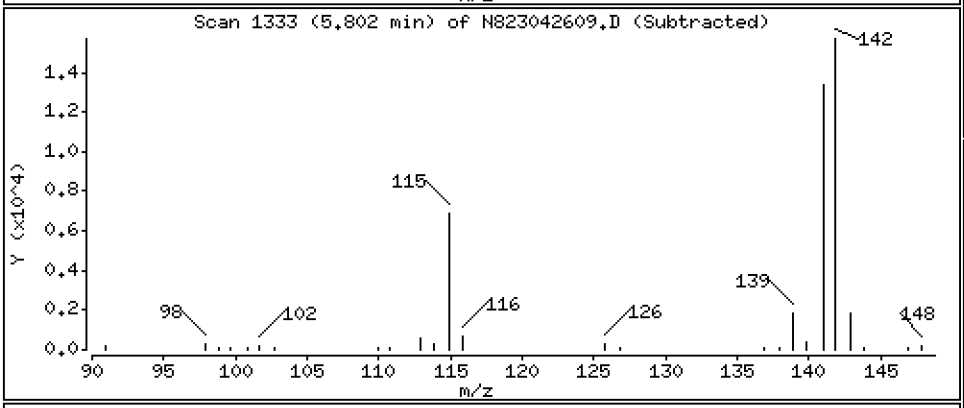
Column diameter: 0.25

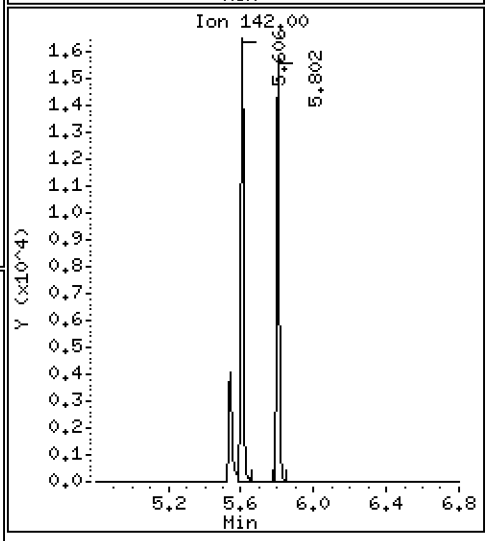
5 1-methylnaphthalene

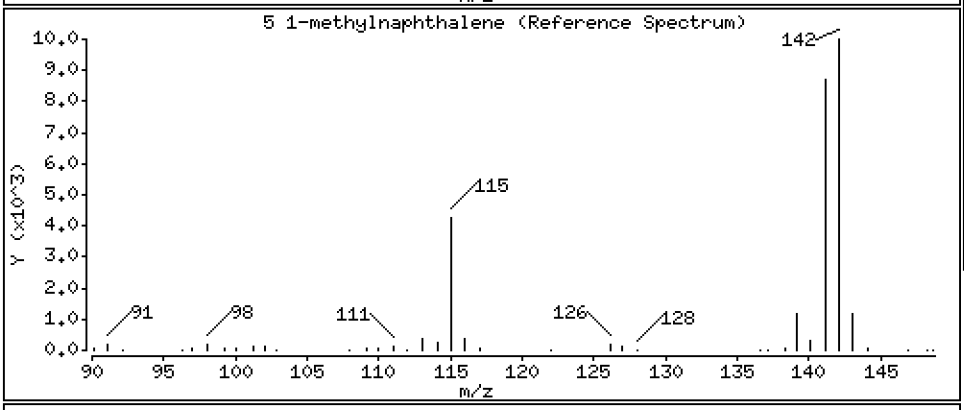
Concentration: 2.380 ug/L

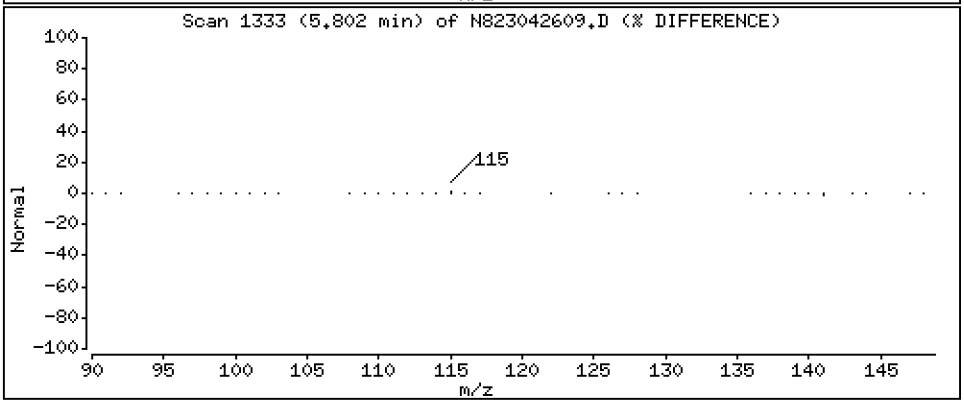












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

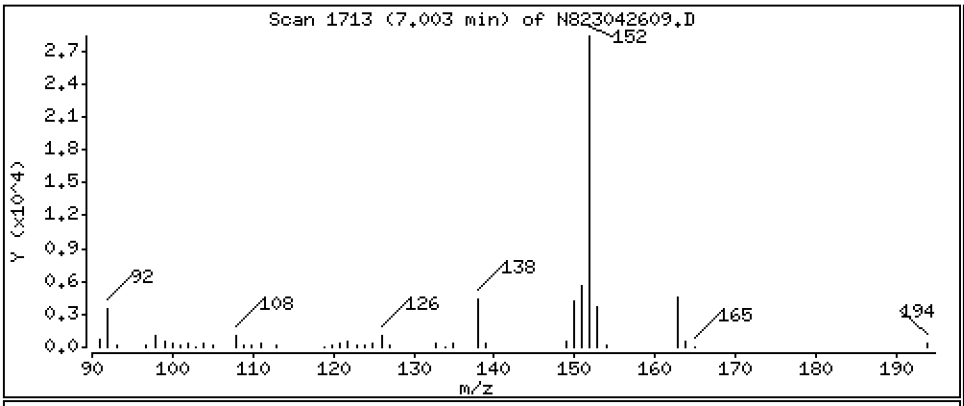
Operator: JZ

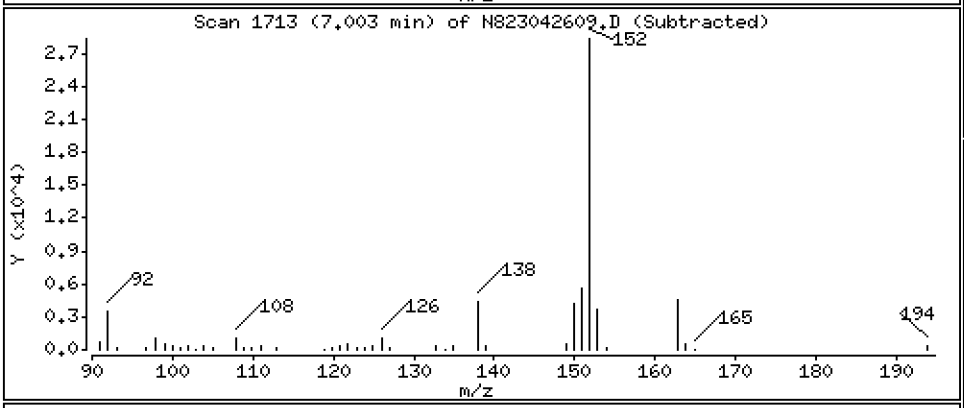
Column phase: Rxi-17sil

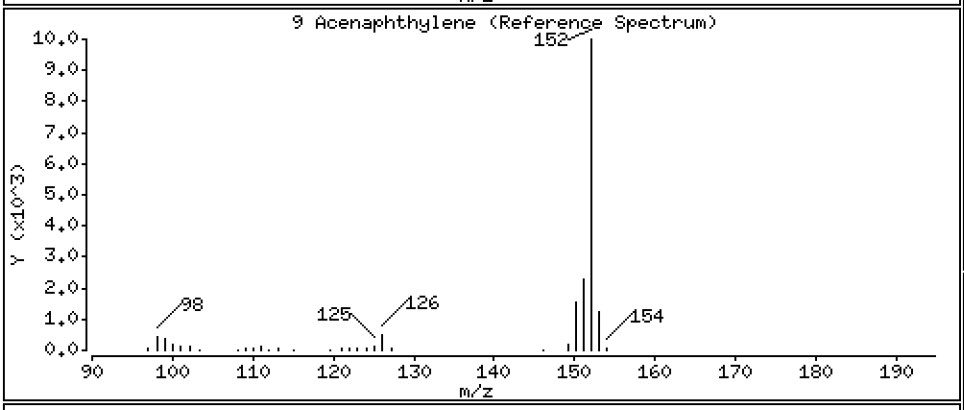
Column diameter: 0.25

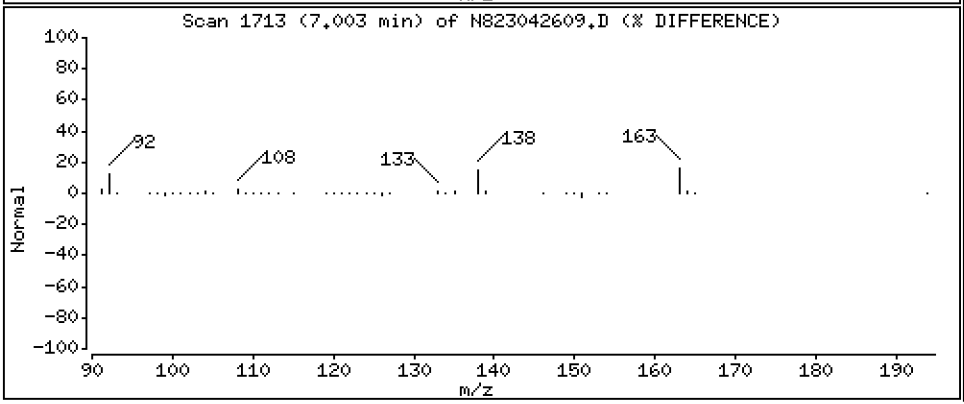
9 Acenaphthylene

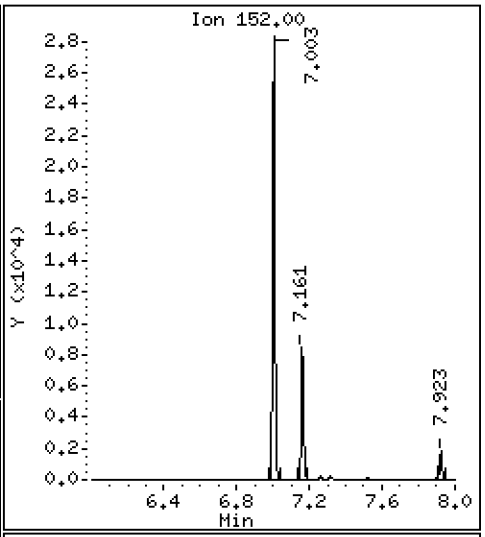
Concentration: 2.322 ug/L

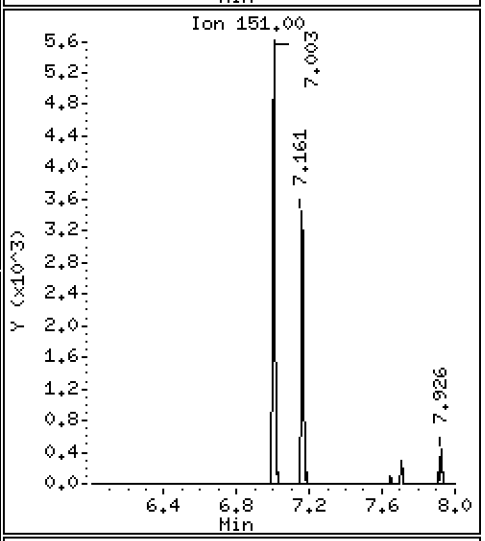


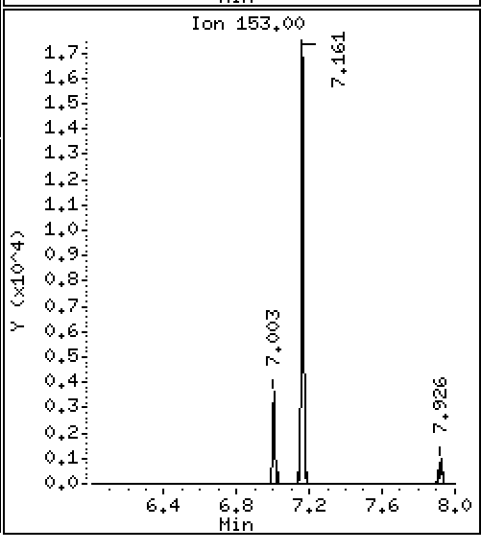












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

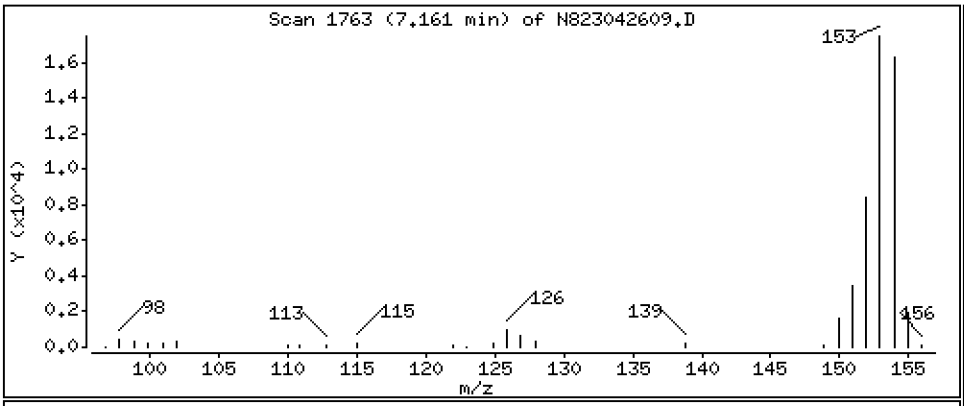
Operator: JZ

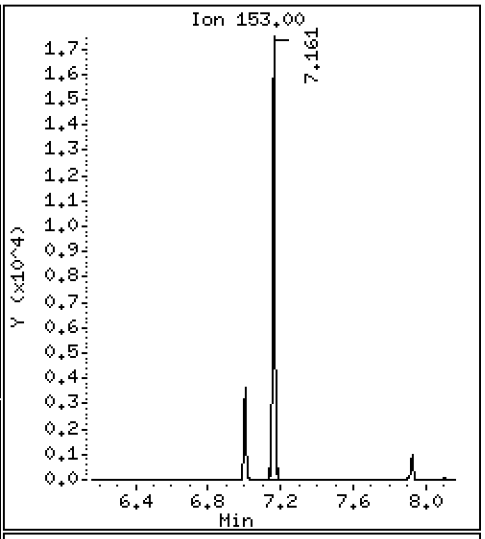
Column phase: Rxi-17sil

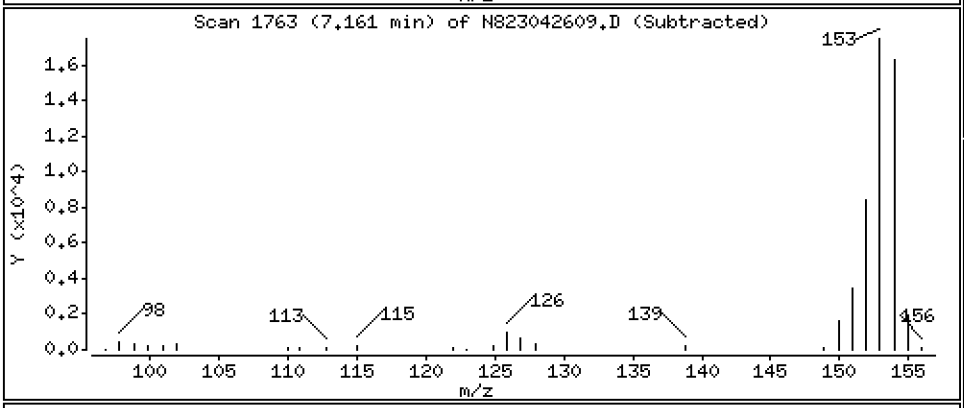
Column diameter: 0.25

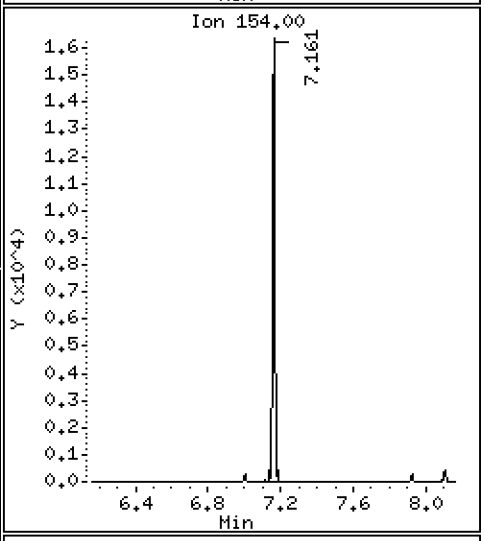
11 Acenaphthene

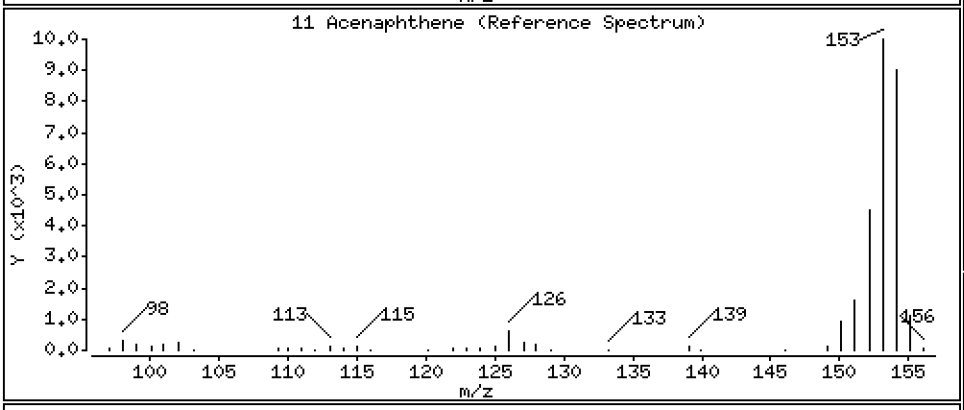
Concentration: 2.234 ug/L

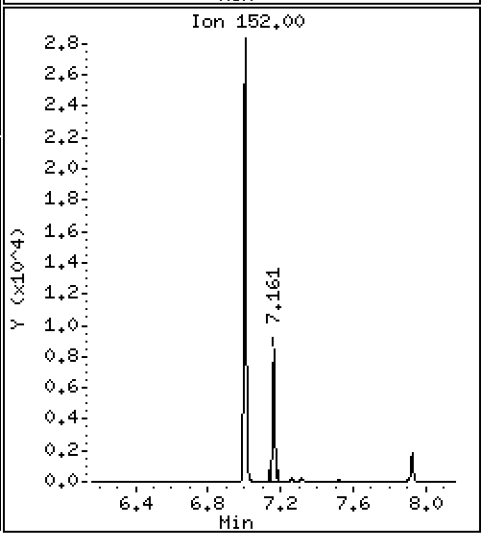


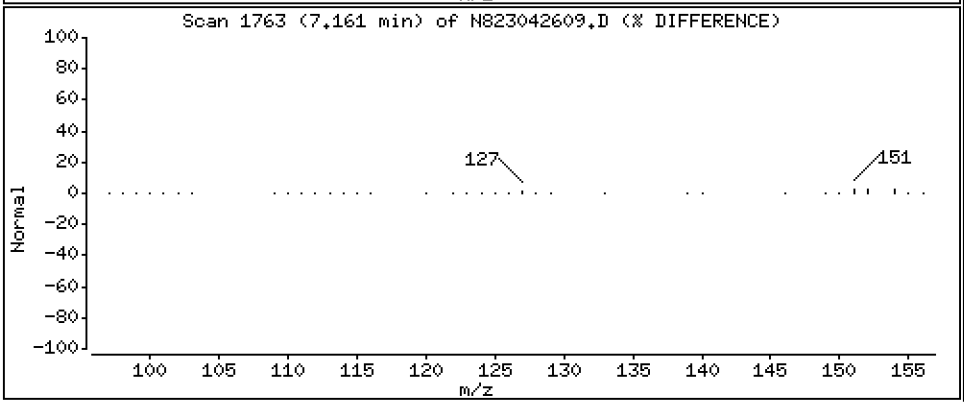












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

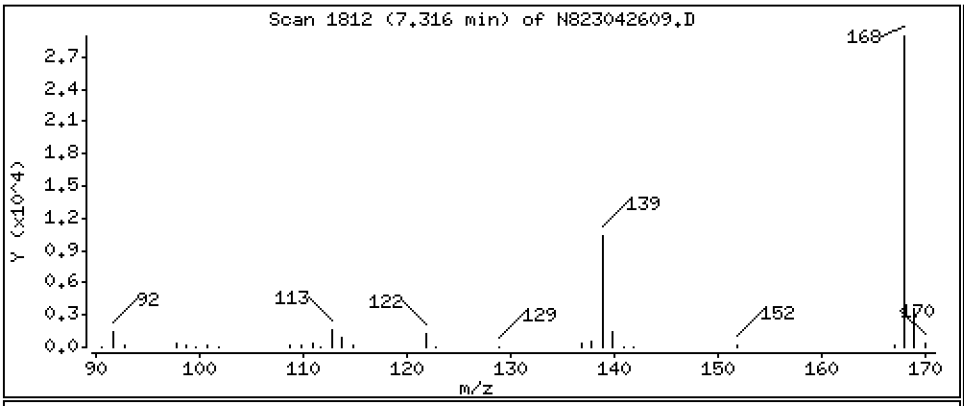
Operator: JZ

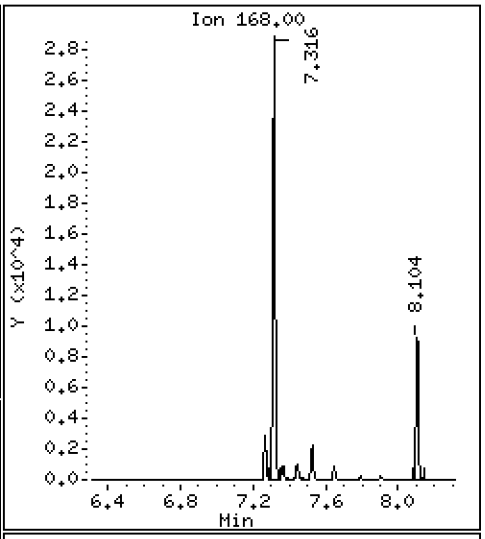
Column phase: Rxi-17sil

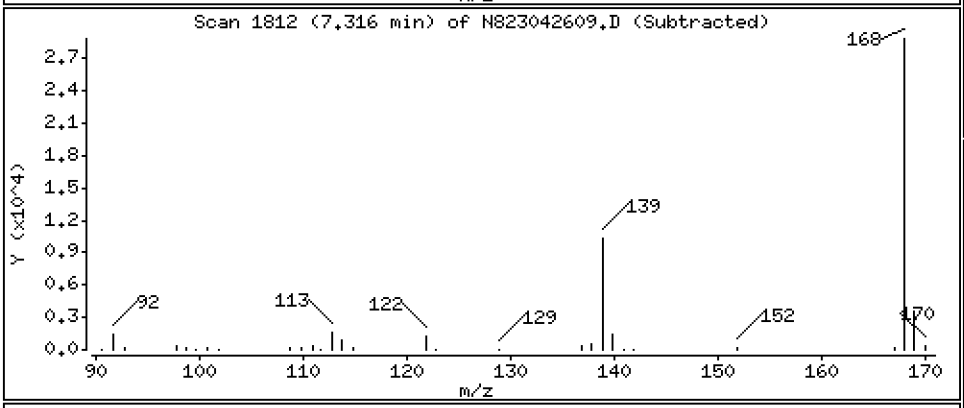
Column diameter: 0.25

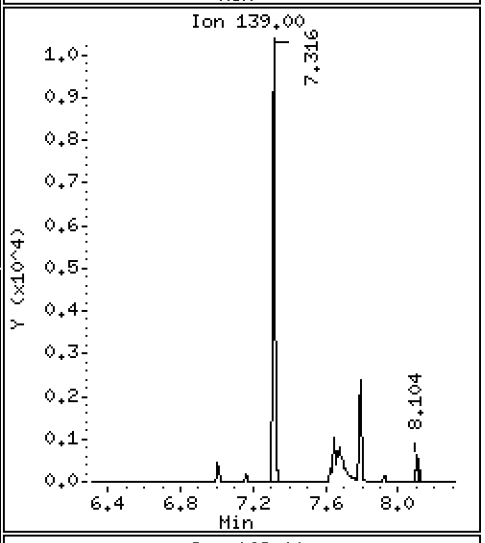
12 Dibenzofuran

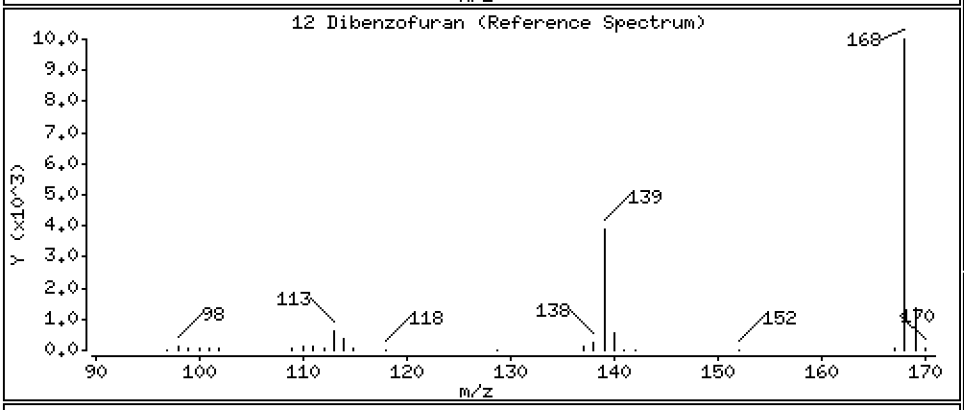
Concentration: 2.518 ug/L

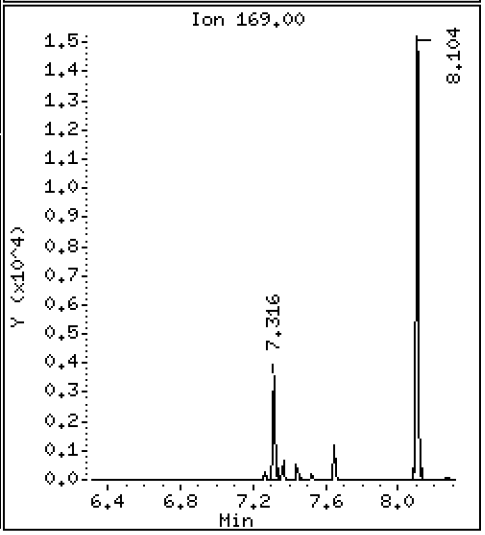


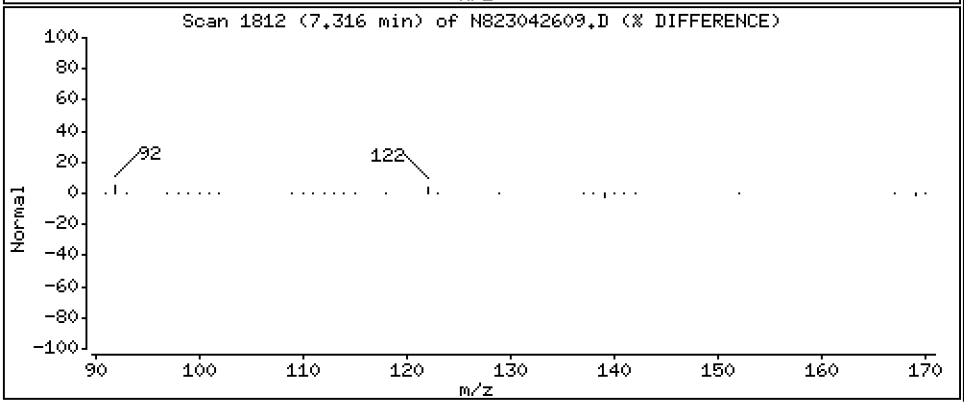












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

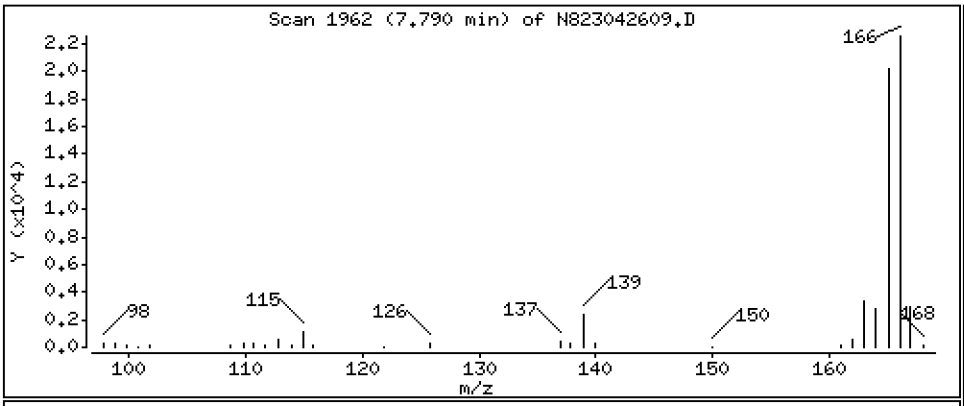
Operator: JZ

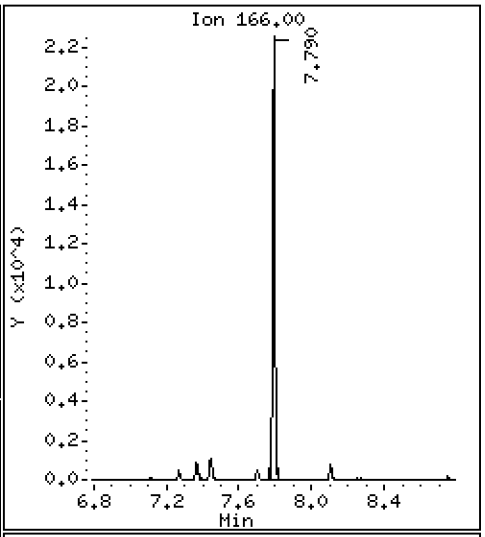
Column phase: Rxi-17sil

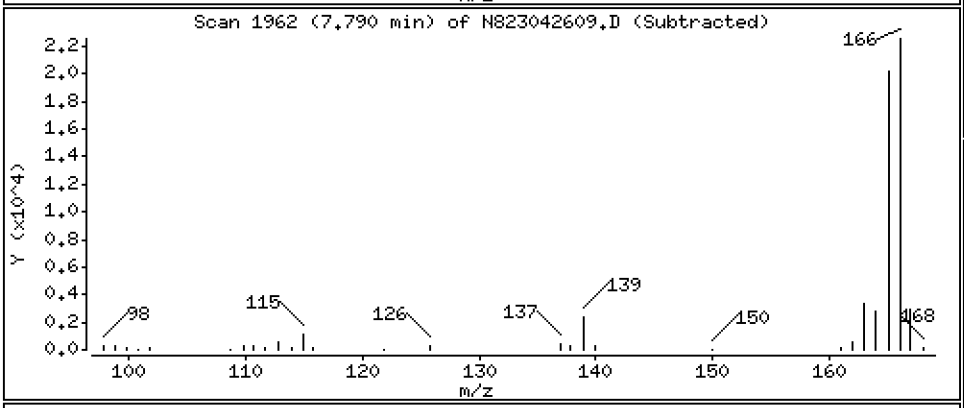
Column diameter: 0.25

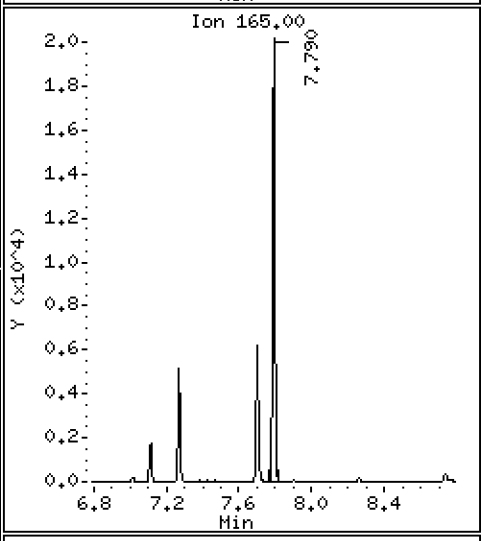
14 Fluorene

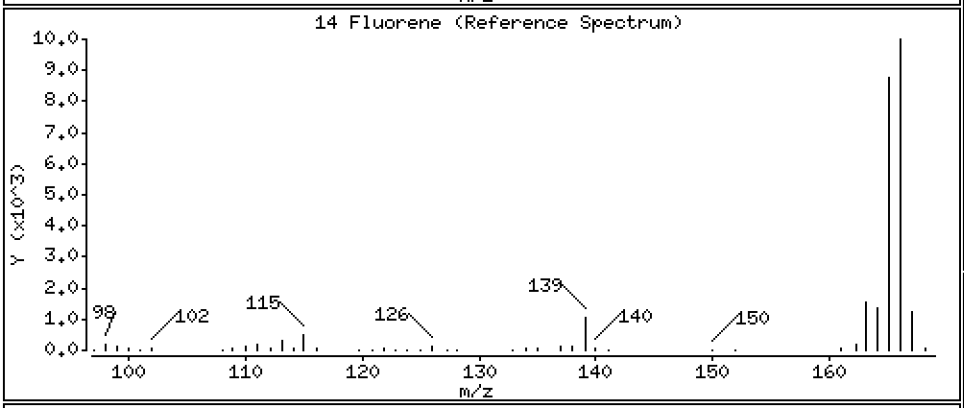
Concentration: 2.293 ug/L

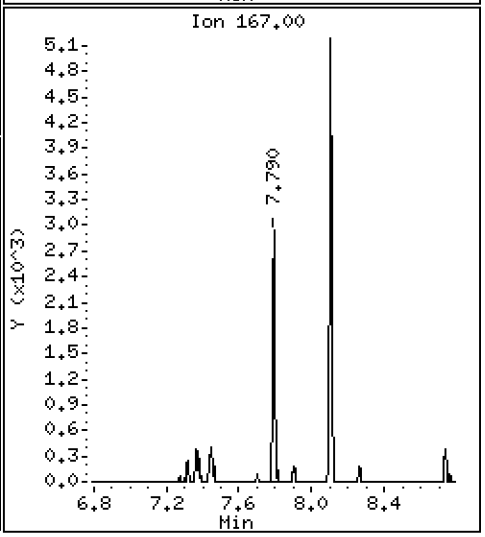


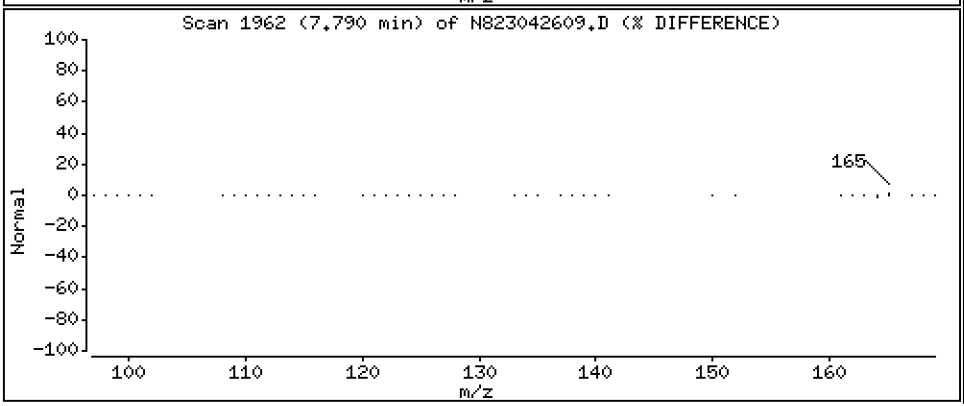












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

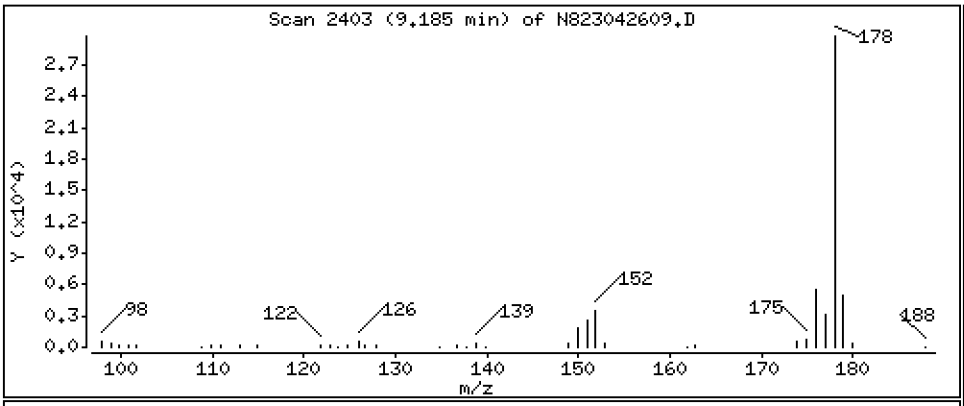
Operator: JZ

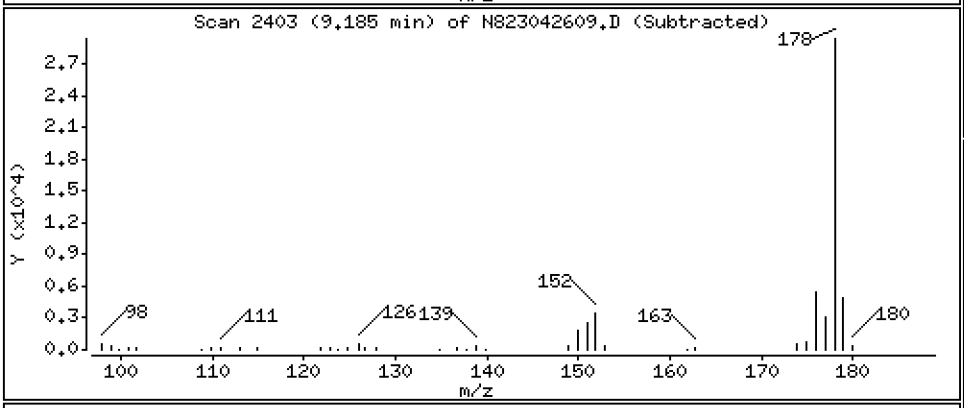
Column phase: Rxi-17sil

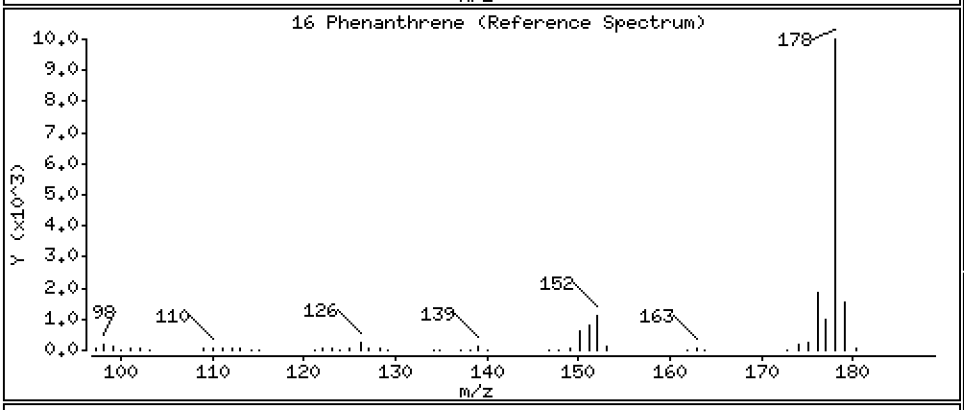
Column diameter: 0.25

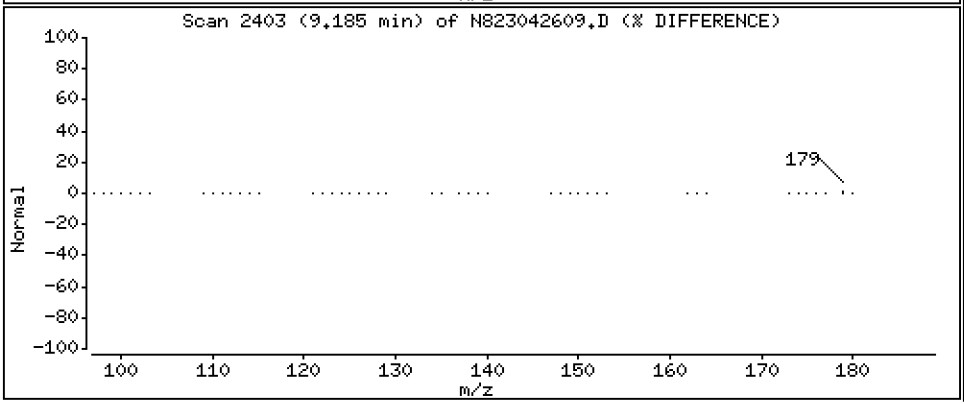
16 Phenanthrene

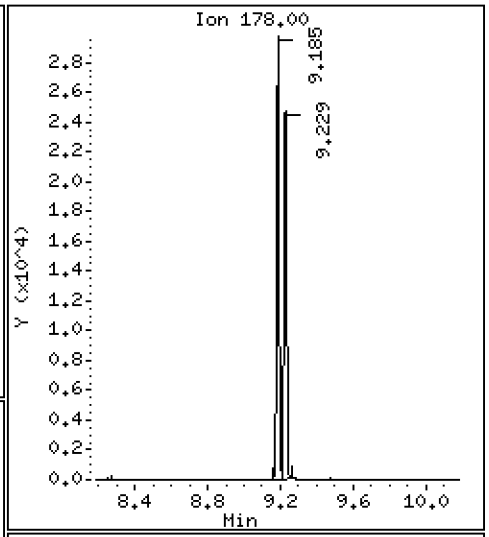
Concentration: 2.161 ug/L

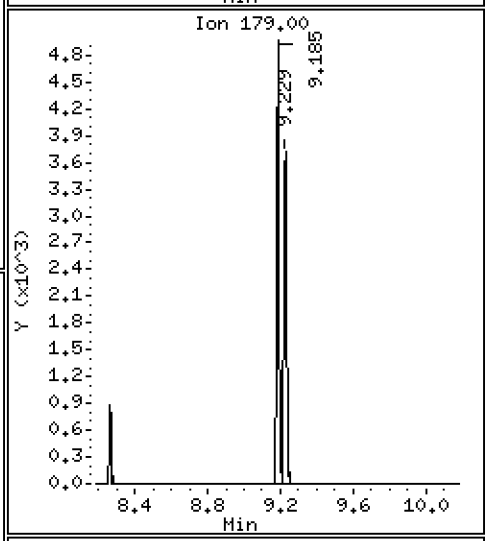


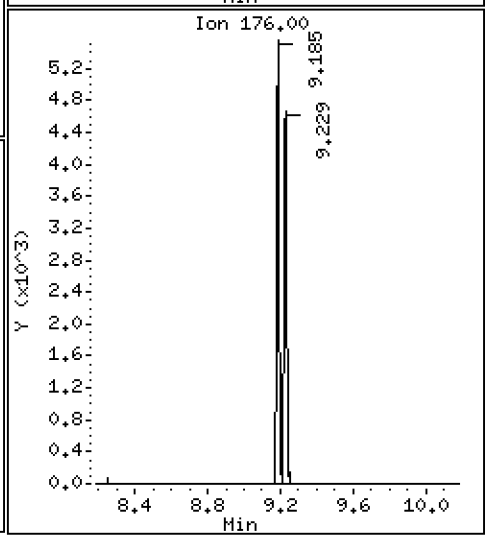












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

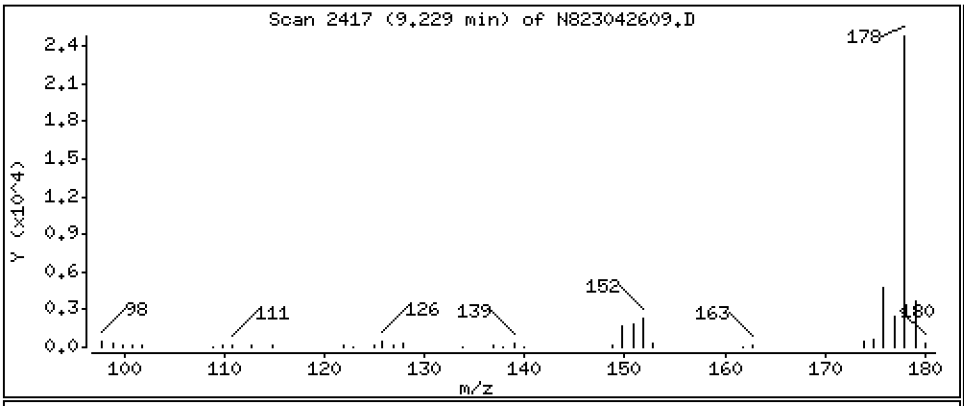
Operator: JZ

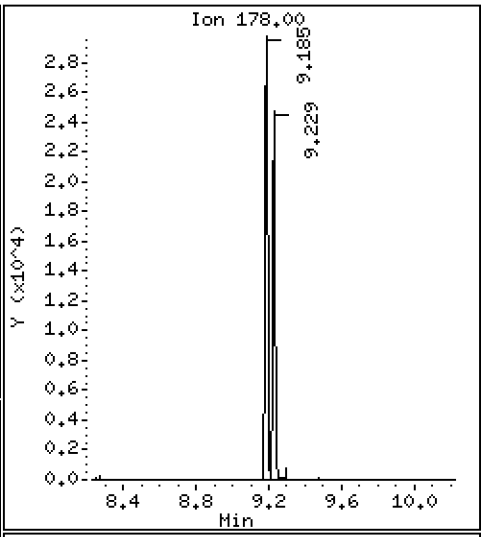
Column phase: Rxi-17sil

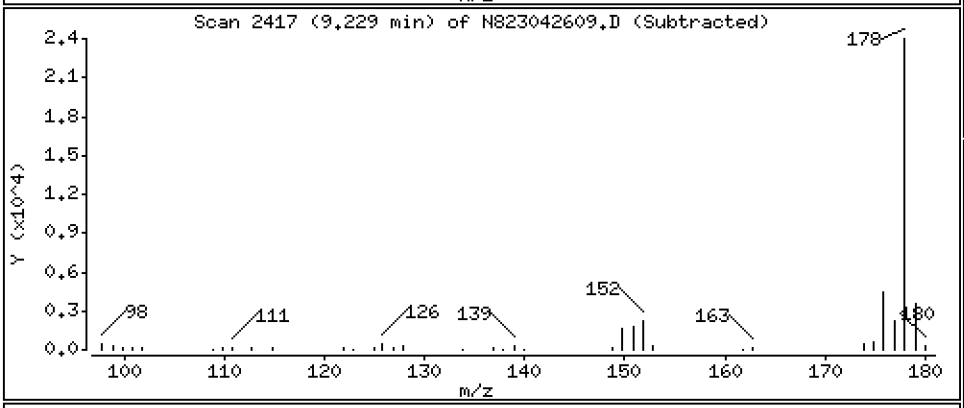
Column diameter: 0.25

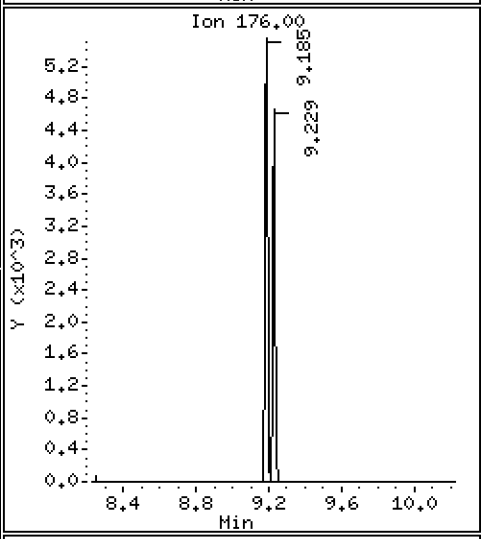
17 Anthracene

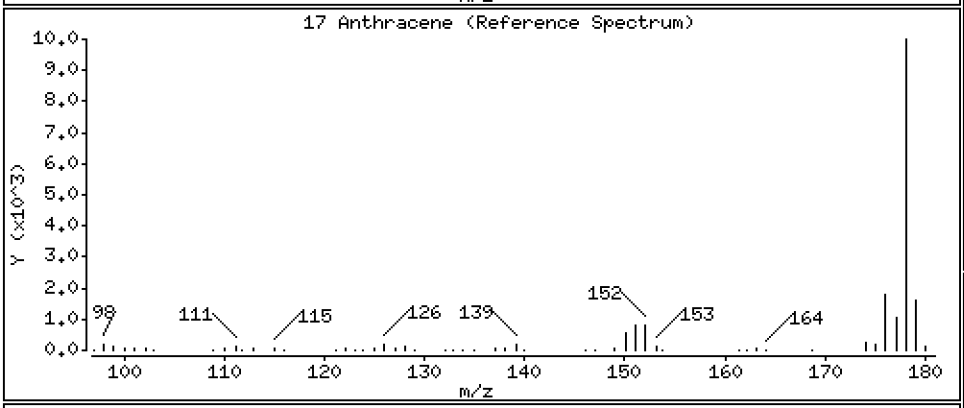
Concentration: 2.008 ug/L

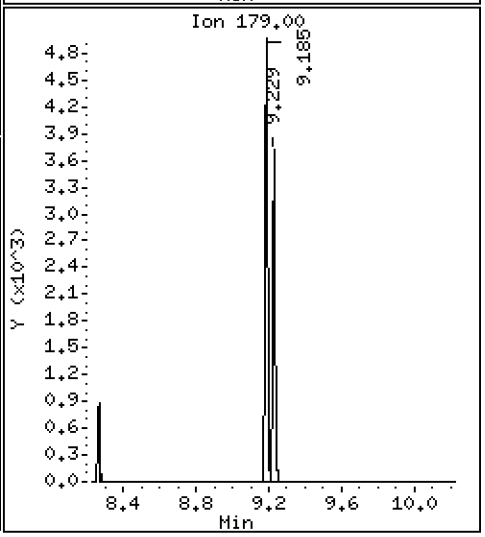


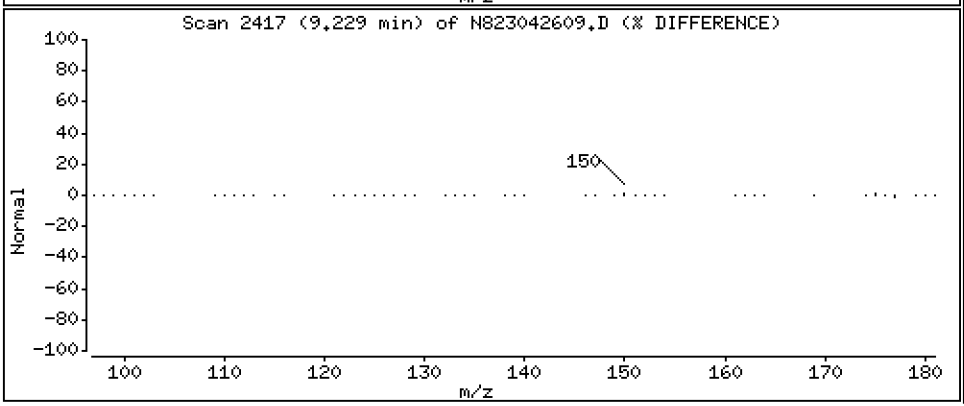












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

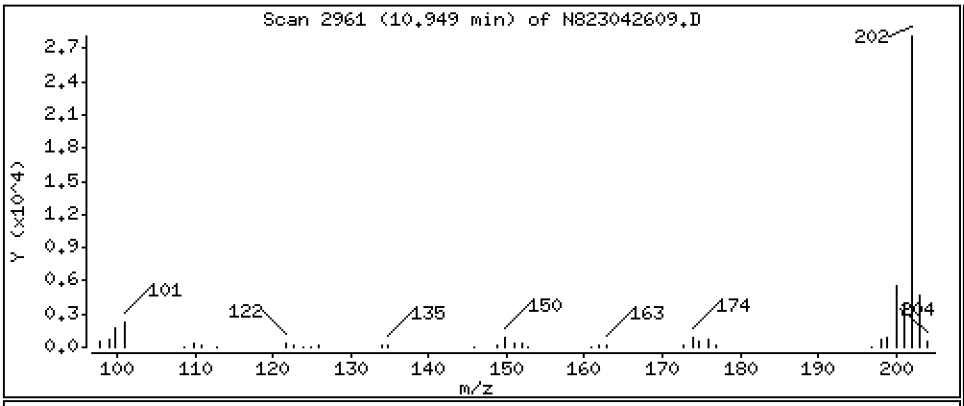
Operator: JZ

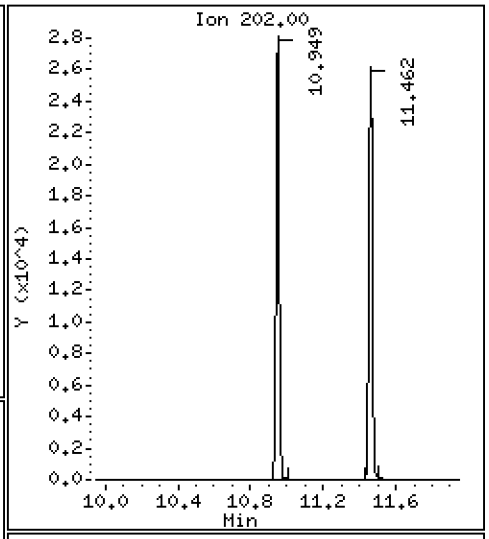
Column phase: Rxi-17sil

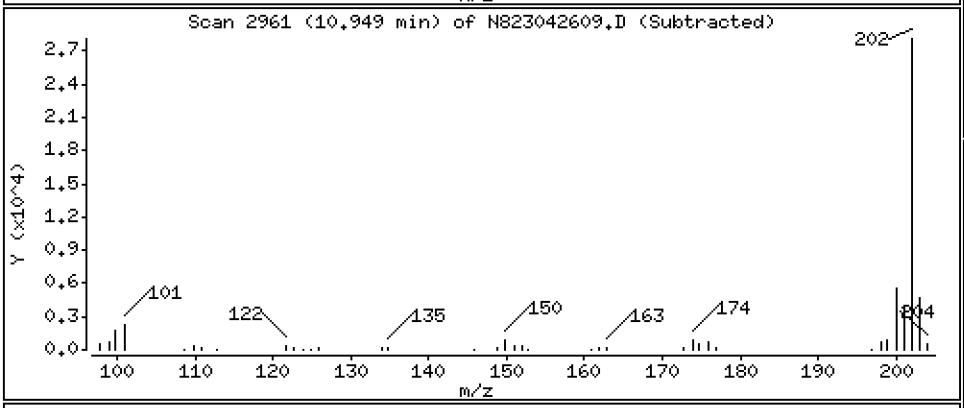
Column diameter: 0.25

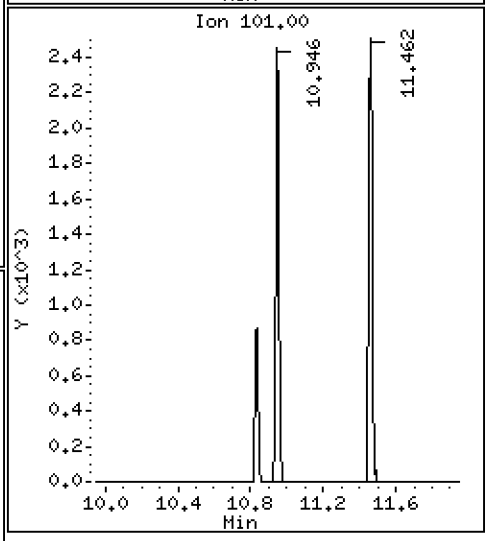
22 Fluoranthene

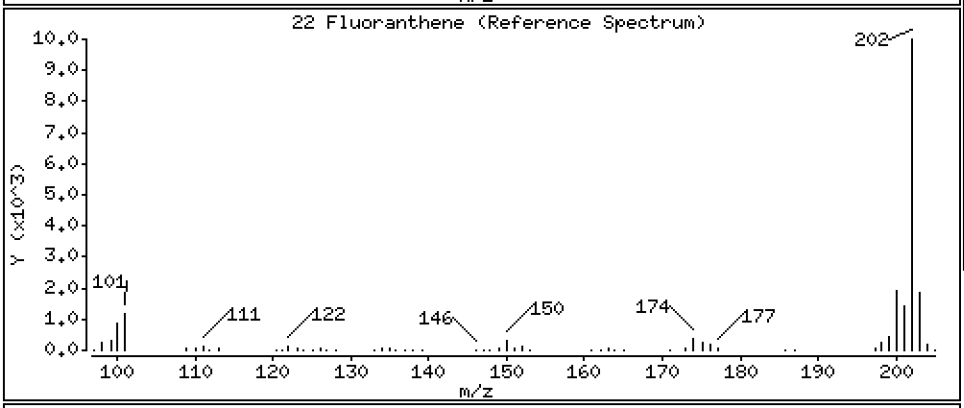
Concentration: 2.256 ug/L

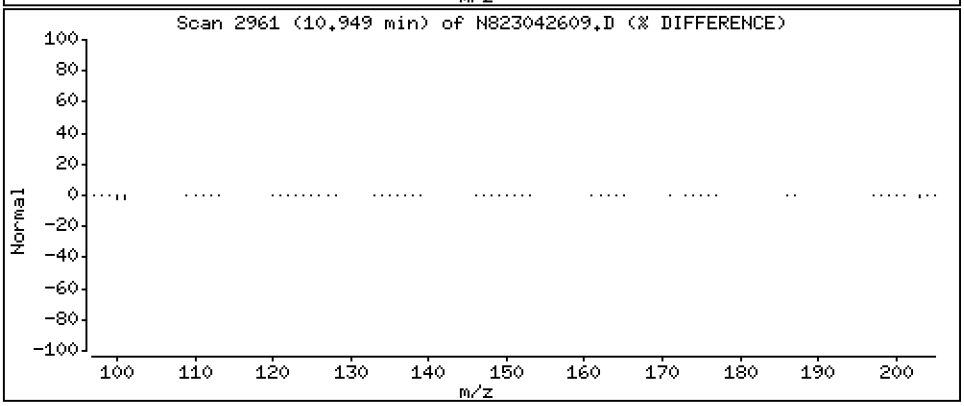












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

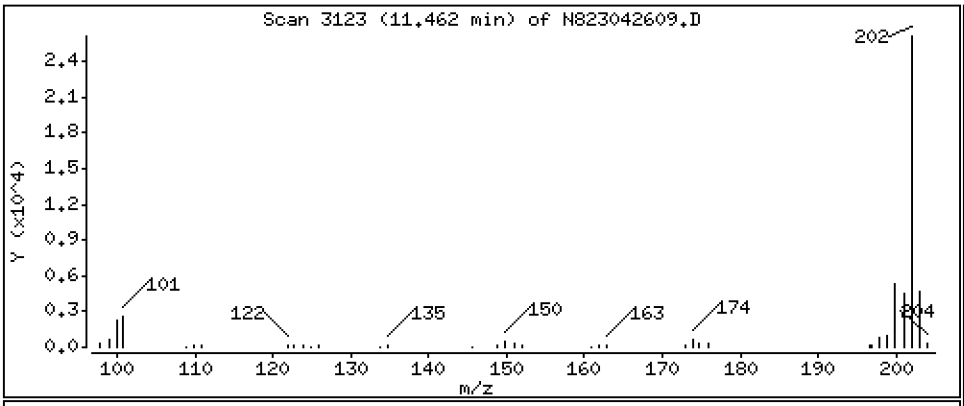
Operator: JZ

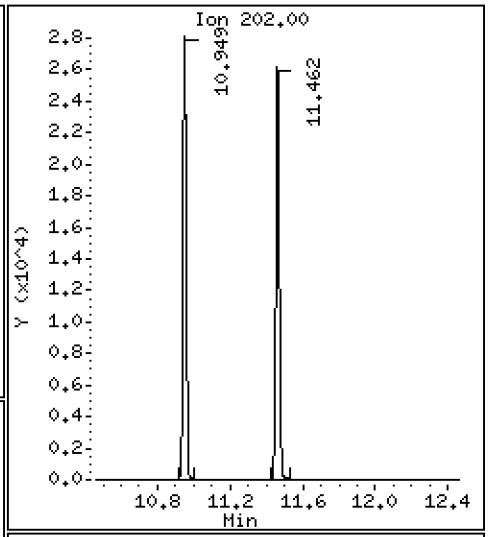
Column phase: Rxi-17sil

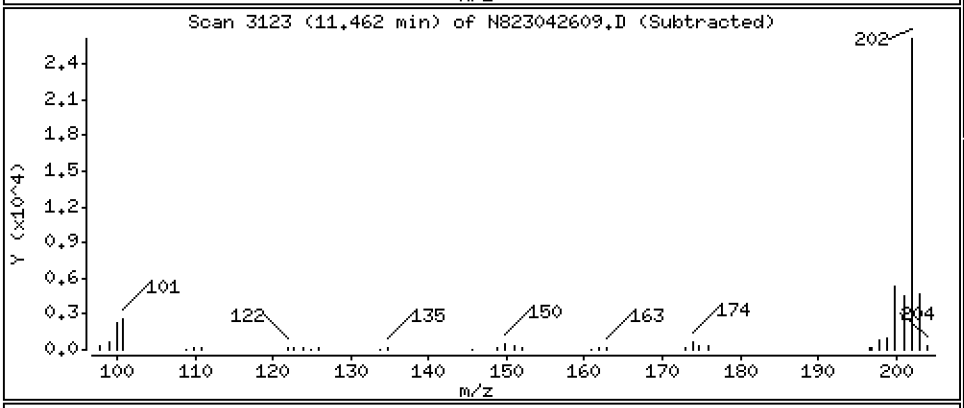
Column diameter: 0.25

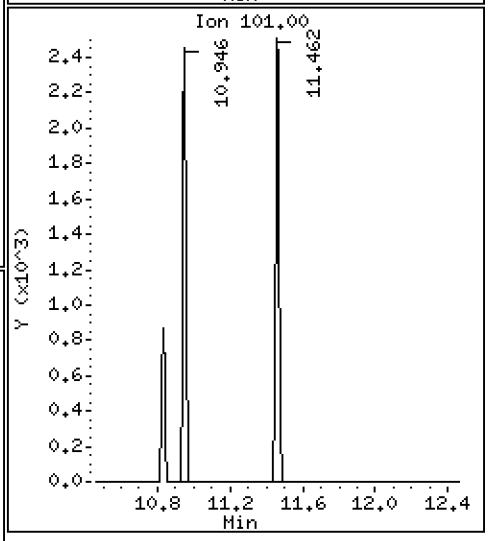
23 Pyrene

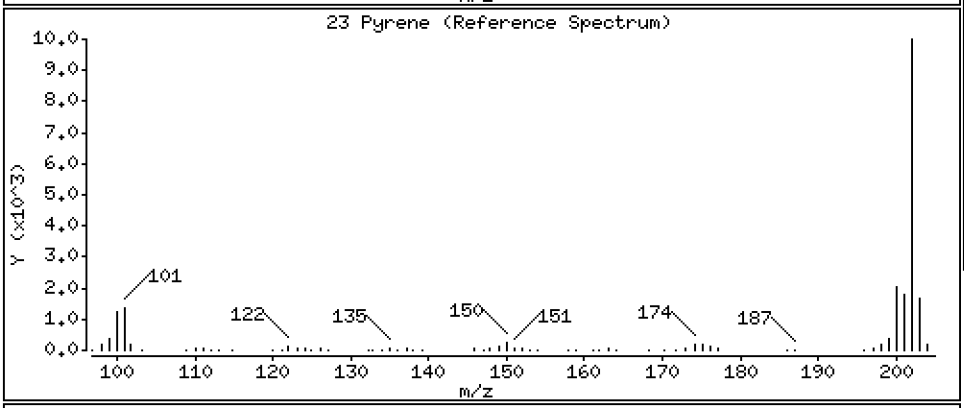
Concentration: 2.227 ug/L

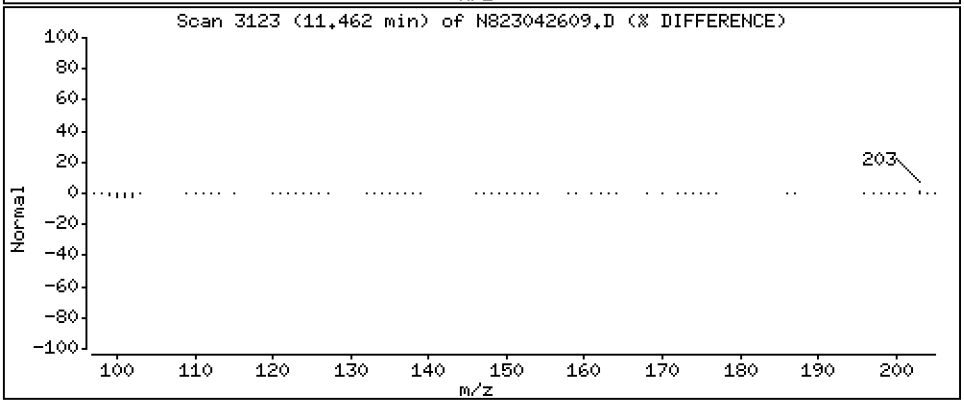












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

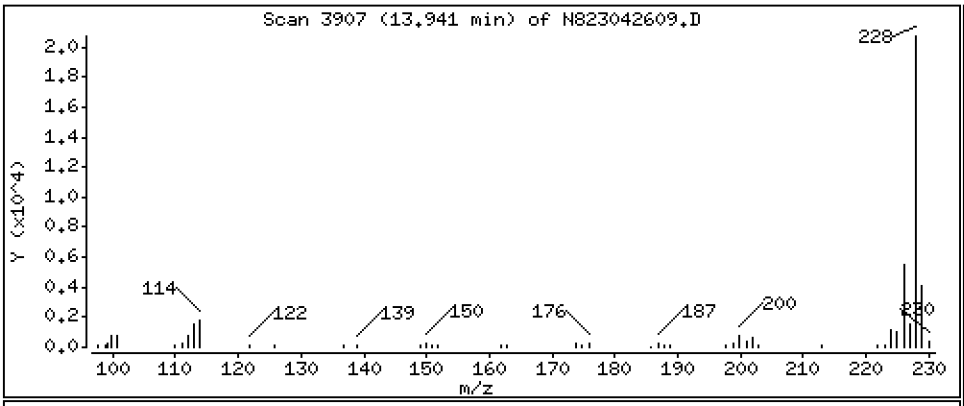
Operator: JZ

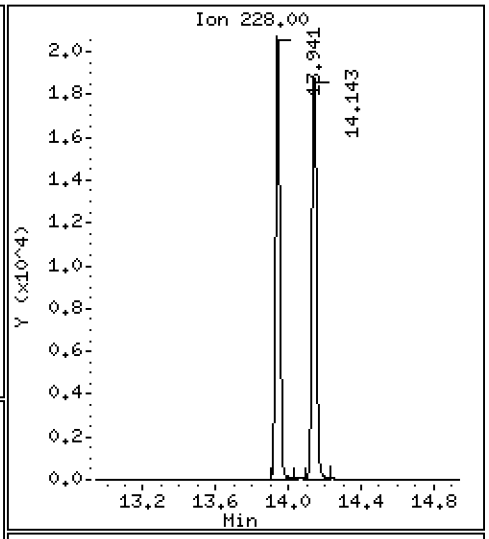
Column phase: Rxi-17sil

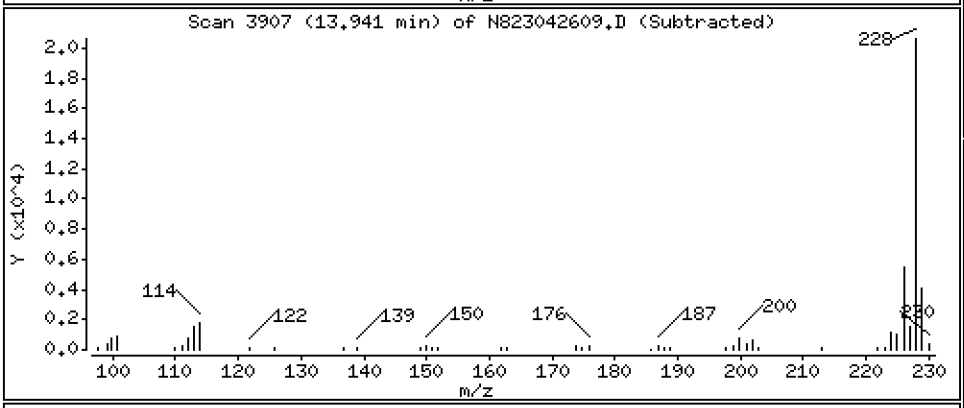
Column diameter: 0.25

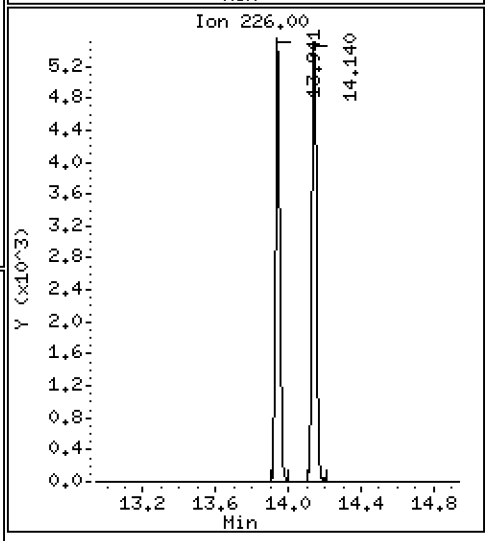
24 Benzo(a)anthracene

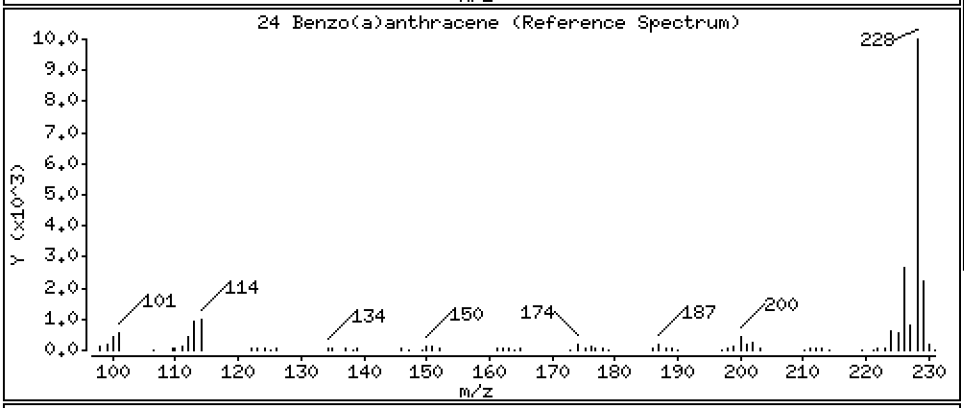
Concentration: 2.175 ug/L

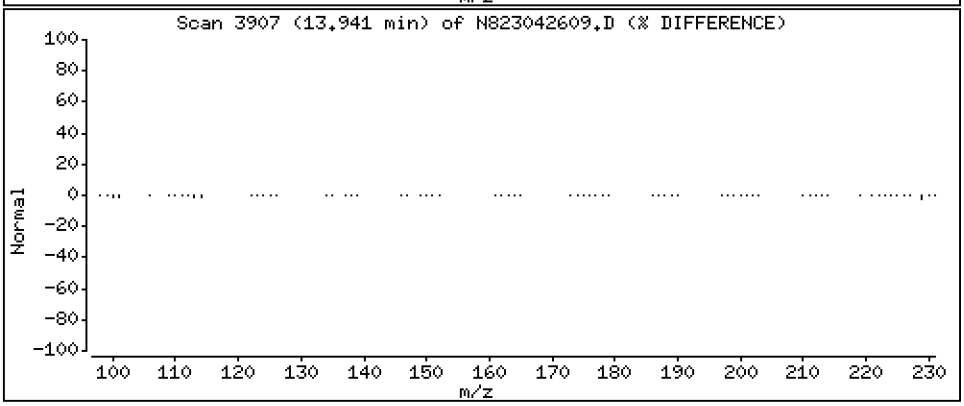












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

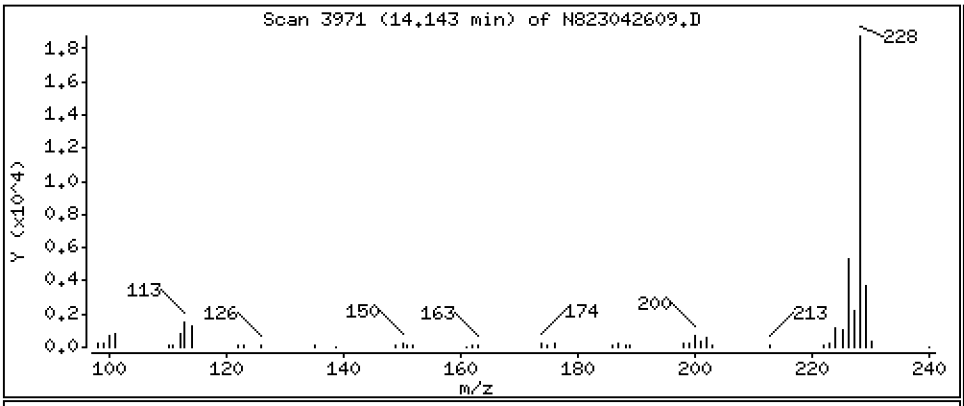
Operator: JZ

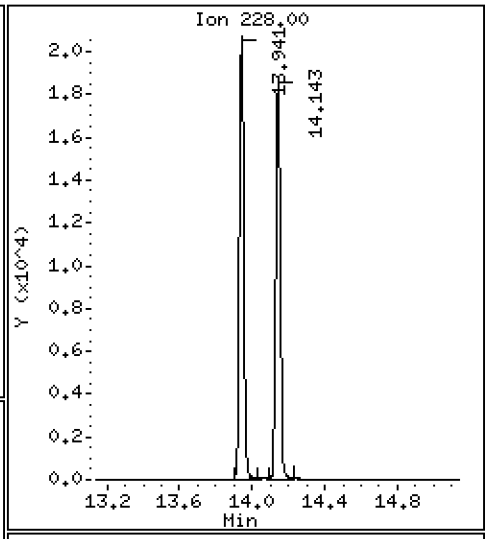
Column phase: Rxi-17sil

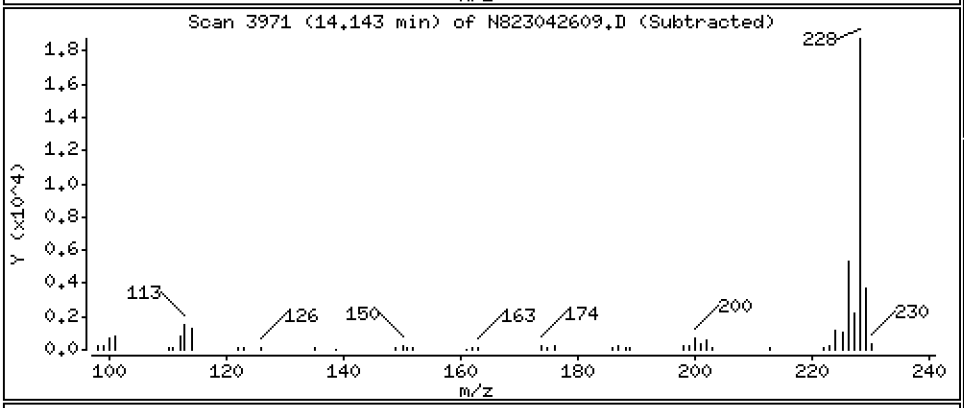
Column diameter: 0.25

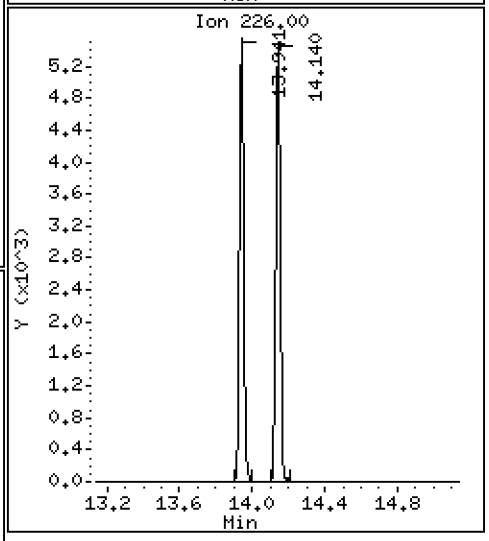
27 Chrysene

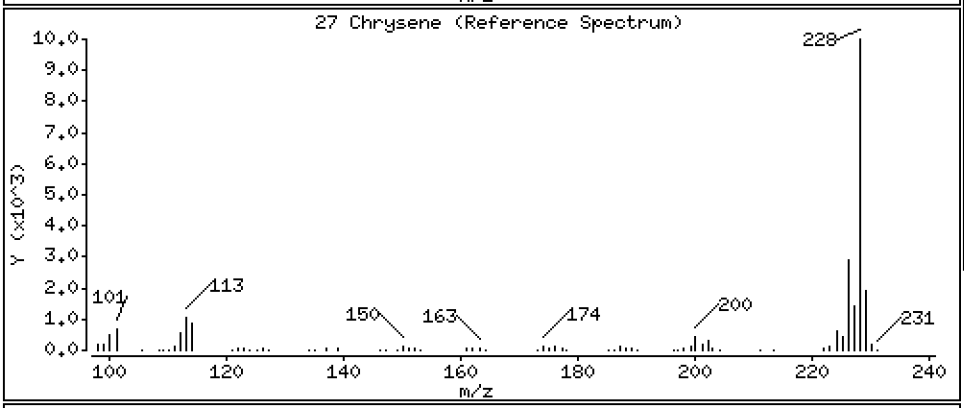
Concentration: 2.137 ug/L

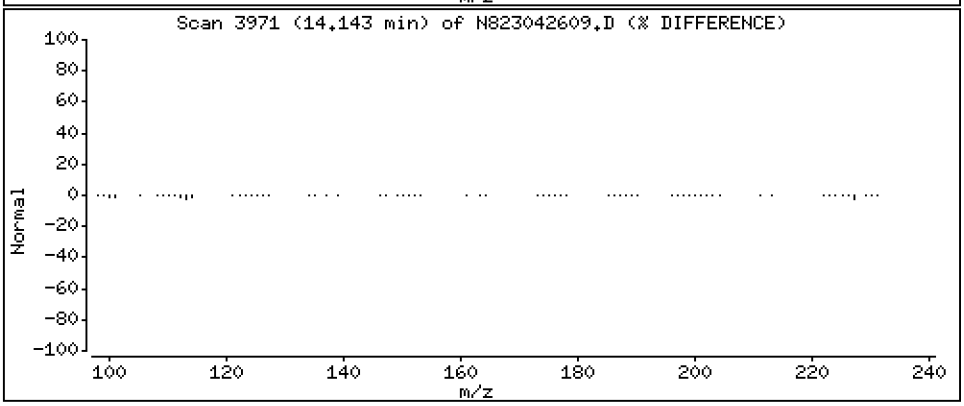












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

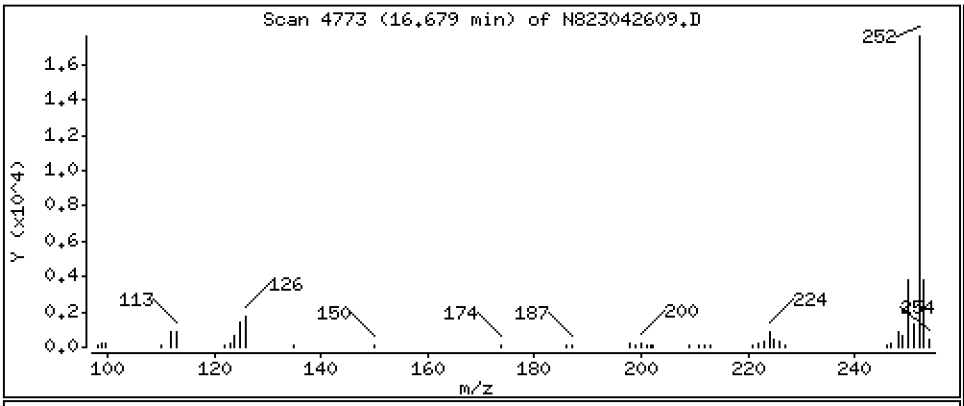
Operator: JZ

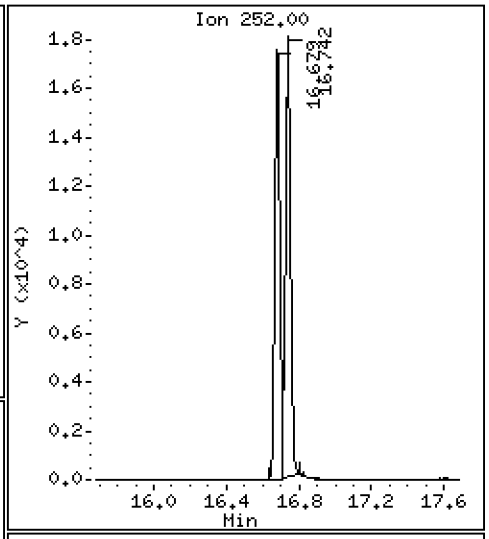
Column phase: Rxi-17sil

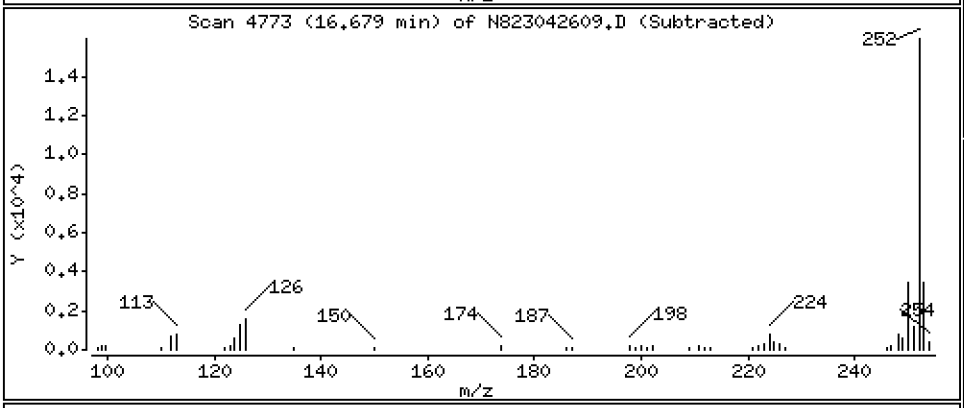
Column diameter: 0.25

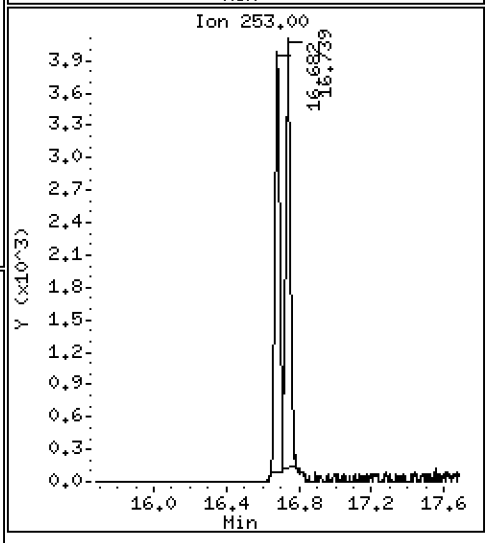
28 Benzo(b)fluoranthene

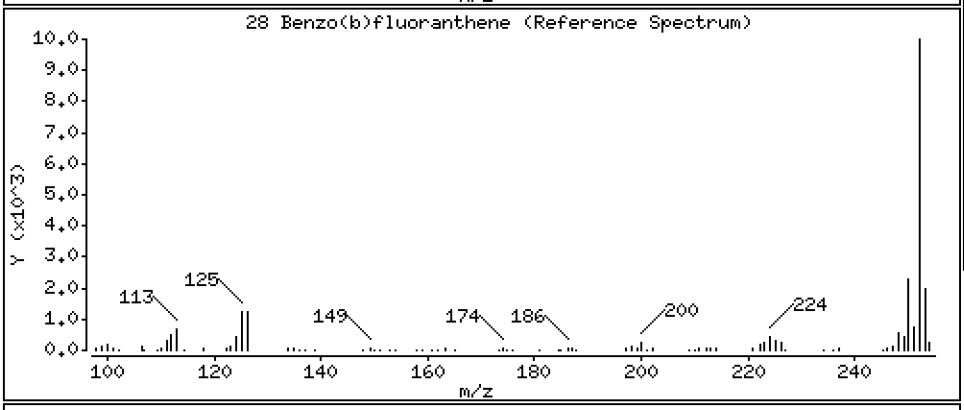
Concentration: 2.156 ug/L

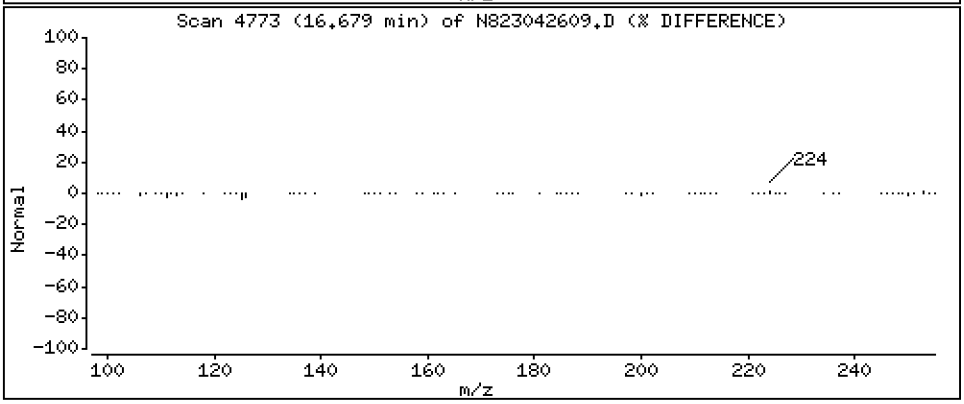












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

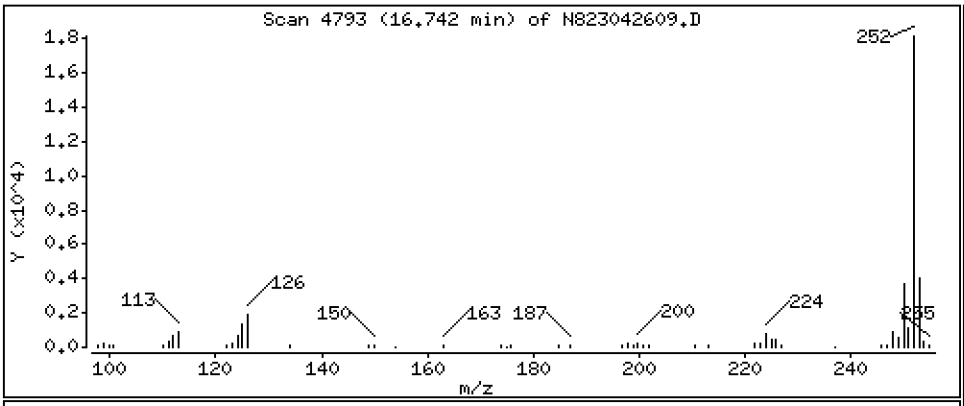
Operator: JZ

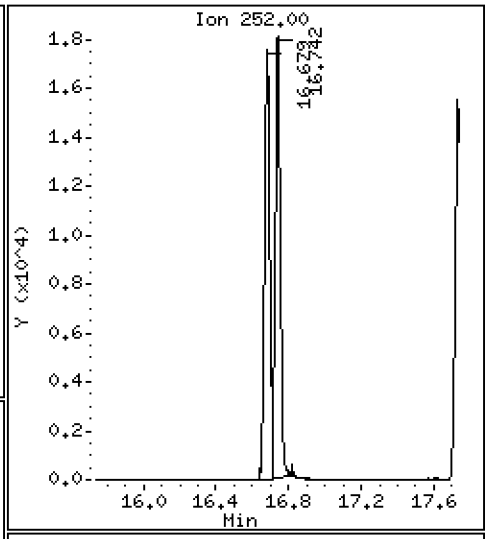
Column phase: Rxi-17sil

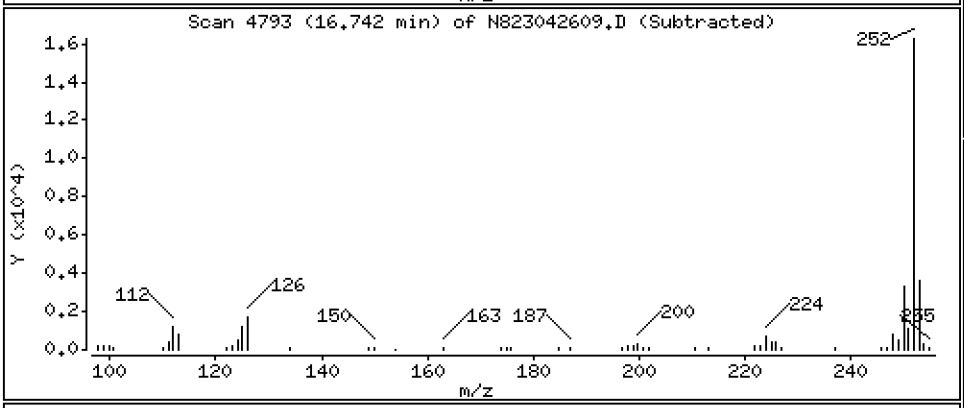
Column diameter: 0.25

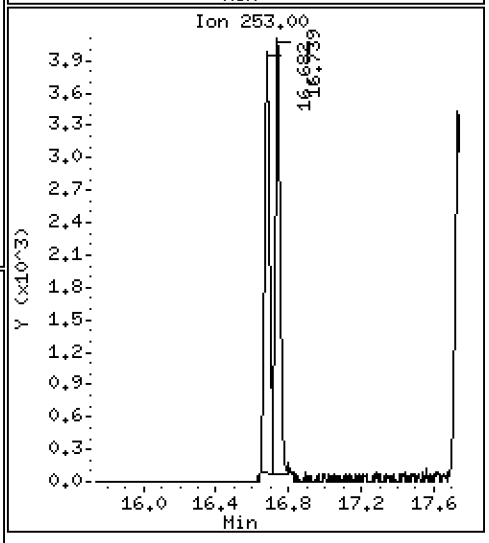
29 Benzo(k)fluoranthene

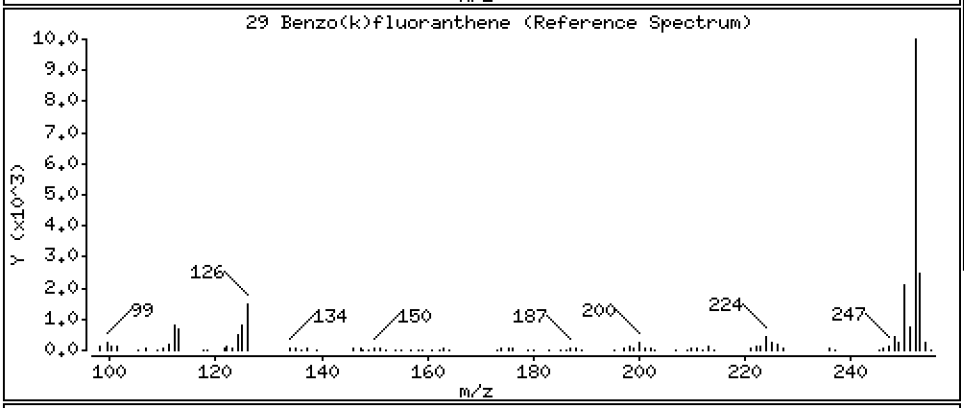
Concentration: 2.301 ug/L

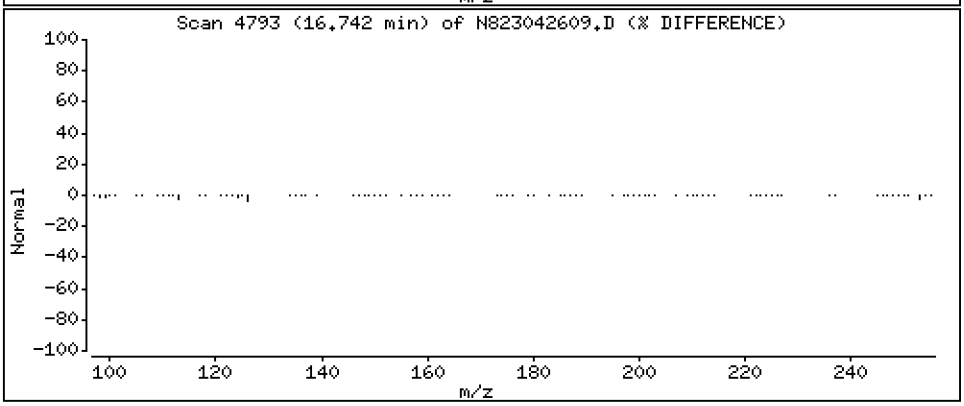












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

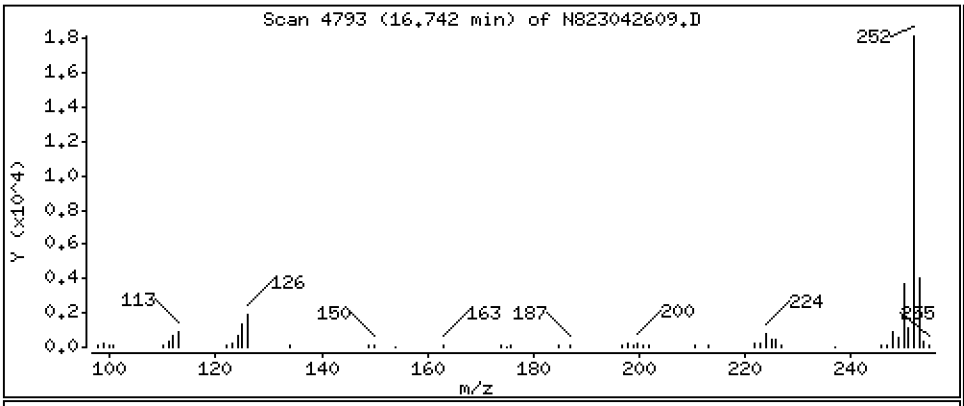
Operator: JZ

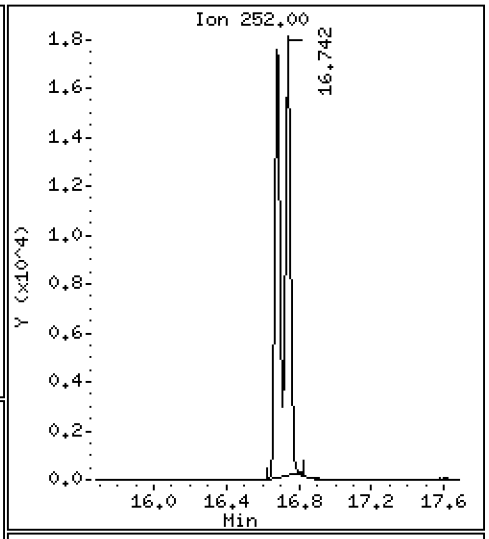
Column phase: Rxi-17sil

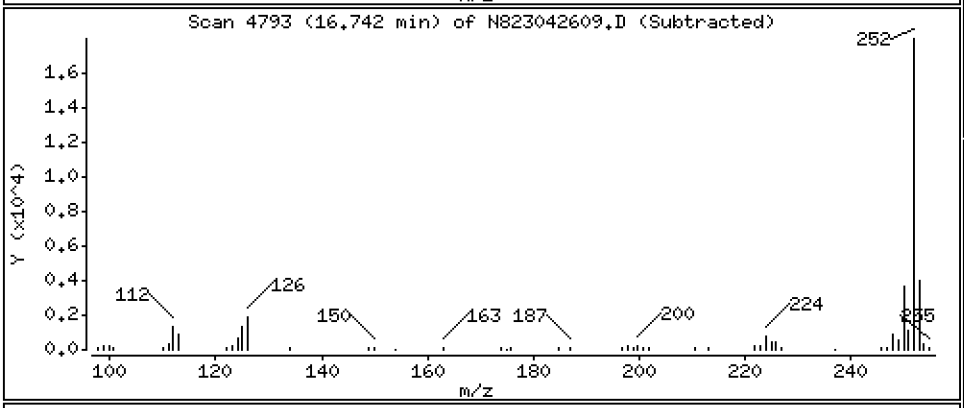
Column diameter: 0.25

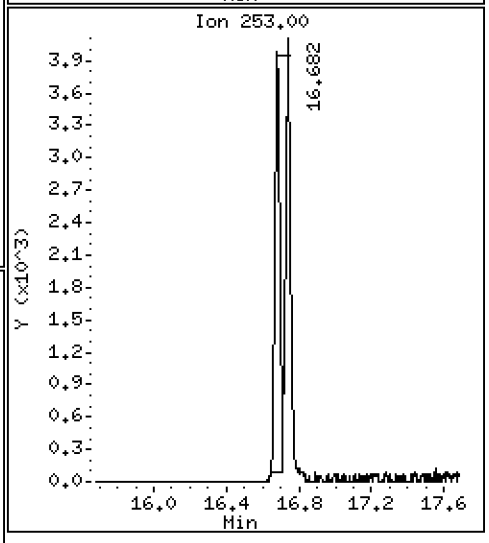
31 Total Benzofluoranthenes

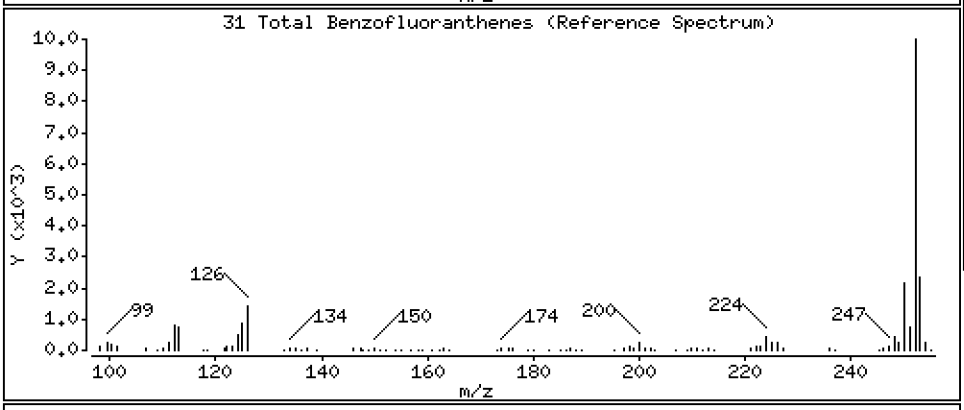
Concentration: 4.553 ug/L

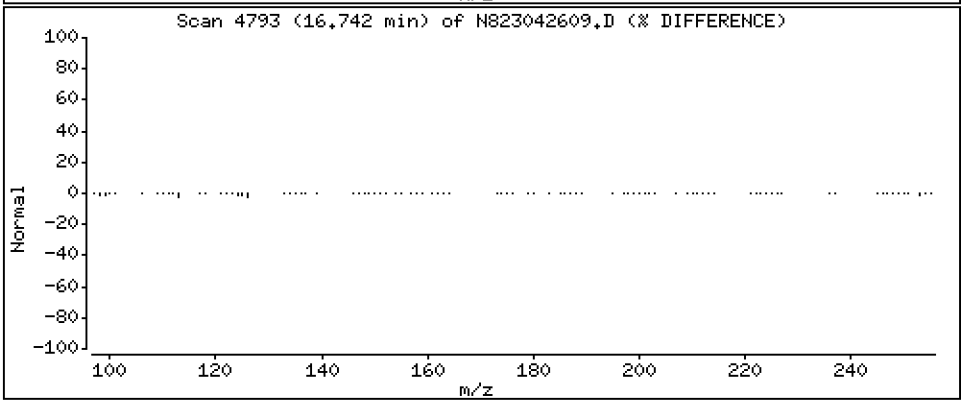












Data File: \\target\share\chem3\nt8.i\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

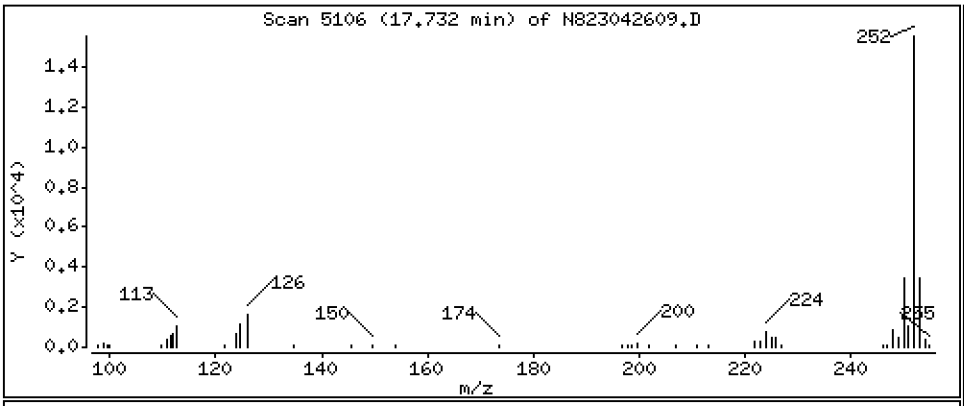
Operator: JZ

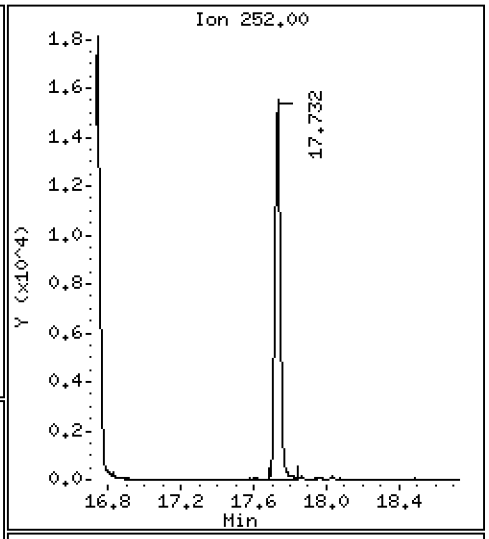
Column phase: Rxi-17sil

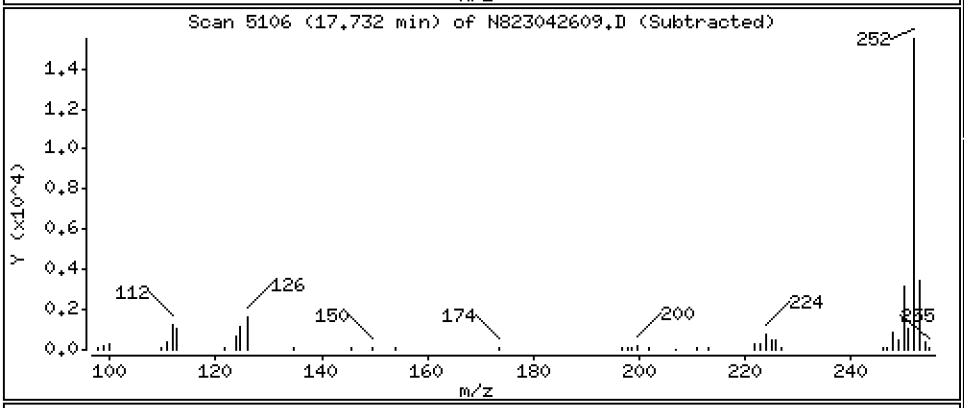
Column diameter: 0.25

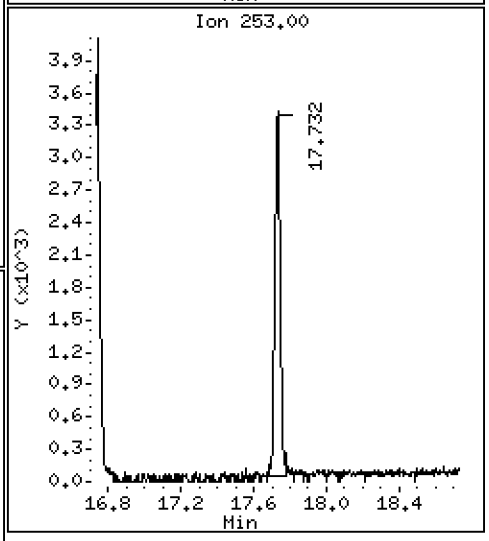
32 Benzo(a)pyrene

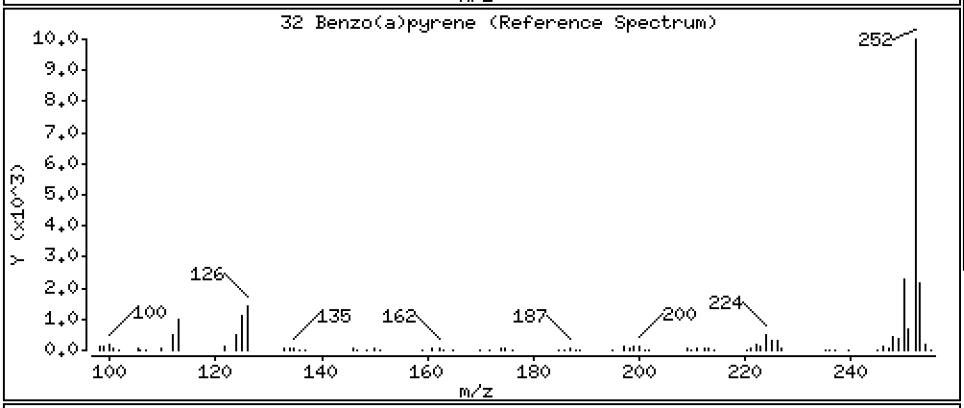
Concentration: 2.295 ug/L

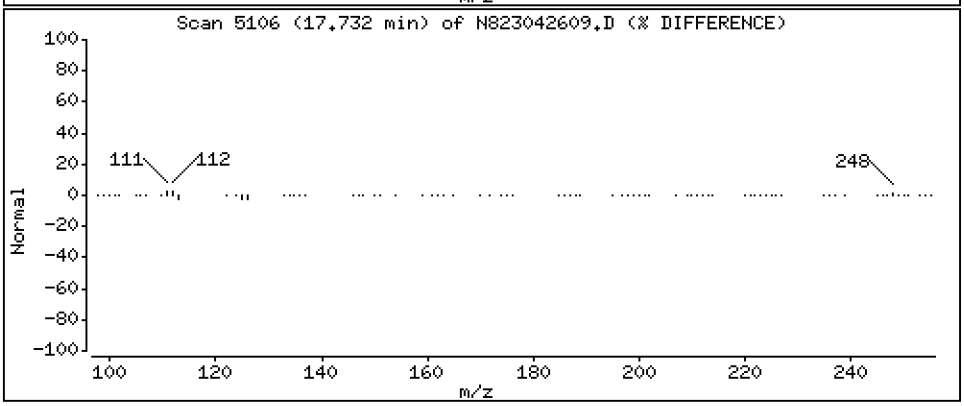












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

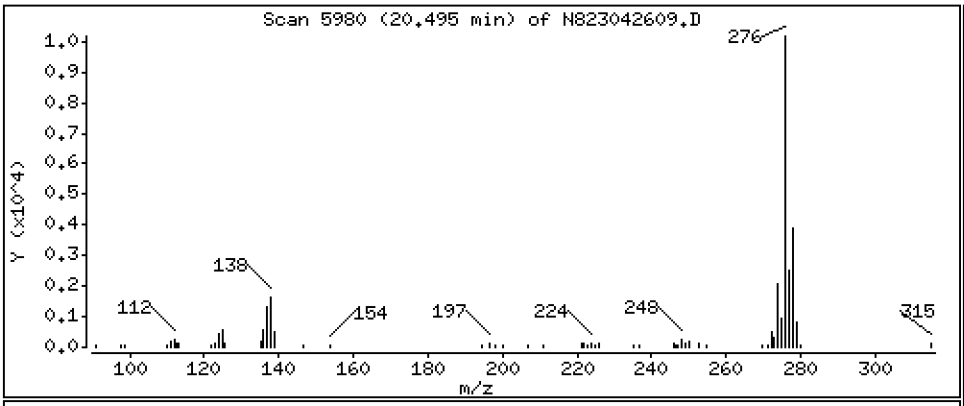
Operator: JZ

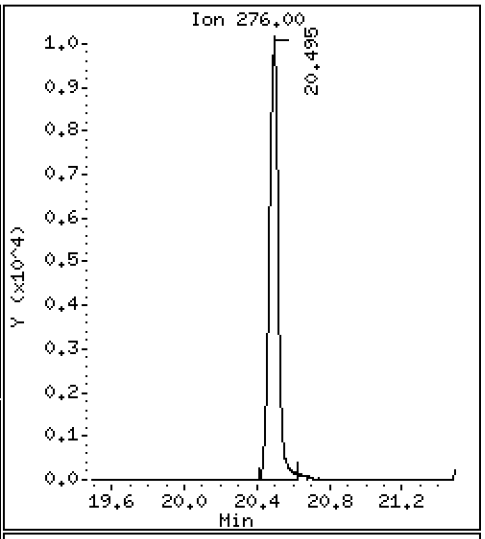
Column phase: Rxi-17sil

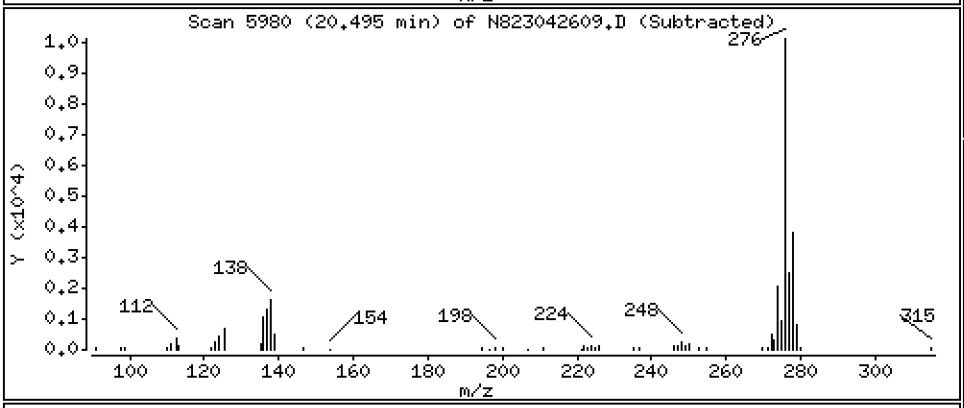
Column diameter: 0.25

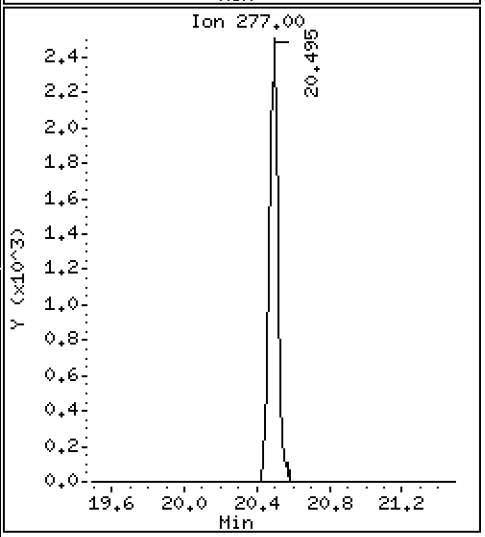
37 Indeno(1,2,3-cd)pyrene

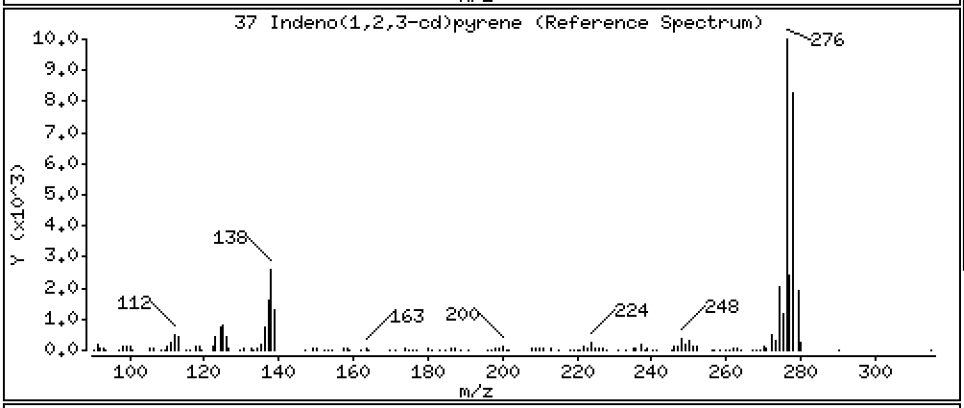
Concentration: 2.450 ug/L

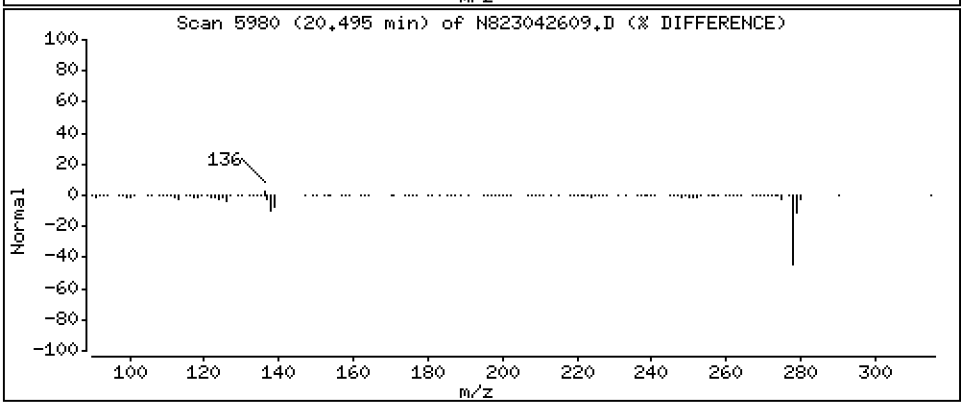












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

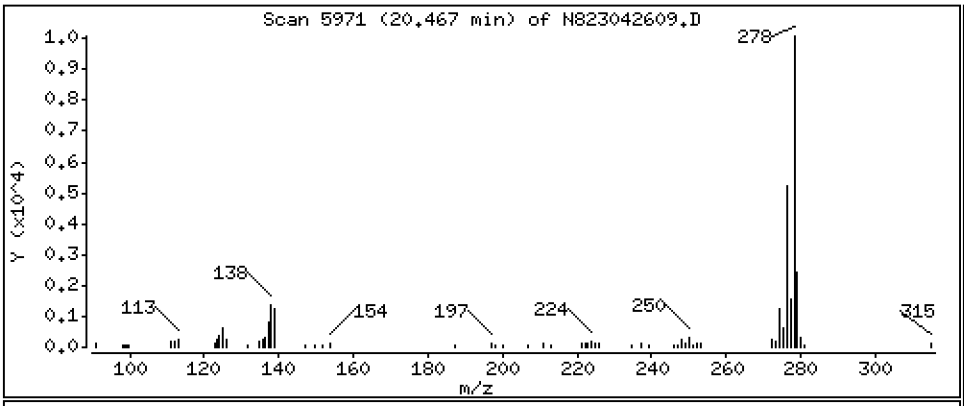
Operator: JZ

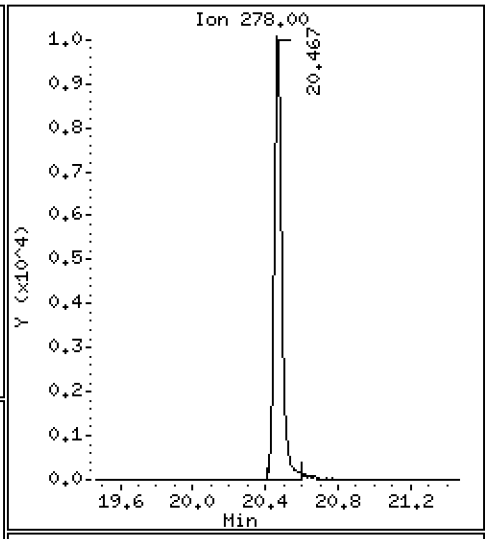
Column phase: Rxi-17sil

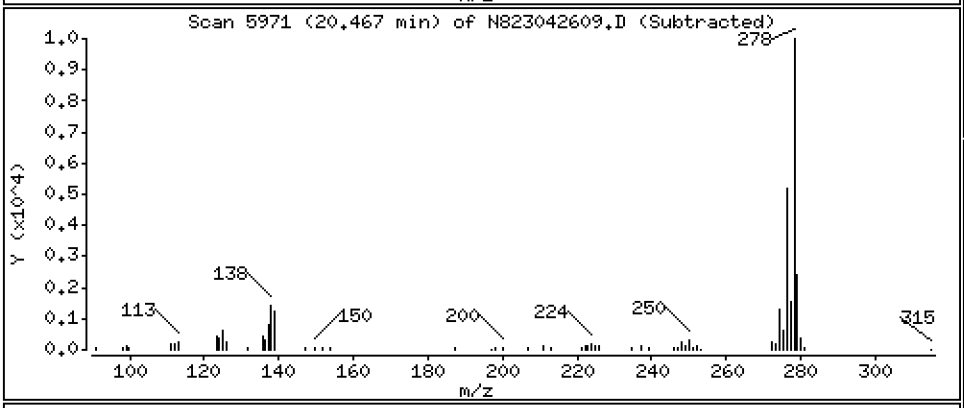
Column diameter: 0.25

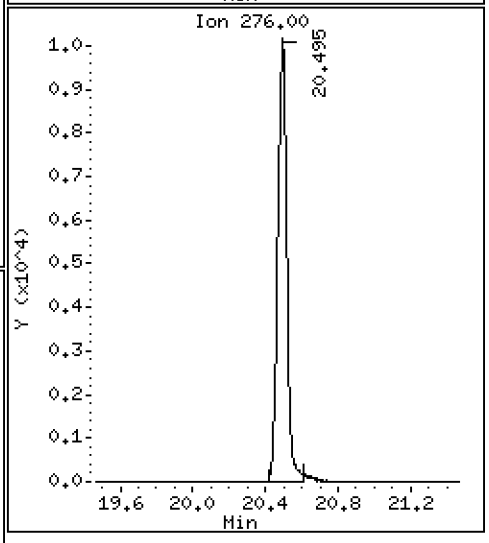
38 Dibenzo(a,h)anthracene

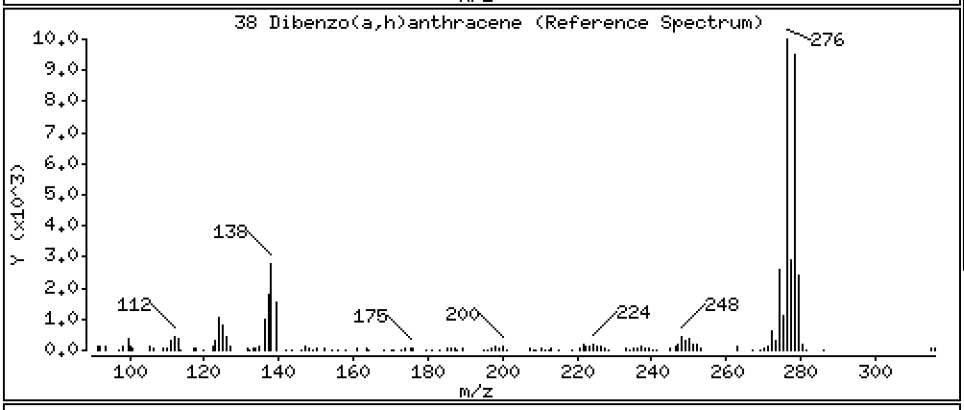
Concentration: 2.334 ug/L

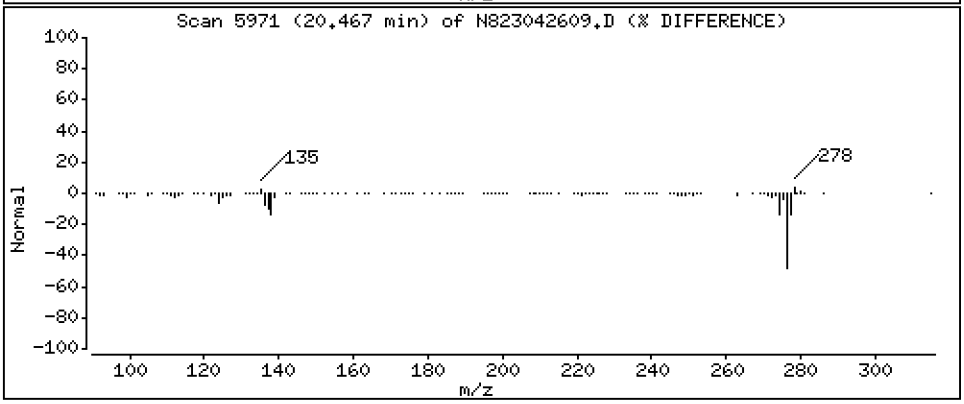












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

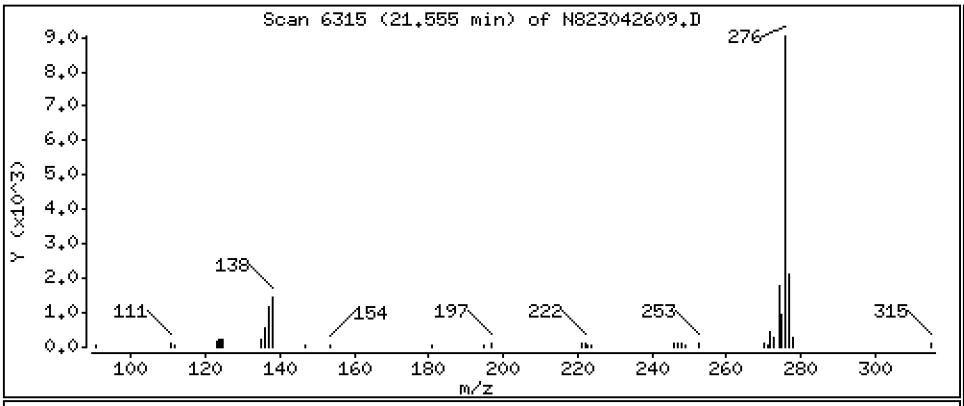
Operator: JZ

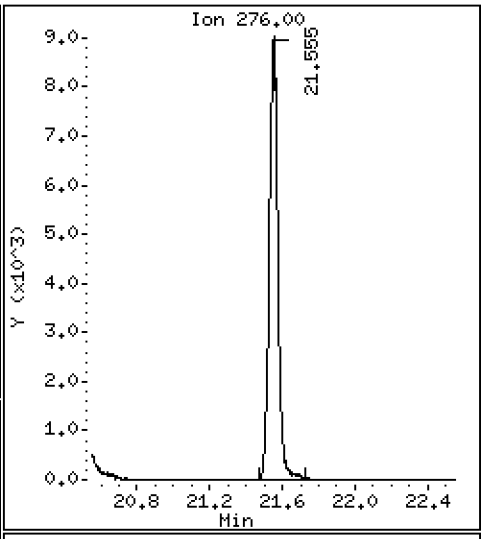
Column phase: Rxi-17sil

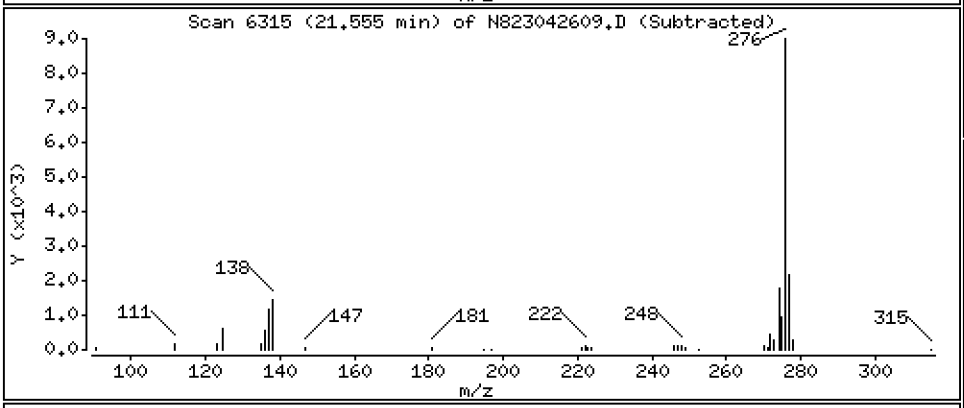
Column diameter: 0.25

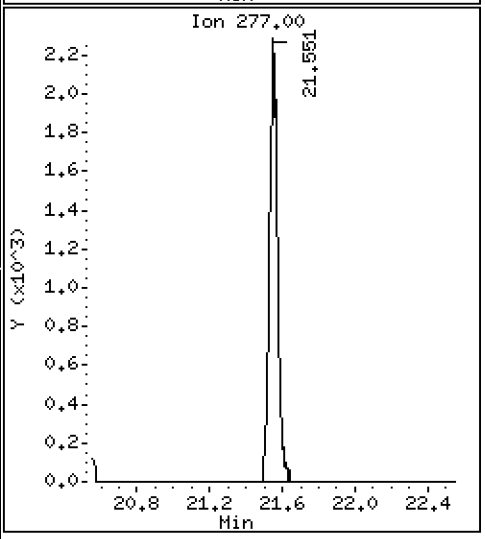
39 Benzo(g,h,i)perylene

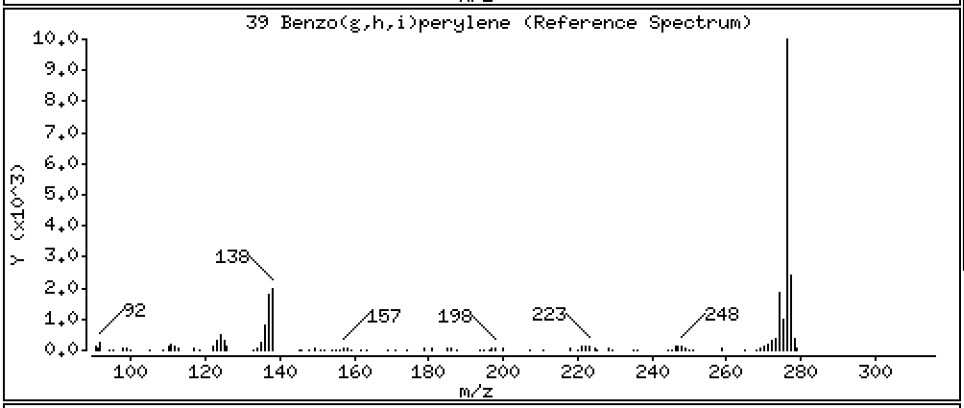
Concentration: 2.248 ug/L

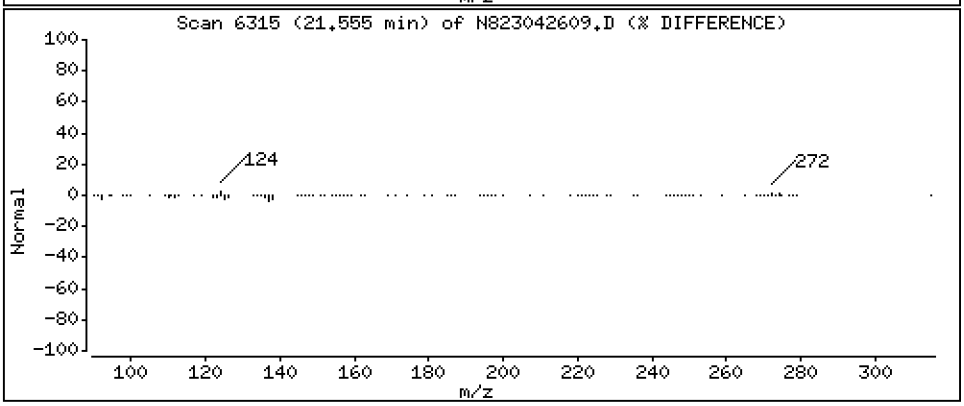












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230426.b\N823042609.D
Lab Smp Id: SLD0372-SCV1
Inj Date : 26-APR-2023 20:49
Operator : JZ Inst ID: nt8.i
Smp Info : SCV230426
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Meth Date : 27-Apr-2023 11:00 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnascv.sub
Target Version: 4.14
Processing Host: JIANQING-202105

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Vo	500.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
*	1 Naphthalene-d8	136	4.827	4.827	(1.000)	20718	2.00000	
	2 Naphthalene	128	4.856	4.856	(1.006)	24938	2.36264	2.363
$	3 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	4 2-Methylnaphthalene	141	5.605	5.605	(1.161)	14334	2.39183	2.392
	5 1-methylnaphthalene	141	5.801	5.801	(1.202)	14142	2.38001	2.380
	9 Acenaphthylene	152	7.003	7.003	(0.984)	25991	2.32237	2.322
*	10 Acenaphthene-d10	164	7.113	7.110	(1.000)	12642	2.00000	
	11 Acenaphthene	153	7.161	7.161	(1.007)	16198	2.23392	2.234
	12 Dibenzofuran	168	7.316	7.313	(1.028)	27419	2.51765	2.518
	14 Fluorene	166	7.790	7.790	(1.095)	19927	2.29268	2.293
*	15 Phenanthrene-d10	188	9.150	9.150	(1.000)	24547	2.00000	
	16 Phenanthrene	178	9.184	9.185	(1.004)	28095	2.16083	2.161
	17 Anthracene	178	9.229	9.226	(1.009)	24487	2.00809	2.008
	22 Fluoranthene	202	10.949	10.949	(1.197)	33741	2.25628	2.256
$	21 Fluoranthene-d10	212	Compound Not Detected.					
	23 Pyrene	202	11.461	11.461	(0.815)	34528	2.22695	2.227
	24 Benzo(a)anthracene	228	13.940	13.940	(0.991)	34655	2.17519	2.175
*	25 Chrysene-d12	240	14.070	14.067	(1.000)	24217	2.00000	
	27 Chrysene	228	14.142	14.139	(1.005)	33440	2.13657	2.137
	28 Benzo(b)fluoranthene	252	16.678	16.682	(0.929)	35085	2.15649	2.156
	29 Benzo(k)fluoranthene	252	16.742	16.739	(0.932)	35276	2.30130	2.301
	31 Total Benzofluoranthenes	252	16.742	16.682	(0.932)	68883	4.55291	4.553(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	32 Benzo(a)pyrene	252	17.731	17.731	(0.987)	32452	2.29472	2.295
*	33 Perylene-d12	264	17.959	17.959	(1.000)	24956	2.00000	
	37 Indeno(1,2,3-cd)pyrene	276	20.495	20.492	(1.141)	35264	2.44967	2.450
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	20.466	20.467	(1.140)	29838	2.33423	2.334
	39 Benzo(g,h,i)perylene	276	21.554	21.551	(1.200)	29972	2.24768	2.248

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042609.D
Lab Smp Id: SLD0372-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230426.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	20718	10.80
10 Acenaphthene-d10	10729	5365	21458	12642	17.83
15 Phenanthrene-d10	20748	10374	41496	24547	18.31
25 Chrysene-d12	20954	10477	41908	24217	15.57
33 Perylene-d12	21563	10782	43126	24956	15.74

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.01
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	0.04
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	-0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.02
33 Perylene-d12	17.96	17.46	18.46	17.96	-0.00

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

REVIEW SUMMARY FOR FILE - N823042609.D

Lab ID: SLD0372-SCV1
nt8.i, 20230426.b\FSIMPNA230426.m,   26-APR-2023 20:49

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

No RRT check performed

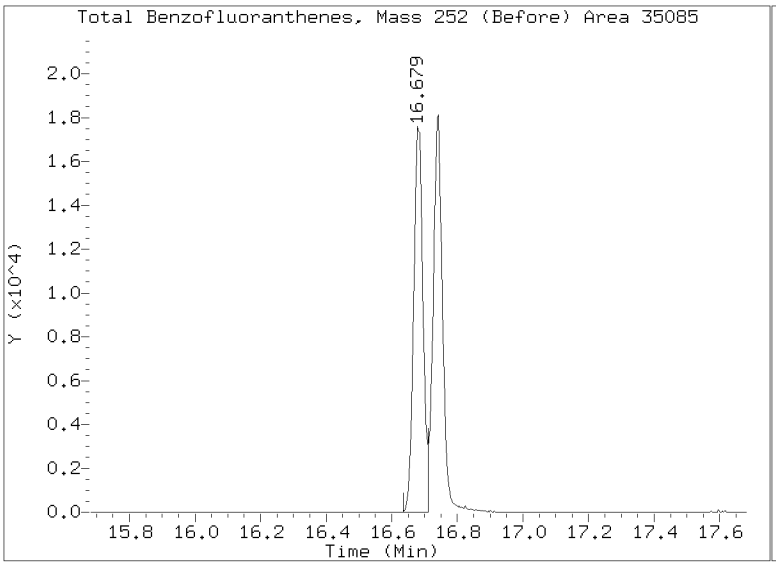
On Column LOD for nt8.i, 20230426.b\FSIMPNA230426.m, pnascv.sub = 0.0500

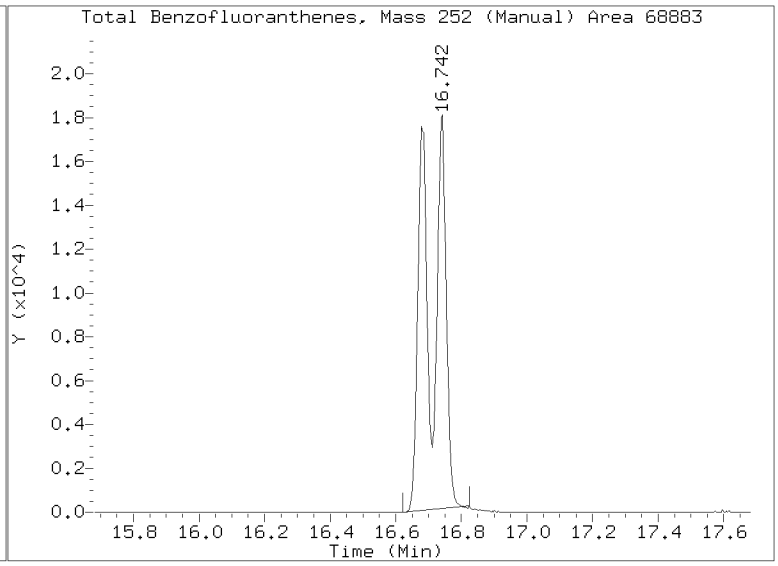
Exception: Benzo(b)fluoranthene 0.0300
Exception: Benzo(k)fluoranthene 0.0300
Exception: Total Benzofluoranthenes 0.0300
Exception: Fluoranthene-d10 (Surr) 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230426.b/N823042609.D
Injection Date: 26-APR-2023 20:49
Lab ID:SLD0372-SCV1 Client ID:
Report Date: 04/27/2023 11:03





SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GA00050
Laboratory ID: SLA0213-SCV1
Sequence: SLA0213
Sequence Name: 8270 SIM PNA SCV
Standard ID: L000686

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Naphthalene	2.5000	2.63	5.0	
2-Methylnaphthalene	2.5000	2.67	6.8	
1-Methylnaphthalene	2.5000	2.65	6.0	
Acenaphthylene	2.5000	2.82	12.8	
Acenaphthene	2.5000	2.60	4.0	
Dibenzofuran	2.5000	2.86	14.4	
Fluorene	2.5000	2.63	5.2	
Phenanthrene	2.5000	2.45	-2.1	
Anthracene	2.5000	2.27	-9.2	
Fluoranthene	2.5000	2.65	6.1	
Pyrene	2.5000	2.46	-1.5	
Benzo(a)anthracene	2.5000	2.59	3.5	
Chrysene	2.5000	2.40	-4.0	
Benzo(b)fluoranthene	2.5000	2.51	0.3	
Benzo(k)fluoranthene	2.5000	2.66	6.2	
Benzofluoranthenes, Total	5.0000	5.48	9.6	
Benzo(a)pyrene	2.5000	2.57	2.9	
Indeno(1,2,3-cd)pyrene	2.5000	2.69	7.6	
Dibenzo(a,h)anthracene	2.5000	2.49	-0.3	
Benzo(g,h,i)perylene	2.5000	2.48	-0.7	

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

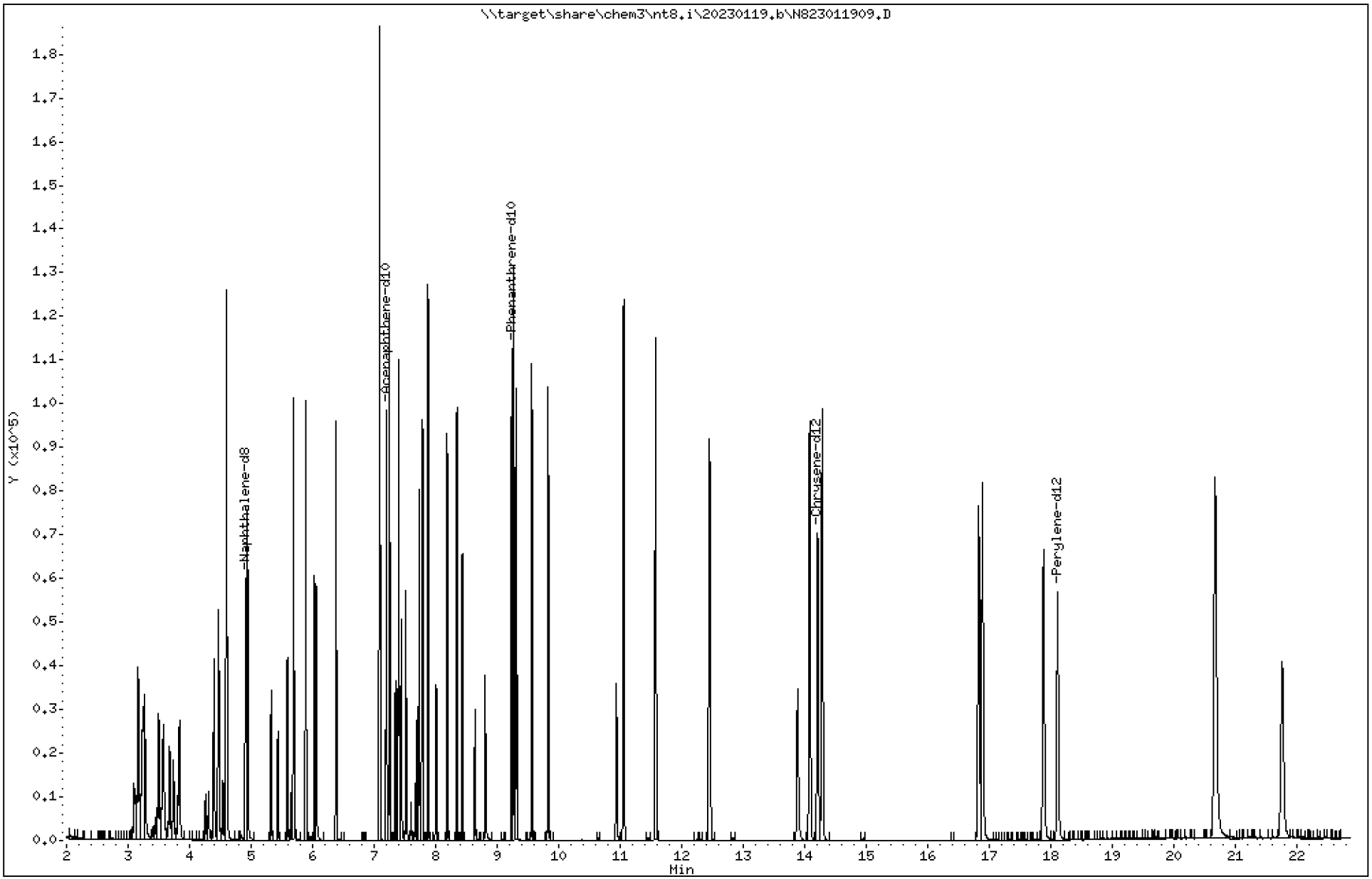
Sample Info: SCV230119

Volume Injected (uL): 1.0

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



23A0207 CLPLIKE (Rev3) - Page 908 of 3315

Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

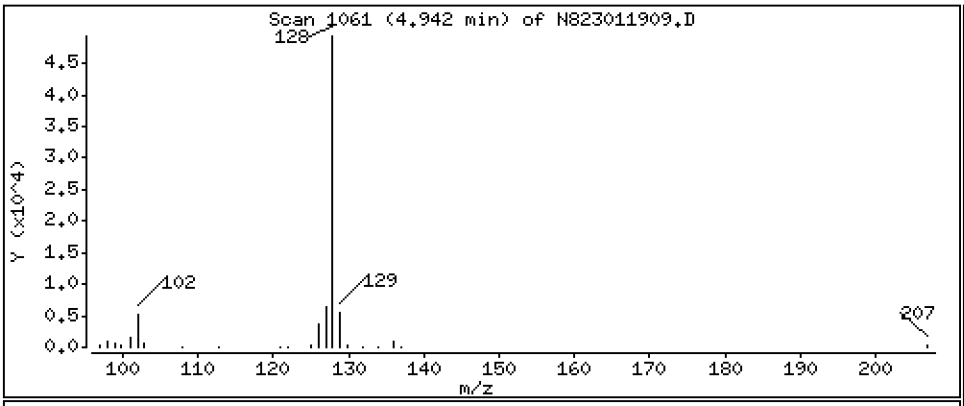
Operator: JZ

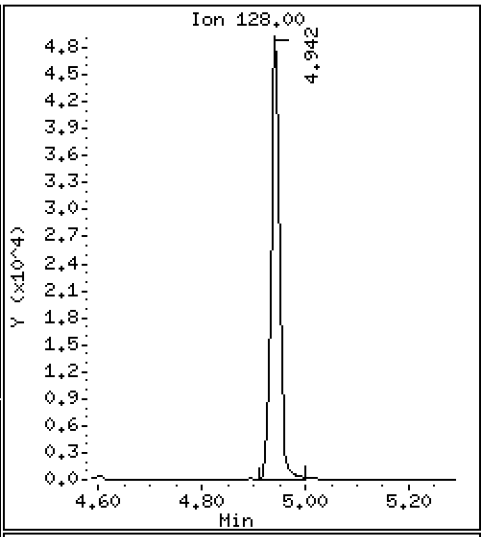
Column phase: Rxi-17sil

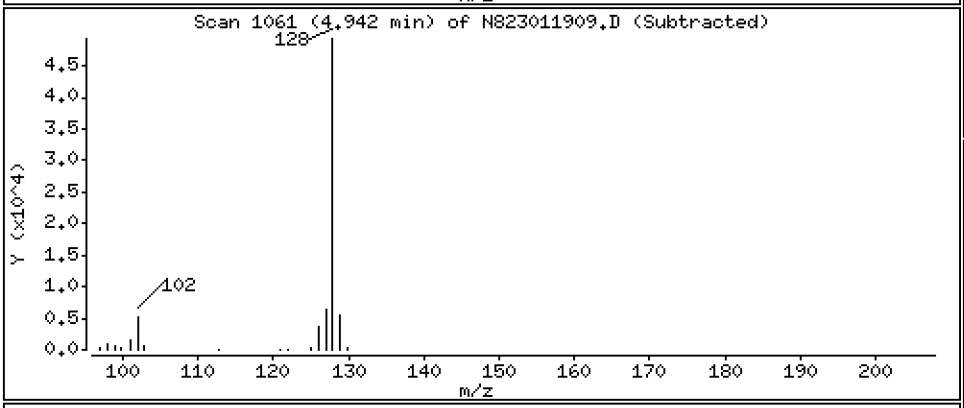
Column diameter: 0.25

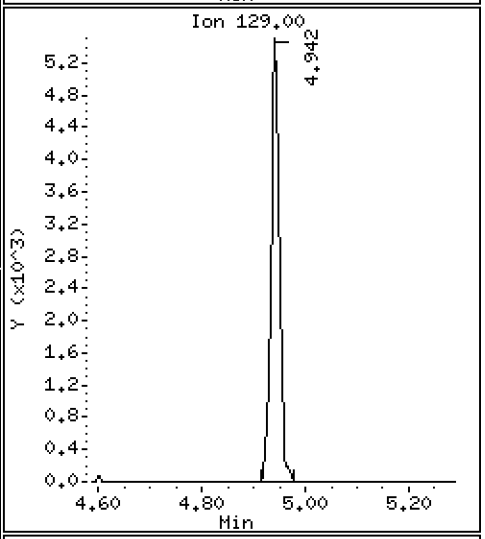
2 Naphthalene

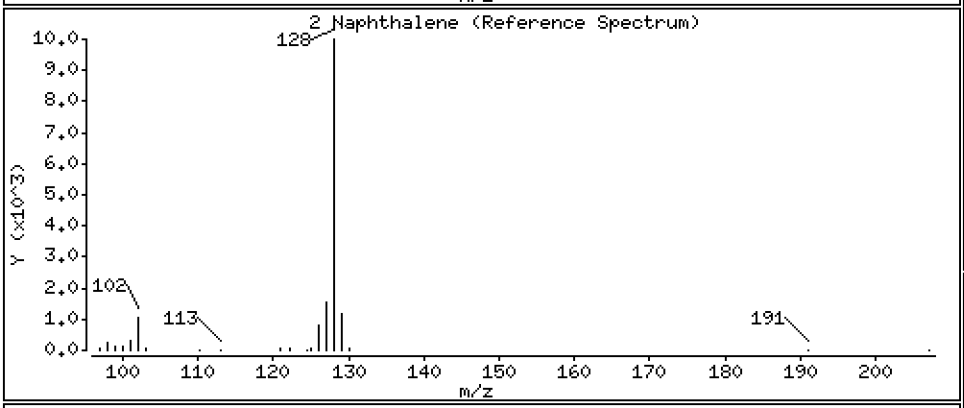
Concentration: 2.626 ug/L

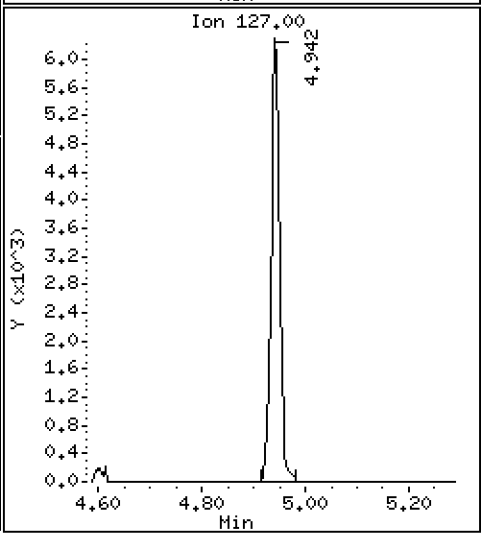


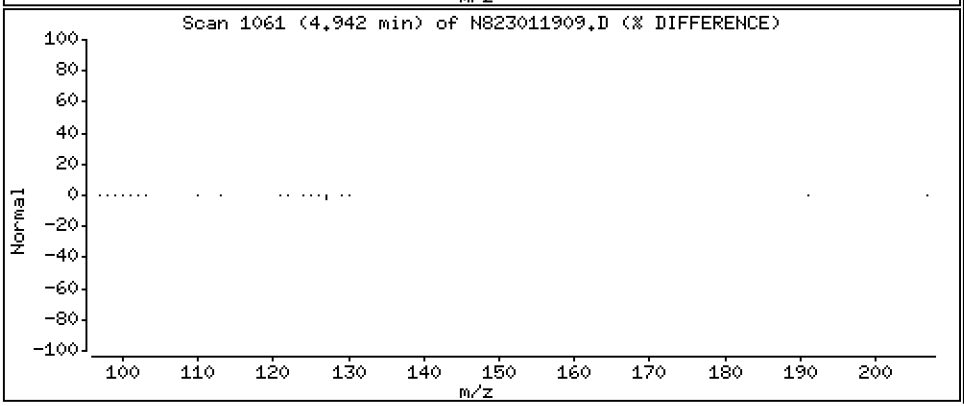












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

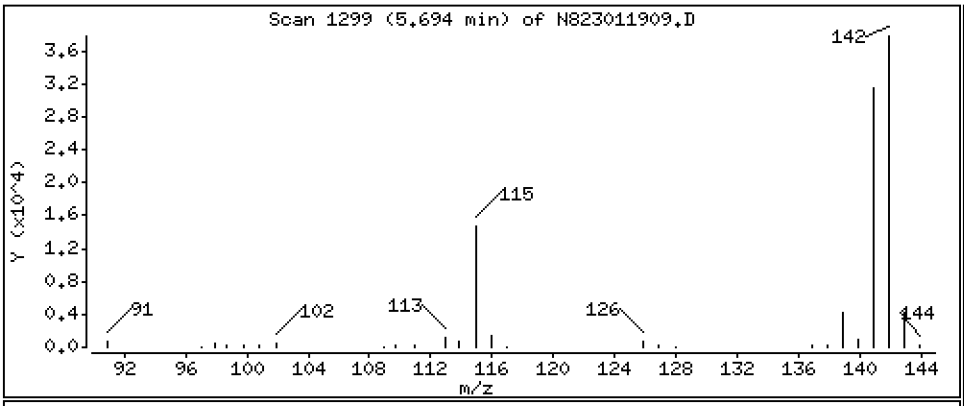
Operator: JZ

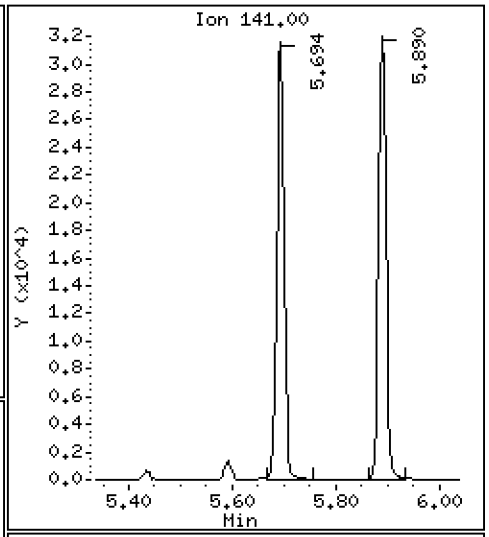
Column phase: Rxi-17sil

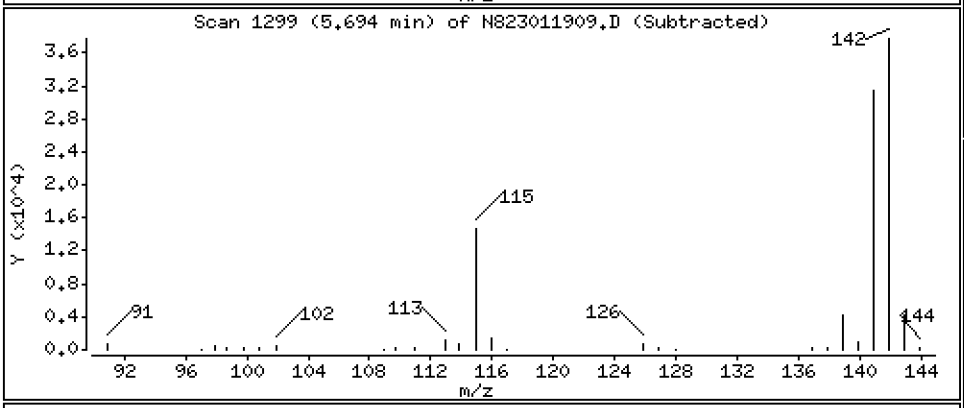
Column diameter: 0.25

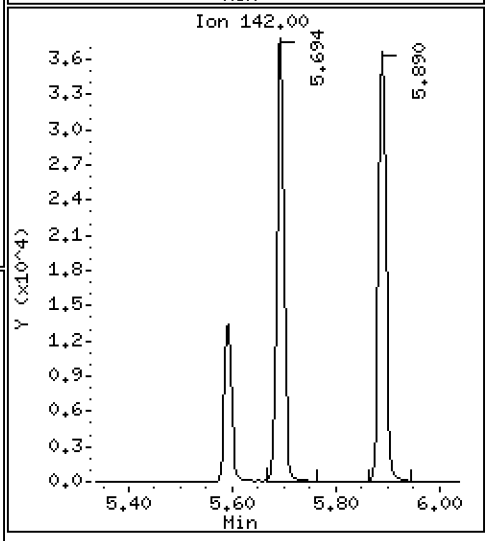
4 2-Methylnaphthalene

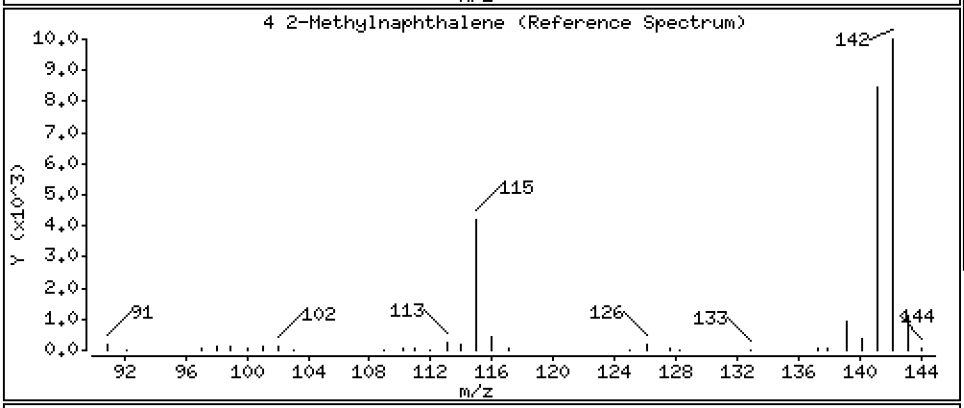
Concentration: 2.670 ug/L

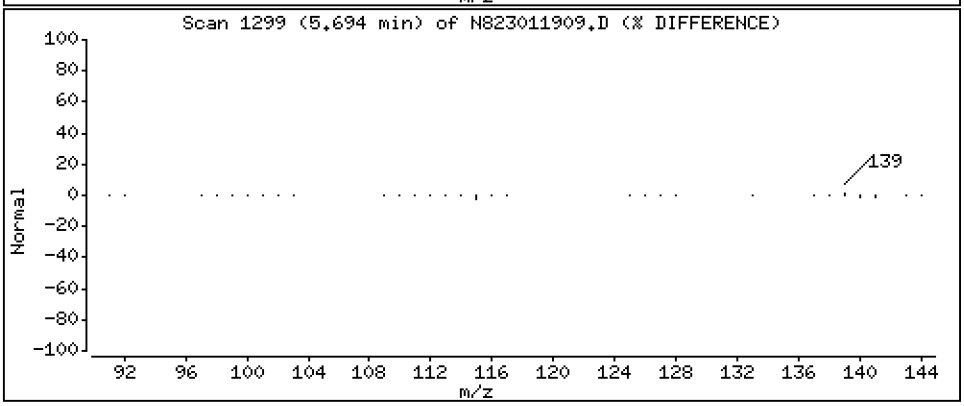












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

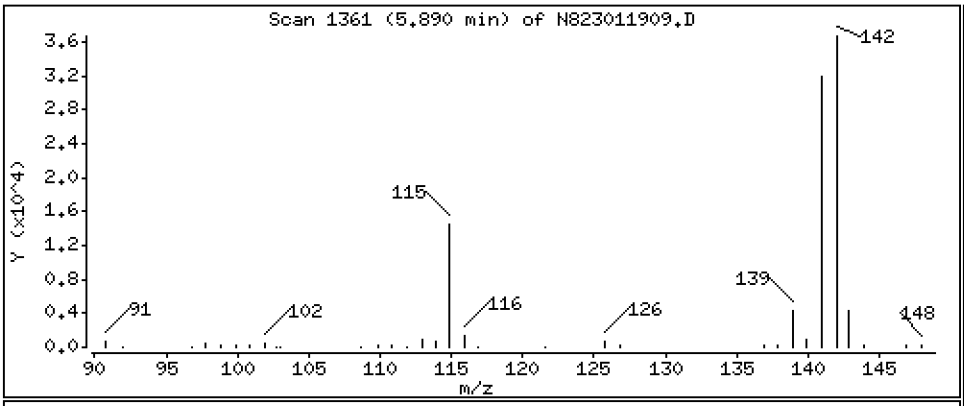
Operator: JZ

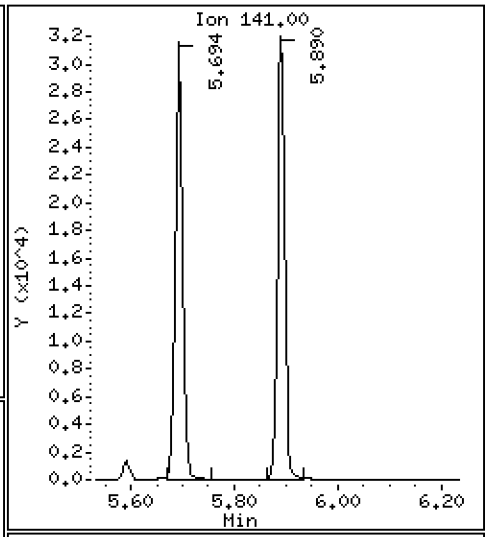
Column phase: Rxi-17sil

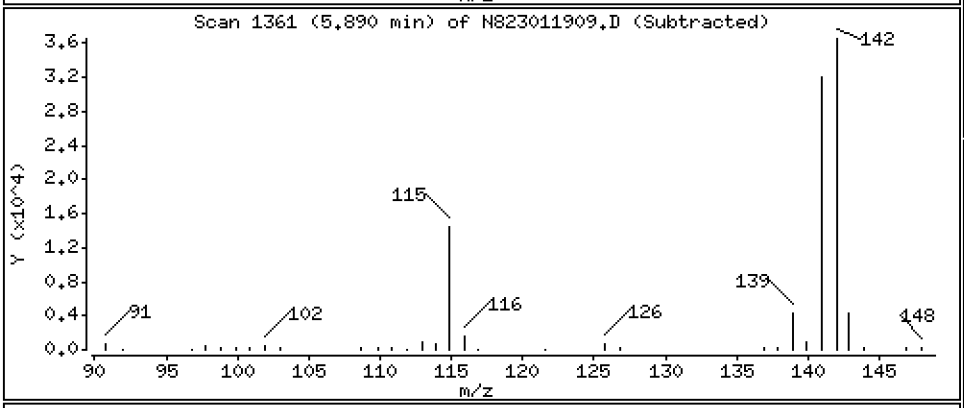
Column diameter: 0.25

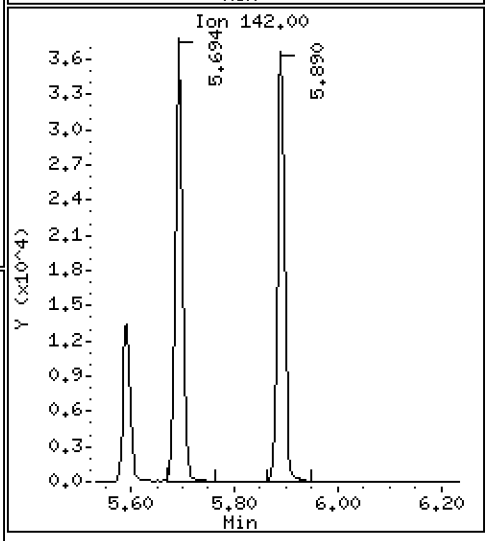
5 1-methylnaphthalene

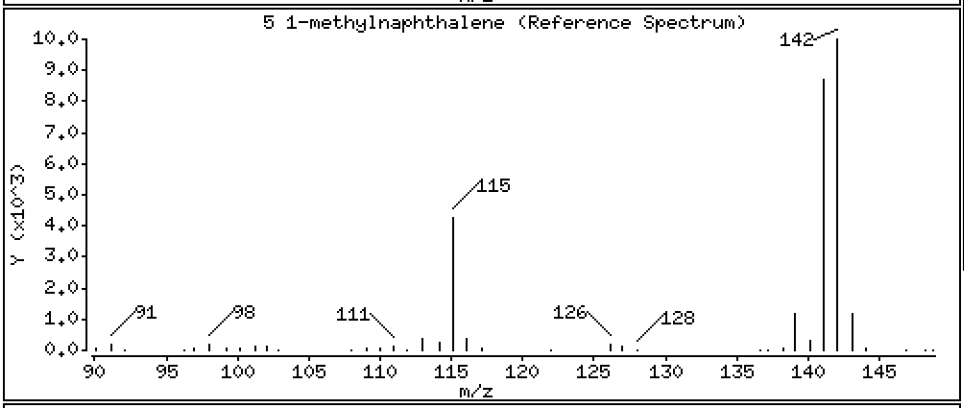
Concentration: 2.649 ug/L

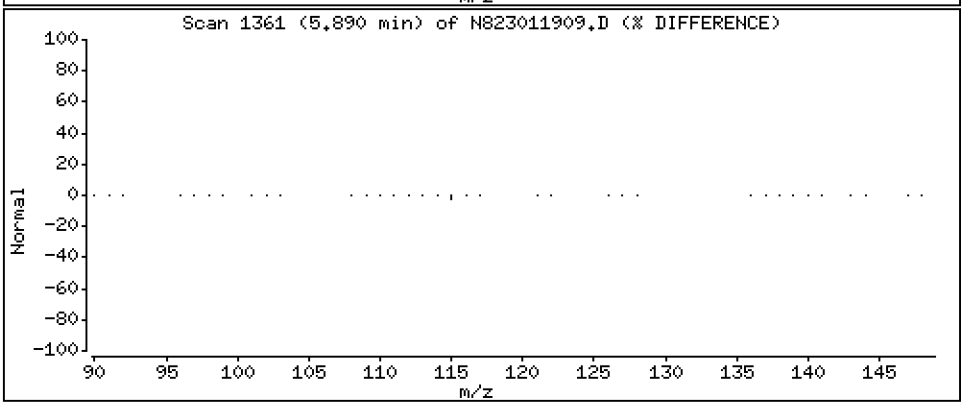












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

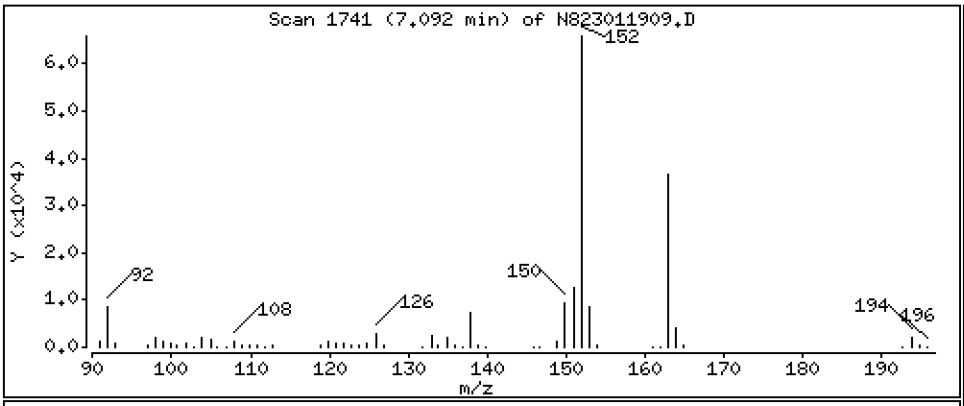
Operator: JZ

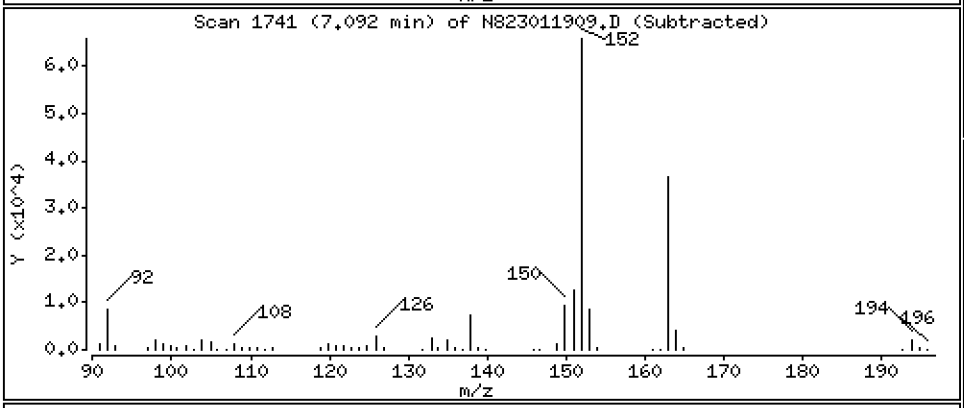
Column phase: Rxi-17sil

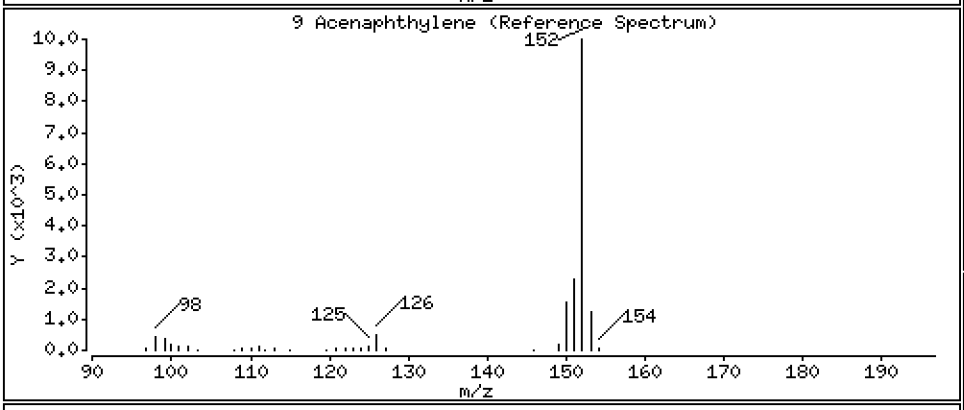
Column diameter: 0.25

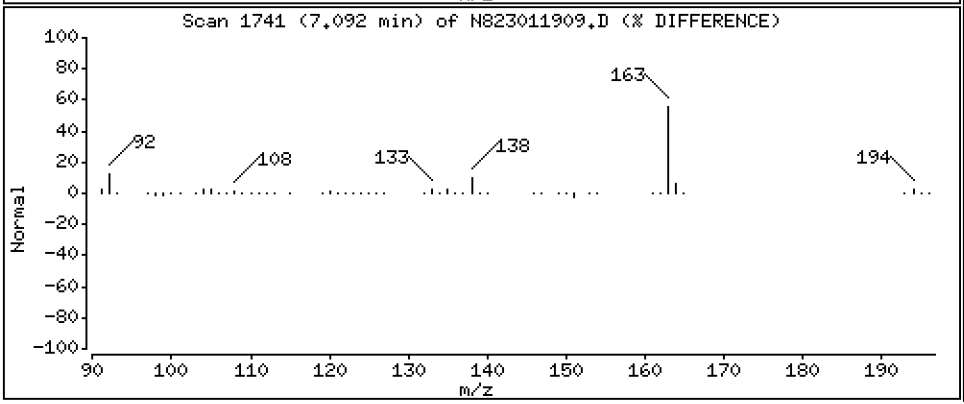
9 Acenaphthylene

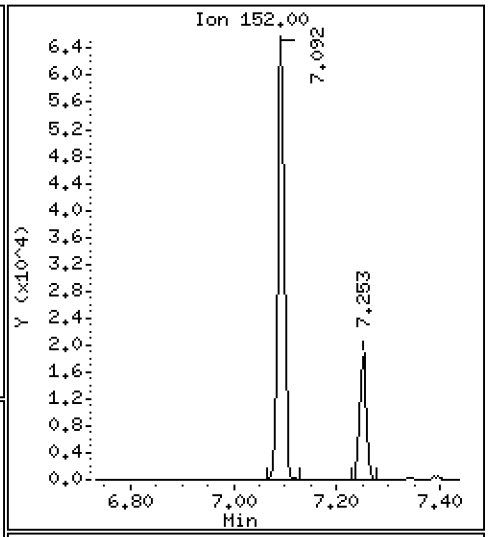
Concentration: 2.821 ug/L

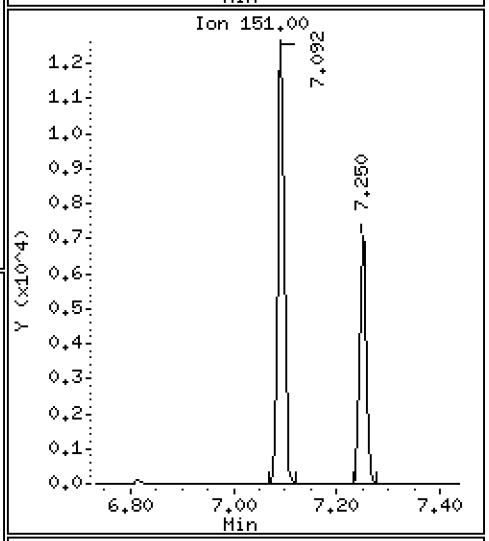


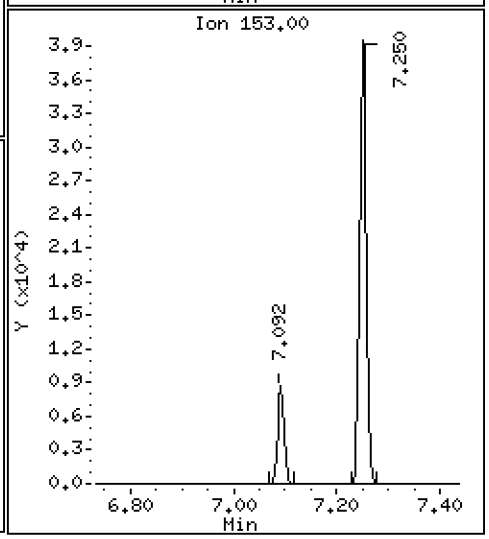












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

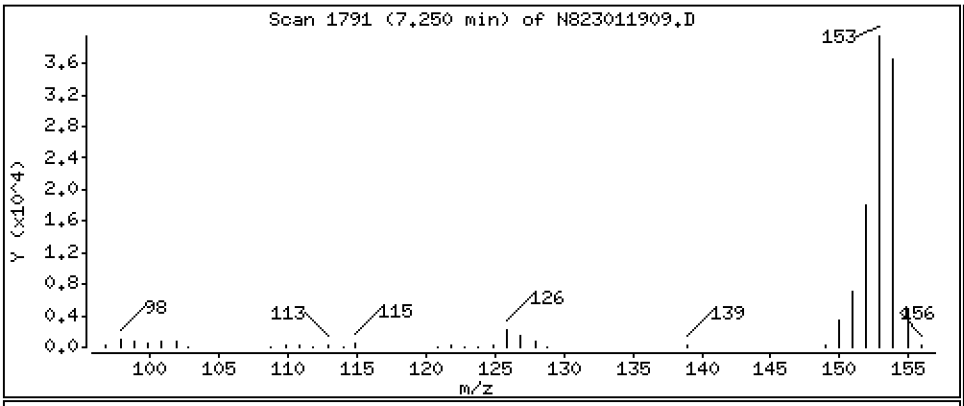
Operator: JZ

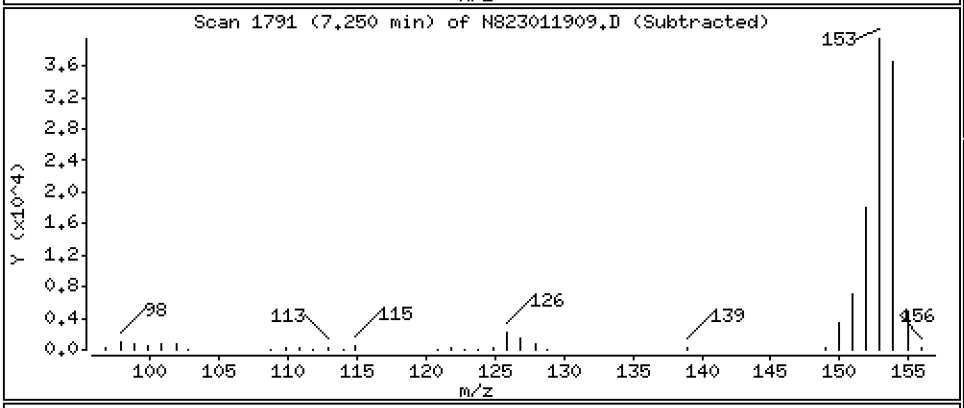
Column phase: Rxi-17sil

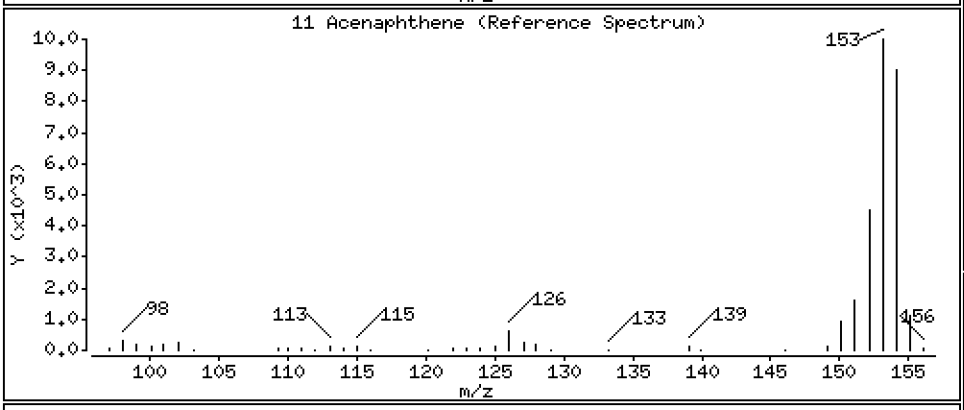
Column diameter: 0.25

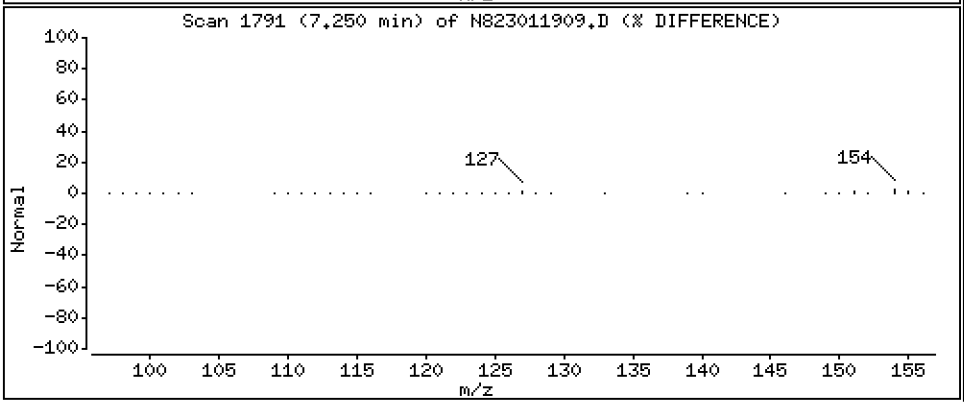
11 Acenaphthene

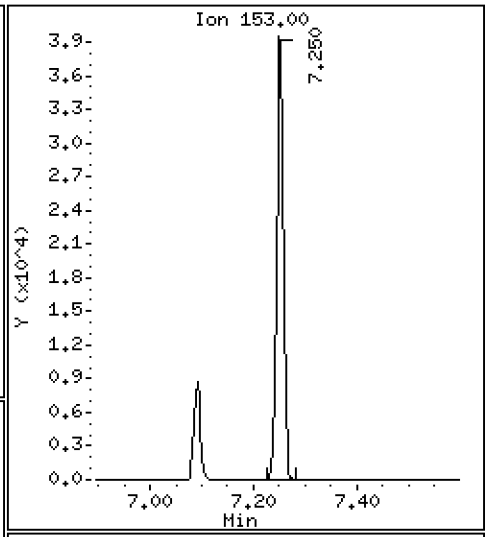
Concentration: 2.600 ug/L

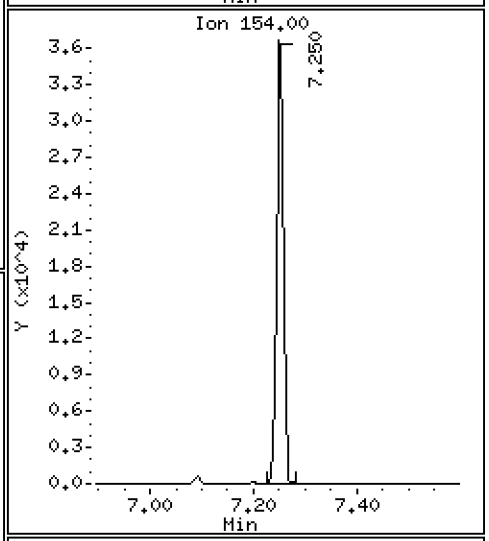


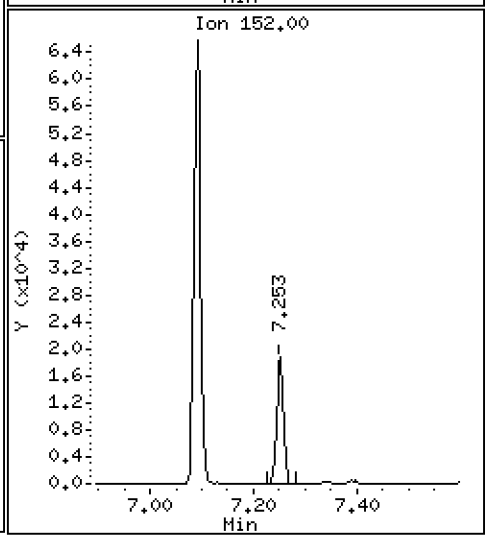












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

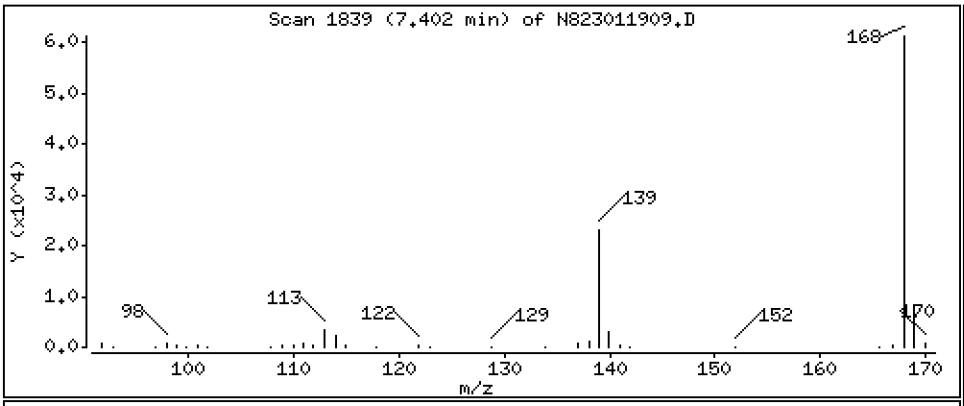
Operator: JZ

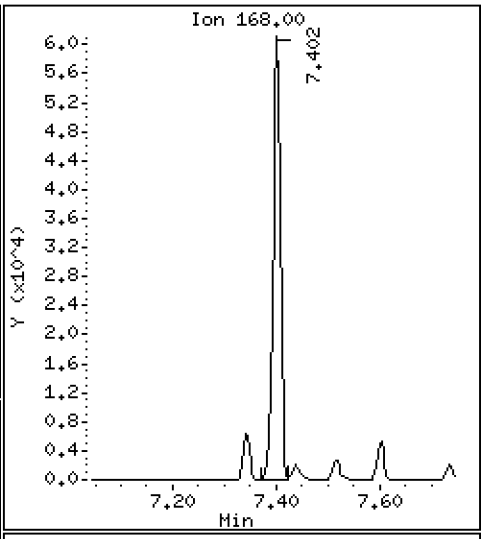
Column phase: Rxi-17sil

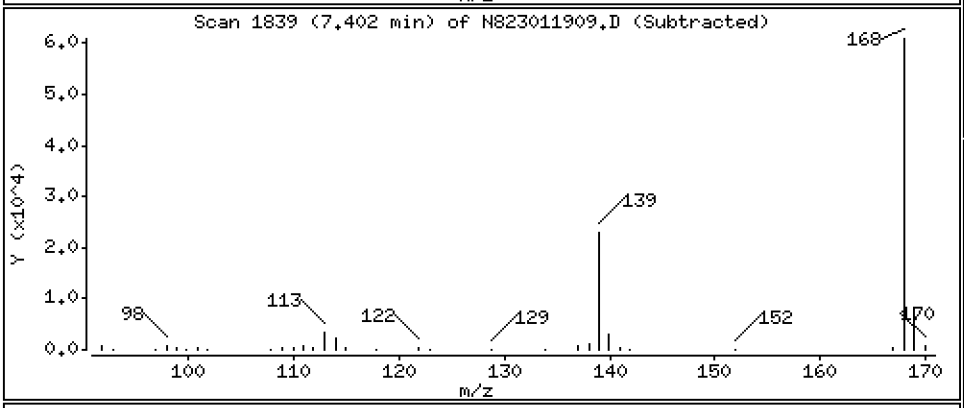
Column diameter: 0.25

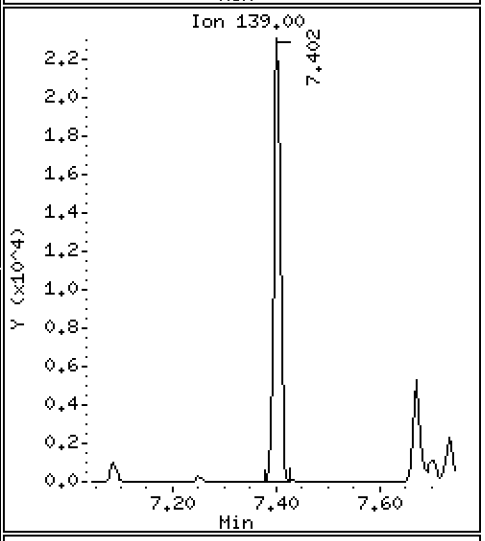
12 Dibenzofuran

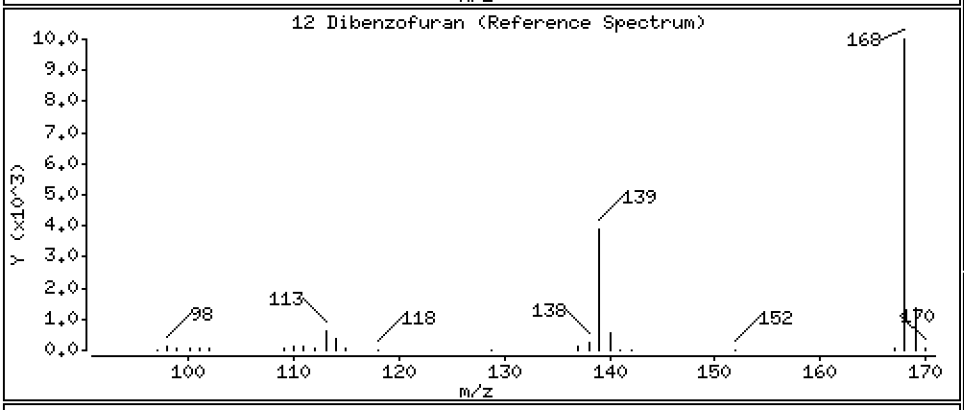
Concentration: 2.860 ug/L

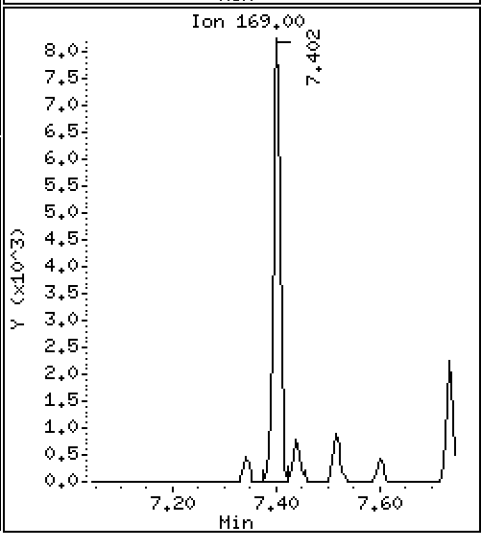


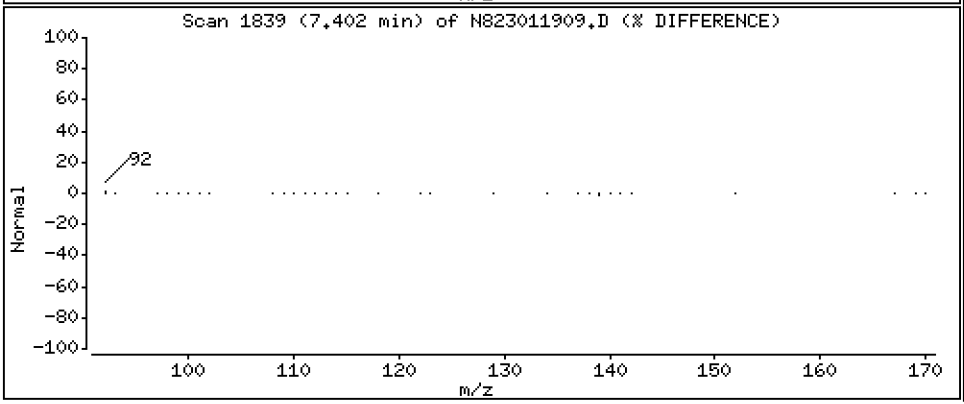












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

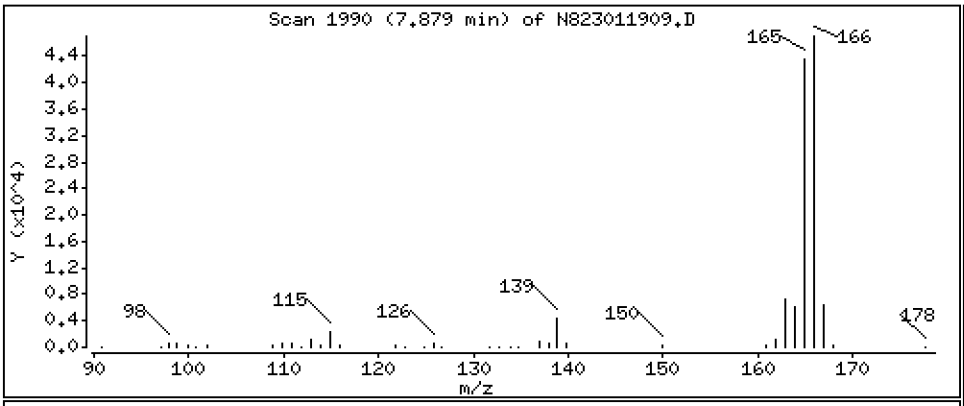
Operator: JZ

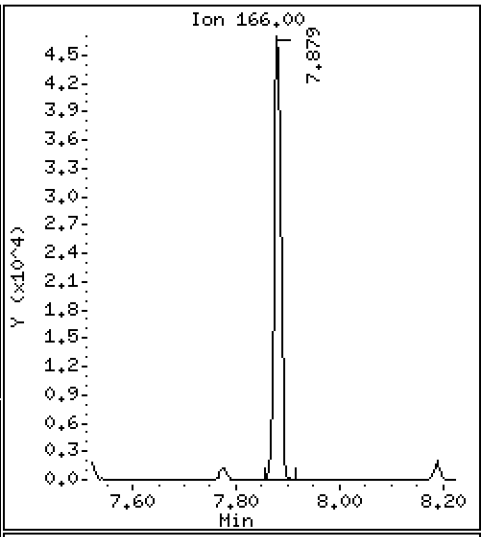
Column phase: Rxi-17sil

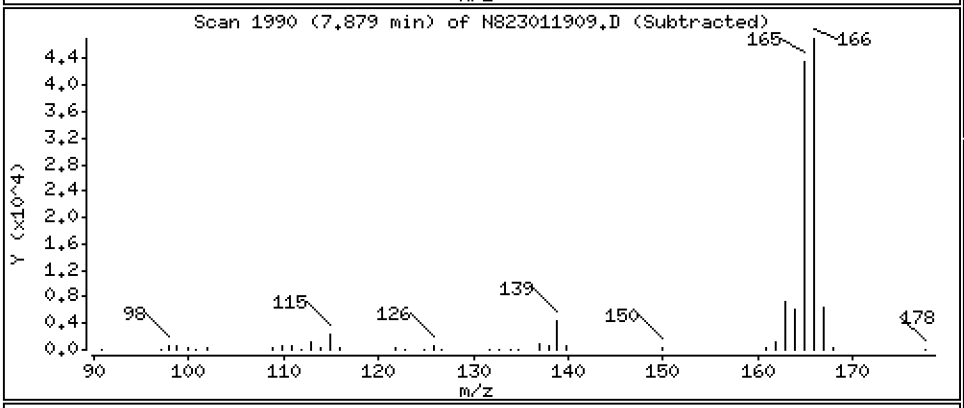
Column diameter: 0.25

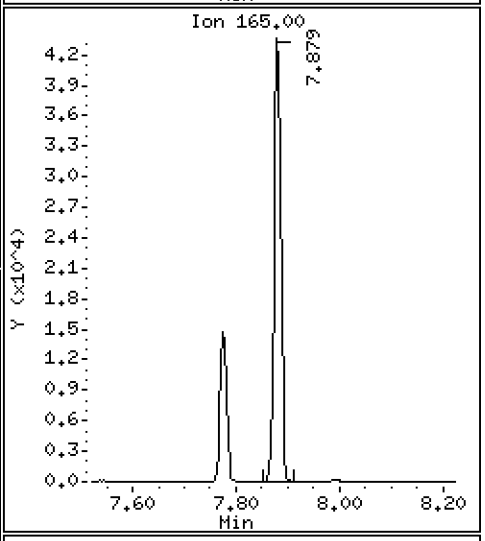
14 Fluorene

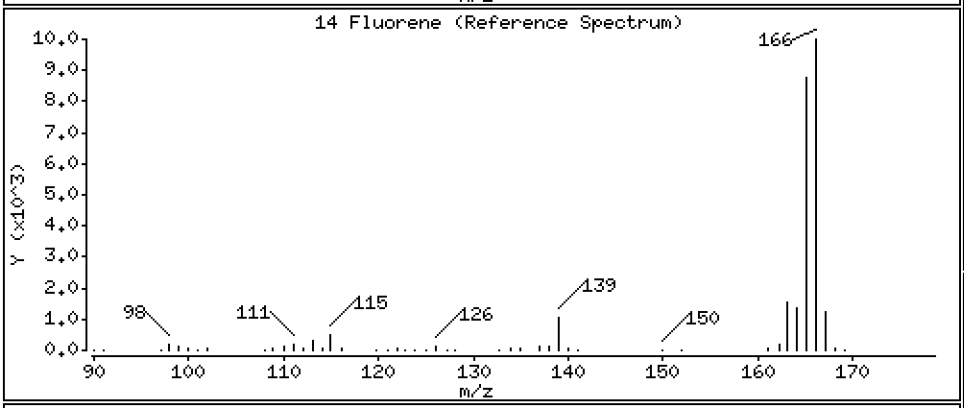
Concentration: 2.631 ug/L

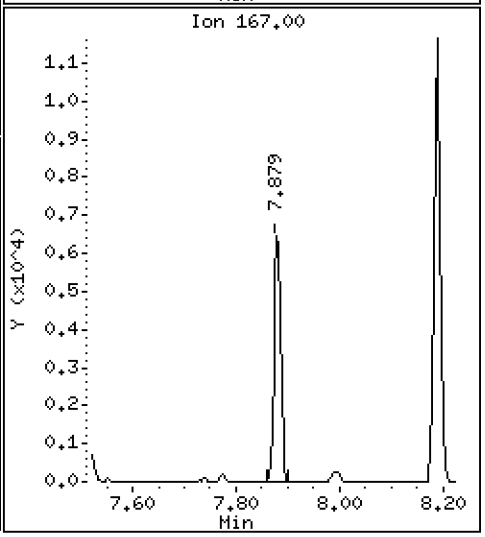


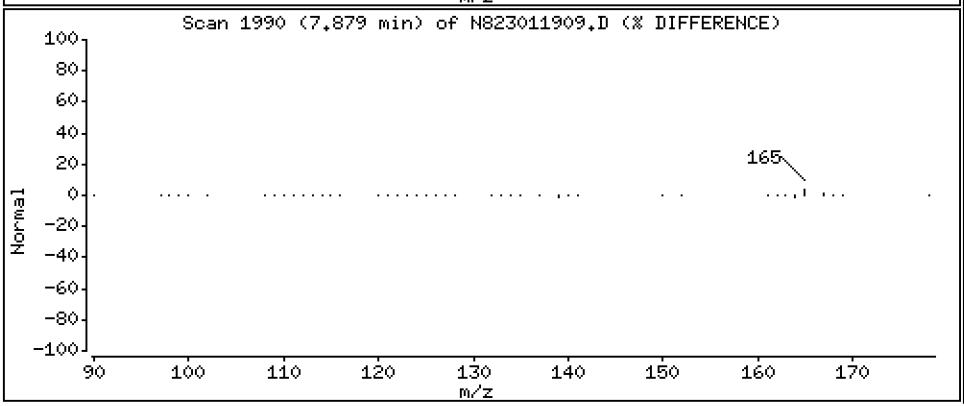












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

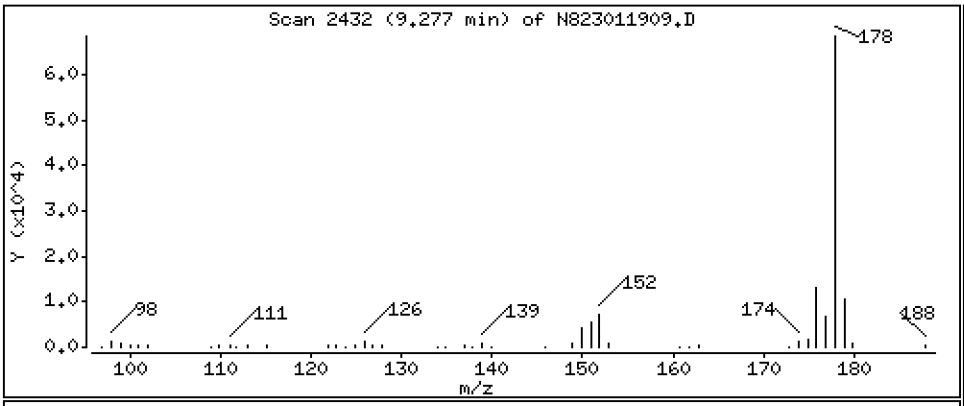
Operator: JZ

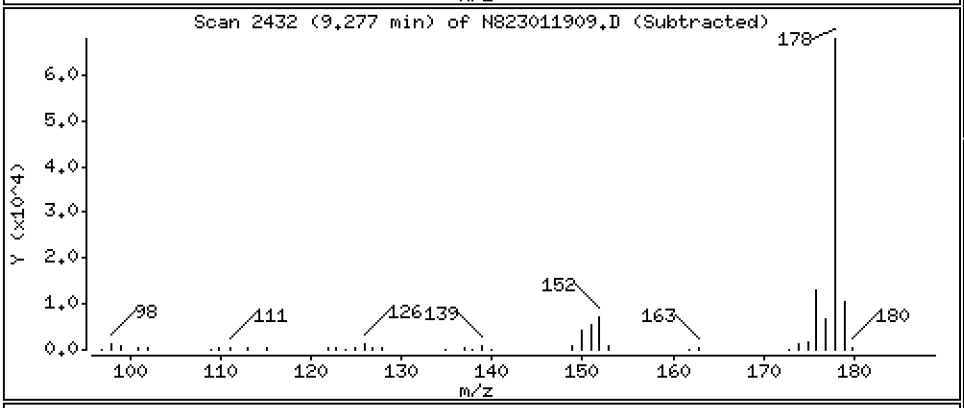
Column phase: Rxi-17sil

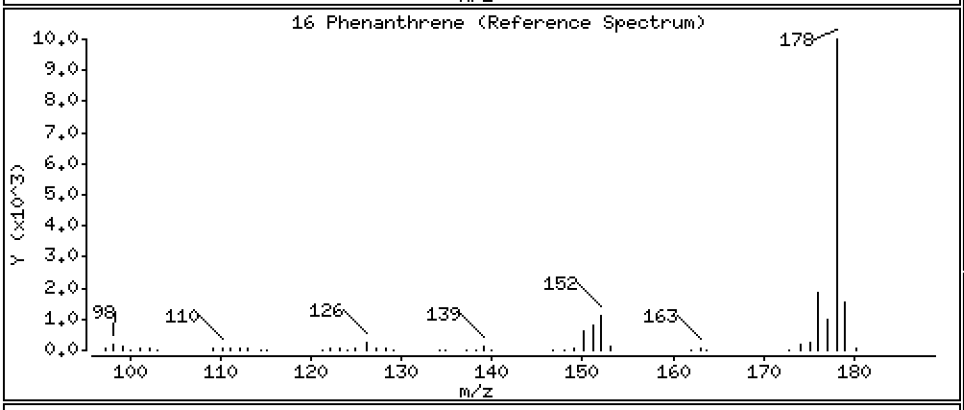
Column diameter: 0.25

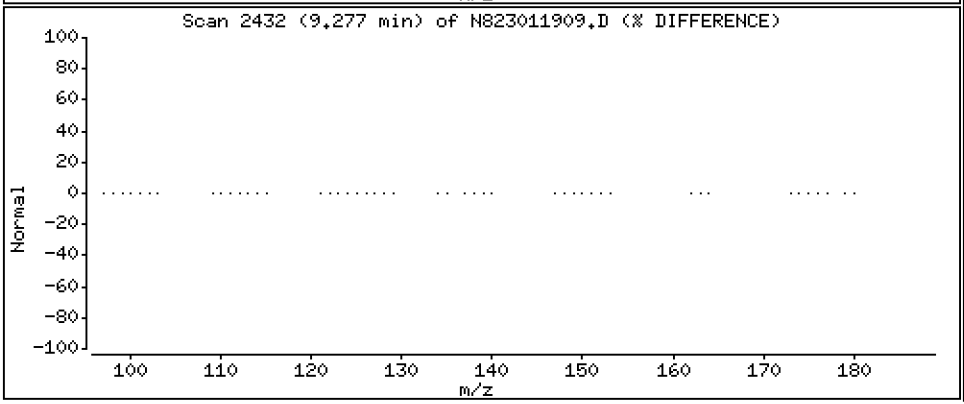
16 Phenanthrene

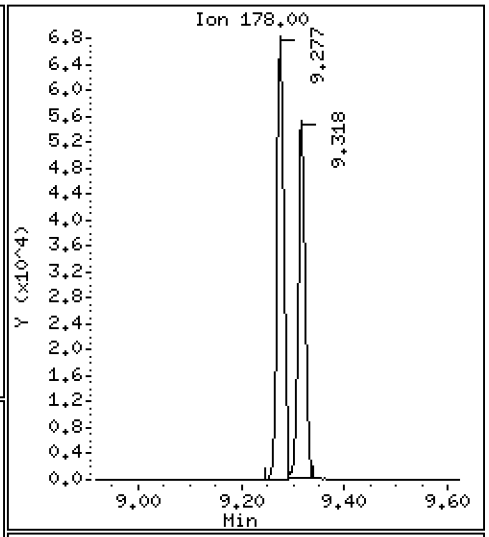
Concentration: 2.448 ug/L

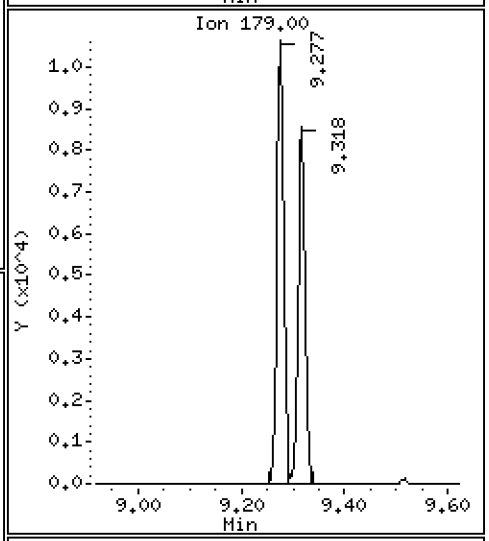


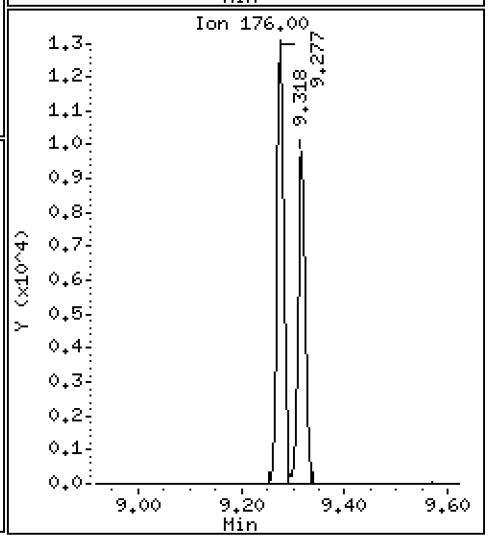












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

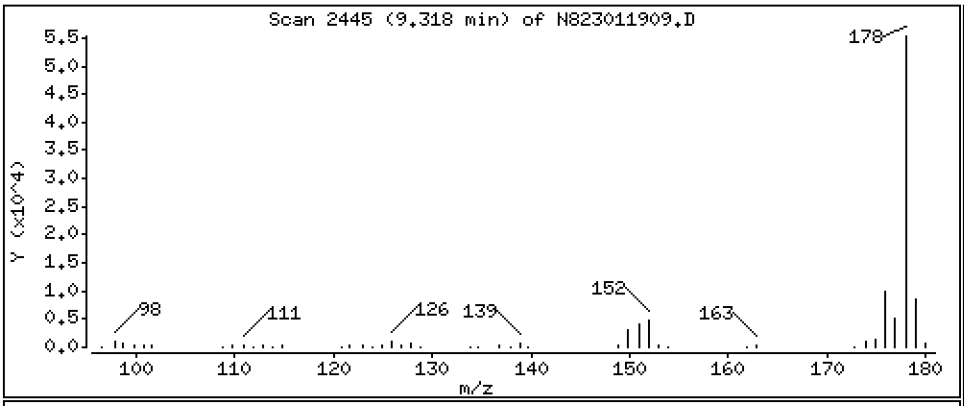
Operator: JZ

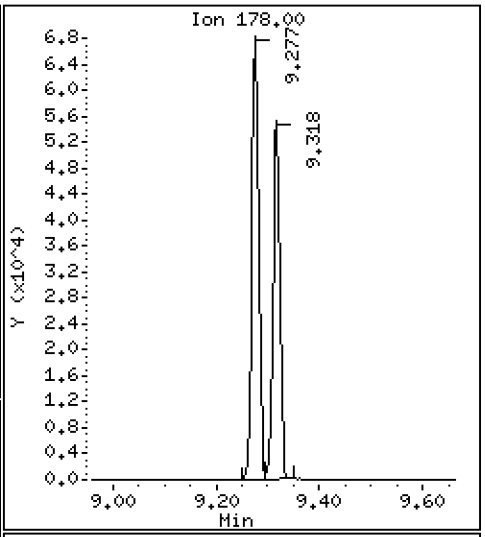
Column phase: Rxi-17sil

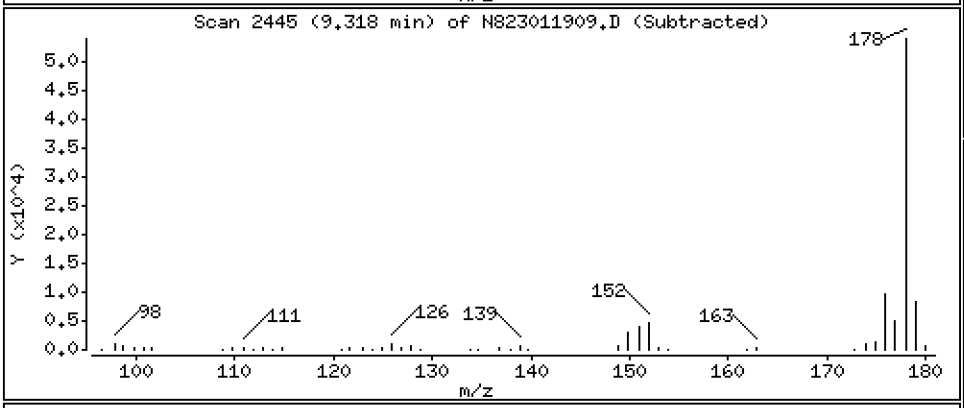
Column diameter: 0.25

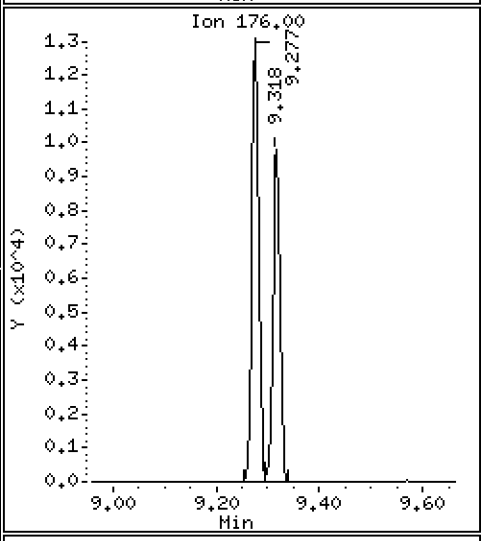
17 Anthracene

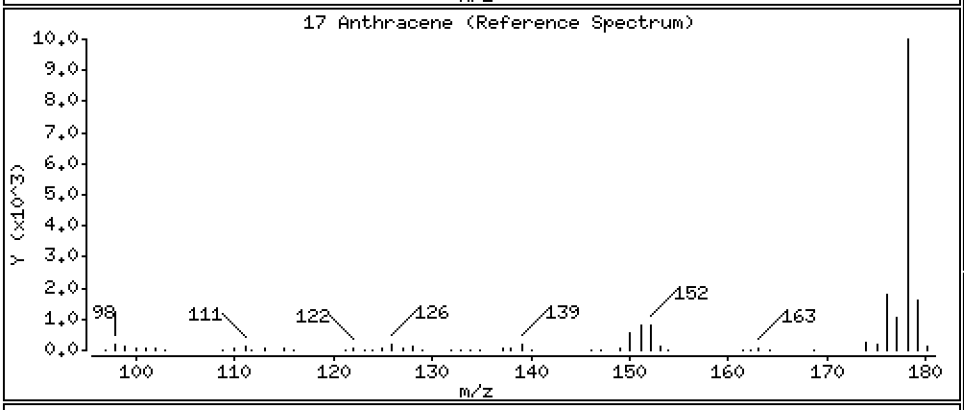
Concentration: 2.270 ug/L

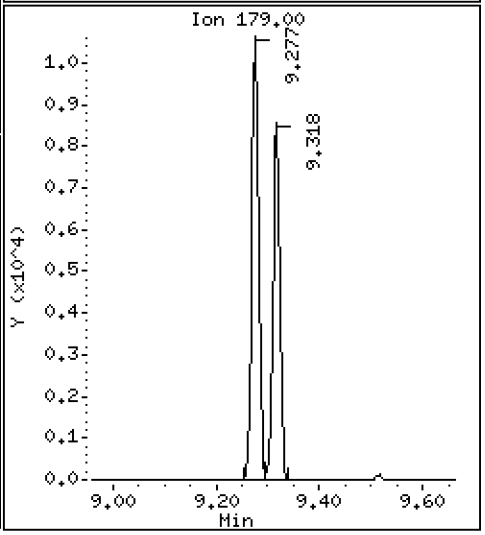


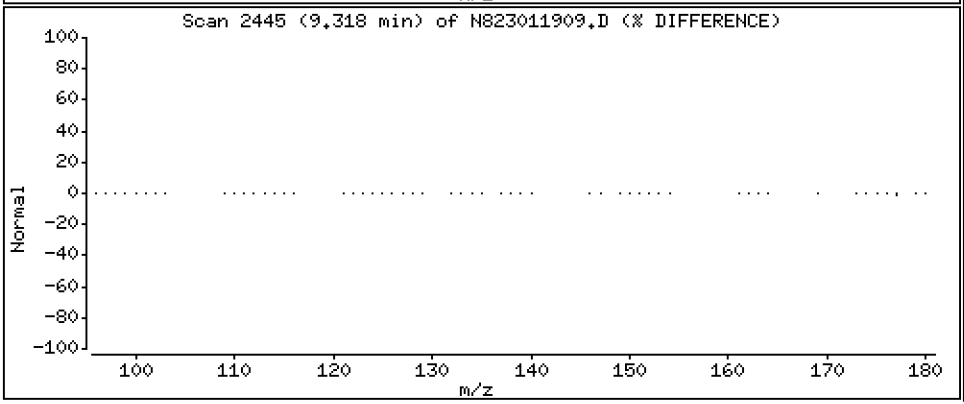












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

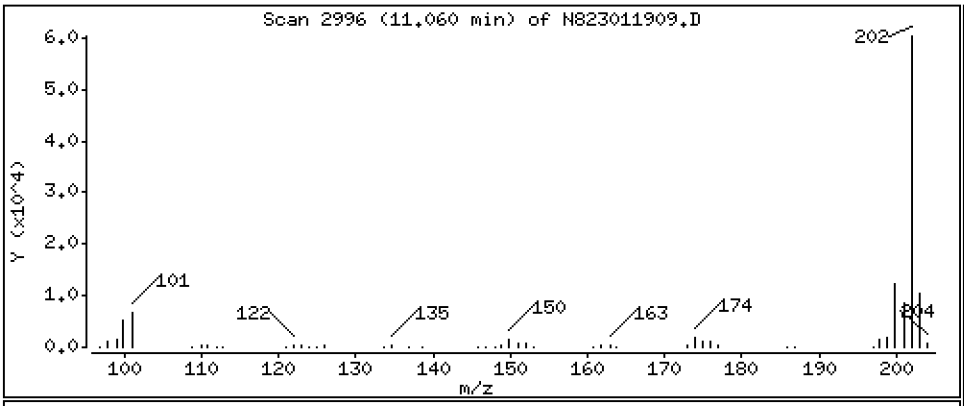
Operator: JZ

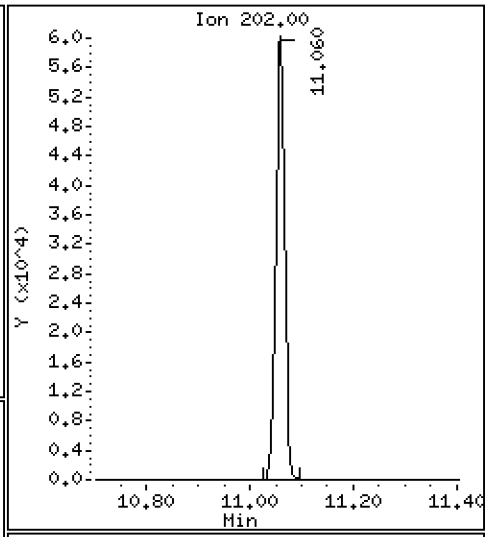
Column phase: Rxi-17sil

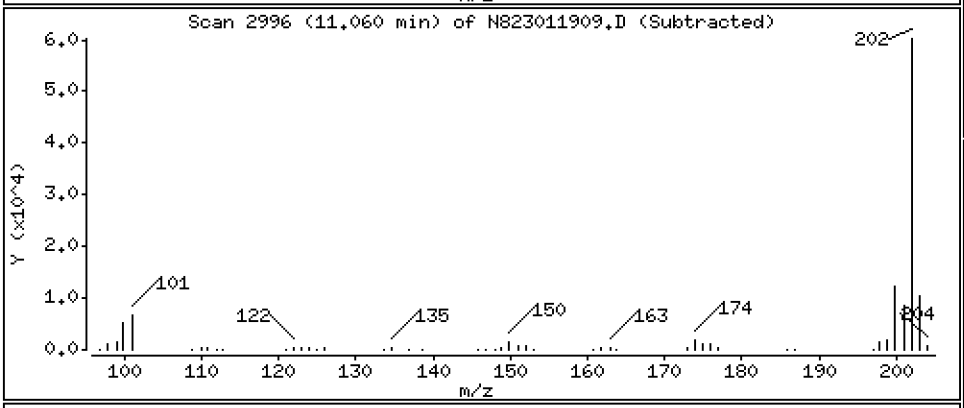
Column diameter: 0.25

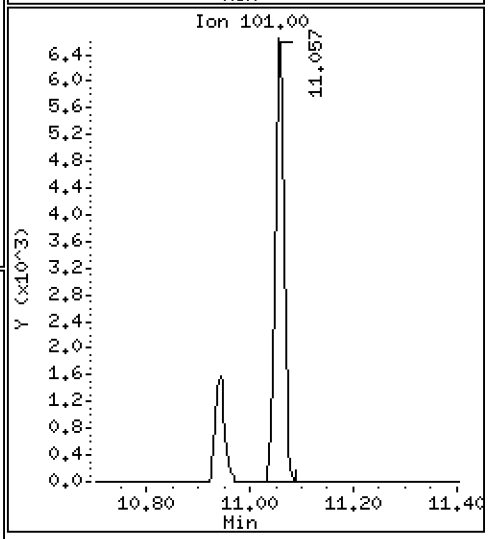
22 Fluoranthene

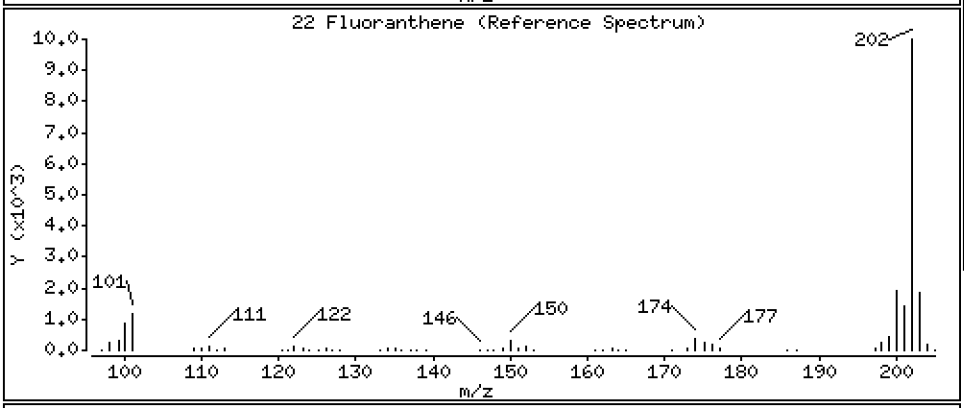
Concentration: 2.653 ug/L

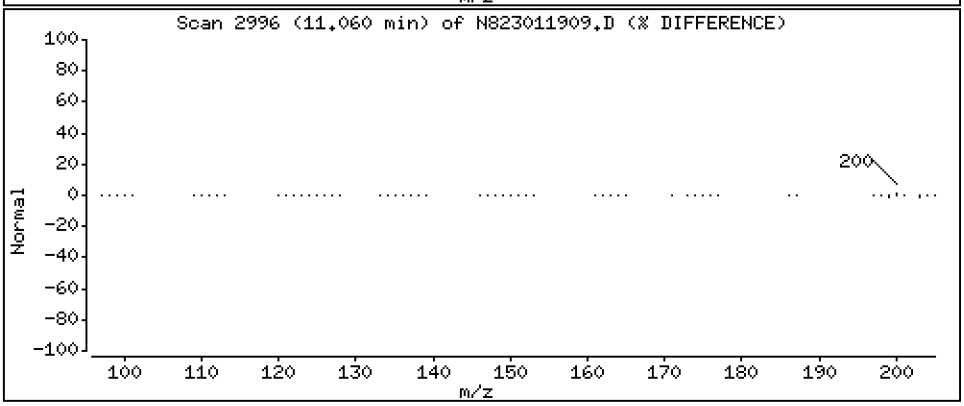












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

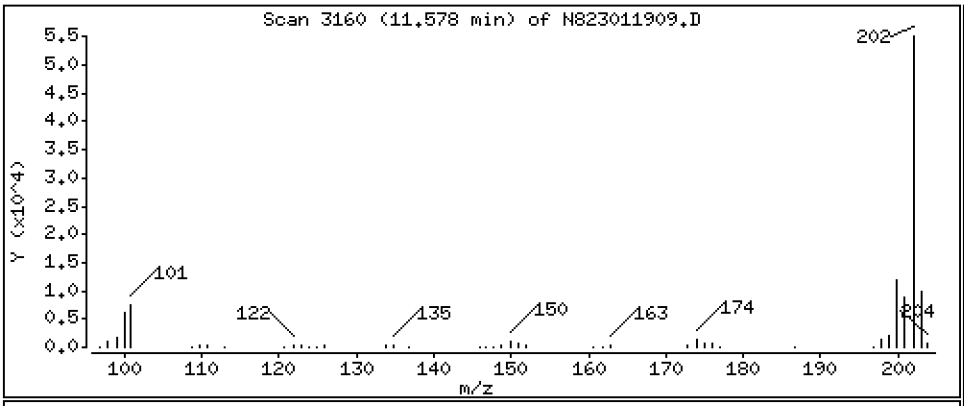
Operator: JZ

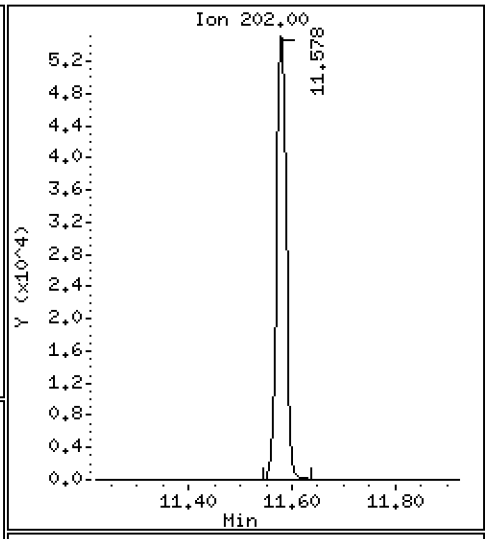
Column phase: Rxi-17sil

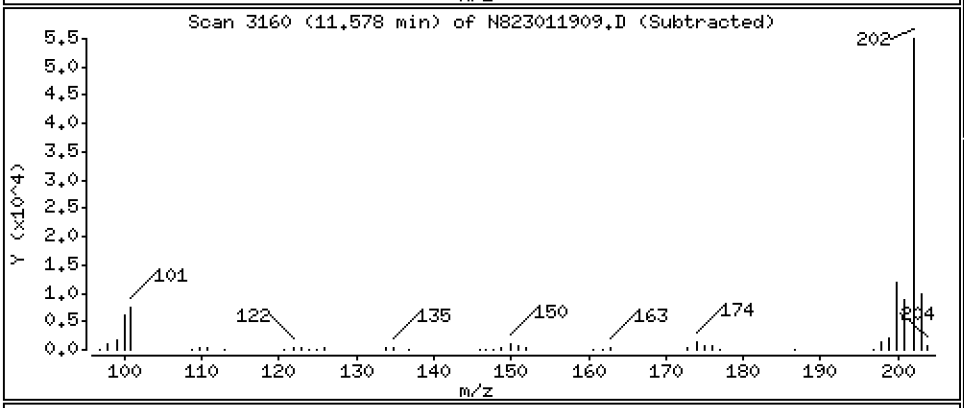
Column diameter: 0.25

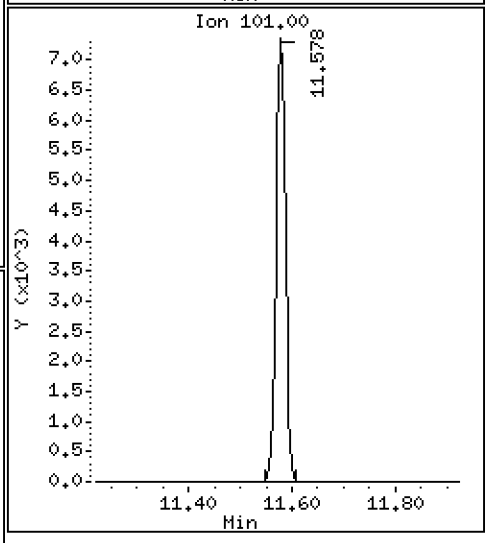
23 Pyrene

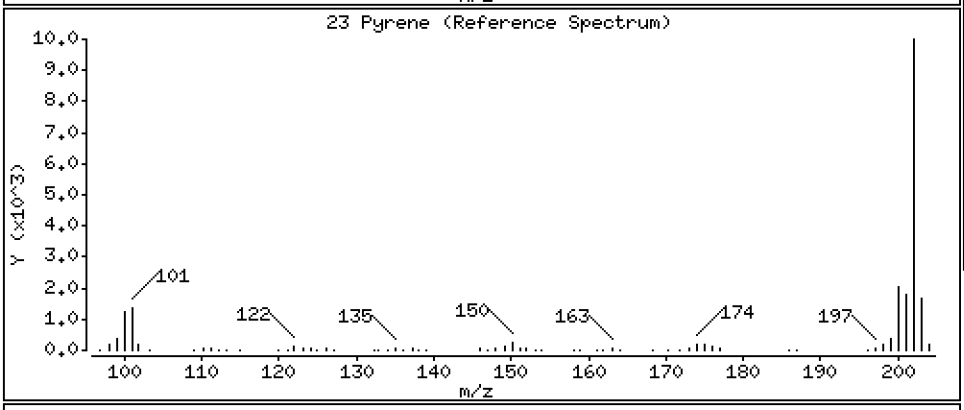
Concentration: 2.462 ug/L

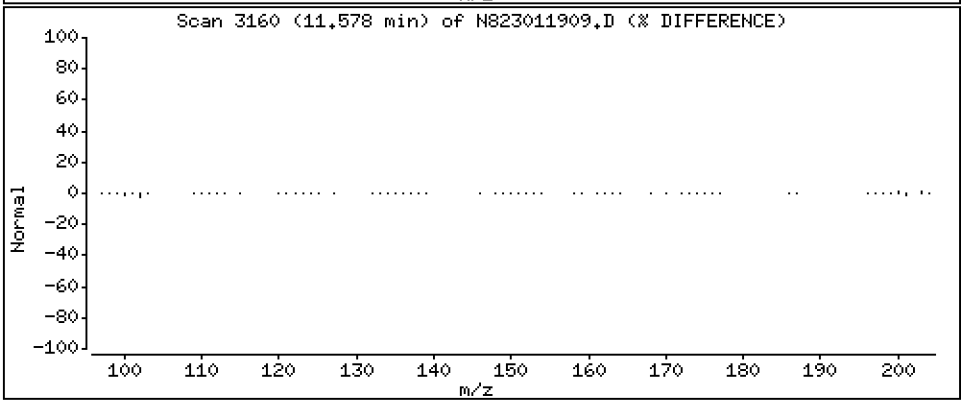












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

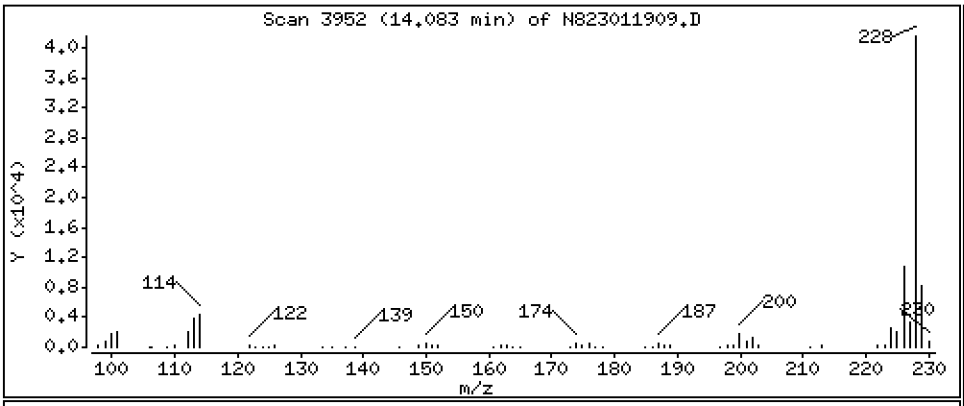
Operator: JZ

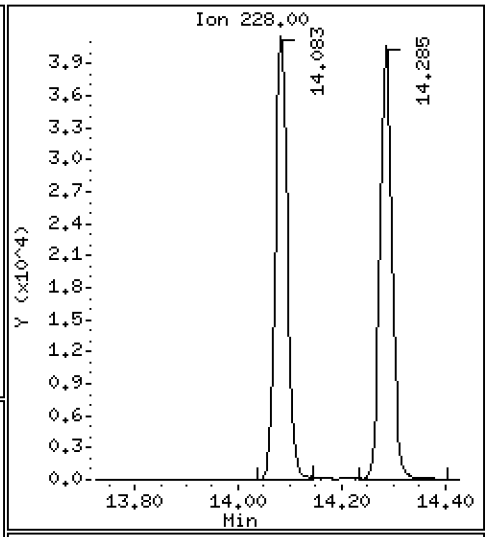
Column phase: Rxi-17sil

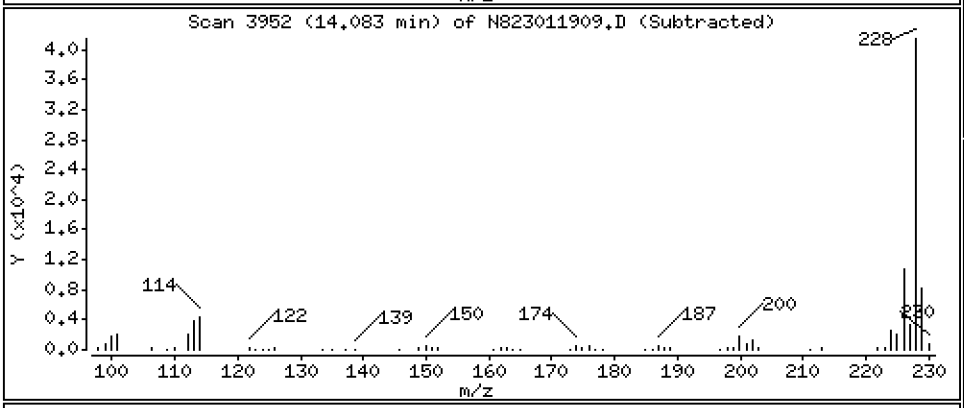
Column diameter: 0.25

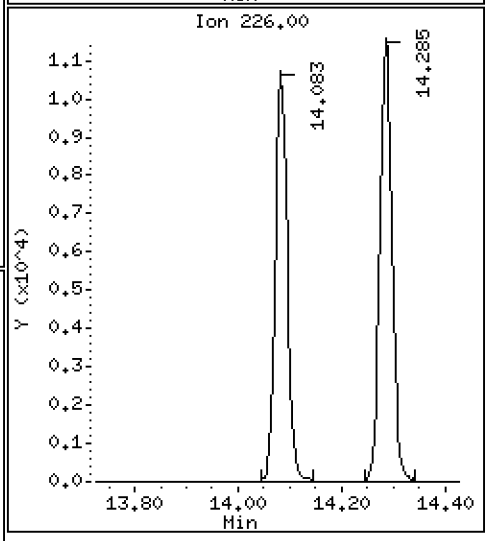
24 Benzo(a)anthracene

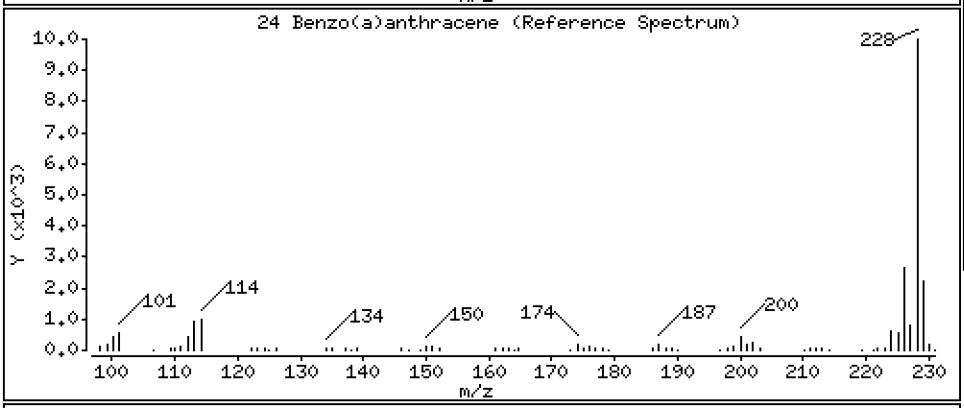
Concentration: 2.587 ug/L

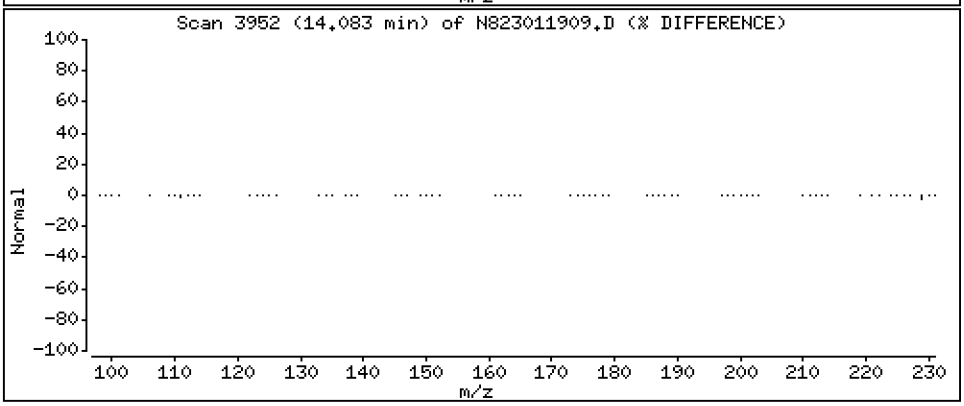












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

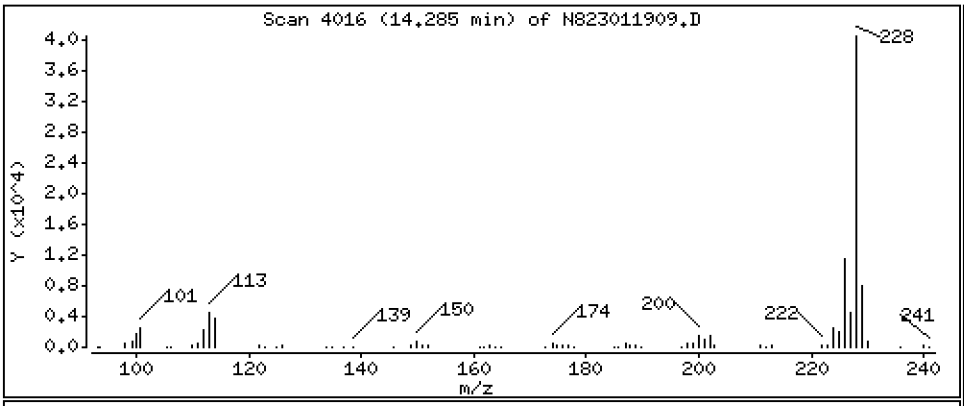
Operator: JZ

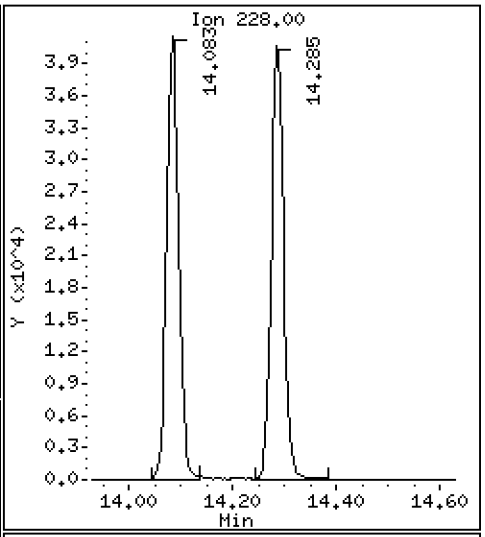
Column phase: Rxi-17sil

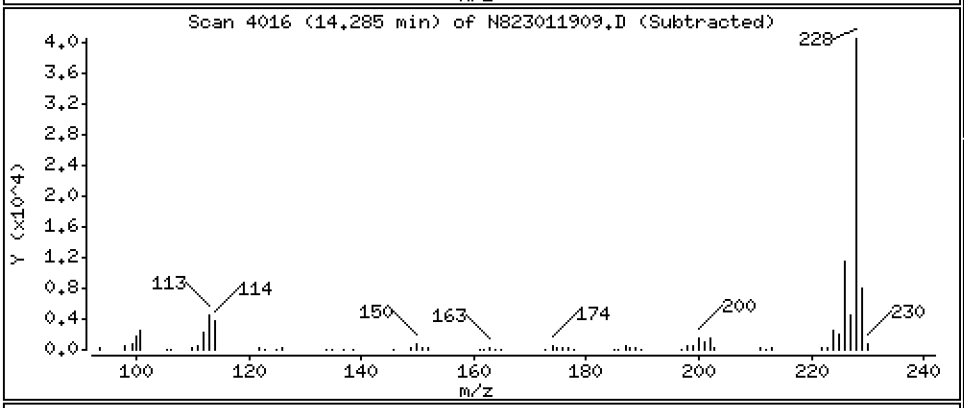
Column diameter: 0.25

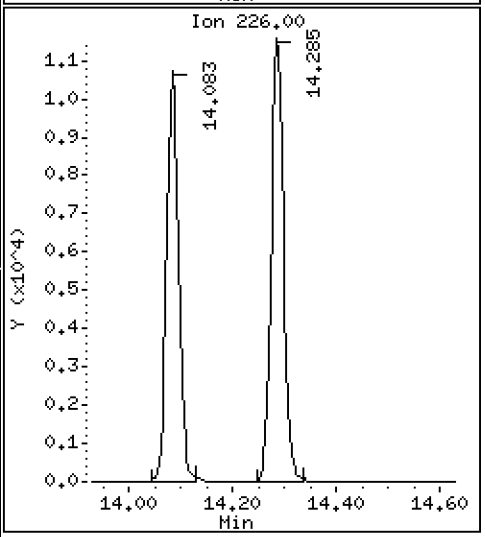
27 Chrysene

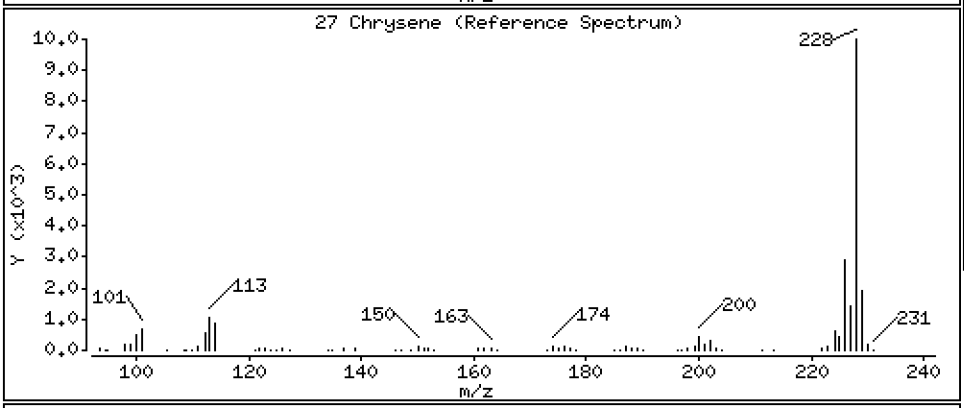
Concentration: 2.400 ug/L

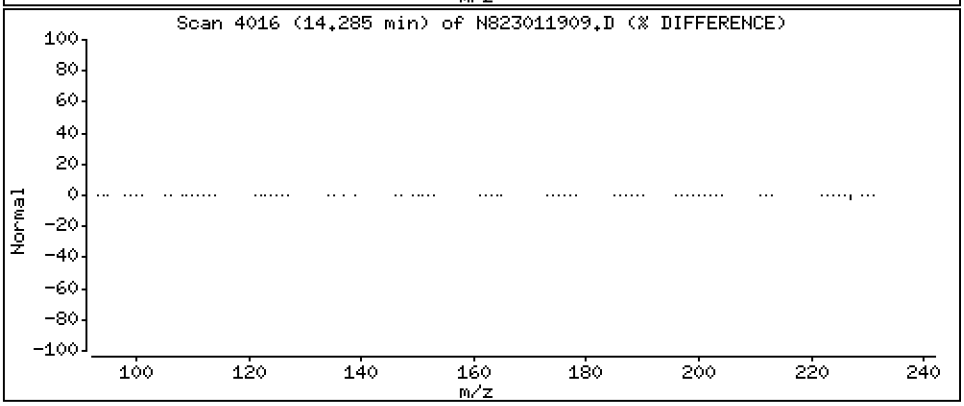












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

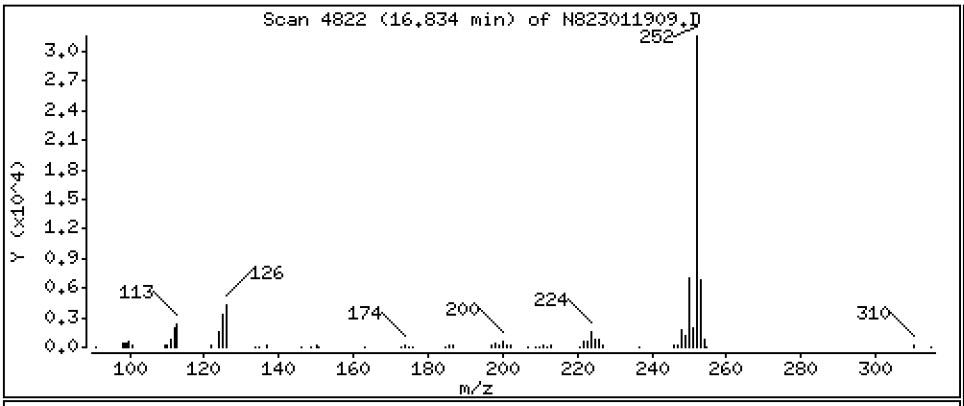
Operator: JZ

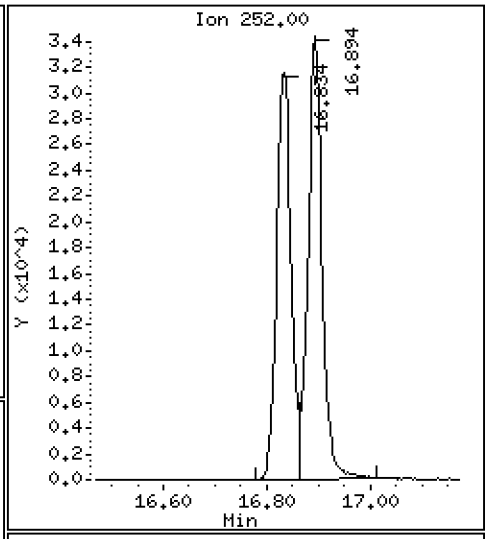
Column phase: Rxi-17sil

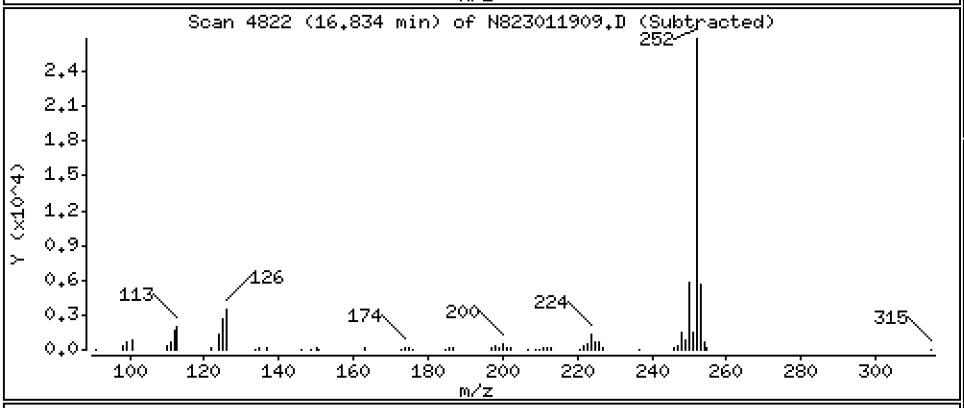
Column diameter: 0.25

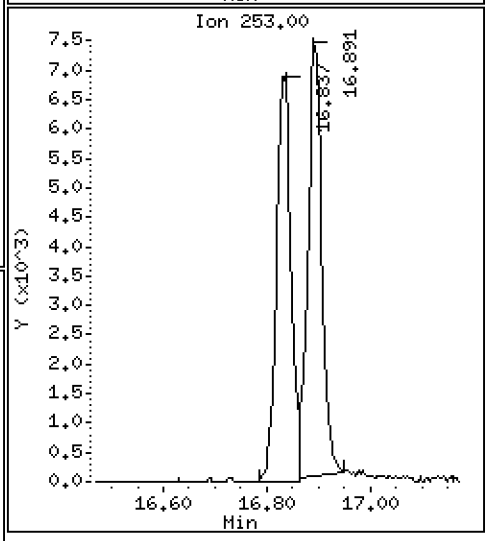
28 Benzo(b)fluoranthene

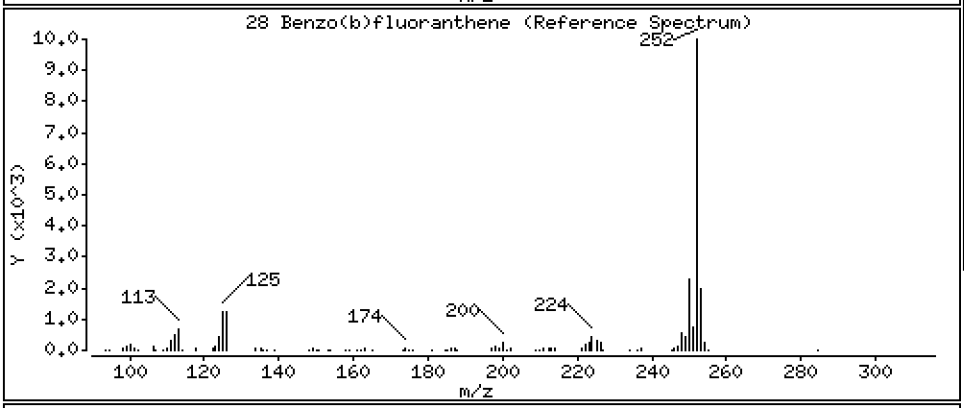
Concentration: 2.507 ug/L

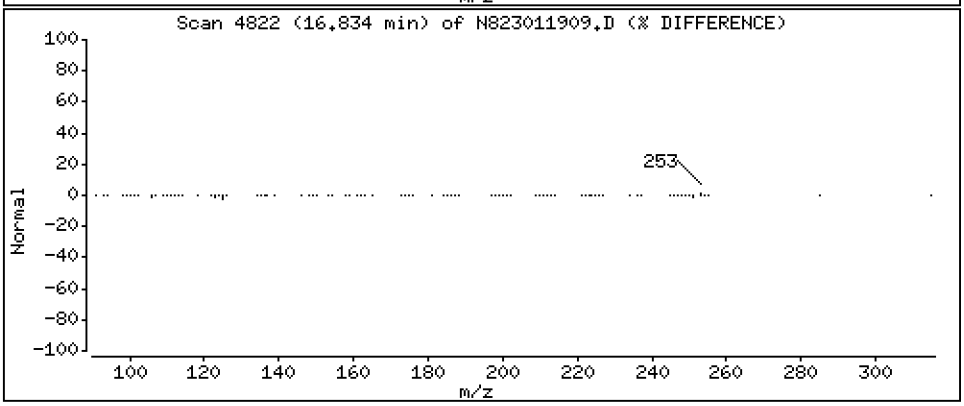












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

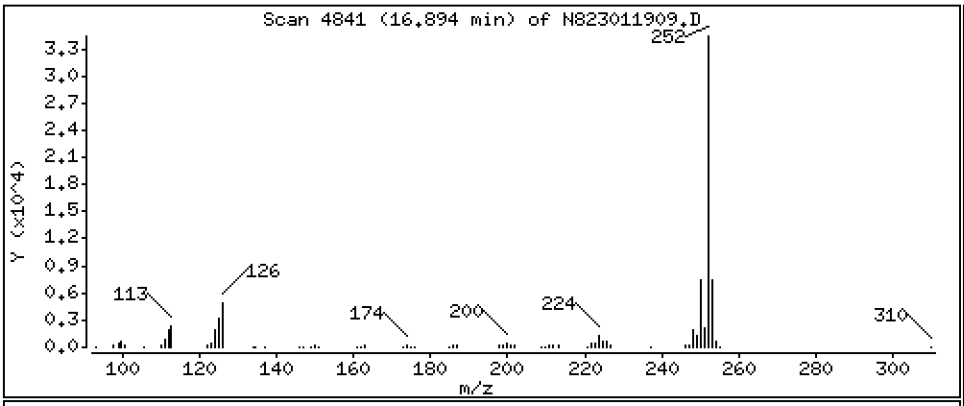
Operator: JZ

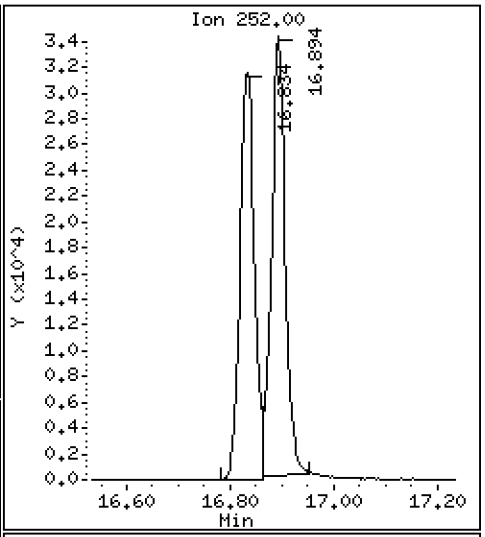
Column phase: Rxi-17sil

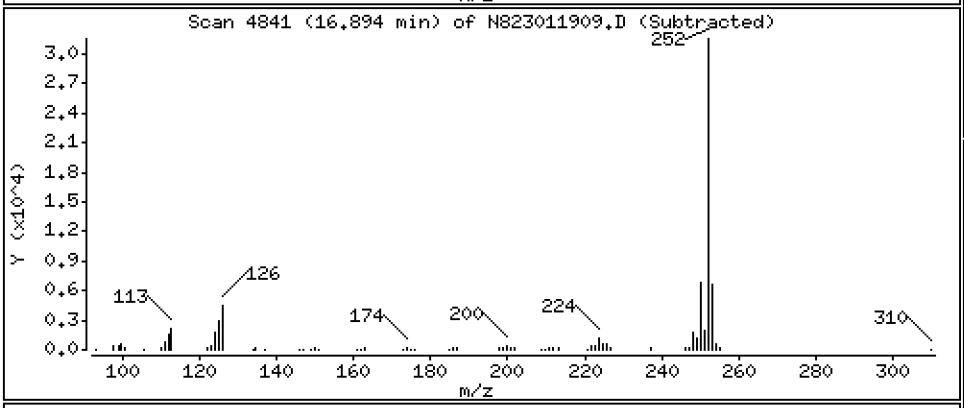
Column diameter: 0.25

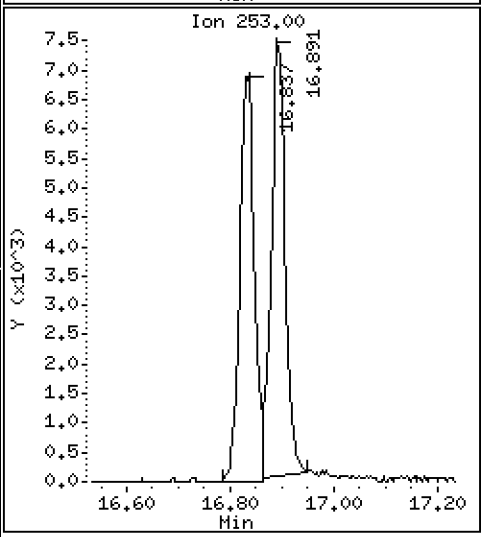
29 Benzo(k)fluoranthene

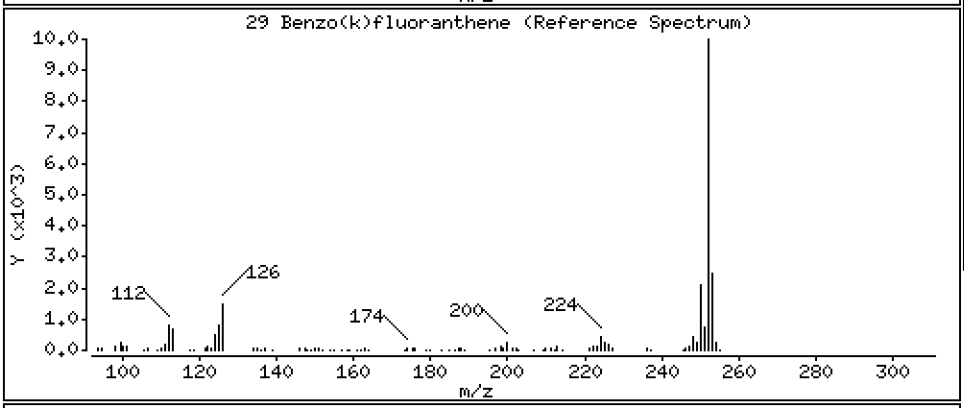
Concentration: 2.656 ug/L

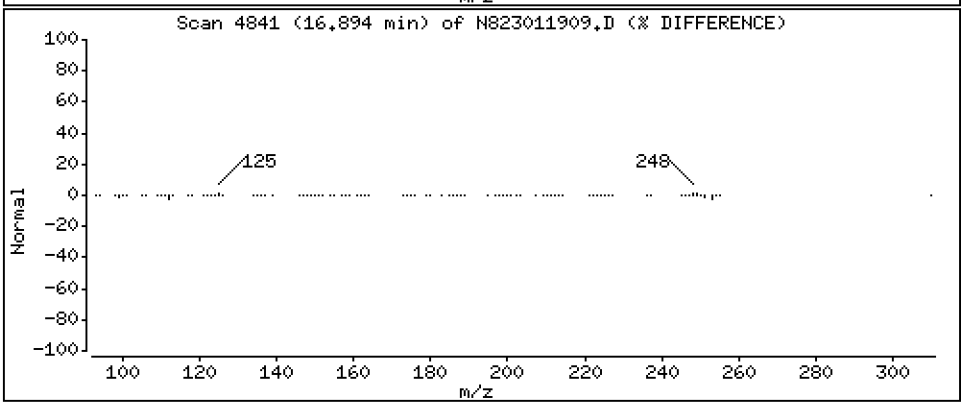












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

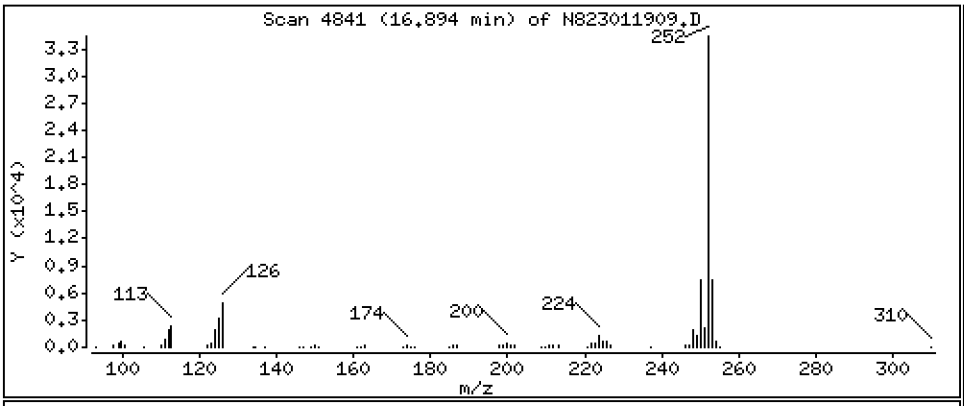
Operator: JZ

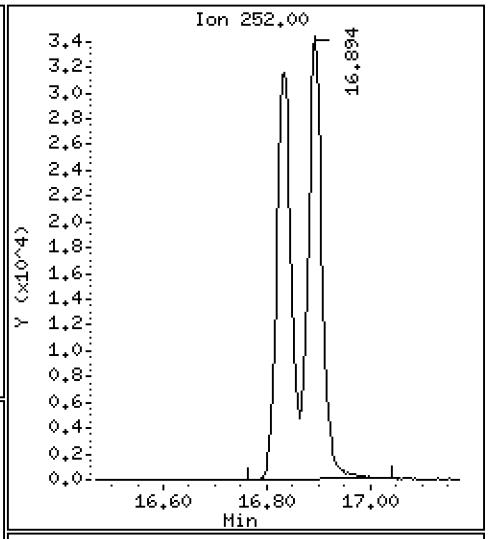
Column phase: Rxi-17sil

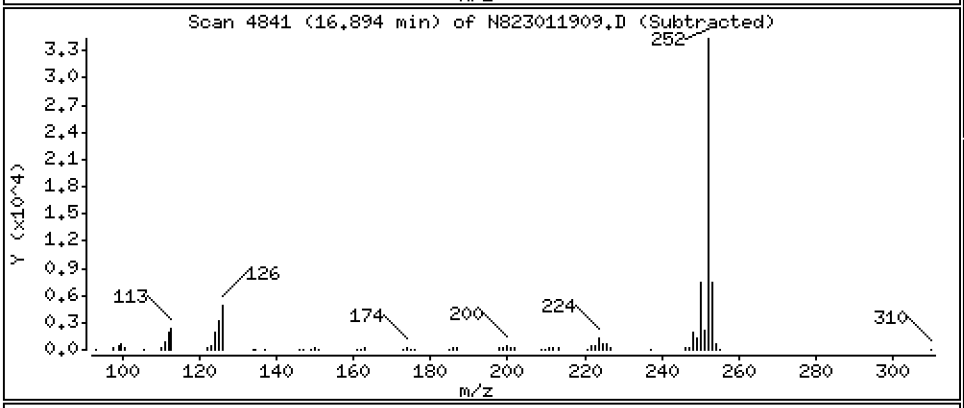
Column diameter: 0.25

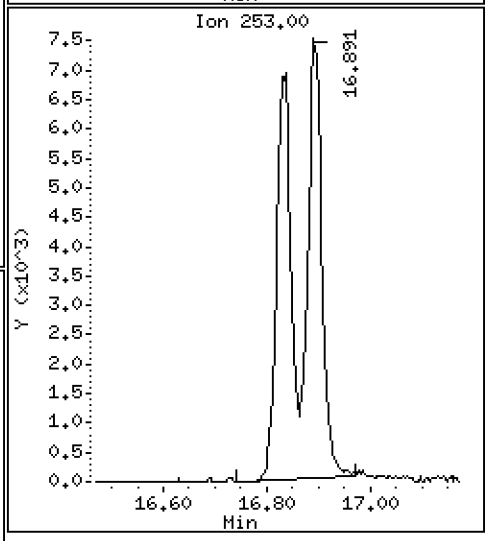
31 Total Benzofluoranthenes

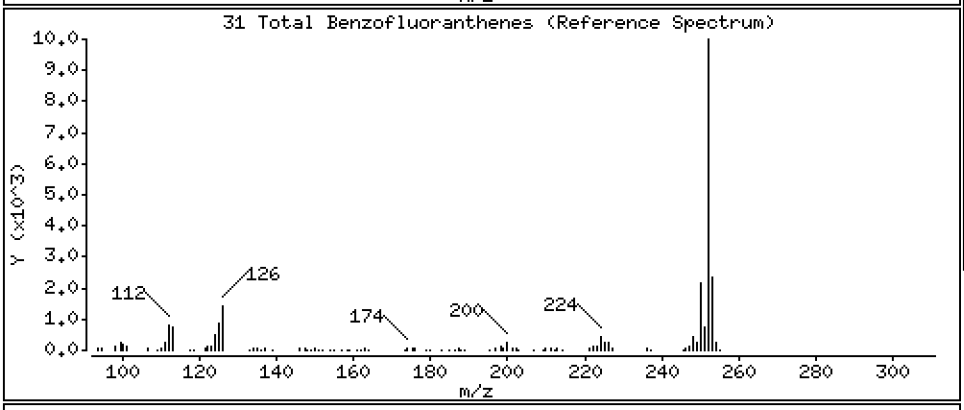
Concentration: 5.480 ug/L

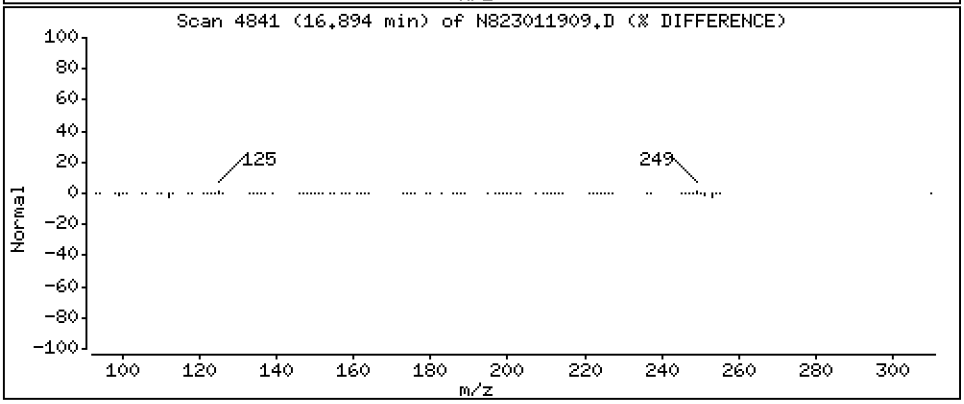












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

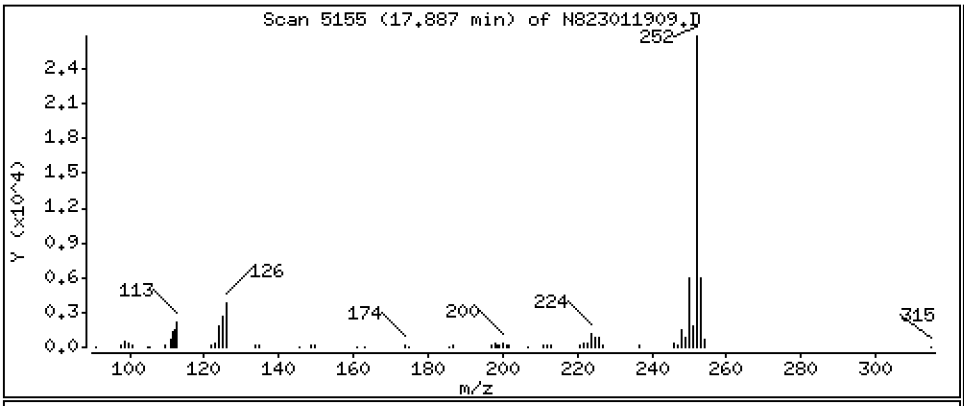
Operator: JZ

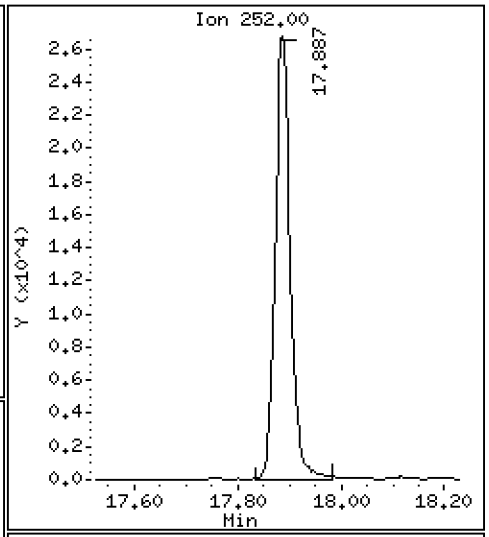
Column phase: Rxi-17sil

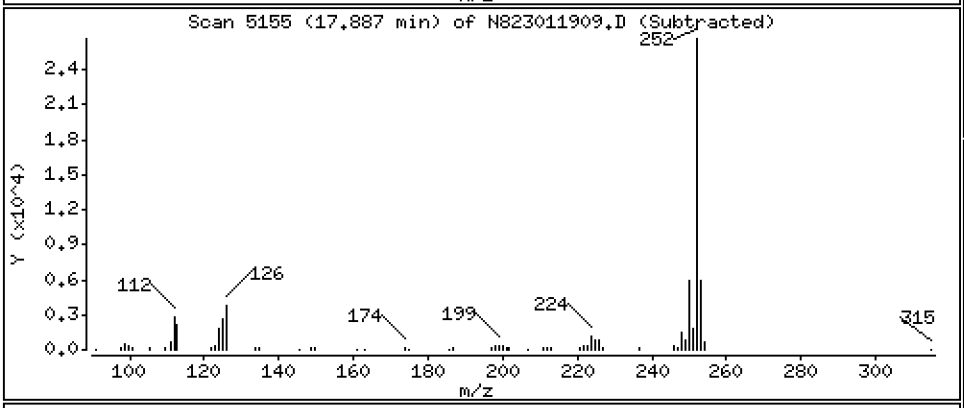
Column diameter: 0.25

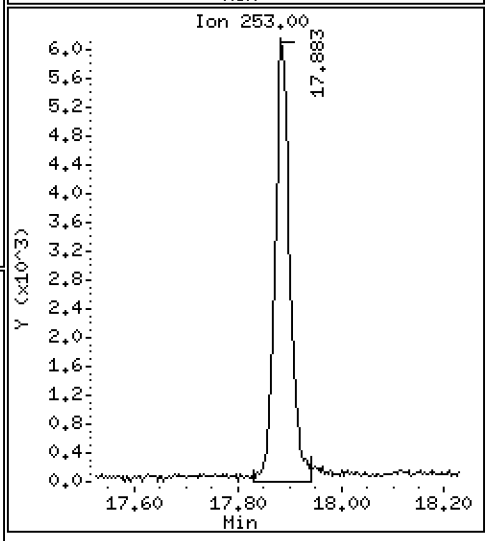
32 Benzo(a)pyrene

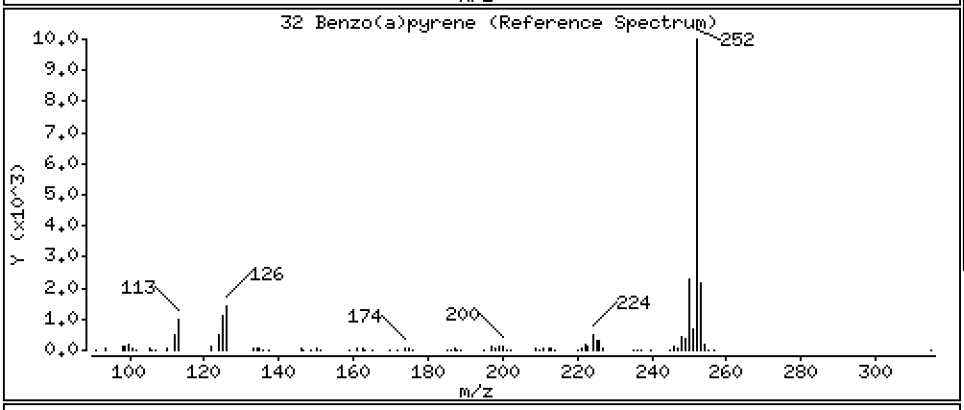
Concentration: 2.572 ug/L

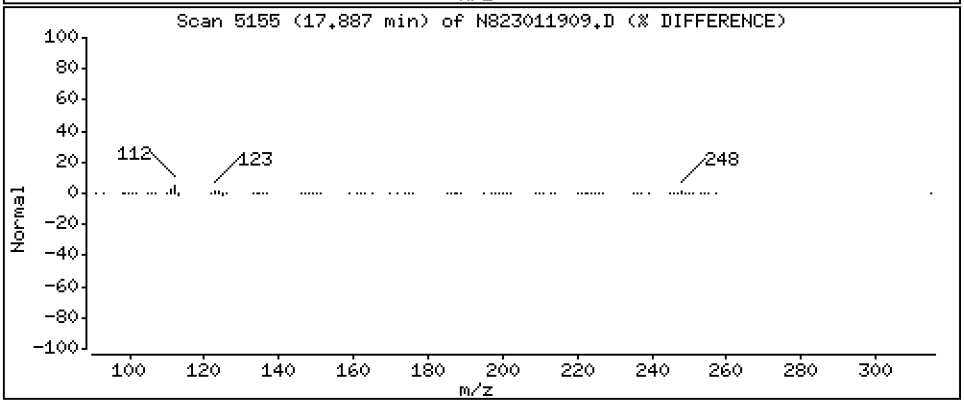












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

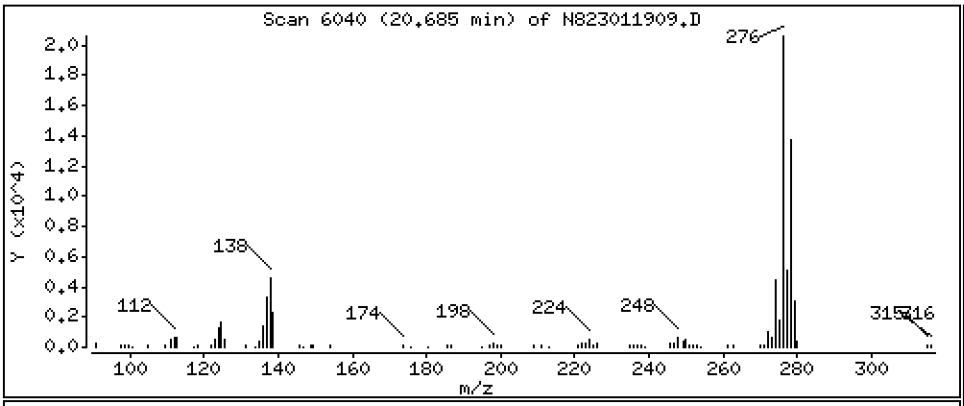
Operator: JZ

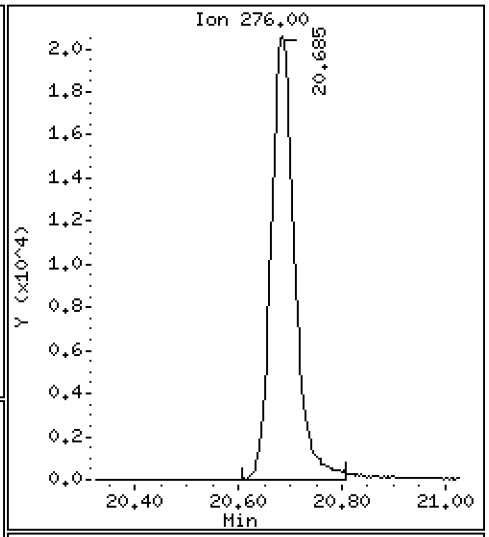
Column phase: Rxi-17sil

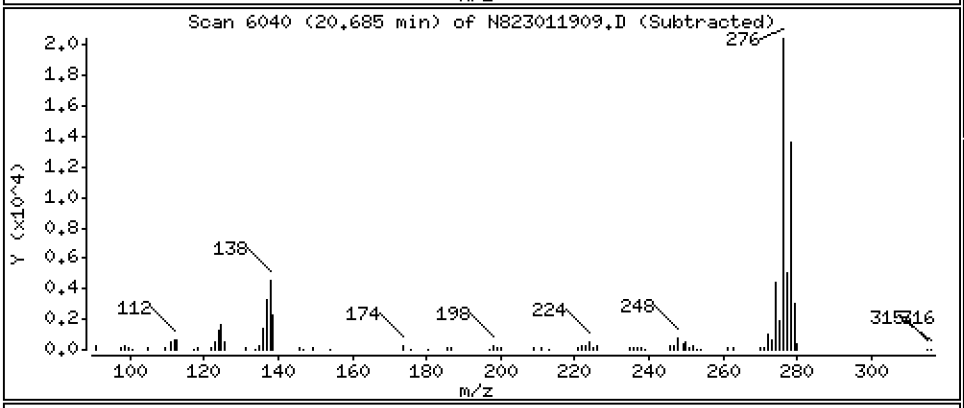
Column diameter: 0.25

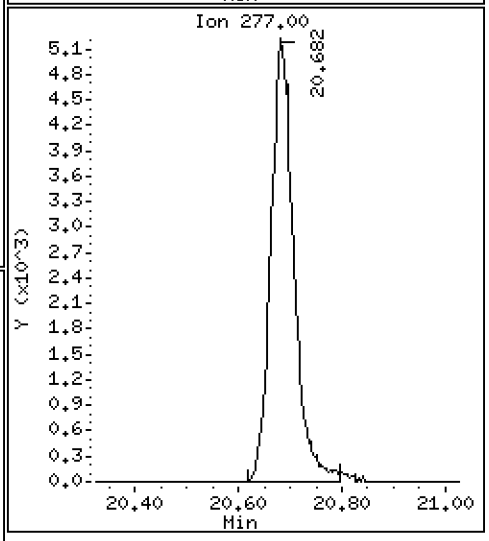
37 Indeno(1,2,3-cd)pyrene

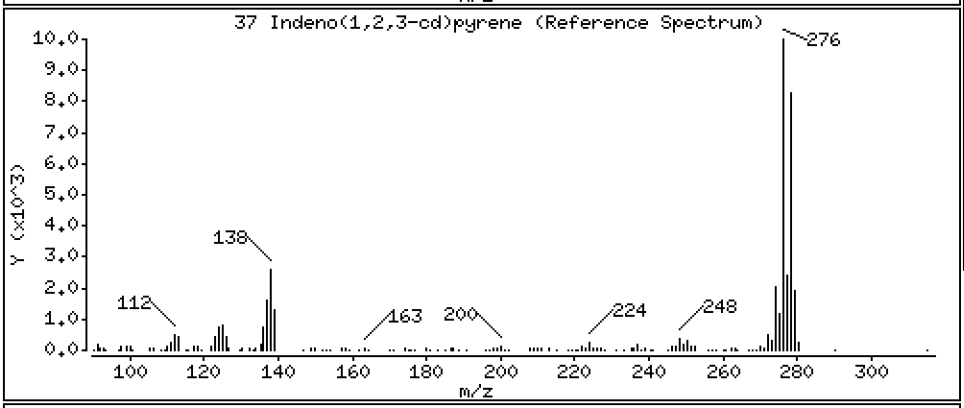
Concentration: 2.689 ug/L

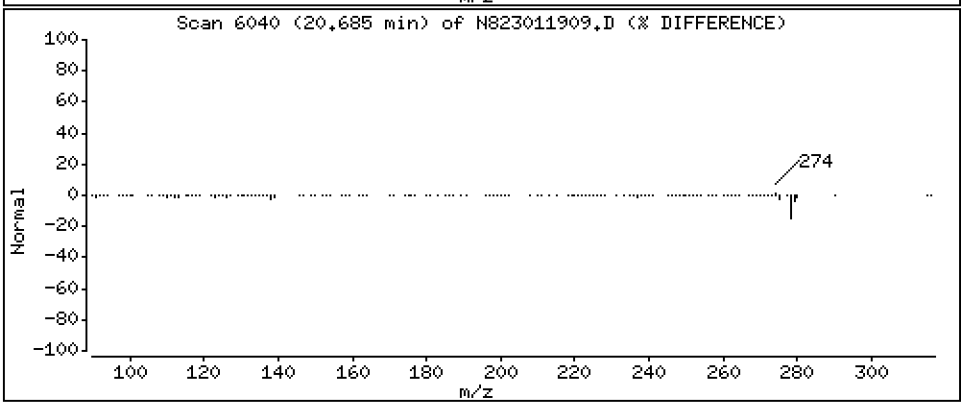












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

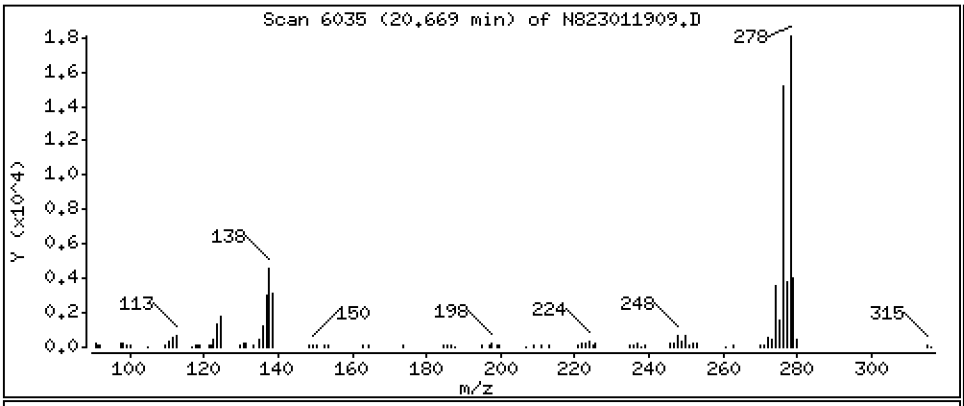
Operator: JZ

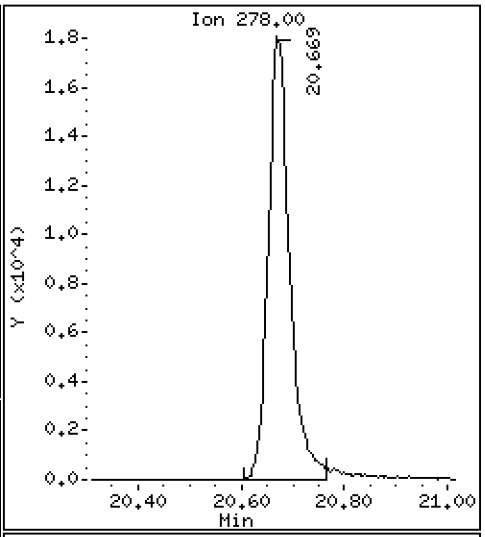
Column phase: Rxi-17sil

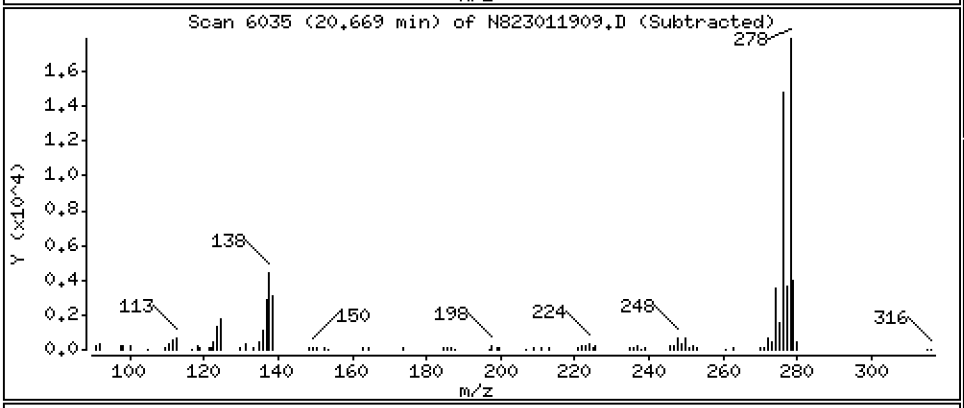
Column diameter: 0.25

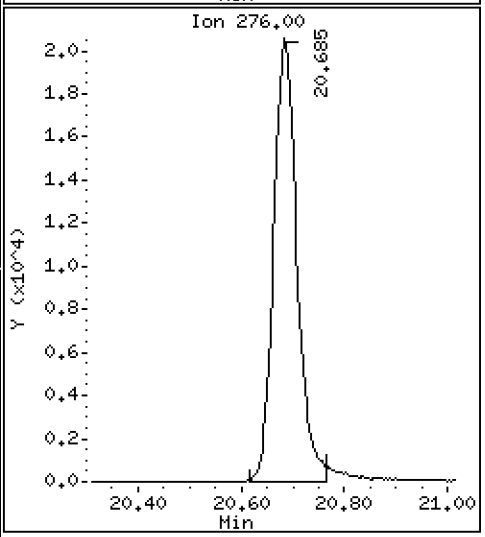
38 Dibenzo(a,h)anthracene

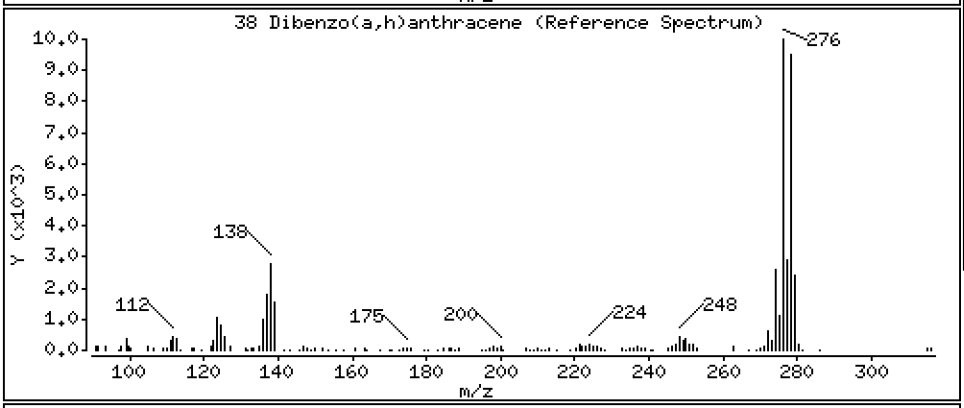
Concentration: 2.493 ug/L

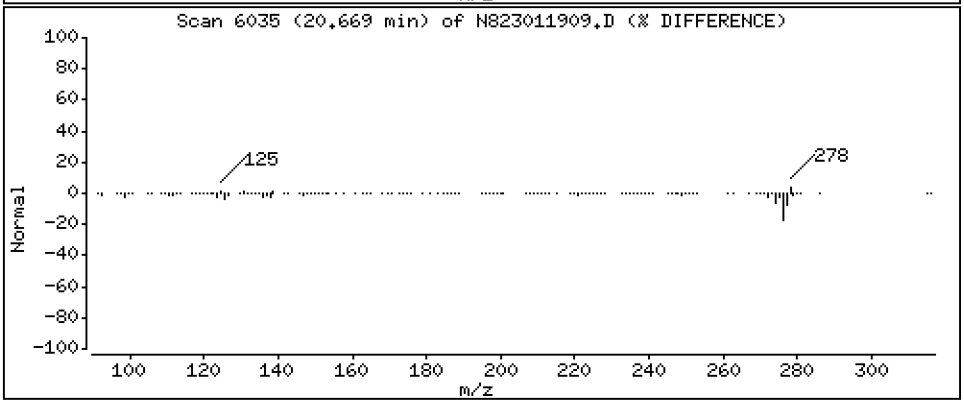












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

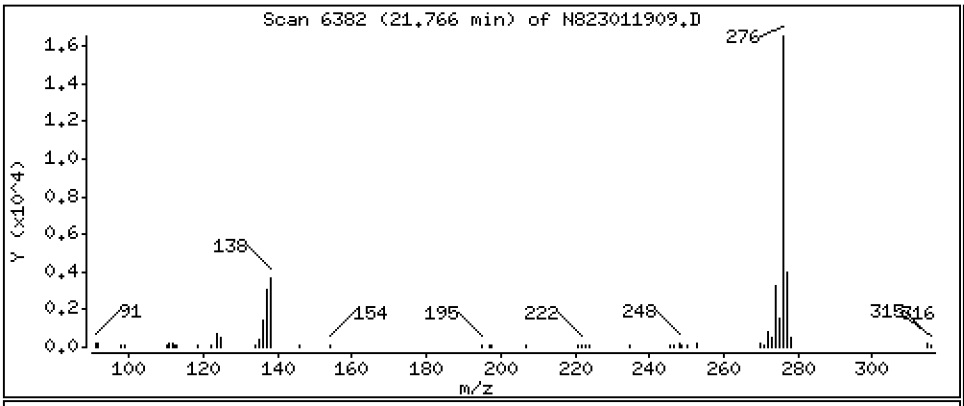
Operator: JZ

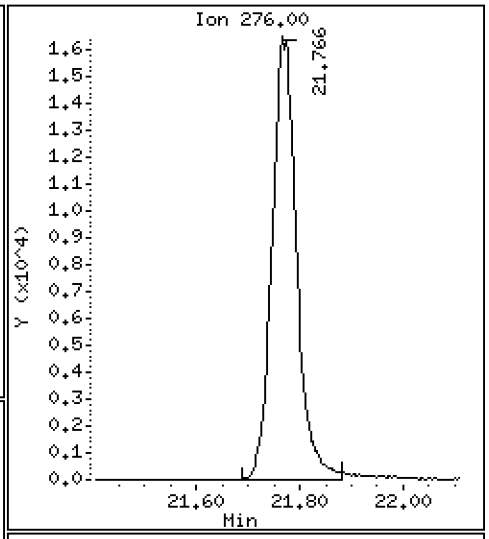
Column phase: Rxi-17sil

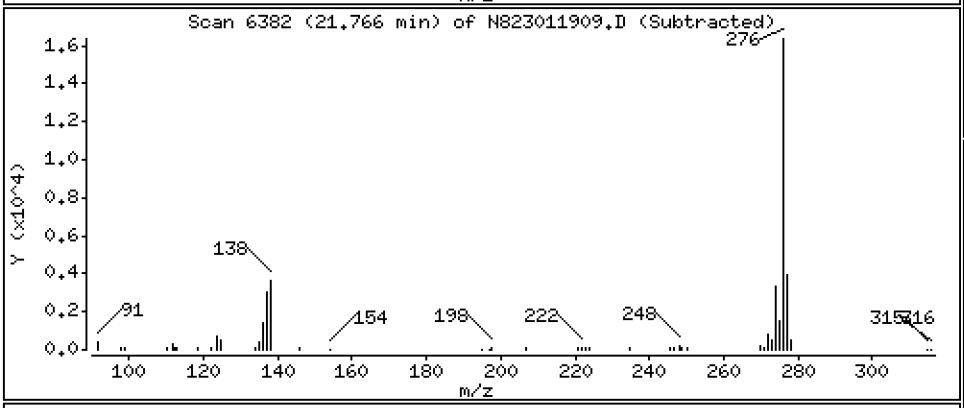
Column diameter: 0.25

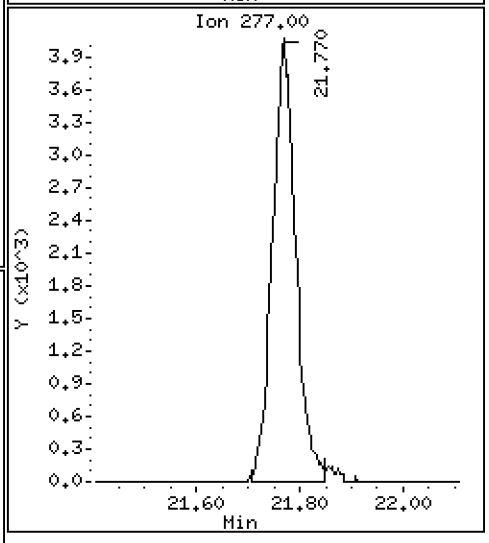
39 Benzo(g,h,i)perylene

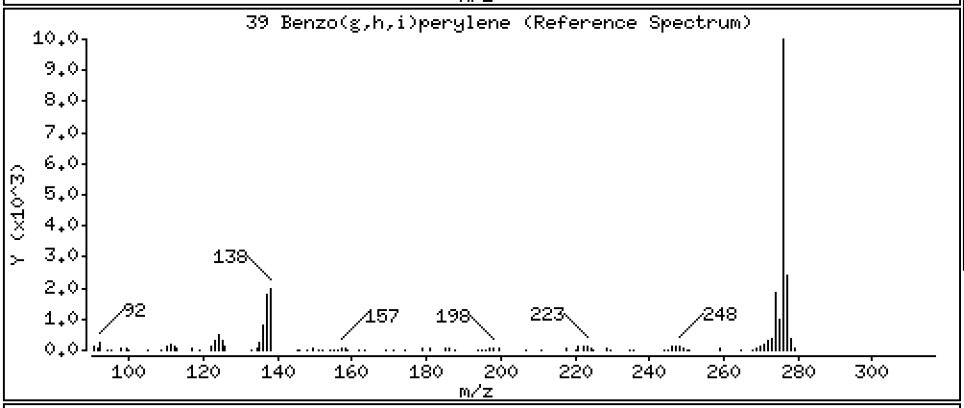
Concentration: 2.483 ug/L

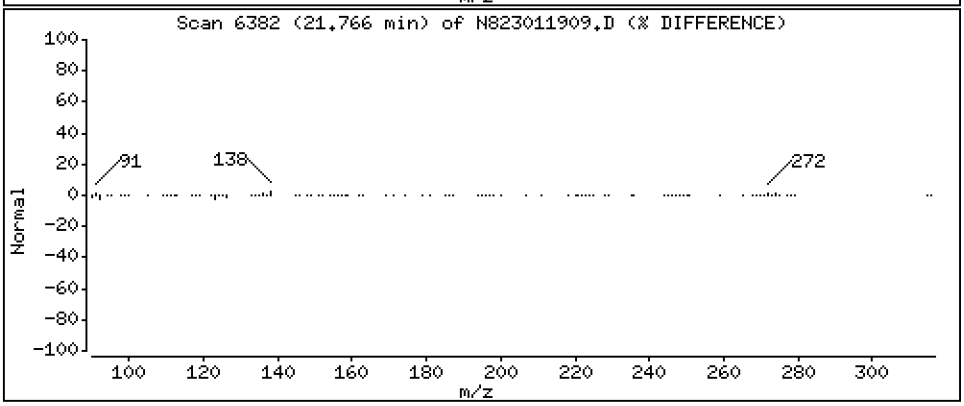












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230119.b\N823011909.D
Lab Smp Id: SLA0213-SCV1
Inj Date : 19-JAN-2023 14:58
Operator : JZ Inst ID: nt8.i
Smp Info : SCV230119
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Meth Date : 25-Jan-2023 21:57 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnascv.sub
Target Version: 4.14
Processing Host: JIANQING-202105

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Vo	500.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
*	1 Naphthalene-d8	136	4.913	4.906	(1.000)	46346	2.00000	
	2 Naphthalene	128	4.941	4.938	(1.006)	56587	2.62597	2.626
$	3 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	4 2-Methylnaphthalene	141	5.694	5.687	(1.159)	31650	2.67019	2.670
	5 1-methylnaphthalene	141	5.890	5.883	(1.199)	31873	2.64949	2.649
	9 Acenaphthylene	152	7.091	7.085	(0.985)	59018	2.82060	2.821
*	10 Acenaphthene-d10	164	7.202	7.196	(1.000)	27709	2.00000	
	11 Acenaphthene	153	7.249	7.246	(1.007)	36454	2.60022	2.600
	12 Dibenzofuran	168	7.401	7.395	(1.028)	60898	2.85987	2.860
	14 Fluorene	166	7.878	7.872	(1.094)	43507	2.63066	2.631
*	15 Phenanthrene-d10	188	9.238	9.235	(1.000)	51685	2.00000	
	16 Phenanthrene	178	9.276	9.270	(1.004)	61815	2.44841	2.448
	17 Anthracene	178	9.317	9.311	(1.009)	52064	2.27006	2.270
	22 Fluoranthene	202	11.059	11.053	(1.197)	72902	2.65276	2.653
$	21 Fluoranthene-d10	212	Compound Not Detected.					
	23 Pyrene	202	11.578	11.572	(0.815)	71115	2.46242	2.462
	24 Benzo(a)anthracene	228	14.082	14.076	(0.991)	67725	2.58725	2.587
*	25 Chrysene-d12	240	14.212	14.202	(1.000)	46582	2.00000	
	27 Chrysene	228	14.285	14.278	(1.005)	66872	2.39976	2.400
	28 Benzo(b)fluoranthene	252	16.833	16.821	(0.929)	60946	2.50689	2.507
	29 Benzo(k)fluoranthene	252	16.893	16.884	(0.932)	63249	2.65606	2.656
	31 Total Benzofluoranthenes	252	16.893	16.821	(0.932)	126178	5.48025	5.480(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	32 Benzo(a)pyrene	252	17.886	17.877	(0.987)	55026	2.57205	2.572
*	33 Perylene-d12	264	18.117	18.111	(1.000)	41743	2.00000	
	37 Indeno(1,2,3-cd)pyrene	276	20.684	20.675	(1.142)	65545	2.68928	2.689
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	20.669	20.662	(1.141)	52293	2.49315	2.493
	39 Benzo(g,h,i)perylene	276	21.766	21.756	(1.201)	54821	2.48258	2.483
	35 Perylene	252	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823011909.D
Lab Smp Id: SLA0213-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 19-JAN-2023
Calibration Time: 12:52
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44704	22352	89408	46346	3.67
10 Acenaphthene-d10	26411	13206	52822	27709	4.91
15 Phenanthrene-d10	49210	24605	98420	51685	5.03
25 Chrysene-d12	42994	21497	85988	46582	8.35
33 Perylene-d12	40520	20260	81040	41743	3.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.91	4.41	5.41	4.91	0.13
10 Acenaphthene-d10	7.20	6.70	7.70	7.20	0.09
15 Phenanthrene-d10	9.24	8.74	9.74	9.24	0.03
25 Chrysene-d12	14.20	13.70	14.70	14.21	0.07
33 Perylene-d12	18.11	17.61	18.61	18.12	0.03

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

REVIEW SUMMARY FOR FILE - N823011909.D

Lab ID: SLA0213-SCV1
nt8.i, 20230119.b\FSIMPNA230119.m,   19-JAN-2023 14:58

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

No RRT check performed

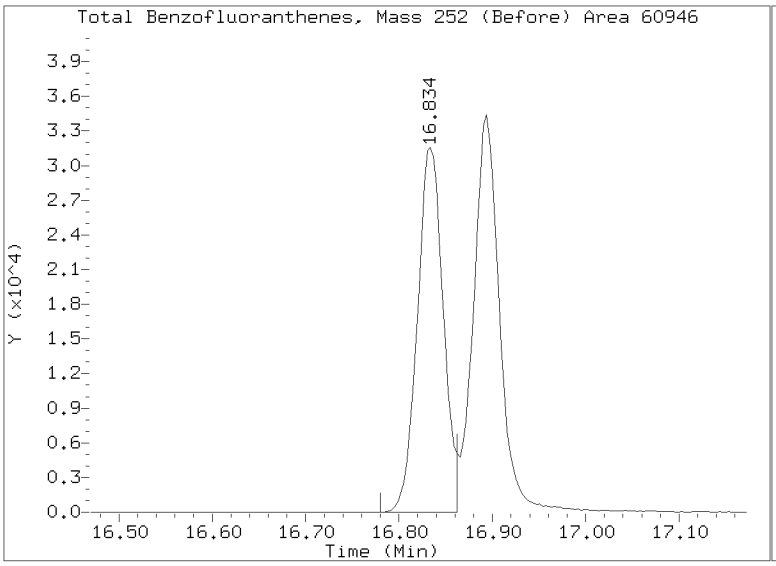
On Column LOD for nt8.i, 20230119.b\FSIMPNA230119.m, pnascv.sub = 0.0500

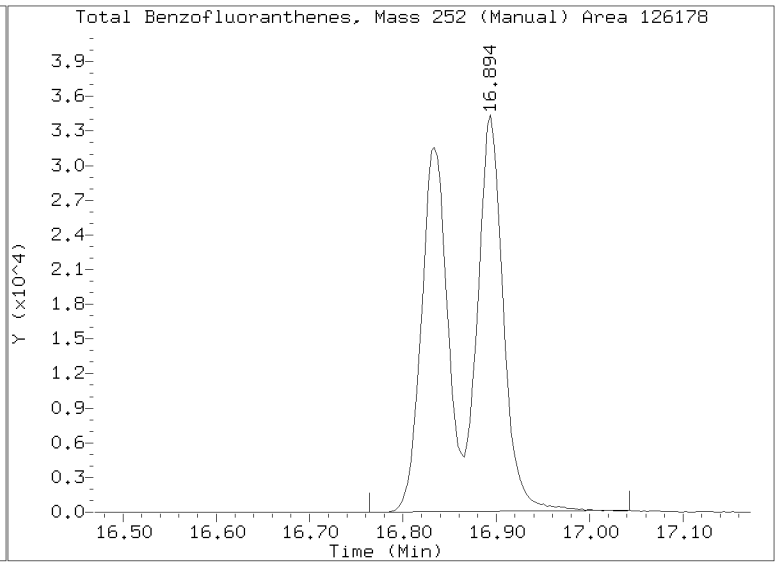
Exception: Benzo(b)fluoranthene 0.0300
Exception: Benzo(k)fluoranthene 0.0300
Exception: Total Benzofluoranthenes 0.0300
Exception: Fluoranthene-d10 (Surr) 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230119.b/N823011909.D
Injection Date: 19-JAN-2023 14:58
Lab ID:SLA0213-SCV1 Client ID:
Report Date: 01/25/2023 22:00





SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GD00068
Laboratory ID: SLD0372-SCV1
Sequence: SLD0372
Sequence Name: 8270 SIM PNA SCV
Standard ID: L000686

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Naphthalene	2.5000	2.36	-5.5	
2-Methylnaphthalene	2.5000	2.39	-4.3	
1-Methylnaphthalene	2.5000	2.38	-4.8	
Acenaphthylene	2.5000	2.32	-7.1	
Acenaphthene	2.5000	2.23	-10.6	
Dibenzofuran	2.5000	2.52	0.7	
Fluorene	2.5000	2.29	-8.3	
Phenanthrene	2.5000	2.16	-13.6	
Anthracene	2.5000	2.01	-19.7	
Fluoranthene	2.5000	2.26	-9.7	
Pyrene	2.5000	2.23	-10.9	
Benzo(a)anthracene	2.5000	2.18	-13.0	
Chrysene	2.5000	2.14	-14.5	
Benzo(b)fluoranthene	2.5000	2.16	-13.7	
Benzo(k)fluoranthene	2.5000	2.30	-7.9	
Benzofluoranthenes, Total	5.0000	4.55	-8.9	
Benzo(a)pyrene	2.5000	2.29	-8.2	
Indeno(1,2,3-cd)pyrene	2.5000	2.45	-2.0	
Dibenzo(a,h)anthracene	2.5000	2.33	-6.6	
Benzo(g,h,i)perylene	2.5000	2.25	-10.1	

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

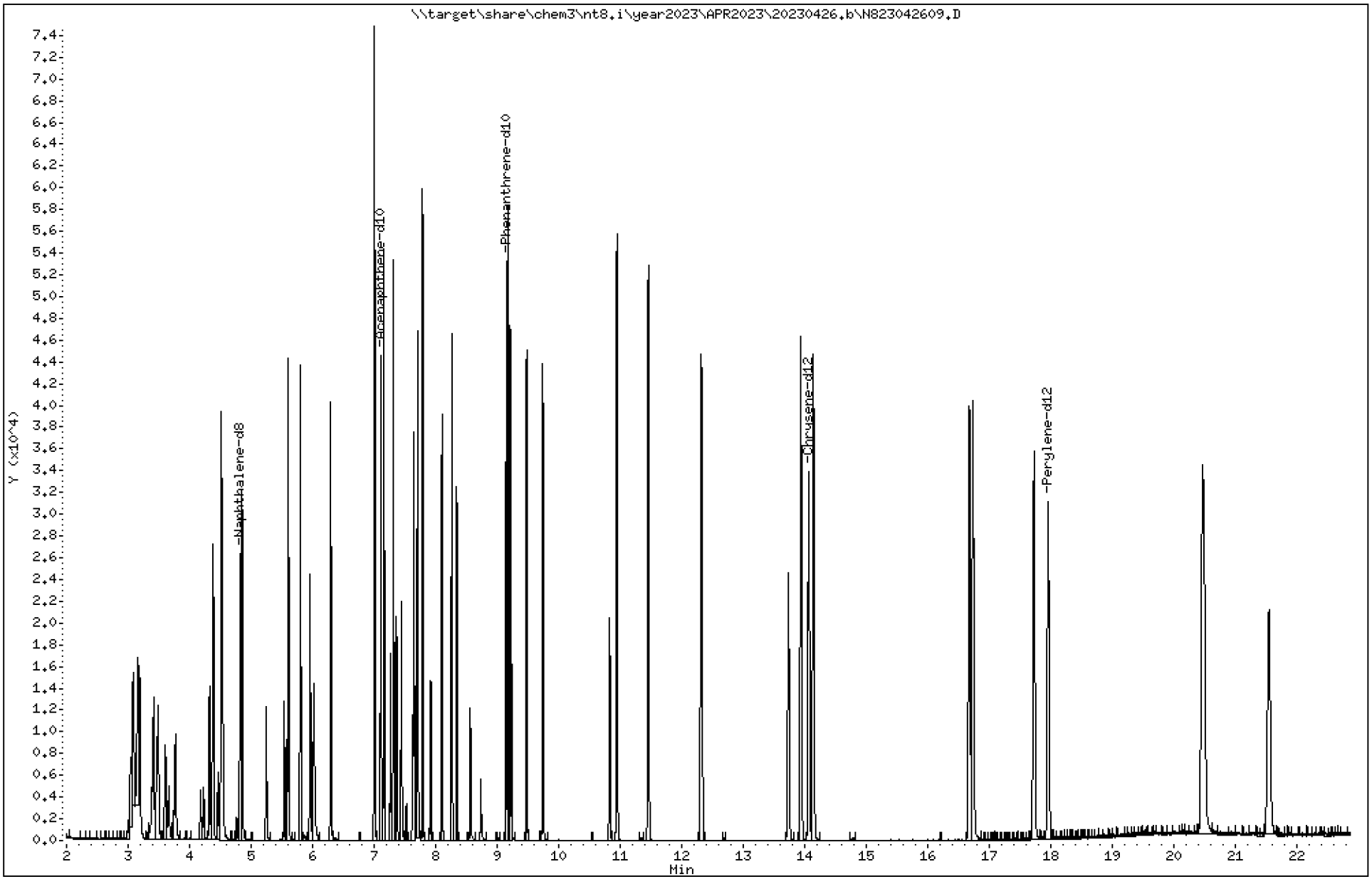
Sample Info: SCV230426

Volume Injected (uL): 1.0

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

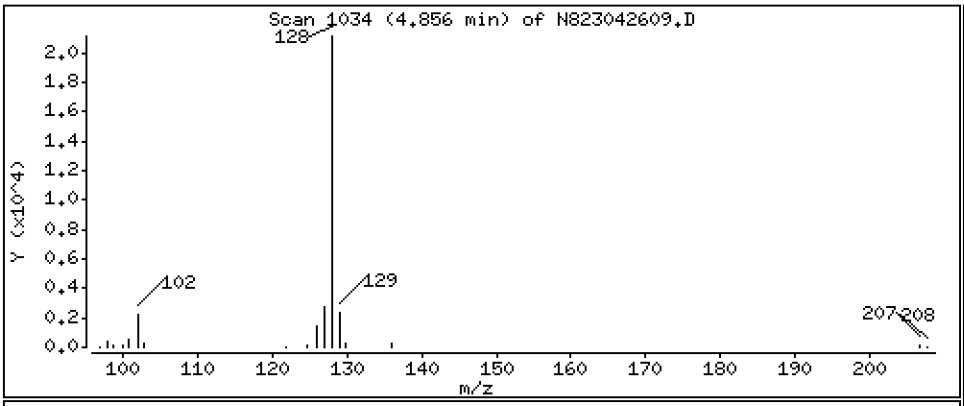
Operator: JZ

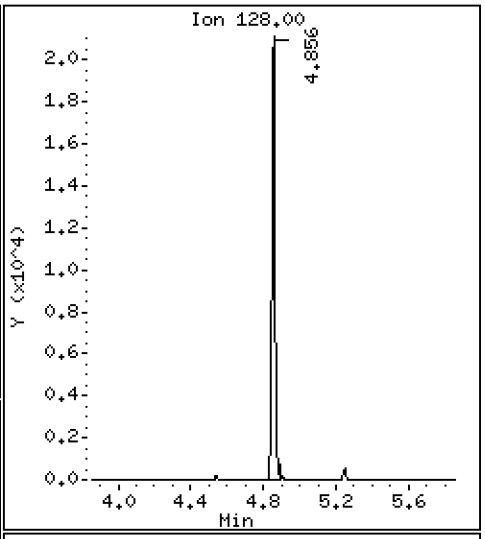
Column phase: Rxi-17sil

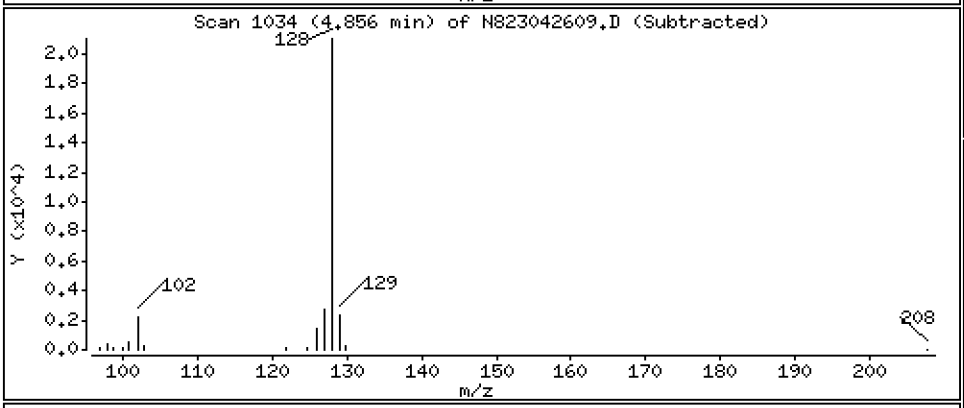
Column diameter: 0.25

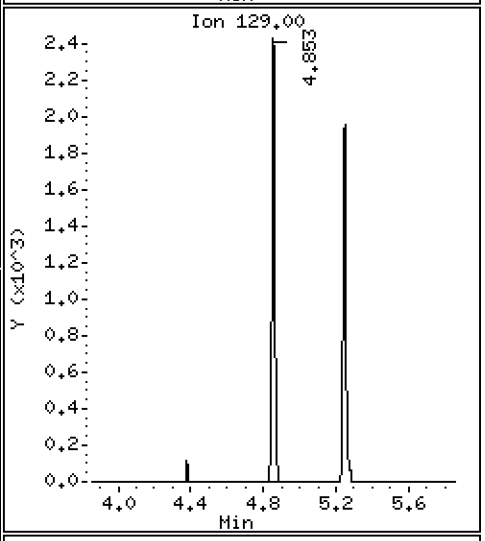
2 Naphthalene

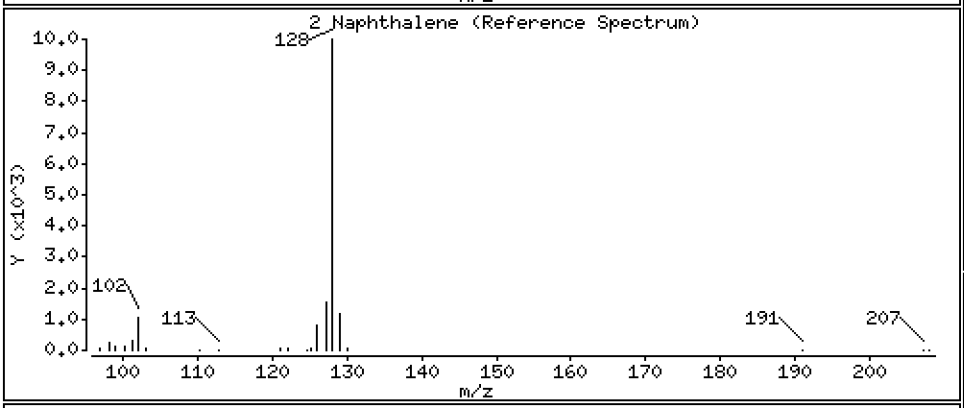
Concentration: 2.363 ug/L

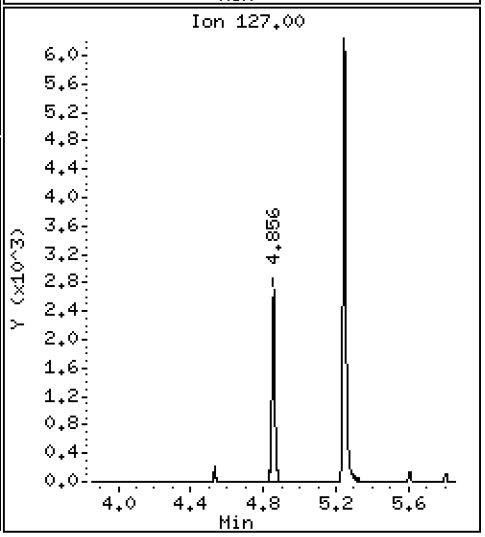


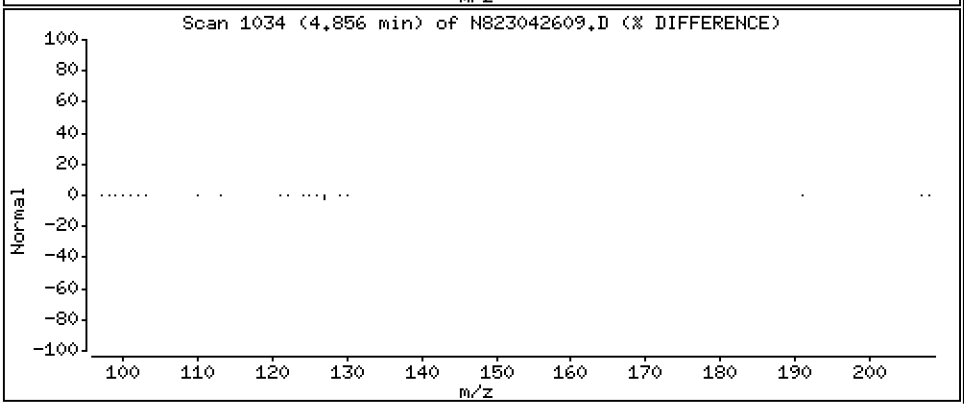












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

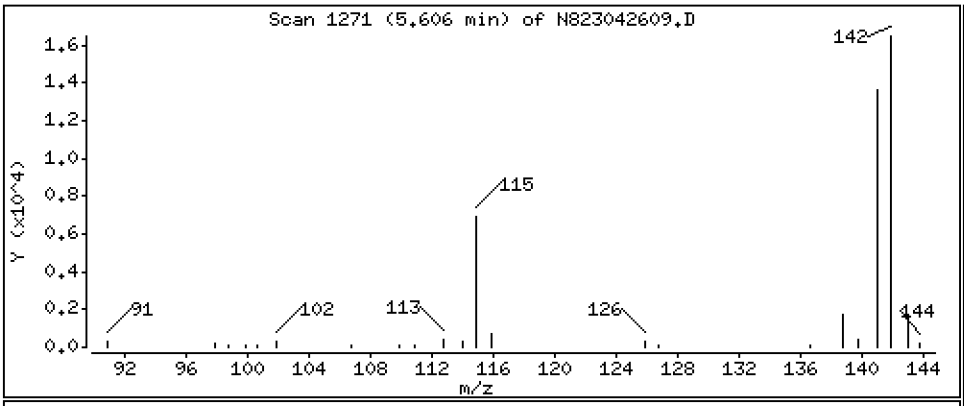
Operator: JZ

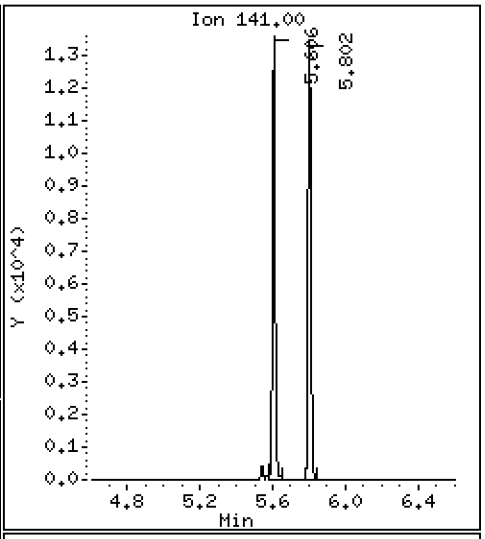
Column phase: Rxi-17sil

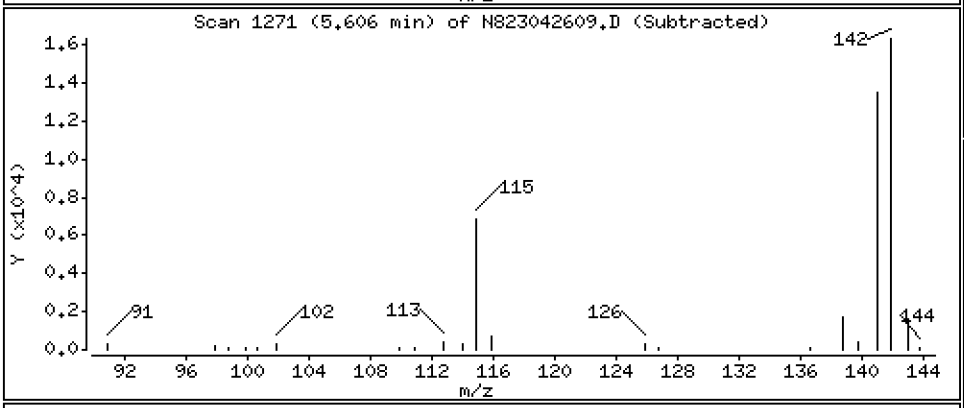
Column diameter: 0.25

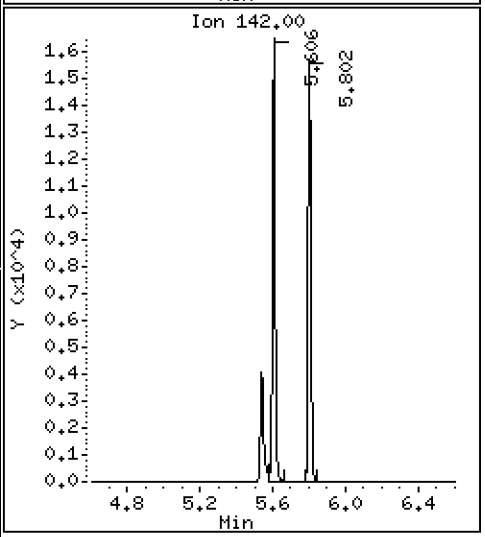
4 2-Methylnaphthalene

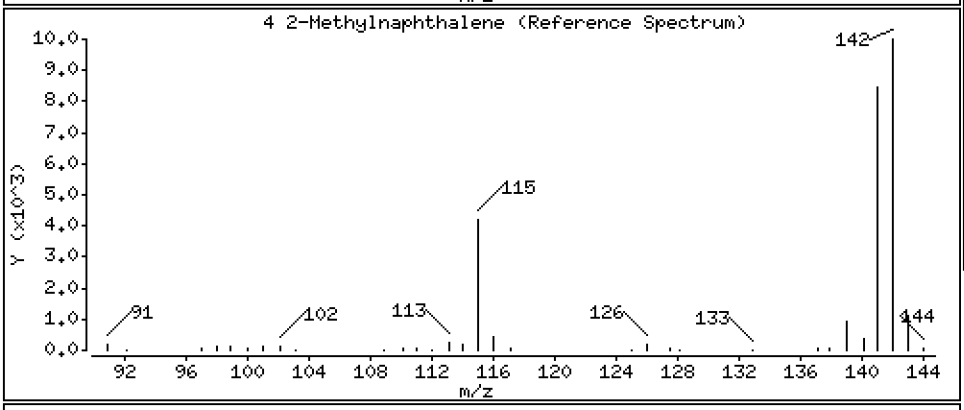
Concentration: 2.392 ug/L

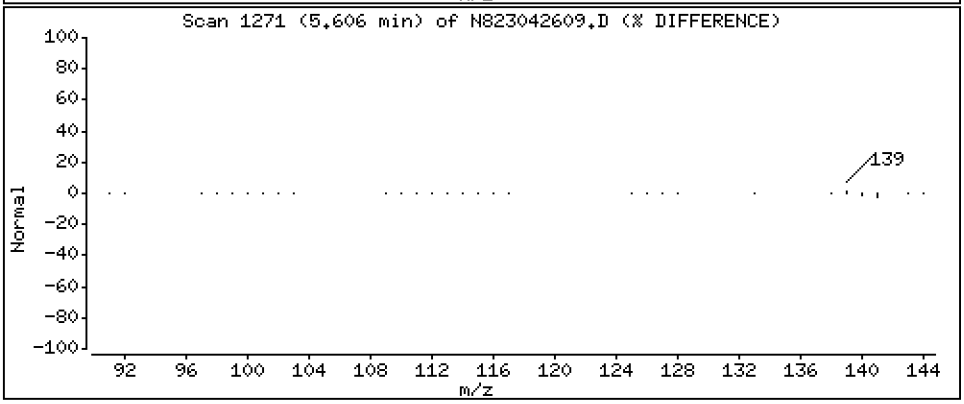












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

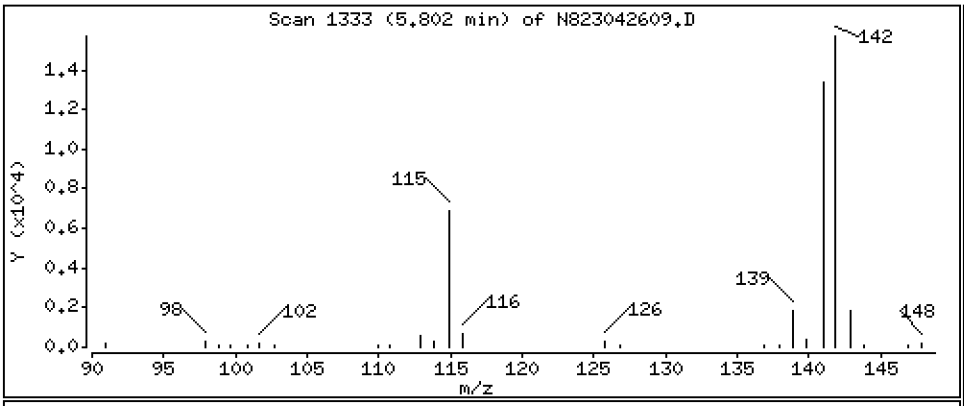
Operator: JZ

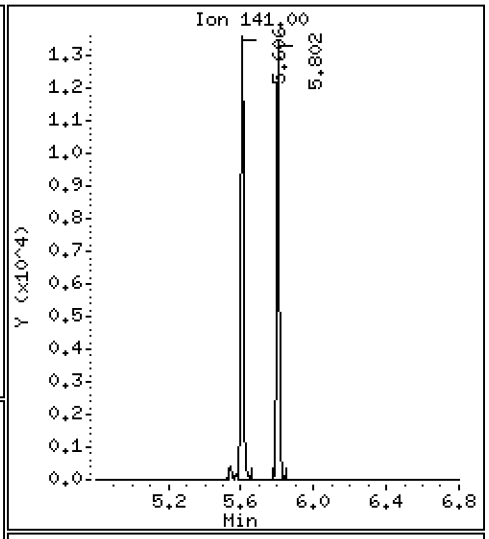
Column phase: Rxi-17sil

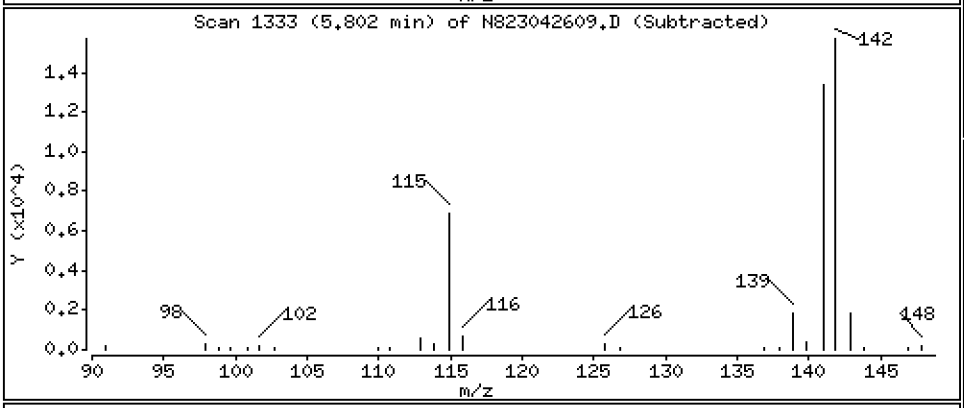
Column diameter: 0.25

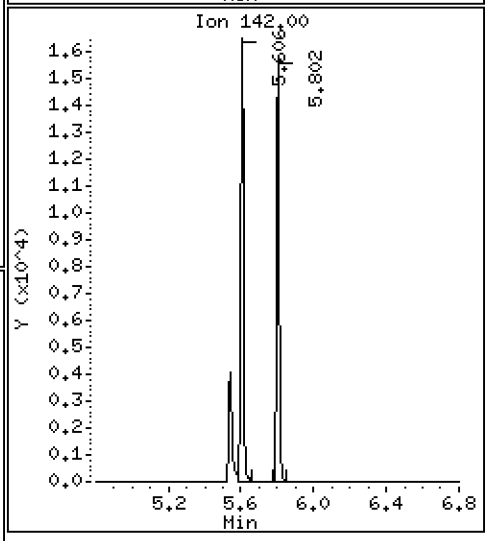
5 1-methylnaphthalene

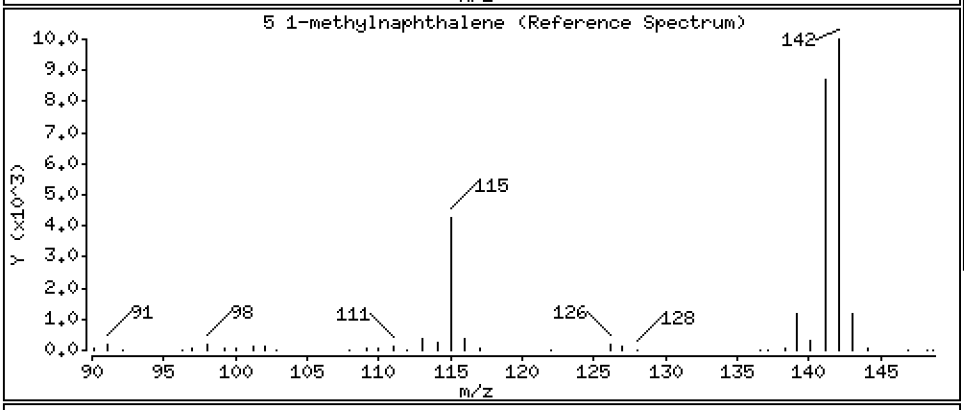
Concentration: 2.380 ug/L

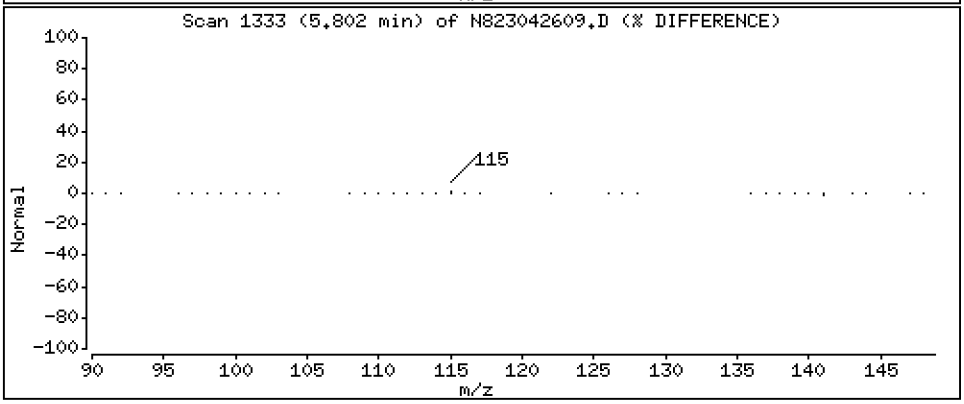












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

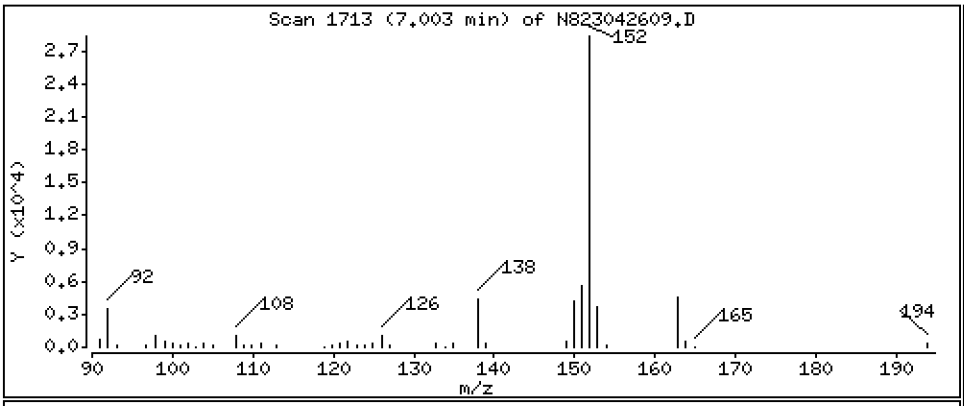
Operator: JZ

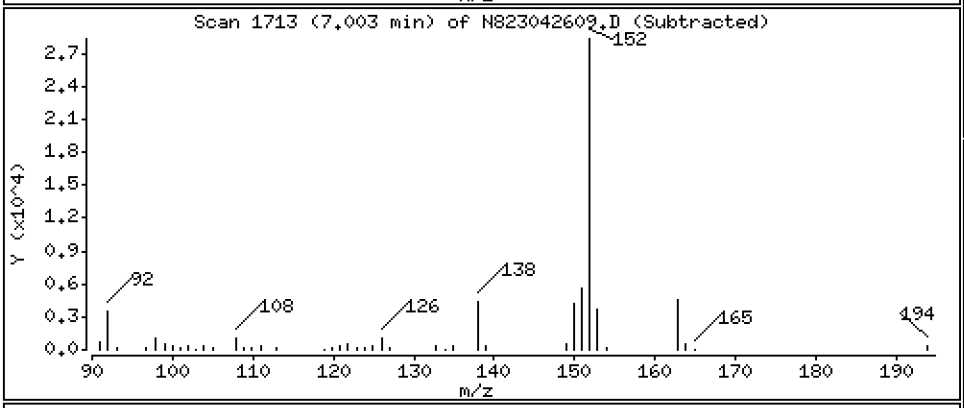
Column phase: Rxi-17sil

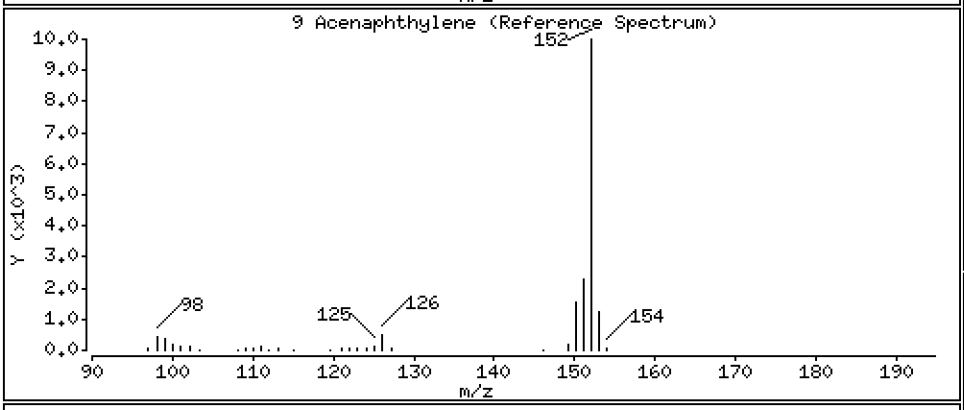
Column diameter: 0.25

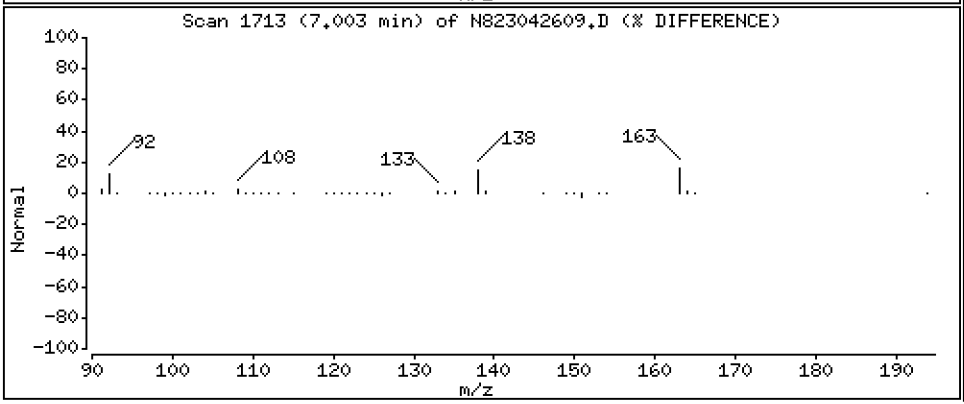
9 Acenaphthylene

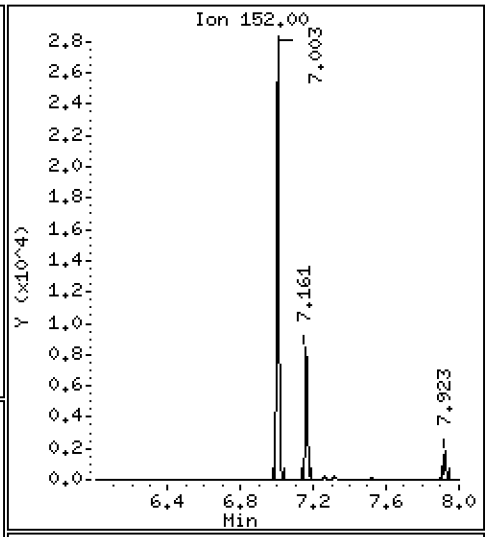
Concentration: 2.322 ug/L

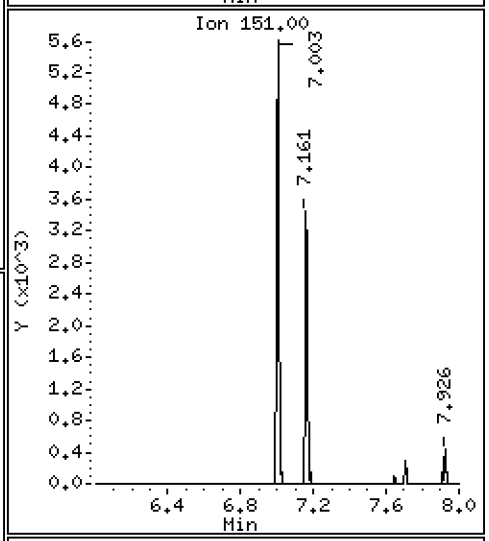


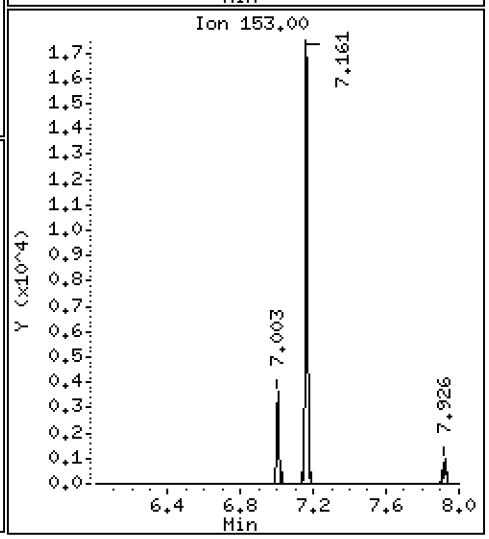












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

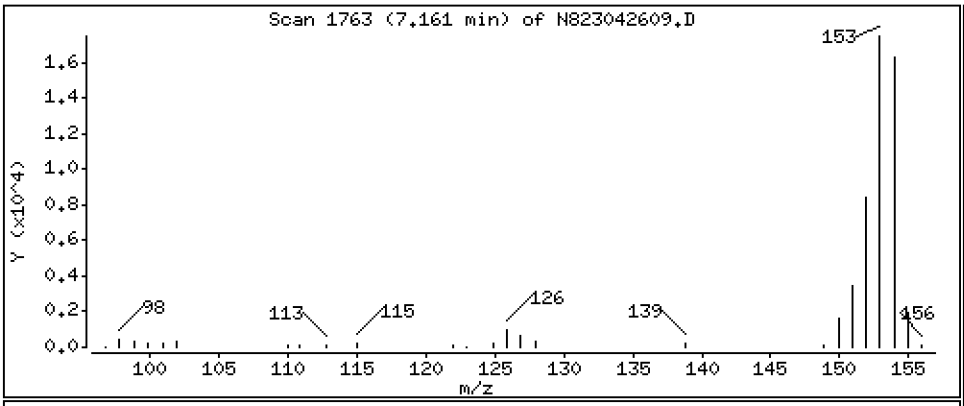
Operator: JZ

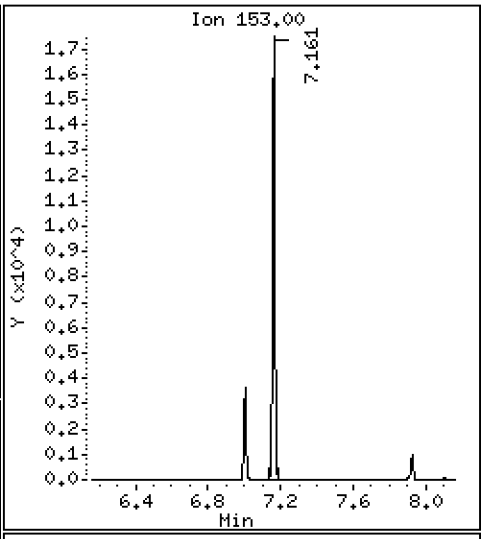
Column phase: Rxi-17sil

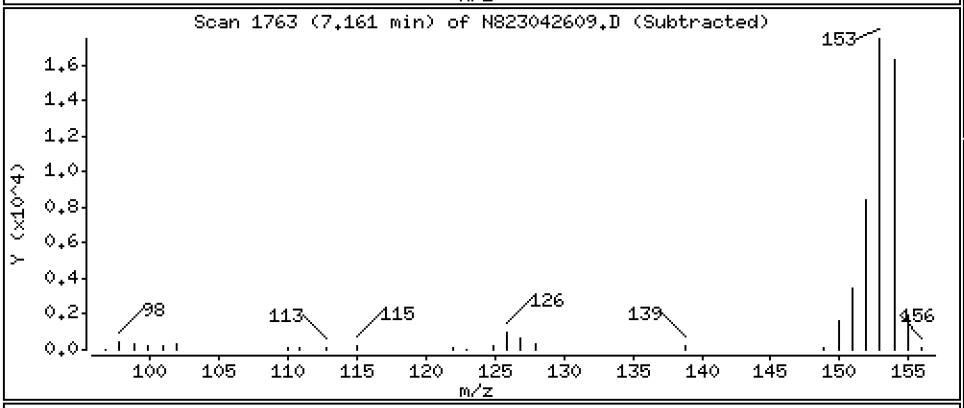
Column diameter: 0.25

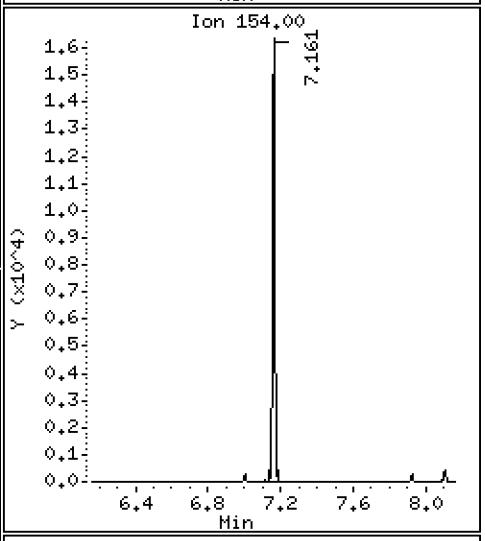
11 Acenaphthene

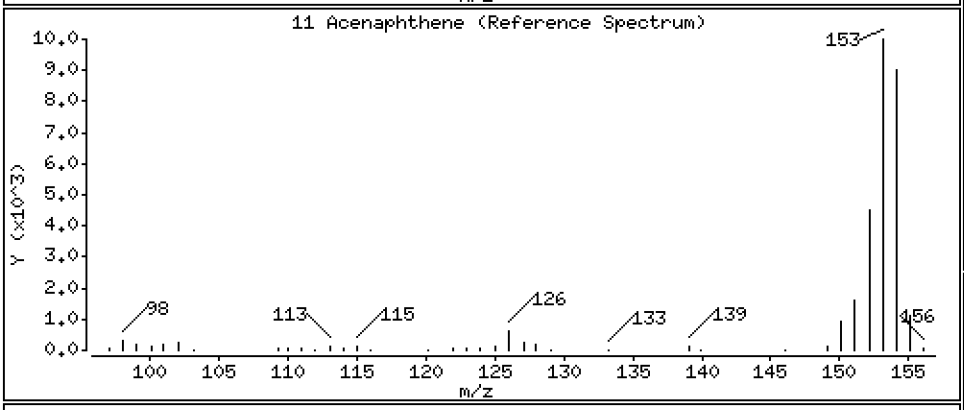
Concentration: 2.234 ug/L

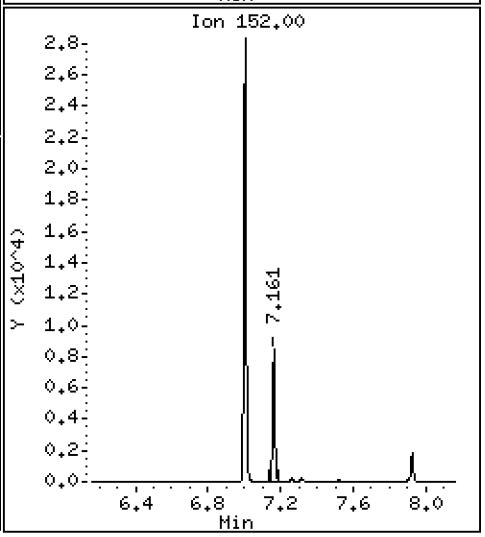


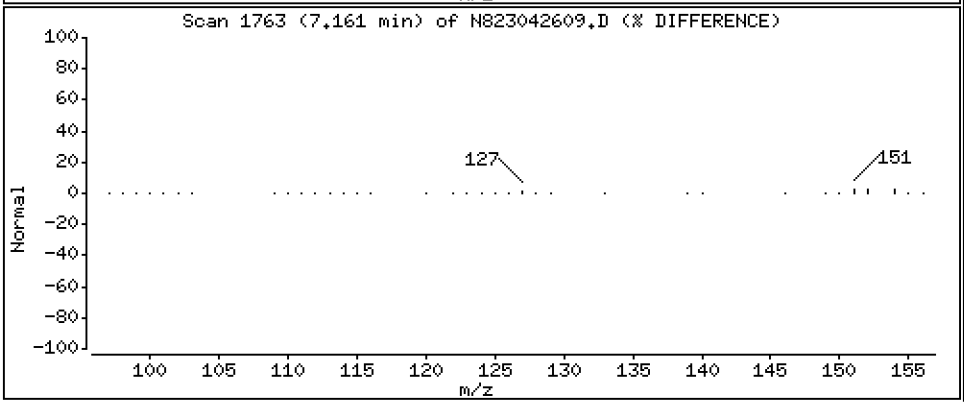












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

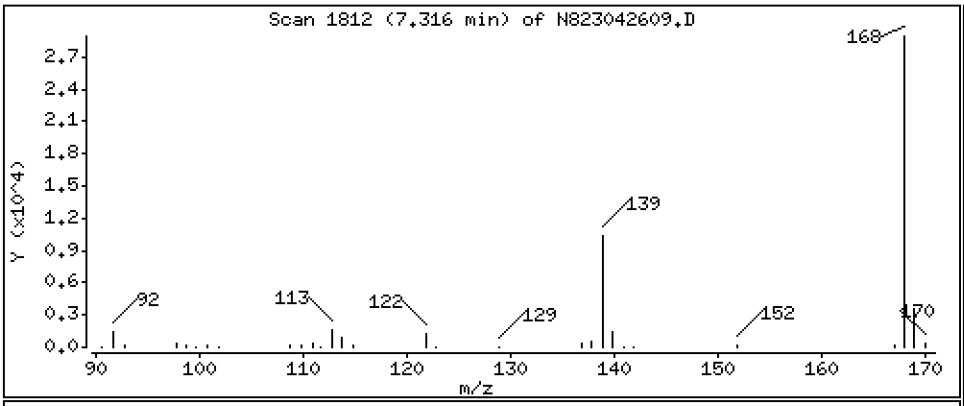
Operator: JZ

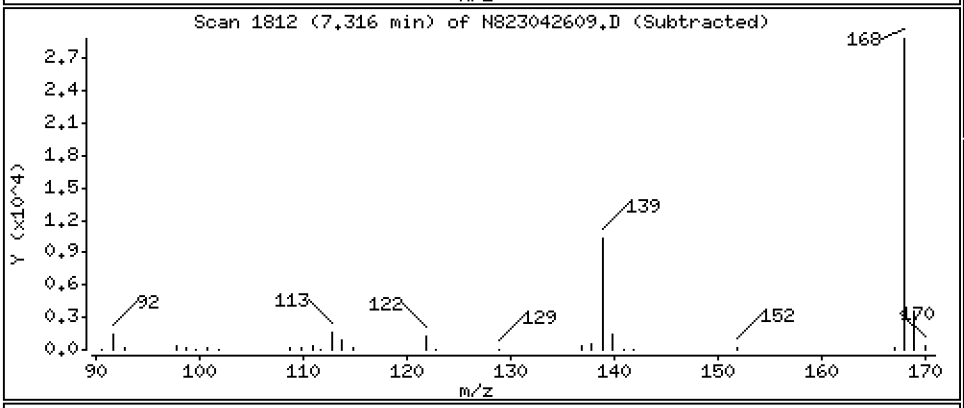
Column phase: Rxi-17sil

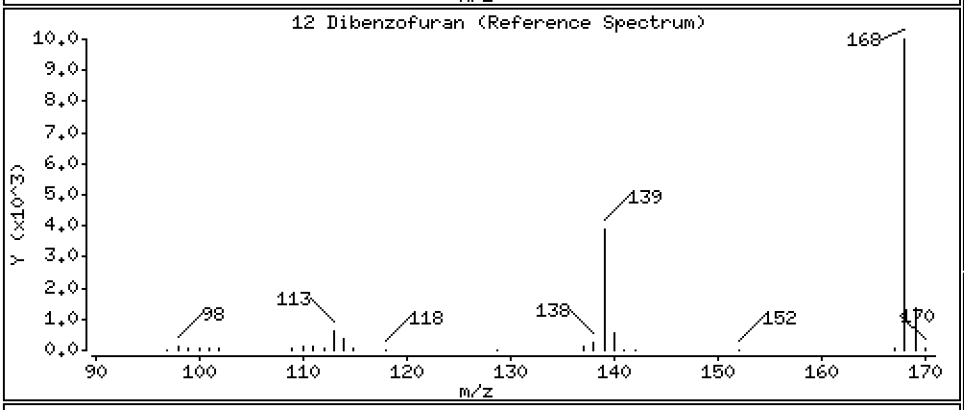
Column diameter: 0.25

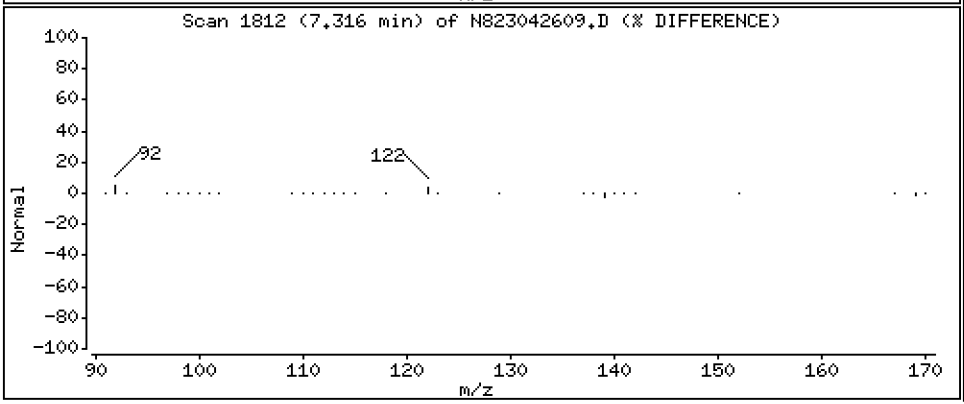
12 Dibenzofuran

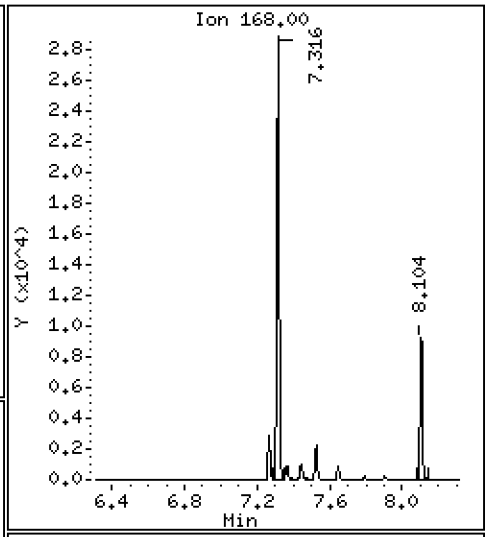
Concentration: 2.518 ug/L

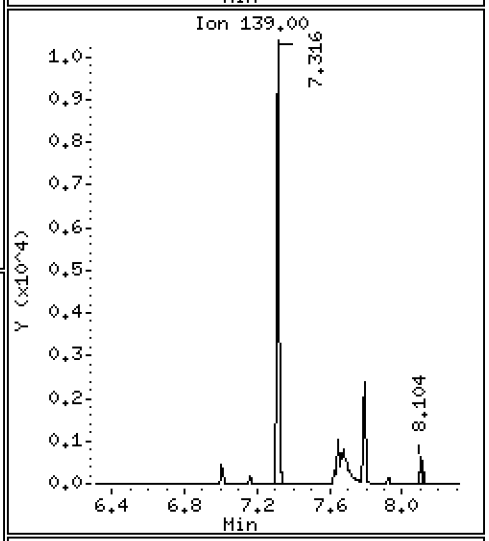


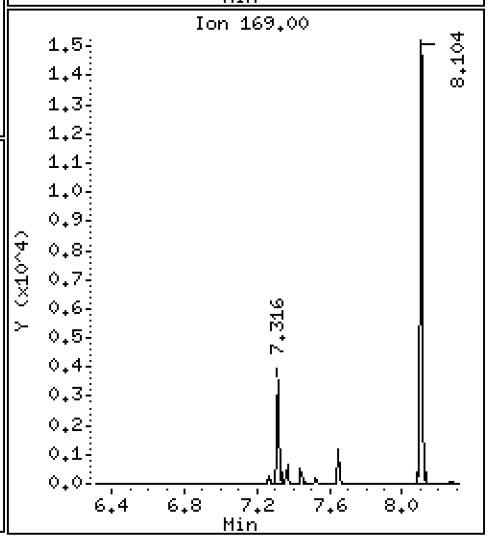












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

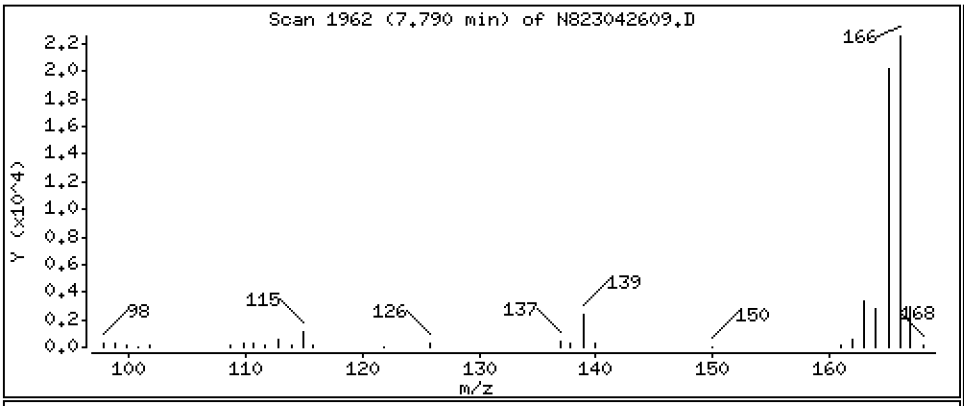
Operator: JZ

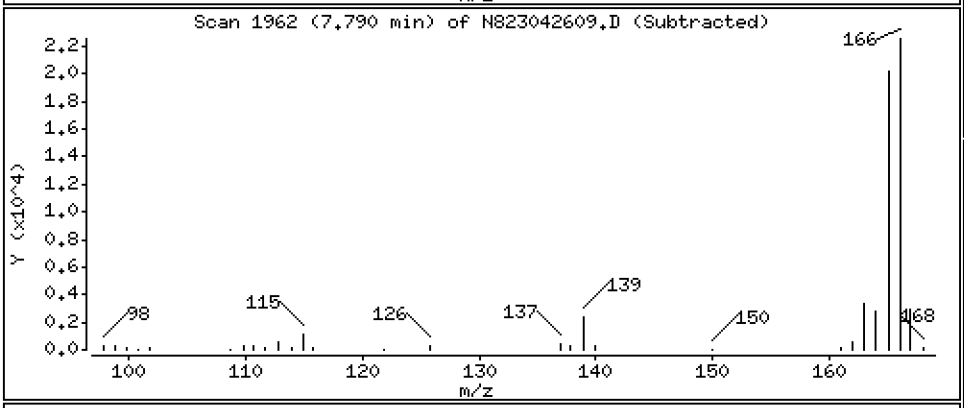
Column phase: Rxi-17sil

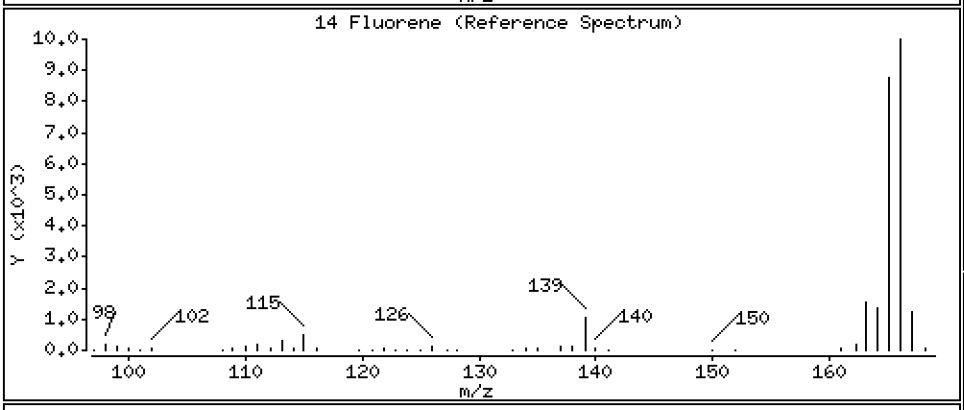
Column diameter: 0.25

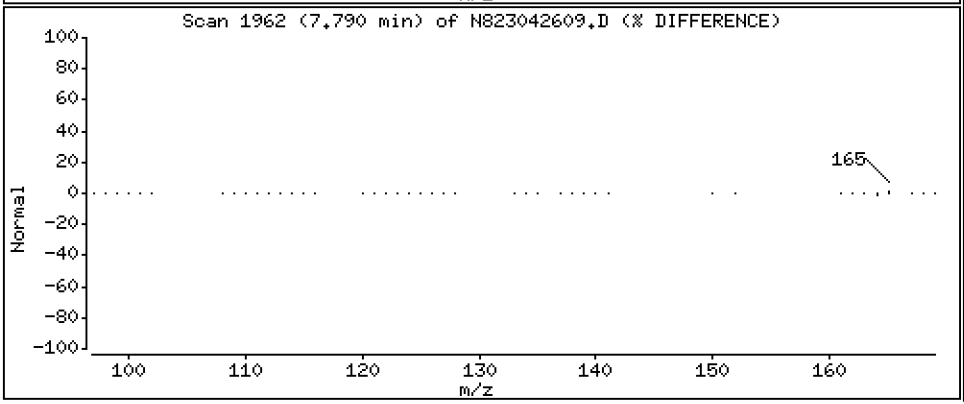
14 Fluorene

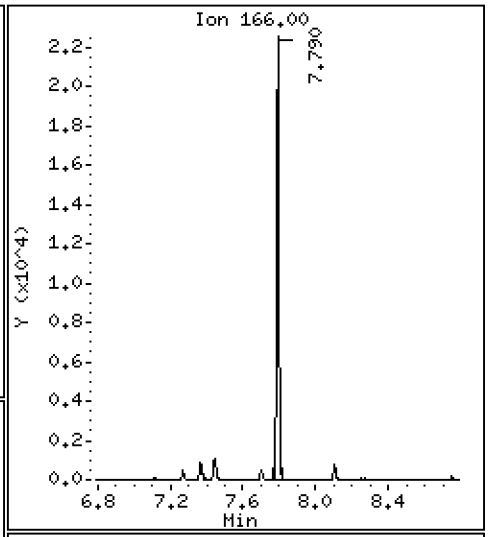
Concentration: 2.293 ug/L

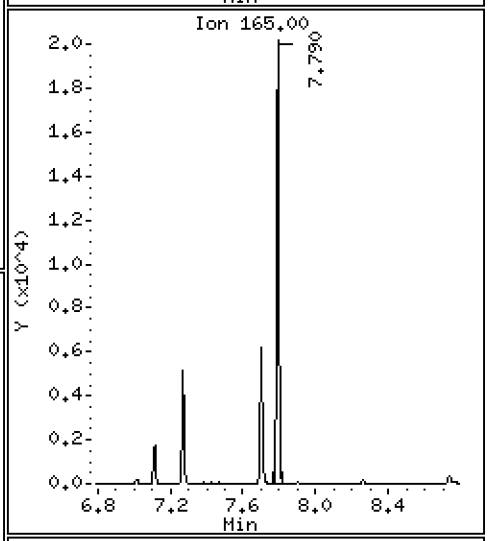


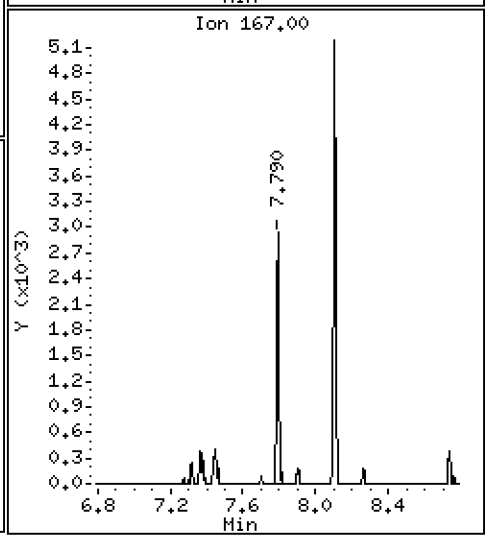












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

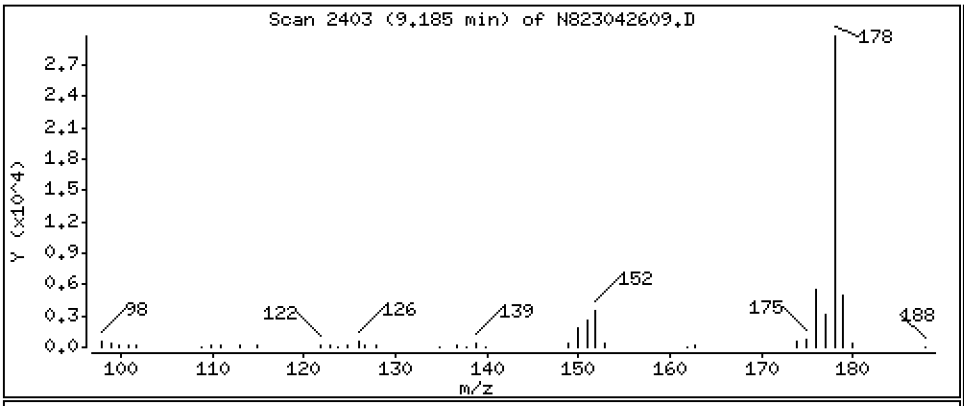
Operator: JZ

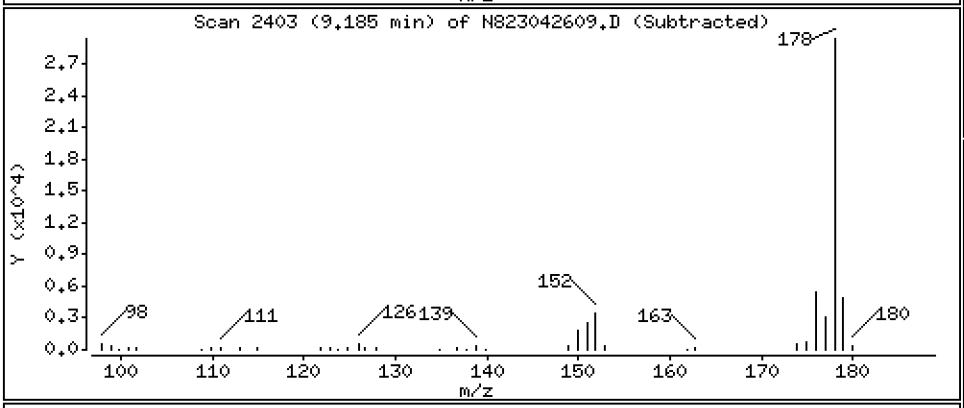
Column phase: Rxi-17sil

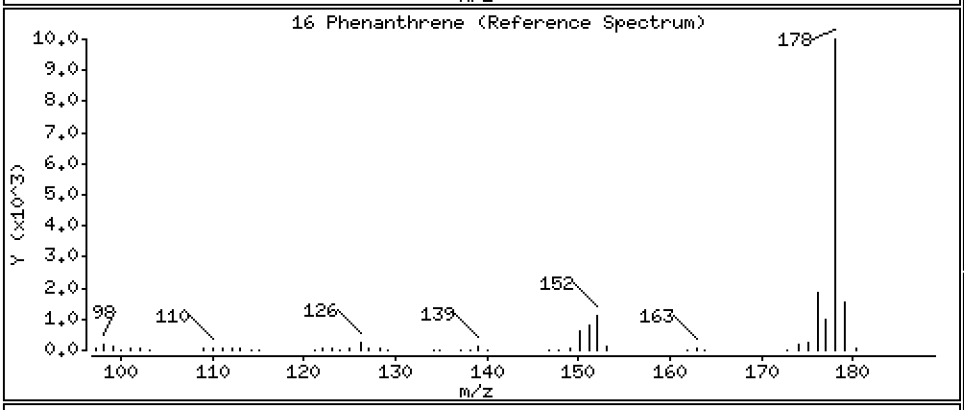
Column diameter: 0.25

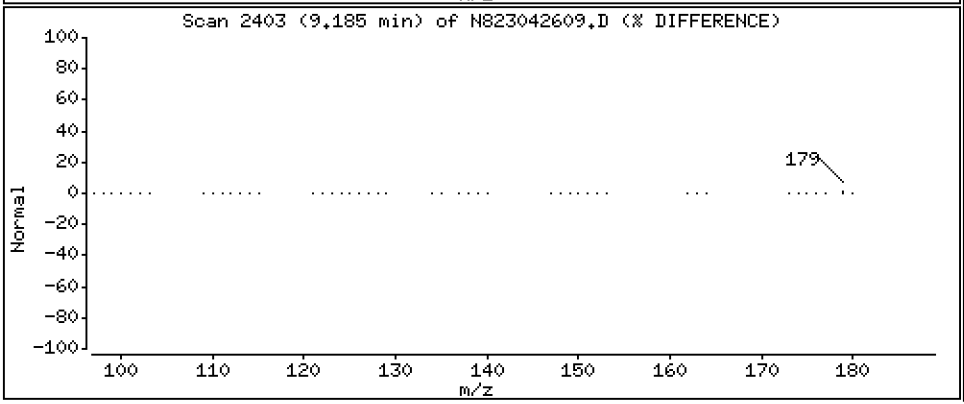
16 Phenanthrene

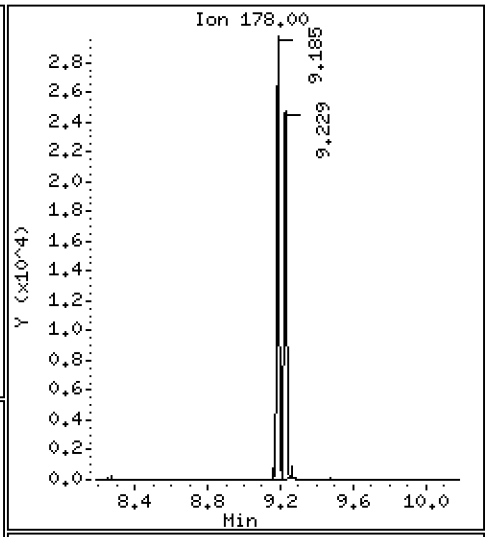
Concentration: 2.161 ug/L

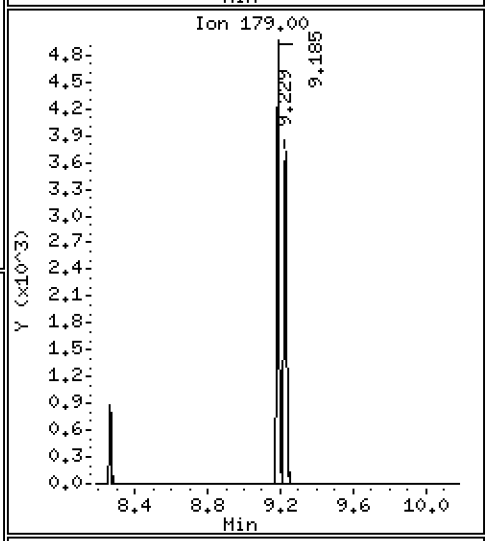


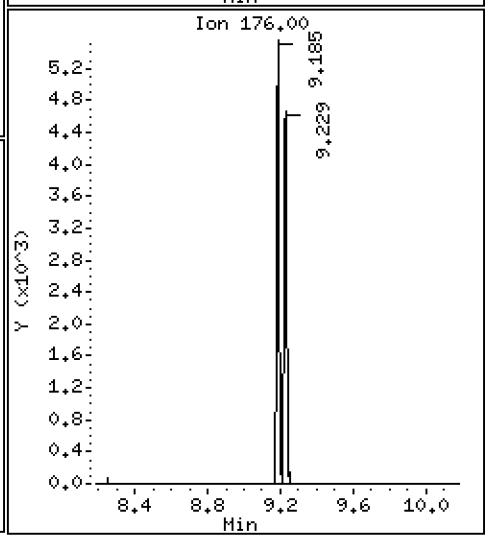












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

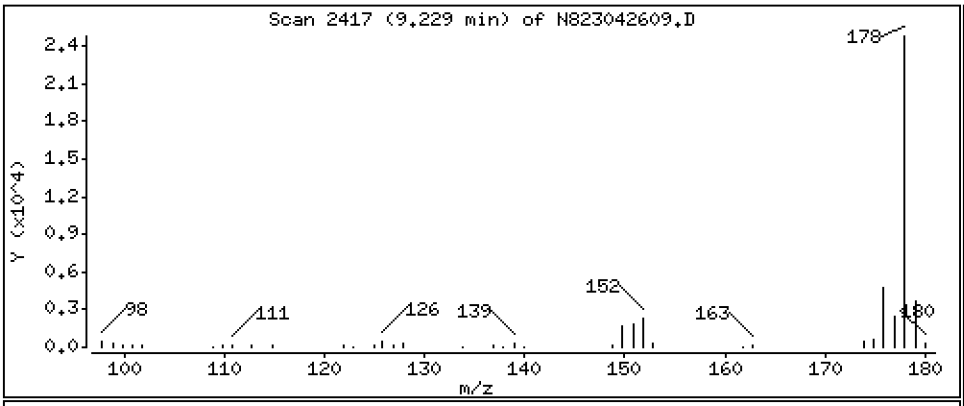
Operator: JZ

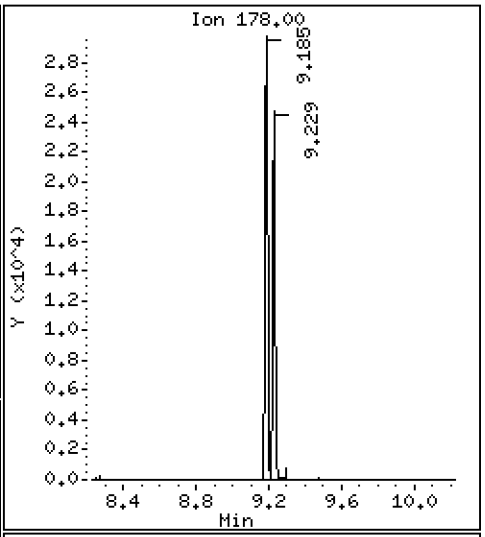
Column phase: Rxi-17sil

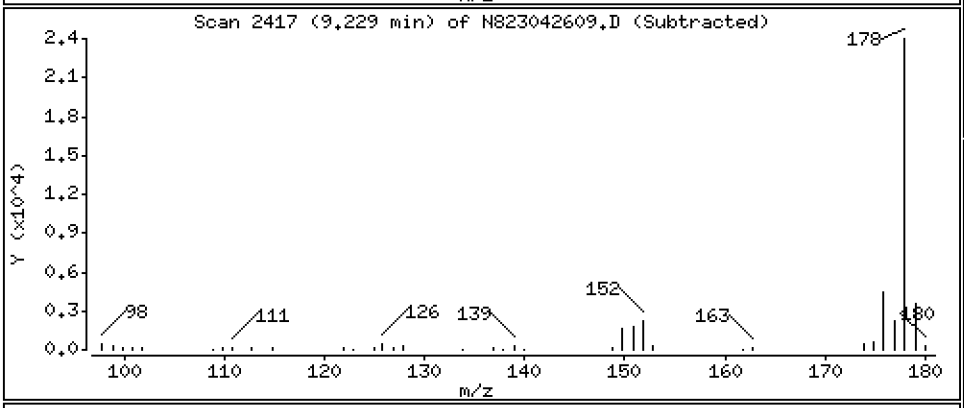
Column diameter: 0.25

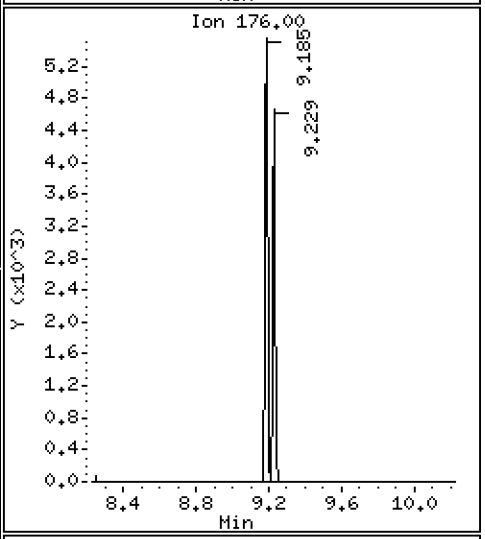
17 Anthracene

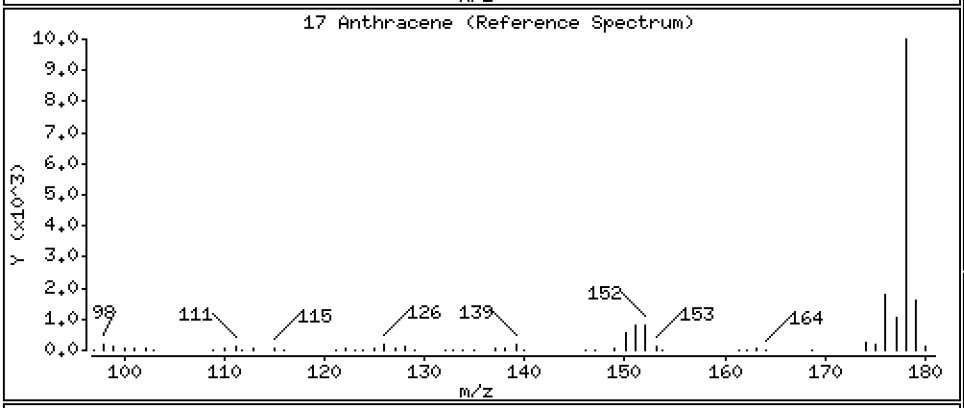
Concentration: 2.008 ug/L

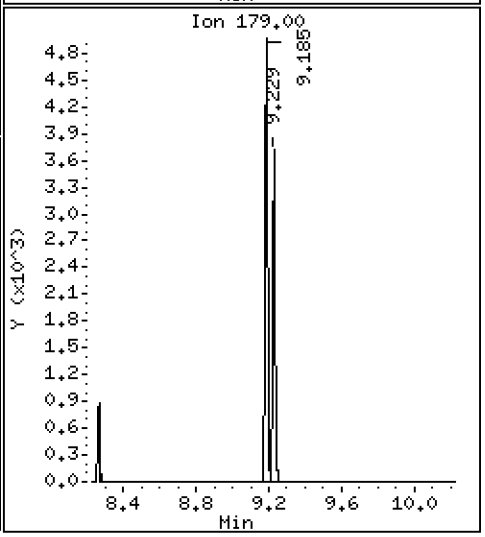


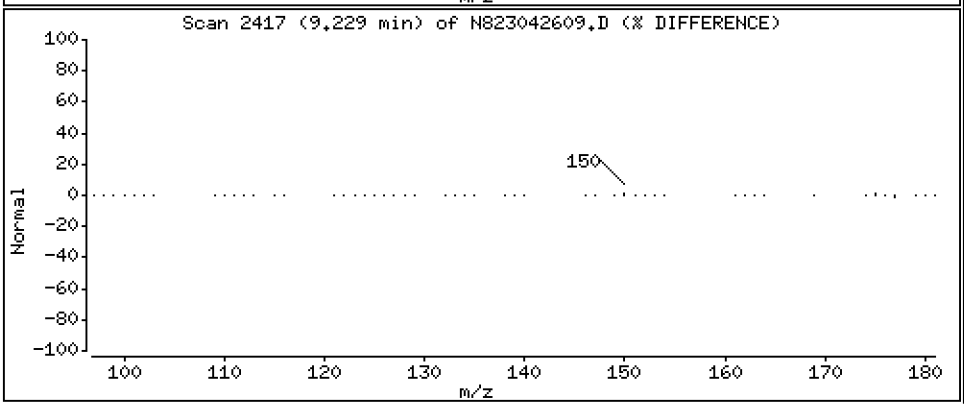












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

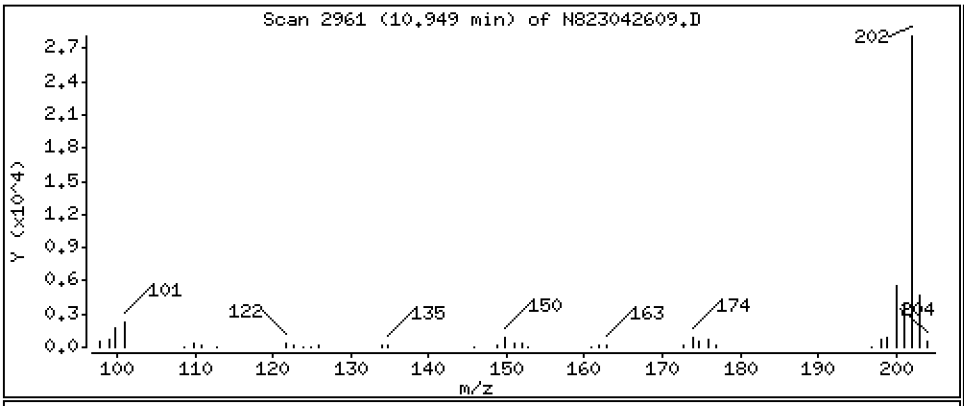
Operator: JZ

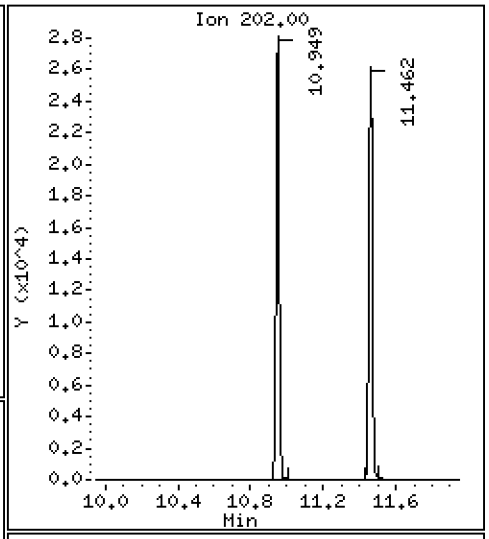
Column phase: Rxi-17sil

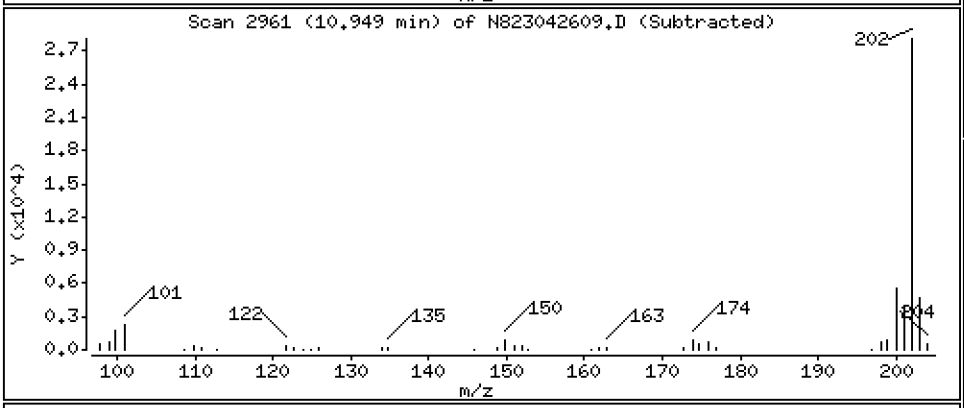
Column diameter: 0.25

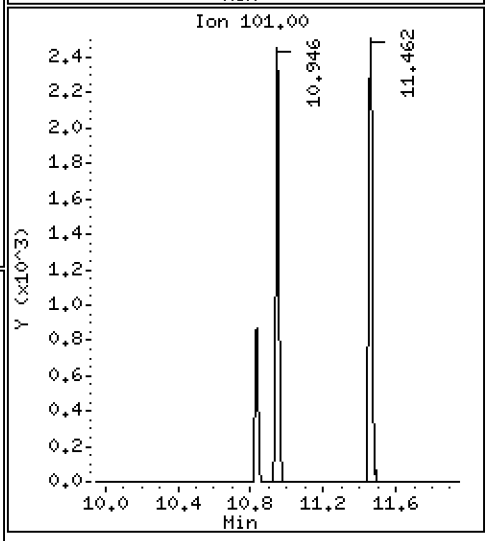
22 Fluoranthene

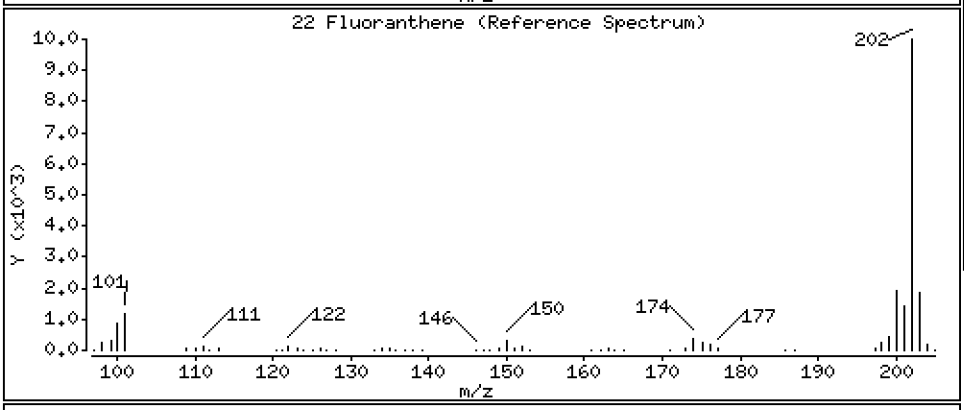
Concentration: 2.256 ug/L

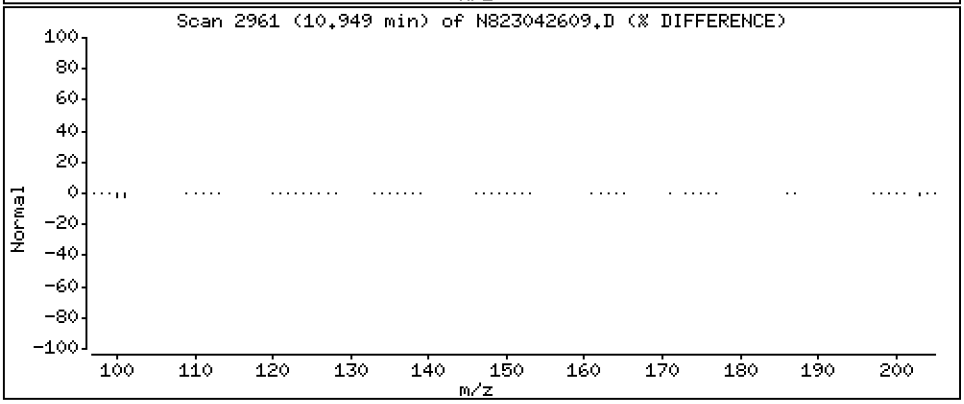












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

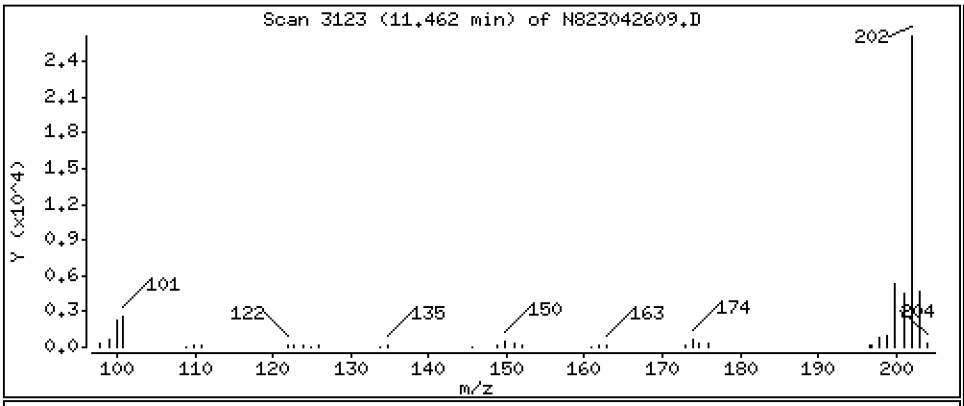
Operator: JZ

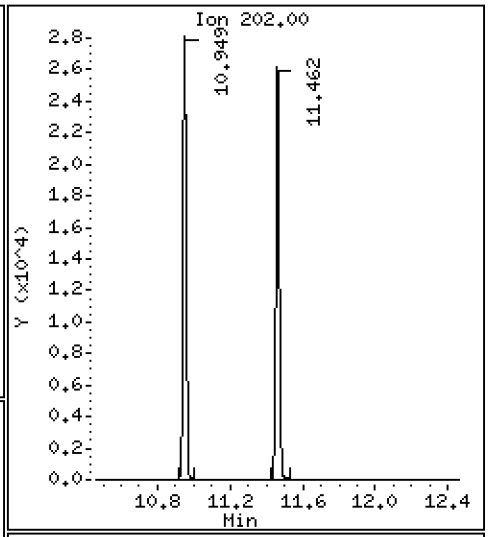
Column phase: Rxi-17sil

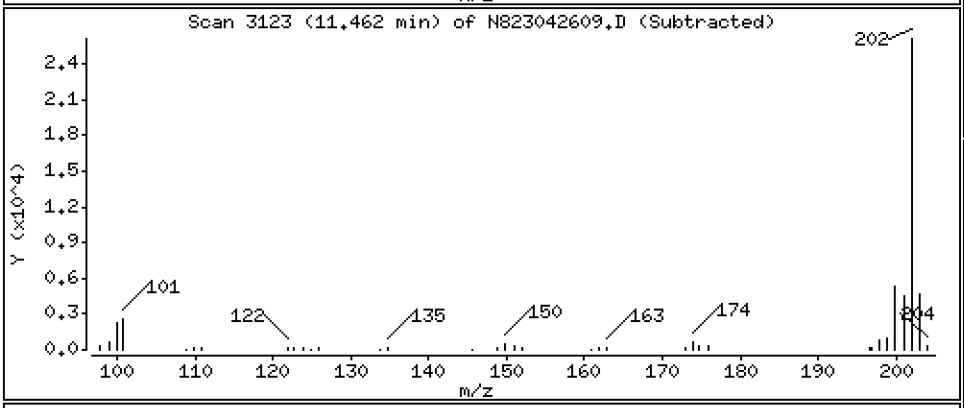
Column diameter: 0.25

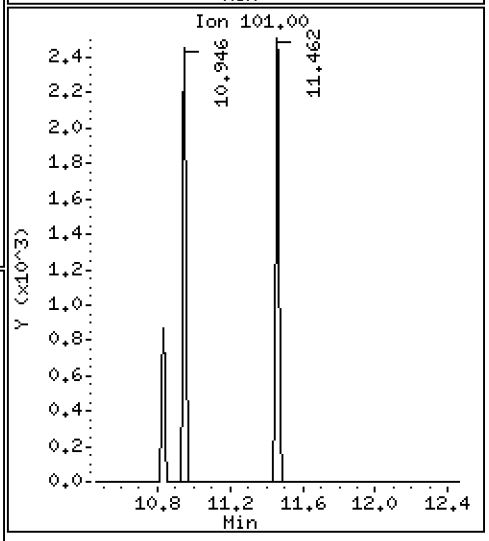
23 Pyrene

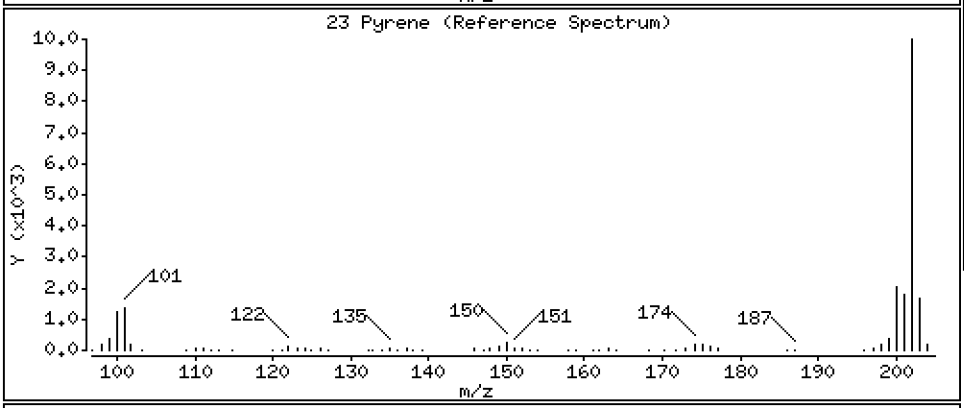
Concentration: 2.227 ug/L

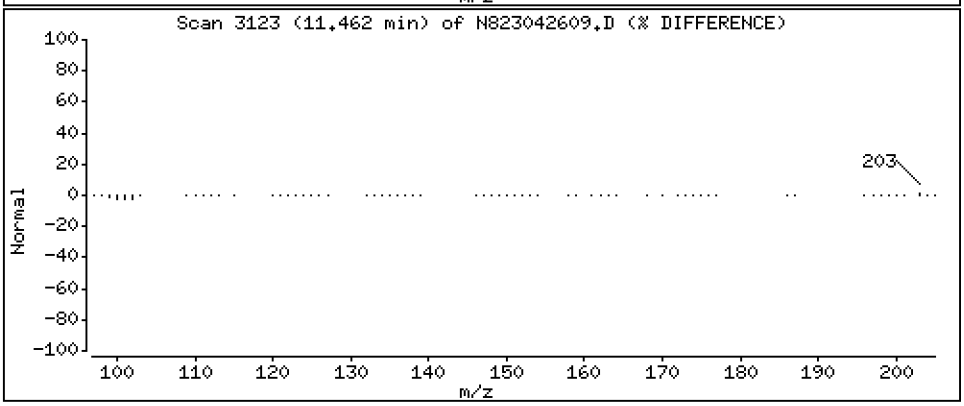












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

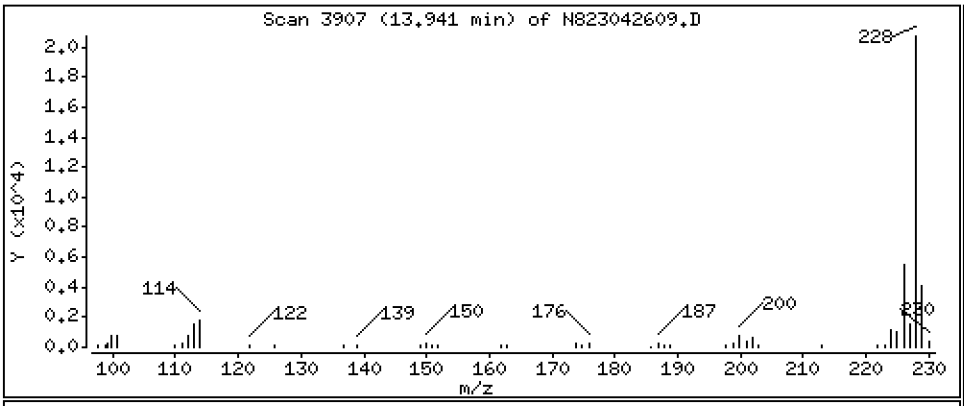
Operator: JZ

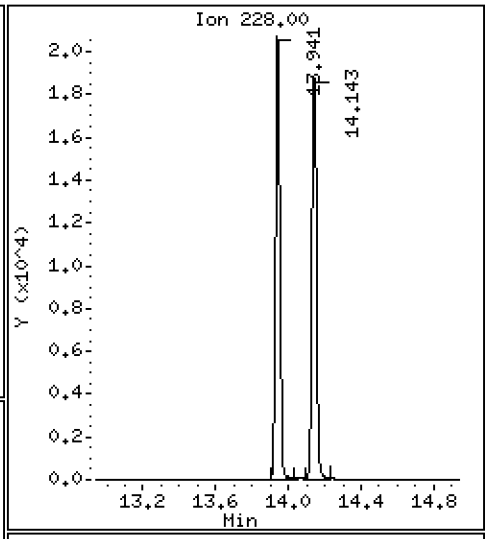
Column phase: Rxi-17sil

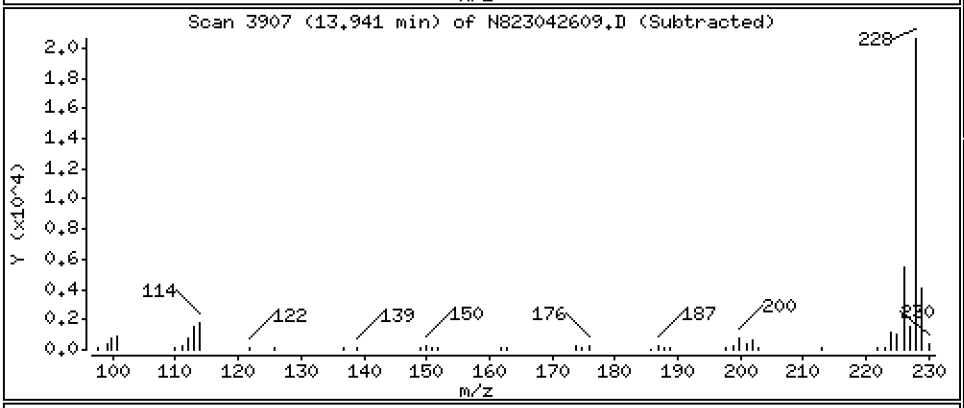
Column diameter: 0.25

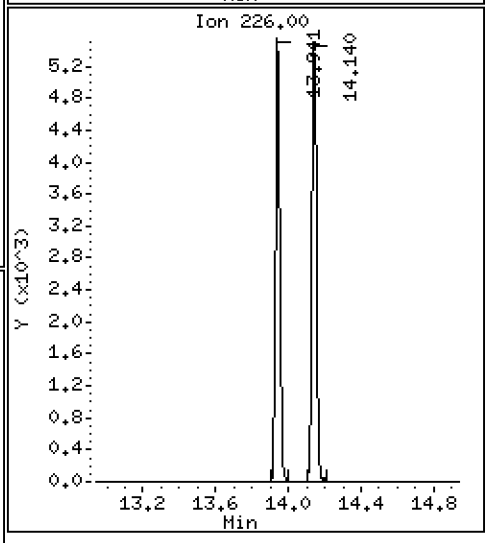
24 Benzo(a)anthracene

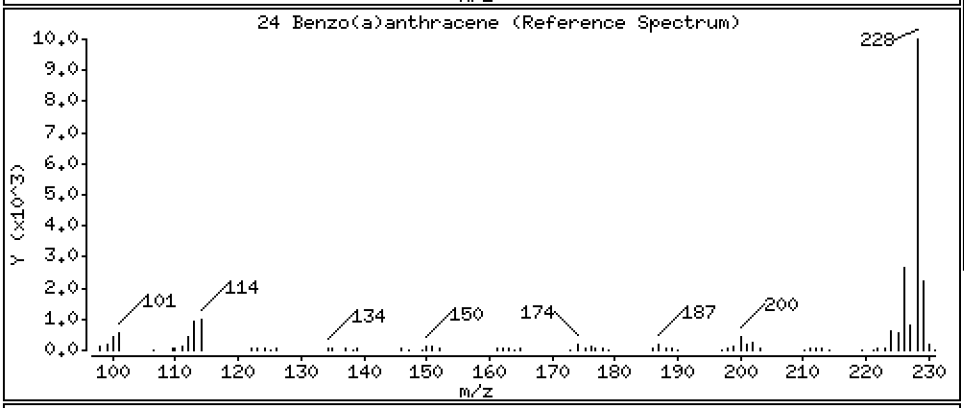
Concentration: 2.175 ug/L

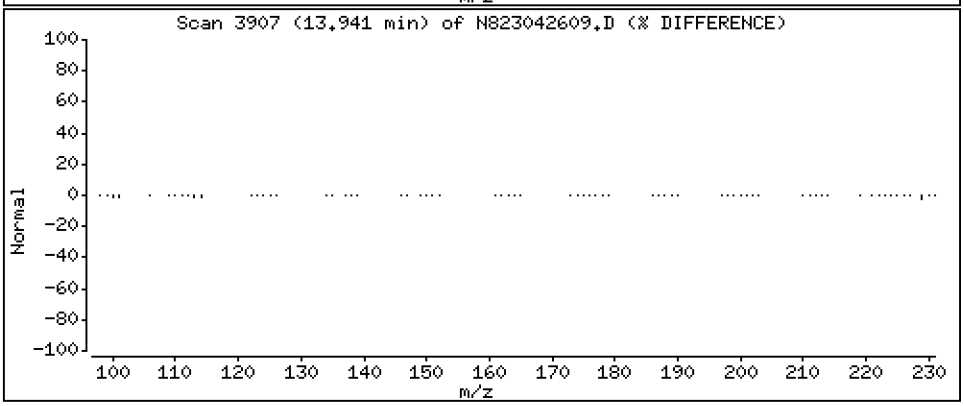












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

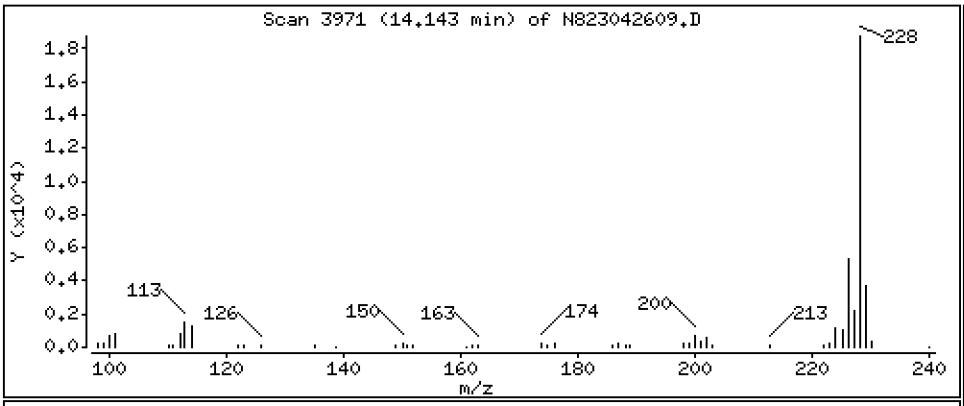
Operator: JZ

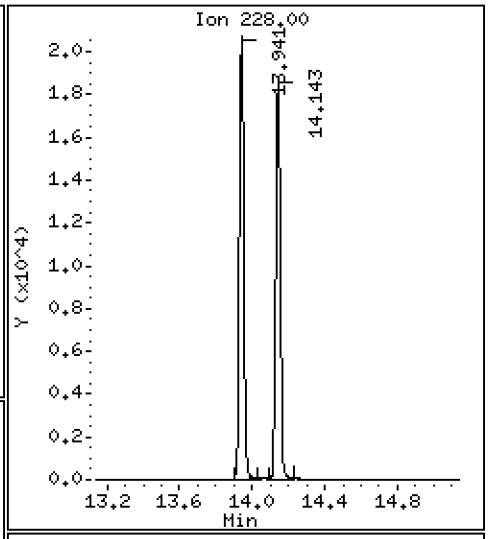
Column phase: Rxi-17sil

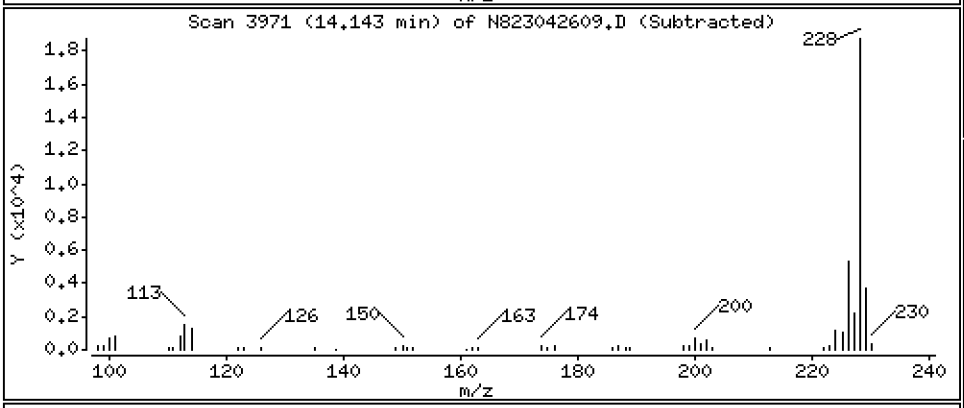
Column diameter: 0.25

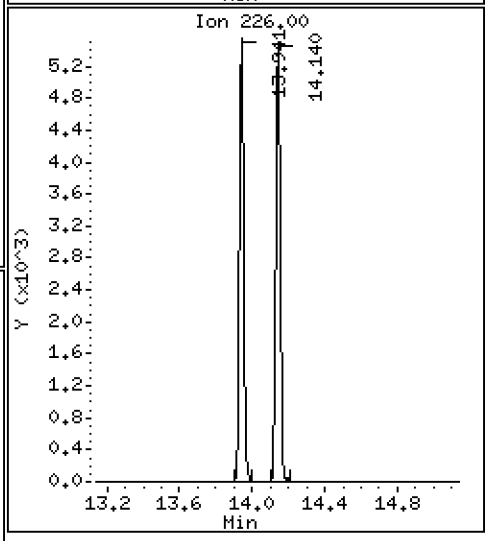
27 Chrysene

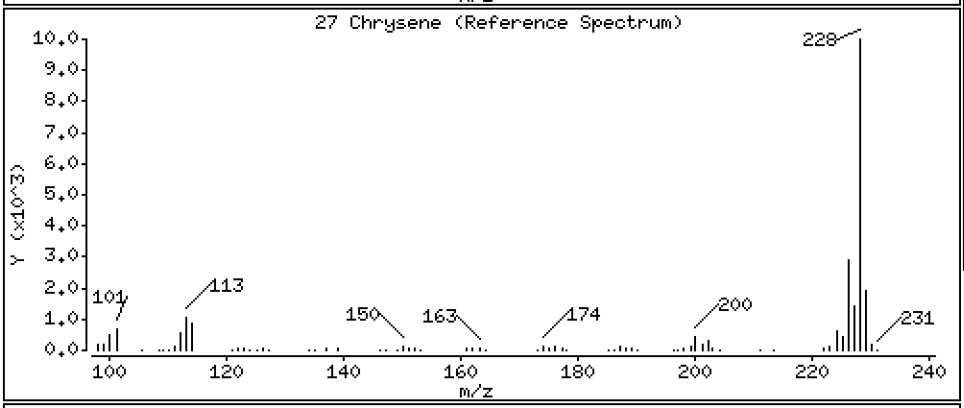
Concentration: 2.137 ug/L

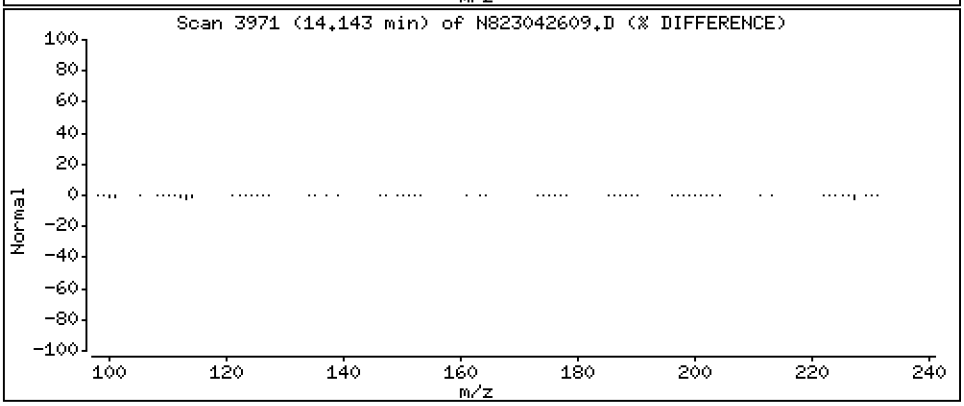












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

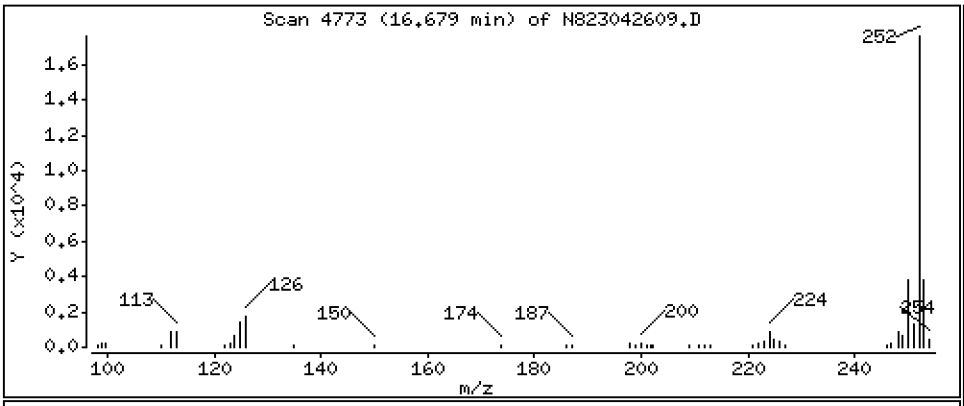
Operator: JZ

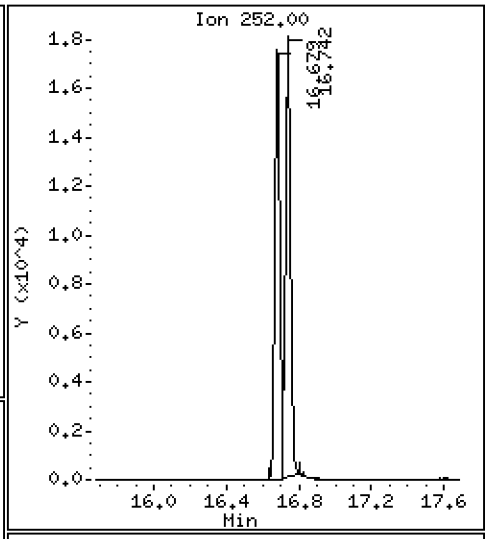
Column phase: Rxi-17sil

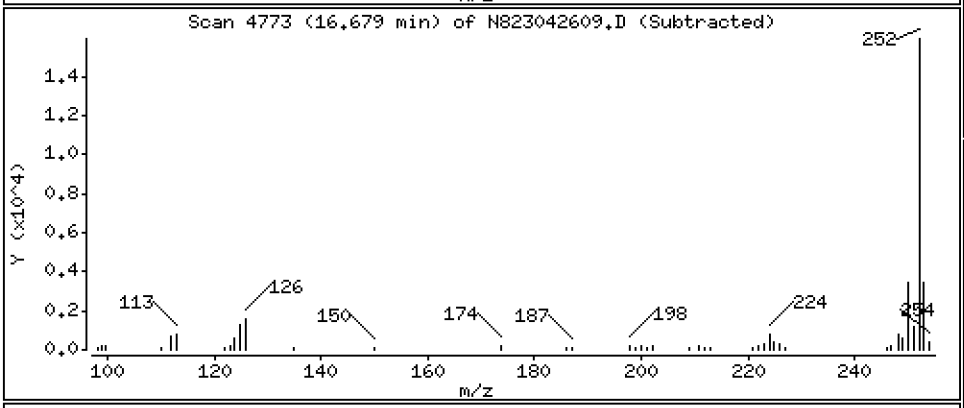
Column diameter: 0.25

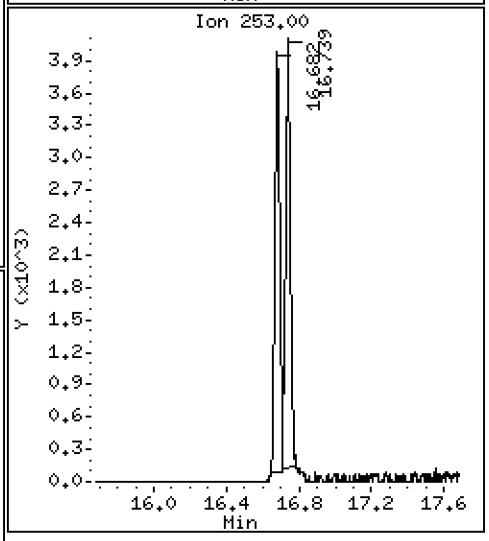
28 Benzo(b)fluoranthene

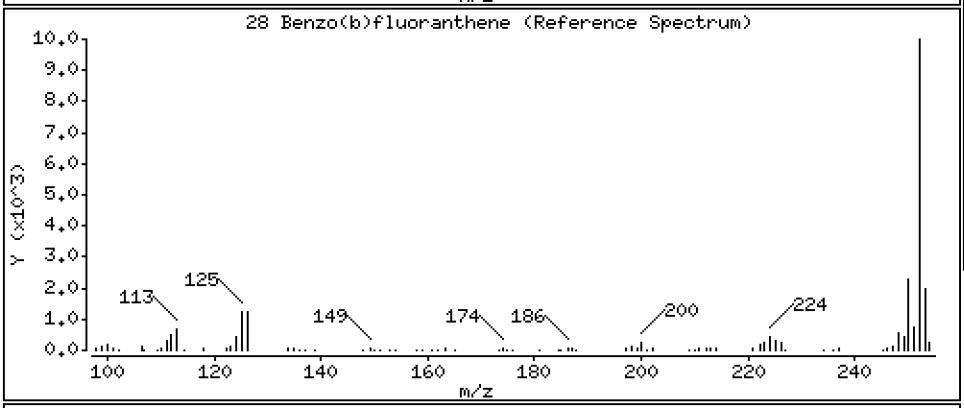
Concentration: 2.156 ug/L

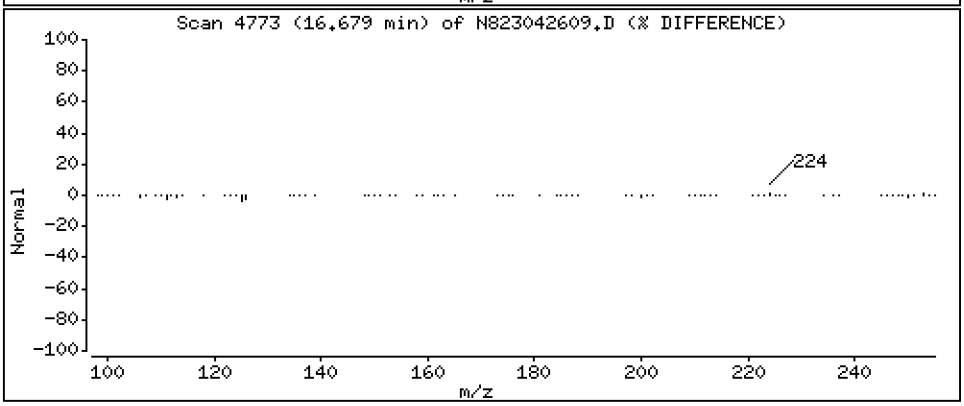












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

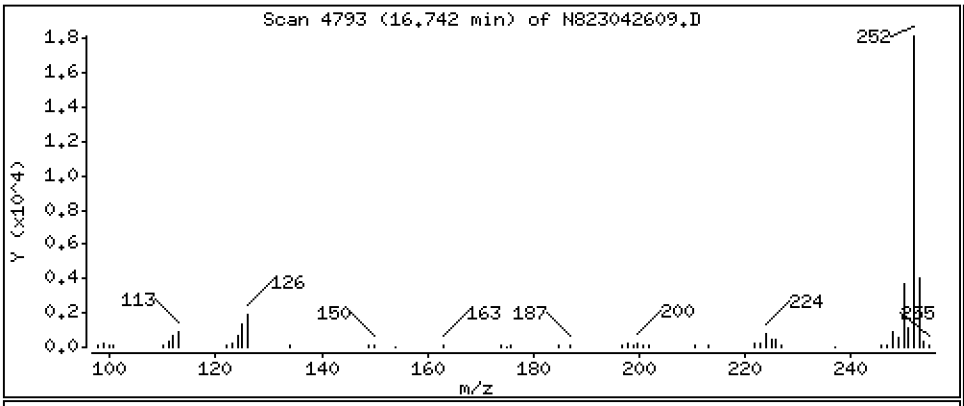
Operator: JZ

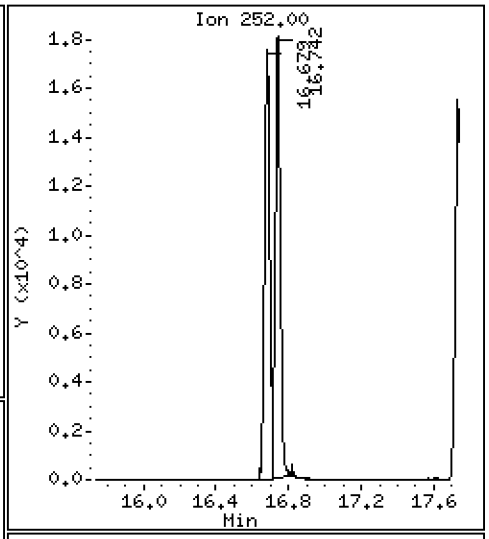
Column phase: Rxi-17sil

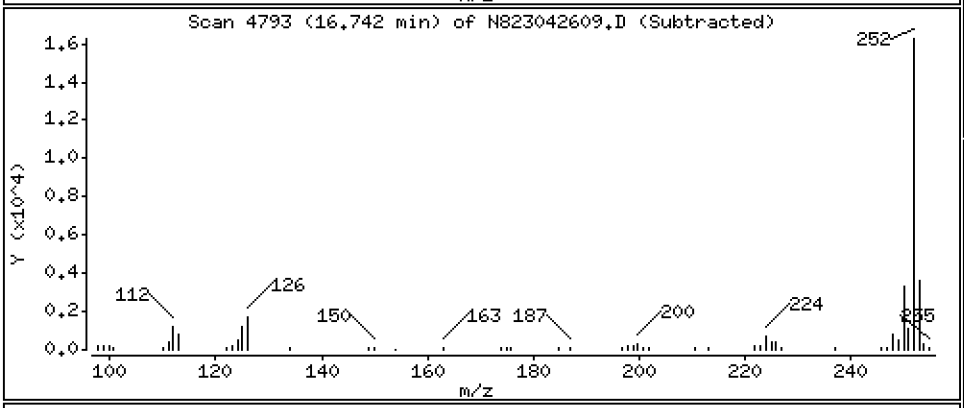
Column diameter: 0.25

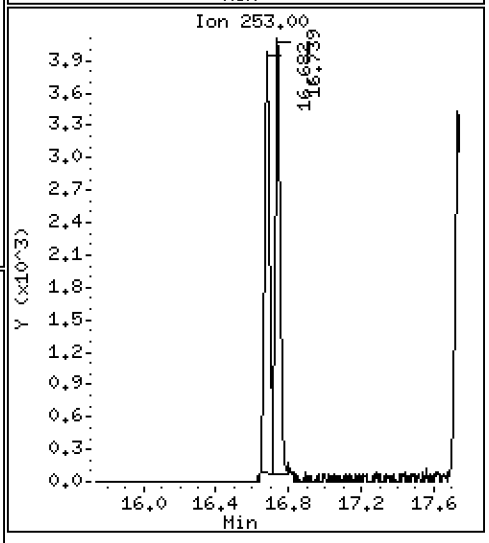
29 Benzo(k)fluoranthene

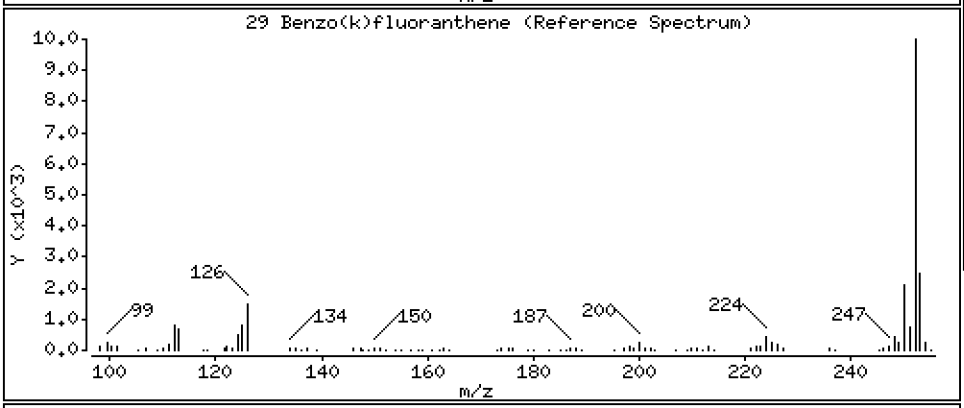
Concentration: 2.301 ug/L

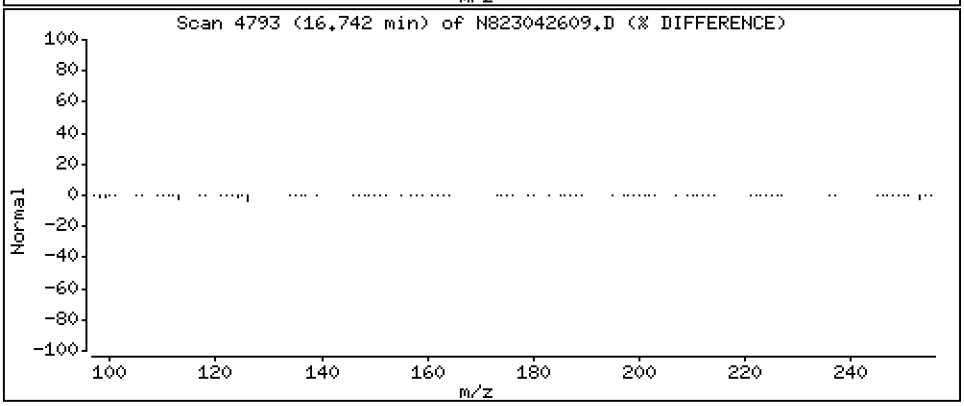












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

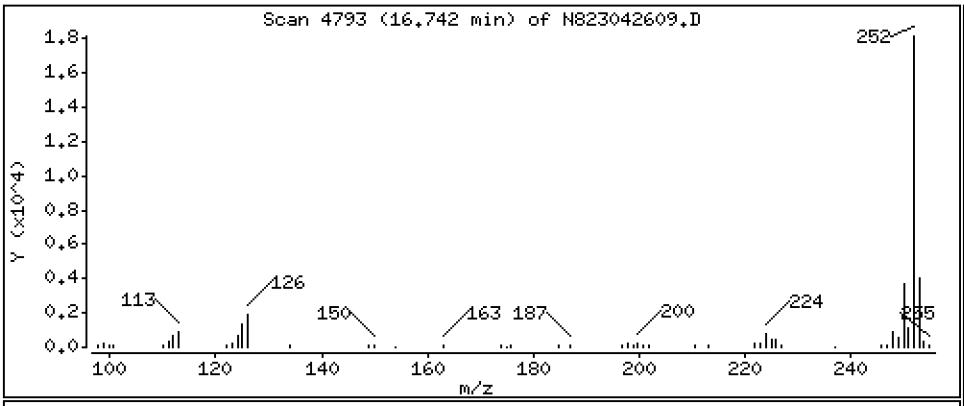
Operator: JZ

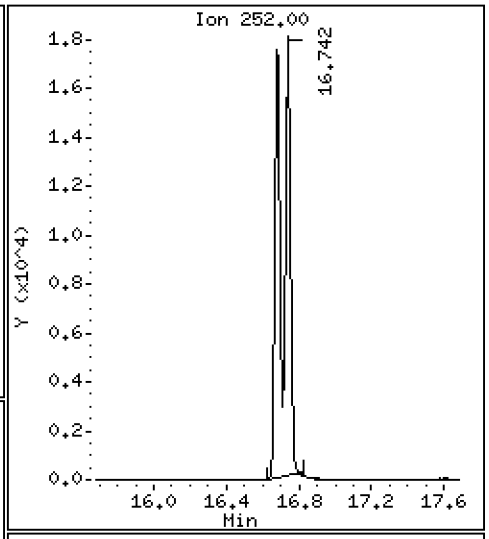
Column phase: Rxi-17sil

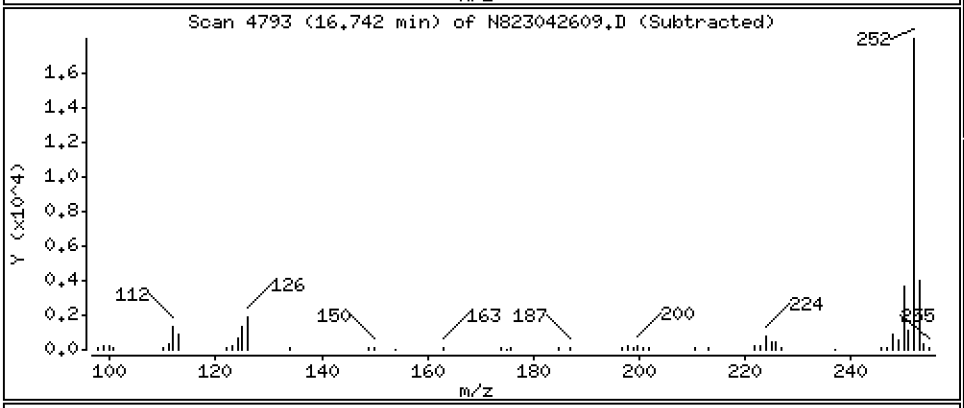
Column diameter: 0.25

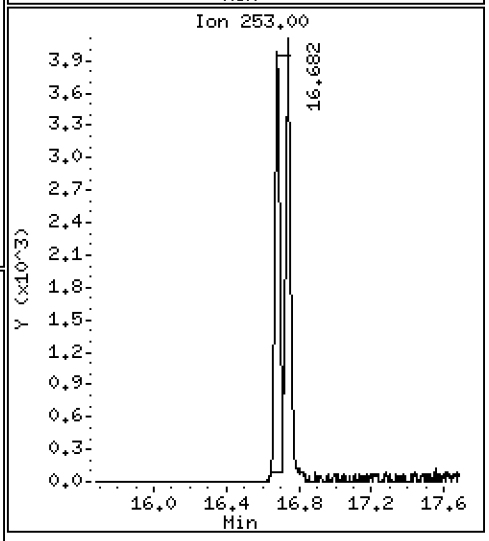
31 Total Benzofluoranthenes

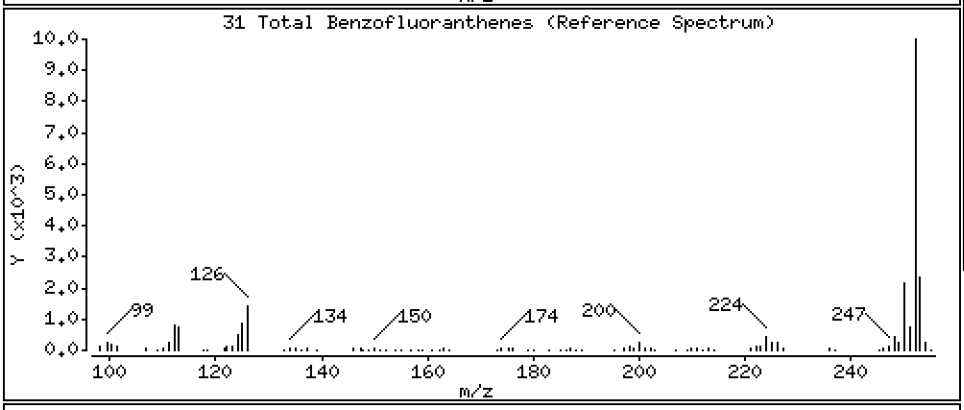
Concentration: 4.553 ug/L

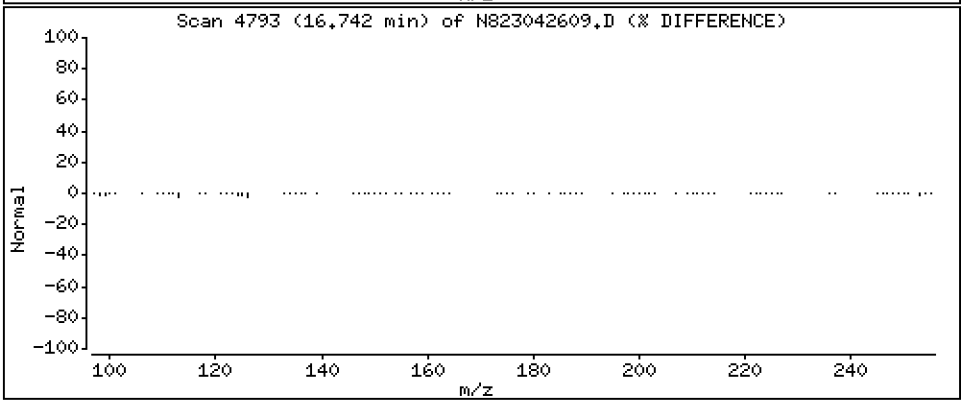












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

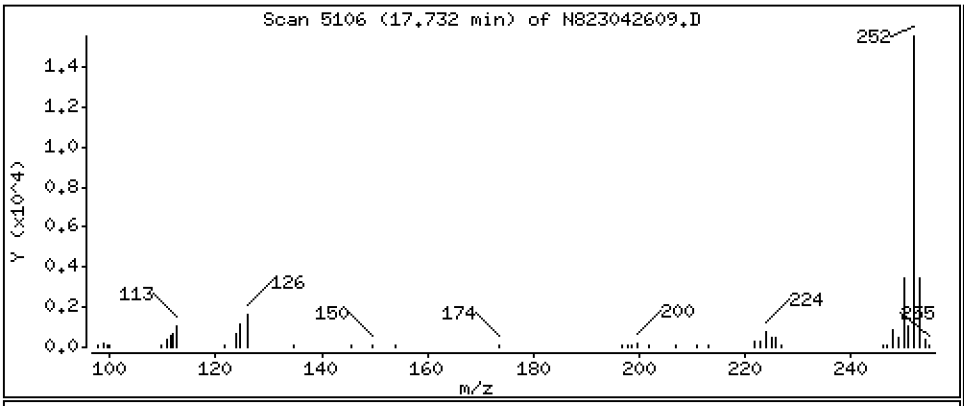
Operator: JZ

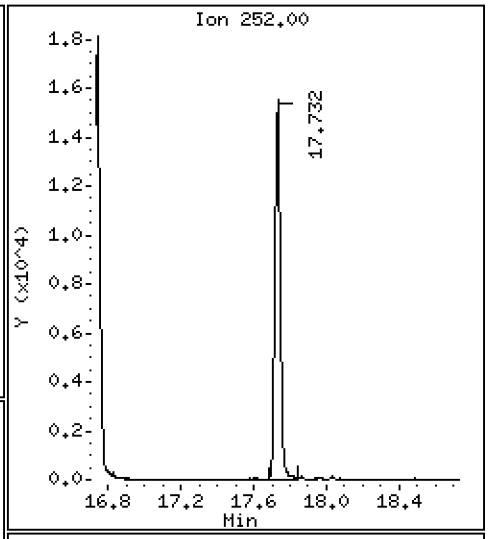
Column phase: Rxi-17sil

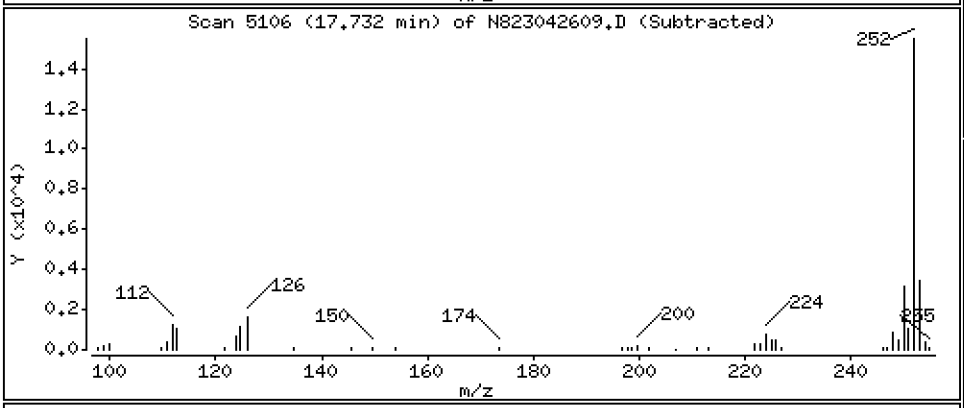
Column diameter: 0.25

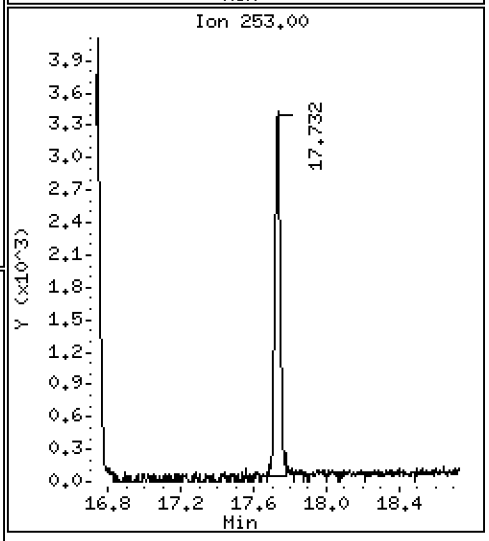
32 Benzo(a)pyrene

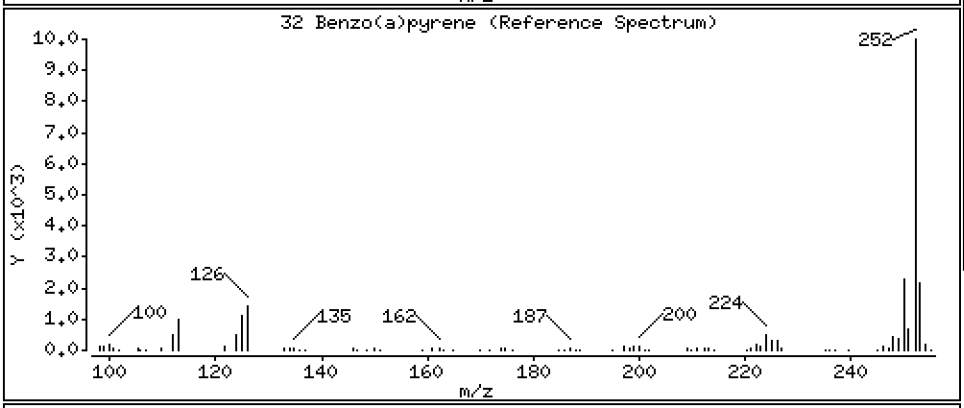
Concentration: 2.295 ug/L

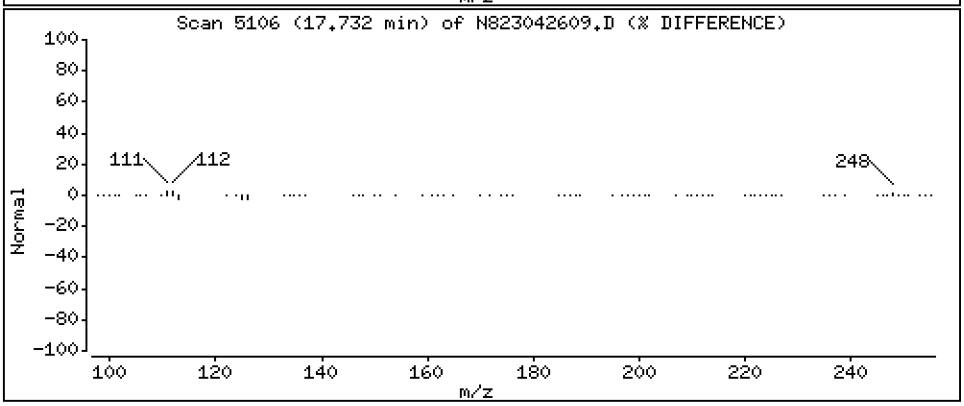












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

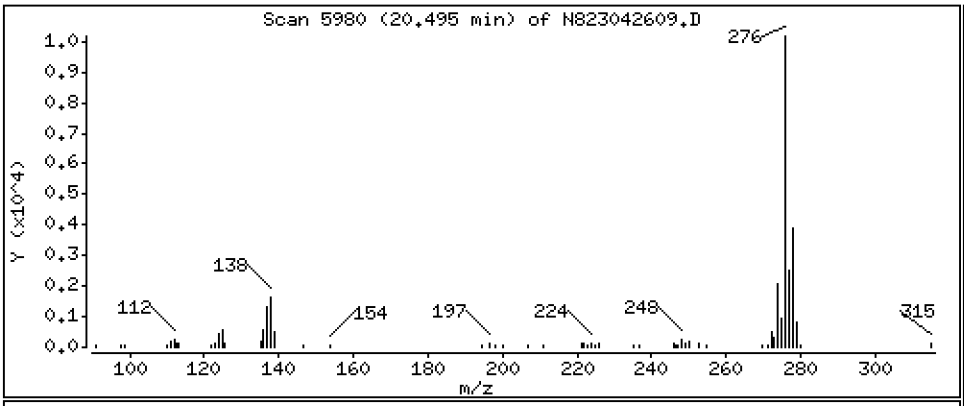
Operator: JZ

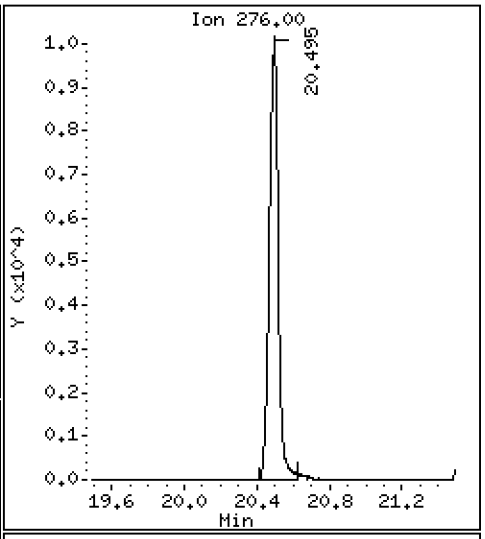
Column phase: Rxi-17sil

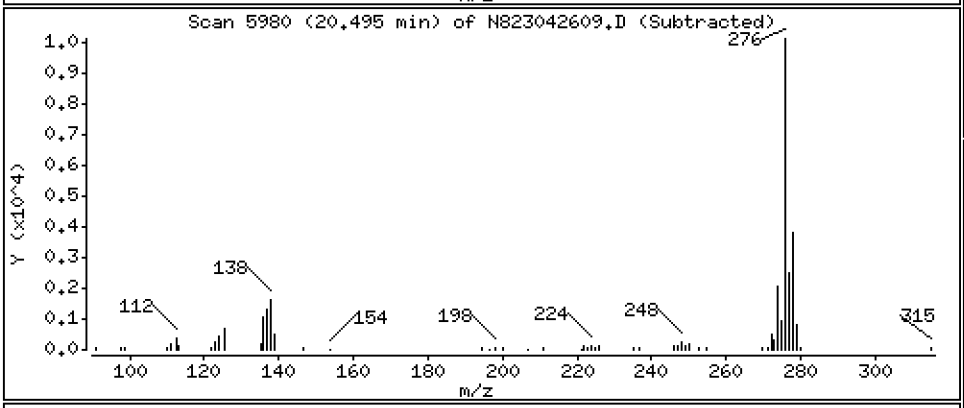
Column diameter: 0.25

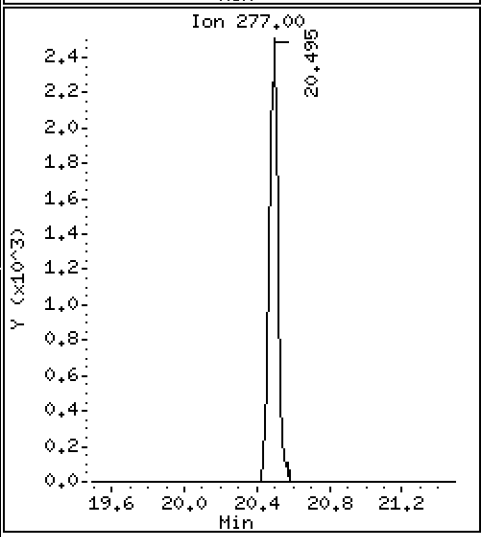
37 Indeno(1,2,3-cd)pyrene

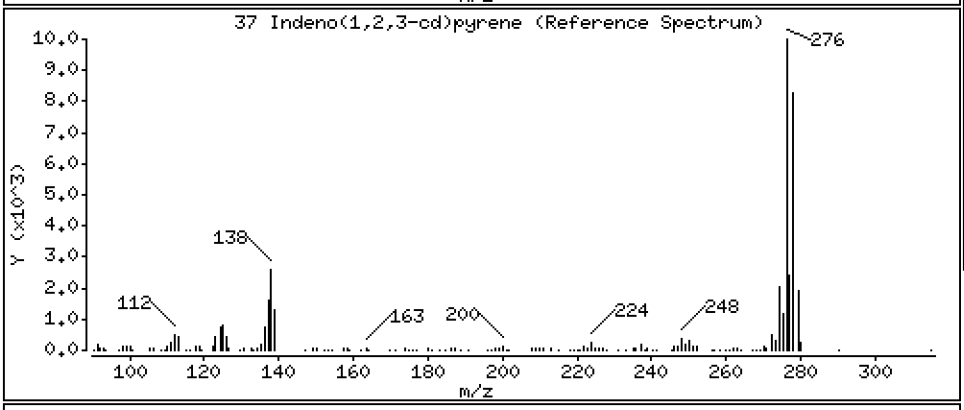
Concentration: 2.450 ug/L

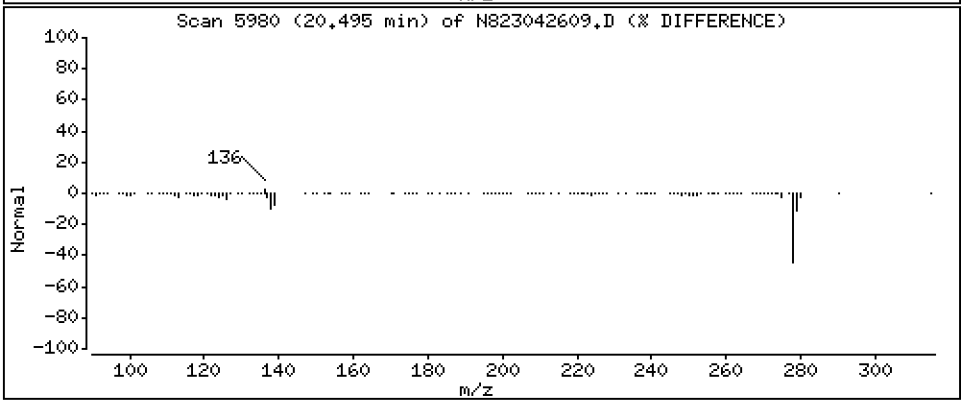












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

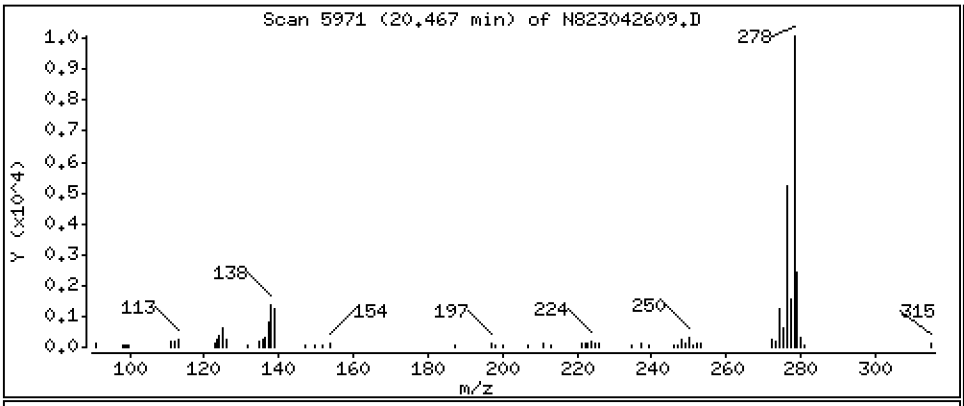
Operator: JZ

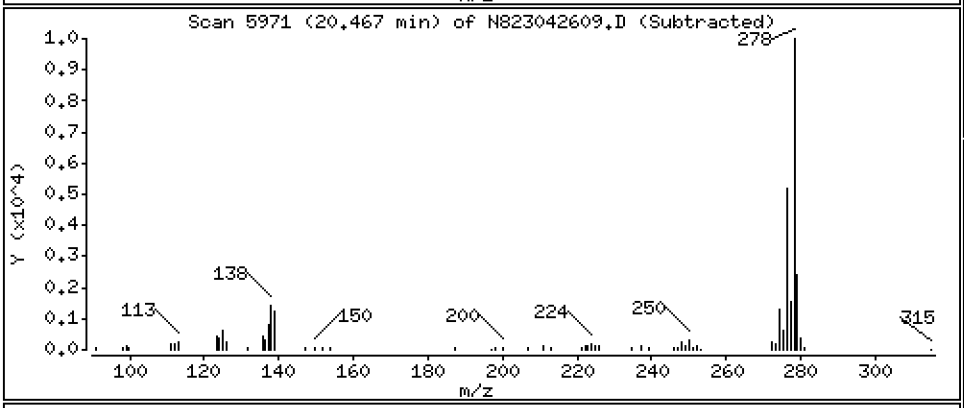
Column phase: Rxi-17sil

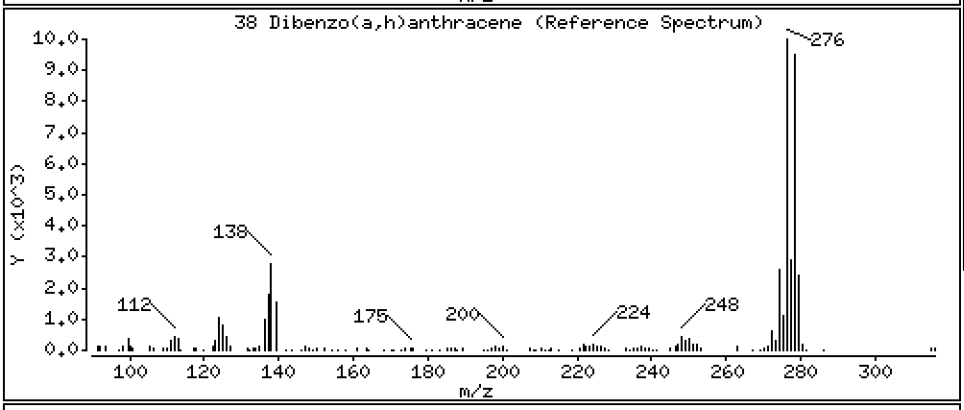
Column diameter: 0.25

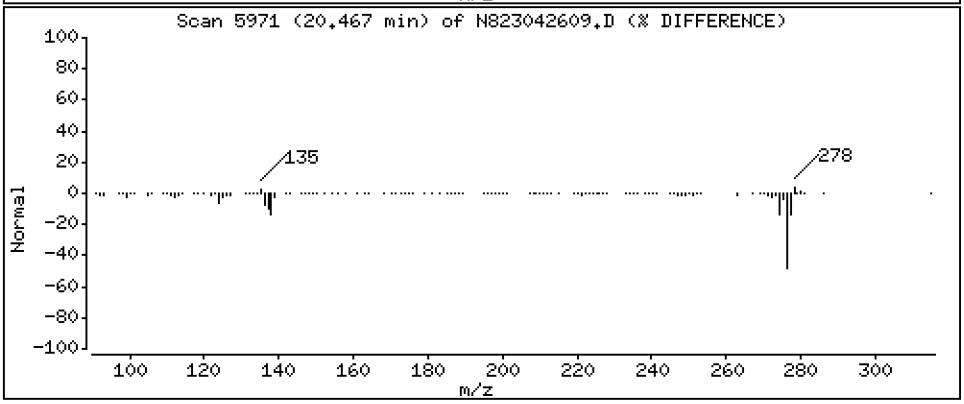
38 Dibenzo(a,h)anthracene

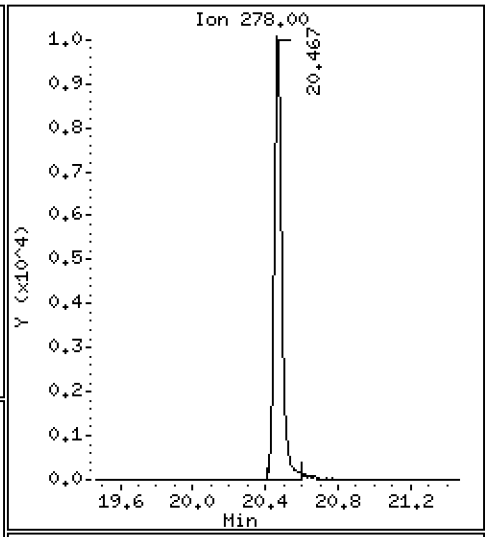
Concentration: 2.334 ug/L

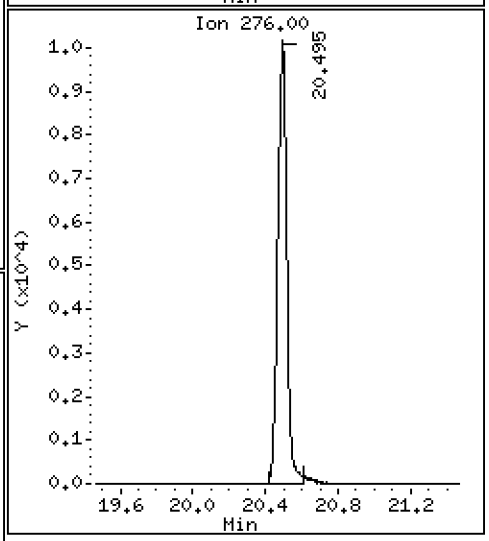












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

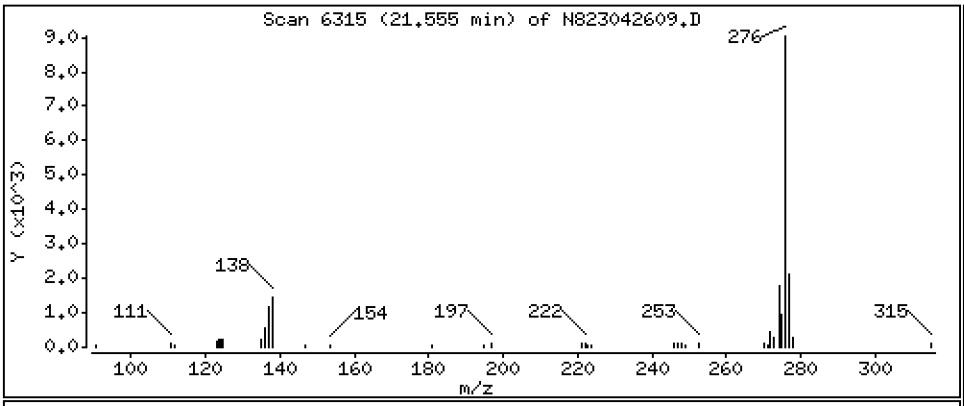
Operator: JZ

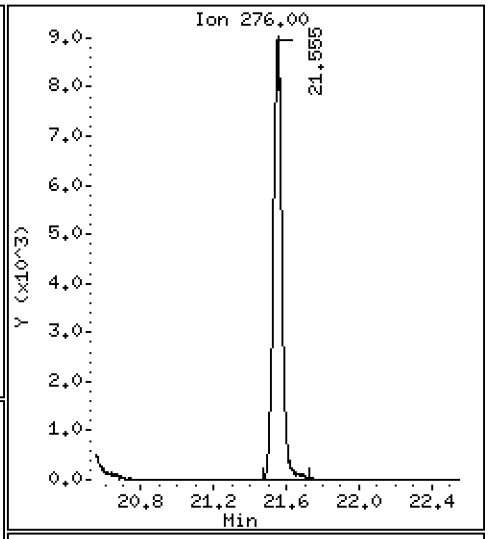
Column phase: Rxi-17sil

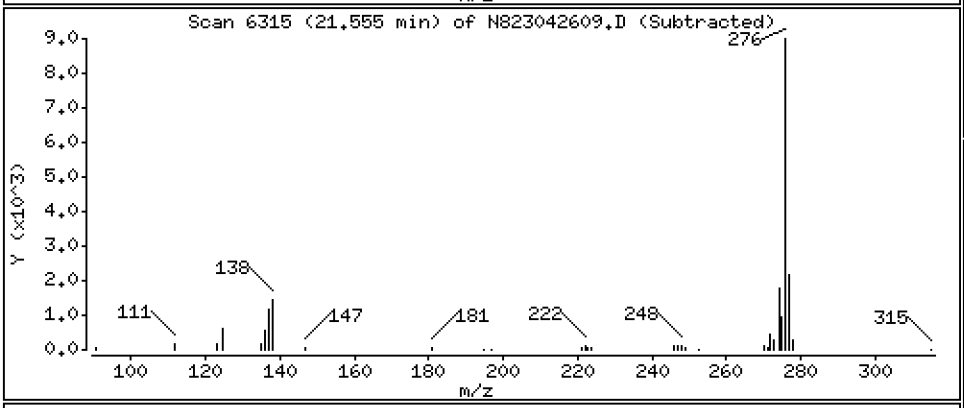
Column diameter: 0.25

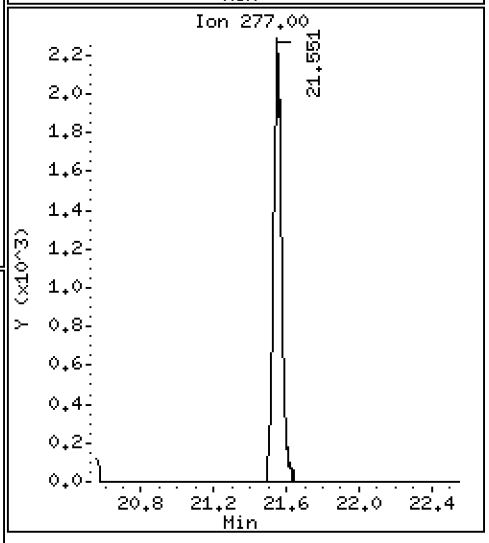
39 Benzo(g,h,i)perylene

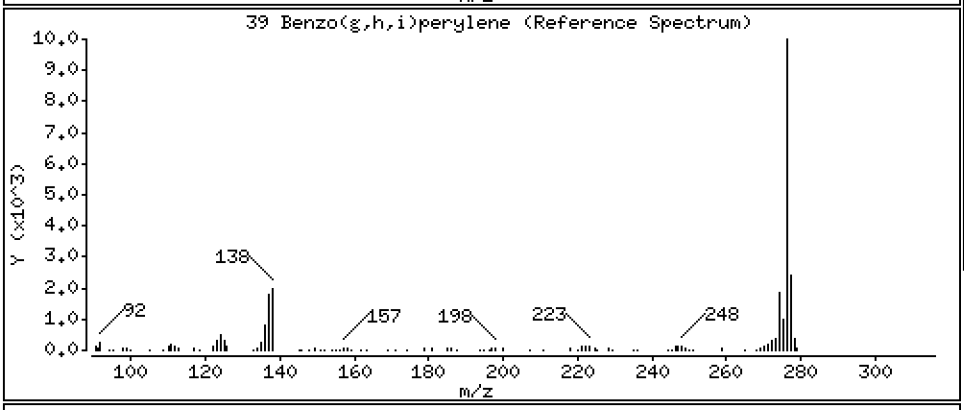
Concentration: 2.248 ug/L

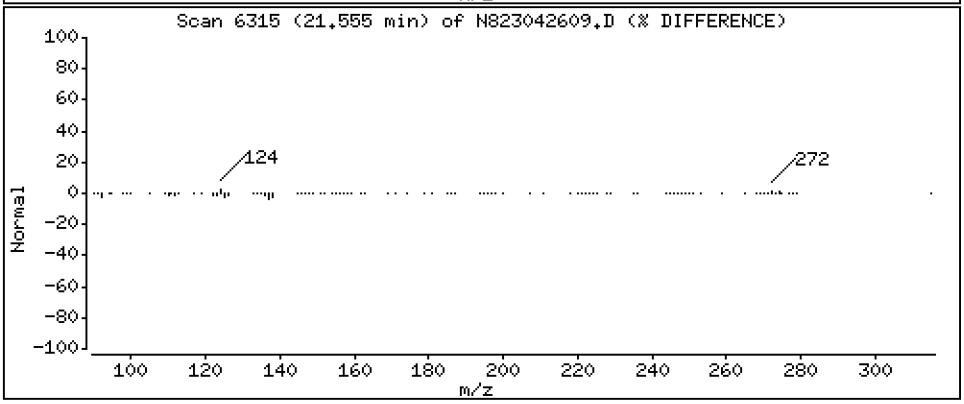












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D
Lab Smp Id: SLD0372-SCV1
Inj Date : 26-APR-2023 20:49
Operator : JZ Inst ID: nt8.i
Smp Info : SCV230426
Misc Info : 23-
Comment : 1ul Injection
Method : \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\FSIMPNA230426
Meth Date : 27-Apr-2023 11:00 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnascv.sub
Target Version: 4.14
Processing Host: JIANQING-202105

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Vo	500.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
*	1 Naphthalene-d8	136	4.827	4.827	(1.000)	20718	2.00000	
	2 Naphthalene	128	4.856	4.856	(1.006)	24938	2.36264	2.363
$	3 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	4 2-Methylnaphthalene	141	5.605	5.605	(1.161)	14334	2.39183	2.392
	5 1-methylnaphthalene	141	5.801	5.801	(1.202)	14142	2.38001	2.380
	9 Acenaphthylene	152	7.003	7.003	(0.984)	25991	2.32237	2.322
*	10 Acenaphthene-d10	164	7.113	7.110	(1.000)	12642	2.00000	
	11 Acenaphthene	153	7.161	7.161	(1.007)	16198	2.23392	2.234
	12 Dibenzofuran	168	7.316	7.313	(1.028)	27419	2.51765	2.518
	14 Fluorene	166	7.790	7.790	(1.095)	19927	2.29268	2.293
*	15 Phenanthrene-d10	188	9.150	9.150	(1.000)	24547	2.00000	
	16 Phenanthrene	178	9.184	9.185	(1.004)	28095	2.16083	2.161
	17 Anthracene	178	9.229	9.226	(1.009)	24487	2.00809	2.008
	22 Fluoranthene	202	10.949	10.949	(1.197)	33741	2.25628	2.256
$	21 Fluoranthene-d10	212	Compound Not Detected.					
	23 Pyrene	202	11.461	11.461	(0.815)	34528	2.22695	2.227
	24 Benzo(a)anthracene	228	13.940	13.940	(0.991)	34655	2.17519	2.175
*	25 Chrysene-d12	240	14.070	14.067	(1.000)	24217	2.00000	
	27 Chrysene	228	14.142	14.139	(1.005)	33440	2.13657	2.137
	28 Benzo(b)fluoranthene	252	16.678	16.682	(0.929)	35085	2.15649	2.156
	29 Benzo(k)fluoranthene	252	16.742	16.739	(0.932)	35276	2.30130	2.301
	31 Total Benzofluoranthenes	252	16.742	16.682	(0.932)	68883	4.55291	4.553(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	32 Benzo(a)pyrene	252	17.731	17.731	(0.987)	32452	2.29472	2.295
*	33 Perylene-d12	264	17.959	17.959	(1.000)	24956	2.00000	
	37 Indeno(1,2,3-cd)pyrene	276	20.495	20.492	(1.141)	35264	2.44967	2.450
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	20.466	20.467	(1.140)	29838	2.33423	2.334
	39 Benzo(g,h,i)perylene	276	21.554	21.551	(1.200)	29972	2.24768	2.248

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042609.D
Lab Smp Id: SLD0372-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\FSIMPNA23042
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	20718	10.80
10 Acenaphthene-d10	10729	5365	21458	12642	17.83
15 Phenanthrene-d10	20748	10374	41496	24547	18.31
25 Chrysene-d12	20954	10477	41908	24217	15.57
33 Perylene-d12	21563	10782	43126	24956	15.74

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.01
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	0.04
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	-0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.02
33 Perylene-d12	17.96	17.46	18.46	17.96	-0.00

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

REVIEW SUMMARY FOR FILE - N823042609.D

Lab ID: SLD0372-SCV1
nt8.i, year2023\APR2023\20230426.b\FSIMPNA230426.m,   26-APR-2023 20:49

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

No RRT check performed

On Column LOD for nt8.i, year2023\APR2023\20230426.b\FSIMPNA230426.m, pnascv.su

Exception: Benzo(b)fluoranthene 0.0300
Exception: Benzo(k)fluoranthene 0.0300
Exception: Total Benzofluoranthenes 0.0300
Exception: Fluoranthene-d10 (Surr) 0.0000

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

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GA00050
Laboratory ID: SLA0213-SCV1
Sequence: SLA0213
Standard ID: L000686

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Naphthalene	2.5000	2.63	5.0	
2-Methylnaphthalene	2.5000	2.67	6.8	
1-Methylnaphthalene	2.5000	2.65	6.0	
Acenaphthylene	2.5000	2.82	12.8	
Acenaphthene	2.5000	2.60	4.0	
Dibenzofuran	2.5000	2.86	14.4	
Fluorene	2.5000	2.63	5.2	
Phenanthrene	2.5000	2.45	-2.1	
Anthracene	2.5000	2.27	-9.2	
Fluoranthene	2.5000	2.65	6.1	
Pyrene	2.5000	2.46	-1.5	
Benzo(a)anthracene	2.5000	2.59	3.5	
Chrysene	2.5000	2.40	-4.0	
Benzo(b)fluoranthene	2.5000	2.51	0.3	
Benzo(k)fluoranthene	2.5000	2.66	6.2	
Benzofluoranthenes, Total	5.0000	5.48	9.6	
Benzo(a)pyrene	2.5000	2.57	2.9	
Indeno(1,2,3-cd)pyrene	2.5000	2.69	7.6	
Dibenzo(a,h)anthracene	2.5000	2.49	-0.3	
Benzo(g,h,i)perylene	2.5000	2.48	-0.7	

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

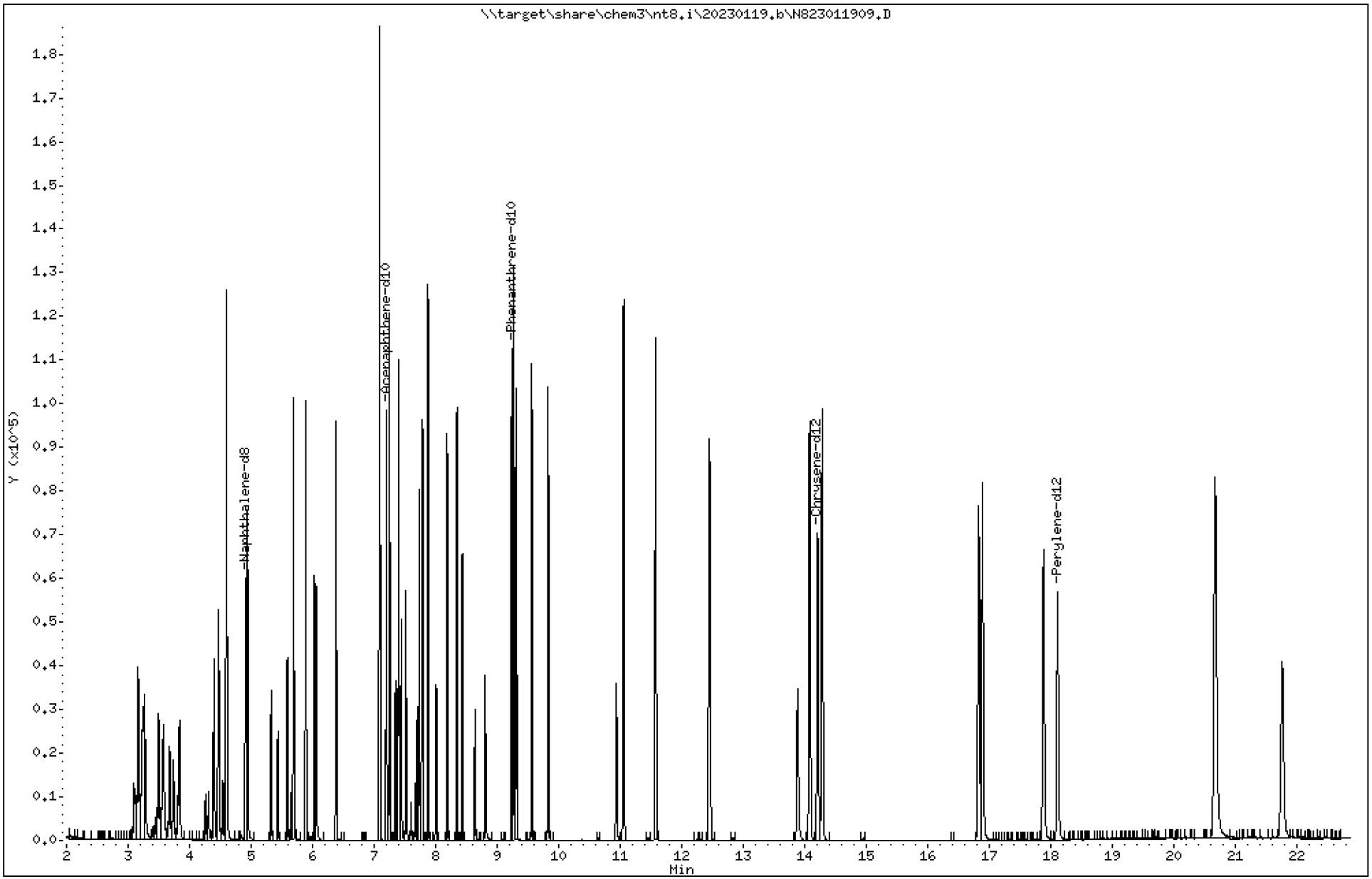
Sample Info: SCV230119

Volume Injected (uL): 1.0

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



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Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

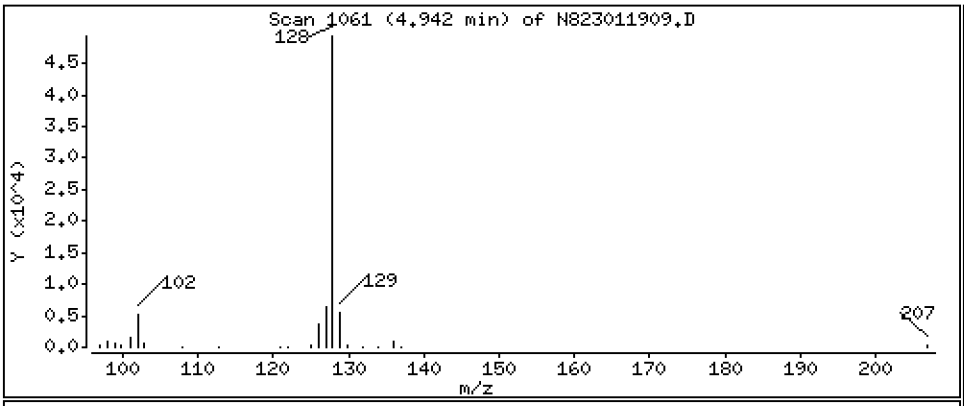
Operator: JZ

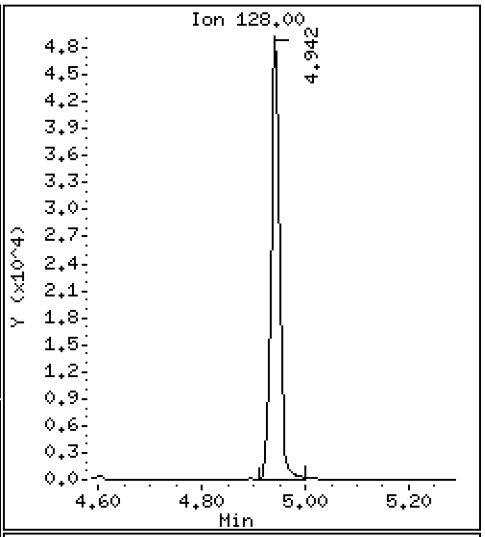
Column phase: Rxi-17sil

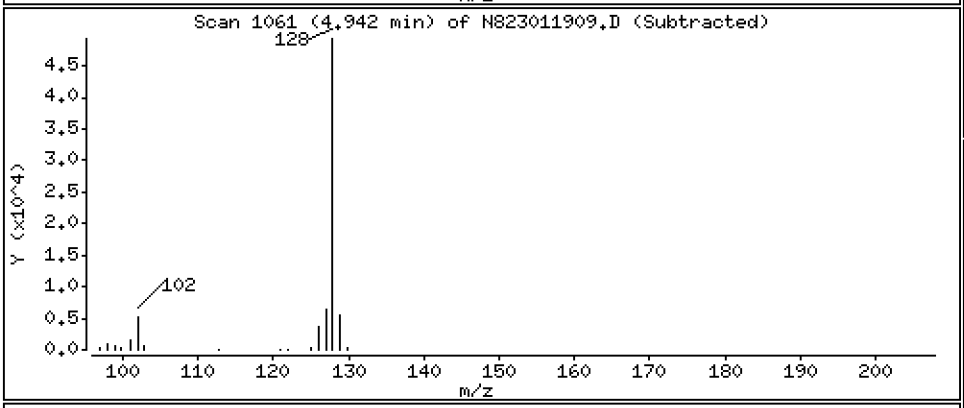
Column diameter: 0.25

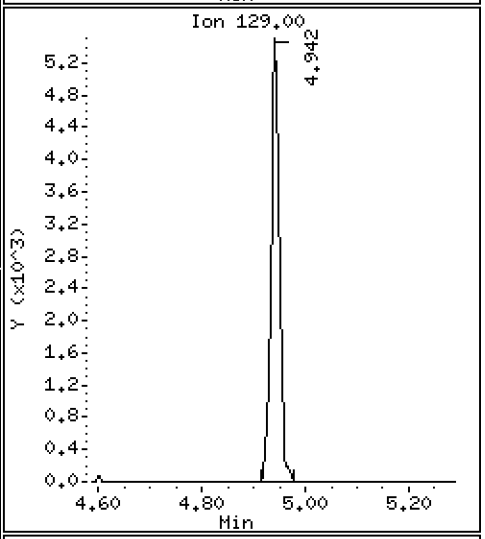
2 Naphthalene

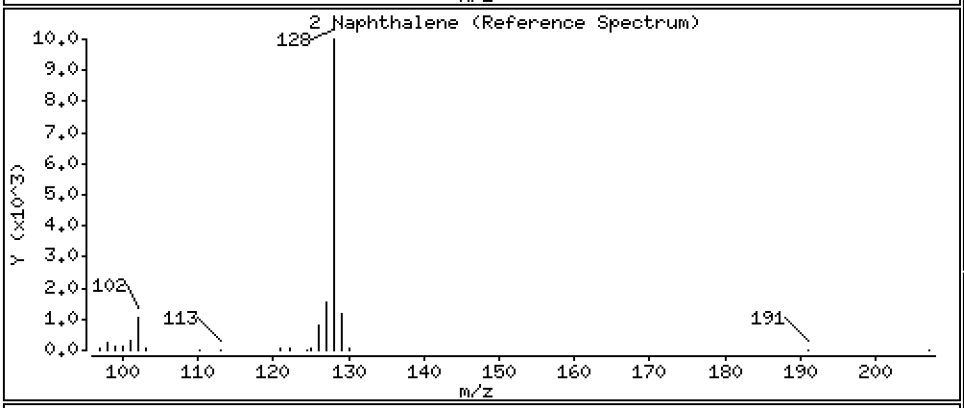
Concentration: 2.626 ug/L

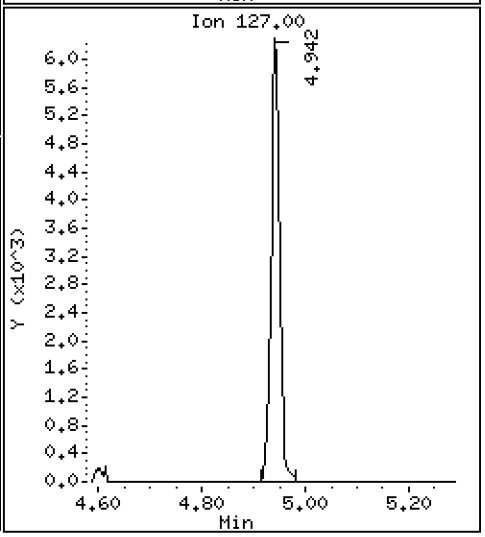


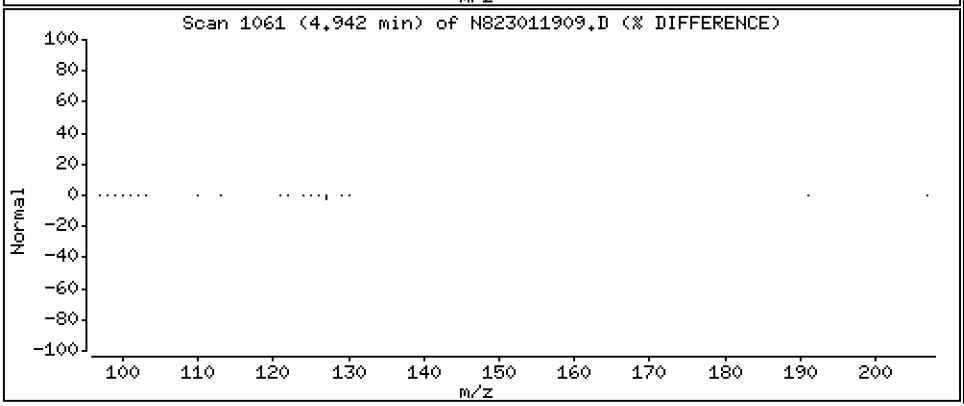












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

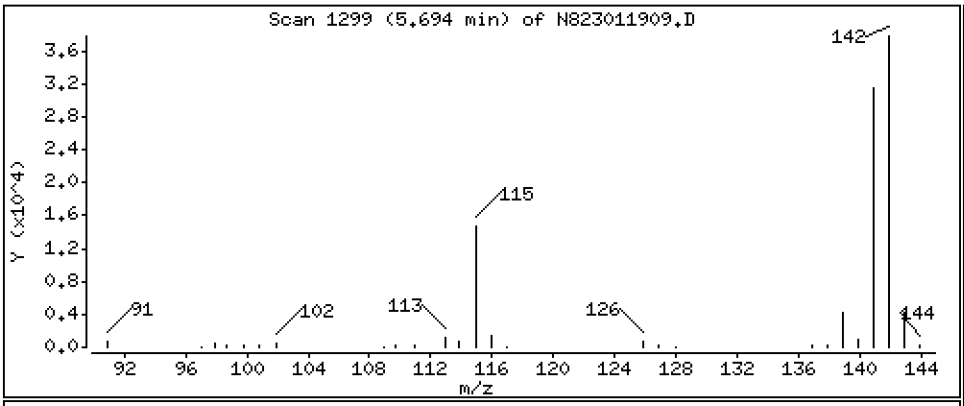
Operator: JZ

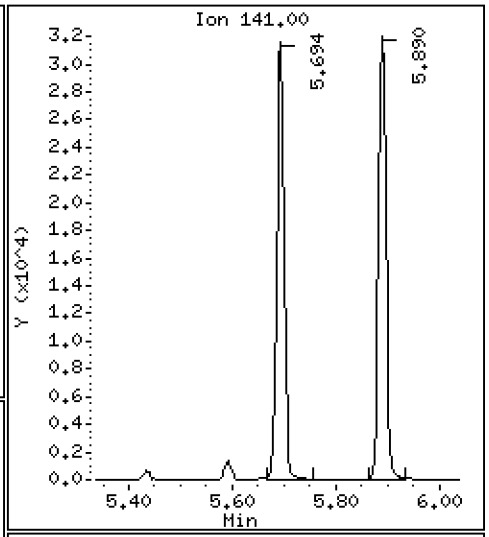
Column phase: Rxi-17sil

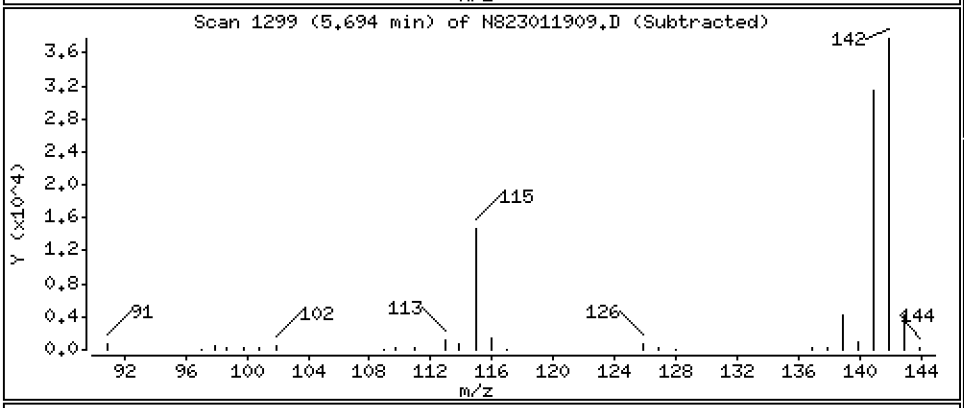
Column diameter: 0.25

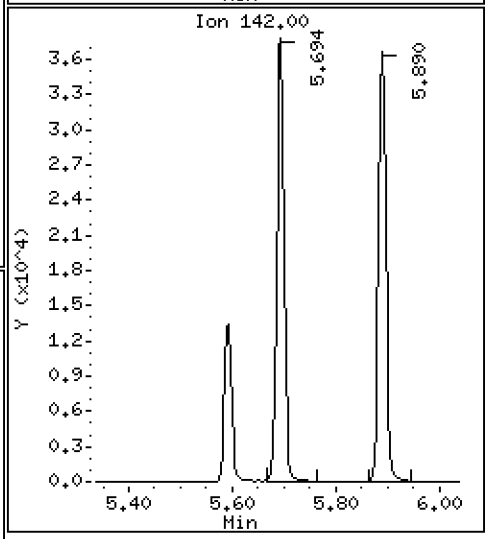
4 2-Methylnaphthalene

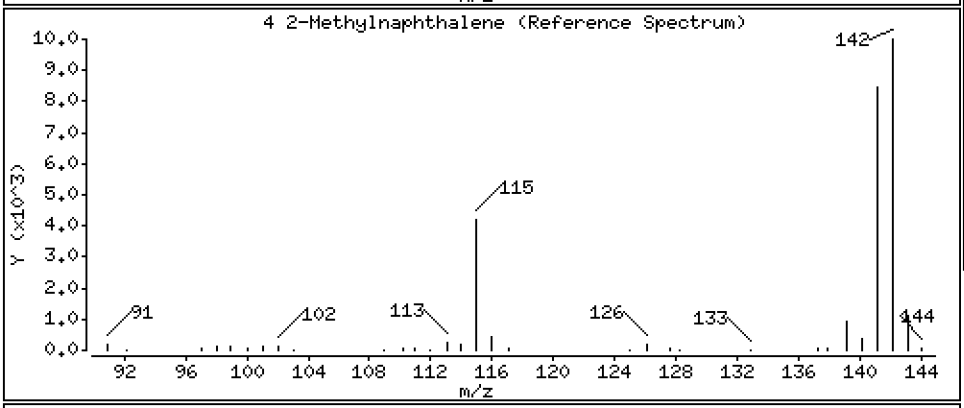
Concentration: 2.670 ug/L

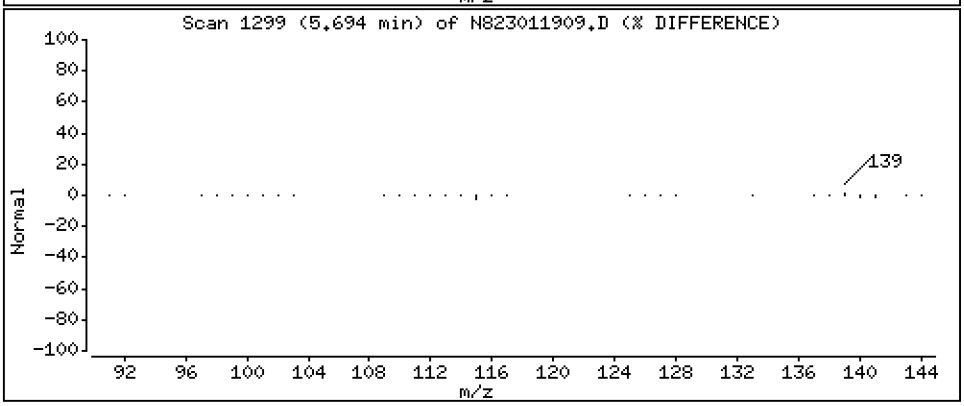












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

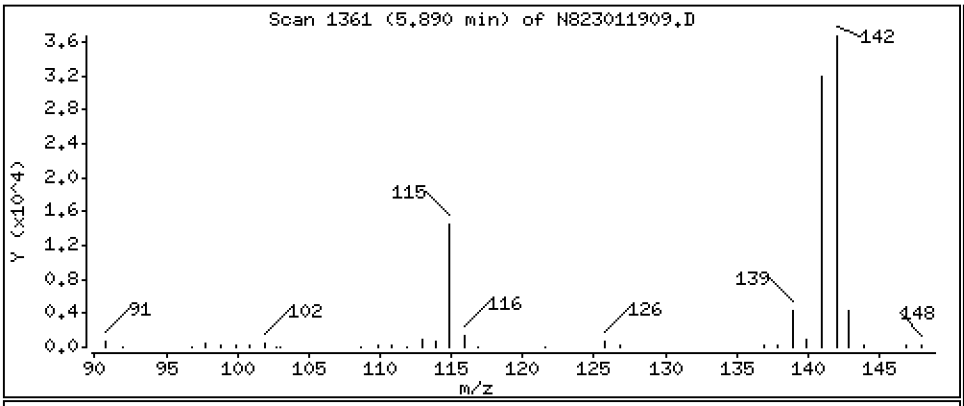
Operator: JZ

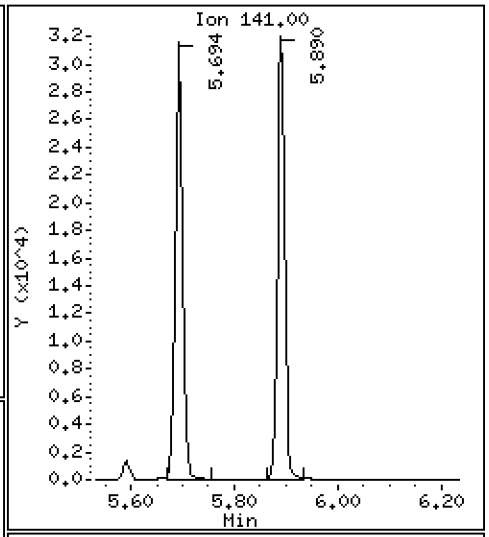
Column phase: Rxi-17sil

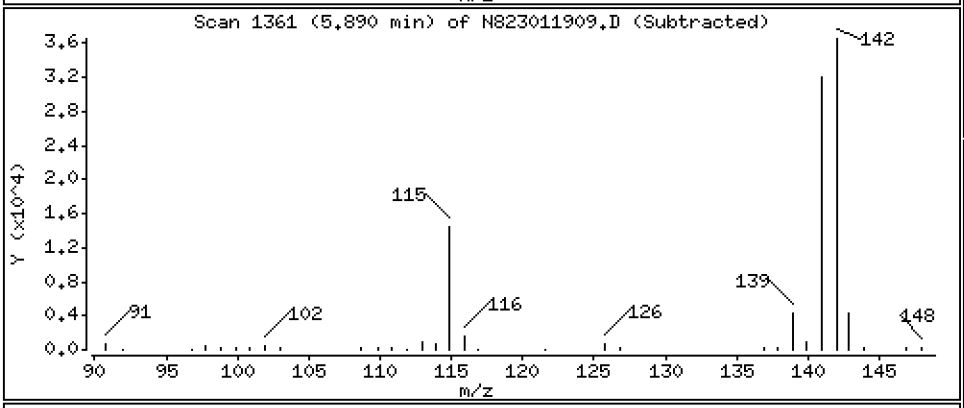
Column diameter: 0.25

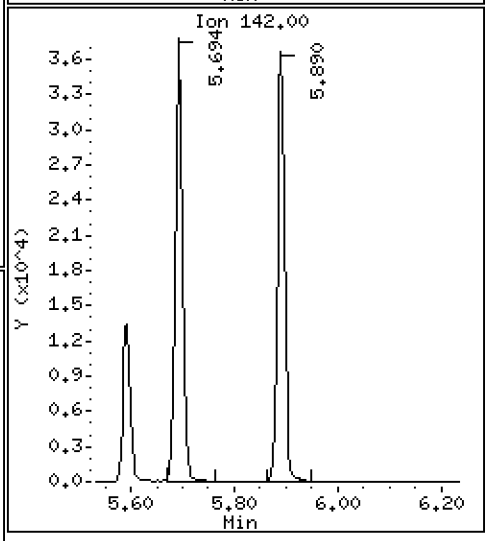
5 1-methylnaphthalene

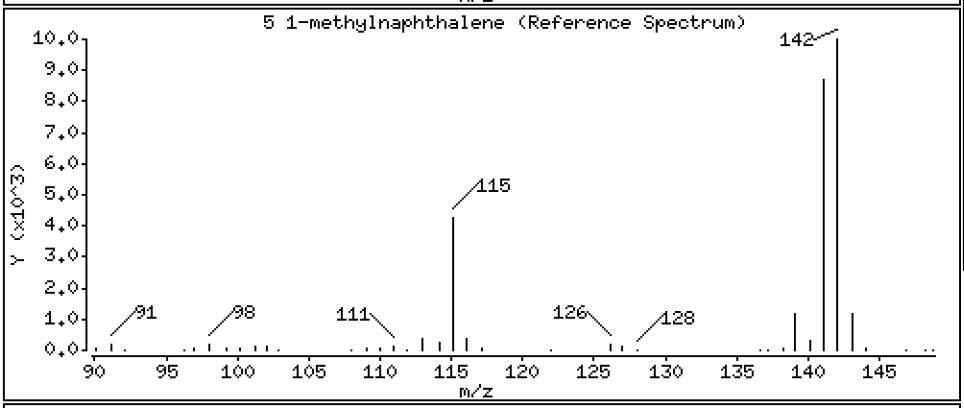
Concentration: 2.649 ug/L

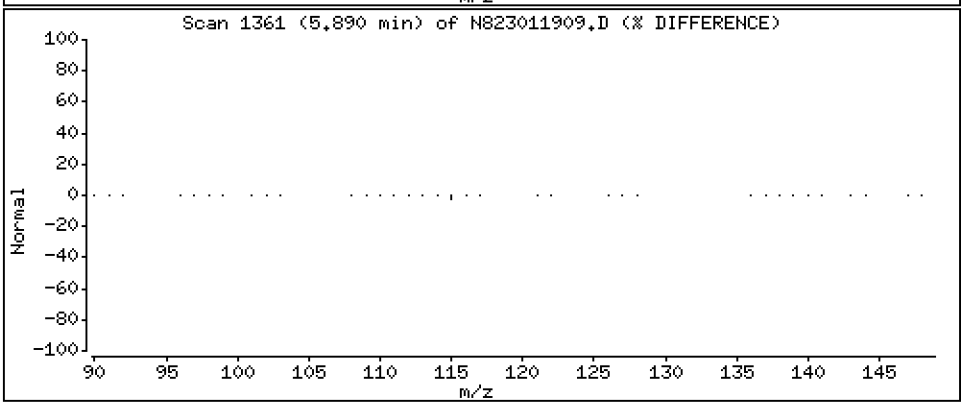












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

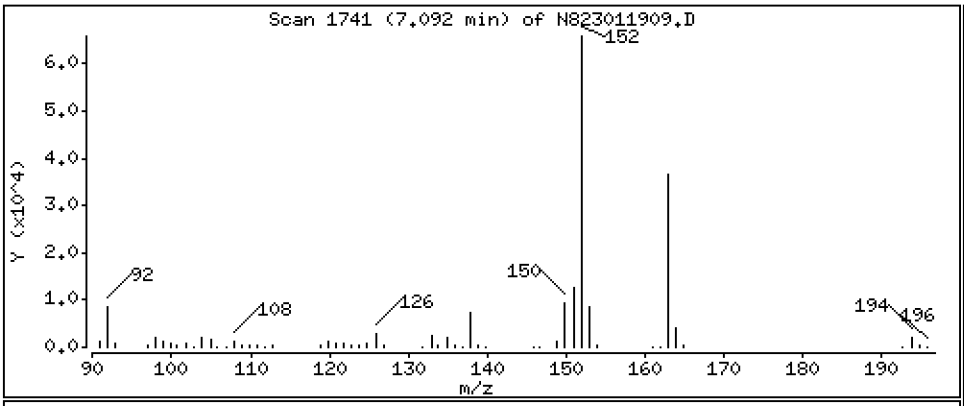
Operator: JZ

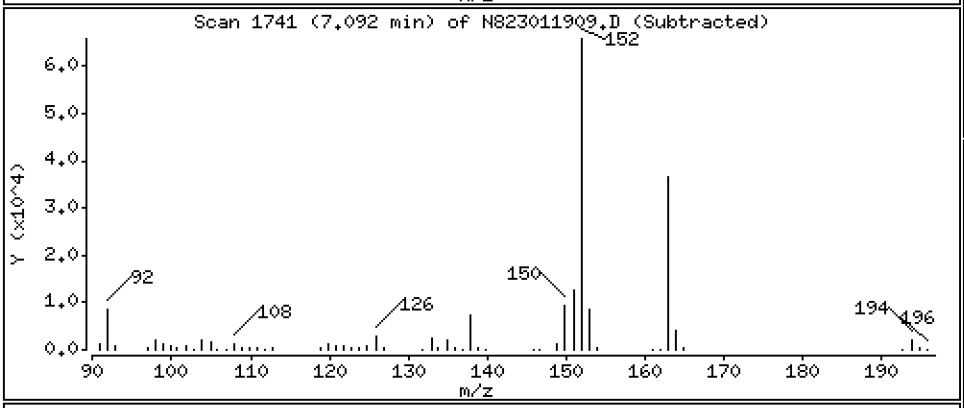
Column phase: Rxi-17sil

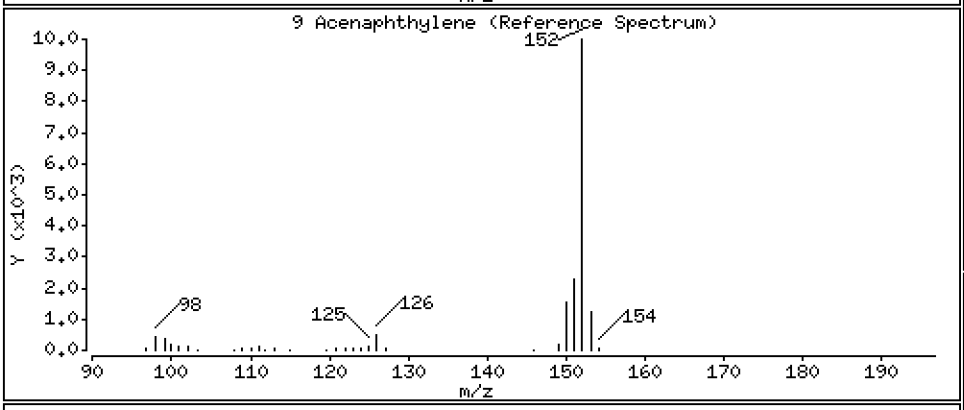
Column diameter: 0.25

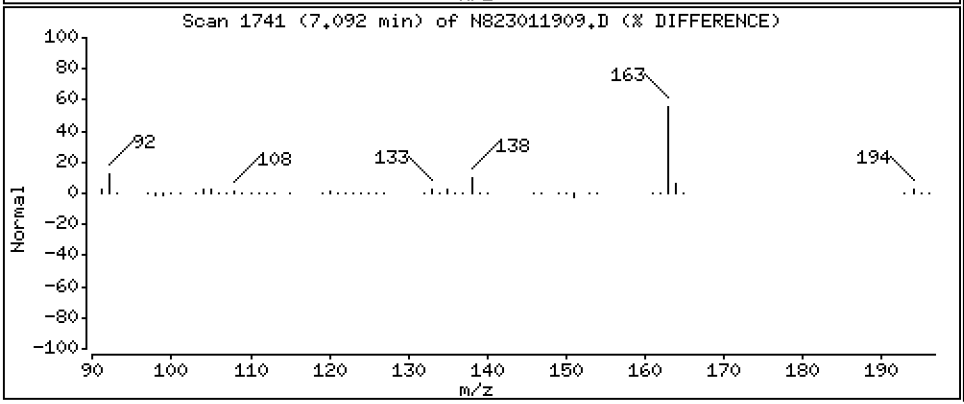
9 Acenaphthylene

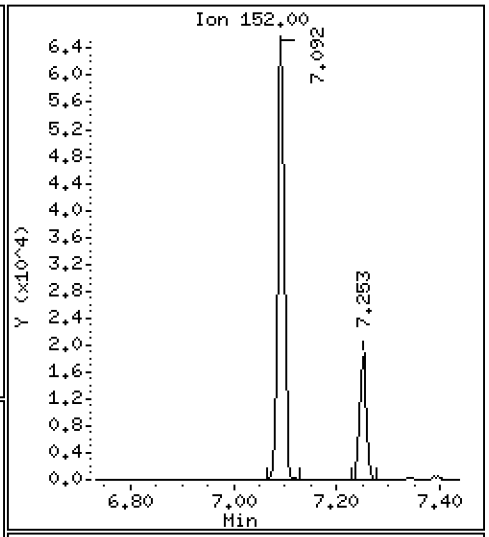
Concentration: 2.821 ug/L

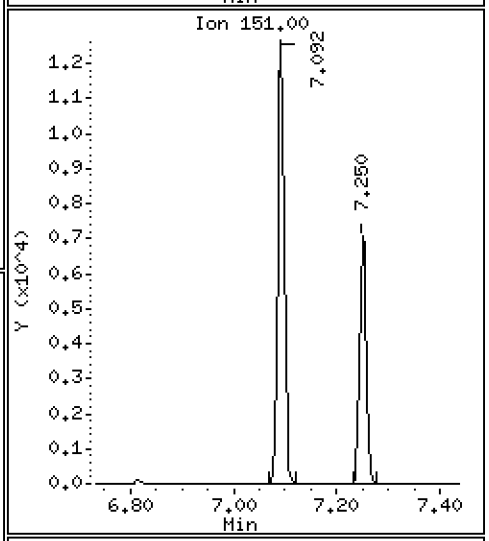


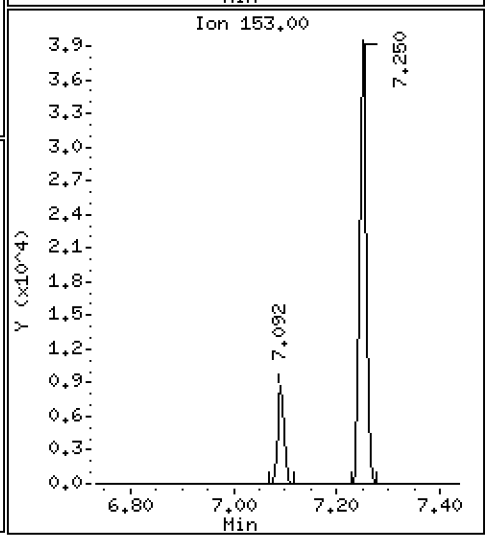












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

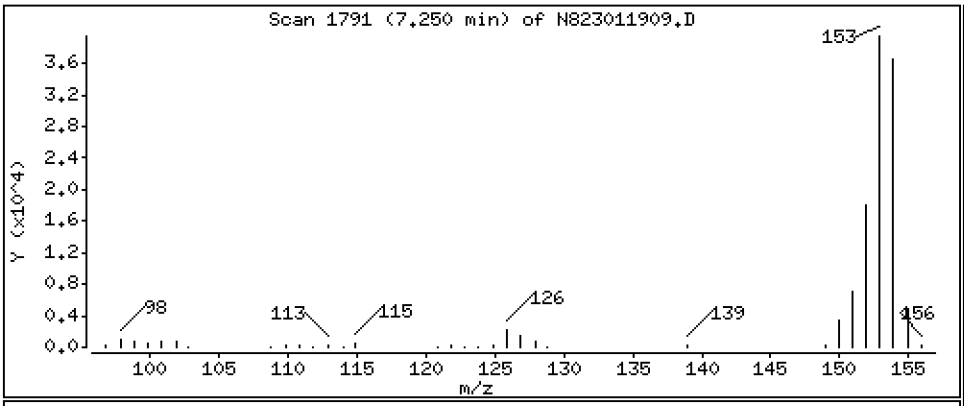
Operator: JZ

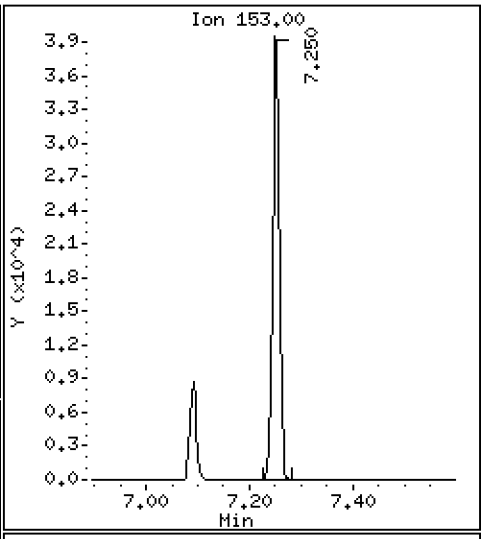
Column phase: Rxi-17sil

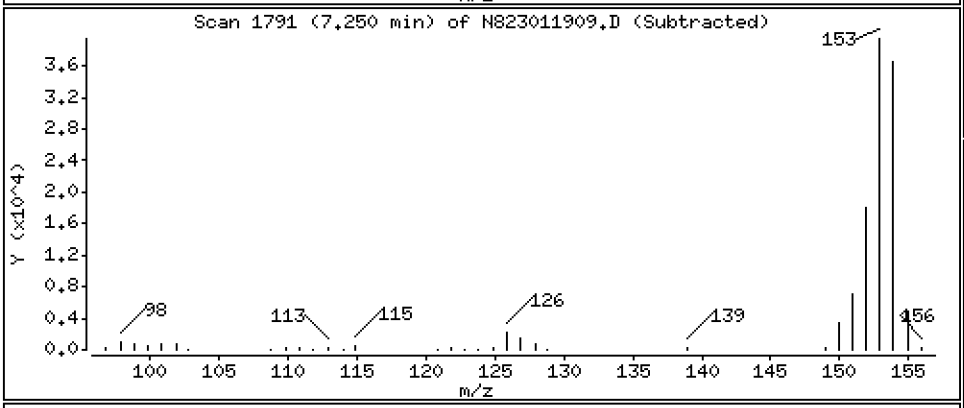
Column diameter: 0.25

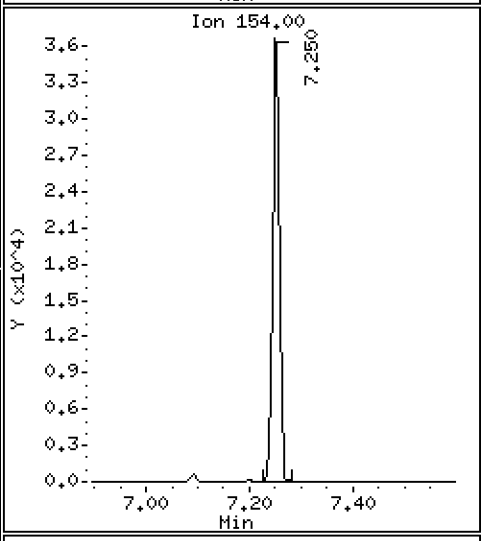
11 Acenaphthene

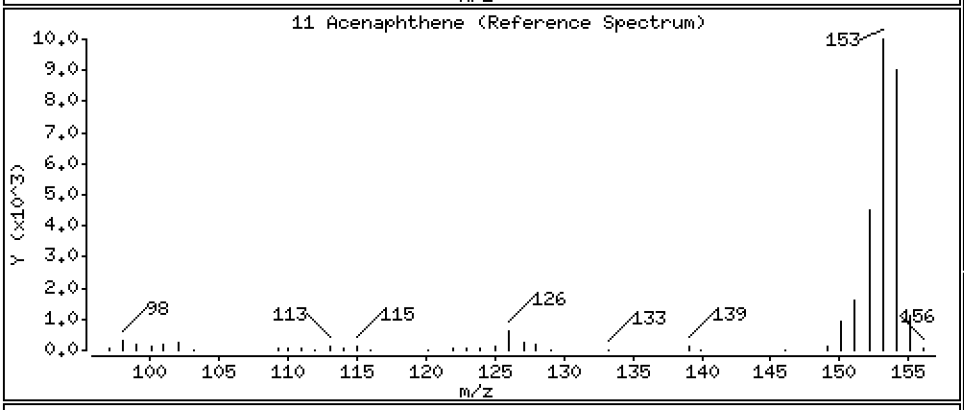
Concentration: 2.600 ug/L

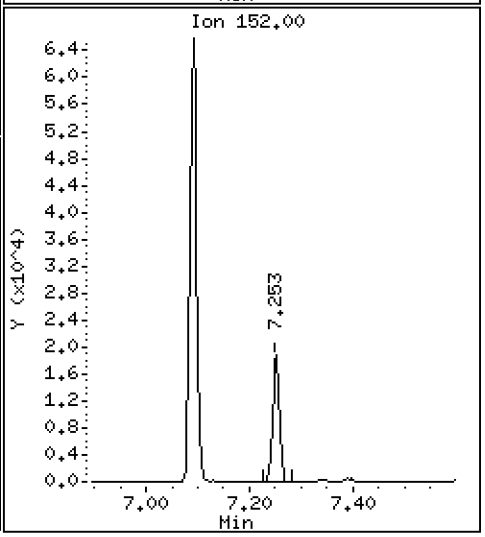


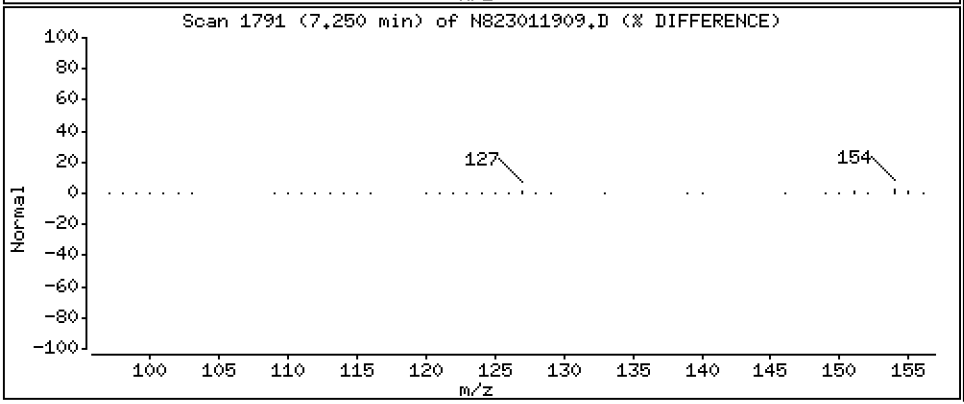












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

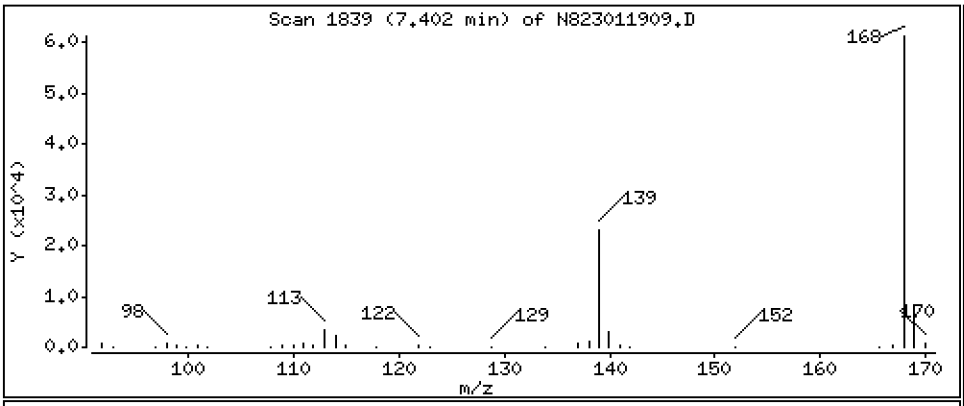
Operator: JZ

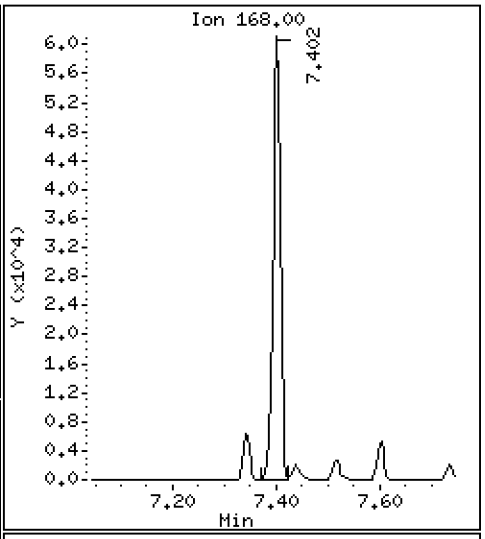
Column phase: Rxi-17sil

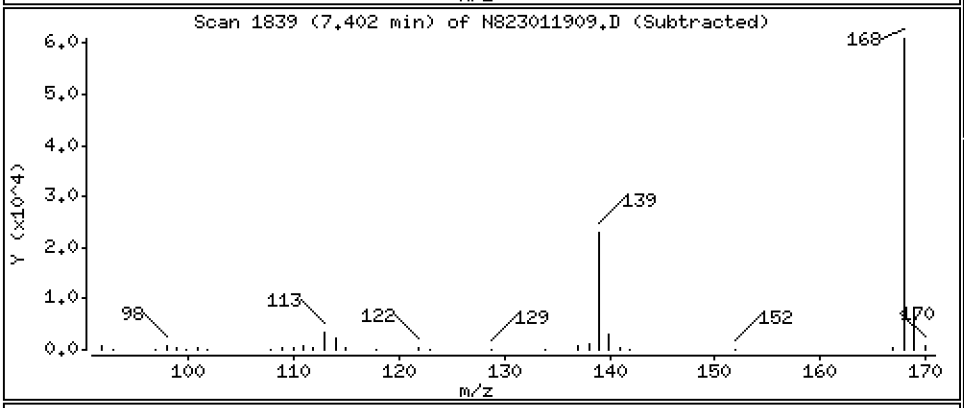
Column diameter: 0.25

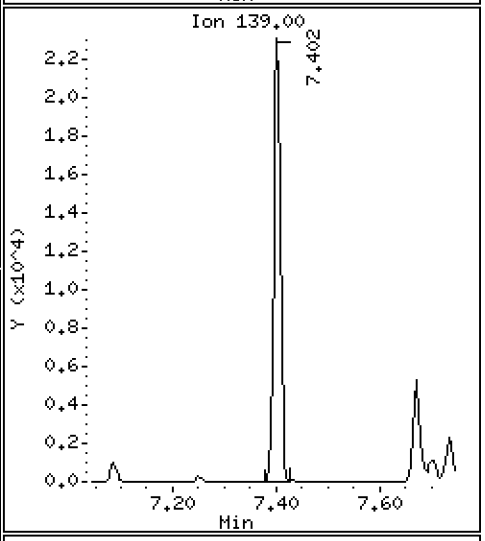
12 Dibenzofuran

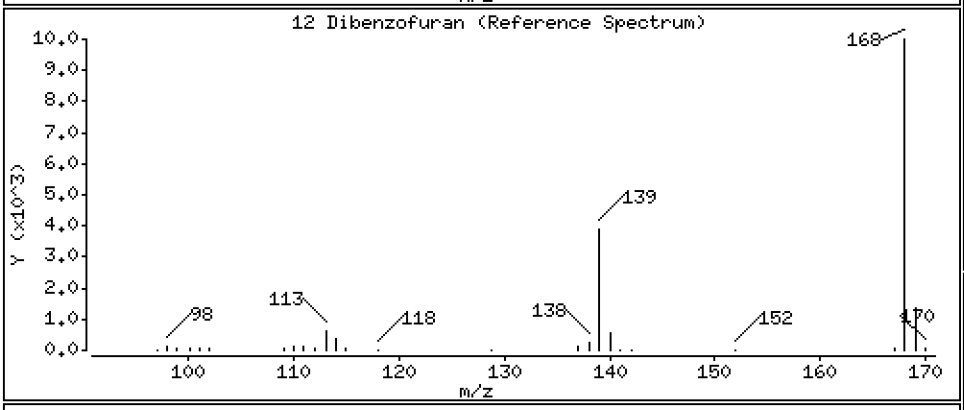
Concentration: 2.860 ug/L

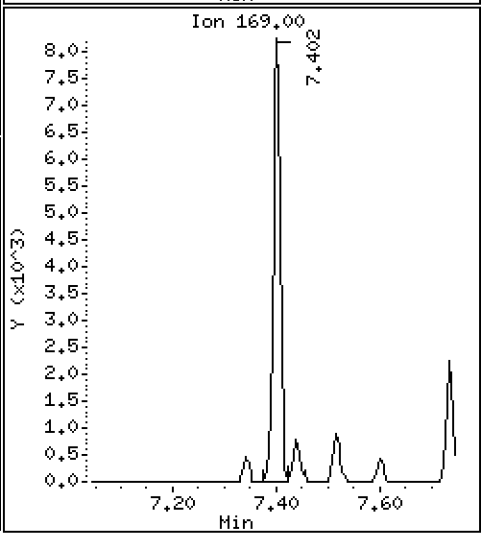


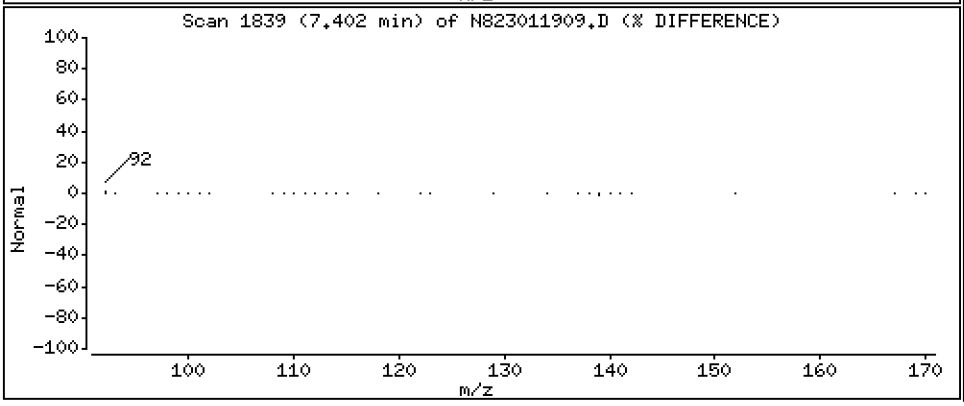












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

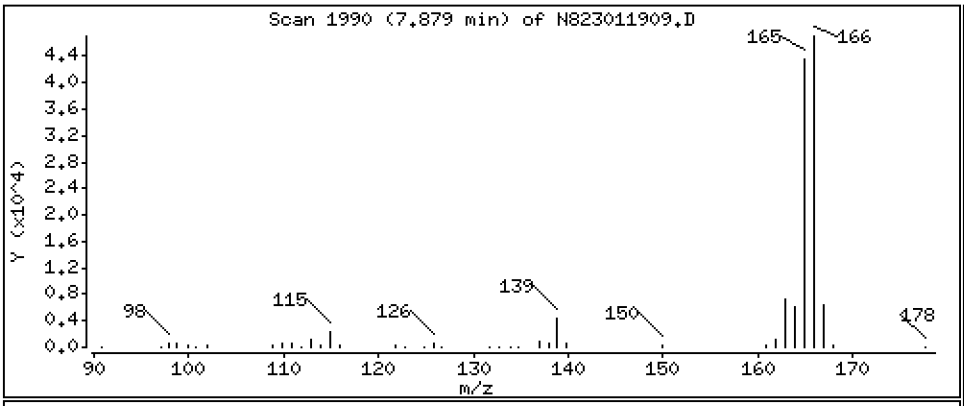
Operator: JZ

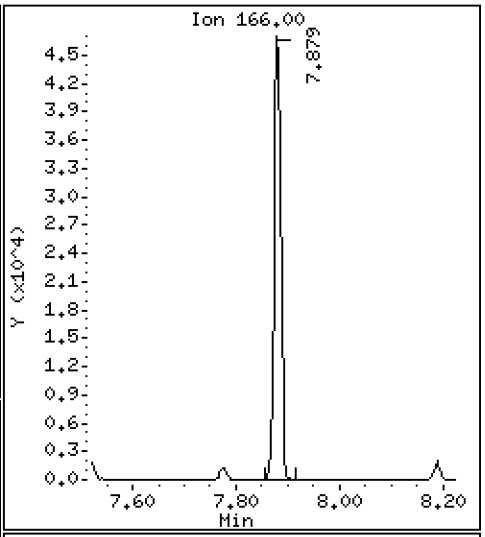
Column phase: Rxi-17sil

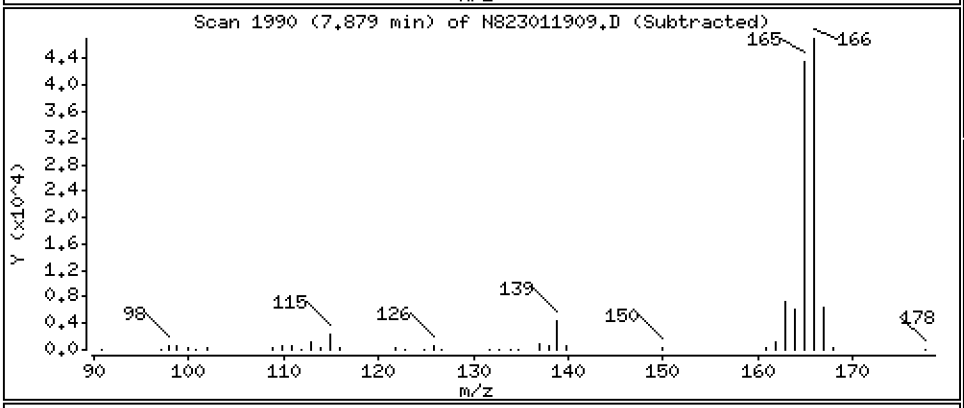
Column diameter: 0.25

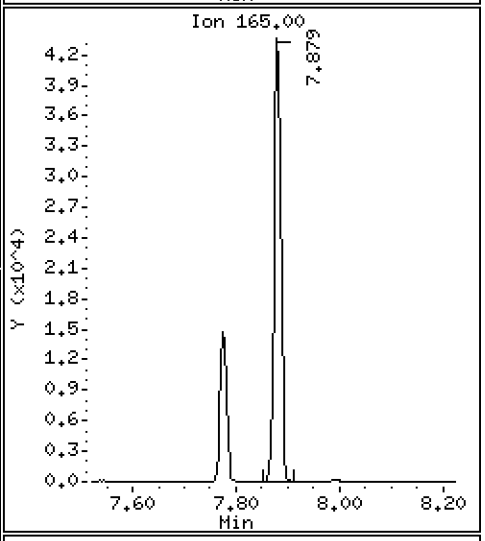
14 Fluorene

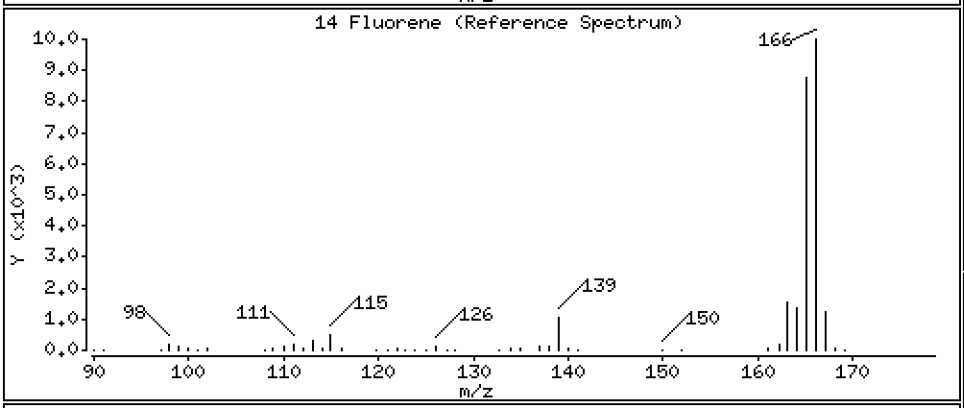
Concentration: 2.631 ug/L

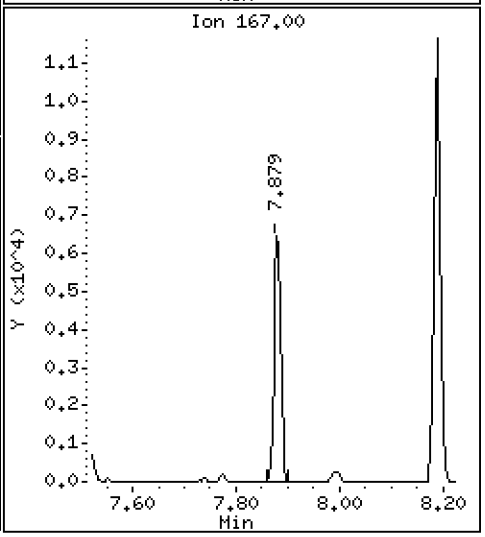


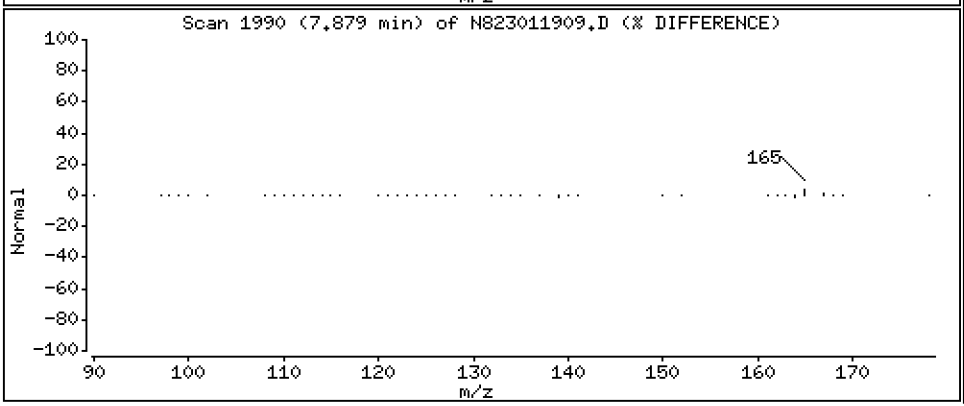












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

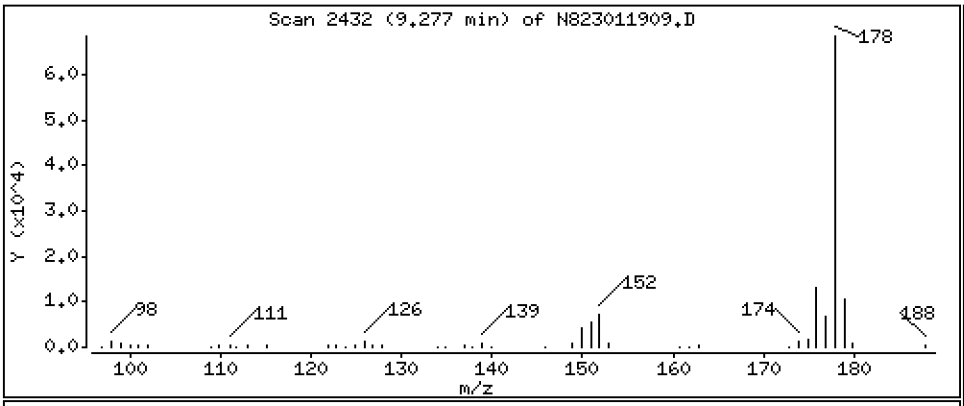
Operator: JZ

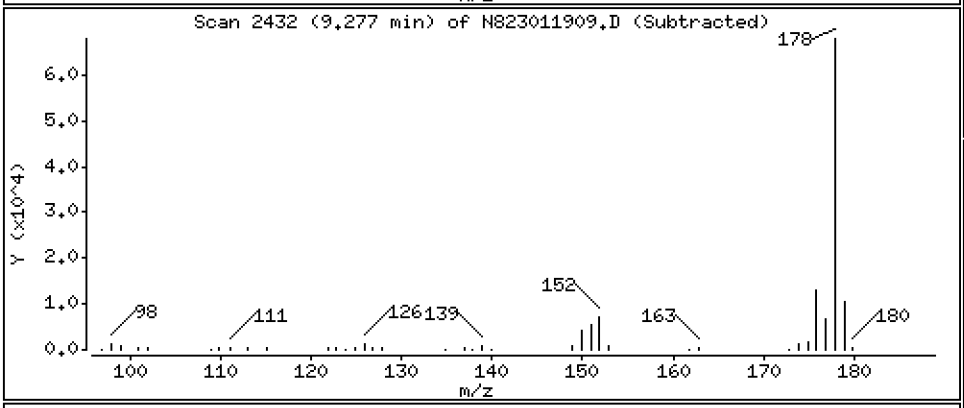
Column phase: Rxi-17sil

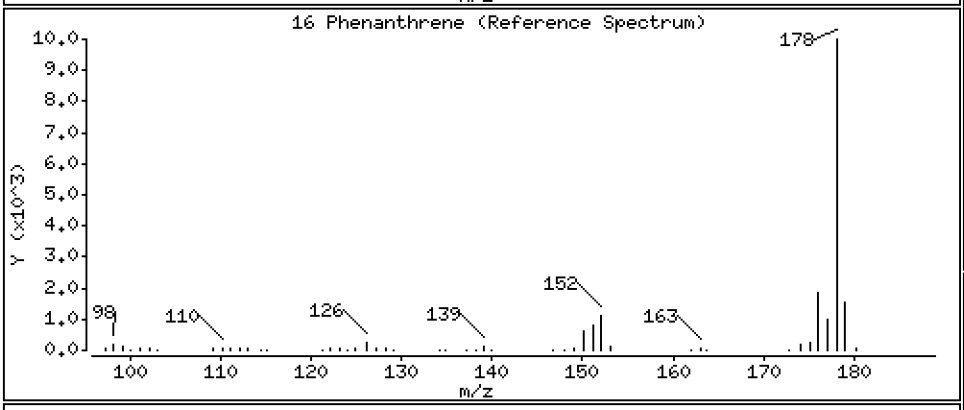
Column diameter: 0.25

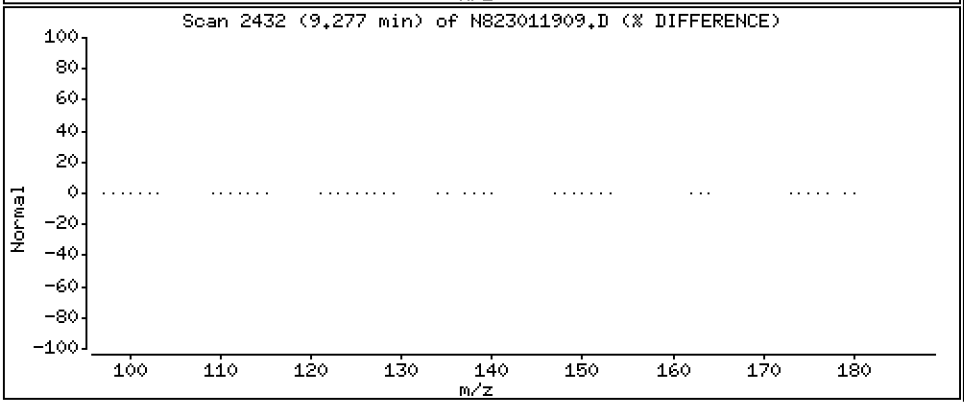
16 Phenanthrene

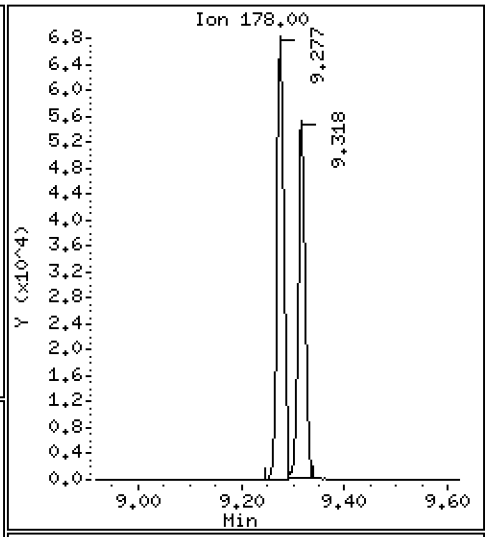
Concentration: 2.448 ug/L

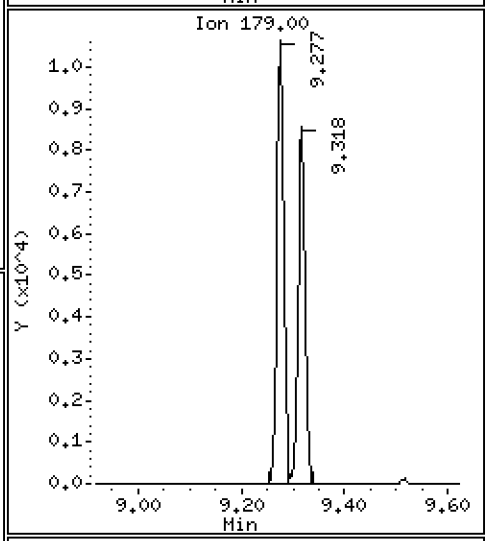


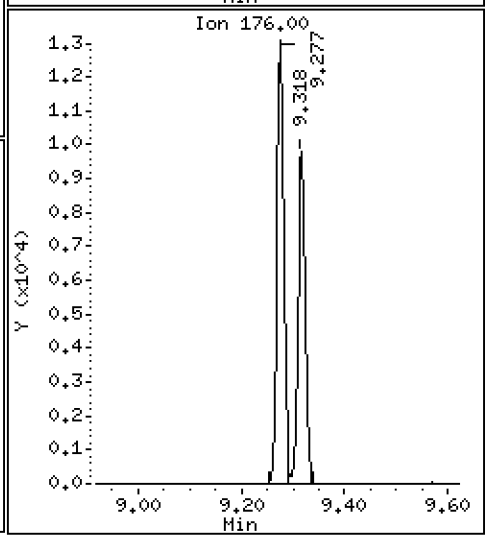












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

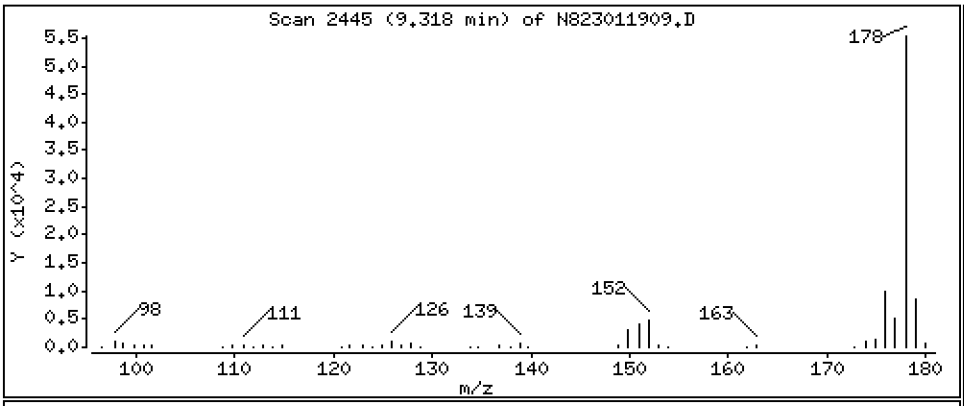
Operator: JZ

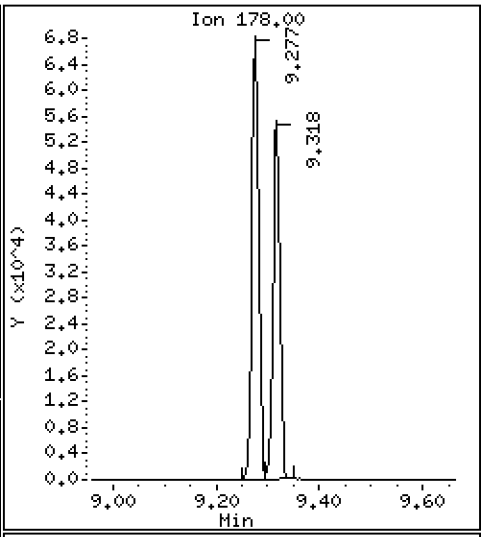
Column phase: Rxi-17sil

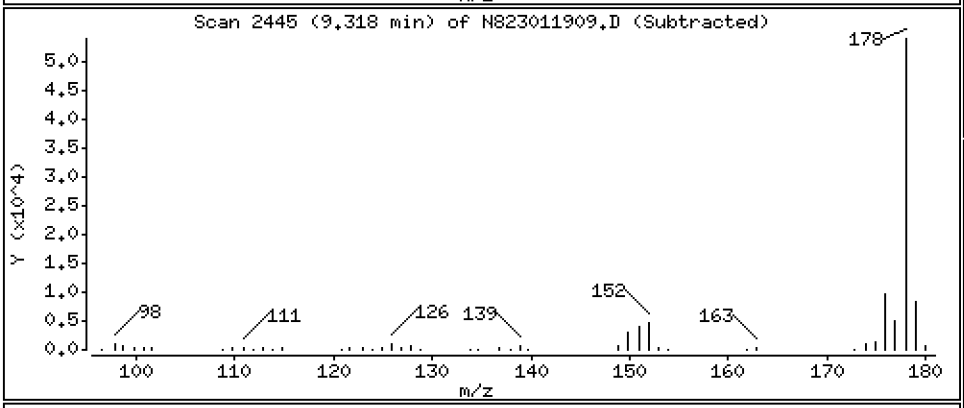
Column diameter: 0.25

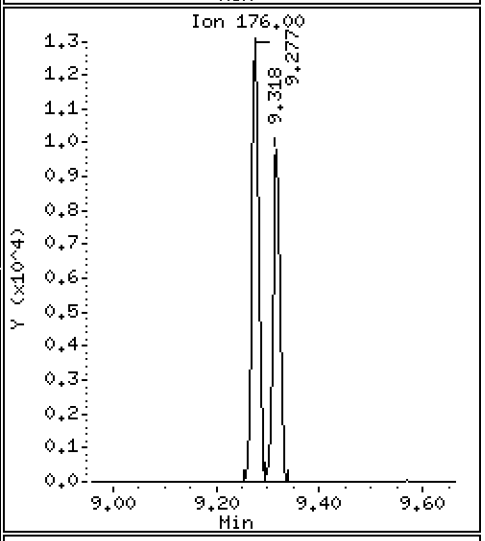
17 Anthracene

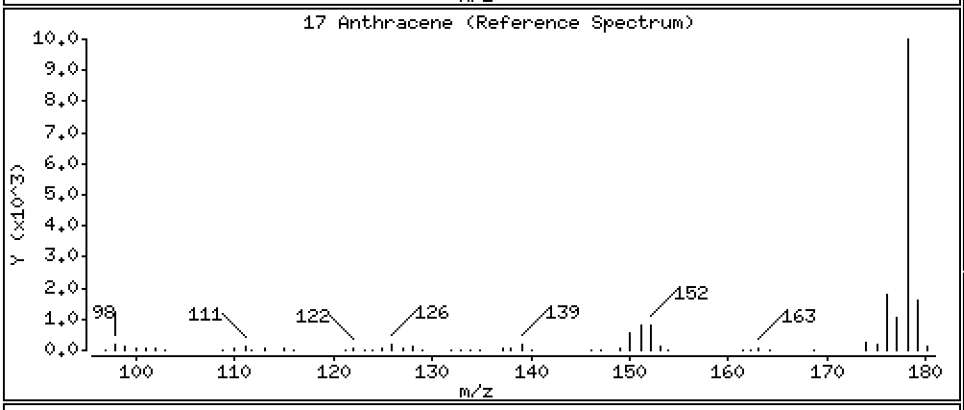
Concentration: 2.270 ug/L

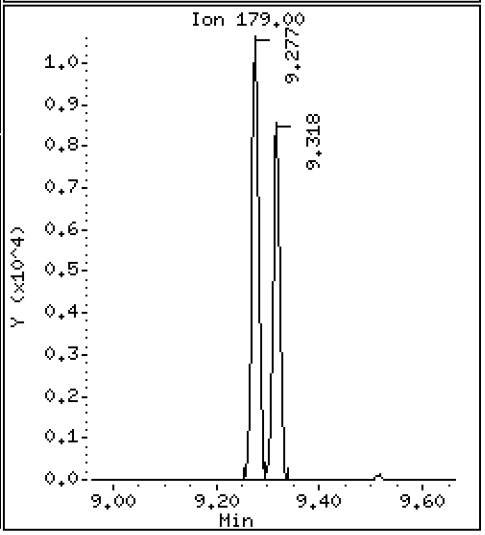


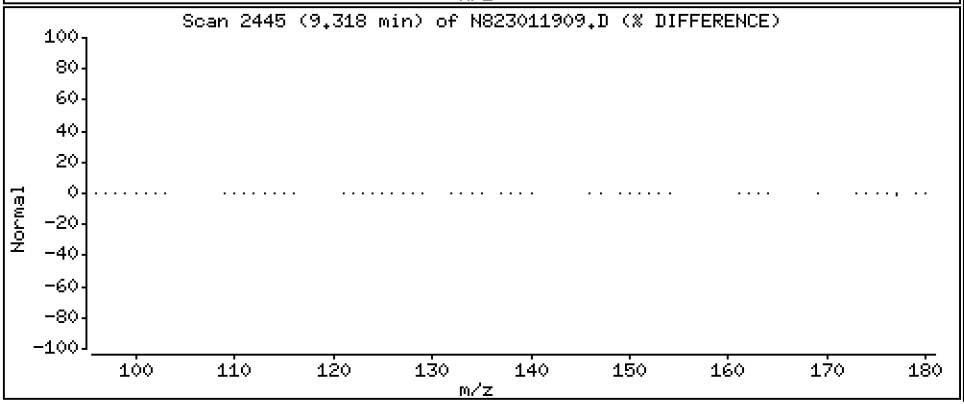












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

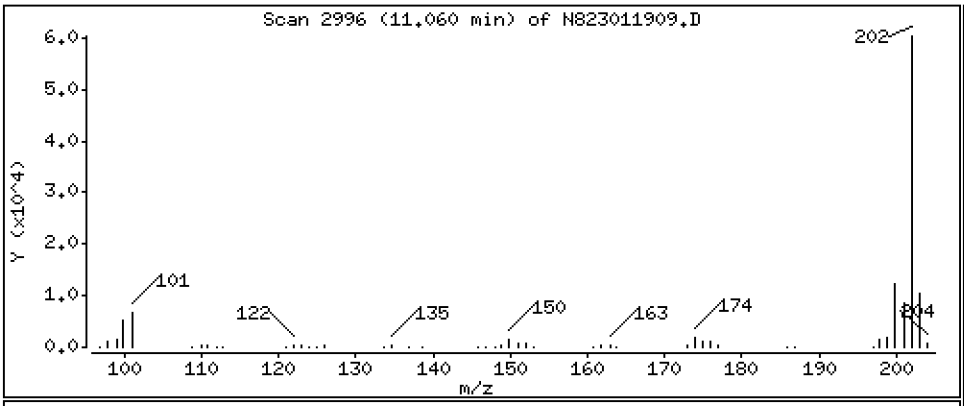
Operator: JZ

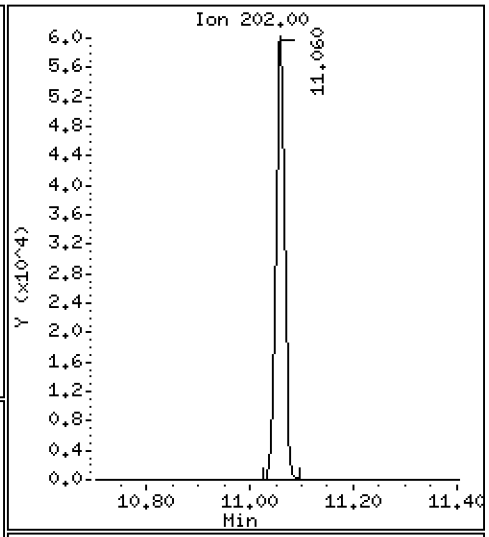
Column phase: Rxi-17sil

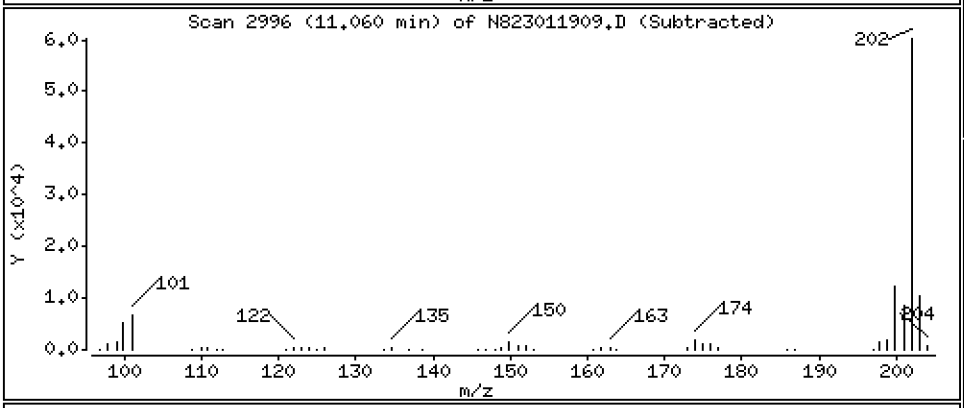
Column diameter: 0.25

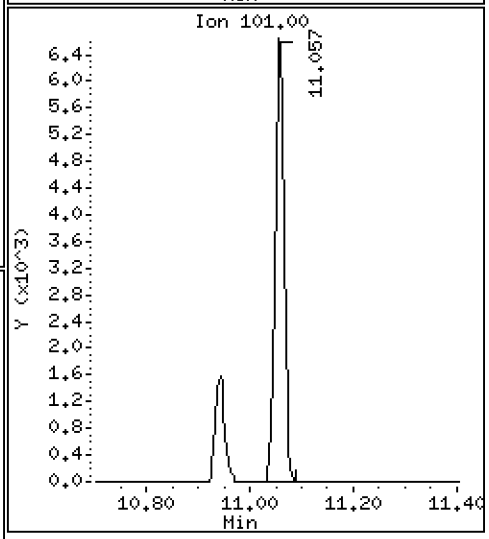
22 Fluoranthene

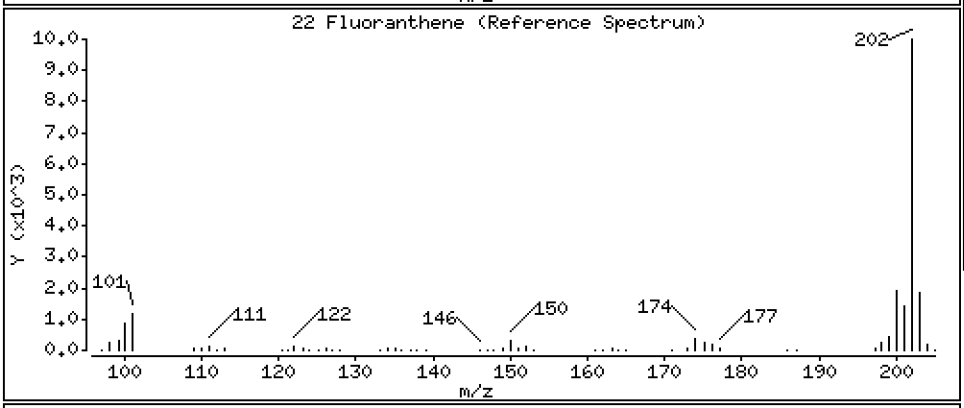
Concentration: 2.653 ug/L

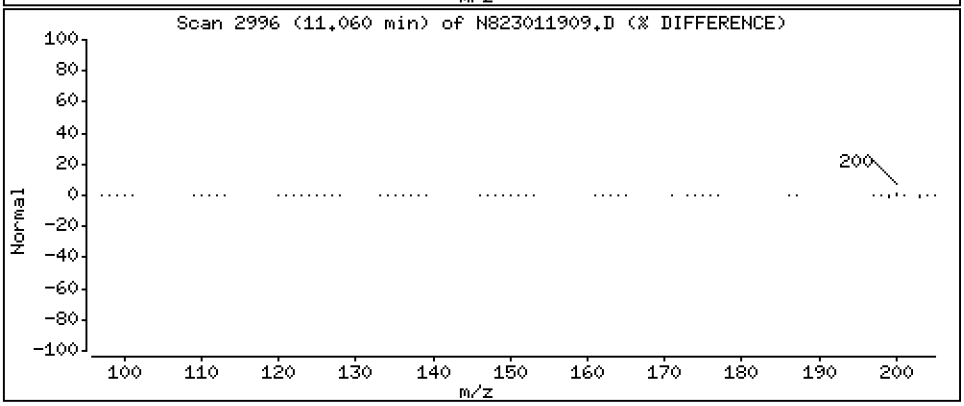












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

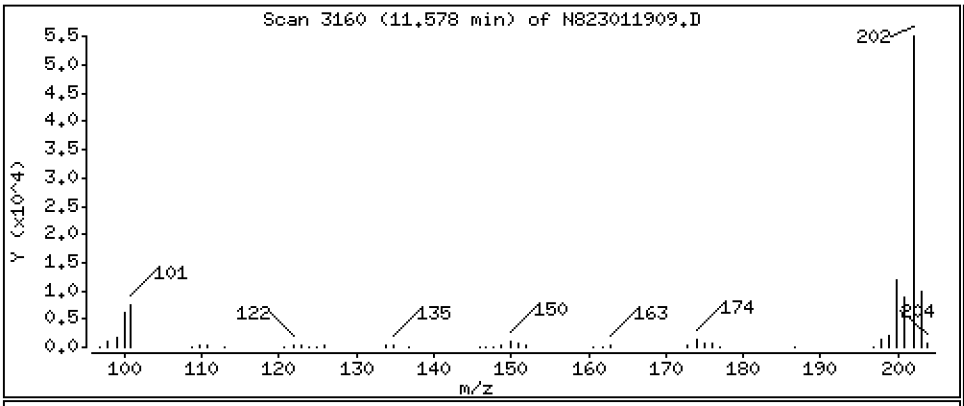
Operator: JZ

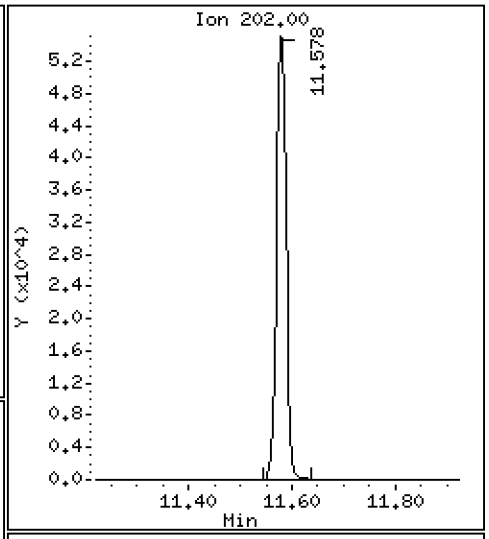
Column phase: Rxi-17sil

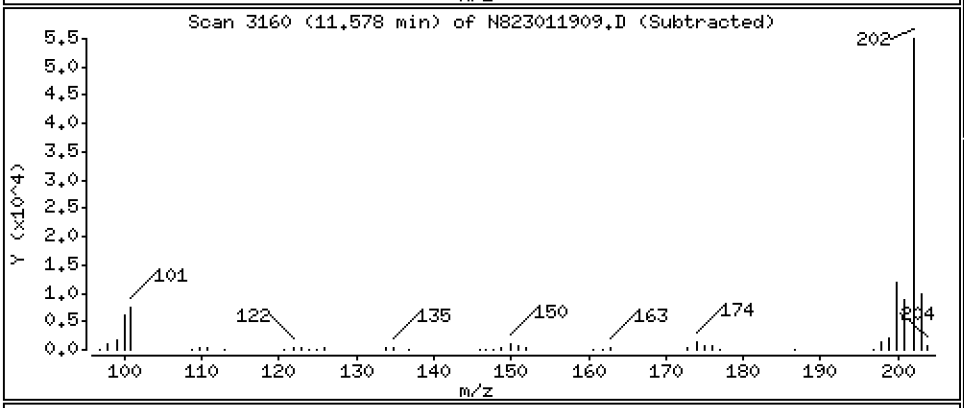
Column diameter: 0.25

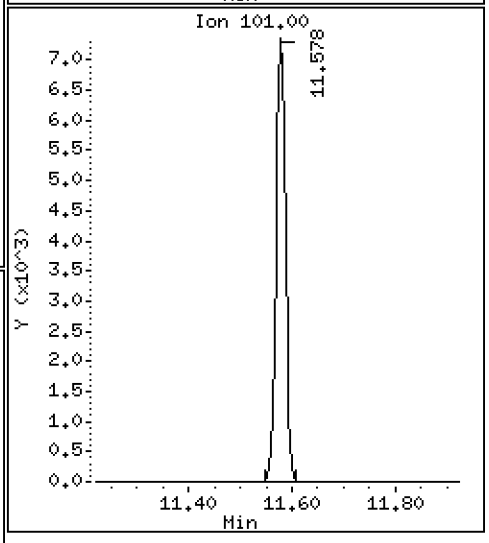
23 Pyrene

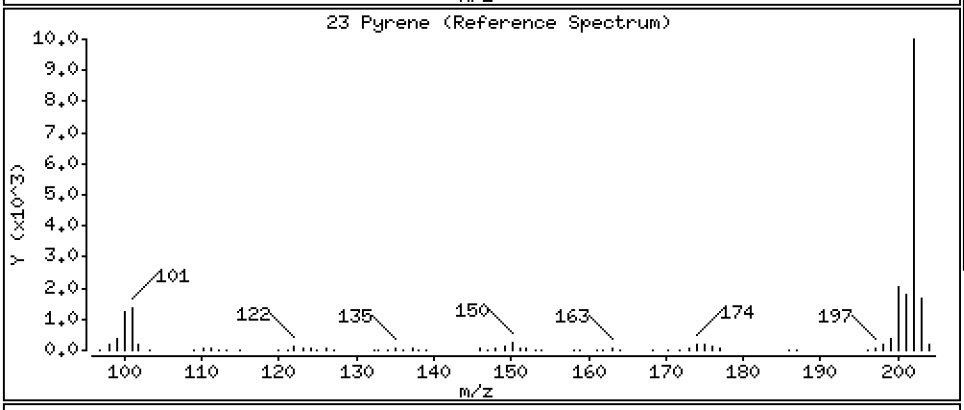
Concentration: 2.462 ug/L

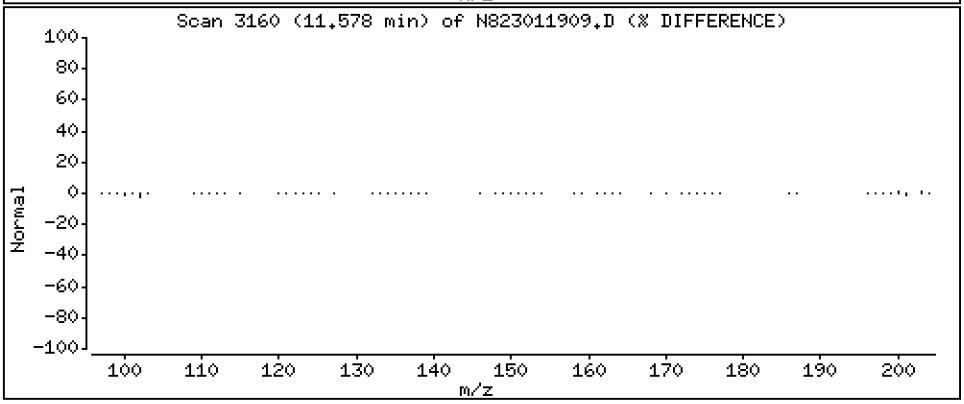












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

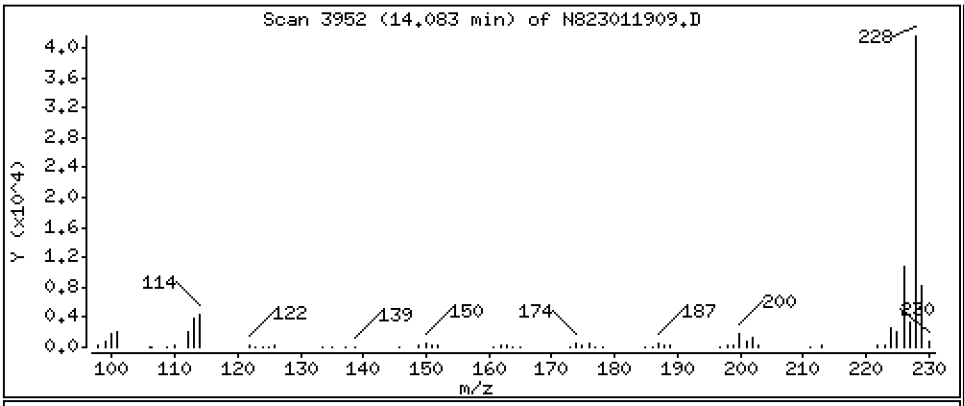
Operator: JZ

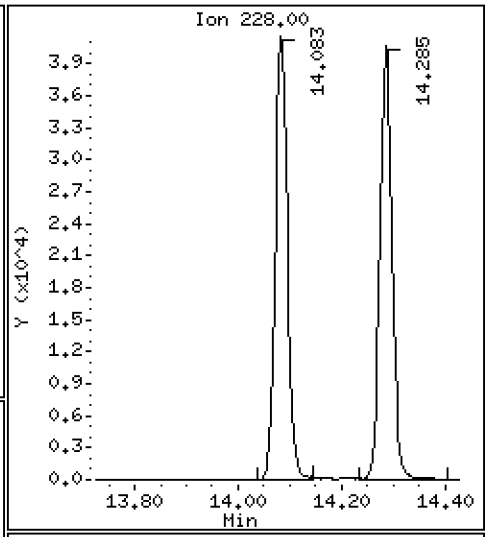
Column phase: Rxi-17sil

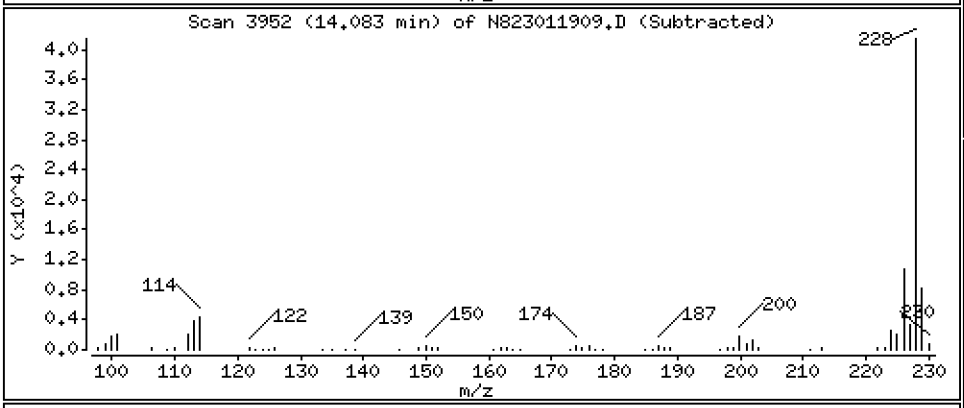
Column diameter: 0.25

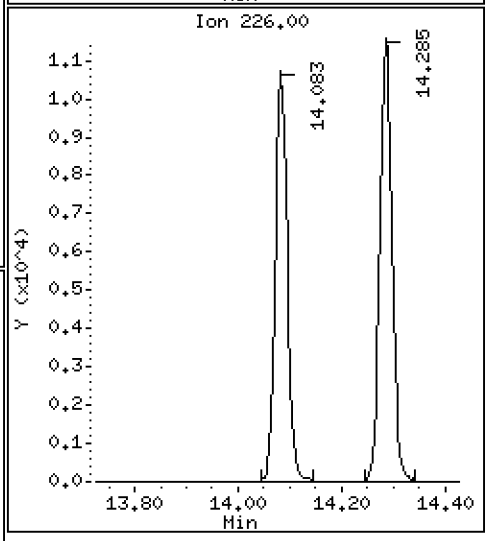
24 Benzo(a)anthracene

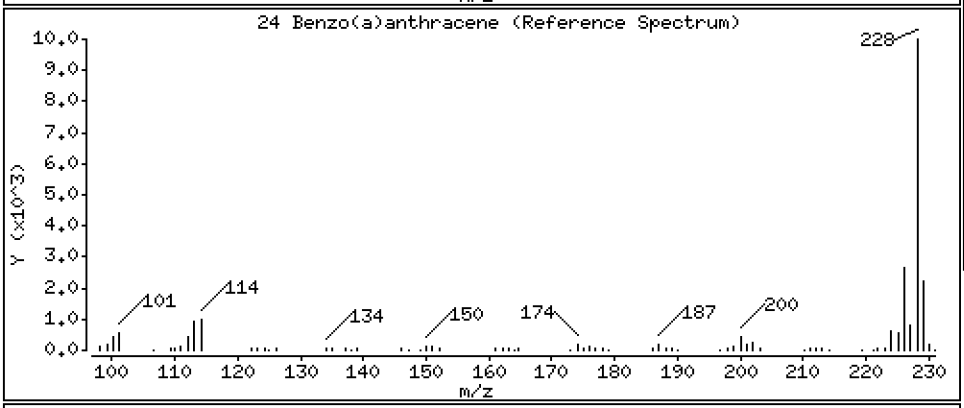
Concentration: 2.587 ug/L

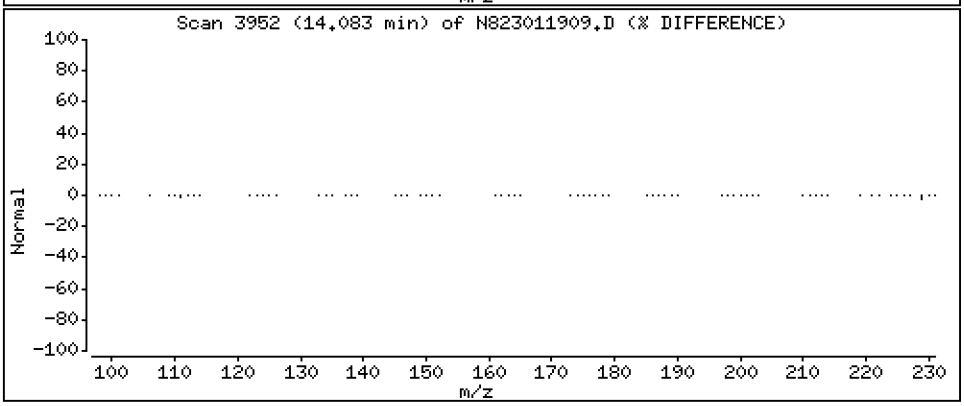












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

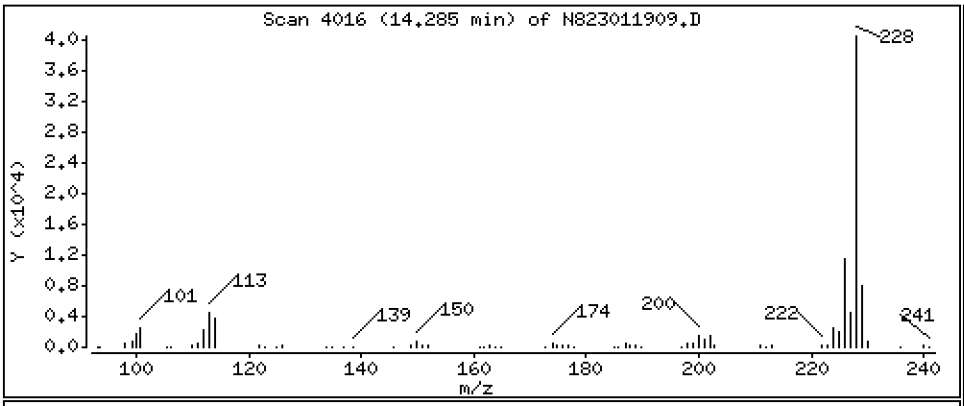
Operator: JZ

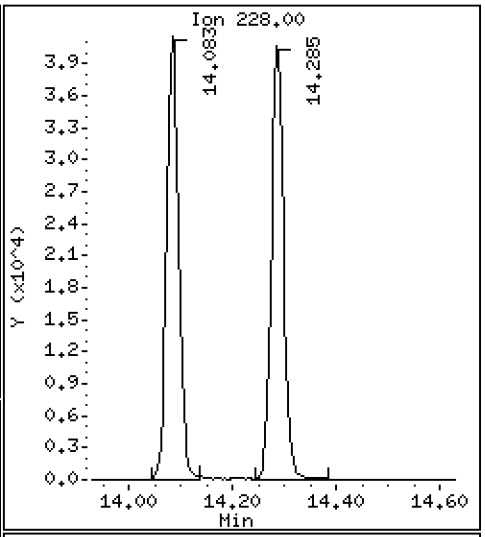
Column phase: Rxi-17sil

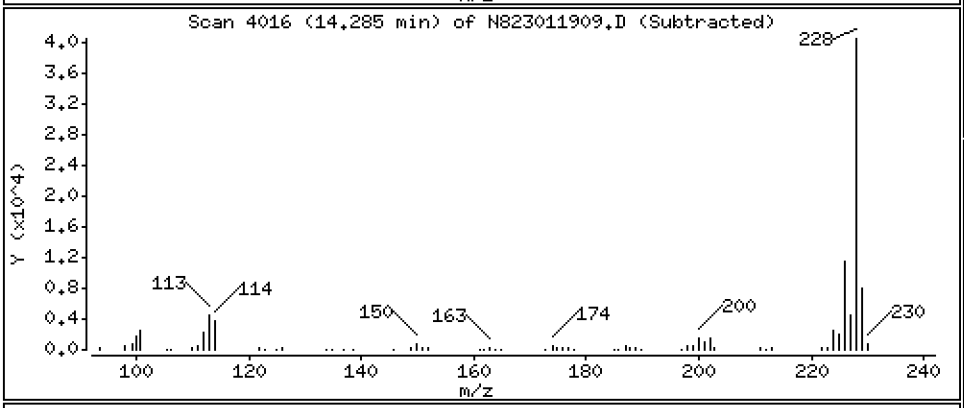
Column diameter: 0.25

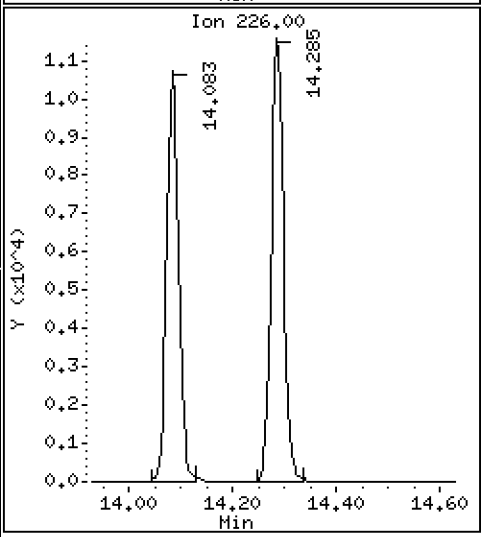
27 Chrysene

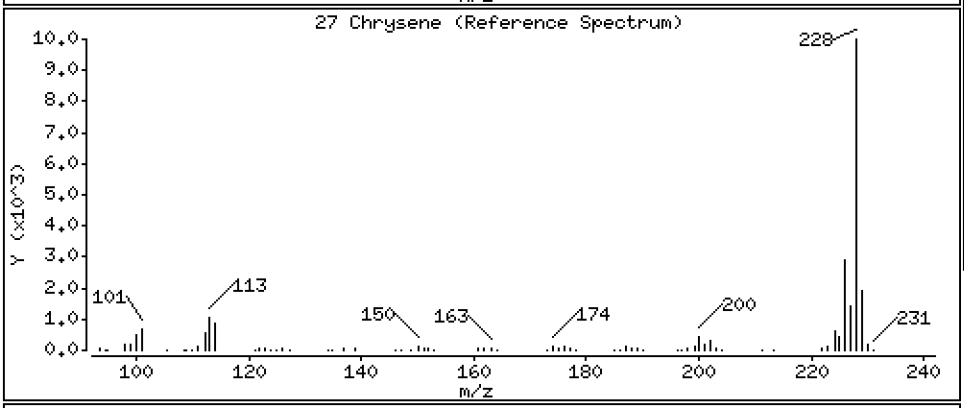
Concentration: 2.400 ug/L

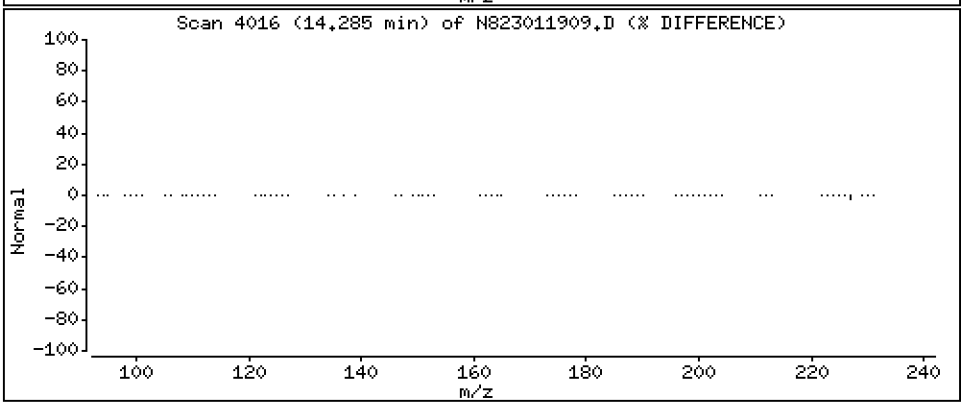












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

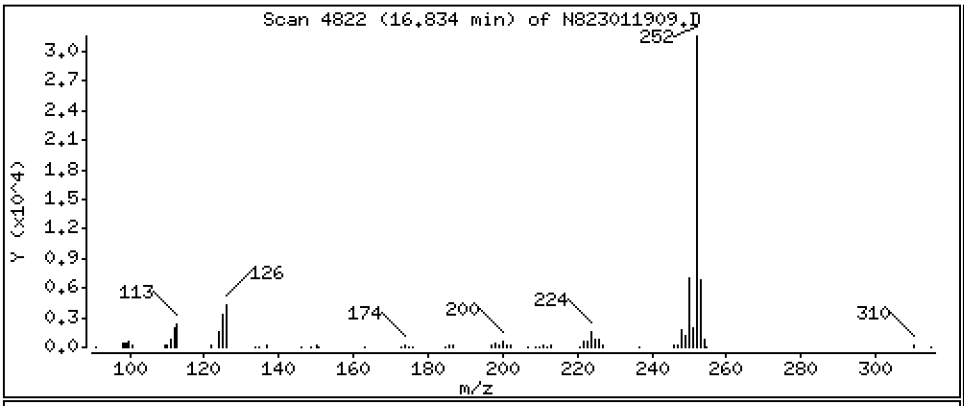
Operator: JZ

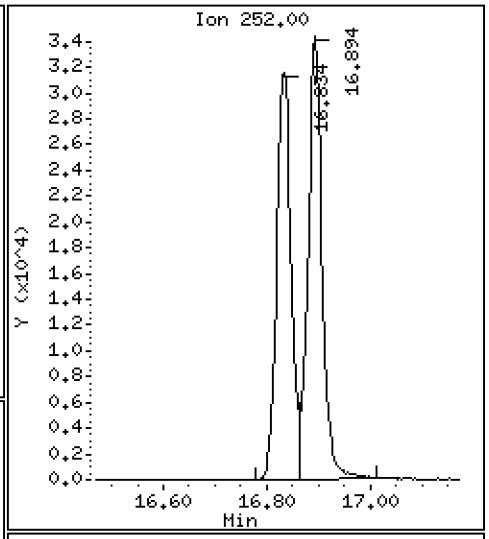
Column phase: Rxi-17sil

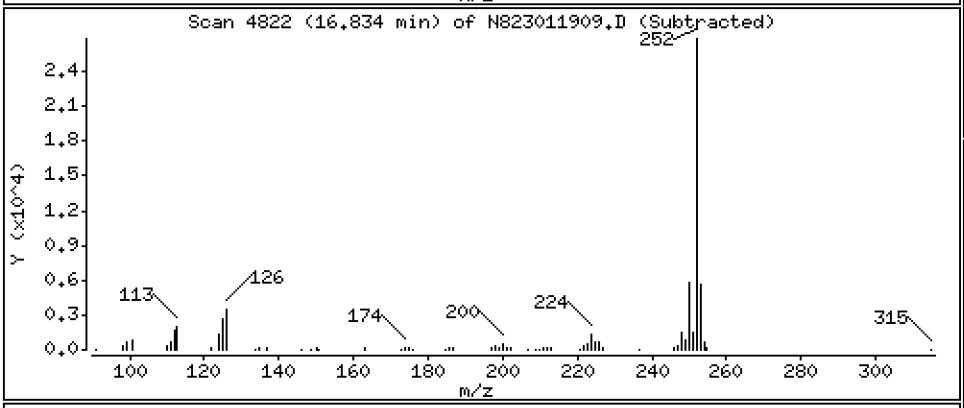
Column diameter: 0.25

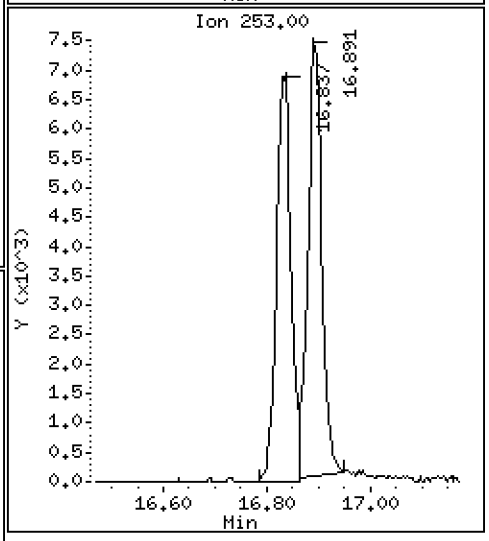
28 Benzo(b)fluoranthene

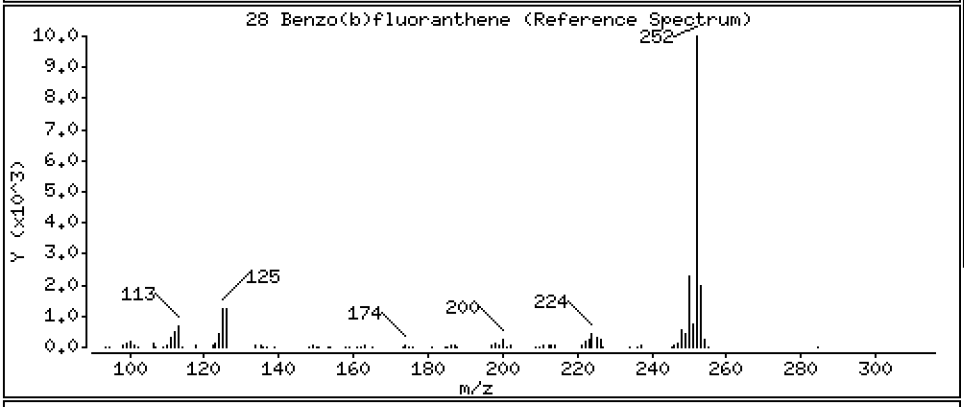
Concentration: 2.507 ug/L

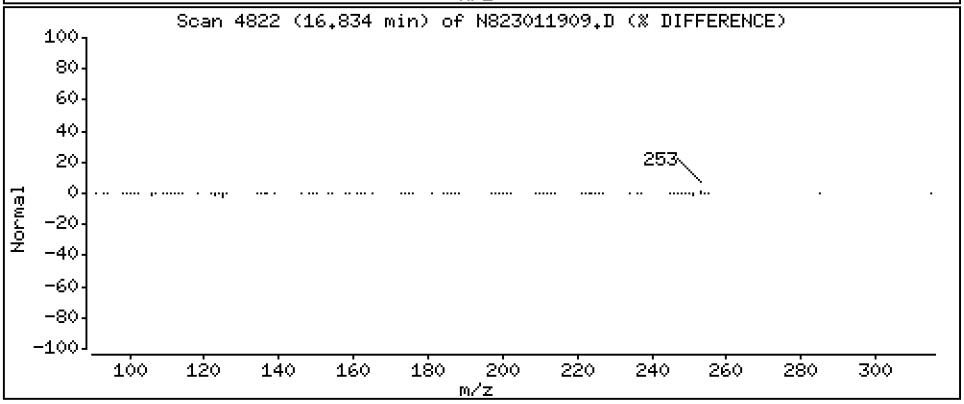












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

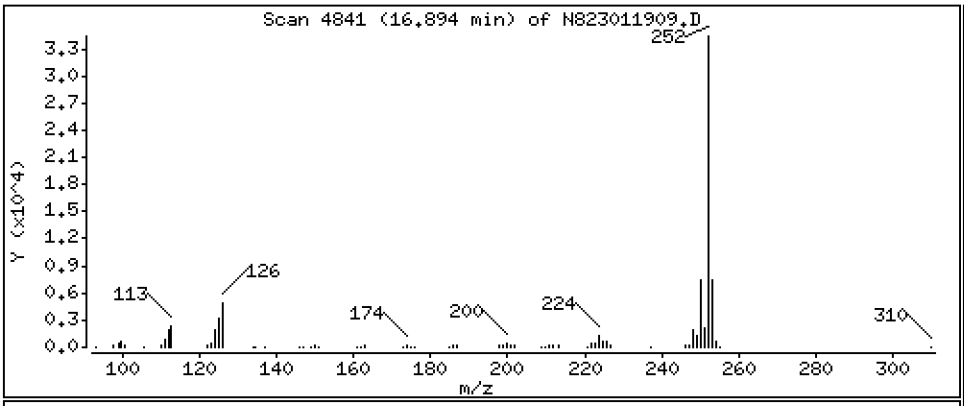
Operator: JZ

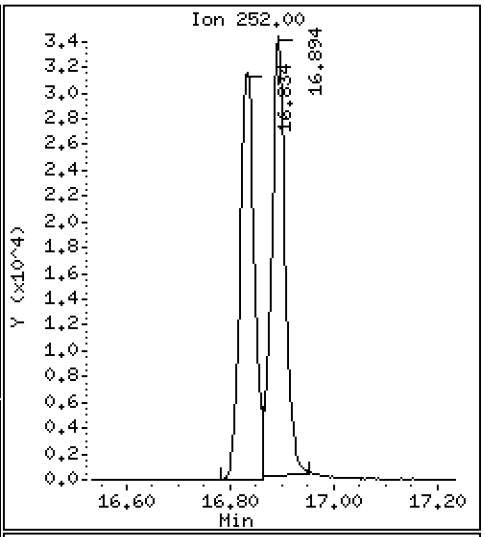
Column phase: Rxi-17sil

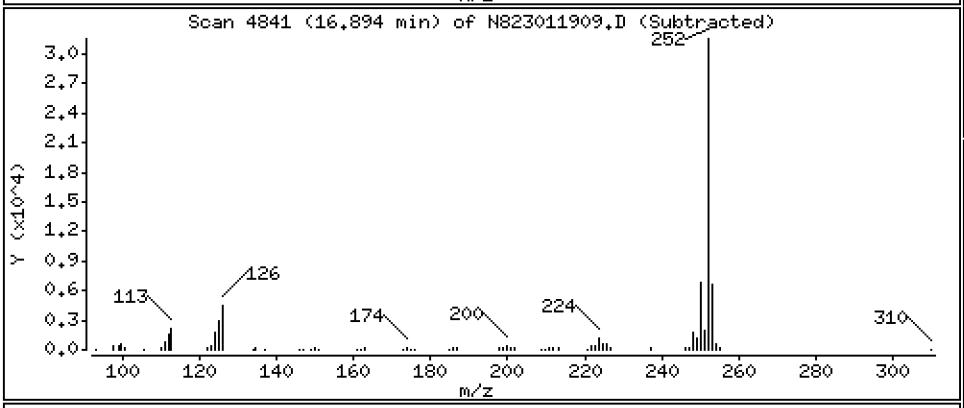
Column diameter: 0.25

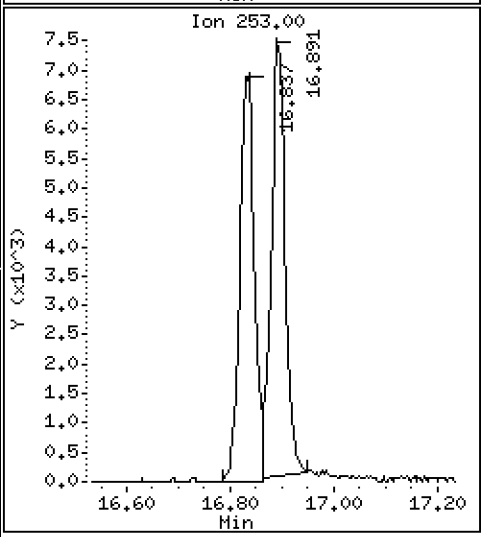
29 Benzo(k)fluoranthene

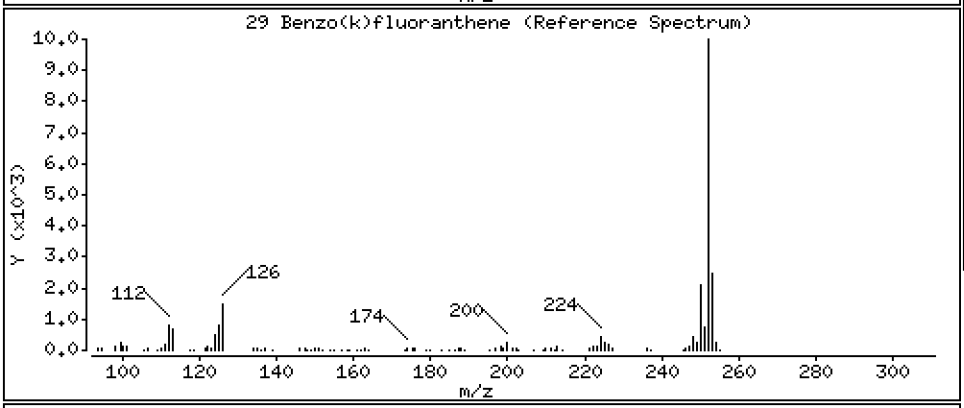
Concentration: 2.656 ug/L

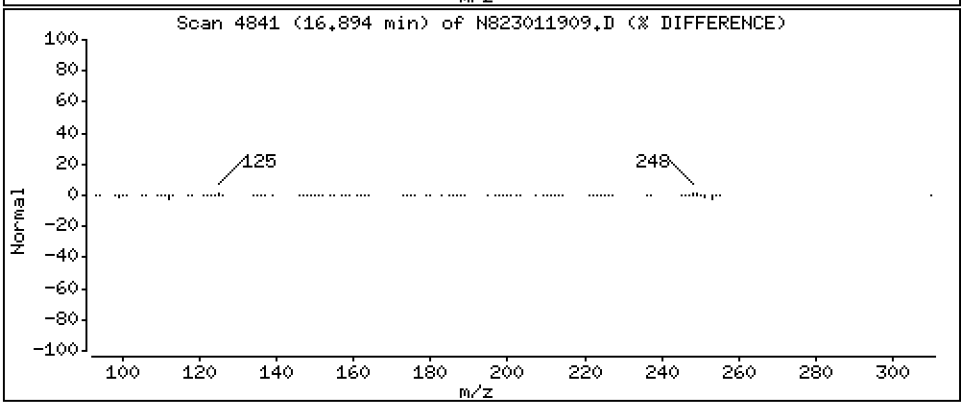












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

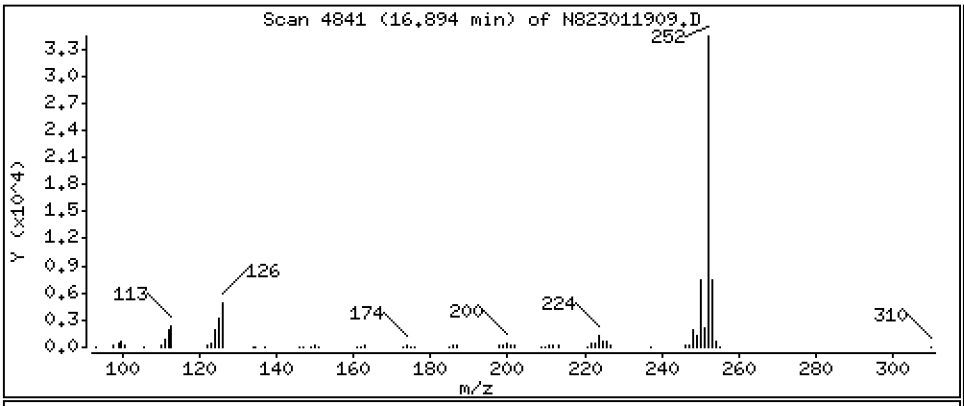
Operator: JZ

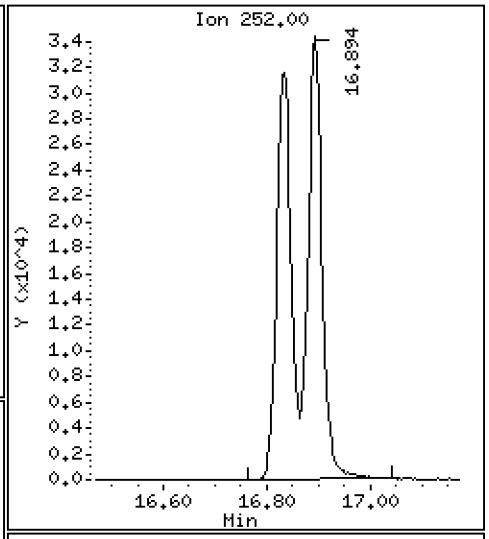
Column phase: Rxi-17sil

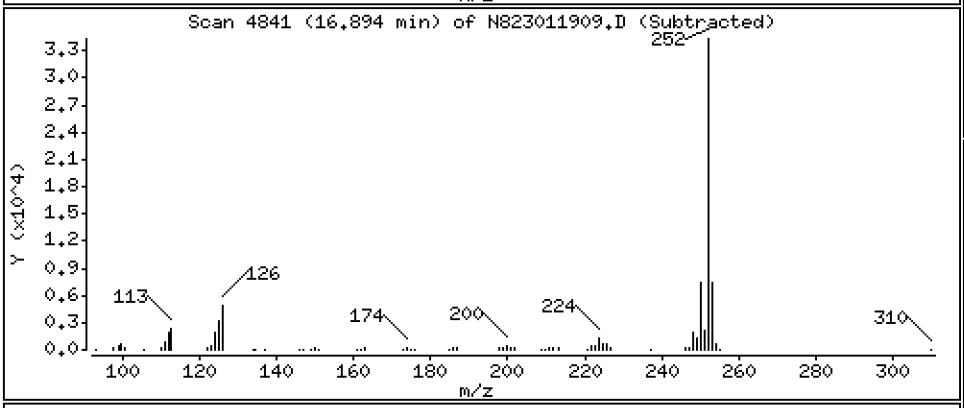
Column diameter: 0.25

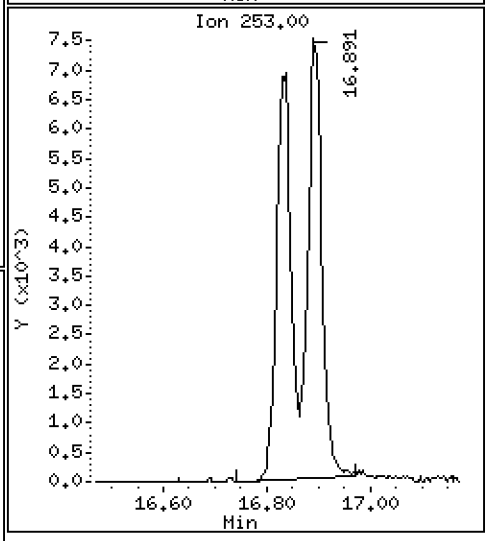
31 Total Benzofluoranthenes

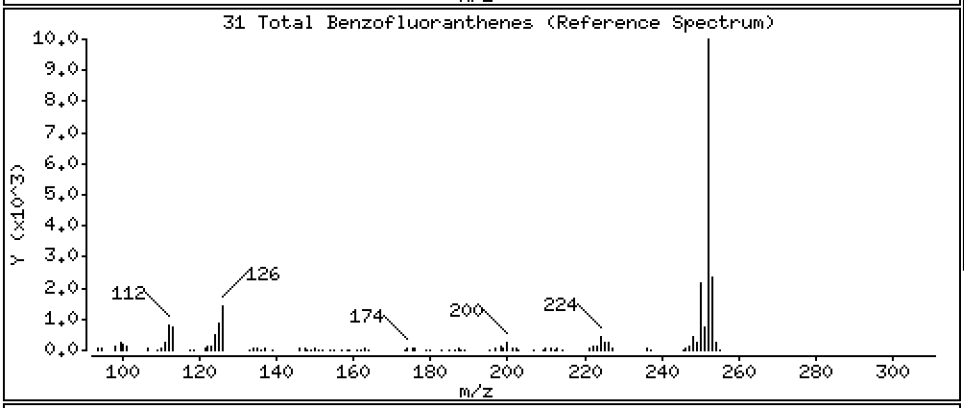
Concentration: 5.480 ug/L

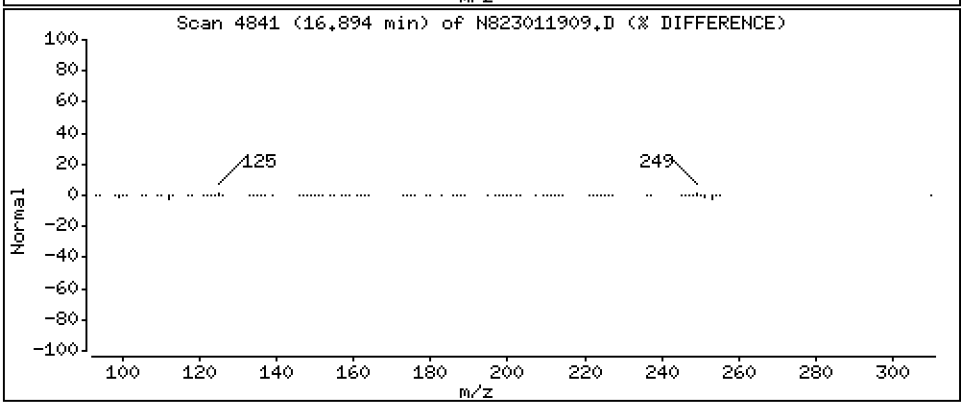












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

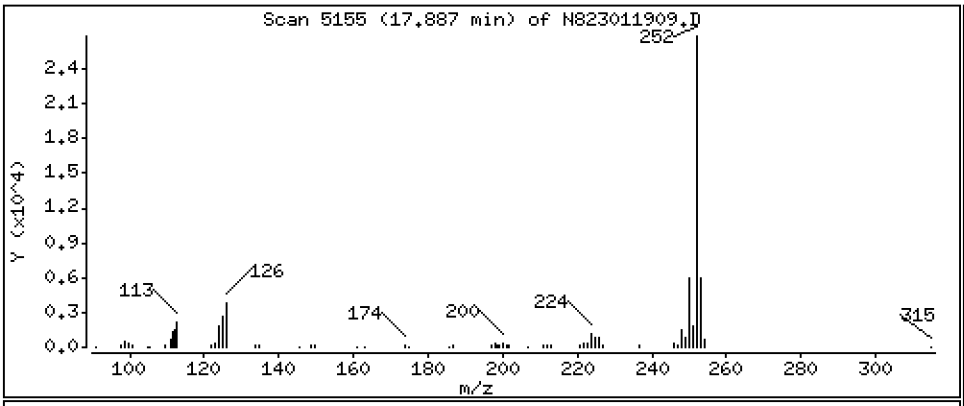
Operator: JZ

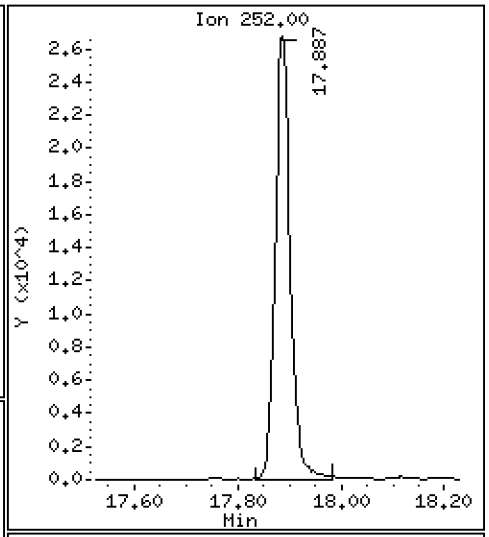
Column phase: Rxi-17sil

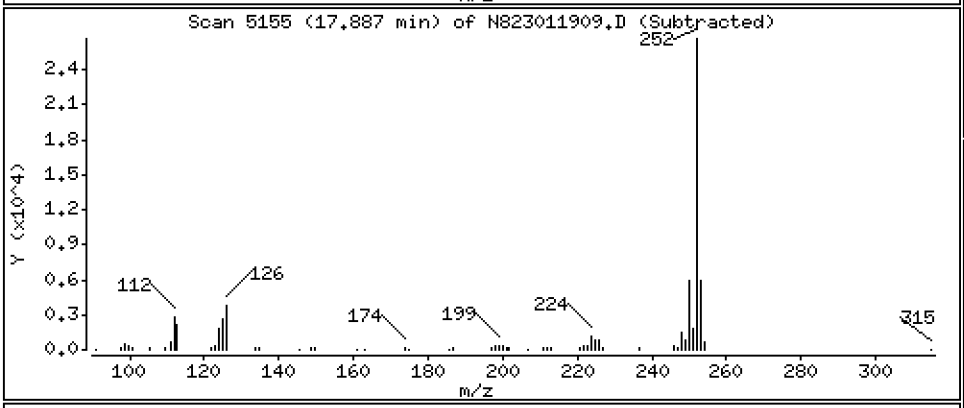
Column diameter: 0.25

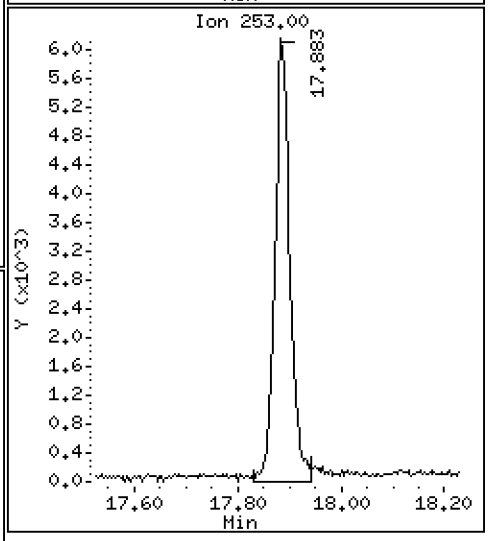
32 Benzo(a)pyrene

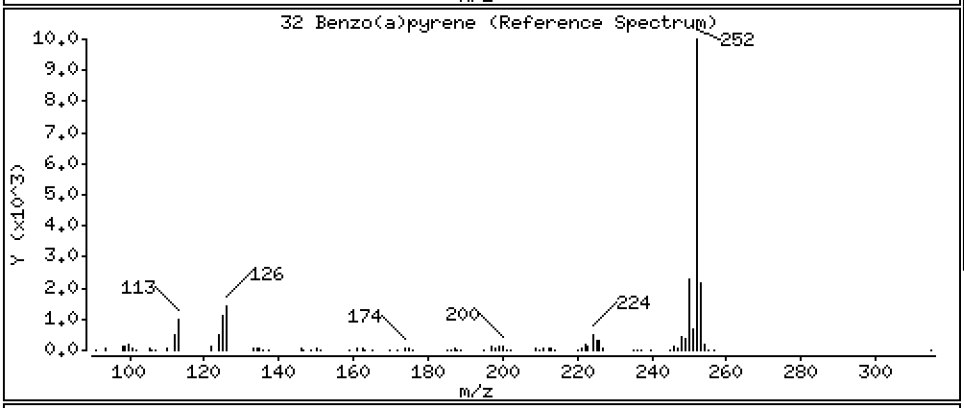
Concentration: 2.572 ug/L

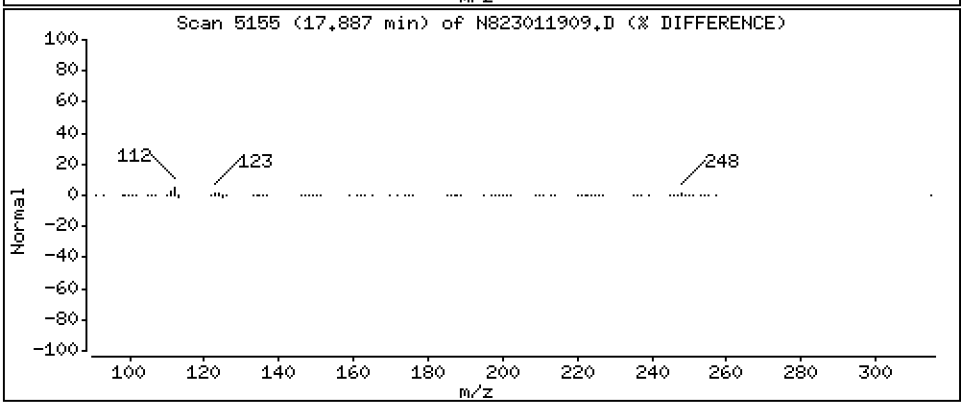












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

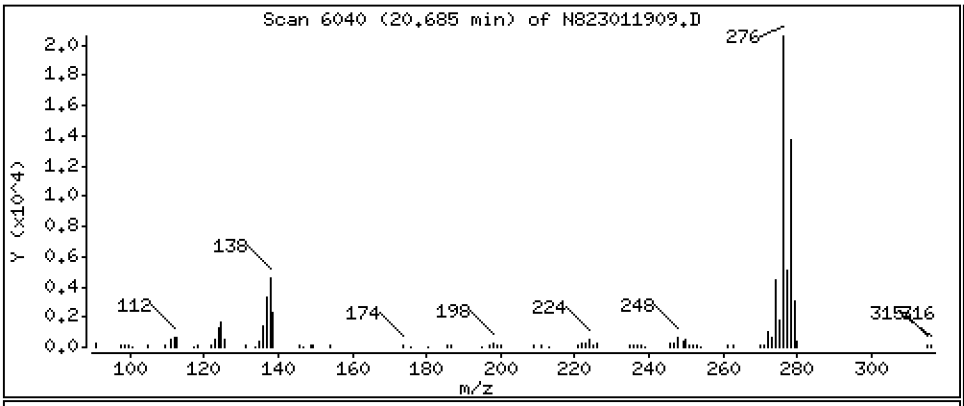
Operator: JZ

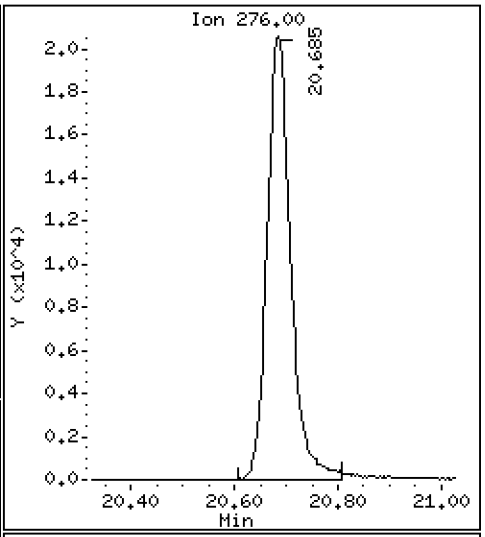
Column phase: Rxi-17sil

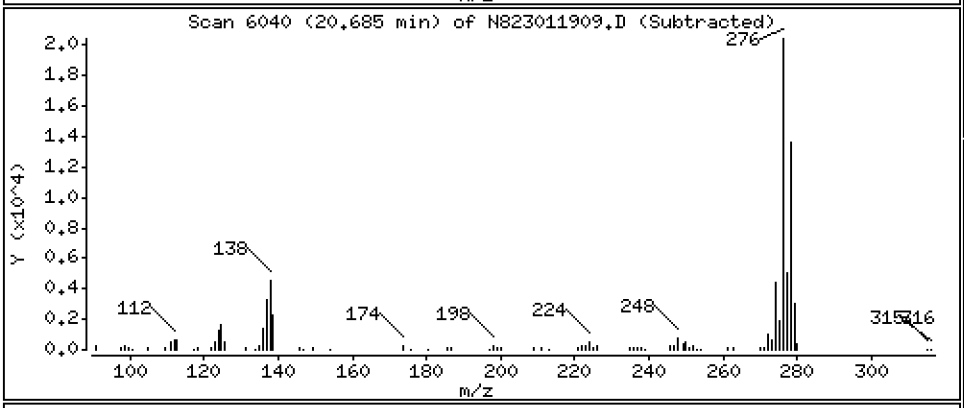
Column diameter: 0.25

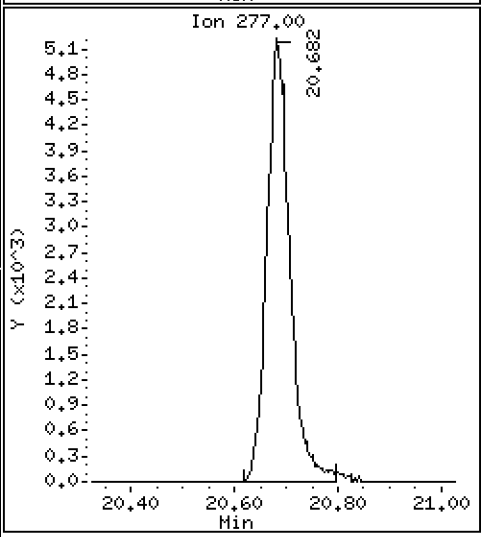
37 Indeno(1,2,3-cd)pyrene

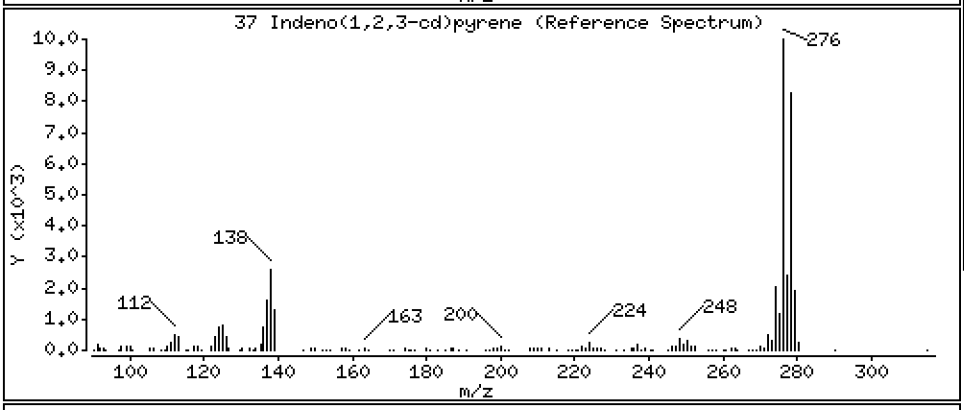
Concentration: 2.689 ug/L

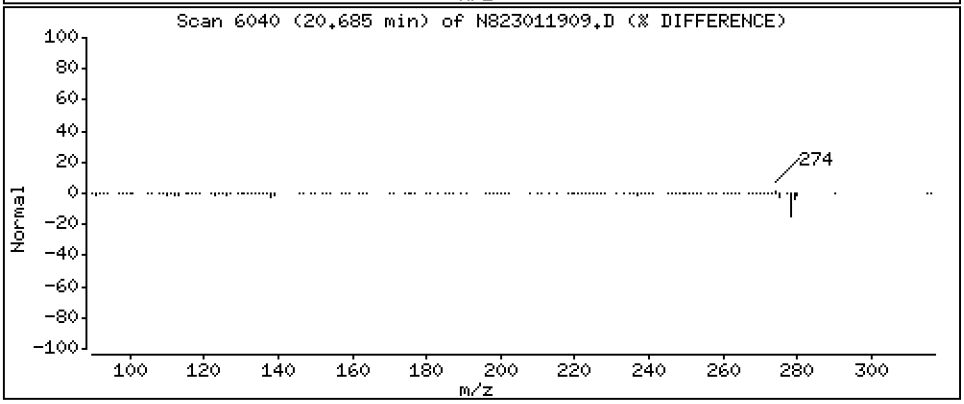












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

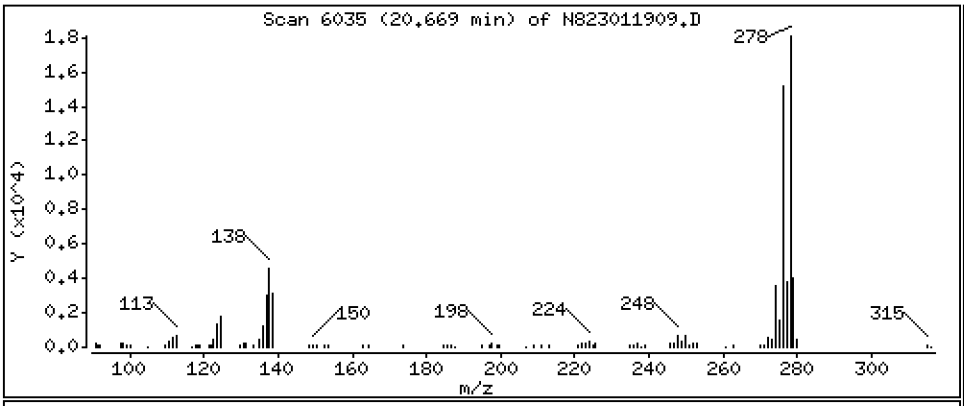
Operator: JZ

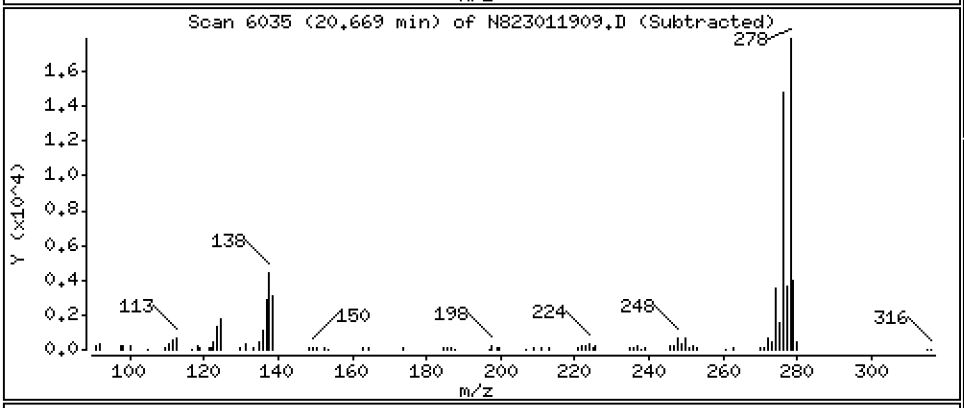
Column phase: Rxi-17sil

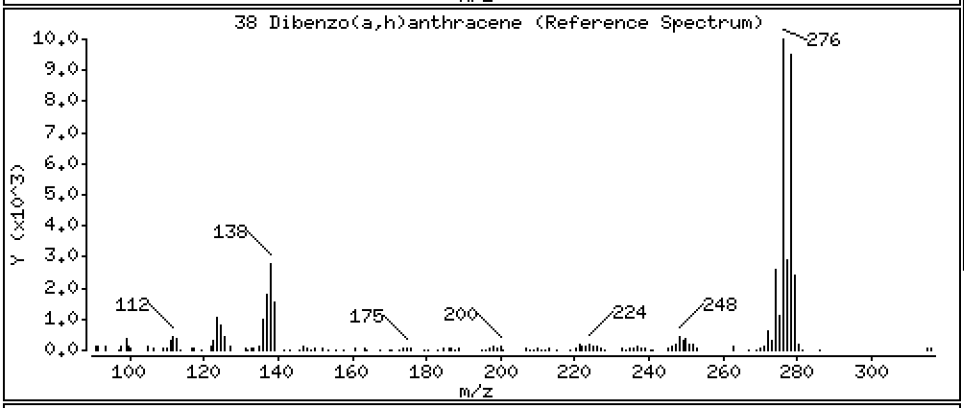
Column diameter: 0.25

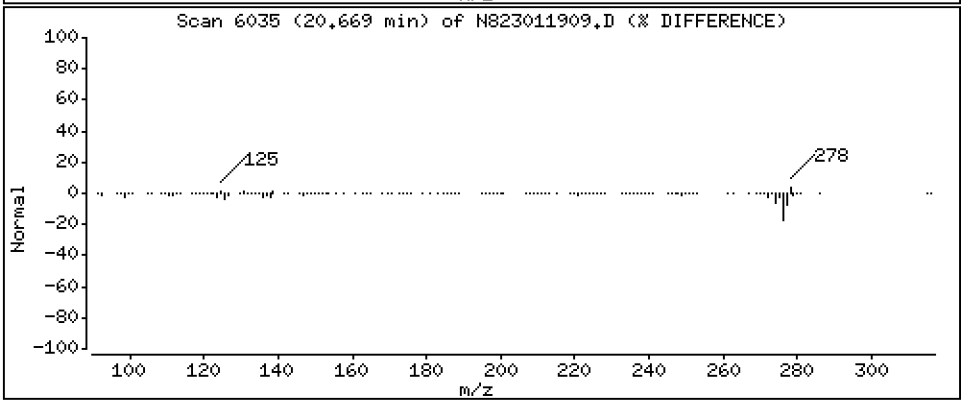
38 Dibenzo(a,h)anthracene

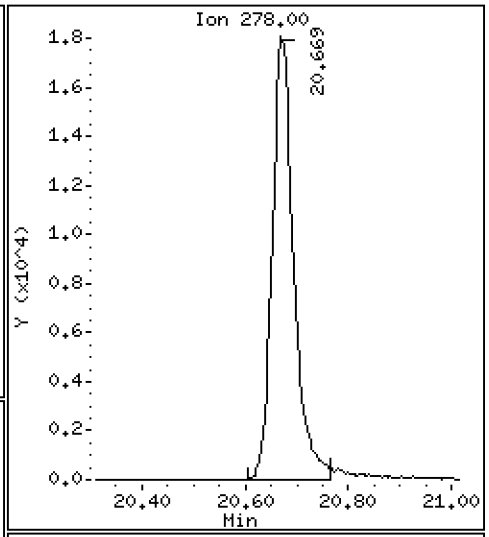
Concentration: 2.493 ug/L

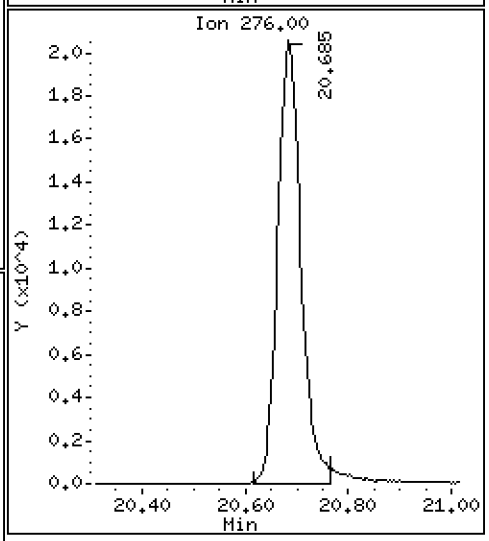












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

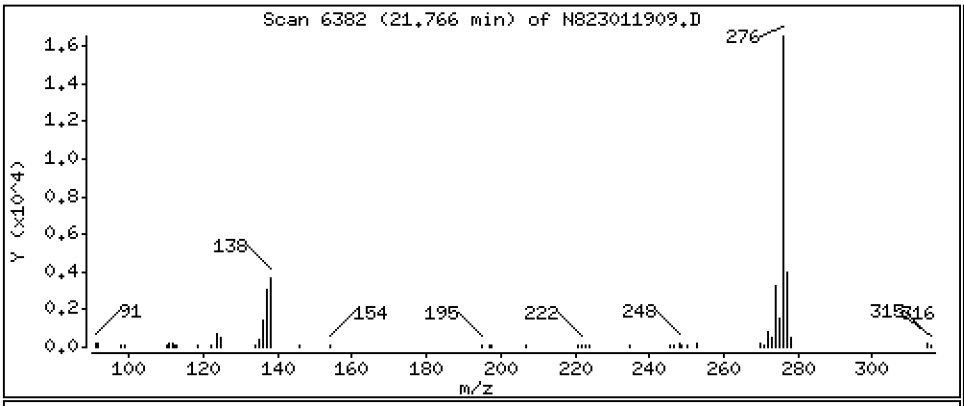
Operator: JZ

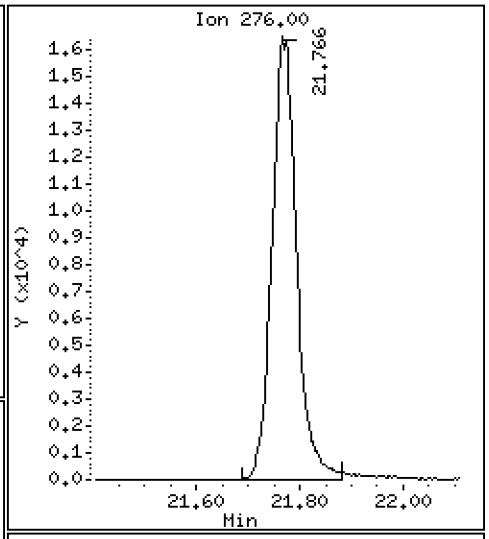
Column phase: Rxi-17sil

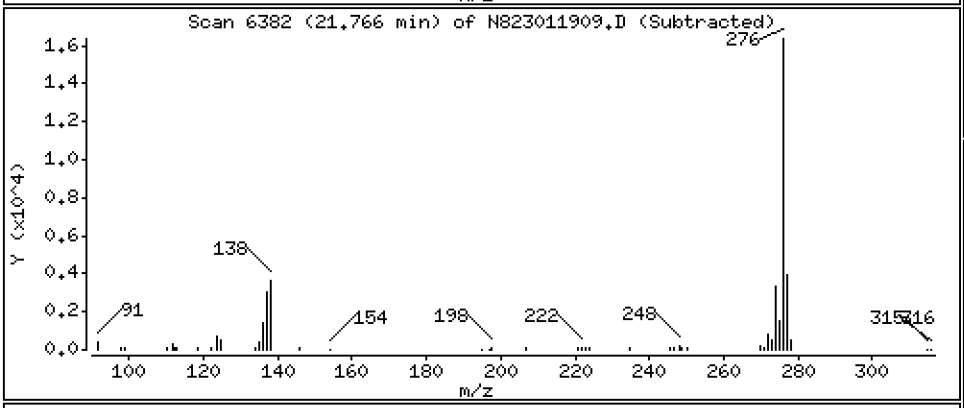
Column diameter: 0.25

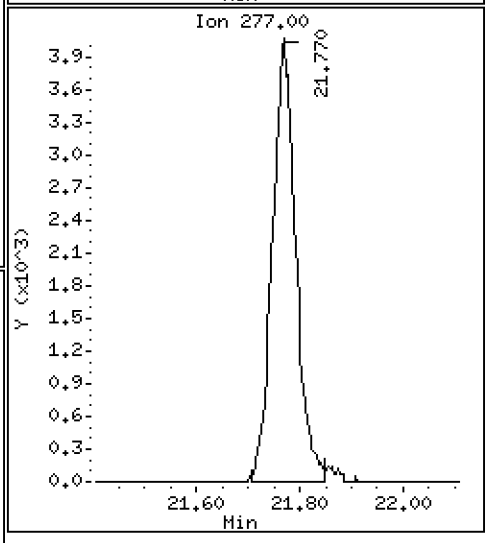
39 Benzo(g,h,i)perylene

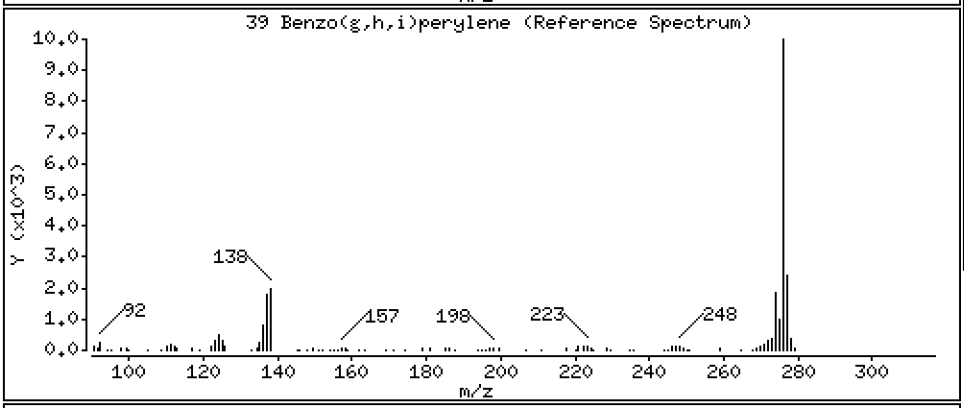
Concentration: 2.483 ug/L

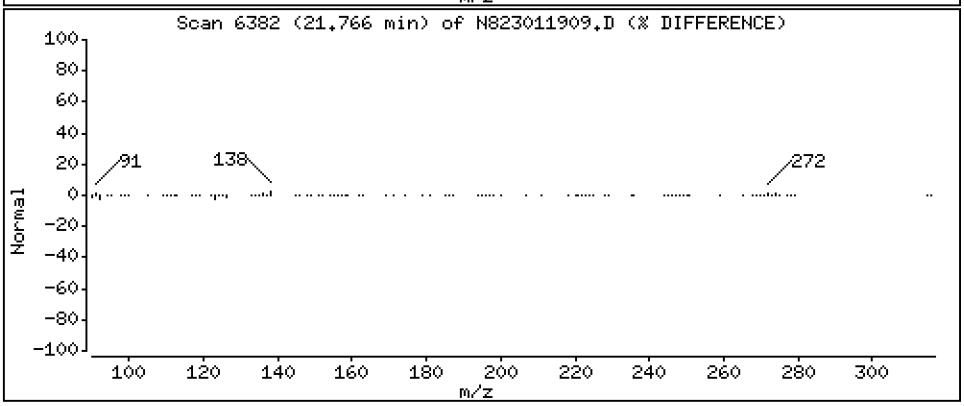












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230119.b\N823011909.D
Lab Smp Id: SLA0213-SCV1
Inj Date : 19-JAN-2023 14:58
Operator : JZ Inst ID: nt8.i
Smp Info : SCV230119
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Meth Date : 25-Jan-2023 21:57 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnascv.sub
Target Version: 4.14
Processing Host: JIANQING-202105

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Vo	500.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
*	1 Naphthalene-d8	136	4.913	4.906	(1.000)	46346	2.00000	
	2 Naphthalene	128	4.941	4.938	(1.006)	56587	2.62597	2.626
$	3 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	4 2-Methylnaphthalene	141	5.694	5.687	(1.159)	31650	2.67019	2.670
	5 1-methylnaphthalene	141	5.890	5.883	(1.199)	31873	2.64949	2.649
	9 Acenaphthylene	152	7.091	7.085	(0.985)	59018	2.82060	2.821
*	10 Acenaphthene-d10	164	7.202	7.196	(1.000)	27709	2.00000	
	11 Acenaphthene	153	7.249	7.246	(1.007)	36454	2.60022	2.600
	12 Dibenzofuran	168	7.401	7.395	(1.028)	60898	2.85987	2.860
	14 Fluorene	166	7.878	7.872	(1.094)	43507	2.63066	2.631
*	15 Phenanthrene-d10	188	9.238	9.235	(1.000)	51685	2.00000	
	16 Phenanthrene	178	9.276	9.270	(1.004)	61815	2.44841	2.448
	17 Anthracene	178	9.317	9.311	(1.009)	52064	2.27006	2.270
	22 Fluoranthene	202	11.059	11.053	(1.197)	72902	2.65276	2.653
$	21 Fluoranthene-d10	212	Compound Not Detected.					
	23 Pyrene	202	11.578	11.572	(0.815)	71115	2.46242	2.462
	24 Benzo(a)anthracene	228	14.082	14.076	(0.991)	67725	2.58725	2.587
*	25 Chrysene-d12	240	14.212	14.202	(1.000)	46582	2.00000	
	27 Chrysene	228	14.285	14.278	(1.005)	66872	2.39976	2.400
	28 Benzo(b)fluoranthene	252	16.833	16.821	(0.929)	60946	2.50689	2.507
	29 Benzo(k)fluoranthene	252	16.893	16.884	(0.932)	63249	2.65606	2.656
	31 Total Benzofluoranthenes	252	16.893	16.821	(0.932)	126178	5.48025	5.480(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	32 Benzo(a)pyrene	252	17.886	17.877	(0.987)	55026	2.57205	2.572
*	33 Perylene-d12	264	18.117	18.111	(1.000)	41743	2.00000	
	37 Indeno(1,2,3-cd)pyrene	276	20.684	20.675	(1.142)	65545	2.68928	2.689
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	20.669	20.662	(1.141)	52293	2.49315	2.493
	39 Benzo(g,h,i)perylene	276	21.766	21.756	(1.201)	54821	2.48258	2.483
	35 Perylene	252	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823011909.D
Lab Smp Id: SLA0213-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 19-JAN-2023
Calibration Time: 12:52
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44704	22352	89408	46346	3.67
10 Acenaphthene-d10	26411	13206	52822	27709	4.91
15 Phenanthrene-d10	49210	24605	98420	51685	5.03
25 Chrysene-d12	42994	21497	85988	46582	8.35
33 Perylene-d12	40520	20260	81040	41743	3.02

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.91	4.41	5.41	4.91	0.13
10 Acenaphthene-d10	7.20	6.70	7.70	7.20	0.09
15 Phenanthrene-d10	9.24	8.74	9.74	9.24	0.03
25 Chrysene-d12	14.20	13.70	14.70	14.21	0.07
33 Perylene-d12	18.11	17.61	18.61	18.12	0.03

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

REVIEW SUMMARY FOR FILE - N823011909.D

Lab ID: SLA0213-SCV1
nt8.i, 20230119.b\FSIMPNA230119.m,   19-JAN-2023 14:58

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

No RRT check performed

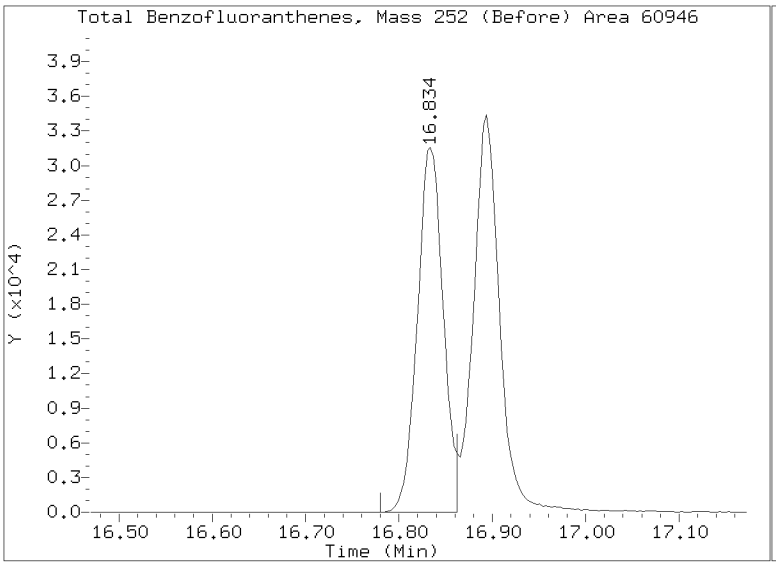
On Column LOD for nt8.i, 20230119.b\FSIMPNA230119.m, pnascv.sub = 0.0500

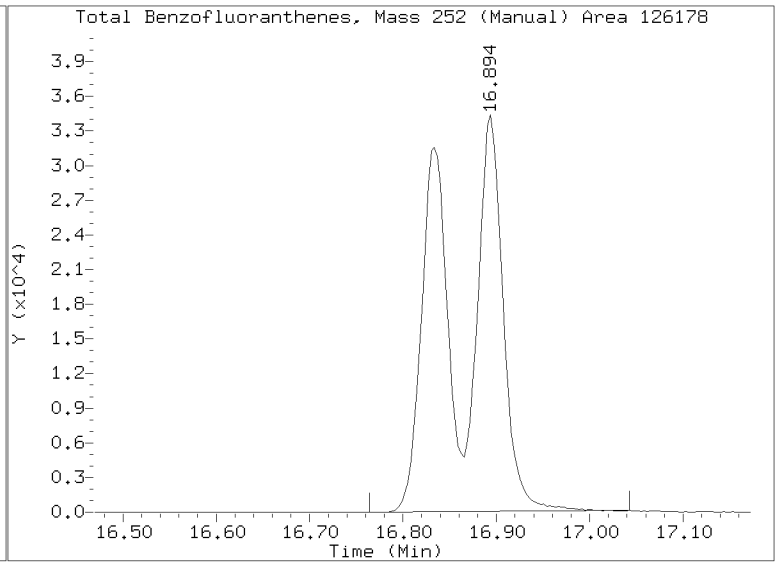
Exception: Benzo(b)fluoranthene 0.0300
Exception: Benzo(k)fluoranthene 0.0300
Exception: Total Benzofluoranthenes 0.0300
Exception: Fluoranthene-d10 (Surr) 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230119.b/N823011909.D
Injection Date: 19-JAN-2023 14:58
Lab ID:SLA0213-SCV1 Client ID:
Report Date: 01/25/2023 22:00





SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GD00068
Laboratory ID: SLD0372-SCV1
Sequence: SLD0372
Standard ID: L000686

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Naphthalene	2.5000	2.36	-5.5	
2-Methylnaphthalene	2.5000	2.39	-4.3	
1-Methylnaphthalene	2.5000	2.38	-4.8	
Acenaphthylene	2.5000	2.32	-7.1	
Acenaphthene	2.5000	2.23	-10.6	
Dibenzofuran	2.5000	2.52	0.7	
Fluorene	2.5000	2.29	-8.3	
Phenanthrene	2.5000	2.16	-13.6	
Anthracene	2.5000	2.01	-19.7	
Fluoranthene	2.5000	2.26	-9.7	
Pyrene	2.5000	2.23	-10.9	
Benzo(a)anthracene	2.5000	2.18	-13.0	
Chrysene	2.5000	2.14	-14.5	
Benzo(b)fluoranthene	2.5000	2.16	-13.7	
Benzo(k)fluoranthene	2.5000	2.30	-7.9	
Benzofluoranthenes, Total	5.0000	4.55	-8.9	
Benzo(a)pyrene	2.5000	2.29	-8.2	
Indeno(1,2,3-cd)pyrene	2.5000	2.45	-2.0	
Dibenzo(a,h)anthracene	2.5000	2.33	-6.6	
Benzo(g,h,i)perylene	2.5000	2.25	-10.1	

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

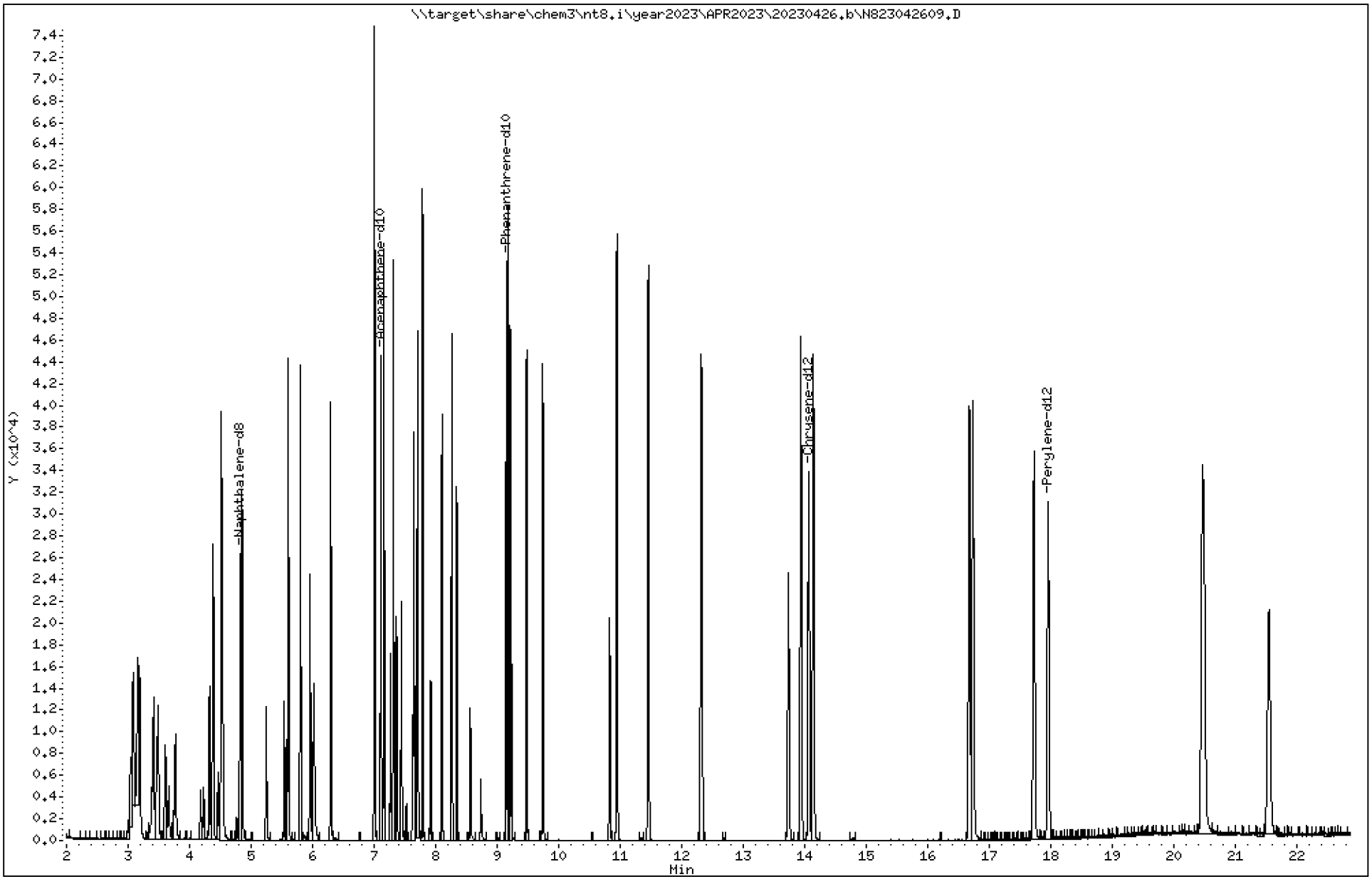
Sample Info: SCV230426

Volume Injected (uL): 1.0

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

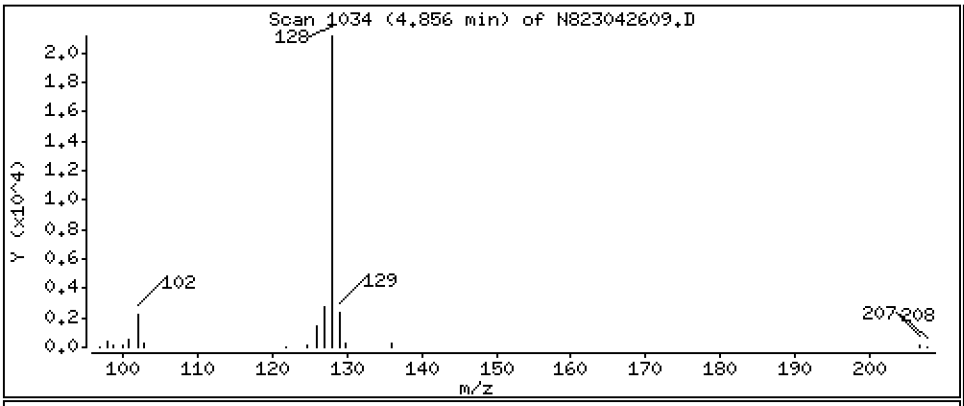
Operator: JZ

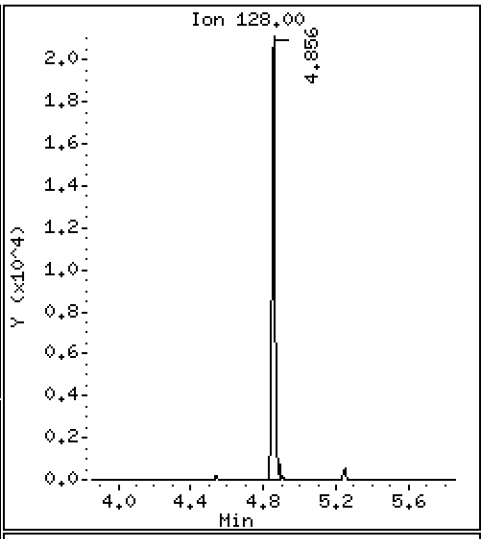
Column phase: Rxi-17sil

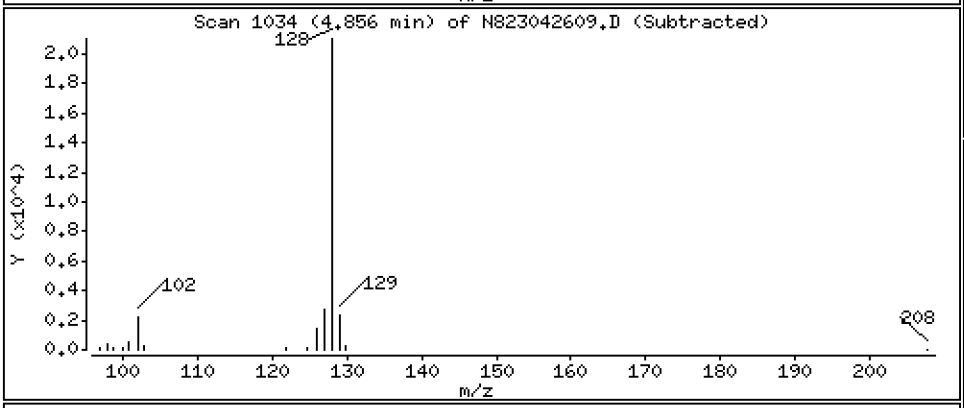
Column diameter: 0.25

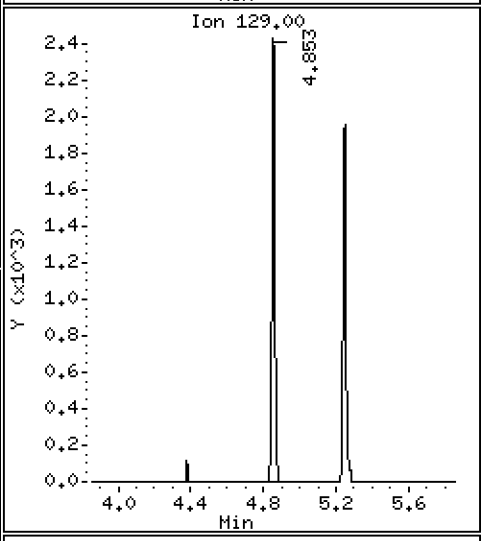
2 Naphthalene

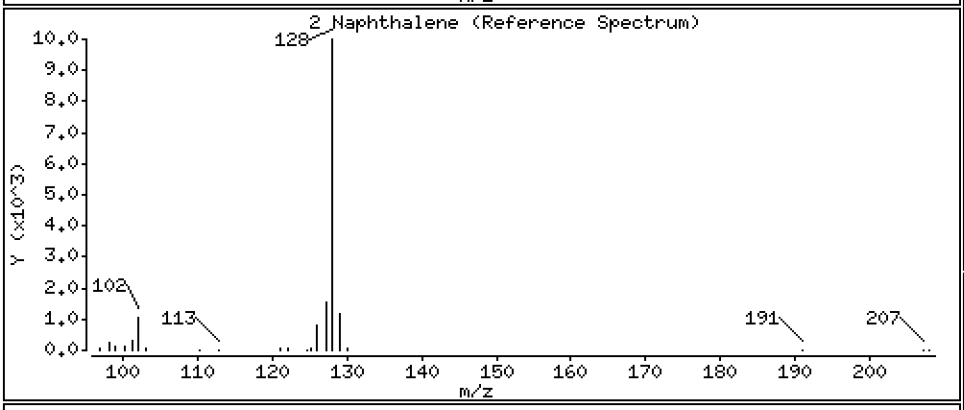
Concentration: 2.363 ug/L

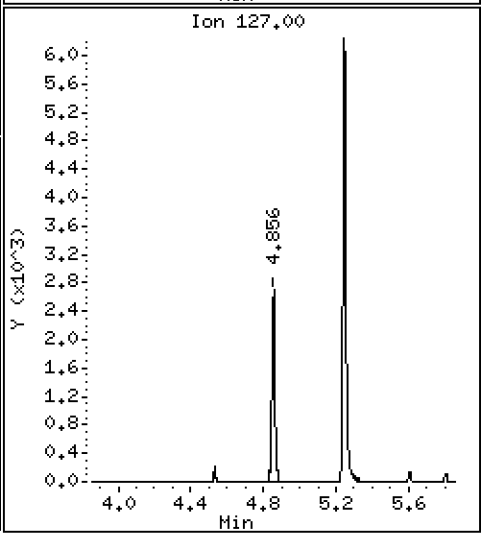


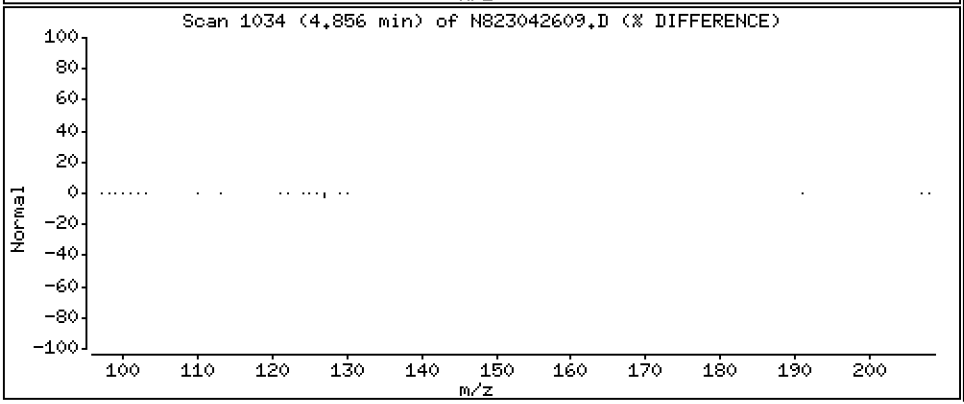












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

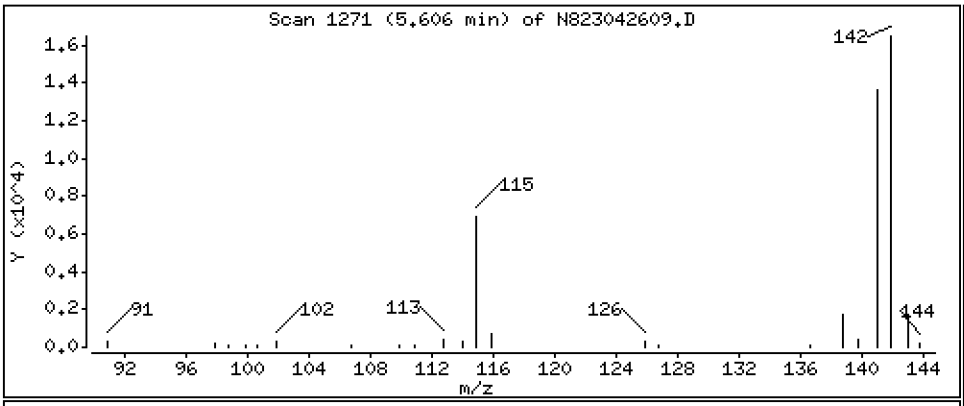
Operator: JZ

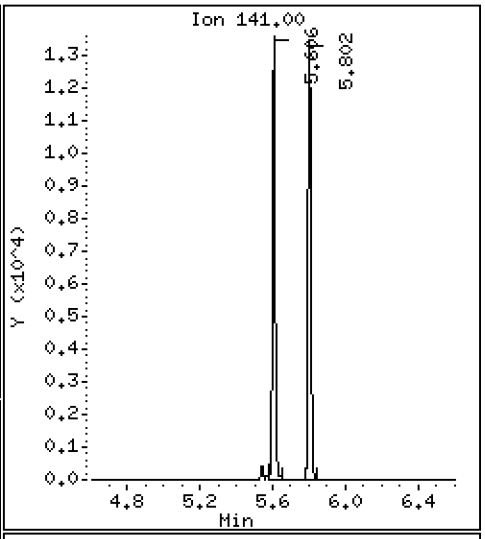
Column phase: Rxi-17sil

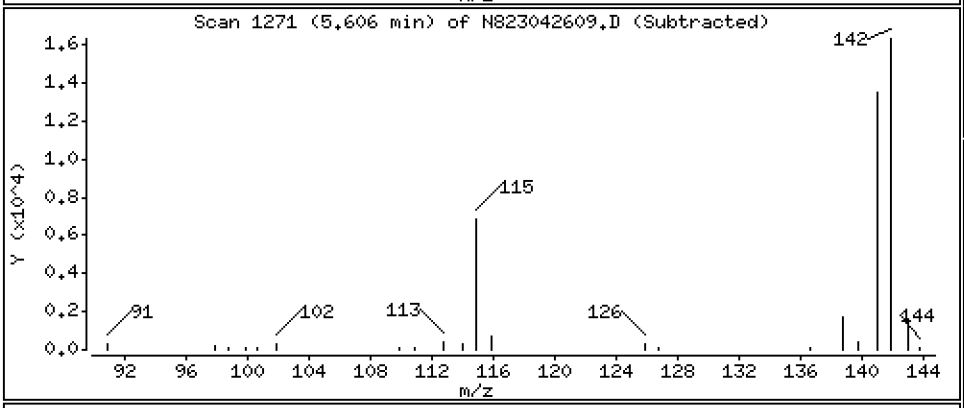
Column diameter: 0.25

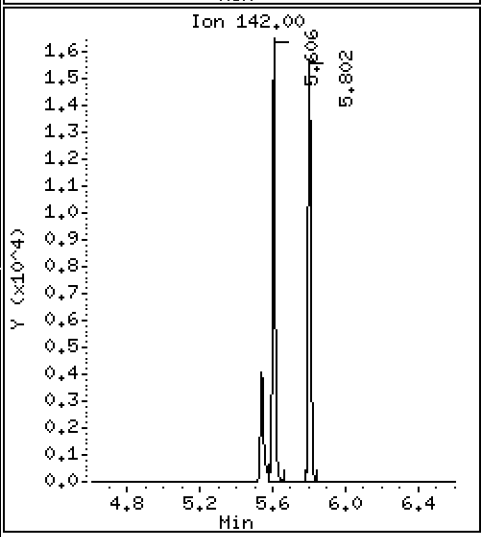
4 2-Methylnaphthalene

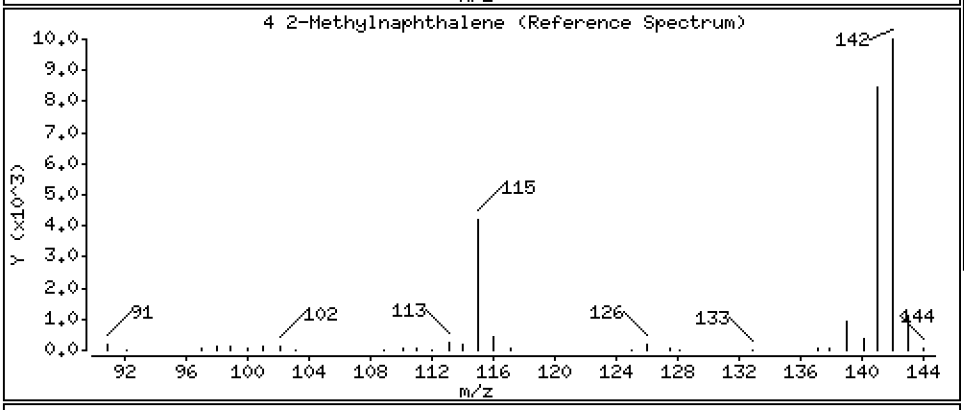
Concentration: 2.392 ug/L

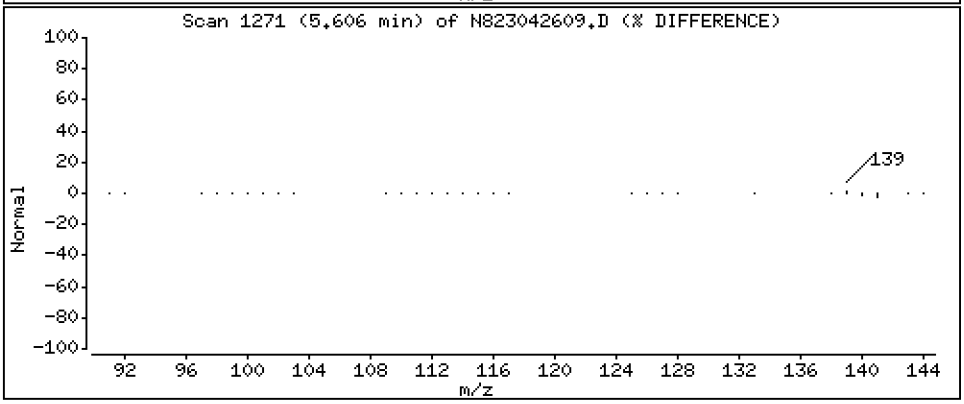












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

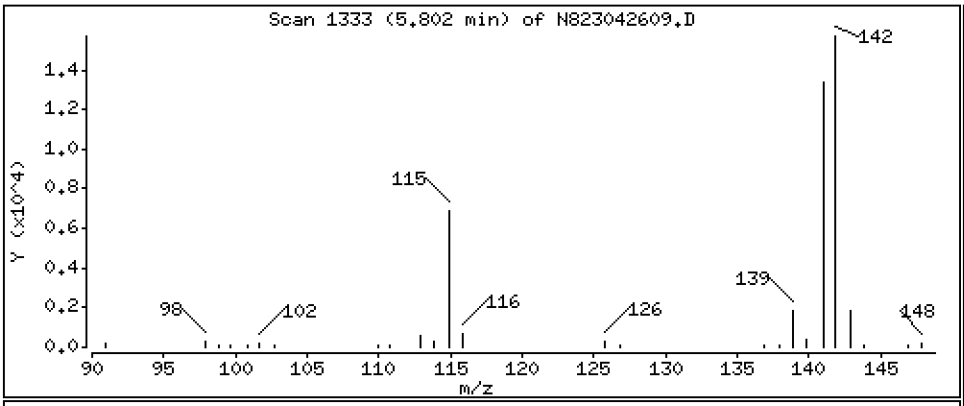
Operator: JZ

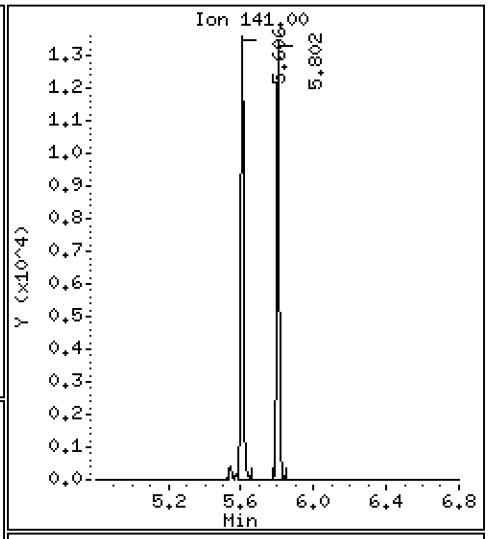
Column phase: Rxi-17sil

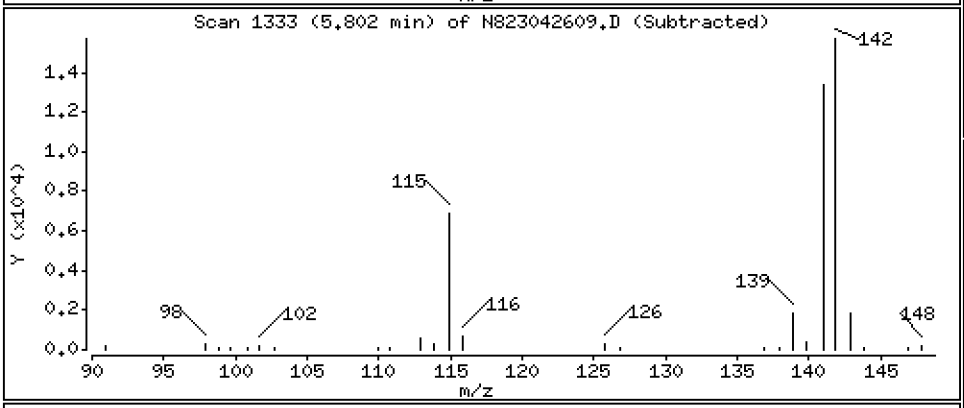
Column diameter: 0.25

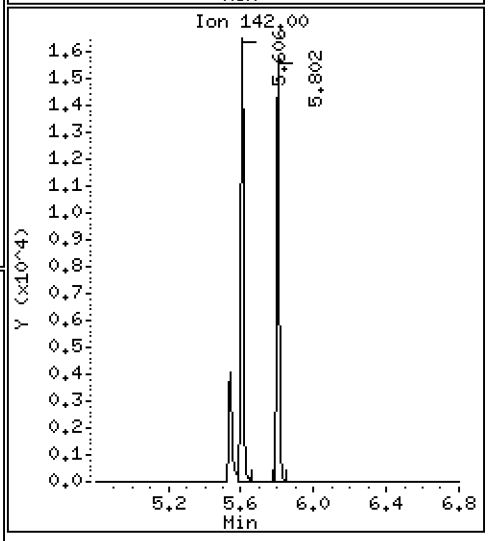
5 1-methylnaphthalene

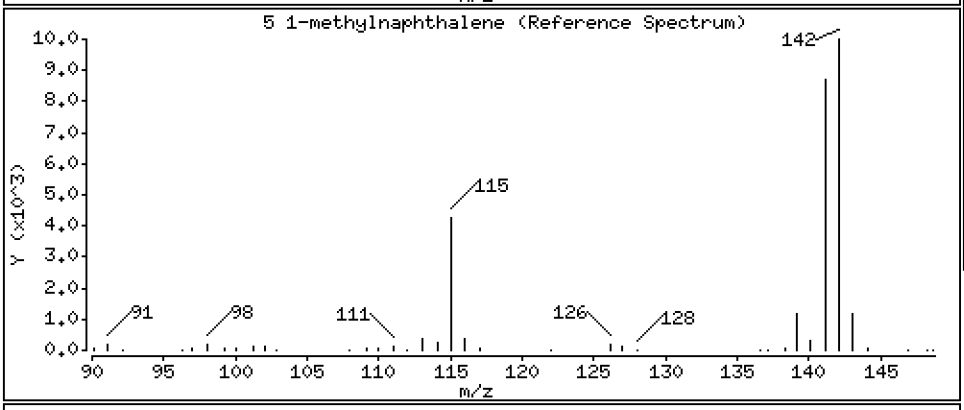
Concentration: 2.380 ug/L

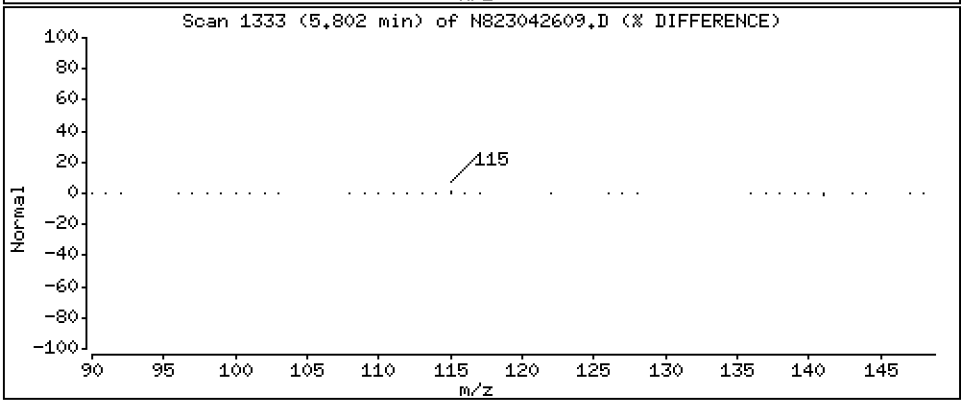












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

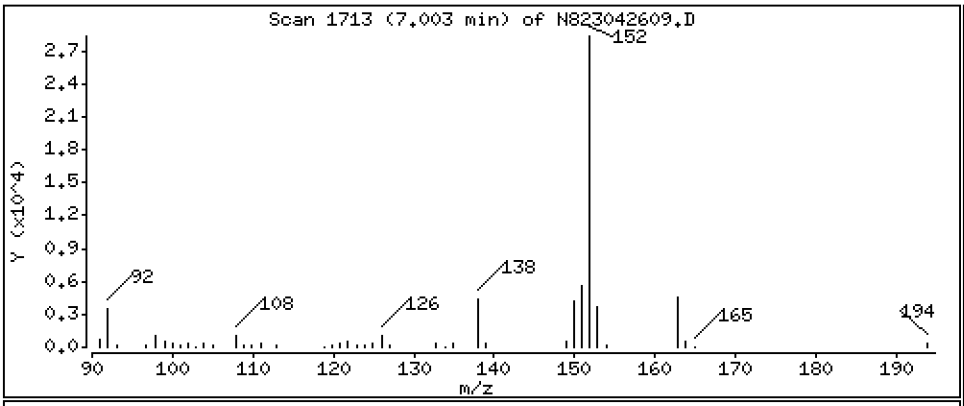
Operator: JZ

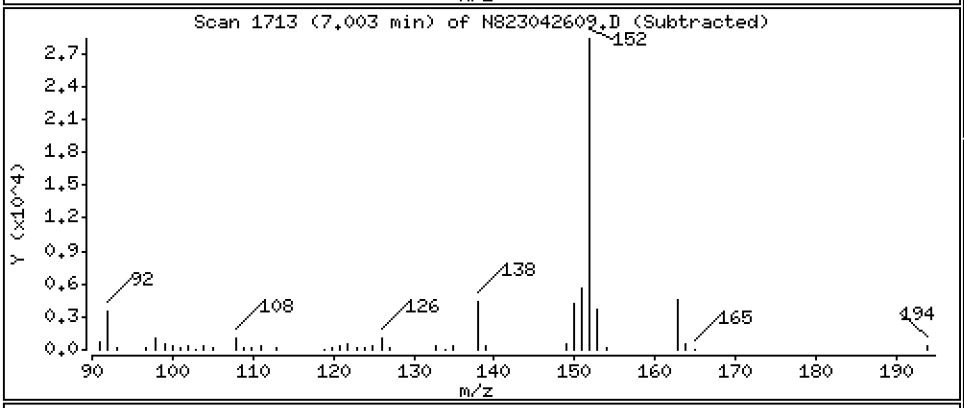
Column phase: Rxi-17sil

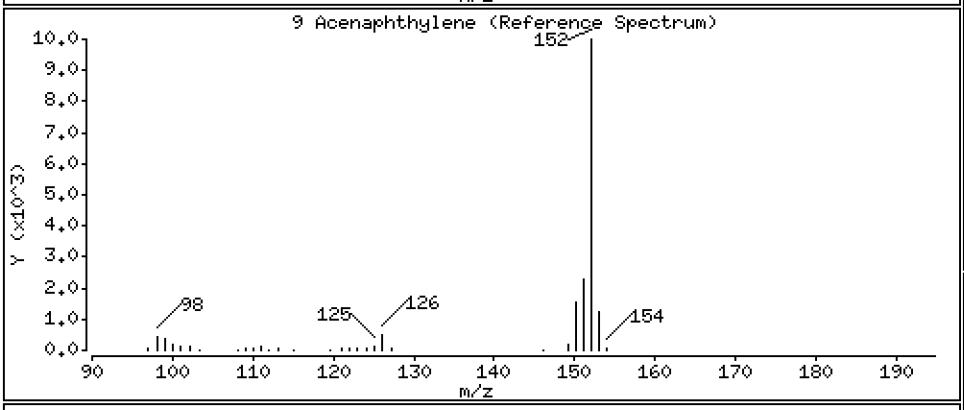
Column diameter: 0.25

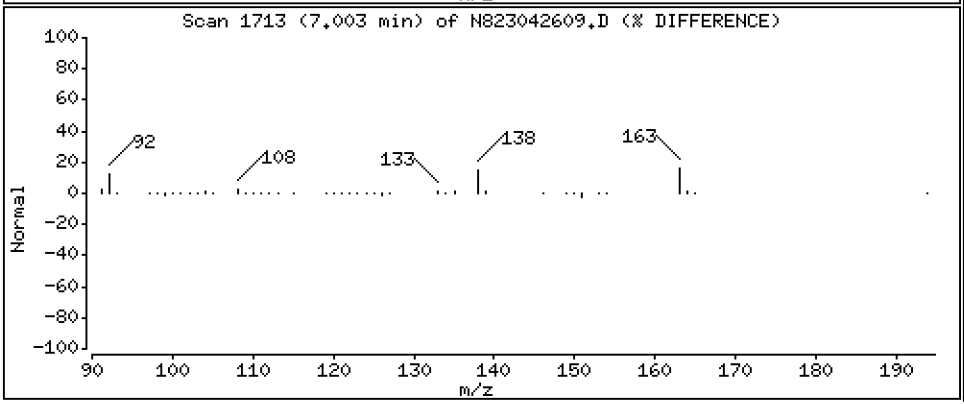
9 Acenaphthylene

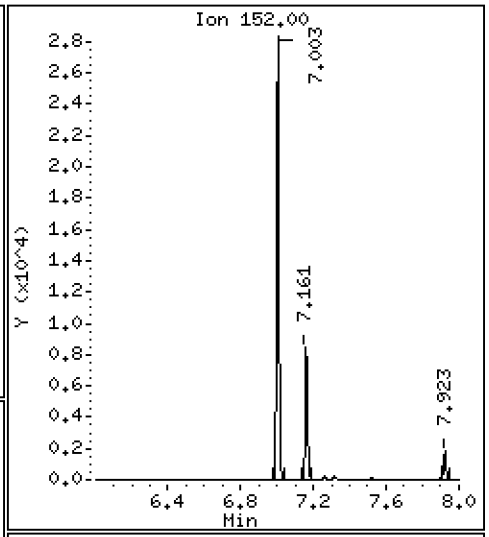
Concentration: 2.322 ug/L

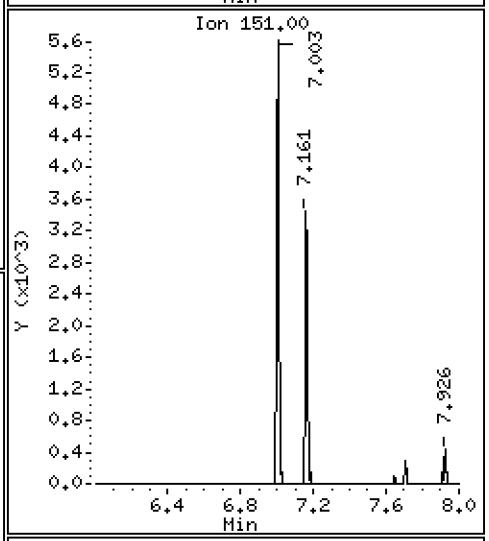


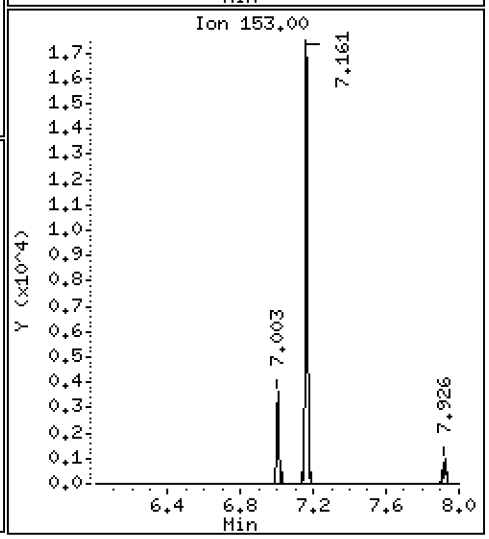












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

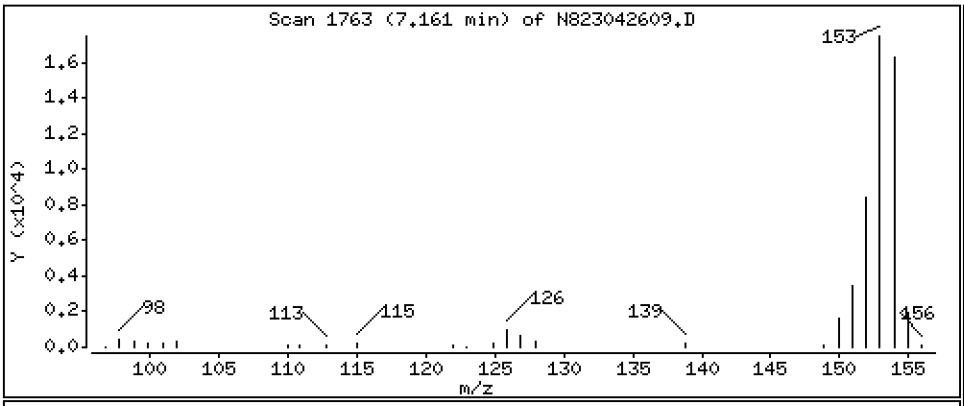
Operator: JZ

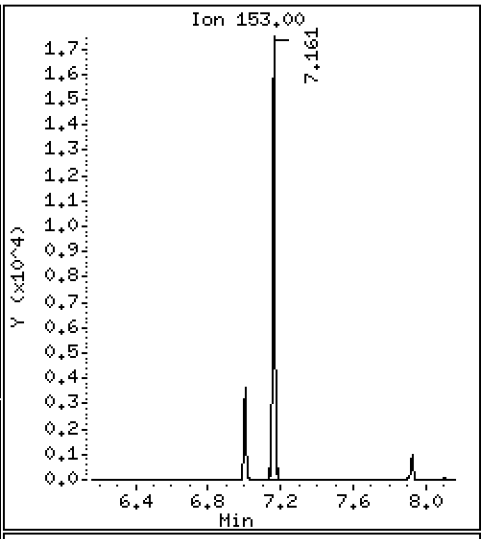
Column phase: Rxi-17sil

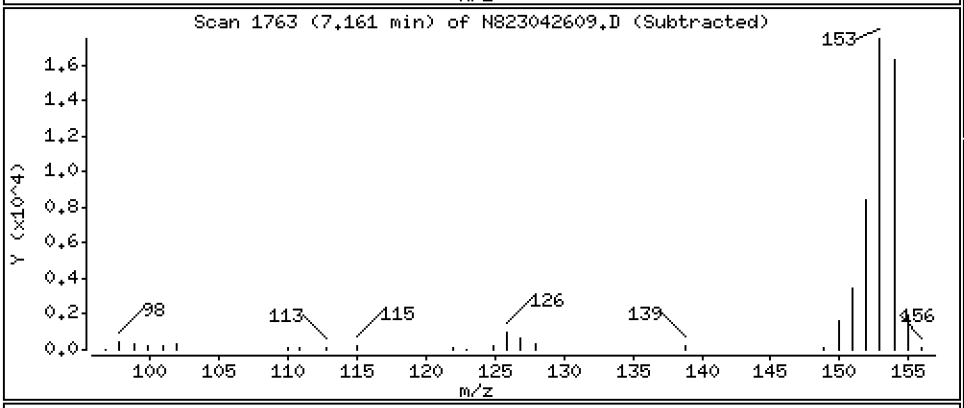
Column diameter: 0.25

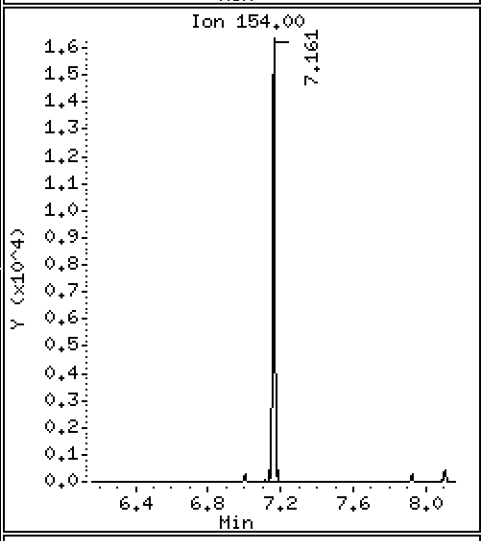
11 Acenaphthene

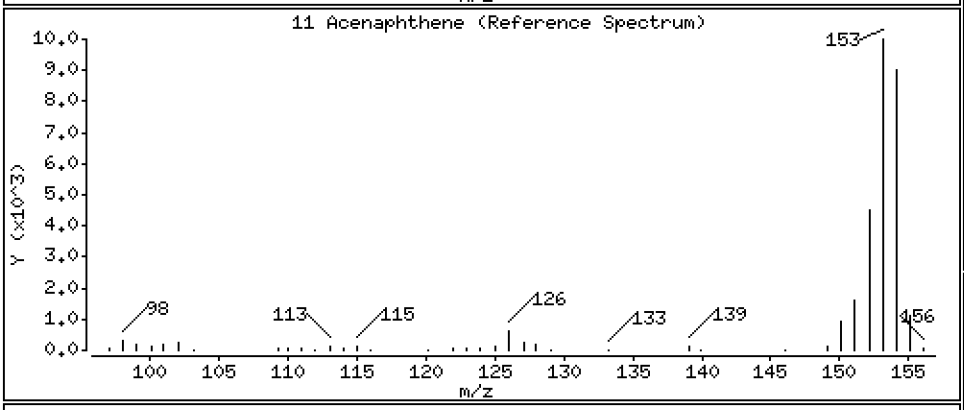
Concentration: 2.234 ug/L

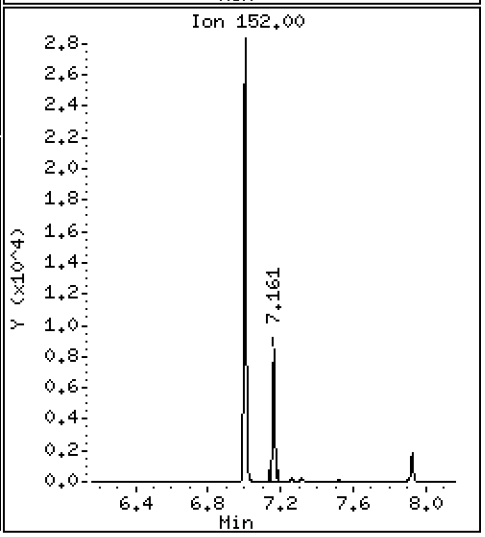


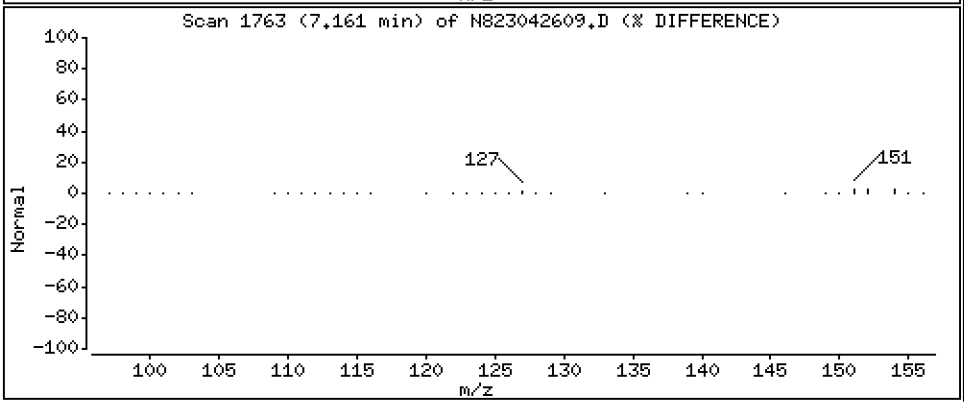












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

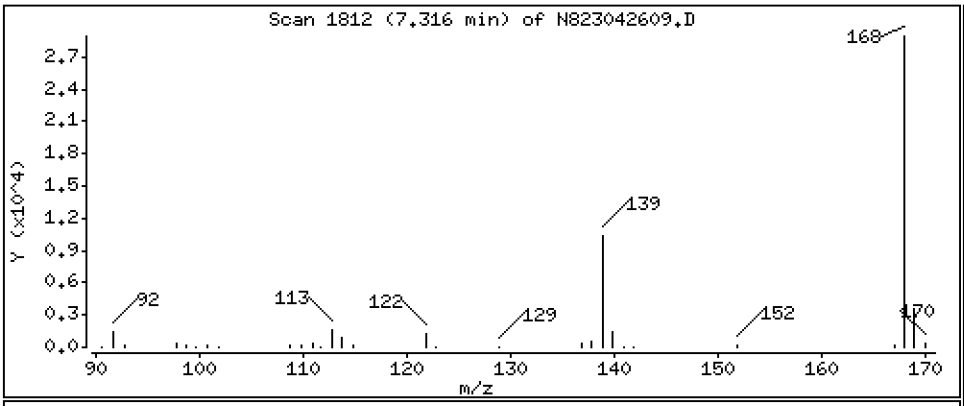
Operator: JZ

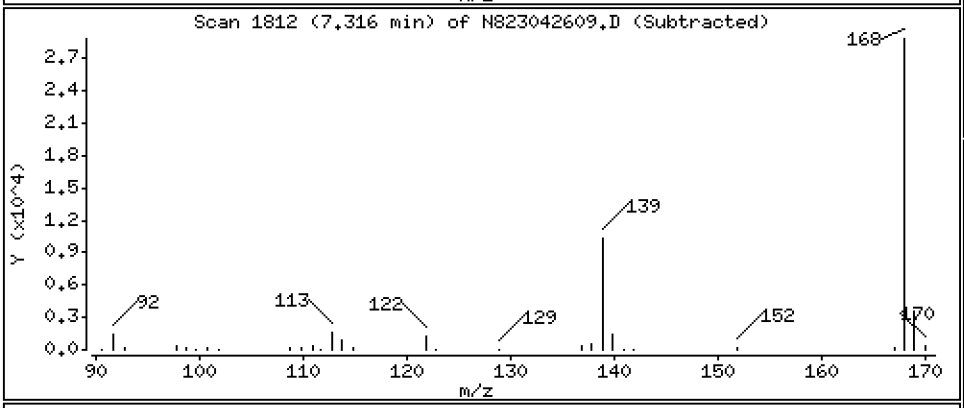
Column phase: Rxi-17sil

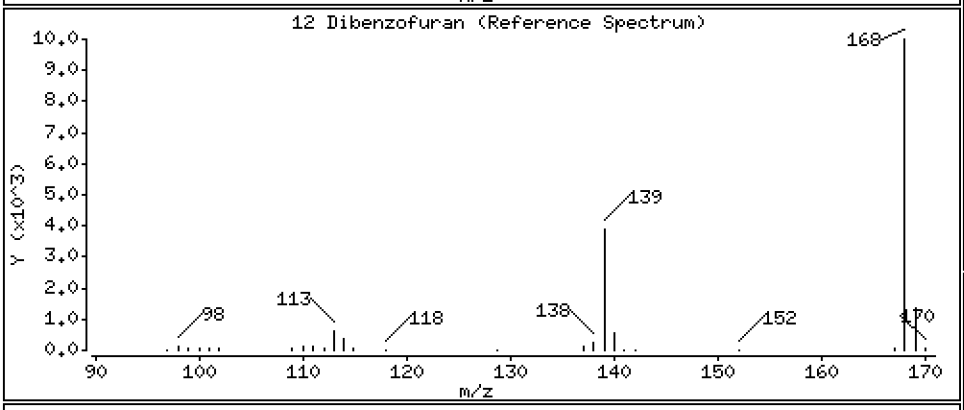
Column diameter: 0.25

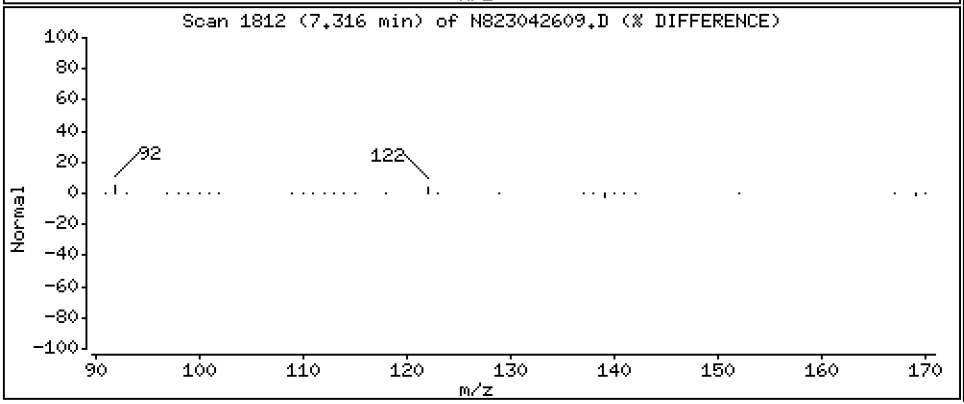
12 Dibenzofuran

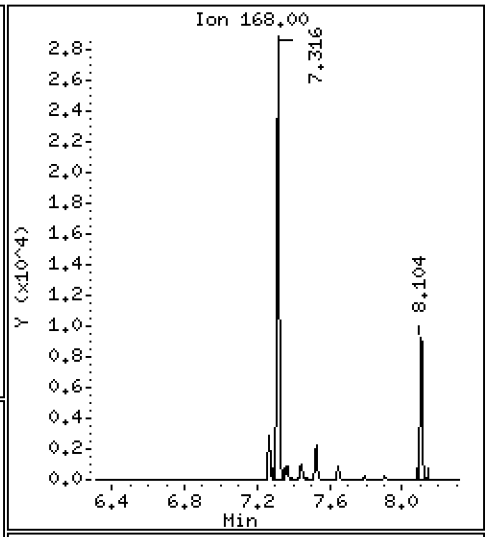
Concentration: 2.518 ug/L

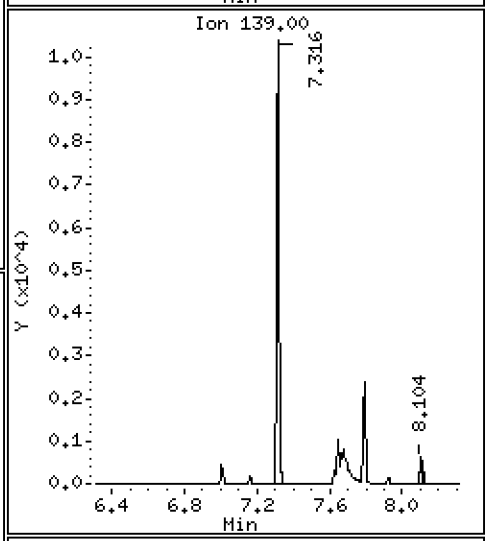


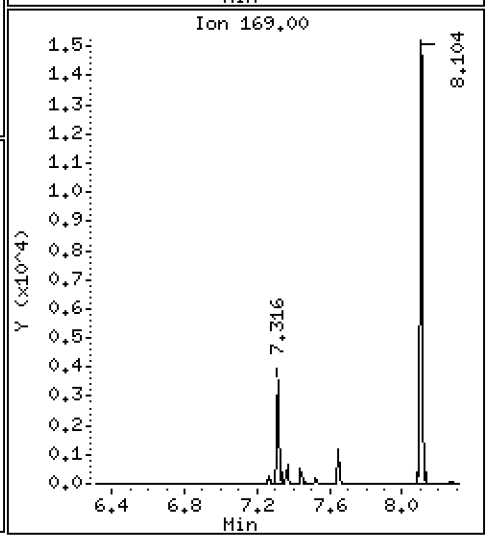












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

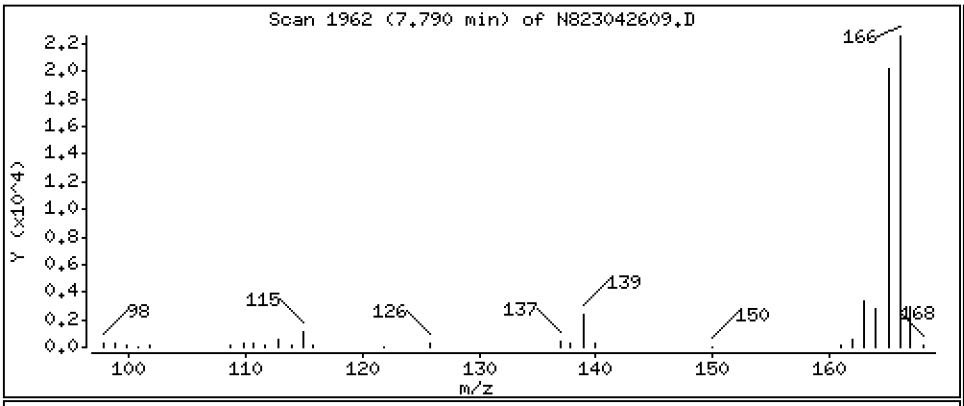
Operator: JZ

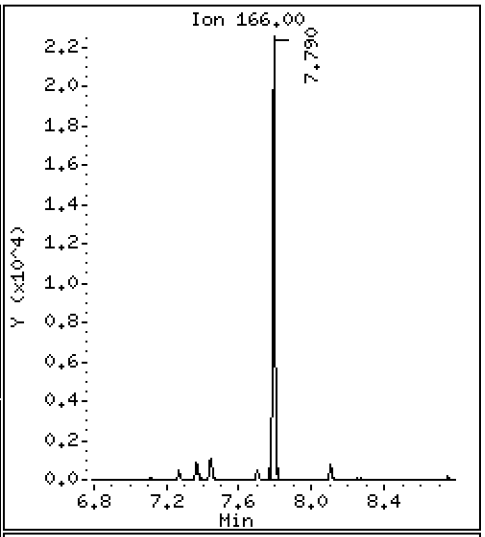
Column phase: Rxi-17sil

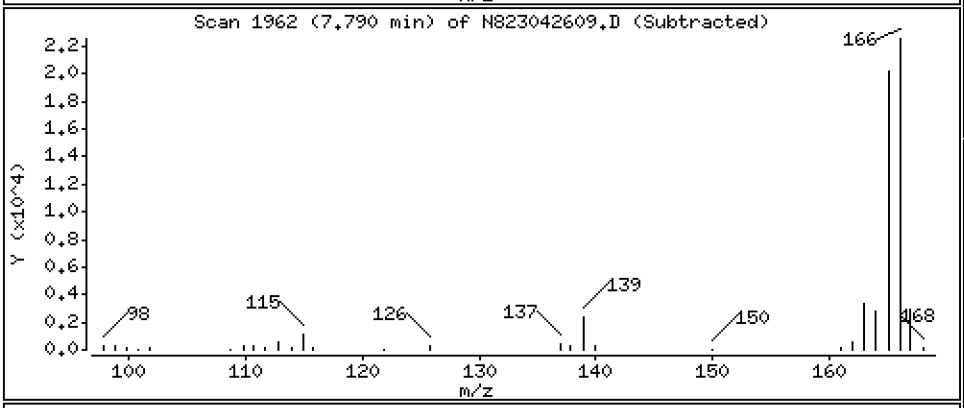
Column diameter: 0.25

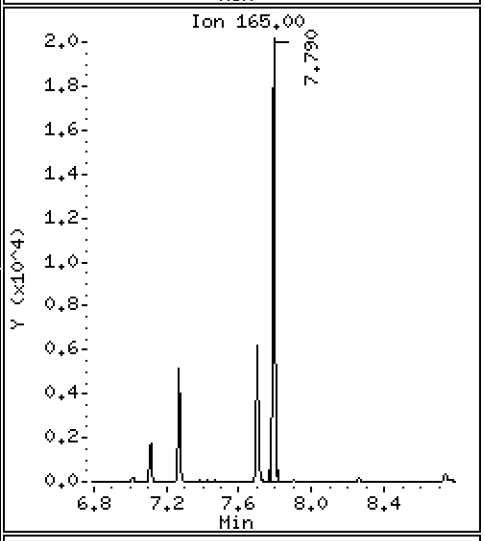
14 Fluorene

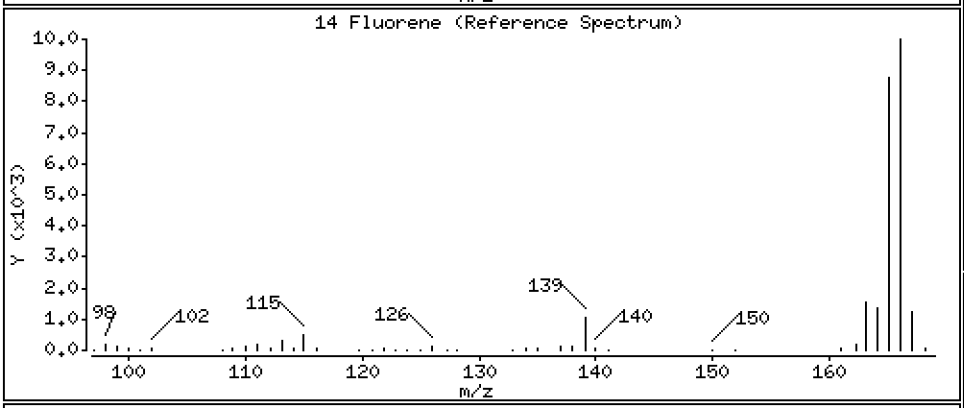
Concentration: 2.293 ug/L

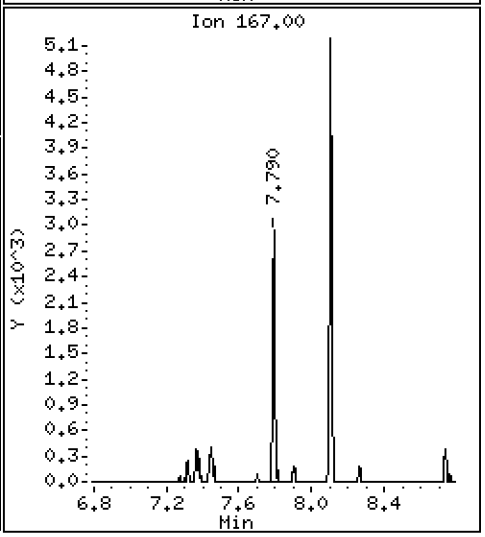


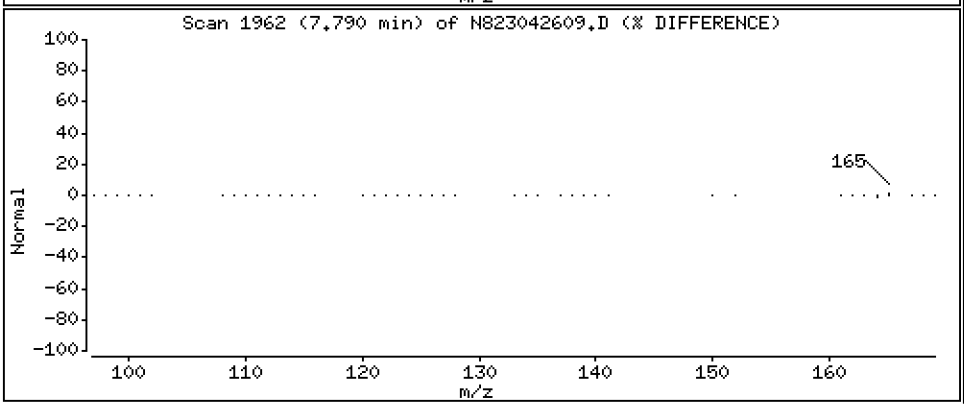












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

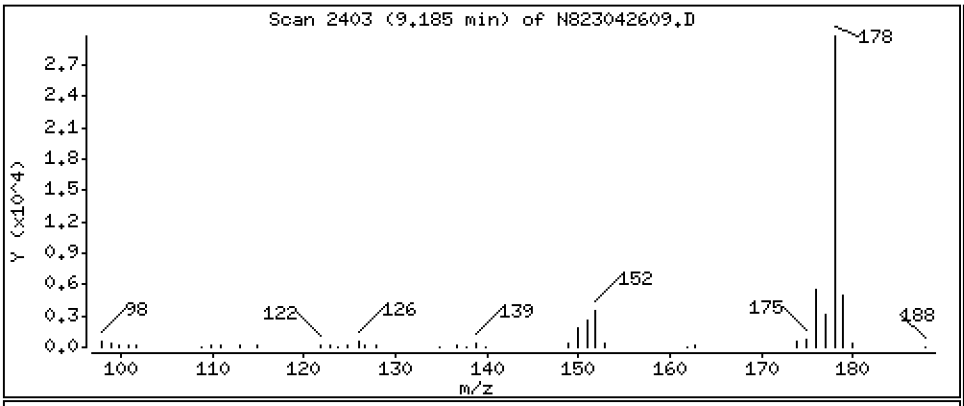
Operator: JZ

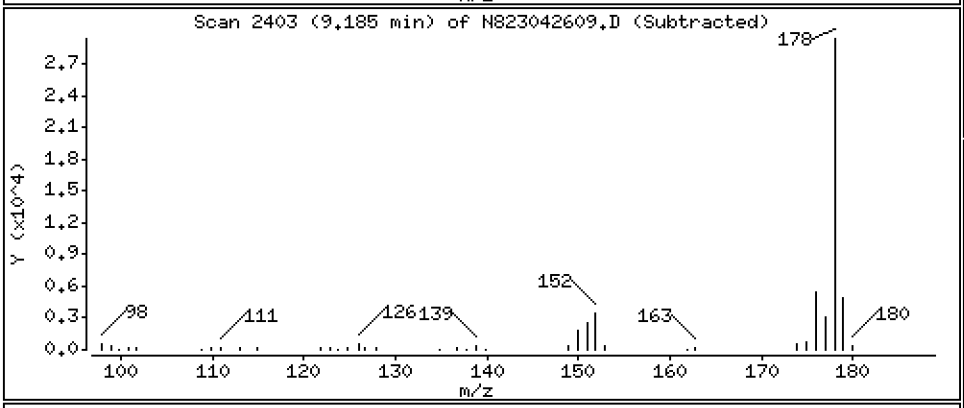
Column phase: Rxi-17sil

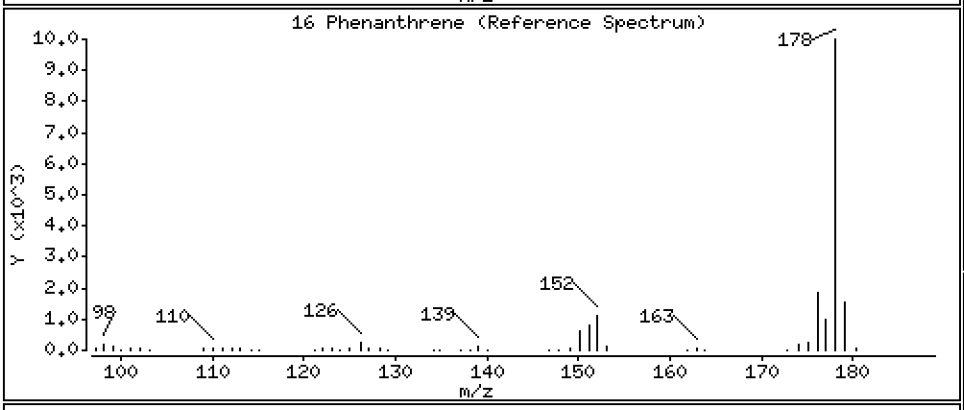
Column diameter: 0.25

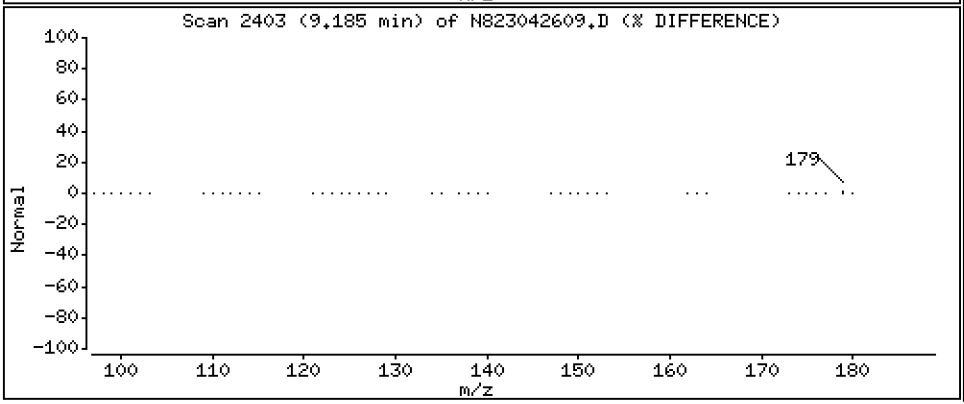
16 Phenanthrene

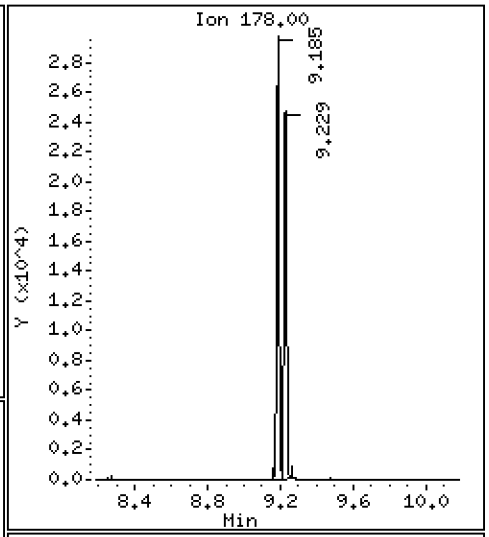
Concentration: 2.161 ug/L

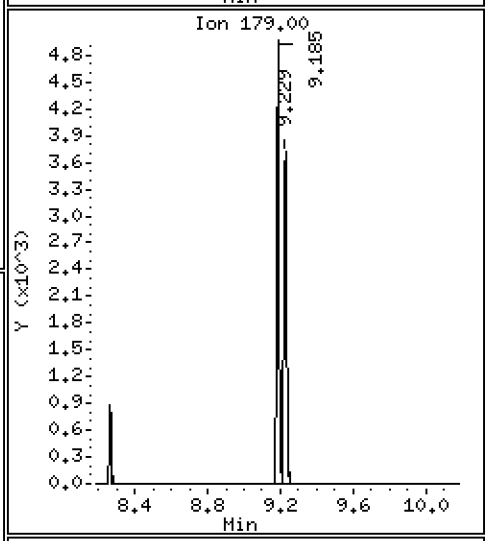


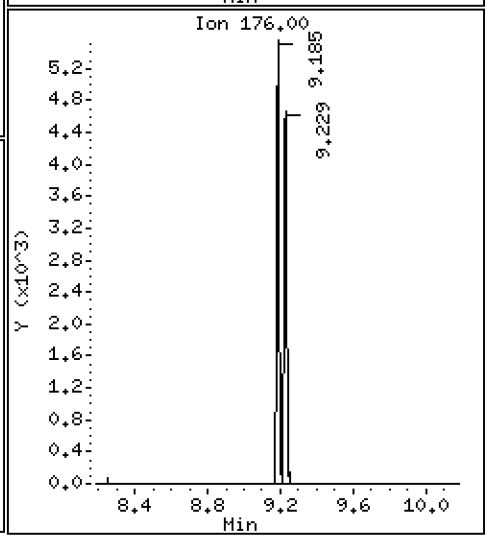












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

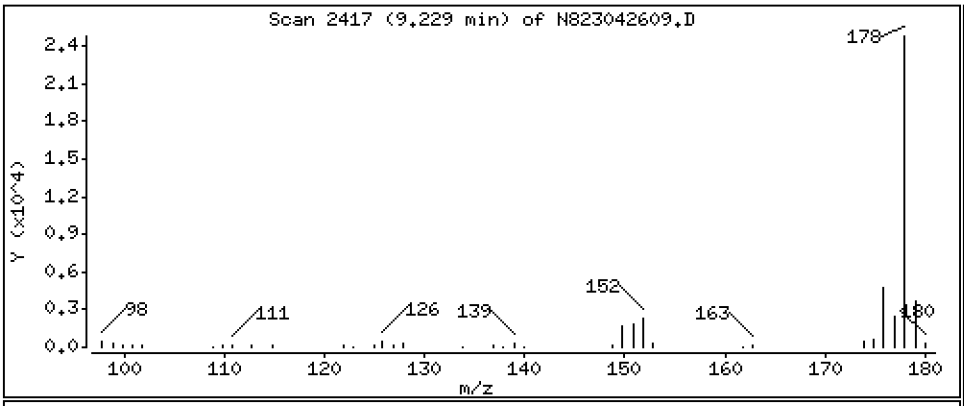
Operator: JZ

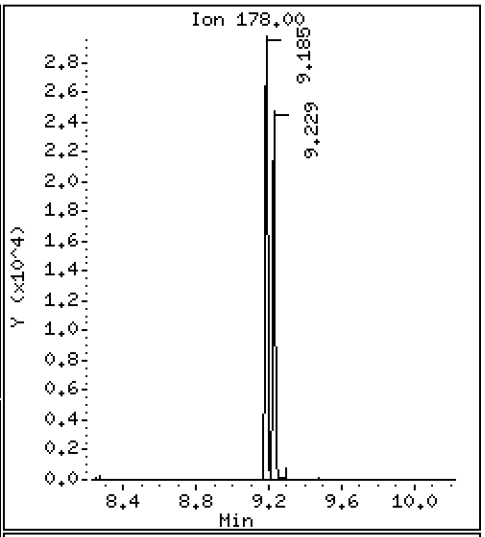
Column phase: Rxi-17sil

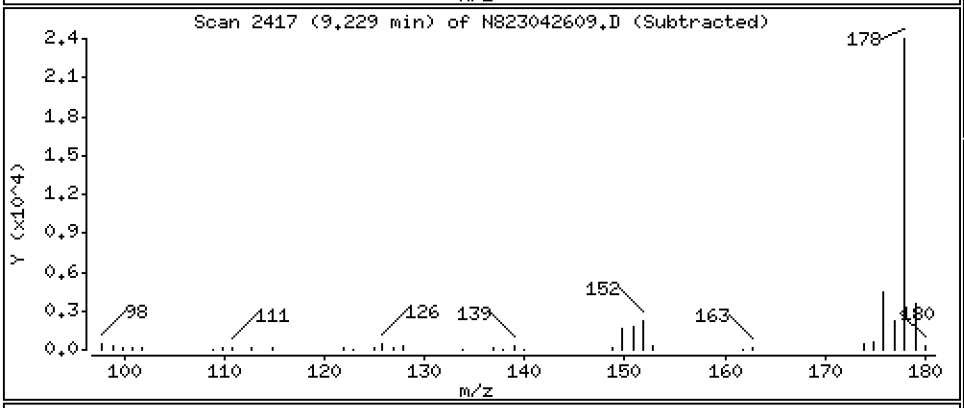
Column diameter: 0.25

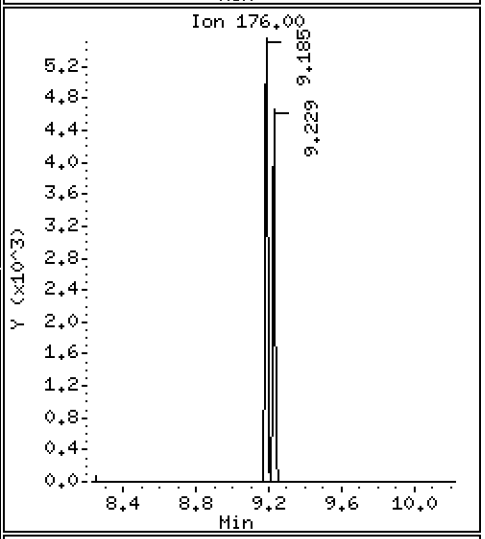
17 Anthracene

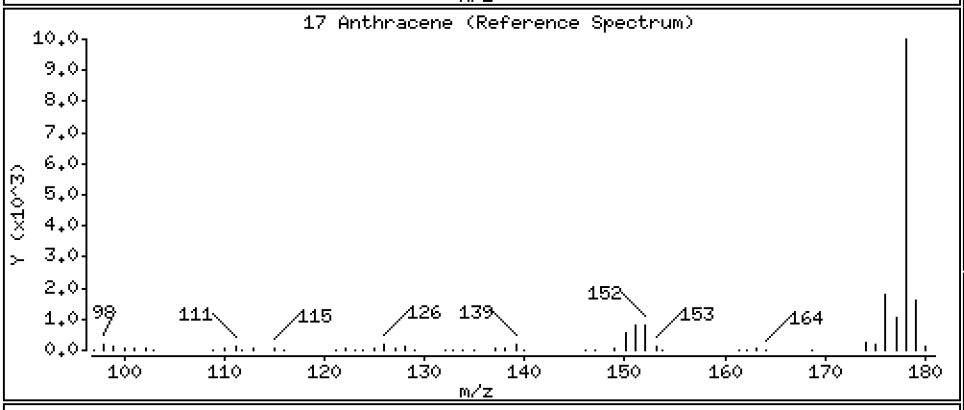
Concentration: 2.008 ug/L

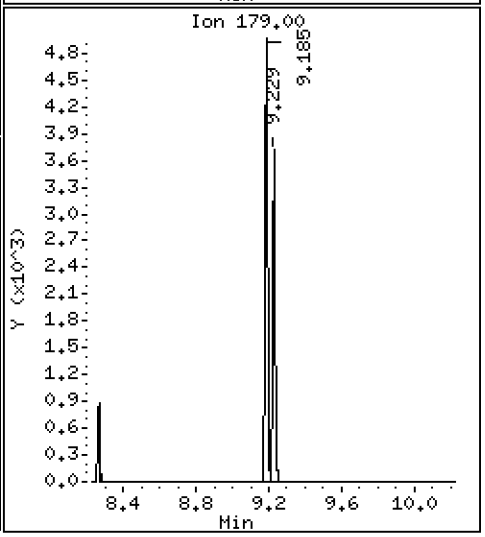


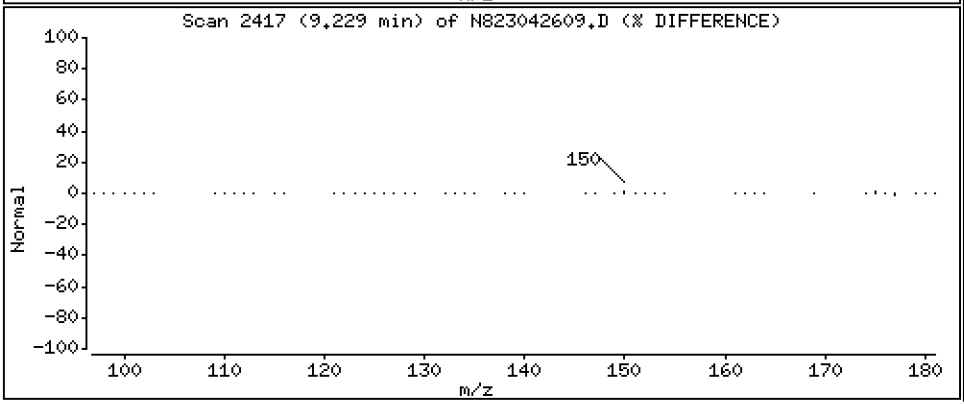












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

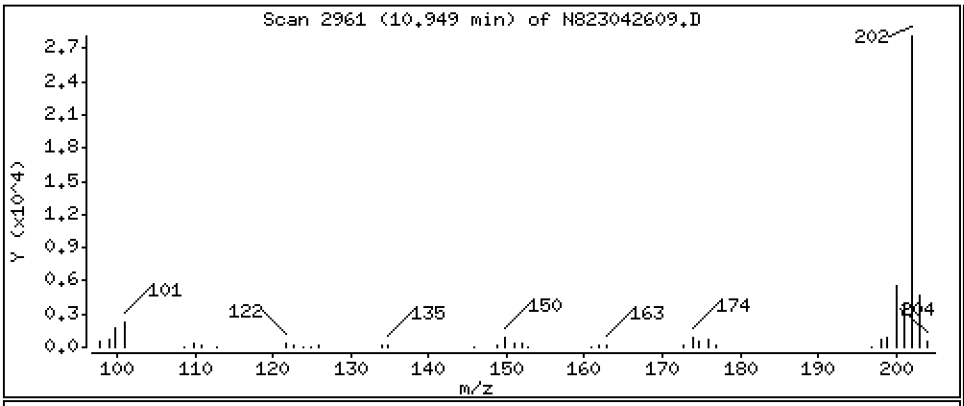
Operator: JZ

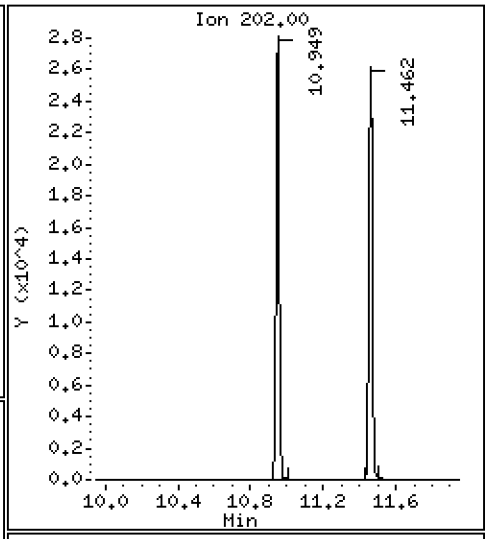
Column phase: Rxi-17sil

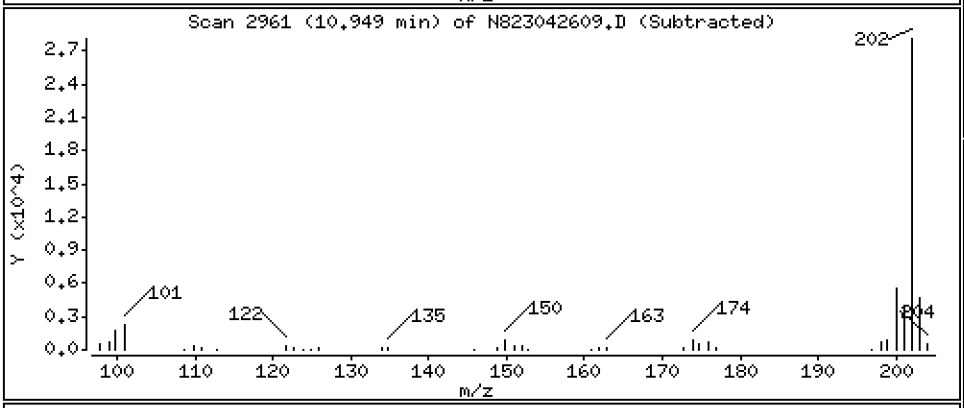
Column diameter: 0.25

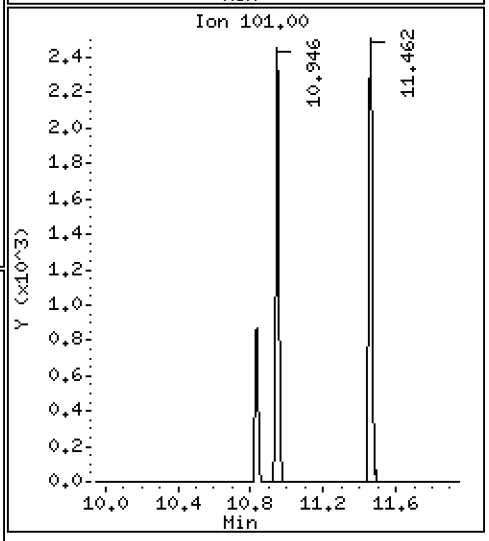
22 Fluoranthene

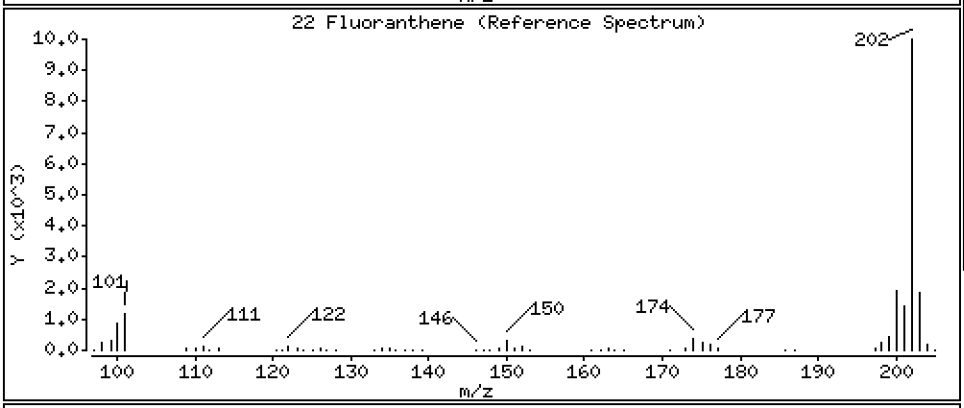
Concentration: 2.256 ug/L

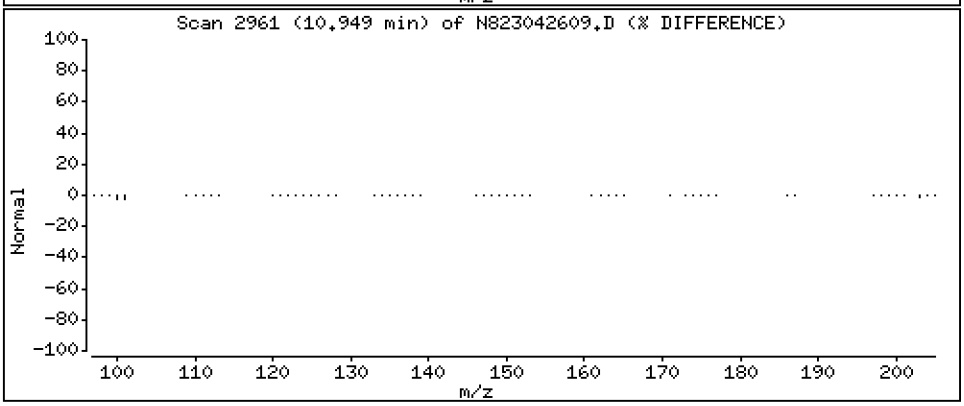












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

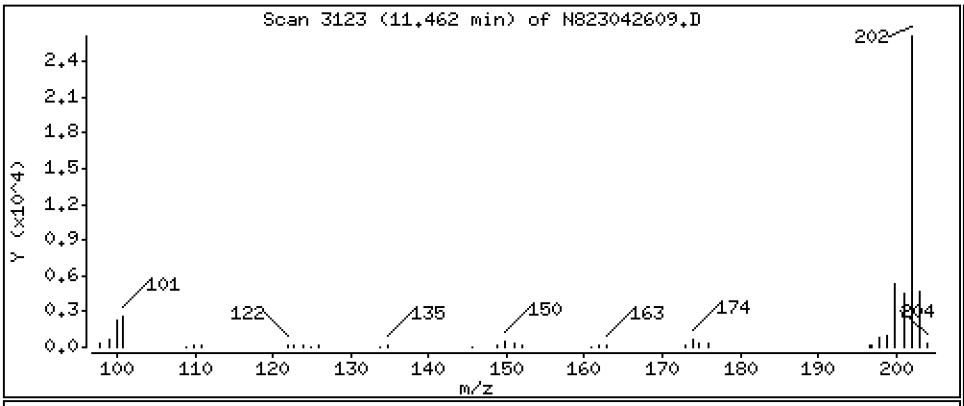
Operator: JZ

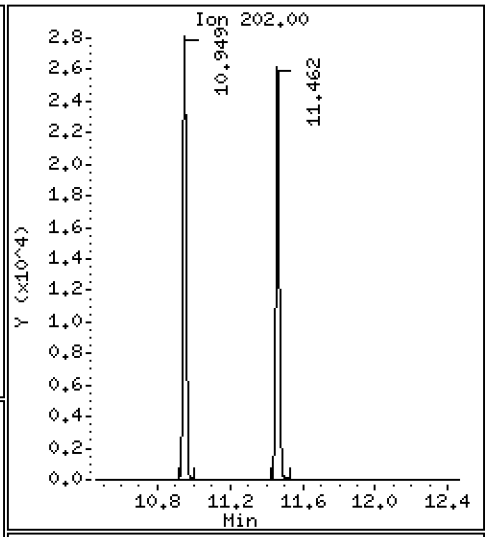
Column phase: Rxi-17sil

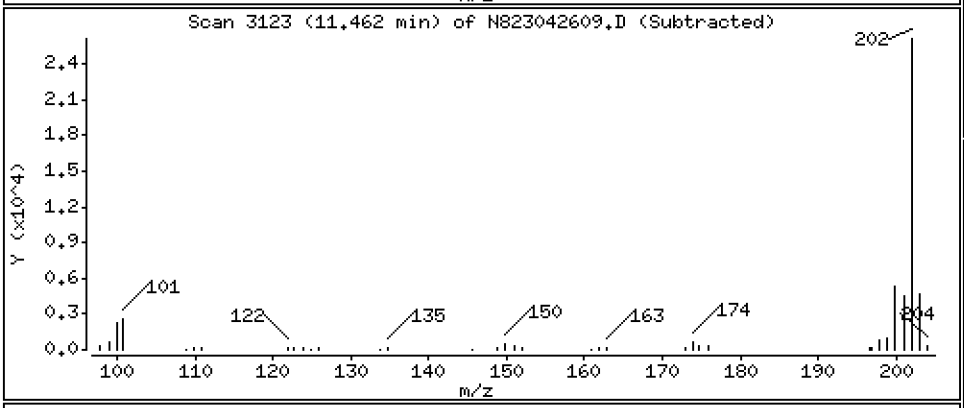
Column diameter: 0.25

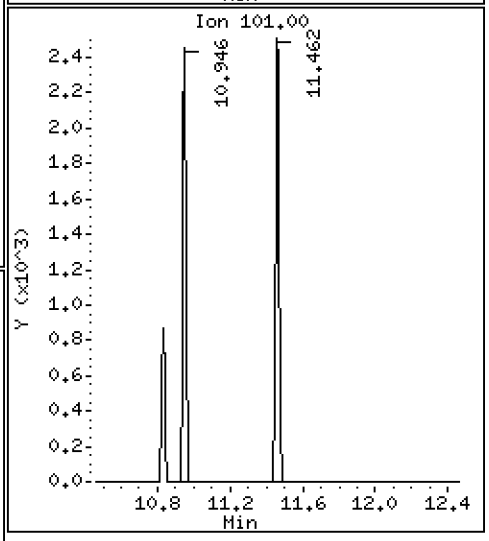
23 Pyrene

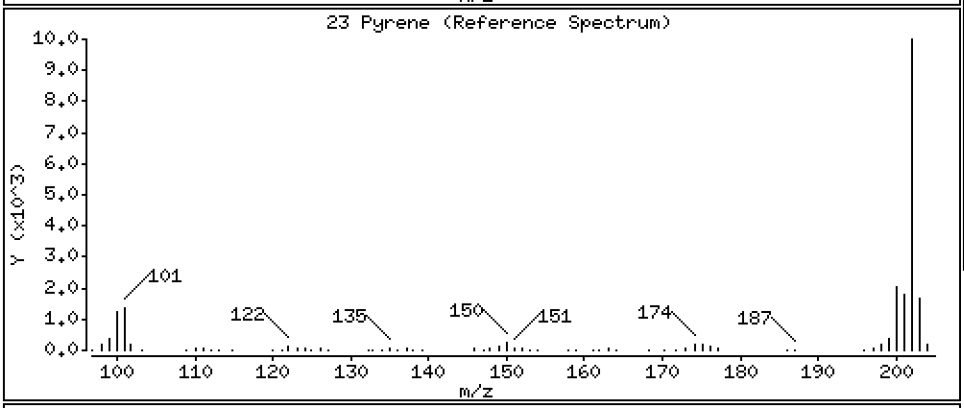
Concentration: 2.227 ug/L

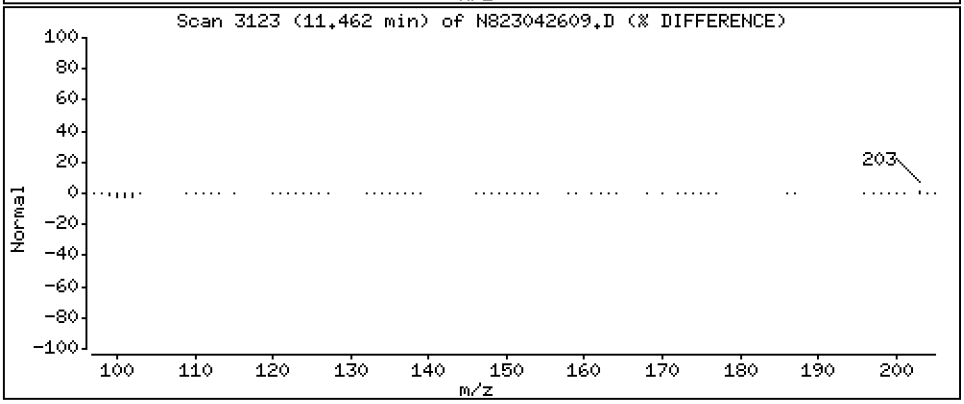












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

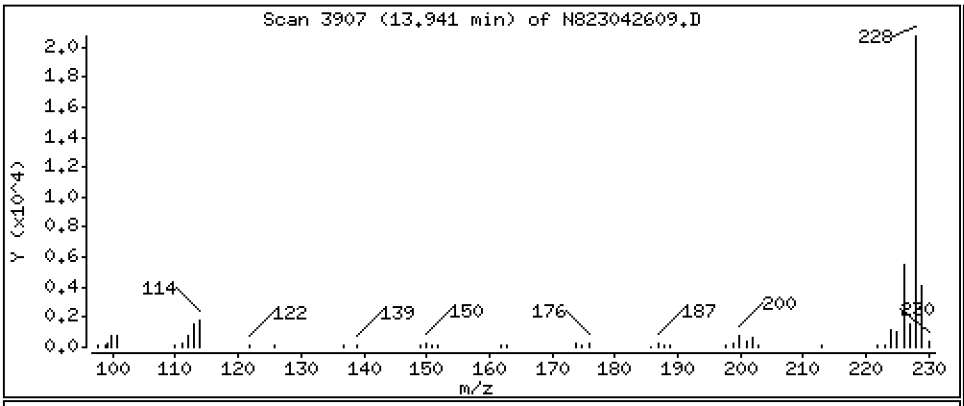
Operator: JZ

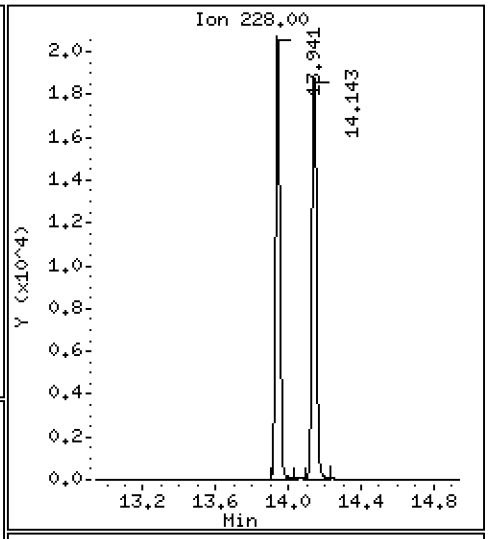
Column phase: Rxi-17sil

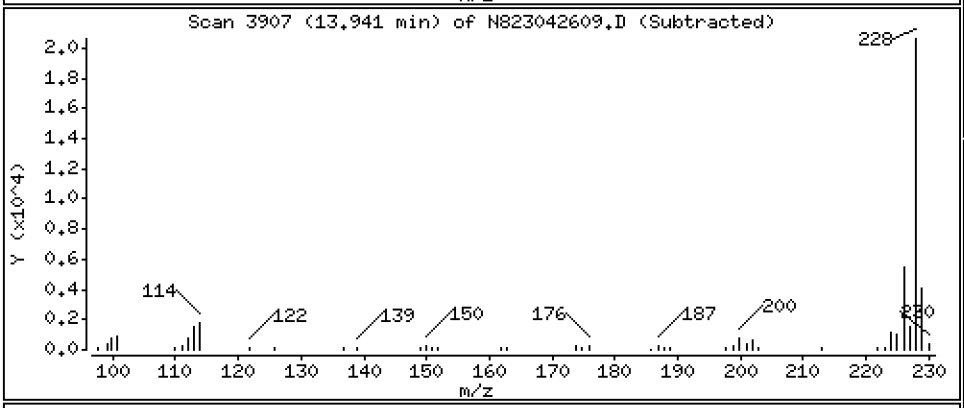
Column diameter: 0.25

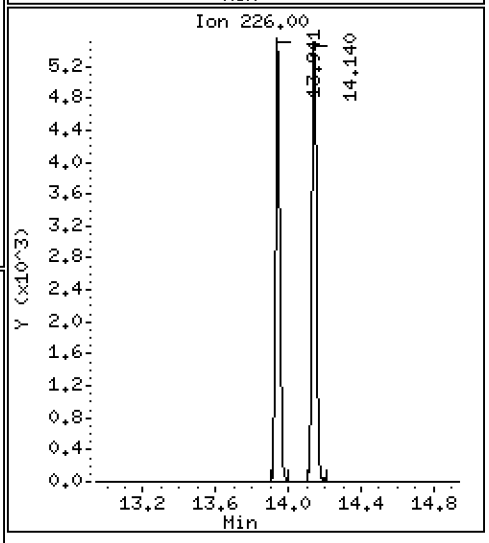
24 Benzo(a)anthracene

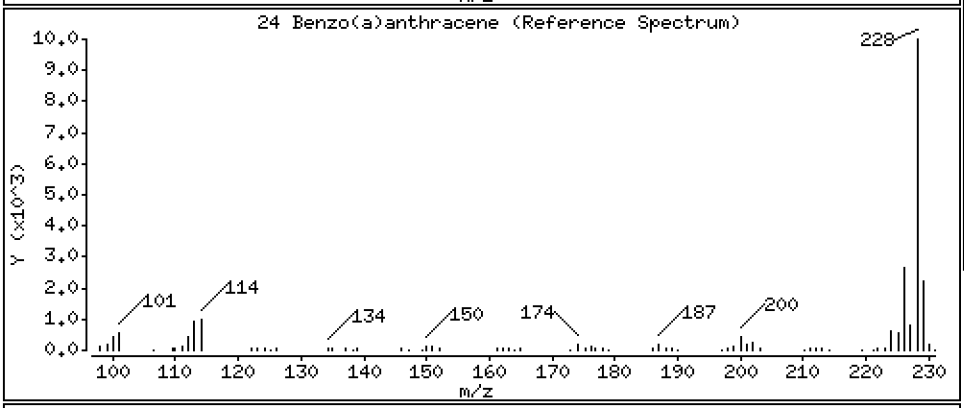
Concentration: 2.175 ug/L

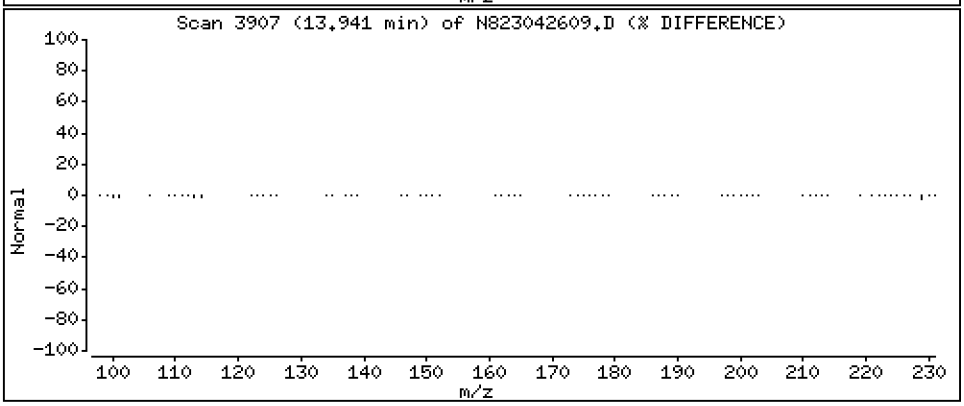












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

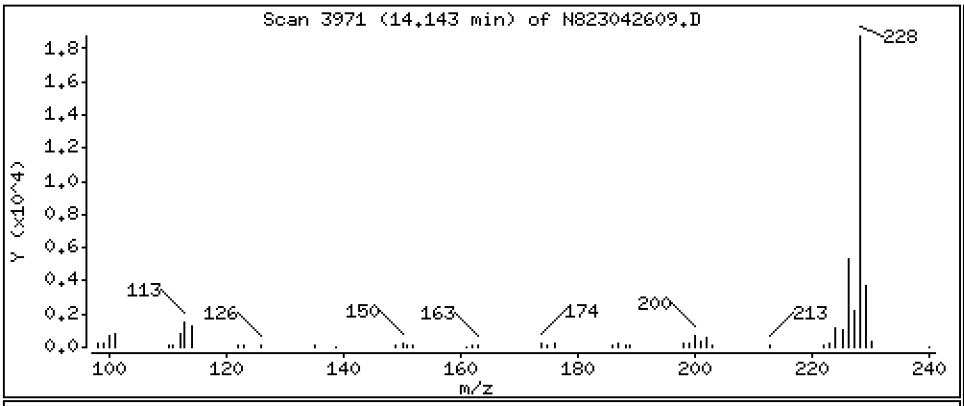
Operator: JZ

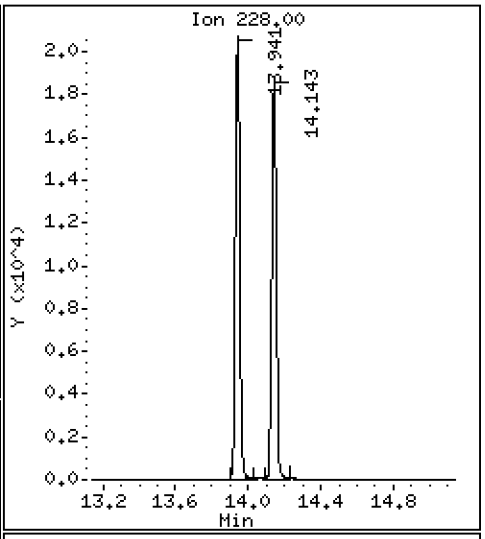
Column phase: Rxi-17sil

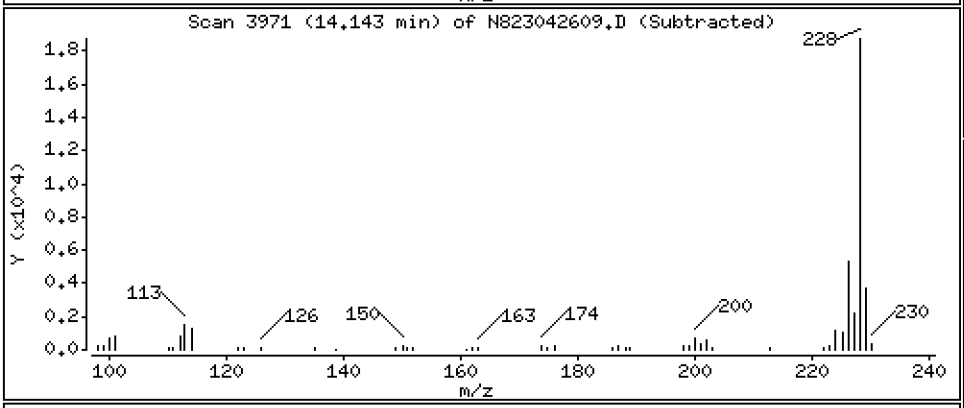
Column diameter: 0.25

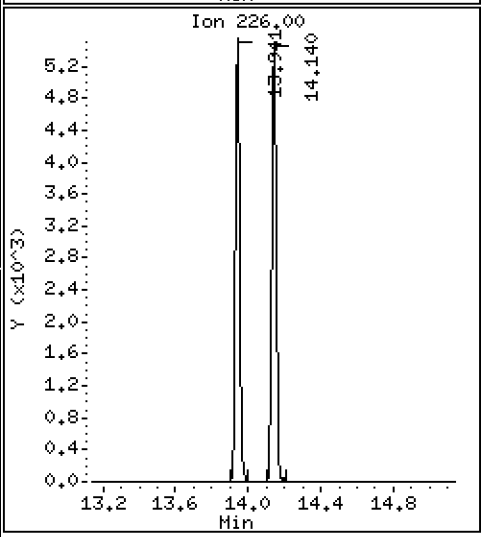
27 Chrysene

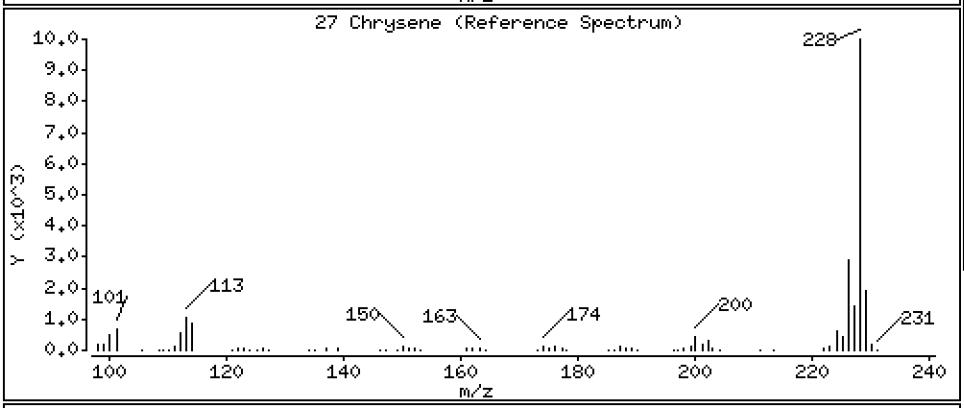
Concentration: 2.137 ug/L

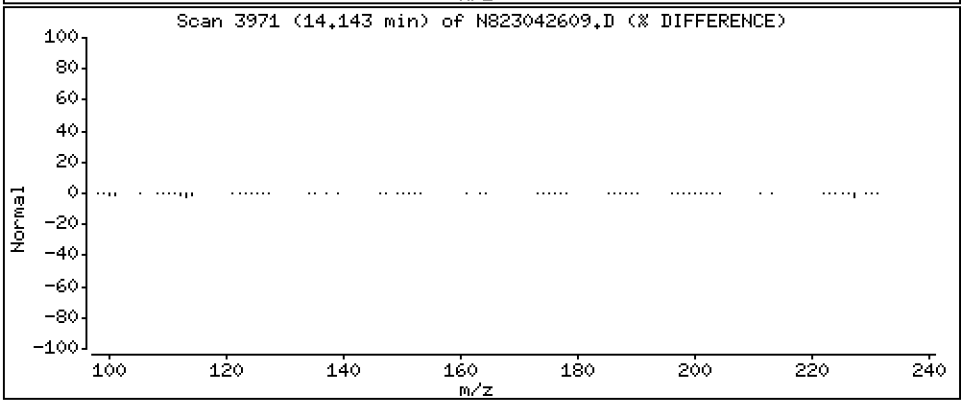












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

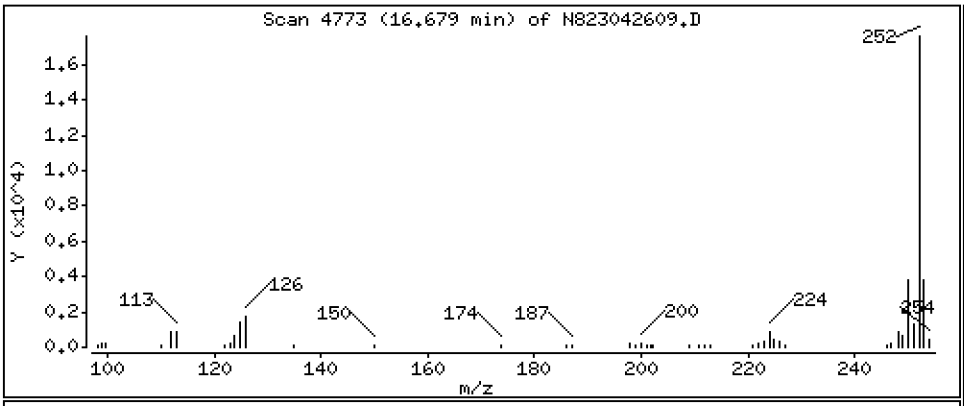
Operator: JZ

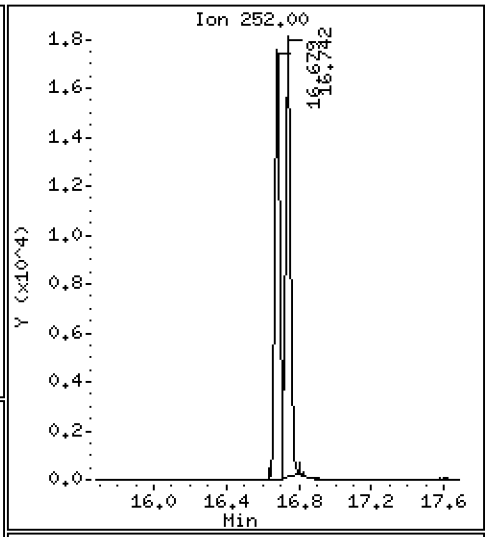
Column phase: Rxi-17sil

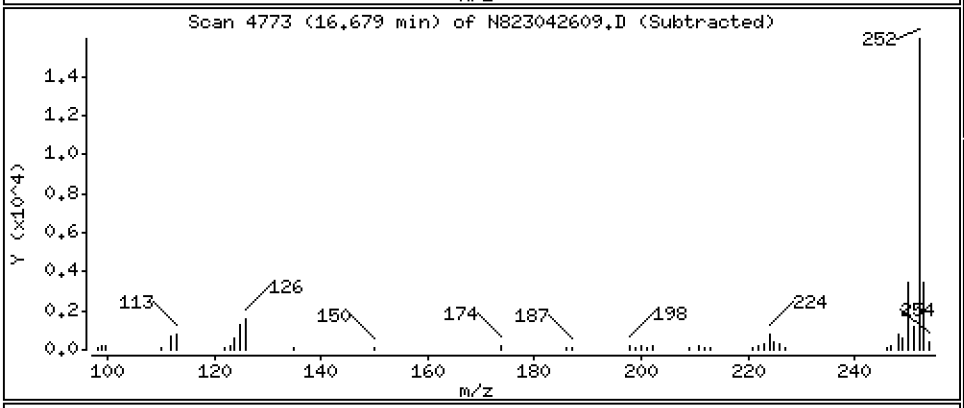
Column diameter: 0.25

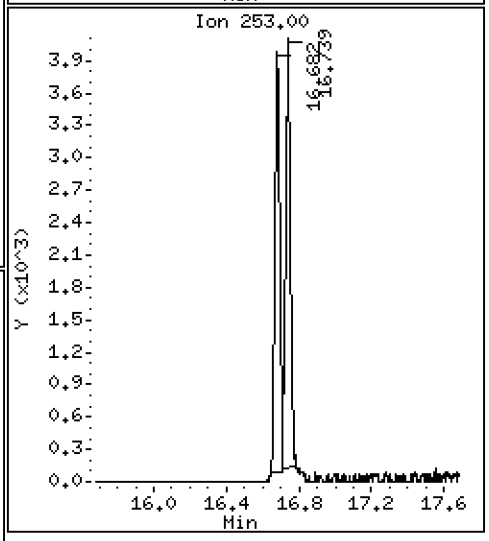
28 Benzo(b)fluoranthene

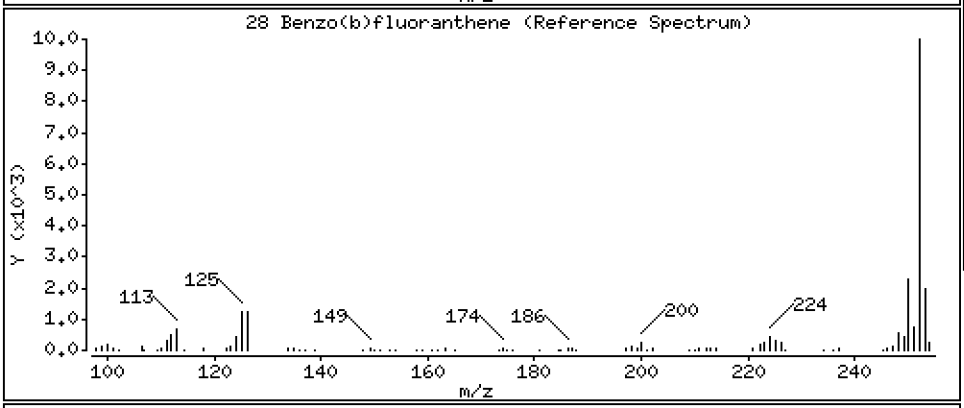
Concentration: 2.156 ug/L

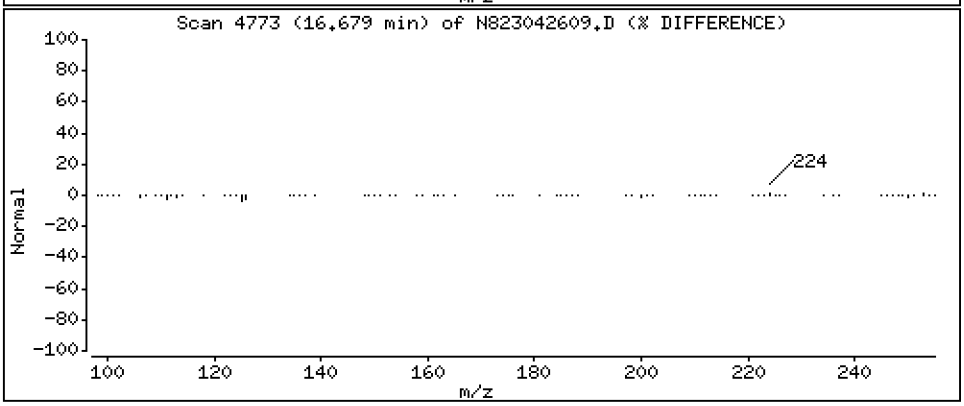












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

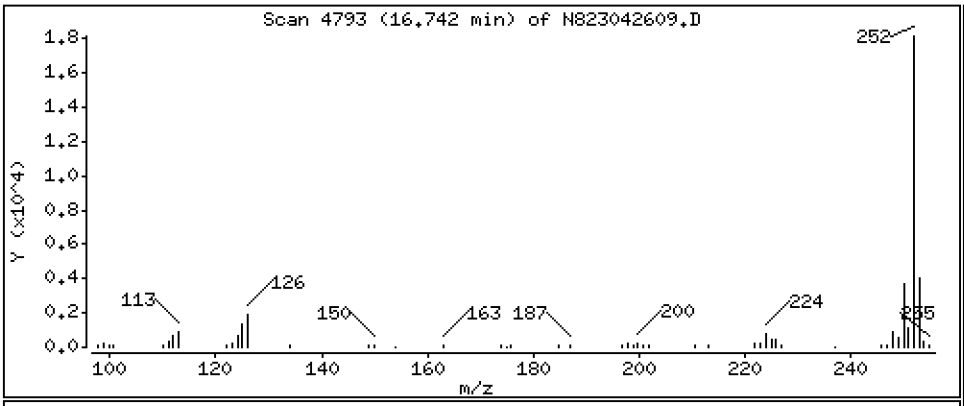
Operator: JZ

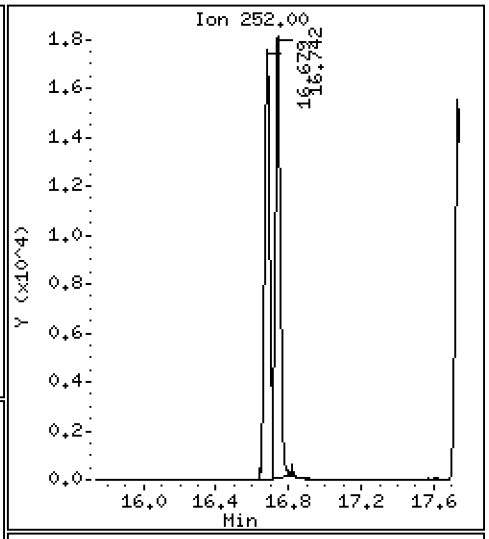
Column phase: Rxi-17sil

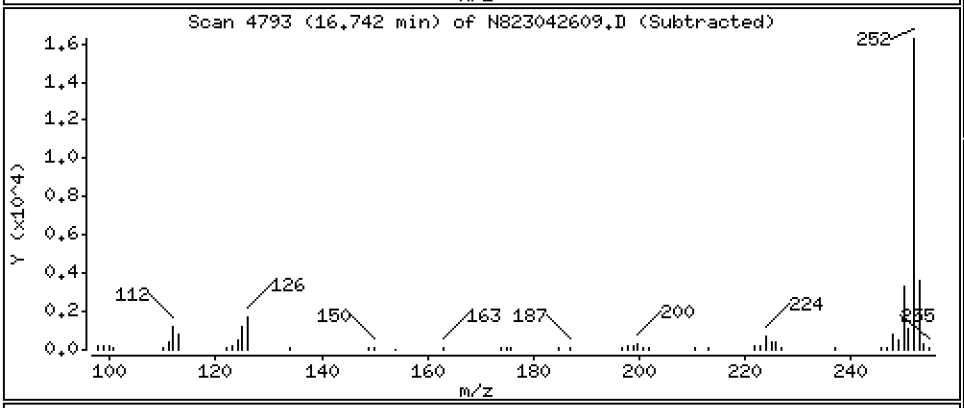
Column diameter: 0.25

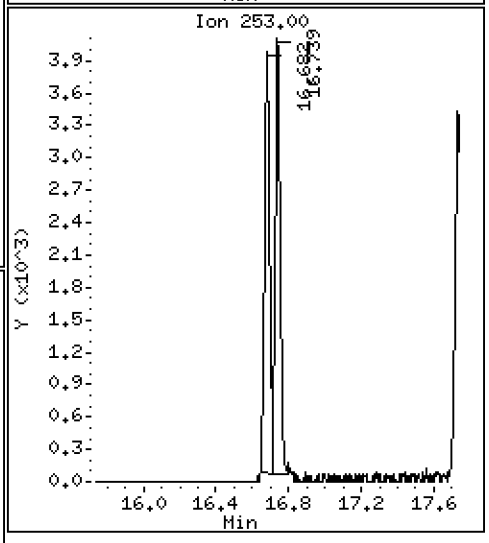
29 Benzo(k)fluoranthene

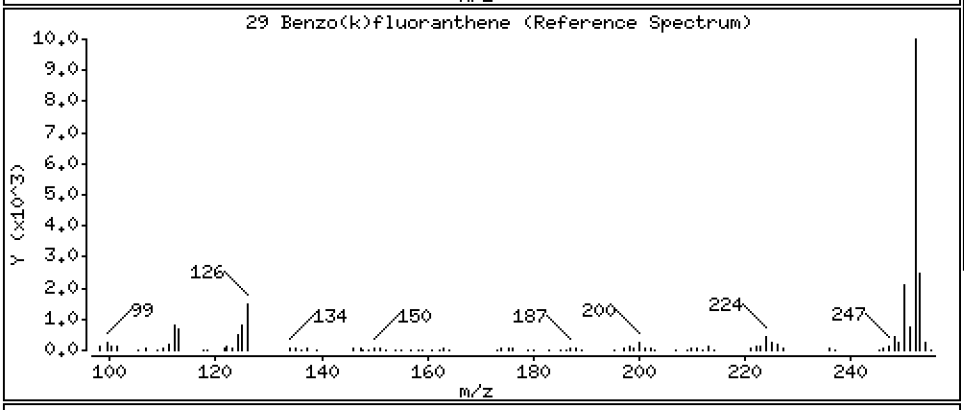
Concentration: 2.301 ug/L

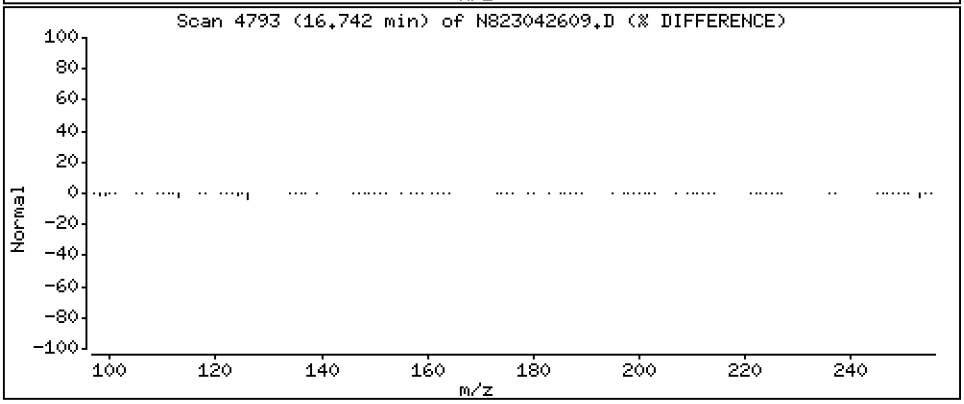












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

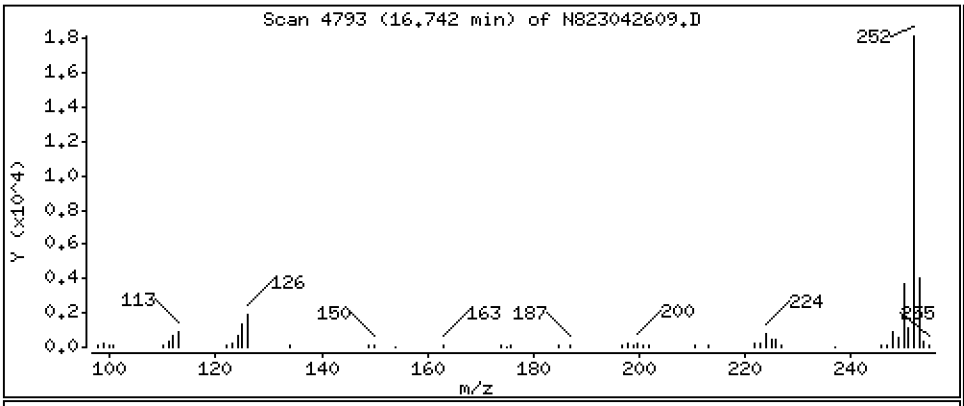
Operator: JZ

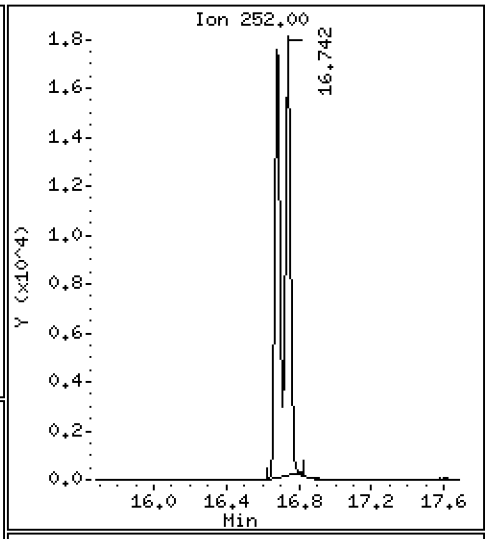
Column phase: Rxi-17sil

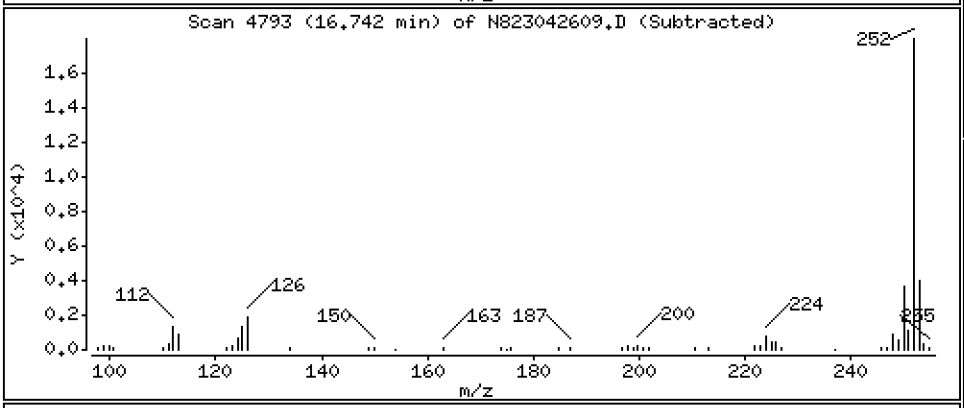
Column diameter: 0.25

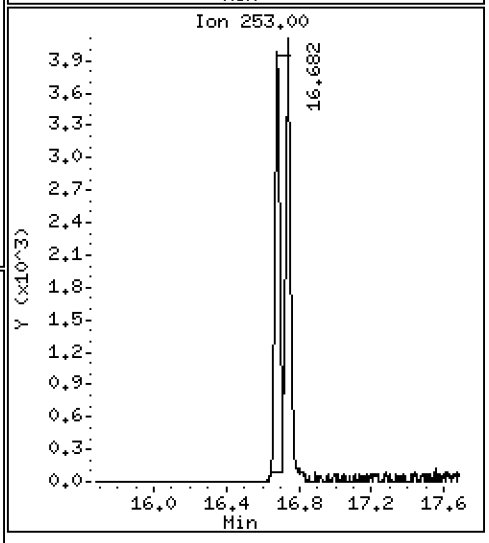
31 Total Benzofluoranthenes

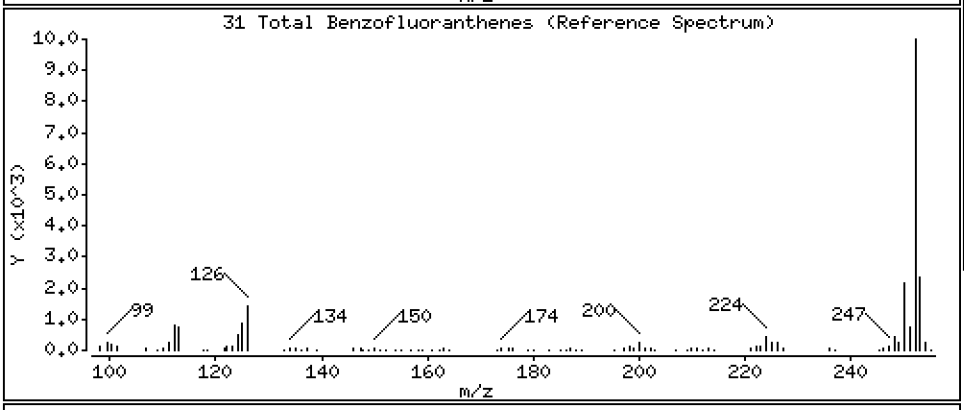
Concentration: 4.553 ug/L

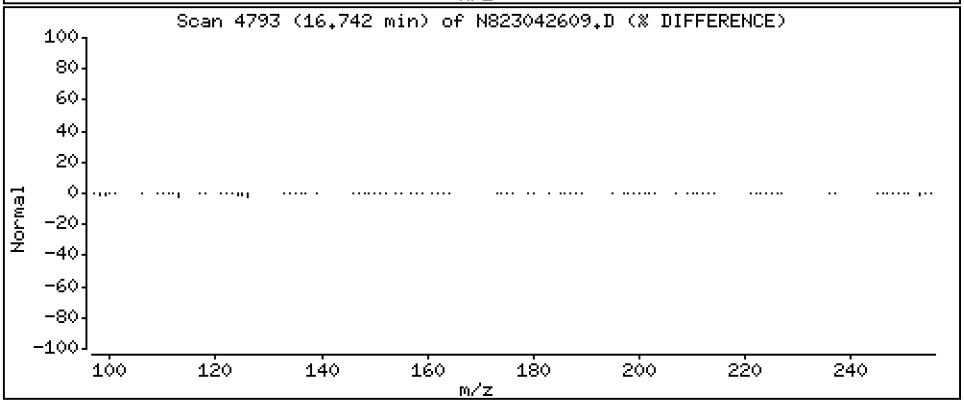












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

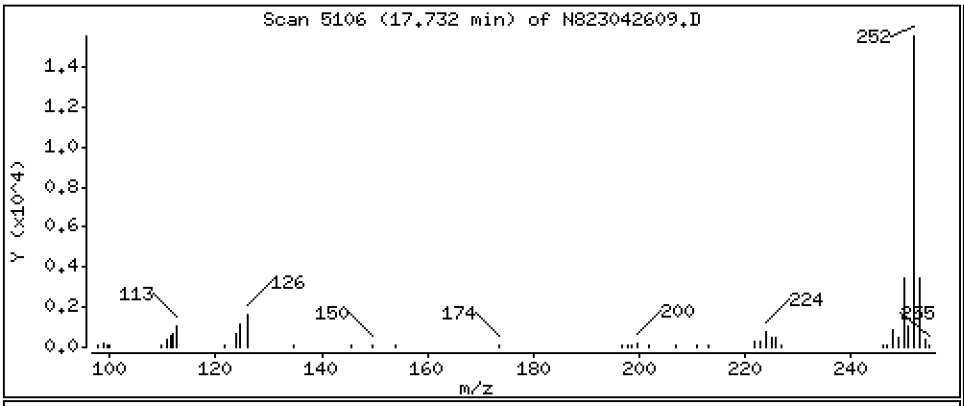
Operator: JZ

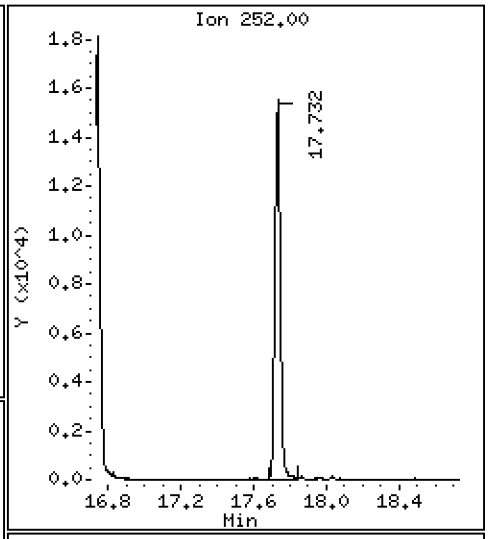
Column phase: Rxi-17sil

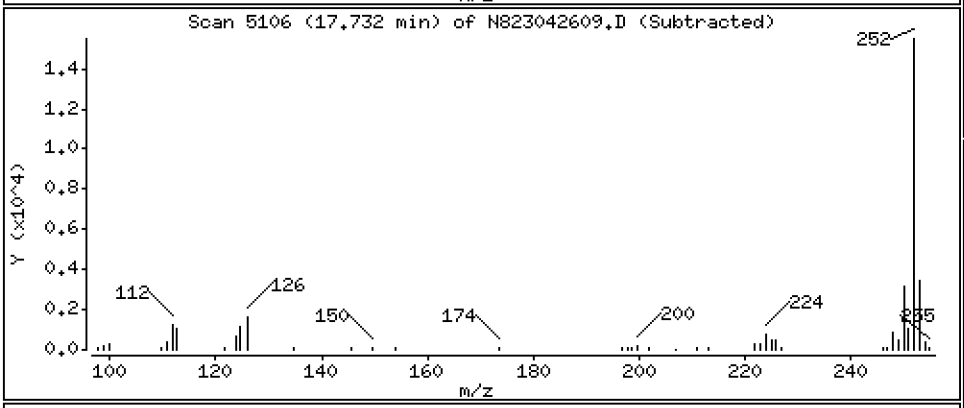
Column diameter: 0.25

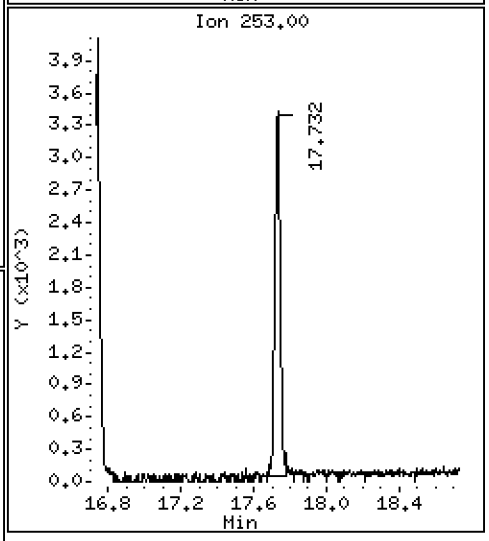
32 Benzo(a)pyrene

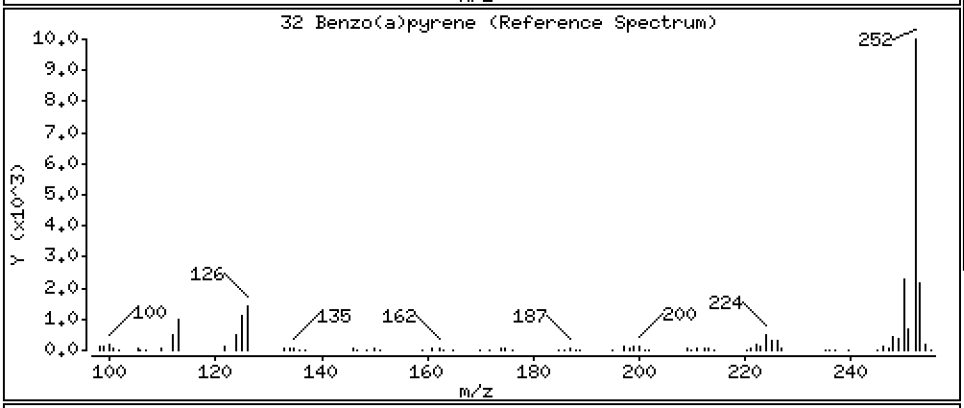
Concentration: 2.295 ug/L

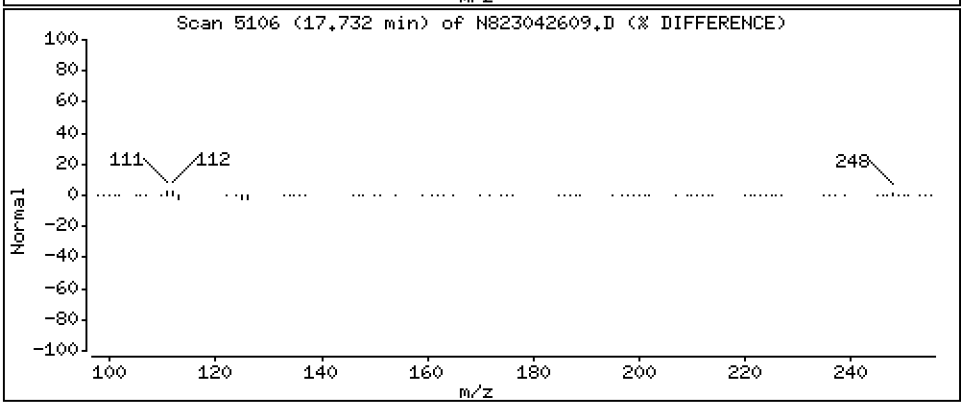












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

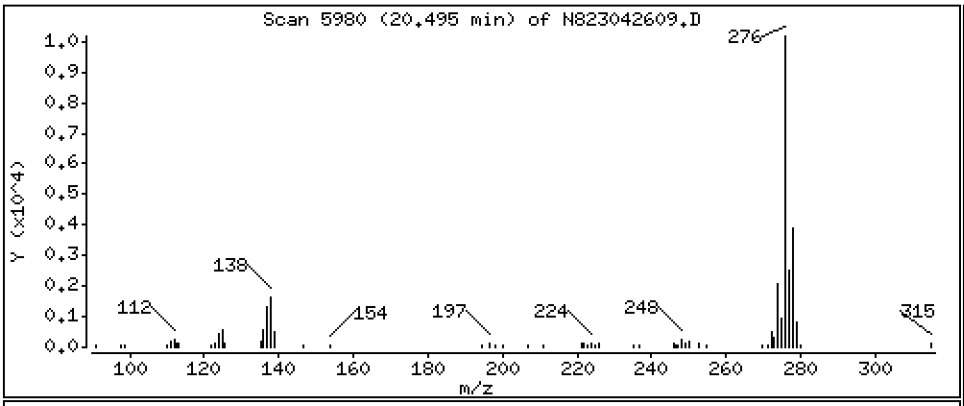
Operator: JZ

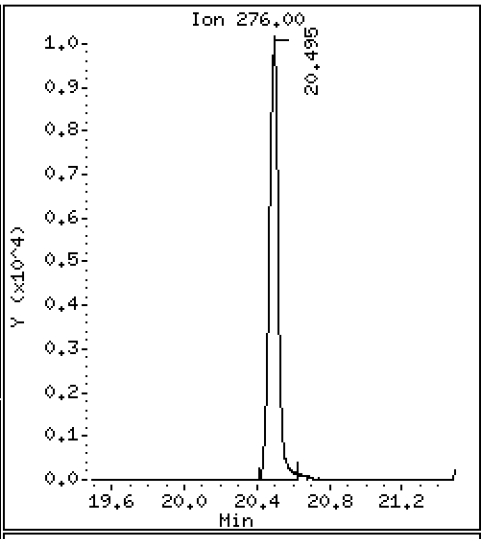
Column phase: Rxi-17sil

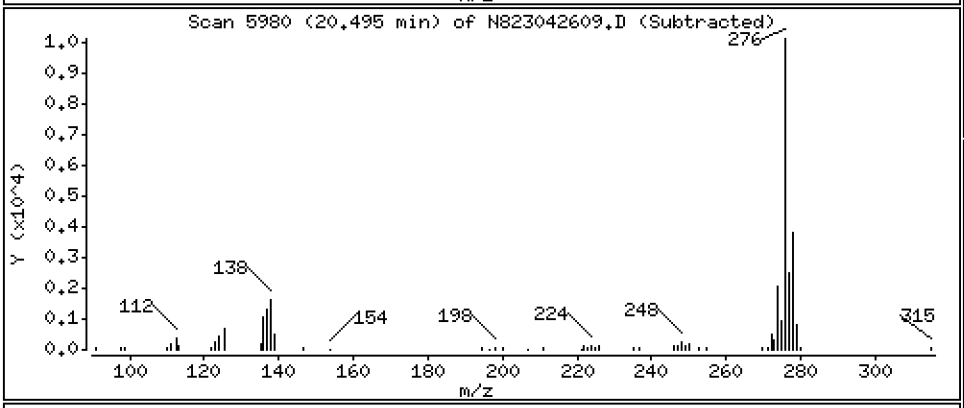
Column diameter: 0.25

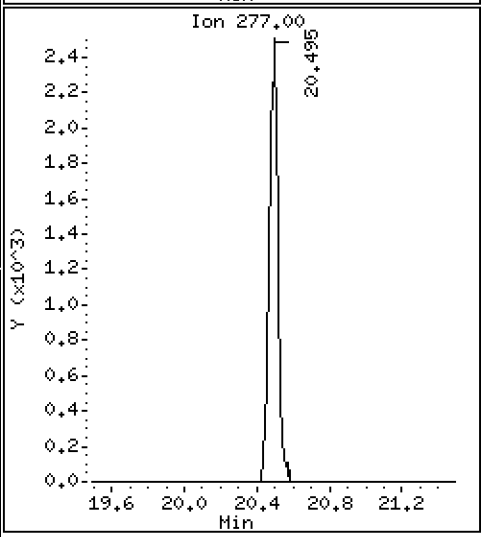
37 Indeno(1,2,3-cd)pyrene

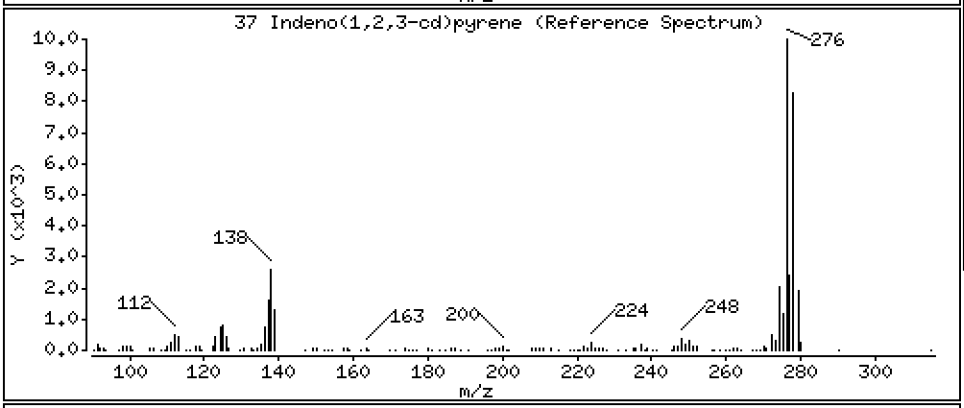
Concentration: 2.450 ug/L

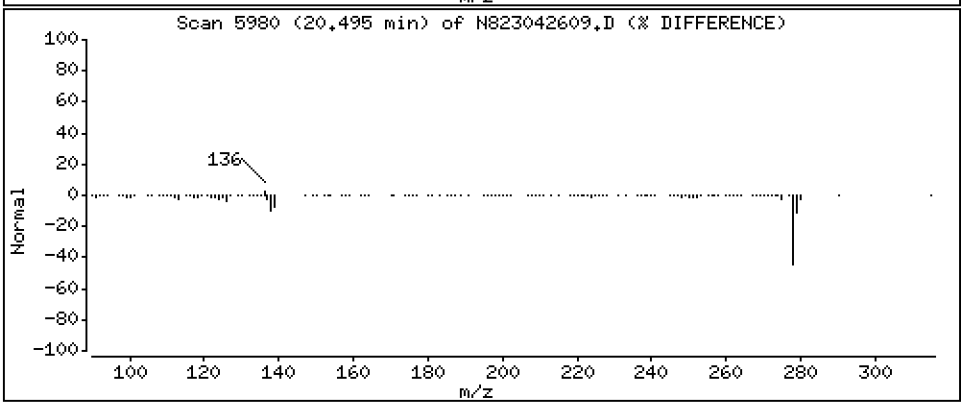












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

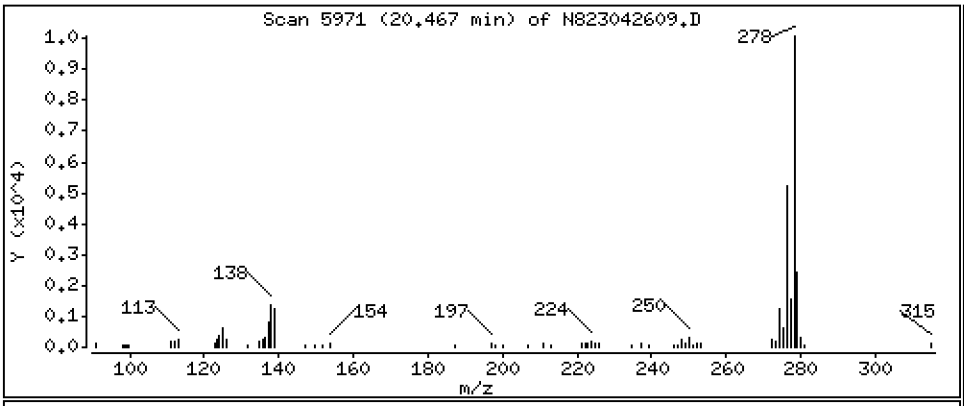
Operator: JZ

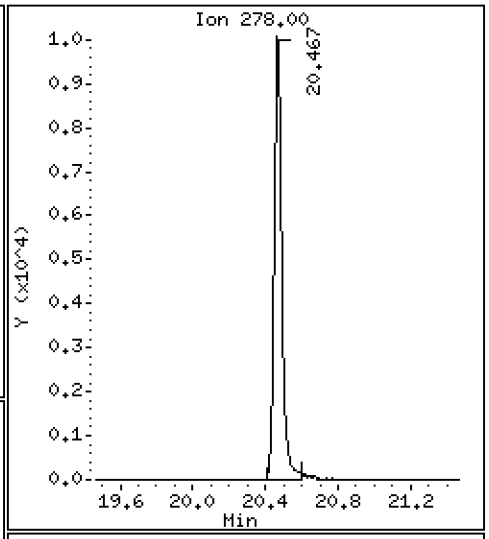
Column phase: Rxi-17sil

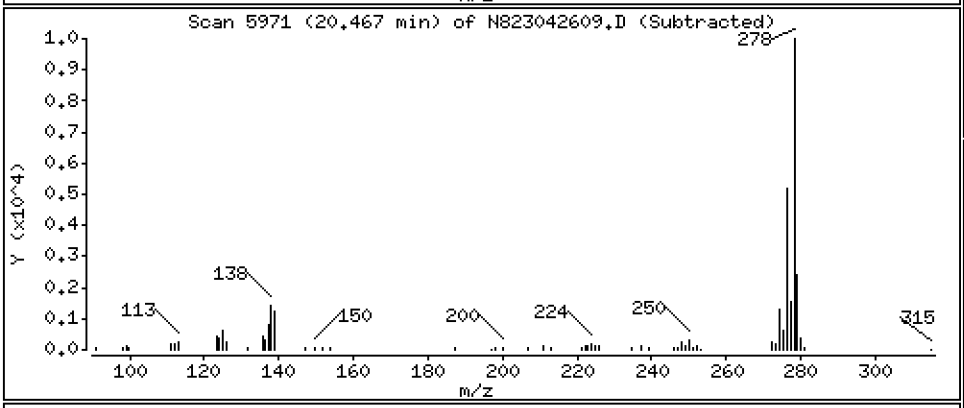
Column diameter: 0.25

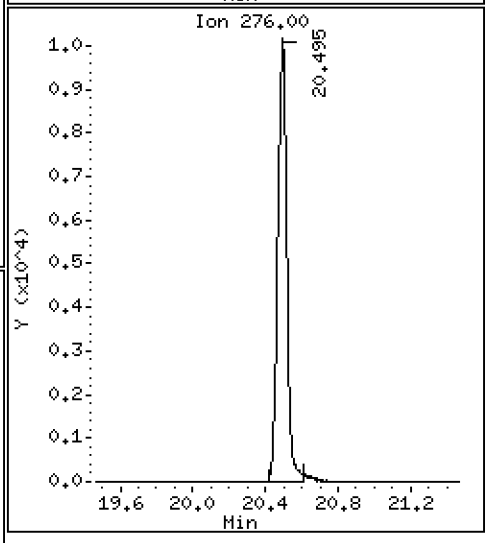
38 Dibenzo(a,h)anthracene

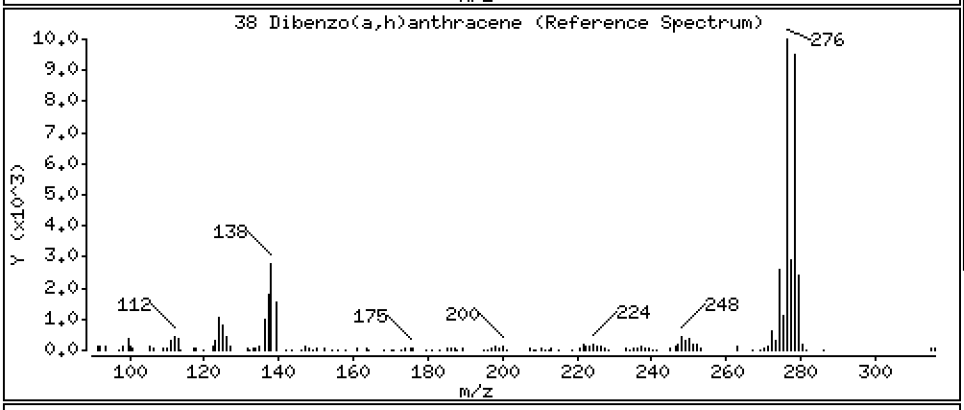
Concentration: 2.334 ug/L

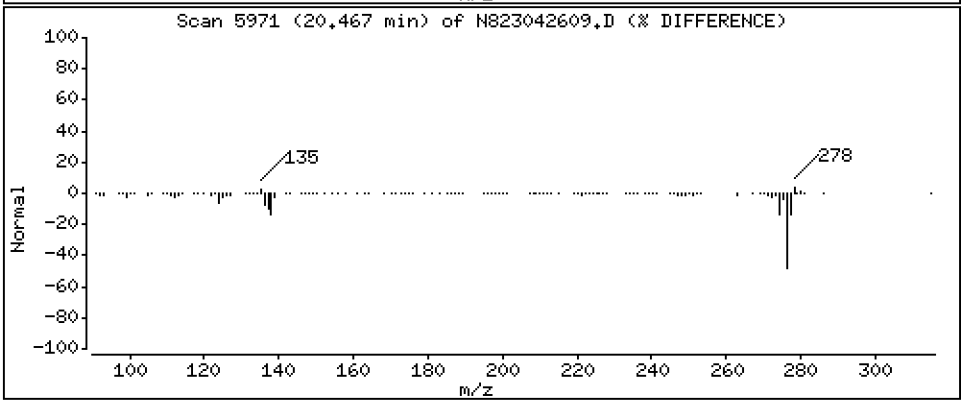












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

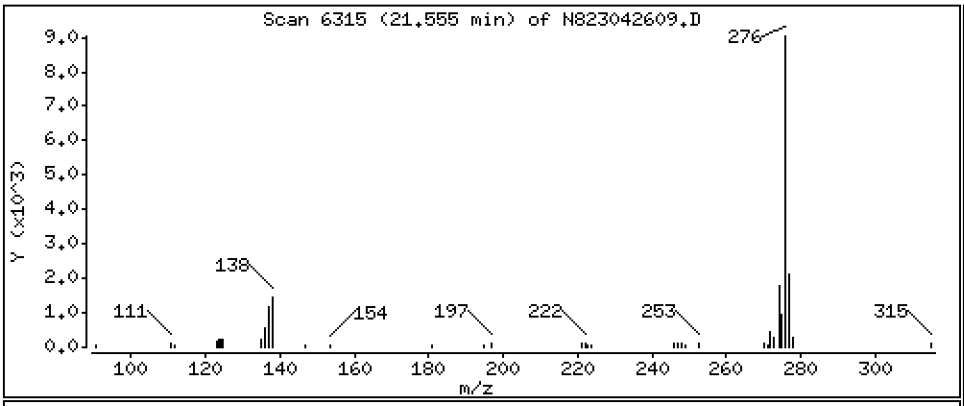
Operator: JZ

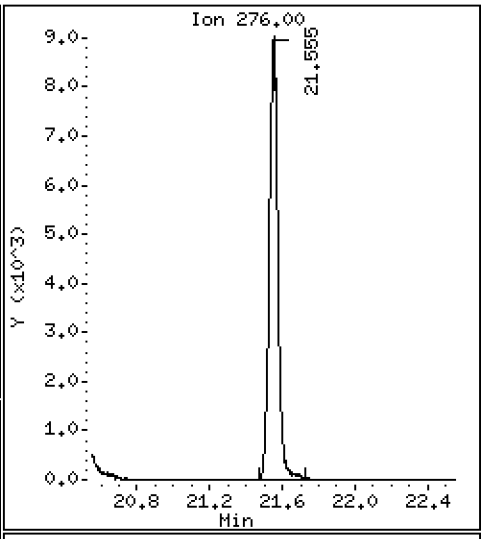
Column phase: Rxi-17sil

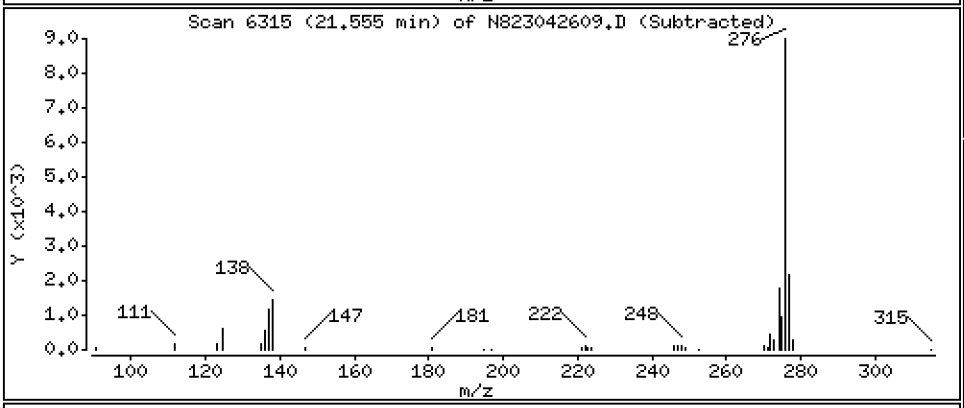
Column diameter: 0.25

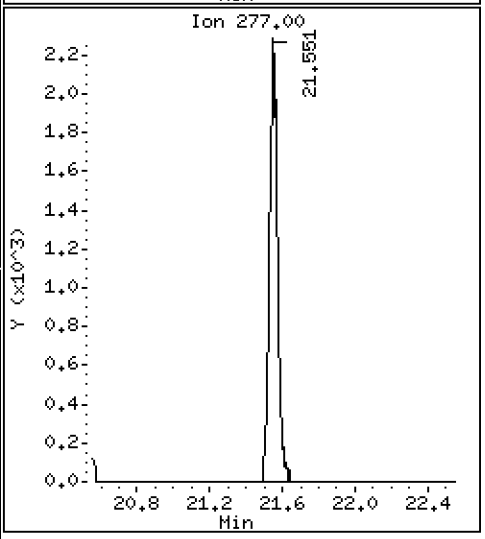
39 Benzo(g,h,i)perylene

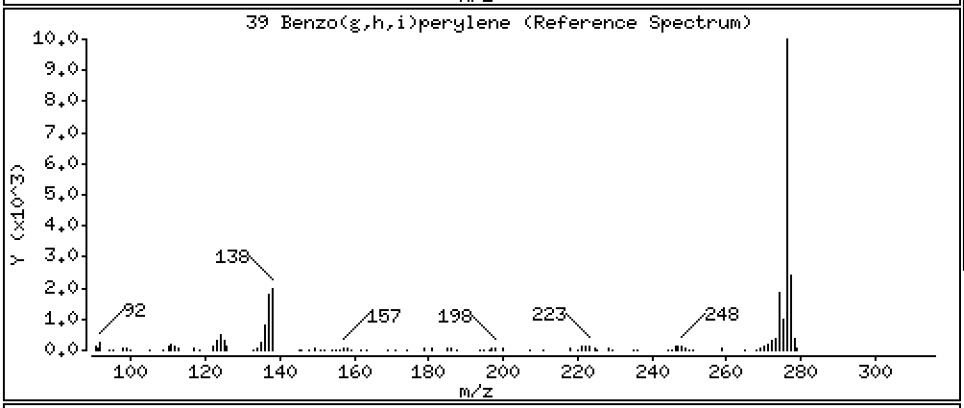
Concentration: 2.248 ug/L

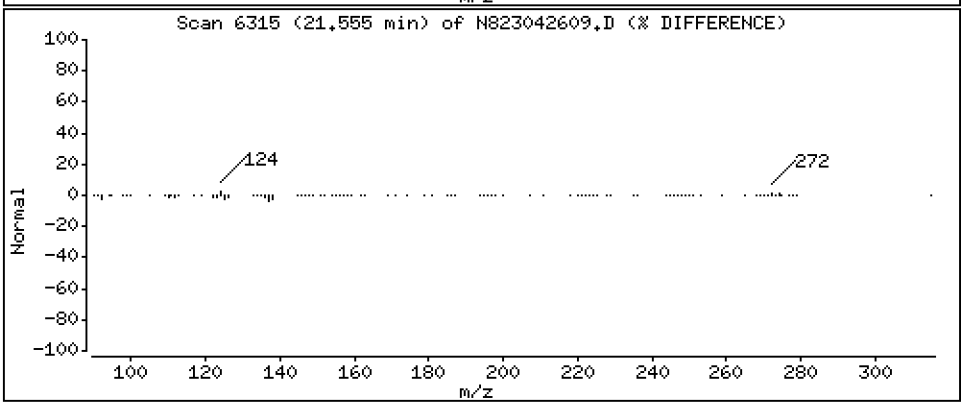












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D
Lab Smp Id: SLD0372-SCV1
Inj Date : 26-APR-2023 20:49
Operator : JZ Inst ID: nt8.i
Smp Info : SCV230426
Misc Info : 23-
Comment : 1ul Injection
Method : \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\FSIMPNA230426
Meth Date : 27-Apr-2023 11:00 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnascv.sub
Target Version: 4.14
Processing Host: JIANQING-202105

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Vo	500.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
* 1	Naphthalene-d8	136	4.827	4.827	(1.000)	20718	2.00000	
2	Naphthalene	128	4.856	4.856	(1.006)	24938	2.36264	2.363
$ 3	2-Methylnaphthalene-d10	152	Compound Not Detected.					
4	2-Methylnaphthalene	141	5.605	5.605	(1.161)	14334	2.39183	2.392
5	1-methylnaphthalene	141	5.801	5.801	(1.202)	14142	2.38001	2.380
9	Acenaphthylene	152	7.003	7.003	(0.984)	25991	2.32237	2.322
* 10	Acenaphthene-d10	164	7.113	7.110	(1.000)	12642	2.00000	
11	Acenaphthene	153	7.161	7.161	(1.007)	16198	2.23392	2.234
12	Dibenzofuran	168	7.316	7.313	(1.028)	27419	2.51765	2.518
14	Fluorene	166	7.790	7.790	(1.095)	19927	2.29268	2.293
* 15	Phenanthrene-d10	188	9.150	9.150	(1.000)	24547	2.00000	
16	Phenanthrene	178	9.184	9.185	(1.004)	28095	2.16083	2.161
17	Anthracene	178	9.229	9.226	(1.009)	24487	2.00809	2.008
22	Fluoranthene	202	10.949	10.949	(1.197)	33741	2.25628	2.256
$ 21	Fluoranthene-d10	212	Compound Not Detected.					
23	Pyrene	202	11.461	11.461	(0.815)	34528	2.22695	2.227
24	Benzo(a)anthracene	228	13.940	13.940	(0.991)	34655	2.17519	2.175
* 25	Chrysene-d12	240	14.070	14.067	(1.000)	24217	2.00000	
27	Chrysene	228	14.142	14.139	(1.005)	33440	2.13657	2.137
28	Benzo(b)fluoranthene	252	16.678	16.682	(0.929)	35085	2.15649	2.156
29	Benzo(k)fluoranthene	252	16.742	16.739	(0.932)	35276	2.30130	2.301
31	Total Benzofluoranthenes	252	16.742	16.682	(0.932)	68883	4.55291	4.553(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	32 Benzo(a)pyrene	252	17.731	17.731	(0.987)	32452	2.29472	2.295
*	33 Perylene-d12	264	17.959	17.959	(1.000)	24956	2.00000	
	37 Indeno(1,2,3-cd)pyrene	276	20.495	20.492	(1.141)	35264	2.44967	2.450
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	20.466	20.467	(1.140)	29838	2.33423	2.334
	39 Benzo(g,h,i)perylene	276	21.554	21.551	(1.200)	29972	2.24768	2.248

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042609.D
Lab Smp Id: SLD0372-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\FSIMPNA23042
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	20718	10.80
10 Acenaphthene-d10	10729	5365	21458	12642	17.83
15 Phenanthrene-d10	20748	10374	41496	24547	18.31
25 Chrysene-d12	20954	10477	41908	24217	15.57
33 Perylene-d12	21563	10782	43126	24956	15.74

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.01
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	0.04
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	-0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.02
33 Perylene-d12	17.96	17.46	18.46	17.96	-0.00

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

REVIEW SUMMARY FOR FILE - N823042609.D

Lab ID: SLD0372-SCV1
nt8.i, year2023\APR2023\20230426.b\FSIMPNA230426.m,   26-APR-2023 20:49

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

No RRT check performed

On Column LOD for nt8.i, year2023\APR2023\20230426.b\FSIMPNA230426.m, pnascv.su

Exception: Benzo(b)fluoranthene 0.0300
Exception: Benzo(k)fluoranthene 0.0300
Exception: Total Benzofluoranthenes 0.0300
Exception: Fluoranthene-d10 (Surr) 0.0000

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

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E-SIM

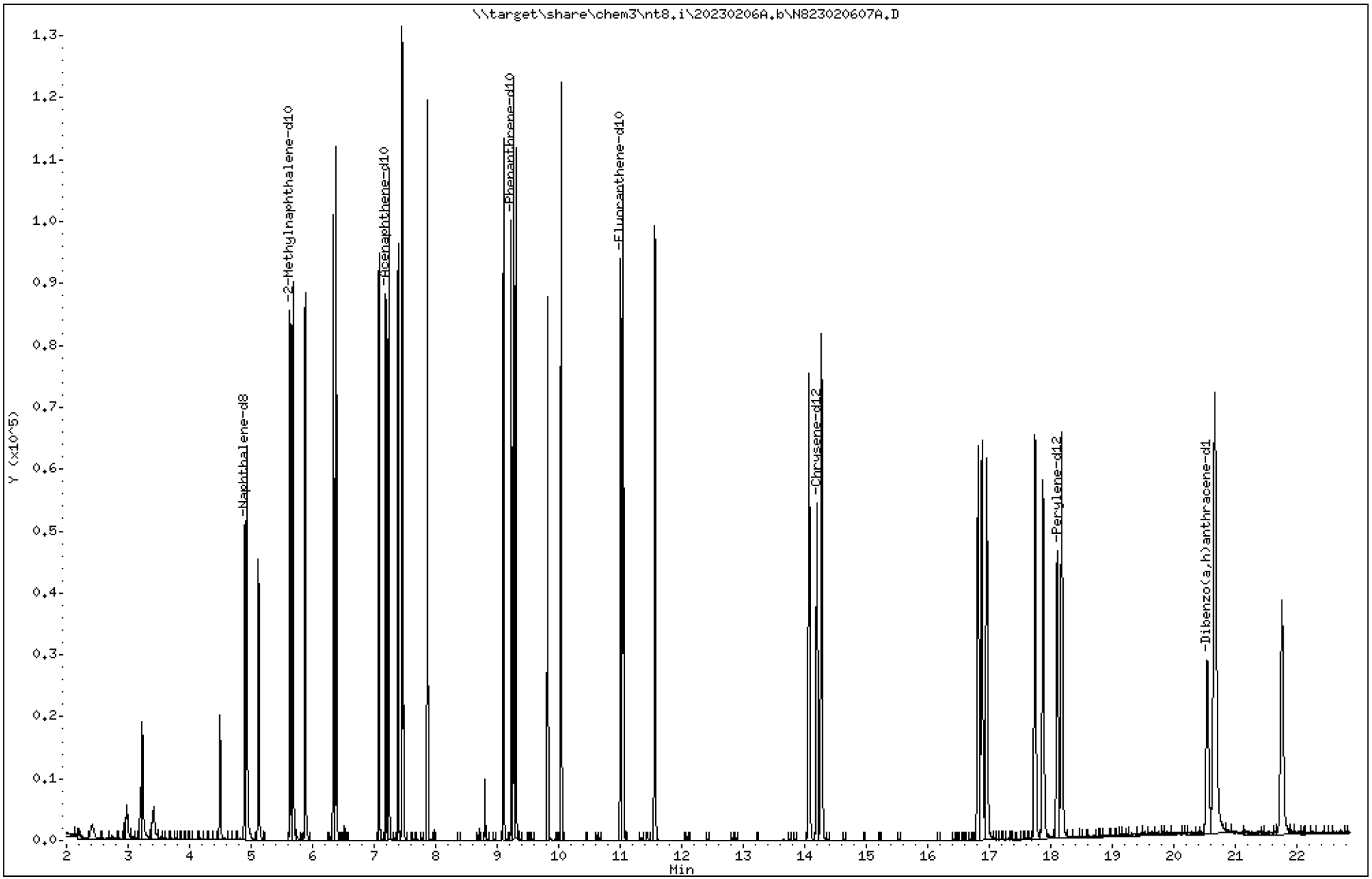
Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT8	Calibration:	GA00050
Lab File ID:	N823020607A.D	Calibration Date:	01/19/2023
Sequence:	SLB0075	Injection Date:	02/06/23
Lab Sample ID:	SLB0075-ICV1	Injection Time:	15:15
Sequence Name:	Initial Cal Check		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Benzo(a)anthracene	A	2.5000	2.66	1.1238870	1.1977170		6.6	+/-20
Chrysene	A	2.5000	2.59	1.1964350	1.2401150		3.6	+/-20
Benzo(b)fluoranthene	A	2.5000	2.43	1.1648110	1.1308220		-2.9	+/-20
Benzo(k)fluoranthene	A	2.5000	2.50	1.1409370	1.1390980		-0.2	+/-20
Benzo(a)pyrene	A	2.5000	2.63	1.0250270	1.0773010		5.1	+/-20
Indeno(1,2,3-cd)pyrene	A	2.5000	2.75	1.1677520	1.2845510		10.0	+/-20
Dibenzo(a,h)anthracene	A	2.5000	2.75	1.0049440	1.1056670		10.0	+/-20
2-Methylnaphthalene-d10	A	2.5000	2.62	0.5454499	0.5707145		4.6	+/-20
Dibenzo[a,h]anthracene-d14	A	2.5000	2.42	0.6679424	0.7585108		-3.2	+/-20
Fluoranthene-d10	A	2.5000	2.58	0.8823923	0.9106613		3.2	+/-20
Naphthalene-d8	A	2.0000	2.00	22973.6700	1.0000		0.0	
Acenaphthene-d10	A	2.0000	2.00	13579.2500	1.0000		0.0	
Phenanthrene-d10	A	2.0000	2.00	25616.1700	1.0000		0.0	
Chrysene-d12	A	2.0000	2.00	22313.2500	1.0000		0.0	
Perylene-d12	A	2.0000	2.00	21012.9200	1.0000		0.0	

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020607A.D
Date : 06-FEB-2023 15:15
Client ID:
Sample Info: ICV230206

Instrument: nt8.i
Operator: JZ
Column phase: Rxi-17sil
Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020607A.D
Lab Smp Id: SLB0075-ICV1
Inj Date : 06-FEB-2023 15:15
Operator : JZ Inst ID: nt8.i
Smp Info : ICV230206
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 12:57 Jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 7 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.900	4.900	(1.000)	44336	2.00000	
	2 Naphthalene	128	4.928	4.928	(1.006)	51993	2.50000	2.522
$	3 2-Methylnaphthalene-d10	152	5.634	5.634	(1.150)	31629	2.50000	2.616
	4 2-Methylnaphthalene	141	5.681	5.681	(1.159)	29535	2.50000	2.605
	5 1-methylnaphthalene	141	5.880	5.880	(1.200)	29856	2.50000	2.594
	7 Biphenyl	154	6.339	6.339	(0.882)	43705	2.50000	2.536
	8 2,6-Dimethylnaphthalene	156	6.386	6.386	(0.888)	31894	2.50000	2.614
	9 Acenaphthylene	152	7.082	7.082	(0.985)	53491	2.50000	2.711
*	10 Acenaphthene-d10	164	7.189	7.189	(1.000)	26127	2.00000	
	11 Acenaphthene	153	7.240	7.240	(1.007)	33973	2.50000	2.570
	12 Dibenzofuran	168	7.392	7.392	(1.028)	49788	2.50000	2.480
	13 1,6,7-Trimethylnaphthalene	170	7.455	7.455	(1.037)	33062	2.50000	2.611
	14 Fluorene	166	7.869	7.869	(1.095)	40694	2.50000	2.610
	18 Dibenzothiophene	184	9.105	9.105	(0.986)	53838	2.50000	2.569
*	15 Phenanthrene-d10	188	9.232	9.232	(1.000)	47424	2.00000	
	16 Phenanthrene	178	9.267	9.267	(1.004)	57495	2.50000	2.482
	17 Anthracene	178	9.308	9.308	(1.008)	54725	2.50000	2.600
	19 Carbazole	167	9.823	9.823	(1.064)	48982	2.50000	2.539
	20 1-Methylphenanthrene	192	10.044	10.044	(1.088)	42941	2.50000	2.572
	22 Fluoranthene	202	11.050	11.050	(1.197)	62701	2.50000	2.487
$	21 Fluoranthene-d10	212	11.009	11.009	(1.192)	53984	2.50000	2.580
	23 Pyrene	202	11.569	11.569	(0.815)	63466	2.50000	2.782
	24 Benzo(a)anthracene	228	14.070	14.070	(0.991)	55086	2.50000	2.664
*	25 Chrysene-d12	240	14.202	14.202	(1.000)	36794	2.00000	
	27 Chrysene	228	14.275	14.275	(1.005)	57036	2.50000	2.591
	28 Benzo(b)fluoranthene	252	16.824	16.824	(0.929)	51786	2.50000	2.427
	29 Benzo(k)fluoranthene	252	16.887	16.887	(0.933)	52165	2.50000	2.496
	30 Benzo(j)fluoranthene	252	16.963	16.963	(0.937)	47288	2.50000	2.513
	31 Total Benzofluoranthenes	252	16.824	16.824	(0.929)	152122	7.50000	7.528(M)
	34 Benzo(e)pyrene	252	17.750	17.750	(0.980)	51675	2.50000	2.429
	32 Benzo(a)pyrene	252	17.877	17.877	(0.987)	49335	2.50000	2.627
*	33 Perylene-d12	264	18.107	18.107	(1.000)	36636	2.00000	
	35 Perylene	252	18.183	18.183	(1.004)	51027	2.50000	2.532

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.549	20.549	(1.135)	34736	2.50000	2.420
37 Indeno(1,2,3-cd)pyrene	276	20.684	20.684	(1.142)	58826	2.50000	2.750
38 Dibenzo(a,h)anthracene	278	20.666	20.666	(1.141)	50634	2.50000	2.751
39 Benzo(g,h,i)perylene	276	21.763	21.763	(1.202)	50628	2.50000	2.612

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020607A.D
Lab Smp Id: SLB0075-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 11:54
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44704	22352	89408	44336	-0.82
10 Acenaphthene-d10	26411	13206	52822	26127	-1.08
15 Phenanthrene-d10	49210	24605	98420	47424	-3.63
25 Chrysene-d12	42994	21497	85988	36794	-14.42
33 Perylene-d12	40520	20260	81040	36636	-9.59

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.90	0.00
10 Acenaphthene-d10	7.19	6.69	7.69	7.19	0.00
15 Phenanthrene-d10	9.23	8.73	9.73	9.23	0.00
25 Chrysene-d12	14.20	13.70	14.70	14.20	0.00
33 Perylene-d12	18.11	17.61	18.61	18.11	0.00

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

REVIEW SUMMARY FOR FILE - N823020607A.D

Lab ID: SLB0075-ICV1
nt8.i, 20230206A.b\FSIMPNA230119.m,   06-FEB-2023 15:15

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

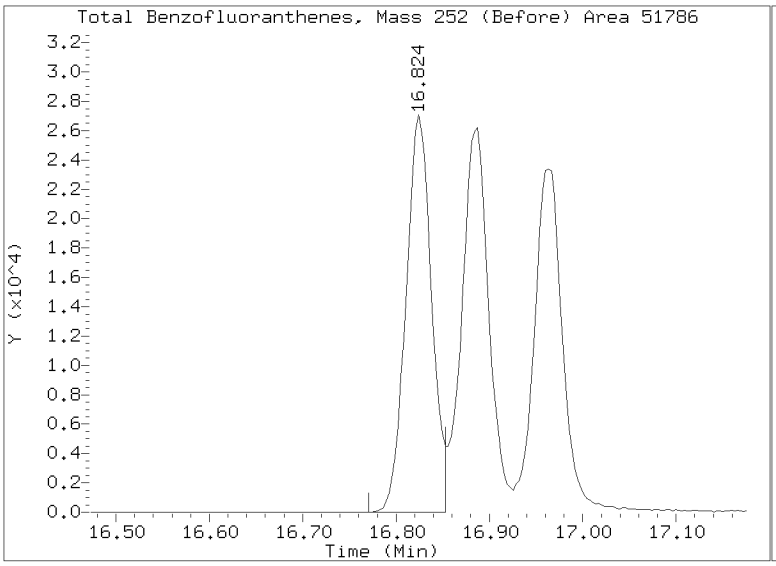
No RRT check performed

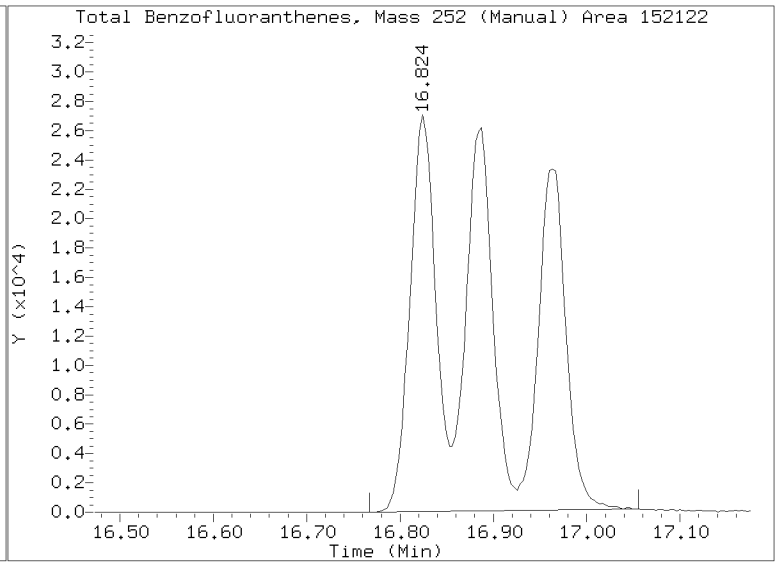
On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, FSIMPNAICLA.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230206A.b/N823020607A.D
Injection Date: 06-FEB-2023 15:15
Lab ID:SLB0075-ICV1 Client ID:
Report Date: 02/07/2023 12:57





Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230206A.b

Instrument: nt8.i Date: 06-FEB-2023 Method: 20230206A.b\FSIMPNA230119.m

INITIAL CAL: 19-JAN-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: N823020607A.D 06-FEB-2023 15:15

Compound	%D
NO Q-FLAGS	

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E-SIM

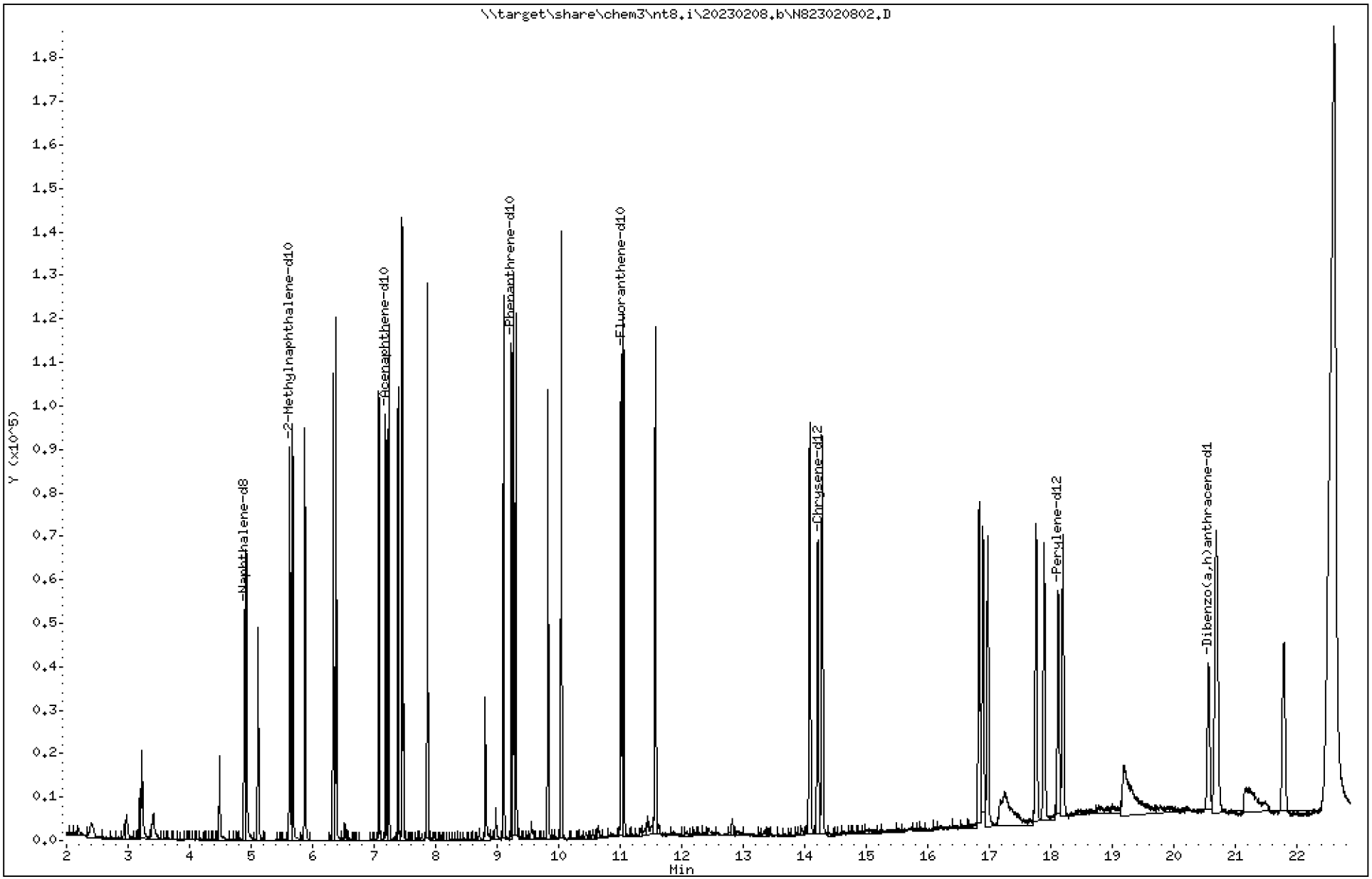
Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT8	Calibration:	GA00050
Lab File ID:	N823020802.D	Calibration Date:	01/19/2023
Sequence:	SLB0101	Injection Date:	02/08/23
Lab Sample ID:	SLB0101-ICV1	Injection Time:	12:05
Sequence Name:	Initial Cal Check		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Naphthalene	A	2.5000	2.56	0.9299181	0.9516451		2.3	+/-20
2-Methylnaphthalene	A	2.5000	2.63	0.5115033	0.5377570		5.1	+/-20
1-Methylnaphthalene	A	2.5000	2.62	0.5191318	0.5449758		5.0	+/-20
Acenaphthylene	A	2.5000	2.75	1.5102600	1.6582950		9.8	+/-20
Acenaphthene	A	2.5000	2.57	1.0119150	1.0399460		2.8	+/-20
Dibenzofuran	A	2.5000	2.50	1.5369690	1.5394020		0.2	+/-20
Fluorene	A	2.5000	2.66	1.1937240	1.2716740		6.5	+/-20
Phenanthrene	A	2.5000	2.46	0.9769567	0.9593685		-1.8	+/-20
Anthracene	A	2.5000	2.66	0.8874960	0.9441760		6.4	+/-20
Fluoranthene	A	2.5000	2.53	1.0634260	1.0780710		1.4	+/-20
Pyrene	A	2.5000	2.70	1.2399700	1.3403690		8.1	+/-20
Benzo(a)anthracene	A	2.5000	2.87	1.1238870	1.2879900		14.6	+/-20
Chrysene	A	2.5000	2.47	1.1964350	1.1799050		-1.4	+/-20
Benzo(b)fluoranthene	A	2.5000	2.72	1.1648110	1.2692850		9.0	+/-20
Benzo(k)fluoranthene	A	2.5000	2.58	1.1409370	1.1774050		3.2	+/-20
Benzo(j)fluoranthene	A	2.5000	2.54	1.0271120	1.0440610		1.6	+/-20
Benzofluoranthenes, Total	A	7.5000	7.88	1.1031370	1.1589790		5.1	+/-20
Benzo(a)pyrene	A	2.5000	2.58	1.0250270	1.0592130		3.3	+/-20
Indeno(1,2,3-cd)pyrene	A	2.5000	2.47	1.1677520	1.1514770		-1.4	+/-20
Dibenzo(a,h)anthracene	A	2.5000	2.56	1.0049440	1.0286260		2.4	+/-20
Benzo(g,h,i)perylene	A	2.5000	2.62	1.0580110	1.1095480		4.9	+/-20
2-Methylnaphthalene-d10	A	2.5000	2.68	0.5454499	0.5839606		7.1	+/-20
Dibenzo[a,h]anthracene-d14	A	2.5000	2.35	0.6679424	0.7369237		-6.0	+/-20
Fluoranthene-d10	A	2.5000	2.72	0.8823923	0.9607413		8.9	
Naphthalene-d8	A	2.0000	2.00	22973.6700	1.0000		0.0	
Acenaphthene-d10	A	2.0000	2.00	13579.2500	1.0000		0.0	
Phenanthrene-d10	A	2.0000	2.00	25616.1700	1.0000		0.0	
Chrysene-d12	A	2.0000	2.00	22313.2500	1.0000		0.0	
Perylene-d12	A	2.0000	2.00	21012.9200	1.0000		0.0	

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230208.b\N823020802.D
Date : 08-FEB-2023 12:05
Client ID:
Sample Info: ICV230208

Instrument: nt8.i
Operator: JZ
Column phase: Rxi-17sil
Column diameter: 0.25



23A0207 CLPLIKE (Rev3) - Page 1022 of 3315

ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230208.b\N823020802.D
Lab Smp Id: SLB0101-ICV1
Inj Date : 08-FEB-2023 12:05
Operator : JZ Inst ID: nt8.i
Smp Info : ICV230208
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230208.b\FSIMPNA230119.m
Meth Date : 08-Feb-2023 13:16 Jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	1 Naphthalene-d8	136	4.894	4.894	(1.000)	47321	2.00000	
	2 Naphthalene	128	4.922	4.922	(1.006)	56291	2.50000	2.558
$	3 2-Methylnaphthalene-d10	152	5.627	5.627	(1.150)	34542	2.50000	2.677
	4 2-Methylnaphthalene	141	5.678	5.678	(1.160)	31809	2.50000	2.628
	5 1-methylnaphthalene	141	5.874	5.874	(1.200)	32236	2.50000	2.624
	7 Biphenyl	154	6.339	6.339	(0.882)	47223	2.50000	2.544
	8 2,6-Dimethylnaphthalene	156	6.383	6.383	(0.888)	34946	2.50000	2.660
	9 Acenaphthylene	152	7.079	7.079	(0.985)	58316	2.50000	2.745
*	10 Acenaphthene-d10	164	7.189	7.189	(1.000)	28133	2.00000	
	11 Acenaphthene	153	7.240	7.240	(1.007)	36571	2.50000	2.569
	12 Dibenzofuran	168	7.392	7.392	(1.028)	54135	2.50000	2.504
	13 1,6,7-Trimethylnaphthalene	170	7.455	7.455	(1.037)	35547	2.50000	2.607
	14 Fluorene	166	7.869	7.869	(1.095)	44720	2.50000	2.663
	18 Dibenzothiophene	184	9.105	9.105	(0.986)	59846	2.50000	2.582
*	15 Phenanthrene-d10	188	9.232	9.232	(1.000)	52447	2.00000	
	16 Phenanthrene	178	9.270	9.270	(1.004)	62895	2.50000	2.455
	17 Anthracene	178	9.308	9.308	(1.008)	61899	2.50000	2.660
	19 Carbazole	167	9.826	9.826	(1.064)	56565	2.50000	2.651
	20 1-Methylphenanthrene	192	10.048	10.048	(1.088)	48607	2.50000	2.633
	22 Fluoranthene	202	11.056	11.056	(1.198)	70677	2.50000	2.534
$	21 Fluoranthene-d10	212	11.018	11.018	(1.194)	62985	2.50000	2.722
	23 Pyrene	202	11.575	11.575	(0.814)	72906	2.50000	2.702
	24 Benzo(a)anthracene	228	14.086	14.086	(0.991)	70057	2.50000	2.865
*	25 Chrysene-d12	240	14.215	14.215	(1.000)	43514	2.00000	
	27 Chrysene	228	14.288	14.288	(1.005)	64178	2.50000	2.465
	28 Benzo(b)fluoranthene	252	16.843	16.843	(0.929)	62663	2.50000	2.724
	29 Benzo(k)fluoranthene	252	16.903	16.903	(0.932)	58127	2.50000	2.580
	30 Benzo(j)fluoranthene	252	16.982	16.982	(0.937)	51544	2.50000	2.541
	31 Total Benzofluoranthenes	252	16.843	16.843	(0.929)	171652	7.50000	7.880(M)
	34 Benzo(e)pyrene	252	17.766	17.766	(0.980)	56603	2.50000	2.468
	32 Benzo(a)pyrene	252	17.899	17.899	(0.987)	52292	2.50000	2.583
*	33 Perylene-d12	264	18.127	18.127	(1.000)	39495	2.00000	
	35 Perylene	252	18.206	18.206	(1.004)	52064	2.50000	2.397

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.568	20.568	(1.135)	36381	2.50000	2.351
37 Indeno(1,2,3-cd)pyrene	276	20.707	20.707	(1.142)	56847	2.50000	2.465
38 Dibenzo(a,h)anthracene	278	20.688	20.688	(1.141)	50782	2.50000	2.559
39 Benzo(g,h,i)perylene	276	21.798	21.798	(1.203)	54777	2.50000	2.622

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020802.D
Lab Smp Id: SLB0101-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230208.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44704	22352	89408	47321	5.85
10 Acenaphthene-d10	26411	13206	52822	28133	6.52
15 Phenanthrene-d10	49210	24605	98420	52447	6.58
25 Chrysene-d12	42994	21497	85988	43514	1.21
33 Perylene-d12	40520	20260	81040	39495	-2.53

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.89	4.39	5.39	4.89	0.00
10 Acenaphthene-d10	7.19	6.69	7.69	7.19	0.00
15 Phenanthrene-d10	9.23	8.73	9.73	9.23	0.00
25 Chrysene-d12	14.22	13.72	14.72	14.22	0.00
33 Perylene-d12	18.13	17.63	18.63	18.13	0.00

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

REVIEW SUMMARY FOR FILE - N823020802.D

Lab ID: SLB0101-ICV1
nt8.i, 20230208.b\FSIMPNA230119.m,   08-FEB-2023 12:05

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

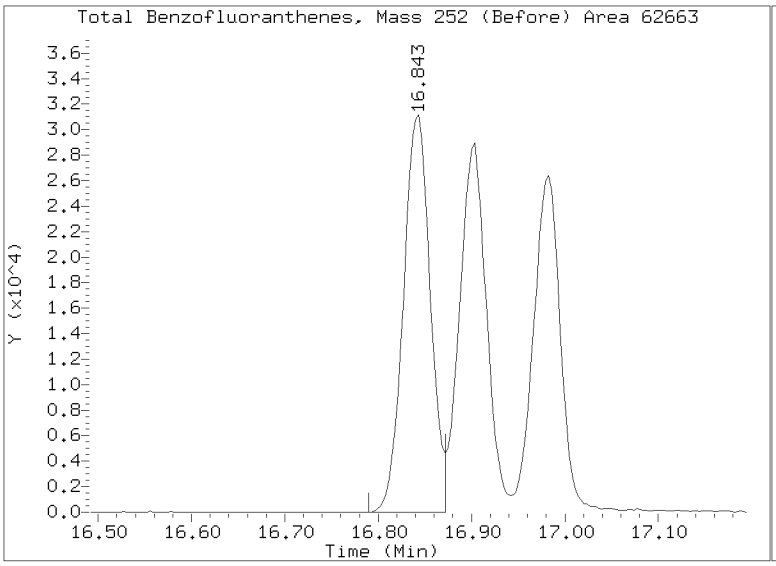
No RRT check performed

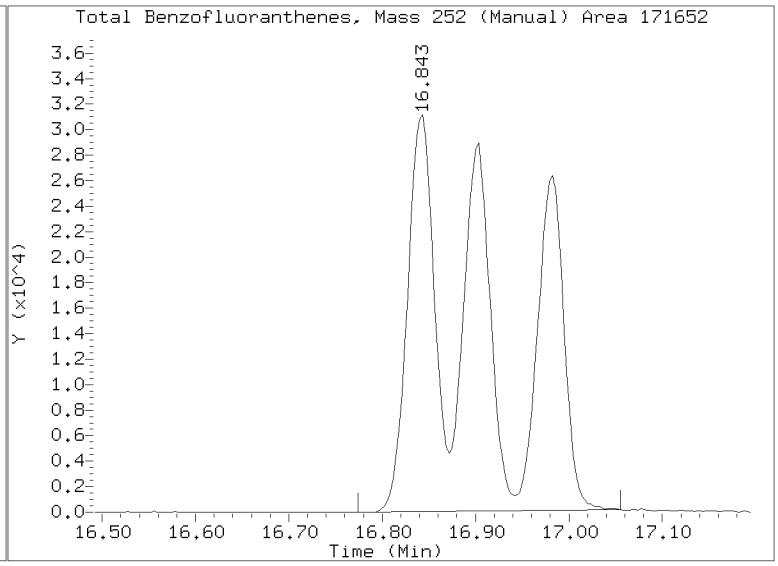
On Column LOD for nt8.i, 20230208.b\FSIMPNA230119.m, FSIMPNAICLA.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230208.b/N823020802.D
Injection Date: 08-FEB-2023 12:05
Lab ID:SLB0101-ICV1 Client ID:
Report Date: 02/08/2023 13:16





Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230208.b

Instrument: nt8.i Date: 08-FEB-2023 Method: 20230208.b\FSIMPNA230119.m

INITIAL CAL: 19-JAN-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: N823020802.D 08-FEB-2023 12:05

Compound	%D
NO Q-FLAGS	

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT8	Calibration:	GD00068
Lab File ID:	N823053002.D	Calibration Date:	04/26/2023
Sequence:	SLE0448	Injection Date:	05/30/23
Lab Sample ID:	SLE0448-ICV1	Injection Time:	11:43
Sequence Name:	Initial Cal Check		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Naphthalene	A	2.5000	2.47	1.0189360	1.0080900		-1.1	+/-20
2-Methylnaphthalene	A	2.5000	2.46	0.5785221	0.5685430		-1.7	+/-20
1-Methylnaphthalene	A	2.5000	2.49	0.5736076	0.5709590		-0.5	+/-20
Acenaphthylene	A	2.5000	2.51	1.7705370	1.7757330		0.3	+/-20
Acenaphthene	A	2.5000	2.42	1.1471200	1.1114030		-3.1	+/-20
Dibenzofuran	A	2.5000	2.38	1.7229440	1.6431190		-4.6	+/-20
Fluorene	A	2.5000	2.46	1.3750310	1.3509840		-1.8	+/-20
Phenanthrene	A	2.5000	2.40	1.0593530	1.0152430		-4.2	+/-20
Anthracene	A	2.5000	2.57	0.9935358	1.0211240		2.8	+/-20
Fluoranthene	A	2.5000	2.16	1.2184160	1.0514440		-13.7	+/-20
Pyrene	A	2.5000	2.55	1.2804750	1.3037450		1.8	+/-20
Benzo(a)anthracene	A	2.5000	2.55	1.3157630	1.3406760		1.9	+/-20
Chrysene	A	2.5000	2.38	1.2925870	1.2313370		-4.7	+/-20
Benzo(b)fluoranthene	A	2.5000	2.45	1.3038540	1.2783680		-2.0	+/-20
Benzo(k)fluoranthene	A	2.5000	2.49	1.2284610	1.2219320		-0.5	+/-20
Benzo(j)fluoranthene	A	2.5000	2.39	1.1350320	1.0843610		-4.5	+/-20
Benzofluoranthenes, Total	A	7.5000	7.29	1.2124900	1.1779		-2.9	+/-20
Benzo(a)pyrene	A	2.5000	2.38	1.1333570	1.0795560		-4.8	+/-20
Indeno(1,2,3-cd)pyrene	A	2.5000	2.58	1.1536650	1.1923730		3.4	+/-20
Dibenzo(a,h)anthracene	A	2.5000	2.60	1.0244260	1.0656980		4.0	+/-20
Benzo(g,h,i)perylene	A	2.5000	2.79	1.0686540	1.1911990		11.5	+/-20
2-Methylnaphthalene-d10	A	2.5000	2.53	0.6176995	0.6237933		1.0	+/-20
Dibenzo[a,h]anthracene-d14	A	2.5000	2.61	0.7635682	0.7955298		4.2	+/-20
Fluoranthene-d10	A	2.5000	2.21	1.0796020	0.9535606		-11.7	
Naphthalene-d8	A	2.0000	2.00	9130.5000	1.0000		0.0	
Acenaphthene-d10	A	2.0000	2.00	5227.0000	1.0000		0.0	
Phenanthrene-d10	A	2.0000	2.00	10115.1700	1.0000		0.0	
Chrysene-d12	A	2.0000	2.00	10064.7500	1.0000		0.0	
Perylene-d12	A	2.0000	2.00	10223.5800	1.0000		0.0	

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230530.b\N823053002.D

Date : 30-MAY-2023 11:43

Client ID:

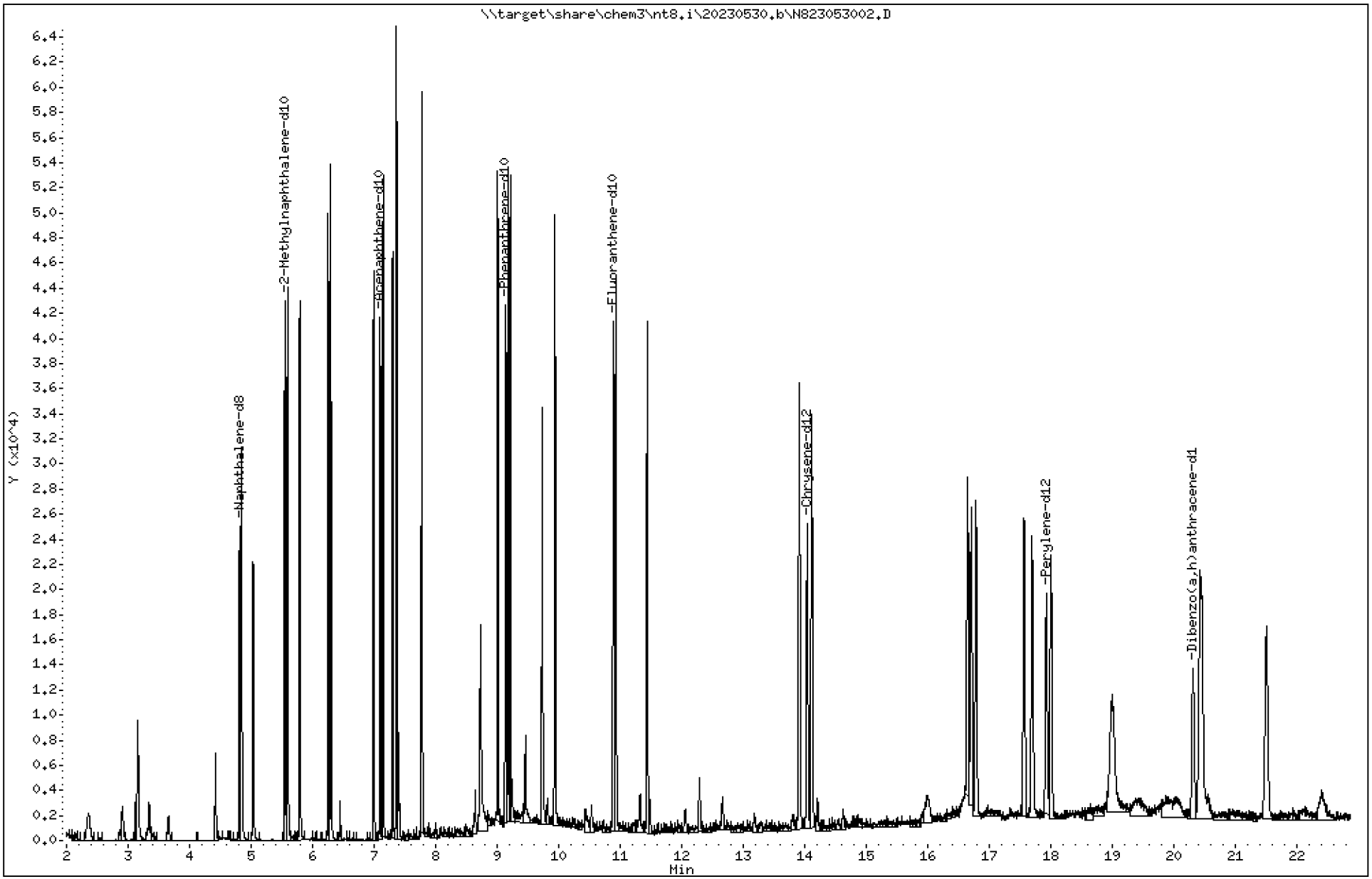
Instrument: nt8.i

Sample Info: ICV230530

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



23A0207 CLPLIKE (Rev3) - Page 1030 of 3315

ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230530.b\N823053002.D
Lab Smp Id: SLE0448-ICV1
Inj Date : 30-MAY-2023 11:43
Operator : JZ Inst ID: nt8.i
Smp Info : ICV230530
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230530.b\FSIMPNA230426.m
Meth Date : 30-May-2023 16:25 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQINGZ-20191

								AMOUNTS	
		QUANT SIG						CAL-AMT	ON-COL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE		(ug/mL)	(ug/mL)
*	1 Naphthalene-d8	136	4.815	4.815	(1.000)	20199		2.00000	
	2 Naphthalene	128	4.843	4.843	(1.006)	25453		2.50000	2.473
$	3 2-Methylnaphthalene-d10	152	5.548	5.548	(1.152)	15750		2.50000	2.525
	4 2-Methylnaphthalene	141	5.596	5.596	(1.162)	14355		2.50000	2.457
	5 1-methylnaphthalene	141	5.792	5.792	(1.203)	14416		2.50000	2.488
	7 Biphenyl	154	6.253	6.253	(0.881)	21401		2.50000	2.310
	8 2,6-Dimethylnaphthalene	156	6.298	6.298	(0.887)	16045		2.50000	2.433
	9 Acenaphthylene	152	6.990	6.990	(0.984)	26727		2.50000	2.507
*	10 Acenaphthene-d10	164	7.101	7.101	(1.000)	12041		2.00000	
	11 Acenaphthene	153	7.148	7.148	(1.007)	16728		2.50000	2.422
	12 Dibenzofuran	168	7.300	7.300	(1.028)	24731		2.50000	2.384
	13 1,6,7-Trimethylnaphthalene	170	7.366	7.366	(1.037)	16295		2.50000	2.484
	14 Fluorene	166	7.777	7.777	(1.095)	20334		2.50000	2.456
	18 Dibenzothiophene	184	9.011	9.011	(0.986)	24222		2.50000	2.571
*	15 Phenanthrene-d10	188	9.137	9.137	(1.000)	19182		2.00000	
	16 Phenanthrene	178	9.172	9.172	(1.004)	24343		2.50000	2.396
	17 Anthracene	178	9.213	9.213	(1.008)	24484		2.50000	2.569
	19 Carbazole	167	9.732	9.732	(1.065)	18766		2.50000	2.062
	20 1-Methylphenanthrene	192	9.940	9.940	(1.088)	16445		2.50000	2.134
	22 Fluoranthene	202	10.930	10.930	(1.196)	25211		2.50000	2.157
$	21 Fluoranthene-d10	212	10.892	10.892	(1.192)	22864		2.50000	2.208
	23 Pyrene	202	11.439	11.439	(0.814)	25982		2.50000	2.545
	24 Benzo(a)anthracene	228	13.915	13.915	(0.991)	26718		2.50000	2.547
*	25 Chrysene-d12	240	14.044	14.044	(1.000)	15943		2.00000	
	27 Chrysene	228	14.117	14.117	(1.005)	24539		2.50000	2.382
	28 Benzo(b)fluoranthene	252	16.653	16.653	(0.929)	22878		2.50000	2.451
	29 Benzo(k)fluoranthene	252	16.713	16.713	(0.932)	21868		2.50000	2.487
	30 Benzo(j)fluoranthene	252	16.789	16.789	(0.936)	19406		2.50000	2.388
	31 Total Benzofluoranthenes	252	16.653	16.653	(0.929)	63240		7.50000	7.286(M)
	34 Benzo(e)pyrene	252	17.573	17.573	(0.980)	20439		2.50000	2.344
	32 Benzo(a)pyrene	252	17.700	17.700	(0.987)	19320		2.50000	2.381
*	33 Perylene-d12	264	17.931	17.931	(1.000)	14317		2.00000	
	35 Perylene	252	18.010	18.010	(1.004)	19294		2.50000	2.368

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.315	20.315	(1.133)	14237	2.50000	2.605
37 Indeno(1,2,3-cd)pyrene	276	20.457	20.457	(1.141)	21339	2.50000	2.584
38 Dibenzo(a,h)anthracene	278	20.432	20.432	(1.139)	19072	2.50000	2.601
39 Benzo(g,h,i)perylene	276	21.510	21.510	(1.200)	21318	2.50000	2.787

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823053002.D
Lab Smp Id: SLE0448-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230530.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 24-MAY-2023
Calibration Time: 10:47
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	20199	8.02
10 Acenaphthene-d10	10729	5365	21458	12041	12.23
15 Phenanthrene-d10	20748	10374	41496	19182	-7.55
25 Chrysene-d12	20954	10477	41908	15943	-23.91
33 Perylene-d12	21563	10782	43126	14317	-33.60

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.82	4.32	5.32	4.82	0.00
10 Acenaphthene-d10	7.10	6.60	7.60	7.10	0.00
15 Phenanthrene-d10	9.14	8.64	9.64	9.14	0.00
25 Chrysene-d12	14.04	13.54	14.54	14.04	0.00
33 Perylene-d12	17.93	17.43	18.43	17.93	0.00

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

REVIEW SUMMARY FOR FILE - N823053002.D

Lab ID: SLE0448-ICV1
nt8.i, 20230530.b\FSIMPNA230426.m,   30-MAY-2023 11:43

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

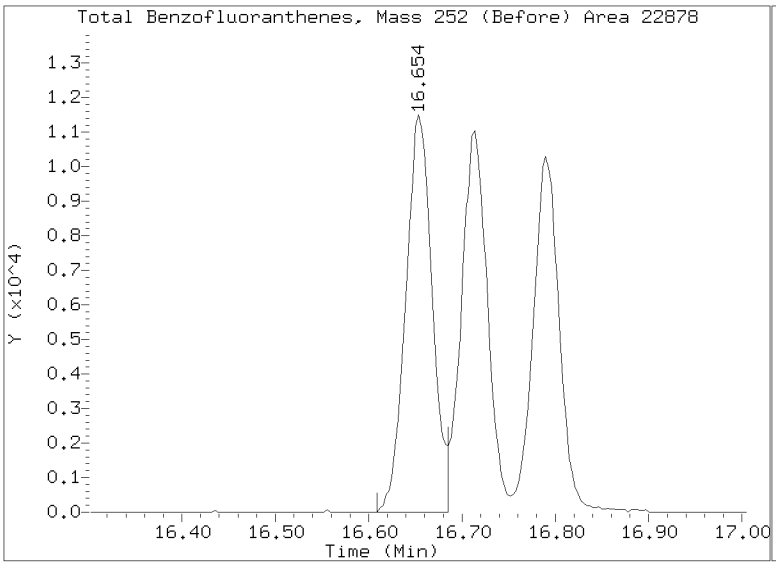
No RRT check performed

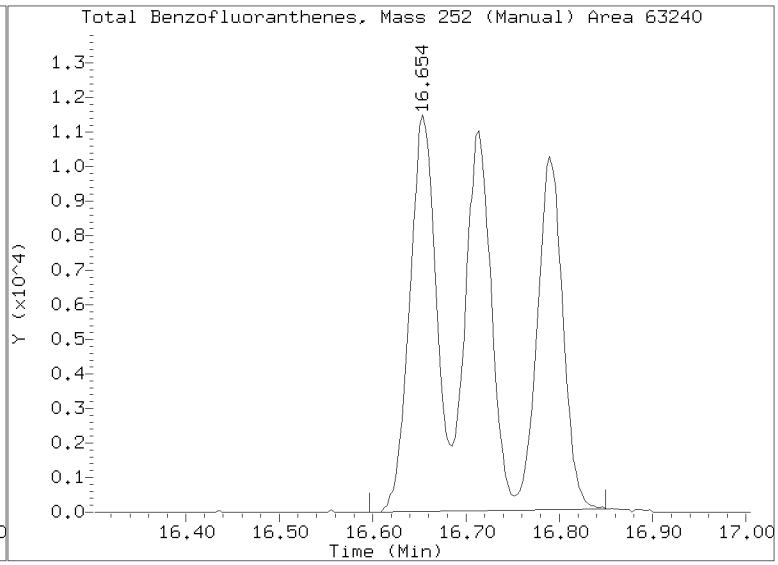
On Column LOD for nt8.i, 20230530.b\FSIMPNA230426.m, FSIMPNAICLA.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230530.b/N823053002.D
Injection Date: 30-MAY-2023 11:43
Lab ID:SLE0448-ICV1 Client ID:
Report Date: 05/30/2023 16:25





Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230530.b

Instrument: nt8.i Date: 30-MAY-2023 Method: 20230530.b\FSIMPNA230426.m

INITIAL CAL: 26-APR-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: N823053002.D 30-MAY-2023 11:43

Compound	%D
NO Q-FLAGS	

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT8	Calibration:	GA00050
Lab File ID:	N823011909.D	Calibration Date:	01/19/2023
Sequence:	SLA0213	Injection Date:	01/19/23
Lab Sample ID:	SLA0213-SCV1	Injection Time:	14:58
Sequence Name:	8270 SIM PNA SCV		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Naphthalene	A	2.5000	2.63	0.9299181	0.9767747		5.0	
2-Methylnaphthalene	A	2.5000	2.67	0.5115033	0.5463255		6.8	
1-Methylnaphthalene	A	2.5000	2.65	0.5191318	0.5501748		6.0	
Acenaphthylene	A	2.5000	2.82	1.5102600	1.7039370		12.8	
Acenaphthene	A	2.5000	2.60	1.0119150	1.0524810		4.0	
Dibenzofuran	A	2.5000	2.86	1.5369690	1.7582160		14.4	
Fluorene	A	2.5000	2.63	1.1937240	1.2561120		5.2	
Phenanthrene	A	2.5000	2.45	0.9769567	0.9567960		-2.1	
Anthracene	A	2.5000	2.27	0.8874960	0.8058663		-9.2	
Fluoranthene	A	2.5000	2.65	1.0634260	1.1284050		6.1	
Pyrene	A	2.5000	2.46	1.2399700	1.2213300		-1.5	
Benzo(a)anthracene	A	2.5000	2.59	1.1238870	1.1631100		3.5	
Chrysene	A	2.5000	2.40	1.1964350	1.1484610		-4.0	
Benzo(b)fluoranthene	A	2.5000	2.51	1.1648110	1.1680230		0.3	
Benzo(k)fluoranthene	A	2.5000	2.66	1.1409370	1.2121600		6.2	
Benzofluoranthenes, Total	A	5.0000	5.48	1.1031370	1.2090940		9.6	
Benzo(a)pyrene	A	2.5000	2.57	1.0250270	1.0545670		2.9	
Indeno(1,2,3-cd)pyrene	A	2.5000	2.69	1.1677520	1.2561630		7.6	
Dibenzo(a,h)anthracene	A	2.5000	2.49	1.0049440	1.0021900		-0.3	
Benzo(g,h,i)perylene	A	2.5000	2.48	1.0580110	1.0506380		-0.7	

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

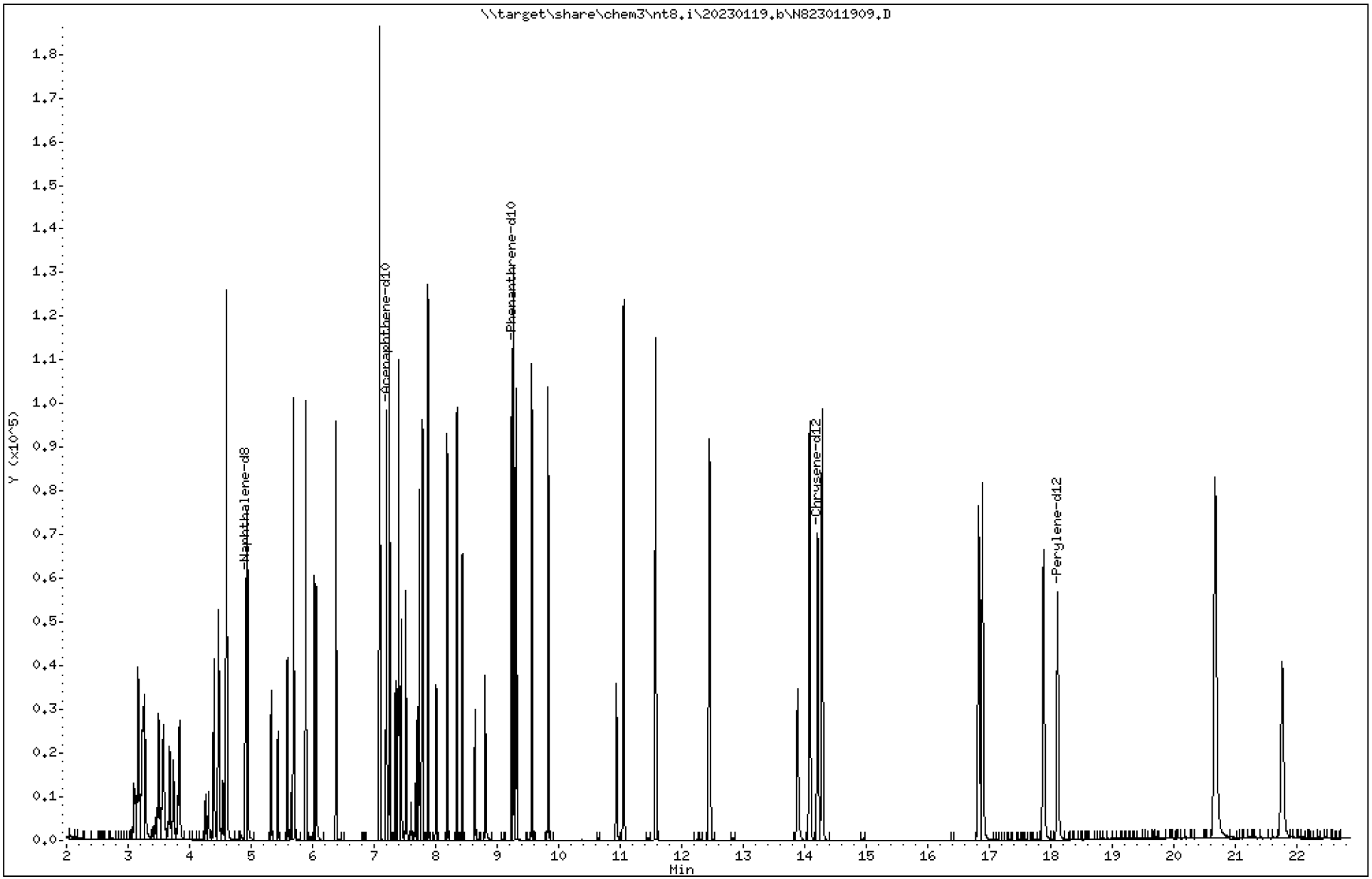
Sample Info: SCV230119

Volume Injected (uL): 1.0

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



23A0207 CLPLIKE (Rev3) - Page 1038 of 3315

Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

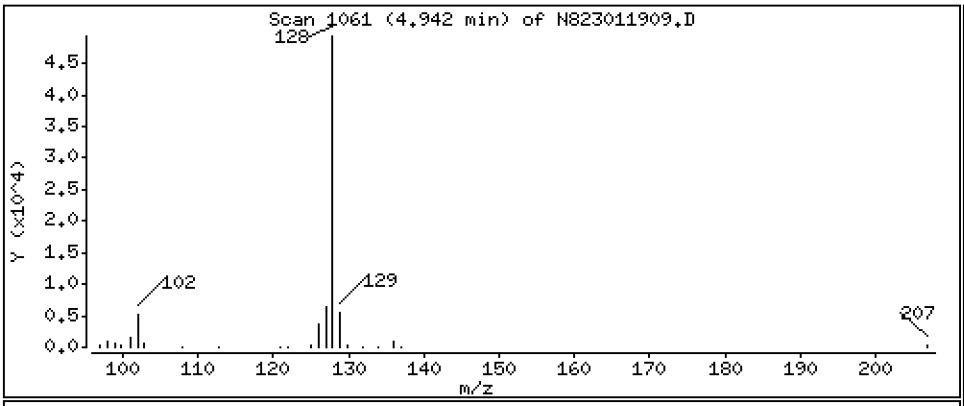
Operator: JZ

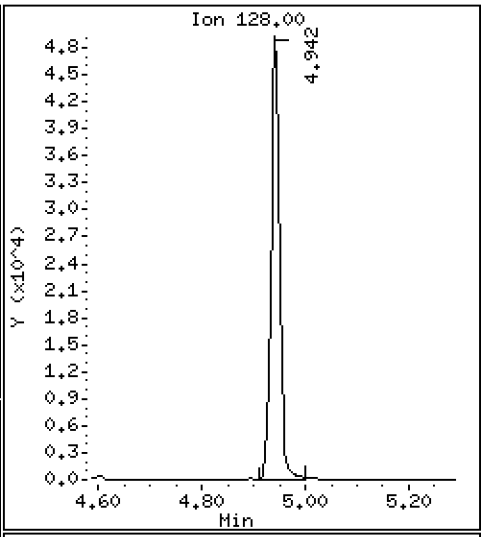
Column phase: Rxi-17sil

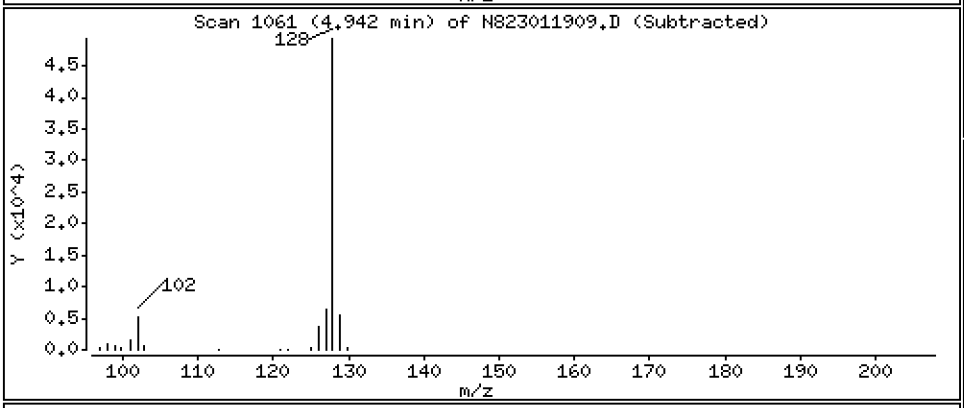
Column diameter: 0.25

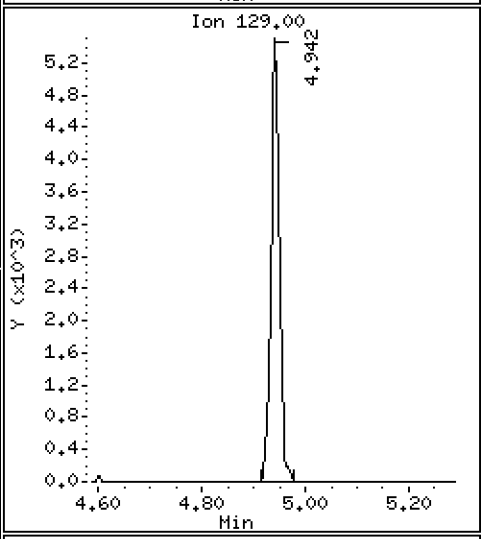
2 Naphthalene

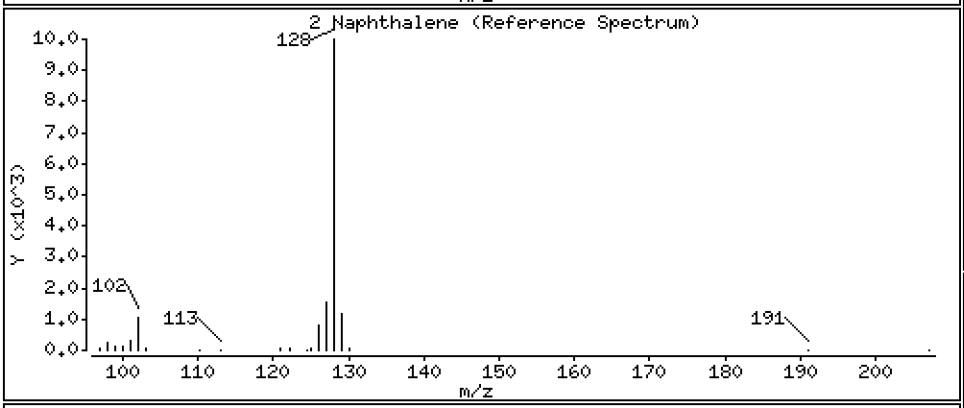
Concentration: 2.626 ug/L

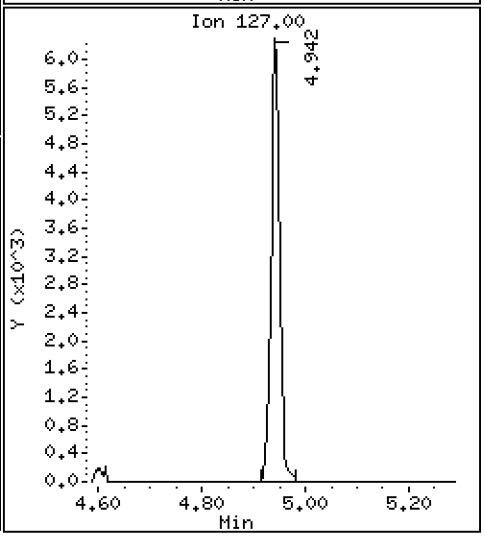


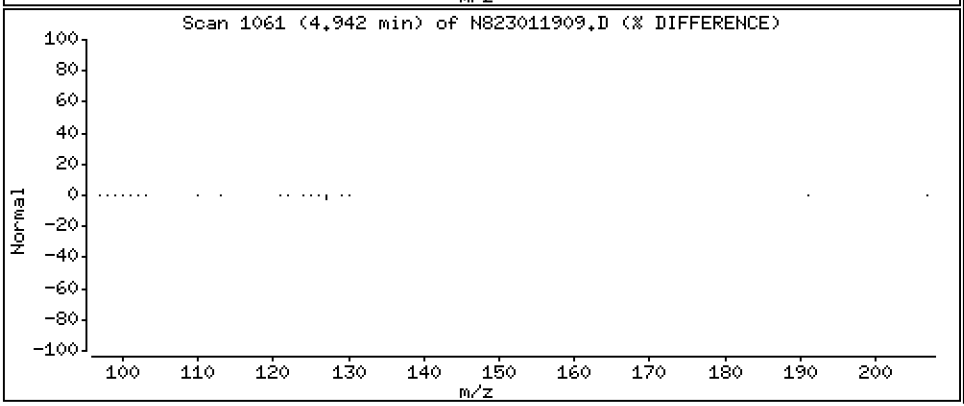












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

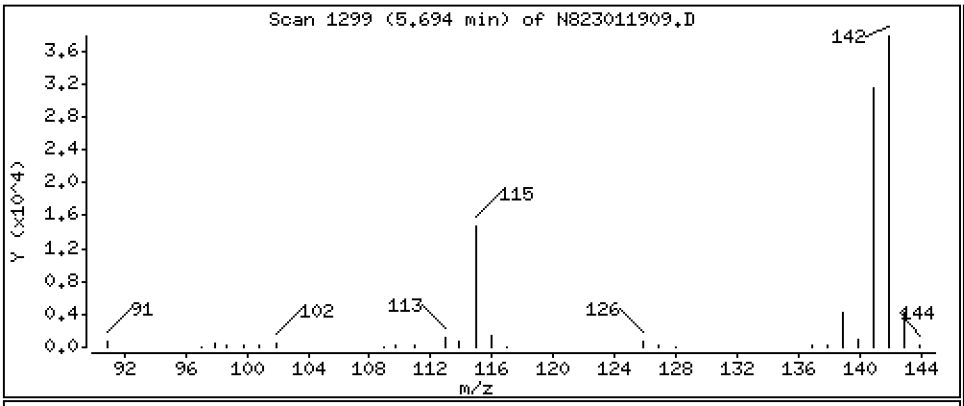
Operator: JZ

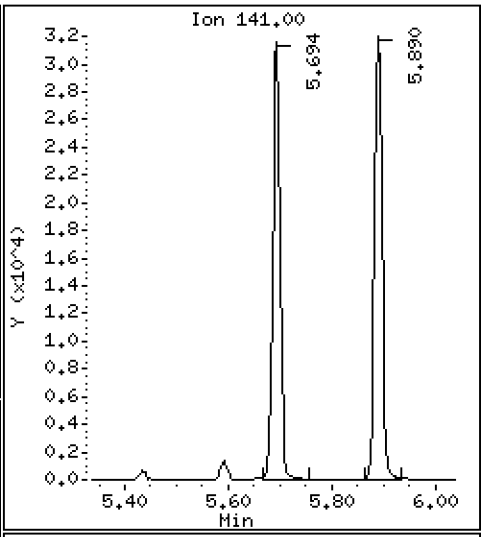
Column phase: Rxi-17sil

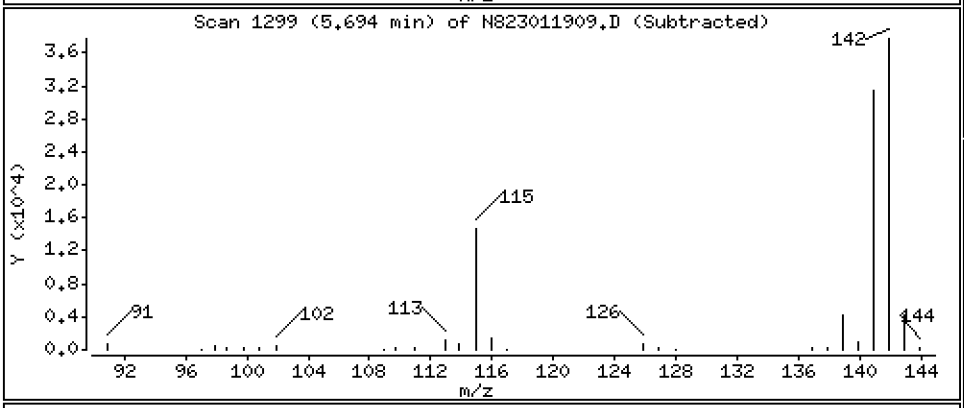
Column diameter: 0.25

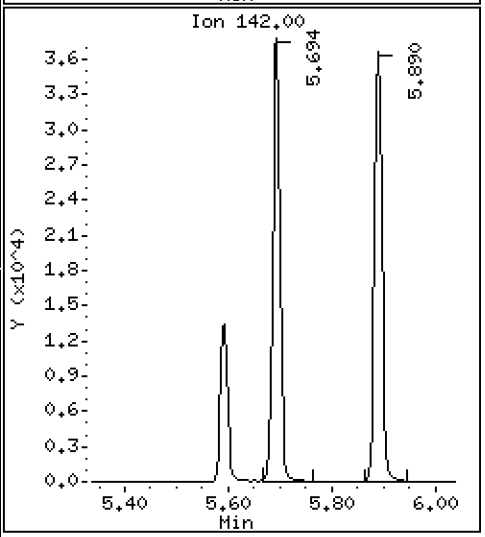
4 2-Methylnaphthalene

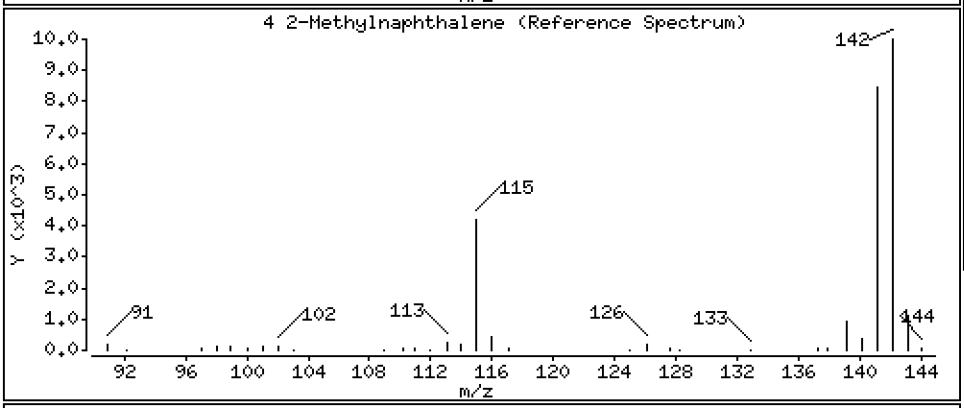
Concentration: 2.670 ug/L

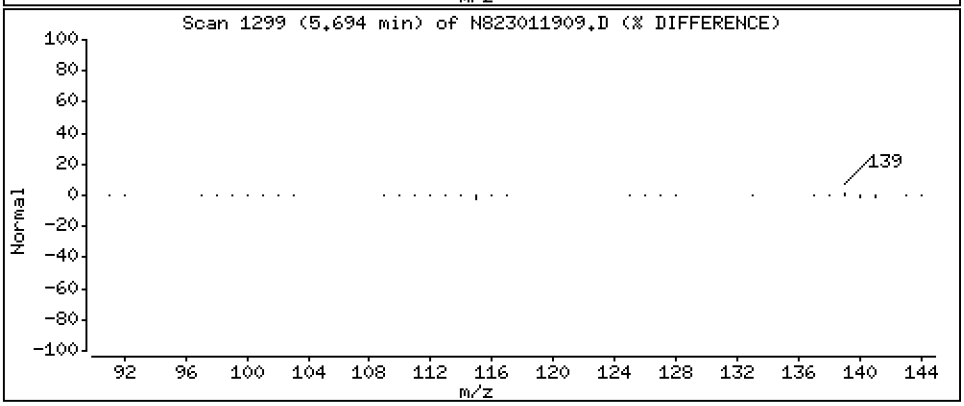












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

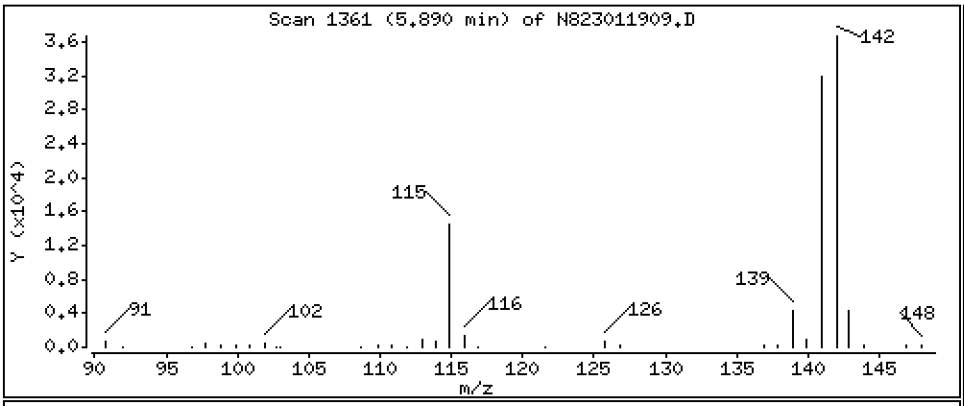
Operator: JZ

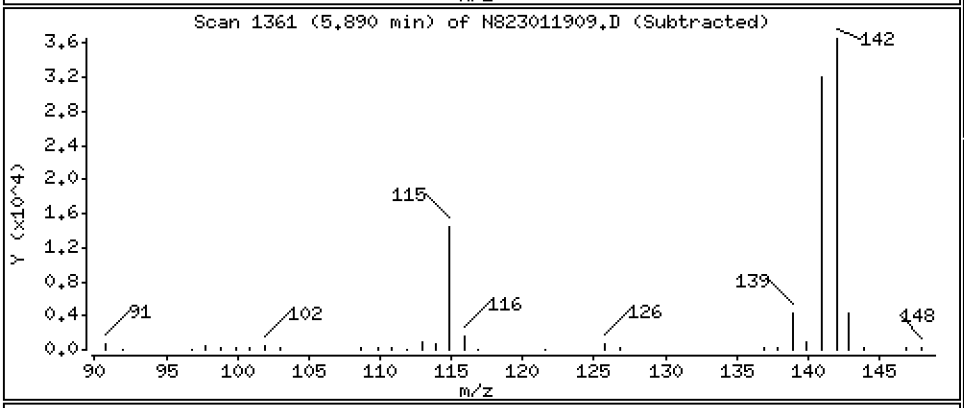
Column phase: Rxi-17sil

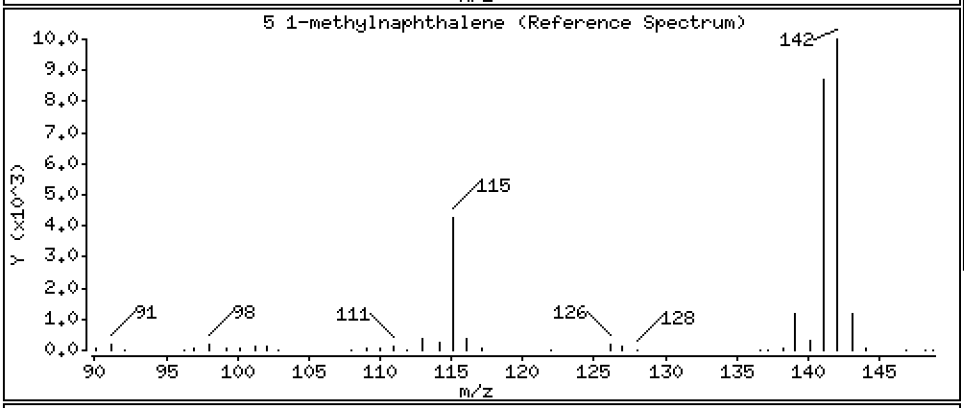
Column diameter: 0.25

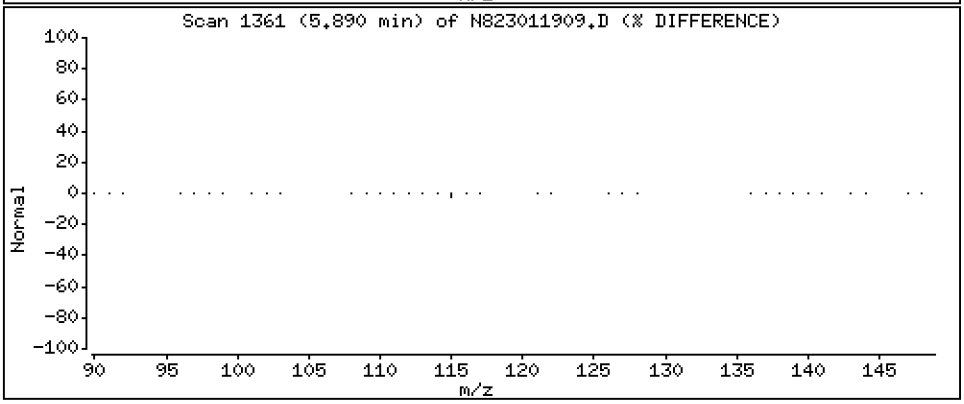
5 1-methylnaphthalene

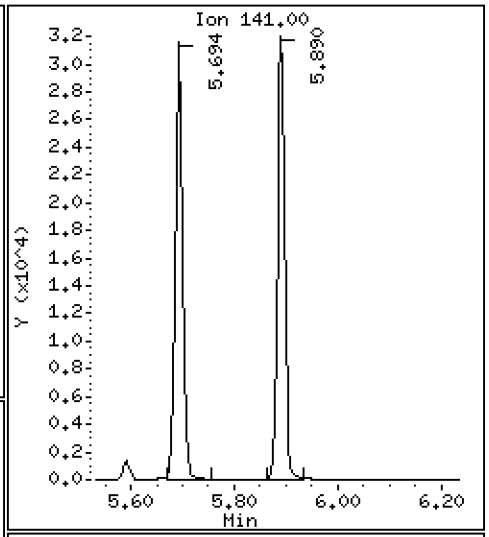
Concentration: 2.649 ug/L

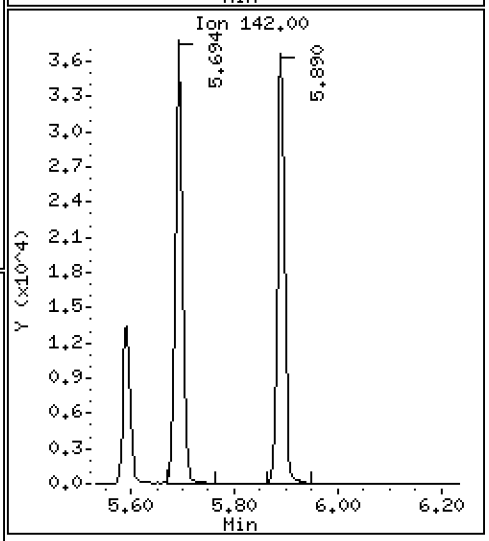












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

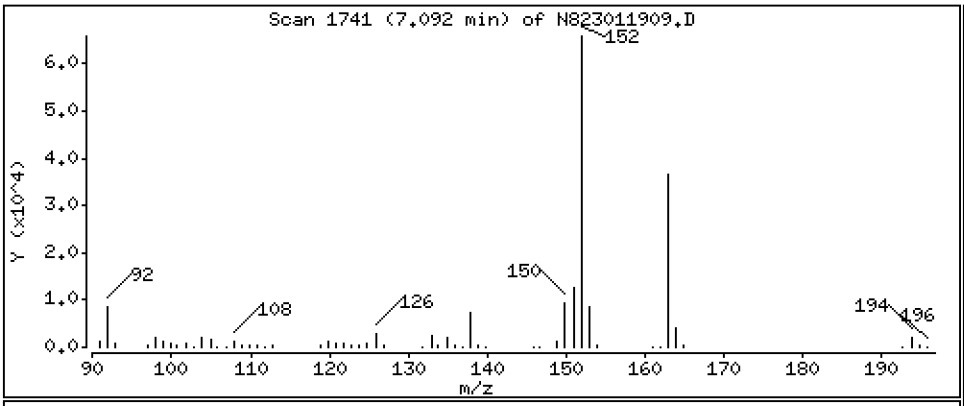
Operator: JZ

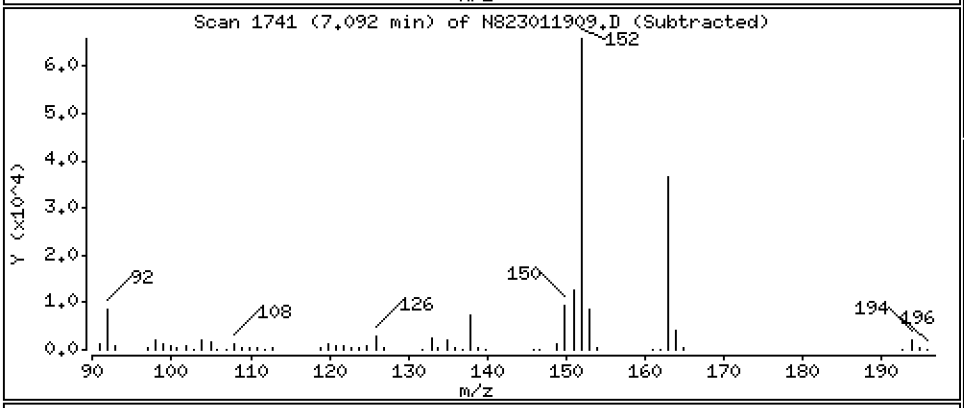
Column phase: Rxi-17sil

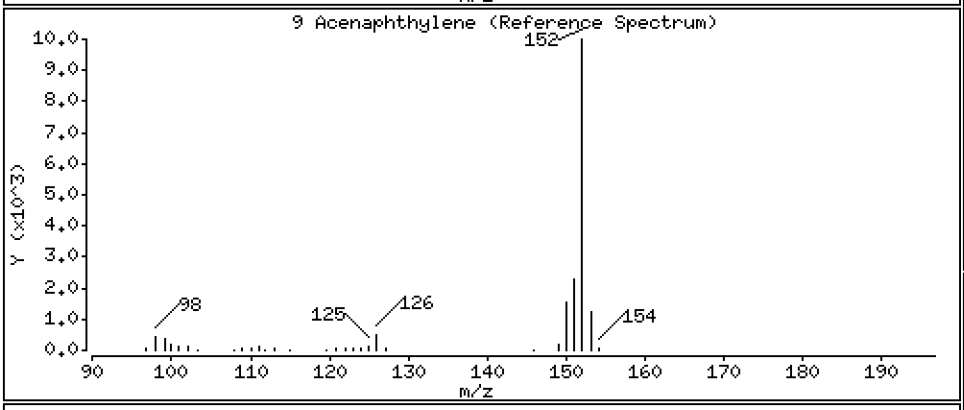
Column diameter: 0.25

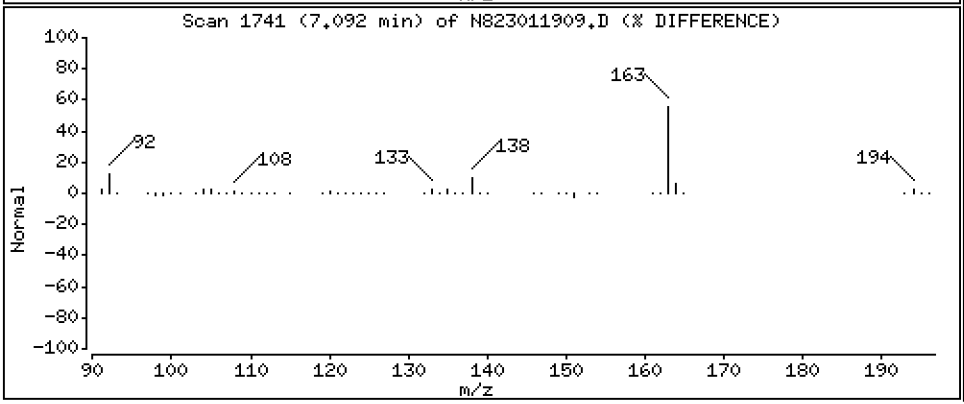
9 Acenaphthylene

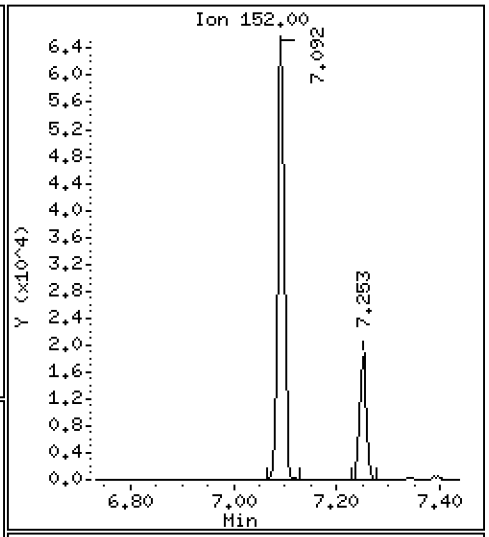
Concentration: 2.821 ug/L

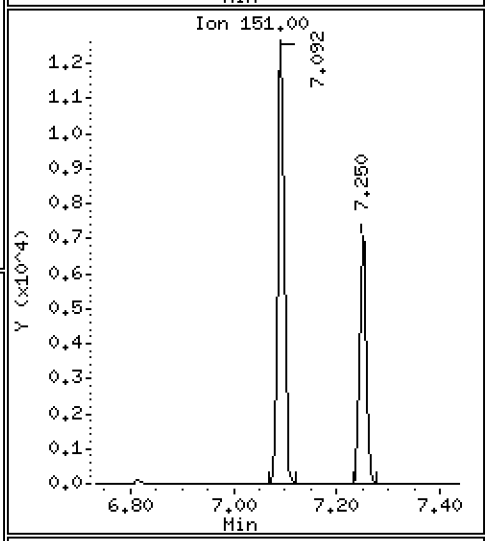


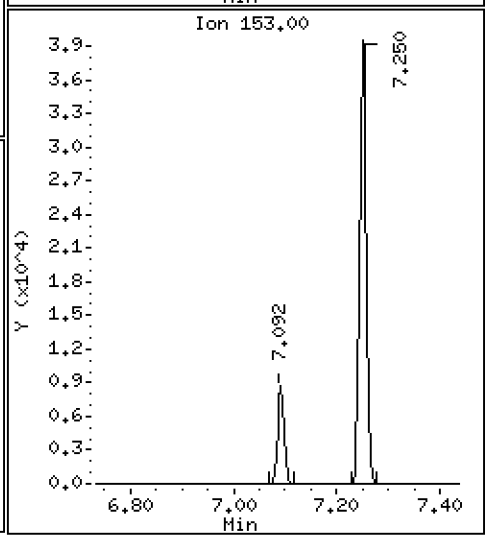












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

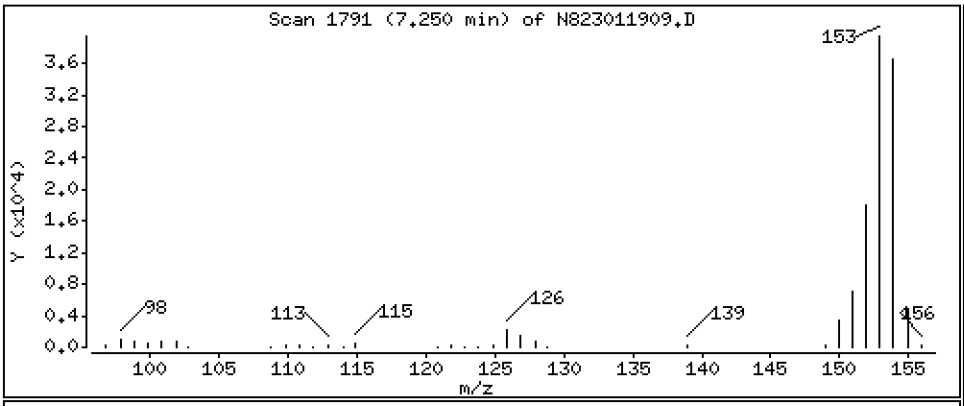
Operator: JZ

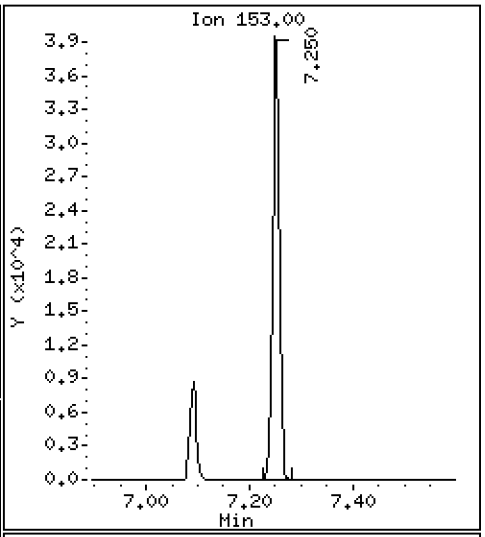
Column phase: Rxi-17sil

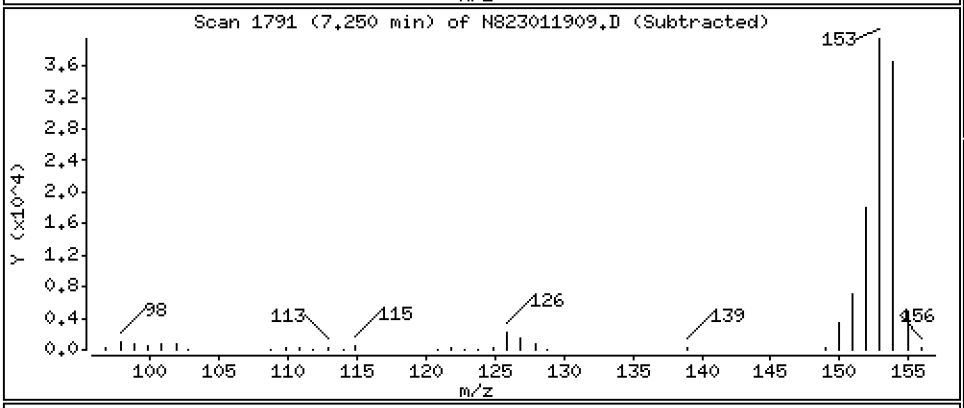
Column diameter: 0.25

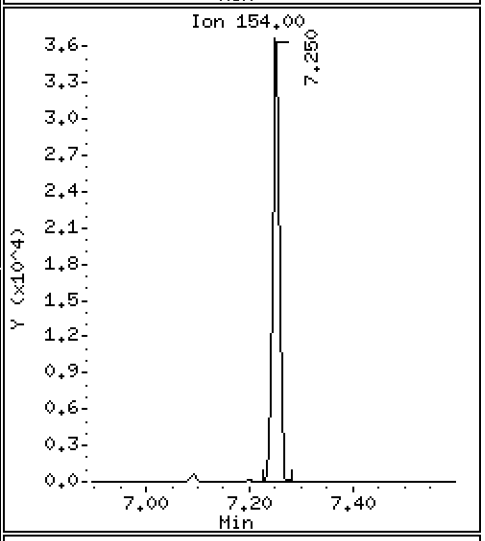
11 Acenaphthene

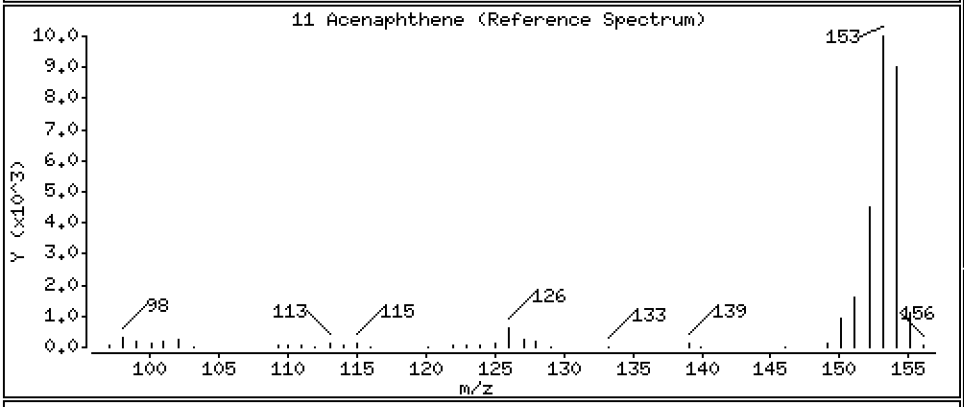
Concentration: 2.600 ug/L

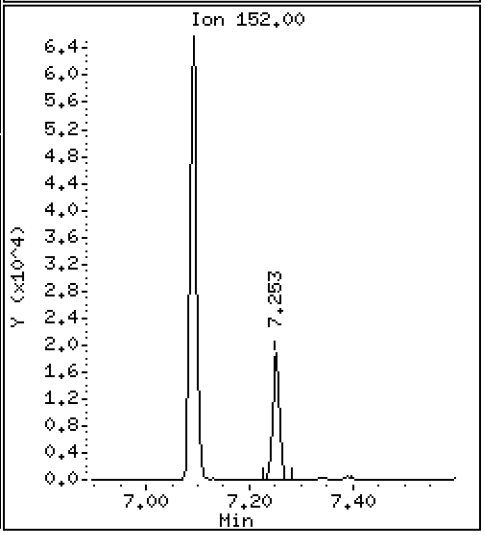


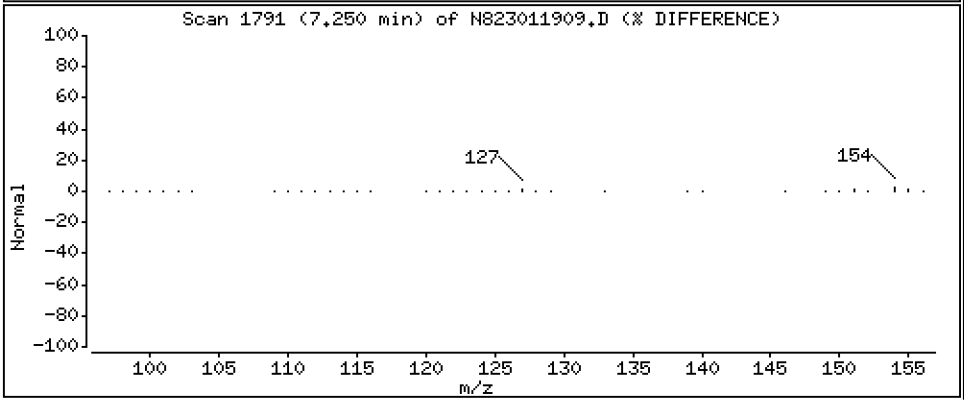












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

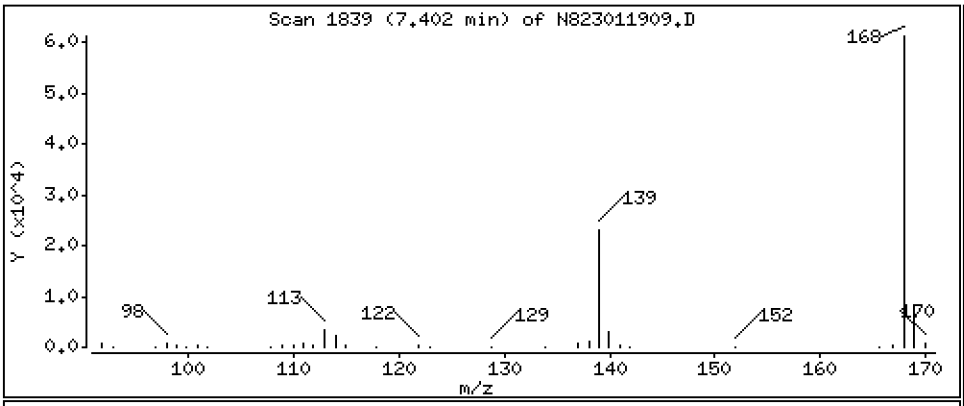
Operator: JZ

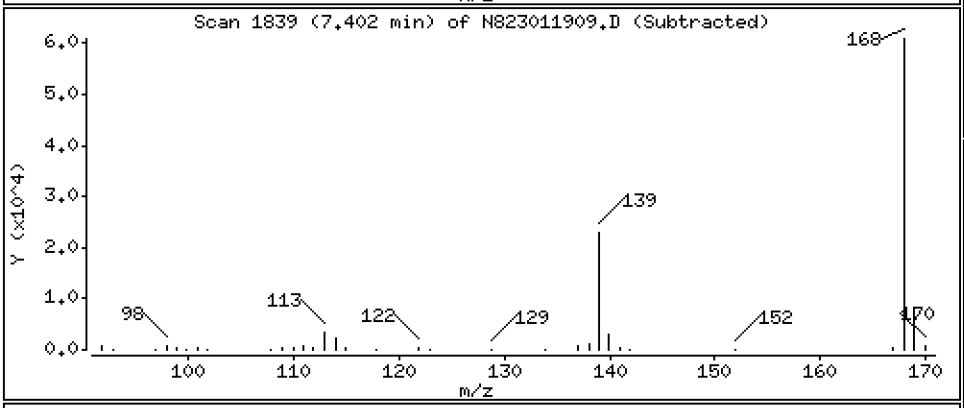
Column phase: Rxi-17sil

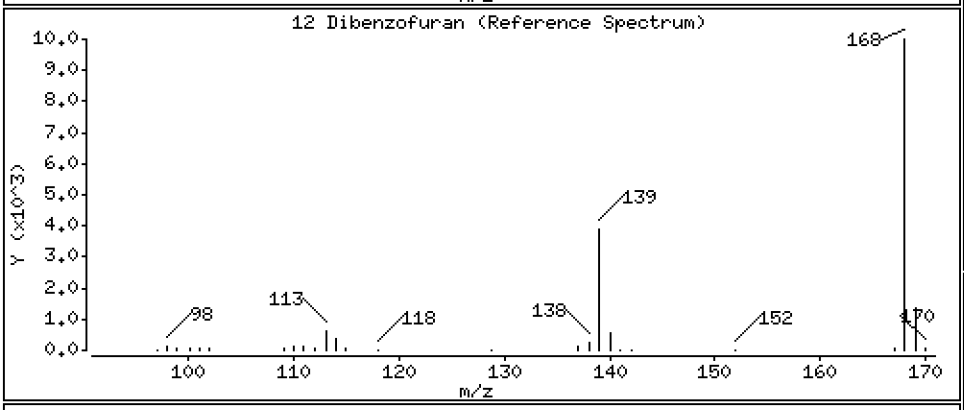
Column diameter: 0.25

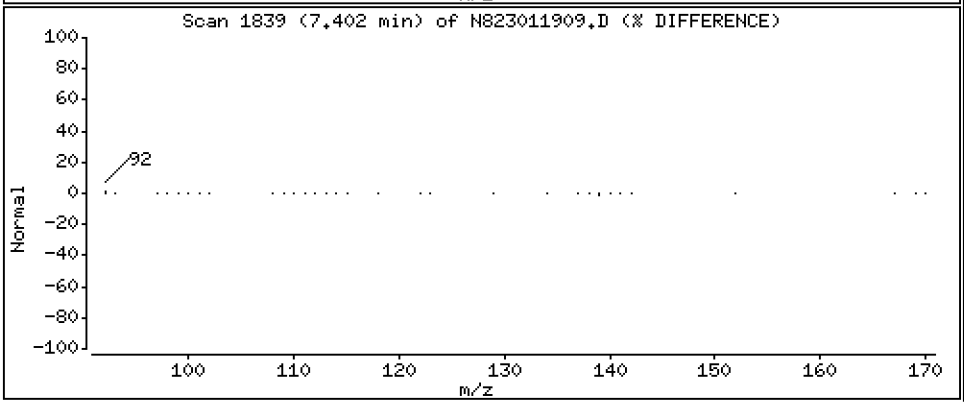
12 Dibenzofuran

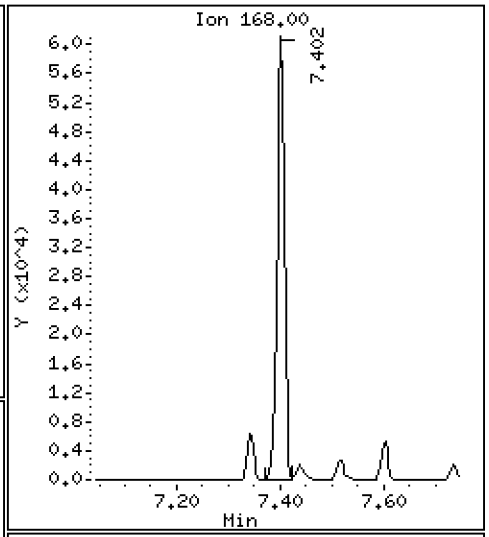
Concentration: 2.860 ug/L

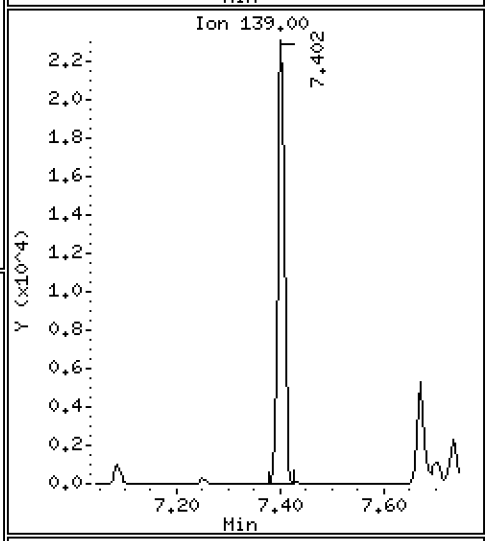


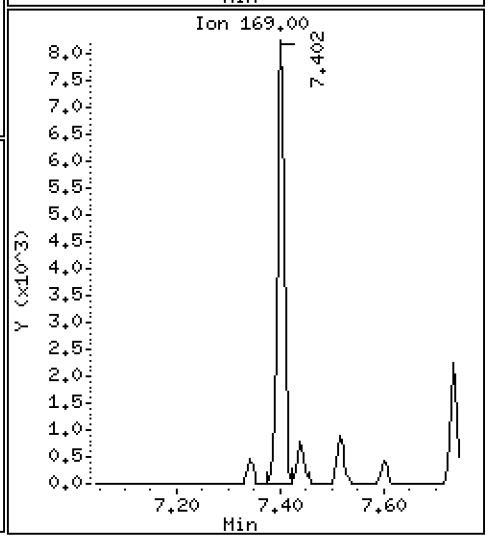












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

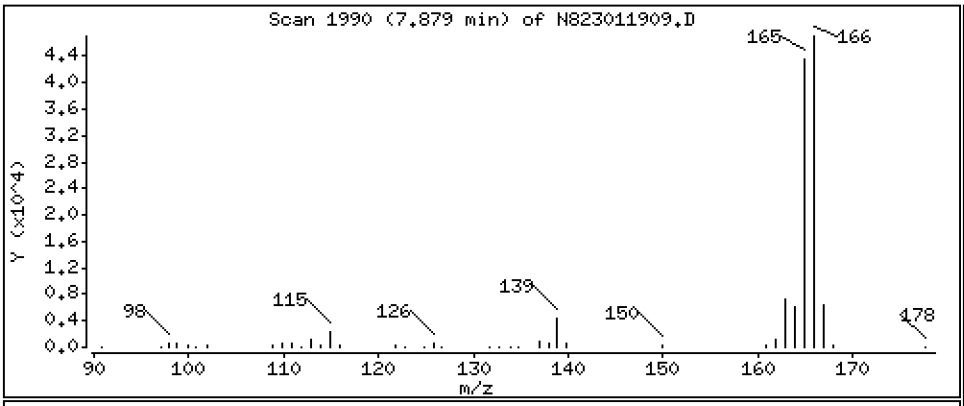
Operator: JZ

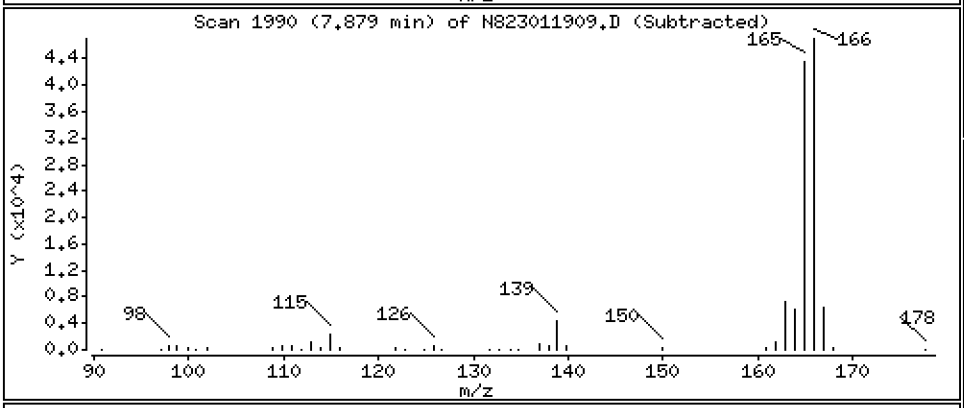
Column phase: Rxi-17sil

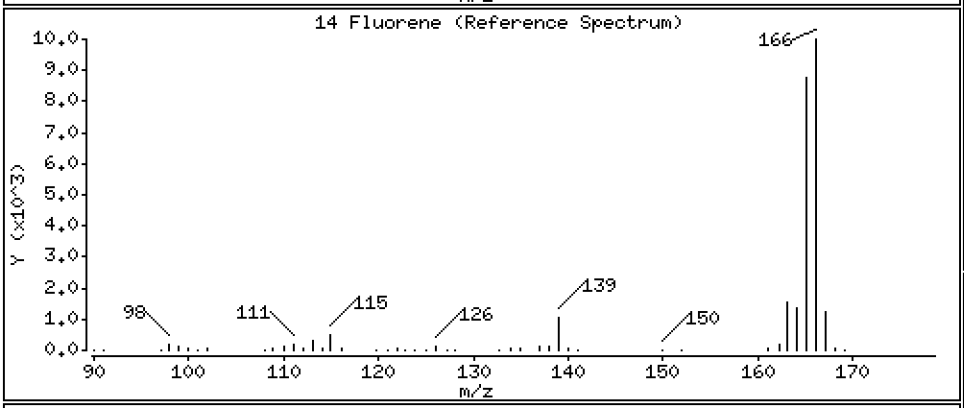
Column diameter: 0.25

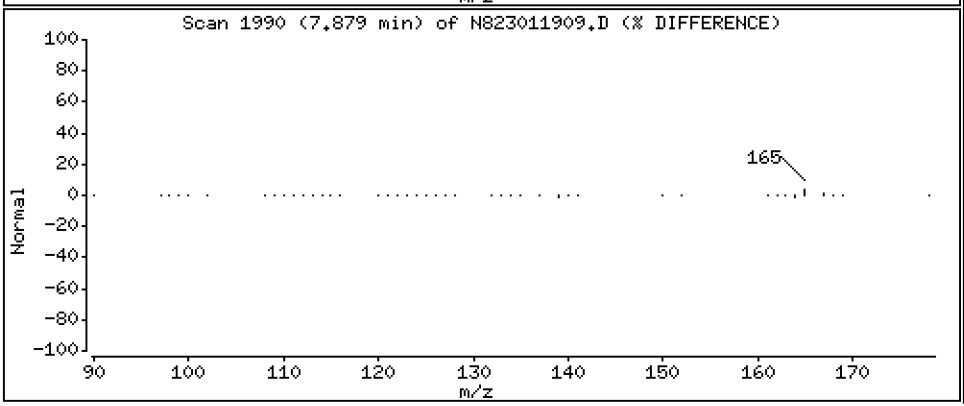
14 Fluorene

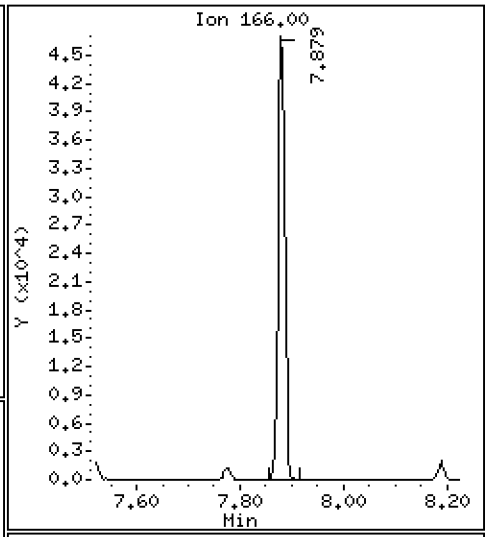
Concentration: 2.631 ug/L

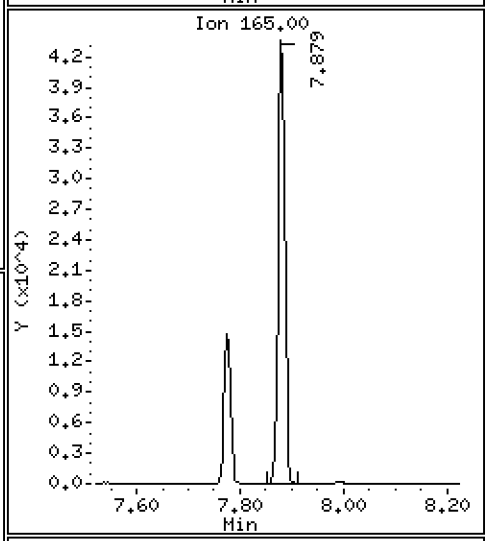


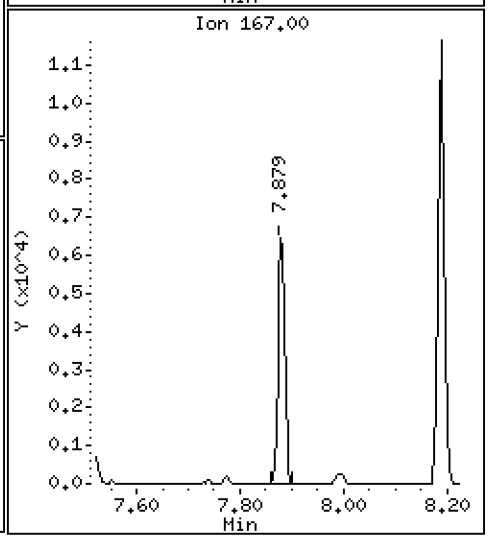












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

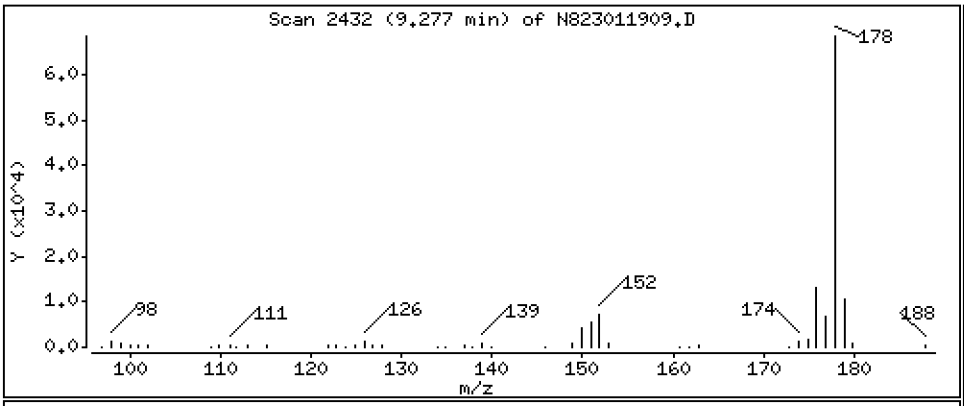
Operator: JZ

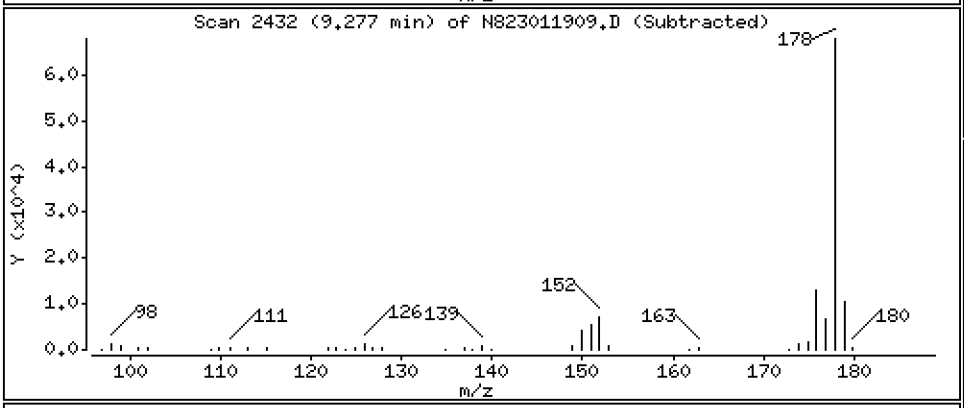
Column phase: Rxi-17sil

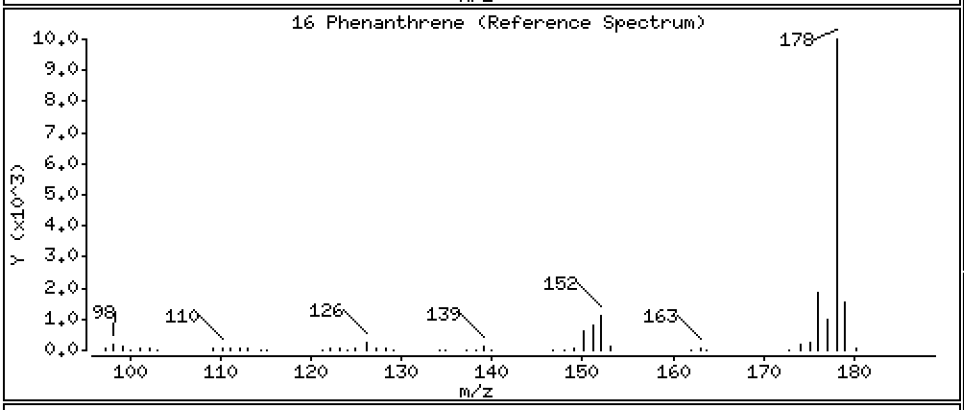
Column diameter: 0.25

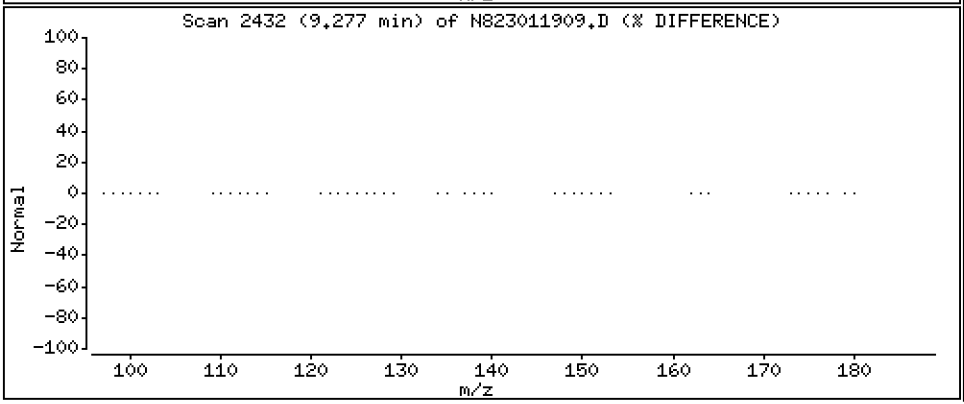
16 Phenanthrene

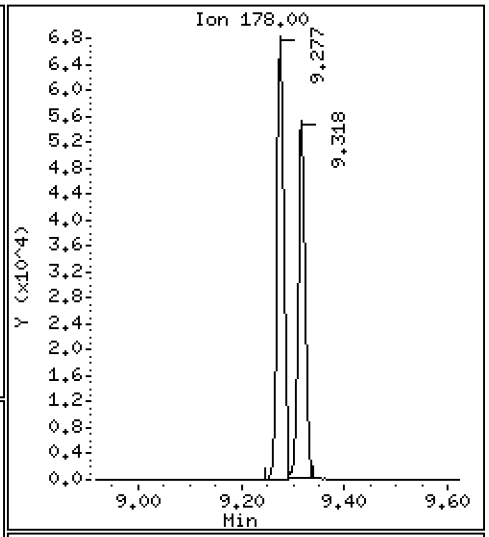
Concentration: 2.448 ug/L

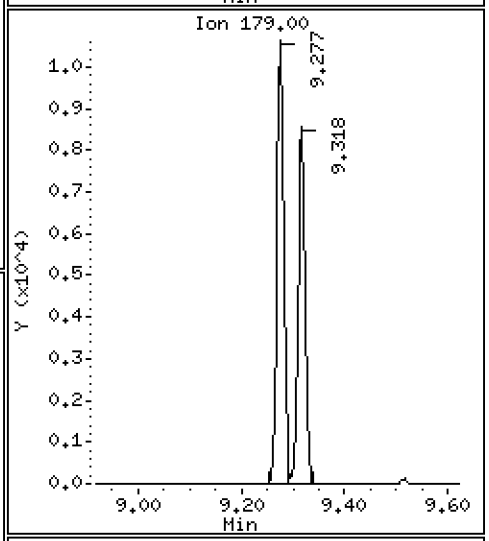


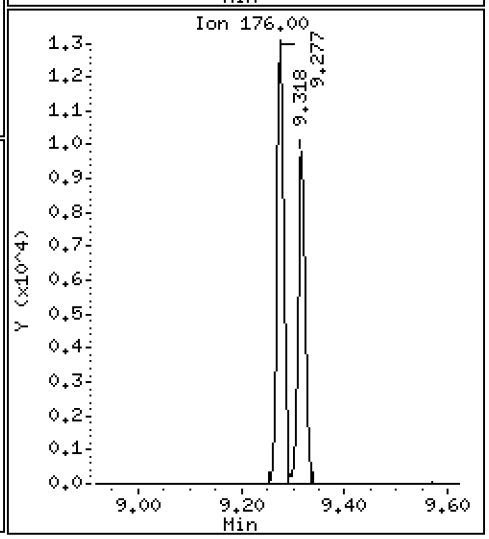












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

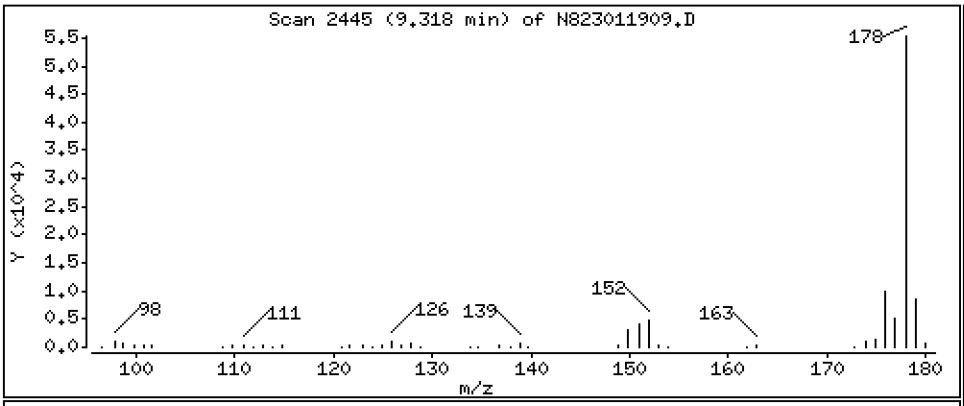
Operator: JZ

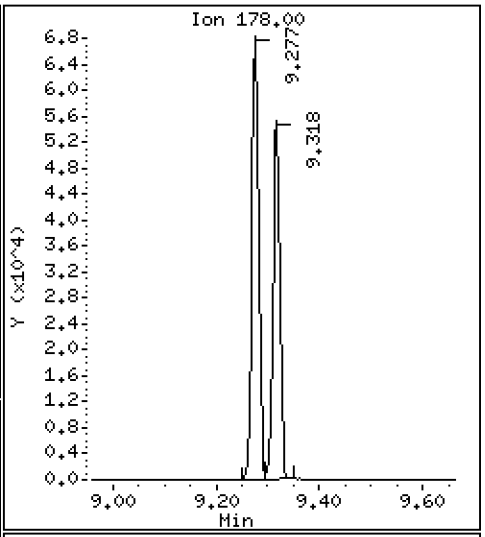
Column phase: Rxi-17sil

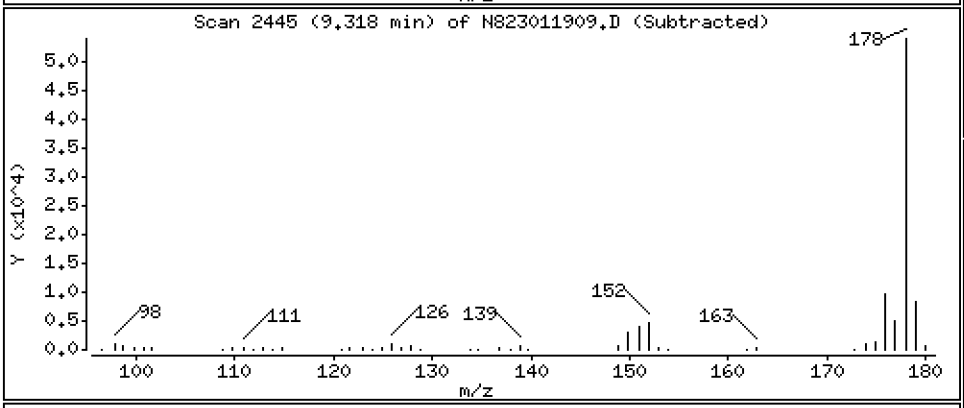
Column diameter: 0.25

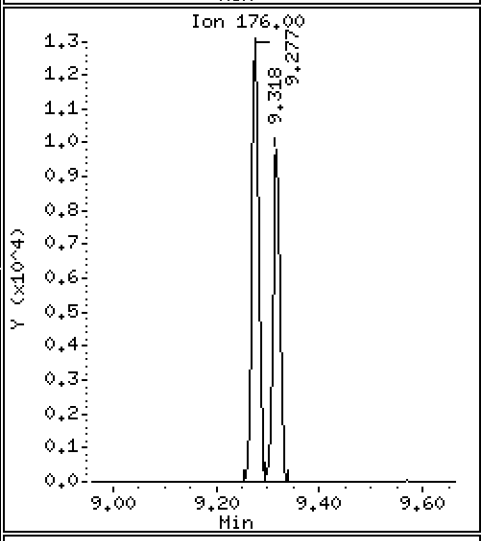
17 Anthracene

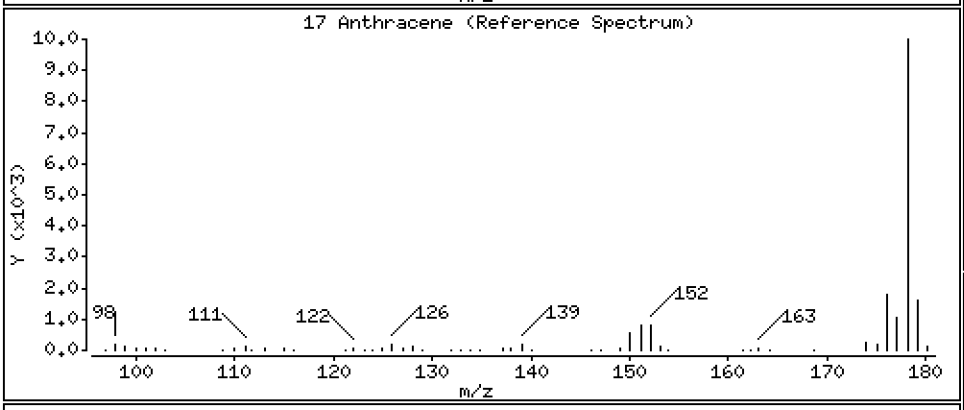
Concentration: 2.270 ug/L

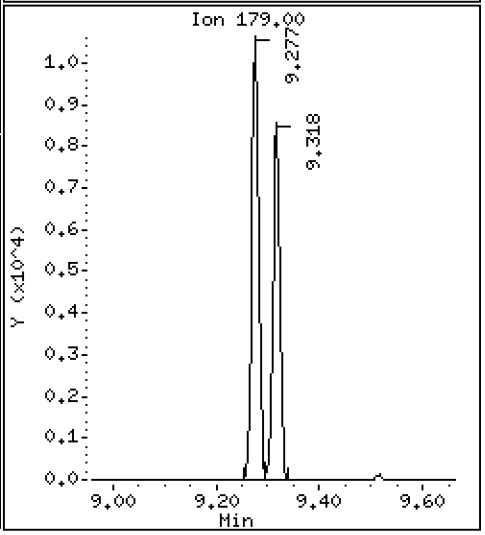


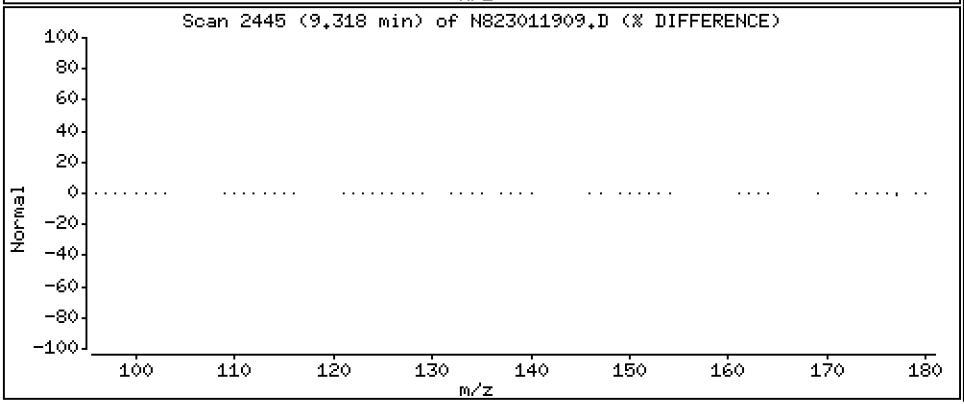












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

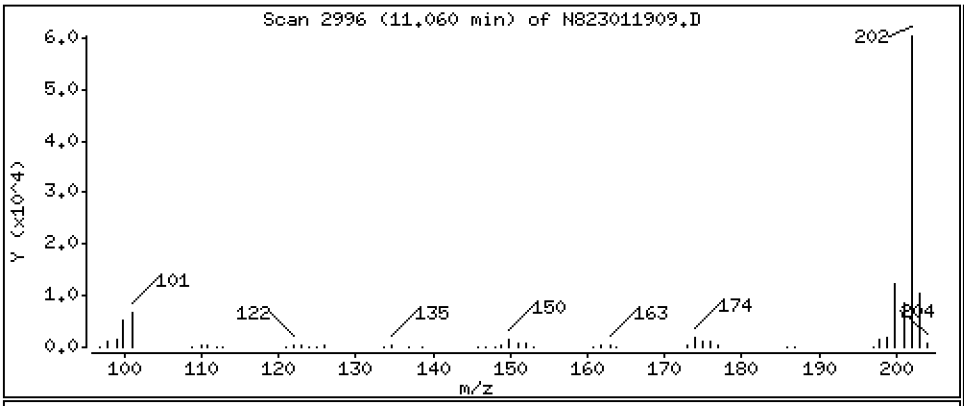
Operator: JZ

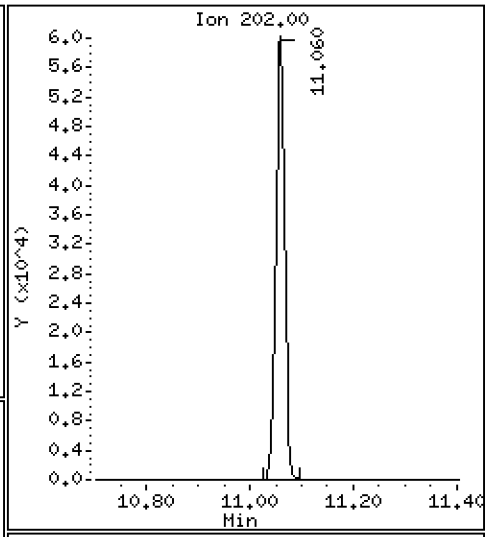
Column phase: Rxi-17sil

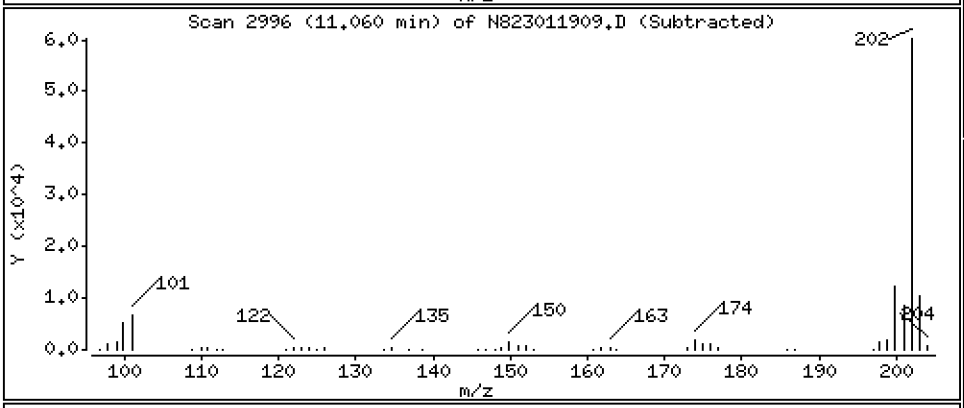
Column diameter: 0.25

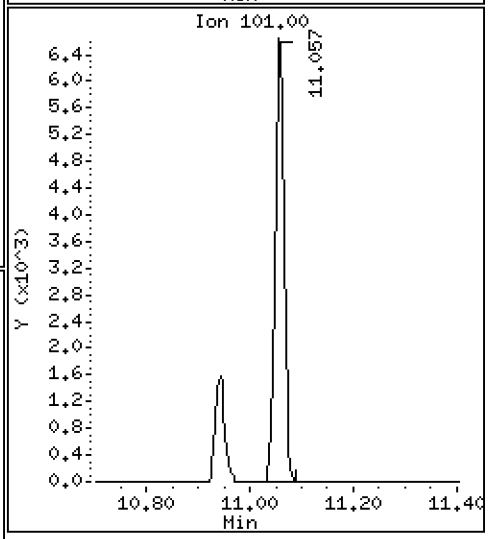
22 Fluoranthene

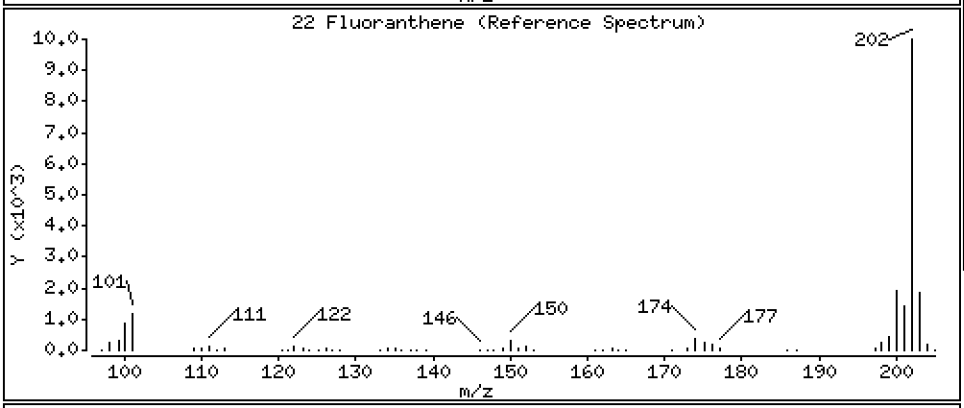
Concentration: 2.653 ug/L

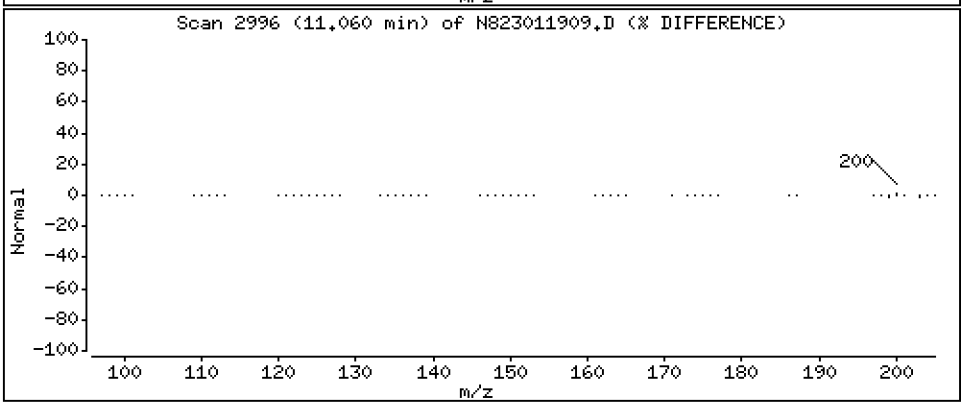












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

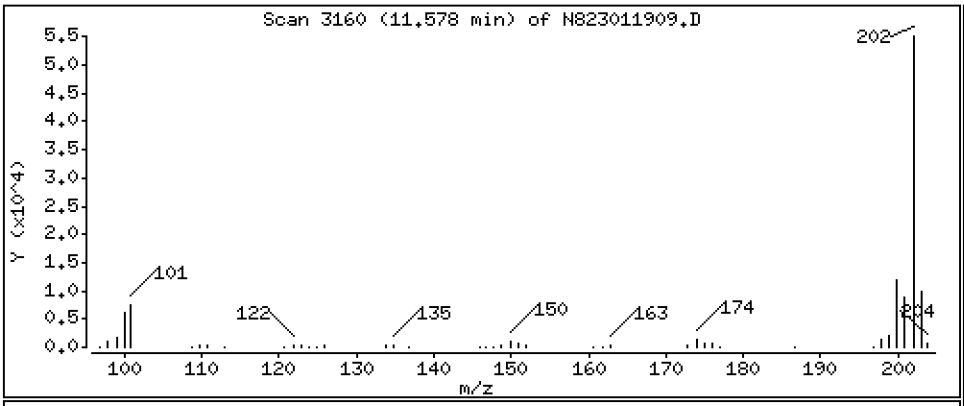
Operator: JZ

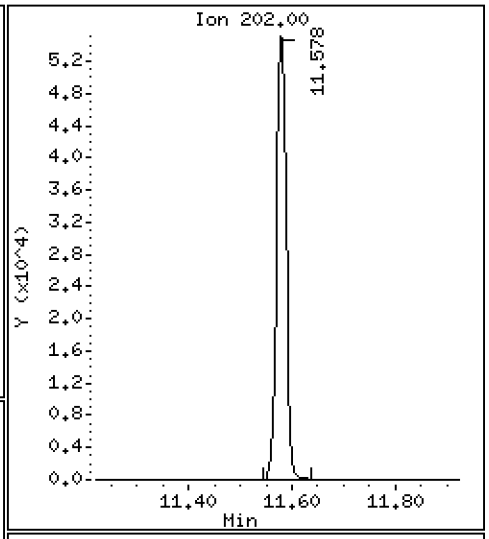
Column phase: Rxi-17sil

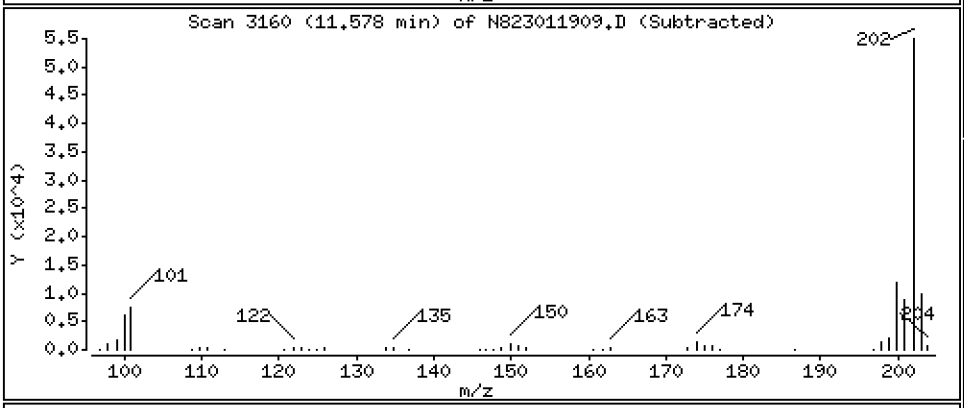
Column diameter: 0.25

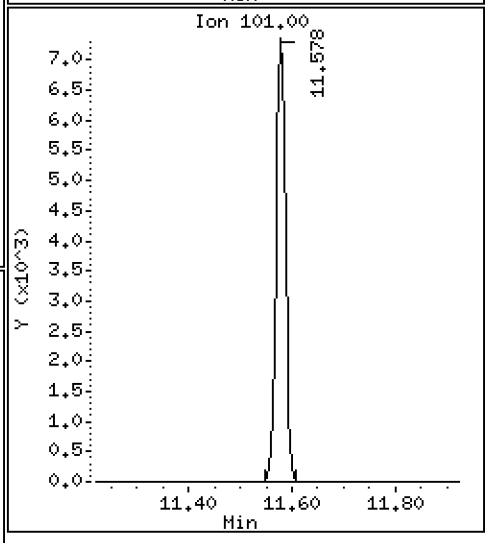
23 Pyrene

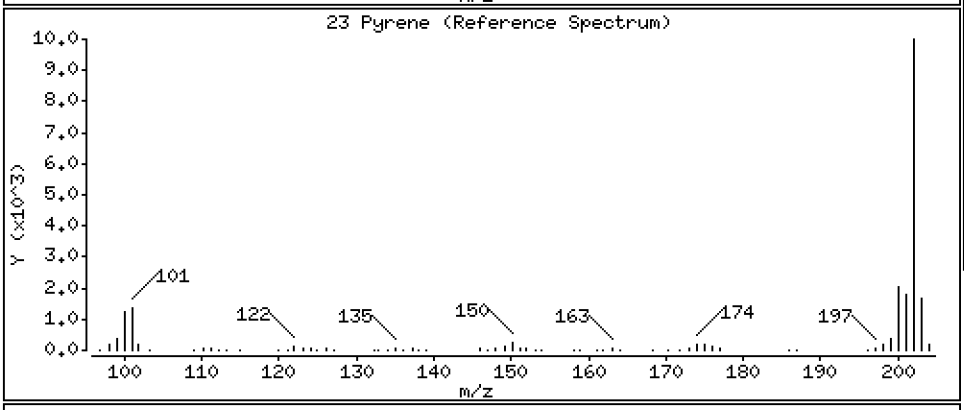
Concentration: 2.462 ug/L

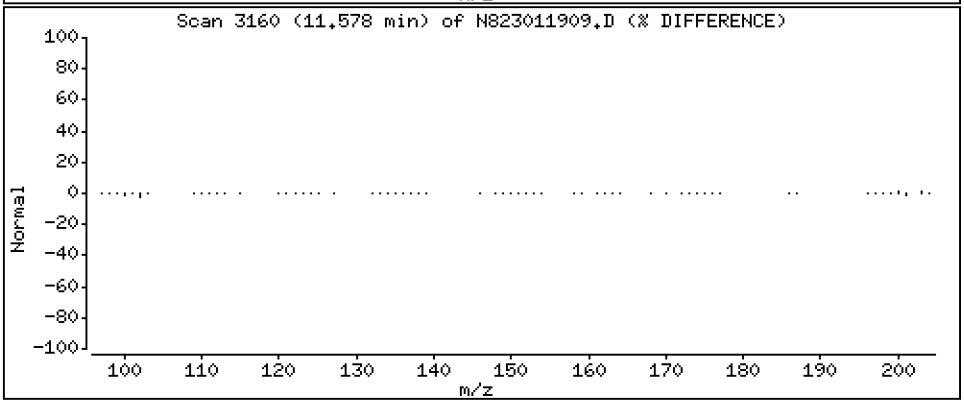












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

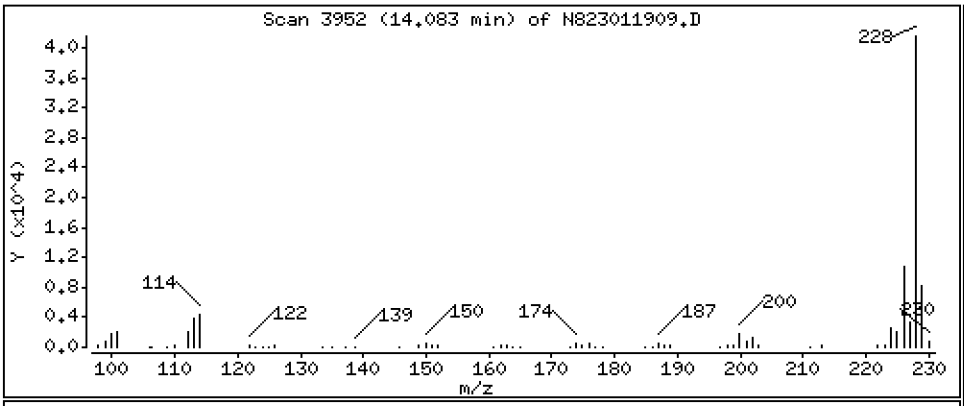
Operator: JZ

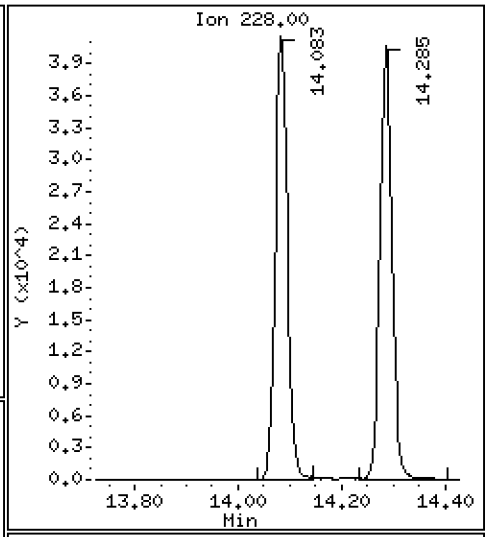
Column phase: Rxi-17sil

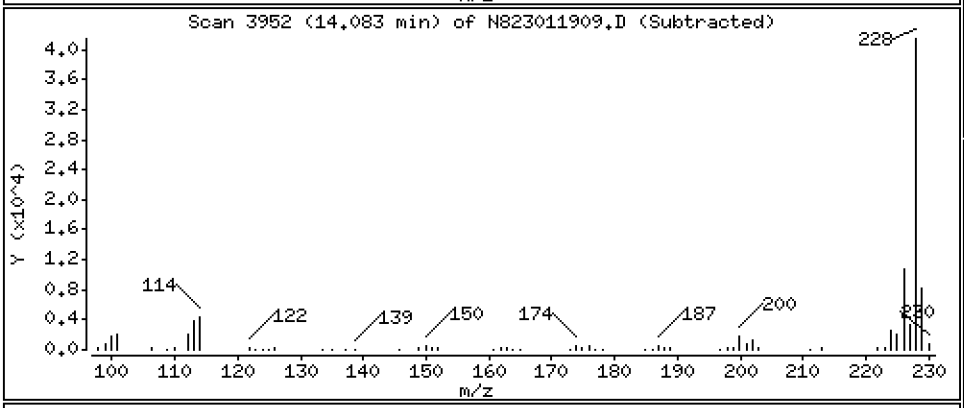
Column diameter: 0.25

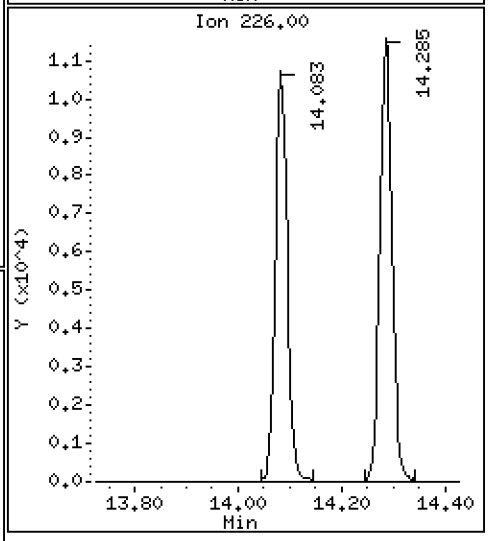
24 Benzo(a)anthracene

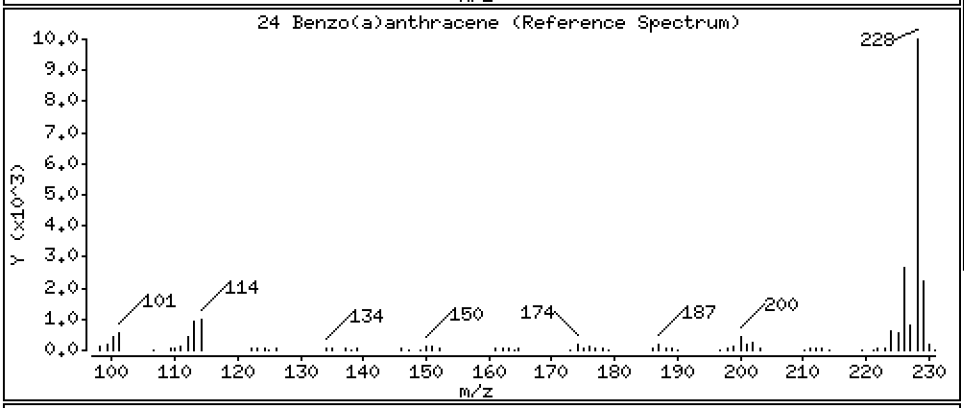
Concentration: 2.587 ug/L

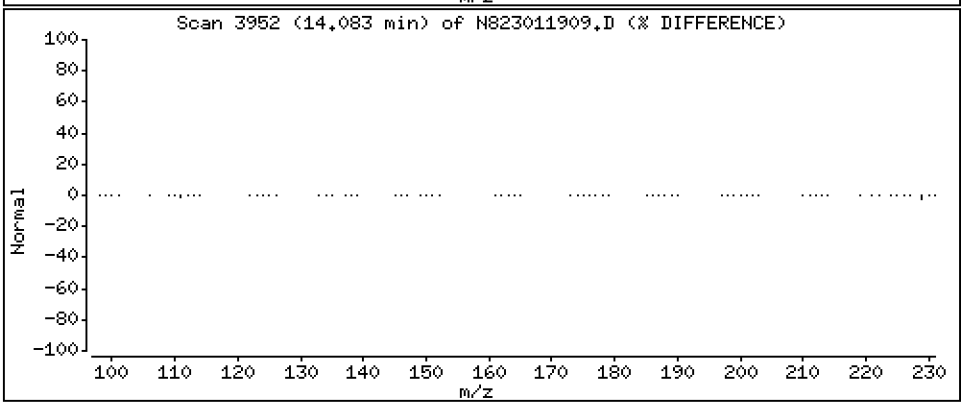












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

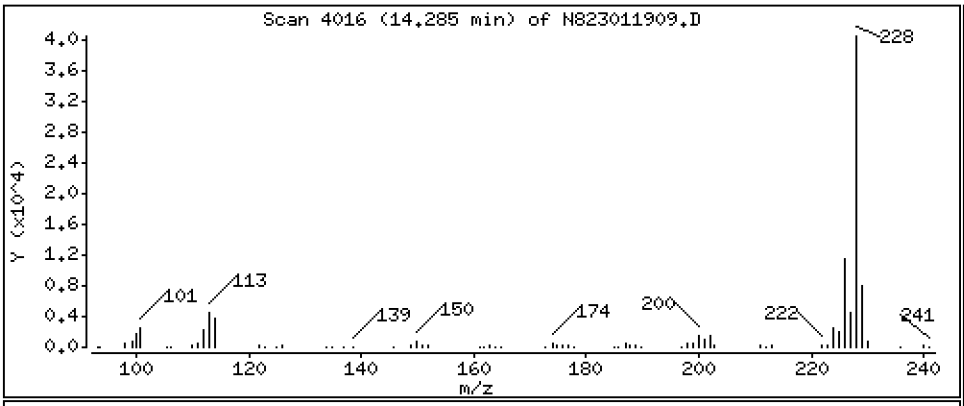
Operator: JZ

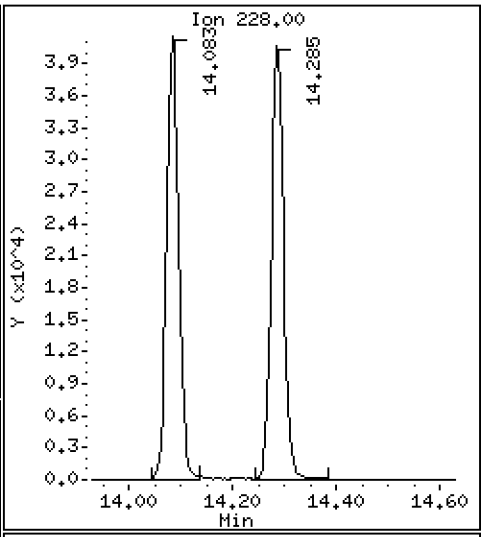
Column phase: Rxi-17sil

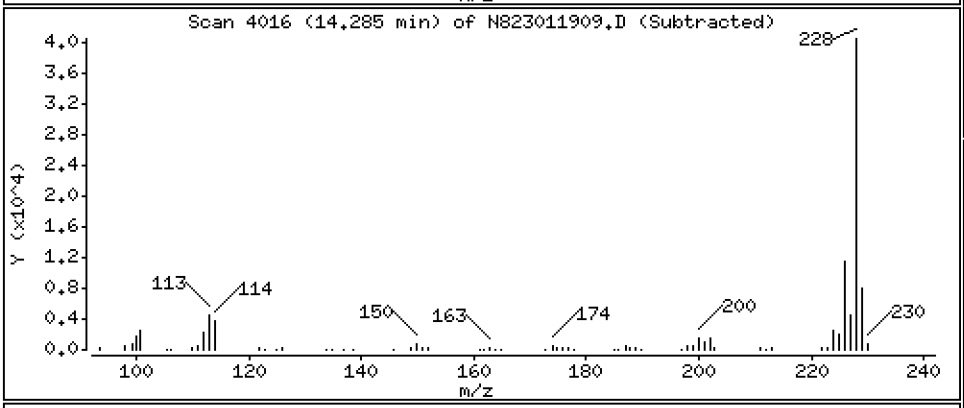
Column diameter: 0.25

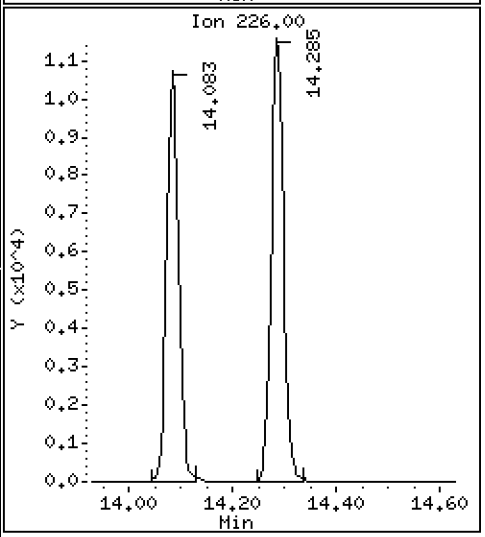
27 Chrysene

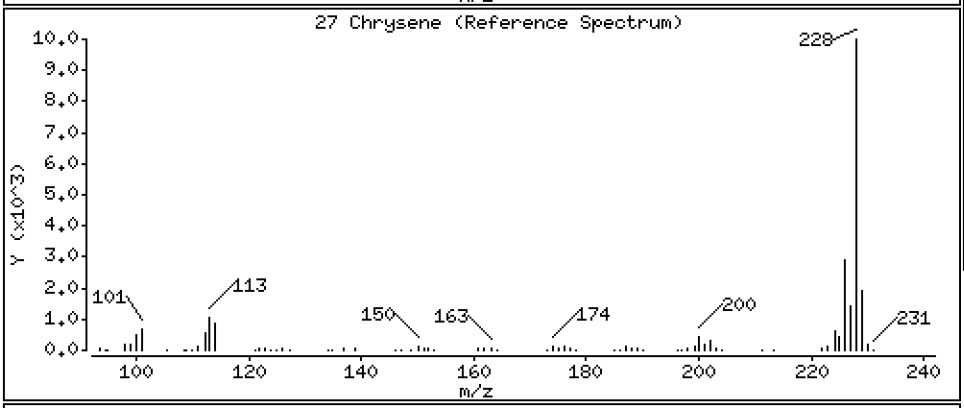
Concentration: 2.400 ug/L

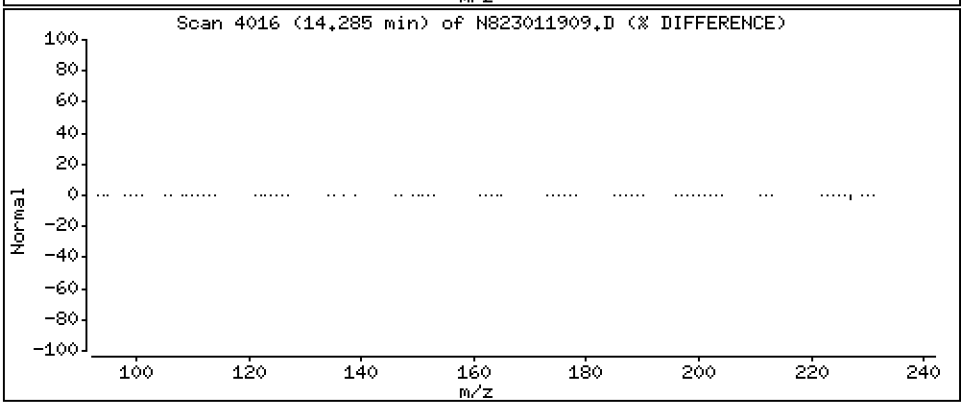












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

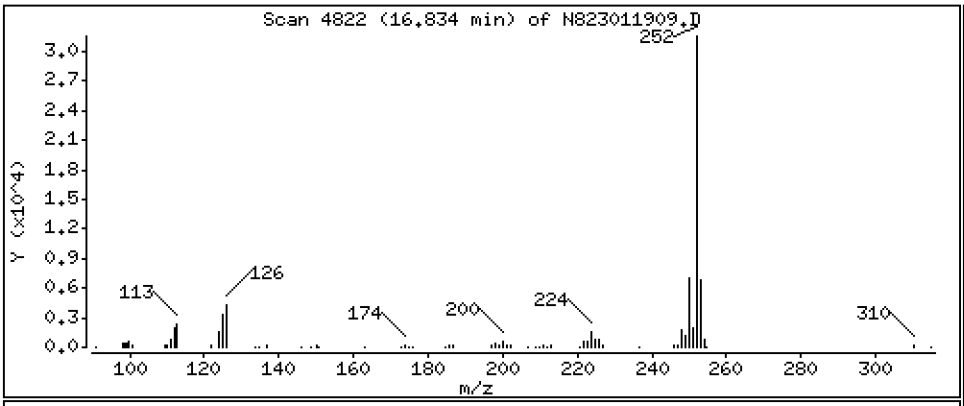
Operator: JZ

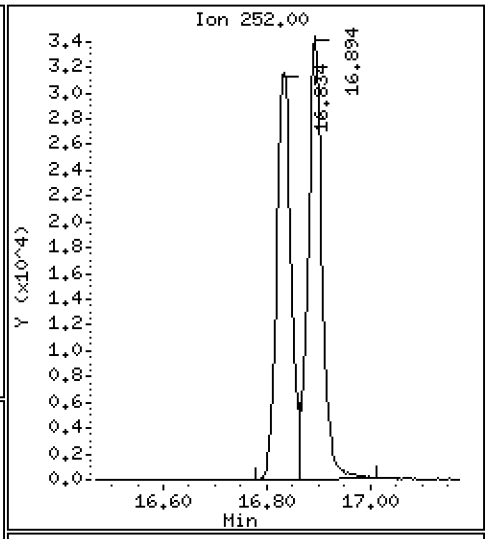
Column phase: Rxi-17sil

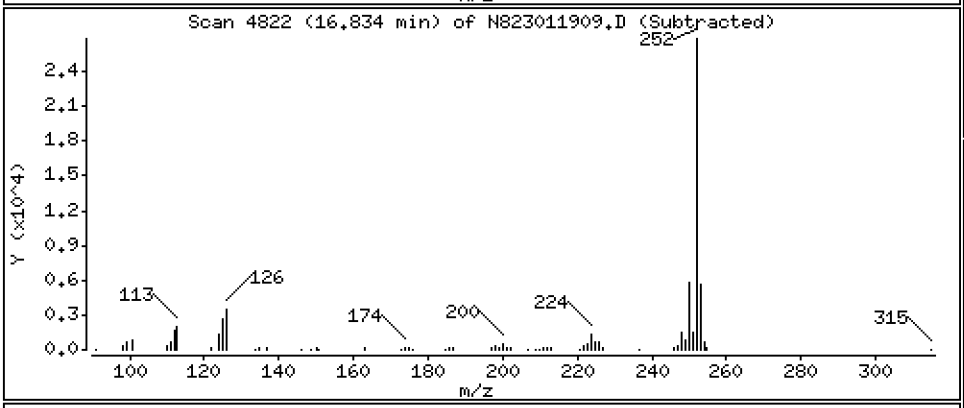
Column diameter: 0.25

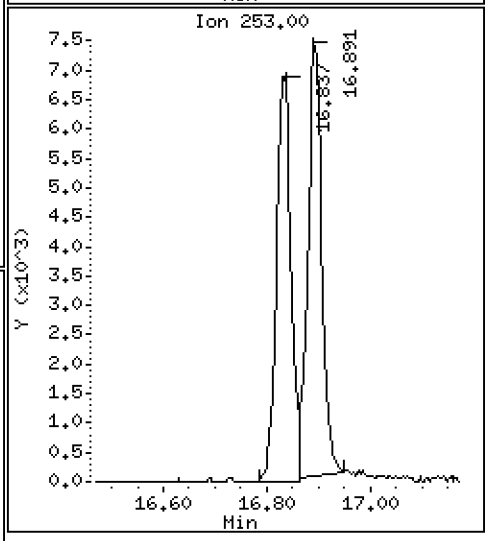
28 Benzo(b)fluoranthene

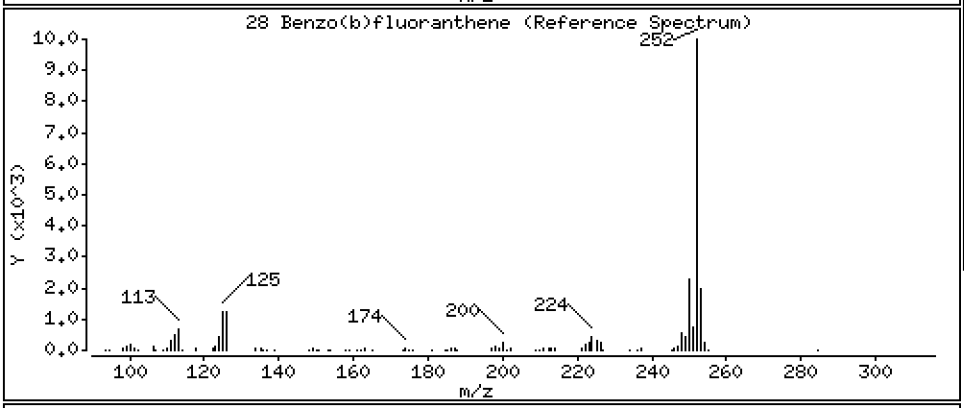
Concentration: 2.507 ug/L

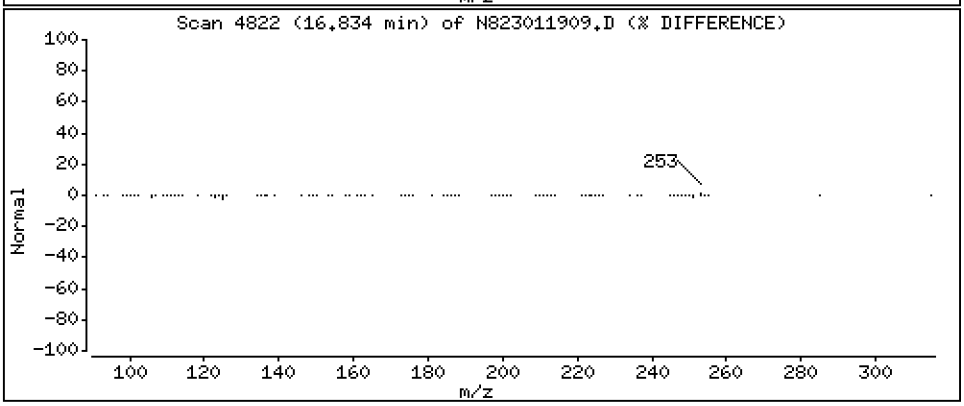












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

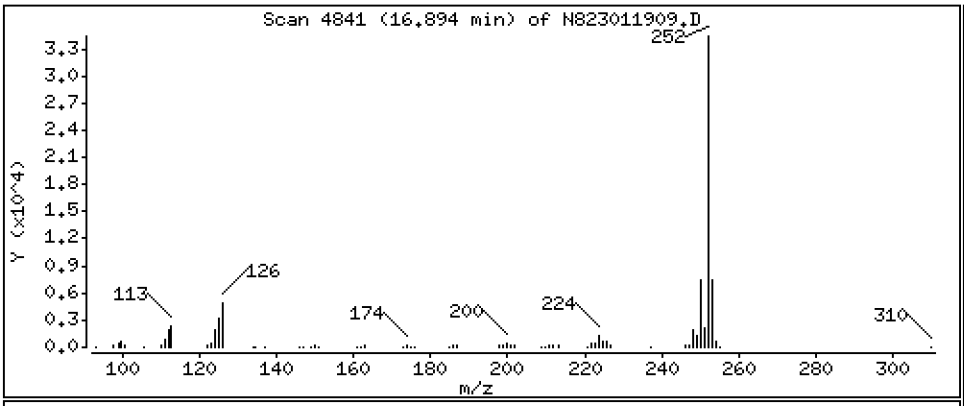
Operator: JZ

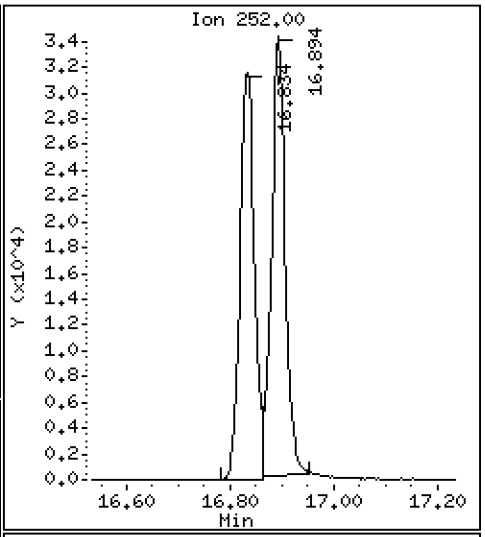
Column phase: Rxi-17sil

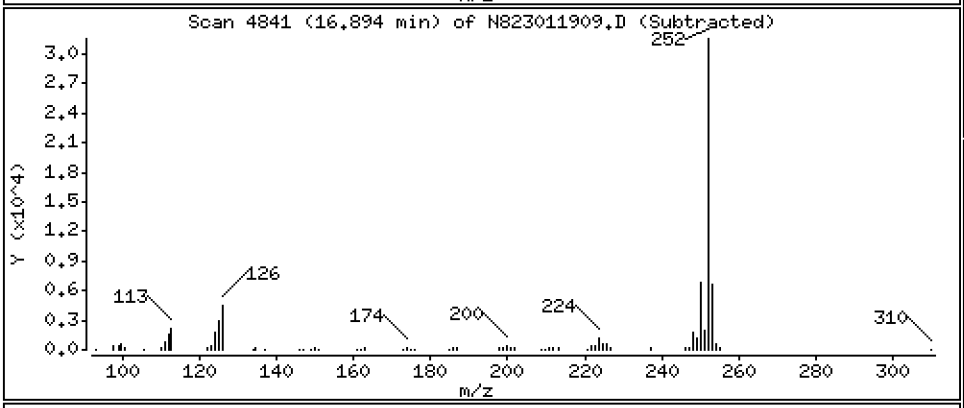
Column diameter: 0.25

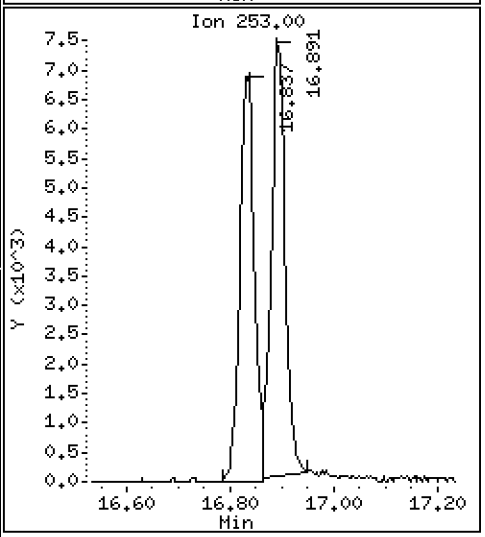
29 Benzo(k)fluoranthene

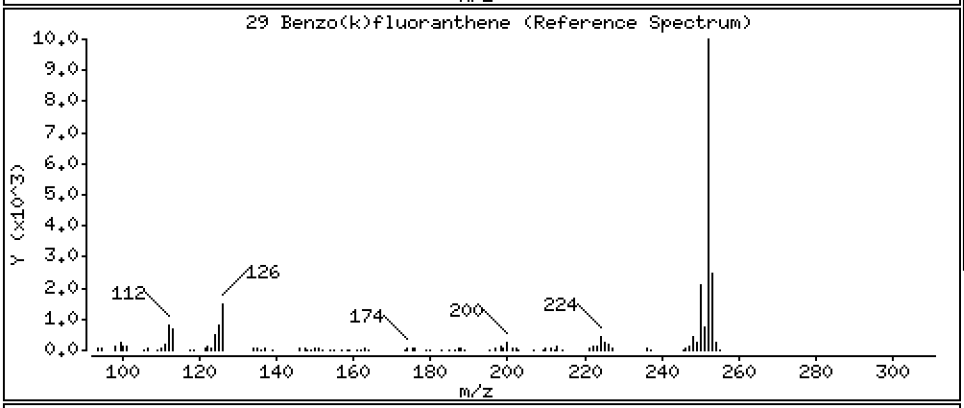
Concentration: 2.656 ug/L

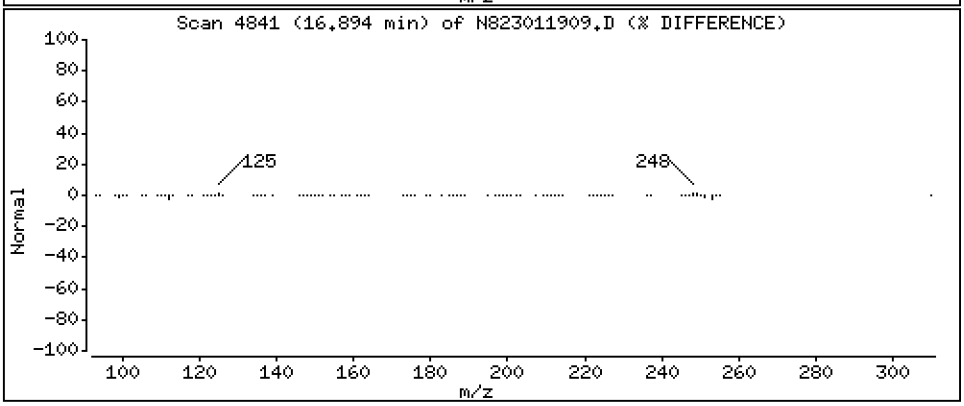












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

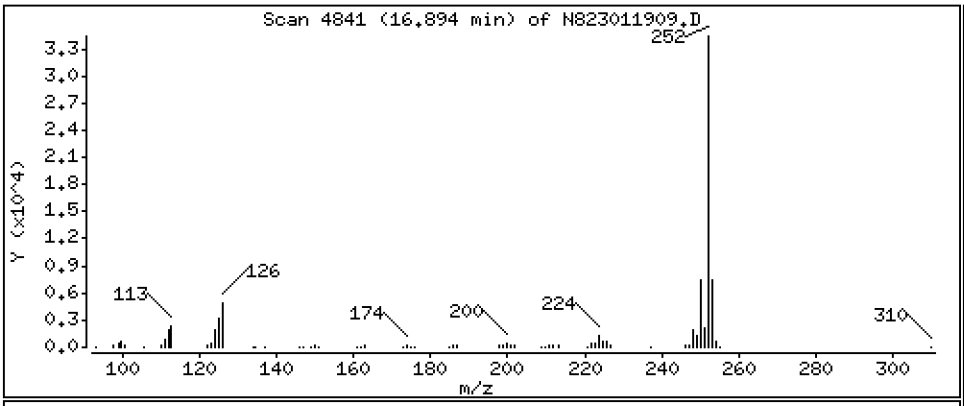
Operator: JZ

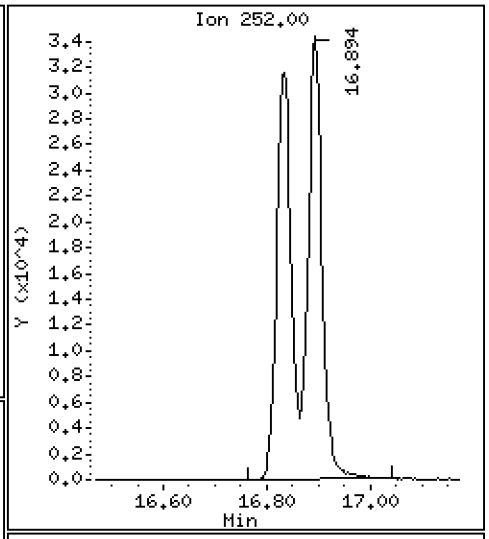
Column phase: Rxi-17sil

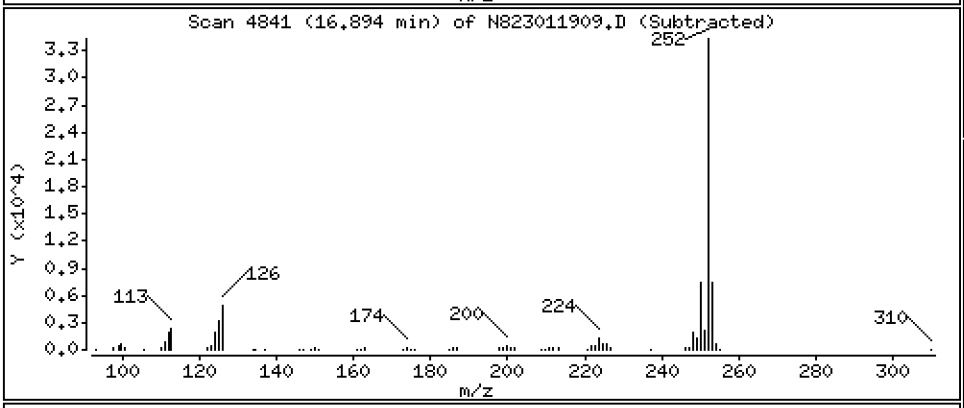
Column diameter: 0.25

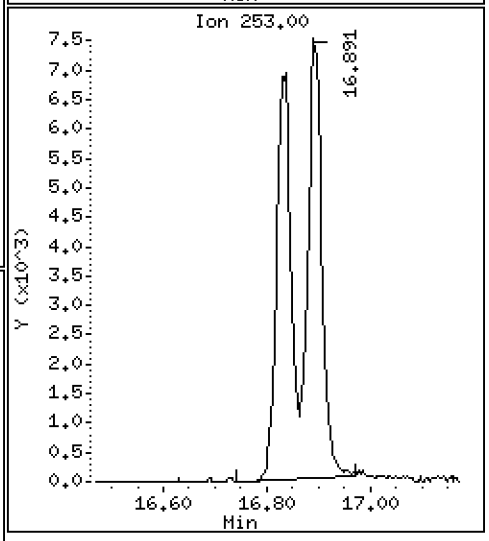
31 Total Benzofluoranthenes

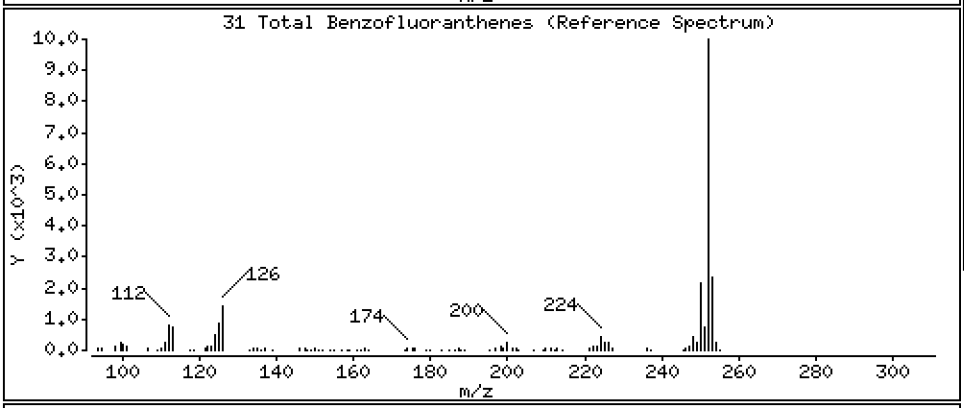
Concentration: 5.480 ug/L

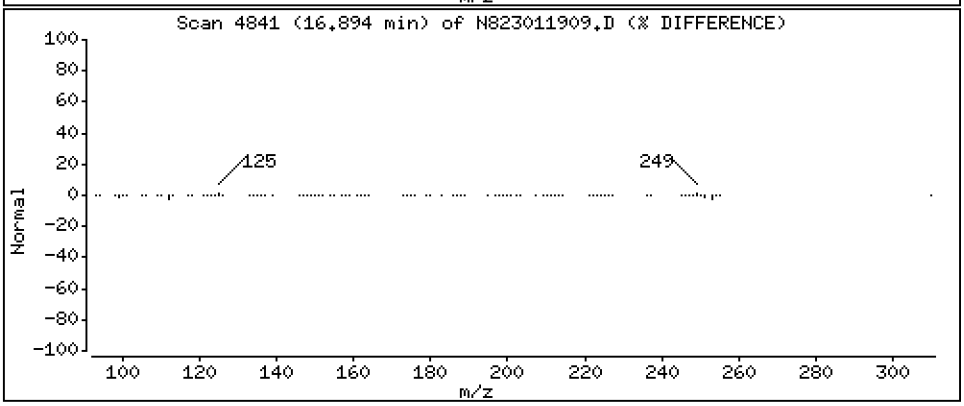












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

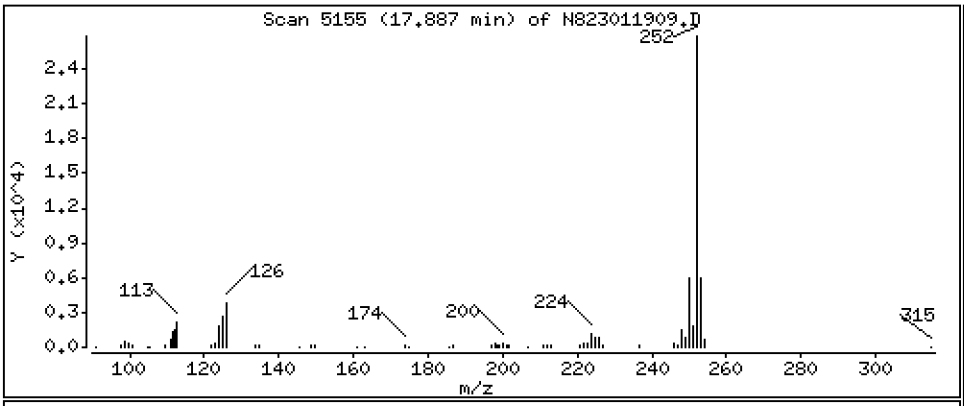
Operator: JZ

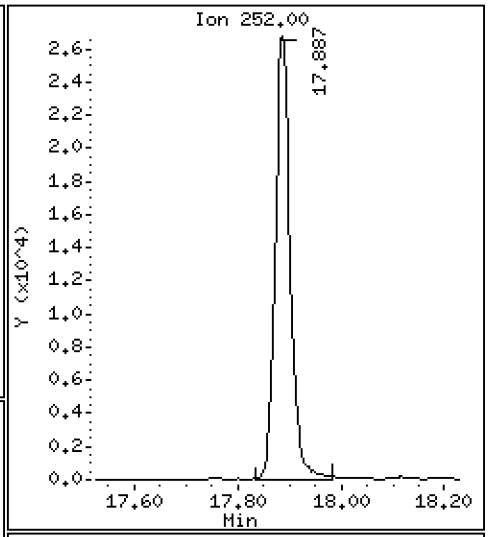
Column phase: Rxi-17sil

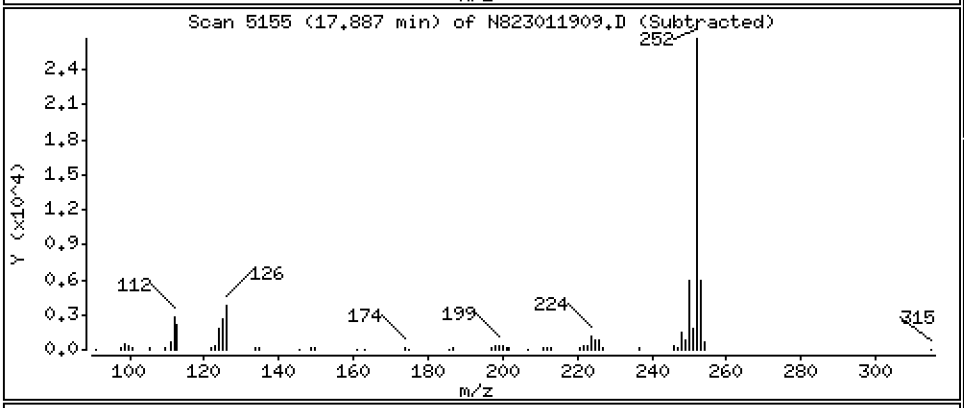
Column diameter: 0.25

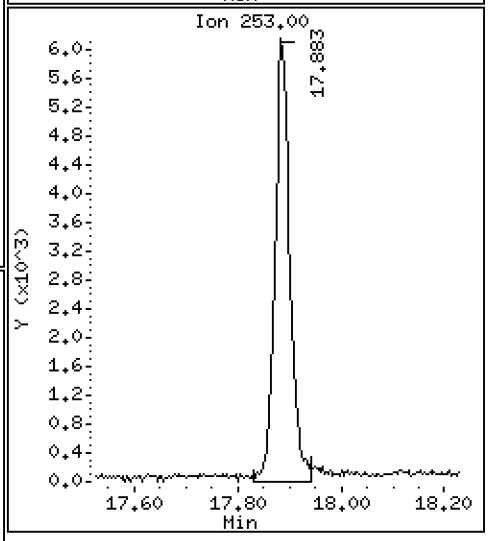
32 Benzo(a)pyrene

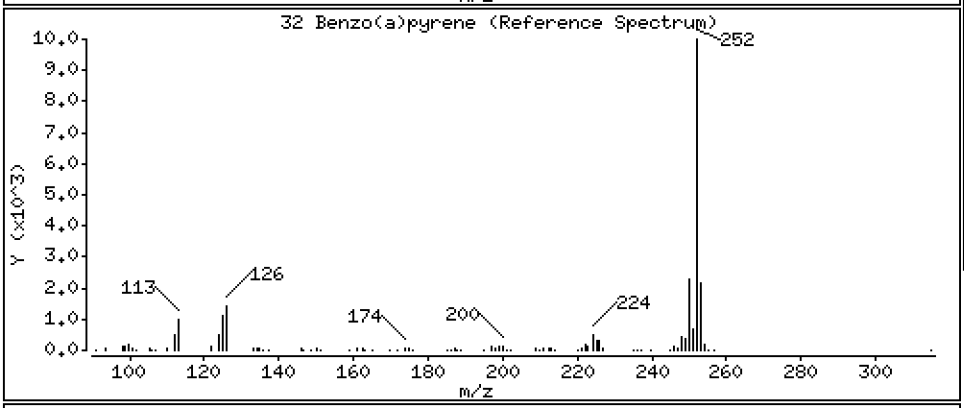
Concentration: 2.572 ug/L

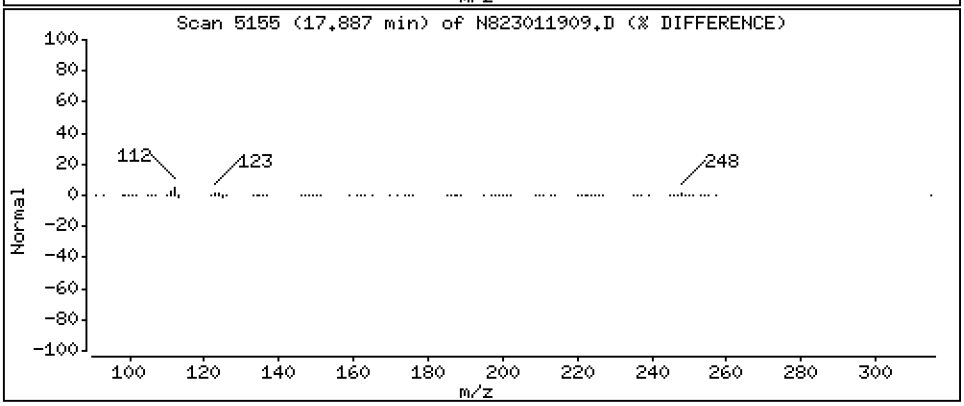












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

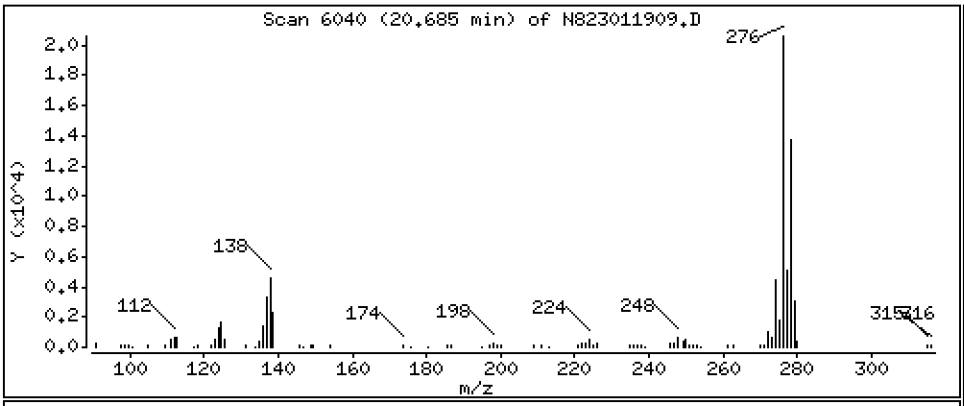
Operator: JZ

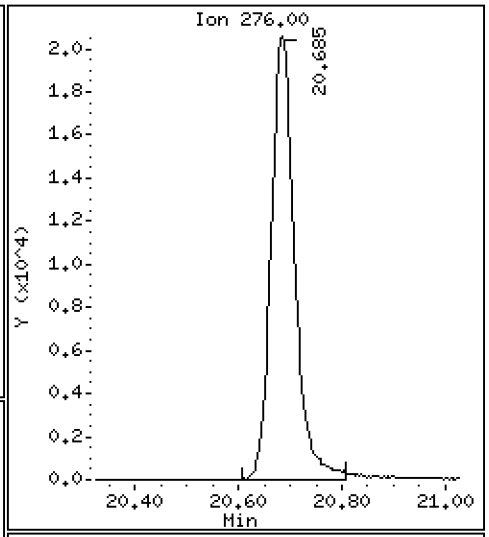
Column phase: Rxi-17sil

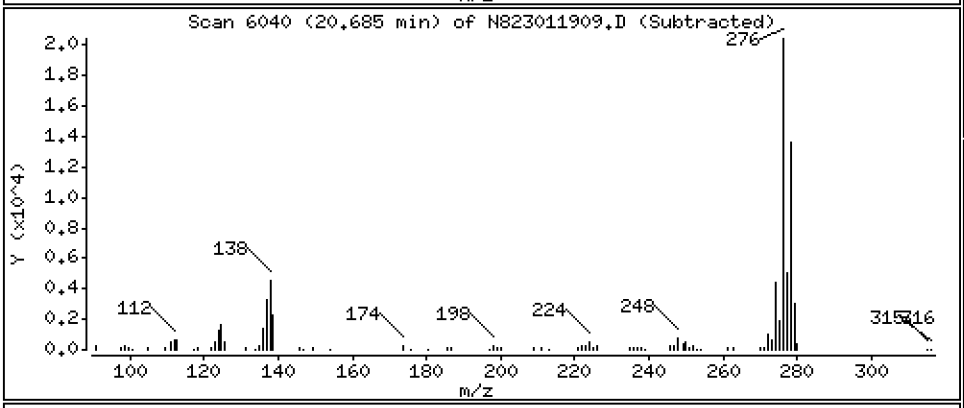
Column diameter: 0.25

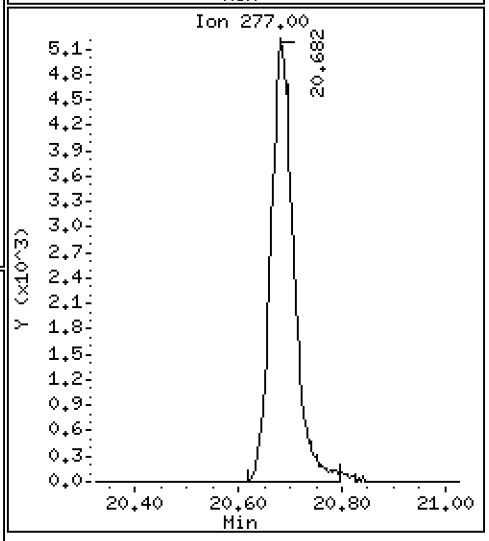
37 Indeno(1,2,3-cd)pyrene

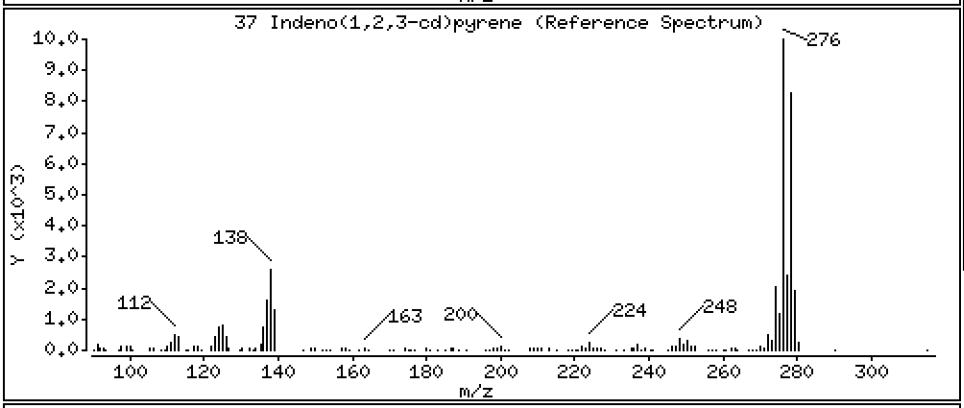
Concentration: 2.689 ug/L

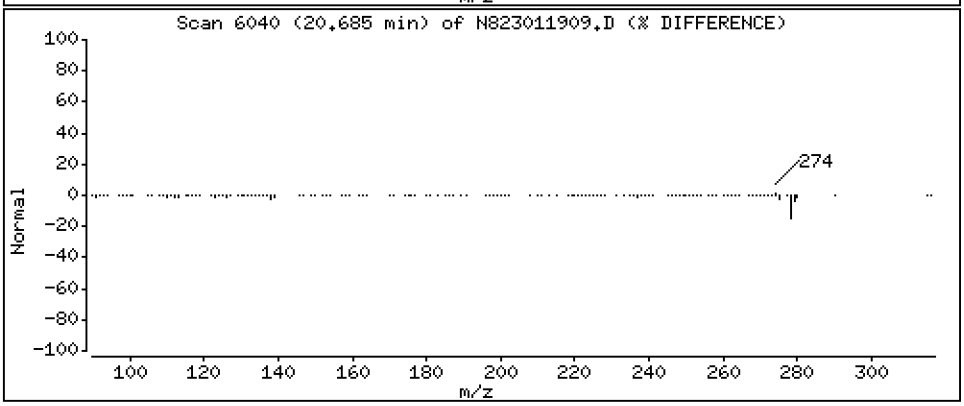












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Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

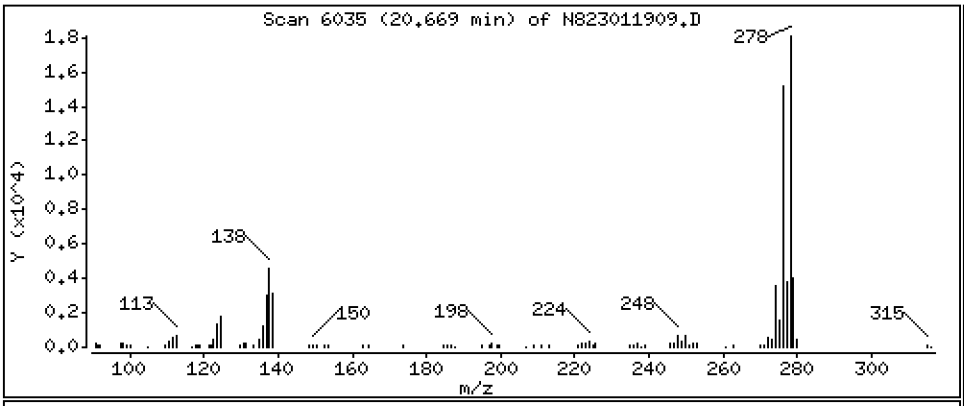
Operator: JZ

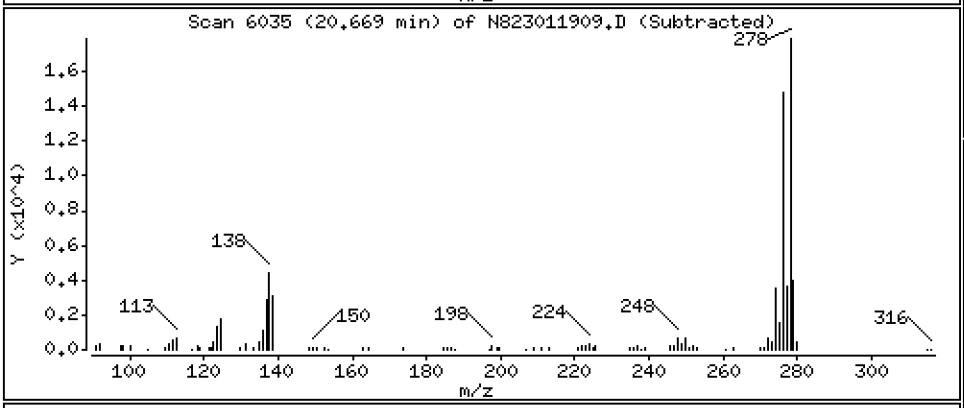
Column phase: Rxi-17sil

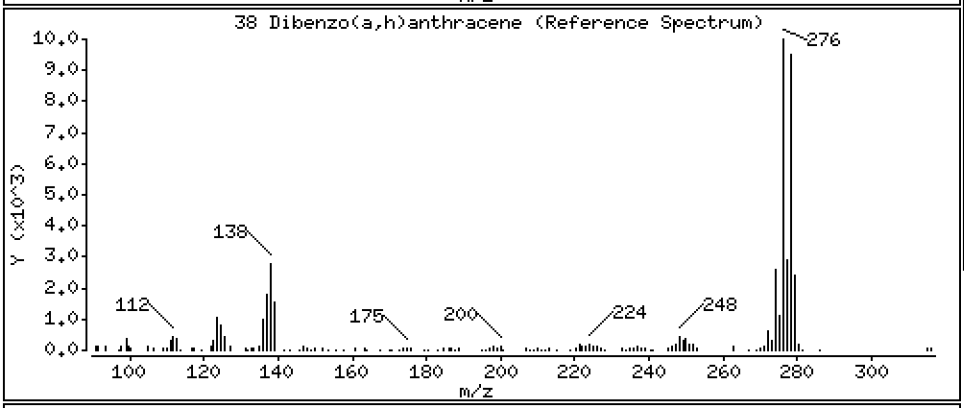
Column diameter: 0.25

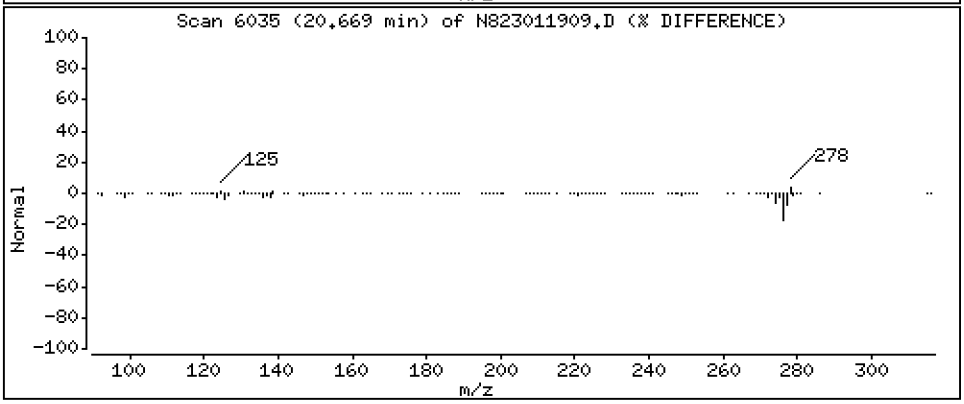
38 Dibenzo(a,h)anthracene

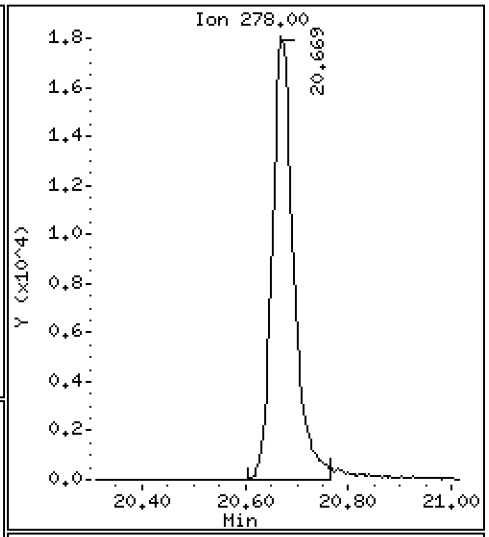
Concentration: 2.493 ug/L

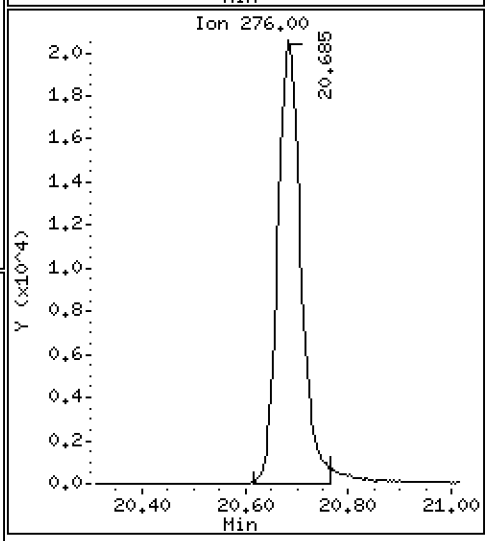












Data File: \\target\share\chem3\nt8.i\20230119.b\N823011909.D

Date : 19-JAN-2023 14:58

Client ID:

Instrument: nt8.i

Sample Info: SCV230119

Volume Injected (uL): 1.0

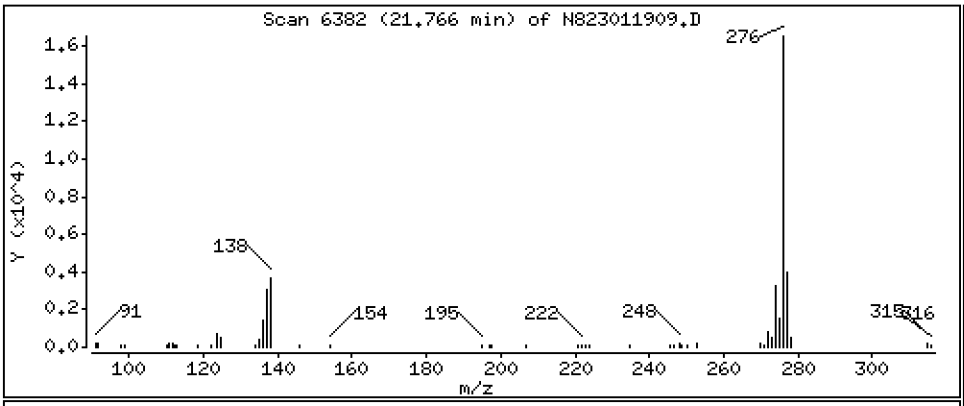
Operator: JZ

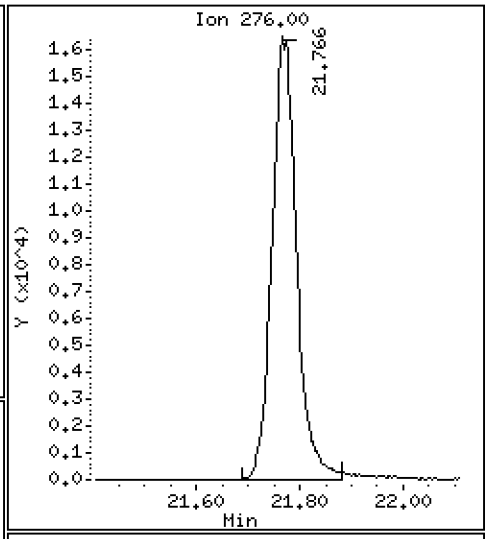
Column phase: Rxi-17sil

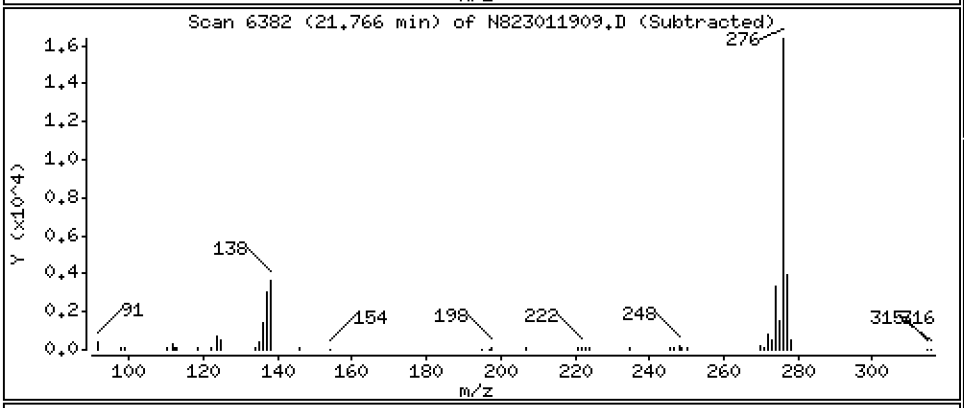
Column diameter: 0.25

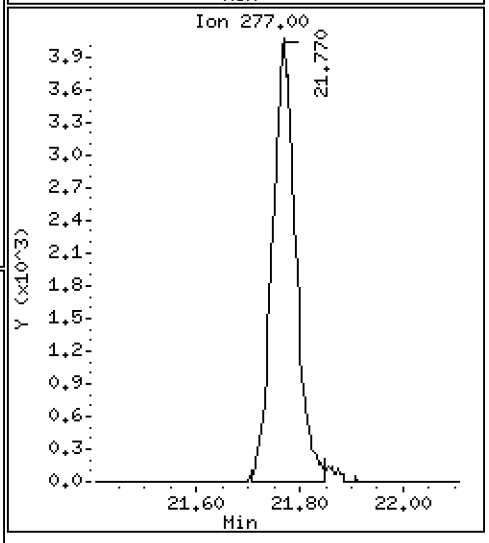
39 Benzo(g,h,i)perylene

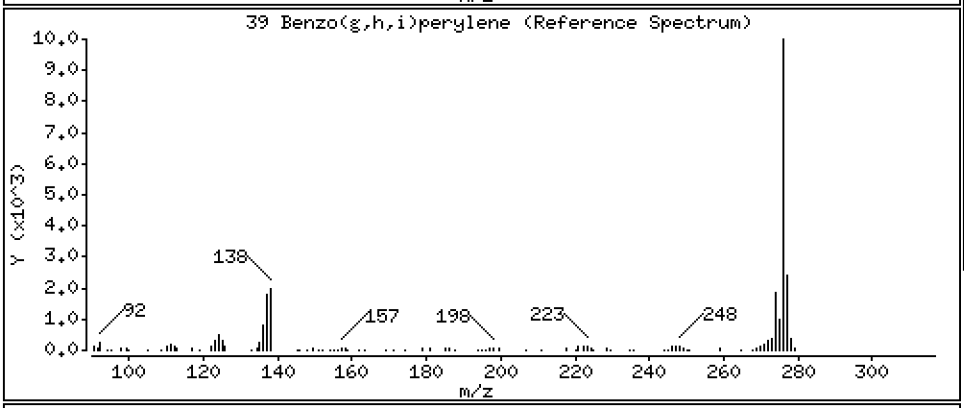
Concentration: 2.483 ug/L

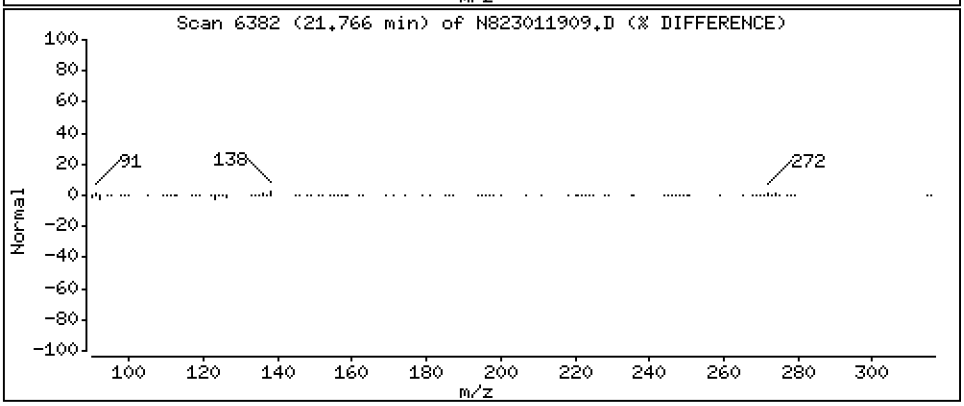












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230119.b\N823011909.D
Lab Smp Id: SLA0213-SCV1
Inj Date : 19-JAN-2023 14:58
Operator : JZ Inst ID: nt8.i
Smp Info : SCV230119
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Meth Date : 25-Jan-2023 21:57 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnascv.sub
Target Version: 4.14
Processing Host: JIANQING-202105

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Vo	500.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
* 1 Naphthalene-d8	136	4.913	4.906	(1.000)	46346	2.00000	
2 Naphthalene	128	4.941	4.938	(1.006)	56587	2.62597	2.626
$ 3 2-Methylnaphthalene-d10	152	Compound Not Detected.					
4 2-Methylnaphthalene	141	5.694	5.687	(1.159)	31650	2.67019	2.670
5 1-methylnaphthalene	141	5.890	5.883	(1.199)	31873	2.64949	2.649
9 Acenaphthylene	152	7.091	7.085	(0.985)	59018	2.82060	2.821
* 10 Acenaphthene-d10	164	7.202	7.196	(1.000)	27709	2.00000	
11 Acenaphthene	153	7.249	7.246	(1.007)	36454	2.60022	2.600
12 Dibenzofuran	168	7.401	7.395	(1.028)	60898	2.85987	2.860
14 Fluorene	166	7.878	7.872	(1.094)	43507	2.63066	2.631
* 15 Phenanthrene-d10	188	9.238	9.235	(1.000)	51685	2.00000	
16 Phenanthrene	178	9.276	9.270	(1.004)	61815	2.44841	2.448
17 Anthracene	178	9.317	9.311	(1.009)	52064	2.27006	2.270
22 Fluoranthene	202	11.059	11.053	(1.197)	72902	2.65276	2.653
$ 21 Fluoranthene-d10	212	Compound Not Detected.					
23 Pyrene	202	11.578	11.572	(0.815)	71115	2.46242	2.462
24 Benzo(a)anthracene	228	14.082	14.076	(0.991)	67725	2.58725	2.587
* 25 Chrysene-d12	240	14.212	14.202	(1.000)	46582	2.00000	
27 Chrysene	228	14.285	14.278	(1.005)	66872	2.39976	2.400
28 Benzo(b)fluoranthene	252	16.833	16.821	(0.929)	60946	2.50689	2.507
29 Benzo(k)fluoranthene	252	16.893	16.884	(0.932)	63249	2.65606	2.656
31 Total Benzofluoranthenes	252	16.893	16.821	(0.932)	126178	5.48025	5.480(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	32 Benzo(a)pyrene	252	17.886	17.877	(0.987)	55026	2.57205	2.572
*	33 Perylene-d12	264	18.117	18.111	(1.000)	41743	2.00000	
	37 Indeno(1,2,3-cd)pyrene	276	20.684	20.675	(1.142)	65545	2.68928	2.689
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	20.669	20.662	(1.141)	52293	2.49315	2.493
	39 Benzo(g,h,i)perylene	276	21.766	21.756	(1.201)	54821	2.48258	2.483
	35 Perylene	252	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823011909.D
Lab Smp Id: SLA0213-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230119.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 19-JAN-2023
Calibration Time: 12:52
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44704	22352	89408	46346	3.67
10 Acenaphthene-d10	26411	13206	52822	27709	4.91
15 Phenanthrene-d10	49210	24605	98420	51685	5.03
25 Chrysene-d12	42994	21497	85988	46582	8.35
33 Perylene-d12	40520	20260	81040	41743	3.02

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.91	4.41	5.41	4.91	0.13
10 Acenaphthene-d10	7.20	6.70	7.70	7.20	0.09
15 Phenanthrene-d10	9.24	8.74	9.74	9.24	0.03
25 Chrysene-d12	14.20	13.70	14.70	14.21	0.07
33 Perylene-d12	18.11	17.61	18.61	18.12	0.03

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

REVIEW SUMMARY FOR FILE - N823011909.D

Lab ID: SLA0213-SCV1
nt8.i, 20230119.b\FSIMPNA230119.m,   19-JAN-2023 14:58

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

No RRT check performed

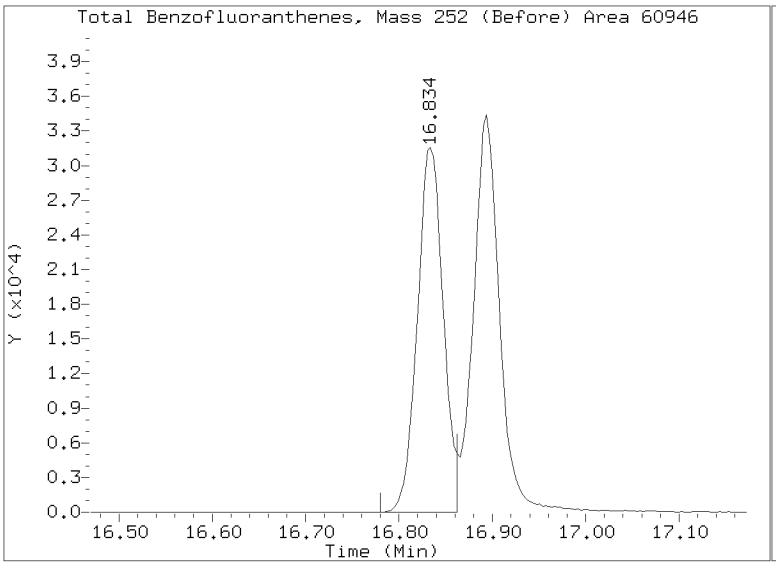
On Column LOD for nt8.i, 20230119.b\FSIMPNA230119.m, pnascv.sub = 0.0500

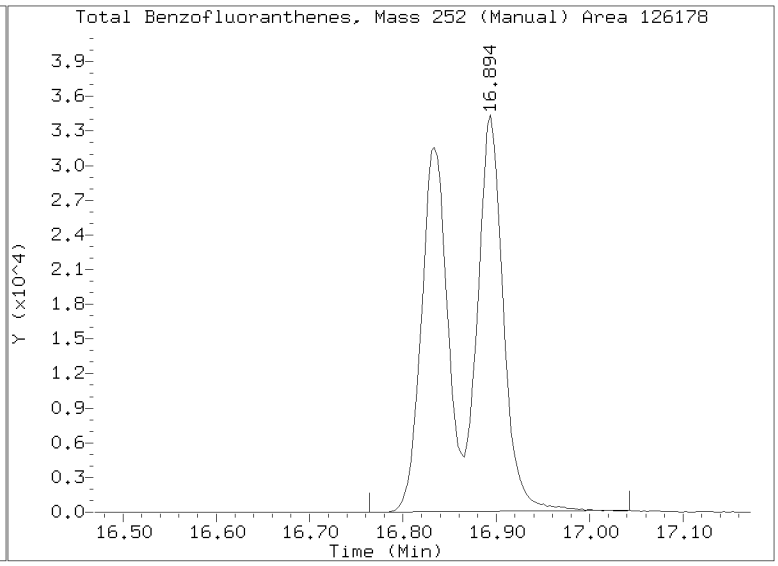
Exception: Benzo(b)fluoranthene 0.0300
Exception: Benzo(k)fluoranthene 0.0300
Exception: Total Benzofluoranthenes 0.0300
Exception: Fluoranthene-d10 (Surr) 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230119.b/N823011909.D
Injection Date: 19-JAN-2023 14:58
Lab ID:SLA0213-SCV1 Client ID:
Report Date: 01/25/2023 22:00





Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT8	Calibration:	GA00050
Lab File ID:	N823020633.D	Calibration Date:	01/19/2023
Sequence:	SLB0075	Injection Date:	02/07/23
Lab Sample ID:	SLB0075-CCV1	Injection Time:	03:09
Sequence Name:	Calibration Check		

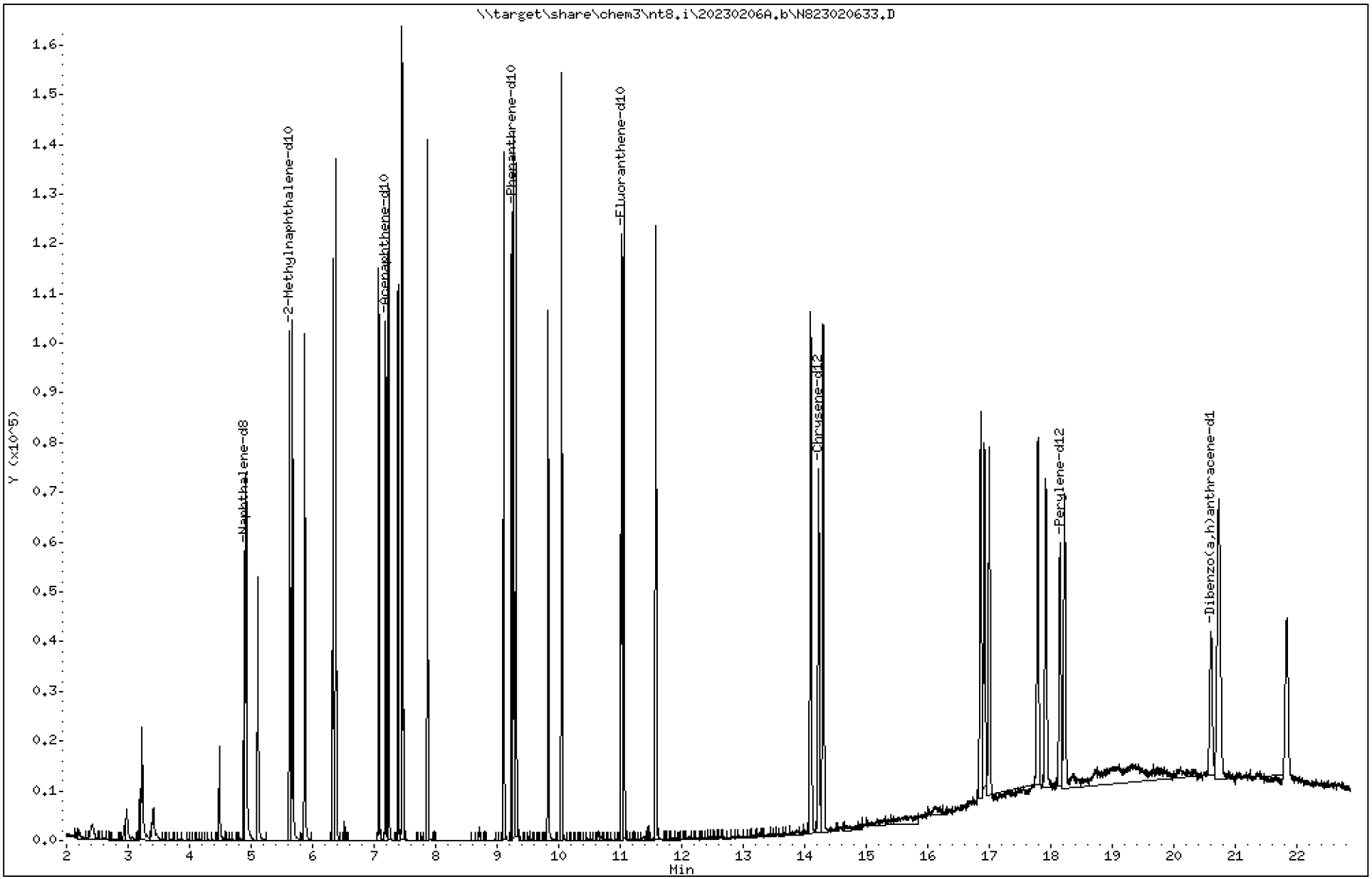
		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Benzo(a)anthracene	A	2.5000	2.85	1.1238870	1.2807120		14.0	+/-50
Chrysene	A	2.5000	2.46	1.1964350	1.1765240		-1.7	+/-50
Benzo(b)fluoranthene	A	2.5000	2.93	1.1648110	1.3636180		17.1	+/-50
Benzo(k)fluoranthene	A	2.5000	2.72	1.1409370	1.2422350		8.9	+/-50
Benzo(a)pyrene	A	2.5000	2.65	1.0250270	1.0880440		6.1	+/-50
Indeno(1,2,3-cd)pyrene	A	2.5000	2.26	1.1677520	1.0535810		-9.8	+/-50
Dibenzo(a,h)anthracene	A	2.5000	2.35	1.0049440	0.9451614		-5.9	+/-50
2-Methylnaphthalene-d10	A	2.5000	2.69	0.5454499	0.5877536		7.8	+/-50
Dibenzo[a,h]anthracene-d14	A	2.5000	2.20	0.6679424	0.6893016		-12.0	+/-50
Fluoranthene-d10	A	2.5000	2.73	0.8823923	0.9648554		9.3	+/-50

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020633.D
Date : 07-FEB-2023 03:09
Client ID:
Sample Info: CCV230206A

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



23A0207 CLPLIKE (Rev3) - Page 1065 of 3315

Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020633.D

Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

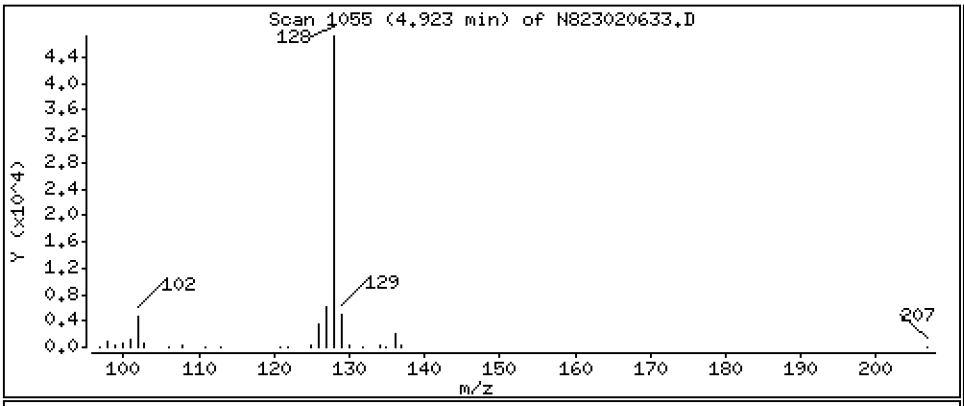
Operator: JZ

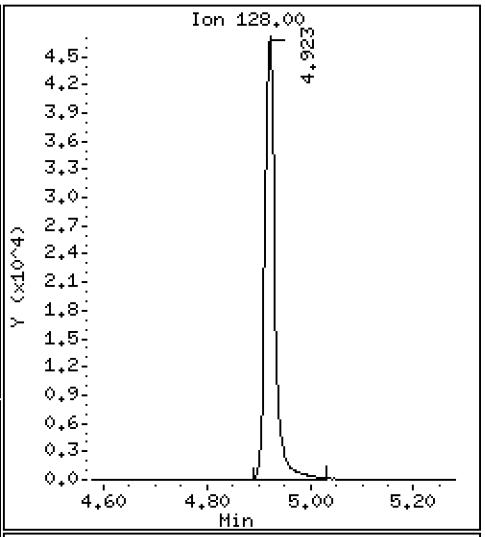
Column phase: Rxi-17sil

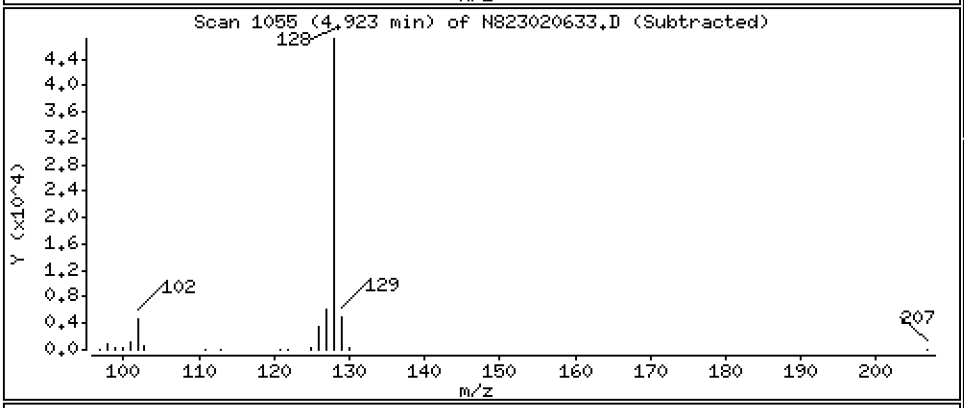
Column diameter: 0.25

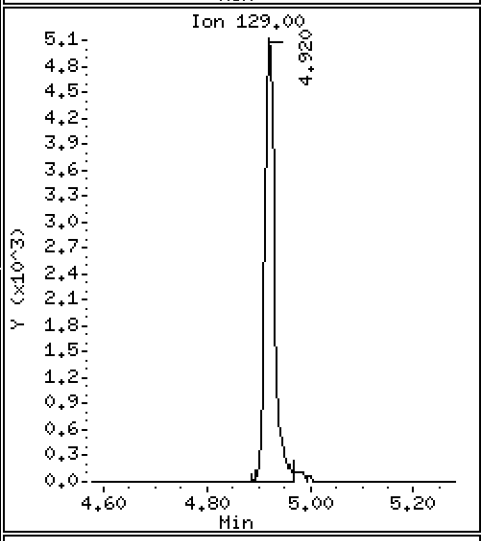
2 Naphthalene

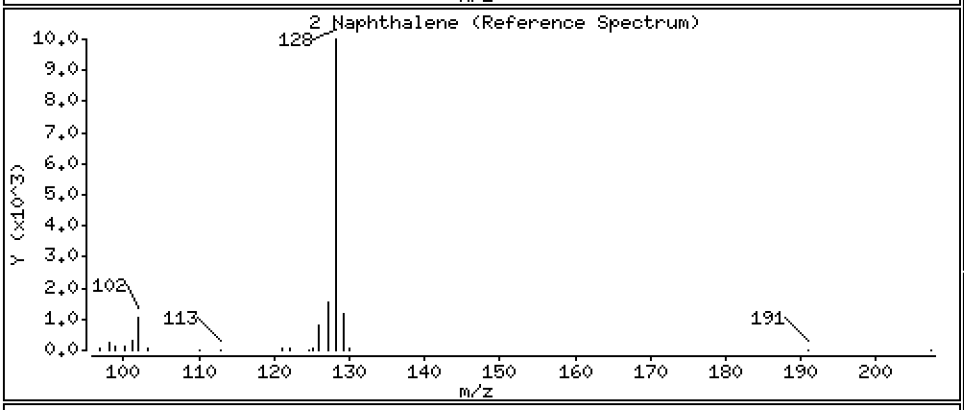
Concentration: 2.576 ug/mL

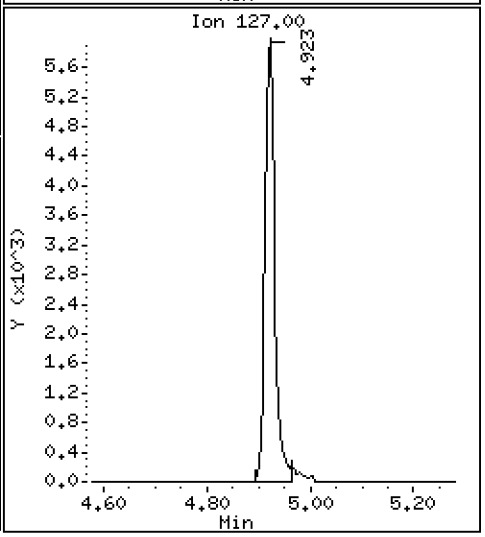


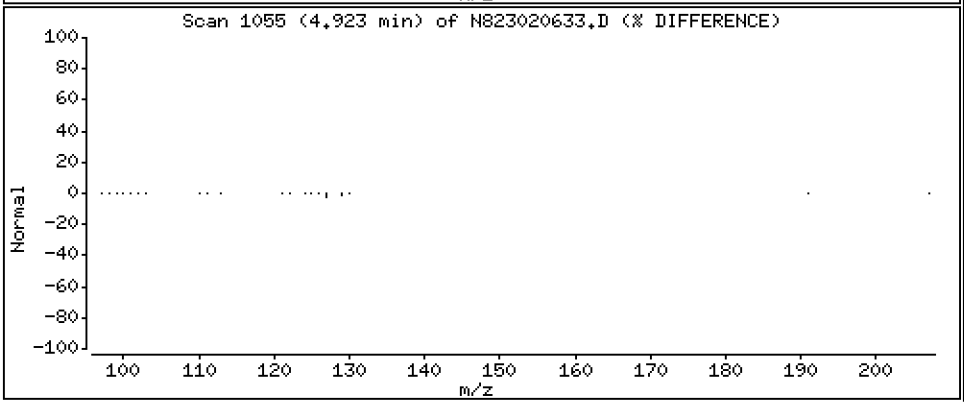












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

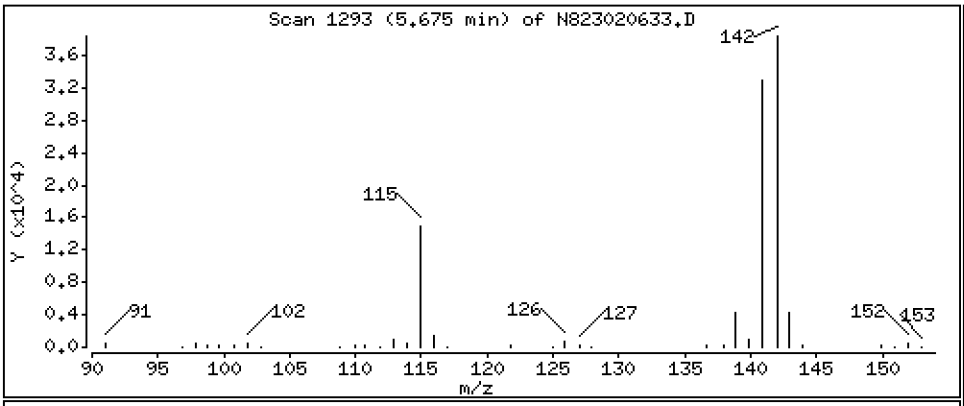
Operator: JZ

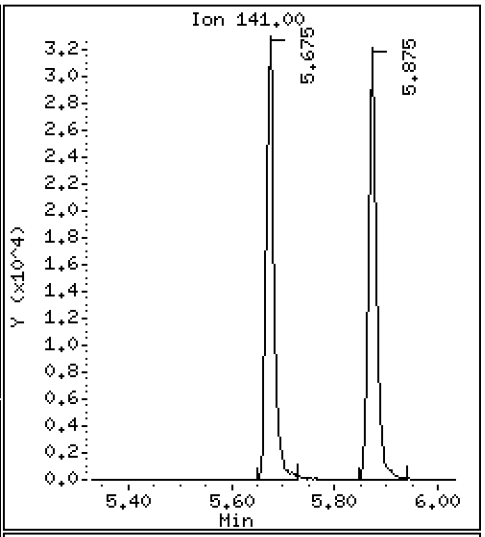
Column phase: Rxi-17sil

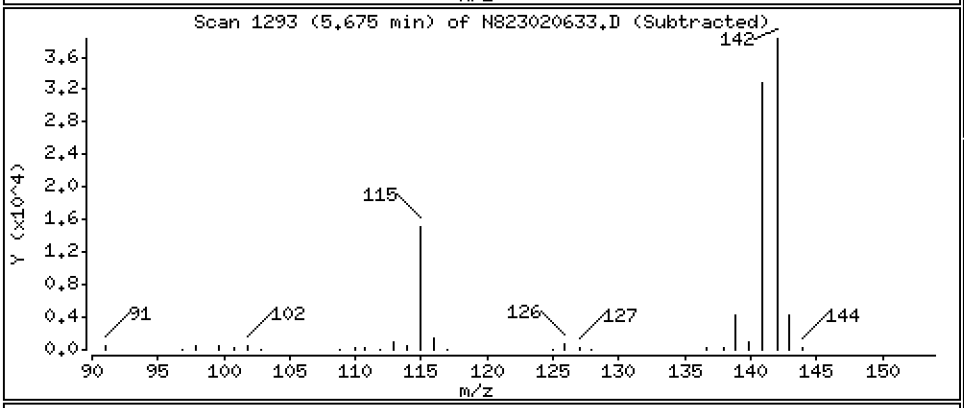
Column diameter: 0.25

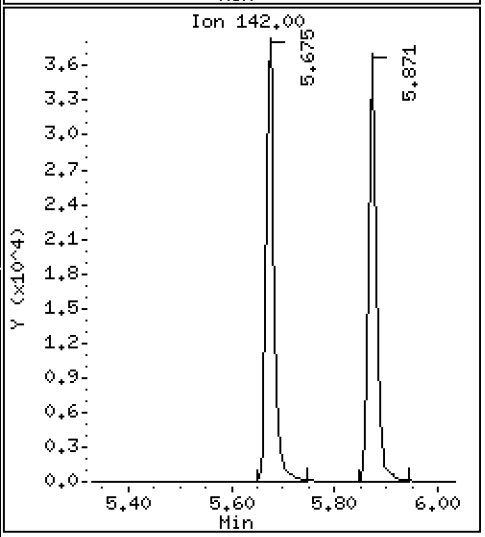
4 2-Methylnaphthalene

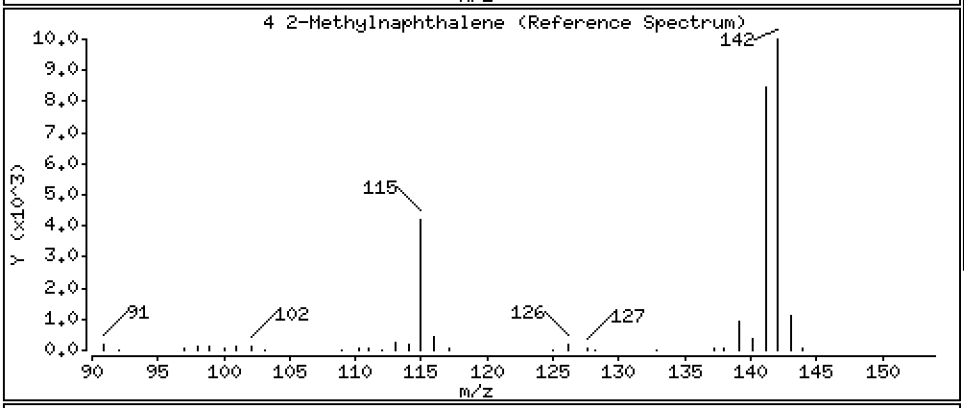
Concentration: 2.611 ug/mL

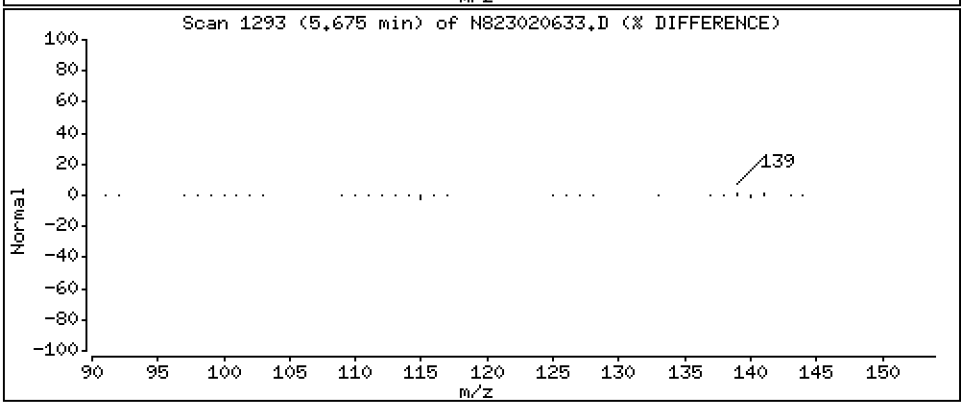












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020633.D

Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

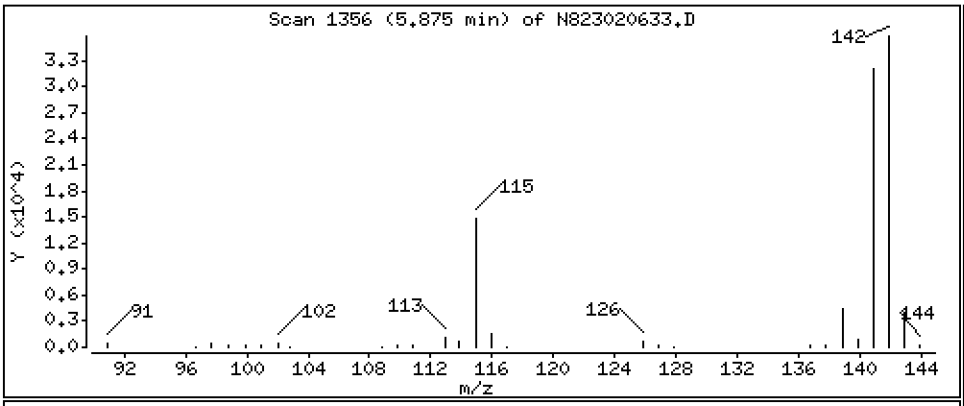
Operator: JZ

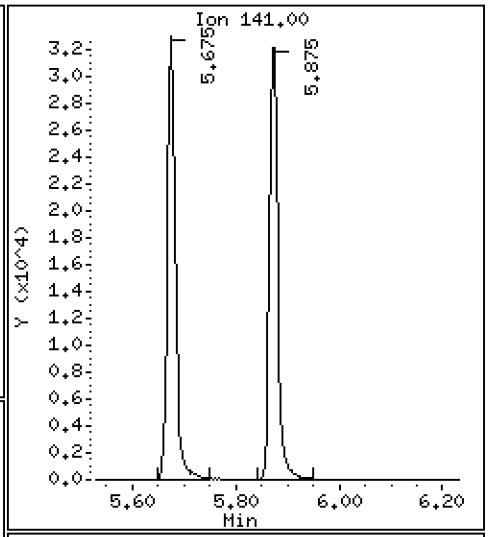
Column phase: Rxi-17sil

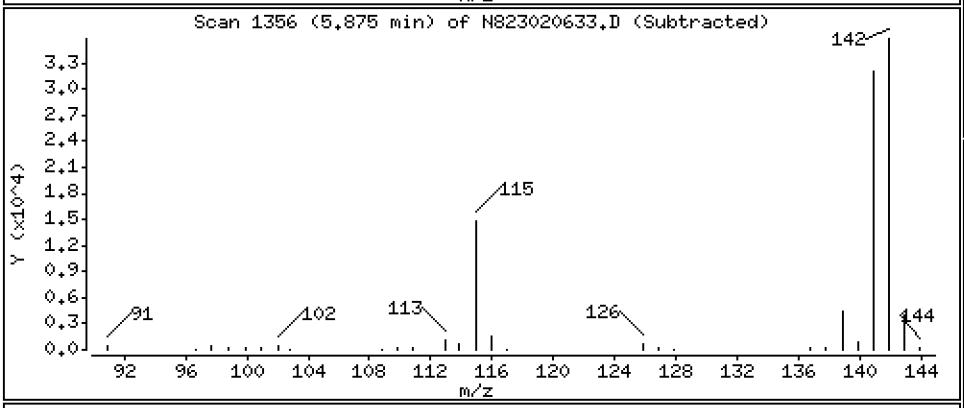
Column diameter: 0.25

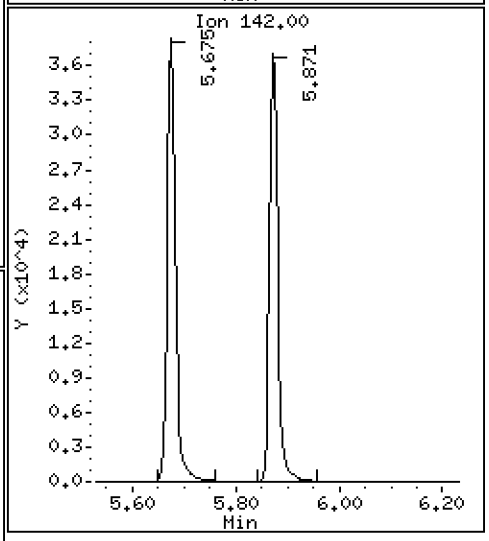
5 1-methylnaphthalene

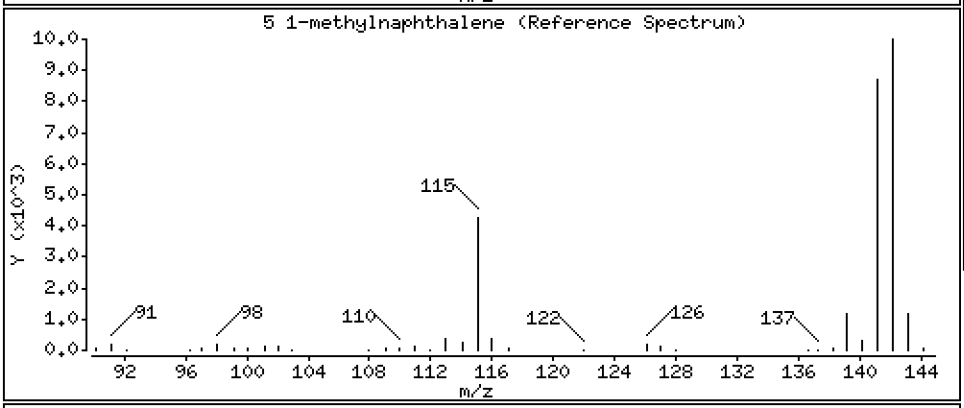
Concentration: 2.603 ug/mL

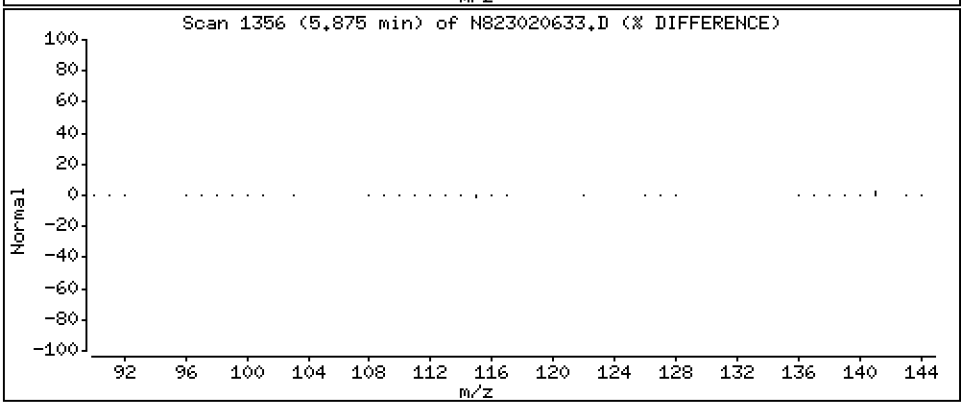












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020633.D

Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

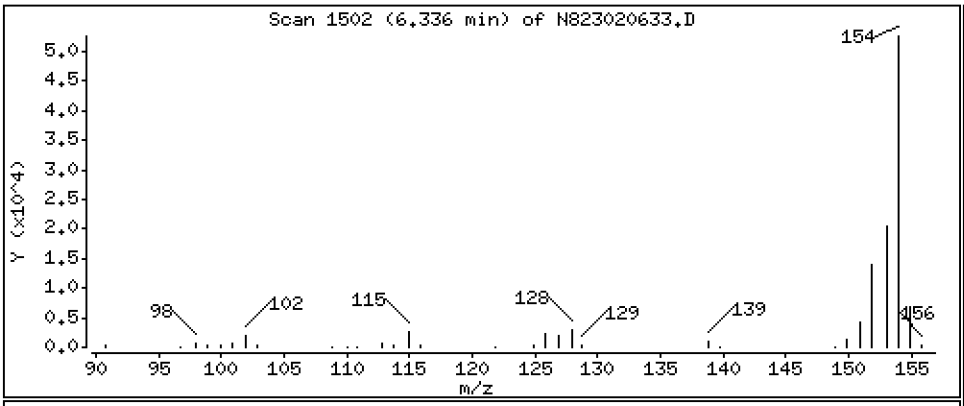
Operator: JZ

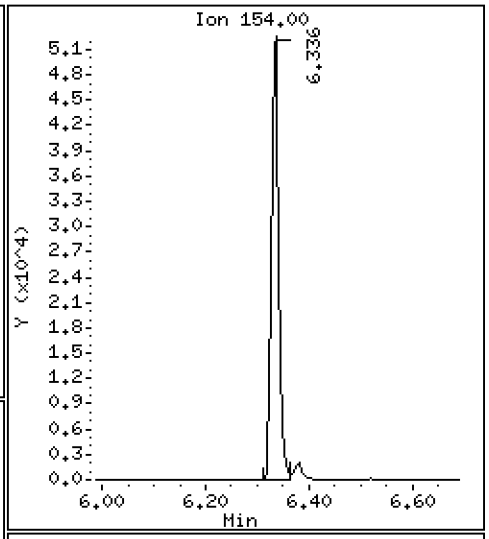
Column phase: Rxi-17sil

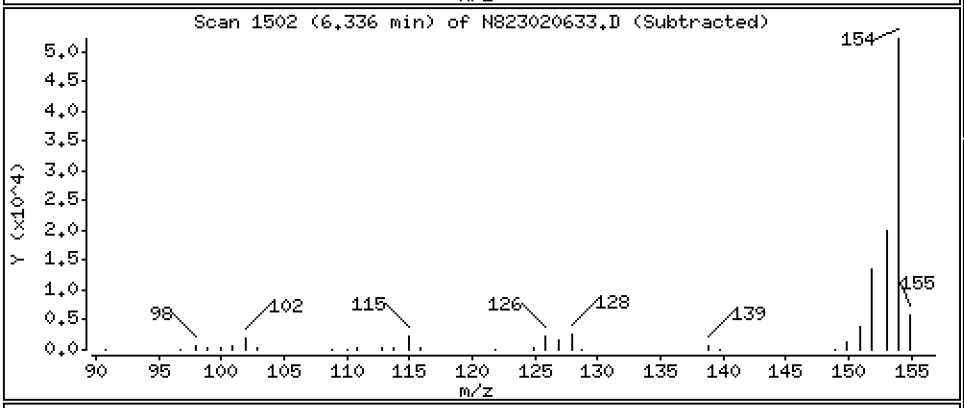
Column diameter: 0.25

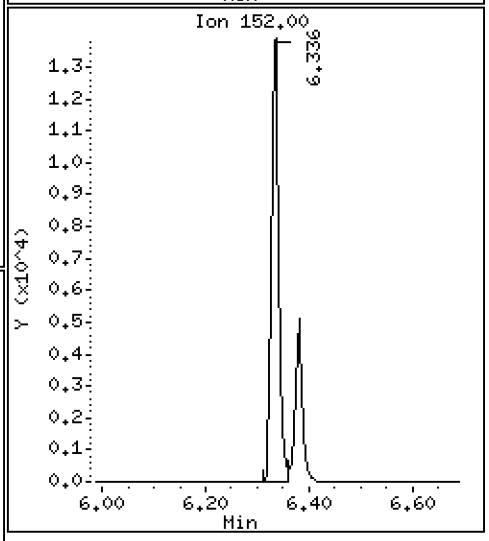
7 Biphenyl

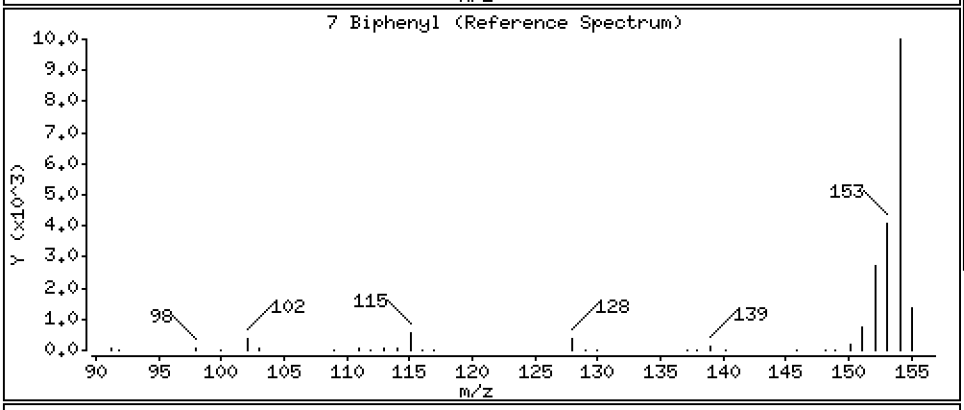
Concentration: 2.532 ug/mL

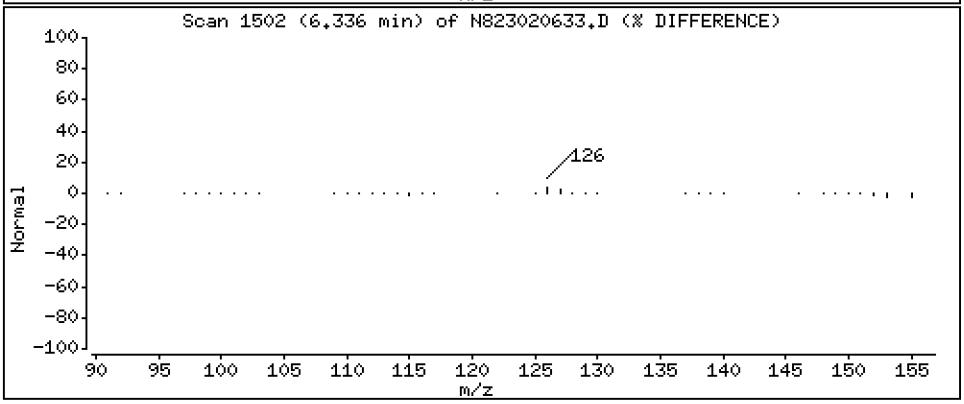












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

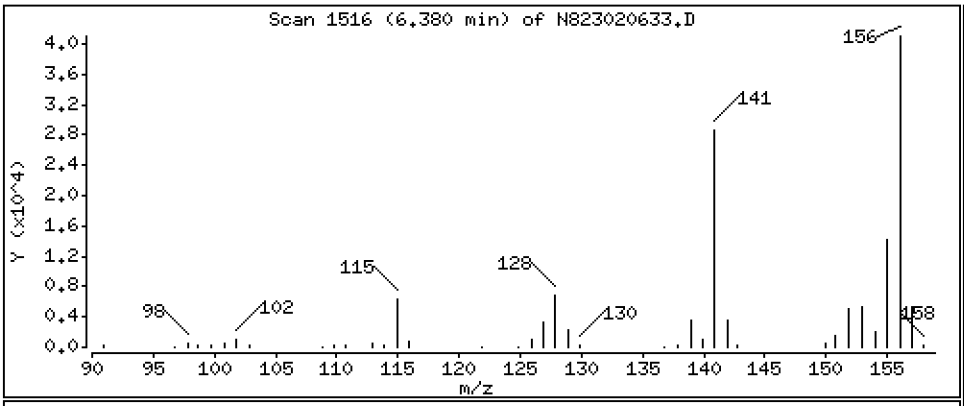
Operator: JZ

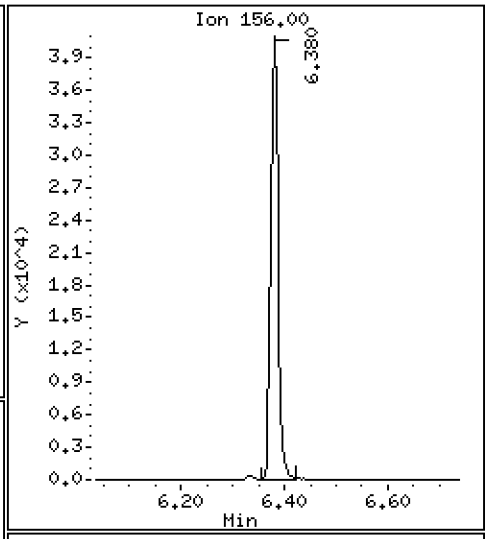
Column phase: Rxi-17sil

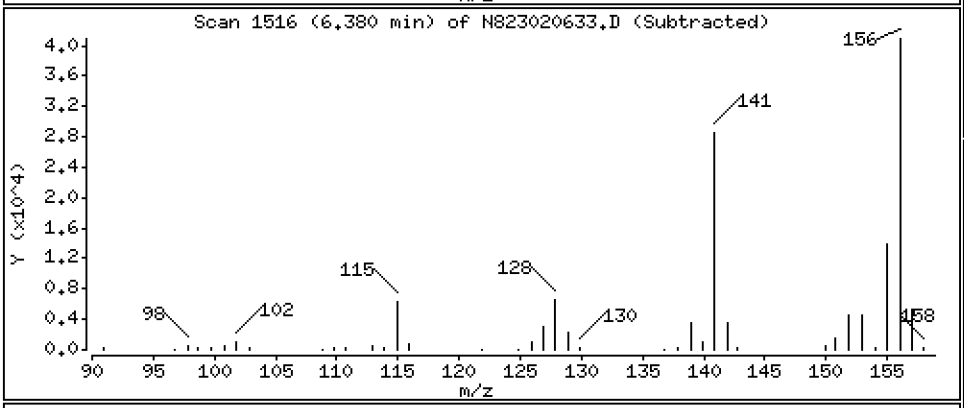
Column diameter: 0.25

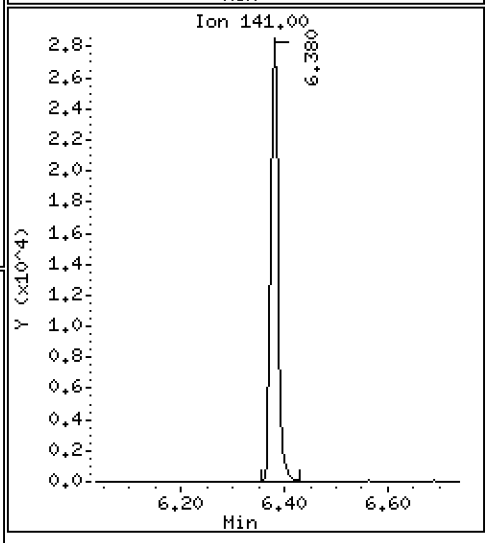
8 2,6-Dimethylnaphthalene

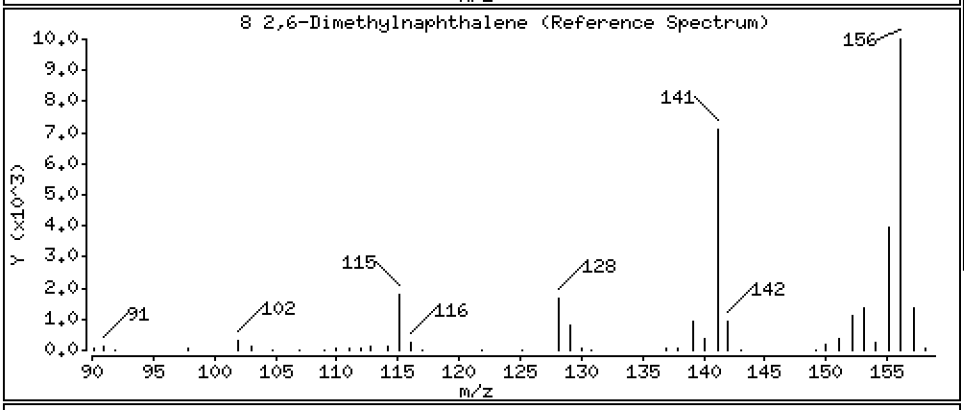
Concentration: 2.669 ug/mL

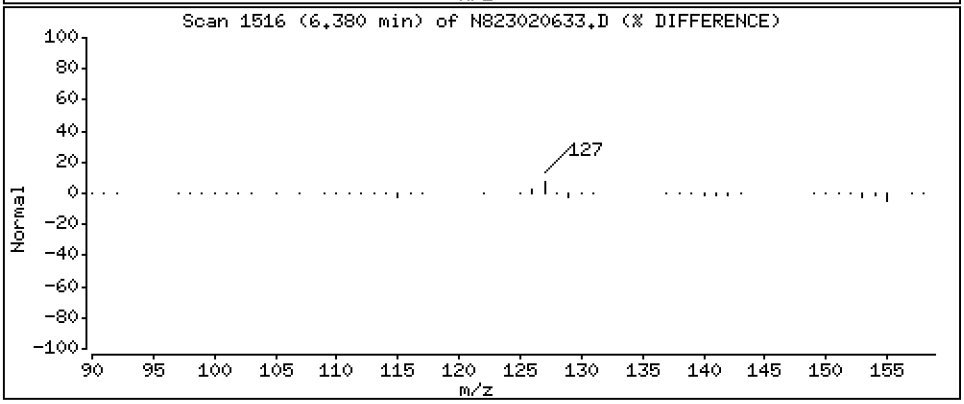












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

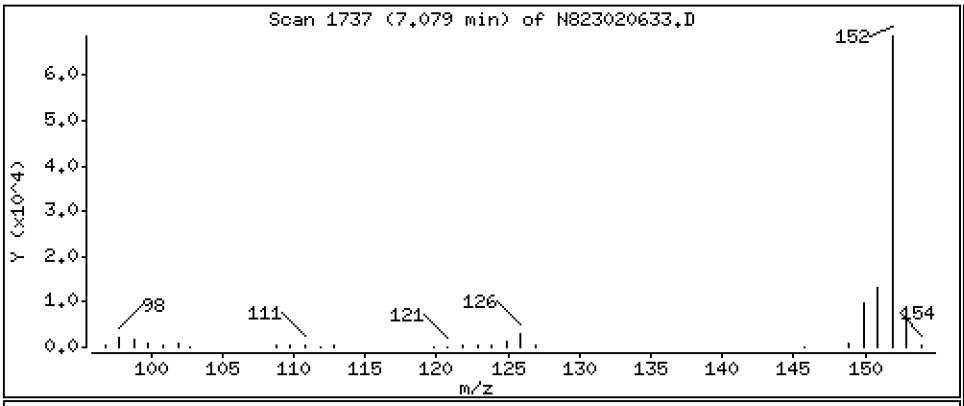
Operator: JZ

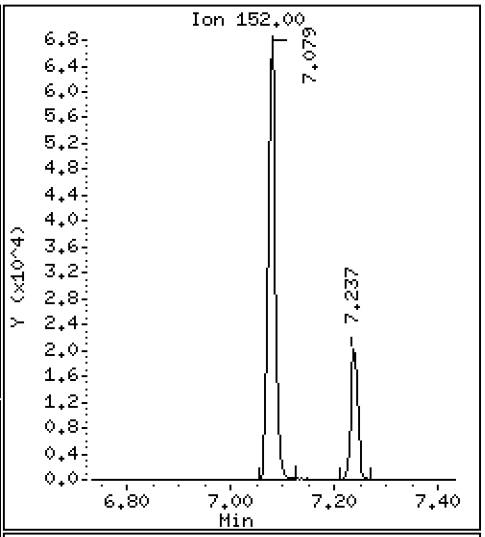
Column phase: Rxi-17sil

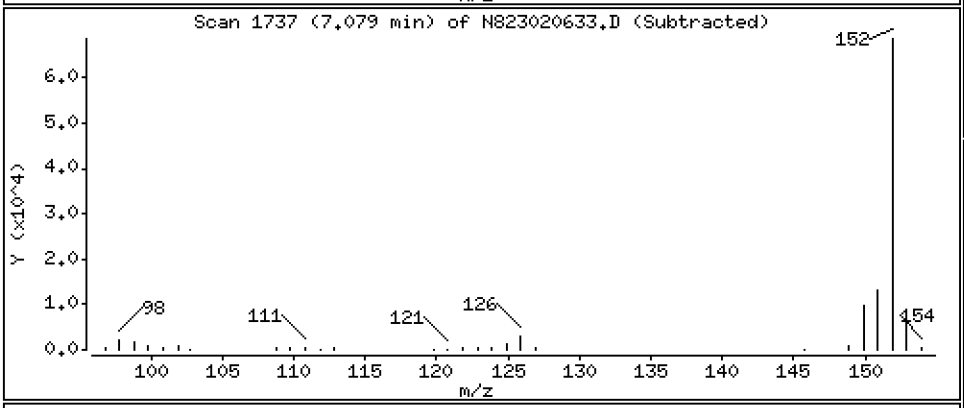
Column diameter: 0.25

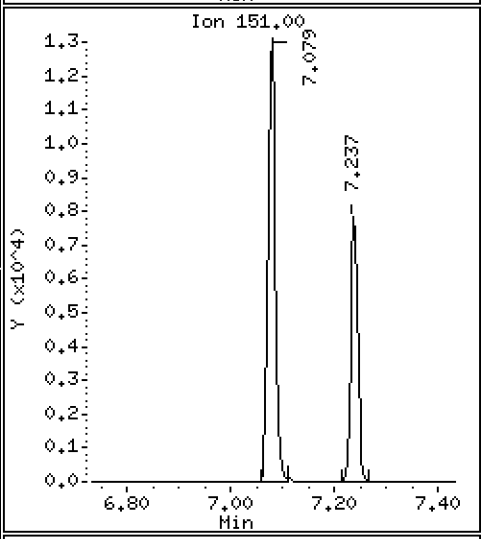
9 Acenaphthylene

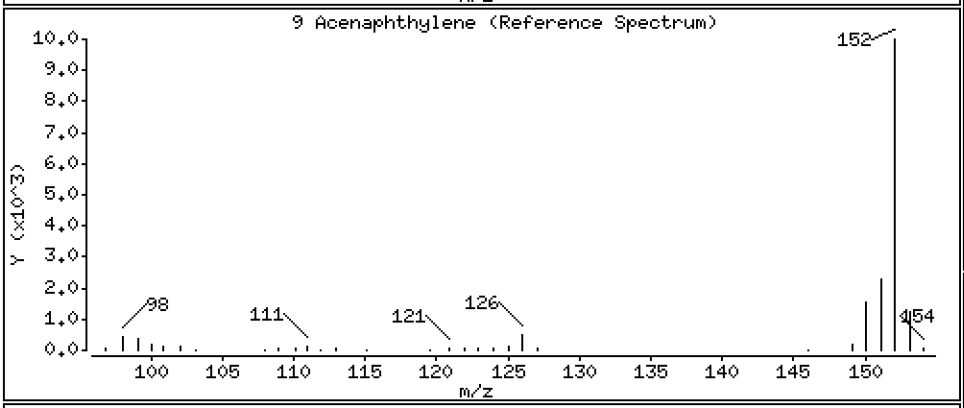
Concentration: 2.741 ug/mL

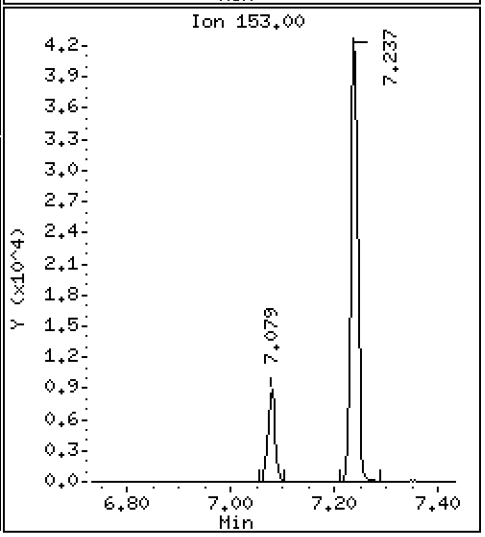


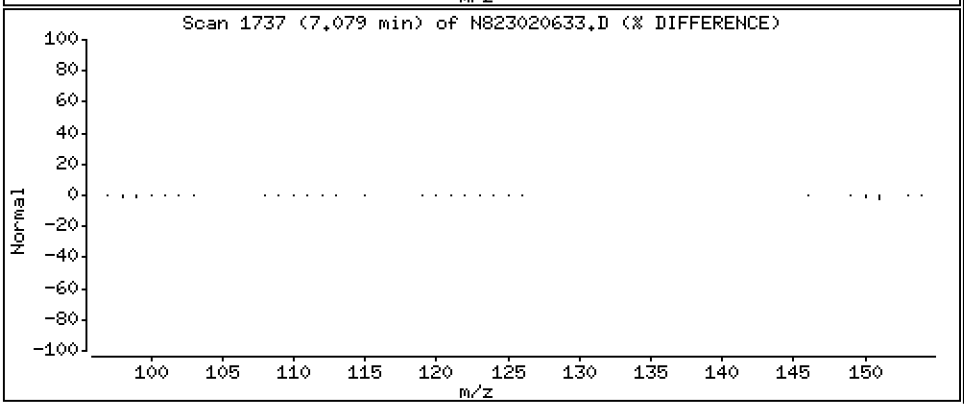












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

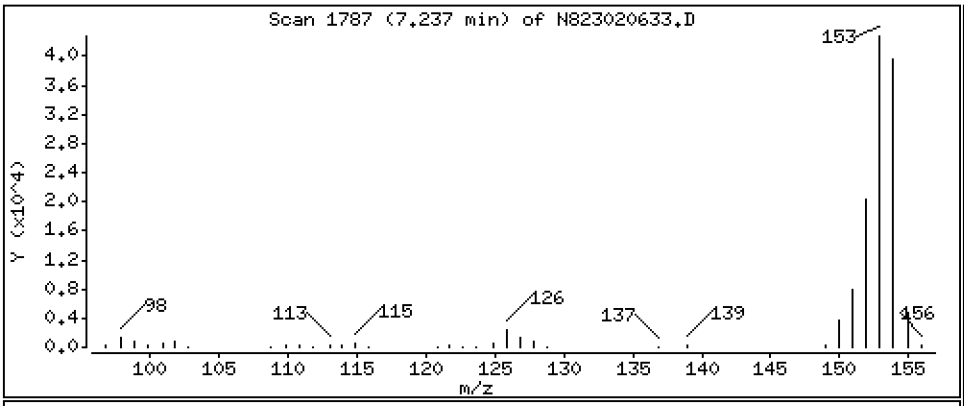
Operator: JZ

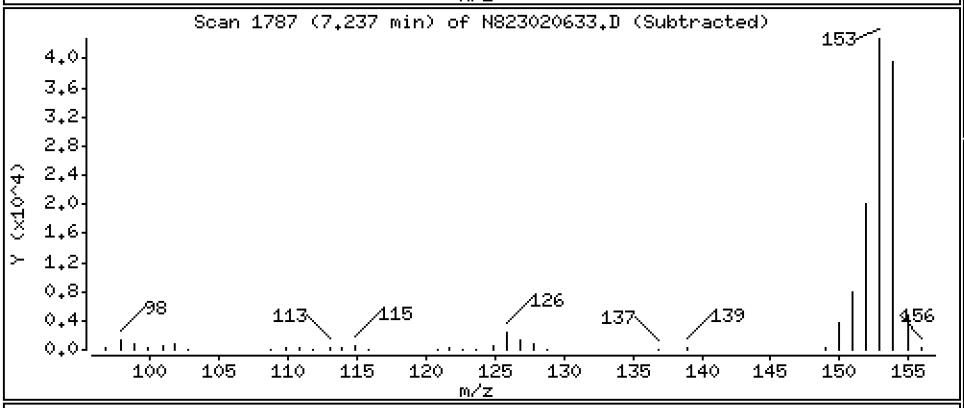
Column phase: Rxi-17sil

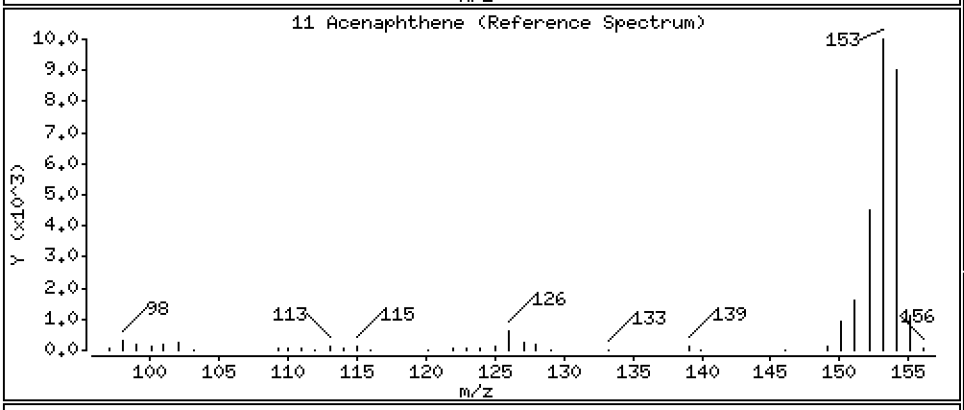
Column diameter: 0.25

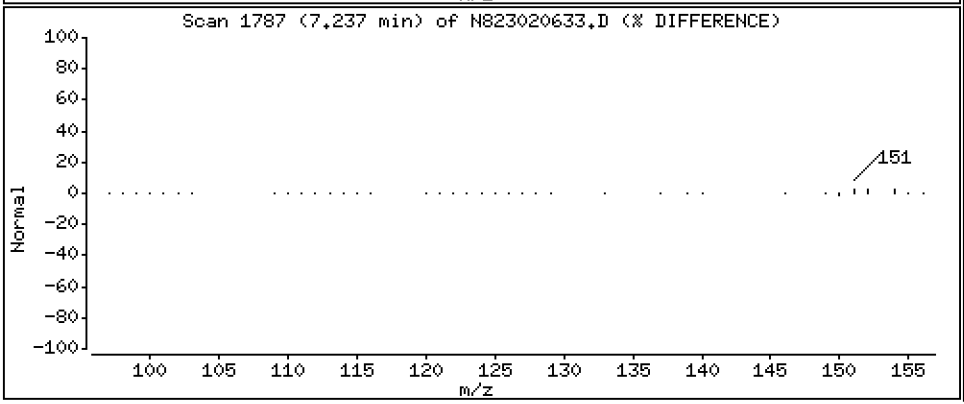
11 Acenaphthene

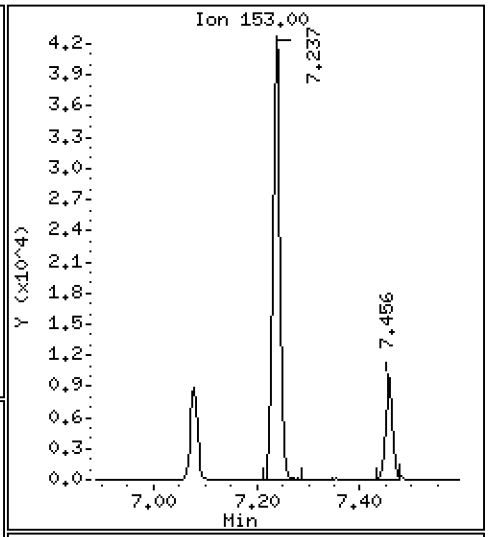
Concentration: 2.545 ug/mL

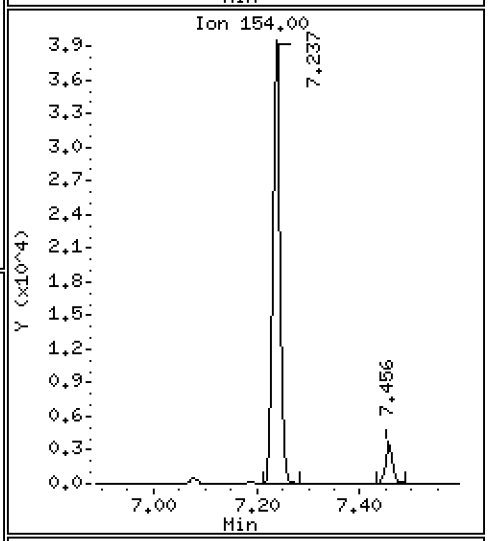


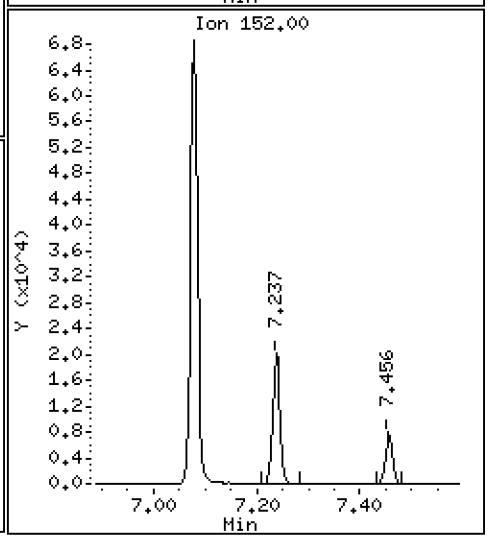












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

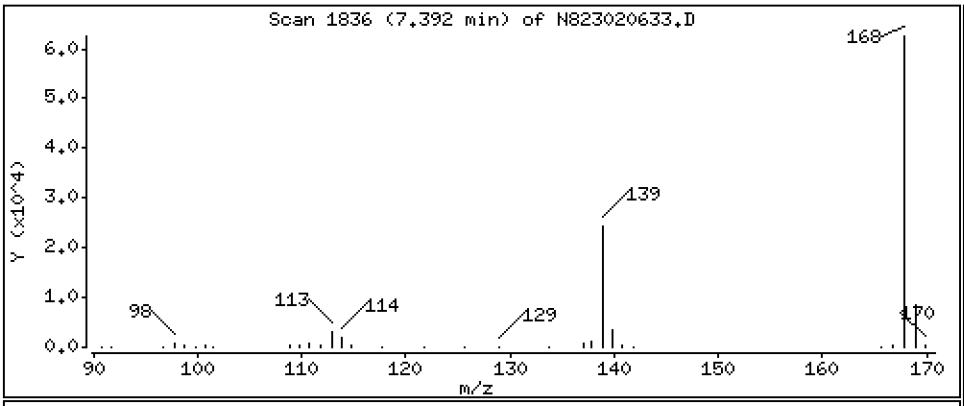
Operator: JZ

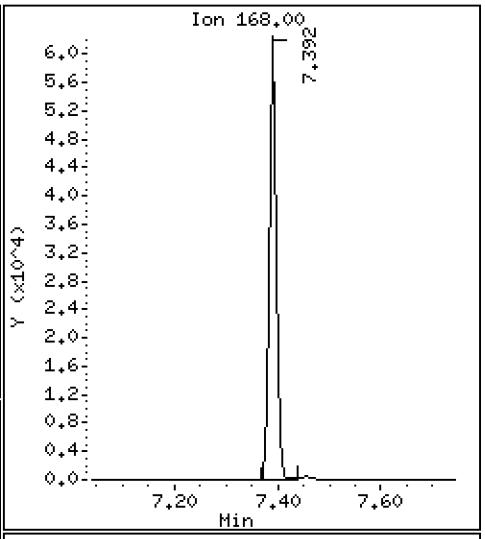
Column phase: Rxi-17sil

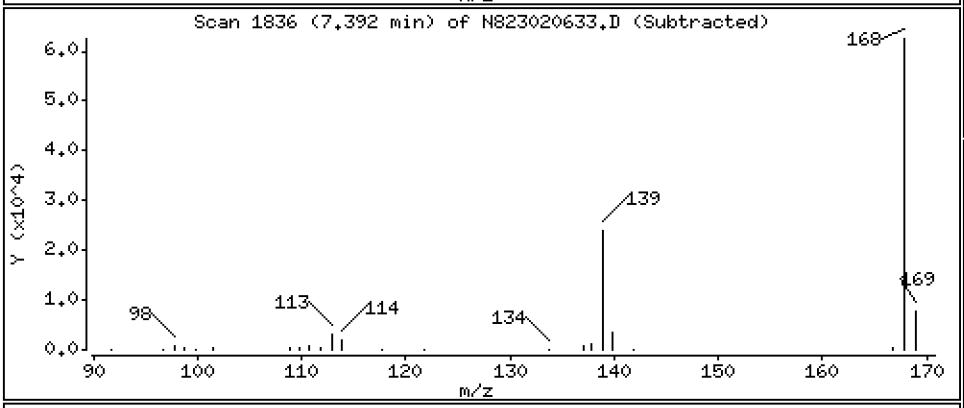
Column diameter: 0.25

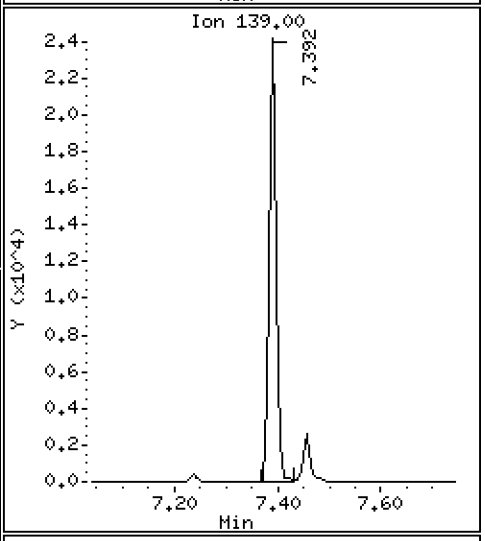
12 Dibenzofuran

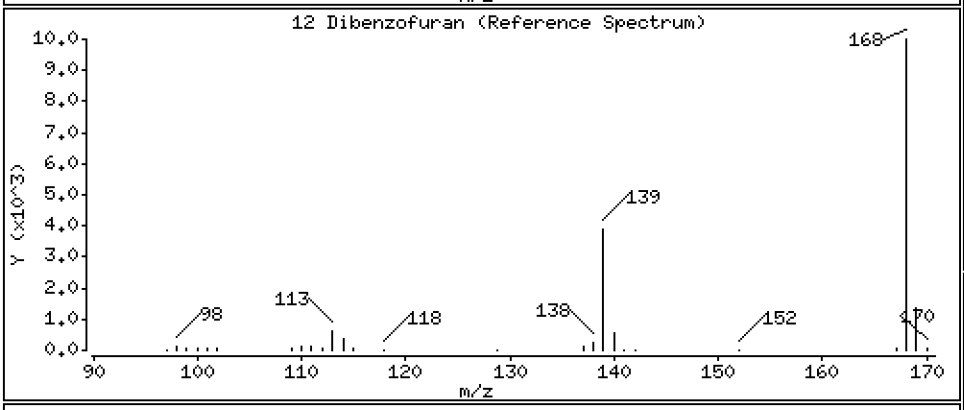
Concentration: 2.493 ug/mL

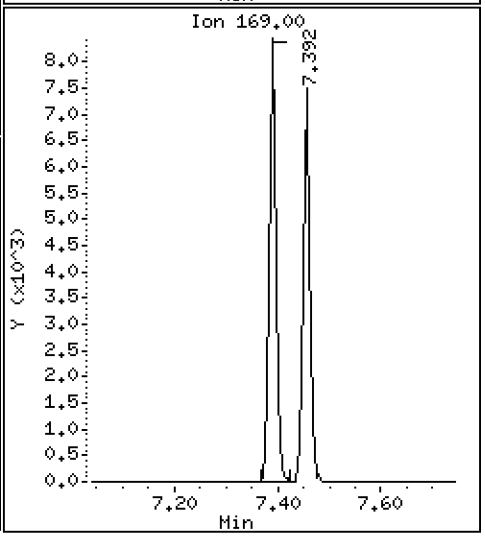


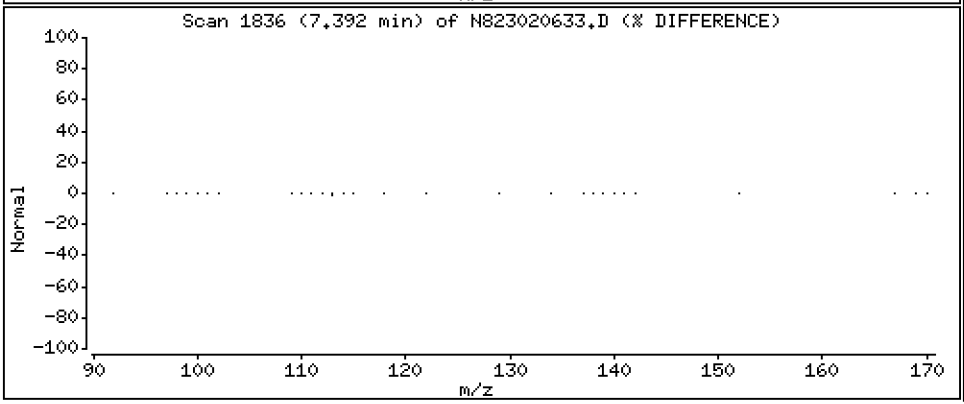












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

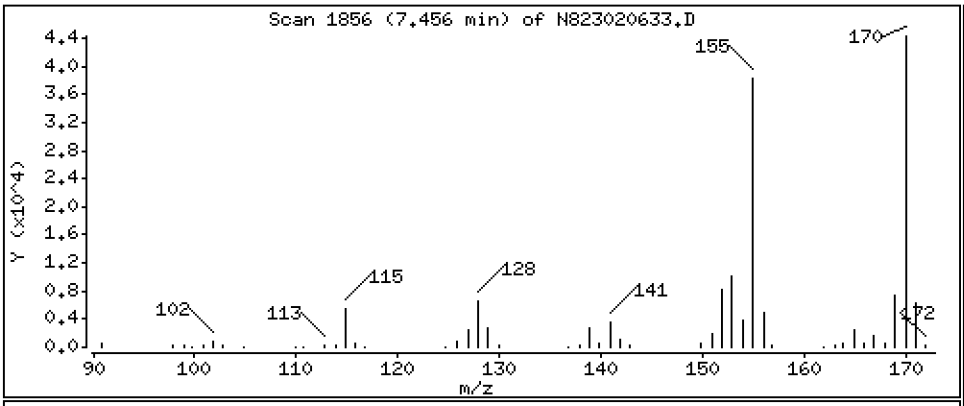
Operator: JZ

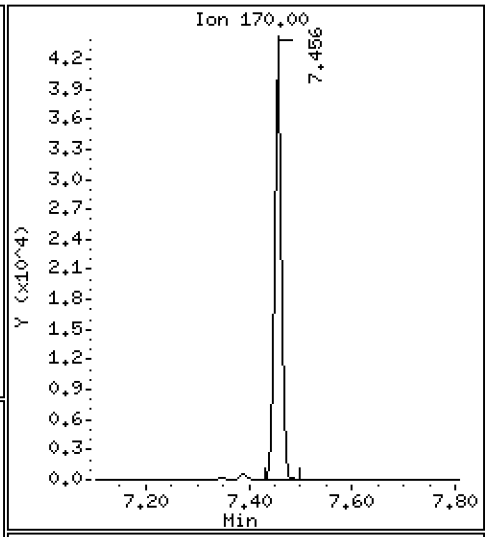
Column phase: Rxi-17sil

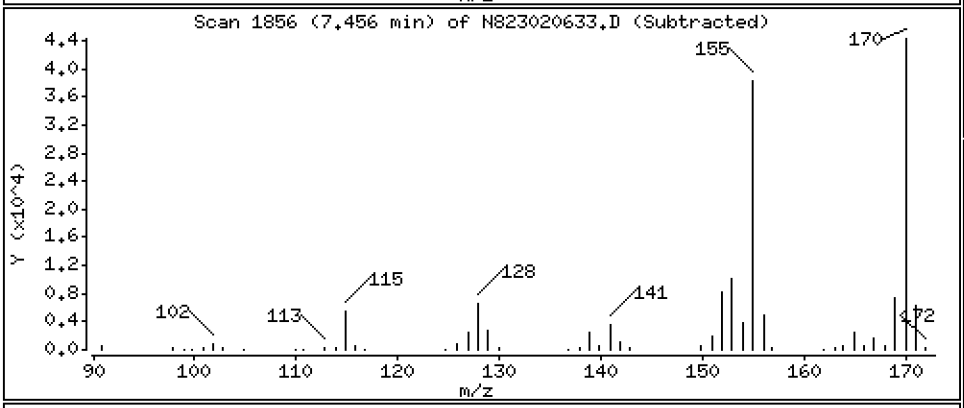
Column diameter: 0.25

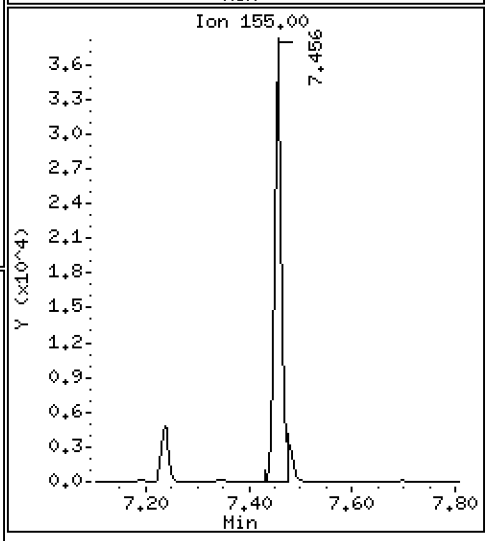
13 1,6,7-Trimethylnaphthalene

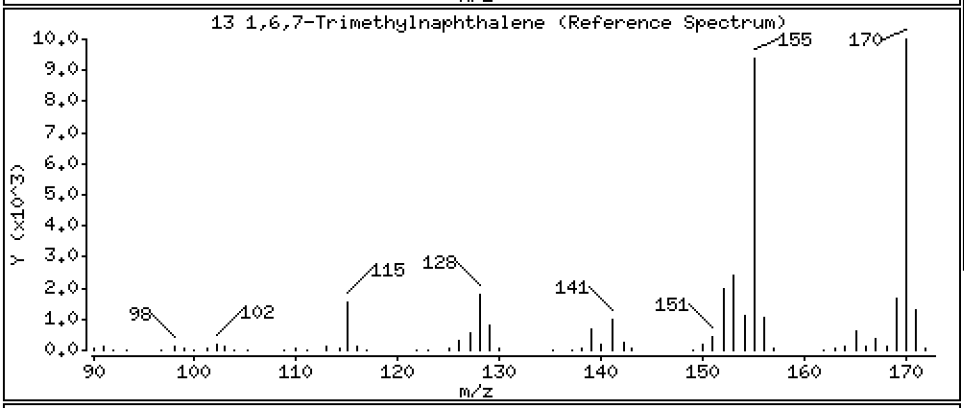
Concentration: 2.660 ug/mL

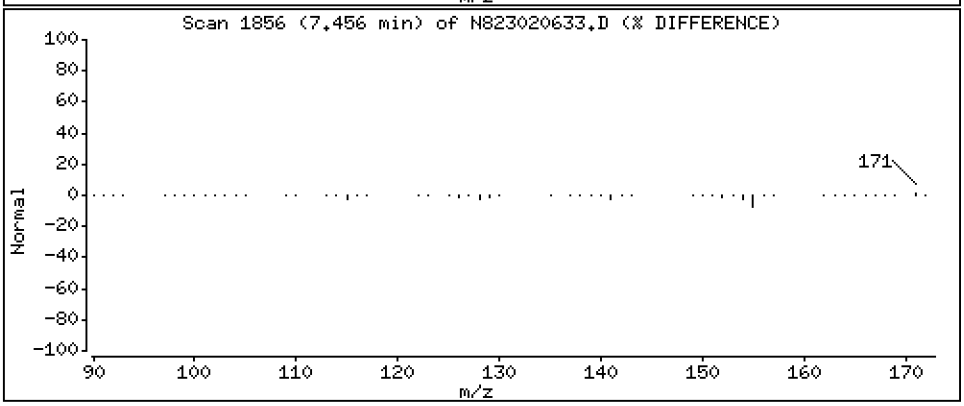












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

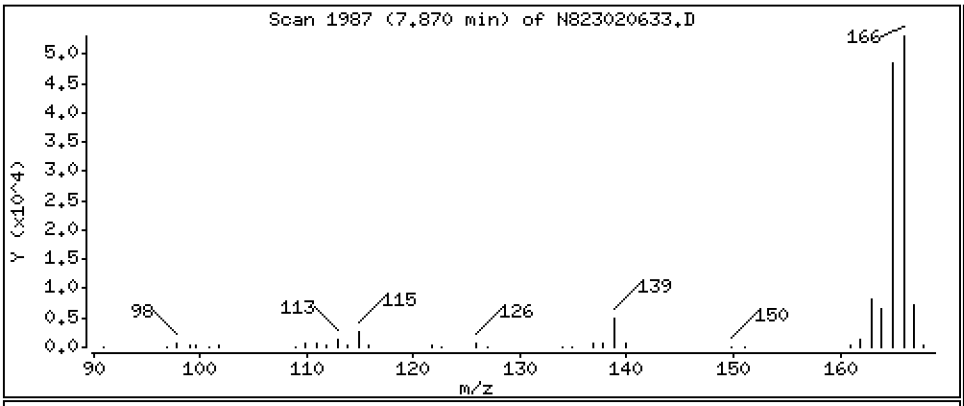
Operator: JZ

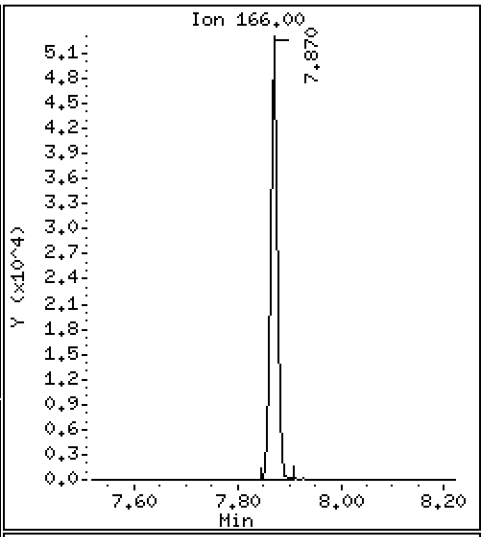
Column phase: Rxi-17sil

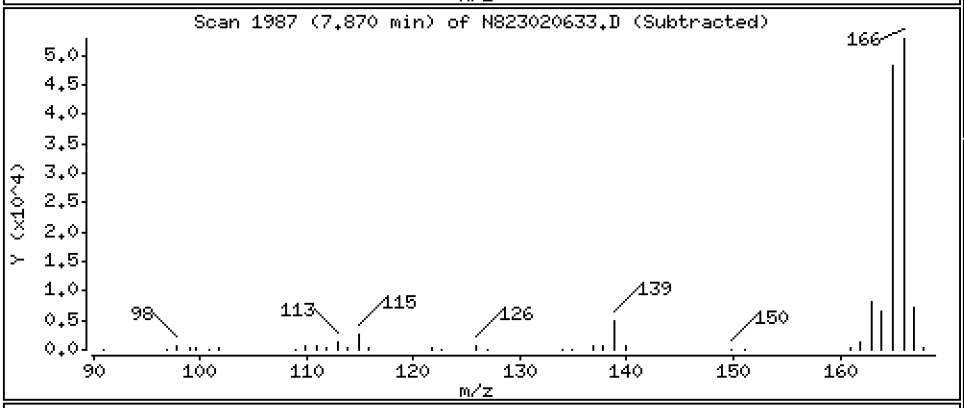
Column diameter: 0.25

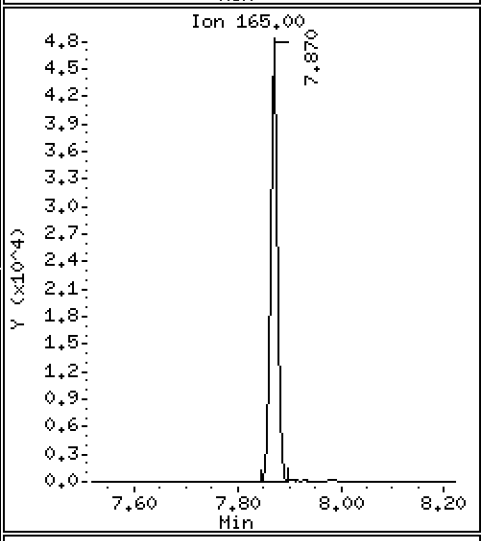
14 Fluorene

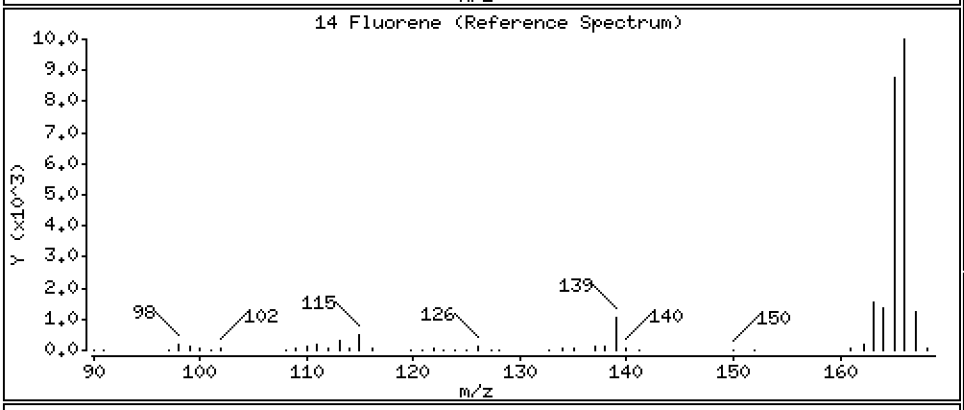
Concentration: 2.623 ug/mL

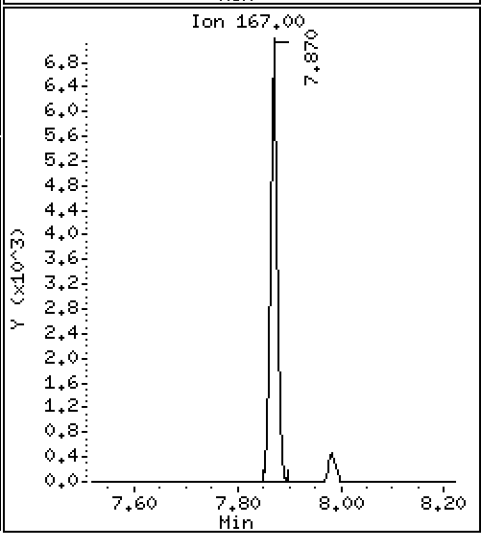


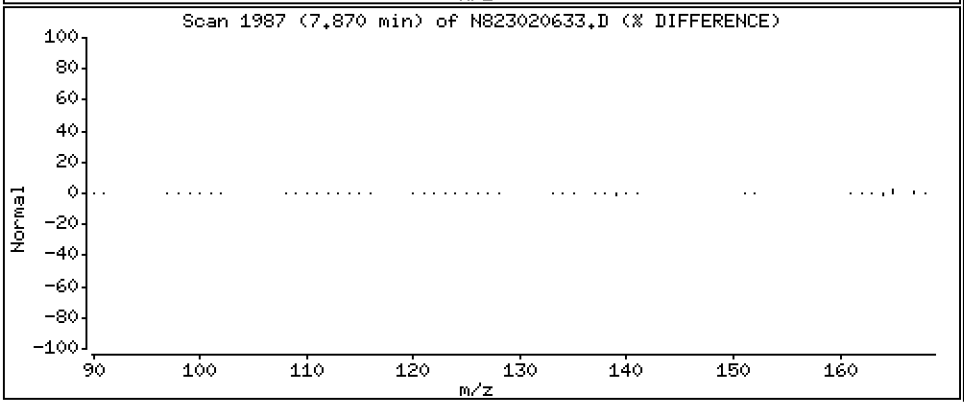












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

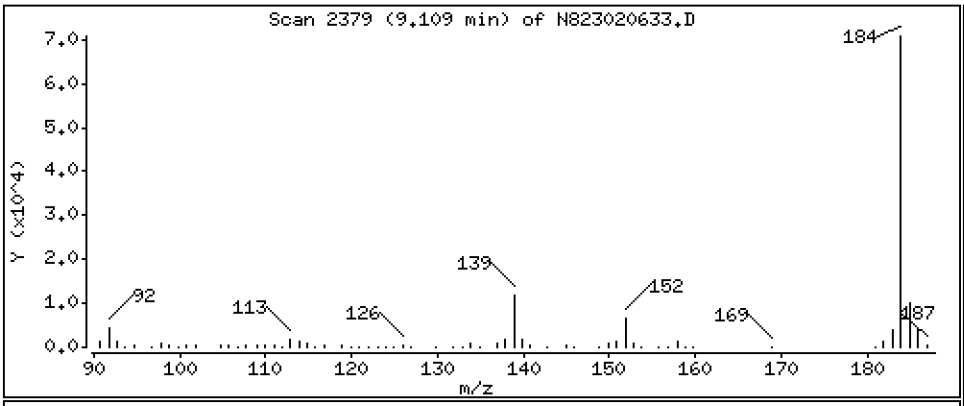
Operator: JZ

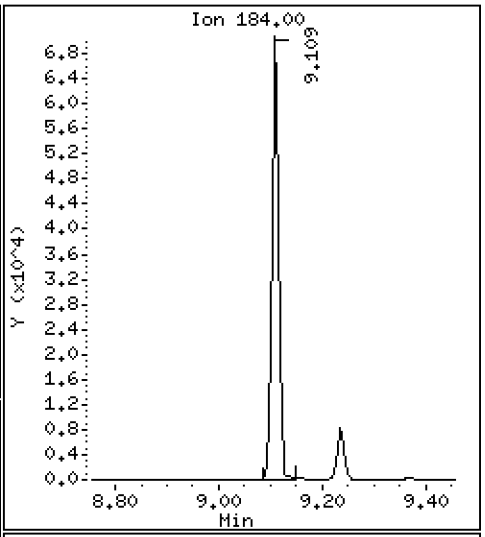
Column phase: Rxi-17sil

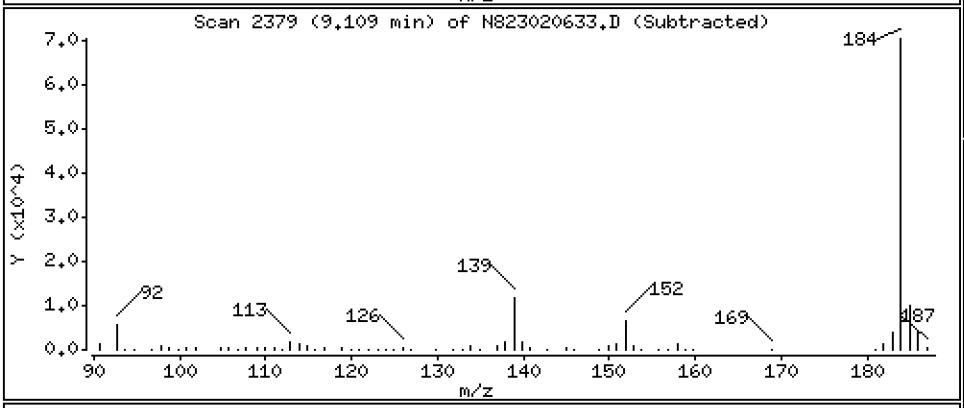
Column diameter: 0.25

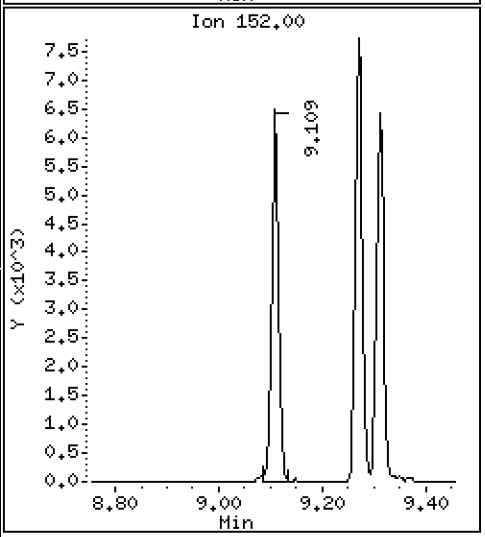
18 Dibenzothiophene

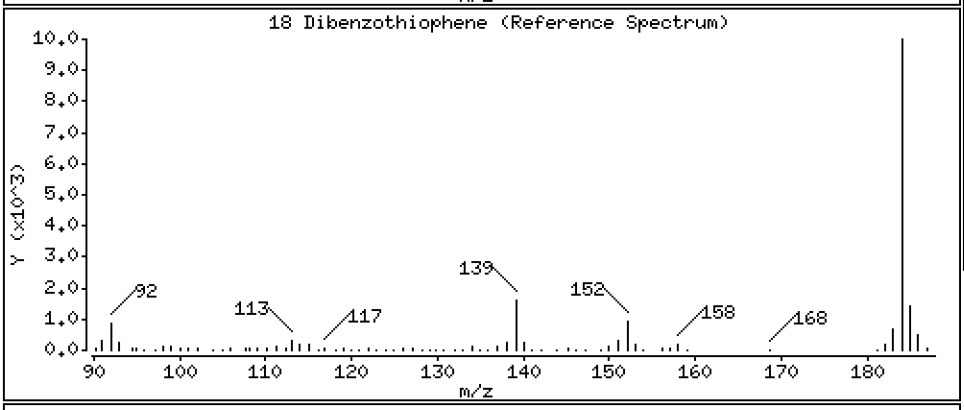
Concentration: 2.606 ug/mL

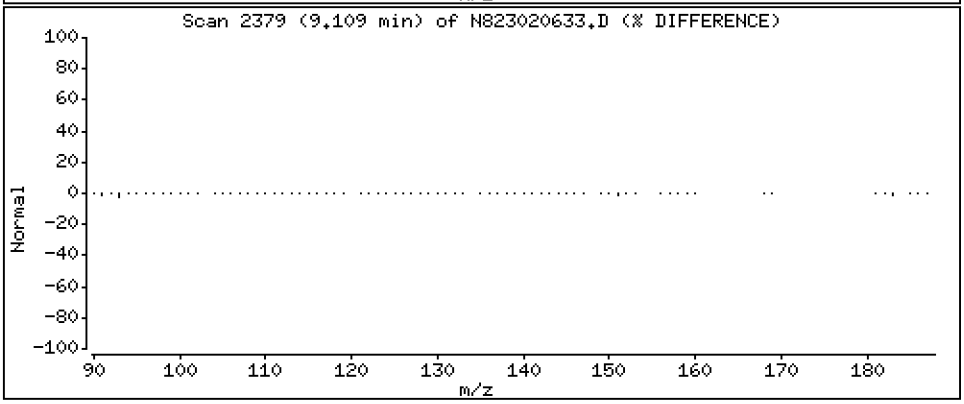












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

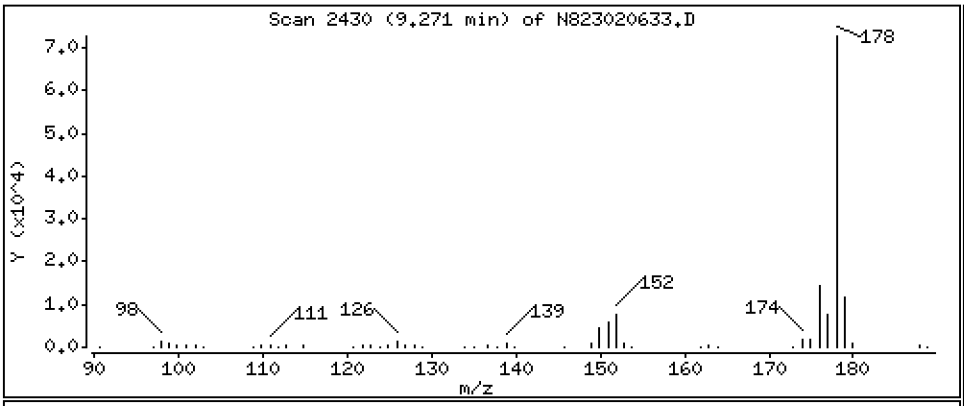
Operator: JZ

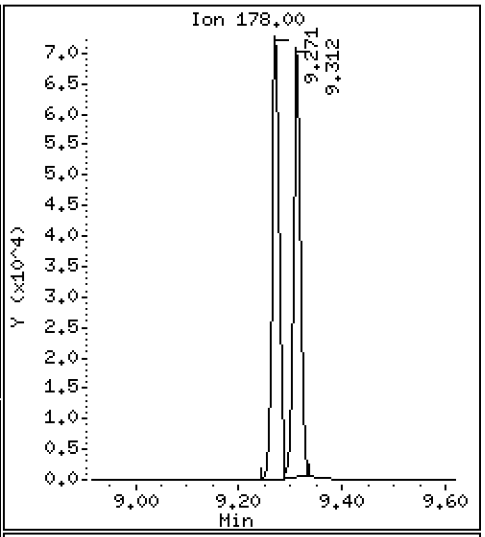
Column phase: Rxi-17sil

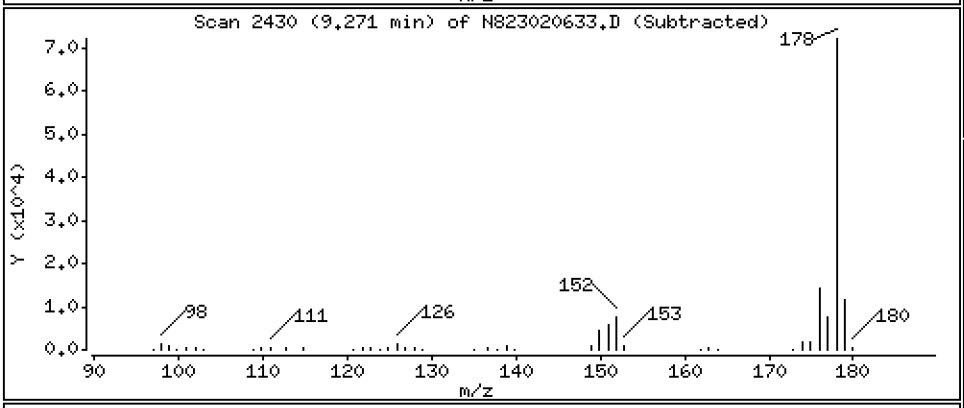
Column diameter: 0.25

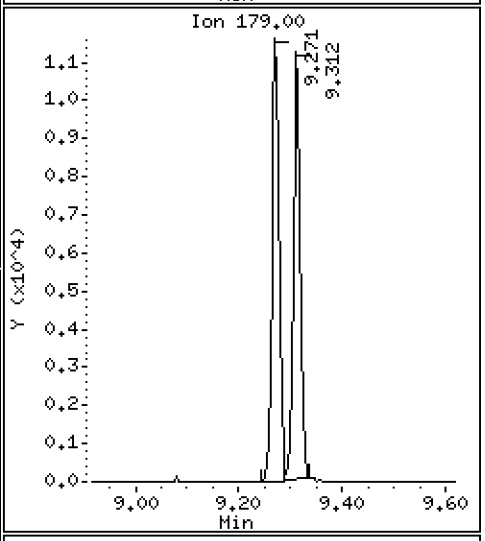
16 Phenanthrene

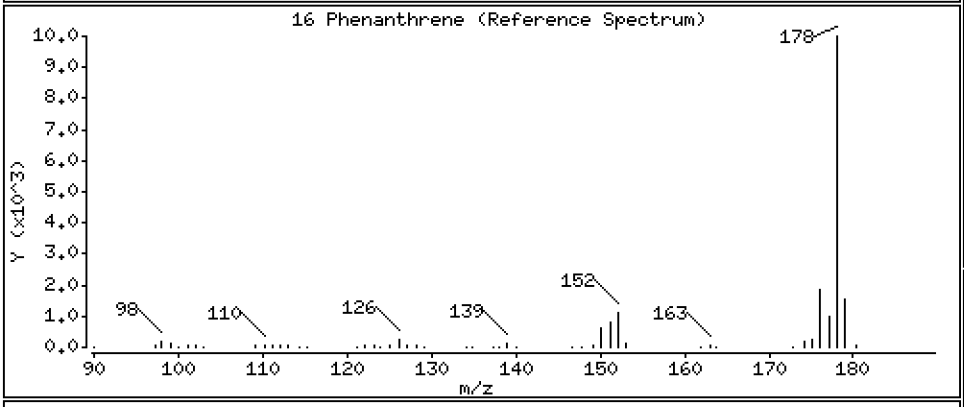
Concentration: 2.454 ug/mL

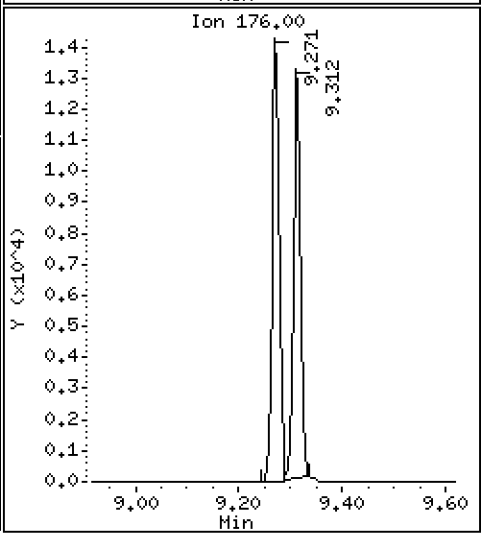


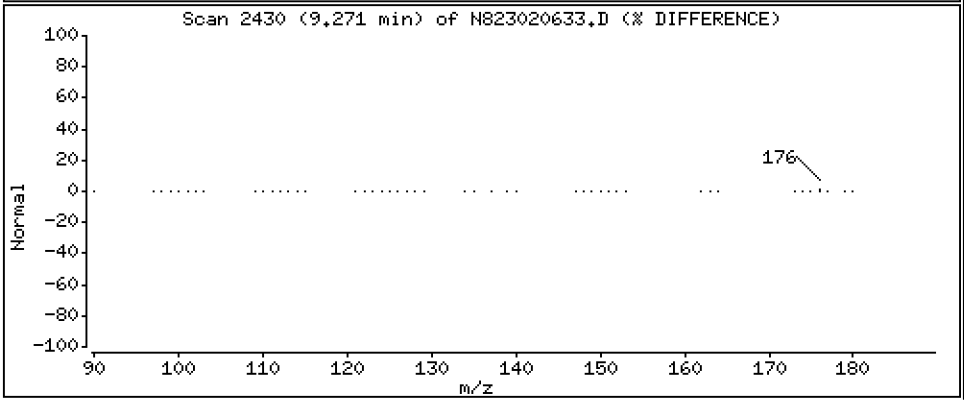












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

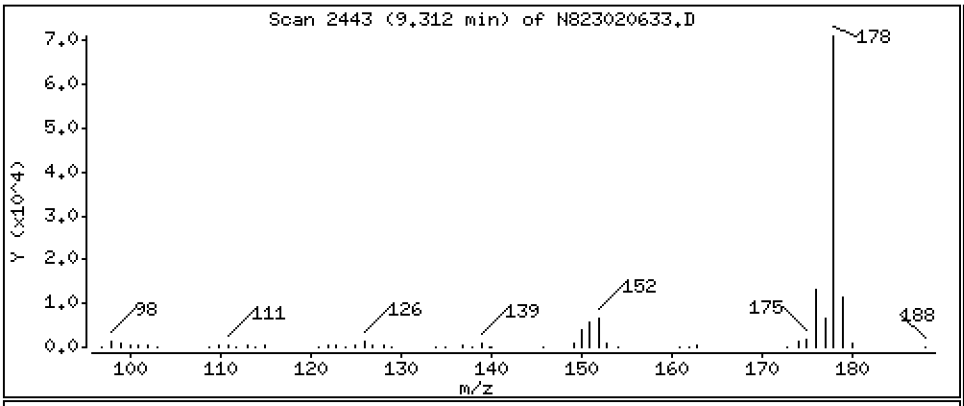
Operator: JZ

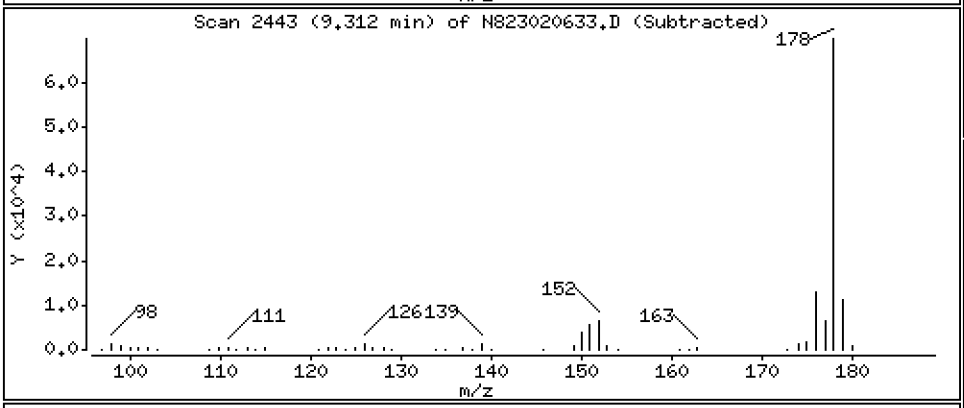
Column phase: Rxi-17sil

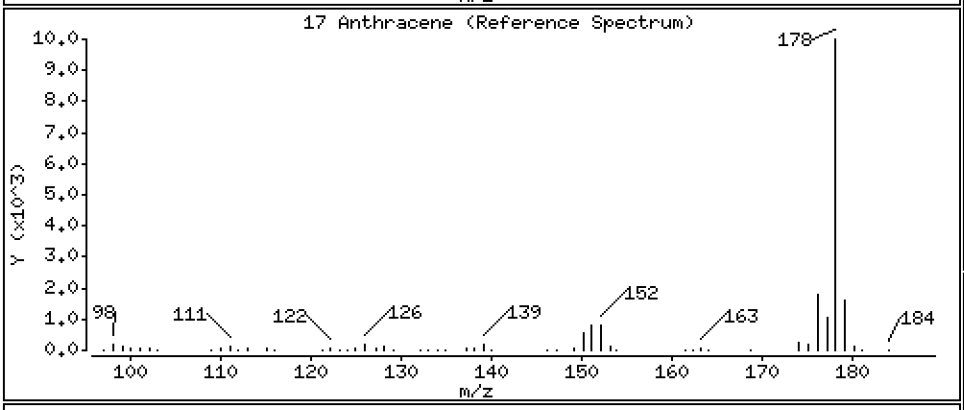
Column diameter: 0.25

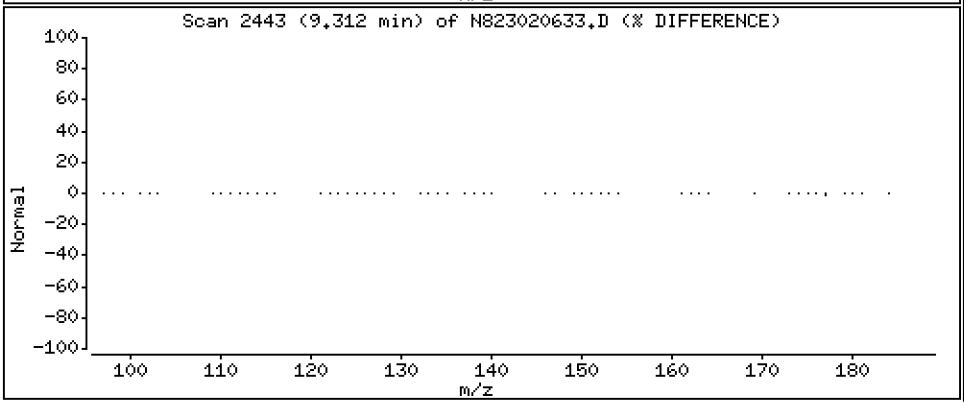
17 Anthracene

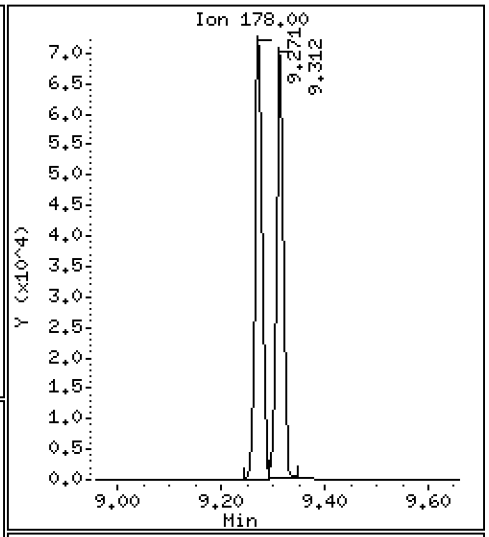
Concentration: 2.634 ug/mL

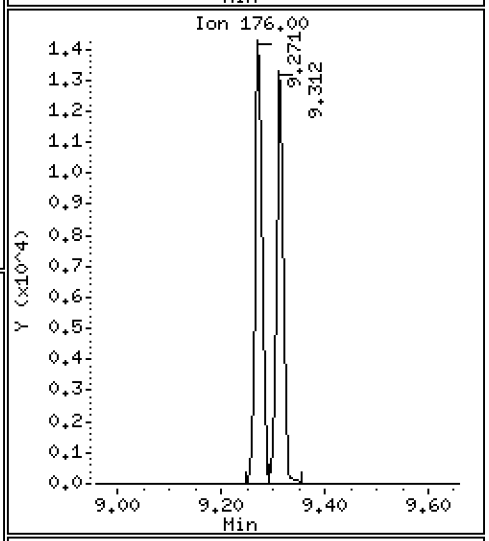


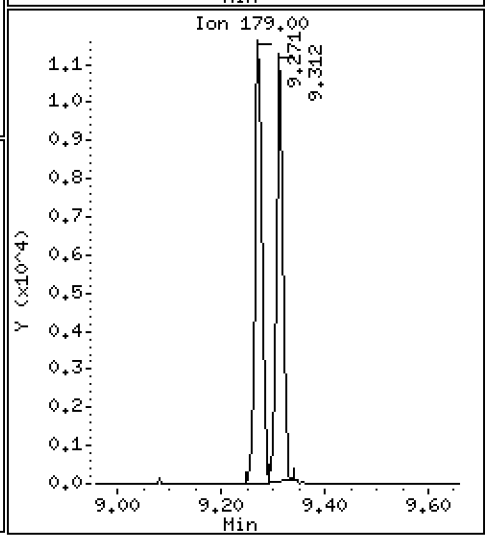












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

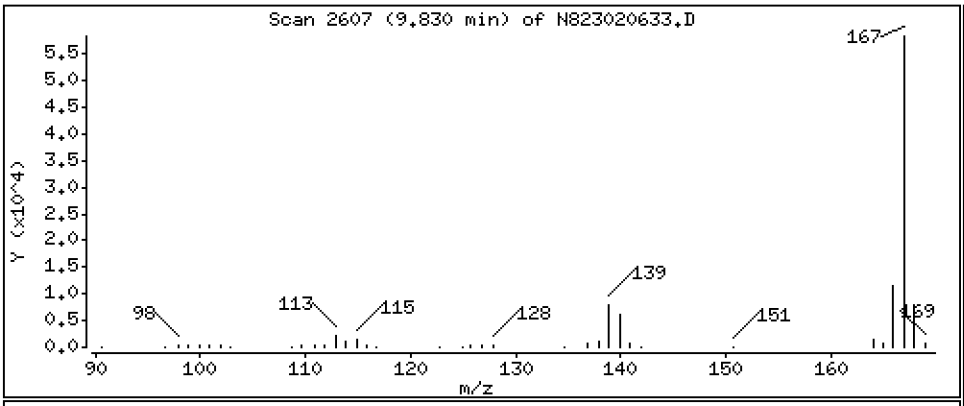
Operator: JZ

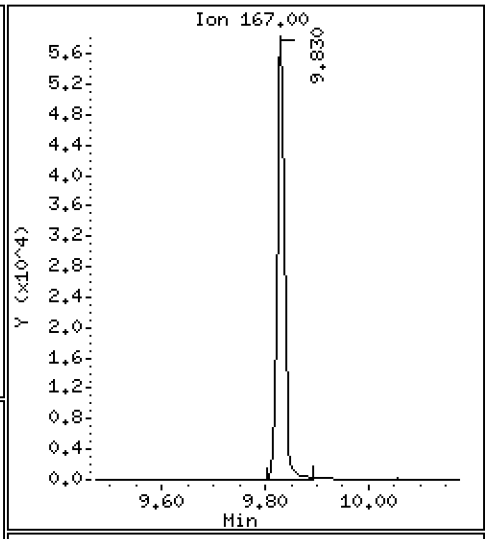
Column phase: Rxi-17sil

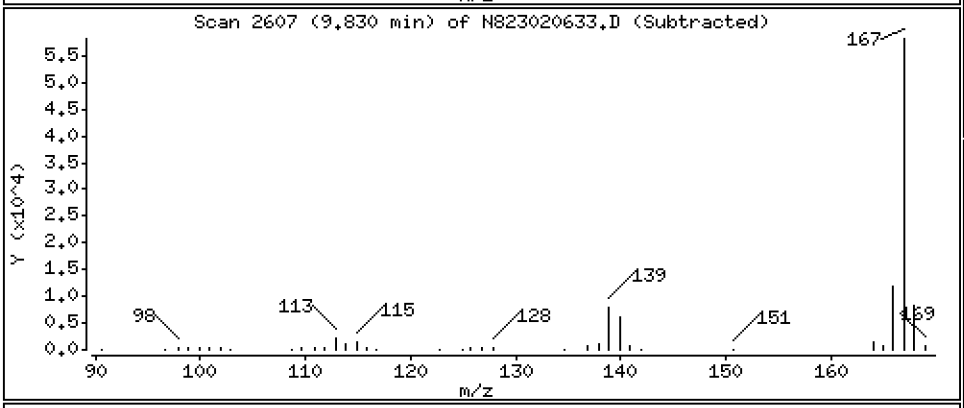
Column diameter: 0.25

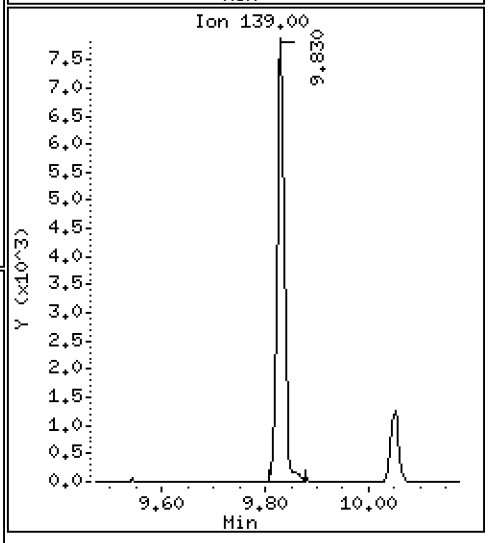
19 Carbazole

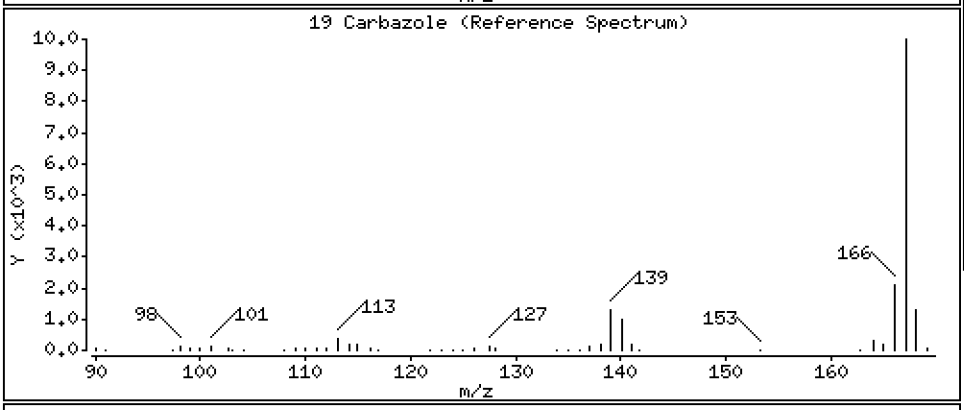
Concentration: 2.534 ug/mL

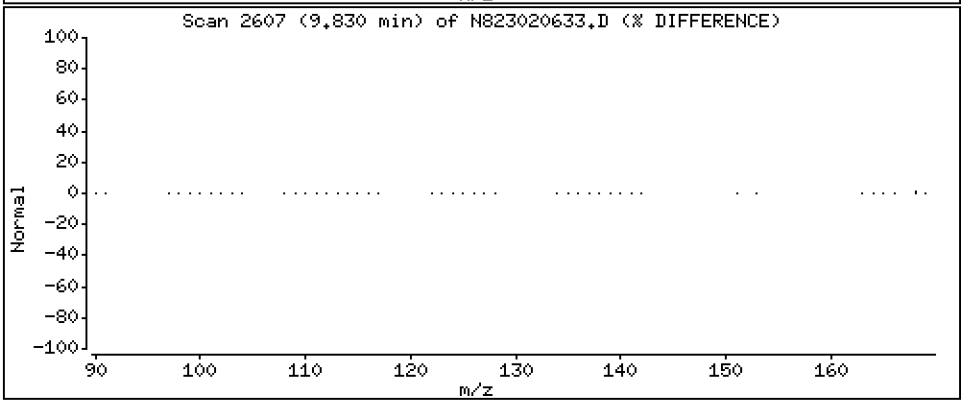












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

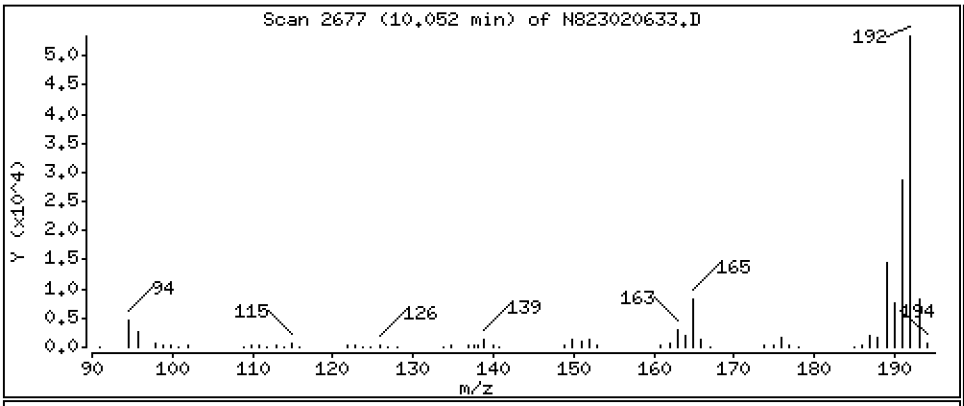
Operator: JZ

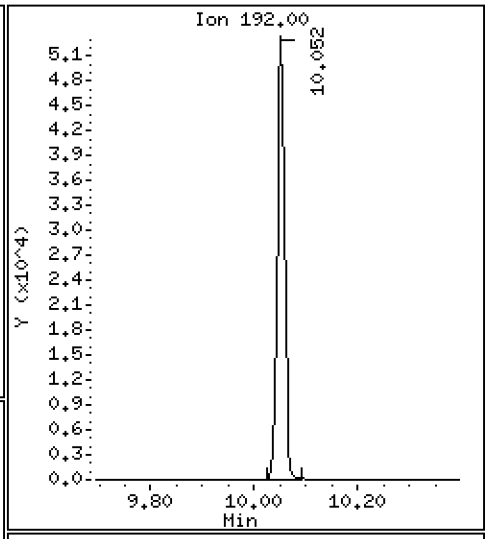
Column phase: Rxi-17sil

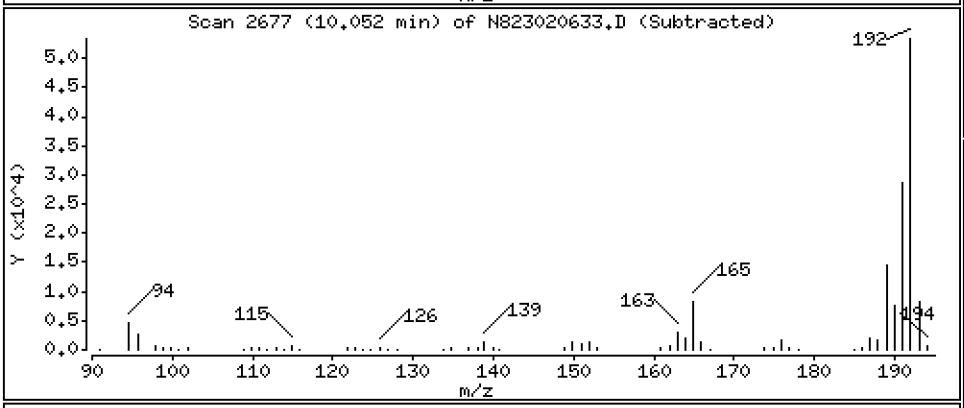
Column diameter: 0.25

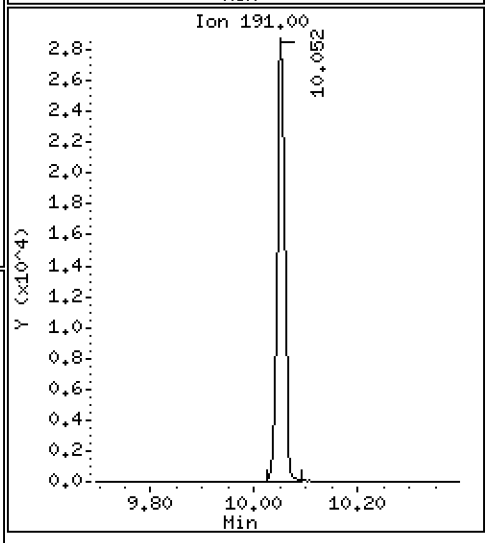
20 1-Methylphenanthrene

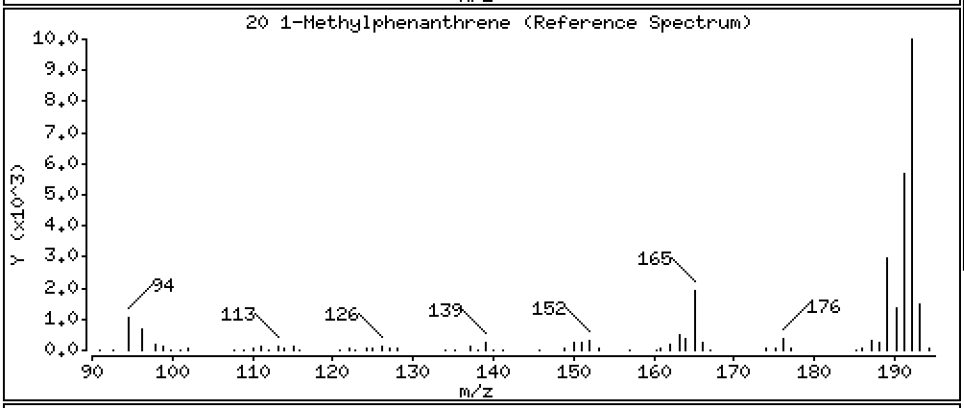
Concentration: 2.660 ug/mL

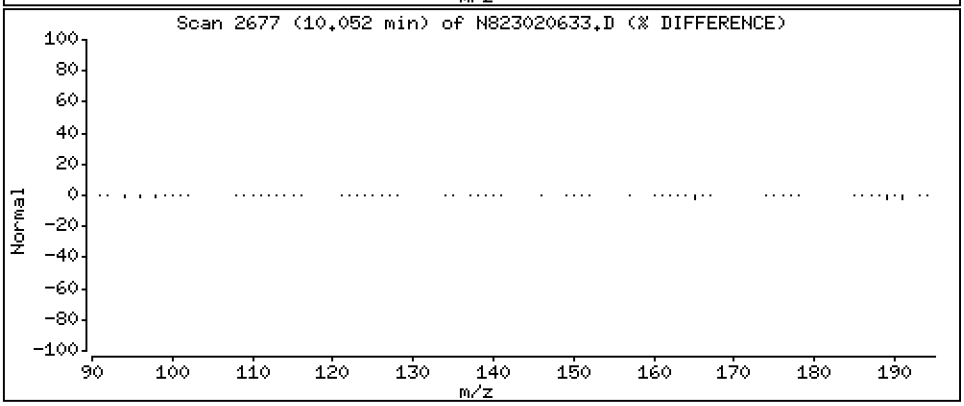












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

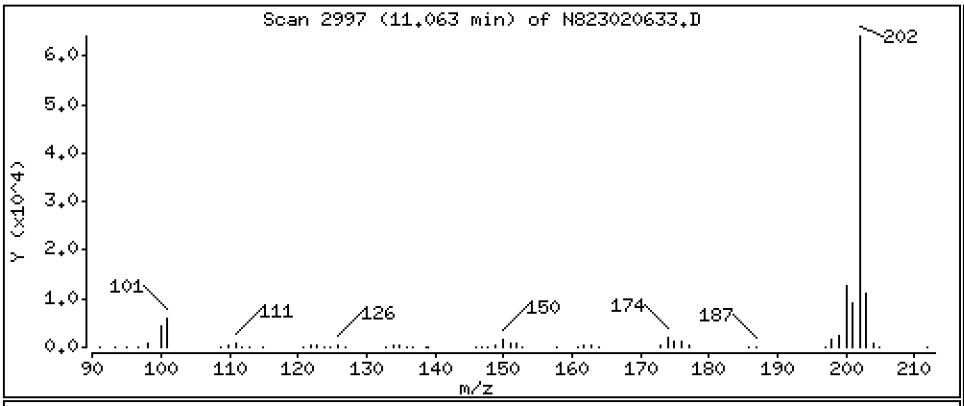
Operator: JZ

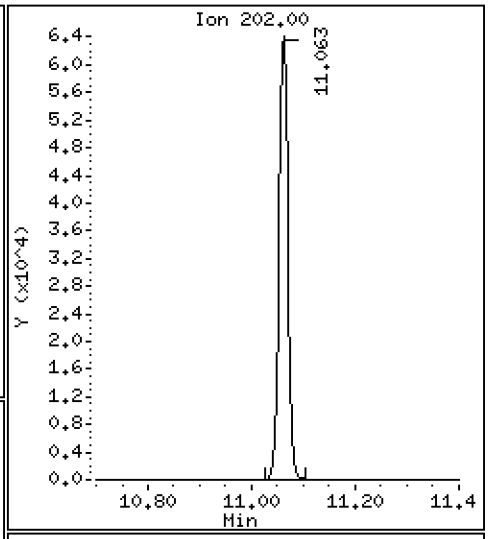
Column phase: Rxi-17sil

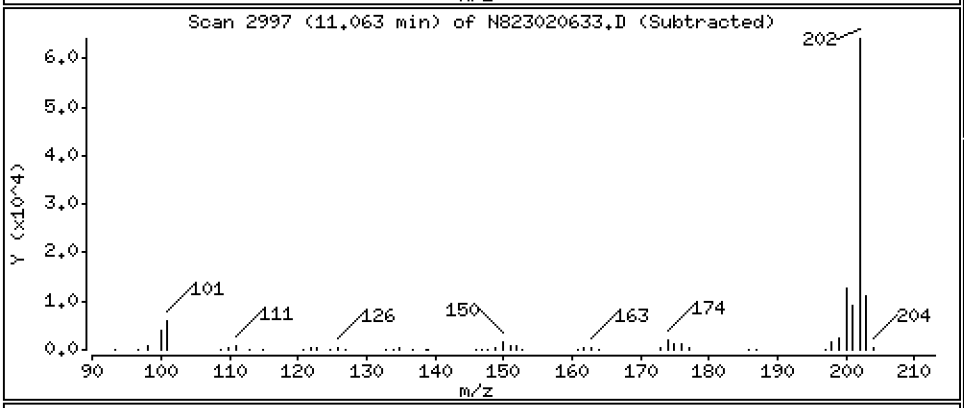
Column diameter: 0.25

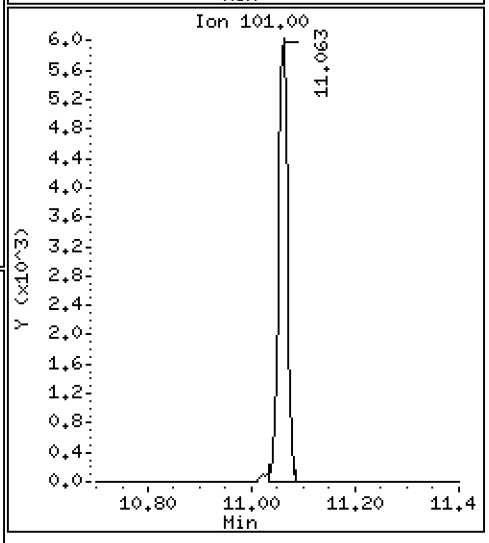
22 Fluoranthene

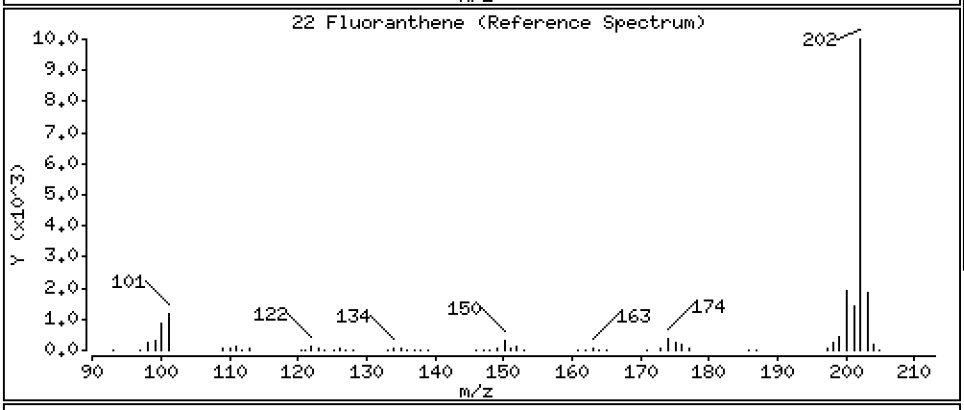
Concentration: 2.561 ug/mL

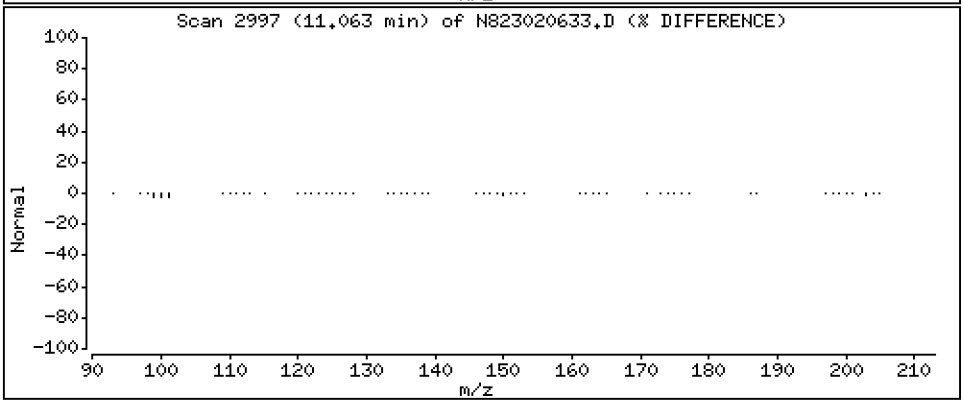












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

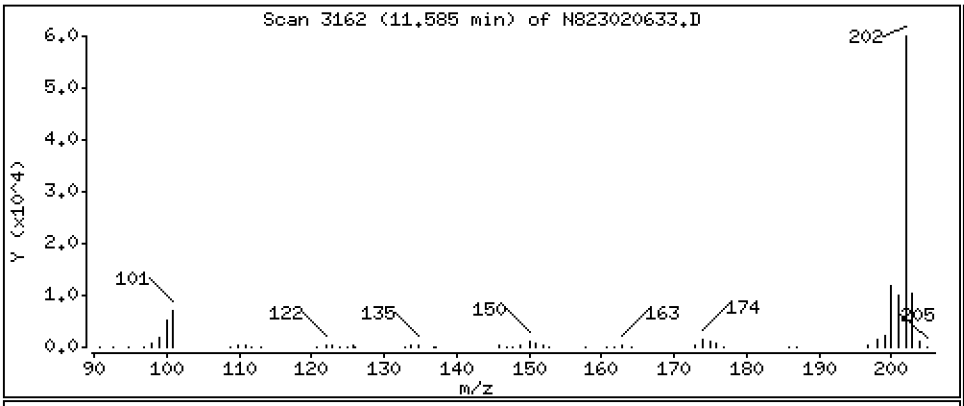
Operator: JZ

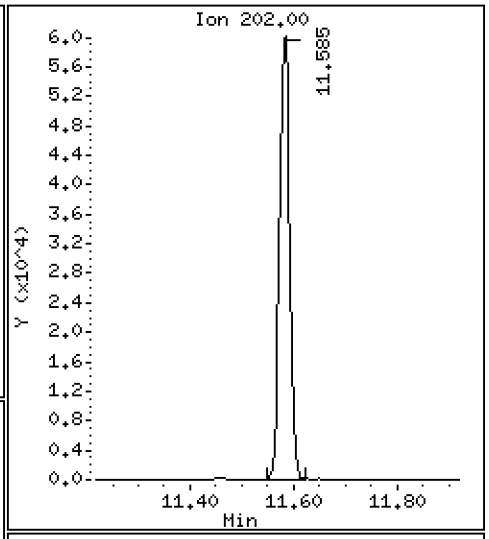
Column phase: Rxi-17sil

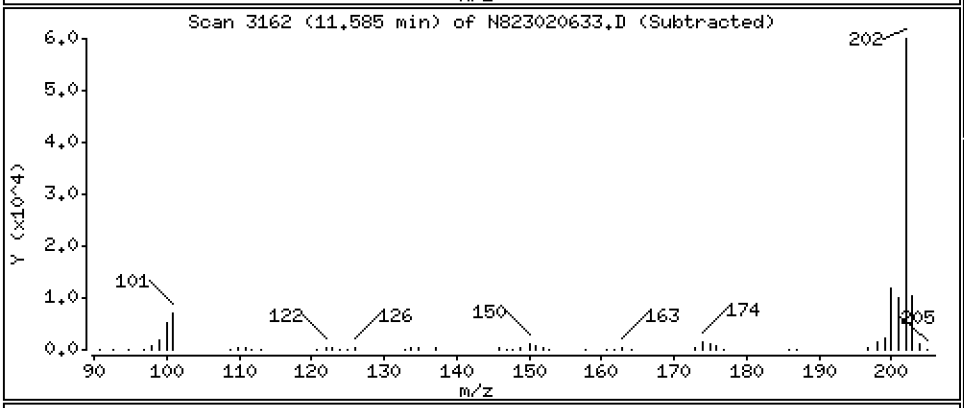
Column diameter: 0.25

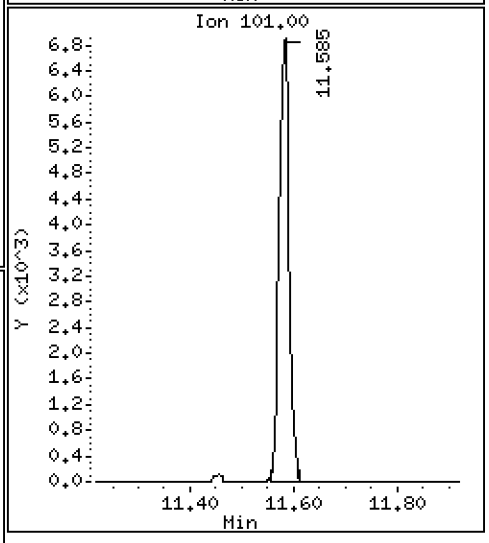
23 Pyrene

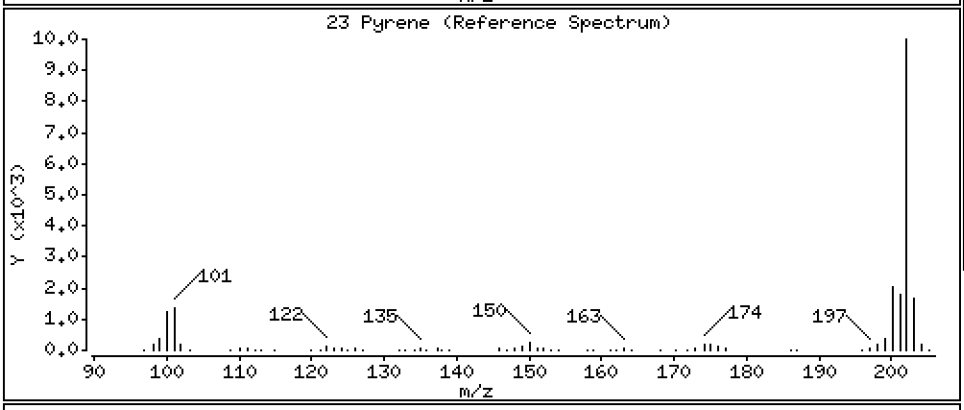
Concentration: 2.763 ug/mL

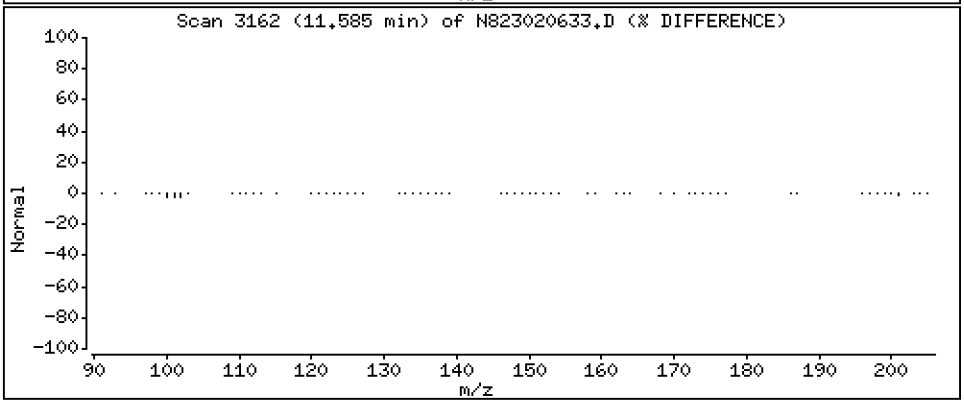












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

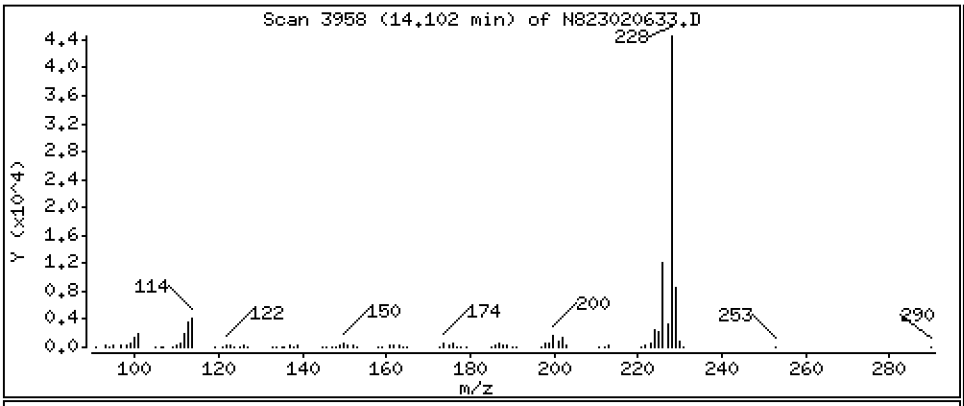
Operator: JZ

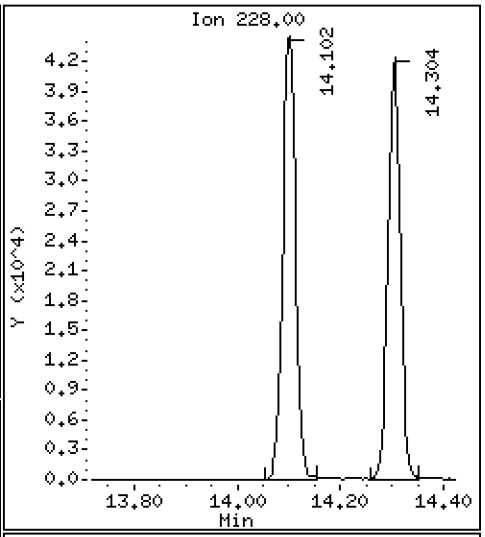
Column phase: Rxi-17sil

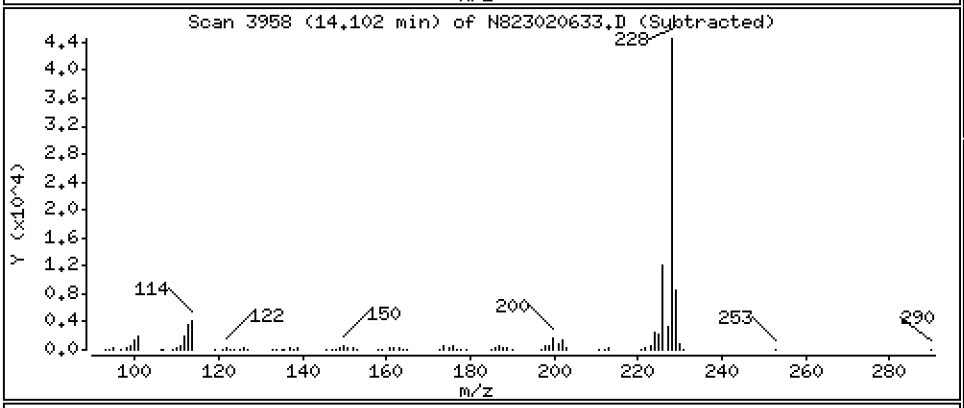
Column diameter: 0.25

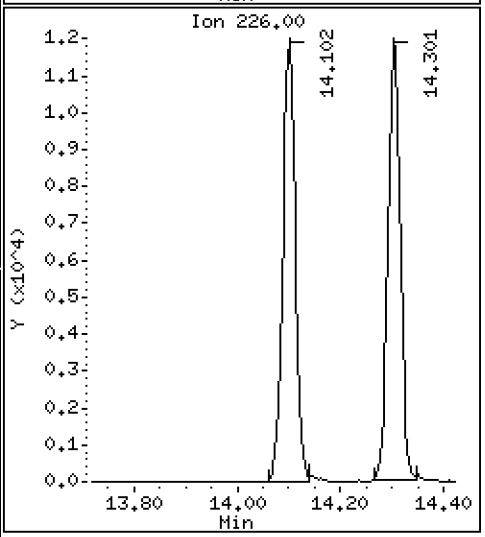
24 Benzo(a)anthracene

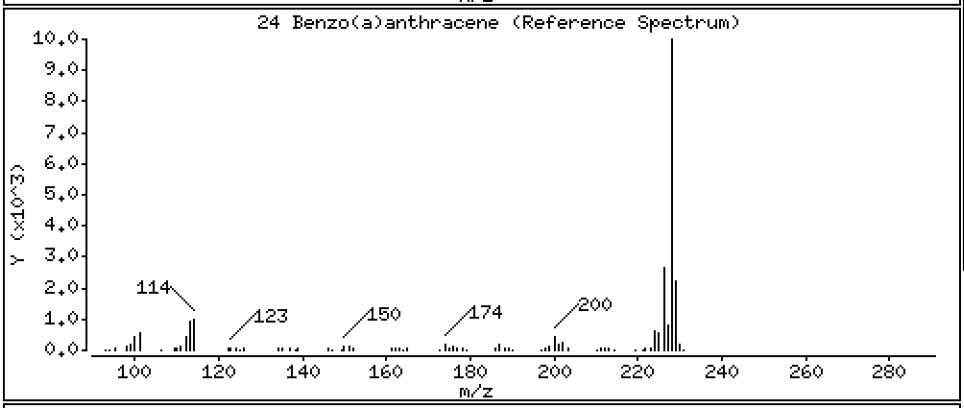
Concentration: 2.849 ug/mL

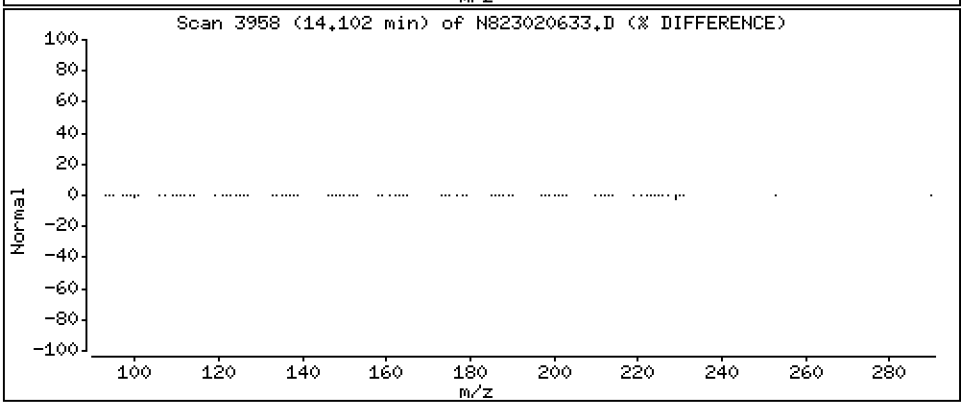












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

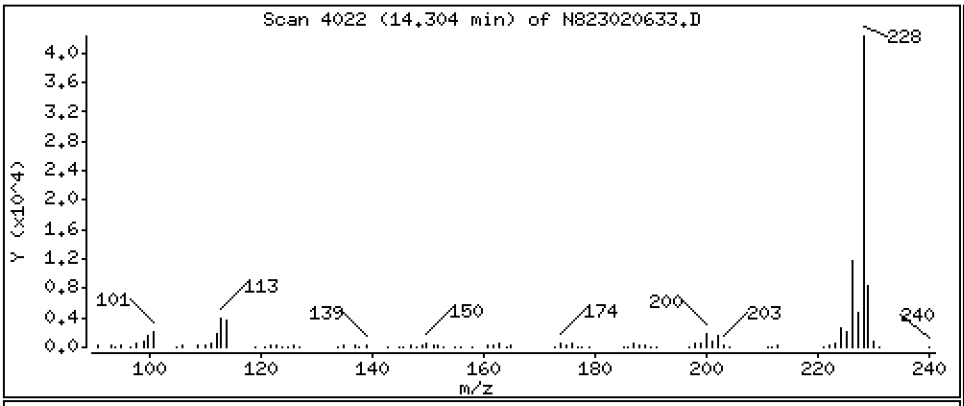
Operator: JZ

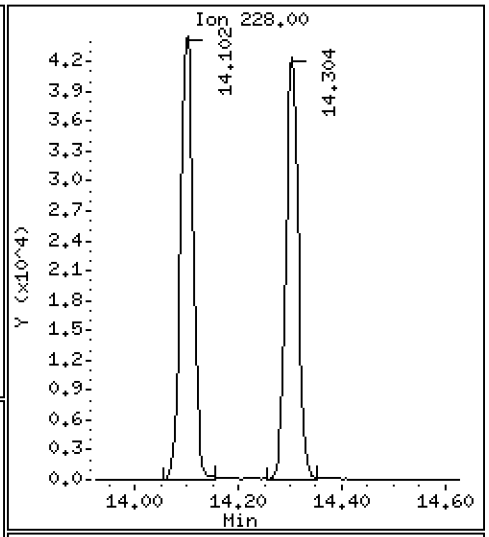
Column phase: Rxi-17sil

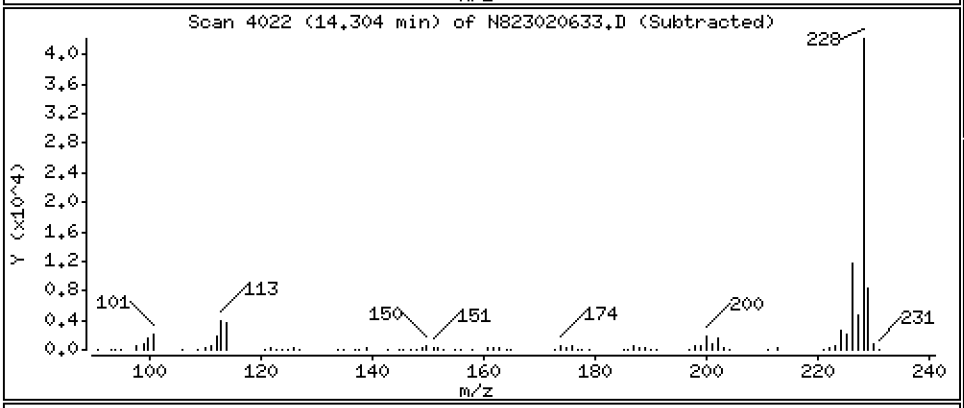
Column diameter: 0.25

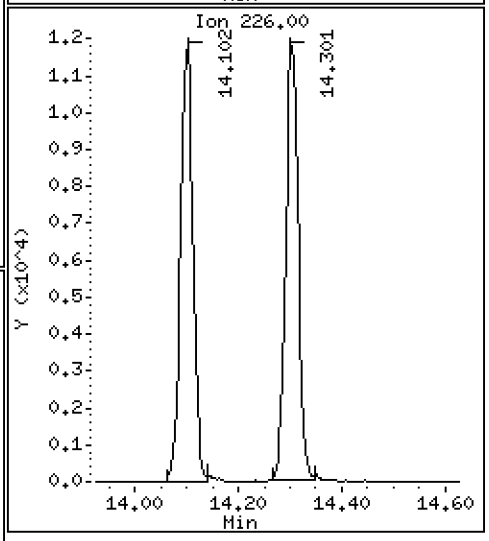
27 Chrysene

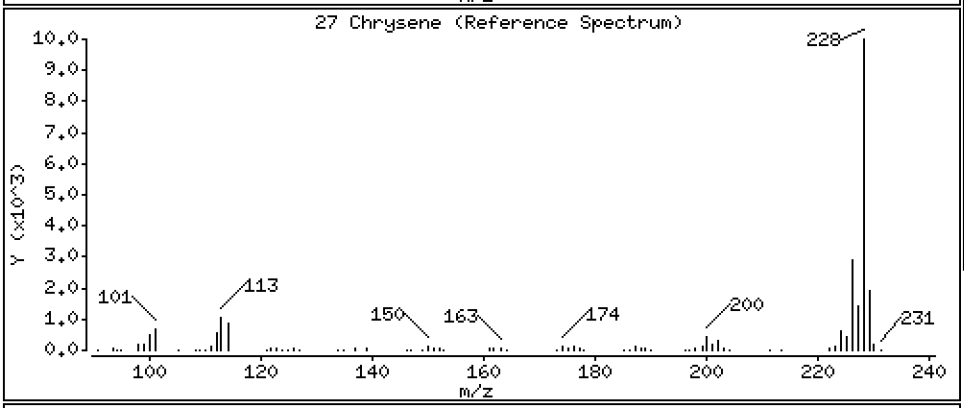
Concentration: 2.458 ug/mL

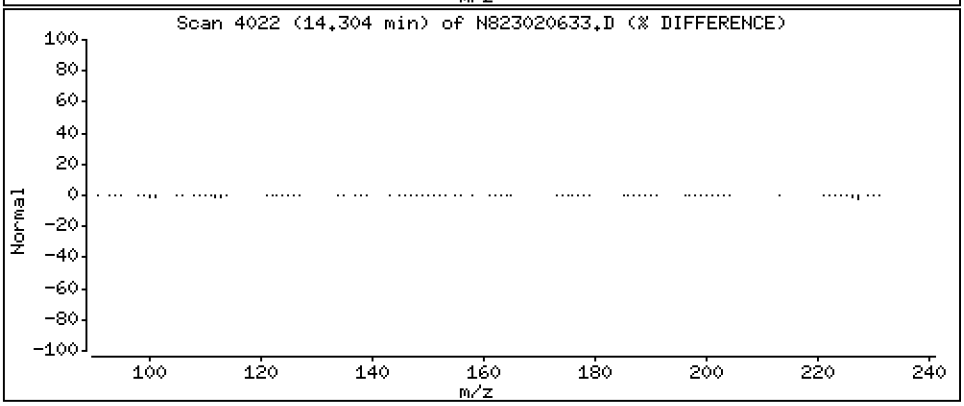












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

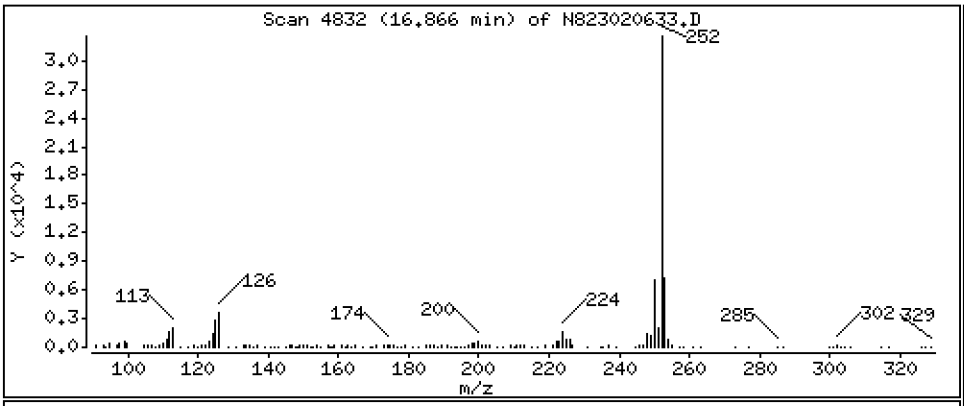
Operator: JZ

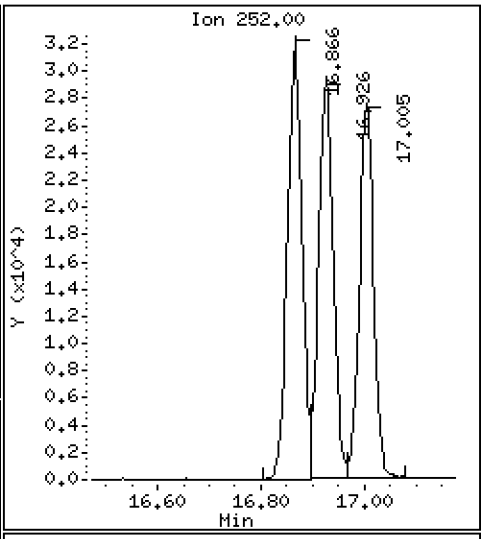
Column phase: Rxi-17sil

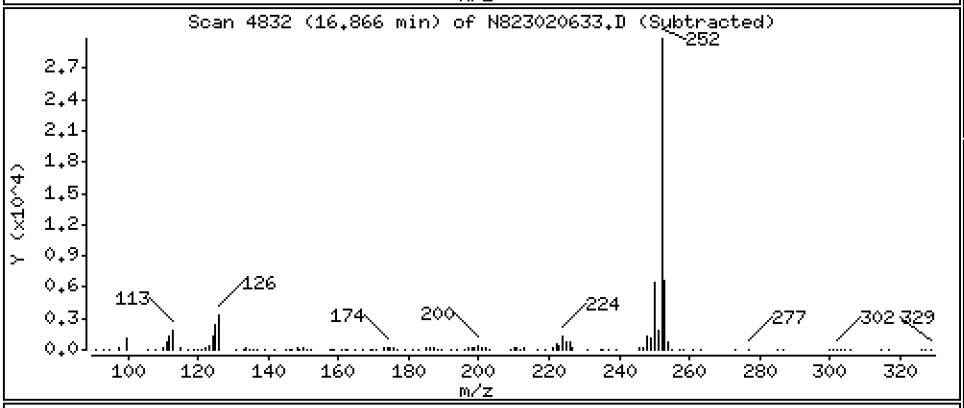
Column diameter: 0.25

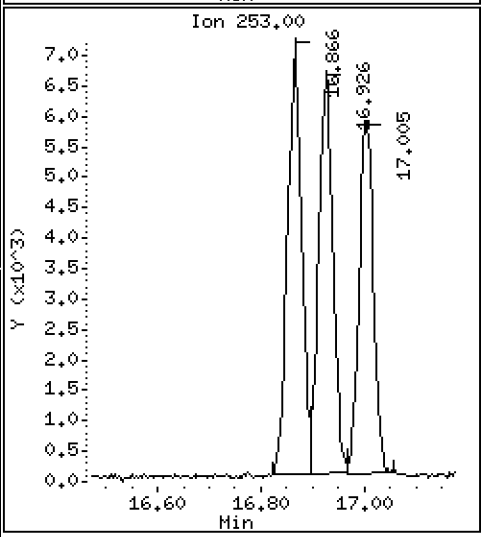
28 Benzo(b)fluoranthene

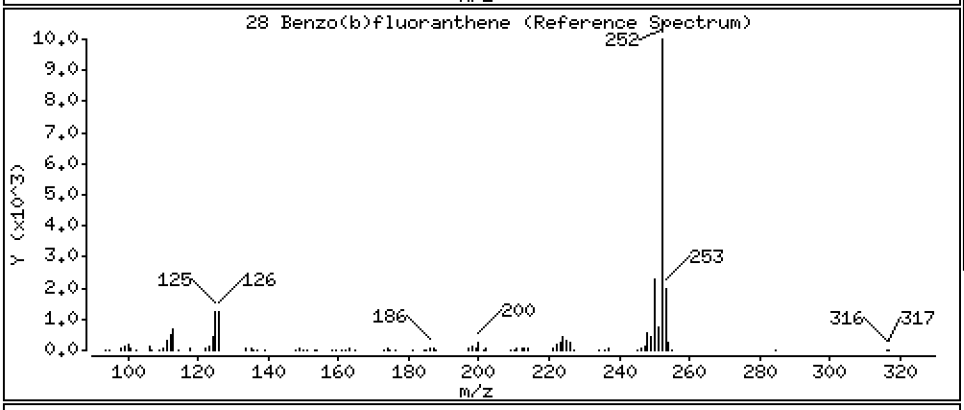
Concentration: 2.927 ug/mL

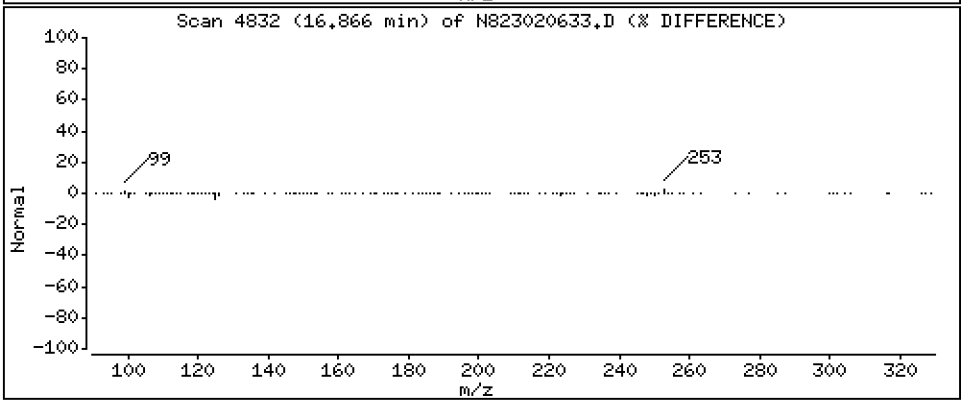












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020633.D

Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

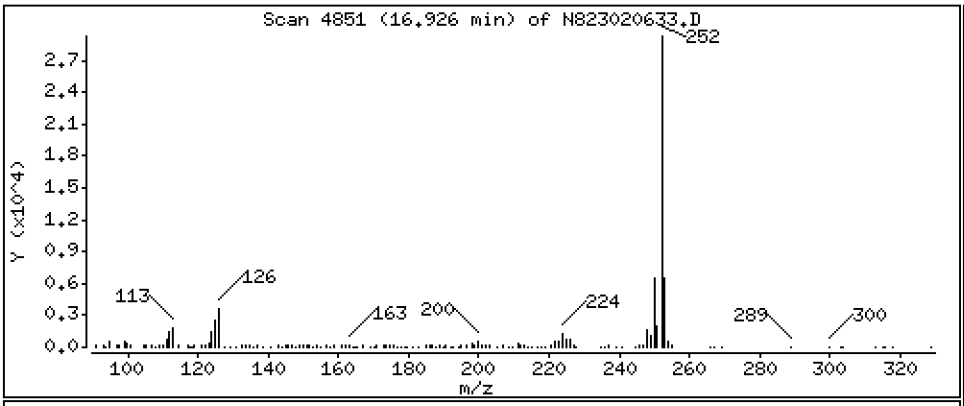
Operator: JZ

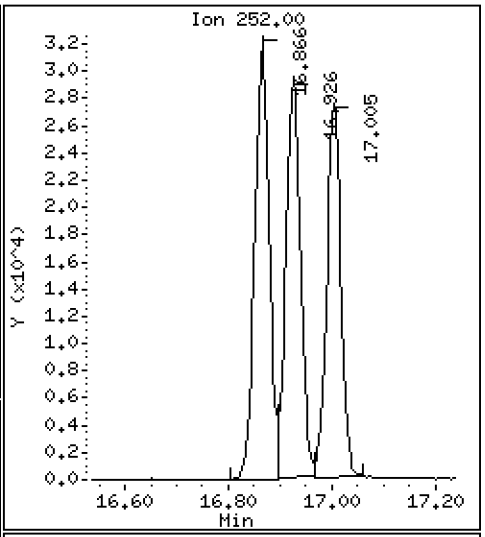
Column phase: Rxi-17sil

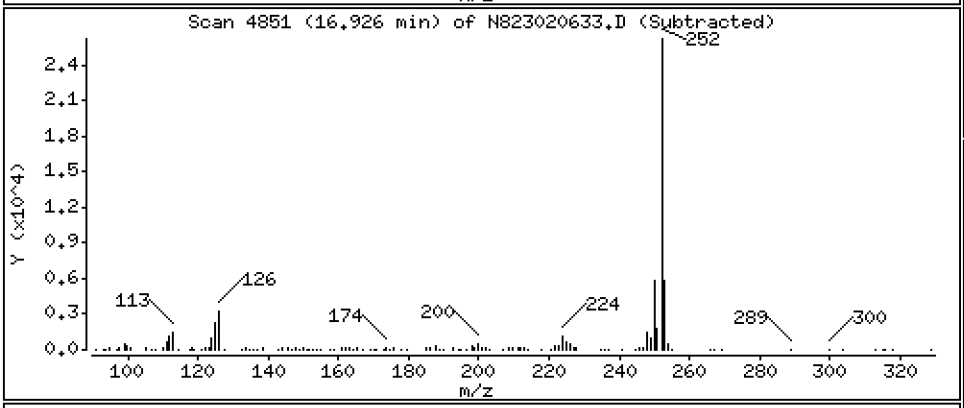
Column diameter: 0.25

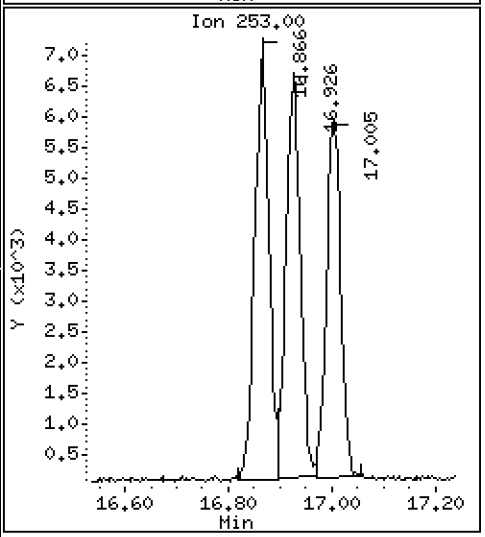
29 Benzo(k)fluoranthene

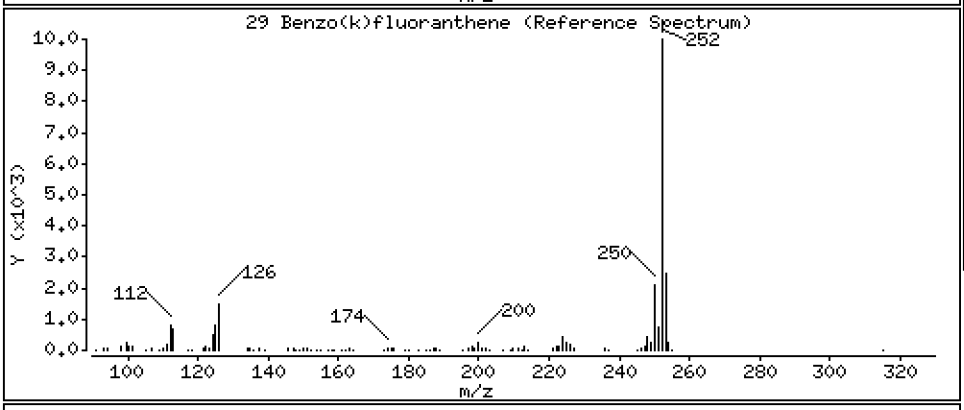
Concentration: 2.722 ug/mL

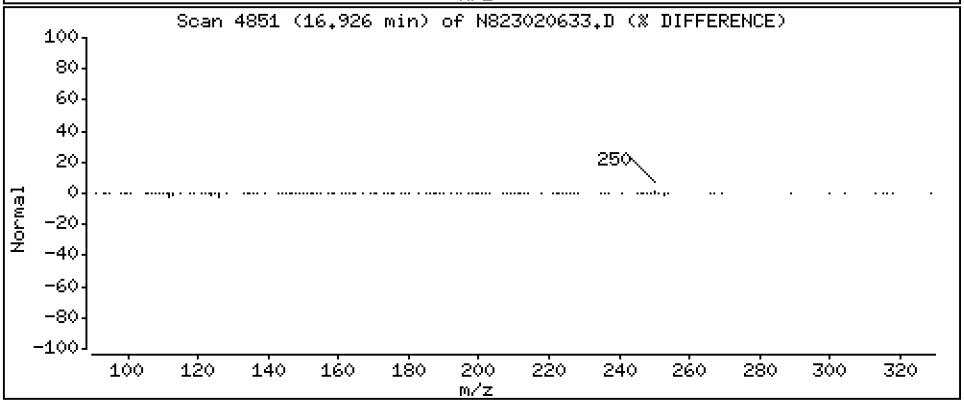












Date : 07-FEB-2023 03:09

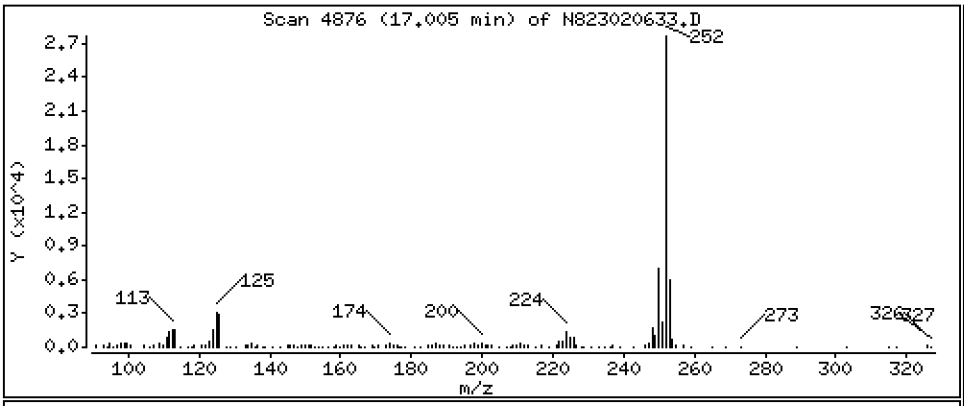
Client ID: Instrument: nt8.i

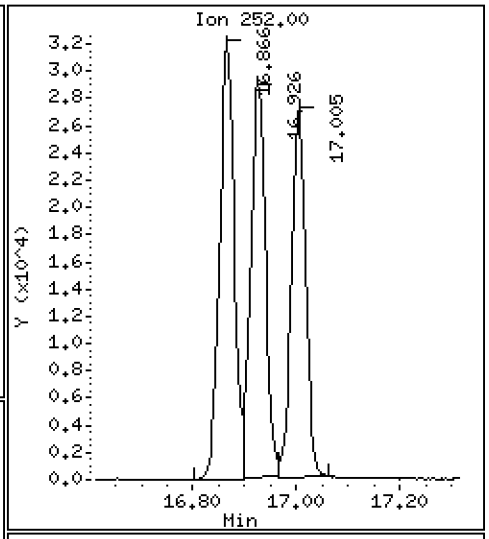
Sample Info: CCV230206A

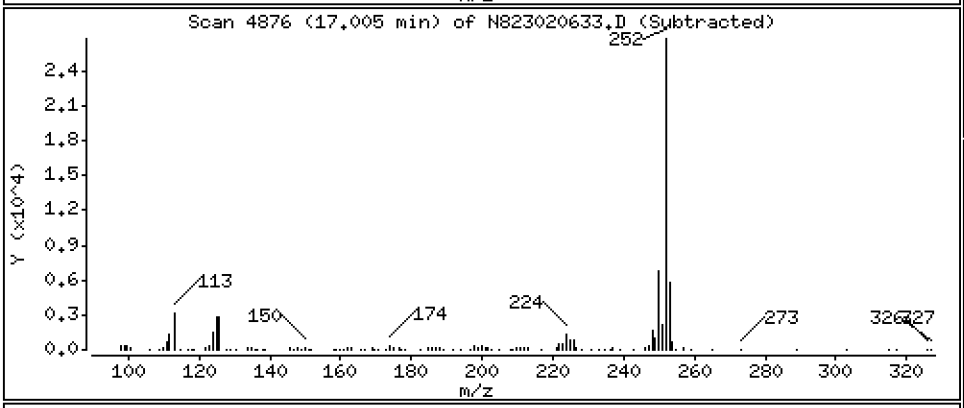
Operator: JZ

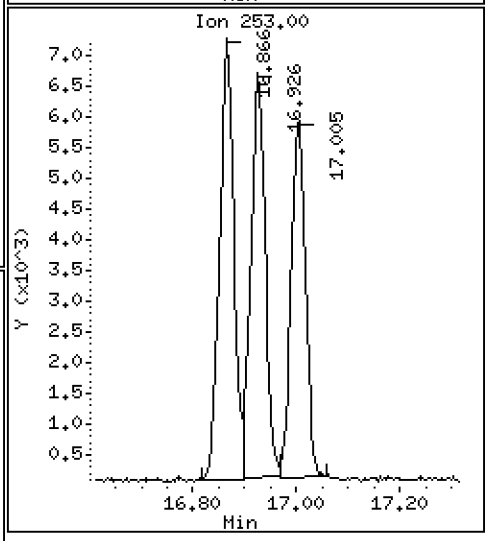
Column phase: Rxi-17sil Column diameter: 0.25

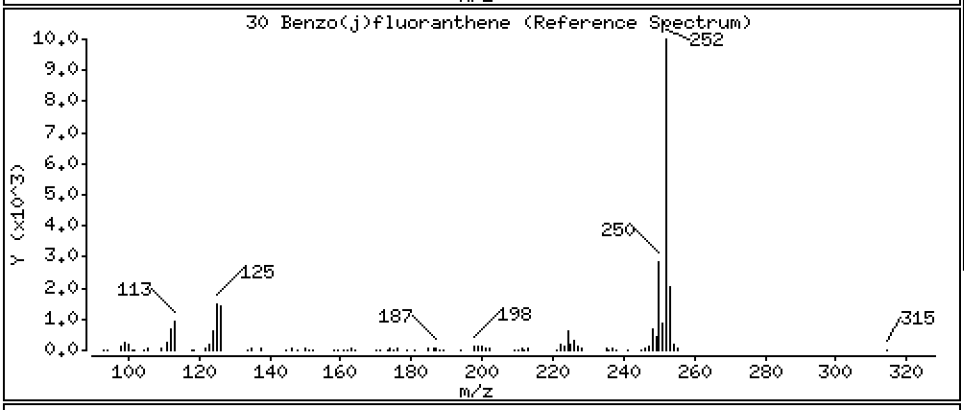
30 Benzo(j)fluoranthene Concentration: 2.719 ug/mL

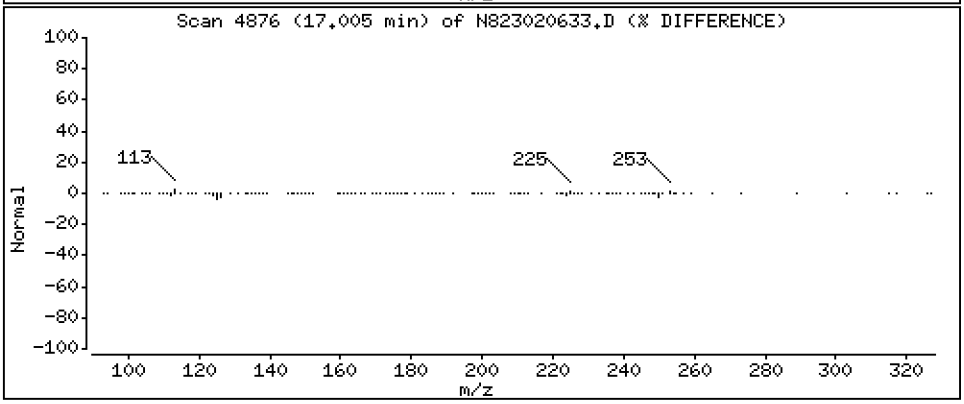












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020633.D

Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

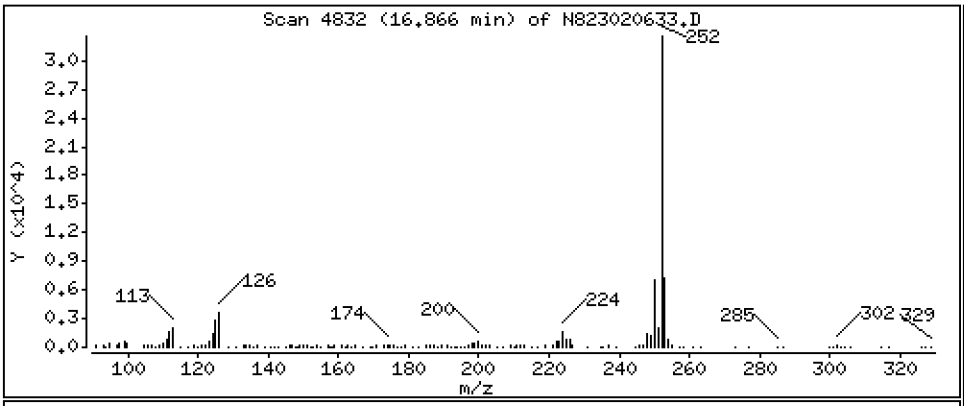
Operator: JZ

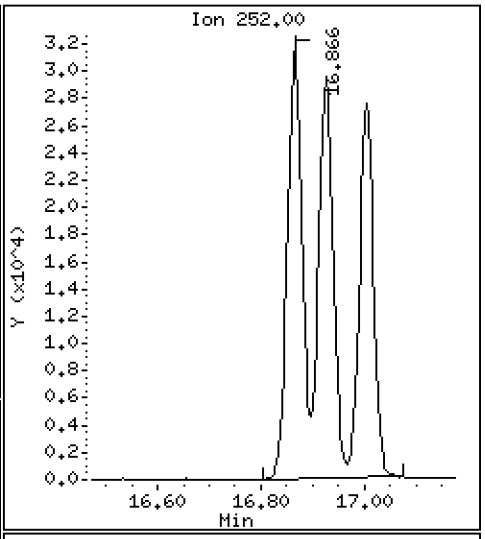
Column phase: Rxi-17sil

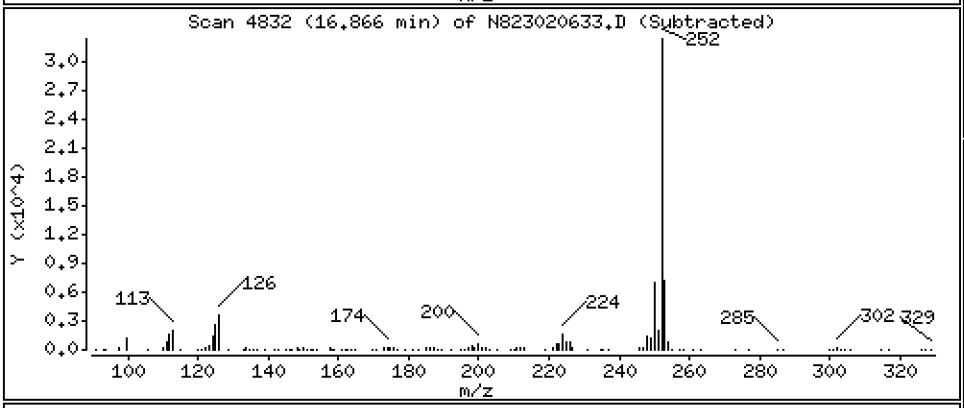
Column diameter: 0.25

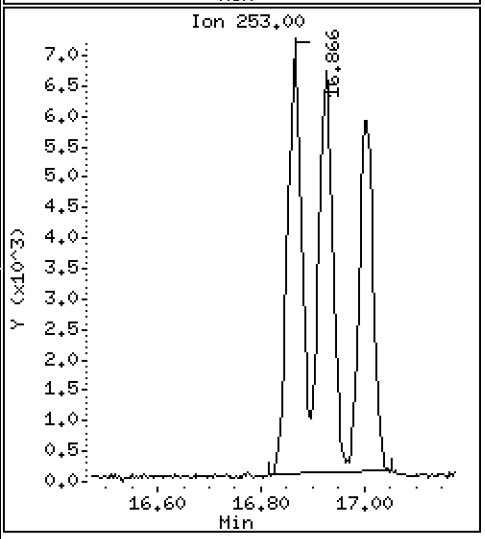
31 Total Benzofluoranthenes

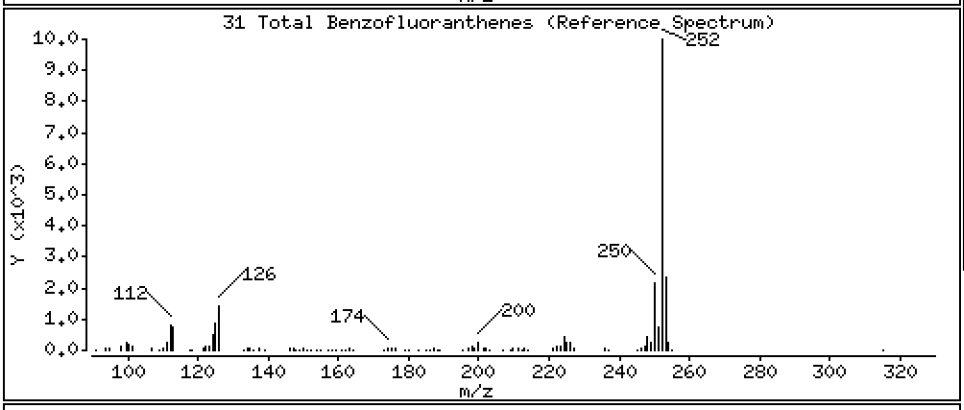
Concentration: 8.381 ug/mL

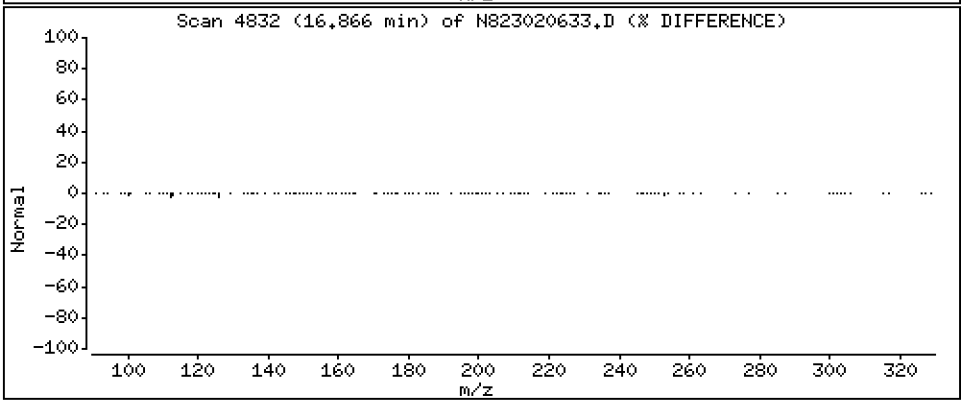












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

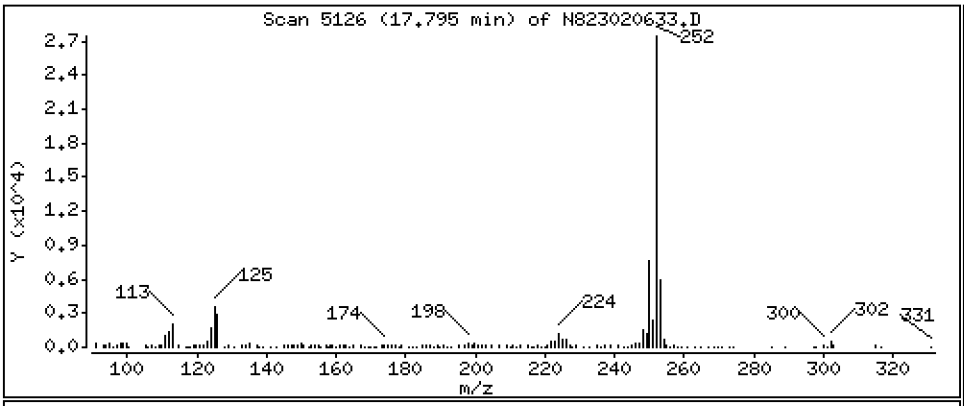
Operator: JZ

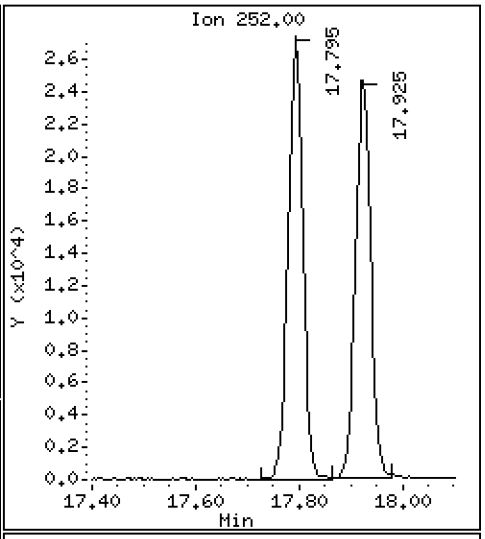
Column phase: Rxi-17sil

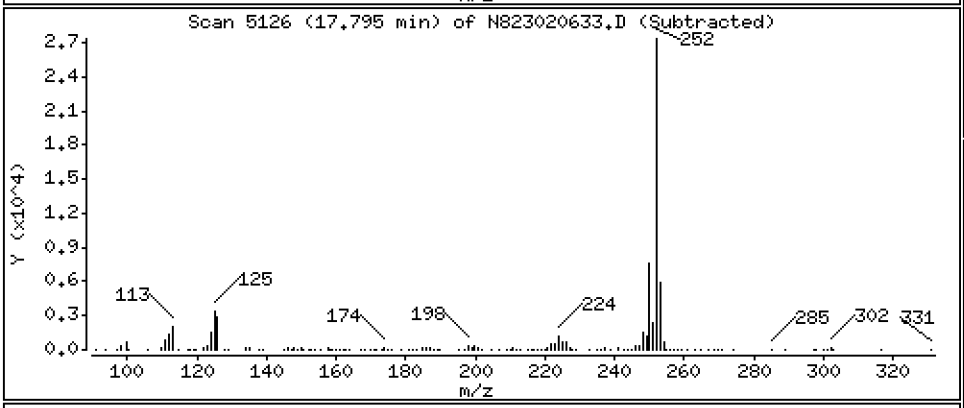
Column diameter: 0.25

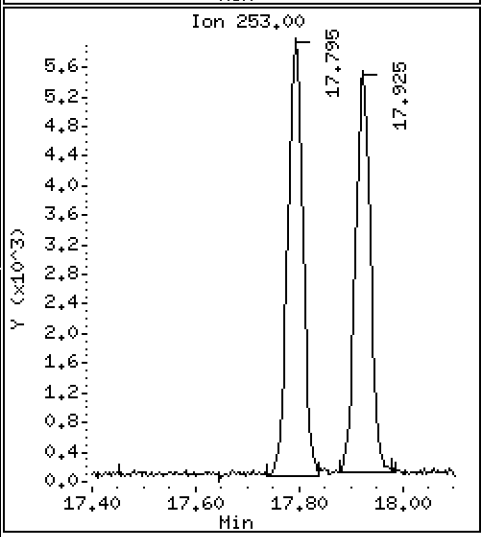
34 Benzo(e)pyrene

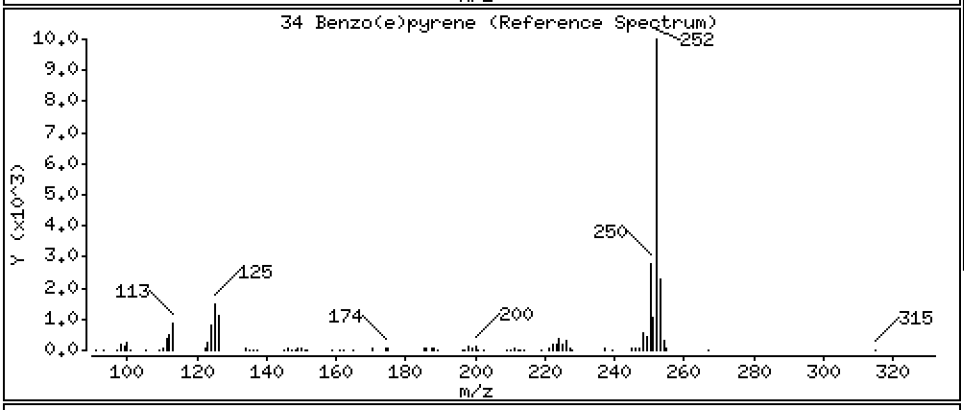
Concentration: 2.516 ug/mL

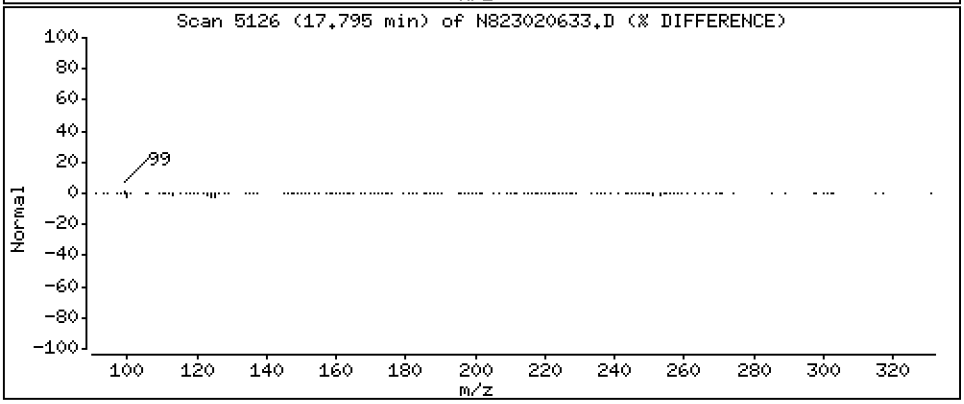












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

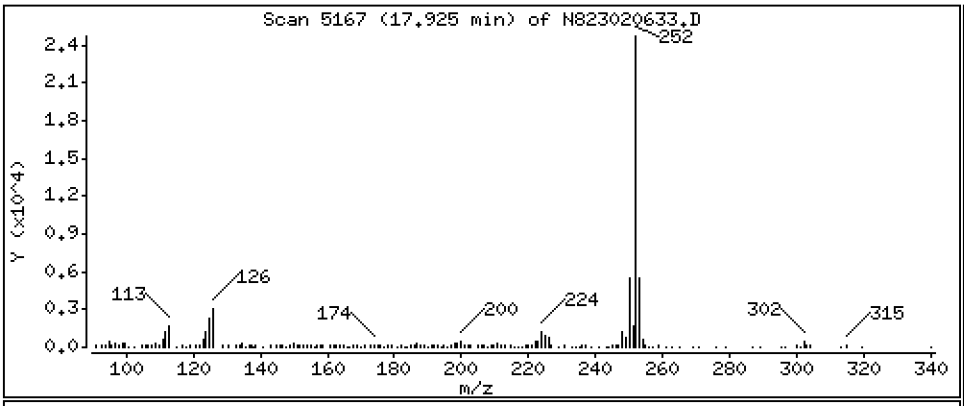
Operator: JZ

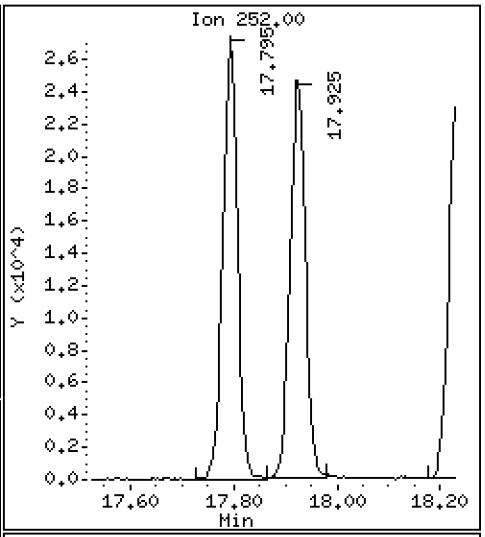
Column phase: Rxi-17sil

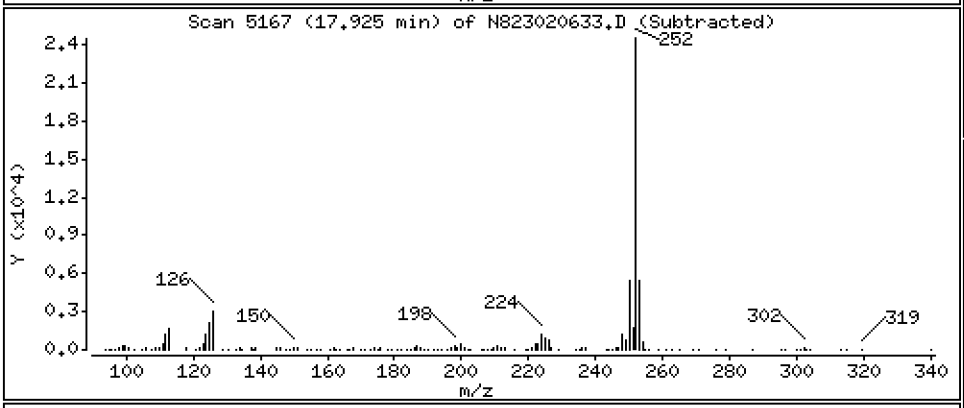
Column diameter: 0.25

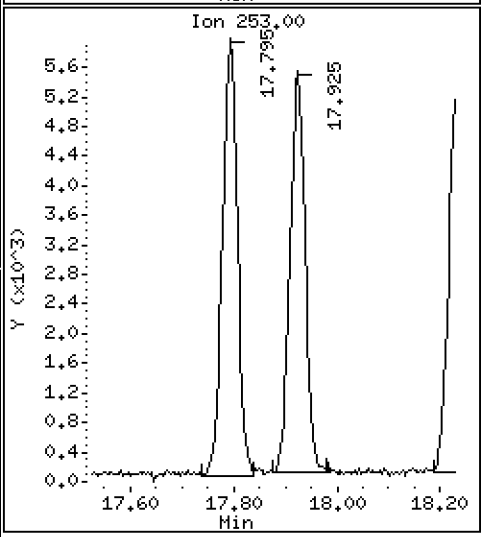
32 Benzo(a)pyrene

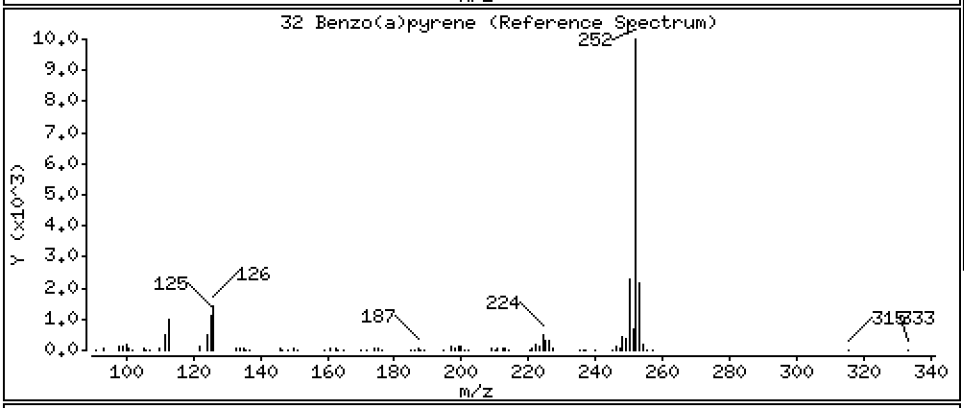
Concentration: 2.654 ug/mL

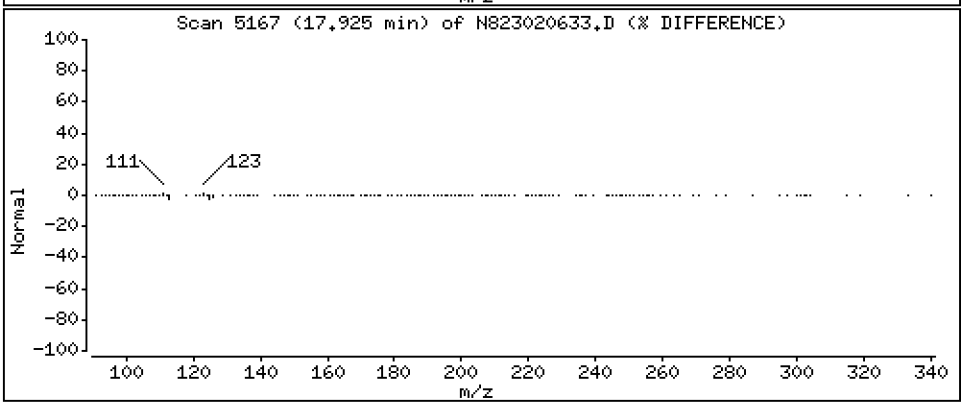












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

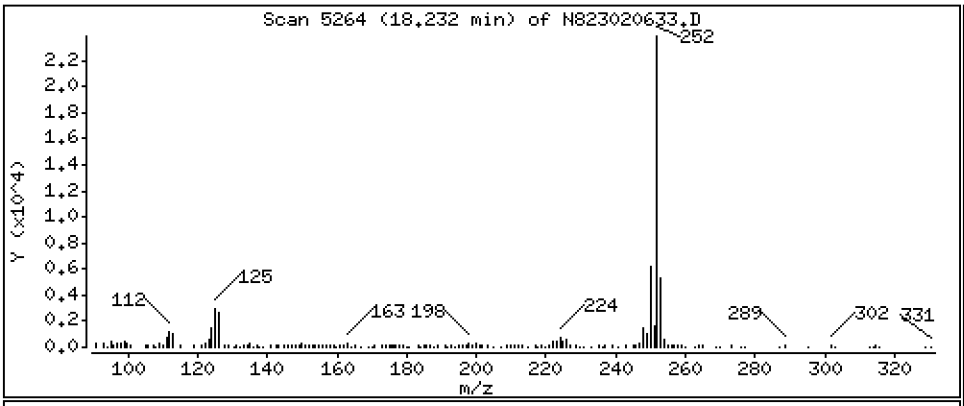
Operator: JZ

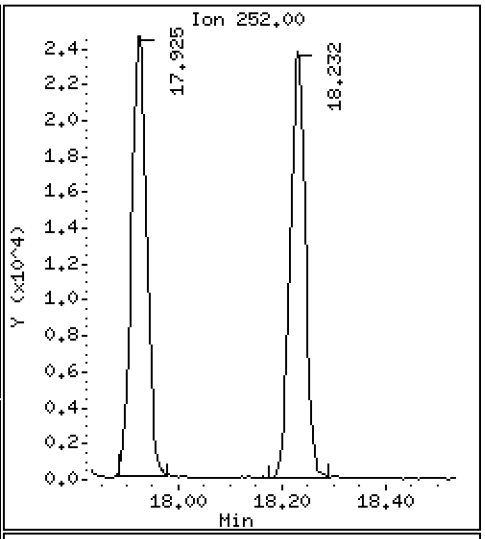
Column phase: Rxi-17sil

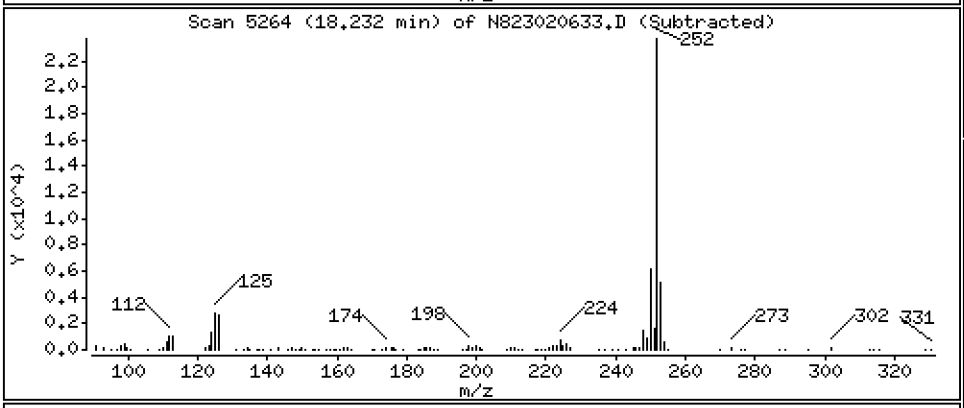
Column diameter: 0.25

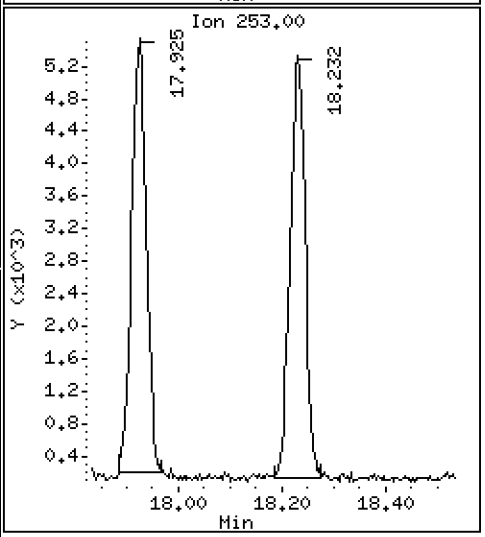
35 Perylene

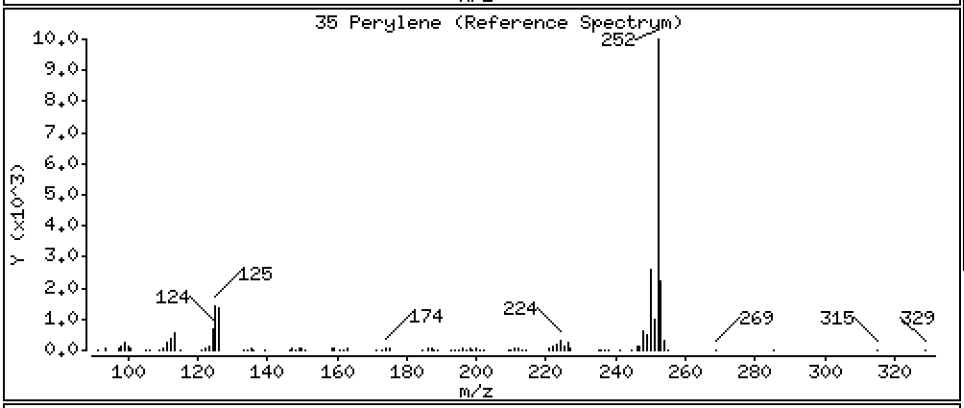
Concentration: 2.357 ug/mL

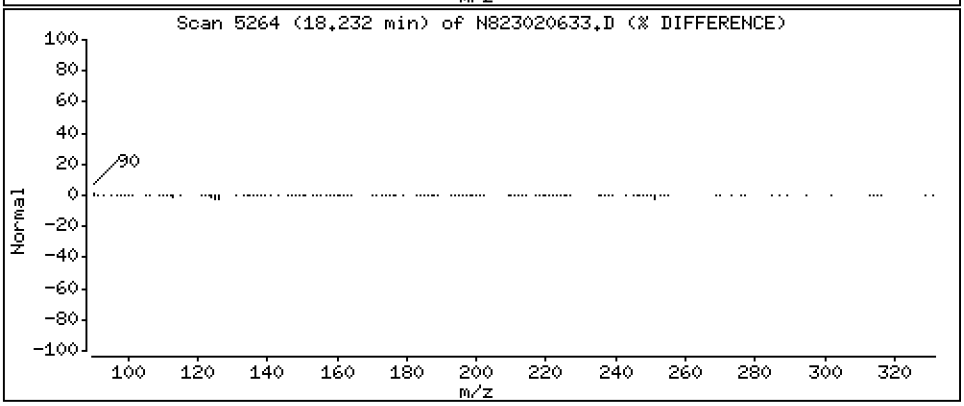












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

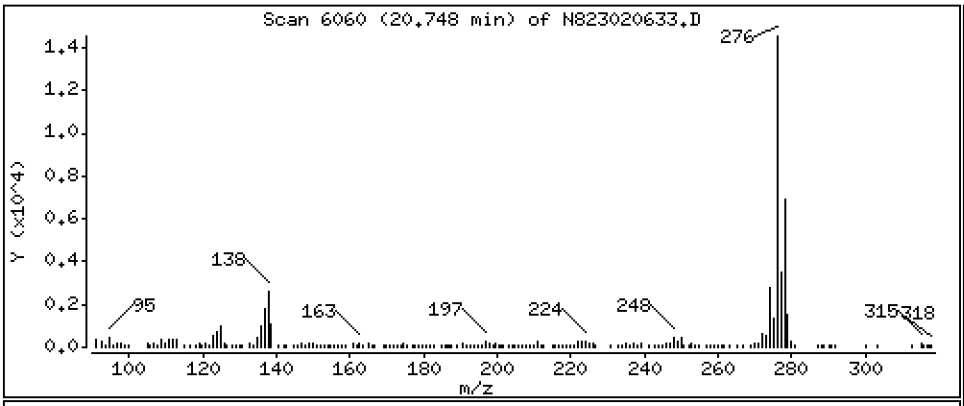
Operator: JZ

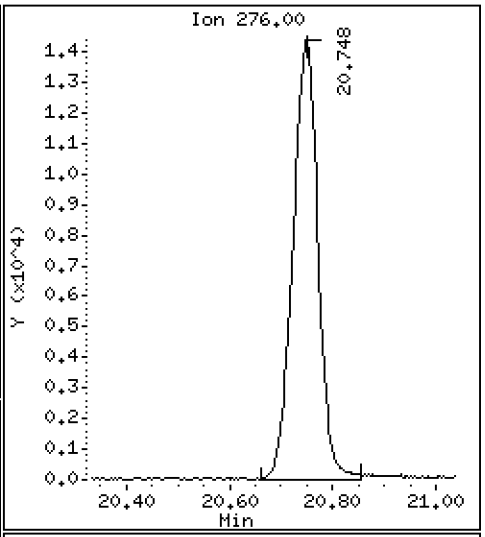
Column phase: Rxi-17sil

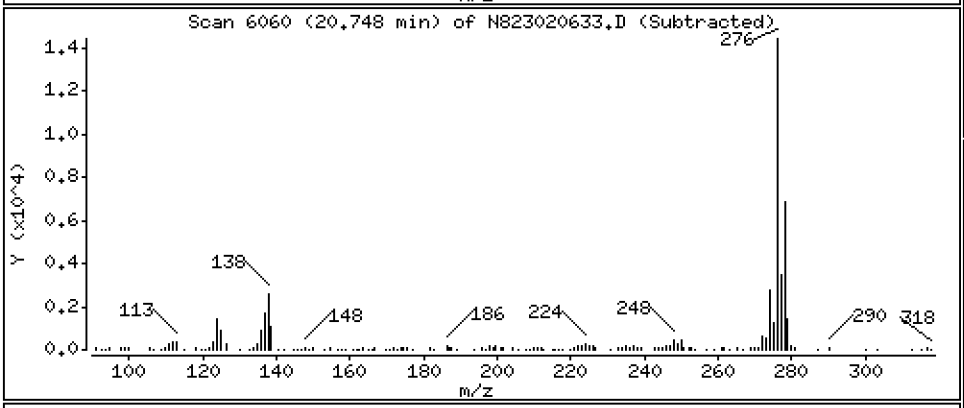
Column diameter: 0.25

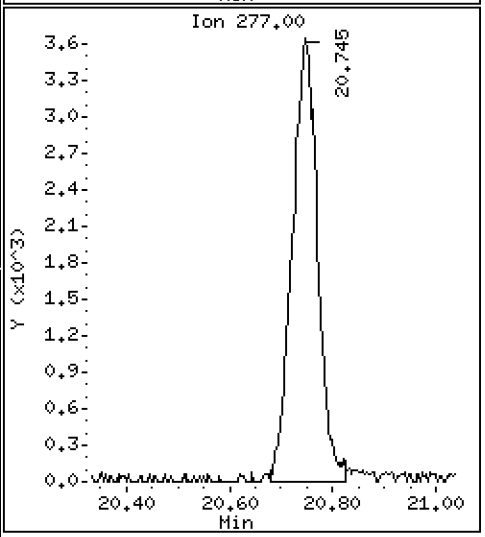
37 Indeno(1,2,3-cd)pyrene

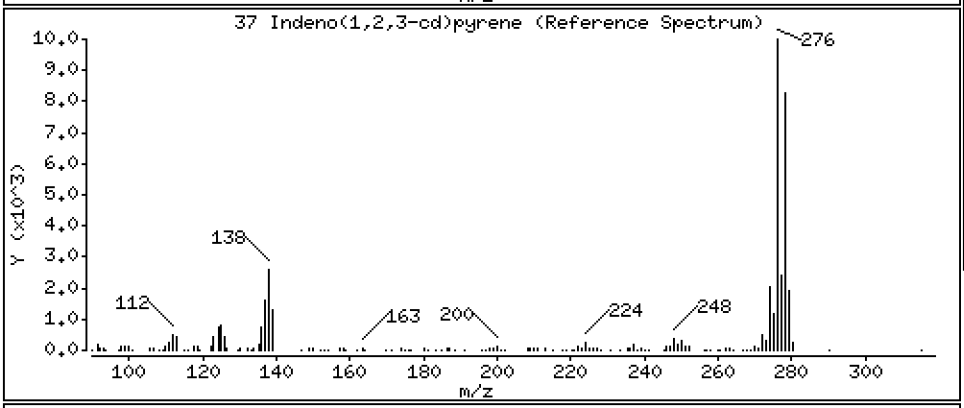
Concentration: 2.256 ug/mL

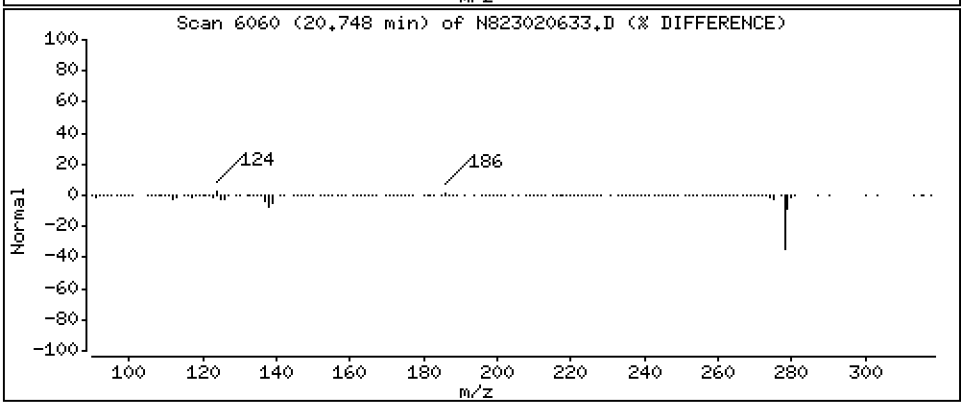












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Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

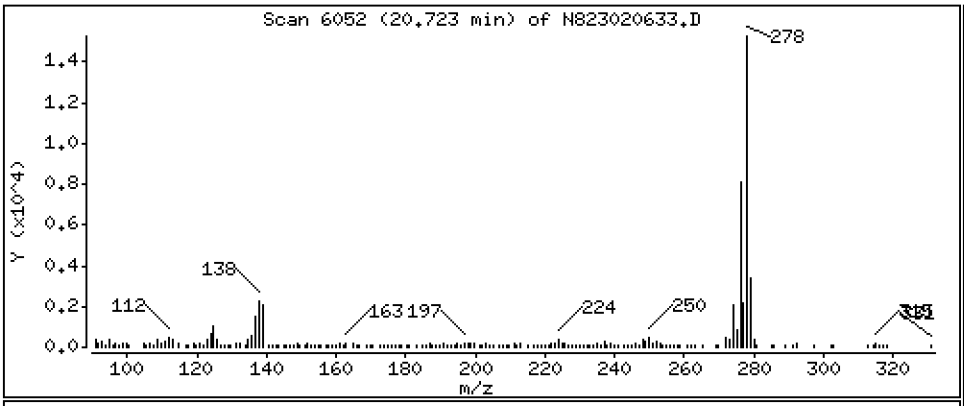
Operator: JZ

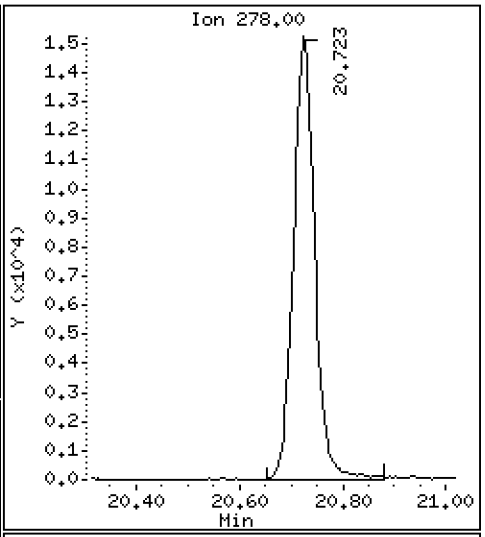
Column phase: Rxi-17sil

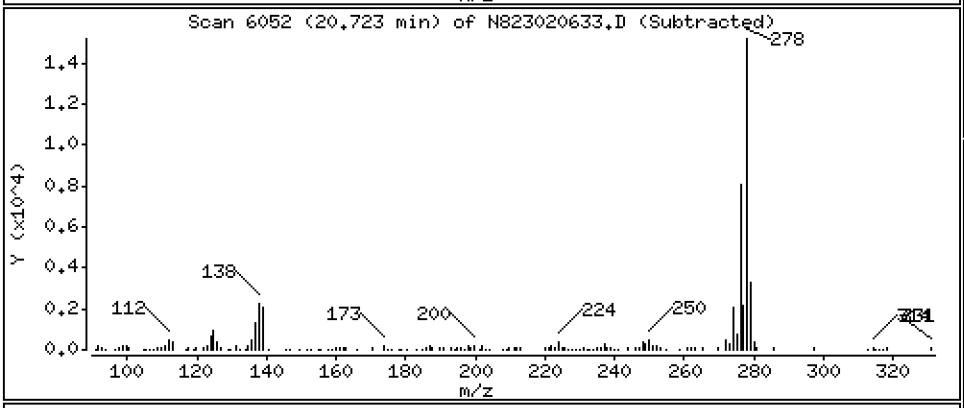
Column diameter: 0.25

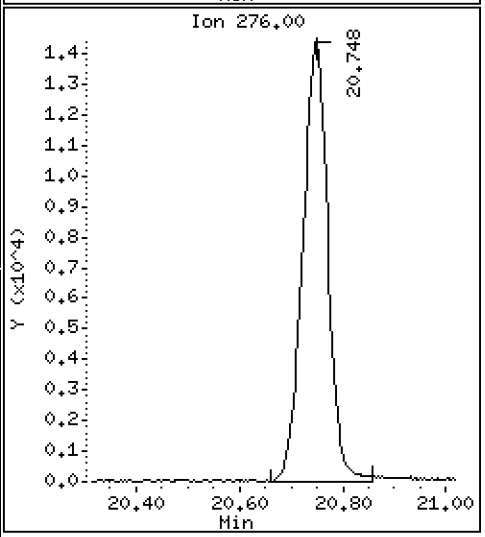
38 Dibenzo(a,h)anthracene

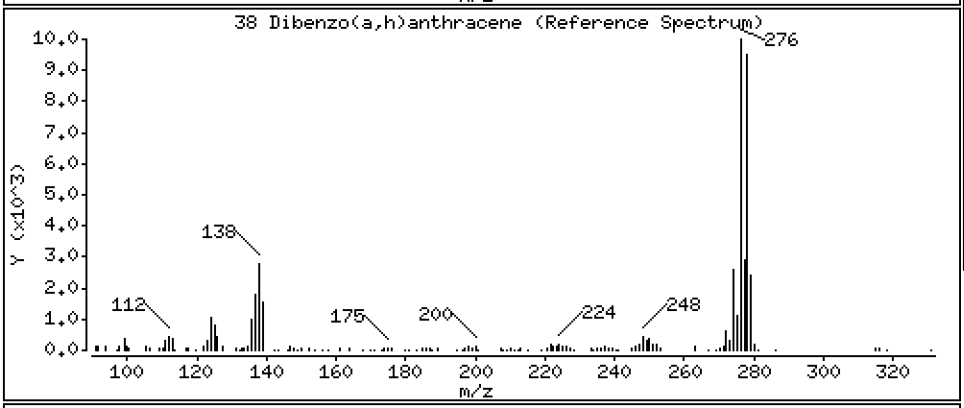
Concentration: 2.351 ug/mL

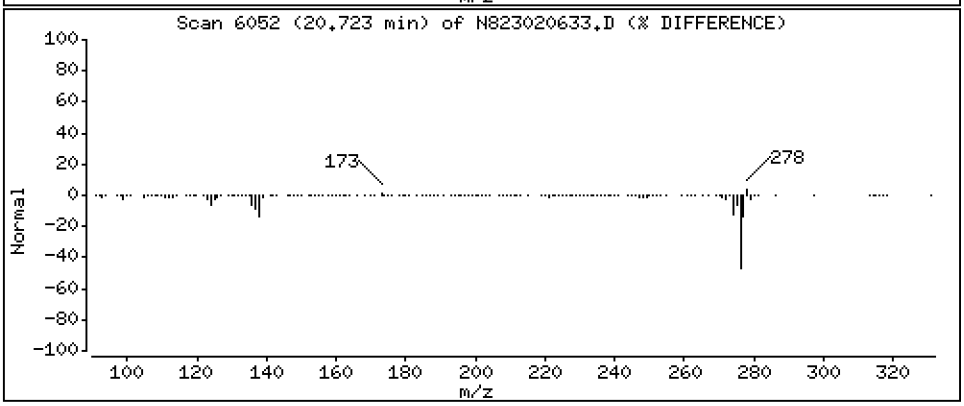












Data File: \\target\share\chem3\nt8.i\20230206A.b\N823020633.D

Date : 07-FEB-2023 03:09

Client ID:

Instrument: nt8.i

Sample Info: CCV230206A

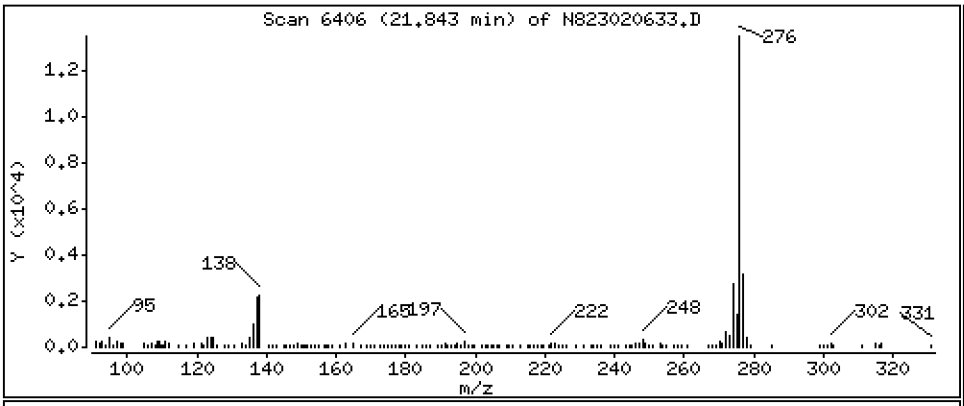
Operator: JZ

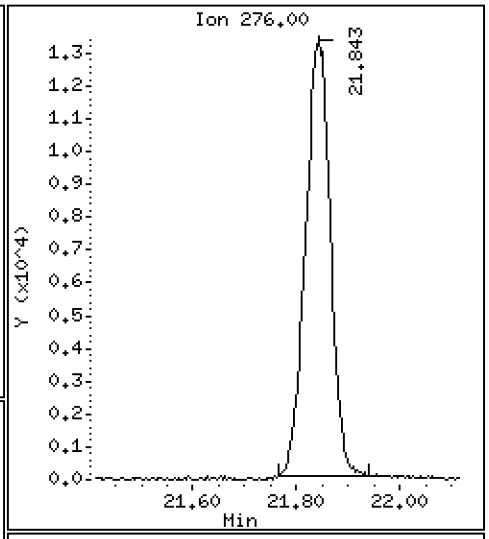
Column phase: Rxi-17sil

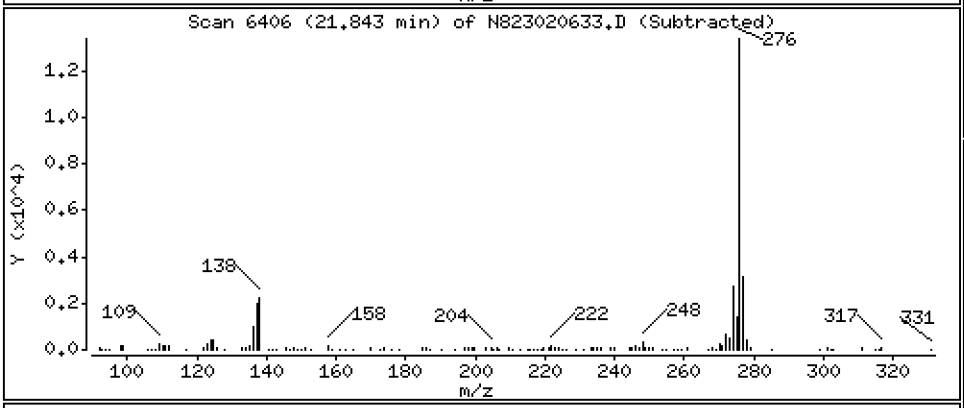
Column diameter: 0.25

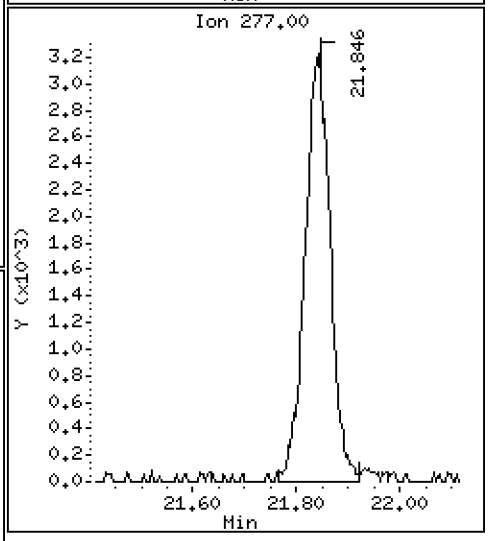
39 Benzo(g,h,i)perylene

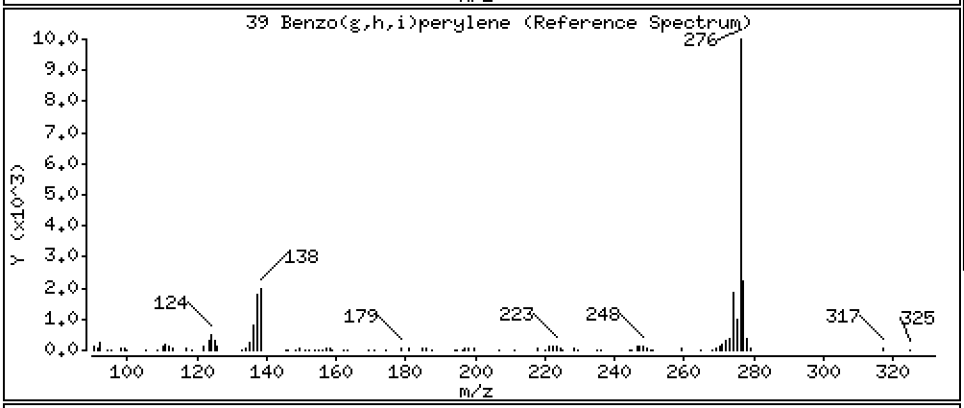
Concentration: 2.282 ug/mL

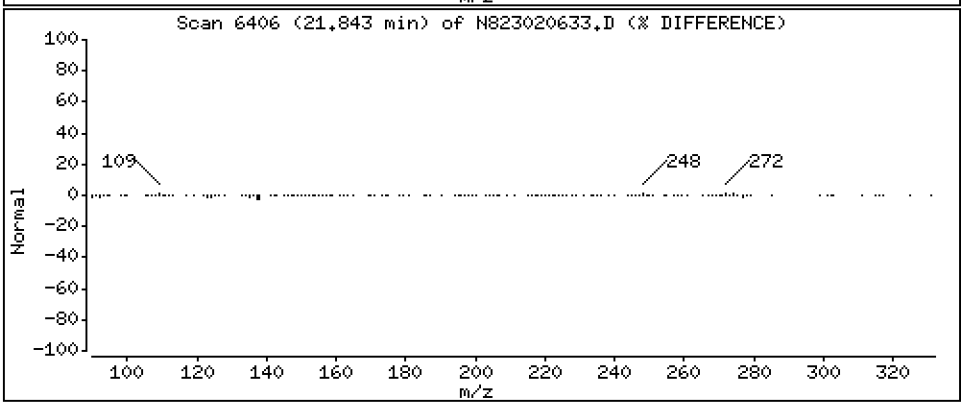












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230206A.b\N823020633.D
Lab Smp Id: SLB0075-CCV1
Inj Date : 07-FEB-2023 03:09
Operator : JZ Inst ID: nt8.i
Smp Info : CCV230206A
Misc Info : 23-
Comment : 1ul Injection
Method : \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Meth Date : 07-Feb-2023 13:04 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 33
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.891	4.900	(1.000)	52897	2.00000	
	2 Naphthalene	128	4.922	4.928	(1.006)	63361	2.57618	2.576
$	3 2-Methylnaphthalene-d10	152	5.627	5.634	(1.151)	38863	2.69389	2.694
	4 2-Methylnaphthalene	141	5.675	5.681	(1.160)	35322	2.61093	2.611
	5 1-methylnaphthalene	141	5.874	5.880	(1.201)	35734	2.60257	2.603
	7 Biphenyl	154	6.336	6.339	(0.882)	52884	2.53205	2.532
	8 2,6-Dimethylnaphthalene	156	6.380	6.386	(0.888)	39449	2.66873	2.669
	9 Acenaphthylene	152	7.079	7.082	(0.985)	65531	2.74112	2.741
*	10 Acenaphthene-d10	164	7.186	7.189	(1.000)	31659	2.00000	
	11 Acenaphthene	153	7.237	7.240	(1.007)	40761	2.54468	2.545
	12 Dibenzofuran	168	7.392	7.392	(1.029)	60656	2.49311	2.493
	13 1,6,7-Trimethylnaphthalene	170	7.455	7.455	(1.037)	40805	2.65970	2.660
	14 Fluorene	166	7.869	7.869	(1.095)	49570	2.62330	2.623
	18 Dibenzothiophene	184	9.109	9.105	(0.986)	66534	2.60645	2.606
*	15 Phenanthrene-d10	188	9.235	9.232	(1.000)	57767	2.00000	
	16 Phenanthrene	178	9.270	9.267	(1.004)	69258	2.45440	2.454
	17 Anthracene	178	9.311	9.308	(1.008)	67531	2.63443	2.634
	19 Carbazole	167	9.830	9.823	(1.064)	59552	2.53414	2.534
	20 1-Methylphenanthrene	192	10.051	10.044	(1.088)	54096	2.66030	2.660
	22 Fluoranthene	202	11.063	11.050	(1.198)	78660	2.56093	2.561
$	21 Fluoranthene-d10	212	11.025	11.009	(1.194)	69671	2.73363	2.734
	23 Pyrene	202	11.585	11.569	(0.814)	82339	2.76298	2.763
	24 Benzo(a)anthracene	228	14.102	14.070	(0.991)	76950	2.84885	2.849
*	25 Chrysene-d12	240	14.228	14.202	(1.000)	48067	2.00000	
	27 Chrysene	228	14.304	14.275	(1.005)	70690	2.45840	2.458
	28 Benzo(b)fluoranthene	252	16.865	16.824	(0.929)	63427	2.92669	2.927
	29 Benzo(k)fluoranthene	252	16.925	16.887	(0.932)	57781	2.72196	2.722
	30 Benzo(j)fluoranthene	252	17.004	16.963	(0.937)	51952	2.71859	2.719
	31 Total Benzofluoranthenes	252	16.865	16.824	(0.929)	172015	8.38100	8.381(M)
	34 Benzo(e)pyrene	252	17.795	17.750	(0.980)	54383	2.51644	2.516
	32 Benzo(a)pyrene	252	17.924	17.877	(0.987)	50609	2.65370	2.654
*	33 Perylene-d12	264	18.155	18.107	(1.000)	37211	2.00000	
	35 Perylene	252	18.231	18.183	(1.004)	48227	2.35653	2.357

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.609	20.549	(1.135)	32062	2.19903	2.199
37 Indeno(1,2,3-cd)pyrene	276	20.748	20.684	(1.143)	49006	2.25558	2.256
38 Dibenzo(a,h)anthracene	278	20.723	20.666	(1.141)	43963	2.35128	2.351
39 Benzo(g,h,i)perylene	276	21.842	21.763	(1.203)	44913	2.28160	2.282

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020633.D
Lab Smp Id: SLB0075-CCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230206A.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 06-FEB-2023
Calibration Time: 15:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	44336	22168	88672	52897	19.31
10 Acenaphthene-d10	26127	13064	52254	31659	21.17
15 Phenanthrene-d10	47424	23712	94848	57767	21.81
25 Chrysene-d12	36794	18397	73588	48067	30.64
33 Perylene-d12	36636	18318	73272	37211	1.57

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.90	4.40	5.40	4.89	-0.19
10 Acenaphthene-d10	7.19	6.69	7.69	7.19	-0.04
15 Phenanthrene-d10	9.23	8.73	9.73	9.24	0.04
25 Chrysene-d12	14.20	13.70	14.70	14.23	0.18
33 Perylene-d12	18.11	17.61	18.61	18.16	0.26

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

REVIEW SUMMARY FOR FILE - N823020633.D

Lab ID: SLB0075-CCV1
nt8.i, 20230206A.b\FSIMPNA230119.m,   07-FEB-2023 03:09

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check performed

On Column LOD for nt8.i, 20230206A.b\FSIMPNA230119.m, FSIMPNAICLA.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

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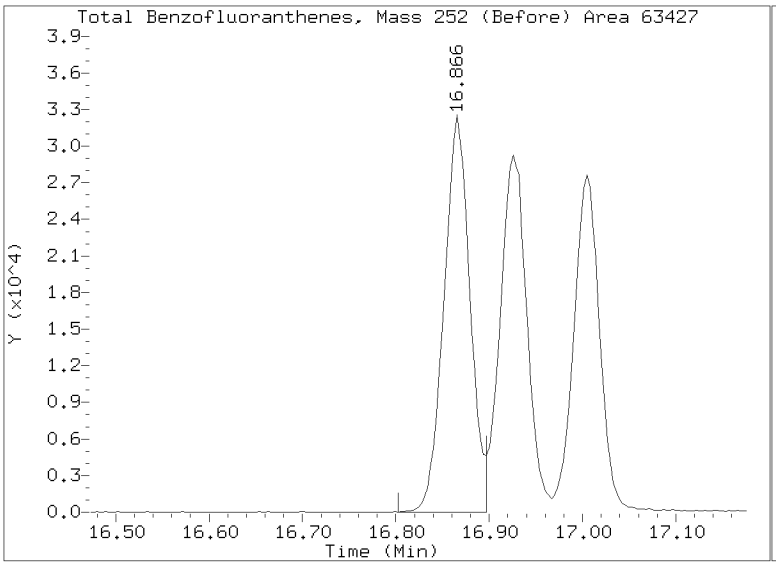
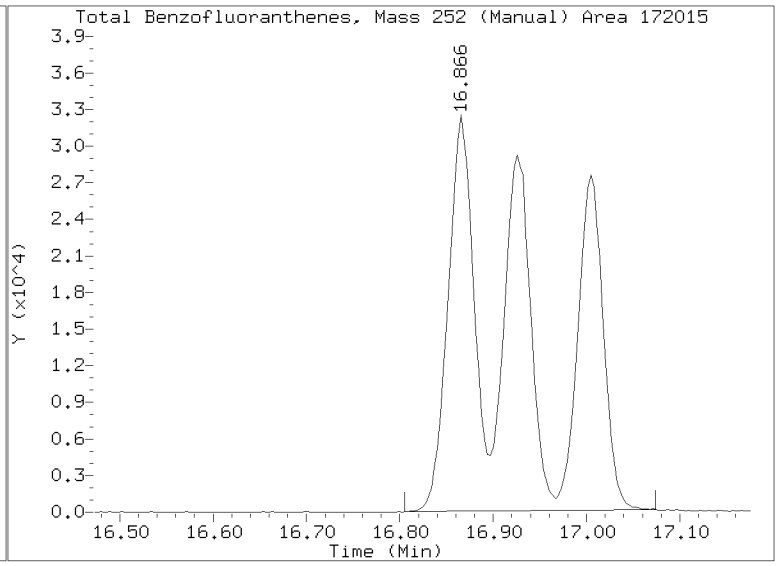
Injection Date: 07-FEB-2023 03:09
Lab ID:SLB0075-CCV1 Client ID:
Report Date: 02/07/2023 19:38





Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT8	Calibration:	GA00050
Lab File ID:	N823020817.D	Calibration Date:	01/19/2023
Sequence:	SLB0101	Injection Date:	02/08/23
Lab Sample ID:	SLB0101-CCV1	Injection Time:	19:21
Sequence Name:	Calibration Check		

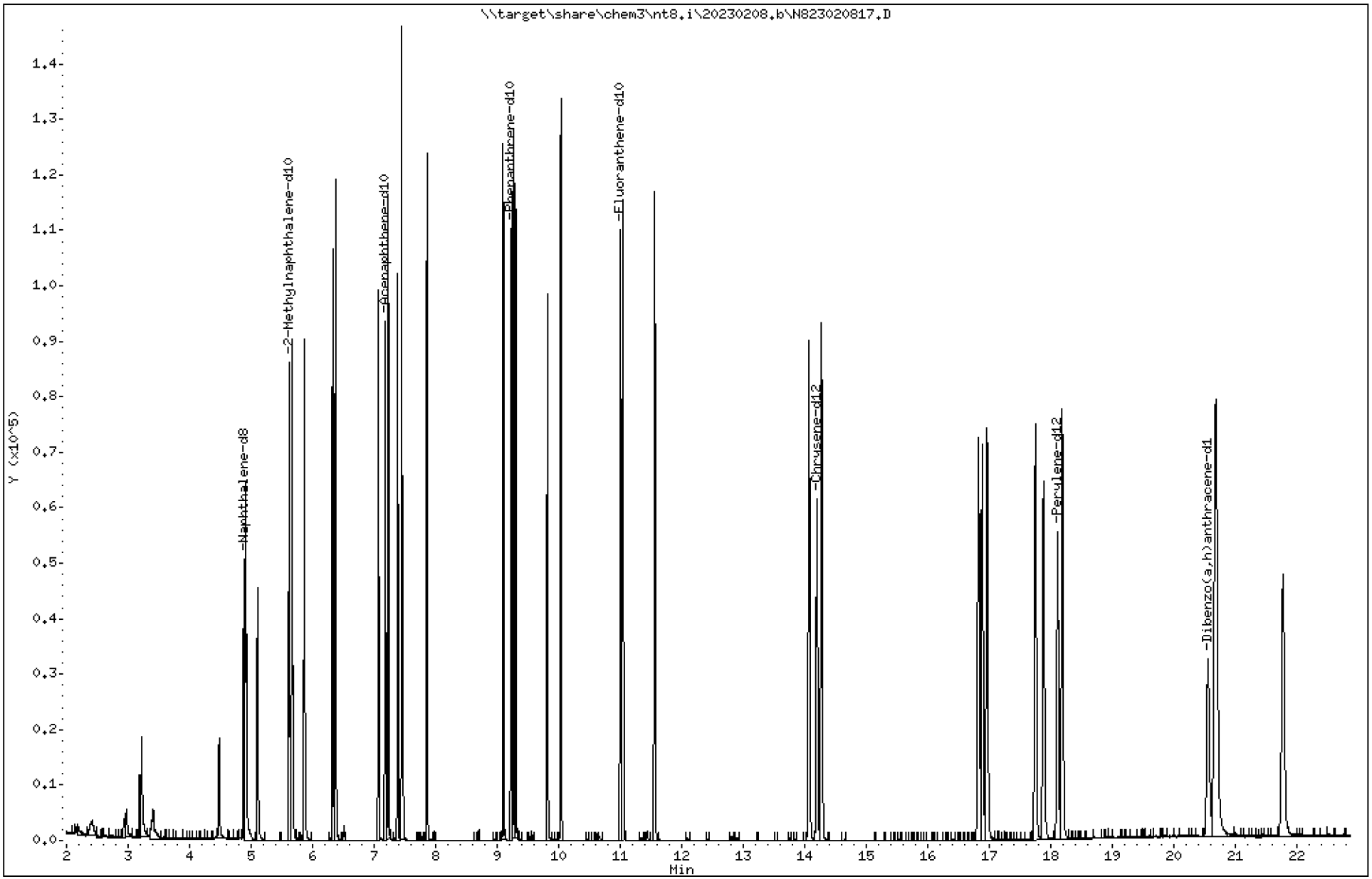
		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Naphthalene	A	2.5000	2.56	0.9299181	0.9507515		2.2	+/-50
2-Methylnaphthalene	A	2.5000	2.59	0.5115033	0.5292800		3.5	+/-50
1-Methylnaphthalene	A	2.5000	2.61	0.5191318	0.5427836		4.6	+/-50
Acenaphthylene	A	2.5000	2.74	1.5102600	1.6537760		9.5	+/-50
Acenaphthene	A	2.5000	2.59	1.0119150	1.0487510		3.6	+/-50
Dibenzofuran	A	2.5000	2.50	1.5369690	1.5379130		0.06	+/-50
Fluorene	A	2.5000	2.66	1.1937240	1.2699230		6.4	+/-50
Phenanthrene	A	2.5000	2.49	0.9769567	0.9741826		-0.3	+/-50
Anthracene	A	2.5000	2.64	0.8874960	0.9361089		5.5	+/-50
Fluoranthene	A	2.5000	2.58	1.0634260	1.0978600		3.2	+/-50
Pyrene	A	2.5000	2.77	1.2399700	1.3731950		10.7	+/-50
Benzo(a)anthracene	A	2.5000	2.71	1.1238870	1.2198090		8.5	+/-50
Chrysene	A	2.5000	2.56	1.1964350	1.2258310		2.5	+/-50
Benzo(b)fluoranthene	A	2.5000	2.44	1.1648110	1.1387470		-2.2	+/-50
Benzo(k)fluoranthene	A	2.5000	2.40	1.1409370	1.0969130		-3.9	+/-50
Benzo(j)fluoranthene	A	2.5000	2.50	1.0271120	1.0271900		0.008	+/-50
Benzofluoranthenes, Total	A	7.5000	7.23	1.1031370	1.0629040		-3.6	+/-50
Benzo(a)pyrene	A	2.5000	2.49	1.0250270	1.0189160		-0.6	+/-50
Indeno(1,2,3-cd)pyrene	A	2.5000	2.78	1.1677520	1.2975410		11.1	+/-50
Dibenzo(a,h)anthracene	A	2.5000	2.76	1.0049440	1.1111630		10.6	+/-50
Benzo(g,h,i)perylene	A	2.5000	2.78	1.0580110	1.1774590		11.3	+/-50
2-Methylnaphthalene-d10	A	2.5000	2.59	0.5454499	0.5643827		3.5	+/-50
Dibenzo[a,h]anthracene-d14	A	2.5000	2.48	0.6679424	0.7763101		-0.9	+/-50
Fluoranthene-d10	A	2.5000	2.73	0.8823923	0.9619691		9.0	

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230208.b\N823020817.D
Date : 08-FEB-2023 19:21
Client ID:
Sample Info: CCV230108

Instrument: nt8.i
Operator: JZ
Column diameter: 0.25

Column phase: Rxi-17sil



23A0207 CLPLIKE (Rev3) - Page 1101 of 3315

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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

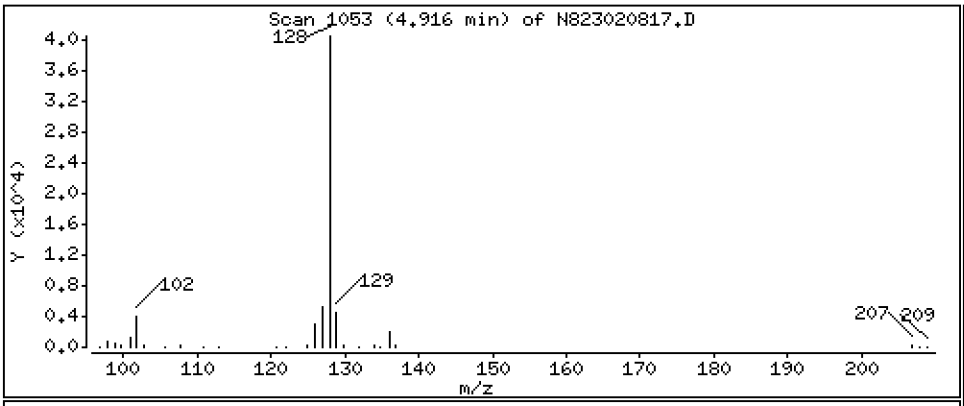
Operator: JZ

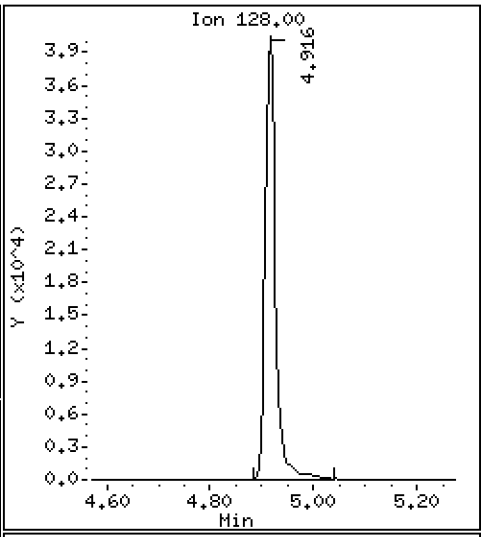
Column phase: Rxi-17sil

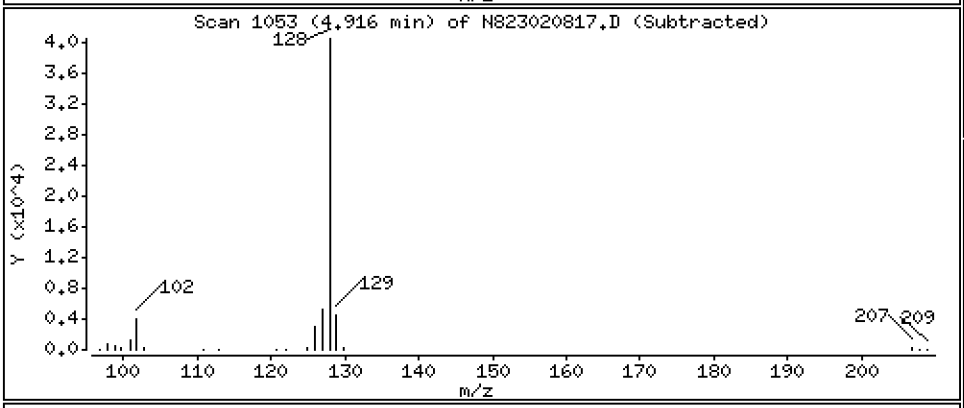
Column diameter: 0.25

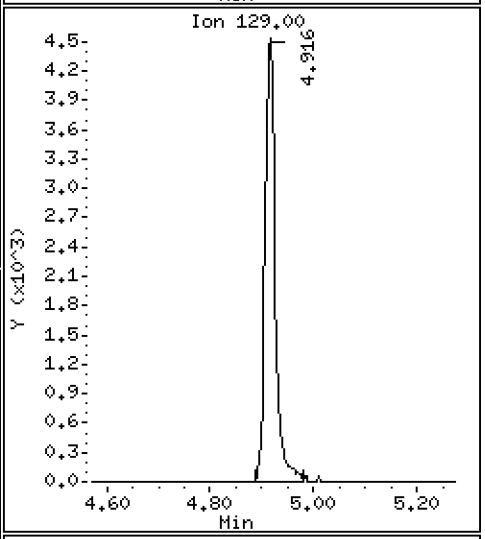
2 Naphthalene

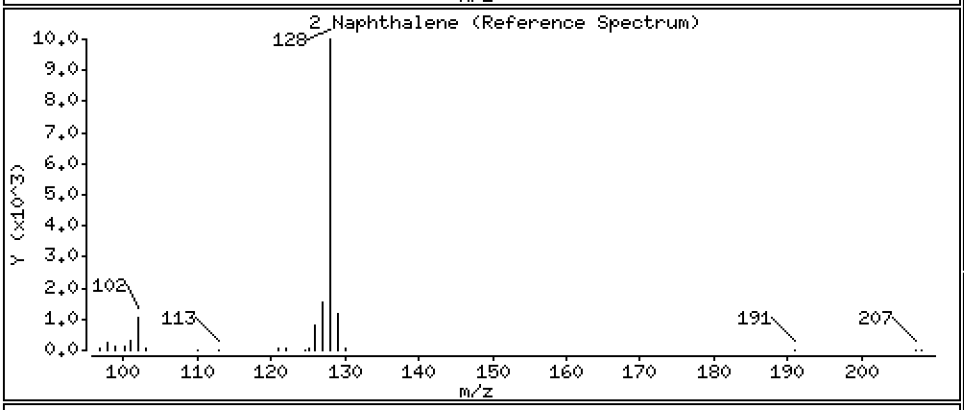
Concentration: 2.556 ug/mL

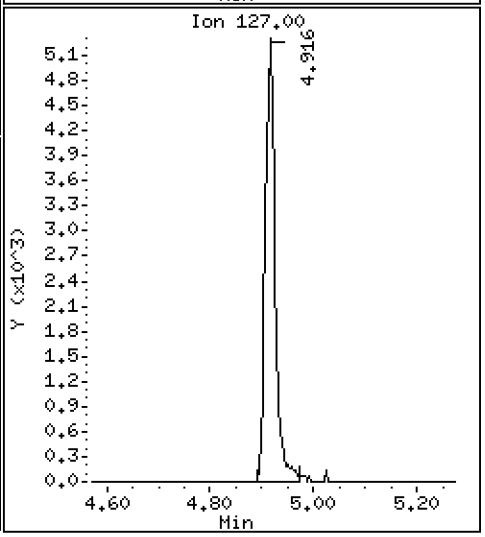


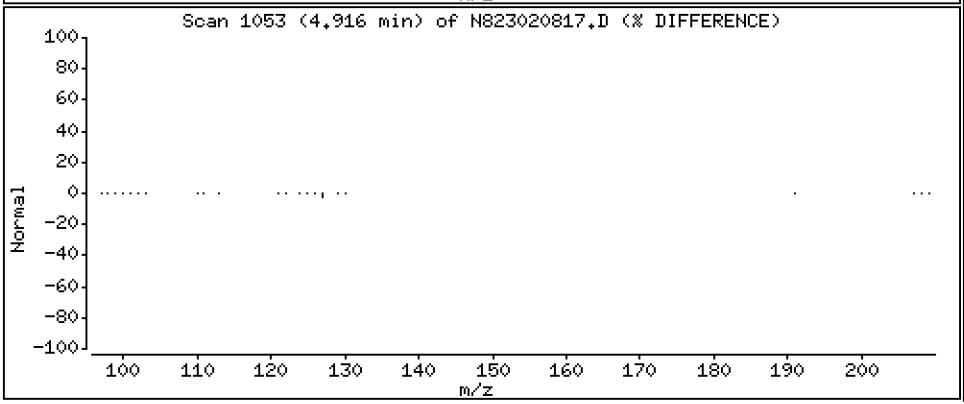












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

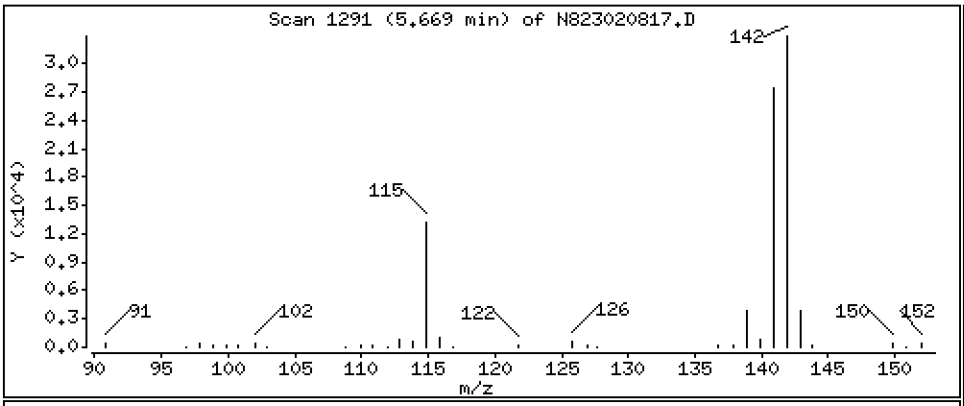
Operator: JZ

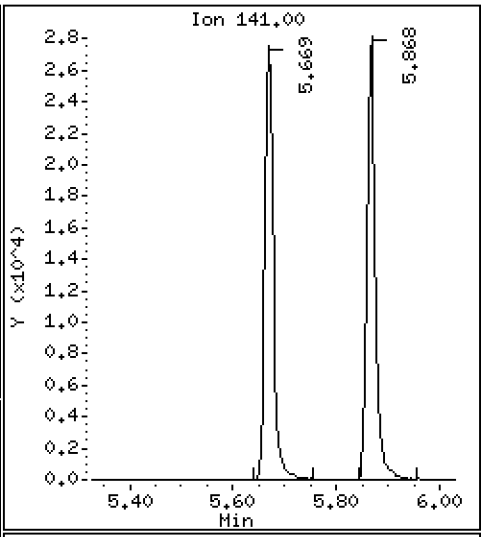
Column phase: Rxi-17sil

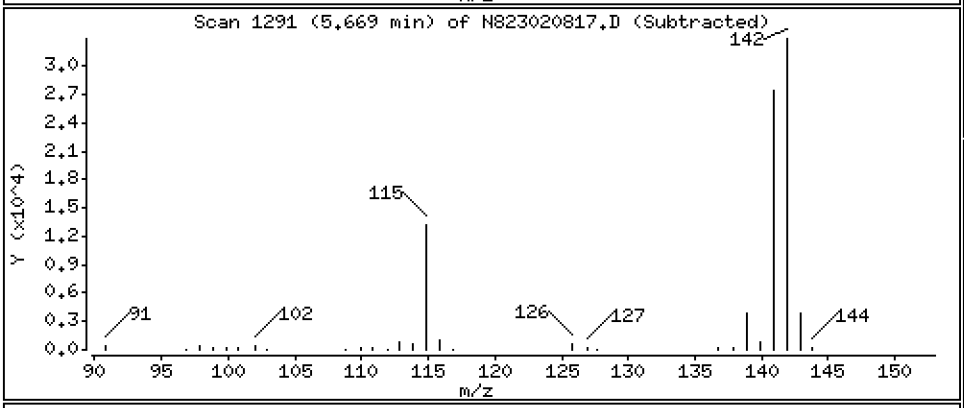
Column diameter: 0.25

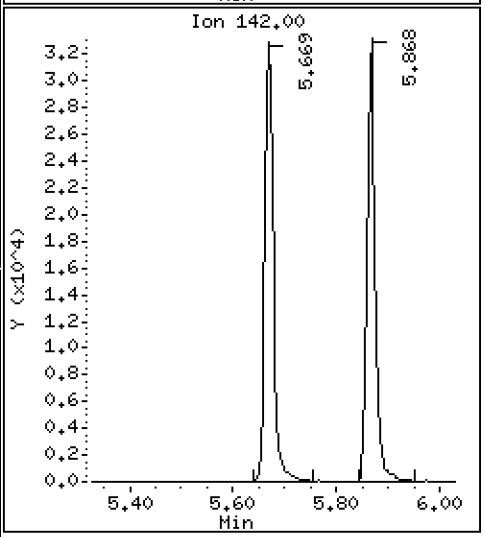
4 2-Methylnaphthalene

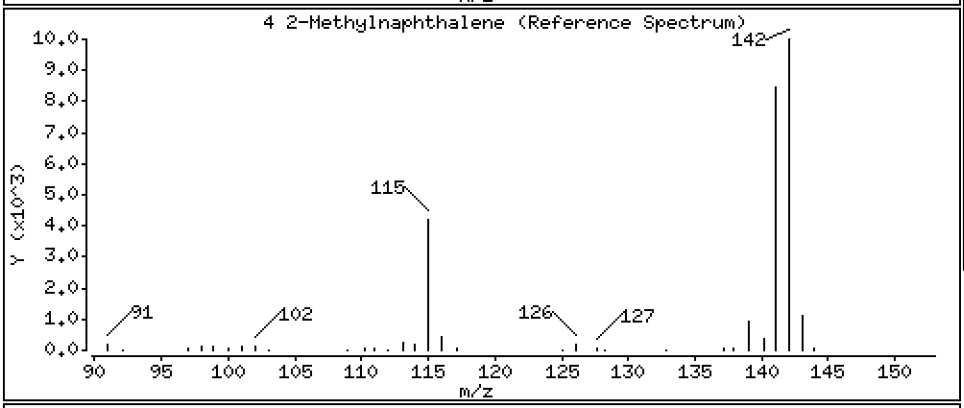
Concentration: 2.587 ug/mL

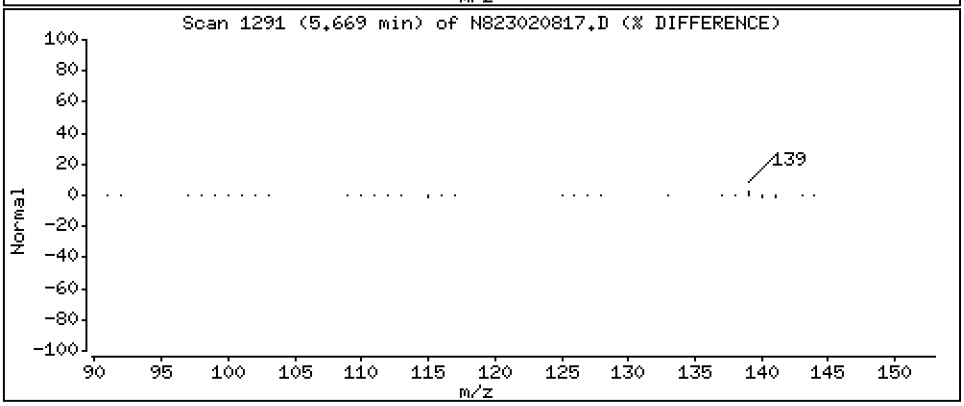












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

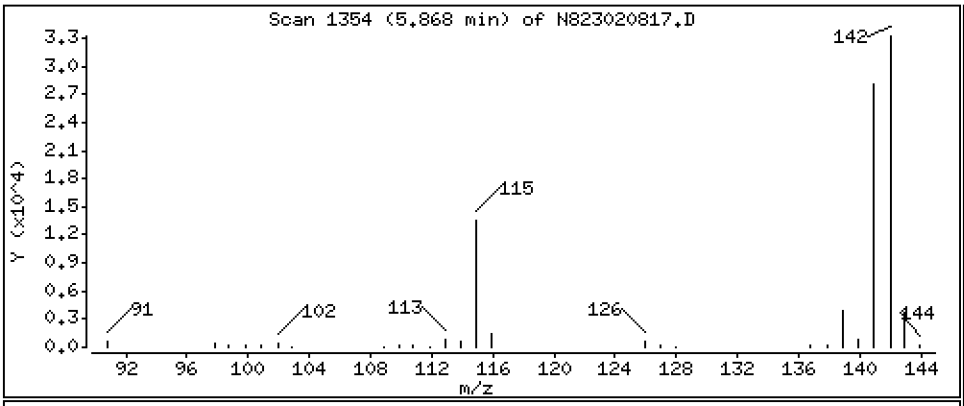
Operator: JZ

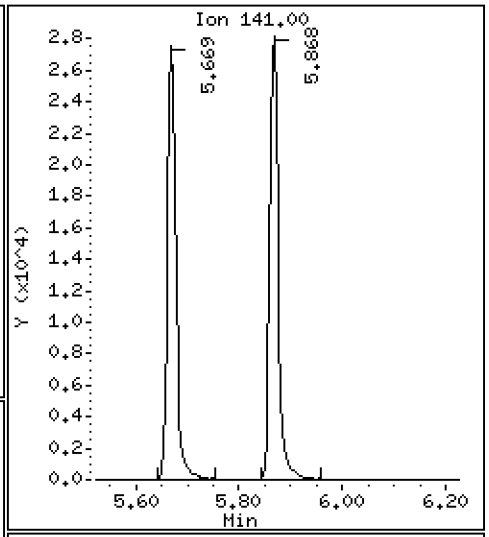
Column phase: Rxi-17sil

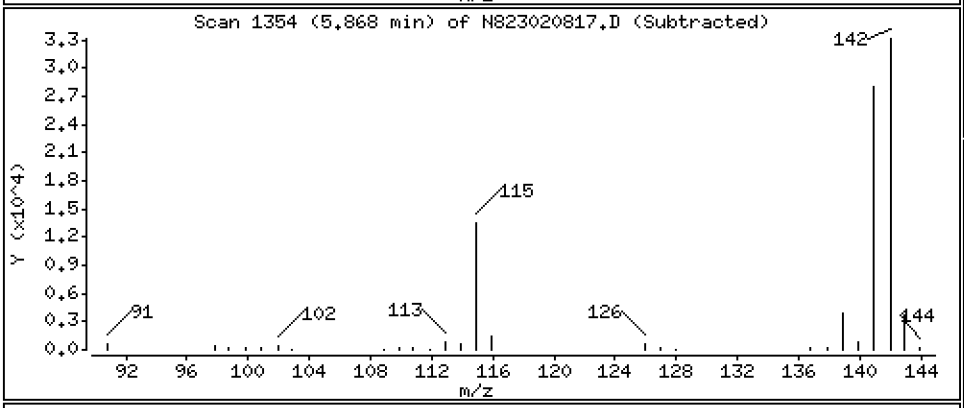
Column diameter: 0.25

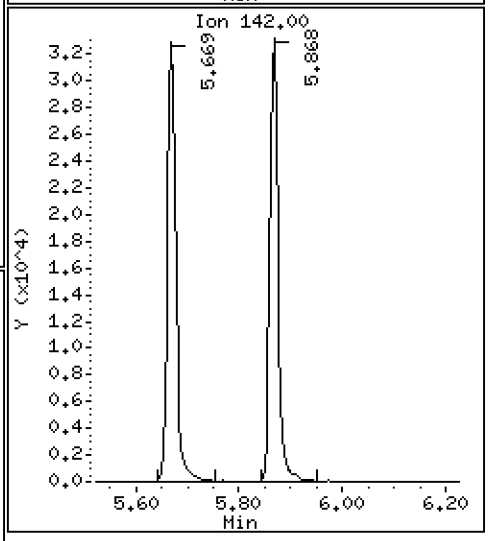
5 1-methylnaphthalene

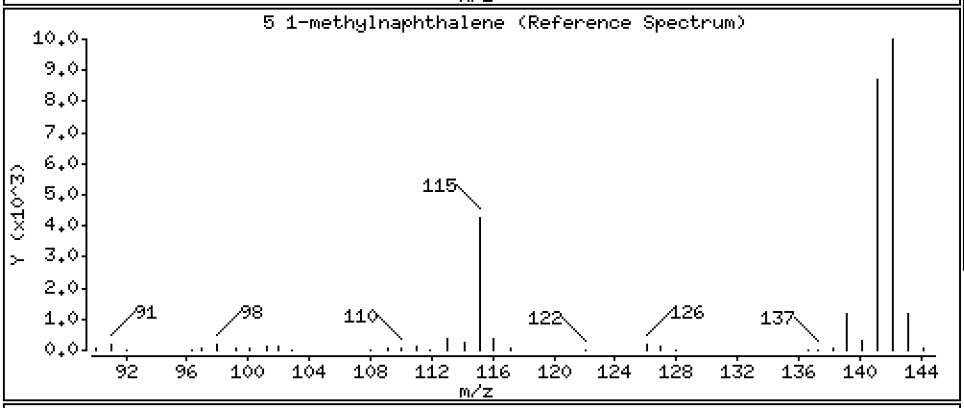
Concentration: 2.614 ug/mL

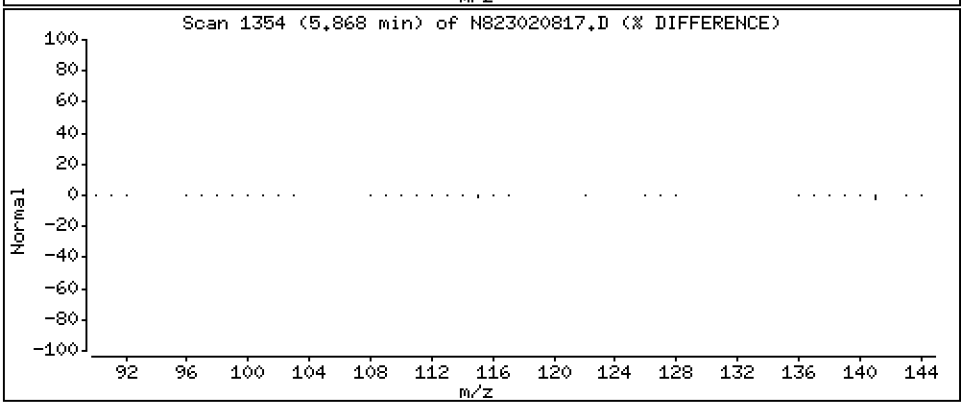












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

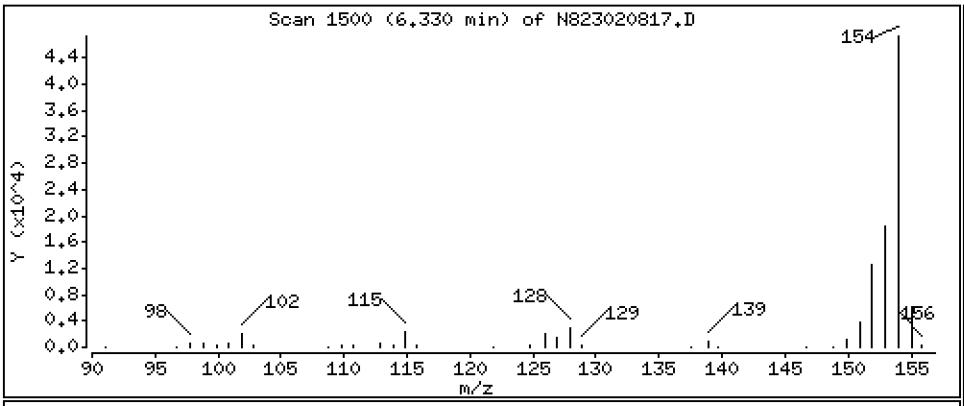
Operator: JZ

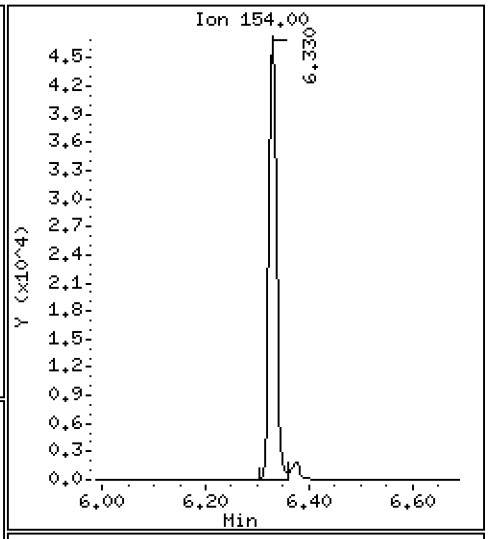
Column phase: Rxi-17sil

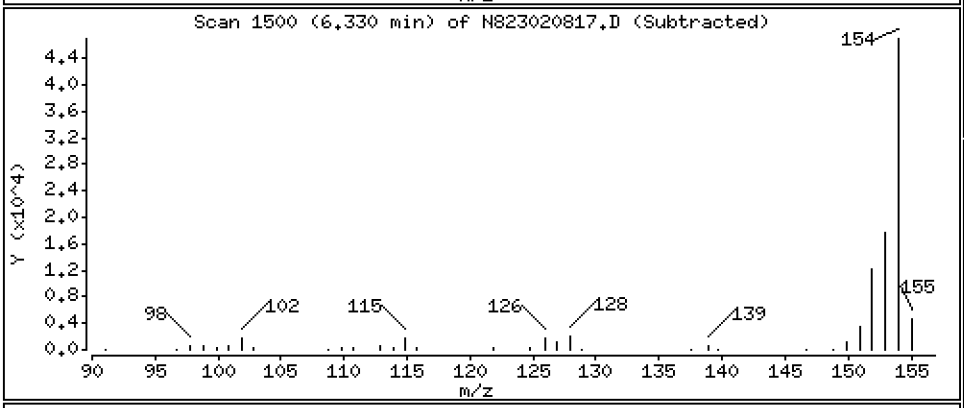
Column diameter: 0.25

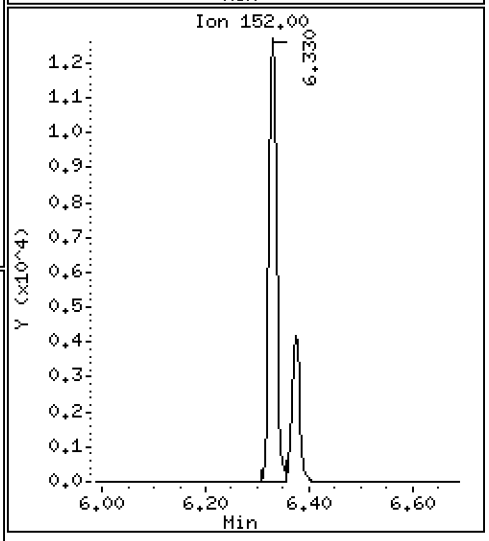
7 Biphenyl

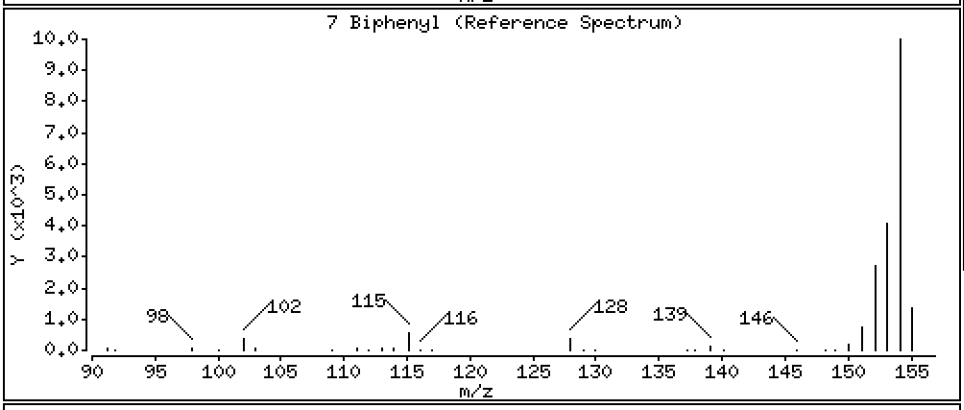
Concentration: 2.540 ug/mL

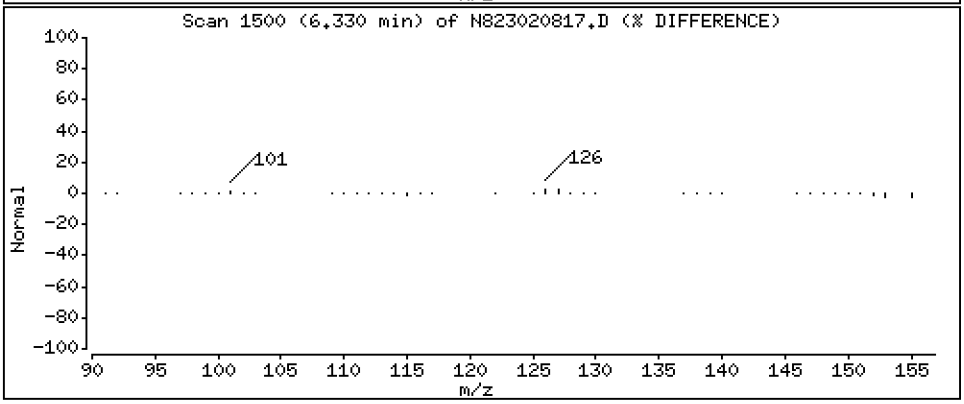












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020817.D

Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

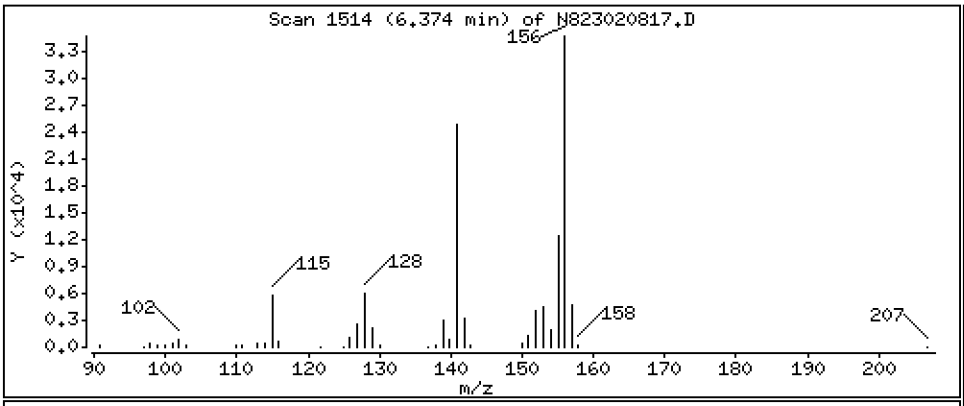
Operator: JZ

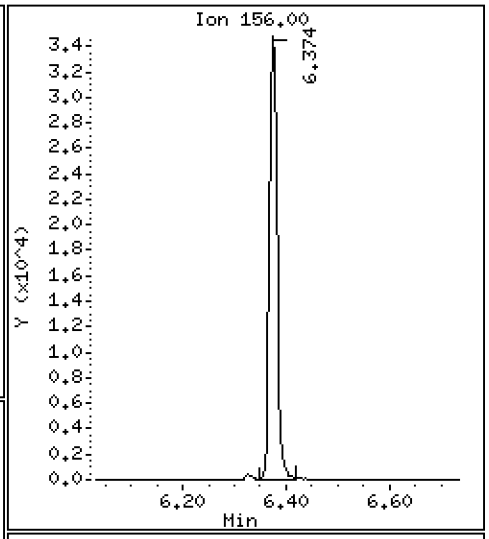
Column phase: Rxi-17sil

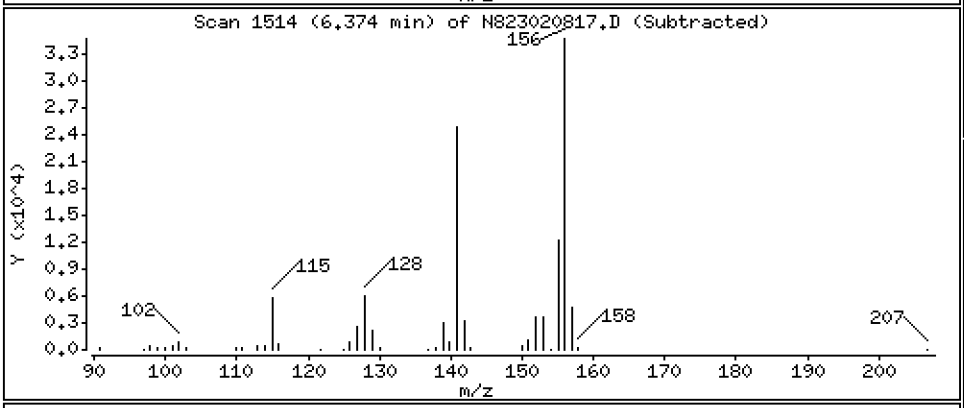
Column diameter: 0.25

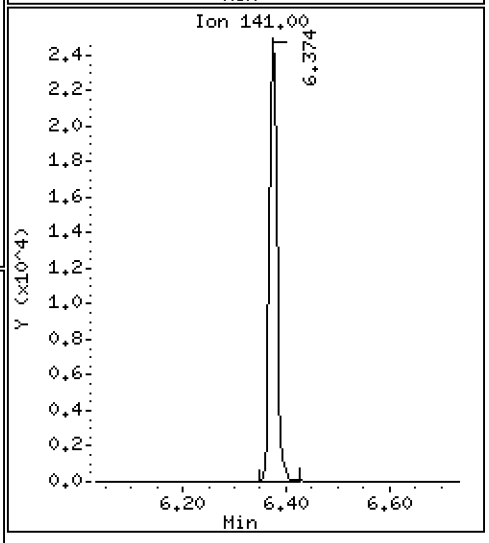
8 2,6-Dimethylnaphthalene

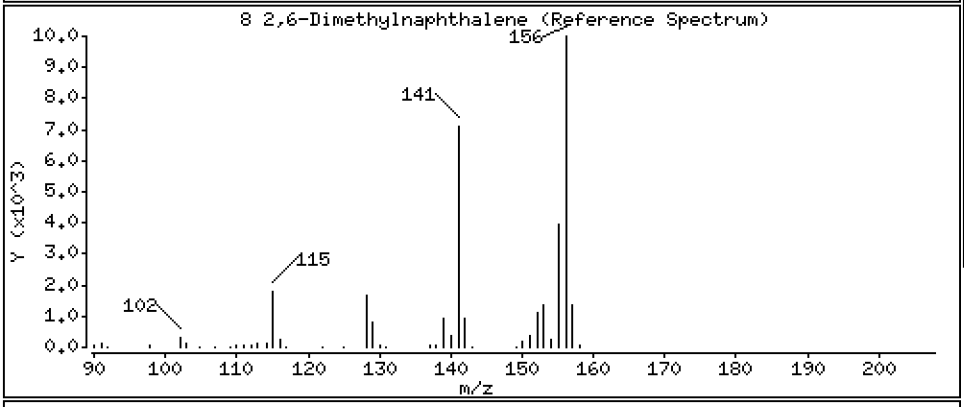
Concentration: 2.673 ug/mL

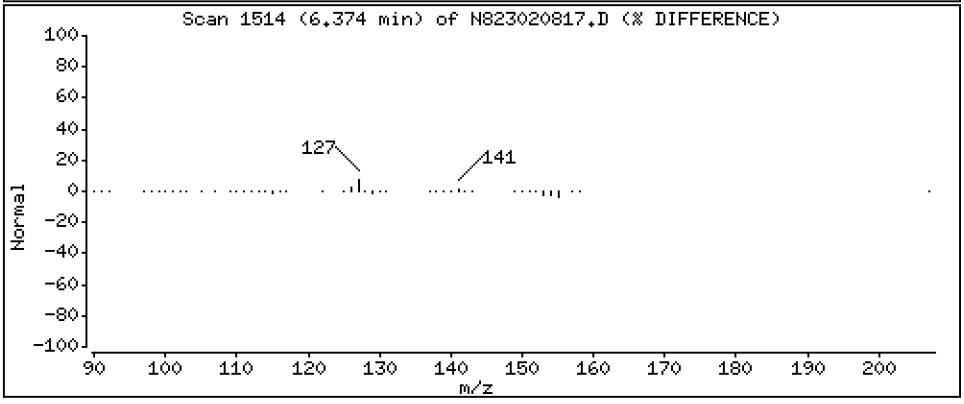












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

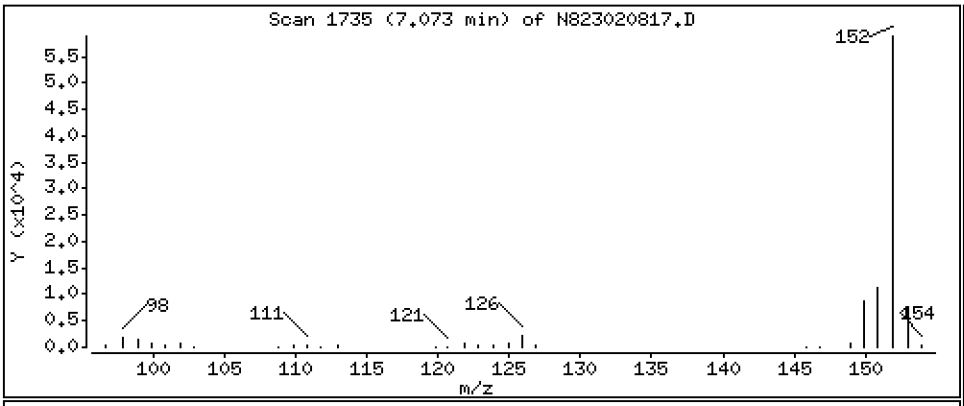
Operator: JZ

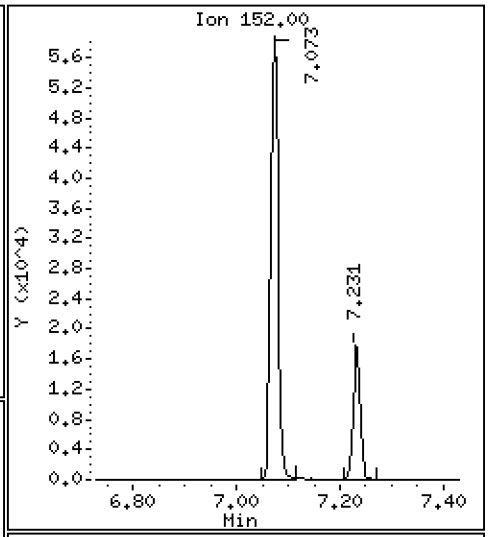
Column phase: Rxi-17sil

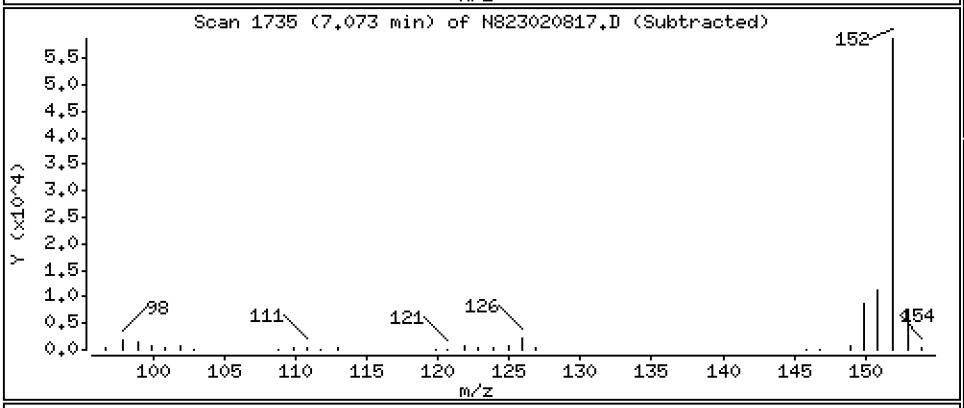
Column diameter: 0.25

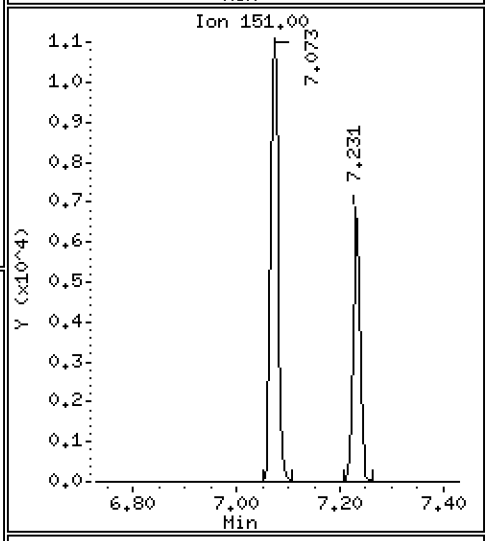
9 Acenaphthylene

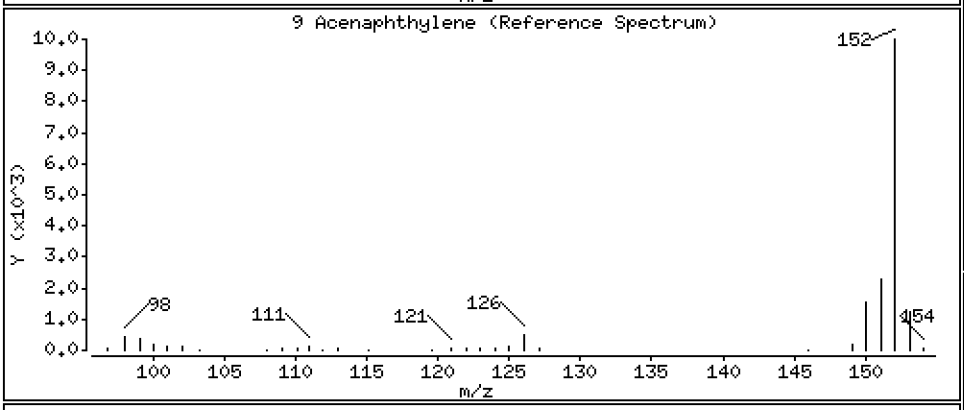
Concentration: 2.738 ug/mL

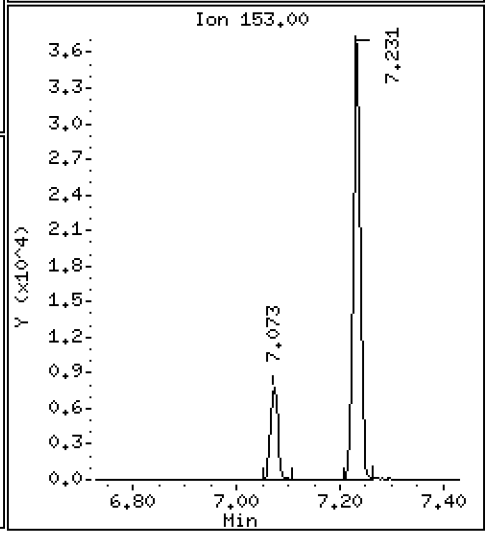


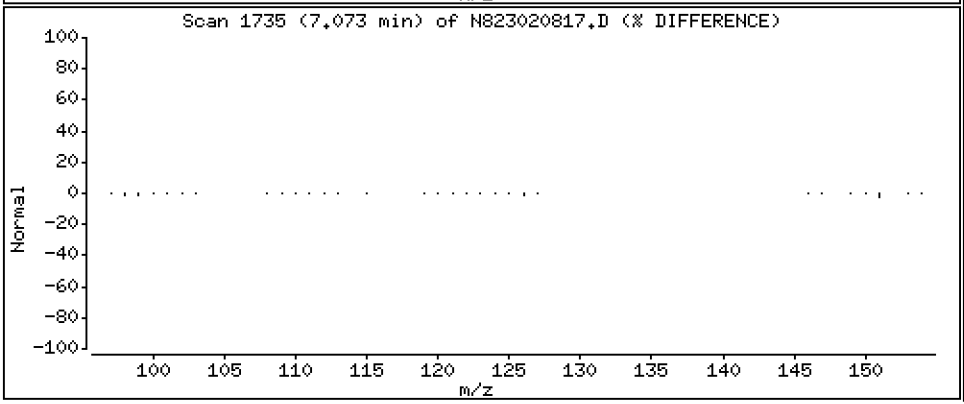












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

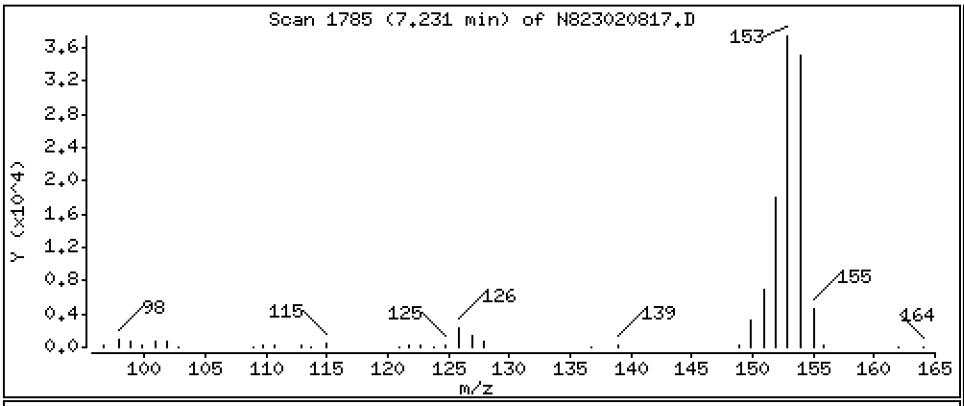
Operator: JZ

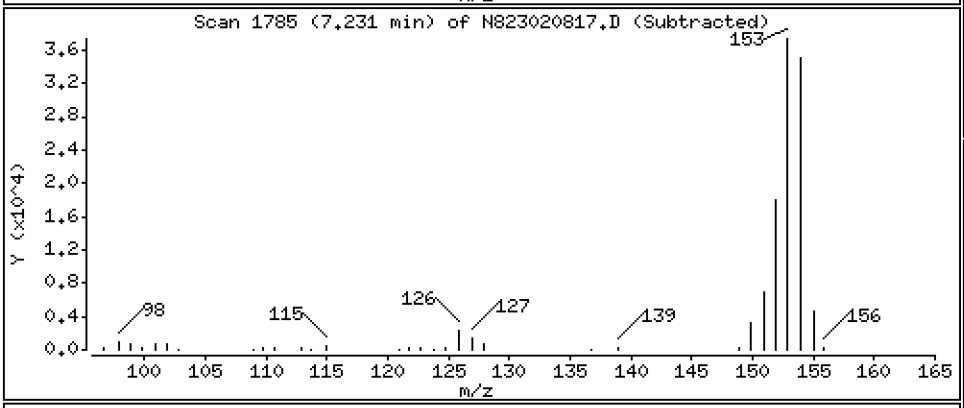
Column phase: Rxi-17sil

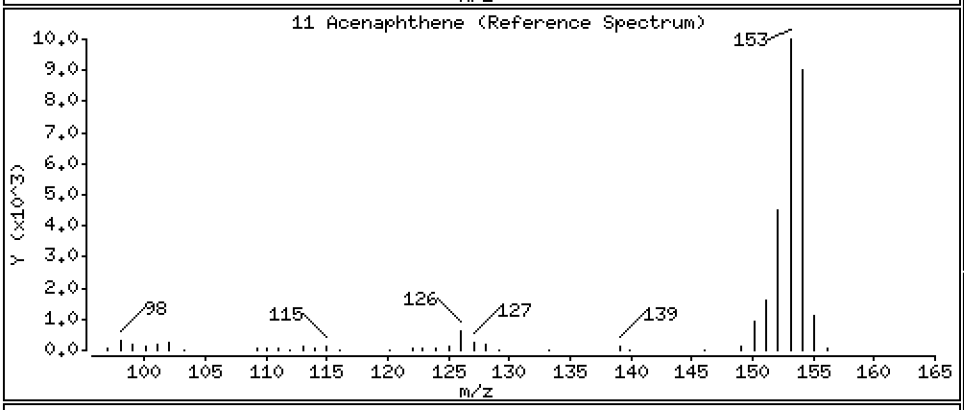
Column diameter: 0.25

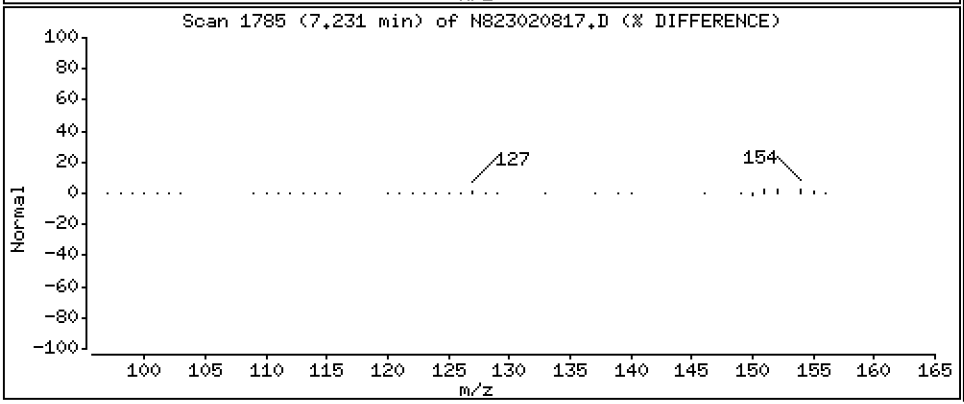
11 Acenaphthene

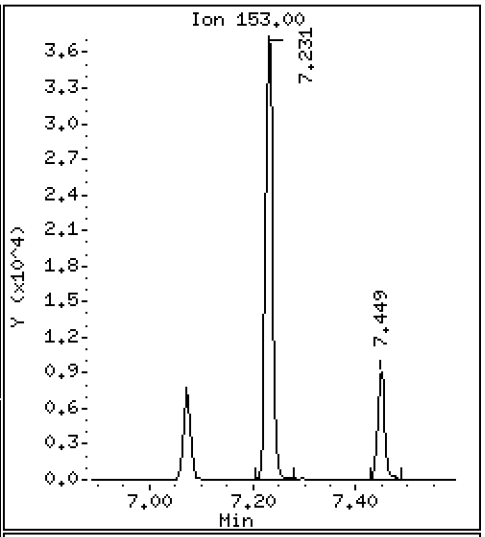
Concentration: 2.591 ug/mL

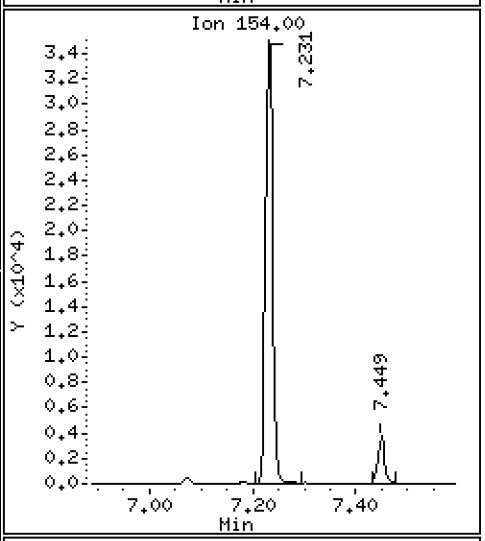


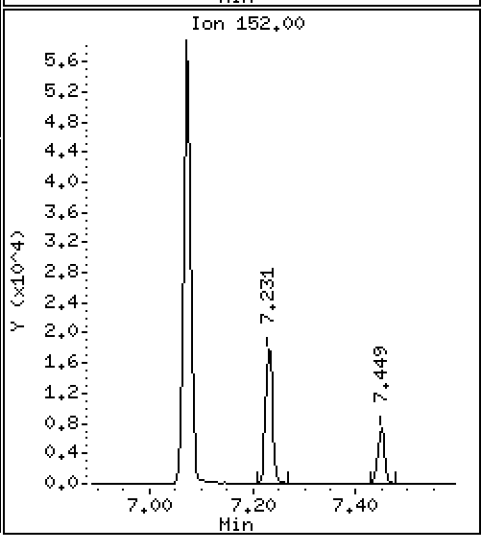












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

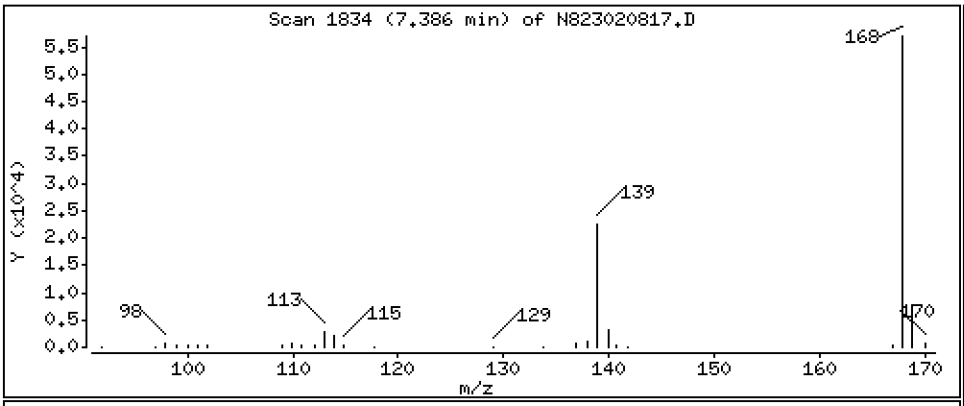
Operator: JZ

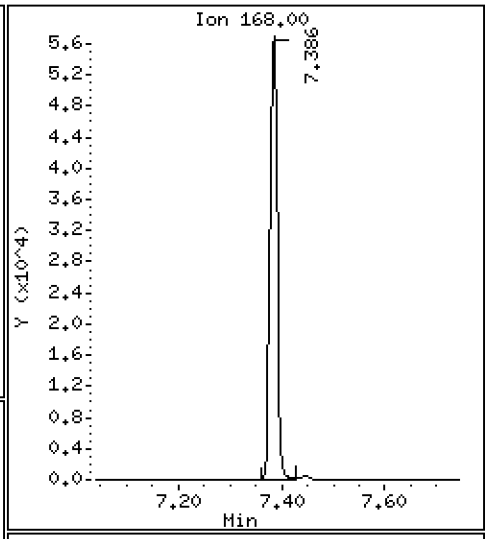
Column phase: Rxi-17sil

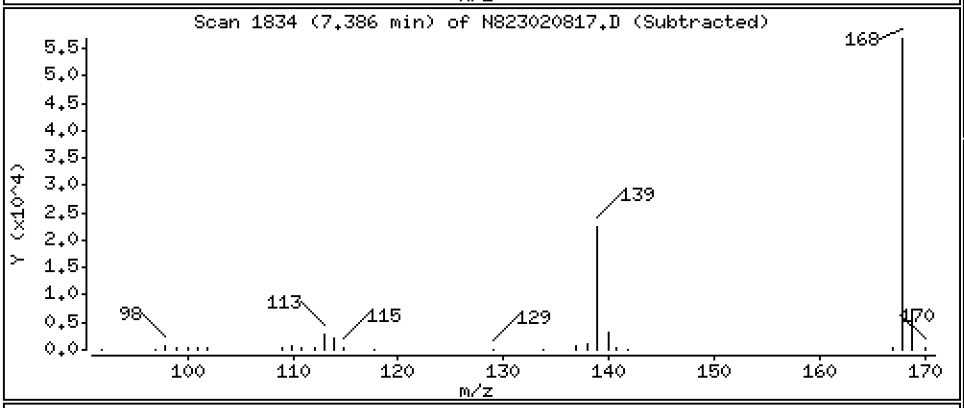
Column diameter: 0.25

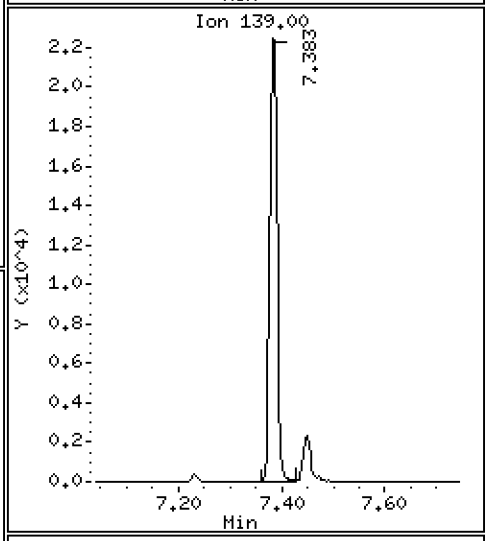
12 Dibenzofuran

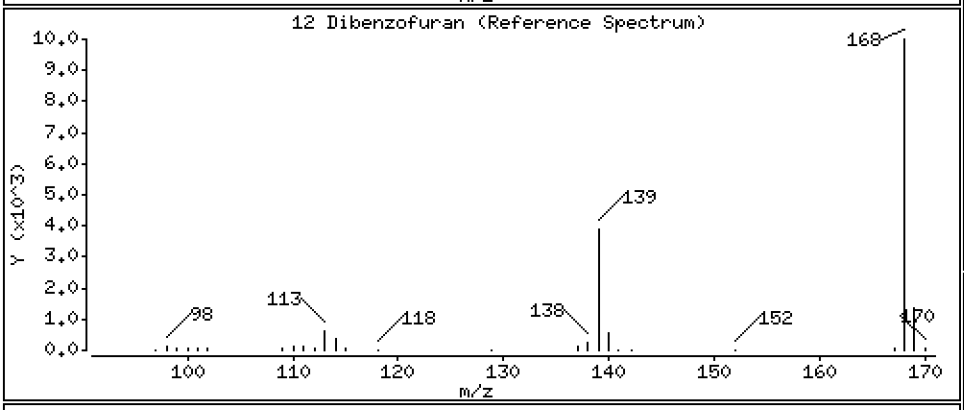
Concentration: 2.502 ug/mL

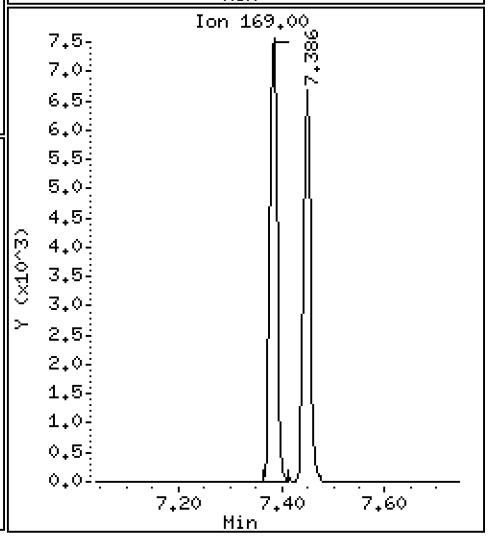


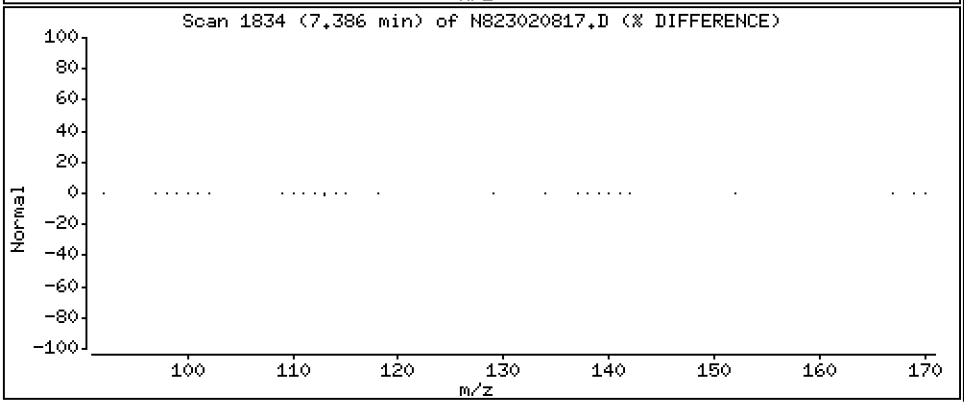












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

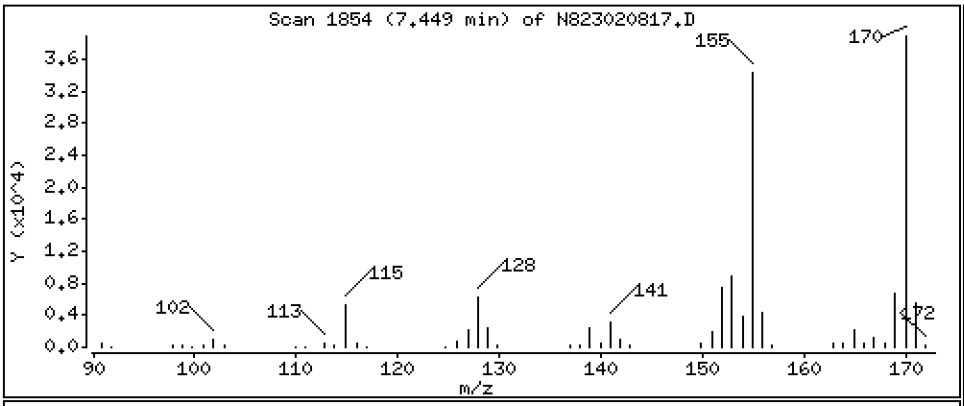
Operator: JZ

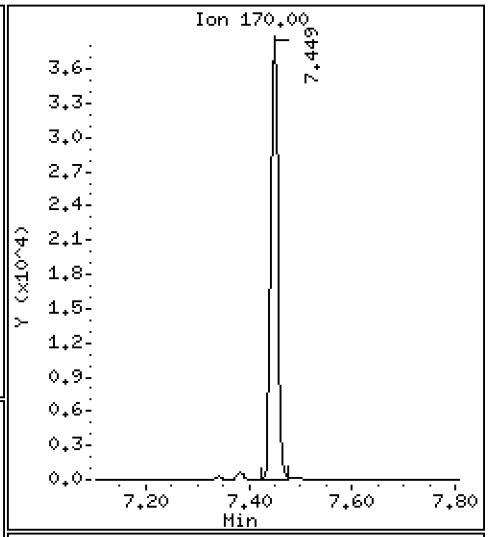
Column phase: Rxi-17sil

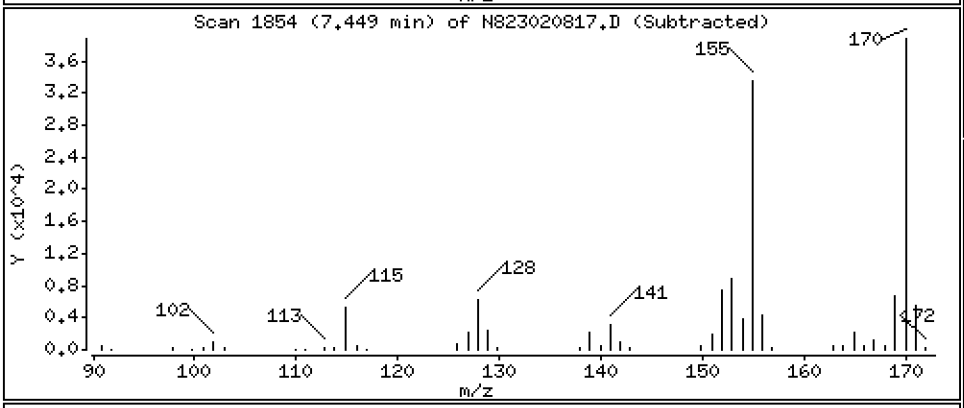
Column diameter: 0.25

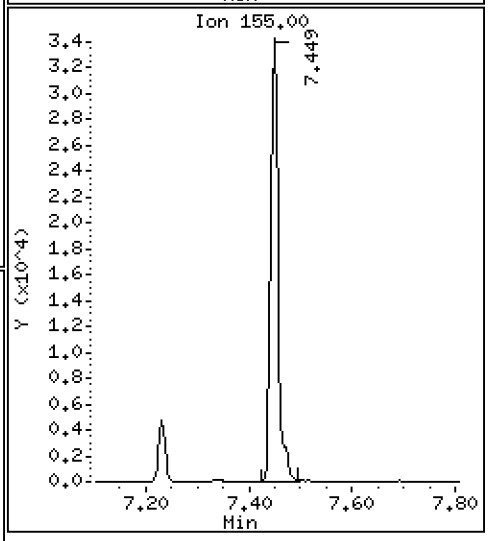
13 1,6,7-Trimethylnaphthalene

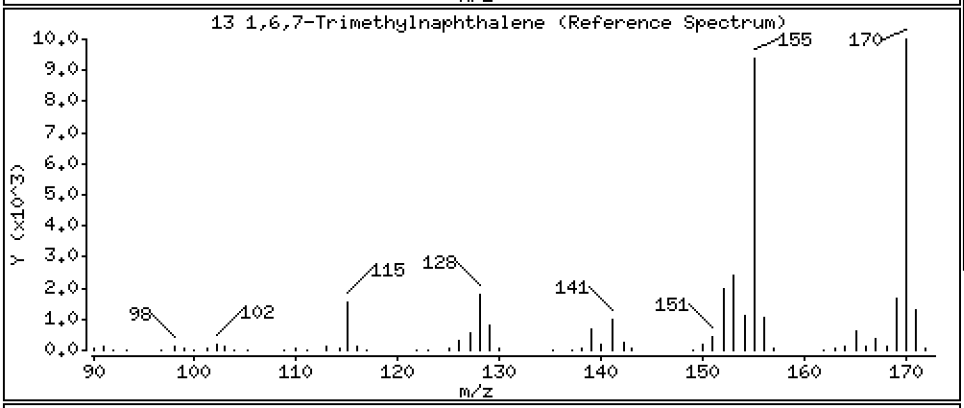
Concentration: 2.668 ug/mL

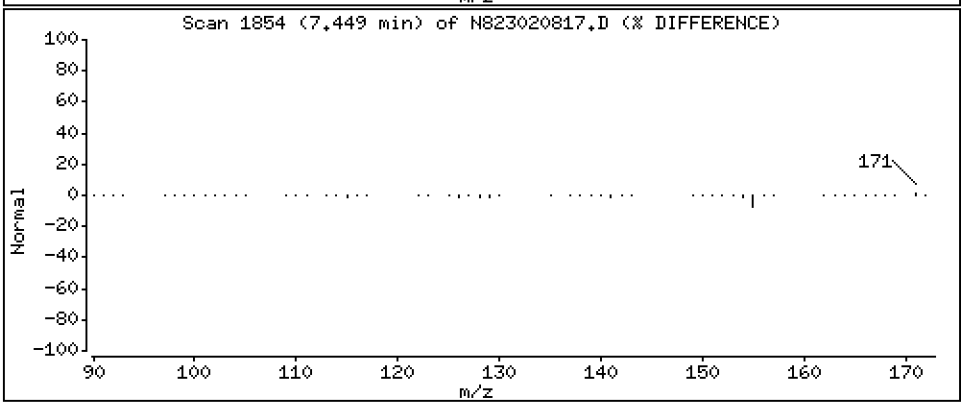












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

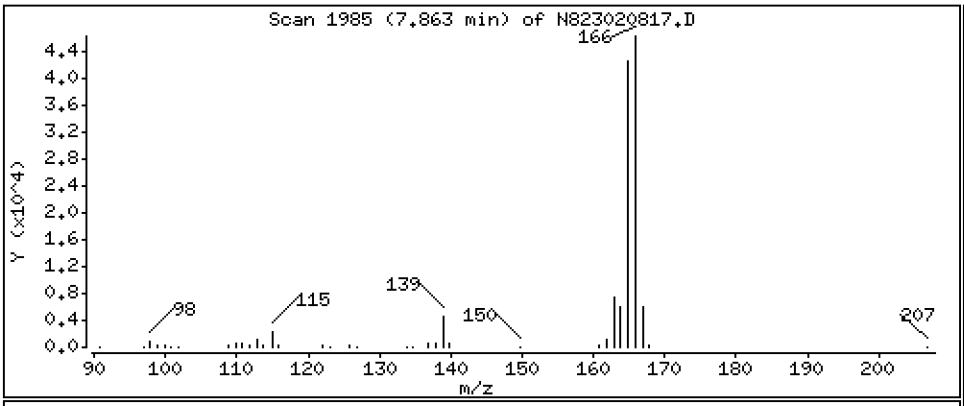
Operator: JZ

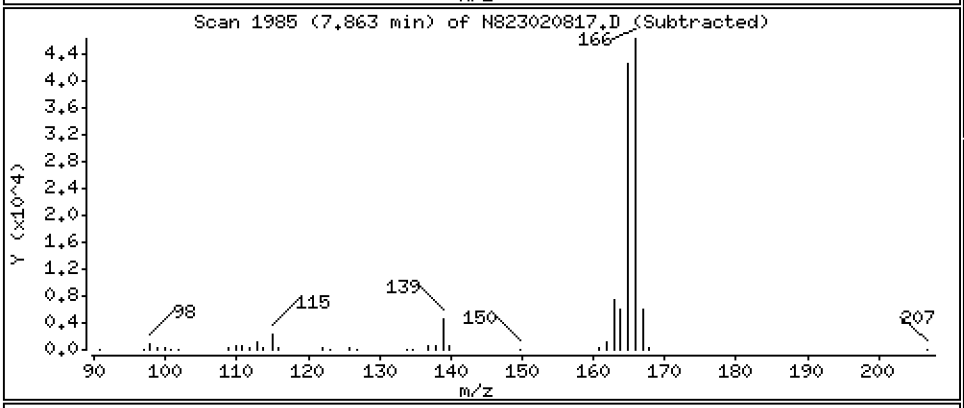
Column phase: Rxi-17sil

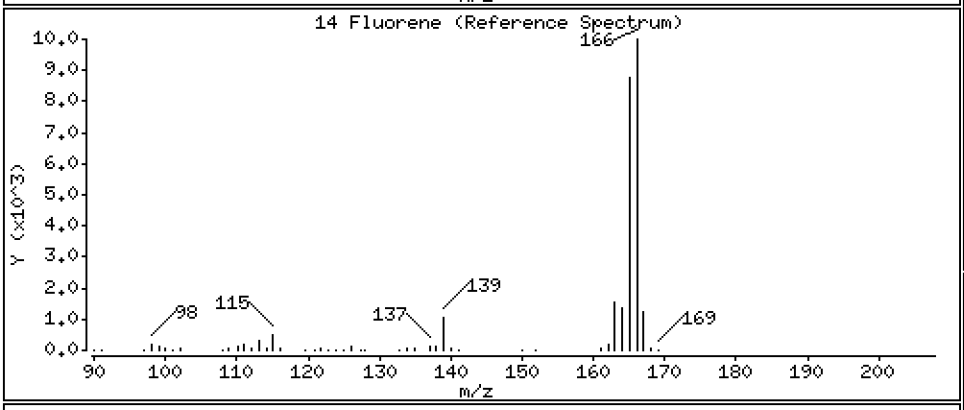
Column diameter: 0.25

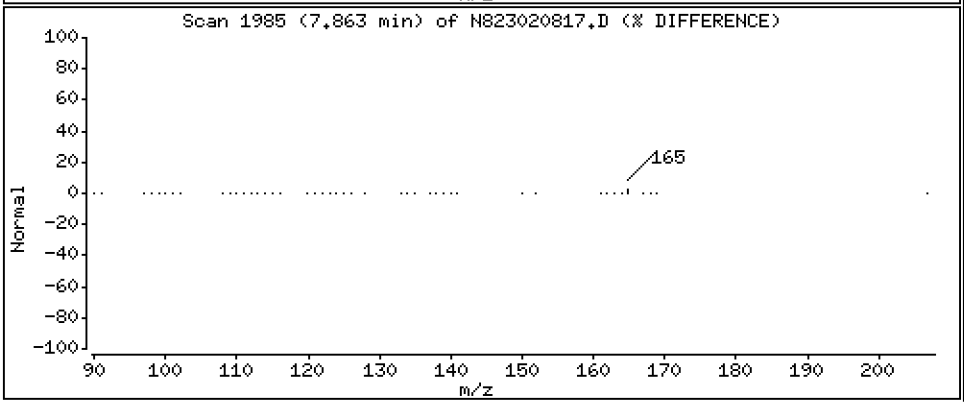
14 Fluorene

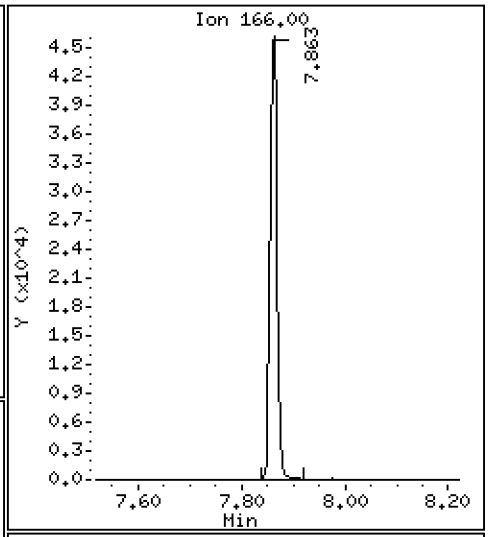
Concentration: 2.660 ug/mL

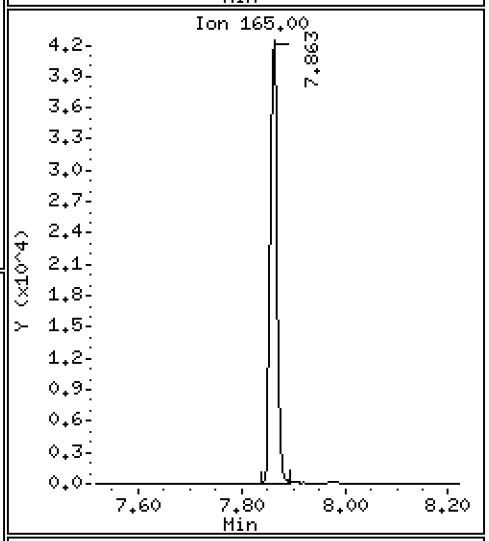


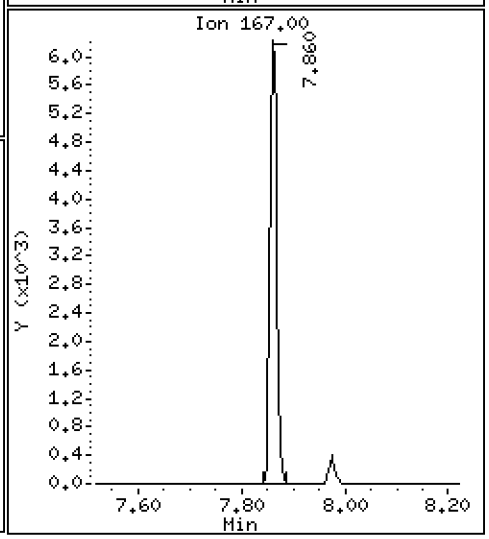












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020817.D

Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

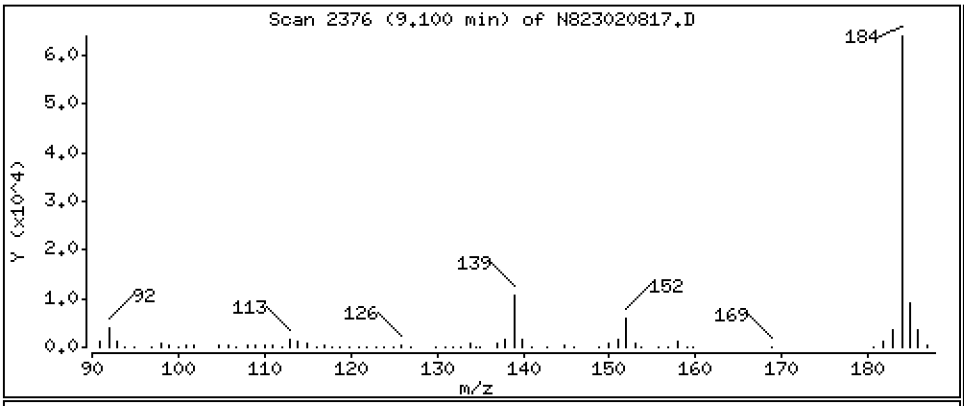
Operator: JZ

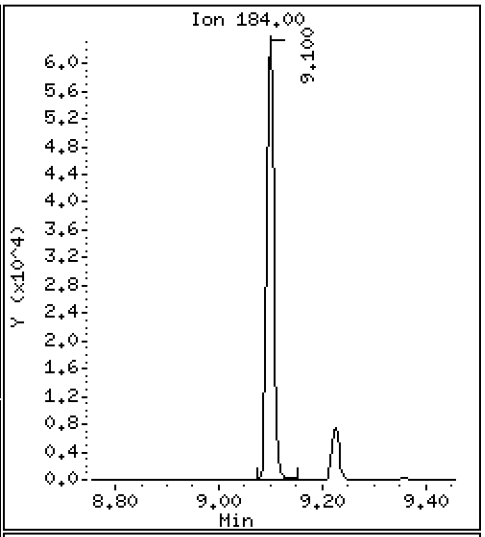
Column phase: Rxi-17sil

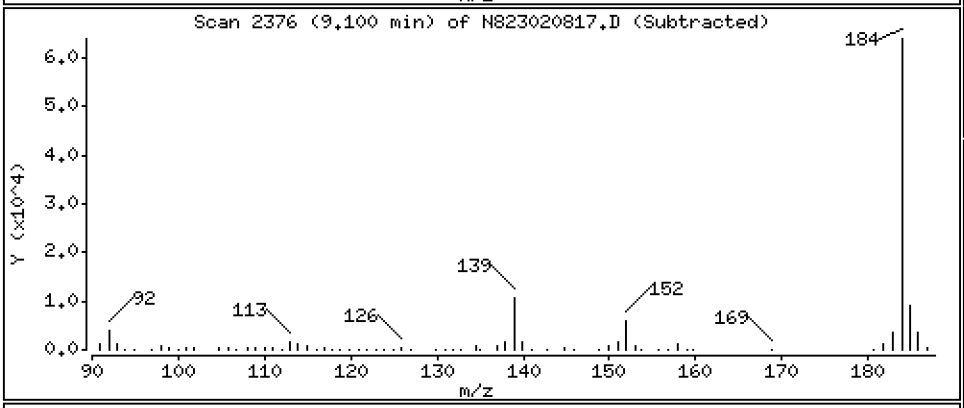
Column diameter: 0.25

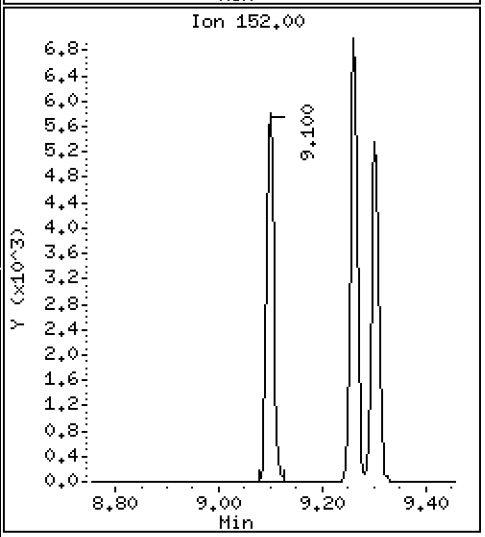
18 Dibenzothiophene

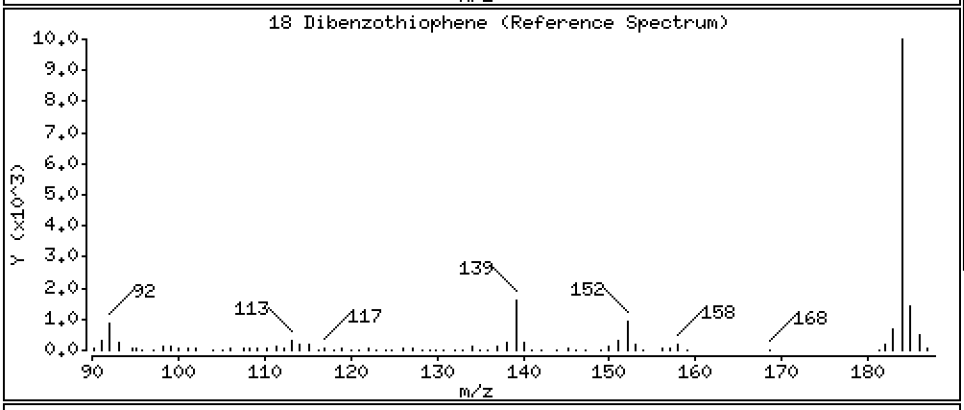
Concentration: 2.605 ug/mL

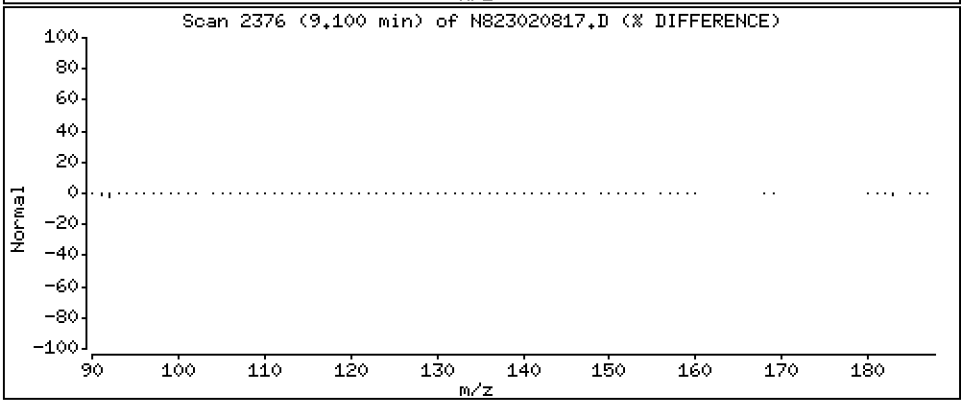












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020817.D

Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

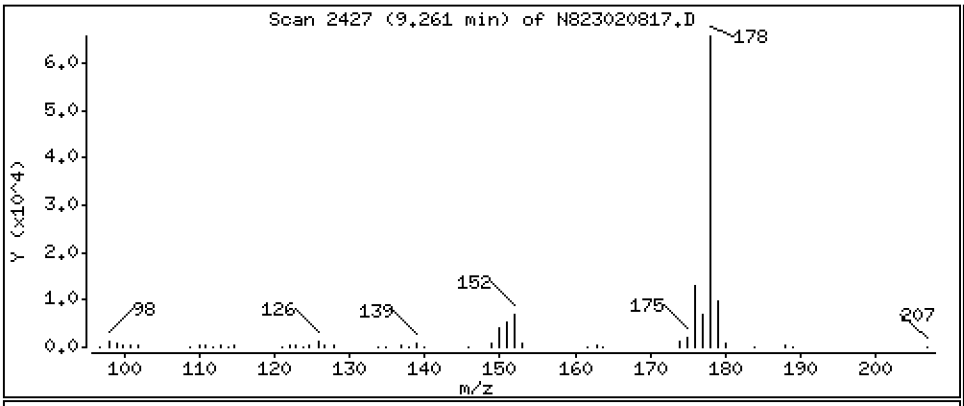
Operator: JZ

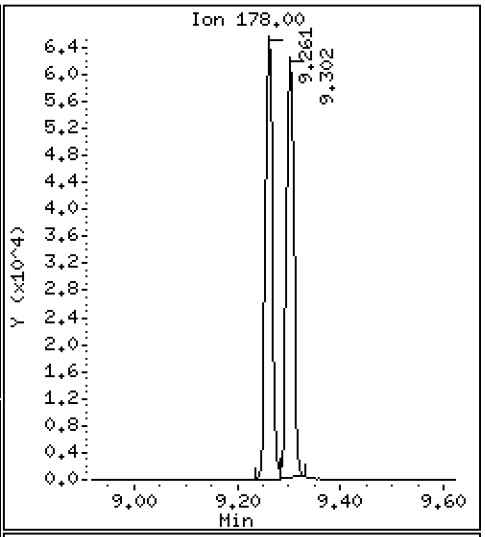
Column phase: Rxi-17sil

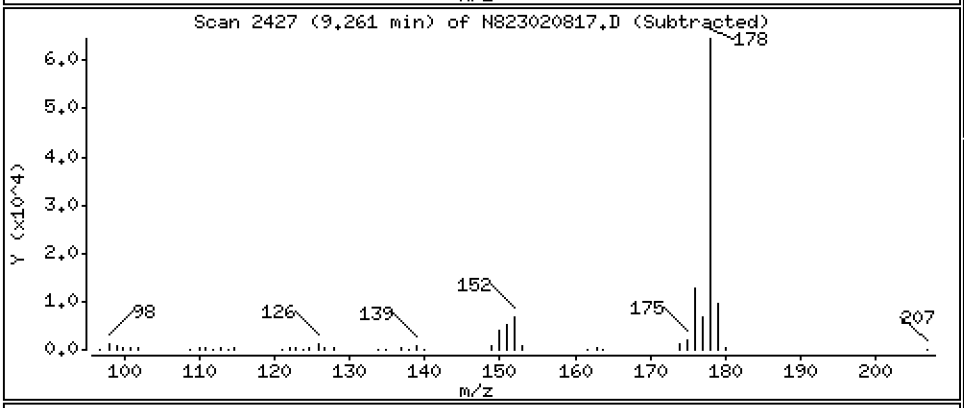
Column diameter: 0.25

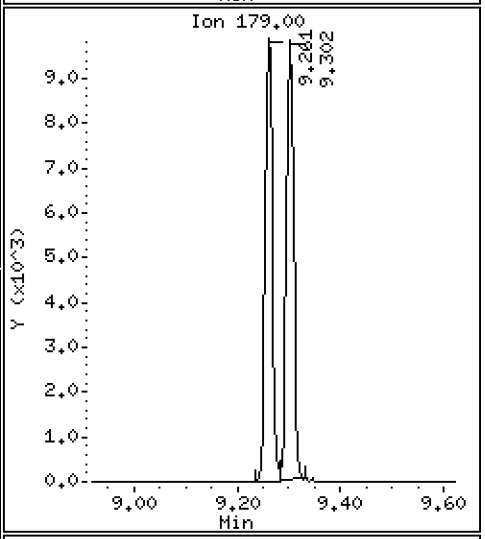
16 Phenanthrene

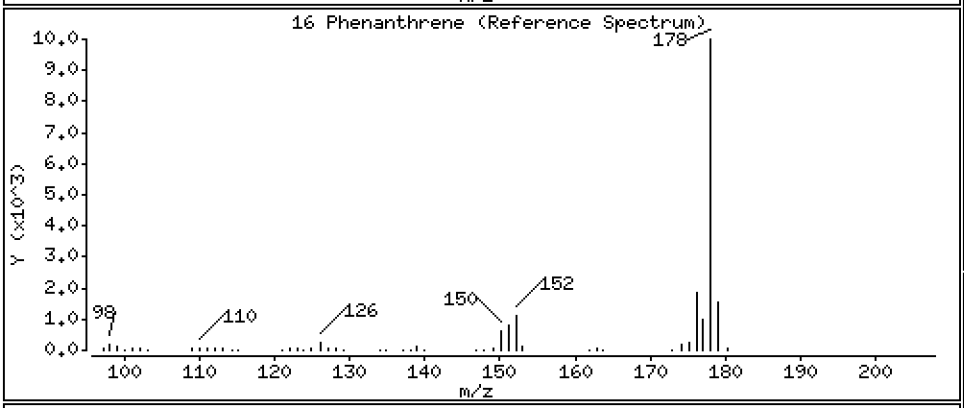
Concentration: 2.493 ug/mL

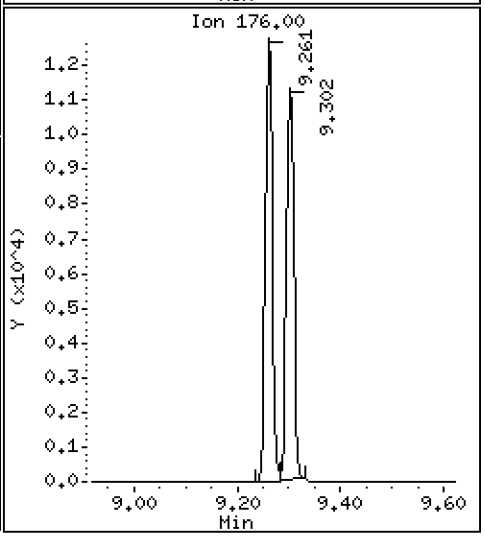


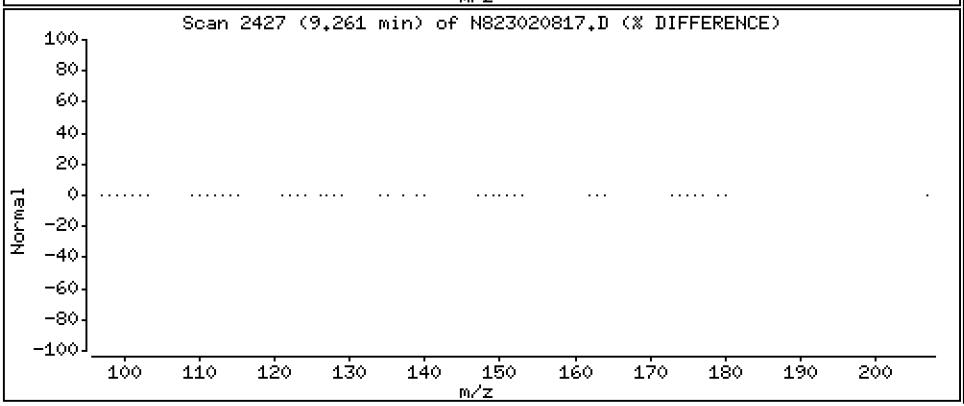












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020817.D

Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

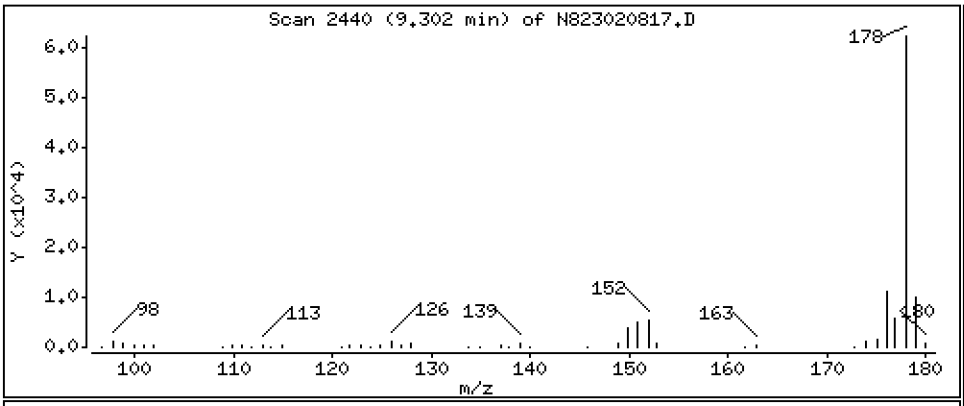
Operator: JZ

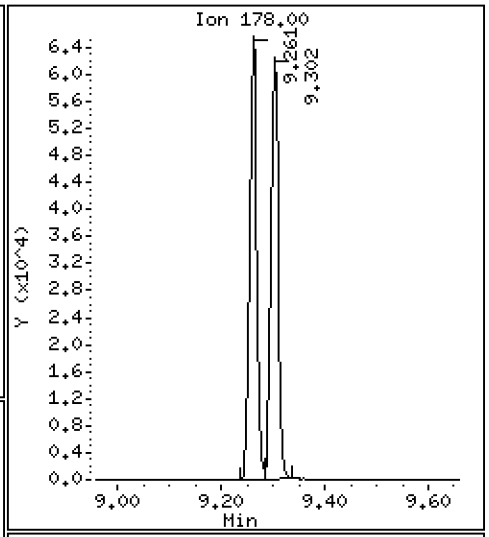
Column phase: Rxi-17sil

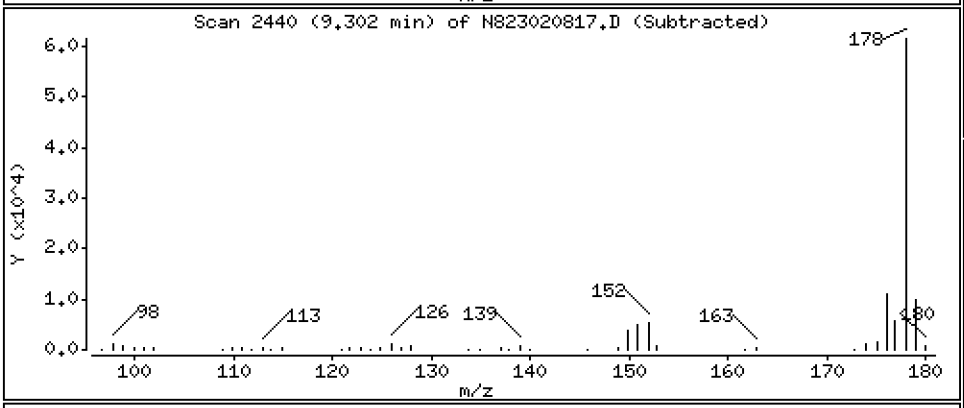
Column diameter: 0.25

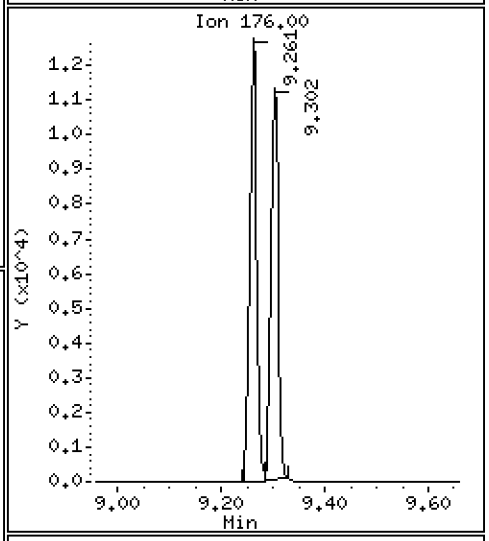
17 Anthracene

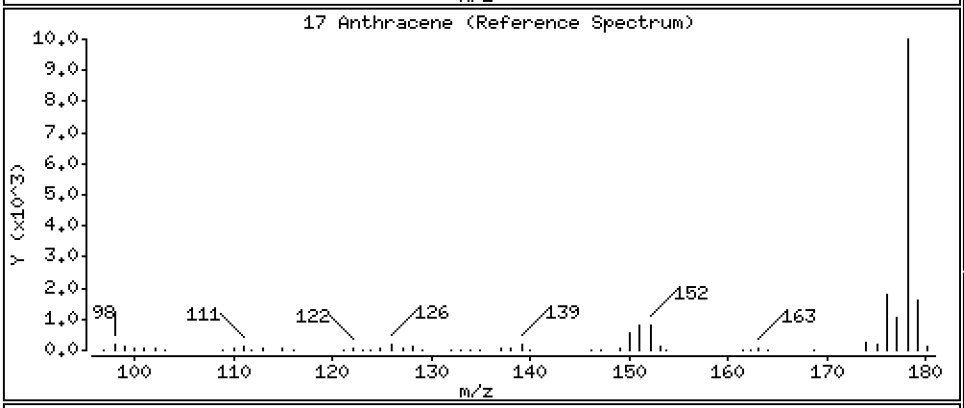
Concentration: 2.637 ug/mL

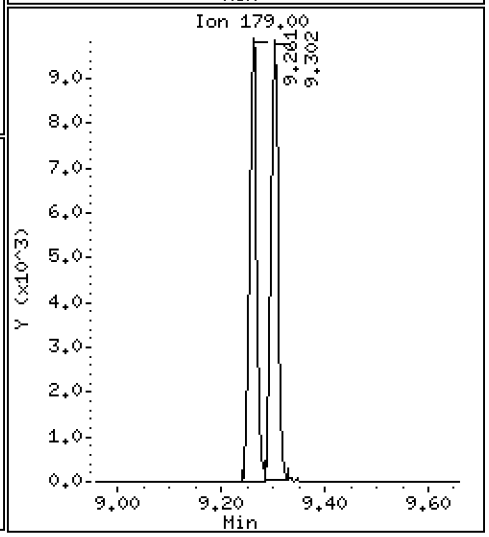


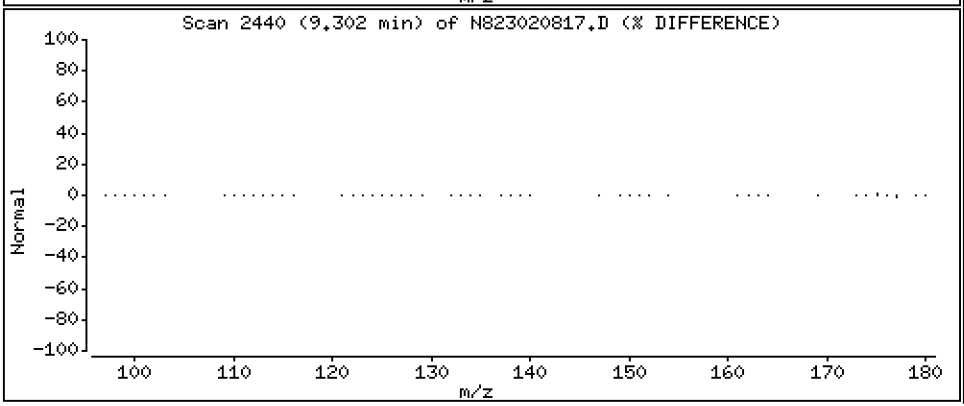












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

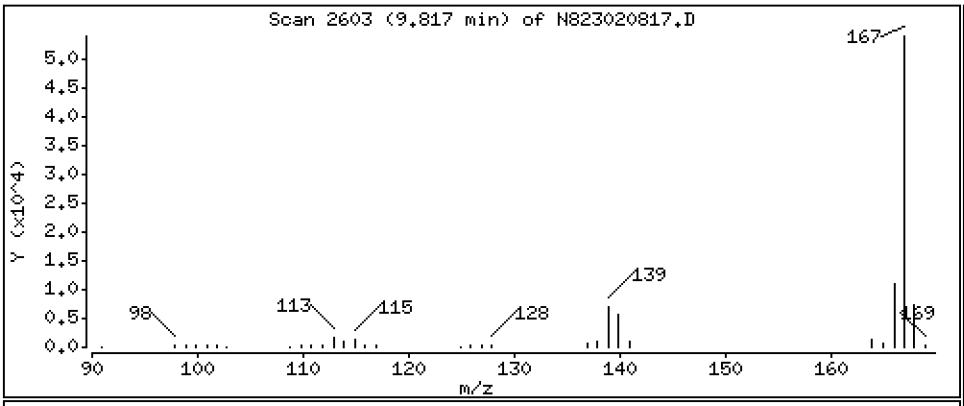
Operator: JZ

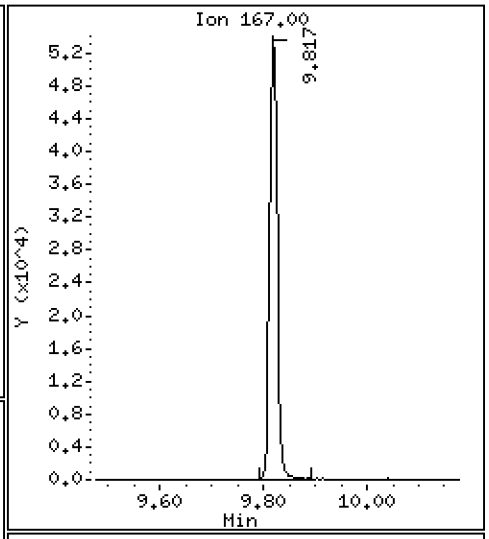
Column phase: Rxi-17sil

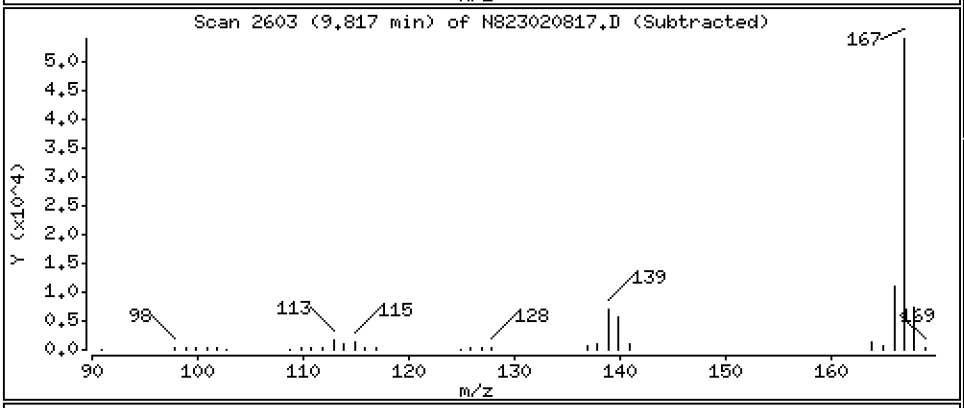
Column diameter: 0.25

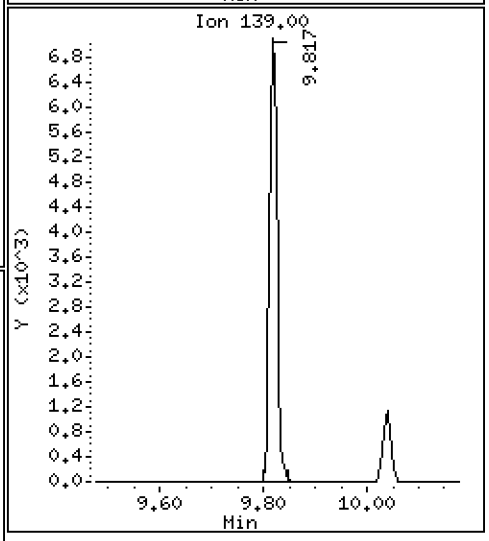
19 Carbazole

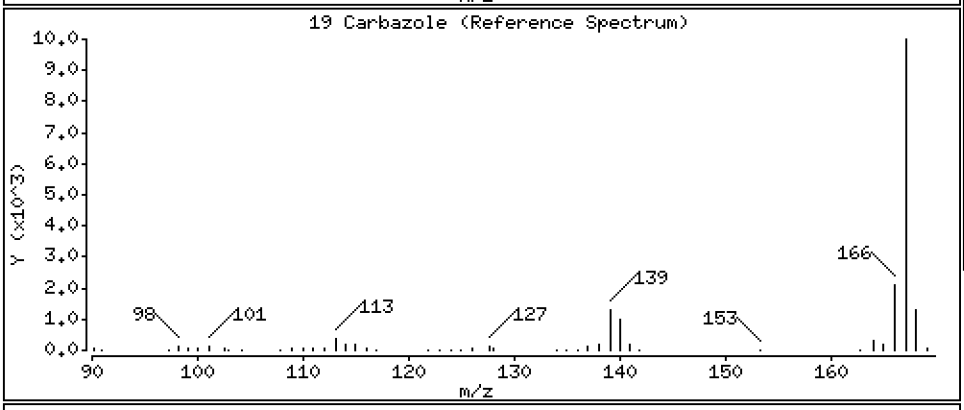
Concentration: 2.587 ug/mL

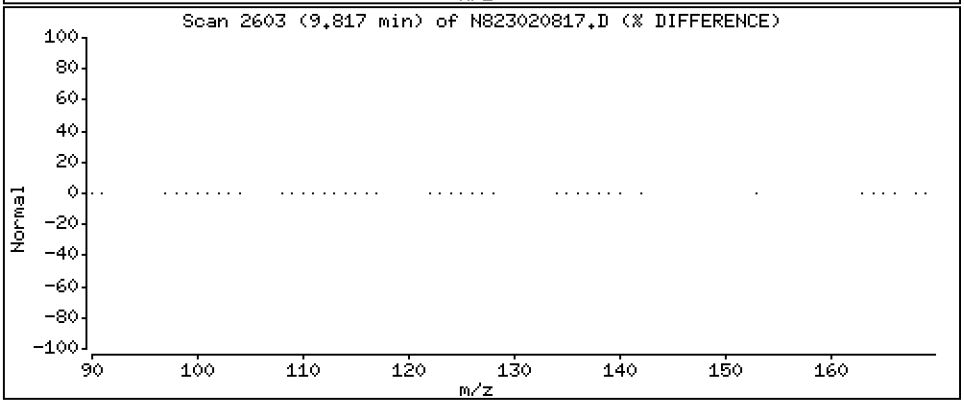












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

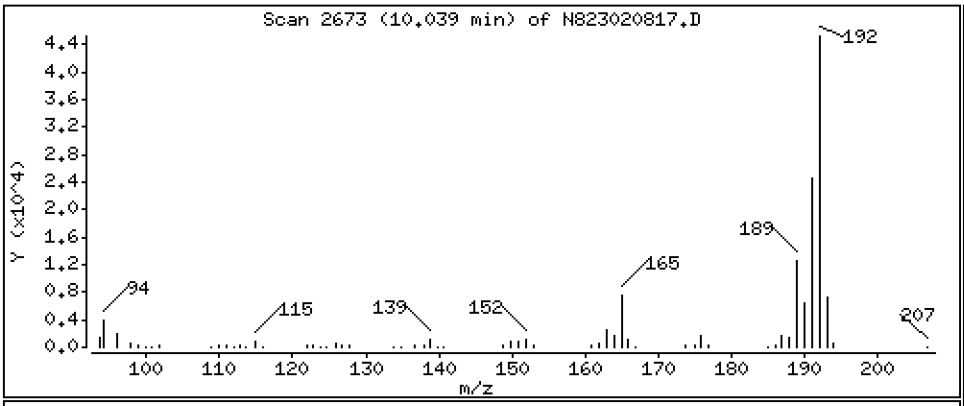
Operator: JZ

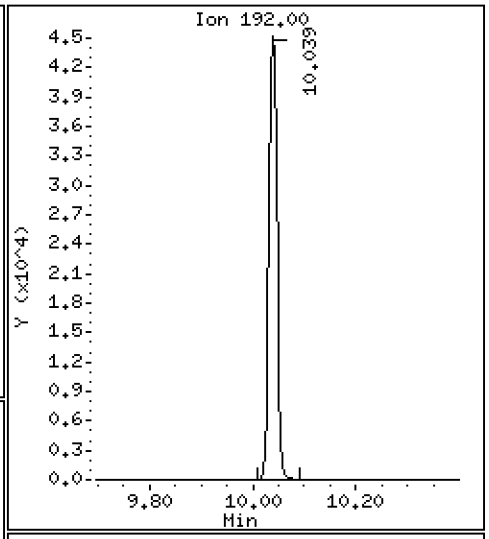
Column phase: Rxi-17sil

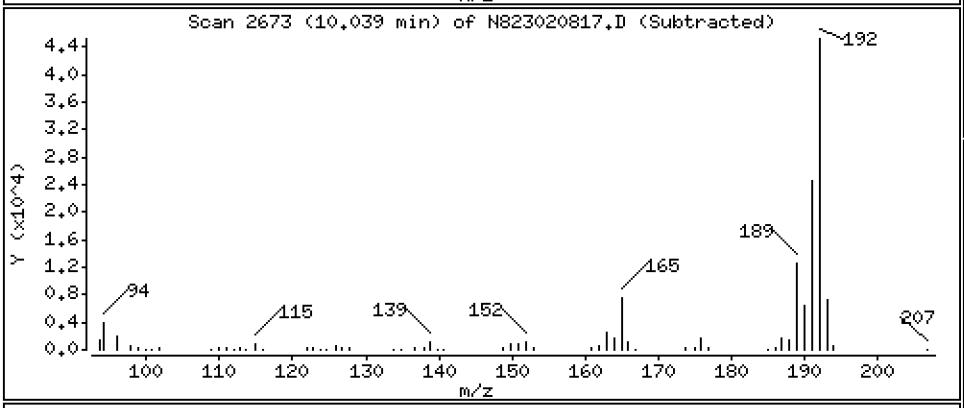
Column diameter: 0.25

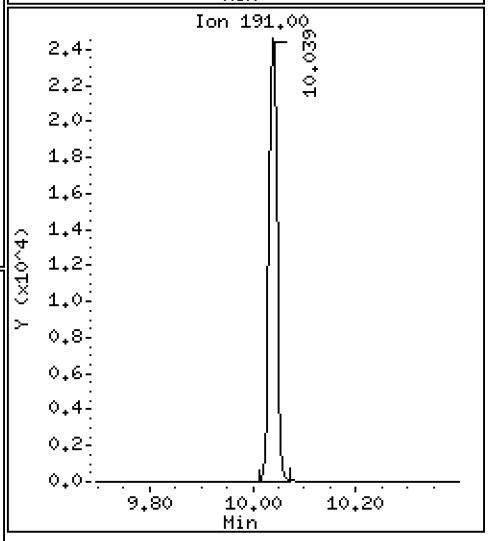
20 1-Methylphenanthrene

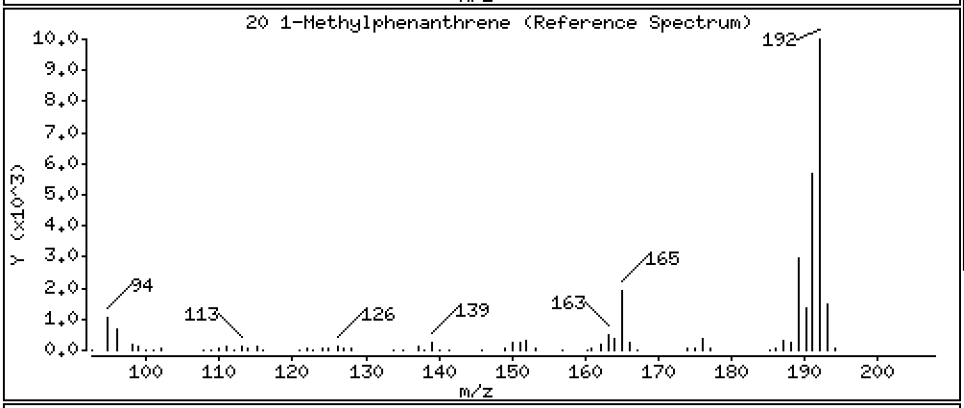
Concentration: 2.660 ug/mL

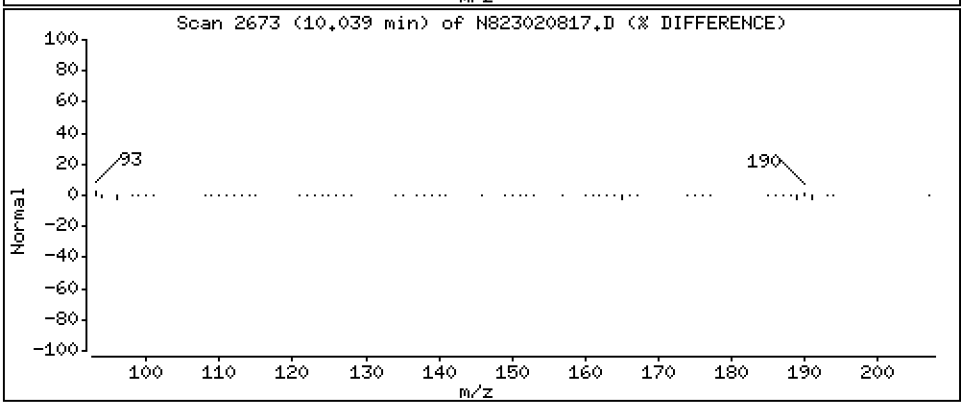












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

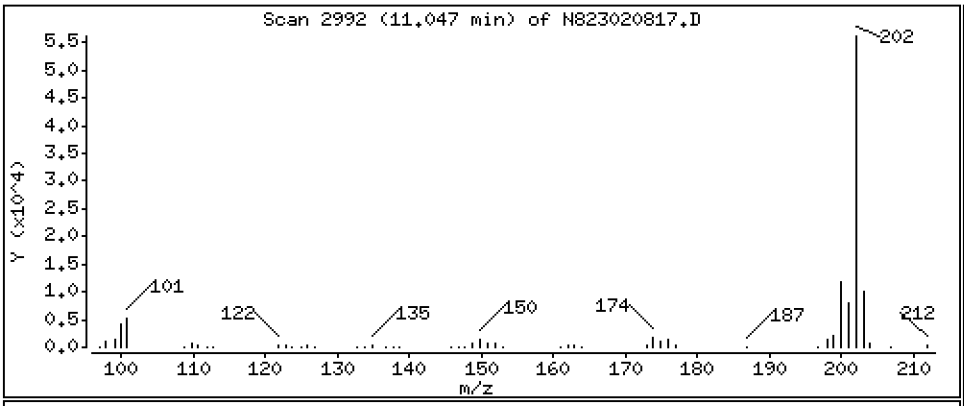
Operator: JZ

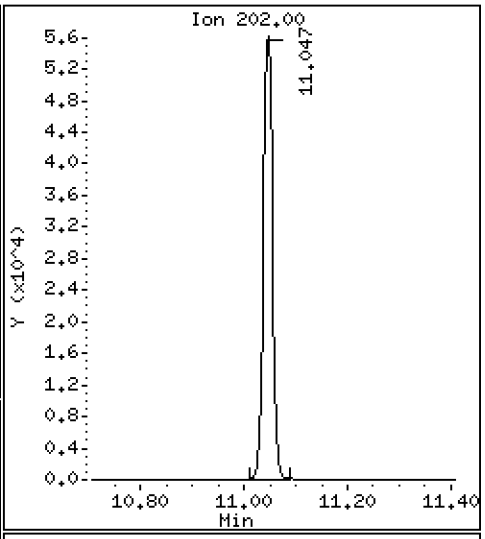
Column phase: Rxi-17sil

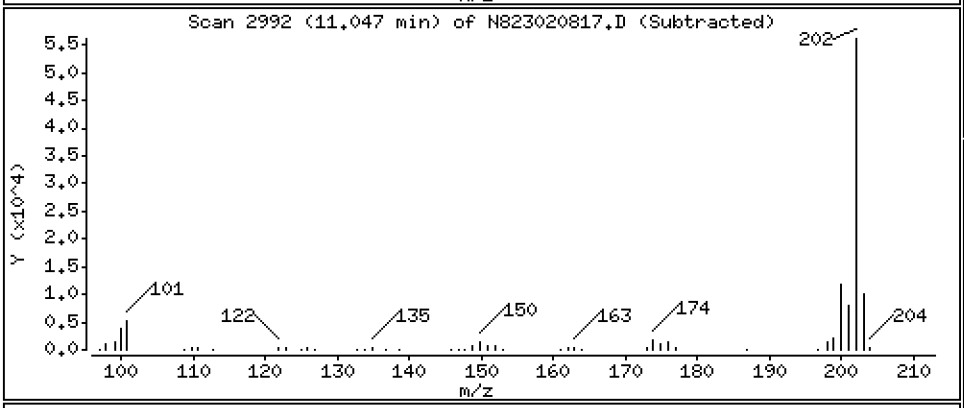
Column diameter: 0.25

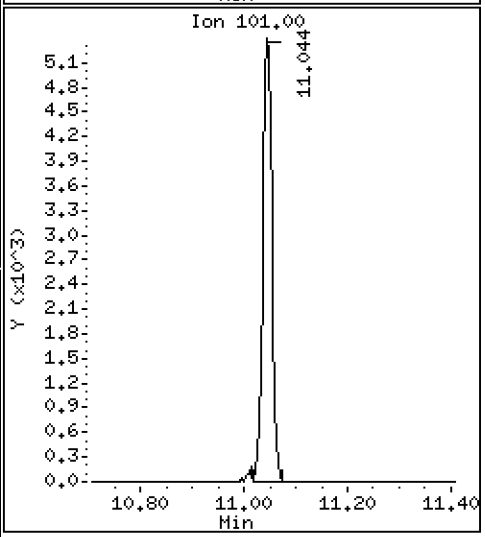
22 Fluoranthene

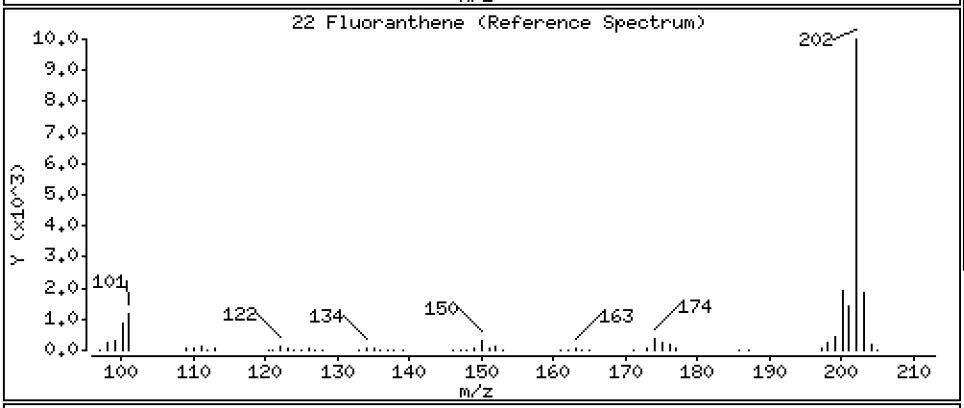
Concentration: 2.581 ug/mL

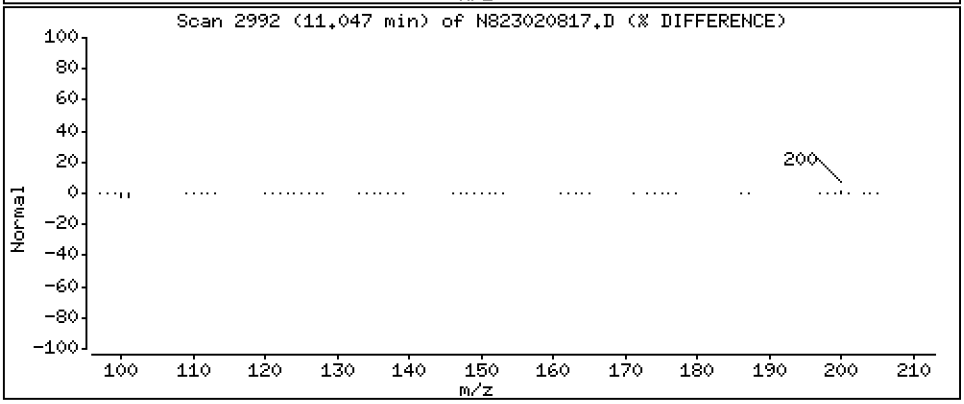












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

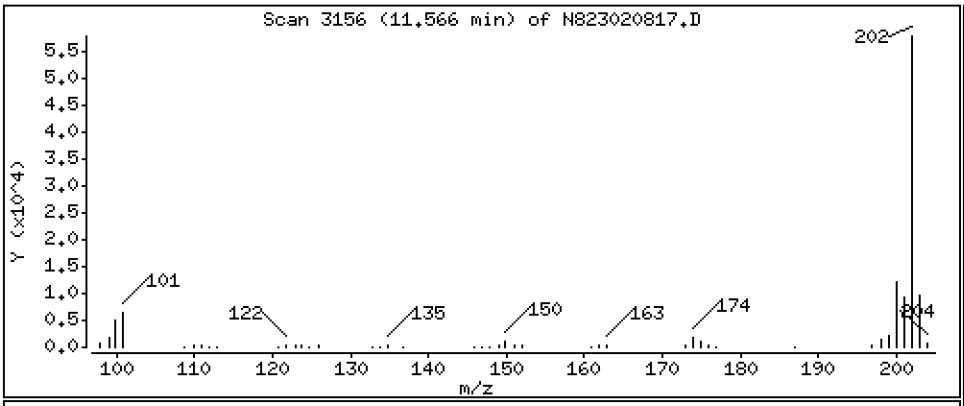
Operator: JZ

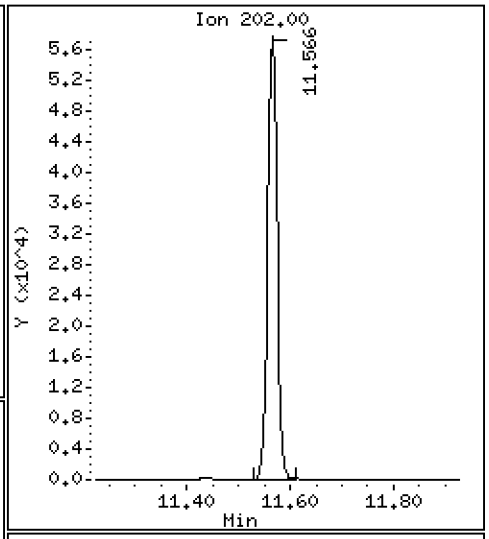
Column phase: Rxi-17sil

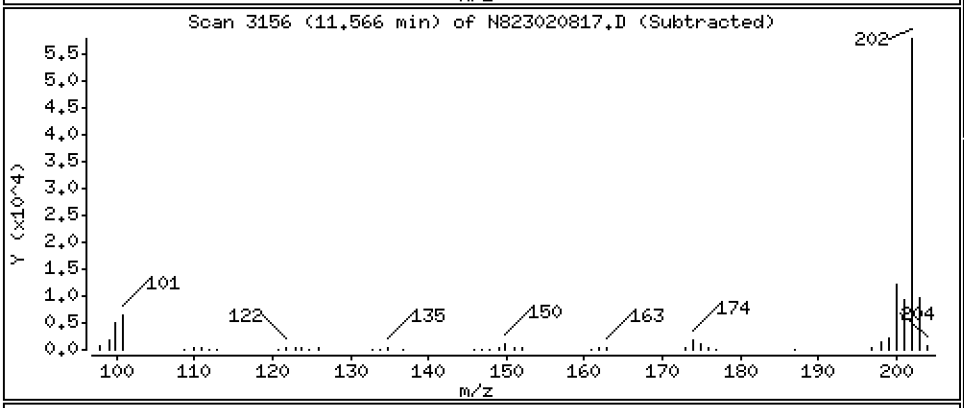
Column diameter: 0.25

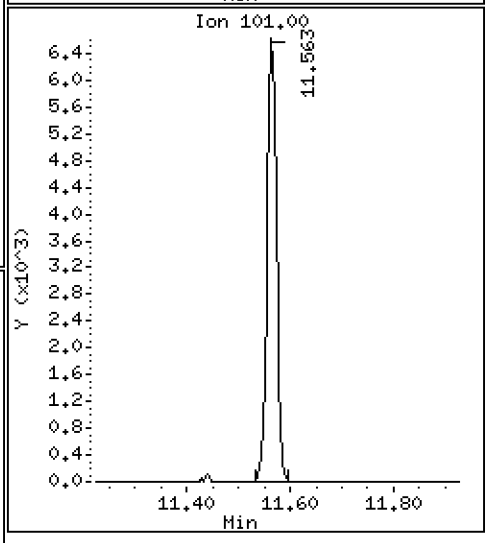
23 Pyrene

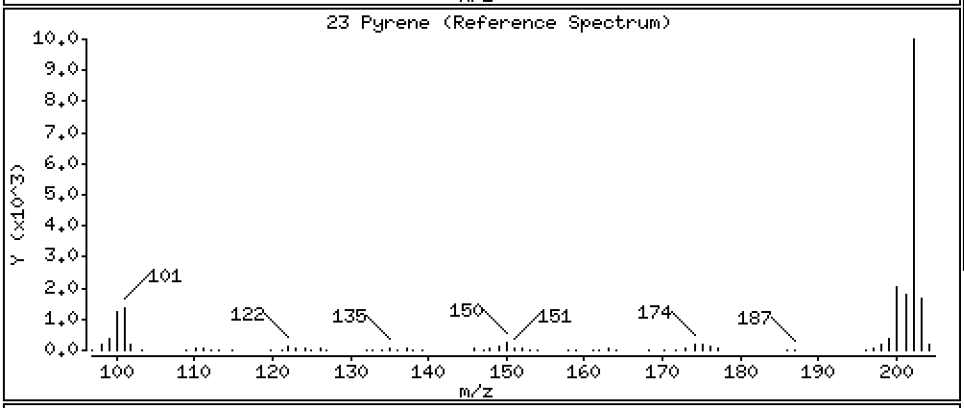
Concentration: 2.769 ug/mL

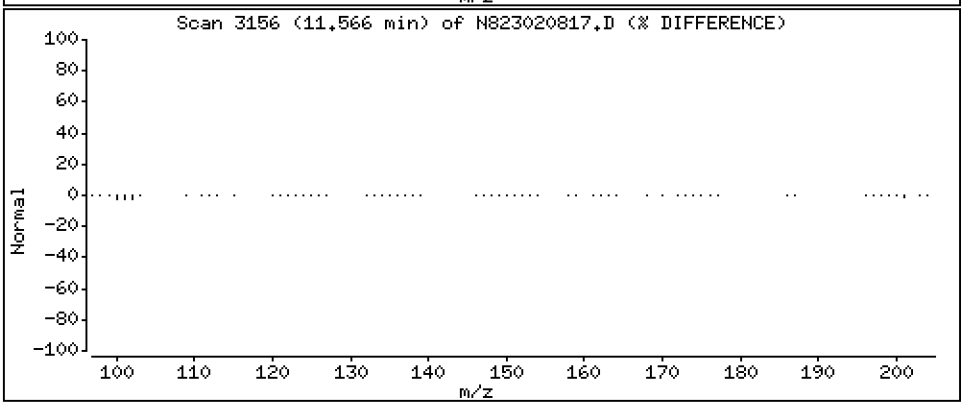












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020817.D

Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

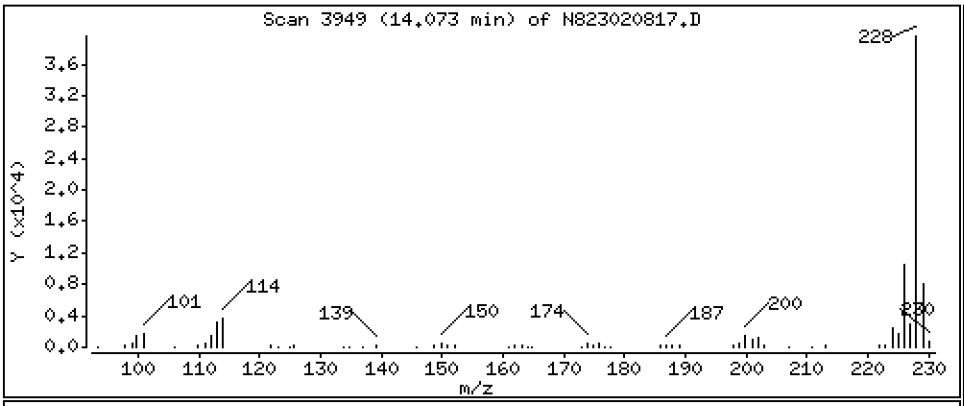
Operator: JZ

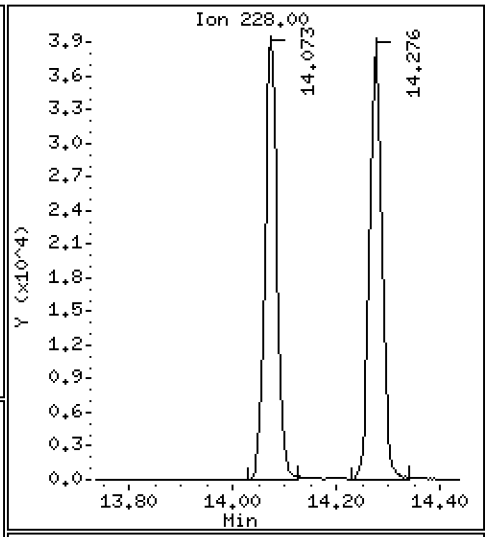
Column phase: Rxi-17sil

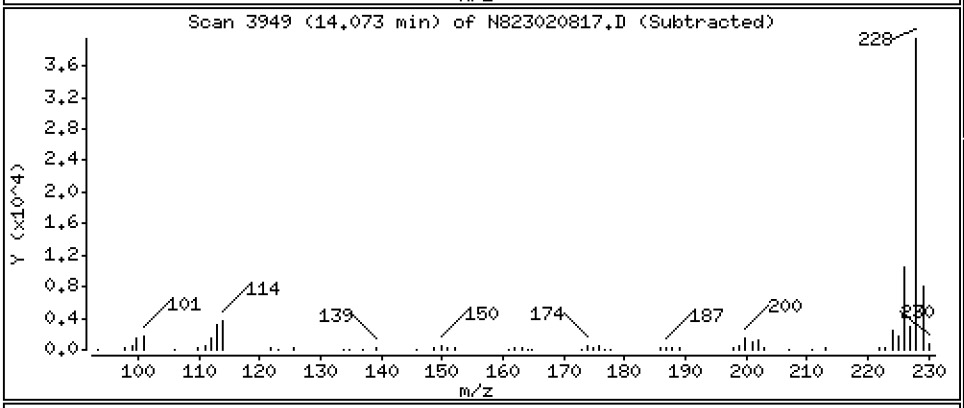
Column diameter: 0.25

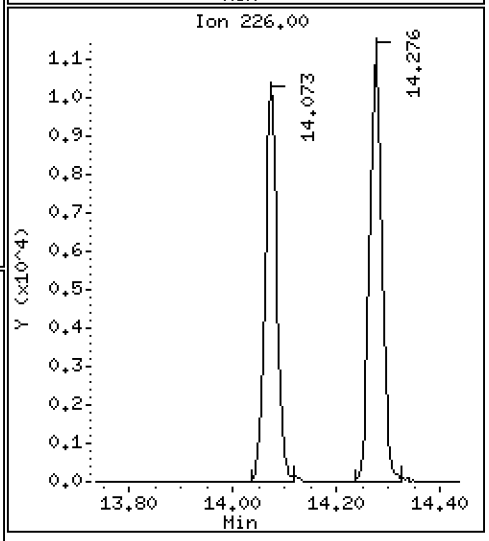
24 Benzo(a)anthracene

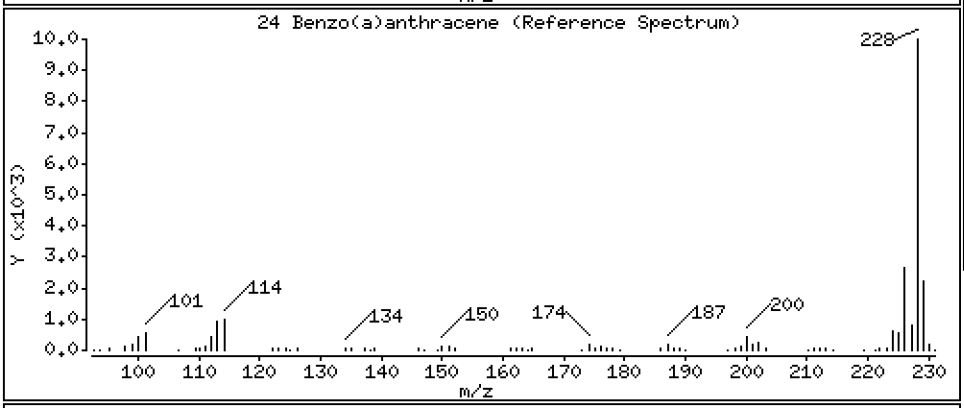
Concentration: 2.713 ug/mL

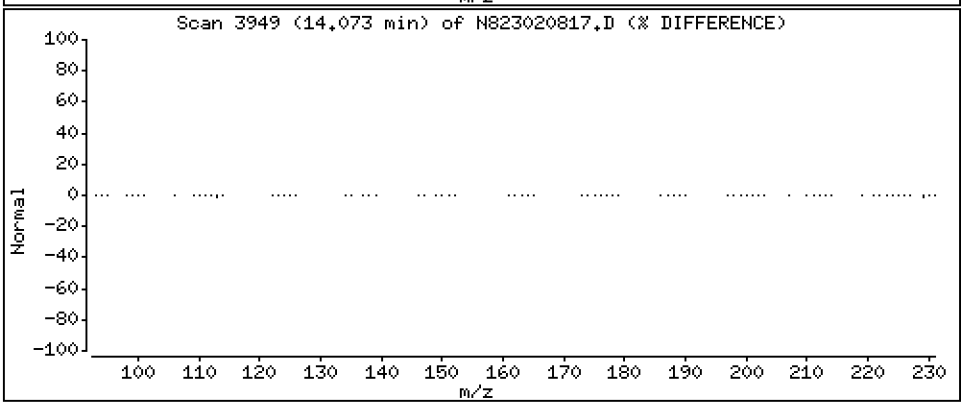












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020817.D

Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

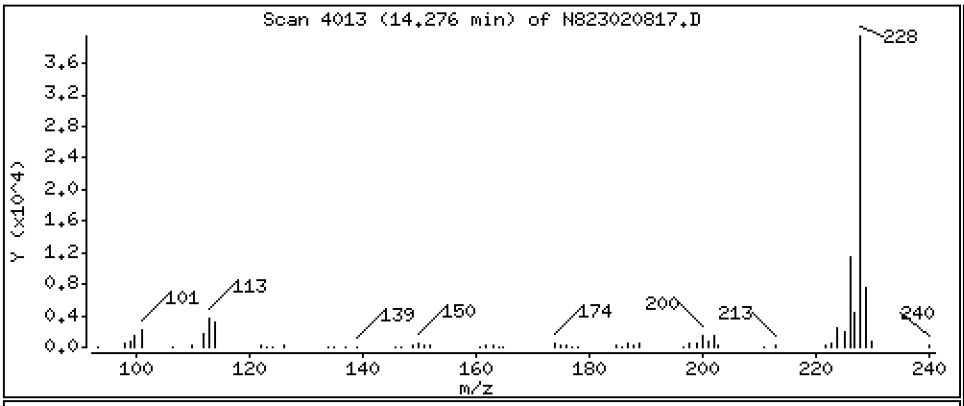
Operator: JZ

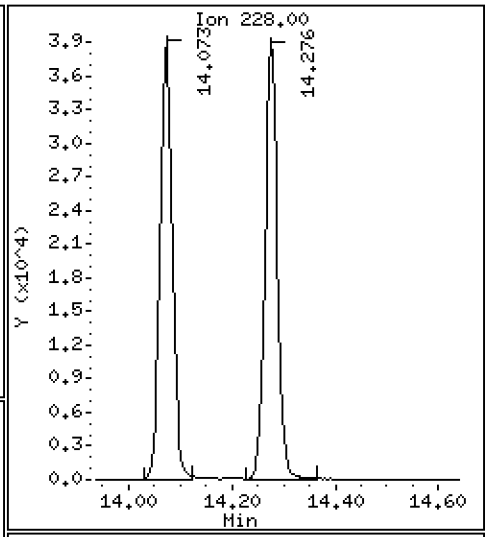
Column phase: Rxi-17sil

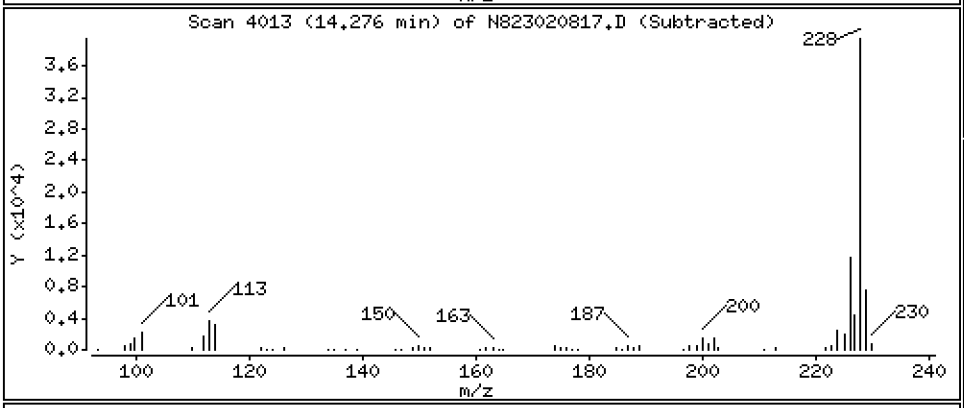
Column diameter: 0.25

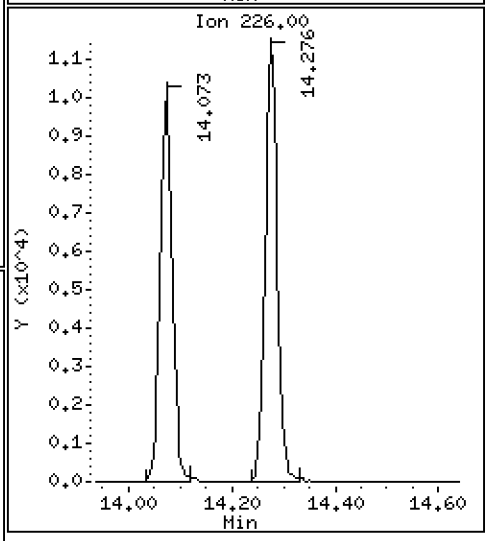
27 Chrysene

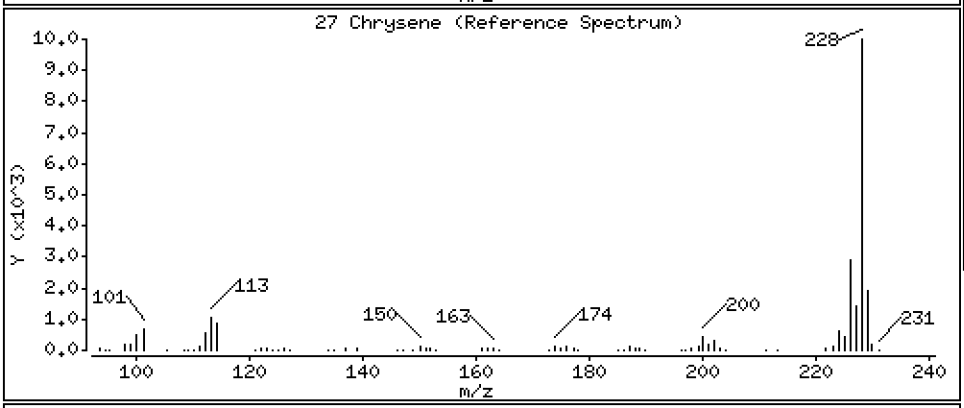
Concentration: 2.561 ug/mL

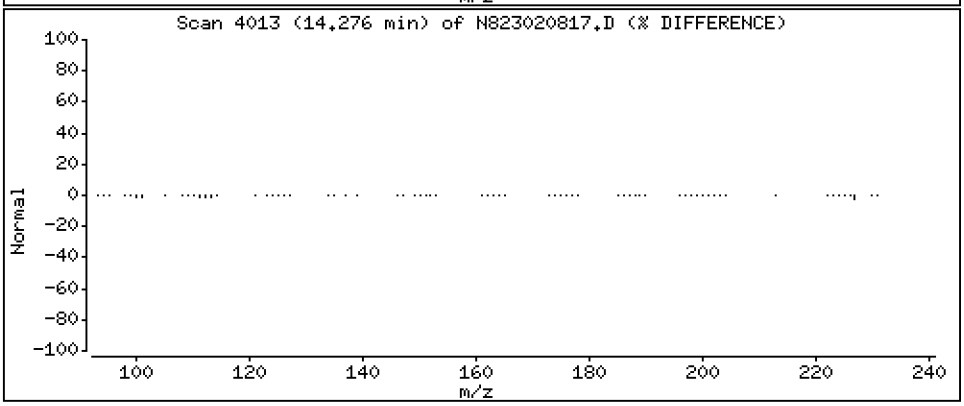












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020817.D

Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

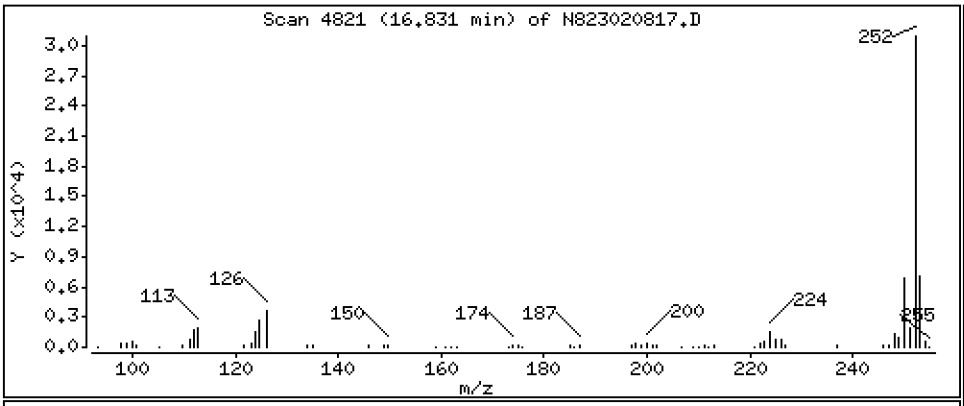
Operator: JZ

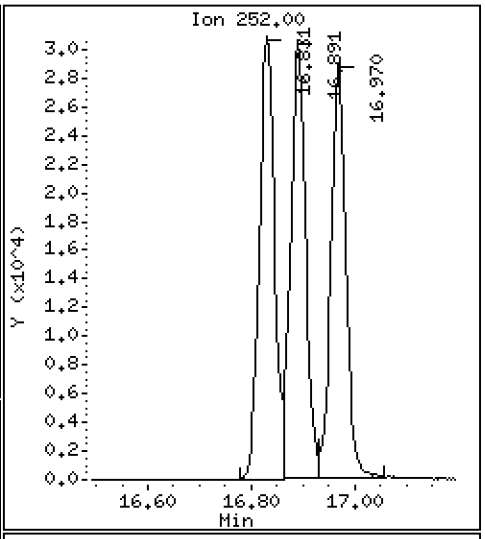
Column phase: Rxi-17sil

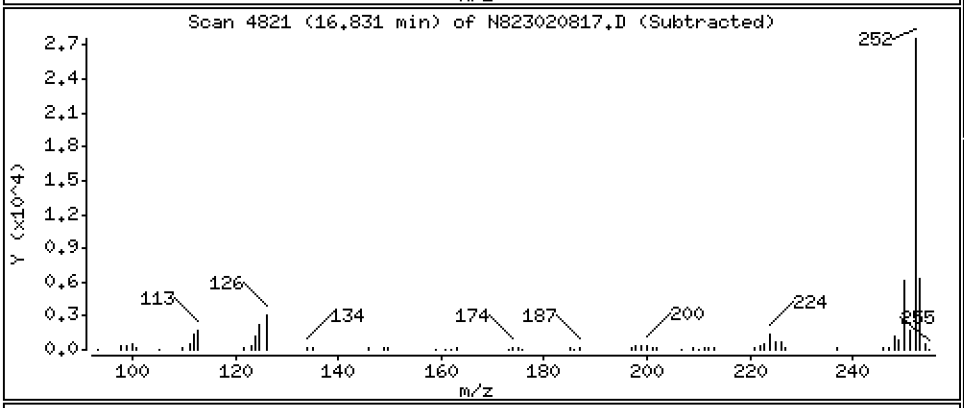
Column diameter: 0.25

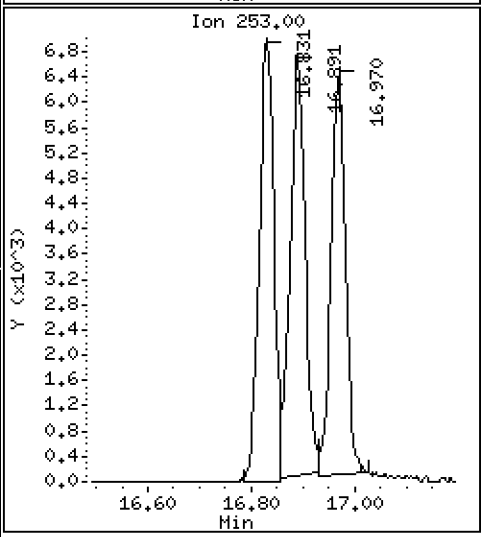
28 Benzo(b)fluoranthene

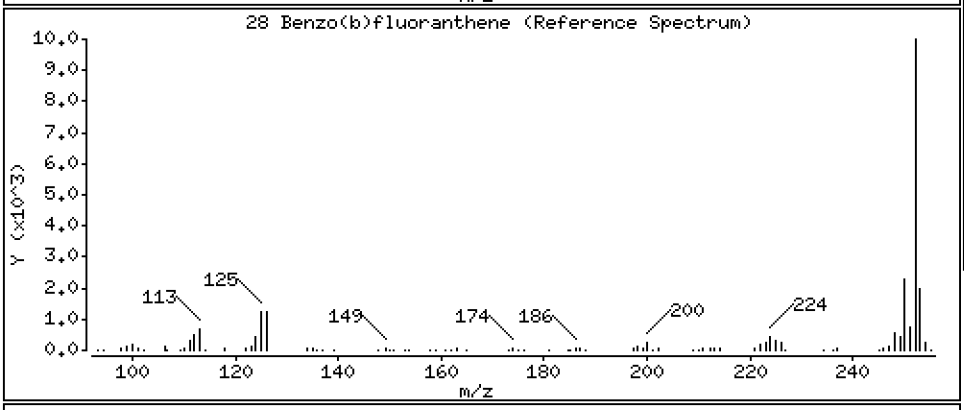
Concentration: 2.444 ug/mL

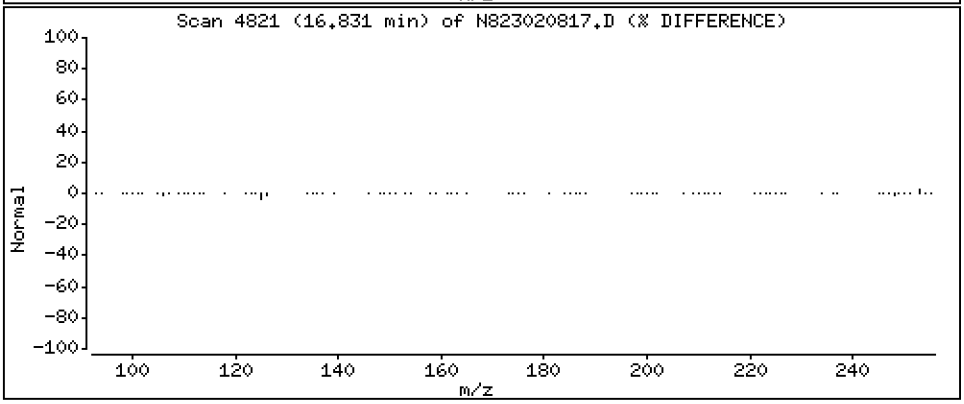












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020817.D

Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

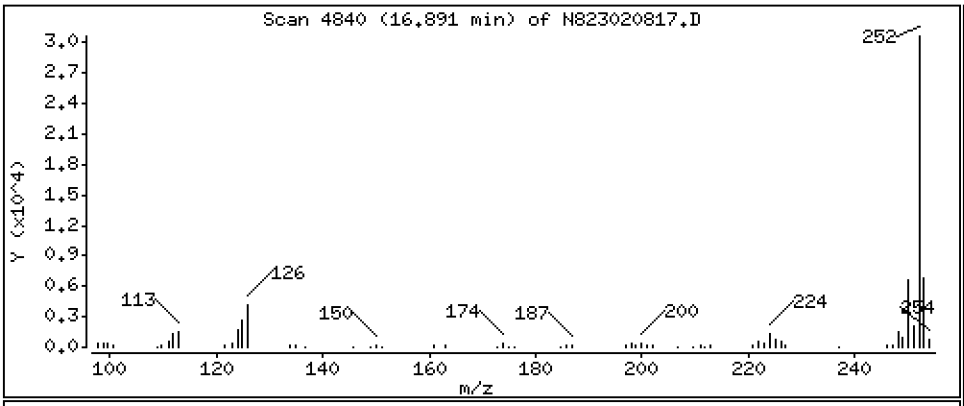
Operator: JZ

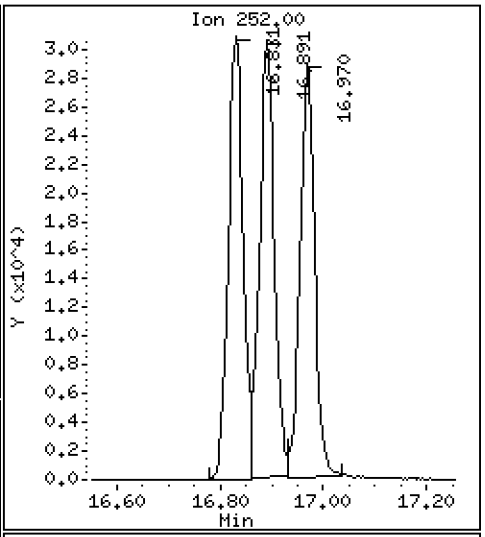
Column phase: Rxi-17sil

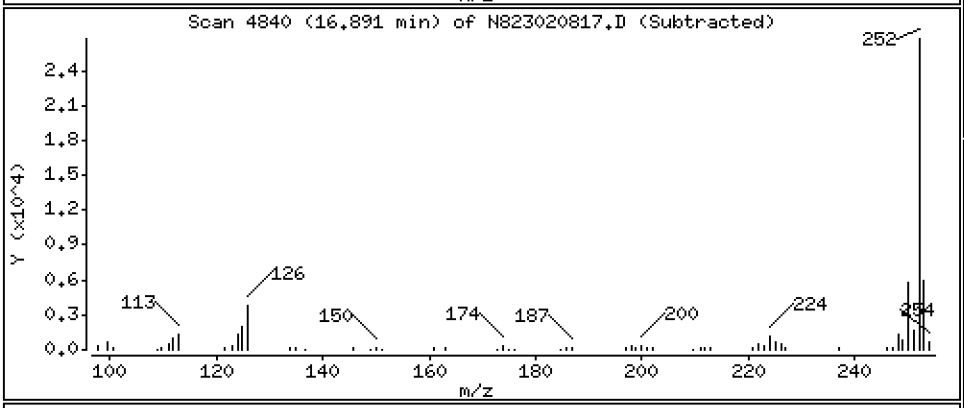
Column diameter: 0.25

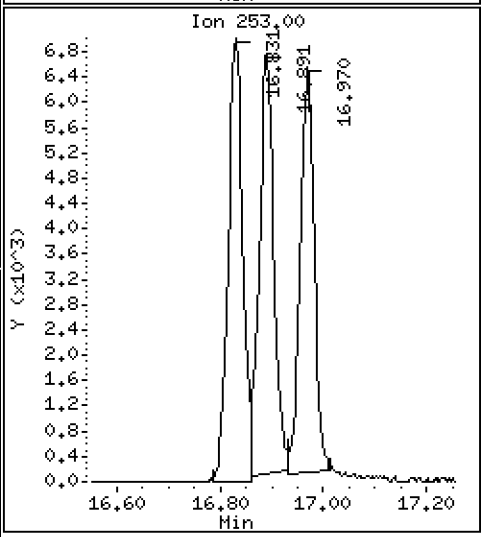
29 Benzo(k)fluoranthene

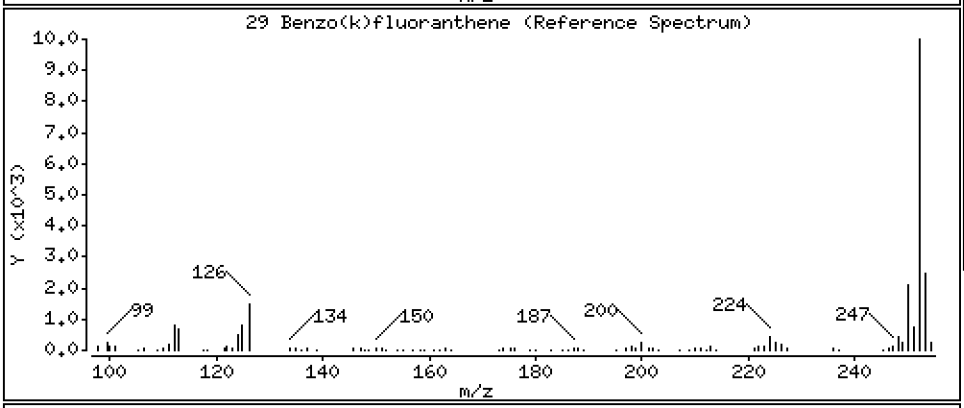
Concentration: 2.404 ug/mL

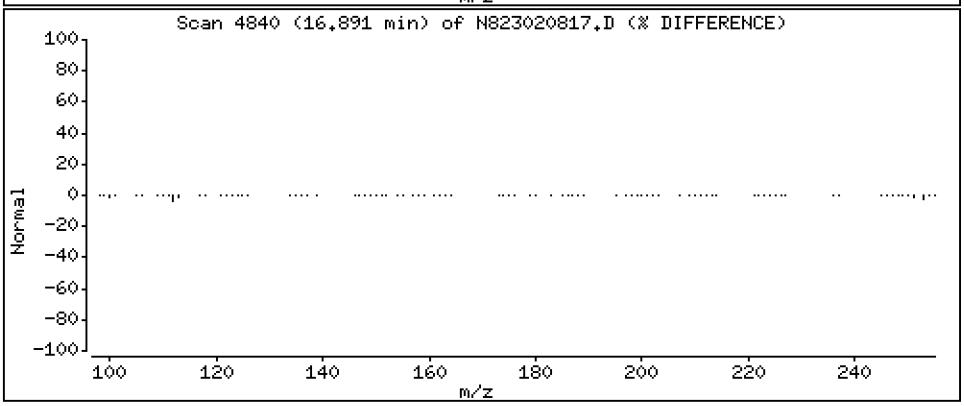












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

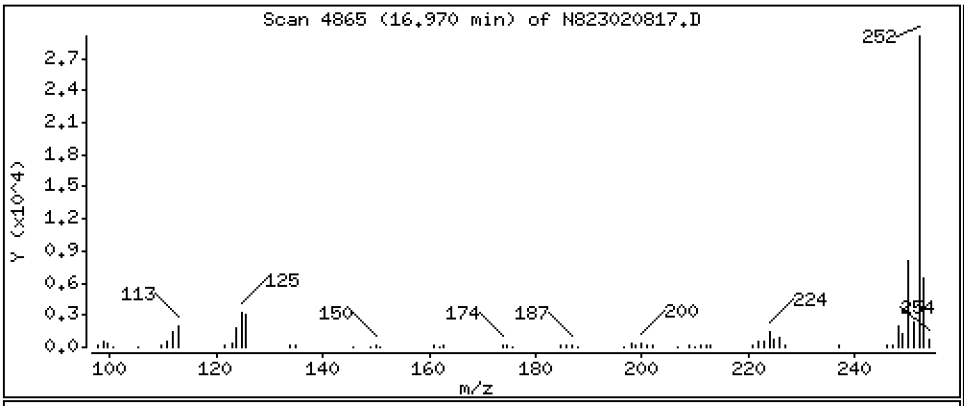
Operator: JZ

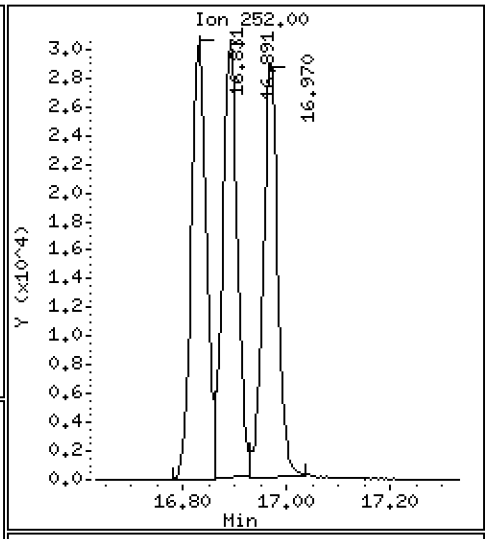
Column phase: Rxi-17sil

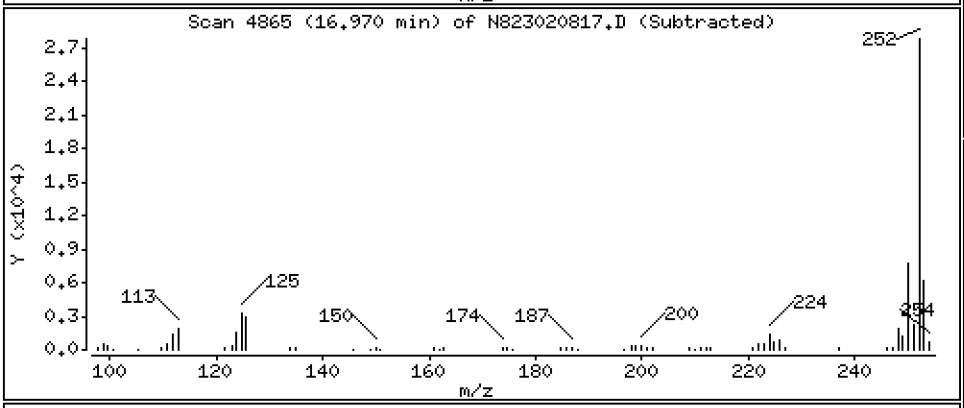
Column diameter: 0.25

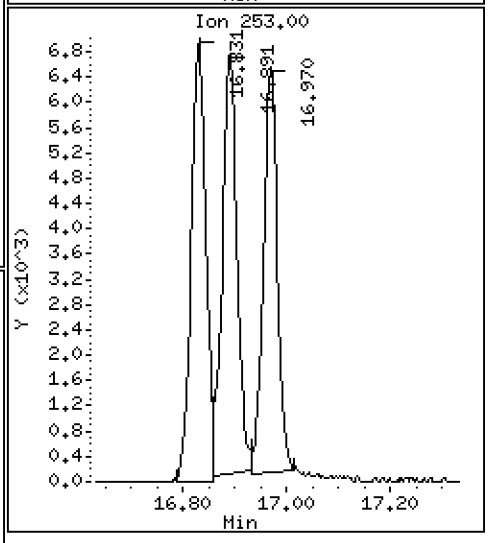
30 Benzo(j)fluoranthene

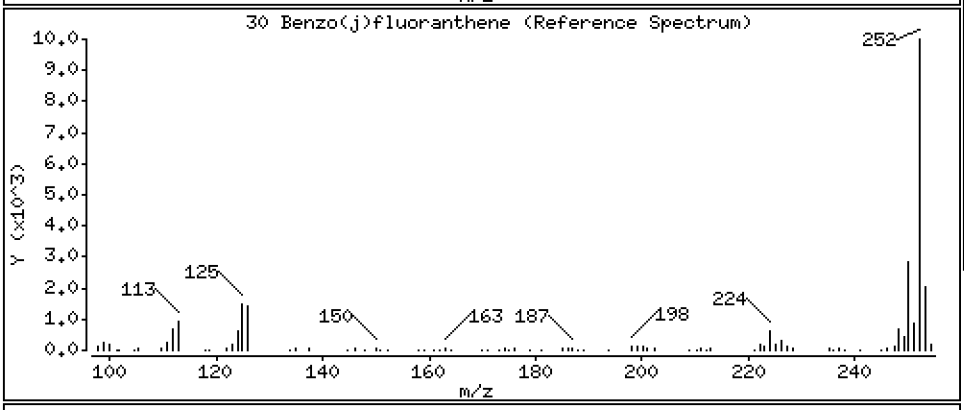
Concentration: 2.500 ug/mL

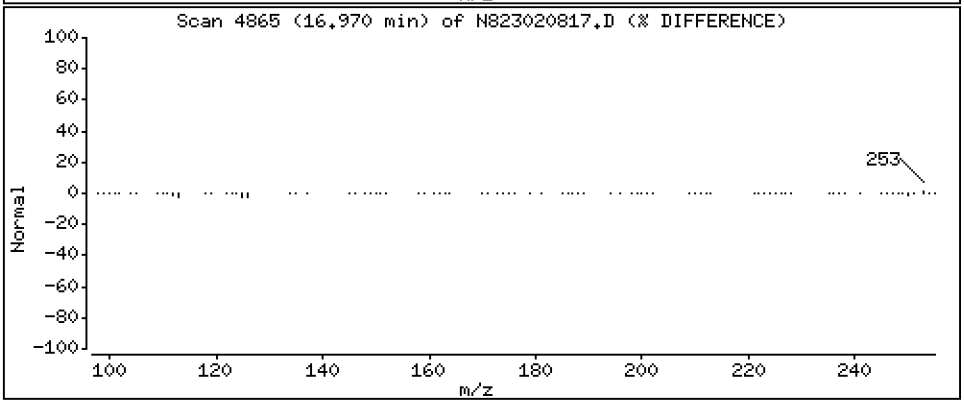












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

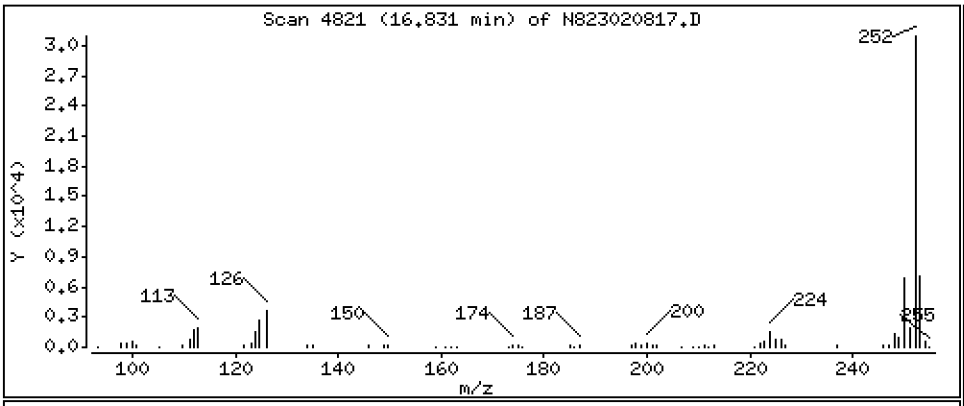
Operator: JZ

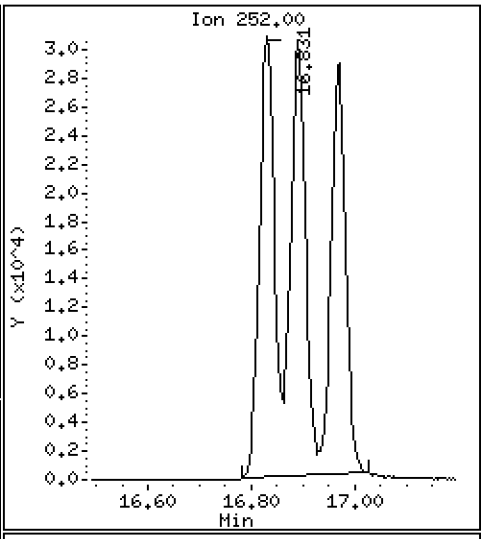
Column phase: Rxi-17sil

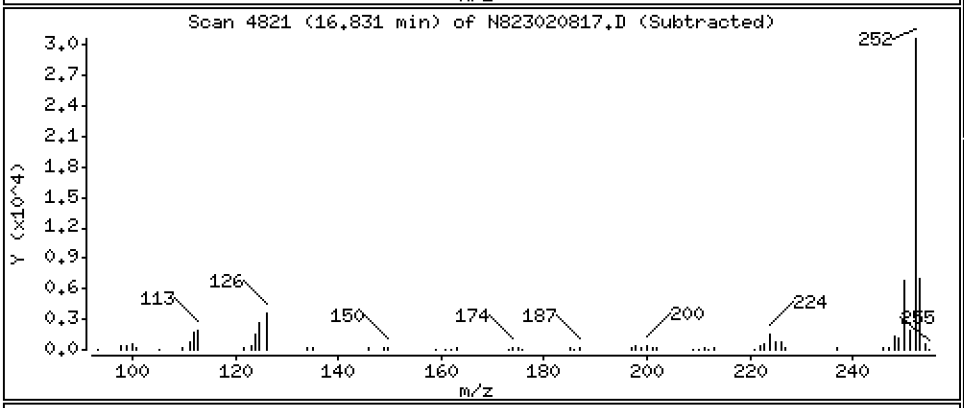
Column diameter: 0.25

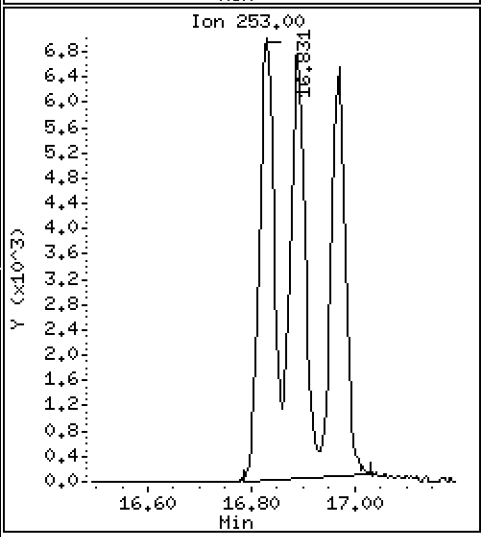
31 Total Benzofluoranthenes

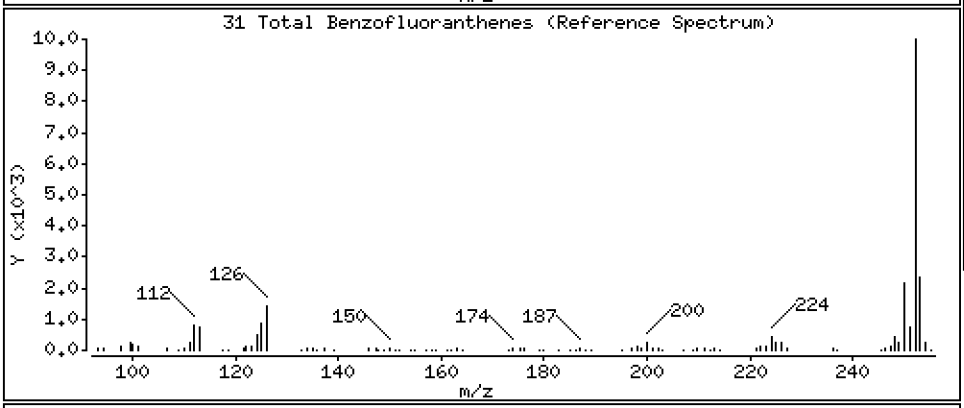
Concentration: 7.226 ug/mL

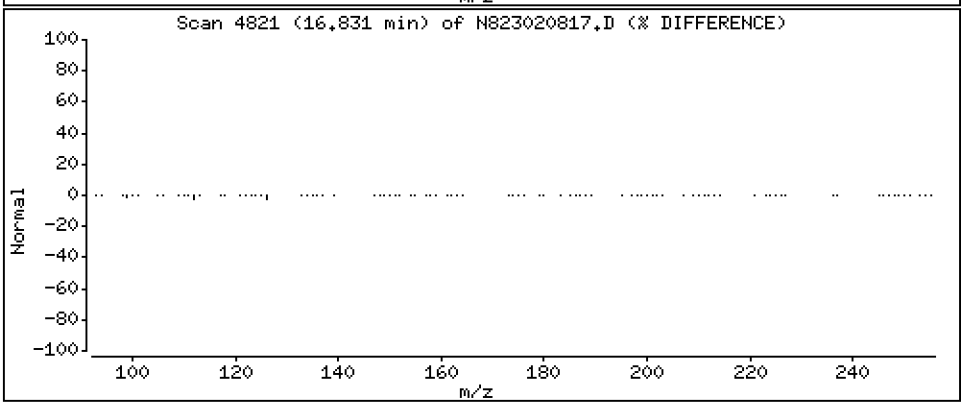












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

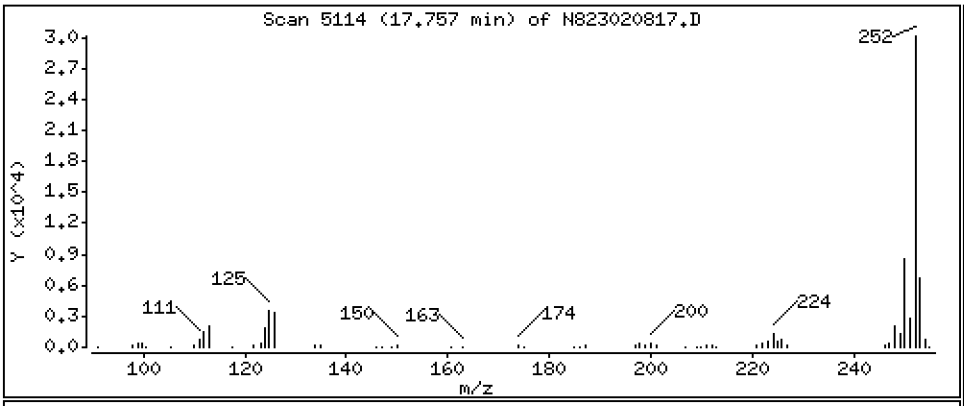
Operator: JZ

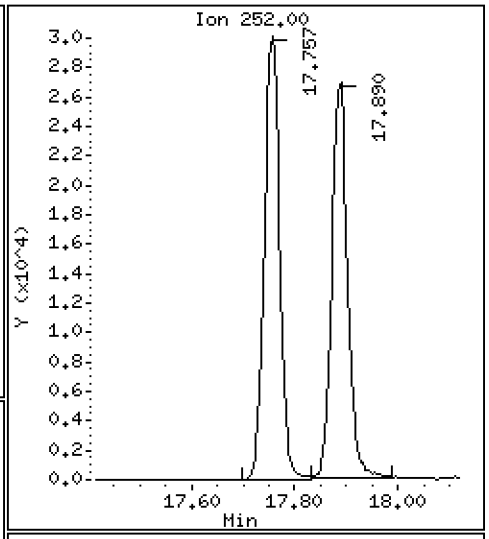
Column phase: Rxi-17sil

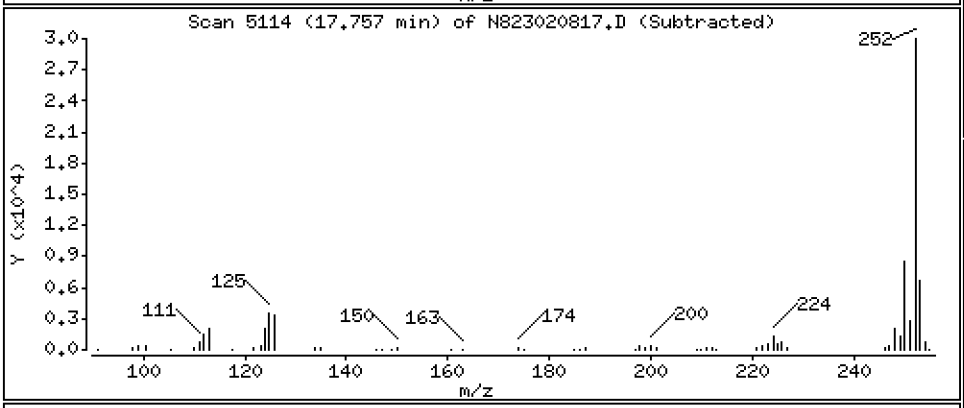
Column diameter: 0.25

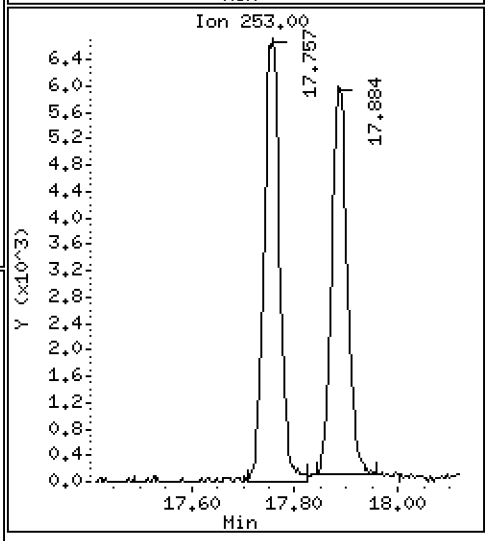
34 Benzo(e)pyrene

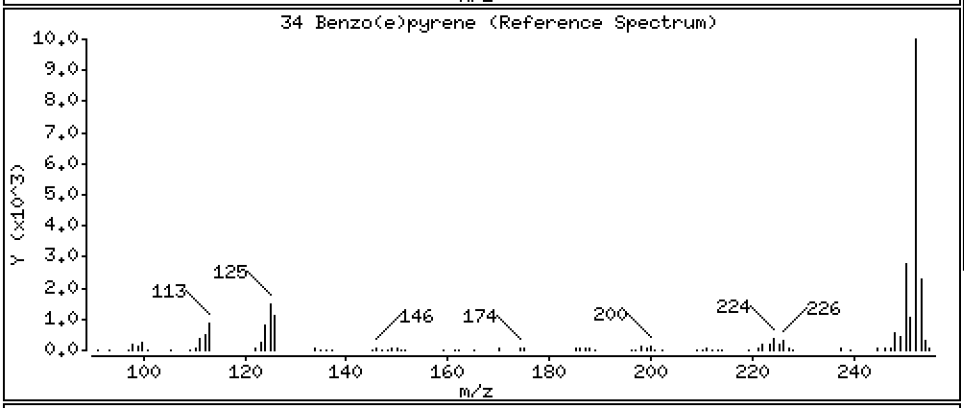
Concentration: 2.417 ug/mL

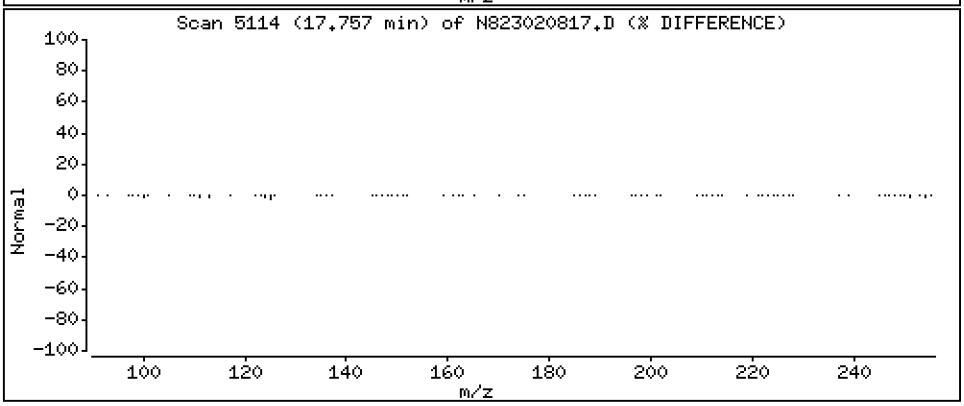












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

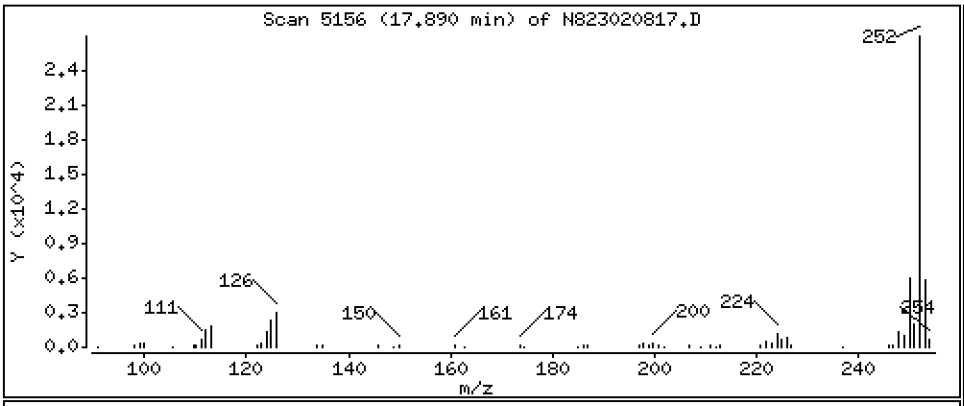
Operator: JZ

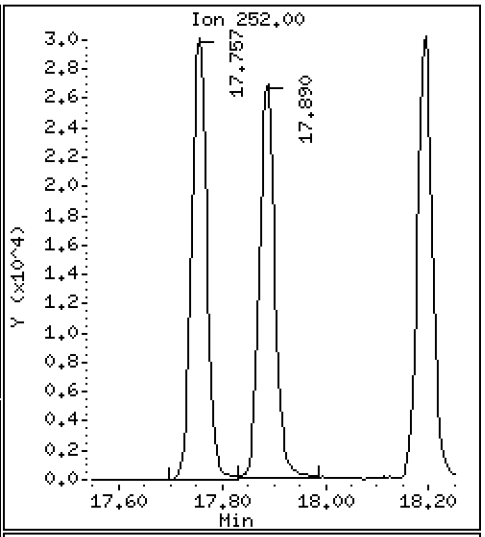
Column phase: Rxi-17sil

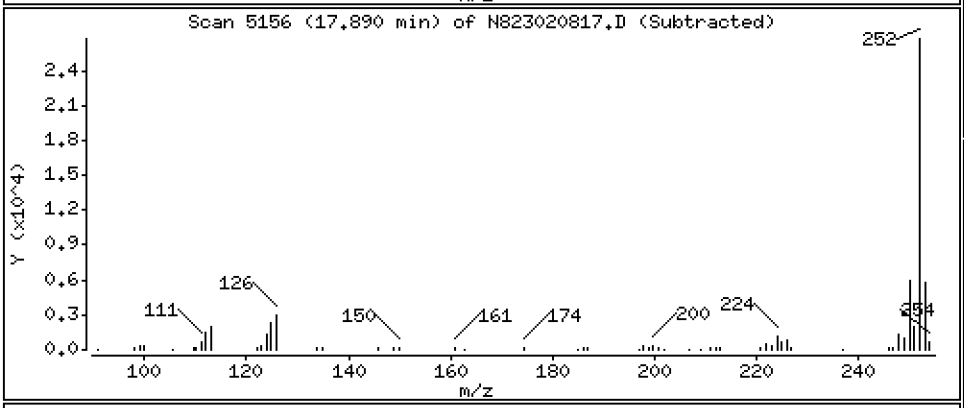
Column diameter: 0.25

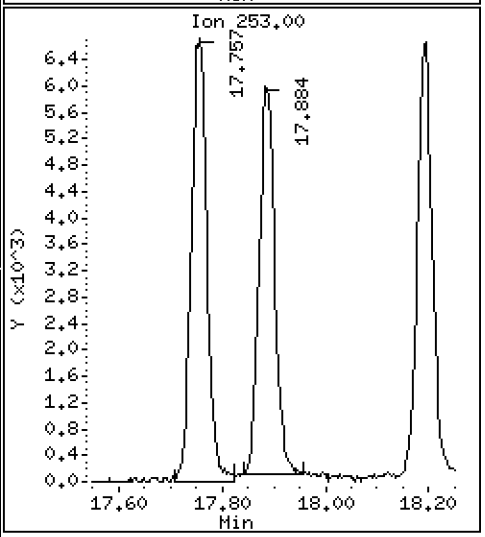
32 Benzo(a)pyrene

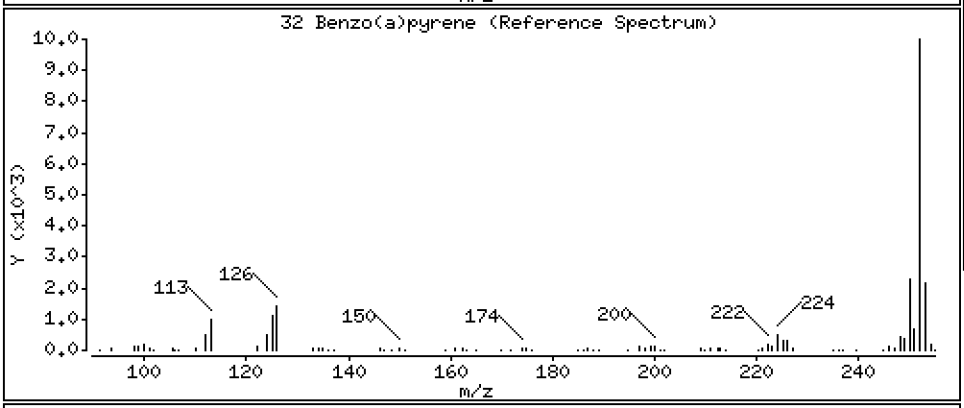
Concentration: 2.485 ug/mL

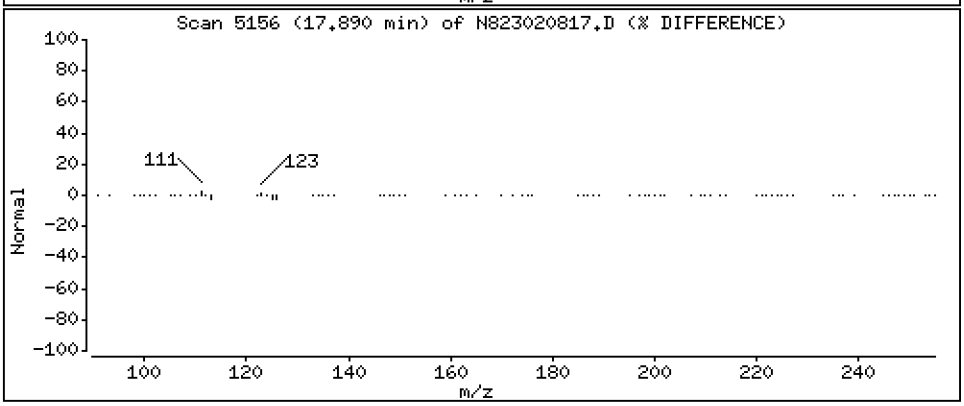












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

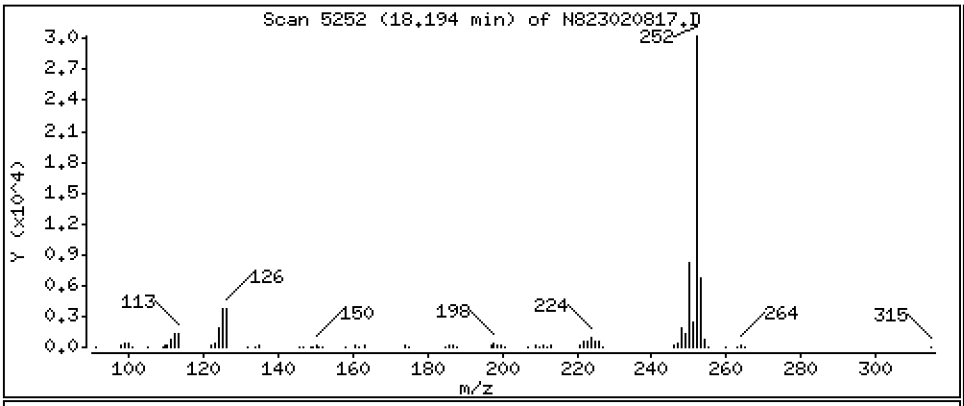
Operator: JZ

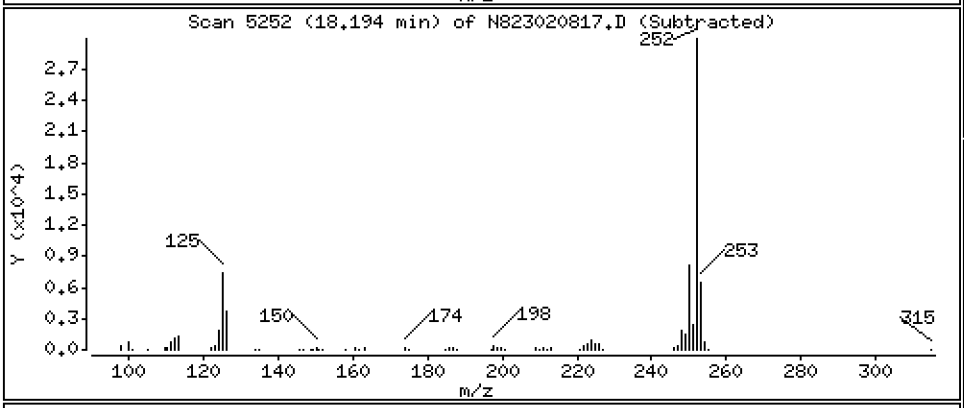
Column phase: Rxi-17sil

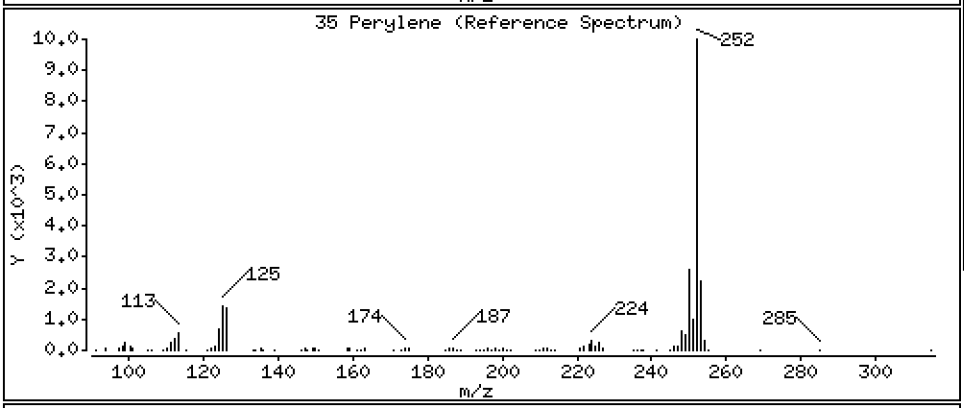
Column diameter: 0.25

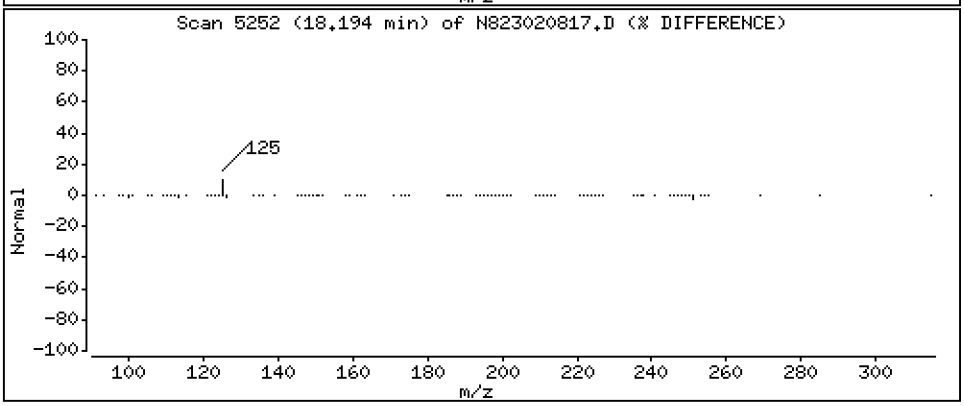
35 Perylene

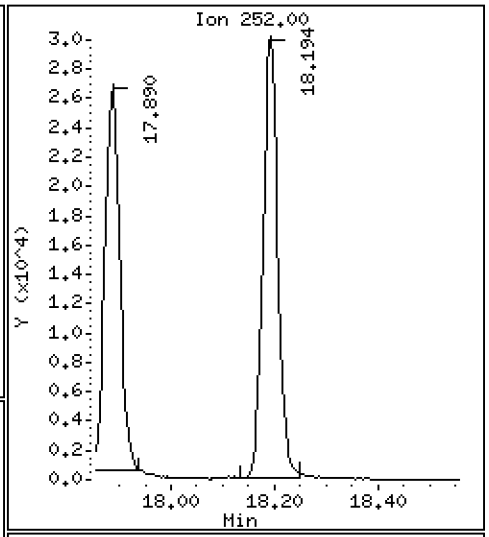
Concentration: 2.481 ug/mL

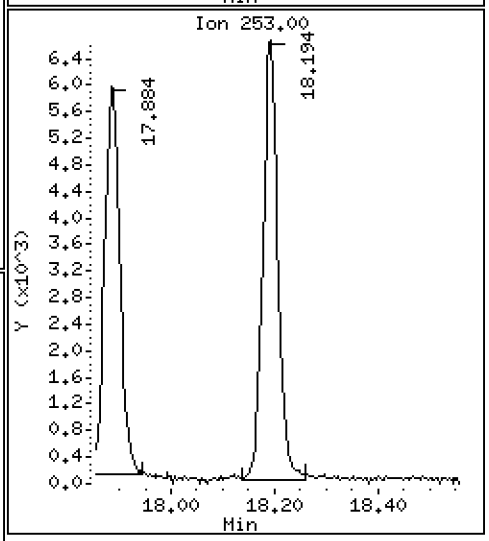












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

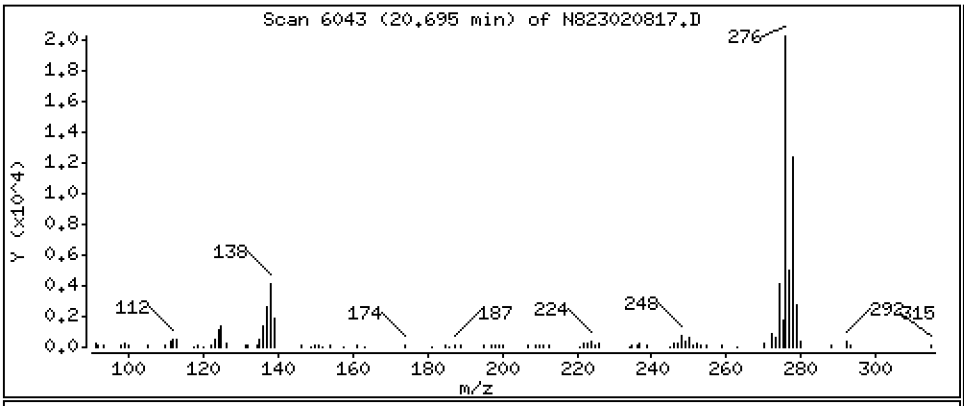
Operator: JZ

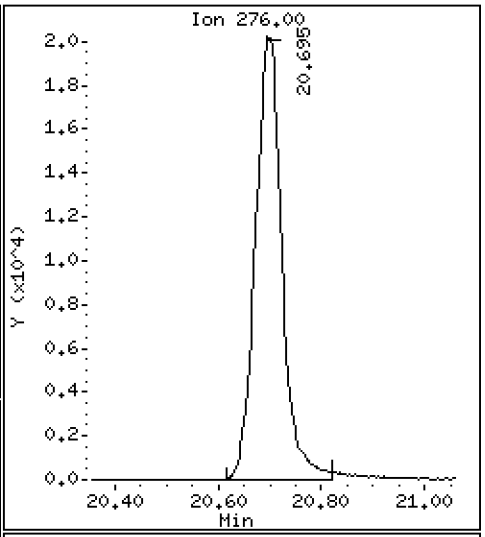
Column phase: Rxi-17sil

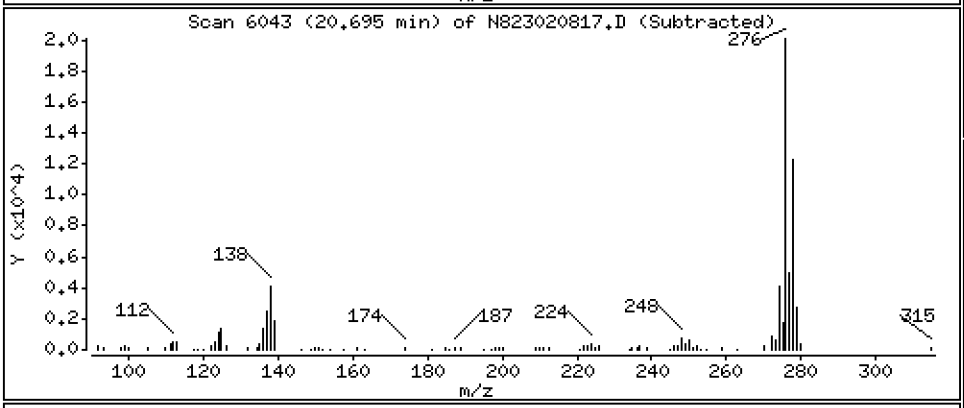
Column diameter: 0.25

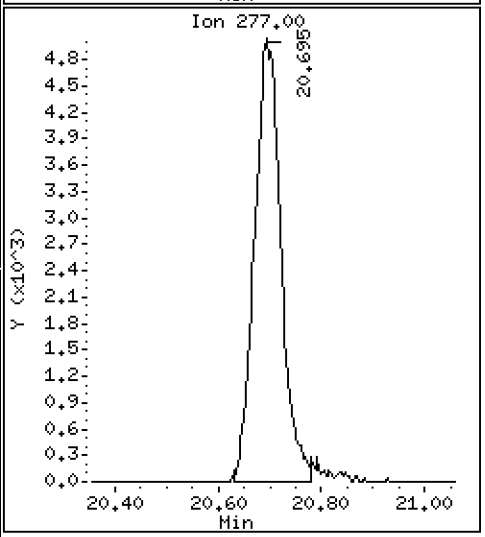
37 Indeno(1,2,3-cd)pyrene

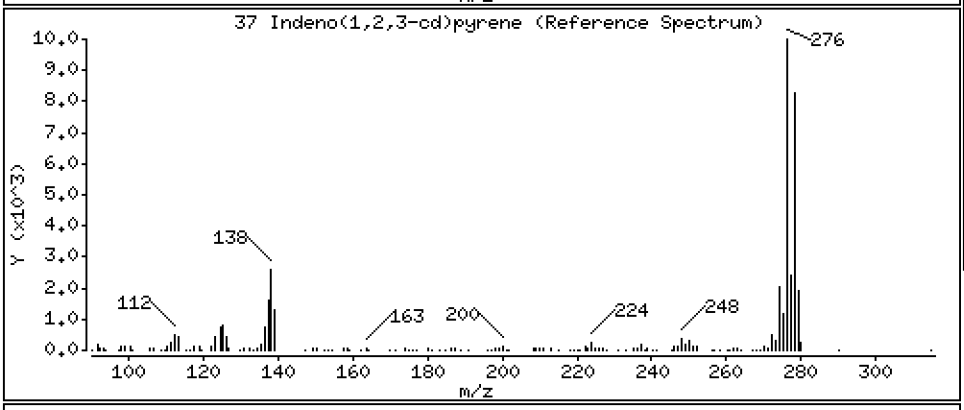
Concentration: 2.778 ug/mL

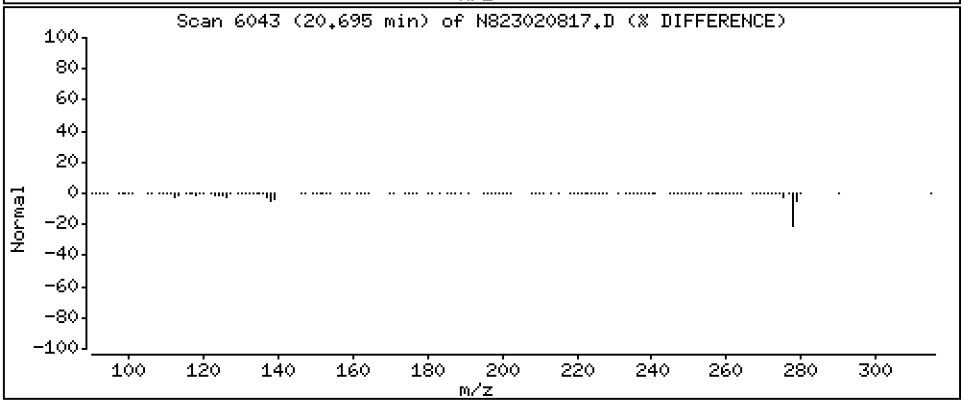












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Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

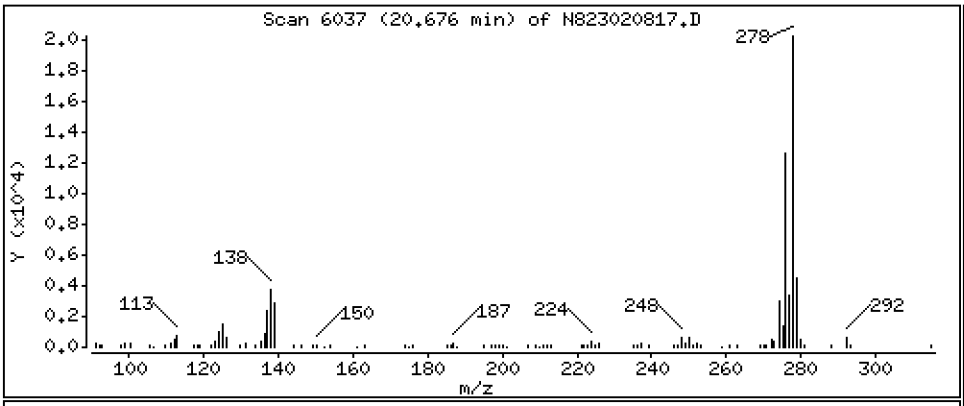
Operator: JZ

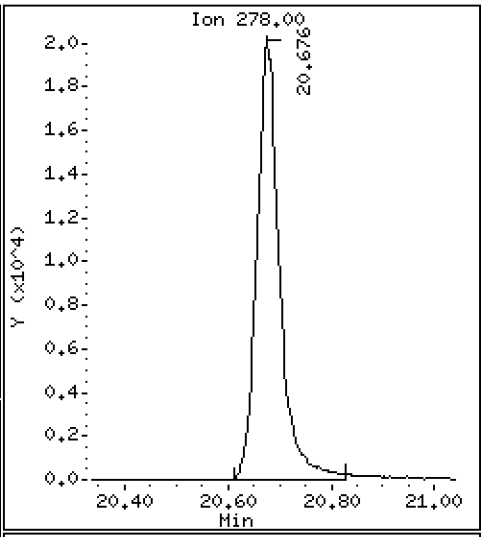
Column phase: Rxi-17sil

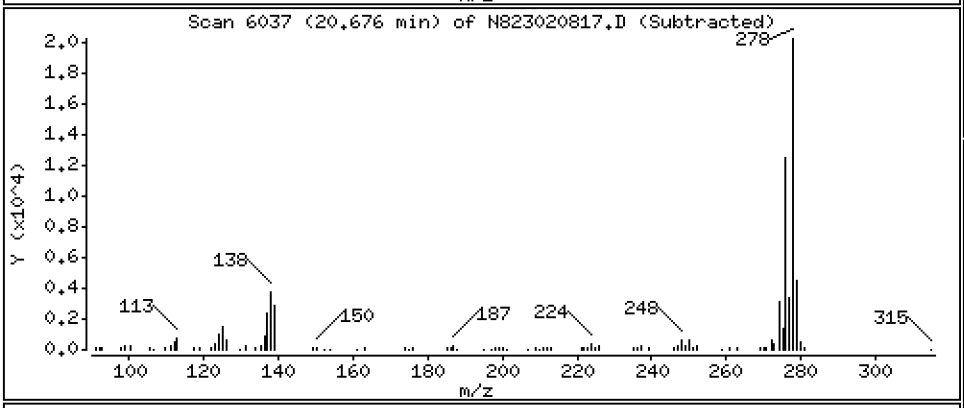
Column diameter: 0.25

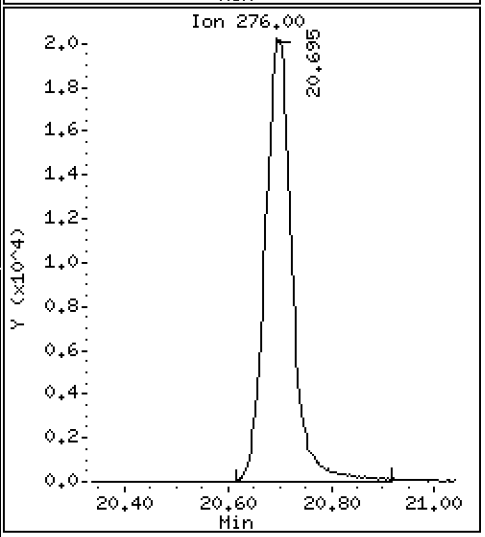
38 Dibenzo(a,h)anthracene

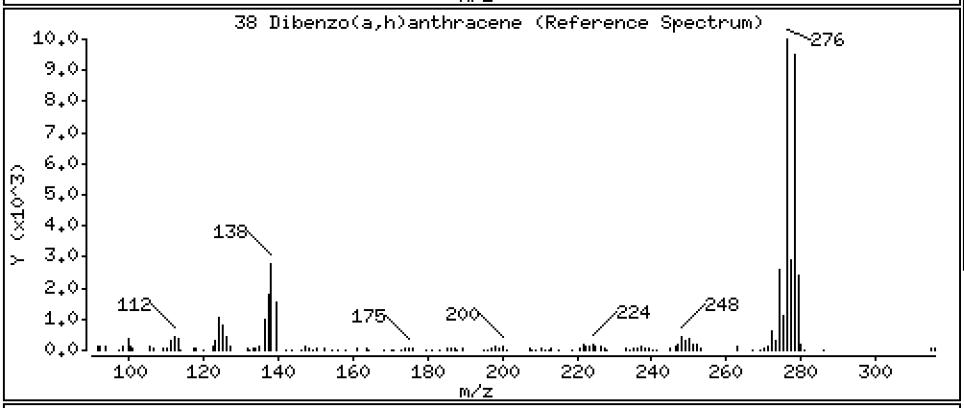
Concentration: 2.764 ug/mL

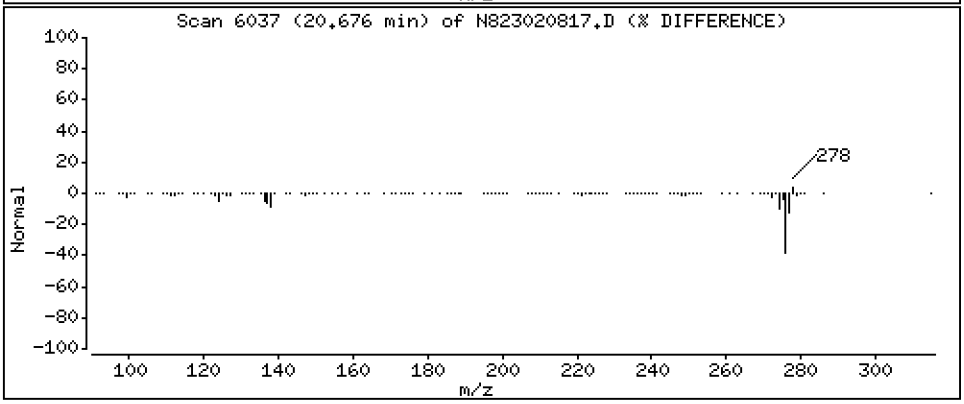












Data File: \\target\share\chem3\nt8.i\20230208.b\N823020817.D

Date : 08-FEB-2023 19:21

Client ID:

Instrument: nt8.i

Sample Info: CCV230108

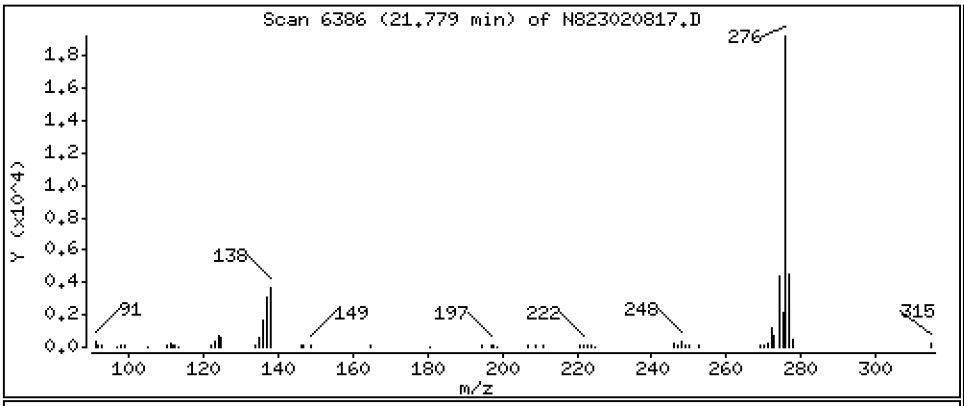
Operator: JZ

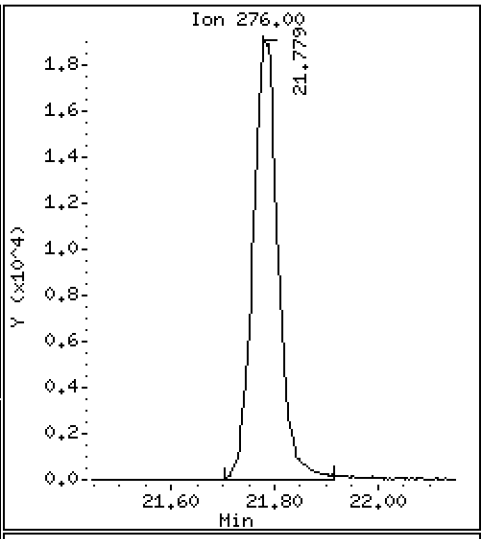
Column phase: Rxi-17sil

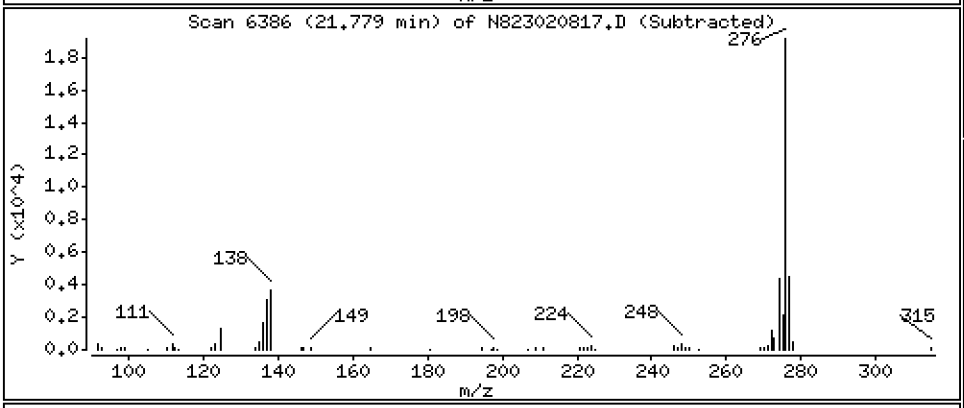
Column diameter: 0.25

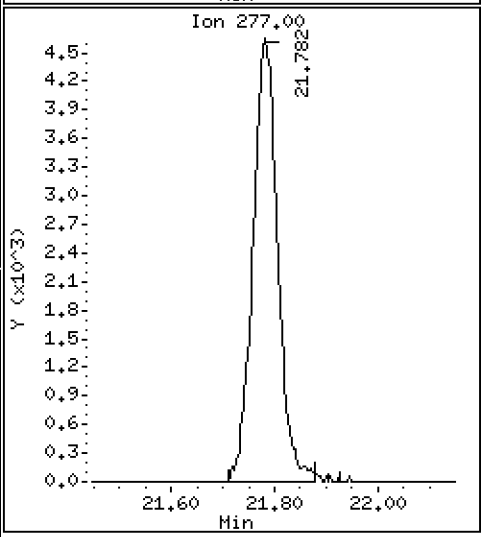
39 Benzo(g,h,i)perylene

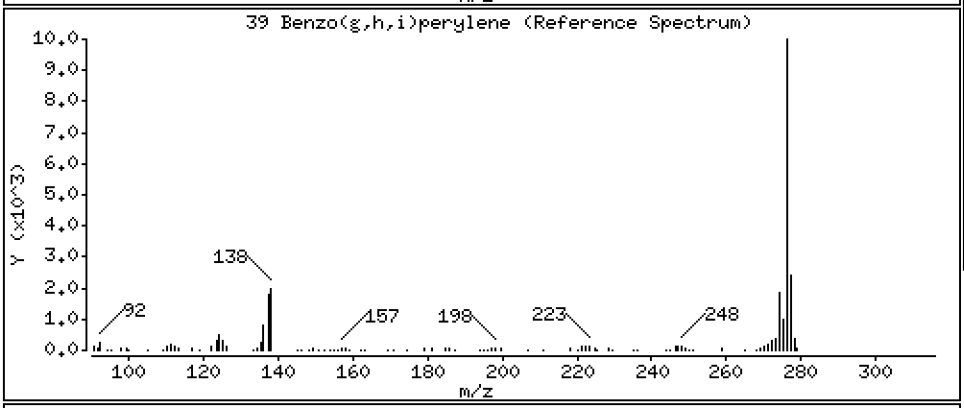
Concentration: 2.782 ug/mL

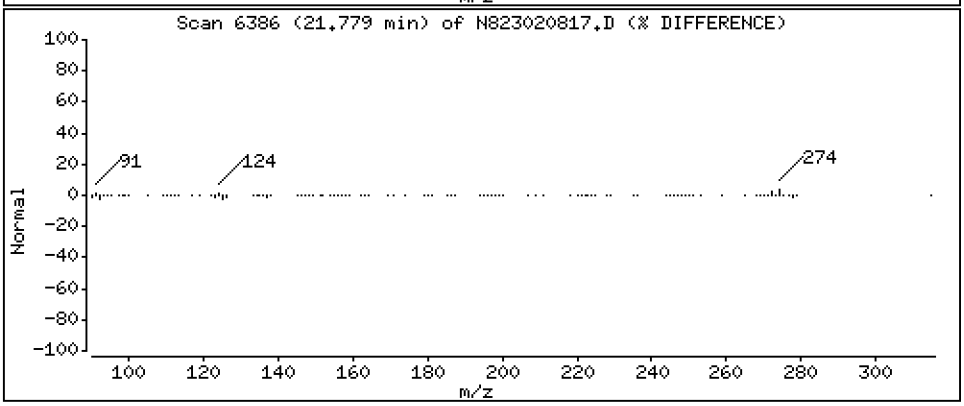












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230208.b\N823020817.D
Lab Smp Id: SLB0101-CCV1
Inj Date : 08-FEB-2023 19:21
Operator : JZ Inst ID: nt8.i
Smp Info : CCV230108
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230208.b\FSIMPNA230119.m
Meth Date : 09-Feb-2023 18:23 jianqing Quant Type: ISTD
Cal Date : 19-JAN-2023 13:46 Cal File: N823011908.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQING-202105

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.884	4.894	(1.000)	47039	2.00000	
	2 Naphthalene	128	4.916	4.922	(1.006)	55903	2.55601	2.556
$	3 2-Methylnaphthalene-d10	152	5.621	5.627	(1.151)	33185	2.58678	2.587
	4 2-Methylnaphthalene	141	5.668	5.678	(1.161)	31121	2.58688	2.587
	5 1-methylnaphthalene	141	5.868	5.874	(1.201)	31915	2.61390	2.614
	7 Biphenyl	154	6.329	6.339	(0.881)	46624	2.54046	2.540
	8 2,6-Dimethylnaphthalene	156	6.374	6.383	(0.887)	34724	2.67334	2.673
	9 Acenaphthylene	152	7.072	7.079	(0.985)	57508	2.73757	2.738
*	10 Acenaphthene-d10	164	7.183	7.189	(1.000)	27819	2.00000	
	11 Acenaphthene	153	7.230	7.240	(1.007)	36469	2.59101	2.591
	12 Dibenzofuran	168	7.385	7.392	(1.028)	53479	2.50154	2.502
	13 1,6,7-Trimethylnaphthalene	170	7.449	7.455	(1.037)	35972	2.66833	2.668
	14 Fluorene	166	7.863	7.869	(1.095)	44160	2.65958	2.660
	18 Dibenzothiophene	184	9.099	9.105	(0.986)	59106	2.60466	2.605
*	15 Phenanthrene-d10	188	9.226	9.232	(1.000)	51353	2.00000	
	16 Phenanthrene	178	9.260	9.270	(1.004)	62534	2.49290	2.493
	17 Anthracene	178	9.302	9.308	(1.008)	60090	2.63694	2.637
	19 Carbazole	167	9.817	9.826	(1.064)	54041	2.58685	2.587
	20 1-Methylphenanthrene	192	10.038	10.048	(1.088)	48093	2.66049	2.660
	22 Fluoranthene	202	11.047	11.056	(1.197)	70473	2.58095	2.581
$	21 Fluoranthene-d10	212	11.006	11.018	(1.193)	61750	2.72546	2.725
	23 Pyrene	202	11.566	11.575	(0.815)	72963	2.76861	2.769
	24 Benzo(a)anthracene	228	14.073	14.086	(0.991)	64813	2.71337	2.713
*	25 Chrysene-d12	240	14.199	14.215	(1.000)	42507	2.00000	
	27 Chrysene	228	14.275	14.288	(1.005)	65133	2.56142	2.561
	28 Benzo(b)fluoranthene	252	16.830	16.843	(0.929)	63451	2.44406	2.444
	29 Benzo(k)fluoranthene	252	16.890	16.903	(0.932)	61120	2.40354	2.404
	30 Benzo(j)fluoranthene	252	16.969	16.982	(0.937)	57235	2.50019	2.500
	31 Total Benzofluoranthenes	252	16.830	16.843	(0.929)	177675	7.22646	7.226(M)
	34 Benzo(e)pyrene	252	17.757	17.766	(0.980)	62576	2.41714	2.417
	32 Benzo(a)pyrene	252	17.889	17.899	(0.987)	56774	2.48510	2.485
*	33 Perylene-d12	264	18.117	18.127	(1.000)	44576	2.00000	
	35 Perylene	252	18.193	18.206	(1.004)	60820	2.48084	2.481

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.565	20.568	(1.135)	43256	2.47661	2.477
37 Indeno(1,2,3-cd)pyrene	276	20.694	20.707	(1.142)	72299	2.77786	2.778
38 Dibenzo(a,h)anthracene	278	20.675	20.688	(1.141)	61914	2.76424	2.764
39 Benzo(g,h,i)perylene	276	21.779	21.798	(1.202)	65608	2.78224	2.782

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823020817.D
Lab Smp Id: SLB0101-CCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230208.b\FSIMPNA230119.m
Misc Info: 23-

Calibration Date: 08-FEB-2023
Calibration Time: 12:05
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	47321	23661	94642	47039	-0.60
10 Acenaphthene-d10	28133	14067	56266	27819	-1.12
15 Phenanthrene-d10	52447	26224	104894	51353	-2.09
25 Chrysene-d12	43514	21757	87028	42507	-2.31
33 Perylene-d12	39495	19748	78990	44576	12.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.89	4.39	5.39	4.88	-0.19
10 Acenaphthene-d10	7.19	6.69	7.69	7.18	-0.09
15 Phenanthrene-d10	9.23	8.73	9.73	9.23	-0.07
25 Chrysene-d12	14.22	13.72	14.72	14.20	-0.11
33 Perylene-d12	18.13	17.63	18.63	18.12	-0.05

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

REVIEW SUMMARY FOR FILE - N823020817.D

Lab ID: SLB0101-CCV1
nt8.i, 20230208.b\FSIMPNA230119.m,   08-FEB-2023 19:21

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

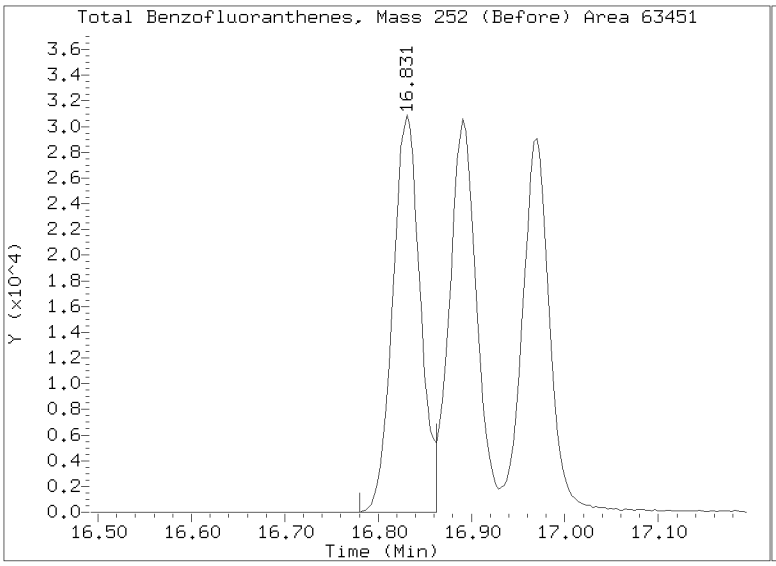
No RRT check performed

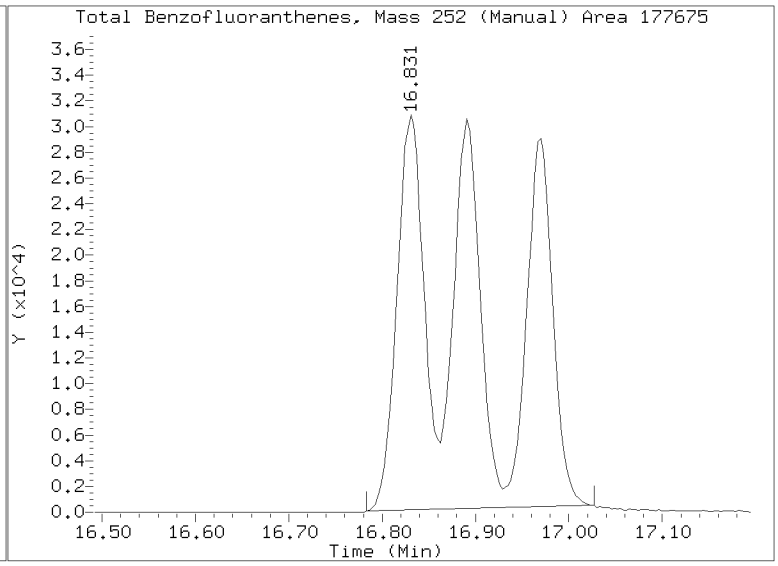
On Column LOD for nt8.i, 20230208.b\FSIMPNA230119.m, FSIMPNAICLA.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230208.b/N823020817.D
Injection Date: 08-FEB-2023 19:21
Lab ID:SLB0101-CCV1 Client ID:
Report Date: 02/09/2023 18:53





Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT8	Calibration:	GD00068
Lab File ID:	N823042609.D	Calibration Date:	04/26/2023
Sequence:	SLD0372	Injection Date:	04/26/23
Lab Sample ID:	SLD0372-SCV1	Injection Time:	20:49
Sequence Name:	8270 SIM PNA SCV		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Naphthalene	A	2.5000	2.36	1.0189360	0.9629501		-5.5	
2-Methylnaphthalene	A	2.5000	2.39	0.5785221	0.5534897		-4.3	
1-Methylnaphthalene	A	2.5000	2.38	0.5736076	0.5460759		-4.8	
Acenaphthylene	A	2.5000	2.32	1.7705370	1.6447400		-7.1	
Acenaphthene	A	2.5000	2.23	1.1471200	1.0250280		-10.6	
Dibenzofuran	A	2.5000	2.52	1.7229440	1.7351050		0.7	
Fluorene	A	2.5000	2.29	1.3750310	1.2610030		-8.3	
Phenanthrene	A	2.5000	2.16	1.0593530	0.9156312		-13.6	
Anthracene	A	2.5000	2.01	0.9935358	0.7980446		-19.7	
Fluoranthene	A	2.5000	2.26	1.2184160	1.0996370		-9.7	
Pyrene	A	2.5000	2.23	1.2804750	1.1406200		-10.9	
Benzo(a)anthracene	A	2.5000	2.18	1.3157630	1.1448160		-13.0	
Chrysene	A	2.5000	2.14	1.2925870	1.1046790		-14.5	
Benzo(b)fluoranthene	A	2.5000	2.16	1.3038540	1.1246990		-13.7	
Benzo(k)fluoranthene	A	2.5000	2.30	1.2284610	1.1308220		-7.9	
Benzofluoranthenes, Total	A	5.0000	4.55	1.2124900	1.1040710		-8.9	
Benzo(a)pyrene	A	2.5000	2.29	1.1333570	1.0402950		-8.2	
Indeno(1,2,3-cd)pyrene	A	2.5000	2.45	1.1536650	1.1304380		-2.0	
Dibenzo(a,h)anthracene	A	2.5000	2.33	1.0244260	0.9564994		-6.6	
Benzo(g,h,i)perylene	A	2.5000	2.25	1.0686540	0.9607950		-10.1	

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

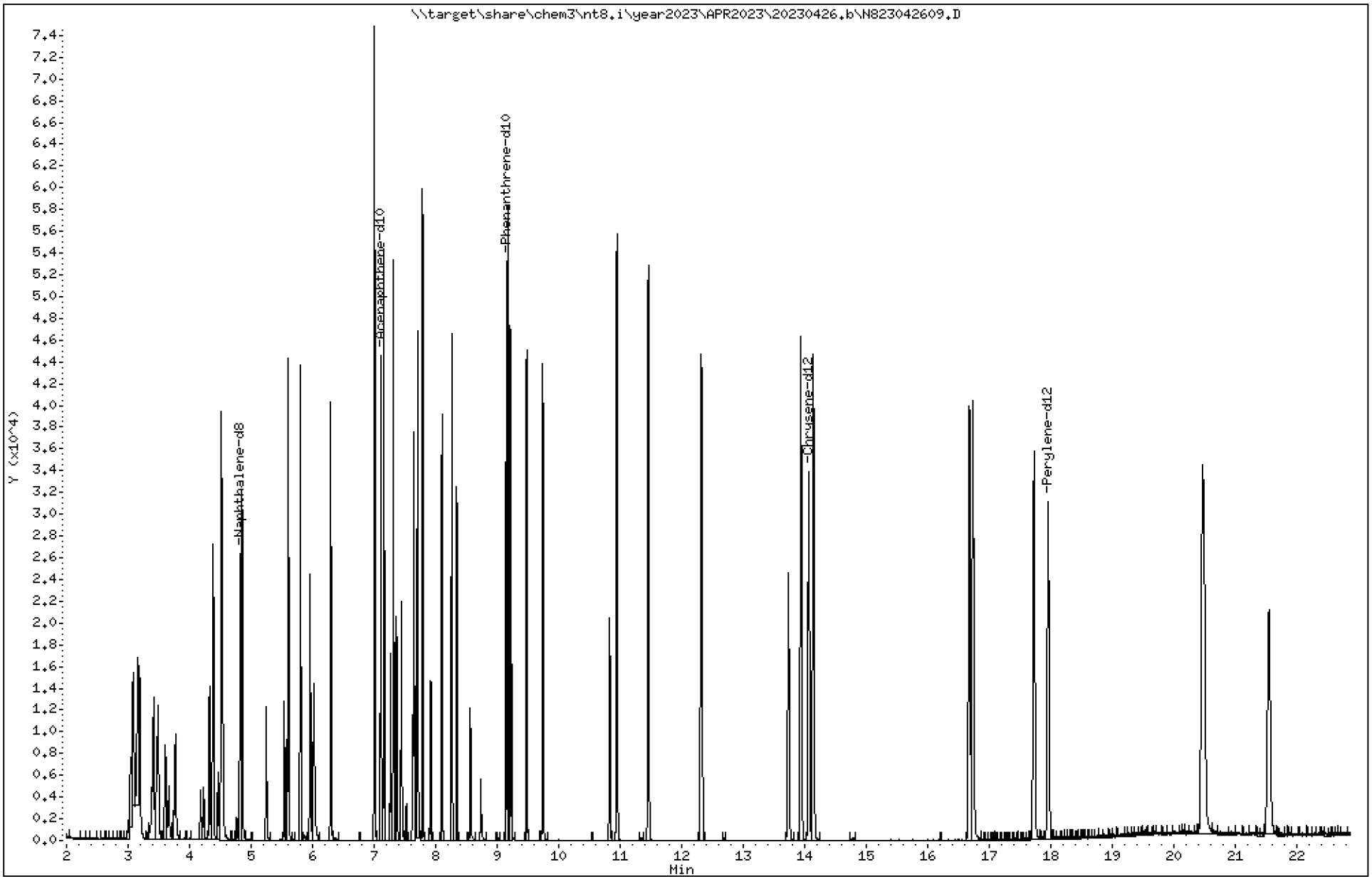
Sample Info: SCV230426

Volume Injected (uL): 1.0

Operator: JZ

Column phase: Rxi-17sil

Column diameter: 0.25



23A0207 CLPLIKE (Rev3) - Page 1137 of 3315

Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

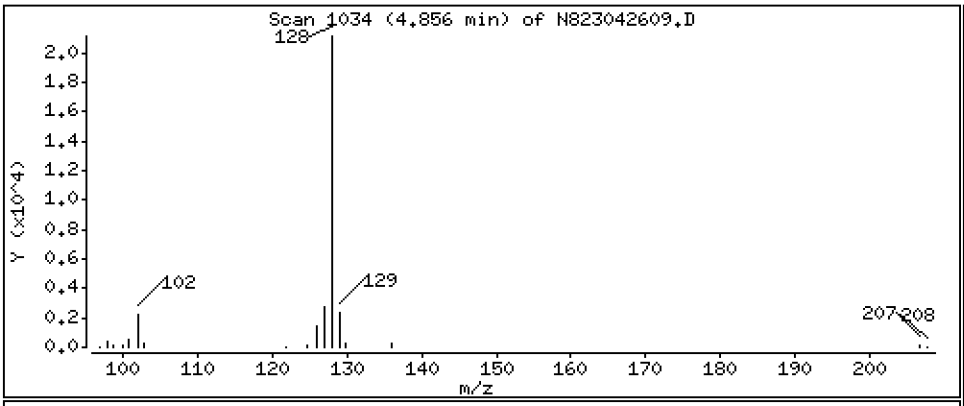
Operator: JZ

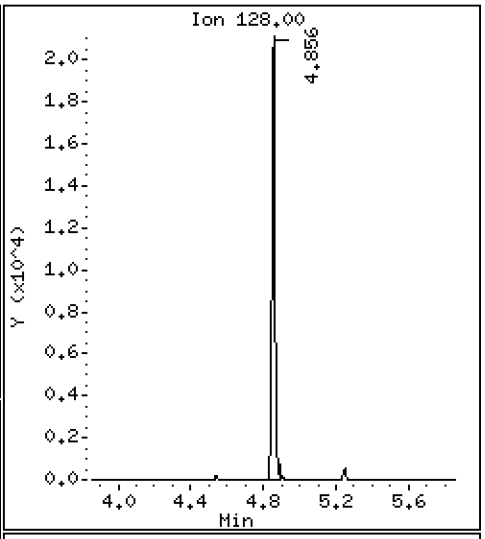
Column phase: Rxi-17sil

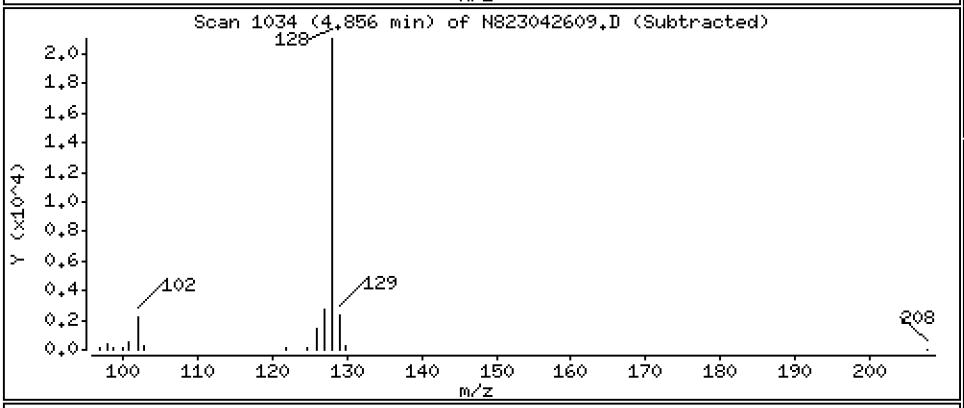
Column diameter: 0.25

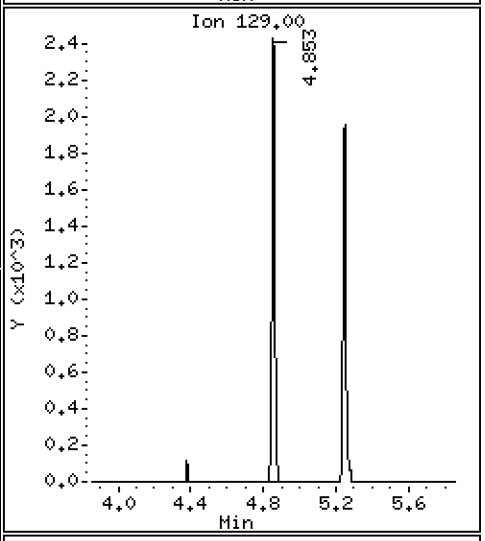
2 Naphthalene

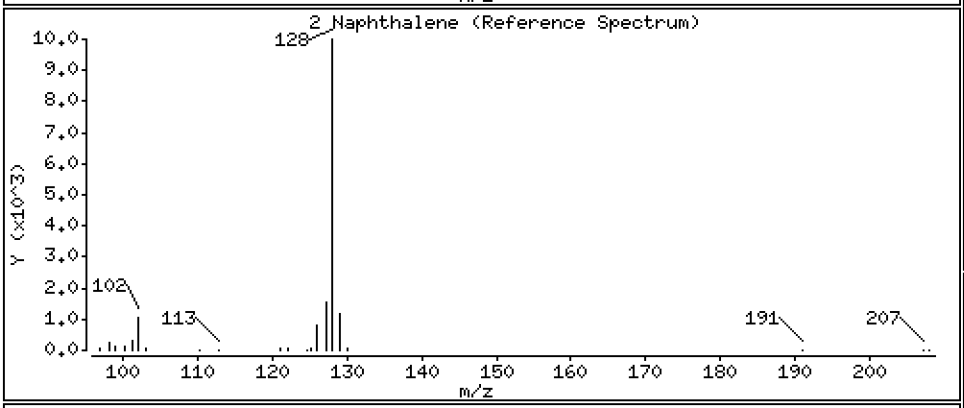
Concentration: 2.363 ug/L

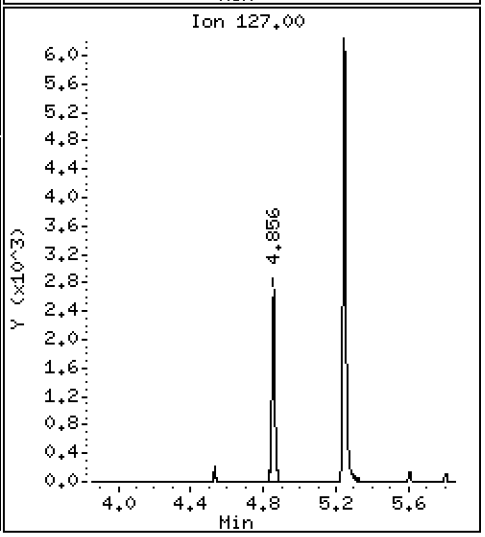


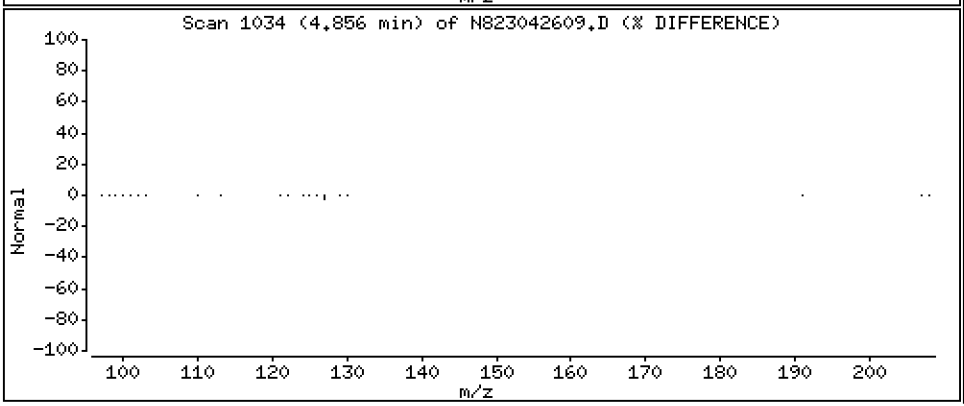












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

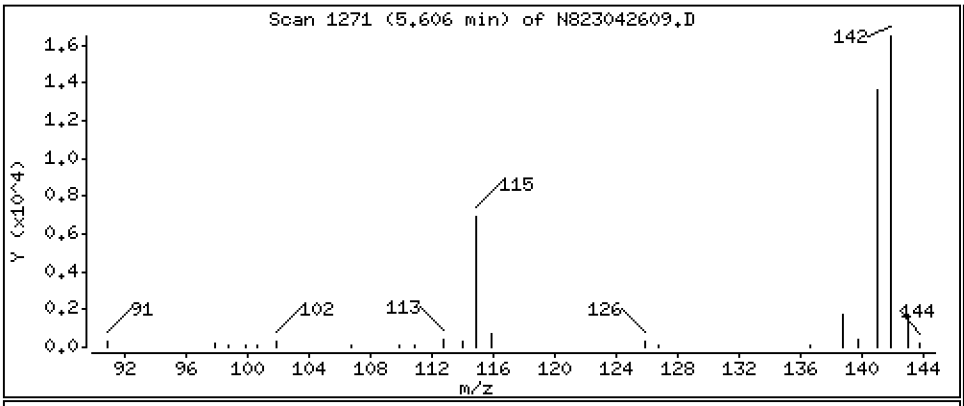
Operator: JZ

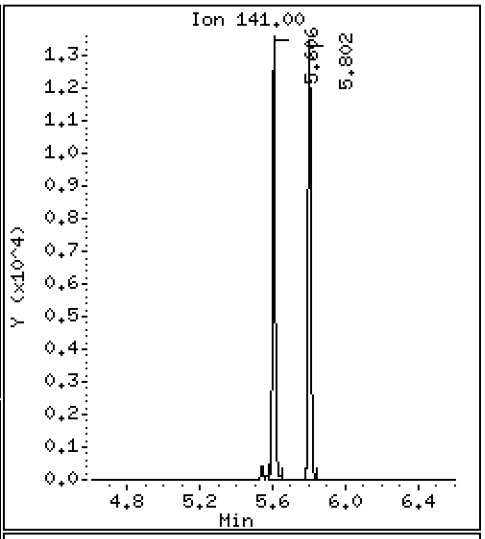
Column phase: Rxi-17sil

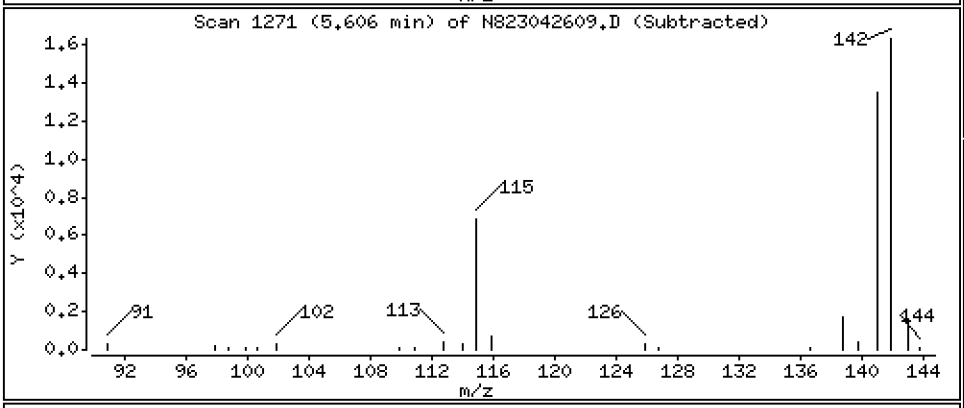
Column diameter: 0.25

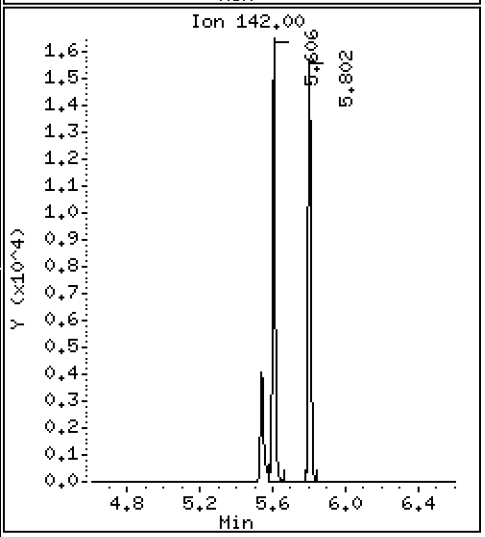
4 2-Methylnaphthalene

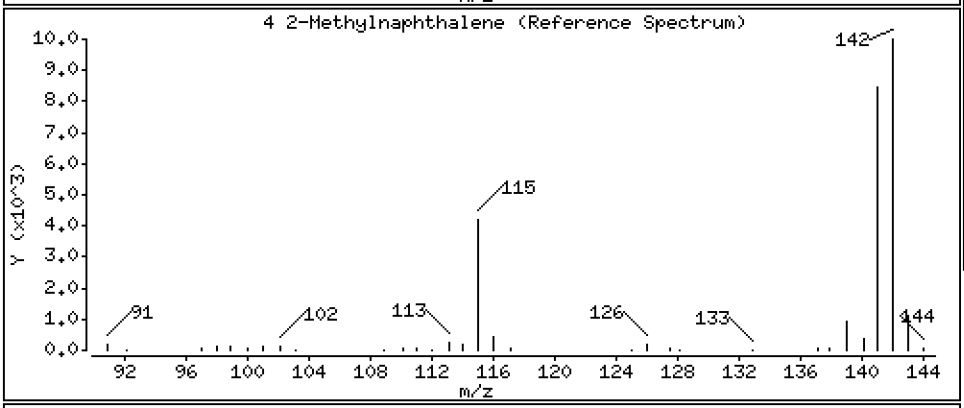
Concentration: 2.392 ug/L

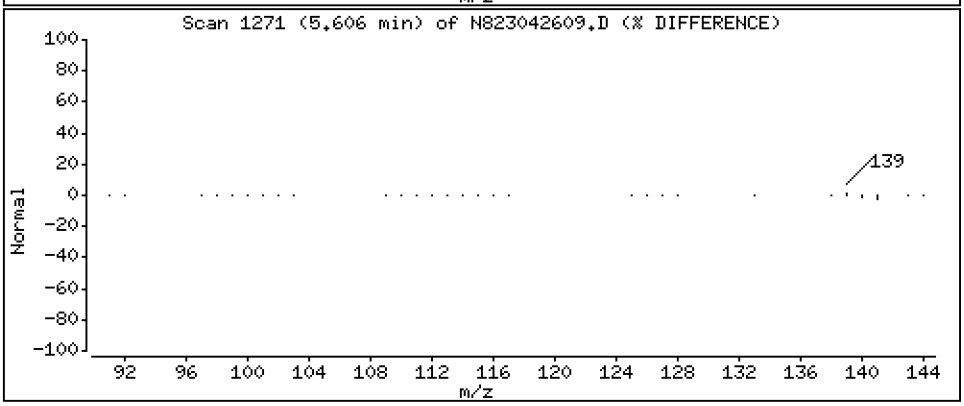












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

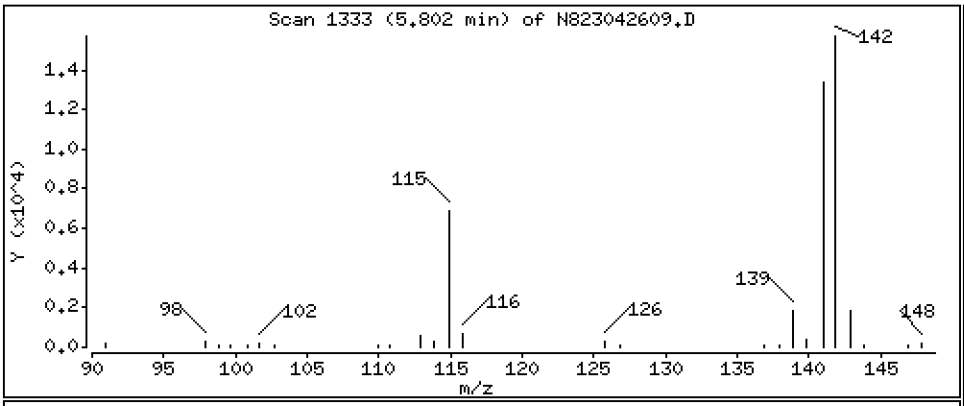
Operator: JZ

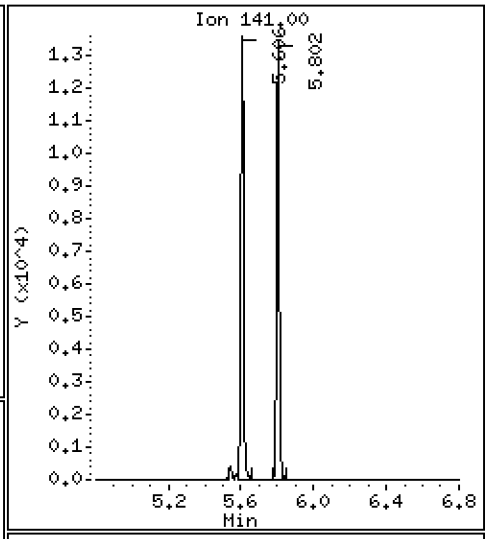
Column phase: Rxi-17sil

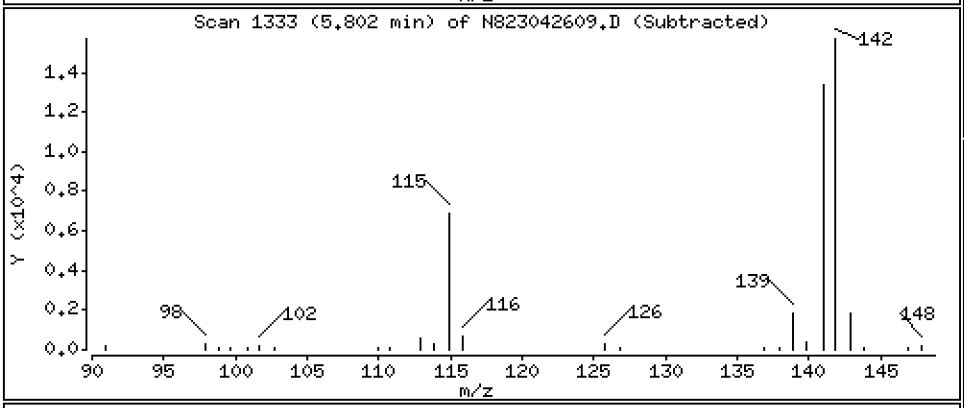
Column diameter: 0.25

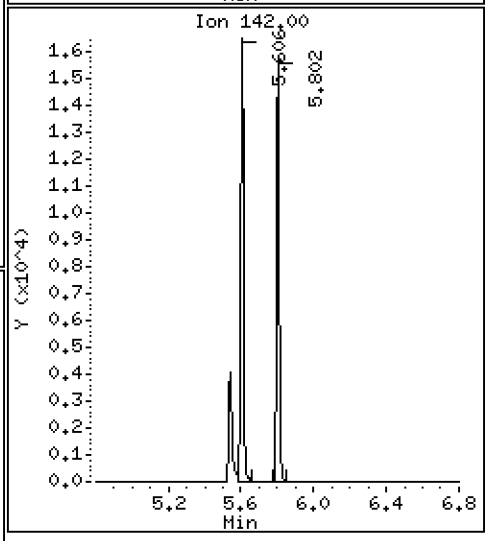
5 1-methylnaphthalene

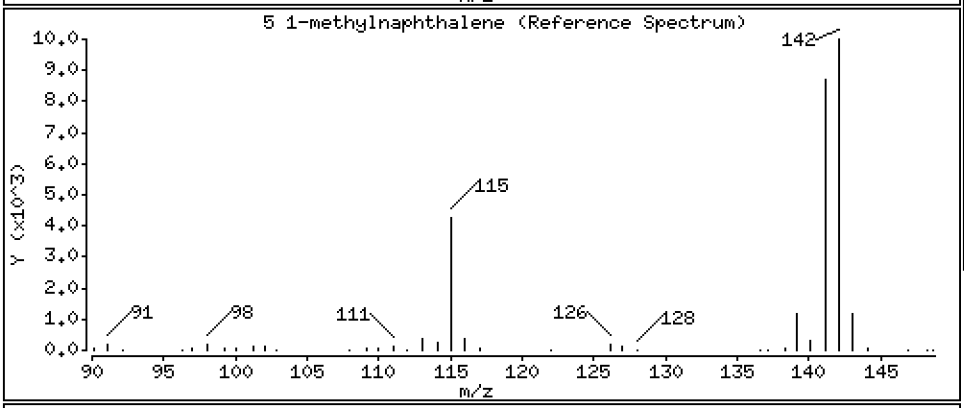
Concentration: 2.380 ug/L

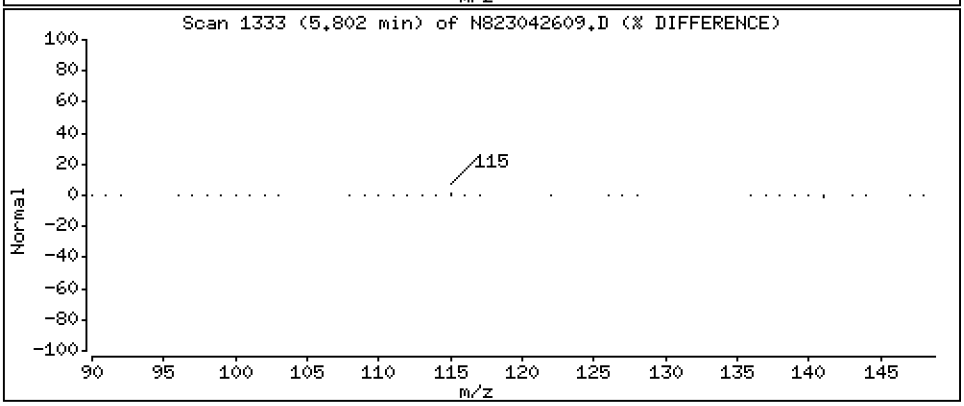












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

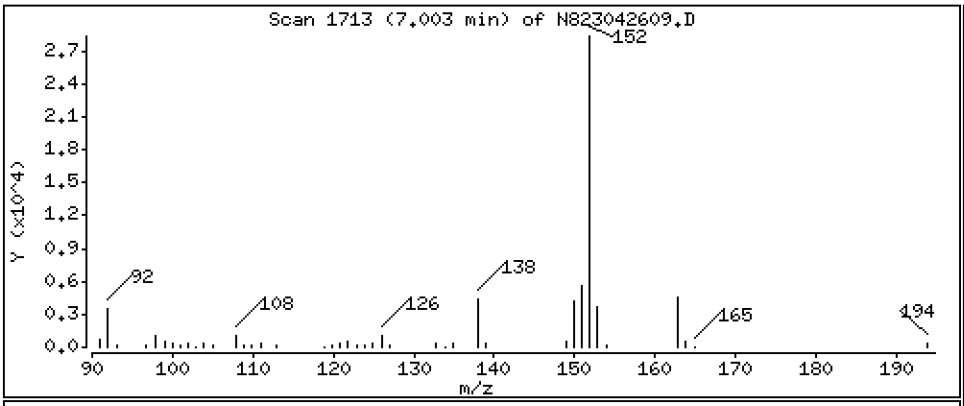
Operator: JZ

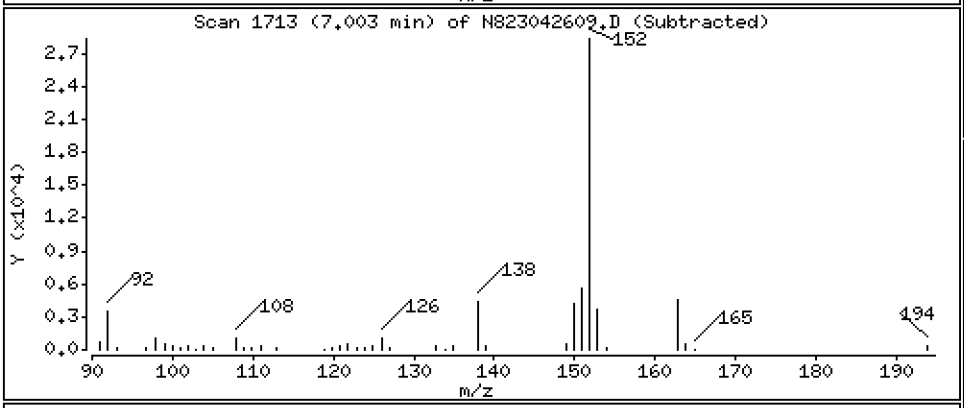
Column phase: Rxi-17sil

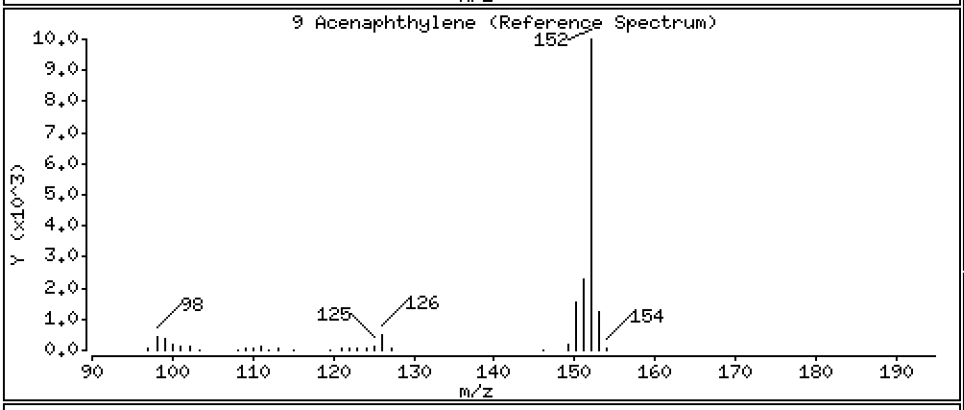
Column diameter: 0.25

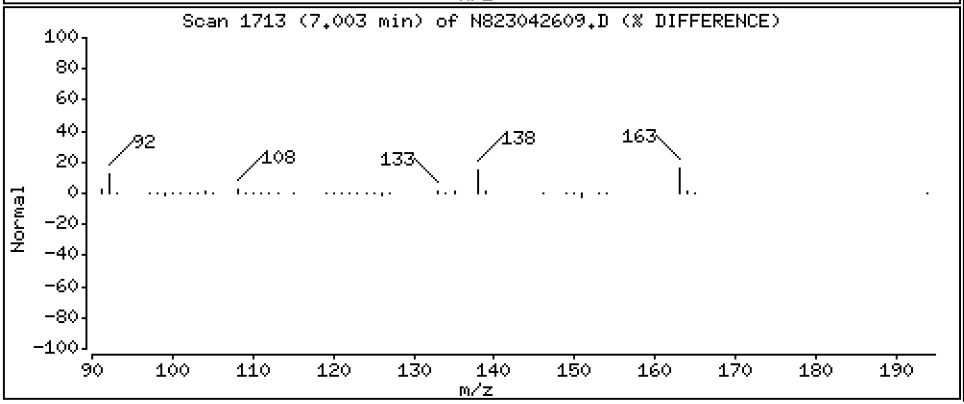
9 Acenaphthylene

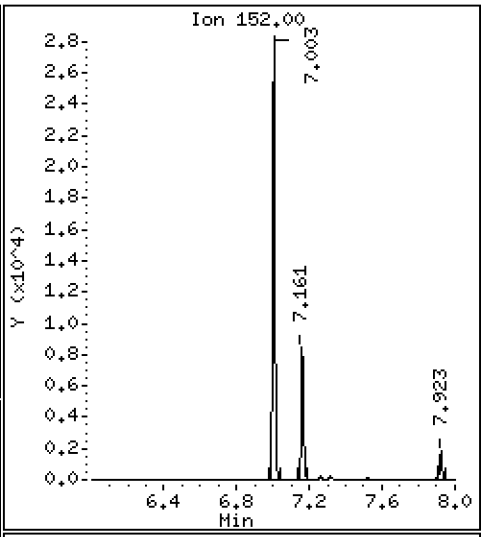
Concentration: 2.322 ug/L

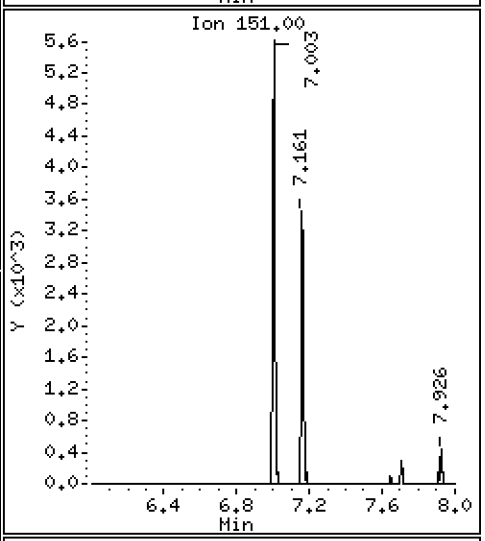


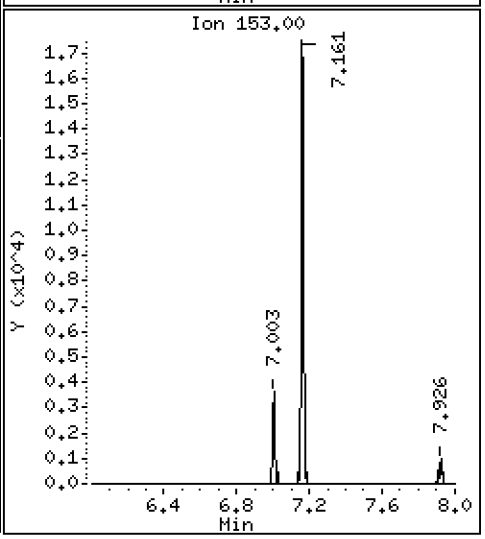












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

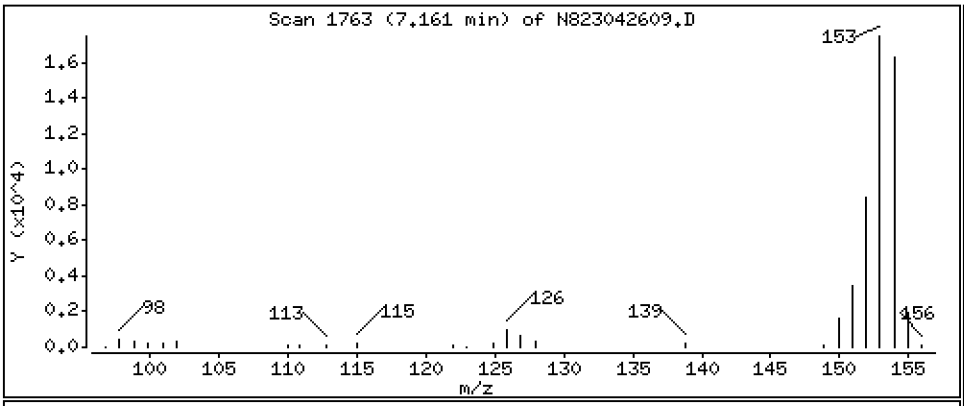
Operator: JZ

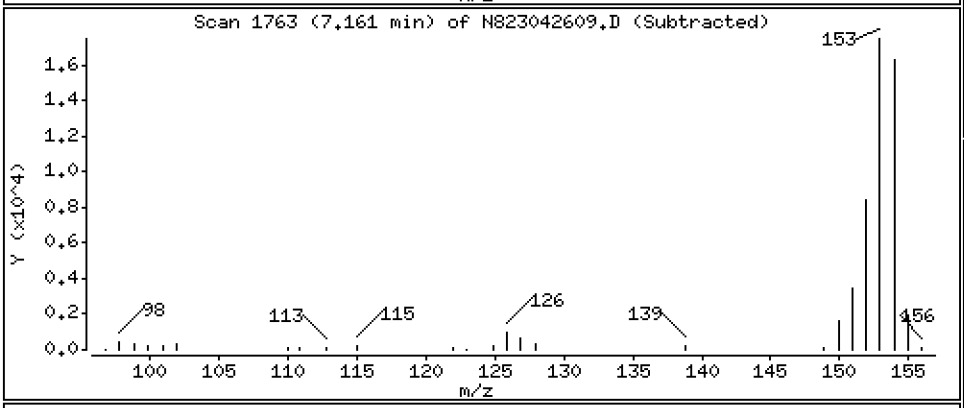
Column phase: Rxi-17sil

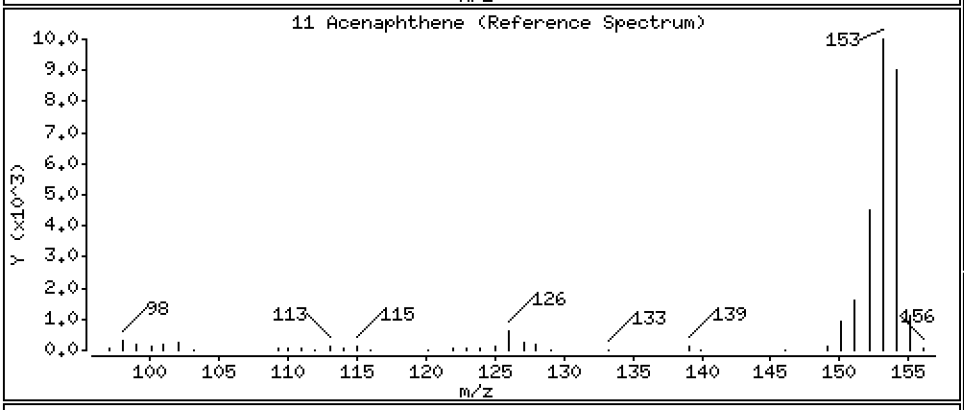
Column diameter: 0.25

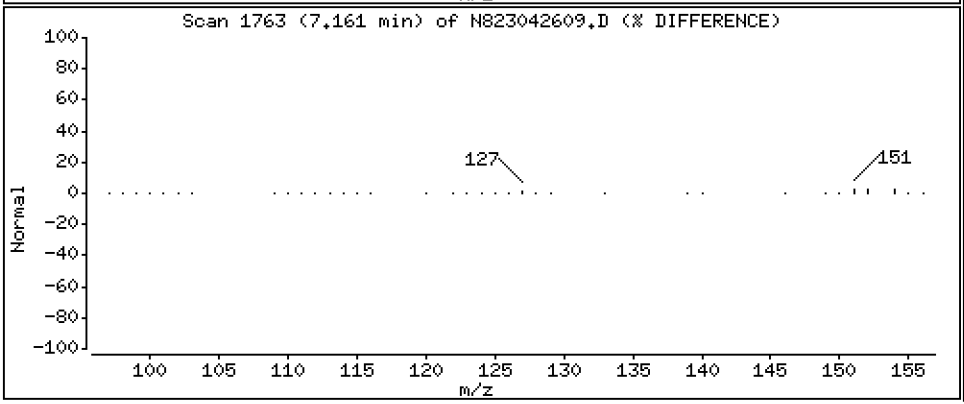
11 Acenaphthene

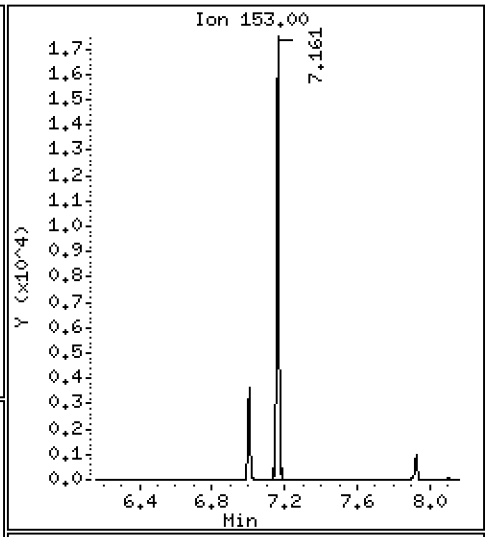
Concentration: 2.234 ug/L

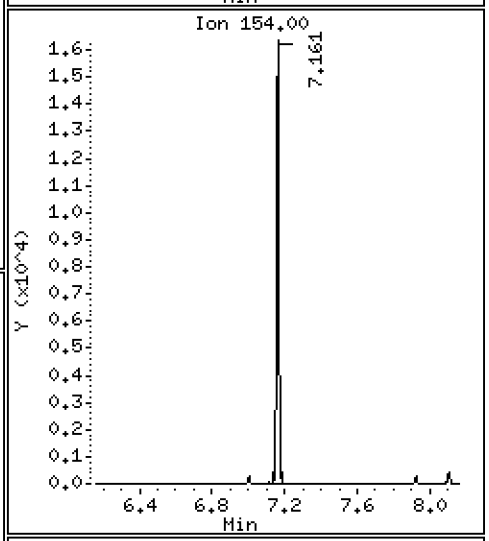


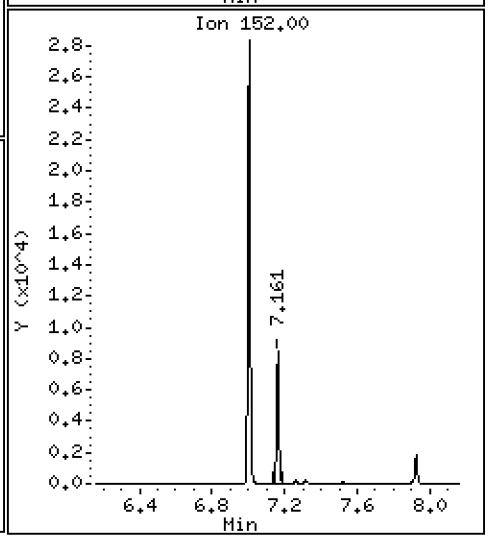












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

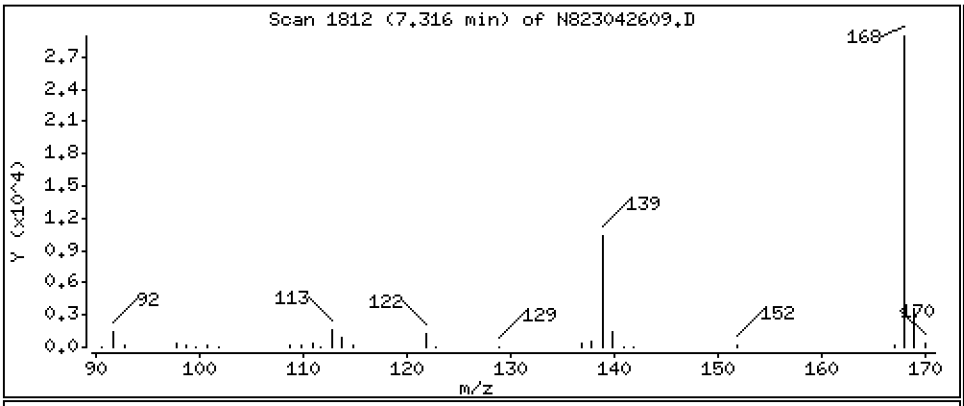
Operator: JZ

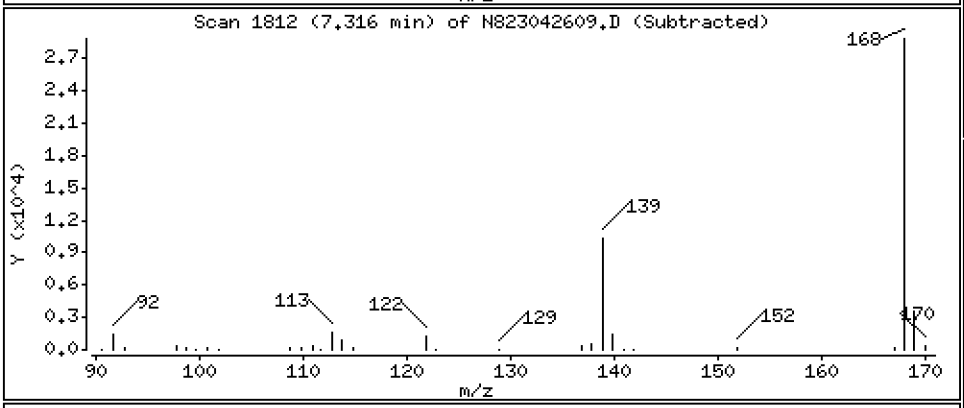
Column phase: Rxi-17sil

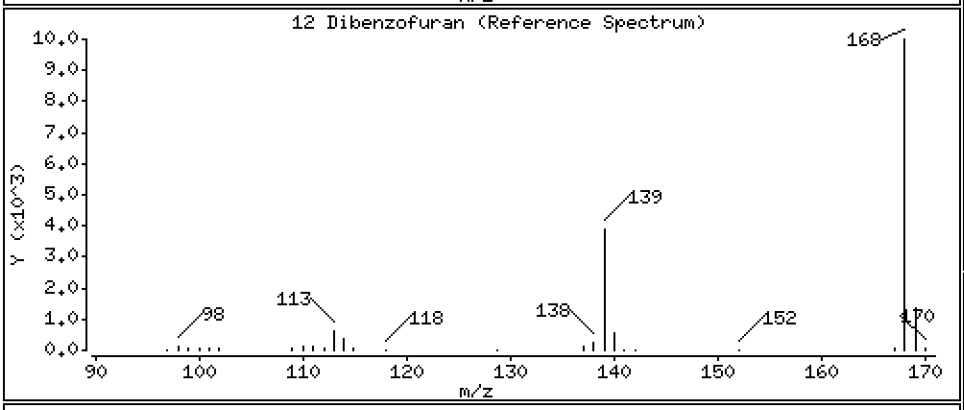
Column diameter: 0.25

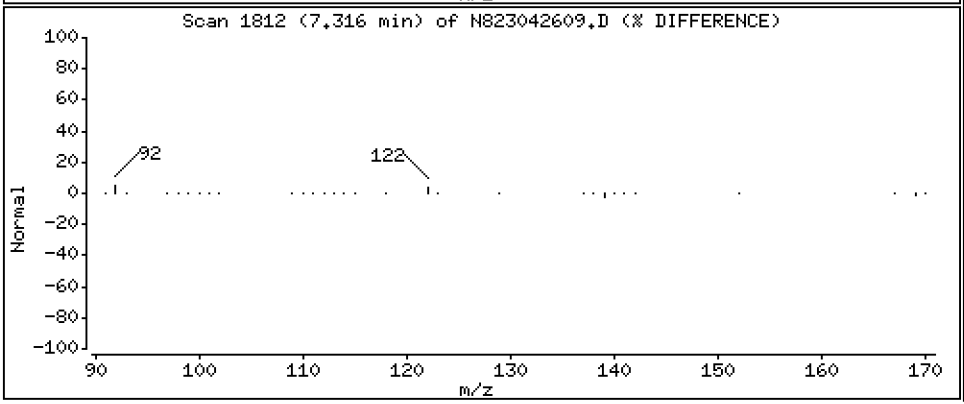
12 Dibenzofuran

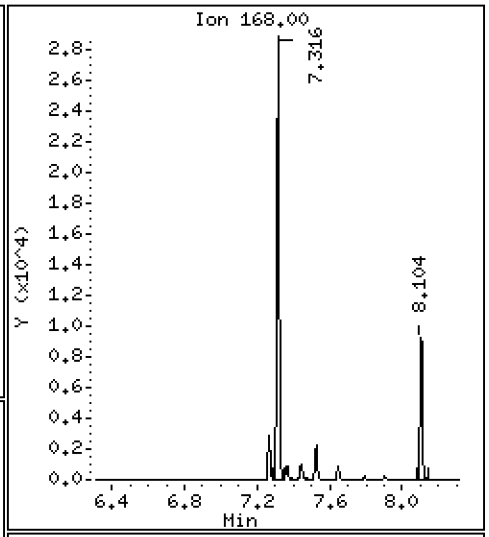
Concentration: 2.518 ug/L

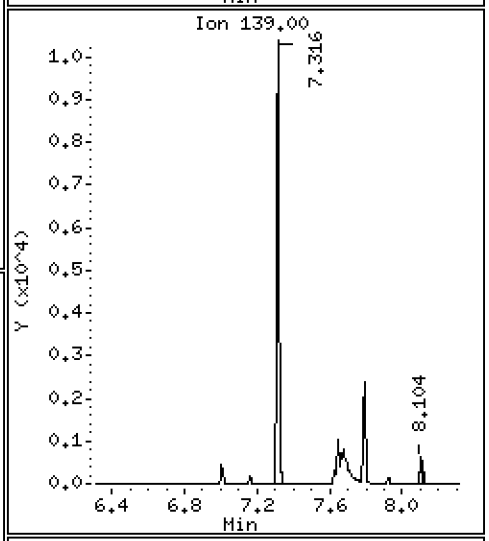


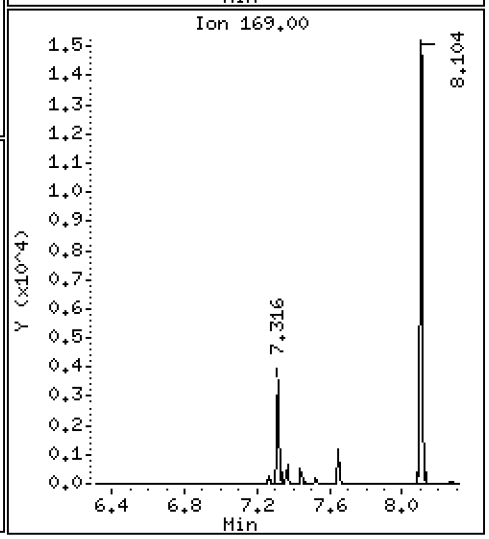












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

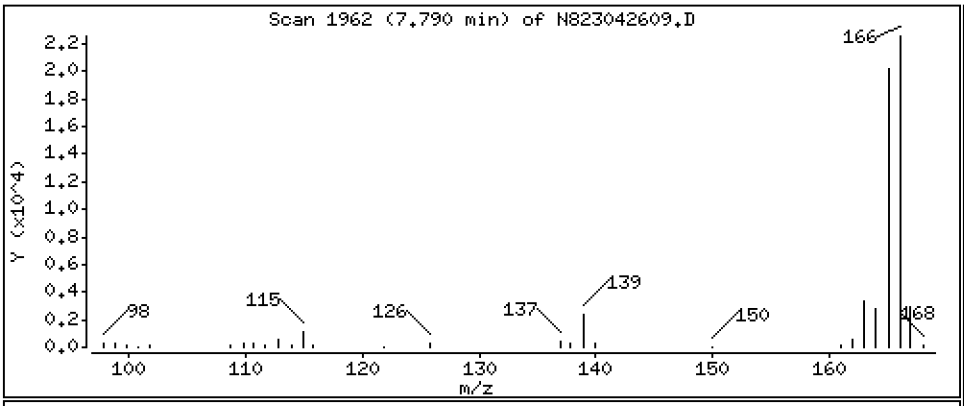
Operator: JZ

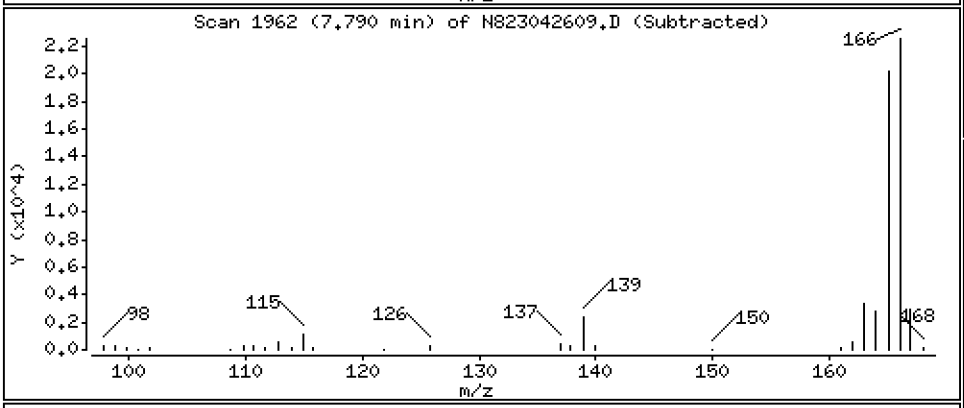
Column phase: Rxi-17sil

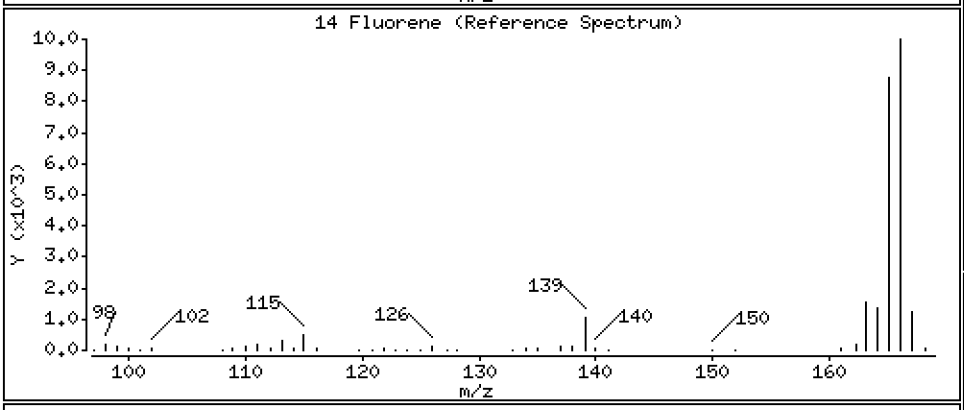
Column diameter: 0.25

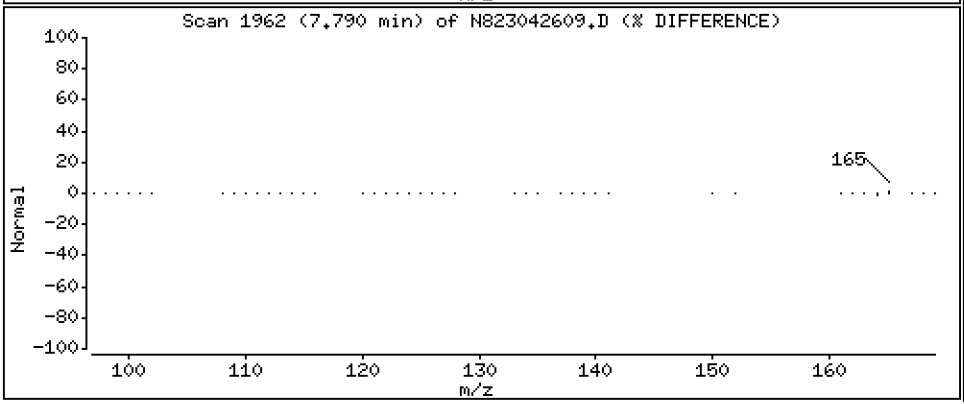
14 Fluorene

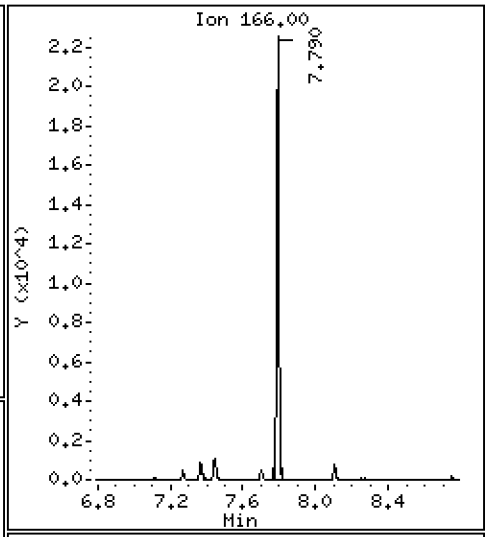
Concentration: 2.293 ug/L

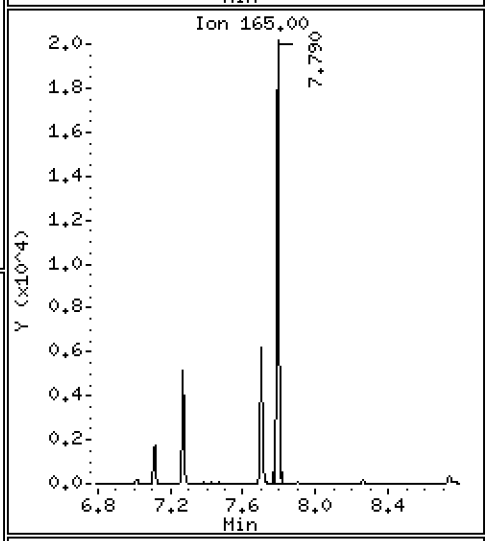


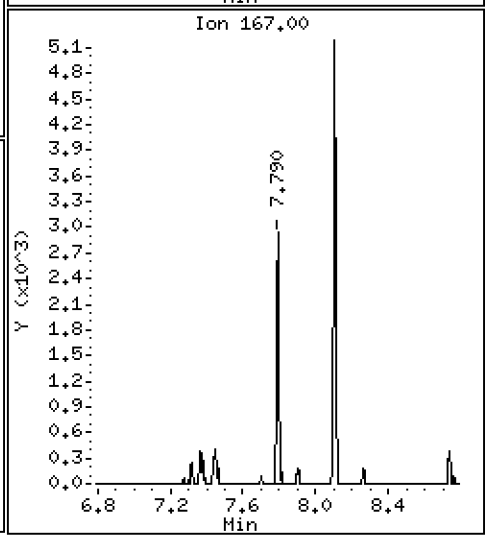












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

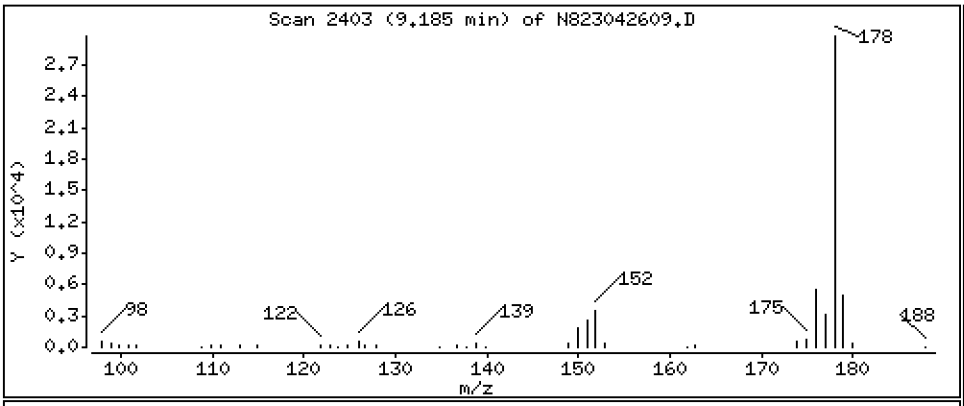
Operator: JZ

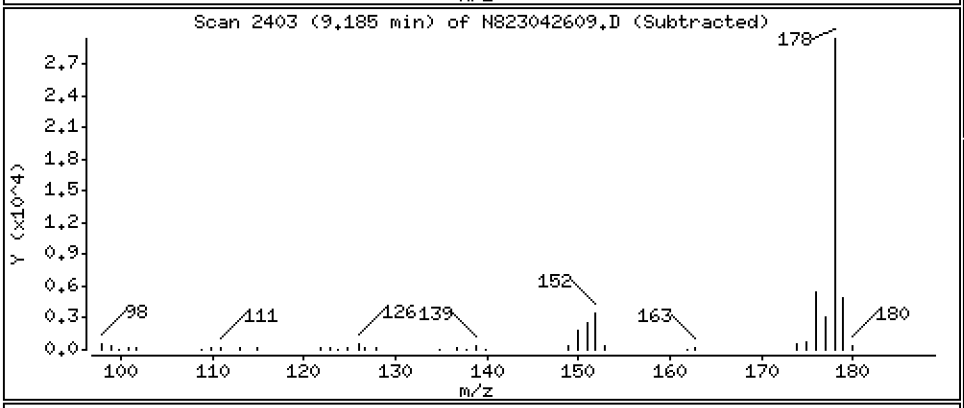
Column phase: Rxi-17sil

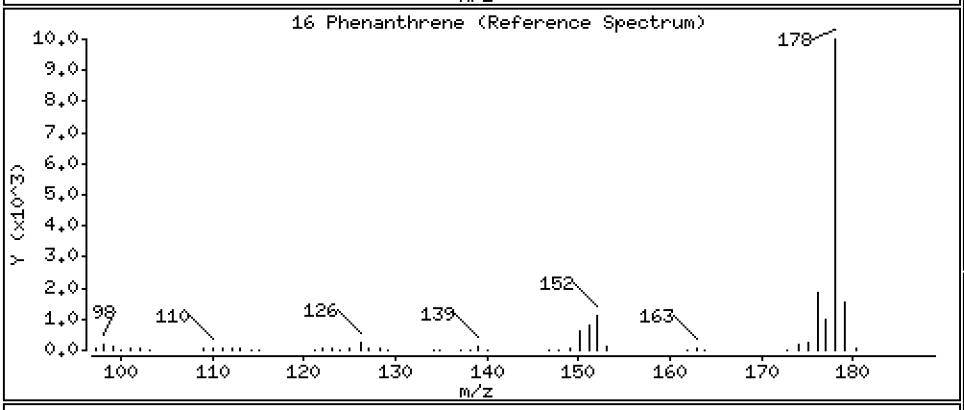
Column diameter: 0.25

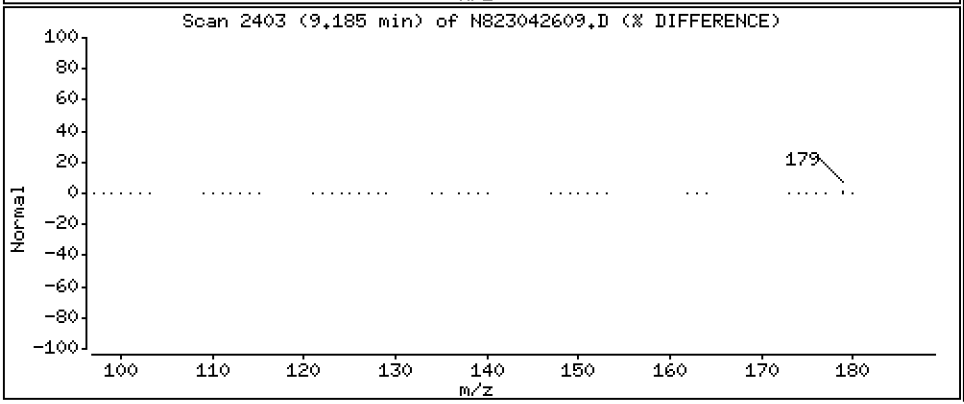
16 Phenanthrene

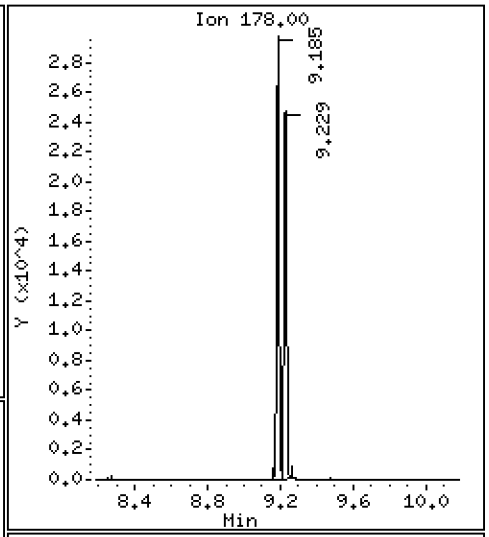
Concentration: 2.161 ug/L

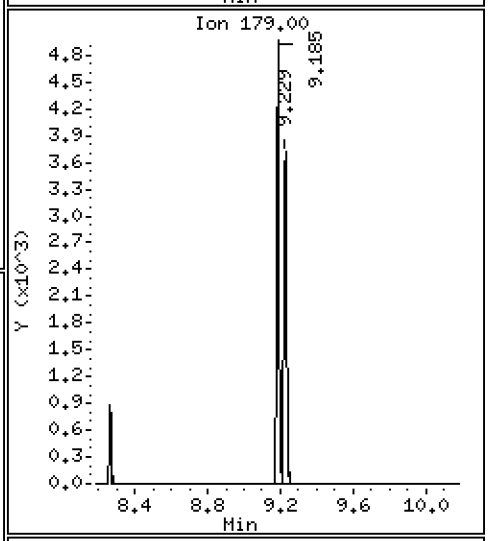


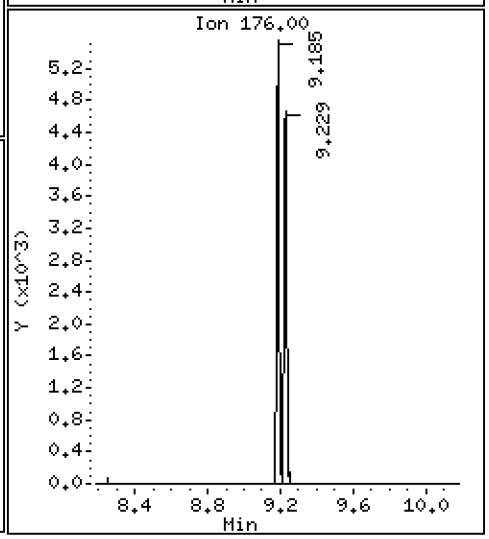












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

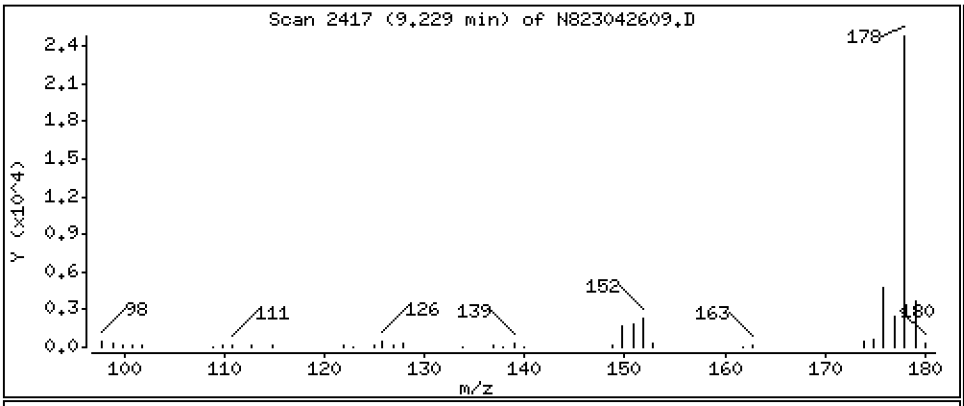
Operator: JZ

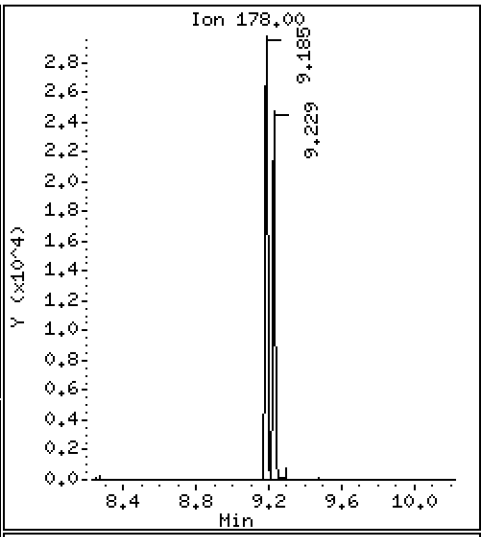
Column phase: Rxi-17sil

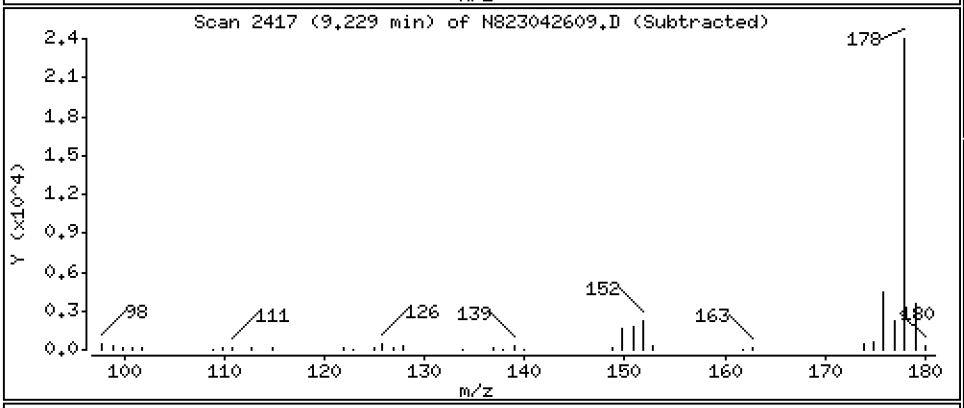
Column diameter: 0.25

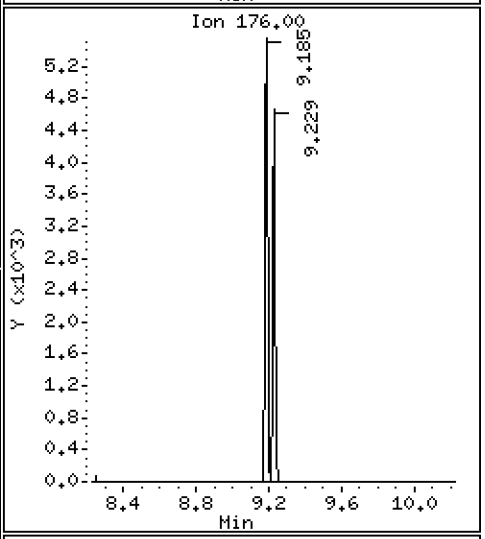
17 Anthracene

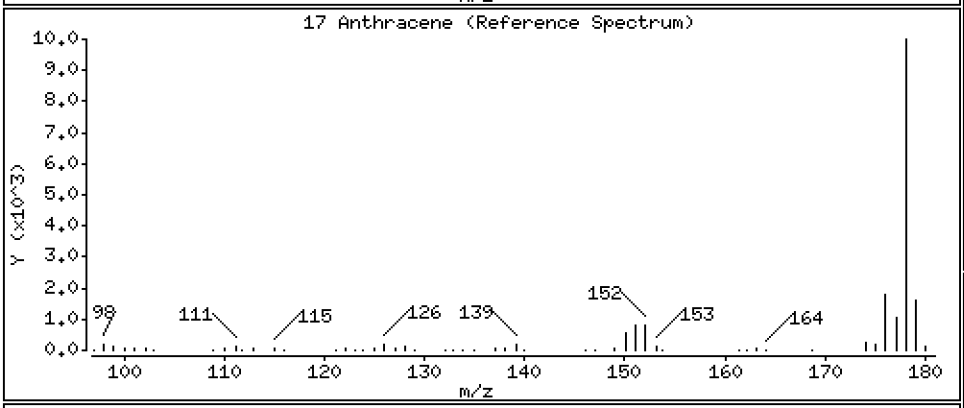
Concentration: 2.008 ug/L

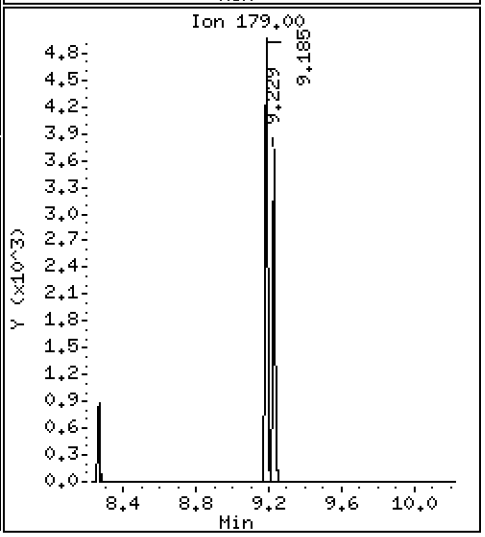


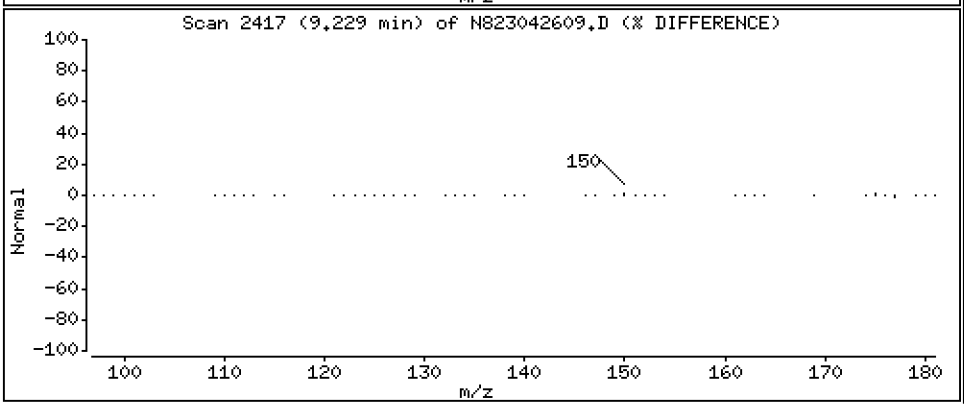












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

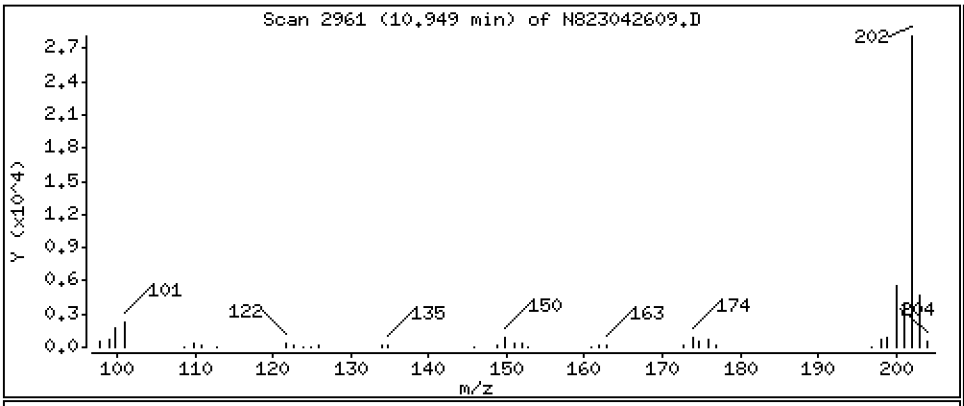
Operator: JZ

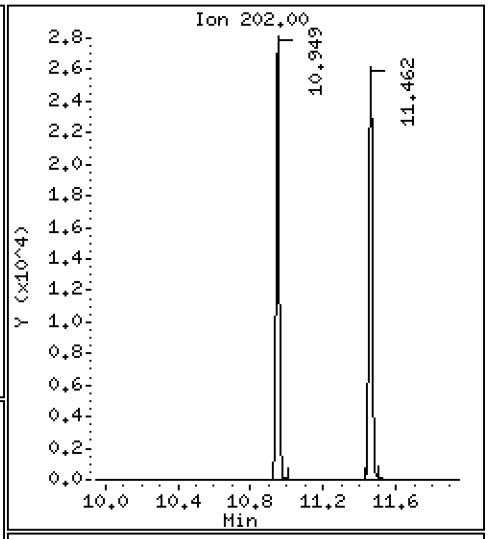
Column phase: Rxi-17sil

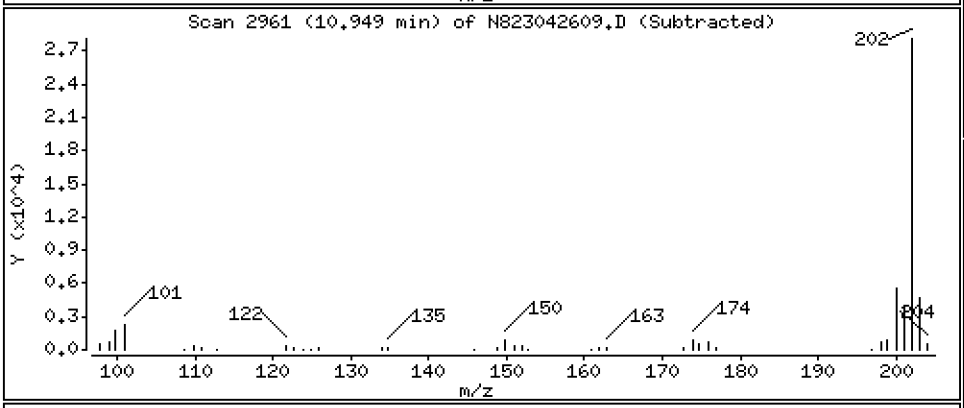
Column diameter: 0.25

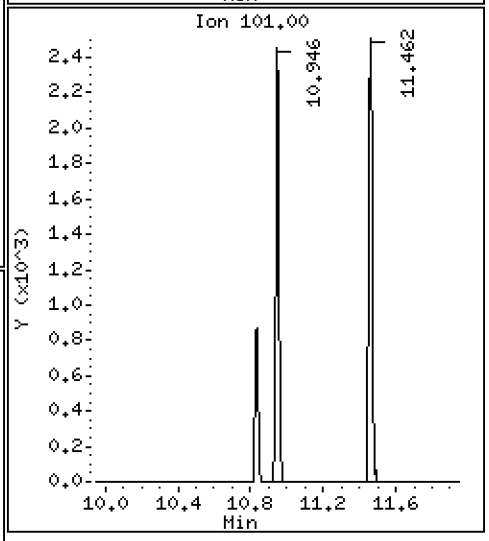
22 Fluoranthene

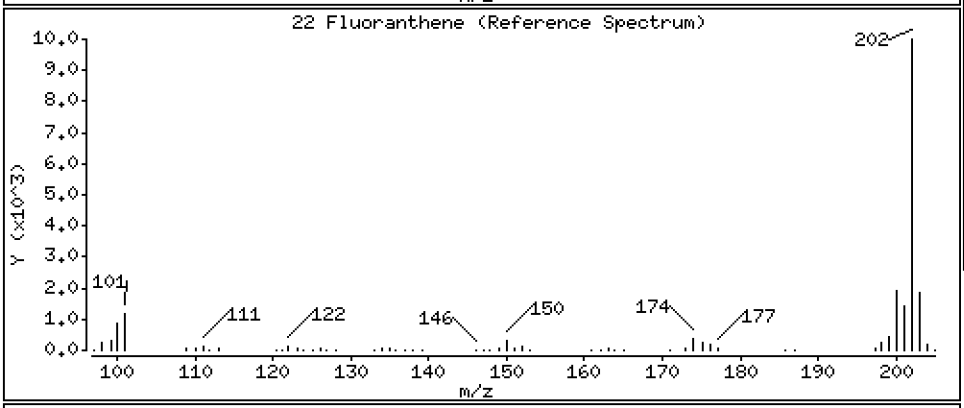
Concentration: 2.256 ug/L

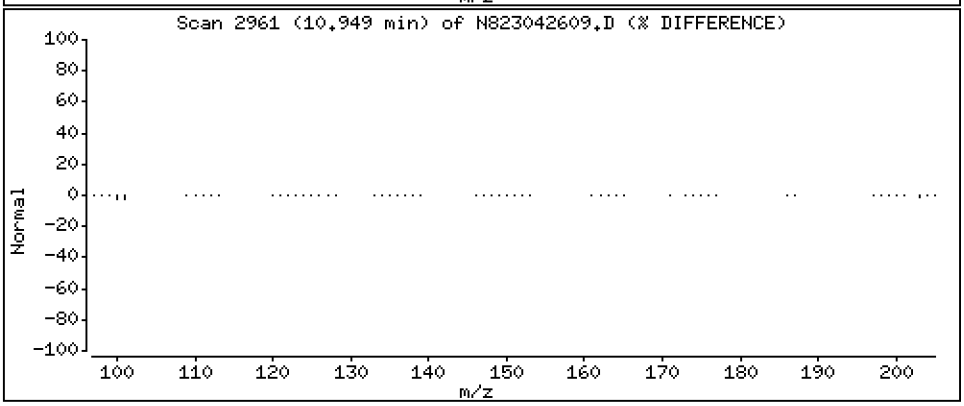












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

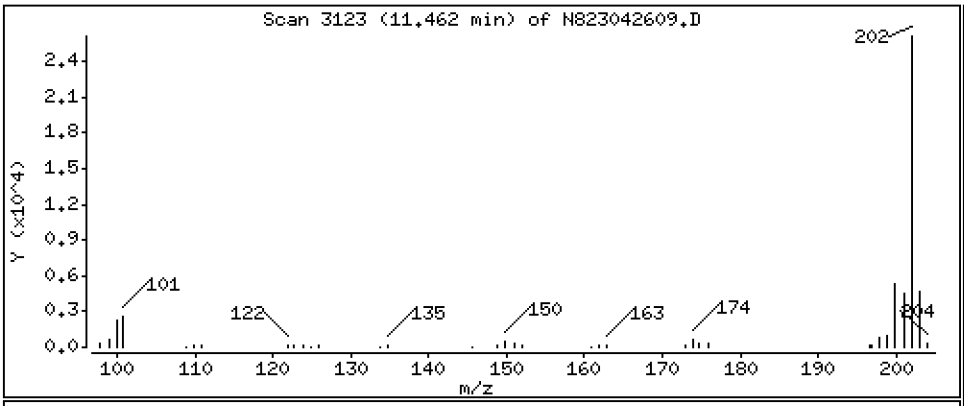
Operator: JZ

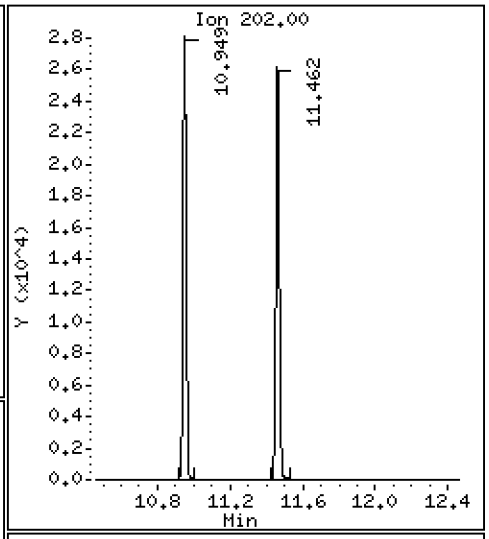
Column phase: Rxi-17sil

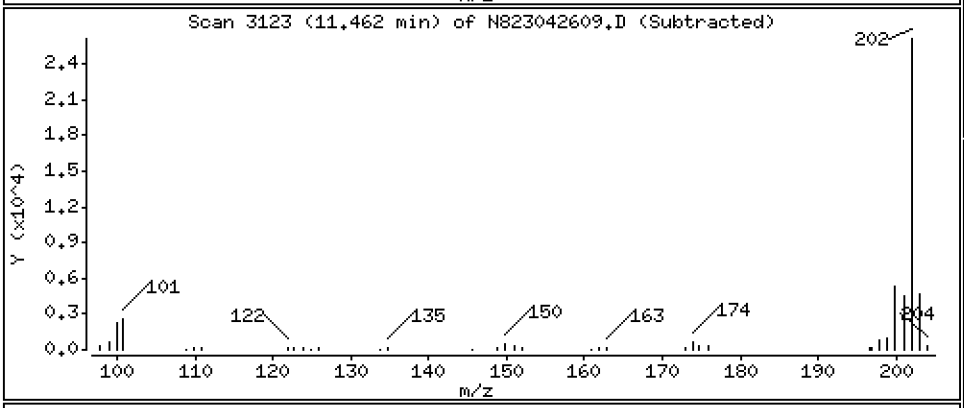
Column diameter: 0.25

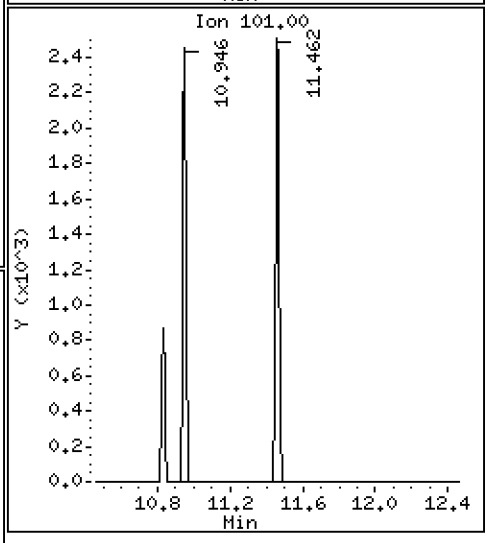
23 Pyrene

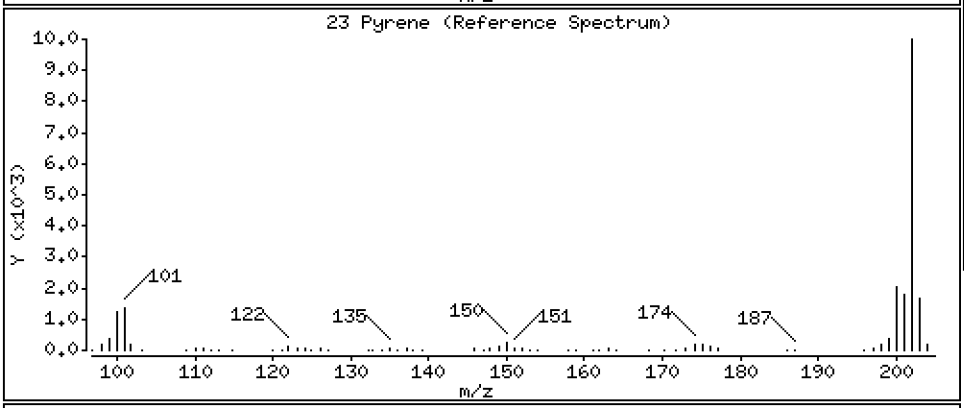
Concentration: 2.227 ug/L

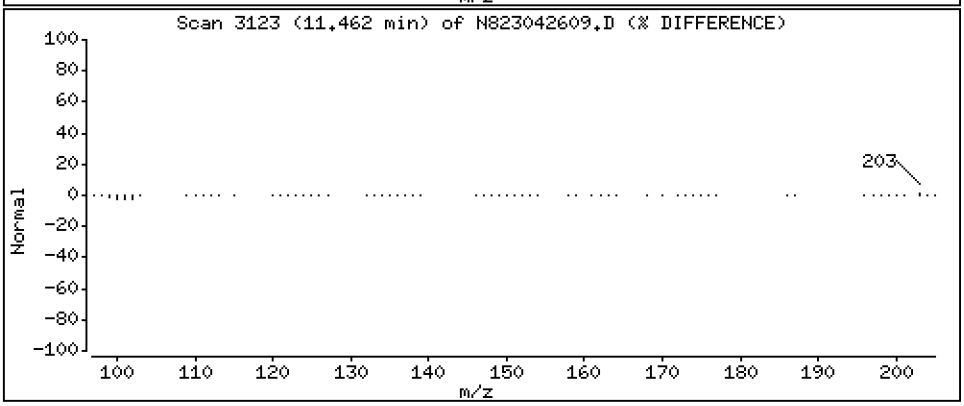












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

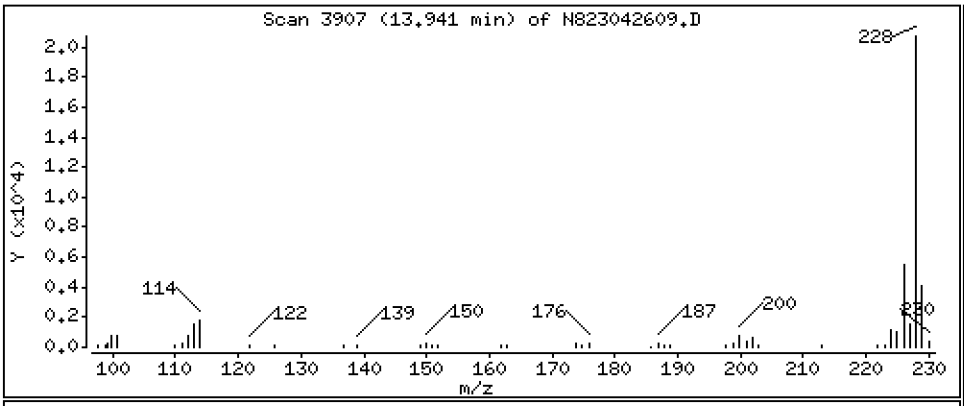
Operator: JZ

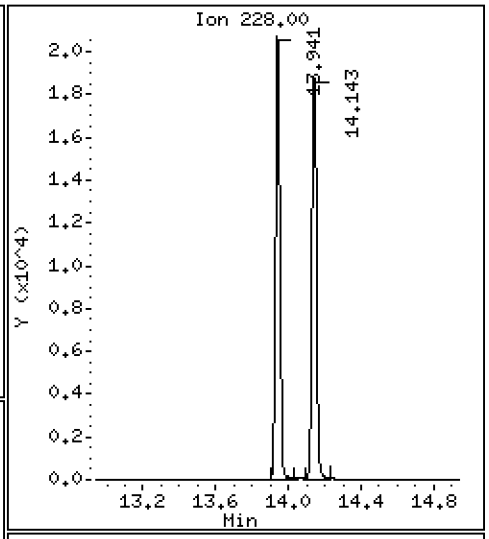
Column phase: Rxi-17sil

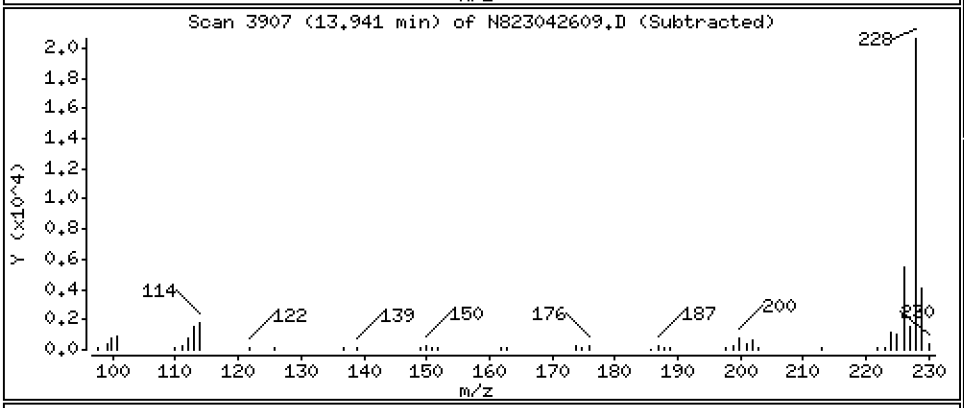
Column diameter: 0.25

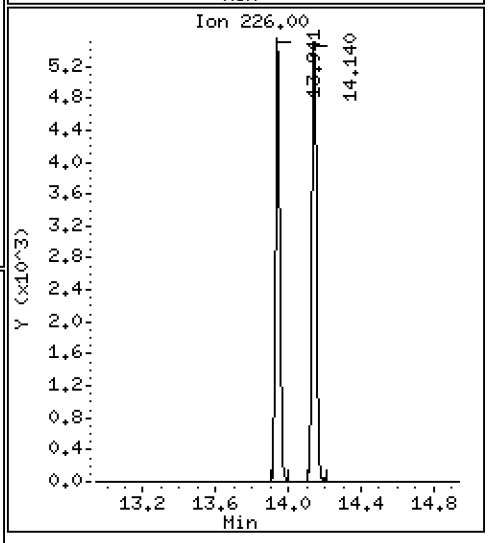
24 Benzo(a)anthracene

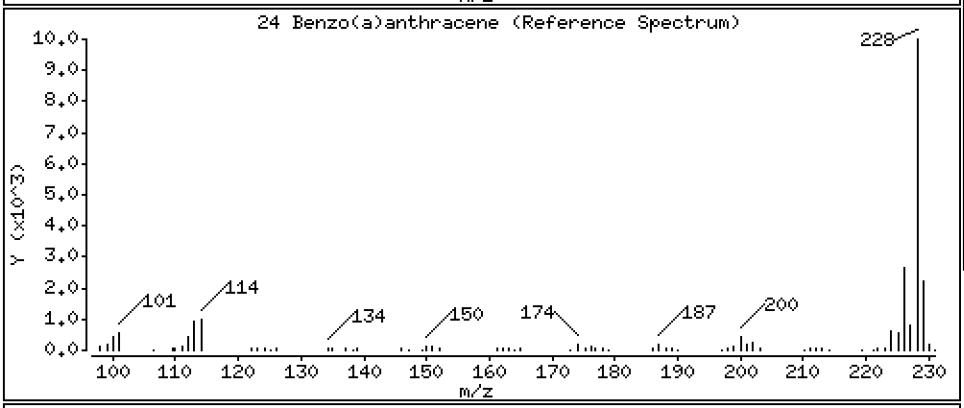
Concentration: 2.175 ug/L

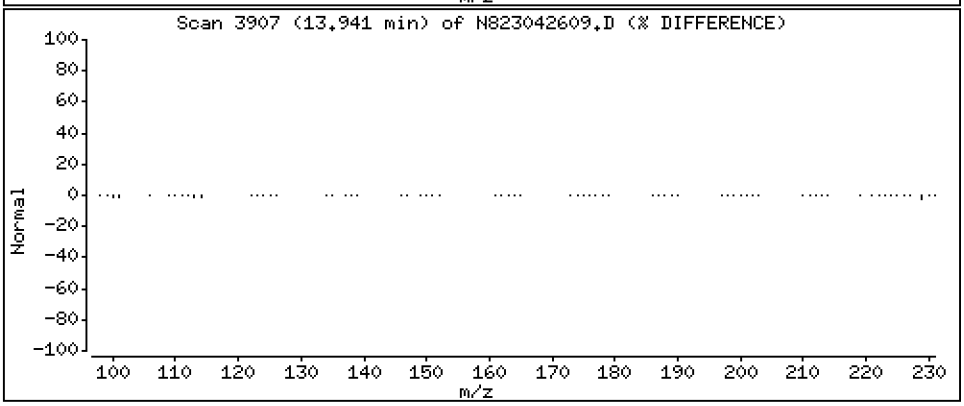












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

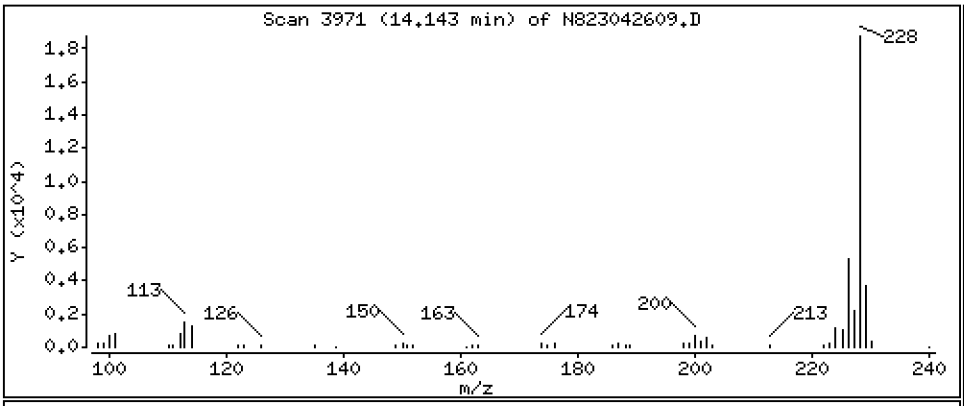
Operator: JZ

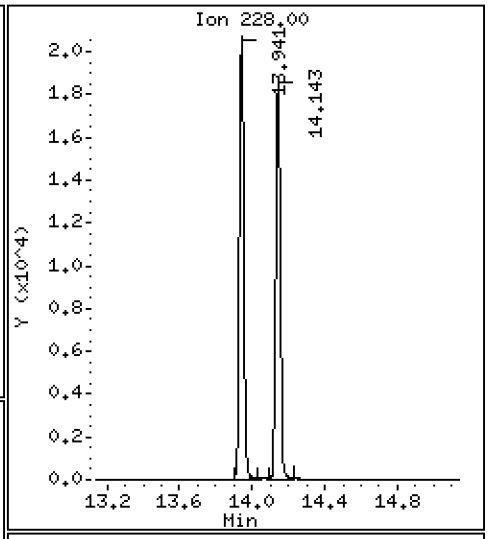
Column phase: Rxi-17sil

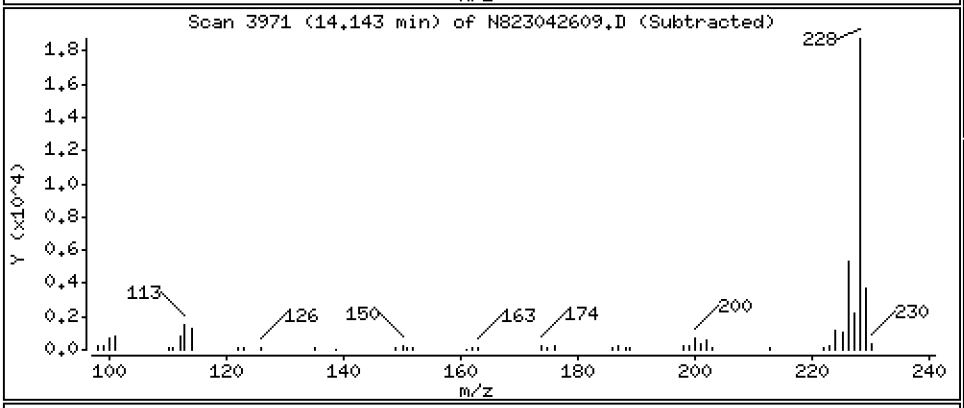
Column diameter: 0.25

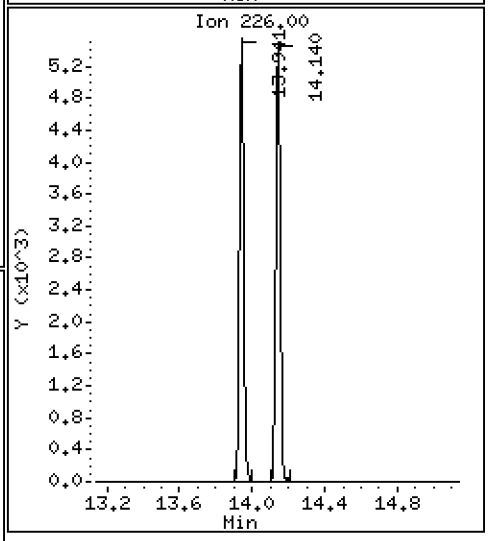
27 Chrysene

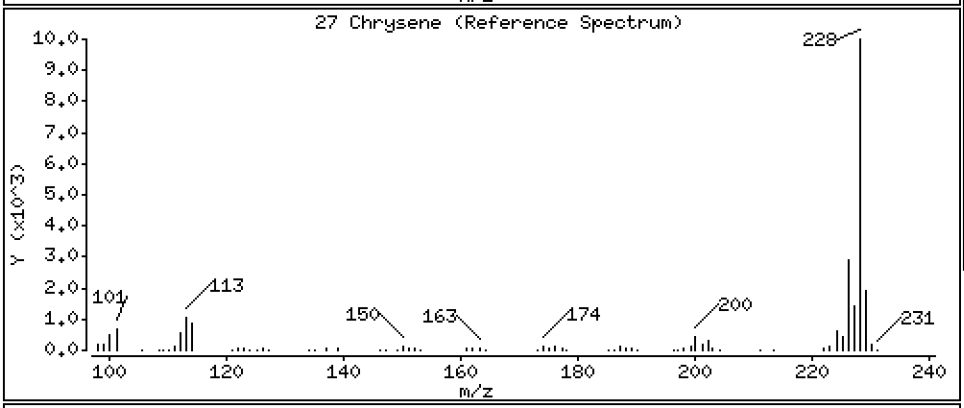
Concentration: 2.137 ug/L

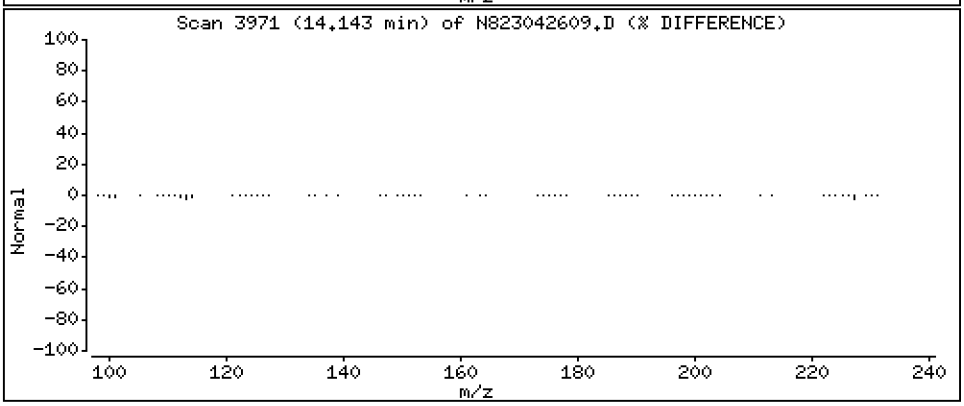












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

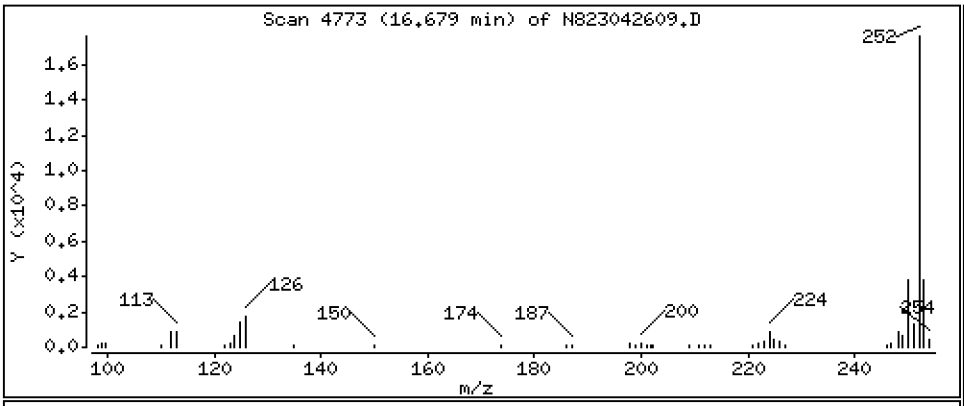
Operator: JZ

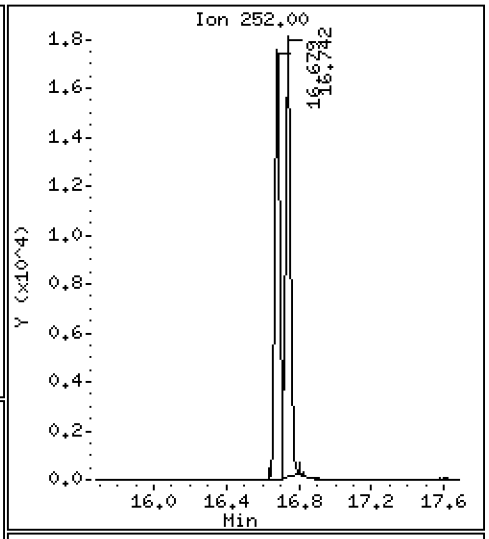
Column phase: Rxi-17sil

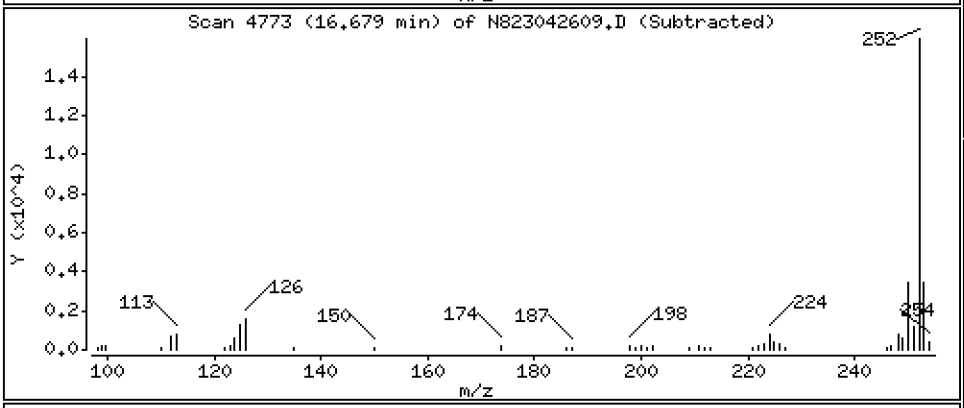
Column diameter: 0.25

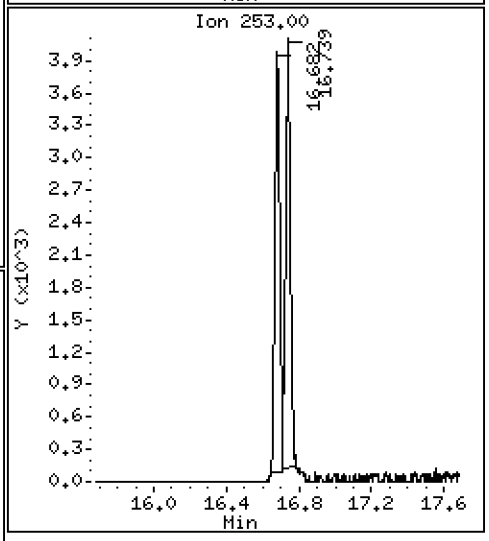
28 Benzo(b)fluoranthene

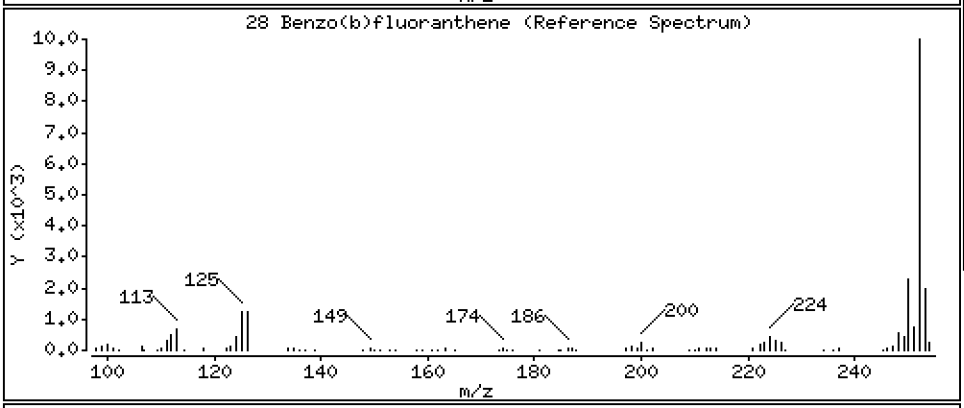
Concentration: 2.156 ug/L

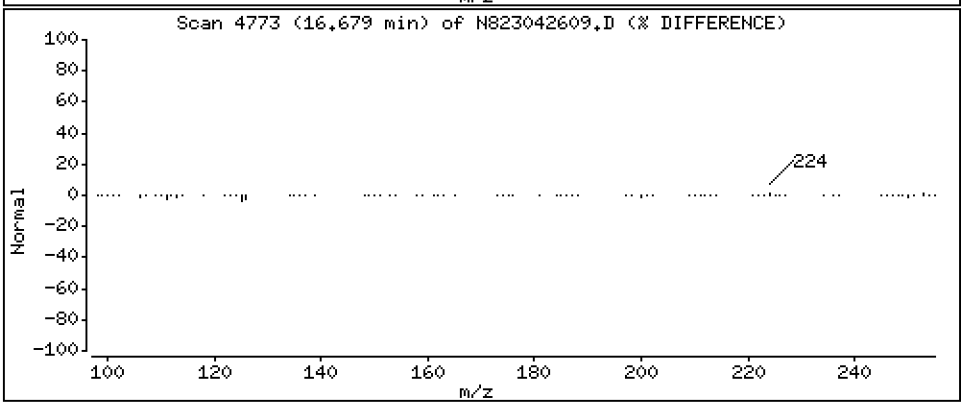












Date : 26-APR-2023 20:49

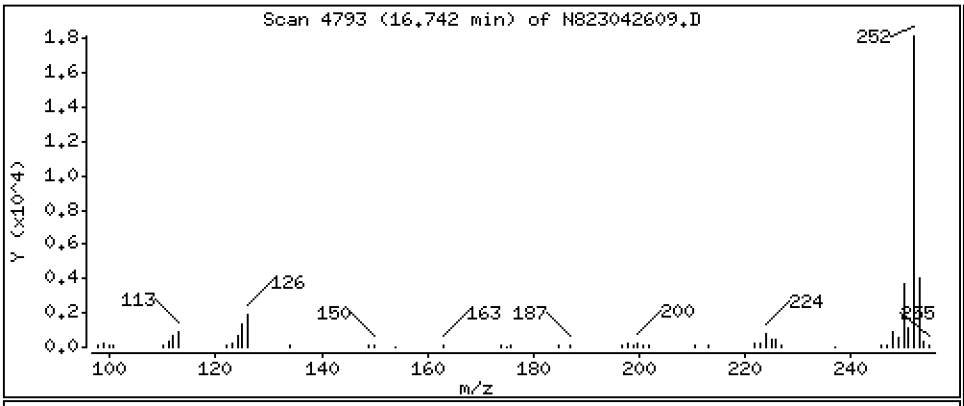
Client ID: Instrument: nt8.i

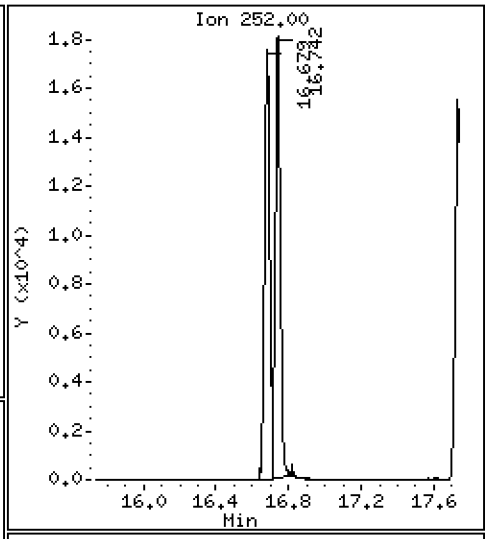
Sample Info: SCV230426

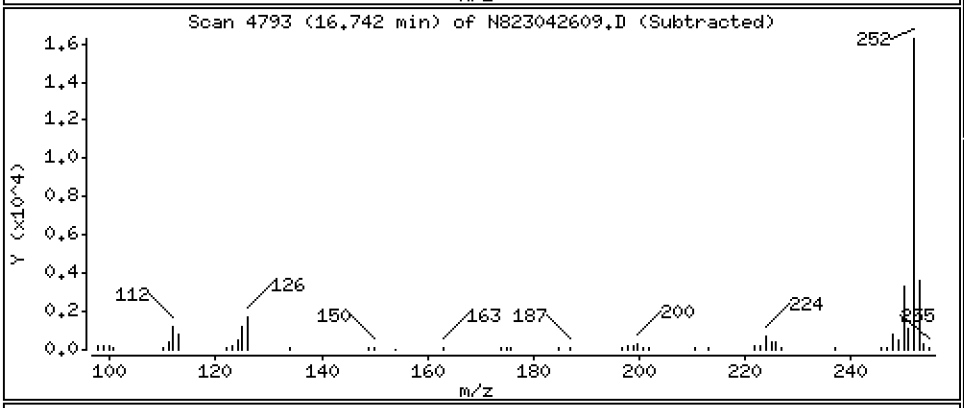
Volume Injected (uL): 1.0 Operator: JZ

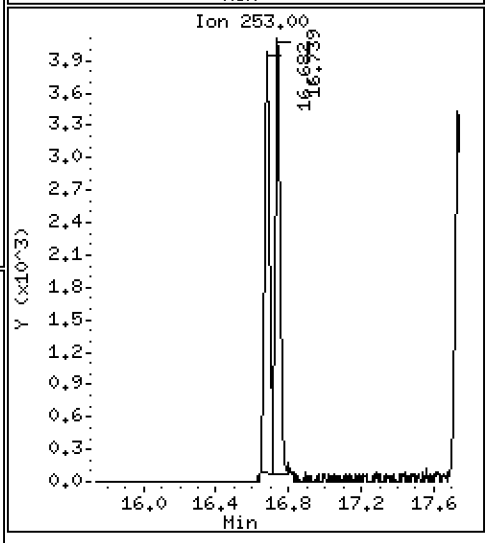
Column phase: Rxi-17sil Column diameter: 0.25

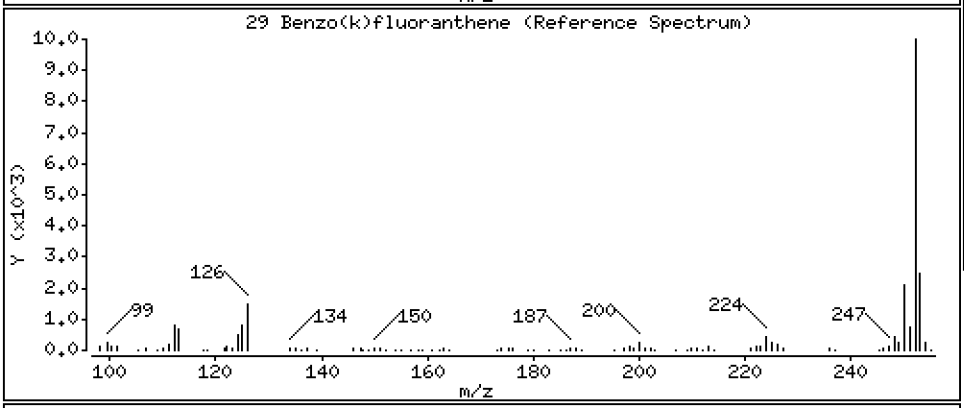
29 Benzo(k)fluoranthene Concentration: 2.301 ug/L

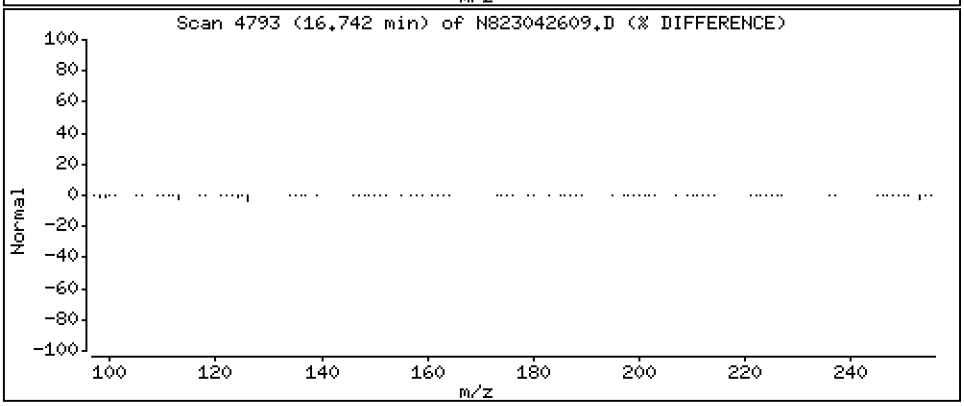












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

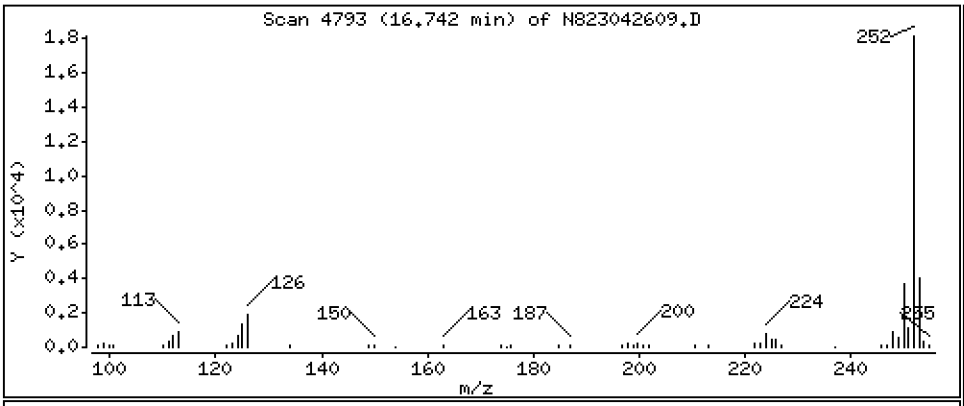
Operator: JZ

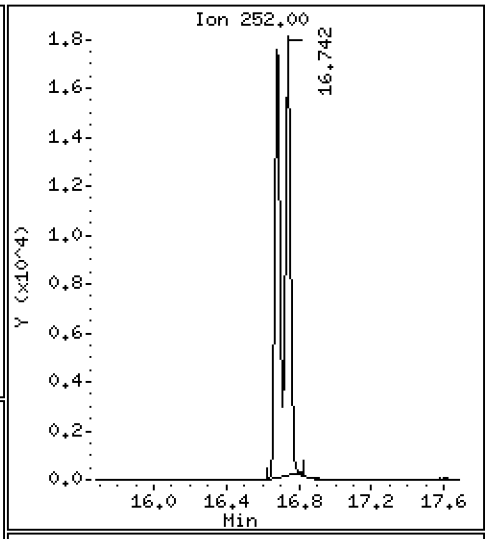
Column phase: Rxi-17sil

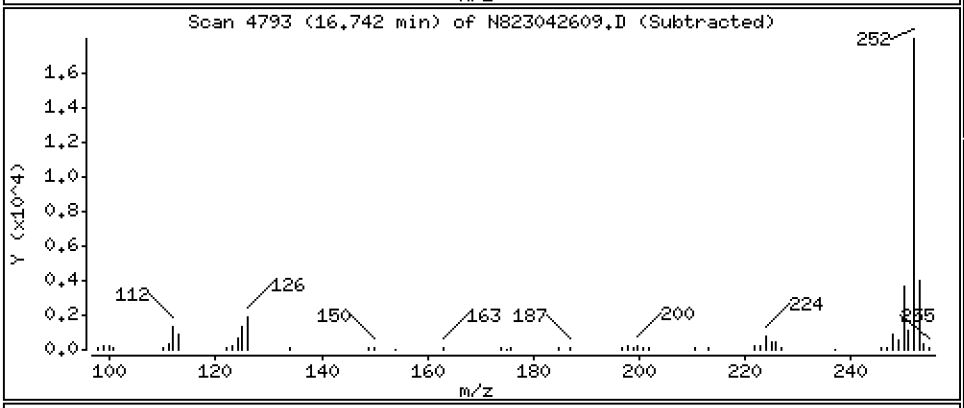
Column diameter: 0.25

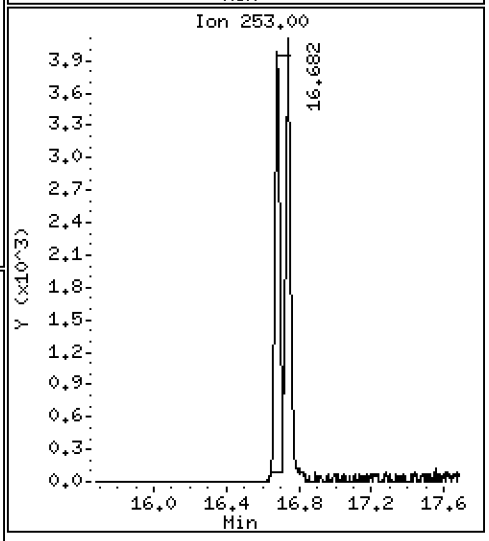
31 Total Benzofluoranthenes

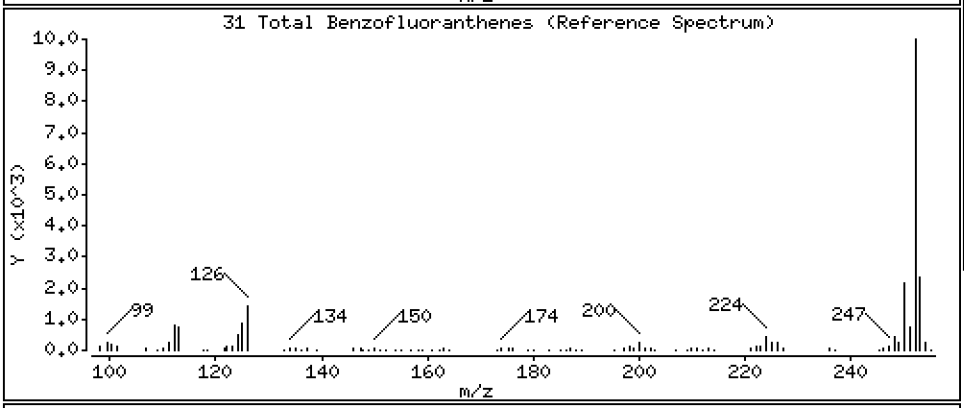
Concentration: 4.553 ug/L

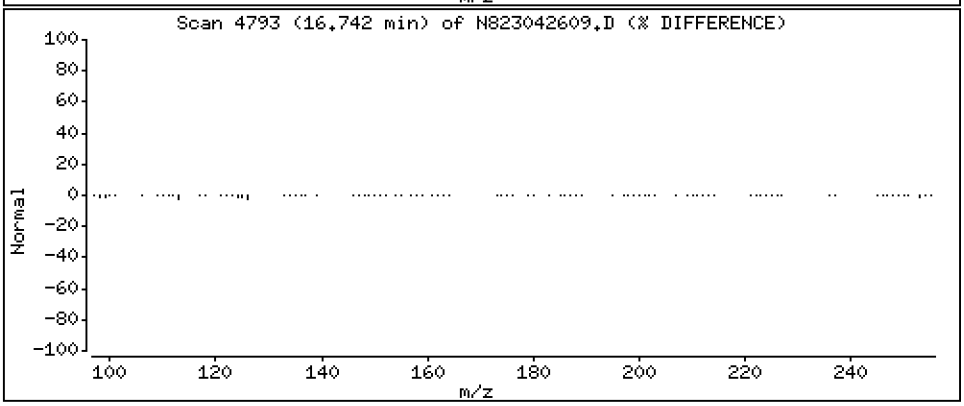












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

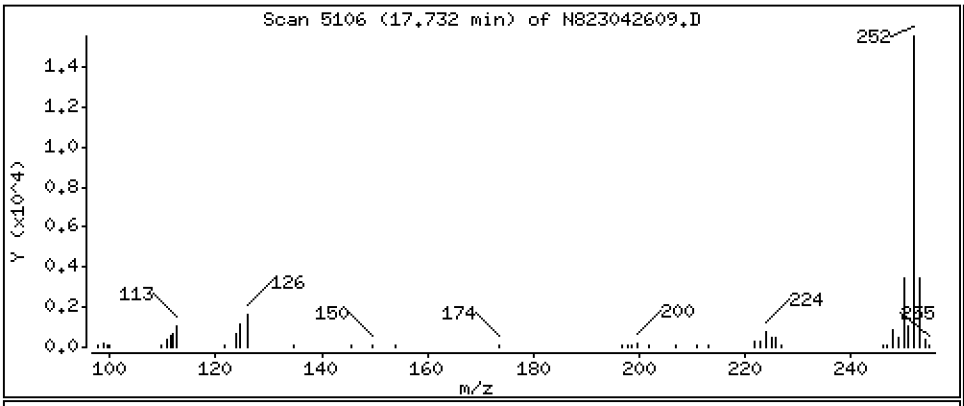
Operator: JZ

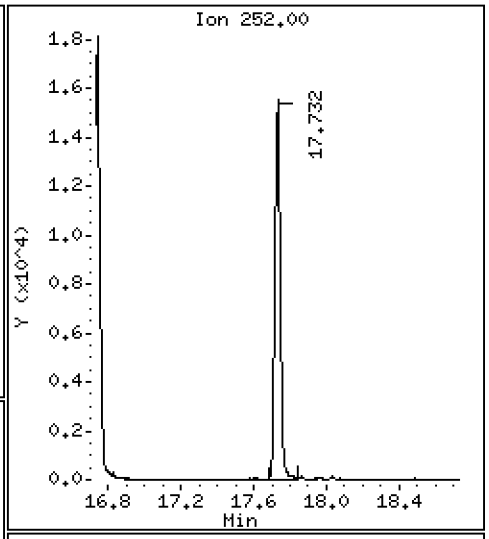
Column phase: Rxi-17sil

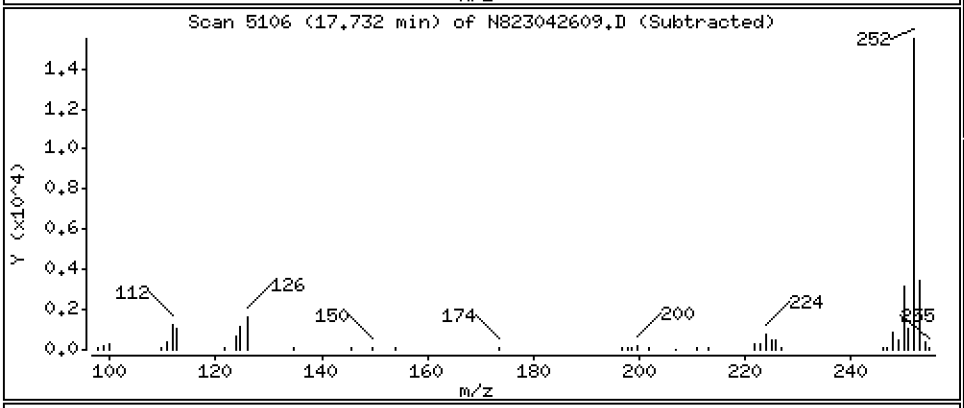
Column diameter: 0.25

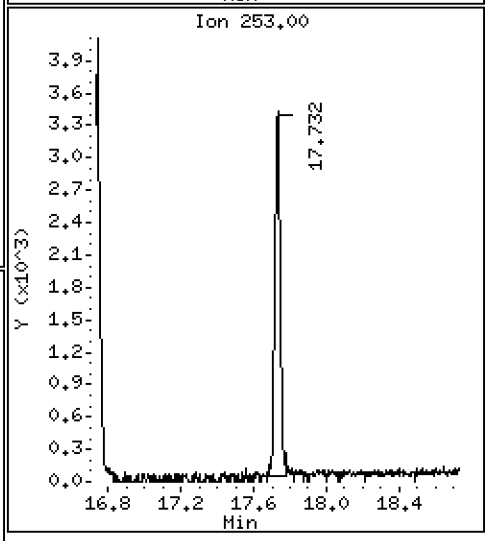
32 Benzo(a)pyrene

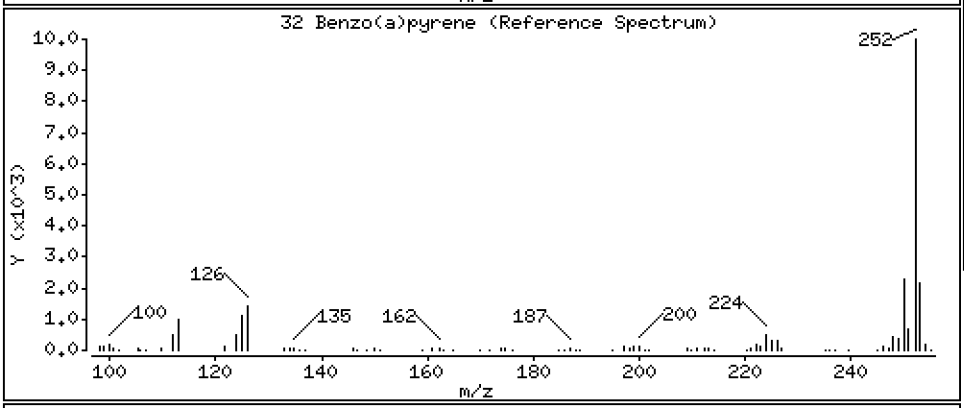
Concentration: 2.295 ug/L

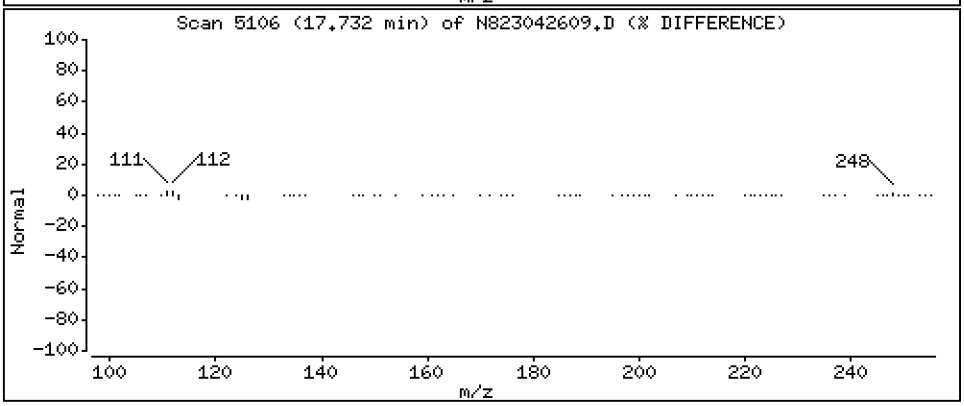












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

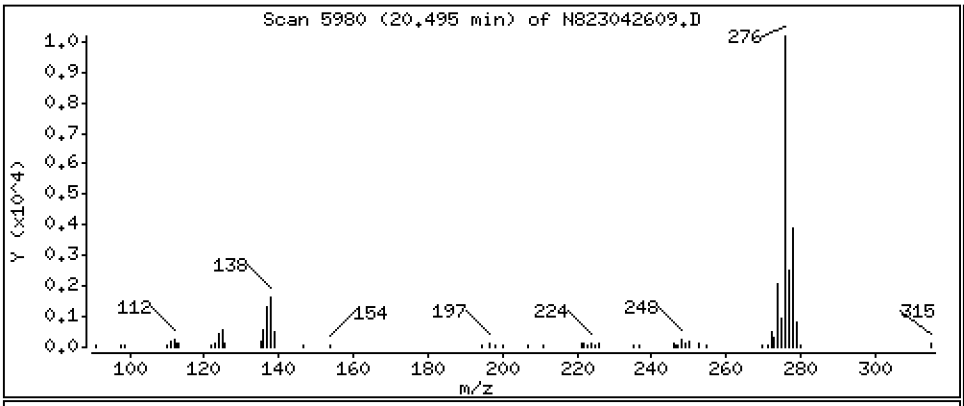
Operator: JZ

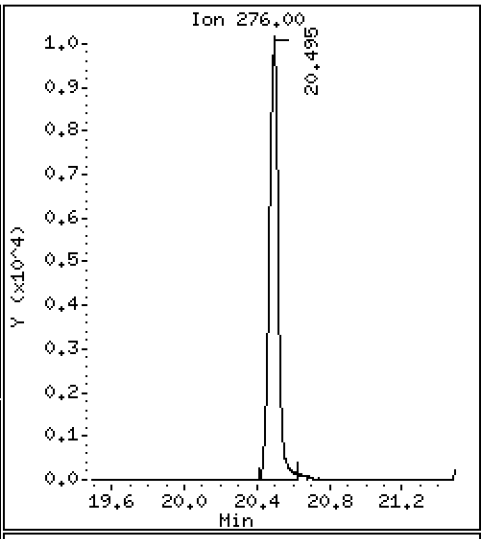
Column phase: Rxi-17sil

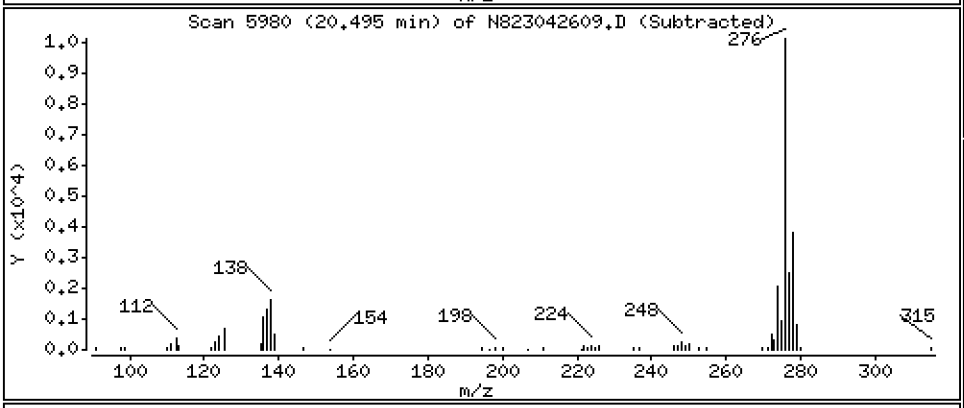
Column diameter: 0.25

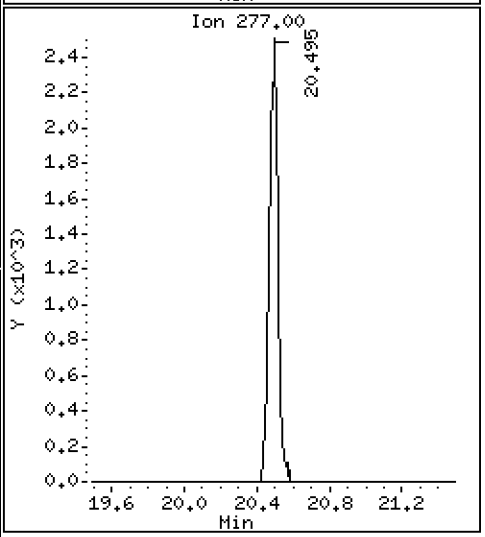
37 Indeno(1,2,3-cd)pyrene

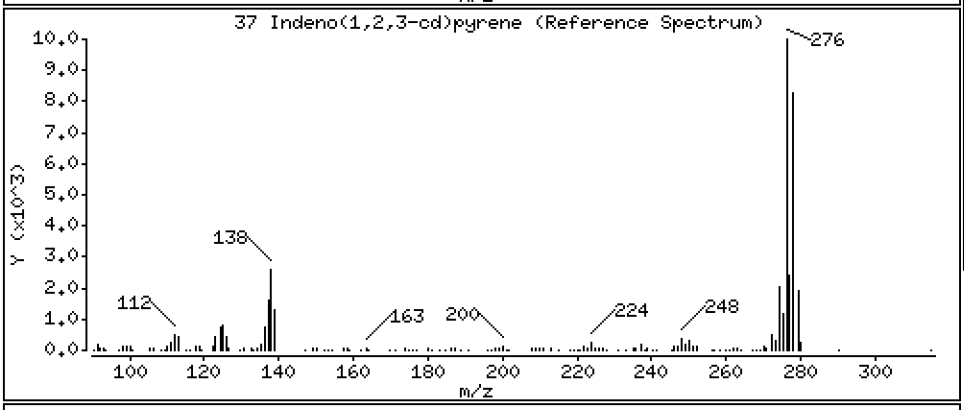
Concentration: 2.450 ug/L

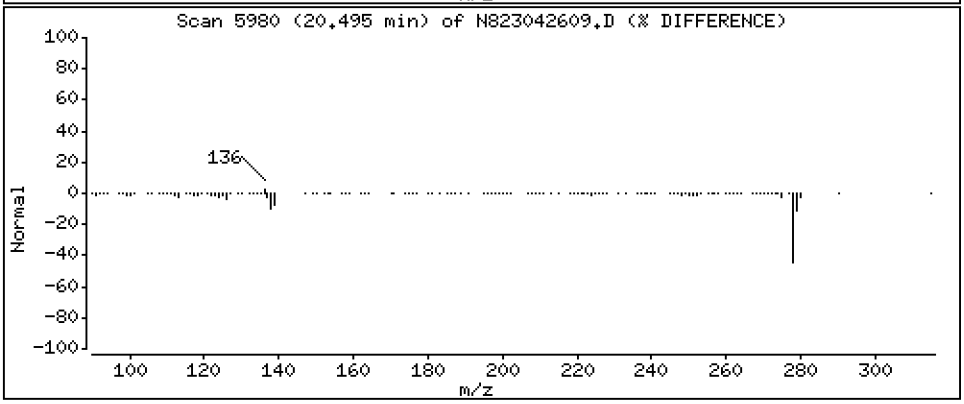












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Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

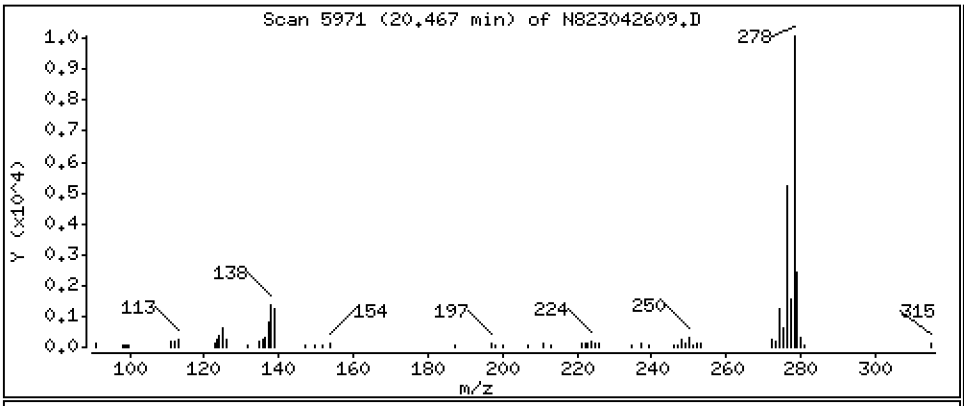
Operator: JZ

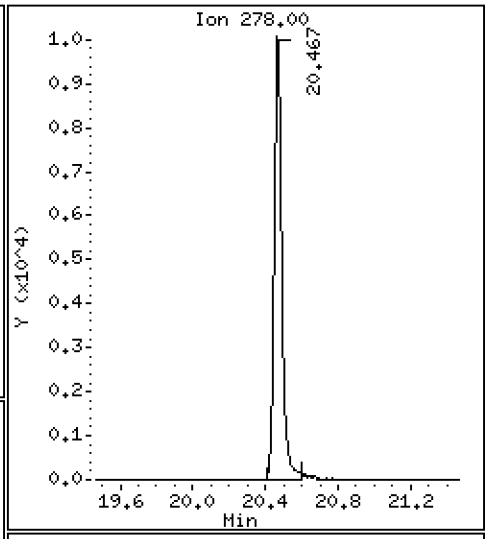
Column phase: Rxi-17sil

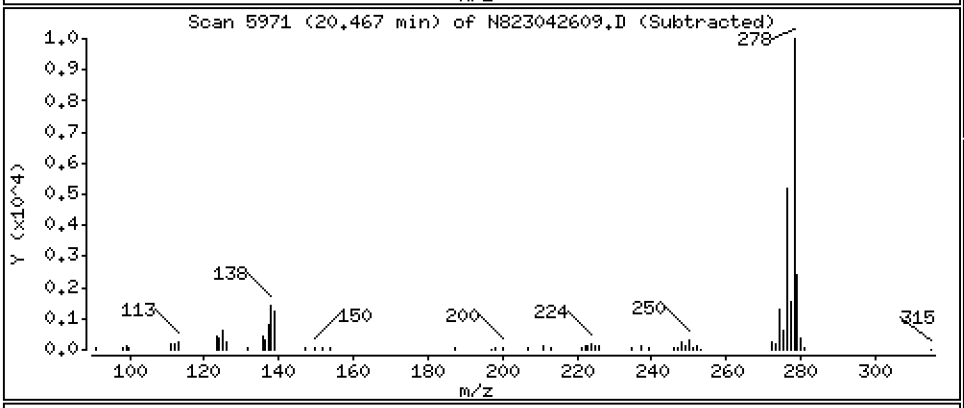
Column diameter: 0.25

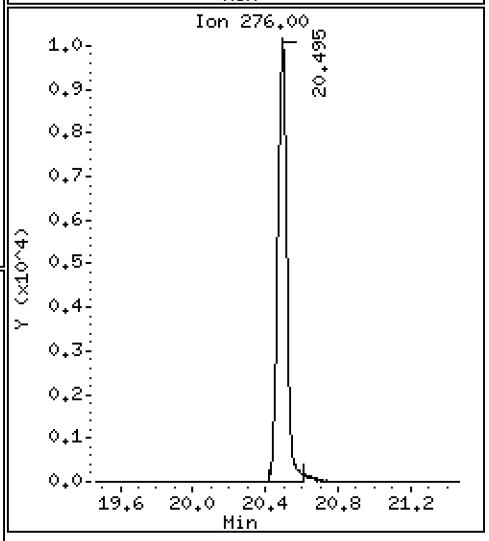
38 Dibenzo(a,h)anthracene

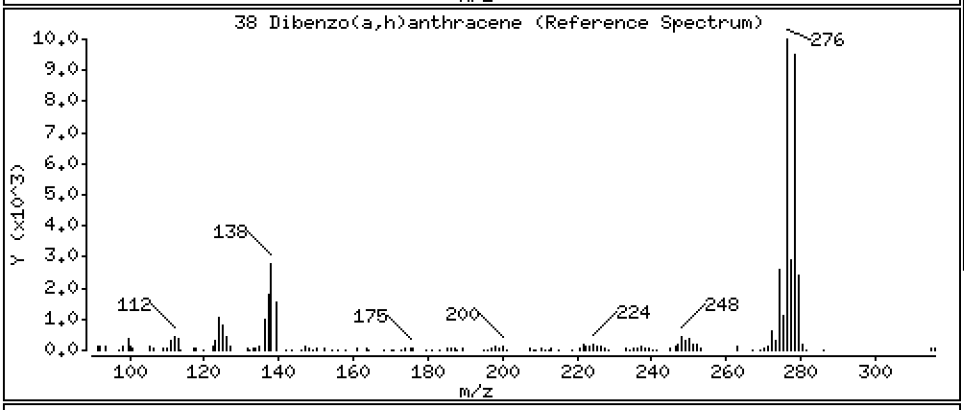
Concentration: 2.334 ug/L

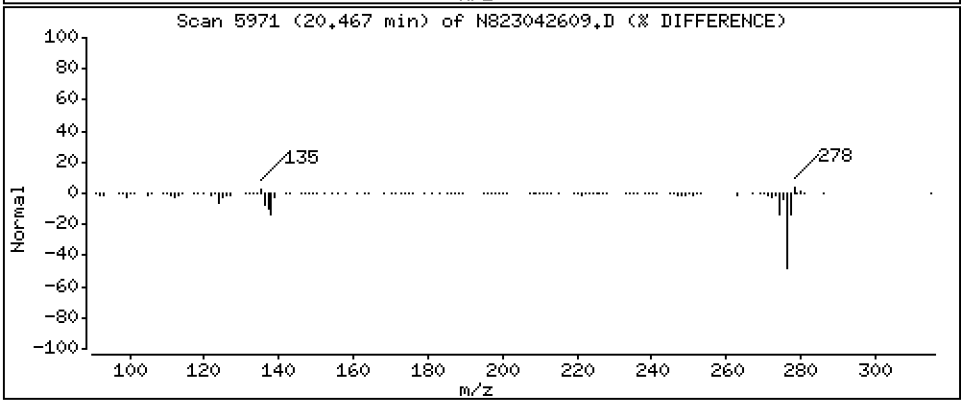












Data File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D

Date : 26-APR-2023 20:49

Client ID:

Instrument: nt8.i

Sample Info: SCV230426

Volume Injected (uL): 1.0

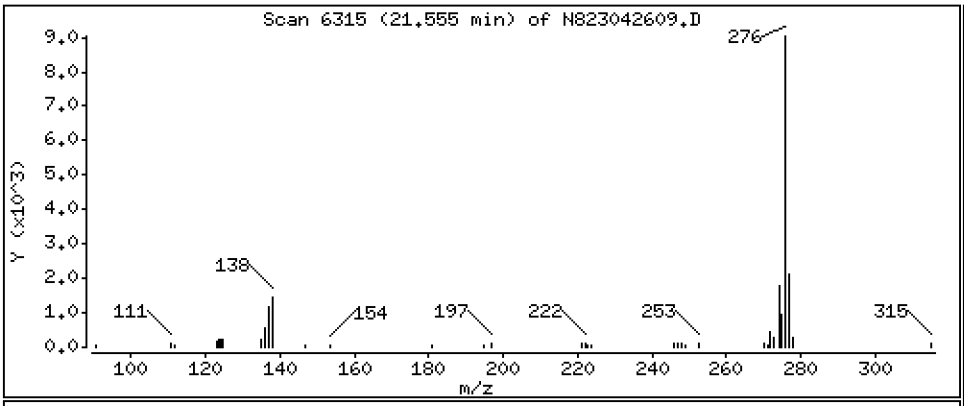
Operator: JZ

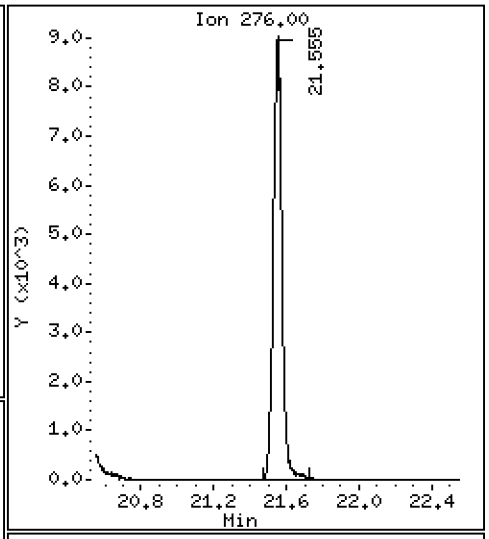
Column phase: Rxi-17sil

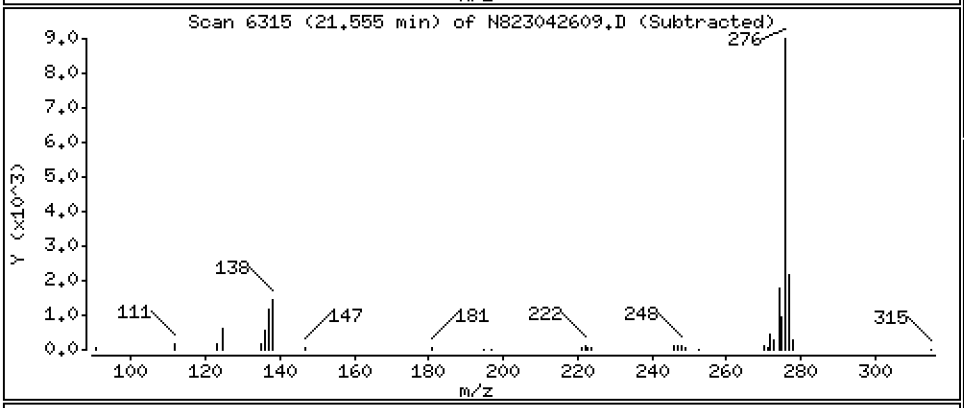
Column diameter: 0.25

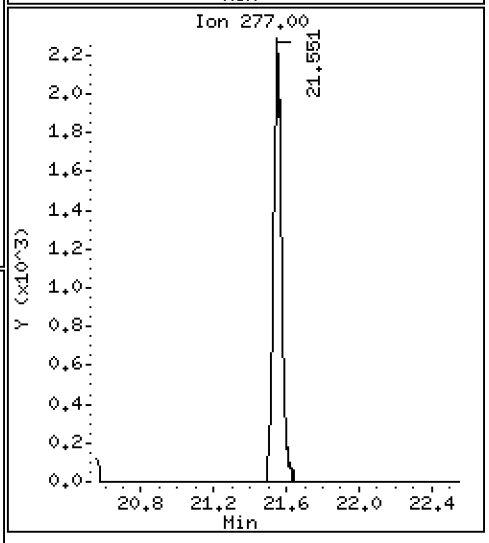
39 Benzo(g,h,i)perylene

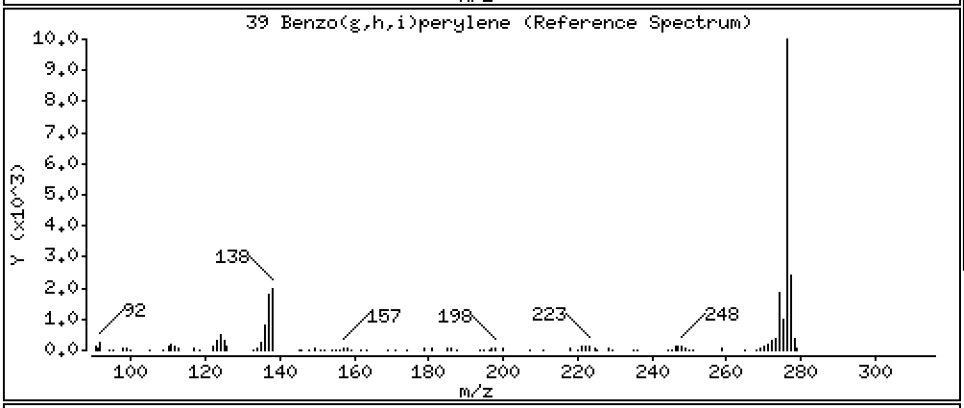
Concentration: 2.248 ug/L

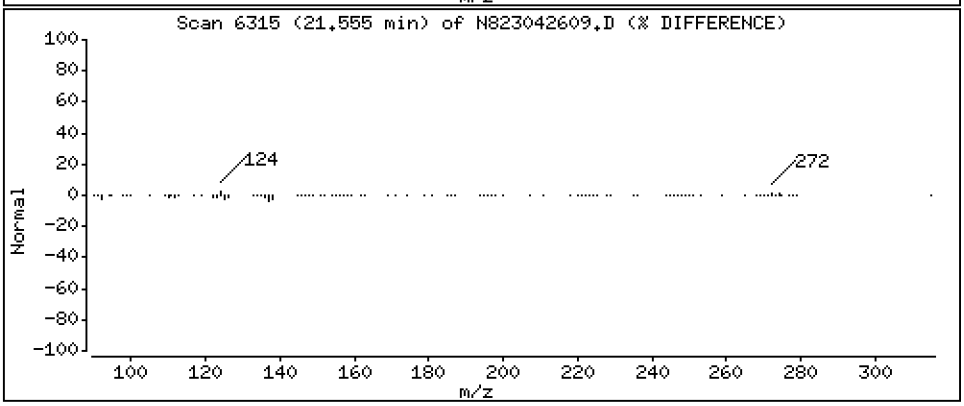












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\N823042609.D
Lab Smp Id: SLD0372-SCV1
Inj Date : 26-APR-2023 20:49
Operator : JZ Inst ID: nt8.i
Smp Info : SCV230426
Misc Info : 23-
Comment : 1ul Injection
Method : \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\FSIMPNA230426
Meth Date : 27-Apr-2023 11:00 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnascv.sub
Target Version: 4.14
Processing Host: JIANQING-202105

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Vo	500.000	Volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
* 1	Naphthalene-d8	136	4.827	4.827	(1.000)	20718	2.00000	
2	Naphthalene	128	4.856	4.856	(1.006)	24938	2.36264	2.363
$ 3	2-Methylnaphthalene-d10	152	Compound Not Detected.					
4	2-Methylnaphthalene	141	5.605	5.605	(1.161)	14334	2.39183	2.392
5	1-methylnaphthalene	141	5.801	5.801	(1.202)	14142	2.38001	2.380
9	Acenaphthylene	152	7.003	7.003	(0.984)	25991	2.32237	2.322
* 10	Acenaphthene-d10	164	7.113	7.110	(1.000)	12642	2.00000	
11	Acenaphthene	153	7.161	7.161	(1.007)	16198	2.23392	2.234
12	Dibenzofuran	168	7.316	7.313	(1.028)	27419	2.51765	2.518
14	Fluorene	166	7.790	7.790	(1.095)	19927	2.29268	2.293
* 15	Phenanthrene-d10	188	9.150	9.150	(1.000)	24547	2.00000	
16	Phenanthrene	178	9.184	9.185	(1.004)	28095	2.16083	2.161
17	Anthracene	178	9.229	9.226	(1.009)	24487	2.00809	2.008
22	Fluoranthene	202	10.949	10.949	(1.197)	33741	2.25628	2.256
$ 21	Fluoranthene-d10	212	Compound Not Detected.					
23	Pyrene	202	11.461	11.461	(0.815)	34528	2.22695	2.227
24	Benzo(a)anthracene	228	13.940	13.940	(0.991)	34655	2.17519	2.175
* 25	Chrysene-d12	240	14.070	14.067	(1.000)	24217	2.00000	
27	Chrysene	228	14.142	14.139	(1.005)	33440	2.13657	2.137
28	Benzo(b)fluoranthene	252	16.678	16.682	(0.929)	35085	2.15649	2.156
29	Benzo(k)fluoranthene	252	16.742	16.739	(0.932)	35276	2.30130	2.301
31	Total Benzofluoranthenes	252	16.742	16.682	(0.932)	68883	4.55291	4.553(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	32 Benzo(a)pyrene	252	17.731	17.731	(0.987)	32452	2.29472	2.295
*	33 Perylene-d12	264	17.959	17.959	(1.000)	24956	2.00000	
	37 Indeno(1,2,3-cd)pyrene	276	20.495	20.492	(1.141)	35264	2.44967	2.450
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	20.466	20.467	(1.140)	29838	2.33423	2.334
	39 Benzo(g,h,i)perylene	276	21.554	21.551	(1.200)	29972	2.24768	2.248

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823042609.D
Lab Smp Id: SLD0372-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\year2023\APR2023\20230426.b\FSIMPNA23042
Misc Info: 23-

Calibration Date: 26-APR-2023
Calibration Time: 19:27
Level: LOW
Sample Type: WATER

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	18699	9350	37398	20718	10.80
10 Acenaphthene-d10	10729	5365	21458	12642	17.83
15 Phenanthrene-d10	20748	10374	41496	24547	18.31
25 Chrysene-d12	20954	10477	41908	24217	15.57
33 Perylene-d12	21563	10782	43126	24956	15.74

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.83	4.33	5.33	4.83	-0.01
10 Acenaphthene-d10	7.11	6.61	7.61	7.11	0.04
15 Phenanthrene-d10	9.15	8.65	9.65	9.15	-0.00
25 Chrysene-d12	14.07	13.57	14.57	14.07	0.02
33 Perylene-d12	17.96	17.46	18.46	17.96	-0.00

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

REVIEW SUMMARY FOR FILE - N823042609.D

Lab ID: SLD0372-SCV1
nt8.i, year2023\APR2023\20230426.b\FSIMPNA230426.m,   26-APR-2023 20:49

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

No RRT check performed

On Column LOD for nt8.i, year2023\APR2023\20230426.b\FSIMPNA230426.m, pnascv.su

Exception: Benzo(b)fluoranthene 0.0300
Exception: Benzo(k)fluoranthene 0.0300
Exception: Total Benzofluoranthenes 0.0300
Exception: Fluoranthene-d10 (Surr) 0.0000

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

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

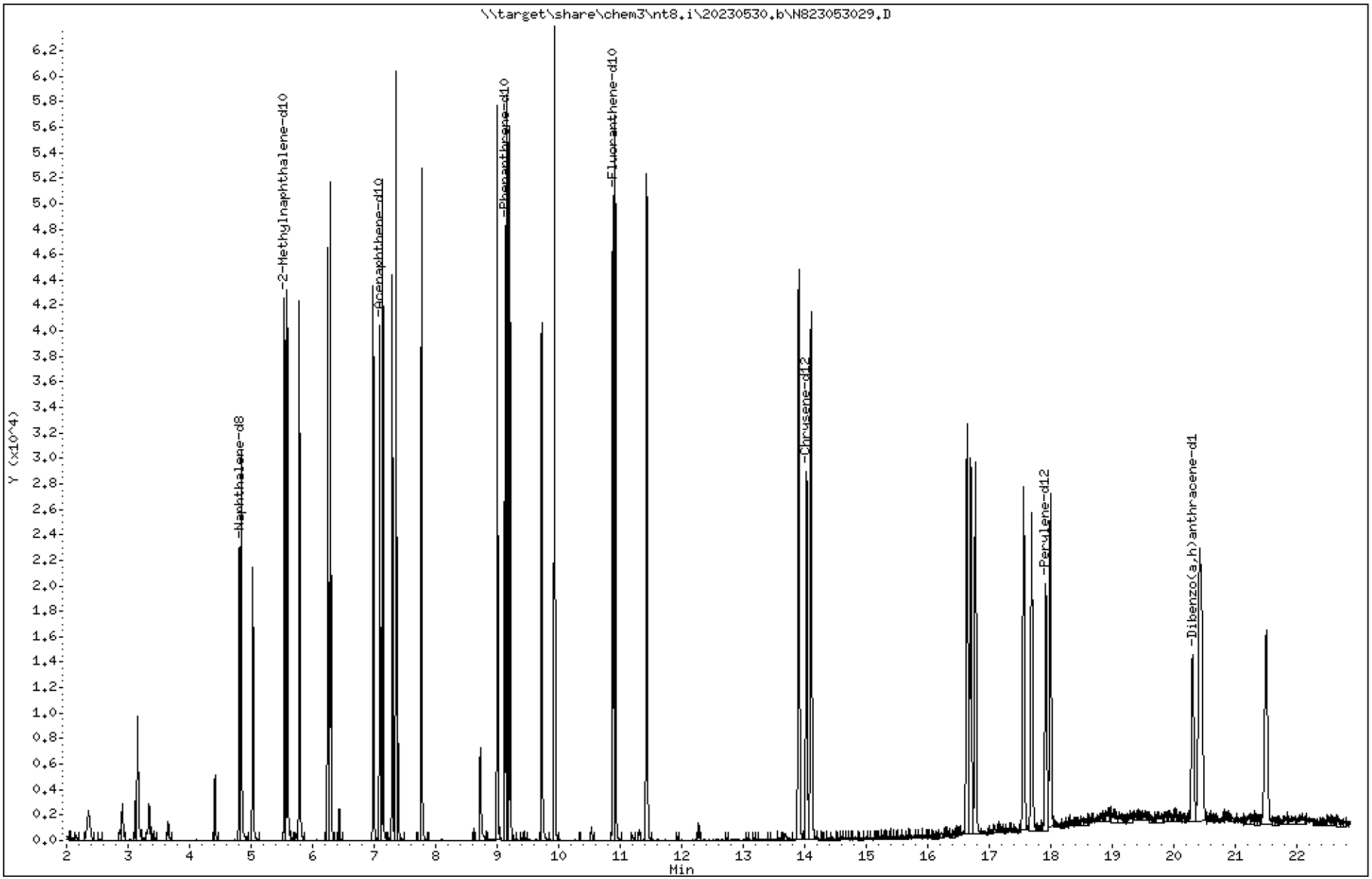
Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT8	Calibration:	GD00068
Lab File ID:	N823053029.D	Calibration Date:	04/26/2023
Sequence:	SLE0448	Injection Date:	05/31/23
Lab Sample ID:	SLE0448-CCV1	Injection Time:	00:22
Sequence Name:	Calibration Check		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Naphthalene	A	2.5000	2.52	1.0189360	1.0254630		0.6	+/-50
2-Methylnaphthalene	A	2.5000	2.49	0.5785221	0.5756381		-0.5	+/-50
1-Methylnaphthalene	A	2.5000	2.51	0.5736076	0.5757954		0.4	+/-50
Acenaphthylene	A	2.5000	2.50	1.7705370	1.7717510		0.07	+/-50
Acenaphthene	A	2.5000	2.45	1.1471200	1.1244410		-2.0	+/-50
Dibenzofuran	A	2.5000	2.38	1.7229440	1.6420540		-4.7	+/-50
Fluorene	A	2.5000	2.48	1.3750310	1.3645790		-0.8	+/-50
Phenanthrene	A	2.5000	2.37	1.0593530	1.0033110		-5.3	+/-50
Anthracene	A	2.5000	2.59	0.9935358	1.0284410		3.5	+/-50
Fluoranthene	A	2.5000	2.44	1.2184160	1.1909400		-2.3	+/-50
Pyrene	A	2.5000	2.71	1.2804750	1.3884500		8.4	+/-50
Benzo(a)anthracene	A	2.5000	2.51	1.3157630	1.3215830		0.4	+/-50
Chrysene	A	2.5000	2.32	1.2925870	1.2012060		-7.1	+/-50
Benzo(b)fluoranthene	A	2.5000	2.64	1.3038540	1.3744990		5.4	+/-50
Benzo(k)fluoranthene	A	2.5000	2.62	1.2284610	1.2861220		4.7	+/-50
Benzo(j)fluoranthene	A	2.5000	2.55	1.1350320	1.1585170		2.1	+/-50
Benzofluoranthenes, Total	A	7.5000	7.84	1.2124900	1.2680860		4.6	+/-50
Benzo(a)pyrene	A	2.5000	2.40	1.1333570	1.0875250		-4.0	+/-50
Indeno(1,2,3-cd)pyrene	A	2.5000	2.52	1.1536650	1.1649800		1.0	+/-50
Dibenzo(a,h)anthracene	A	2.5000	2.41	1.0244260	0.9876754		-3.6	+/-50
Benzo(g,h,i)perylene	A	2.5000	2.50	1.0686540	1.0704410		0.2	+/-50
2-Methylnaphthalene-d10	A	2.5000	2.54	0.6176995	0.6278830		1.6	+/-50
Dibenzo[a,h]anthracene-d14	A	2.5000	2.52	0.7635682	0.7692385		0.7	+/-50
Fluoranthene-d10	A	2.5000	2.48	1.0796020	1.0717240		-0.7	

* Values outside of QC limits

Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D
Date : 31-MAY-2023 00:22
Client ID:
Sample Info: CCV230530

Instrument: nt8.i
Operator: JZ
Column phase: Rxi-17sil
Column diameter: 0.25



23A0207 CLPLIKE (Rev3) - Page 1163 of 3315

Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

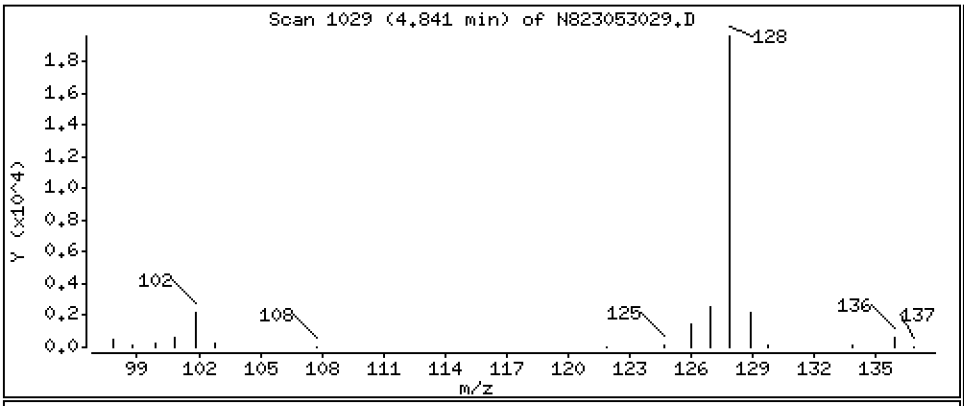
Operator: JZ

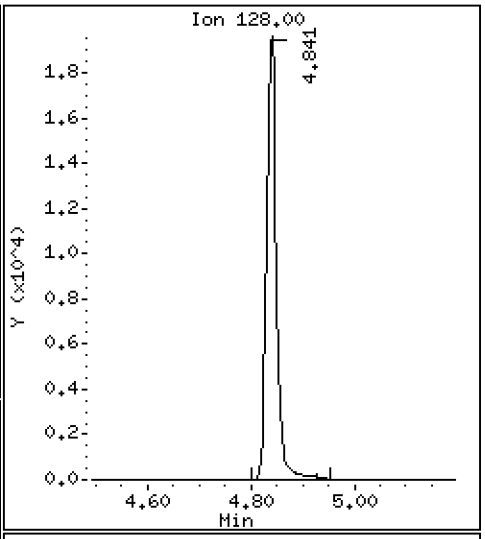
Column phase: Rxi-17sil

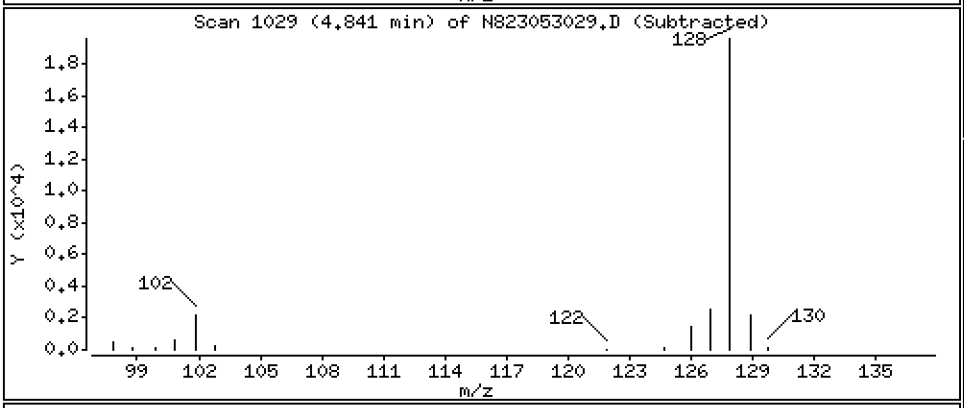
Column diameter: 0.25

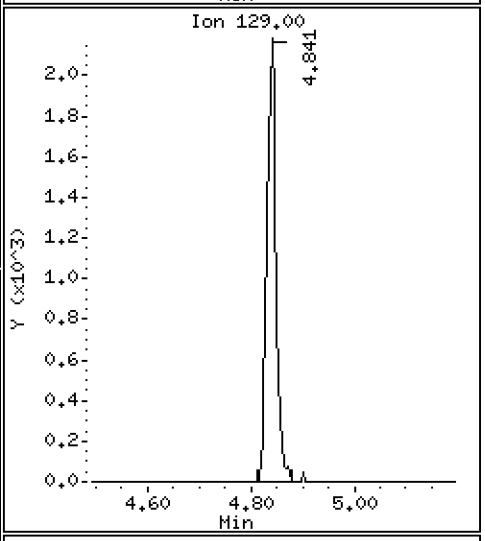
2 Naphthalene

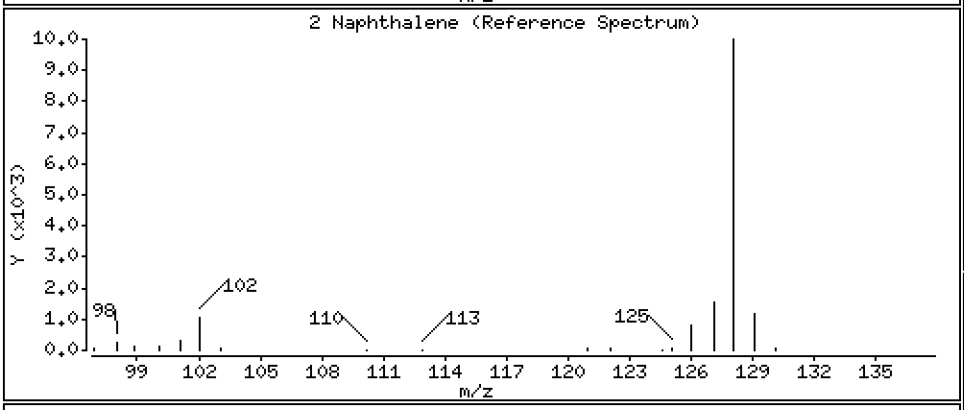
Concentration: 2.516 ug/mL

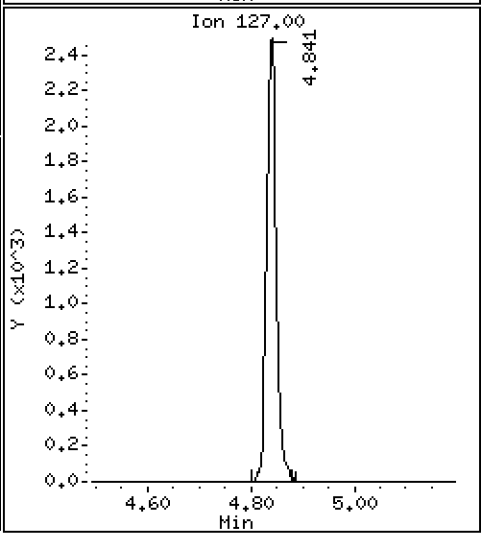


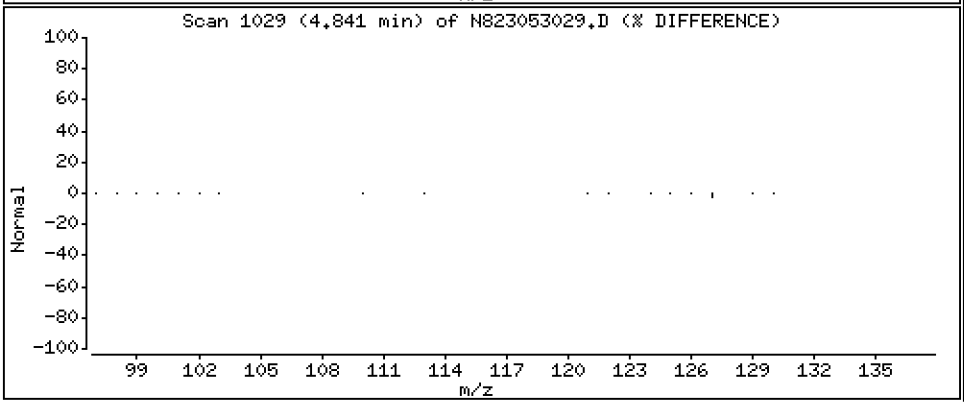












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Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

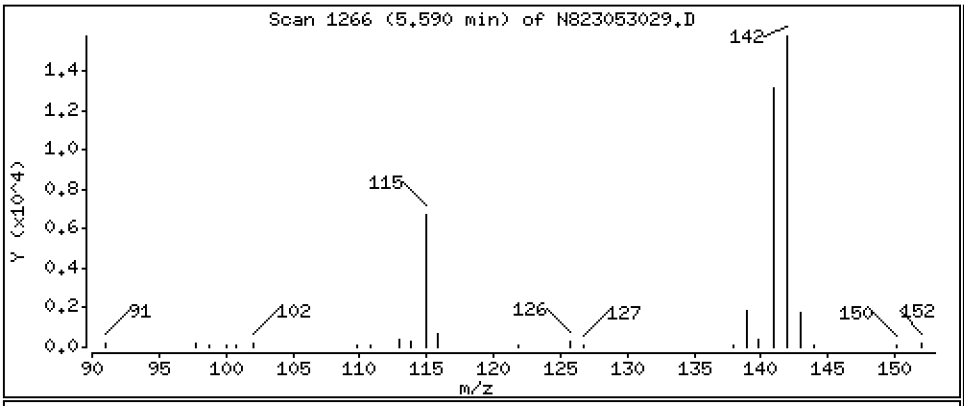
Operator: JZ

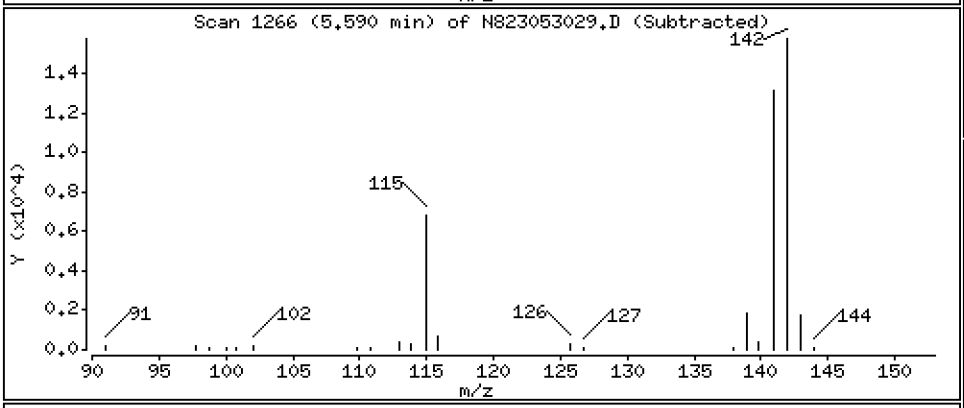
Column phase: Rxi-17sil

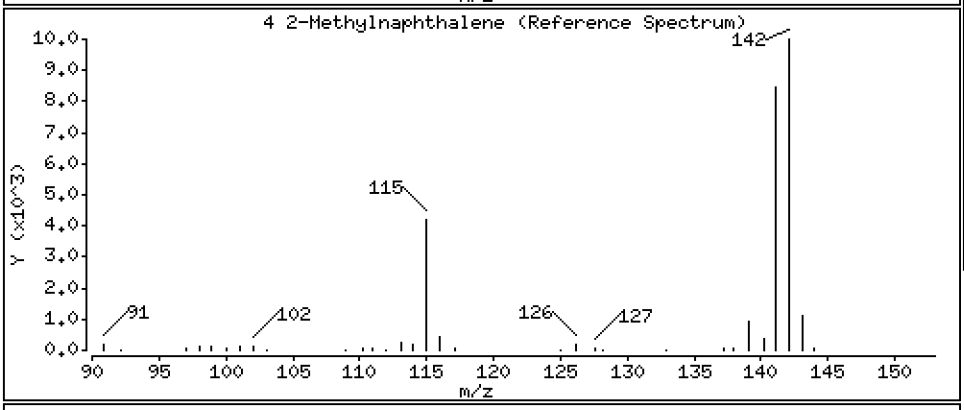
Column diameter: 0.25

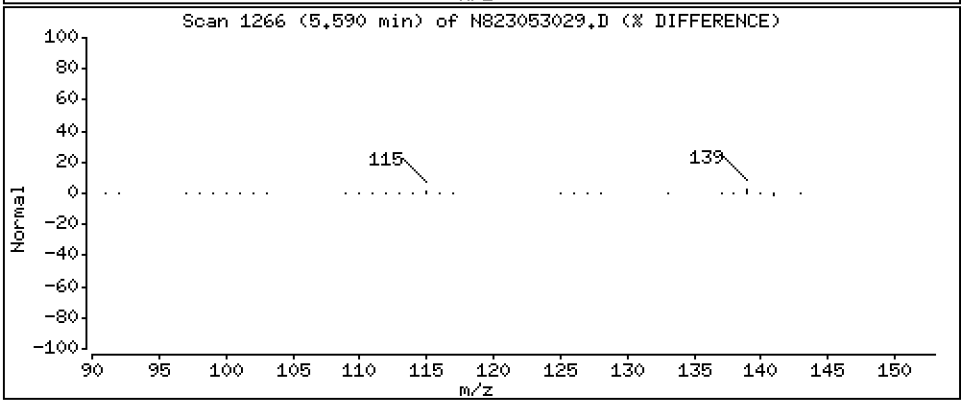
4 2-Methylnaphthalene

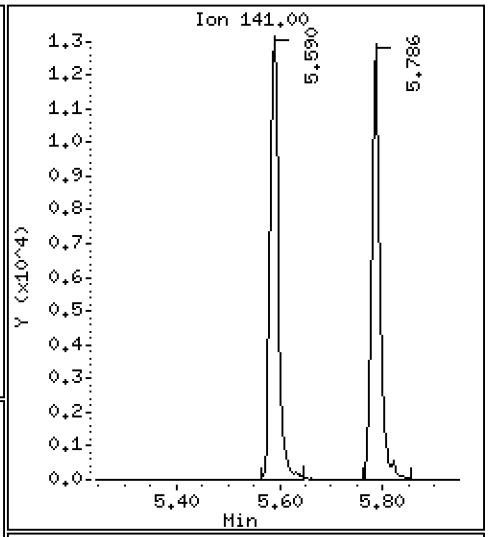
Concentration: 2.488 ug/mL

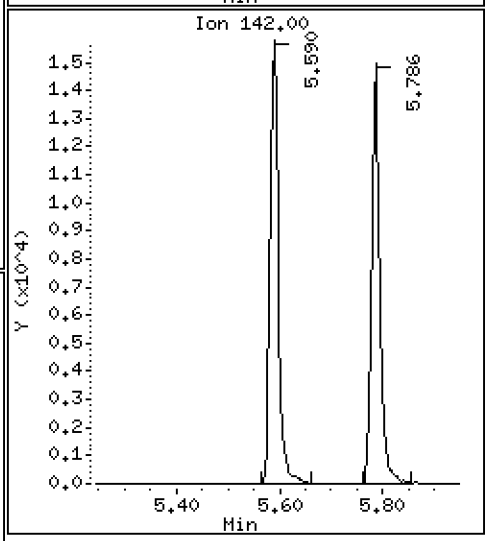












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

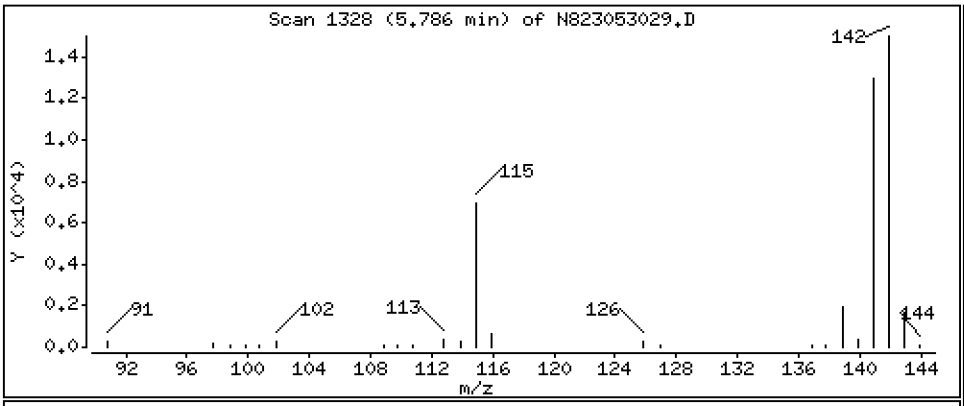
Operator: JZ

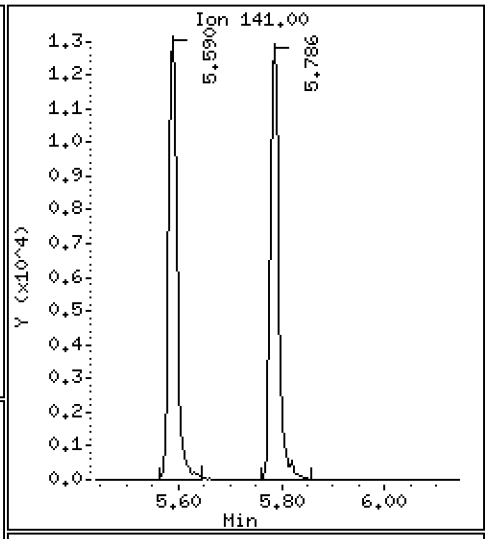
Column phase: Rxi-17sil

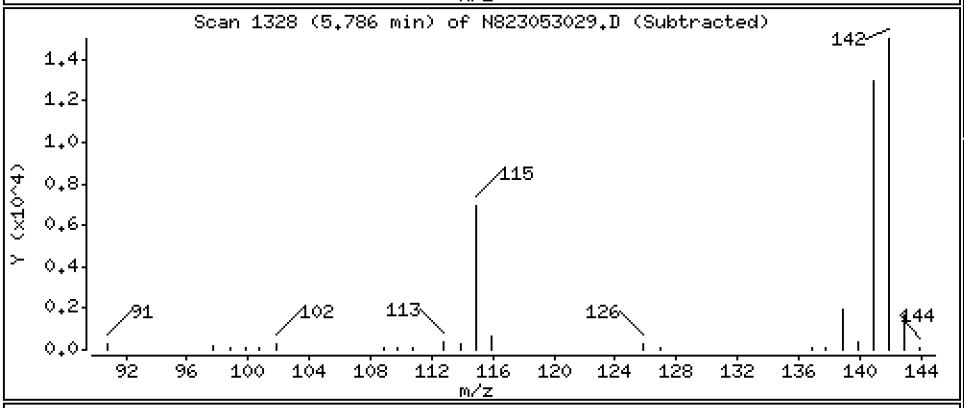
Column diameter: 0.25

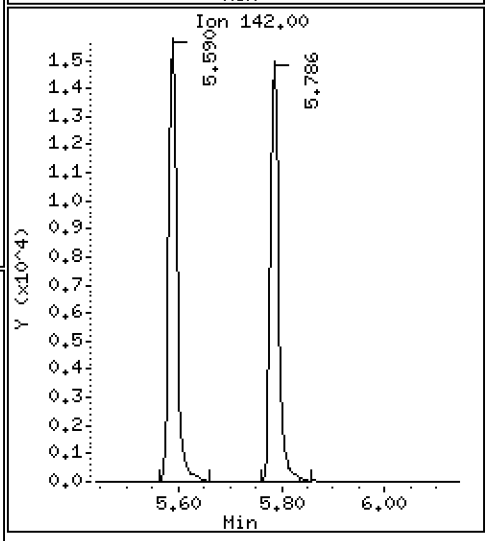
5 1-methylnaphthalene

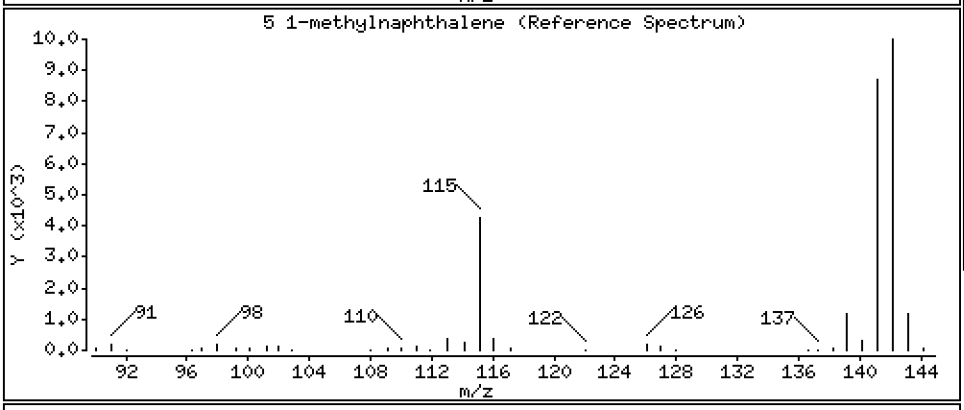
Concentration: 2.510 ug/mL

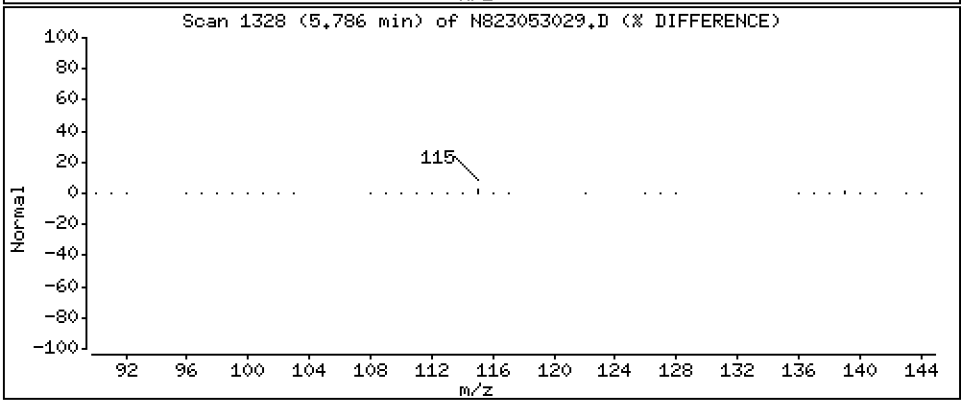












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

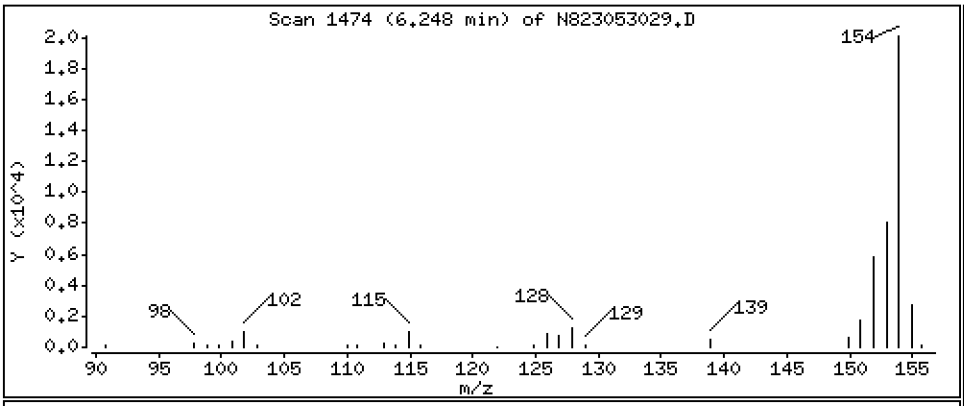
Operator: JZ

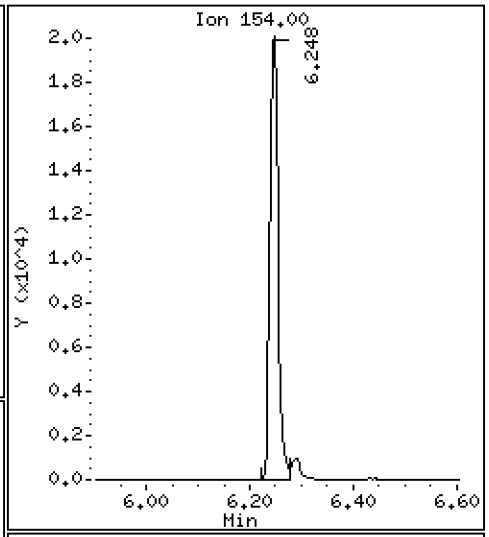
Column phase: Rxi-17sil

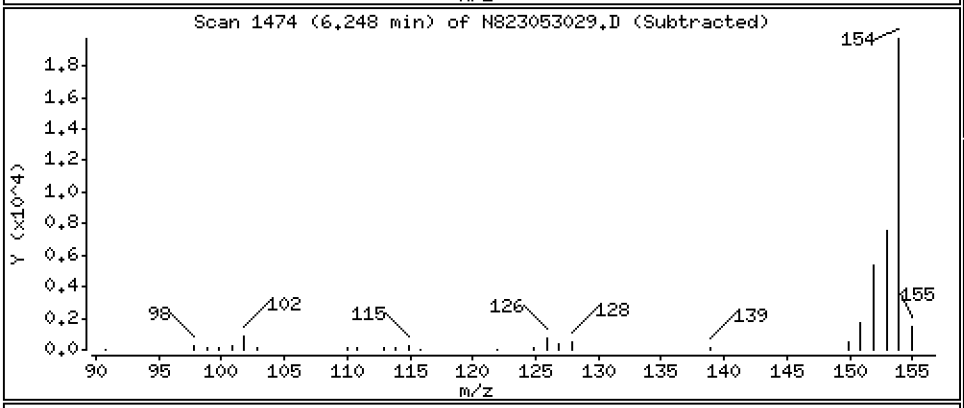
Column diameter: 0.25

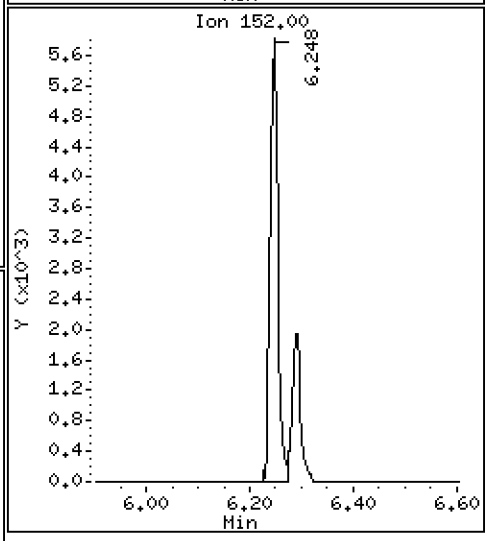
7 Biphenyl

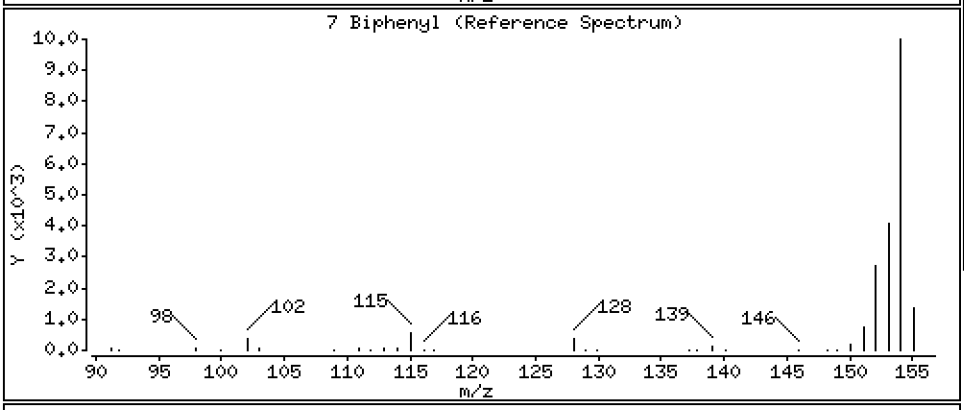
Concentration: 2.303 ug/mL

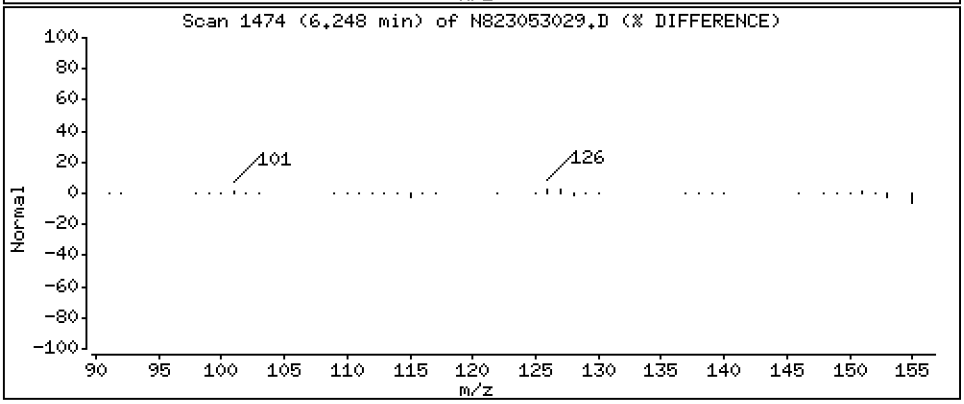












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Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

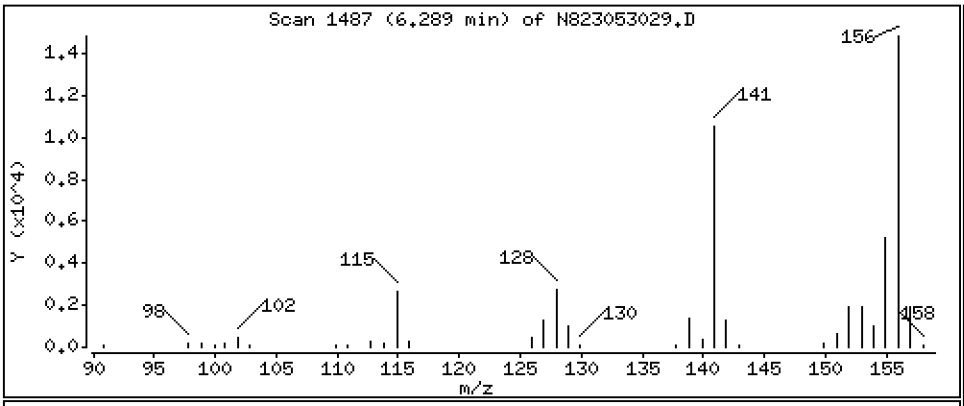
Operator: JZ

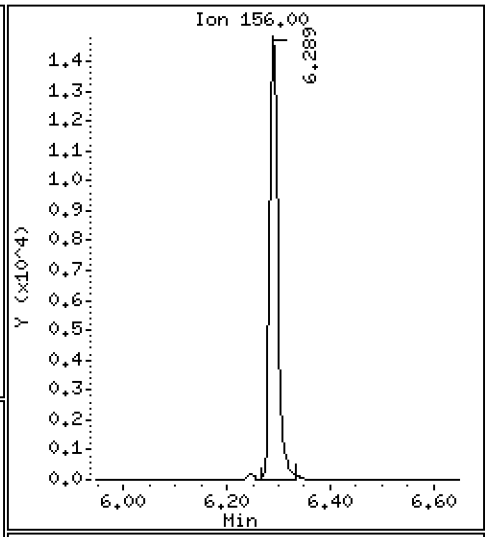
Column phase: Rxi-17sil

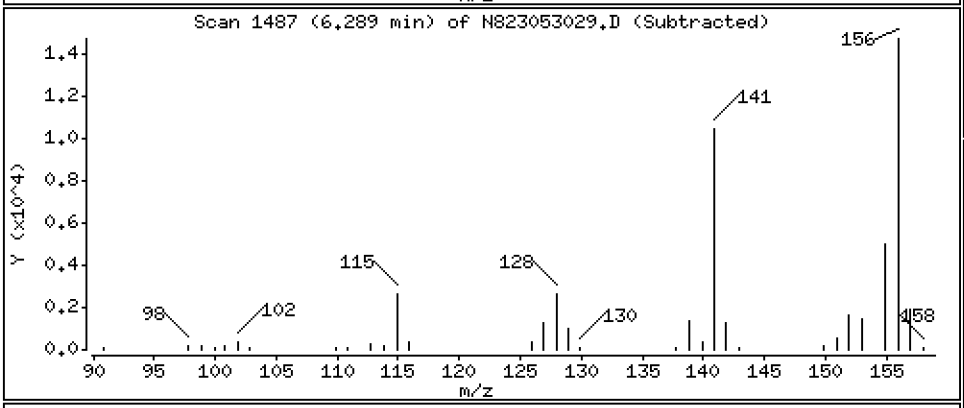
Column diameter: 0.25

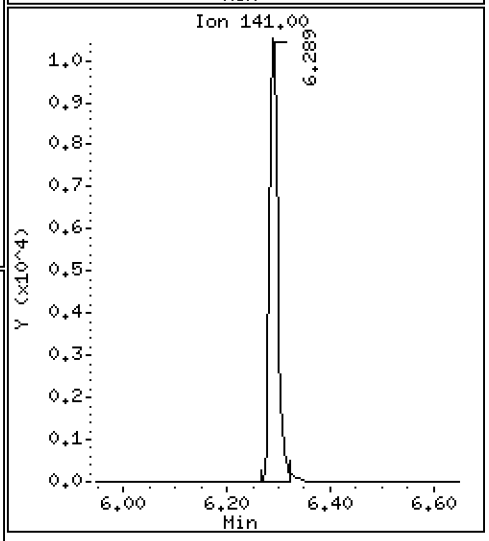
8 2,6-Dimethylnaphthalene

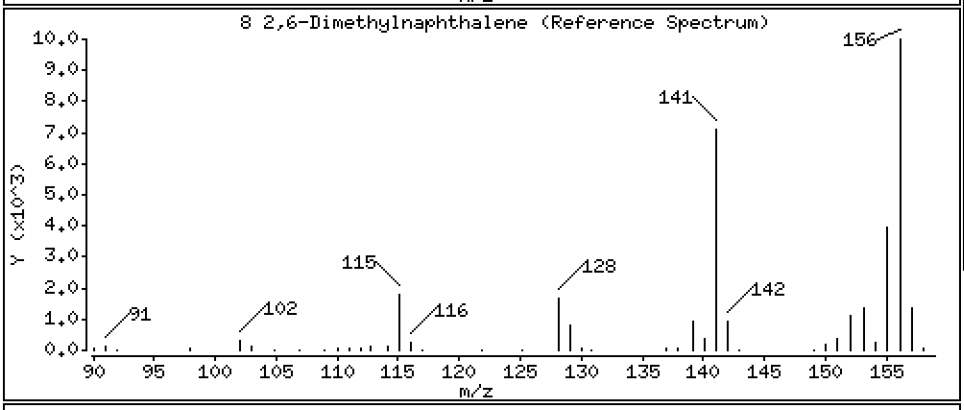
Concentration: 2.394 ug/mL

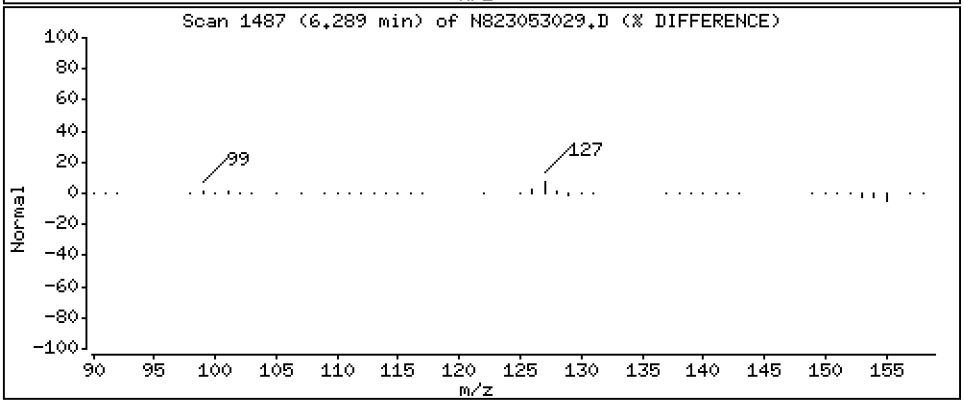












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

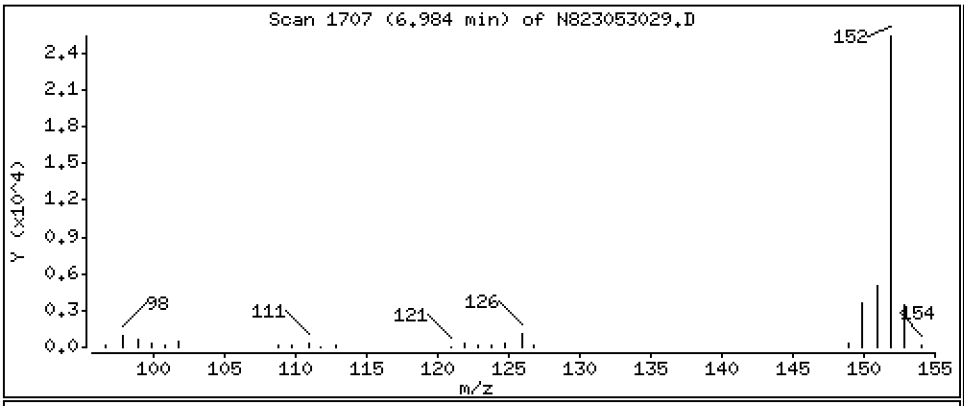
Operator: JZ

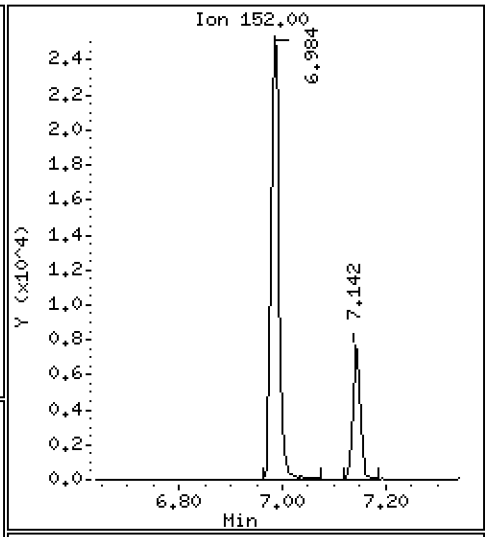
Column phase: Rxi-17sil

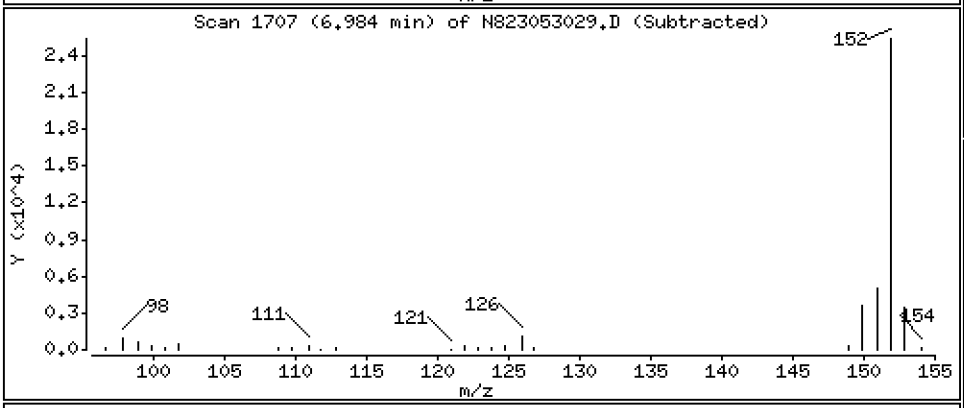
Column diameter: 0.25

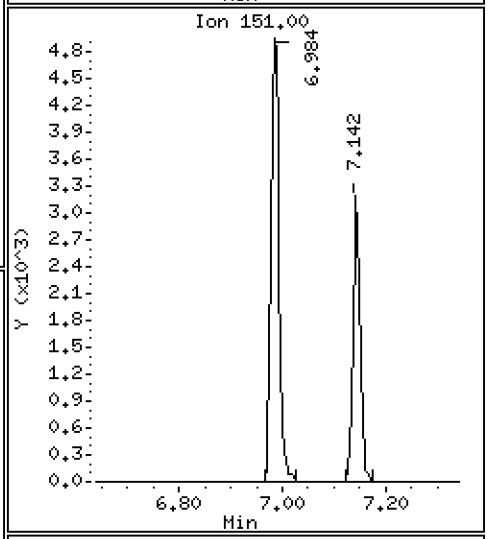
9 Acenaphthylene

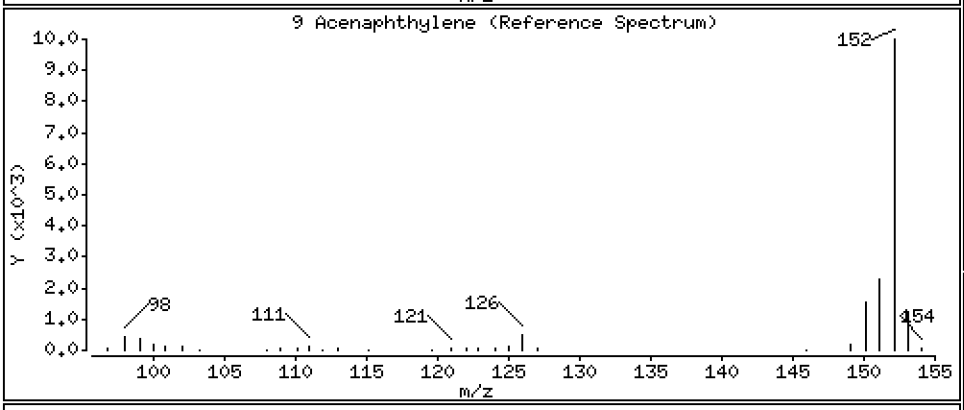
Concentration: 2.502 ug/mL

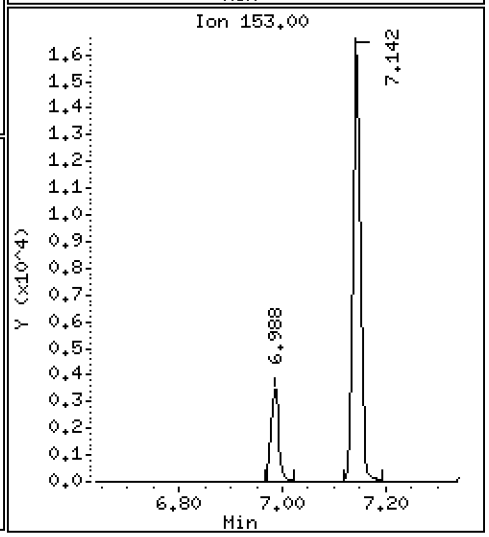


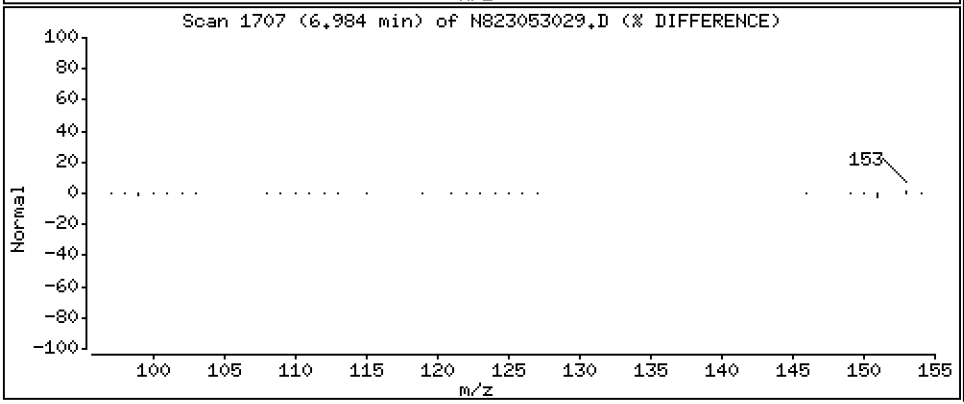












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Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

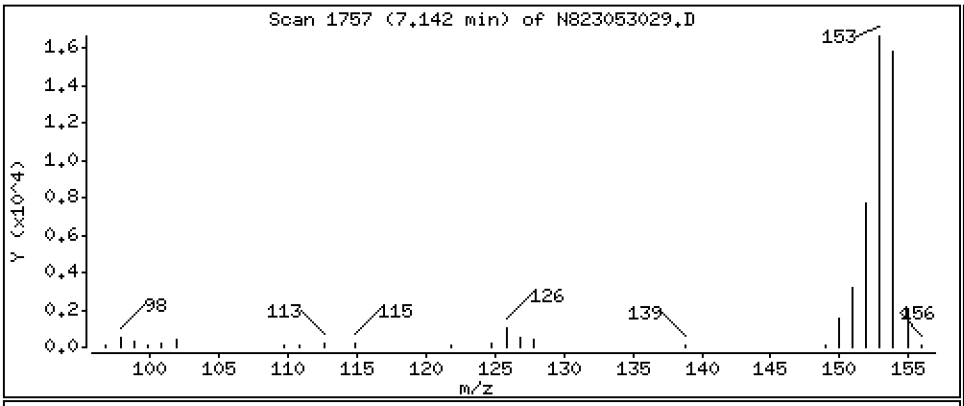
Operator: JZ

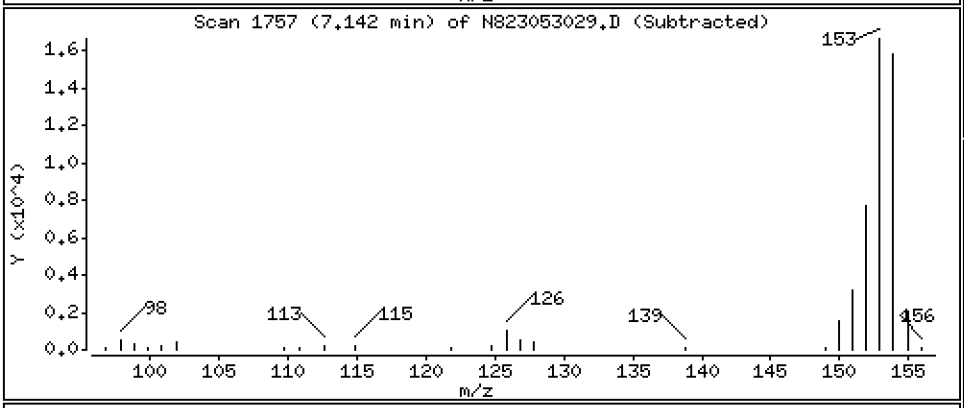
Column phase: Rxi-17sil

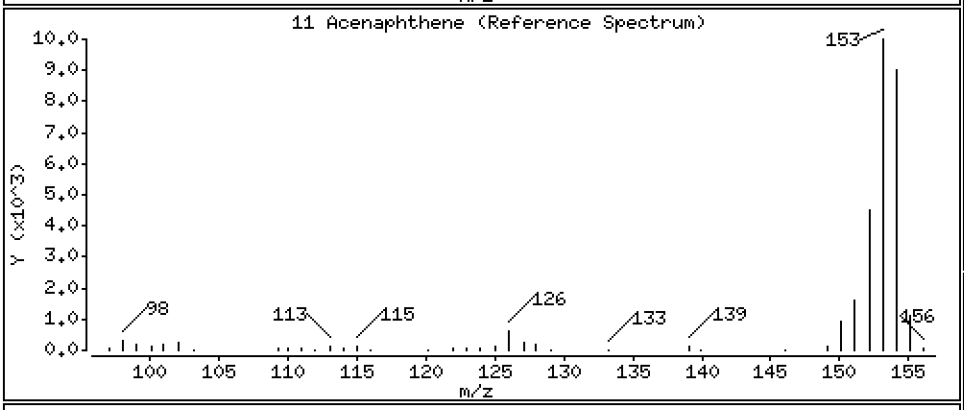
Column diameter: 0.25

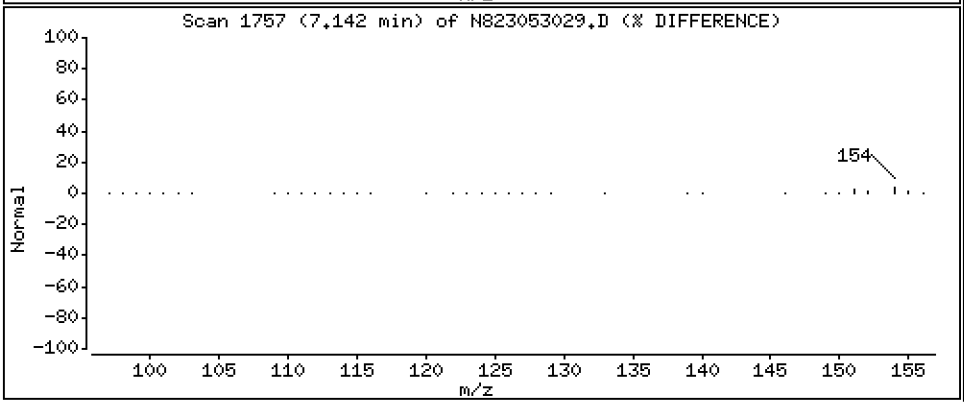
11 Acenaphthene

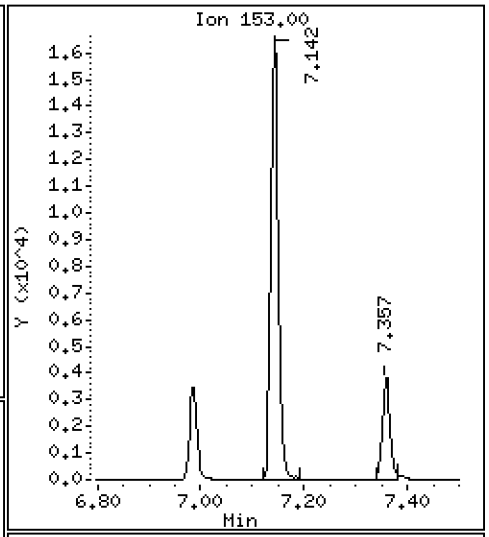
Concentration: 2.451 ug/mL

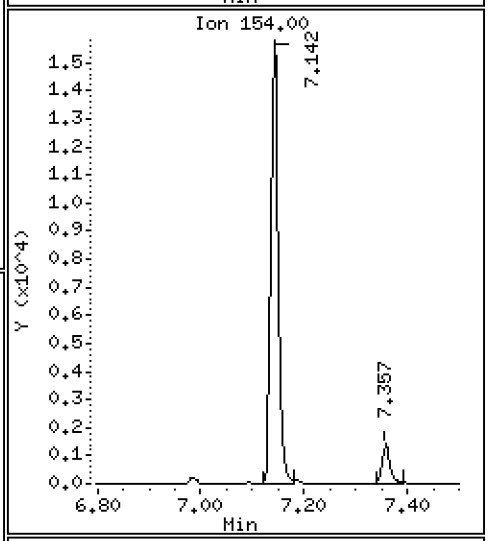


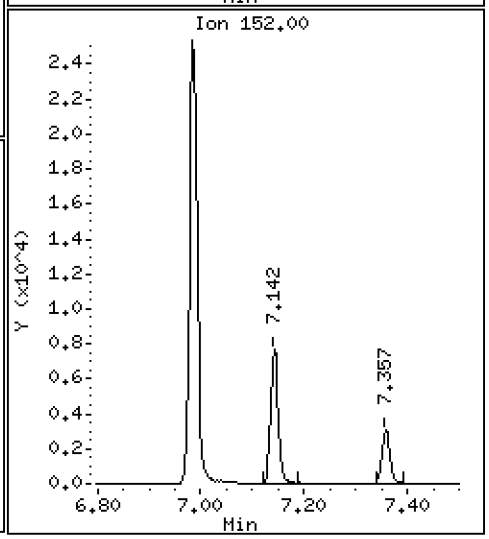












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

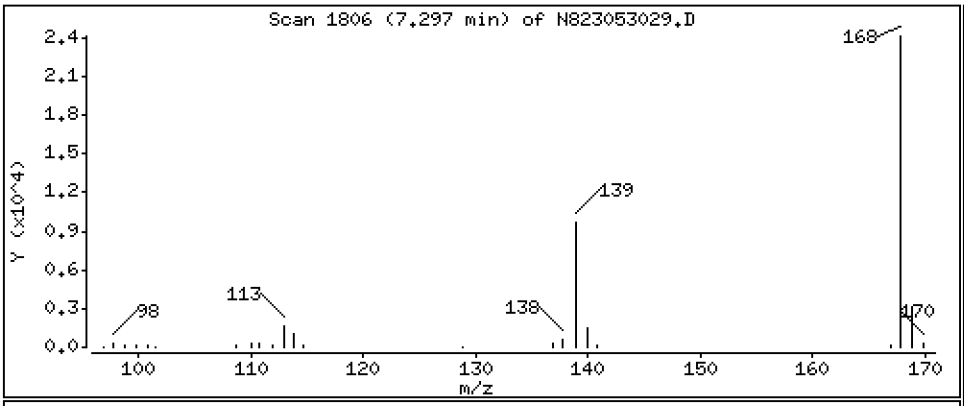
Operator: JZ

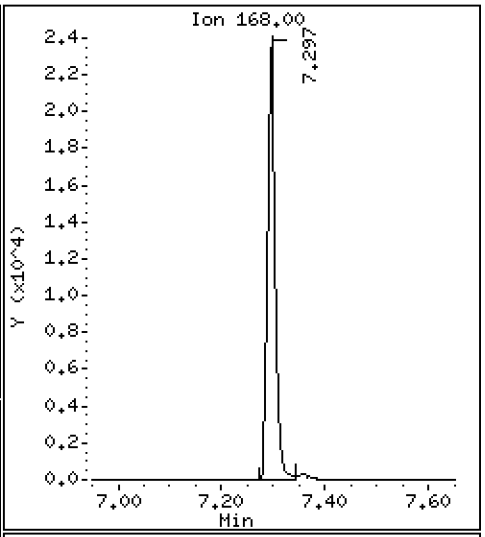
Column phase: Rxi-17sil

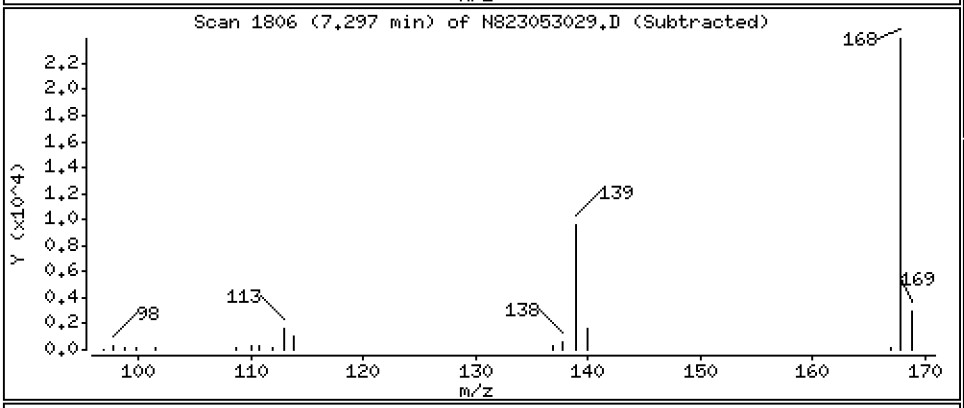
Column diameter: 0.25

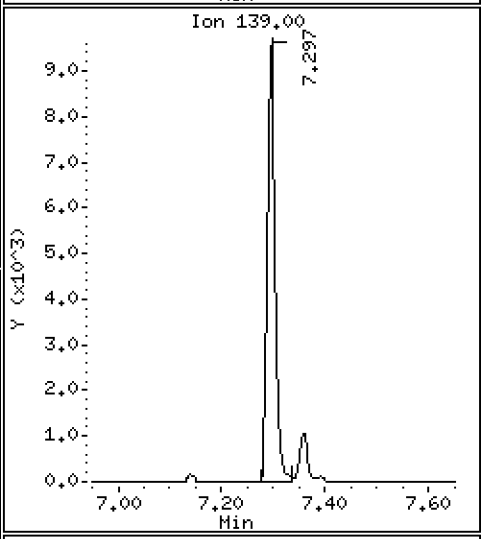
12 Dibenzofuran

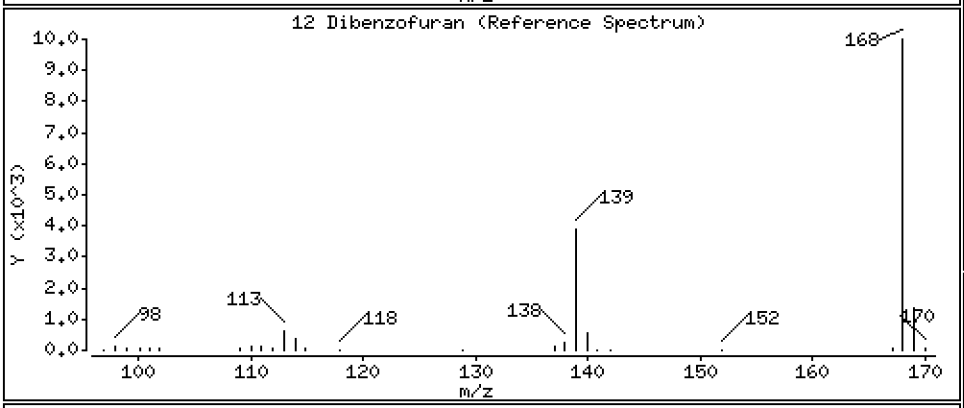
Concentration: 2.383 ug/mL

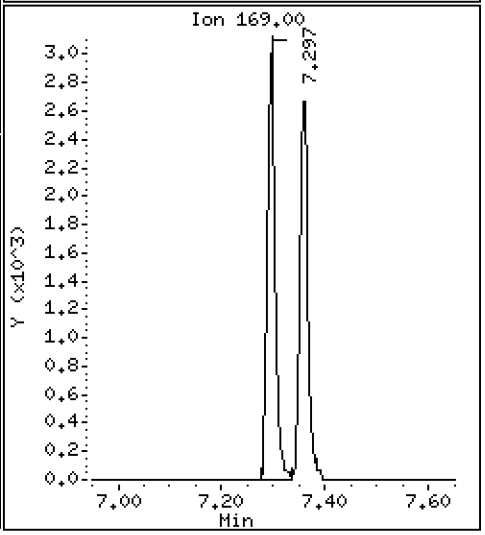


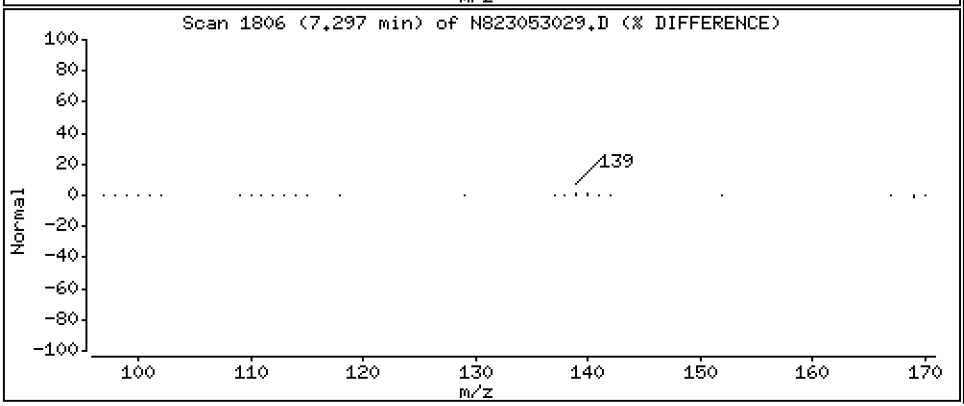












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Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

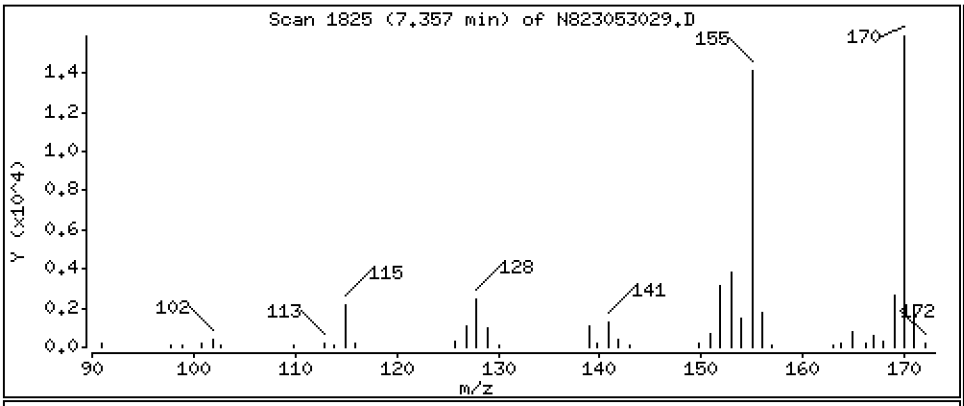
Operator: JZ

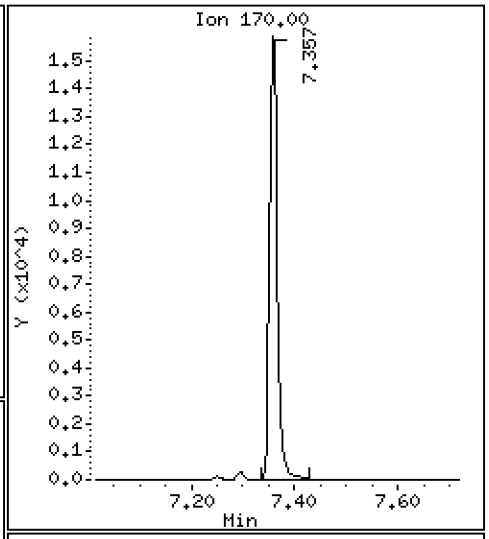
Column phase: Rxi-17sil

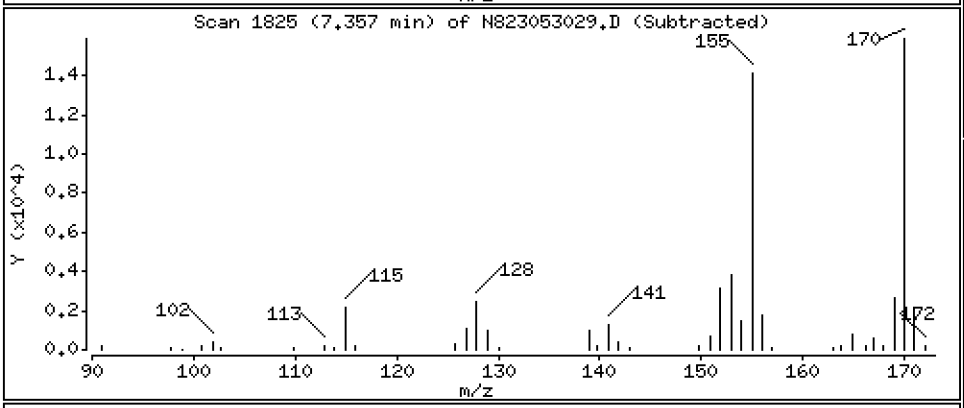
Column diameter: 0.25

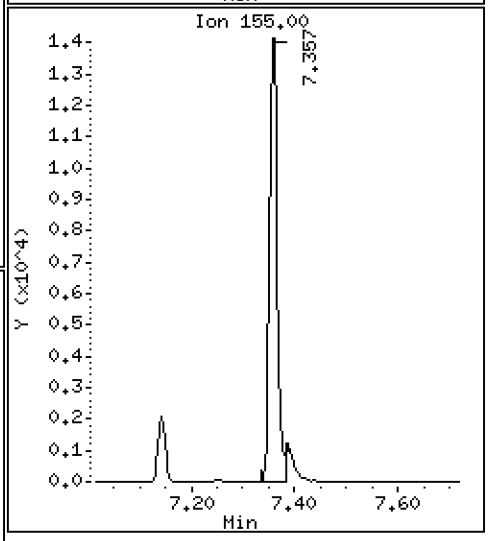
13 1,6,7-Trimethylnaphthalene

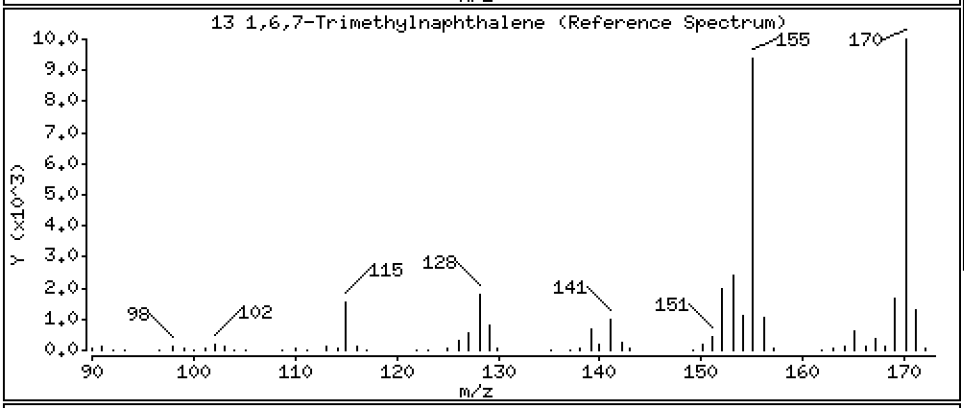
Concentration: 2.529 ug/mL

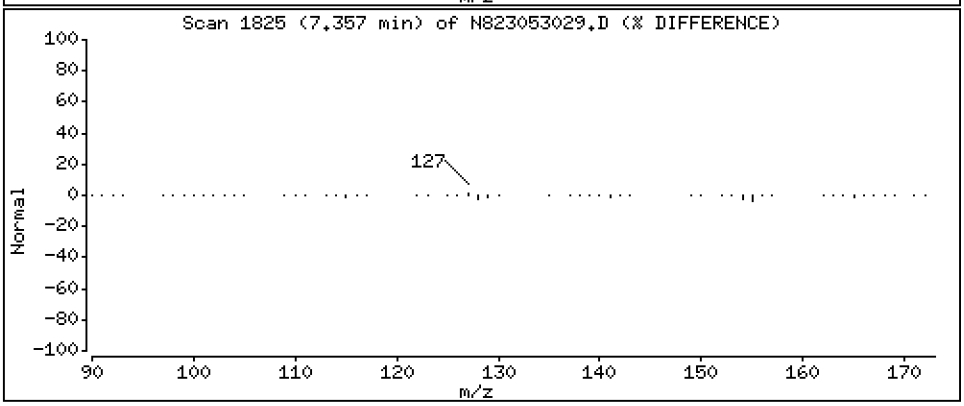












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

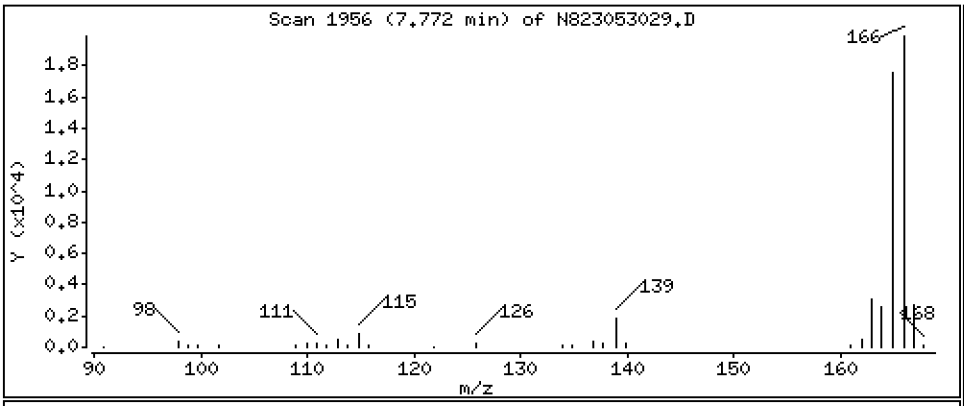
Operator: JZ

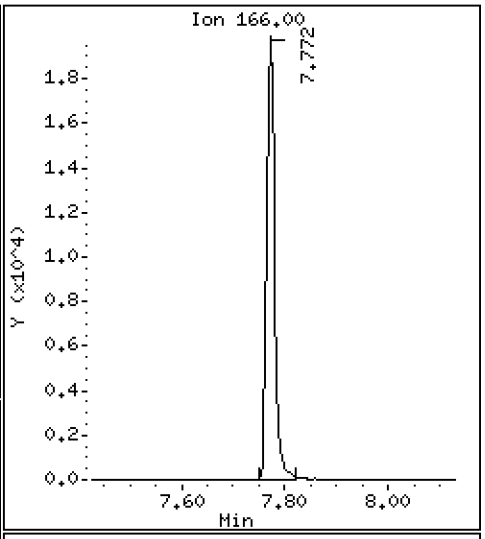
Column phase: Rxi-17sil

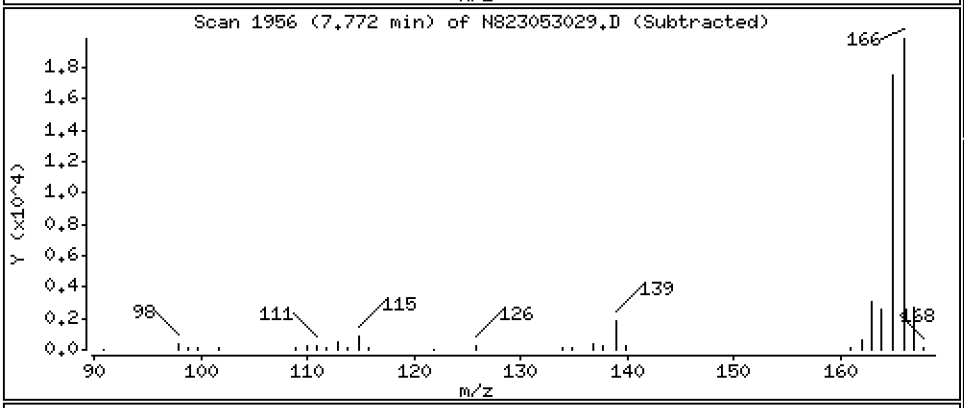
Column diameter: 0.25

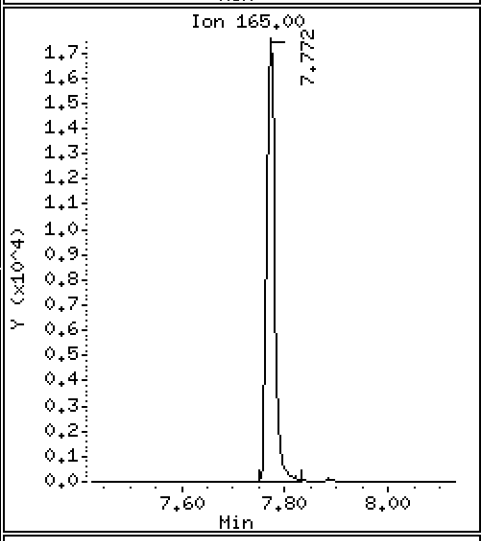
14 Fluorene

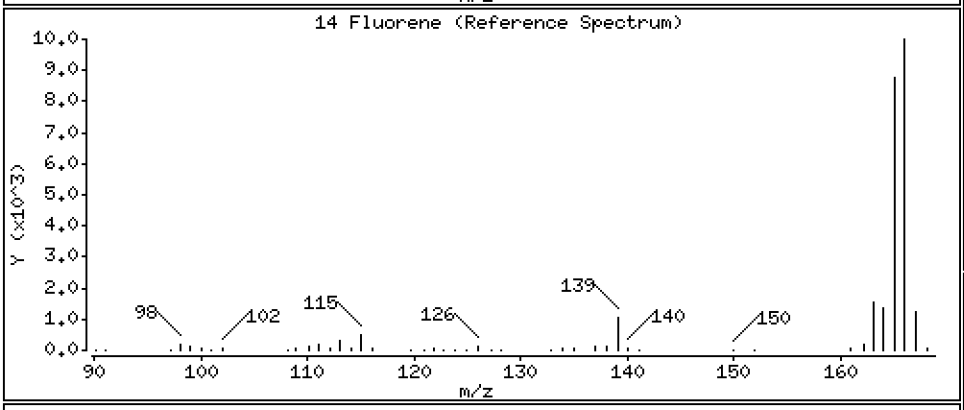
Concentration: 2.481 ug/mL

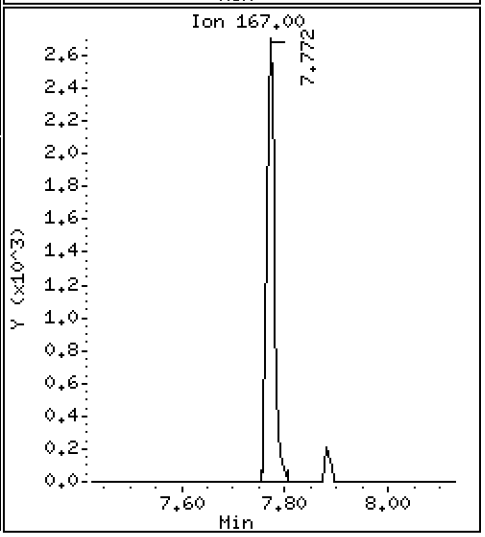


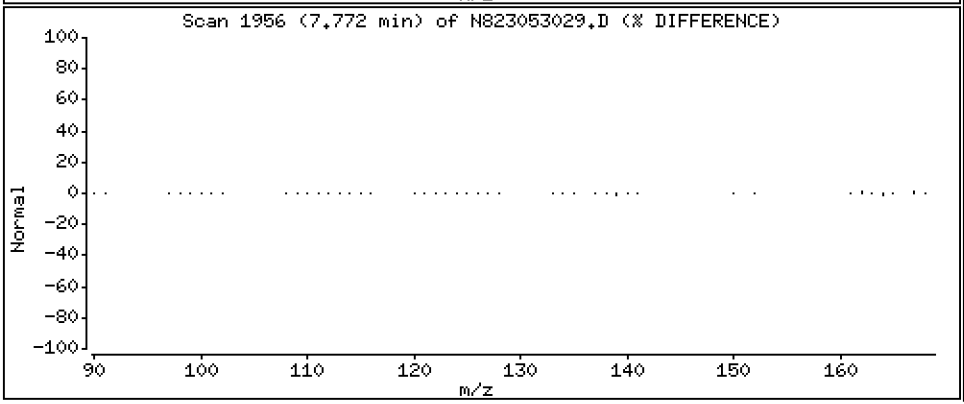












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

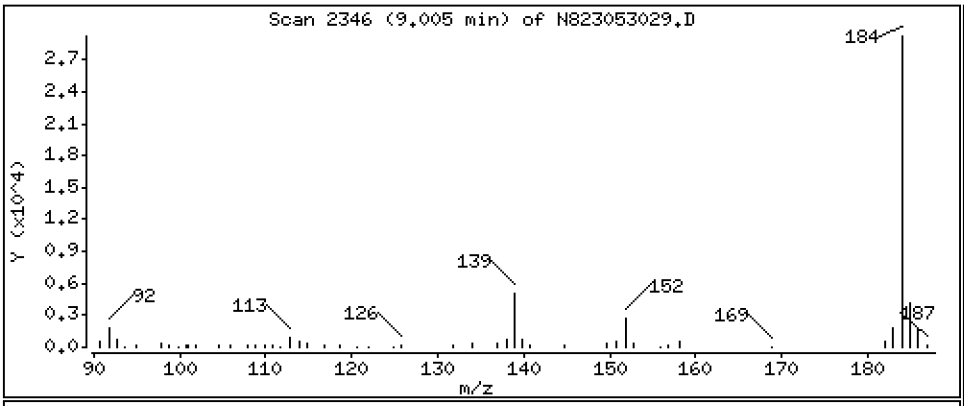
Operator: JZ

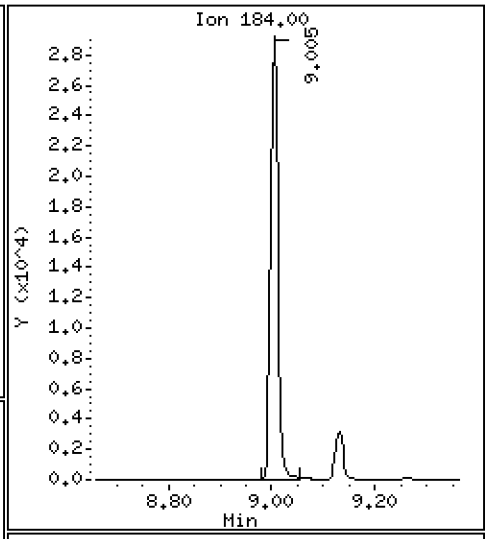
Column phase: Rxi-17sil

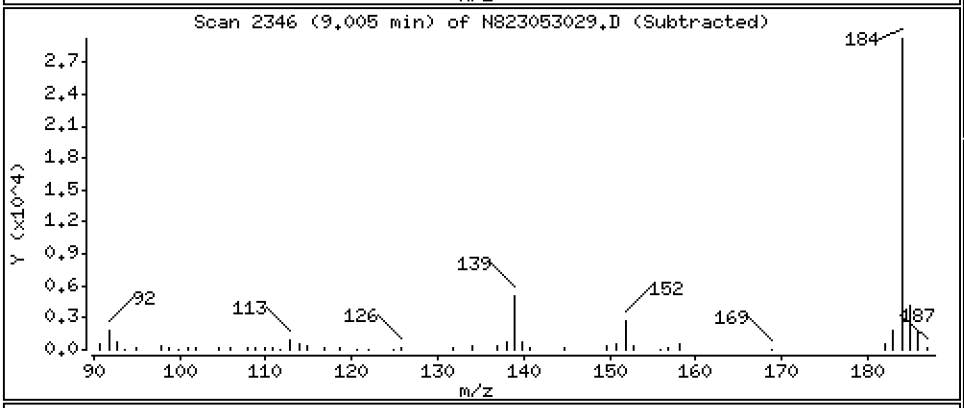
Column diameter: 0.25

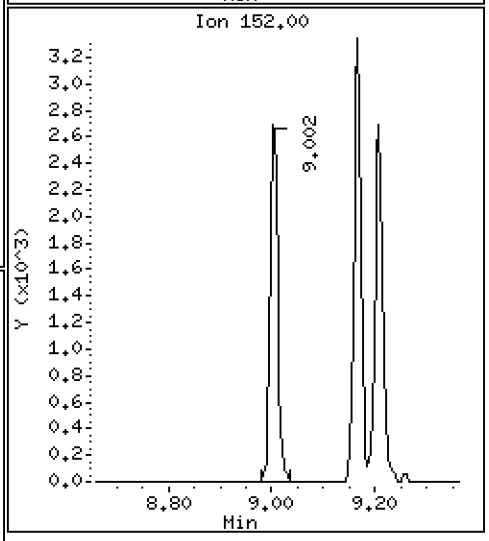
18 Dibenzothiophene

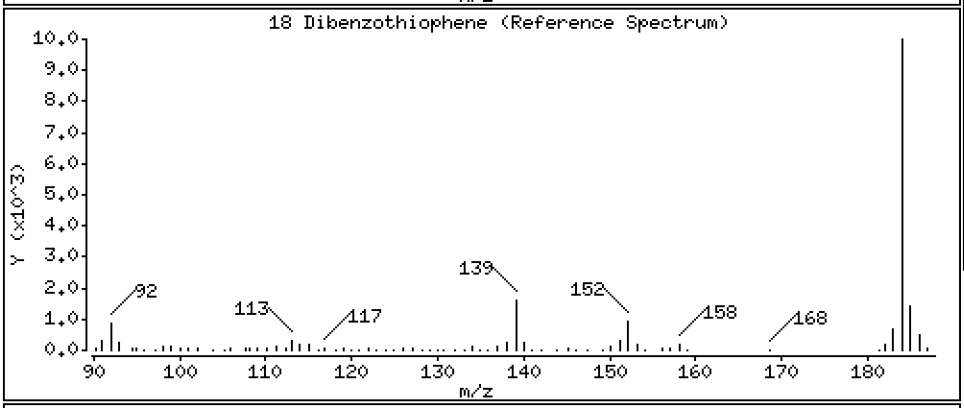
Concentration: 2.442 ug/mL

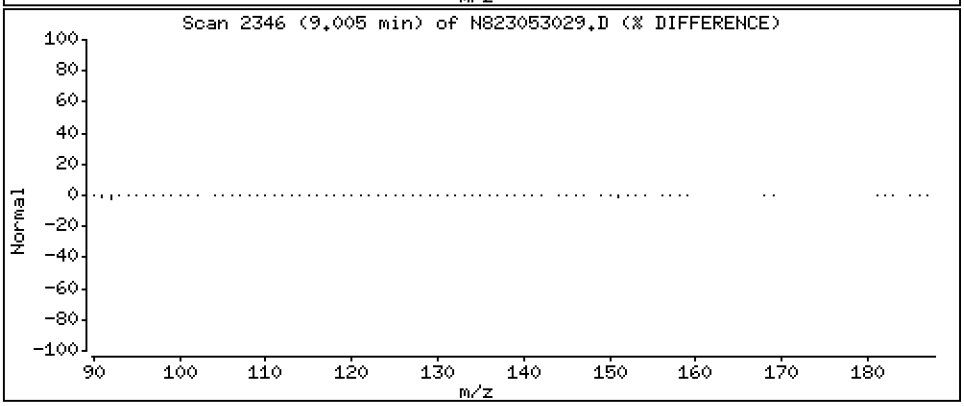












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

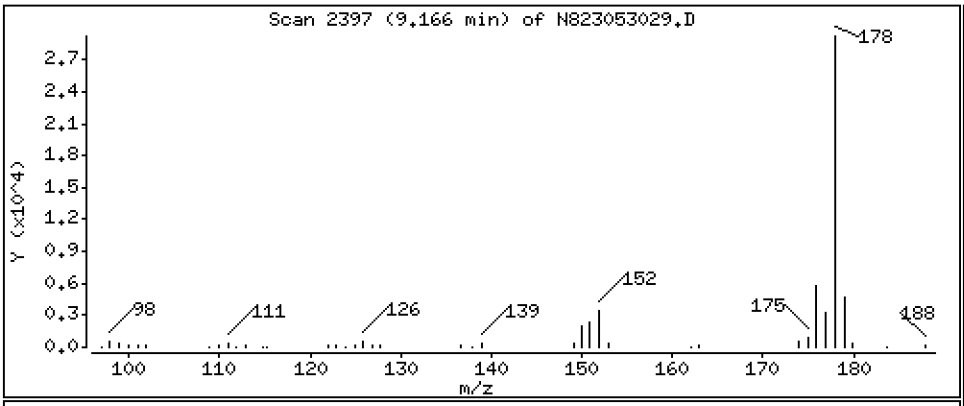
Operator: JZ

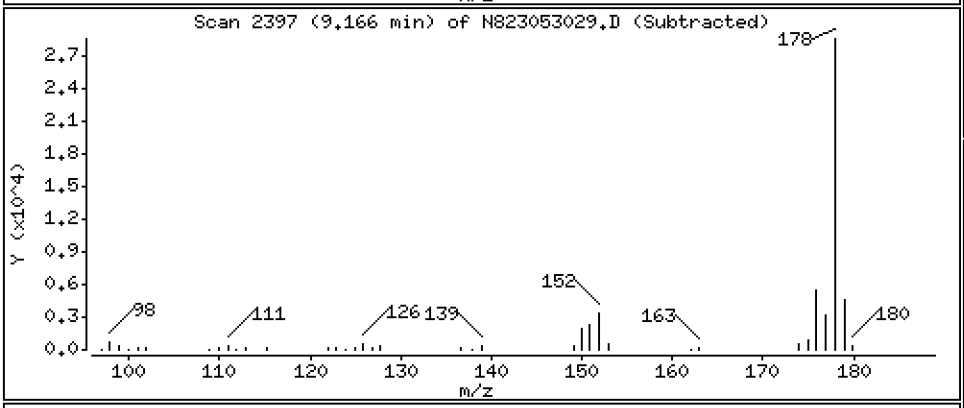
Column phase: Rxi-17sil

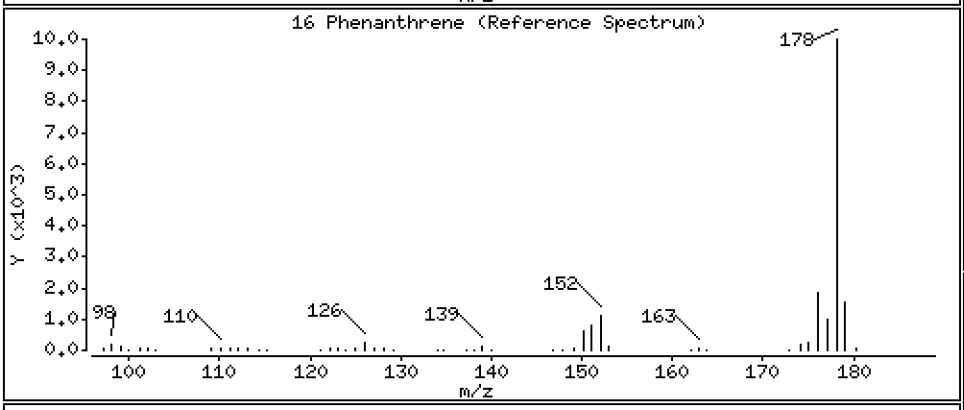
Column diameter: 0.25

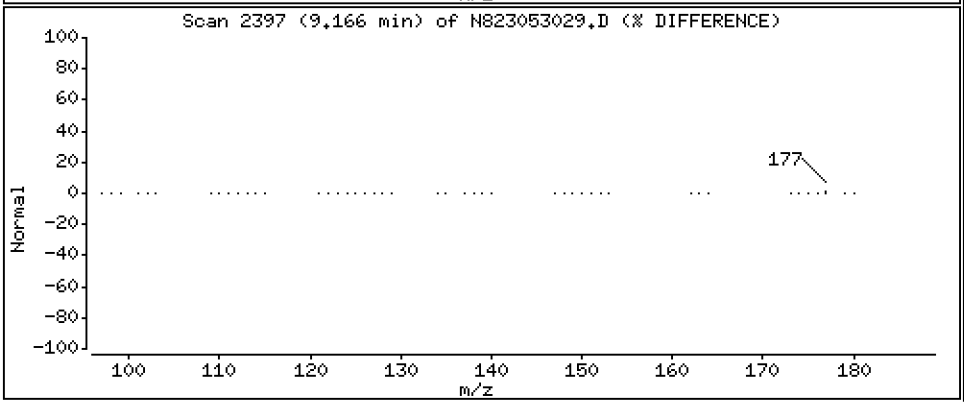
16 Phenanthrene

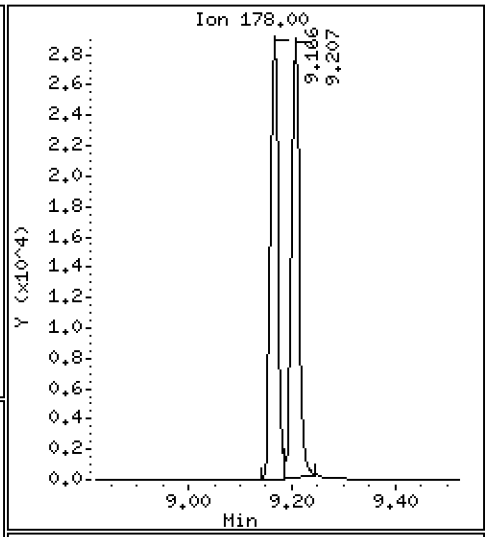
Concentration: 2.368 ug/mL

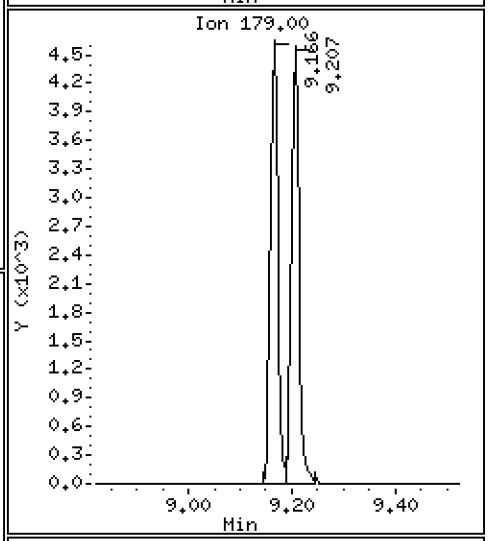


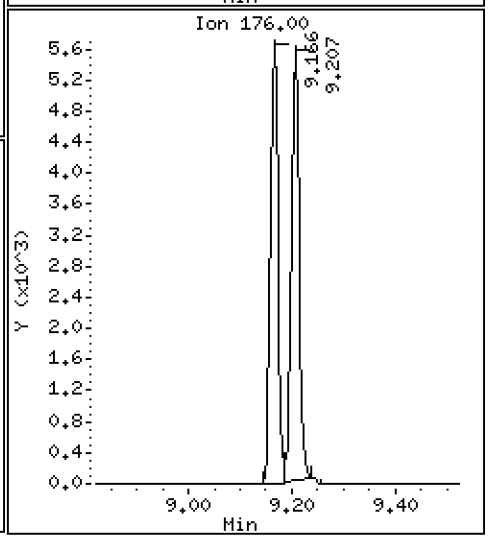












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Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

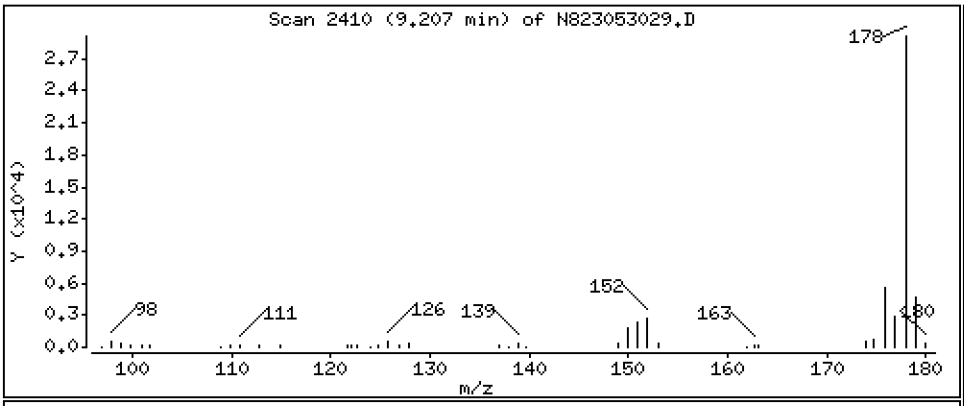
Operator: JZ

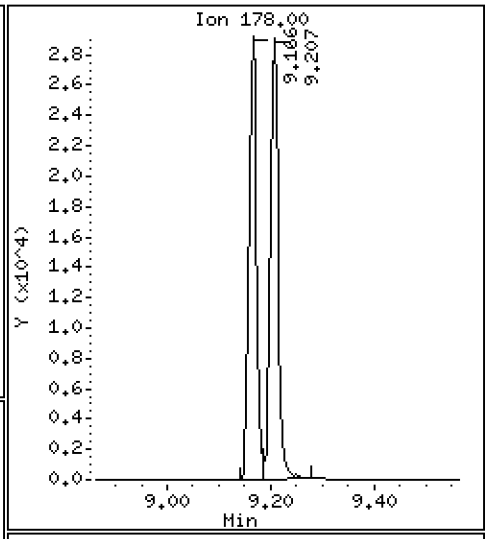
Column phase: Rxi-17sil

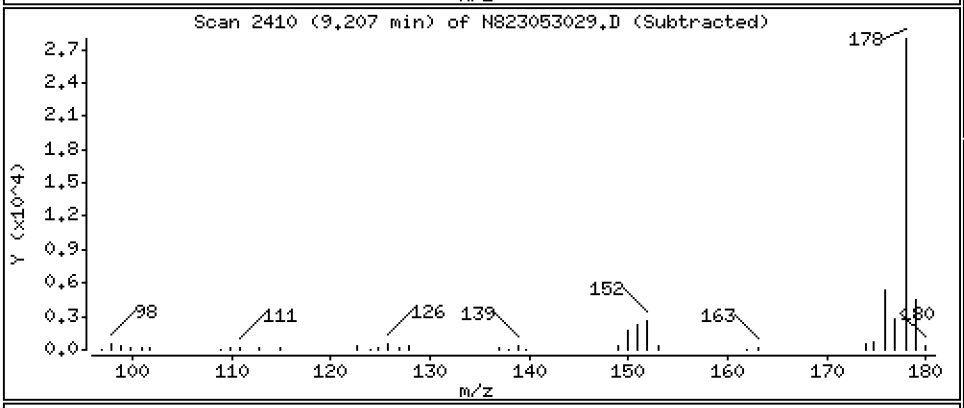
Column diameter: 0.25

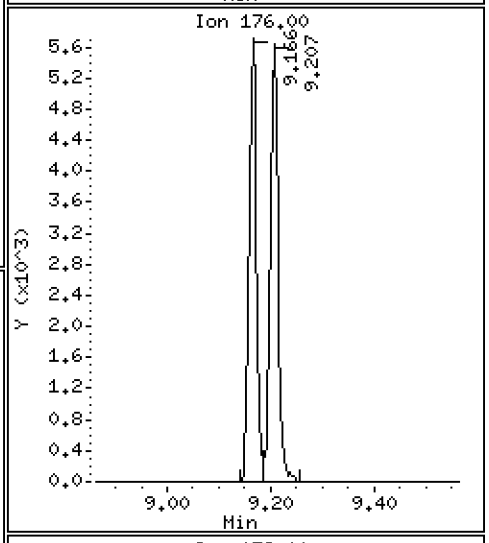
17 Anthracene

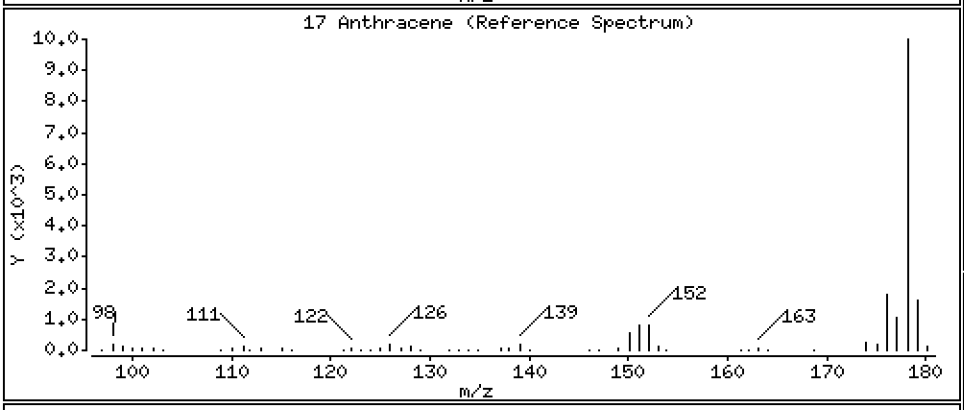
Concentration: 2.588 ug/mL

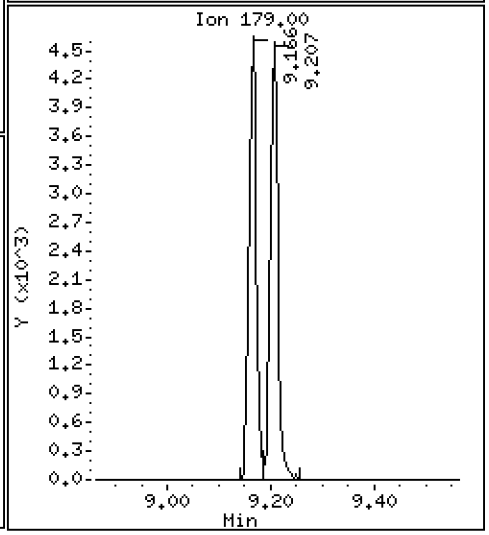


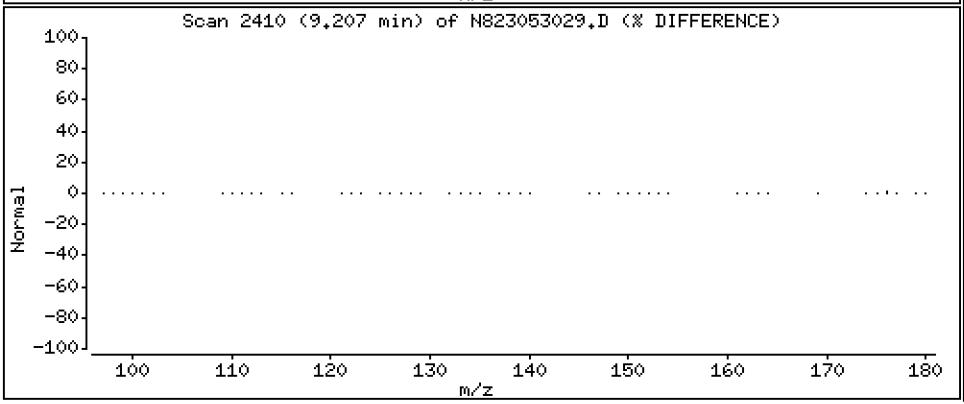












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

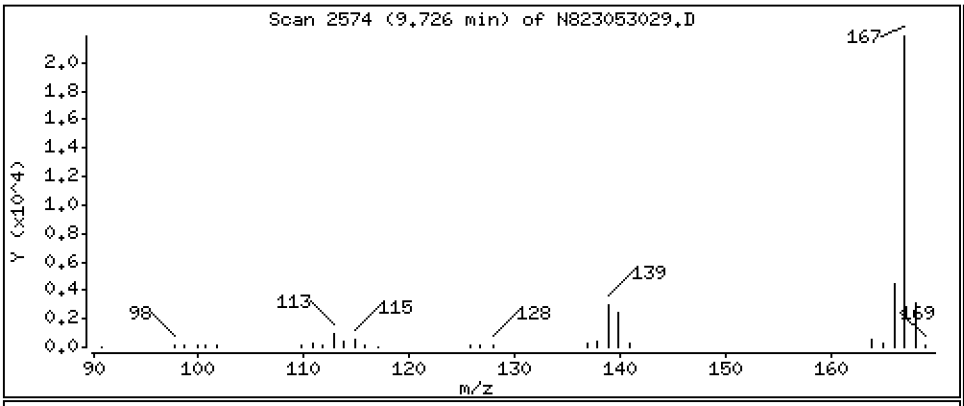
Operator: JZ

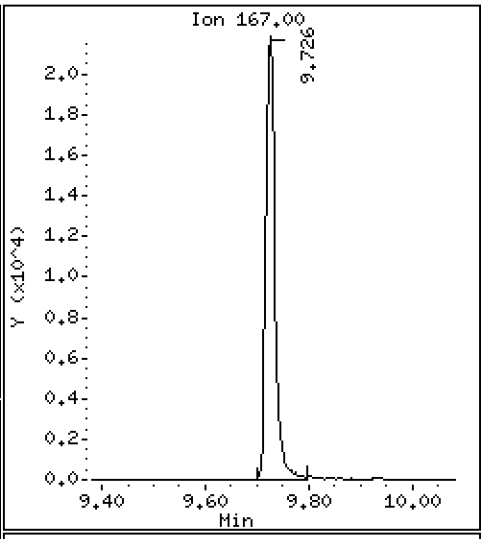
Column phase: Rxi-17sil

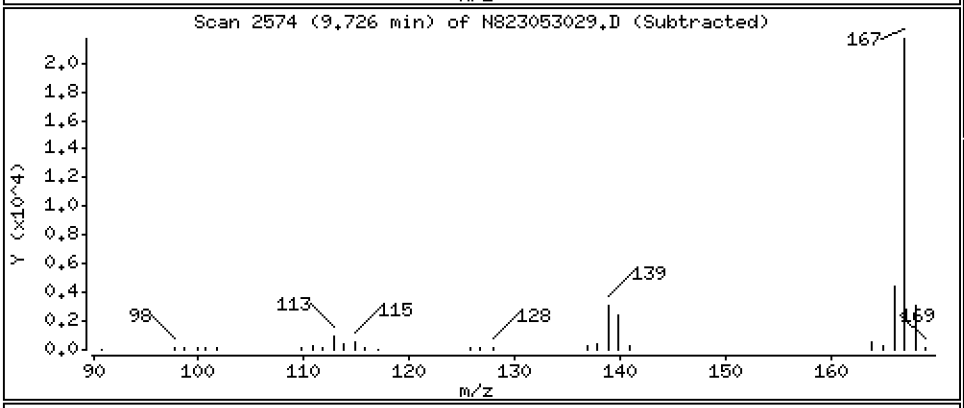
Column diameter: 0.25

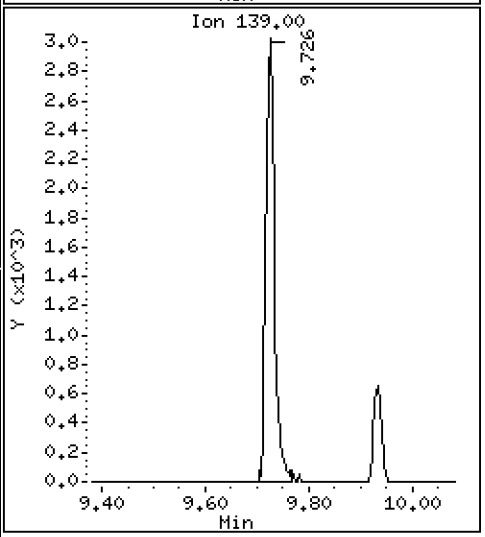
19 Carbazole

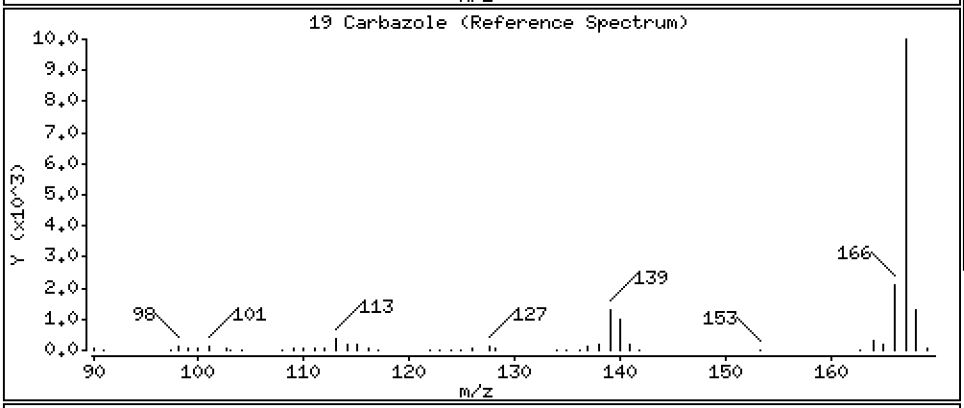
Concentration: 2.373 ug/mL

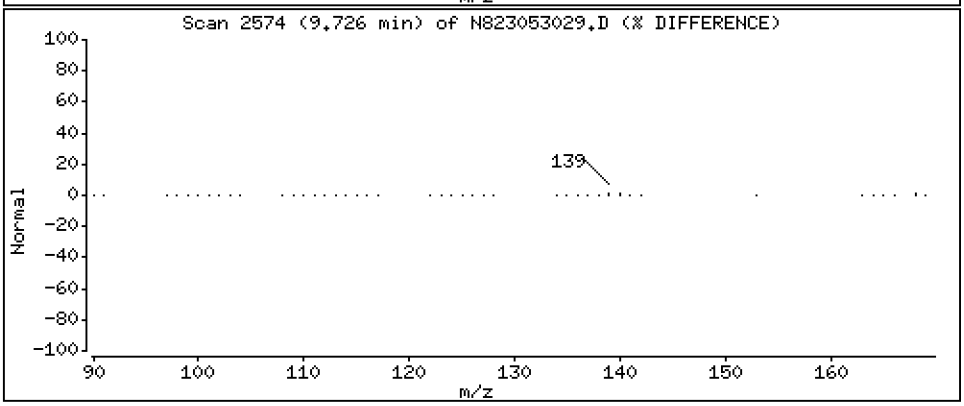












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Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

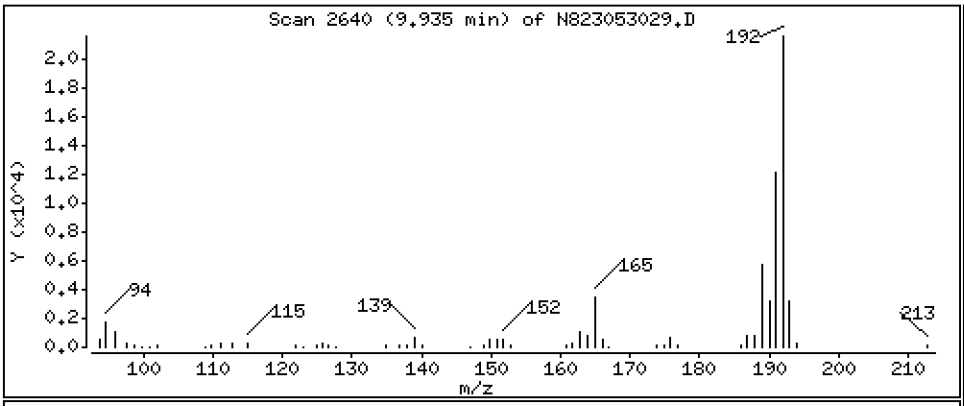
Operator: JZ

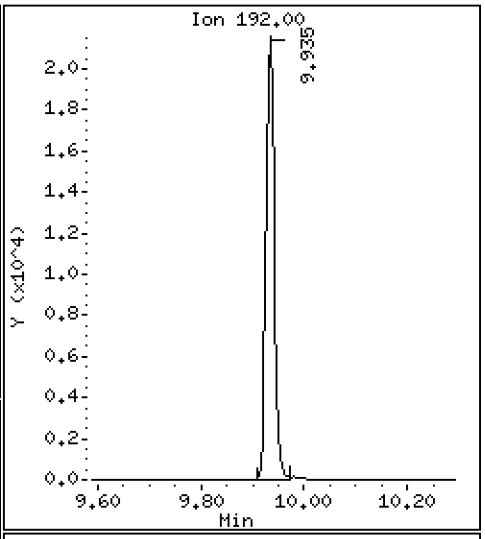
Column phase: Rxi-17sil

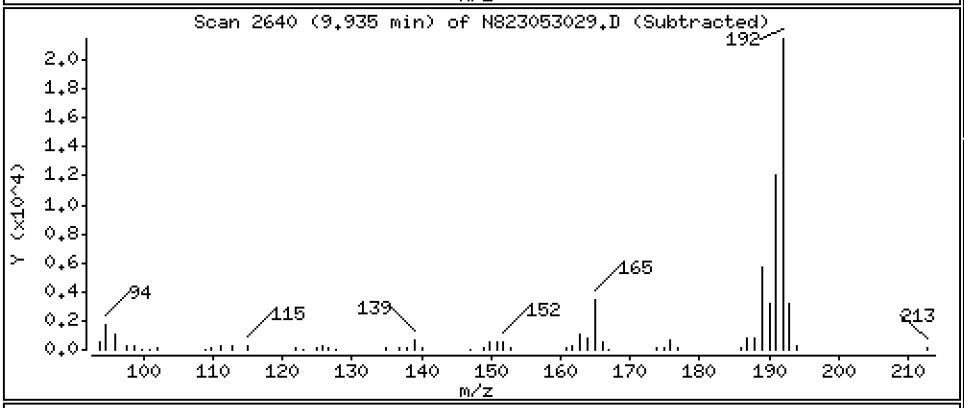
Column diameter: 0.25

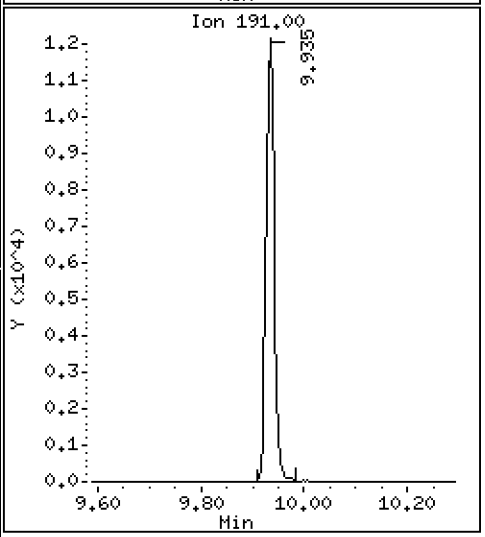
20 1-Methylphenanthrene

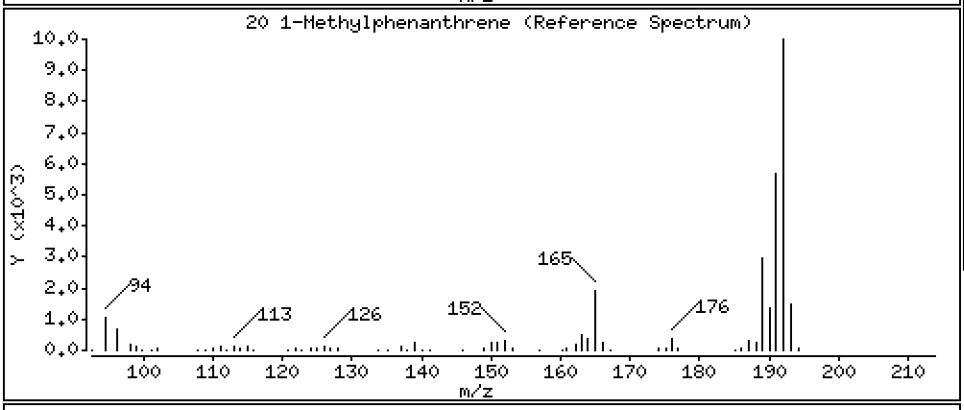
Concentration: 2.482 ug/mL

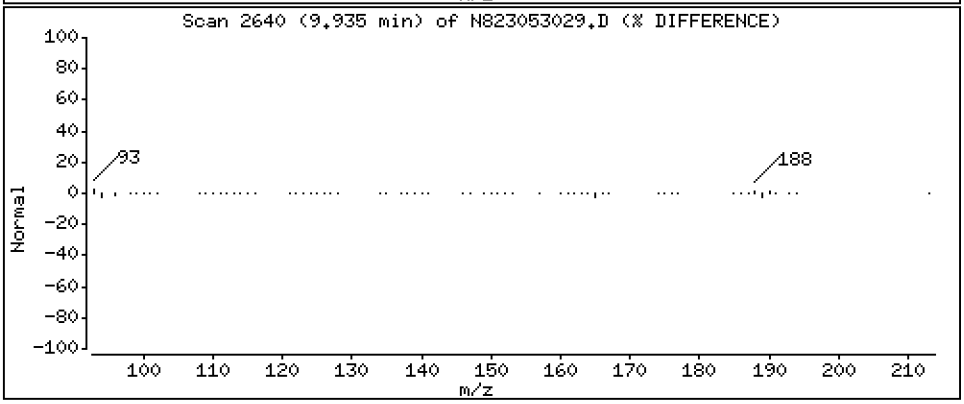












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

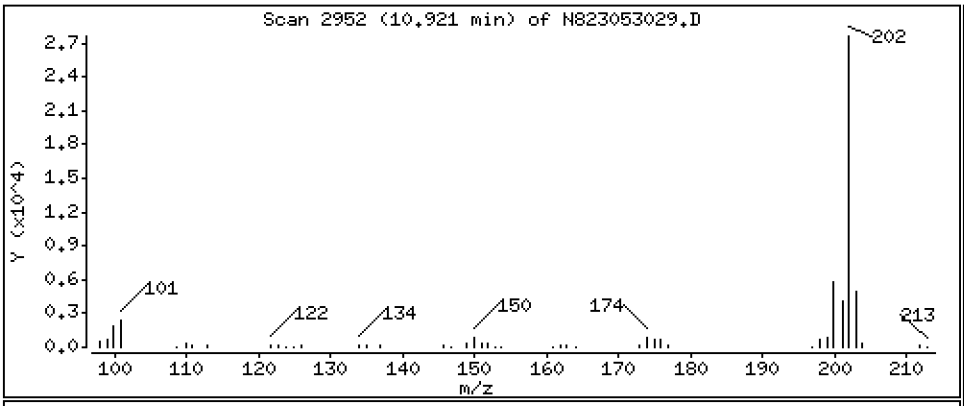
Operator: JZ

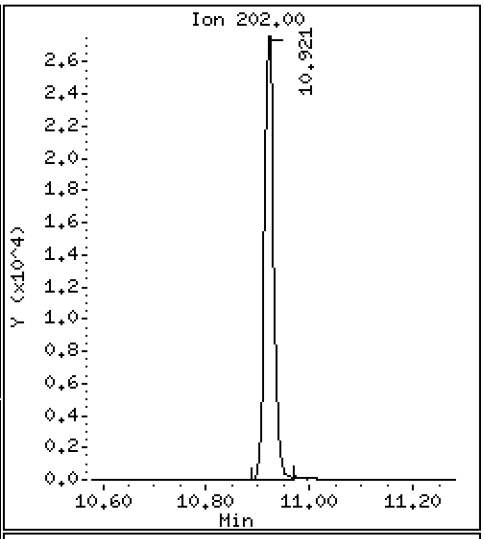
Column phase: Rxi-17sil

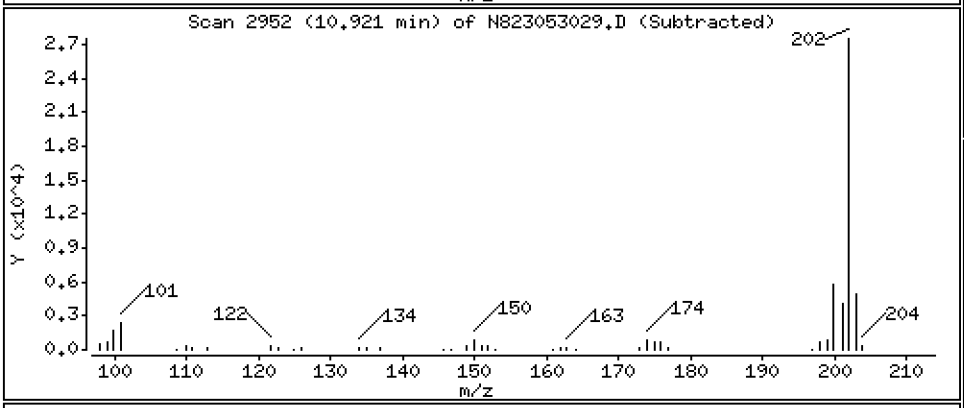
Column diameter: 0.25

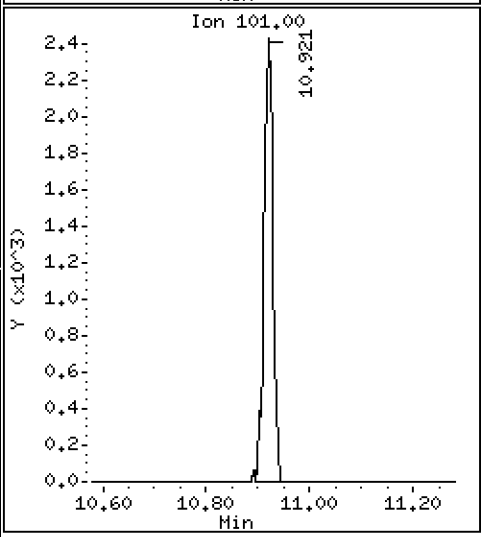
22 Fluoranthene

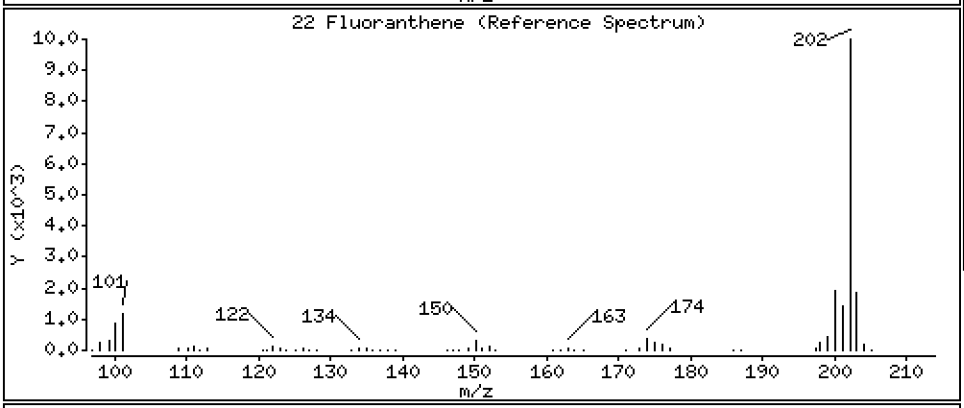
Concentration: 2.444 ug/mL

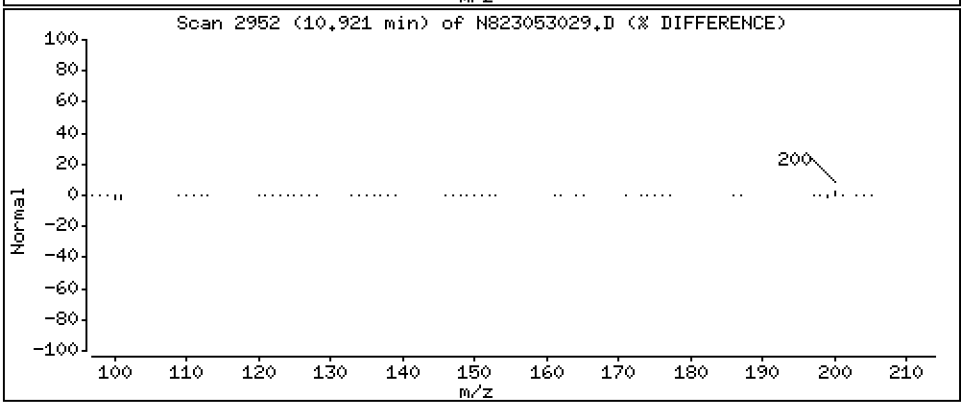












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

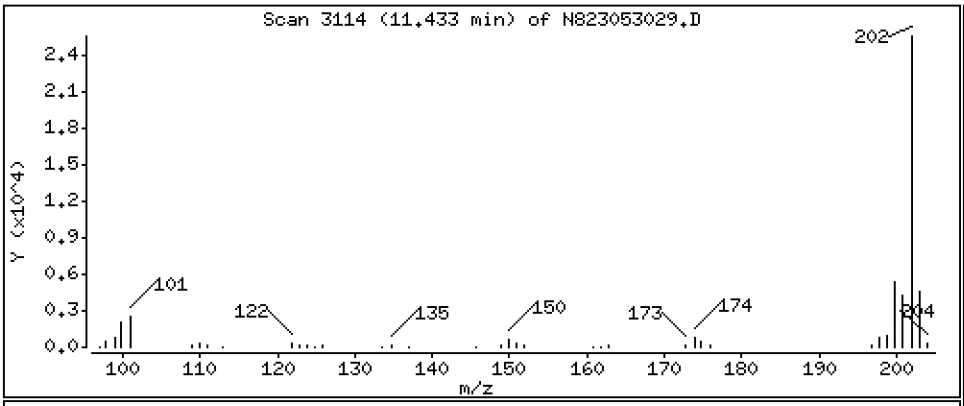
Operator: JZ

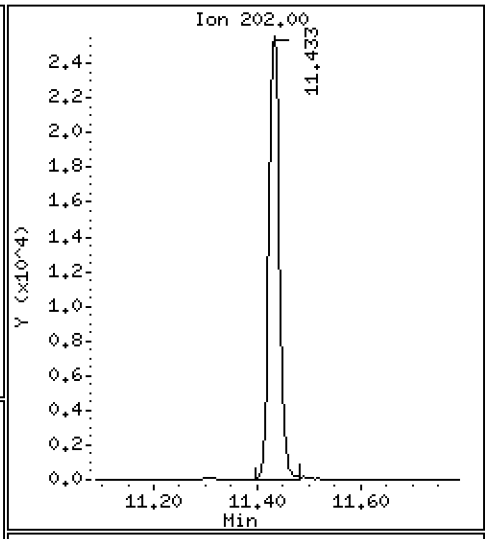
Column phase: Rxi-17sil

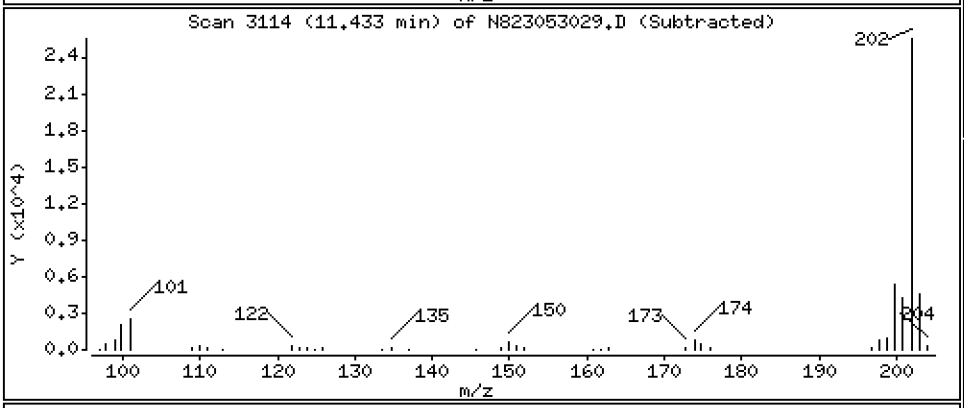
Column diameter: 0.25

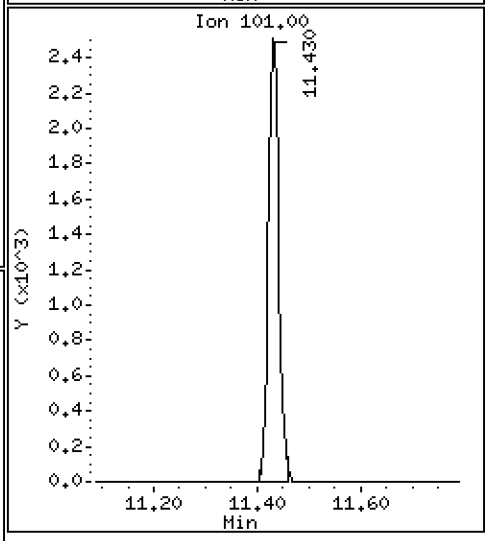
23 Pyrene

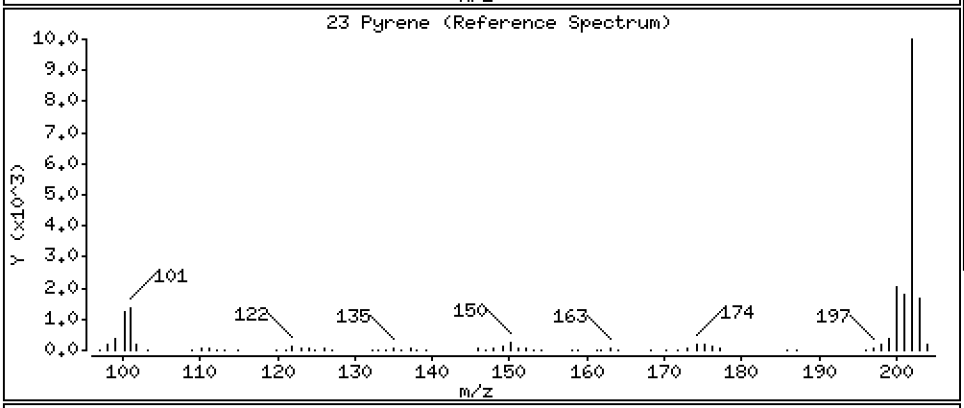
Concentration: 2.711 ug/mL

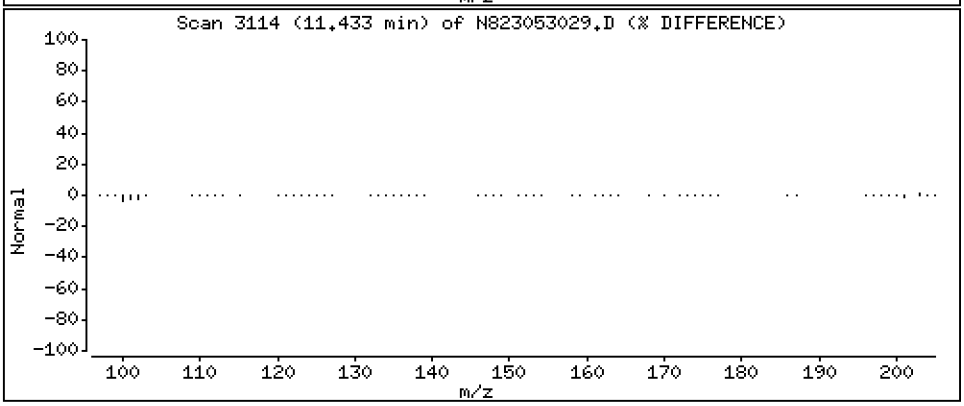












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

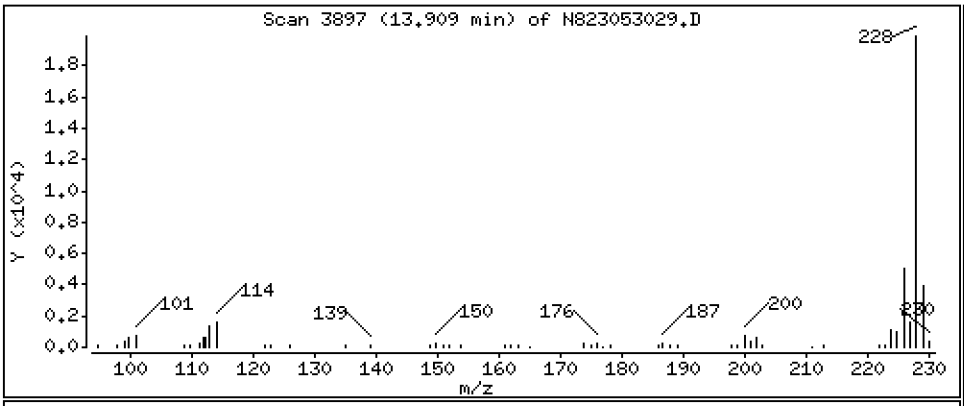
Operator: JZ

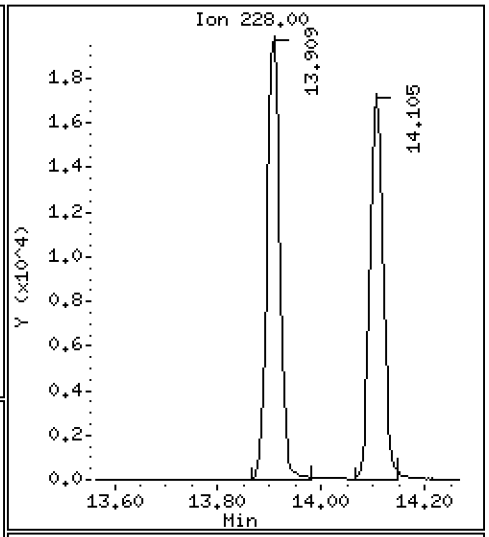
Column phase: Rxi-17sil

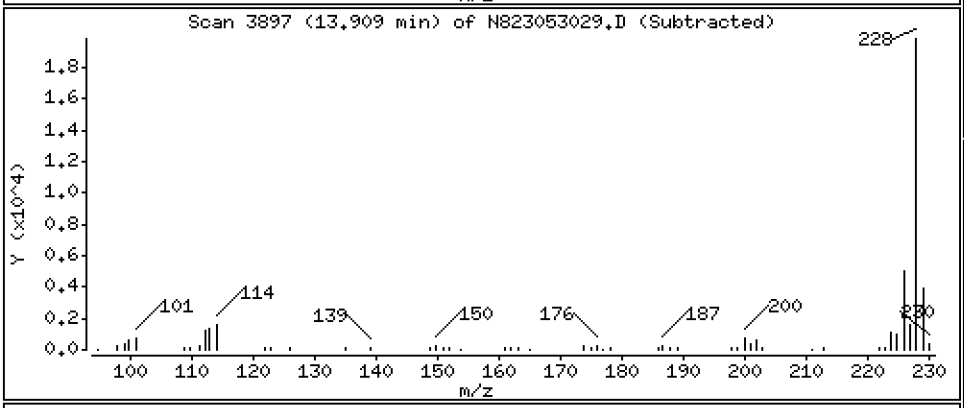
Column diameter: 0.25

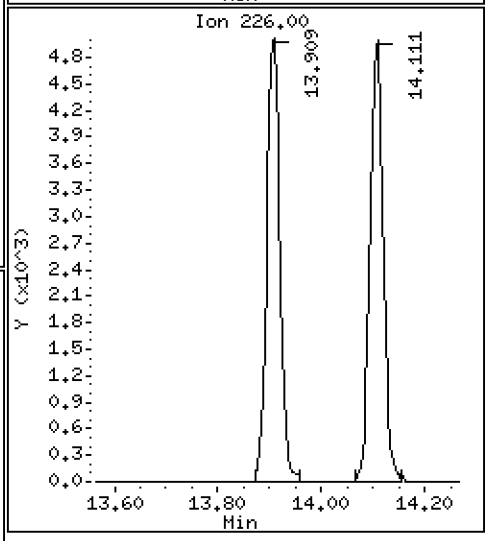
24 Benzo(a)anthracene

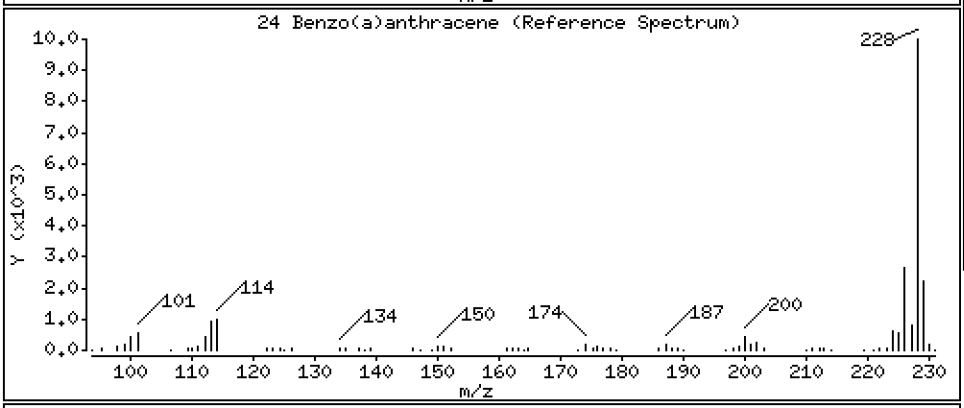
Concentration: 2.511 ug/mL

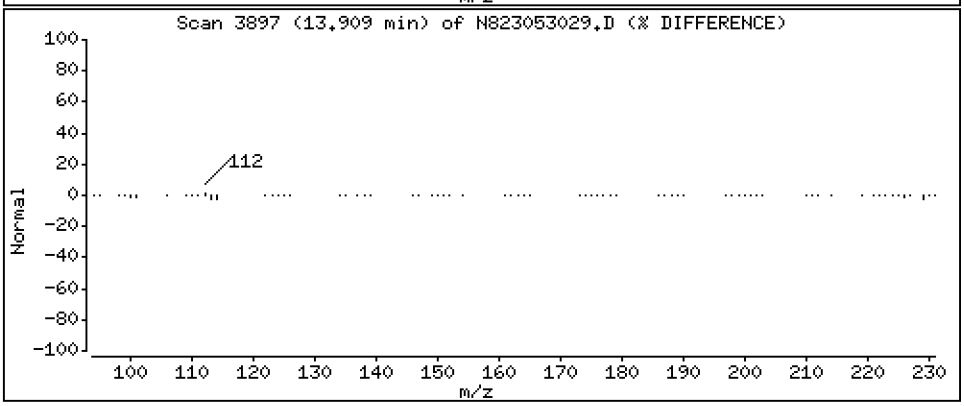












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

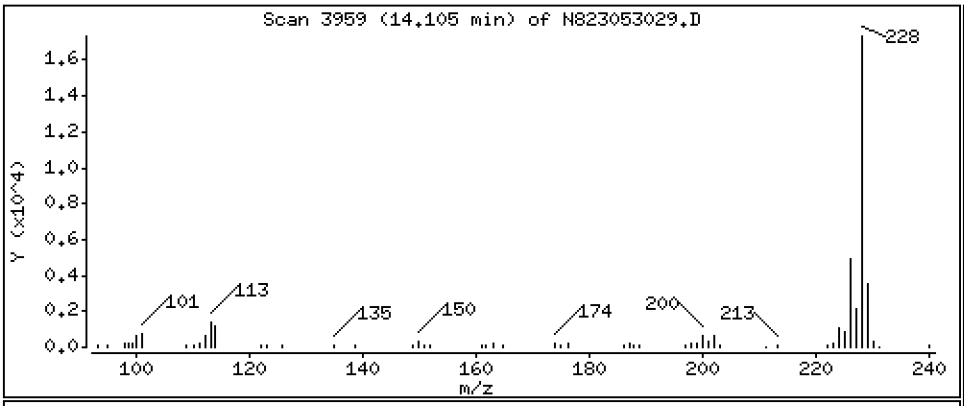
Operator: JZ

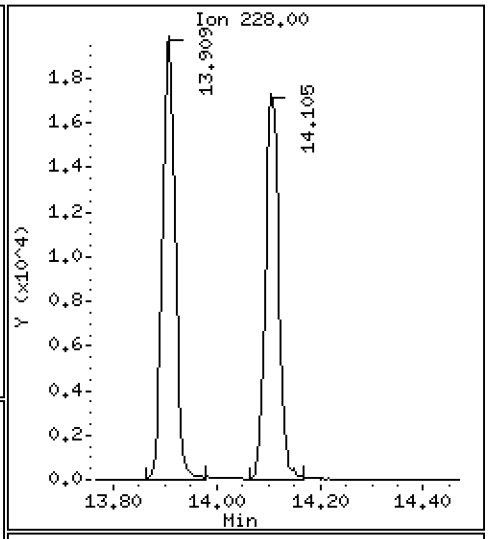
Column phase: Rxi-17sil

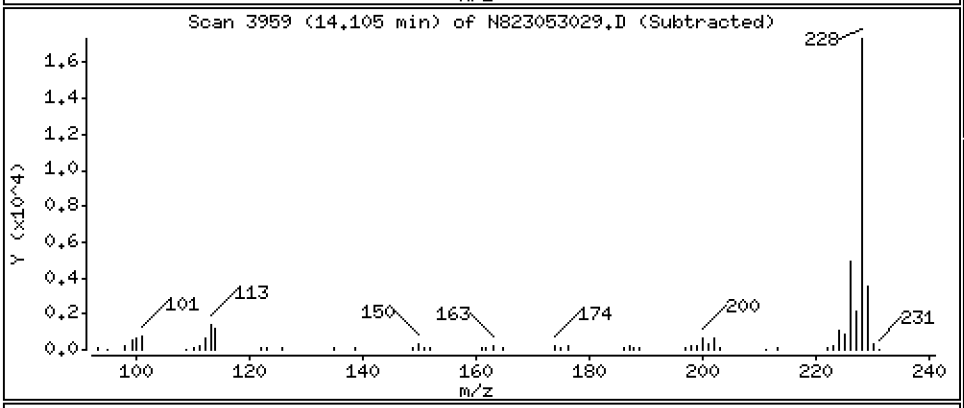
Column diameter: 0.25

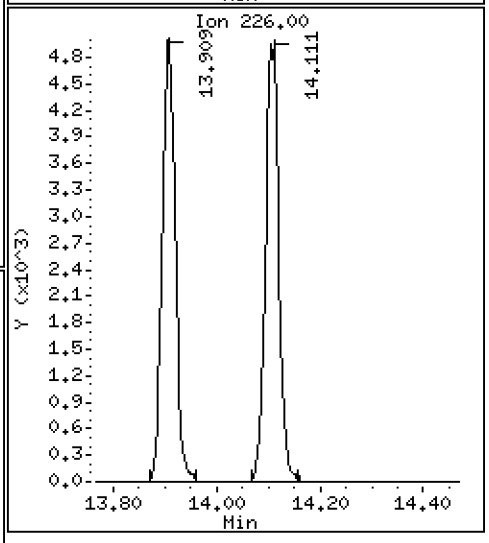
27 Chrysene

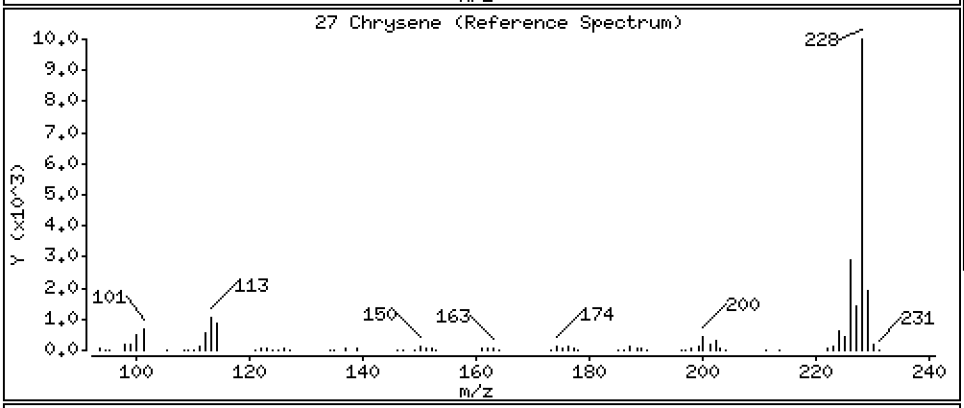
Concentration: 2.323 ug/mL

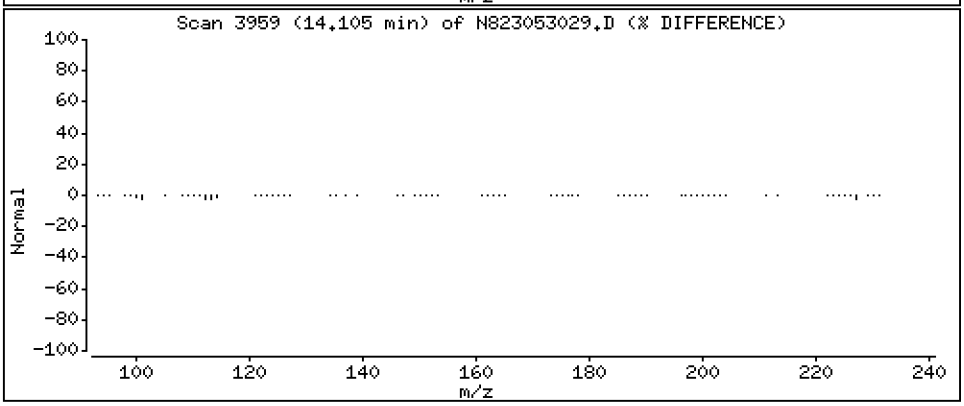












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

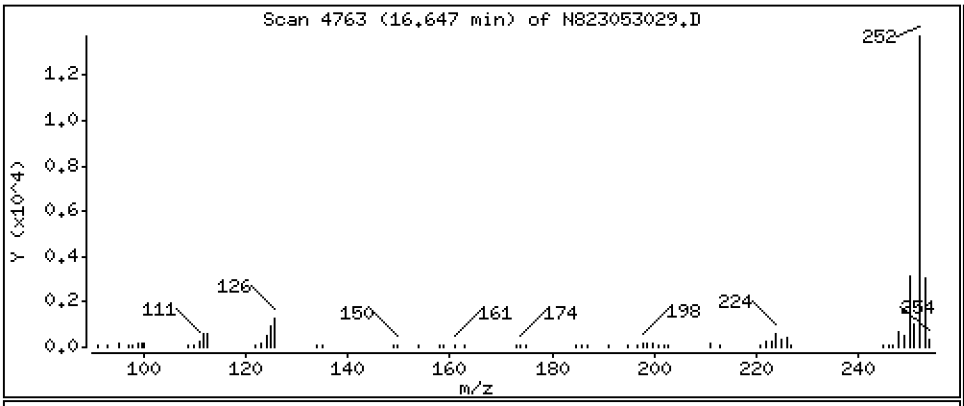
Operator: JZ

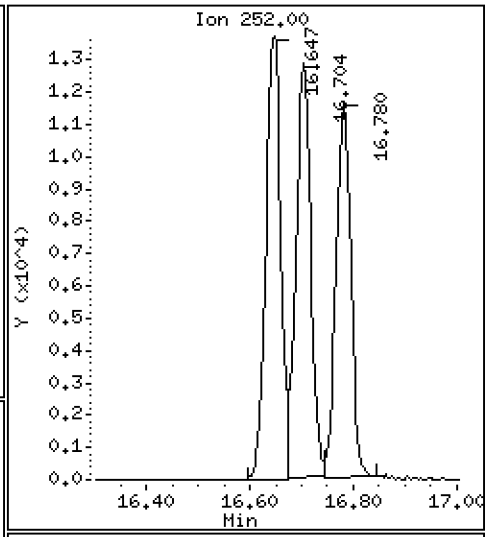
Column phase: Rxi-17sil

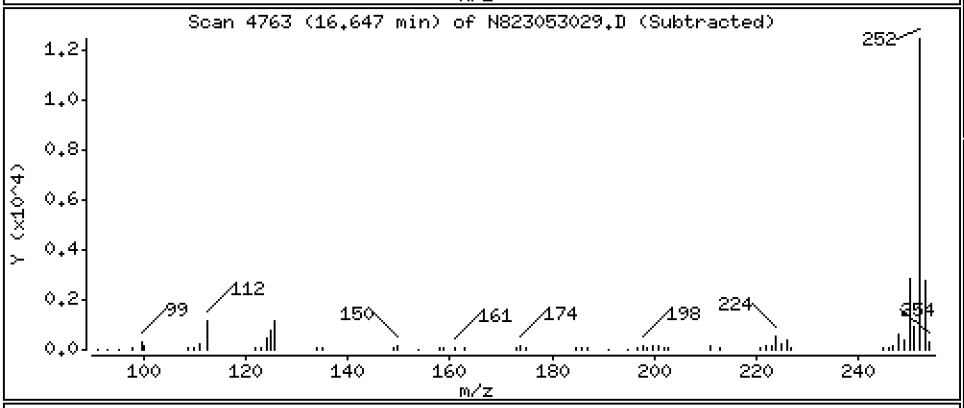
Column diameter: 0.25

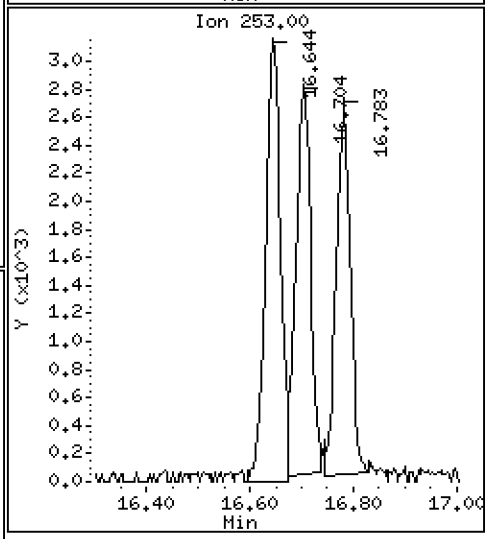
28 Benzo(b)fluoranthene

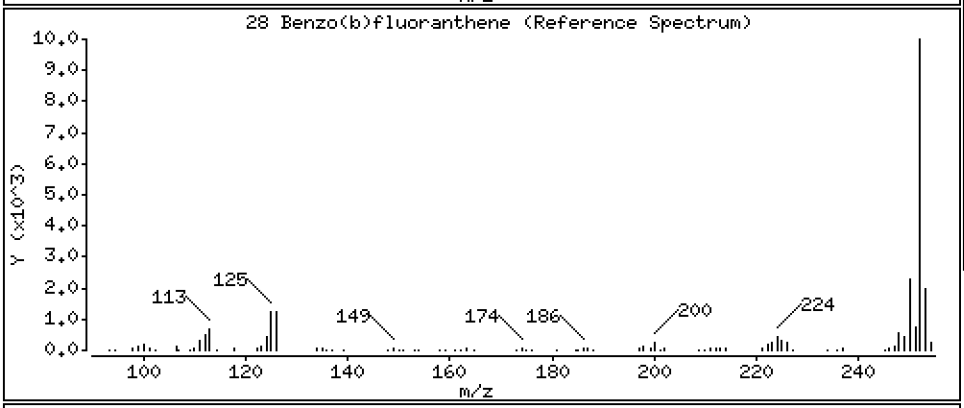
Concentration: 2.635 ug/mL

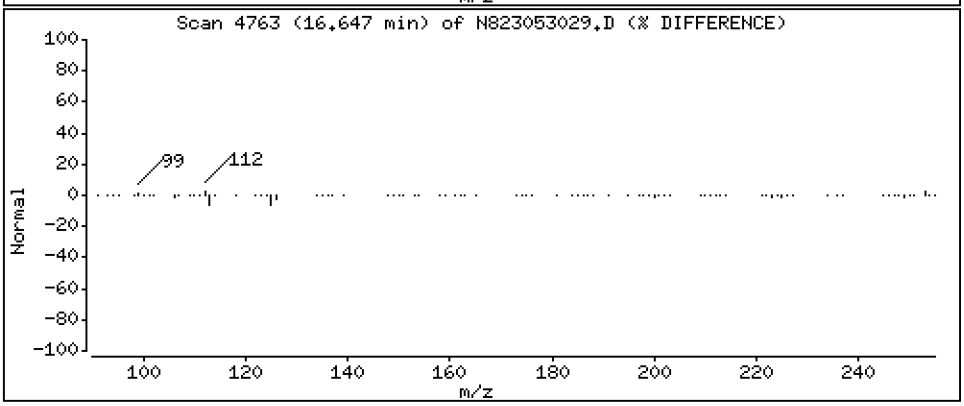












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

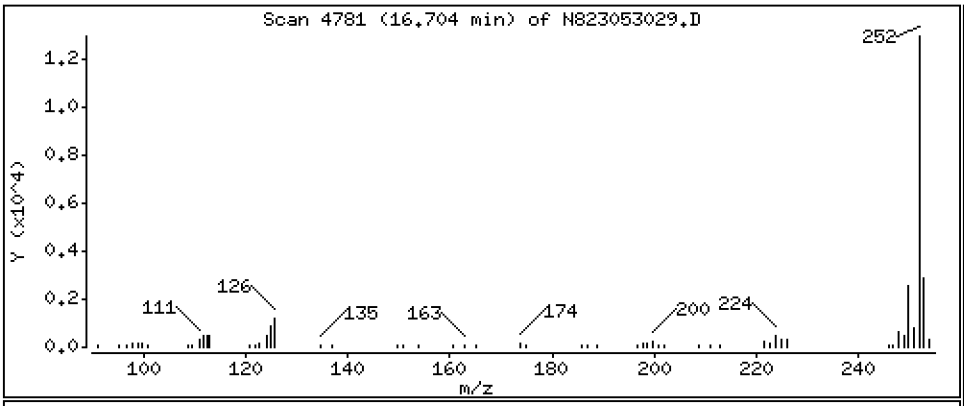
Operator: JZ

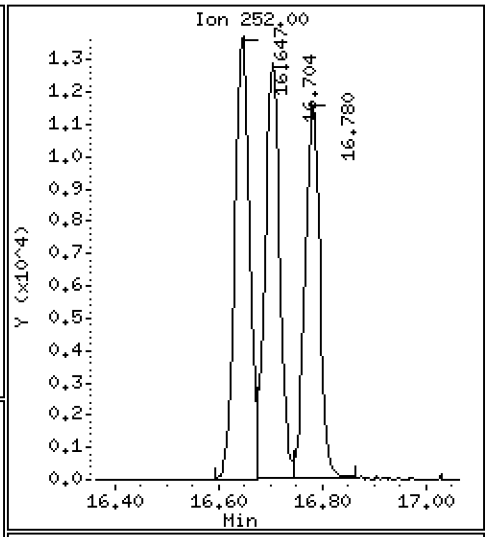
Column phase: Rxi-17sil

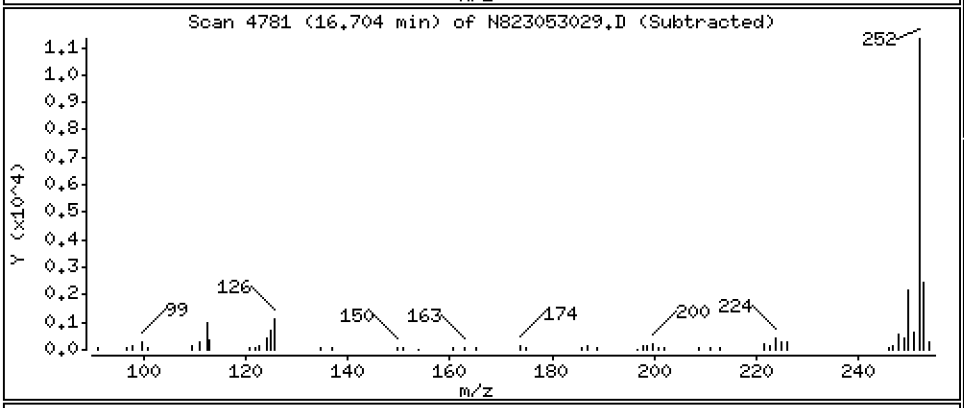
Column diameter: 0.25

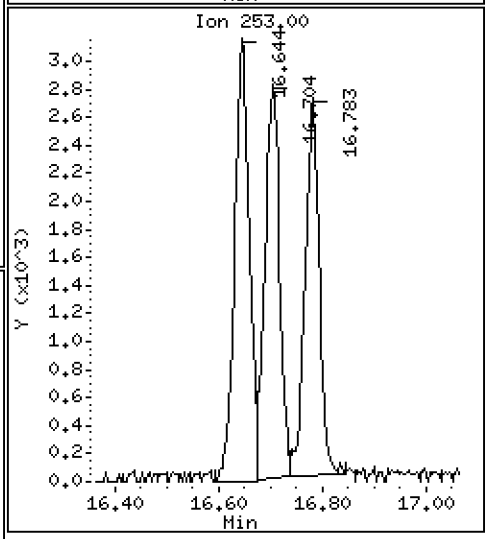
29 Benzo(k)fluoranthene

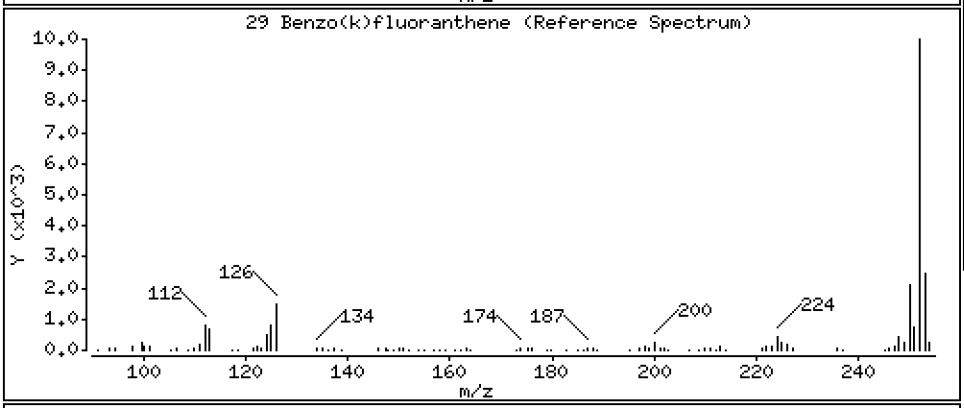
Concentration: 2.617 ug/mL

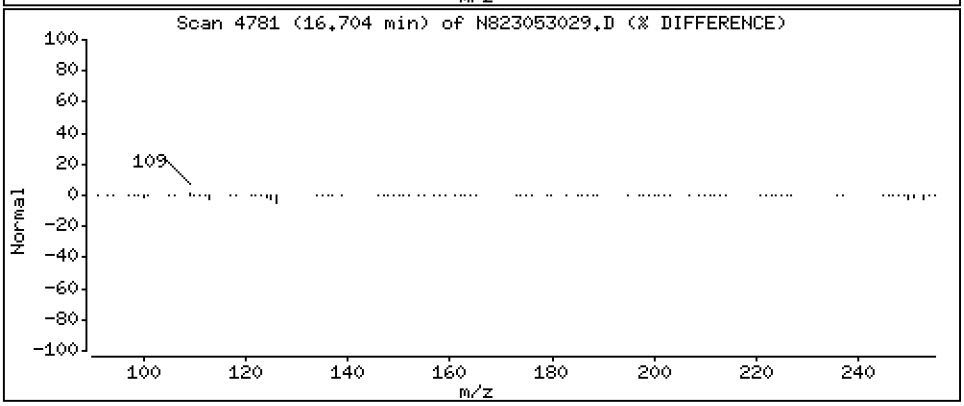












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

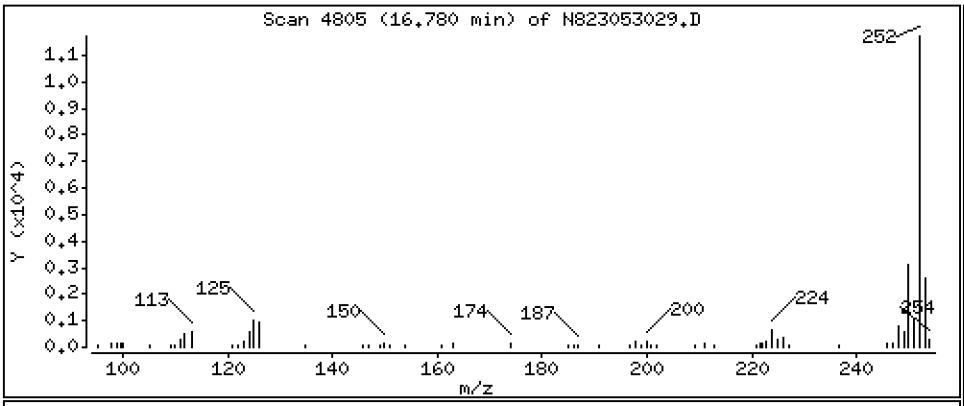
Operator: JZ

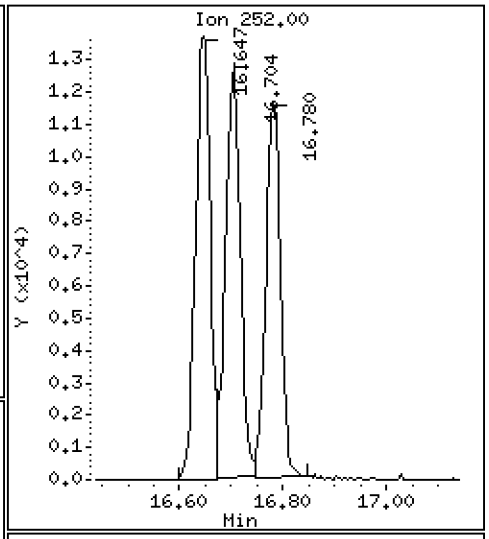
Column phase: Rxi-17sil

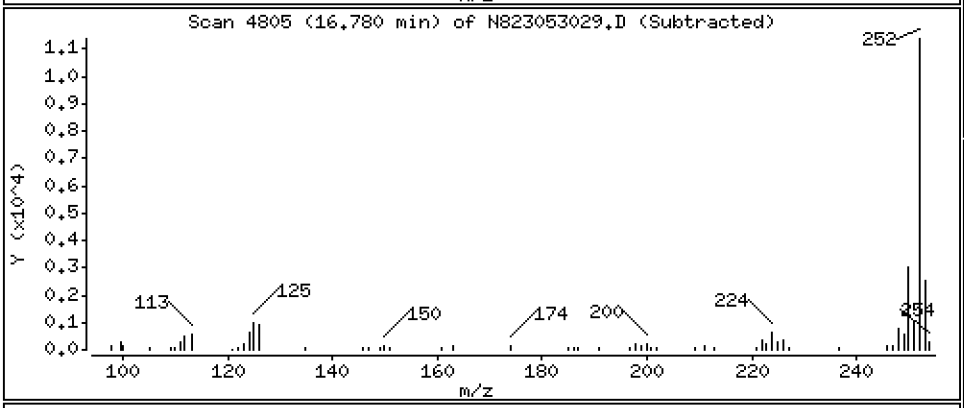
Column diameter: 0.25

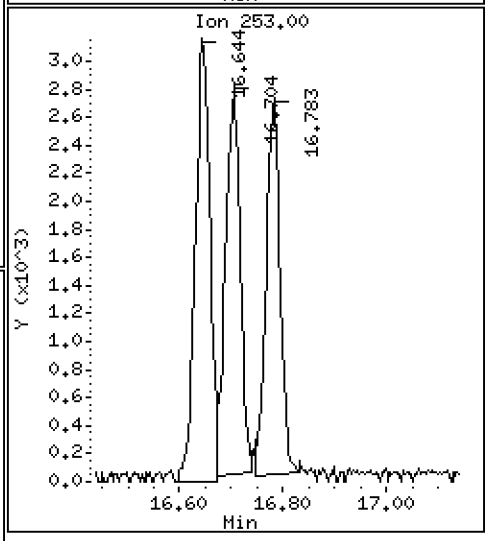
30 Benzo(j)fluoranthene

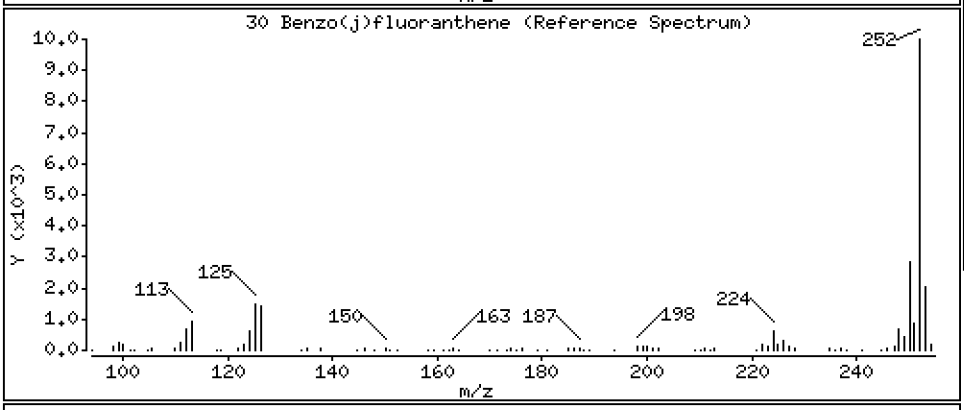
Concentration: 2.552 ug/mL

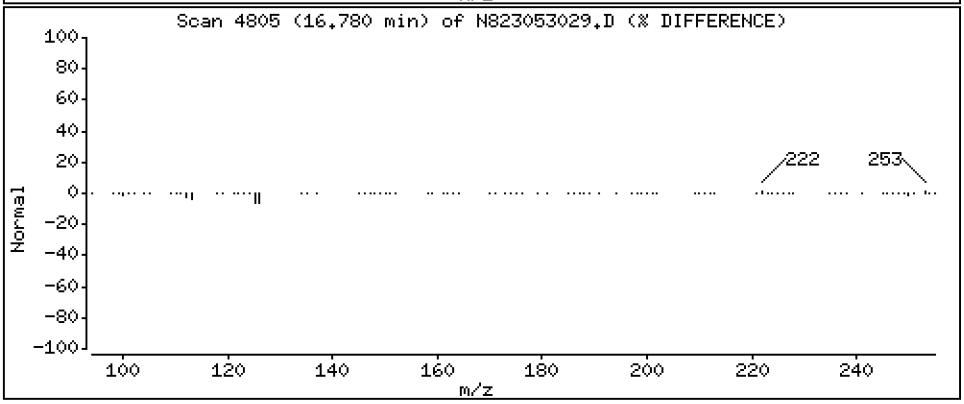












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

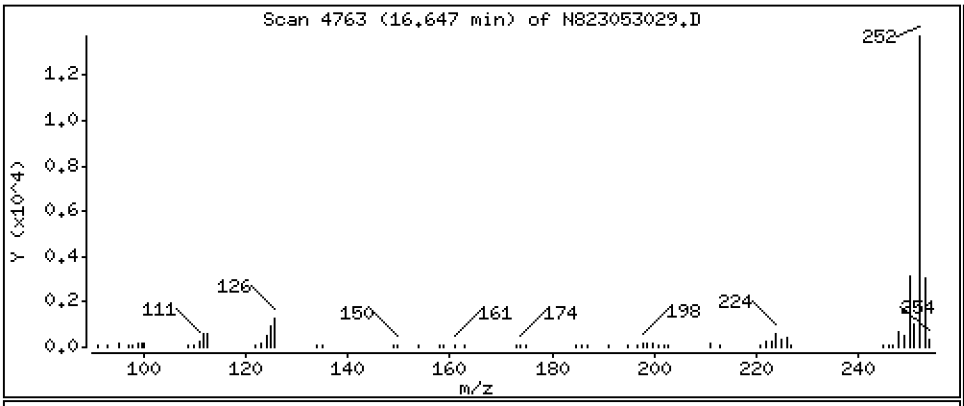
Operator: JZ

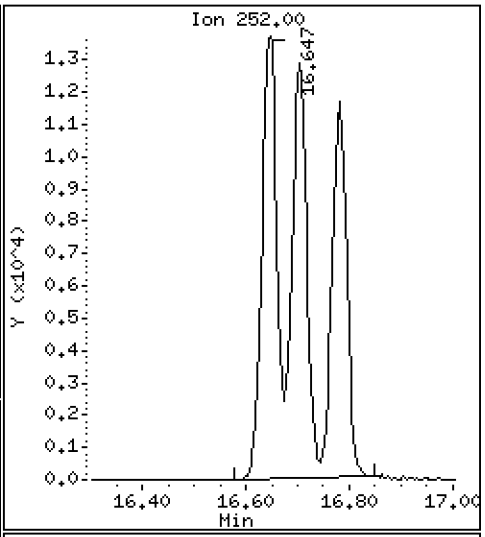
Column phase: Rxi-17sil

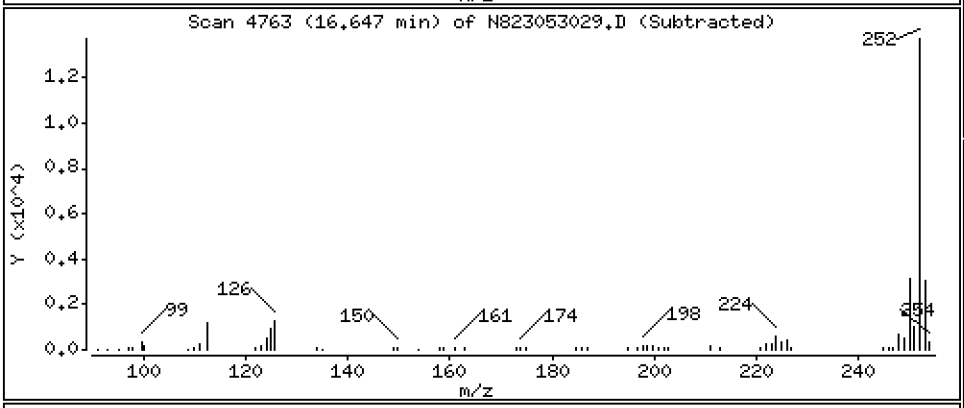
Column diameter: 0.25

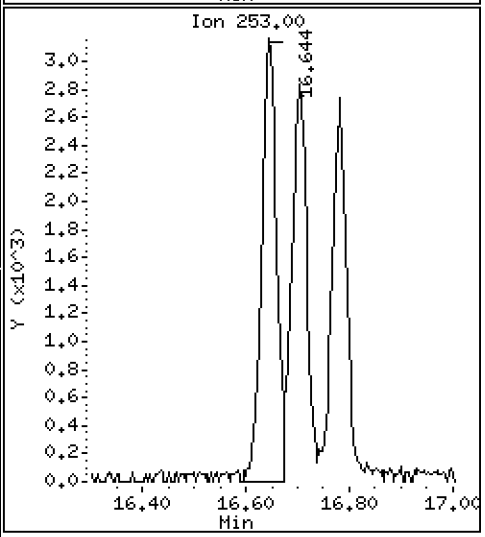
31 Total Benzofluoranthenes

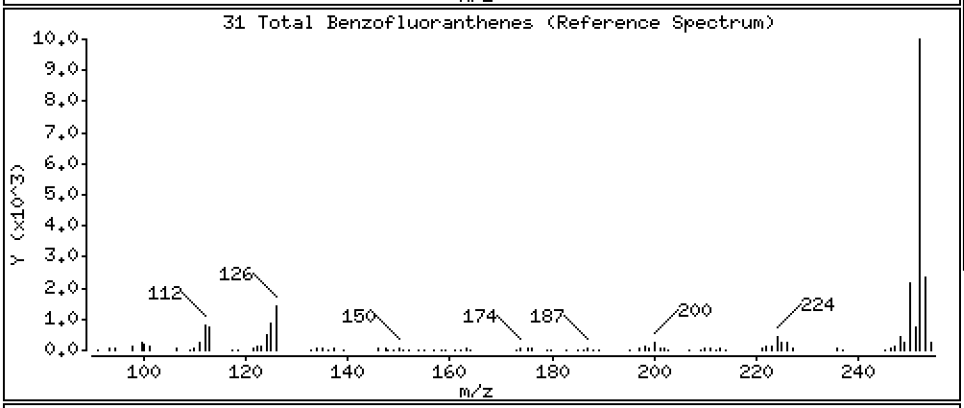
Concentration: 7.844 ug/mL

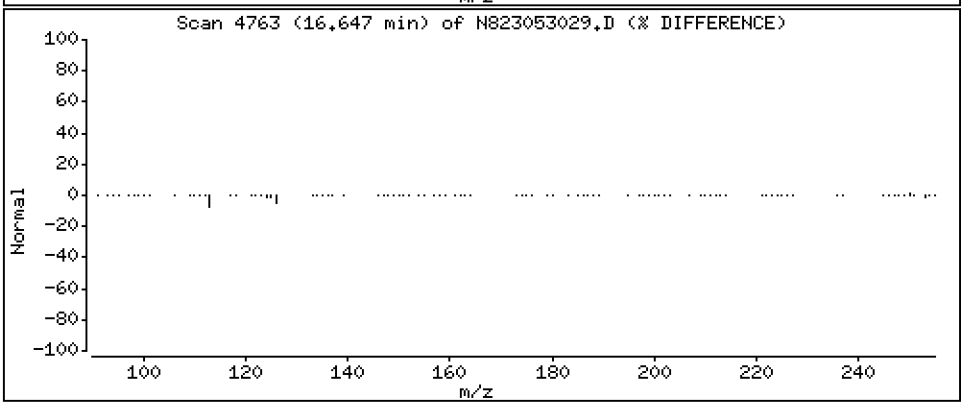












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

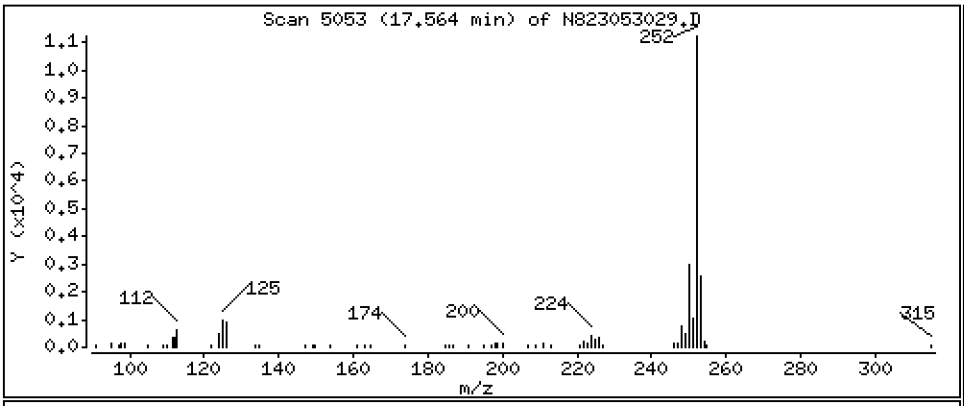
Operator: JZ

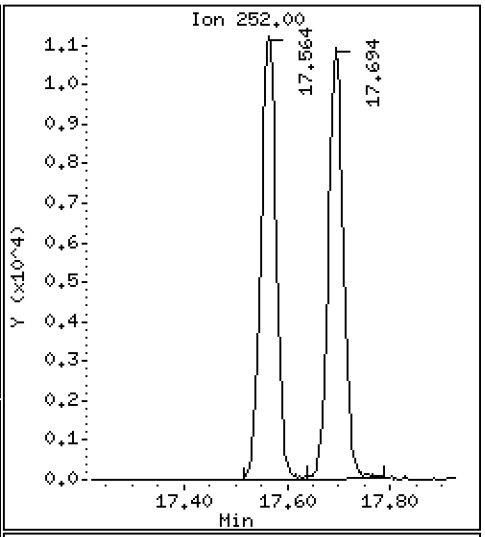
Column phase: Rxi-17sil

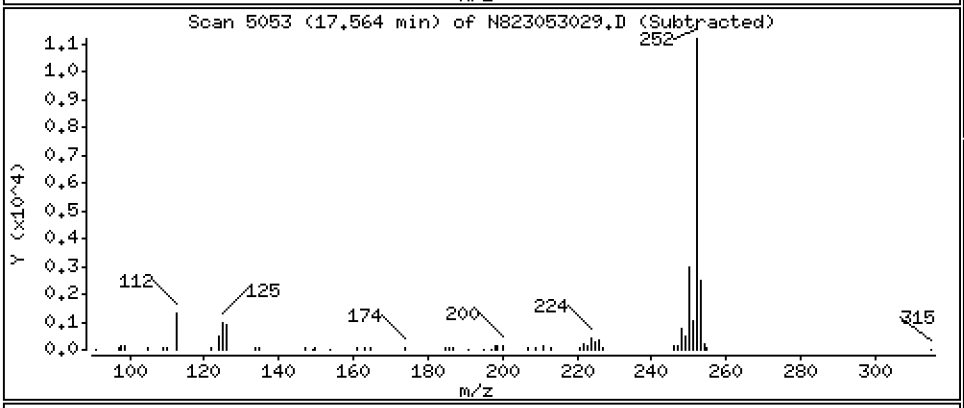
Column diameter: 0.25

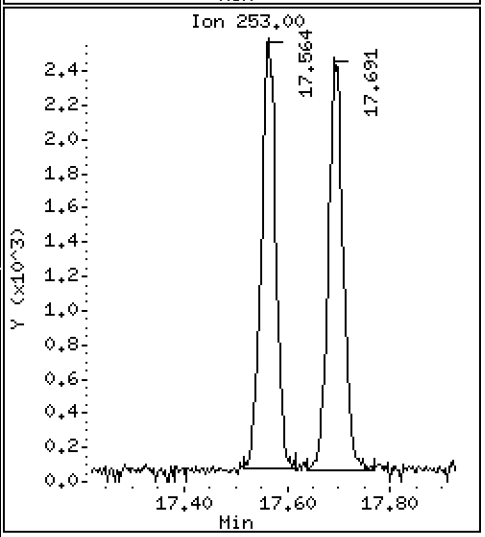
34 Benzo(e)pyrene

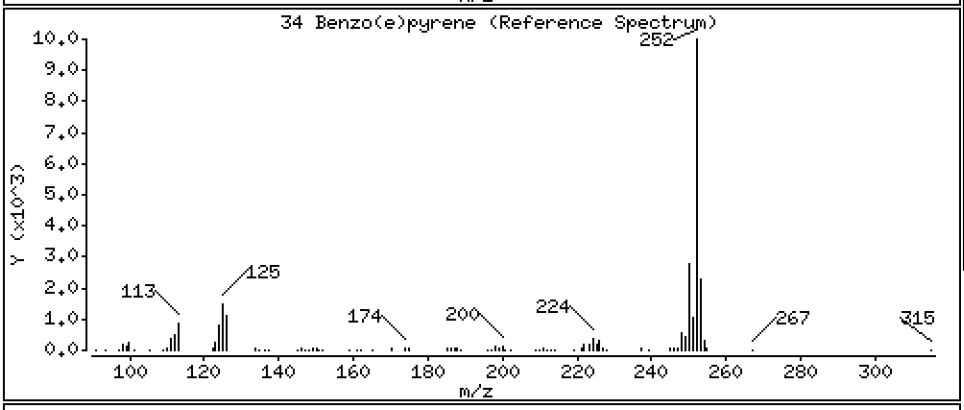
Concentration: 2.421 ug/mL

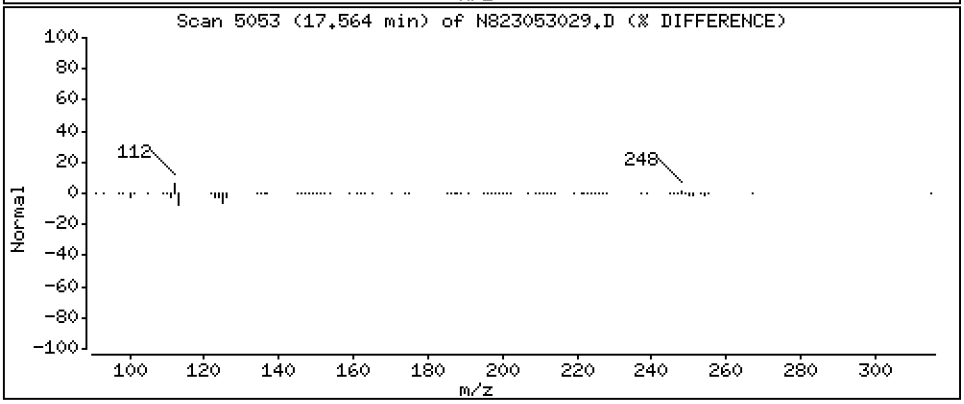












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Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

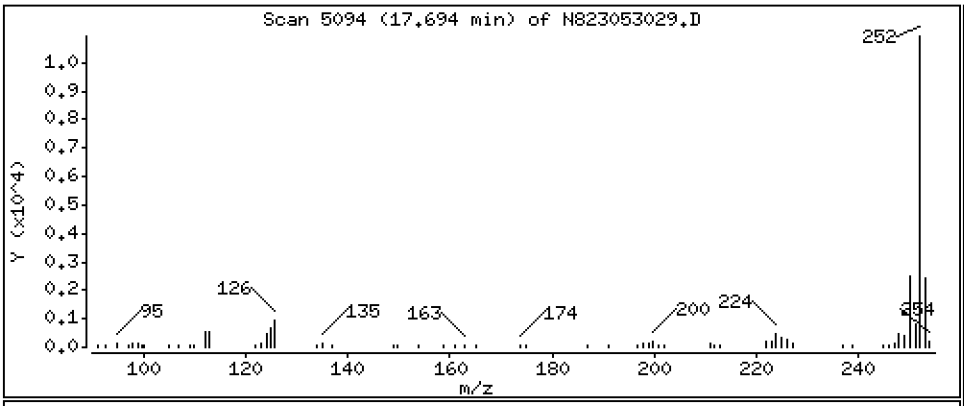
Operator: JZ

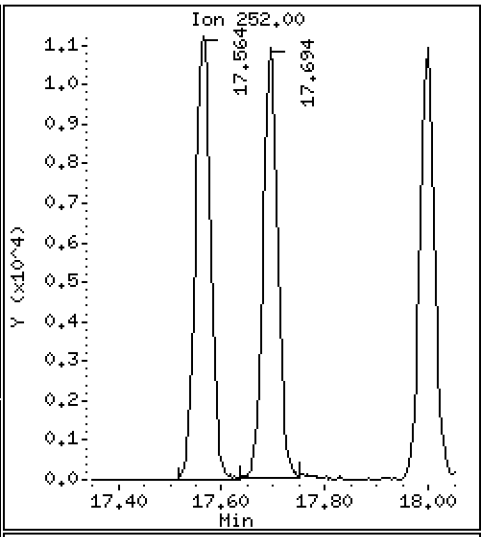
Column phase: Rxi-17sil

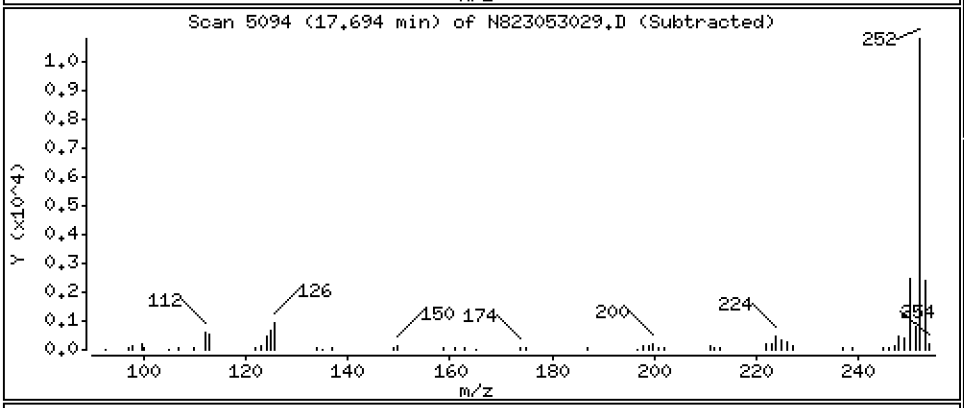
Column diameter: 0.25

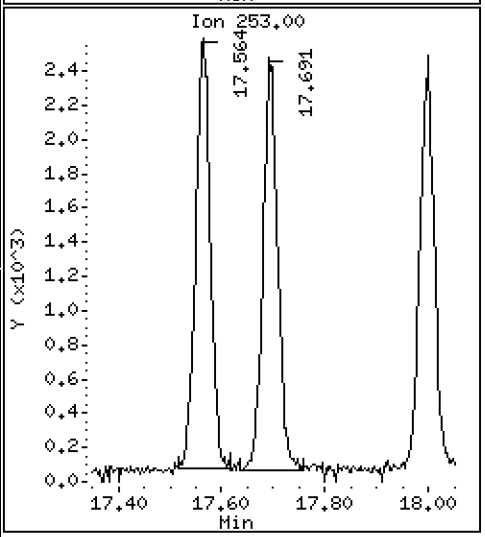
32 Benzo(a)pyrene

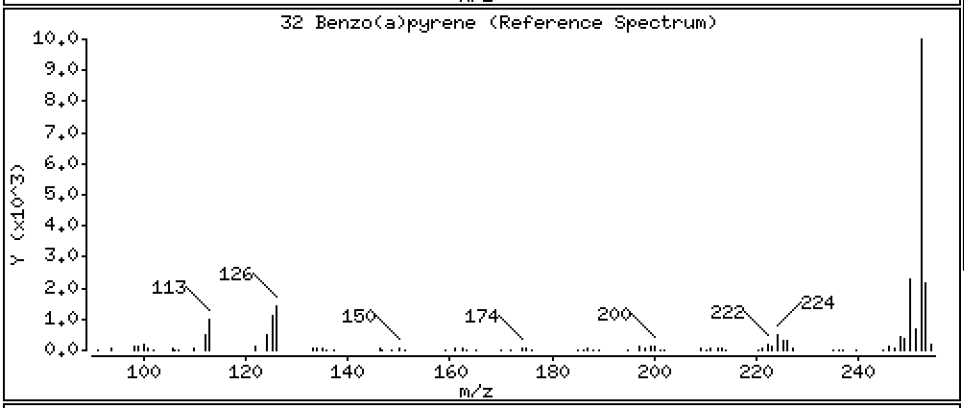
Concentration: 2.399 ug/mL

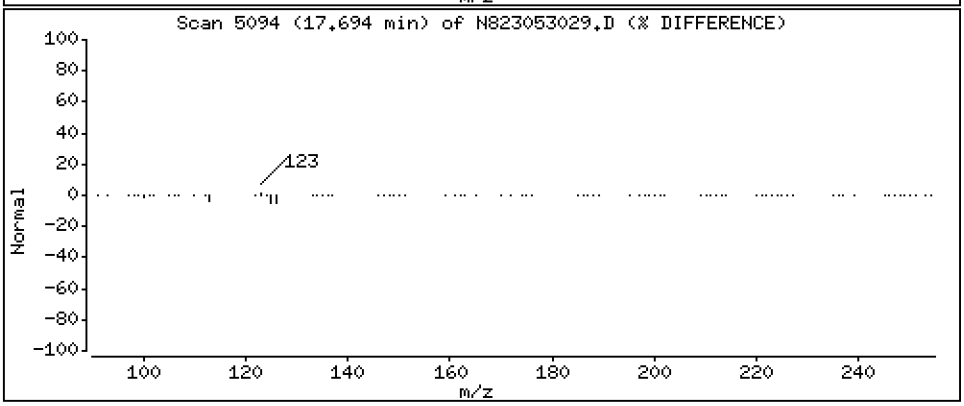












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Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

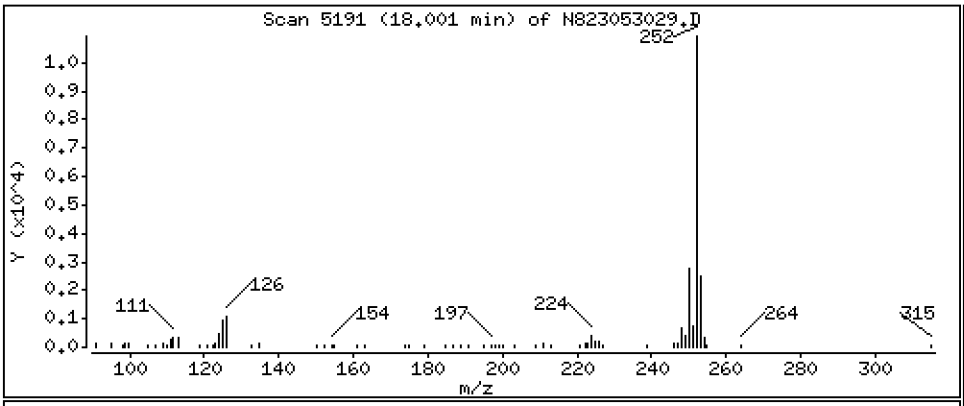
Operator: JZ

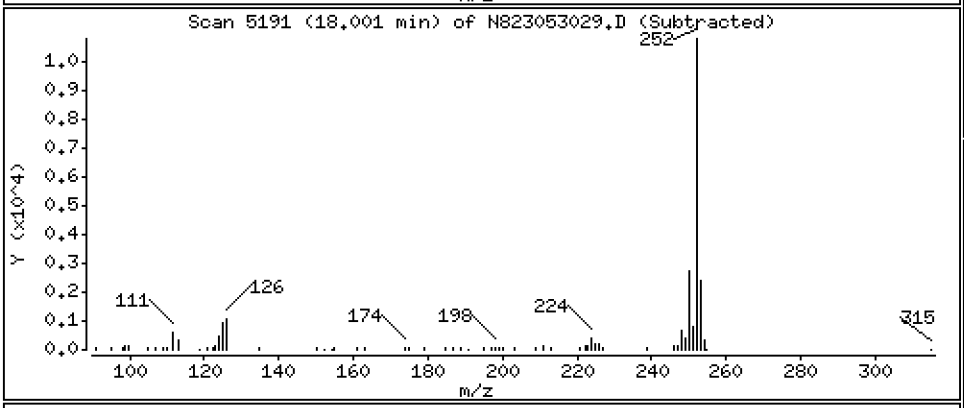
Column phase: Rxi-17sil

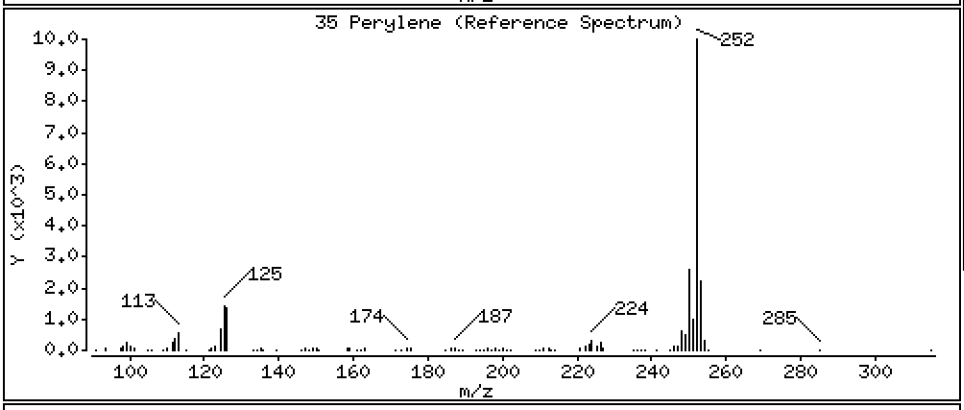
Column diameter: 0.25

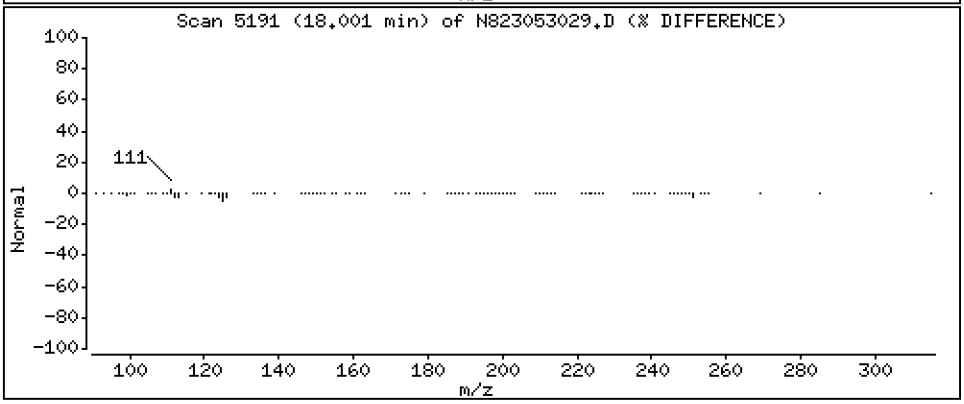
35 Perylene

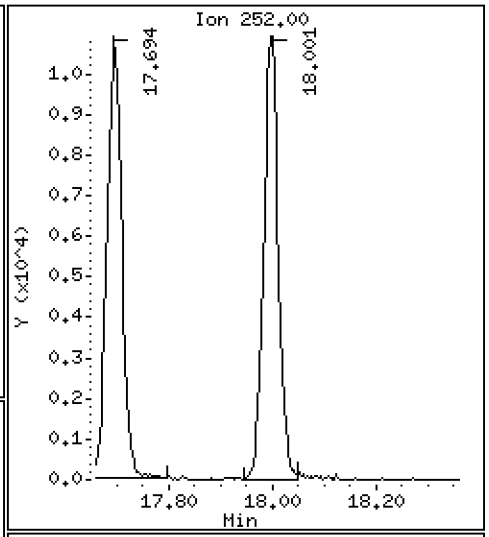
Concentration: 2.407 ug/mL

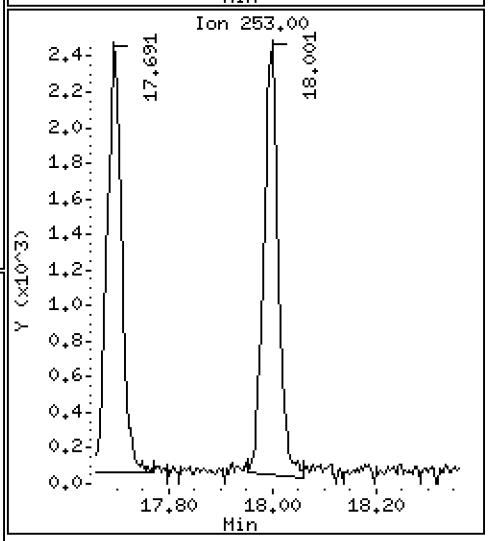












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

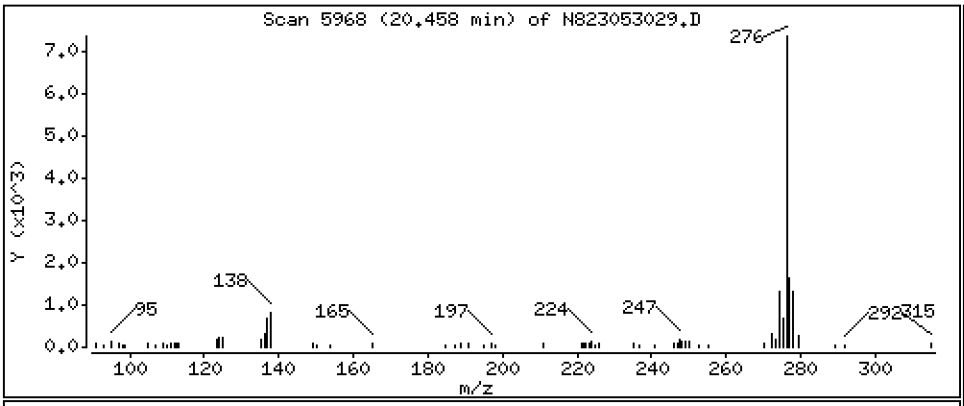
Operator: JZ

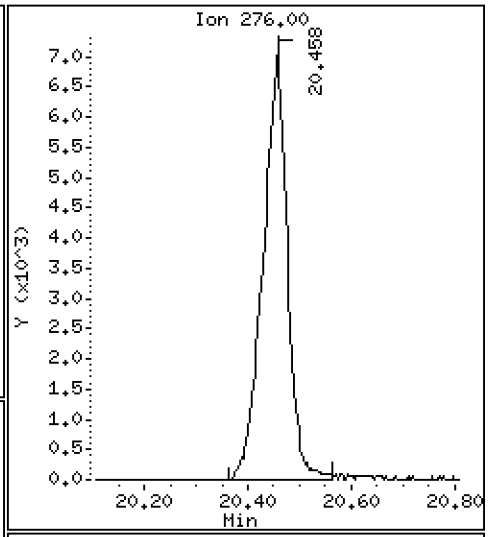
Column phase: Rxi-17sil

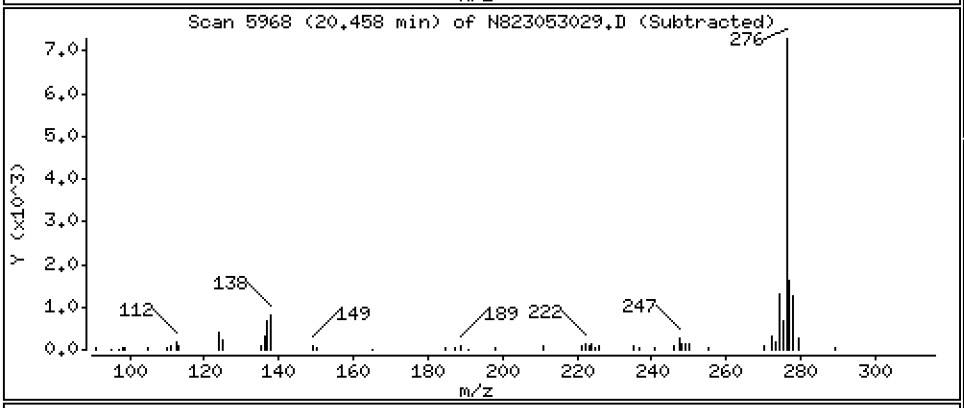
Column diameter: 0.25

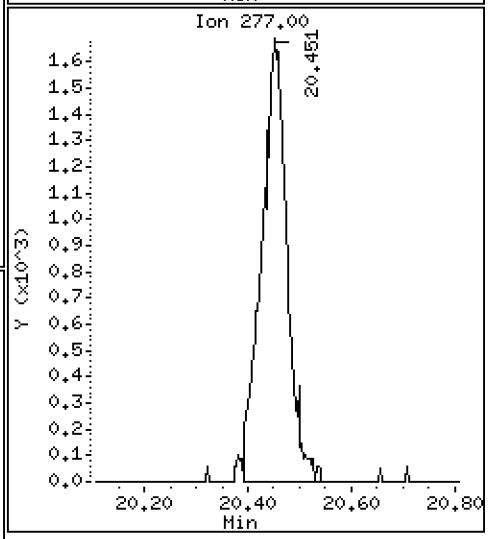
37 Indeno(1,2,3-cd)pyrene

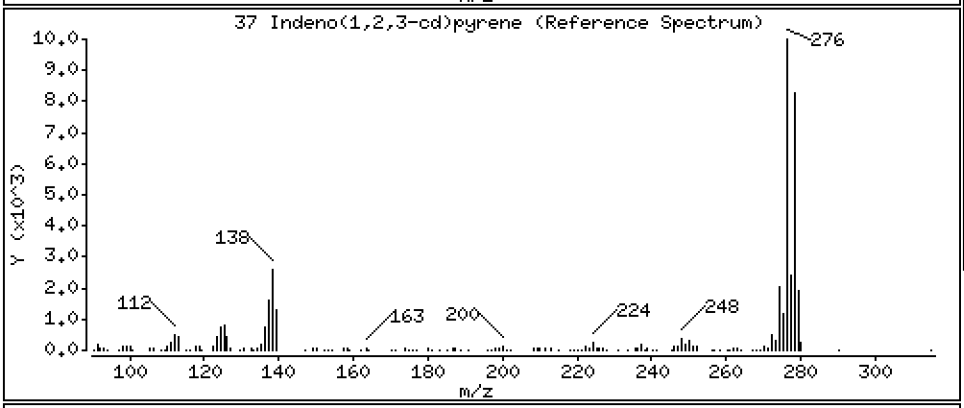
Concentration: 2.525 ug/mL

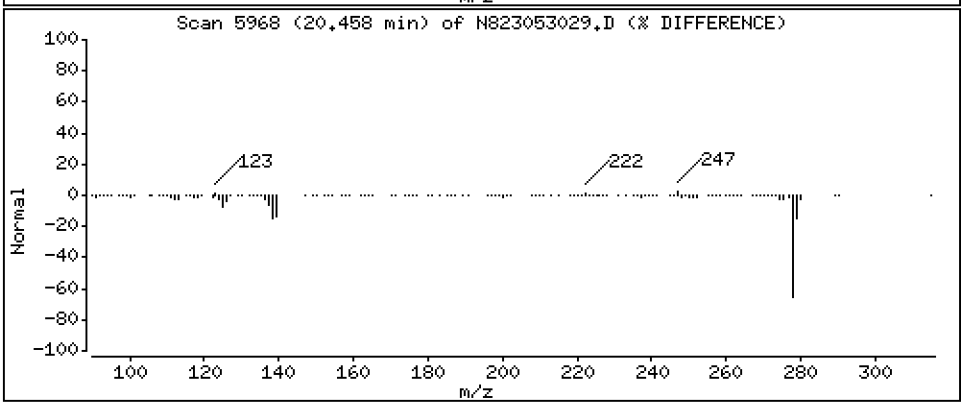












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

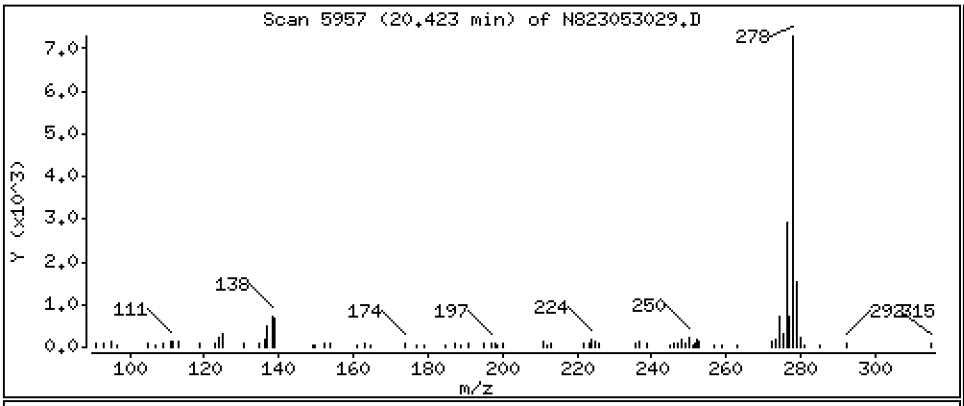
Operator: JZ

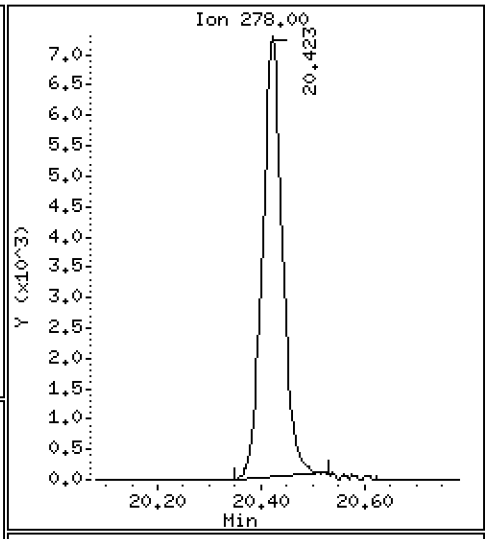
Column phase: Rxi-17sil

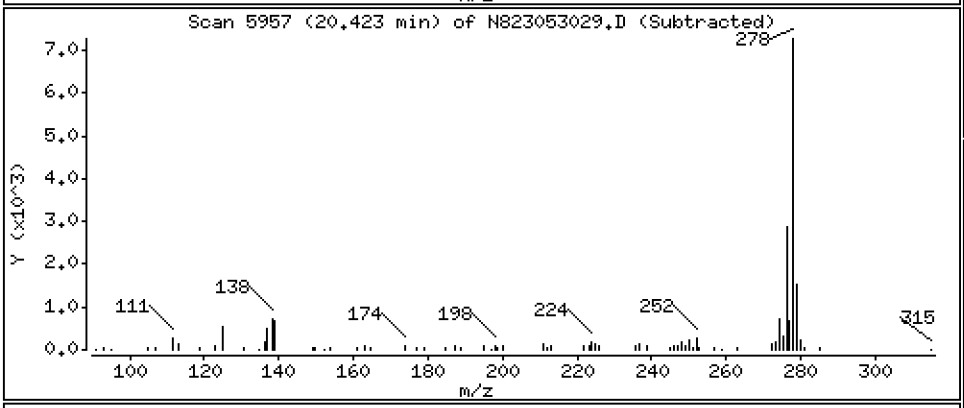
Column diameter: 0.25

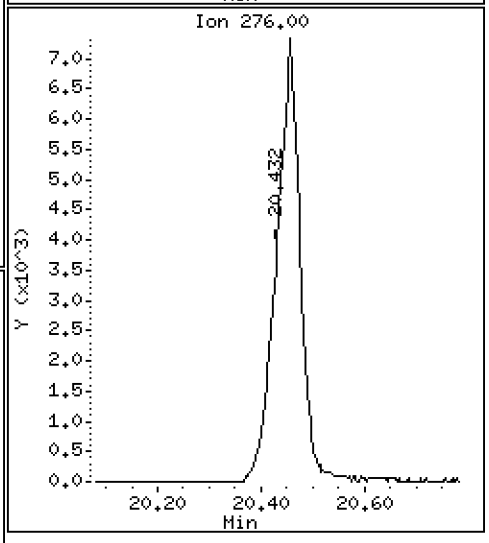
38 Dibenzo(a,h)anthracene

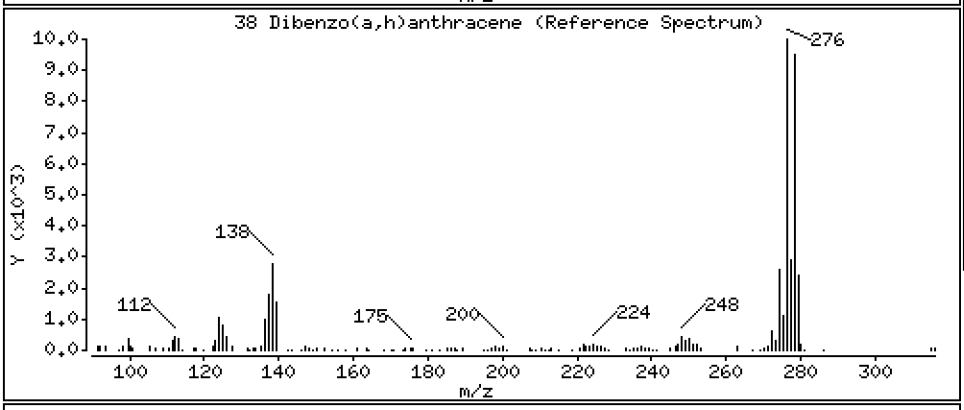
Concentration: 2.410 ug/mL

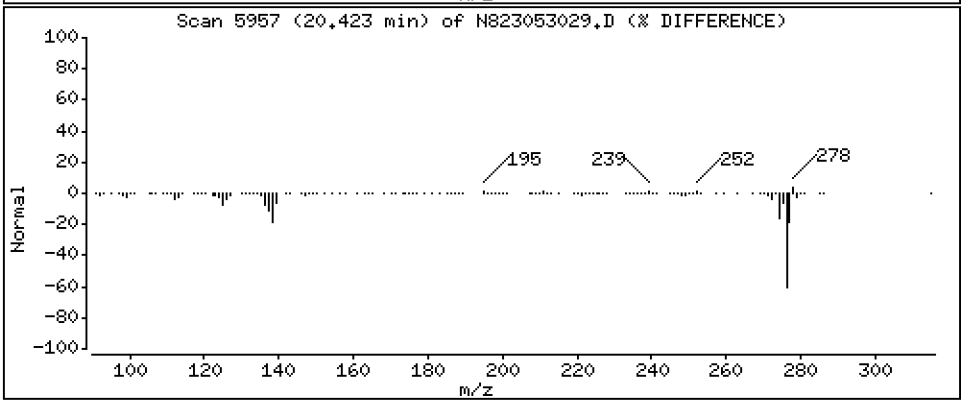












Data File: \\target\share\chem3\nt8.i\20230530.b\N823053029.D

Date : 31-MAY-2023 00:22

Client ID:

Instrument: nt8.i

Sample Info: CCV230530

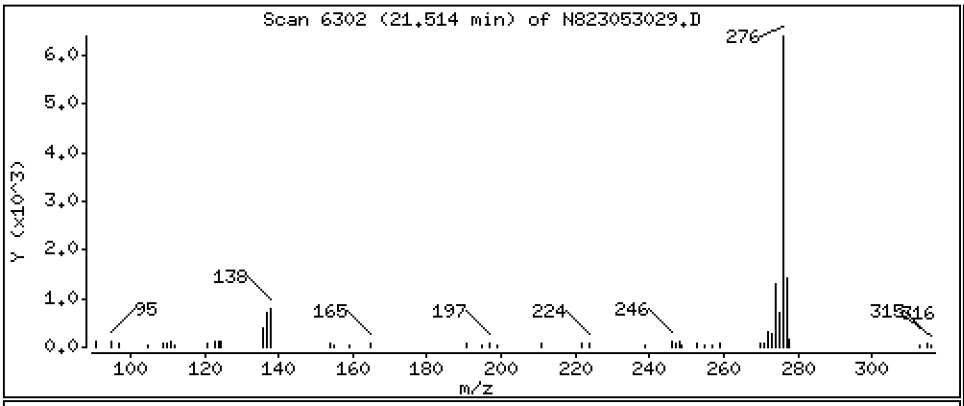
Operator: JZ

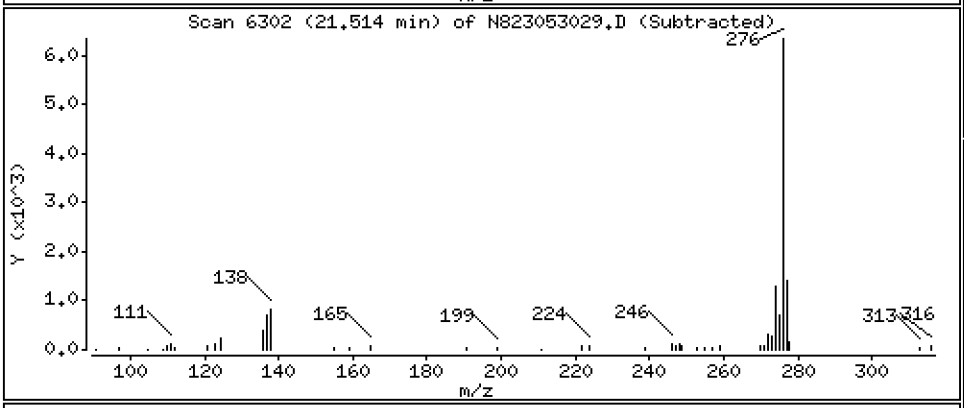
Column phase: Rxi-17sil

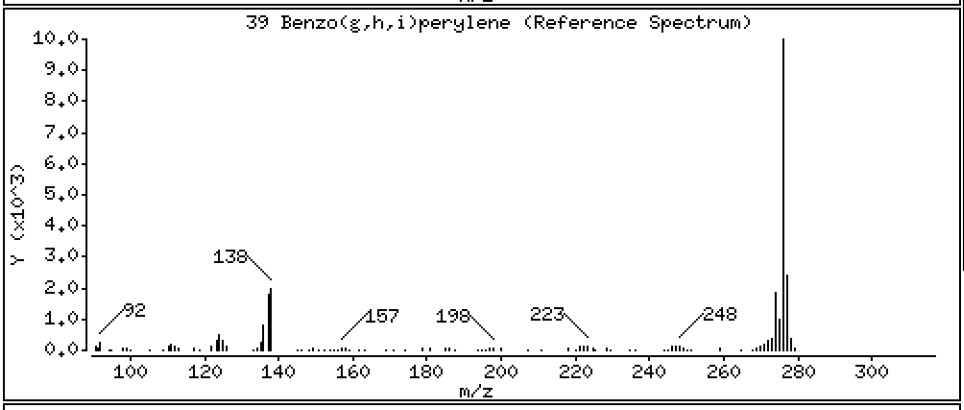
Column diameter: 0.25

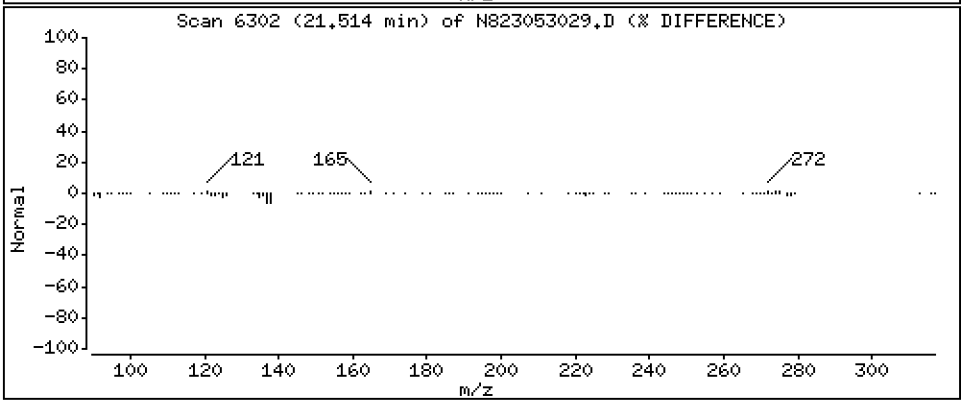
39 Benzo(g,h,i)perylene

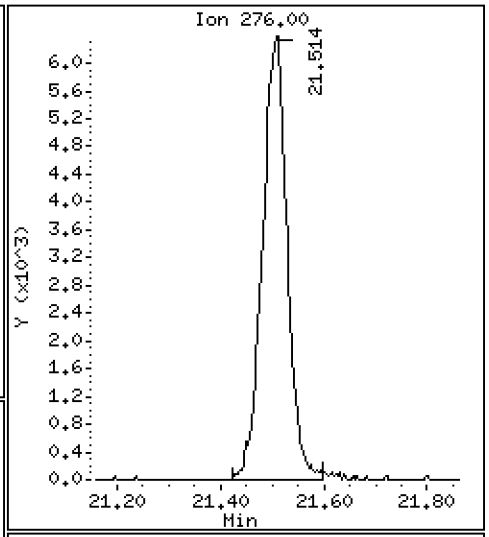
Concentration: 2.504 ug/mL

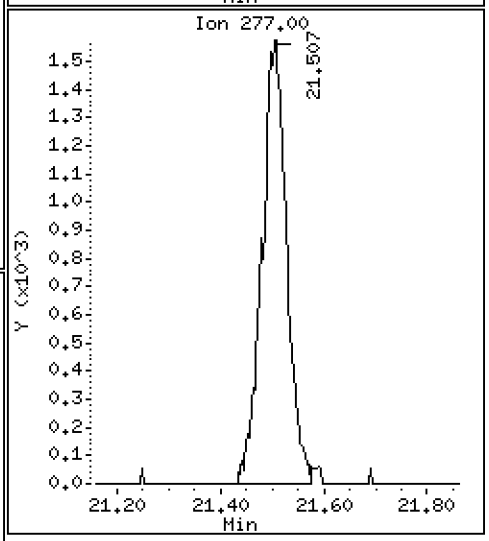












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt8.i\20230530.b\N823053029.D
Lab Smp Id: SLE0448-CCV1
Inj Date : 31-MAY-2023 00:22
Operator : JZ Inst ID: nt8.i
Smp Info : CCV230530
Misc Info : 23-
Comment   : 1ul Injection
Method   : \\target\share\chem3\nt8.i\20230530.b\FSIMPNA230426.m
Meth Date : 31-May-2023 08:52 jianqing Quant Type: ISTD
Cal Date : 26-APR-2023 20:22 Cal File: N823042608.D
Als bottle: 29
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: FSIMPNAICLA.sub
Target Version: 4.14
Processing Host: JIANQINGZ-20191

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
*	1 Naphthalene-d8	136	4.812	4.815	(1.000)	20335	2.00000	
	2 Naphthalene	128	4.840	4.843	(1.006)	26066	2.51601	2.516
$	3 2-Methylnaphthalene-d10	152	5.542	5.548	(1.152)	15960	2.54122	2.541
	4 2-Methylnaphthalene	141	5.589	5.596	(1.162)	14632	2.48754	2.488
	5 1-methylnaphthalene	141	5.786	5.792	(1.202)	14636	2.50954	2.510
	7 Biphenyl	154	6.247	6.253	(0.881)	21636	2.30288	2.303
	8 2,6-Dimethylnaphthalene	156	6.288	6.298	(0.887)	16011	2.39351	2.394
	9 Acenaphthylene	152	6.984	6.990	(0.985)	27048	2.50171	2.502
*	10 Acenaphthene-d10	164	7.091	7.101	(1.000)	12213	2.00000	
	11 Acenaphthene	153	7.142	7.148	(1.007)	17166	2.45058	2.451
	12 Dibenzofuran	168	7.297	7.300	(1.029)	25068	2.38263	2.383
	13 1,6,7-Trimethylnaphthalene	170	7.357	7.366	(1.037)	16828	2.52922	2.529
	14 Fluorene	166	7.771	7.777	(1.096)	20832	2.48100	2.481
	18 Dibenzothiophene	184	9.004	9.011	(0.986)	28331	2.44186	2.442
*	15 Phenanthrene-d10	188	9.131	9.137	(1.000)	23621	2.00000	
	16 Phenanthrene	178	9.166	9.172	(1.004)	29624	2.36774	2.368
	17 Anthracene	178	9.207	9.213	(1.008)	30366	2.58783	2.588
	19 Carbazole	167	9.725	9.732	(1.065)	26599	2.37319	2.373
	20 1-Methylphenanthrene	192	9.934	9.940	(1.088)	23559	2.48222	2.482
	22 Fluoranthene	202	10.921	10.930	(1.196)	35164	2.44362	2.444
$	21 Fluoranthene-d10	212	10.886	10.892	(1.192)	31644	2.48176	2.482
	23 Pyrene	202	11.433	11.439	(0.815)	36275	2.71081	2.711
	24 Benzo(a)anthracene	228	13.909	13.915	(0.991)	34528	2.51106	2.511
*	25 Chrysene-d12	240	14.032	14.044	(1.000)	20901	2.00000	
	27 Chrysene	228	14.105	14.117	(1.005)	31383	2.32326	2.323
	28 Benzo(b)fluoranthene	252	16.647	16.653	(0.929)	27435	2.63545	2.635
	29 Benzo(k)fluoranthene	252	16.704	16.713	(0.932)	25671	2.61734	2.617
	30 Benzo(j)fluoranthene	252	16.780	16.789	(0.936)	23124	2.55173	2.552
	31 Total Benzofluoranthenes	252	16.647	16.653	(0.929)	75933	7.84390	7.844(M)
	34 Benzo(e)pyrene	252	17.564	17.573	(0.980)	23546	2.42137	2.421
	32 Benzo(a)pyrene	252	17.693	17.700	(0.987)	21707	2.39890	2.399
*	33 Perylene-d12	264	17.921	17.931	(1.000)	15968	2.00000	
	35 Perylene	252	18.000	18.010	(1.004)	21867	2.40657	2.407

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$ 36 Dibenzo(a,h)anthracene-d14	292	20.308	20.315	(1.133)	15354	2.51857	2.519
37 Indeno(1,2,3-cd)pyrene	276	20.457	20.457	(1.141)	23253	2.52452	2.525
38 Dibenzo(a,h)anthracene	278	20.422	20.432	(1.140)	19714	2.41031	2.410(M)
39 Benzo(g,h,i)perylene	276	21.513	21.510	(1.200)	21366	2.50418	2.504

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt8.i
Lab File ID: N823053029.D
Lab Smp Id: SLE0448-CCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: \\target\share\chem3\nt8.i\20230530.b\FSIMPNA230426.m
Misc Info: 23-

Calibration Date: 30-MAY-2023
Calibration Time: 11:43
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	20199	10100	40398	20335	0.67
10 Acenaphthene-d10	12041	6021	24082	12213	1.43
15 Phenanthrene-d10	19182	9591	38364	23621	23.14
25 Chrysene-d12	15943	7972	31886	20901	31.10
33 Perylene-d12	14317	7159	28634	15968	11.53

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Naphthalene-d8	4.82	4.32	5.32	4.81	-0.06
10 Acenaphthene-d10	7.10	6.60	7.60	7.09	-0.13
15 Phenanthrene-d10	9.14	8.64	9.64	9.13	-0.07
25 Chrysene-d12	14.04	13.54	14.54	14.03	-0.09
33 Perylene-d12	17.93	17.43	18.43	17.92	-0.05

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

REVIEW SUMMARY FOR FILE - N823053029.D

Lab ID: SLE0448-CCV1
nt8.i, 20230530.b\FSIMPNA230426.m,   31-MAY-2023 00:22

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

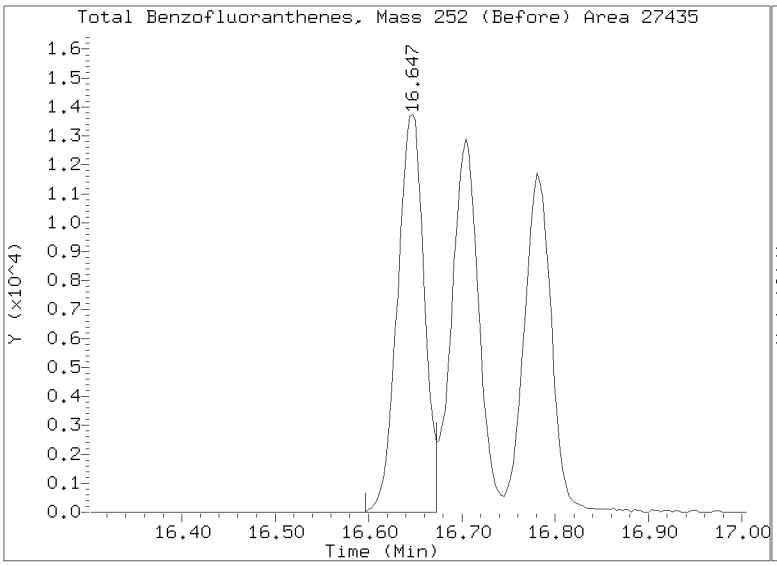
No RRT check performed

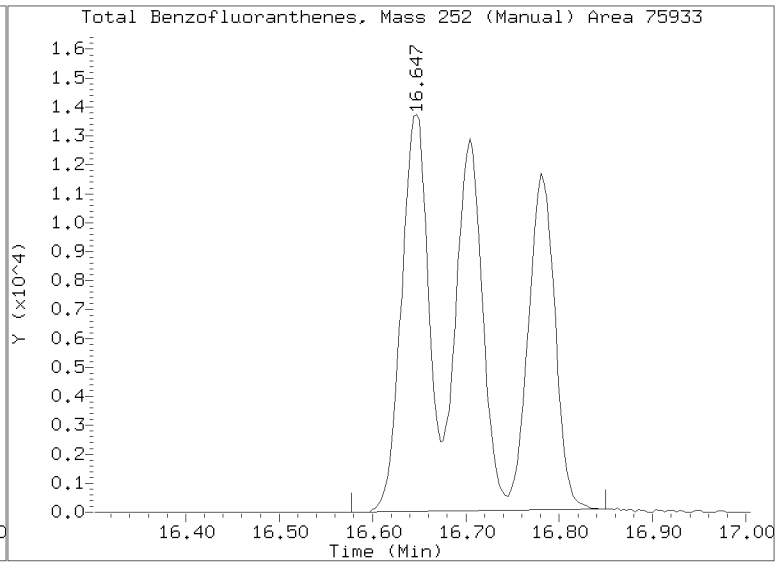
On Column LOD for nt8.i, 20230530.b\FSIMPNA230426.m, FSIMPNAICLA.sub = 0.0000

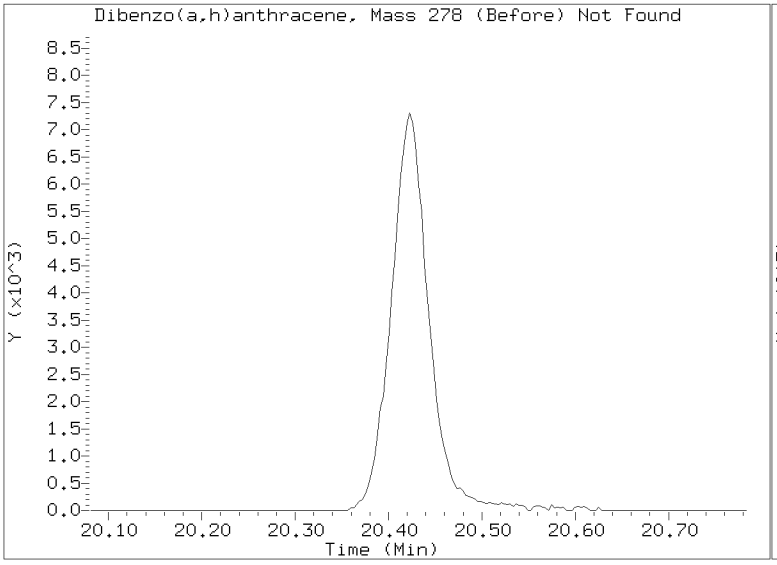
* Only compounds listed in the work order have been verified by the analyst *

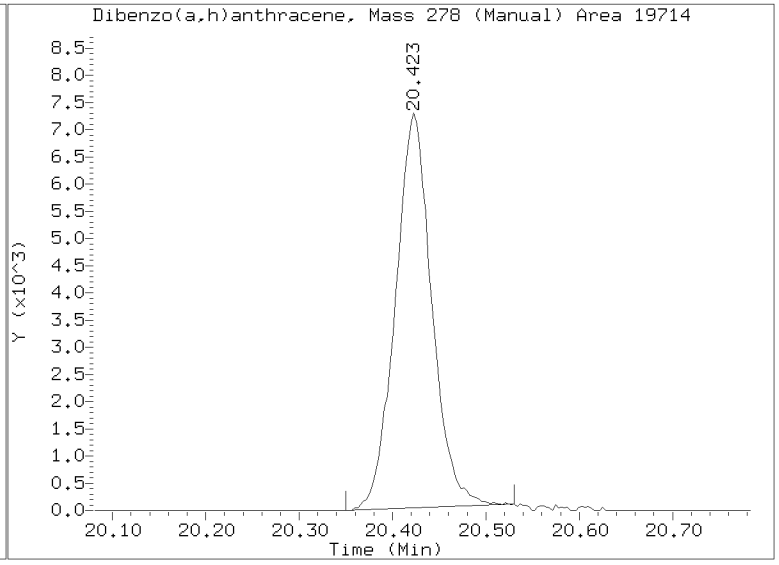
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt8.i/20230530.b/N823053029.D
Injection Date: 31-MAY-2023 00:22
Lab ID:SLE0448-CCV1 Client ID:
Report Date: 05/31/2023 10:40









Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLA0213	Instrument:	NT8
		Calibration:	GA00050

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLA0213-TUN1	N823011901.D	NA	01/19/23 10:28
Initial Cal Blank	SLA0213-ICB1	N823011902.D	NA	01/19/23 10:59
8270 SIM PNA 0.1	SLA0213-CAL1	N823011903.D	NA	01/19/23 11:26
8270 SIM PNA 0.5	SLA0213-CAL2	N823011904.D	NA	01/19/23 11:58
8270 SIM PNA 1.0	SLA0213-CAL3	N823011905.D	NA	01/19/23 12:25
8270 SIM PNA 2.5	SLA0213-CAL4	N823011906.D	NA	01/19/23 12:52
8270 SIM PNA 5	SLA0213-CAL5	N823011907.D	NA	01/19/23 13:19
8270 SIM PNA 10	SLA0213-CAL6	N823011908.D	NA	01/19/23 13:46
8270 SIM PNA SCV	SLA0213-SCV1	N823011909.D	NA	01/19/23 14:58

Printed: 1/19/2023 8:45:16PM

ANALYSIS SEQUENCE

SLA0213

Instrument: NT8 Element Column ID: J006458
Calibration ID: GA00050

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SLA0213-TUN1	MS Tune	QC		1	K004775			
SLA0213-ICB1	Initial Cal Blank	QC		2		K008540		
SLA0213-CAL1	8270 SIM PNA 0.1	QC		3	L000603	K008540		
SLA0213-CAL2	8270 SIM PNA 0.5	QC		4	L000604	K008540		
SLA0213-CAL3	8270 SIM PNA 1.0	QC		5	L000605	K008540		
SLA0213-CAL4	8270 SIM PNA 2.5	QC		6	L000606	K008540		
SLA0213-CAL5	8270 SIM PNA 5	QC		7	L000607	K008540		
SLA0213-CAL6	8270 SIM PNA 10	QC		8	L000608	K008540		
SLA0213-SCV1	8270 SIM PNA SCV	QC		9	L000686	K008540		

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230119.b

	Time	Filename	LabID	ClientId	DF											
1	1028	N823011901.D	SLA0213-TUN1		1	|NO ISTDS FOUND||										
2	1059	N823011902.D	SLA0213-ICB1		1	| 4.92	52082||	7.20	30936||	9.24	59030||	14.22	50944||	18.12	47418|
3	1126	N823011903.D	SLA0213-CAL1		1	| 4.91	46132||	7.20	27261||	9.24	52158||	14.20	44953||	18.11	41635|
4	1158	N823011904.D	SLA0213-CAL2		1	| 4.91	45056||	7.20	26746||	9.24	50759||	14.21	44658||	18.11	42567|
5	1225	N823011905.D	SLA0213-CAL3		1	| 4.91	47180||	7.20	28206||	9.24	53233||	14.20	46493||	18.11	44587|
6	1252	N823011906.D	SLA0213-CAL4		1	| 4.91	44704||	7.20	26411||	9.24	49210||	14.20	42994||	18.11	40520|
7	1319	N823011907.D	SLA0213-CAL5		1	| 4.91	46542||	7.20	27638||	9.23	51351||	14.20	44781||	18.11	42187|
8	1346	N823011908.D	SLA0213-CAL6		1	| 4.91	46070||	7.20	26689||	9.24	50683||	14.21	43880||	18.11	40659|
9	1458	N823011909.D	SLA0213-SCV1		1	| 4.91	46346||	7.20	27709||	9.24	51685||	14.21	46582||	18.12	41743|

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230119.b

ARI Job No.: SLA0 Method: FSIMPNA230119.m Instrument: nt8.i Date: 19-JAN-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1059	N823011902.D	SLA0213-ICB1		1	NO MANUAL INTEGRATION
1126	N823011903.D	SLA0213-CAL1		1	Total Benzofluoranthenes, Dibenzo(a,h)anthracene-d14,
1158	N823011904.D	SLA0213-CAL2		1	Total Benzofluoranthenes, Dibenzo(a,h)anthracene, Dibenzo(a,h)anthracene-d14,
1225	N823011905.D	SLA0213-CAL3		1	Total Benzofluoranthenes,
1252	N823011906.D	SLA0213-CAL4		1	Total Benzofluoranthenes,
1319	N823011907.D	SLA0213-CAL5		1	Total Benzofluoranthenes,
1346	N823011908.D	SLA0213-CAL6		1	Total Benzofluoranthenes,
1458	N823011909.D	SLA0213-SCV1		1	Total Benzofluoranthenes,

Security Status Report

Date: 19-Jan-2023 20:43

N823011901.D	Data Locked	jianqing, 19-Jan-2023 20:43
N823011902.D	Data Locked	jianqing, 19-Jan-2023 20:43
N823011903.D	Data Locked	jianqing, 19-Jan-2023 20:43
N823011904.D	Data Locked	jianqing, 19-Jan-2023 20:43
N823011905.D	Data Locked	jianqing, 19-Jan-2023 20:43
N823011906.D	Data Locked	jianqing, 19-Jan-2023 20:43
N823011907.D	Data Locked	jianqing, 19-Jan-2023 20:43
N823011908.D	Data Locked	jianqing, 19-Jan-2023 20:43
N823011909.D	Data Locked	jianqing, 19-Jan-2023 20:43

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0075	Instrument:	NT8
		Calibration:	GA00050

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLB0075-TUN1	N823020606.D	NA	02/06/23 14:46
Initial Cal Check	SLB0075-ICV1	N823020607A.D	NA	02/06/23 15:15
Blank	BLA0683-BLK1	N823020608.D	Solid	02/06/23 15:57
LCS	BLA0683-BS1	N823020609.D	Solid	02/06/23 16:24
LCS Dup	BLA0683-BSD1	N823020610.D	Solid	02/06/23 16:51
Reference	BLA0683-SRM1	N823020611.D	Solid	02/06/23 17:18
LDW23-IT1088	23A0207-01	N823020612.D	Solid	02/06/23 17:45
LDW23-IT1089	23A0207-02	N823020613.D	Solid	02/06/23 18:12
LDW23-IT1079	23A0207-03	N823020614.D	Solid	02/06/23 18:39
LDW23-IT1079	BLA0683-MS1	N823020615.D	Solid	02/06/23 19:06
LDW23-IT1079	BLA0683-MSD1	N823020616.D	Solid	02/06/23 19:33
LDW23-IT1080-FD	23A0207-05	N823020618.D	Solid	02/06/23 20:26
LDW23-IT1072	23A0207-06	N823020619.D	Solid	02/06/23 20:53
LDW23-IT1081	23A0207-07	N823020620.D	Solid	02/06/23 21:20
LDW23-IT1068	23A0207-08	N823020621.D	Solid	02/06/23 21:47
LDW23-IT1062	23A0207-09	N823020622.D	Solid	02/06/23 22:14
LDW23-IT1078	23A0207-15	N823020623.D	Solid	02/06/23 22:41
LDW23-IT1209	23A0207-17	N823020625.D	Solid	02/06/23 23:34
ZZZZZ	23A0249-07	N823020626.D	Solid	02/07/23 00:01
ZZZZZ	23A0295-08	N823020627.D	Solid	02/07/23 00:28
ZZZZZ	23A0313-03	N823020628.D	Solid	02/07/23 00:55
ZZZZZ	23A0313-04	N823020629.D	Solid	02/07/23 01:22
ZZZZZ	23A0313-12	N823020630.D	Solid	02/07/23 01:49
ZZZZZ	23A0326-08	N823020631.D	Solid	02/07/23 02:16
ZZZZZ	23A0326-09	N823020632.D	Solid	02/07/23 02:42
Calibration Check	SLB0075-CCV1	N823020633.D	NA	02/07/23 03:09

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLB0075

Instrument: NT8
Calibration ID: GA00050

Printed: 2/8/2023 4:31:14PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0075-TUN1	QC		1		K004775			
SLB0075-ICV1	QC		2		L000606	K008540		
BLA0683-BLK1	QC		3			K008540		
BLA0683-BS1	QC		4			K008540		
BLA0683-BSD1	QC		5			K008540		
BLA0683-SRM1	QC		6			K008540		
23A0207-01	0E-SIM PAH (0.1ug/L or 5ug	A 02	7			K008540	Anchor QEA, LLC	
23A0207-02	0E-SIM PAH (0.1ug/L or 5ug	A 02	8			K008540	Anchor QEA, LLC	
23A0207-03	0E-SIM PAH (0.1ug/L or 5ug	A 02	9			K008540	Anchor QEA, LLC	
BLA0683-MS1	QC		10			K008540		
BLA0683-MSD1	QC		11			K008540		
23A0207-05	0E-SIM PAH (0.1ug/L or 5ug	A 02	12			K008540	Anchor QEA, LLC	
23A0207-06	0E-SIM PAH (0.1ug/L or 5ug	A 02	13			K008540	Anchor QEA, LLC	
23A0207-07	0E-SIM PAH (0.1ug/L or 5ug	A 02	14			K008540	Anchor QEA, LLC	
23A0207-08	0E-SIM PAH (0.1ug/L or 5ug	A 02	15			K008540	Anchor QEA, LLC	
23A0207-09	0E-SIM PAH (0.1ug/L or 5ug	A 02	16			K008540	Anchor QEA, LLC	
23A0207-15	0E-SIM PAH (0.1ug/L or 5ug	A 02	17			K008540	Anchor QEA, LLC	
23A0207-17	0E-SIM PAH (0.1ug/L or 5ug	A 02	18			K008540	Anchor QEA, LLC	
23A0249-07	0E-SIM PAH (0.1ug/L or 5ug	A 01	19			K008540	Anchor QEA, LLC	
23A0295-08	0E-SIM PAH (0.1ug/L or 5ug	A 01	20			K008540	Anchor QEA, LLC	
23A0313-03	0E-SIM PAH (0.1ug/L or 5ug	A 01	21			K008540	Anchor QEA, LLC	

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SLB0075

Instrument: NT8
Calibration ID: GA00050

Printed: 2/8/2023 4:31:14PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
23A0313-04	0E-SIM PAH (0.1ug/L or 5ug	A 01	22			K008540	Anchor QEA, LLC	
23A0313-12	0E-SIM PAH (0.1ug/L or 5ug	A 01	23			K008540	Anchor QEA, LLC	
23A0326-08	0E-SIM PAH (0.1ug/L or 5ug	A 01	24			K008540	Anchor QEA, LLC	
23A0326-09	0E-SIM PAH (0.1ug/L or 5ug	A 01	25			K008540	Anchor QEA, LLC	
SLB0075-CCV1	QC		26		L000606	K008540		

Samples Loaded By Date

Data Processed By Date

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230206A.b

	Time	Filename	LabID	ClientId	DF											
1	1446	N823020606.D	SLB0075-TUN1		1	NO ISTDS FOUND										
2	1515	N823020607A.D	SLB0075-ICV1		1	4.90	44336	7.19	26127	9.23	47424	14.20	36794	18.11	36636	
3	1557	N823020608.D	BLA0683-BLK1		1	4.89	48985	7.19	28561	9.23	52393	14.20	40654	18.10	24723	
4	1624	N823020609.D	BLA0683-BS1		1	4.88	50596	7.18	29850	9.22	54061	14.19	41046	18.10	27103	
5	1651	N823020610.D	BLA0683-BSD1		1	4.89	52018	7.18	29996	9.22	54697	14.19	41650	18.10	27575	
6	1718	N823020611.D	BLA0683-SRM1		1	4.88	47898	7.18	26592	9.22	44776	14.19	36552	18.09	22526	
7	1745	N823020612.D	23A0207-01		1	4.88	49668	7.18	29744	9.22	50330	14.19	35079	18.09	30080	
8	1812	N823020613.D	23A0207-02		1	4.89	52443	7.18	30994	9.22	49132	14.19	23550	18.10	21895	
9	1839	N823020614.D	23A0207-03		1	4.88	52165	7.18	30594	9.23	46304	14.19	23098	18.10	21017	
10	1906	N823020615.D	BLA0683-MS1		1	4.88	54388	7.18	30727	9.23	46335	14.19	24118	18.11	21563	
11	1933	N823020616.D	BLA0683-MSD1		1	4.88	52636	7.18	30563	9.23	45924	14.19	23485	18.10	21615	
12	1959	N823020617.D	23A0207-04	IS out, NR	1	4.88	51275	7.18	28123	9.23	43249	14.20	19710	18.11	17658	
13	2026	N823020618.D	23A0207-05		1	4.89	50448	7.18	28375	9.23	45673	14.20	20022	18.11	18460	
14	2053	N823020619.D	23A0207-06		3	4.89	50637	7.18	30605	9.23	52103	14.20	24084	18.10	20229	
15	2120	N823020620.D	23A0207-07		1	4.89	51867	7.18	31021	9.23	53247	14.20	26745	18.11	24765	
16	2147	N823020621.D	23A0207-08		1	4.88	54142	7.18	32326	9.23	57668	14.19	37315	18.11	31960	
17	2214	N823020622.D	23A0207-09		1	4.88	51253	7.18	30524	9.23	47253	14.19	26321	18.11	26206	
18	2241	N823020623.D	23A0207-15		3	4.89	54069	7.19	27937	9.23	43496	14.20	23177	18.12	20718	
19	2308	N823020624.D	23A0207-16	IS out, NR	3	4.89	52940	7.19	28892	9.23	42684	14.22	19654	18.13	17901	
20	2334	N823020625.D	23A0207-17		3	4.89	53176	7.19	28398	9.23	43410	14.22	20694	18.14	18612	

JZ 2/10/23

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230206A.b

	Time	Filename	LabID	ClientId	DF											
21	0001	N823020626.D	23A0249-07		1	4.88	57390	7.19	33309	9.24	50089	14.24	22976	18.17	20857
22	0028	N823020627.D	23A0295-08		1	4.88	53834	7.19	32628	9.24	54268	14.23	24018	18.16	19340
23	0055	N823020628.D	23A0313-03		3	4.89	56887	7.19	30456	9.24	48664	14.25	22993	18.17	19769
24	0122	N823020629.D	23A0313-04		1	4.89	53062	7.19	28241	9.24	46666	14.28	29789	18.19	22259
25	0149	N823020630.D	23A0313-12		1	4.88	58298	7.19	35361	9.24	61613	14.23	23944	18.16	19888
26	0216	N823020631.D	23A0326-08		1	4.88	56917	7.19	31966	9.24	50110	14.25	22679	18.17	20298
27	0242	N823020632.D	23A0326-09		1	4.88	55762	7.19	33500	9.24	54143	14.23	22621	18.16	20226
28	0309	N823020633.D	SLB0075-CCV1		1	4.89	52897	7.19	31659	9.24	57767	14.23	48067	18.16	37211

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230206A.b

ARI Job No.: SLB0 Method: tune.b\DFTPP.m Instrument: nt8.i Date: 06-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1446	N823020606.D	SLB0075-TUN1		1	NO MANUAL INTEGRATION
1557	N823020608.D	BLA0683-BLK1		1	Acenaphthene, Phenanthrene,
1624	N823020609.D	BLA0683-BS1		1	Total Benzofluoranthenes,
1651	N823020610.D	BLA0683-BSD1		1	Total Benzofluoranthenes,
1718	N823020611.D	BLA0683-SRM1		1	2-Methylnaphthalene, Dibenzofuran, Perylene, Total Benzofluoranthenes,
1745	N823020612.D	23A0207-01		1	Total Benzofluoranthenes,
1812	N823020613.D	23A0207-02		1	2-Methylnaphthalene, Anthracene, Total Benzofluoranthenes,
1839	N823020614.D	23A0207-03		1	Naphthalene, Dibenzo(a,h)anthracene, 2-Methylnaphthalene, 1-methylnaphthalene, Acenaphthylene, Total Benzofluoranthenes, Chrysene,
1906	N823020615.D	BLA0683-MS1		1	Total Benzofluoranthenes,
1933	N823020616.D	BLA0683-MSD1		1	Total Benzofluoranthenes,
2026	N823020618.D	23A0207-05		1	Benzo(g,h,i)perylene, Naphthalene, Dibenzo(a,h)anthracene, 1-methylnaphthalene, Indeno(1,2,3-cd)pyrene, Acenaphthene, Perylene, Total Benzofluoranthenes, Chrysene, Carbazole,
2053	N823020619.D	23A0207-06		3	Benzo(g,h,i)perylene, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene, Perylene, Benzo(a)pyrene, Total Benzofluoranthenes, Benzo(j)fluoranthene,
2120	N823020620.D	23A0207-07		1	Benzo(g,h,i)perylene, Naphthalene, Dibenzo(a,h)anthracene, 2-Methylnaphthalene, Indeno(1,2,3-cd)pyrene, Acenaphthene, Fluorene, Perylene, Benzo(a)pyrene, Total Benzofluoranthenes, Benzo(j)fluoranthene,
2147	N823020621.D	23A0207-08		1	Benzo(g,h,i)perylene, 2-Methylnaphthalene, Phenanthrene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Carbazole,
2214	N823020622.D	23A0207-09		1	Benzo(g,h,i)perylene, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene, Acenaphthene, Anthracene, Benzo(a)anthracene, Total Benzofluoranthenes, Chrysene,
2241	N823020623.D	23A0207-15		3	Benzo(g,h,i)perylene, Naphthalene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene, Dibenzofuran, Fluorene, Benzo(a)pyrene, Total Benzofluoranthenes,

2334	N823020625.D	23A0207-17		3	1-methylnaphthalene, Total Benzofluoranthenes, Carbazole,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230206A.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0001	N823020626.D	23A0249-07		1	Dibenzo(a,h)anthracene, Fluorene, Benzo(a)pyrene, Benzo(a)anthracene, Total Benzofluoranthenes, Chrysene,
0028	N823020627.D	23A0295-08		1	Dibenzo(a,h)anthracene, 2-Methylnaphthalene, Acenaphthylene, Indeno(1,2,3-cd)pyrene, Perylene, Total Benzofluoranthenes, Chrysene, Carbazole,
0055	N823020628.D	23A0313-03		3	Benzo(g,h,i)perylene, Dibenzo(a,h)anthracene, Acenaphthylene, Acenaphthene, Anthracene, Total Benzofluoranthenes, Carbazole,
0122	N823020629.D	23A0313-04		1	Dibenzo(a,h)anthracene, Total Benzofluoranthenes, Dibenzo(a,h)anthracene-d14,
0149	N823020630.D	23A0313-12		1	Benzo(g,h,i)perylene, Naphthalene, Dibenzo(a,h)anthracene, 2-Methylnaphthalene, Acenaphthylene, Indeno(1,2,3-cd)pyrene, Fluorene, Perylene, Total Benzofluoranthenes, Chrysene, Benzo(j)fluoranthene, Dibenzo(a,h)anthracene-d14,
0216	N823020631.D	23A0326-08		1	Benzo(g,h,i)perylene, Naphthalene, Dibenzo(a,h)anthracene, 2-Methylnaphthalene, 1-methylnaphthalene, Indeno(1,2,3-cd)pyrene, Acenaphthene, Fluorene, Perylene, Total Benzofluoranthenes, Benzo(j)fluoranthene, Perylene-d12, Carbazole, Fluoranthene-d10, Dibenzo(a,h)anthracene-d14,
0242	N823020632.D	23A0326-09		1	Naphthalene, Dibenzo(a,h)anthracene, 2-Methylnaphthalene, Acenaphthylene, Acenaphthene, Total Benzofluoranthenes, Carbazole,
0309	N823020633.D	SLB0075-CCV1		1	Total Benzofluoranthenes,

Security Status Report

Date: 10-Feb-2023 13:10

N823020606.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020607A.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020608.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020609.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020610.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020611.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020612.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020613.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020614.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020615.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020616.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020618.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020619.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020620.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020621.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020622.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020623.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020625.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020626.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020627.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020628.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020629.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020630.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020631.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020632.D	Data Locked	jianqing, 10-Feb-2023 13:10
N823020633.D	Data Locked	jianqing, 10-Feb-2023 13:10

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

Sequence: SLB0078
Analyst: JZ Date: 2/6/23

Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor
23A0207-06	100	K005942	200	3				
23A0207-15	100		200	3				
23A0207-17	100		200	3				
23A0313-03	100		200	3				

Form 12010F Version 002 03/01/2018

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0101	Instrument:	NT8
		Calibration:	GA00050

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLB0101-TUN1	N823020801.D	NA	02/08/23 11:48
Initial Cal Check	SLB0101-ICV1	N823020802.D	NA	02/08/23 12:05
LDW23-IT1080	23A0207-04	N823020805.D	Solid	02/08/23 13:33
LDW23-IT1201	23A0207-16	N823020806.D	Solid	02/08/23 14:00
ZZZZZ	BLB0054-BLK1	N823020808.D	Water	02/08/23 15:20
ZZZZZ	BLB0054-BS1	N823020809.D	Water	02/08/23 15:47
ZZZZZ	BLB0054-BSD1	N823020810.D	Water	02/08/23 16:13
ZZZZZ	23B0020-01	N823020811.D	Water	02/08/23 16:40
ZZZZZ	23B0020-03	N823020812.D	Water	02/08/23 17:07
ZZZZZ	23B0020-05	N823020813.D	Water	02/08/23 17:34
ZZZZZ	23B0020-07	N823020814.D	Water	02/08/23 18:01
ZZZZZ	23B0020-09	N823020815.D	Water	02/08/23 18:28
ZZZZZ	23B0020-11	N823020816.D	Water	02/08/23 18:54
Calibration Check	SLB0101-CCV1	N823020817.D	NA	02/08/23 19:21

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLB0101

Instrument: NT8
Calibration ID: GA00050

Printed: 2/10/2023 3:06:11PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0101-TUN1	QC		1		K004775			
SLB0101-ICV1	QC		2		L000606	K008540		
BLB0101-BLK1	QC		3			K008540		
BLB0101-BS1	QC		4			K008540		
23A0207-04	0E-SIM PAH (0.1ug/L or 5ug	A 02	5			K008540	Anchor QEA, LLC	
23A0207-16	0E-SIM PAH (0.1ug/L or 5ug	A 02	6			K008540	Anchor QEA, LLC	
23B0063-01	625.1-SIM PAH (0.1 ug/L)	A 01	7			K008540	Whatcom Environmental Services	
BLB0054-BLK1	QC		8			K008540		
BLB0054-BS1	QC		9			K008540		
BLB0054-BSD1	QC		10			K008540		
23B0020-01	0E-SIM PAH (0.1ug/L or 5ug	G 01	11			K008540	Geosyntec Consultants	
23B0020-03	0E-SIM PAH (0.1ug/L or 5ug	G 01	12			K008540	Geosyntec Consultants	
23B0020-05	0E-SIM PAH (0.1ug/L or 5ug	G 01	13			K008540	Geosyntec Consultants	
23B0020-07	0E-SIM PAH (0.1ug/L or 5ug	G 01	14			K008540	Geosyntec Consultants	
23B0020-09	0E-SIM PAH (0.1ug/L or 5ug	G 01	15			K008540	Geosyntec Consultants	
23B0020-11	0E-SIM PAH (0.1ug/L or 5ug	C 01	16			K008540	Geosyntec Consultants	
SLB0101-CCV1	QC		17		L000606	K008540		

Samples Loaded By Date

Data Processed By Date

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230208.b

	Time	Filename	LabID	ClientId	DF											
1	1148	N823020801.D	SLB0101-TUN1		1	NO ISTDS FOUND										
2	1205	N823020802.D	ICV230208		1	4.89	47321	7.19	28133	9.23	52447	14.22	43514	18.13	39495	
3	1240	N823020803.D	BLB0101-BLK1		1	4.89	45535	7.19	27222	9.23	51075	14.21	41820	18.12	30513	
4	1307	N823020804.D	BLB0101-BS1		1	4.88	46691	7.18	27885	9.23	51915	14.20	43607	18.12	34233	
5	1333	N823020805.D	23A0207-04		3	4.88	47341	7.18	28151	9.23	46354	14.20	24280	18.12	27509	
6	1400	N823020806.D	23A0207-16		9	4.89	49742	7.18	29339	9.23	43820	14.21	25465	18.12	27212	
7	1427	N823020807.D	23B0063-01		1	4.88	47379	7.18	27754	9.23	51546	14.20	41437	18.12	27084	
8	1520	N823020808.D	BLB0054-BLK1		1	4.88	47386	7.19	28685	9.24	53399	14.22	43789	18.13	32956	
9	1547	N823020809.D	BLB0054-BS1		1	4.88	48835	7.18	28936	9.23	54475	14.20	44479	18.12	32696	
10	1613	N823020810.D	BLB0054-BSD1		1	4.88	50107	7.18	30530	9.23	57036	14.20	47179	18.12	35884	
11	1640	N823020811.D	23B0020-01		1	4.88	48442	7.18	28543	9.23	52925	14.20	42851	18.12	29381	
12	1707	N823020812.D	23B0020-03		1	4.88	49165	7.18	29622	9.23	55412	14.20	45383	18.12	32960	
13	1734	N823020813.D	23B0020-05		1	4.88	50176	7.18	30342	9.23	56075	14.20	46640	18.12	34174	
14	1801	N823020814.D	23B0020-07		1	4.88	46778	7.18	27895	9.23	52553	14.20	43286	18.12	30123	
15	1828	N823020815.D	23B0020-09		1	4.88	49453	7.18	29115	9.23	54655	14.20	45097	18.11	31397	
16	1854	N823020816.D	23B0020-11		1	4.88	50906	7.18	30456	9.23	56900	14.20	46611	18.12	32336	
17	1921	N823020817.D	SLB0101-CCV1		1	4.88	47039	7.18	27819	9.23	51353	14.20	42507	18.12	44576	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230208.b

ARI Job No.: ICV2 Method: FSIMPNA230119.m Instrument: nt8.i Date: 08-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1205	N823020802.D	ICV230208		1	Total Benzofluorantheres,
1240	N823020803.D	BLB0101-BLK1		1	NO MANUAL INTEGRATION
1307	N823020804.D	BLB0101-BS1		1	Total Benzofluoranthenes,
1333	N823020805.D	23A0207-04		3	Benzo(g,h,i)perylene, Acenaphthene, Fluorene, Perylene, Total Benzofluoranthenes,
1400	N823020806.D	23A0207-16		9	Acenaphthene, Fluorene, Total Benzofluoranthenes, 2-Methylnaphthalene-d10,
1427	N823020807.D	23B0063-01		1	1-methylnaphthalene,
1520	N823020808.D	BLB0054-BLK1		1	NO MANUAL INTEGRATION
1547	N823020809.D	BLB0054-BS1		1	Total Benzofluoranthenes,
1613	N823020810.D	BLB0054-BSD1		1	Total Benzofluoranthenes,
1640	N823020811.D	23B0020-01		1	NO MANUAL INTEGRATION
1707	N823020812.D	23B0020-03		1	NO MANUAL INTEGRATION
1734	N823020813.D	23B0020-05		1	NO MANUAL INTEGRATION
1801	N823020814.D	23B0020-07		1	NO MANUAL INTEGRATION
1828	N823020815.D	23B0020-09		1	NO MANUAL INTEGRATION
1854	N823020816.D	23B0020-11		1	NO MANUAL INTEGRATION
1921	N823020817.D	SLB0101-CCV1		1	Total Benzofluoranthenes,

Security Status Report

Date: 12-Feb-2023 13:11

N823020801.D	Data Locked	jianqing, 12-Feb-2023 13:11
N823020802.D	Data Locked	jianqing, 12-Feb-2023 13:11
N823020803.D	Data Locked	jianqing, 12-Feb-2023 13:11
N823020804.D	Data Locked	jianqing, 12-Feb-2023 13:11
N823020805.D	Data Locked	jianqing, 12-Feb-2023 13:11
N823020806.D	Data Locked	jianqing, 12-Feb-2023 13:11
N823020807.D	Data Locked	jianqing, 12-Feb-2023 13:11
N823020808.D	Data Locked	jianqing, 12-Feb-2023 13:11
N823020809.D	Data Locked	jianqing, 12-Feb-2023 13:11
N823020810.D	Data Locked	jianqing, 12-Feb-2023 13:11
N823020811.D	Data Locked	jianqing, 12-Feb-2023 13:11
N823020812.D	Data Locked	jianqing, 12-Feb-2023 13:11
N823020813.D	Data Locked	jianqing, 12-Feb-2023 13:11
N823020814.D	Data Locked	jianqing, 12-Feb-2023 13:11
N823020815.D	Data Locked	jianqing, 12-Feb-2023 13:11
N823020816.D	Data Locked	jianqing, 12-Feb-2023 13:11
N823020817.D	Data Locked	jianqing, 12-Feb-2023 13:11

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

Sequence: SLB0101
Analyst: JZ Date: 2/8/23

Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor
23A0207-04	100	K005942	200	3				
23A0207-16	100	from 3 X	200	9				

Form 12010F Version 002 03/01/2018

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLD0372	Instrument:	NT8
		Calibration:	GD00068

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLD0372-TUN1	N823042601.D	NA	04/26/23 17:16
8270 SIM PNA 0.1	SLD0372-CAL1	N823042603.D	NA	04/26/23 18:06
8270 SIM PNA 0.5	SLD0372-CAL2	N823042604.D	NA	04/26/23 18:33
8270 SIM PNA 1.0	SLD0372-CAL3	N823042605.D	NA	04/26/23 19:00
8270 SIM PNA 2.5	SLD0372-CAL4	N823042606.D	NA	04/26/23 19:27
8270 SIM PNA 5	SLD0372-CAL5	N823042607.D	NA	04/26/23 19:55
8270 SIM PNA 10	SLD0372-CAL6	N823042608.D	NA	04/26/23 20:22
8270 SIM PNA SCV	SLD0372-SCV1	N823042609.D	NA	04/26/23 20:49

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLD0372

Instrument: NT8
Calibration ID: GD00068

Printed: 4/27/2023 12:20:00PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLD0372-TUN1	QC		1		K004775			
SLD0372-ICB1	QC		2			L004537		
SLD0372-CAL1	QC		3		L000603	L004537		
SLD0372-CAL2	QC		4		L000604	L004537		
SLD0372-CAL3	QC		5		L000605	L004537		
SLD0372-CAL4	QC		6		L000606	L004537		
SLD0372-CAL5	QC		7		L000607	L004537		
SLD0372-CAL6	QC		8		L000608	L004537		
SLD0372-SCV1	QC		9		L000686	L004537		

Samples Loaded By Date

Data Processed By Date

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230426.b

	Time	Filename	LabID	ClientId	DF											
1	1716	N823042601.D	SLD0372-TUN1		1	NO ISTDS FOUND										
2	1738	N823042602.D	SLD0372-ICB1		1	4.83	16370	7.12	9360	9.16	15764	14.08	15736	17.97	13577	
3	1806	N823042603.D	SLD0372-CAL1		1	4.83	17222	7.11	9918	9.15	18763	14.07	18539	17.96	18495	
4	1833	N823042604.D	SLD0372-CAL2		1	4.83	18547	7.11	10688	9.15	20788	14.07	20319	17.96	20821	
5	1900	N823042605.D	SLD0372-CAL3		1	4.83	17610	7.11	10164	9.15	19712	14.07	20491	17.96	20562	
6	1927	N823042606.D	SLD0372-CAL4		1	4.83	18699	7.11	10729	9.15	20748	14.07	20954	17.96	21563	
7	1955	N823042607.D	SLD0372-CAL5		1	4.83	18501	7.11	10621	9.15	20636	14.07	20333	17.96	20900	
8	2022	N823042608.D	SLD0372-CAL6		1	4.83	18987	7.11	10604	9.15	20735	14.07	20141	17.96	20342	
9	2049	N823042609.D	SLD0372-SCV1		1	4.83	20718	7.11	12642	9.15	24547	14.07	24217	17.96	24956	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230426.b

ARI Job No.: SLD0 Method: FSIMPNA230426.m Instrument: nt8.i Date: 26-APR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1738	N823042602.D	SLD0372-ICB1		1	NO MANUAL INTEGRATION
1806	N823042603.D	SLD0372-CAL1		1	Total Benzofluoranthenes, Dibenzo(a,h)anthracene-d14,
1833	N823042604.D	SLD0372-CAL2		1	Total Benzofluoranthenes, Dibenzo(a,h)anthracene-d14,
1900	N823042605.D	SLD0372-CAL3		1	Total Benzofluoranthenes, Perylene, Dibenzo(a,h)anthracene,
1927	N823042606.D	SLD0372-CAL4		1	Total Benzofluoranthenes,
1955	N823042607.D	SLD0372-CAL5		1	Total Benzofluoranthenes,
2022	N823042608.D	SLD0372-CAL6		1	Total Benzofluoranthenes, Dibenzo(a,h)anthracene,
2049	N823042609.D	SLD0372-SCV1		1	Total Benzofluoranthenes,

Security Status Report

Date: 27-Apr-2023 12:21

N823042601.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042602.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042603.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042604.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042605.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042606.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042607.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042608.D	Data Locked	jianqing, 27-Apr-2023 12:21
N823042609.D	Data Locked	jianqing, 27-Apr-2023 12:21

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0448	Instrument:	NT8
		Calibration:	GD00068

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLE0448-TUN1	N823053001.D	NA	05/30/23 11:01
Initial Cal Check	SLE0448-ICV1	N823053002.D	NA	05/30/23 11:43
Blank	BLE0421-BLK1	N823053007.D	Solid	05/30/23 14:23
LCS	BLE0421-BS1	N823053008.D	Solid	05/30/23 14:51
LCS Dup	BLE0421-BSD1	N823053009.D	Solid	05/30/23 15:18
Reference	BLE0421-SRM1	N823053010.D	Solid	05/30/23 15:45
LDW23-IT1097	23A0207-10	N823053011.D	Solid	05/30/23 16:12
ZZZZZ	23E0219-04	N823053012.D	Solid	05/30/23 16:39
ZZZZZ	23E0219-06	N823053013.D	Solid	05/30/23 17:07
ZZZZZ	23E0219-08	N823053014.D	Solid	05/30/23 17:34
ZZZZZ	23E0219-11	N823053015.D	Solid	05/30/23 18:01
ZZZZZ	23E0219-12	N823053018.D	Solid	05/30/23 19:23
ZZZZZ	23E0033-01	N823053019.D	Solid	05/30/23 19:50
ZZZZZ	23E0033-02	N823053020.D	Solid	05/30/23 20:17
ZZZZZ	23E0033-03	N823053021.D	Solid	05/30/23 20:44
ZZZZZ	23E0033-04	N823053022.D	Solid	05/30/23 21:12
ZZZZZ	23E0033-05	N823053023.D	Solid	05/30/23 21:39
ZZZZZ	23E0033-06	N823053024.D	Solid	05/30/23 22:06
ZZZZZ	23E0033-07	N823053025.D	Solid	05/30/23 22:33
ZZZZZ	23E0033-08	N823053026.D	Solid	05/30/23 23:00
Calibration Check	SLE0448-CCV1	N823053029.D	NA	05/31/23 00:22

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLE0448

Instrument: NT8
Calibration ID: GD00068

Printed: 5/31/2023 3:46:42PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLE0448-TUN1	QC		1		L005045			
SLE0448-ICV1	QC		2		L000606	L004537		
BLE0482-BLK1	QC		3			L004537		
BLE0482-BS1	QC		4			L004537		
BLE0482-BSD1	QC		5			L004537		
23E0306-01	625.1-SIM PAH (0.1 ug/L)	C 01	6			L004537	Schnitzer Steel	
BLE0421-BLK1	QC		7			L004537		
BLE0421-BS1	QC		8			L004537		
BLE0421-BSD1	QC		9			L004537		
BLE0421-SRM1	QC		10			L004537		
23A0207-10	0E-SIM PAH (0.1ug/L or 5ug	A 02	11			L004537	Anchor QEA, LLC	
23E0219-04	0E-SIM PAH (0.1ug/L or 5ug	A 01	12			L004537	Anchor QEA, LLC	
23E0219-06	0E-SIM PAH (0.1ug/L or 5ug	A 01	13			L004537	Anchor QEA, LLC	
23E0219-08	0E-SIM PAH (0.1ug/L or 5ug	A 01	14			L004537	Anchor QEA, LLC	
23E0219-11	0E-SIM PAH (0.1ug/L or 5ug	A 01	15			L004537	Anchor QEA, LLC	
BLE0421-MS1	QC		16			L004537		
BLE0421-MSD1	QC		17			L004537		
23E0219-12	0E-SIM PAH (0.1ug/L or 5ug	A 01	18			L004537	Anchor QEA, LLC	
23E0033-01	0E-SIM PAH (0.1ug/L or 5ug	A 02	19			L004537	Spectra Laboratories-Kitsap Poulsbo	
23E0033-02	0E-SIM PAH (0.1ug/L or 5ug	A 02	20			L004537	Spectra Laboratories-Kitsap Poulsbo	
23E0033-03	0E-SIM PAH (0.1ug/L or 5ug	A 02	21			L004537	Spectra Laboratories-Kitsap Poulsbo	

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SLE0448

Instrument: NT8
Calibration ID: GD00068

Printed: 5/31/2023 3:46:42PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
23E0033-04	0E-SIM PAH (0.1ug/L or 5ug	A 02	22			L004537	Spectra Laboratories-Kitsap Poulsbo	
23E0033-05	0E-SIM PAH (0.1ug/L or 5ug	A 02	23			L004537	Spectra Laboratories-Kitsap Poulsbo	
23E0033-06	0E-SIM PAH (0.1ug/L or 5ug	A 02	24			L004537	Spectra Laboratories-Kitsap Poulsbo	
23E0033-07	0E-SIM PAH (0.1ug/L or 5ug	A 02	25			L004537	Spectra Laboratories-Kitsap Poulsbo	
23E0033-08	0E-SIM PAH (0.1ug/L or 5ug	A 02	26			L004537	Spectra Laboratories-Kitsap Poulsbo	
SLE0448-CCV1	QC		27		L000606	L004537		

Samples Loaded By Date

Data Processed By Date

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230530.b

	Time	Filename	LabID	ClientId	DF											
1	1101	N823053001.D	SLE0448-TUN1		1	|NO ISTDS FOUND|										
2	1143	N823053002.D	SLE0448-ICV1		1	4.82	20199	7.10	12041	9.14	19182	14.04	15943	17.93	14317	
3	1231	N823053003.D	BLE0482-BLK1		1	4.81	17437	7.10	10690	9.13	20189	14.04	17629	17.93	11144	
4	1258	N823053004.D	BLE0482-BS1		1	4.81	18296	7.09	11245	9.13	22085	14.03	19723	17.92	13482	
5	1329	N823053005.D	BLE0482-BSD1		1	4.81	18070	7.09	10869	9.13	21712	14.04	19403	17.92	13068	
6	1356	N823053006.D	23E0306-01		1	4.81	17314	7.10	10944	9.13	19492	14.04	14019	17.92	13485	
7	1423	N823053007.D	BLE0421-BLK1		1	4.81	18366	7.09	10973	9.13	22417	14.03	20176	17.92	19519	
8	1451	N823053008.D	BLE0421-BS1		1	4.80	19536	7.09	11328	9.13	22273	14.03	20544	17.92	17809	
9	1518	N823053009.D	BLE0421-BSD1		1	4.80	19445	7.09	11426	9.13	22700	14.03	21100	17.92	18120	
10	1545	N823053010.D	BLE0421-SRM1		1	4.81	18318	7.09	10804	9.13	20619	14.03	19687	17.92	17751	
11	1612	N823053011.D	23A0207-10		3	4.81	17623	7.09	9866	9.13	17866	14.03	8712	17.92	10111	
12	1639	N823053012.D	23E0219-04		1	4.80	18756	7.09	11574	9.13	21461	14.03	15138	17.92	14989	
13	1707	N823053013.D	23E0219-06		3	4.81	18779	7.09	11240	9.13	19749	14.03	12402	17.92	11765	
14	1734	N823053014.D	23E0219-08		3	4.81	20307	7.09	11329	9.13	17564	14.04	9721	17.93	9996	
15	1801	N823053015.D	23E0219-11		1	4.80	17885	7.09	10526	9.13	18282	14.03	11421	17.92	11453	
16	1828	N823053016.D	BLE0421-MS1		1	4.80	19965	7.09	11561	9.13	20449	14.03	13576	17.92	14281	
17	1856	N823053017.D	BLE0421-MSD1		1	4.80	20210	7.09	11998	9.13	20261	14.03	13296	17.92	13679	
18	1923	N823053018.D	23E0219-12		1	4.80	19720	7.09	11703	9.13	20901	14.04	12045	17.92	13001	
19	1950	N823053019.D	23E0033-01		3	4.81	18788	7.09	11196	9.13	21270	14.03	12663	17.92	12408	
20	2017	N823053020.D	23E0033-02		3	4.81	20935	7.09	12634	9.13	23094	14.03	12436	17.92	10914	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230530.b

	Time	Filename	LabID	ClientId	DF											
21	2044	N823053021.D	23E0033-03		3	4.81	20321	7.09	12481	9.13	22506	14.03	11820	17.92	11802	
22	2112	N823053022.D	23E0033-04		3	4.81	19694	7.10	11785	9.13	20574	14.04	10158	17.93	9106	
23	2139	N823053023.D	23E0033-05		3	4.81	19181	7.09	11295	9.13	19572	14.04	9912	17.93	8991	
24	2206	N823053024.D	23E0033-06		3	4.81	20553	7.09	12470	9.13	22182	14.04	11027	17.93	9351	
25	2233	N823053025.D	23E0033-07		3	4.81	20335	7.09	12351	9.13	22694	14.04	12441	17.92	10172	
26	2300	N823053026.D	23E0033-08		3	4.81	19394	7.09	11702	9.13	20282	14.04	10041	17.93	8821	
27	2328	N823053027.D	23E0033-09	out of 12hr Q,NR	3	4.81	20688	7.09	12703	9.13	20916	14.04	10040	17.93	10222	
28	2355	N823053028.D	23E0033-10	out of 12hr Q,NR	3	4.81	21691	7.09	12953	9.13	25365	14.04	12768	17.92	10978	
29	0022	N823053029.D	SLE0448-CCV1		1	4.81	20335	7.09	12213	9.13	23621	14.03	20901	17.92	15968	

JZ 5/31/23

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230530.b

ARI Job No.: SLE0 Method: FSIMPNA230426.m Instrument: nt8.i Date: 30-MAY-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1143	N823053002.D	SLE0448-ICV1		1	Total Benzofluoranthenes,
1231	N823053003.D	BLE0482-BLK1		1	NO MANUAL INTEGRATION
1258	N823053004.D	BLE0482-BS1		1	Benzo(g,h,i)perylene, Dibenzo(a,h)anthracene, Total Benzofluoranthenes,
1329	N823053005.D	BLE0482-BSD1		1	Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene, Total Benzofluoranthenes,
1356	N823053006.D	23E0306-01		1	Fluorene, Anthracene, Pyrene,
1423	N823053007.D	BLE0421-BLK1		1	NO MANUAL INTEGRATION
1451	N823053008.D	BLE0421-BS1		1	Dibenzo(a,h)anthracene, Total Benzofluoranthenes,
1518	N823053009.D	BLE0421-BSD1		1	Dibenzo(a,h)anthracene, Total Benzofluoranthenes,
1545	N823053010.D	BLE0421-SRM1		1	Dibenzo(a,h)anthracene, Total Benzofluoranthenes,
1612	N823053011.D	23A0207-10		3	Dibenzo(a,h)anthracene, 1-methylnaphthalene, Acenaphthylene, Indeno(1,2,3-cd)pyrene, Acenaphthene, Total Benzofluoranthenes, Chrysene, Benzo(j)fluoranthene, Carbazole,
1639	N823053012.D	23E0219-04		1	Dibenzo(a,h)anthracene, Benzo(a)pyrene, Total Benzofluoranthenes, Benzo(b)fluoranthene, Benzo(j)fluoranthene, Carbazole,
1707	N823053013.D	23E0219-06		3	Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene, Benzo(a)pyrene, Total Benzofluoranthenes, Chrysene, Carbazole, 2-Methylnaphthalene-d10, Dibenzo(a,h)anthracene-d14,
1734	N823053014.D	23E0219-08		3	Dibenzo(a,h)anthracene, Total Benzofluoranthenes,
1801	N823053015.D	23E0219-11		1	Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene, Benzo(a)pyrene, Total Benzofluoranthenes, Carbazole,
1828	N823053016.D	BLE0421-MS1		1	Dibenzo(a,h)anthracene, Total Benzofluoranthenes,
1856	N823053017.D	BLE0421-MSD1		1	Dibenzo(a,h)anthracene, Total Benzofluoranthenes,
1923	N823053018.D	23E0219-12		1	Dibenzo(a,h)anthracene, Acenaphthene, Perylene, Benzo(a)pyrene, Total Benzofluoranthenes,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt8.i\20230530.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1950	N823053019.D	23E0033-01		3	Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene, Benzo(a)pyrene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(b)fluoranthe Benzo(j)fluoranthene,
2017	N823053020.D	23E0033-02		3	Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene, Perylene, Benzo(k)fluoranthene, Pyrene, Benzo(a)anthracene, Total Benzofluoranthenes, Benzo(b)fluoranthene, Benzo(j)fluoranthene,
2044	N823053021.D	23E0033-03		3	Perylene, Anthracene, Benzo(a)pyrene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(j)fluoranthene, Dibenzo(a,h)anthracene-d14,
2112	N823053022.D	23E0033-04		3	Indeno(1,2,3-cd)pyrene, Perylene, Benzo(a)pyrene, Fluoranthene, Benzo(a)anthracene, Total Benzofluoranthenes, Chrysene, Benzo(b)fluoranthene, Benzo(j)fluoranthene, Perylene-d12, Carbazole,
2139	N823053023.D	23E0033-05		3	Indeno(1,2,3-cd)pyrene, Perylene, Total Benzofluoranthenes, Chrysene, Benzo(b)fluoranthene, Benzo(j)fluoranthene, Carbazole, Dibenzo(a,h)anthracene-d14,
2206	N823053024.D	23E0033-06		3	Benzo(g,h,i)perylene, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene, Perylene, Anthracene, Benzo(a)pyrene, Fluoranthene, Benzo(a)anthracene, Total Benzofluoranthenes, Benzo(b)fluoranthene, Benzo(j)fluoranthene,
2233	N823053025.D	23E0033-07		3	Benzo(g,h,i)perylene, Indeno(1,2,3-cd)pyrene, Benzo(k)fluoranthene, Benzo(a)anthracene, Total Benzofluoranthenes,
2300	N823053026.D	23E0033-08		3	Benzo(g,h,i)perylene, Dibenzo(a,h)anthracene, Indeno(1,2,3-cd)pyrene, Perylene, Benzo(a)pyrene, Pyrene, Benzo(a)anthracene, Total Benzofluoranthenes, Chrysene, Benzo(b)fluoranthene, Benzo(j)fluoranthene, Carbazole, Dibenzo(a,h)anthracene-d14,
0022	N823053029.D	SLE0448-CCV1		1	Total Benzofluoranthenes, Dibenzo(a,h)anthracene,

Security Status Report

Date: 31-May-2023 16:06

N823053001.D	Data Locked	jianqing, 31-May-2023 16:06
N823053002.D	Data Locked	jianqing, 31-May-2023 16:06
N823053003.D	Data Locked	jianqing, 31-May-2023 16:06
N823053004.D	Data Locked	jianqing, 31-May-2023 16:06
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N823053006.D	Data Locked	jianqing, 31-May-2023 16:06
N823053007.D	Data Locked	jianqing, 31-May-2023 16:06
N823053008.D	Data Locked	jianqing, 31-May-2023 16:06
N823053009.D	Data Locked	jianqing, 31-May-2023 16:06
N823053010.D	Data Locked	jianqing, 31-May-2023 16:06
N823053011.D	Data Locked	jianqing, 31-May-2023 16:06
N823053012.D	Data Locked	jianqing, 31-May-2023 16:06
N823053013.D	Data Locked	jianqing, 31-May-2023 16:06
N823053014.D	Data Locked	jianqing, 31-May-2023 16:06
N823053015.D	Data Locked	jianqing, 31-May-2023 16:06
N823053016.D	Data Locked	jianqing, 31-May-2023 16:06
N823053017.D	Data Locked	jianqing, 31-May-2023 16:06
N823053018.D	Data Locked	jianqing, 31-May-2023 16:06
N823053019.D	Data Locked	jianqing, 31-May-2023 16:06
N823053020.D	Data Locked	jianqing, 31-May-2023 16:06
N823053021.D	Data Locked	jianqing, 31-May-2023 16:06
N823053022.D	Data Locked	jianqing, 31-May-2023 16:06
N823053023.D	Data Locked	jianqing, 31-May-2023 16:06
N823053024.D	Data Locked	jianqing, 31-May-2023 16:06
N823053025.D	Data Locked	jianqing, 31-May-2023 16:06
N823053026.D	Data Locked	jianqing, 31-May-2023 16:06
N823053029.D	Data Locked	jianqing, 31-May-2023 16:06

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

Sequence: SLE0448
Analyst: JZ Date: 5/30/23

Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor
23A0207-10	100	K005941	200	3				
23E0219-06	100		200	3				
23E0219-08	100		200	3				
23E0033-01	100		200	3				
23E0033-02	100		200	3				
23E0033-03	100		200	3				
23E0033-04	100		200	3				
23E0033-05	100		200	3				
23E0033-06	100		200	3				
23E0033-07	100		200	3				
23E0033-08	100		200	3				

Form 12010F Version 002 03/01/2018

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLA0213	Instrument:	NT8
Calibration:	GA00050	Calibration Date:	01/19/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLA0213-ICB1 (Water)			Lab File ID: N823011902.D				Analyzed: 01/19/23 10:59	
2-Methylnaphthalene-d10			31 - 120		5.6415	-5.6415	N/A	
Dibenzo[a,h]anthracene-d14			10 - 125		20.5525	-20.5525	N/A	
Fluoranthene-d10			46 - 121		11.016	-11.0160	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0075	Instrument:	NT8
Calibration:	GA00050	Calibration Date:	01/19/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0075-ICV1 (Solid)			Lab File ID: N823020607A.D			Analyzed: 02/06/23 15:15		
2-Methylnaphthalene-d10	2.5000	105	80 - 120	5.634	5.6415	-0.0075	N/A	
Dibenzo[a,h]anthracene-d14	2.5000	96.8	80 - 120	20.549	20.5525	-0.0035	N/A	
Fluoranthene-d10	2.5000	103	80 - 120	11.009	11.016	-0.0070	N/A	
BLA0683-BLK1 (Solid)			Lab File ID: N823020608.D			Analyzed: 02/06/23 15:57		
2-Methylnaphthalene-d10	150.00	83.2	32 - 120	5.627	5.6415	-0.0145	N/A	
Dibenzo[a,h]anthracene-d14	150.00	154	21 - 133	20.545	20.5525	-0.0075	N/A	*
Fluoranthene-d10	150.00	99.4	36 - 134	11.009	11.016	-0.0070	N/A	
BLA0683-BS1 (Solid)			Lab File ID: N823020609.D			Analyzed: 02/06/23 16:24		
2-Methylnaphthalene-d10	150.00	63.3	32 - 120	5.624	5.6415	-0.0175	N/A	
Dibenzo[a,h]anthracene-d14	150.00	114	21 - 133	20.536	20.5525	-0.0165	N/A	
Fluoranthene-d10	150.00	73.4	36 - 134	11	11.016	-0.0160	N/A	
BLA0683-BSD1 (Solid)			Lab File ID: N823020610.D			Analyzed: 02/06/23 16:51		
2-Methylnaphthalene-d10	150.00	71.8	32 - 120	5.624	5.6415	-0.0175	N/A	
Dibenzo[a,h]anthracene-d14	150.00	119	21 - 133	20.533	20.5525	-0.0195	N/A	
Fluoranthene-d10	150.00	80.0	36 - 134	11.003	11.016	-0.0130	N/A	
BLA0683-SRM1 (Solid)			Lab File ID: N823020611.D			Analyzed: 02/06/23 17:18		
2-Methylnaphthalene-d10	300.00	95.8	32 - 120	5.624	5.6415	-0.0175	N/A	
Dibenzo[a,h]anthracene-d14	300.00	173	21 - 133	20.53	20.5525	-0.0225	N/A	*
Fluoranthene-d10	300.00	110	36 - 134	11.003	11.016	-0.0130	N/A	
23A0207-01 (Solid)			Lab File ID: N823020612.D			Analyzed: 02/06/23 17:45		
2-Methylnaphthalene-d10	149.67	83.0	32 - 120	5.624	5.6415	-0.0175	N/A	
Dibenzo[a,h]anthracene-d14	149.67	116	21 - 133	20.527	20.5525	-0.0255	N/A	
Fluoranthene-d10	149.67	85.0	36 - 134	11.003	11.016	-0.0130	N/A	
23A0207-02 (Solid)			Lab File ID: N823020613.D			Analyzed: 02/06/23 18:12		
2-Methylnaphthalene-d10	149.44	93.5	32 - 120	5.624	5.6415	-0.0175	N/A	
Dibenzo[a,h]anthracene-d14	149.44	135	21 - 133	20.539	20.5525	-0.0135	N/A	*
Fluoranthene-d10	149.44	101	36 - 134	11.006	11.016	-0.0100	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0075	Instrument:	NT8
Calibration:	GA00050	Calibration Date:	01/19/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0207-03 (Solid)				Lab File ID: N823020614.D			Analyzed: 02/06/23 18:39	
2-Methylnaphthalene-d10	150.04	72.8	32 - 120	5.624	5.6415	-0.0175	N/A	
Dibenzo[a,h]anthracene-d14	150.04	106	21 - 133	20.539	20.5525	-0.0135	N/A	
Fluoranthene-d10	150.04	71.5	36 - 134	11.003	11.016	-0.0130	N/A	
BLA0683-MS1 (Solid)				Lab File ID: N823020615.D			Analyzed: 02/06/23 19:06	
2-Methylnaphthalene-d10	150.04	75.5	32 - 120	5.624	5.6415	-0.0175	N/A	
Dibenzo[a,h]anthracene-d14	150.04	112	21 - 133	20.546	20.5525	-0.0065	N/A	
Fluoranthene-d10	150.04	83.7	36 - 134	11.006	11.016	-0.0100	N/A	
BLA0683-MSD1 (Solid)				Lab File ID: N823020616.D			Analyzed: 02/06/23 19:33	
2-Methylnaphthalene-d10	150.04	71.9	32 - 120	5.624	5.6415	-0.0175	N/A	
Dibenzo[a,h]anthracene-d14	150.04	103	21 - 133	20.545	20.5525	-0.0075	N/A	
Fluoranthene-d10	150.04	78.3	36 - 134	11.006	11.016	-0.0100	N/A	
23A0207-05 (Solid)				Lab File ID: N823020618.D			Analyzed: 02/06/23 20:26	
2-Methylnaphthalene-d10	149.44	73.4	32 - 120	5.624	5.6415	-0.0175	N/A	
Dibenzo[a,h]anthracene-d14	149.44	99.1	21 - 133	20.545	20.5525	-0.0075	N/A	
Fluoranthene-d10	149.44	99.9	36 - 134	11.018	11.016	0.0020	N/A	
23A0207-06 (Solid)				Lab File ID: N823020619.D			Analyzed: 02/06/23 20:53	
2-Methylnaphthalene-d10	149.70	116	32 - 120	5.627	5.6415	-0.0145	N/A	
Dibenzo[a,h]anthracene-d14	149.70	135	21 - 133	20.549	20.5525	-0.0035	N/A	*
Fluoranthene-d10	149.70	114	36 - 134	11.006	11.016	-0.0100	N/A	
23A0207-07 (Solid)				Lab File ID: N823020620.D			Analyzed: 02/06/23 21:20	
2-Methylnaphthalene-d10	149.36	78.9	32 - 120	5.624	5.6415	-0.0175	N/A	
Dibenzo[a,h]anthracene-d14	149.36	99.8	21 - 133	20.542	20.5525	-0.0105	N/A	
Fluoranthene-d10	149.36	86.2	36 - 134	11.009	11.016	-0.0070	N/A	
23A0207-08 (Solid)				Lab File ID: N823020621.D			Analyzed: 02/06/23 21:47	
2-Methylnaphthalene-d10	149.35	79.5	32 - 120	5.624	5.6415	-0.0175	N/A	
Dibenzo[a,h]anthracene-d14	149.35	91.7	21 - 133	20.549	20.5525	-0.0035	N/A	
Fluoranthene-d10	149.35	87.2	36 - 134	11.006	11.016	-0.0100	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0075	Instrument:	NT8
Calibration:	GA00050	Calibration Date:	01/19/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0207-09 (Solid)				Lab File ID: N823020622.D			Analyzed: 02/06/23 22:14	
2-Methylnaphthalene-d10	149.11	87.9	32 - 120	5.624	5.6415	-0.0175	N/A	
Dibenzo[a,h]anthracene-d14	149.11	129	21 - 133	20.546	20.5525	-0.0065	N/A	
Fluoranthene-d10	149.11	91.4	36 - 134	11.006	11.016	-0.0100	N/A	
23A0207-15 (Solid)				Lab File ID: N823020623.D			Analyzed: 02/06/23 22:41	
2-Methylnaphthalene-d10	149.79	88.8	32 - 120	5.627	5.6415	-0.0145	N/A	
Dibenzo[a,h]anthracene-d14	149.79	106	21 - 133	20.561	20.5525	0.0085	N/A	
Fluoranthene-d10	149.79	86.5	36 - 134	11.006	11.016	-0.0100	N/A	
23A0207-17 (Solid)				Lab File ID: N823020625.D			Analyzed: 02/06/23 23:34	
2-Methylnaphthalene-d10	149.88	99.3	32 - 120	5.627	5.6415	-0.0145	N/A	
Dibenzo[a,h]anthracene-d14	149.88	127	21 - 133	20.58	20.5525	0.0275	N/A	
Fluoranthene-d10	149.88	145	36 - 134	11.025	11.016	0.0090	N/A	*
SLB0075-CCV1 (Solid)				Lab File ID: N823020633.D			Analyzed: 02/07/23 03:09	
2-Methylnaphthalene-d10	2.5000	108	50 - 150	5.627	5.6415	-0.0145	N/A	
Dibenzo[a,h]anthracene-d14	2.5000	88.0	50 - 150	20.609	20.5525	0.0565	N/A	
Fluoranthene-d10	2.5000	109	50 - 150	11.025	11.016	0.0090	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0101	Instrument:	NT8
Calibration:	GA00050	Calibration Date:	01/19/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0101-ICV1 (Water)				Lab File ID: N823020802.D			Analyzed: 02/08/23 12:05	
2-Methylnaphthalene-d10	2.5000	107	80 - 120	5.627	5.6415	-0.0145	N/A	
Dibenzo[a,h]anthracene-d14	2.5000	94.0	80 - 120	20.568	20.5525	0.0155	N/A	
Fluoranthene-d10	2.5000	109	80 - 120	11.018	11.016	0.0020	N/A	
23A0207-04 (Solid)				Lab File ID: N823020805.D			Analyzed: 02/08/23 13:33	
2-Methylnaphthalene-d10	149.86	73.2	32 - 120	5.621	5.6415	-0.0205	N/A	
Dibenzo[a,h]anthracene-d14	149.86	104	21 - 133	20.558	20.5525	0.0055	N/A	
Fluoranthene-d10	149.86	87.0	36 - 134	11.012	11.016	-0.0040	N/A	
23A0207-16 (Solid)				Lab File ID: N823020806.D			Analyzed: 02/08/23 14:00	
2-Methylnaphthalene-d10	149.71	104	32 - 120	5.621	5.6415	-0.0205	N/A	
Dibenzo[a,h]anthracene-d14	149.71	145	21 - 133	20.558	20.5525	0.0055	N/A	*
Fluoranthene-d10	149.71	103	36 - 134	11.009	11.016	-0.0070	N/A	
SLB0101-CCV1 (Water)				Lab File ID: N823020817.D			Analyzed: 02/08/23 19:21	
2-Methylnaphthalene-d10	2.5000	103	50 - 150	5.621	5.6415	-0.0205	N/A	
Dibenzo[a,h]anthracene-d14	2.5000	99.1	50 - 150	20.565	20.5525	0.0125	N/A	
Fluoranthene-d10	2.5000	109	0 - 200	11.006	11.016	-0.0100	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0448
Instrument: NT8
Calibration: GD00068
Calibration Date: 04/26/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLE0448-ICV1 (Water)				Lab File ID: N823053002.D			Analyzed: 05/30/23 11:43	
2-Methylnaphthalene-d10	2.5000	101	80 - 120	5.548	5.559	-0.0110	N/A	
Dibenzo[a,h]anthracene-d14	2.5000	104	80 - 120	20.315	20.35817	-0.0432	N/A	
Fluoranthene-d10	2.5000	88.3	0 - 200	10.892	10.912	-0.0200	N/A	
BLE0421-BLK1 (Solid)				Lab File ID: N823053007.D			Analyzed: 05/30/23 14:23	
2-Methylnaphthalene-d10	150.00	66.5	32 - 120	5.539	5.559	-0.0200	N/A	
Dibenzo[a,h]anthracene-d14	150.00	93.6	21 - 133	20.302	20.35817	-0.0562	N/A	
Fluoranthene-d10	150.00	75.4	36 - 134	10.886	10.912	-0.0260	N/A	
BLE0421-BS1 (Solid)				Lab File ID: N823053008.D			Analyzed: 05/30/23 14:51	
2-Methylnaphthalene-d10	150.00	76.6	32 - 120	5.539	5.559	-0.0200	N/A	
Dibenzo[a,h]anthracene-d14	150.00	122	21 - 133	20.305	20.35817	-0.0532	N/A	
Fluoranthene-d10	150.00	86.6	36 - 134	10.883	10.912	-0.0290	N/A	
BLE0421-BSD1 (Solid)				Lab File ID: N823053009.D			Analyzed: 05/30/23 15:18	
2-Methylnaphthalene-d10	150.00	75.8	32 - 120	5.539	5.559	-0.0200	N/A	
Dibenzo[a,h]anthracene-d14	150.00	122	21 - 133	20.308	20.35817	-0.0502	N/A	
Fluoranthene-d10	150.00	86.0	36 - 134	10.883	10.912	-0.0290	N/A	
BLE0421-SRM1 (Solid)				Lab File ID: N823053010.D			Analyzed: 05/30/23 15:45	
2-Methylnaphthalene-d10	300.00	74.7	32 - 120	5.539	5.559	-0.0200	N/A	
Dibenzo[a,h]anthracene-d14	300.00	117	21 - 133	20.302	20.35817	-0.0562	N/A	
Fluoranthene-d10	300.00	85.0	36 - 134	10.883	10.912	-0.0290	N/A	
23A0207-10 (Solid)				Lab File ID: N823053011.D			Analyzed: 05/30/23 16:12	
2-Methylnaphthalene-d10	149.92	91.3	32 - 120	5.539	5.559	-0.0200	N/A	
Dibenzo[a,h]anthracene-d14	149.92	151	21 - 133	20.305	20.35817	-0.0532	N/A	*
Fluoranthene-d10	149.92	99.9	36 - 134	10.886	10.912	-0.0260	N/A	
SLE0448-CCV1 (Water)				Lab File ID: N823053029.D			Analyzed: 05/31/23 00:22	
2-Methylnaphthalene-d10	2.5000	102	50 - 150	5.542	5.559	-0.0170	N/A	
Dibenzo[a,h]anthracene-d14	2.5000	101	50 - 150	20.308	20.35817	-0.0502	N/A	
Fluoranthene-d10	2.5000	99.3	0 - 200	10.886	10.912	-0.0260	N/A	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLA0213	Instrument:	NT8
		Calibration:	GA00050

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Blank (SLA0213-ICB1)		(Water)		Lab File ID: N823011902.D				Analyzed: 01/19/23 10:59	
Naphthalene-d8	52082	4.916	44704	4.906	117	50 - 200	0.010	+/-0.50	
Acenaphthene-d10	30936	7.202	26411	7.196	117	50 - 200	0.006	+/-0.50	
Phenanthrene-d10	59030	9.241	49210	9.235	120	50 - 200	0.006	+/-0.50	
Chrysene-d12	50944	14.215	42994	14.202	118	50 - 200	0.013	+/-0.50	
Perylene-d12	47418	18.12	40520	18.111	117	50 - 200	0.009	+/-0.50	
Secondary Cal Check (SLA0213-SCV1)		(Water)		Lab File ID: N823011909.D				Analyzed: 01/19/23 14:58	
Naphthalene-d8	46346	4.913	44704	4.906	104	50 - 200	0.007	+/-0.50	
Acenaphthene-d10	27709	7.202	26411	7.196	105	50 - 200	0.006	+/-0.50	
Phenanthrene-d10	51685	9.238	49210	9.235	105	50 - 200	0.003	+/-0.50	
Chrysene-d12	46582	14.212	42994	14.202	108	50 - 200	0.010	+/-0.50	
Perylene-d12	41743	18.117	40520	18.111	103	50 - 200	0.006	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0075	Instrument:	NT8
		Calibration:	GA00050

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLB0075-ICV1)		(Solid)		Lab File ID: N823020607A.D				Analyzed: 02/06/23 15:15	
Naphthalene-d8	44336	4.9	44336	4.9	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	26127	7.189	26127	7.189	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	47424	9.232	47424	9.232	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	36794	14.202	36794	14.202	100	50 - 200	0.000	+/-0.50	
Perylene-d12	36636	18.107	36636	18.107	100	50 - 200	0.000	+/-0.50	
Blank (BLA0683-BLK1)		(Solid)		Lab File ID: N823020608.D				Analyzed: 02/06/23 15:57	
Naphthalene-d8	48985	4.89	44336	4.9	110	50 - 200	-0.010	+/-0.50	
Acenaphthene-d10	28561	7.189	26127	7.189	109	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	52393	9.229	47424	9.232	110	50 - 200	-0.003	+/-0.50	
Chrysene-d12	40654	14.196	36794	14.202	110	50 - 200	-0.006	+/-0.50	
Perylene-d12	24723	18.104	36636	18.107	67	50 - 200	-0.003	+/-0.50	
LCS (BLA0683-BS1)		(Solid)		Lab File ID: N823020609.D				Analyzed: 02/06/23 16:24	
Naphthalene-d8	50596	4.884	44336	4.9	114	50 - 200	-0.016	+/-0.50	
Acenaphthene-d10	29850	7.183	26127	7.189	114	50 - 200	-0.006	+/-0.50	
Phenanthrene-d10	54061	9.222	47424	9.232	114	50 - 200	-0.010	+/-0.50	
Chrysene-d12	41046	14.19	36794	14.202	112	50 - 200	-0.012	+/-0.50	
Perylene-d12	27103	18.098	36636	18.107	74	50 - 200	-0.009	+/-0.50	
LCS Dup (BLA0683-BSD1)		(Solid)		Lab File ID: N823020610.D				Analyzed: 02/06/23 16:51	
Naphthalene-d8	52018	4.887	44336	4.9	117	50 - 200	-0.013	+/-0.50	
Acenaphthene-d10	29996	7.183	26127	7.189	115	50 - 200	-0.006	+/-0.50	
Phenanthrene-d10	54697	9.223	47424	9.232	115	50 - 200	-0.009	+/-0.50	
Chrysene-d12	41650	14.187	36794	14.202	113	50 - 200	-0.015	+/-0.50	
Perylene-d12	27575	18.098	36636	18.107	75	50 - 200	-0.009	+/-0.50	
Reference (BLA0683-SRM1)		(Solid)		Lab File ID: N823020611.D				Analyzed: 02/06/23 17:18	
Naphthalene-d8	47898	4.884	44336	4.9	108	50 - 200	-0.016	+/-0.50	
Acenaphthene-d10	26592	7.183	26127	7.189	102	50 - 200	-0.006	+/-0.50	
Phenanthrene-d10	44776	9.223	47424	9.232	94	50 - 200	-0.009	+/-0.50	
Chrysene-d12	36552	14.19	36794	14.202	99	50 - 200	-0.012	+/-0.50	
Perylene-d12	22526	18.092	36636	18.107	61	50 - 200	-0.015	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0075	Instrument:	NT8
		Calibration:	GA00050

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-IT1088 (23A0207-01)		(Solid)		Lab File ID: N823020612.D				Analyzed: 02/06/23 17:45	
Naphthalene-d8	49668	4.884	44336	4.9	112	50 - 200	-0.016	+/-0.50	
Acenaphthene-d10	29744	7.183	26127	7.189	114	50 - 200	-0.006	+/-0.50	
Phenanthrene-d10	50330	9.223	47424	9.232	106	50 - 200	-0.009	+/-0.50	
Chrysene-d12	35079	14.187	36794	14.202	95	50 - 200	-0.015	+/-0.50	
Perylene-d12	30080	18.092	36636	18.107	82	50 - 200	-0.015	+/-0.50	
LDW23-IT1089 (23A0207-02)		(Solid)		Lab File ID: N823020613.D				Analyzed: 02/06/23 18:12	
Naphthalene-d8	52443	4.887	44336	4.9	118	50 - 200	-0.013	+/-0.50	
Acenaphthene-d10	30994	7.183	26127	7.189	119	50 - 200	-0.006	+/-0.50	
Phenanthrene-d10	49132	9.222	47424	9.232	104	50 - 200	-0.010	+/-0.50	
Chrysene-d12	23550	14.193	36794	14.202	64	50 - 200	-0.009	+/-0.50	
Perylene-d12	21895	18.098	36636	18.107	60	50 - 200	-0.009	+/-0.50	
LDW23-IT1079 (23A0207-03)		(Solid)		Lab File ID: N823020614.D				Analyzed: 02/06/23 18:39	
Naphthalene-d8	52165	4.884	44336	4.9	118	50 - 200	-0.016	+/-0.50	
Acenaphthene-d10	30594	7.183	26127	7.189	117	50 - 200	-0.006	+/-0.50	
Phenanthrene-d10	46304	9.225	47424	9.232	98	50 - 200	-0.007	+/-0.50	
Chrysene-d12	23098	14.193	36794	14.202	63	50 - 200	-0.009	+/-0.50	
Perylene-d12	21017	18.098	36636	18.107	57	50 - 200	-0.009	+/-0.50	
Matrix Spike (BLA0683-MS1)		(Solid)		Lab File ID: N823020615.D				Analyzed: 02/06/23 19:06	
Naphthalene-d8	54388	4.884	44336	4.9	123	50 - 200	-0.016	+/-0.50	
Acenaphthene-d10	30727	7.183	26127	7.189	118	50 - 200	-0.006	+/-0.50	
Phenanthrene-d10	46335	9.226	47424	9.232	98	50 - 200	-0.006	+/-0.50	
Chrysene-d12	24118	14.193	36794	14.202	66	50 - 200	-0.009	+/-0.50	
Perylene-d12	21563	18.105	36636	18.107	59	50 - 200	-0.002	+/-0.50	
Matrix Spike Dup (BLA0683-MSD1)		(Solid)		Lab File ID: N823020616.D				Analyzed: 02/06/23 19:33	
Naphthalene-d8	52636	4.884	44336	4.9	119	50 - 200	-0.016	+/-0.50	
Acenaphthene-d10	30563	7.183	26127	7.189	117	50 - 200	-0.006	+/-0.50	
Phenanthrene-d10	45924	9.226	47424	9.232	97	50 - 200	-0.006	+/-0.50	
Chrysene-d12	23485	14.193	36794	14.202	64	50 - 200	-0.009	+/-0.50	
Perylene-d12	21615	18.101	36636	18.107	59	50 - 200	-0.006	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0075	Instrument:	NT8
		Calibration:	GA00050

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-IT1080-FD (23A0207-05)		(Solid)		Lab File ID: N823020618.D				Analyzed: 02/06/23 20:26	
Naphthalene-d8	50448	4.887	44336	4.9	114	50 - 200	-0.013	+/-0.50	
Acenaphthene-d10	28375	7.183	26127	7.189	109	50 - 200	-0.006	+/-0.50	
Phenanthrene-d10	45673	9.226	47424	9.232	96	50 - 200	-0.006	+/-0.50	
Chrysene-d12	20022	14.199	36794	14.202	54	50 - 200	-0.003	+/-0.50	
Perylene-d12	18460	18.111	36636	18.107	50	50 - 200	0.004	+/-0.50	
LDW23-IT1072 (23A0207-06)		(Solid)		Lab File ID: N823020619.D				Analyzed: 02/06/23 20:53	
Naphthalene-d8	50637	4.891	44336	4.9	114	50 - 200	-0.009	+/-0.50	
Acenaphthene-d10	30605	7.183	26127	7.189	117	50 - 200	-0.006	+/-0.50	
Phenanthrene-d10	52103	9.226	47424	9.232	110	50 - 200	-0.006	+/-0.50	
Chrysene-d12	24084	14.196	36794	14.202	65	50 - 200	-0.006	+/-0.50	
Perylene-d12	20229	18.104	36636	18.107	55	50 - 200	-0.003	+/-0.50	
LDW23-IT1081 (23A0207-07)		(Solid)		Lab File ID: N823020620.D				Analyzed: 02/06/23 21:20	
Naphthalene-d8	51867	4.887	44336	4.9	117	50 - 200	-0.013	+/-0.50	
Acenaphthene-d10	31021	7.183	26127	7.189	119	50 - 200	-0.006	+/-0.50	
Phenanthrene-d10	53247	9.226	47424	9.232	112	50 - 200	-0.006	+/-0.50	
Chrysene-d12	26745	14.196	36794	14.202	73	50 - 200	-0.006	+/-0.50	
Perylene-d12	24765	18.107	36636	18.107	68	50 - 200	0.000	+/-0.50	
LDW23-IT1068 (23A0207-08)		(Solid)		Lab File ID: N823020621.D				Analyzed: 02/06/23 21:47	
Naphthalene-d8	54142	4.884	44336	4.9	122	50 - 200	-0.016	+/-0.50	
Acenaphthene-d10	32326	7.183	26127	7.189	124	50 - 200	-0.006	+/-0.50	
Phenanthrene-d10	57668	9.226	47424	9.232	122	50 - 200	-0.006	+/-0.50	
Chrysene-d12	37315	14.193	36794	14.202	101	50 - 200	-0.009	+/-0.50	
Perylene-d12	31960	18.105	36636	18.107	87	50 - 200	-0.002	+/-0.50	
LDW23-IT1062 (23A0207-09)		(Solid)		Lab File ID: N823020622.D				Analyzed: 02/06/23 22:14	
Naphthalene-d8	51253	4.884	44336	4.9	116	50 - 200	-0.016	+/-0.50	
Acenaphthene-d10	30524	7.183	26127	7.189	117	50 - 200	-0.006	+/-0.50	
Phenanthrene-d10	47253	9.226	47424	9.232	100	50 - 200	-0.006	+/-0.50	
Chrysene-d12	26321	14.193	36794	14.202	72	50 - 200	-0.009	+/-0.50	
Perylene-d12	26206	18.105	36636	18.107	72	50 - 200	-0.002	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0075	Instrument:	NT8
		Calibration:	GA00050

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-IT1078 (23A0207-15)		(Solid)		Lab File ID: N823020623.D				Analyzed: 02/06/23 22:41	
Naphthalene-d8	54069	4.894	44336	4.9	122	50 - 200	-0.006	+/-0.50	
Acenaphthene-d10	27937	7.186	26127	7.189	107	50 - 200	-0.003	+/-0.50	
Phenanthrene-d10	43496	9.225	47424	9.232	92	50 - 200	-0.007	+/-0.50	
Chrysene-d12	23177	14.202	36794	14.202	63	50 - 200	0.000	+/-0.50	
Perylene-d12	20718	18.123	36636	18.107	57	50 - 200	0.016	+/-0.50	
LDW23-IT1209 (23A0207-17)		(Solid)		Lab File ID: N823020625.D				Analyzed: 02/06/23 23:34	
Naphthalene-d8	53176	4.894	44336	4.9	120	50 - 200	-0.006	+/-0.50	
Acenaphthene-d10	28398	7.186	26127	7.189	109	50 - 200	-0.003	+/-0.50	
Phenanthrene-d10	43410	9.232	47424	9.232	92	50 - 200	0.000	+/-0.50	
Chrysene-d12	20694	14.222	36794	14.202	56	50 - 200	0.020	+/-0.50	
Perylene-d12	18612	18.136	36636	18.107	51	50 - 200	0.029	+/-0.50	
Calibration Check (SLB0075-CCV1)		(Water)		Lab File ID: N823020633.D				Analyzed: 02/07/23 03:09	
Naphthalene-d8	52897	4.891	44336	4.9	119	50 - 200	-0.009	+/-0.50	
Acenaphthene-d10	31659	7.186	26127	7.189	121	50 - 200	-0.003	+/-0.50	
Phenanthrene-d10	57767	9.235	47424	9.232	122	50 - 200	0.003	+/-0.50	
Chrysene-d12	48067	14.228	36794	14.202	131	50 - 200	0.026	+/-0.50	
Perylene-d12	37211	18.155	36636	18.107	102	50 - 200	0.048	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0101	Instrument:	NT8
		Calibration:	GA00050

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLB0101-ICV1)		(Water)		Lab File ID: N823020802.D				Analyzed: 02/08/23 12:05	
Naphthalene-d8	47321	4.894	47321	4.894	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	28133	7.189	28133	7.189	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	52447	9.232	52447	9.232	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	43514	14.215	43514	14.215	100	50 - 200	0.000	+/-0.50	
Perylene-d12	39495	18.127	39495	18.127	100	50 - 200	0.000	+/-0.50	
LDW23-IT1080 (23A0207-04)		(Solid)		Lab File ID: N823020805.D				Analyzed: 02/08/23 13:33	
Naphthalene-d8	47341	4.884	47321	4.894	100	50 - 200	-0.010	+/-0.50	
Acenaphthene-d10	28151	7.183	28133	7.189	100	50 - 200	-0.006	+/-0.50	
Phenanthrene-d10	46354	9.226	52447	9.232	88	50 - 200	-0.006	+/-0.50	
Chrysene-d12	24280	14.203	43514	14.215	56	50 - 200	-0.012	+/-0.50	
Perylene-d12	27509	18.12	39495	18.127	70	50 - 200	-0.007	+/-0.50	
LDW23-IT1201 (23A0207-16)		(Solid)		Lab File ID: N823020806.D				Analyzed: 02/08/23 14:00	
Naphthalene-d8	49742	4.887	47321	4.894	105	50 - 200	-0.007	+/-0.50	
Acenaphthene-d10	29339	7.183	28133	7.189	104	50 - 200	-0.006	+/-0.50	
Phenanthrene-d10	43820	9.226	52447	9.232	84	50 - 200	-0.006	+/-0.50	
Chrysene-d12	25465	14.209	43514	14.215	59	50 - 200	-0.006	+/-0.50	
Perylene-d12	27212	18.123	39495	18.127	69	50 - 200	-0.004	+/-0.50	
Calibration Check (SLB0101-CCV1)		(Water)		Lab File ID: N823020817.D				Analyzed: 02/08/23 19:21	
Naphthalene-d8	47039	4.884	47321	4.894	99	50 - 200	-0.010	+/-0.50	
Acenaphthene-d10	27819	7.183	28133	7.189	99	50 - 200	-0.006	+/-0.50	
Phenanthrene-d10	51353	9.226	52447	9.232	98	50 - 200	-0.006	+/-0.50	
Chrysene-d12	42507	14.199	43514	14.215	98	50 - 200	-0.016	+/-0.50	
Perylene-d12	44576	18.117	39495	18.127	113	50 - 200	-0.010	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLD0372	Instrument:	NT8
		Calibration:	GD00068

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SLD0372-SCV1)		(Water)		Lab File ID: N823042609.D				Analyzed: 04/26/23 20:49	
Naphthalene-d8	20718	4.827	18699	4.827	111	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	12642	7.113	10729	7.11	118	50 - 200	0.003	+/-0.50	
Phenanthrene-d10	24547	9.15	20748	9.15	118	50 - 200	0.000	+/-0.50	
Chrysene-d12	24217	14.07	20954	14.067	116	50 - 200	0.003	+/-0.50	
Perylene-d12	24956	17.959	21563	17.959	116	50 - 200	0.000	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLE0448

SDG: 23A0207
Project: AOC5 MR Phase 1
Instrument: NT8
Calibration: GD00068

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLE0448-ICV1)		(Water)		Lab File ID: N823053002.D				Analyzed: 05/30/23 11:43	
Naphthalene-d8	20199	4.815	20199	4.815	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	12041	7.101	12041	7.101	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	19182	9.137	19182	9.137	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	15943	14.044	15943	14.044	100	50 - 200	0.000	+/-0.50	
Perylene-d12	14317	17.931	14317	17.931	100	50 - 200	0.000	+/-0.50	
Blank (BLE0421-BLK1)		(Solid)		Lab File ID: N823053007.D				Analyzed: 05/30/23 14:23	
Naphthalene-d8	18366	4.805	20199	4.815	91	50 - 200	-0.010	+/-0.50	
Acenaphthene-d10	10973	7.091	12041	7.101	91	50 - 200	-0.010	+/-0.50	
Phenanthrene-d10	22417	9.131	19182	9.137	117	50 - 200	-0.006	+/-0.50	
Chrysene-d12	20176	14.032	15943	14.044	127	50 - 200	-0.012	+/-0.50	
Perylene-d12	19519	17.921	14317	17.931	136	50 - 200	-0.010	+/-0.50	
LCS (BLE0421-BS1)		(Solid)		Lab File ID: N823053008.D				Analyzed: 05/30/23 14:51	
Naphthalene-d8	19536	4.802	20199	4.815	97	50 - 200	-0.013	+/-0.50	
Acenaphthene-d10	11328	7.091	12041	7.101	94	50 - 200	-0.010	+/-0.50	
Phenanthrene-d10	22273	9.128	19182	9.137	116	50 - 200	-0.009	+/-0.50	
Chrysene-d12	20544	14.029	15943	14.044	129	50 - 200	-0.015	+/-0.50	
Perylene-d12	17809	17.915	14317	17.931	124	50 - 200	-0.016	+/-0.50	
LCS Dup (BLE0421-BSD1)		(Solid)		Lab File ID: N823053009.D				Analyzed: 05/30/23 15:18	
Naphthalene-d8	19445	4.802	20199	4.815	96	50 - 200	-0.013	+/-0.50	
Acenaphthene-d10	11426	7.091	12041	7.101	95	50 - 200	-0.010	+/-0.50	
Phenanthrene-d10	22700	9.128	19182	9.137	118	50 - 200	-0.009	+/-0.50	
Chrysene-d12	21100	14.029	15943	14.044	132	50 - 200	-0.015	+/-0.50	
Perylene-d12	18120	17.918	14317	17.931	127	50 - 200	-0.013	+/-0.50	
Reference (BLE0421-SRM1)		(Solid)		Lab File ID: N823053010.D				Analyzed: 05/30/23 15:45	
Naphthalene-d8	18318	4.805	20199	4.815	91	50 - 200	-0.010	+/-0.50	
Acenaphthene-d10	10804	7.091	12041	7.101	90	50 - 200	-0.010	+/-0.50	
Phenanthrene-d10	20619	9.128	19182	9.137	107	50 - 200	-0.009	+/-0.50	
Chrysene-d12	19687	14.029	15943	14.044	123	50 - 200	-0.015	+/-0.50	
Perylene-d12	17751	17.918	14317	17.931	124	50 - 200	-0.013	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0448	Instrument:	NT8
		Calibration:	GD00068

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-IT1097 (23A0207-10)		(Solid)		Lab File ID: N823053011.D				Analyzed: 05/30/23 16:12	
Naphthalene-d8	17623	4.808	20199	4.815	87	50 - 200	-0.007	+/-0.50	
Acenaphthene-d10	9866	7.094	12041	7.101	82	50 - 200	-0.007	+/-0.50	
Phenanthrene-d10	17866	9.131	19182	9.137	93	50 - 200	-0.006	+/-0.50	
Chrysene-d12	8712	14.032	15943	14.044	55	50 - 200	-0.012	+/-0.50	
Perylene-d12	10111	17.921	14317	17.931	71	50 - 200	-0.010	+/-0.50	
Calibration Check (SLE0448-CCV1)		(Water)		Lab File ID: N823053029.D				Analyzed: 05/31/23 00:22	
Naphthalene-d8	20335	4.812	20199	4.815	101	50 - 200	-0.003	+/-0.50	
Acenaphthene-d10	12213	7.091	12041	7.101	101	50 - 200	-0.010	+/-0.50	
Phenanthrene-d10	23621	9.131	19182	9.137	123	50 - 200	-0.006	+/-0.50	
Chrysene-d12	20901	14.032	15943	14.044	131	50 - 200	-0.012	+/-0.50	
Perylene-d12	15968	17.921	14317	17.931	112	50 - 200	-0.010	+/-0.50	

HOLDING TIME SUMMARY

Analysis: EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-IT1088 23A0207-01	01/11/23 08:22	01/11/23 16:45	02/01/23 11:29	21	365	02/06/23 17:45	5	40	
LDW23-IT1089 23A0207-02	01/11/23 08:42	01/11/23 16:45	02/01/23 11:29	21	365	02/06/23 18:12	5	40	
LDW23-IT1079 23A0207-03	01/11/23 09:04	01/11/23 16:45	02/01/23 11:29	21	365	02/06/23 18:39	5	40	
LDW23-IT1080 23A0207-04	01/11/23 09:24	01/11/23 16:45	02/01/23 11:29	21	365	02/08/23 13:33	7	40	
LDW23-IT1080-FD 23A0207-05	01/11/23 09:24	01/11/23 16:45	02/01/23 11:29	21	365	02/06/23 20:26	5	40	
LDW23-IT1072 23A0207-06	01/11/23 09:41	01/11/23 16:45	02/01/23 11:29	21	365	02/06/23 20:53	5	40	
LDW23-IT1081 23A0207-07	01/11/23 10:15	01/11/23 16:45	02/01/23 11:29	21	365	02/06/23 21:20	5	40	
LDW23-IT1068 23A0207-08	01/11/23 10:45	01/11/23 16:45	02/01/23 11:29	21	365	02/06/23 21:47	5	40	
LDW23-IT1062 23A0207-09	01/11/23 11:03	01/11/23 16:45	02/01/23 11:29	21	365	02/06/23 22:14	5	40	
LDW23-IT1097 23A0207-10	01/11/23 11:32	01/11/23 16:45	05/16/23 13:53	125	365	05/30/23 16:12	14	40	
LDW23-IT1078 23A0207-15	01/11/23 14:13	01/11/23 16:45	02/01/23 11:29	20	365	02/06/23 22:41	5	40	
LDW23-IT1201 23A0207-16	01/11/23 14:54	01/11/23 16:45	02/01/23 11:29	20	365	02/08/23 14:00	7	40	
LDW23-IT1209 23A0207-17	01/11/23 15:21	01/11/23 16:45	02/01/23 11:29	20	365	02/06/23 23:34	6	40	
Matrix Spike BLA0683-MS1	01/11/23 09:04	01/11/23 16:45	02/01/23 11:29	21	365	02/06/23 19:06	5	40	
Matrix Spike Dup BLA0683-MSD1	01/11/23 09:04	01/11/23 16:45	02/01/23 11:29	21	365	02/06/23 19:33	5	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: NT8

Analyte	MDL	RL	Units
Benzo(a)anthracene	0.82	5.00	ug/kg
Chrysene	1.05	5.00	ug/kg
Benzo(b)fluoranthene	1.37	5.00	ug/kg
Benzo(k)fluoranthene	0.76	5.00	ug/kg
Benzo(a)pyrene	0.61	5.00	ug/kg
Indeno(1,2,3-cd)pyrene	1.05	5.00	ug/kg
Dibenzo(a,h)anthracene	0.89	5.00	ug/kg

I8227

Certificate of Analysis

SIGMA-ALDRICH

Product Name	Pentachlorophenol, 97%
Product Number	P2604
Product Brand	ALDRICH
CAS Number	87-86-5
Molecular Formula	C_6Cl_5OH
Molecular Weight	266.34

TEST	SPECIFICATION	LOT 07119HO RESULTS
APPEARANCE	WHITE TO OFF-WHITE OR LIGHT BLUE POWDER	OFF-WHITE POWDER
INFRARED SPECTRUM	CONFORMS TO STRUCTURE.	CONFORMS TO STRUCTURE AND STANDARD
TITRATION	97.5% - 102.5% (WITH AGNO3 AFTER OXYGEN	100.5 % (WITH AGNO3 AFTER OXYGEN COMBUSTION)
GAS LIQUID CHROMATOGRAPHY	97.5% (MINIMUM)	99.9 %
SOLUBILITY		100 MG/ML, 95% ETOH: VERY HAZY, FAINT YELLOW SOLUTION
QUALITY CONTROL ACCEPTANCE DATE		JUNE 2001

Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

Cambridge Isotope Laboratories, Inc.

50 Frontage Road, Andover, MA 01810-5413 USA
800.322.1174 (N.AMERICA) 978.749.8000 (INTERNATIONAL)
www.isotope.com

CERTIFICATE OF ANALYSIS

Product Name: DIBENZ[A,H]ANTHRACENE
(Isotopic Label & Enrichment Specification) (D14, 97%)

Lot Number: PR-14764/09163DA2

Catalog Number: DLM-677-0

I295

Product Information

Chemical Purity Specification:	≥ 98%
Labeled CAS Number:	NA
Unlabeled CAS Number:	53-70-3
Molecular Weight:	292.5
Chemical Formula:	C22D14
Storage:	Store at room temperature away from light and moisture.
Stability:	Stable if stored under recommended conditions.

Certification

Cambridge Isotope Laboratories, Inc. guarantees that this material meets or exceeds the specifications stated. Absolute identity as well as chemical and isotopic purities are assured by the use of unambiguous synthetic routes and multiple chemical analyses whenever possible.

Approved by: Deborah E. Costa

Deborah E. Costa, Quality Assurance

Quality Control Tests and Results

GC/MS for Chemical Purity	99.3%
GC/MS for Isotopic Enrichment	97.4%
Melting Point Range Determination	263-265°C
1H NMR for Chemical Purity	Pass

E006466

SVOA-d14-Dibenz(a,h)anthracene-NEAT
Solvent / Lot: NA
Prep: 11/9/2016 by VS
Exp: 5/8/2030
Location:

660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

2-Chloronaphthalene

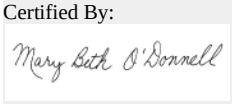
CATALOG NUMBER	N-10323-100MG
LOT NUMBER	10816400
DATE CERTIFIED	05/22/18
EXPIRATION DATE	05/31/24
CAS NUMBER	91-58-7
MOLECULAR FORMULA	C10H7Cl
MOLECULAR WEIGHT	162.62
STORAGE	Store at room temperature (20 - 25 °C).
HANDLING	See Safety Data Sheet
INTENDED USE	For laboratory use only.

I010152
2-Chloronaphthalene NEAT
Expires 12/31/2079
Prepared By Joshua Rains 10/29/2020

Analytical Test	Value
% PURITY (GC/FID)	99.5

Chem Service, Inc. guarantees the purity to be +/- 0.5% deviation prior to the expiration date shown on the label and exclusive of any customer contamination.

Certified By:



Mary Beth O'Donnell
CSM/TC

Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015

PJLA Reference Material Producer PJLA Testing

COA Form
Revision 3 (3/2015)

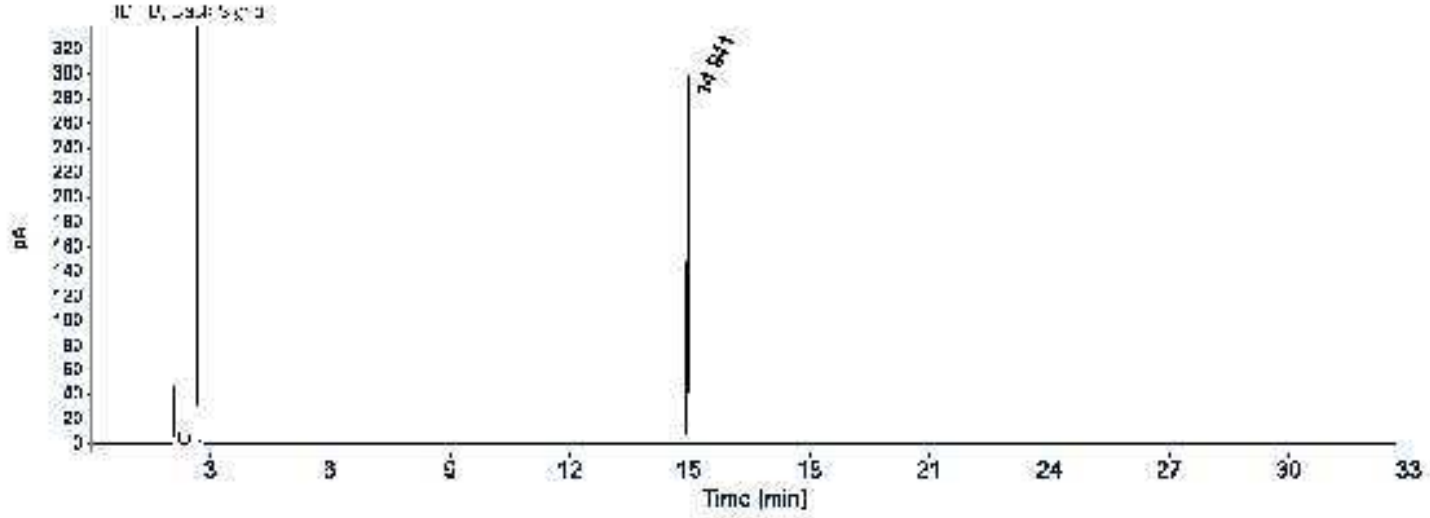
660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Gas Chromatography / Flame Ionization Detector (GC/FID)

Data file: C:\Chem32\1\Data\2018 Data\0518\2-Chloronaphtthalene.D
Sample name: 2-Chloronaphthalene

Instrument: GC3
Injection date: 5/22/2018 1:12:52 PM
Acq. method: REAR_SCREEN.M
Location: 209
Injection volume: 1.0uL
Col Type: pn# 7HG-G006-17-C **Diameter** 250.000 **Length** 30.000



Signal: FID1 B, Back Signal

RT [min]	Type	Width [min]	Area	Height	Area%
14.941	BB	0.0410	808.8124	308.5675	100.0000
		Sum	808.8124		

Certificate of Analysis - Certified Reference Material

PAHs by HPLC

Product no.: SQC017-40G
Lot no.: LRAC9745
Expiry Date: April 2024
Manufacturing Date: April 2021
Storage: REFRIGERATE
Solvent/Matrix: SOIL
Certificate version: LRAC9745.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

Certified Values:

Analyte	*Units*	*Certified Value*
Dibenzo(a,h)anthracene	µg/Kg	177 ± 21
Acenaphthylene	µg/Kg	609 ± 49
Anthracene	µg/Kg	239 ± 22
Benzo(a)anthracene	µg/Kg	109 ± 8
Benzo(a)pyrene	µg/Kg	65.5 ± 5.2
Benzo(b)fluoranthene	µg/Kg	295 ± 20
Benzo(g,h,i)perylene	µg/Kg	176 ± 17
Naphthalene	µg/Kg	566 ± 47
Chrysene	µg/Kg	210 ± 19
Benzo(b+k)fluoranthene	µg/Kg	662 ± 81
Fluoranthene	µg/Kg	273 ± 17
Fluorene	µg/Kg	326 ± 20
Indeno(1,2,3-cd) pyrene	µg/Kg	208 ± 23
Phenanthrene	µg/Kg	220 ± 13
Pyrene	µg/Kg	380 ± 25
Acenaphthene	µg/Kg	459 ± 33
Benzo(k)fluoranthene	µg/Kg	259 ± 23

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Informational Values:

Analyte	*Units*	*Suggested Acceptance Windows*	*Standard Deviation*
Dibenzo(a,h)anthracene	µg/Kg	0.00 to 379	67.4
Acenaphthylene	µg/Kg	140 to 1078	156
Anthracene	µg/Kg	26.0 to 452	71.1
Benzo(a)anthracene	µg/Kg	33.4 to 185	25.3
Benzo(a)pyrene	µg/Kg	15.6 to 115	16.6
Benzo(b)fluoranthene	µg/Kg	98.7 to 492	65.6
Benzo(g,h,i)perylene	µg/Kg	16.5 to 336	53.3
Naphthalene	µg/Kg	99.8 to 1032	155
Chrysene	µg/Kg	27.9 to 391	60.6
Benzo(b+k)fluoranthene	µg/Kg	265 to 1059	132
Fluoranthene	µg/Kg	113 to 433	53.3
Fluorene	µg/Kg	135 to 517	63.6
Indeno(1,2,3-cd) pyrene	µg/Kg	0.00 to 432	74.5
Phenanthrene	µg/Kg	92.8 to 346	42.2
Pyrene	µg/Kg	138 to 622	80.7
Acenaphthene	µg/Kg	154 to 764	102
Benzo(k)fluoranthene	µg/Kg	36.2 to 482	74.3

Additional Information:

DESCRIPTION

This product consist of a 4 vials each containing 10g of soil for analysis of PAHs. Each vial is identical and has been tested show homogeneity.

Four samples have been provided for your convenience (multiple methods, multiple analysts, etc.)

The soil has been chemically stabilized with 1 mL of acetone to minimize degradation of the sample.

SAMPLE PREPARATION

Extract the complete contents of a single vial. Transfer entire contents of one vial to extraction vessel. Rinse vial and cap with extraction solvent.

Note: Sample extracts and calibration solutions should be in the same solvent.

All values are based on a wet weight basis, do not correct for moisture.

Assume a 10g sample size for all calculations.

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: Package of 4 units of 10 g in amber jar

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 19-Apr-2021

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom } ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAC9745.01	19-Apr-2021	Original Release Date

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Disclaimer: The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

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The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada.

CERTIFIED WEIGHT REPORT

Part Number: **70476**
Lot Number: 092220
Description: Benzo(j)fluoranthene

Expiration Date: 092225
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 23060

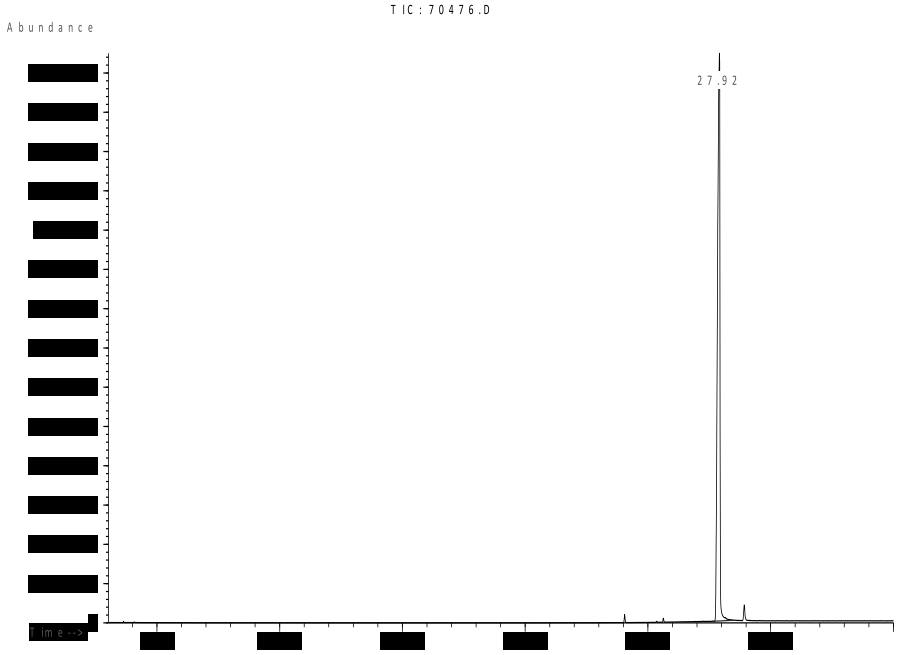
Solvent(s): **Lot#**
Methylene chloride 104929

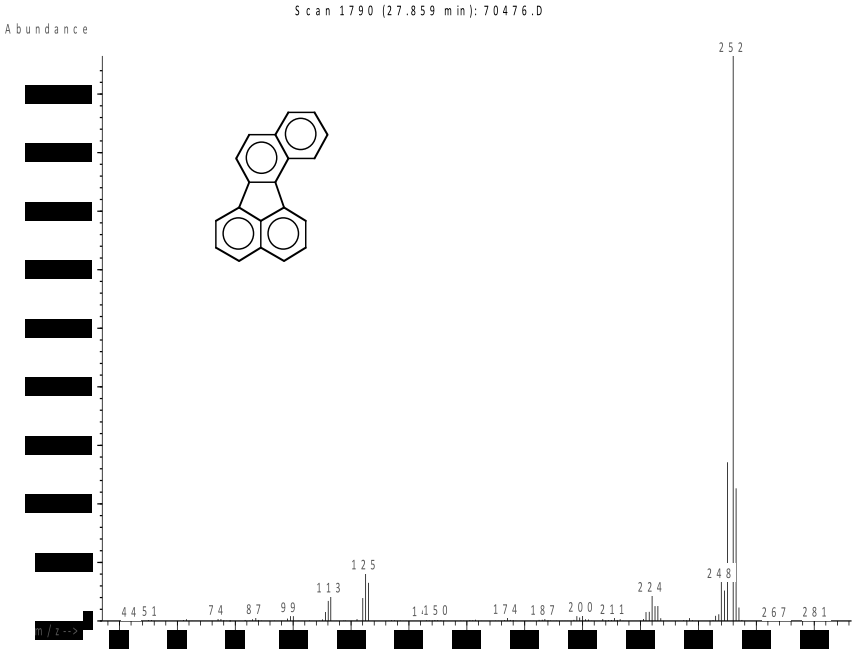
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 25.0 0.001 Flask Uncertainty

	092220
Formulated By: Benson Chan	DATE
	092220
Reviewed By: Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Benzo(j)fluoranthene	476	3-CSZ-153-20	1000	98.1	0.2	0.02547	0.02552	1001.8	5.7	205-82-3	0.2mg/m3	N/A

Method GC8MSD1M: Column:SBB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9 min.), Rate = 10°C/min., Injector B= 200°C, Detector B = 290°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by Candice Warren.





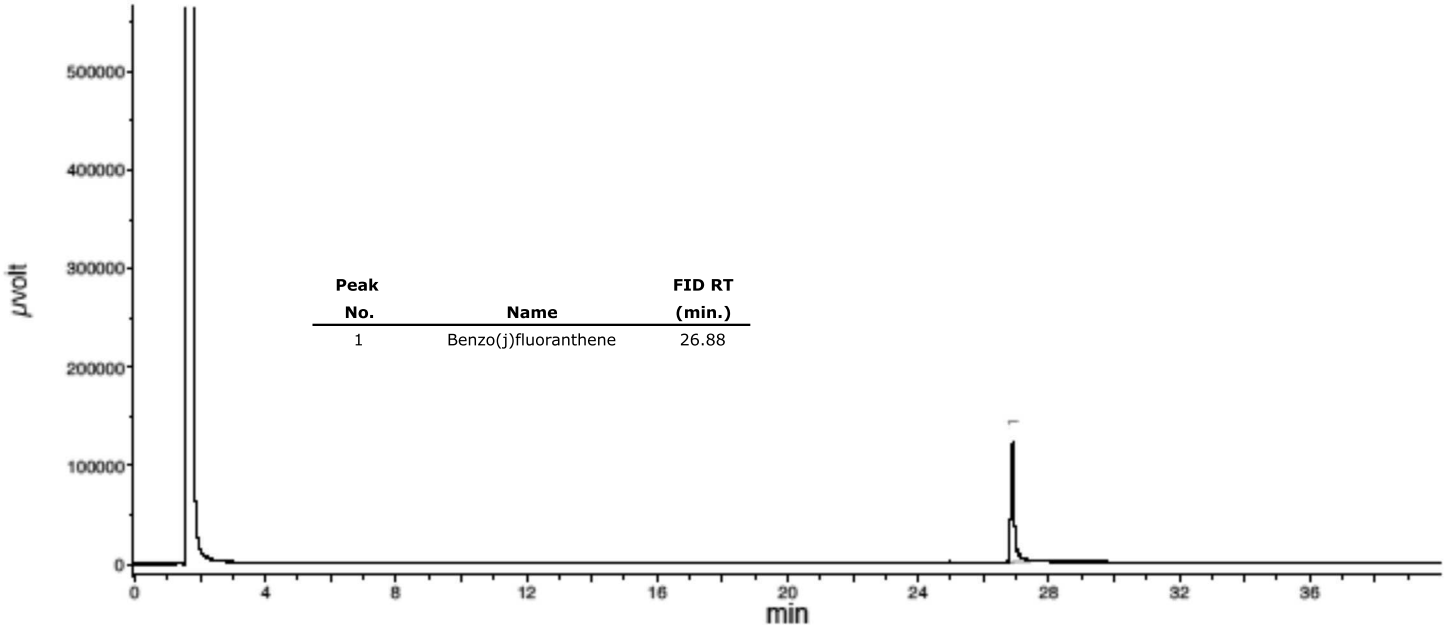
- **The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.**
- **Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).**
- **Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.**
- **All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.**
- **Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).**

Run 31, "P70476 L092220 [1000µg/mL in MeCl2]"

Run Length: 40.00 min, 23999 points at 10 points/second.
Created: Thu, Sep 24, 2020 at 2:33:43 AM.
Sampled: Sequence "092120-GC9M2", Method "GC9-M2".
Analyzed using Method "GC9-M2".

Comments

GC9-M2 Analysis by Melissa Stonier
Column ID SPB-5 30 meter x 0.53mm x 1.5um Film Thickness.
Flow rates; Total Flow = 300 ml/min, Helium (carrier) = 6.5 mL, Helium (make-up) = 25 mL.
Hydrogen (detector) = 30 mL, Air (detector) =360 mLOven Temp 1 = 50°C (1 min).
Rate = 10°C/min, Oven Temp 2 = 300°C (14 min), Total Run Time = 40 Minutes. Injector Temp = 250°C.
FID Temp = 300°C, FID Signal = eDaq Channel 1.
Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 uL, Range = 3



Peak No.	Name	FID RT (min.)
1	Benzo(j)fluoranthene	26.88

Certificate of Analysis

Sigma-Aldrich

Product Name:	2,4,6-Tribromophenol
Product Description:	99%
Product Brand:	Sigma-Aldrich
Product Number:	137715
Molecular Weight:	330.80
Molecular Formula:	$Br_3C_6H_2OH$
CAS Number:	118-79-6

TEST	SPECIFICATION	LOT 05110PD RESULTS
APPEARANCE:	WHITE TO OFF-WHITE TO PINK FLAKES, CHUNKS,	PINK BEADS
INFRARED SPECTRUM:		CONFORMS TO STRUCTURE.
GAS LIQUID:	98.5% (MINIMUM)	99.9%
QUALITY CONTROL:		NOVEMBER 2005

Barbara Rajzer

Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

J010541
SVOA-Tribromophenol-NEAT
Solvent / Lot: 05110PD
Prep: 10/1/2021 by VS
Exp: 3/30/2040
Location: voa freezer

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CERTIFIED WEIGHT REPORT

Part Number: 93462
Lot Number: 081021
Description: PAH Standard
30 components
Expiration Date: 081026
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 6UTB

Solvent(s): Methylene chloride **Lot#** 105345

K3587

5E-05 Balance Uncertainty
Volume(s) shown below were combined and diluted to (mL): 20.0 0.001 Flask Uncertainty

Formulated By:	Prashant Chauhan	081021 DATE
Reviewed By:	Pedro L. Rentas	081021 DATE

Compound	Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc.(ug/mL)	Final Conc.(ug/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Acenaphthene	10007	042420	0.50	10.00	0.042	2001.2	1000.4	9.4	83-32-9	N/A	ipr-rat 600mg/kg
2. Acenaphthylene	10007	042420	0.50	10.00	0.042	2000.2	999.9	9.4	208-96-8	N/A	N/A
3. Anthracene	10007	042420	0.50	10.00	0.042	2000.3	999.9	9.3	120-12-7	0.2mg/m3 (8H)	ipr-mus 430mg/kg
4. Benzo(a)anthracene	10007	042420	0.50	10.00	0.042	2001.3	1000.4	9.4	56-55-3	N/A	N/A
5. Benzo(a)pyrene	10007	042420	0.50	10.00	0.042	2000.0	999.8	9.3	50-32-8	0.2mg/m3 (8H)	scu-rat 50mg/kg
6. Benzo(b)fluoranthene	10007	042420	0.50	10.00	0.042	2000.9	1000.2	9.3	205-99-2	N/A	N/A
7. Benzo(k)fluoranthene	10007	042420	0.50	10.00	0.042	2001.2	1000.4	9.4	207-08-9	N/A	N/A
8. Benzo(g,h,i)perylene	10007	042420	0.50	10.00	0.042	2000.0	999.8	9.3	191-24-2	N/A	N/A
9. Carbazole	10007	042420	0.50	10.00	0.042	2000.3	999.9	9.4	86-74-8	N/A	ipr-mus 200mg/kg
10. Chrysene	10007	042420	0.50	10.00	0.042	2000.8	1000.2	9.4	218-01-9	0.2mg/m3	N/A
11. Dibenzo(a,h)anthracene	10007	042420	0.50	10.00	0.042	2000.8	1000.2	9.4	53-70-3	0.2mg/m3	N/A
12. Fluoranthene	10007	042420	0.50	10.00	0.042	2000.3	999.9	9.4	206-44-0	N/A	orl-rat 2000mg/kg
13. Fluorene	10007	042420	0.50	10.00	0.042	2000.9	1000.2	9.4	86-73-7	N/A	ipr-mus 2 g/kg
14. Indeno(1,2,3-cd)pyrene	10007	042420	0.50	10.00	0.042	2000.1	999.8	9.3	193-39-5	N/A	N/A
15. Naphthalene	10007	042420	0.50	10.00	0.042	2000.9	1000.2	9.3	91-20-3	10 ppm (50mg/m3/8H)	orl-rat 490mg/kg
16. Phenanthrene	10007	042420	0.50	10.00	0.042	2000.9	1000.2	9.4	85-01-8	0.2mg/m3/8H	orl-mus 700mg/kg
17. Pyrene	10007	042420	0.50	10.00	0.042	2001.0	1000.3	9.4	129-00-0	0.2mg/m3/8H	orl-rat 2700mg/kg
18. Benzo(e)pyrene	94851	081021	0.50	10.00	0.042	2002.1	1000.8	9.4	192-97-2	N/A	N/A
19. Biphenyl	94851	081021	0.50	10.00	0.042	2001.5	1000.5	9.4	92-52-4	0.2 ppm(1mg/m3/8H)	orl-rat 2400mg/kg
20. Decalin (49% cis, 51% trans)	94851	081021	0.50	10.00	0.042	2002.5	1001.0	9.4	91-17-8	N/A	N/A
21. Dibenzofuran	94851	081021	0.50	10.00	0.042	2002.3	1000.9	9.4	132-64-9	N/A	N/A
22. Dibenzothiophene	94851	081021	0.50	10.00	0.042	2002.5	1001.0	9.4	132-65-0	N/A	orl-mus 470 mg/kg
23. 2,6-Dimethylnaphthalene	94851	081021	0.50	10.00	0.042	2001.9	1000.7	9.4	581-42-0	N/A	N/A
24. 1-Methylnaphthalene	94851	081021	0.50	10.00	0.042	2002.2	1000.9	9.4	90-12-0	N/A	orl-rat 1840mg/kg
25. 2-Methylnaphthalene	94851	081021	0.50	10.00	0.042	2000.6	1000.1	9.4	91-57-6	N/A	orl-rat 1630mg/kg
26. 1-Methylphenanthrene	94851	081021	0.50	10.00	0.042	2002.3	1000.9	13.2	832-69-9	N/A	N/A
27. Pentachlorophenol	94851	081021	0.50	10.00	0.042	3961.5	1980.3	18.6	87-86-5	0.5mg/m3/8H (skin)	orl-rat 27mg/kg
28. Perylene	94851	081021	0.50	10.00	0.042	2001.9	1000.7	9.4	198-55-0	N/A	N/A
29. Thianaphthene	94851	081021	0.50	10.00	0.042	2003.1	1001.3	9.4	95-15-8	N/A	N/A
30. 2,3,5-Trimethylnaphthalene	94851	081021	0.50	10.00	0.042	2003.1	1001.3	9.5	2245-38-7	N/A	N/A

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

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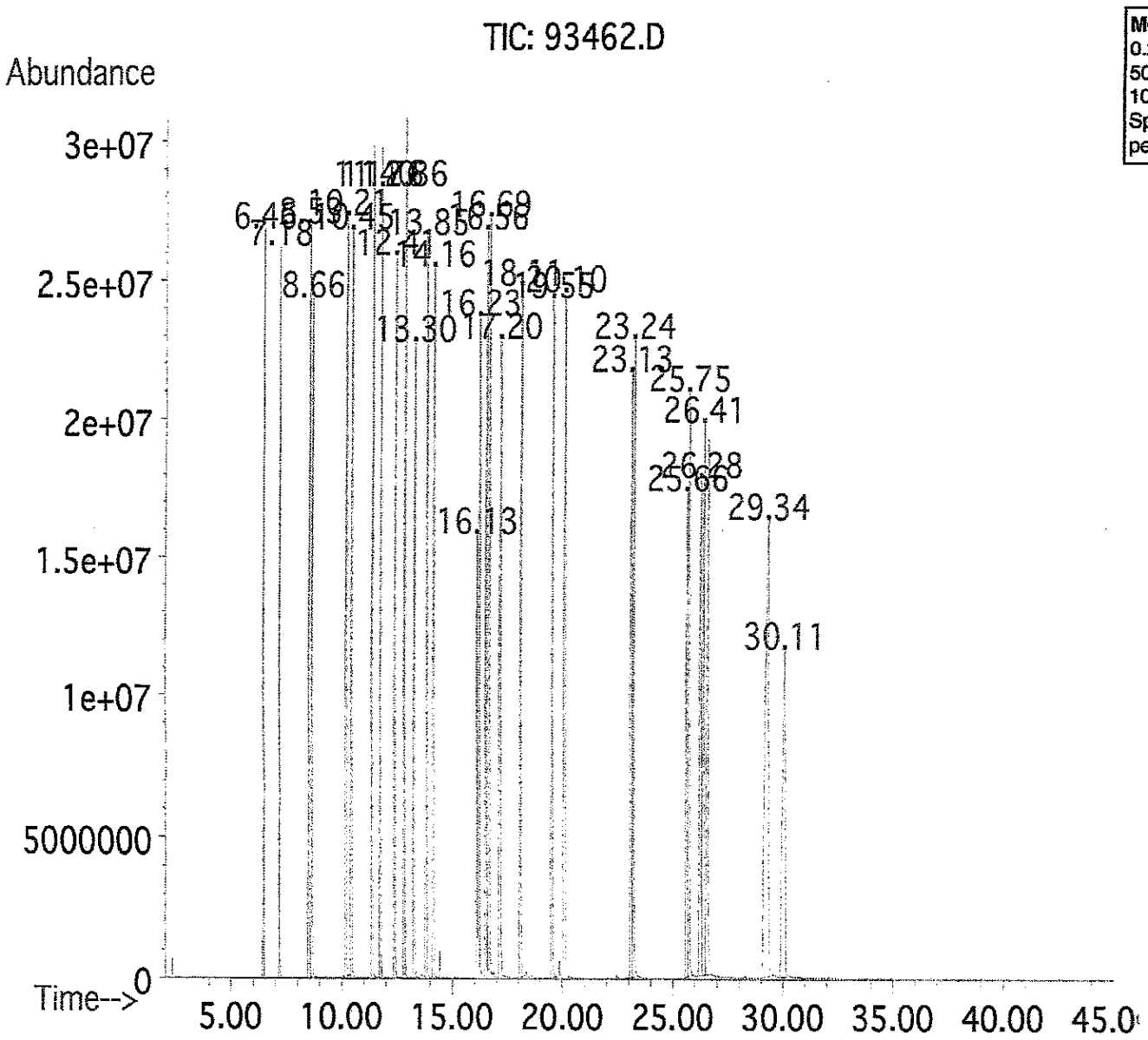

Method GC8MSD-2Long: Column:SPB-5 (30m X 0.25mm ID X 0.25μm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (14min.), Rate = 10°C/min., Injector B= 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Gina McLane.

Retention Time (min.)	
Decahydronaphthalene (Decalin) (isomer)	6.46
Decahydronaphthalene (Decalin) (isomer)	7.18
Naphthalene	8.53
Thianaphthene	8.66
2-Methylnaphthalene	10.21
1-Methylnaphthalene	10.45
Biphenyl	11.4
2,6-Dimethylnaphthalene	11.76
Acenaphthylene	12.41
Acenaphthene	12.86
Dibenzofuran	13.3
2,3,5-Trimethylnaphthalene	13.85
Fluorene	14.16
Pentachlorophenol	16.13
Dibenzothiophene	16.23
Phenanthrene	16.56
Anthracene	16.69
Carbazole	17.2
1-Methylphenanthrene	18.11
Fluoranthene	19.55
Pyrene	20.1
Benzo(a)anthracene	23.13
Chrysene	23.24
Benzo(b)fluoranthene	25.66
Benzo(k)fluoranthene	25.75
Perylene	26.28
Benzo(a)pyrene	26.41
Benzo(e)pyrene	26.61
Indeno(1,2,3-cd)pyrene	29.34
Dibenzo(a,h)anthracene	29.34
Benzo(g,h,i)perylene	30.11

Certificate of Analysis

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Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.:	AL0-101291	**Lot Number:**	CL11000
Description:	GC/MS Tuning Mix	**Certification Date:**	May 9, 2014
Storage:	4 °C	**Expiration Date:**	December 31, 2023
Provided As:	1 mL in 2 mL Ampoule in Methylene chloride	**Revision Date:**	August 5, 2015

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty (%)
Benzidine	92-87-5	1000	± 0.208%
Decafluorotriphenylphosphine (DFTPP)	5074-71-5	1000	± 0.057%
4,4'-DDT	50-29-3	1000	± 0.056%
Pentachlorophenol	87-86-5	1000	± 0.061%

K003891
GC/MS Tune solution-1000ug/ml
Solvent / Lot: CL11000
Prep: 4/22/2022 by VS
Exp: 12/31/2023
Location:

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Reference Material Producer
Certificate No. 2427.02

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Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

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Chemical Testing Laboratory
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Certificate of Analysis

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Reference Material Producer
Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 33913 **Lot No.:** A0183500

Description : SOM01.0 SIM Analysis Standard

SOM01.0 SIM Analysis Standard 2000µg/mL, Methylene chloride, 1mL /ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 29, 2028 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Methylnaphthalene-d10	2,003.5 µg/mL	+/- 11.7578 µg/mL	Gravimetric
	CAS # 7297-45-2 (Lot EF-135)		+/- 90.2539 µg/mL	Unstressed
	Purity 96%		+/- 100.1449 µg/mL	Stressed
2	Fluoranthene-d10	2,006.0 µg/mL	+/- 11.7723 µg/mL	Gravimetric
	CAS # 93951-69-0 (Lot PR-20668)		+/- 90.3656 µg/mL	Unstressed
	Purity 99%		+/- 100.2689 µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

K004605
SOMO 1.0 SIM DMC
Solvent / Lot: A0183500
Prep: 5/14/2022 by VS
Exp: 2/29/2028
Location:

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

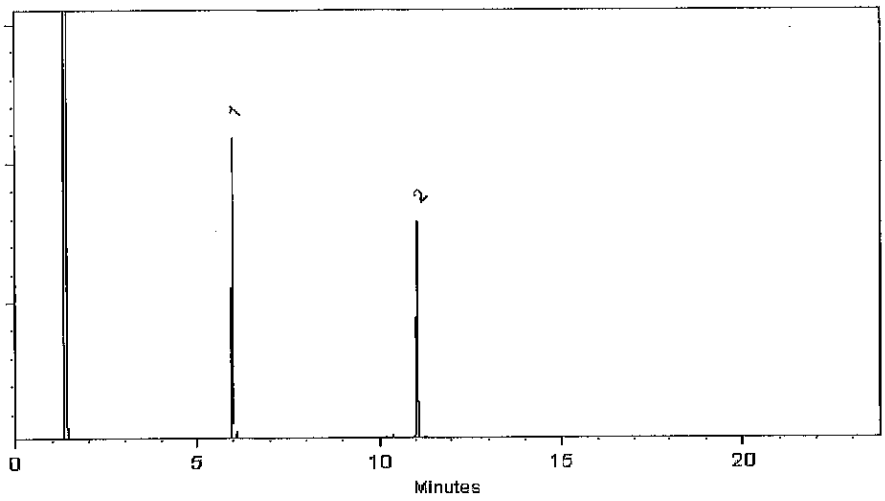
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Cathleen Soltis - Mix Technician

Date Mixed: 29-Mar-2022 **Balance:** B345965662

Clara Windle - Operations Technician I

Date Passed: 01-Apr-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Certificate of Analysis

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18355
Certification Date: July 25, 2022
Expiration Date: August 31, 2023

K007995
SVOA-8270 LCS MIX 1000ug/ml
Solvent / Lot: N/A
Prep: 8/29/2022 by JZ
Exp: 8/31/2023
Location: FREEZER 44

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Acenaphthene	83-32-9	1000	± 0.300%
Acenaphthylene	208-96-8	1000	± 0.225%
Anthracene	120-12-7	1000	± 6.858%
Azobenzene	103-33-3	1000	± 0.224%
Benzo(a)anthracene	56-55-3	1000	± 0.247%
Benzo(a)pyrene	50-32-8	1000	± 0.270%
Benzo(b)fluoranthene	205-99-2	1000	± 0.635%
Benzo(k)fluoranthene	207-08-9	1000	± 0.682%
Benzo(g,h,i)perylene	191-24-2	1000	± 0.272%
Benzyl alcohol	100-51-6	1000	± 0.231%
Benzyl butyl phthalate	85-68-7	1000	± 0.480%
bis(2-Chloroethoxy)methane	111-91-1	1000	± 0.479%
bis(2-Chloroethyl) ether	111-44-4	1000	± 0.479%
bis(2-Chloroisopropyl) ether	108-60-1	1000	± 0.550%
bis(2-Ethylhexyl) adipate	103-23-1	1000	± 0.479%
bis(2-Ethylhexyl) phthalate	117-81-7	1000	± 0.479%
4-Bromophenyl phenyl ether	101-55-3	1000	± 0.479%
Carbazole	86-74-8	1000	± 0.146%

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Reference Material Producer
Certicate No. 2427.02

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Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

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Certified Reference Material

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Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
4-Chloroaniline	106-47-8	1000	± 0.300%
4-Chloro-3-methylphenol	59-50-7	1000	± 0.545%
2-Chloronaphthalene	91-58-7	1000	± 0.224%
2-Chlorophenol	95-57-8	1000	± 0.507%
4-Chlorophenyl phenyl ether	7005-72-3	1000	± 0.479%
Chrysene	218-01-9	1000	± 0.145%
Dibenz(a,h)anthracene	53-70-3	1000	± 1.058%
Dibenzofuran	132-64-9	1000	± 0.302%
Di-n-butyl phthalate	84-74-2	1000	± 0.518%
1,2-Dichlorobenzene	95-50-1	1000	± 0.247%
1,3-Dichlorobenzene	541-73-1	1000	± 0.225%
1,4-Dichlorobenzene	106-46-7	1000	± 0.224%
2,4-Dichlorophenol	120-83-2	1000	± 0.545%
Diethyl phthalate	84-66-2	1000	± 0.518%
2,4-Dimethylphenol	105-67-9	1000	± 0.507%
Dimethyl phthalate	131-11-3	1000	± 0.518%
1,2-Dinitrobenzene	528-29-0	1000	± 0.361%
1,3-Dinitrobenzene	99-65-0	1000	± 0.300%
1,4-Dinitrobenzene	100-25-4	1000	± 0.242%
2,4-Dinitrophenol	51-28-5	1000	± 0.545%
2,4-Dinitrotoluene	121-14-2	1000	± 1.128%

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Certified Reference Material

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Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2,6-Dinitrotoluene	606-20-2	1000	± 0.224%
Di-n-octyl phthalate	117-84-0	1000	± 0.486%
Fluoranthene	206-44-0	1000	± 0.224%
Fluorene	86-73-7	1000	± 0.224%
Hexachlorobenzene	118-74-1	1000	± 0.152%
Hexachlorobutadiene	87-68-3	1000	± 0.746%
Hexachlorocyclopentadiene	77-47-4	1000	± 0.153%
Hexachloroethane	67-72-1	1000	± 0.300%
Indeno(1,2,3-cd)pyrene	193-39-5	1000	± 0.883%
Isophorone	78-59-1	1000	± 0.145%
2-Methyl-4,6-dinitrophenol	534-52-1	1000	± 0.508%
1-Methylnaphthalene	90-12-0	1000	± 0.479%
2-Methylnaphthalene	91-57-6	1000	± 0.487%
2-Methylphenol	95-48-7	1000	± 0.545%
3-Methylphenol	108-39-4	500	± 0.279%
4-Methylphenol	106-44-5	500	± 0.399%
Naphthalene	91-20-3	1000	± 0.226%
2-Nitroaniline	88-74-4	1000	± 0.224%
3-Nitroaniline	99-09-2	1000	± 0.235%
4-Nitroaniline	100-01-6	1000	± 0.300%
Nitrobenzene	98-95-3	1000	± 0.300%

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Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2-Nitrophenol	88-75-5	1000	± 0.514%
4-Nitrophenol	100-02-7	1000	± 0.519%
N-Nitrosodimethylamine	62-75-9	1000	± 0.503%
N-Nitrosodiphenylamine	86-30-6	1000	± 0.476%
N-Nitrosodi-n-propylamine	621-64-7	1000	± 0.461%
Pentachlorophenol	87-86-5	1000	± 0.202%
Phenanthrene	85-01-8	1000	± 0.145%
Phenol	108-95-2	1000	± 0.545%
Pyrene	129-00-0	1000	± 0.147%
Pyridine	110-86-1	1000	± 0.503%
2,3,4,6-Tetrachlorophenol	58-90-2	1000	± 0.247%
2,3,5,6-Tetrachlorophenol	935-95-5	1000	± 0.247%
1,2,4-Trichlorobenzene	120-82-1	1000	± 0.224%
2,4,5-Trichlorophenol	95-95-4	1000	± 0.507%
2,4,6-Trichlorophenol	88-06-2	1000	± 0.509%

Notes: The proper chemical name for Bis(2-Chloroiospropyl) ether is 2,2'-oxybis(1-chloropropane). The analytical uncertainty contribution to the expanded uncertainty for 3 and 4-Methylphenol is measured as the total of the two analytes. N-Nitrosodiphenylamine presents as Diphenylamine at 854 µg/mL.

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis - Analytical Standard

PAHs in Soil

Product no.: SQC017-40G
Lot no.: LRAD3953
Expiry Date: October 2025
Manufacturing Date: October 2022
Storage: REFRIGERATE
Solvent/Matrix: SOIL
Certificate version: LRAD3953.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

Analyte	*Units*	*Certified Value*
Naphthalene	µg/Kg	418 ± 39
Acenaphthene	µg/Kg	478 ± 51
Acenaphthylene	µg/Kg	557 ± 63
Anthracene	µg/Kg	393 ± 23
Benzo(a)anthracene	µg/Kg	110 ± 11
Benzo(a)pyrene	µg/Kg	159 ± 23
Benzo(b)fluoranthene	µg/Kg	318 ± 49
Benzo(g,h,i)perylene	µg/Kg	103 ± 18
Benzo(k)fluoranthene	µg/Kg	95.1 ± 16.0
Chrysene	µg/Kg	231 ± 24
Dibenz(a,h) anthracene	µg/Kg	220 ± 16
Fluoranthene	µg/Kg	303 ± 24
Fluorene	µg/Kg	340 ± 27
Indeno(1,2,3-cd) pyrene	µg/Kg	119 ± 14
Phenanthrene	µg/Kg	510 ± 30
Pyrene	µg/Kg	350 ± 25

Informational Values:

Analyte	*Units*	*Suggested Acceptance Windows*	*Standard Deviation*
Acenaphthene	µg/Kg	192 to 1041	141
Acenaphthylene	µg/Kg	13.1 to 1101	181
Anthracene	µg/Kg	166 to 619	75.4
Benzo(a)anthracene	µg/Kg	28.4 to 191	27.2
Benzo(a)pyrene	µg/Kg	0.00 to 327	56.2
Benzo(b)fluoranthene	µg/Kg	0.00 to 672	118
Benzo(g,h,i)perylene	µg/Kg	35.9 to 170	36.0
Benzo(k)fluoranthene	µg/Kg	0.00 to 215	39.9
Chrysene	µg/Kg	100.00 to 361	43.5
Dibenz(a,h) anthracene	µg/Kg	98.0 to 341	40.5
Fluoranthene	µg/Kg	176 to 518	57.0
Fluorene	µg/Kg	128 to 644	85.9
Indeno(1,2,3-cd) pyrene	µg/Kg	52.6 to 185	22.0
Naphthalene	µg/Kg	31.3 to 910	146
Phenanthrene	µg/Kg	255 to 953	116
Pyrene	µg/Kg	184 to 654	78.2

Additional Information:

DESCRIPTION

This product consist of a 4 vials each containing 10g of soil for analysis of PAHs. Each vial is identical and has been tested show homogeneity.

Four samples have been provided for your convenience (multiple methods, multiple analysts, etc.)

The soil has been chemically stabilized with 1 mL of acetone to minimize degradation of the sample.

SAMPLE PREPARATION

Extract the complete contents of a single vial. Transfer entire contents of one vial to extraction vessel. Rinse vial and cap with extraction solvent.

Note: Sample extracts and calibration solutions should be in the same solvent.

All values are based on a wet weight basis, do not correct for moisture.

Assume a 10g sample size for all calculations.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: Package of 4 units of 10 g in amber jar

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Certificate issue date: 24 OCT 2022

Andy Ommen - QC Manager

Scott Stetler - QA Manager

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD3953.01	24 OCT 2022	Original release date

Disclaimer: The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

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The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada.

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.:	AL0-101291	**Lot Number:**	CL11000
Description:	GC/MS Tuning Mix	**Certification Date:**	May 9, 2014
Storage:	4 °C	**Expiration Date:**	December 31, 2023
Provided As:	1 mL in 2 mL Ampoule in Methylene chloride	**Revision Date:**	August 5, 2015

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty (%)
Benzidine	92-87-5	1000	± 0.208%
Decafluorotriphenylphosphine (DFTPP)	5074-71-5	1000	± 0.057%
4,4'-DDT	50-29-3	1000	± 0.056%
Pentachlorophenol	87-86-5	1000	± 0.061%

LOO 1648

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL111110613_us

Certificate of Analysis

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Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101291
Description: GC/MS Tuning Mix
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene chloride

Lot Number: CL11000
Certification Date: May 9, 2014
Expiration Date: December 31, 2023
Revision Date: August 5, 2015

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty (%)
Benzidine	92-87-5	1000	± 0.208%
Decafluorotriphenylphosphine (DFTPP)	5074-71-5	1000	± 0.057%
4,4'-DDT	50-29-3	1000	± 0.056%
Pentachlorophenol	87-86-5	1000	± 0.061%

LOT 1648

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

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Chemical Testing Laboratory
Certificate No. 2427.03

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Certificate of Analysis

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Access your MSDS and digital C of A at www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC Guide 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC Guide 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC Guide 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC Guide 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

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Certified Reference Materials

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Chemical Testing Laboratory
Certificate No. 2427.03

IL.11170613_us

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-IT1088

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0207-01 A	File ID:	02082337ECD7.D
Sampled:	01/11/23 08:22	Prepared:	01/30/23 11:40	Analyzed:	02/08/23 22:14
% Solids:	78.42	Preparation:	EPA 3546 (Microwave)	Initial/Final:	15.6 g Wet / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0127	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.1	1.6	4.1	U
11104-28-2	Aroclor 1221	1	1	4.1	1.6	4.1	U
11141-16-5	Aroclor 1232	1	1	4.1	1.6	4.1	U
53469-21-9	Aroclor 1242	1	1	4.1	1.6	4.1	U
12672-29-6	Aroclor 1248	2	1	14.3	1.6	4.1	
11097-69-1	Aroclor 1254	2	1	16.4	1.6	4.1	
11096-82-5	Aroclor 1260	2	1	16.7	0.6	4.1	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*8.1743*	*6.77*	*82.9*	*40 - 126*	
Tetrachlorometaxylene	*1*	*8.1743*	*6.76*	*82.7*	*44 - 120*	
Decachlorobiphenyl	*2*	*8.1743*	*6.82*	*83.5*	*40 - 126*	
Tetrachlorometaxylene	*2*	*8.1743*	*7.60*	*93.0*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082337ECD7.D
Data file 2: /230208.b/230208.b/02082337ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0207-01
Client ID:
Injection Date: 08-FEB-2023 22:14
Report Date: 02/09/2023 10:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.000	191611	5.684	-0.000	177161	33.1	37.2	11.6	Tetrachloro-m-xylene
13.886	-0.003	171515	14.114	-0.002	219630	33.2	33.4	0.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	409623	-18.6
Hexabromobiphenyl	647433	483767	-25.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	352454	4.6
Hexabromobiphenyl	382032	414464	8.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.399	-0.007	11488	56.1	1	8.300	-0.003	10857	68.1
Aroclor-1248	2	8.568	-0.012	10354	39.6	2	8.706	-0.004	10355	60.4
Aroclor-1248	3	8.987	-0.012	24358	48.7	3	9.143	-0.008	16833	80.3
Aroclor-1248	4	9.288	-0.006	24949	100.8	4	9.563	-0.011	18633	71.9
		Total Col1Ave (4 peaks):			61.3		Total Col2Ave (4 peaks):			70.2 RPD = 14
		Corrected Ave (3 peaks):			48.1		Corrected Ave (3 peaks):			66.8 RPD = 33
Aroclor-1254	1	9.288	-0.005	24949	59.8	1	9.440	-0.004	19527	76.4
Aroclor-1254	2	9.364	-0.007	9385	52.7	2	9.959	-0.006	12519	60.6
Aroclor-1254	3	9.657	-0.005	17344	64.8	3	10.109	-0.007	37596	83.4
Aroclor-1254	4	9.790	-0.008	34554	65.9	4	10.359	-0.007	45463	100.8
Aroclor-1254	5	10.131	-0.026	19700	57.8	5	10.557	-0.007	33441	133.2
		Total Col1Ave (5 peaks):			60.2		Total Col2Ave (5 peaks):			90.9 RPD = 41*
		Corrected Ave (4 peaks):			58.8		Corrected Ave (4 peaks):			80.3 RPD = 31
Aroclor-1260	1	11.035	-0.005	18727	69.0	1	11.645	-0.004	24233	81.0
Aroclor-1260	2	11.351	-0.005	19064	68.3	2	11.907	-0.005	49160	65.0
Aroclor-1260	3	11.722	-0.006	55359	75.4	3	12.423	-0.007	21206	112.5
Aroclor-1260	4	12.123	-0.009	24691	65.1	4	12.491	-0.004	33035	67.5
Aroclor-1260	5	12.235	-0.004	10080	60.9	NS	---			----
		Total Col1Ave (5 peaks):			67.7		Total Col2Ave (4 peaks):			81.5 RPD = 18
		Corrected Ave (4 peaks):			65.8		Corrected Ave (3 peaks):			71.2 RPD = 8
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.908 - 13.789) = 813038 Col1 Total PCB = 0.2 ppm*

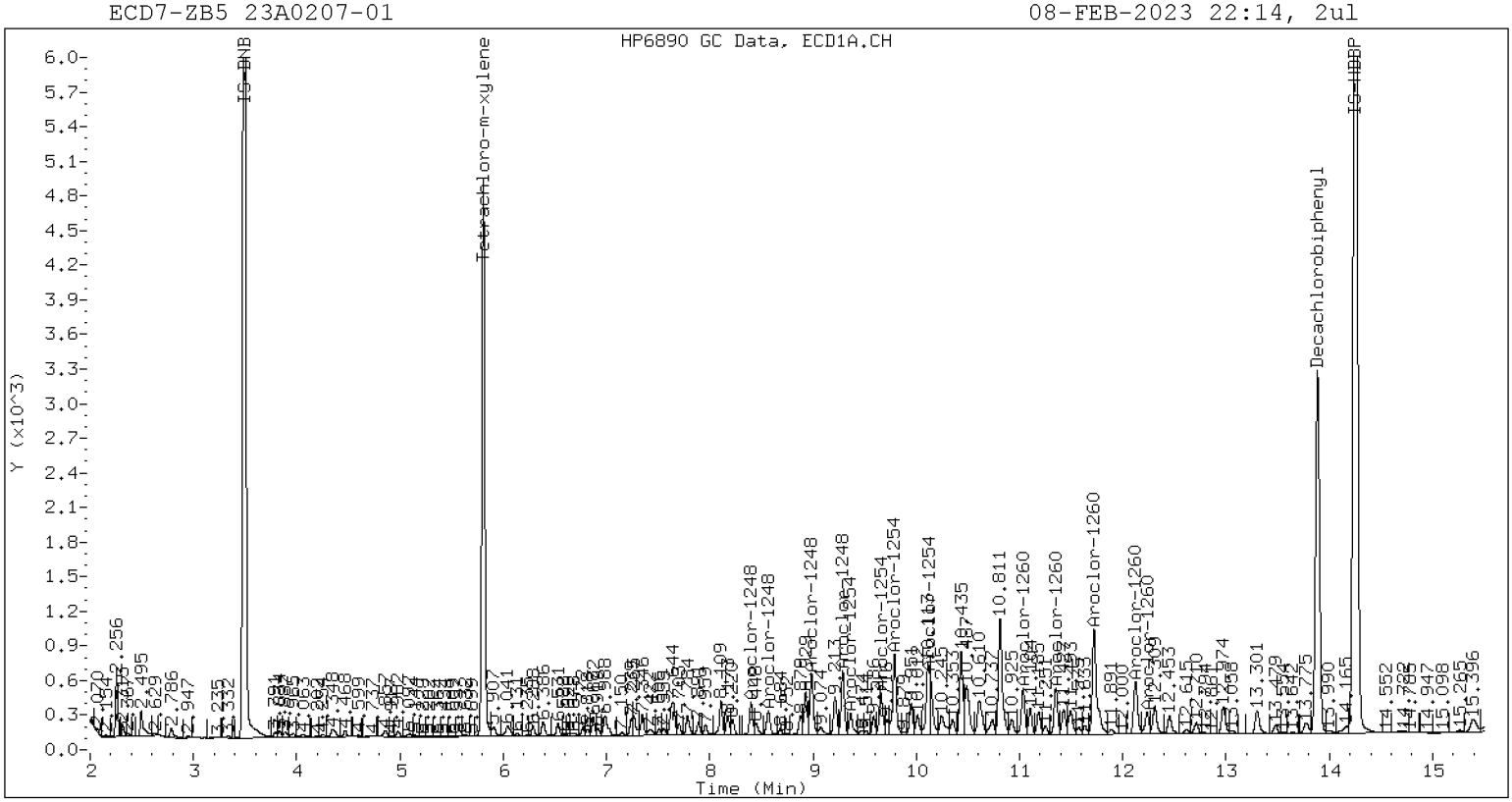
Total PCB Area Col2 (5.785 - 14.016) = 776567 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

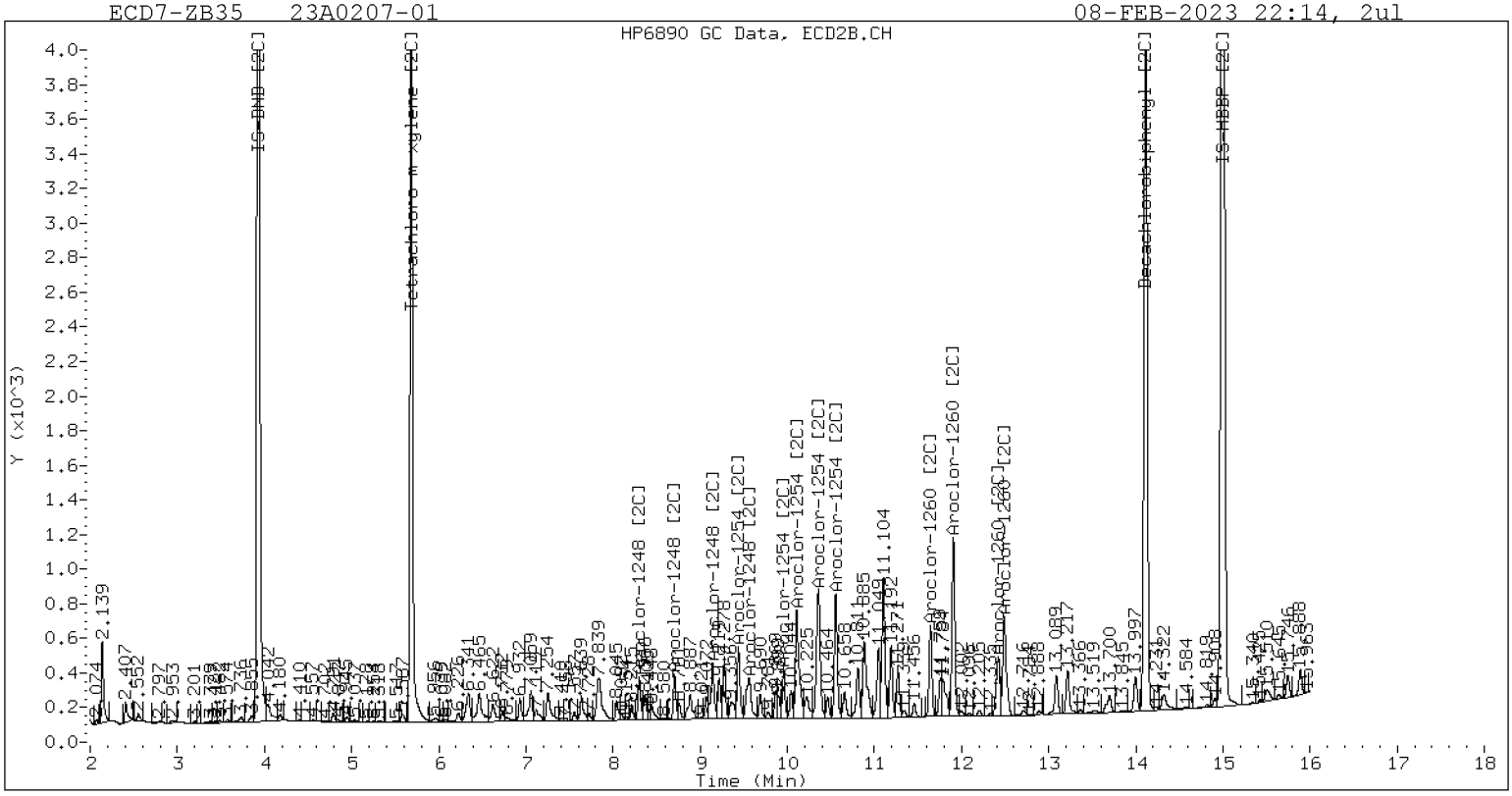
PCB Dual Column Chromatograms

ECD7-ZB5 23A0207-01 08-FEB-2023 22:14, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0207-01 08-FEB-2023 22:14, 2ul

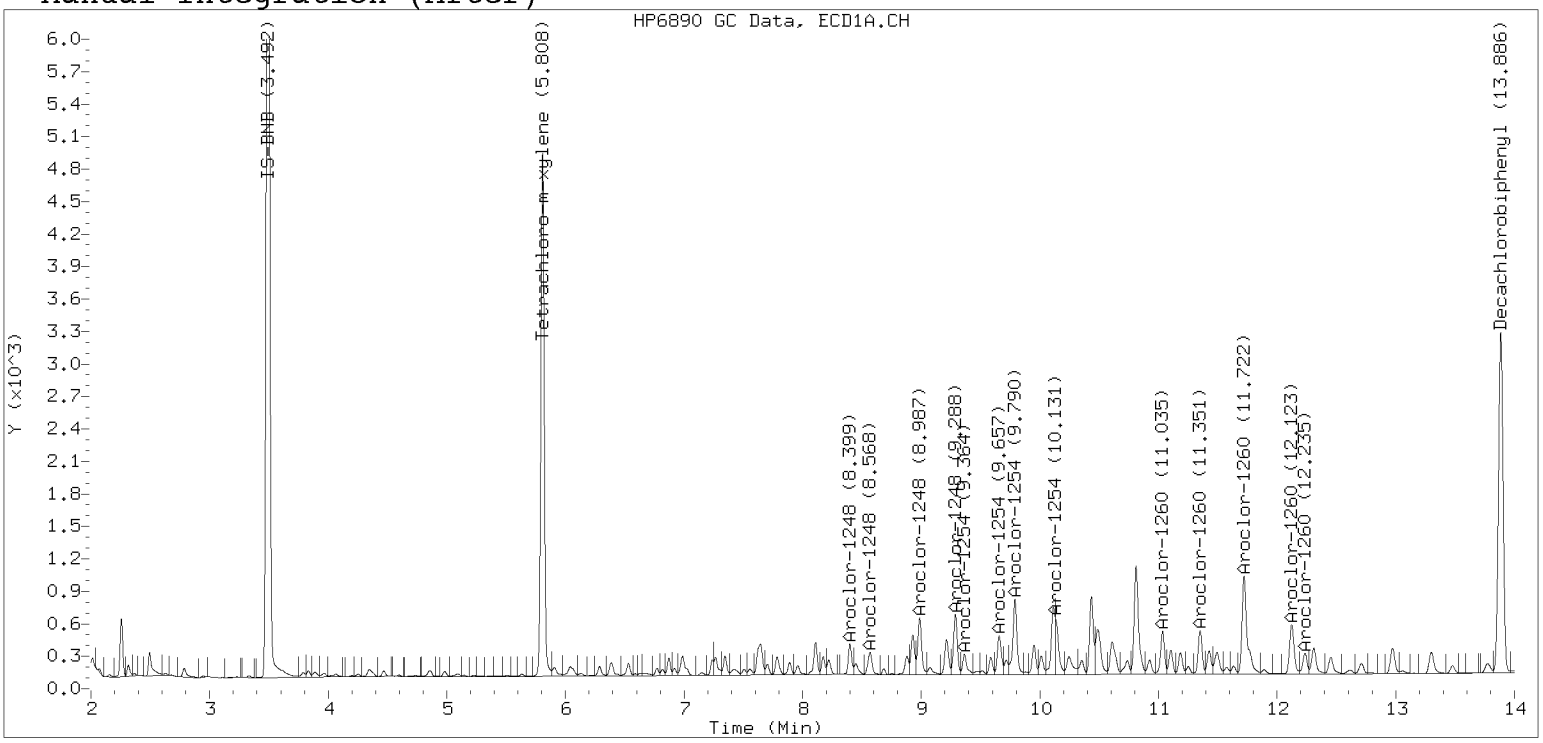


ZB-35 Manual Integration: NO

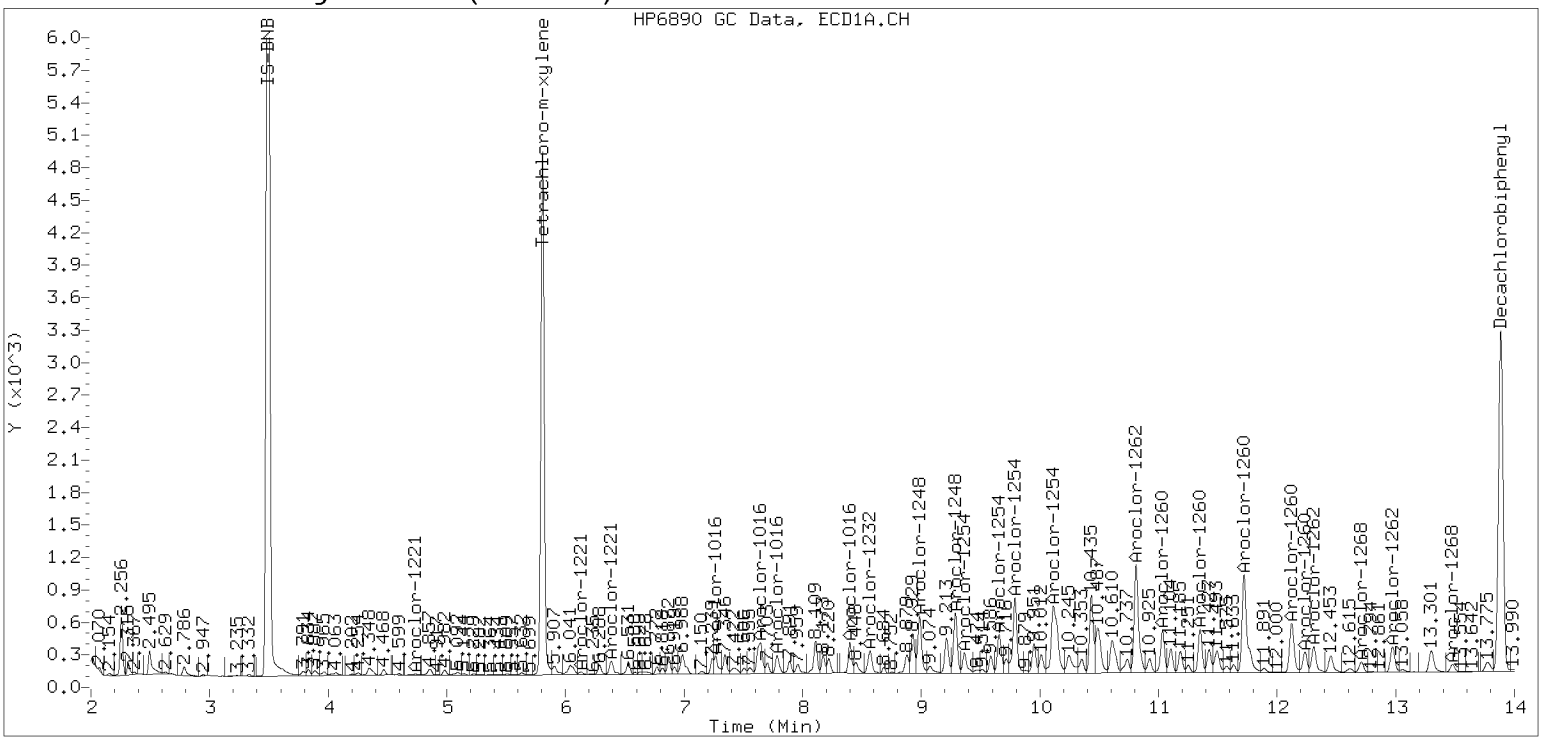
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230208.b/02082337ECD7.D Injection Date: 08-FEB-2023 22:14

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-IT1089

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0207-02 A	File ID:	02082338ECD7.D
Sampled:	01/11/23 08:42	Prepared:	01/30/23 11:40	Analyzed:	02/08/23 22:35
% Solids:	78.60	Preparation:	EPA 3546 (Microwave)	Initial/Final:	15.93 g Wet / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0127	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	26.1	1.6	4.0	
11097-69-1	Aroclor 1254	1	1	56.5	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	41.5	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9866*	*6.01*	*75.2*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9866*	*6.44*	*80.6*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9866*	*6.20*	*77.6*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9866*	*6.72*	*84.2*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082338ECD7.D
Data file 2: /230208.b/230208.b/02082338ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0207-02
Client ID:
Injection Date: 08-FEB-2023 22:35
Report Date: 02/09/2023 10:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.001	183876	5.683	-0.002	165983	32.2	33.7	4.3	Tetrachloro-m-xylene
13.885	-0.004	134870	14.113	-0.003	179571	30.1	31.0	3.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	403519	-19.8
Hexabromobiphenyl	647433	419125	-35.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	364675	8.2
Hexabromobiphenyl	382032	364602	-4.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.397	-0.009	28757	142.5	1	8.299	-0.004	26478	160.6
Aroclor-1248	2	8.563	-0.017	21150	82.1	2	8.705	-0.005	26566	149.7
Aroclor-1248	3	8.986	-0.013	82336	167.2	3	9.140	-0.012	14890	68.7
Aroclor-1248	4	9.286	-0.007	97536	400.1	4	9.532	-0.043	40458	150.9
		Total Col1Ave (4 peaks):			198.0		Total Col2Ave (4 peaks):			132.5 RPD = 40
		Corrected Ave (3 peaks):			130.6		Corrected Ave (3 peaks):			123.1 RPD = 6
Aroclor-1254	1	9.286	-0.006	97536	237.2	1	9.438	-0.006	72972	275.8
Aroclor-1254	2	9.363	-0.008	39644	225.8	2	9.956	-0.008	42844	200.4
Aroclor-1254	3	9.661	-0.000	91587	347.6	3	10.106	-0.010	135086	289.6
Aroclor-1254	4	9.788	-0.011	130993	253.7	4	10.359	-0.006	118723	254.5
Aroclor-1254	5	10.111	-0.046	117573	350.2	5	10.554	-0.009	98866	380.5
		Total Col1Ave (5 peaks):			282.9		Total Col2Ave (5 peaks):			280.2 RPD = 1
		Corrected Ave (4 peaks):			266.1		Corrected Ave (4 peaks):			255.1 RPD = 4
Aroclor-1260	1	11.034	-0.006	46025	195.7	1	11.644	-0.005	63973	243.2
Aroclor-1260	2	11.350	-0.006	44170	182.7	2	11.905	-0.008	124352	186.9
Aroclor-1260	3	11.719	-0.009	113540	178.4	3	12.425	-0.006	35599	214.6
Aroclor-1260	4	12.120	-0.012	59632	181.4	4	12.487	-0.008	79998	185.7
Aroclor-1260	5	12.233	-0.007	22832	159.3	NS	---			----
		Total Col1Ave (5 peaks):			179.5		Total Col2Ave (4 peaks):			207.6 RPD = 15
		Corrected Ave (4 peaks):			175.4		Corrected Ave (3 peaks):			195.7 RPD = 11
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.908 - 13.789) = 2015893 Col1 Total PCB = 0.4 ppm*

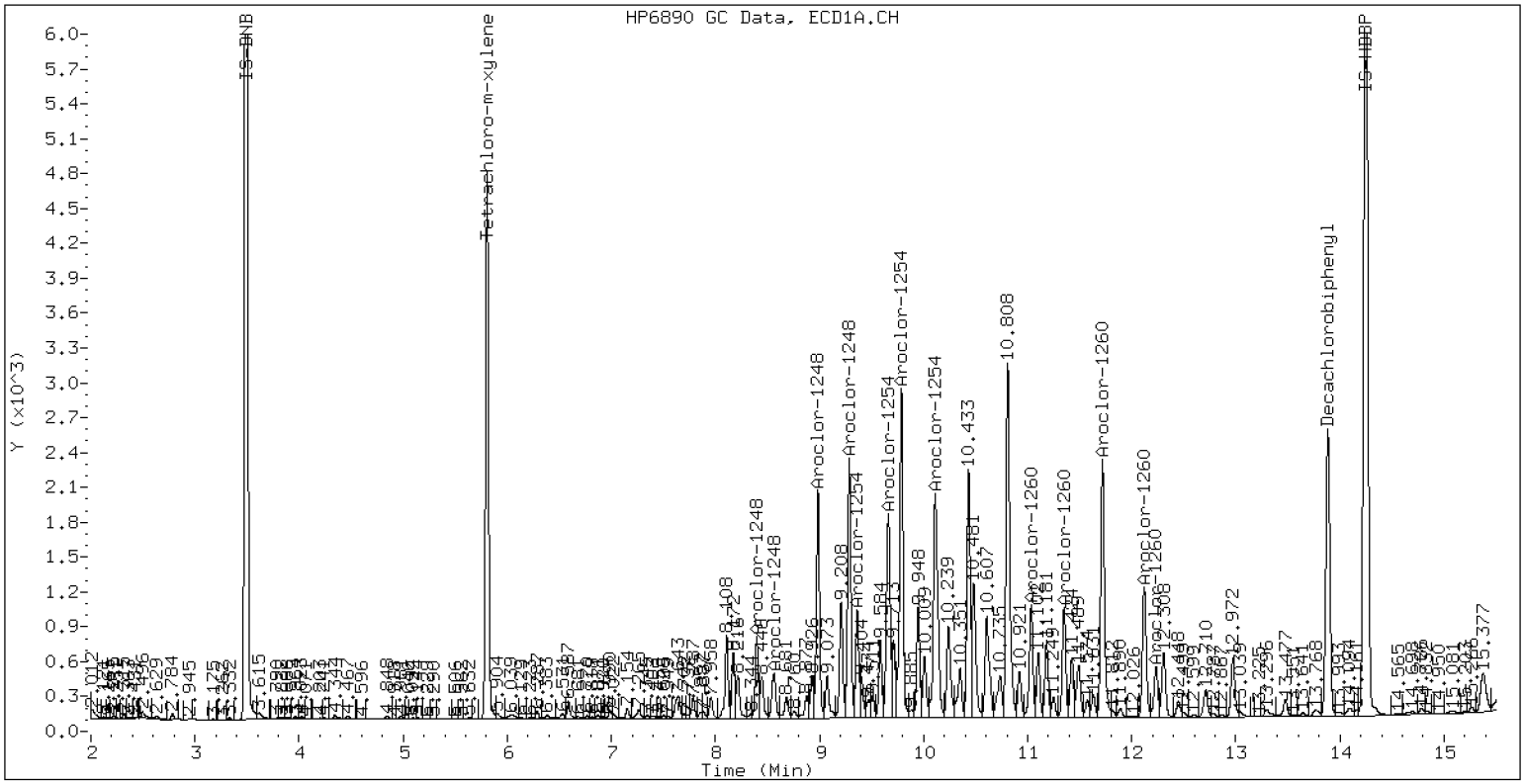
Total PCB Area Col2 (5.785 - 14.016) = 1878557 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

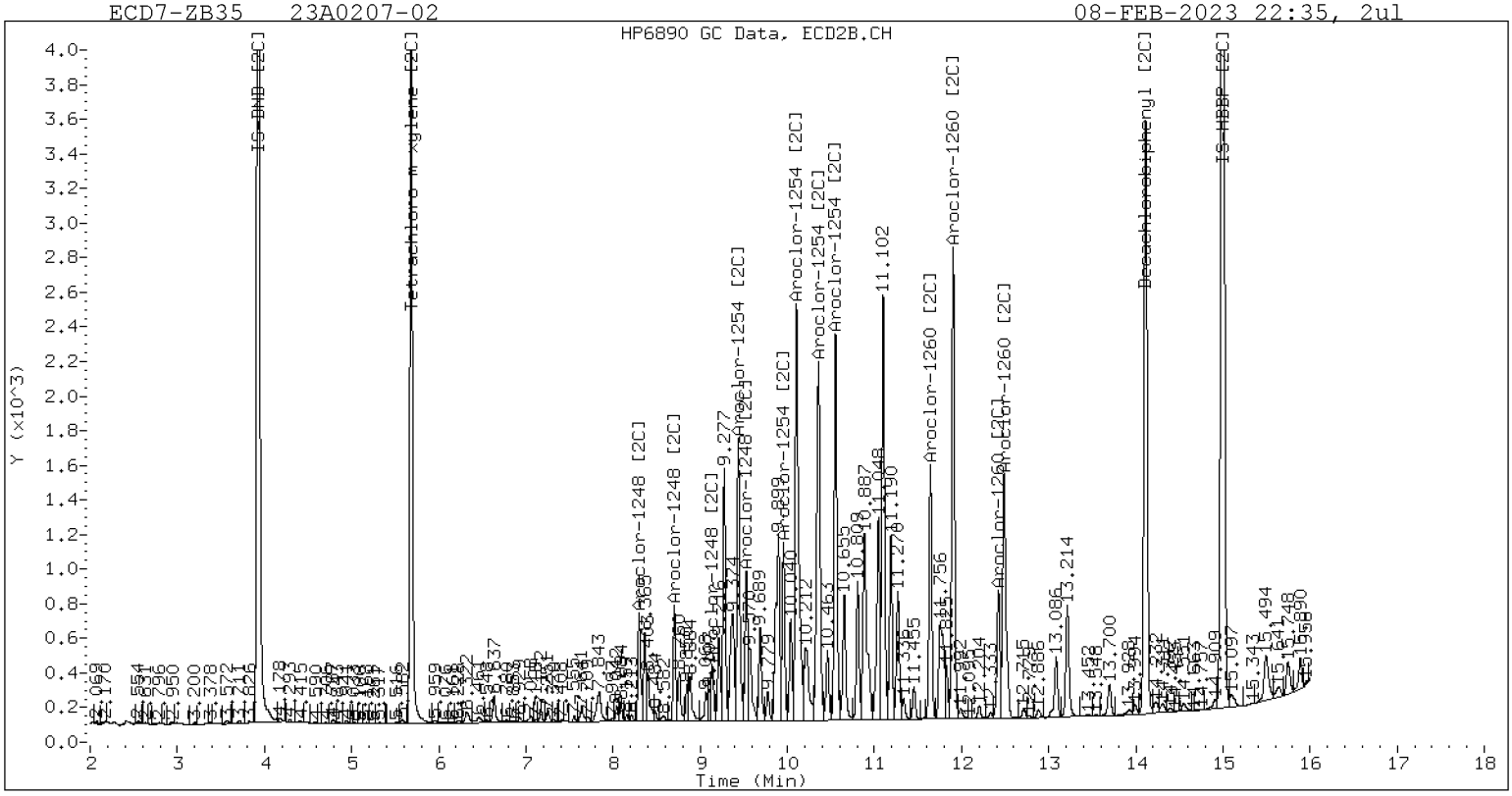
PCB Dual Column Chromatograms

ECD7-ZB5 23A0207-02 08-FEB-2023 22:35, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0207-02 08-FEB-2023 22:35, 2ul

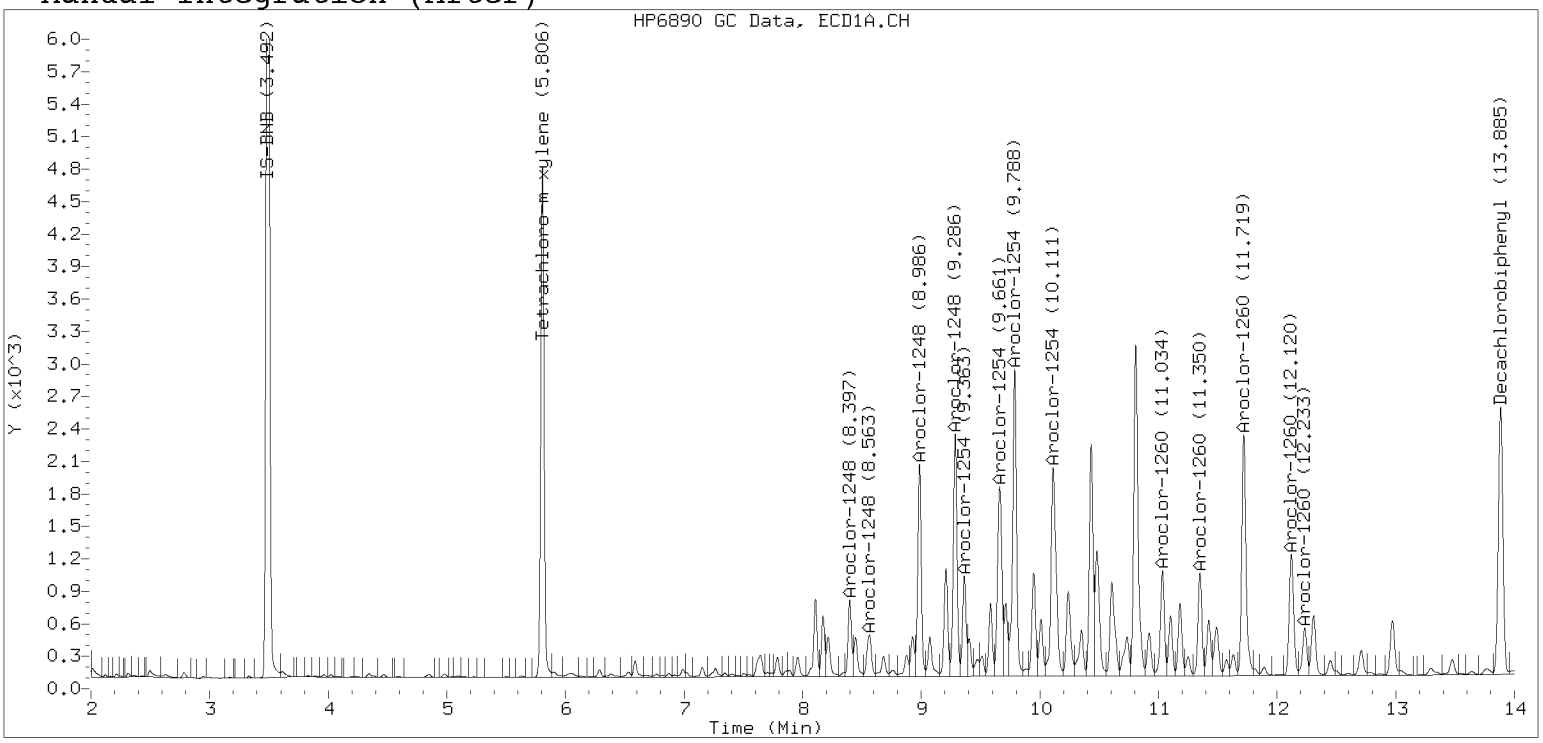


ZB-35 Manual Integration: YES

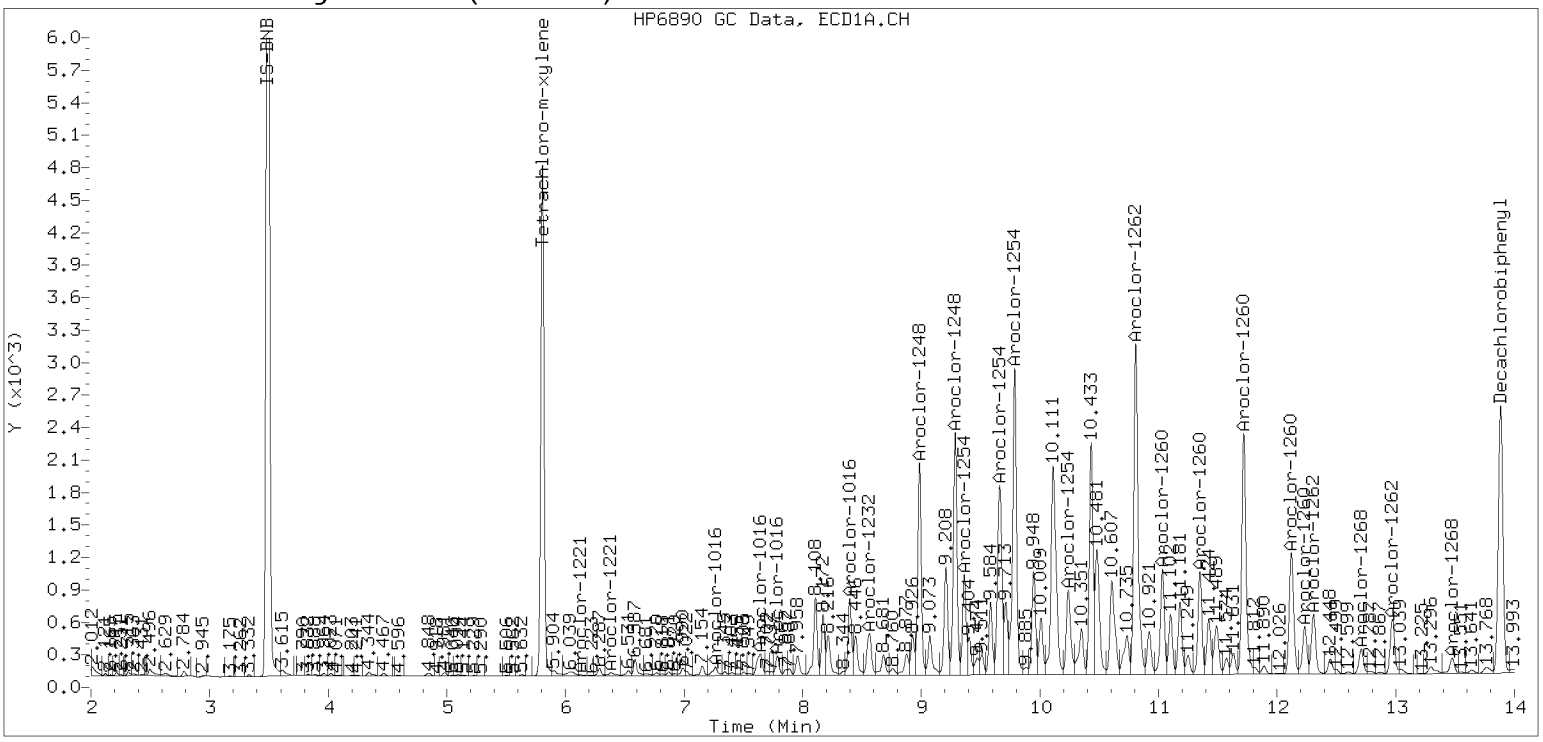
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230208.b/02082338ECD7.D Injection Date: 08-FEB-2023 22:35

Manual Integration (After)



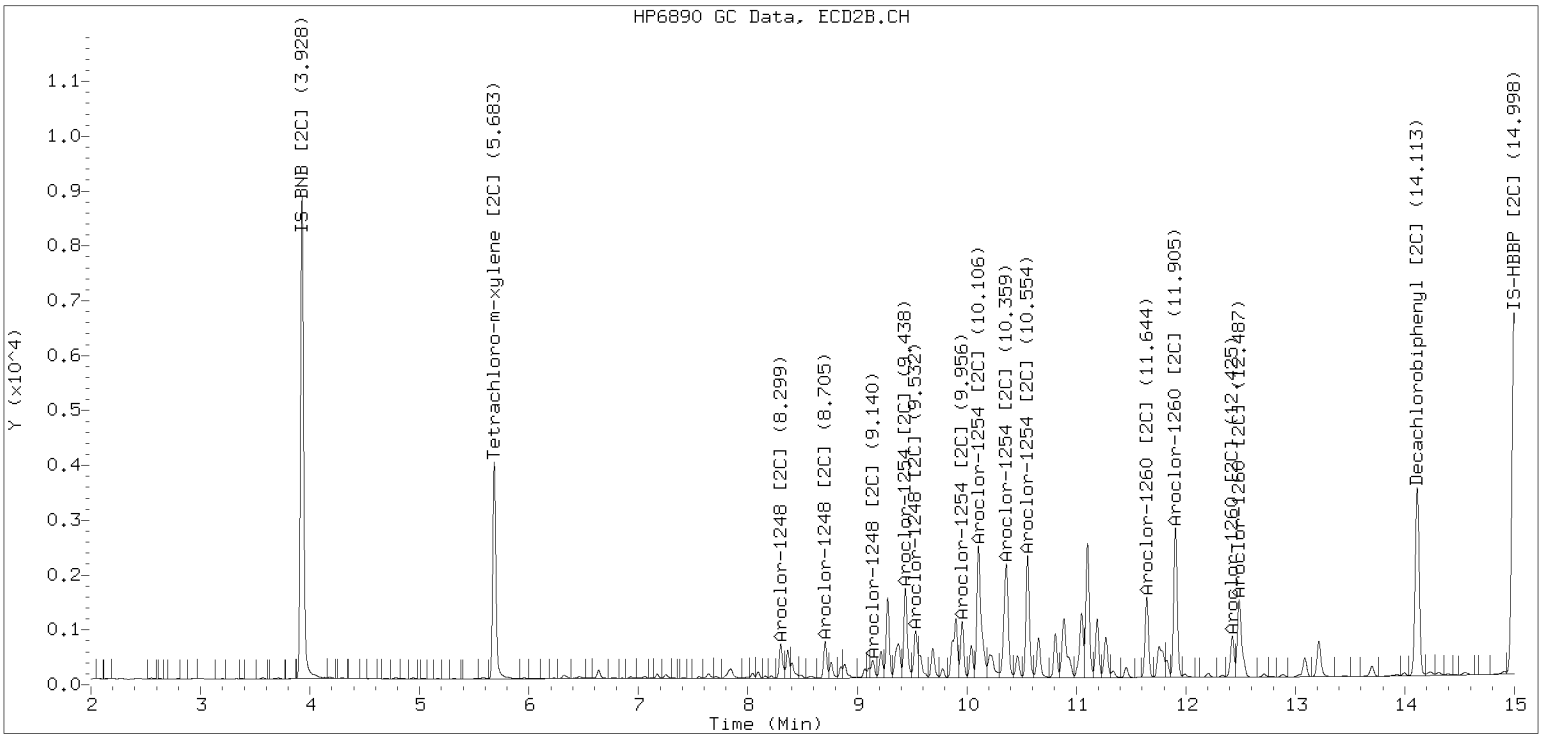
Processed Integration (Before)



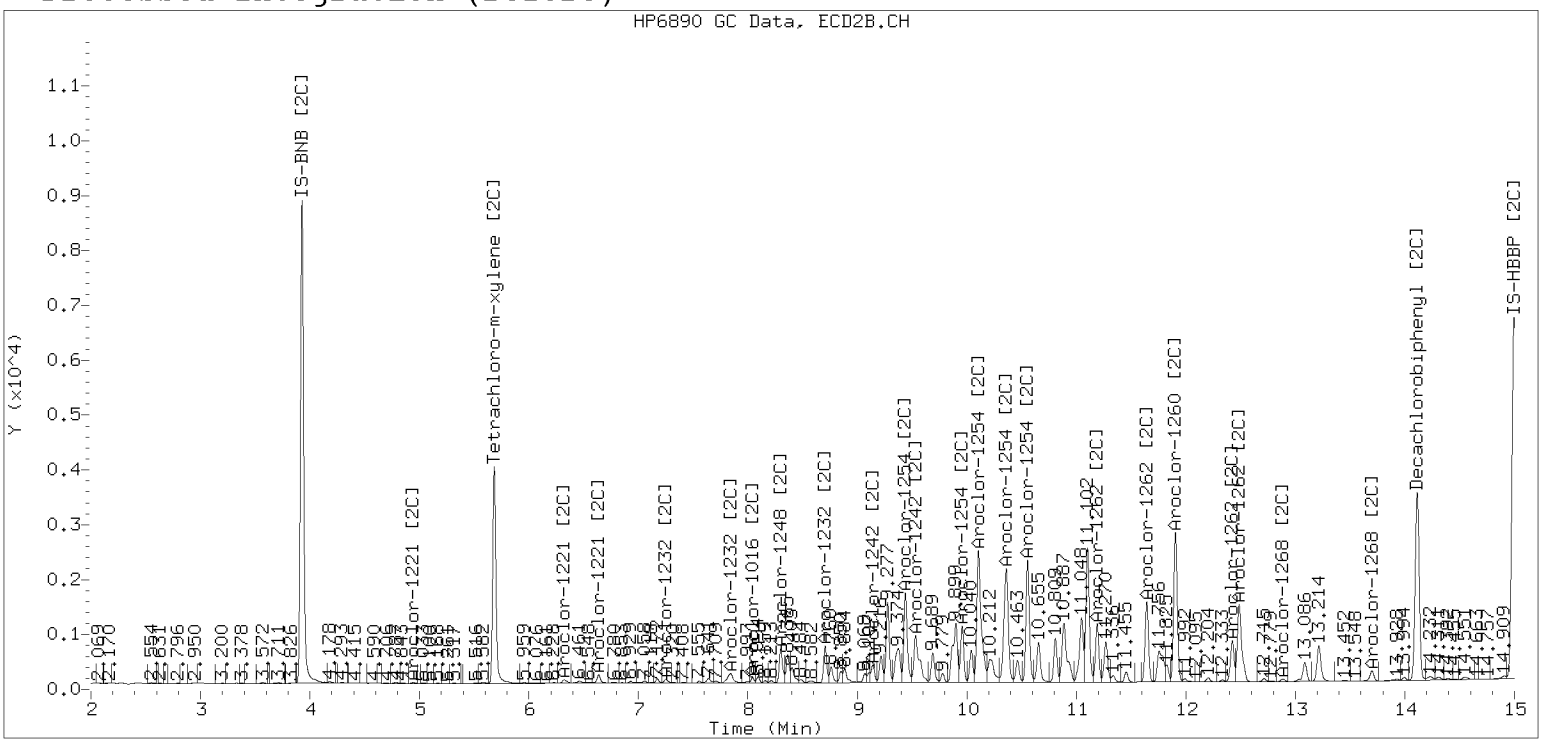
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230208.b/230208.b/02082338ECD7.D Injection Date: 08-FEB-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-IT1079

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0207-03 A	File ID:	02082339ECD7.D
Sampled:	01/11/23 09:04	Prepared:	01/30/23 11:40	Analyzed:	02/08/23 22:55
% Solids:	79.98	Preparation:	EPA 3546 (Microwave)	Initial/Final:	15.63 g Wet / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0127	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	8.7	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	8.2	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	9.1	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9994*	*6.02*	*75.3*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9994*	*5.90*	*73.8*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9994*	*6.19*	*77.4*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9994*	*6.65*	*83.2*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082339ECD7.D
Data file 2: /230208.b/230208.b/02082339ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0207-03
Client ID:
Injection Date: 08-FEB-2023 22:55
Report Date: 02/09/2023 10:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.001	170264	5.682	-0.003	159986	29.5	33.3	12.0	Tetrachloro-m-xylene
13.885	-0.004	131360	14.113	-0.003	175338	30.1	31.0	2.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	408181	-18.9
Hexabromobiphenyl	647433	407722	-37.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	355663	5.6
Hexabromobiphenyl	382032	356880	-6.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.397	-0.008	6706	32.8	1	8.299	-0.005	6101	37.9
Aroclor-1248	2	8.565	-0.015	6761	26.0	2	8.705	-0.005	7061	40.8
Aroclor-1248	3	8.983	-0.016	13316	26.7	3	9.139	-0.012	8566	40.5
Aroclor-1248	4	9.284	-0.009	11309	45.9	4	9.566	-0.009	14337	54.8
		Total Col1Ave (4 peaks):			32.8		Total Col2Ave (4 peaks):			43.5 RPD = 28
		Corrected Ave (3 peaks):			28.5		Corrected Ave (3 peaks):			39.8 RPD = 33
Aroclor-1254	1	9.284	-0.008	11309	27.2	1	9.439	-0.006	11014	42.7
Aroclor-1254	2	9.362	-0.009	3852	21.7	2	9.956	-0.008	5266	25.2
Aroclor-1254	3	9.658	-0.003	9279	34.8	3	10.105	-0.011	18026	39.6
Aroclor-1254	4	9.786	-0.012	17173	32.9	4	10.356	-0.010	19779	43.5
Aroclor-1254	5	10.112	-0.045	19728	58.1	5	10.554	-0.009	13547	53.5
		Total Col1Ave (5 peaks):			34.9		Total Col2Ave (5 peaks):			40.9 RPD = 16
		Corrected Ave (4 peaks):			29.1		Corrected Ave (4 peaks):			37.8 RPD = 26
Aroclor-1260	1	11.031	-0.009	9297	40.6	1	11.643	-0.006	10330	40.1
Aroclor-1260	2	11.348	-0.008	7508	31.9	2	11.905	-0.007	23015	35.3
Aroclor-1260	3	11.718	-0.009	18628	30.1	3	12.422	-0.009	11354	69.9
Aroclor-1260	4	12.119	-0.012	10330	32.3	4	12.487	-0.009	15234	36.1
Aroclor-1260	5	12.234	-0.006	6355	45.6	NS	---			----
		Total Col1Ave (5 peaks):			36.1		Total Col2Ave (4 peaks):			45.4 RPD = 23
		Corrected Ave (4 peaks):			33.7		Corrected Ave (3 peaks):			37.2 RPD = 10
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.908 - 13.789) = 433905 Col1 Total PCB = 0.1 ppm*

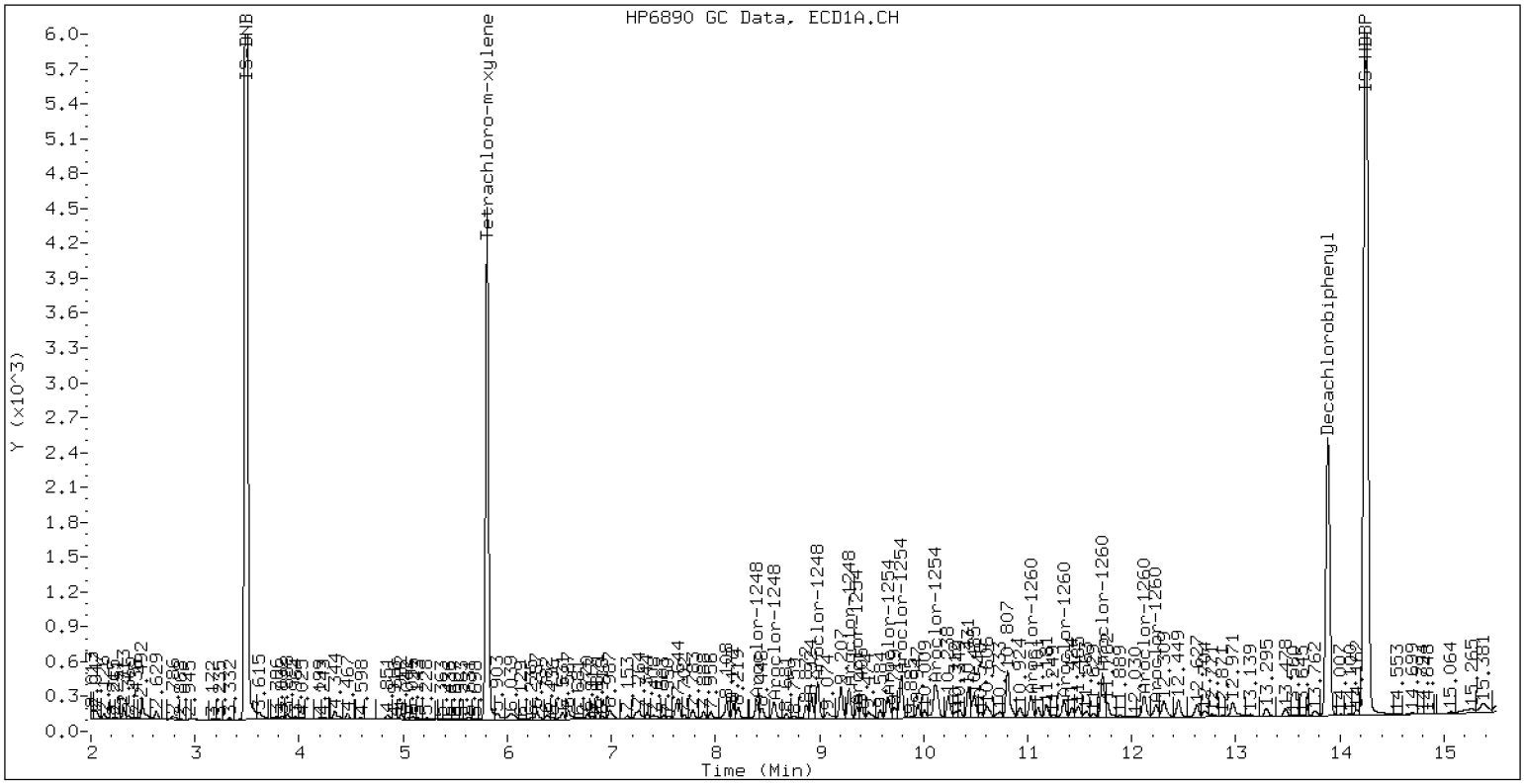
Total PCB Area Col2 (5.785 - 14.016) = 431752 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

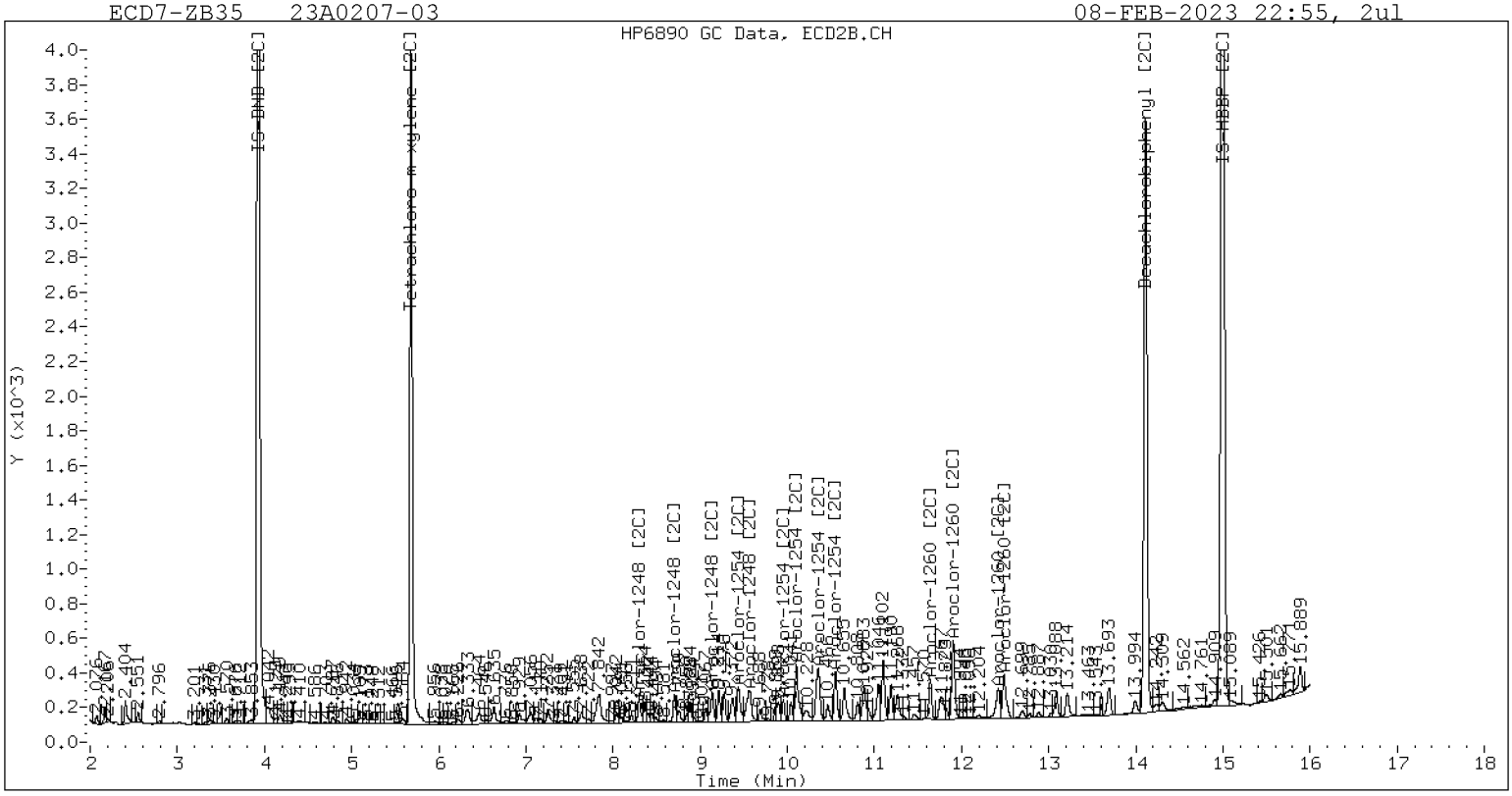
PCB Dual Column Chromatograms

ECD7-ZB5 23A0207-03 08-FEB-2023 22:55, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0207-03 08-FEB-2023 22:55, 2ul

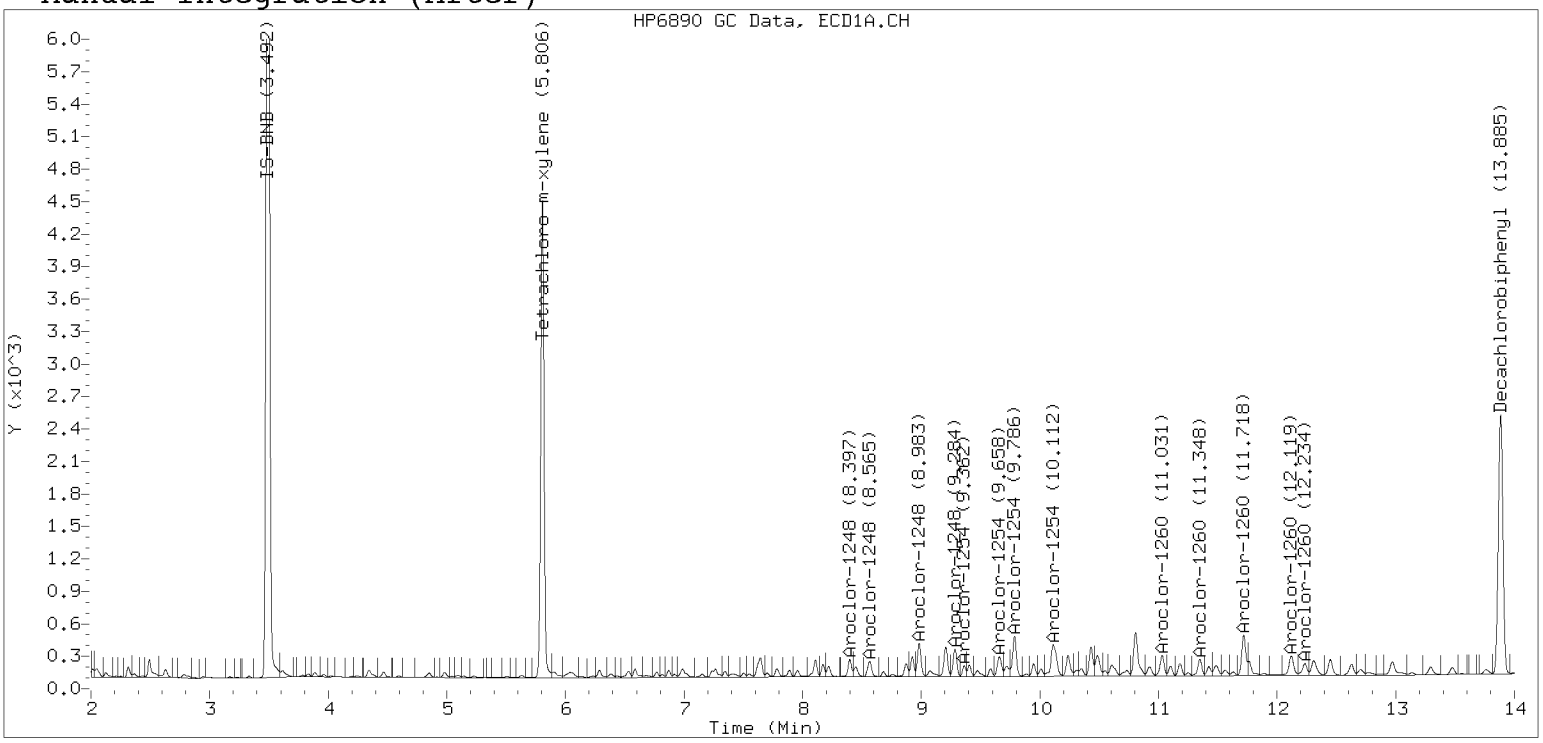


ZB-35 Manual Integration: NO

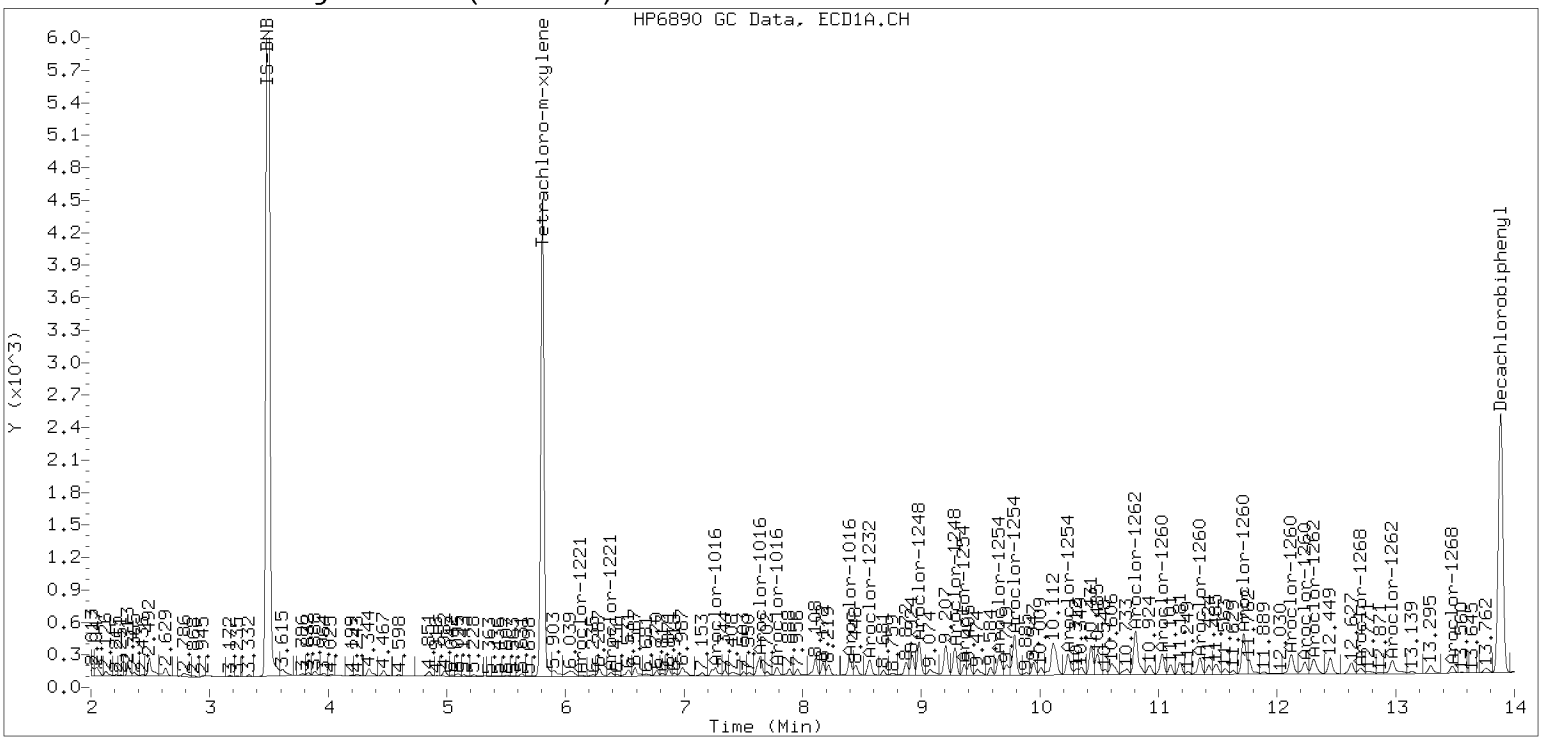
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230208.b/02082339ECD7.D Injection Date: 08-FEB-2023 22:55

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-IT1080

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0207-04 A	File ID:	02082342ECD7.D
Sampled:	01/11/23 09:24	Prepared:	01/30/23 11:40	Analyzed:	02/08/23 23:58
% Solids:	73.60	Preparation:	EPA 3546 (Microwave)	Initial/Final:	16.98 g Wet / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0127	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	36.9	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	44.6	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	37.7	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*8.0017*	*5.64*	*70.4*	*40 - 126*	
Tetrachlorometaxylene	*1*	*8.0017*	*4.95*	*61.9*	*44 - 120*	
Decachlorobiphenyl	*2*	*8.0017*	*5.63*	*70.4*	*40 - 126*	
Tetrachlorometaxylene	*2*	*8.0017*	*5.66*	*70.8*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082342ECD7.D
Data file 2: /230208.b/230208.b/02082342ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0207-04
Client ID:
Injection Date: 08-FEB-2023 23:58
Report Date: 02/09/2023 10:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.002	139678	5.682	-0.003	129873	24.8	28.3	13.4	Tetrachloro-m-xylene
13.884	-0.005	111961	14.114	-0.003	150633	28.2	28.1	0.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	399141	-20.7
Hexabromobiphenyl	647433	371511	-42.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	339290	0.7
Hexabromobiphenyl	382032	337220	-11.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.396	-0.010	33815	169.4	1	8.298	-0.005	31589	206.0
Aroclor-1248	2	8.563	-0.017	32803	128.8	2	8.705	-0.005	33804	204.8
Aroclor-1248	3	8.981	-0.018	76066	156.1	3	9.137	-0.015	42941	212.9
Aroclor-1248	4	9.285	-0.009	67596	280.3	4	9.533	-0.042	28519	114.3
		Total Col1Ave (4 peaks):			183.6		Total Col2Ave (4 peaks):			184.5 RPD = 0
		Corrected Ave (3 peaks):			151.4		Corrected Ave (3 peaks):			175.0 RPD = 14
Aroclor-1254	1	9.285	-0.008	67596	166.2	1	9.437	-0.008	53914	219.0
Aroclor-1254	2	9.361	-0.010	27086	155.9	2	9.955	-0.009	26050	130.9
Aroclor-1254	3	9.665	0.003	76934	295.2	3	10.104	-0.011	92814	213.9
Aroclor-1254	4	9.785	-0.013	86146	168.7	4	10.353	-0.013	105018	242.0
Aroclor-1254	5	10.116	-0.041	104921	315.9	5	10.553	-0.010	74847	309.6
		Total Col1Ave (5 peaks):			220.4		Total Col2Ave (5 peaks):			223.1 RPD = 1
		Corrected Ave (4 peaks):			196.5		Corrected Ave (4 peaks):			201.4 RPD = 2
Aroclor-1260	1	11.032	-0.008	35209	168.9	1	11.643	-0.006	44918	184.6
Aroclor-1260	2	11.349	-0.008	30568	142.7	2	11.904	-0.009	90131	146.4
Aroclor-1260	3	11.718	-0.010	99571	176.5	3	12.421	-0.010	41698	271.8
Aroclor-1260	4	12.117	-0.014	42372	145.4	4	12.487	-0.008	59981	150.6
Aroclor-1260	5	12.233	-0.006	18428	145.1	NS	---			----
		Total Col1Ave (5 peaks):			155.7		Total Col2Ave (4 peaks):			188.4 RPD = 19
		Corrected Ave (4 peaks):			150.5		Corrected Ave (3 peaks):			160.6 RPD = 6
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.908 - 13.789) = 1863486 Col1 Total PCB = 0.4 ppm*

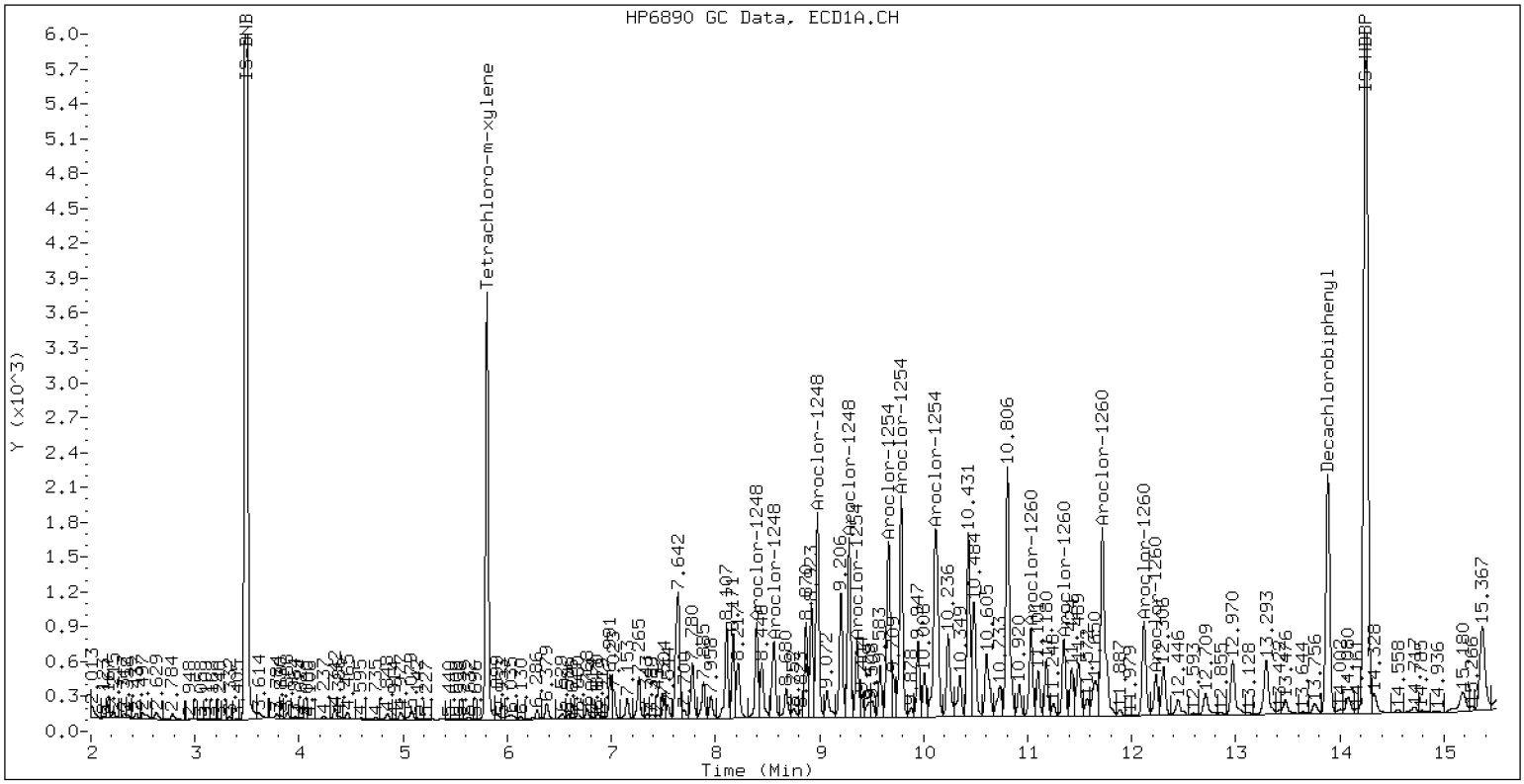
Total PCB Area Col2 (5.785 - 14.016) = 1769860 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

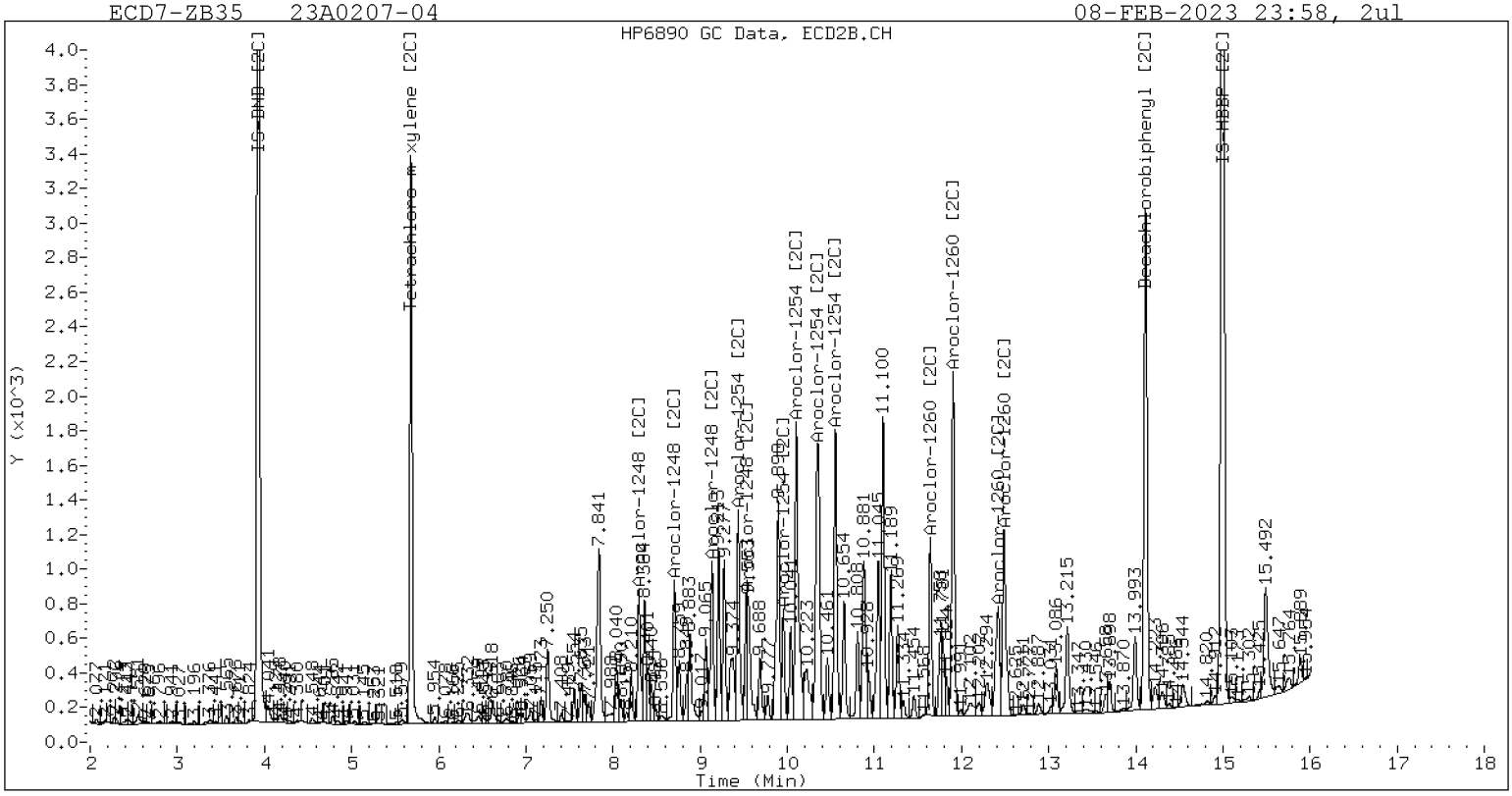
PCB Dual Column Chromatograms

ECD7-ZB5 23A0207-04 08-FEB-2023 23:58, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0207-04 08-FEB-2023 23:58, 2ul

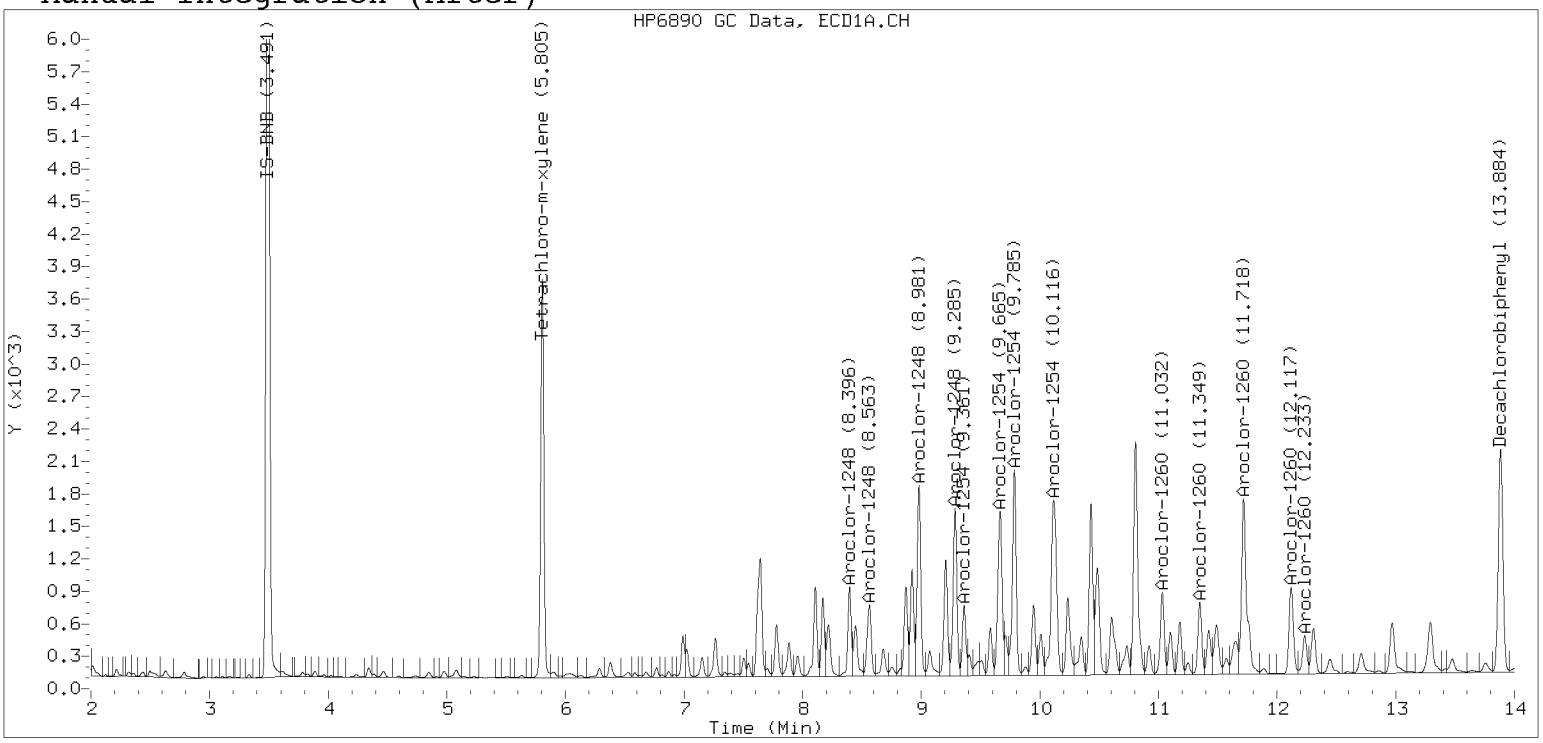


ZB-35 Manual Integration: YES

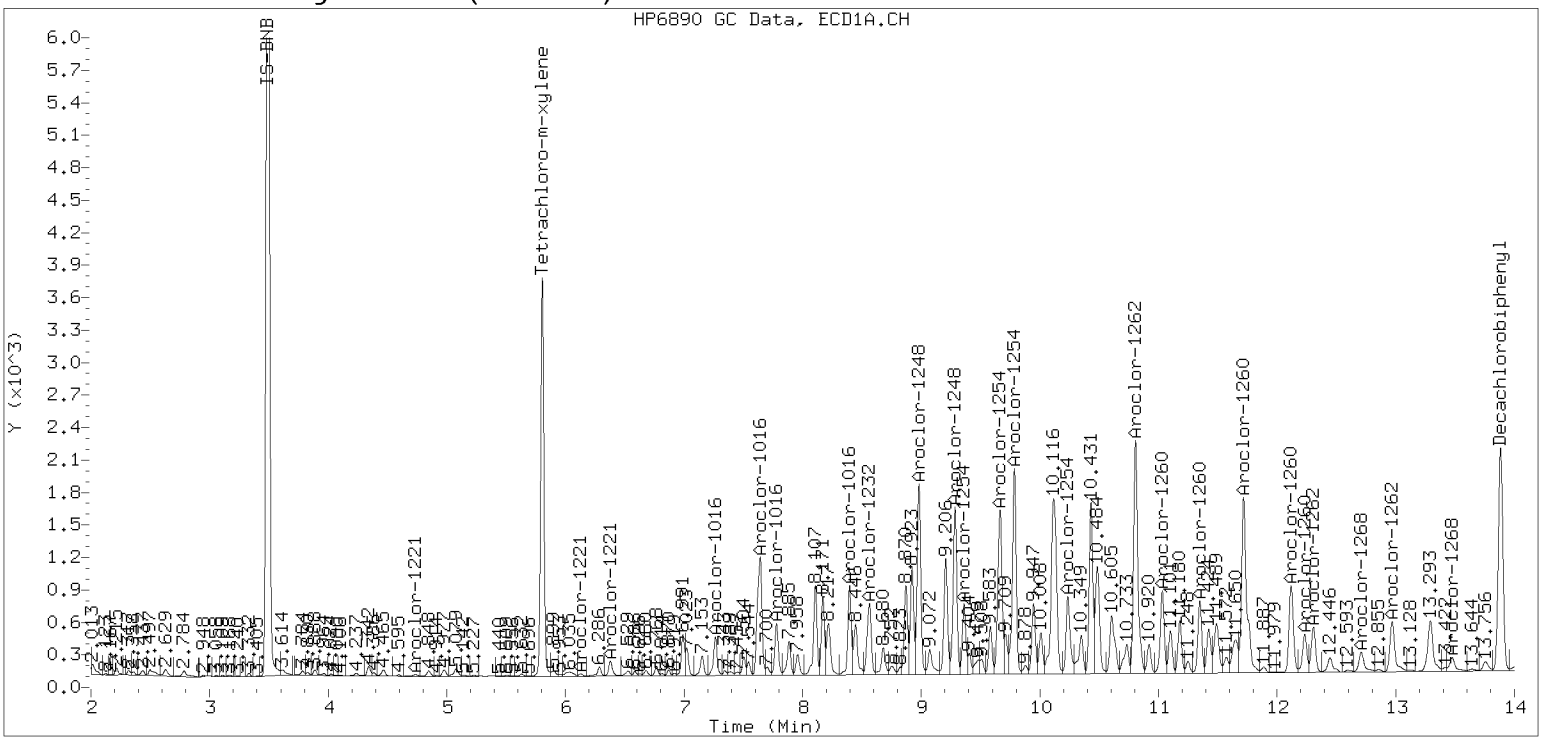
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230208.b/02082342ECD7.D Injection Date: 08-FEB-2023 23:58

Manual Integration (After)



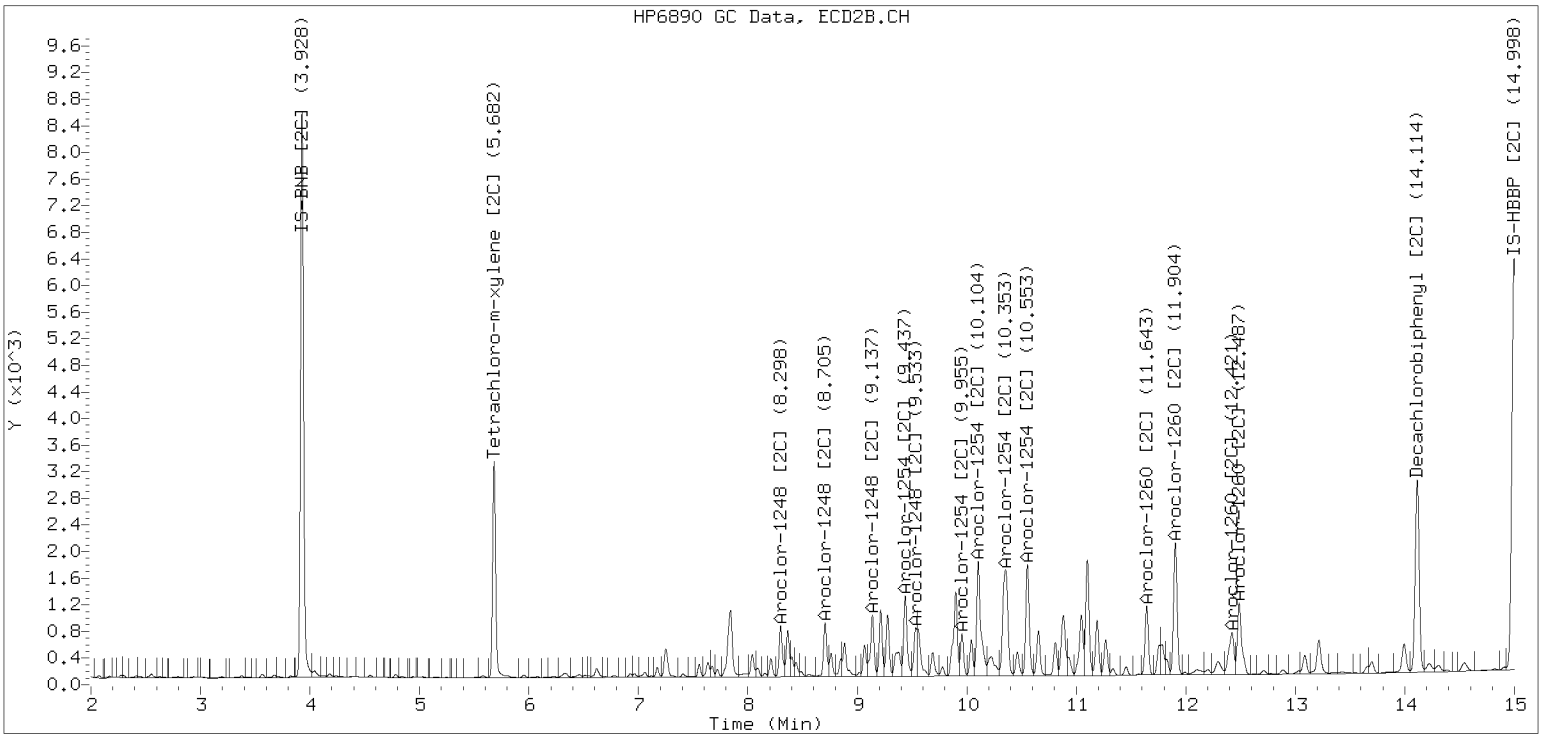
Processed Integration (Before)



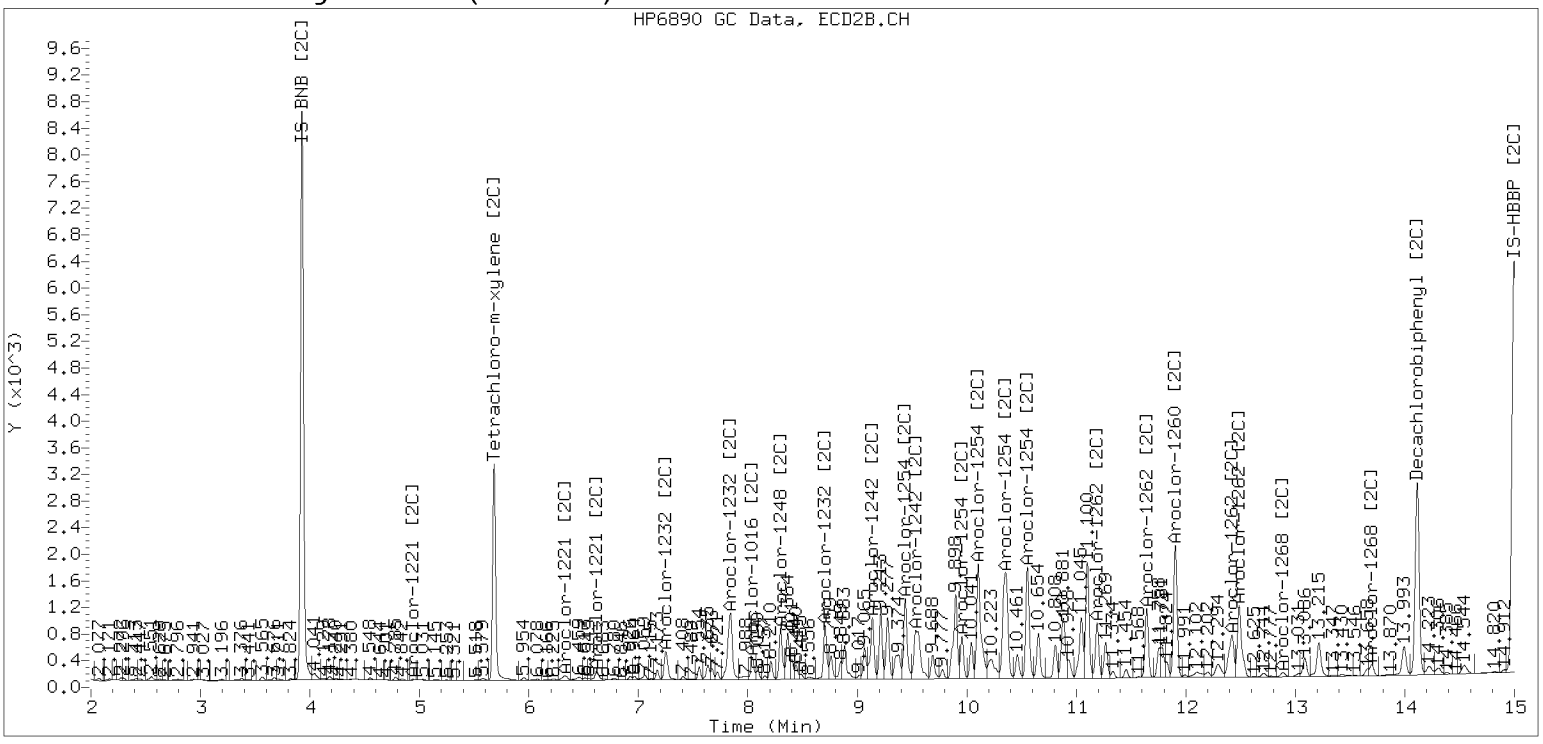
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230208.b/230208.b/02082342ECD7.D Injection Date: 08-FEB-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-IT1080-FD

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0207-05 A	File ID:	02082343ECD7.D
Sampled:	01/11/23 09:24	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 00:20
% Solids:	71.34	Preparation:	EPA 3546 (Microwave)	Initial/Final:	17.55 g Wet / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0127	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	38.7	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	49.2	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	47.6	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9871*	*5.74*	*71.8*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9871*	*4.87*	*61.0*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9871*	*5.10*	*63.8*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9871*	*5.55*	*69.5*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082343ECD7.D
Data file 2: /230208.b/230208.b/02082343ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0207-05
Client ID:
Injection Date: 09-FEB-2023 00:20
Report Date: 02/09/2023 10:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.003	138826	5.682	-0.003	128834	24.4	27.8	13.0	Tetrachloro-m-xylene
13.884	-0.004	116197	14.112	-0.004	152718	28.7	25.5	11.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	402535	-20.0
Hexabromobiphenyl	647433	378168	-41.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	342858	1.8
Hexabromobiphenyl	382032	376856	-1.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.396	-0.009	34335	170.5	1	8.298	-0.006	32933	212.5
Aroclor-1248	2	8.563	-0.017	33668	131.1	2	8.705	-0.006	35570	213.2
Aroclor-1248	3	8.981	-0.018	80735	164.3	3	9.137	-0.015	45126	221.4
Aroclor-1248	4	9.285	-0.008	71848	295.4	4	9.533	-0.042	32311	128.2
		Total Col1Ave (4 peaks):			190.3		Total Col2Ave (4 peaks):			193.8 RPD = 2
		Corrected Ave (3 peaks):			155.3		Corrected Ave (3 peaks):			184.6 RPD = 17
Aroclor-1254	1	9.285	-0.007	71848	175.1	1	9.437	-0.008	57554	231.4
Aroclor-1254	2	9.361	-0.010	29136	166.3	2	9.955	-0.009	26287	130.7
Aroclor-1254	3	9.665	0.004	85529	325.4	3	10.104	-0.012	101393	231.2
Aroclor-1254	4	9.786	-0.012	91557	177.8	4	10.355	-0.011	117285	267.4
Aroclor-1254	5	10.115	-0.042	116013	346.4	5	10.553	-0.010	90773	371.6
		Total Col1Ave (5 peaks):			238.2		Total Col2Ave (5 peaks):			246.5 RPD = 3
		Corrected Ave (4 peaks):			211.2		Corrected Ave (4 peaks):			215.2 RPD = 2
Aroclor-1260	1	11.033	-0.007	48946	230.7	1	11.643	-0.006	58619	215.6
Aroclor-1260	2	11.348	-0.008	41795	191.6	2	11.904	-0.009	138249	201.0
Aroclor-1260	3	11.719	-0.009	122112	212.7	3	12.423	-0.007	52727	307.5
Aroclor-1260	4	12.118	-0.013	59245	199.7	4	12.488	-0.008	101759	228.6
Aroclor-1260	5	12.233	-0.007	35755	276.5	NS	---			----
		Total Col1Ave (5 peaks):			222.2		Total Col2Ave (4 peaks):			238.2 RPD = 7
		Corrected Ave (4 peaks):			208.7		Corrected Ave (3 peaks):			215.1 RPD = 3
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.908 - 13.789) = 2099344 Col1 Total PCB = 0.4 ppm*

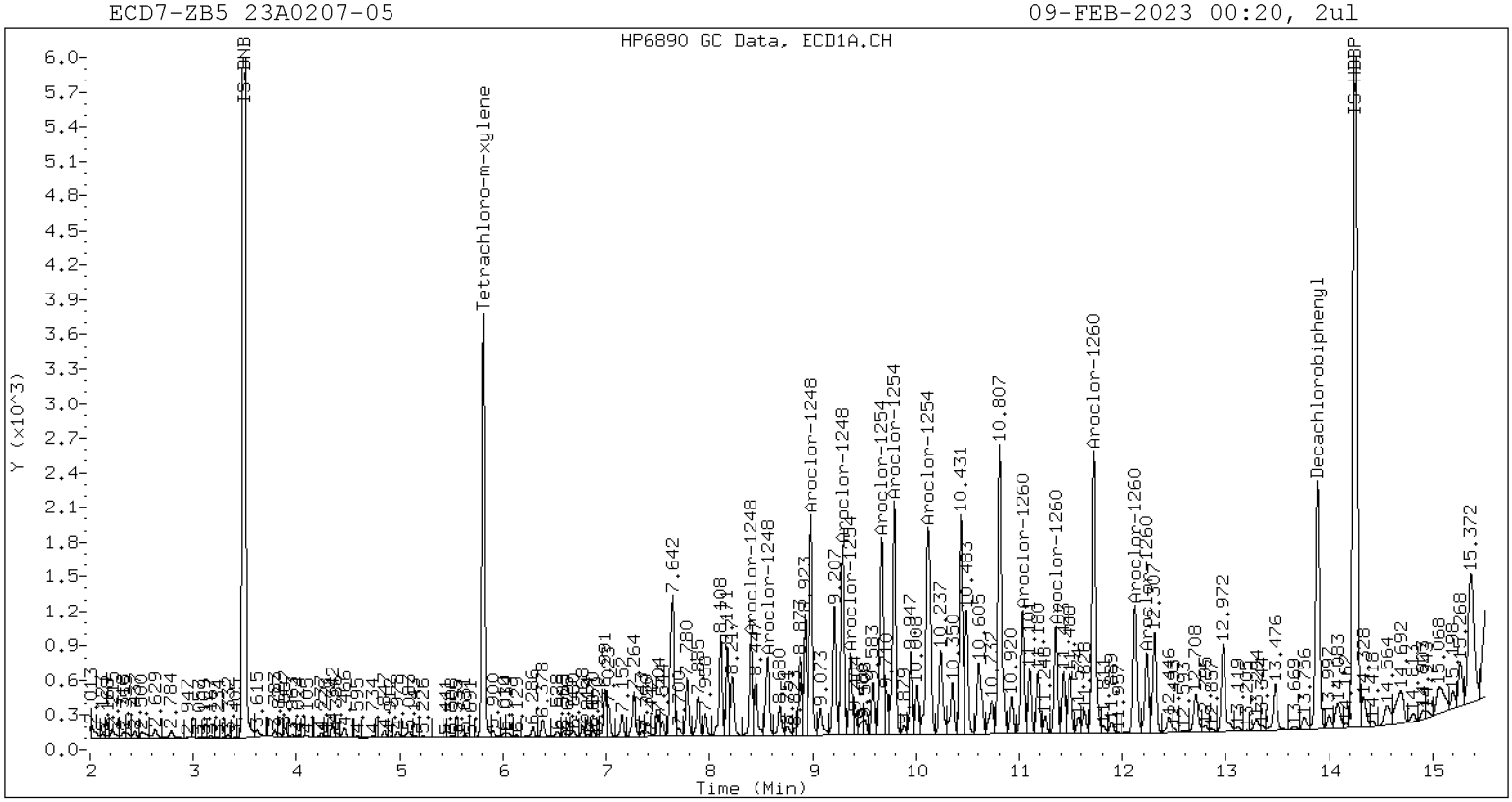
Total PCB Area Col2 (5.785 - 14.016) = 2091392 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

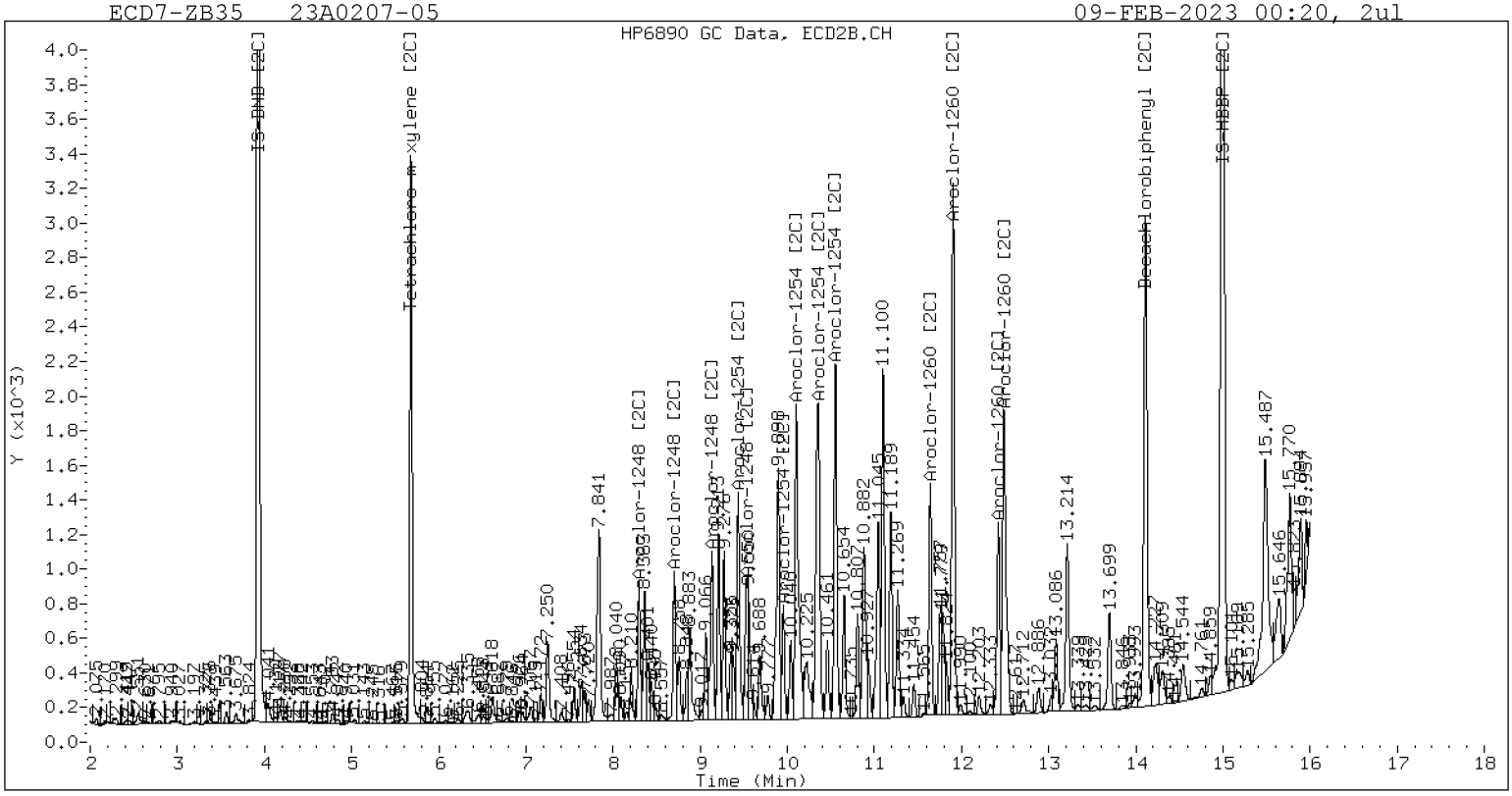
PCB Dual Column Chromatograms

ECD7-ZB5 23A0207-05 09-FEB-2023 00:20, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0207-05 09-FEB-2023 00:20, 2ul

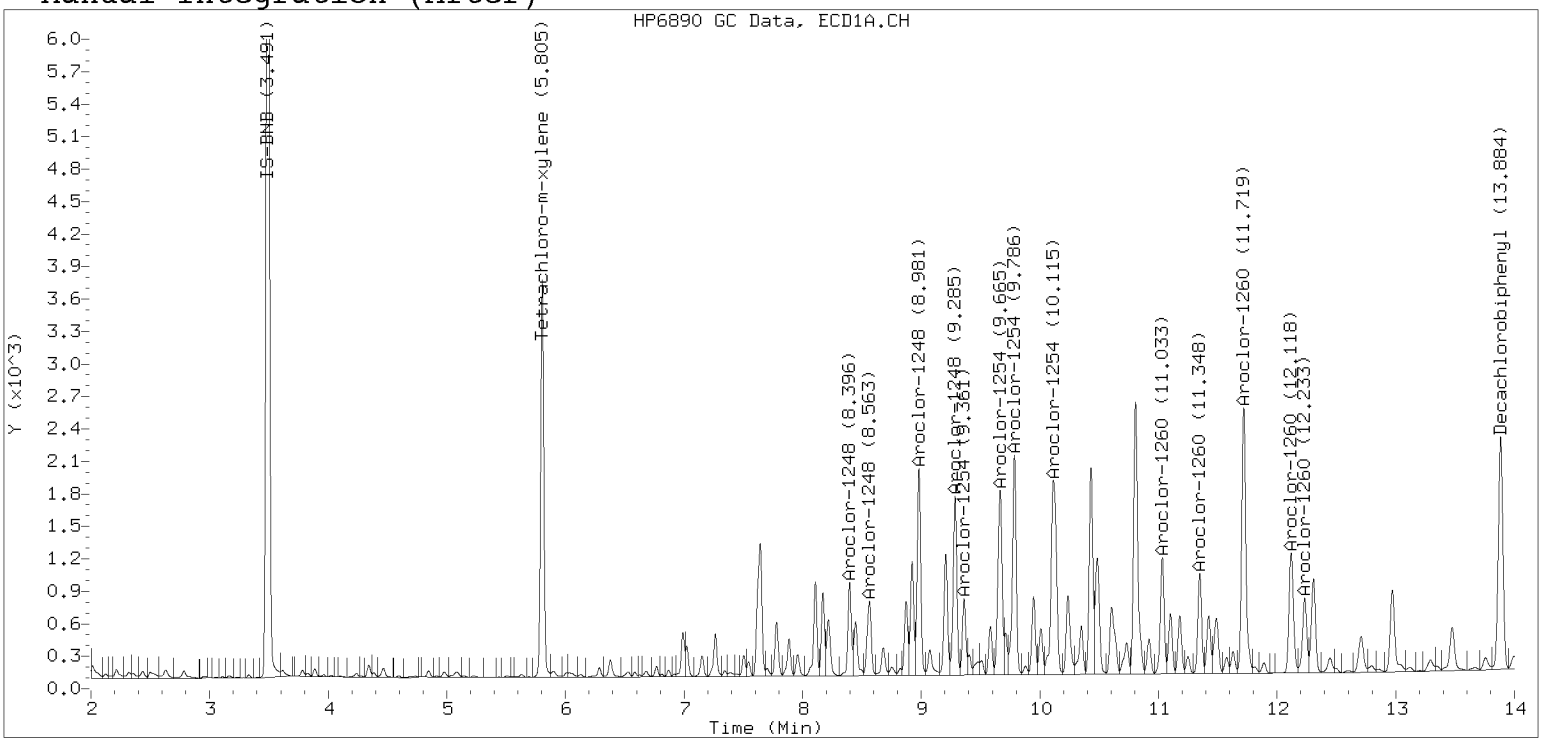


ZB-35 Manual Integration: YES

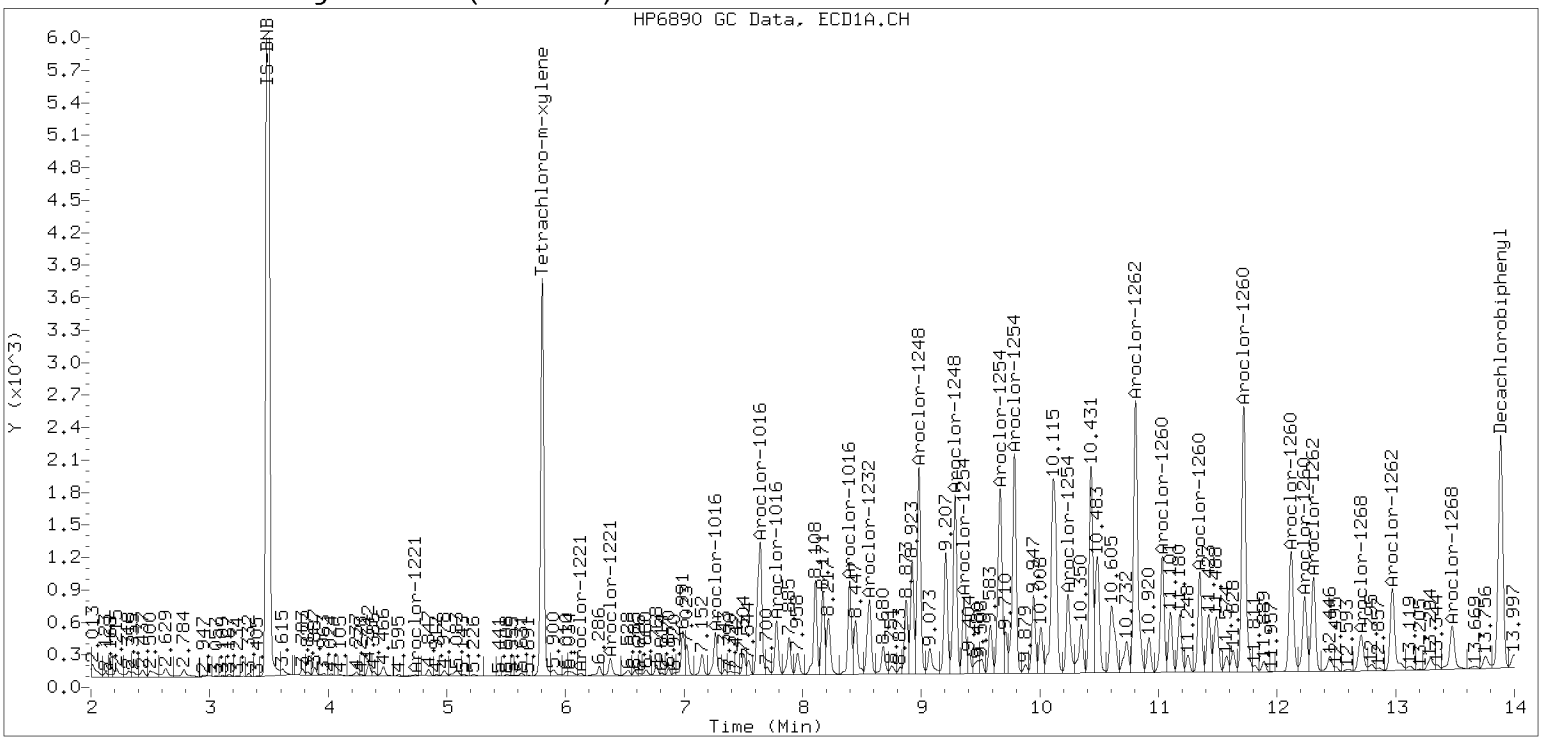
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230208.b/02082343ECD7.D Injection Date: 09-FEB-2023 00:20

Manual Integration (After)



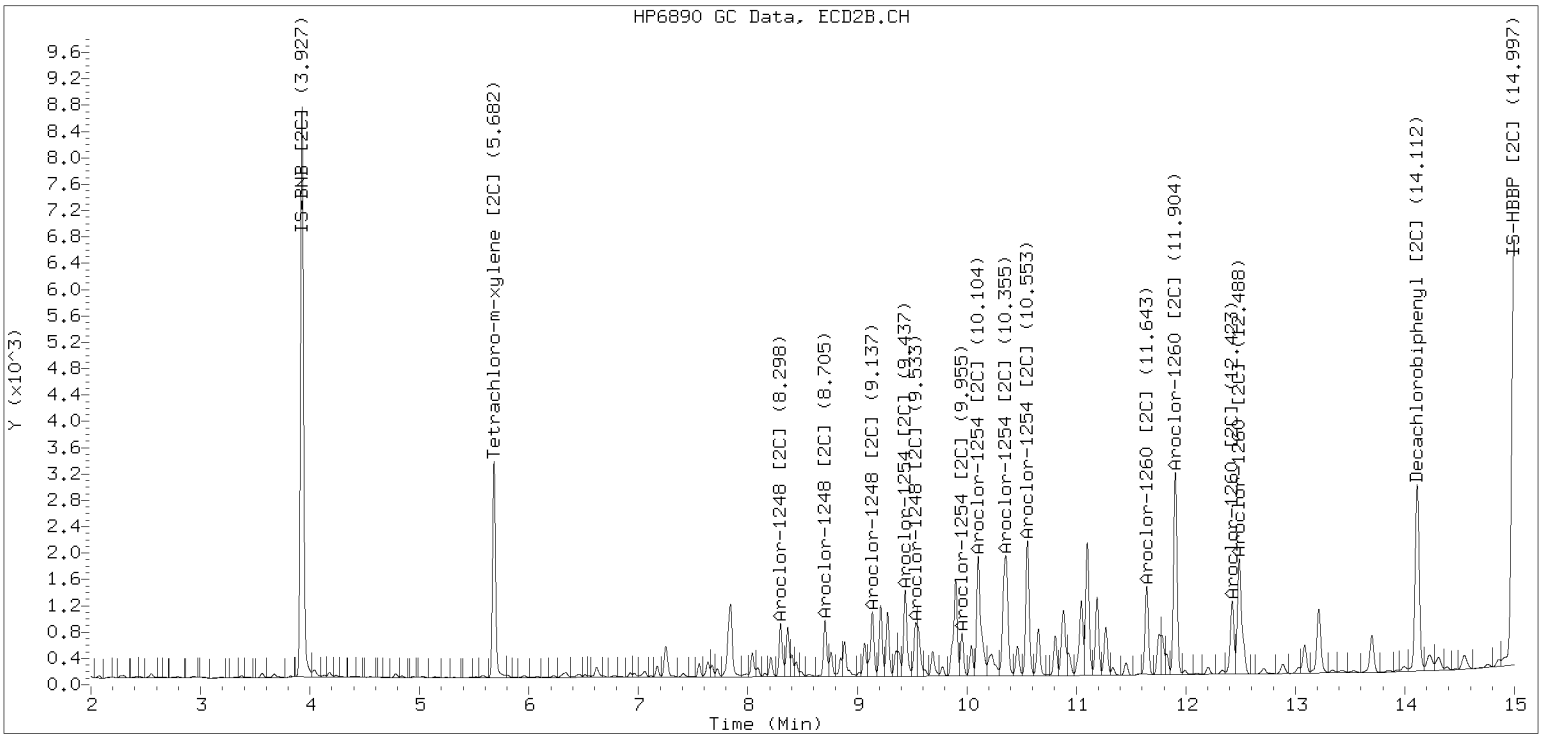
Processed Integration (Before)



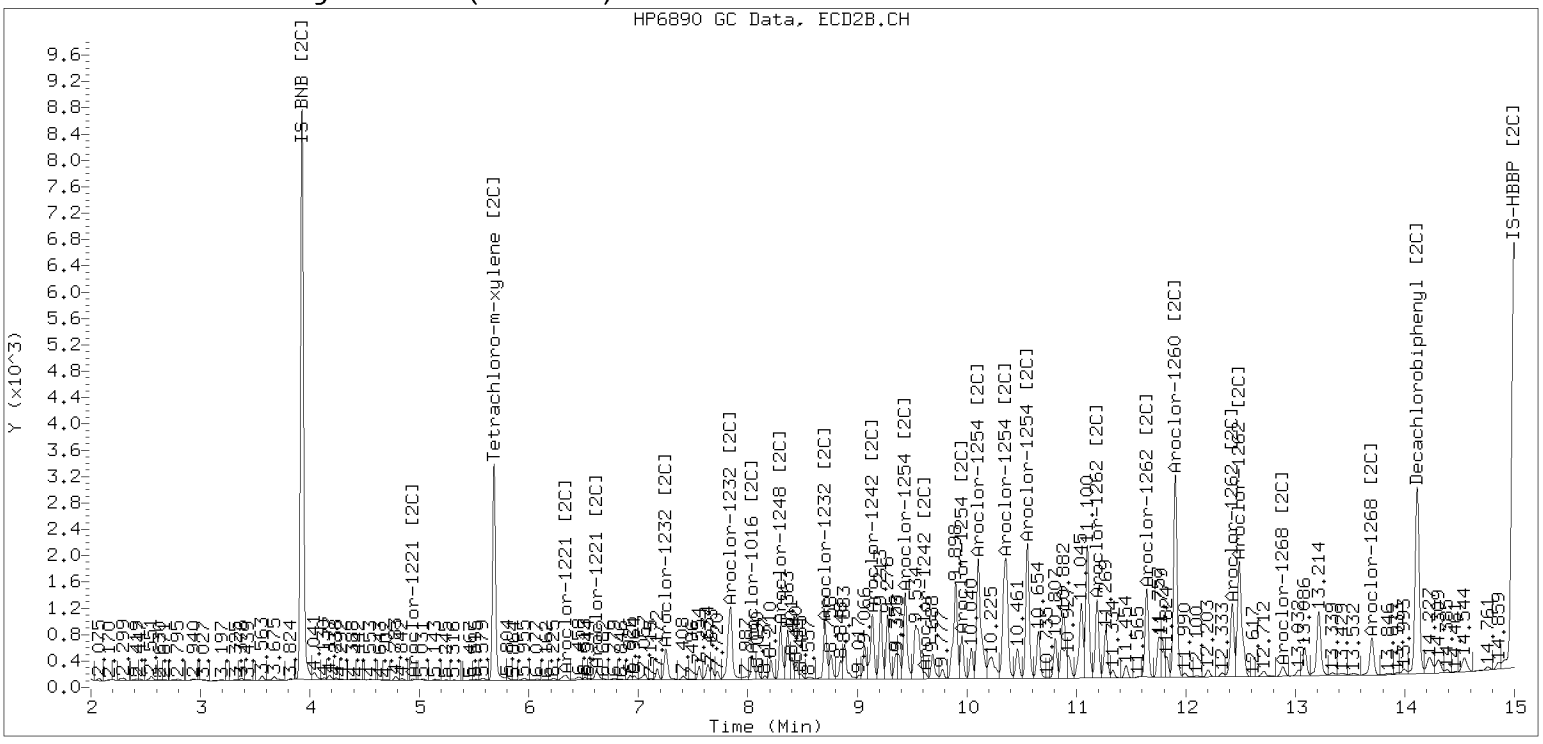
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230208.b/230208.b/02082343ECD7.D Injection Date: 09-FEB-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-IT1072

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0207-06 A	File ID:	02082344ECD7.D
Sampled:	01/11/23 09:41	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 00:41
% Solids:	78.96	Preparation:	EPA 3546 (Microwave)	Initial/Final:	15.87 g Wet / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0127	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	4.0	1.6	4.0	U
11097-69-1	Aroclor 1254	1	1	9.1	1.6	4.0	
11096-82-5	Aroclor 1260	1	1	6.0	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9802*	*5.51*	*69.1*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9802*	*5.67*	*71.0*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082344ECD7.D
Data file 2: /230208.b/230208.b/02082344ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0207-06
Client ID:
Injection Date: 09-FEB-2023 00:41
Report Date: 02/09/2023 10:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.002	168948	5.683	-0.002	159406	28.4	31.9	11.5	Tetrachloro-m-xylene
13.882	-0.006	100366	14.113	-0.004	161412	27.6	32.9	17.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	420859	-16.4
Hexabromobiphenyl	647433	339496	-47.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	370171	9.9
Hexabromobiphenyl	382032	308793	-19.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1254	1	9.284	-0.009	12415	28.9	1	9.437	-0.007	7194	26.8
Aroclor-1254	2	9.367	-0.004	5297	28.9	2	9.955	-0.009	5778	26.6
Aroclor-1254	3	9.669	0.007	33742	122.8	3	10.105	-0.011	13485	28.5
Aroclor-1254	4	9.786	-0.012	10423	19.4	4	10.358	-0.007	18824	39.8
Aroclor-1254	5	10.110	-0.047	9428	26.9	5	10.553	-0.010	11112	42.1
		Total Col1Ave (5 peaks):			45.4		Total Col2Ave (5 peaks):			32.8 RPD = 32
		Corrected Ave (4 peaks):			26.0		Corrected Ave (4 peaks):			30.4 RPD = 15
Aroclor-1260	1	11.032	-0.007	5166	27.1	1	11.642	-0.007	6225	27.9
Aroclor-1260	2	11.347	-0.009	4327	22.1	2	11.903	-0.009	12177	21.6
Aroclor-1260	3	11.716	-0.012	12647	24.5	3	12.396	-0.035	14141	100.7
Aroclor-1260	4	12.117	-0.014	13160	49.4	4	12.487	-0.008	11499	31.5
Aroclor-1260	5	12.232	-0.008	3037	26.2	NS	---			----
		Total Col1Ave (5 peaks):			29.9		Total Col2Ave (4 peaks):			45.4 RPD = 41*
		Corrected Ave (4 peaks):			25.0		Corrected Ave (3 peaks):			27.0 RPD = 8
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.908 - 13.789) = 379408 Col1 Total PCB = 0.1 ppm*

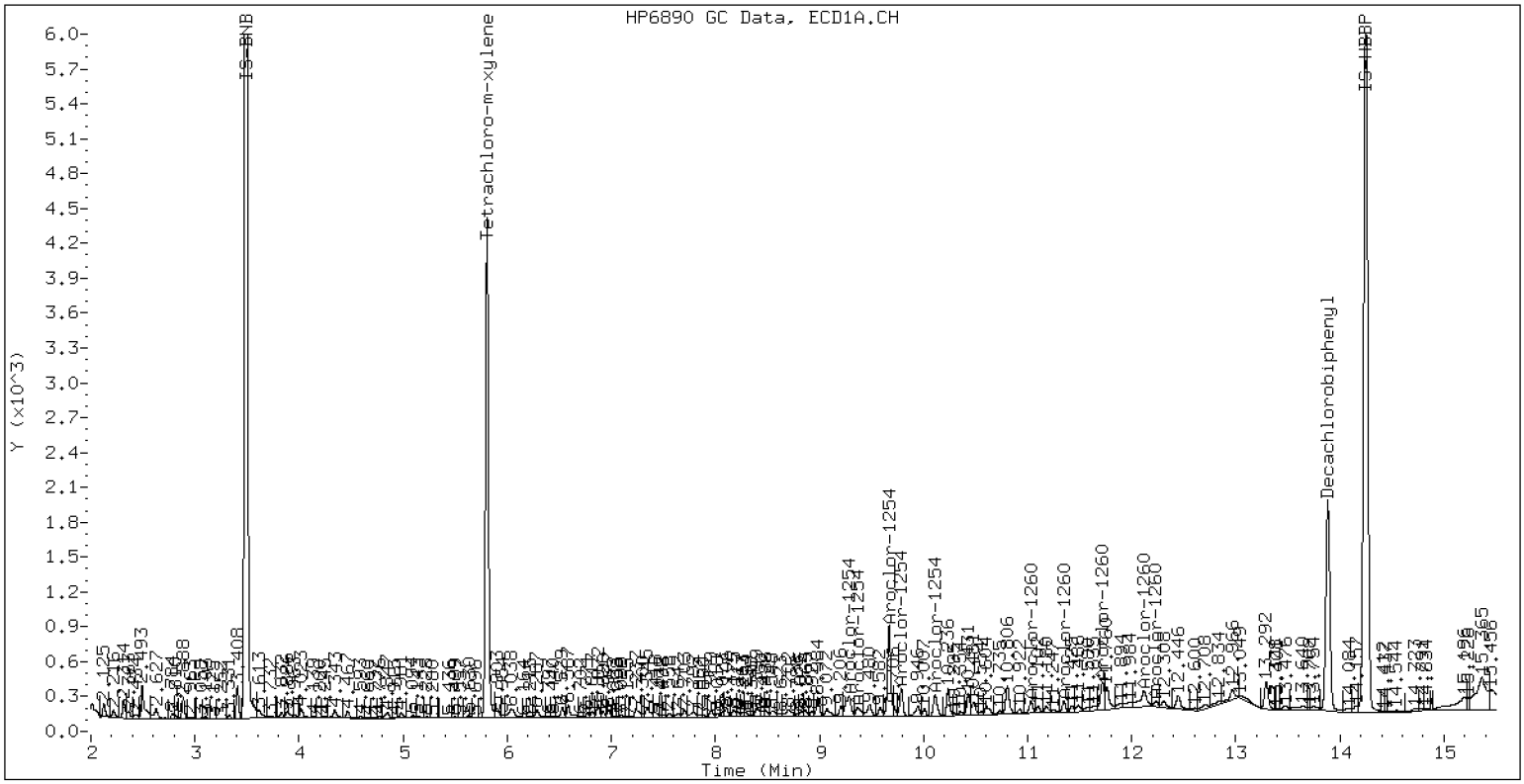
Total PCB Area Col2 (5.785 - 14.016) = 414996 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

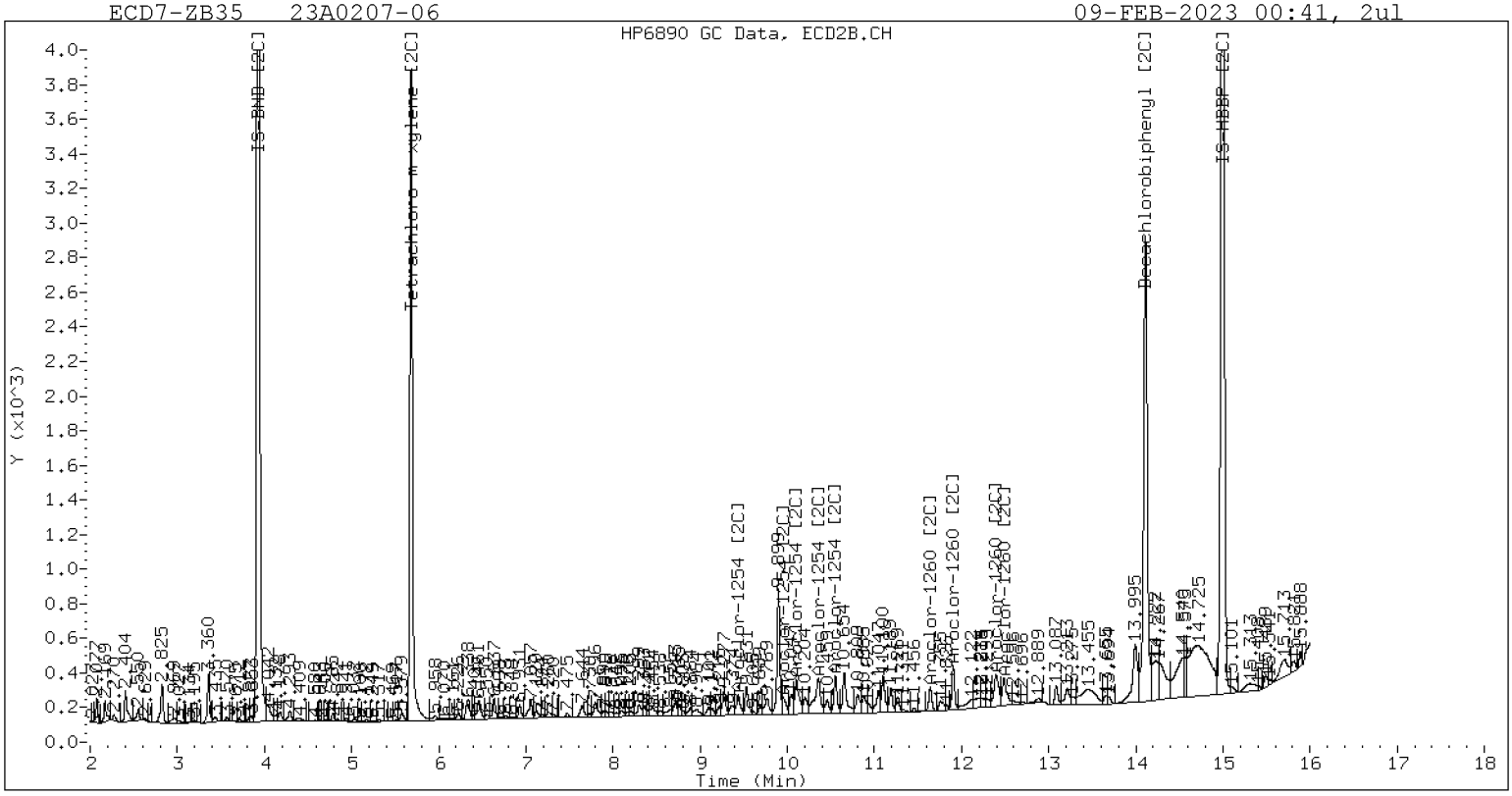
PCB Dual Column Chromatograms

ECD7-ZB5 23A0207-06 09-FEB-2023 00:41, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0207-06 09-FEB-2023 00:41, 2ul

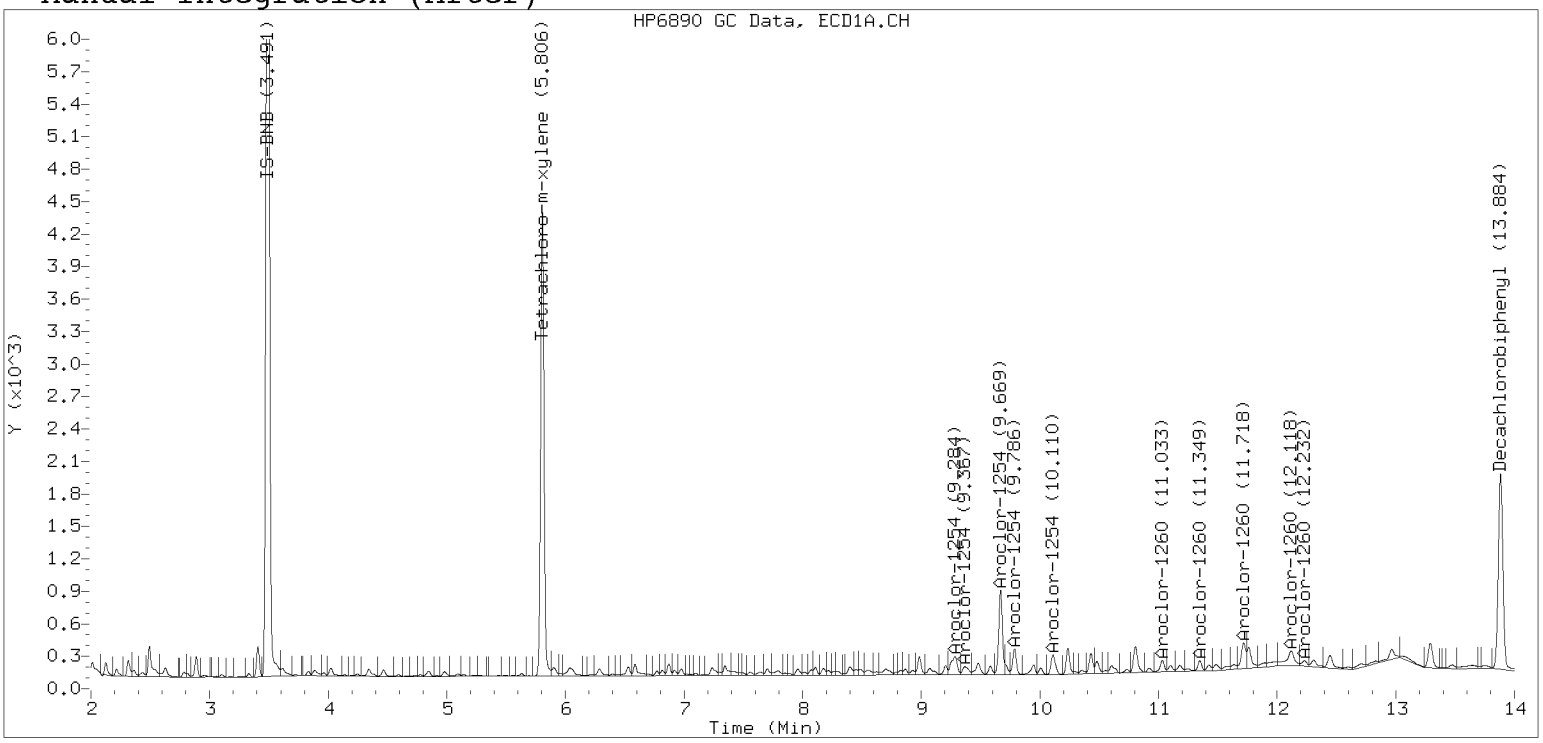


ZB-35 Manual Integration: NO

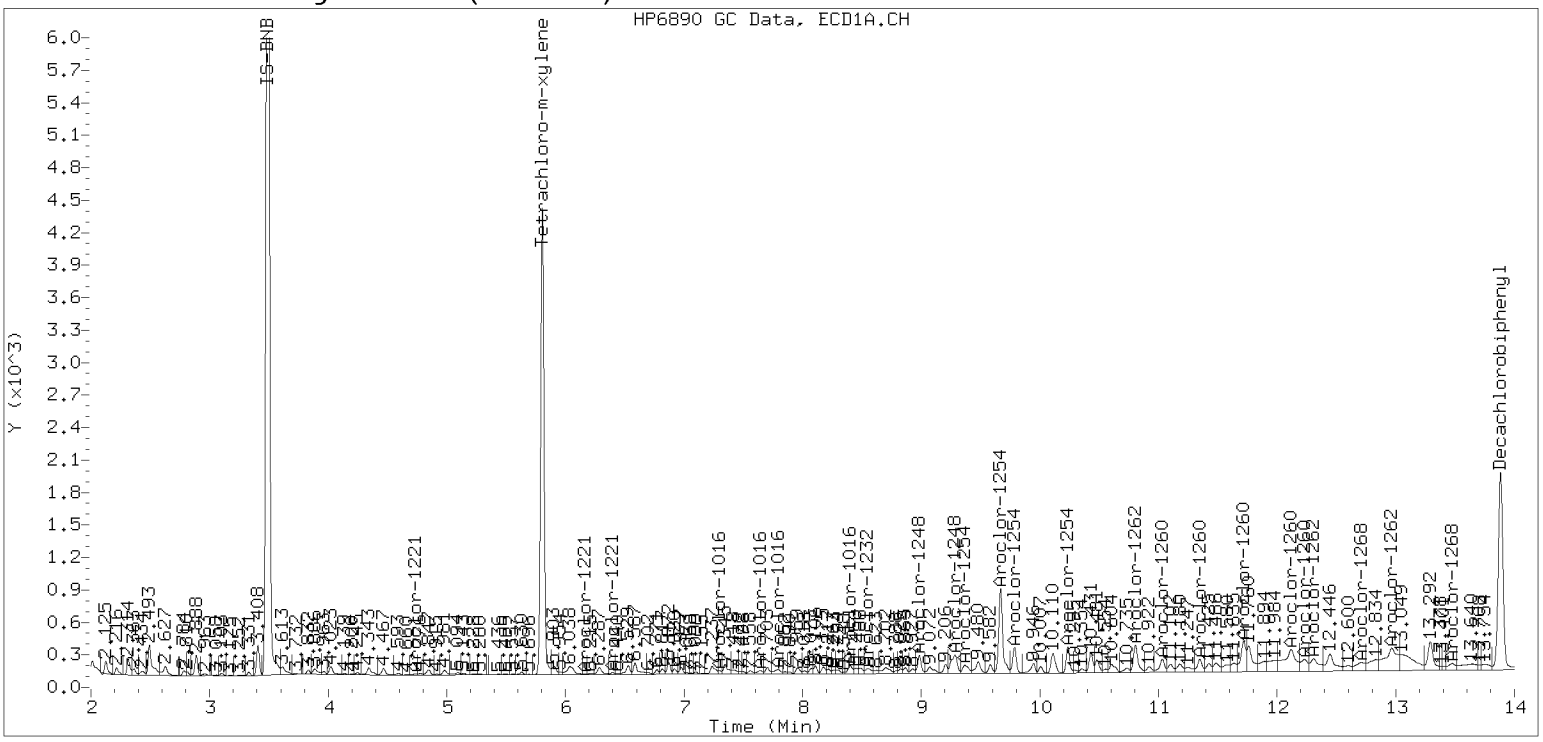
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230208.b/02082344ECD7.D Injection Date: 09-FEB-2023 00:41

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-IT1081

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0207-07 A	File ID:	02082345ECD7.D
Sampled:	01/11/23 10:15	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 01:02
% Solids:	78.77	Preparation:	EPA 3546 (Microwave)	Initial/Final:	15.87 g Wet / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0127	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	8.8	1.6	4.0	
11097-69-1	Aroclor 1254	1	1	10.5	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	7.3	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9995*	*5.79*	*72.4*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9995*	*5.59*	*69.9*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9995*	*5.73*	*71.6*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9995*	*6.23*	*77.9*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082345ECD7.D
Data file 2: /230208.b/230208.b/02082345ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0207-07
Client ID:
Injection Date: 09-FEB-2023 01:02
Report Date: 02/09/2023 10:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.002	164856	5.682	-0.003	153803	28.0	31.2	10.8	Tetrachloro-m-xylene
13.886	-0.003	110837	14.114	-0.003	146406	28.9	28.6	1.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	417072	-17.1
Hexabromobiphenyl	647433	358007	-44.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	365183	8.4
Hexabromobiphenyl	382032	322236	-15.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.398	-0.008	7347	35.2	1	8.300	-0.004	7401	44.8
Aroclor-1248	2	8.567	-0.013	6337	23.8	2	8.706	-0.004	6631	37.3
Aroclor-1248	3	8.986	-0.013	16304	32.0	3	9.141	-0.011	8981	41.4
Aroclor-1248	4	9.288	-0.006	16533	65.6	4	9.535	-0.040	13909	51.8
		Total Col1Ave (4 peaks):			39.2		Total Col2Ave (4 peaks):			43.8 RPD = 11
		Corrected Ave (3 peaks):			30.3		Corrected Ave (3 peaks):			41.2 RPD = 30
Aroclor-1254	1	9.288	-0.005	16533	38.9	1	9.439	-0.006	14591	55.1
Aroclor-1254	2	9.363	-0.007	7601	41.9	2	9.958	-0.006	6694	31.3
Aroclor-1254	3	9.668	0.006	19087	70.1	3	10.107	-0.008	22526	48.2
Aroclor-1254	4	9.789	-0.010	21038	39.4	4	10.356	-0.009	25298	54.2
Aroclor-1254	5	10.117	-0.040	25150	72.5	5	10.556	-0.008	17336	66.6
		Total Col1Ave (5 peaks):			52.6		Total Col2Ave (5 peaks):			51.1 RPD = 3
		Corrected Ave (4 peaks):			47.6		Corrected Ave (4 peaks):			47.2 RPD = 1
Aroclor-1260	1	11.034	-0.006	7747	38.6	1	11.645	-0.004	10322	44.4
Aroclor-1260	2	11.350	-0.006	6113	29.6	2	11.906	-0.006	18630	31.7
Aroclor-1260	3	11.721	-0.007	15321	28.2	3	12.400	-0.031	17133	116.9
Aroclor-1260	4	12.121	-0.010	8600	30.6	4	12.489	-0.006	12996	34.1
Aroclor-1260	5	12.235	-0.005	4019	32.8	NS	---			----
		Total Col1Ave (5 peaks):			32.0		Total Col2Ave (4 peaks):			56.8 RPD = 56*
		Corrected Ave (4 peaks):			30.3		Corrected Ave (3 peaks):			36.7 RPD = 19
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.908 - 13.789) = 478315 Col1 Total PCB = 0.1 ppm*

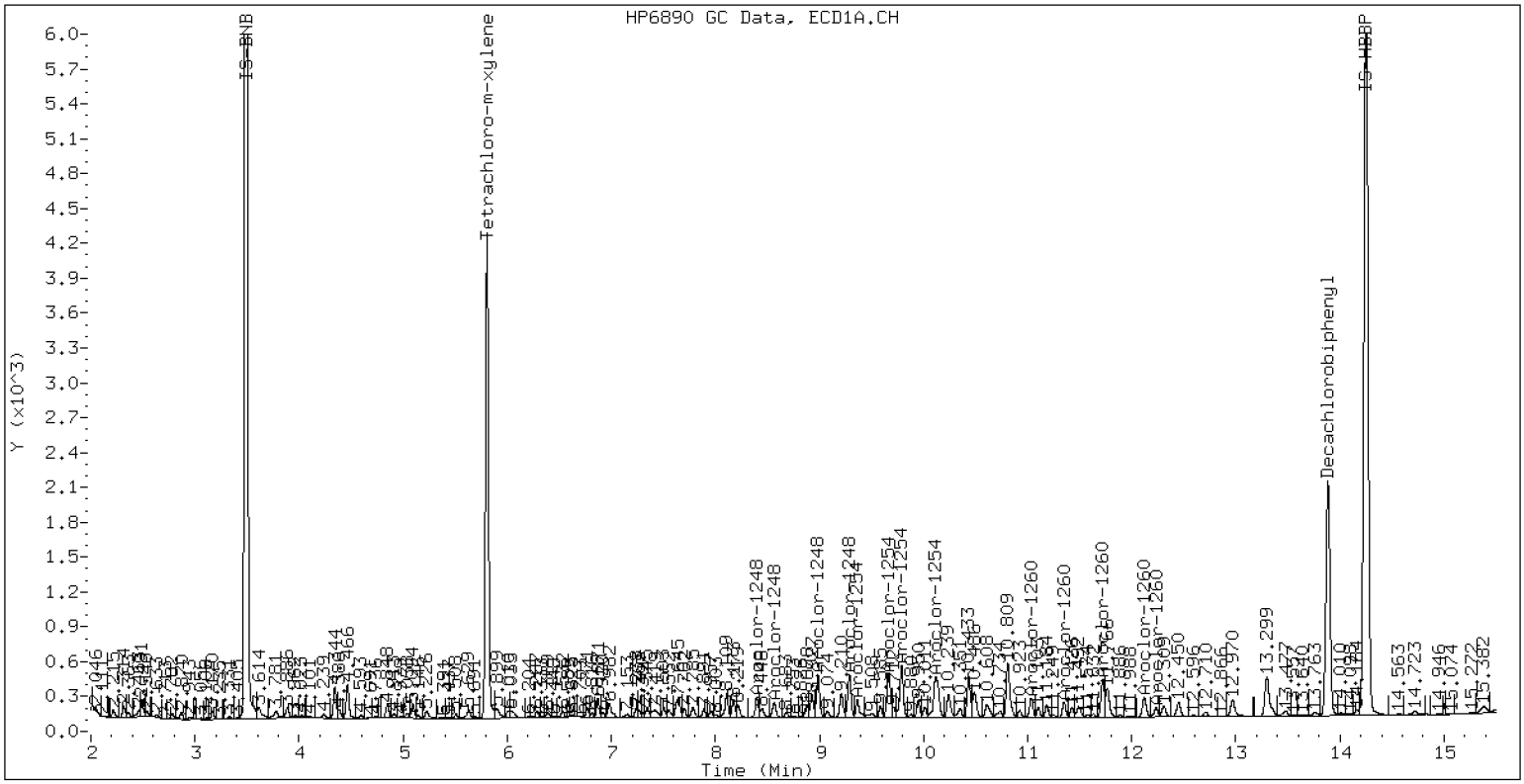
Total PCB Area Col2 (5.785 - 14.016) = 466495 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

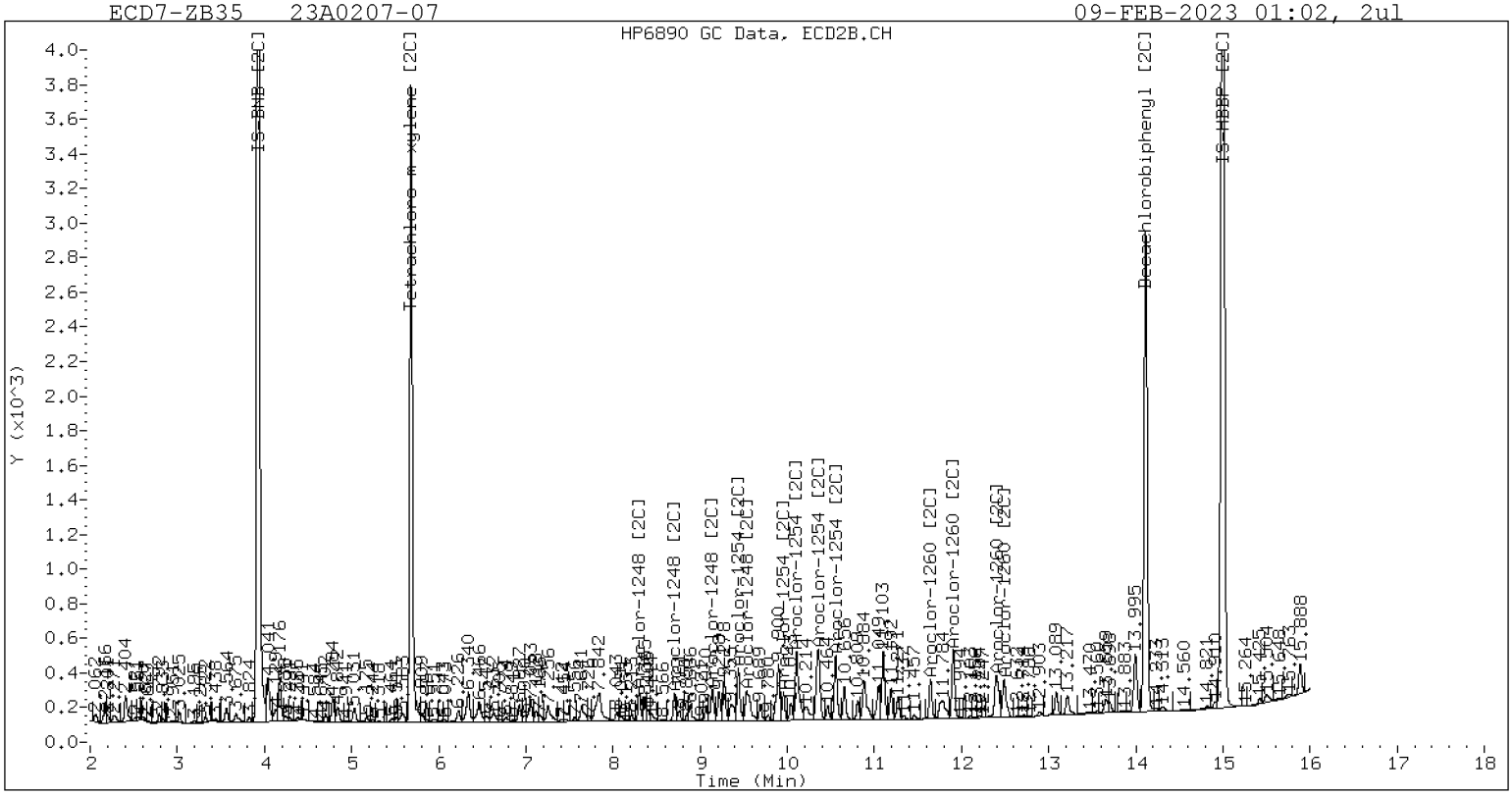
PCB Dual Column Chromatograms

ECD7-ZB5 23A0207-07 09-FEB-2023 01:02, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0207-07 09-FEB-2023 01:02, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-IT1068

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0207-08 A	File ID:	02082346ECD7.D
Sampled:	01/11/23 10:45	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 01:22
% Solids:	72.83	Preparation:	EPA 3546 (Microwave)	Initial/Final:	17.2 g Wet / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0127	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	4.0	1.6	4.0	U
11097-69-1	Aroclor 1254	1	1	4.0	1.6	4.0	U
11096-82-5	Aroclor 1260	1	1	4.0	0.6	4.0	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9829*	*6.11*	*76.5*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9829*	*6.12*	*76.6*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082346ECD7.D
Data file 2: /230208.b/230208.b/02082346ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0207-08
Client ID:
Injection Date: 09-FEB-2023 01:22
Report Date: 02/09/2023 10:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.002	172822	5.683	-0.002	158845	30.6	32.6	6.1	Tetrachloro-m-xylene
13.887	-0.002	137274	14.115	-0.001	174205	30.6	30.2	1.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	398955	-20.7
Hexabromobiphenyl	647433	419512	-35.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	360842	7.1
Hexabromobiphenyl	382032	363903	-4.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.908 - 13.789) = 181797 Col1 Total PCB = 0.0 ppm*

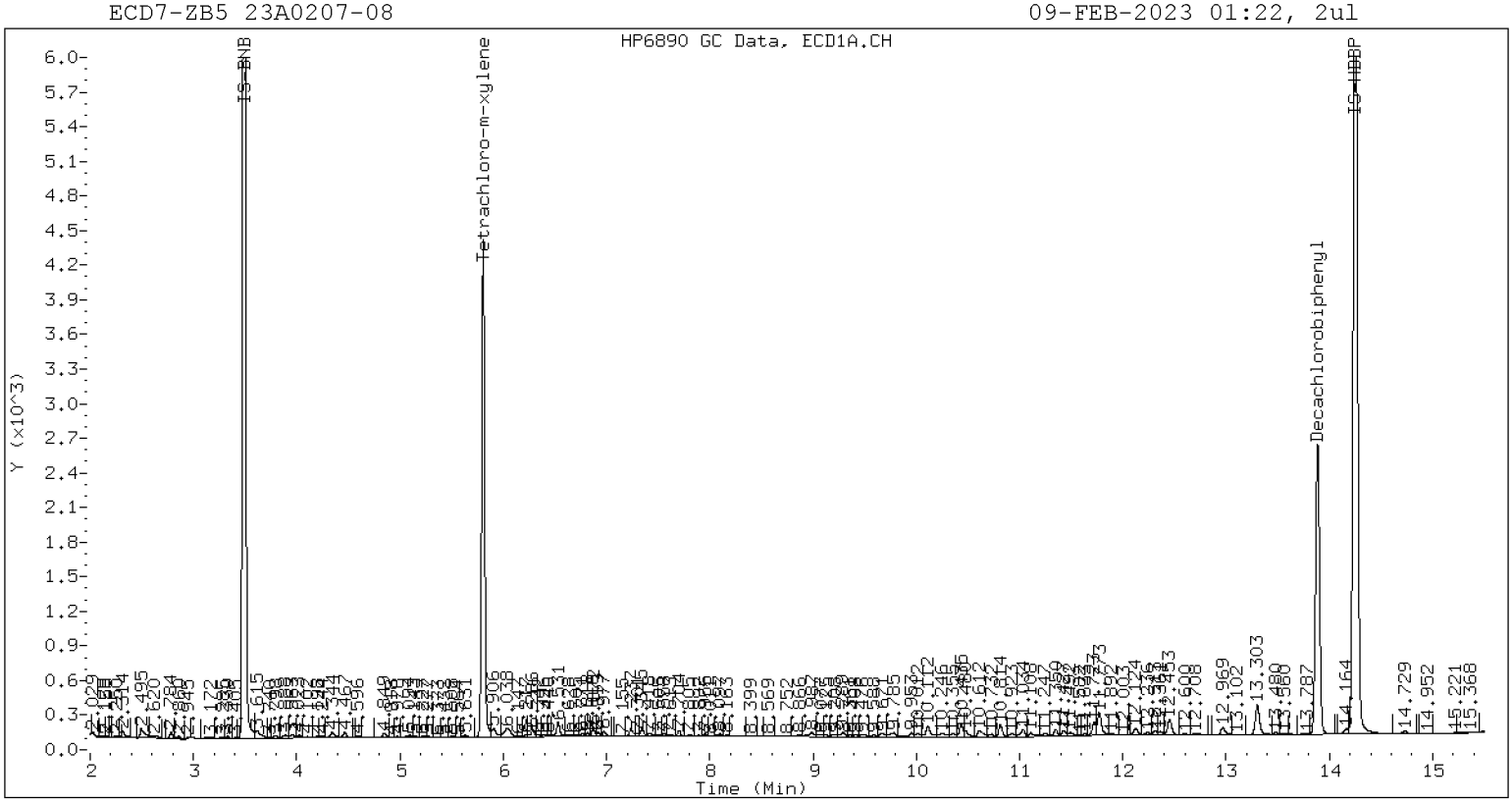
Total PCB Area Col2 (5.785 - 14.016) = 148224 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

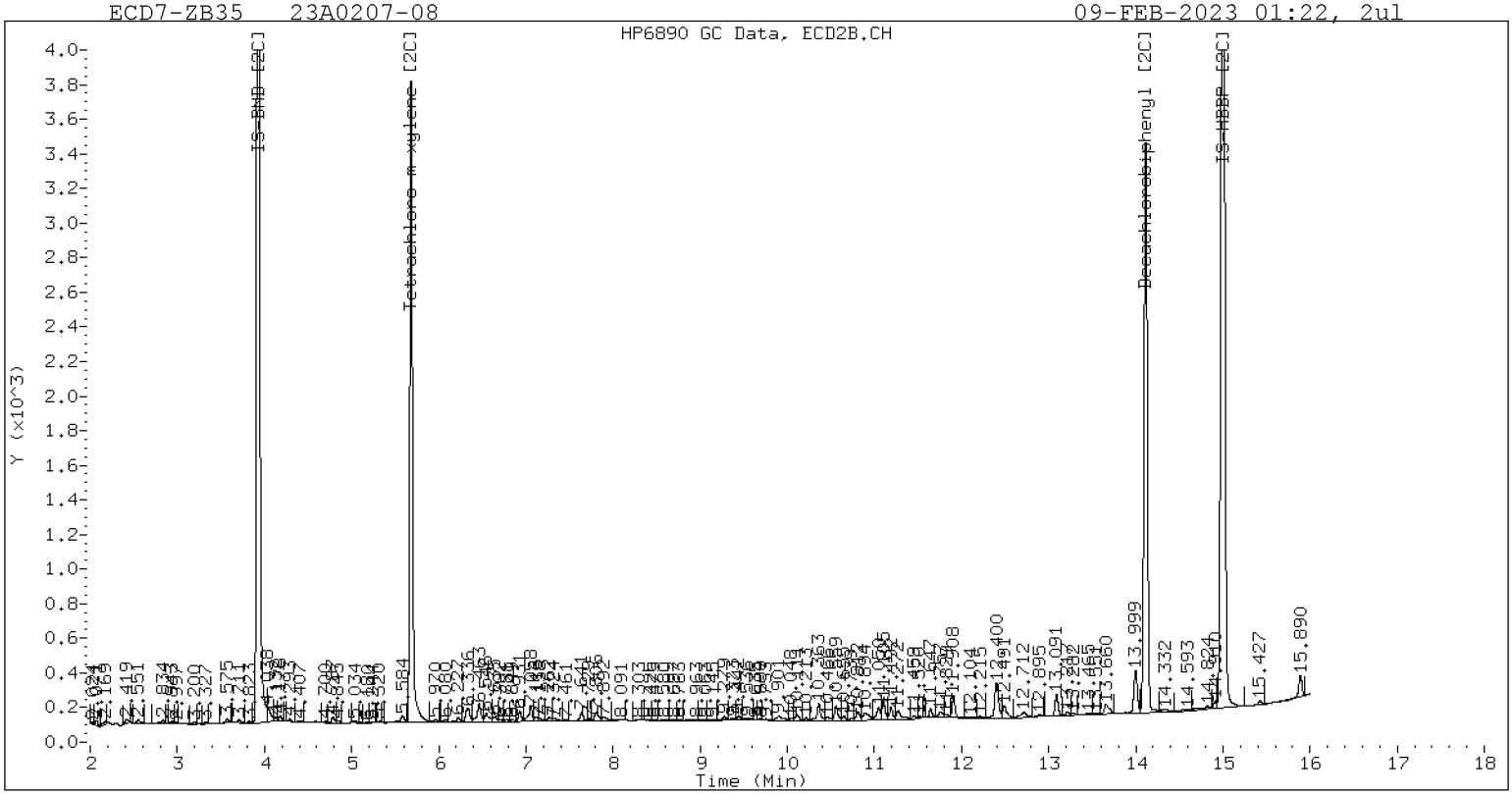
PCB Dual Column Chromatograms

ECD7-ZB5 23A0207-08 09-FEB-2023 01:22, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0207-08 09-FEB-2023 01:22, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-IT1062

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0207-09 A	File ID:	02082347ECD7.D
Sampled:	01/11/23 11:03	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 01:44
% Solids:	73.00	Preparation:	EPA 3546 (Microwave)	Initial/Final:	17.16 g Wet / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0127	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	13.4	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	28.9	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	33.6	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9829*	*5.96*	*74.7*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9829*	*5.76*	*72.2*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9829*	*5.94*	*74.4*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9829*	*6.26*	*78.4*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082347ECD7.D
Data file 2: /230208.b/230208.b/02082347ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0207-09
Client ID:
Injection Date: 09-FEB-2023 01:44
Report Date: 02/09/2023 10:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.001	170472	5.683	-0.002	155536	28.9	31.4	8.3	Tetrachloro-m-xylene
13.885	-0.003	139049	14.114	-0.003	179542	29.9	29.8	0.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	417588	-17.0
Hexabromobiphenyl	647433	435045	-32.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	366759	8.9
Hexabromobiphenyl	382032	380084	-0.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.398	-0.008	6254	29.9	1	8.300	-0.004	7714	46.5
Aroclor-1248	2	8.561	-0.019	6014	22.6	2	8.706	-0.004	6405	35.9
Aroclor-1248	3	8.986	-0.013	35868	70.4	3	9.141	-0.011	7318	33.6
Aroclor-1248	4	9.287	-0.007	36966	146.5	4	9.532	-0.043	23580	87.4
		Total Col1Ave (4 peaks):			67.3		Total Col2Ave (4 peaks):			50.9 RPD = 28
		Corrected Ave (3 peaks):			41.0		Corrected Ave (3 peaks):			38.7 RPD = 6
Aroclor-1254	1	9.287	-0.006	36966	86.9	1	9.439	-0.005	29431	110.6
Aroclor-1254	2	9.362	-0.009	20548	113.1	2	9.957	-0.007	9958	46.3
Aroclor-1254	3	9.668	0.006	32909	120.7	3	10.107	-0.009	63715	135.8
Aroclor-1254	4	9.788	-0.011	57801	108.2	4	10.361	-0.005	73860	157.4
Aroclor-1254	5	10.111	-0.046	77036	221.7	5	10.556	-0.008	71318	272.9
		Total Col1Ave (5 peaks):			130.1		Total Col2Ave (5 peaks):			144.6 RPD = 11
		Corrected Ave (4 peaks):			107.2		Corrected Ave (4 peaks):			112.5 RPD = 5
Aroclor-1260	1	11.033	-0.007	40134	164.4	1	11.645	-0.004	44232	161.3
Aroclor-1260	2	11.349	-0.007	33528	133.6	2	11.905	-0.007	97458	140.5
Aroclor-1260	3	11.719	-0.009	100739	152.5	3	12.423	-0.007	39271	227.1
Aroclor-1260	4	12.120	-0.011	47291	138.6	4	12.489	-0.007	64591	143.9
Aroclor-1260	5	12.234	-0.005	19151	128.7	NS	---			----
		Total Col1Ave (5 peaks):			143.6		Total Col2Ave (4 peaks):			168.2 RPD = 16
		Corrected Ave (4 peaks):			138.4		Corrected Ave (3 peaks):			148.6 RPD = 7
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.908 - 13.789) = 1384088 Col1 Total PCB = 0.3 ppm*

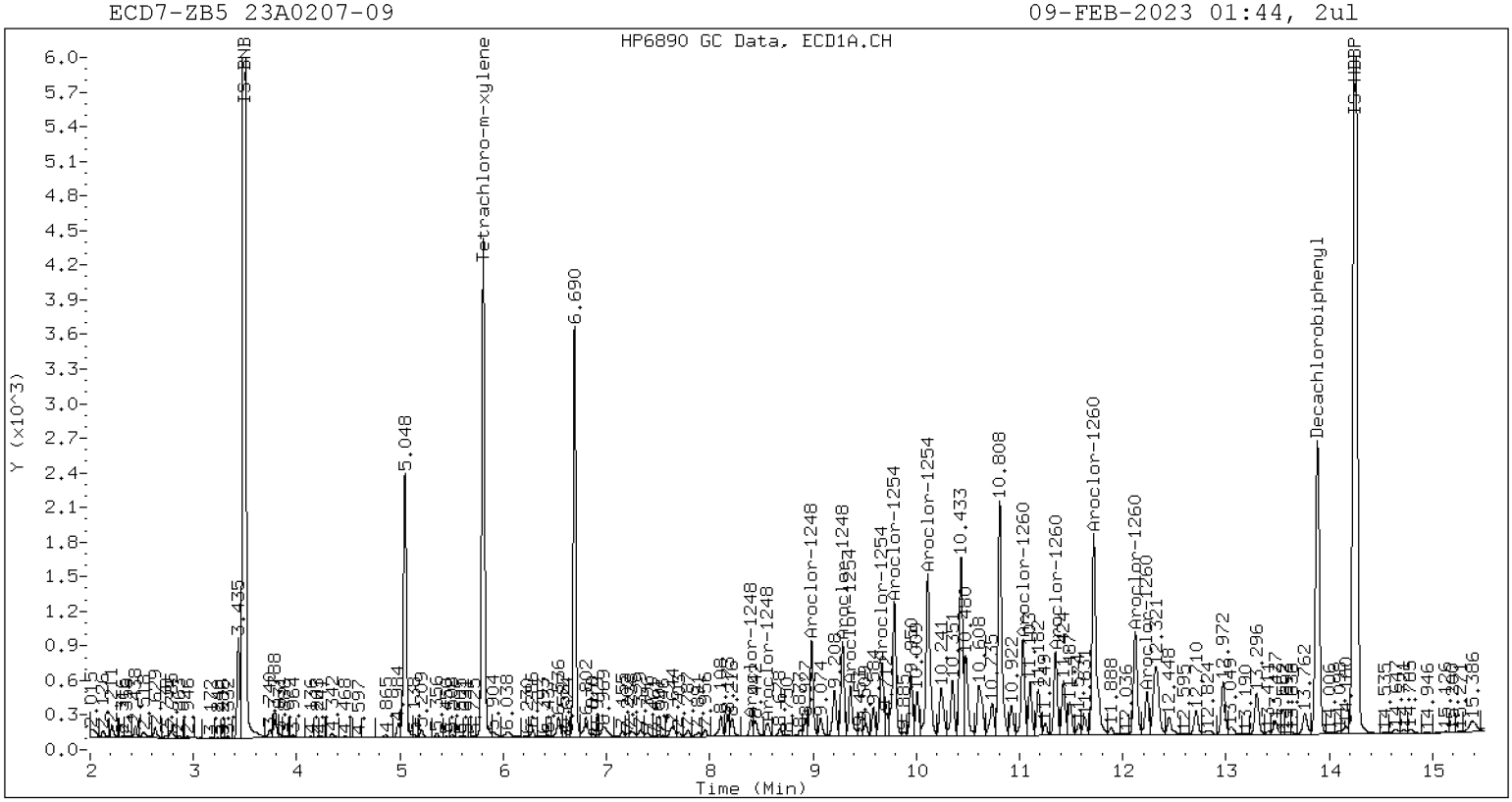
Total PCB Area Col2 (5.785 - 14.016) = 1331235 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

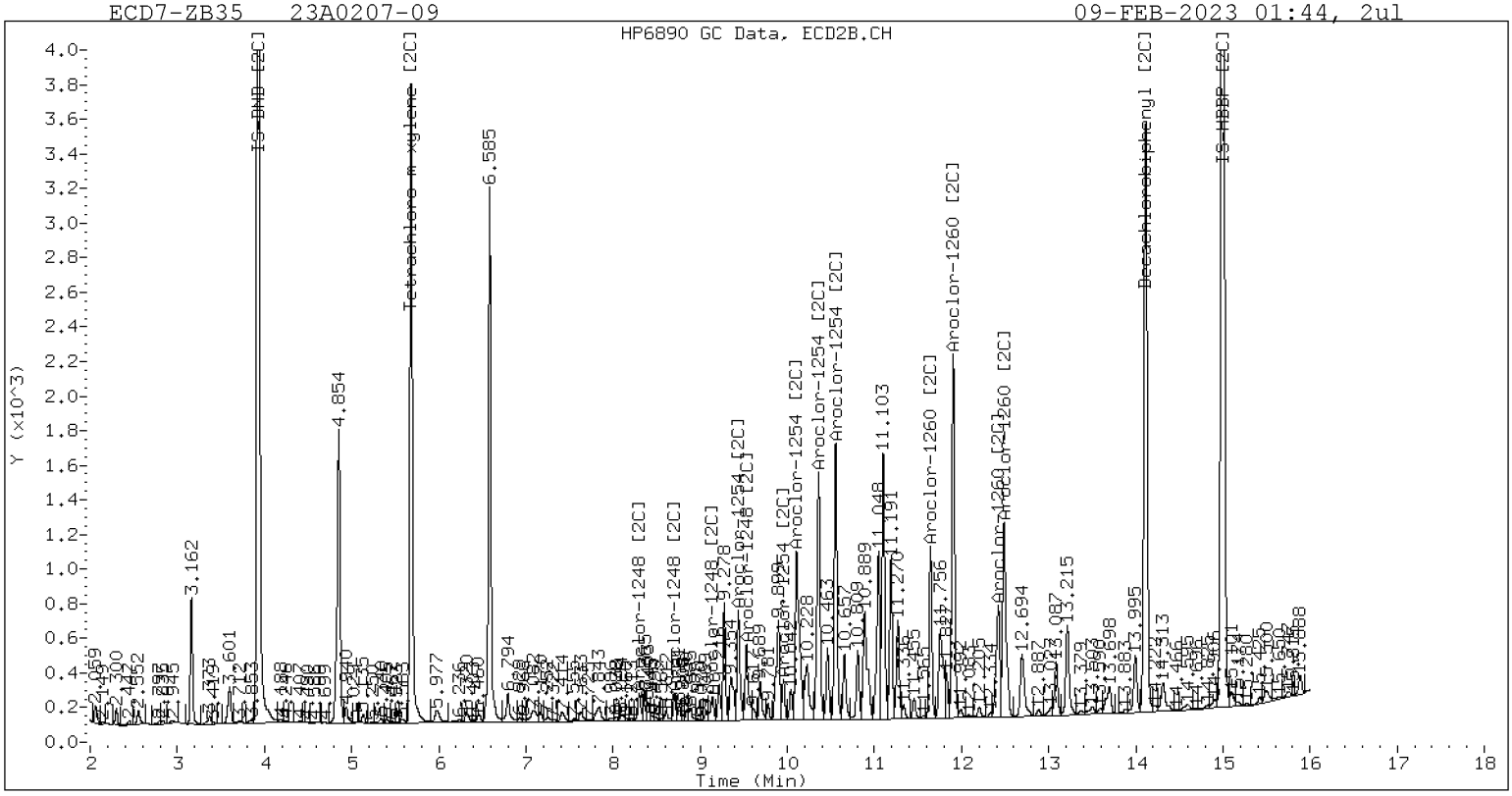
PCB Dual Column Chromatograms

ECD7-ZB5 23A0207-09 09-FEB-2023 01:44, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0207-09 09-FEB-2023 01:44, 2ul

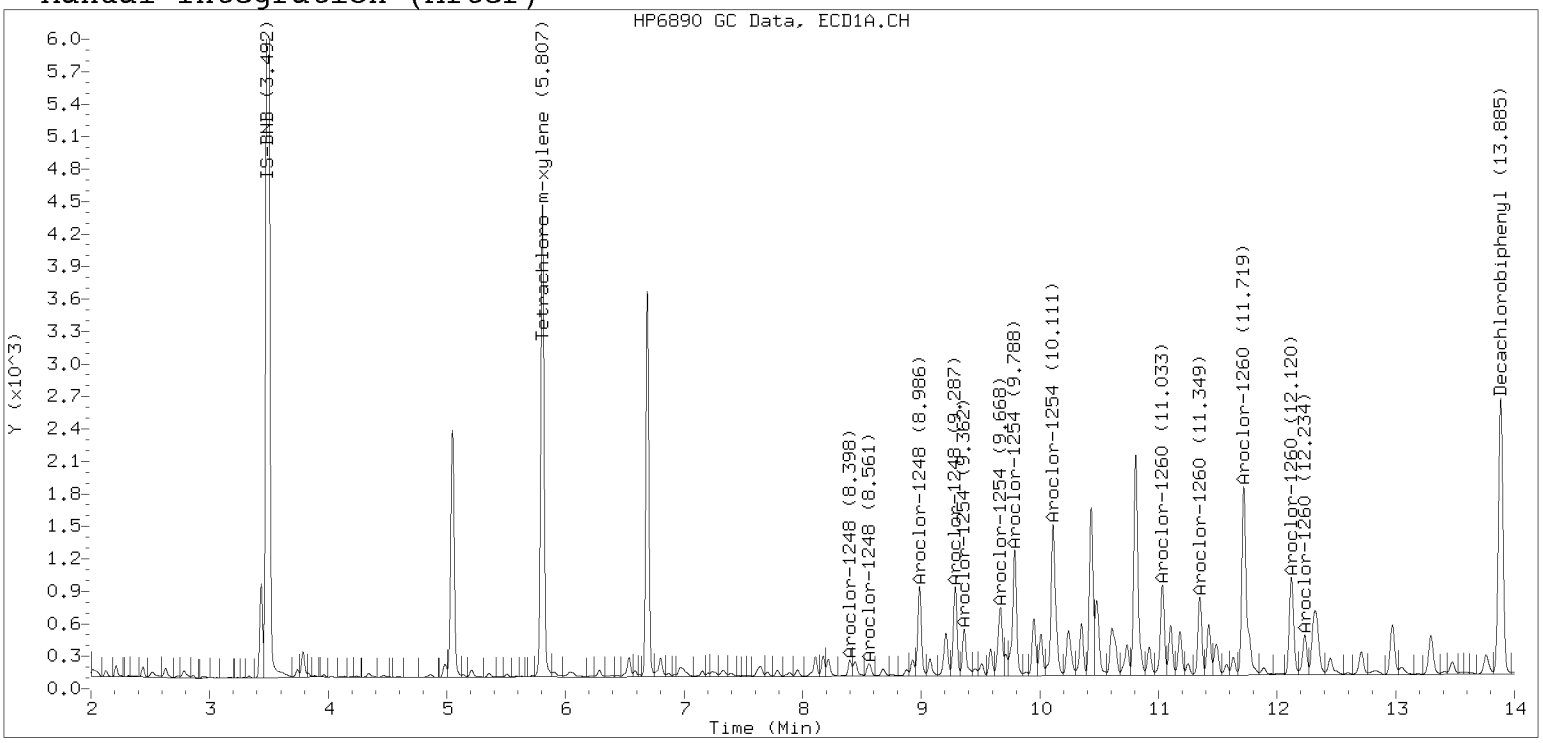


ZB-35 Manual Integration: YES

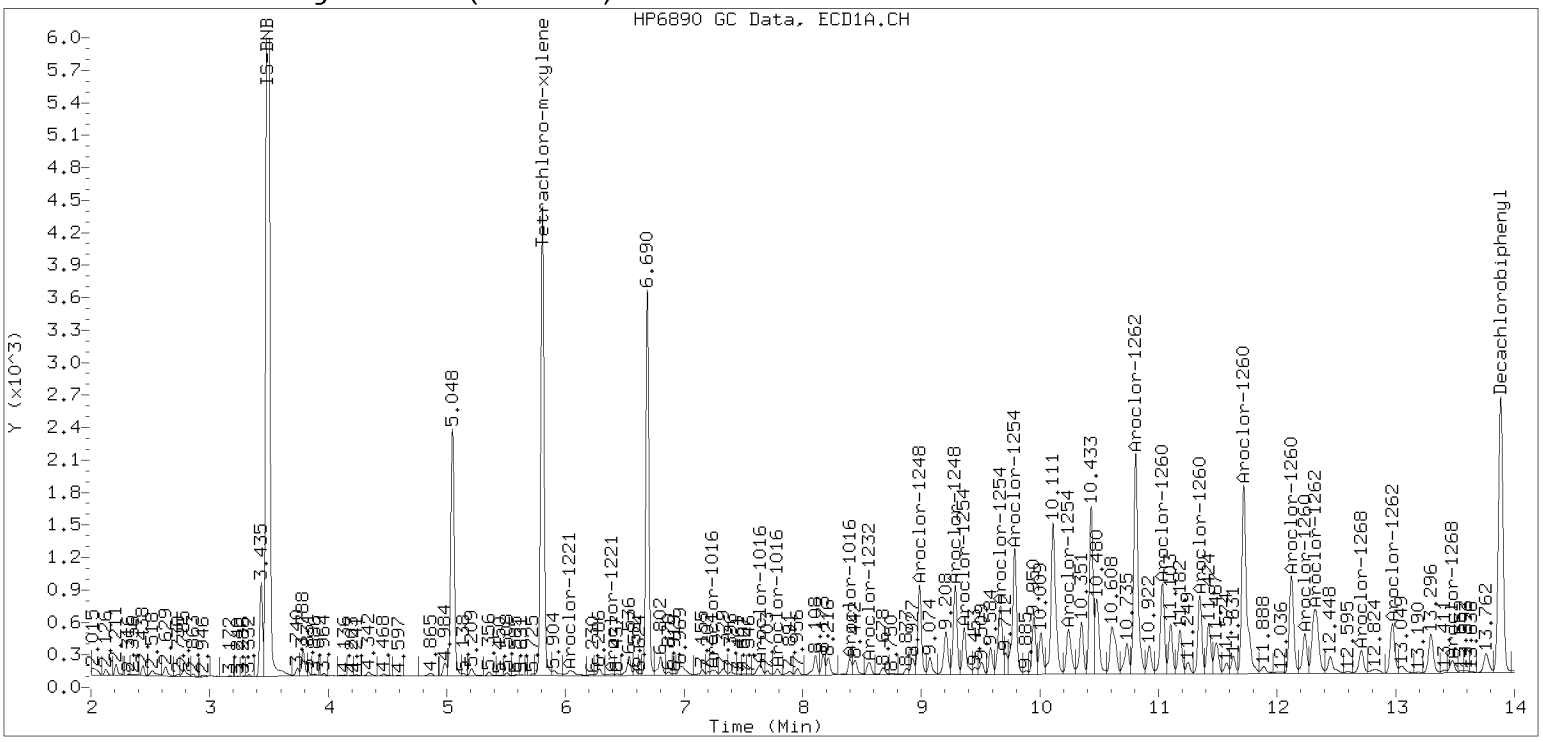
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230208.b/02082347ECD7.D Injection Date: 09-FEB-2023 01:44

Manual Integration (After)



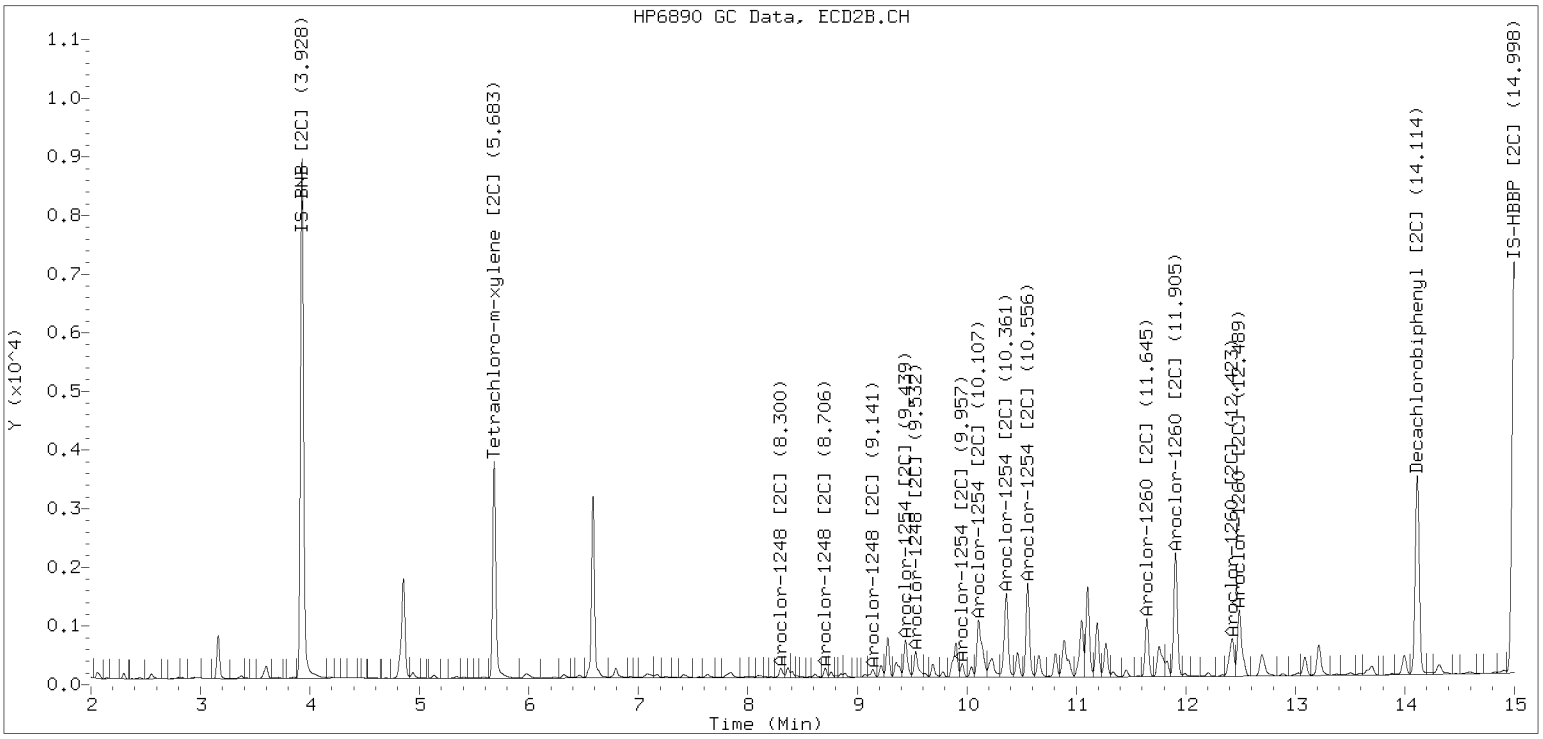
Processed Integration (Before)



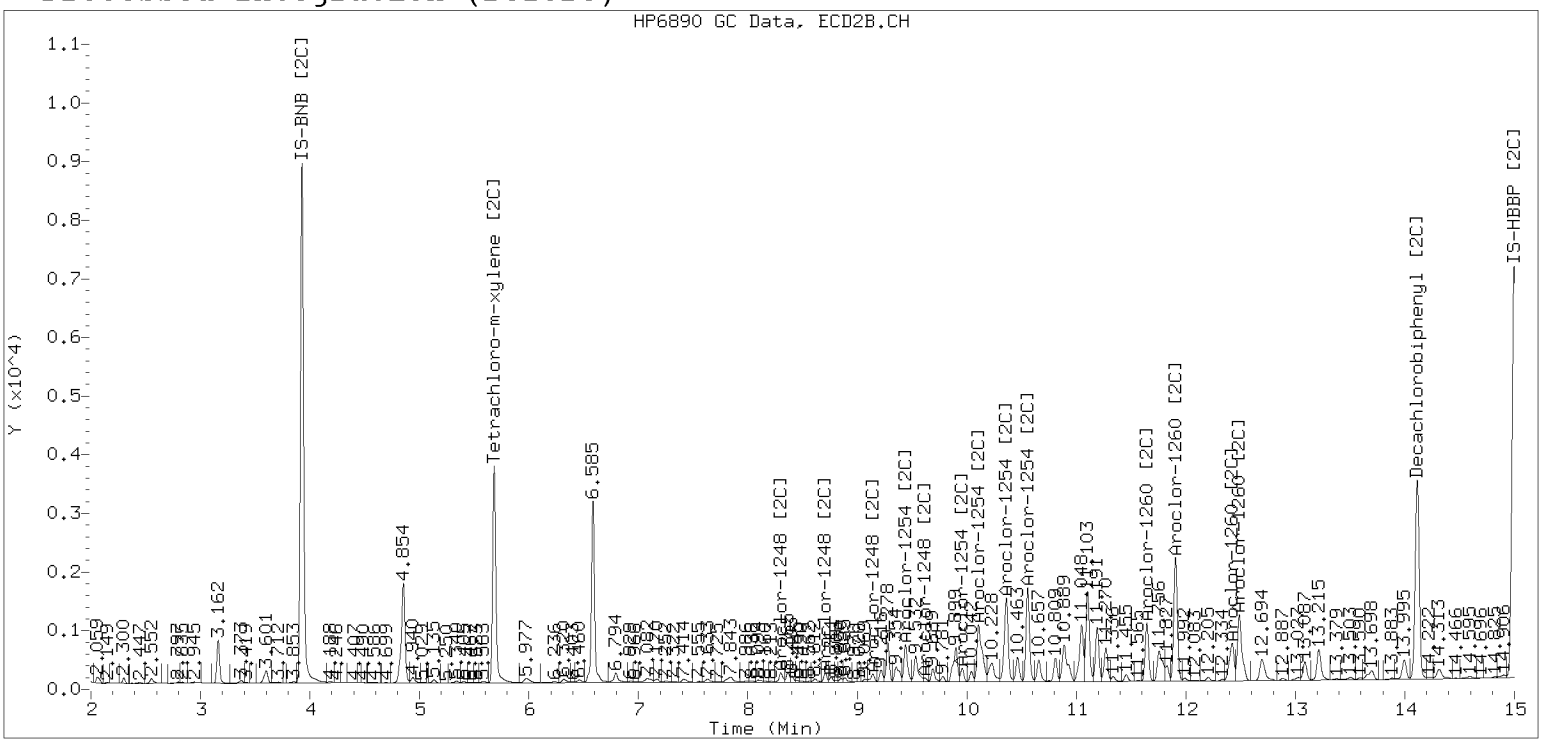
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230208.b/230208.b/02082347ECD7.D Injection Date: 09-FEB-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-IT1097

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0207-10 A	File ID:	02092309ECD7.D
Sampled:	01/11/23 11:32	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 15:02
% Solids:	71.52	Preparation:	EPA 3546 (Microwave)	Initial/Final:	17.49 g Wet / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0148	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	15.5	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	42.6	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	25.2	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9943*	*6.29*	*78.7*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9943*	*5.07*	*63.4*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9943*	*6.28*	*78.6*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9943*	*5.62*	*70.2*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092309ECD7.D
Data file 2: /230209.b/230209.b/02092309ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0207-10
Client ID:
Injection Date: 09-FEB-2023 15:02
Report Date: 02/10/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.804	-0.005	125635	5.680	-0.005	116520	25.4	28.1	10.3	Tetrachloro-m-xylene
13.884	-0.007	116836	14.111	-0.004	160594	31.5	31.4	0.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	350589	-30.3
Hexabromobiphenyl	647433	347180	-46.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	306746	-9.0
Hexabromobiphenyl	382032	321958	-15.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.394	-0.011	7603	43.4	1	8.297	-0.006	10282	74.2
Aroclor-1248	2	8.562	-0.018	5521	24.7	2	8.704	-0.005	7598	50.9
Aroclor-1248	3	8.983	-0.016	39332	91.9	3	9.135	-0.016	12689	69.6
Aroclor-1248	4	9.284	-0.010	56952	268.9	4	9.528	-0.048	25847	114.6
		Total Col1Ave (4 peaks):			107.2		Total Col2Ave (4 peaks):			77.3 RPD = 32
		Corrected Ave (3 peaks):			53.3		Corrected Ave (3 peaks):			64.9 RPD = 20
Aroclor-1254	1	9.284	-0.015	56952	159.4	1	9.435	-0.009	49956	224.5
Aroclor-1254	2	9.359	-0.018	23196	152.0	2	9.954	-0.010	25853	143.7
Aroclor-1254	3	9.658	-0.012	52140	227.7	3	10.103	-0.014	82604	210.5
Aroclor-1254	4	9.785	-0.024	90578	201.9	4	10.344	-0.022	90095	229.6
Aroclor-1254	5	10.123	-0.054	85316	292.5	5	10.552	-0.011	56243	257.4
		Total Col1Ave (5 peaks):			206.7		Total Col2Ave (5 peaks):			213.1 RPD = 3
		Corrected Ave (4 peaks):			185.3		Corrected Ave (4 peaks):			202.1 RPD = 9
Aroclor-1260	1	11.029	-0.015	23899	122.7	1	11.640	-0.009	36701	158.0
Aroclor-1260	2	11.347	-0.013	19327	96.5	2	11.902	-0.011	52784	89.8
Aroclor-1260	3	11.716	-0.018	40848	77.5	3	12.421	-0.010	23524	160.6
Aroclor-1260	4	12.117	-0.022	20883	76.7	4	12.485	-0.011	36701	96.5
Aroclor-1260	5	12.231	-0.013	17960	151.3	NS	---			----
		Total Col1Ave (5 peaks):			104.9		Total Col2Ave (4 peaks):			126.2 RPD = 18
		Corrected Ave (4 peaks):			93.3		Corrected Ave (3 peaks):			114.8 RPD = 21
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.909 - 13.792) = 1312521 Col1 Total PCB = 0.3 ppm*

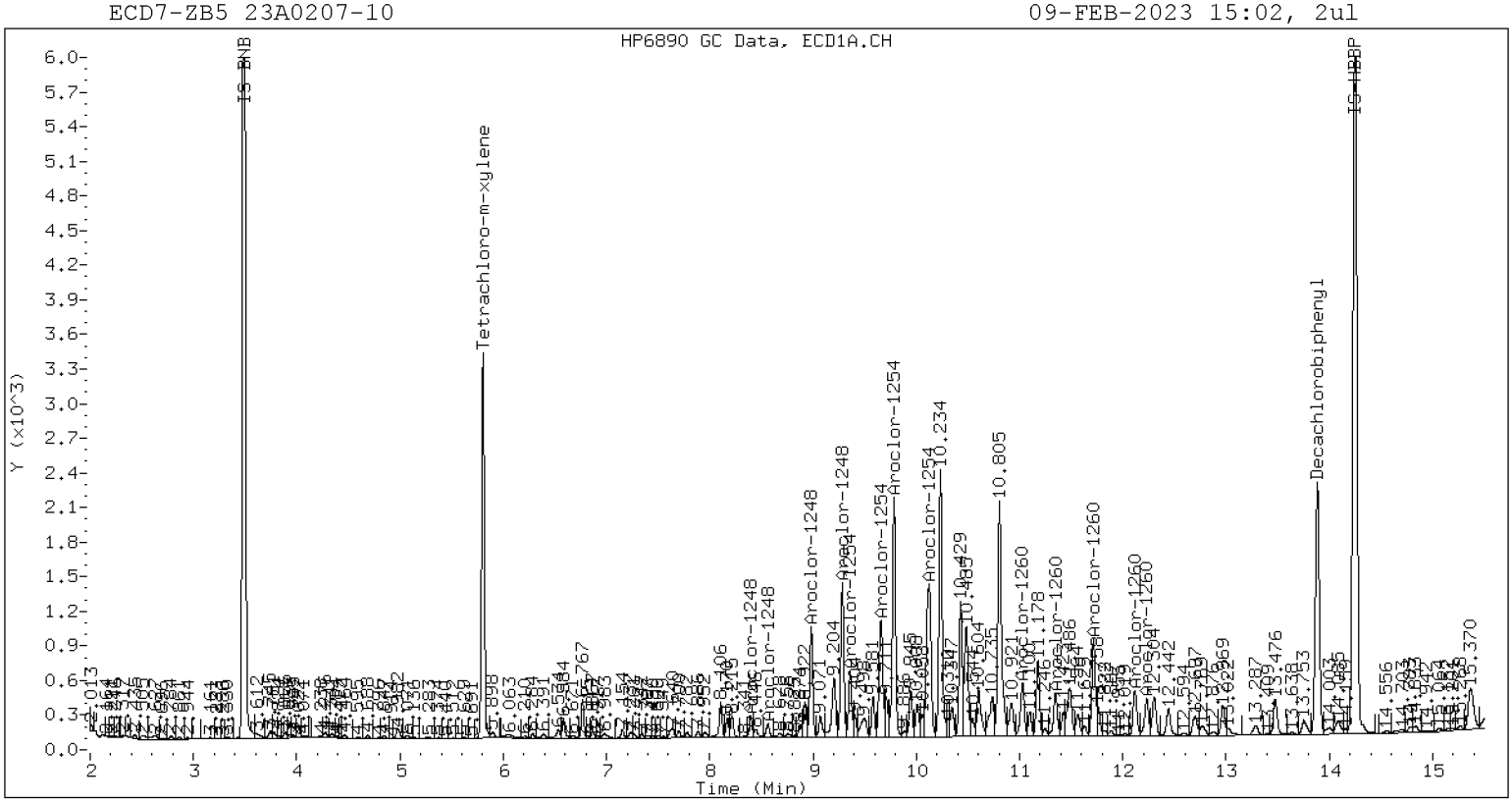
Total PCB Area Col2 (5.785 - 14.015) = 1250846 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

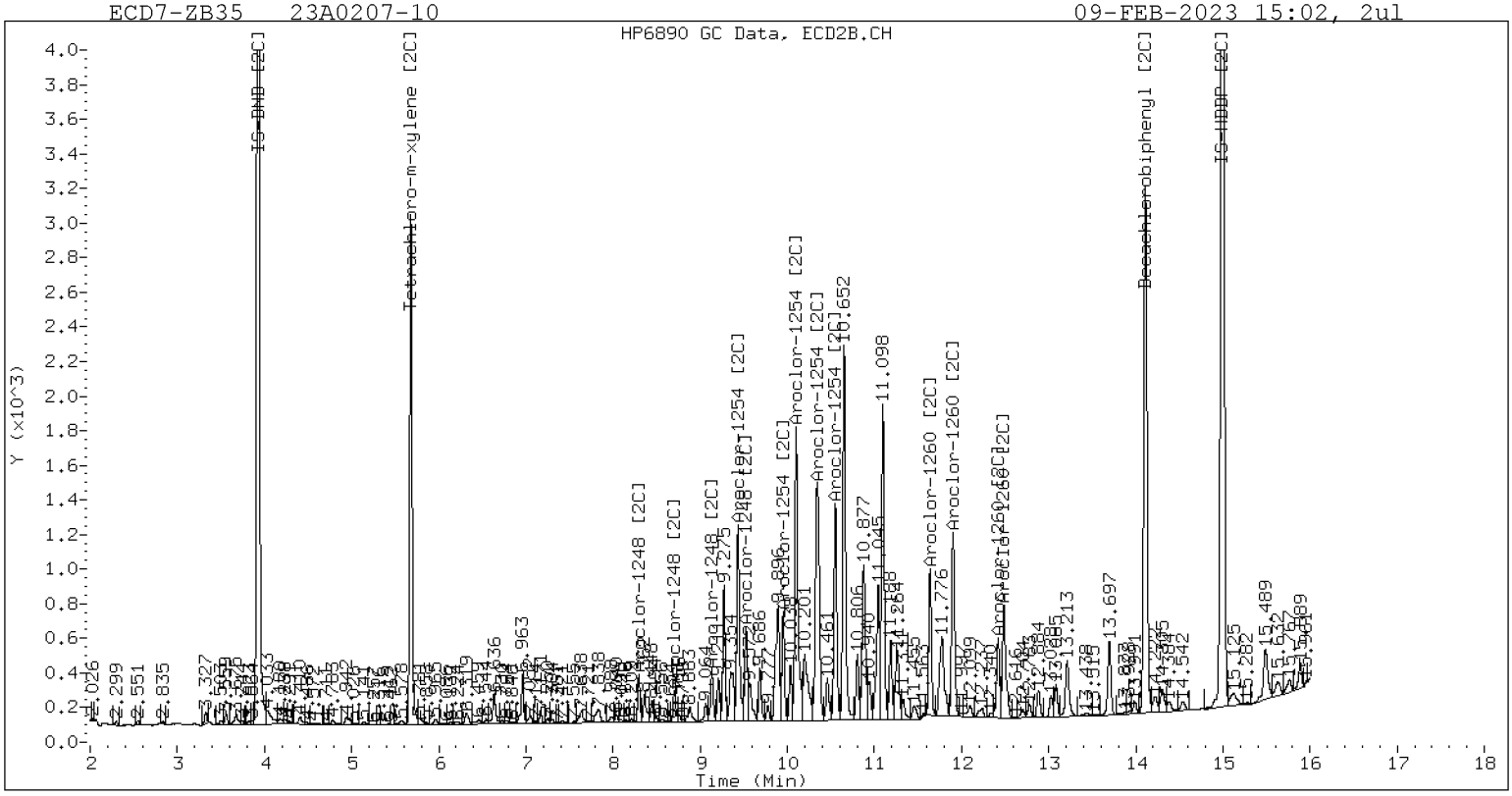
PCB Dual Column Chromatograms

ECD7-ZB5 23A0207-10 09-FEB-2023 15:02, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0207-10 09-FEB-2023 15:02, 2ul

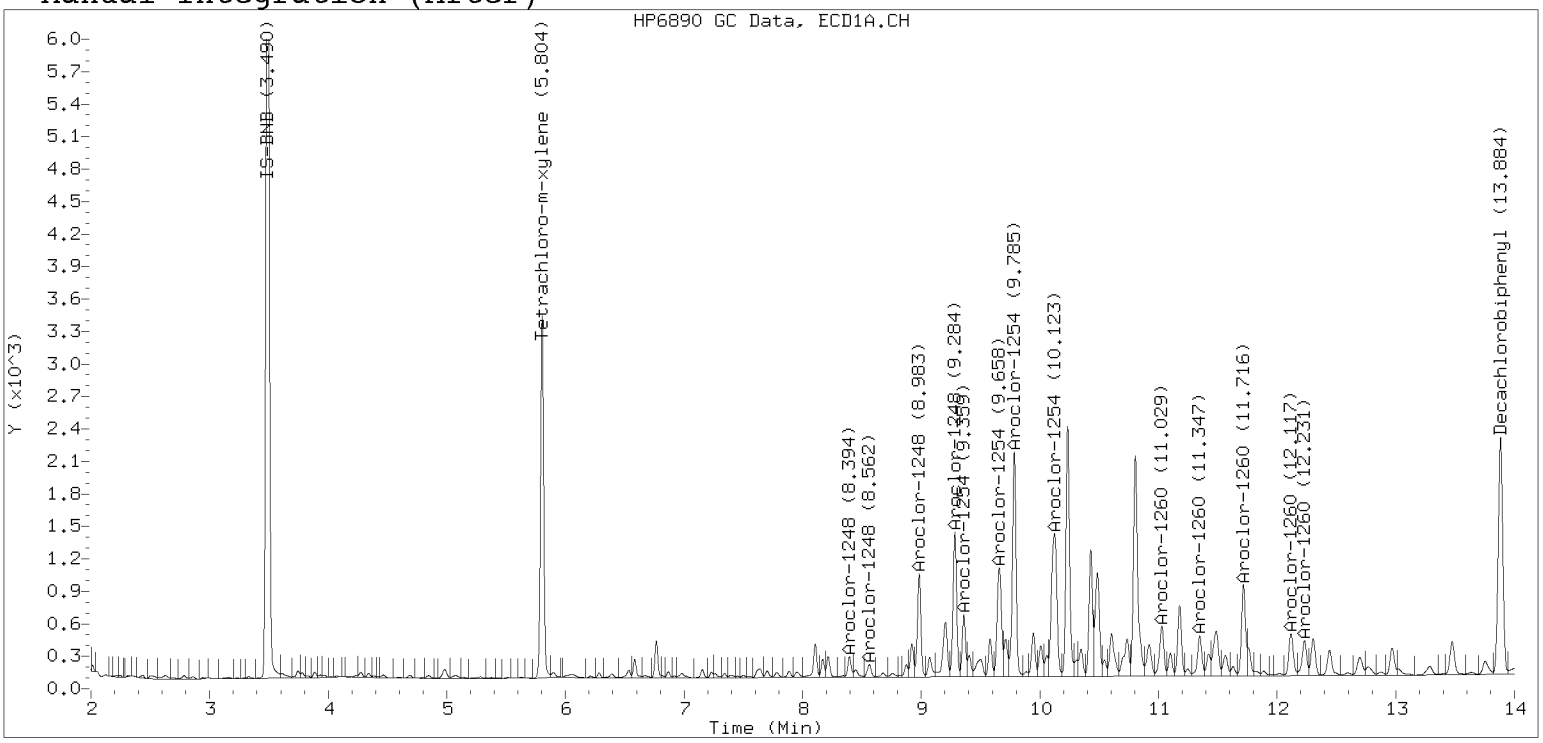


ZB-35 Manual Integration: YES

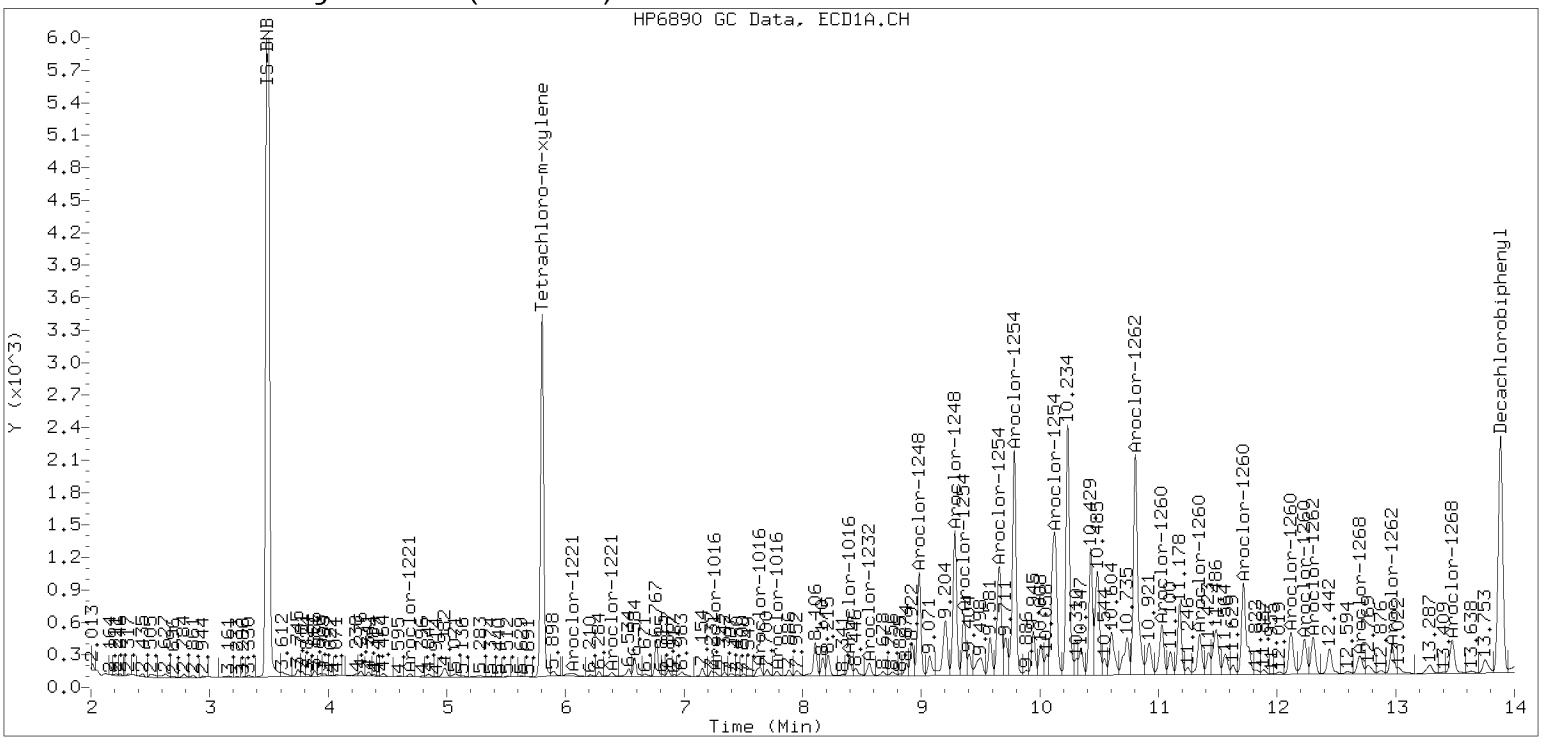
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230209.b/02092309ECD7.D Injection Date: 09-FEB-2023 15:02

Manual Integration (After)



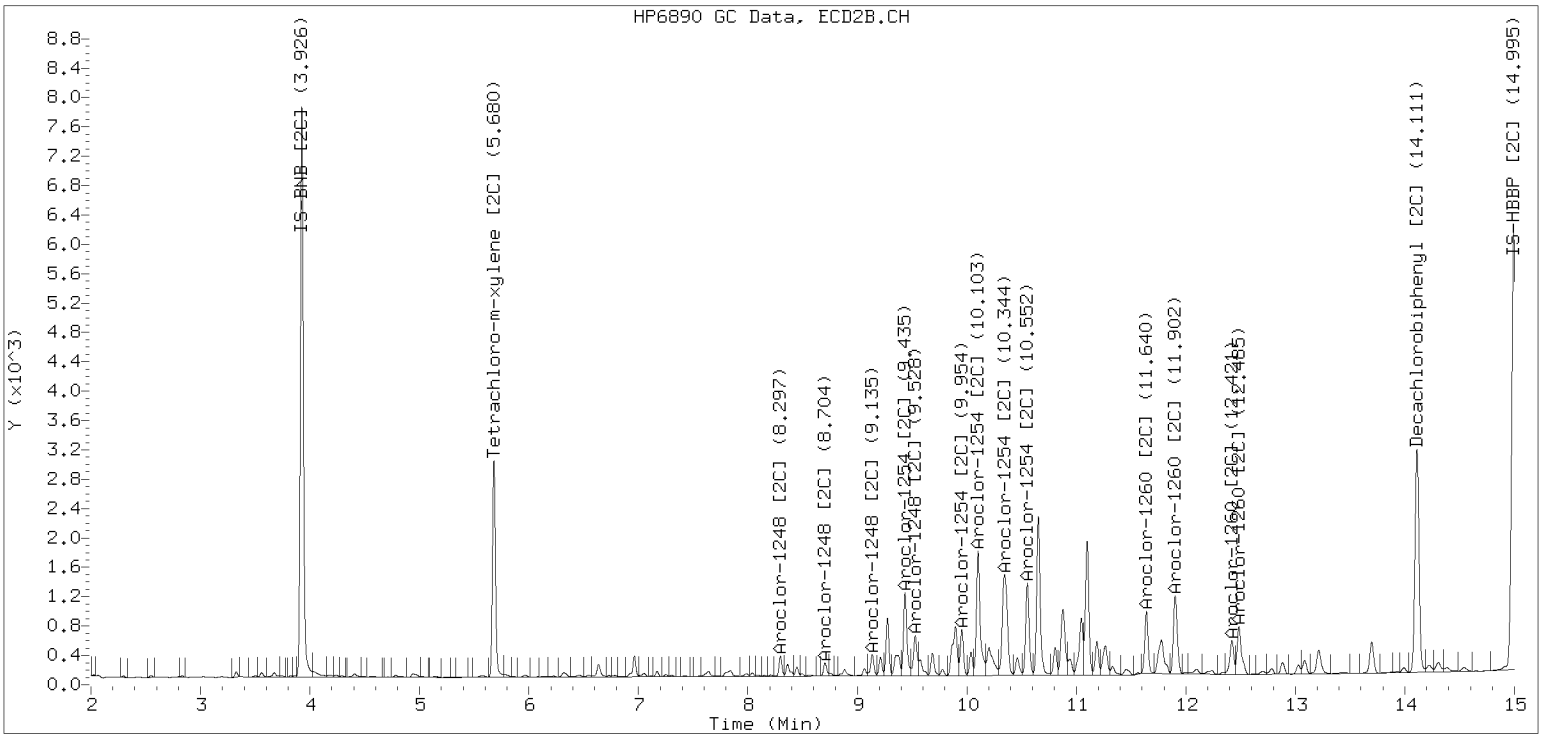
Processed Integration (Before)



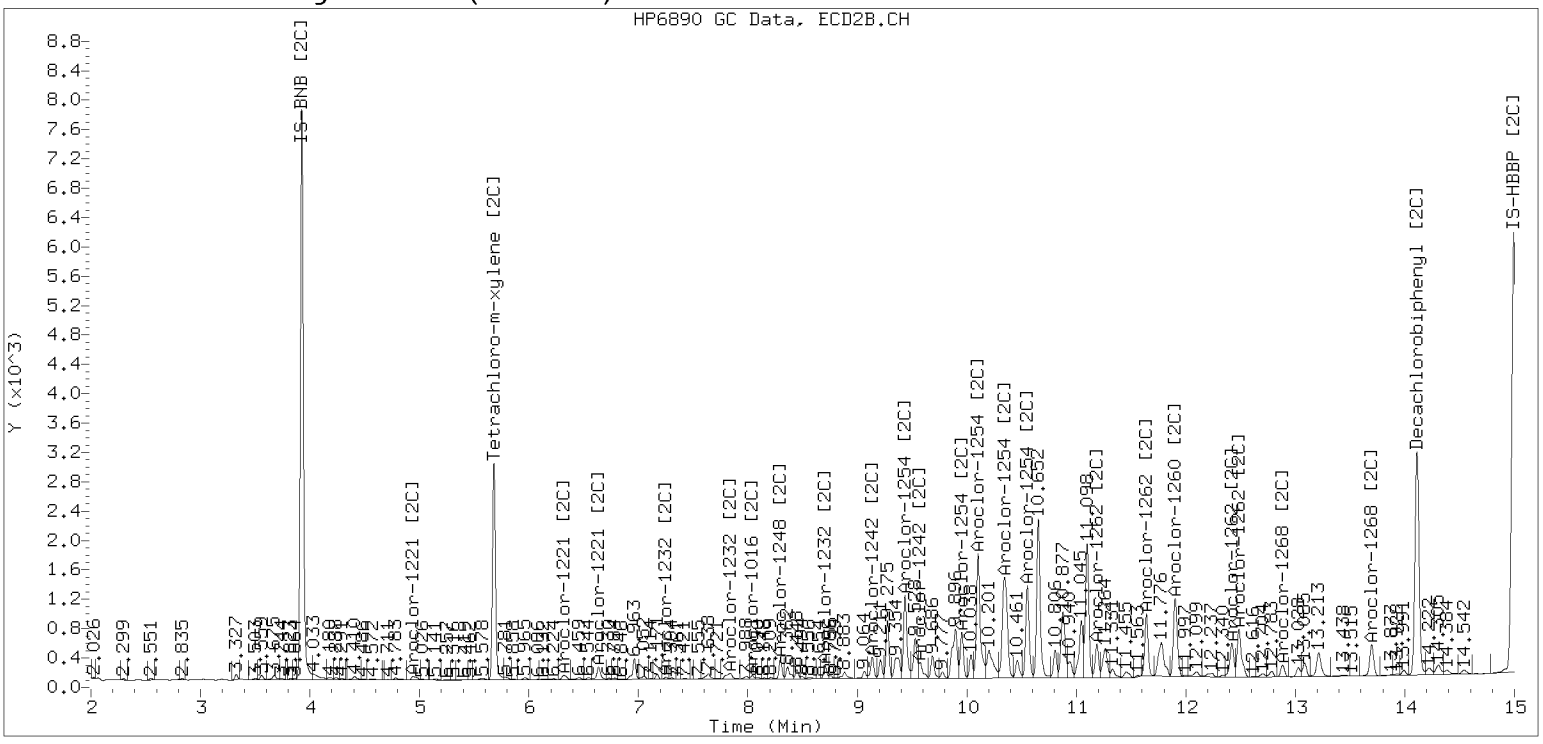
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230209.b/230209.b/02092309ECD7.D Injection Date: 09-FEB-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1085

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0207-11 A	File ID:	02092310ECD7.D
Sampled:	01/11/23 12:34	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 15:23
% Solids:	47.76	Preparation:	EPA 3546 (Microwave)	Initial/Final:	26.19 g Wet / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0148	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	25.7	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	41.6	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	30.8	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9947*	*5.30*	*66.3*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9947*	*4.78*	*59.7*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9947*	*5.20*	*65.0*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9947*	*5.51*	*68.9*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092310ECD7.D
Data file 2: /230209.b/230209.b/02092310ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0207-11
Client ID:
Injection Date: 09-FEB-2023 15:23
Report Date: 02/10/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.803	-0.006	125100	5.680	-0.005	117699	23.9	27.5	14.2	Tetrachloro-m-xylene
13.884	-0.007	99586	14.112	-0.003	137855	26.5	26.0	2.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	370378	-26.4
Hexabromobiphenyl	647433	350937	-45.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	316067	-6.2
Hexabromobiphenyl	382032	334060	-12.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.394	-0.012	20218	109.1	1	8.297	-0.006	21519	150.6
Aroclor-1248	2	8.562	-0.018	17247	73.0	2	8.703	-0.007	18545	120.6
Aroclor-1248	3	8.980	-0.019	47955	106.1	3	9.136	-0.016	26411	140.6
Aroclor-1248	4	9.284	-0.010	50345	225.0	4	9.531	-0.045	23691	101.9
	Total Col1Ave (4 peaks):				128.3	Total Col2Ave (4 peaks):				128.4 RPD = 0
	Corrected Ave (3 peaks):				96.1	Corrected Ave (3 peaks):				121.0 RPD = 23
Aroclor-1254	1	9.284	-0.015	50345	133.4	1	9.435	-0.009	44062	192.2
Aroclor-1254	2	9.359	-0.019	20279	125.8	2	9.953	-0.011	22920	123.7
Aroclor-1254	3	9.657	-0.012	43881	181.4	3	10.102	-0.014	74670	184.7
Aroclor-1254	4	9.784	-0.024	73017	154.1	4	10.349	-0.017	100276	248.0
Aroclor-1254	5	10.118	-0.060	51127	165.9	5	10.552	-0.012	65931	292.8
	Total Col1Ave (5 peaks):				152.1	Total Col2Ave (5 peaks):				208.3 RPD = 31
	Corrected Ave (4 peaks):				144.8	Corrected Ave (4 peaks):				187.1 RPD = 26
					148.675					
Aroclor-1260	1	11.031	-0.013	28616	145.3	1	11.641	-0.008	35904	149.0
Aroclor-1260	2	11.346	-0.015	23197	114.6	2	11.903	-0.010	73757	121.0
Aroclor-1260	3	11.716	-0.018	71363	133.9	3	12.422	-0.009	31634	208.2
Aroclor-1260	4	12.117	-0.022	35658	129.5	4	12.487	-0.009	54580	138.3
Aroclor-1260	5	12.233	-0.011	19324	161.0	NS	---			----
	Total Col1Ave (5 peaks):				136.9	Total Col2Ave (4 peaks):				154.1 RPD = 12
	Corrected Ave (4 peaks):				130.8	Corrected Ave (3 peaks):				136.1 RPD = 4
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 1435604 Col1 Total PCB = 0.3 ppm*

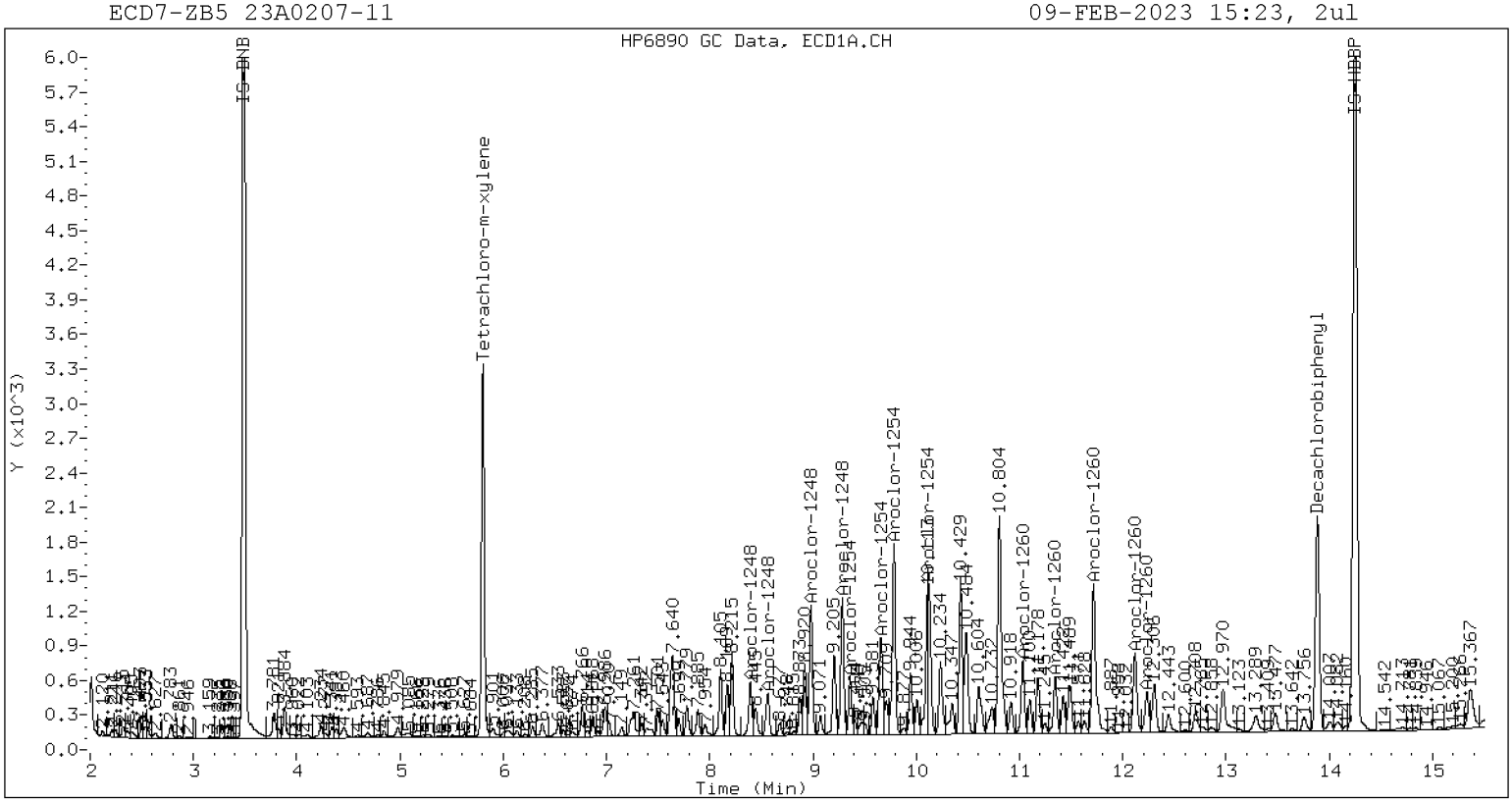
Total PCB Area Col2 (5.785 - 14.015) = 1452104 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

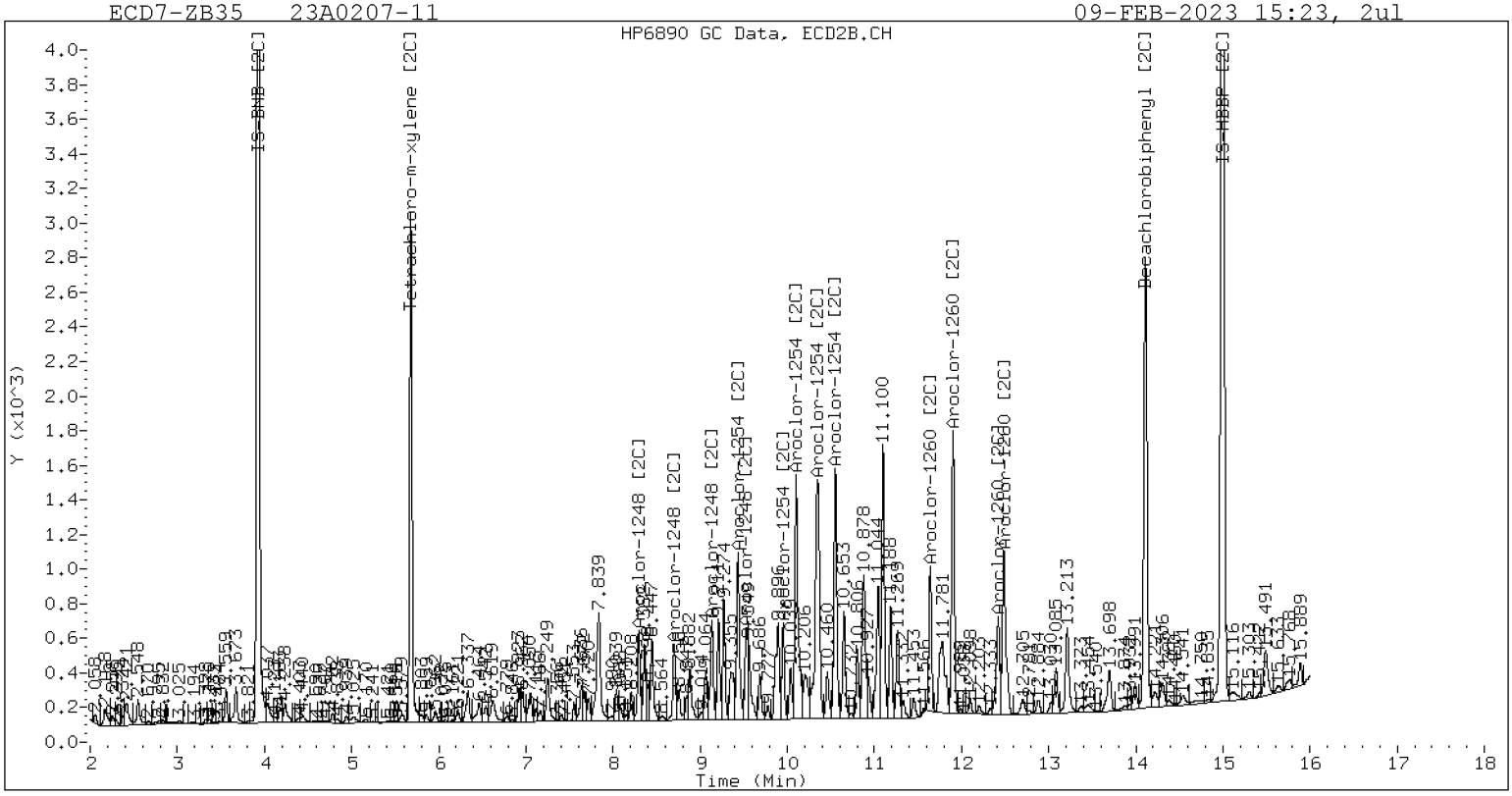
PCB Dual Column Chromatograms

ECD7-ZB5 23A0207-11 09-FEB-2023 15:23, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0207-11 09-FEB-2023 15:23, 2ul

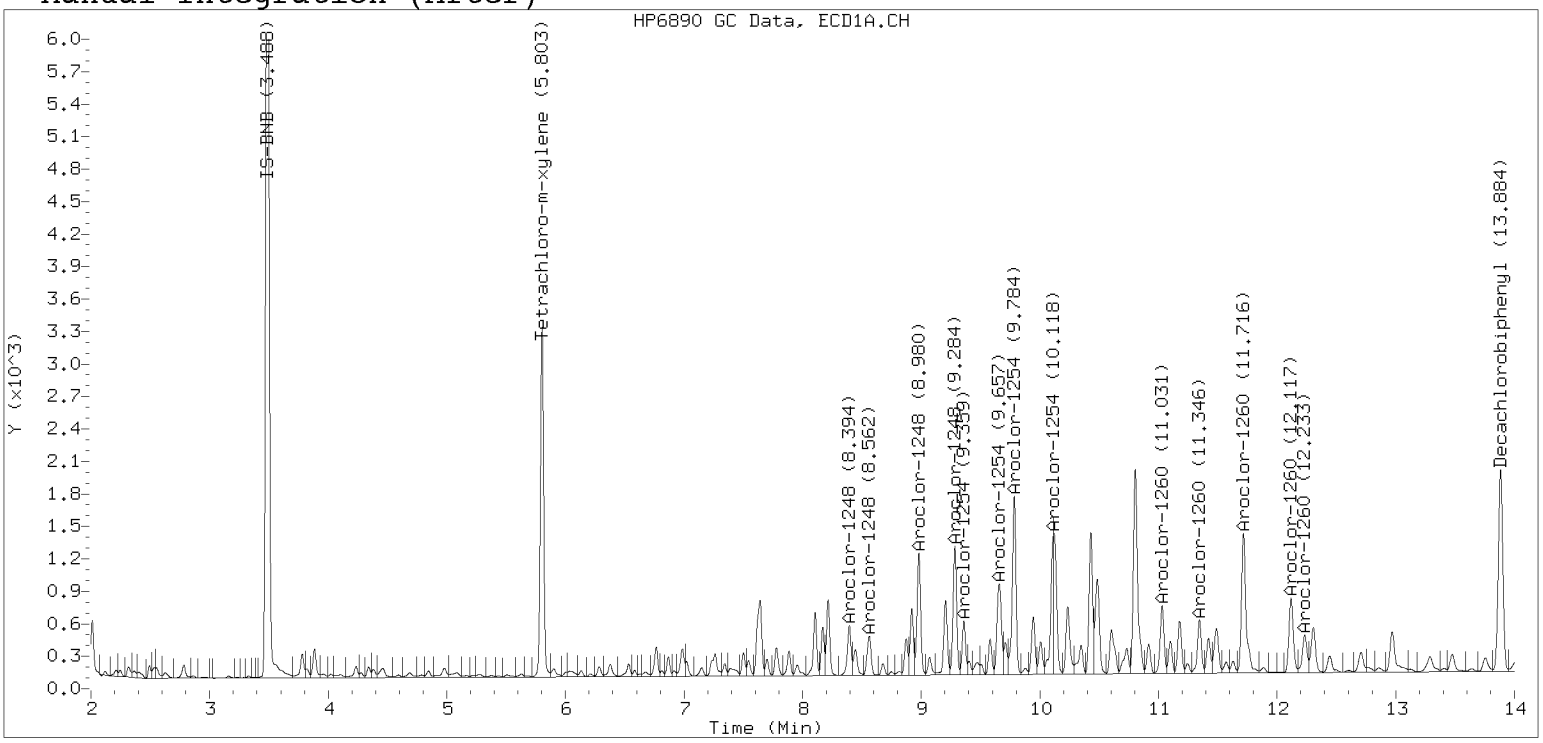


ZB-35 Manual Integration: YES

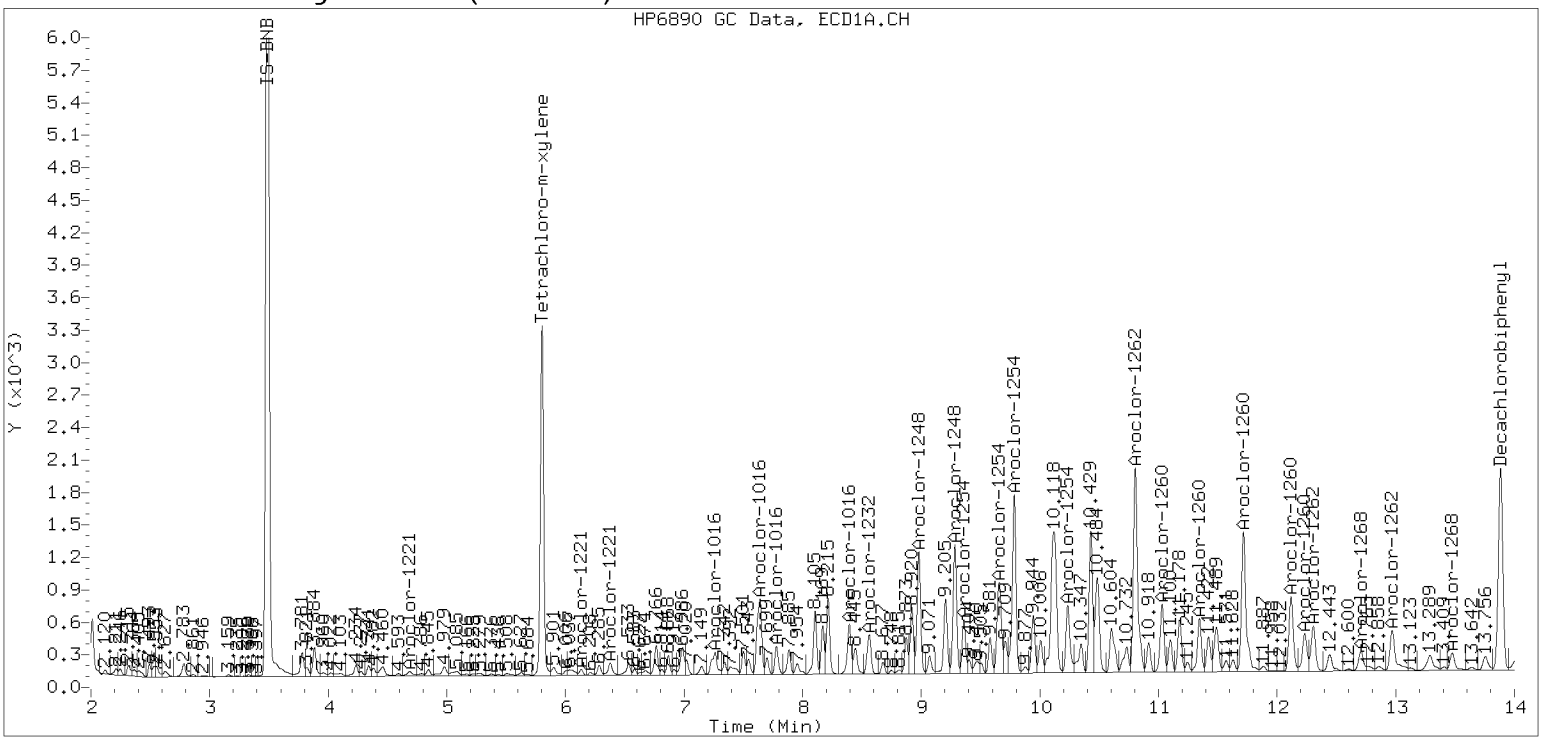
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230209.b/02092310ECD7.D Injection Date: 09-FEB-2023 15:23

Manual Integration (After)



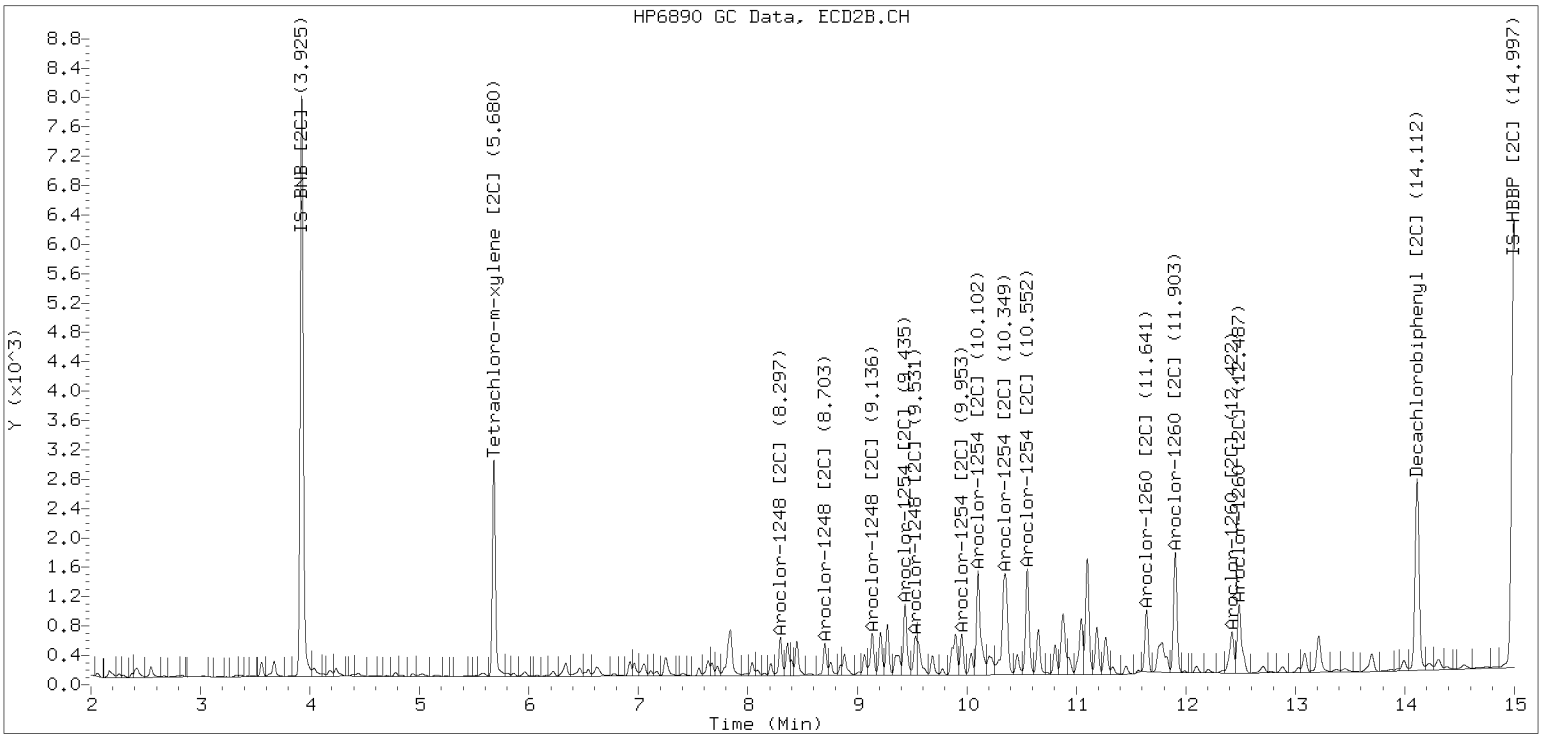
Processed Integration (Before)



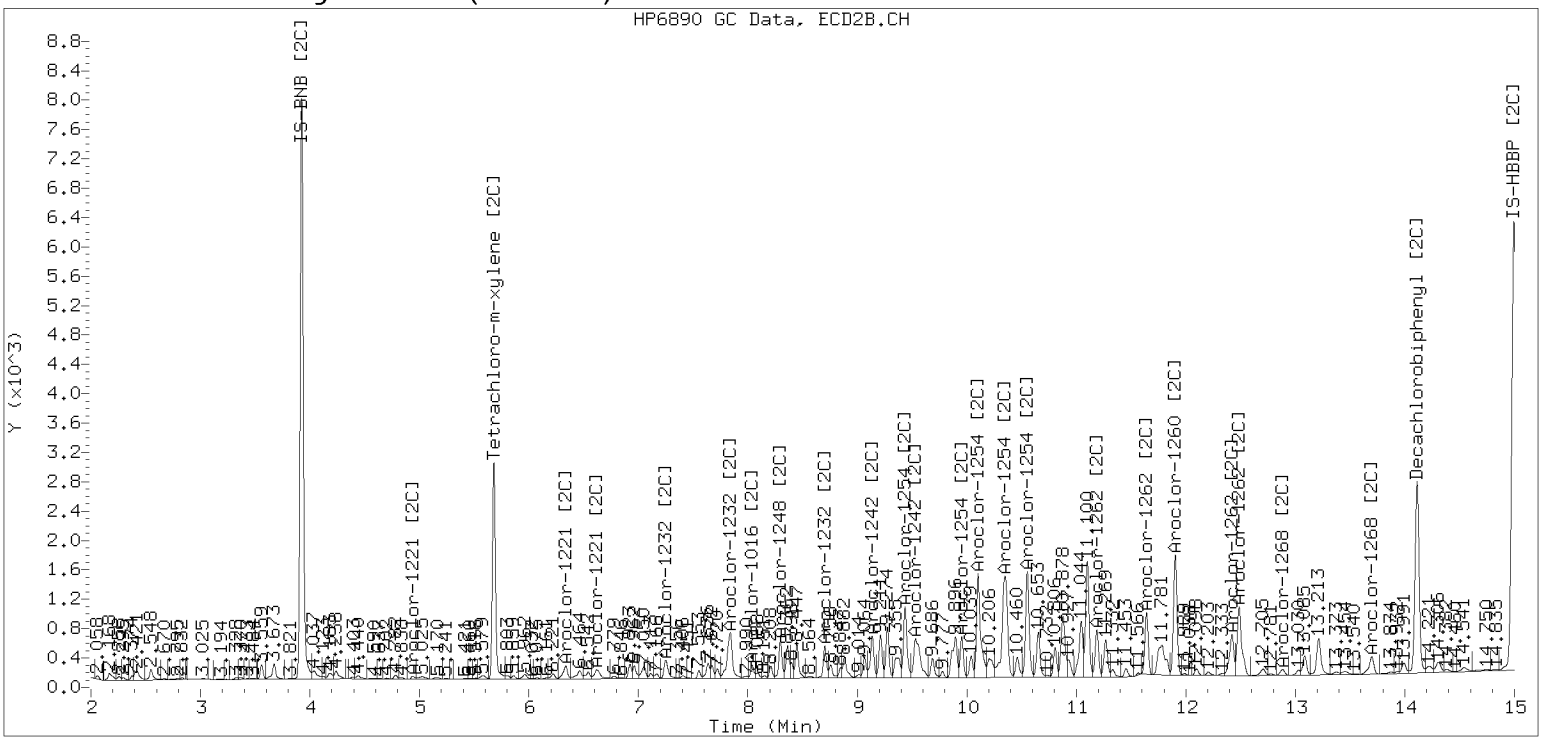
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230209.b/230209.b/02092310ECD7.D Injection Date: 09-FEB-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1069

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0207-12 A	File ID:	02092311ECD7.D
Sampled:	01/11/23 13:22	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 15:44
% Solids:	77.00	Preparation:	EPA 3546 (Microwave)	Initial/Final:	16.23 g Wet / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0148	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	15.0	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	29.1	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	31.1	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*8.0019*	*5.94*	*74.3*	*40 - 126*	
Tetrachlorometaxylene	*1*	*8.0019*	*5.54*	*69.2*	*44 - 120*	
Decachlorobiphenyl	*2*	*8.0019*	*5.32*	*66.5*	*40 - 126*	
Tetrachlorometaxylene	*2*	*8.0019*	*6.12*	*76.5*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092311ECD7.D
Data file 2: /230209.b/230209.b/02092311ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0207-12
Client ID:
Injection Date: 09-FEB-2023 15:44
Report Date: 02/10/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.004	143521	5.682	-0.004	134704	27.7	30.6	10.0	Tetrachloro-m-xylene
13.885	-0.007	124800	14.114	-0.001	152390	29.7	26.6	11.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	366843	-27.1
Hexabromobiphenyl	647433	392752	-39.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	325677	-3.3
Hexabromobiphenyl	382032	361072	-5.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.395	-0.011	11363	61.9	1	8.298	-0.004	15681	106.5
Aroclor-1248	2	8.563	-0.017	8591	36.7	2	8.704	-0.006	10151	64.1
Aroclor-1248	3	8.984	-0.015	32391	72.3	3	9.138	-0.014	12734	65.8
Aroclor-1248	4	9.286	-0.008	33995	153.4	4	9.530	-0.046	15227	63.6
		Total Col1Ave (4 peaks):			81.1		Total Col2Ave (4 peaks):			75.0 RPD = 8
		Corrected Ave (3 peaks):			57.0		Corrected Ave (3 peaks):			64.5 RPD = 12
Aroclor-1254	1	9.286	-0.013	33995	90.9	1	9.437	-0.008	29943	126.7
Aroclor-1254	2	9.361	-0.017	15005	94.0	2	9.955	-0.009	11377	59.6
Aroclor-1254	3	9.662	-0.008	27138	113.3	3	10.104	-0.012	51749	124.2
Aroclor-1254	4	9.786	-0.022	47900	102.0	4	10.357	-0.010	66337	159.2
Aroclor-1254	5	10.111	-0.066	69013	226.1	5	10.553	-0.010	59546	256.6
		Total Col1Ave (5 peaks):			125.3		Total Col2Ave (5 peaks):			145.3 RPD = 15
		Corrected Ave (4 peaks):			100.1		Corrected Ave (4 peaks):			117.4 RPD = 16
Aroclor-1260	1	11.032	-0.011	36911	167.5	1	11.643	-0.007	38406	147.4
Aroclor-1260	2	11.348	-0.012	31571	139.4	2	11.904	-0.009	97948	148.6
Aroclor-1260	3	11.719	-0.015	76179	127.7	3	12.395	-0.036	166385	1012.9
Aroclor-1260	4	12.119	-0.021	54318	176.3	4	12.487	-0.009	72909	170.9
Aroclor-1260	5	12.234	-0.010	24646	183.5	NS	---			----
		Total Col1Ave (5 peaks):			158.9		Total Col2Ave (4 peaks):			370.0 RPD = 80*
		Corrected Ave (4 peaks):			152.7		Corrected Ave (3 peaks):			155.7 RPD = 2
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.909 - 13.792) = 1635224 Col1 Total PCB = 0.4 ppm*

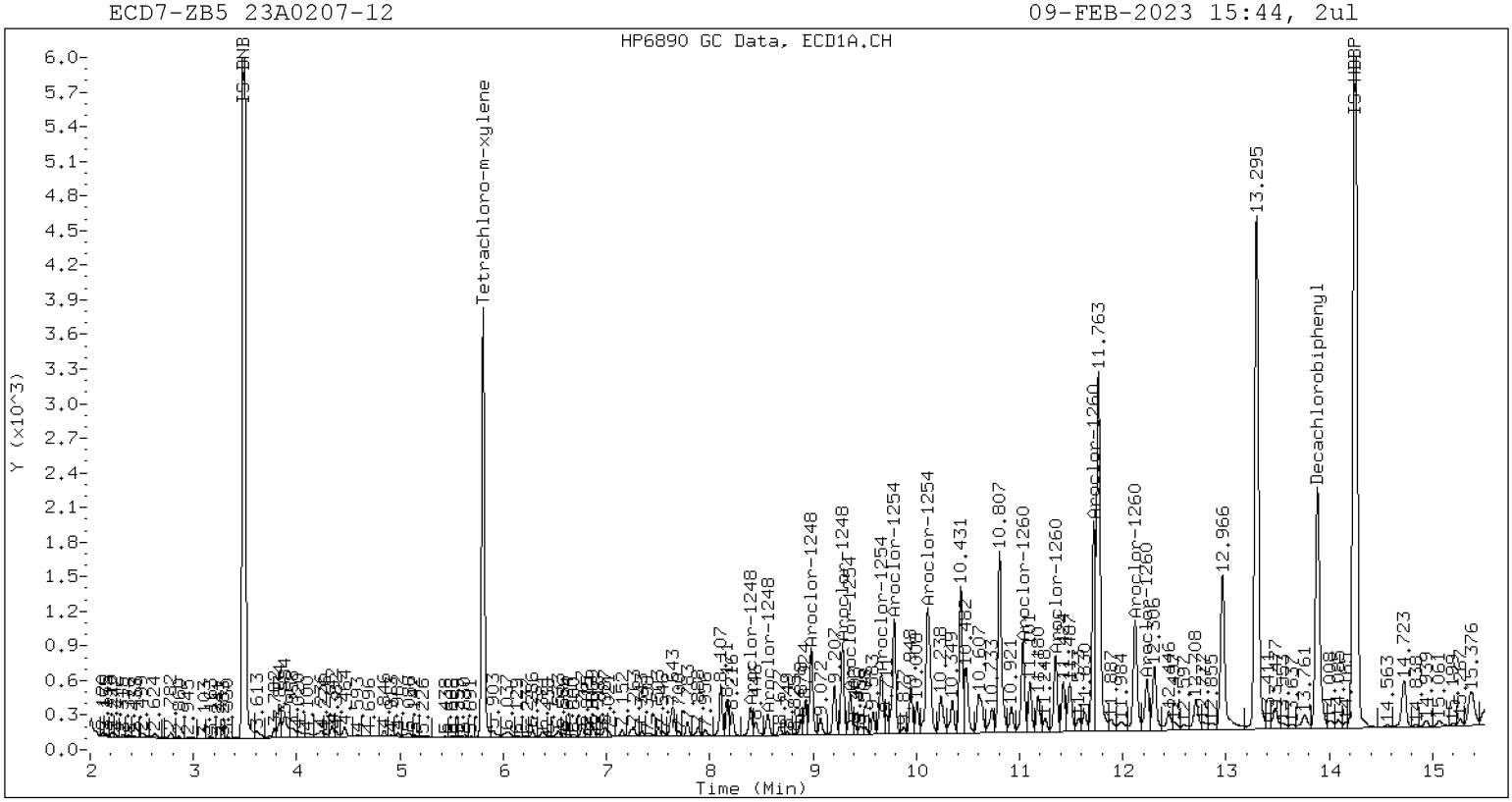
Total PCB Area Col2 (5.785 - 14.015) = 1302533 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

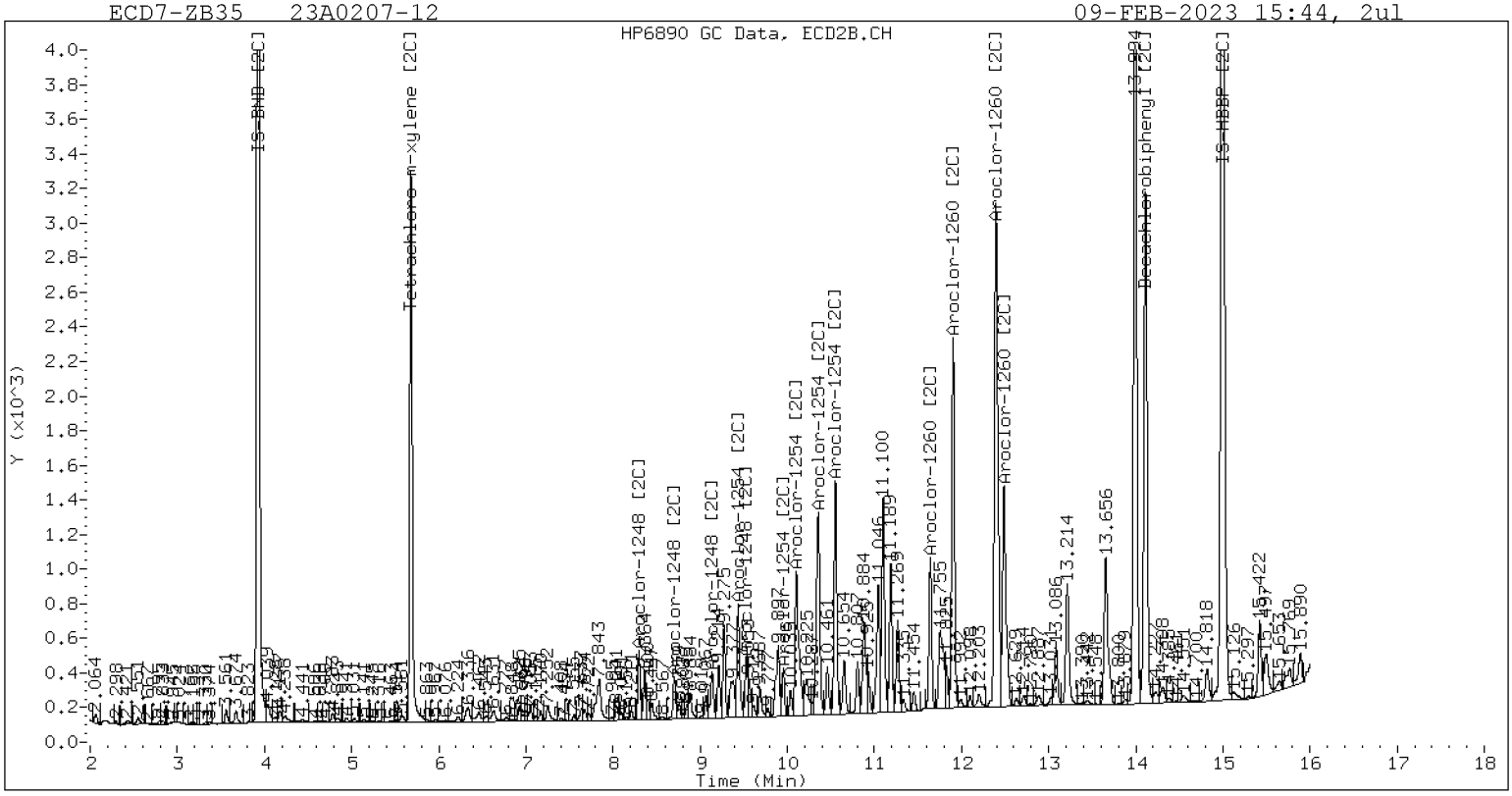
PCB Dual Column Chromatograms

ECD7-ZB5 23A0207-12 09-FEB-2023 15:44, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0207-12 09-FEB-2023 15:44, 2ul

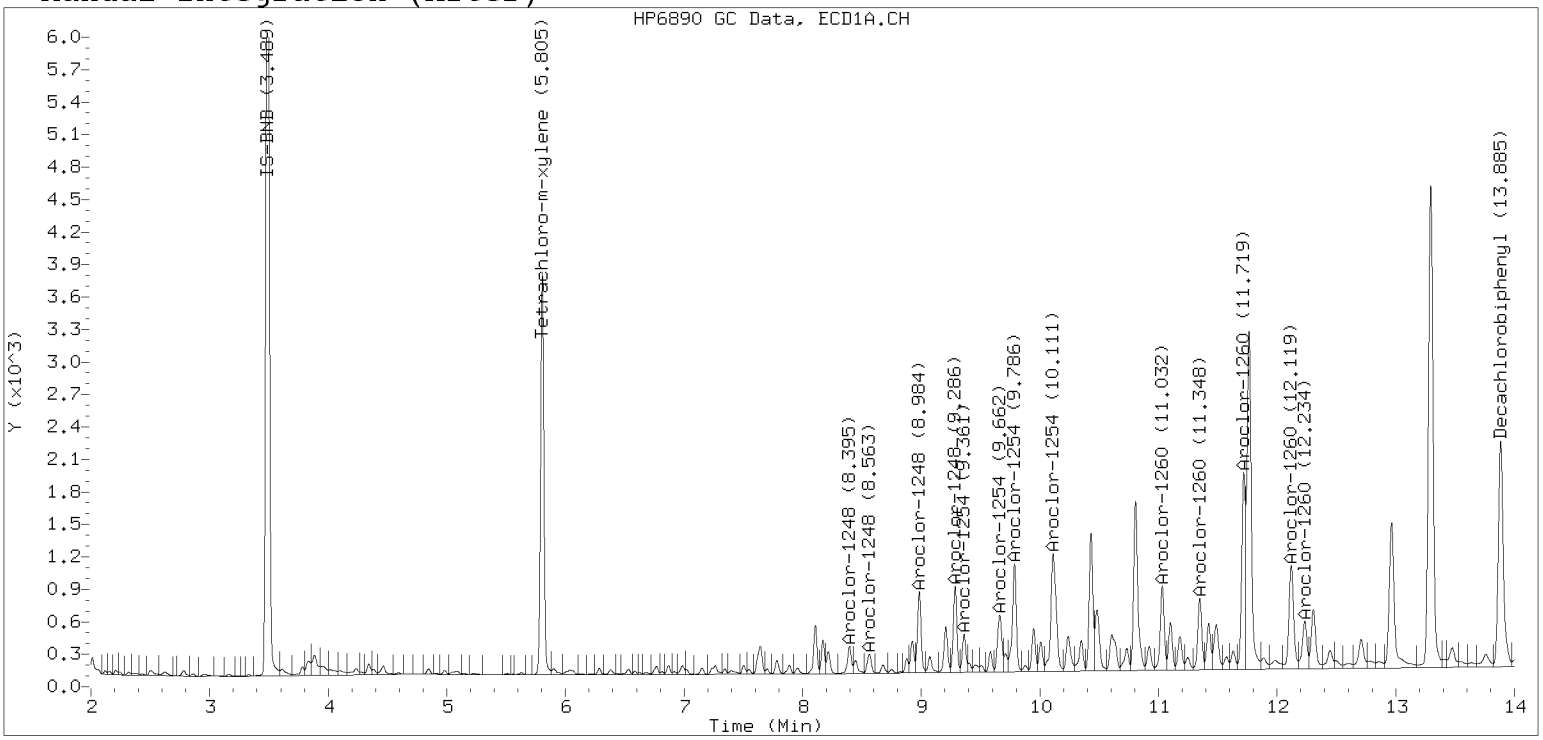


ZB-35 Manual Integration: YES

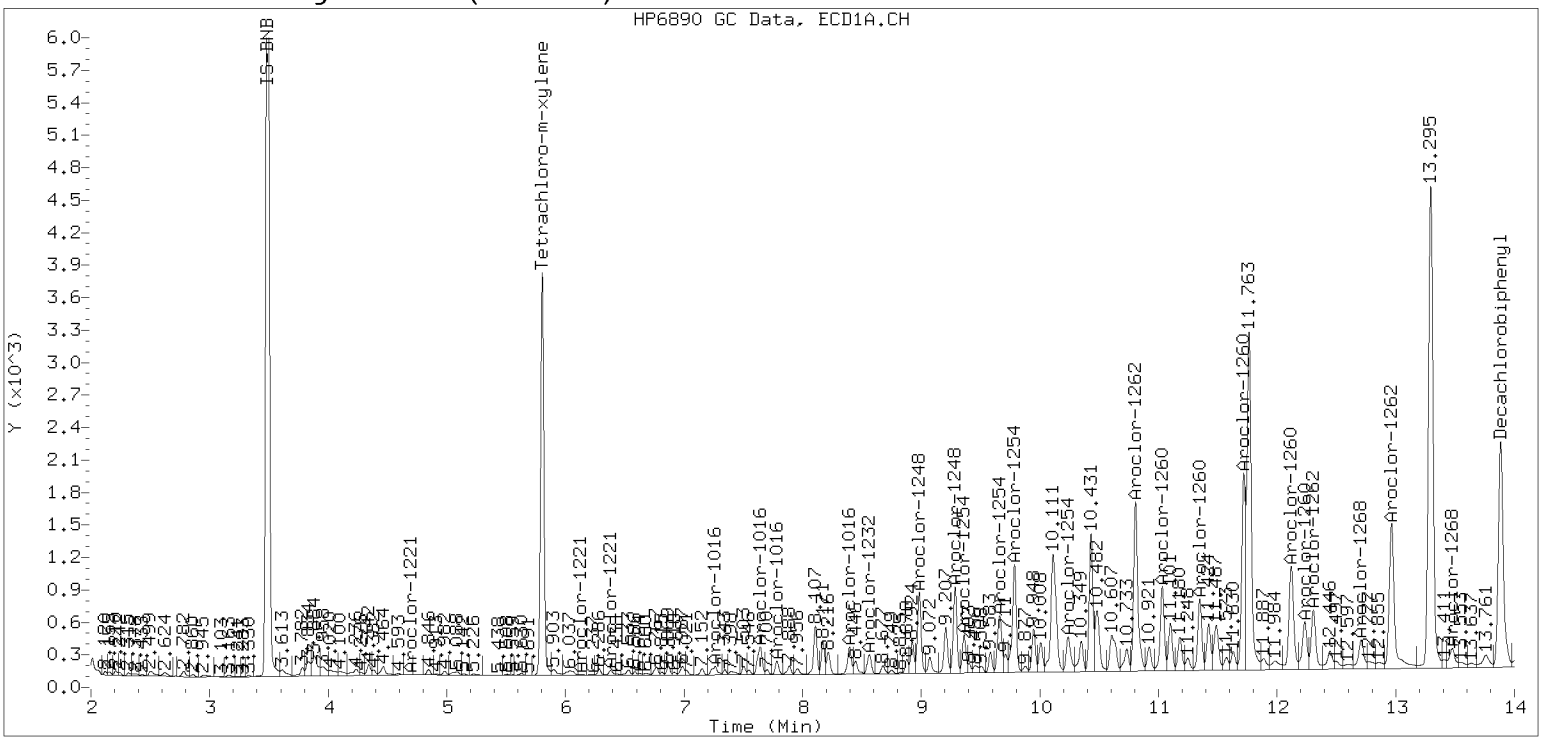
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230209.b/02092311ECD7.D Injection Date: 09-FEB-2023 15:44

Manual Integration (After)



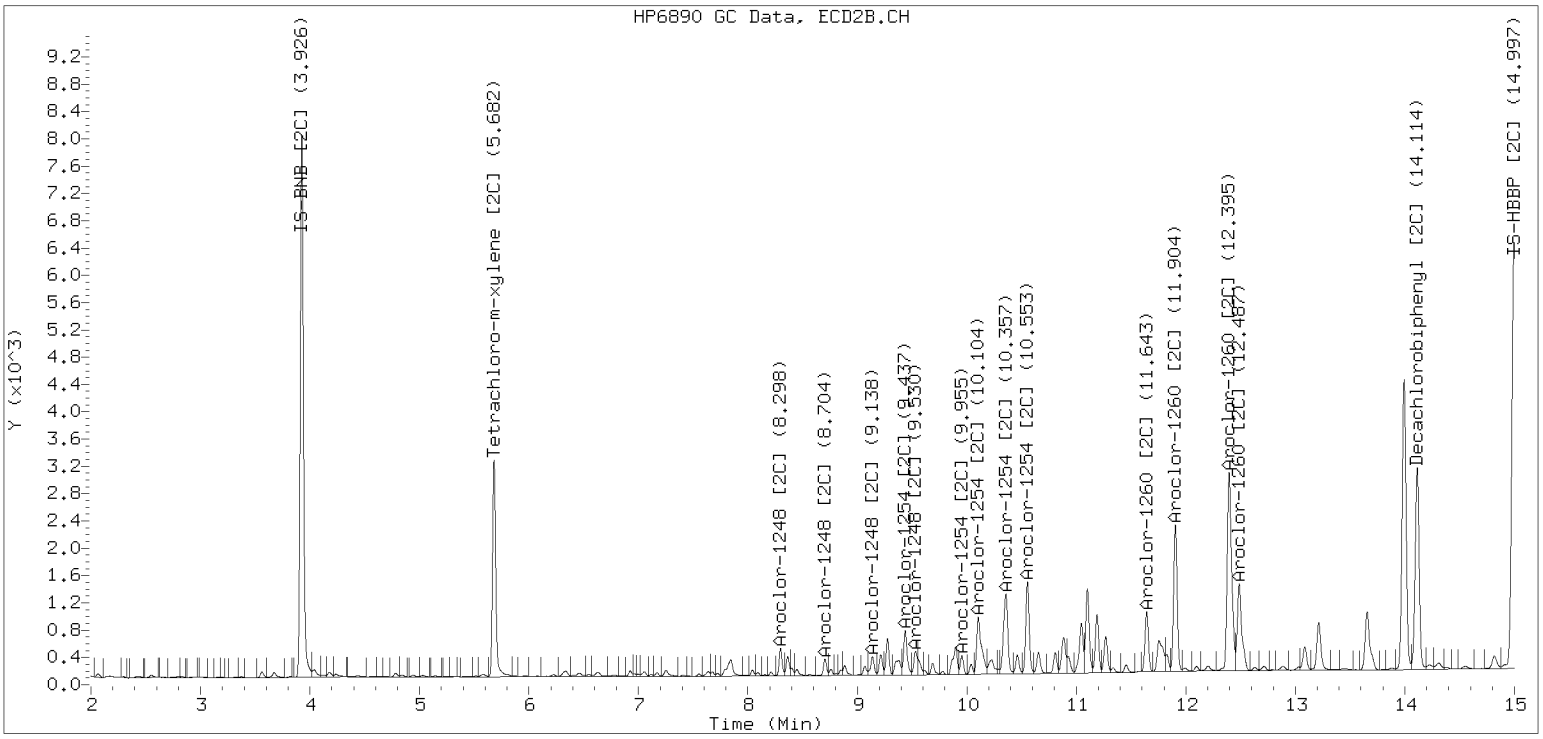
Processed Integration (Before)



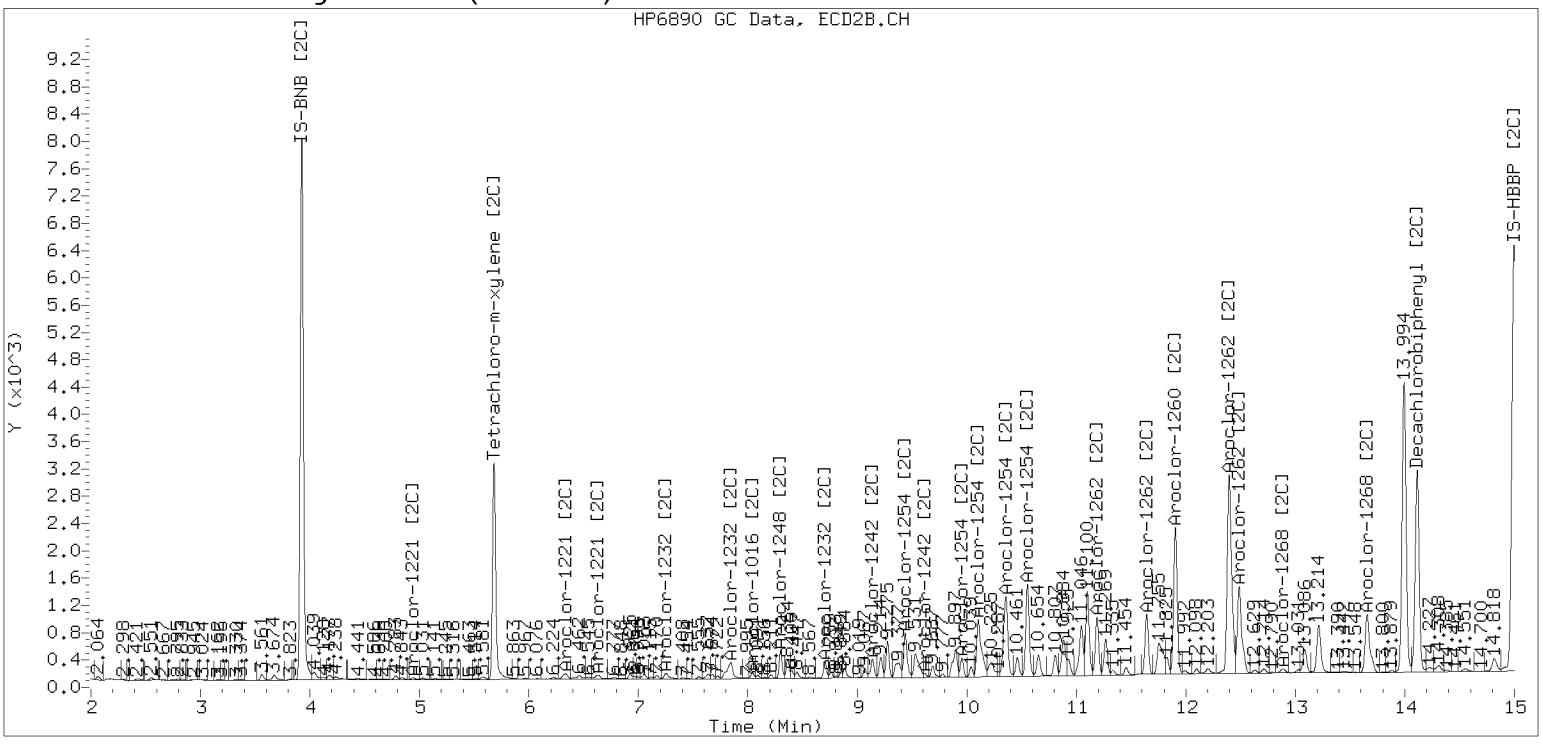
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230209.b/230209.b/02092311ECD7.D Injection Date: 09-FEB-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1058

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0207-13 A	File ID:	02092312ECD7.D
Sampled:	01/11/23 13:09	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 16:05
% Solids:	51.05	Preparation:	EPA 3546 (Microwave)	Initial/Final:	24.49 g Wet / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0148	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	28.5	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	54.2	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	49.9	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9986*	*6.02*	*75.3*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9986*	*5.24*	*65.5*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9986*	*5.15*	*64.4*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9986*	*6.01*	*75.1*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092312ECD7.D
Data file 2: /230209.b/230209.b/02092312ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0207-13
Client ID:
Injection Date: 09-FEB-2023 16:05
Report Date: 02/10/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.803	-0.006	137576	5.680	-0.006	129358	26.2	30.0	13.6	Tetrachloro-m-xylene
13.884	-0.008	113830	14.111	-0.004	152387	30.1	25.7	15.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	371377	-26.2
Hexabromobiphenyl	647433	353329	-45.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	318562	-5.4
Hexabromobiphenyl	382032	373018	-2.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.394	-0.011	21315	114.7	1	8.297	-0.006	24432	169.7
Aroclor-1248	2	8.562	-0.018	17811	75.2	2	8.703	-0.007	19599	126.4
Aroclor-1248	3	8.981	-0.018	56110	123.8	3	9.135	-0.017	28878	152.5
Aroclor-1248	4	9.284	-0.010	62257	277.5	4	9.530	-0.046	28510	121.7
		Total Col1Ave (4 peaks):			147.8		Total Col2Ave (4 peaks):			142.6 RPD = 4
		Corrected Ave (3 peaks):			104.6		Corrected Ave (3 peaks):			133.5 RPD = 24
Aroclor-1254	1	9.284	-0.015	62257	164.5	1	9.435	-0.010	52649	227.8
Aroclor-1254	2	9.360	-0.018	25608	158.5	2	9.953	-0.011	27038	144.7
Aroclor-1254	3	9.658	-0.012	53716	221.5	3	10.102	-0.014	93878	230.4
Aroclor-1254	4	9.784	-0.025	87475	184.1	4	10.352	-0.014	126850	311.3
Aroclor-1254	5	10.116	-0.061	62470	202.2	5	10.551	-0.013	100215	441.6
		Total Col1Ave (5 peaks):			186.1		Total Col2Ave (5 peaks):			271.2 RPD = 37
		Corrected Ave (4 peaks):			177.3		Corrected Ave (4 peaks):			228.6 RPD = 25
					182.15					
Aroclor-1260	1	11.031	-0.012	47978	242.0	1	11.640	-0.009	53927	200.4
Aroclor-1260	2	11.345	-0.016	36150	177.4	2	11.902	-0.011	128701	189.0
Aroclor-1260	3	11.716	-0.018	128890	240.3	3	12.420	-0.011	65141	383.9
Aroclor-1260	4	12.117	-0.023	55550	200.4	4	12.486	-0.010	98848	224.3
Aroclor-1260	5	12.231	-0.013	35514	293.9	NS	---			----
		Total Col1Ave (5 peaks):			230.8		Total Col2Ave (4 peaks):			249.4 RPD = 8
		Corrected Ave (4 peaks):			215.0		Corrected Ave (3 peaks):			204.6 RPD = 5
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.909 - 13.792) = 1892214 Col1 Total PCB = 0.4 ppm*

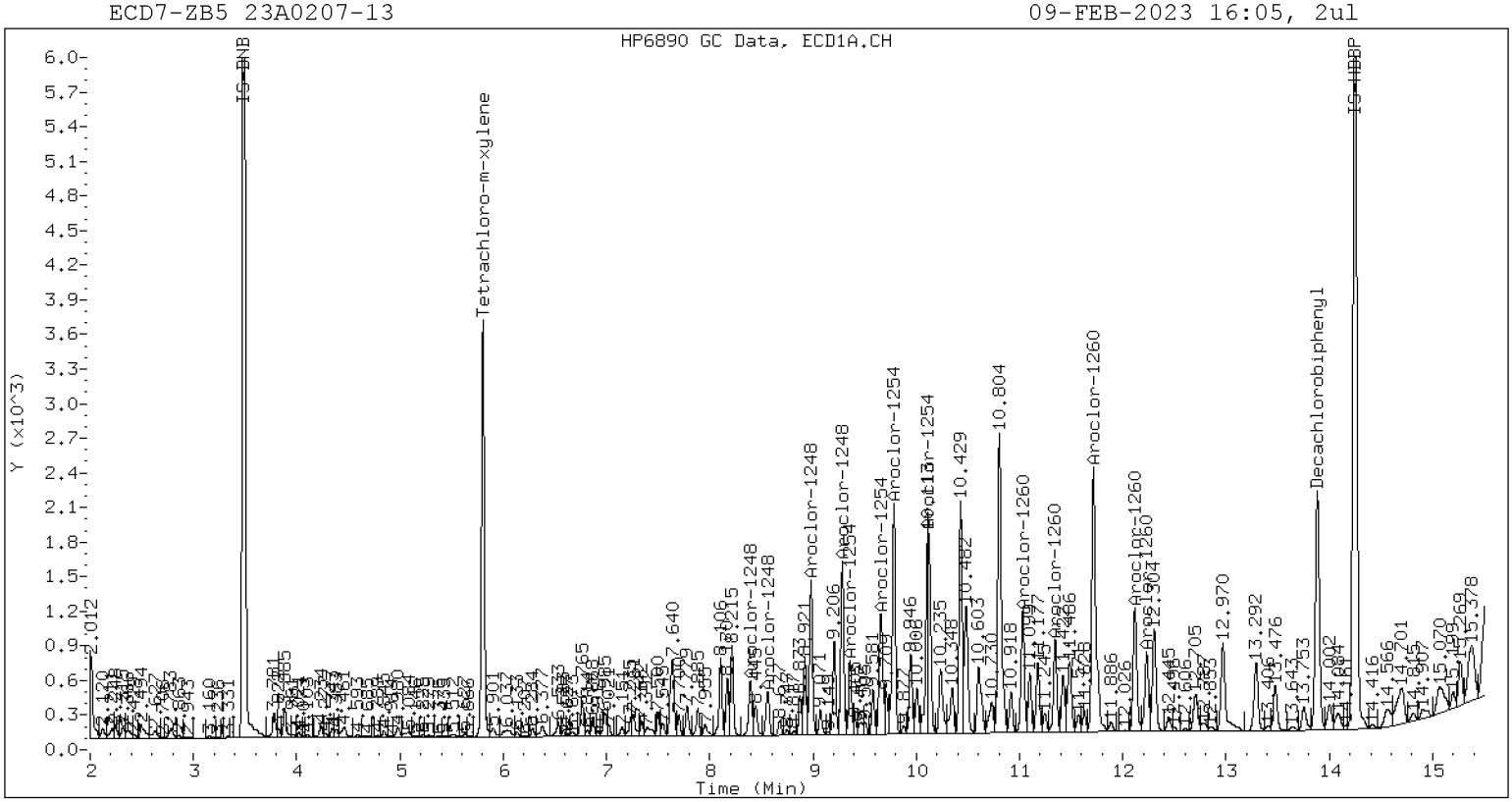
Total PCB Area Col2 (5.785 - 14.015) = 1933433 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

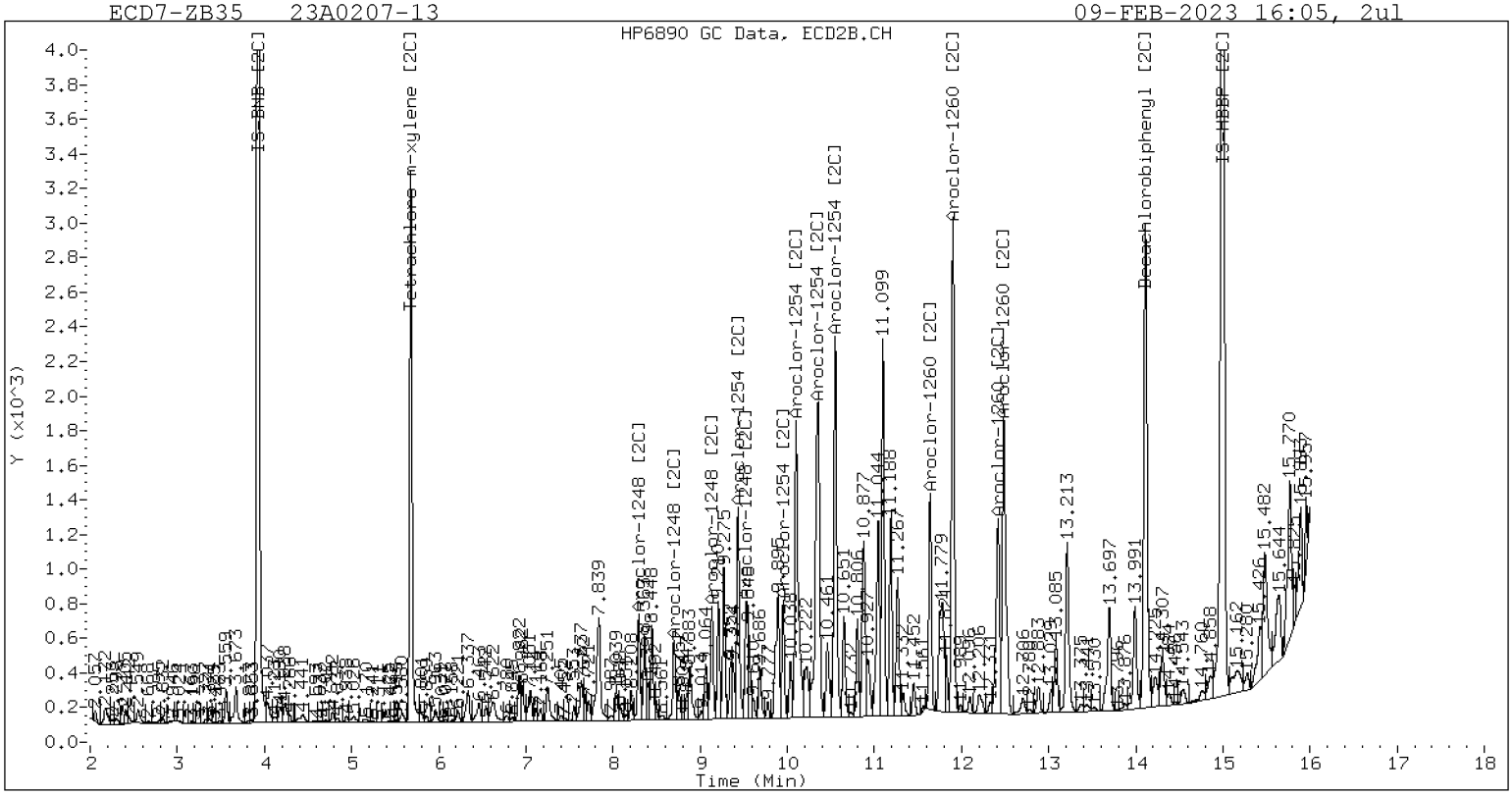
PCB Dual Column Chromatograms

ECD7-ZB5 23A0207-13 09-FEB-2023 16:05, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0207-13 09-FEB-2023 16:05, 2ul

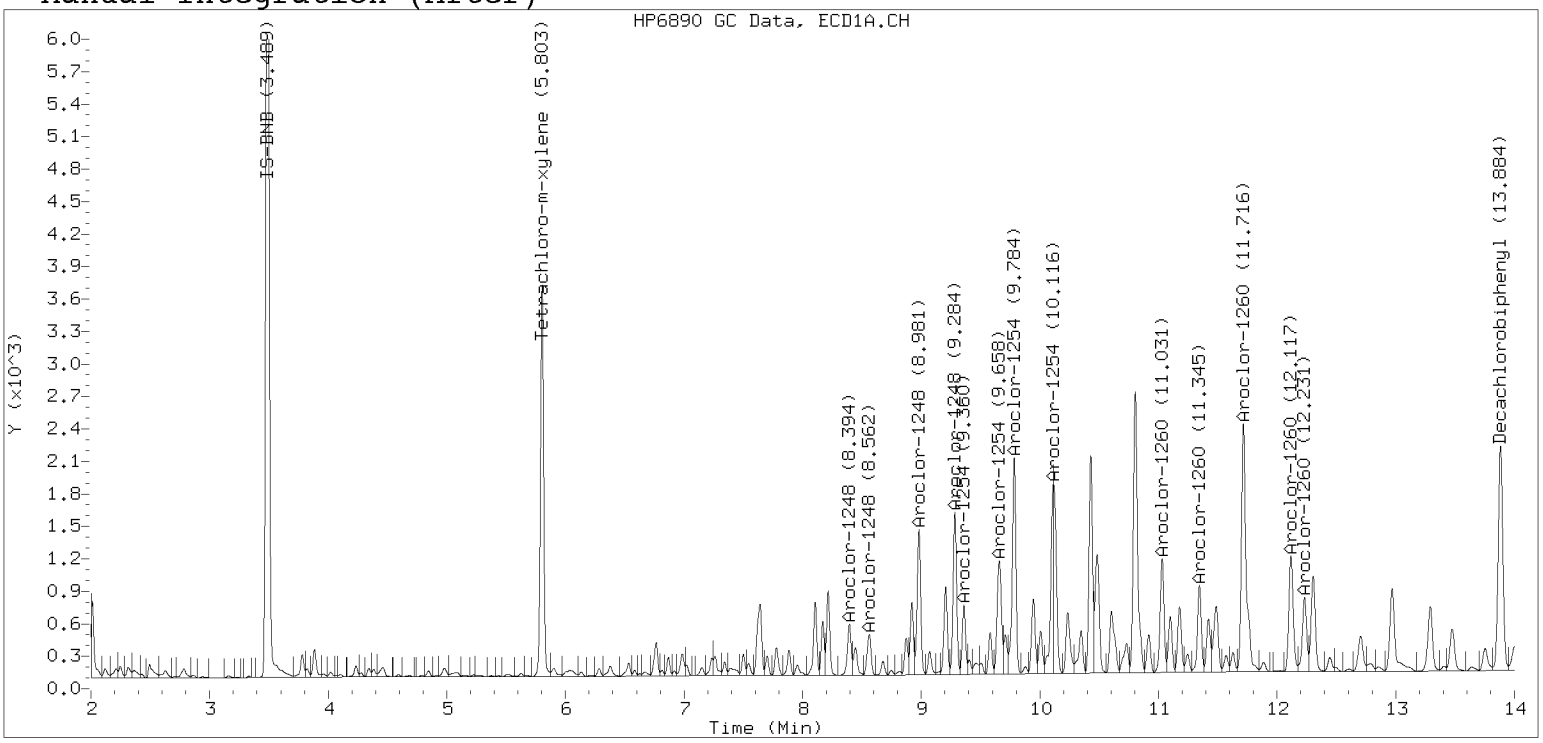


ZB-35 Manual Integration: YES

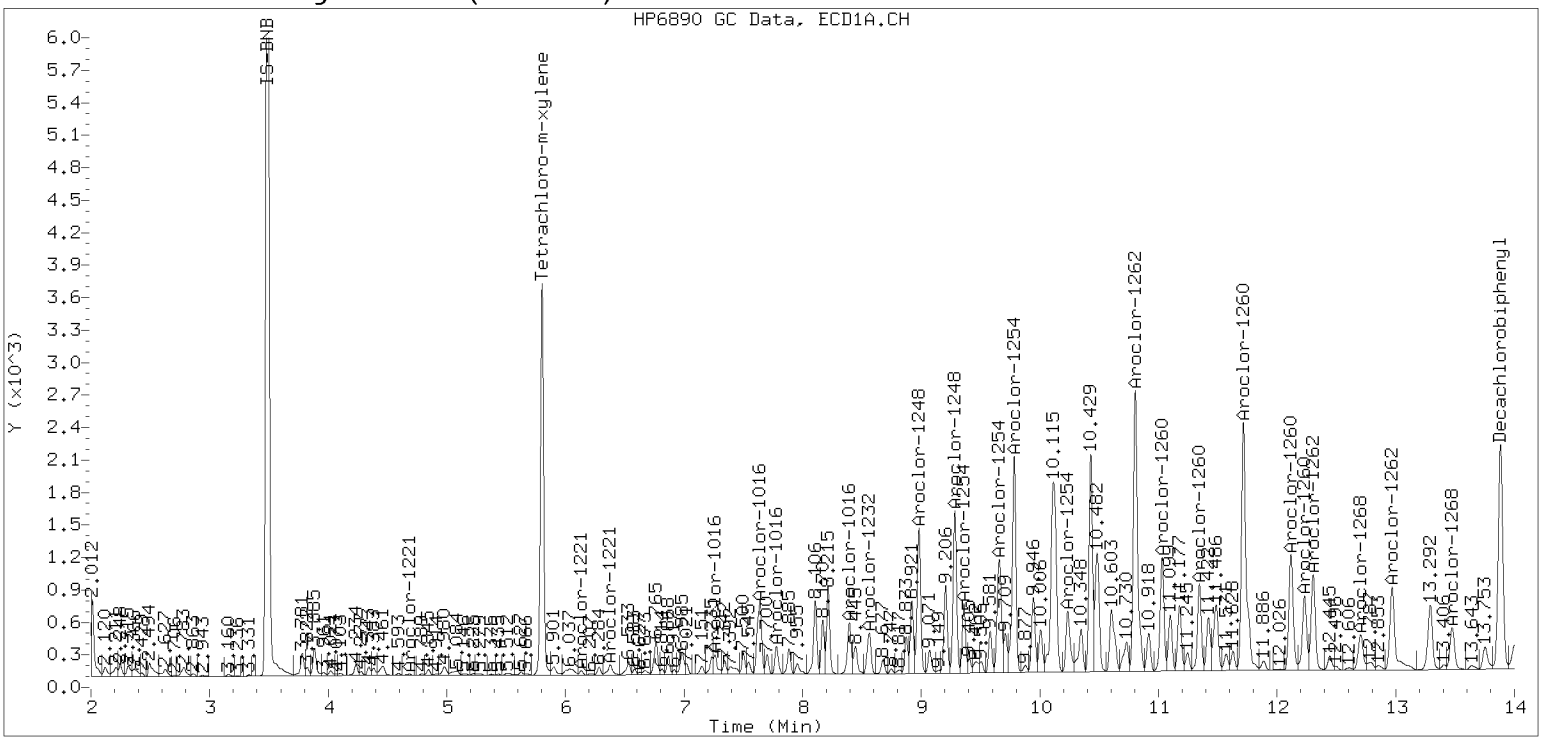
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230209.b/02092312ECD7.D Injection Date: 09-FEB-2023 16:05

Manual Integration (After)



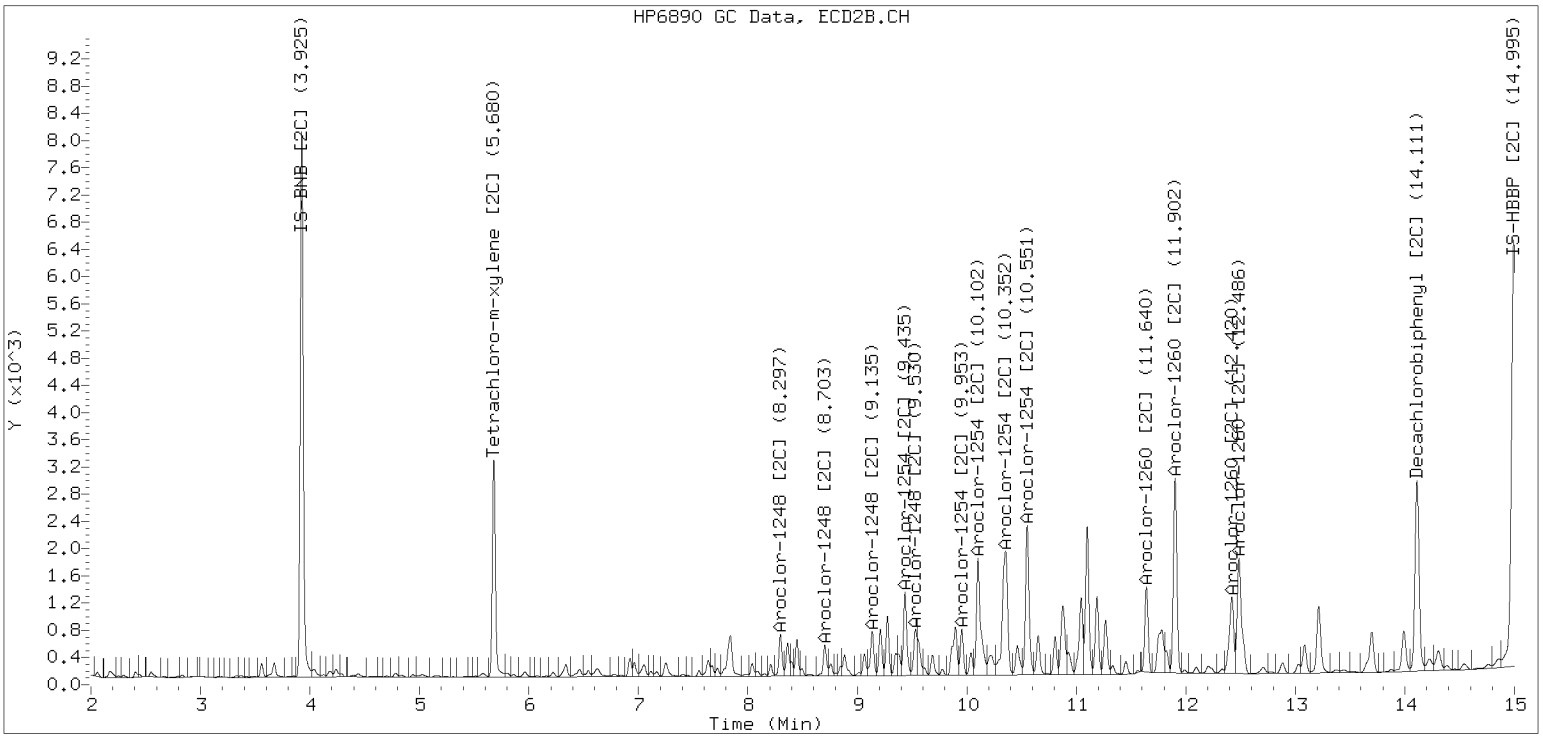
Processed Integration (Before)



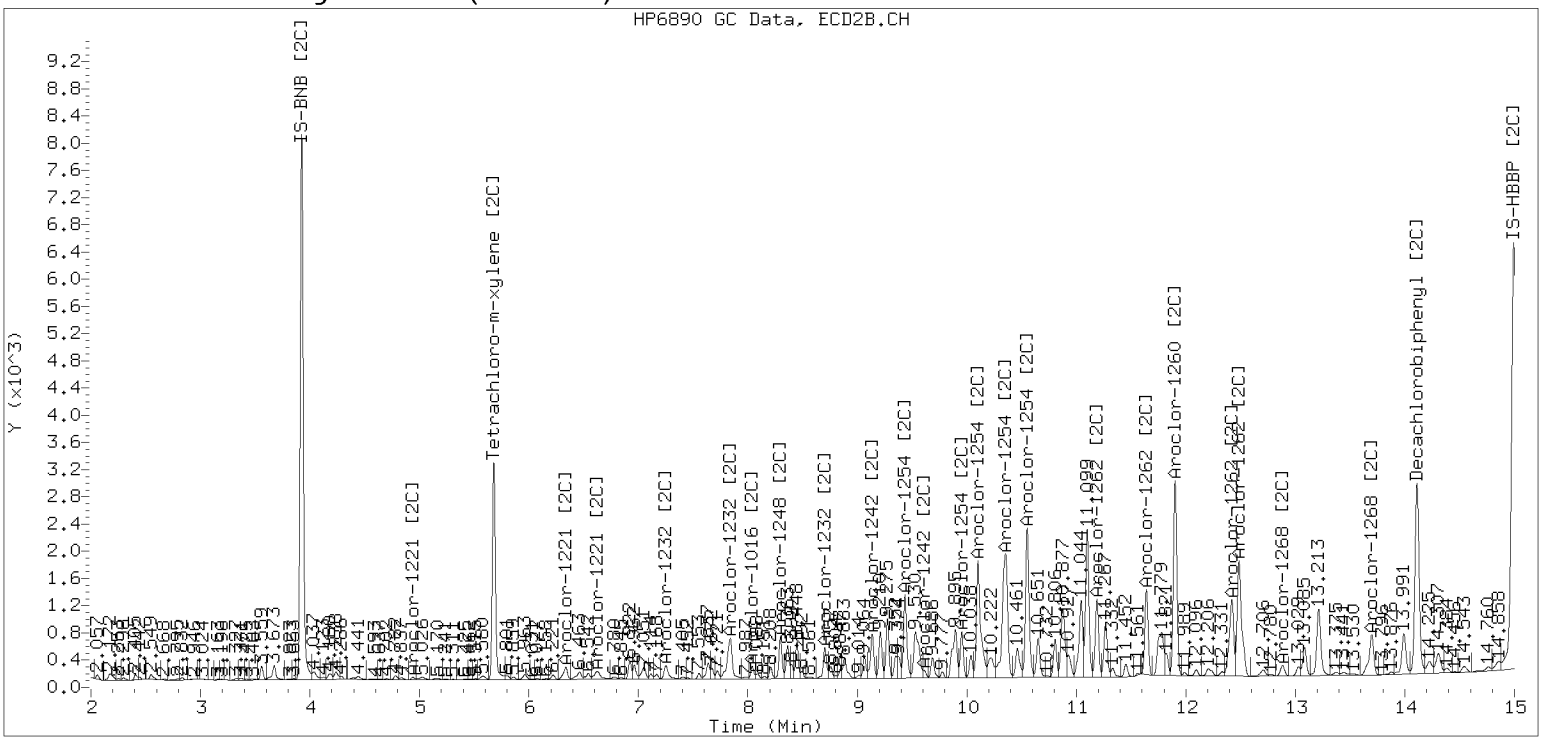
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230209.b/230209.b/02092312ECD7.D Injection Date: 09-FEB-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1073

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0207-14 A	File ID:	02092313ECD7.D
Sampled:	01/11/23 13:37	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 16:27
% Solids:	70.44	Preparation:	EPA 3546 (Microwave)	Initial/Final:	17.77 g Wet / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0148	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	23.0	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	33.1	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	22.7	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9890*	*6.26*	*78.3*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9890*	*5.52*	*69.1*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9890*	*7.31*	*91.5*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9890*	*6.15*	*77.0*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092313ECD7.D
Data file 2: /230209.b/230209.b/02092313ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0207-14
Client ID:
Injection Date: 09-FEB-2023 16:27
Report Date: 02/10/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.804	-0.005	140837	5.681	-0.004	134043	27.7	30.8	10.7	Tetrachloro-m-xylene
13.885	-0.006	116618	14.113	-0.002	191560	31.3	36.6	15.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	360239	-28.4
Hexabromobiphenyl	647433	348028	-46.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	322037	-4.4
Hexabromobiphenyl	382032	329677	-13.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.396	-0.010	15202	84.4	1	8.297	-0.005	24862	170.8
Aroclor-1248	2	8.563	-0.017	8196	35.7	2	8.703	-0.007	18733	119.6
Aroclor-1248	3	8.984	-0.015	38397	87.3	3	9.137	-0.015	12930	67.5
Aroclor-1248	4	9.284	-0.009	42984	197.5	4	9.529	-0.047	24447	103.2
		Total Col1Ave (4 peaks):			101.2		Total Col2Ave (4 peaks):			115.3 RPD = 13
		Corrected Ave (3 peaks):			69.1		Corrected Ave (3 peaks):			96.8 RPD = 33
Aroclor-1254	1	9.284	-0.015	42984	117.1	1	9.436	-0.008	34275	146.7
Aroclor-1254	2	9.360	-0.018	21683	138.3	2	9.955	-0.009	14357	76.0
Aroclor-1254	3	9.661	-0.008	33080	140.6	3	10.103	-0.013	73143	177.6
Aroclor-1254	4	9.785	-0.024	62945	136.6	4	10.353	-0.014	80023	194.3
Aroclor-1254	5	10.115	-0.062	72181	240.8	5	10.553	-0.011	53463	233.0
		Total Col1Ave (5 peaks):			154.7		Total Col2Ave (5 peaks):			165.5 RPD = 7
		Corrected Ave (4 peaks):			133.1		Corrected Ave (4 peaks):			148.6 RPD = 11
Aroclor-1260	1	11.031	-0.013	24058	123.2	1	11.642	-0.007	27403	115.2
Aroclor-1260	2	11.348	-0.013	22088	110.0	2	11.904	-0.009	52938	88.0
Aroclor-1260	3	11.717	-0.017	62648	118.6	3	12.423	-0.008	22141	147.6
Aroclor-1260	4	12.118	-0.022	42739	156.5	4	12.487	-0.010	40511	104.0
Aroclor-1260	5	12.234	-0.010	21233	178.4	NS	---			----
		Total Col1Ave (5 peaks):			137.3		Total Col2Ave (4 peaks):			113.7 RPD = 19
		Corrected Ave (4 peaks):			127.1		Corrected Ave (3 peaks):			102.4 RPD = 22
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.909 - 13.792) = 1302914 Col1 Total PCB = 0.3 ppm*

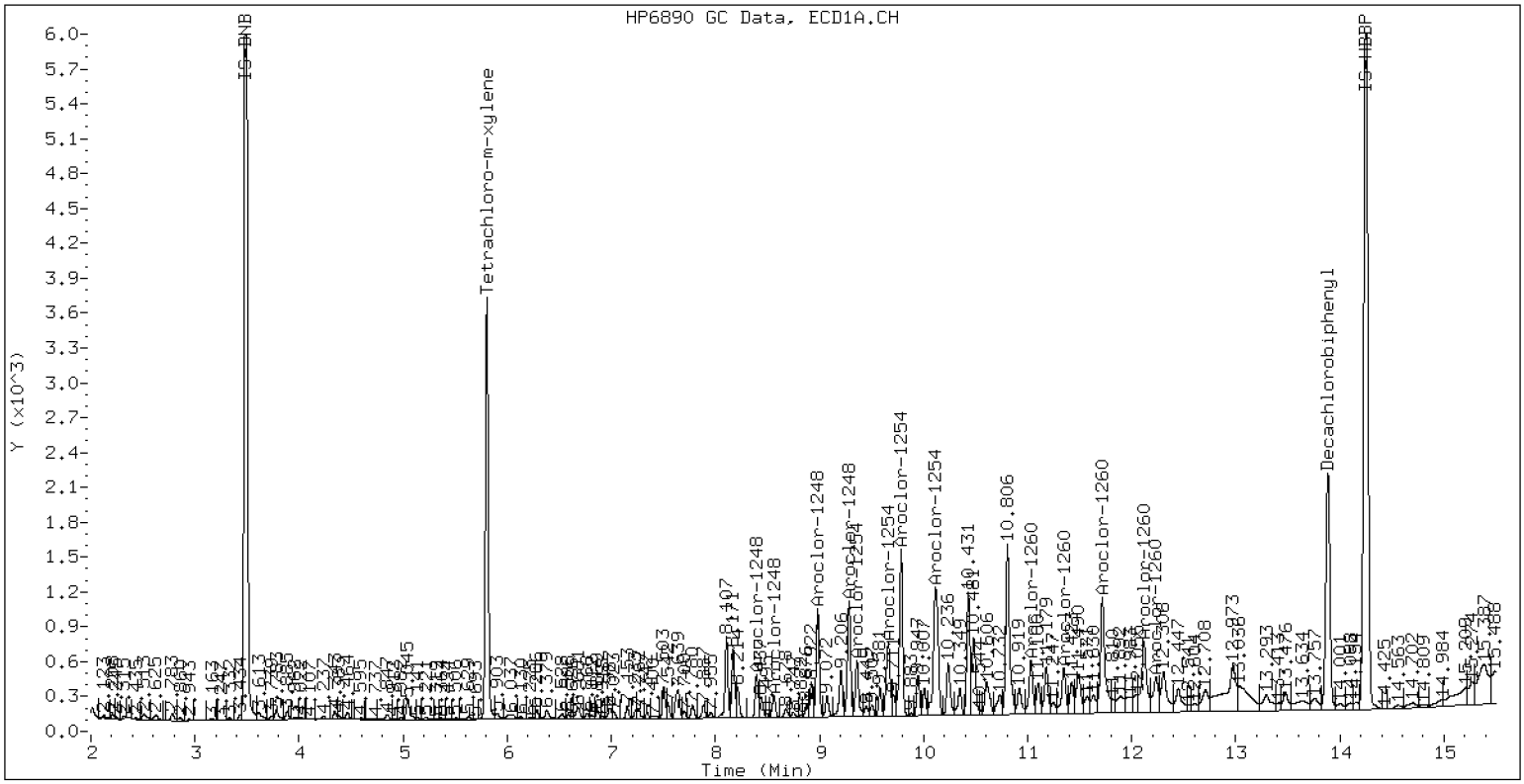
Total PCB Area Col2 (5.785 - 14.015) = 1141924 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

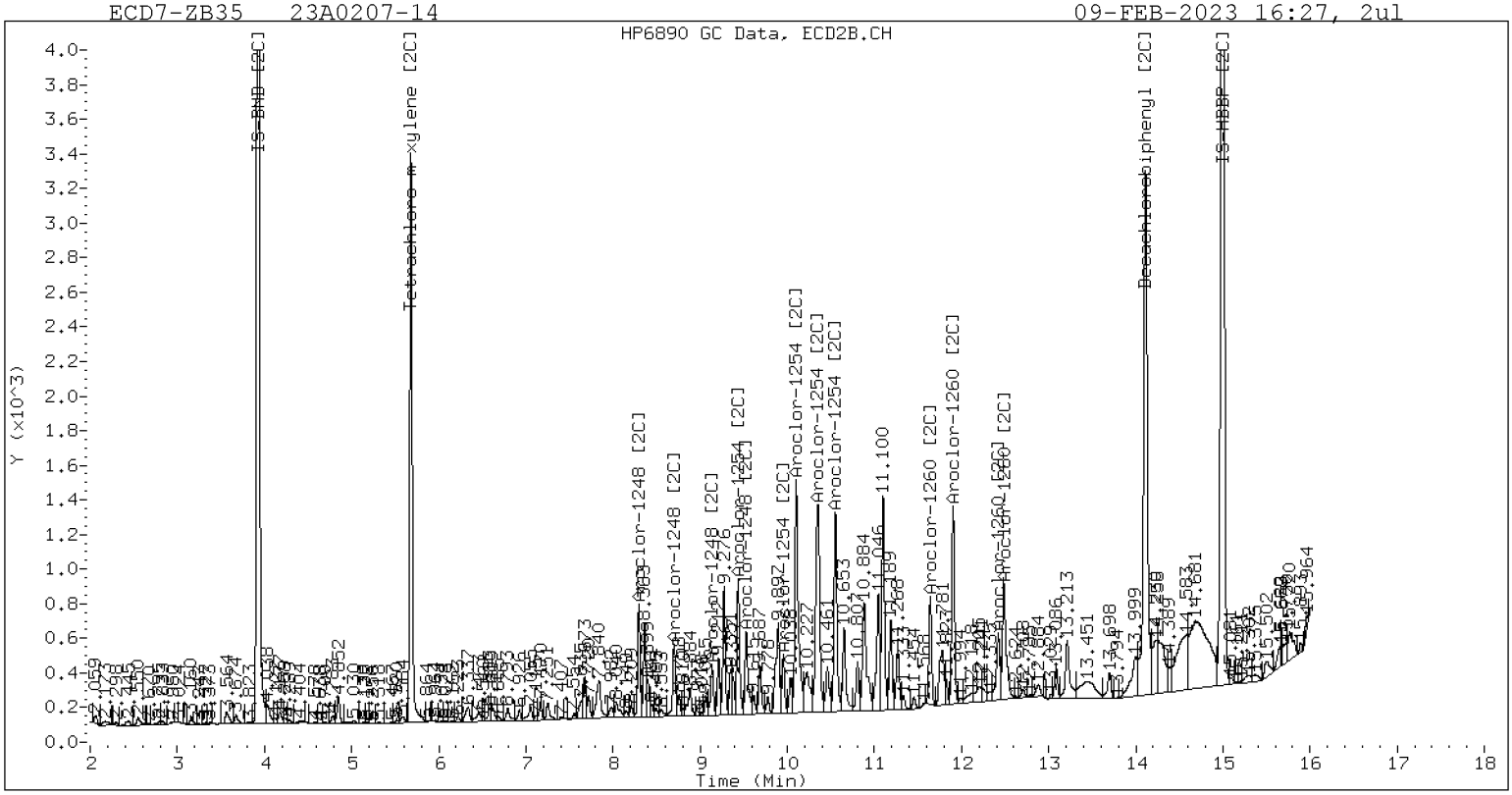
PCB Dual Column Chromatograms

ECD7-ZB5 23A0207-14 09-FEB-2023 16:27, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0207-14 09-FEB-2023 16:27, 2ul

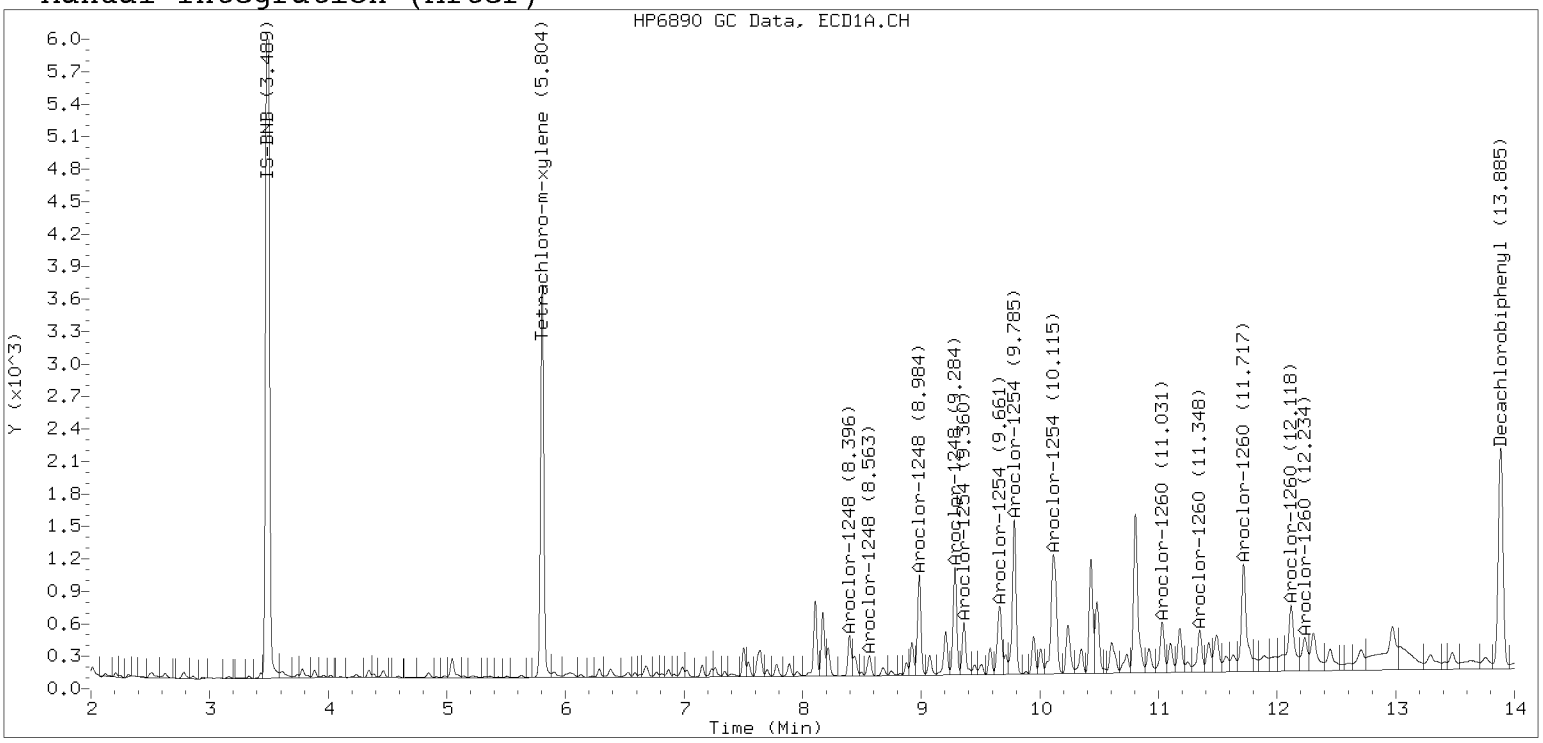


ZB-35 Manual Integration: YES

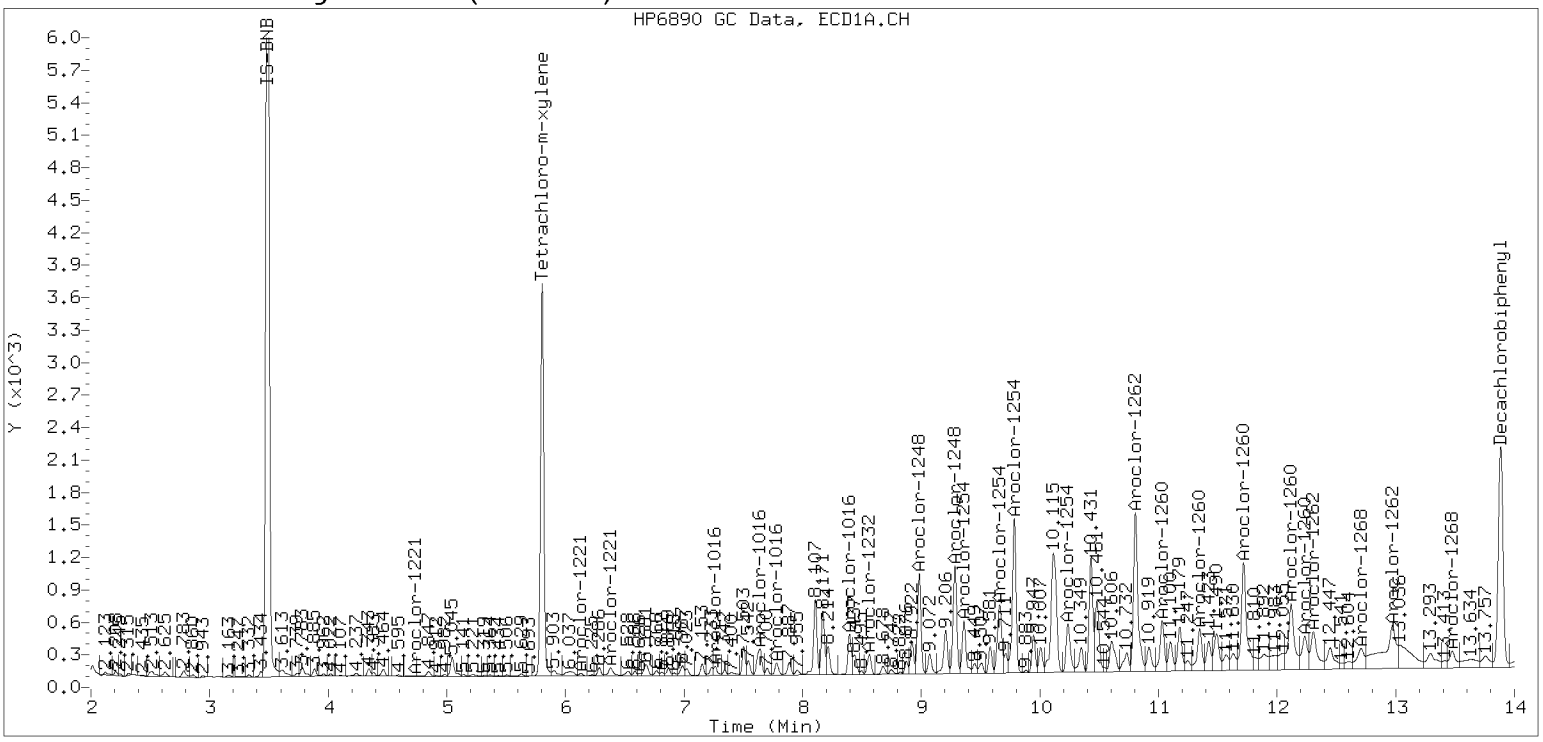
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230209.b/02092313ECD7.D Injection Date: 09-FEB-2023 16:27

Manual Integration (After)



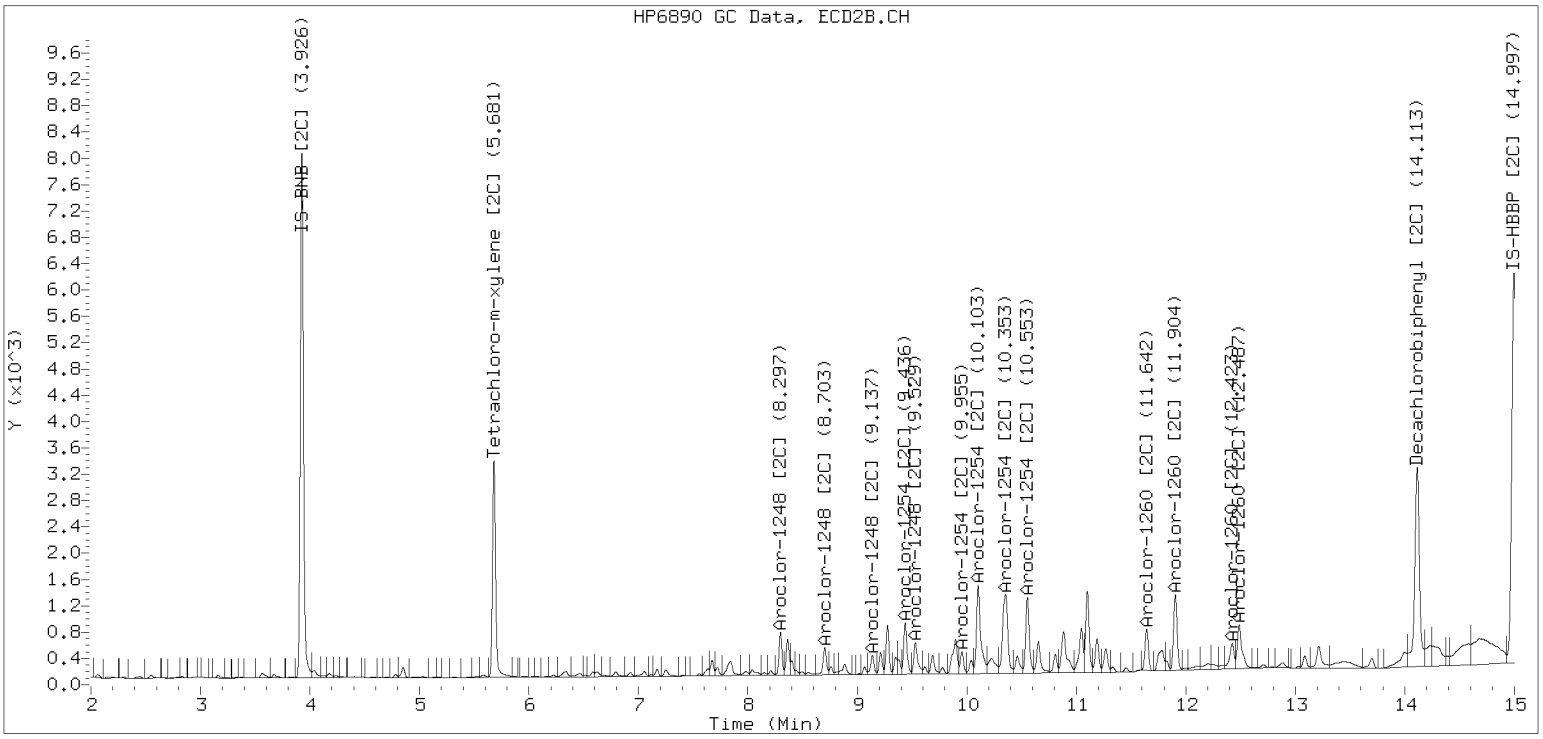
Processed Integration (Before)



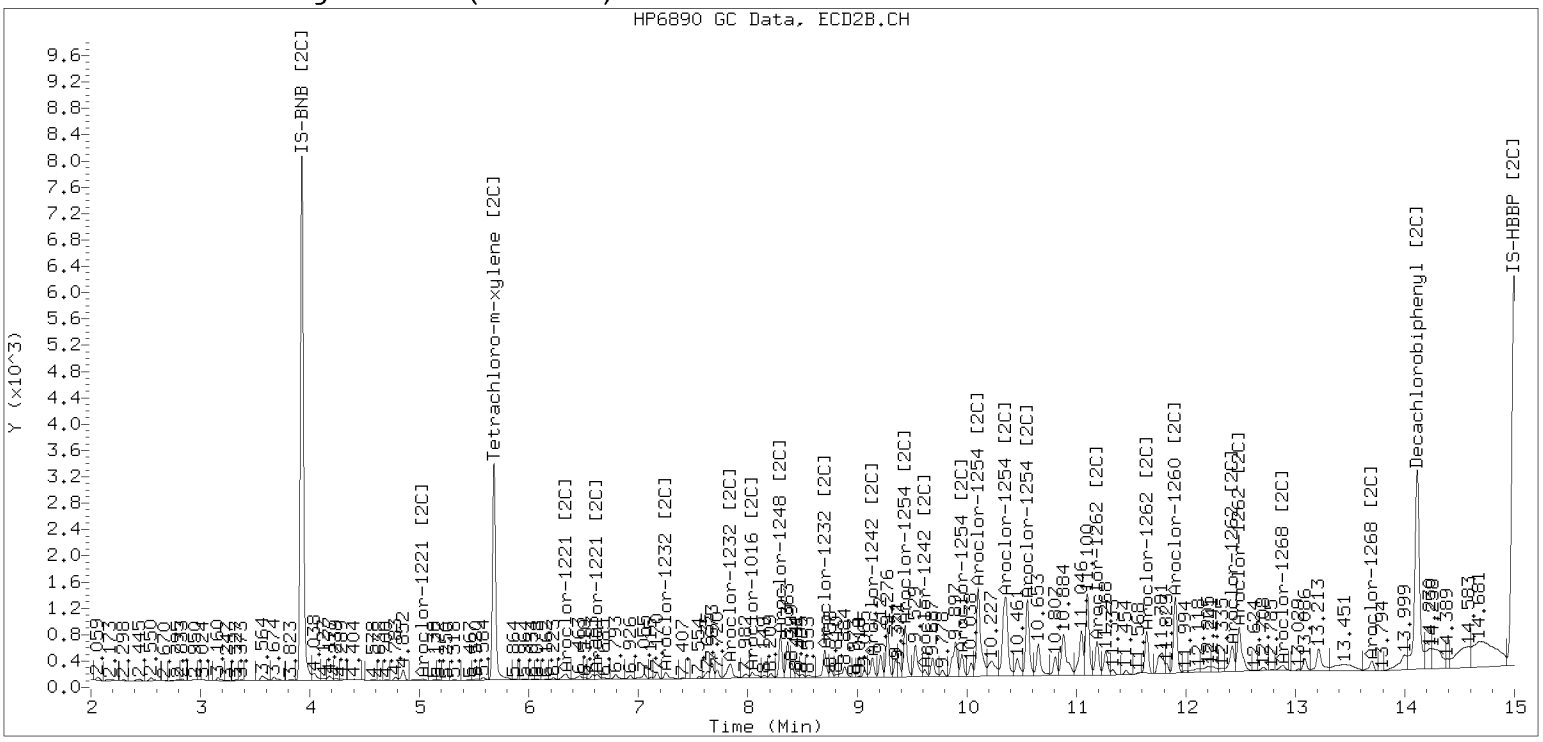
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230209.b/230209.b/02092313ECD7.D Injection Date: 09-FEB-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-IT1078

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0207-15 A	File ID:	02092314ECD7.D
Sampled:	01/11/23 14:13	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 16:48
% Solids:	77.75	Preparation:	EPA 3546 (Microwave)	Initial/Final:	16.09 g Wet / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0148	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	55.7	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	91.1	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	79.7	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9936*	*5.17*	*64.6*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9936*	*3.99*	*50.0*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9936*	*5.51*	*68.9*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9936*	*4.54*	*56.8*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092314ECD7.D
Data file 2: /230209.b/230209.b/02092314ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0207-15
Client ID:
Injection Date: 09-FEB-2023 16:48
Report Date: 02/10/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.802	-0.006	105194	5.679	-0.006	96814	20.0	22.7	12.9	Tetrachloro-m-xylene
13.884	-0.008	88623	14.112	-0.003	132565	25.9	27.6	6.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	372404	-26.0
Hexabromobiphenyl	647433	320447	-50.5 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	315067	-6.5
Hexabromobiphenyl	382032	303098	-20.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.394	-0.012	45430	243.9	1	8.296	-0.007	48192	338.4
Aroclor-1248	2	8.559	-0.021	41777	175.8	2	8.702	-0.007	50217	327.6
Aroclor-1248	3	8.981	-0.018	126929	279.2	3	9.134	-0.018	46026	245.7
Aroclor-1248	4	9.283	-0.011	119517	531.2	4	9.529	-0.046	47178	203.7
		Total Col1Ave (4 peaks):			307.5		Total Col2Ave (4 peaks):			278.8 RPD = 10
		Corrected Ave (3 peaks):			233.0		Corrected Ave (3 peaks):			259.0 RPD = 11
Aroclor-1254	1	9.283	-0.016	119517	314.9	1	9.434	-0.010	86338	377.7
Aroclor-1254	2	9.359	-0.019	39202	241.9	2	9.953	-0.011	52746	285.5
Aroclor-1254	3	9.661	-0.008	127421	524.0	3	10.102	-0.014	187380	464.9
Aroclor-1254	4	9.784	-0.025	168612	353.8	4	10.356	-0.010	193015	478.9
Aroclor-1254	5	10.110	-0.067	183736	593.0	5	10.552	-0.012	150935	672.4
		Total Col1Ave (5 peaks):			405.5		Total Col2Ave (5 peaks):			455.9 RPD = 12
		Corrected Ave (4 peaks):			358.7		Corrected Ave (4 peaks):			401.8 RPD = 11
Aroclor-1260	1	11.031	-0.013	67879	377.5	1	11.641	-0.008	97244	444.7
Aroclor-1260	2	11.347	-0.013	67662	366.1	2	11.903	-0.010	195744	353.8
Aroclor-1260	3	11.717	-0.017	175795	361.3	3	12.422	-0.009	63098	457.6
Aroclor-1260	4	12.117	-0.023	86749	345.1	4	12.486	-0.010	121201	338.5
Aroclor-1260	5	12.232	-0.012	31927	291.4	NS	---			----
		Total Col1Ave (5 peaks):			348.3		Total Col2Ave (4 peaks):			398.7 RPD = 13
		Corrected Ave (4 peaks):			341.0		Corrected Ave (3 peaks):			379.0 RPD = 11
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.909 - 13.792) = 3058711 Col1 Total PCB = 0.7 ppm*

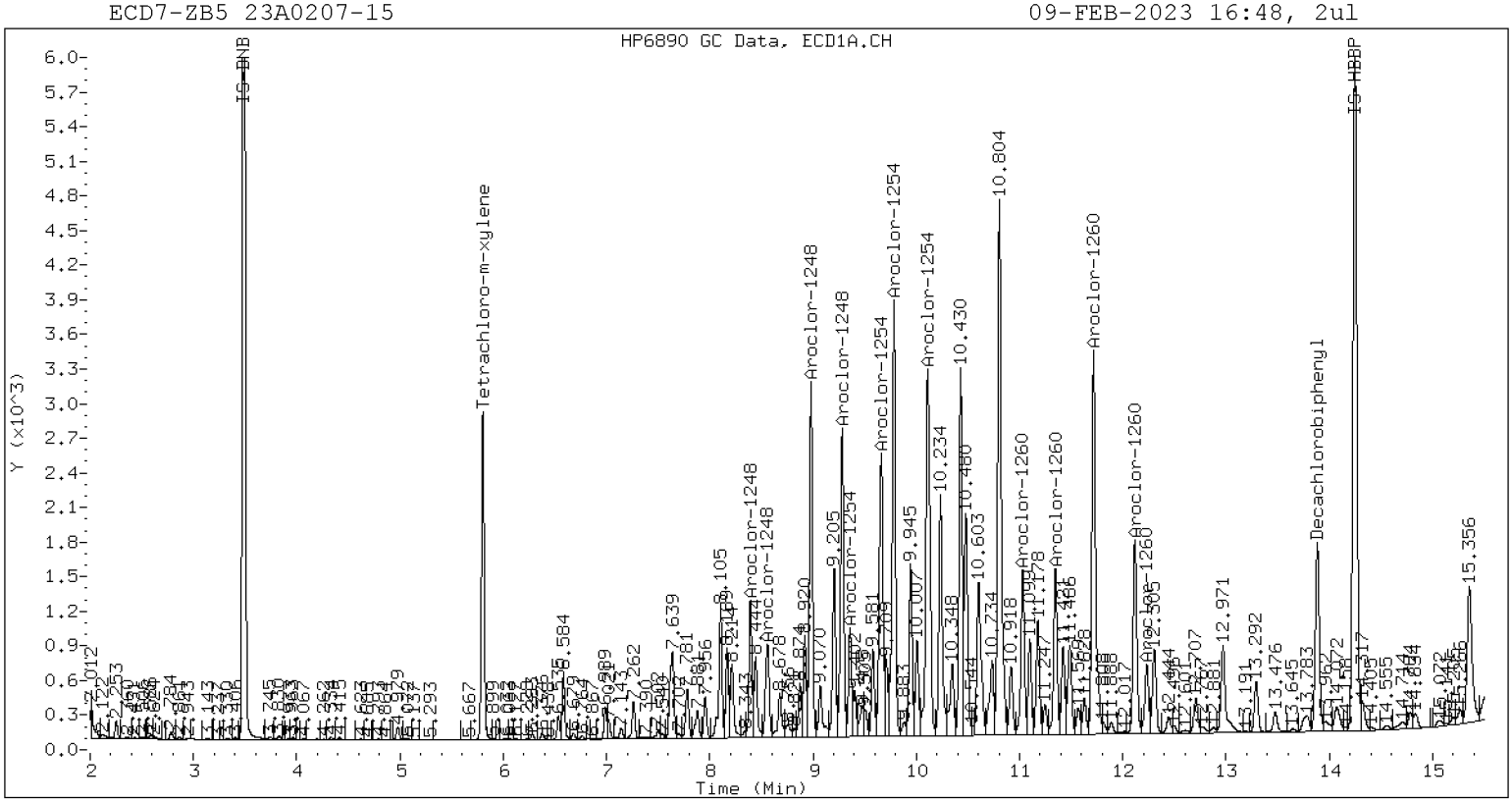
Total PCB Area Col2 (5.785 - 14.015) = 3041181 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

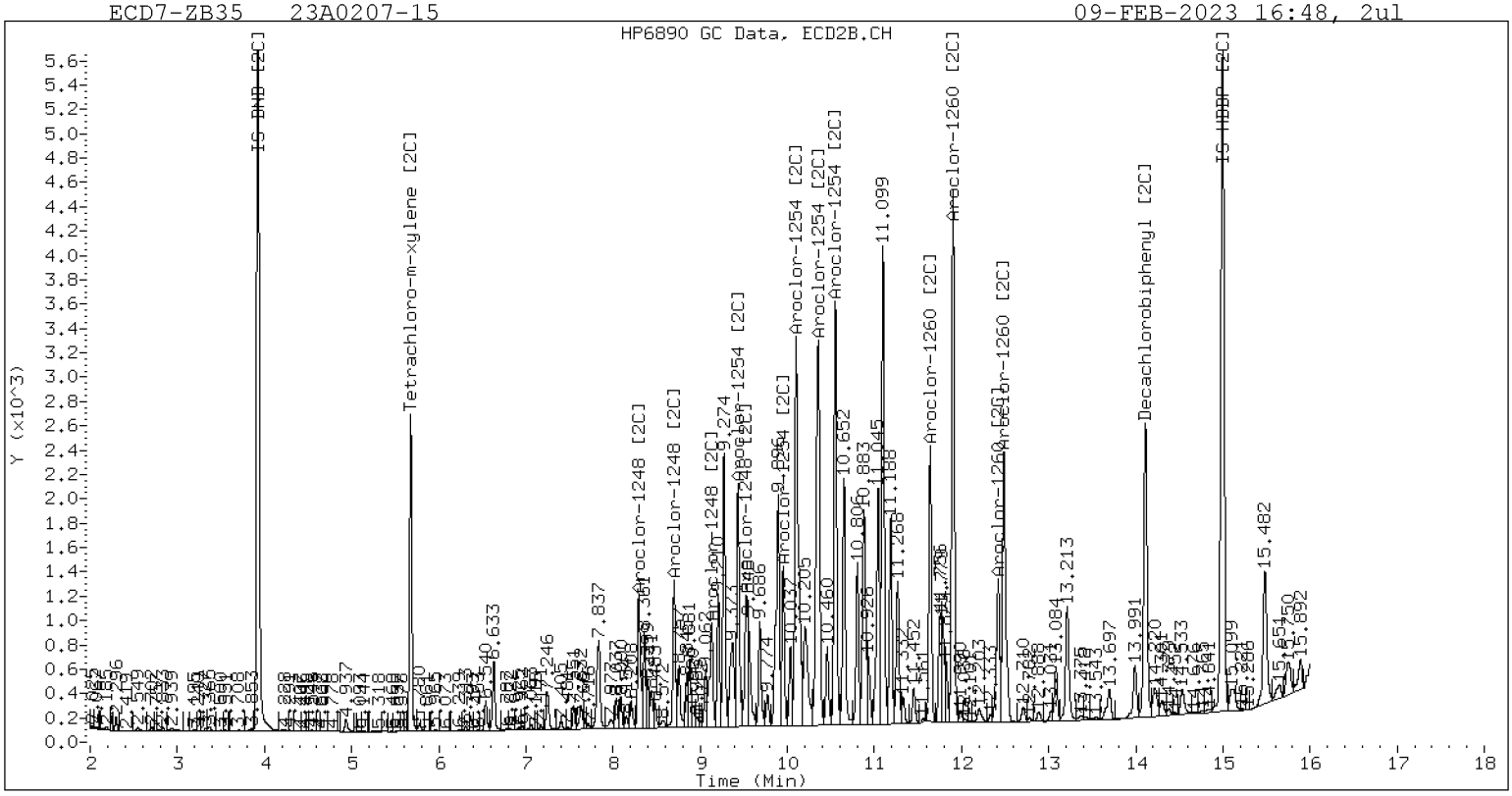
PCB Dual Column Chromatograms

ECD7-ZB5 23A0207-15 09-FEB-2023 16:48, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0207-15 09-FEB-2023 16:48, 2ul

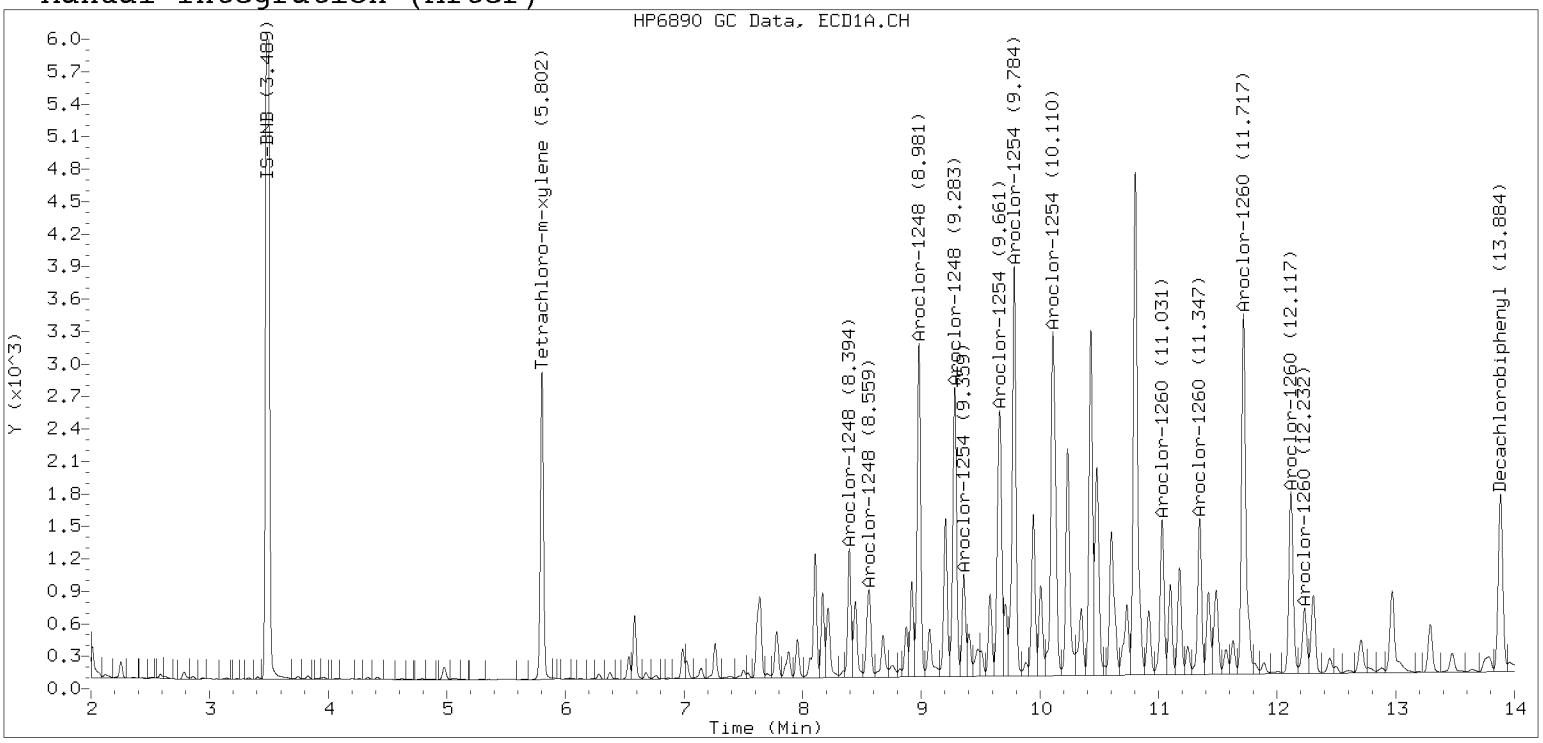


ZB-35 Manual Integration: YES

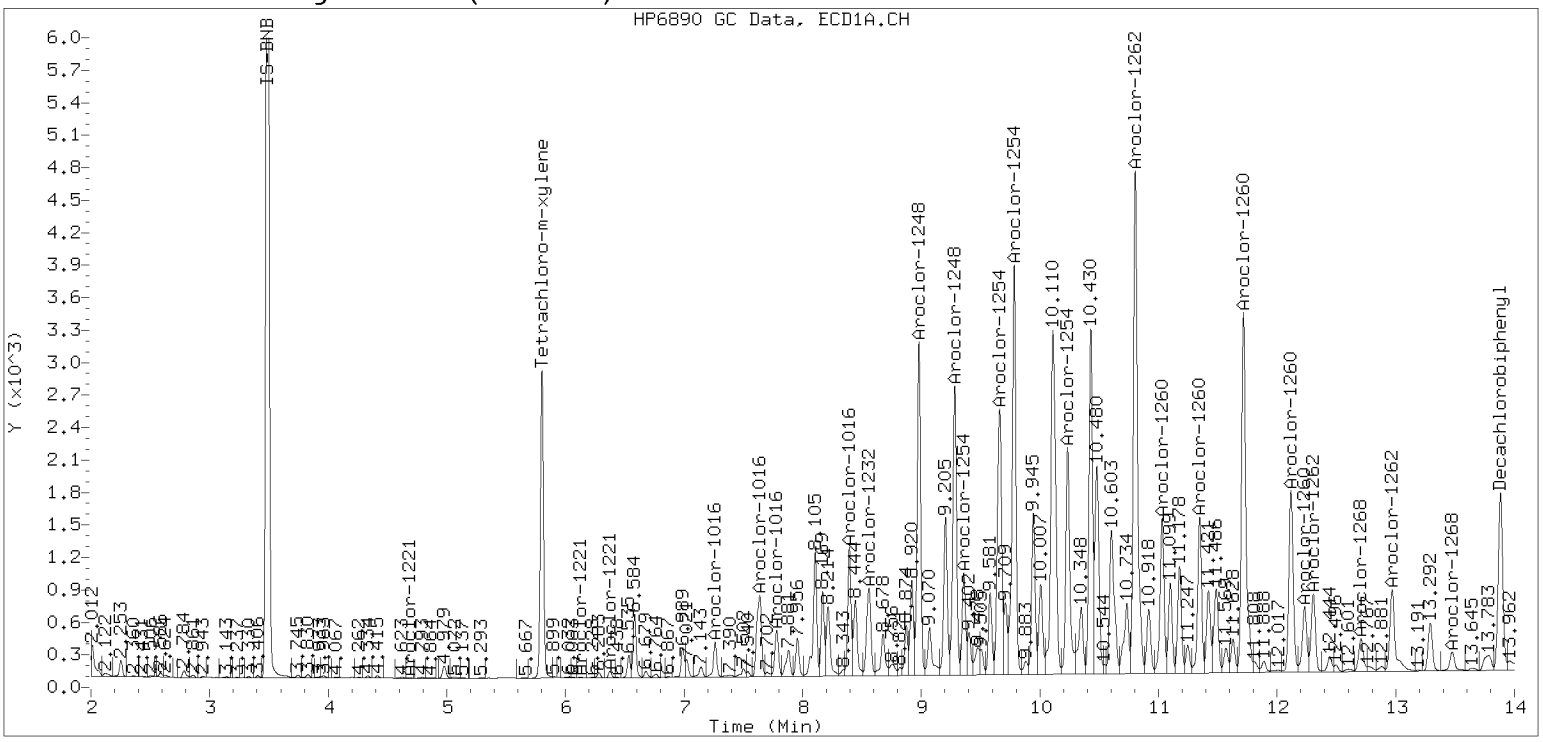
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230209.b/02092314ECD7.D Injection Date: 09-FEB-2023 16:48

Manual Integration (After)



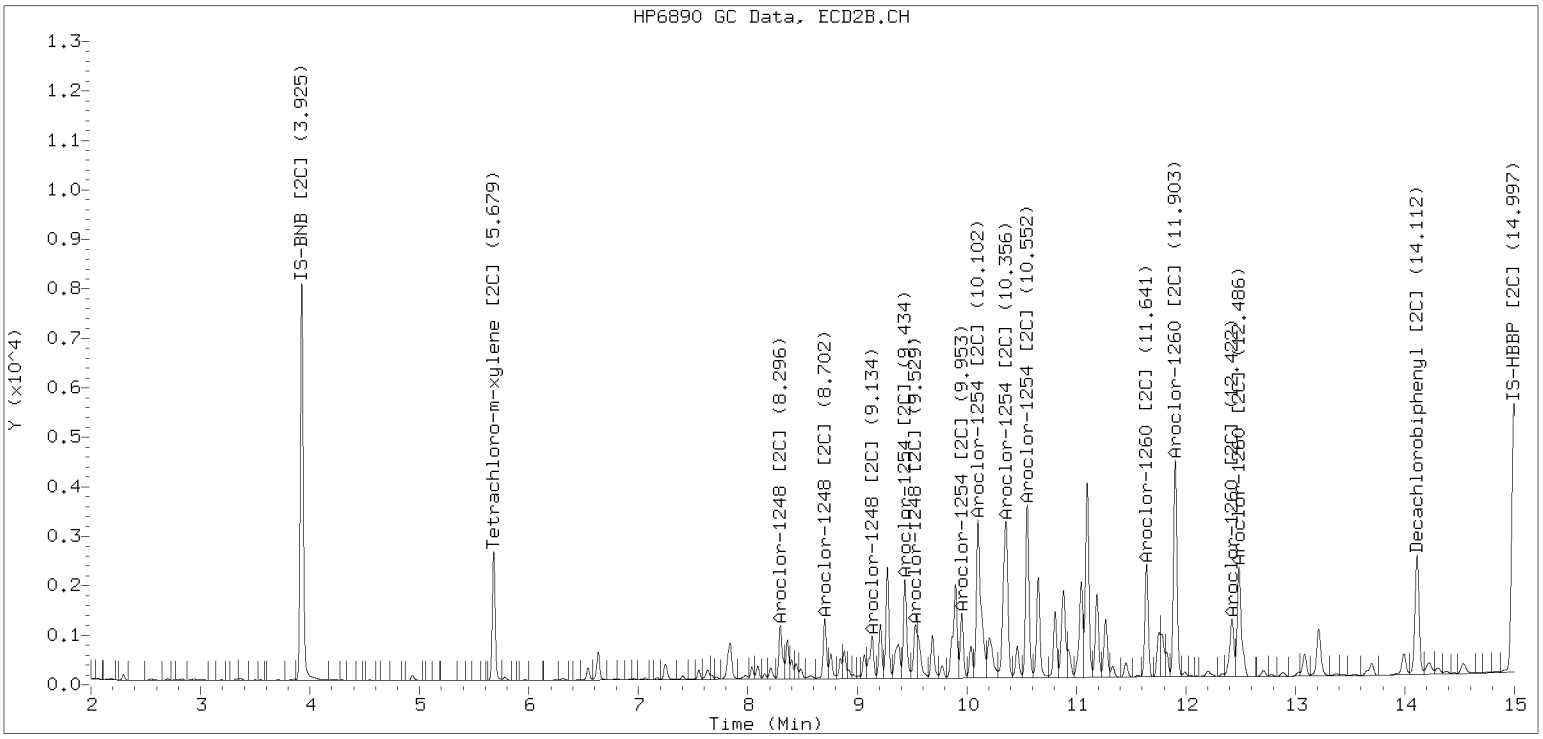
Processed Integration (Before)



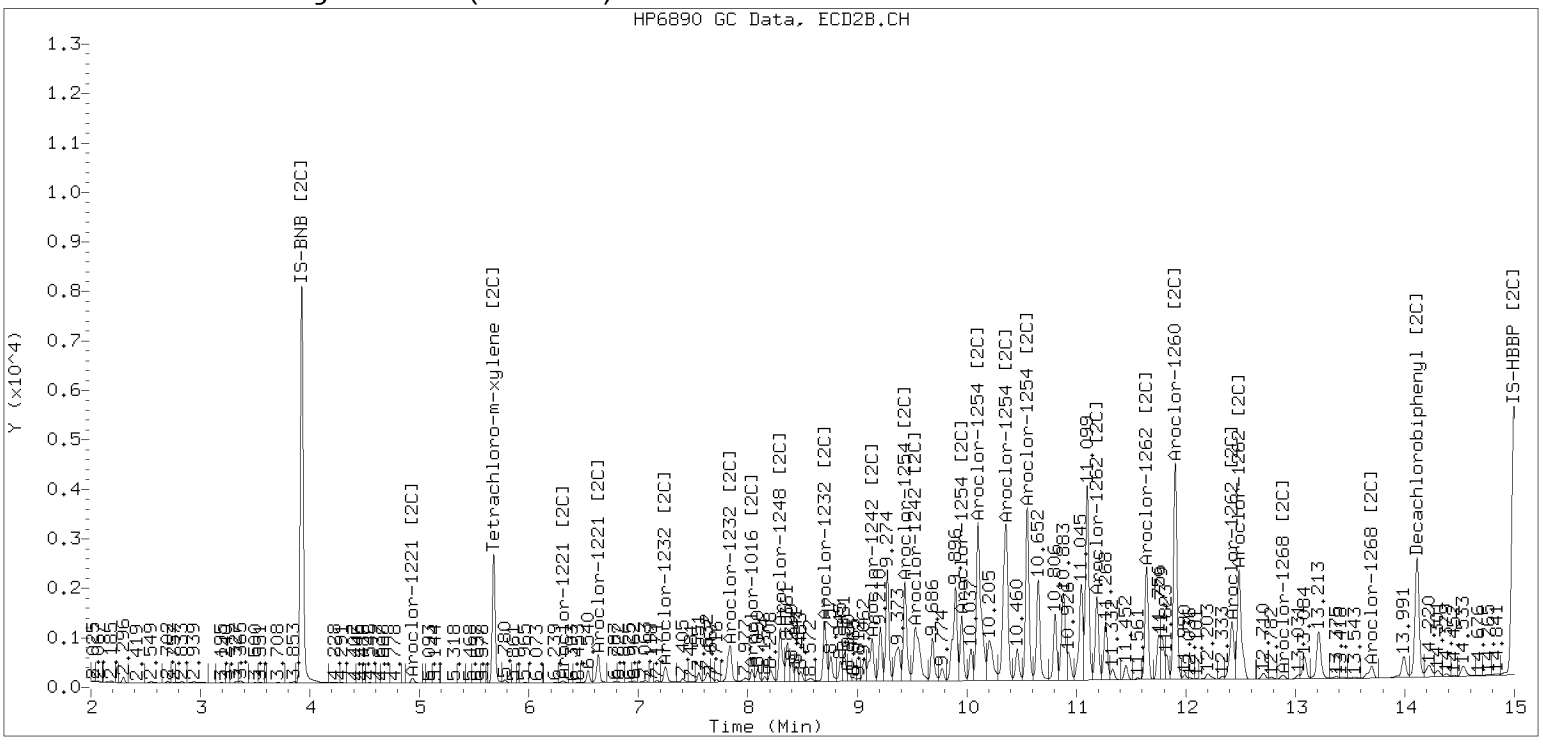
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230209.b/230209.b/02092314ECD7.D Injection Date: 09-FEB-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-IT1201

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0207-16 A	File ID:	02092315ECD7.D
Sampled:	01/11/23 14:54	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 17:09
% Solids:	62.70	Preparation:	EPA 3546 (Microwave)	Initial/Final:	19.96 g Wet / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0148	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	99.4	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	179	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	103	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9905*	*5.46*	*68.3*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9905*	*4.08*	*51.1*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9905*	*5.62*	*70.4*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9905*	*4.65*	*58.2*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092315ECD7.D
Data file 2: /230209.b/230209.b/02092315ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0207-16
Client ID:
Injection Date: 09-FEB-2023 17:09
Report Date: 02/10/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.802	-0.007	102604	5.678	-0.007	95260	20.4	23.3	13.1	Tetrachloro-m-xylene
13.884	-0.007	84208	14.111	-0.004	139813	27.3	28.1	2.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	355370	-29.4
Hexabromobiphenyl	647433	287989	-55.5 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	302452	-10.2
Hexabromobiphenyl	382032	312986	-18.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.394	-0.012	53797	302.6	1	8.295	-0.007	79671	582.7
Aroclor-1248	2	8.560	-0.020	42449	187.2	2	8.701	-0.008	55872	379.7
Aroclor-1248	3	8.980	-0.019	191505	441.5	3	9.133	-0.019	81695	454.3
Aroclor-1248	4	9.284	-0.010	226493	1054.9	4	9.527	-0.049	127527	573.5
		Total Col1Ave (4 peaks):			496.5	Total Col2Ave (4 peaks):				497.6 RPD = 0
		Corrected Ave (3 peaks):			310.4	Corrected Ave (3 peaks):				469.2 RPD = 41*
Aroclor-1254	1	9.284	-0.015	226493	625.4	1	9.434	-0.010	188114	857.3
Aroclor-1254	2	9.358	-0.020	86588	559.9	2	9.953	-0.011	106217	598.9
Aroclor-1254	3	9.650	-0.019	145507	627.0	3	10.101	-0.015	335363	866.9
Aroclor-1254	4	9.783	-0.025	302547	665.3	4	10.339	-0.027	376249	972.5
Aroclor-1254	5	10.120	-0.057	348282	1177.9	5	10.551	-0.013	254753	1182.2
		Total Col1Ave (5 peaks):			731.1	Total Col2Ave (5 peaks):				895.6 RPD = 20
		Corrected Ave (4 peaks):			619.4	Corrected Ave (4 peaks):				823.9 RPD = 28
Aroclor-1260	1	11.031	-0.013	84966	525.8	1	11.641	-0.009	140880	623.9
Aroclor-1260	2	11.347	-0.014	74176	446.6	2	11.903	-0.010	253127	443.1
Aroclor-1260	3	11.717	-0.017	202383	462.8	3	12.422	-0.009	75997	533.7
Aroclor-1260	4	12.117	-0.023	116239	514.5	4	12.485	-0.012	169594	458.7
Aroclor-1260	5	12.232	-0.012	46240	469.5	NS	---			----
		Total Col1Ave (5 peaks):			483.9	Total Col2Ave (4 peaks):				514.9 RPD = 6
		Corrected Ave (4 peaks):			473.4	Corrected Ave (3 peaks):				478.5 RPD = 1
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks				Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 4499494 Col1 Total PCB = 1.1 ppm*

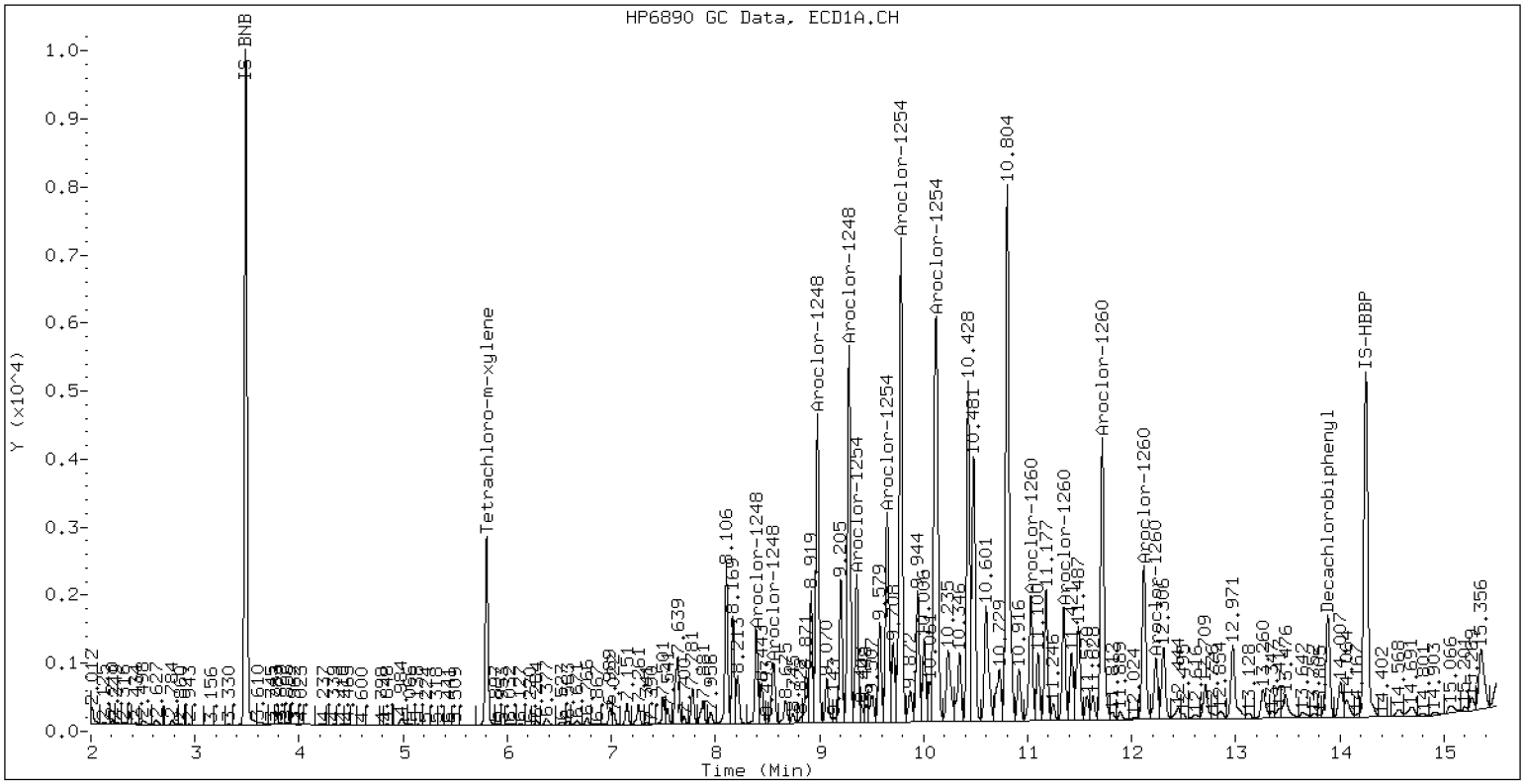
Total PCB Area Col2 (5.785 - 14.015) = 4654199 Col2 Total PCB = 1.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

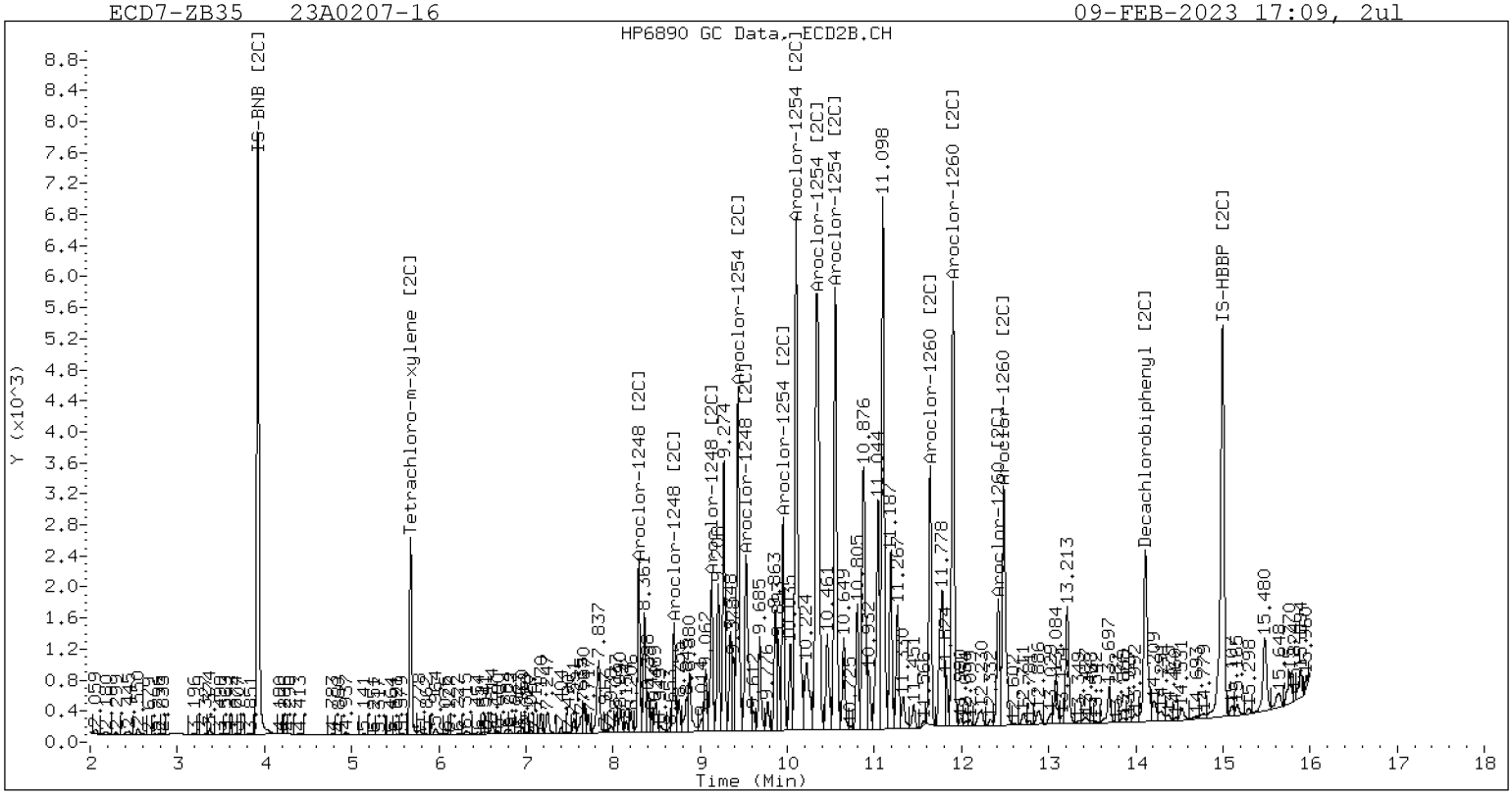
PCB Dual Column Chromatograms

ECD7-ZB5 23A0207-16 09-FEB-2023 17:09, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0207-16 09-FEB-2023 17:09, 2ul

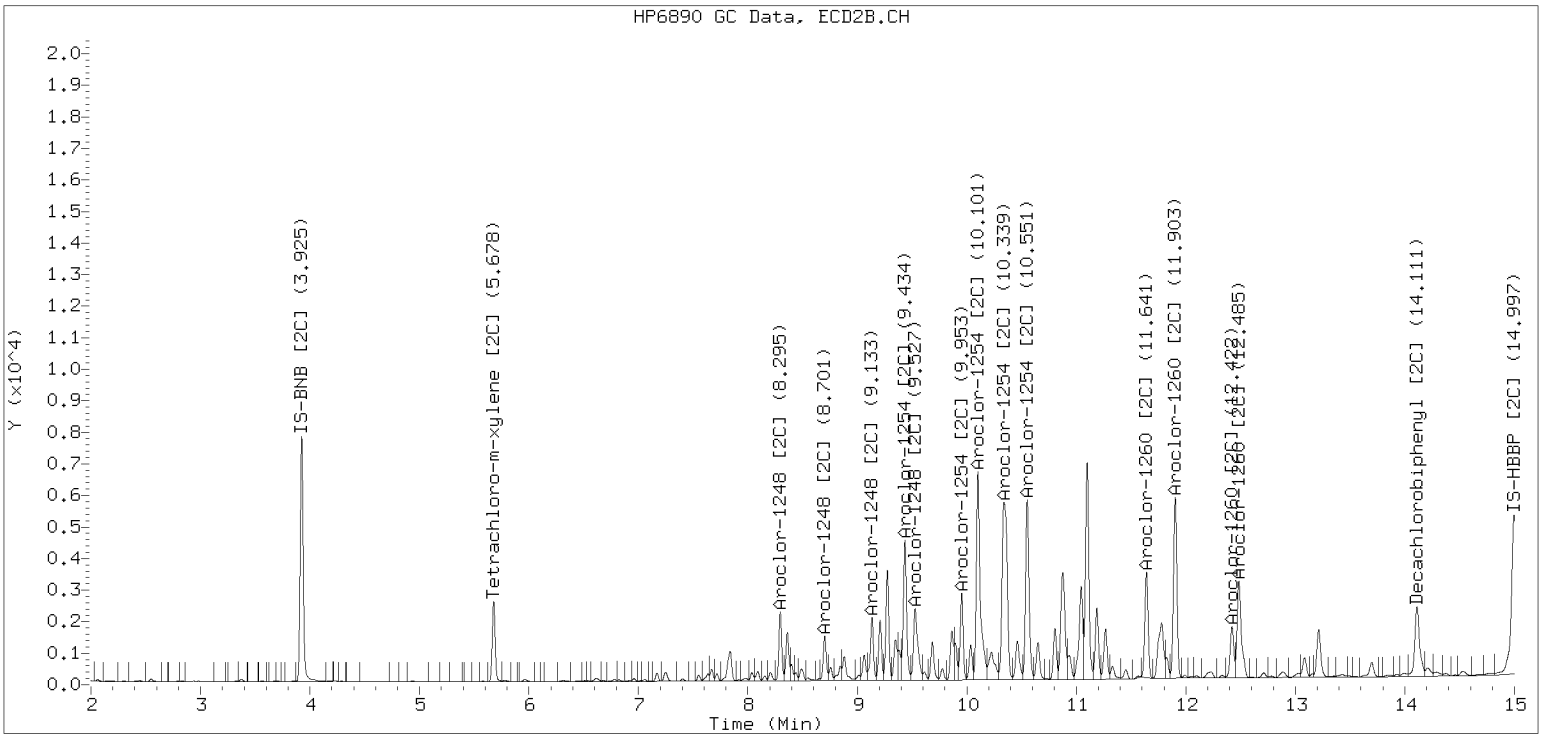


ZB-35 Manual Integration: YES

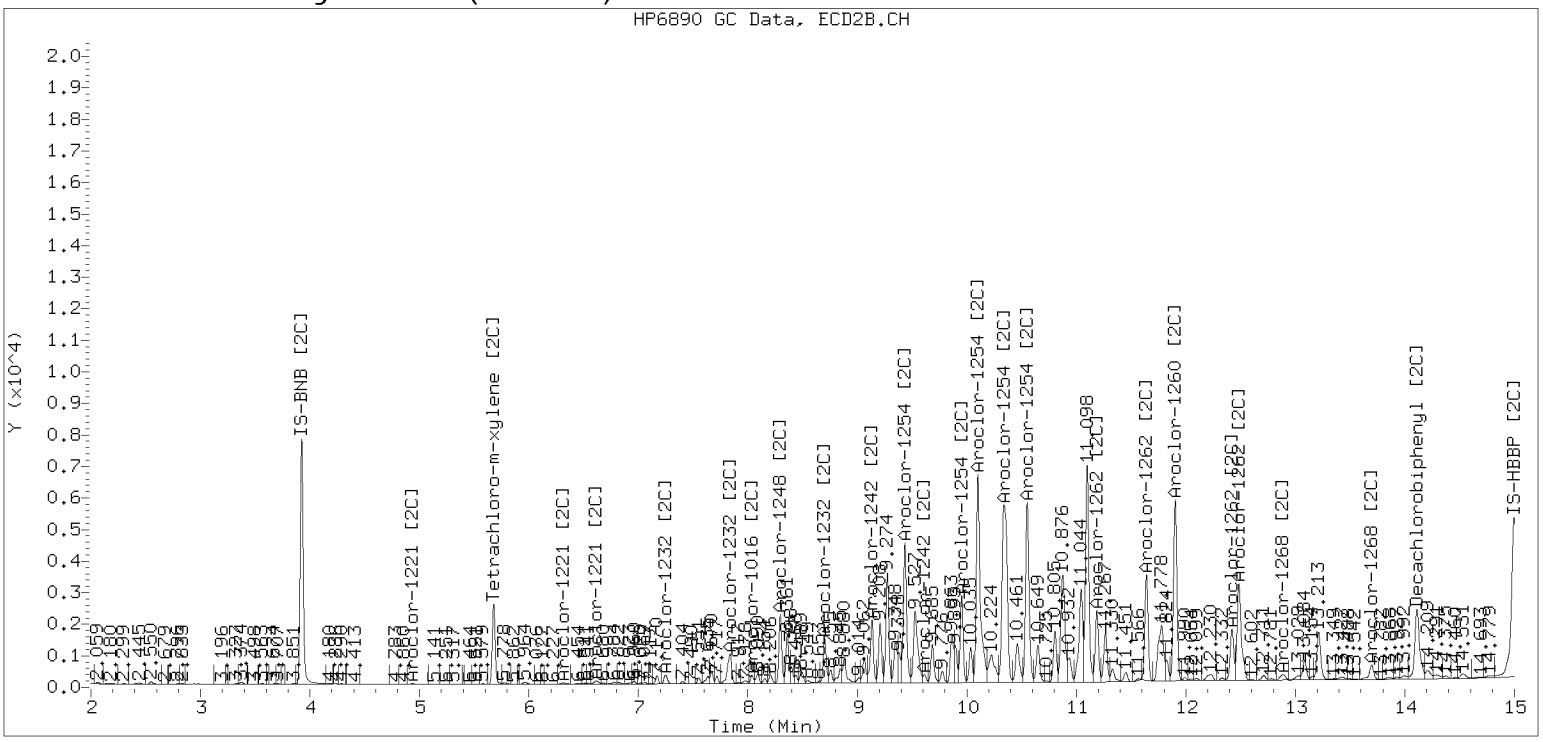
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230209.b/230209.b/02092315ECD7.D Injection Date: 09-FEB-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-IT1209

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0207-17 A	File ID:	02092316ECD7.D
Sampled:	01/11/23 15:21	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 17:30
% Solids:	63.22	Preparation:	EPA 3546 (Microwave)	Initial/Final:	19.79 g Wet / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0148	Calibration:	GA00061
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	5	20.0	7.8	20.0	U
11104-28-2	Aroclor 1221	1	5	20.0	7.8	20.0	U
11141-16-5	Aroclor 1232	1	5	20.0	7.8	20.0	U
53469-21-9	Aroclor 1242	1	5	20.0	7.8	20.0	U
12672-29-6	Aroclor 1248	2	5	286	7.8	20.0	D
11097-69-1	Aroclor 1254	2	5	418	7.8	20.0	D
11096-82-5	Aroclor 1260	2	5	241	2.9	20.0	D

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9928*	*8.14*	*102*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9928*	*4.96*	*62.0*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9928*	*5.73*	*71.7*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9928*	*5.40*	*67.5*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092316ECD7.D
Data file 2: /230209.b/230209.b/02092316ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0207-17RE1
Client ID:
Injection Date: 09-FEB-2023 17:30
Report Date: 02/10/2023 15:50
Matrix: NONE
Dilution Factor: 5.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.802	-0.007	23884	5.679	-0.006	21606	5.0	5.4	8.5	Tetrachloro-m-xylene
13.883	-0.005	25136	14.111	-0.004	25268	8.1	5.7	34.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	340425	-32.4
Hexabromobiphenyl	647433	288600	-55.4 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	295883	-12.2
Hexabromobiphenyl	382032	277623	-27.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.393	-0.009	33812	198.5	1	8.296	-0.007	39119	292.5
Aroclor-1248	2	8.561	-0.013	29174	134.3	2	8.702	-0.007	36671	254.7
Aroclor-1248	3	8.980	-0.013	100787	242.5	3	9.134	-0.018	51463	292.6
Aroclor-1248	4	9.284	-0.007	109667	533.2	4	9.530	-0.046	66379	305.1
		Total Col1Ave (4 peaks):			277.1		Total Col2Ave (4 peaks):			286.2 RPD = 3
		Corrected Ave (3 peaks):			191.8		Corrected Ave (3 peaks):			279.9 RPD = 37
Aroclor-1254	1	9.284	-0.010	109667	316.1	1	9.434	-0.010	84352	393.0
Aroclor-1254	2	9.359	-0.013	44845	302.7	2	9.953	-0.011	47583	274.2
Aroclor-1254	3	9.650	-0.012	61472	276.5	3	10.101	-0.015	154784	409.0
Aroclor-1254	4	9.783	-0.017	140705	323.0	4	10.341	-0.025	182147	481.3
Aroclor-1254	5	10.122	-0.039	170857	603.2	5	10.552	-0.012	113182	536.9
		Total Col1Ave (5 peaks):			364.3		Total Col2Ave (5 peaks):			418.9 RPD = 14
		Corrected Ave (4 peaks):			304.6		Corrected Ave (4 peaks):			389.4 RPD = 24
Aroclor-1260	1	11.031	-0.010	34755	214.6	1	11.641	-0.008	63387	316.5
Aroclor-1260	2	11.348	-0.009	31884	191.5	2	11.902	-0.011	103733	204.7
Aroclor-1260	3	11.717	-0.013	86851	198.2	3	12.423	-0.008	29121	230.6
Aroclor-1260	4	12.118	-0.016	55384	244.6	4	12.485	-0.012	70035	213.6
Aroclor-1260	5	12.233	-0.007	20908	211.9	NS	---			----
		Total Col1Ave (5 peaks):			212.2		Total Col2Ave (4 peaks):			241.3 RPD = 13
		Corrected Ave (4 peaks):			204.1		Corrected Ave (3 peaks):			216.3 RPD = 6
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.908 - 13.789) = 2239810 Col1 Total PCB = 0.6 ppm*

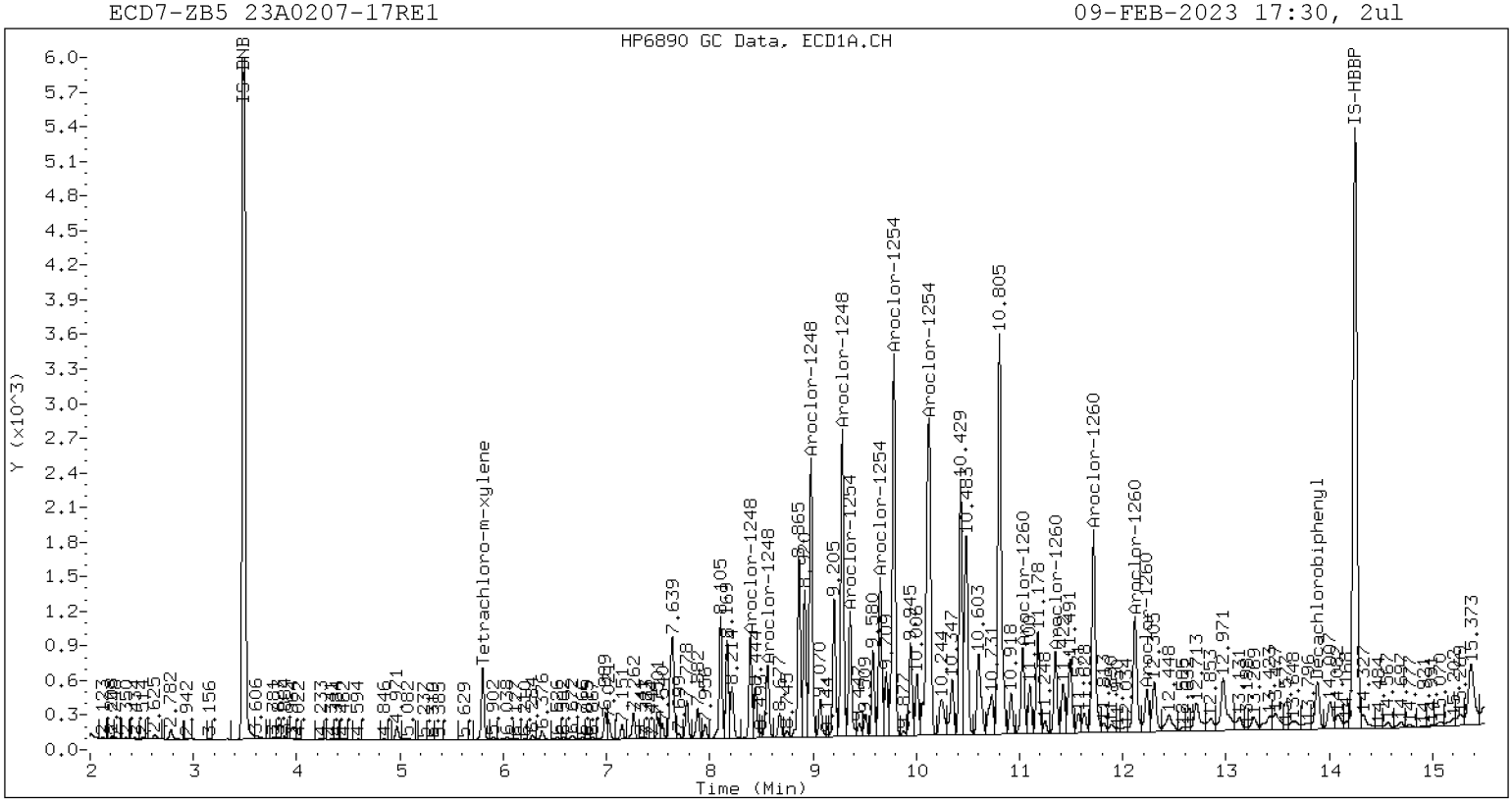
Total PCB Area Col2 (5.785 - 14.015) = 2236668 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

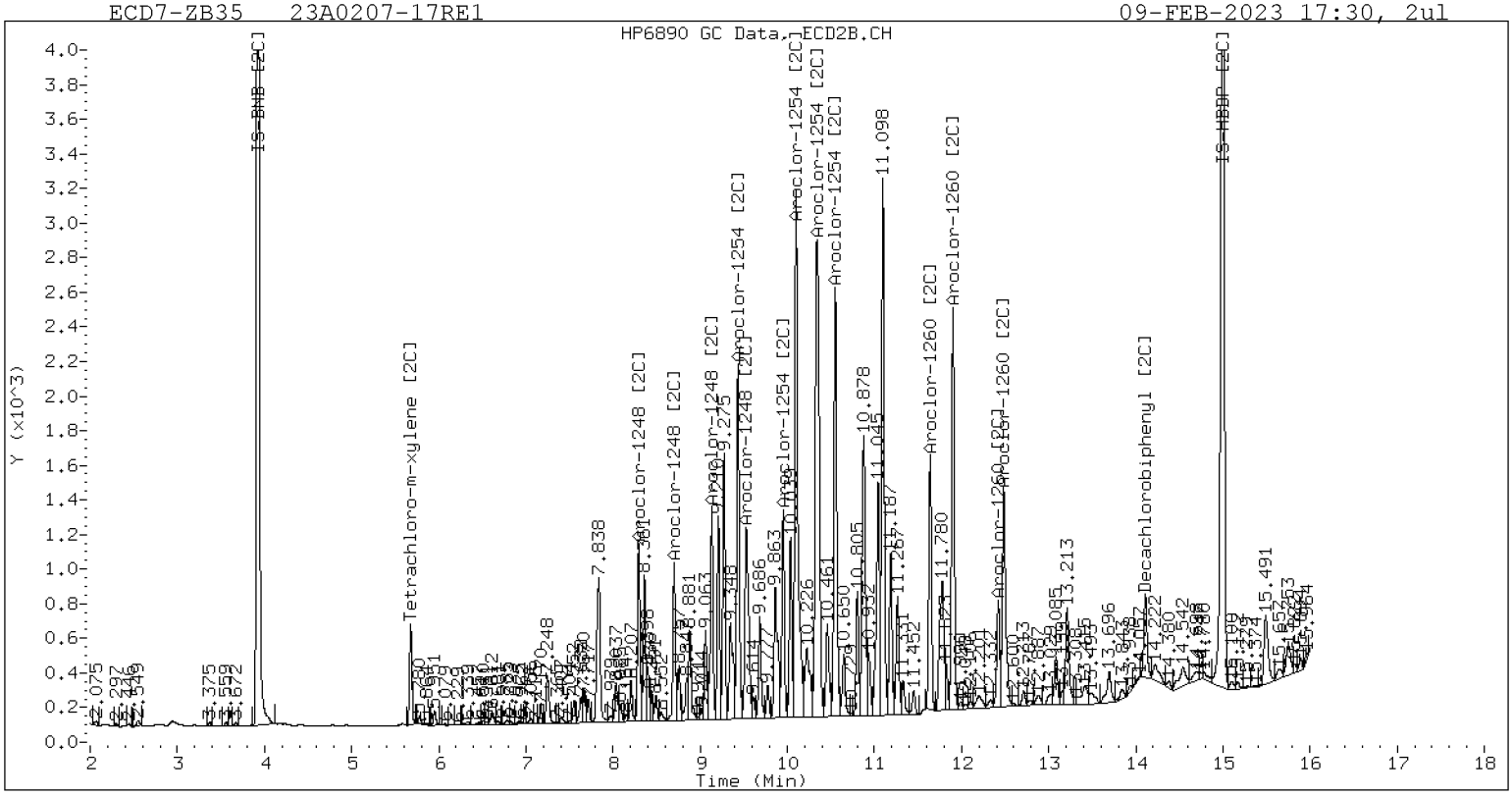
PCB Dual Column Chromatograms

ECD7-ZB5 23A0207-17RE1 09-FEB-2023 17:30, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0207-17RE1 09-FEB-2023 17:30, 2ul

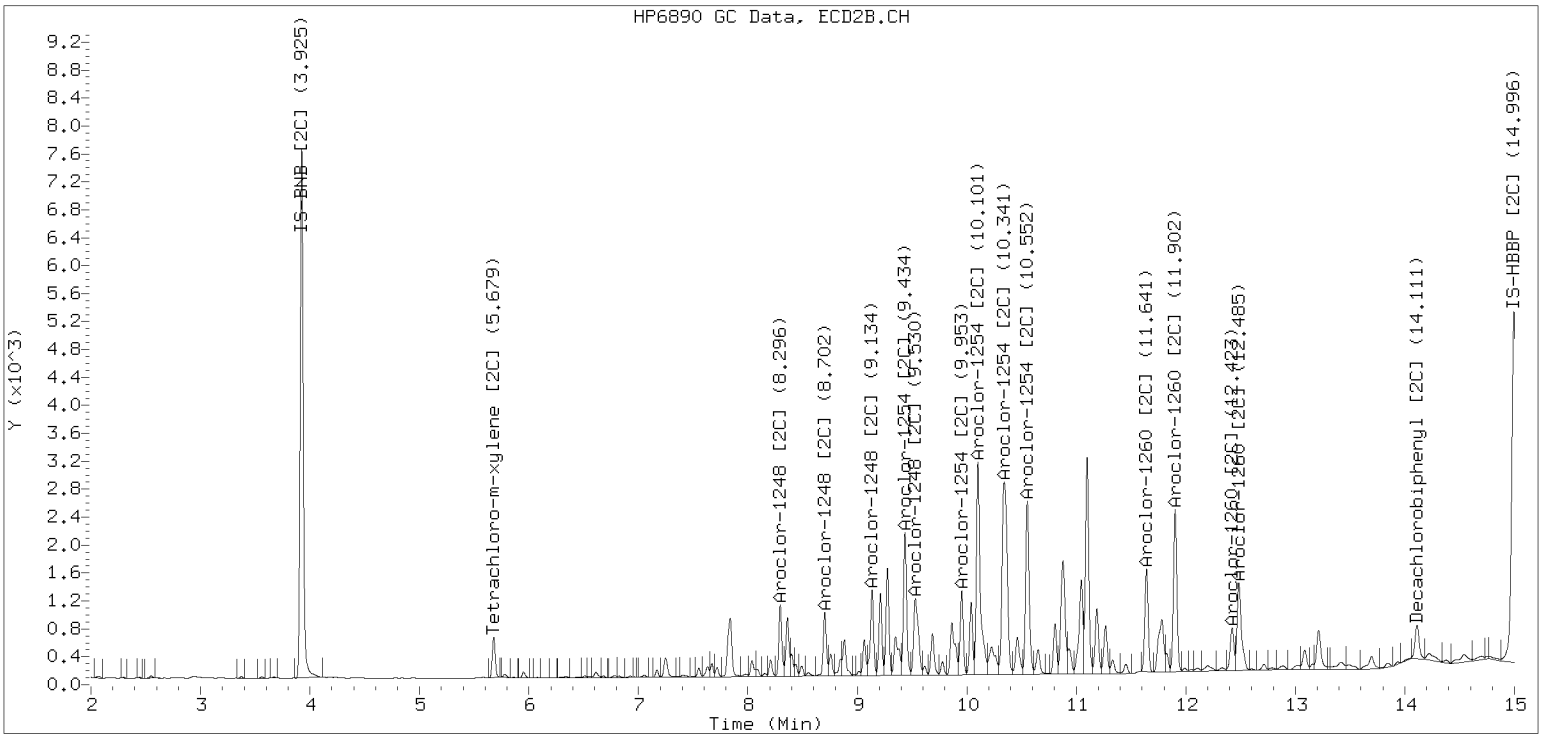


ZB-35 Manual Integration: YES

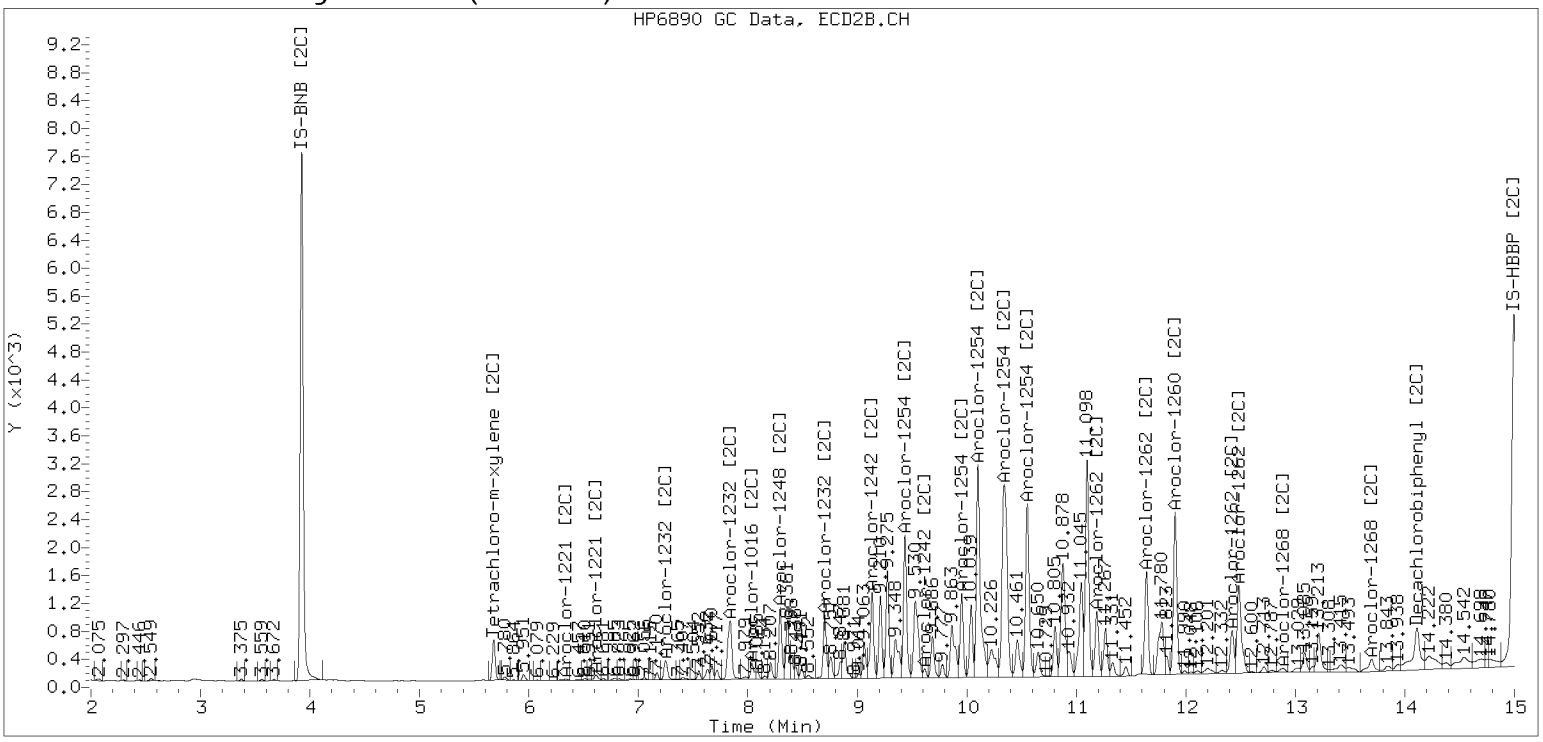
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230209.b/230209.b/02092316ECD7.D Injection Date: 09-FEB-2023

Manual Integration (After)



Processed Integration (Before)



PREPARATION BATCH SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC SDG: 23A0207

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

Batch: BLA0626 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1088	23A0207-01	02082337ECD7.D	01/30/23 11:40	
LDW23-IT1089	23A0207-02	02082338ECD7.D	01/30/23 11:40	
LDW23-IT1079	23A0207-03	02082339ECD7.D	01/30/23 11:40	
LDW23-IT1080	23A0207-04	02082342ECD7.D	01/30/23 11:40	
LDW23-IT1080-FD	23A0207-05	02082343ECD7.D	01/30/23 11:40	
LDW23-IT1072	23A0207-06	02082344ECD7.D	01/30/23 11:40	
LDW23-IT1081	23A0207-07	02082345ECD7.D	01/30/23 11:40	
LDW23-IT1068	23A0207-08	02082346ECD7.D	01/30/23 11:40	
LDW23-IT1062	23A0207-09	02082347ECD7.D	01/30/23 11:40	
LDW23-IT1097	23A0207-10	02092309ECD7.D	01/30/23 11:40	
LDW23-SC1085	23A0207-11	02092310ECD7.D	01/30/23 11:40	
LDW23-SC1069	23A0207-12	02092311ECD7.D	01/30/23 11:40	
LDW23-SC1058	23A0207-13	02092312ECD7.D	01/30/23 11:40	
LDW23-SC1073	23A0207-14	02092313ECD7.D	01/30/23 11:40	
LDW23-IT1078	23A0207-15	02092314ECD7.D	01/30/23 11:40	
LDW23-IT1201	23A0207-16	02092315ECD7.D	01/30/23 11:40	
LDW23-IT1209	23A0207-17	02092316ECD7.D	01/30/23 11:40	
Blank	BLA0626-BLK1	02082333ECD7.D	01/30/23 11:40	
LCS	BLA0626-BS1	02082334ECD7.D	01/30/23 11:40	
LCS Dup	BLA0626-BSD1	02082335ECD7.D	01/30/23 11:40	
LDW23-IT1079	BLA0626-MS1	02082340ECD7.D	01/30/23 11:40	
LDW23-IT1079	BLA0626-MSD1	02082341ECD7.D	01/30/23 11:40	
Reference	BLA0626-SRM1	02082336ECD7.D	01/30/23 11:40	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0626

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

Matrix: Solid **Date Prepared:** 01/30/23 **Balance ID:** B14462614 **Set Up By:** CRD 1/26/23

WO Comments

23A0207: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

The following standards may be missing from this batch!

Designator	Description
QLS 5	QLS Spike

Analysis: 8082A PCB Solid 4

Lab Number & Container	% Solids	Initial (g) Target Dry: 12.5 (Wet)	Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL) 1 2 3	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23A0207-01 A	78.4	(15.94)	15.96	5mL	5mL	2mL	2.5	1.0	
23A0207-02 A	78.6	(15.90)	15.93	5mL	5mL	2mL	2.5	1.0	
23A0207-03 A	80.0	(15.63)	15.63	5mL	5mL	2mL	2.5	1.0	
23A0207-04 A	73.6	(16.98)	16.98	5mL	5mL	2mL	2.5	1.0	
23A0207-05 A	71.3	(17.52)	17.55	5mL	5mL	2mL	2.5	1.0	
23A0207-06 A	79.0	(15.83)	15.87	5mL	5mL	2mL	2.5	1.0	
23A0207-07 A	78.8	(15.87)	15.87	5mL	5mL	2mL	2.5	1.0	
23A0207-08 A	72.8	(17.16)	17.20	5mL	5mL	2mL	2.5	1.0	
23A0207-09 A	73.0	(17.12)	17.16	5mL	5mL	2mL	2.5	1.0	
23A0207-10 A	71.5	(17.48)	17.49	5mL	5mL	2mL	2.5	1.0	
23A0207-11 A	47.8	(26.17)	26.19	5mL	5mL	2mL	2.5	1.0	
23A0207-12 A	77.0	(16.23)	16.23	5mL	5mL	2mL	2.5	1.0	
23A0207-13 A	51.1	(24.49)	24.49	5mL	5mL	2mL	2.5	1.0	
23A0207-14 A	70.4	(17.75)	17.77	5mL	5mL	2mL	2.5	1.0	
23A0207-15 A	77.8	(16.08)	16.09	5mL	5mL	2mL	2.5	1.0	
23A0207-16 A	62.7	(19.94)	19.96	5mL	5mL	2mL	2.5	1.0	
23A0207-17 A	63.2	(19.77)	19.79	5mL	5mL	2mL	2.5	1.0	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 12.5 (Wet)	Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL) 1 2 3	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLA0626-BLK1	100.0	(12.50)	12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BLA0626-BS1	100.0	(12.50)	12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BLA0626-BSD1	100.0	(12.50)	12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BLA0626-MS1	80.0	(15.63)	15.63	5mL	5mL	2mL	2.5	1.0	Use 23A0207-03
BLA0626-MSD1	80.0	(15.63)	15.63	5mL	5mL	2mL	2.5	1.0	Use 23A0207-03
BLA0626-SRM1	100.0	~~(12.50)~~ (2.50) +1g DI WATER	2.50	5mL	5mL	2mL	2.5	1.0	Use K011478

01/30/23 — Client ID verified By — Date

NRS 2/7/23 — Preparation Reviewed By — Date

01/30/23 11:40 — Extraction Date and Time

Printed: 1/26/2023 10:35:06AM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0626

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

WO Comments

23A0207: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Steps

Microwave
1 2 3
CT 01/30/23
Analyst/Date

KD
100°C
Hexane Exchange
(2 X 20 mL)
1 2 3 4 5 6
NKS 1/31/23
Analyst/Date

TurboVap
Pre Cleanups
1 2 3 4 5
ZH 2/6/23
Analyst/Date

TurboVap
Post Cleanups
1 2 3 4 5
NKS 2/7/23
Analyst/Date

Vialing
NKS 2/7/23
Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: CT/V Date: 01/30/23	
Neutral Glass Wool	KQQQ354
1:1 Hexane/Acetone	LQQQ646
Hexane	KQQQ331Q
Anhydrous Sodium Sulfate	LQQQ759
KD Analyst: NKS Date: 1/31/23	
Anhydrous Sodium Sulfate	N/A
Hexane	K011373
Vialing Analyst: ZH/NKS Date: 2/7/23	
Hexane	K011373
Concentrated Sulfuric Acid	L001033
Silica Gel (SPE) Darts	K011573
Sodium Sulfite	K010363
Tetrabutylammonium hydrogensulfate (TBAS)	L000840

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 2µg/mL	N L000773 Exp Date: 7/21/2023	50µL	CT	V
Spike 20µg/mL	1 K008150 Exp Date: 3/5/2023	63µL	CT	V

MANUALLY ENTER EXPIRATION DATES!

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

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

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLA0626

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

WO Comments

23A0207: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate. 2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hexane/Acetone until the solvent layer is 3 inches above the soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then cool vessels in R-05 15 minutes. Re-homogenize while cool. 7. Decant 1:1 Hex/Ace into Erlenmeyer flask with sodium sulfate in bottom and funnel with neutral glasswool plug. 8. Re-homogenize and rinse with 1:1 Hexane/Acetone. 9. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 10. KD on 100° bath. 11. Exchange (2 X with 20mL) Hexane. 12. TurboVap. 13. Clean-ups. 14. TurboVap. 15. Vial with Hexane. A. Need Total Solids Y (N) B. Archive/Freeze (Y) N	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

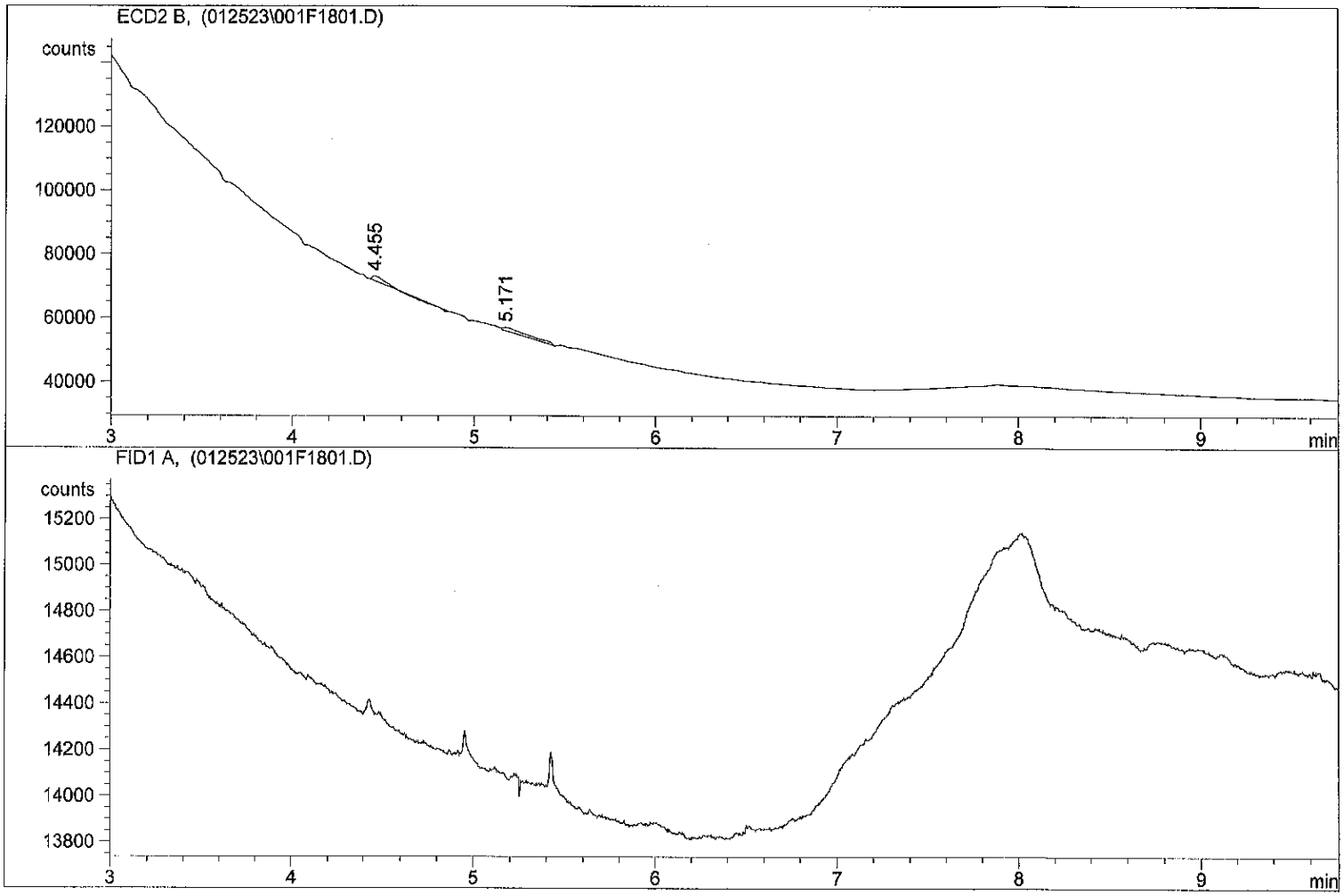
Organic Extractions Laboratory
Analyst Notes

Extraction Parameter: PCB Extraction Batch: BLA0626

Total Solids Batch: BLA0589 Work Order(s): 23A0207

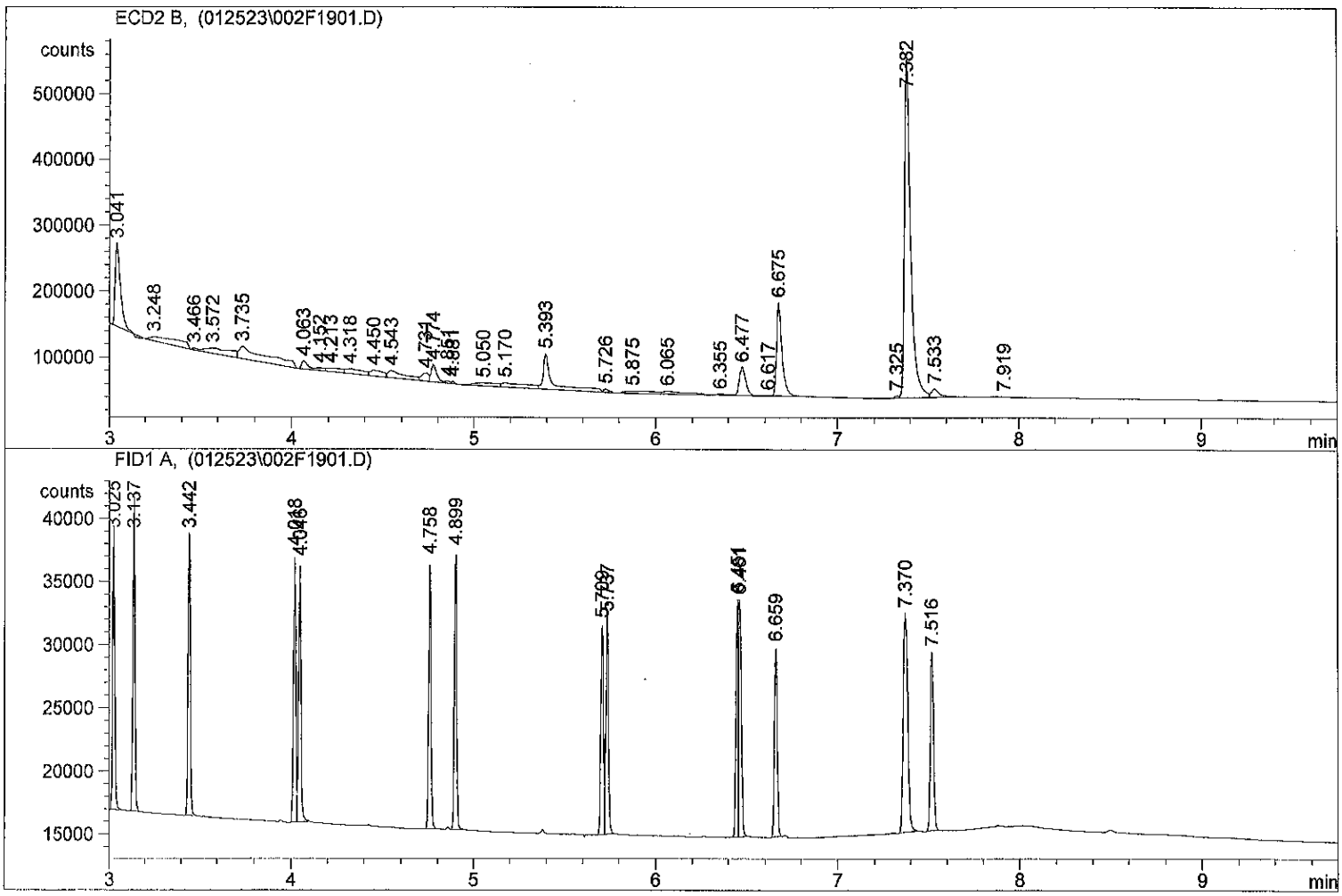
Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 207-6,7,	DP 1/25/23
☒ Standing Water Decanted (Not shared)= 207-1,2,3,4,5,9,10,12,13,15,11	DP 1/25/23
☐ Standing Water Homogenized (Shared samples)=	
☒ Clay/Clumps (Difficult to homogenize)= 207-8	DP 1/25/23
☒ Rocks (%+size)? 30% ¼" - ⅓" = 207-3,9,100,12,14 60% ⅕" - ⅓" = 207-15	DP 1/25/23
☒ Organics (Leaves/sticks/grass)= 207-10,16	DP 1/25/23
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☒ Previously Frozen =	CTO 11/04/22
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

Injection Date	: 1/25/2023 9:21:32 PM	Seq. Line	: 18
Sample Name	: DCM RINSE	Location	: Vial 1
Acq. Operator	: DXP	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



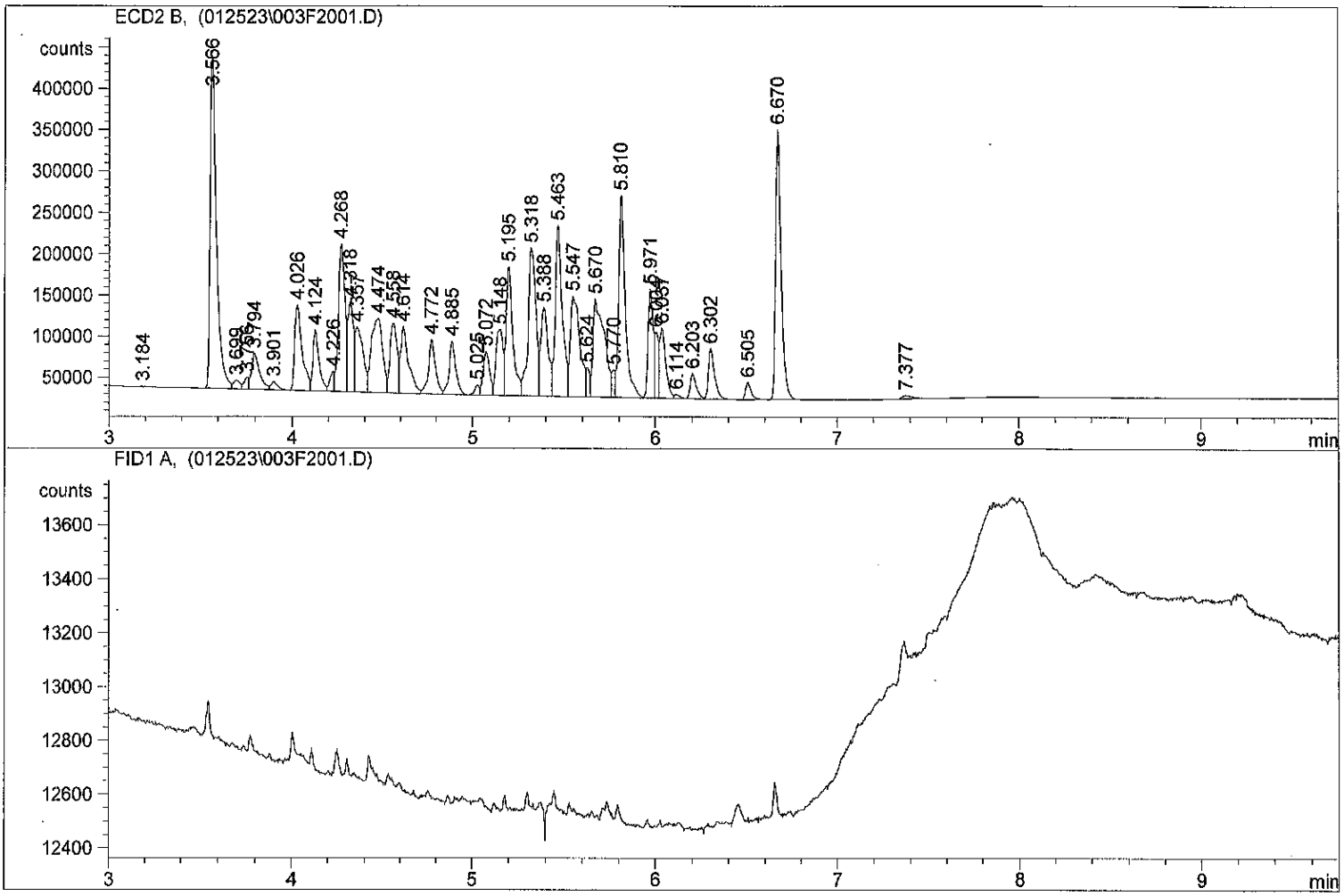
*** End of Report ***

Injection Date	: 1/25/2023 9:36:10 PM	Seq. Line	: 19
Sample Name	: PNA STD 10 PPM	Location	: Vial 2
Acq. Operator	: DXP	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Injection Date	: 1/25/2023 9:50:07 PM	Seq. Line :	20
Sample Name	: AR1660 1 PPM	Location :	Vial 3
Acq. Operator	: DXP	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			

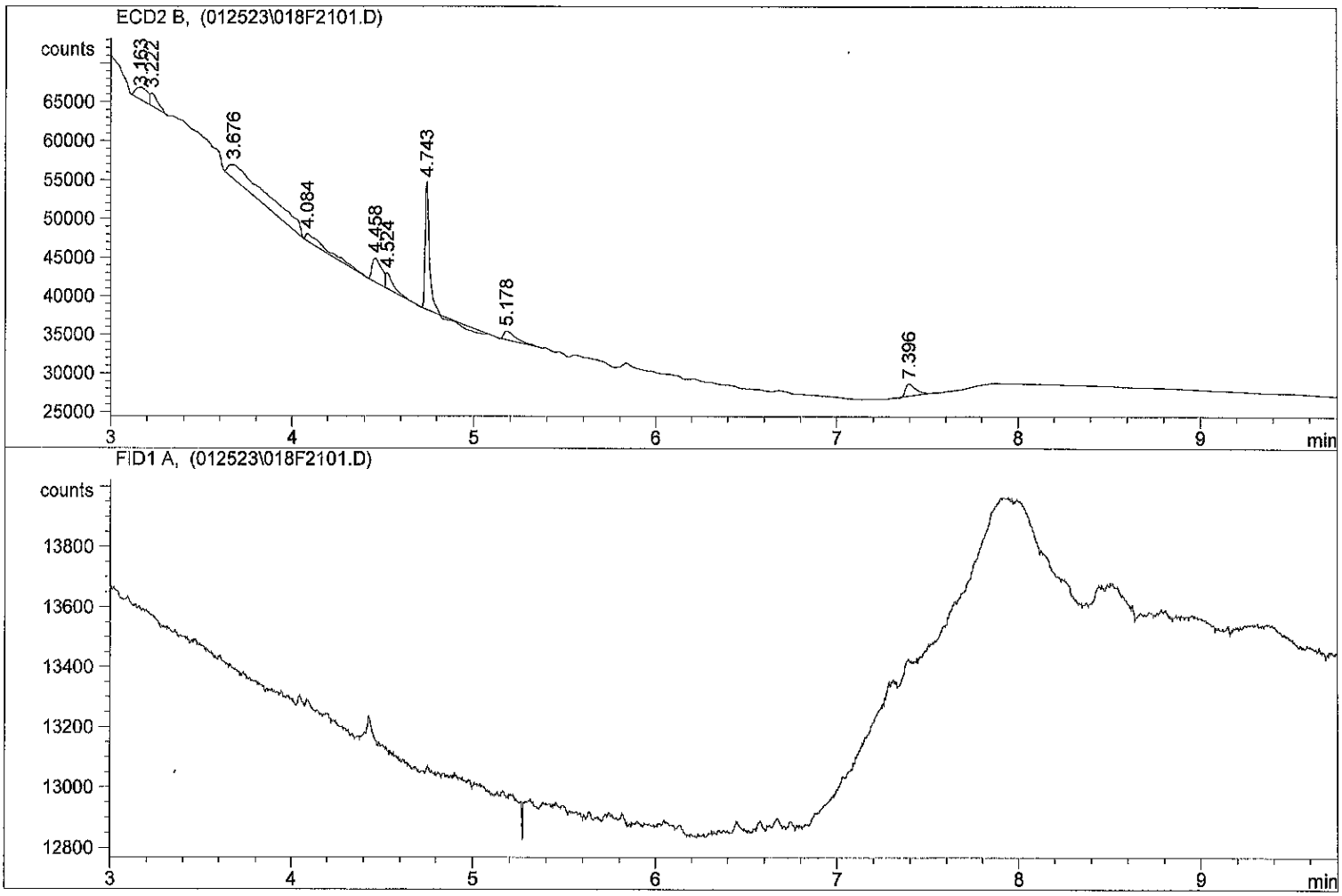


*** End of Report ***

Data File C:\HPCHEM\1\DATA\012523\018F2101.D Sample Name: 23A0207 01

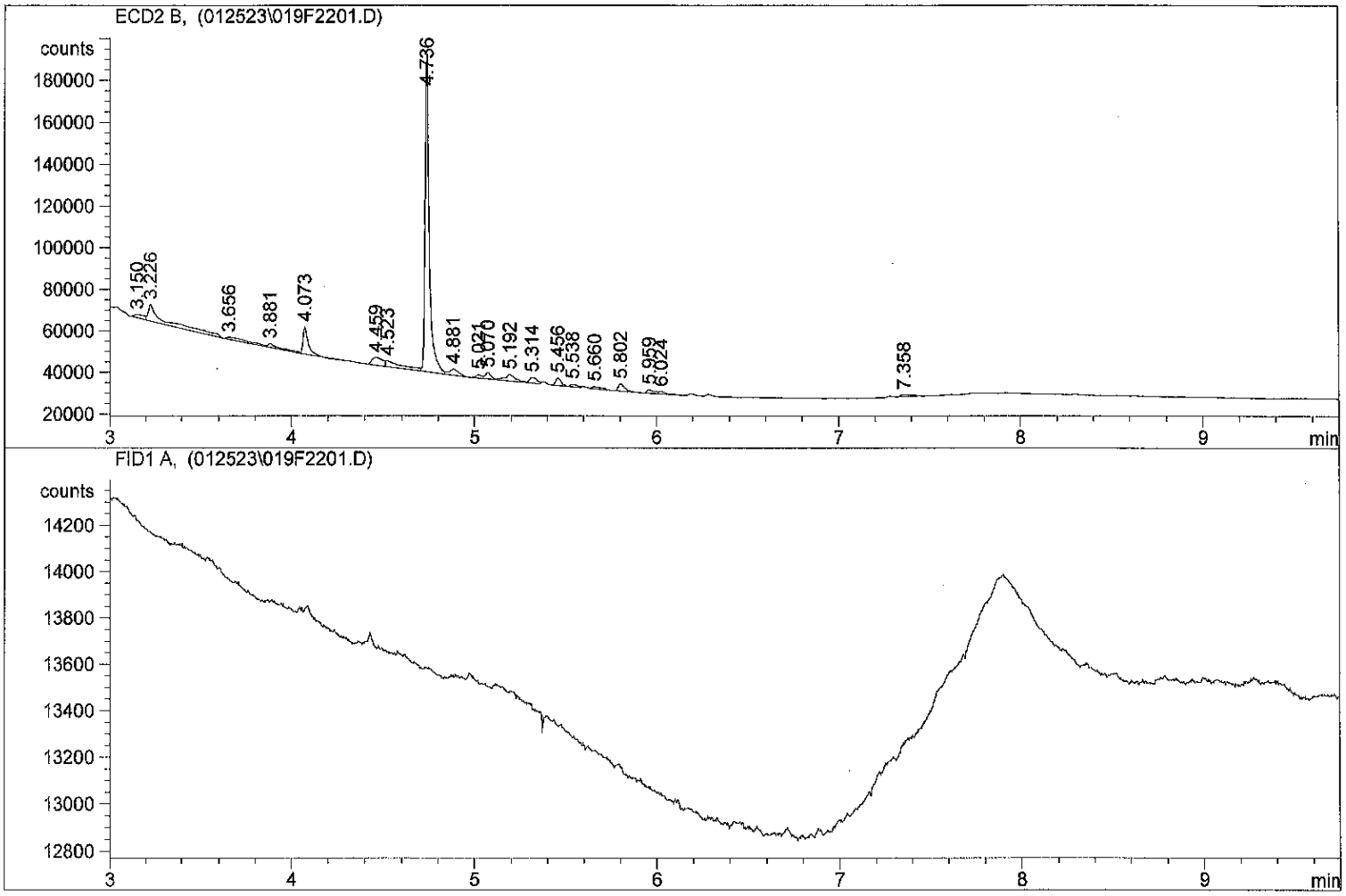
Injection Date	: 1/25/2023 10:04:40 PM	Seq. Line	: 21
Sample Name	: 23A0207 01	Location	: Vial 18
Acq. Operator	: DXP	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		

SCREEN METHOD



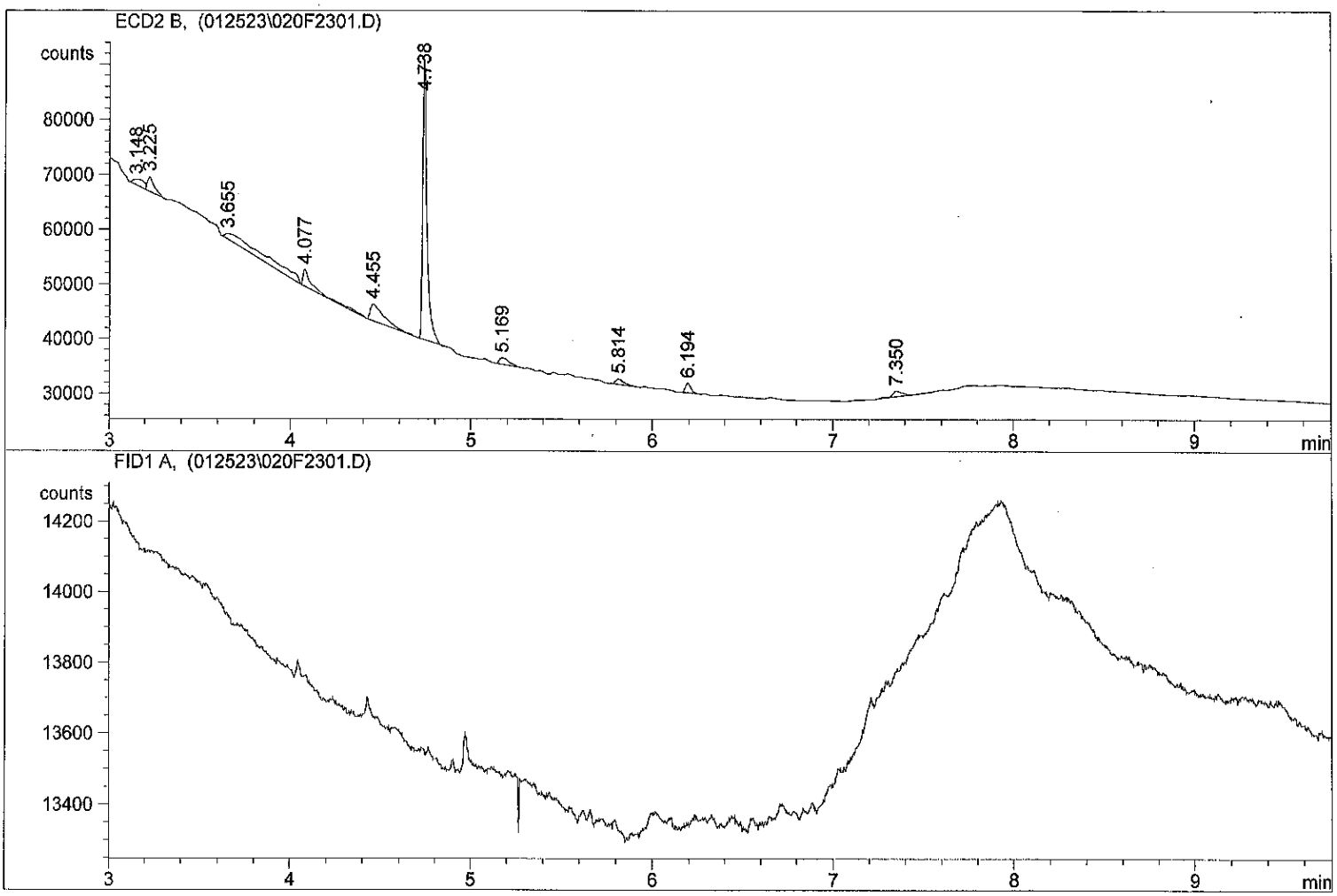
*** End of Report ***

Injection Date	: 1/25/2023 10:18:34 PM	Seq. Line	: 22
Sample Name	: 23A0207 02	Location	: Vial 19
Acq. Operator	: DXP	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

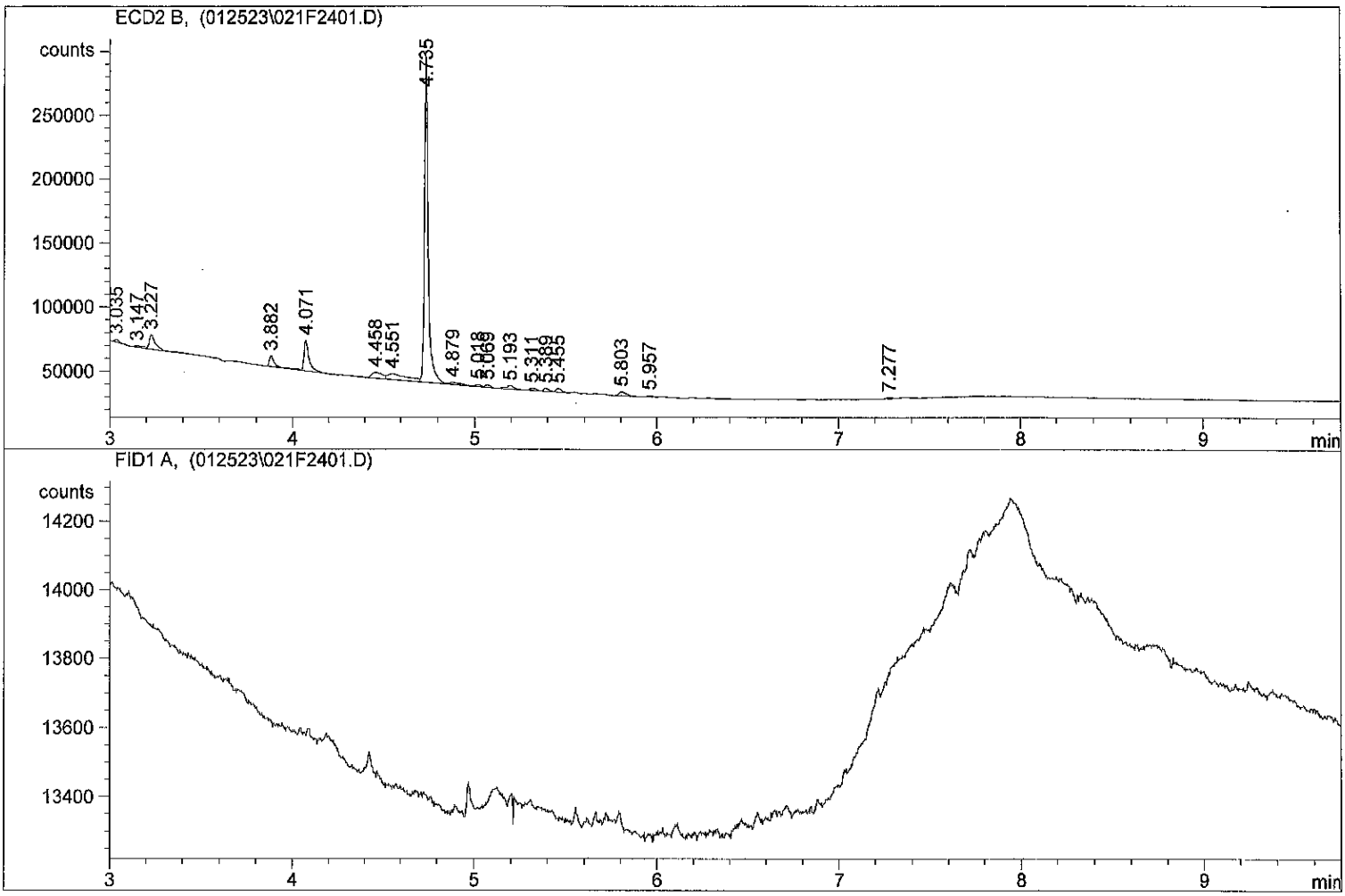
Injection Date	: 1/25/2023 10:33:12 PM	Seq. Line	: 23
Sample Name	: 23A0207 03	Location	: Vial 20
Acq. Operator	: DXP	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

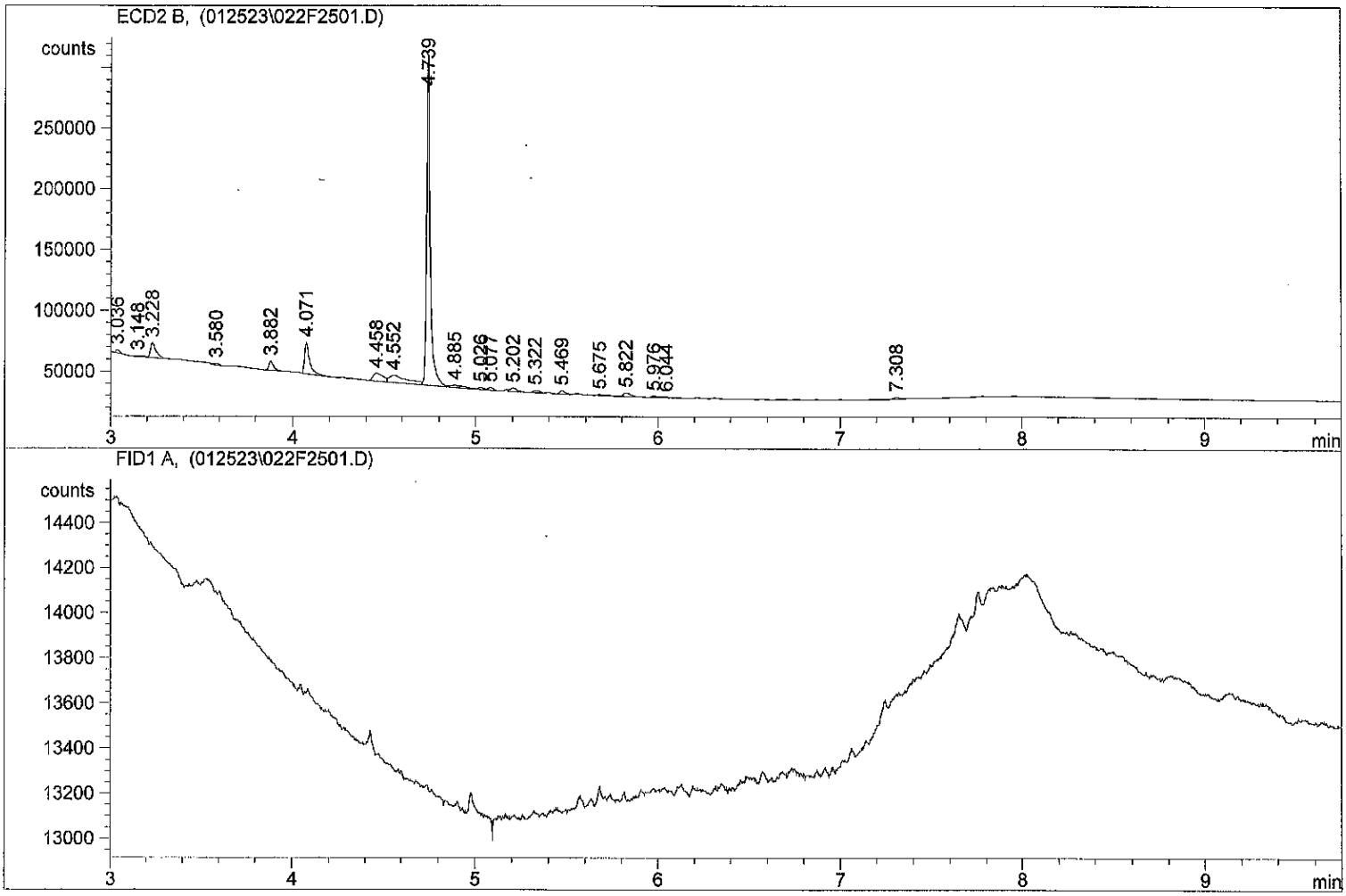
Data File C:\HPCHEM\1\DATA\012523\021F2401.D Sample Name: 23A0207 04

Injection Date	: 1/25/2023 10:47:06 PM	Seq. Line	: 24
Sample Name	: 23A0207 04	Location	: Vial 21
Acq. Operator	: DXP	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

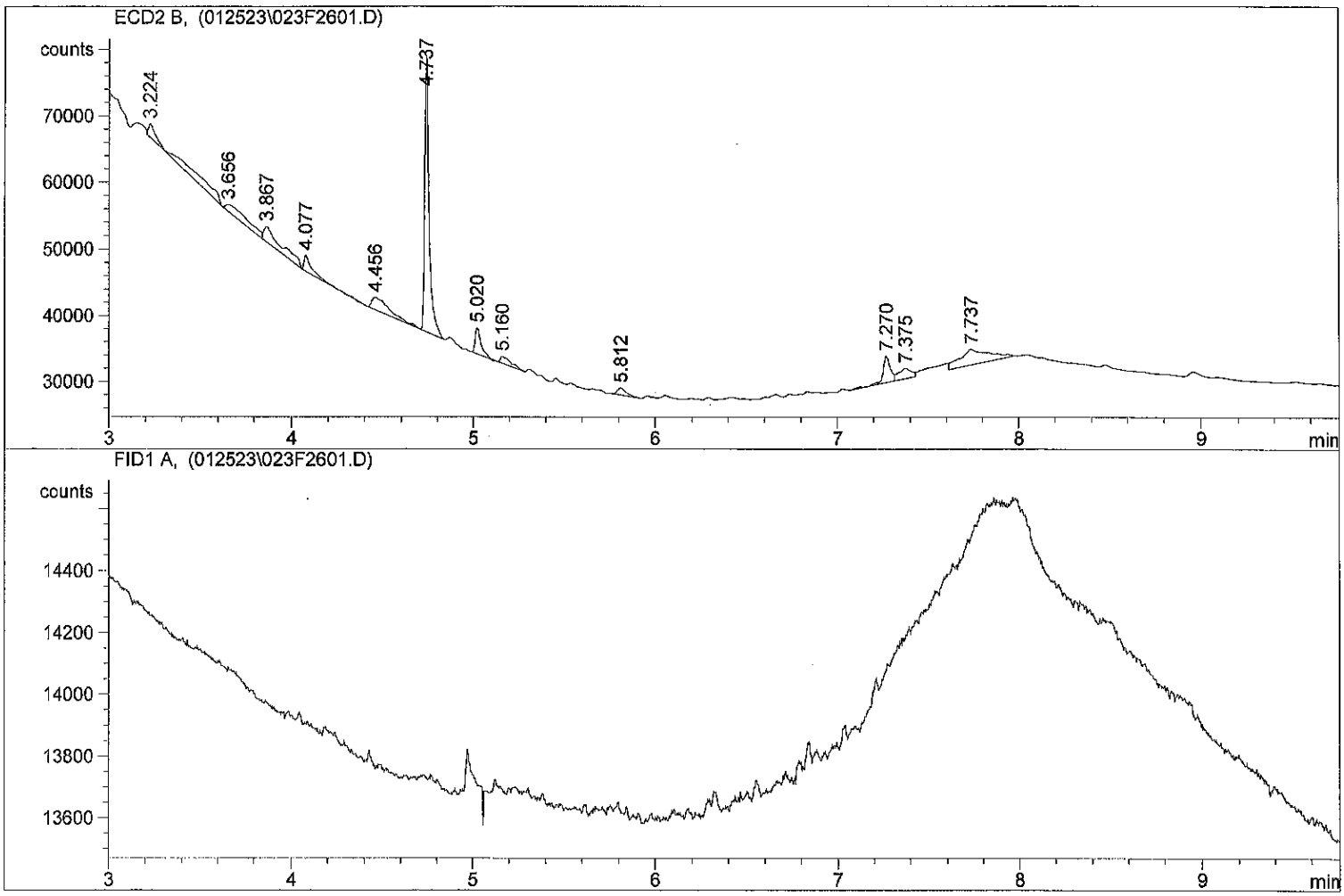
Injection Date	: 1/25/2023 11:01:45 PM	Seq. Line	: 25
Sample Name	: 23A0207 05	Location	: Vial 22
Acq. Operator	: DXP	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Injection Date : 1/25/2023 11:15:45 PM Seq. Line : 26
Sample Name : 23A0207 06 Location : Vial 23
Acq. Operator : DXP Inj : 1
Inj Volume : 1 µl

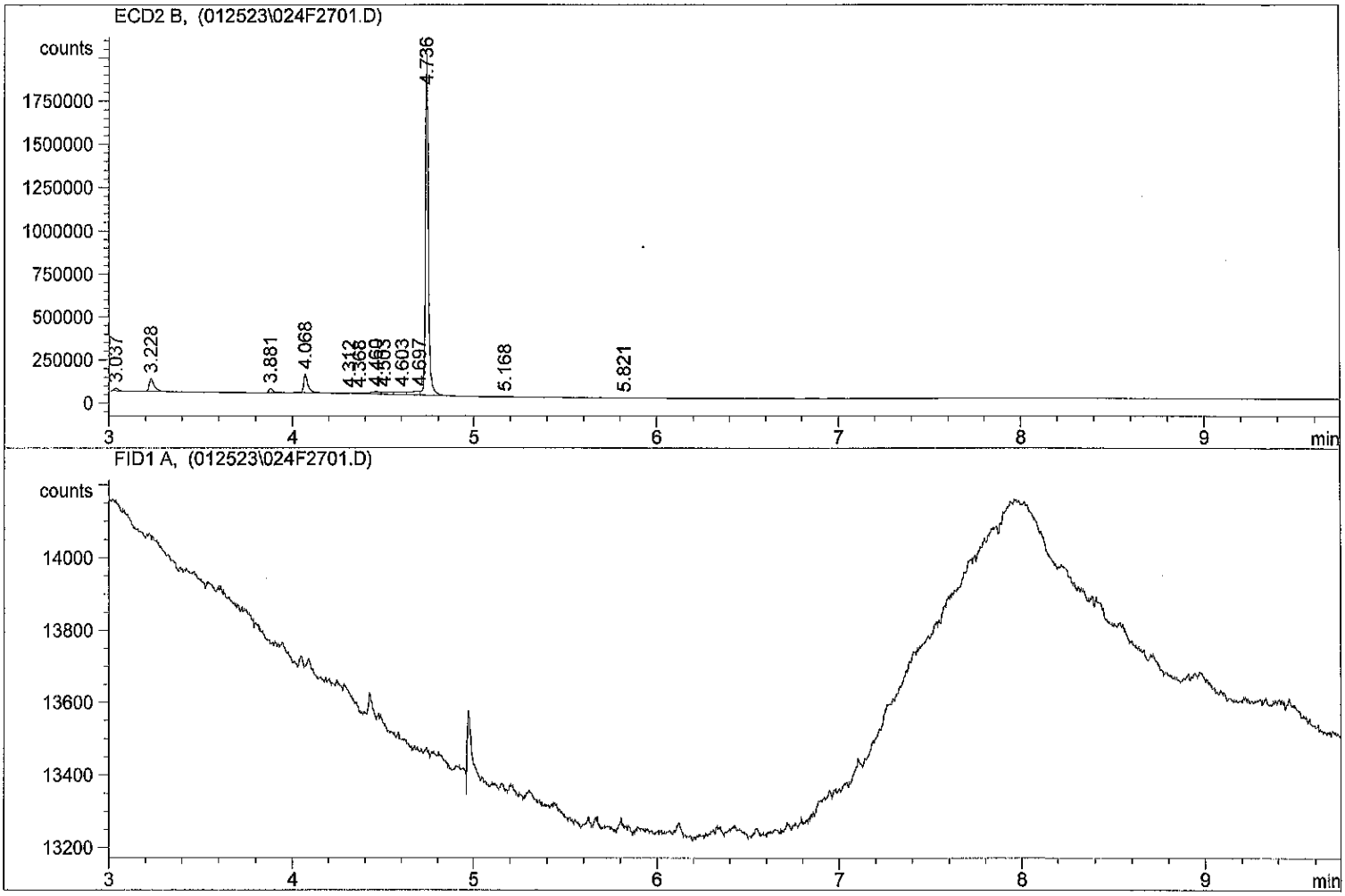
Sequence File : C:\HPCHEM\1\SEQUENCE\012523.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD



*** End of Report ***

Data File C:\HPCHEM\1\DATA\012523\024F2701.D Sample Name: 23A0207 07

Injection Date	: 1/25/2023 11:30:14 PM	Seq. Line	: 27
Sample Name	: 23A0207 07	Location	: Vial 24
Acq. Operator	: DXP	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

```
Injection Date  : 1/25/2023 11:44:10 PM          Seq. Line :  28
Sample Name     : 23A0207 08                     Location : Vial 25
Acq. Operator   : DXP                               Inj :   1
                                                 Inj Volume : 1 µl

Sequence File   : C:\HPCHEM\1\SEQUENCE\012523.S
Method          : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed    : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD
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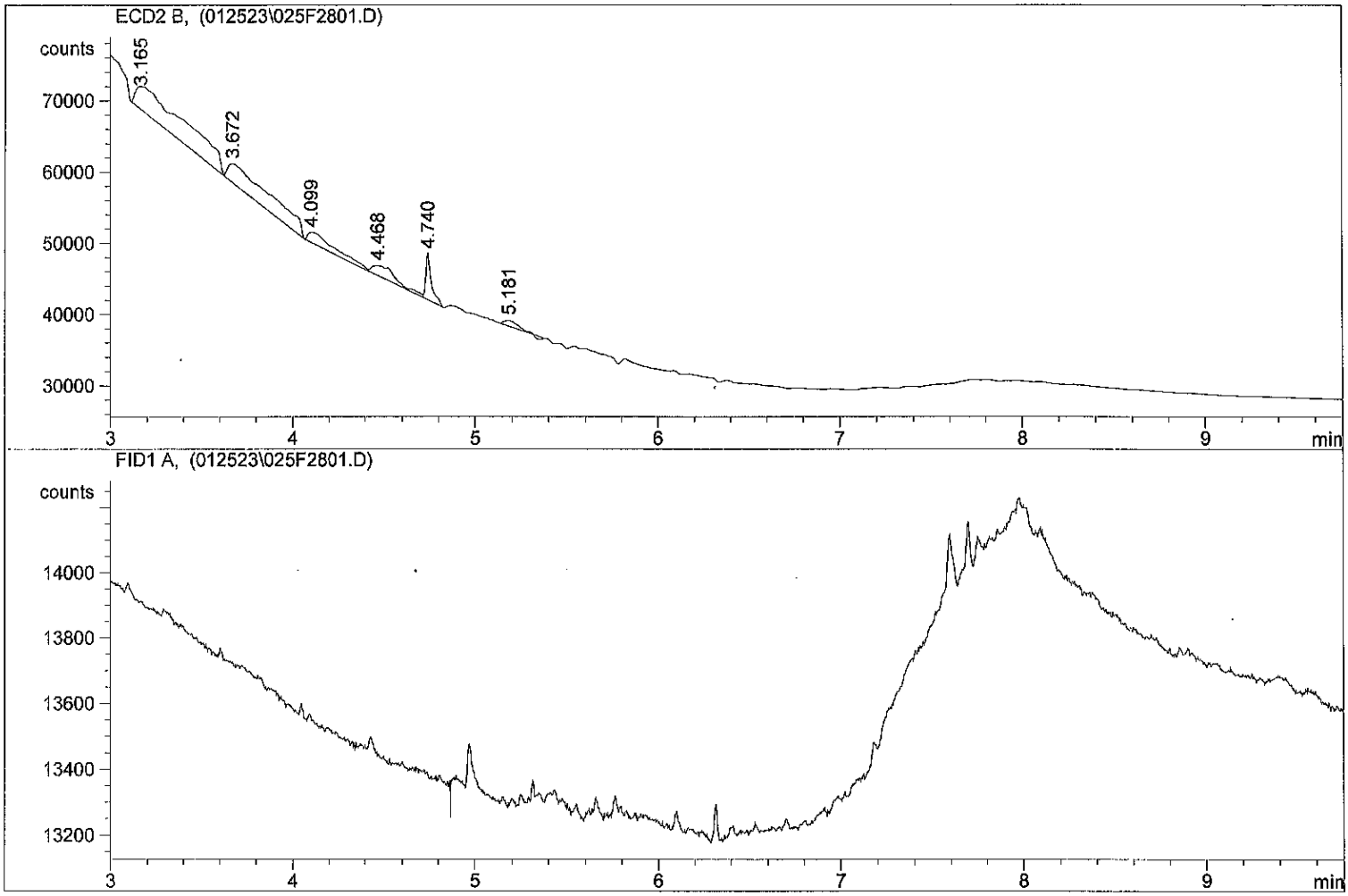
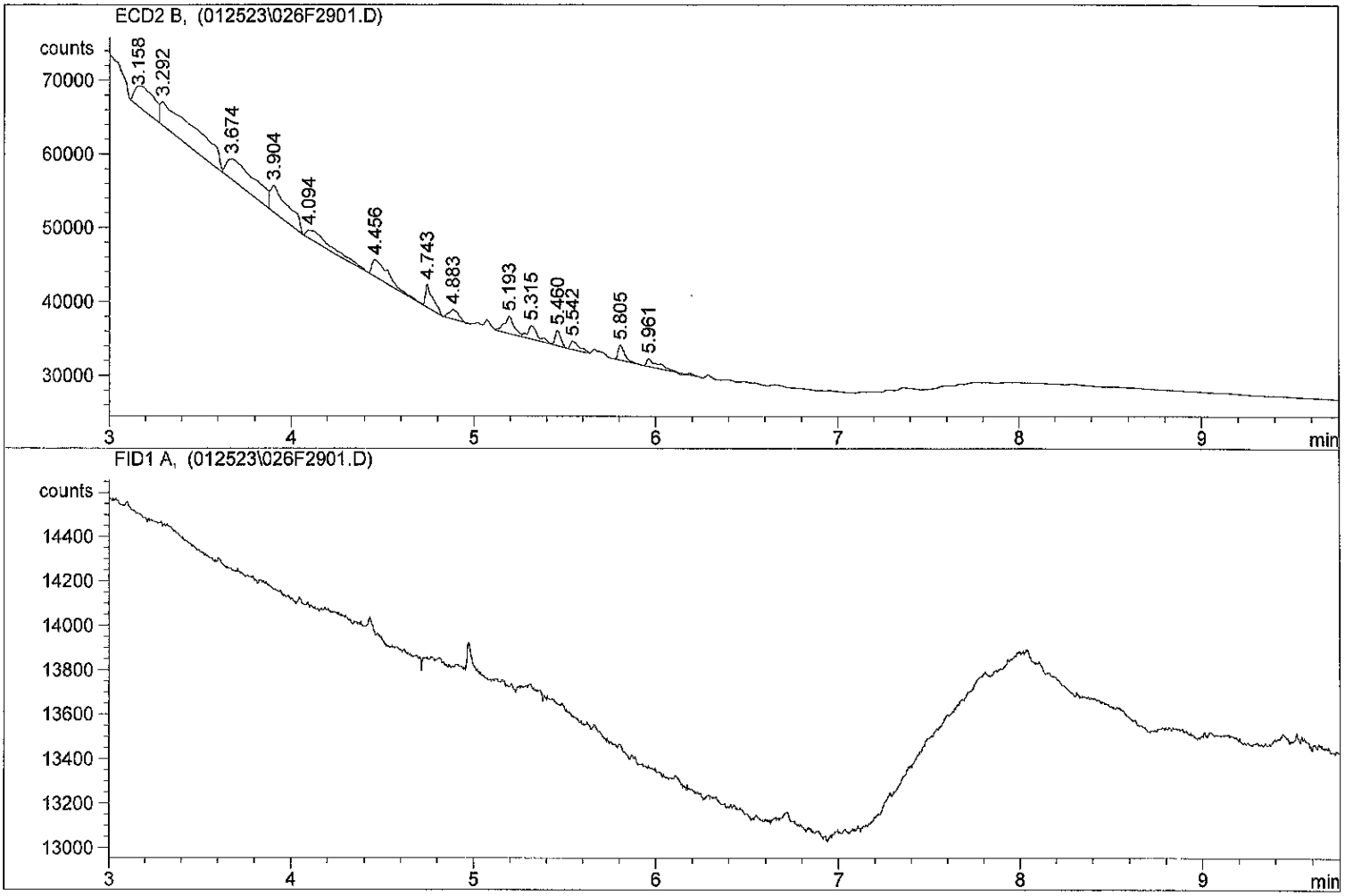


*** End of Report ***

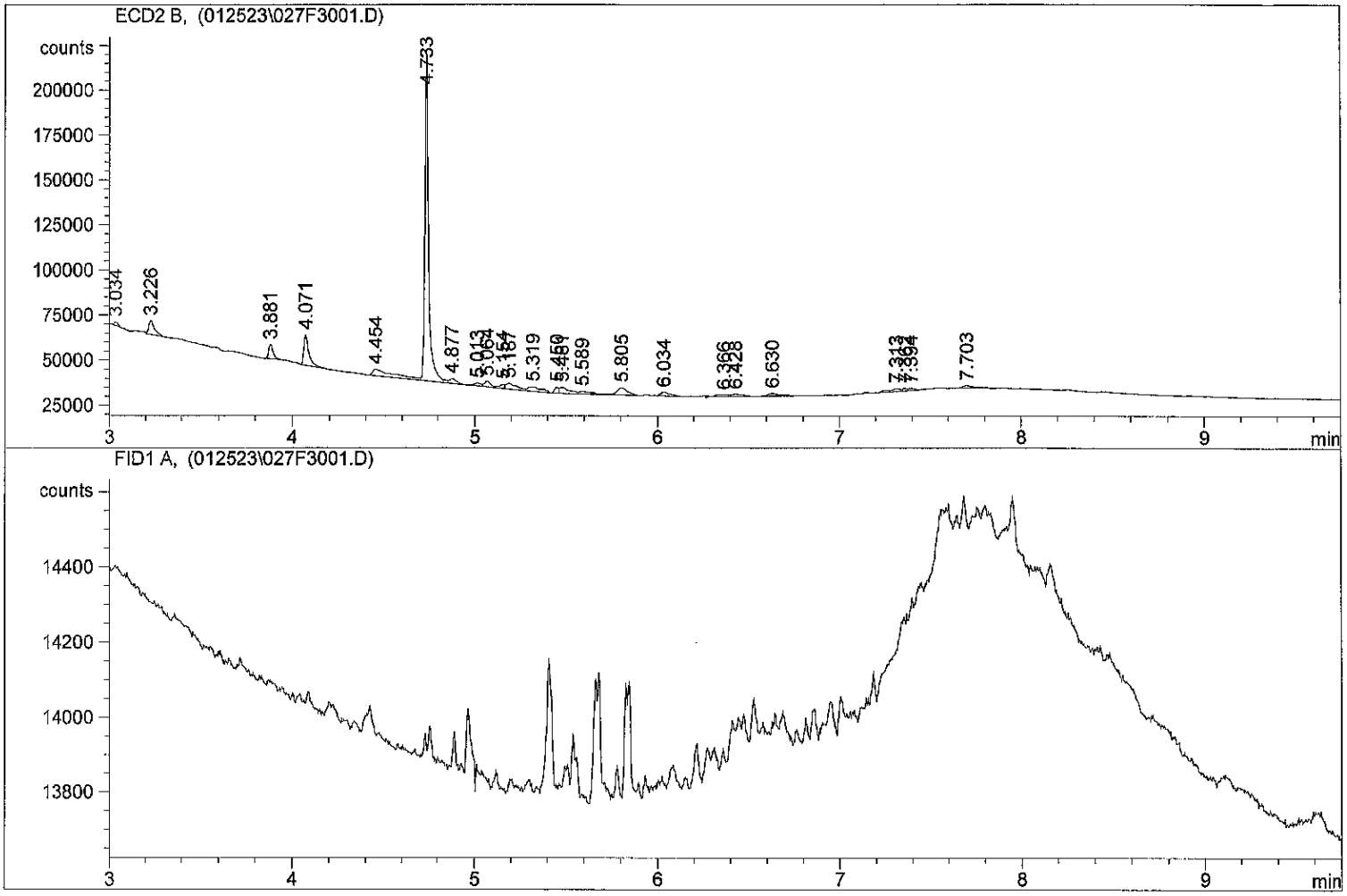
Injection Date	: 1/25/2023 11:58:45 PM	Seq. Line	: 29
Sample Name	: 23A0207 09	Location	: Vial 26
Acq. Operator	: DXP	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Data File C:\HPCHEM\1\DATA\012523\027F3001.D Sample Name: 23A0207 10

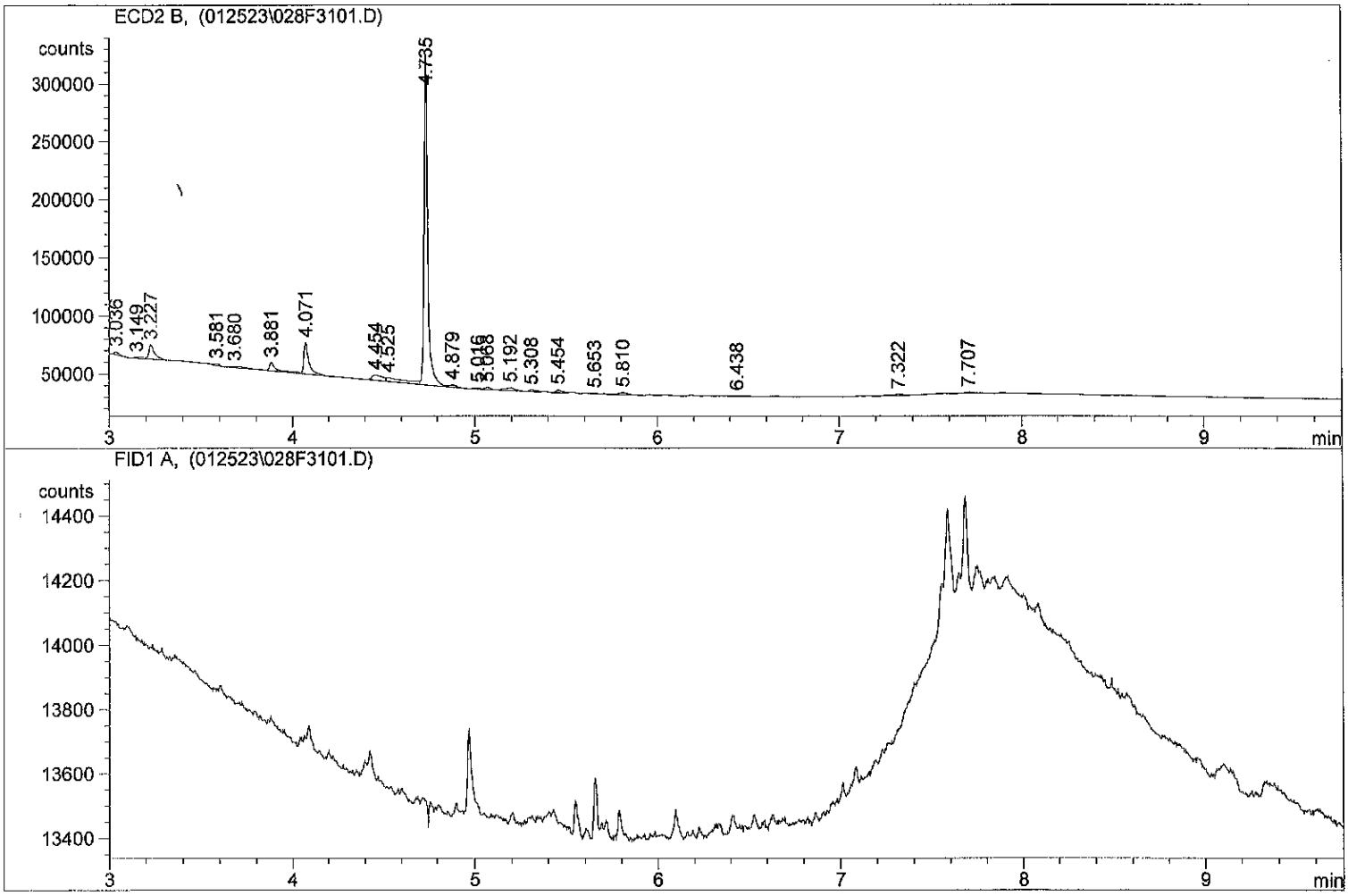
Injection Date	: 1/26/2023 12:12:44 AM	Seq. Line	: 30
Sample Name	: 23A0207 10	Location	: Vial 27
Acq. Operator	: DXP	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

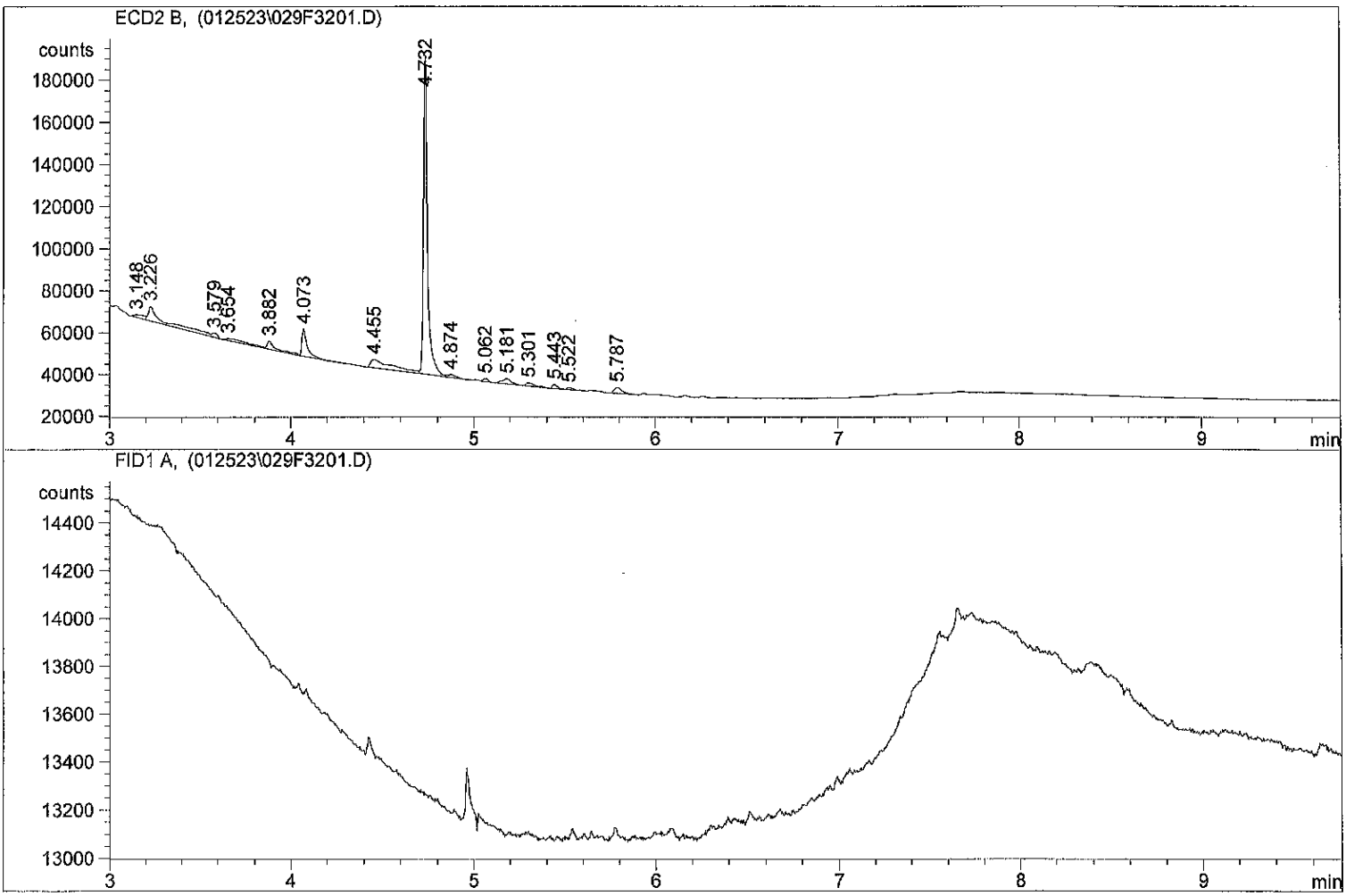
Data File C:\HPCHEM\1\DATA\012523\028F3101.D Sample Name: 23A0207 11

Injection Date	: 1/26/2023 12:27:18 AM	Seq. Line	: 31
Sample Name	: 23A0207 11	Location	: Vial 28
Acq. Operator	: DXP	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



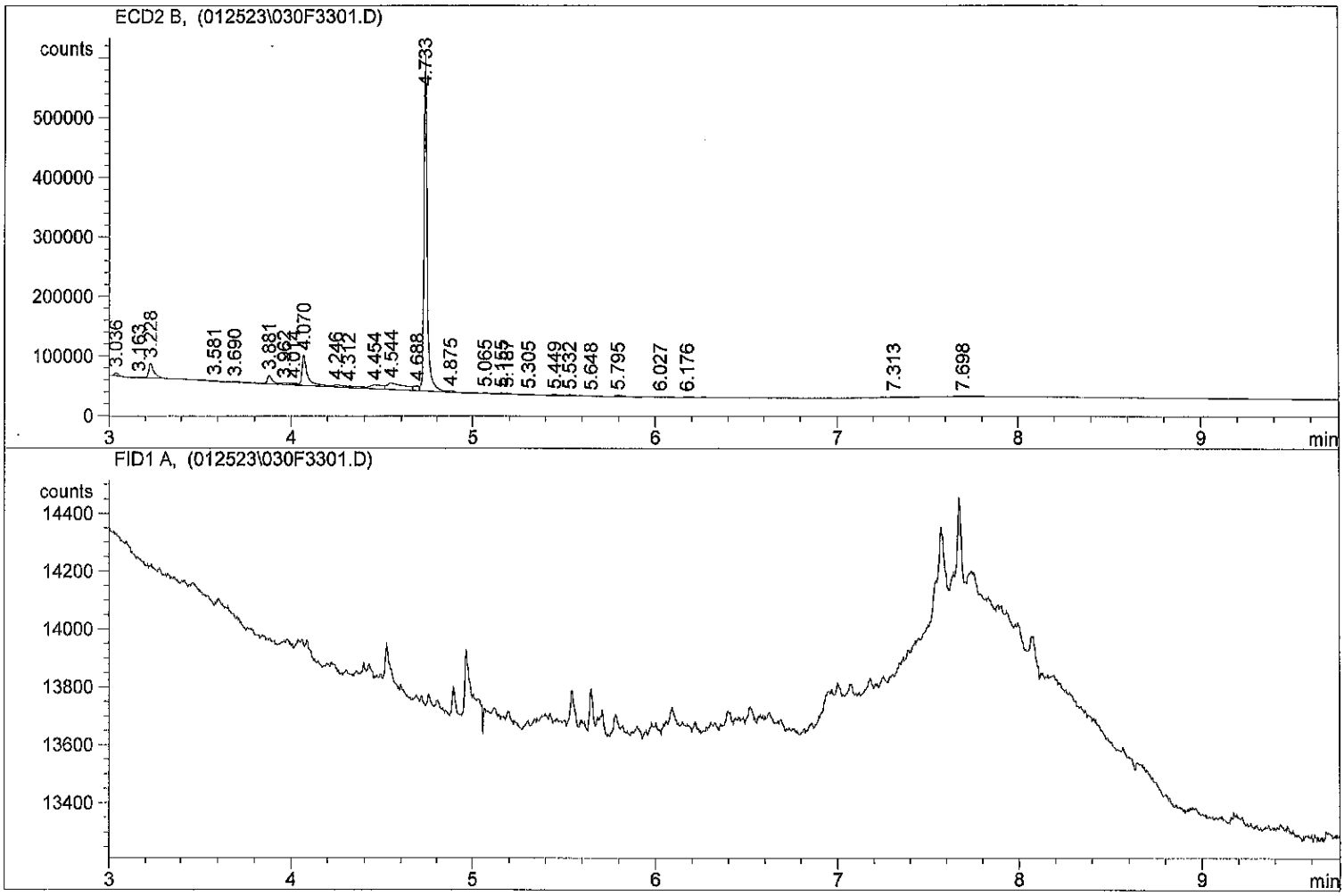
*** End of Report ***

Injection Date	: 1/26/2023 12:41:18 AM	Seq. Line	: 32
Sample Name	: 23A0207 12	Location	: Vial 29
Acq. Operator	: DXP	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

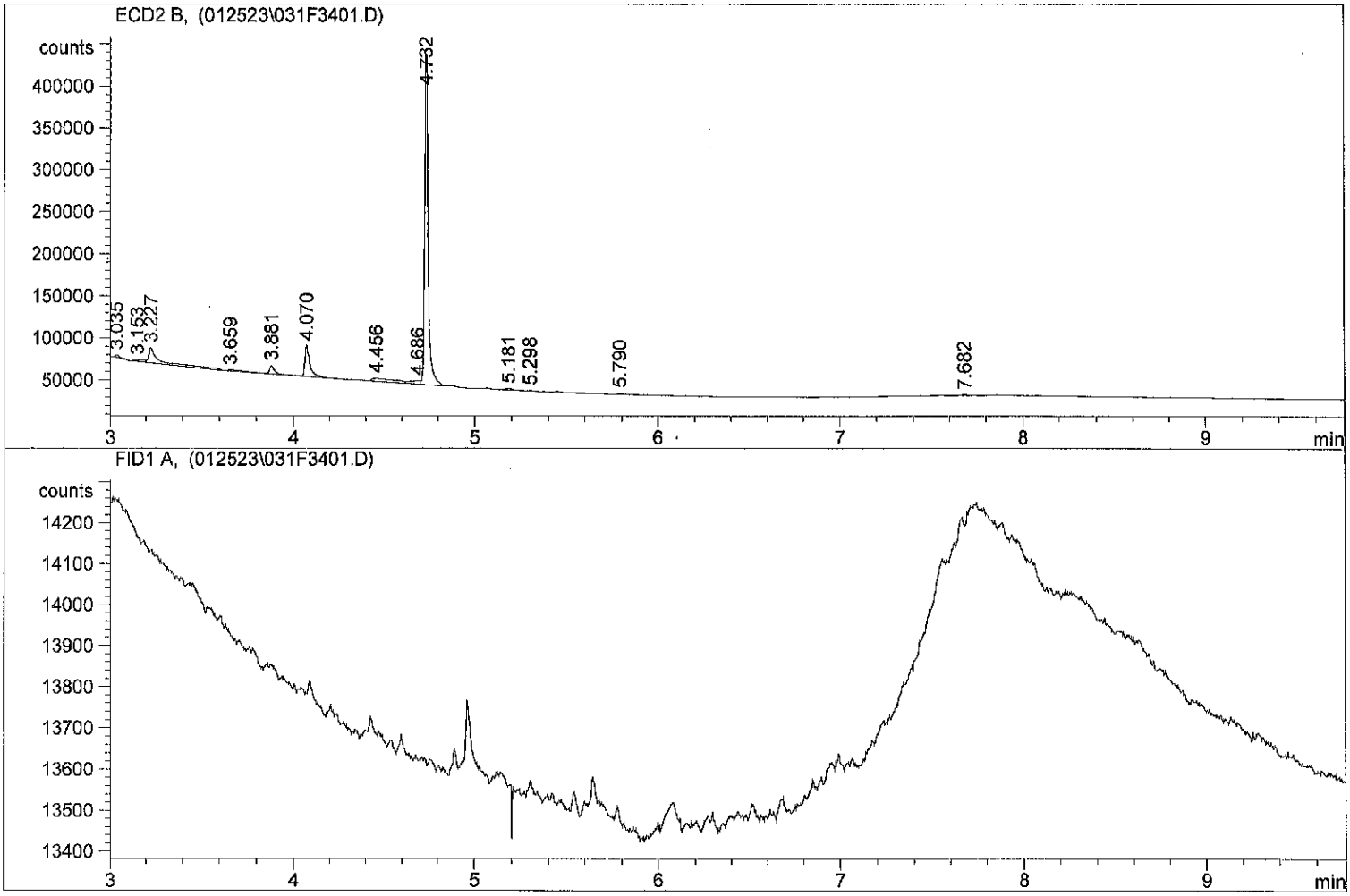
Injection Date	: 1/26/2023 12:55:48 AM	Seq. Line	: 33
Sample Name	: 23A0207 13	Location	: Vial 30
Acq. Operator	: DXP	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Data File C:\HPCHEM\1\DATA\012523\031F3401.D Sample Name: 23A0207 14

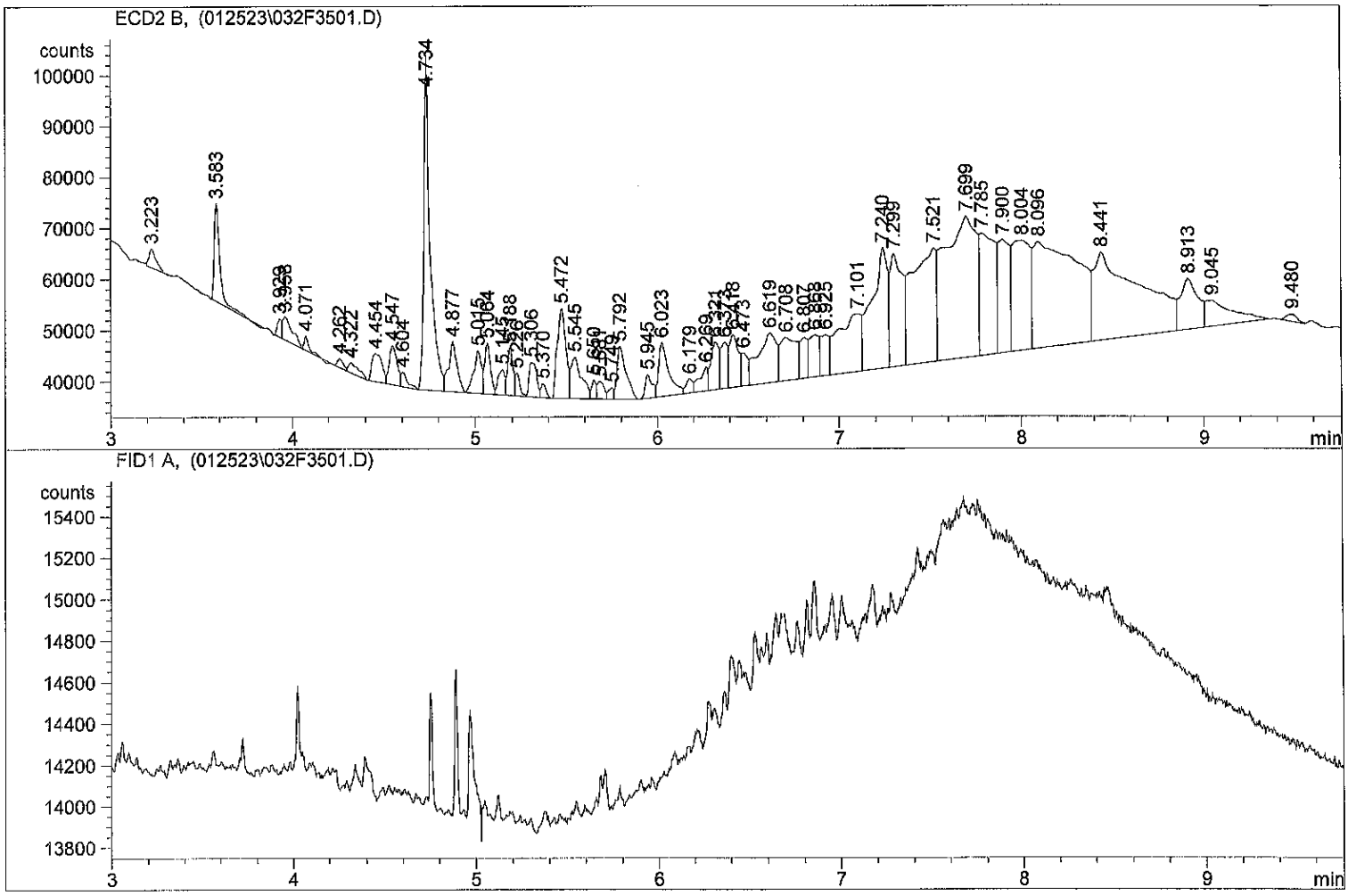
Injection Date	: 1/26/2023 1:09:45 AM	Seq. Line	: 34
Sample Name	: 23A0207 14	Location	: Vial 31
Acq. Operator	: DXP	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Data File C:\HPCHEM\1\DATA\012523\032F3501.D Sample Name: 23A0207 15

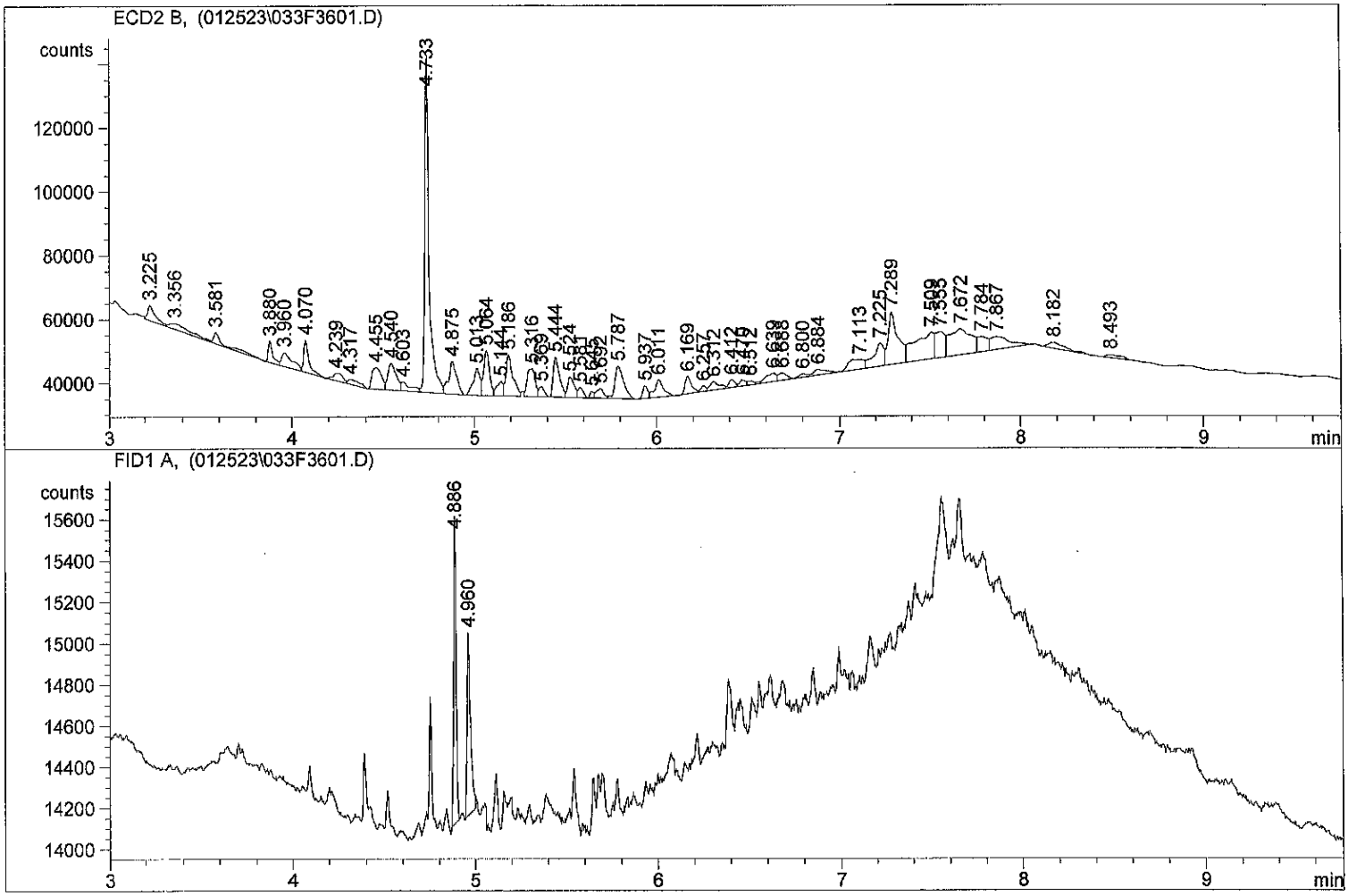
Injection Date	: 1/26/2023 1:24:16 AM	Seq. Line	: 35
Sample Name	: 23A0207 15	Location	: Vial 32
Acq. Operator	: DXP	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

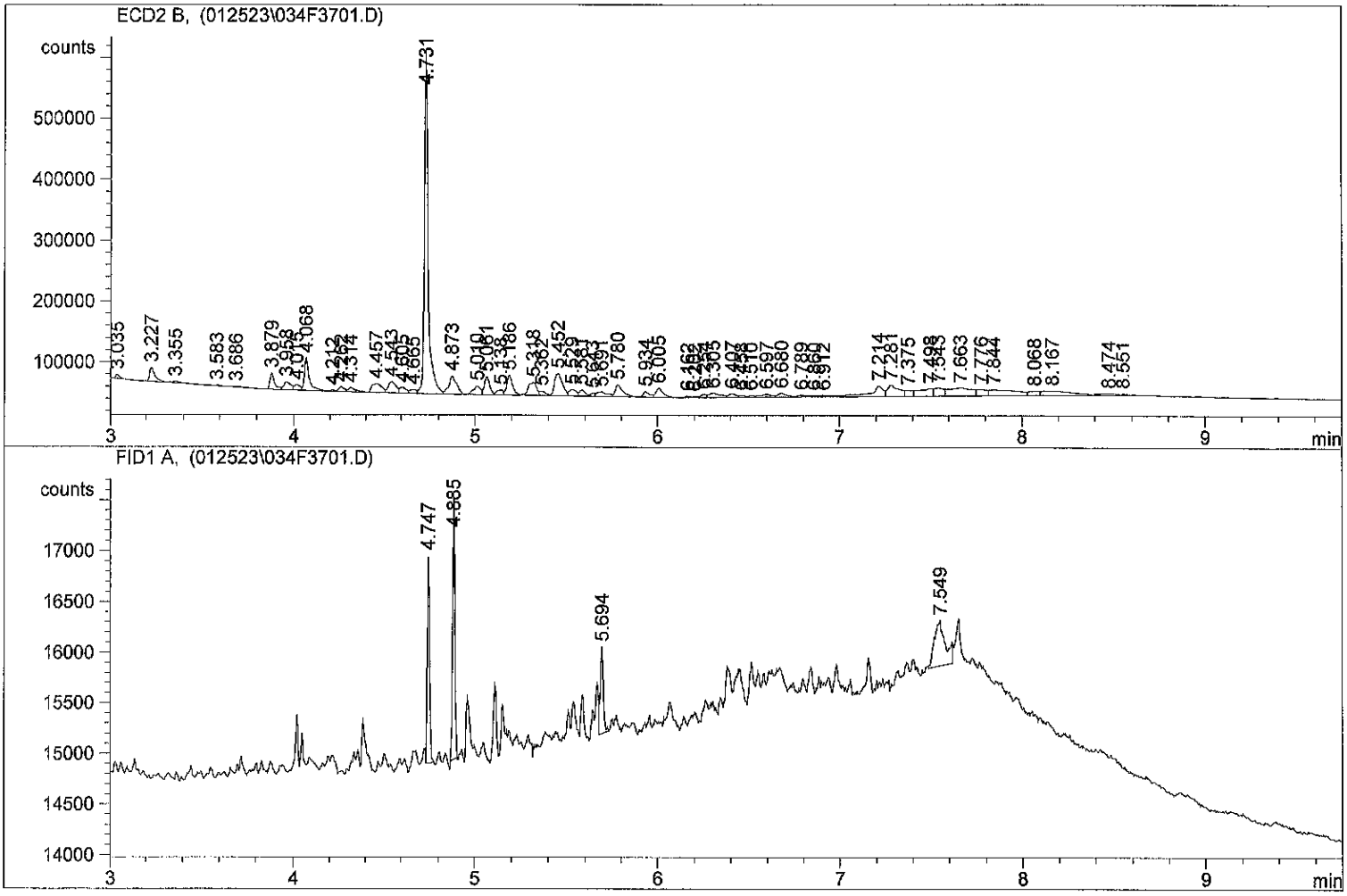
Data File C:\HPCHEM\1\DATA\012523\033F3601.D Sample Name: 23A0207 16

Injection Date	: 1/26/2023 1:38:16 AM	Seq. Line	: 36
Sample Name	: 23A0207 16	Location	: Vial 33
Acq. Operator	: DXP	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Injection Date	: 1/26/2023 1:52:45 AM	Seq. Line	: 37
Sample Name	: 23A0207 17	Location	: Vial 34
Acq. Operator	: DXP	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\012523.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0055	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665 Sulfuric Acid Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1079	23A0207-03	02082339ECD7.D	02/07/2023	
LDW23-IT1201	23A0207-16	02092315ECD7.D	02/07/2023	
LDW23-IT1097	23A0207-10	02092309ECD7.D	02/07/2023	
LDW23-IT1078	23A0207-15	02092314ECD7.D	02/07/2023	
LDW23-SC1058	23A0207-13	02092312ECD7.D	02/07/2023	
LDW23-SC1069	23A0207-12	02092311ECD7.D	02/07/2023	
LDW23-SC1073	23A0207-14	02092313ECD7.D	02/07/2023	
LDW23-IT1089	23A0207-02	02082338ECD7.D	02/07/2023	
LDW23-IT1088	23A0207-01	02082337ECD7.D	02/07/2023	
LDW23-IT1081	23A0207-07	02082345ECD7.D	02/07/2023	
LDW23-IT1209	23A0207-17	02092316ECD7.D	02/07/2023	
LDW23-IT1080-FD	23A0207-05	02082343ECD7.D	02/07/2023	
LDW23-IT1080	23A0207-04	02082342ECD7.D	02/07/2023	
Reference	BLA0626-SRM1	02082336ECD7.D	02/07/2023	
LDW23-IT1072	23A0207-06	02082344ECD7.D	02/07/2023	
LDW23-IT1068	23A0207-08	02082346ECD7.D	02/07/2023	
LDW23-IT1062	23A0207-09	02082347ECD7.D	02/07/2023	
Blank	BLA0626-BLK1	02082333ECD7.D	02/07/2023	
LCS	BLA0626-BS1	02082334ECD7.D	02/07/2023	
LCS Dup	BLA0626-BSD1	02082335ECD7.D	02/07/2023	
Matrix Spike	BLA0626-MS1	02082340ECD7.D	02/07/2023	
Matrix Spike Dup	BLA0626-MSD1	02082341ECD7.D	02/07/2023	
LDW23-SC1085	23A0207-11	02092310ECD7.D	02/07/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0055

Matrix: Solid **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 2/7/2023 4:31:01PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0207-01	A	LDW23-IT1088	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-02	A	LDW23-IT1089	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-03	A	LDW23-IT1079	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-04	A	LDW23-IT1080	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-05	A	LDW23-IT1080-FD	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-06	A	LDW23-IT1072	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-07	A	LDW23-IT1081	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-08	A	LDW23-IT1068	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-09	A	LDW23-IT1062	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-10	A	LDW23-IT1097	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-11	A	LDW23-SC1085	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-12	A	LDW23-SC1069	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-13	A	LDW23-SC1058	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-14	A	LDW23-SC1073	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-15	A	LDW23-IT1078	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-16	A	LDW23-IT1201	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-17	A	LDW23-IT1209	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
BLA0626-BLK1	-	Blank	-	2.5	2.5	-	2/7/2023	NRB	
BLA0626-BS1	-	LCS	-	2.5	2.5	-	2/7/2023	NRB	
BLA0626-BSD1	-	LCS Dup	-	2.5	2.5	-	2/7/2023	NRB	
BLA0626-MS1	-	Matrix Spike	-	2.5	2.5	-	2/7/2023	NRB	
BLA0626-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/7/2023	NRB	

CLEANUP BENCH SHEET

CLB0055

Matrix: Solid **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 2/7/2023 4:31:01PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
BLA0626-SRM1	-	Reference	-	2.5	2.5	-	2/7/2023	NRB	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0056	Cleanup Type:	Sulfur
Cleanup Method:	EPA 3660B Sulfur Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1209	23A0207-17	02092316ECD7.D	02/07/2023	
LDW23-IT1068	23A0207-08	02082346ECD7.D	02/07/2023	
LDW23-IT1062	23A0207-09	02082347ECD7.D	02/07/2023	
LDW23-IT1201	23A0207-16	02092315ECD7.D	02/07/2023	
Matrix Spike Dup	BLA0626-MSD1	02082341ECD7.D	02/07/2023	
Matrix Spike	BLA0626-MS1	02082340ECD7.D	02/07/2023	
LCS Dup	BLA0626-BSD1	02082335ECD7.D	02/07/2023	
LCS	BLA0626-BS1	02082334ECD7.D	02/07/2023	
LDW23-IT1072	23A0207-06	02082344ECD7.D	02/07/2023	
Blank	BLA0626-BLK1	02082333ECD7.D	02/07/2023	
LDW23-SC1085	23A0207-11	02092310ECD7.D	02/07/2023	
Reference	BLA0626-SRM1	02082336ECD7.D	02/07/2023	
LDW23-SC1058	23A0207-13	02092312ECD7.D	02/07/2023	
LDW23-SC1073	23A0207-14	02092313ECD7.D	02/07/2023	
LDW23-IT1097	23A0207-10	02092309ECD7.D	02/07/2023	
LDW23-IT1089	23A0207-02	02082338ECD7.D	02/07/2023	
LDW23-IT1088	23A0207-01	02082337ECD7.D	02/07/2023	
LDW23-IT1081	23A0207-07	02082345ECD7.D	02/07/2023	
LDW23-IT1080-FD	23A0207-05	02082343ECD7.D	02/07/2023	
LDW23-IT1080	23A0207-04	02082342ECD7.D	02/07/2023	
LDW23-IT1079	23A0207-03	02082339ECD7.D	02/07/2023	
LDW23-IT1078	23A0207-15	02092314ECD7.D	02/07/2023	
LDW23-SC1069	23A0207-12	02092311ECD7.D	02/07/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0056

Matrix: Solid **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 2/7/2023 4:31:40PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0207-01	A	LDW23-IT1088	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-02	A	LDW23-IT1089	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-03	A	LDW23-IT1079	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-04	A	LDW23-IT1080	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-05	A	LDW23-IT1080-FD	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-06	A	LDW23-IT1072	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-07	A	LDW23-IT1081	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-08	A	LDW23-IT1068	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-09	A	LDW23-IT1062	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-10	A	LDW23-IT1097	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-11	A	LDW23-SC1085	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-12	A	LDW23-SC1069	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-13	A	LDW23-SC1058	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-14	A	LDW23-SC1073	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-15	A	LDW23-IT1078	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-16	A	LDW23-IT1201	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-17	A	LDW23-IT1209	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
BLA0626-BLK1	-	Blank	-	2.5	2.5	-	2/7/2023	NRB	
BLA0626-BS1	-	LCS	-	2.5	2.5	-	2/7/2023	NRB	
BLA0626-BSD1	-	LCS Dup	-	2.5	2.5	-	2/7/2023	NRB	
BLA0626-MS1	-	Matrix Spike	-	2.5	2.5	-	2/7/2023	NRB	
BLA0626-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/7/2023	NRB	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0056

Matrix: Solid **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 2/7/2023 4:31:40PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
BLA0626-SRM1	-	Reference	-	2.5	2.5	-	2/7/2023	NRB	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0057	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1078	23A0207-15	02092314ECD7.D	02/07/2023	
Blank	BLA0626-BLK1	02082333ECD7.D	02/07/2023	
LCS	BLA0626-BS1	02082334ECD7.D	02/07/2023	
LCS Dup	BLA0626-BSD1	02082335ECD7.D	02/07/2023	
Matrix Spike	BLA0626-MS1	02082340ECD7.D	02/07/2023	
LDW23-SC1073	23A0207-14	02092313ECD7.D	02/07/2023	
Reference	BLA0626-SRM1	02082336ECD7.D	02/07/2023	
LDW23-IT1201	23A0207-16	02092315ECD7.D	02/07/2023	
Matrix Spike Dup	BLA0626-MSD1	02082341ECD7.D	02/07/2023	
LDW23-IT1079	23A0207-03	02082339ECD7.D	02/07/2023	
LDW23-SC1085	23A0207-11	02092310ECD7.D	02/07/2023	
LDW23-SC1058	23A0207-13	02092312ECD7.D	02/07/2023	
LDW23-IT1072	23A0207-06	02082344ECD7.D	02/07/2023	
LDW23-SC1069	23A0207-12	02092311ECD7.D	02/07/2023	
LDW23-IT1080	23A0207-04	02082342ECD7.D	02/07/2023	
LDW23-IT1080-FD	23A0207-05	02082343ECD7.D	02/07/2023	
LDW23-IT1081	23A0207-07	02082345ECD7.D	02/07/2023	
LDW23-IT1089	23A0207-02	02082338ECD7.D	02/07/2023	
LDW23-IT1097	23A0207-10	02092309ECD7.D	02/07/2023	
LDW23-IT1209	23A0207-17	02092316ECD7.D	02/07/2023	
LDW23-IT1062	23A0207-09	02082347ECD7.D	02/07/2023	
LDW23-IT1088	23A0207-01	02082337ECD7.D	02/07/2023	
LDW23-IT1068	23A0207-08	02082346ECD7.D	02/07/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0057

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup - uL** **Printed: 2/7/2023 4:32:37PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0207-01	A	LDW23-IT1088	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-02	A	LDW23-IT1089	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-03	A	LDW23-IT1079	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-04	A	LDW23-IT1080	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-05	A	LDW23-IT1080-FD	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-06	A	LDW23-IT1072	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-07	A	LDW23-IT1081	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-08	A	LDW23-IT1068	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-09	A	LDW23-IT1062	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-10	A	LDW23-IT1097	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-11	A	LDW23-SC1085	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-12	A	LDW23-SC1069	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-13	A	LDW23-SC1058	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-14	A	LDW23-SC1073	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-15	A	LDW23-IT1078	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-16	A	LDW23-IT1201	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
23A0207-17	A	LDW23-IT1209	A 01	2.5	2.5	8082A PCB Solid 4	2/7/2023	NRB	
BLA0626-BLK1	-	Blank	-	2.5	2.5	-	2/7/2023	NRB	
BLA0626-BS1	-	LCS	-	2.5	2.5	-	2/7/2023	NRB	
BLA0626-BSD1	-	LCS Dup	-	2.5	2.5	-	2/7/2023	NRB	
BLA0626-MS1	-	Matrix Spike	-	2.5	2.5	-	2/7/2023	NRB	
BLA0626-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/7/2023	NRB	

CLEANUP BENCH SHEET

CLB0057

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup - uL** **Printed: 2/7/2023 4:32:37PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
BLA0626-SRM1	-	Reference	-	2.5	2.5	-	2/7/2023	NRB	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8082A

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLA0626-BLK1	File ID:	02082333ECD7.D
Sampled:	N/A	Prepared:	01/30/23 11:40	Analyzed:	02/08/23 20:50
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	12.5 g / 2.5 mL
Batch:	BLA0626	Sequence:	SLB0127	Calibration:	GA00061
Instrument:	ECD7	Column:	ZB5	Cleanups:	Silica Gel, Sulfur, Sulfuric Acid

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
12674-11-2	Aroclor 1016	1	4.0	U	1.6	4.0
11104-28-2	Aroclor 1221	1	4.0	U	1.6	4.0
11141-16-5	Aroclor 1232	1	4.0	U	1.6	4.0
53469-21-9	Aroclor 1242	1	4.0	U	1.6	4.0
12672-29-6	Aroclor 1248	1	4.0	U	1.6	4.0
11097-69-1	Aroclor 1254	1	4.0	U	1.6	4.0
11096-82-5	Aroclor 1260	1	4.0	U	0.6	4.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Decachlorobiphenyl	8.0000	5.97	74.6	40 - 126	
Tetrachlorometaxylene	8.0000	5.99	74.9	44 - 120	
Decachlorobiphenyl [2C]	8.0000	6.26	78.2	40 - 126	
Tetrachlorometaxylene [2C]	8.0000	5.87	73.4	44 - 120	

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082333ECD7.D
Data file 2: /230208.b/230208.b/02082333ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLA0626-BLK1
Client ID:
Injection Date: 08-FEB-2023 20:50
Report Date: 02/09/2023 10:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.001	178032	5.683	-0.002	152223	30.0	29.4	2.0	Tetrachloro-m-xylene
13.889	0.000	164672	14.116	-0.001	212307	29.8	31.3	4.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	420471	-16.5
Hexabromobiphenyl	647433	516103	-20.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	383529	13.8
Hexabromobiphenyl	382032	427398	11.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.908 - 13.789) = 40758 Col1 Total PCB = 0.0 ppm*

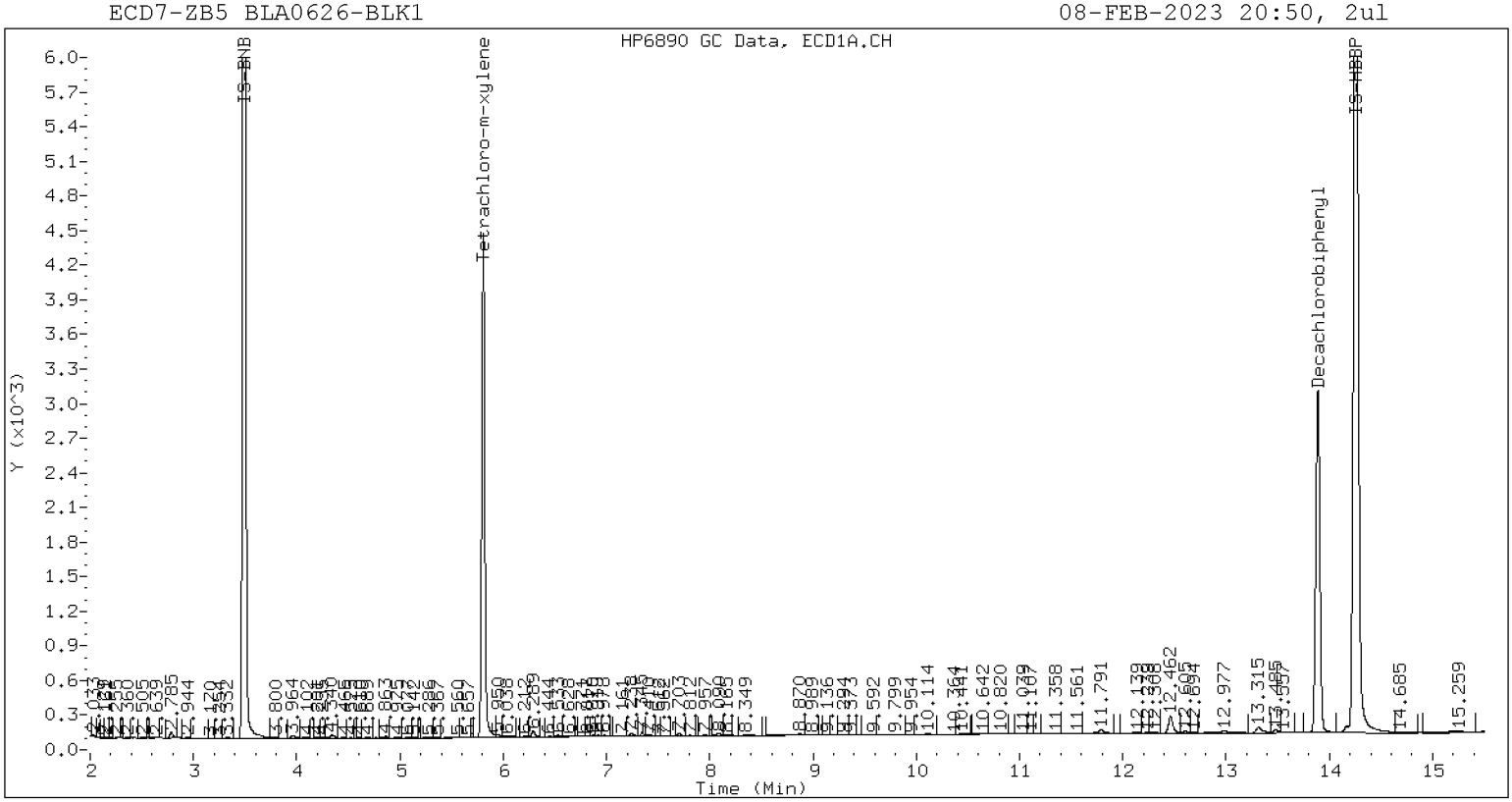
Total PCB Area Col2 (5.785 - 14.016) = 32858 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

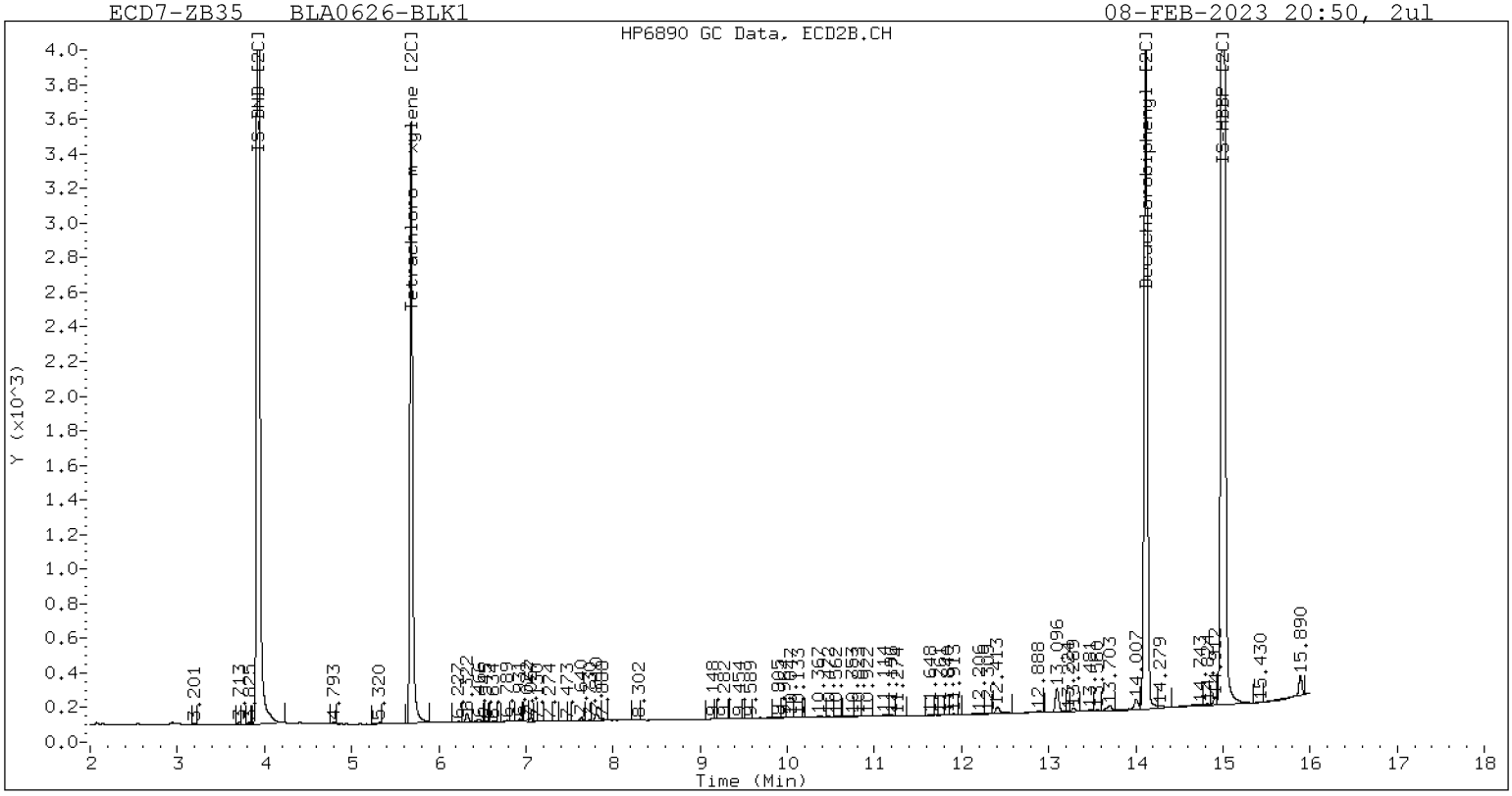
PCB Dual Column Chromatograms

ECD7-ZB5 BLA0626-BLK1 08-FEB-2023 20:50, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLA0626-BLK1 08-FEB-2023 20:50, 2ul



ZB-35 Manual Integration: NO

LCS / LCS DUPLICATE RECOVERY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/08/23 21:11
Batch:	BLA0626	Laboratory ID:	BLA0626-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	12.5 g / 2.5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Aroclor 1016 [2C]	101	90.2		89.5	56 - 120
Aroclor 1260 [2C]	101	94.3		93.5	58 - 120

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Aroclor 1016 [2C]	101	85.5		84.8	5.43	30	56 - 120
Aroclor 1260 [2C]	101	89.2		88.5	5.56	30	58 - 120

* Indicates values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082334ECD7.D
Data file 2: /230208.b/230208.b/02082334ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLA0626-BS1
Client ID:
Injection Date: 08-FEB-2023 21:11
Report Date: 02/09/2023 10:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.001	196163	5.684	-0.001	164949	33.2	32.1	3.5	Tetrachloro-m-xylene
13.889	0.000	187832	14.116	-0.000	230857	32.1	32.1	0.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	417676	-17.0
Hexabromobiphenyl	647433	547599	-15.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	380250	12.9
Hexabromobiphenyl	382032	453027	18.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.267	-0.002	70563	454.6	1	7.251	-0.002	91168	442.0
Aroclor-1016	2	7.646	-0.003	230744	448.7	2	7.845	-0.003	210266	465.2
Aroclor-1016	3	7.784	-0.003	91990	388.8	3	8.045	-0.003	85562	463.9
Aroclor-1016	4	8.399	-0.002	69130	454.2	4	8.302	-0.002	62716	433.8
Total Col1Ave (4 peaks):					436.6	Total Col2Ave (4 peaks):				451.2 RPD = 3
Corrected Ave (3 peaks):					430.5	Corrected Ave (3 peaks):				446.6 RPD = 4
Aroclor-1221	1	4.734	0.001	345	11.2	1	4.960	0.001	277	9.9
Aroclor-1221	2	6.130	-0.004	7864	124.6	2	6.296	-0.003	11959	195.8
Aroclor-1221	3	6.380	-0.004	42123	287.4	3	6.618	-0.005	39493	383.1
Total Col1Ave (3 peaks):					141.1	Total Col2Ave (3 peaks):				196.3 RPD = 33
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.734	0.001	345	17.9	1	4.960	0.000	277	16.4
Aroclor-1232	2	6.130	-0.004	7864	181.1	2	7.251	-0.005	91168	963.5
Aroclor-1232	3	7.646	-0.012	230744	1062.3	3	7.845	-0.009	210266	1091.1
Aroclor-1232	4	8.571	-0.014	83827	901.6	4	8.708	-0.006	66027	1233.2
Total Col1Ave (4 peaks):					540.7	Total Col2Ave (4 peaks):				826.1 RPD = 42*
Corrected Ave (3 peaks):					366.8	Corrected Ave (3 peaks):				690.3 RPD = 61*
Aroclor-1242	1	7.267	-0.004	70563	551.7	1	7.251	-0.001	91168	548.2
Aroclor-1242	2	7.646	-0.009	230744	551.3	2	7.845	-0.004	210266	569.2
Aroclor-1242	3	8.399	-0.007	69130	555.9	3	9.146	-0.006	11401	98.6
Aroclor-1242	4	8.571	-0.011	83827	446.2	4	9.570	-0.007	6267	40.9
Total Col1Ave (4 peaks):					526.3	Total Col2Ave (4 peaks):				314.2 RPD = 50*
Corrected Ave (3 peaks):					516.4	Corrected Ave (3 peaks):				229.2 RPD = 77*
Aroclor-1248	1	8.399	-0.006	69130	330.9	1	8.302	-0.002	62716	364.9
Aroclor-1248	2	8.571	-0.009	83827	314.5	2	8.708	-0.002	66027	356.9
Aroclor-1248	3	8.989	-0.010	64166	125.9	3	9.146	-0.006	11401	50.4
Aroclor-1248	4	9.292	-0.001	63281	250.8	4	9.570	-0.005	6267	22.4
Total Col1Ave (4 peaks):					255.5	Total Col2Ave (4 peaks):				198.7 RPD = 25
Corrected Ave (3 peaks):					230.4	Corrected Ave (3 peaks):				143.2 RPD = 47*
Aroclor-1254	1	9.292	-0.000	63281	148.7	1	9.443	-0.002	54087	196.1
Aroclor-1254	2	9.362	-0.009	3372	18.6	2	9.962	-0.002	11901	53.4
Aroclor-1254	3	9.659	-0.003	12864	47.2	3	10.140	0.024	122709	252.3
Aroclor-1254	4	9.794	-0.004	38716	72.4	4	10.365	-0.000	155790	320.3
Aroclor-1254	5	10.114	-0.043	175037	503.7	5	10.560	-0.004	203240	750.2
Total Col1Ave (5 peaks):					158.1	Total Col2Ave (5 peaks):				314.4 RPD = 66*
Corrected Ave (4 peaks):					71.7	Corrected Ave (4 peaks):				205.5 RPD = 97*
Aroclor-1260	1	11.038	-0.001	139924	455.4	1	11.648	-0.001	151044	462.2
Aroclor-1260	2	11.355	-0.001	142860	452.3	2	11.911	-0.001	357711	432.6
Aroclor-1260	3	11.726	-0.002	361560	434.9	3	12.430	-0.001	111228	539.7
Aroclor-1260	4	12.129	-0.003	181701	423.0	4	12.495	-0.001	241511	451.3
Aroclor-1260	5	12.238	-0.001	72320	386.2	NS	---			----
Total Col1Ave (5 peaks):					430.4	Total Col2Ave (4 peaks):				471.4 RPD = 9
Corrected Ave (4 peaks):					424.1	Corrected Ave (3 peaks):				448.7 RPD = 6
Aroclor-1262	1	10.815	-0.017	277682	1253.9	1	11.194	-0.006	143040	322.6
Aroclor-1262	2	12.238	-0.007	72320	206.9	2	11.648	-0.005	151044	400.6
Aroclor-1262	3	12.312	-0.008	86047	226.8	3	12.430	-0.005	111228	277.0
Aroclor-1262	4	12.980	-0.009	79951	231.2	4	12.495	-0.009	241511	375.6
Total Col1Ave (4 peaks):					479.7	Total Col2Ave (4 peaks):				344.0 RPD = 33
Corrected Ave (3 peaks):					221.6	Corrected Ave (3 peaks):				325.1 RPD = 38
Aroclor-1268	1	12.238	-0.007	72320	79.9	1	12.430	-0.004	111228	105.1
Aroclor-1268	2	12.312	-0.006	86047	95.4	2	12.495	-0.007	241511	214.5
Aroclor-1268	3	12.715	0.016	38150	51.0	3	12.889	-0.004	6202	6.6
Aroclor-1268	4	13.482	-0.007	23857	10.8	4	13.703	-0.005	29711	10.3
Total Col1Ave (4 peaks):					59.3	Total Col2Ave (4 peaks):				84.1 RPD = 35

Corrected Ave (3 peaks): 47.3 Corrected Ave (3 peaks): 40.7 RPD = 15

Total PCB Area Col1 (5.908 - 13.789) = 3933762 Col1 Total PCB = 0.8 ppm*

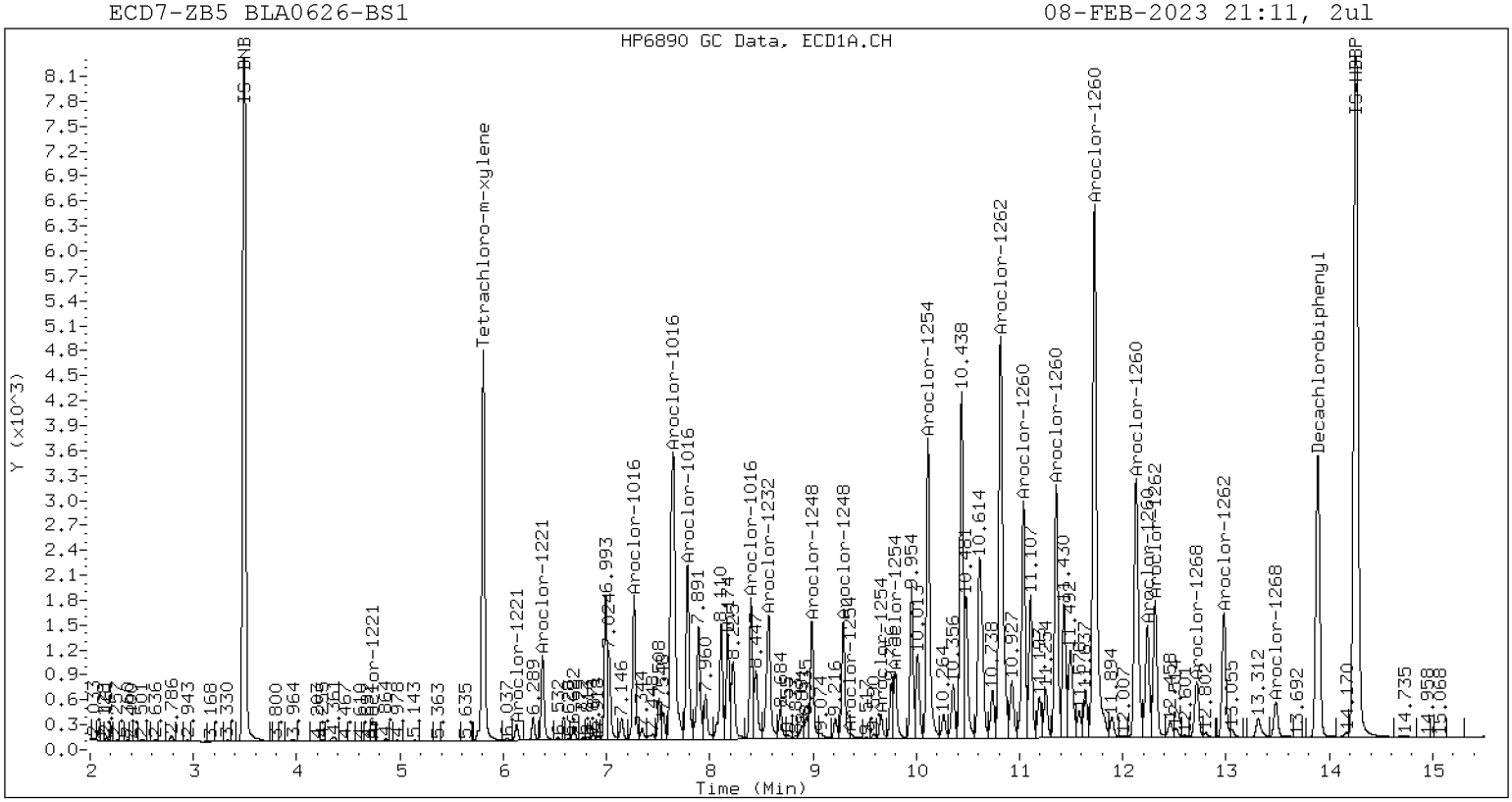
Total PCB Area Col2 (5.785 - 14.016) = 3697373 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

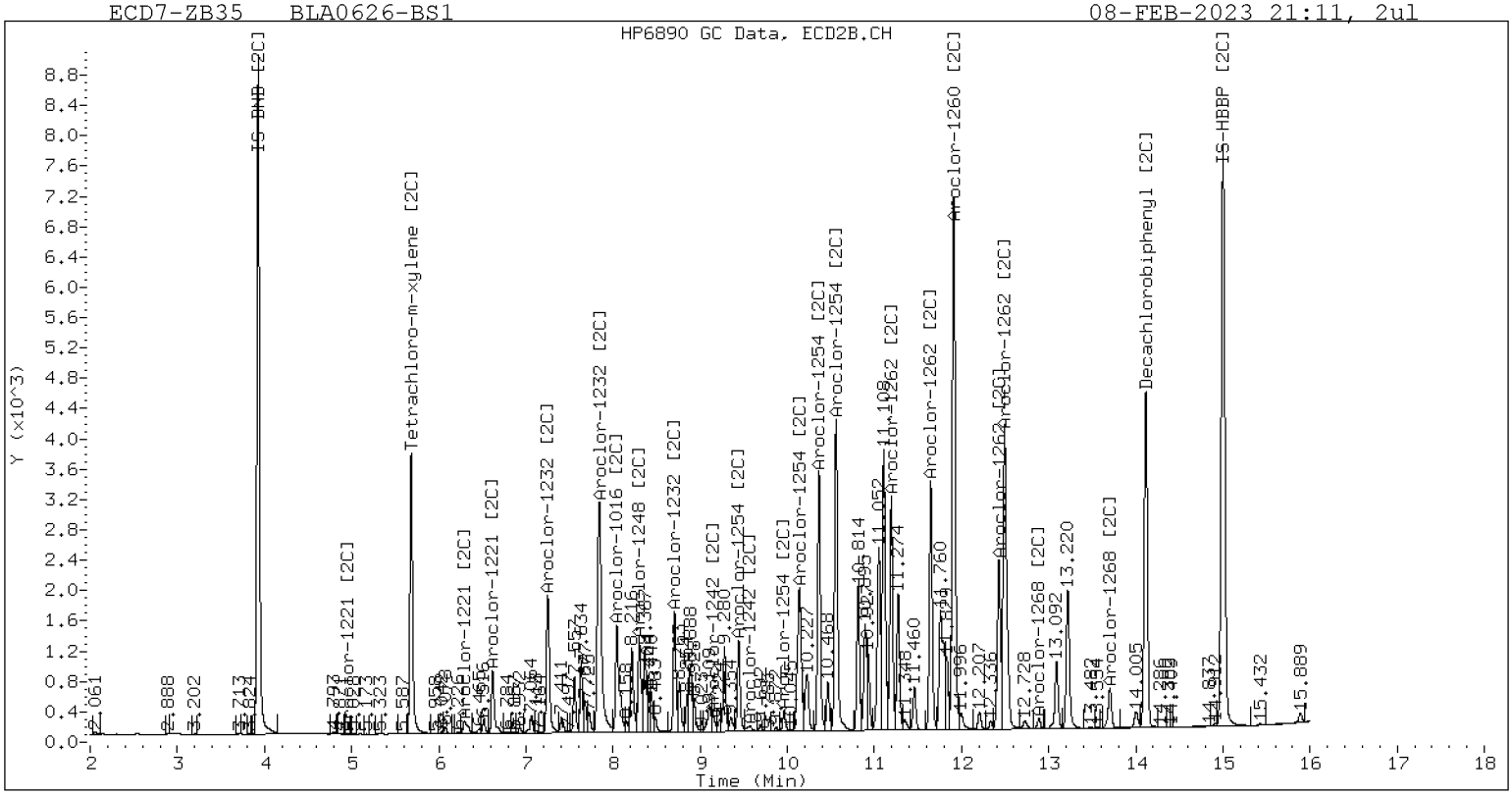
PCB Dual Column Chromatograms

ECD7-ZB5 BLA0626-BS1 08-FEB-2023 21:11, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLA0626-BS1 08-FEB-2023 21:11, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082335ECD7.D
Data file 2: /230208.b/230208.b/02082335ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLA0626-BSD1
Client ID:
Injection Date: 08-FEB-2023 21:32
Report Date: 02/09/2023 10:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.001	186950	5.684	-0.000	154930	31.7	30.1	5.4	Tetrachloro-m-xylene
13.887	-0.001	182560	14.116	-0.001	228866	30.7	31.4	2.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	416665	-17.2
Hexabromobiphenyl	647433	555526	-14.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	381085	13.1
Hexabromobiphenyl	382032	458806	20.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.267	-0.002	67339	434.9	1	7.252	-0.001	86319	417.6
Aroclor-1016	2	7.646	-0.003	223330	435.3	2	7.844	-0.004	200482	442.6
Aroclor-1016	3	7.784	-0.003	89697	380.0	3	8.045	-0.003	81264	439.7
Aroclor-1016	4	8.400	-0.002	67614	445.3	4	8.302	-0.002	59366	409.7
	Total Col1Ave (4 peaks):				423.9		Total Col2Ave (4 peaks):			427.4 RPD = 1
	Corrected Ave (3 peaks):				416.7		Corrected Ave (3 peaks):			422.3 RPD = 1
Aroclor-1221	1	4.732	-0.001	352	11.4	1	4.960	0.001	345	12.3
Aroclor-1221	2	6.129	-0.004	8537	135.6	2	6.295	-0.003	9997	163.3
Aroclor-1221	3	6.380	-0.004	42220	288.8	3	6.619	-0.004	34059	329.6
	Total Col1Ave (3 peaks):				145.3		Total Col2Ave (3 peaks):			168.4 RPD = 15
	Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks			
Aroclor-1232	1	4.732	-0.002	352	18.3	1	4.960	0.000	345	20.4
Aroclor-1232	2	6.129	-0.004	8537	197.0	2	7.252	-0.004	86319	910.3
Aroclor-1232	3	7.646	-0.012	223330	1030.6	3	7.844	-0.010	200482	1038.1
Aroclor-1232	4	8.571	-0.013	82690	891.5	4	8.708	-0.006	62502	1164.8
	Total Col1Ave (4 peaks):				534.4		Total Col2Ave (4 peaks):			783.4 RPD = 38
	Corrected Ave (3 peaks):				368.9		Corrected Ave (3 peaks):			656.2 RPD = 56*
Aroclor-1242	1	7.267	-0.003	67339	527.8	1	7.252	-0.000	86319	517.9
Aroclor-1242	2	7.646	-0.009	223330	534.9	2	7.844	-0.004	200482	541.6
Aroclor-1242	3	8.400	-0.007	67614	545.0	3	9.147	-0.006	10411	89.8
Aroclor-1242	4	8.571	-0.010	82690	441.2	4	9.571	-0.006	5754	37.4
	Total Col1Ave (4 peaks):				512.2		Total Col2Ave (4 peaks):			296.7 RPD = 53*
	Corrected Ave (3 peaks):				501.3		Corrected Ave (3 peaks):			215.1 RPD = 80*
Aroclor-1248	1	8.400	-0.006	67614	324.4	1	8.302	-0.002	59366	344.6
Aroclor-1248	2	8.571	-0.009	82690	311.0	2	8.708	-0.002	62502	337.1
Aroclor-1248	3	8.989	-0.010	63384	124.6	3	9.147	-0.005	10411	46.0
Aroclor-1248	4	9.292	-0.001	67532	268.3	4	9.571	-0.004	5754	20.5
	Total Col1Ave (4 peaks):				257.1		Total Col2Ave (4 peaks):			187.1 RPD = 32
	Corrected Ave (3 peaks):				234.6		Corrected Ave (3 peaks):			134.5 RPD = 54*
Aroclor-1254	1	9.292	-0.000	67532	159.0	1	9.442	-0.003	52110	188.5
Aroclor-1254	2	---			0.0	2	9.962	-0.002	11624	52.0
Aroclor-1254	3	9.658	-0.004	13045	47.9	3	10.140	0.024	119421	245.0
Aroclor-1254	4	9.794	-0.004	38161	71.6	4	10.364	-0.001	151682	311.2
Aroclor-1254	5	10.113	-0.044	173108	499.3	5	10.559	-0.005	198466	731.0
	Total Col1Ave (4 peaks):				194.5		Total Col2Ave (5 peaks):			305.5 RPD = 44*
	Corrected Ave (3 peaks):				92.9		Corrected Ave (4 peaks):			199.2 RPD = 73*
Aroclor-1260	1	11.039	-0.001	135627	435.1	1	11.647	-0.002	147960	447.0
Aroclor-1260	2	11.356	-0.001	140327	438.0	2	11.911	-0.001	352570	421.0
Aroclor-1260	3	11.726	-0.001	340808	404.1	3	12.430	-0.001	100845	483.1
Aroclor-1260	4	12.129	-0.003	179996	413.0	4	12.495	-0.000	234392	432.5
Aroclor-1260	5	12.239	-0.000	71473	376.2	NS	---			----
	Total Col1Ave (5 peaks):				413.3		Total Col2Ave (4 peaks):			445.9 RPD = 8
	Corrected Ave (4 peaks):				407.1		Corrected Ave (3 peaks):			433.5 RPD = 6
Aroclor-1262	1	10.816	-0.016	269823	1201.0	1	11.194	-0.006	138612	308.7
Aroclor-1262	2	12.239	-0.007	71473	201.6	2	11.647	-0.006	147960	387.5
Aroclor-1262	3	12.313	-0.007	85178	221.3	3	12.430	-0.005	100845	248.0
Aroclor-1262	4	12.980	-0.009	78110	222.7	4	12.495	-0.009	234392	359.9
	Total Col1Ave (4 peaks):				461.6		Total Col2Ave (4 peaks):			326.0 RPD = 34
	Corrected Ave (3 peaks):				215.2		Corrected Ave (3 peaks):			305.5 RPD = 35
Aroclor-1268	1	12.239	-0.006	71473	77.9	1	12.430	-0.004	100845	94.1
Aroclor-1268	2	12.313	-0.005	85178	93.1	2	12.495	-0.007	234392	205.6
Aroclor-1268	3	12.716	0.017	38019	50.1	3	12.889	-0.005	5916	6.2
Aroclor-1268	4	13.483	-0.006	23646	10.5	4	13.704	-0.005	27167	9.3
	Total Col1Ave (4 peaks):				57.9		Total Col2Ave (4 peaks):			78.8 RPD = 31

Corrected Ave (3 peaks): 46.2 Corrected Ave (3 peaks): 36.5 RPD = 23

Total PCB Area Col1 (5.908 - 13.789) = 3859168 Col1 Total PCB = 0.8 ppm*

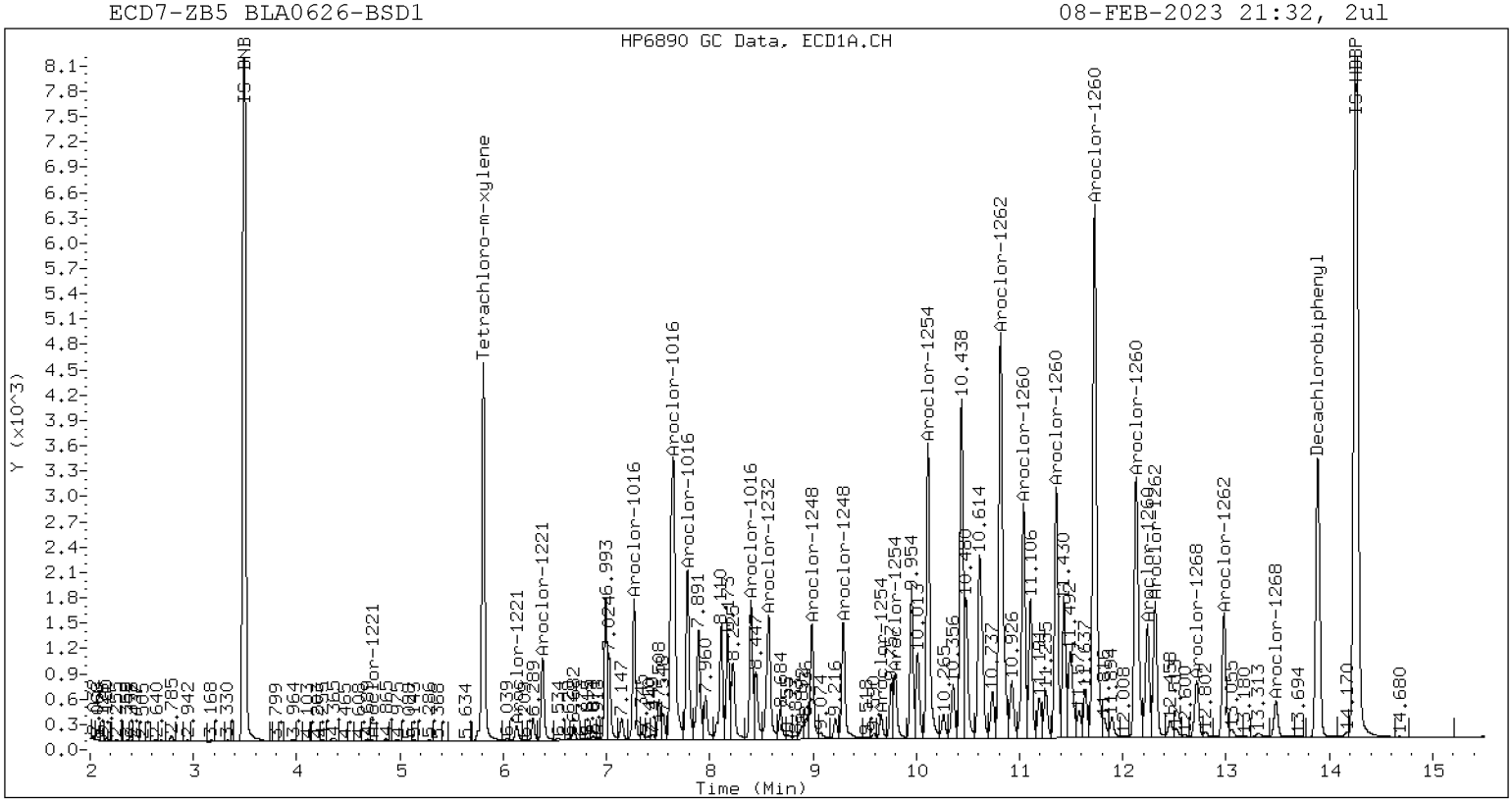
Total PCB Area Col2 (5.785 - 14.016) = 3551917 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

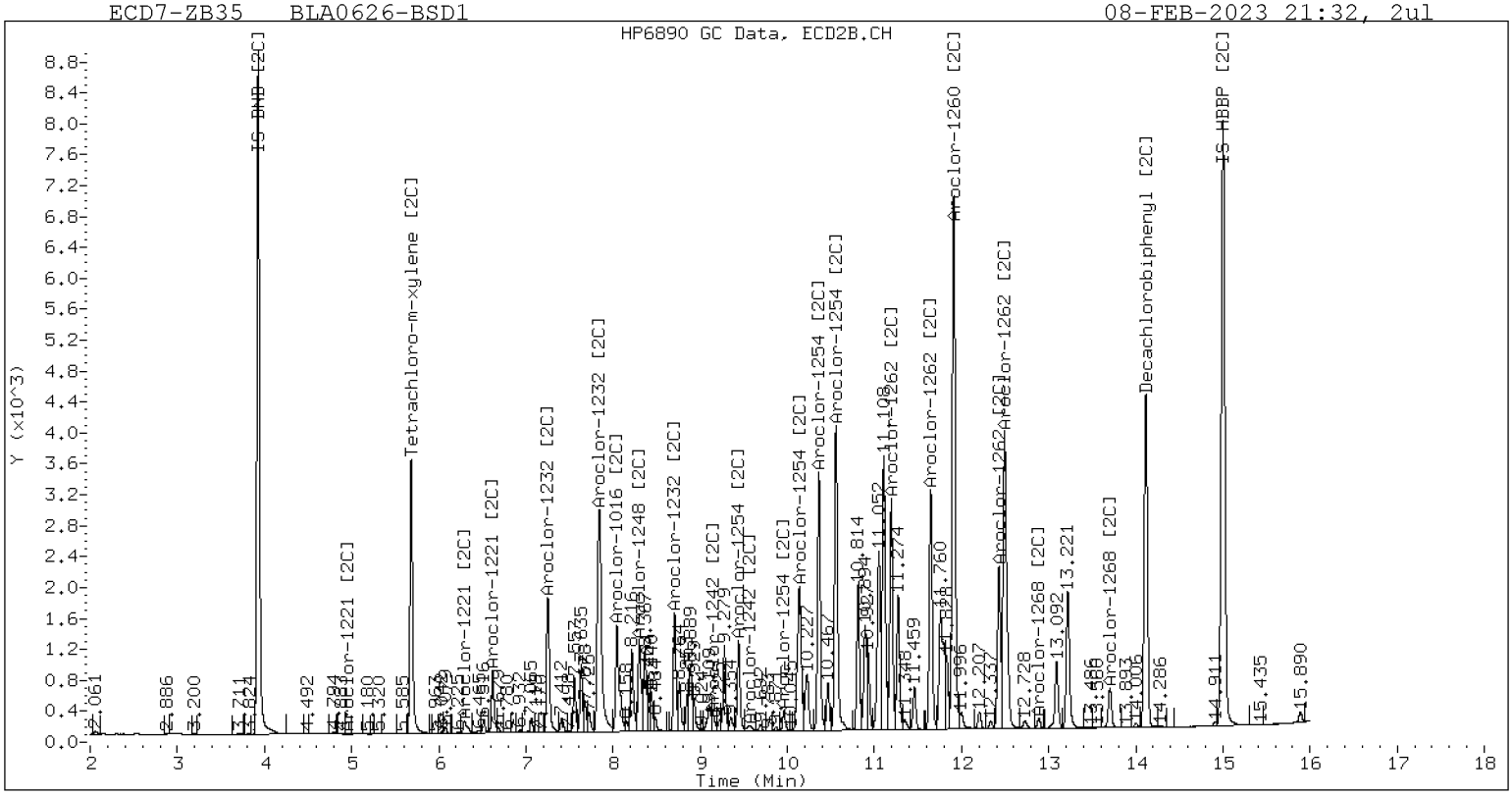
PCB Dual Column Chromatograms

ECD7-ZB5 BLA0626-BSD1 08-FEB-2023 21:32, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLA0626-BSD1 08-FEB-2023 21:32, 2ul



ZB-35 Manual Integration: NO

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/08/23 23:16
Batch:	BLA0626	Laboratory ID:	BLA0626-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	15.63 g / 2.5 mL	Source Sample:	LDW23-IT1079

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Aroclor 1016	101	ND	U	70.9		70.3	56 - 120
Aroclor 1260 [2C]	101	9.1		79.3		69.5	58 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/08/23 23:37
Batch:	BLA0626	Laboratory ID:	BLA0626-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	15.63 g / 2.5 mL	Source Sample:	LDW23-IT1079

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor 1016	101	72.3		71.7	1.98	30	56 - 120
Aroclor 1260 [2C]	101	85.0		75.1	6.87	30	58 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082340ECD7.D
Data file 2: /230208.b/230208.b/02082340ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLA0626-MS1
Client ID:
Injection Date: 08-FEB-2023 23:16
Report Date: 02/09/2023 10:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.002	164906	5.683	-0.002	151502	29.4	31.7	7.7	Tetrachloro-m-xylene
13.885	-0.003	123574	14.113	-0.004	162860	28.4	28.6	0.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	397234	-21.1
Hexabromobiphenyl	647433	406606	-37.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	353289	4.9
Hexabromobiphenyl	382032	359183	-6.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.266	-0.003	54533	369.4	1	7.250	-0.003	75106	392.0
Aroclor-1016	2	7.642	-0.006	183253	374.7	2	7.841	-0.007	165685	394.6
Aroclor-1016	3	7.781	-0.006	68969	306.5	3	8.042	-0.007	64757	377.9
Aroclor-1016	4	8.397	-0.004	53188	367.4	4	8.299	-0.004	46722	347.8
Total Col1Ave (4 peaks):					354.5	Total Col2Ave (4 peaks):				378.1 RPD = 6
Corrected Ave (3 peaks):					347.8	Corrected Ave (3 peaks):				372.6 RPD = 7
Aroclor-1221	1	4.731	-0.002	452	15.4	1	4.945	-0.014	2051	79.2
Aroclor-1221	2	6.129	-0.005	7476	124.5	2	6.294	-0.004	9928	174.9
Aroclor-1221	3	6.379	-0.005	37654	270.2	3	6.617	-0.005	34532	360.5
Total Col1Ave (3 peaks):					136.7	Total Col2Ave (3 peaks):				204.9 RPD = 40
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.731	-0.002	452	24.7	1	4.945	-0.015	2051	130.6
Aroclor-1232	2	6.129	-0.005	7476	181.0	2	7.250	-0.006	75106	854.4
Aroclor-1232	3	7.642	-0.016	183253	887.1	3	7.841	-0.013	165685	925.4
Aroclor-1232	4	8.567	-0.018	57225	647.1	4	8.705	-0.009	51429	1033.8
Total Col1Ave (4 peaks):					435.0	Total Col2Ave (4 peaks):				736.0 RPD = 51*
Corrected Ave (3 peaks):					284.3	Corrected Ave (3 peaks):				636.8 RPD = 77*
Aroclor-1242	1	7.266	-0.005	54533	448.3	1	7.250	-0.002	75106	486.1
Aroclor-1242	2	7.642	-0.013	183253	460.3	2	7.841	-0.008	165685	482.8
Aroclor-1242	3	8.397	-0.009	53188	449.7	3	9.138	-0.014	12090	112.5
Aroclor-1242	4	8.567	-0.015	57225	320.3	4	9.572	-0.005	14739	103.5
Total Col1Ave (4 peaks):					419.7	Total Col2Ave (4 peaks):				296.2 RPD = 34
Corrected Ave (3 peaks):					406.1	Corrected Ave (3 peaks):				232.9 RPD = 54*
Aroclor-1248	1	8.397	-0.008	53188	267.7	1	8.299	-0.004	46722	292.6
Aroclor-1248	2	8.567	-0.014	57225	225.8	2	8.705	-0.005	51429	299.2
Aroclor-1248	3	8.986	-0.013	44270	91.3	3	9.138	-0.014	12090	57.6
Aroclor-1248	4	9.288	-0.006	48054	200.2	4	9.572	-0.003	14739	56.7
Total Col1Ave (4 peaks):					196.2	Total Col2Ave (4 peaks):				176.5 RPD = 11
Corrected Ave (3 peaks):					172.4	Corrected Ave (3 peaks):				135.6 RPD = 24
Aroclor-1254	1	9.288	-0.005	48054	118.7	1	9.438	-0.006	43837	171.0
Aroclor-1254	2	9.362	-0.009	3603	20.8	2	9.957	-0.007	10790	52.1
Aroclor-1254	3	9.655	-0.007	15493	59.7	3	10.136	0.021	85503	189.2
Aroclor-1254	4	9.786	-0.012	53646	105.5	4	10.361	-0.005	111029	245.7
Aroclor-1254	5	10.110	-0.047	118720	359.2	5	10.555	-0.009	132239	525.4
Total Col1Ave (5 peaks):					132.8	Total Col2Ave (5 peaks):				236.7 RPD = 56*
Corrected Ave (4 peaks):					76.2	Corrected Ave (4 peaks):				164.5 RPD = 73*
Aroclor-1260	1	11.033	-0.006	85406	374.4	1	11.644	-0.005	95222	367.5
Aroclor-1260	2	11.349	-0.007	84631	360.9	2	11.905	-0.007	239226	364.9
Aroclor-1260	3	11.720	-0.008	230424	373.2	3	12.424	-0.006	80874	494.9
Aroclor-1260	4	12.120	-0.011	110719	347.1	4	12.488	-0.007	152500	359.4
Aroclor-1260	5	12.234	-0.005	44472	319.8	NS	---			----
Total Col1Ave (5 peaks):					355.1	Total Col2Ave (4 peaks):				396.7 RPD = 11
Corrected Ave (4 peaks):					350.3	Corrected Ave (3 peaks):				363.9 RPD = 4
Aroclor-1262	1	10.808	-0.024	177333	1078.4	1	11.191	-0.009	89230	253.8
Aroclor-1262	2	12.234	-0.012	44472	171.4	2	11.644	-0.009	95222	318.5
Aroclor-1262	3	12.308	-0.013	53471	189.8	3	12.424	-0.010	80874	254.0
Aroclor-1262	4	12.972	-0.017	52588	204.8	4	12.488	-0.015	152500	299.1
Total Col1Ave (4 peaks):					411.1	Total Col2Ave (4 peaks):				281.4 RPD = 37
Corrected Ave (3 peaks):					188.6	Corrected Ave (3 peaks):				269.0 RPD = 35
Aroclor-1268	1	12.234	-0.011	44472	66.2	1	12.424	-0.009	80874	96.4
Aroclor-1268	2	12.308	-0.010	53471	79.8	2	12.488	-0.013	152500	170.9
Aroclor-1268	3	12.709	0.010	24190	43.6	3	12.885	-0.008	4930	6.6
Aroclor-1268	4	13.477	-0.012	15483	9.4	4	13.699	-0.009	23437	10.2
Total Col1Ave (4 peaks):					49.8	Total Col2Ave (4 peaks):				71.0 RPD = 35

Corrected Ave (3 peaks): 39.7 Corrected Ave (3 peaks): 37.8 RPD = 5

Total PCB Area Col1 (5.908 - 13.789) = 2735034 Col1 Total PCB = 0.6 ppm*

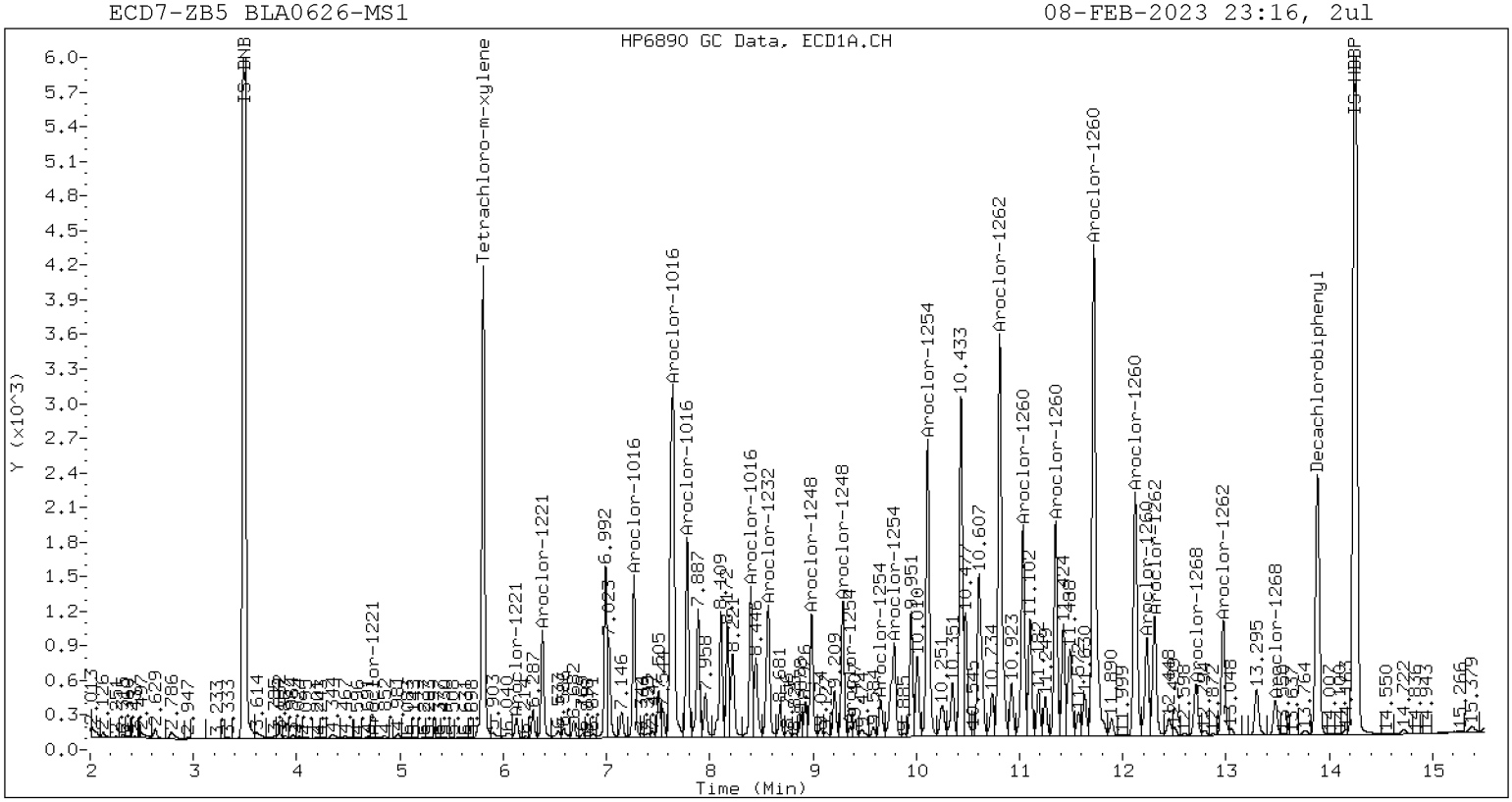
Total PCB Area Col2 (5.785 - 14.016) = 2635721 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

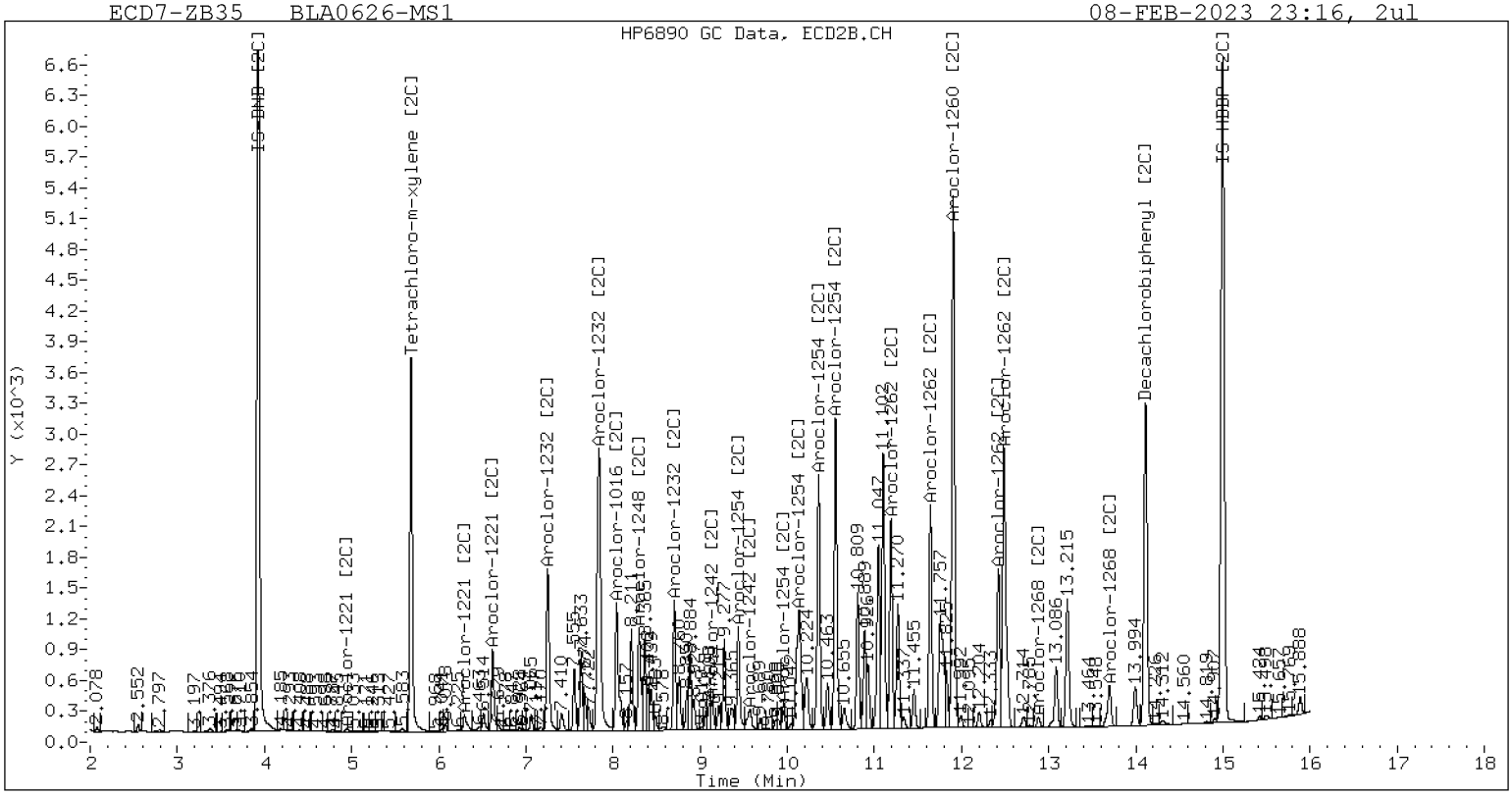
PCB Dual Column Chromatograms

ECD7-ZB5 BLA0626-MS1 08-FEB-2023 23:16, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLA0626-MS1 08-FEB-2023 23:16, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082341ECD7.D
Data file 2: /230208.b/230208.b/02082341ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLA0626-MSD1
Client ID:
Injection Date: 08-FEB-2023 23:37
Report Date: 02/09/2023 10:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.001	162493	5.683	-0.002	149602	29.4	32.6	10.3	Tetrachloro-m-xylene
13.885	-0.003	121094	14.113	-0.004	160092	29.8	29.6	0.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	391584	-22.2
Hexabromobiphenyl	647433	379432	-41.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	339867	0.9
Hexabromobiphenyl	382032	340449	-10.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.266	-0.003	54915	377.4	1	7.250	-0.004	76146	413.1
Aroclor-1016	2	7.642	-0.007	185168	384.0	2	7.841	-0.007	167221	414.0
Aroclor-1016	3	7.781	-0.006	69176	311.8	3	8.041	-0.007	65516	397.4
Aroclor-1016	4	8.397	-0.005	53243	373.1	4	8.299	-0.005	47546	367.9
Total Col1Ave (4 peaks):		361.6				Total Col2Ave (4 peaks):		398.1	RPD = 10	
Corrected Ave (3 peaks):		354.1				Corrected Ave (3 peaks):		392.8	RPD = 10	
Aroclor-1221	1	4.729	-0.003	400	13.8	1	4.943	-0.016	1633	65.5
Aroclor-1221	2	6.129	-0.005	7617	128.7	2	6.294	-0.004	9263	169.7
Aroclor-1221	3	6.379	-0.005	37643	274.0	3	6.617	-0.006	33695	365.7
Total Col1Ave (3 peaks):		138.8				Total Col2Ave (3 peaks):		200.3	RPD = 36	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.729	-0.004	400	22.1	1	4.943	-0.017	1633	108.1
Aroclor-1232	2	6.129	-0.005	7617	187.1	2	7.250	-0.007	76146	900.4
Aroclor-1232	3	7.642	-0.016	185168	909.3	3	7.841	-0.014	167221	970.9
Aroclor-1232	4	8.566	-0.018	57771	662.7	4	8.705	-0.009	52830	1103.9
Total Col1Ave (4 peaks):		445.3				Total Col2Ave (4 peaks):		770.8	RPD = 54*	
Corrected Ave (3 peaks):		290.6				Corrected Ave (3 peaks):		659.8	RPD = 78*	
Aroclor-1242	1	7.266	-0.005	54915	458.0	1	7.250	-0.003	76146	512.3
Aroclor-1242	2	7.642	-0.013	185168	471.9	2	7.841	-0.008	167221	506.5
Aroclor-1242	3	8.397	-0.010	53243	456.7	3	9.137	-0.015	12876	124.5
Aroclor-1242	4	8.566	-0.015	57771	328.0	4	9.568	-0.008	15276	111.5
Total Col1Ave (4 peaks):		428.6				Total Col2Ave (4 peaks):		313.7	RPD = 31	
Corrected Ave (3 peaks):		414.2				Corrected Ave (3 peaks):		247.5	RPD = 50*	
Aroclor-1248	1	8.397	-0.009	53243	271.8	1	8.299	-0.005	47546	309.5
Aroclor-1248	2	8.566	-0.014	57771	231.2	2	8.705	-0.005	52830	319.5
Aroclor-1248	3	8.985	-0.013	45676	95.6	3	9.137	-0.014	12876	63.7
Aroclor-1248	4	9.287	-0.007	49045	207.3	4	9.568	-0.006	15276	61.1
Total Col1Ave (4 peaks):		201.5				Total Col2Ave (4 peaks):		188.5	RPD = 7	
Corrected Ave (3 peaks):		178.0				Corrected Ave (3 peaks):		144.8	RPD = 21	
Aroclor-1254	1	9.287	-0.005	49045	122.9	1	9.438	-0.007	44553	180.7
Aroclor-1254	2	9.362	-0.009	4354	25.6	2	9.957	-0.008	11226	56.3
Aroclor-1254	3	9.655	-0.007	17138	67.0	3	10.136	0.020	86943	200.0
Aroclor-1254	4	9.786	-0.013	55645	111.1	4	10.361	-0.005	112964	259.8
Aroclor-1254	5	10.110	-0.048	120948	371.2	5	10.554	-0.009	134418	555.1
Total Col1Ave (5 peaks):		139.5				Total Col2Ave (5 peaks):		250.4	RPD = 57*	
Corrected Ave (4 peaks):		81.6				Corrected Ave (4 peaks):		174.2	RPD = 72*	
Aroclor-1260	1	11.032	-0.007	86436	406.0	1	11.643	-0.006	96177	391.6
Aroclor-1260	2	11.349	-0.007	84957	388.2	2	11.904	-0.009	243725	392.2
Aroclor-1260	3	11.719	-0.009	232644	403.8	3	12.423	-0.008	82226	530.9
Aroclor-1260	4	12.119	-0.012	111406	374.3	4	12.487	-0.008	154797	384.9
Aroclor-1260	5	12.233	-0.006	44885	345.9	NS	---			----
Total Col1Ave (5 peaks):		383.6				Total Col2Ave (4 peaks):		424.9	RPD = 10	
Corrected Ave (4 peaks):		378.1				Corrected Ave (3 peaks):		389.6	RPD = 3	
Aroclor-1262	1	10.807	-0.025	179625	1170.6	1	11.190	-0.010	90279	270.9
Aroclor-1262	2	12.233	-0.012	44885	185.3	2	11.643	-0.010	96177	339.4
Aroclor-1262	3	12.307	-0.014	53805	204.6	3	12.423	-0.011	82226	272.5
Aroclor-1262	4	12.972	-0.017	53578	223.6	4	12.487	-0.017	154797	320.3
Total Col1Ave (4 peaks):		446.0				Total Col2Ave (4 peaks):		300.8	RPD = 39	
Corrected Ave (3 peaks):		204.5				Corrected Ave (3 peaks):		287.9	RPD = 34	
Aroclor-1268	1	12.233	-0.012	44885	71.6	1	12.423	-0.011	82226	103.4
Aroclor-1268	2	12.307	-0.011	53805	86.1	2	12.487	-0.015	154797	183.0
Aroclor-1268	3	12.709	0.010	24631	47.6	3	12.885	-0.008	4923	7.0
Aroclor-1268	4	13.477	-0.012	16658	10.8	4	13.698	-0.010	24335	11.2
Total Col1Ave (4 peaks):		54.0				Total Col2Ave (4 peaks):		76.1	RPD = 34	

Corrected Ave (3 peaks): 43.3 Corrected Ave (3 peaks): 40.5 RPD = 7

Total PCB Area Col1 (5.908 - 13.789) = 2764543 Col1 Total PCB = 0.6 ppm*

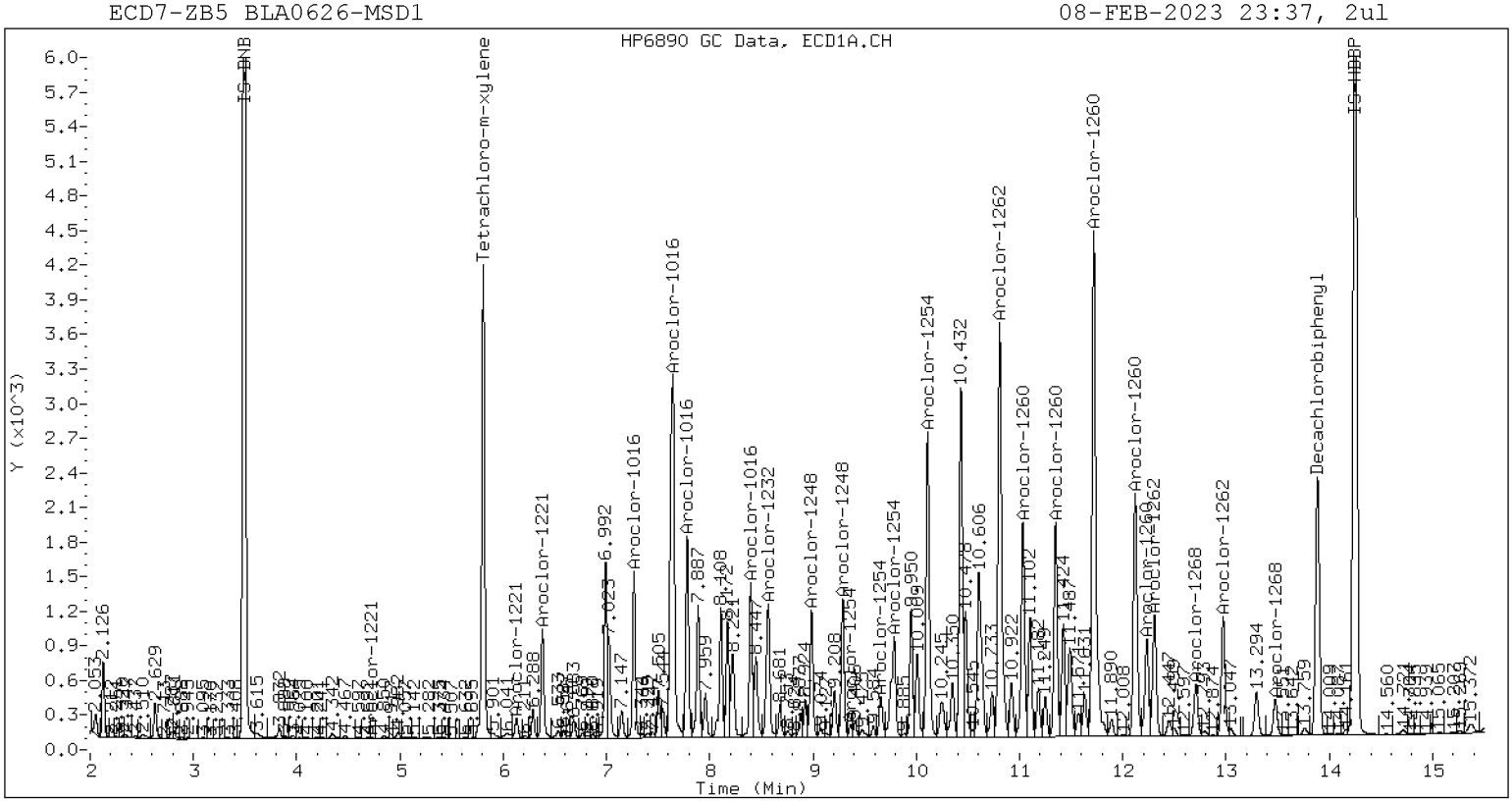
Total PCB Area Col2 (5.785 - 14.016) = 2673970 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

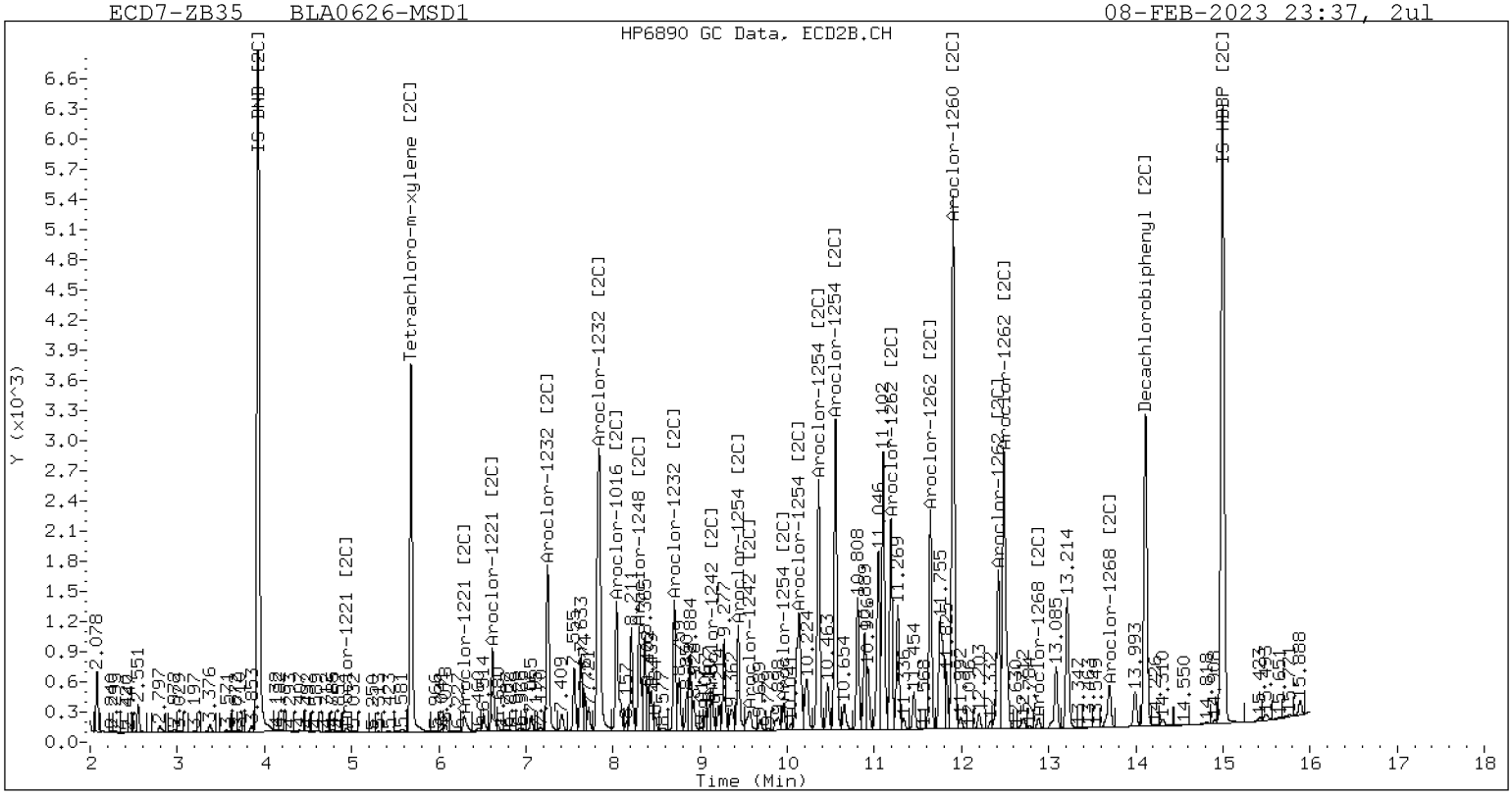
PCB Dual Column Chromatograms

ECD7-ZB5 BLA0626-MSD1 08-FEB-2023 23:37, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLA0626-MSD1 08-FEB-2023 23:37, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0626-SRM1
Batch: BLA0626
Initial/Final: 2.5 g / 2.5 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 02/08/2023 21:53
Standard ID: K011478
Expires: 06/11/2023
Standard Lot#: PSRM0169
Description: Puget Sound reference-SRM

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Aroclor 1260	108.00	83.1	2.9	20.0		77.0	38 - 167
Aroclor 1260 [2C]	108.00	113	2.9	20.0		105	38 - 167

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082336ECD7.D
Data file 2: /230208.b/230208.b/02082336ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLA0626-SRM1
Client ID:
Injection Date: 08-FEB-2023 21:53
Report Date: 02/09/2023 10:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.002	161846	5.683	-0.001	145497	27.4	29.2	6.3	Tetrachloro-m-xylene
13.886	-0.003	151060	14.114	-0.002	187817	28.1	26.9	4.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	417163	-17.1
Hexabromobiphenyl	647433	502062	-22.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	368172	9.3
Hexabromobiphenyl	382032	439735	15.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.302	0.033	1191	7.7	1	7.257	0.004	6818	34.1
Aroclor-1016	2	7.645	-0.004	5757	11.2	2	7.841	-0.007	12704	29.0
Aroclor-1016	3	7.788	0.001	2869	12.1	3	8.044	-0.004	2410	13.5
Aroclor-1016	4	8.399	-0.003	4986	32.8	4	8.301	-0.003	7058	50.4
Total Col1Ave (4 peaks):					16.0	Total Col2Ave (4 peaks):				31.8 RPD = 66*
Corrected Ave (3 peaks):					10.3	Corrected Ave (3 peaks):				25.6 RPD = 85*
Aroclor-1221	1	4.686	-0.047	364	11.8	1	4.943	-0.016	501	18.6
Aroclor-1221	2	6.116	-0.018	484	7.7	2	6.339	0.041	7876	133.2
Aroclor-1221	3	6.393	0.009	868	5.9	3	6.636	0.013	3096	31.0
Total Col1Ave (3 peaks):					8.5	Total Col2Ave (3 peaks):				60.9 RPD = 151*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.686	-0.047	364	18.9	1	4.943	-0.017	501	30.6
Aroclor-1232	2	6.116	-0.018	484	11.2	2	7.257	0.001	6818	74.4
Aroclor-1232	3	7.645	-0.013	5757	26.5	3	7.841	-0.014	12704	68.1
Aroclor-1232	4	8.568	-0.016	3499	37.7	4	8.707	-0.007	5550	107.1
Total Col1Ave (4 peaks):					23.6	Total Col2Ave (4 peaks):				70.0 RPD = 99*
Corrected Ave (3 peaks):					18.9	Corrected Ave (3 peaks):				57.7 RPD = 101*
Aroclor-1242	1	7.302	0.031	1191	9.3	1	7.257	0.005	6818	42.3
Aroclor-1242	2	7.645	-0.010	5757	13.8	2	7.841	-0.008	12704	35.5
Aroclor-1242	3	8.399	-0.008	4986	40.1	3	9.143	-0.009	7275	65.0
Aroclor-1242	4	8.568	-0.013	3499	18.6	4	9.535	-0.041	11737	79.1
Total Col1Ave (4 peaks):					20.5	Total Col2Ave (4 peaks):				55.5 RPD = 92*
Corrected Ave (3 peaks):					13.9	Corrected Ave (3 peaks):				47.6 RPD = 110*
Aroclor-1248	1	8.399	-0.007	4986	23.9	1	8.301	-0.003	7058	42.4
Aroclor-1248	2	8.568	-0.012	3499	13.1	2	8.707	-0.003	5550	31.0
Aroclor-1248	3	8.988	-0.011	15810	31.0	3	9.143	-0.008	7275	33.2
Aroclor-1248	4	9.288	-0.005	21498	85.3	4	9.535	-0.039	11737	43.4
Total Col1Ave (4 peaks):					38.3	Total Col2Ave (4 peaks):				37.5 RPD = 2
Corrected Ave (3 peaks):					22.7	Corrected Ave (3 peaks):				35.5 RPD = 44*
Aroclor-1254	1	9.288	-0.004	21498	50.6	1	9.441	-0.004	19018	71.2
Aroclor-1254	2	9.365	-0.006	7459	41.1	2	9.958	-0.006	8916	41.3
Aroclor-1254	3	9.658	-0.004	12383	45.5	3	10.109	-0.006	36286	77.1
Aroclor-1254	4	9.790	-0.009	28508	53.4	4	10.361	-0.004	46159	98.0
Aroclor-1254	5	10.112	-0.045	46644	134.4	5	10.556	-0.007	46135	175.9
Total Col1Ave (5 peaks):					65.0	Total Col2Ave (5 peaks):				92.7 RPD = 35
Corrected Ave (4 peaks):					47.6	Corrected Ave (4 peaks):				71.9 RPD = 41*
Aroclor-1260	1	11.035	-0.005	26178	92.9	1	11.644	-0.005	29107	91.8
Aroclor-1260	2	11.348	-0.008	21639	74.7	2	11.906	-0.006	69089	86.1
Aroclor-1260	3	11.720	-0.008	61750	81.0	3	12.417	-0.014	37474	187.3
Aroclor-1260	4	12.122	-0.009	34059	86.5	4	12.489	-0.007	45468	87.5
Aroclor-1260	5	12.234	-0.005	13826	80.5	NS	---			----
Total Col1Ave (5 peaks):					83.1	Total Col2Ave (4 peaks):				113.2 RPD = 31
Corrected Ave (4 peaks):					80.7	Corrected Ave (3 peaks):				88.5 RPD = 9
Aroclor-1262	1	10.810	-0.022	60588	298.4	1	11.191	-0.009	28044	65.2
Aroclor-1262	2	12.234	-0.011	13826	43.1	2	11.644	-0.009	29107	79.5
Aroclor-1262	3	12.308	-0.013	16775	48.2	3	12.417	-0.018	37474	96.2
Aroclor-1262	4	12.972	-0.017	22396	70.6	4	12.489	-0.015	45468	72.8
Total Col1Ave (4 peaks):					115.1	Total Col2Ave (4 peaks):				78.4 RPD = 38
Corrected Ave (3 peaks):					54.0	Corrected Ave (3 peaks):				72.5 RPD = 29
Aroclor-1268	1	12.234	-0.010	13826	16.7	1	12.417	-0.017	37474	36.5
Aroclor-1268	2	12.308	-0.010	16775	20.3	2	12.489	-0.013	45468	41.6
Aroclor-1268	3	12.711	0.012	7894	11.5	3	12.887	-0.006	1385	1.5
Aroclor-1268	4	13.480	-0.009	4124	2.0	4	13.697	-0.012	5910	2.1
Total Col1Ave (4 peaks):					12.6	Total Col2Ave (4 peaks):				20.4 RPD = 47*

Corrected Ave (3 peaks): 10.1 Corrected Ave (3 peaks): 13.4 RPD = 28

Total PCB Area Col1 (5.908 - 13.789) = 811941 Col1 Total PCB = 0.2 ppm*

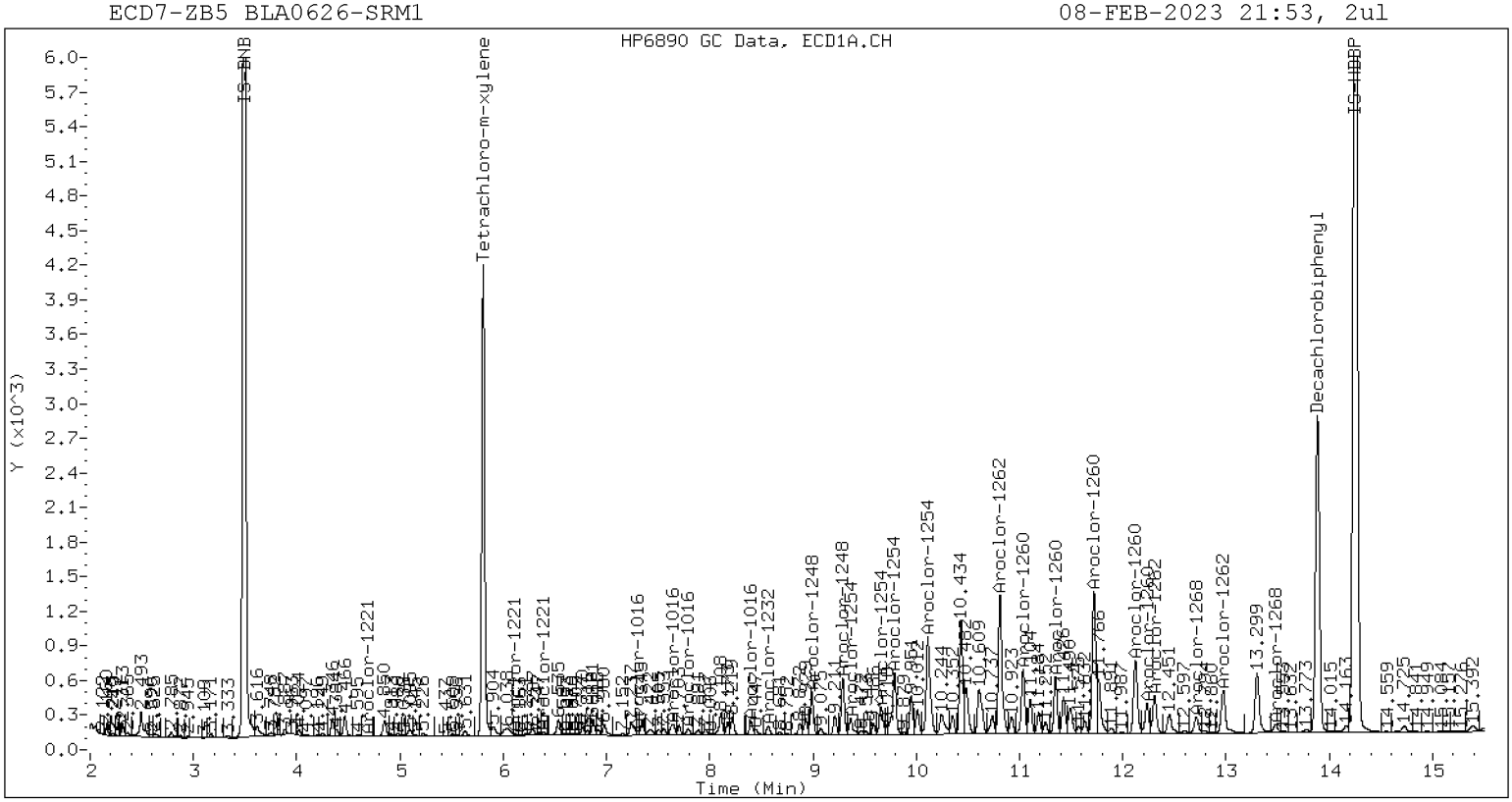
Total PCB Area Col2 (5.785 - 14.016) = 832717 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

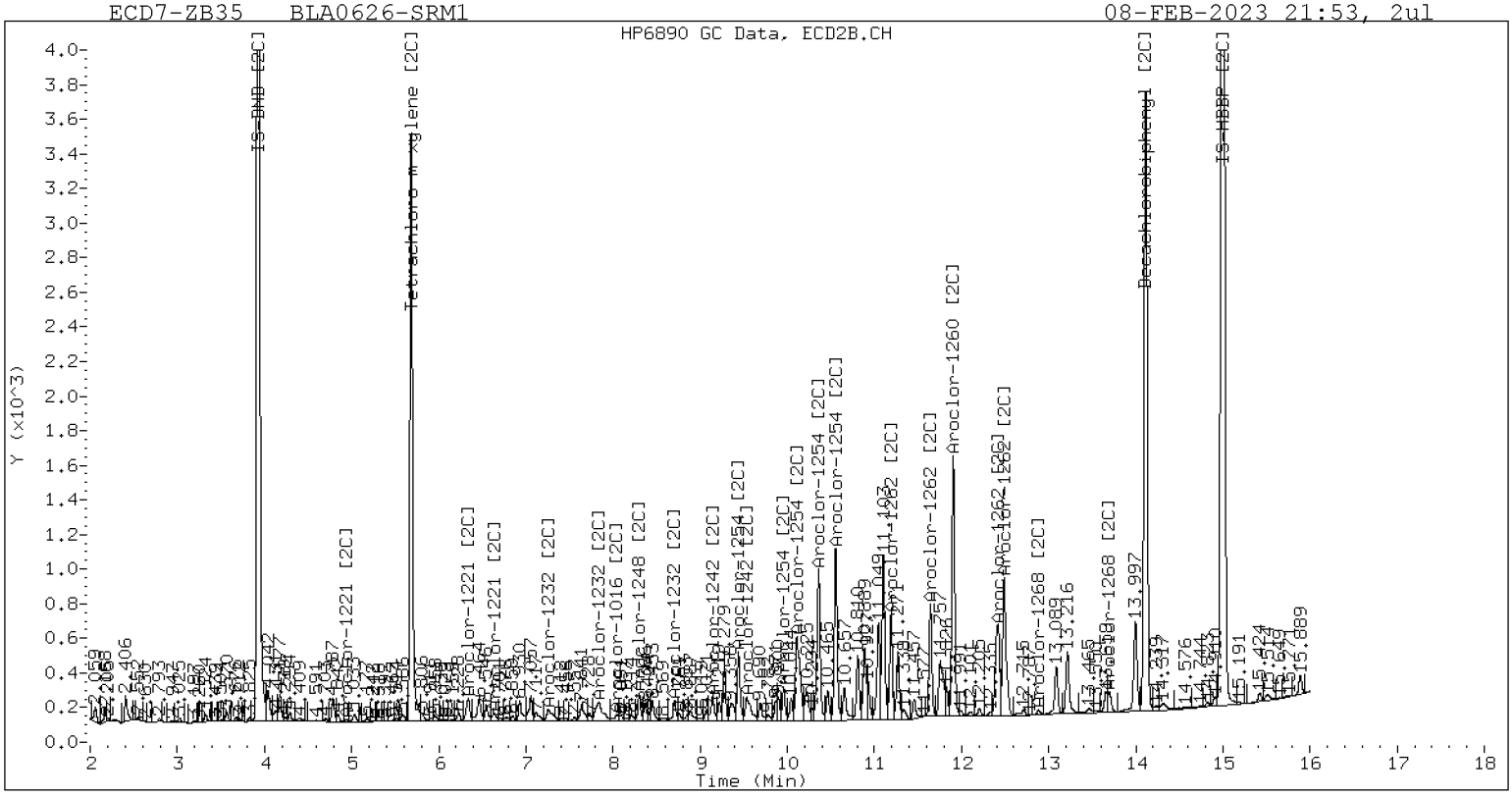
PCB Dual Column Chromatograms

ECD7-ZB5 BLA0626-SRM1 08-FEB-2023 21:53, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLA0626-SRM1 08-FEB-2023 21:53, 2ul



ZB-35 Manual Integration: NO

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (1):	ZB5

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1016	250	5.167707E-02	20	4.942809E-02	50	5.153925E-02	1000	4.662732E-02	100	5.549196E-02	500	4.928929E-02
Aroclor-1016 (1)	250	3.017861E-02	20	2.947465E-02	50	3.102226E-02	1000	2.635254E-02	100	3.309682E-02	500	2.824148E-02
Aroclor-1016 (2)	250	0.1020346	20	9.270426E-02	50	9.811961E-02	1000	9.356138E-02	100	0.1059789	500	0.0986114
Aroclor-1016 (3)	250	4.399859E-02	20	4.877736E-02	50	4.899883E-02	1000	3.795541E-02	100	0.0512744	500	4.091133E-02
Aroclor-1016 (4)	250	3.049651E-02	20	2.675607E-02	50	2.801628E-02	1000	2.863996E-02	100	3.161774E-02	500	2.939295E-02
Aroclor 1260	250	6.608884E-02	20	6.779653E-02	50	6.325495E-02	1000	5.469674E-02	100	5.850835E-02	500	5.278897E-02
Aroclor-1260 (1)	250	5.181373E-02	20	4.727423E-02	50	4.542797E-02	1000	0.0403981	100	0.0442757	500	0.0401323
Aroclor-1260 (2)	250	5.350015E-02	20	4.939797E-02	50	4.636355E-02	1000	4.208491E-02	100	4.449674E-02	500	4.100371E-02
Aroclor-1260 (3)	250	0.1331674	20	0.1373712	50	0.1282887	1000	0.1078965	100	0.1173998	500	0.1046798
Aroclor-1260 (4)	250	6.473121E-02	20	7.197922E-02	50	0.0663805	1000	5.863707E-02	100	5.997377E-02	500	5.485394E-02
Aroclor-1260 (5)	250	2.723173E-02	20	3.295998E-02	50	2.981405E-02	1000	2.446709E-02	100	2.639578E-02	500	2.327509E-02
Decachlorobiphenyl	40	0.8481341	3.2	0.8644195	8	0.9030151	160	0.7914512	16	0.9308139	80	0.7957625
Tetrachlorometaxylene	40	1.149655	3.2	1.100393	8	1.102173	160	1.094607	16	1.219974	80	1.117921

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1221							250	0.0153579				
Aroclor-1221 (1)							250	5.913051E-03				
Aroclor-1221 (2)							250	1.209121E-02				
Aroclor-1221 (3)							250	2.806945E-02				
Aroclor 1232									250	1.785602E-02		
Aroclor-1232 (1)									250	3.691407E-03		
Aroclor-1232 (2)									250	8.319285E-03		
Aroclor-1232 (3)									250	4.160486E-02		
Aroclor-1232 (4)									250	1.780851E-02		
Aroclor 1242	250	0.0411165										
Aroclor-1242 (1)	250	2.449677E-02										
Aroclor-1242 (2)	250	8.016926E-02										
Aroclor-1242 (3)	250	2.381903E-02										
Aroclor-1242 (4)	250	3.598092E-02										
Aroclor 1248			250	0.0592639								
Aroclor-1248 (1)			250	4.001993E-02								
Aroclor-1248 (2)			250	5.105008E-02								
Aroclor-1248 (3)			250	9.765126E-02								
Aroclor-1248 (4)			250	4.833435E-02								
Aroclor 1254					250	6.750332E-02						
Aroclor-1254 (1)					250	8.153293E-02						
Aroclor-1254 (2)					250	0.0348121						
Aroclor-1254 (3)					250	5.224052E-02						
Aroclor-1254 (4)					250	0.1023658						
Aroclor-1254 (5)					250	6.656523E-02						
Aroclor-1262 (1)							250	3.235265E-02				
Aroclor-1262 (2)							250	5.106336E-02				
Aroclor-1262 (3)							250	5.543866E-02				

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor-1262 (4)							250	5.051654E-02				
Aroclor-1268 (1)									250	0.132157		
Aroclor-1268 (2)									250	0.1317955		
Aroclor-1268 (3)									250	0.1091938		
Aroclor-1268 (4)									250	0.3237404		

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016	0.0506755	5.9			RSD (20)	
Aroclor-1016 (1)	2.972773E-02	7.8			RSD (20)	
Aroclor-1016 (2)	9.850169E-02	5.1			RSD (20)	
Aroclor-1016 (3)	4.531932E-02	11.5			RSD (20)	
Aroclor-1016 (4)	2.915325E-02	6.0			RSD (20)	
Aroclor 1221		0.0			RSD (20)	
Aroclor-1221 (1)		0.0			RSD (20)	
Aroclor-1221 (2)		0.0			RSD (20)	
Aroclor-1221 (3)		0.0			RSD (20)	
Aroclor 1232		0.0			RSD (20)	
Aroclor-1232 (1)		0.0			RSD (20)	
Aroclor-1232 (2)		0.0			RSD (20)	
Aroclor-1232 (3)		0.0			RSD (20)	
Aroclor-1232 (4)		0.0			RSD (20)	
Aroclor 1242		0.0			RSD (20)	
Aroclor-1242 (1)		0.0			RSD (20)	
Aroclor-1242 (2)		0.0			RSD (20)	
Aroclor-1242 (3)		0.0			RSD (20)	
Aroclor-1242 (4)		0.0			RSD (20)	
Aroclor 1248		0.0			RSD (20)	
Aroclor-1248 (1)		0.0			RSD (20)	
Aroclor-1248 (2)		0.0			RSD (20)	
Aroclor-1248 (3)		0.0			RSD (20)	
Aroclor-1248 (4)		0.0			RSD (20)	
Aroclor 1254		0.0			RSD (20)	
Aroclor-1254 (1)		0.0			RSD (20)	
Aroclor-1254 (2)		0.0			RSD (20)	
Aroclor-1254 (3)		0.0			RSD (20)	
Aroclor-1254 (4)		0.0			RSD (20)	
Aroclor-1254 (5)		0.0			RSD (20)	
Aroclor 1260	0.0605224	10.2			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1)	0.044887	9.8			RSD (20)	
Aroclor-1260 (2)	4.614117E-02	10.2			RSD (20)	
Aroclor-1260 (3)	0.1214672	11.2			RSD (20)	
Aroclor-1260 (4)	6.275928E-02	9.8			RSD (20)	
Aroclor-1260 (5)	2.735729E-02	13.0			RSD (20)	
Aroclor-1262 (1)		0.0			RSD (20)	
Aroclor-1262 (2)		0.0			RSD (20)	
Aroclor-1262 (3)		0.0			RSD (20)	
Aroclor-1262 (4)		0.0			RSD (20)	
Aroclor-1268 (1)		0.0			RSD (20)	
Aroclor-1268 (2)		0.0			RSD (20)	
Aroclor-1268 (3)		0.0			RSD (20)	
Aroclor-1268 (4)		0.0			RSD (20)	
Decachlorobiphenyl	0.8555994	6.6			RSD (20)	
Tetrachlorometaxylene	1.130787	4.2			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (2):	ZB35

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
Aroclor 1016 [2C]	250	5.292579E-02	20	4.676037E-02	50	5.470557E-02	1000	4.853417E-02	100	5.747899E-02	500	5.114174E-02
Aroclor-1016 (1) [2C]	250	4.314113E-02	20	4.423802E-02	50	4.724251E-02	1000	3.795138E-02	100	4.677646E-02	500	4.099489E-02
Aroclor-1016 (2) [2C]	250	9.823746E-02	20	8.511696E-02	50	9.615173E-02	1000	9.129912E-02	100	0.1041709	500	9.554107E-02
Aroclor-1016 (3) [2C]	250	4.028886E-02	20	2.918885E-02	50	0.0416533	1000	3.764267E-02	100	4.478001E-02	500	3.925449E-02
Aroclor-1016 (4) [2C]	250	3.003571E-02	20	2.849763E-02	50	3.377476E-02	1000	2.724351E-02	100	3.418865E-02	500	0.0287764
Aroclor 1260 [2C]	250	0.0868269	20	8.456297E-02	50	8.682148E-02	1000	7.954321E-02	100	8.639013E-02	500	7.778218E-02
Aroclor-1260 (1) [2C]	250	6.129497E-02	20	6.075052E-02	50	5.973709E-02	1000	5.307059E-02	100	5.911734E-02	500	5.231082E-02
Aroclor-1260 (2) [2C]	250	0.1536701	20	0.147481	50	0.1510614	1000	0.1380864	100	0.1518107	500	0.1339581
Aroclor-1260 (3) [2C]	250	3.647192E-02	20	3.683006E-02	50	3.729426E-02	1000	3.693906E-02	100	3.582131E-02	500	3.500995E-02
Aroclor-1260 (4) [2C]	250	0.0958705	20	9.319031E-02	50	9.919317E-02	1000	9.007677E-02	100	9.881117E-02	500	8.984983E-02
Decachlorobiphenyl [2C]	40	1.292085	3.2	1.209146	8	1.271224	160	1.30389	16	1.311901	80	1.229614
Tetrachlorometaxylene [2C]	40	1.096753	3.2	1.043423	8	1.105211	160	1.038509	16	1.153217	80	1.051873

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1221 [2C]							250	1.346872E-02				
Aroclor-1221 (1) [2C]							250	5.864614E-03				
Aroclor-1221 (2) [2C]							250	1.285084E-02				
Aroclor-1221 (3) [2C]							250	2.169068E-02				
Aroclor 1232 [2C]									250	0.0188178		
Aroclor-1232 (1) [2C]									250	3.556924E-03		
Aroclor-1232 (2) [2C]									250	1.990636E-02		
Aroclor-1232 (3) [2C]									250	4.054321E-02		
Aroclor-1232 (4) [2C]									250	1.126471E-02		
Aroclor 1242 [2C]	250	4.232355E-02										
Aroclor-1242 (1) [2C]	250	3.498756E-02										
Aroclor-1242 (2) [2C]	250	7.771274E-02										
Aroclor-1242 (3) [2C]	250	2.433789E-02										
Aroclor-1242 (4) [2C]	250	3.225599E-02										
Aroclor 1248 [2C]			250	4.536727E-02								
Aroclor-1248 (1) [2C]			250	0.036162								
Aroclor-1248 (2) [2C]			250	3.892353E-02								
Aroclor-1248 (3) [2C]			250	4.756205E-02								
Aroclor-1248 (4) [2C]			250	5.882148E-02								
Aroclor 1254 [2C]					250	7.332193E-02						
Aroclor-1254 (1) [2C]					250	5.803883E-02						
Aroclor-1254 (2) [2C]					250	4.691175E-02						
Aroclor-1254 (3) [2C]					250	0.1023304						
Aroclor-1254 (4) [2C]					250	0.1023323						
Aroclor-1254 (5) [2C]					250	5.699633E-02						
Aroclor-1262 (1) [2C]							250	7.829705E-02				
Aroclor-1262 (2) [2C]							250	6.658267E-02				
Aroclor-1262 (3) [2C]							250	7.090313E-02				

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor-1262 (4) [2C]							250	0.1135497				
Aroclor-1268 (1) [2C]									250	0.1868176		
Aroclor-1268 (2) [2C]									250	0.1988025		
Aroclor-1268 (3) [2C]									250	0.1654822		
Aroclor-1268 (4) [2C]									250	0.5111759		

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016 [2C]	5.192444E-02	7.6			RSD (20)	
Aroclor-1016 (1) [2C]	4.339073E-02	8.1			RSD (20)	
Aroclor-1016 (2) [2C]	9.508621E-02	6.8			RSD (20)	
Aroclor-1016 (3) [2C]	3.880136E-02	13.6			RSD (20)	
Aroclor-1016 (4) [2C]	3.041944E-02	9.5			RSD (20)	
Aroclor 1221 [2C]		0.0			RSD (20)	
Aroclor-1221 (1) [2C]		0.0			RSD (20)	
Aroclor-1221 (2) [2C]		0.0			RSD (20)	
Aroclor-1221 (3) [2C]		0.0			RSD (20)	
Aroclor 1232 [2C]		0.0			RSD (20)	
Aroclor-1232 (1) [2C]		0.0			RSD (20)	
Aroclor-1232 (2) [2C]		0.0			RSD (20)	
Aroclor-1232 (3) [2C]		0.0			RSD (20)	
Aroclor-1232 (4) [2C]		0.0			RSD (20)	
Aroclor 1242 [2C]		0.0			RSD (20)	
Aroclor-1242 (1) [2C]		0.0			RSD (20)	
Aroclor-1242 (2) [2C]		0.0			RSD (20)	
Aroclor-1242 (3) [2C]		0.0			RSD (20)	
Aroclor-1242 (4) [2C]		0.0			RSD (20)	
Aroclor 1248 [2C]		0.0			RSD (20)	
Aroclor-1248 (1) [2C]		0.0			RSD (20)	
Aroclor-1248 (2) [2C]		0.0			RSD (20)	
Aroclor-1248 (3) [2C]		0.0			RSD (20)	
Aroclor-1248 (4) [2C]		0.0			RSD (20)	
Aroclor 1254 [2C]		0.0			RSD (20)	
Aroclor-1254 (1) [2C]		0.0			RSD (20)	
Aroclor-1254 (2) [2C]		0.0			RSD (20)	
Aroclor-1254 (3) [2C]		0.0			RSD (20)	
Aroclor-1254 (4) [2C]		0.0			RSD (20)	
Aroclor-1254 (5) [2C]		0.0			RSD (20)	
Aroclor 1260 [2C]	8.365448E-02	4.8			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GA00061	Instrument:	ECD7
Calibration Date:	01/24/2023	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1) [2C]	5.771356E-02	6.9			RSD (20)	
Aroclor-1260 (2) [2C]	0.1460113	5.5			RSD (20)	
Aroclor-1260 (3) [2C]	3.639443E-02	2.3			RSD (20)	
Aroclor-1260 (4) [2C]	9.449863E-02	4.4			RSD (20)	
Aroclor-1262 (1) [2C]		0.0			RSD (20)	
Aroclor-1262 (2) [2C]		0.0			RSD (20)	
Aroclor-1262 (3) [2C]		0.0			RSD (20)	
Aroclor-1262 (4) [2C]		0.0			RSD (20)	
Aroclor-1268 (1) [2C]		0.0			RSD (20)	
Aroclor-1268 (2) [2C]		0.0			RSD (20)	
Aroclor-1268 (3) [2C]		0.0			RSD (20)	
Aroclor-1268 (4) [2C]		0.0			RSD (20)	
Decachlorobiphenyl [2C]	1.269643	3.3			RSD (20)	
Tetrachlorometaxylene [2C]	1.081498	4.2			RSD (20)	

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLA0281

Instrument: ECD7
Calibration ID: GA00061

Printed: 1/26/2023 11:51:52AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLA0281-CAL1	QC		1		L000856	K006953		
SLA0281-CAL2	QC		2		L000859	K006953		
SLA0281-CAL3	QC		3		L000858	K006953		
SLA0281-CAL4	QC		4		L000731	K006953		
SLA0281-CAL5	QC		5		L000857	K006953		
SLA0281-CAL6	QC		6		L000855	K006953		
SLA0281-CAL7	QC		7		L000860	K006953		
SLA0281-CAL8	QC		8		L000861	K006953		
SLA0281-CAL9	QC		9		L000862	K006953		
SLA0281-CALA	QC		10		L000863	K006953		
SLA0281-CALB	QC		11		L000864	K006953		
SLA0281-SCV1	QC		12		K007655	K006953		
SLA0281-SCV2	QC		13		K007656	K006953		
SLA0281-SCV3	QC		14		K007657	K006953		
SLA0281-SCV4	QC		15		K007658	K006953		
SLA0281-SCV5	QC		16		K007659	K006953		
SLA0281-SCV6	QC		17		K007660	K006953		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230124.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	24-JAN-2023 15:39	01242312ECD7.D	1	IB	
2	24-JAN-2023 16:00	01242313ECD7.D	1	0.25PPM AR1660	
3	24-JAN-2023 16:21	01242314ECD7.D	1	0.02PPM AR1660	
4	24-JAN-2023 16:42	01242315ECD7.D	1	0.05PPM AR1660	
5	24-JAN-2023 17:03	01242316ECD7.D	1	1.0PPM AR1660	
6	24-JAN-2023 17:24	01242317ECD7.D	1	0.1PPM AR1660	
7	24-JAN-2023 17:45	01242318ECD7.D	1	0.5PPM AR1660	
8	24-JAN-2023 18:06	01242319ECD7.D	1	0.25PPM 1242	
9	24-JAN-2023 18:27	01242320ECD7.D	1	0.25PPM 1248	
10	24-JAN-2023 18:48	01242321ECD7.D	1	0.25PPM 1254	
11	24-JAN-2023 19:09	01242322ECD7.D	1	0.25PPM 2162	
12	24-JAN-2023 19:30	01242323ECD7.D	1	0.25PPM 3268	
13	24-JAN-2023 19:51	01242324ECD7.D	1	AR1660 SCV	
14	24-JAN-2023 20:12	01242325ECD7.D	1	AR1242 SCV	
15	24-JAN-2023 20:33	01242326ECD7.D	1	AR1248 SCV	
16	24-JAN-2023 20:54	01242327ECD7.D	1	AR1254 SCV	
17	24-JAN-2023 21:15	01242328ECD7.D	1	AR2162 SCV	
18	24-JAN-2023 21:36	01242329ECD7.D	1	AR3268 SCV	
19	24-JAN-2023 21:57	01242330ECD7.D	1	DDTS	
20	24-JAN-2023 22:18	01242331ECD7.D	1	DDT BD	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230124.b

ARI Job No.: IB Method: PCB.m Instrument: ecd7.i Date: 24-JAN-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1539	01242312ECD7.D	IB		1	NO MANUAL INTEGRATION
1600	01242313ECD7.D	0.25PPM	AR1660	1	NO MANUAL INTEGRATION
1621	01242314ECD7.D	0.02PPM	AR1660	1	NO MANUAL INTEGRATION
1642	01242315ECD7.D	0.05PPM	AR1660	1	NO MANUAL INTEGRATION
1703	01242316ECD7.D	1.0PPM	AR1660	1	NO MANUAL INTEGRATION
1724	01242317ECD7.D	0.1PPM	AR1660	1	NO MANUAL INTEGRATION
1745	01242318ECD7.D	0.5PPM	AR1660	1	NO MANUAL INTEGRATION
1806	01242319ECD7.D	0.25PPM	1242	1	NO MANUAL INTEGRATION
1827	01242320ECD7.D	0.25PPM	1248	1	NO MANUAL INTEGRATION
1848	01242321ECD7.D	0.25PPM	1254	1	NO MANUAL INTEGRATION
1909	01242322ECD7.D	0.25PPM	2162	1	NO MANUAL INTEGRATION
1930	01242323ECD7.D	0.25PPM	3268	1	NO MANUAL INTEGRATION
1951	01242324ECD7.D	AR1660	SCV	1	NO MANUAL INTEGRATION
2012	01242325ECD7.D	AR1242	SCV	1	NO MANUAL INTEGRATION
2033	01242326ECD7.D	AR1248	SCV	1	NO MANUAL INTEGRATION
2054	01242327ECD7.D	AR1254	SCV	1	NO MANUAL INTEGRATION
2115	01242328ECD7.D	AR2162	SCV	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230124.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2136	01242329ECD7.D	AR3268 SCV		1	NO MANUAL INTEGRATION
2157	01242330ECD7.D	DDTS		1	NO MANUAL INTEGRATION
2218	01242331ECD7.D	DDT BD		1	NO MANUAL INTEGRATION

Security Status Report

Date: 26-Jan-2023 11:55

01242301ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242302ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242303ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242304ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242305ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242306ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242307ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242308ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242309ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242310ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242311ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242312ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242313ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242314ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242315ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242316ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242317ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242318ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242319ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242320ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242321ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242322ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242323ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242324ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242325ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242326ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242327ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242328ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242329ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242330ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242331ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00
End Cal Date : 24-JAN-2023 21:57
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m
Last Edit : 25-Jan-2023 10:02 JoshuaR
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\230124.b\01242314ECD7.D
Level 2: \\target\share\chem4\ecd7.i\230124.b\01242315ECD7.D
Level 3: \\target\share\chem4\ecd7.i\230124.b\01242317ECD7.D
Level 4: \\target\share\chem4\ecd7.i\230124.b\01242313ECD7.D
Level 5: \\target\share\chem4\ecd7.i\230124.b\01242318ECD7.D
Level 6: \\target\share\chem4\ecd7.i\230124.b\01242316ECD7.D
Level 7: \\target\share\chem4\ecd7.i\230124.b\01242323ECD7.D
Level 8: \\target\share\chem4\ecd7.i\230124.b\01242330ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00591	+++++	0.00591	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01209	+++++	0.01209	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02807	+++++	0.02807	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02450	+++++	0.02450	0.000

	(2)	+++++	+++++	+++++	+++++	+++++	+++++		
		0.08017	+++++					0.08017	0.000
	(3)	+++++	+++++	+++++	+++++	+++++	+++++		
		0.02382	+++++					0.02382	0.000
	(4)	+++++	+++++	+++++	+++++	+++++	+++++		
		0.03598	+++++					0.03598	0.000
4	Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
		0.00369	+++++					0.00369	0.000

ARI Labs, Inc.

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Integrator : HP Genie
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Last Edit : 25-Jan-2023 10:02 JoshuaR
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
(2)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.00832	+++++							0.00832	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.04160	+++++							0.04160	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.01781	+++++							0.01781	0.000
7 Aroclor-1016(1)	0.02947	0.03102	0.03310	0.03018	0.02824	0.02635				
	+++++	+++++							0.02973	7.802
(2)	0.09270	0.09812	0.10598	0.10203	0.09861	0.09356				
	+++++	+++++							0.09850	5.108
(3)	0.04878	0.04900	0.05127	0.04400	0.04091	0.03796				
	+++++	+++++							0.04532	11.523
(4)	0.02676	0.02802	0.03162	0.03050	0.02939	0.02864				
	+++++	+++++							0.02915	5.988
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++				

	0.04002	+++++				0.04002	0.000	
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05105	+++++				0.05105	0.000	
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.09765	+++++				0.09765	0.000	
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04833	+++++				0.04833	0.000	

ARI Labs, Inc.

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Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m
Last Edit : 25-Jan-2023 10:02 JoshuaR
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.08153	+++++					0.08153	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03481	+++++					0.03481	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05224	+++++					0.05224	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10237	+++++					0.10237	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06657	+++++					0.06657	0.000
9 Aroclor-1260(1)	0.04727	0.04543	0.04428	0.05181	0.04013	0.04040		
	+++++	+++++					0.04489	9.818
(2)	0.04940	0.04636	0.04450	0.05350	0.04100	0.04208		
	+++++	+++++					0.04614	10.182
(3)	0.13737	0.12829	0.11740	0.13317	0.10468	0.10790		

	+++++	+++++					0.12147	11.161
(4)	0.07198	0.06638	0.05997	0.06473	0.05485	0.05864		
	+++++	+++++					0.06276	9.803
(5)	0.03296	0.02981	0.02640	0.02723	0.02328	0.02447		
	+++++	+++++					0.02736	13.015
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03235	+++++					0.03235	0.000

ARI Labs, Inc.

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Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m
Last Edit : 25-Jan-2023 10:02 JoshuaR
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
(2)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.05106	+++++							0.05106	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.05544	+++++							0.05544	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.05052	+++++							0.05052	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.13216	+++++							0.13216	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.13180	+++++							0.13180	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.10919	+++++							0.10919	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.32374	+++++							0.32374	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++				

	+++++	904					904	0.000	
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	1034					1034	0.000	
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	2557					2557	0.000	
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	1539					1539	0.000	

ARI Labs, Inc.

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Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1484	1484	0.000
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 Tetrachloro-m-xylene	1.10039	1.10217	1.21997	1.14965	1.11792	1.09461	+++++	+++++	1.13079	4.246
$ 13 Decachlorobiphenyl	0.86442	0.90302	0.93081	0.84813	0.79576	0.79145	+++++	+++++	0.85560	6.556

ARI Labs, Inc.

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Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m
Last Edit : 25-Jan-2023 09:58 JoshuaR
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242314ECD7.D
Level 2: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242315ECD7.D
Level 3: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242317ECD7.D
Level 4: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242313ECD7.D
Level 5: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242318ECD7.D
Level 6: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242316ECD7.D
Level 7: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242323ECD7.D
Level 8: \\target\share\chem4\ecd7.i\230124.b\230124.b\01242330ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
1 Aroclor-1221 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00586	+++++	0.00586	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01285	+++++	0.01285	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02169	+++++	0.02169	0.000
4 Aroclor-1232 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00356	+++++	0.00356	0.000

(2)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.01991	+++++					0.01991	0.000	
(3)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.04054	+++++					0.04054	0.000	
(4)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.01126	+++++					0.01126	0.000	
3 Aroclor-1242 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.03499	+++++					0.03499	0.000	

ARI Labs, Inc.

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Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m
Last Edit : 25-Jan-2023 09:58 JoshuaR
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07771	+++++					0.07771	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02434	+++++					0.02434	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03226	+++++					0.03226	0.000
6 Aroclor-1248 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03616	+++++					0.03616	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03892	+++++					0.03892	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04756	+++++					0.04756	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05882	+++++					0.05882	0.000
7 Aroclor-1016 [2C](1)	0.04424	0.04724	0.04678	0.04314	0.04099	0.03795		

	+++++	+++++				0.04339		8.142
(2)	0.08512	0.09615	0.10417	0.09824	0.09554	0.09130		
	+++++	+++++				0.09509		6.775
(3)	0.02919	0.04165	0.04478	0.04029	0.03925	0.03764		
	+++++	+++++				0.03880		13.639
(4)	0.02850	0.03377	0.03419	0.03004	0.02878	0.02724		
	+++++	+++++				0.03042		9.538

ARI Labs, Inc.

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Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m
Last Edit : 25-Jan-2023 09:58 JoshuaR
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
8 Aroclor-1254 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05804	+++++					0.05804	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04691	+++++					0.04691	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10233	+++++					0.10233	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10233	+++++					0.10233	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05700	+++++					0.05700	0.000
10 Aroclor-1262 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07830	+++++					0.07830	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06658	+++++					0.06658	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		

	0.07090	+++++				0.07090	0.000	
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.11355	+++++				0.11355	0.000	
9 Aroclor-1260 [2C]	(1)	0.06075	0.05974	0.05912	0.06129	0.05231	0.05307	
	+++++	+++++				0.05771	6.881	
	(2)	0.14748	0.15106	0.15181	0.15367	0.13396	0.13809	
	+++++	+++++				0.14601	5.547	

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00
End Cal Date : 24-JAN-2023 21:57
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m
Last Edit : 25-Jan-2023 09:58 JoshuaR
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
(3)	0.03683	0.03729	0.03582	0.03647	0.03501	0.03694				
	#####	#####							0.03639	2.314
(4)	0.09319	0.09919	0.09881	0.09587	0.08985	0.09008				
	#####	#####							0.09450	4.373
11 Aroclor-1268 [2C](1)	#####	#####	#####	#####	#####	#####				
	0.18682	#####							0.18682	0.000
(2)	#####	#####	#####	#####	#####	#####				
	0.19880	#####							0.19880	0.000
(3)	#####	#####	#####	#####	#####	#####				
	0.16548	#####							0.16548	0.000
(4)	#####	#####	#####	#####	#####	#####				
	0.51118	#####							0.51118	0.000
41 2,4-DDE [2C]	#####	#####	#####	#####	#####	#####				
	#####	1528							1528	0.000
42 2,4-DDD [2C]	#####	#####	#####	#####	#####	#####				

	+++++	866					866	0.000	
44 4,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	863					863	0.000	
45 4,4-DDD/2,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	1162					1162	0.000	
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	1277					1277	0.000	

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-JAN-2023 16:00
End Cal Date : 24-JAN-2023 21:57
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m
Last Edit : 25-Jan-2023 09:58 JoshuaR
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	___ RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene [2C]	1.04342	1.10521	1.15322	1.09675	1.05187	1.03851		
	+++++	+++++					1.08150	4.159
$ 13 Decachlorobiphenyl [2C]	1.20915	1.27122	1.31190	1.29209	1.22961	1.30389		
	+++++	+++++					1.26964	3.291

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\230124.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	01242313ECD7	01242314ECD7	01242315ECD7	01242316ECD7	01242317ECD7	01242318ECD7
INJ.DATE:	24-JAN-2023	24-JAN-2023	24-JAN-2023	24-JAN-2023	24-JAN-2023	24-JAN-2023
INJ.TIME:	16:00	16:21	16:42	17:03	17:24	17:45

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	3.493	3.492	3.492	3.492	3.492	3.493	3.492	3.392-3.592	3.492	0.000
$ 1 Tetrachloro-m-xylene	5.810	5.809	5.809	5.809	5.808	5.809	5.809	5.709-5.909	5.809	0.001
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	4.733	4.633-4.833	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	7.271	7.171-7.371	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	4.733	4.633-4.833	+++++	+++++
7 Aroclor-1016	7.272	7.272	7.271	7.270	7.271	7.270	7.270	7.170-7.370	7.271	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	8.406	8.306-8.505	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	9.299	9.199-9.399	+++++	+++++
9 Aroclor-1260	11.047	11.049	11.048	11.043	11.046	11.044	11.044	10.944-11.144	11.046	0.002
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.832	10.732-10.932	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	12.245	12.145-12.345	+++++	+++++
$ 13 Decachlorobiphenyl	13.894	13.892	13.893	13.892	13.892	13.891	13.892	13.792-13.992	13.892	0.001
* 12 IS-HBBP	14.267	14.265	14.265	14.264	14.264	14.264	14.266	14.166-14.366	14.265	0.001
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.263	9.213-9.313	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.805	9.755-9.855	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.296	10.246-10.346	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.687	9.587-9.787	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\230124.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	10.281	10.181-10.381	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.758	10.658-10.858	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.842	1.742-1.942	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	6.708	6.608-6.808	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\230124.b\230124.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	01242313ECD7	01242314ECD7	01242315ECD7	01242316ECD7	01242317ECD7	01242318ECD7
INJ.DATE:	24-JAN-2023	24-JAN-2023	24-JAN-2023	24-JAN-2023	24-JAN-2023	24-JAN-2023
INJ.TIME:	16:00	16:21	16:42	17:03	17:24	17:45

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB [2C]	3.928	3.929	3.929	3.929	3.928	3.929	3.929	3.829-4.029	3.929	0.001
$ 2 Tetrachloro-m-xylene [	5.685	5.686	5.687	5.685	5.686	5.686	5.687	5.587-5.787	5.686	0.001
1 Aroclor-1221 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.959	4.859-5.059	+++++	+++++
4 Aroclor-1232 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.960	4.860-5.060	+++++	+++++
3 Aroclor-1242 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	7.256	7.156-7.356	+++++	+++++
6 Aroclor-1248 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	8.305	8.205-8.405	+++++	+++++
7 Aroclor-1016 [2C]	7.255	7.257	7.256	7.254	7.255	7.254	7.255	7.155-7.355	7.255	0.001
8 Aroclor-1254 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.448	9.348-9.548	+++++	+++++
10 Aroclor-1262 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	11.200	11.100-11.300	+++++	+++++
9 Aroclor-1260 [2C]	11.653	11.655	11.655	11.653	11.655	11.653	11.653	11.553-11.753	11.654	0.001
11 Aroclor-1268 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	12.434	12.334-12.534	+++++	+++++
$ 13 Decachlorobiphenyl [2C	14.120	14.121	14.120	14.122	14.119	14.120	14.120	14.020-14.220	14.120	0.001
* 12 IS-HBBP [2C]	15.008	15.008	15.009	15.007	15.008	15.009	15.009	14.909-15.109	15.008	0.000
41 2,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.912	9.862-9.962	+++++	+++++
42 2,4-DDD [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.538	9.488-9.588	+++++	+++++
44 4,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.211	10.111-10.311	+++++	+++++
45 4,4-DDD/2,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.666	10.566-10.766	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230124.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\230124.b\230124.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	11.095	10.995-11.195	+++++	+++++
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.703	1.603-1.803	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	7.178	7.078-7.278	+++++	+++++

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242312ECD7.D
Data file 2: /230124.b/230124.b/01242312ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 24-JAN-2023 15:39
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.822	0.013	272340	5.680	-0.007	171573	36.5	36.4	0.1	Tetrachloro-m-xylene
13.900	0.008	252989	14.120	-0.000	223176	37.3	38.6	3.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	528068	4.9
Hexabromobiphenyl	647433	634177	-2.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	348301	3.4
Hexabromobiphenyl	382032	364259	-4.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	7.852	0.064	162	0.5	3	---			0.0
Aroclor-1016	4	8.431	0.027	495	2.6	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.317	0.019	1908	34.1
Aroclor-1221	3	---			0.0	3	6.630	0.007	299	3.2
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	7.208	-0.049	26	0.3
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	8.730	0.017	33	0.7
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	7.208	-0.048	26	0.2
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	8.431	0.024	495	3.1	3	9.151	-0.008	93	0.9
Aroclor-1242	4	8.630	0.049	1101	4.6	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.431	0.025	495	1.9	1	---			0.0
Aroclor-1248	2	8.630	0.050	1101	3.3	2	8.730	0.018	33	0.2
Aroclor-1248	3	---			0.0	3	9.151	-0.005	93	0.4
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	9.474	0.026	9010	35.7
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	9.571	-0.099	114	0.3	3	---			0.0
Aroclor-1254	4	9.770	-0.038	104	0.2	4	---			0.0
Aroclor-1254	5	---			0.0	5	10.525	-0.044	482	1.9
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	11.066	0.023	262	0.7	1	11.703	0.050	189	0.7
Aroclor-1260	2	---			0.0	2	11.832	-0.086	97	0.1
Aroclor-1260	3	11.803	0.069	4470	4.6	3	12.414	-0.022	2209	13.3
Aroclor-1260	4	12.089	-0.051	661	1.3	4	---			0.0
Aroclor-1260	5	12.282	0.038	5183	23.9	NS	---			----
	Total Col1Ave (4 peaks):				7.7	Total Col2Ave (3 peaks):				4.7 RPD = 47*
	Corrected Ave (3 peaks):				2.2	Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.789	-0.043	941	3.7	1	---			0.0
Aroclor-1262	2	12.282	0.036	5183	12.8	2	11.703	0.051	189	0.6
Aroclor-1262	3	---			0.0	3	12.414	-0.020	2209	6.8
Aroclor-1262	4	12.982	-0.007	2811	7.0	4	---			0.0
	Total Col1Ave (3 peaks):				7.8	Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	12.282	0.037	5183	4.9	1	12.414	-0.020	2209	2.6
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.705	0.006	3092	3.6	3	12.894	0.001	724	1.0
Aroclor-1268	4	13.500	0.011	13310	5.2	4	13.708	-0.000	2974	1.3
	Total Col1Ave (3 peaks):				4.6	Total Col2Ave (3 peaks):				1.6 RPD = 96*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 89790 Col1 Total PCB = 0.0 ppm*

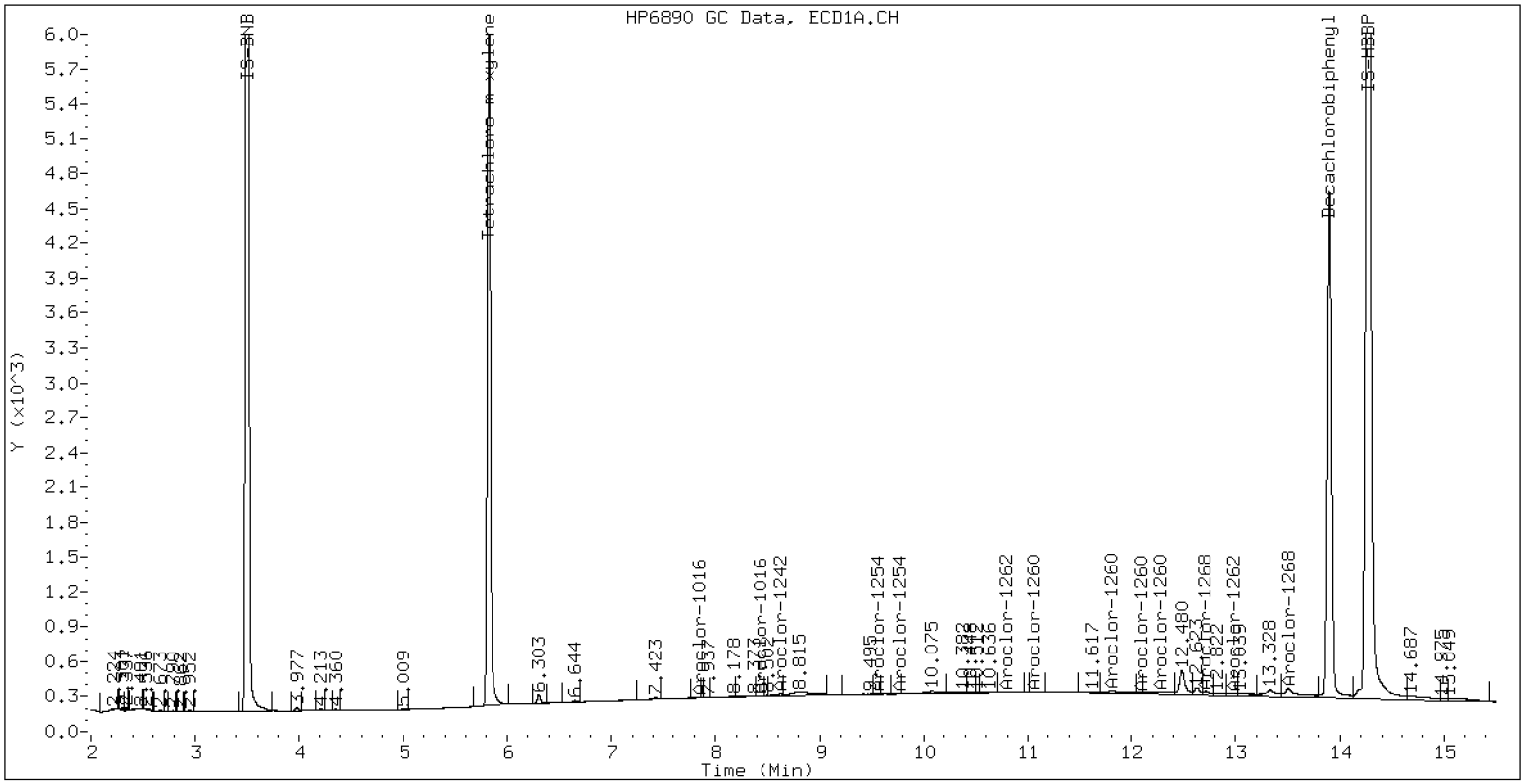
Total PCB Area Col2 (5.787 - 14.020) = 40020 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

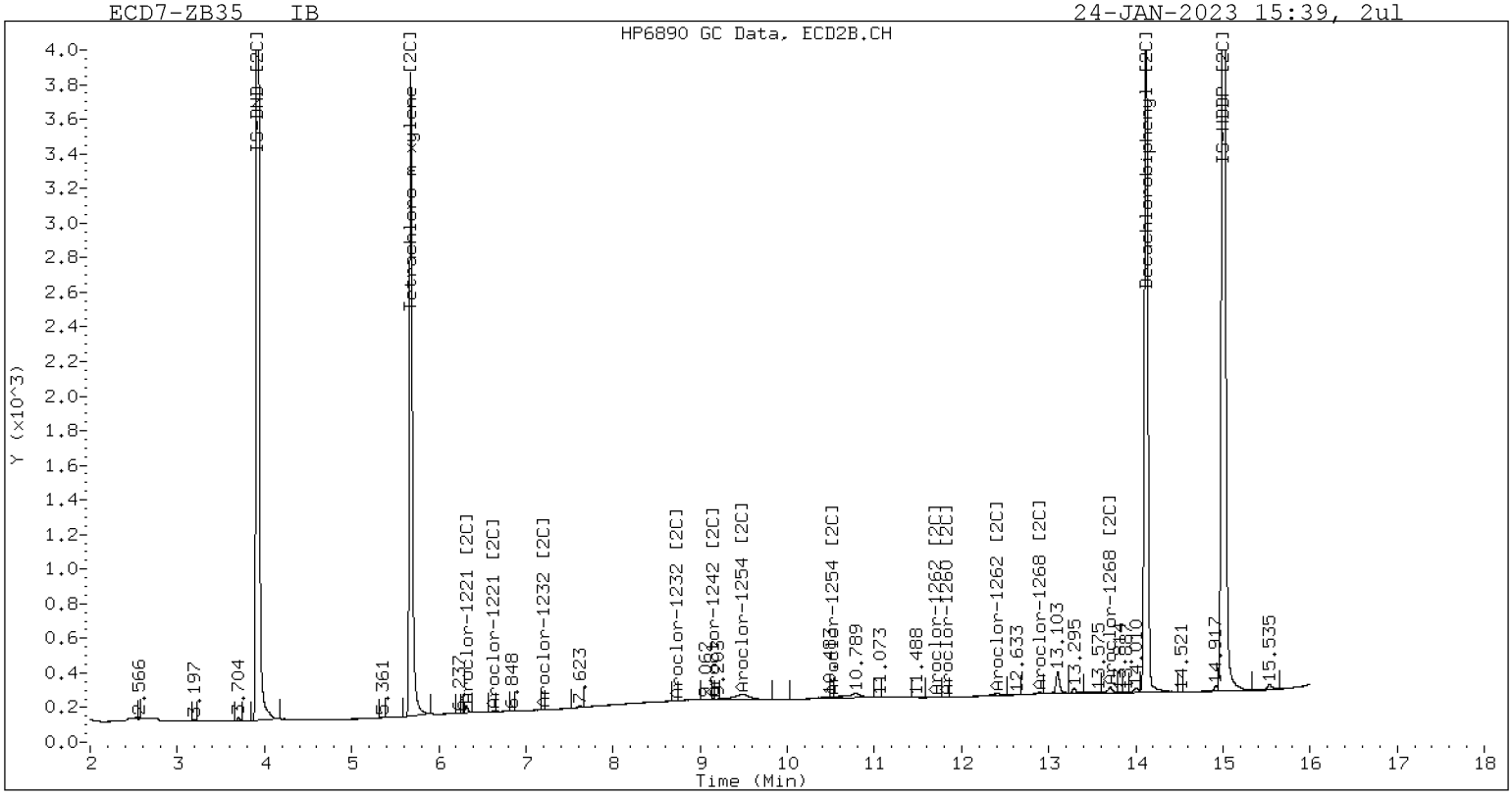
PCB Dual Column Chromatograms

ECD7-ZB5 IB 24-JAN-2023 15:39, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 IB 24-JAN-2023 15:39, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242313ECD7.D
Data file 2: /230124.b/230124.b/01242313ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPM AR1660
Client ID:
Injection Date: 24-JAN-2023 16:00
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.810	0.001	289321	5.685	-0.002	184754	40.7	40.6	0.3	Tetrachloro-m-xylene
13.894	0.002	274555	14.120	0.000	246809	39.7	40.7	2.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503318	0.0
Hexabromobiphenyl	647433	647433	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	336911	0.0
Hexabromobiphenyl	382032	382032	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	47467	253.8	1	7.255	0.000	45421	248.6
Aroclor-1016	2	7.654	0.004	160487	259.0	2	7.851	0.000	103429	258.3
Aroclor-1016	3	7.791	0.003	69204	242.7	3	8.050	0.000	42418	259.6
Aroclor-1016	4	8.406	0.003	47967	261.5	4	8.305	0.000	31623	246.8
Total Col1Ave (4 peaks):					254.2	Total Col2Ave (4 peaks):				253.3 RPD = 0
Corrected Ave (3 peaks):					251.8	Corrected Ave (3 peaks):				251.2 RPD = 0
CalAmt %D:					1.7	CalAmt %D:				1.3
Aroclor-1260	1	11.047	0.003	104831	288.6	1	11.653	0.000	73177	265.5
Aroclor-1260	2	11.362	0.002	108243	289.9	2	11.918	0.000	183459	263.1
Aroclor-1260	3	11.738	0.004	269428	274.1	3	12.436	0.000	43542	250.5
Aroclor-1260	4	12.142	0.002	130966	257.9	4	12.502	0.000	114455	253.6
Aroclor-1260	5	12.246	0.002	55096	248.9	NS	---			----
Total Col1Ave (5 peaks):					271.8	Total Col2Ave (4 peaks):				258.2 RPD = 5
Corrected Ave (4 peaks):					267.3	Corrected Ave (3 peaks):				255.8 RPD = 4
CalAmt %D:					8.7	CalAmt %D:				3.3

Total PCB Area Col1 (5.909 - 13.792) = 2930230 Col1 Total PCB = 0.5 ppm*

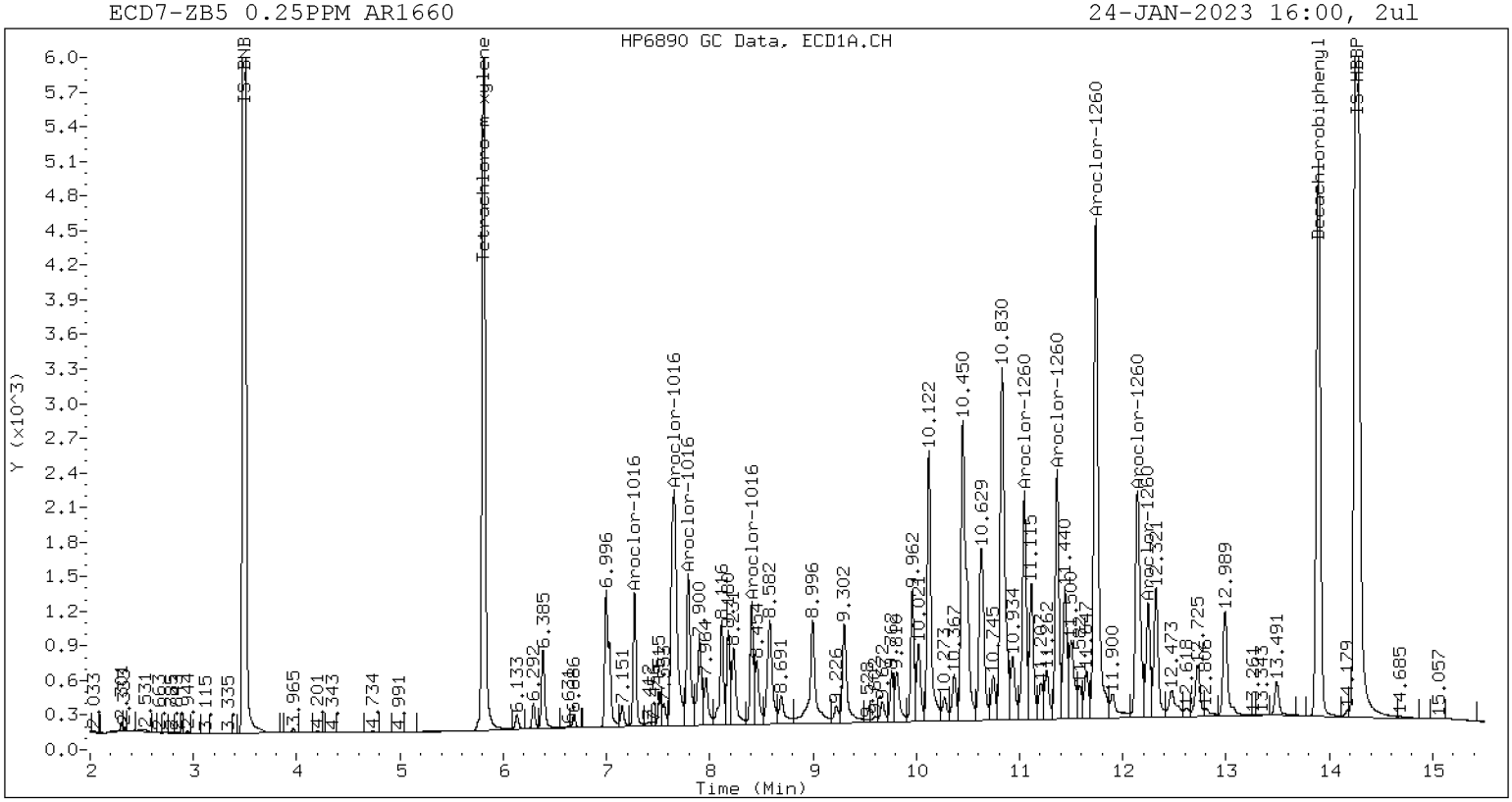
Total PCB Area Col2 (5.787 - 14.020) = 1777050 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

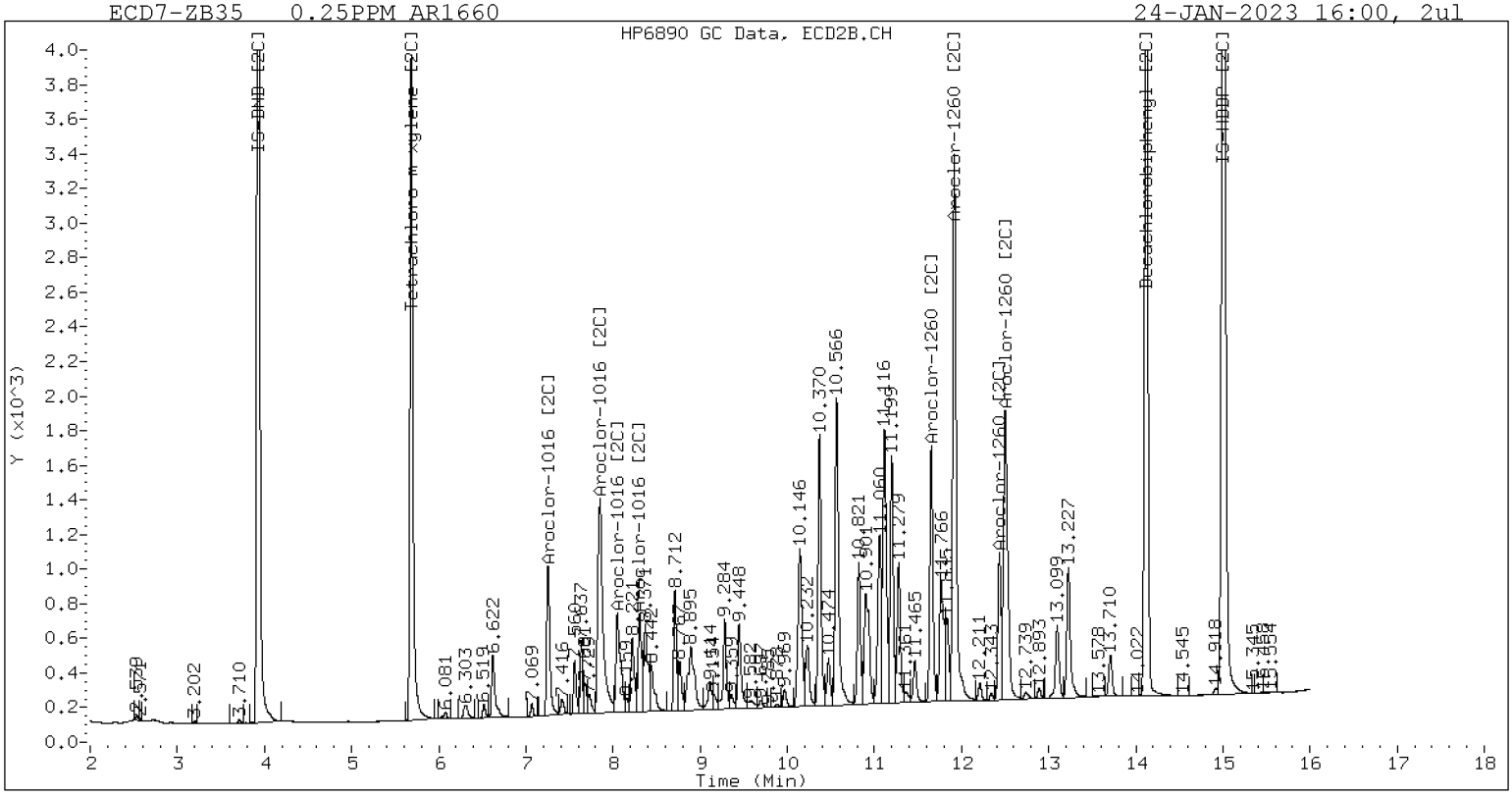
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM AR1660 24-JAN-2023 16:00, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM AR1660 24-JAN-2023 16:00, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242314ECD7.D
Data file 2: /230124.b/230124.b/01242314ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPM AR1660
Client ID:
Injection Date: 24-JAN-2023 16:21
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.000	21307	5.686	-0.000	13767	3.1	3.1	0.9	Tetrachloro-m-xylene
13.892	0.000	23054	14.121	0.001	19257	3.2	3.0	5.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	484077	-3.8
Hexabromobiphenyl	647433	666748	3.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	329852	-2.1
Hexabromobiphenyl	382032	398153	4.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	3567	19.8	1	7.257	0.002	3648	20.4
Aroclor-1016	2	7.663	0.012	11219	18.8	2	7.858	0.007	7019	17.9
Aroclor-1016	3	7.796	0.008	5903	21.5	3	8.058	0.007	2407	15.0
Aroclor-1016	4	8.410	0.006	3238	18.4	4	8.308	0.003	2350	18.7
Total Col1Ave (4 peaks):					19.6	Total Col2Ave (4 peaks):				18.0 RPD = 9
Corrected Ave (3 peaks):					19.0	Corrected Ave (3 peaks):				17.2 RPD = 10
CalAmt %D:					-1.8	CalAmt %D:				-9.9
Aroclor-1260	1	11.049	0.005	7880	21.1	1	11.655	0.002	6047	21.1
Aroclor-1260	2	11.365	0.005	8234	21.4	2	11.923	0.005	14680	20.2
Aroclor-1260	3	11.742	0.008	22898	22.6	3	12.438	0.002	3666	20.2
Aroclor-1260	4	12.149	0.009	11998	22.9	4	12.506	0.004	9276	19.7
Aroclor-1260	5	12.247	0.003	5494	24.1	NS	---			----
Total Col1Ave (5 peaks):					22.4	Total Col2Ave (4 peaks):				20.3 RPD = 10
Corrected Ave (4 peaks):					22.0	Corrected Ave (3 peaks):				20.1 RPD = 9
CalAmt %D:					12.1	CalAmt %D:				1.5

Total PCB Area Col1 (5.909 - 13.792) = 256211 Col1 Total PCB = 0.0 ppm*

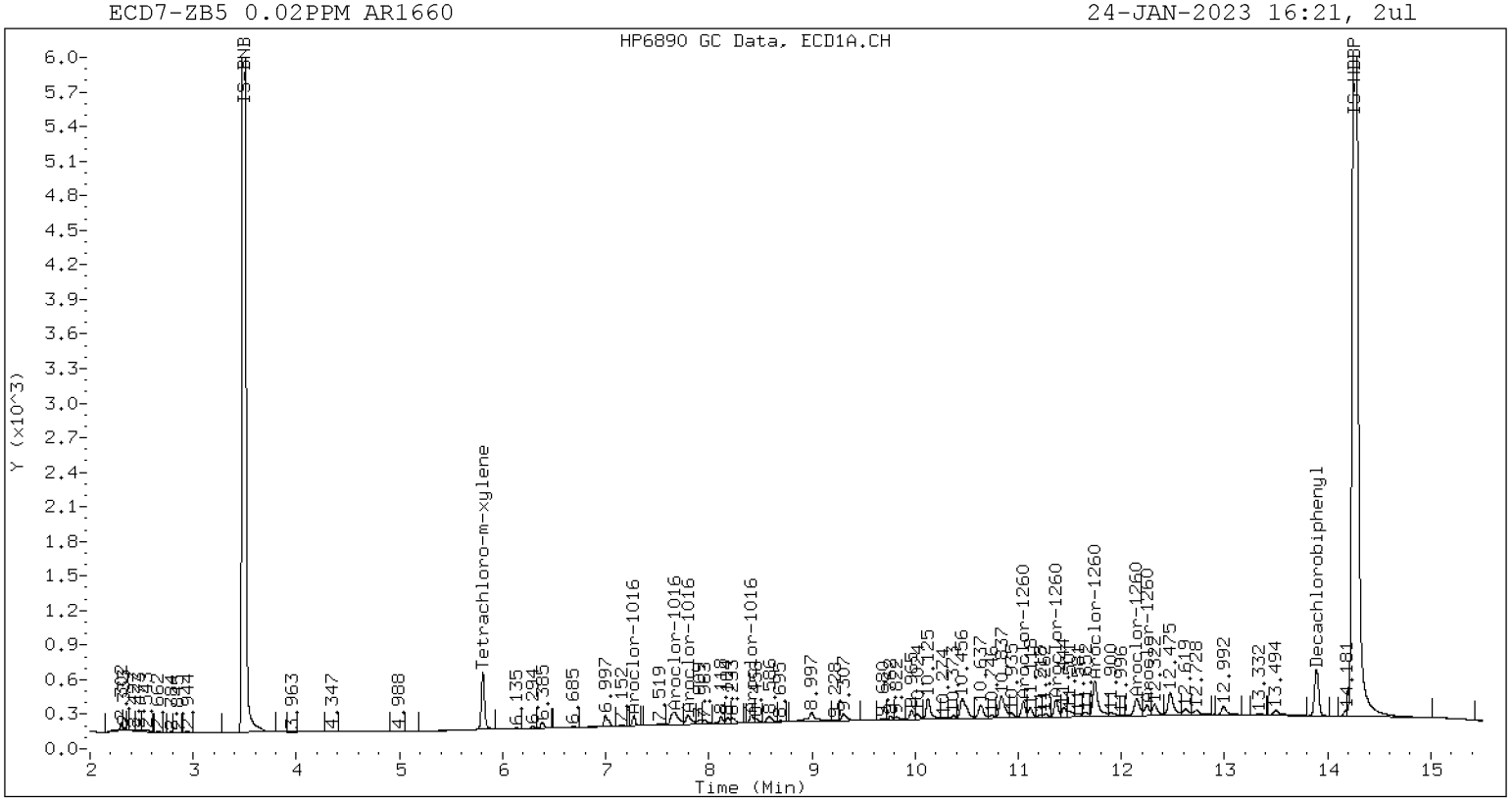
Total PCB Area Col2 (5.787 - 14.020) = 146434 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

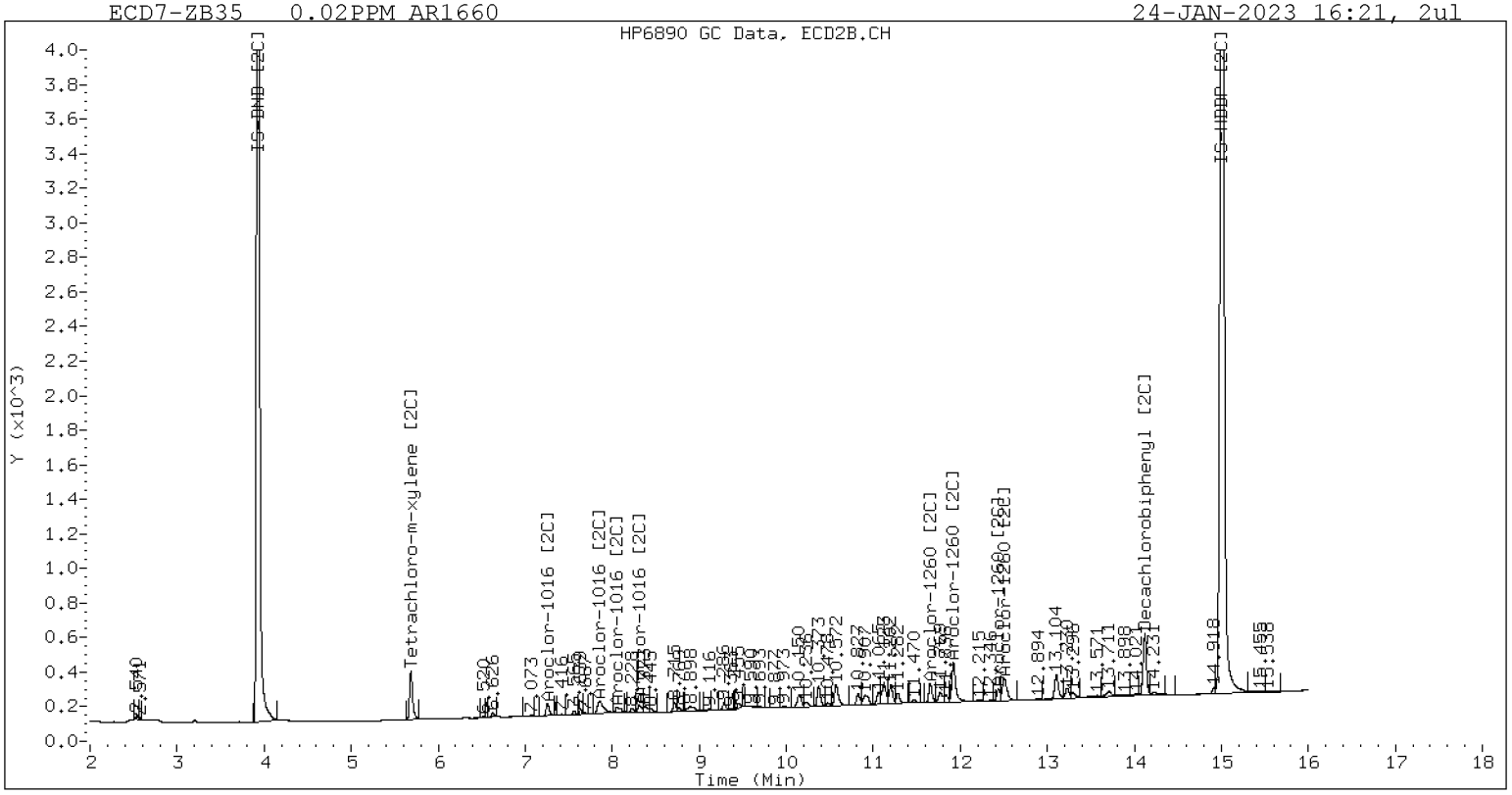
PCB Dual Column Chromatograms

ECD7-ZB5 0.02PPM AR1660 24-JAN-2023 16:21, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.02PPM AR1660 24-JAN-2023 16:21, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242315ECD7.D
Data file 2: /230124.b/230124.b/01242315ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPM AR1660
Client ID:
Injection Date: 24-JAN-2023 16:42
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	53503	5.687	-0.000	36922	7.8	8.2	4.7	Tetrachloro-m-xylene
13.893	0.001	62544	14.120	-0.000	52782	8.4	8.0	5.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	485432	-3.6
Hexabromobiphenyl	647433	692613	7.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	334072	-0.8
Hexabromobiphenyl	382032	415206	8.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.002	9412	52.2	1	7.256	0.001	9864	54.4
Aroclor-1016	2	7.657	0.007	29769	49.8	2	7.855	0.004	20076	50.6
Aroclor-1016	3	7.795	0.006	14866	54.1	3	8.055	0.004	8697	53.7
Aroclor-1016	4	8.409	0.005	8500	48.1	4	8.308	0.003	7052	55.5
Total Col1Ave (4 peaks):					51.0	Total Col2Ave (4 peaks):				53.5 RPD = 5
Corrected Ave (3 peaks):					50.0	Corrected Ave (3 peaks):				52.9 RPD = 6
CalAmt %D:					2.0	CalAmt %D:				7.1
Aroclor-1260	1	11.048	0.005	19665	50.6	1	11.655	0.002	15502	51.8
Aroclor-1260	2	11.364	0.003	20070	50.2	2	11.921	0.003	39201	51.7
Aroclor-1260	3	11.740	0.006	55534	52.8	3	12.439	0.003	9678	51.2
Aroclor-1260	4	12.145	0.006	28735	52.9	4	12.506	0.004	25741	52.5
Aroclor-1260	5	12.246	0.002	12906	54.5	NS	---			----
Total Col1Ave (5 peaks):					52.2	Total Col2Ave (4 peaks):				51.8 RPD = 1
Corrected Ave (4 peaks):					51.6	Corrected Ave (3 peaks):				51.6 RPD = 0
CalAmt %D:					4.4	CalAmt %D:				3.6

Total PCB Area Col1 (5.909 - 13.792) = 600311 Col1 Total PCB = 0.1 ppm*

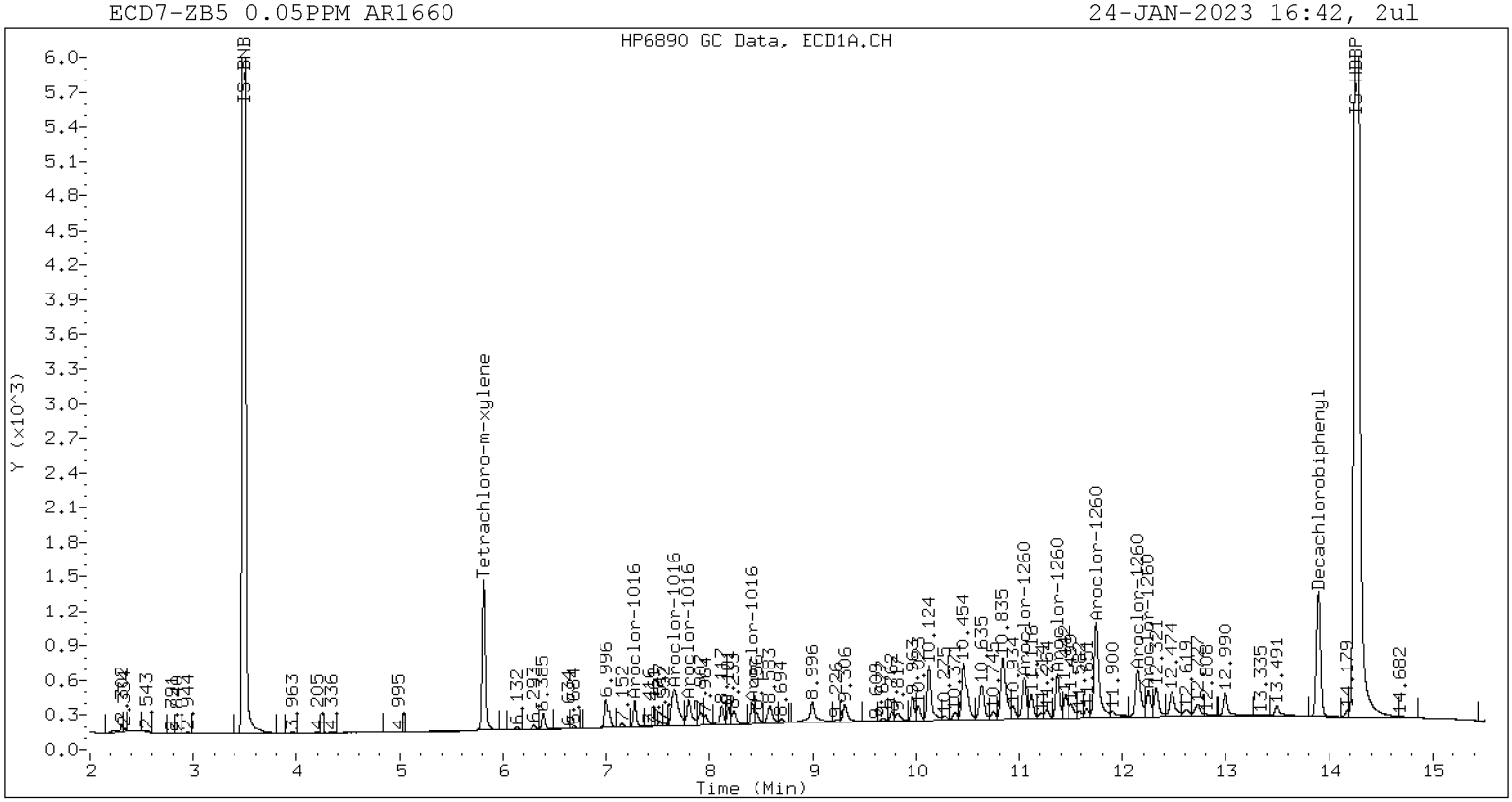
Total PCB Area Col2 (5.787 - 14.020) = 383666 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

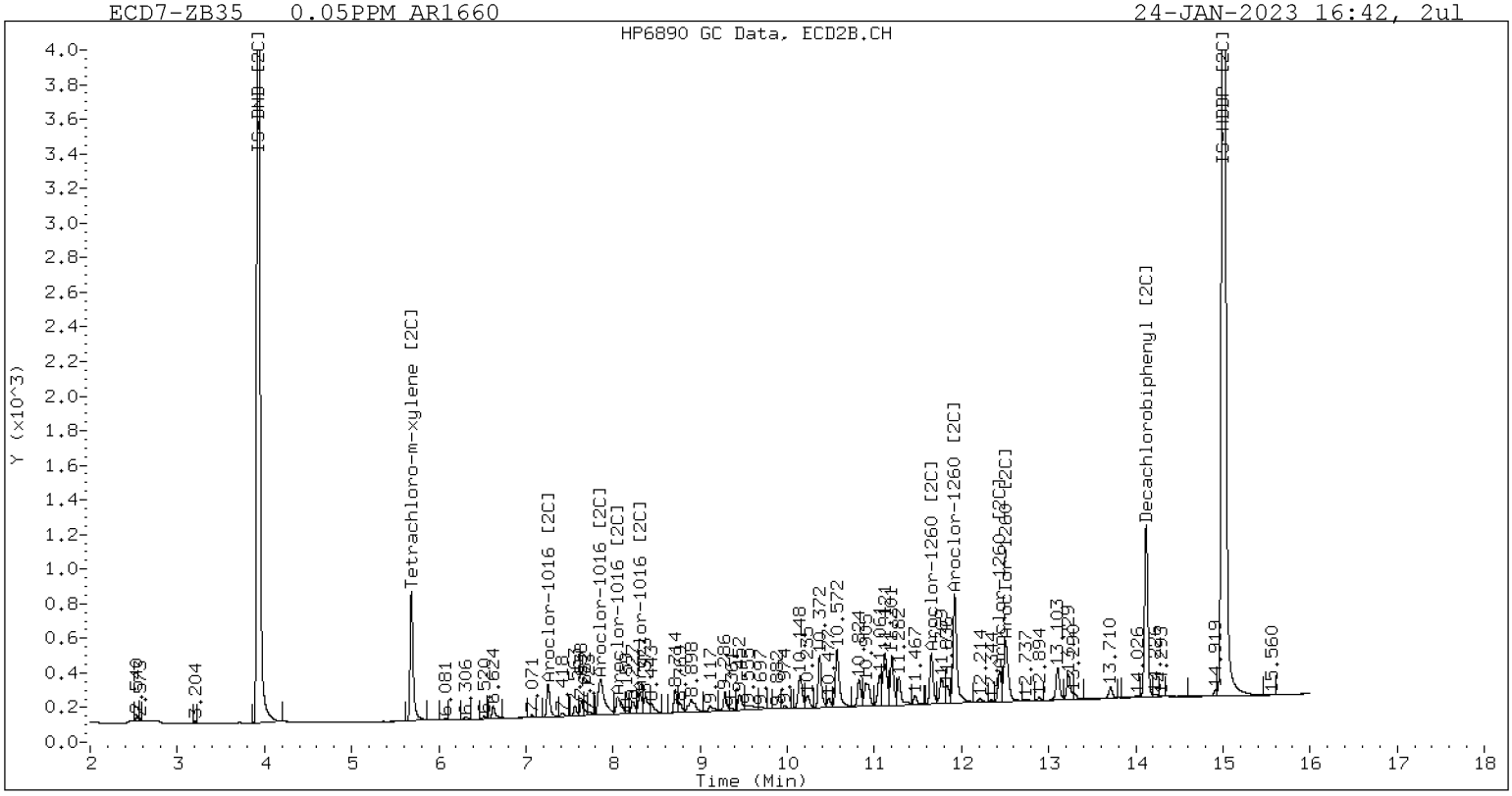
PCB Dual Column Chromatograms

ECD7-ZB5 0.05PPM AR1660 24-JAN-2023 16:42, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.05PPM AR1660 24-JAN-2023 16:42, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242316ECD7.D
Data file 2: /230124.b/230124.b/01242316ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 1.0PPM AR1660
Client ID:
Injection Date: 24-JAN-2023 17:03
Report Date: 01/25/2023 11:34
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.000	1033475	5.685	-0.002	672800	154.9	153.6	0.8	Tetrachloro-m-xylene
13.892	0.000	1125556	14.122	0.002	1078539	148.0	164.3	10.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	472076	-6.2
Hexabromobiphenyl	647433	711071	9.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	323926	-3.9
Hexabromobiphenyl	382032	413585	8.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.270	-0.000	155505	886.5	1	7.254	-0.001	153668	874.6
Aroclor-1016	2	7.649	-0.001	552101	949.8	2	7.849	-0.002	369677	960.2
Aroclor-1016	3	7.786	-0.002	223973	837.5	3	8.048	-0.003	152418	970.1
Aroclor-1016	4	8.402	-0.001	169003	982.4	4	8.304	-0.001	110311	895.6
	Total Col1Ave (4 peaks):				914.1	Total Col2Ave (4 peaks):				925.1 RPD = 1
	Corrected Ave (3 peaks):				891.3	Corrected Ave (3 peaks):				910.1 RPD = 2
			CalAmt %D:		-8.6			CalAmt %D:		-7.5
Aroclor-1260	1	11.043	-0.001	359074	900.0	1	11.653	-0.001	274365	919.6
Aroclor-1260	2	11.360	-0.000	374067	912.1	2	11.917	-0.000	713881	945.7
Aroclor-1260	3	11.733	-0.001	959026	888.3	3	12.436	-0.000	190968	1015.0
Aroclor-1260	4	12.137	-0.002	521189	934.3	4	12.502	-0.000	465680	953.2
Aroclor-1260	5	12.242	-0.002	217473	894.4	NS	---			----
	Total Col1Ave (5 peaks):				905.8	Total Col2Ave (4 peaks):				958.4 RPD = 6
	Corrected Ave (4 peaks):				898.7	Corrected Ave (3 peaks):				939.5 RPD = 4
			CalAmt %D:		-9.4			CalAmt %D:		-4.2

Total PCB Area Col1 (5.909 - 13.792) = 10234908 Col1 Total PCB = 1.9 ppm*

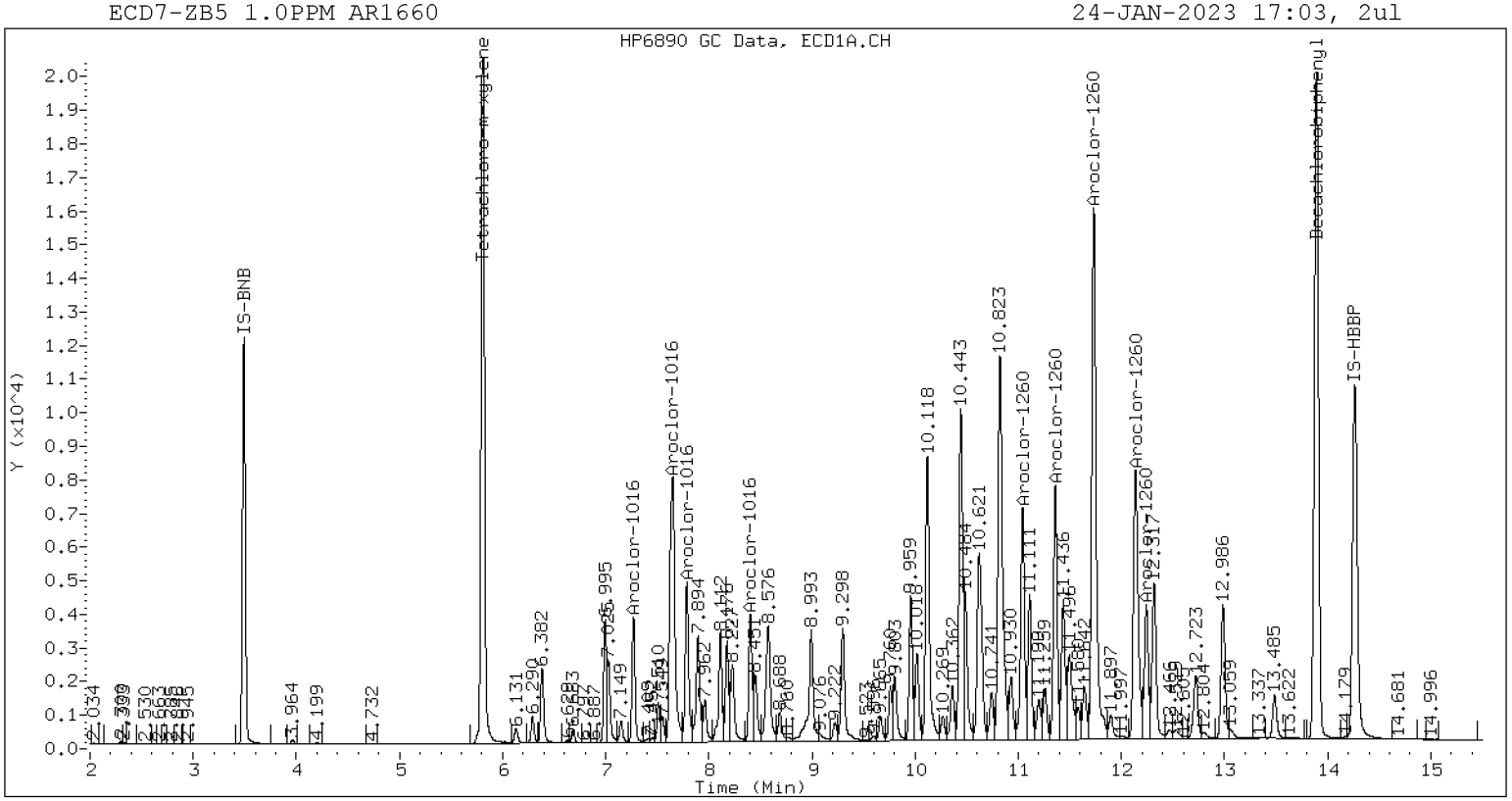
Total PCB Area Col2 (5.787 - 14.020) = 6685547 Col2 Total PCB = 2.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

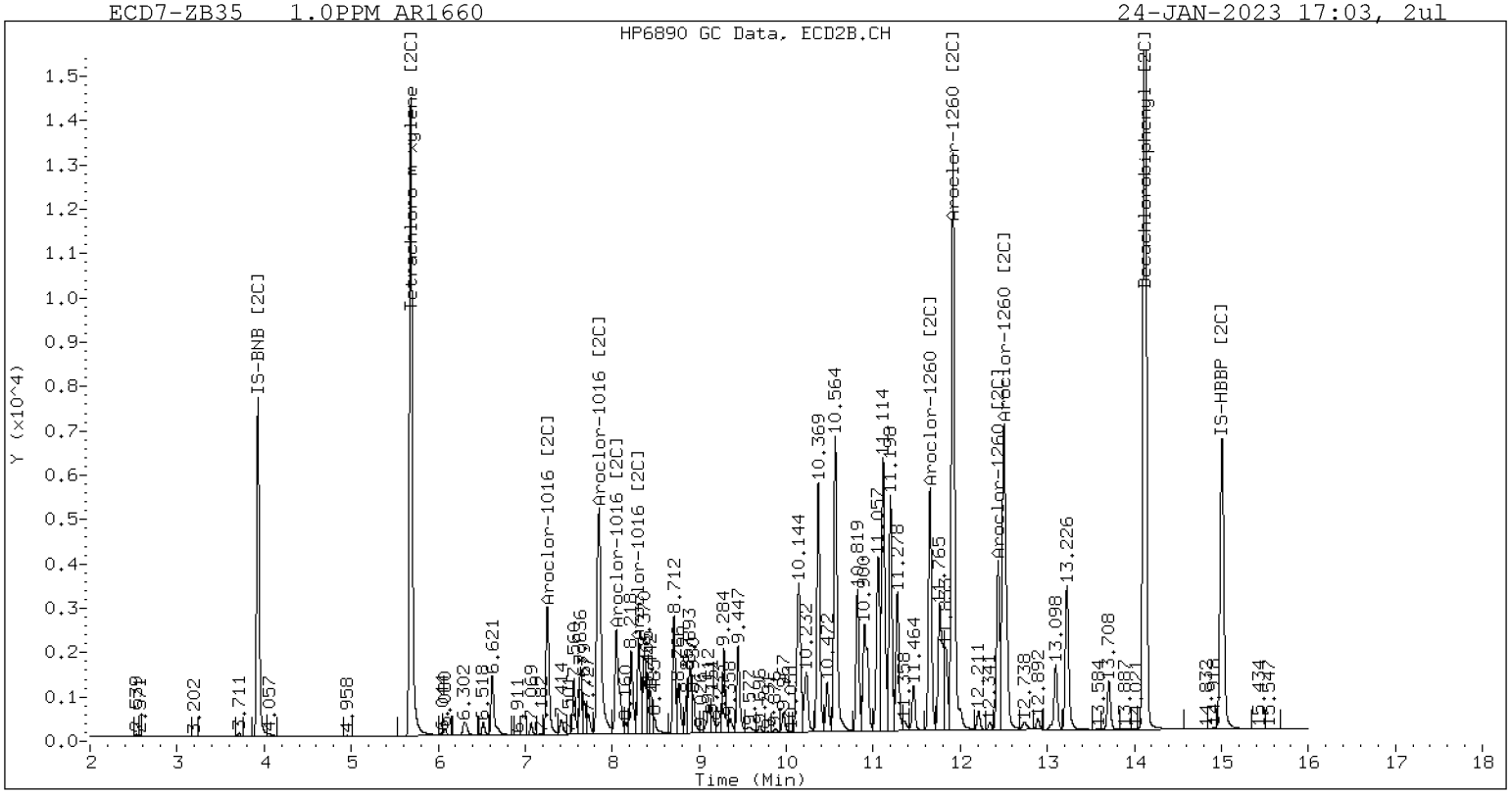
PCB Dual Column Chromatograms

ECD7-ZB5 1.0PPM AR1660 24-JAN-2023 17:03, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 1.0PPM AR1660 24-JAN-2023 17:03, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242317ECD7.D
Data file 2: /230124.b/230124.b/01242317ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPM AR1660
Client ID:
Injection Date: 24-JAN-2023 17:24
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.001	117058	5.686	-0.001	76340	17.3	17.1	1.2	Tetrachloro-m-xylene
13.892	0.000	140818	14.119	-0.001	113773	17.4	16.5	5.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	479756	-4.7
Hexabromobiphenyl	647433	756424	16.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	330987	-1.8
Hexabromobiphenyl	382032	433619	13.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.271	0.001	19848	111.3	1	7.255	0.000	19353	107.8
Aroclor-1016	2	7.656	0.005	63555	107.6	2	7.853	0.002	43099	109.6
Aroclor-1016	3	7.793	0.004	30749	113.1	3	8.053	0.003	18527	115.4
Aroclor-1016	4	8.406	0.003	18961	108.5	4	8.307	0.002	14145	112.4
Total Col1Ave (4 peaks):					110.1	Total Col2Ave (4 peaks):				111.3 RPD = 1
Corrected Ave (3 peaks):					109.1	Corrected Ave (3 peaks):				109.9 RPD = 1
CalAmt %D:					10.1	CalAmt %D:				11.3
Aroclor-1260	1	11.046	0.002	41864	98.6	1	11.655	0.001	32043	102.4
Aroclor-1260	2	11.362	0.001	42073	96.4	2	11.920	0.002	82285	104.0
Aroclor-1260	3	11.739	0.004	111005	96.7	3	12.437	0.001	19416	98.4
Aroclor-1260	4	12.144	0.004	56707	95.6	4	12.504	0.002	53558	104.6
Aroclor-1260	5	12.245	0.001	24958	96.5	NS	---			----
Total Col1Ave (5 peaks):					96.8	Total Col2Ave (4 peaks):				102.3 RPD = 6
Corrected Ave (4 peaks):					96.3	Corrected Ave (3 peaks):				101.6 RPD = 5
CalAmt %D:					-3.2	CalAmt %D:				2.3

Total PCB Area Col1 (5.909 - 13.792) = 1238855 Col1 Total PCB = 0.2 ppm*

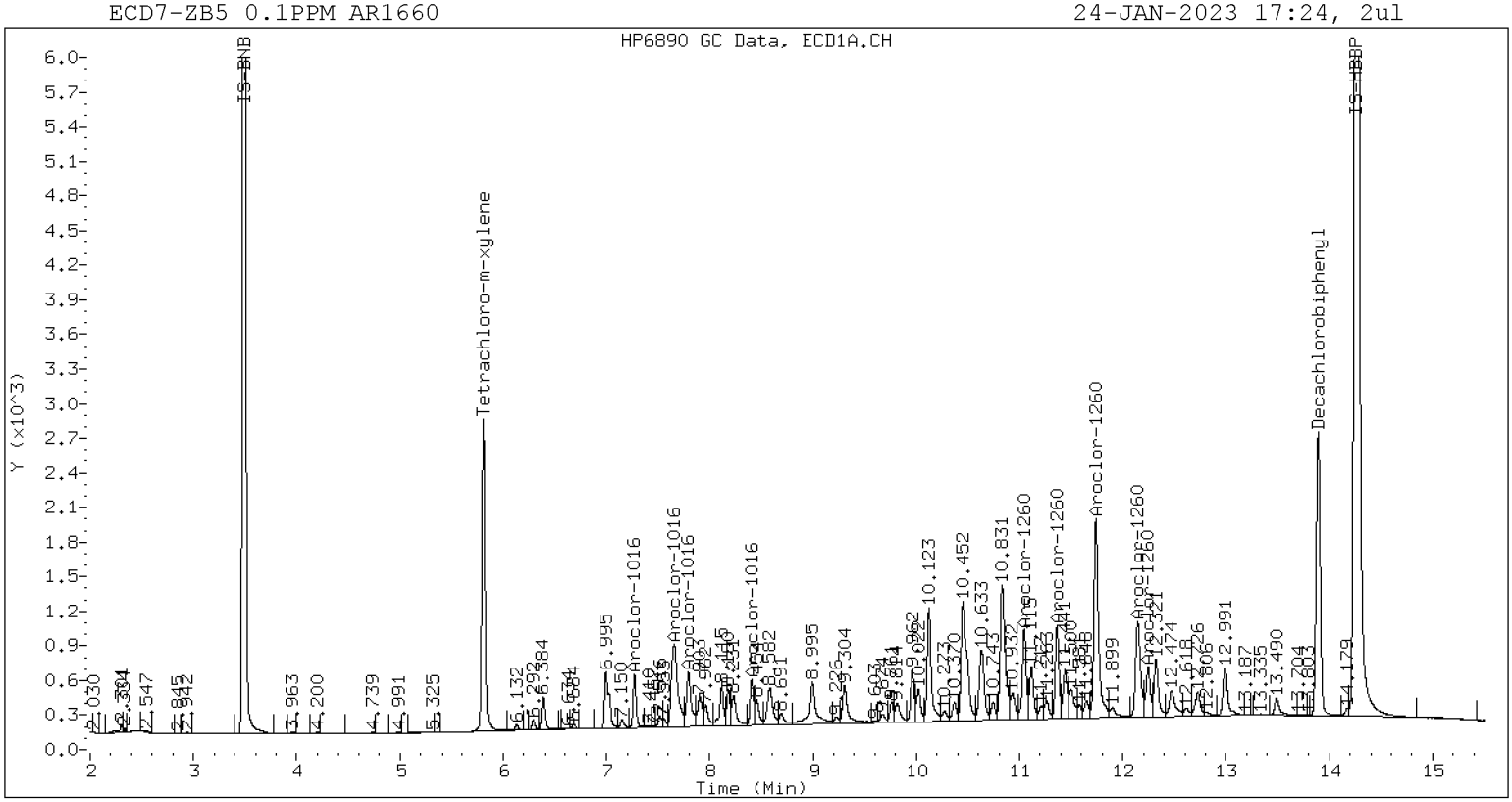
Total PCB Area Col2 (5.787 - 14.020) = 777713 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

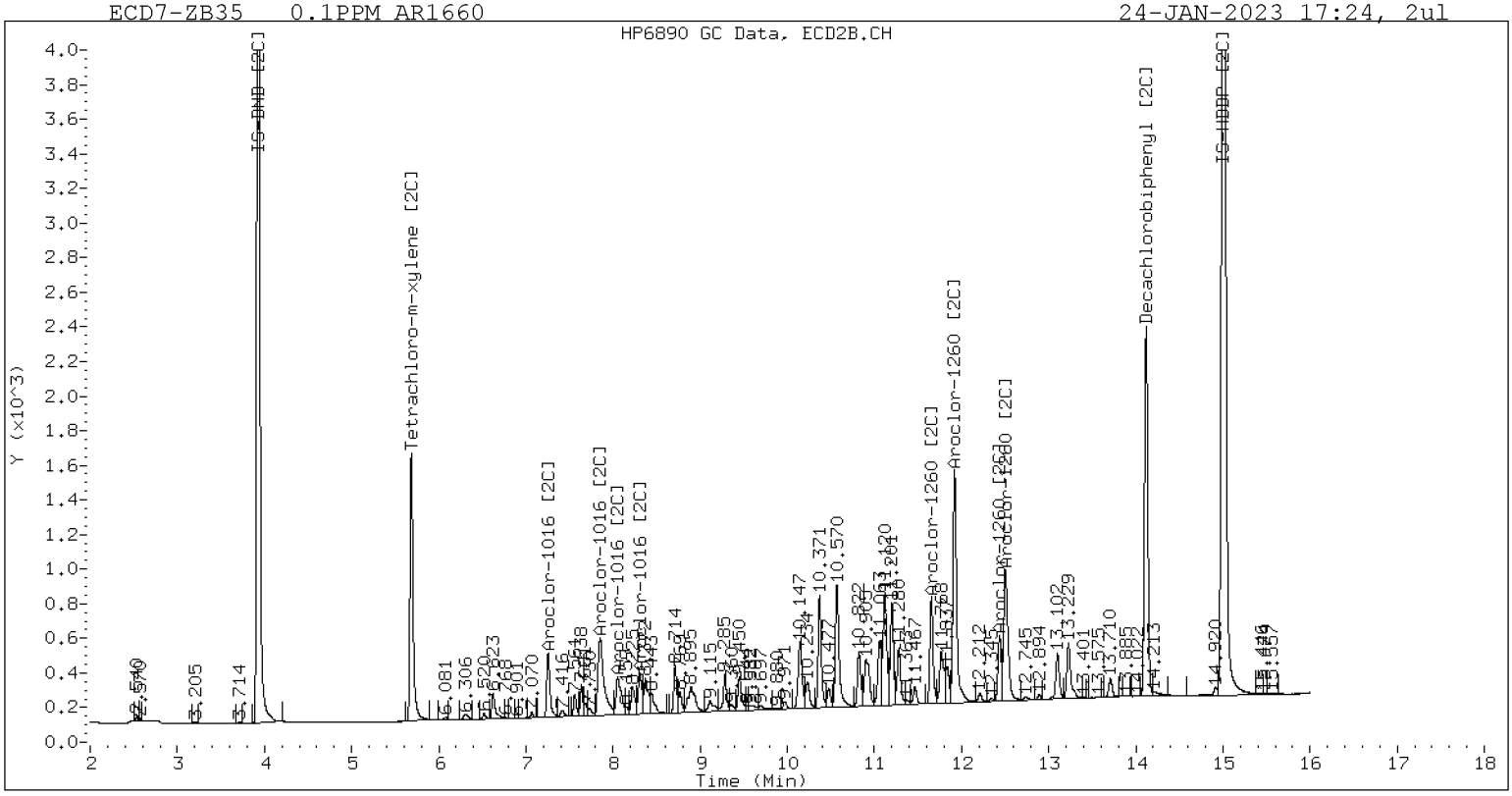
PCB Dual Column Chromatograms

ECD7-ZB5 0.1PPM AR1660 24-JAN-2023 17:24, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.1PPM AR1660 24-JAN-2023 17:24, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242318ECD7.D
Data file 2: /230124.b/230124.b/01242318ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPM AR1660
Client ID:
Injection Date: 24-JAN-2023 17:45
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.000	534053	5.686	-0.000	348900	79.1	77.8	1.6	Tetrachloro-m-xylene
13.891	-0.001	614978	14.120	0.000	552784	74.4	77.5	4.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	477720	-5.1
Hexabromobiphenyl	647433	772816	19.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	331694	-1.5
Hexabromobiphenyl	382032	449559	17.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	0.000	84322	475.0	1	7.254	-0.000	84986	472.4
Aroclor-1016	2	7.650	0.000	294429	500.6	2	7.850	-0.001	198065	502.4
Aroclor-1016	3	7.789	0.000	122151	451.4	3	8.050	-0.000	81378	505.8
Aroclor-1016	4	8.404	0.000	87760	504.1	4	8.305	-0.000	59656	473.0
Total Col1Ave (4 peaks):				482.8		Total Col2Ave (4 peaks):			488.4	RPD = 1
Corrected Ave (3 peaks):				475.6		Corrected Ave (3 peaks):			482.6	RPD = 1
CalAmt %D:				-3.4		CalAmt %D:			-2.3	
Aroclor-1260	1	11.044	0.000	193843	447.0	1	11.653	-0.000	146980	453.2
Aroclor-1260	2	11.361	0.000	198052	444.3	2	11.917	-0.001	376388	458.7
Aroclor-1260	3	11.734	0.000	505614	430.9	3	12.436	-0.000	98369	481.0
Aroclor-1260	4	12.139	0.000	264950	437.0	4	12.501	-0.001	252455	475.4
Aroclor-1260	5	12.244	0.000	112421	425.4	NS	---			----
Total Col1Ave (5 peaks):				436.9		Total Col2Ave (4 peaks):			467.1	RPD = 7
Corrected Ave (4 peaks):				434.4		Corrected Ave (3 peaks):			462.4	RPD = 6
CalAmt %D:				-12.6		CalAmt %D:			-6.6	

Total PCB Area Col1 (5.909 - 13.792) = 5412241 Col1 Total PCB = 1.0 ppm*

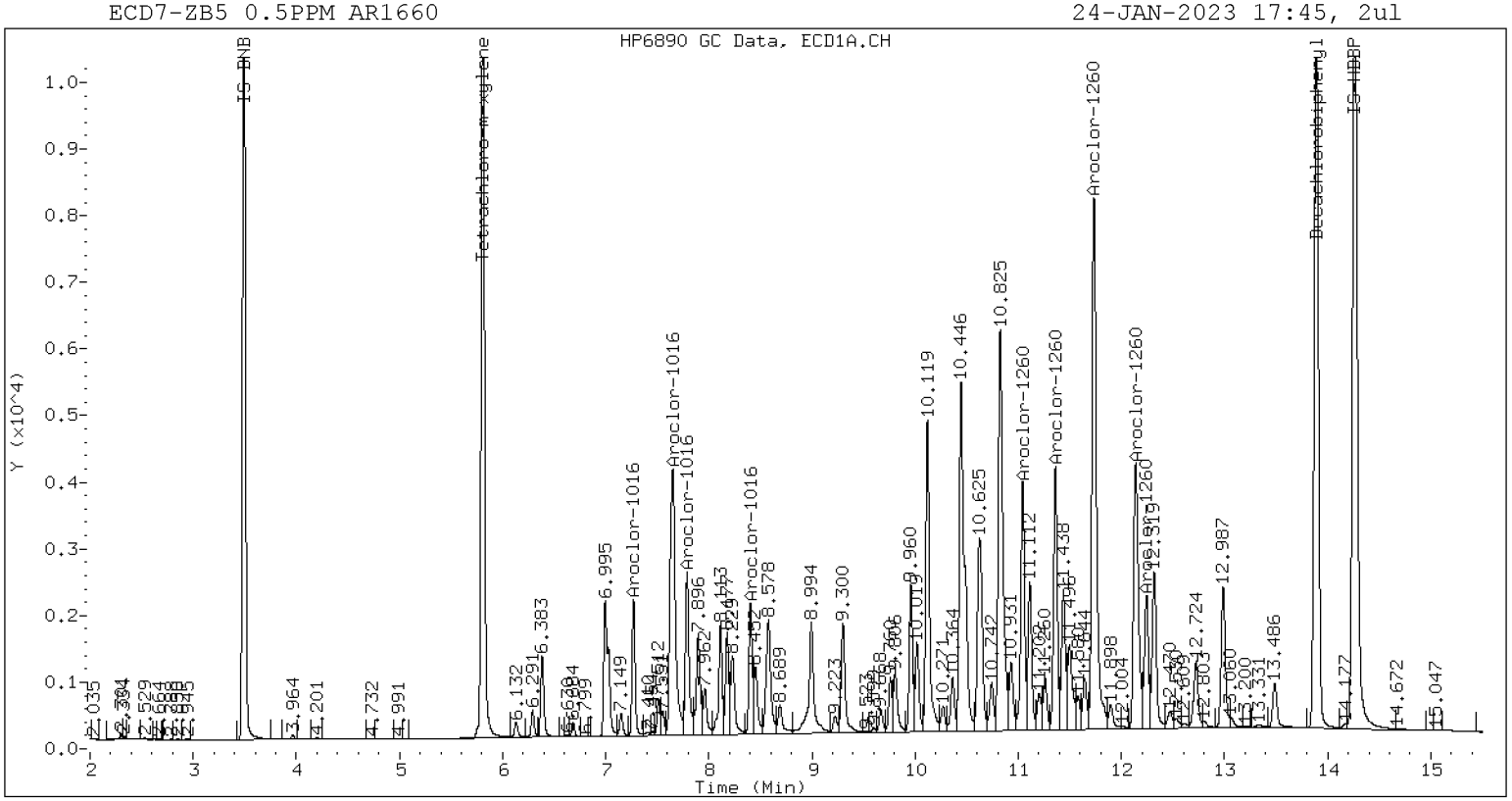
Total PCB Area Col2 (5.787 - 14.020) = 3551064 Col2 Total PCB = 1.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

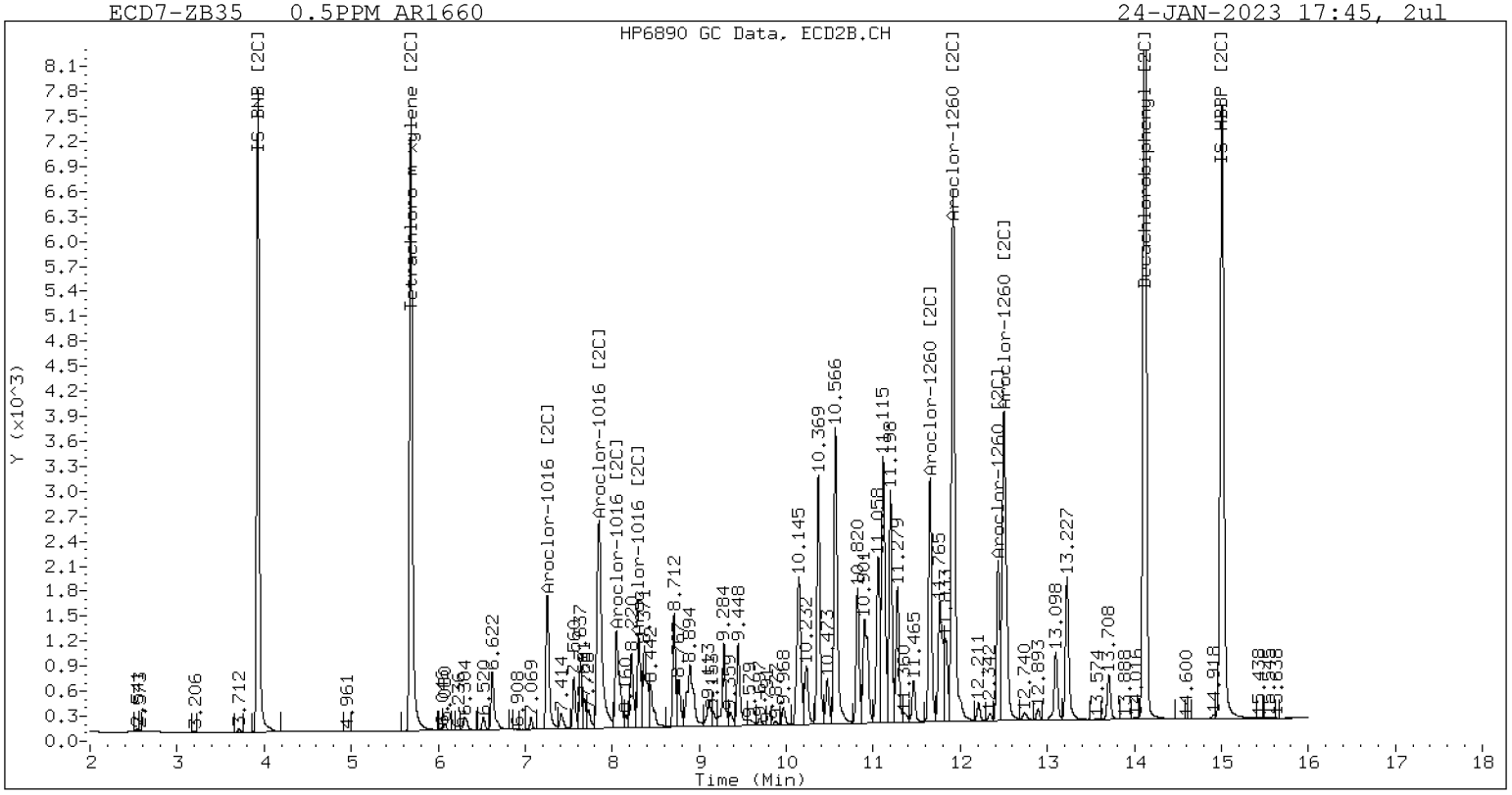
PCB Dual Column Chromatograms

ECD7-ZB5 0.5PPM AR1660 24-JAN-2023 17:45, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.5PPM AR1660 24-JAN-2023 17:45, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242319ECD7.D
Data file 2: /230124.b/230124.b/01242319ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPM 1242
Client ID:
Injection Date: 24-JAN-2023 18:06
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	317773	5.686	-0.000	205627	47.7	46.6	2.2	Tetrachloro-m-xylene
13.892	-0.000	322814	14.121	0.001	269935	36.0	36.5	1.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	471690	-6.3
Hexabromobiphenyl	647433	839322	29.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	326260	-3.2
Hexabromobiphenyl	382032	466396	22.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.271	0.000	36109	250.0	1	7.256	0.000	35672	250.0
Aroclor-1242	2	7.655	0.000	118172	250.0	2	7.853	0.000	79233	250.0
Aroclor-1242	3	8.407	0.000	35110	250.0	3	9.160	0.000	24814	250.0
Aroclor-1242	4	8.581	0.000	53037	250.0	4	9.587	0.000	32887	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):			250.0	RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):			250.0	RPD = 0

Total PCB Area Col1 (5.909 - 13.792) = 930958 Col1 Total PCB = 0.2 ppm*

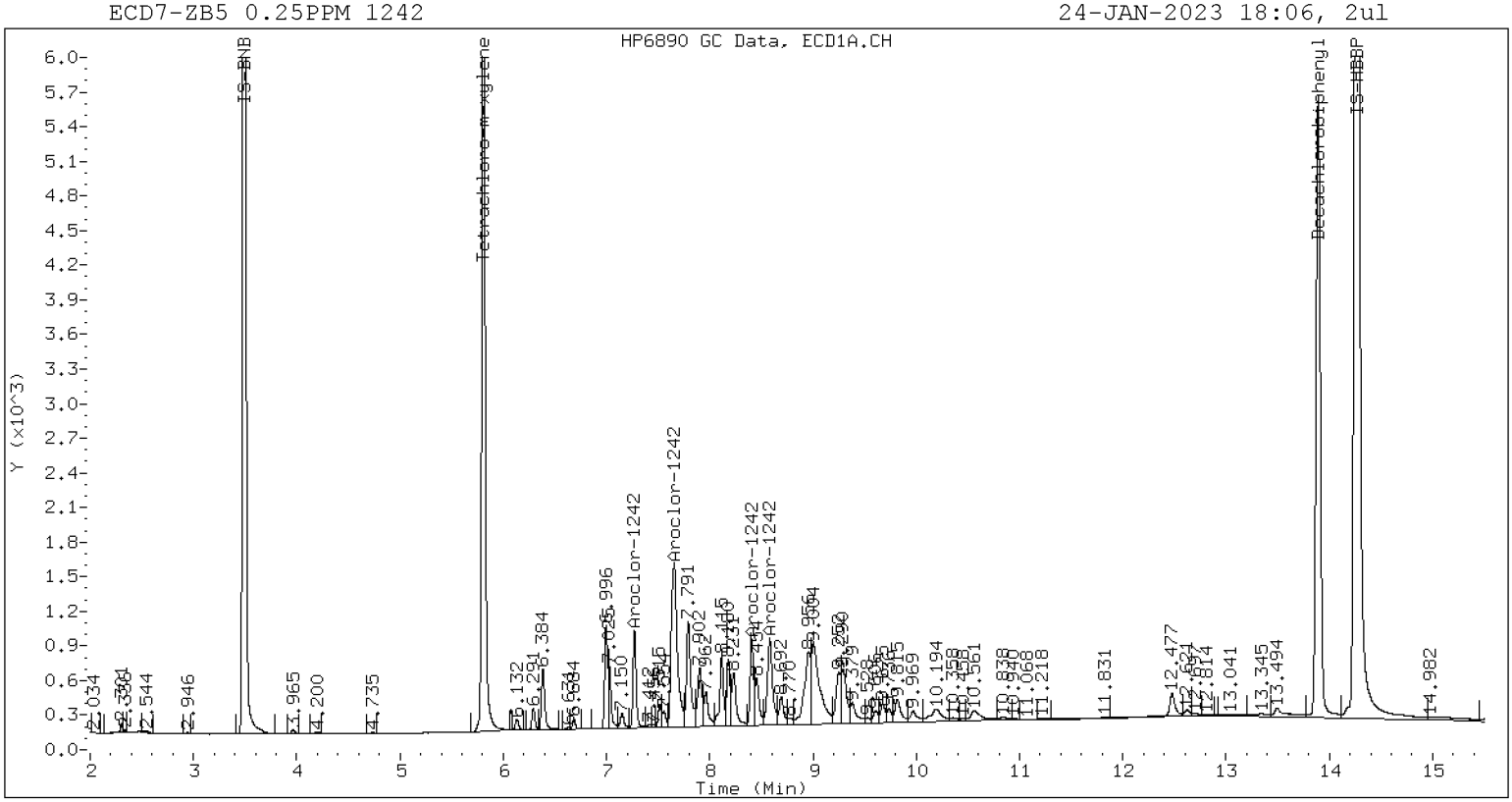
Total PCB Area Col2 (5.787 - 14.020) = 567613 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

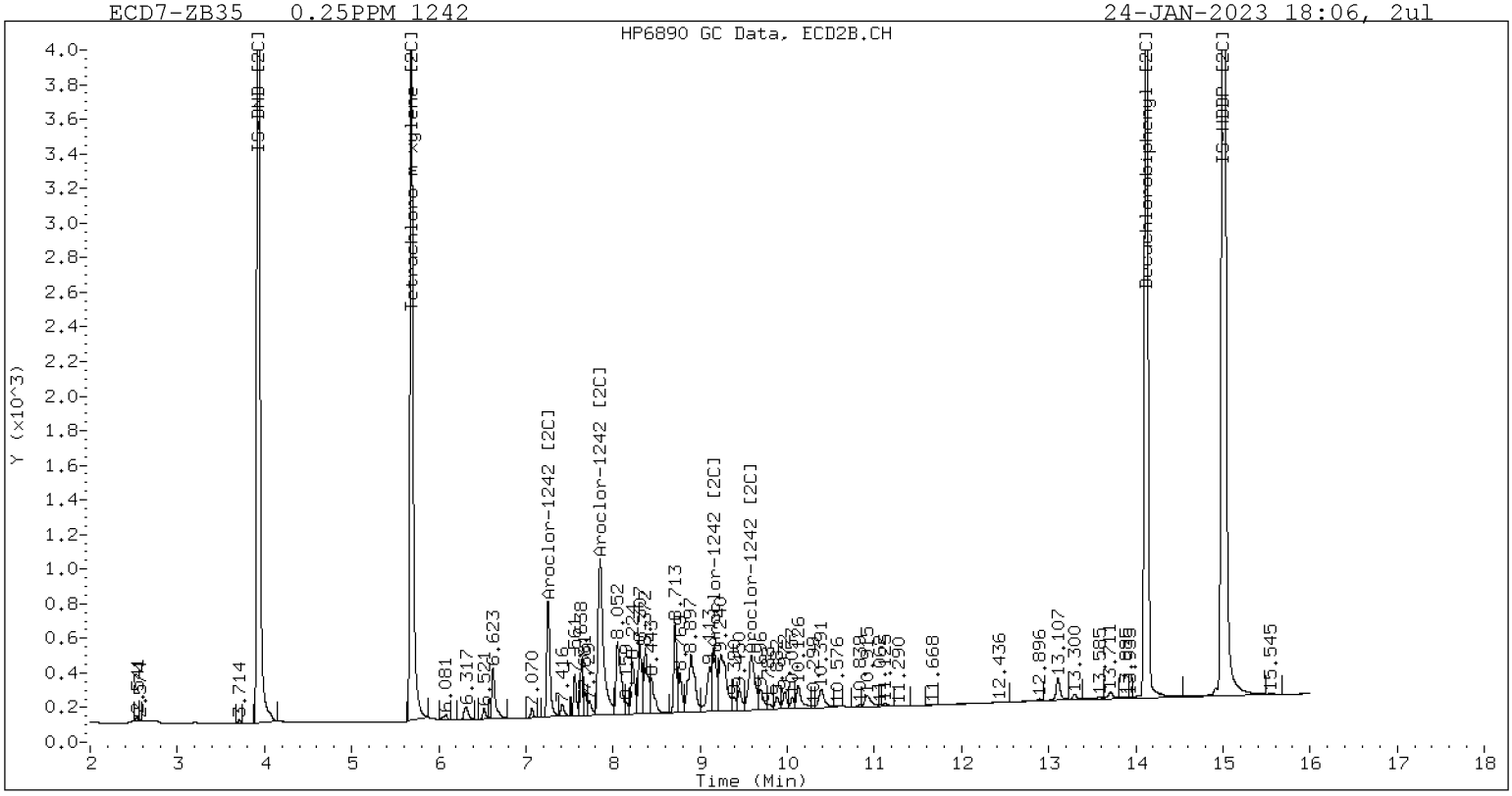
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM 1242 24-JAN-2023 18:06, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM 1242 24-JAN-2023 18:06, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242320ECD7.D
Data file 2: /230124.b/230124.b/01242320ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPM 1248
Client ID:
Injection Date: 24-JAN-2023 18:27
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	266561	5.686	-0.001	171841	38.5	38.0	1.3	Tetrachloro-m-xylene
13.892	0.001	334524	14.120	0.000	281569	36.6	37.7	3.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	489828	-2.7
Hexabromobiphenyl	647433	855612	32.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	334539	-0.7
Hexabromobiphenyl	382032	470415	23.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.406	0.000	61259	250.0	1	8.305	0.000	37805	250.0
Aroclor-1248	2	8.580	0.000	78143	250.0	2	8.712	0.000	40692	250.0
Aroclor-1248	3	8.999	0.000	149476	250.0	3	9.156	0.000	49723	250.0
Aroclor-1248	4	9.294	0.000	73986	250.0	4	9.582	0.000	61494	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.909 - 13.792) = 1237662 Col1 Total PCB = 0.2 ppm*

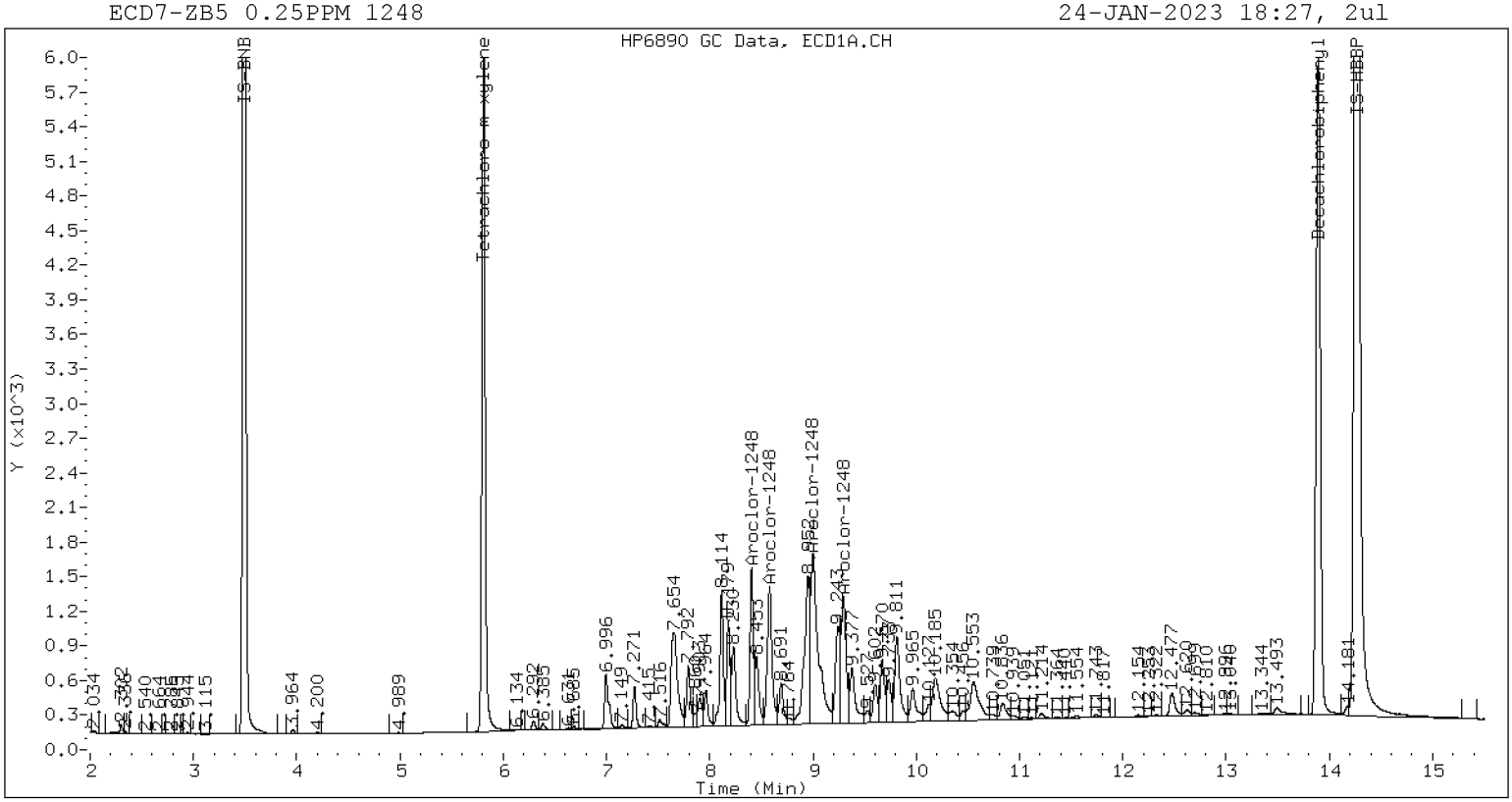
Total PCB Area Col2 (5.787 - 14.020) = 773955 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

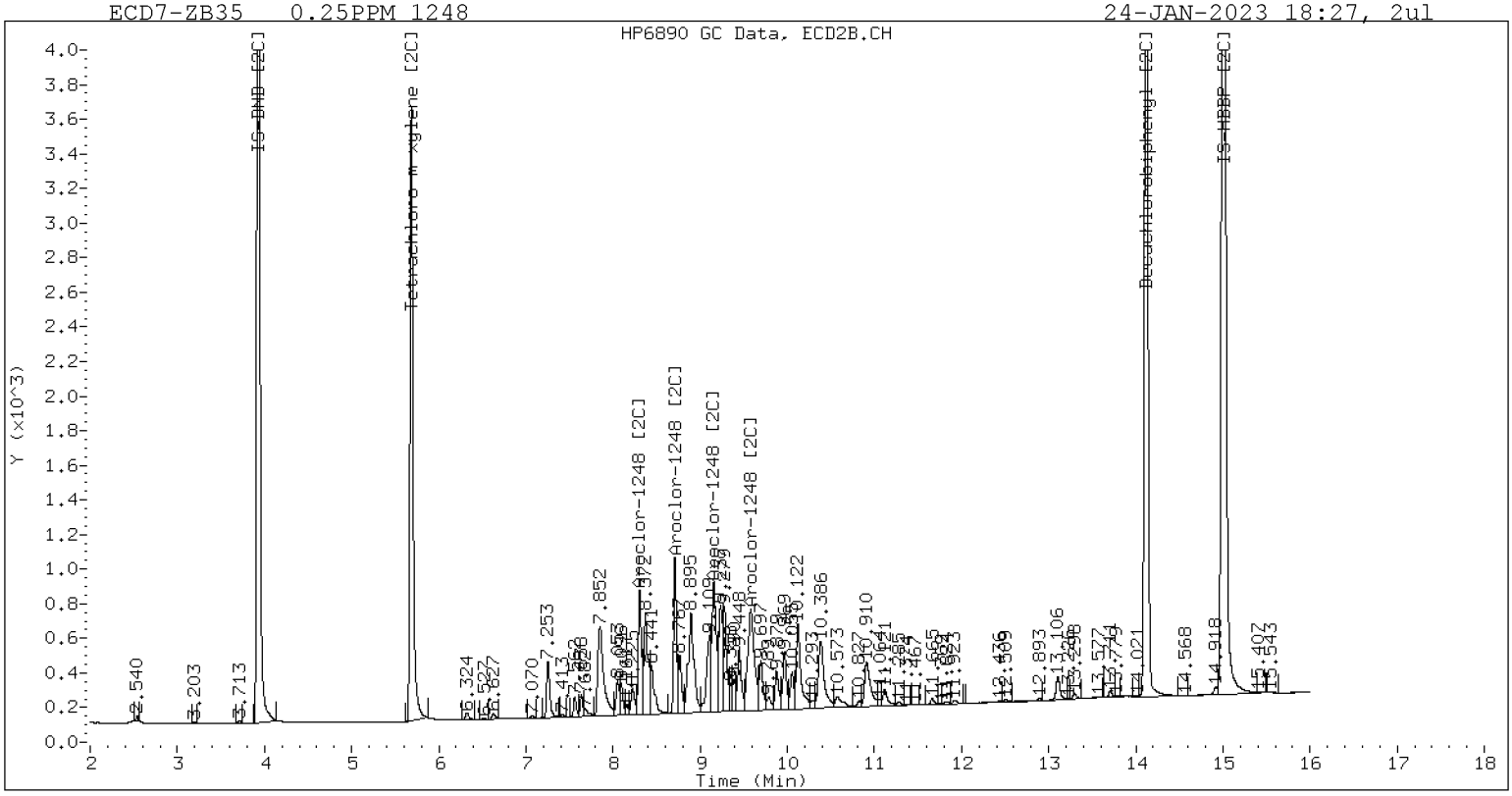
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM 1248 24-JAN-2023 18:27, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM 1248 24-JAN-2023 18:27, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242321ECD7.D
Data file 2: /230124.b/230124.b/01242321ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPM 1254
Client ID:
Injection Date: 24-JAN-2023 18:48
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.001	258819	5.684	-0.002	171764	37.7	38.1	1.1	Tetrachloro-m-xylene
13.893	0.001	343162	14.119	-0.001	283996	36.8	37.9	2.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	486231	-3.4
Hexabromobiphenyl	647433	871523	34.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	333658	-1.0
Hexabromobiphenyl	382032	471925	23.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.299	0.000	123887	250.0	1	9.448	0.000	60516	250.0
Aroclor-1254	2	9.378	0.000	52896	250.0	2	9.969	0.000	48914	250.0
Aroclor-1254	3	9.669	0.000	79378	250.0	3	10.121	0.000	106698	250.0
Aroclor-1254	4	9.808	0.000	155542	250.0	4	10.372	0.000	106700	250.0
Aroclor-1254	5	10.177	0.000	101144	250.0	5	10.569	0.000	59429	250.0

Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.909 - 13.792) = 1659821 Col1 Total PCB = 0.3 ppm*

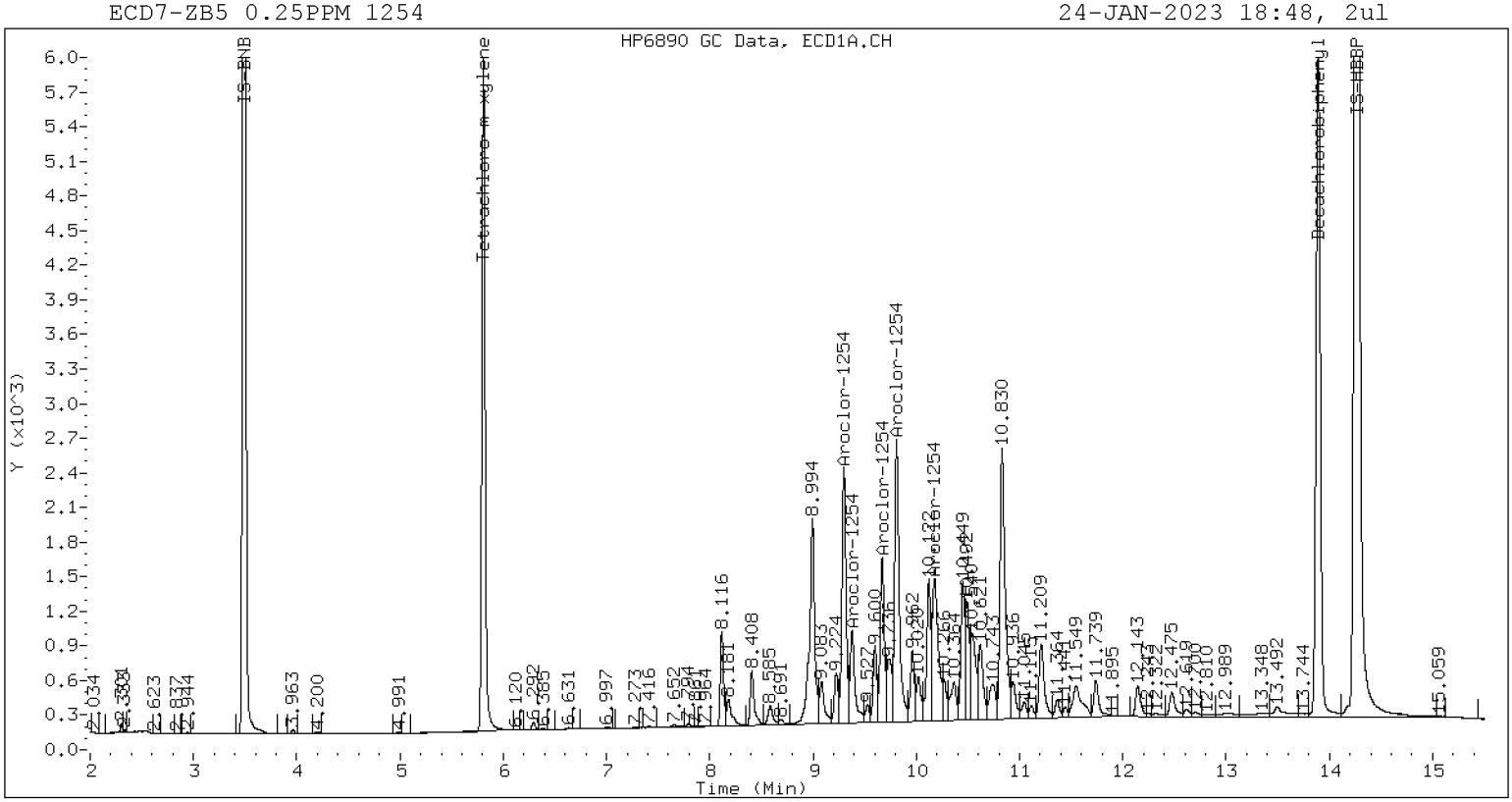
Total PCB Area Col2 (5.787 - 14.020) = 1016659 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

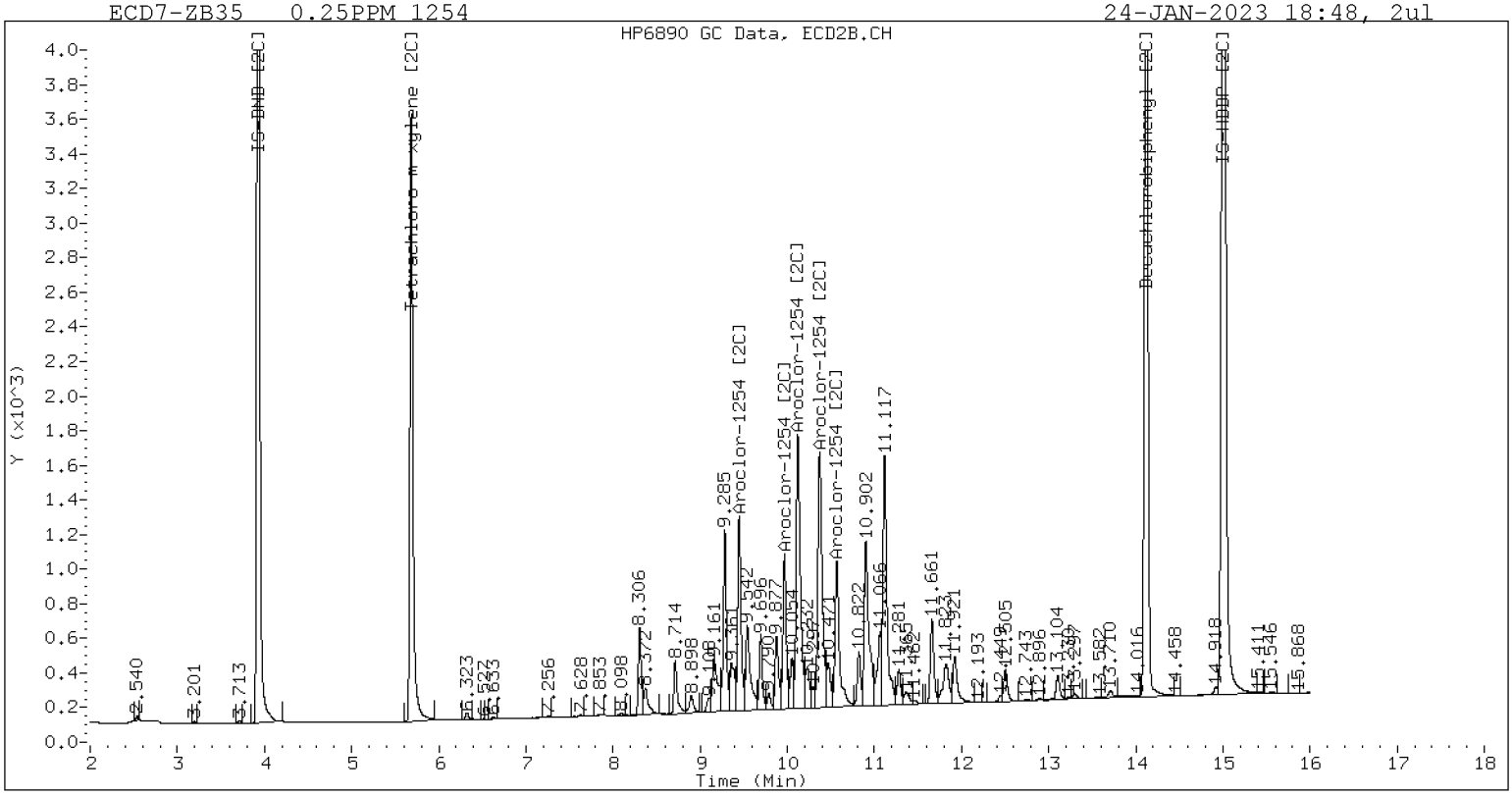
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM 1254 24-JAN-2023 18:48, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM 1254 24-JAN-2023 18:48, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242322ECD7.D
Data file 2: /230124.b/230124.b/01242322ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPM 2162
Client ID:
Injection Date: 24-JAN-2023 19:09
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	272296	5.686	-0.001	173237	39.1	38.6	1.3	Tetrachloro-m-xylene
13.893	0.001	347331	14.120	-0.000	282892	36.8	37.2	1.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	492470	-2.2
Hexabromobiphenyl	647433	883652	36.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	331807	-1.5
Hexabromobiphenyl	382032	479356	25.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor		ZB5 Col RT	Shift	Area	Amount		ZB35 Col RT	Shift	Area	Amount
Aroclor-1221	1	4.733	0.000	9100	250.0	1	4.959	0.000	6081	250.0
Aroclor-1221	2	6.134	0.000	18608	250.0	2	6.298	0.000	13325	250.0
Aroclor-1221	3	6.384	0.000	43198	250.0	3	6.623	0.000	22491	250.0
Total Col1Ave (3 peaks):					250.0	Total Col2Ave (3 peaks):				250.0 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.832	0.000	89339	250.0	1	11.200	0.000	117288	250.0
Aroclor-1262	2	12.246	0.000	141007	250.0	2	11.653	0.000	99740	250.0
Aroclor-1262	3	12.321	0.000	153089	250.0	3	12.434	0.000	106212	250.0
Aroclor-1262	4	12.989	0.000	139497	250.0	4	12.504	0.000	170096	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.909 - 13.792) = 2446612 Col1 Total PCB = 0.4 ppm*

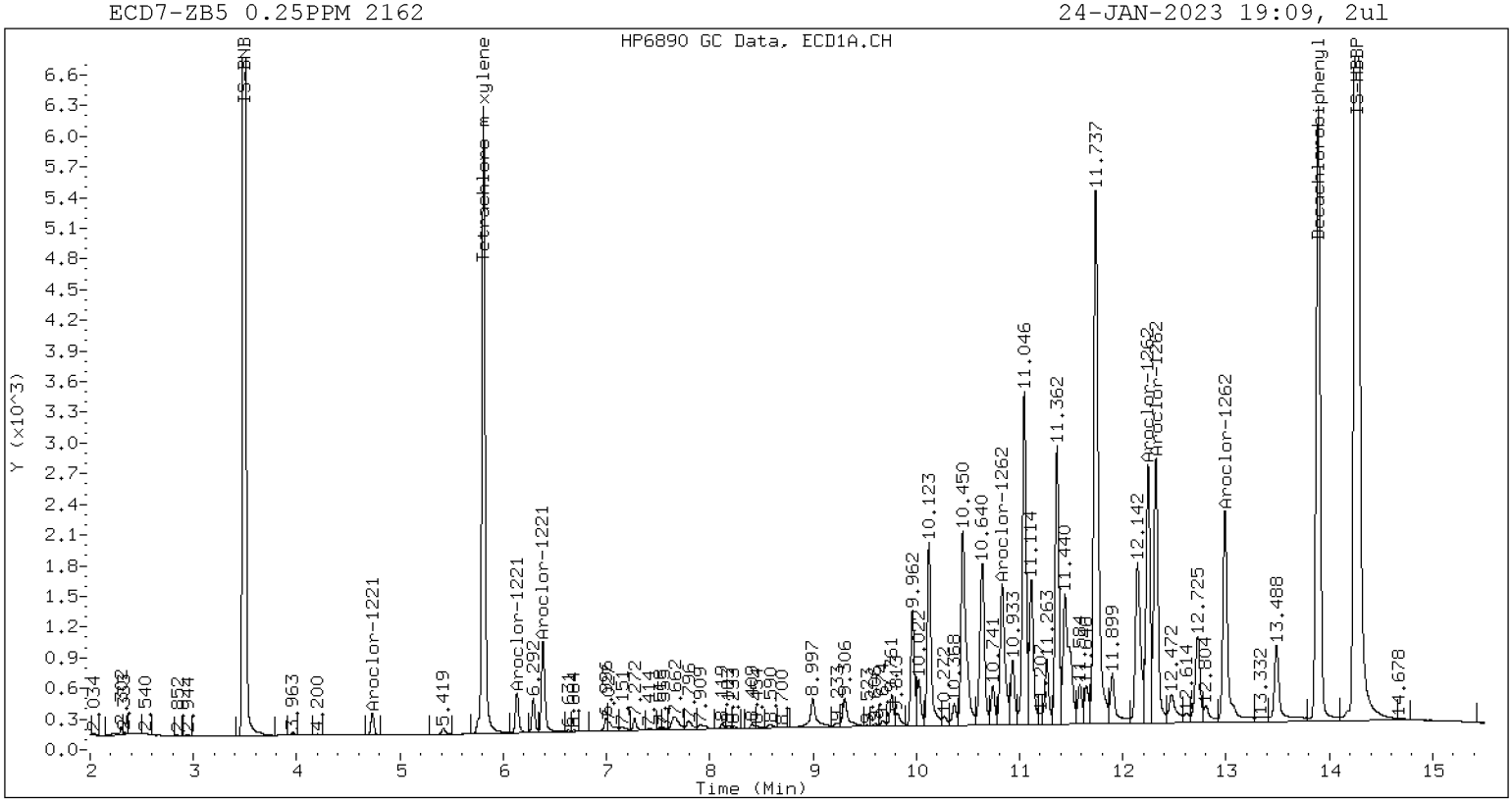
Total PCB Area Col2 (5.787 - 14.020) = 1558387 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

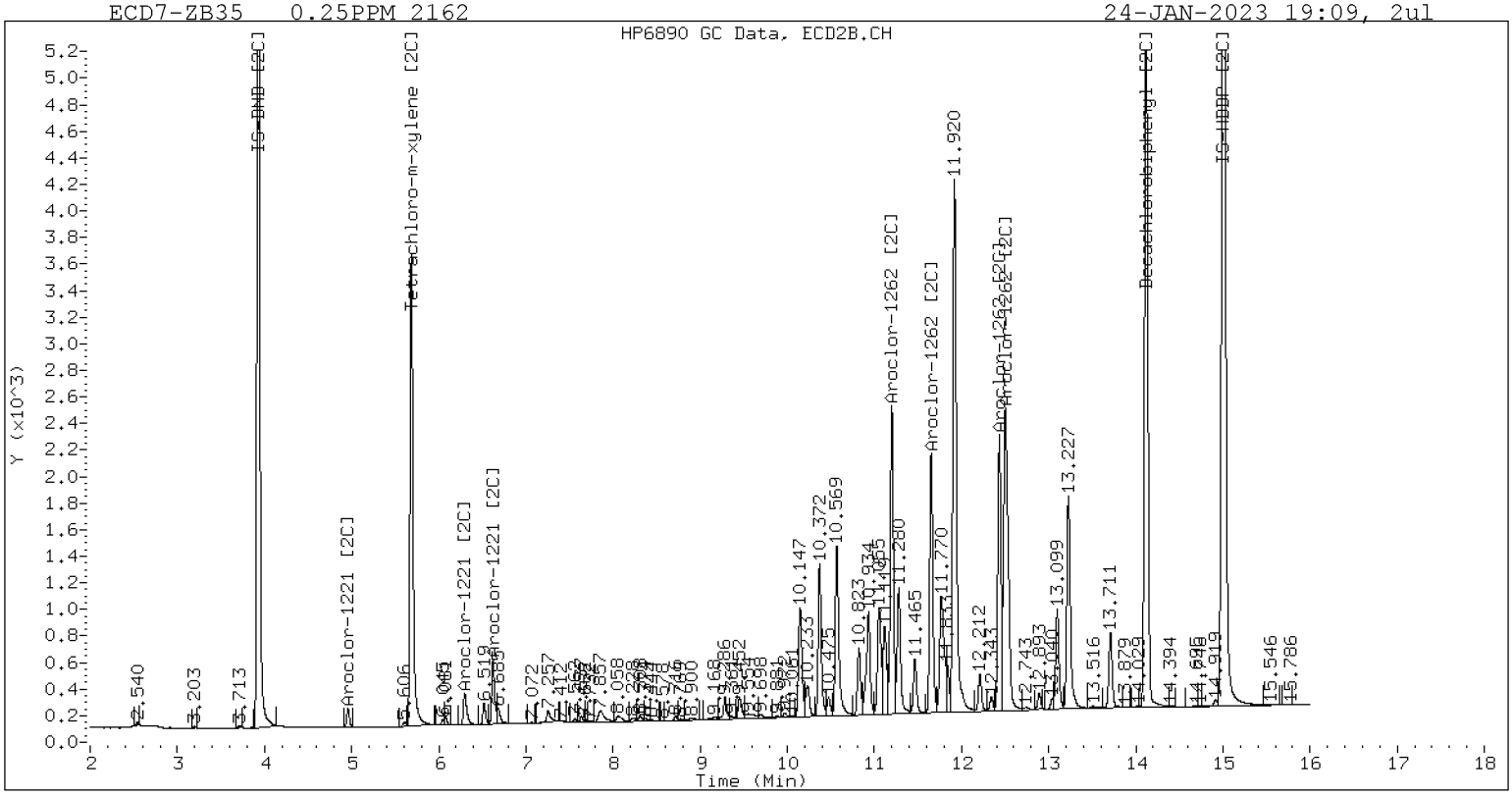
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM 2162 24-JAN-2023 19:09, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM 2162 24-JAN-2023 19:09, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242323ECD7.D
Data file 2: /230124.b/230124.b/01242323ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPM 3268
Client ID:
Injection Date: 24-JAN-2023 19:30
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.000	277108	5.687	0.000	177359	39.7	39.1	1.5	Tetrachloro-m-xylene
13.892	0.000	525503	14.120	0.000	438987	53.8	57.7	7.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	493427	-2.0
Hexabromobiphenyl	647433	913614	41.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	335121	-0.5
Hexabromobiphenyl	382032	479458	25.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	4.733	0.000	5692	250.0	1	4.960	0.000	3725	250.0
Aroclor-1232	2	6.133	0.000	12828	250.0	2	7.257	0.000	20847	250.0
Aroclor-1232	3	7.658	0.000	64153	250.0	3	7.854	0.000	42459	250.0
Aroclor-1232	4	8.584	0.000	27460	250.0	4	8.714	0.000	11797	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	12.245	0.000	377314	250.0	1	12.434	0.000	279910	250.0
Aroclor-1268	2	12.318	0.000	376282	250.0	2	12.501	0.000	297867	250.0
Aroclor-1268	3	12.699	0.000	311753	250.0	3	12.893	0.000	247943	250.0
Aroclor-1268	4	13.489	0.000	924293	250.0	4	13.709	0.000	765898	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.909 - 13.792) = 3136879 Col1 Total PCB = 0.5 ppm*

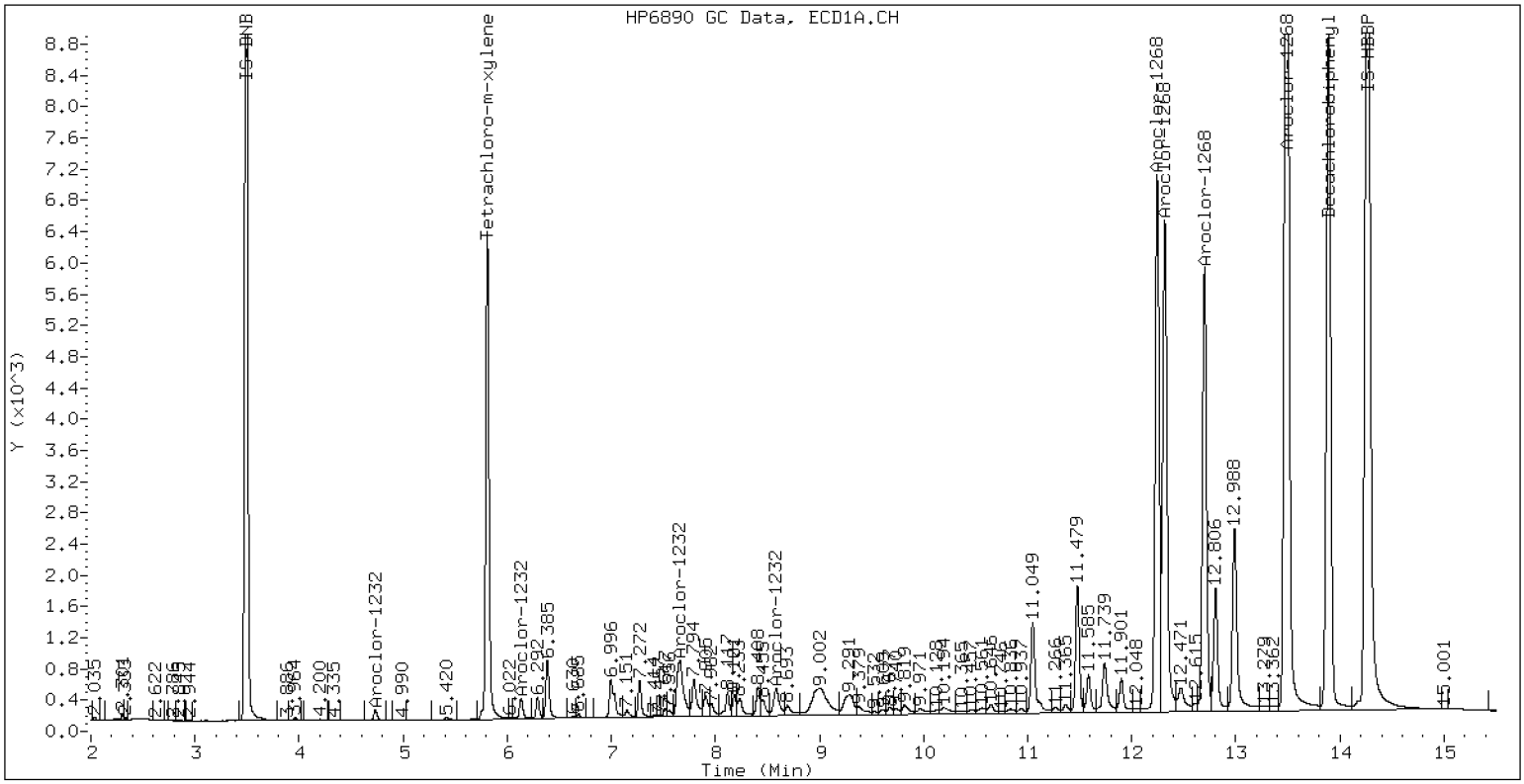
Total PCB Area Col2 (5.787 - 14.020) = 2269104 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

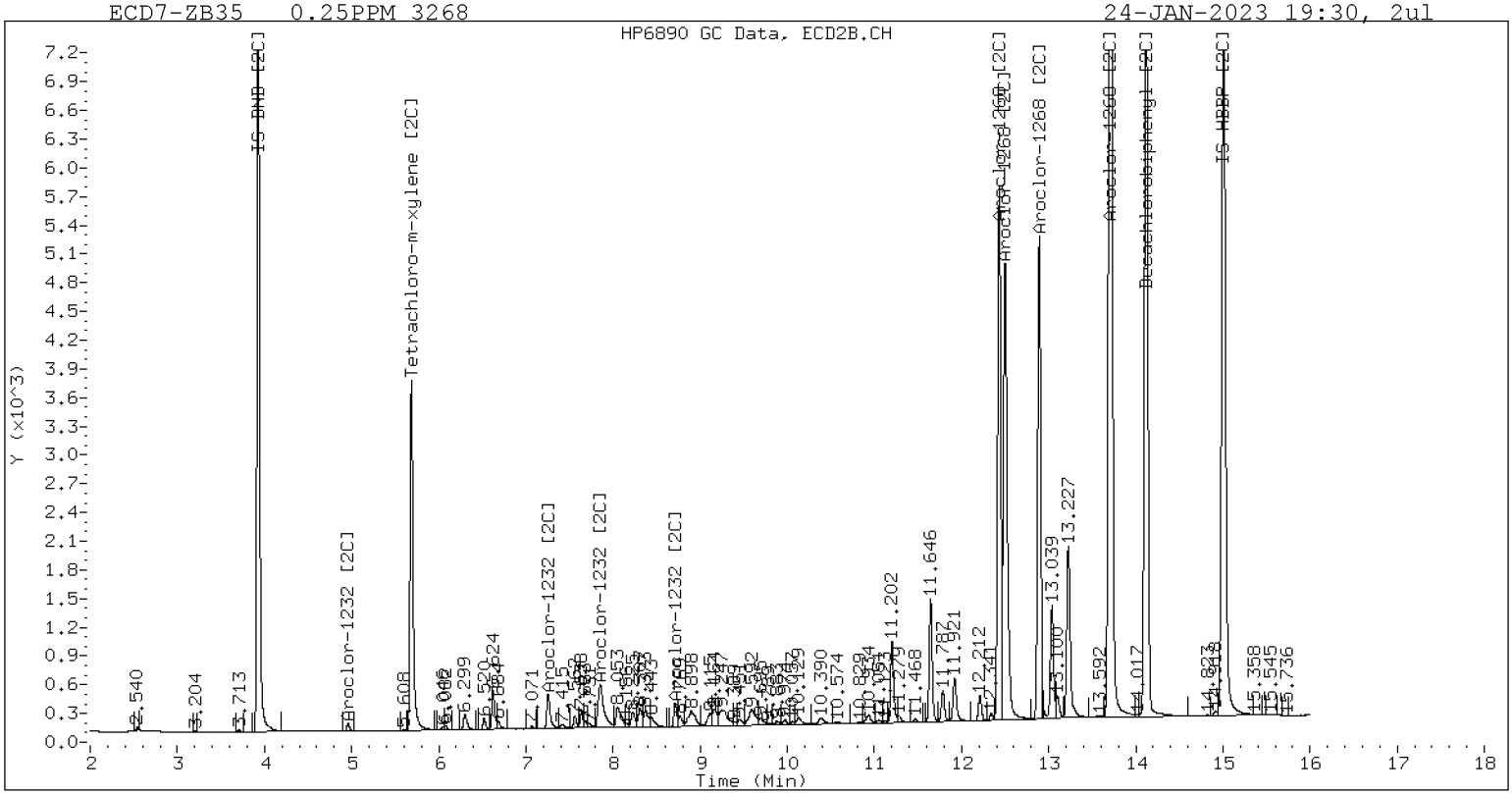
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPM 3268 24-JAN-2023 19:30, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPM 3268 24-JAN-2023 19:30, 2ul

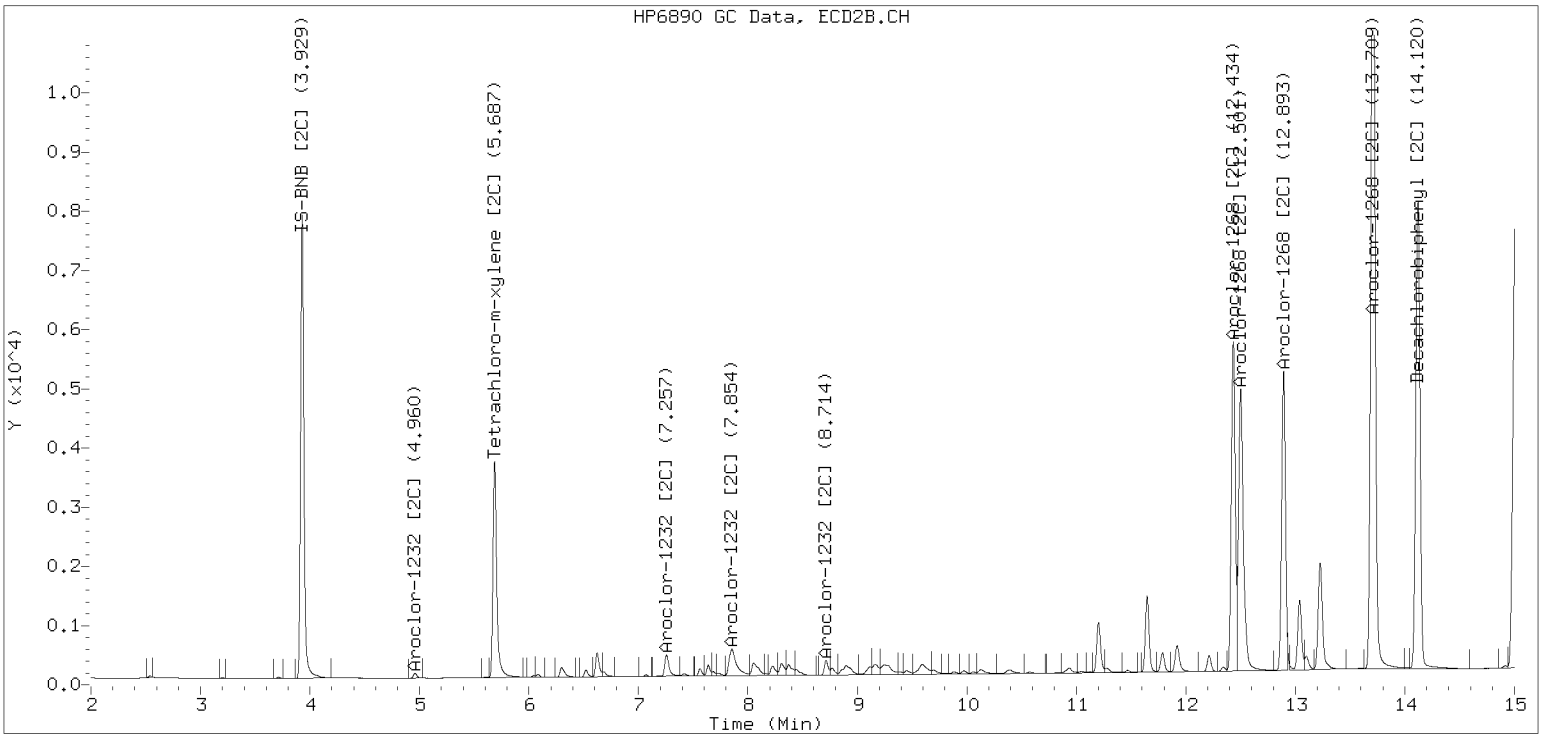


ZB-35 Manual Integration: YES

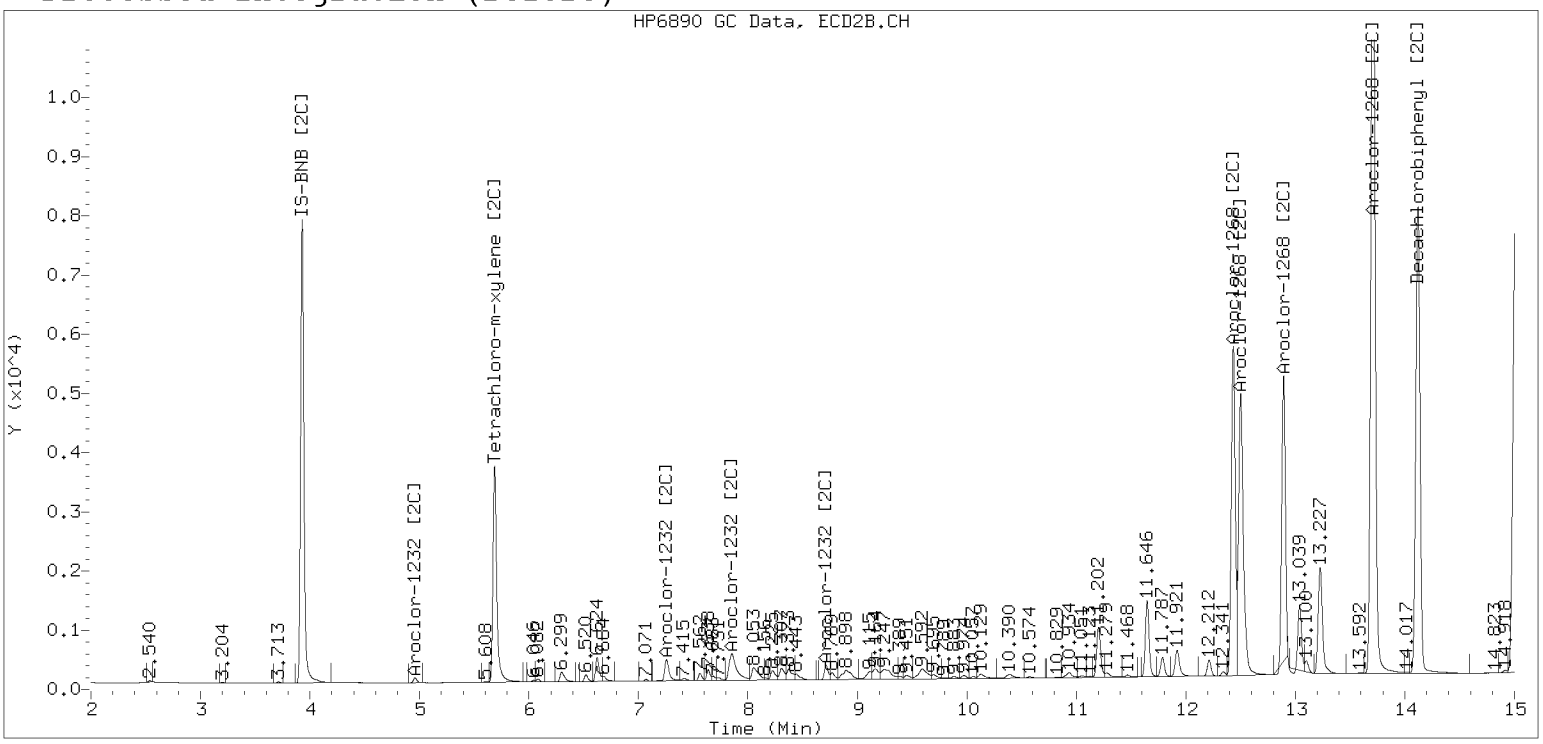
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230124.b/230124.b/01242323ECD7.D Injection Date: 24-JAN-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242324ECD7.D
Data file 2: /230124.b/230124.b/01242324ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 SCV
Client ID:
Injection Date: 24-JAN-2023 19:51
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	268739	5.686	-0.001	172961	37.5	37.3	0.6	Tetrachloro-m-xylene
13.891	-0.000	381489	14.121	0.001	320416	37.9	40.2	5.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	506576	0.6
Hexabromobiphenyl	647433	940129	45.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	343102	1.8
Hexabromobiphenyl	382032	501702	31.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	40958	217.6	1	7.255	0.001	40190	216.0
Aroclor-1016	2	7.655	0.004	135282	216.9	2	7.852	0.001	90338	221.5
Aroclor-1016	3	7.791	0.003	61557	214.5	3	8.052	0.002	37810	227.2
Aroclor-1016	4	8.406	0.002	40372	218.7	4	8.306	0.000	28171	215.9
Total Col1Ave (4 peaks):					216.9	Total Col2Ave (4 peaks):				220.2 RPD = 1
Corrected Ave (3 peaks):					216.3	Corrected Ave (3 peaks):				217.8 RPD = 1
Aroclor-1221	1	4.732	-0.001	256	6.8	1	---			0.0
Aroclor-1221	2	6.131	-0.002	4742	61.9	2	6.302	0.004	5037	91.4
Aroclor-1221	3	6.384	-0.000	27448	154.4	3	6.623	-0.000	18931	203.5
Total Col1Ave (3 peaks):					74.4	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.732	-0.001	256	11.0	1	---			0.0
Aroclor-1232	2	6.131	-0.002	4742	90.0	2	7.255	-0.001	40190	470.8
Aroclor-1232	3	7.655	-0.004	135282	513.5	3	7.852	-0.002	90338	519.5
Aroclor-1232	4	8.581	-0.003	56938	504.9	4	8.713	-0.001	27776	574.9
Total Col1Ave (4 peaks):					279.8	Total Col2Ave (3 peaks):				521.7 RPD = 60*
Corrected Ave (3 peaks):					202.0	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	-0.000	40958	264.0	1	7.255	-0.000	40190	267.8
Aroclor-1242	2	7.655	-0.001	135282	266.5	2	7.852	-0.001	90338	271.0
Aroclor-1242	3	8.406	-0.001	40372	267.7	3	9.115	-0.045	15827	151.6
Aroclor-1242	4	8.581	-0.000	56938	249.9	4	9.587	0.001	3186	23.0
Total Col1Ave (4 peaks):					262.0	Total Col2Ave (4 peaks):				178.4 RPD = 38
Corrected Ave (3 peaks):					260.1	Corrected Ave (3 peaks):				147.5 RPD = 55*
Aroclor-1248	1	8.406	0.000	40372	159.3	1	8.306	0.000	28171	181.6
Aroclor-1248	2	8.581	0.001	56938	176.1	2	8.713	0.000	27776	166.4
Aroclor-1248	3	8.995	-0.004	58213	94.1	3	9.115	-0.042	15827	77.6
Aroclor-1248	4	9.304	0.010	36620	119.6	4	9.587	0.006	3186	12.6
Total Col1Ave (4 peaks):					137.3	Total Col2Ave (4 peaks):				109.6 RPD = 22
Corrected Ave (3 peaks):					124.4	Corrected Ave (3 peaks):				85.5 RPD = 37
Aroclor-1254	1	9.304	0.005	36620	70.9	1	9.450	0.002	20792	83.5
Aroclor-1254	2	---			0.0	2	9.972	0.003	2640	13.1
Aroclor-1254	3	9.673	0.003	4075	12.3	3	10.148	0.027	52902	120.5
Aroclor-1254	4	9.813	0.004	14733	22.7	4	10.372	0.000	71680	163.3
Aroclor-1254	5	10.122	-0.055	119528	283.6	5	10.569	-0.000	98559	403.2
Total Col1Ave (4 peaks):					97.4	Total Col2Ave (5 peaks):				156.7 RPD = 47*
Corrected Ave (3 peaks):					35.3	Corrected Ave (4 peaks):				95.1 RPD = 92*
Aroclor-1260	1	11.045	0.002	116435	220.7	1	11.654	0.000	81795	226.0
Aroclor-1260	2	11.362	0.001	116918	215.6	2	11.920	0.002	217887	238.0
Aroclor-1260	3	11.738	0.003	303264	212.5	3	12.437	0.001	56212	246.3
Aroclor-1260	4	12.143	0.004	141534	191.9	4	12.502	0.000	142689	240.8
Aroclor-1260	5	12.246	0.002	68446	212.9	NS	---			----
Total Col1Ave (5 peaks):					210.7	Total Col2Ave (4 peaks):				237.8 RPD = 12
Corrected Ave (4 peaks):					208.2	Corrected Ave (3 peaks):				234.9 RPD = 12
Aroclor-1262	1	10.830	-0.002	169725	446.4	1	11.200	0.000	83995	171.1
Aroclor-1262	2	12.246	0.000	68446	114.1	2	11.654	0.001	81795	195.9
Aroclor-1262	3	12.320	-0.000	84201	129.2	3	12.437	0.003	56212	126.4
Aroclor-1262	4	12.989	-0.000	78065	131.5	4	12.502	-0.001	142689	200.4
Total Col1Ave (4 peaks):					205.3	Total Col2Ave (4 peaks):				173.4 RPD = 17
Corrected Ave (3 peaks):					124.9	Corrected Ave (3 peaks):				164.5 RPD = 27
Aroclor-1268	1	12.246	0.001	68446	44.1	1	12.437	0.003	56212	48.0
Aroclor-1268	2	12.320	0.002	84201	54.4	2	12.502	0.001	142689	114.4
Aroclor-1268	3	12.726	0.027	33020	25.7	3	12.894	0.001	1495	1.4
Aroclor-1268	4	13.490	0.001	16019	4.2	4	13.709	0.001	10120	3.2
Total Col1Ave (4 peaks):					32.1	Total Col2Ave (4 peaks):				41.8 RPD = 26
Corrected Ave (3 peaks):					24.7	Corrected Ave (3 peaks):				17.5 RPD = 34

Total PCB Area Col1 (5.909 - 13.792) = 2789370 Col1 Total PCB = 0.5 ppm*

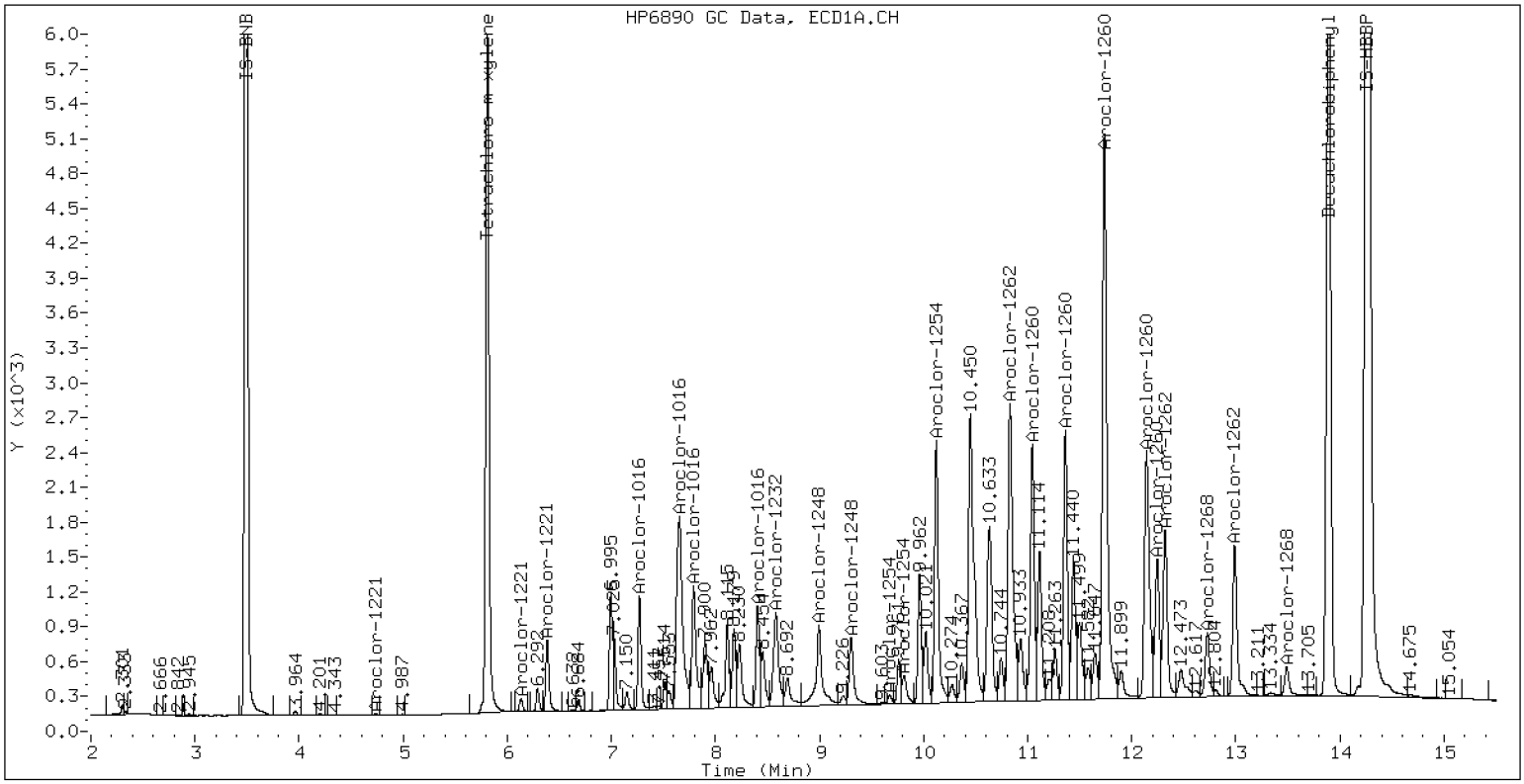
Total PCB Area Col2 (5.787 - 14.020) = 1810543 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

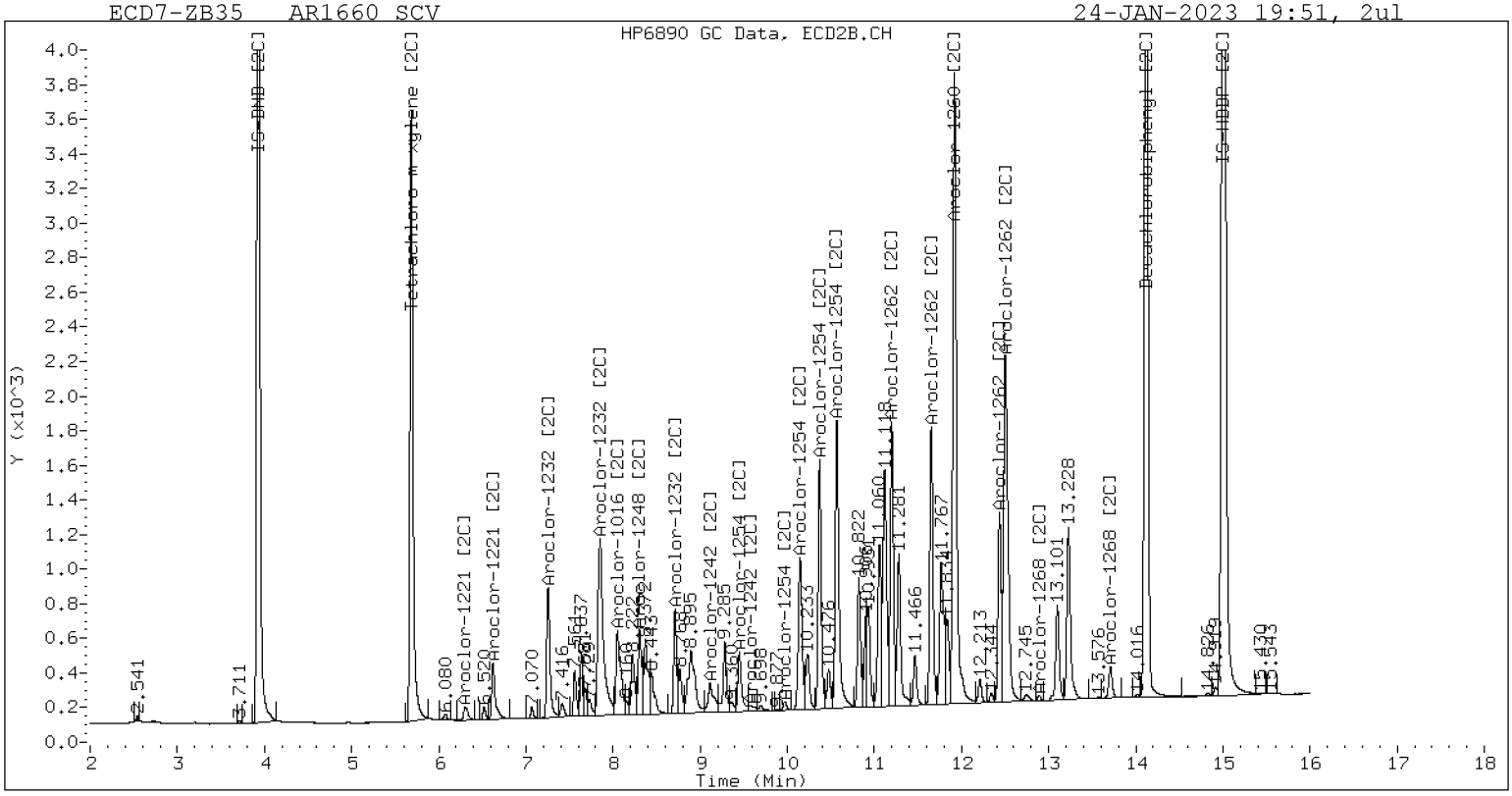
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660 SCV 24-JAN-2023 19:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660 SCV 24-JAN-2023 19:51, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242325ECD7.D
Data file 2: /230124.b/230124.b/01242325ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 SCV
Client ID:
Injection Date: 24-JAN-2023 20:12
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	268580	5.686	-0.001	172592	37.8	37.4	1.1	Tetrachloro-m-xylene
13.892	0.001	392918	14.121	0.001	323869	38.5	40.3	4.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503089	-0.0
Hexabromobiphenyl	647433	953137	47.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	341704	1.4
Hexabromobiphenyl	382032	505860	32.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	29901	159.9	1	7.255	0.000	32077	173.1
Aroclor-1016	2	7.653	0.003	107333	173.3	2	7.851	-0.000	71438	175.9
Aroclor-1016	3	7.790	0.002	45013	157.9	3	8.051	0.001	29072	175.4
Aroclor-1016	4	8.406	0.002	32958	179.8	4	8.306	0.001	21761	167.5
Total Col1Ave (4 peaks):					167.7	Total Col2Ave (4 peaks):				173.0 RPD = 3
Corrected Ave (3 peaks):					163.7	Corrected Ave (3 peaks):				172.0 RPD = 5
Aroclor-1221	1	4.737	0.004	141	3.8	1	---			0.0
Aroclor-1221	2	6.133	-0.001	3649	48.0	2	6.317	0.018	4290	78.2
Aroclor-1221	3	6.384	-0.000	21189	120.0	3	6.624	0.001	14613	157.7
Total Col1Ave (3 peaks):					57.3	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.737	0.003	141	6.1	1	---			0.0
Aroclor-1232	2	6.133	-0.001	3649	69.7	2	7.255	-0.002	32077	377.3
Aroclor-1232	3	7.653	-0.005	107333	410.2	3	7.851	-0.004	71438	412.5
Aroclor-1232	4	8.581	-0.003	59617	532.3	4	8.713	-0.000	22563	468.9
Total Col1Ave (4 peaks):					254.6	Total Col2Ave (3 peaks):				419.6 RPD = 49*
Corrected Ave (3 peaks):					162.0	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	29901	194.1	1	7.255	-0.001	32077	214.6
Aroclor-1242	2	7.653	-0.002	107333	212.9	2	7.851	-0.002	71438	215.2
Aroclor-1242	3	8.406	-0.000	32958	220.0	3	9.156	-0.004	27374	263.3
Aroclor-1242	4	8.581	-0.000	59617	263.5	4	9.581	-0.006	34156	247.9
Total Col1Ave (4 peaks):					222.6	Total Col2Ave (4 peaks):				235.3 RPD = 6
Corrected Ave (3 peaks):					209.0	Corrected Ave (3 peaks):				225.9 RPD = 8
Aroclor-1248	1	8.406	0.001	32958	131.0	1	8.306	0.001	21761	140.9
Aroclor-1248	2	8.581	0.001	59617	185.7	2	8.713	0.001	22563	135.7
Aroclor-1248	3	9.003	0.004	72557	118.2	3	9.156	-0.000	27374	134.7
Aroclor-1248	4	9.296	0.003	28122	92.5	4	9.581	-0.001	34156	135.9
Total Col1Ave (4 peaks):					131.8	Total Col2Ave (4 peaks):				136.8 RPD = 4
Corrected Ave (3 peaks):					113.9	Corrected Ave (3 peaks):				135.5 RPD = 17
Aroclor-1254	1	9.296	-0.002	28122	54.8	1	9.448	0.000	11650	47.0
Aroclor-1254	2	9.380	0.002	9292	42.4	2	9.968	-0.001	7642	38.1
Aroclor-1254	3	9.671	0.001	12871	39.2	3	10.120	-0.001	16012	36.6
Aroclor-1254	4	9.808	-0.000	22113	34.4	4	10.378	0.007	16300	37.3
Aroclor-1254	5	10.176	-0.001	17771	42.5	5	10.572	0.004	4439	18.2
Total Col1Ave (5 peaks):					42.7	Total Col2Ave (5 peaks):				35.5 RPD = 18
Corrected Ave (4 peaks):					39.6	Corrected Ave (4 peaks):				32.6 RPD = 19
Aroclor-1260	1	11.047	0.003	741	1.4	1	11.663	0.010	1794	4.9
Aroclor-1260	2	11.366	0.006	379	0.7	2	11.923	0.005	1208	1.3
Aroclor-1260	3	11.745	0.011	860	0.6	3	12.507	0.071	977	4.2
Aroclor-1260	4	12.154	0.014	1536	2.1	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
Total Col1Ave (4 peaks):					1.2	Total Col2Ave (3 peaks):				3.5 RPD = 99*
Corrected Ave (3 peaks):					0.9	Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.836	0.004	10654	27.6	1	11.120	-0.080	8071	16.3
Aroclor-1262	2	12.154	-0.092	1536	2.5	2	11.663	0.010	1794	4.3
Aroclor-1262	3	---			0.0	3	12.507	0.073	977	2.2
Aroclor-1262	4	13.040	0.051	1739	2.9	4	---			0.0
Total Col1Ave (3 peaks):					11.0	Total Col2Ave (3 peaks):				7.6 RPD = 37
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.154	-0.091	1536	1.0	1	12.507	0.073	977	0.8
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.623	-0.076	5080	3.9	3	12.894	0.001	98	0.1
Aroclor-1268	4	13.501	0.012	2725	0.7	4	13.707	-0.001	1566	0.5
Total Col1Ave (3 peaks):					1.9	Total Col2Ave (3 peaks):				0.5 RPD = 120*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 915887 Col1 Total PCB = 0.2 ppm*

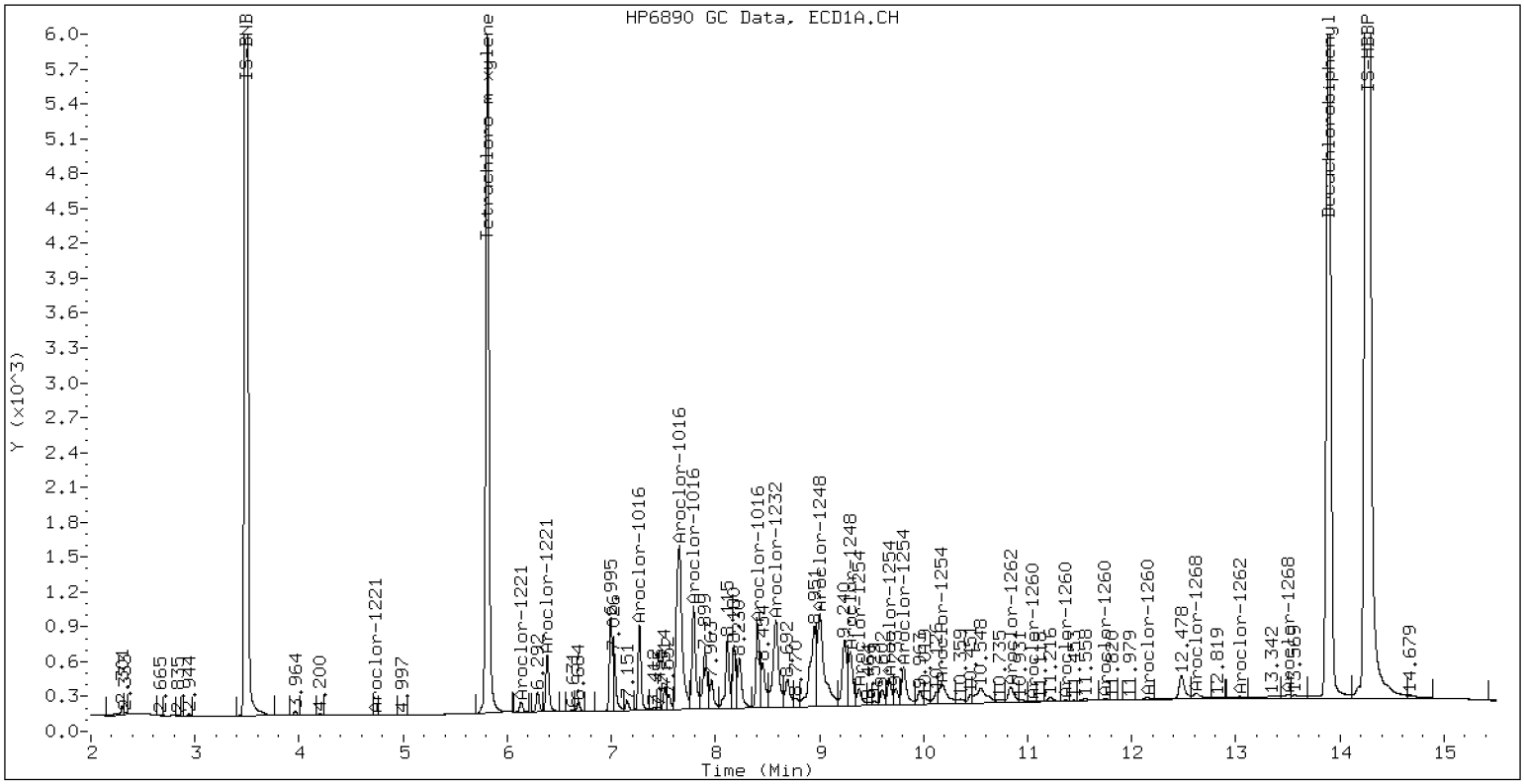
Total PCB Area Col2 (5.787 - 14.020) = 575897 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

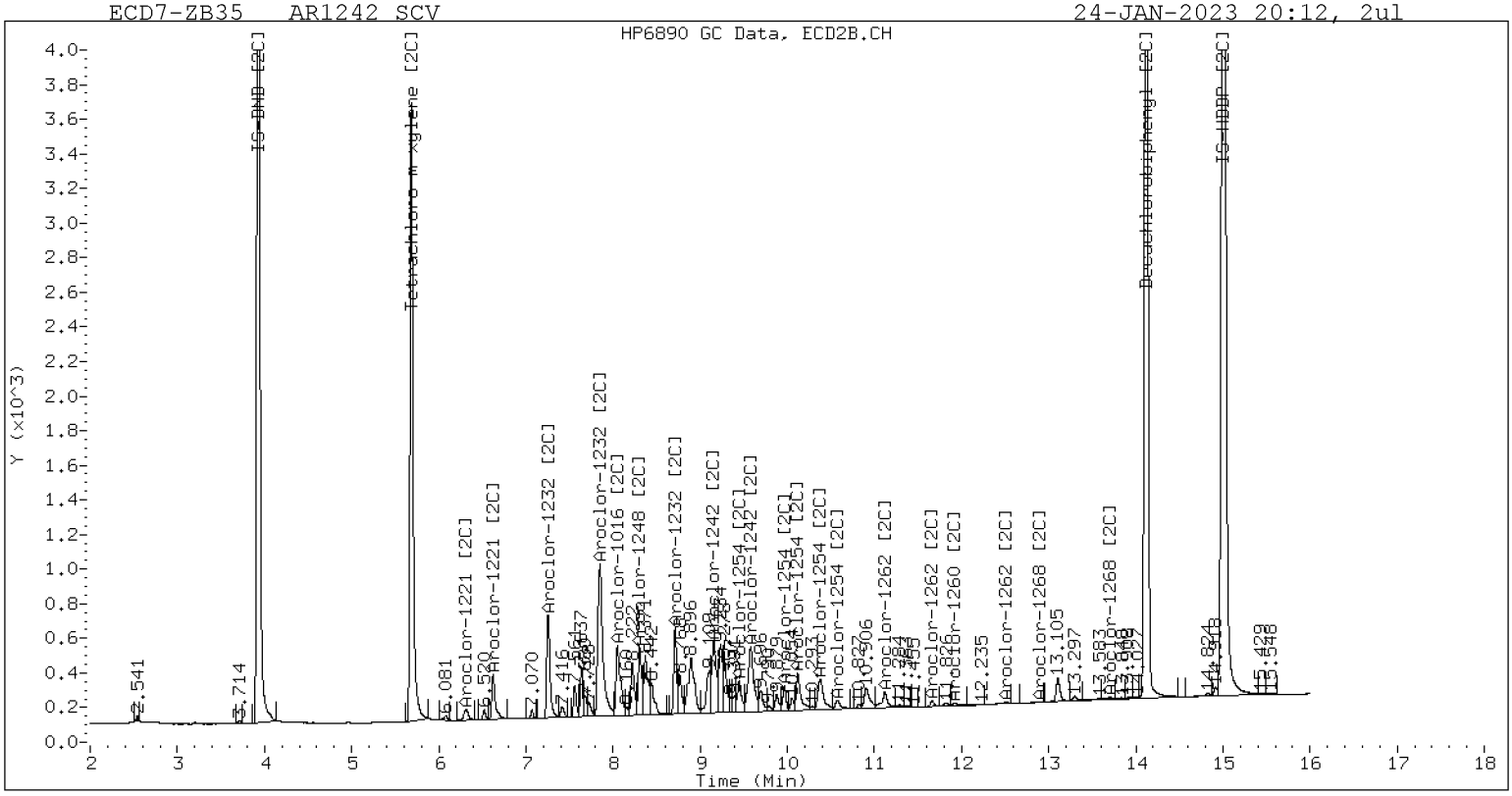
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242 SCV 24-JAN-2023 20:12, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242 SCV 24-JAN-2023 20:12, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242326ECD7.D
Data file 2: /230124.b/230124.b/01242326ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 SCV
Client ID:
Injection Date: 24-JAN-2023 20:33
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.000	263982	5.686	-0.001	169991	36.8	36.5	0.6	Tetrachloro-m-xylene
13.892	0.001	400655	14.121	0.001	316171	38.3	39.6	3.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	508189	1.0
Hexabromobiphenyl	647433	979067	51.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	344105	2.1
Hexabromobiphenyl	382032	503378	31.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	14777	78.3	1	7.254	-0.001	16100	86.3
Aroclor-1016	2	7.655	0.004	70114	112.1	2	7.853	0.002	47184	115.4
Aroclor-1016	3	7.794	0.006	27212	94.5	3	8.053	0.003	9427	56.5
Aroclor-1016	4	8.406	0.003	59884	323.4	4	8.306	0.001	36680	280.3
Total Col1Ave (4 peaks):					152.0	Total Col2Ave (4 peaks):				134.6 RPD = 12
Corrected Ave (3 peaks):					94.9	Corrected Ave (3 peaks):				86.0 RPD = 10
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.133	-0.000	591	7.7	2	6.323	0.025	1820	32.9
Aroclor-1221	3	6.386	0.001	2453	13.8	3	6.627	0.004	1477	15.8
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.133	-0.000	591	11.2	2	7.254	-0.002	16100	188.0
Aroclor-1232	3	7.655	-0.004	70114	265.3	3	7.853	-0.001	47184	270.6
Aroclor-1232	4	8.581	-0.003	76286	674.3	4	8.714	0.000	39330	811.7
Total Col1Ave (3 peaks):					316.9	Total Col2Ave (3 peaks):				423.4 RPD = 29
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	14777	95.0	1	7.254	-0.002	16100	107.0
Aroclor-1242	2	7.655	-0.001	70114	137.7	2	7.853	0.000	47184	141.2
Aroclor-1242	3	8.406	-0.000	59884	395.8	3	9.159	-0.001	46988	448.9
Aroclor-1242	4	8.581	-0.000	76286	333.8	4	9.584	-0.003	56615	408.1
Total Col1Ave (4 peaks):					240.5	Total Col2Ave (4 peaks):				276.3 RPD = 14
Corrected Ave (3 peaks):					188.8	Corrected Ave (3 peaks):				218.7 RPD = 15
Aroclor-1248	1	8.406	0.001	59884	235.6	1	8.306	0.001	36680	235.8
Aroclor-1248	2	8.581	0.001	76286	235.2	2	8.714	0.002	39330	234.9
Aroclor-1248	3	9.000	0.001	148805	239.9	3	9.159	0.003	46988	229.7
Aroclor-1248	4	9.295	0.001	73114	238.1	4	9.584	0.002	56615	223.8
Total Col1Ave (4 peaks):					237.2	Total Col2Ave (4 peaks):				231.0 RPD = 3
Corrected Ave (3 peaks):					236.3	Corrected Ave (3 peaks):				229.5 RPD = 3
Aroclor-1254	1	9.295	-0.004	73114	141.2	1	9.449	0.001	20314	81.4
Aroclor-1254	2	9.378	0.000	36561	165.3	2	9.970	0.000	18678	92.6
Aroclor-1254	3	9.672	0.003	30736	92.6	3	10.124	0.003	35321	80.2
Aroclor-1254	4	9.813	0.004	53537	82.3	4	10.387	0.015	35188	79.9
Aroclor-1254	5	10.192	0.015	40119	94.9	5	10.575	0.006	7386	30.1
Total Col1Ave (5 peaks):					115.3	Total Col2Ave (5 peaks):				72.9 RPD = 45*
Corrected Ave (4 peaks):					102.7	Corrected Ave (4 peaks):				67.9 RPD = 41*
Aroclor-1260	1	11.054	0.010	1868	3.4	1	11.664	0.011	2055	5.7
Aroclor-1260	2	11.366	0.005	1375	2.4	2	11.926	0.009	1303	1.4
Aroclor-1260	3	11.745	0.010	2137	1.4	3	12.439	0.003	395	1.7
Aroclor-1260	4	12.147	0.008	1650	2.1	4	12.507	0.005	890	1.5
Aroclor-1260	5	12.255	0.011	558	1.7	NS	---			----
Total Col1Ave (5 peaks):					2.2	Total Col2Ave (4 peaks):				2.6 RPD = 15
Corrected Ave (4 peaks):					1.9	Corrected Ave (3 peaks):				1.5 RPD = 22
Aroclor-1262	1	10.837	0.005	12736	32.2	1	11.122	-0.078	7136	14.5
Aroclor-1262	2	12.255	0.010	558	0.9	2	11.664	0.011	2055	4.9
Aroclor-1262	3	12.327	0.006	596	0.9	3	12.439	0.004	395	0.9
Aroclor-1262	4	12.996	0.007	1113	1.8	4	12.507	0.003	890	1.2
Total Col1Ave (4 peaks):					8.9	Total Col2Ave (4 peaks):				5.4 RPD = 50*
Corrected Ave (3 peaks):					1.2	Corrected Ave (3 peaks):				2.3 RPD = 65*
Aroclor-1268	1	12.255	0.010	558	0.3	1	12.439	0.005	395	0.3
Aroclor-1268	2	12.327	0.009	596	0.4	2	12.507	0.005	890	0.7
Aroclor-1268	3	12.706	0.007	1161	0.9	3	12.896	0.003	166	0.2
Aroclor-1268	4	13.504	0.016	3330	0.8	4	13.717	0.009	469	0.1
Total Col1Ave (4 peaks):					0.6	Total Col2Ave (4 peaks):				0.3 RPD = 57*
Corrected Ave (3 peaks):					0.5	Corrected Ave (3 peaks):				0.2 RPD = 83*

Total PCB Area Col1 (5.909 - 13.792) = 1230760 Col1 Total PCB = 0.2 ppm*

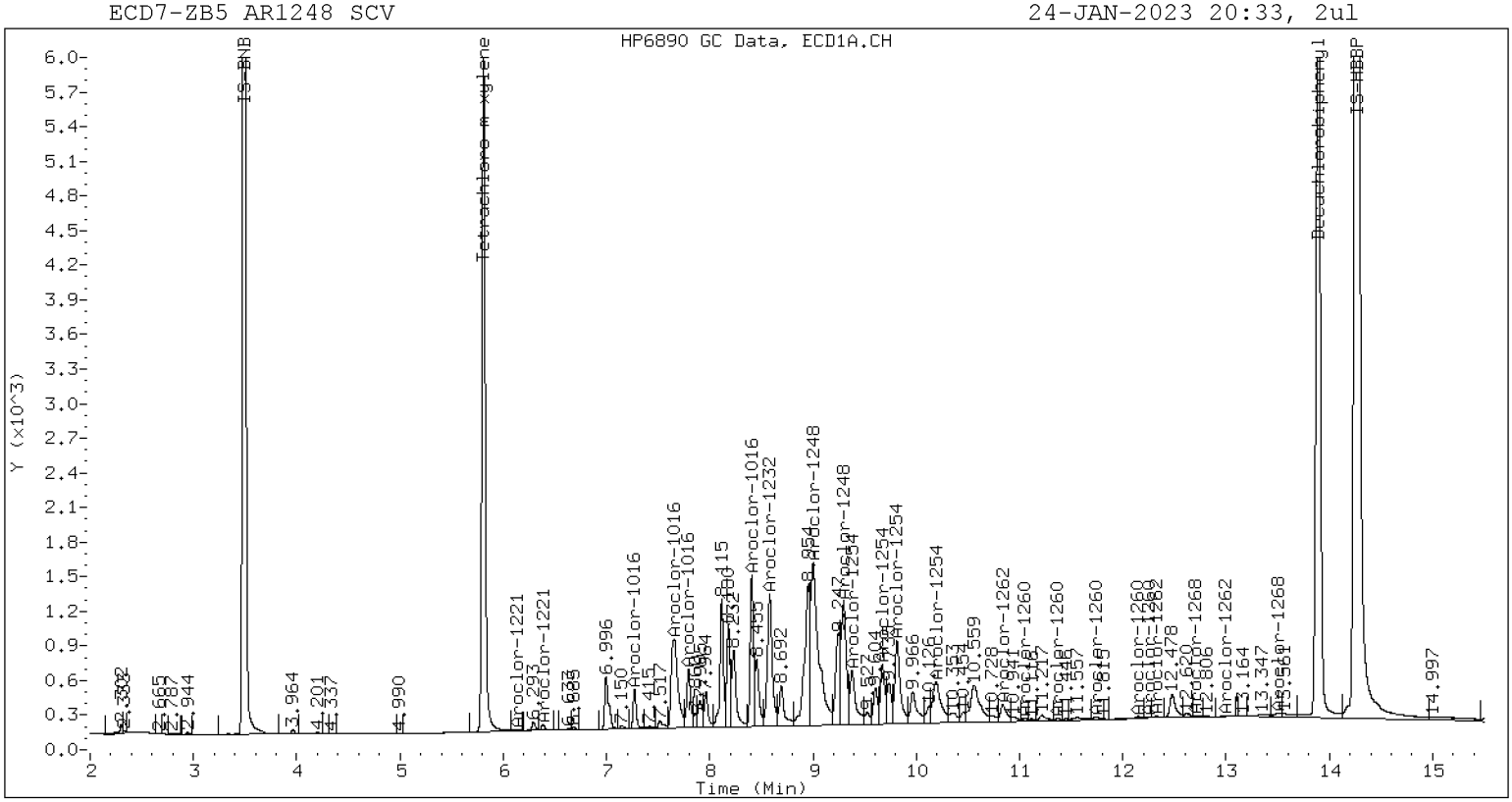
Total PCB Area Col2 (5.787 - 14.020) = 742749 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

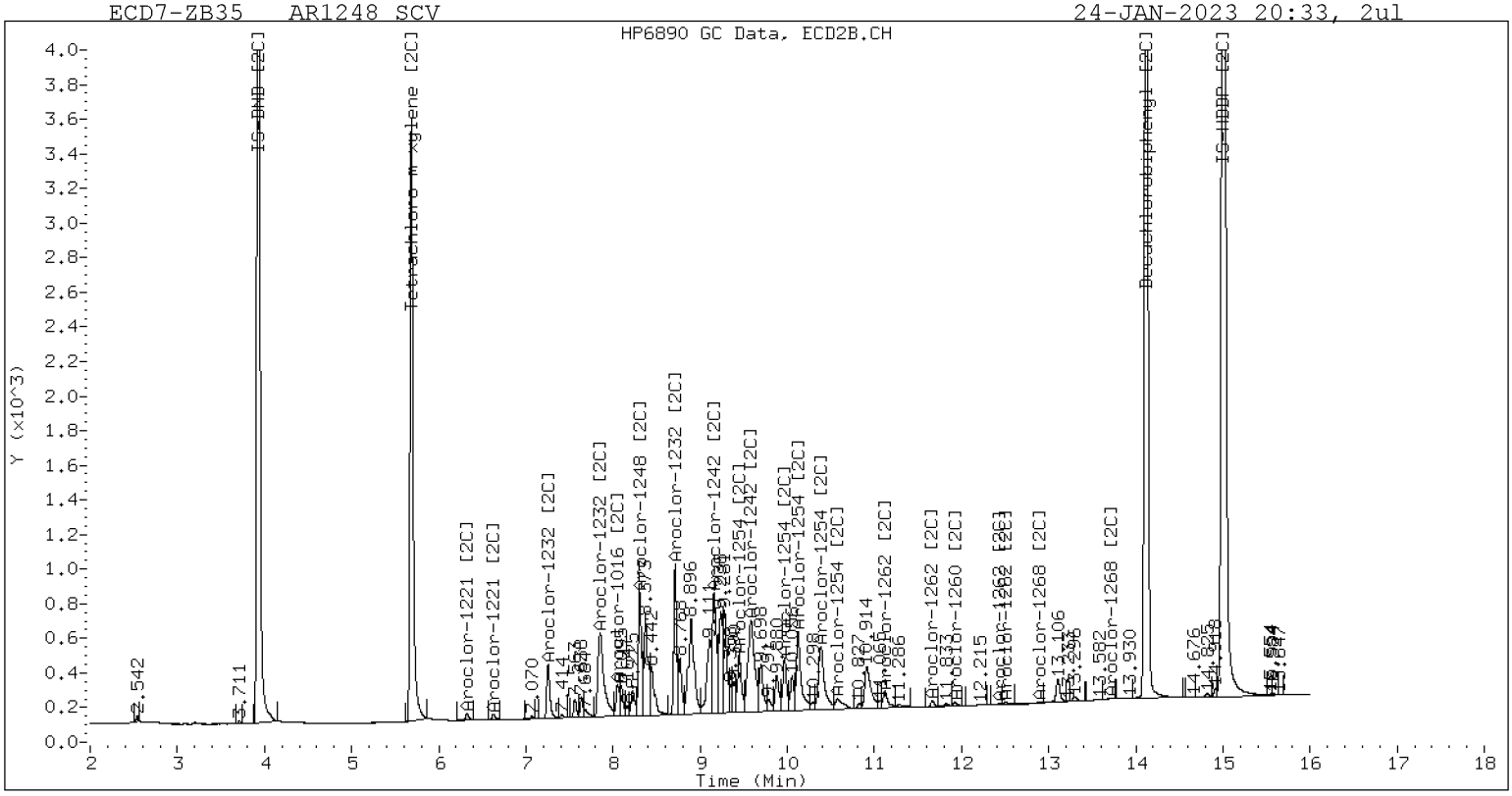
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248 SCV 24-JAN-2023 20:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248 SCV 24-JAN-2023 20:33, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242327ECD7.D
Data file 2: /230124.b/230124.b/01242327ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 SCV
Client ID:
Injection Date: 24-JAN-2023 20:54
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	261398	5.686	-0.001	169839	36.7	36.6	0.1	Tetrachloro-m-xylene
13.892	0.001	383983	14.121	0.001	323233	37.1	39.5	6.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	504424	0.2
Hexabromobiphenyl	647433	968338	49.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	342969	1.8
Hexabromobiphenyl	382032	515045	34.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.273	0.003	320	1.7	1	7.258	0.003	332	1.8
Aroclor-1016	2	7.658	0.008	991	1.6	2	---			0.0
Aroclor-1016	3	7.795	0.007	662	2.3	3	8.097	0.047	515	3.1
Aroclor-1016	4	8.408	0.005	21378	116.3	4	8.307	0.002	20446	156.8
	Total Col1Ave (4 peaks):				30.5	Total Col2Ave (3 peaks):				53.9 RPD = 55*
	Corrected Ave (3 peaks):				1.9	Corrected Ave: < 3 Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.325	0.026	1749	31.7
Aroclor-1221	3	---			0.0	3	6.633	0.011	321	3.5
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	7.258	0.001	332	3.9
Aroclor-1232	3	7.658	-0.000	991	3.8	3	---			0.0
Aroclor-1232	4	8.587	0.003	8887	79.1	4	8.715	0.001	14030	290.5
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	7.273	0.002	320	2.1	1	7.258	0.002	332	2.2
Aroclor-1242	2	7.658	0.003	991	2.0	2	---			0.0
Aroclor-1242	3	8.408	0.002	21378	142.3	3	9.164	0.004	26593	254.9
Aroclor-1242	4	8.587	0.006	8887	39.2	4	9.543	-0.043	34385	248.7
	Total Col1Ave (4 peaks):				46.4	Total Col2Ave (3 peaks):				168.6 RPD = 114*
	Corrected Ave (3 peaks):				14.4	Corrected Ave: < 3 Peaks				
Aroclor-1248	1	8.408	0.003	21378	84.7	1	8.307	0.001	20446	131.9
Aroclor-1248	2	8.587	0.007	8887	27.6	2	8.715	0.003	14030	84.1
Aroclor-1248	3	8.995	-0.004	110289	179.1	3	9.164	0.007	26593	130.4
Aroclor-1248	4	9.300	0.007	113143	371.2	4	9.543	-0.038	34385	136.4
	Total Col1Ave (4 peaks):				165.7	Total Col2Ave (4 peaks):				120.7 RPD = 31
	Corrected Ave (3 peaks):				97.2	Corrected Ave (3 peaks):				115.5 RPD = 17
Aroclor-1254	1	9.300	0.002	113143	220.1	1	9.449	0.001	56453	226.9
Aroclor-1254	2	9.379	0.001	49468	225.4	2	9.970	0.001	45325	225.4
Aroclor-1254	3	9.671	0.002	72811	221.0	3	10.122	0.002	97044	221.2
Aroclor-1254	4	9.811	0.002	140530	217.7	4	10.374	0.002	98778	225.2
Aroclor-1254	5	10.182	0.005	92254	219.8	5	10.570	0.001	57171	234.0
	Total Col1Ave (5 peaks):				220.8	Total Col2Ave (5 peaks):				226.5 RPD = 3
	Corrected Ave (4 peaks):				219.7	Corrected Ave (4 peaks):				224.7 RPD = 2
Aroclor-1260	1	11.045	0.002	8960	16.5	1	11.661	0.008	26985	72.6
Aroclor-1260	2	11.364	0.004	9237	16.5	2	11.923	0.006	19882	21.2
Aroclor-1260	3	11.741	0.007	21268	14.5	3	12.505	0.069	13190	56.3
Aroclor-1260	4	12.146	0.007	19041	25.1	4	---			0.0
Aroclor-1260	5	12.321	0.077	1835	5.5	NS	---			----
	Total Col1Ave (5 peaks):				15.6	Total Col2Ave (3 peaks):				50.0 RPD = 105*
	Corrected Ave (4 peaks):				13.3	Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.832	0.000	157590	402.4	1	11.119	-0.081	92414	183.3
Aroclor-1262	2	12.321	0.075	1835	3.0	2	11.661	0.008	26985	63.0
Aroclor-1262	3	---			0.0	3	12.505	0.071	13190	28.9
Aroclor-1262	4	12.995	0.006	843	1.4	4	---			0.0
	Total Col1Ave (3 peaks):				135.6	Total Col2Ave (3 peaks):				91.7 RPD = 39
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.321	0.076	1835	1.1	1	12.505	0.072	13190	11.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.720	0.021	1314	1.0	3	12.891	-0.002	169	0.2
Aroclor-1268	4	13.504	0.016	1169	0.3	4	13.706	-0.002	1132	0.3
	Total Col1Ave (3 peaks):				0.8	Total Col2Ave (3 peaks):				3.8 RPD = 130*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 1507519 Col1 Total PCB = 0.3 ppm*

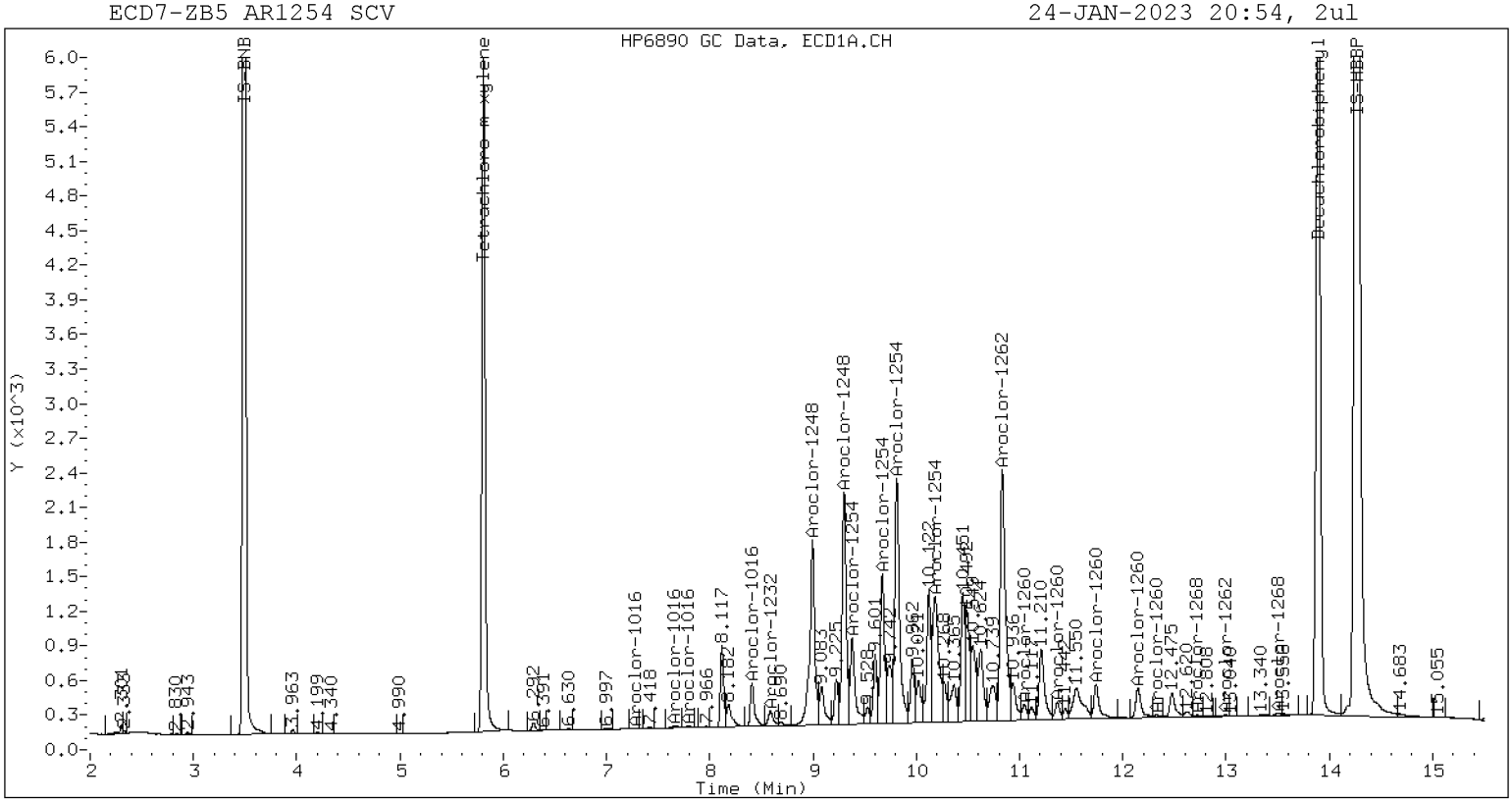
Total PCB Area Col2 (5.787 - 14.020) = 951047 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

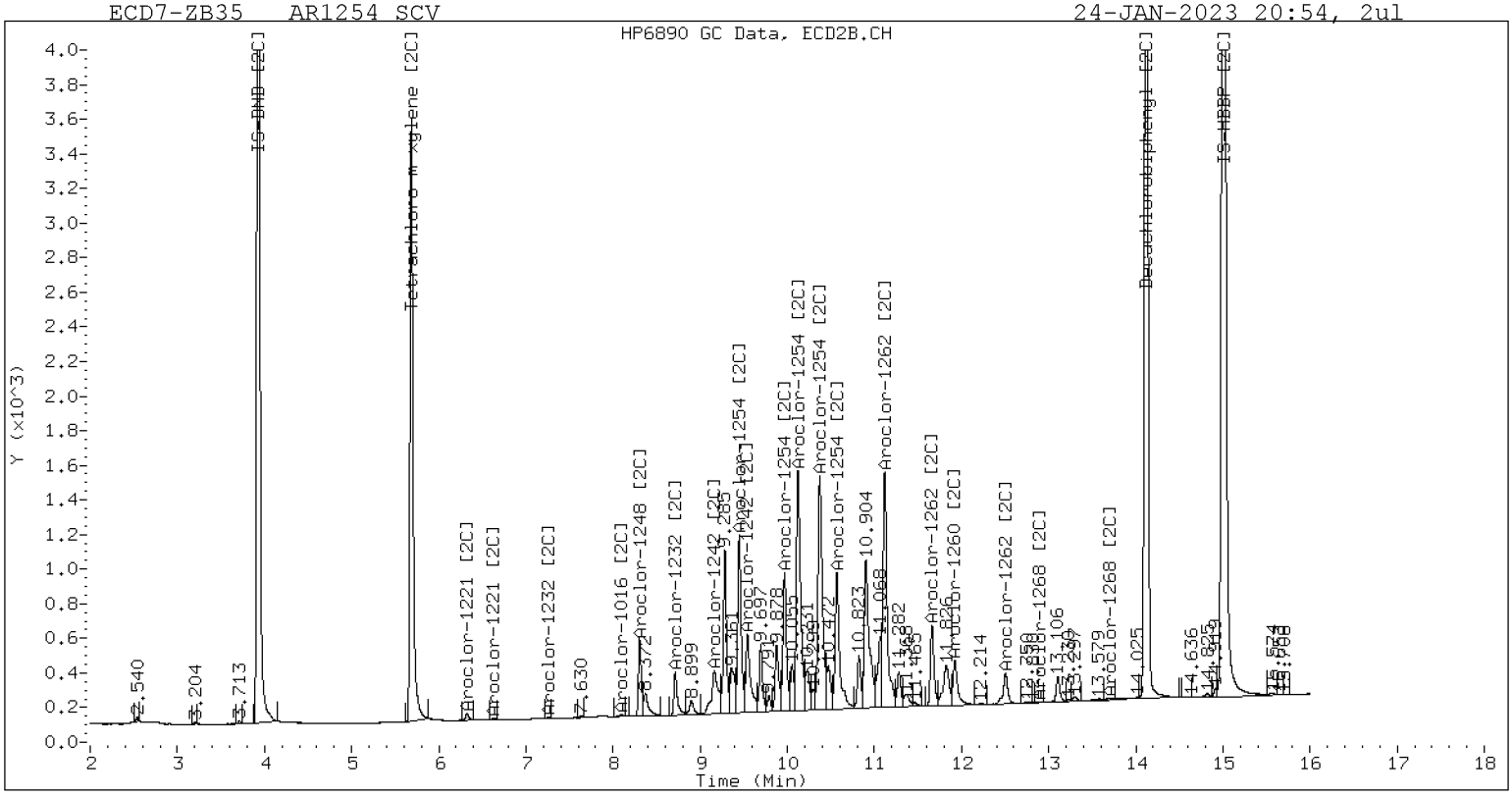
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254 SCV 24-JAN-2023 20:54, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254 SCV 24-JAN-2023 20:54, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242328ECD7.D
Data file 2: /230124.b/230124.b/01242328ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 SCV
Client ID:
Injection Date: 24-JAN-2023 21:15
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	265357	5.685	-0.001	170984	37.3	37.2	0.3	Tetrachloro-m-xylene
13.891	-0.001	397332	14.119	-0.001	326981	37.5	39.5	5.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503473	0.0
Hexabromobiphenyl	647433	991997	53.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	340361	1.0
Hexabromobiphenyl	382032	521975	36.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	5326	28.5	1	7.257	0.002	6708	36.3
Aroclor-1016	2	7.664	0.013	11965	19.3	2	7.856	0.005	7233	17.9
Aroclor-1016	3	7.797	0.009	6015	21.1	3	8.058	0.008	2997	18.2
Aroclor-1016	4	8.410	0.006	3771	20.6	4	8.308	0.002	2065	16.0
Total Col1Ave (4 peaks):					22.4	Total Col2Ave (4 peaks):				22.1 RPD = 1
Corrected Ave (3 peaks):					20.3	Corrected Ave (3 peaks):				17.3 RPD = 16
Aroclor-1221	1	4.732	-0.000	9097	244.5	1	4.959	-0.000	6157	246.8
Aroclor-1221	2	6.133	-0.000	16114	211.8	2	6.297	-0.001	12807	234.2
Aroclor-1221	3	6.384	0.000	40299	228.1	3	6.622	-0.000	21707	235.2
Total Col1Ave (3 peaks):					228.1	Total Col2Ave (3 peaks):				238.7 RPD = 5
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.732	-0.001	9097	391.6	1	4.959	-0.001	6157	406.9
Aroclor-1232	2	6.133	0.000	16114	307.8	2	7.257	0.000	6708	79.2
Aroclor-1232	3	7.664	0.005	11965	45.7	3	7.856	0.001	7233	41.9
Aroclor-1232	4	8.589	0.004	2837	25.3	4	8.716	0.002	1869	39.0
Total Col1Ave (4 peaks):					192.6	Total Col2Ave (4 peaks):				141.7 RPD = 30
Corrected Ave (3 peaks):					126.3	Corrected Ave (3 peaks):				53.4 RPD = 81*
Aroclor-1242	1	7.272	0.001	5326	34.5	1	7.257	0.001	6708	45.1
Aroclor-1242	2	7.664	0.008	11965	23.7	2	7.856	0.003	7233	21.9
Aroclor-1242	3	8.410	0.004	3771	25.2	3	9.169	0.009	1956	18.9
Aroclor-1242	4	8.589	0.007	2837	12.5	4	9.544	-0.043	5978	43.6
Total Col1Ave (4 peaks):					24.0	Total Col2Ave (4 peaks):				32.3 RPD = 30
Corrected Ave (3 peaks):					20.5	Corrected Ave (3 peaks):				28.1 RPD = 31
Aroclor-1248	1	8.410	0.005	3771	15.0	1	8.308	0.002	2065	13.4
Aroclor-1248	2	8.589	0.008	2837	8.8	2	8.716	0.004	1869	11.3
Aroclor-1248	3	8.997	-0.002	36022	58.6	3	9.169	0.012	1956	9.7
Aroclor-1248	4	9.305	0.011	30853	101.4	4	9.544	-0.038	5978	23.9
Total Col1Ave (4 peaks):					46.0	Total Col2Ave (4 peaks):				14.6 RPD = 104*
Corrected Ave (3 peaks):					27.5	Corrected Ave (3 peaks):				11.5 RPD = 82*
Aroclor-1254	1	9.305	0.006	30853	60.1	1	9.451	0.003	17617	71.3
Aroclor-1254	2	9.376	-0.002	5370	24.5	2	9.970	0.001	2849	14.3
Aroclor-1254	3	9.673	0.003	5543	16.9	3	10.146	0.026	88151	202.5
Aroclor-1254	4	9.810	0.002	14544	22.6	4	10.370	-0.002	107074	245.9
Aroclor-1254	5	10.121	-0.056	180016	429.7	5	10.567	-0.002	141725	584.5
Total Col1Ave (5 peaks):					110.8	Total Col2Ave (5 peaks):				223.7 RPD = 68*
Corrected Ave (4 peaks):					31.0	Corrected Ave (4 peaks):				133.5 RPD = 125*
Aroclor-1260	1	11.044	0.001	310806	558.4	1	11.652	-0.001	187682	498.4
Aroclor-1260	2	11.361	0.000	263161	460.0	2	11.917	-0.000	450612	473.0
Aroclor-1260	3	11.735	0.000	629605	418.0	3	12.433	-0.003	206042	867.7
Aroclor-1260	4	12.141	0.001	210012	269.9	4	12.502	-0.000	326457	529.5
Aroclor-1260	5	12.244	-0.000	268425	791.3	NS	---			----
Total Col1Ave (5 peaks):					499.5	Total Col2Ave (4 peaks):				592.1 RPD = 17
Corrected Ave (4 peaks):					426.6	Corrected Ave (3 peaks):				500.3 RPD = 16
Aroclor-1262	1	10.828	-0.005	171094	426.5	1	11.200	0.000	219731	430.1
Aroclor-1262	2	12.244	-0.002	268425	423.9	2	11.652	-0.001	187682	432.0
Aroclor-1262	3	12.319	-0.002	291581	424.2	3	12.433	-0.001	206042	445.4
Aroclor-1262	4	12.988	-0.001	257735	411.5	4	12.502	-0.002	326457	440.6
Total Col1Ave (4 peaks):					421.5	Total Col2Ave (4 peaks):				437.0 RPD = 4
Corrected Ave (3 peaks):					419.8	Corrected Ave (3 peaks):				434.3 RPD = 3
Aroclor-1268	1	12.244	-0.001	268425	163.8	1	12.433	-0.000	206042	169.0
Aroclor-1268	2	12.319	0.001	291581	178.4	2	12.502	0.000	326457	251.7
Aroclor-1268	3	12.725	0.026	108693	80.3	3	12.892	-0.001	10062	9.3
Aroclor-1268	4	13.486	-0.003	95646	23.8	4	13.710	0.001	59437	17.8
Total Col1Ave (4 peaks):					111.6	Total Col2Ave (4 peaks):				112.0 RPD = 0

Corrected Ave (3 peaks): 89.3 Corrected Ave (3 peaks): 65.4 RPD = 31

Total PCB Area Col1 (5.909 - 13.792) = 4409992 Col1 Total PCB = 0.8 ppm*

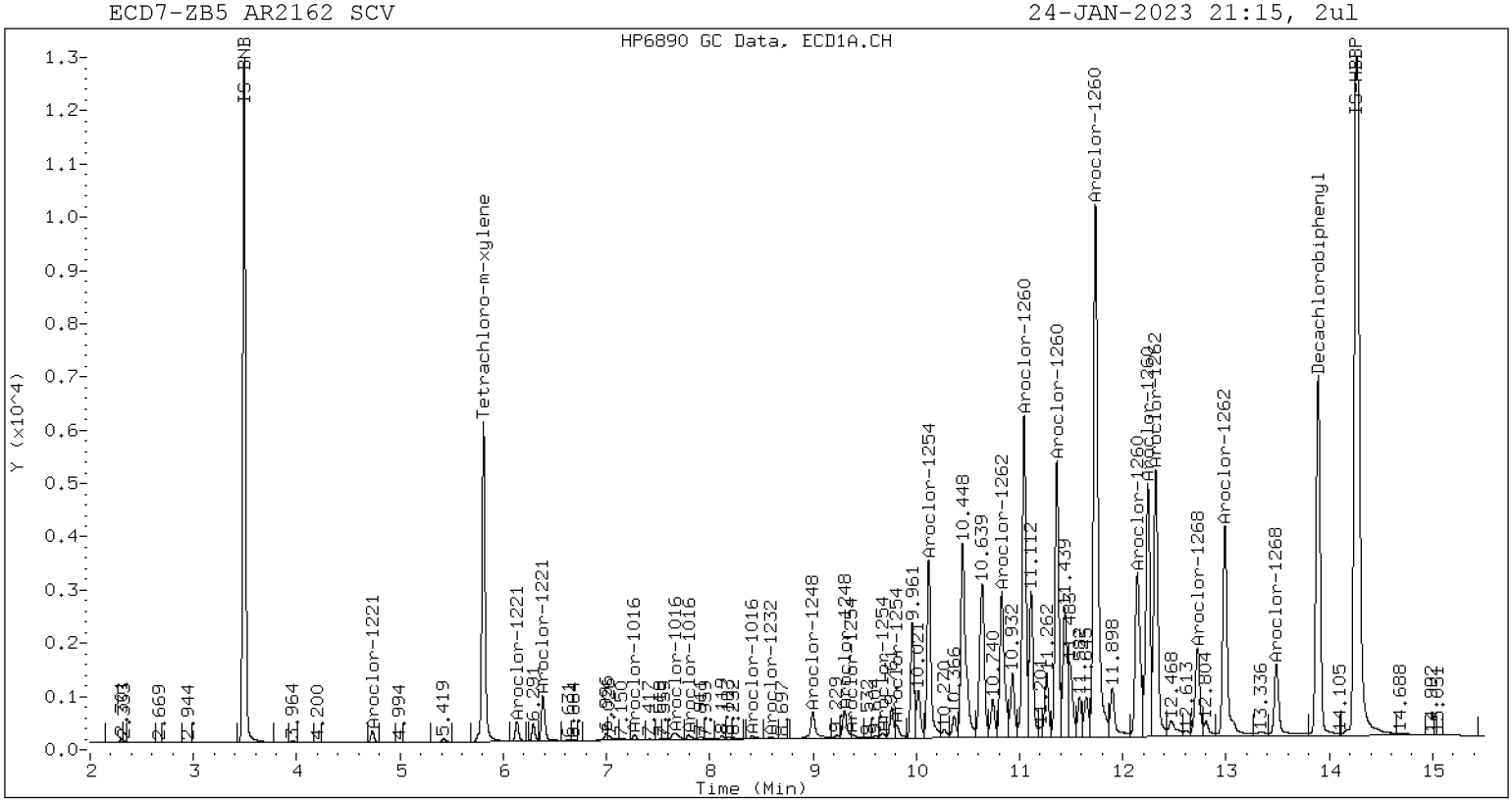
Total PCB Area Col2 (5.787 - 14.020) = 2874073 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

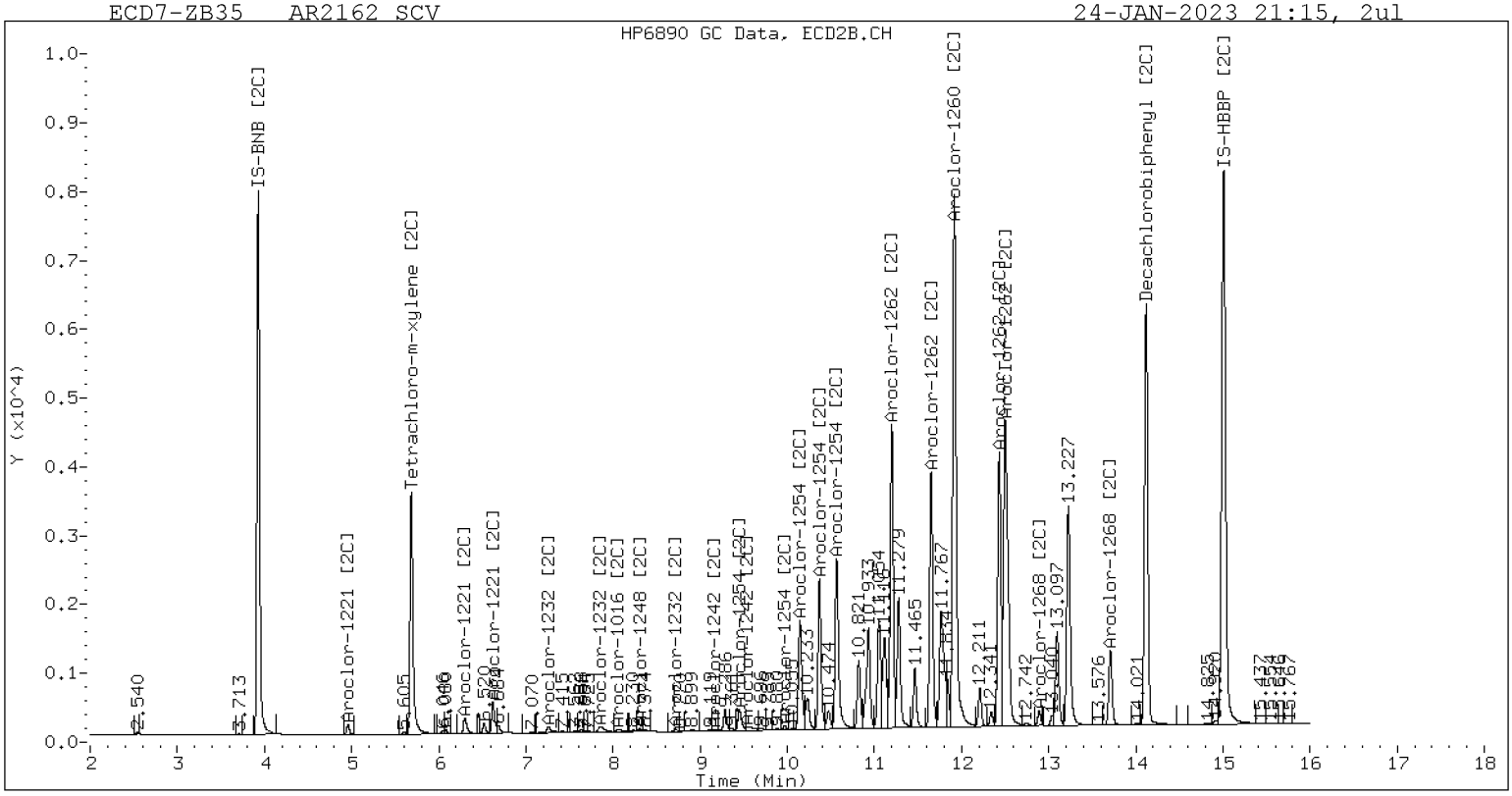
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162 SCV 24-JAN-2023 21:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162 SCV 24-JAN-2023 21:15, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242329ECD7.D
Data file 2: /230124.b/230124.b/01242329ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 SCV
Client ID:
Injection Date: 24-JAN-2023 21:36
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.810	0.001	250455	5.687	0.000	162795	36.4	36.3	0.2	Tetrachloro-m-xylene
13.892	0.000	551946	14.120	0.000	461901	54.6	57.9	5.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	487061	-3.2
Hexabromobiphenyl	647433	944934	46.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	331721	-1.5
Hexabromobiphenyl	382032	502401	31.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016 1	7.272	0.002	19363	107.0	1	7.256	0.001	19791	110.0
Aroclor-1016 2	7.659	0.009	58630	97.8	2	7.856	0.005	40139	101.8
Aroclor-1016 3	7.794	0.006	28286	102.5	3	8.055	0.005	17412	108.2
Aroclor-1016 4	8.408	0.004	17373	97.9	4	8.308	0.003	11962	94.8
Total Col1Ave (4 peaks):				101.3	Total Col2Ave (4 peaks):				103.7 RPD = 2
Corrected Ave (3 peaks):				99.4	Corrected Ave (3 peaks):				101.6 RPD = 2
Aroclor-1221 1	4.735	0.002	5022	139.5	1	4.961	0.002	3409	140.2
Aroclor-1221 2	6.134	0.001	8987	122.1	2	6.299	0.001	7677	144.1
Aroclor-1221 3	6.385	0.001	29368	171.8	3	6.624	0.001	16198	180.1
Total Col1Ave (3 peaks):				144.5	Total Col2Ave (3 peaks):				154.8 RPD = 7
Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1232 1	4.735	0.002	5022	223.5	1	4.961	0.002	3409	231.1
Aroclor-1232 2	6.134	0.001	8987	177.4	2	7.256	-0.001	19791	239.8
Aroclor-1232 3	7.659	0.001	58630	231.5	3	7.856	0.001	40139	238.8
Aroclor-1232 4	8.585	0.000	24991	230.5	4	8.715	0.001	11476	245.7
Total Col1Ave (4 peaks):				215.7	Total Col2Ave (4 peaks):				238.8 RPD = 10
Corrected Ave (3 peaks):				210.5	Corrected Ave (3 peaks):				236.6 RPD = 12
Aroclor-1242 1	7.272	0.001	19363	129.8	1	7.256	0.000	19791	136.4
Aroclor-1242 2	7.659	0.004	58630	120.1	2	7.856	0.002	40139	124.6
Aroclor-1242 3	8.408	0.001	17373	119.8	3	9.166	0.006	11813	117.1
Aroclor-1242 4	8.585	0.003	24991	114.1	4	9.595	0.009	16549	123.7
Total Col1Ave (4 peaks):				121.0	Total Col2Ave (4 peaks):				125.4 RPD = 4
Corrected Ave (3 peaks):				118.0	Corrected Ave (3 peaks):				121.8 RPD = 3
Aroclor-1248 1	8.408	0.002	17373	71.3	1	8.308	0.003	11962	79.8
Aroclor-1248 2	8.585	0.005	24991	80.4	2	8.715	0.003	11476	71.1
Aroclor-1248 3	9.001	0.002	67631	113.8	3	9.166	0.009	11813	59.9
Aroclor-1248 4	9.293	-0.001	30983	105.3	4	9.595	0.014	16549	67.9
Total Col1Ave (4 peaks):				92.7	Total Col2Ave (4 peaks):				69.7 RPD = 28
Corrected Ave (3 peaks):				85.7	Corrected Ave (3 peaks):				66.3 RPD = 26
Aroclor-1254 1	9.293	-0.006	30983	62.4	1	9.451	0.003	3749	15.6
Aroclor-1254 2	9.381	0.003	9071	42.8	2	9.974	0.005	2452	12.6
Aroclor-1254 3	9.678	0.009	5199	16.3	3	10.131	0.010	4718	11.1
Aroclor-1254 4	9.820	0.012	8864	14.2	4	10.389	0.018	4224	10.0
Aroclor-1254 5	10.195	0.018	8085	19.9	5	10.573	0.004	1573	6.7
Total Col1Ave (5 peaks):				31.1	Total Col2Ave (5 peaks):				11.2 RPD = 94*
Corrected Ave (4 peaks):				23.3	Corrected Ave (4 peaks):				10.1 RPD = 79*
Aroclor-1260 1	11.050	0.006	66852	126.1	1	11.647	-0.006	57235	157.9
Aroclor-1260 2	11.366	0.006	6269	11.5	2	11.919	0.002	25368	27.7
Aroclor-1260 3	11.741	0.007	41446	28.9	3	12.434	-0.002	262014	1146.4
Aroclor-1260 4	12.052	-0.088	2691	3.6	4	12.502	-0.000	277060	466.9
Aroclor-1260 5	12.245	0.002	349286	1080.9	NS	---			----
Total Col1Ave (5 peaks):				250.2	Total Col2Ave (4 peaks):				449.7 RPD = 57*
Corrected Ave (4 peaks):				42.5	Corrected Ave (3 peaks):				217.5 RPD = 135*
Aroclor-1262 1	10.838	0.006	4520	11.8	1	11.203	0.003	40576	82.5
Aroclor-1262 2	12.245	-0.000	349286	579.1	2	11.647	-0.006	57235	136.9
Aroclor-1262 3	12.318	-0.002	349715	534.1	3	12.434	-0.001	262014	588.4
Aroclor-1262 4	12.988	-0.001	141905	237.8	4	12.502	-0.002	277060	388.5
Total Col1Ave (4 peaks):				340.7	Total Col2Ave (4 peaks):				299.1 RPD = 13
Corrected Ave (3 peaks):				261.2	Corrected Ave (3 peaks):				202.6 RPD = 25
Aroclor-1268 1	12.245	0.001	349286	223.8	1	12.434	0.000	262014	223.3
Aroclor-1268 2	12.318	0.000	349715	224.6	2	12.502	0.000	277060	221.9
Aroclor-1268 3	12.699	0.000	289328	224.3	3	12.893	-0.000	208928	201.0
Aroclor-1268 4	13.490	0.001	849299	222.1	4	13.710	0.002	725831	226.1
Total Col1Ave (4 peaks):				223.7	Total Col2Ave (4 peaks):				218.1 RPD = 3

Corrected Ave (3 peaks): 223.4 Corrected Ave (3 peaks): 215.4 RPD = 4

Total PCB Area Col1 (5.909 - 13.792) = 2866092 Col1 Total PCB = 0.5 ppm*

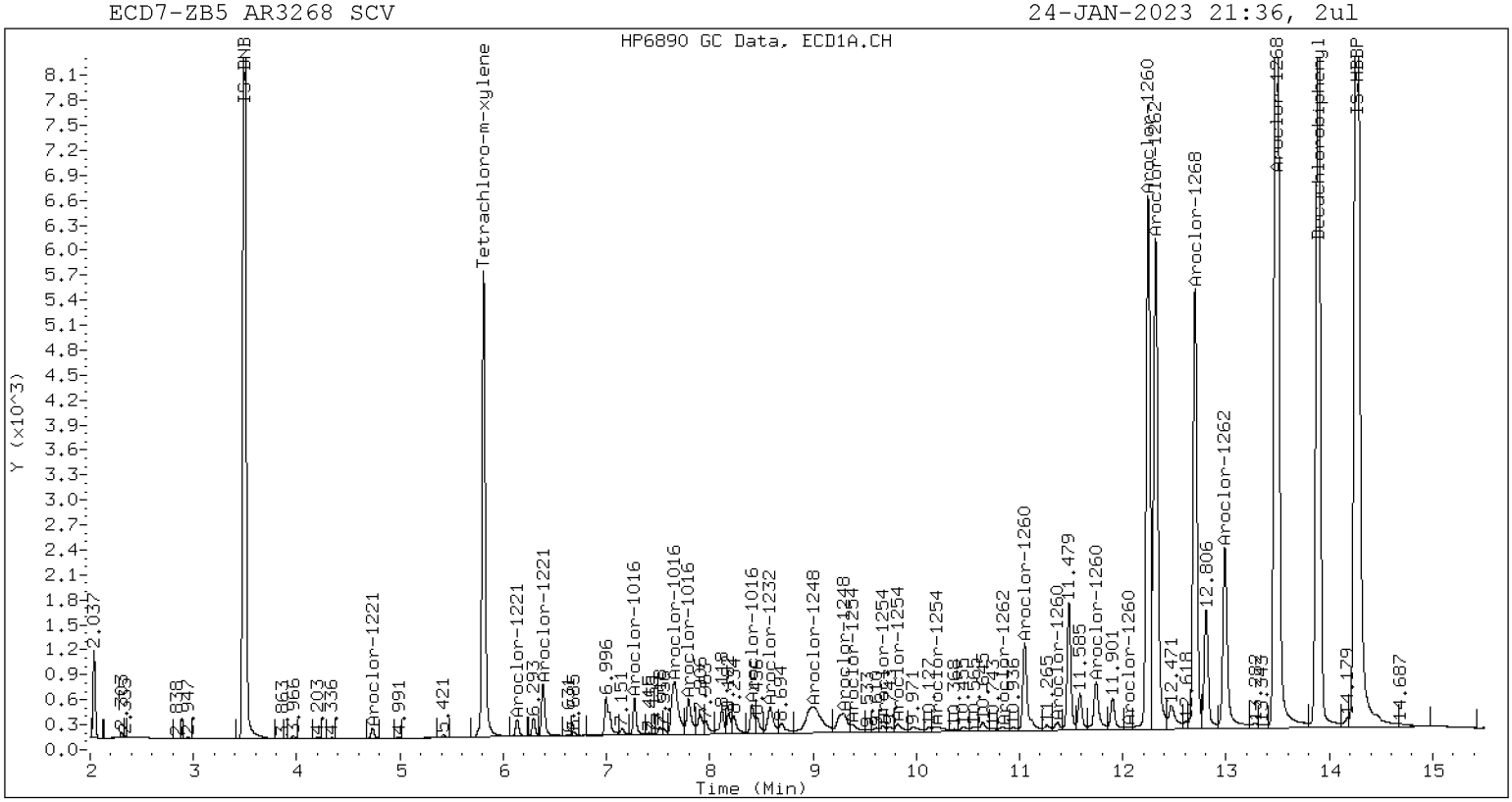
Total PCB Area Col2 (5.787 - 14.020) = 2084481 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

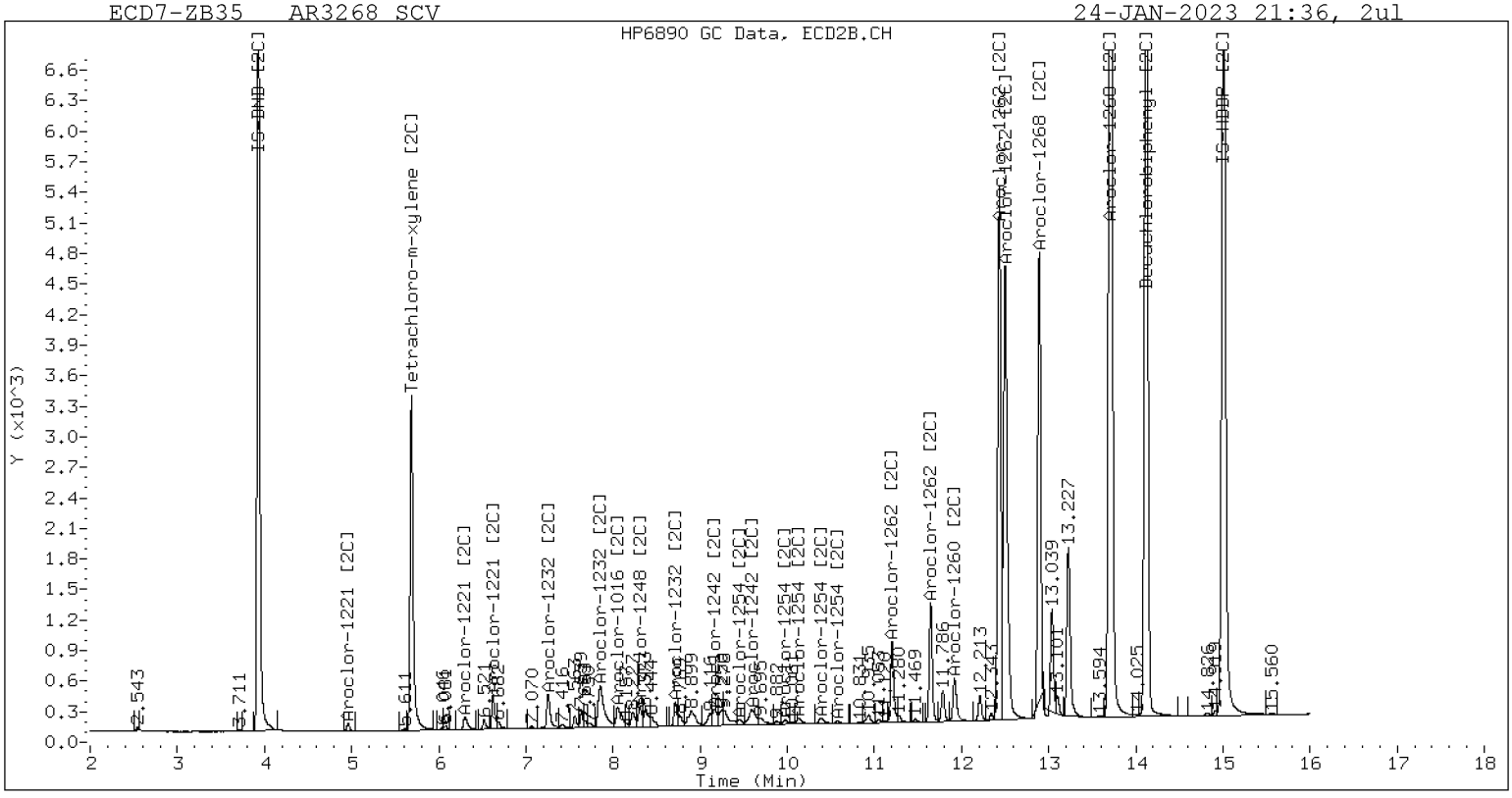
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268 SCV 24-JAN-2023 21:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268 SCV 24-JAN-2023 21:36, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /230124.b/01242330ECD7.D ARI ID: DDTS

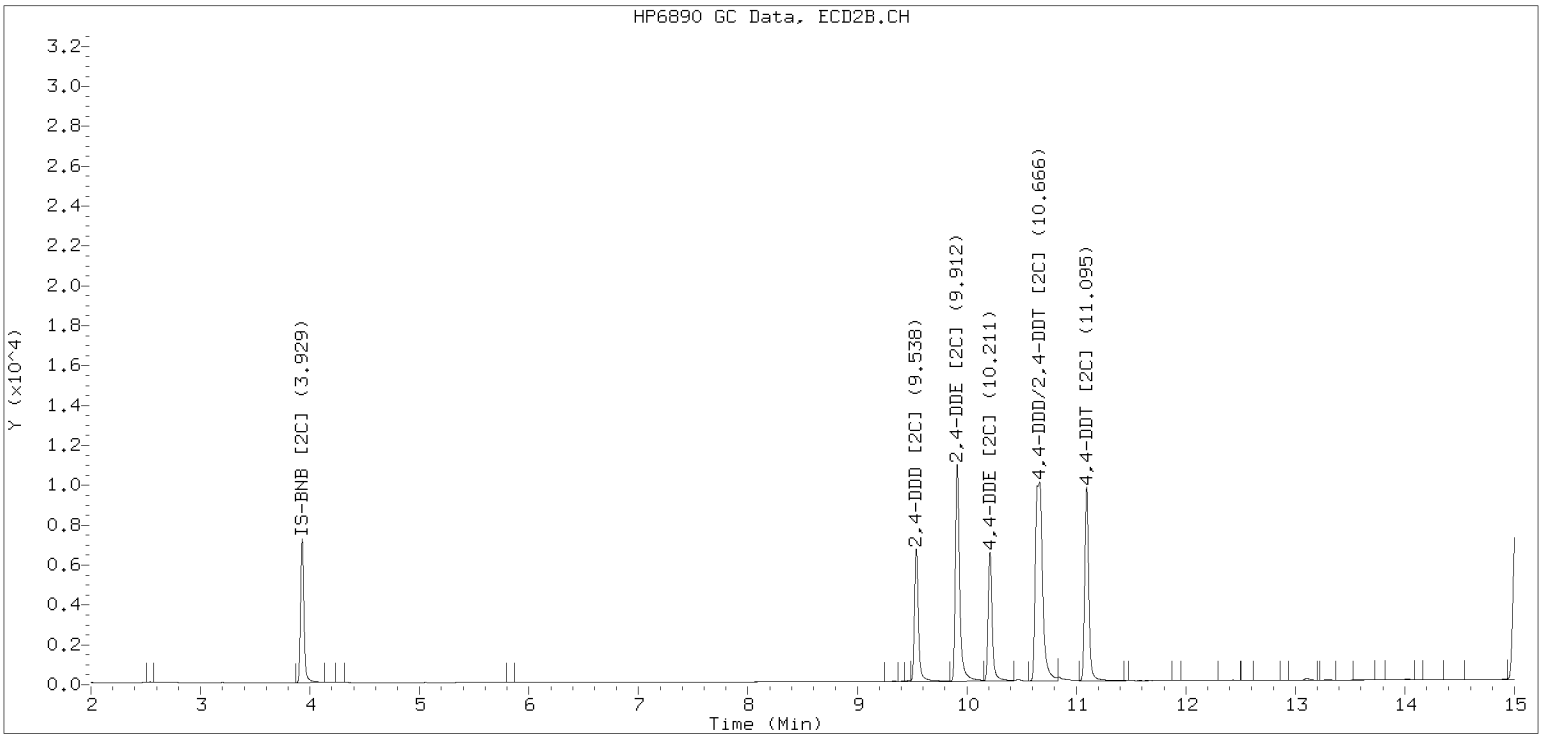
ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
9.263	0.000	519078	9.912	0.000	601473	0.100	0.100	0.0	2,4-DDE
10.296	0.000	1468204	10.666	0.000	915087	0.100	0.200#	66.7*	2,4-DDT
9.687	0.000	883988	10.211	0.000	339715	0.100	0.100	0.0	4,4-DDE
0.000	-10.281	0	10.666	0.000	915087	0.000	0.200#	----	4,4-DDD

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

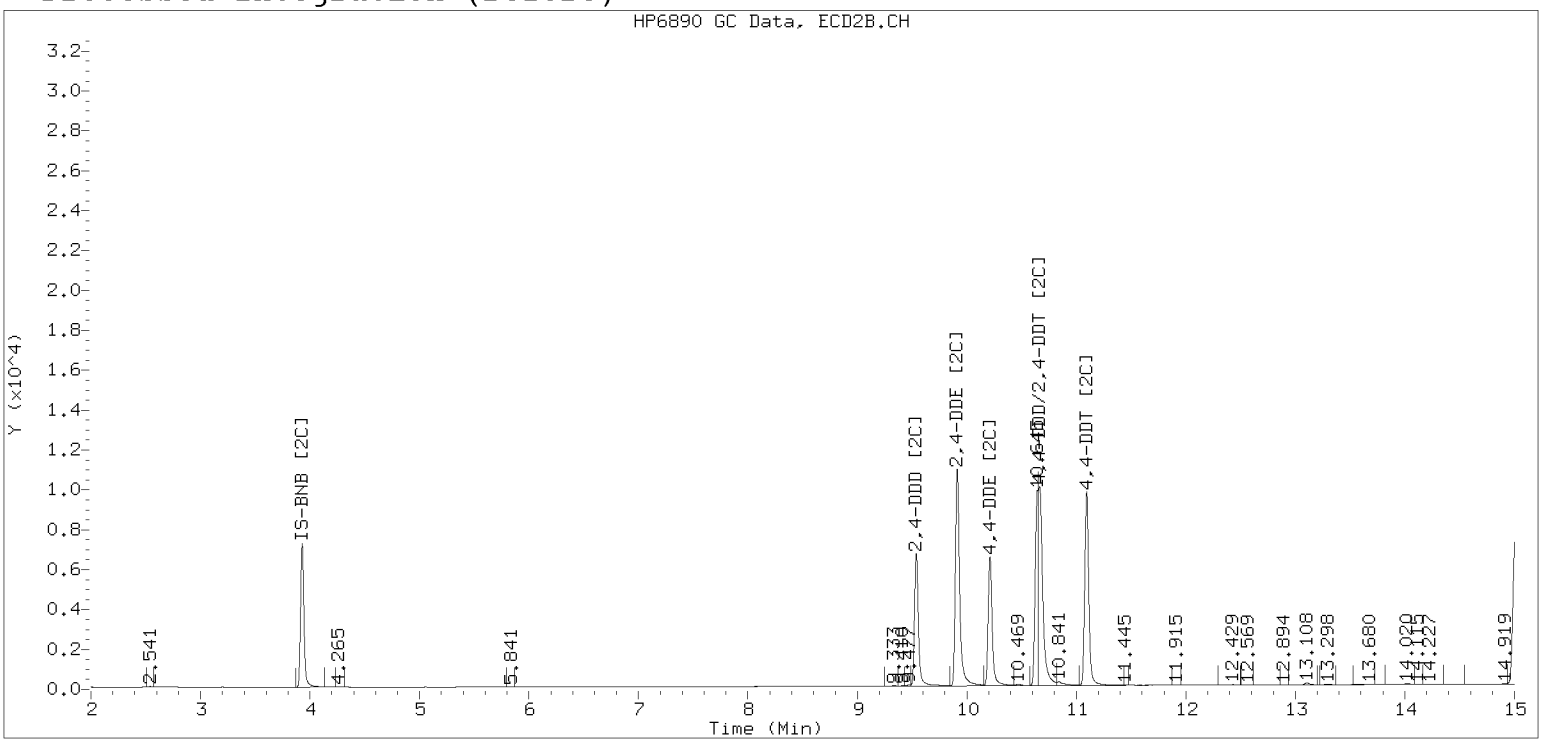
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230124.b/230124.b/01242330ECD7.D Injection Date: 24-JAN-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242331ECD7.D
Data file 2: /230124.b/230124.b/01242331ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: DDT BD
Client ID:
Injection Date: 24-JAN-2023 22:18
Report Date: 01/25/2023 10:54
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	249607	0.000	0.000	0	36.2	0.1	198.6*	Tetrachloro-m-xylene
13.893	0.001	342925	0.000	0.000	0	33.3	0.1	198.4*	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	488086	-3.0
Hexabromobiphenyl	647433	963404	48.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	334787	-0.6
Hexabromobiphenyl	382032	334787	-12.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	3.929	-0.000	334787	80.0
Aroclor-1016	2	---			0.0	NS	---			----
Aroclor-1016	3	---			0.0	NS	---			----
Aroclor-1016	4	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	9.924	0.012	8335	0.0
Aroclor-1221	2	---			0.0	NS	---			----
Aroclor-1221	3	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	NS	---			----
Aroclor-1232	3	---			0.0	NS	---			----
Aroclor-1232	4	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	NS	---			----
Aroclor-1242	3	---			0.0	NS	---			----
Aroclor-1242	4	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	10.681	0.016	29738	0.0
Aroclor-1248	2	---			0.0	NS	---			----
Aroclor-1248	3	8.973	-0.026	2304	3.9	NS	---			----
Aroclor-1248	4	9.235	-0.059	1484	5.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	9.235	-0.064	1484	3.0	1	11.098	0.003	696435	0.1
Aroclor-1254	2	9.378	-0.000	295	1.4	NS	---			----
Aroclor-1254	3	9.703	0.034	11396	35.8	NS	---			----
Aroclor-1254	4	---			0.0	NS	---			----
Aroclor-1254	5	10.272	0.095	32481	80.0	NS	---			----
	Total Col1Ave (4 peaks):				30.0	Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	11.115	0.071	9308	17.2	1	---			0.0
Aroclor-1260	2	11.344	-0.016	232461	418.4	NS	---			----
Aroclor-1260	3	11.698	-0.036	294	0.2	NS	---			----
Aroclor-1260	4	---			0.0	NS	---			----
Aroclor-1260	5	---			0.0	NS	---			----
	Total Col1Ave (3 peaks):				145.3	Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.763	-0.070	892438	2290.6	1	---			0.0
Aroclor-1262	2	---			0.0	NS	---			----
Aroclor-1262	3	---			0.0	NS	---			----
Aroclor-1262	4	12.990	0.001	748	1.2	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	NS	---			----
Aroclor-1268	3	12.620	-0.079	4678	3.6	NS	---			----
Aroclor-1268	4	13.510	0.021	3115	0.8	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 1961348 Col1 Total PCB = 0.3 ppm*

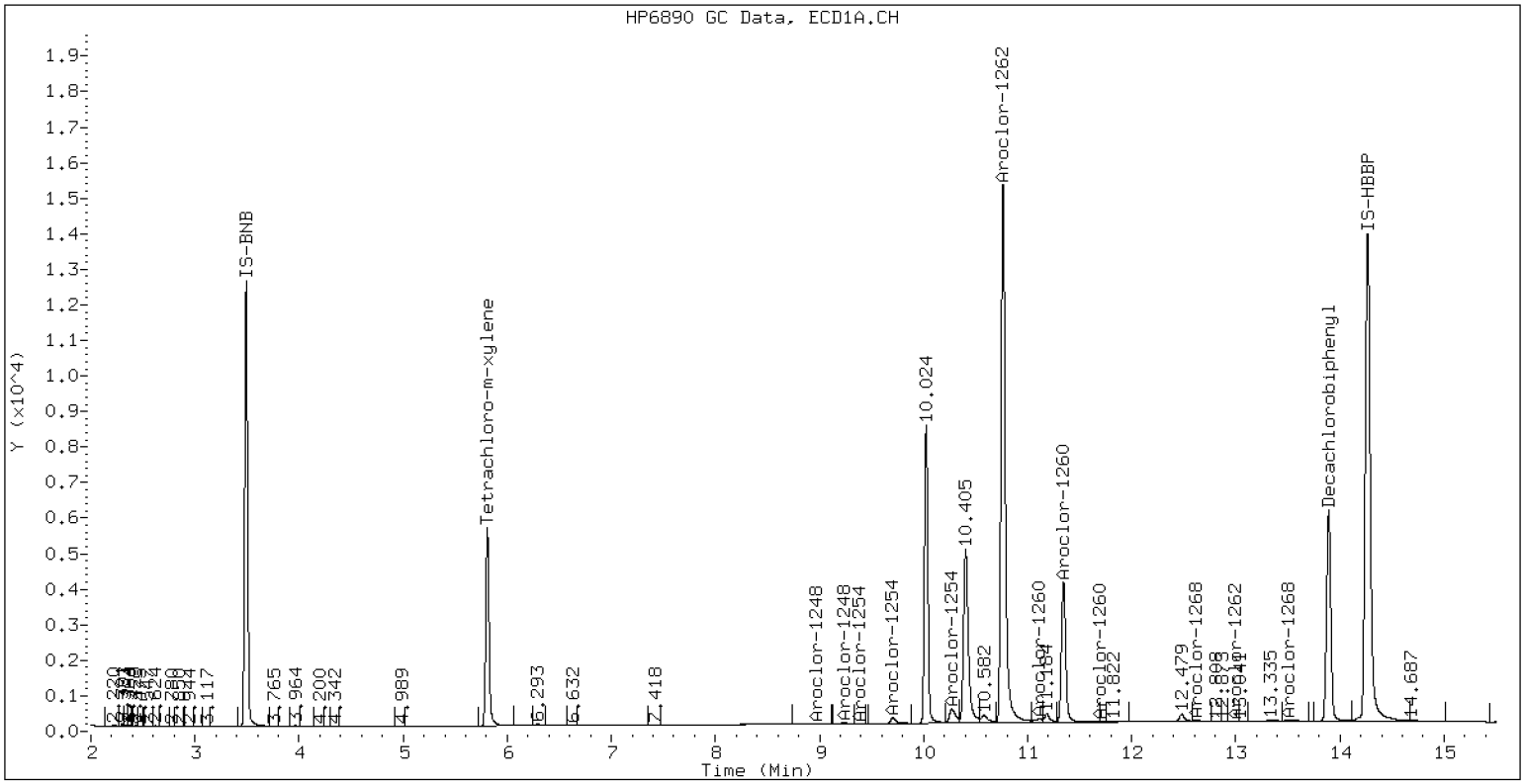
Total PCB Area Col2 (5.909 - 13.792) = 1177441 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

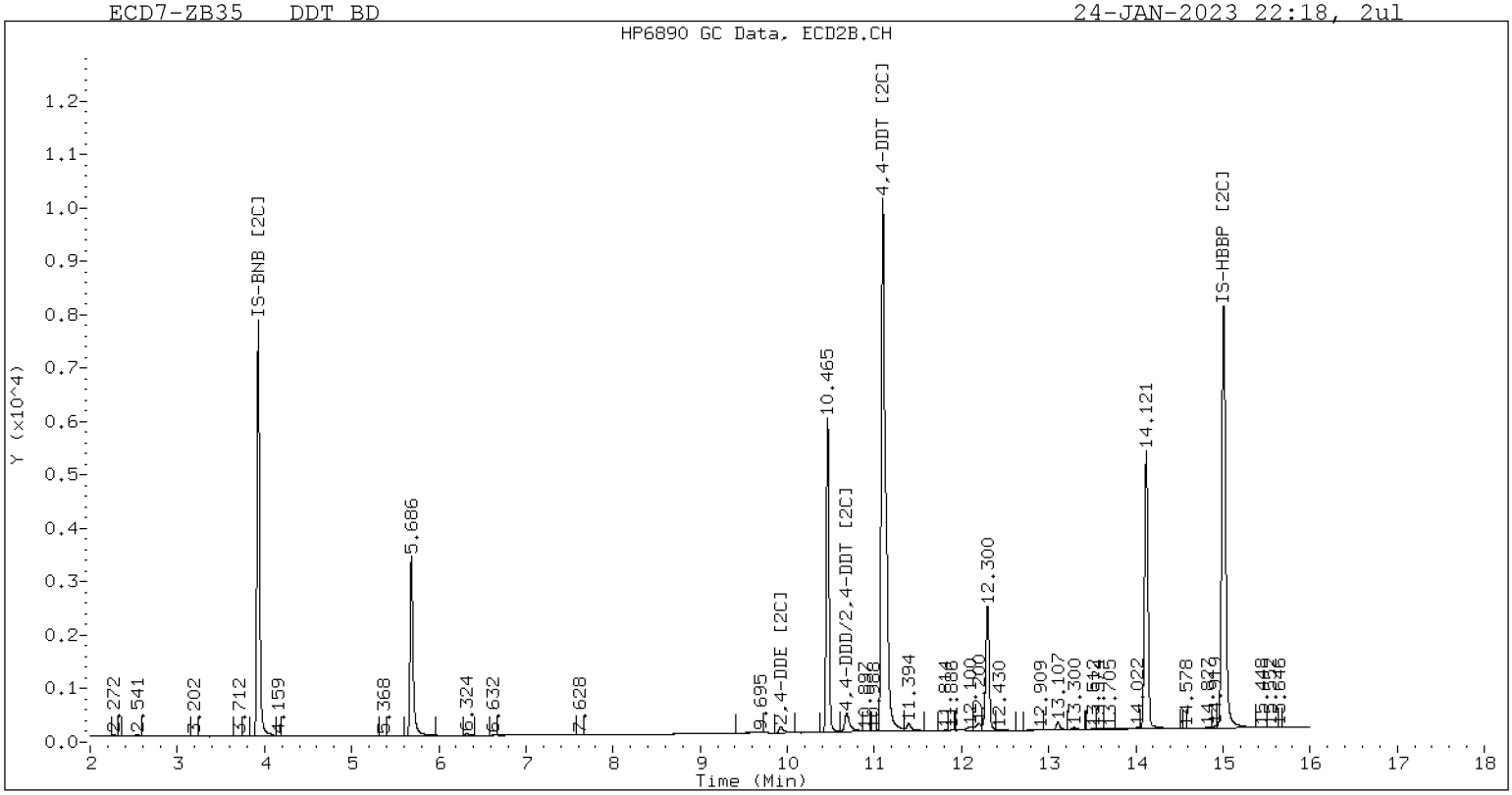
PCB Dual Column Chromatograms

ECD7-ZB5 DDT BD 24-JAN-2023 22:18, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 DDT BD 24-JAN-2023 22:18, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GA00061
Laboratory ID: SLA0281-SCV1
Sequence: SLA0281
Sequence Name: AR1660SCV1
Standard ID: K007655

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1016	250.00	217	-13.2	20.00
Aroclor 1016 [2C]	250.00	220	-11.9	20.00
Aroclor 1260	250.00	211	-15.7	20.00
Aroclor 1260 [2C]	250.00	238	-4.9	20.00
Decachlorobiphenyl	40.000	37.9	-5.1	20.00
Tetrachlorometaxylene	40.000	37.5	-6.2	20.00
Decachlorobiphenyl [2C]	40.000	40.2	0.6	20.00
Tetrachlorometaxylene [2C]	40.000	37.3	-6.8	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242324ECD7.D
Data file 2: /230124.b/230124.b/01242324ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 SCV
Client ID:
Injection Date: 24-JAN-2023 19:51
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	268739	5.686	-0.001	172961	37.5	37.3	0.6	Tetrachloro-m-xylene
13.891	-0.000	381489	14.121	0.001	320416	37.9	40.2	5.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	506576	0.6
Hexabromobiphenyl	647433	940129	45.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	343102	1.8
Hexabromobiphenyl	382032	501702	31.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	40958	217.6	1	7.255	0.001	40190	216.0
Aroclor-1016	2	7.655	0.004	135282	216.9	2	7.852	0.001	90338	221.5
Aroclor-1016	3	7.791	0.003	61557	214.5	3	8.052	0.002	37810	227.2
Aroclor-1016	4	8.406	0.002	40372	218.7	4	8.306	0.000	28171	215.9
Total Col1Ave (4 peaks):					216.9	Total Col2Ave (4 peaks):				220.2 RPD = 1
Corrected Ave (3 peaks):					216.3	Corrected Ave (3 peaks):				217.8 RPD = 1
Aroclor-1221	1	4.732	-0.001	256	6.8	1	---			0.0
Aroclor-1221	2	6.131	-0.002	4742	61.9	2	6.302	0.004	5037	91.4
Aroclor-1221	3	6.384	-0.000	27448	154.4	3	6.623	-0.000	18931	203.5
Total Col1Ave (3 peaks):					74.4	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.732	-0.001	256	11.0	1	---			0.0
Aroclor-1232	2	6.131	-0.002	4742	90.0	2	7.255	-0.001	40190	470.8
Aroclor-1232	3	7.655	-0.004	135282	513.5	3	7.852	-0.002	90338	519.5
Aroclor-1232	4	8.581	-0.003	56938	504.9	4	8.713	-0.001	27776	574.9
Total Col1Ave (4 peaks):					279.8	Total Col2Ave (3 peaks):				521.7 RPD = 60*
Corrected Ave (3 peaks):					202.0	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	-0.000	40958	264.0	1	7.255	-0.000	40190	267.8
Aroclor-1242	2	7.655	-0.001	135282	266.5	2	7.852	-0.001	90338	271.0
Aroclor-1242	3	8.406	-0.001	40372	267.7	3	9.115	-0.045	15827	151.6
Aroclor-1242	4	8.581	-0.000	56938	249.9	4	9.587	0.001	3186	23.0
Total Col1Ave (4 peaks):					262.0	Total Col2Ave (4 peaks):				178.4 RPD = 38
Corrected Ave (3 peaks):					260.1	Corrected Ave (3 peaks):				147.5 RPD = 55*
Aroclor-1248	1	8.406	0.000	40372	159.3	1	8.306	0.000	28171	181.6
Aroclor-1248	2	8.581	0.001	56938	176.1	2	8.713	0.000	27776	166.4
Aroclor-1248	3	8.995	-0.004	58213	94.1	3	9.115	-0.042	15827	77.6
Aroclor-1248	4	9.304	0.010	36620	119.6	4	9.587	0.006	3186	12.6
Total Col1Ave (4 peaks):					137.3	Total Col2Ave (4 peaks):				109.6 RPD = 22
Corrected Ave (3 peaks):					124.4	Corrected Ave (3 peaks):				85.5 RPD = 37
Aroclor-1254	1	9.304	0.005	36620	70.9	1	9.450	0.002	20792	83.5
Aroclor-1254	2	---			0.0	2	9.972	0.003	2640	13.1
Aroclor-1254	3	9.673	0.003	4075	12.3	3	10.148	0.027	52902	120.5
Aroclor-1254	4	9.813	0.004	14733	22.7	4	10.372	0.000	71680	163.3
Aroclor-1254	5	10.122	-0.055	119528	283.6	5	10.569	-0.000	98559	403.2
Total Col1Ave (4 peaks):					97.4	Total Col2Ave (5 peaks):				156.7 RPD = 47*
Corrected Ave (3 peaks):					35.3	Corrected Ave (4 peaks):				95.1 RPD = 92*
Aroclor-1260	1	11.045	0.002	116435	220.7	1	11.654	0.000	81795	226.0
Aroclor-1260	2	11.362	0.001	116918	215.6	2	11.920	0.002	217887	238.0
Aroclor-1260	3	11.738	0.003	303264	212.5	3	12.437	0.001	56212	246.3
Aroclor-1260	4	12.143	0.004	141534	191.9	4	12.502	0.000	142689	240.8
Aroclor-1260	5	12.246	0.002	68446	212.9	NS	---			----
Total Col1Ave (5 peaks):					210.7	Total Col2Ave (4 peaks):				237.8 RPD = 12
Corrected Ave (4 peaks):					208.2	Corrected Ave (3 peaks):				234.9 RPD = 12
Aroclor-1262	1	10.830	-0.002	169725	446.4	1	11.200	0.000	83995	171.1
Aroclor-1262	2	12.246	0.000	68446	114.1	2	11.654	0.001	81795	195.9
Aroclor-1262	3	12.320	-0.000	84201	129.2	3	12.437	0.003	56212	126.4
Aroclor-1262	4	12.989	-0.000	78065	131.5	4	12.502	-0.001	142689	200.4
Total Col1Ave (4 peaks):					205.3	Total Col2Ave (4 peaks):				173.4 RPD = 17
Corrected Ave (3 peaks):					124.9	Corrected Ave (3 peaks):				164.5 RPD = 27
Aroclor-1268	1	12.246	0.001	68446	44.1	1	12.437	0.003	56212	48.0
Aroclor-1268	2	12.320	0.002	84201	54.4	2	12.502	0.001	142689	114.4
Aroclor-1268	3	12.726	0.027	33020	25.7	3	12.894	0.001	1495	1.4
Aroclor-1268	4	13.490	0.001	16019	4.2	4	13.709	0.001	10120	3.2
Total Col1Ave (4 peaks):					32.1	Total Col2Ave (4 peaks):				41.8 RPD = 26
Corrected Ave (3 peaks):					24.7	Corrected Ave (3 peaks):				17.5 RPD = 34

Total PCB Area Col1 (5.909 - 13.792) = 2789370 Col1 Total PCB = 0.5 ppm*

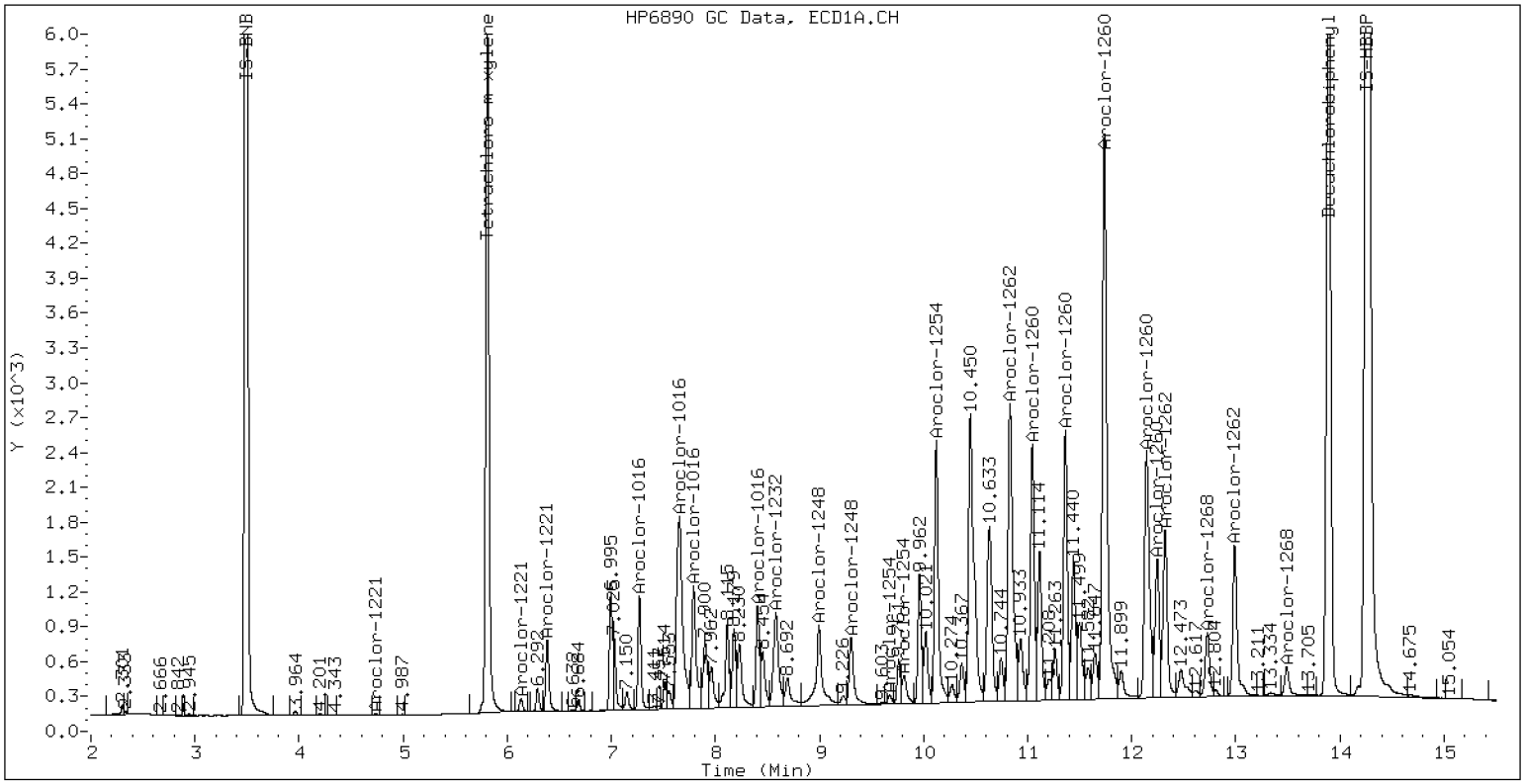
Total PCB Area Col2 (5.787 - 14.020) = 1810543 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

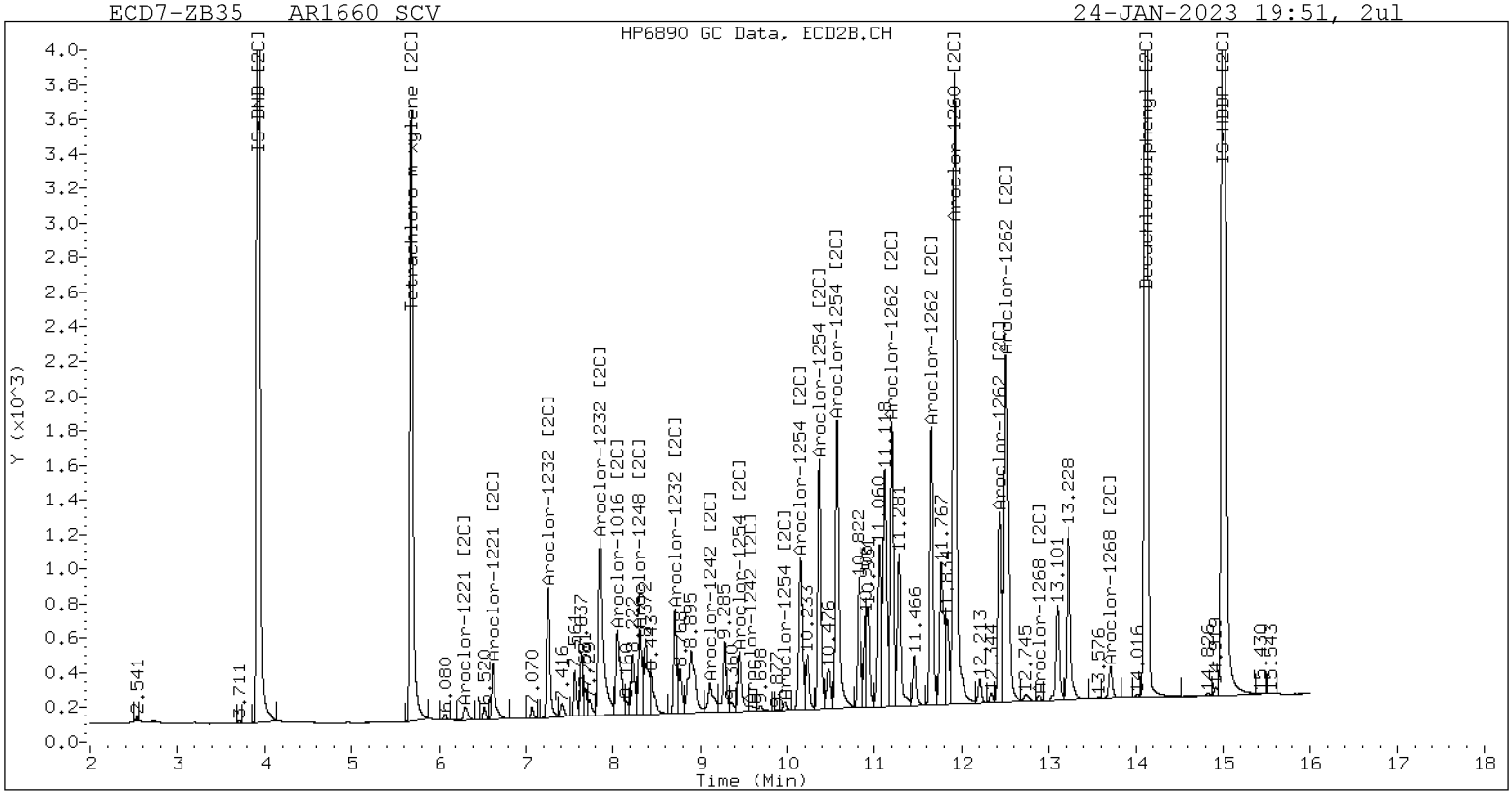
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660 SCV 24-JAN-2023 19:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660 SCV 24-JAN-2023 19:51, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GA00061
Laboratory ID: SLA0281-SCV2
Sequence: SLA0281
Sequence Name: AR1242SCV2
Standard ID: K007656

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1242	250.00	223	-10.9	20.00
Aroclor 1242 [2C]	250.00	235	-5.9	20.00
Decachlorobiphenyl	40.000	38.5	-3.6	20.00
Tetrachlorometaxylene	40.000	37.8	-5.6	20.00
Decachlorobiphenyl [2C]	40.000	40.3	0.9	20.00
Tetrachlorometaxylene [2C]	40.000	37.4	-6.6	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242325ECD7.D
Data file 2: /230124.b/230124.b/01242325ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 SCV
Client ID:
Injection Date: 24-JAN-2023 20:12
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	268580	5.686	-0.001	172592	37.8	37.4	1.1	Tetrachloro-m-xylene
13.892	0.001	392918	14.121	0.001	323869	38.5	40.3	4.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503089	-0.0
Hexabromobiphenyl	647433	953137	47.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	341704	1.4
Hexabromobiphenyl	382032	505860	32.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	29901	159.9	1	7.255	0.000	32077	173.1
Aroclor-1016	2	7.653	0.003	107333	173.3	2	7.851	-0.000	71438	175.9
Aroclor-1016	3	7.790	0.002	45013	157.9	3	8.051	0.001	29072	175.4
Aroclor-1016	4	8.406	0.002	32958	179.8	4	8.306	0.001	21761	167.5
Total Col1Ave (4 peaks):		167.7				Total Col2Ave (4 peaks):		173.0	RPD = 3	
Corrected Ave (3 peaks):		163.7				Corrected Ave (3 peaks):		172.0	RPD = 5	
Aroclor-1221	1	4.737	0.004	141	3.8	1	---			0.0
Aroclor-1221	2	6.133	-0.001	3649	48.0	2	6.317	0.018	4290	78.2
Aroclor-1221	3	6.384	-0.000	21189	120.0	3	6.624	0.001	14613	157.7
Total Col1Ave (3 peaks):		57.3				Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.737	0.003	141	6.1	1	---			0.0
Aroclor-1232	2	6.133	-0.001	3649	69.7	2	7.255	-0.002	32077	377.3
Aroclor-1232	3	7.653	-0.005	107333	410.2	3	7.851	-0.004	71438	412.5
Aroclor-1232	4	8.581	-0.003	59617	532.3	4	8.713	-0.000	22563	468.9
Total Col1Ave (4 peaks):		254.6				Total Col2Ave (3 peaks):		419.6	RPD = 49*	
Corrected Ave (3 peaks):		162.0				Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	29901	194.1	1	7.255	-0.001	32077	214.6
Aroclor-1242	2	7.653	-0.002	107333	212.9	2	7.851	-0.002	71438	215.2
Aroclor-1242	3	8.406	-0.000	32958	220.0	3	9.156	-0.004	27374	263.3
Aroclor-1242	4	8.581	-0.000	59617	263.5	4	9.581	-0.006	34156	247.9
Total Col1Ave (4 peaks):		222.6				Total Col2Ave (4 peaks):		235.3	RPD = 6	
Corrected Ave (3 peaks):		209.0				Corrected Ave (3 peaks):		225.9	RPD = 8	
Aroclor-1248	1	8.406	0.001	32958	131.0	1	8.306	0.001	21761	140.9
Aroclor-1248	2	8.581	0.001	59617	185.7	2	8.713	0.001	22563	135.7
Aroclor-1248	3	9.003	0.004	72557	118.2	3	9.156	-0.000	27374	134.7
Aroclor-1248	4	9.296	0.003	28122	92.5	4	9.581	-0.001	34156	135.9
Total Col1Ave (4 peaks):		131.8				Total Col2Ave (4 peaks):		136.8	RPD = 4	
Corrected Ave (3 peaks):		113.9				Corrected Ave (3 peaks):		135.5	RPD = 17	
Aroclor-1254	1	9.296	-0.002	28122	54.8	1	9.448	0.000	11650	47.0
Aroclor-1254	2	9.380	0.002	9292	42.4	2	9.968	-0.001	7642	38.1
Aroclor-1254	3	9.671	0.001	12871	39.2	3	10.120	-0.001	16012	36.6
Aroclor-1254	4	9.808	-0.000	22113	34.4	4	10.378	0.007	16300	37.3
Aroclor-1254	5	10.176	-0.001	17771	42.5	5	10.572	0.004	4439	18.2
Total Col1Ave (5 peaks):		42.7				Total Col2Ave (5 peaks):		35.5	RPD = 18	
Corrected Ave (4 peaks):		39.6				Corrected Ave (4 peaks):		32.6	RPD = 19	
Aroclor-1260	1	11.047	0.003	741	1.4	1	11.663	0.010	1794	4.9
Aroclor-1260	2	11.366	0.006	379	0.7	2	11.923	0.005	1208	1.3
Aroclor-1260	3	11.745	0.011	860	0.6	3	12.507	0.071	977	4.2
Aroclor-1260	4	12.154	0.014	1536	2.1	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
Total Col1Ave (4 peaks):		1.2				Total Col2Ave (3 peaks):		3.5	RPD = 99*	
Corrected Ave (3 peaks):		0.9				Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.836	0.004	10654	27.6	1	11.120	-0.080	8071	16.3
Aroclor-1262	2	12.154	-0.092	1536	2.5	2	11.663	0.010	1794	4.3
Aroclor-1262	3	---			0.0	3	12.507	0.073	977	2.2
Aroclor-1262	4	13.040	0.051	1739	2.9	4	---			0.0
Total Col1Ave (3 peaks):		11.0				Total Col2Ave (3 peaks):		7.6	RPD = 37	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.154	-0.091	1536	1.0	1	12.507	0.073	977	0.8
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.623	-0.076	5080	3.9	3	12.894	0.001	98	0.1
Aroclor-1268	4	13.501	0.012	2725	0.7	4	13.707	-0.001	1566	0.5
Total Col1Ave (3 peaks):		1.9				Total Col2Ave (3 peaks):		0.5	RPD = 120*	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 915887 Col1 Total PCB = 0.2 ppm*

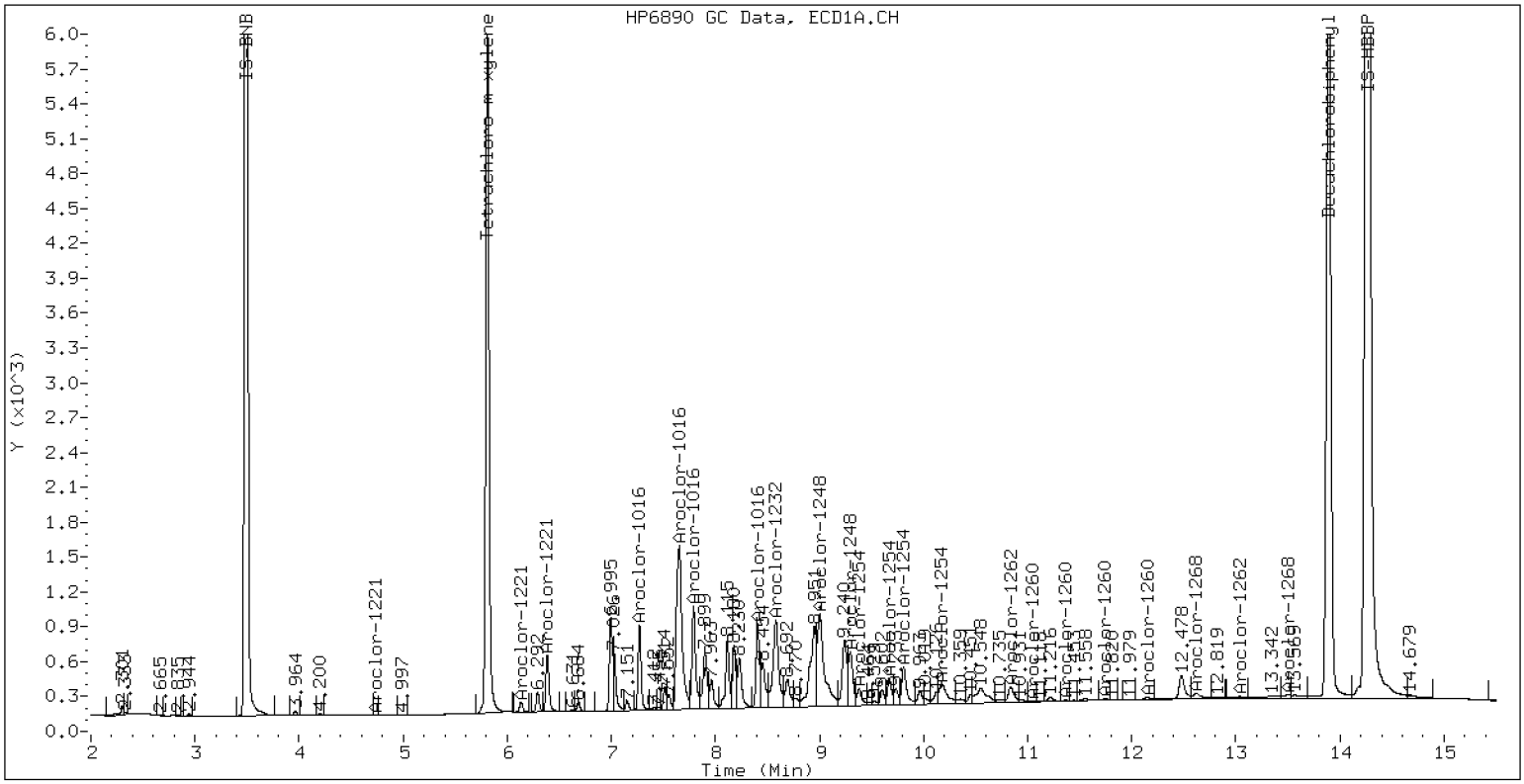
Total PCB Area Col2 (5.787 - 14.020) = 575897 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

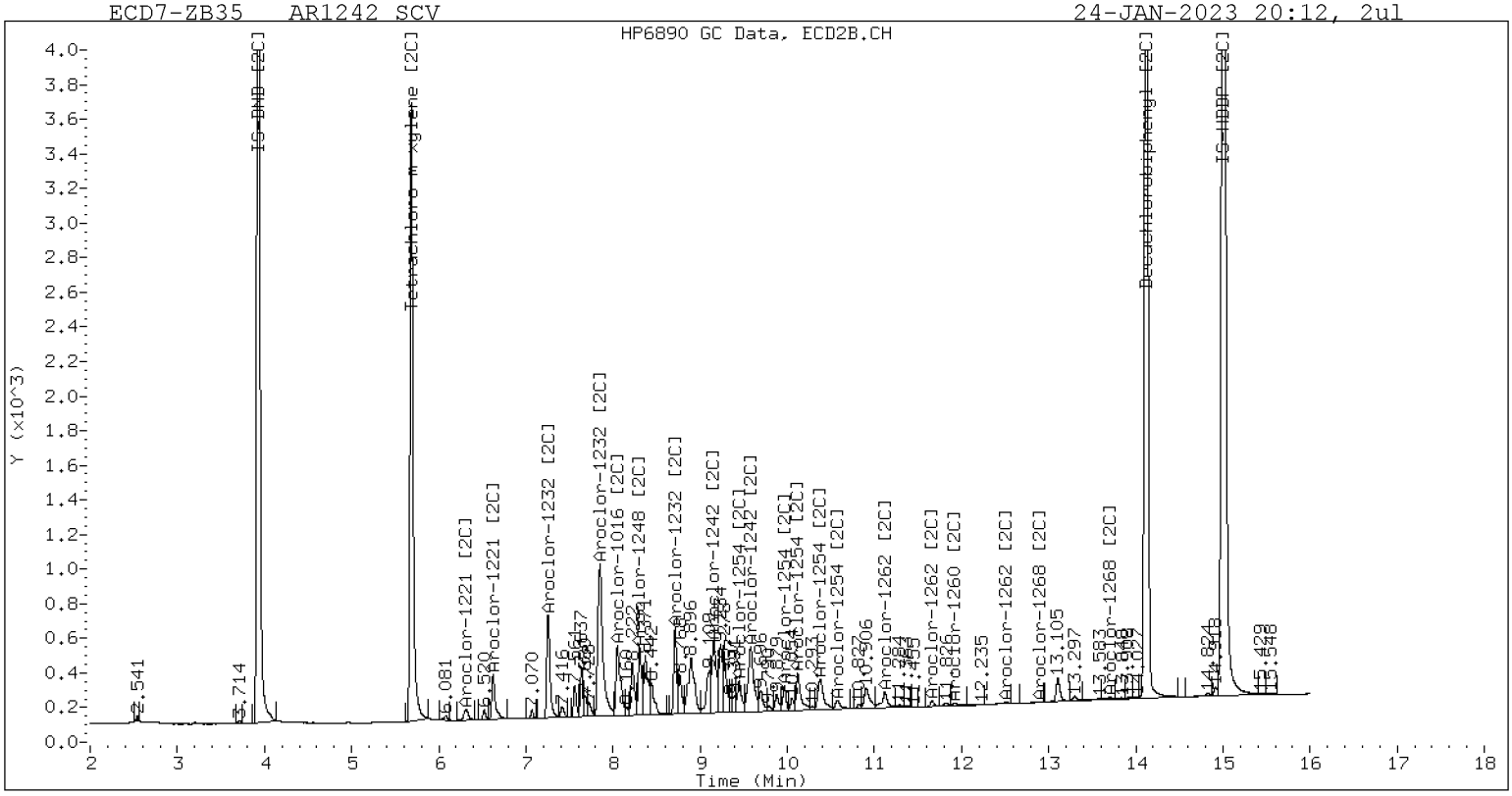
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242 SCV 24-JAN-2023 20:12, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242 SCV 24-JAN-2023 20:12, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GA00061
Laboratory ID: SLA0281-SCV3
Sequence: SLA0281
Sequence Name: AR1248SCV3
Standard ID: K007657

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1248	250.00	237	-5.1	20.00
Aroclor 1248 [2C]	250.00	231	-7.6	20.00
Decachlorobiphenyl	40.000	38.3	-4.3	20.00
Tetrachlorometaxylene	40.000	36.8	-8.1	20.00
Decachlorobiphenyl [2C]	40.000	39.6	-1.1	20.00
Tetrachlorometaxylene [2C]	40.000	36.5	-8.6	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242326ECD7.D
Data file 2: /230124.b/230124.b/01242326ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 SCV
Client ID:
Injection Date: 24-JAN-2023 20:33
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.000	263982	5.686	-0.001	169991	36.8	36.5	0.6	Tetrachloro-m-xylene
13.892	0.001	400655	14.121	0.001	316171	38.3	39.6	3.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	508189	1.0
Hexabromobiphenyl	647433	979067	51.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	344105	2.1
Hexabromobiphenyl	382032	503378	31.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	14777	78.3	1	7.254	-0.001	16100	86.3
Aroclor-1016	2	7.655	0.004	70114	112.1	2	7.853	0.002	47184	115.4
Aroclor-1016	3	7.794	0.006	27212	94.5	3	8.053	0.003	9427	56.5
Aroclor-1016	4	8.406	0.003	59884	323.4	4	8.306	0.001	36680	280.3
Total Col1Ave (4 peaks):					152.0	Total Col2Ave (4 peaks):				134.6 RPD = 12
Corrected Ave (3 peaks):					94.9	Corrected Ave (3 peaks):				86.0 RPD = 10
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.133	-0.000	591	7.7	2	6.323	0.025	1820	32.9
Aroclor-1221	3	6.386	0.001	2453	13.8	3	6.627	0.004	1477	15.8
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.133	-0.000	591	11.2	2	7.254	-0.002	16100	188.0
Aroclor-1232	3	7.655	-0.004	70114	265.3	3	7.853	-0.001	47184	270.6
Aroclor-1232	4	8.581	-0.003	76286	674.3	4	8.714	0.000	39330	811.7
Total Col1Ave (3 peaks):					316.9	Total Col2Ave (3 peaks):				423.4 RPD = 29
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	14777	95.0	1	7.254	-0.002	16100	107.0
Aroclor-1242	2	7.655	-0.001	70114	137.7	2	7.853	0.000	47184	141.2
Aroclor-1242	3	8.406	-0.000	59884	395.8	3	9.159	-0.001	46988	448.9
Aroclor-1242	4	8.581	-0.000	76286	333.8	4	9.584	-0.003	56615	408.1
Total Col1Ave (4 peaks):					240.5	Total Col2Ave (4 peaks):				276.3 RPD = 14
Corrected Ave (3 peaks):					188.8	Corrected Ave (3 peaks):				218.7 RPD = 15
Aroclor-1248	1	8.406	0.001	59884	235.6	1	8.306	0.001	36680	235.8
Aroclor-1248	2	8.581	0.001	76286	235.2	2	8.714	0.002	39330	234.9
Aroclor-1248	3	9.000	0.001	148805	239.9	3	9.159	0.003	46988	229.7
Aroclor-1248	4	9.295	0.001	73114	238.1	4	9.584	0.002	56615	223.8
Total Col1Ave (4 peaks):					237.2	Total Col2Ave (4 peaks):				231.0 RPD = 3
Corrected Ave (3 peaks):					236.3	Corrected Ave (3 peaks):				229.5 RPD = 3
Aroclor-1254	1	9.295	-0.004	73114	141.2	1	9.449	0.001	20314	81.4
Aroclor-1254	2	9.378	0.000	36561	165.3	2	9.970	0.000	18678	92.6
Aroclor-1254	3	9.672	0.003	30736	92.6	3	10.124	0.003	35321	80.2
Aroclor-1254	4	9.813	0.004	53537	82.3	4	10.387	0.015	35188	79.9
Aroclor-1254	5	10.192	0.015	40119	94.9	5	10.575	0.006	7386	30.1
Total Col1Ave (5 peaks):					115.3	Total Col2Ave (5 peaks):				72.9 RPD = 45*
Corrected Ave (4 peaks):					102.7	Corrected Ave (4 peaks):				67.9 RPD = 41*
Aroclor-1260	1	11.054	0.010	1868	3.4	1	11.664	0.011	2055	5.7
Aroclor-1260	2	11.366	0.005	1375	2.4	2	11.926	0.009	1303	1.4
Aroclor-1260	3	11.745	0.010	2137	1.4	3	12.439	0.003	395	1.7
Aroclor-1260	4	12.147	0.008	1650	2.1	4	12.507	0.005	890	1.5
Aroclor-1260	5	12.255	0.011	558	1.7	NS	---			----
Total Col1Ave (5 peaks):					2.2	Total Col2Ave (4 peaks):				2.6 RPD = 15
Corrected Ave (4 peaks):					1.9	Corrected Ave (3 peaks):				1.5 RPD = 22
Aroclor-1262	1	10.837	0.005	12736	32.2	1	11.122	-0.078	7136	14.5
Aroclor-1262	2	12.255	0.010	558	0.9	2	11.664	0.011	2055	4.9
Aroclor-1262	3	12.327	0.006	596	0.9	3	12.439	0.004	395	0.9
Aroclor-1262	4	12.996	0.007	1113	1.8	4	12.507	0.003	890	1.2
Total Col1Ave (4 peaks):					8.9	Total Col2Ave (4 peaks):				5.4 RPD = 50*
Corrected Ave (3 peaks):					1.2	Corrected Ave (3 peaks):				2.3 RPD = 65*
Aroclor-1268	1	12.255	0.010	558	0.3	1	12.439	0.005	395	0.3
Aroclor-1268	2	12.327	0.009	596	0.4	2	12.507	0.005	890	0.7
Aroclor-1268	3	12.706	0.007	1161	0.9	3	12.896	0.003	166	0.2
Aroclor-1268	4	13.504	0.016	3330	0.8	4	13.717	0.009	469	0.1
Total Col1Ave (4 peaks):					0.6	Total Col2Ave (4 peaks):				0.3 RPD = 57*
Corrected Ave (3 peaks):					0.5	Corrected Ave (3 peaks):				0.2 RPD = 83*

Total PCB Area Col1 (5.909 - 13.792) = 1230760 Col1 Total PCB = 0.2 ppm*

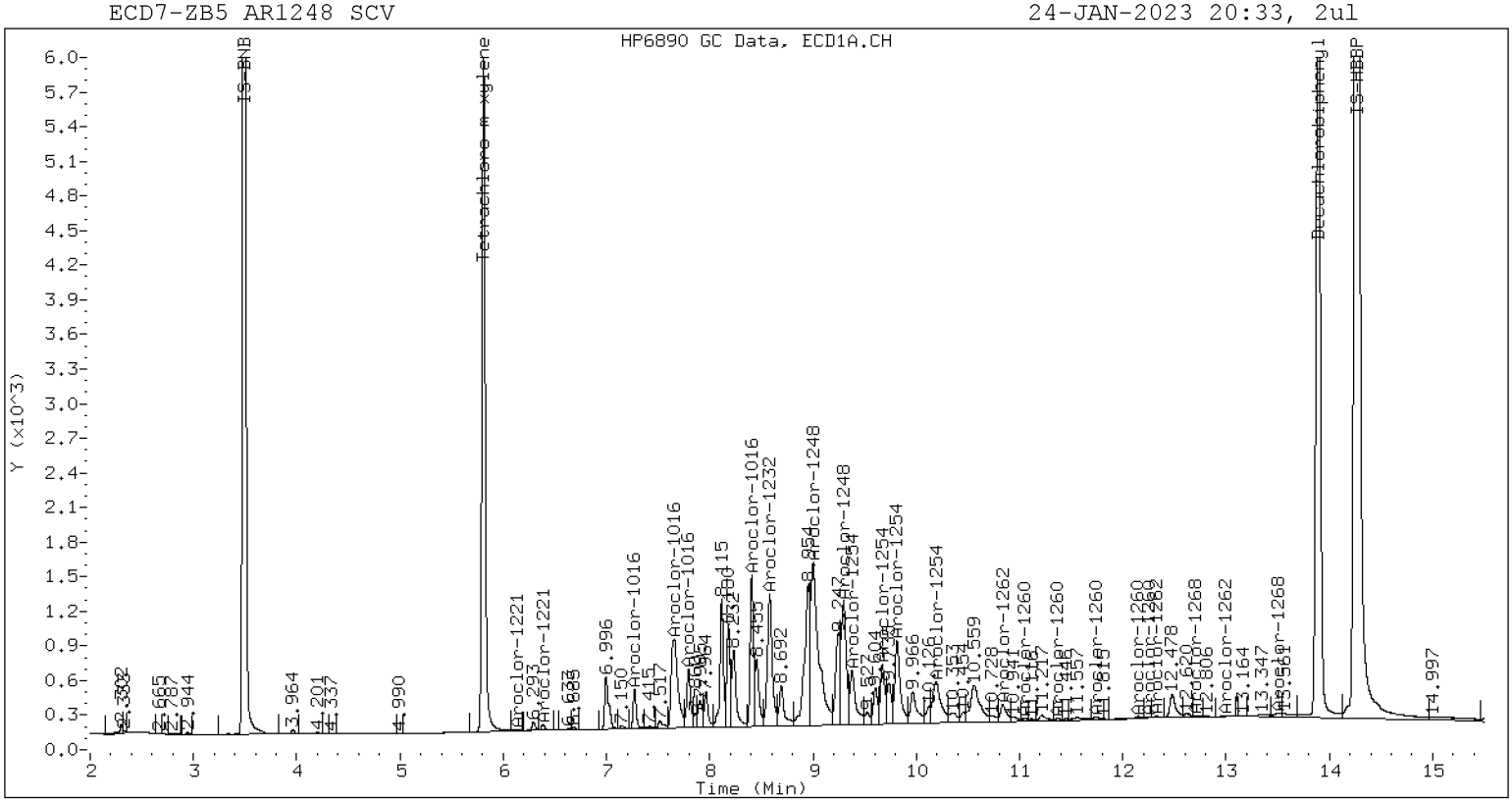
Total PCB Area Col2 (5.787 - 14.020) = 742749 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

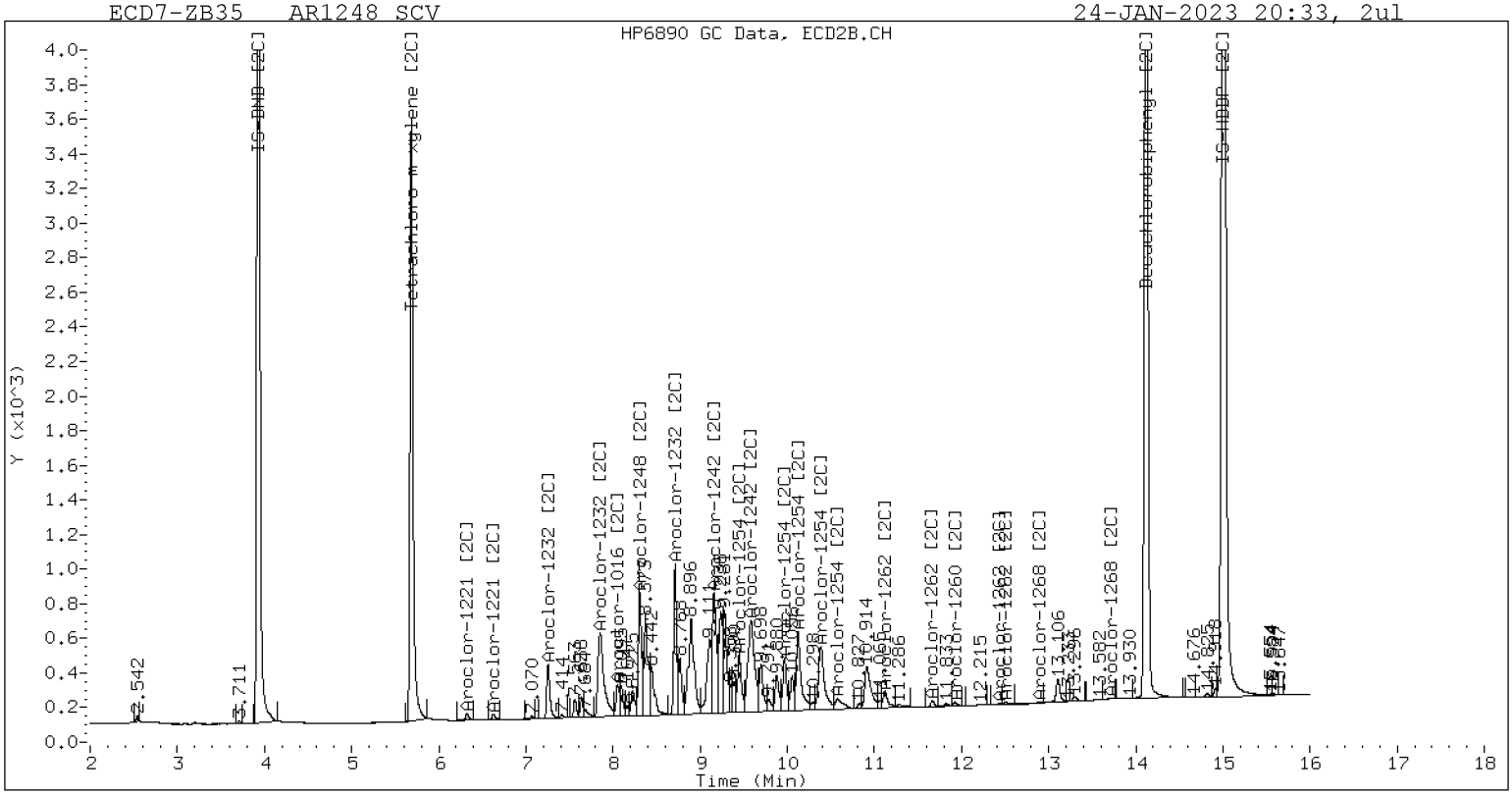
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248 SCV 24-JAN-2023 20:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248 SCV 24-JAN-2023 20:33, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GA00061
Laboratory ID: SLA0281-SCV4
Sequence: SLA0281
Sequence Name: AR1254SCV4
Standard ID: K007658

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1254	250.00	221	-11.7	20.00
Aroclor 1254 [2C]	250.00	227	-9.4	20.00
Decachlorobiphenyl	40.000	37.1	-7.3	20.00
Tetrachlorometaxylene	40.000	36.7	-8.3	20.00
Decachlorobiphenyl [2C]	40.000	39.5	-1.1	20.00
Tetrachlorometaxylene [2C]	40.000	36.6	-8.4	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242327ECD7.D
Data file 2: /230124.b/230124.b/01242327ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 SCV
Client ID:
Injection Date: 24-JAN-2023 20:54
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	261398	5.686	-0.001	169839	36.7	36.6	0.1	Tetrachloro-m-xylene
13.892	0.001	383983	14.121	0.001	323233	37.1	39.5	6.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	504424	0.2
Hexabromobiphenyl	647433	968338	49.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	342969	1.8
Hexabromobiphenyl	382032	515045	34.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.273	0.003	320	1.7	1	7.258	0.003	332	1.8
Aroclor-1016	2	7.658	0.008	991	1.6	2	---			0.0
Aroclor-1016	3	7.795	0.007	662	2.3	3	8.097	0.047	515	3.1
Aroclor-1016	4	8.408	0.005	21378	116.3	4	8.307	0.002	20446	156.8
	Total Col1Ave (4 peaks):				30.5	Total Col2Ave (3 peaks):				53.9 RPD = 55*
	Corrected Ave (3 peaks):				1.9	Corrected Ave: < 3 Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.325	0.026	1749	31.7
Aroclor-1221	3	---			0.0	3	6.633	0.011	321	3.5
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	7.258	0.001	332	3.9
Aroclor-1232	3	7.658	-0.000	991	3.8	3	---			0.0
Aroclor-1232	4	8.587	0.003	8887	79.1	4	8.715	0.001	14030	290.5
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	7.273	0.002	320	2.1	1	7.258	0.002	332	2.2
Aroclor-1242	2	7.658	0.003	991	2.0	2	---			0.0
Aroclor-1242	3	8.408	0.002	21378	142.3	3	9.164	0.004	26593	254.9
Aroclor-1242	4	8.587	0.006	8887	39.2	4	9.543	-0.043	34385	248.7
	Total Col1Ave (4 peaks):				46.4	Total Col2Ave (3 peaks):				168.6 RPD = 114*
	Corrected Ave (3 peaks):				14.4	Corrected Ave: < 3 Peaks				
Aroclor-1248	1	8.408	0.003	21378	84.7	1	8.307	0.001	20446	131.9
Aroclor-1248	2	8.587	0.007	8887	27.6	2	8.715	0.003	14030	84.1
Aroclor-1248	3	8.995	-0.004	110289	179.1	3	9.164	0.007	26593	130.4
Aroclor-1248	4	9.300	0.007	113143	371.2	4	9.543	-0.038	34385	136.4
	Total Col1Ave (4 peaks):				165.7	Total Col2Ave (4 peaks):				120.7 RPD = 31
	Corrected Ave (3 peaks):				97.2	Corrected Ave (3 peaks):				115.5 RPD = 17
Aroclor-1254	1	9.300	0.002	113143	220.1	1	9.449	0.001	56453	226.9
Aroclor-1254	2	9.379	0.001	49468	225.4	2	9.970	0.001	45325	225.4
Aroclor-1254	3	9.671	0.002	72811	221.0	3	10.122	0.002	97044	221.2
Aroclor-1254	4	9.811	0.002	140530	217.7	4	10.374	0.002	98778	225.2
Aroclor-1254	5	10.182	0.005	92254	219.8	5	10.570	0.001	57171	234.0
	Total Col1Ave (5 peaks):				220.8	Total Col2Ave (5 peaks):				226.5 RPD = 3
	Corrected Ave (4 peaks):				219.7	Corrected Ave (4 peaks):				224.7 RPD = 2
Aroclor-1260	1	11.045	0.002	8960	16.5	1	11.661	0.008	26985	72.6
Aroclor-1260	2	11.364	0.004	9237	16.5	2	11.923	0.006	19882	21.2
Aroclor-1260	3	11.741	0.007	21268	14.5	3	12.505	0.069	13190	56.3
Aroclor-1260	4	12.146	0.007	19041	25.1	4	---			0.0
Aroclor-1260	5	12.321	0.077	1835	5.5	NS	---			----
	Total Col1Ave (5 peaks):				15.6	Total Col2Ave (3 peaks):				50.0 RPD = 105*
	Corrected Ave (4 peaks):				13.3	Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.832	0.000	157590	402.4	1	11.119	-0.081	92414	183.3
Aroclor-1262	2	12.321	0.075	1835	3.0	2	11.661	0.008	26985	63.0
Aroclor-1262	3	---			0.0	3	12.505	0.071	13190	28.9
Aroclor-1262	4	12.995	0.006	843	1.4	4	---			0.0
	Total Col1Ave (3 peaks):				135.6	Total Col2Ave (3 peaks):				91.7 RPD = 39
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.321	0.076	1835	1.1	1	12.505	0.072	13190	11.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.720	0.021	1314	1.0	3	12.891	-0.002	169	0.2
Aroclor-1268	4	13.504	0.016	1169	0.3	4	13.706	-0.002	1132	0.3
	Total Col1Ave (3 peaks):				0.8	Total Col2Ave (3 peaks):				3.8 RPD = 130*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 1507519 Col1 Total PCB = 0.3 ppm*

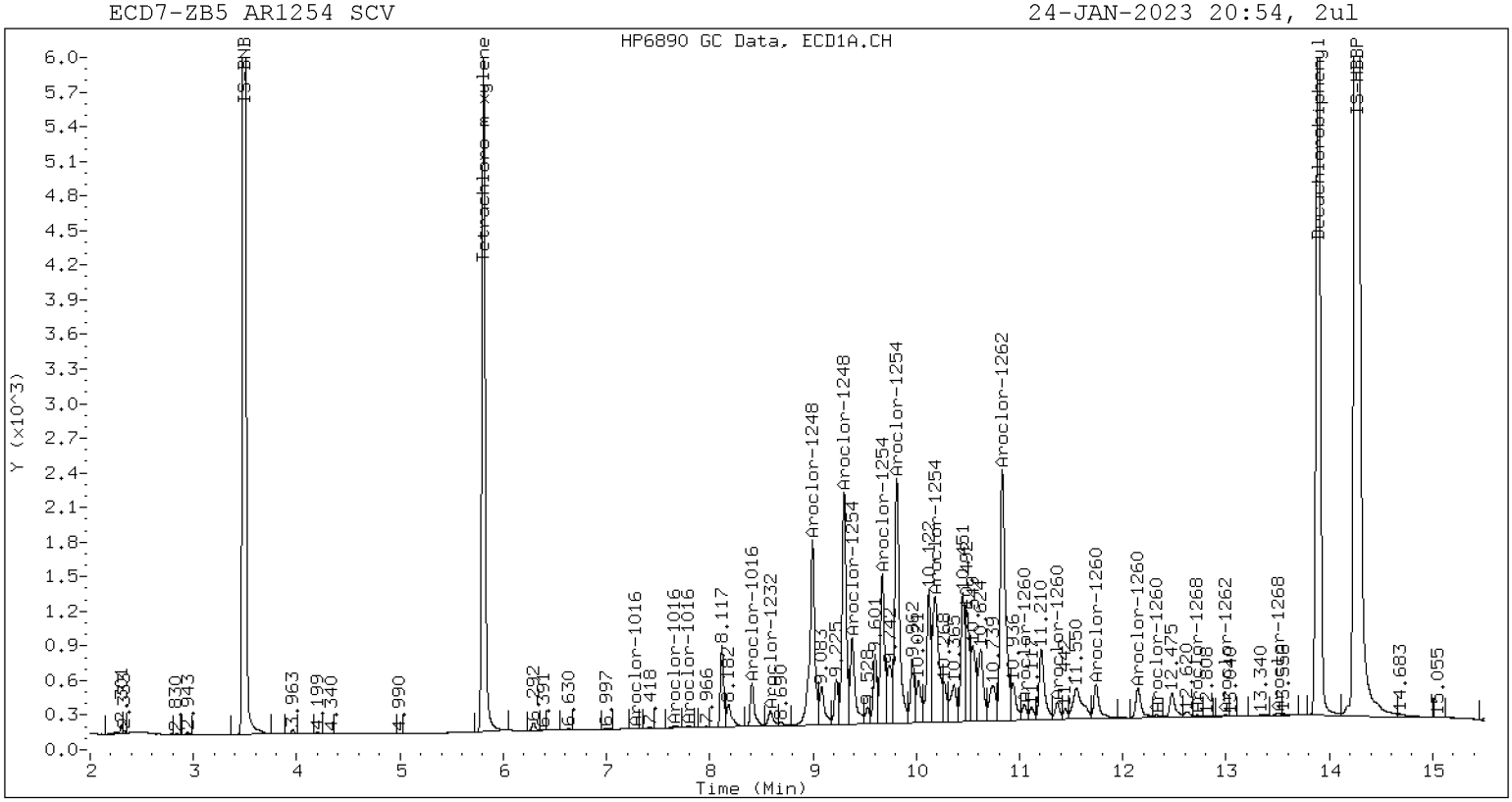
Total PCB Area Col2 (5.787 - 14.020) = 951047 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

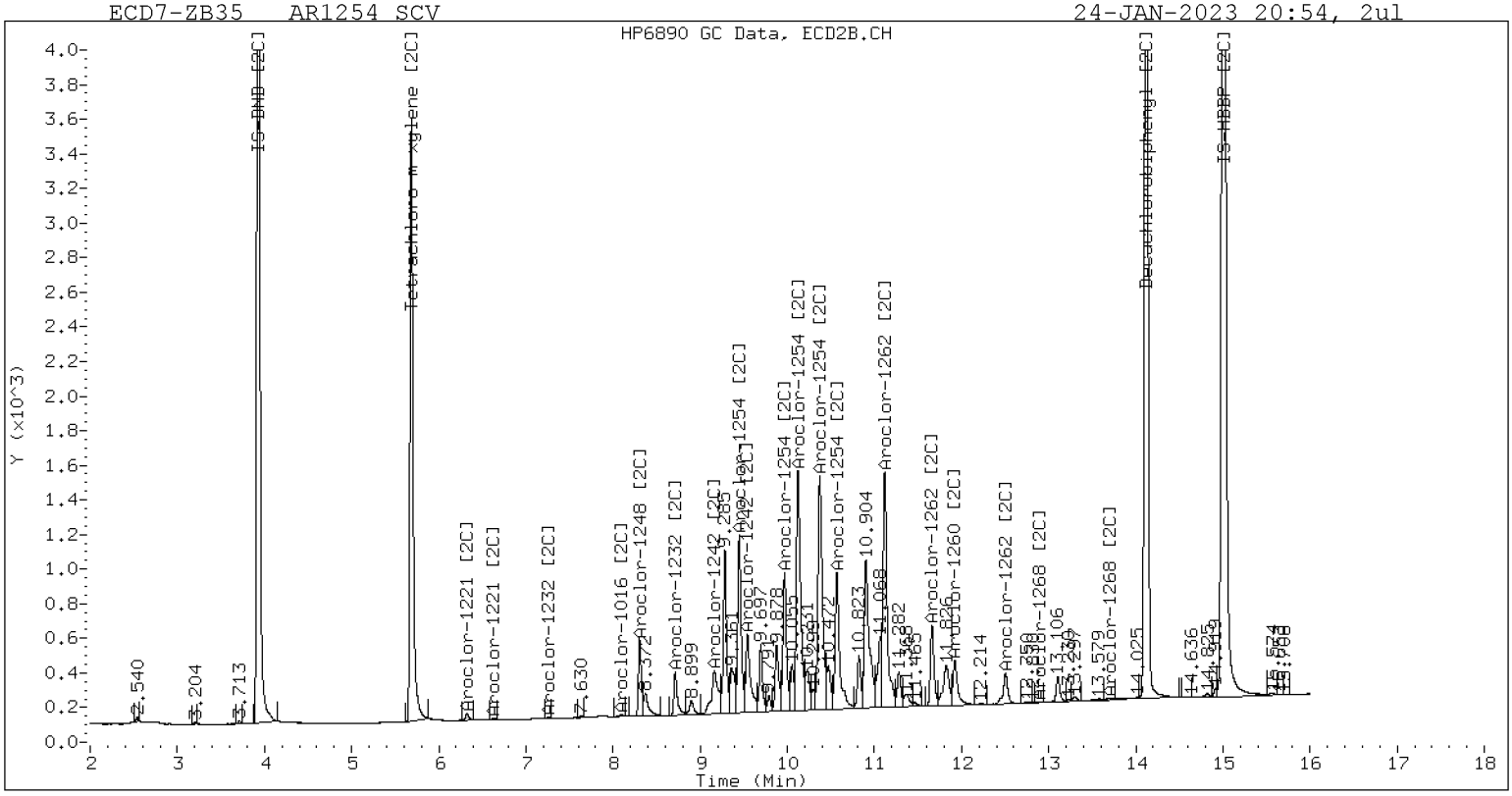
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254 SCV 24-JAN-2023 20:54, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254 SCV 24-JAN-2023 20:54, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GA00061
Laboratory ID: SLA0281-SCV5
Sequence: SLA0281
Sequence Name: AR2162SCV5
Standard ID: K007659

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1221	250.00	228	-8.8	20.00
Aroclor 1221 [2C]	250.00	239	-4.5	20.00
Decachlorobiphenyl	40.000	37.5	-6.4	20.00
Tetrachlorometaxylene	40.000	37.3	-6.8	20.00
Decachlorobiphenyl [2C]	40.000	39.5	-1.3	20.00
Tetrachlorometaxylene [2C]	40.000	37.2	-7.1	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242328ECD7.D
Data file 2: /230124.b/230124.b/01242328ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 SCV
Client ID:
Injection Date: 24-JAN-2023 21:15
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	265357	5.685	-0.001	170984	37.3	37.2	0.3	Tetrachloro-m-xylene
13.891	-0.001	397332	14.119	-0.001	326981	37.5	39.5	5.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503473	0.0
Hexabromobiphenyl	647433	991997	53.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	340361	1.0
Hexabromobiphenyl	382032	521975	36.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	5326	28.5	1	7.257	0.002	6708	36.3
Aroclor-1016	2	7.664	0.013	11965	19.3	2	7.856	0.005	7233	17.9
Aroclor-1016	3	7.797	0.009	6015	21.1	3	8.058	0.008	2997	18.2
Aroclor-1016	4	8.410	0.006	3771	20.6	4	8.308	0.002	2065	16.0
Total Col1Ave (4 peaks):					22.4	Total Col2Ave (4 peaks):				22.1 RPD = 1
Corrected Ave (3 peaks):					20.3	Corrected Ave (3 peaks):				17.3 RPD = 16
Aroclor-1221	1	4.732	-0.000	9097	244.5	1	4.959	-0.000	6157	246.8
Aroclor-1221	2	6.133	-0.000	16114	211.8	2	6.297	-0.001	12807	234.2
Aroclor-1221	3	6.384	0.000	40299	228.1	3	6.622	-0.000	21707	235.2
Total Col1Ave (3 peaks):					228.1	Total Col2Ave (3 peaks):				238.7 RPD = 5
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.732	-0.001	9097	391.6	1	4.959	-0.001	6157	406.9
Aroclor-1232	2	6.133	0.000	16114	307.8	2	7.257	0.000	6708	79.2
Aroclor-1232	3	7.664	0.005	11965	45.7	3	7.856	0.001	7233	41.9
Aroclor-1232	4	8.589	0.004	2837	25.3	4	8.716	0.002	1869	39.0
Total Col1Ave (4 peaks):					192.6	Total Col2Ave (4 peaks):				141.7 RPD = 30
Corrected Ave (3 peaks):					126.3	Corrected Ave (3 peaks):				53.4 RPD = 81*
Aroclor-1242	1	7.272	0.001	5326	34.5	1	7.257	0.001	6708	45.1
Aroclor-1242	2	7.664	0.008	11965	23.7	2	7.856	0.003	7233	21.9
Aroclor-1242	3	8.410	0.004	3771	25.2	3	9.169	0.009	1956	18.9
Aroclor-1242	4	8.589	0.007	2837	12.5	4	9.544	-0.043	5978	43.6
Total Col1Ave (4 peaks):					24.0	Total Col2Ave (4 peaks):				32.3 RPD = 30
Corrected Ave (3 peaks):					20.5	Corrected Ave (3 peaks):				28.1 RPD = 31
Aroclor-1248	1	8.410	0.005	3771	15.0	1	8.308	0.002	2065	13.4
Aroclor-1248	2	8.589	0.008	2837	8.8	2	8.716	0.004	1869	11.3
Aroclor-1248	3	8.997	-0.002	36022	58.6	3	9.169	0.012	1956	9.7
Aroclor-1248	4	9.305	0.011	30853	101.4	4	9.544	-0.038	5978	23.9
Total Col1Ave (4 peaks):					46.0	Total Col2Ave (4 peaks):				14.6 RPD = 104*
Corrected Ave (3 peaks):					27.5	Corrected Ave (3 peaks):				11.5 RPD = 82*
Aroclor-1254	1	9.305	0.006	30853	60.1	1	9.451	0.003	17617	71.3
Aroclor-1254	2	9.376	-0.002	5370	24.5	2	9.970	0.001	2849	14.3
Aroclor-1254	3	9.673	0.003	5543	16.9	3	10.146	0.026	88151	202.5
Aroclor-1254	4	9.810	0.002	14544	22.6	4	10.370	-0.002	107074	245.9
Aroclor-1254	5	10.121	-0.056	180016	429.7	5	10.567	-0.002	141725	584.5
Total Col1Ave (5 peaks):					110.8	Total Col2Ave (5 peaks):				223.7 RPD = 68*
Corrected Ave (4 peaks):					31.0	Corrected Ave (4 peaks):				133.5 RPD = 125*
Aroclor-1260	1	11.044	0.001	310806	558.4	1	11.652	-0.001	187682	498.4
Aroclor-1260	2	11.361	0.000	263161	460.0	2	11.917	-0.000	450612	473.0
Aroclor-1260	3	11.735	0.000	629605	418.0	3	12.433	-0.003	206042	867.7
Aroclor-1260	4	12.141	0.001	210012	269.9	4	12.502	-0.000	326457	529.5
Aroclor-1260	5	12.244	-0.000	268425	791.3	NS	---			----
Total Col1Ave (5 peaks):					499.5	Total Col2Ave (4 peaks):				592.1 RPD = 17
Corrected Ave (4 peaks):					426.6	Corrected Ave (3 peaks):				500.3 RPD = 16
Aroclor-1262	1	10.828	-0.005	171094	426.5	1	11.200	0.000	219731	430.1
Aroclor-1262	2	12.244	-0.002	268425	423.9	2	11.652	-0.001	187682	432.0
Aroclor-1262	3	12.319	-0.002	291581	424.2	3	12.433	-0.001	206042	445.4
Aroclor-1262	4	12.988	-0.001	257735	411.5	4	12.502	-0.002	326457	440.6
Total Col1Ave (4 peaks):					421.5	Total Col2Ave (4 peaks):				437.0 RPD = 4
Corrected Ave (3 peaks):					419.8	Corrected Ave (3 peaks):				434.3 RPD = 3
Aroclor-1268	1	12.244	-0.001	268425	163.8	1	12.433	-0.000	206042	169.0
Aroclor-1268	2	12.319	0.001	291581	178.4	2	12.502	0.000	326457	251.7
Aroclor-1268	3	12.725	0.026	108693	80.3	3	12.892	-0.001	10062	9.3
Aroclor-1268	4	13.486	-0.003	95646	23.8	4	13.710	0.001	59437	17.8
Total Col1Ave (4 peaks):					111.6	Total Col2Ave (4 peaks):				112.0 RPD = 0

Corrected Ave (3 peaks): 89.3 Corrected Ave (3 peaks): 65.4 RPD = 31

Total PCB Area Col1 (5.909 - 13.792) = 4409992 Col1 Total PCB = 0.8 ppm*

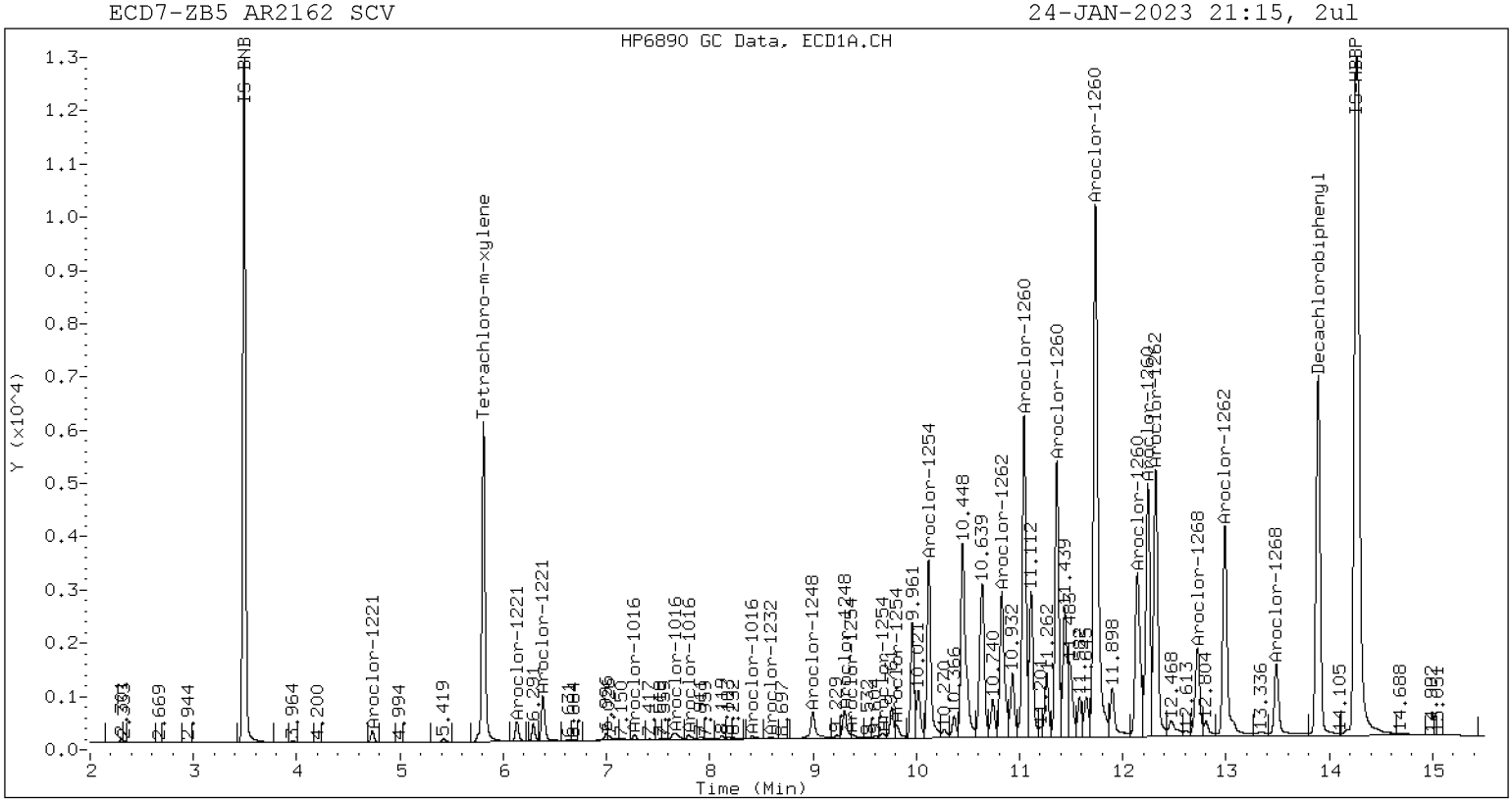
Total PCB Area Col2 (5.787 - 14.020) = 2874073 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

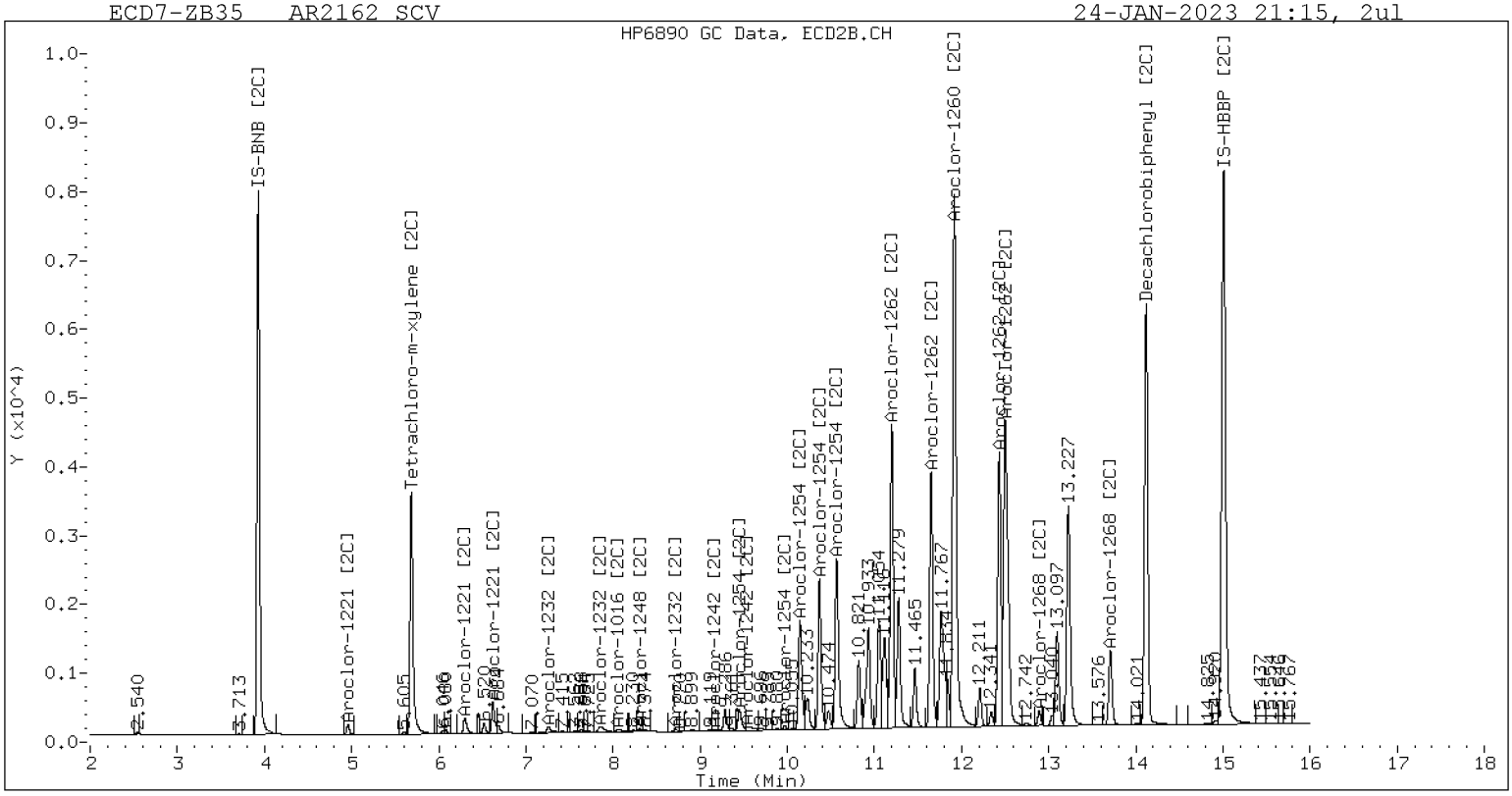
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162 SCV 24-JAN-2023 21:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162 SCV 24-JAN-2023 21:15, 2ul



ZB-35 Manual Integration: NO

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GA00061
Laboratory ID: SLA0281-SCV6
Sequence: SLA0281
Sequence Name: AR3268SCV6
Standard ID: K007660

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1232	250.00	216	-13.7	20.00
Aroclor 1232 [2C]	250.00	239	-4.5	20.00
Decachlorobiphenyl	40.000	54.6	36.5	20.00
Tetrachlorometaxylene	40.000	36.4	-9.1	20.00
Decachlorobiphenyl [2C]	40.000	57.9	44.8	20.00
Tetrachlorometaxylene [2C]	40.000	36.3	-9.2	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242329ECD7.D
Data file 2: /230124.b/230124.b/01242329ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 SCV
Client ID:
Injection Date: 24-JAN-2023 21:36
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.810	0.001	250455	5.687	0.000	162795	36.4	36.3	0.2	Tetrachloro-m-xylene
13.892	0.000	551946	14.120	0.000	461901	54.6	57.9	5.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	487061	-3.2
Hexabromobiphenyl	647433	944934	46.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	331721	-1.5
Hexabromobiphenyl	382032	502401	31.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	19363	107.0	1	7.256	0.001	19791	110.0
Aroclor-1016	2	7.659	0.009	58630	97.8	2	7.856	0.005	40139	101.8
Aroclor-1016	3	7.794	0.006	28286	102.5	3	8.055	0.005	17412	108.2
Aroclor-1016	4	8.408	0.004	17373	97.9	4	8.308	0.003	11962	94.8
Total Col1Ave (4 peaks):					101.3	Total Col2Ave (4 peaks):				103.7 RPD = 2
Corrected Ave (3 peaks):					99.4	Corrected Ave (3 peaks):				101.6 RPD = 2
Aroclor-1221	1	4.735	0.002	5022	139.5	1	4.961	0.002	3409	140.2
Aroclor-1221	2	6.134	0.001	8987	122.1	2	6.299	0.001	7677	144.1
Aroclor-1221	3	6.385	0.001	29368	171.8	3	6.624	0.001	16198	180.1
Total Col1Ave (3 peaks):					144.5	Total Col2Ave (3 peaks):				154.8 RPD = 7
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.735	0.002	5022	223.5	1	4.961	0.002	3409	231.1
Aroclor-1232	2	6.134	0.001	8987	177.4	2	7.256	-0.001	19791	239.8
Aroclor-1232	3	7.659	0.001	58630	231.5	3	7.856	0.001	40139	238.8
Aroclor-1232	4	8.585	0.000	24991	230.5	4	8.715	0.001	11476	245.7
Total Col1Ave (4 peaks):					215.7	Total Col2Ave (4 peaks):				238.8 RPD = 10
Corrected Ave (3 peaks):					210.5	Corrected Ave (3 peaks):				236.6 RPD = 12
Aroclor-1242	1	7.272	0.001	19363	129.8	1	7.256	0.000	19791	136.4
Aroclor-1242	2	7.659	0.004	58630	120.1	2	7.856	0.002	40139	124.6
Aroclor-1242	3	8.408	0.001	17373	119.8	3	9.166	0.006	11813	117.1
Aroclor-1242	4	8.585	0.003	24991	114.1	4	9.595	0.009	16549	123.7
Total Col1Ave (4 peaks):					121.0	Total Col2Ave (4 peaks):				125.4 RPD = 4
Corrected Ave (3 peaks):					118.0	Corrected Ave (3 peaks):				121.8 RPD = 3
Aroclor-1248	1	8.408	0.002	17373	71.3	1	8.308	0.003	11962	79.8
Aroclor-1248	2	8.585	0.005	24991	80.4	2	8.715	0.003	11476	71.1
Aroclor-1248	3	9.001	0.002	67631	113.8	3	9.166	0.009	11813	59.9
Aroclor-1248	4	9.293	-0.001	30983	105.3	4	9.595	0.014	16549	67.9
Total Col1Ave (4 peaks):					92.7	Total Col2Ave (4 peaks):				69.7 RPD = 28
Corrected Ave (3 peaks):					85.7	Corrected Ave (3 peaks):				66.3 RPD = 26
Aroclor-1254	1	9.293	-0.006	30983	62.4	1	9.451	0.003	3749	15.6
Aroclor-1254	2	9.381	0.003	9071	42.8	2	9.974	0.005	2452	12.6
Aroclor-1254	3	9.678	0.009	5199	16.3	3	10.131	0.010	4718	11.1
Aroclor-1254	4	9.820	0.012	8864	14.2	4	10.389	0.018	4224	10.0
Aroclor-1254	5	10.195	0.018	8085	19.9	5	10.573	0.004	1573	6.7
Total Col1Ave (5 peaks):					31.1	Total Col2Ave (5 peaks):				11.2 RPD = 94*
Corrected Ave (4 peaks):					23.3	Corrected Ave (4 peaks):				10.1 RPD = 79*
Aroclor-1260	1	11.050	0.006	66852	126.1	1	11.647	-0.006	57235	157.9
Aroclor-1260	2	11.366	0.006	6269	11.5	2	11.919	0.002	25368	27.7
Aroclor-1260	3	11.741	0.007	41446	28.9	3	12.434	-0.002	262014	1146.4
Aroclor-1260	4	12.052	-0.088	2691	3.6	4	12.502	-0.000	277060	466.9
Aroclor-1260	5	12.245	0.002	349286	1080.9	NS	---			----
Total Col1Ave (5 peaks):					250.2	Total Col2Ave (4 peaks):				449.7 RPD = 57*
Corrected Ave (4 peaks):					42.5	Corrected Ave (3 peaks):				217.5 RPD = 135*
Aroclor-1262	1	10.838	0.006	4520	11.8	1	11.203	0.003	40576	82.5
Aroclor-1262	2	12.245	-0.000	349286	579.1	2	11.647	-0.006	57235	136.9
Aroclor-1262	3	12.318	-0.002	349715	534.1	3	12.434	-0.001	262014	588.4
Aroclor-1262	4	12.988	-0.001	141905	237.8	4	12.502	-0.002	277060	388.5
Total Col1Ave (4 peaks):					340.7	Total Col2Ave (4 peaks):				299.1 RPD = 13
Corrected Ave (3 peaks):					261.2	Corrected Ave (3 peaks):				202.6 RPD = 25
Aroclor-1268	1	12.245	0.001	349286	223.8	1	12.434	0.000	262014	223.3
Aroclor-1268	2	12.318	0.000	349715	224.6	2	12.502	0.000	277060	221.9
Aroclor-1268	3	12.699	0.000	289328	224.3	3	12.893	-0.000	208928	201.0
Aroclor-1268	4	13.490	0.001	849299	222.1	4	13.710	0.002	725831	226.1
Total Col1Ave (4 peaks):					223.7	Total Col2Ave (4 peaks):				218.1 RPD = 3

Corrected Ave (3 peaks): 223.4 Corrected Ave (3 peaks): 215.4 RPD = 4

Total PCB Area Col1 (5.909 - 13.792) = 2866092 Col1 Total PCB = 0.5 ppm*

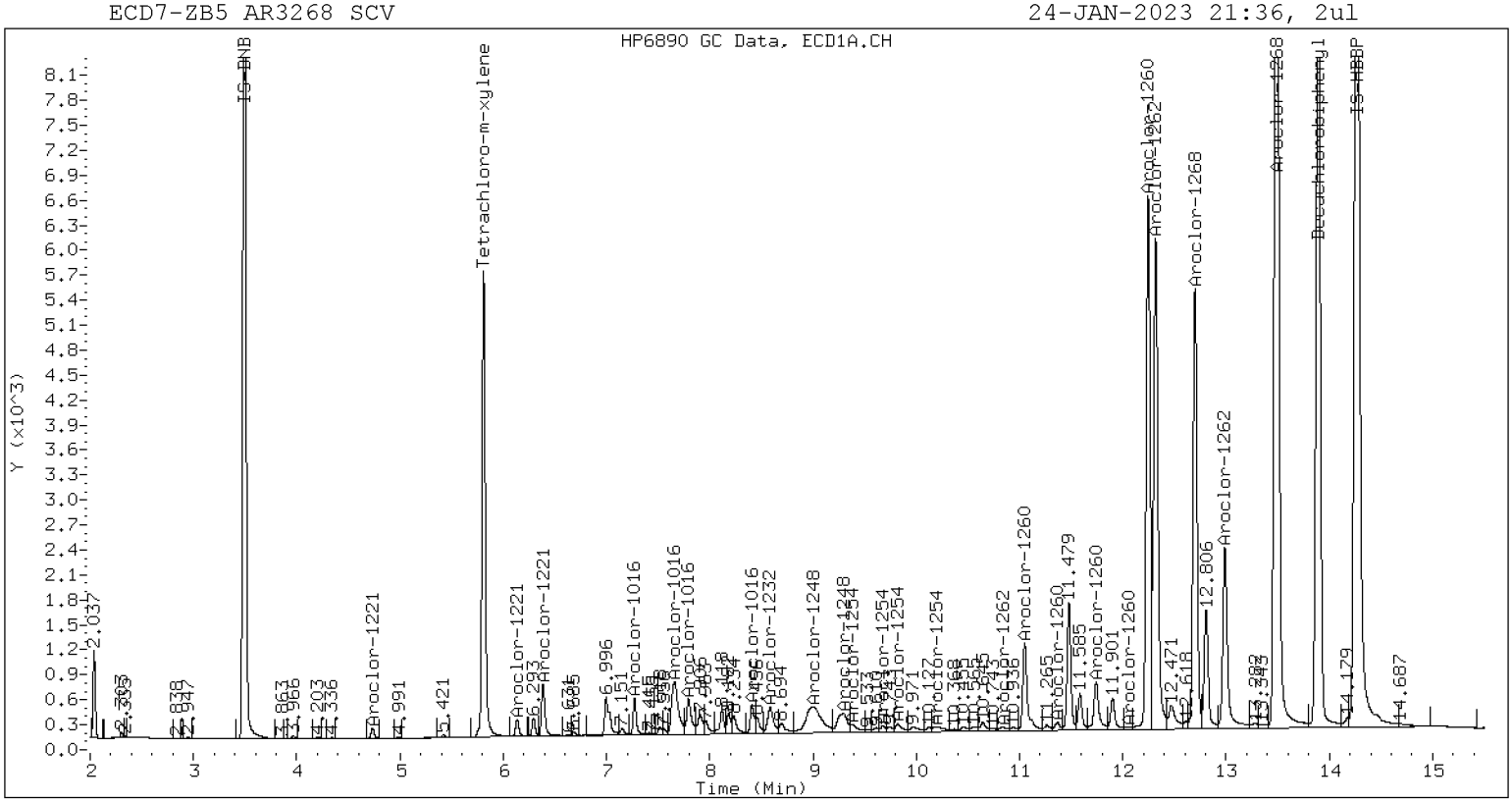
Total PCB Area Col2 (5.787 - 14.020) = 2084481 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

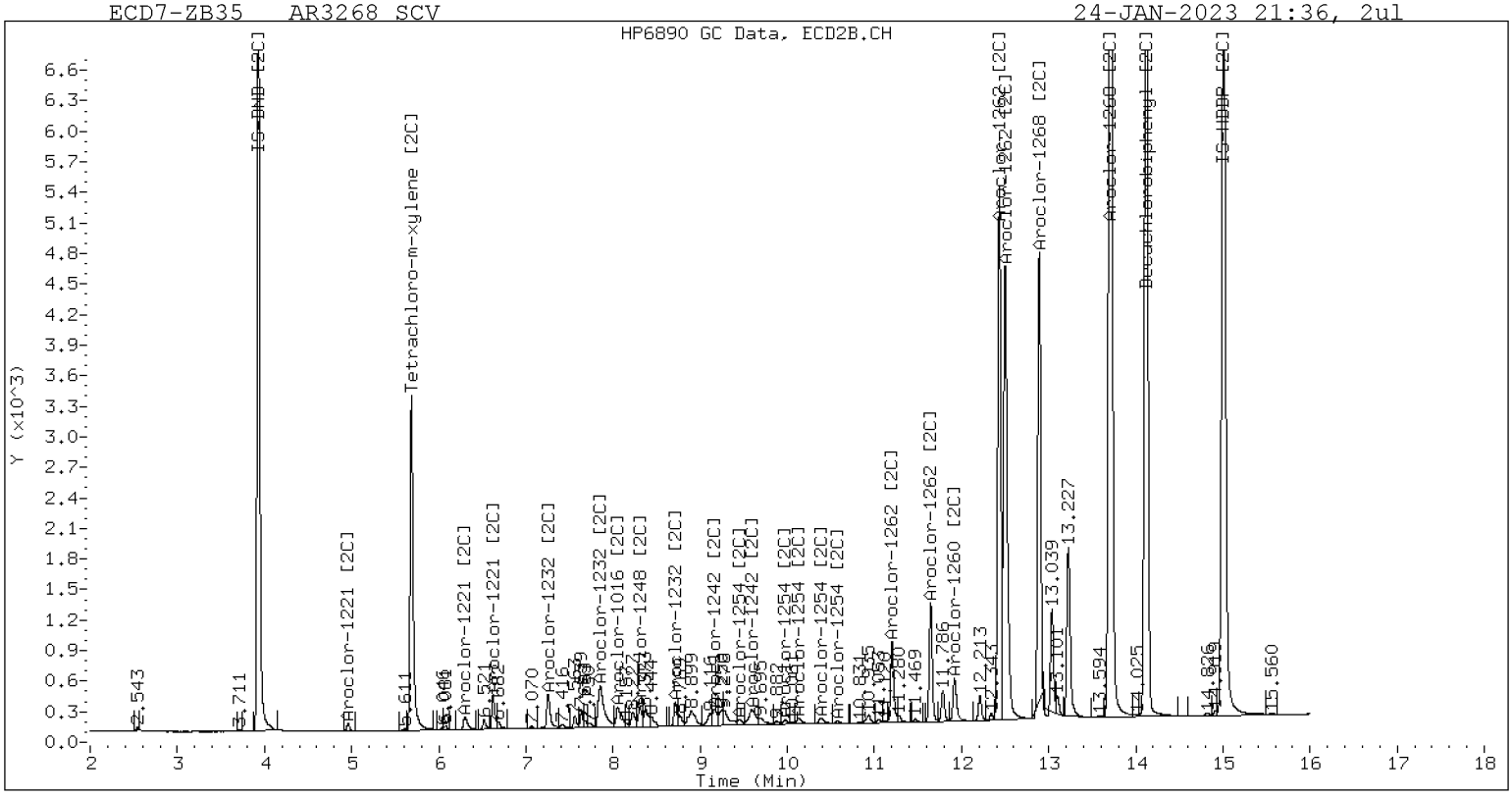
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268 SCV 24-JAN-2023 21:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268 SCV 24-JAN-2023 21:36, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02082307ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0127	Injection Date:	02/08/23
Lab Sample ID:	SLB0127-ICV1	Injection Time:	11:44
Sequence Name:	AR1254ICV1		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	229	0.0675033	0.0618626		-8.6	+/-20
Aroclor-1254 (1)	A	250.00	230	0.0815329	0.0750215			
Aroclor-1254 (2)	A	250.00	227	0.0348121	0.0316098			
Aroclor-1254 (3)	A	250.00	230	0.0522405	0.0480873			
Aroclor-1254 (4)	A	250.00	232	0.1023658	0.0948310			
Aroclor-1254 (5)	A	250.00	224	0.0665652	0.0597634			
Aroclor 1254 [2C]	A	250.00	232	0.0733219	0.0685475		-7.1	+/-20
Aroclor-1254 (1) [2C]	A	250.00	240	0.0580388	0.0557336			
Aroclor-1254 (2) [2C]	A	250.00	239	0.0469118	0.0449119			
Aroclor-1254 (3) [2C]	A	250.00	237	0.1023304	0.0969773			
Aroclor-1254 (4) [2C]	A	250.00	240	0.1023323	0.0983998			
Aroclor-1254 (5) [2C]	A	250.00	205	0.0569963	0.0467151			
Decachlorobiphenyl	A	40.000	35.8	0.8555994	0.7664067		-10.5	+/-20
Tetrachlorometaxylene	A	40.000	38.2	1.1307870	1.0806080		-4.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	33.7	1.2696430	1.0711880		-15.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.3	1.0814980	1.0365250		-4.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082307ECD7.D
Data file 2: /230208.b/230208.b/02082307ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 08-FEB-2023 11:44
Report Date: 02/09/2023 10:55
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.000	203458	5.685	-0.000	176867	38.2	38.3	0.3	Tetrachloro-m-xylene
13.890	0.002	168967	14.117	0.000	199099	35.8	33.7	6.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	376562	-25.2
Hexabromobiphenyl	647433	440933	-31.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	341269	1.3
Hexabromobiphenyl	382032	371735	-2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1254	1	9.293	0.000	88282	230.0	1	9.444	0.000	59438	240.1
Aroclor-1254	2	9.371	0.000	37197	227.0	2	9.964	-0.000	47897	239.3
Aroclor-1254	3	9.662	0.000	56587	230.1	3	10.116	0.000	103423	236.9
Aroclor-1254	4	9.798	0.000	111593	231.6	4	10.366	0.000	104940	240.4
Aroclor-1254	5	10.157	0.000	70327	224.5	5	10.563	-0.000	49820	204.9
		Total Col1Ave (5 peaks):		228.6			Total Col2Ave (5 peaks):		232.3	RPD = 2
		Corrected Ave (4 peaks):		227.9			Corrected Ave (4 peaks):		230.3	RPD = 1
			CalAmt %D:	-8.5				CalAmt %D:	-7.1	

Total PCB Area Col1 (5.908 - 13.789) = 1111550 Col1 Total PCB = 0.3 ppm*

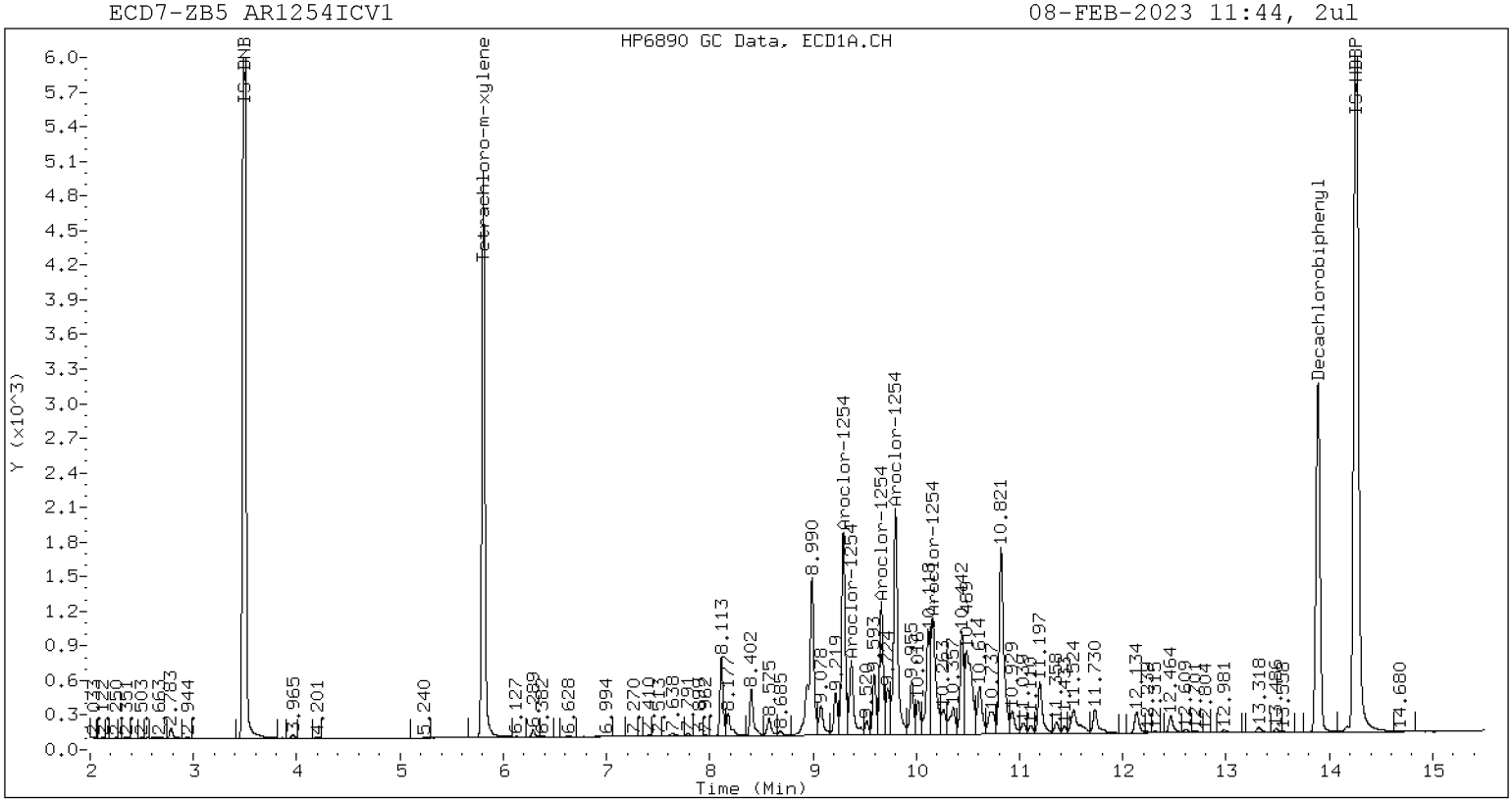
Total PCB Area Col2 (5.785 - 14.016) = 977998 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

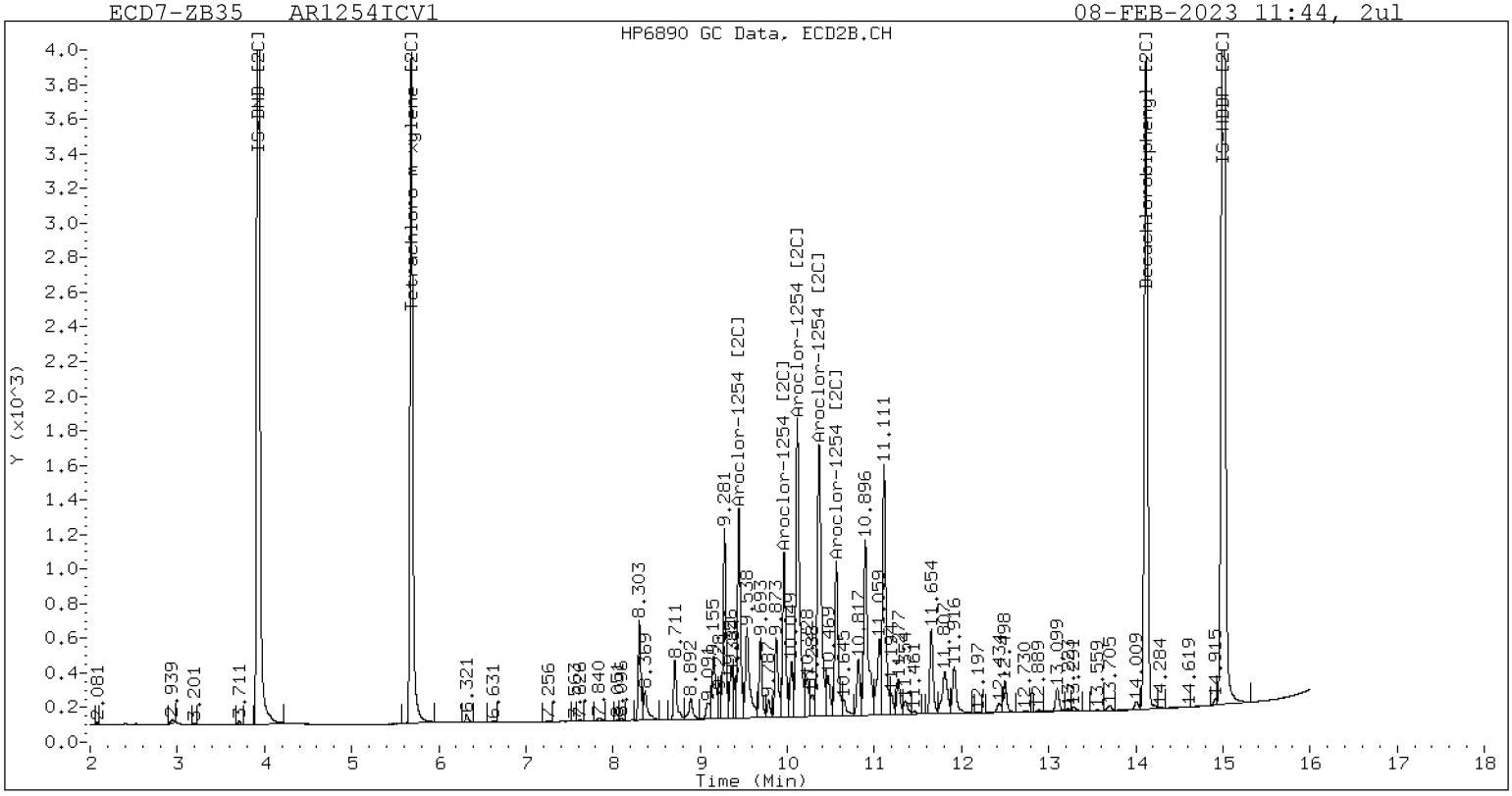
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 08-FEB-2023 11:44, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1 08-FEB-2023 11:44, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02082308ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0127	Injection Date:	02/08/23
Lab Sample ID:	SLB0127-ICV2	Injection Time:	12:05
Sequence Name:	AR1660ICV2		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
Aroclor 1016	A	250.00	234	0.0506755	0.0475020		-6.4	+/-20	
Aroclor-1016 (1)	A	250.00	239	0.0297277	0.0284165		-4.4		
Aroclor-1016 (2)	A	250.00	239	0.0985017	0.0941642		-4.4		
Aroclor-1016 (3)	A	250.00	216	0.0453193	0.0392036		-13.6		
Aroclor-1016 (4)	A	250.00	242	0.0291533	0.0282237		-3.2		
Aroclor 1016 [2C]	A	250.00	245	0.0519244	0.0511697		-1.9	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	243	0.0433907	0.0421376		-2.8		
Aroclor-1016 (2) [2C]	A	250.00	248	0.0950862	0.0943809		-0.8		
Aroclor-1016 (3) [2C]	A	250.00	251	0.0388014	0.0390328		0.4		
Aroclor-1016 (4) [2C]	A	250.00	239	0.0304194	0.0291275		-4.4		
Aroclor 1260	A	250.00	199	0.0605224	0.0478827		-20.5	+/-20	*
Aroclor-1260 (1)	A	250.00	220	0.0448870	0.0394552		-12.0		
Aroclor-1260 (2)	A	250.00	206	0.0461412	0.0379696		-17.6		
Aroclor-1260 (3)	A	250.00	193	0.1214672	0.0936536		-22.8		
Aroclor-1260 (4)	A	250.00	192	0.0627593	0.0483287		-23.2		
Aroclor-1260 (5)	A	250.00	183	0.0273573	0.0200062		-26.8		
Aroclor 1260 [2C]	A	250.00	242	0.0836545	0.0800784		-3.4	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	240	0.0577136	0.0554773		-4.0		
Aroclor-1260 (2) [2C]	A	250.00	238	0.1460113	0.1392976		-4.8		
Aroclor-1260 (3) [2C]	A	250.00	254	0.0363944	0.0369775		1.6		
Aroclor-1260 (4) [2C]	A	250.00	234	0.0944986	0.0885613		-6.4		
Decachlorobiphenyl	A	40.000	33.5	0.8555994	0.7175636		-16.3	+/-20	
Tetrachlorometaxylene	A	40.000	39.4	1.1307870	1.1137980		-1.5	+/-20	
Decachlorobiphenyl [2C]	A	40.000	34.4	1.2696430	1.0906170		-14.0	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	39.5	1.0814980	1.0692810		-1.3	+/-20	

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082308ECD7.D
Data file 2: /230208.b/230208.b/02082308ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 08-FEB-2023 12:05
Report Date: 02/09/2023 10:55
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.000	214434	5.685	0.000	185208	39.4	39.5	0.4	Tetrachloro-m-xylene
13.889	0.000	179444	14.117	0.000	213551	33.5	34.4	2.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	385050	-23.5
Hexabromobiphenyl	647433	500148	-22.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	346416	2.8
Hexabromobiphenyl	382032	391615	2.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	0.000	34193	239.0	1	7.253	-0.000	45616	242.8
Aroclor-1016	2	7.649	0.000	113306	239.0	2	7.849	0.001	102172	248.1
Aroclor-1016	3	7.787	0.000	47173	216.3	3	8.049	0.000	42255	251.5
Aroclor-1016	4	8.401	0.000	33961	242.0	4	8.303	-0.000	31532	239.4
Total Col1Ave (4 peaks):					234.1	Total Col2Ave (4 peaks):				245.4 RPD = 5
Corrected Ave (3 peaks):					231.4	Corrected Ave (3 peaks):				243.4 RPD = 5
CalAmt %D:					-6.4	CalAmt %D:				-1.8
Aroclor-1260	1	11.040	0.000	61667	219.7	1	11.649	0.000	67893	240.3
Aroclor-1260	2	11.356	0.000	59345	205.7	2	11.913	0.001	170472	238.5
Aroclor-1260	3	11.728	0.000	146377	192.8	3	12.431	0.000	45253	254.0
Aroclor-1260	4	12.131	0.000	75536	192.5	4	12.497	0.002	108381	234.3
Aroclor-1260	5	12.239	0.000	31269	182.8	NS	---			----
Total Col1Ave (5 peaks):					198.7	Total Col2Ave (4 peaks):				241.8 RPD = 20
Corrected Ave (4 peaks):					193.5	Corrected Ave (3 peaks):				237.7 RPD = 21
CalAmt %D:					-20.5	CalAmt %D:				-3.3

Total PCB Area Col1 (5.908 - 13.789) = 1821238 Col1 Total PCB = 0.4 ppm*

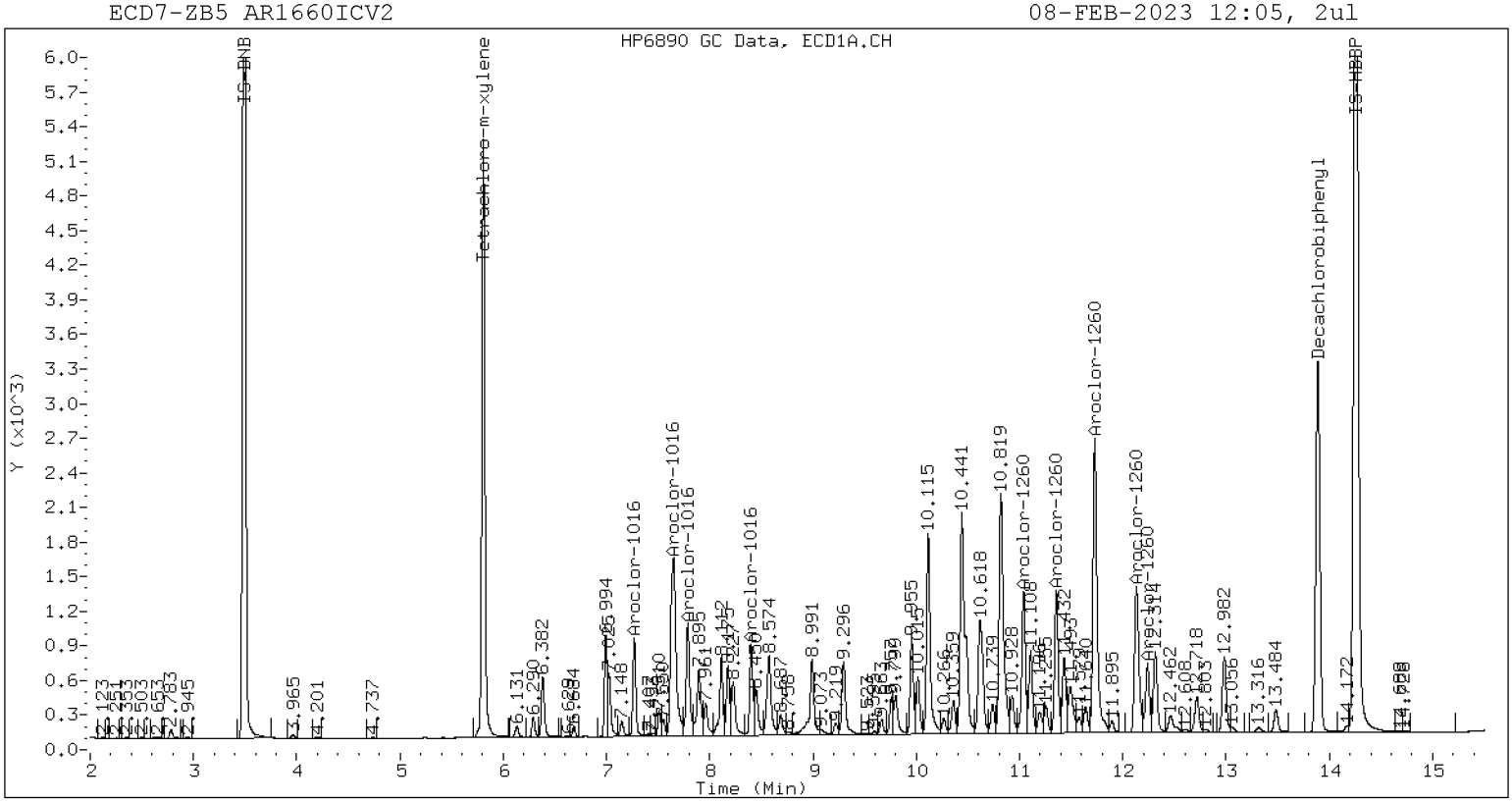
Total PCB Area Col2 (5.785 - 14.016) = 1716136 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 08-FEB-2023 12:05, 2ul



ZB-5 Manual Integration: NO

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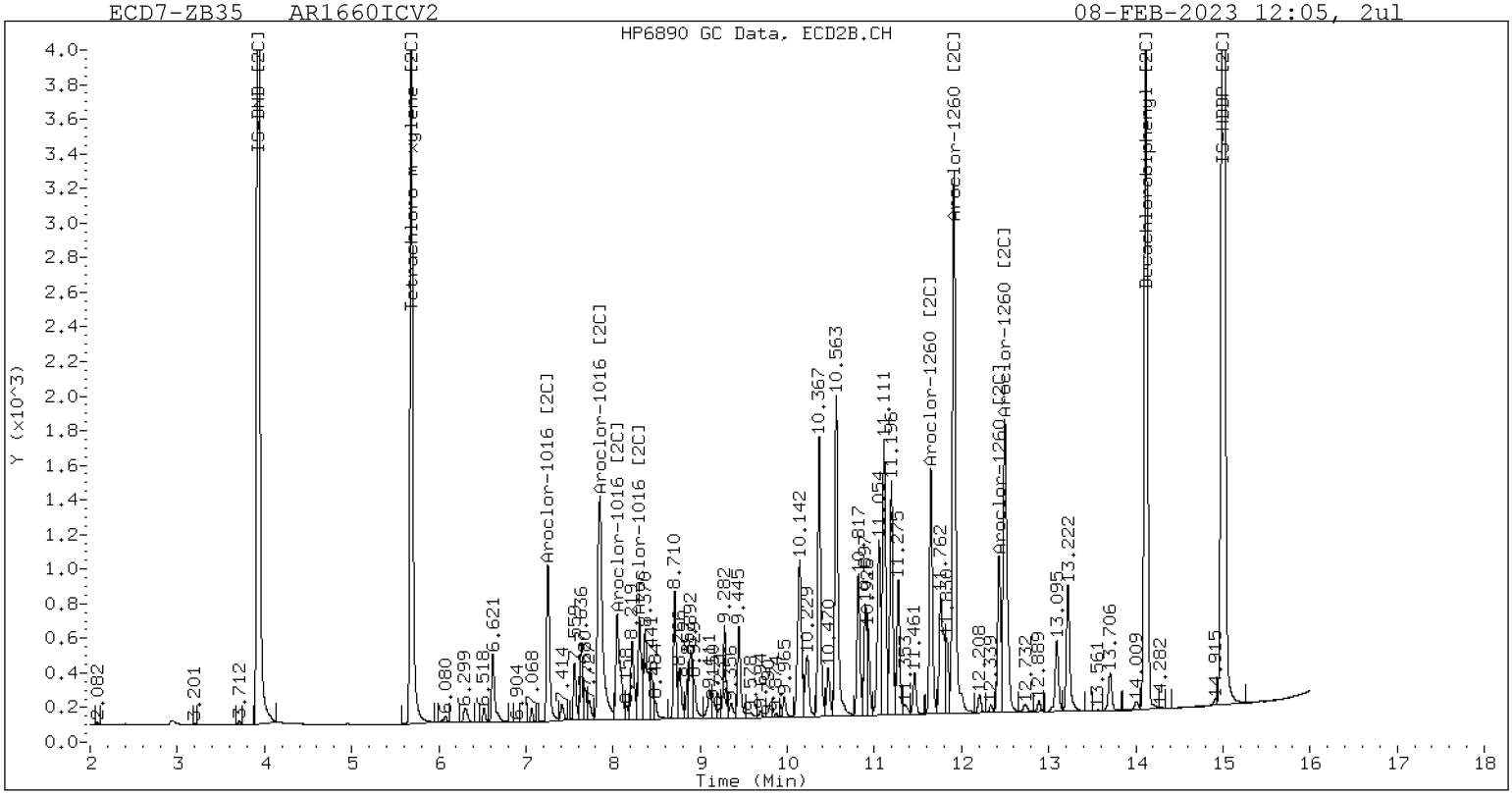


ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02092306ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0148	Injection Date:	02/09/23
Lab Sample ID:	SLB0148-ICV1	Injection Time:	13:59
Sequence Name:	AR1254ICV1		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	224	0.0675033	0.0609094		-10.5	+/-20
Aroclor-1254 (1)	A	250.00	228	0.0815329	0.0745149			
Aroclor-1254 (2)	A	250.00	213	0.0348121	0.0296052			
Aroclor-1254 (3)	A	250.00	228	0.0522405	0.0477492			
Aroclor-1254 (4)	A	250.00	229	0.1023658	0.0937434			
Aroclor-1254 (5)	A	250.00	221	0.0665652	0.0589343			
Aroclor 1254 [2C]	A	250.00	233	0.0733219	0.0684929		-7.0	+/-20
Aroclor-1254 (1) [2C]	A	250.00	239	0.0580388	0.0554127			
Aroclor-1254 (2) [2C]	A	250.00	239	0.0469118	0.0449159			
Aroclor-1254 (3) [2C]	A	250.00	234	0.1023304	0.0958714			
Aroclor-1254 (4) [2C]	A	250.00	239	0.1023323	0.0978462			
Aroclor-1254 (5) [2C]	A	250.00	212	0.0569963	0.0484183			
Decachlorobiphenyl	A	40.000	37.9	0.8555994	0.8099570		-5.3	+/-20
Tetrachlorometaxylene	A	40.000	38.0	1.1307870	1.0757870		-5.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	35.6	1.2696430	1.1307770		-11.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.9	1.0814980	1.0241290		-5.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092306ECD7.D
Data file 2: /230209.b/230209.b/02092306ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 09-FEB-2023 13:59
Report Date: 02/10/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.003	198224	5.682	-0.003	173339	38.1	37.9	0.5	Tetrachloro-m-xylene
13.890	-0.002	207643	14.116	0.001	268806	37.9	35.6	6.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	368519	-26.8
Hexabromobiphenyl	647433	512726	-20.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	338510	0.5
Hexabromobiphenyl	382032	475436	24.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.293	-0.006	85813	228.5	1	9.444	-0.001	58618	238.7
Aroclor-1254	2	9.372	-0.006	34094	212.6	2	9.963	-0.001	47514	239.4
Aroclor-1254	3	9.662	-0.007	54989	228.5	3	10.115	-0.001	101417	234.2
Aroclor-1254	4	9.800	-0.009	107957	228.9	4	10.366	-0.001	103506	239.0
Aroclor-1254	5	10.162	-0.015	67870	221.3	5	10.563	-0.001	51219	212.4

Total Col1Ave (5 peaks): 224.0 Total Col2Ave (5 peaks): 232.7 RPD = 4

Corrected Ave (4 peaks): 222.7 Corrected Ave (4 peaks): 231.1 RPD = 4

CalAmt %D: -10.4 CalAmt %D: -6.9

Total PCB Area Col1 (5.909 - 13.792) = 1136674 Col1 Total PCB = 0.3 ppm*

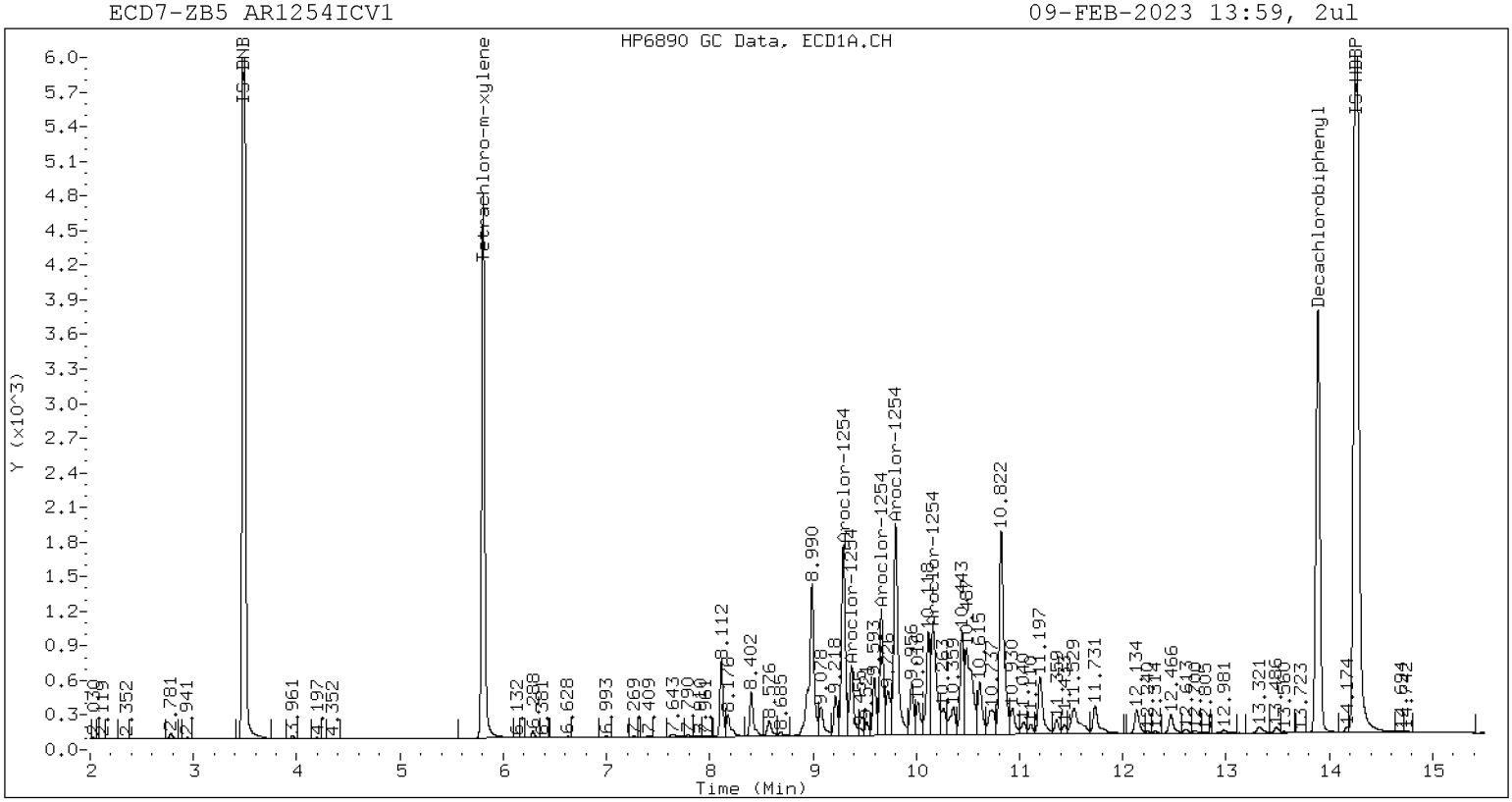
Total PCB Area Col2 (5.785 - 14.015) = 993557 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

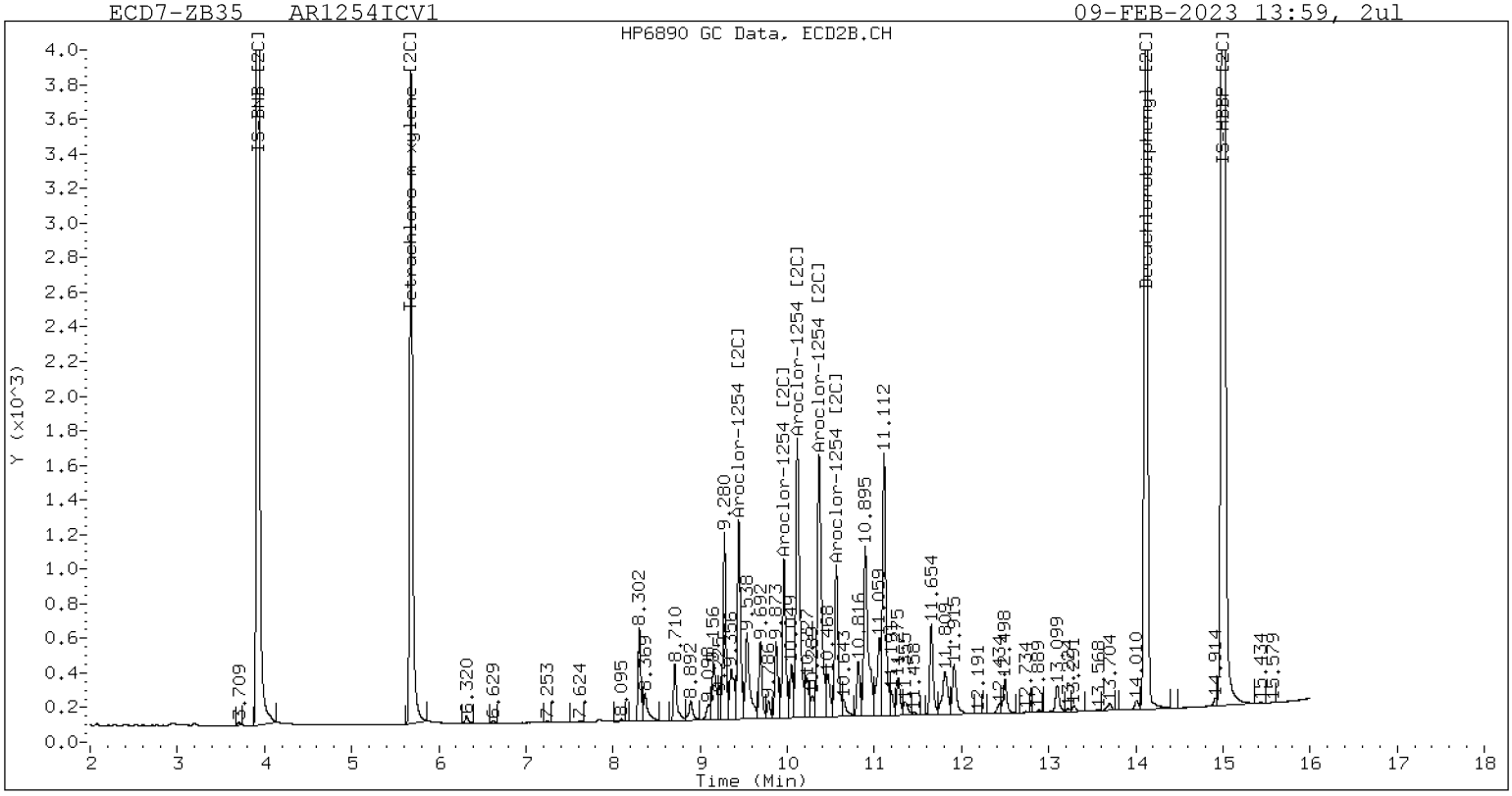
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 09-FEB-2023 13:59, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1 09-FEB-2023 13:59, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02092307ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0148	Injection Date:	02/09/23
Lab Sample ID:	SLB0148-ICV2	Injection Time:	14:20
Sequence Name:	AR1660ICV2		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
Aroclor 1016	A	250.00	233	0.0506755	0.0472033		-6.8	+/-20	
Aroclor-1016 (1)	A	250.00	240	0.0297277	0.0285872		-4.0		
Aroclor-1016 (2)	A	250.00	235	0.0985017	0.0927611		-6.0		
Aroclor-1016 (3)	A	250.00	218	0.0453193	0.0396233		-12.8		
Aroclor-1016 (4)	A	250.00	239	0.0291533	0.0278418		-4.4		
Aroclor 1016 [2C]	A	250.00	245	0.0519244	0.0506971		-2.0	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	242	0.0433907	0.0419321		-3.2		
Aroclor-1016 (2) [2C]	A	250.00	243	0.0950862	0.0922932		-2.8		
Aroclor-1016 (3) [2C]	A	250.00	251	0.0388014	0.0388997		0.4		
Aroclor-1016 (4) [2C]	A	250.00	244	0.0304194	0.0296635		-2.4		
Aroclor 1260	A	250.00	193	0.0605224	0.0471968		-22.6	+/-20	*
Aroclor-1260 (1)	A	250.00	198	0.0448870	0.0354910		-20.8		
Aroclor-1260 (2)	A	250.00	198	0.0461412	0.0366336		-20.8		
Aroclor-1260 (3)	A	250.00	197	0.1214672	0.0957022		-21.2		
Aroclor-1260 (4)	A	250.00	192	0.0627593	0.0482645		-23.2		
Aroclor-1260 (5)	A	250.00	182	0.0273573	0.0198928		-27.2		
Aroclor 1260 [2C]	A	250.00	213	0.0836545	0.0706119		-15.0	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	208	0.0577136	0.0479563		-16.8		
Aroclor-1260 (2) [2C]	A	250.00	209	0.1460113	0.1222471		-16.4		
Aroclor-1260 (3) [2C]	A	250.00	222	0.0363944	0.0323908		-11.2		
Aroclor-1260 (4) [2C]	A	250.00	211	0.0944986	0.0798534		-15.6		
Decachlorobiphenyl	A	40.000	33.8	0.8555994	0.7232482		-15.5	+/-20	
Tetrachlorometaxylene	A	40.000	39.8	1.1307870	1.1243980		-0.5	+/-20	
Decachlorobiphenyl [2C]	A	40.000	36.0	1.2696430	1.1438630		-10.0	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	38.9	1.0814980	1.0528570		-2.8	+/-20	

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092307ECD7.D
Data file 2: /230209.b/230209.b/02092307ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 09-FEB-2023 14:20
Report Date: 02/10/2023 12:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.004	201274	5.684	-0.002	174491	39.8	38.9	2.1	Tetrachloro-m-xylene
13.889	-0.002	211472	14.117	0.003	272526	33.8	36.0	6.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	358012	-28.9
Hexabromobiphenyl	647433	584784	-9.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	331462	-1.6
Hexabromobiphenyl	382032	476501	24.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.267	-0.003	31983	240.4	1	7.252	-0.001	43434	241.6
Aroclor-1016	2	7.649	-0.001	103780	235.4	2	7.850	-0.000	95599	242.7
Aroclor-1016	3	7.786	-0.002	44330	218.6	3	8.048	-0.000	40293	250.6
Aroclor-1016	4	8.401	-0.003	31149	238.8	4	8.302	-0.001	30726	243.8
	Total Col1Ave (4 peaks):				233.3		Total Col2Ave (4 peaks):			244.7 RPD = 5
	Corrected Ave (3 peaks):				230.9		Corrected Ave (3 peaks):			242.7 RPD = 5
			CalAmt %D:		-6.7			CalAmt %D:		-2.1
Aroclor-1260	1	11.039	-0.004	64858	197.7	1	11.649	-0.001	71410	207.7
Aroclor-1260	2	11.356	-0.004	66946	198.5	2	11.913	-0.000	182034	209.3
Aroclor-1260	3	11.729	-0.006	174891	197.0	3	12.432	0.001	48232	222.5
Aroclor-1260	4	12.133	-0.007	88201	192.3	4	12.497	0.000	118907	211.3
Aroclor-1260	5	12.239	-0.005	36353	181.8	NS	---			----
	Total Col1Ave (5 peaks):				193.4		Total Col2Ave (4 peaks):			212.7 RPD = 9
	Corrected Ave (4 peaks):				192.2		Corrected Ave (3 peaks):			209.4 RPD = 9
			CalAmt %D:		-22.6			CalAmt %D:		-14.9

Total PCB Area Col1 (5.909 - 13.792) = 1847926 Col1 Total PCB = 0.4 ppm*

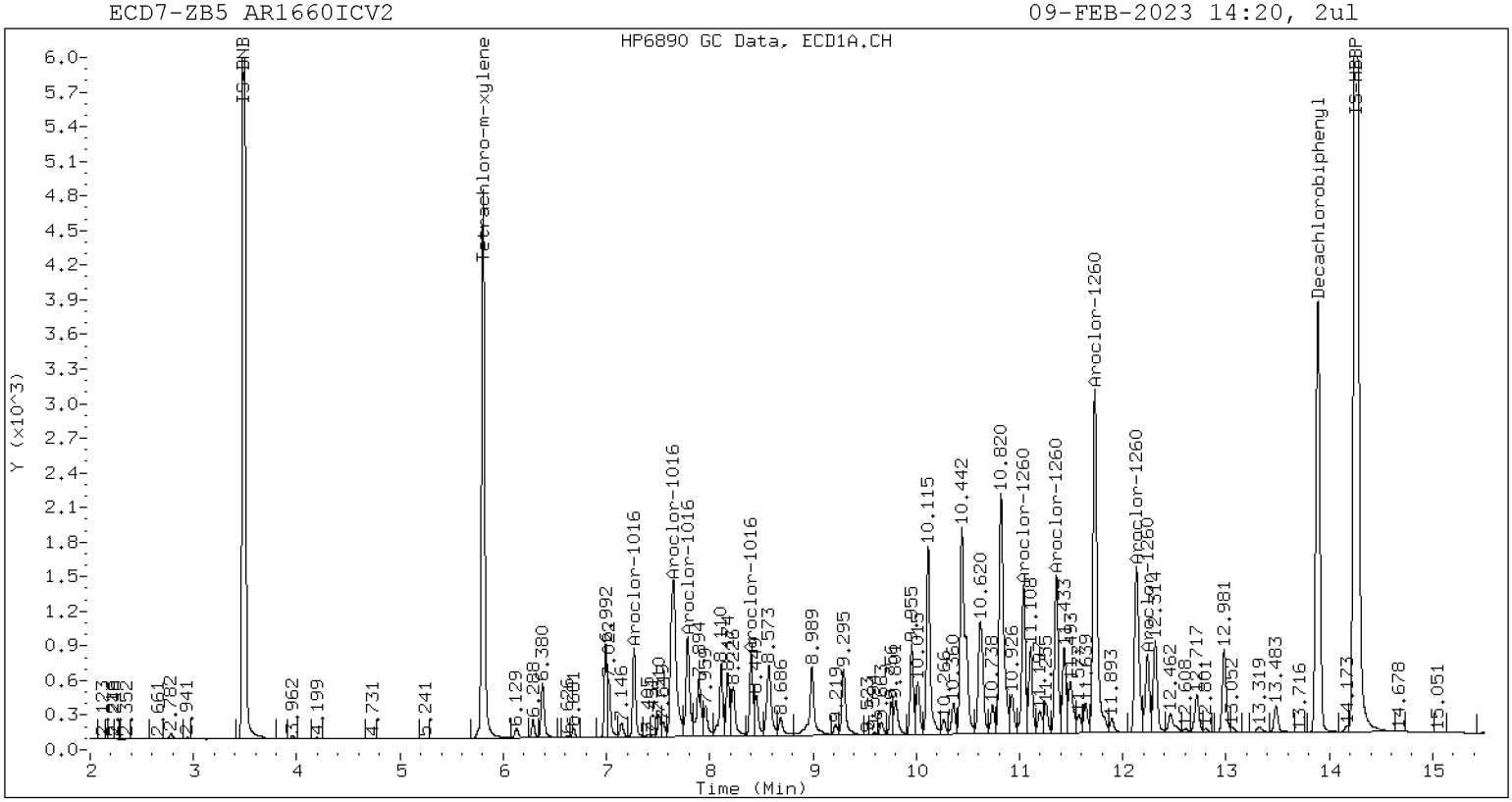
Total PCB Area Col2 (5.785 - 14.015) = 1719768 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

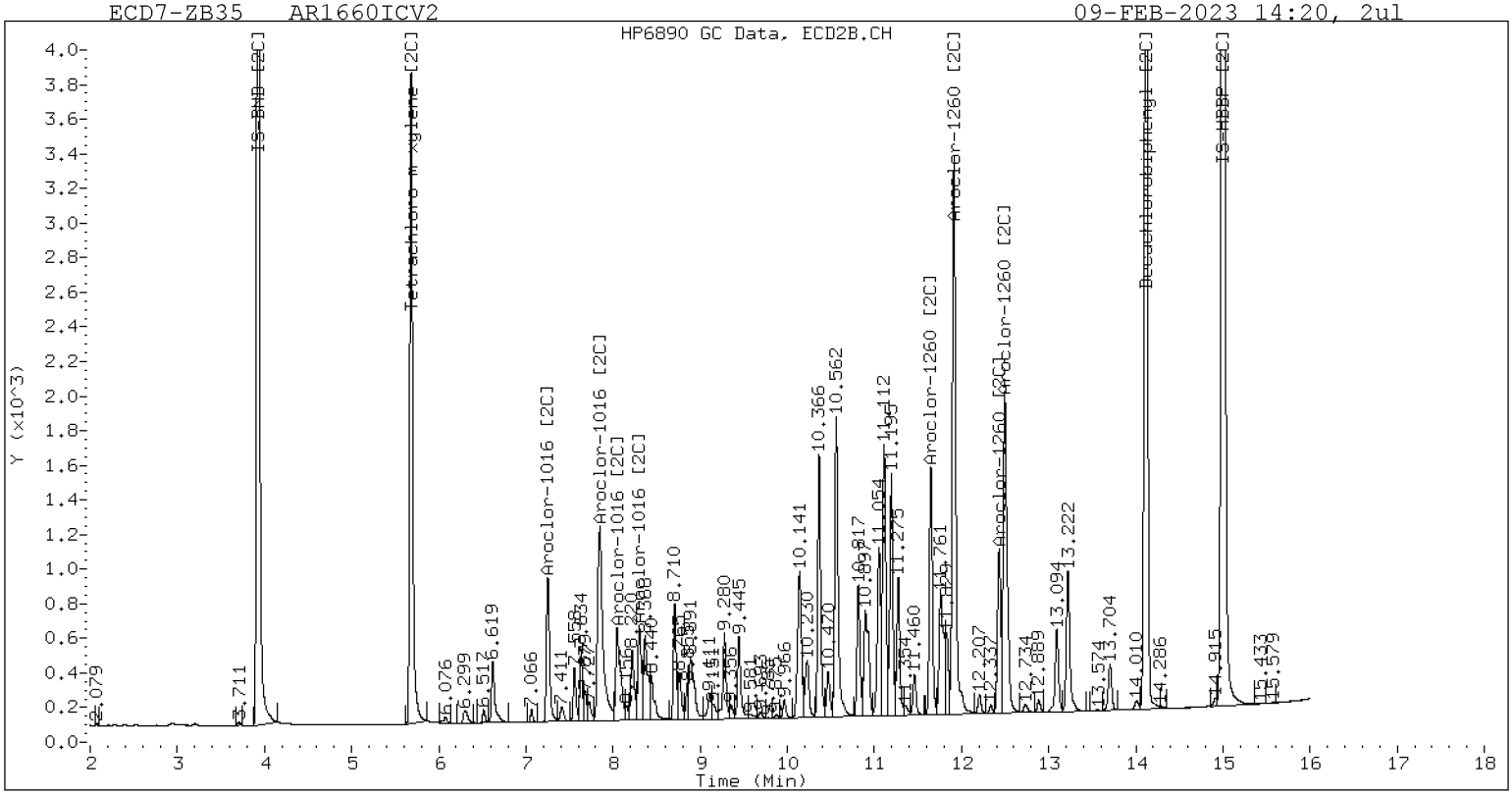
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 09-FEB-2023 14:20, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2 09-FEB-2023 14:20, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01242324ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0281	Injection Date:	01/24/23
Lab Sample ID:	SLA0281-SCV1	Injection Time:	19:51
Sequence Name:	AR1660SCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	217	0.0506755	0.0439293		-13.2	+/-20
Aroclor 1016 [2C]	A	250.00	220	0.0519244	0.0458194		-11.9	+/-20
Aroclor 1260	A	250.00	211	0.0605224	0.0508252		-15.7	+/-20
Aroclor 1260 [2C]	A	250.00	238	0.0836545	0.0795027		-4.9	+/-20
Decachlorobiphenyl	A	40.000	37.9	0.8555994	0.8115673		-5.1	+/-20
Tetrachlorometaxylene	A	40.000	37.5	1.1307870	1.0610020		-6.2	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.2	1.2696430	1.2773160		0.6	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.3	1.0814980	1.0082190		-6.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242324ECD7.D
Data file 2: /230124.b/230124.b/01242324ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660 SCV
Client ID:
Injection Date: 24-JAN-2023 19:51
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	268739	5.686	-0.001	172961	37.5	37.3	0.6	Tetrachloro-m-xylene
13.891	-0.000	381489	14.121	0.001	320416	37.9	40.2	5.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	506576	0.6
Hexabromobiphenyl	647433	940129	45.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	343102	1.8
Hexabromobiphenyl	382032	501702	31.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	40958	217.6	1	7.255	0.001	40190	216.0
Aroclor-1016	2	7.655	0.004	135282	216.9	2	7.852	0.001	90338	221.5
Aroclor-1016	3	7.791	0.003	61557	214.5	3	8.052	0.002	37810	227.2
Aroclor-1016	4	8.406	0.002	40372	218.7	4	8.306	0.000	28171	215.9
Total Col1Ave (4 peaks):					216.9	Total Col2Ave (4 peaks):				220.2 RPD = 1
Corrected Ave (3 peaks):					216.3	Corrected Ave (3 peaks):				217.8 RPD = 1
Aroclor-1221	1	4.732	-0.001	256	6.8	1	---			0.0
Aroclor-1221	2	6.131	-0.002	4742	61.9	2	6.302	0.004	5037	91.4
Aroclor-1221	3	6.384	-0.000	27448	154.4	3	6.623	-0.000	18931	203.5
Total Col1Ave (3 peaks):					74.4	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.732	-0.001	256	11.0	1	---			0.0
Aroclor-1232	2	6.131	-0.002	4742	90.0	2	7.255	-0.001	40190	470.8
Aroclor-1232	3	7.655	-0.004	135282	513.5	3	7.852	-0.002	90338	519.5
Aroclor-1232	4	8.581	-0.003	56938	504.9	4	8.713	-0.001	27776	574.9
Total Col1Ave (4 peaks):					279.8	Total Col2Ave (3 peaks):				521.7 RPD = 60*
Corrected Ave (3 peaks):					202.0	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	-0.000	40958	264.0	1	7.255	-0.000	40190	267.8
Aroclor-1242	2	7.655	-0.001	135282	266.5	2	7.852	-0.001	90338	271.0
Aroclor-1242	3	8.406	-0.001	40372	267.7	3	9.115	-0.045	15827	151.6
Aroclor-1242	4	8.581	-0.000	56938	249.9	4	9.587	0.001	3186	23.0
Total Col1Ave (4 peaks):					262.0	Total Col2Ave (4 peaks):				178.4 RPD = 38
Corrected Ave (3 peaks):					260.1	Corrected Ave (3 peaks):				147.5 RPD = 55*
Aroclor-1248	1	8.406	0.000	40372	159.3	1	8.306	0.000	28171	181.6
Aroclor-1248	2	8.581	0.001	56938	176.1	2	8.713	0.000	27776	166.4
Aroclor-1248	3	8.995	-0.004	58213	94.1	3	9.115	-0.042	15827	77.6
Aroclor-1248	4	9.304	0.010	36620	119.6	4	9.587	0.006	3186	12.6
Total Col1Ave (4 peaks):					137.3	Total Col2Ave (4 peaks):				109.6 RPD = 22
Corrected Ave (3 peaks):					124.4	Corrected Ave (3 peaks):				85.5 RPD = 37
Aroclor-1254	1	9.304	0.005	36620	70.9	1	9.450	0.002	20792	83.5
Aroclor-1254	2	---			0.0	2	9.972	0.003	2640	13.1
Aroclor-1254	3	9.673	0.003	4075	12.3	3	10.148	0.027	52902	120.5
Aroclor-1254	4	9.813	0.004	14733	22.7	4	10.372	0.000	71680	163.3
Aroclor-1254	5	10.122	-0.055	119528	283.6	5	10.569	-0.000	98559	403.2
Total Col1Ave (4 peaks):					97.4	Total Col2Ave (5 peaks):				156.7 RPD = 47*
Corrected Ave (3 peaks):					35.3	Corrected Ave (4 peaks):				95.1 RPD = 92*
Aroclor-1260	1	11.045	0.002	116435	220.7	1	11.654	0.000	81795	226.0
Aroclor-1260	2	11.362	0.001	116918	215.6	2	11.920	0.002	217887	238.0
Aroclor-1260	3	11.738	0.003	303264	212.5	3	12.437	0.001	56212	246.3
Aroclor-1260	4	12.143	0.004	141534	191.9	4	12.502	0.000	142689	240.8
Aroclor-1260	5	12.246	0.002	68446	212.9	NS	---			----
Total Col1Ave (5 peaks):					210.7	Total Col2Ave (4 peaks):				237.8 RPD = 12
Corrected Ave (4 peaks):					208.2	Corrected Ave (3 peaks):				234.9 RPD = 12
Aroclor-1262	1	10.830	-0.002	169725	446.4	1	11.200	0.000	83995	171.1
Aroclor-1262	2	12.246	0.000	68446	114.1	2	11.654	0.001	81795	195.9
Aroclor-1262	3	12.320	-0.000	84201	129.2	3	12.437	0.003	56212	126.4
Aroclor-1262	4	12.989	-0.000	78065	131.5	4	12.502	-0.001	142689	200.4
Total Col1Ave (4 peaks):					205.3	Total Col2Ave (4 peaks):				173.4 RPD = 17
Corrected Ave (3 peaks):					124.9	Corrected Ave (3 peaks):				164.5 RPD = 27
Aroclor-1268	1	12.246	0.001	68446	44.1	1	12.437	0.003	56212	48.0
Aroclor-1268	2	12.320	0.002	84201	54.4	2	12.502	0.001	142689	114.4
Aroclor-1268	3	12.726	0.027	33020	25.7	3	12.894	0.001	1495	1.4
Aroclor-1268	4	13.490	0.001	16019	4.2	4	13.709	0.001	10120	3.2
Total Col1Ave (4 peaks):					32.1	Total Col2Ave (4 peaks):				41.8 RPD = 26
Corrected Ave (3 peaks):					24.7	Corrected Ave (3 peaks):				17.5 RPD = 34

Total PCB Area Col1 (5.909 - 13.792) = 2789370 Col1 Total PCB = 0.5 ppm*

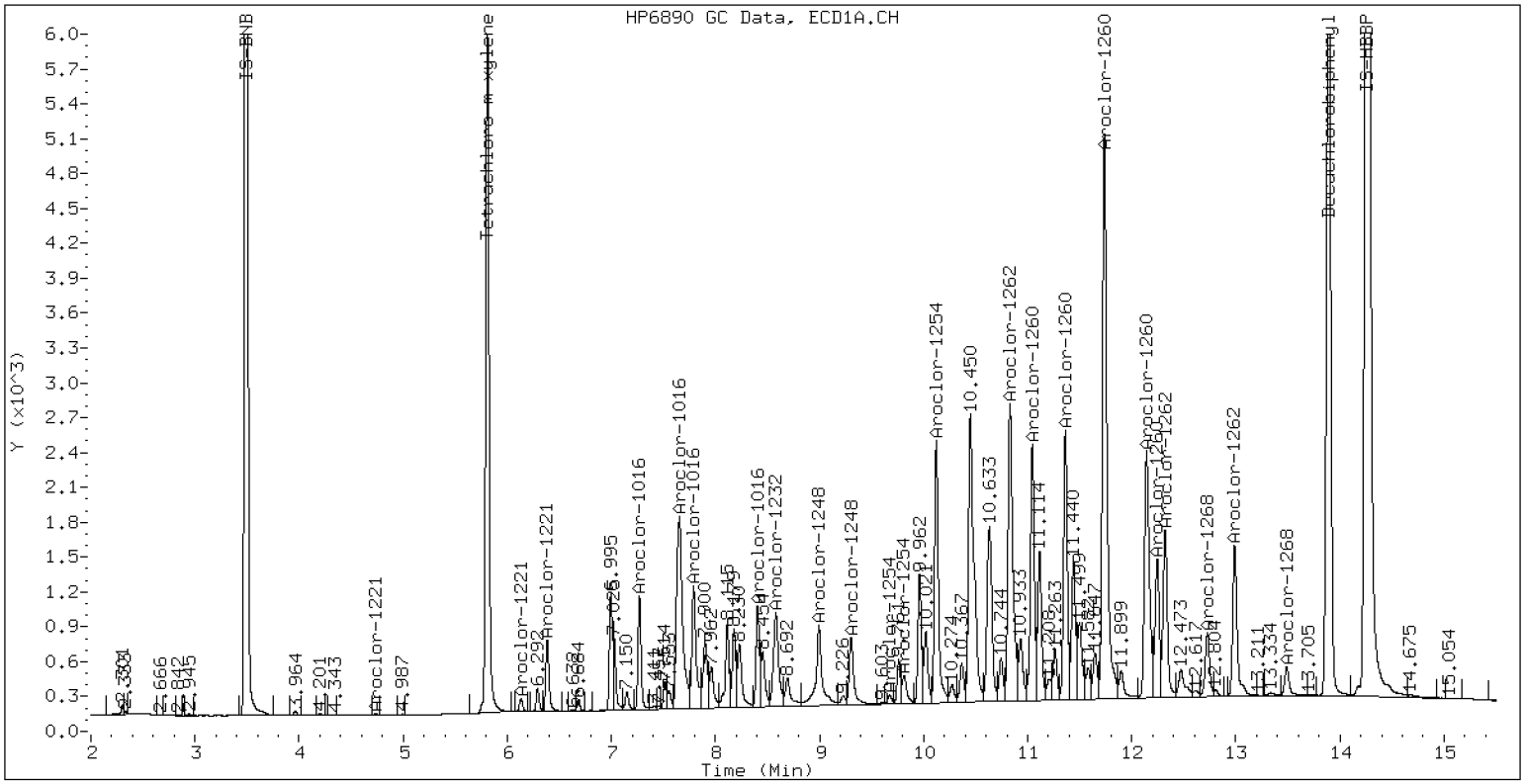
Total PCB Area Col2 (5.787 - 14.020) = 1810543 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

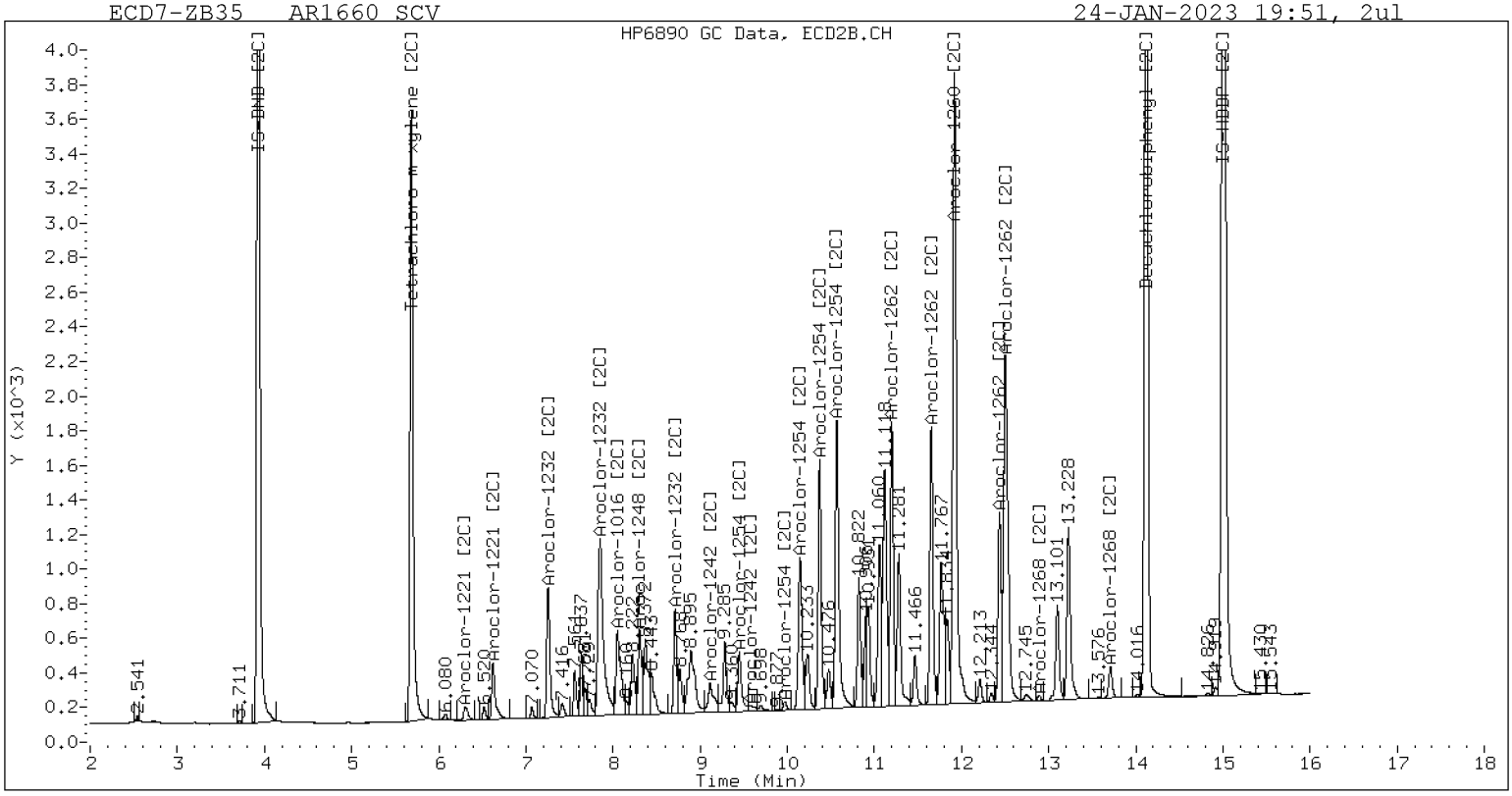
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660 SCV 24-JAN-2023 19:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660 SCV 24-JAN-2023 19:51, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01242325ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0281	Injection Date:	01/24/23
Lab Sample ID:	SLA0281-SCV2	Injection Time:	20:12
Sequence Name:	AR1242SCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	223	0.0411165	0.0365437		-10.9	+/-20
Aroclor 1242 [2C]	A	250.00	235	0.0423236	0.0386405		-5.9	+/-20
Decachlorobiphenyl	A	40.000	38.5	0.8555994	0.8244733		-3.6	+/-20
Tetrachlorometaxylene	A	40.000	37.8	1.1307870	1.0677240		-5.6	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.3	1.2696430	1.2804690		0.9	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.4	1.0814980	1.0101840		-6.6	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242325ECD7.D
Data file 2: /230124.b/230124.b/01242325ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242 SCV
Client ID:
Injection Date: 24-JAN-2023 20:12
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	268580	5.686	-0.001	172592	37.8	37.4	1.1	Tetrachloro-m-xylene
13.892	0.001	392918	14.121	0.001	323869	38.5	40.3	4.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503089	-0.0
Hexabromobiphenyl	647433	953137	47.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	341704	1.4
Hexabromobiphenyl	382032	505860	32.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	29901	159.9	1	7.255	0.000	32077	173.1
Aroclor-1016	2	7.653	0.003	107333	173.3	2	7.851	-0.000	71438	175.9
Aroclor-1016	3	7.790	0.002	45013	157.9	3	8.051	0.001	29072	175.4
Aroclor-1016	4	8.406	0.002	32958	179.8	4	8.306	0.001	21761	167.5
Total Col1Ave (4 peaks):					167.7	Total Col2Ave (4 peaks):				173.0 RPD = 3
Corrected Ave (3 peaks):					163.7	Corrected Ave (3 peaks):				172.0 RPD = 5
Aroclor-1221	1	4.737	0.004	141	3.8	1	---			0.0
Aroclor-1221	2	6.133	-0.001	3649	48.0	2	6.317	0.018	4290	78.2
Aroclor-1221	3	6.384	-0.000	21189	120.0	3	6.624	0.001	14613	157.7
Total Col1Ave (3 peaks):					57.3	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.737	0.003	141	6.1	1	---			0.0
Aroclor-1232	2	6.133	-0.001	3649	69.7	2	7.255	-0.002	32077	377.3
Aroclor-1232	3	7.653	-0.005	107333	410.2	3	7.851	-0.004	71438	412.5
Aroclor-1232	4	8.581	-0.003	59617	532.3	4	8.713	-0.000	22563	468.9
Total Col1Ave (4 peaks):					254.6	Total Col2Ave (3 peaks):				419.6 RPD = 49*
Corrected Ave (3 peaks):					162.0	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	29901	194.1	1	7.255	-0.001	32077	214.6
Aroclor-1242	2	7.653	-0.002	107333	212.9	2	7.851	-0.002	71438	215.2
Aroclor-1242	3	8.406	-0.000	32958	220.0	3	9.156	-0.004	27374	263.3
Aroclor-1242	4	8.581	-0.000	59617	263.5	4	9.581	-0.006	34156	247.9
Total Col1Ave (4 peaks):					222.6	Total Col2Ave (4 peaks):				235.3 RPD = 6
Corrected Ave (3 peaks):					209.0	Corrected Ave (3 peaks):				225.9 RPD = 8
Aroclor-1248	1	8.406	0.001	32958	131.0	1	8.306	0.001	21761	140.9
Aroclor-1248	2	8.581	0.001	59617	185.7	2	8.713	0.001	22563	135.7
Aroclor-1248	3	9.003	0.004	72557	118.2	3	9.156	-0.000	27374	134.7
Aroclor-1248	4	9.296	0.003	28122	92.5	4	9.581	-0.001	34156	135.9
Total Col1Ave (4 peaks):					131.8	Total Col2Ave (4 peaks):				136.8 RPD = 4
Corrected Ave (3 peaks):					113.9	Corrected Ave (3 peaks):				135.5 RPD = 17
Aroclor-1254	1	9.296	-0.002	28122	54.8	1	9.448	0.000	11650	47.0
Aroclor-1254	2	9.380	0.002	9292	42.4	2	9.968	-0.001	7642	38.1
Aroclor-1254	3	9.671	0.001	12871	39.2	3	10.120	-0.001	16012	36.6
Aroclor-1254	4	9.808	-0.000	22113	34.4	4	10.378	0.007	16300	37.3
Aroclor-1254	5	10.176	-0.001	17771	42.5	5	10.572	0.004	4439	18.2
Total Col1Ave (5 peaks):					42.7	Total Col2Ave (5 peaks):				35.5 RPD = 18
Corrected Ave (4 peaks):					39.6	Corrected Ave (4 peaks):				32.6 RPD = 19
Aroclor-1260	1	11.047	0.003	741	1.4	1	11.663	0.010	1794	4.9
Aroclor-1260	2	11.366	0.006	379	0.7	2	11.923	0.005	1208	1.3
Aroclor-1260	3	11.745	0.011	860	0.6	3	12.507	0.071	977	4.2
Aroclor-1260	4	12.154	0.014	1536	2.1	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
Total Col1Ave (4 peaks):					1.2	Total Col2Ave (3 peaks):				3.5 RPD = 99*
Corrected Ave (3 peaks):					0.9	Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.836	0.004	10654	27.6	1	11.120	-0.080	8071	16.3
Aroclor-1262	2	12.154	-0.092	1536	2.5	2	11.663	0.010	1794	4.3
Aroclor-1262	3	---			0.0	3	12.507	0.073	977	2.2
Aroclor-1262	4	13.040	0.051	1739	2.9	4	---			0.0
Total Col1Ave (3 peaks):					11.0	Total Col2Ave (3 peaks):				7.6 RPD = 37
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.154	-0.091	1536	1.0	1	12.507	0.073	977	0.8
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.623	-0.076	5080	3.9	3	12.894	0.001	98	0.1
Aroclor-1268	4	13.501	0.012	2725	0.7	4	13.707	-0.001	1566	0.5
Total Col1Ave (3 peaks):					1.9	Total Col2Ave (3 peaks):				0.5 RPD = 120*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 915887 Col1 Total PCB = 0.2 ppm*

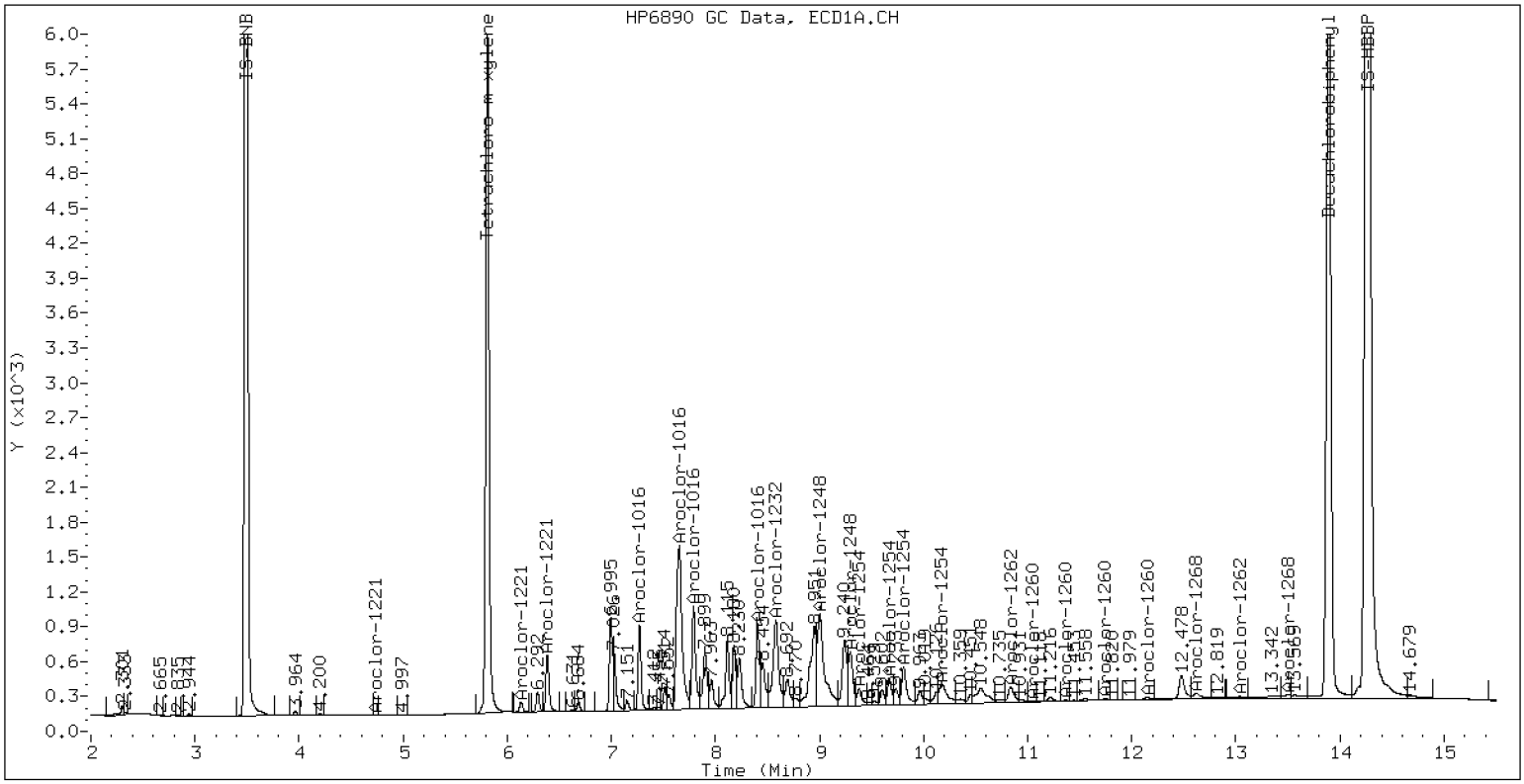
Total PCB Area Col2 (5.787 - 14.020) = 575897 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

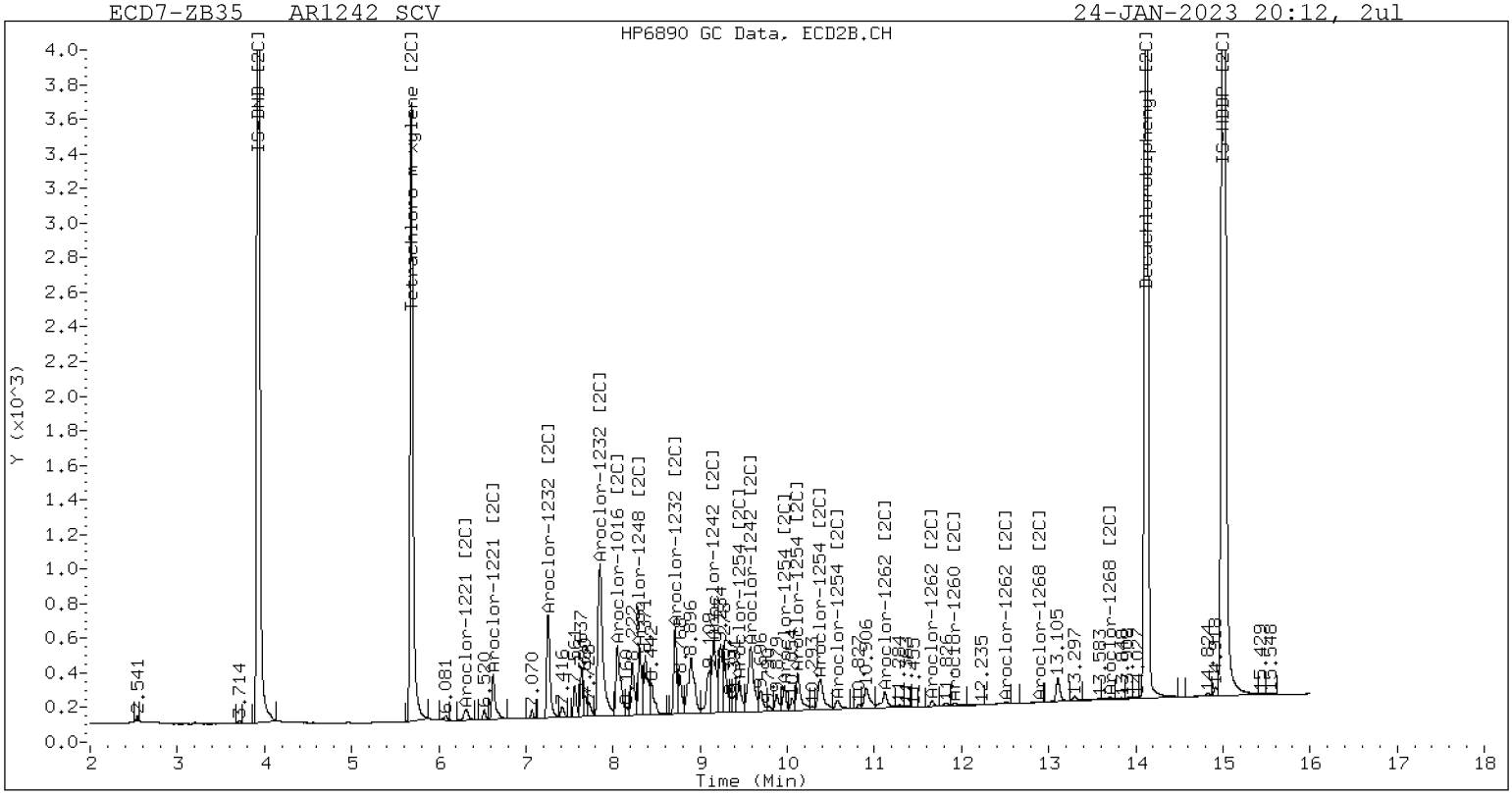
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242 SCV 24-JAN-2023 20:12, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242 SCV 24-JAN-2023 20:12, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01242326ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0281	Injection Date:	01/24/23
Lab Sample ID:	SLA0281-SCV3	Injection Time:	20:33
Sequence Name:	AR1248SCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	237	0.0592639	0.0563710		-5.1	+/-20
Aroclor 1248 [2C]	A	250.00	231	0.0453673	0.0417577		-7.6	+/-20
Decachlorobiphenyl	A	40.000	38.3	0.8555994	0.8184425		-4.3	+/-20
Tetrachlorometaxylene	A	40.000	36.8	1.1307870	1.0389130		-8.1	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.6	1.2696430	1.2561970		-1.1	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.5	1.0814980	0.9880182		-8.6	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242326ECD7.D
Data file 2: /230124.b/230124.b/01242326ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248 SCV
Client ID:
Injection Date: 24-JAN-2023 20:33
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.000	263982	5.686	-0.001	169991	36.8	36.5	0.6	Tetrachloro-m-xylene
13.892	0.001	400655	14.121	0.001	316171	38.3	39.6	3.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	508189	1.0
Hexabromobiphenyl	647433	979067	51.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	344105	2.1
Hexabromobiphenyl	382032	503378	31.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.001	14777	78.3	1	7.254	-0.001	16100	86.3
Aroclor-1016	2	7.655	0.004	70114	112.1	2	7.853	0.002	47184	115.4
Aroclor-1016	3	7.794	0.006	27212	94.5	3	8.053	0.003	9427	56.5
Aroclor-1016	4	8.406	0.003	59884	323.4	4	8.306	0.001	36680	280.3
Total Col1Ave (4 peaks):					152.0	Total Col2Ave (4 peaks):				134.6 RPD = 12
Corrected Ave (3 peaks):					94.9	Corrected Ave (3 peaks):				86.0 RPD = 10
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.133	-0.000	591	7.7	2	6.323	0.025	1820	32.9
Aroclor-1221	3	6.386	0.001	2453	13.8	3	6.627	0.004	1477	15.8
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.133	-0.000	591	11.2	2	7.254	-0.002	16100	188.0
Aroclor-1232	3	7.655	-0.004	70114	265.3	3	7.853	-0.001	47184	270.6
Aroclor-1232	4	8.581	-0.003	76286	674.3	4	8.714	0.000	39330	811.7
Total Col1Ave (3 peaks):					316.9	Total Col2Ave (3 peaks):				423.4 RPD = 29
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	0.000	14777	95.0	1	7.254	-0.002	16100	107.0
Aroclor-1242	2	7.655	-0.001	70114	137.7	2	7.853	0.000	47184	141.2
Aroclor-1242	3	8.406	-0.000	59884	395.8	3	9.159	-0.001	46988	448.9
Aroclor-1242	4	8.581	-0.000	76286	333.8	4	9.584	-0.003	56615	408.1
Total Col1Ave (4 peaks):					240.5	Total Col2Ave (4 peaks):				276.3 RPD = 14
Corrected Ave (3 peaks):					188.8	Corrected Ave (3 peaks):				218.7 RPD = 15
Aroclor-1248	1	8.406	0.001	59884	235.6	1	8.306	0.001	36680	235.8
Aroclor-1248	2	8.581	0.001	76286	235.2	2	8.714	0.002	39330	234.9
Aroclor-1248	3	9.000	0.001	148805	239.9	3	9.159	0.003	46988	229.7
Aroclor-1248	4	9.295	0.001	73114	238.1	4	9.584	0.002	56615	223.8
Total Col1Ave (4 peaks):					237.2	Total Col2Ave (4 peaks):				231.0 RPD = 3
Corrected Ave (3 peaks):					236.3	Corrected Ave (3 peaks):				229.5 RPD = 3
Aroclor-1254	1	9.295	-0.004	73114	141.2	1	9.449	0.001	20314	81.4
Aroclor-1254	2	9.378	0.000	36561	165.3	2	9.970	0.000	18678	92.6
Aroclor-1254	3	9.672	0.003	30736	92.6	3	10.124	0.003	35321	80.2
Aroclor-1254	4	9.813	0.004	53537	82.3	4	10.387	0.015	35188	79.9
Aroclor-1254	5	10.192	0.015	40119	94.9	5	10.575	0.006	7386	30.1
Total Col1Ave (5 peaks):					115.3	Total Col2Ave (5 peaks):				72.9 RPD = 45*
Corrected Ave (4 peaks):					102.7	Corrected Ave (4 peaks):				67.9 RPD = 41*
Aroclor-1260	1	11.054	0.010	1868	3.4	1	11.664	0.011	2055	5.7
Aroclor-1260	2	11.366	0.005	1375	2.4	2	11.926	0.009	1303	1.4
Aroclor-1260	3	11.745	0.010	2137	1.4	3	12.439	0.003	395	1.7
Aroclor-1260	4	12.147	0.008	1650	2.1	4	12.507	0.005	890	1.5
Aroclor-1260	5	12.255	0.011	558	1.7	NS	---			----
Total Col1Ave (5 peaks):					2.2	Total Col2Ave (4 peaks):				2.6 RPD = 15
Corrected Ave (4 peaks):					1.9	Corrected Ave (3 peaks):				1.5 RPD = 22
Aroclor-1262	1	10.837	0.005	12736	32.2	1	11.122	-0.078	7136	14.5
Aroclor-1262	2	12.255	0.010	558	0.9	2	11.664	0.011	2055	4.9
Aroclor-1262	3	12.327	0.006	596	0.9	3	12.439	0.004	395	0.9
Aroclor-1262	4	12.996	0.007	1113	1.8	4	12.507	0.003	890	1.2
Total Col1Ave (4 peaks):					8.9	Total Col2Ave (4 peaks):				5.4 RPD = 50*
Corrected Ave (3 peaks):					1.2	Corrected Ave (3 peaks):				2.3 RPD = 65*
Aroclor-1268	1	12.255	0.010	558	0.3	1	12.439	0.005	395	0.3
Aroclor-1268	2	12.327	0.009	596	0.4	2	12.507	0.005	890	0.7
Aroclor-1268	3	12.706	0.007	1161	0.9	3	12.896	0.003	166	0.2
Aroclor-1268	4	13.504	0.016	3330	0.8	4	13.717	0.009	469	0.1
Total Col1Ave (4 peaks):					0.6	Total Col2Ave (4 peaks):				0.3 RPD = 57*
Corrected Ave (3 peaks):					0.5	Corrected Ave (3 peaks):				0.2 RPD = 83*

Total PCB Area Col1 (5.909 - 13.792) = 1230760 Col1 Total PCB = 0.2 ppm*

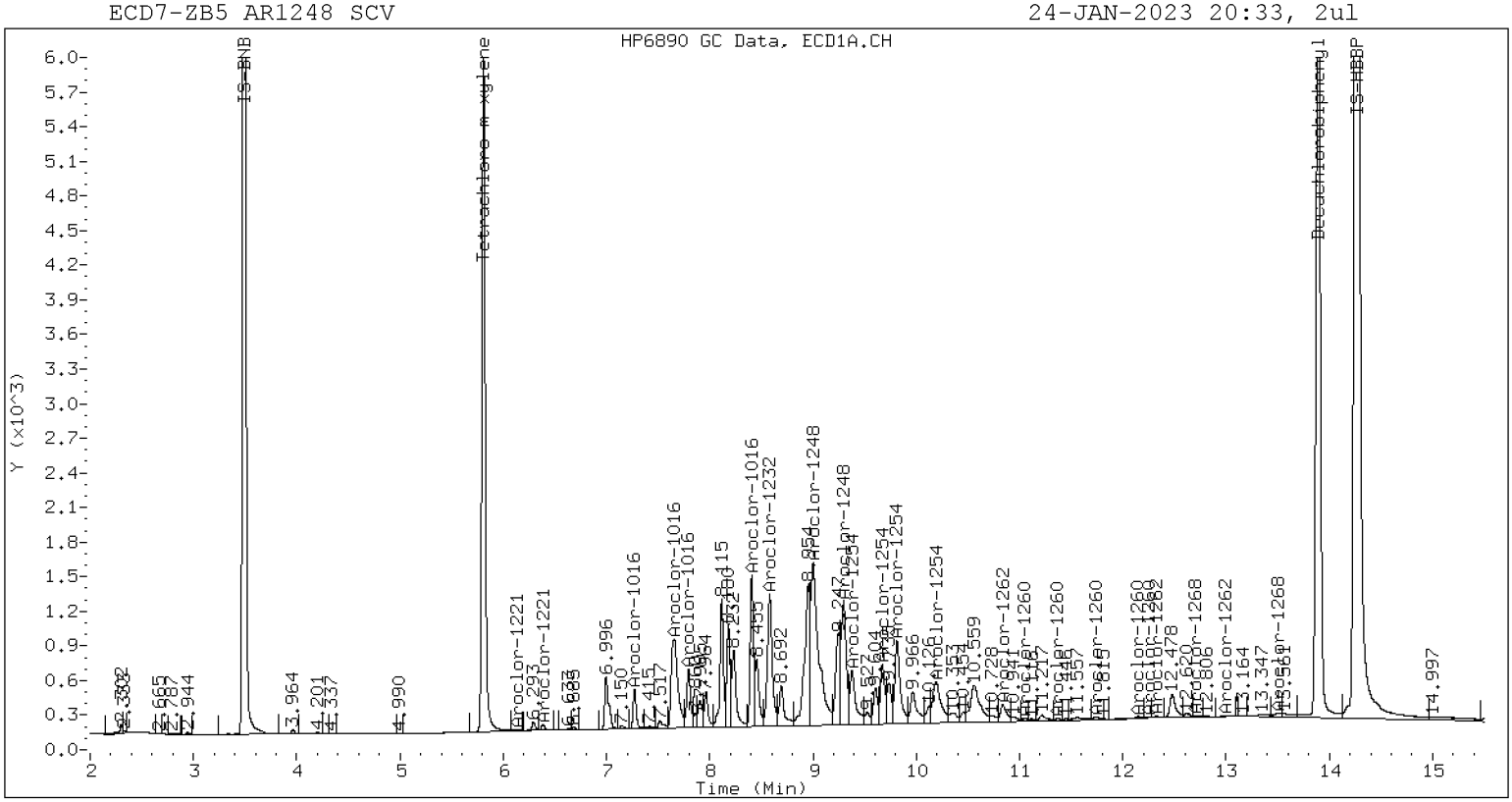
Total PCB Area Col2 (5.787 - 14.020) = 742749 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

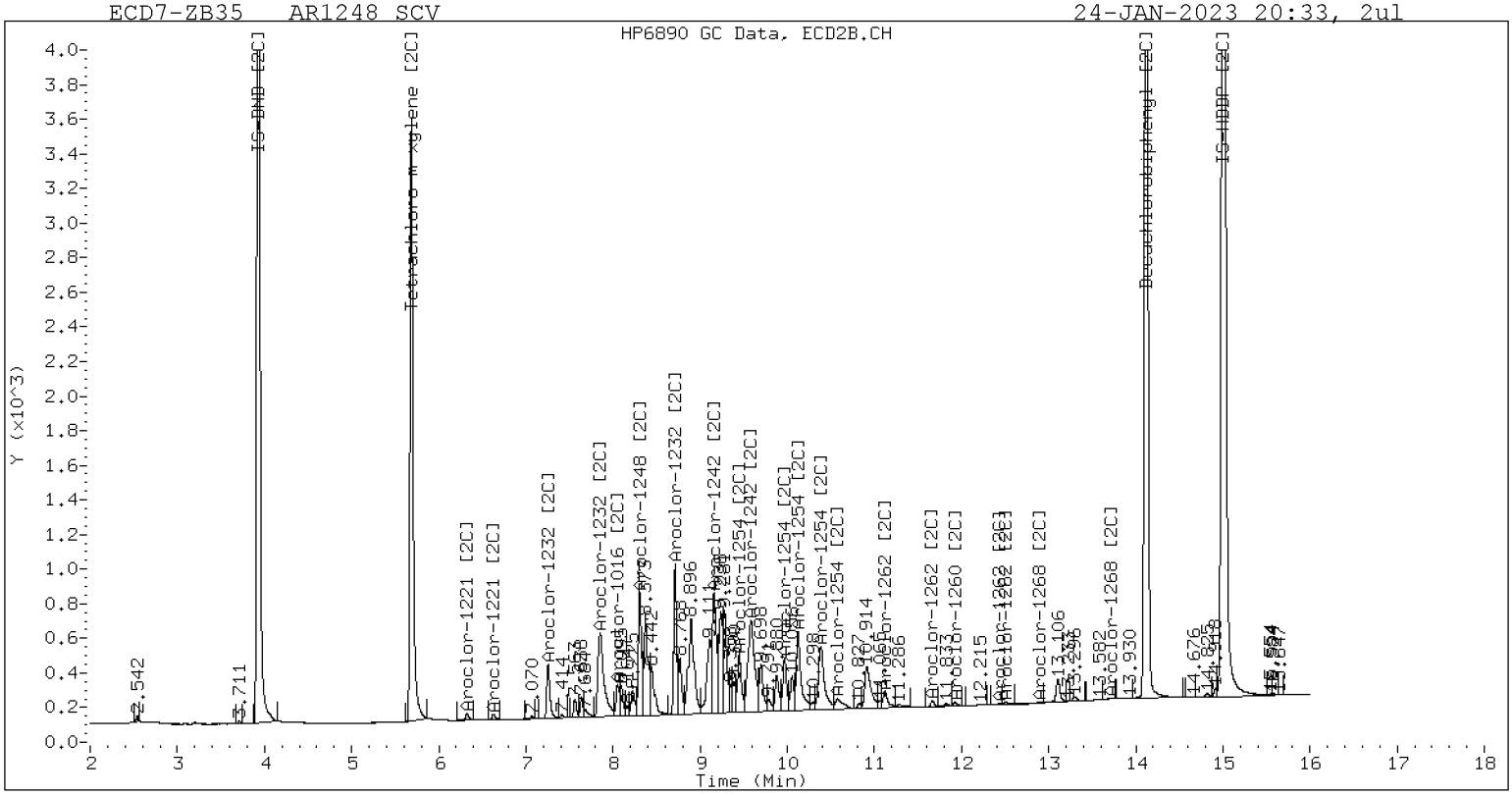
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248 SCV 24-JAN-2023 20:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248 SCV 24-JAN-2023 20:33, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01242327ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0281	Injection Date:	01/24/23
Lab Sample ID:	SLA0281-SCV4	Injection Time:	20:54
Sequence Name:	AR1254SCV4		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	221	0.0675033	0.0594048		-11.7	+/-20
Aroclor 1254 [2C]	A	250.00	227	0.0733219	0.0662023		-9.4	+/-20
Decachlorobiphenyl	A	40.000	37.1	0.8555994	0.7930764		-7.3	+/-20
Tetrachlorometaxylene	A	40.000	36.7	1.1307870	1.0364220		-8.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.5	1.2696430	1.2551640		-1.1	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.6	1.0814980	0.9904044		-8.4	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242327ECD7.D
Data file 2: /230124.b/230124.b/01242327ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254 SCV
Client ID:
Injection Date: 24-JAN-2023 20:54
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	261398	5.686	-0.001	169839	36.7	36.6	0.1	Tetrachloro-m-xylene
13.892	0.001	383983	14.121	0.001	323233	37.1	39.5	6.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	504424	0.2
Hexabromobiphenyl	647433	968338	49.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	342969	1.8
Hexabromobiphenyl	382032	515045	34.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.273	0.003	320	1.7	1	7.258	0.003	332	1.8
Aroclor-1016	2	7.658	0.008	991	1.6	2	---			0.0
Aroclor-1016	3	7.795	0.007	662	2.3	3	8.097	0.047	515	3.1
Aroclor-1016	4	8.408	0.005	21378	116.3	4	8.307	0.002	20446	156.8
	Total Col1Ave (4 peaks):				30.5	Total Col2Ave (3 peaks):				53.9 RPD = 55*
	Corrected Ave (3 peaks):				1.9	Corrected Ave: < 3 Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.325	0.026	1749	31.7
Aroclor-1221	3	---			0.0	3	6.633	0.011	321	3.5
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	7.258	0.001	332	3.9
Aroclor-1232	3	7.658	-0.000	991	3.8	3	---			0.0
Aroclor-1232	4	8.587	0.003	8887	79.1	4	8.715	0.001	14030	290.5
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	7.273	0.002	320	2.1	1	7.258	0.002	332	2.2
Aroclor-1242	2	7.658	0.003	991	2.0	2	---			0.0
Aroclor-1242	3	8.408	0.002	21378	142.3	3	9.164	0.004	26593	254.9
Aroclor-1242	4	8.587	0.006	8887	39.2	4	9.543	-0.043	34385	248.7
	Total Col1Ave (4 peaks):				46.4	Total Col2Ave (3 peaks):				168.6 RPD = 114*
	Corrected Ave (3 peaks):				14.4	Corrected Ave: < 3 Peaks				
Aroclor-1248	1	8.408	0.003	21378	84.7	1	8.307	0.001	20446	131.9
Aroclor-1248	2	8.587	0.007	8887	27.6	2	8.715	0.003	14030	84.1
Aroclor-1248	3	8.995	-0.004	110289	179.1	3	9.164	0.007	26593	130.4
Aroclor-1248	4	9.300	0.007	113143	371.2	4	9.543	-0.038	34385	136.4
	Total Col1Ave (4 peaks):				165.7	Total Col2Ave (4 peaks):				120.7 RPD = 31
	Corrected Ave (3 peaks):				97.2	Corrected Ave (3 peaks):				115.5 RPD = 17
Aroclor-1254	1	9.300	0.002	113143	220.1	1	9.449	0.001	56453	226.9
Aroclor-1254	2	9.379	0.001	49468	225.4	2	9.970	0.001	45325	225.4
Aroclor-1254	3	9.671	0.002	72811	221.0	3	10.122	0.002	97044	221.2
Aroclor-1254	4	9.811	0.002	140530	217.7	4	10.374	0.002	98778	225.2
Aroclor-1254	5	10.182	0.005	92254	219.8	5	10.570	0.001	57171	234.0
	Total Col1Ave (5 peaks):				220.8	Total Col2Ave (5 peaks):				226.5 RPD = 3
	Corrected Ave (4 peaks):				219.7	Corrected Ave (4 peaks):				224.7 RPD = 2
Aroclor-1260	1	11.045	0.002	8960	16.5	1	11.661	0.008	26985	72.6
Aroclor-1260	2	11.364	0.004	9237	16.5	2	11.923	0.006	19882	21.2
Aroclor-1260	3	11.741	0.007	21268	14.5	3	12.505	0.069	13190	56.3
Aroclor-1260	4	12.146	0.007	19041	25.1	4	---			0.0
Aroclor-1260	5	12.321	0.077	1835	5.5	NS	---			----
	Total Col1Ave (5 peaks):				15.6	Total Col2Ave (3 peaks):				50.0 RPD = 105*
	Corrected Ave (4 peaks):				13.3	Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.832	0.000	157590	402.4	1	11.119	-0.081	92414	183.3
Aroclor-1262	2	12.321	0.075	1835	3.0	2	11.661	0.008	26985	63.0
Aroclor-1262	3	---			0.0	3	12.505	0.071	13190	28.9
Aroclor-1262	4	12.995	0.006	843	1.4	4	---			0.0
	Total Col1Ave (3 peaks):				135.6	Total Col2Ave (3 peaks):				91.7 RPD = 39
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1268	1	12.321	0.076	1835	1.1	1	12.505	0.072	13190	11.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.720	0.021	1314	1.0	3	12.891	-0.002	169	0.2
Aroclor-1268	4	13.504	0.016	1169	0.3	4	13.706	-0.002	1132	0.3
	Total Col1Ave (3 peaks):				0.8	Total Col2Ave (3 peaks):				3.8 RPD = 130*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				

Total PCB Area Col1 (5.909 - 13.792) = 1507519 Col1 Total PCB = 0.3 ppm*

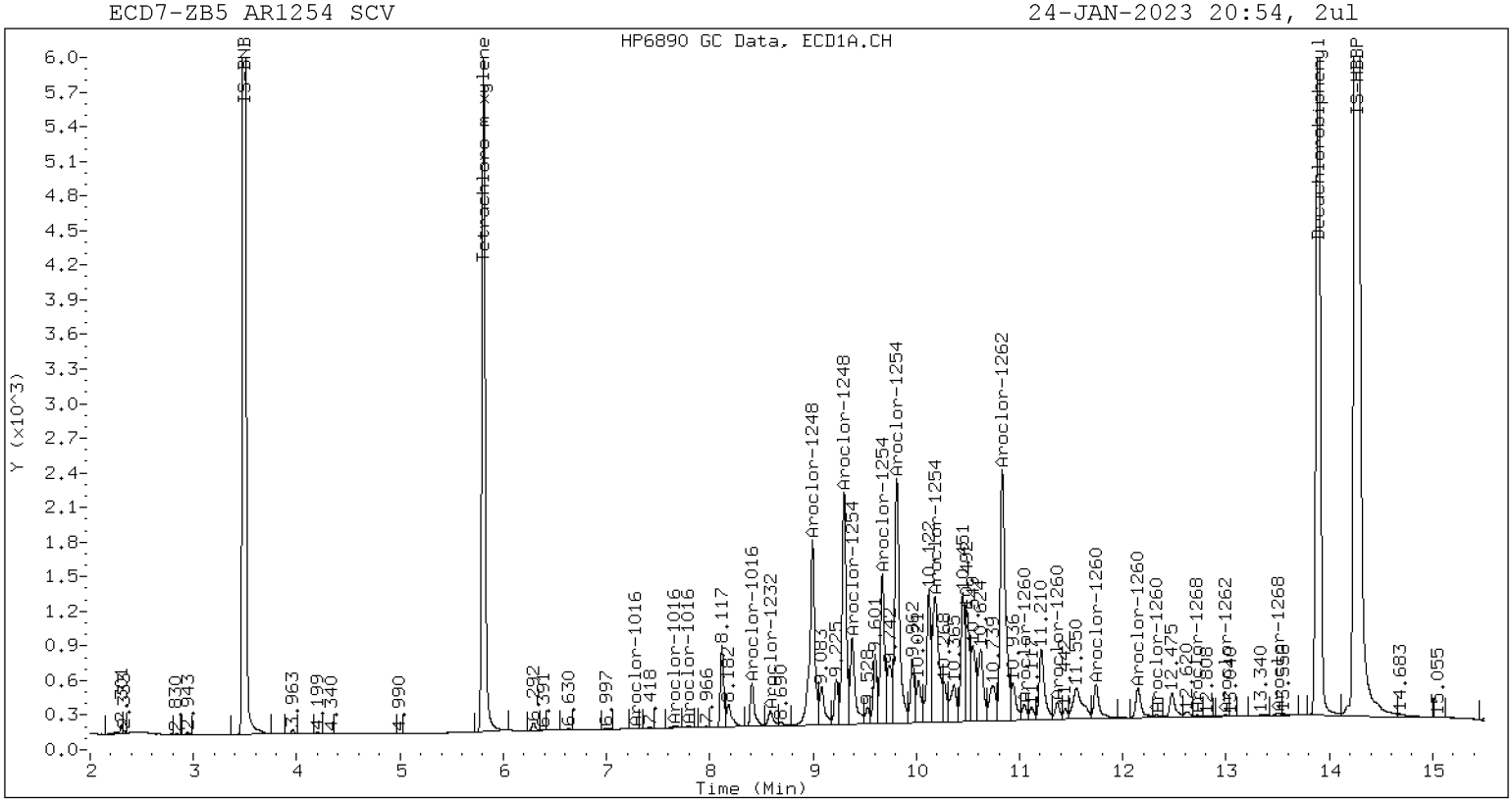
Total PCB Area Col2 (5.787 - 14.020) = 951047 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

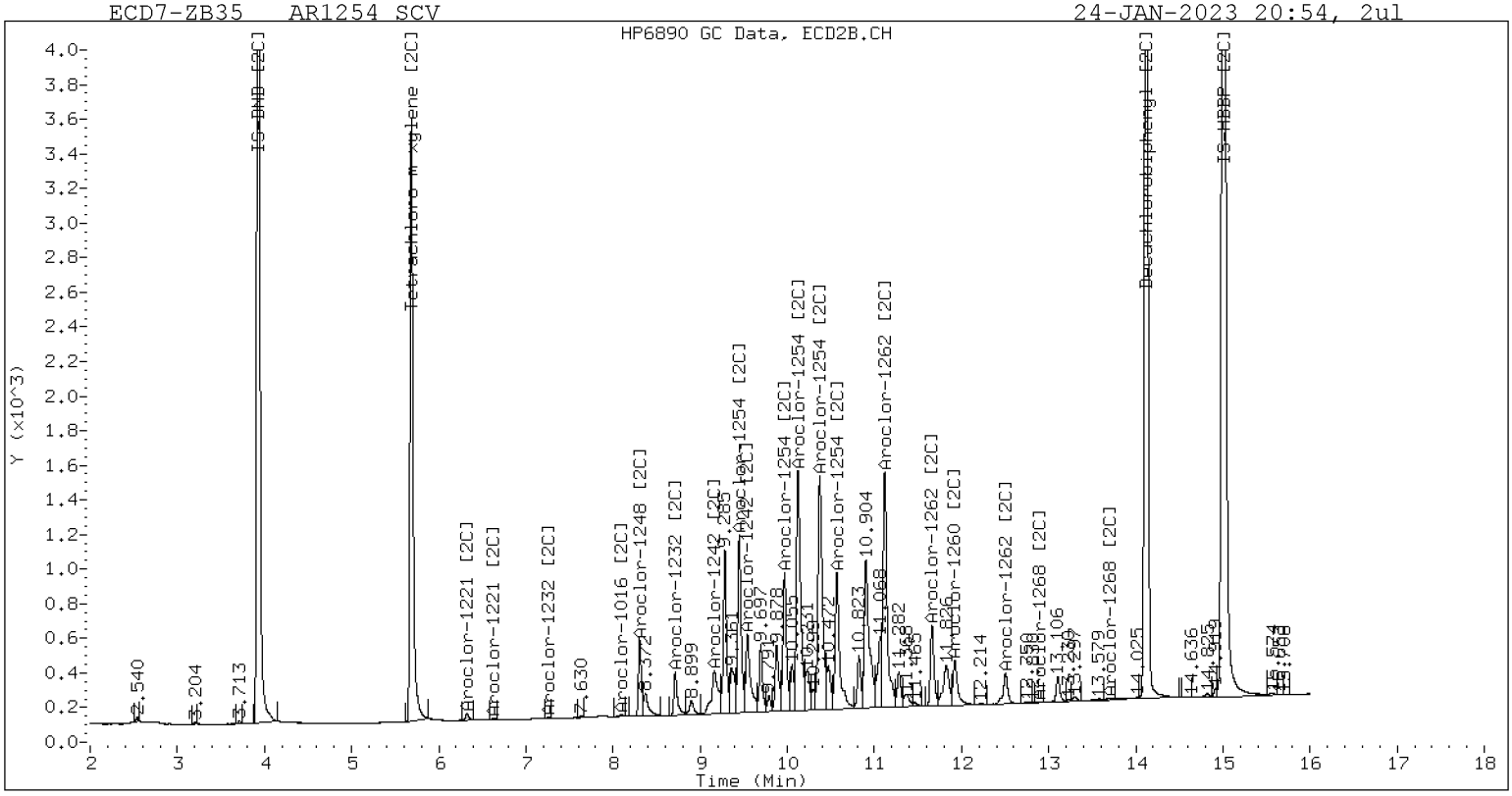
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254 SCV 24-JAN-2023 20:54, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254 SCV 24-JAN-2023 20:54, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01242328ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0281	Injection Date:	01/24/23
Lab Sample ID:	SLA0281-SCV5	Injection Time:	21:15
Sequence Name:	AR2162SCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1221	A	250.00	228	0.0153579	0.0138791		-8.8	+/-20
Aroclor 1221 [2C]	A	250.00	239	0.0134687	0.0127460		-4.5	+/-20
Decachlorobiphenyl	A	40.000	37.5	0.8555994	0.8010750		-6.4	+/-20
Tetrachlorometaxylene	A	40.000	37.3	1.1307870	1.0541060		-6.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.5	1.2696430	1.2528610		-1.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.2	1.0814980	1.0047210		-7.1	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242328ECD7.D
Data file 2: /230124.b/230124.b/01242328ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162 SCV
Client ID:
Injection Date: 24-JAN-2023 21:15
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	-0.000	265357	5.685	-0.001	170984	37.3	37.2	0.3	Tetrachloro-m-xylene
13.891	-0.001	397332	14.119	-0.001	326981	37.5	39.5	5.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	503473	0.0
Hexabromobiphenyl	647433	991997	53.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	340361	1.0
Hexabromobiphenyl	382032	521975	36.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	5326	28.5	1	7.257	0.002	6708	36.3
Aroclor-1016	2	7.664	0.013	11965	19.3	2	7.856	0.005	7233	17.9
Aroclor-1016	3	7.797	0.009	6015	21.1	3	8.058	0.008	2997	18.2
Aroclor-1016	4	8.410	0.006	3771	20.6	4	8.308	0.002	2065	16.0
Total Col1Ave (4 peaks):					22.4	Total Col2Ave (4 peaks):				22.1 RPD = 1
Corrected Ave (3 peaks):					20.3	Corrected Ave (3 peaks):				17.3 RPD = 16
Aroclor-1221	1	4.732	-0.000	9097	244.5	1	4.959	-0.000	6157	246.8
Aroclor-1221	2	6.133	-0.000	16114	211.8	2	6.297	-0.001	12807	234.2
Aroclor-1221	3	6.384	0.000	40299	228.1	3	6.622	-0.000	21707	235.2
Total Col1Ave (3 peaks):					228.1	Total Col2Ave (3 peaks):				238.7 RPD = 5
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.732	-0.001	9097	391.6	1	4.959	-0.001	6157	406.9
Aroclor-1232	2	6.133	0.000	16114	307.8	2	7.257	0.000	6708	79.2
Aroclor-1232	3	7.664	0.005	11965	45.7	3	7.856	0.001	7233	41.9
Aroclor-1232	4	8.589	0.004	2837	25.3	4	8.716	0.002	1869	39.0
Total Col1Ave (4 peaks):					192.6	Total Col2Ave (4 peaks):				141.7 RPD = 30
Corrected Ave (3 peaks):					126.3	Corrected Ave (3 peaks):				53.4 RPD = 81*
Aroclor-1242	1	7.272	0.001	5326	34.5	1	7.257	0.001	6708	45.1
Aroclor-1242	2	7.664	0.008	11965	23.7	2	7.856	0.003	7233	21.9
Aroclor-1242	3	8.410	0.004	3771	25.2	3	9.169	0.009	1956	18.9
Aroclor-1242	4	8.589	0.007	2837	12.5	4	9.544	-0.043	5978	43.6
Total Col1Ave (4 peaks):					24.0	Total Col2Ave (4 peaks):				32.3 RPD = 30
Corrected Ave (3 peaks):					20.5	Corrected Ave (3 peaks):				28.1 RPD = 31
Aroclor-1248	1	8.410	0.005	3771	15.0	1	8.308	0.002	2065	13.4
Aroclor-1248	2	8.589	0.008	2837	8.8	2	8.716	0.004	1869	11.3
Aroclor-1248	3	8.997	-0.002	36022	58.6	3	9.169	0.012	1956	9.7
Aroclor-1248	4	9.305	0.011	30853	101.4	4	9.544	-0.038	5978	23.9
Total Col1Ave (4 peaks):					46.0	Total Col2Ave (4 peaks):				14.6 RPD = 104*
Corrected Ave (3 peaks):					27.5	Corrected Ave (3 peaks):				11.5 RPD = 82*
Aroclor-1254	1	9.305	0.006	30853	60.1	1	9.451	0.003	17617	71.3
Aroclor-1254	2	9.376	-0.002	5370	24.5	2	9.970	0.001	2849	14.3
Aroclor-1254	3	9.673	0.003	5543	16.9	3	10.146	0.026	88151	202.5
Aroclor-1254	4	9.810	0.002	14544	22.6	4	10.370	-0.002	107074	245.9
Aroclor-1254	5	10.121	-0.056	180016	429.7	5	10.567	-0.002	141725	584.5
Total Col1Ave (5 peaks):					110.8	Total Col2Ave (5 peaks):				223.7 RPD = 68*
Corrected Ave (4 peaks):					31.0	Corrected Ave (4 peaks):				133.5 RPD = 125*
Aroclor-1260	1	11.044	0.001	310806	558.4	1	11.652	-0.001	187682	498.4
Aroclor-1260	2	11.361	0.000	263161	460.0	2	11.917	-0.000	450612	473.0
Aroclor-1260	3	11.735	0.000	629605	418.0	3	12.433	-0.003	206042	867.7
Aroclor-1260	4	12.141	0.001	210012	269.9	4	12.502	-0.000	326457	529.5
Aroclor-1260	5	12.244	-0.000	268425	791.3	NS	---			----
Total Col1Ave (5 peaks):					499.5	Total Col2Ave (4 peaks):				592.1 RPD = 17
Corrected Ave (4 peaks):					426.6	Corrected Ave (3 peaks):				500.3 RPD = 16
Aroclor-1262	1	10.828	-0.005	171094	426.5	1	11.200	0.000	219731	430.1
Aroclor-1262	2	12.244	-0.002	268425	423.9	2	11.652	-0.001	187682	432.0
Aroclor-1262	3	12.319	-0.002	291581	424.2	3	12.433	-0.001	206042	445.4
Aroclor-1262	4	12.988	-0.001	257735	411.5	4	12.502	-0.002	326457	440.6
Total Col1Ave (4 peaks):					421.5	Total Col2Ave (4 peaks):				437.0 RPD = 4
Corrected Ave (3 peaks):					419.8	Corrected Ave (3 peaks):				434.3 RPD = 3
Aroclor-1268	1	12.244	-0.001	268425	163.8	1	12.433	-0.000	206042	169.0
Aroclor-1268	2	12.319	0.001	291581	178.4	2	12.502	0.000	326457	251.7
Aroclor-1268	3	12.725	0.026	108693	80.3	3	12.892	-0.001	10062	9.3
Aroclor-1268	4	13.486	-0.003	95646	23.8	4	13.710	0.001	59437	17.8
Total Col1Ave (4 peaks):					111.6	Total Col2Ave (4 peaks):				112.0 RPD = 0

Corrected Ave (3 peaks): 89.3 Corrected Ave (3 peaks): 65.4 RPD = 31

Total PCB Area Col1 (5.909 - 13.792) = 4409992 Col1 Total PCB = 0.8 ppm*

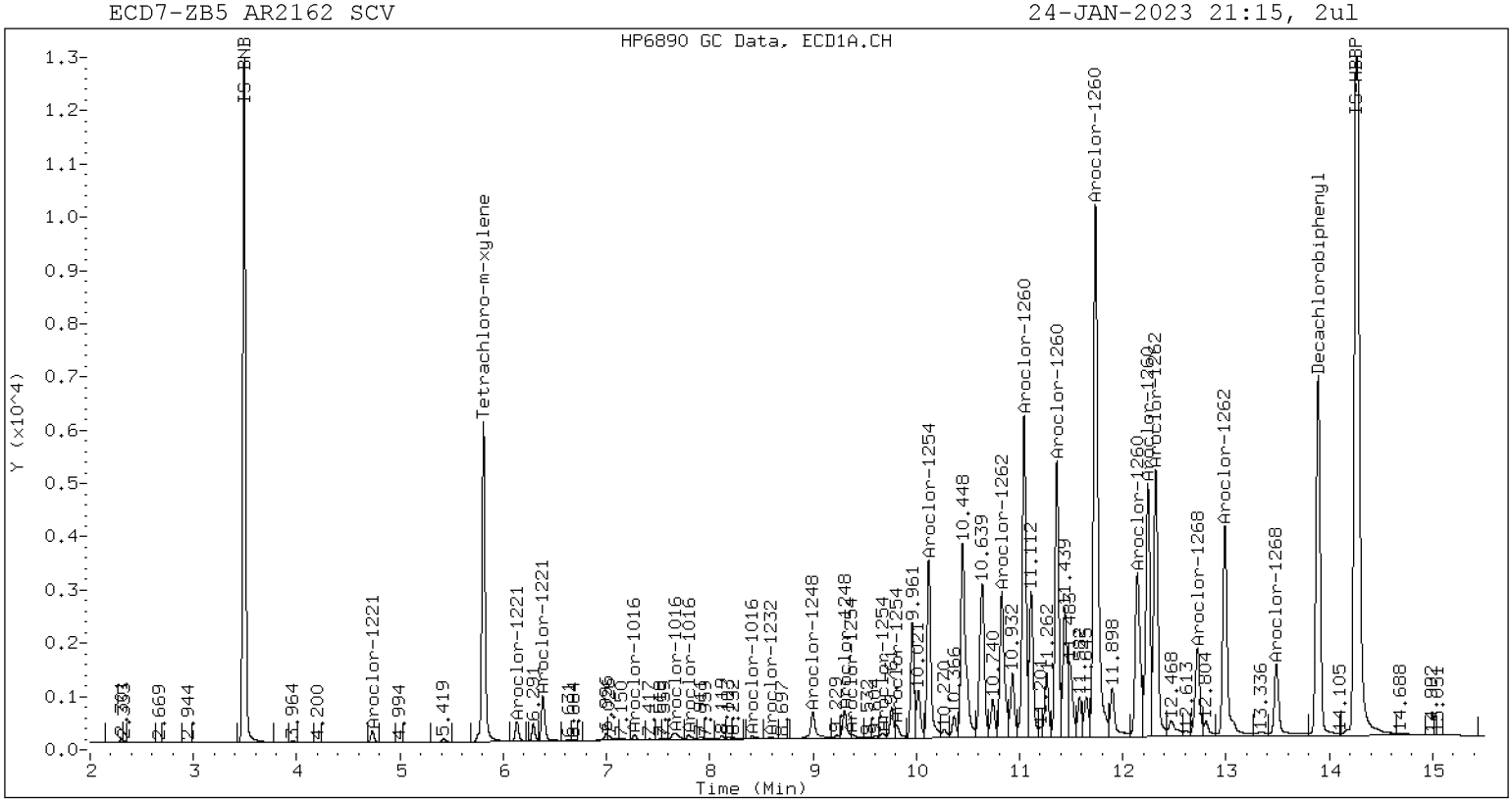
Total PCB Area Col2 (5.787 - 14.020) = 2874073 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

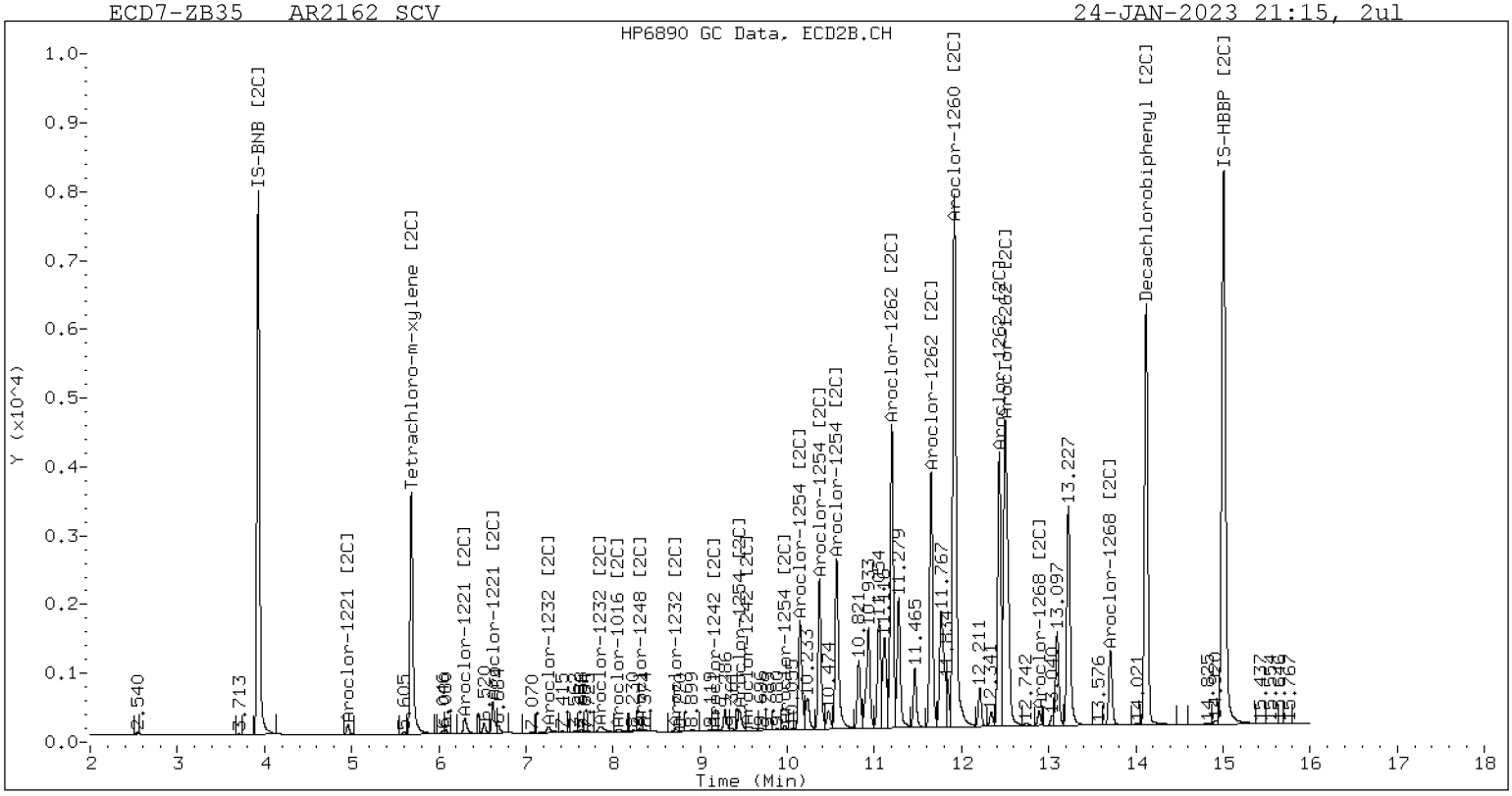
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162 SCV 24-JAN-2023 21:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162 SCV 24-JAN-2023 21:15, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	01242329ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLA0281	Injection Date:	01/24/23
Lab Sample ID:	SLA0281-SCV6	Injection Time:	21:36
Sequence Name:	AR3268SCV6		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1232	A	250.00	216	0.0178560	0.0160358		-13.7	+/-20
Aroclor 1232 [2C]	A	250.00	239	0.0188178	0.0180429		-4.5	+/-20
Decachlorobiphenyl	A	40.000	54.6	0.8555994	1.1682210		36.5	+/-20
Tetrachlorometaxylene	A	40.000	36.4	1.1307870	1.0284340		-9.1	+/-20
Decachlorobiphenyl [2C]	A	40.000	57.9	1.2696430	1.8387740		44.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.3	1.0814980	0.9815176		-9.2	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230124.b/01242329ECD7.D
Data file 2: /230124.b/230124.b/01242329ECD7.D
Method: \\target\share\chem4\ecd7.i\230124.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268 SCV
Client ID:
Injection Date: 24-JAN-2023 21:36
Report Date: 01/25/2023 10:53
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.810	0.001	250455	5.687	0.000	162795	36.4	36.3	0.2	Tetrachloro-m-xylene
13.892	0.000	551946	14.120	0.000	461901	54.6	57.9	5.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	487061	-3.2
Hexabromobiphenyl	647433	944934	46.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	331721	-1.5
Hexabromobiphenyl	382032	502401	31.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	19363	107.0	1	7.256	0.001	19791	110.0
Aroclor-1016	2	7.659	0.009	58630	97.8	2	7.856	0.005	40139	101.8
Aroclor-1016	3	7.794	0.006	28286	102.5	3	8.055	0.005	17412	108.2
Aroclor-1016	4	8.408	0.004	17373	97.9	4	8.308	0.003	11962	94.8
Total Col1Ave (4 peaks):		101.3				Total Col2Ave (4 peaks):		103.7	RPD = 2	
Corrected Ave (3 peaks):		99.4				Corrected Ave (3 peaks):		101.6	RPD = 2	
Aroclor-1221	1	4.735	0.002	5022	139.5	1	4.961	0.002	3409	140.2
Aroclor-1221	2	6.134	0.001	8987	122.1	2	6.299	0.001	7677	144.1
Aroclor-1221	3	6.385	0.001	29368	171.8	3	6.624	0.001	16198	180.1
Total Col1Ave (3 peaks):		144.5				Total Col2Ave (3 peaks):		154.8	RPD = 7	
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.735	0.002	5022	223.5	1	4.961	0.002	3409	231.1
Aroclor-1232	2	6.134	0.001	8987	177.4	2	7.256	-0.001	19791	239.8
Aroclor-1232	3	7.659	0.001	58630	231.5	3	7.856	0.001	40139	238.8
Aroclor-1232	4	8.585	0.000	24991	230.5	4	8.715	0.001	11476	245.7
Total Col1Ave (4 peaks):		215.7				Total Col2Ave (4 peaks):		238.8	RPD = 10	
Corrected Ave (3 peaks):		210.5				Corrected Ave (3 peaks):		236.6	RPD = 12	
Aroclor-1242	1	7.272	0.001	19363	129.8	1	7.256	0.000	19791	136.4
Aroclor-1242	2	7.659	0.004	58630	120.1	2	7.856	0.002	40139	124.6
Aroclor-1242	3	8.408	0.001	17373	119.8	3	9.166	0.006	11813	117.1
Aroclor-1242	4	8.585	0.003	24991	114.1	4	9.595	0.009	16549	123.7
Total Col1Ave (4 peaks):		121.0				Total Col2Ave (4 peaks):		125.4	RPD = 4	
Corrected Ave (3 peaks):		118.0				Corrected Ave (3 peaks):		121.8	RPD = 3	
Aroclor-1248	1	8.408	0.002	17373	71.3	1	8.308	0.003	11962	79.8
Aroclor-1248	2	8.585	0.005	24991	80.4	2	8.715	0.003	11476	71.1
Aroclor-1248	3	9.001	0.002	67631	113.8	3	9.166	0.009	11813	59.9
Aroclor-1248	4	9.293	-0.001	30983	105.3	4	9.595	0.014	16549	67.9
Total Col1Ave (4 peaks):		92.7				Total Col2Ave (4 peaks):		69.7	RPD = 28	
Corrected Ave (3 peaks):		85.7				Corrected Ave (3 peaks):		66.3	RPD = 26	
Aroclor-1254	1	9.293	-0.006	30983	62.4	1	9.451	0.003	3749	15.6
Aroclor-1254	2	9.381	0.003	9071	42.8	2	9.974	0.005	2452	12.6
Aroclor-1254	3	9.678	0.009	5199	16.3	3	10.131	0.010	4718	11.1
Aroclor-1254	4	9.820	0.012	8864	14.2	4	10.389	0.018	4224	10.0
Aroclor-1254	5	10.195	0.018	8085	19.9	5	10.573	0.004	1573	6.7
Total Col1Ave (5 peaks):		31.1				Total Col2Ave (5 peaks):		11.2	RPD = 94*	
Corrected Ave (4 peaks):		23.3				Corrected Ave (4 peaks):		10.1	RPD = 79*	
Aroclor-1260	1	11.050	0.006	66852	126.1	1	11.647	-0.006	57235	157.9
Aroclor-1260	2	11.366	0.006	6269	11.5	2	11.919	0.002	25368	27.7
Aroclor-1260	3	11.741	0.007	41446	28.9	3	12.434	-0.002	262014	1146.4
Aroclor-1260	4	12.052	-0.088	2691	3.6	4	12.502	-0.000	277060	466.9
Aroclor-1260	5	12.245	0.002	349286	1080.9	NS	---			----
Total Col1Ave (5 peaks):		250.2				Total Col2Ave (4 peaks):		449.7	RPD = 57*	
Corrected Ave (4 peaks):		42.5				Corrected Ave (3 peaks):		217.5	RPD = 135*	
Aroclor-1262	1	10.838	0.006	4520	11.8	1	11.203	0.003	40576	82.5
Aroclor-1262	2	12.245	-0.000	349286	579.1	2	11.647	-0.006	57235	136.9
Aroclor-1262	3	12.318	-0.002	349715	534.1	3	12.434	-0.001	262014	588.4
Aroclor-1262	4	12.988	-0.001	141905	237.8	4	12.502	-0.002	277060	388.5
Total Col1Ave (4 peaks):		340.7				Total Col2Ave (4 peaks):		299.1	RPD = 13	
Corrected Ave (3 peaks):		261.2				Corrected Ave (3 peaks):		202.6	RPD = 25	
Aroclor-1268	1	12.245	0.001	349286	223.8	1	12.434	0.000	262014	223.3
Aroclor-1268	2	12.318	0.000	349715	224.6	2	12.502	0.000	277060	221.9
Aroclor-1268	3	12.699	0.000	289328	224.3	3	12.893	-0.000	208928	201.0
Aroclor-1268	4	13.490	0.001	849299	222.1	4	13.710	0.002	725831	226.1
Total Col1Ave (4 peaks):		223.7				Total Col2Ave (4 peaks):		218.1	RPD = 3	

Corrected Ave (3 peaks): 223.4 Corrected Ave (3 peaks): 215.4 RPD = 4

Total PCB Area Col1 (5.909 - 13.792) = 2866092 Col1 Total PCB = 0.5 ppm*

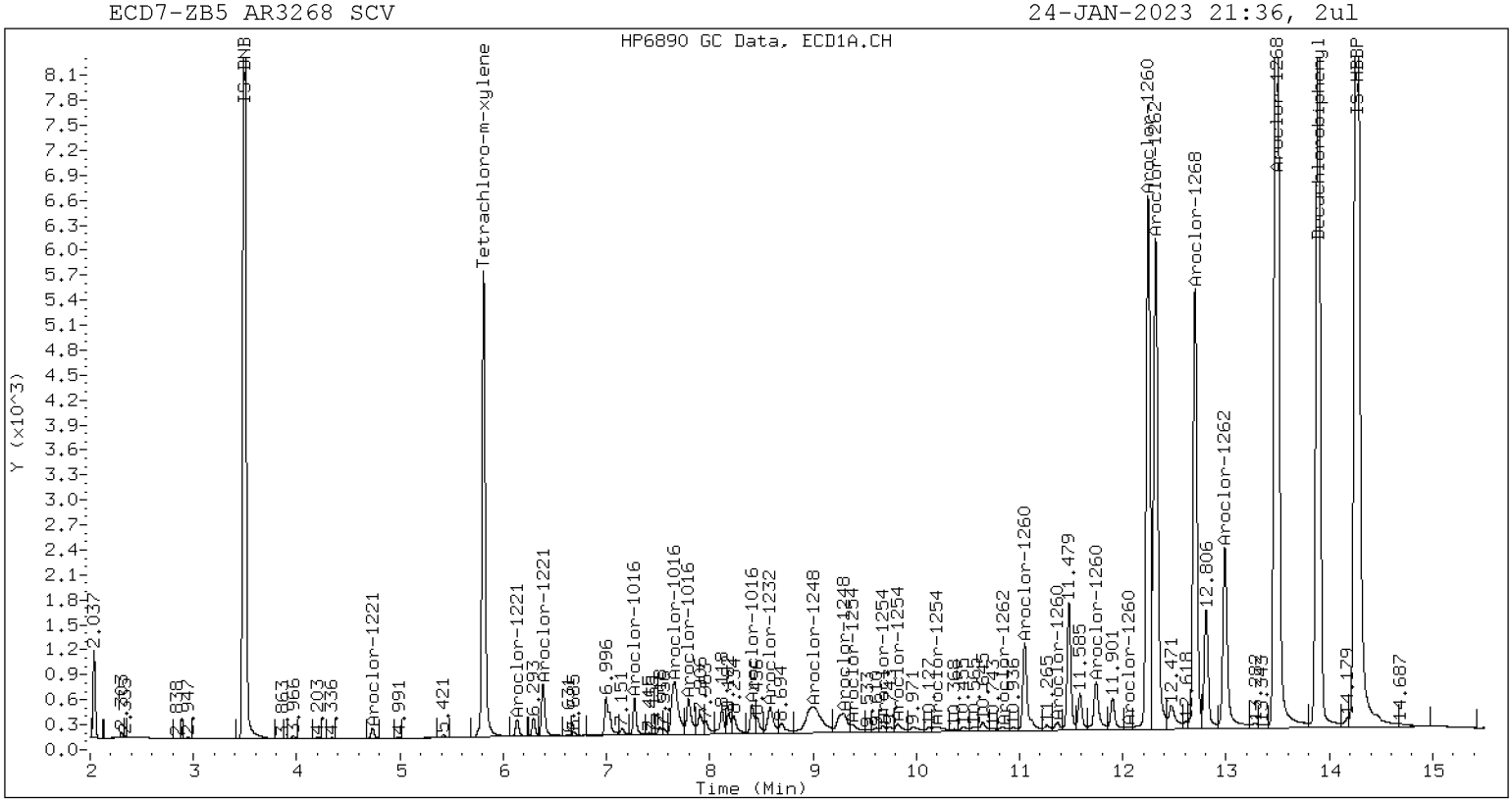
Total PCB Area Col2 (5.787 - 14.020) = 2084481 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

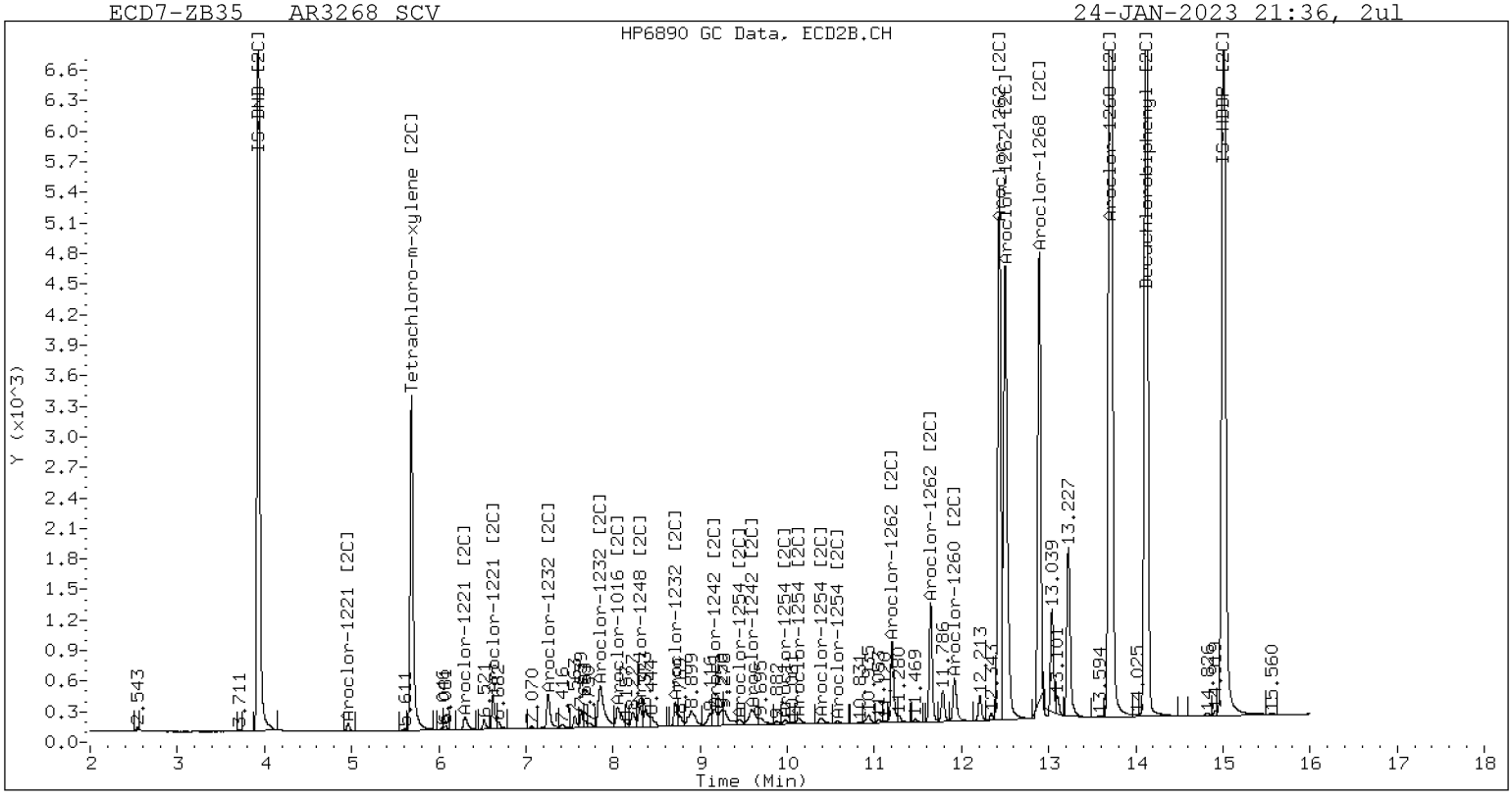
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268 SCV 24-JAN-2023 21:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268 SCV 24-JAN-2023 21:36, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02082316ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0127	Injection Date:	02/08/23
Lab Sample ID:	SLB0127-CCV1	Injection Time:	14:53
Sequence Name:	AR1248CCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1248	A	250.00	178	0.0592639	0.0401779		-28.8	+/-20	*
Aroclor-1248 (1)	A	250.00	211		0.0338016				
Aroclor-1248 (2)	A	250.00	204		0.0416906				
Aroclor-1248 (3)	A	250.00	141		0.0549680				
Aroclor-1248 (4)	A	250.00	156		0.0302512				
Aroclor 1248 [2C]	A	250.00	214	0.0453673	0.0385442		-14.5	+/-20	
Aroclor-1248 (1) [2C]	A	250.00	222		0.0320711				
Aroclor-1248 (2) [2C]	A	250.00	217		0.0338539				
Aroclor-1248 (3) [2C]	A	250.00	212		0.0402827				
Aroclor-1248 (4) [2C]	A	250.00	204		0.0479690				
Decachlorobiphenyl	A	40.000	31.3	0.8555994	0.6697117		-21.8	+/-20	*
Tetrachlorometaxylene	A	40.000	36.1	1.1307870	1.0218100		-9.8	+/-20	
Decachlorobiphenyl [2C]	A	40.000	33.8	1.2696430	1.0746470		-15.5	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	36.9	1.0814980	0.9986607		-7.8	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082316ECD7.D
Data file 2: /230208.b/230208.b/02082316ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 08-FEB-2023 14:53
Report Date: 02/09/2023 10:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.000	193726	5.685	-0.000	175225	36.1	36.9	2.2	Tetrachloro-m-xylene
13.889	0.001	131373	14.116	-0.000	174426	31.3	33.9	7.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	379182	-24.7
Hexabromobiphenyl	647433	392327	-39.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	350920	4.2
Hexabromobiphenyl	382032	324620	-15.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.402	-0.003	40053	211.2	1	8.304	0.000	35170	221.7
Aroclor-1248	2	8.574	-0.006	49401	204.2	2	8.710	0.000	37125	217.4
Aroclor-1248	3	8.994	-0.005	65134	140.7	3	9.152	0.000	44175	211.7
Aroclor-1248	4	9.291	-0.003	35846	156.5	4	9.575	0.000	52604	203.9
Total Col1Ave (4 peaks):					178.1	Total Col2Ave (4 peaks):				213.7 RPD = 18
Corrected Ave (3 peaks):					167.1	Corrected Ave (3 peaks):				211.0 RPD = 23
CalAmt %D:					-28.7	CalAmt %D:				-14.5

Total PCB Area Col1 (5.908 - 13.789) = 736684 Col1 Total PCB = 0.2 ppm*

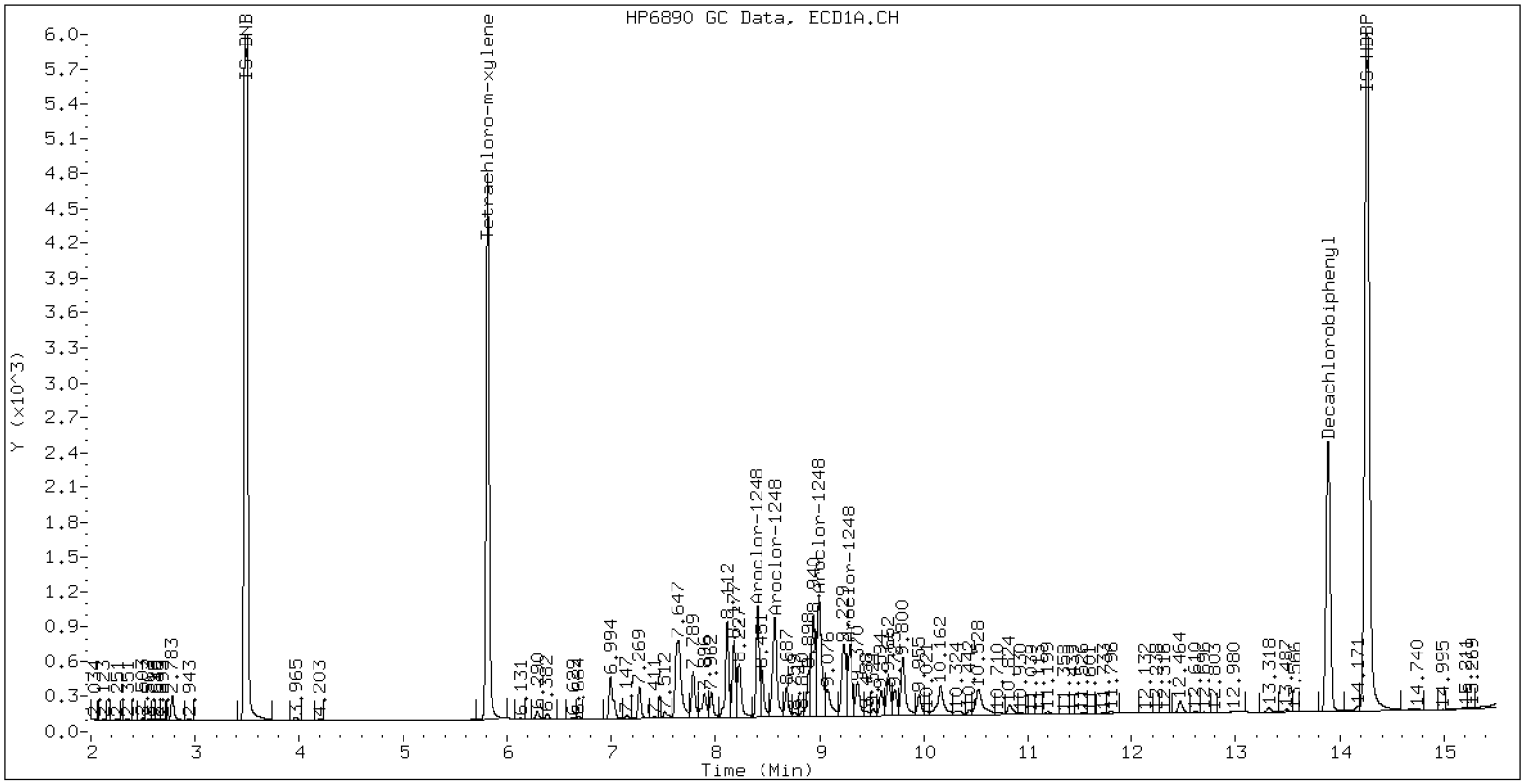
Total PCB Area Col2 (5.785 - 14.016) = 681751 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

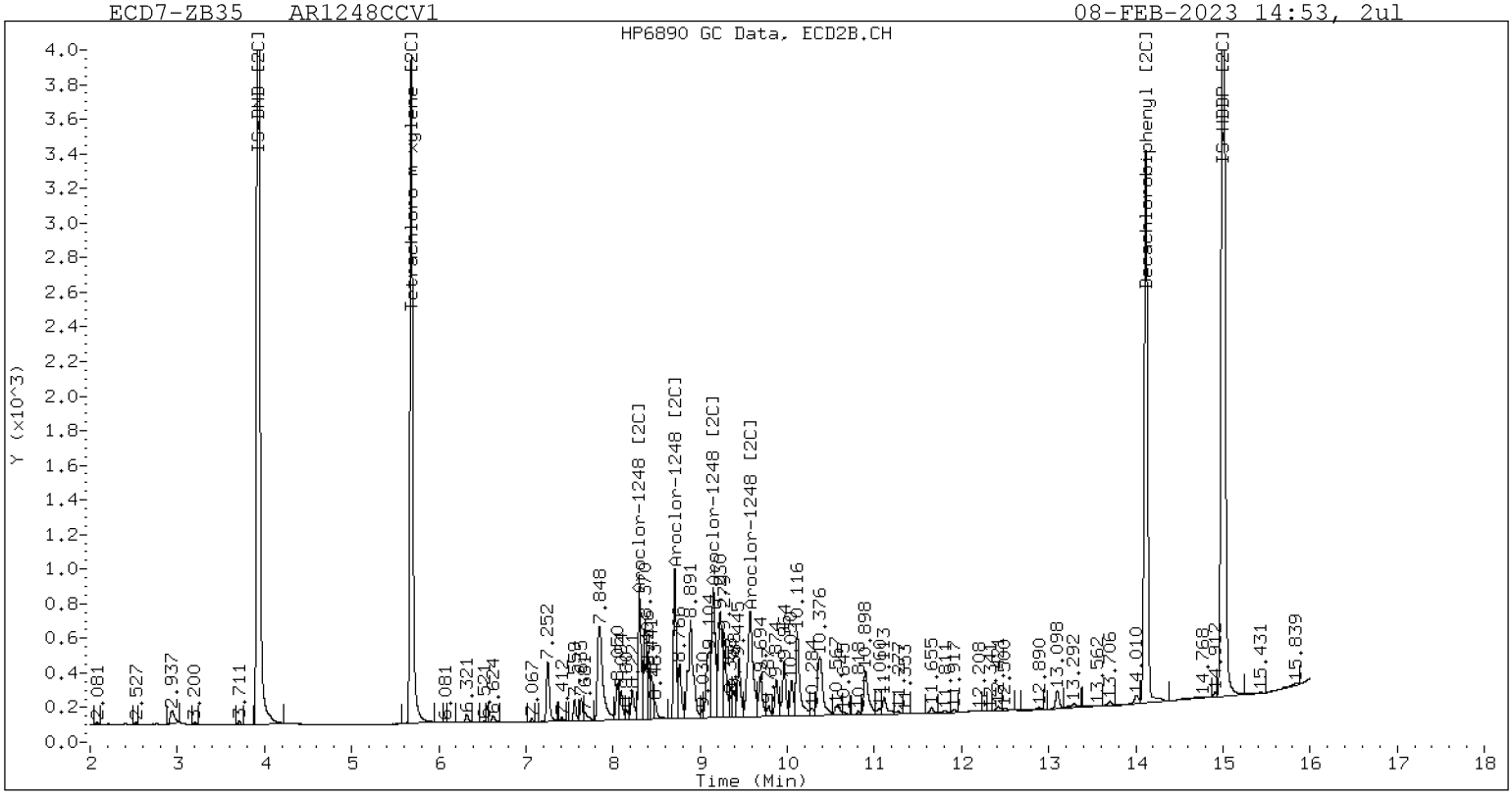
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 08-FEB-2023 14:53, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 08-FEB-2023 14:53, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02082317ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0127	Injection Date:	02/08/23
Lab Sample ID:	SLB0127-CCV2	Injection Time:	15:14
Sequence Name:	AR1660CCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	229	0.0506755	0.0466201		-8.4	+/-20
Aroclor-1016 (1)	A	250.00	236	0.0297277	0.0280650		-5.6	
Aroclor-1016 (2)	A	250.00	236	0.0985017	0.0928910		-5.6	
Aroclor-1016 (3)	A	250.00	212	0.0453193	0.0385060		-15.2	
Aroclor-1016 (4)	A	250.00	232	0.0291533	0.0270183		-7.2	
Aroclor 1016 [2C]	A	250.00	243	0.0519244	0.0504938		-3.0	+/-20
Aroclor-1016 (1) [2C]	A	250.00	241	0.0433907	0.0417684		-3.6	
Aroclor-1016 (2) [2C]	A	250.00	245	0.0950862	0.0931189		-2.0	
Aroclor-1016 (3) [2C]	A	250.00	247	0.0388014	0.0382800		-1.2	
Aroclor-1016 (4) [2C]	A	250.00	237	0.0304194	0.0288079		-5.2	
Aroclor 1260	A	250.00	216	0.0605224	0.0527720		-13.6	+/-20
Aroclor-1260 (1)	A	250.00	236	0.0448870	0.0423675		-5.6	
Aroclor-1260 (2)	A	250.00	230	0.0461412	0.0424574		-8.0	
Aroclor-1260 (3)	A	250.00	220	0.1214672	0.1068575		-12.0	
Aroclor-1260 (4)	A	250.00	205	0.0627593	0.0514674		-18.0	
Aroclor-1260 (5)	A	250.00	189	0.0273573	0.0207100		-24.4	
Aroclor 1260 [2C]	A	250.00	247	0.0836545	0.0820233		-1.2	+/-20
Aroclor-1260 (1) [2C]	A	250.00	253	0.0577136	0.0583690		1.2	
Aroclor-1260 (2) [2C]	A	250.00	246	0.1460113	0.1439598		-1.6	
Aroclor-1260 (3) [2C]	A	250.00	255	0.0363944	0.0371610		2.0	
Aroclor-1260 (4) [2C]	A	250.00	234	0.0944986	0.0886034		-6.4	
Decachlorobiphenyl	A	40.000	34.1	0.8555994	0.7290729		-14.8	+/-20
Tetrachlorometaxylene	A	40.000	39.2	1.1307870	1.1075160		-2.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.6	1.2696430	1.1623500		-8.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.7	1.0814980	1.0461590		-3.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082317ECD7.D
Data file 2: /230208.b/230208.b/02082317ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 08-FEB-2023 15:14
Report Date: 02/09/2023 10:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.002	211128	5.686	0.001	182528	39.2	38.7	1.2	Tetrachloro-m-xylene
13.889	0.000	164839	14.117	0.001	210258	34.1	36.6	7.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	381264	-24.2
Hexabromobiphenyl	647433	452188	-30.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	348949	3.6
Hexabromobiphenyl	382032	361781	-5.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	0.001	33438	236.0	1	7.254	0.000	45547	240.7
Aroclor-1016	2	7.649	0.000	110675	235.8	2	7.848	0.000	101543	244.8
Aroclor-1016	3	7.788	0.001	45878	212.4	3	8.049	0.001	41743	246.6
Aroclor-1016	4	8.402	0.001	32191	231.7	4	8.304	0.000	31414	236.8
Total Col1Ave (4 peaks):					229.0	Total Col2Ave (4 peaks):				242.2 RPD = 6
Corrected Ave (3 peaks):					226.6	Corrected Ave (3 peaks):				240.7 RPD = 6
CalAmt %D:					-8.4	CalAmt %D:				-3.1
Aroclor-1260	1	11.040	0.000	59869	236.0	1	11.650	0.001	65990	252.8
Aroclor-1260	2	11.356	-0.000	59996	230.0	2	11.913	0.001	162756	246.5
Aroclor-1260	3	11.729	0.002	150999	219.9	3	12.431	0.001	42013	255.3
Aroclor-1260	4	12.132	0.001	72728	205.0	4	12.497	0.001	100172	234.4
Aroclor-1260	5	12.240	0.001	29265	189.3	NS	---			----
Total Col1Ave (5 peaks):					216.0	Total Col2Ave (4 peaks):				247.2 RPD = 13
Corrected Ave (4 peaks):					211.1	Corrected Ave (3 peaks):				244.6 RPD = 15
CalAmt %D:					-13.6	CalAmt %D:				-1.1

Total PCB Area Col1 (5.908 - 13.789) = 1742169 Col1 Total PCB = 0.4 ppm*

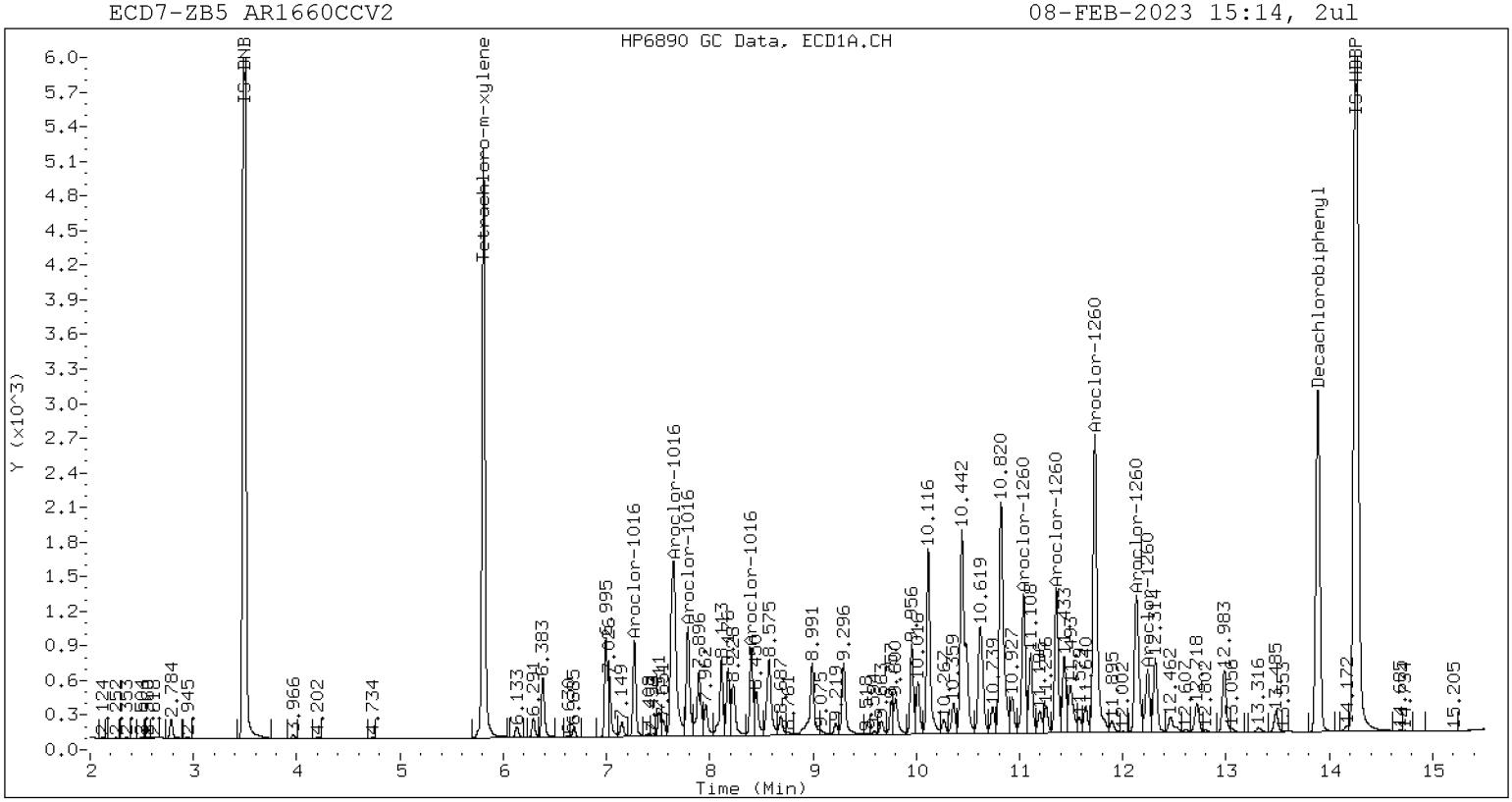
Total PCB Area Col2 (5.785 - 14.016) = 1648399 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

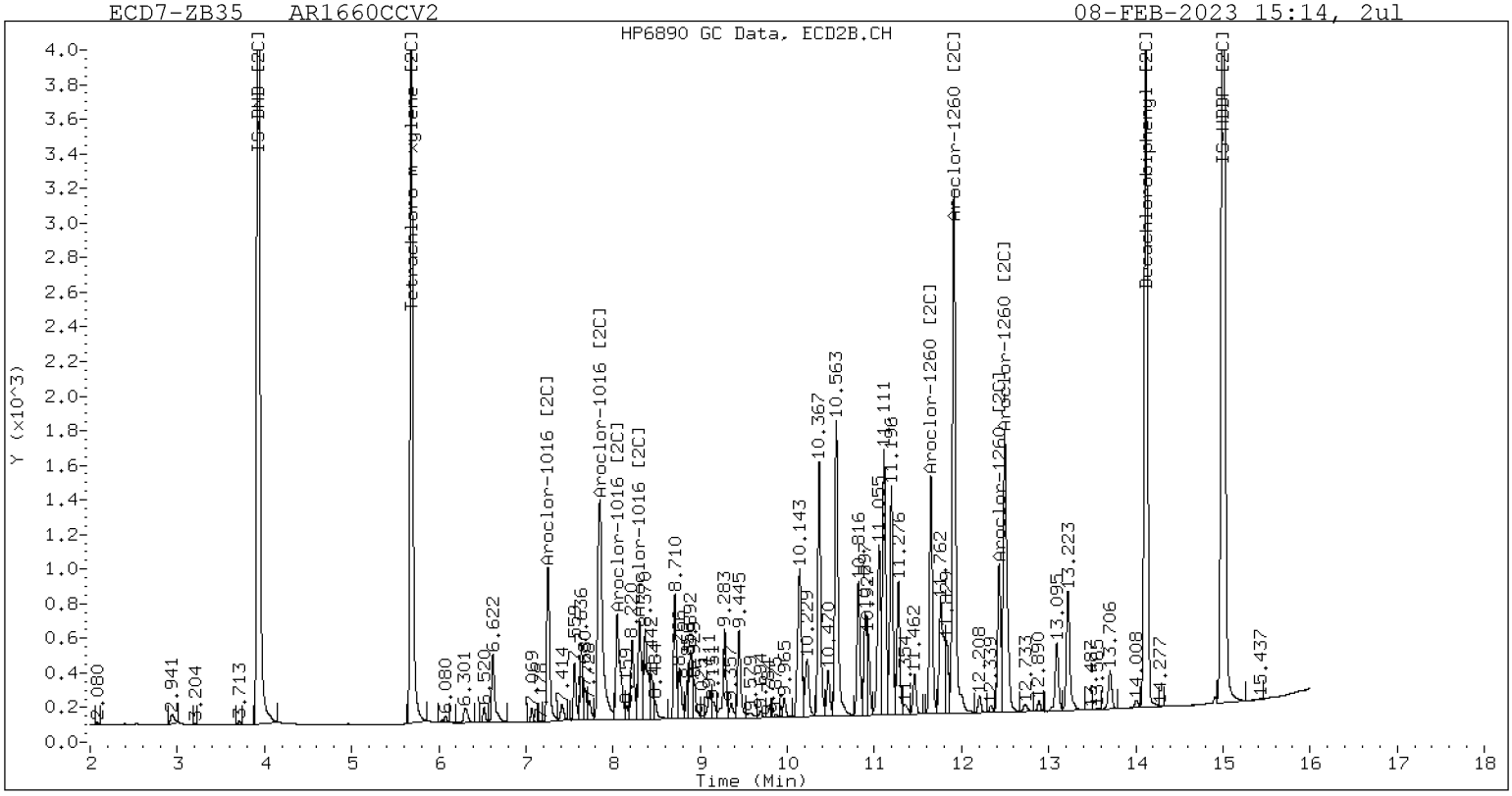
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 08-FEB-2023 15:14, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 08-FEB-2023 15:14, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02082330ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0127	Injection Date:	02/08/23
Lab Sample ID:	SLB0127-CCV3	Injection Time:	19:47
Sequence Name:	AR1242CCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1242	A	250.00	215	0.0411165	0.0356465		-14.0	+/-20	
Aroclor-1242 (1)	A	250.00	227		0.0222108				
Aroclor-1242 (2)	A	250.00	223		0.0714984				
Aroclor-1242 (3)	A	250.00	208		0.0198520				
Aroclor-1242 (4)	A	250.00	202		0.0290249				
Aroclor 1242 [2C]	A	250.00	215	0.0423236	0.0367460		-13.9	+/-20	
Aroclor-1242 (1) [2C]	A	250.00	230		0.0322239				
Aroclor-1242 (2) [2C]	A	250.00	220		0.0683912				
Aroclor-1242 (3) [2C]	A	250.00	213		0.0207524				
Aroclor-1242 (4) [2C]	A	250.00	198		0.0256167				
Decachlorobiphenyl	A	40.000	30.8	0.8555994	0.6592090		-23.0	+/-20	*
Tetrachlorometaxylene	A	40.000	43.9	1.1307870	1.2418250		9.8	+/-20	
Decachlorobiphenyl [2C]	A	40.000	31.5	1.2696430	0.9993356		-21.3	+/-20	*
Tetrachlorometaxylene [2C]	A	40.000	44.7	1.0814980	1.2088600		11.8	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082330ECD7.D
Data file 2: /230208.b/230208.b/02082330ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV3
Client ID:
Injection Date: 08-FEB-2023 19:47
Report Date: 02/09/2023 10:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.000	240909	5.684	-0.001	216305	43.9	44.7	1.8	Tetrachloro-m-xylene
13.888	-0.000	118211	14.117	0.000	160931	30.8	31.5	2.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	387992	-22.9
Hexabromobiphenyl	647433	358645	-44.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	357866	6.2
Hexabromobiphenyl	382032	322076	-15.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.268	-0.002	26930	226.7	1	7.252	0.000	36037	230.3
Aroclor-1242	2	7.649	-0.006	86690	223.0	2	7.849	0.000	76484	220.0
Aroclor-1242	3	8.402	-0.005	24070	208.4	3	9.152	0.000	23208	213.2
Aroclor-1242	4	8.574	-0.008	35192	201.7	4	9.577	0.000	28648	198.5
Total Col1Ave (4 peaks):					214.9	Total Col2Ave (4 peaks):				215.5 RPD = 0
Corrected Ave (3 peaks):					211.0	Corrected Ave (3 peaks):				210.6 RPD = 0
CalAmt %D:					-14.0	CalAmt %D:				-13.8

Total PCB Area Col1 (5.908 - 13.789) = 595563 Col1 Total PCB = 0.1 ppm*

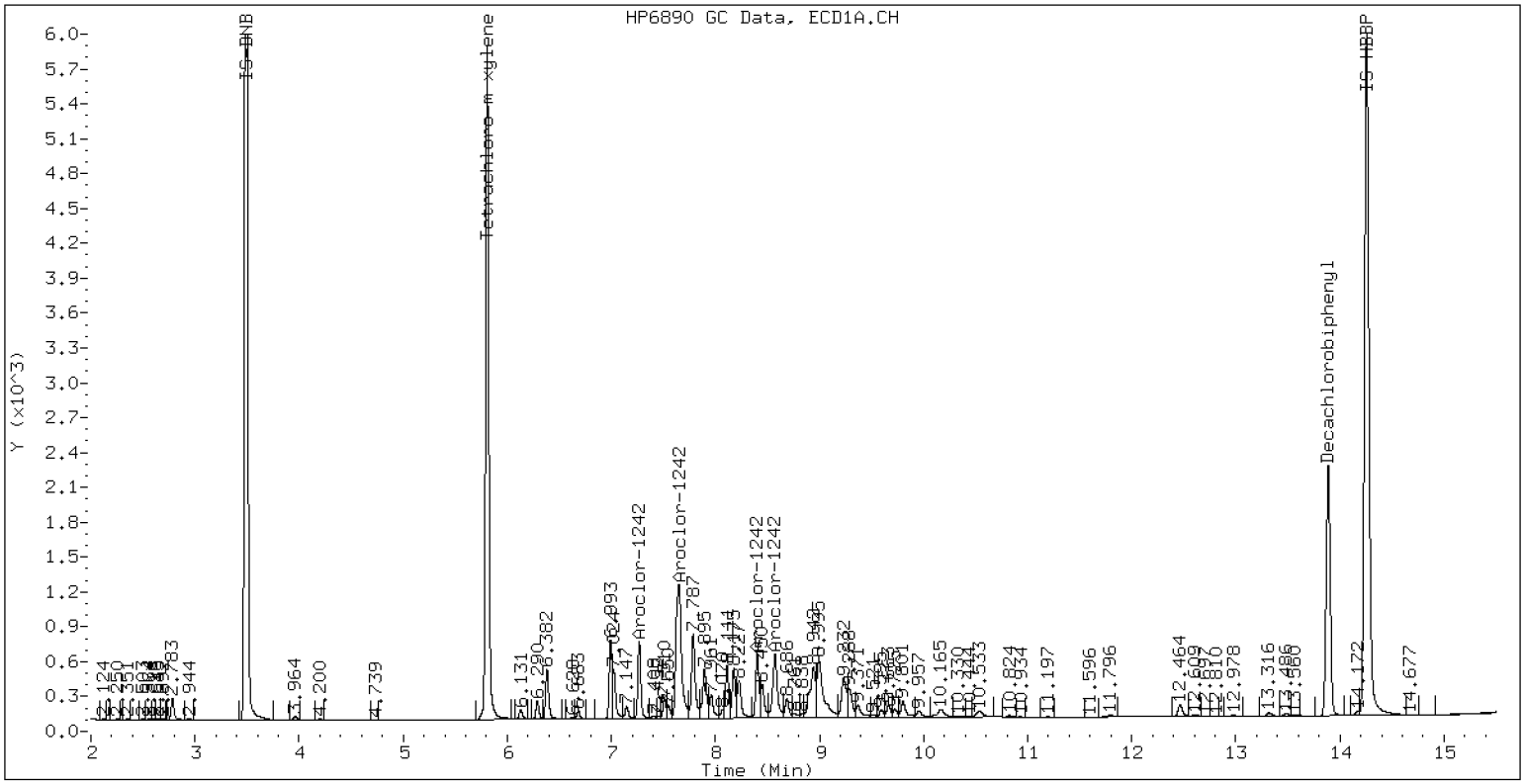
Total PCB Area Col2 (5.785 - 14.016) = 523367 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

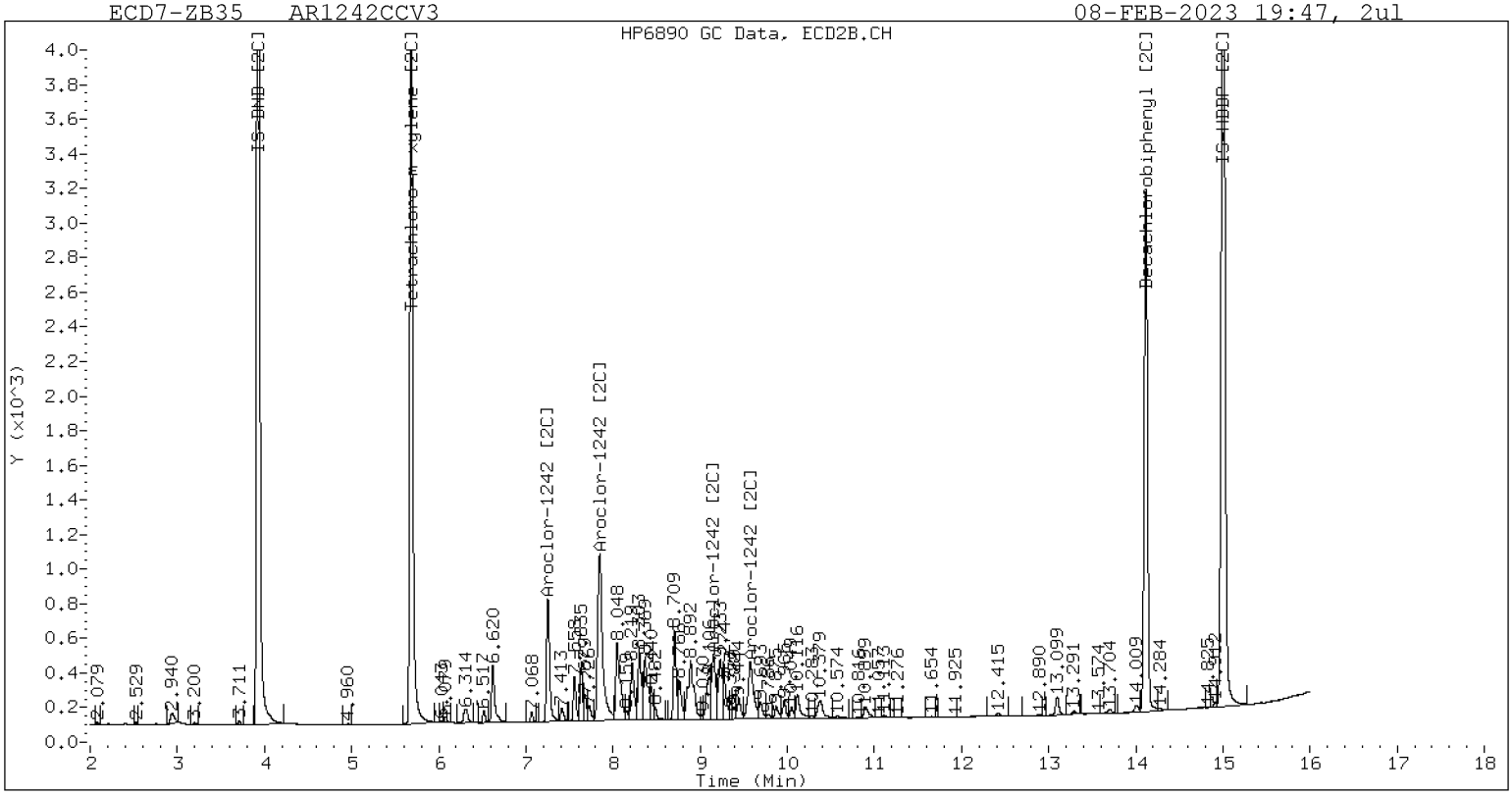
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3 08-FEB-2023 19:47, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV3 08-FEB-2023 19:47, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02082331ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0127	Injection Date:	02/08/23
Lab Sample ID:	SLB0127-CCV4	Injection Time:	20:08
Sequence Name:	AR1660CCV4		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	229	0.0506755	0.0465417		-8.4	+/-20
Aroclor-1016 (1)	A	250.00	236	0.0297277	0.0280782		-5.6	
Aroclor-1016 (2)	A	250.00	235	0.0985017	0.0925244		-6.0	
Aroclor-1016 (3)	A	250.00	211	0.0453193	0.0382972		-15.6	
Aroclor-1016 (4)	A	250.00	234	0.0291533	0.0272672		-6.4	
Aroclor 1016 [2C]	A	250.00	239	0.0519244	0.0499739		-4.3	+/-20
Aroclor-1016 (1) [2C]	A	250.00	240	0.0433907	0.0416748		-4.0	
Aroclor-1016 (2) [2C]	A	250.00	243	0.0950862	0.0923167		-2.8	
Aroclor-1016 (3) [2C]	A	250.00	243	0.0388014	0.0377861		-2.8	
Aroclor-1016 (4) [2C]	A	250.00	231	0.0304194	0.0281179		-7.6	
Aroclor 1260	A	250.00	222	0.0605224	0.0540817		-11.0	+/-20
Aroclor-1260 (1)	A	250.00	243	0.0448870	0.0436227		-2.8	
Aroclor-1260 (2)	A	250.00	234	0.0461412	0.0432981		-6.4	
Aroclor-1260 (3)	A	250.00	223	0.1214672	0.1083021		-10.8	
Aroclor-1260 (4)	A	250.00	213	0.0627593	0.0533981		-14.8	
Aroclor-1260 (5)	A	250.00	199	0.0273573	0.0217874		-20.4	
Aroclor 1260 [2C]	A	250.00	246	0.0836545	0.0814468		-1.5	+/-20
Aroclor-1260 (1) [2C]	A	250.00	247	0.0577136	0.0570864		-1.2	
Aroclor-1260 (2) [2C]	A	250.00	243	0.1460113	0.1419334		-2.8	
Aroclor-1260 (3) [2C]	A	250.00	259	0.0363944	0.0376512		3.6	
Aroclor-1260 (4) [2C]	A	250.00	236	0.0944986	0.0891160		-5.6	
Decachlorobiphenyl	A	40.000	34.4	0.8555994	0.7367650		-14.0	+/-20
Tetrachlorometaxylene	A	40.000	39.6	1.1307870	1.1199620		-1.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	35.3	1.2696430	1.1194660		-11.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.3	1.0814980	1.0616470		-1.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082331ECD7.D
Data file 2: /230208.b/230208.b/02082331ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV4
Client ID:
Injection Date: 08-FEB-2023 20:08
Report Date: 02/09/2023 10:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.000	219386	5.684	-0.001	190452	39.6	39.3	0.9	Tetrachloro-m-xylene
13.888	-0.000	161966	14.116	0.000	208023	34.4	35.3	2.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	391774	-22.2
Hexabromobiphenyl	647433	439668	-32.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	358786	6.5
Hexabromobiphenyl	382032	371647	-2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.268	-0.001	34376	236.1	1	7.253	-0.001	46726	240.1
Aroclor-1016	2	7.650	0.001	113277	234.8	2	7.848	-0.000	103506	242.7
Aroclor-1016	3	7.787	0.000	46887	211.3	3	8.048	-0.000	42366	243.5
Aroclor-1016	4	8.401	0.000	33383	233.8	4	8.303	-0.001	31526	231.1
Total Col1Ave (4 peaks):					229.0	Total Col2Ave (4 peaks):				239.3 RPD = 4
Corrected Ave (3 peaks):					226.6	Corrected Ave (3 peaks):				238.0 RPD = 5
CalAmt %D:					-8.4	CalAmt %D:				-4.3
Aroclor-1260	1	11.040	0.000	59936	243.0	1	11.649	0.000	66300	247.3
Aroclor-1260	2	11.356	0.000	59490	234.6	2	11.912	0.000	164841	243.0
Aroclor-1260	3	11.729	0.001	148803	222.9	3	12.431	0.000	43728	258.6
Aroclor-1260	4	12.133	0.001	73367	212.7	4	12.496	0.000	103499	235.8
Aroclor-1260	5	12.240	0.000	29935	199.1	NS	---			----
Total Col1Ave (5 peaks):					222.5	Total Col2Ave (4 peaks):				246.2 RPD = 10
Corrected Ave (4 peaks):					217.3	Corrected Ave (3 peaks):				242.0 RPD = 11
CalAmt %D:					-11.0	CalAmt %D:				-1.5

Total PCB Area Col1 (5.908 - 13.789) = 1789147 Col1 Total PCB = 0.4 ppm*

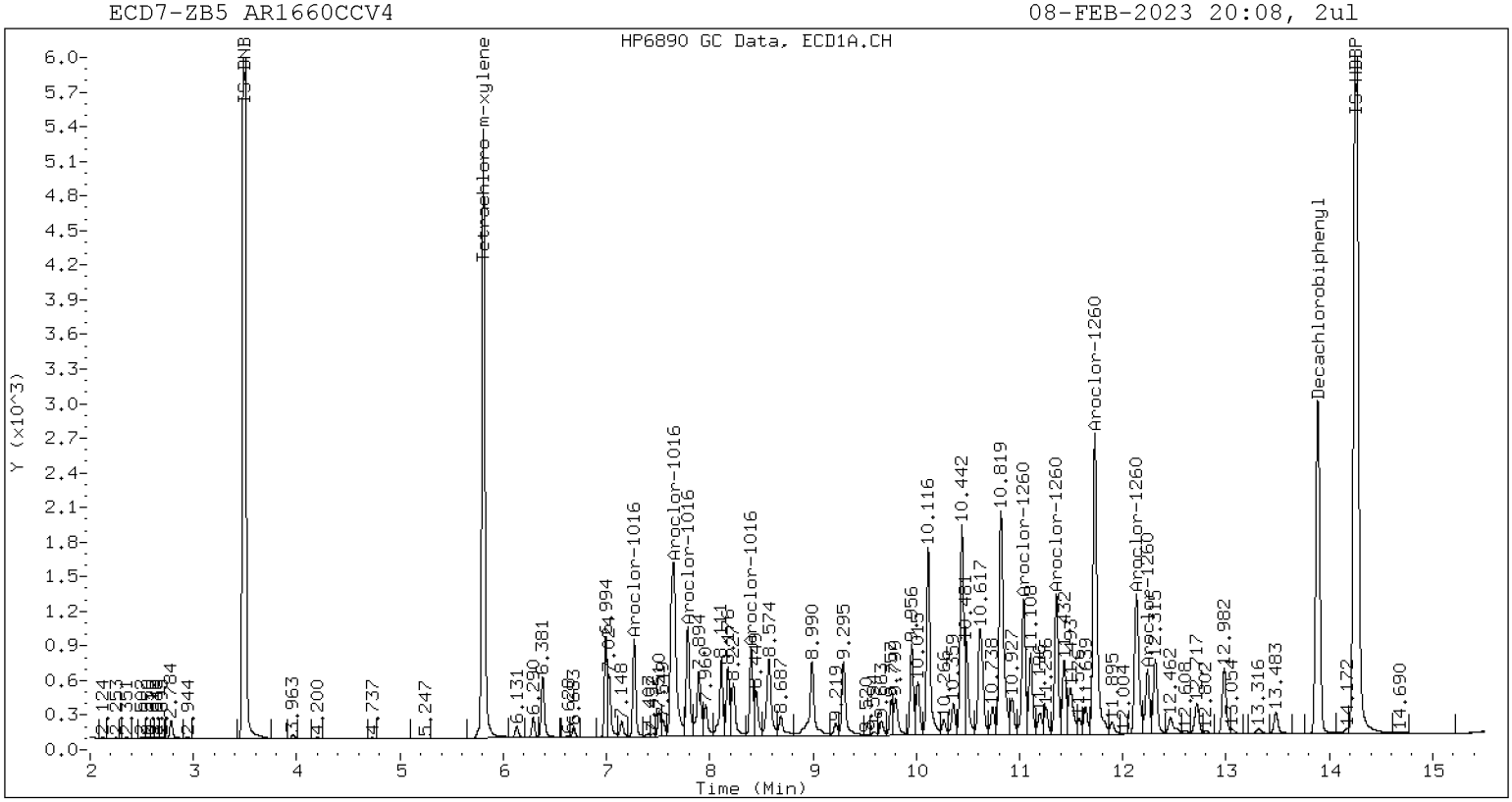
Total PCB Area Col2 (5.785 - 14.016) = 1669067 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

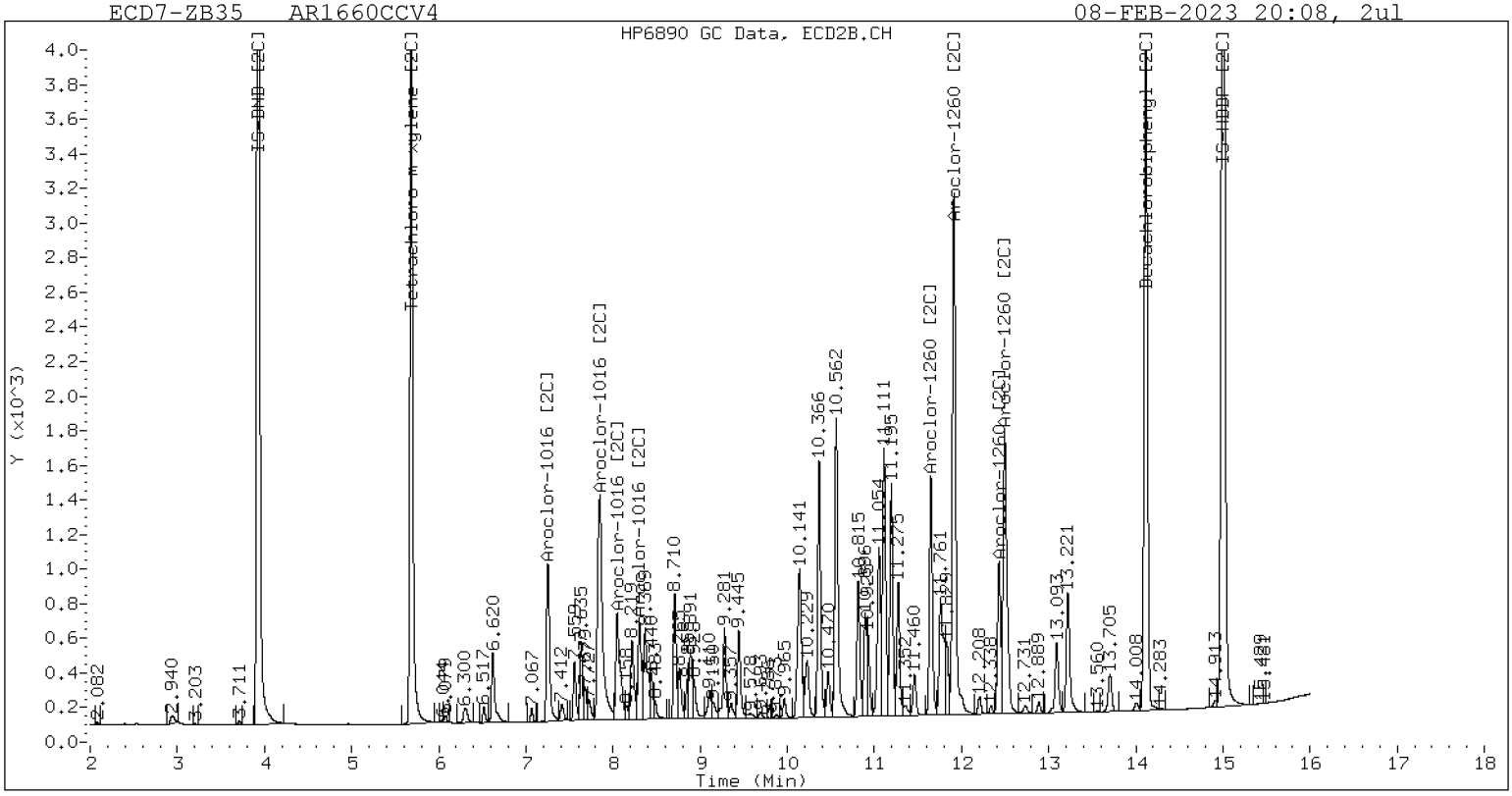
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4 08-FEB-2023 20:08, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV4 08-FEB-2023 20:08, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02082348ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0127	Injection Date:	02/09/23
Lab Sample ID:	SLB0127-CCV5	Injection Time:	02:04
Sequence Name:	AR1254CCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	205	0.0675033	0.0560074		-17.9	+/-20
Aroclor-1254 (1)	A	250.00	213		0.0694783			
Aroclor-1254 (2)	A	250.00	190		0.0265151			
Aroclor-1254 (3)	A	250.00	209		0.0436777			
Aroclor-1254 (4)	A	250.00	208		0.0853791			
Aroclor-1254 (5)	A	250.00	206		0.0549868			
Aroclor 1254 [2C]	A	250.00	225	0.0733219	0.0661746		-10.2	+/-20
Aroclor-1254 (1) [2C]	A	250.00	235		0.0544865			
Aroclor-1254 (2) [2C]	A	250.00	232		0.0435154			
Aroclor-1254 (3) [2C]	A	250.00	229		0.0936295			
Aroclor-1254 (4) [2C]	A	250.00	230		0.0943233			
Aroclor-1254 (5) [2C]	A	250.00	197		0.0449183			
Decachlorobiphenyl	A	40.000	33.0	0.8555994	0.7070340		-17.5	+/-20
Tetrachlorometaxylene	A	40.000	37.4	1.1307870	1.0560610		-6.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	35.8	1.2696430	1.1354700		-10.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.1	1.0814980	1.0298160		-4.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082348ECD7.D
Data file 2: /230208.b/230208.b/02082348ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCV5
Client ID:
Injection Date: 09-FEB-2023 02:04
Report Date: 02/09/2023 10:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.001	205962	5.686	0.001	183107	37.4	38.1	1.9	Tetrachloro-m-xylene
13.889	0.001	168039	14.116	-0.000	218742	33.1	35.8	7.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	390057	-22.5
Hexabromobiphenyl	647433	475335	-26.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	355611	5.6
Hexabromobiphenyl	382032	385289	0.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1254	1	9.293	0.001	84689	213.0	1	9.444	0.000	60550	234.7
Aroclor-1254	2	9.370	-0.000	32320	190.4	2	9.964	0.000	48358	231.9
Aroclor-1254	3	9.661	-0.000	53240	209.0	3	10.116	0.000	104049	228.7
Aroclor-1254	4	9.799	0.000	104071	208.5	4	10.365	0.000	104820	230.4
Aroclor-1254	5	10.158	0.001	67025	206.5	5	10.563	0.000	49917	197.0
	Total Col1Ave (5 peaks):				205.5		Total Col2Ave (5 peaks):			224.6 RPD = 9
	Corrected Ave (4 peaks):				203.6		Corrected Ave (4 peaks):			222.0 RPD = 9
			CalAmt %D:		-17.8			CalAmt %D:		-10.2

Total PCB Area Col1 (5.908 - 13.789) = 1075015 Col1 Total PCB = 0.2 ppm*

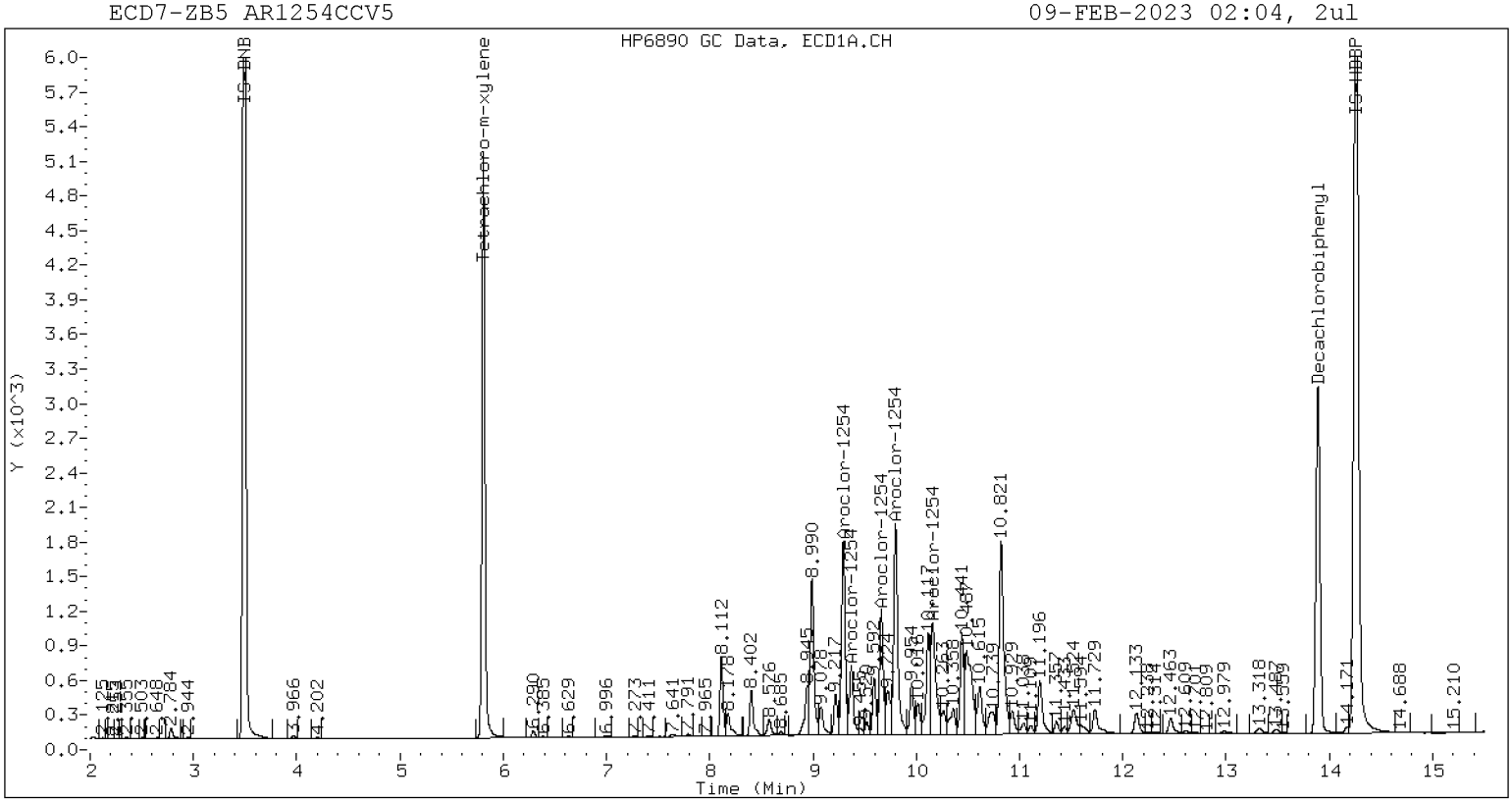
Total PCB Area Col2 (5.785 - 14.016) = 984600 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

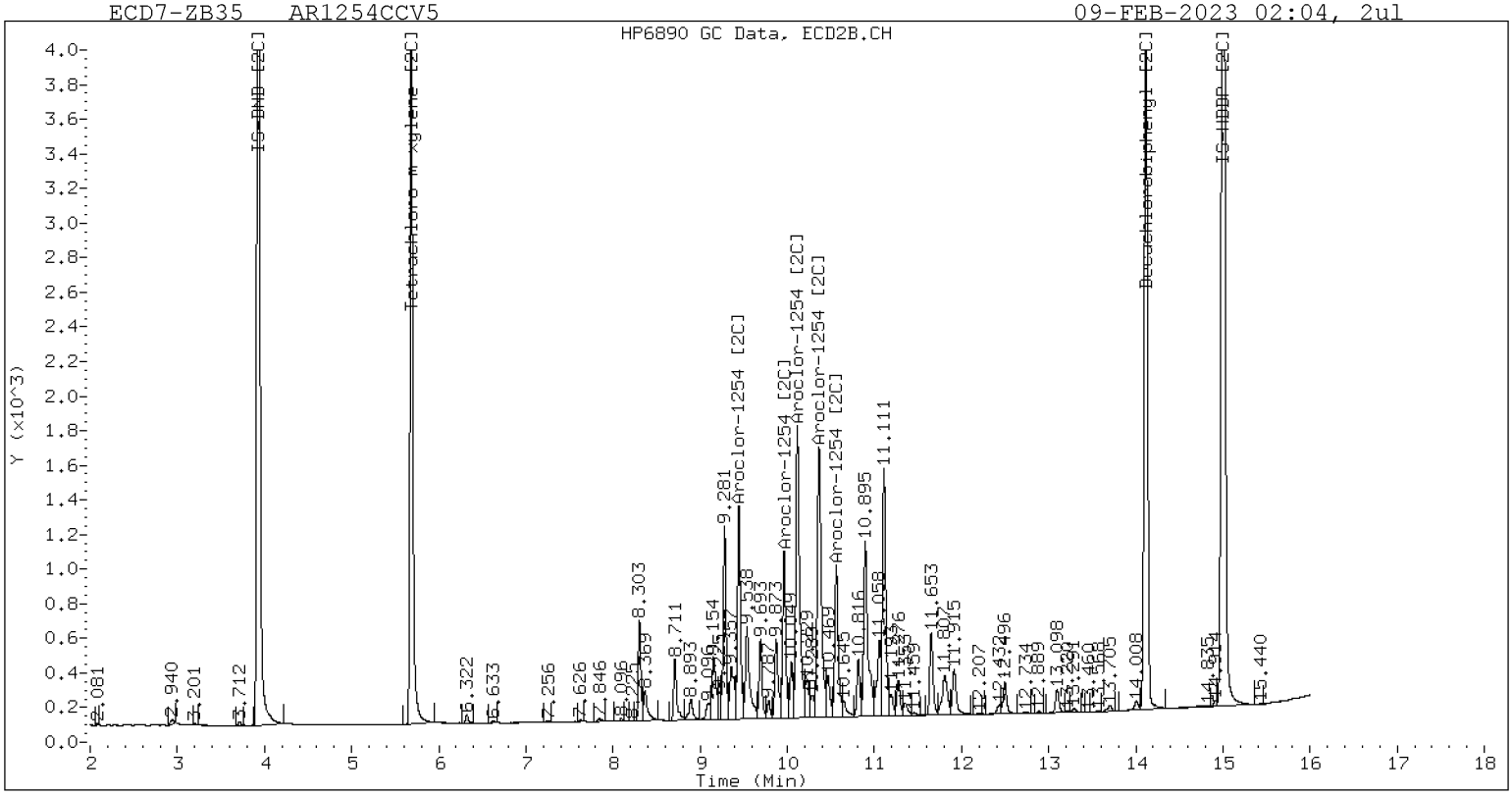
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5 09-FEB-2023 02:04, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCV5 09-FEB-2023 02:04, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02082349ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0127	Injection Date:	02/09/23
Lab Sample ID:	SLB0127-CCV6	Injection Time:	02:26
Sequence Name:	AR1660CCV6		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	231	0.0506755	0.0468530		-7.7	+/-20
Aroclor-1016 (1)	A	250.00	236	0.0297277	0.0280622		-5.6	
Aroclor-1016 (2)	A	250.00	236	0.0985017	0.0928640		-5.6	
Aroclor-1016 (3)	A	250.00	214	0.0453193	0.0388931		-14.4	
Aroclor-1016 (4)	A	250.00	237	0.0291533	0.0275925		-5.2	
Aroclor 1016 [2C]	A	250.00	242	0.0519244	0.0504075		-3.3	+/-20
Aroclor-1016 (1) [2C]	A	250.00	239	0.0433907	0.0415585		-4.4	
Aroclor-1016 (2) [2C]	A	250.00	244	0.0950862	0.0928294		-2.4	
Aroclor-1016 (3) [2C]	A	250.00	248	0.0388014	0.0384926		-0.8	
Aroclor-1016 (4) [2C]	A	250.00	236	0.0304194	0.0287494		-5.6	
Aroclor 1260	A	250.00	213	0.0605224	0.0517981		-14.8	+/-20
Aroclor-1260 (1)	A	250.00	227	0.0448870	0.0407834		-9.2	
Aroclor-1260 (2)	A	250.00	223	0.0461412	0.0412473		-10.8	
Aroclor-1260 (3)	A	250.00	214	0.1214672	0.1037936		-14.4	
Aroclor-1260 (4)	A	250.00	207	0.0627593	0.0519321		-17.2	
Aroclor-1260 (5)	A	250.00	194	0.0273573	0.0212340		-22.4	
Aroclor 1260 [2C]	A	250.00	231	0.0836545	0.0763138		-7.8	+/-20
Aroclor-1260 (1) [2C]	A	250.00	233	0.0577136	0.0537695		-6.8	
Aroclor-1260 (2) [2C]	A	250.00	227	0.1460113	0.1327417		-9.2	
Aroclor-1260 (3) [2C]	A	250.00	240	0.0363944	0.0349330		-4.0	
Aroclor-1260 (4) [2C]	A	250.00	222	0.0944986	0.0838106		-11.2	
Decachlorobiphenyl	A	40.000	34.6	0.8555994	0.7395003		-13.5	+/-20
Tetrachlorometaxylene	A	40.000	39.0	1.1307870	1.1017630		-2.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	35.6	1.2696430	1.1301780		-11.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.8	1.0814980	1.0505790		-3.0	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230208.b/02082349ECD7.D
Data file 2: /230208.b/230208.b/02082349ECD7.D
Method: \\target\share\chem4\ecd7.i\230208.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV6
Client ID:
Injection Date: 09-FEB-2023 02:26
Report Date: 02/09/2023 10:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.001	219544	5.685	-0.000	190741	39.0	38.9	0.3	Tetrachloro-m-xylene
13.890	0.001	192804	14.117	0.000	239643	34.6	35.6	2.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	398532	-20.8
Hexabromobiphenyl	647433	521444	-19.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	363116	7.8
Hexabromobiphenyl	382032	424080	11.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.000	34949	236.0	1	7.252	-0.001	47158	239.4
Aroclor-1016	2	7.649	0.000	115654	235.7	2	7.849	0.001	105337	244.1
Aroclor-1016	3	7.787	0.000	48438	214.6	3	8.048	-0.000	43679	248.0
Aroclor-1016	4	8.402	0.000	34364	236.6	4	8.303	-0.000	32623	236.3
Total Col1Ave (4 peaks):					230.7	Total Col2Ave (4 peaks):				241.9 RPD = 5
Corrected Ave (3 peaks):					228.7	Corrected Ave (3 peaks):				239.9 RPD = 5
CalAmt %D:					-7.7	CalAmt %D:				-3.2
Aroclor-1260	1	11.039	-0.000	66457	227.1	1	11.649	-0.000	71258	232.9
Aroclor-1260	2	11.356	0.000	67213	223.5	2	11.913	0.001	175916	227.3
Aroclor-1260	3	11.729	0.001	169133	213.6	3	12.431	0.000	46295	240.0
Aroclor-1260	4	12.132	0.000	84624	206.9	4	12.496	0.001	111070	221.7
Aroclor-1260	5	12.240	0.000	34601	194.0	NS	---			----
Total Col1Ave (5 peaks):					213.0	Total Col2Ave (4 peaks):				230.5 RPD = 8
Corrected Ave (4 peaks):					209.5	Corrected Ave (3 peaks):				227.3 RPD = 8
CalAmt %D:					-14.8	CalAmt %D:				-7.8

Total PCB Area Col1 (5.908 - 13.789) = 1904573 Col1 Total PCB = 0.4 ppm*

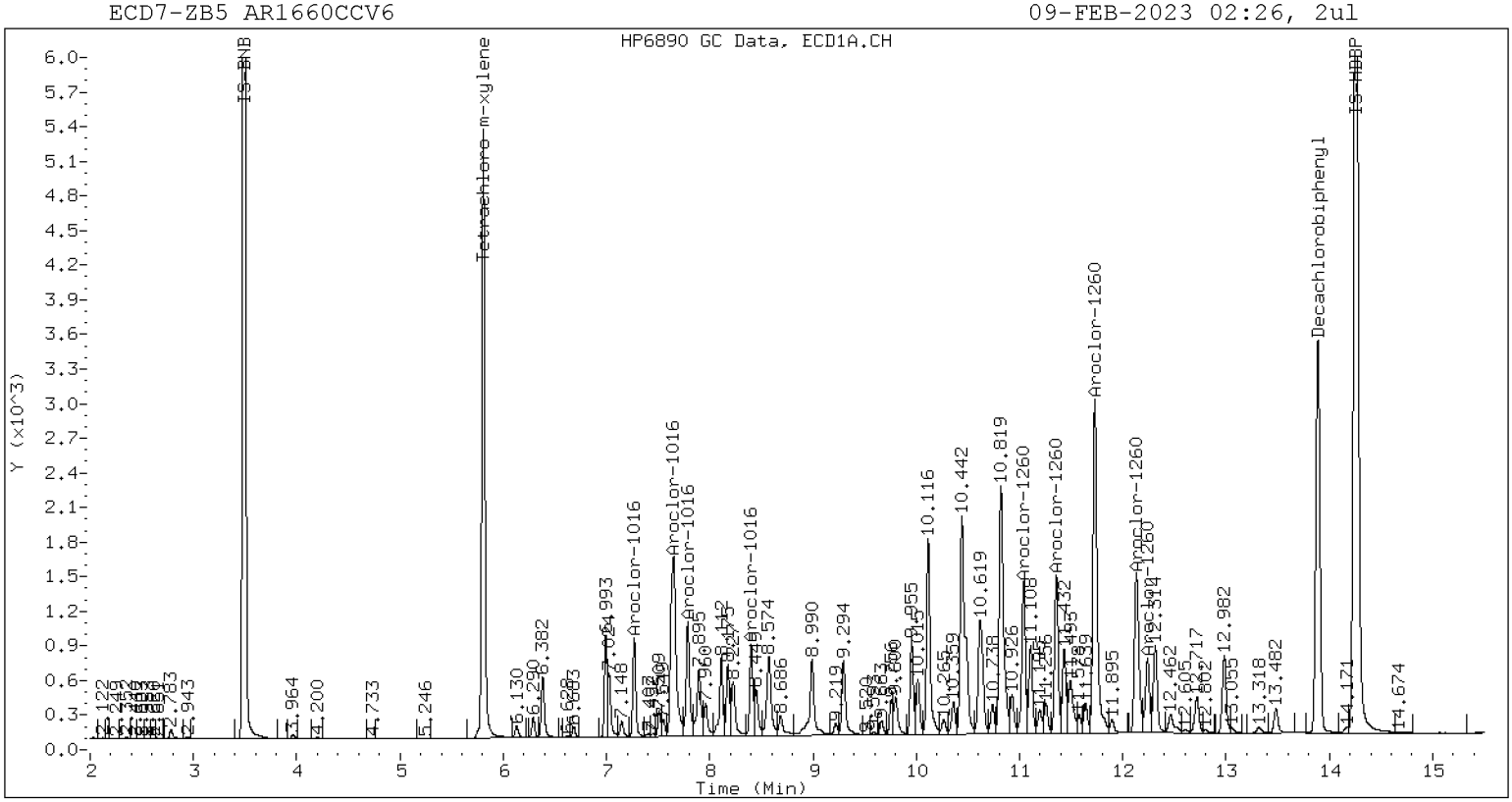
Total PCB Area Col2 (5.785 - 14.016) = 1775667 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

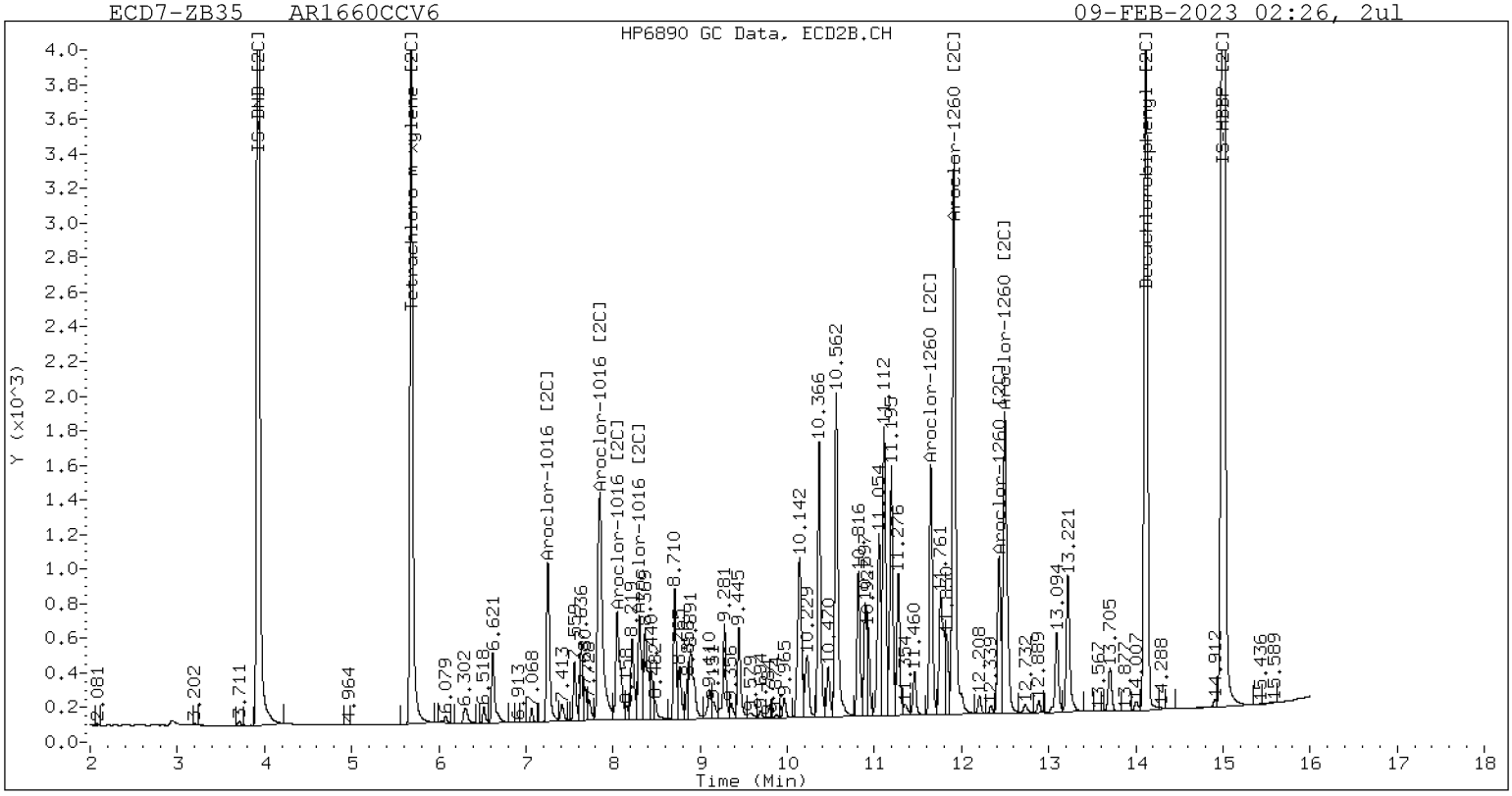
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6 09-FEB-2023 02:26, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6 09-FEB-2023 02:26, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02092317ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0148	Injection Date:	02/09/23
Lab Sample ID:	SLB0148-CCV1	Injection Time:	17:51
Sequence Name:	AR1248CCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1248	A	250.00	172	0.0592639	0.0389220		-31.1	+/-20	*
Aroclor-1248 (1)	A	250.00	203		0.0324482				
Aroclor-1248 (2)	A	250.00	196		0.0401208				
Aroclor-1248 (3)	A	250.00	138		0.0537376				
Aroclor-1248 (4)	A	250.00	152		0.0293812				
Aroclor 1248 [2C]	A	250.00	211	0.0453673	0.0378875		-15.8	+/-20	
Aroclor-1248 (1) [2C]	A	250.00	226		0.0327212				
Aroclor-1248 (2) [2C]	A	250.00	211		0.0329152				
Aroclor-1248 (3) [2C]	A	250.00	208		0.0395753				
Aroclor-1248 (4) [2C]	A	250.00	197		0.0463384				
Decachlorobiphenyl	A	40.000	32.1	0.8555994	0.6870908		-19.8	+/-20	
Tetrachlorometaxylene	A	40.000	36.3	1.1307870	1.0271480		-9.3	+/-20	
Decachlorobiphenyl [2C]	A	40.000	34.2	1.2696430	1.0848250		-14.5	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	36.6	1.0814980	0.9893007		-8.5	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092317ECD7.D
Data file 2: /230209.b/230209.b/02092317ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 09-FEB-2023 17:51
Report Date: 02/10/2023 12:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.004	187869	5.682	-0.003	170550	36.3	36.6	0.7	Tetrachloro-m-xylene
13.889	-0.003	116376	14.117	0.002	165770	32.1	34.2	6.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	365807	-27.3
Hexabromobiphenyl	647433	338750	-47.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	344789	2.3
Hexabromobiphenyl	382032	305616	-20.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1248	1	8.400	-0.005	37093	202.7	1	8.302	-0.001	35256	226.2	
Aroclor-1248	2	8.573	-0.007	45864	196.5	2	8.708	-0.001	35465	211.4	
Aroclor-1248	3	8.992	-0.006	61430	137.6	3	9.151	-0.001	42641	208.0	
Aroclor-1248	4	9.291	-0.003	33587	152.0	4	9.576	-0.000	49928	196.9	
Total Col1Ave (4 peaks):					172.2	Total Col2Ave (4 peaks):				210.6	RPD = 20
Corrected Ave (3 peaks):					162.0	Corrected Ave (3 peaks):				205.5	RPD = 24
CalAmt %D:					-31.1	CalAmt %D:				-15.7	

Total PCB Area Col1 (5.909 - 13.792) = 699031 Col1 Total PCB = 0.2 ppm*

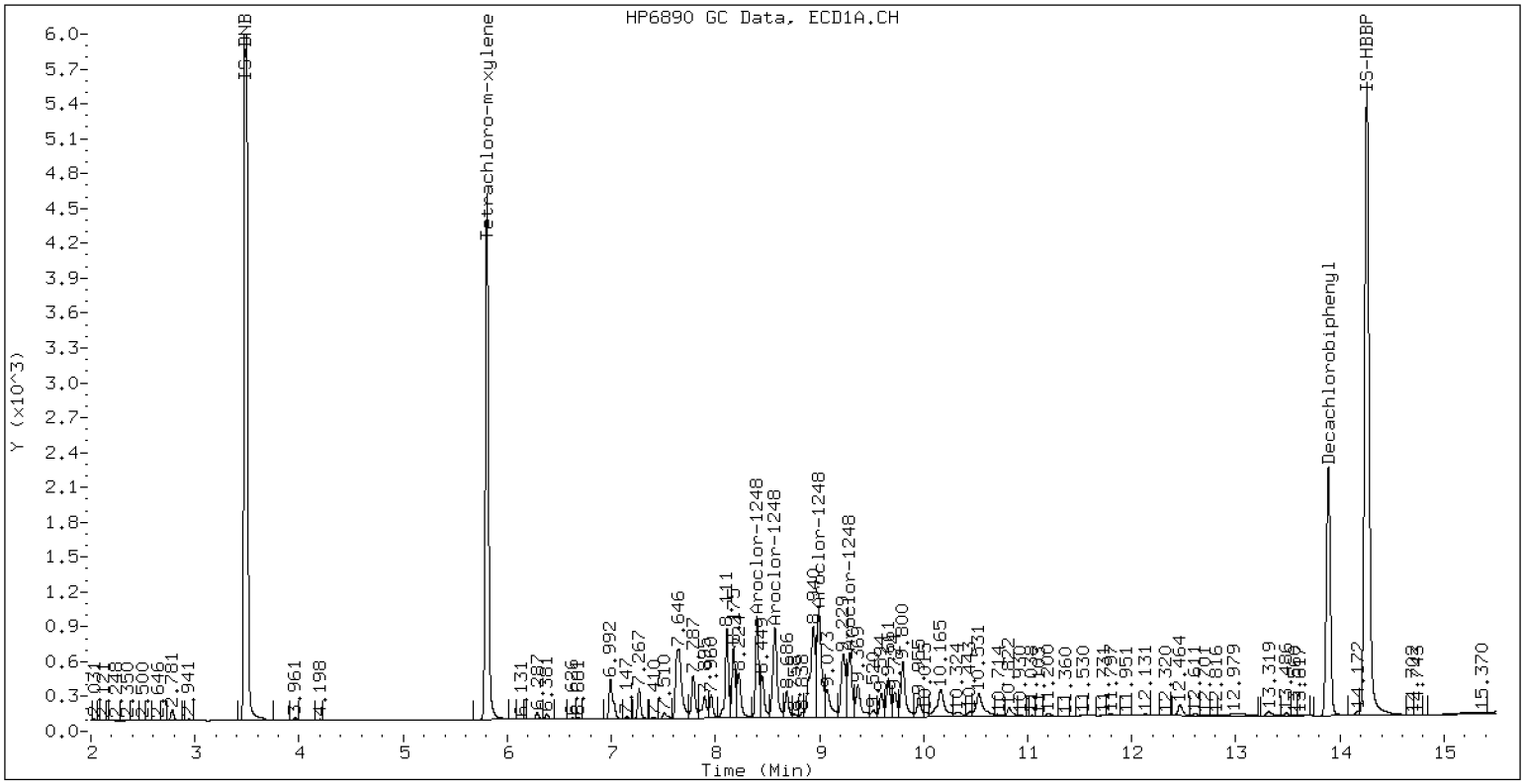
Total PCB Area Col2 (5.785 - 14.015) = 661379 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

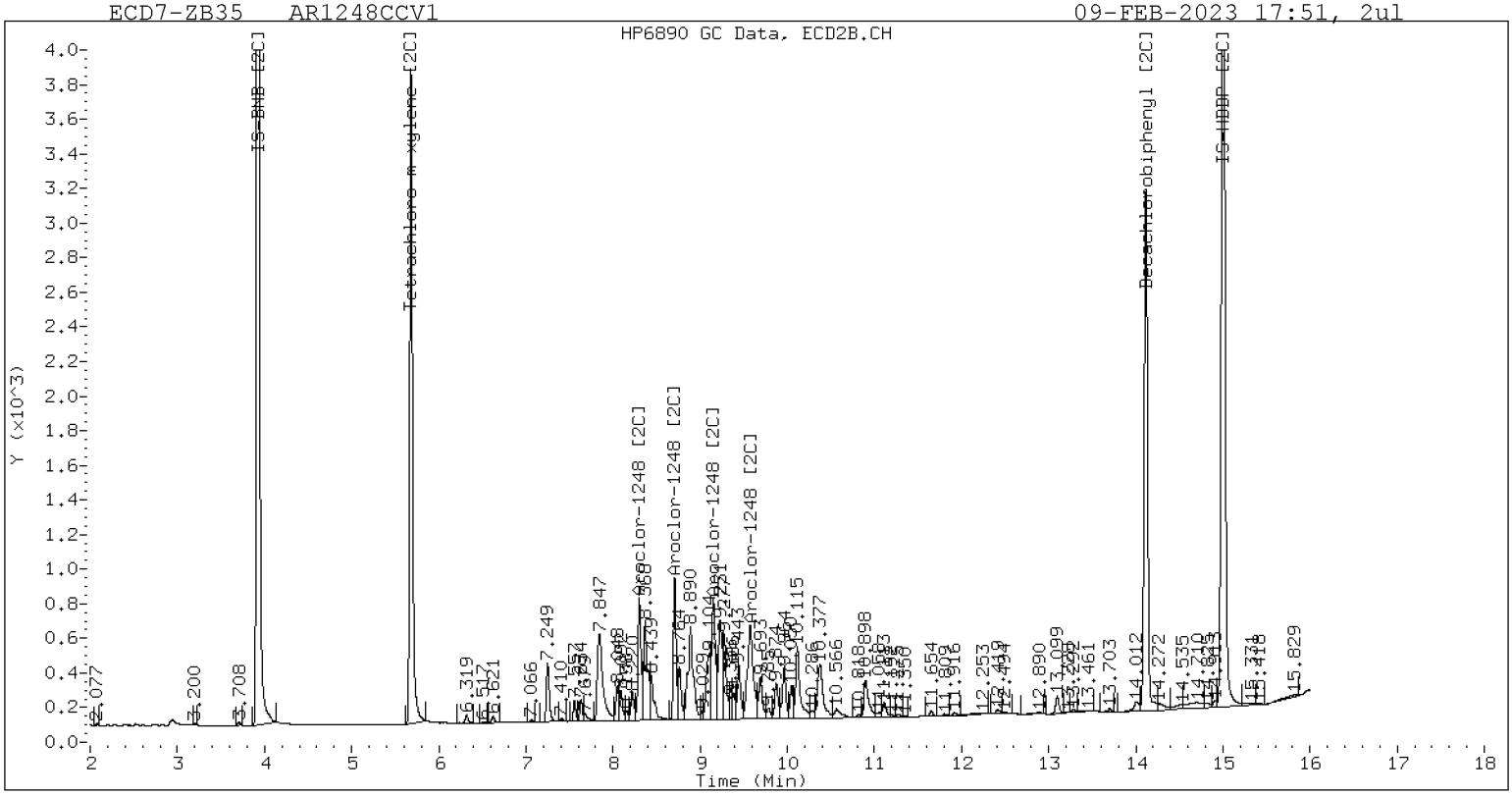
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 09-FEB-2023 17:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV1 09-FEB-2023 17:51, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02092318ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0148	Injection Date:	02/09/23
Lab Sample ID:	SLB0148-CCV2	Injection Time:	18:12
Sequence Name:	AR1660CCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	229	0.0506755	0.0464747		-8.5	+/-20
Aroclor-1016 (1)	A	250.00	238	0.0297277	0.0282451		-4.8	
Aroclor-1016 (2)	A	250.00	234	0.0985017	0.0920981		-6.4	
Aroclor-1016 (3)	A	250.00	214	0.0453193	0.0388300		-14.4	
Aroclor-1016 (4)	A	250.00	229	0.0291533	0.0267256		-8.4	
Aroclor 1016 [2C]	A	250.00	241	0.0519244	0.0500523		-3.8	+/-20
Aroclor-1016 (1) [2C]	A	250.00	238	0.0433907	0.0413703		-4.8	
Aroclor-1016 (2) [2C]	A	250.00	241	0.0950862	0.0917404		-3.6	
Aroclor-1016 (3) [2C]	A	250.00	246	0.0388014	0.0382250		-1.6	
Aroclor-1016 (4) [2C]	A	250.00	237	0.0304194	0.0288736		-5.2	
Aroclor 1260	A	250.00	225	0.0605224	0.0547201		-10.1	+/-20
Aroclor-1260 (1)	A	250.00	252	0.0448870	0.0452657		0.8	
Aroclor-1260 (2)	A	250.00	236	0.0461412	0.0435570		-5.6	
Aroclor-1260 (3)	A	250.00	226	0.1214672	0.1099539		-9.6	
Aroclor-1260 (4)	A	250.00	212	0.0627593	0.0531370		-15.2	
Aroclor-1260 (5)	A	250.00	198	0.0273573	0.0216869		-20.8	
Aroclor 1260 [2C]	A	250.00	239	0.0836545	0.0788493		-4.3	+/-20
Aroclor-1260 (1) [2C]	A	250.00	230	0.0577136	0.0530333		-8.0	
Aroclor-1260 (2) [2C]	A	250.00	230	0.1460113	0.1343894		-8.0	
Aroclor-1260 (3) [2C]	A	250.00	258	0.0363944	0.0375230		3.2	
Aroclor-1260 (4) [2C]	A	250.00	239	0.0944986	0.0904513		-4.4	
Decachlorobiphenyl	A	40.000	34.8	0.8555994	0.7443062		-13.0	+/-20
Tetrachlorometaxylene	A	40.000	39.0	1.1307870	1.1034840		-2.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.6	1.2696430	1.1621620		-8.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.5	1.0814980	1.0399930		-3.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092318ECD7.D
Data file 2: /230209.b/230209.b/02092318ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 09-FEB-2023 18:12
Report Date: 02/10/2023 12:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.003	201479	5.683	-0.002	178440	39.0	38.5	1.5	Tetrachloro-m-xylene
13.888	-0.004	142944	14.116	0.001	191278	34.8	36.6	5.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	365169	-27.4
Hexabromobiphenyl	647433	384100	-40.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	343156	1.9
Hexabromobiphenyl	382032	329176	-13.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.267	-0.003	32232	237.5	1	7.251	-0.002	44364	238.4
Aroclor-1016	2	7.648	-0.002	105098	233.7	2	7.848	-0.002	98379	241.2
Aroclor-1016	3	7.786	-0.002	44311	214.2	3	8.048	-0.000	40991	246.3
Aroclor-1016	4	8.400	-0.003	30498	229.2	4	8.302	-0.001	30963	237.3
Total Col1Ave (4 peaks):					228.7	Total Col2Ave (4 peaks):				240.8 RPD = 5
Corrected Ave (3 peaks):					225.7	Corrected Ave (3 peaks):				239.0 RPD = 6
CalAmt %D:					-8.5	CalAmt %D:				-3.7
Aroclor-1260	1	11.039	-0.004	54333	252.1	1	11.648	-0.001	54554	229.7
Aroclor-1260	2	11.356	-0.005	52282	236.0	2	11.912	-0.002	138243	230.1
Aroclor-1260	3	11.729	-0.006	131979	226.3	3	12.430	-0.001	38599	257.8
Aroclor-1260	4	12.132	-0.007	63781	211.7	4	12.496	-0.001	93045	239.3
Aroclor-1260	5	12.239	-0.005	26031	198.2	NS	---			----
Total Col1Ave (5 peaks):					224.9	Total Col2Ave (4 peaks):				239.2 RPD = 6
Corrected Ave (4 peaks):					218.0	Corrected Ave (3 peaks):				233.0 RPD = 7
CalAmt %D:					-10.1	CalAmt %D:				-4.3

Total PCB Area Col1 (5.909 - 13.792) = 1598137 Col1 Total PCB = 0.4 ppm*

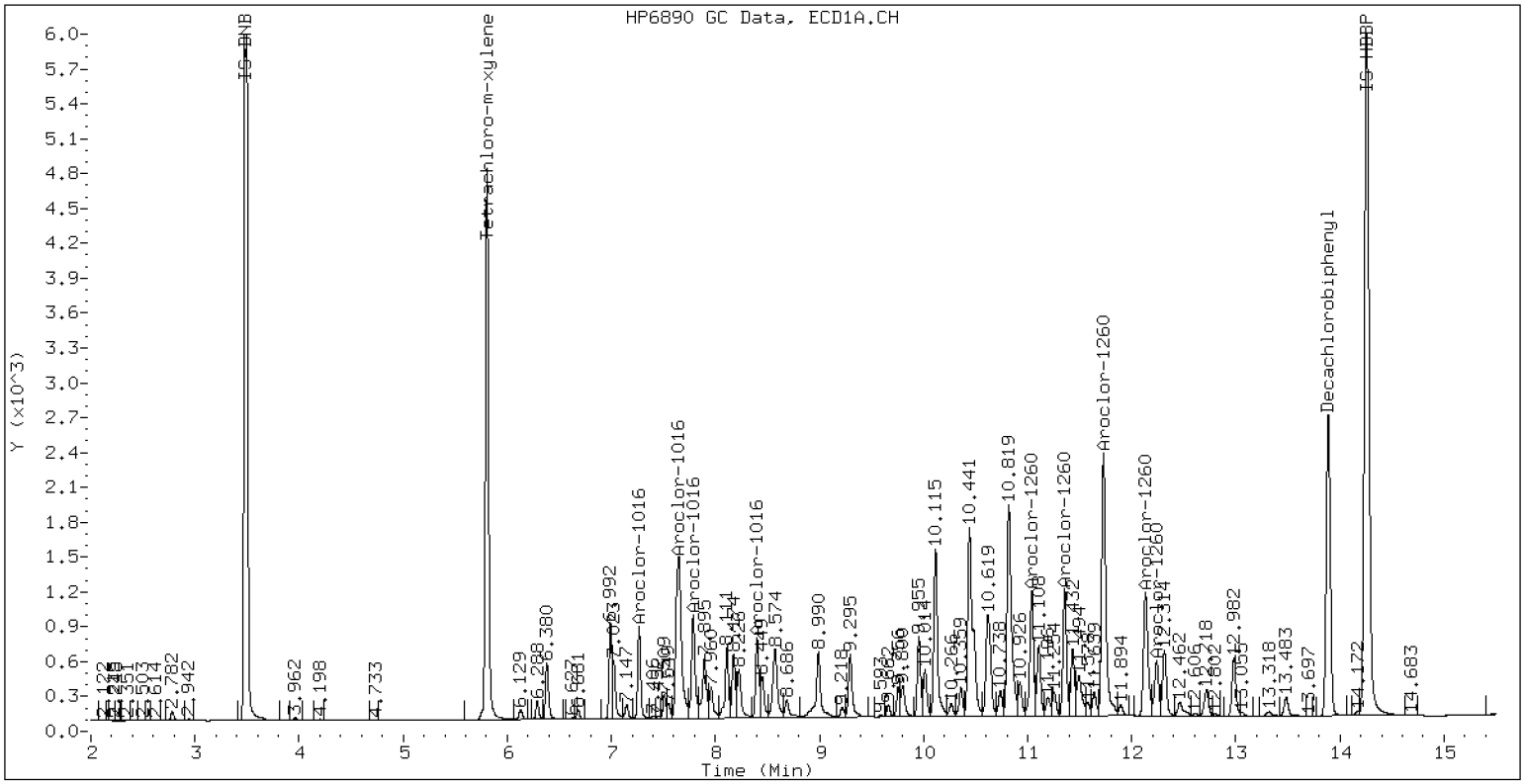
Total PCB Area Col2 (5.785 - 14.015) = 1509152 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

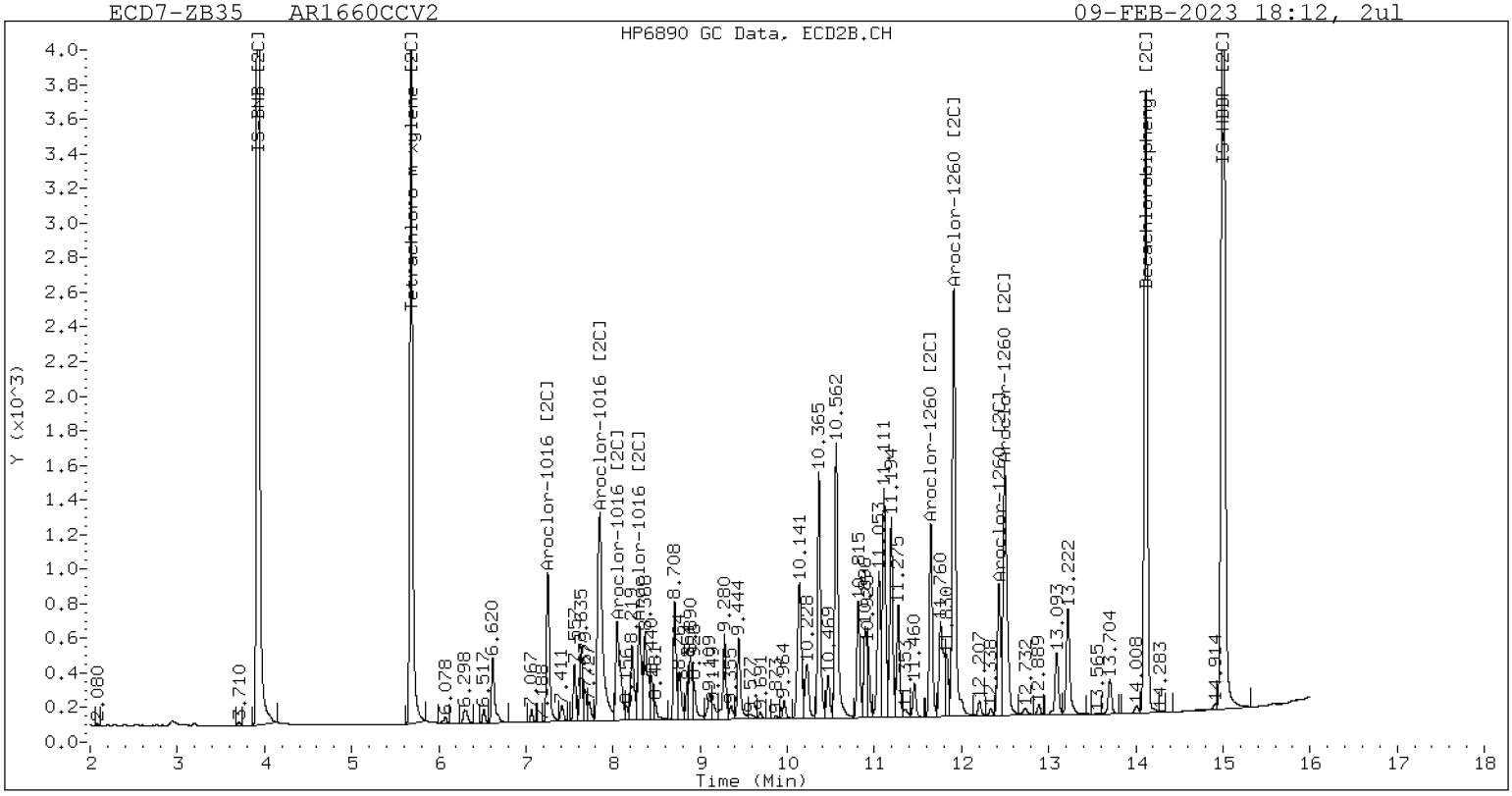
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 09-FEB-2023 18:12, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 09-FEB-2023 18:12, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02092333ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0148	Injection Date:	02/09/23
Lab Sample ID:	SLB0148-CCV3	Injection Time:	23:27
Sequence Name:	AR1242CCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	228	0.0411165	0.0372608		-9.0	+/-20
Aroclor-1242 (1)	A	250.00	232		0.0226989			
Aroclor-1242 (2)	A	250.00	226		0.0725037			
Aroclor-1242 (3)	A	250.00	230		0.0219169			
Aroclor-1242 (4)	A	250.00	222		0.0319237			
Aroclor 1242 [2C]	A	250.00	231	0.0423236	0.0392141		-7.5	+/-20
Aroclor-1242 (1) [2C]	A	250.00	240		0.0335298			
Aroclor-1242 (2) [2C]	A	250.00	233		0.0723536			
Aroclor-1242 (3) [2C]	A	250.00	234		0.0227749			
Aroclor-1242 (4) [2C]	A	250.00	218		0.0281982			
Decachlorobiphenyl	A	40.000	32.1	0.8555994	0.6872062		-19.8	+/-20
Tetrachlorometaxylene	A	40.000	44.9	1.1307870	1.2695840		12.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	34.3	1.2696430	1.0898700		-14.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	44.9	1.0814980	1.2131990		12.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092333ECD7.D
Data file 2: /230209.b/230209.b/02092333ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV3
Client ID:
Injection Date: 09-FEB-2023 23:27
Report Date: 02/10/2023 12:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.001	236917	5.685	-0.000	207417	44.9	44.9	0.1	Tetrachloro-m-xylene
13.889	-0.002	222449	14.117	0.002	258164	32.1	34.3	6.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	373220	-25.8
Hexabromobiphenyl	647433	647401	-0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	341934	1.5
Hexabromobiphenyl	382032	473752	24.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.269	-0.002	26474	231.7	1	7.253	0.001	35828	239.6
Aroclor-1242	2	7.651	-0.005	84562	226.1	2	7.850	0.001	77313	232.8
Aroclor-1242	3	8.402	-0.005	25562	230.0	3	9.155	0.001	24336	233.9
Aroclor-1242	4	8.575	-0.006	37233	221.8	4	9.579	-0.001	30131	218.6
Total Col1Ave (4 peaks):					227.4	Total Col2Ave (4 peaks):				231.2 RPD = 2
Corrected Ave (3 peaks):					226.0	Corrected Ave (3 peaks):				228.4 RPD = 1
CalAmt %D:					-9.0	CalAmt %D:				-7.5

Total PCB Area Col1 (5.909 - 13.792) = 635361 Col1 Total PCB = 0.1 ppm*

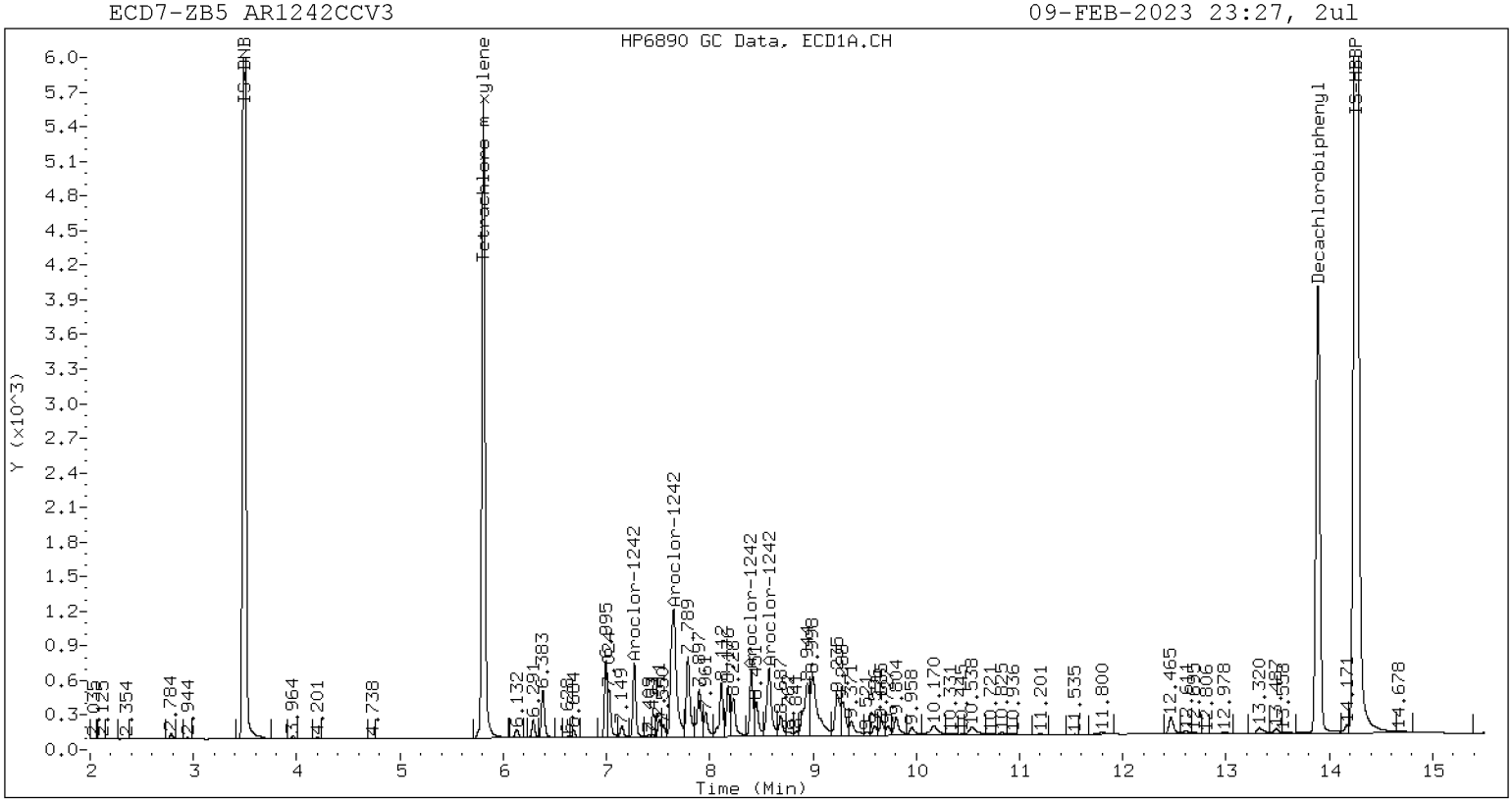
Total PCB Area Col2 (5.785 - 14.015) = 554766 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

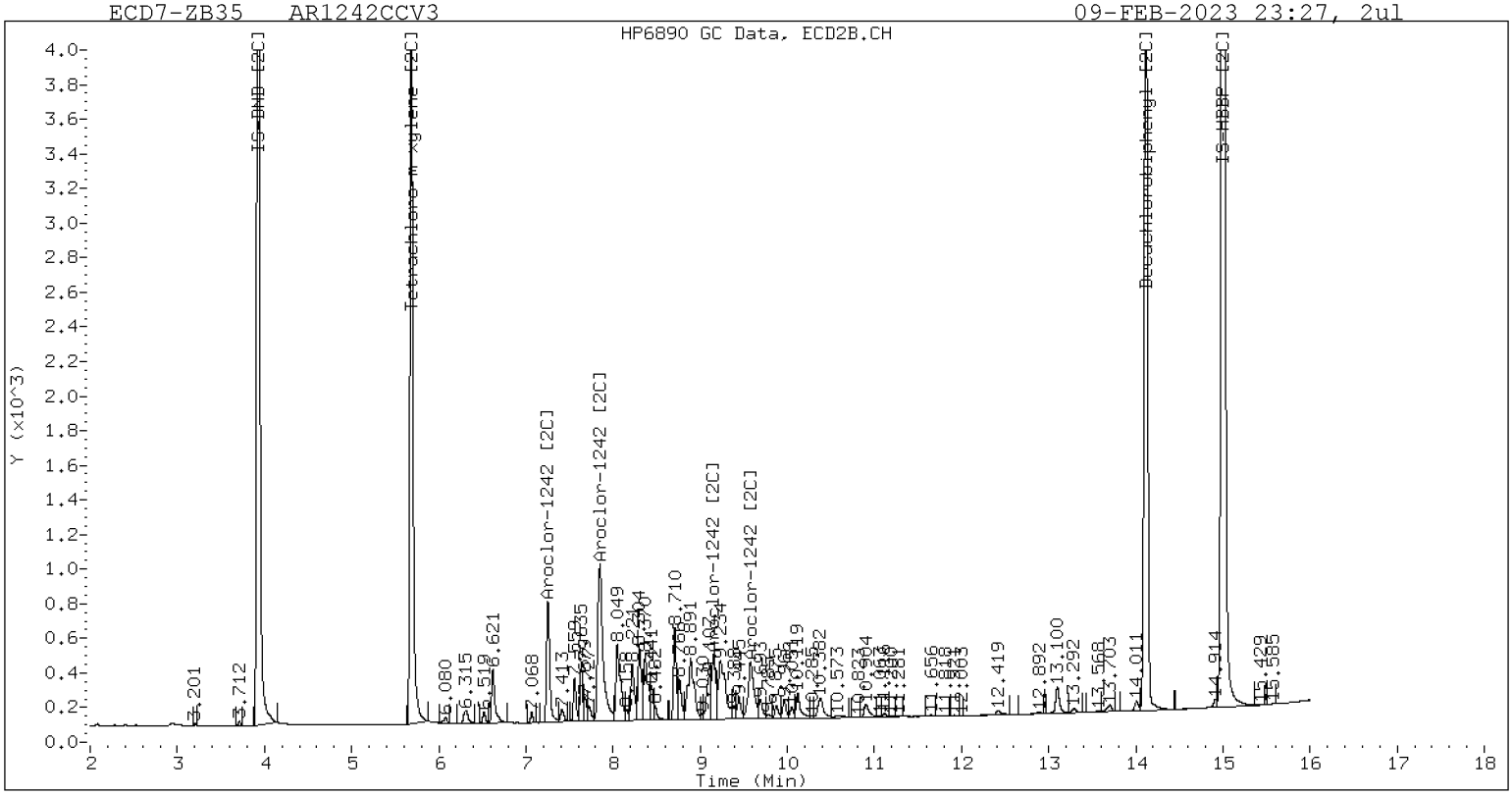
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3 09-FEB-2023 23:27, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV3 09-FEB-2023 23:27, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02092334ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0148	Injection Date:	02/09/23
Lab Sample ID:	SLB0148-CCV4	Injection Time:	23:48
Sequence Name:	AR1660CCV4		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1016	A	250.00	231	0.0506755	0.0466777		-7.8	+/-20	
Aroclor-1016 (1)	A	250.00	237	0.0297277	0.0281490		-5.2		
Aroclor-1016 (2)	A	250.00	233	0.0985017	0.0919524		-6.8		
Aroclor-1016 (3)	A	250.00	215	0.0453193	0.0390053		-14.0		
Aroclor-1016 (4)	A	250.00	237	0.0291533	0.0276039		-5.2		
Aroclor 1016 [2C]	A	250.00	241	0.0519244	0.0499836		-3.8	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	237	0.0433907	0.0412210		-5.2		
Aroclor-1016 (2) [2C]	A	250.00	240	0.0950862	0.0914284		-4.0		
Aroclor-1016 (3) [2C]	A	250.00	247	0.0388014	0.0383015		-1.2		
Aroclor-1016 (4) [2C]	A	250.00	238	0.0304194	0.0289832		-4.8		
Aroclor 1260	A	250.00	176	0.0605224	0.0428881		-29.5	+/-20	*
Aroclor-1260 (1)	A	250.00	183	0.0448870	0.0328900		-26.8		
Aroclor-1260 (2)	A	250.00	182	0.0461412	0.0335995		-27.2		
Aroclor-1260 (3)	A	250.00	178	0.1214672	0.0863229		-28.8		
Aroclor-1260 (4)	A	250.00	174	0.0627593	0.0436846		-30.4		
Aroclor-1260 (5)	A	250.00	164	0.0273573	0.0179434		-34.4		
Aroclor 1260 [2C]	A	250.00	215	0.0836545	0.0712942		-14.2	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	211	0.0577136	0.0487914		-15.6		
Aroclor-1260 (2) [2C]	A	250.00	212	0.1460113	0.1239490		-15.2		
Aroclor-1260 (3) [2C]	A	250.00	224	0.0363944	0.0325395		-10.4		
Aroclor-1260 (4) [2C]	A	250.00	211	0.0944986	0.0798968		-15.6		
Decachlorobiphenyl	A	40.000	34.1	0.8555994	0.7285648		-14.8	+/-20	
Tetrachlorometaxylene	A	40.000	38.6	1.1307870	1.0925330		-3.5	+/-20	
Decachlorobiphenyl [2C]	A	40.000	37.3	1.2696430	1.1838700		-6.8	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	38.5	1.0814980	1.0405680		-3.8	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092334ECD7.D
Data file 2: /230209.b/230209.b/02092334ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV4
Client ID:
Injection Date: 09-FEB-2023 23:48
Report Date: 02/10/2023 12:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.001	204284	5.685	-0.000	178099	38.6	38.5	0.4	Tetrachloro-m-xylene
13.889	-0.003	238872	14.116	0.001	280937	34.1	37.3	9.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	373964	-25.7
Hexabromobiphenyl	647433	655733	1.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	342311	1.6
Hexabromobiphenyl	382032	474608	24.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.001	32896	236.7	1	7.253	0.000	44095	237.5
Aroclor-1016	2	7.650	-0.000	107459	233.4	2	7.849	-0.001	97803	240.4
Aroclor-1016	3	7.787	-0.001	45583	215.2	3	8.050	0.001	40972	246.8
Aroclor-1016	4	8.403	-0.001	32259	236.7	4	8.304	0.000	31004	238.2
Total Col1Ave (4 peaks):					230.5	Total Col2Ave (4 peaks):				240.7 RPD = 4
Corrected Ave (3 peaks):					228.4	Corrected Ave (3 peaks):				238.7 RPD = 4
CalAmt %D:					-7.8	CalAmt %D:				-3.7
Aroclor-1260	1	11.041	-0.003	67397	183.2	1	11.649	-0.000	72365	211.4
Aroclor-1260	2	11.357	-0.003	68851	182.0	2	11.913	-0.000	183835	212.2
Aroclor-1260	3	11.729	-0.005	176890	177.7	3	12.431	-0.000	48261	223.5
Aroclor-1260	4	12.134	-0.006	89517	174.0	4	12.497	0.001	118499	211.4
Aroclor-1260	5	12.241	-0.003	36769	164.0	NS	---			----
Total Col1Ave (5 peaks):					176.2	Total Col2Ave (4 peaks):				214.6 RPD = 20
Corrected Ave (4 peaks):					174.4	Corrected Ave (3 peaks):				211.6 RPD = 19
CalAmt %D:					-29.5	CalAmt %D:				-14.2

Total PCB Area Col1 (5.909 - 13.792) = 1918206 Col1 Total PCB = 0.4 ppm*

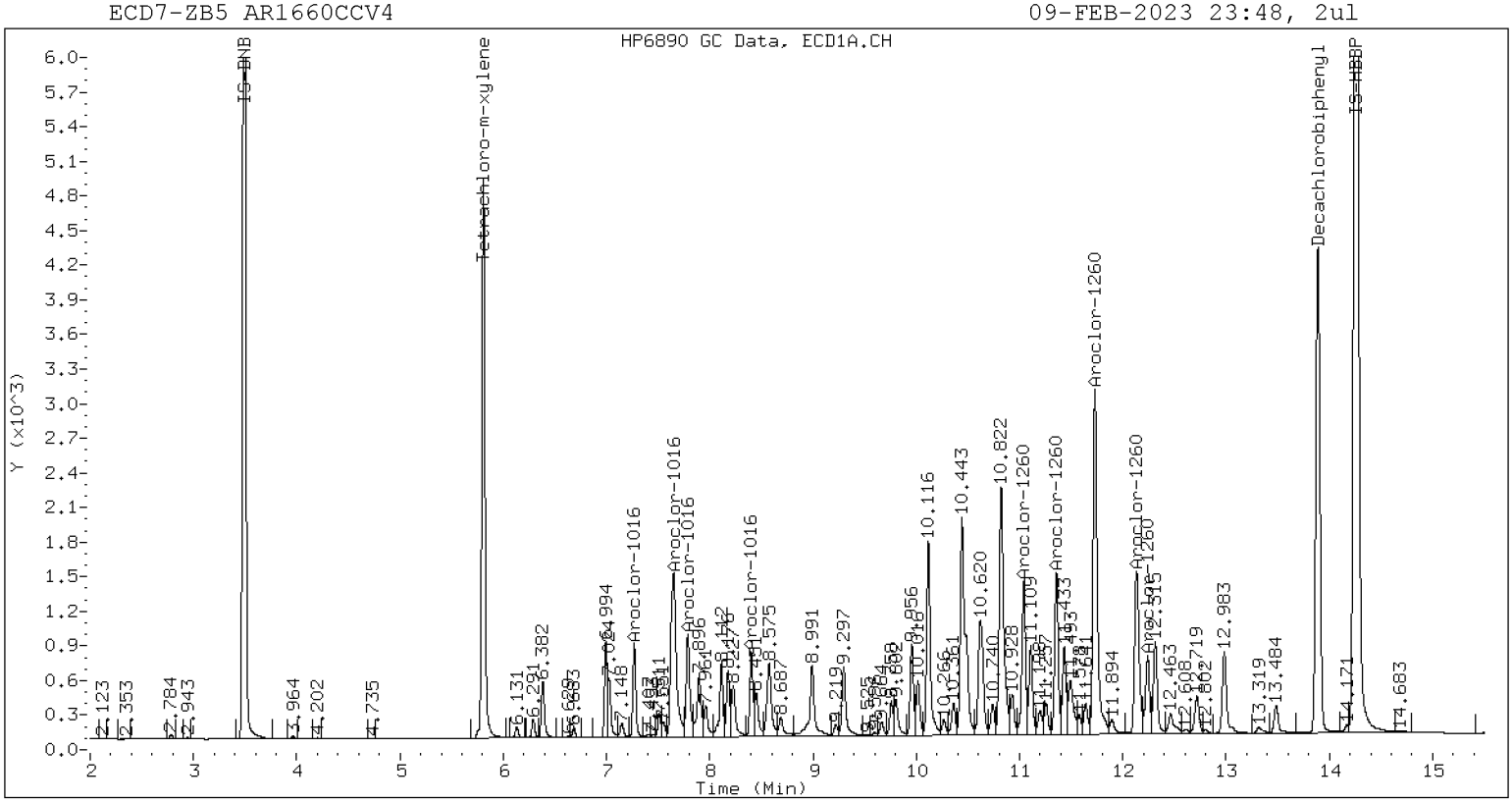
Total PCB Area Col2 (5.785 - 14.015) = 1747789 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

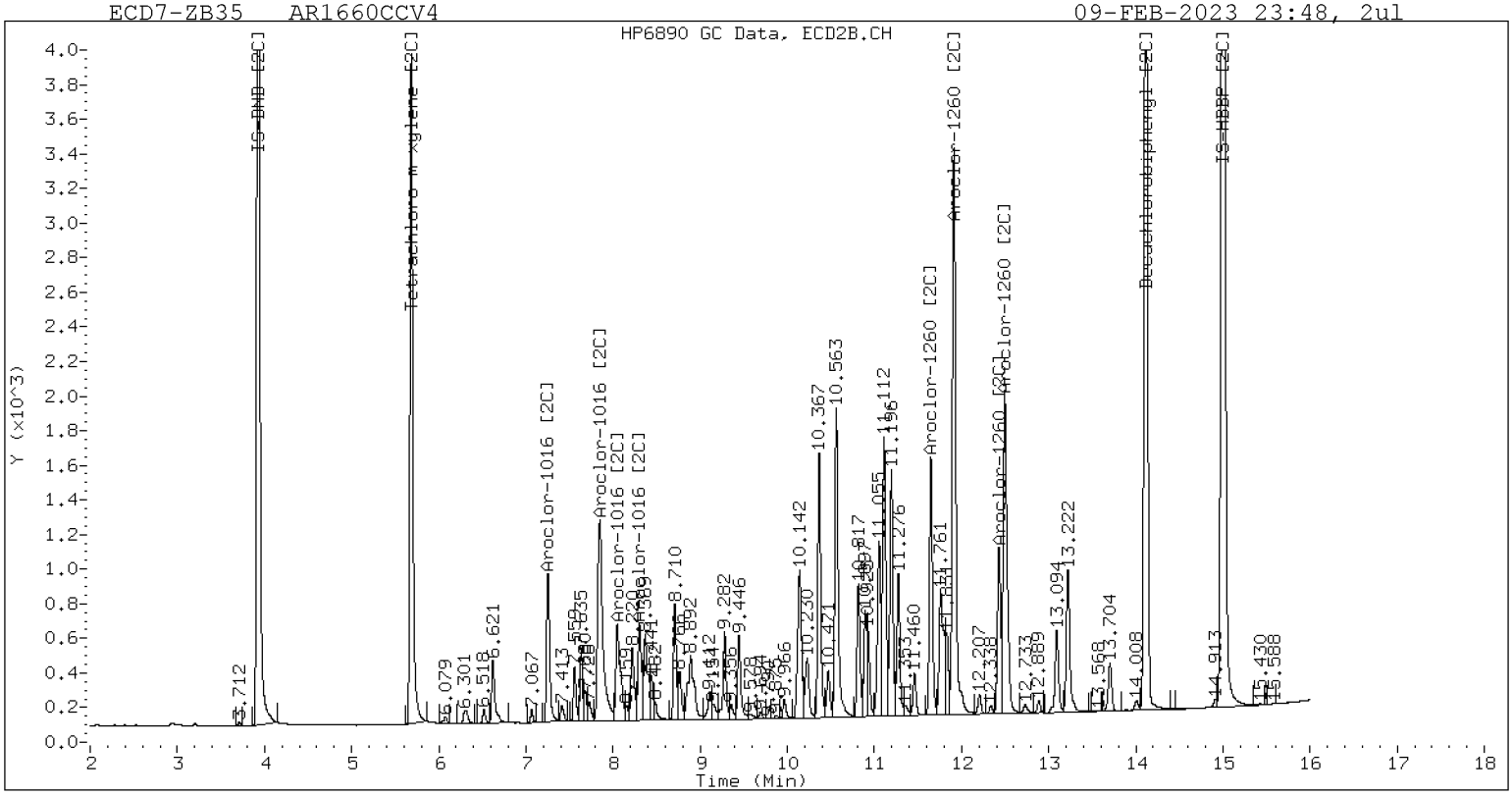
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4 09-FEB-2023 23:48, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV4 09-FEB-2023 23:48, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02092339ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0148	Injection Date:	02/10/23
Lab Sample ID:	SLB0148-CCV5	Injection Time:	01:34
Sequence Name:	AR1254CCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1254	A	250.00	211	0.0675033	0.0575565		-15.4	+/-20	
Aroclor-1254 (1)	A	250.00	220		0.0716728				
Aroclor-1254 (2)	A	250.00	201		0.0280088				
Aroclor-1254 (3)	A	250.00	216		0.0452387				
Aroclor-1254 (4)	A	250.00	215		0.0881637				
Aroclor-1254 (5)	A	250.00	205		0.0546985				
Aroclor 1254 [2C]	A	250.00	224	0.0733219	0.0659154		-10.5	+/-20	
Aroclor-1254 (1) [2C]	A	250.00	231		0.0537428				
Aroclor-1254 (2) [2C]	A	250.00	232		0.0434960				
Aroclor-1254 (3) [2C]	A	250.00	225		0.0922822				
Aroclor-1254 (4) [2C]	A	250.00	230		0.0942442				
Aroclor-1254 (5) [2C]	A	250.00	201		0.0458117				
Decachlorobiphenyl	A	40.000	31.2	0.8555994	0.6686030		-22.0	+/-20	*
Tetrachlorometaxylene	A	40.000	37.4	1.1307870	1.0588640		-6.5	+/-20	
Decachlorobiphenyl [2C]	A	40.000	35.8	1.2696430	1.1375630		-10.5	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	38.4	1.0814980	1.0380320		-4.0	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092339ECD7.D
Data file 2: /230209.b/230209.b/02092339ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCV5
Client ID:
Injection Date: 10-FEB-2023 01:34
Report Date: 02/10/2023 12:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.001	201514	5.686	0.000	181244	37.5	38.4	2.5	Tetrachloro-m-xylene
13.888	-0.004	204182	14.116	0.001	263864	31.3	35.8	13.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	380623	-24.4
Hexabromobiphenyl	647433	610772	-5.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	349207	3.6
Hexabromobiphenyl	382032	463911	21.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1254	1	9.294	-0.005	85251	219.8	1	9.445	0.000	58648	231.5
Aroclor-1254	2	9.371	-0.006	33315	201.1	2	9.964	0.000	47466	231.8
Aroclor-1254	3	9.662	-0.007	53809	216.5	3	10.116	0.000	100705	225.5
Aroclor-1254	4	9.800	-0.009	104866	215.3	4	10.366	0.000	102846	230.2
Aroclor-1254	5	10.161	-0.016	65061	205.4	5	10.564	0.000	49993	200.9
		Total Col1Ave (5 peaks):			211.6		Total Col2Ave (5 peaks):			224.0 RPD = 6
		Corrected Ave (4 peaks):			209.6		Corrected Ave (4 peaks):			222.0 RPD = 6
			CalAmt %D:		-15.3			CalAmt %D:		-10.4

Total PCB Area Col1 (5.909 - 13.792) = 1092394 Col1 Total PCB = 0.2 ppm*

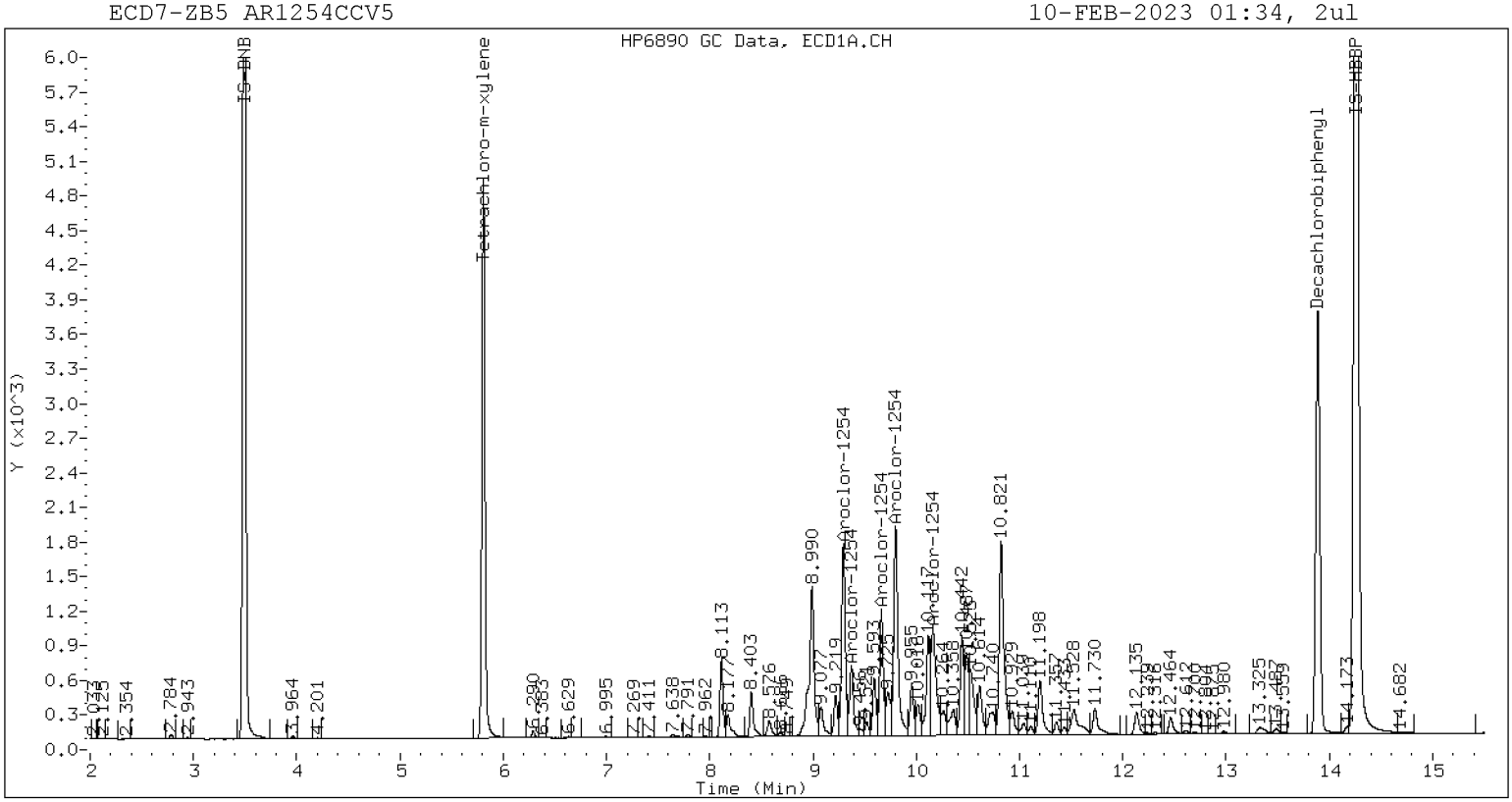
Total PCB Area Col2 (5.785 - 14.015) = 985256 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

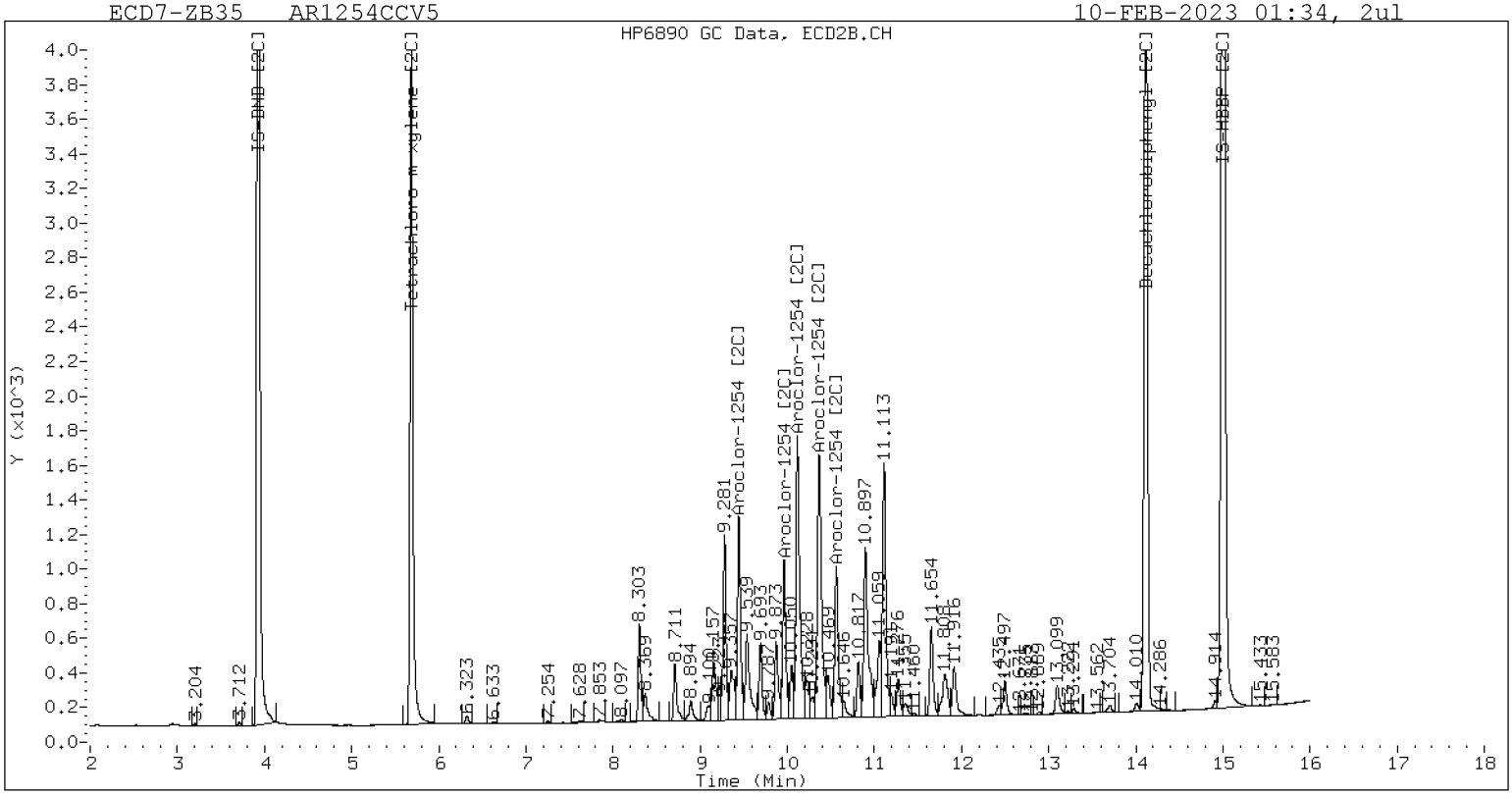
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5 10-FEB-2023 01:34, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCV5 10-FEB-2023 01:34, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02092340ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0148	Injection Date:	02/10/23
Lab Sample ID:	SLB0148-CCV6	Injection Time:	01:55
Sequence Name:	AR1660CCV6		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1016	A	250.00	230	0.0506755	0.0466399		-8.0	+/-20	
Aroclor-1016 (1)	A	250.00	237	0.0297277	0.0282369		-5.2		
Aroclor-1016 (2)	A	250.00	233	0.0985017	0.0918239		-6.8		
Aroclor-1016 (3)	A	250.00	215	0.0453193	0.0390615		-14.0		
Aroclor-1016 (4)	A	250.00	235	0.0291533	0.0274373		-6.0		
Aroclor 1016 [2C]	A	250.00	245	0.0519244	0.0509918		-1.9	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	242	0.0433907	0.0420638		-3.2		
Aroclor-1016 (2) [2C]	A	250.00	245	0.0950862	0.0933147		-2.0		
Aroclor-1016 (3) [2C]	A	250.00	252	0.0388014	0.0391620		0.8		
Aroclor-1016 (4) [2C]	A	250.00	242	0.0304194	0.0294266		-3.2		
Aroclor 1260	A	250.00	178	0.0605224	0.0433932		-29.0	+/-20	*
Aroclor-1260 (1)	A	250.00	184	0.0448870	0.0330727		-26.4		
Aroclor-1260 (2)	A	250.00	184	0.0461412	0.0338905		-26.4		
Aroclor-1260 (3)	A	250.00	181	0.1214672	0.0880074		-27.6		
Aroclor-1260 (4)	A	250.00	175	0.0627593	0.0439948		-30.0		
Aroclor-1260 (5)	A	250.00	164	0.0273573	0.0180004		-34.4		
Aroclor 1260 [2C]	A	250.00	210	0.0836545	0.0698484		-16.0	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	204	0.0577136	0.0472141		-18.4		
Aroclor-1260 (2) [2C]	A	250.00	207	0.1460113	0.1211670		-17.2		
Aroclor-1260 (3) [2C]	A	250.00	220	0.0363944	0.0320698		-12.0		
Aroclor-1260 (4) [2C]	A	250.00	209	0.0944986	0.0789427		-16.4		
Decachlorobiphenyl	A	40.000	32.1	0.8555994	0.6861333		-19.8	+/-20	
Tetrachlorometaxylene	A	40.000	39.1	1.1307870	1.1056930		-2.3	+/-20	
Decachlorobiphenyl [2C]	A	40.000	36.7	1.2696430	1.1660440		-8.3	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	38.8	1.0814980	1.0479890		-3.0	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092340ECD7.D
Data file 2: /230209.b/230209.b/02092340ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV6
Client ID:
Injection Date: 10-FEB-2023 01:55
Report Date: 02/10/2023 12:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.002	209735	5.686	0.001	181037	39.1	38.8	0.9	Tetrachloro-m-xylene
13.890	-0.002	221772	14.116	0.001	284355	32.1	36.7	13.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	379373	-24.6
Hexabromobiphenyl	647433	646440	-0.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	345494	2.5
Hexabromobiphenyl	382032	487726	27.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.268	-0.001	33476	237.5	1	7.253	0.000	45415	242.4
Aroclor-1016	2	7.650	0.000	108861	233.1	2	7.851	0.001	100749	245.3
Aroclor-1016	3	7.787	-0.001	46309	215.5	3	8.050	0.001	42282	252.3
Aroclor-1016	4	8.402	-0.002	32528	235.3	4	8.304	0.000	31771	241.8
Total Col1Ave (4 peaks):					230.3	Total Col2Ave (4 peaks):				245.5 RPD = 6
Corrected Ave (3 peaks):					227.9	Corrected Ave (3 peaks):				243.2 RPD = 6
CalAmt %D:					-7.9	CalAmt %D:				-1.8
Aroclor-1260	1	11.040	-0.003	66811	184.2	1	11.649	-0.000	71961	204.5
Aroclor-1260	2	11.356	-0.005	68463	183.6	2	11.914	0.000	184676	207.5
Aroclor-1260	3	11.729	-0.006	177786	181.1	3	12.431	0.000	48879	220.3
Aroclor-1260	4	12.132	-0.008	88875	175.3	4	12.497	0.000	120320	208.8
Aroclor-1260	5	12.239	-0.005	36363	164.5	NS	---			----
Total Col1Ave (5 peaks):					177.7	Total Col2Ave (4 peaks):				210.3 RPD = 17
Corrected Ave (4 peaks):					176.1	Corrected Ave (3 peaks):				206.9 RPD = 16
CalAmt %D:					-28.9	CalAmt %D:				-15.9

Total PCB Area Col1 (5.909 - 13.792) = 1913242 Col1 Total PCB = 0.4 ppm*

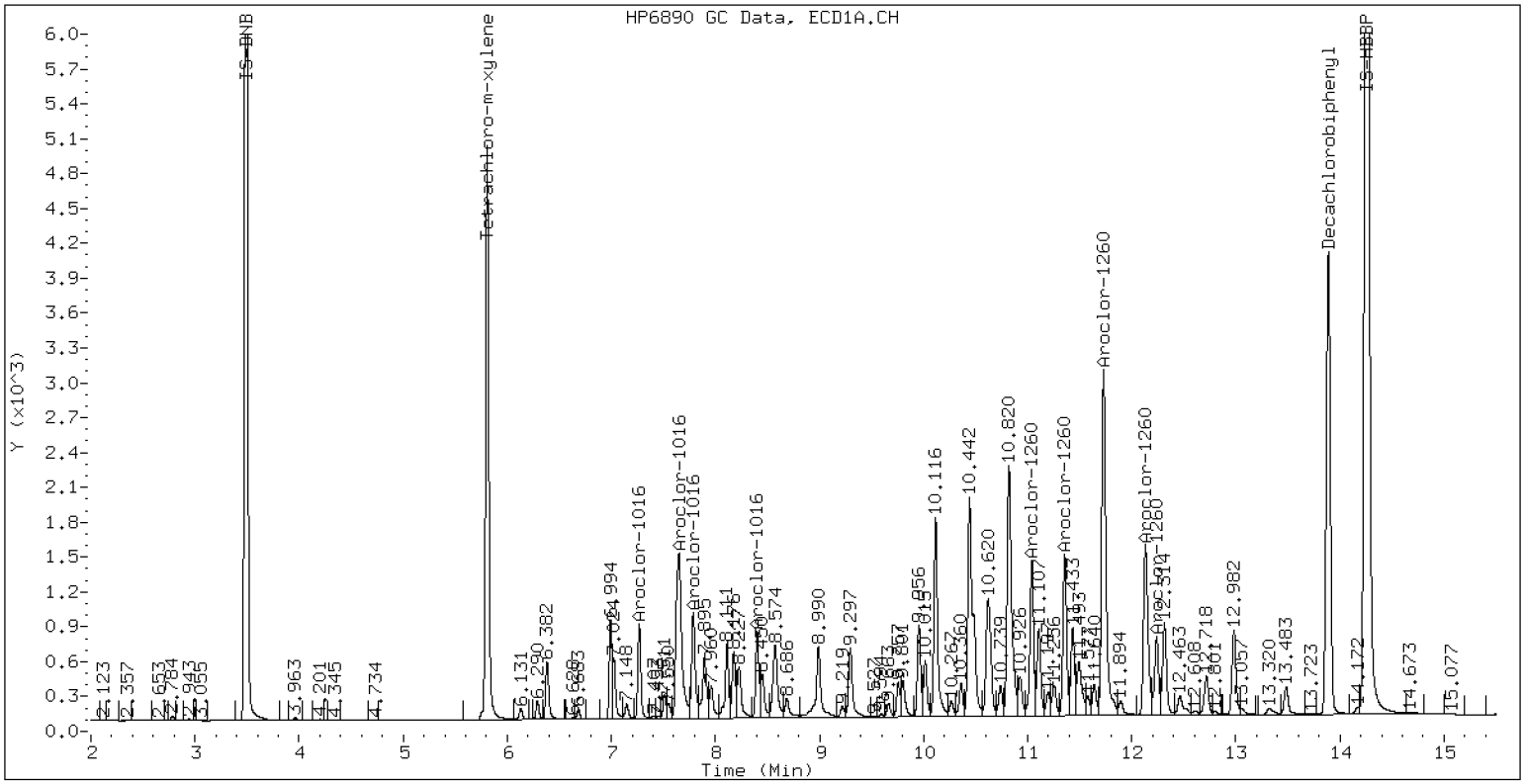
Total PCB Area Col2 (5.785 - 14.015) = 1762253 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

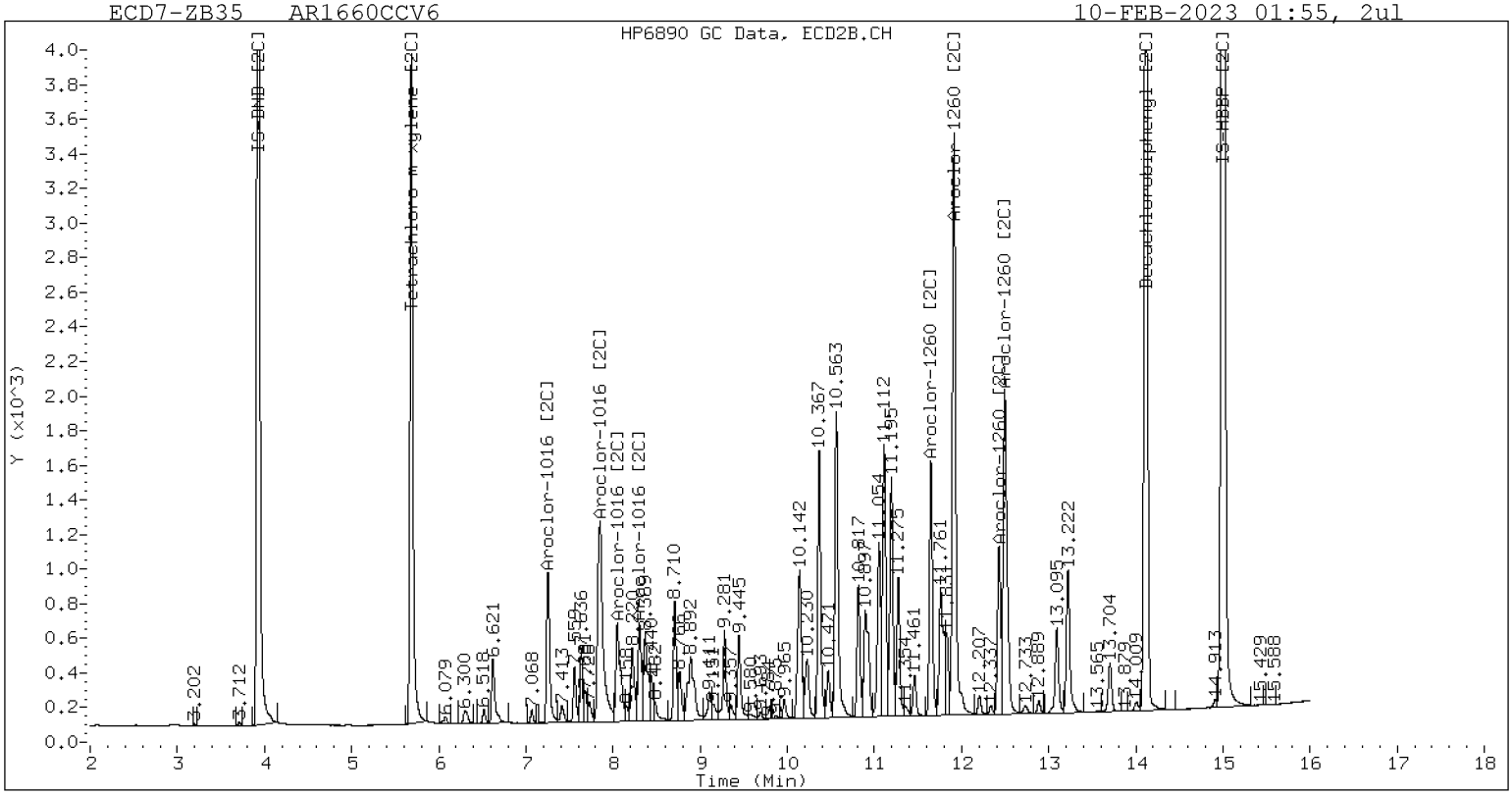
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6 10-FEB-2023 01:55, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6 10-FEB-2023 01:55, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02092357ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0148	Injection Date:	02/10/23
Lab Sample ID:	SLB0148-CCV7	Injection Time:	07:52
Sequence Name:	AR1248CCV7		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	193	0.0592639	0.0437568		-23.0	+/-20 *
Aroclor-1248 (1)	A	250.00	223		0.0357726			
Aroclor-1248 (2)	A	250.00	219		0.0446968			
Aroclor-1248 (3)	A	250.00	158		0.0616303			
Aroclor-1248 (4)	A	250.00	170		0.0329275			
Aroclor 1248 [2C]	A	250.00	222	0.0453673	0.0399082		-11.4	+/-20
Aroclor-1248 (1) [2C]	A	250.00	234		0.0338204			
Aroclor-1248 (2) [2C]	A	250.00	220		0.0342472			
Aroclor-1248 (3) [2C]	A	250.00	222		0.0421468			
Aroclor-1248 (4) [2C]	A	250.00	210		0.0494183			
Decachlorobiphenyl	A	40.000	33.2	0.8555994	0.7095181		-17.0	+/-20
Tetrachlorometaxylene	A	40.000	37.2	1.1307870	1.0520370		-7.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.0	1.2696430	1.1431620		-10.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.4	1.0814980	1.0123010		-6.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092357ECD7.D
Data file 2: /230209.b/230209.b/02092357ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV7
Client ID:
Injection Date: 10-FEB-2023 07:52
Report Date: 02/10/2023 12:59
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.001	197784	5.685	-0.000	181003	37.2	37.4	0.6	Tetrachloro-m-xylene
13.890	-0.002	150150	14.116	0.001	203947	33.2	36.0	8.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	376002	-25.3
Hexabromobiphenyl	647433	423245	-34.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	357607	6.1
Hexabromobiphenyl	382032	356812	-6.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.402	-0.003	42033	223.5	1	8.302	0.000	37795	233.8
Aroclor-1248	2	8.574	-0.006	52519	218.9	2	8.709	0.000	38272	220.0
Aroclor-1248	3	8.993	-0.006	72416	157.8	3	9.152	0.000	47100	221.5
Aroclor-1248	4	9.291	-0.003	38690	170.3	4	9.576	0.000	55226	210.0
Total Col1Ave (4 peaks):					192.6	Total Col2Ave (4 peaks):				221.3 RPD = 14
Corrected Ave (3 peaks):					182.3	Corrected Ave (3 peaks):				217.2 RPD = 17
CalAmt %D:					-23.0	CalAmt %D:				-11.5

Total PCB Area Col1 (5.909 - 13.792) = 798026 Col1 Total PCB = 0.2 ppm*

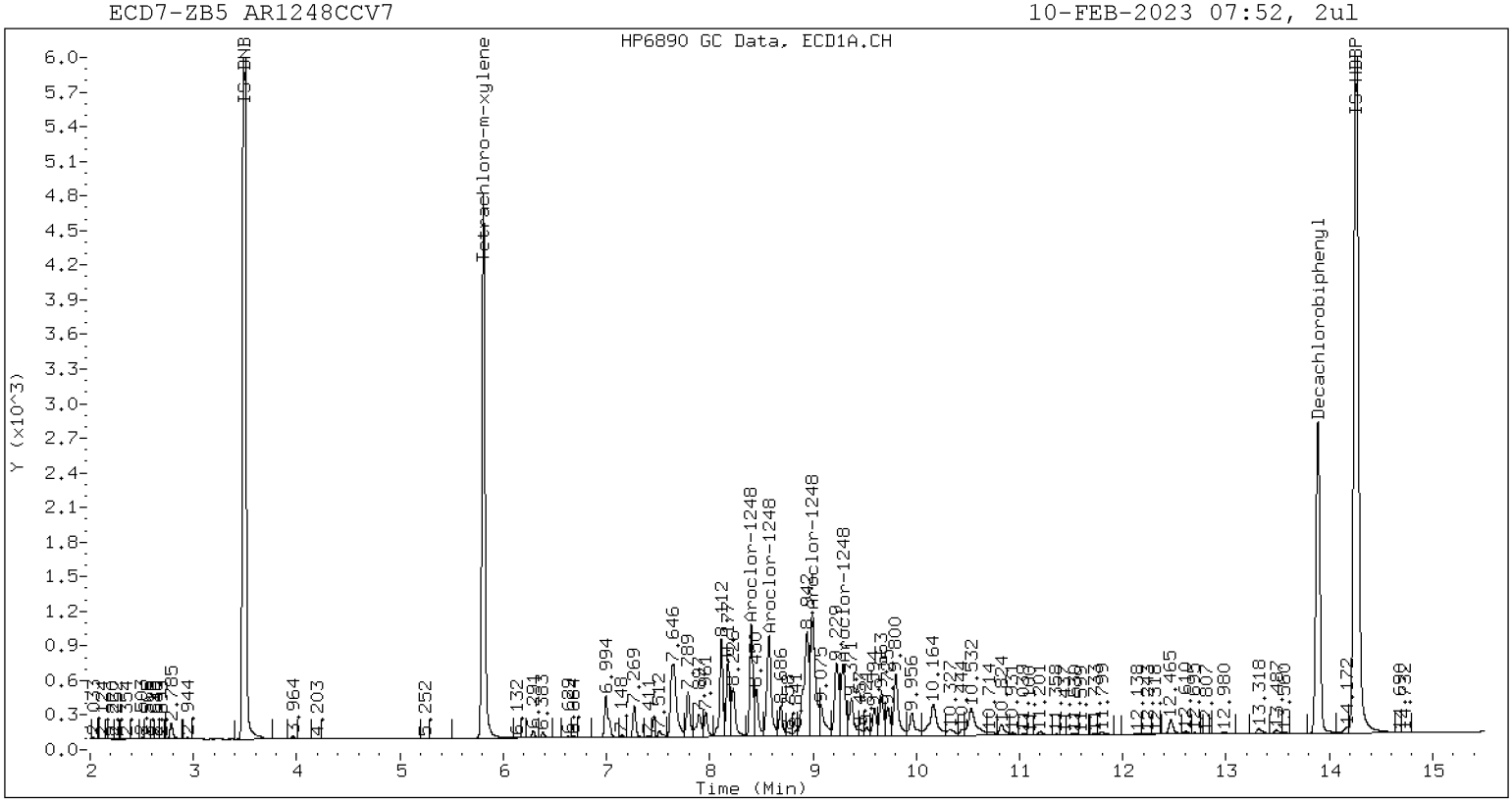
Total PCB Area Col2 (5.785 - 14.015) = 722431 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

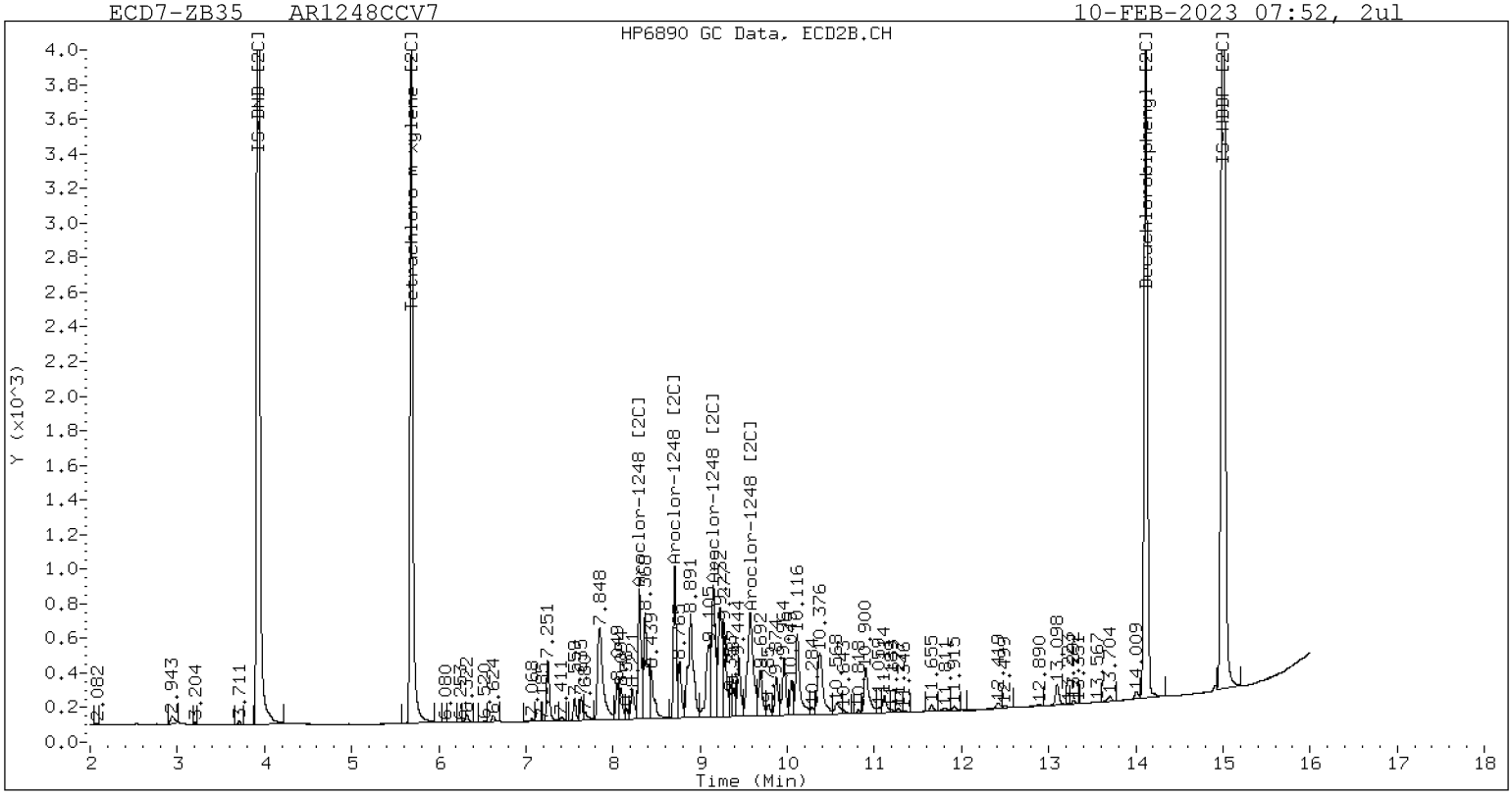
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV7 10-FEB-2023 07:52, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV7 10-FEB-2023 07:52, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02092358ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0148	Injection Date:	02/10/23
Lab Sample ID:	SLB0148-CCV8	Injection Time:	08:13
Sequence Name:	AR1660CCV8		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	233	0.0506755	0.0471628		-7.0	+/-20
Aroclor-1016 (1)	A	250.00	240	0.0297277	0.0284920		-4.0	
Aroclor-1016 (2)	A	250.00	236	0.0985017	0.0932170		-5.6	
Aroclor-1016 (3)	A	250.00	217	0.0453193	0.0392720		-13.2	
Aroclor-1016 (4)	A	250.00	237	0.0291533	0.0276702		-5.2	
Aroclor 1016 [2C]	A	250.00	241	0.0519244	0.0501073		-3.8	+/-20
Aroclor-1016 (1) [2C]	A	250.00	242	0.0433907	0.0419792		-3.2	
Aroclor-1016 (2) [2C]	A	250.00	242	0.0950862	0.0920676		-3.2	
Aroclor-1016 (3) [2C]	A	250.00	244	0.0388014	0.0379431		-2.4	
Aroclor-1016 (4) [2C]	A	250.00	234	0.0304194	0.0284393		-6.4	
Aroclor 1260	A	250.00	217	0.0605224	0.0527541		-13.0	+/-20
Aroclor-1260 (1)	A	250.00	230	0.0448870	0.0413709		-8.0	
Aroclor-1260 (2)	A	250.00	223	0.0461412	0.0412223		-10.8	
Aroclor-1260 (3)	A	250.00	216	0.1214672	0.1050820		-13.6	
Aroclor-1260 (4)	A	250.00	215	0.0627593	0.0539015		-14.0	
Aroclor-1260 (5)	A	250.00	203	0.0273573	0.0221938		-18.8	
Aroclor 1260 [2C]	A	250.00	237	0.0836545	0.0786624		-5.2	+/-20
Aroclor-1260 (1) [2C]	A	250.00	235	0.0577136	0.0541758		-6.0	
Aroclor-1260 (2) [2C]	A	250.00	235	0.1460113	0.1372854		-6.0	
Aroclor-1260 (3) [2C]	A	250.00	248	0.0363944	0.0361468		-0.8	
Aroclor-1260 (4) [2C]	A	250.00	230	0.0944986	0.0870416		-8.0	
Decachlorobiphenyl	A	40.000	35.4	0.8555994	0.7572282		-11.5	+/-20
Tetrachlorometaxylene	A	40.000	39.4	1.1307870	1.1148790		-1.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.9	1.2696430	1.1705950		-7.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.1	1.0814980	1.0579430		-2.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092358ECD7.D
Data file 2: /230209.b/230209.b/02092358ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV8
Client ID:
Injection Date: 10-FEB-2023 08:13
Report Date: 02/10/2023 12:59
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.001	209027	5.686	0.000	187887	39.4	39.1	0.8	Tetrachloro-m-xylene
13.890	-0.002	172096	14.116	0.001	225826	35.4	36.9	4.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	374977	-25.5
Hexabromobiphenyl	647433	454542	-29.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	355193	5.4
Hexabromobiphenyl	382032	385831	1.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.269	-0.001	33387	239.6	1	7.253	0.000	46596	241.9
Aroclor-1016	2	7.650	-0.001	109232	236.6	2	7.850	0.000	102193	242.1
Aroclor-1016	3	7.787	-0.002	46019	216.6	3	8.048	0.000	42116	244.5
Aroclor-1016	4	8.402	-0.002	32424	237.3	4	8.303	0.000	31567	233.7
Total Col1Ave (4 peaks):					232.5	Total Col2Ave (4 peaks):				240.5 RPD = 3
Corrected Ave (3 peaks):					230.2	Corrected Ave (3 peaks):				239.2 RPD = 4
CalAmt %D:					-7.0	CalAmt %D:				-3.8
Aroclor-1260	1	11.040	-0.004	58765	230.4	1	11.649	0.000	65321	234.7
Aroclor-1260	2	11.356	-0.004	58554	223.3	2	11.913	0.000	165528	235.1
Aroclor-1260	3	11.730	-0.005	149263	216.3	3	12.431	0.000	43583	248.3
Aroclor-1260	4	12.133	-0.006	76564	214.7	4	12.496	0.000	104948	230.3
Aroclor-1260	5	12.239	-0.005	31525	202.8	NS	---			----
Total Col1Ave (5 peaks):					217.5	Total Col2Ave (4 peaks):				237.1 RPD = 9
Corrected Ave (4 peaks):					214.3	Corrected Ave (3 peaks):				233.3 RPD = 9
CalAmt %D:					-13.0	CalAmt %D:				-5.2

Total PCB Area Col1 (5.909 - 13.792) = 1763561 Col1 Total PCB = 0.4 ppm*

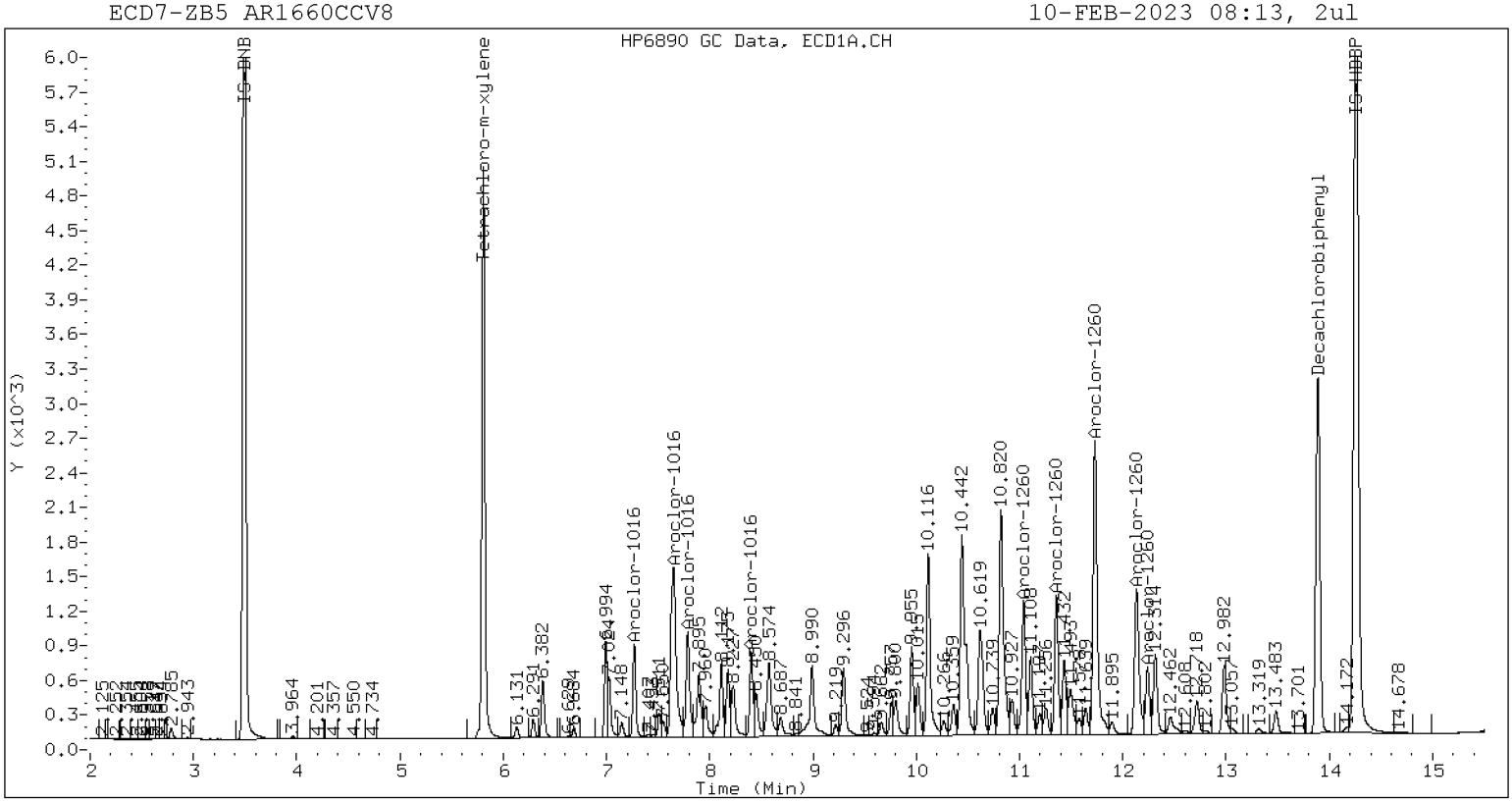
Total PCB Area Col2 (5.785 - 14.015) = 1649567 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

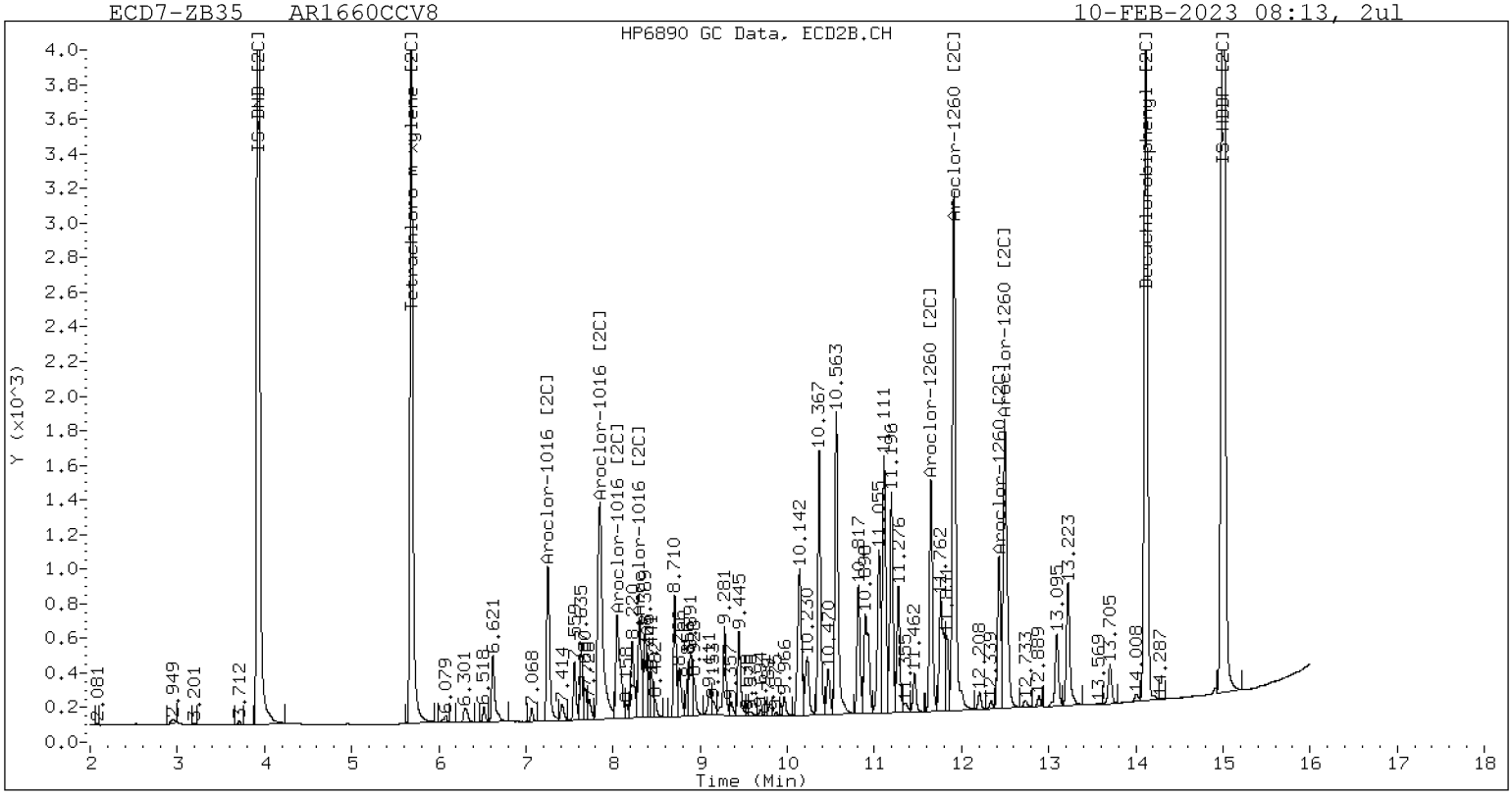
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV8 10-FEB-2023 08:13, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV8 10-FEB-2023 08:13, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02092369ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0148	Injection Date:	02/10/23
Lab Sample ID:	SLB0148-CCV9	Injection Time:	12:04
Sequence Name:	AR1242CCV9		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	226	0.0411165	0.0372043		-9.5	+/-20
Aroclor-1242 (1)	A	250.00	231		0.0226053			
Aroclor-1242 (2)	A	250.00	226		0.0726338			
Aroclor-1242 (3)	A	250.00	226		0.0215802			
Aroclor-1242 (4)	A	250.00	222		0.0319980			
Aroclor 1242 [2C]	A	250.00	229	0.0423236	0.0388297		-8.6	+/-20
Aroclor-1242 (1) [2C]	A	250.00	238		0.0333665			
Aroclor-1242 (2) [2C]	A	250.00	232		0.0720093			
Aroclor-1242 (3) [2C]	A	250.00	231		0.0225089			
Aroclor-1242 (4) [2C]	A	250.00	213		0.0274338			
Decachlorobiphenyl	A	40.000	32.2	0.8555994	0.6878324		-19.5	+/-20
Tetrachlorometaxylene	A	40.000	45.0	1.1307870	1.2731900		12.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	34.4	1.2696430	1.0936260		-14.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	45.1	1.0814980	1.2193430		12.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092369ECD7.D
Data file 2: /230209.b/230209.b/02092369ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV9
Client ID:
Injection Date: 10-FEB-2023 12:04
Report Date: 02/10/2023 14:32
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.000	236898	5.685	0.000	218749	45.0	45.1	0.1	Tetrachloro-m-xylene
13.889	-0.001	166571	14.115	0.000	214851	32.2	34.5	6.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	372133	-26.1
Hexabromobiphenyl	647433	484336	-25.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	358798	6.5
Hexabromobiphenyl	382032	392915	2.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1242	1	7.268	-0.000	26288	230.7	1	7.252	0.000	37412	238.4
Aroclor-1242	2	7.651	0.000	84467	226.5	2	7.849	0.000	80740	231.7
Aroclor-1242	3	8.402	-0.000	25096	226.5	3	9.154	0.000	25238	231.2
Aroclor-1242	4	8.575	-0.001	37211	222.3	4	9.580	0.000	30760	212.6
Total Col1Ave (4 peaks):					226.5	Total Col2Ave (4 peaks):				228.5 RPD = 1
Corrected Ave (3 peaks):					225.1	Corrected Ave (3 peaks):				225.2 RPD = 0
CalAmt %D:					-9.4	CalAmt %D:				-8.6

Total PCB Area Col1 (5.908 - 13.790) = 624107 Col1 Total PCB = 0.1 ppm*

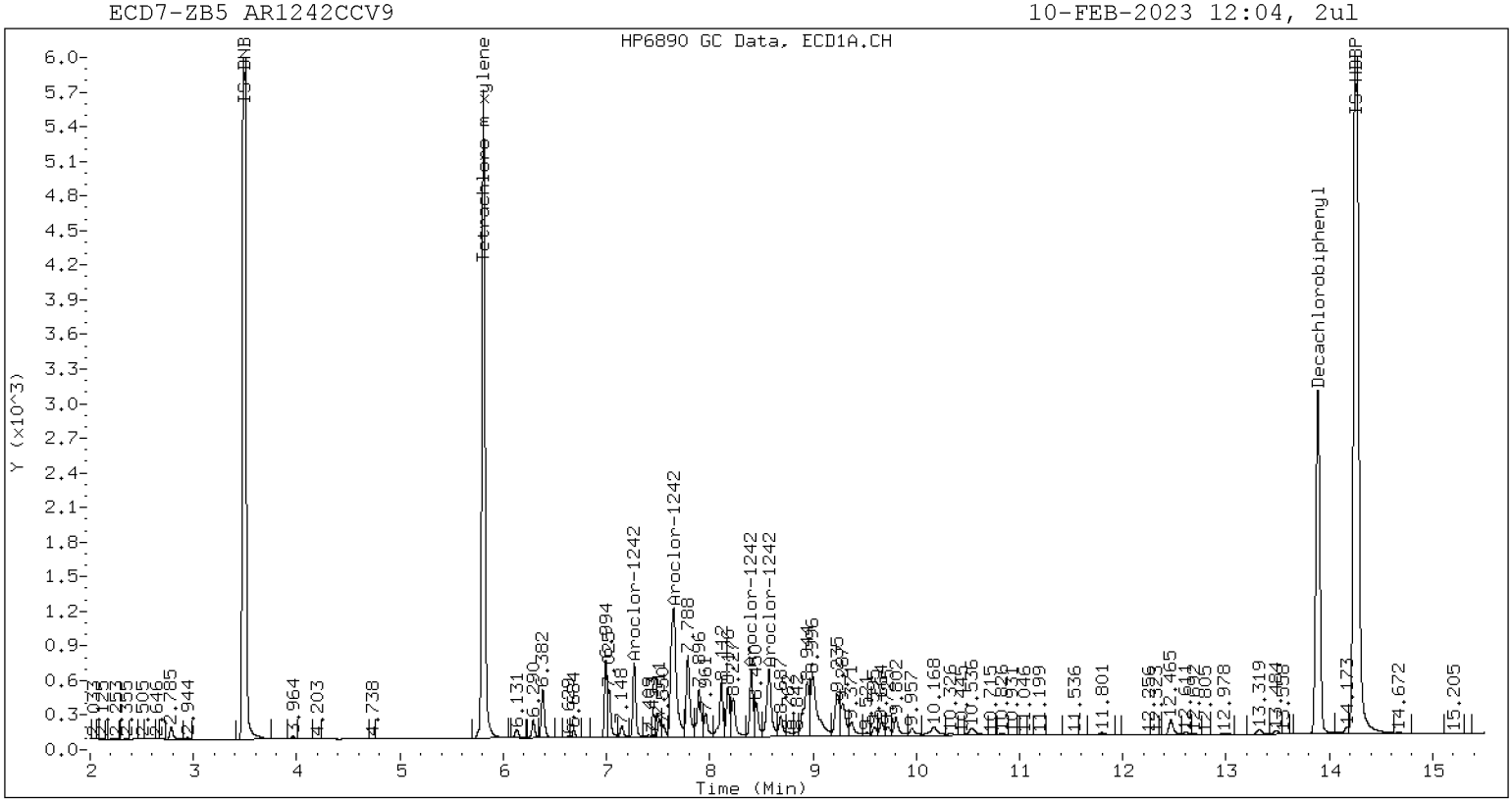
Total PCB Area Col2 (5.785 - 14.015) = 564529 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

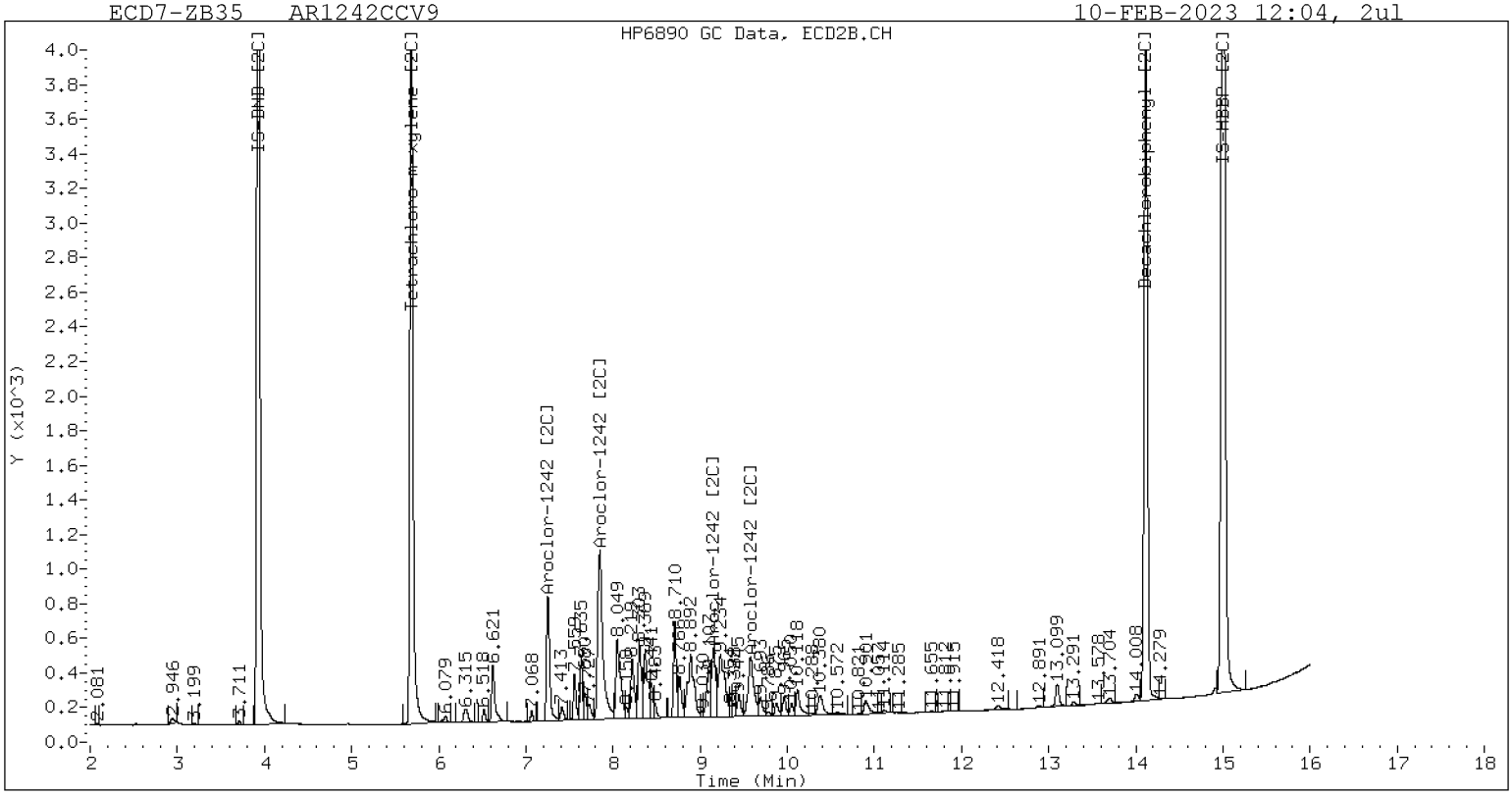
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV9 10-FEB-2023 12:04, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV9 10-FEB-2023 12:04, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02092370ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0148	Injection Date:	02/10/23
Lab Sample ID:	SLB0148-CCVA	Injection Time:	12:25
Sequence Name:	AR1660CCVA		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	232	0.0506755	0.0469565		-7.3	+/-20
Aroclor-1016 (1)	A	250.00	238	0.0297277	0.0282644		-4.8	
Aroclor-1016 (2)	A	250.00	236	0.0985017	0.0928469		-5.6	
Aroclor-1016 (3)	A	250.00	216	0.0453193	0.0391186		-13.6	
Aroclor-1016 (4)	A	250.00	237	0.0291533	0.0275962		-5.2	
Aroclor 1016 [2C]	A	250.00	246	0.0519244	0.0511188		-1.8	+/-20
Aroclor-1016 (1) [2C]	A	250.00	242	0.0433907	0.0420679		-3.2	
Aroclor-1016 (2) [2C]	A	250.00	247	0.0950862	0.0938336		-1.2	
Aroclor-1016 (3) [2C]	A	250.00	252	0.0388014	0.0391986		0.8	
Aroclor-1016 (4) [2C]	A	250.00	241	0.0304194	0.0293751		-3.6	
Aroclor 1260	A	250.00	200	0.0605224	0.0487281		-20.0	+/-20
Aroclor-1260 (1)	A	250.00	213	0.0448870	0.0382742		-14.8	
Aroclor-1260 (2)	A	250.00	209	0.0461412	0.0386046		-16.4	
Aroclor-1260 (3)	A	250.00	202	0.1214672	0.0980069		-19.2	
Aroclor-1260 (4)	A	250.00	195	0.0627593	0.0489153		-22.0	
Aroclor-1260 (5)	A	250.00	181	0.0273573	0.0198395		-27.6	
Aroclor 1260 [2C]	A	250.00	235	0.0836545	0.0781344		-6.0	+/-20
Aroclor-1260 (1) [2C]	A	250.00	234	0.0577136	0.0541531		-6.4	
Aroclor-1260 (2) [2C]	A	250.00	234	0.1460113	0.1369726		-6.4	
Aroclor-1260 (3) [2C]	A	250.00	245	0.0363944	0.0356233		-2.0	
Aroclor-1260 (4) [2C]	A	250.00	227	0.0944986	0.0857887		-9.2	
Decachlorobiphenyl	A	40.000	34.7	0.8555994	0.7431611		-13.3	+/-20
Tetrachlorometaxylene	A	40.000	39.0	1.1307870	1.1023980		-2.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.4	1.2696430	1.1871290		-6.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.6	1.0814980	1.0450140		-3.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092370ECD7.D
Data file 2: /230209.b/230209.b/02092370ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCVA
Client ID:
Injection Date: 10-FEB-2023 12:25
Report Date: 02/10/2023 14:32
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.000	207209	5.686	0.000	187465	39.0	38.7	0.9	Tetrachloro-m-xylene
13.889	-0.001	191471	14.115	0.001	247305	34.7	37.4	7.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	375924	-25.3
Hexabromobiphenyl	647433	515288	-20.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	358780	6.5
Hexabromobiphenyl	382032	416644	9.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	0.000	33204	237.7	1	7.254	0.000	47166	242.4
Aroclor-1016	2	7.650	0.001	109073	235.6	2	7.850	0.000	105205	246.7
Aroclor-1016	3	7.788	0.001	45955	215.8	3	8.049	0.001	43949	252.6
Aroclor-1016	4	8.402	0.001	32419	236.6	4	8.304	0.000	32935	241.4
Total Col1Ave (4 peaks):					231.4	Total Col2Ave (4 peaks):				245.8 RPD = 6
Corrected Ave (3 peaks):					229.4	Corrected Ave (3 peaks):				243.5 RPD = 6
CalAmt %D:					-7.4	CalAmt %D:				-1.7
Aroclor-1260	1	11.041	0.001	61632	213.2	1	11.649	-0.000	70508	234.6
Aroclor-1260	2	11.356	0.000	62164	209.2	2	11.914	0.000	178340	234.5
Aroclor-1260	3	11.729	-0.000	157818	201.7	3	12.432	0.001	46382	244.7
Aroclor-1260	4	12.133	0.000	78767	194.9	4	12.497	0.001	111698	227.0
Aroclor-1260	5	12.240	0.001	31947	181.3	NS	---			----
Total Col1Ave (5 peaks):					200.0	Total Col2Ave (4 peaks):				235.2 RPD = 16
Corrected Ave (4 peaks):					196.8	Corrected Ave (3 peaks):				232.0 RPD = 16
CalAmt %D:					-20.0	CalAmt %D:				-5.9

Total PCB Area Col1 (5.908 - 13.790) = 1797916 Col1 Total PCB = 0.4 ppm*

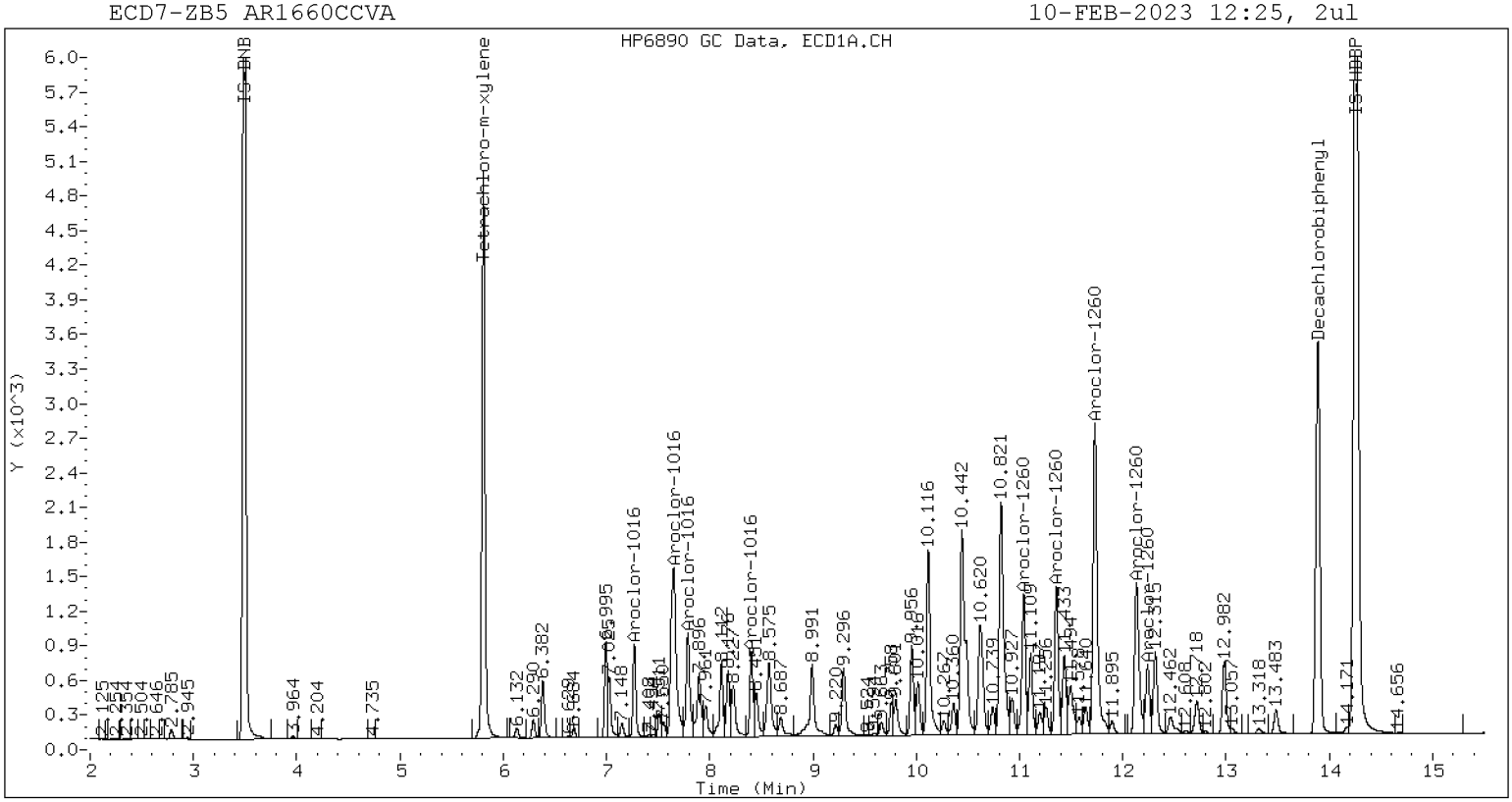
Total PCB Area Col2 (5.785 - 14.015) = 1759656 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

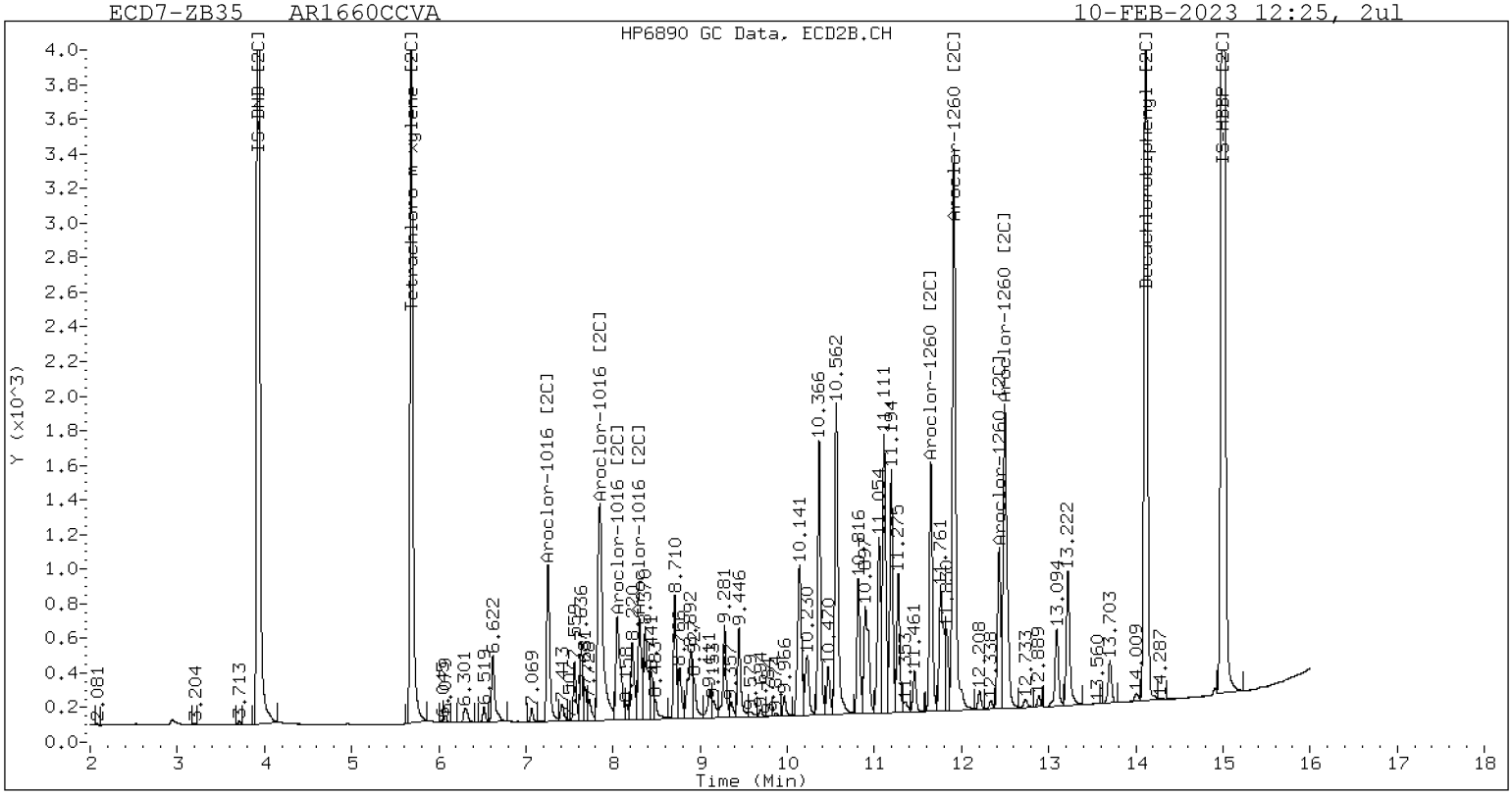
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCVA 10-FEB-2023 12:25, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCVA 10-FEB-2023 12:25, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02092381ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0148	Injection Date:	02/10/23
Lab Sample ID:	SLB0148-CCVB	Injection Time:	16:17
Sequence Name:	AR1254CCVB		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	189	0.0675033	0.0514221		-24.3	+/-20 *
Aroclor-1254 (1)	A	250.00	202		0.0658000			
Aroclor-1254 (2)	A	250.00	181		0.0252013			
Aroclor-1254 (3)	A	250.00	190		0.0396093			
Aroclor-1254 (4)	A	250.00	190		0.0776735			
Aroclor-1254 (5)	A	250.00	183		0.0488263			
Aroclor 1254 [2C]	A	250.00	205	0.0733219	0.0601935		-18.1	+/-20
Aroclor-1254 (1) [2C]	A	250.00	219		0.0508970			
Aroclor-1254 (2) [2C]	A	250.00	215		0.0403362			
Aroclor-1254 (3) [2C]	A	250.00	205		0.0840644			
Aroclor-1254 (4) [2C]	A	250.00	208		0.0852686			
Aroclor-1254 (5) [2C]	A	250.00	177		0.0404016			
Decachlorobiphenyl	A	40.000	32.4	0.8555994	0.6937162		-19.0	+/-20
Tetrachlorometaxylene	A	40.000	38.0	1.1307870	1.0742460		-5.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	35.9	1.2696430	1.1397600		-10.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.6	1.0814980	1.0445970		-3.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092381ECD7.D
Data file 2: /230209.b/230209.b/02092381ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCVB
Client ID:
Injection Date: 10-FEB-2023 16:17
Report Date: 02/10/2023 16:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.000	204458	5.685	0.000	191669	38.0	38.6	1.7	Tetrachloro-m-xylene
13.890	0.001	142225	14.116	0.000	204767	32.4	35.9	10.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	380654	-24.4
Hexabromobiphenyl	647433	410038	-36.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	366972	8.9
Hexabromobiphenyl	382032	359316	-5.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.293	-0.001	78272	201.8	1	9.444	0.000	58368	219.2
Aroclor-1254	2	9.371	-0.000	29978	181.0	2	9.965	0.000	46257	215.0
Aroclor-1254	3	9.662	-0.000	47117	189.6	3	10.116	0.000	96404	205.4
Aroclor-1254	4	9.800	0.000	92396	189.7	4	10.365	0.000	97785	208.3
Aroclor-1254	5	10.160	-0.001	58081	183.4	5	10.563	0.000	46332	177.2

Total Col1Ave (5 peaks): 189.1 Total Col2Ave (5 peaks): 205.0 RPD = 8

Corrected Ave (4 peaks): 185.9 Corrected Ave (4 peaks): 201.5 RPD = 8

CalAmt %D: -24.4 CalAmt %D: -18.0

Total PCB Area Col1 (5.908 - 13.789) = 943912 Col1 Total PCB = 0.2 ppm*

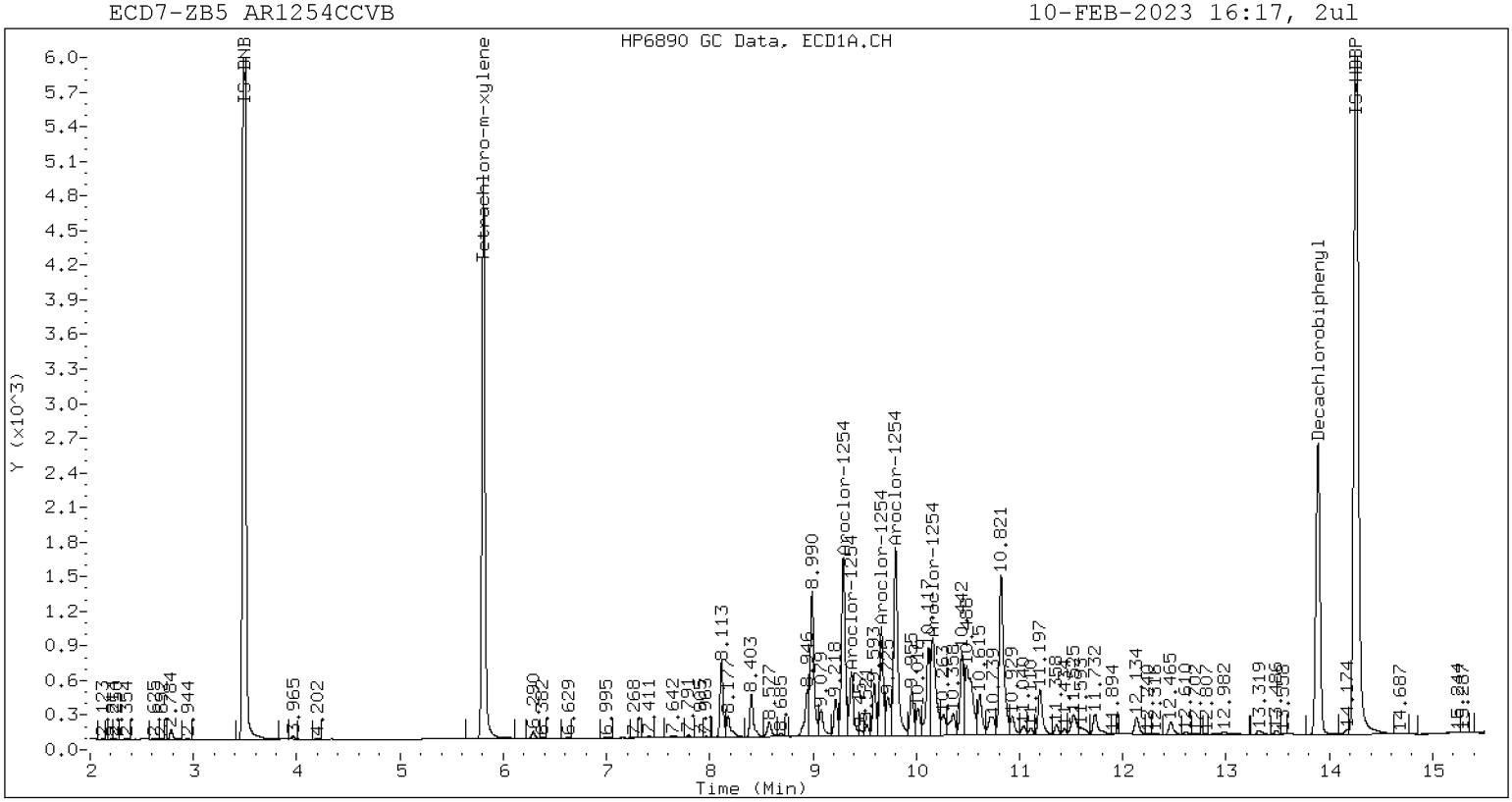
Total PCB Area Col2 (5.785 - 14.016) = 932790 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

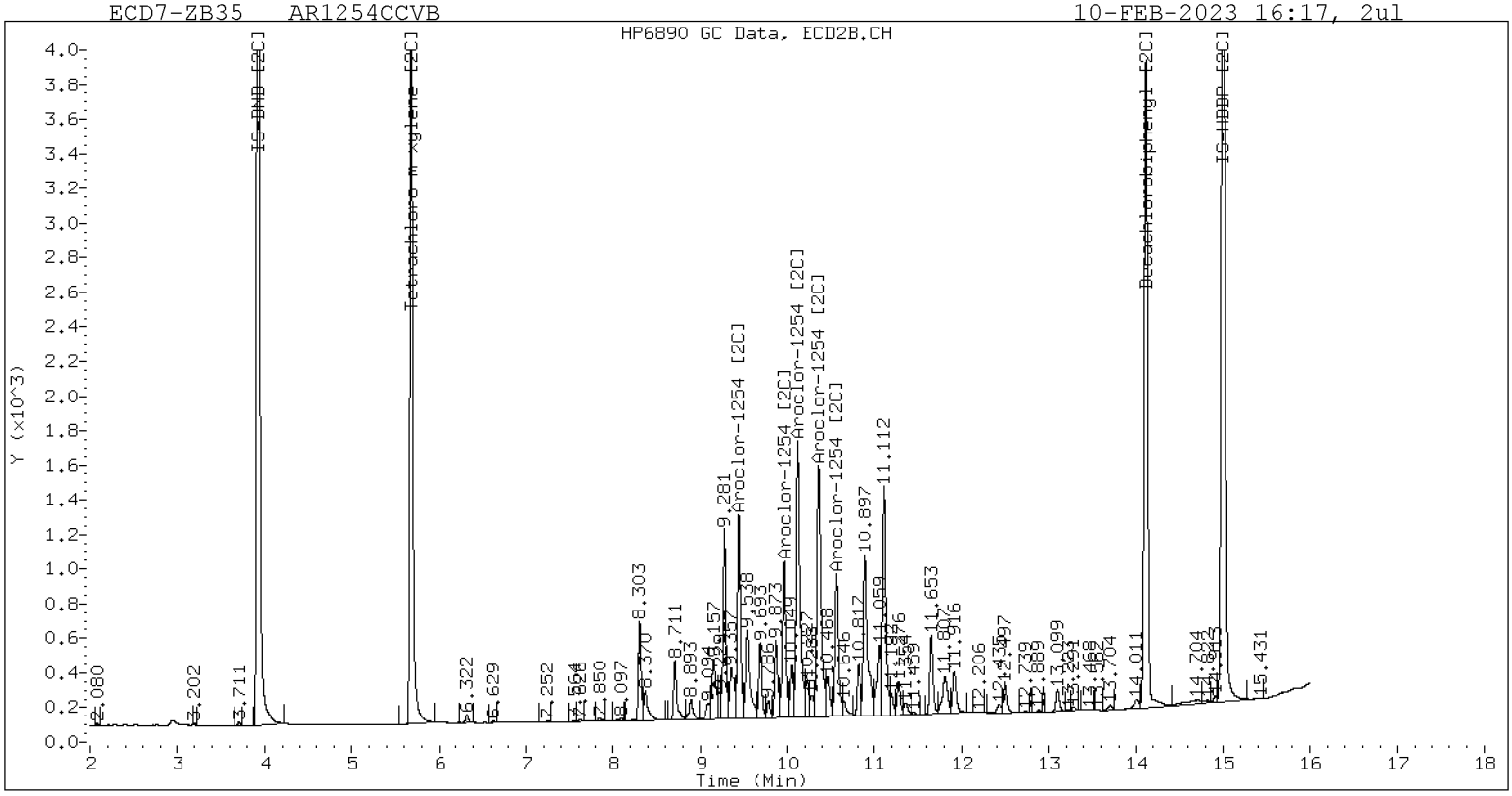
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCVB 10-FEB-2023 16:17, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCVB 10-FEB-2023 16:17, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02092382ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0148	Injection Date:	02/10/23
Lab Sample ID:	SLB0148-CCVC	Injection Time:	16:38
Sequence Name:	AR1660CCVC		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	230	0.0506755	0.0467373		-7.9	+/-20
Aroclor-1016 (1)	A	250.00	237	0.0297277	0.0281745		-5.2	
Aroclor-1016 (2)	A	250.00	235	0.0985017	0.0925543		-6.0	
Aroclor-1016 (3)	A	250.00	214	0.0453193	0.0387630		-14.4	
Aroclor-1016 (4)	A	250.00	235	0.0291533	0.0274572		-6.0	
Aroclor 1016 [2C]	A	250.00	247	0.0519244	0.0513336		-1.3	+/-20
Aroclor-1016 (1) [2C]	A	250.00	244	0.0433907	0.0424353		-2.4	
Aroclor-1016 (2) [2C]	A	250.00	248	0.0950862	0.0941725		-0.8	
Aroclor-1016 (3) [2C]	A	250.00	253	0.0388014	0.0392901		1.2	
Aroclor-1016 (4) [2C]	A	250.00	242	0.0304194	0.0294365		-3.2	
Aroclor 1260	A	250.00	212	0.0605224	0.0515890		-15.4	+/-20
Aroclor-1260 (1)	A	250.00	226	0.0448870	0.0406367		-9.6	
Aroclor-1260 (2)	A	250.00	222	0.0461412	0.0409774		-11.2	
Aroclor-1260 (3)	A	250.00	215	0.1214672	0.1042948		-14.0	
Aroclor-1260 (4)	A	250.00	204	0.0627593	0.0511549		-18.4	
Aroclor-1260 (5)	A	250.00	191	0.0273573	0.0208812		-23.6	
Aroclor 1260 [2C]	A	250.00	240	0.0836545	0.0795185		-4.1	+/-20
Aroclor-1260 (1) [2C]	A	250.00	240	0.0577136	0.0553727		-4.0	
Aroclor-1260 (2) [2C]	A	250.00	238	0.1460113	0.1388974		-4.8	
Aroclor-1260 (3) [2C]	A	250.00	250	0.0363944	0.0364418		0.0	
Aroclor-1260 (4) [2C]	A	250.00	231	0.0944986	0.0873621		-7.6	
Decachlorobiphenyl	A	40.000	34.2	0.8555994	0.7310562		-14.5	+/-20
Tetrachlorometaxylene	A	40.000	39.4	1.1307870	1.1142210		-1.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.1	1.2696430	1.1778000		-7.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.9	1.0814980	1.0524790		-2.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092382ECD7.D
Data file 2: /230209.b/230209.b/02092382ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCVC
Client ID:
Injection Date: 10-FEB-2023 16:38
Report Date: 02/10/2023 17:00
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.000	210492	5.686	0.001	189852	39.4	38.9	1.2	Tetrachloro-m-xylene
13.889	-0.002	170301	14.117	0.001	231691	34.2	37.1	8.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	377828	-24.9
Hexabromobiphenyl	647433	465904	-28.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	360771	7.1
Hexabromobiphenyl	382032	393430	3.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.000	33266	236.9	1	7.253	-0.000	47842	244.5
Aroclor-1016	2	7.650	-0.000	109280	234.9	2	7.850	0.000	106171	247.6
Aroclor-1016	3	7.787	-0.000	45768	213.8	3	8.049	0.001	44296	253.1
Aroclor-1016	4	8.402	-0.000	32419	235.5	4	8.304	0.000	33187	241.9
Total Col1Ave (4 peaks):					230.3	Total Col2Ave (4 peaks):				246.8 RPD = 7
Corrected Ave (3 peaks):					228.1	Corrected Ave (3 peaks):				244.7 RPD = 7
CalAmt %D:					-7.9	CalAmt %D:				-1.3
Aroclor-1260	1	11.040	-0.001	59165	226.3	1	11.650	0.000	68079	239.9
Aroclor-1260	2	11.356	0.000	59661	222.0	2	11.913	0.000	170770	237.8
Aroclor-1260	3	11.730	0.000	151848	214.7	3	12.432	0.001	44804	250.3
Aroclor-1260	4	12.133	0.000	74479	203.8	4	12.496	0.000	107409	231.1
Aroclor-1260	5	12.240	0.000	30402	190.8	NS	---			----
Total Col1Ave (5 peaks):					211.5	Total Col2Ave (4 peaks):				239.8 RPD = 13
Corrected Ave (4 peaks):					207.8	Corrected Ave (3 peaks):				236.3 RPD = 13
CalAmt %D:					-15.4	CalAmt %D:				-4.1

Total PCB Area Col1 (5.908 - 13.790) = 1751626 Col1 Total PCB = 0.4 ppm*

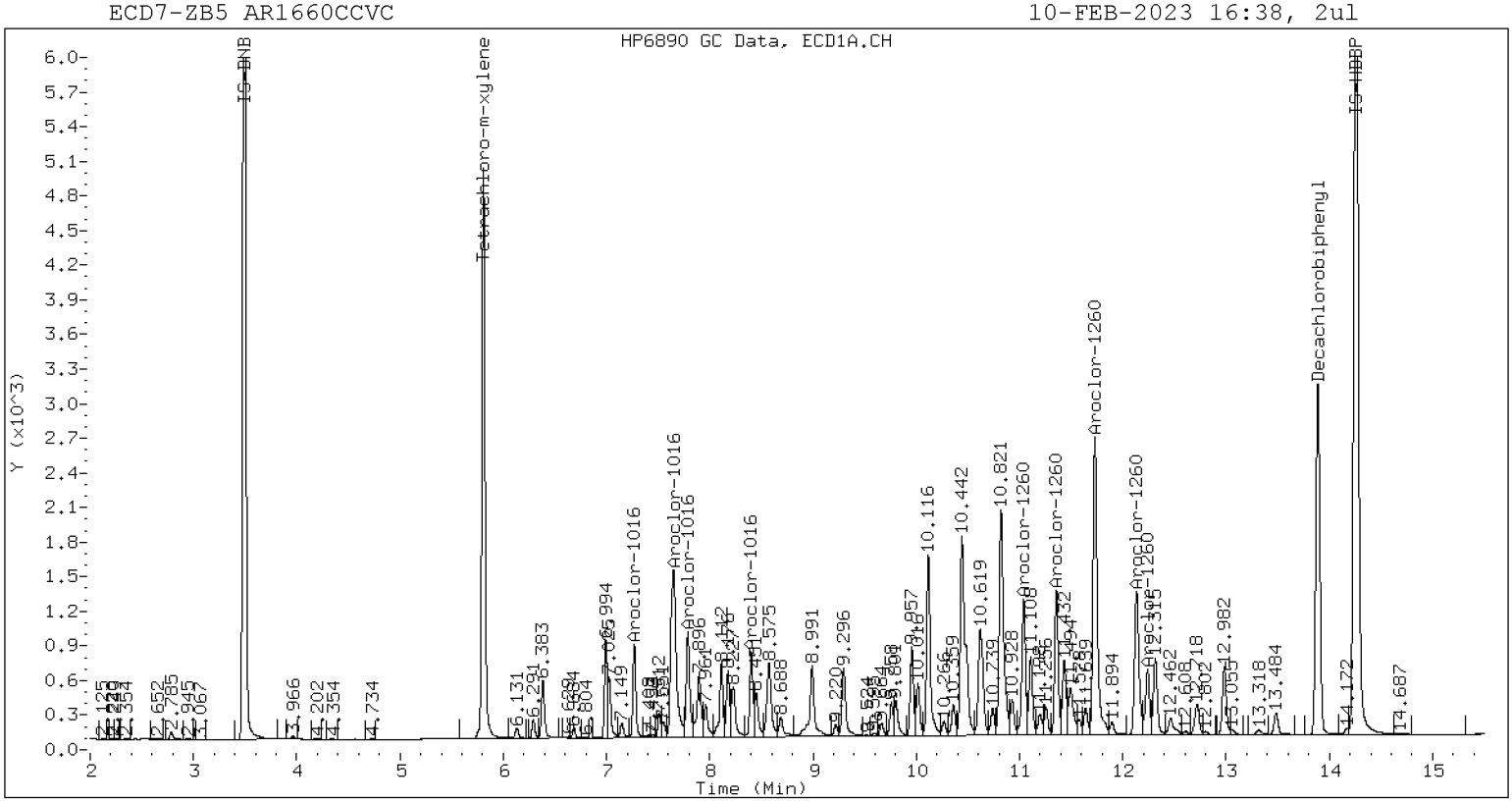
Total PCB Area Col2 (5.785 - 14.016) = 1724666 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

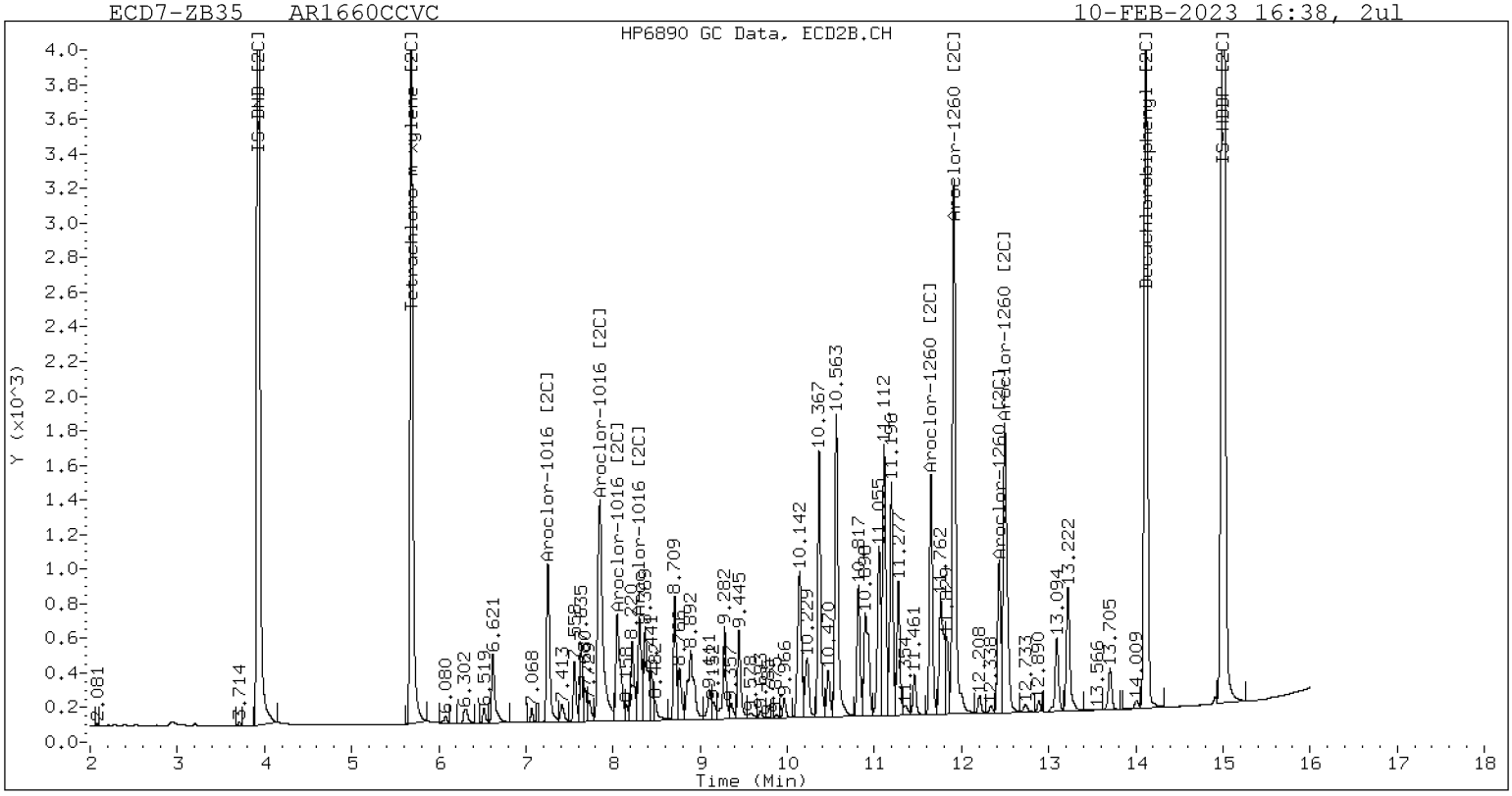
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCVC 10-FEB-2023 16:38, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCVC 10-FEB-2023 16:38, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02092385ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0148	Injection Date:	02/10/23
Lab Sample ID:	SLB0148-CCVD	Injection Time:	17:41
Sequence Name:	AR1248CCVD		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1248	A	250.00	195	0.0592639	0.0442892		-22.0	+/-20	*
Aroclor-1248 (1)	A	250.00	227		0.0363764				
Aroclor-1248 (2)	A	250.00	223		0.0455804				
Aroclor-1248 (3)	A	250.00	160		0.0624010				
Aroclor-1248 (4)	A	250.00	170		0.0327989				
Aroclor 1248 [2C]	A	250.00	224	0.0453673	0.0405441		-10.3	+/-20	
Aroclor-1248 (1) [2C]	A	250.00	234		0.0339333				
Aroclor-1248 (2) [2C]	A	250.00	221		0.0344301				
Aroclor-1248 (3) [2C]	A	250.00	224		0.0425855				
Aroclor-1248 (4) [2C]	A	250.00	218		0.0512276				
Decachlorobiphenyl	A	40.000	32.1	0.8555994	0.6868434		-19.8	+/-20	
Tetrachlorometaxylene	A	40.000	37.1	1.1307870	1.0484900		-7.3	+/-20	
Decachlorobiphenyl [2C]	A	40.000	34.6	1.2696430	1.0973150		-13.5	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	37.3	1.0814980	1.0093900		-6.8	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092385ECD7.D
Data file 2: /230209.b/230209.b/02092385ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCVD
Client ID:
Injection Date: 10-FEB-2023 17:41
Report Date: 02/13/2023 08:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.000	205342	5.685	-0.000	189515	37.1	37.3	0.7	Tetrachloro-m-xylene
13.890	-0.000	183857	14.116	-0.001	246514	32.1	34.6	7.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	391691	-22.2
Hexabromobiphenyl	647433	535368	-17.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	375504	11.5
Hexabromobiphenyl	382032	449304	17.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1248	1	8.402	0.000	44526	227.2	1	8.304	0.000	39819	234.6	
Aroclor-1248	2	8.574	-0.000	55792	223.2	2	8.710	0.000	40402	221.1	
Aroclor-1248	3	8.994	0.001	76381	159.8	3	9.154	0.000	49972	223.8	
Aroclor-1248	4	9.292	0.001	40147	169.6	4	9.577	0.000	60113	217.7	
Total Col1Ave (4 peaks):					195.0	Total Col2Ave (4 peaks):				224.3	RPD = 14
Corrected Ave (3 peaks):					184.2	Corrected Ave (3 peaks):				220.9	RPD = 18
CalAmt %D:					-22.0	CalAmt %D:				-10.3	

Total PCB Area Col1 (5.908 - 13.790) = 843897 Col1 Total PCB = 0.2 ppm*

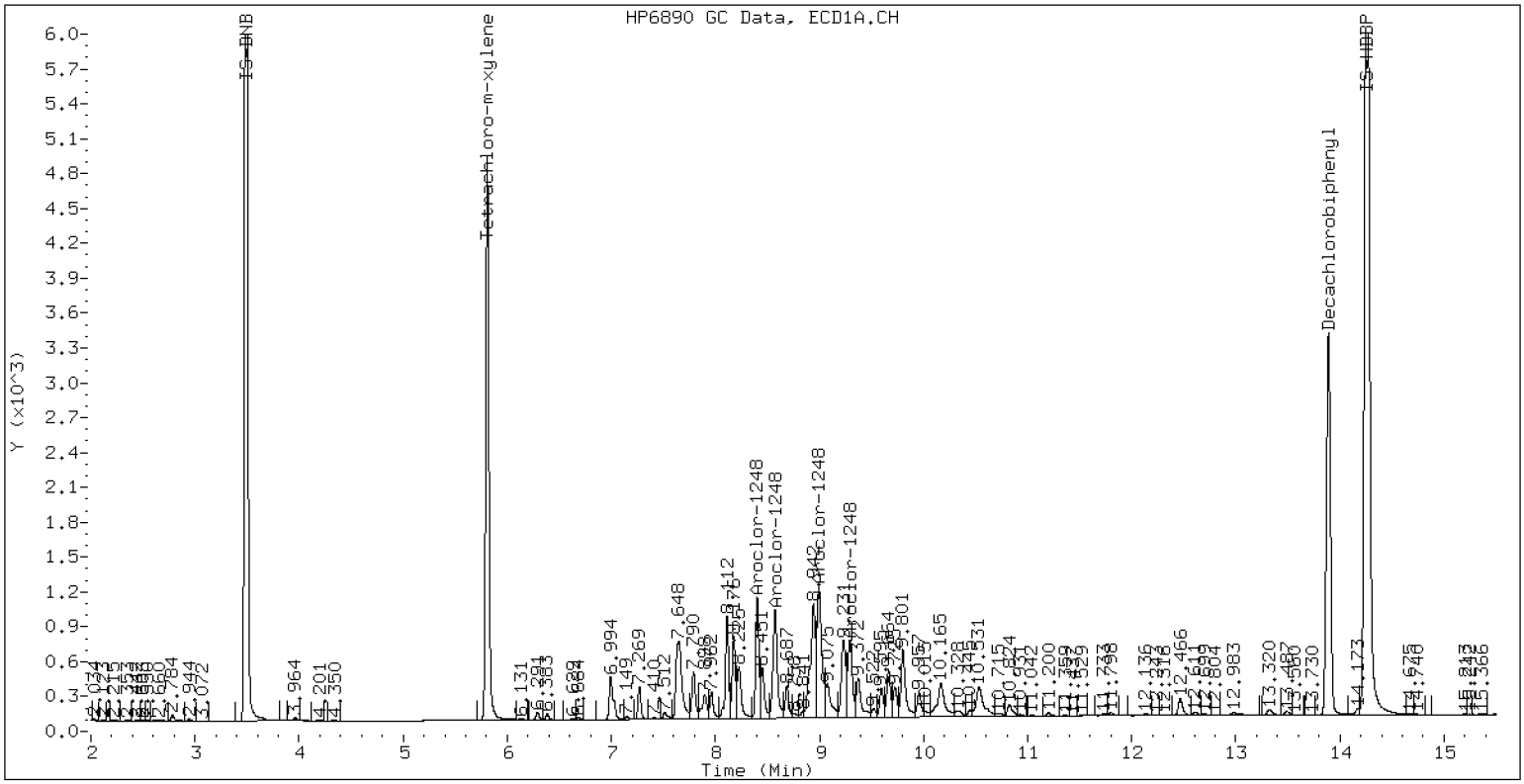
Total PCB Area Col2 (5.786 - 14.017) = 777787 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

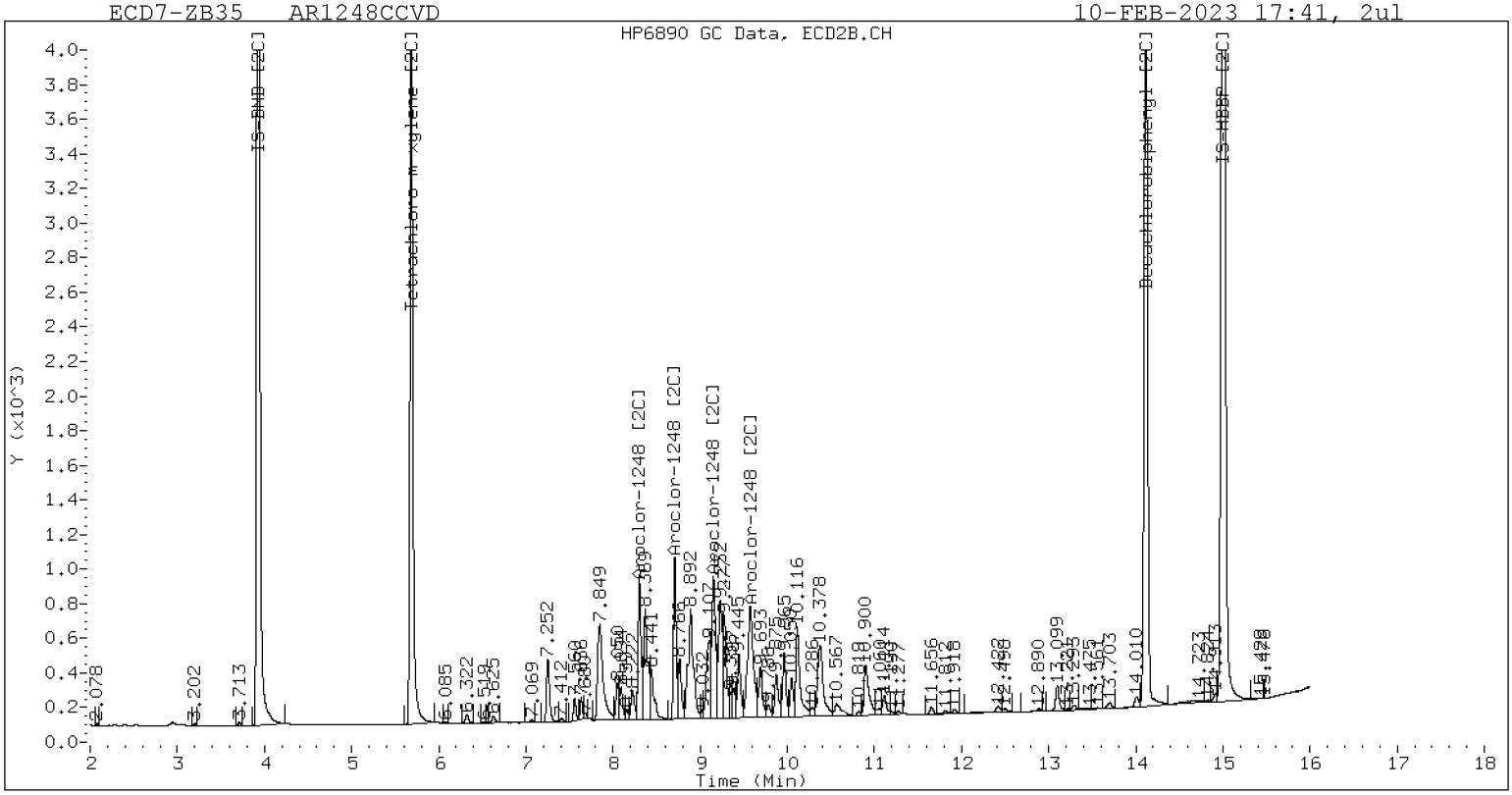
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCVD 10-FEB-2023 17:41, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCVD 10-FEB-2023 17:41, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GA00061
Lab File ID:	02092386ECD7.D	Calibration Date:	01/24/2023
Sequence:	SLB0148	Injection Date:	02/10/23
Lab Sample ID:	SLB0148-CCVE	Injection Time:	18:02
Sequence Name:	AR1660CCVE		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1016	A	250.00	232	0.0506755	0.0469060		-7.4	+/-20	
Aroclor-1016 (1)	A	250.00	238	0.0297277	0.0282654		-4.8		
Aroclor-1016 (2)	A	250.00	235	0.0985017	0.0925920		-6.0		
Aroclor-1016 (3)	A	250.00	216	0.0453193	0.0390933		-13.6		
Aroclor-1016 (4)	A	250.00	237	0.0291533	0.0276734		-5.2		
Aroclor 1016 [2C]	A	250.00	243	0.0519244	0.0505114		-2.9	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	240	0.0433907	0.0417063		-4.0		
Aroclor-1016 (2) [2C]	A	250.00	243	0.0950862	0.0925077		-2.8		
Aroclor-1016 (3) [2C]	A	250.00	249	0.0388014	0.0386903		-0.4		
Aroclor-1016 (4) [2C]	A	250.00	239	0.0304194	0.0291412		-4.4		
Aroclor 1260	A	250.00	199	0.0605224	0.0485304		-20.3	+/-20	*
Aroclor-1260 (1)	A	250.00	208	0.0448870	0.0373919		-16.8		
Aroclor-1260 (2)	A	250.00	206	0.0461412	0.0379718		-17.6		
Aroclor-1260 (3)	A	250.00	201	0.1214672	0.0977558		-19.6		
Aroclor-1260 (4)	A	250.00	197	0.0627593	0.0493582		-21.2		
Aroclor-1260 (5)	A	250.00	184	0.0273573	0.0201745		-26.4		
Aroclor 1260 [2C]	A	250.00	226	0.0836545	0.0749746		-9.6	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	223	0.0577136	0.0515378		-10.8		
Aroclor-1260 (2) [2C]	A	250.00	224	0.1460113	0.1306585		-10.4		
Aroclor-1260 (3) [2C]	A	250.00	237	0.0363944	0.0345505		-5.2		
Aroclor-1260 (4) [2C]	A	250.00	220	0.0944986	0.0831513		-12.0		
Decachlorobiphenyl	A	40.000	34.2	0.8555994	0.7310019		-14.5	+/-20	
Tetrachlorometaxylene	A	40.000	39.0	1.1307870	1.1023390		-2.5	+/-20	
Decachlorobiphenyl [2C]	A	40.000	35.9	1.2696430	1.1398760		-10.3	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	39.2	1.0814980	1.0597820		-2.0	+/-20	

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230209.b/02092386ECD7.D
Data file 2: /230209.b/230209.b/02092386ECD7.D
Method: \\target\share\chem4\ecd7.i\230209.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCVE
Client ID:
Injection Date: 10-FEB-2023 18:02
Report Date: 02/13/2023 08:47
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.000	212439	5.686	0.000	194247	39.0	39.2	0.5	Tetrachloro-m-xylene
13.889	-0.001	200887	14.117	0.000	262856	34.2	35.9	5.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	503318	385433	-23.4
Hexabromobiphenyl	647433	549621	-15.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	336911	366579	8.8
Hexabromobiphenyl	382032	461201	20.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-JAN-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.000	34045	237.7	1	7.254	0.000	47777	240.3
Aroclor-1016	2	7.651	0.001	111525	235.0	2	7.850	0.000	105973	243.2
Aroclor-1016	3	7.788	0.000	47087	215.7	3	8.049	0.000	44322	249.3
Aroclor-1016	4	8.403	0.000	33332	237.3	4	8.303	0.000	33383	239.5
Total Col1Ave (4 peaks):					231.4	Total Col2Ave (4 peaks):				243.1 RPD = 5
Corrected Ave (3 peaks):					229.3	Corrected Ave (3 peaks):				241.0 RPD = 5
CalAmt %D:					-7.4	CalAmt %D:				-2.8
Aroclor-1260	1	11.040	-0.001	64223	208.3	1	11.649	0.000	74279	223.2
Aroclor-1260	2	11.356	-0.000	65219	205.7	2	11.914	0.000	188312	223.7
Aroclor-1260	3	11.729	-0.000	167902	201.2	3	12.431	0.000	49796	237.3
Aroclor-1260	4	12.133	-0.000	84776	196.6	4	12.498	0.000	119842	220.0
Aroclor-1260	5	12.241	0.000	34651	184.4	NS	---			----
Total Col1Ave (5 peaks):					199.2	Total Col2Ave (4 peaks):				226.1 RPD = 13
Corrected Ave (4 peaks):					197.0	Corrected Ave (3 peaks):				222.3 RPD = 12
CalAmt %D:					-20.3	CalAmt %D:				-9.6

Total PCB Area Col1 (5.908 - 13.790) = 1876791 Col1 Total PCB = 0.4 ppm*

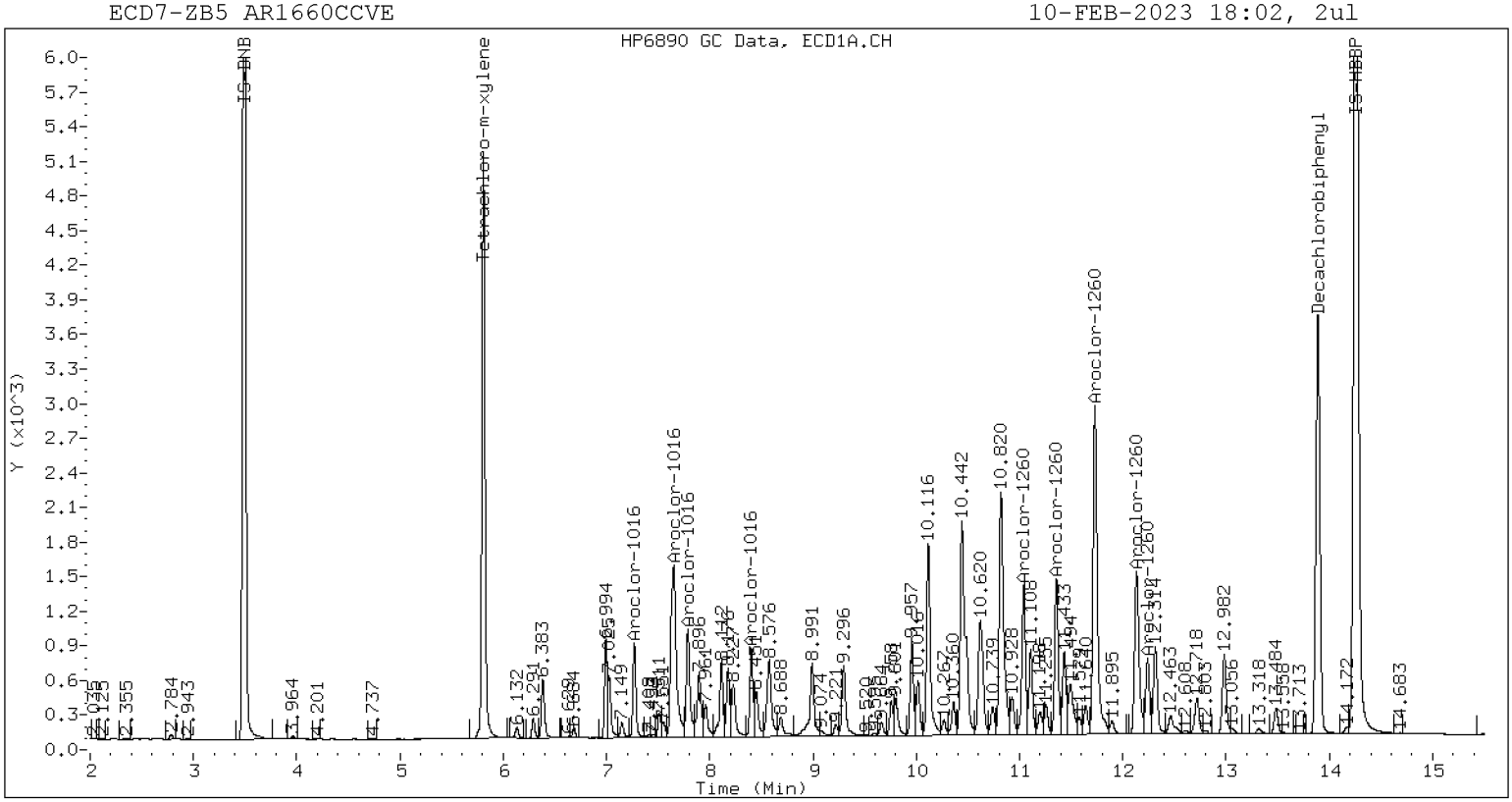
Total PCB Area Col2 (5.786 - 14.017) = 1828576 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

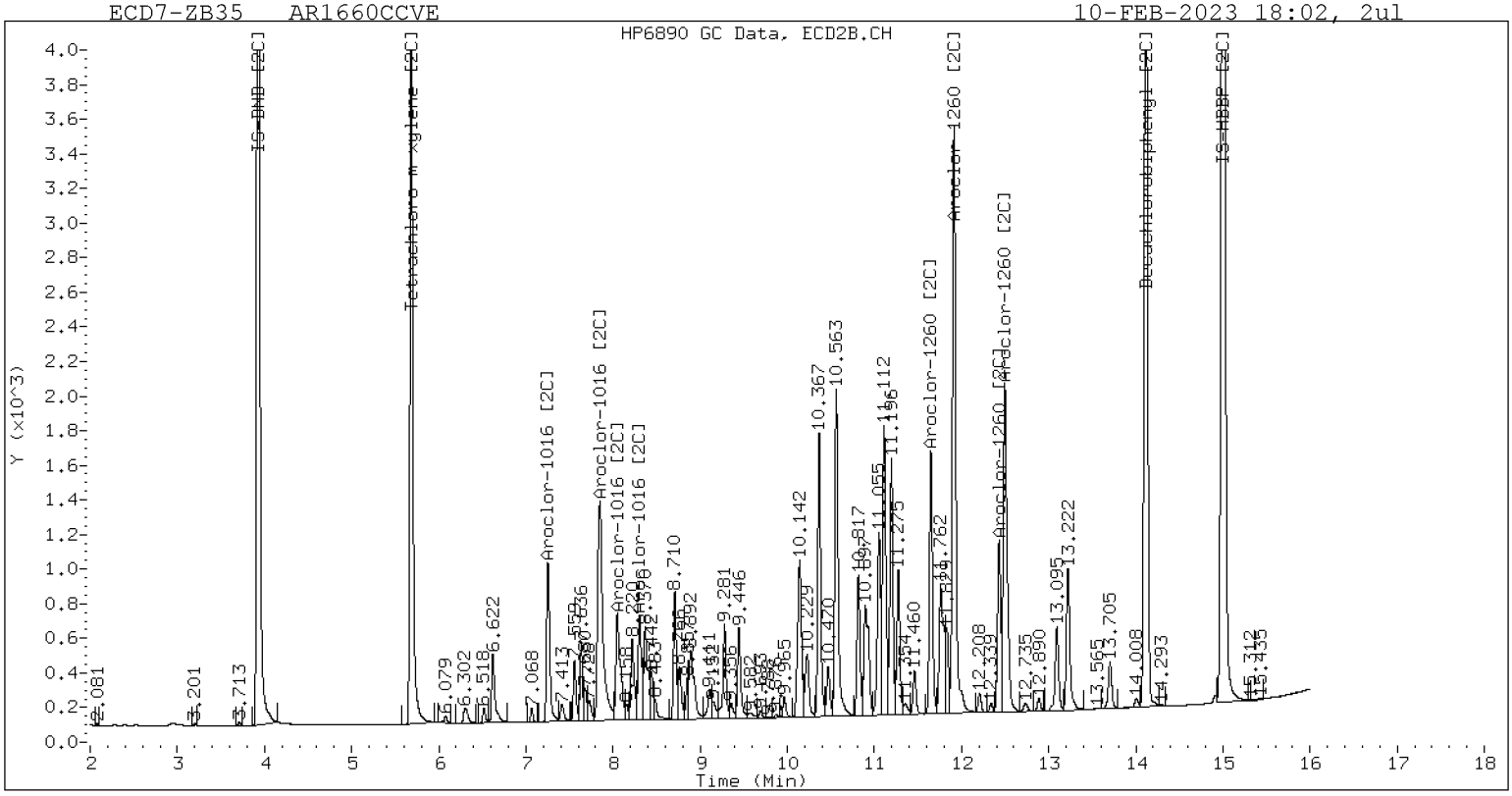
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCVE 10-FEB-2023 18:02, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCVE 10-FEB-2023 18:02, 2ul



ZB-35 Manual Integration: NO

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLA0281
Instrument: ECD7
Calibration: GA00061

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Cal Standard	SLA0281-CAL1	01242313ECD7.D	01242313ECD7.D	NA	01/24/23 16:00
Cal Standard	SLA0281-CAL2	01242314ECD7.D	01242314ECD7.D	NA	01/24/23 16:21
Cal Standard	SLA0281-CAL3	01242315ECD7.D	01242315ECD7.D	NA	01/24/23 16:42
Cal Standard	SLA0281-CAL4	01242316ECD7.D	01242316ECD7.D	NA	01/24/23 17:03
Cal Standard	SLA0281-CAL5	01242317ECD7.D	01242317ECD7.D	NA	01/24/23 17:24
Cal Standard	SLA0281-CAL6	01242318ECD7.D	01242318ECD7.D	NA	01/24/23 17:45
Cal Standard	SLA0281-CAL7	01242319ECD7.D	01242319ECD7.D	NA	01/24/23 18:06
Cal Standard	SLA0281-CAL8	01242320ECD7.D	01242320ECD7.D	NA	01/24/23 18:27
Cal Standard	SLA0281-CAL9	01242321ECD7.D	01242321ECD7.D	NA	01/24/23 18:48
Cal Standard	SLA0281-CALA	01242322ECD7.D	01242322ECD7.D	NA	01/24/23 19:09
Cal Standard	SLA0281-CALB	01242323ECD7.D	01242323ECD7.D	NA	01/24/23 19:30
Secondary Cal Check	SLA0281-SCV1	01242324ECD7.D	01242324ECD7.D	NA	01/24/23 19:51
Secondary Cal Check	SLA0281-SCV2	01242325ECD7.D	01242325ECD7.D	NA	01/24/23 20:12
Secondary Cal Check	SLA0281-SCV3	01242326ECD7.D	01242326ECD7.D	NA	01/24/23 20:33
Secondary Cal Check	SLA0281-SCV4	01242327ECD7.D	01242327ECD7.D	NA	01/24/23 20:54
Secondary Cal Check	SLA0281-SCV5	01242328ECD7.D	01242328ECD7.D	NA	01/24/23 21:15
Secondary Cal Check	SLA0281-SCV6	01242329ECD7.D	01242329ECD7.D	NA	01/24/23 21:36

Security Status Report

Date: 26-Jan-2023 15:41

01242330ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242331ECD7.D	Data Locked	richardl, 25-Jan-2023 12:44
01242332ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242333ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242334ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242335ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242336ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242337ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242338ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242339ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242340ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242341ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242342ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242343ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242344ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242345ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242346ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242347ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242348ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242349ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242350ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242351ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242352ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242353ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242354ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242355ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
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01242357ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242358ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242359ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242360ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242361ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242362ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242363ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242364ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242365ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242366ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242367ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242368ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242369ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242370ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242371ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242372ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242373ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19

01242374ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242375ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242376ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242377ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242378ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242379ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242380ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
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01242383ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242384ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242385ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242386ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242387ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242388ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242389ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242390ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19
01242391ECD7.D	Data Locked	richardl, 26-Jan-2023 13:19

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0127	Instrument:	ECD7
		Calibration:	GA00061

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLB0127-ICV1	02082307ECD7.D	02082307ECD7.D	NA	02/08/23 11:44
Initial Cal Check	SLB0127-ICV2	02082308ECD7.D	02082308ECD7.D	NA	02/08/23 12:05
Calibration Check	SLB0127-CCV1	02082316ECD7.D	02082316ECD7.D	NA	02/08/23 14:53
Calibration Check	SLB0127-CCV2	02082317ECD7.D	02082317ECD7.D	NA	02/08/23 15:14
Calibration Check	SLB0127-CCV3	02082330ECD7.D	02082330ECD7.D	NA	02/08/23 19:47
Calibration Check	SLB0127-CCV4	02082331ECD7.D	02082331ECD7.D	NA	02/08/23 20:08
Blank	BLA0626-BLK1	02082333ECD7.D	02082333ECD7.D	Solid	02/08/23 20:50
LCS	BLA0626-BS1	02082334ECD7.D	02082334ECD7.D	Solid	02/08/23 21:11
LCS Dup	BLA0626-BSD1	02082335ECD7.D	02082335ECD7.D	Solid	02/08/23 21:32
Reference	BLA0626-SRM1	02082336ECD7.D	02082336ECD7.D	Solid	02/08/23 21:53
LDW23-IT1088	23A0207-01	02082337ECD7.D	02082337ECD7.D	Solid	02/08/23 22:14
LDW23-IT1089	23A0207-02	02082338ECD7.D	02082338ECD7.D	Solid	02/08/23 22:35
LDW23-IT1079	23A0207-03	02082339ECD7.D	02082339ECD7.D	Solid	02/08/23 22:55
LDW23-IT1079	BLA0626-MS1	02082340ECD7.D	02082340ECD7.D	Solid	02/08/23 23:16
LDW23-IT1079	BLA0626-MSD1	02082341ECD7.D	02082341ECD7.D	Solid	02/08/23 23:37
LDW23-IT1080	23A0207-04	02082342ECD7.D	02082342ECD7.D	Solid	02/08/23 23:58
LDW23-IT1080-FD	23A0207-05	02082343ECD7.D	02082343ECD7.D	Solid	02/09/23 00:20
LDW23-IT1072	23A0207-06	02082344ECD7.D	02082344ECD7.D	Solid	02/09/23 00:41
LDW23-IT1081	23A0207-07	02082345ECD7.D	02082345ECD7.D	Solid	02/09/23 01:02
LDW23-IT1068	23A0207-08	02082346ECD7.D	02082346ECD7.D	Solid	02/09/23 01:22
LDW23-IT1062	23A0207-09	02082347ECD7.D	02082347ECD7.D	Solid	02/09/23 01:44
Calibration Check	SLB0127-CCV5	02082348ECD7.D	02082348ECD7.D	NA	02/09/23 02:04
Calibration Check	SLB0127-CCV6	02082349ECD7.D	02082349ECD7.D	NA	02/09/23 02:26

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0148	Instrument:	ECD7
		Calibration:	GA00061

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLB0148-ICV1	02092306ECD7.D	02092306ECD7.D	NA	02/09/23 13:59
Initial Cal Check	SLB0148-ICV2	02092307ECD7.D	02092307ECD7.D	NA	02/09/23 14:20
LDW23-IT1097	23A0207-10	02092309ECD7.D	02092309ECD7.D	Solid	02/09/23 15:02
LDW23-SC1085	23A0207-11	02092310ECD7.D	02092310ECD7.D	Solid	02/09/23 15:23
LDW23-SC1069	23A0207-12	02092311ECD7.D	02092311ECD7.D	Solid	02/09/23 15:44
LDW23-SC1058	23A0207-13	02092312ECD7.D	02092312ECD7.D	Solid	02/09/23 16:05
LDW23-SC1073	23A0207-14	02092313ECD7.D	02092313ECD7.D	Solid	02/09/23 16:27
LDW23-IT1078	23A0207-15	02092314ECD7.D	02092314ECD7.D	Solid	02/09/23 16:48
LDW23-IT1201	23A0207-16	02092315ECD7.D	02092315ECD7.D	Solid	02/09/23 17:09
LDW23-IT1209	23A0207-17	02092316ECD7.D	02092316ECD7.D	Solid	02/09/23 17:30
Calibration Check	SLB0148-CCV1	02092317ECD7.D	02092317ECD7.D	NA	02/09/23 17:51
Calibration Check	SLB0148-CCV2	02092318ECD7.D	02092318ECD7.D	NA	02/09/23 18:12
Calibration Check	SLB0148-CCV3	02092333ECD7.D	02092333ECD7.D	NA	02/09/23 23:27
Calibration Check	SLB0148-CCV4	02092334ECD7.D	02092334ECD7.D	NA	02/09/23 23:48
Calibration Check	SLB0148-CCV5	02092339ECD7.D	02092339ECD7.D	NA	02/10/23 01:34
Calibration Check	SLB0148-CCV6	02092340ECD7.D	02092340ECD7.D	NA	02/10/23 01:55
Calibration Check	SLB0148-CCV7	02092357ECD7.D	02092357ECD7.D	NA	02/10/23 07:52
Calibration Check	SLB0148-CCV8	02092358ECD7.D	02092358ECD7.D	NA	02/10/23 08:13
Calibration Check	SLB0148-CCV9	02092369ECD7.D	02092369ECD7.D	NA	02/10/23 12:04
Calibration Check	SLB0148-CCVA	02092370ECD7.D	02092370ECD7.D	NA	02/10/23 12:25
Calibration Check	SLB0148-CCVB	02092381ECD7.D	02092381ECD7.D	NA	02/10/23 16:17
Calibration Check	SLB0148-CCVC	02092382ECD7.D	02092382ECD7.D	NA	02/10/23 16:38
Calibration Check	SLB0148-CCVD	02092385ECD7.D	02092385ECD7.D	NA	02/10/23 17:41
Calibration Check	SLB0148-CCVE	02092386ECD7.D	02092386ECD7.D	NA	02/10/23 18:02

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLB0148

Instrument: ECD7
Calibration ID: FL00010

Printed: 2/10/2023 5:27:44PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0148-ICV1	QC		1		L000862	L000844		
SLB0148-ICV2	QC		2		L000856	L000844		
23A0206-13	8082A PCB Solid 4	B 03	3			L000844	Anchor QEA, LLC	
23A0207-10	8082A PCB Solid 4	A 01	4			L000844	Anchor QEA, LLC	
23A0207-11	8082A PCB Solid 4	A 01	5			L000844	Anchor QEA, LLC	
23A0207-12	8082A PCB Solid 4	A 01	6			L000844	Anchor QEA, LLC	
23A0207-13	8082A PCB Solid 4	A 01	7			L000844	Anchor QEA, LLC	
23A0207-14	8082A PCB Solid 4	A 01	8			L000844	Anchor QEA, LLC	
23A0207-15	8082A PCB Solid 4	A 01	9			L000844	Anchor QEA, LLC	
23A0207-16	8082A PCB Solid 4	A 01	10			L000844	Anchor QEA, LLC	
23A0207-17	8082A PCB Solid 4	A 01	11			L000844	Anchor QEA, LLC	
SLB0148-CCV1	QC		12		L000861	L000844		
SLB0148-CCV2	QC		13		L000856	L000844		
BLB0100-BLK1	QC		14			L000844		
BLB0100-BS1	QC		15			L000844		
23B0067-02	8082A PCB	A 01	16			L000844	The Boeing Company [Auburn]	
23B0067-03	8082A PCB	A 01	17			L000844	The Boeing Company [Auburn]	
BLB0090-BLK1	QC		18			L000844		
BLB0090-BS1	QC		19			L000844		
23B0067-01	082A PCB Medium Level Oil	A 01	20			L000844	The Boeing Company [Auburn]	
23B0069-01	082A PCB Medium Level Oil	A 01	21			L000844	The Boeing Company [Auburn]	RL must be at or below 1 PPM

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SLB0148

Instrument: ECD7
Calibration ID: FL00010

Printed: 2/10/2023 5:27:44PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
BLB0126-BLK1	QC		22			L000844		
BLB0126-BS1	QC		23			L000844		
BLB0126-BSD1	QC		24			L000844		
23B0044-01	PCB (20 ug/kg) or (MTCA 0.	D 01	25			L000844	The Boeing Company [NBF - Central Puget S	
23B0096-01	PCB (20 ug/kg) or (MTCA 0.	A 01	26			L000844	The Boeing Company [NBF - Central Puget S	
SLB0148-CCV3	QC		27		L000860	L000844		
SLB0148-CCV4	QC		28		L000856	L000844		
BLB0188-BLK1	QC		29			L000844		
BLB0188-BS1	QC		30			L000844		
23B0112-01	082A PCB Medium Level Oil	A 01	31			L000844	Seattle Public Utilities [Solid Waste Field Op]	See Version Comment
SLB0148-CCV5	QC		32		L000862	L000844		
SLB0148-CCV6	QC		33		L000856	L000844		
BLA0674-BLK1	QC		34			L000844		
BLA0674-BS1	QC		35			L000844		
BLA0674-BSD1	QC		36			L000844		
BLA0674-SRM1	QC		37			L000844		
23A0249-02	8082A PCB Solid 4	A 03	38			L000844	Anchor QEA, LLC	
23A0249-03	8082A PCB Solid 4	A 03	39			L000844	Anchor QEA, LLC	
23A0249-04	8082A PCB Solid 4	A 03	40			L000844	Anchor QEA, LLC	
23A0249-06	8082A PCB Solid 4	A 03	41			L000844	Anchor QEA, LLC	
23A0249-07	8082A PCB Solid 4	A 03	42			L000844	Anchor QEA, LLC	

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SLB0148

Instrument: ECD7
Calibration ID: FL00010

Printed: 2/10/2023 5:27:44PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
BLA0674-MS1	QC		43			L000844		
BLA0674-MSD1	QC		44			L000844		
23A0249-11	8082A PCB Solid 4	A 03	45			L000844	Anchor QEA, LLC	
SLB0148-CCV7	QC		46		L000861	L000844		
SLB0148-CCV8	QC		47		L000856	L000844		
23A0295-03	8082A PCB Solid 4	A 03	48			L000844	Anchor QEA, LLC	
23A0295-07	8082A PCB Solid 4	A 03	49			L000844	Anchor QEA, LLC	
23A0295-08	8082A PCB Solid 4	A 03	50			L000844	Anchor QEA, LLC	
23A0295-09	8082A PCB Solid 4	A 03	51			L000844	Anchor QEA, LLC	
23A0295-10	8082A PCB Solid 4	A 03	52			L000844	Anchor QEA, LLC	
SLB0148-CCV9	QC		53		L000860	L000844		
SLB0148-CCVA	QC		54		L000856	L000844		
23B0064-01	082A PCB Medium Level Oil	A 01	55			L000844	Seattle Public Utilities [Solid Waste Field Op]	See Version Comment
23A0249-05	8082A PCB Solid 4	A 03	56			L000844	Anchor QEA, LLC	
23A0249-08	8082A PCB Solid 4	A 03	57			L000844	Anchor QEA, LLC	
23A0249-09	8082A PCB Solid 4	A 03	58			L000844	Anchor QEA, LLC	
23A0249-10	8082A PCB Solid 4	A 03	59			L000844	Anchor QEA, LLC	
23A0295-04	8082A PCB Solid 4	A 03	60			L000844	Anchor QEA, LLC	
23A0295-05	8082A PCB Solid 4	A 03	61			L000844	Anchor QEA, LLC	
23A0295-06	8082A PCB Solid 4	A 03	62			L000844	Anchor QEA, LLC	
SLB0148-CCVB	QC		63		L000862	L000844		

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SLB0148

Instrument: ECD7
Calibration ID: FL00010

Printed: 2/10/2023 5:27:44PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0148-CCVC	QC		64		L000856	L000844		
23A0295-01	8082A PCB Solid 4	A 03	65			L000844	Anchor QEA, LLC	
23A0295-02	8082A PCB Solid 4	A 03	66			L000844	Anchor QEA, LLC	
SLB0148-CCVD	QC		67		L000861	L000844		
SLB0148-CCVE	QC		68		L000856	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	09-FEB-2023 11:58	02092301ECD7.D	1	DCM RINSE	
2	09-FEB-2023 12:19	02092302ECD7.D	1	AR1254TEST	
3	09-FEB-2023 12:40	02092303ECD7.D	1	AR1248TEST	
4	09-FEB-2023 13:01	02092304ECD7.D	1	AR1242TEST	
5	09-FEB-2023 13:38	02092305ECD7.D	1	DDTS	
6	09-FEB-2023 13:59	02092306ECD7.D	1	AR1254ICV1	
7	09-FEB-2023 14:20	02092307ECD7.D	1	AR1660ICV2	
8	09-FEB-2023 14:41	02092308ECD7.D	50	23A0206-13RE3	
9	09-FEB-2023 15:02	02092309ECD7.D	1	23A0207-10	
10	09-FEB-2023 15:23	02092310ECD7.D	1	23A0207-11	
11	09-FEB-2023 15:44	02092311ECD7.D	1	23A0207-12	
12	09-FEB-2023 16:05	02092312ECD7.D	1	23A0207-13	
13	09-FEB-2023 16:27	02092313ECD7.D	1	23A0207-14	
14	09-FEB-2023 16:48	02092314ECD7.D	1	23A0207-15	
15	09-FEB-2023 17:09	02092315ECD7.D	1	23A0207-16	
16	09-FEB-2023 17:30	02092316ECD7.D	5	23A0207-17RE1	
17	09-FEB-2023 17:51	02092317ECD7.D	1	AR1248CCV1	
18	09-FEB-2023 18:12	02092318ECD7.D	1	AR1660CCV2	
19	09-FEB-2023 18:33	02092319ECD7.D	1	BLB0100-BLK1	
20	09-FEB-2023 18:54	02092320ECD7.D	1	BLB0100-BS1	
21	09-FEB-2023 19:15	02092321ECD7.D	1	23B0067-02	
22	09-FEB-2023 19:36	02092322ECD7.D	1	23B0067-03	
23	09-FEB-2023 19:57	02092323ECD7.D	1	BLB0090-BLK1	
24	09-FEB-2023 20:18	02092324ECD7.D	1	BLB0090-BS1	
25	09-FEB-2023 20:39	02092325ECD7.D	5	23B0064-01RE1	
26	09-FEB-2023 21:00	02092326ECD7.D	5	23B0067-01RE1	
27	09-FEB-2023 21:21	02092327ECD7.D	5	23B0069-01RE1	
28	09-FEB-2023 21:42	02092328ECD7.D	1	BLB0126-BLK1	
29	09-FEB-2023 22:03	02092329ECD7.D	1	BLB0126-BS1	
30	09-FEB-2023 22:24	02092330ECD7.D	1	BLB0126-BSD1	
31	09-FEB-2023 22:45	02092331ECD7.D	1	23B0044-01	
32	09-FEB-2023 23:06	02092332ECD7.D	1	23B0096-01	
33	09-FEB-2023 23:27	02092333ECD7.D	1	AR1242CCV3	
34	09-FEB-2023 23:48	02092334ECD7.D	1	AR1660CCV4	
35	10-FEB-2023 00:09	02092335ECD7.D	1	BLB0188-BLK1	
36	10-FEB-2023 00:31	02092336ECD7.D	1	BLB0188-BS1	
37	10-FEB-2023 00:52	02092337ECD7.D	1	23B0112-01	
38	10-FEB-2023 01:13	02092338ECD7.D	5	23B0112-01RE1	
39	10-FEB-2023 01:34	02092339ECD7.D	1	AR1254CCV5	
40	10-FEB-2023 01:55	02092340ECD7.D	1	AR1660CCV6	
41	10-FEB-2023 02:16	02092341ECD7.D	1	BLA0674-BLK1	
42	10-FEB-2023 02:37	02092342ECD7.D	1	BLA0674-BS1	
43	10-FEB-2023 02:58	02092343ECD7.D	1	BLA0674-BSD1	
44	10-FEB-2023 03:19	02092344ECD7.D	1	BLA0674-SRM1	
45	10-FEB-2023 03:40	02092345ECD7.D	1	23A0249-02	
46	10-FEB-2023 04:01	02092346ECD7.D	1	23A0249-03	
47	10-FEB-2023 04:22	02092347ECD7.D	1	23A0249-04	
48	10-FEB-2023 04:43	02092348ECD7.D	1	23A0249-05	
49	10-FEB-2023 05:04	02092349ECD7.D	1	23A0249-06	
50	10-FEB-2023 05:25	02092350ECD7.D	1	23A0249-07	

	Inject Date/Time	Filename	DF	LabID	ClientID
51	10-FEB-2023 05:46	02092351ECD7.D	1	BLA0674-MS1	
52	10-FEB-2023 06:07	02092352ECD7.D	1	BLA0674-MSD1	
53	10-FEB-2023 06:28	02092353ECD7.D	1	23A0249-08	
54	10-FEB-2023 06:49	02092354ECD7.D	1	23A0249-09	
55	10-FEB-2023 07:10	02092355ECD7.D	1	23A0249-10	
56	10-FEB-2023 07:31	02092356ECD7.D	1	23A0249-11	
57	10-FEB-2023 07:52	02092357ECD7.D	1	AR1248CCV7	
58	10-FEB-2023 08:13	02092358ECD7.D	1	AR1660CCV8	
59	10-FEB-2023 08:34	02092359ECD7.D	1	23A0295-01	
60	10-FEB-2023 08:55	02092360ECD7.D	1	23A0295-02	
61	10-FEB-2023 09:16	02092361ECD7.D	1	23A0295-03	
62	10-FEB-2023 09:37	02092362ECD7.D	1	23A0295-04	
63	10-FEB-2023 09:58	02092363ECD7.D	1	23A0295-05	
64	10-FEB-2023 10:19	02092364ECD7.D	1	23A0295-06	
65	10-FEB-2023 10:40	02092365ECD7.D	1	23A0295-07	
66	10-FEB-2023 11:01	02092366ECD7.D	1	23A0295-08	
67	10-FEB-2023 11:22	02092367ECD7.D	1	23A0295-09	
68	10-FEB-2023 11:43	02092368ECD7.D	1	23A0295-10	
69	10-FEB-2023 12:04	02092369ECD7.D	1	AR1242CCV9	
70	10-FEB-2023 12:25	02092370ECD7.D	1	AR1660CCVA	
71	10-FEB-2023 12:46	02092371ECD7.D	1	23B0064-01	
72	10-FEB-2023 13:07	02092372ECD7.D	1	23A0249-05	
73	10-FEB-2023 13:29	02092373ECD7.D	1	23A0249-08	
74	10-FEB-2023 13:50	02092374ECD7.D	1	23A0249-09	
75	10-FEB-2023 14:11	02092375ECD7.D	1	23A0249-10	
76	10-FEB-2023 14:32	02092376ECD7.D	1	23A0295-01	
77	10-FEB-2023 14:53	02092377ECD7.D	1	23A0295-02	
78	10-FEB-2023 15:14	02092378ECD7.D	1	23A0295-04	
79	10-FEB-2023 15:35	02092379ECD7.D	1	23A0295-05	
80	10-FEB-2023 15:56	02092380ECD7.D	1	23A0295-06	
81	10-FEB-2023 16:17	02092381ECD7.D	1	AR1254CCVB	
82	10-FEB-2023 16:38	02092382ECD7.D	1	AR1660CCVC	
83	10-FEB-2023 16:59	02092383ECD7.D	5	23A0295-01RE1	
84	10-FEB-2023 17:20	02092384ECD7.D	5	23A0295-02RE1	
85	10-FEB-2023 17:41	02092385ECD7.D	1	AR1248CCVD	
86	10-FEB-2023 18:02	02092386ECD7.D	1	AR1660CCVE	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b

ARI Job No.: DCM Method: PCB.m Instrument: ecd7.i Date: 09-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1158	02092301ECD7.D	DCM RINSE		1	NO MANUAL INTEGRATION
1219	02092302ECD7.D	AR1254TEST		1	NO MANUAL INTEGRATION
1240	02092303ECD7.D	AR1248TEST		1	NO MANUAL INTEGRATION
1301	02092304ECD7.D	AR1242TEST		1	NO MANUAL INTEGRATION
1338	02092305ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1359	02092306ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1420	02092307ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1441	02092308ECD7.D	23A0206-13RE3		50	Aroclor-1254,
1502	02092309ECD7.D	23A0207-10		1	Aroclor-1260,
1523	02092310ECD7.D	23A0207-11		1	Aroclor-1254,
1544	02092311ECD7.D	23A0207-12		1	Aroclor-1254,
1605	02092312ECD7.D	23A0207-13		1	Aroclor-1254,
1627	02092313ECD7.D	23A0207-14		1	Aroclor-1254,
1648	02092314ECD7.D	23A0207-15		1	Aroclor-1254,
1709	02092315ECD7.D	23A0207-16		1	NO MANUAL INTEGRATION
1730	02092316ECD7.D	23A0207-17RE1		5	NO MANUAL INTEGRATION
1751	02092317ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1812	02092318ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
1833	02092319ECD7.D	BLB0100-BLK1		1	NO MANUAL INTEGRATION
1854	02092320ECD7.D	BLB0100-BS1		1	NO MANUAL INTEGRATION
1915	02092321ECD7.D	23B0067-02		1	NO MANUAL INTEGRATION
1936	02092322ECD7.D	23B0067-03		1	NO MANUAL INTEGRATION
1957	02092323ECD7.D	BLB0090-BLK1		1	NO MANUAL INTEGRATION
2018	02092324ECD7.D	BLB0090-BS1		1	NO MANUAL INTEGRATION
2039	02092325ECD7.D	23B0064-01RE1		5	NO MANUAL INTEGRATION
2100	02092326ECD7.D	23B0067-01RE1		5	IS-HBBP, Decachlorobiphenyl,
2121	02092327ECD7.D	23B0069-01RE1		5	NO MANUAL INTEGRATION
2142	02092328ECD7.D	BLB0126-BLK1		1	NO MANUAL INTEGRATION
2203	02092329ECD7.D	BLB0126-BS1		1	NO MANUAL INTEGRATION
2224	02092330ECD7.D	BLB0126-BSD1		1	NO MANUAL INTEGRATION
2245	02092331ECD7.D	23B0044-01		1	NO MANUAL INTEGRATION
2306	02092332ECD7.D	23B0096-01		1	NO MANUAL INTEGRATION
2327	02092333ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
2348	02092334ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
0009	02092335ECD7.D	BLB0188-BLK1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0031	02092336ECD7.D	BLB0188-BS1		1	NO MANUAL INTEGRATION
0052	02092337ECD7.D	23B0112-01		1	NO MANUAL INTEGRATION
0113	02092338ECD7.D	23B0112-01RE1		5	NO MANUAL INTEGRATION
0134	02092339ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
0155	02092340ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
0216	02092341ECD7.D	BLA0674-BLK1		1	NO MANUAL INTEGRATION
0237	02092342ECD7.D	BLA0674-BS1		1	NO MANUAL INTEGRATION
0258	02092343ECD7.D	BLA0674-BSD1		1	NO MANUAL INTEGRATION
0319	02092344ECD7.D	BLA0674-SRM1		1	NO MANUAL INTEGRATION
0340	02092345ECD7.D	23A0249-02		1	Aroclor-1254,
0401	02092346ECD7.D	23A0249-03		1	Aroclor-1248, Aroclor-1254, Aroclor-1260, IS-HBBP, Decachlorobiphenyl,
0422	02092347ECD7.D	23A0249-04		1	NO MANUAL INTEGRATION
0443	02092348ECD7.D	23A0249-05		1	NO MANUAL INTEGRATION
0504	02092349ECD7.D	23A0249-06		1	NO MANUAL INTEGRATION
0525	02092350ECD7.D	23A0249-07		1	NO MANUAL INTEGRATION
0546	02092351ECD7.D	BLA0674-MS1		1	NO MANUAL INTEGRATION
0607	02092352ECD7.D	BLA0674-MSD1		1	NO MANUAL INTEGRATION
0628	02092353ECD7.D	23A0249-08		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0649	02092354ECD7.D	23A0249-09		1	NO MANUAL INTEGRATION
0710	02092355ECD7.D	23A0249-10		1	NO MANUAL INTEGRATION
0731	02092356ECD7.D	23A0249-11		1	NO MANUAL INTEGRATION
0752	02092357ECD7.D	AR1248CCV7		1	NO MANUAL INTEGRATION
0813	02092358ECD7.D	AR1660CCV8		1	NO MANUAL INTEGRATION
0834	02092359ECD7.D	23A0295-01		1	NO MANUAL INTEGRATION
0855	02092360ECD7.D	23A0295-02		1	NO MANUAL INTEGRATION
0916	02092361ECD7.D	23A0295-03		1	NO MANUAL INTEGRATION
0937	02092362ECD7.D	23A0295-04		1	NO MANUAL INTEGRATION
0958	02092363ECD7.D	23A0295-05		1	NO MANUAL INTEGRATION
1019	02092364ECD7.D	23A0295-06		1	NO MANUAL INTEGRATION
1040	02092365ECD7.D	23A0295-07		1	NO MANUAL INTEGRATION
1101	02092366ECD7.D	23A0295-08		1	Aroclor-1254,
1122	02092367ECD7.D	23A0295-09		1	NO MANUAL INTEGRATION
1143	02092368ECD7.D	23A0295-10		1	Aroclor-1254, Aroclor-1260,
1204	02092369ECD7.D	AR1242CCV9		1	NO MANUAL INTEGRATION
1225	02092370ECD7.D	AR1660CCVA		1	NO MANUAL INTEGRATION
1246	02092371ECD7.D	23B0064-01		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1307	02092372ECD7.D	23A0249-05		1	NO MANUAL INTEGRATION
1329	02092373ECD7.D	23A0249-08		1	NO MANUAL INTEGRATION
1350	02092374ECD7.D	23A0249-09		1	Aroclor-1254,
1411	02092375ECD7.D	23A0249-10		1	NO MANUAL INTEGRATION
1432	02092376ECD7.D	23A0295-01		1	NO MANUAL INTEGRATION
1453	02092377ECD7.D	23A0295-02		1	NO MANUAL INTEGRATION
1514	02092378ECD7.D	23A0295-04		1	Aroclor-1254,
1535	02092379ECD7.D	23A0295-05		1	NO MANUAL INTEGRATION
1556	02092380ECD7.D	23A0295-06		1	NO MANUAL INTEGRATION
1617	02092381ECD7.D	AR1254CCVB		1	NO MANUAL INTEGRATION
1638	02092382ECD7.D	AR1660CCVC		1	NO MANUAL INTEGRATION
1659	02092383ECD7.D	23A0295-01RE1		5	Aroclor-1254,
1720	02092384ECD7.D	23A0295-02RE1		5	Aroclor-1254, Aroclor-1260,
1741	02092385ECD7.D	AR1248CCVD		1	NO MANUAL INTEGRATION
1802	02092386ECD7.D	AR1660CCVE		1	NO MANUAL INTEGRATION
1158	02092301ECD7.D	DCM RINSE		1	NO MANUAL INTEGRATION
1219	02092302ECD7.D	AR1254TEST		1	NO MANUAL INTEGRATION
1240	02092303ECD7.D	AR1248TEST		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1301	02092304ECD7.D	AR1242TEST		1	NO MANUAL INTEGRATION
1338	02092305ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1359	02092306ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1420	02092307ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1441	02092308ECD7.D	23A0206-13RE3		50	NO MANUAL INTEGRATION
1502	02092309ECD7.D	23A0207-10		1	Aroclor-1248 [2C],
1523	02092310ECD7.D	23A0207-11		1	Aroclor-1248 [2C],
1544	02092311ECD7.D	23A0207-12		1	Aroclor-1248 [2C],
1605	02092312ECD7.D	23A0207-13		1	Aroclor-1248 [2C],
1627	02092313ECD7.D	23A0207-14		1	Aroclor-1248 [2C],
1648	02092314ECD7.D	23A0207-15		1	Aroclor-1248 [2C],
1709	02092315ECD7.D	23A0207-16		1	Aroclor-1248 [2C],
1730	02092316ECD7.D	23A0207-17RE1		5	Aroclor-1248 [2C], IS-HBBP [2C], Decachlorobiphenyl [2C],
1751	02092317ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
1812	02092318ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
1833	02092319ECD7.D	BLB0100-BLK1		1	NO MANUAL INTEGRATION
1854	02092320ECD7.D	BLB0100-BS1		1	NO MANUAL INTEGRATION
1915	02092321ECD7.D	23B0067-02		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1936	02092322ECD7.D	23B0067-03		1	NO MANUAL INTEGRATION
1957	02092323ECD7.D	BLB0090-BLK1		1	NO MANUAL INTEGRATION
2018	02092324ECD7.D	BLB0090-BS1		1	NO MANUAL INTEGRATION
2039	02092325ECD7.D	23B0064-01RE1		5	NO MANUAL INTEGRATION
2100	02092326ECD7.D	23B0067-01RE1		5	NO MANUAL INTEGRATION
2121	02092327ECD7.D	23B0069-01RE1		5	NO MANUAL INTEGRATION
2142	02092328ECD7.D	BLB0126-BLK1		1	NO MANUAL INTEGRATION
2203	02092329ECD7.D	BLB0126-BS1		1	NO MANUAL INTEGRATION
2224	02092330ECD7.D	BLB0126-BSD1		1	NO MANUAL INTEGRATION
2245	02092331ECD7.D	23B0044-01		1	NO MANUAL INTEGRATION
2306	02092332ECD7.D	23B0096-01		1	NO MANUAL INTEGRATION
2327	02092333ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
2348	02092334ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
0009	02092335ECD7.D	BLB0188-BLK1		1	NO MANUAL INTEGRATION
0031	02092336ECD7.D	BLB0188-BS1		1	NO MANUAL INTEGRATION
0052	02092337ECD7.D	23B0112-01		1	NO MANUAL INTEGRATION
0113	02092338ECD7.D	23B0112-01RE1		5	NO MANUAL INTEGRATION
0134	02092339ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0155	02092340ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
0216	02092341ECD7.D	BLA0674-BLK1		1	NO MANUAL INTEGRATION
0237	02092342ECD7.D	BLA0674-BS1		1	NO MANUAL INTEGRATION
0258	02092343ECD7.D	BLA0674-BSD1		1	NO MANUAL INTEGRATION
0319	02092344ECD7.D	BLA0674-SRM1		1	NO MANUAL INTEGRATION
0340	02092345ECD7.D	23A0249-02		1	Aroclor-1248 [2C],
0401	02092346ECD7.D	23A0249-03		1	Aroclor-1248 [2C],
0422	02092347ECD7.D	23A0249-04		1	Aroclor-1248 [2C],
0443	02092348ECD7.D	23A0249-05		1	NO MANUAL INTEGRATION
0504	02092349ECD7.D	23A0249-06		1	NO MANUAL INTEGRATION
0525	02092350ECD7.D	23A0249-07		1	Aroclor-1248 [2C],
0546	02092351ECD7.D	BLA0674-MS1		1	NO MANUAL INTEGRATION
0607	02092352ECD7.D	BLA0674-MSD1		1	NO MANUAL INTEGRATION
0628	02092353ECD7.D	23A0249-08		1	NO MANUAL INTEGRATION
0649	02092354ECD7.D	23A0249-09		1	NO MANUAL INTEGRATION
0710	02092355ECD7.D	23A0249-10		1	NO MANUAL INTEGRATION
0731	02092356ECD7.D	23A0249-11		1	NO MANUAL INTEGRATION
0752	02092357ECD7.D	AR1248CCV7		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0813	02092358ECD7.D	AR1660CCV8		1	NO MANUAL INTEGRATION
0834	02092359ECD7.D	23A0295-01		1	NO MANUAL INTEGRATION
0855	02092360ECD7.D	23A0295-02		1	NO MANUAL INTEGRATION
0916	02092361ECD7.D	23A0295-03		1	Aroclor-1248 [2C],
0937	02092362ECD7.D	23A0295-04		1	NO MANUAL INTEGRATION
0958	02092363ECD7.D	23A0295-05		1	NO MANUAL INTEGRATION
1019	02092364ECD7.D	23A0295-06		1	NO MANUAL INTEGRATION
1040	02092365ECD7.D	23A0295-07		1	Aroclor-1248 [2C],
1101	02092366ECD7.D	23A0295-08		1	NO MANUAL INTEGRATION
1122	02092367ECD7.D	23A0295-09		1	Aroclor-1248 [2C],
1143	02092368ECD7.D	23A0295-10		1	NO MANUAL INTEGRATION
1204	02092369ECD7.D	AR1242CCV9		1	NO MANUAL INTEGRATION
1225	02092370ECD7.D	AR1660CCVA		1	NO MANUAL INTEGRATION
1246	02092371ECD7.D	23B0064-01		1	NO MANUAL INTEGRATION
1307	02092372ECD7.D	23A0249-05		1	Aroclor-1248 [2C],
1329	02092373ECD7.D	23A0249-08		1	Aroclor-1248 [2C],
1350	02092374ECD7.D	23A0249-09		1	Aroclor-1248 [2C],
1411	02092375ECD7.D	23A0249-10		1	Aroclor-1248 [2C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230209.b\230209.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1432	02092376ECD7.D	23A0295-01		1	NO MANUAL INTEGRATION
1453	02092377ECD7.D	23A0295-02		1	NO MANUAL INTEGRATION
1514	02092378ECD7.D	23A0295-04		1	Aroclor-1248 [2C],
1535	02092379ECD7.D	23A0295-05		1	Aroclor-1248 [2C],
1556	02092380ECD7.D	23A0295-06		1	Aroclor-1248 [2C],
1617	02092381ECD7.D	AR1254CCVB		1	NO MANUAL INTEGRATION
1638	02092382ECD7.D	AR1660CCVC		1	NO MANUAL INTEGRATION
1659	02092383ECD7.D	23A0295-01RE1		5	Aroclor-1248 [2C],
1720	02092384ECD7.D	23A0295-02RE1		5	Aroclor-1248 [2C],
1741	02092385ECD7.D	AR1248CCVD		1	NO MANUAL INTEGRATION
1802	02092386ECD7.D	AR1660CCVE		1	NO MANUAL INTEGRATION
1823	02092387.D	AR1254		1	NO MANUAL INTEGRATION
1844	02092388.D	AR1660		1	NO MANUAL INTEGRATION
1905	02092389.D	AR1248		1	NO MANUAL INTEGRATION
1926	02092390.D	AR1660		1	NO MANUAL INTEGRATION
1947	02092391.D	AR1242		1	NO MANUAL INTEGRATION
2008	02092392.D	AR1660		1	NO MANUAL INTEGRATION

Security Status Report

Date: 13-Feb-2023 08:54

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SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLA0281
Instrument: ECD7
Calibration: GA00061
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLA0281-SCV1 (Solid)			Lab File ID: 01242324ECD7.D			Analyzed: 01/24/23 19:51		
Decachlorobiphenyl	40.000	94.9	80 - 120	13.891	13.892	-0.0010	N/A	
Tetrachlorometaxylene	40.000	93.8	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	101	80 - 120	14.12	14.12017	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	93.2	80 - 120	5.685	5.685333	-0.0003	N/A	
SLA0281-SCV2 (Solid)			Lab File ID: 01242325ECD7.D			Analyzed: 01/24/23 20:12		
Decachlorobiphenyl	40.000	96.4	80 - 120	13.892	13.892	0.0000	N/A	
Tetrachlorometaxylene	40.000	94.4	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	101	80 - 120	14.121	14.12017	0.0008	N/A	
Tetrachlorometaxylene [2C]	40.000	93.4	80 - 120	5.685	5.685333	-0.0003	N/A	
SLA0281-SCV3 (Solid)			Lab File ID: 01242326ECD7.D			Analyzed: 01/24/23 20:33		
Decachlorobiphenyl	40.000	95.7	80 - 120	13.892	13.892	0.0000	N/A	
Tetrachlorometaxylene	40.000	91.9	80 - 120	5.809	5.808667	0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	98.9	80 - 120	14.12	14.12017	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	91.4	80 - 120	5.685	5.685333	-0.0003	N/A	
SLA0281-SCV4 (Solid)			Lab File ID: 01242327ECD7.D			Analyzed: 01/24/23 20:54		
Decachlorobiphenyl	40.000	92.7	80 - 120	13.892	13.892	0.0000	N/A	
Tetrachlorometaxylene	40.000	91.7	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	98.9	80 - 120	14.121	14.12017	0.0008	N/A	
Tetrachlorometaxylene [2C]	40.000	91.6	80 - 120	5.685	5.685333	-0.0003	N/A	
SLA0281-SCV5 (Solid)			Lab File ID: 01242328ECD7.D			Analyzed: 01/24/23 21:15		
Decachlorobiphenyl	40.000	93.6	80 - 120	13.89	13.892	-0.0020	N/A	
Tetrachlorometaxylene	40.000	93.2	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	98.7	80 - 120	14.119	14.12017	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	92.9	80 - 120	5.685	5.685333	-0.0003	N/A	
SLA0281-SCV6 (Solid)			Lab File ID: 01242329ECD7.D			Analyzed: 01/24/23 21:36		
Decachlorobiphenyl	40.000	137	80 - 120	13.892	13.892	0.0000	N/A	
Tetrachlorometaxylene	40.000	90.9	80 - 120	5.809	5.808667	0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	145	80 - 120	14.12	14.12017	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	90.8	80 - 120	5.686	5.685333	0.0007	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0127
Instrument: ECD7
Calibration: GA00061
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0127-ICV1 (Solid)			Lab File ID: 02082307ECD7.D			Analyzed: 02/08/23 11:44		
Decachlorobiphenyl	40.000	89.5	80 - 120	13.89	13.892	-0.0020	N/A	
Tetrachlorometaxylene	40.000	95.5	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	84.3	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	95.8	80 - 120	5.684	5.685333	-0.0013	N/A	
SLB0127-ICV2 (Solid)			Lab File ID: 02082308ECD7.D			Analyzed: 02/08/23 12:05		
Decachlorobiphenyl	40.000	83.8	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	98.5	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	86.0	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	98.8	80 - 120	5.685	5.685333	-0.0003	N/A	
SLB0127-CCV1 (Solid)			Lab File ID: 02082316ECD7.D			Analyzed: 02/08/23 14:53		
Decachlorobiphenyl	40.000	78.3	80 - 120	13.889	13.892	-0.0030	N/A	*
Tetrachlorometaxylene	40.000	90.3	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	84.5	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	92.3	80 - 120	5.684	5.685333	-0.0013	N/A	
SLB0127-CCV2 (Solid)			Lab File ID: 02082317ECD7.D			Analyzed: 02/08/23 15:14		
Decachlorobiphenyl	40.000	85.3	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	98.0	80 - 120	5.809	5.808667	0.0003	N/A	
Decachlorobiphenyl [2C]	40.000	91.5	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	96.8	80 - 120	5.686	5.685333	0.0007	N/A	
SLB0127-CCV3 (Solid)			Lab File ID: 02082330ECD7.D			Analyzed: 02/08/23 19:47		
Decachlorobiphenyl	40.000	77.0	80 - 120	13.888	13.892	-0.0040	N/A	*
Tetrachlorometaxylene	40.000	110	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	78.8	80 - 120	14.116	14.12017	-0.0042	N/A	*
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.683	5.685333	-0.0023	N/A	
SLB0127-CCV4 (Solid)			Lab File ID: 02082331ECD7.D			Analyzed: 02/08/23 20:08		
Decachlorobiphenyl	40.000	86.0	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	99.0	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	88.3	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	98.3	80 - 120	5.684	5.685333	-0.0013	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0127
Instrument: ECD7
Calibration: GA00061
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLA0626-BLK1 (Solid)			Lab File ID: 02082333ECD7.D			Analyzed: 02/08/23 20:50		
Decachlorobiphenyl	8.0000	74.6	40 - 126	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	8.0000	74.9	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	8.0000	78.2	40 - 126	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	8.0000	73.4	44 - 120	5.683	5.685333	-0.0023	N/A	
BLA0626-BS1 (Solid)			Lab File ID: 02082334ECD7.D			Analyzed: 02/08/23 21:11		
Decachlorobiphenyl	8.0000	80.2	40 - 126	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	8.0000	83.1	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	8.0000	80.3	40 - 126	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	8.0000	80.2	44 - 120	5.683	5.685333	-0.0023	N/A	
BLA0626-BSD1 (Solid)			Lab File ID: 02082335ECD7.D			Analyzed: 02/08/23 21:32		
Decachlorobiphenyl	8.0000	76.8	40 - 126	13.887	13.892	-0.0050	N/A	
Tetrachlorometaxylene	8.0000	79.4	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	8.0000	78.6	40 - 126	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	8.0000	75.2	44 - 120	5.684	5.685333	-0.0013	N/A	
BLA0626-SRM1 (Solid)			Lab File ID: 02082336ECD7.D			Analyzed: 02/08/23 21:53		
Decachlorobiphenyl	40.000	70.3	40 - 126	13.885	13.892	-0.0070	N/A	
Tetrachlorometaxylene	40.000	68.6	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	40.000	67.3	40 - 126	14.114	14.12017	-0.0062	N/A	
Tetrachlorometaxylene [2C]	40.000	73.1	44 - 120	5.683	5.685333	-0.0023	N/A	
23A0207-01 (Solid)			Lab File ID: 02082337ECD7.D			Analyzed: 02/08/23 22:14		
Decachlorobiphenyl	8.1743	82.9	40 - 126	13.885	13.892	-0.0070	N/A	
Tetrachlorometaxylene	8.1743	82.7	44 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	8.1743	83.5	40 - 126	14.114	14.12017	-0.0062	N/A	
Tetrachlorometaxylene [2C]	8.1743	93.0	44 - 120	5.684	5.685333	-0.0013	N/A	
23A0207-02 (Solid)			Lab File ID: 02082338ECD7.D			Analyzed: 02/08/23 22:35		
Decachlorobiphenyl	7.9866	75.2	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9866	80.6	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	7.9866	77.6	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9866	84.2	44 - 120	5.683	5.685333	-0.0023	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0127
Instrument: ECD7
Calibration: GA00061
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0207-03 (Solid)			Lab File ID: 02082339ECD7.D			Analyzed: 02/08/23 22:55		
Decachlorobiphenyl	7.9994	75.3	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9994	73.8	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	7.9994	77.4	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9994	83.2	44 - 120	5.682	5.685333	-0.0033	N/A	
BLA0626-MS1 (Solid)			Lab File ID: 02082340ECD7.D			Analyzed: 02/08/23 23:16		
Decachlorobiphenyl	7.9994	71.0	40 - 126	13.885	13.892	-0.0070	N/A	
Tetrachlorometaxylene	7.9994	73.4	44 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	7.9994	71.4	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9994	79.3	44 - 120	5.682	5.685333	-0.0033	N/A	
BLA0626-MSD1 (Solid)			Lab File ID: 02082341ECD7.D			Analyzed: 02/08/23 23:37		
Decachlorobiphenyl	7.9994	74.6	40 - 126	13.885	13.892	-0.0070	N/A	
Tetrachlorometaxylene	7.9994	73.4	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	7.9994	74.1	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9994	81.4	44 - 120	5.682	5.685333	-0.0033	N/A	
23A0207-04 (Solid)			Lab File ID: 02082342ECD7.D			Analyzed: 02/08/23 23:58		
Decachlorobiphenyl	8.0017	70.4	40 - 126	13.883	13.892	-0.0090	N/A	
Tetrachlorometaxylene	8.0017	61.9	44 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	8.0017	70.4	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	8.0017	70.8	44 - 120	5.682	5.685333	-0.0033	N/A	
23A0207-05 (Solid)			Lab File ID: 02082343ECD7.D			Analyzed: 02/09/23 00:20		
Decachlorobiphenyl	7.9871	71.8	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9871	61.0	44 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	7.9871	63.8	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9871	69.5	44 - 120	5.681	5.685333	-0.0043	N/A	
23A0207-06 (Solid)			Lab File ID: 02082344ECD7.D			Analyzed: 02/09/23 00:41		
Decachlorobiphenyl	7.9802	69.1	40 - 126	13.882	13.892	-0.0100	N/A	
Tetrachlorometaxylene	7.9802	71.0	44 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	7.9802	82.3	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9802	79.6	44 - 120	5.682	5.685333	-0.0033	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0127	Instrument:	ECD7
Calibration:	GA00061	Calibration Date:	01/24/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0207-07 (Solid)			Lab File ID: 02082345ECD7.D			Analyzed: 02/09/23 01:02		
Decachlorobiphenyl	7.9995	72.4	40 - 126	13.885	13.892	-0.0070	N/A	
Tetrachlorometaxylene	7.9995	69.9	44 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	7.9995	71.6	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9995	77.9	44 - 120	5.682	5.685333	-0.0033	N/A	
23A0207-08 (Solid)			Lab File ID: 02082346ECD7.D			Analyzed: 02/09/23 01:22		
Decachlorobiphenyl	7.9829	76.5	40 - 126	13.886	13.892	-0.0060	N/A	
Tetrachlorometaxylene	7.9829	76.6	44 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	7.9829	75.4	40 - 126	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	7.9829	81.4	44 - 120	5.682	5.685333	-0.0033	N/A	
23A0207-09 (Solid)			Lab File ID: 02082347ECD7.D			Analyzed: 02/09/23 01:44		
Decachlorobiphenyl	7.9829	74.7	40 - 126	13.885	13.892	-0.0070	N/A	
Tetrachlorometaxylene	7.9829	72.2	44 - 120	5.806	5.808667	-0.0027	N/A	
Decachlorobiphenyl [2C]	7.9829	74.4	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9829	78.4	44 - 120	5.682	5.685333	-0.0033	N/A	
SLB0127-CCV5 (Solid)			Lab File ID: 02082348ECD7.D			Analyzed: 02/09/23 02:04		
Decachlorobiphenyl	40.000	82.5	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	93.5	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	89.5	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	95.3	80 - 120	5.685	5.685333	-0.0003	N/A	
SLB0127-CCV6 (Solid)			Lab File ID: 02082349ECD7.D			Analyzed: 02/09/23 02:26		
Decachlorobiphenyl	40.000	86.5	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	97.5	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	89.0	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	97.0	80 - 120	5.684	5.685333	-0.0013	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0148	Instrument:	ECD7
Calibration:	GA00061	Calibration Date:	01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0148-ICV1 (Solid)				Lab File ID: 02092306ECD7.D			Analyzed: 02/09/23 13:59	
Decachlorobiphenyl	40.000	94.8	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	95.0	80 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	40.000	89.0	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	94.8	80 - 120	5.682	5.685333	-0.0033	N/A	
SLB0148-ICV2 (Solid)				Lab File ID: 02092307ECD7.D			Analyzed: 02/09/23 14:20	
Decachlorobiphenyl	40.000	84.5	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	99.5	80 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	40.000	90.0	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	97.3	80 - 120	5.683	5.685333	-0.0023	N/A	
23A0207-10 (Solid)				Lab File ID: 02092309ECD7.D			Analyzed: 02/09/23 15:02	
Decachlorobiphenyl	7.9943	78.7	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9943	63.4	44 - 120	5.803	5.808667	-0.0057	N/A	
Decachlorobiphenyl [2C]	7.9943	78.6	40 - 126	14.111	14.12017	-0.0092	N/A	
Tetrachlorometaxylene [2C]	7.9943	70.2	44 - 120	5.68	5.685333	-0.0053	N/A	
23A0207-11 (Solid)				Lab File ID: 02092310ECD7.D			Analyzed: 02/09/23 15:23	
Decachlorobiphenyl	7.9947	66.3	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9947	59.7	44 - 120	5.803	5.808667	-0.0057	N/A	
Decachlorobiphenyl [2C]	7.9947	65.0	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9947	68.9	44 - 120	5.679	5.685333	-0.0063	N/A	
23A0207-12 (Solid)				Lab File ID: 02092311ECD7.D			Analyzed: 02/09/23 15:44	
Decachlorobiphenyl	8.0019	74.3	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	8.0019	69.2	44 - 120	5.804	5.808667	-0.0047	N/A	
Decachlorobiphenyl [2C]	8.0019	66.5	40 - 126	14.113	14.12017	-0.0072	N/A	
Tetrachlorometaxylene [2C]	8.0019	76.5	44 - 120	5.681	5.685333	-0.0043	N/A	
23A0207-13 (Solid)				Lab File ID: 02092312ECD7.D			Analyzed: 02/09/23 16:05	
Decachlorobiphenyl	7.9986	75.3	40 - 126	13.883	13.892	-0.0090	N/A	
Tetrachlorometaxylene	7.9986	65.5	44 - 120	5.803	5.808667	-0.0057	N/A	
Decachlorobiphenyl [2C]	7.9986	64.4	40 - 126	14.111	14.12017	-0.0092	N/A	
Tetrachlorometaxylene [2C]	7.9986	75.1	44 - 120	5.679	5.685333	-0.0063	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0148
Instrument: ECD7
Calibration: GA00061
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0207-14 (Solid)			Lab File ID: 02092313ECD7.D			Analyzed: 02/09/23 16:27		
Decachlorobiphenyl	7.9890	78.3	40 - 126	13.885	13.892	-0.0070	N/A	
Tetrachlorometaxylene	7.9890	69.1	44 - 120	5.804	5.808667	-0.0047	N/A	
Decachlorobiphenyl [2C]	7.9890	91.5	40 - 126	14.112	14.12017	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9890	77.0	44 - 120	5.681	5.685333	-0.0043	N/A	
23A0207-15 (Solid)			Lab File ID: 02092314ECD7.D			Analyzed: 02/09/23 16:48		
Decachlorobiphenyl	7.9936	64.6	40 - 126	13.883	13.892	-0.0090	N/A	
Tetrachlorometaxylene	7.9936	50.0	44 - 120	5.802	5.808667	-0.0067	N/A	
Decachlorobiphenyl [2C]	7.9936	68.9	40 - 126	14.111	14.12017	-0.0092	N/A	
Tetrachlorometaxylene [2C]	7.9936	56.8	44 - 120	5.678	5.685333	-0.0073	N/A	
23A0207-16 (Solid)			Lab File ID: 02092315ECD7.D			Analyzed: 02/09/23 17:09		
Decachlorobiphenyl	7.9905	68.3	40 - 126	13.884	13.892	-0.0080	N/A	
Tetrachlorometaxylene	7.9905	51.1	44 - 120	5.802	5.808667	-0.0067	N/A	
Decachlorobiphenyl [2C]	7.9905	70.4	40 - 126	14.111	14.12017	-0.0092	N/A	
Tetrachlorometaxylene [2C]	7.9905	58.2	44 - 120	5.678	5.685333	-0.0073	N/A	
23A0207-17 (Solid)			Lab File ID: 02092316ECD7.D			Analyzed: 02/09/23 17:30		
Decachlorobiphenyl	7.9928	102	40 - 126	13.883	13.892	-0.0090	N/A	
Tetrachlorometaxylene	7.9928	62.0	44 - 120	5.801	5.808667	-0.0077	N/A	
Decachlorobiphenyl [2C]	7.9928	71.7	40 - 126	14.11	14.12017	-0.0102	N/A	
Tetrachlorometaxylene [2C]	7.9928	67.5	44 - 120	5.678	5.685333	-0.0073	N/A	
SLB0148-CCV1 (Solid)			Lab File ID: 02092317ECD7.D			Analyzed: 02/09/23 17:51		
Decachlorobiphenyl	40.000	80.3	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	90.8	80 - 120	5.804	5.808667	-0.0047	N/A	
Decachlorobiphenyl [2C]	40.000	85.5	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	91.5	80 - 120	5.681	5.685333	-0.0043	N/A	
SLB0148-CCV2 (Solid)			Lab File ID: 02092318ECD7.D			Analyzed: 02/09/23 18:12		
Decachlorobiphenyl	40.000	87.0	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	97.5	80 - 120	5.805	5.808667	-0.0037	N/A	
Decachlorobiphenyl [2C]	40.000	91.5	80 - 120	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	96.3	80 - 120	5.682	5.685333	-0.0033	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0148
Instrument: ECD7
Calibration: GA00061
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0148-CCV3 (Solid)			Lab File ID: 02092333ECD7.D				Analyzed: 02/09/23 23:27	
Decachlorobiphenyl	40.000	80.3	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	112	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	85.8	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	112	80 - 120	5.685	5.685333	-0.0003	N/A	
SLB0148-CCV4 (Solid)			Lab File ID: 02092334ECD7.D				Analyzed: 02/09/23 23:48	
Decachlorobiphenyl	40.000	85.3	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	96.5	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	93.3	80 - 120	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	96.3	80 - 120	5.684	5.685333	-0.0013	N/A	
SLB0148-CCV5 (Solid)			Lab File ID: 02092339ECD7.D				Analyzed: 02/10/23 01:34	
Decachlorobiphenyl	40.000	78.0	80 - 120	13.888	13.892	-0.0040	N/A	*
Tetrachlorometaxylene	40.000	93.5	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	89.5	80 - 120	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	96.0	80 - 120	5.685	5.685333	-0.0003	N/A	
SLB0148-CCV6 (Solid)			Lab File ID: 02092340ECD7.D				Analyzed: 02/10/23 01:55	
Decachlorobiphenyl	40.000	80.3	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	97.8	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	91.8	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	97.0	80 - 120	5.685	5.685333	-0.0003	N/A	
SLB0148-CCV7 (Solid)			Lab File ID: 02092357ECD7.D				Analyzed: 02/10/23 07:52	
Decachlorobiphenyl	40.000	83.0	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	93.0	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	90.0	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	93.5	80 - 120	5.685	5.685333	-0.0003	N/A	
SLB0148-CCV8 (Solid)			Lab File ID: 02092358ECD7.D				Analyzed: 02/10/23 08:13	
Decachlorobiphenyl	40.000	88.5	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	98.5	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	92.3	80 - 120	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	97.8	80 - 120	5.685	5.685333	-0.0003	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0148
Instrument: ECD7
Calibration: GA00061
Calibration Date: 01/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0148-CCV9 (Solid)			Lab File ID: 02092369ECD7.D			Analyzed: 02/10/23 12:04		
Decachlorobiphenyl	40.000	80.5	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	113	80 - 120	5.807	5.808667	-0.0017	N/A	
Decachlorobiphenyl [2C]	40.000	86.0	80 - 120	14.114	14.12017	-0.0062	N/A	
Tetrachlorometaxylene [2C]	40.000	113	80 - 120	5.685	5.685333	-0.0003	N/A	
SLB0148-CCVA (Solid)			Lab File ID: 02092370ECD7.D			Analyzed: 02/10/23 12:25		
Decachlorobiphenyl	40.000	86.8	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	97.5	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	93.5	80 - 120	14.115	14.12017	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	96.5	80 - 120	5.685	5.685333	-0.0003	N/A	
SLB0148-CCVB (Solid)			Lab File ID: 02092381ECD7.D			Analyzed: 02/10/23 16:17		
Decachlorobiphenyl	40.000	81.0	80 - 120	13.89	13.892	-0.0020	N/A	
Tetrachlorometaxylene	40.000	95.0	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	89.8	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	96.5	80 - 120	5.685	5.685333	-0.0003	N/A	
SLB0148-CCVC (Solid)			Lab File ID: 02092382ECD7.D			Analyzed: 02/10/23 16:38		
Decachlorobiphenyl	40.000	85.5	80 - 120	13.888	13.892	-0.0040	N/A	
Tetrachlorometaxylene	40.000	98.5	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	92.8	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	97.3	80 - 120	5.686	5.685333	0.0007	N/A	
SLB0148-CCVD (Solid)			Lab File ID: 02092385ECD7.D			Analyzed: 02/10/23 17:41		
Decachlorobiphenyl	40.000	80.3	80 - 120	13.89	13.892	-0.0020	N/A	
Tetrachlorometaxylene	40.000	92.8	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	86.5	80 - 120	14.116	14.12017	-0.0042	N/A	
Tetrachlorometaxylene [2C]	40.000	93.3	80 - 120	5.685	5.685333	-0.0003	N/A	
SLB0148-CCVE (Solid)			Lab File ID: 02092386ECD7.D			Analyzed: 02/10/23 18:02		
Decachlorobiphenyl	40.000	85.5	80 - 120	13.889	13.892	-0.0030	N/A	
Tetrachlorometaxylene	40.000	97.5	80 - 120	5.808	5.808667	-0.0007	N/A	
Decachlorobiphenyl [2C]	40.000	89.8	80 - 120	14.117	14.12017	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	98.0	80 - 120	5.685	5.685333	-0.0003	N/A	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLA0281	Instrument:	ECD7
		Calibration:	GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SLA0281-SCV1)		(Solid)	Lab File ID: 01242324ECD7.D				Analyzed: 01/24/23 19:51		
1-Bromo-2-Nitrobenzene	506576	3.491	503318	3.492	101	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	940129	14.264	647433	14.266	145	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	343102	3.928	336911	3.928	102	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	501702	15.008	382032	15.008	131	50 - 200	0.000	+/-0.50	
Secondary Cal Check (SLA0281-SCV2)		(Solid)	Lab File ID: 01242325ECD7.D				Analyzed: 01/24/23 20:12		
1-Bromo-2-Nitrobenzene	503089	3.492	503318	3.492	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	953137	14.265	647433	14.266	147	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	341704	3.929	336911	3.928	101	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	505860	15.007	382032	15.008	132	50 - 200	-0.001	+/-0.50	
Secondary Cal Check (SLA0281-SCV3)		(Solid)	Lab File ID: 01242326ECD7.D				Analyzed: 01/24/23 20:33		
1-Bromo-2-Nitrobenzene	508189	3.491	503318	3.492	101	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	979067	14.265	647433	14.266	151	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	344105	3.928	336911	3.928	102	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	503378	15.007	382032	15.008	132	50 - 200	-0.001	+/-0.50	
Secondary Cal Check (SLA0281-SCV4)		(Solid)	Lab File ID: 01242327ECD7.D				Analyzed: 01/24/23 20:54		
1-Bromo-2-Nitrobenzene	504424	3.491	503318	3.492	100	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	968338	14.265	647433	14.266	150	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	342969	3.928	336911	3.928	102	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	515045	15.01	382032	15.008	135	50 - 200	0.002	+/-0.50	
Secondary Cal Check (SLA0281-SCV5)		(Solid)	Lab File ID: 01242328ECD7.D				Analyzed: 01/24/23 21:15		
1-Bromo-2-Nitrobenzene	503473	3.491	503318	3.492	100	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	991997	14.264	647433	14.266	153	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	340361	3.928	336911	3.928	101	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	521975	15.008	382032	15.008	137	50 - 200	0.000	+/-0.50	
Secondary Cal Check (SLA0281-SCV6)		(Solid)	Lab File ID: 01242329ECD7.D				Analyzed: 01/24/23 21:36		
1-Bromo-2-Nitrobenzene	487061	3.494	503318	3.492	97	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl	944934	14.266	647433	14.266	146	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	331721	3.93	336911	3.928	98	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl [2C]	502401	15.007	382032	15.008	132	50 - 200	-0.001	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0127	Instrument:	ECD7
		Calibration:	GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLB0127-ICV1)		(Solid)	Lab File ID: 02082307ECD7.D				Analyzed: 02/08/23 11:44		
1-Bromo-2-Nitrobenzene	376562	3.492	376562	3.492	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	440933	14.259	440933	14.259	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	341269	3.928	341269	3.928	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	371735	15.004	371735	15.004	100	50 - 200	0.000	+/-0.50	
Initial Cal Check (SLB0127-ICV2)		(Solid)	Lab File ID: 02082308ECD7.D				Analyzed: 02/08/23 12:05		
1-Bromo-2-Nitrobenzene	385050	3.491	385050	3.491	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	500148	14.257	500148	14.257	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	346416	3.927	346416	3.927	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	391615	15.003	391615	15.003	100	50 - 200	0.000	+/-0.50	
Blank (BLA0626-BLK1)		(Solid)	Lab File ID: 02082333ECD7.D				Analyzed: 02/08/23 20:50		
1-Bromo-2-Nitrobenzene	420471	3.49	385050	3.491	109	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	516103	14.257	500148	14.257	103	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	383529	3.927	346416	3.927	111	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	427398	15.001	391615	15.003	109	50 - 200	-0.002	+/-0.50	
LCS (BLA0626-BS1)		(Solid)	Lab File ID: 02082334ECD7.D				Analyzed: 02/08/23 21:11		
1-Bromo-2-Nitrobenzene	417676	3.491	385050	3.491	108	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	547599	14.258	500148	14.257	109	50 - 200	0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	380250	3.927	346416	3.927	110	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	453027	15.001	391615	15.003	116	50 - 200	-0.002	+/-0.50	
LCS Dup (BLA0626-BSD1)		(Solid)	Lab File ID: 02082335ECD7.D				Analyzed: 02/08/23 21:32		
1-Bromo-2-Nitrobenzene	416665	3.491	385050	3.491	108	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	555526	14.257	500148	14.257	111	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	381085	3.927	346416	3.927	110	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	458806	15.002	391615	15.003	117	50 - 200	-0.001	+/-0.50	
Reference (BLA0626-SRM1)		(Solid)	Lab File ID: 02082336ECD7.D				Analyzed: 02/08/23 21:53		
1-Bromo-2-Nitrobenzene	417163	3.491	385050	3.491	108	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	502062	14.251	500148	14.257	100	50 - 200	-0.006	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	368172	3.928	346416	3.927	106	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	439735	14.998	391615	15.003	112	50 - 200	-0.005	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0127	Instrument:	ECD7
		Calibration:	GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-IT1088 (23A0207-01)		(Solid)	Lab File ID: 02082337ECD7.D				Analyzed: 02/08/23 22:14		
1-Bromo-2-Nitrobenzene	409623	3.492	385050	3.491	106	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	483767	14.252	500148	14.257	97	50 - 200	-0.005	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	352454	3.929	346416	3.927	102	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl [2C]	414464	14.999	391615	15.003	106	50 - 200	-0.004	+/-0.50	
LDW23-IT1089 (23A0207-02)		(Solid)	Lab File ID: 02082338ECD7.D				Analyzed: 02/08/23 22:35		
1-Bromo-2-Nitrobenzene	403519	3.491	385050	3.491	105	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	419125	14.248	500148	14.257	84	50 - 200	-0.009	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	364675	3.928	346416	3.927	105	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	364602	14.997	391615	15.003	93	50 - 200	-0.006	+/-0.50	
LDW23-IT1079 (23A0207-03)		(Solid)	Lab File ID: 02082339ECD7.D				Analyzed: 02/08/23 22:55		
1-Bromo-2-Nitrobenzene	408181	3.491	385050	3.491	106	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	407722	14.248	500148	14.257	82	50 - 200	-0.009	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	355663	3.928	346416	3.927	103	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	356880	14.997	391615	15.003	91	50 - 200	-0.006	+/-0.50	
Matrix Spike (BLA0626-MS1)		(Solid)	Lab File ID: 02082340ECD7.D				Analyzed: 02/08/23 23:16		
1-Bromo-2-Nitrobenzene	397234	3.491	385050	3.491	103	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	406606	14.249	500148	14.257	81	50 - 200	-0.008	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	353289	3.928	346416	3.927	102	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	359183	14.997	391615	15.003	92	50 - 200	-0.006	+/-0.50	
Matrix Spike Dup (BLA0626-MSD1)		(Solid)	Lab File ID: 02082341ECD7.D				Analyzed: 02/08/23 23:37		
1-Bromo-2-Nitrobenzene	391584	3.491	385050	3.491	102	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	379432	14.249	500148	14.257	76	50 - 200	-0.008	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	339867	3.927	346416	3.927	98	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	340449	14.997	391615	15.003	87	50 - 200	-0.006	+/-0.50	
LDW23-IT1080 (23A0207-04)		(Solid)	Lab File ID: 02082342ECD7.D				Analyzed: 02/08/23 23:58		
1-Bromo-2-Nitrobenzene	399141	3.491	385050	3.491	104	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	371511	14.248	500148	14.257	74	50 - 200	-0.009	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	339290	3.927	346416	3.927	98	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	337220	14.997	391615	15.003	86	50 - 200	-0.006	+/-0.50	

Analytical Resources, LLC
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INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0127	Instrument:	ECD7
		Calibration:	GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-IT1080-FD (23A0207-05)		(Solid)	Lab File ID: 02082343ECD7.D				Analyzed: 02/09/23 00:20		
1-Bromo-2-Nitrobenzene	402535	3.49	385050	3.491	105	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	378168	14.248	500148	14.257	76	50 - 200	-0.009	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	342858	3.927	346416	3.927	99	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	376856	14.997	391615	15.003	96	50 - 200	-0.006	+/-0.50	
LDW23-IT1072 (23A0207-06)		(Solid)	Lab File ID: 02082344ECD7.D				Analyzed: 02/09/23 00:41		
1-Bromo-2-Nitrobenzene	420859	3.49	385050	3.491	109	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	339496	14.248	500148	14.257	68	50 - 200	-0.009	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	370171	3.927	346416	3.927	107	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	308793	14.996	391615	15.003	79	50 - 200	-0.007	+/-0.50	
LDW23-IT1081 (23A0207-07)		(Solid)	Lab File ID: 02082345ECD7.D				Analyzed: 02/09/23 01:02		
1-Bromo-2-Nitrobenzene	417072	3.49	385050	3.491	108	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	358007	14.25	500148	14.257	72	50 - 200	-0.007	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	365183	3.926	346416	3.927	105	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	322236	14.997	391615	15.003	82	50 - 200	-0.006	+/-0.50	
LDW23-IT1068 (23A0207-08)		(Solid)	Lab File ID: 02082346ECD7.D				Analyzed: 02/09/23 01:22		
1-Bromo-2-Nitrobenzene	398955	3.49	385050	3.491	104	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	419512	14.252	500148	14.257	84	50 - 200	-0.005	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	360842	3.927	346416	3.927	104	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	363903	15	391615	15.003	93	50 - 200	-0.003	+/-0.50	
LDW23-IT1062 (23A0207-09)		(Solid)	Lab File ID: 02082347ECD7.D				Analyzed: 02/09/23 01:44		
1-Bromo-2-Nitrobenzene	417588	3.491	385050	3.491	108	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	435045	14.25	500148	14.257	87	50 - 200	-0.007	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	366759	3.927	346416	3.927	106	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	380084	14.997	391615	15.003	97	50 - 200	-0.006	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0148	Instrument:	ECD7
		Calibration:	GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLB0148-ICV1)		(Solid)	Lab File ID: 02092306ECD7.D				Analyzed: 02/09/23 13:59		
1-Bromo-2-Nitrobenzene	368519	3.488	368519	3.488	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	512726	14.259	512726	14.259	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	338510	3.924	338510	3.924	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	475436	15.003	475436	15.003	100	50 - 200	0.000	+/-0.50	
Initial Cal Check (SLB0148-ICV2)		(Solid)	Lab File ID: 02092307ECD7.D				Analyzed: 02/09/23 14:20		
1-Bromo-2-Nitrobenzene	358012	3.489	358012	3.489	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	584784	14.259	584784	14.259	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	331462	3.926	331462	3.926	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	476501	15.003	476501	15.003	100	50 - 200	0.000	+/-0.50	
LDW23-IT1097 (23A0207-10)		(Solid)	Lab File ID: 02092309ECD7.D				Analyzed: 02/09/23 15:02		
1-Bromo-2-Nitrobenzene	350589	3.489	358012	3.489	98	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	347180	14.248	584784	14.259	59	50 - 200	-0.011	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	306746	3.926	331462	3.926	93	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	321958	14.994	476501	15.003	68	50 - 200	-0.009	+/-0.50	
LDW23-SC1085 (23A0207-11)		(Solid)	Lab File ID: 02092310ECD7.D				Analyzed: 02/09/23 15:23		
1-Bromo-2-Nitrobenzene	370378	3.488	358012	3.489	103	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	350937	14.247	584784	14.259	60	50 - 200	-0.012	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	316067	3.925	331462	3.926	95	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	334060	14.996	476501	15.003	70	50 - 200	-0.007	+/-0.50	
LDW23-SC1069 (23A0207-12)		(Solid)	Lab File ID: 02092311ECD7.D				Analyzed: 02/09/23 15:44		
1-Bromo-2-Nitrobenzene	366843	3.489	358012	3.489	102	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	392752	14.248	584784	14.259	67	50 - 200	-0.011	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	325677	3.925	331462	3.926	98	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	361072	14.997	476501	15.003	76	50 - 200	-0.006	+/-0.50	
LDW23-SC1058 (23A0207-13)		(Solid)	Lab File ID: 02092312ECD7.D				Analyzed: 02/09/23 16:05		
1-Bromo-2-Nitrobenzene	371377	3.488	358012	3.489	104	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	353329	14.248	584784	14.259	60	50 - 200	-0.011	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	318562	3.925	331462	3.926	96	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	373018	14.994	476501	15.003	78	50 - 200	-0.009	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0148	Instrument:	ECD7
		Calibration:	GA00061

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SC1073 (23A0207-14)		(Solid)		Lab File ID: 02092313ECD7.D				Analyzed: 02/09/23 16:27	
1-Bromo-2-Nitrobenzene	360239	3.489	358012	3.489	101	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	348028	14.247	584784	14.259	60	50 - 200	-0.012	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	322037	3.925	331462	3.926	97	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	329677	14.996	476501	15.003	69	50 - 200	-0.007	+/-0.50	
LDW23-IT1078 (23A0207-15)		(Solid)		Lab File ID: 02092314ECD7.D				Analyzed: 02/09/23 16:48	
1-Bromo-2-Nitrobenzene	372404	3.488	358012	3.489	104	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	320447	14.247	584784	14.259	55	50 - 200	-0.012	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	315067	3.924	331462	3.926	95	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	303098	14.996	476501	15.003	64	50 - 200	-0.007	+/-0.50	
LDW23-IT1201 (23A0207-16)		(Solid)		Lab File ID: 02092315ECD7.D				Analyzed: 02/09/23 17:09	
1-Bromo-2-Nitrobenzene	355370	3.488	358012	3.489	99	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	287989	14.249	584784	14.259	49	50 - 200	-0.010	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	302452	3.924	331462	3.926	91	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	312986	14.997	476501	15.003	66	50 - 200	-0.006	+/-0.50	
LDW23-IT1209 (23A0207-17)		(Solid)		Lab File ID: 02092316ECD7.D				Analyzed: 02/09/23 17:30	
1-Bromo-2-Nitrobenzene	340425	3.488	358012	3.489	95	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	288600	14.249	584784	14.259	49	50 - 200	-0.010	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	295883	3.925	331462	3.926	89	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	277623	14.996	476501	15.003	58	50 - 200	-0.007	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-01	File ID:	02082337ECD7.D
Sampled:	01/11/23 08:22	Prepared:	01/30/23 11:40	Analyzed:	02/08/23 22:14
Solids:	78.42	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0626	Sequence:	SLB0127		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.398	8.405	0.007	17787.25	12.5	13.4
	* 2	8.3	8.305	0.005	14169.5	14.3	
Aroclor 1254	1	9.287	9.298	0.011	21186.4	12.3	28.6
	* 2	9.439	9.447	0.008	29709.2	16.4	
Aroclor 1260	1	11.034	11.04533	0.0113	25584.2	13.8	19.
	* 2	11.645	11.65333	0.00833	31908.5	16.7	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-02	File ID:	02082338ECD7.D
Sampled:	01/11/23 08:42	Prepared:	01/30/23 11:40	Analyzed:	02/08/23 22:35
Solids:	78.60	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0626	Sequence:	SLB0127		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.396	8.405	0.009	57444.75	26.1	1.5
	2	8.299	8.305	0.006	27098	26.5	
Aroclor 1254	* 1	9.286	9.298	0.012	95466.6	56.5	1.1
	2	9.437	9.447	0.01	93698.2	55.9	
Aroclor 1260	1	11.033	11.04533	0.0123	57239.8	35.8	14.7
	* 2	11.643	11.65333	0.0103	75980.5	41.5	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-03	File ID:	02082339ECD7.D
Sampled:	01/11/23 09:04	Prepared:	01/30/23 11:40	Analyzed:	02/08/23 22:55
Solids:	79.98	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0626	Sequence:	SLB0127		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.397	8.405	0.008	9523	6.6	27.5
	* 2	8.298	8.305	0.007	9016.25	8.7	
Aroclor 1254	1	9.284	9.298	0.014	12268.2	7.0	15.8
	* 2	9.438	9.447	0.009	13526.4	8.2	
Aroclor 1260	1	11.03	11.04533	0.0153	10423.6	7.2	23.3
	* 2	11.642	11.65333	0.0113	14983.25	9.1	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-04	File ID:	02082342ECD7.D
Sampled:	01/11/23 09:24	Prepared:	01/30/23 11:40	Analyzed:	02/08/23 23:58
Solids:	73.60	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0626	Sequence:	SLB0127		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.395	8.405	0.01	52570	36.7	.5
	* 2	8.298	8.305	0.007	34213.25	36.9	
Aroclor 1254	1	9.285	9.298	0.013	72536.6	44.1	1.1
	* 2	9.436	9.447	0.011	70528.6	44.6	
Aroclor 1260	1	11.032	11.04533	0.0133	45229.6	31.1	19.2
	* 2	11.642	11.65333	0.0113	59182	37.7	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-05	File ID:	02082343ECD7.D
Sampled:	01/11/23 09:24	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 00:20
Solids:	71.34	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0626	Sequence:	SLB0127		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.396	8.405	0.009	55146.5	38.0	1.8
	* 2	8.298	8.305	0.007	36485	38.7	
Aroclor 1254	1	9.285	9.298	0.013	78816.6	47.6	3.3
	* 2	9.436	9.447	0.011	78658.4	49.2	
Aroclor 1260	1	11.032	11.04533	0.0133	61570.6	44.4	7.
	* 2	11.642	11.65333	0.0113	87838.5	47.6	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-06	File ID:	02082344ECD7.D
Sampled:	01/11/23 09:41	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 00:41
Solids:	78.96	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0626	Sequence:	SLB0127		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1254	* 1	9.283	9.298	0.015	14261	9.1	33.3
	2	9.437	9.447	0.01	11278.6	6.5	
Aroclor 1260	* 1	11.032	11.04533	0.0133	7667.4	6.0	10.5
	2	11.642	11.65333	0.0113	11010.5	5.4	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-07	File ID:	02082345ECD7.D
Sampled:	01/11/23 10:15	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 01:02
Solids:	78.77	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0626	Sequence:	SLB0127		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.397	8.405	0.008	11630.25	7.8	12.
	* 2	8.3	8.305	0.005	9230.5	8.8	
Aroclor 1254	* 1	9.287	9.298	0.011	17881.8	10.5	2.9
	2	9.438	9.447	0.009	17289	10.2	
Aroclor 1260	1	11.034	11.04533	0.0113	8360	6.4	13.1
	* 2	11.644	11.65333	0.00933	14770.25	7.3	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-09	File ID:	02082347ECD7.D
Sampled:	01/11/23 11:03	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 01:44
Solids:	73.00	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0626	Sequence:	SLB0127		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.397	8.405	0.008	21275.5	13.4	28.1
	2	8.3	8.305	0.005	11254.25	10.1	
Aroclor 1254	1	9.286	9.298	0.012	45052	26.0	10.6
	* 2	9.439	9.447	0.008	49656.4	28.9	
Aroclor 1260	1	11.033	11.04533	0.0123	48168.6	28.7	15.7
	* 2	11.644	11.65333	0.00933	61388	33.6	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-10	File ID:	02092309ECD7.D
Sampled:	01/11/23 11:32	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 15:02
Solids:	71.52	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0626	Sequence:	SLB0148		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.394	8.405	0.011	27352	10.7	36.6
	* 2	8.296	8.305	0.009	14104	15.5	
Aroclor 1254	1	9.283	9.298	0.015	61636.4	37.0	14.1
	* 2	9.435	9.447	0.012	60950.2	42.6	
Aroclor 1260	1	11.028	11.04533	0.0173	24583.4	21.0	18.2
	* 2	11.639	11.65333	0.0143	37427.5	25.2	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-11	File ID:	02092310ECD7.D
Sampled:	01/11/23 12:34	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 15:23
Solids:	47.76	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0626	Sequence:	SLB0148		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.393	8.405	0.012	33941.25	25.6	.4
	* 2	8.296	8.305	0.009	22541.5	25.7	
Aroclor 1254	1	9.283	9.298	0.015	47729.8	29.7	33.4
	* 2	9.435	9.447	0.012	61571.8	41.6	
Aroclor 1260	1	11.03	11.04533	0.0153	35631.6	27.4	11.7
	* 2	11.641	11.65333	0.0123	48968.75	30.8	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-12	File ID:	02092311ECD7.D
Sampled:	01/11/23 13:22	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 15:44
Solids:	77.00	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0626	Sequence:	SLB0148		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.394	8.405	0.011	21585	16.2	7.7
	* 2	8.298	8.305	0.007	13448.25	15.0	
Aroclor 1254	1	9.285	9.298	0.013	38610.2	20.0	37.1
	* 2	9.436	9.447	0.011	43790.4	29.1	
Aroclor 1260	1	11.032	11.04533	0.0133	44725	31.8	2.2
	* 2	11.642	11.65333	0.0113	93912	31.1	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-13	File ID:	02092312ECD7.D
Sampled:	01/11/23 13:09	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 16:05
Solids:	51.05	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0626	Sequence:	SLB0148		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.394	8.405	0.011	39373.25	29.6	3.8
	* 2	8.296	8.305	0.009	25354.75	28.5	
Aroclor 1254	1	9.283	9.298	0.015	58305.2	36.4	39.3
	* 2	9.434	9.447	0.013	80126	54.2	
Aroclor 1260	1	11.031	11.04533	0.0143	60816.4	46.2	7.7
	* 2	11.64	11.65333	0.0133	86654.25	49.9	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-14	File ID:	02092313ECD7.D
Sampled:	01/11/23 13:37	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 16:27
Solids:	70.44	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0626	Sequence:	SLB0148		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.395	8.405	0.01	26194.75	20.2	13.
	* 2	8.297	8.305	0.008	20243	23.0	
Aroclor 1254	1	9.284	9.298	0.014	46574.6	26.6	21.8
	* 2	9.436	9.447	0.011	51052.2	33.1	
Aroclor 1260	1	11.031	11.04533	0.0143	34553.2	27.4	18.8
	* 2	11.641	11.65333	0.0123	35748.25	22.7	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-15	File ID:	02092314ECD7.D
Sampled:	01/11/23 14:13	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 16:48
Solids:	77.75	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0626	Sequence:	SLB0148		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.393	8.405	0.012	83413.25	61.5	9.9
	* 2	8.295	8.305	0.01	47903.25	55.7	
Aroclor 1254	1	9.282	9.298	0.016	127697.6	71.7	23.8
	* 2	9.434	9.447	0.013	134082.8	91.1	
Aroclor 1260	1	11.03	11.04533	0.0153	86002.4	69.6	13.5
	* 2	11.641	11.65333	0.0123	119321.8	79.7	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-16	File ID:	02092315ECD7.D
Sampled:	01/11/23 14:54	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 17:09
Solids:	62.70	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0626	Sequence:	SLB0148		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.393	8.405	0.012	128561	99.2	.2
	* 2	8.295	8.305	0.01	86191.25	99.4	
Aroclor 1254	1	9.283	9.298	0.015	221883.4	124	36.3
	* 2	9.434	9.447	0.013	252139.2	179	
Aroclor 1260	1	11.031	11.04533	0.0143	104800.8	96.7	6.3
	* 2	11.64	11.65333	0.0133	159899.5	103	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-17	File ID:	02092316ECD7.D
Sampled:	01/11/23 15:21	Prepared:	01/30/23 11:40	Analyzed:	02/09/23 17:30
Solids:	63.22	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLA0626	Sequence:	SLB0148		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.393	8.405	0.012	68360	277	3.2
	* 2	8.295	8.305	0.01	48408	286	
Aroclor 1254	1	9.283	9.298	0.015	105509.2	364	13.8
	* 2	9.434	9.447	0.013	116409.6	418	
Aroclor 1260	1	11.03	11.04533	0.0153	45956.4	212	12.8
	* 2	11.641	11.65333	0.0123	66569	241	

* Column used for quantitation

HOLDING TIME SUMMARY

Analysis: EPA 8082A

Laboratory: Analytical Resources, LLC SDG: 23A0207

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-IT1088 23A0207-01	01/11/23 08:22	01/11/23 16:45	01/30/23 11:40	19	365	02/08/23 22:14	9	40	
LDW23-IT1089 23A0207-02	01/11/23 08:42	01/11/23 16:45	01/30/23 11:40	19	365	02/08/23 22:35	9	40	
LDW23-IT1079 23A0207-03	01/11/23 09:04	01/11/23 16:45	01/30/23 11:40	19	365	02/08/23 22:55	9	40	
LDW23-IT1080 23A0207-04	01/11/23 09:24	01/11/23 16:45	01/30/23 11:40	19	365	02/08/23 23:58	10	40	
LDW23-IT1080-FD 23A0207-05	01/11/23 09:24	01/11/23 16:45	01/30/23 11:40	19	365	02/09/23 00:20	10	40	
LDW23-IT1072 23A0207-06	01/11/23 09:41	01/11/23 16:45	01/30/23 11:40	19	365	02/09/23 00:41	10	40	
LDW23-IT1081 23A0207-07	01/11/23 10:15	01/11/23 16:45	01/30/23 11:40	19	365	02/09/23 01:02	10	40	
LDW23-IT1068 23A0207-08	01/11/23 10:45	01/11/23 16:45	01/30/23 11:40	19	365	02/09/23 01:22	10	40	
LDW23-IT1062 23A0207-09	01/11/23 11:03	01/11/23 16:45	01/30/23 11:40	19	365	02/09/23 01:44	10	40	
LDW23-IT1097 23A0207-10	01/11/23 11:32	01/11/23 16:45	01/30/23 11:40	19	365	02/09/23 15:02	10	40	
LDW23-SC1085 23A0207-11	01/11/23 12:34	01/11/23 16:45	01/30/23 11:40	18	365	02/09/23 15:23	10	40	
LDW23-SC1069 23A0207-12	01/11/23 13:22	01/11/23 16:45	01/30/23 11:40	18	365	02/09/23 15:44	10	40	
LDW23-SC1058 23A0207-13	01/11/23 13:09	01/11/23 16:45	01/30/23 11:40	18	365	02/09/23 16:05	10	40	
LDW23-SC1073 23A0207-14	01/11/23 13:37	01/11/23 16:45	01/30/23 11:40	18	365	02/09/23 16:27	10	40	
LDW23-IT1078 23A0207-15	01/11/23 14:13	01/11/23 16:45	01/30/23 11:40	18	365	02/09/23 16:48	10	40	
LDW23-IT1201 23A0207-16	01/11/23 14:54	01/11/23 16:45	01/30/23 11:40	18	365	02/09/23 17:09	10	40	
LDW23-IT1209 23A0207-17	01/11/23 15:21	01/11/23 16:45	01/30/23 11:40	18	365	02/09/23 17:30	10	40	
Matrix Spike BLA0626-MS1	01/11/23 09:04	01/11/23 16:45	01/30/23 11:40	19	365	02/08/23 23:16	9	40	
Matrix Spike Dup BLA0626-MSD1	01/11/23 09:04	01/11/23 16:45	01/30/23 11:40	19	365	02/08/23 23:37	9	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ECD7

Analyte	MDL	RL	Units
Aroclor 1016	1.6	4.0	ug/kg
Aroclor 1016 [2C]	1.6	4.0	ug/kg
Aroclor 1221	1.6	4.0	ug/kg
Aroclor 1221 [2C]	1.6	4.0	ug/kg
Aroclor 1232	1.6	4.0	ug/kg
Aroclor 1232 [2C]	1.6	4.0	ug/kg
Aroclor 1242	1.6	4.0	ug/kg
Aroclor 1242 [2C]	1.6	4.0	ug/kg
Aroclor 1248	1.6	4.0	ug/kg
Aroclor 1248 [2C]	1.6	4.0	ug/kg
Aroclor 1254	1.6	4.0	ug/kg
Aroclor 1254 [2C]	1.6	4.0	ug/kg
Aroclor 1260	0.6	4.0	ug/kg
Aroclor 1260 [2C]	0.6	4.0	ug/kg

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: S-279N
Description: Tetrachloro-m-xylene
Lot: 0052481B-1
Solvent: N/A
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: Jul 28, 2005
Expiration: Jul 28, 2015
Sample Size: 100 mg
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

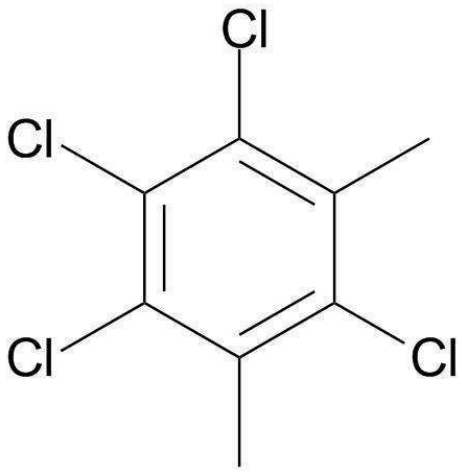
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration	Certified Analyte Concentration[1]
Tetrachloro-meta-xylene	877-09-8	96.0	N/A	N/A

Identification:

Molecular formula: C8H6Cl4
Molecular weight: 243.94



C000147
tetrachlormetaxylene
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] The Uncertainty calculated for this product is ±2.4%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Metrological traceability is established through in-house validated methods.

Purity, if stated, is equal to 100% minus found impurity components. Impurity components have not been identified.

The information on this certificate may not be reproduced without the express permission of the manufacturer. See reverse side for additional information

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

EXPIRED AccuStandard

AccuStandard
125 Market Street
New Haven, CT 06513
(203) 786-5290

CERTIFICATE OF PRODUCT DATA

PRODUCT: C-209N
DESCRIPTION: 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl
LOT #: 990521LB-AC
SOLVENT: N/A

EXPIRATION: Jul 28, 2015

This product is guaranteed accurate to ±0.5% of the Certified Analyte concentration through the Expiration Date on the Label.

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1]	Certified Analyte Concentration[2]
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	100	N/A	N/A

C000148
decachlorbiphenyl
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

* I1768A

Certified by: R. Cooper

1. All weights are traceable through National Institute of Standards & Technology, Test No. 822/254480
2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty calculated for this product is ±4% which is the Combined Uncertainty uc(y). It represents an estimated standard deviation equal to the positive square root of the total variance of the uncertainty of components. The Expanded Uncertainty is U which is Uc(y) *K where K is the coverage factor at the 95% confidence level (K=2).
3. A product with a suffix (-1A, -2B, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

Please note: AccuStandard follows the U.S. conventions in reporting numerical values, on both certificates and labels.

A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

This product was manufactured in accordance to quality system requirements of ISO 9001:2000 and ISO 17025

* Recertified 2 4-6-09 JS

Analytical Standard Record

Standard ID: C000148 **Printed: 4/23/2015 11:54:44AM**

Description:	decachlorbiphenyl	Expires:	15-Jan-2020
Standard Type:	Other	Prepared:	15-Jan-2014
Solvent:	na/a	Prepared By:	Joshua Rains
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	27-Feb-2015 13:03 by JGR
Vendor:	Accustandard	Lot #:	990521lb-ac
Vendor Catalog #:			

Comments

see i1768a
SOM calibrations added 06/12/14 sdrd

Analyte	CAS Number	Concentration	Units
Decachlorobiphenyl [2C]	2051-24-3	1000000	ug/mL
Decachlorobiphenyl	2051-24-3	1000000	ug/mL
DCB 1660 [2C]	2051-24-3	1000000	ug/mL
DCB 1660	2051-24-3	1000000	ug/mL
DCB [2C]	2051-24-3	1000000	ug/mL
DCB (A) [2C]	2051-24-3	1000000	ug/mL
DCB (A)	2051-24-3	1000000	ug/mL
DCB	2051-24-3	1000000	ug/mL

Reviewed By Date

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Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101461
Description: Aroclor 1254
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL13053
Certification Date: November 29, 2018
Expiration Date: November 30, 2026

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1254	11097-69-1	1000	± 0.246%

I09808
Recd. JP
02/24/20

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Certificate No. 2427.02

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Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

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IL11110613_us

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101462
Description: Aroclor 1260
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL16516
Certification Date: March 4, 2021
Expiration Date: February 28, 2029

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1260	11096-82-5	1000	± 0.553%

J 006465

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101468
Description: Aroclor 1221
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14017
Certification Date: August 20, 2019
Expiration Date: August 31, 2027

Andrea L Gill
Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1221	11104-28-2	1000	± 0.553%

J00466
Rec'd
06/18/21

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Certicate No. 2427.02

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Certified Reference Materials

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101469
Description: Aroclor 1232
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14914
Certification Date: January 31, 2020
Expiration Date: January 31, 2028

Andrea L Gill
Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1232	11141-16-5	1000	± 0.738%

J006467 JR
read
06/18/21

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Certicate No. 2427.03

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2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101470
Description: Aroclor 1242
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14018
Certification Date: August 20, 2019
Expiration Date: August 31, 2027

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1242	53469-21-9	1000	± 0.553%

J006468
Read JR
06/18/21

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Certicate No. 2427.02

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3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.:	AL0-101471	**Lot Number:**	CL15384
Description:	Aroclor 1248	**Certification Date:**	June 19, 2020
Storage:	4 °C	**Expiration Date:**	June 30, 2028
Provided As:	1 mL in 2 mL Ampoule in Isooctane		

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1248	12672-29-6	1000	± 0.520%

JJ06469
Reed, JR
06/18/21

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Certicate No. 2427.02

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5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

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Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101474
Description: Aroclor 1262
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL11330
Certification Date: May 15, 2015
Expiration Date: April 30, 2023
Revision Date: April 2, 2018

Andrea L Gill
Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1262	37324-23-5	1000	± 0.516%

J 00647
Red JR
06/18/21

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Certificate No. 2427.02

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

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Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.:	AL0-101475	**Lot Number:**	CL11331
Description:	Aroclor 1268	**Certification Date:**	May 15, 2015
Storage:	4 °C	**Expiration Date:**	April 30, 2023
Provided As:	1 mL in 2 mL Ampoule in Isooctane	**Revision Date:**	April 2, 2018

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1268	11100-14-4	1000	± 0.516%

J006472
Rec'd
06/18/21

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL11110613_us

Certificate of Analysis

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Access your MSDS and digital C of A at www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

Certificate of Analysis

Produced by Phenova
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Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101467
Description: Aroclor 1016
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL16555
Certification Date: June 22, 2021
Expiration Date: February 28, 2029

J012591
AROCLOR 1016
Expires 2/28/2029
Prepared By Joshua Rains 11/26/2021

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1016	12674-11-2	1000	± 0.310%

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_us

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

Agilent

Aroclor 1016 Solution

Product Number: PP-282 **Page:** 1 of 1

Lot Number: CR-0761 **Lot Issue Date:** 28-Feb-2017 **Expiration Date:** 31-Mar-2025

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1016	012674-11-2	NT01016	100.2 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1254 Reed JR 02/05/22

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

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Agilent

Certificate of Analysis

Product Name: Aroclor 1260 Standard

Product Number: PP-362-1 **Lot Issue Date:** 20-Jan-2021

Lot Number: 0006582048 **Expiration Date:** 28-Feb-2025

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1260	011096-82-5	NT01023	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K 1255

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

MJBourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
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Certificate of Analysis
ISO Guide 34

Aroclor 1242 Solution

Product Number: PP-312 **Page:** 1 of 1

Lot Number: CS-6293 **Lot Issue Date:** 04-Jan-2019 **Expiration Date:** 31-Jan-2023

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1242	053469-21-9	NT01020	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1256

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ISO Guide 34 Cert No.
AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026
registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO17025 Cert No.
AT-1937

ISO 17034

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Reference Material Certificate

Product Name:	Aroclor 1248 Standard	**Lot Number:**	0006626997
Product Number:	PP-342-1	**Lot Issue Date:**	17-Aug-2021
Storage Conditions:	Store at Room Temperature (15° to 30°C).	**Expiration Date:**	30-Sep-2025

	CERTIFIED VALUES				
Component Name	Concentration		Expanded Uncertainty	CAS#	Analyte Lot
Aroclor 1248	100.3	±	0.5 µg/mL	012672-29-6	NT01582

Matrix: isooctane (2,2,4-trimethylpentane)

K1257

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:
The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

Certificate of Analysis

Agilent

Aroclor 1254 Solution

Product Number: PP-352 **Page:** 1 of 1

Lot Number: CS-2321 **Lot Issue Date:** 04-May-2018 **Expiration Date:** 31-May-2026

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1254	011097-69-1	RM00922	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1258

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 9001
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TUV USA, Inc.

Agilent

Certificate of Analysis

Product Name: Aroclor 1221 Standard

Product Number: PP-292-1 **Lot Issue Date:** 28-Apr-2020

Lot Number: 0006535333 **Expiration Date:** 31-May-2024

Description:

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1221	011104-28-2	RM04278	100.2 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K1259

Traceability:

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:

This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:

Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:

The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

MBourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert No. AT-1937

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Certificate of Analysis
ISO 17034

Aroclor 1262 Standard

Product Number: PP-372-1 **Page:** 1 of 1

Lot Number: 0006499800 **Lot Issue Date:** 04-Nov-2019 **Expiration Date:** 30-Nov-2023

This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent Technologies ISO 9001 registered quality system. A review of the gravimetric preparation data by our ISO 17025 accredited laboratory serves to verify the concentration of each analyte. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1262	037324-23-5	RM14263	100.0 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1260

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026 registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

Agilent

Certificate of Analysis
ISO 17034

Aroclor 1232 Standard

Product Number: PP-302-1 **Page:** 1 of 1

Lot Number: CF-2197A **Lot Issue Date:** 05-Jul-2016 **Expiration Date:** 31-Aug-2023

This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1232	011141-16-5	NT01717	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1261

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026 registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO17025 Cert No. AT-1937

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Certificate of Analysis

Product Name: Aroclor 1268 Standard

Product Number: PP-382-1 **Lot Issue Date:** 09-Feb-2021

Lot Number: 0006587800 **Expiration Date:** 31-Mar-2029

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1268	011100-14-4	RM00937	100.0 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K1262

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026
Page: 1 of 1
www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101467
Description: Aroclor 1016
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL12975
Certification Date: November 19, 2018
Expiration Date: October 31, 2026

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1016	12674-11-2	1000	± 0.553%

K 5829

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL11110613_us

Certificate of Analysis

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

   $$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

ILT1116613_US

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101462
Description: Aroclor 1260
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL18021
Certification Date: February 14, 2022
Expiration Date: February 28, 2030

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1260	11096-82-5	1000	± 0.553%

K005830

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL6493018_us

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Recipient Copy

CHAIN-OF-CUSTODY RECORD

COC No. 15570

Order Number: CB014985

Date Shipped: 12/12/2022

AirBill No(s): 519204142631

From: QATS LABORATORY
2700 CHANDLER AVENUE, BLDG. B
LAS VEGAS, NV 89120
PHONE: 1-702-895-8712

To: SUE DUNNIHOO
ANALYTICAL RESOURCES INC.
4611 S. 134TH PLACE SUITE 100
TUKWILA WA 98168
250-695-6207

Sample ID	Sigma ID	Qty	Description/Remarks	→ Catalogue Number
KO11477 PSRM0168	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM
KO11478 PSRM0169	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM
KO11479 PSRM0171	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM

12/12/2022

PUGET SOUND SRM FOR DUWAMISH AOC4 PROJECT.

Please use the enclosed Sample Preparation Instructions. If catalogue number(s) are listed at the top of the Sample Preparation Instructions use the Sample Preparation Instructions with catalogue number(s) matching the catalogue number(s) of each of the samples listed above.

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
	12/12/2022 (1400)	P Hilly	12/12/22 11:15
Custody Seal(s): Present/Absent	Remarks:		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1089

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-02 B	File ID:	23022318
Sampled:	01/11/23 08:42	Prepared:	01/24/23 13:10	Analyzed:	02/24/23 00:14
% Solids:	80.60	Preparation:	EPA 1613	Initial/Final:	12.41 g Wet / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.769	0.655-0.886	0.083	1.00	0.259	ng/kg	J, B
1746-01-6	2,3,7,8-TCDD	1	0.372	0.655-0.886	0.056	1.00	0.206	ng/kg	EMPC, J
57117-41-6	1,2,3,7,8-PeCDF	1	2.143	1.318-1.783	0.094	1.00	0.262	ng/kg	EMPC, J
57117-31-4	2,3,4,7,8-PeCDF	1	1.720	1.318-1.783	0.092	1.00	0.731	ng/kg	J
40321-76-4	1,2,3,7,8-PeCDD	1	1.355	1.318-1.783	0.171	1.00	0.901	ng/kg	J
70648-26-9	1,2,3,4,7,8-HxCDF	1	1.395	1.054-1.426	0.076	1.00	3.01	ng/kg	B
57117-44-9	1,2,3,6,7,8-HxCDF	1	1.246	1.054-1.426	0.070	1.00	1.04	ng/kg	
60851-34-5	2,3,4,6,7,8-HxCDF	1	1.289	1.054-1.426	0.076	1.00	1.54	ng/kg	
72918-21-9	1,2,3,7,8,9-HxCDF	1	1.825	1.054-1.426	0.088	1.00	0.455	ng/kg	EMPC, J, B
39227-28-6	1,2,3,4,7,8-HxCDD	1	1.234	1.054-1.426	0.100	1.00	1.13	ng/kg	
57653-85-7	1,2,3,6,7,8-HxCDD	1	1.183	1.054-1.426	0.099	1.00	3.28	ng/kg	
19408-74-3	1,2,3,7,8,9-HxCDD	1	1.241	1.054-1.426	0.102	1.00	2.88	ng/kg	B
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	1.046	0.893-1.208	0.115	1.00	24.8	ng/kg	
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.948	0.893-1.208	0.169	1.00	1.70	ng/kg	
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.067	0.893-1.208	0.289	2.50	90.5	ng/kg	B
39001-02-0	OCDF	1	0.858	0.757-1.024	0.139	2.50	50.0	ng/kg	
3268-87-9	OCDD	1	0.877	0.757-1.024	0.348	10.0	655	ng/kg	B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			1.00	5.21	ng/kg	
41903-57-5	Total TCDD	1	0.000			1.00	0.135	ng/kg	
30402-15-4	Total PeCDF	1	0.000			1.00	8.99	ng/kg	
36088-22-9	Total PeCDD	1	0.000			1.00	1.49	ng/kg	
55684-94-1	Total HxCDF	1	0.000			1.00	28.5	ng/kg	
34465-46-8	Total HxCDD	1	0.000			1.00	23.5	ng/kg	
38998-75-3	Total HpCDF	1	0.000			1.00	66.7	ng/kg	
37871-00-4	Total HpCDD	1	0.000			1.00	174	ng/kg	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 4.08

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 4.08

LDW23-IT1089

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-02	File ID:	23022318
Sampled:	01/11/23 08:42	Prepared:	01/24/23 13:10	Analyzed:	02/24/23 00:14
Solids Wt%:	80.60	Preparation:	EPA 1613	Initial/Final:	12.41 g / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.747	0.655-0.886	0.081	84.1	24 - 169 %	
13C12-2,3,7,8-TCDD		0.769	0.655-0.886	0.135	111	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.558	1.318-1.783	0.144	106	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.557	1.318-1.783	0.150	104	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.708	1.318-1.783	0.109	84.1	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.506	0.434-0.587	0.204	99.5	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.511	0.434-0.587	0.199	107	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.512	0.434-0.587	0.211	101	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.513	0.434-0.587	0.231	96.8	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.218	1.054-1.426	0.164	110	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.250	1.054-1.426	0.159	113	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.445	0.374-0.506	0.199	70.8	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.440	0.374-0.506	0.228	68.3	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.088	0.893-1.208	0.143	72.8	23 - 140 %	
13C12-OCDD		0.908	0.757-1.024	0.178	71.8	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.046	89.7	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:14:37 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: 23A0207-02, Name: 23022318, Date: 24-Feb-2023, Time: 00:14:46, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.986	1.001	4.653e2	6.049e2	0.876	0.769	0.770	922	865	6.18e3	9.05e3	6.7	10.5	NO	dd	dd	0.130
12378-PeCDF	30.153	1.001	7.710e2	3.597e2	0.845	2.143	1.550	877	1091	1.21e4	5.82e3	13.8	5.3	YES	bb	bb	0.131
23478-PeCDF	31.490	1.001	2.026e3	1.178e3	0.911	1.720	1.550	877	1091	2.90e4	1.70e4	33.0	15.6	NO	dd	db	0.366
123478-HxCDF	35.100	1.000	8.290e3	5.943e3	1.182	1.395	1.240	933	1024	1.25e5	9.78e4	134.1	95.5	NO	bd	bd	1.507
234678-HxCDF	36.081	1.000	4.154e3	3.222e3	1.229	1.289	1.240	933	1024	4.85e4	3.79e4	52.0	37.0	NO	bd	bb	0.768
123678-HxCDF	35.245	1.001	3.164e3	2.539e3	1.248	1.246	1.240	933	1024	4.49e4	4.01e4	48.2	39.2	NO	db	db	0.520
123789-HxCDF	37.106	1.000	1.196e3	6.550e2	1.187	1.825	1.240	933	1024	1.57e4	1.12e4	16.8	11.0	YES	bd	bb	0.228
1234678-HpCDF	38.966	1.000	4.278e4	4.092e4	1.204	1.046	1.050	1095	1067	6.78e5	6.78e5	618.9	636.0	NO	bd	bb	12.424
1234789-HpCDF	41.239	1.000	2.276e3	2.401e3	1.165	0.948	1.050	1095	1067	2.88e4	3.07e4	26.3	28.8	NO	bb	bb	0.851
OCDF	45.527	1.006	5.915e4	6.891e4	1.186	0.858	0.890	530	920	6.38e5	7.32e5	1202.9	795.4	NO	bd	bb	25.026
2378-TCDD	26.622	1.000	2.675e2	7.197e2	1.236	0.372	0.770	804	552	3.49e3	1.04e4	4.3	18.9	YES	bd	bd	0.103
12378-PeCDD	31.747	1.001	1.373e3	1.013e3	1.087	1.355	1.550	1122	1088	1.95e4	1.39e4	17.4	12.7	NO	bb	bb	0.451
123478-HxCDD	36.214	1.000	2.410e3	1.953e3	0.987	1.234	1.240	1067	1100	4.09e4	3.59e4	38.3	32.6	NO	bd	bd	0.564
123678-HxCDD	36.337	1.000	7.548e3	6.380e3	1.021	1.183	1.240	1067	1100	1.29e5	1.01e5	121.0	91.7	NO	dd	dd	1.638
123789-HxCDD	36.716	1.011	6.355e3	5.121e3	0.985	1.241	1.240	1067	1100	9.88e4	8.18e4	92.7	74.4	NO	bb	bb	1.440
1234678-HpCDD	40.481	1.000	1.271e5	1.191e5	1.253	1.067	1.050	2237	1786	1.88e6	1.79e6	840.8	1004.4	NO	bb	bb	45.240
OCDD	45.289	1.000	7.275e5	8.295e5	1.103	0.877	0.890	1527	1838	8.71e6	9.95e6	5706.5	5413.2	NO	bb	bb	327.334
13C-2378-TCDF	25.958	1.007	4.029e5	5.394e5	1.768	0.747	0.770	1518	906	6.26e6	8.30e6	4126.3	9155.5	NO	bb	bb	84.137
13C-12378-PeCDF	30.131	1.168	6.224e5	3.994e5	1.527	1.558	1.550	2273	1434	9.07e6	5.80e6	3991.5	4041.9	NO	bd	bd	105.623
13C-23478-PeCDF	31.468	1.220	5.854e5	3.761e5	1.466	1.557	1.550	2273	1434	8.53e6	5.45e6	3753.9	3801.2	NO	bb	bb	103.514
13C-123478-HxCDF	35.089	0.956	2.685e5	5.309e5	1.054	0.506	0.510	2014	2534	4.37e6	8.64e6	2168.9	3408.3	NO	bd	bd	99.492
13C-123678-HxCDF	35.223	0.960	2.970e5	5.812e5	1.080	0.511	0.510	2014	2534	4.57e6	8.88e6	2267.1	3503.7	NO	db	db	106.638
13C-234678-HxCDF	36.092	0.983	2.645e5	5.167e5	1.014	0.512	0.510	2014	2534	4.27e6	8.38e6	2120.2	3307.0	NO	bb	bb	100.998
13C-123789-HxCDF	37.117	1.011	2.323e5	4.524e5	0.928	0.513	0.510	2014	2534	3.83e6	7.49e6	1901.8	2955.8	NO	bb	bb	96.768
13C-1234678-HpCDF	38.955	1.061	1.724e5	3.870e5	1.036	0.445	0.440	1896	2474	2.89e6	6.41e6	1526.6	2593.1	NO	bb	bb	70.808
13C-1234789-HpCDF	41.228	1.123	1.442e5	3.274e5	0.905	0.440	0.440	1896	2474	2.02e6	4.43e6	1063.9	1792.6	NO	bb	bb	68.336
13C-1234-TCDD	25.788	0.000	2.763e5	3.572e5	1.000	0.773	0.770	1511	991	4.41e6	5.64e6	2919.4	5691.3	NO	bb	bb	100.000
13C-2378-TCDD	26.608	1.032	3.374e5	4.385e5	1.103	0.769	0.770	1511	991	5.11e6	6.73e6	3382.6	6788.5	NO	bb	bb	111.052
13C-12378-PeCDD	31.725	1.230	3.071e5	1.798e5	0.914	1.708	1.550	782	894	4.51e6	2.62e6	5765.3	2928.9	NO	bd	bb	84.076
13C-123478-HxCDD	36.203	0.986	4.305e5	3.535e5	0.933	1.218	1.240	1741	1502	7.20e6	5.91e6	4132.7	3936.4	NO	bd	bd	110.210
13C-123678-HxCDD	36.326	0.990	4.627e5	3.701e5	0.965	1.250	1.240	1741	1502	7.15e6	5.56e6	4107.2	3700.3	NO	db	db	113.225
13C-1234678-HpCDD	40.470	1.103	2.263e5	2.080e5	0.782	1.088	1.050	1078	1301	3.47e6	3.19e6	3221.6	2451.1	NO	bb	bb	72.836
13C-OCDD	45.271	1.233	4.107e5	4.521e5	0.788	0.908	0.890	1415	1561	5.01e6	5.57e6	3538.7	3569.2	NO	bb	bb	143.537
13C-123789-HxCDD	36.704	0.000	4.158e5	3.468e5	1.000	1.199	1.240	1741	1502	6.94e6	5.84e6	3983.6	3887.0	NO	bb	bb	100.000
37CL-2378-TCDD	26.622	1.032	2.803e5		1.233			948		4.37e6		4607.4			bb		35.878

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:14:37 Pacific Standard Time

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Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.455	0.865	8.190e1	2.953e2	1.064	0.277	0.770	922	865	1.71e3	4.62e3	1.9	5.3	YES	bb	bb	0.038
1289-TCDF					0.858		0.770	922	865								
13468-PECDF					1.013		1.550	637	775								
12389-PECDF					0.844		1.550	877	1091								
123468-HXCDF	33.451	0.953	8.518e3	7.106e3	1.197	1.199	1.240	933	1024	1.34e5	1.12e5	144.0	109.1	NO	bb	bb	1.632
1368-TCDD	23.740	0.892	9.957e2	9.831e2	1.084	1.013	0.770	804	552	1.45e4	1.62e4	18.0	29.4	YES	bd	bb	0.235
1289-TCDD					0.975		0.770	804	552								
12479-PECDD	29.017	0.915	2.414e3	7.596e2	1.837	3.178	1.550	1122	1088	2.26e4	1.45e4	20.1	13.3	YES	bb	bd	0.355
12389-PECDD					1.252		1.550	1122	1088								
124679-HXCDD	34.220	0.945	1.306e4	1.002e4	1.033	1.303	1.240	1067	1100	2.01e5	1.60e5	188.3	145.2	NO	bb	bb	2.850
1234679-HPCDD	39.423	0.974	1.211e5	1.127e5	1.286	1.074	1.050	2237	1786	1.96e6	1.84e6	873.9	1029.1	NO	bb	bb	41.872
Total-tetrafurans			9.981e3		0.933			922		1.56e5							2.604
Total-penta1			1.864e4					637		2.80e5							3.307
Total-pentafurans			6.275e3		0.866			877		9.35e4							1.188
Total-hexafurans			7.593e4		1.208			933		1.16e6							14.270
Total-heptafurans			1.070e5		1.185			1095		1.64e6							33.367
Total-Furans			2.770e5		1.067			922		3.97e6							79.762
Total-tetradioxins			2.560e2		1.099			804		4.46e3							0.068
Total-pentadioxins			2.568e3		1.392			1122		3.63e4							0.746
Total-hexadioxins			5.281e4		1.007			1067		7.34e5							11.753
Total-heptadioxins			2.482e5		1.269			2237		3.84e6							87.112
Total-Dioxins			1.031e6		1.165			804		1.33e7							427.012
Total-TEQ			1.308e6					804		1.73e7							506.774
FUNCTION1 PFK			3.904e7					405192		2.17e7							
FUNCTION2 PFK			1.936e5					225887		5.64e6							0.000
FUNCTION3 PFK			1.281e4					434842		6.41e5							0.000
FUNCTION4 PFK			4.819e5					217362		1.36e7							
FUNCTION5 PFK			2.278e4					158883		1.12e6							
FUNCTION1 HXCD...			8.968e2					550		1.58e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			4.261e2					798		9.37e3							0.000
FUNCTION3 OCDPE			4.161e2					569		7.85e3							0.000
FUNCTION4 NCDPE			3.800e3					617		6.41e4							0.000
FUNCTION5 DCDPE			1.605e2					486		3.27e3							0.000

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.25	8.798e2	9.993e2	0.933	0.88	0.77	12.1	YES	NO	db	db	0.214
2	Total-tetrafurans	23.97	1.052e3	1.364e3	0.933	0.77	0.77	18.3	YES	NO	bd	bd	0.275
3	Total-tetrafurans	23.60	6.059e2	7.536e2	0.933	0.80	0.77	9.2	YES	NO	dd	dd	0.155
4	Total-tetrafurans	23.47	2.648e2	3.125e2	0.933	0.85	0.77	4.7	YES	NO	dd	dd	0.066
5	Total-tetrafurans	23.30	1.579e3	2.093e3	0.933	0.75	0.77	26.8	YES	NO	bd	bd	0.418
6	Total-tetrafurans	22.72	7.602e2	8.815e2	0.933	0.86	0.77	14.6	YES	NO	bb	bb	0.187
7	Total-tetrafurans	27.61	2.546e3	3.626e3	0.933	0.70	0.77	43.3	YES	NO	bb	bb	0.702
8	Total-tetrafurans	26.20	3.477e2	4.540e2	0.933	0.77	0.77	5.3	YES	NO	dd	db	0.091
9	Total-tetrafurans	26.10	1.327e3	1.567e3	0.933	0.85	0.77	24.4	YES	NO	dd	dd	0.329
10	2378-TCDF	25.99	4.653e2	6.049e2	0.876	0.77	0.77	6.7	YES	NO	dd	dd	0.130
11	Total-tetrafurans	25.66	1.540e2	1.838e2	0.933	0.84	0.77	3.6	YES	NO	bd	bd	0.038

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-penta1	27.40	1.864e4	1.235e4		1.51	1.55	440.3	YES	NO	bb	db	3.307

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	28.43	1.098e2	7.877e1	0.866	1.39	1.55	2.7	NO	NO	bb	bb	0.022
2	23478-PeCDF	31.49	2.026e3	1.178e3	0.911	1.72	1.55	33.0	YES	NO	dd	db	0.366
3	Total-pentafurans	31.33	1.576e3	1.101e3	0.866	1.43	1.55	24.0	YES	NO	dd	dd	0.312
4	Total-pentafurans	29.86	5.833e2	4.374e2	0.866	1.33	1.55	12.0	YES	NO	db	db	0.119
5	Total-pentafurans	29.77	1.979e3	1.199e3	0.866	1.65	1.55	34.9	YES	NO	dd	dd	0.370

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HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	234678-HxCDF	36.08	4.154e3	3.222e3	1.229	1.29	1.24	52.0	YES	NO	bd	bb	0.768
2	123678-HxCDF	35.25	3.164e3	2.539e3	1.248	1.25	1.24	48.2	YES	NO	db	db	0.520
3	123478-HxCDF	35.10	8.290e3	5.943e3	1.182	1.39	1.24	134.1	YES	NO	bd	bd	1.507
4	Total-hexafurans	34.96	8.607e2	6.215e2	1.208	1.38	1.24	15.4	YES	NO	bb	bb	0.156
5	Total-hexafurans	34.49	2.263e4	1.818e4	1.208	1.24	1.24	386.6	YES	NO	bb	bd	4.297
6	Total-hexafurans	33.65	2.831e4	2.287e4	1.208	1.24	1.24	467.6	YES	NO	bd	bb	5.389
7	123468-HXCDF	33.45	8.518e3	7.106e3	1.197	1.20	1.24	144.0	YES	NO	bb	bb	1.632

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.24	2.276e3	2.401e3	1.165	0.95	1.05	26.3	YES	NO	bb	bb	0.851
2	Total-heptafurans	39.63	6.197e4	6.073e4	1.185	1.02	1.05	851.3	YES	NO	bd	bb	20.092
3	1234678-HpCDF	38.97	4.278e4	4.092e4	1.204	1.05	1.05	618.9	YES	NO	bd	bb	12.424

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.25	8.798e2	9.993e2	0.933	0.88	0.77	12.1	YES	NO	db	db	0.214
2	Total-tetrafurans	23.97	1.052e3	1.364e3	0.933	0.77	0.77	18.3	YES	NO	bd	bd	0.275
3	Total-tetrafurans	23.60	6.059e2	7.536e2	0.933	0.80	0.77	9.2	YES	NO	dd	dd	0.155
4	Total-tetrafurans	23.47	2.648e2	3.125e2	0.933	0.85	0.77	4.7	YES	NO	dd	dd	0.066
5	Total-tetrafurans	23.30	1.579e3	2.093e3	0.933	0.75	0.77	26.8	YES	NO	bd	bd	0.418
6	Total-tetrafurans	22.72	7.602e2	8.815e2	0.933	0.86	0.77	14.6	YES	NO	bb	bb	0.187
7	Total-tetrafurans	27.61	2.546e3	3.626e3	0.933	0.70	0.77	43.3	YES	NO	bb	bb	0.702
8	Total-tetrafurans	26.20	3.477e2	4.540e2	0.933	0.77	0.77	5.3	YES	NO	dd	db	0.091
9	Total-tetrafurans	26.10	1.327e3	1.567e3	0.933	0.85	0.77	24.4	YES	NO	dd	dd	0.329
10	2378-TCDF	25.99	4.653e2	6.049e2	0.876	0.77	0.77	6.7	YES	NO	dd	dd	0.130
11	Total-tetrafurans	25.66	1.540e2	1.838e2	0.933	0.84	0.77	3.6	YES	NO	bd	bd	0.038
12	Total-pentafurans	28.43	1.098e2	7.877e1	0.866	1.39	1.55	2.7	NO	NO	bb	bb	0.022
13	23478-PeCDF	31.49	2.026e3	1.178e3	0.911	1.72	1.55	33.0	YES	NO	dd	db	0.366
14	Total-pentafurans	31.33	1.576e3	1.101e3	0.866	1.43	1.55	24.0	YES	NO	dd	dd	0.312
15	Total-pentafurans	29.86	5.833e2	4.374e2	0.866	1.33	1.55	12.0	YES	NO	db	db	0.119
16	Total-pentafurans	29.77	1.979e3	1.199e3	0.866	1.65	1.55	34.9	YES	NO	dd	dd	0.370
17	234678-HxCDF	36.08	4.154e3	3.222e3	1.229	1.29	1.24	52.0	YES	NO	bd	bb	0.768
18	123678-HxCDF	35.25	3.164e3	2.539e3	1.248	1.25	1.24	48.2	YES	NO	db	db	0.520
19	123478-HxCDF	35.10	8.290e3	5.943e3	1.182	1.39	1.24	134.1	YES	NO	bd	bd	1.507
20	Total-hexafurans	34.96	8.607e2	6.215e2	1.208	1.38	1.24	15.4	YES	NO	bb	bb	0.156
21	Total-hexafurans	34.49	2.263e4	1.818e4	1.208	1.24	1.24	386.6	YES	NO	bb	bd	4.297
22	Total-hexafurans	33.65	2.831e4	2.287e4	1.208	1.24	1.24	467.6	YES	NO	bd	bb	5.389
23	123468-HXCDF	33.45	8.518e3	7.106e3	1.197	1.20	1.24	144.0	YES	NO	bb	bb	1.632
24	1234789-HpCDF	41.24	2.276e3	2.401e3	1.165	0.95	1.05	26.3	YES	NO	bb	bb	0.851
25	Total-heptafurans	39.63	6.197e4	6.073e4	1.185	1.02	1.05	851.3	YES	NO	bd	bb	20.092
26	1234678-HpCDF	38.97	4.278e4	4.092e4	1.204	1.05	1.05	618.9	YES	NO	bd	bb	12.424
27	OCDF	45.53	5.915e4	6.891e4	1.186	0.86	0.89	1202.9	YES	NO	bd	bb	25.026
28	Total-penta1	27.40	1.864e4	1.235e4		1.51	1.55	440.3	YES	NO	bb	db	3.307

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	24.22	2.560e2	3.197e2	1.099	0.80	0.77	5.5	YES	NO	bb	bb	0.068

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PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentadioxins	30.14	1.196e3	8.030e2	1.392	1.49	1.55	15.0	YES	NO	bb	bb	0.295
2	12378-PeCDD	31.75	1.373e3	1.013e3	1.087	1.36	1.55	17.4	YES	NO	bb	bb	0.451

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HXCDD	34.22	1.306e4	1.002e4	1.033	1.30	1.24	188.3	YES	NO	bb	bb	2.850
2	123789-HxCDD	36.72	6.355e3	5.121e3	0.985	1.24	1.24	92.7	YES	NO	bb	bb	1.440
3	123678-HxCDD	36.34	7.548e3	6.380e3	1.021	1.18	1.24	121.0	YES	NO	dd	dd	1.638
4	123478-HxCDD	36.21	2.410e3	1.953e3	0.987	1.23	1.24	38.3	YES	NO	bd	bd	0.564
5	Total-hexadioxins	35.35	2.099e4	1.758e4	1.007	1.19	1.24	214.3	YES	NO	bd	bb	4.740
6	Total-hexadioxins	34.99	2.440e3	1.802e3	1.007	1.35	1.24	33.9	YES	NO	bd	bb	0.521

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.48	1.271e5	1.191e5	1.253	1.07	1.05	840.8	YES	NO	bb	bb	45.240
2	1234679-HPCDD	39.42	1.211e5	1.127e5	1.286	1.07	1.05	873.9	YES	NO	bb	bb	41.872

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	24.22	2.560e2	3.197e2	1.099	0.80	0.77	5.5	YES	NO	bb	bb	0.068
2	Total-pentadioxins	30.14	1.196e3	8.030e2	1.392	1.49	1.55	15.0	YES	NO	bb	bb	0.295
3	124679-HXCDD	34.22	1.306e4	1.002e4	1.033	1.30	1.24	188.3	YES	NO	bb	bb	2.850
4	12378-PeCDD	31.75	1.373e3	1.013e3	1.087	1.36	1.55	17.4	YES	NO	bb	bb	0.451
5	123789-HxCDD	36.72	6.355e3	5.121e3	0.985	1.24	1.24	92.7	YES	NO	bb	bb	1.440
6	123678-HxCDD	36.34	7.548e3	6.380e3	1.021	1.18	1.24	121.0	YES	NO	dd	dd	1.638
7	123478-HxCDD	36.21	2.410e3	1.953e3	0.987	1.23	1.24	38.3	YES	NO	bd	bd	0.564
8	Total-hexadioxins	35.35	2.099e4	1.758e4	1.007	1.19	1.24	214.3	YES	NO	bd	bb	4.740
9	Total-hexadioxins	34.99	2.440e3	1.802e3	1.007	1.35	1.24	33.9	YES	NO	bd	bb	0.521
10	1234678-HpCDD	40.48	1.271e5	1.191e5	1.253	1.07	1.05	840.8	YES	NO	bb	bb	45.240
11	1234679-HPCDD	39.42	1.211e5	1.127e5	1.286	1.07	1.05	873.9	YES	NO	bb	bb	41.872
12	OCDD	45.29	7.275e5	8.295e5	1.103	0.88	0.89	5706.5	YES	NO	bb	bb	327.334

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.25	8.798e2	9.993e2	0.933	0.88	0.77	12.1	YES	NO	db	db	0.214
2	Total-tetrafurans	23.97	1.052e3	1.364e3	0.933	0.77	0.77	18.3	YES	NO	bd	bd	0.275
3	Total-tetrafurans	23.60	6.059e2	7.536e2	0.933	0.80	0.77	9.2	YES	NO	dd	dd	0.155
4	Total-tetrafurans	23.47	2.648e2	3.125e2	0.933	0.85	0.77	4.7	YES	NO	dd	dd	0.066
5	Total-tetrafurans	23.30	1.579e3	2.093e3	0.933	0.75	0.77	26.8	YES	NO	bd	bd	0.418
6	Total-tetrafurans	22.72	7.602e2	8.815e2	0.933	0.86	0.77	14.6	YES	NO	bb	bb	0.187
7	Total-tetrafurans	27.61	2.546e3	3.626e3	0.933	0.70	0.77	43.3	YES	NO	bb	bb	0.702
8	Total-tetrafurans	26.20	3.477e2	4.540e2	0.933	0.77	0.77	5.3	YES	NO	dd	db	0.091
9	Total-tetrafurans	26.10	1.327e3	1.567e3	0.933	0.85	0.77	24.4	YES	NO	dd	dd	0.329
10	2378-TCDF	25.99	4.653e2	6.049e2	0.876	0.77	0.77	6.7	YES	NO	dd	dd	0.130
11	Total-tetrafurans	25.66	1.540e2	1.838e2	0.933	0.84	0.77	3.6	YES	NO	bd	bd	0.038
12	Total-pentafurans	28.43	1.098e2	7.877e1	0.866	1.39	1.55	2.7	NO	NO	bb	bb	0.022
13	23478-PeCDF	31.49	2.026e3	1.178e3	0.911	1.72	1.55	33.0	YES	NO	dd	db	0.366
14	Total-pentafurans	31.33	1.576e3	1.101e3	0.866	1.43	1.55	24.0	YES	NO	dd	dd	0.312
15	Total-pentafurans	29.86	5.833e2	4.374e2	0.866	1.33	1.55	12.0	YES	NO	db	db	0.119
16	Total-pentafurans	29.77	1.979e3	1.199e3	0.866	1.65	1.55	34.9	YES	NO	dd	dd	0.370
17	234678-HxCDF	36.08	4.154e3	3.222e3	1.229	1.29	1.24	52.0	YES	NO	bd	bb	0.768
18	123678-HxCDF	35.25	3.164e3	2.539e3	1.248	1.25	1.24	48.2	YES	NO	db	db	0.520
19	123478-HxCDF	35.10	8.290e3	5.943e3	1.182	1.39	1.24	134.1	YES	NO	bd	bd	1.507
20	Total-hexafurans	34.96	8.607e2	6.215e2	1.208	1.38	1.24	15.4	YES	NO	bb	bb	0.156
21	Total-hexafurans	34.49	2.263e4	1.818e4	1.208	1.24	1.24	386.6	YES	NO	bb	bd	4.297
22	Total-hexafurans	33.65	2.831e4	2.287e4	1.208	1.24	1.24	467.6	YES	NO	bd	bb	5.389
23	123468-HXCDF	33.45	8.518e3	7.106e3	1.197	1.20	1.24	144.0	YES	NO	bb	bb	1.632
24	1234789-HpCDF	41.24	2.276e3	2.401e3	1.165	0.95	1.05	26.3	YES	NO	bb	bb	0.851
25	Total-heptafurans	39.63	6.197e4	6.073e4	1.185	1.02	1.05	851.3	YES	NO	bd	bb	20.092
26	1234678-HpCDF	38.97	4.278e4	4.092e4	1.204	1.05	1.05	618.9	YES	NO	bd	bb	12.424
27	OCDF	45.53	5.915e4	6.891e4	1.186	0.86	0.89	1202.9	YES	NO	bd	bb	25.026
28	Total-penta1	27.40	1.864e4	1.235e4		1.51	1.55	440.3	YES	NO	bb	db	3.307
29	Total-tetradioxins	24.22	2.560e2	3.197e2	1.099	0.80	0.77	5.5	YES	NO	bb	bb	0.068
30	Total-pentadioxins	30.14	1.196e3	8.030e2	1.392	1.49	1.55	15.0	YES	NO	bb	bb	0.295
31	124679-HXCDD	34.22	1.306e4	1.002e4	1.033	1.30	1.24	188.3	YES	NO	bb	bb	2.850
32	12378-PeCDD	31.75	1.373e3	1.013e3	1.087	1.36	1.55	17.4	YES	NO	bb	bb	0.451
33	123789-HxCDD	36.72	6.355e3	5.121e3	0.985	1.24	1.24	92.7	YES	NO	bb	bb	1.440
34	123678-HxCDD	36.34	7.548e3	6.380e3	1.021	1.18	1.24	121.0	YES	NO	dd	dd	1.638
35	123478-HxCDD	36.21	2.410e3	1.953e3	0.987	1.23	1.24	38.3	YES	NO	bd	bd	0.564
36	Total-hexadioxins	35.35	2.099e4	1.758e4	1.007	1.19	1.24	214.3	YES	NO	bd	bb	4.740
37	Total-hexadioxins	34.99	2.440e3	1.802e3	1.007	1.35	1.24	33.9	YES	NO	bd	bb	0.521

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	1234678-HpCDD	40.48	1.271e5	1.191e5	1.253	1.07	1.05	840.8	YES	NO	bb	bb	45.240
39	1234679-HPCDD	39.42	1.211e5	1.127e5	1.286	1.07	1.05	873.9	YES	NO	bb	bb	41.872
40	OCDD	45.29	7.275e5	8.295e5	1.103	0.88	0.89	5706.5	YES	NO	bb	bb	327.334

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.18	3.904e7					53.7	YES		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.77	4.361e3					1.0	NO		bb		0.000
2	FUNCTION2 PFK	29.51	2.797e3					0.5	NO		bb		0.000
3	FUNCTION2 PFK	29.22	7.289e3					1.2	NO		bb		0.000
4	FUNCTION2 PFK	29.13	2.430e4					1.3	NO		db		0.000
5	FUNCTION2 PFK	29.06	7.056e3					1.3	NO		bd		0.000
6	FUNCTION2 PFK	28.79	1.856e4					1.7	NO		bb		0.000
7	FUNCTION2 PFK	28.60	5.840e3					1.2	NO		bb		0.000
8	FUNCTION2 PFK	32.73	4.553e3					0.9	NO		bb		0.000
9	FUNCTION2 PFK	32.67	4.463e3					0.9	NO		bb		0.000
10	FUNCTION2 PFK	32.54	2.368e4					1.7	NO		bb		0.000
11	FUNCTION2 PFK	32.21	5.827e3					1.2	NO		bb		0.000
12	FUNCTION2 PFK	32.17	1.112e3					0.4	NO		bb		0.000
13	FUNCTION2 PFK	31.95	7.224e3					1.2	NO		db		0.000
14	FUNCTION2 PFK	31.89	1.810e4					2.0	NO		dd		0.000
15	FUNCTION2 PFK	31.87	8.200e3					1.5	NO		bd		0.000
16	FUNCTION2 PFK	31.81	5.799e3					0.7	NO		bb		0.000
17	FUNCTION2 PFK	31.38	3.393e3					0.8	NO		bb		0.000
18	FUNCTION2 PFK	31.26	3.711e3					0.9	NO		bb		0.000
19	FUNCTION2 PFK	31.20	2.953e3					0.7	NO		bb		0.000
20	FUNCTION2 PFK	30.88	1.323e4					1.4	NO		bb		0.000
21	FUNCTION2 PFK	30.80	1.895e4					1.6	NO		bb		0.000
22	FUNCTION2 PFK	30.70	1.112e3					0.4	NO		bb		0.000
23	FUNCTION2 PFK	30.31	1.109e3					0.4	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	35.36	1.281e4					1.5	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	39.18	6.392e3					1.3	NO		bb		
2	FUNCTION4 PFK	38.99	1.478e4					1.7	NO		bb		
3	FUNCTION4 PFK	38.88	7.347e3					1.0	NO		db		
4	FUNCTION4 PFK	38.83	1.135e4					1.4	NO		bd		
5	FUNCTION4 PFK	38.73	8.261e3					1.1	NO		db		
6	FUNCTION4 PFK	38.70	2.569e3					0.8	NO		bd		
7	FUNCTION4 PFK	38.67	2.923e3					0.9	NO		db		
8	FUNCTION4 PFK	38.61	1.697e4					1.8	NO		bd		
9	FUNCTION4 PFK	38.48	5.309e3					0.7	NO		bb		
10	FUNCTION4 PFK	38.34	4.302e3					1.1	NO		bb		
11	FUNCTION4 PFK	38.20	1.269e4					1.6	NO		db		
12	FUNCTION4 PFK	38.15	7.658e3					1.2	NO		dd		
13	FUNCTION4 PFK	38.08	6.742e3					1.2	NO		bd		
14	FUNCTION4 PFK	41.16	5.938e3					1.0	NO		bb		
15	FUNCTION4 PFK	40.97	4.393e3					0.9	NO		bb		
16	FUNCTION4 PFK	40.82	1.910e4					1.7	NO		bb		
17	FUNCTION4 PFK	40.51	8.354e2					0.3	NO		bb		
18	FUNCTION4 PFK	40.33	9.550e3					1.1	NO		bb		
19	FUNCTION4 PFK	40.12	6.682e3					1.3	NO		bb		
20	FUNCTION4 PFK	39.85	1.049e3					0.4	NO		bb		
21	FUNCTION4 PFK	39.78	8.731e3					1.2	NO		bb		
22	FUNCTION4 PFK	39.68	8.069e3					0.8	NO		bb		
23	FUNCTION4 PFK	39.59	3.936e3					0.9	NO		bb		
24	FUNCTION4 PFK	39.53	1.675e4					1.9	NO		db		
25	FUNCTION4 PFK	39.49	7.920e3					1.7	NO		bd		
26	FUNCTION4 PFK	39.41	1.138e4					1.5	NO		db		
27	FUNCTION4 PFK	39.39	1.791e4					2.3	NO		dd		
28	FUNCTION4 PFK	39.33	2.025e4					2.1	NO		dd		
29	FUNCTION4 PFK	39.29	4.438e3					1.0	NO		bd		
30	FUNCTION4 PFK	42.75	1.529e4					2.0	NO		db		
31	FUNCTION4 PFK	42.71	1.683e4					2.9	NO		bd		
32	FUNCTION4 PFK	42.65	1.913e4					2.4	NO		db		
33	FUNCTION4 PFK	42.58	1.879e4					2.1	NO		bd		
34	FUNCTION4 PFK	42.53	5.044e3					0.8	NO		bb		
35	FUNCTION4 PFK	42.46	1.006e3					0.4	NO		bb		
36	FUNCTION4 PFK	42.31	2.693e4					2.0	NO		bb		
37	FUNCTION4 PFK	42.19	2.938e4					1.6	NO		db		

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION4 PFK	42.11	1.027e4					1.7	NO		dd		
39	FUNCTION4 PFK	42.05	1.182e4					1.3	NO		bd		
40	FUNCTION4 PFK	41.97	2.707e4					2.4	NO		db		
41	FUNCTION4 PFK	41.90	1.784e4					2.2	NO		bd		
42	FUNCTION4 PFK	41.73	7.157e3					1.2	NO		db		
43	FUNCTION4 PFK	41.68	9.153e3					1.4	NO		bd		
44	FUNCTION4 PFK	41.52	4.766e3					1.0	NO		bb		
45	FUNCTION4 PFK	41.31	2.094e3					0.4	NO		bb		
46	FUNCTION4 PFK	42.87	5.130e3					1.1	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.76	4.477e3					1.5	NO		bb		
2	FUNCTION5 PFK	43.72	1.698e3					0.8	NO		bb		
3	FUNCTION5 PFK	43.64	3.553e3					1.5	NO		bb		
4	FUNCTION5 PFK	43.60	1.163e4					2.4	NO		bb		
5	FUNCTION5 PFK	43.17	1.418e3					1.0	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.00	7.244e1					2.8	NO		bb		0.000
2	FUNCTION1 HXCD...	23.47	1.621e2					5.6	YES		bb		0.000
3	FUNCTION1 HXCD...	22.54	1.945e2					5.7	YES		bb		0.000
4	FUNCTION1 HXCD...	22.05	3.888e2					11.4	YES		bb		0.000
5	FUNCTION1 HXCD...	21.45	7.896e1					3.2	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	29.23	8.135e1					2.5	NO		dd		0.000
2	FUNCTION2 HPCD...	29.20	1.086e2					3.3	YES		bd		0.000
3	FUNCTION2 HPCD...	29.51	8.253e1					2.1	NO		db		0.000
4	FUNCTION2 HPCD...	29.40	8.227e1					1.7	NO		dd		0.000
5	FUNCTION2 HPCD...	29.34	7.133e1					2.1	NO		dd		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	37.16	1.183e2					6.0	YES		bb		0.000
2	FUNCTION3 OCDPE	36.70	1.260e2					4.1	YES		bb		0.000
3	FUNCTION3 OCDPE	36.21	7.927e1					2.2	NO		bb		0.000
4	FUNCTION3 OCDPE	33.38	9.262e1					1.6	NO		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	42.40	1.037e2					4.7	YES		bb		0.000
2	FUNCTION4 NCDPE	40.46	8.508e1					2.8	NO		bb		0.000
3	FUNCTION4 NCDPE	38.62	3.612e3					96.3	YES		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	46.27	8.880e1					4.5	YES		db		0.000
2	FUNCTION5 DCDPE	46.20	7.169e1					2.3	NO		bd		0.000

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ID: 23A0207-02, Name: 23022318, Date: 24-Feb-2023, Time: 00:14:46, Conditions: AUTOSPEC01, User: pk

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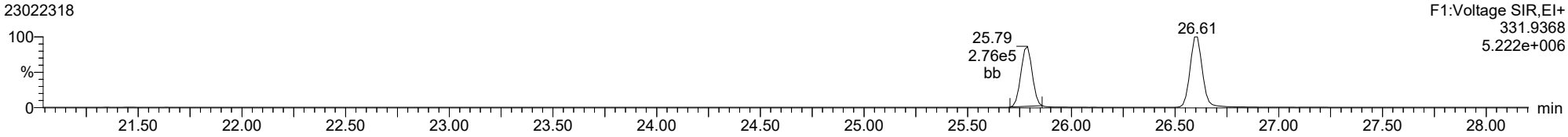

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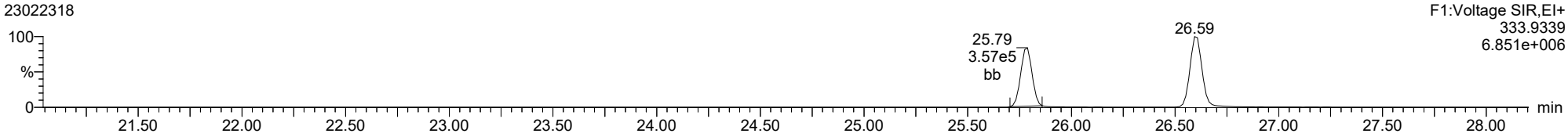

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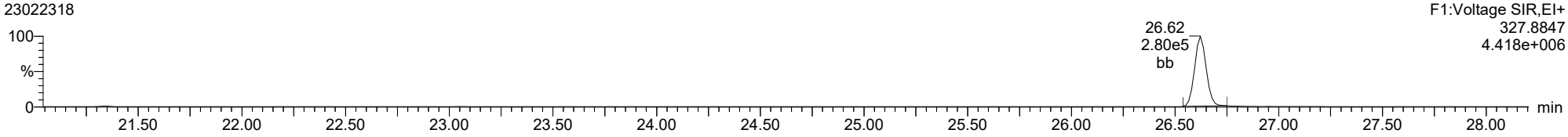

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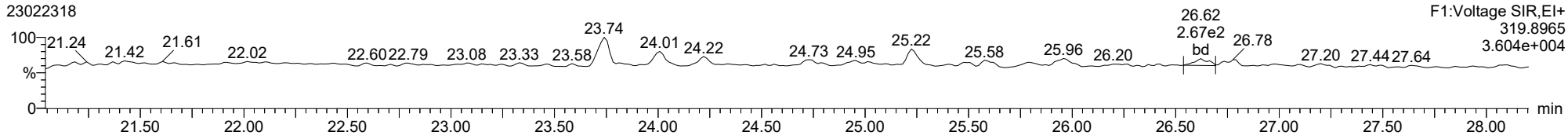

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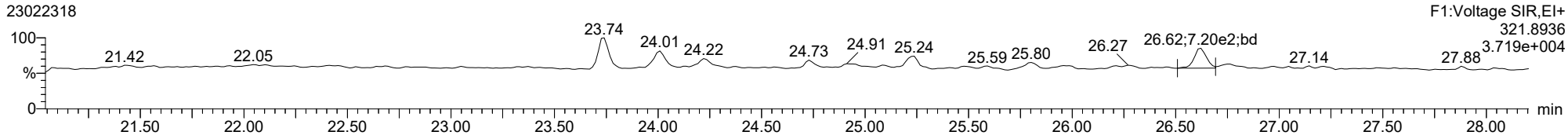

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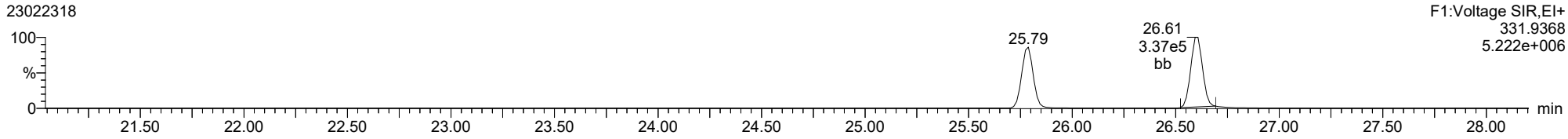

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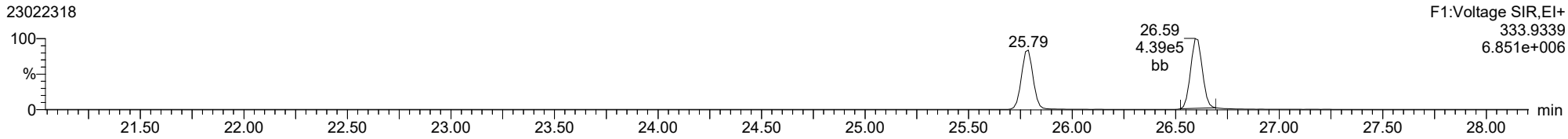

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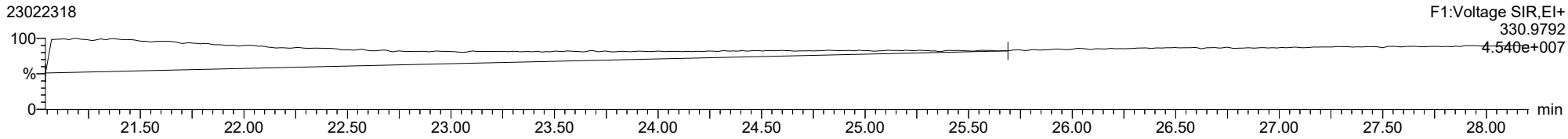

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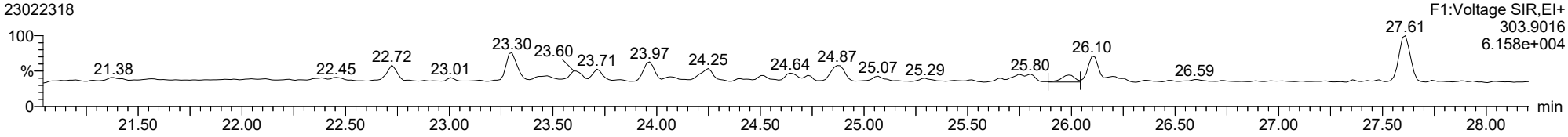
2378-TCDF



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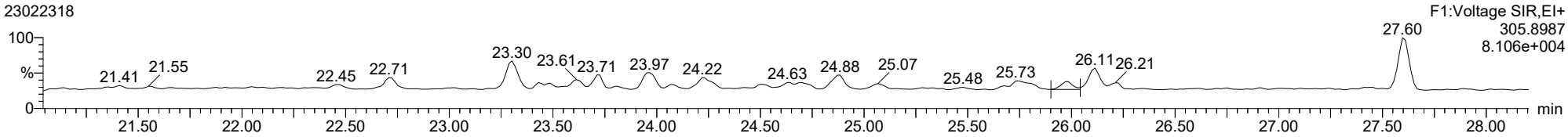

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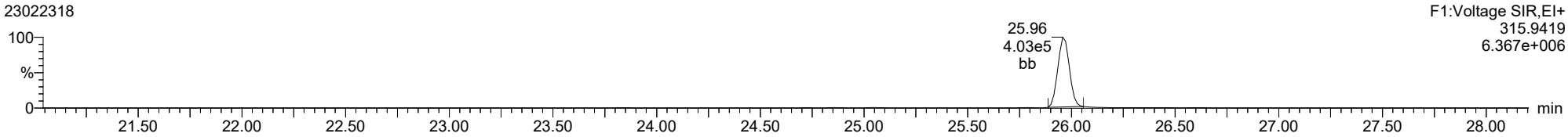

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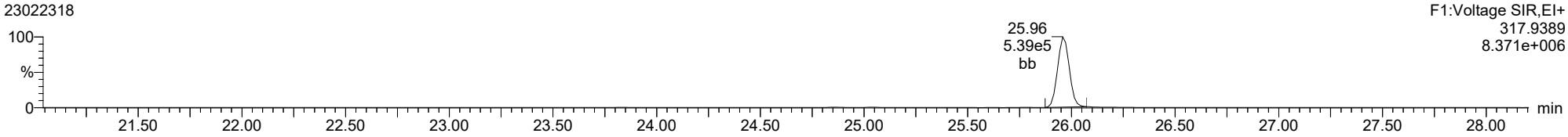

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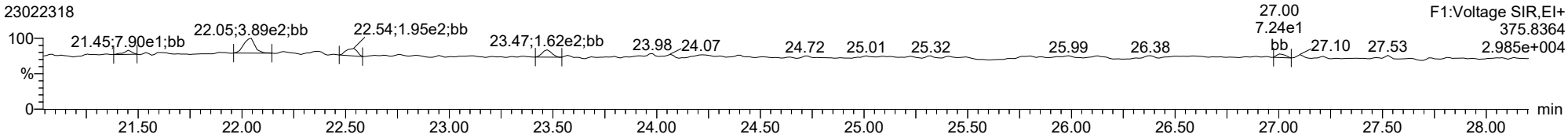

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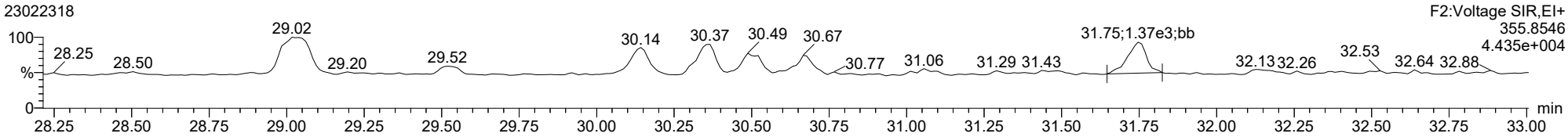
12378-PeCDD



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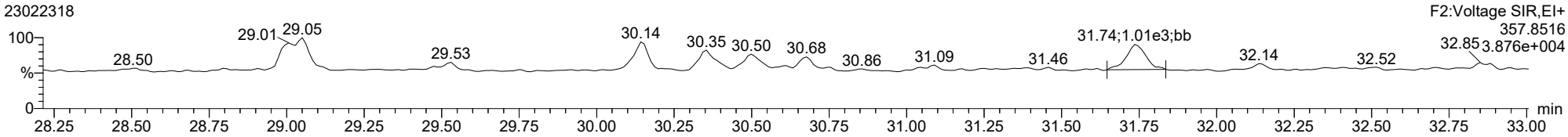

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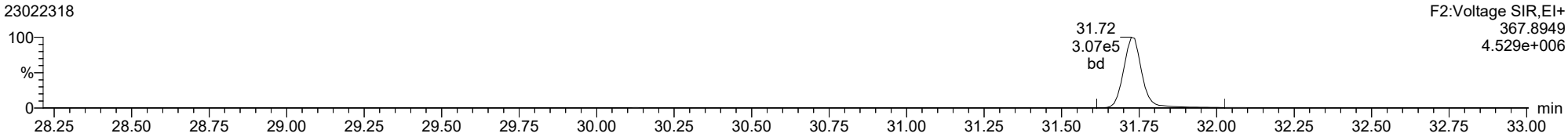

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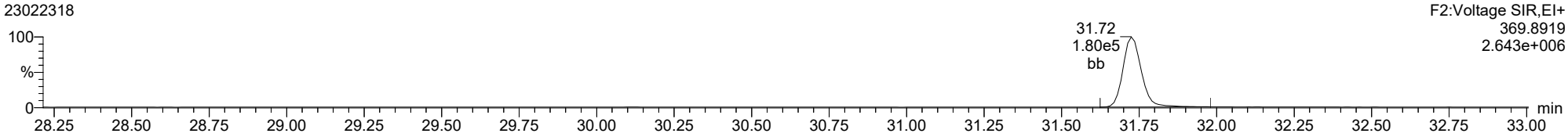

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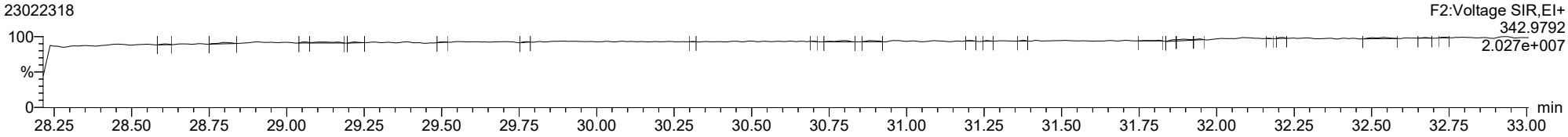

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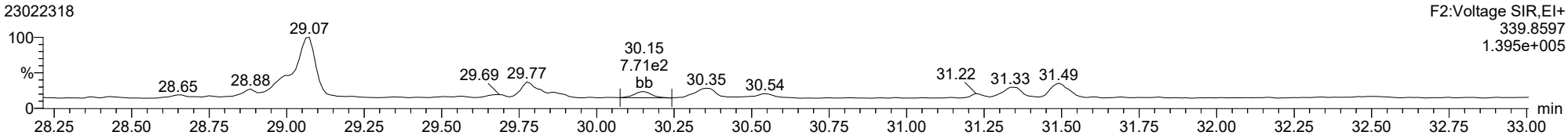

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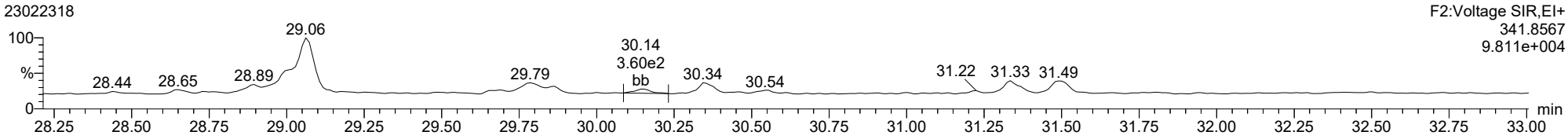

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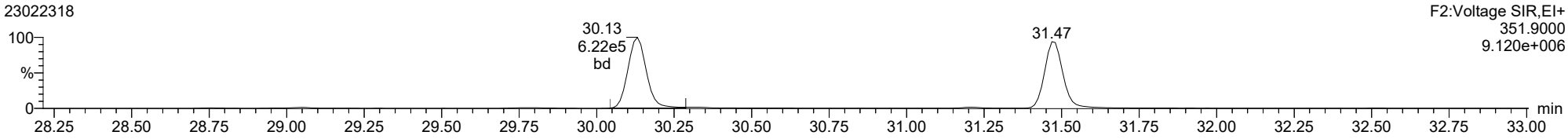

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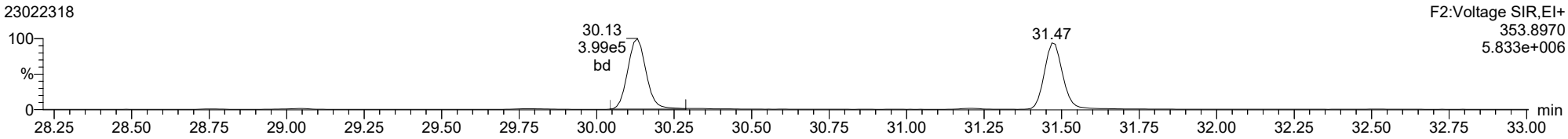

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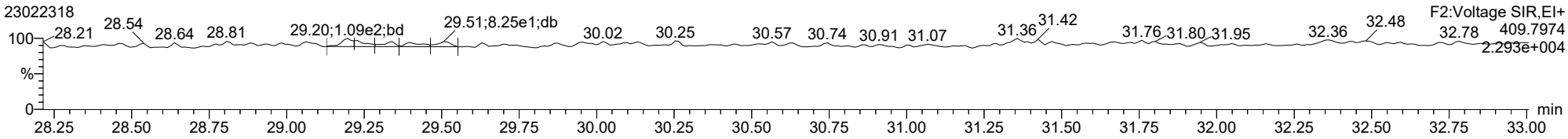

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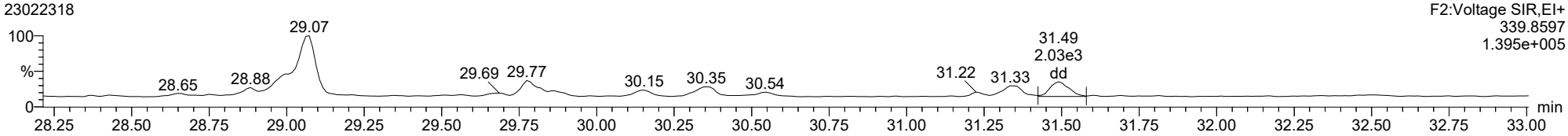

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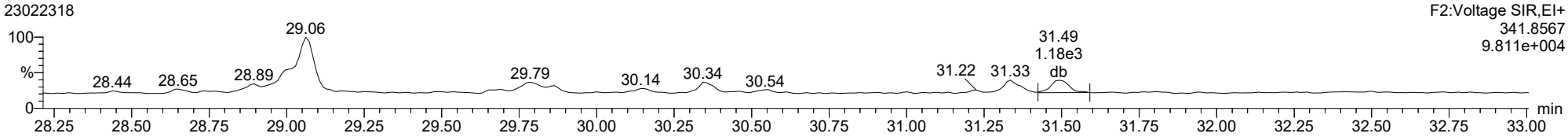

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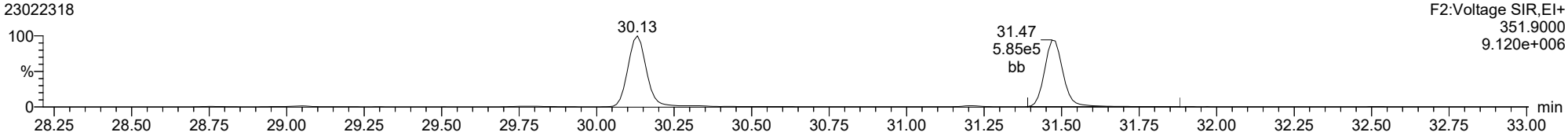

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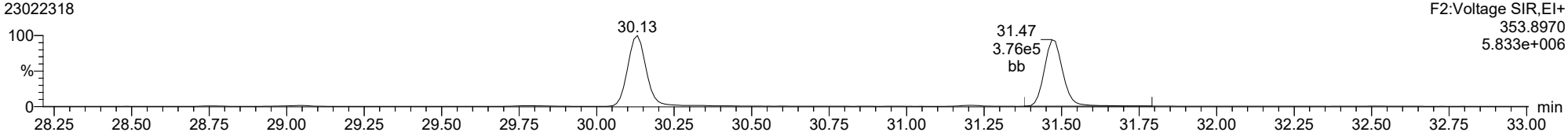

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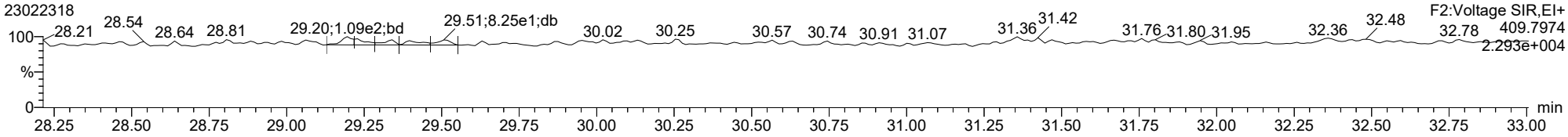

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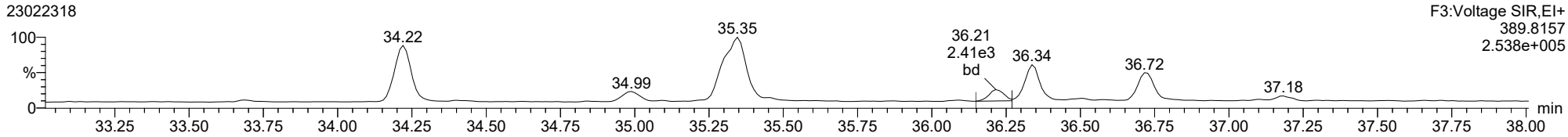

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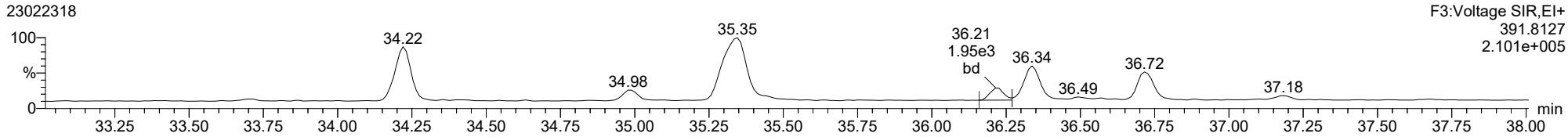

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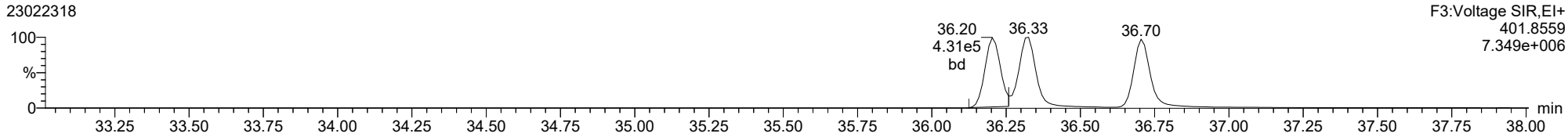

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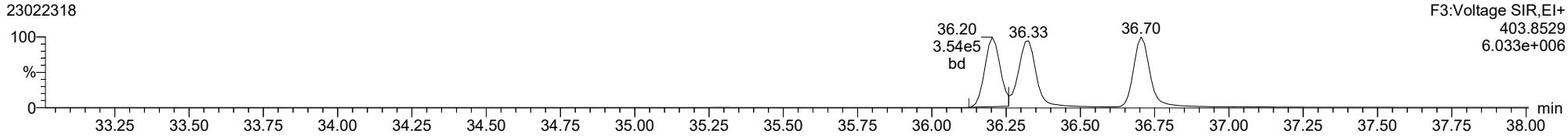

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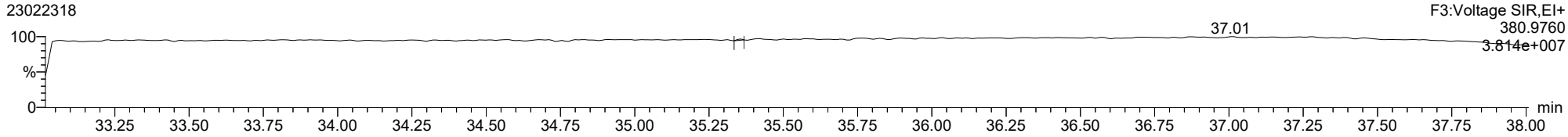

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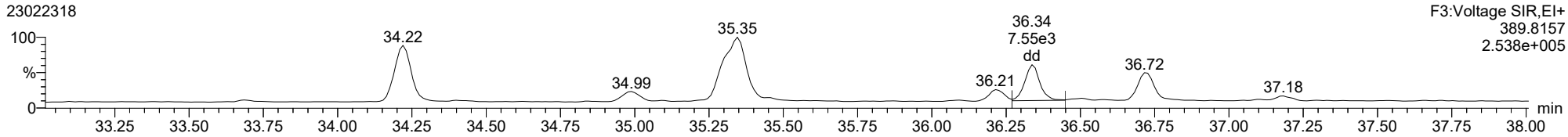

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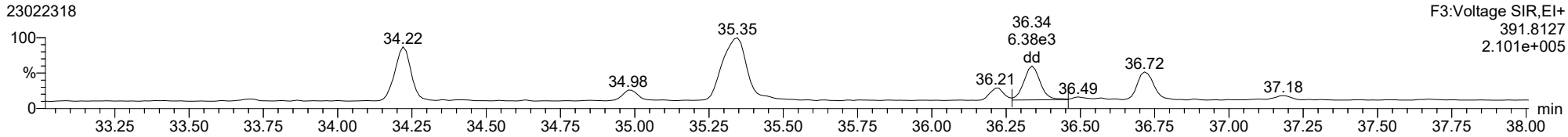

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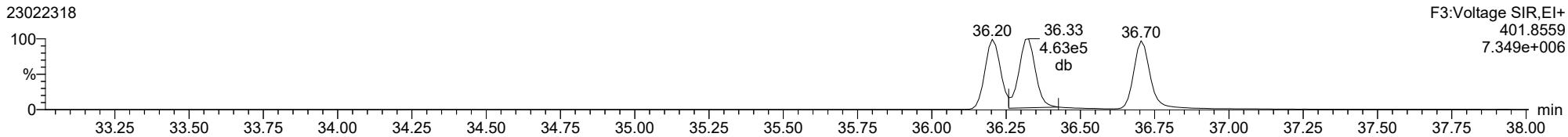

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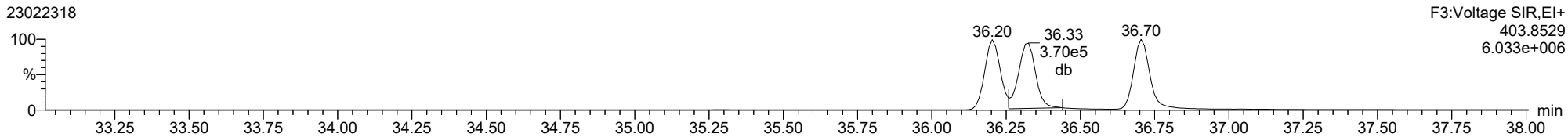

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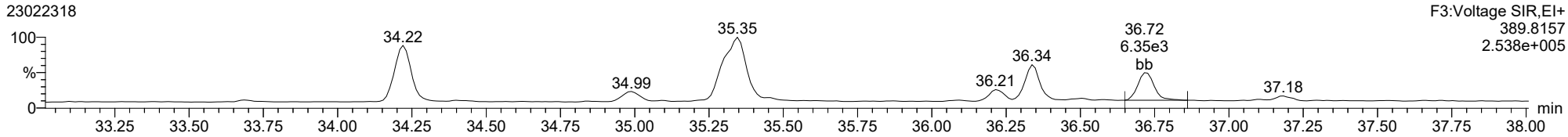

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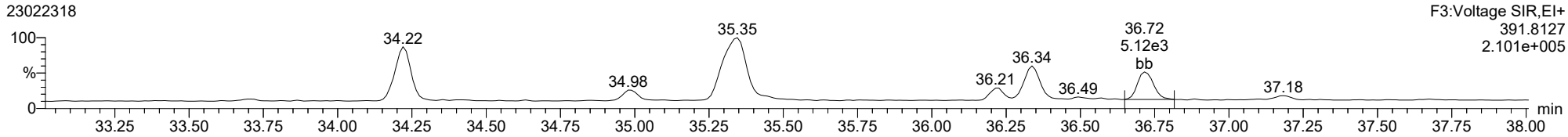

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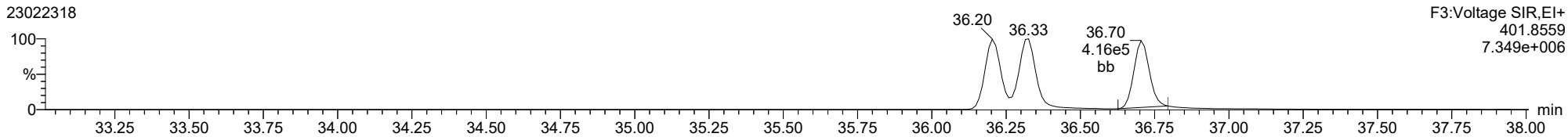

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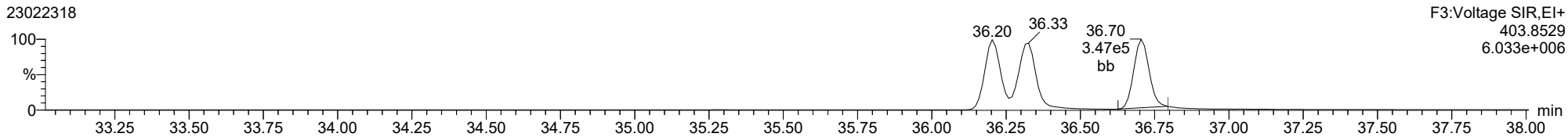

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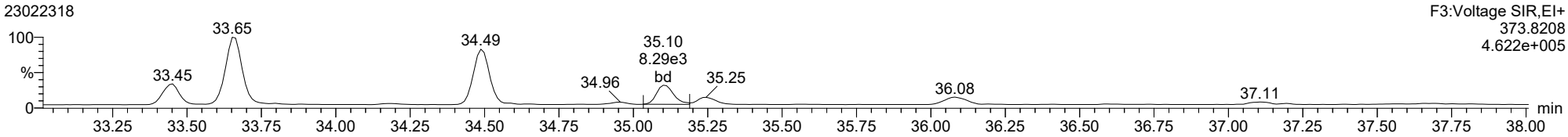

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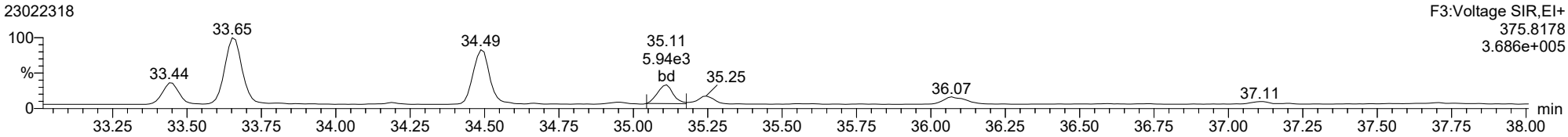

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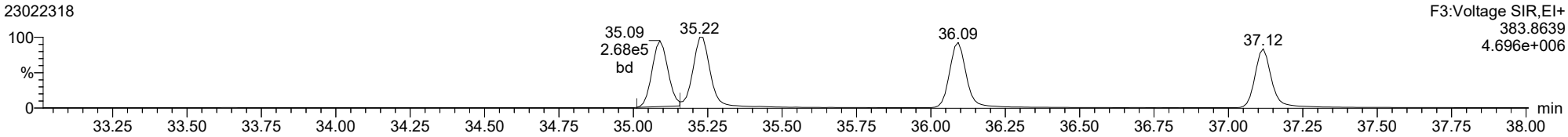

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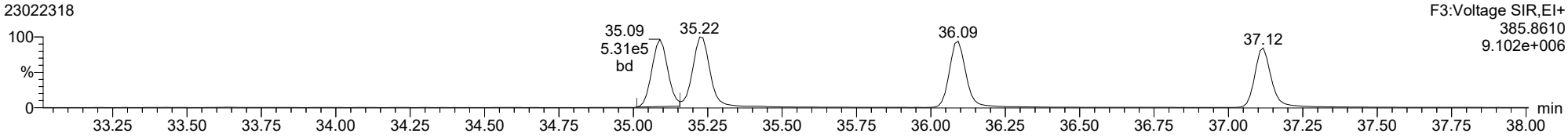

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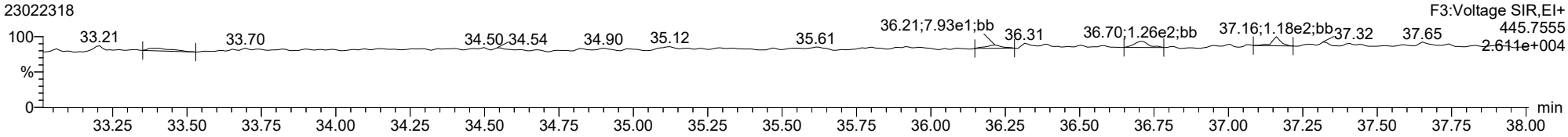

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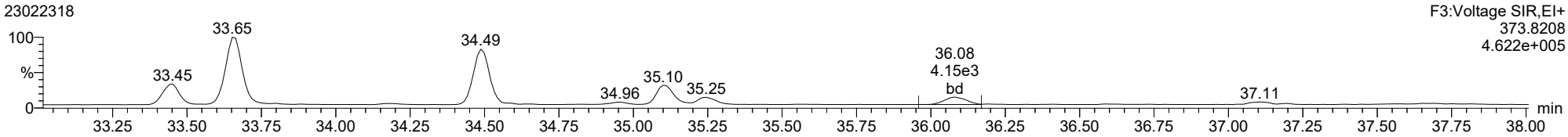

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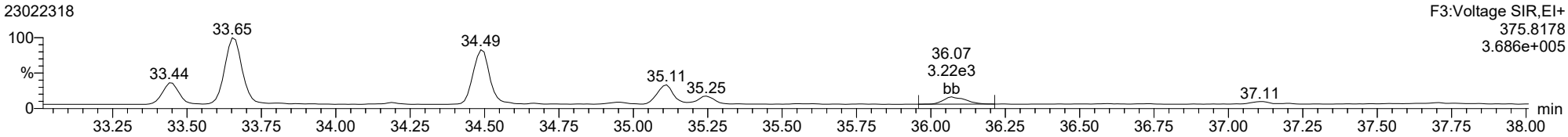

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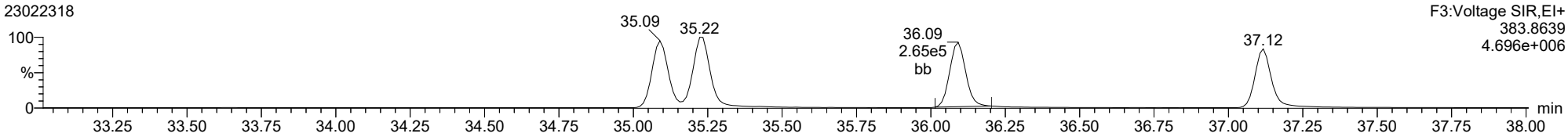

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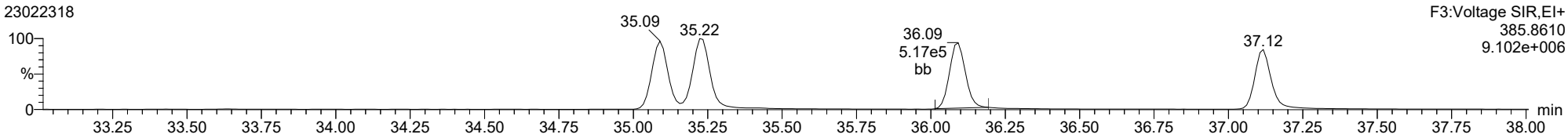

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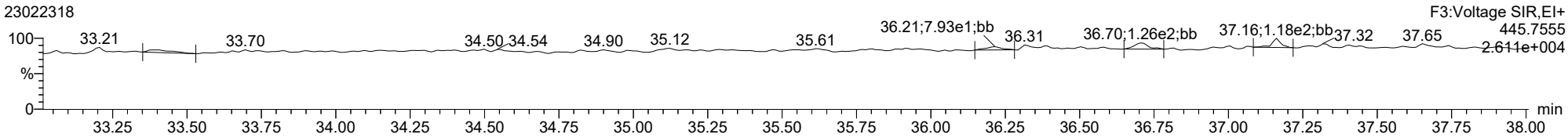

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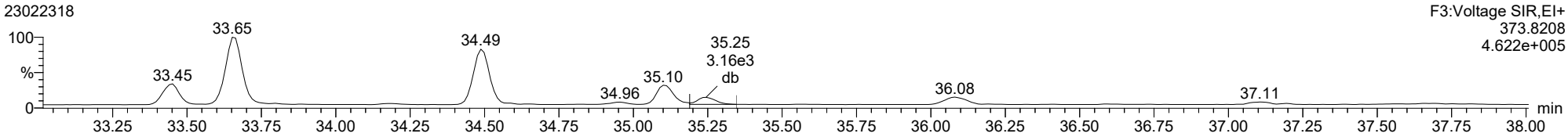

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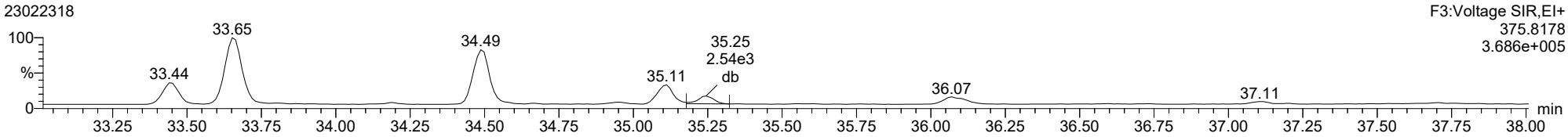

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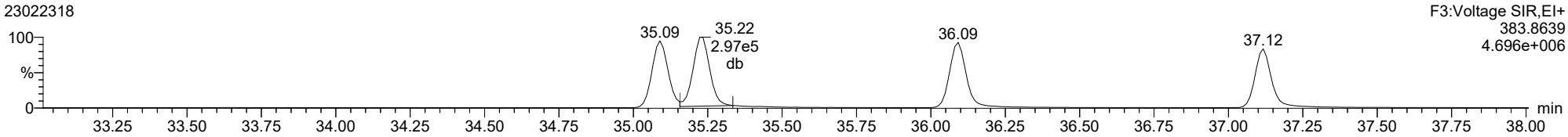

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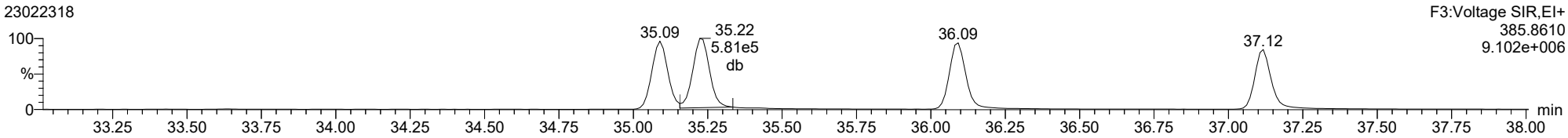

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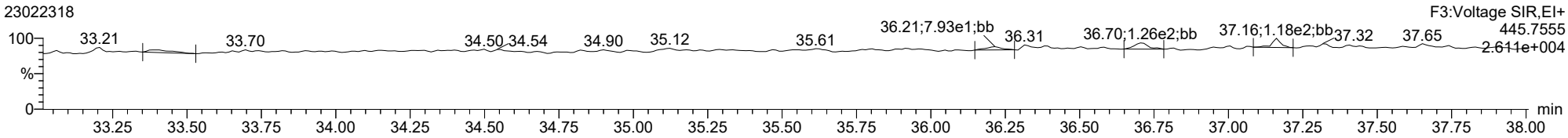

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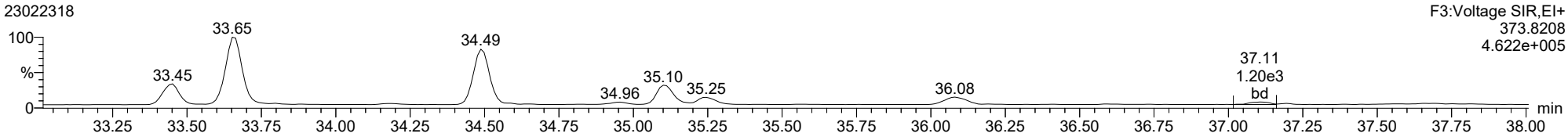

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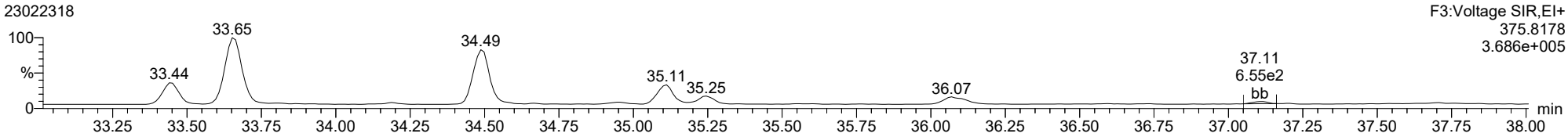

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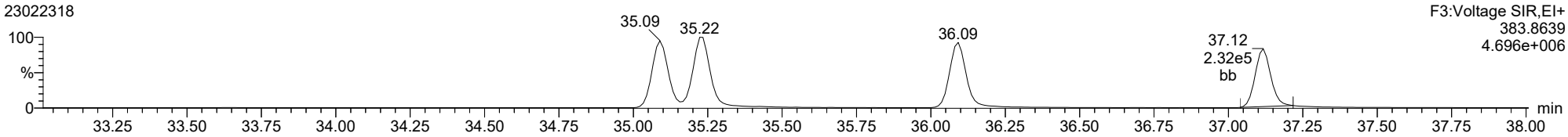

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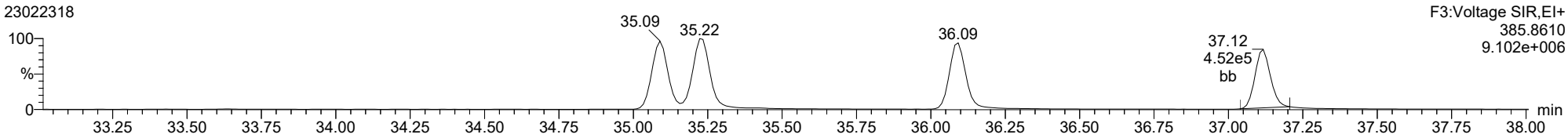

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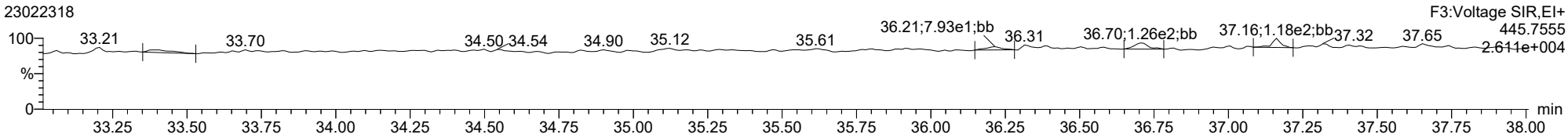

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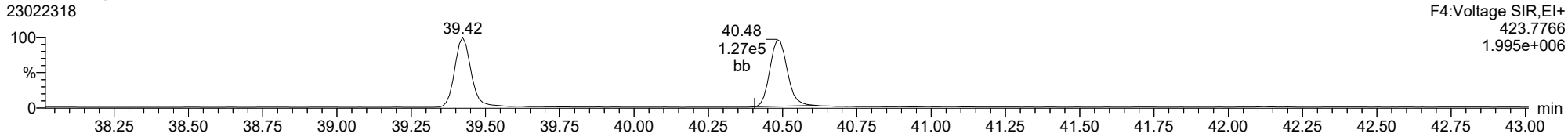

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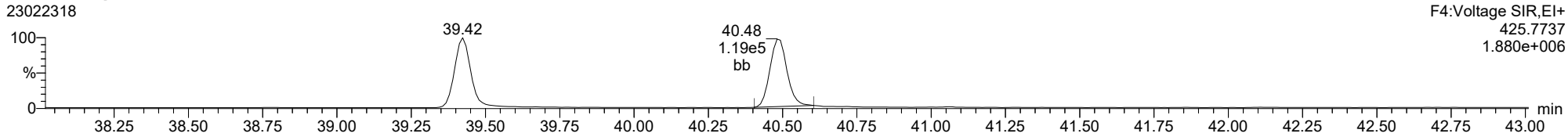

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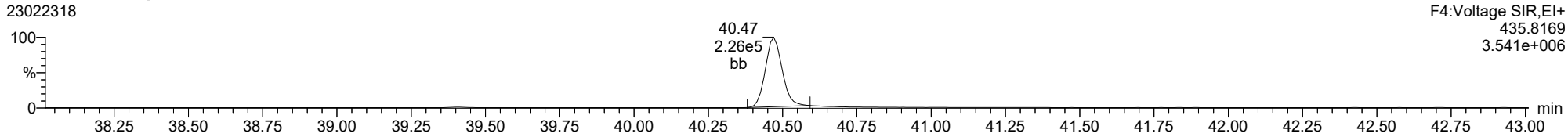

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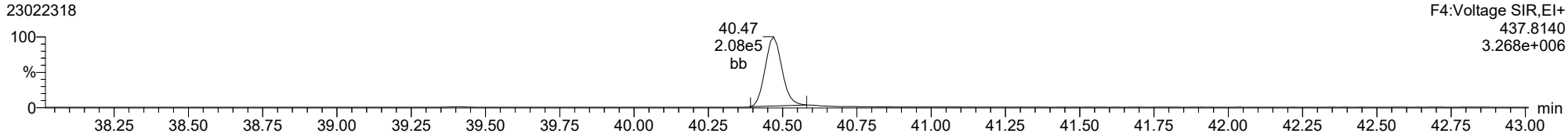

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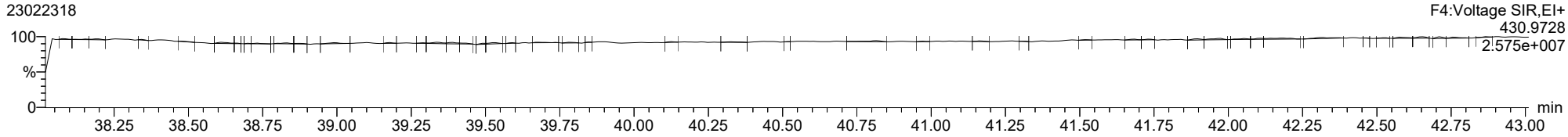

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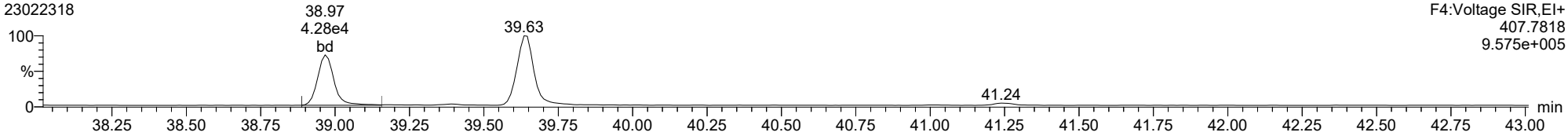
1234678-HpCDF



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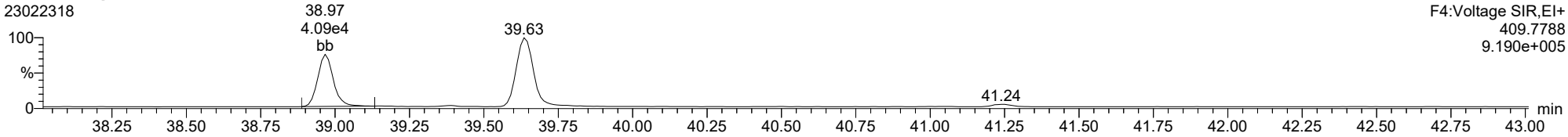

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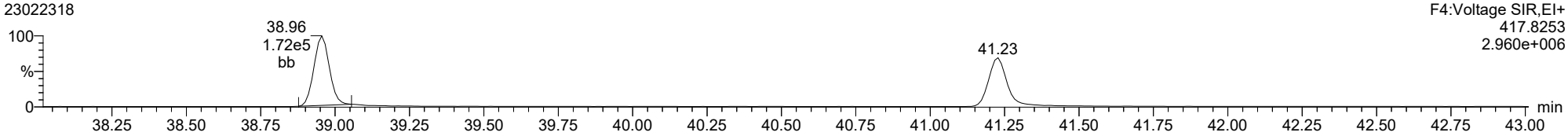

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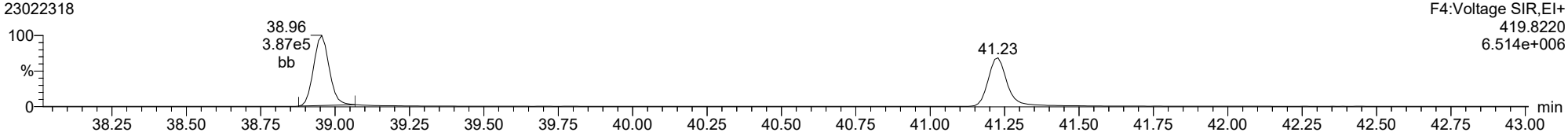
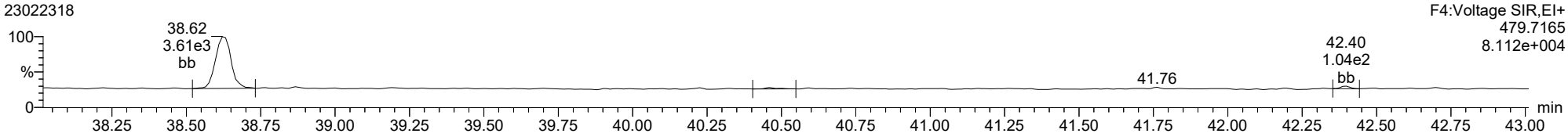


FUNCTION4 NCDPE



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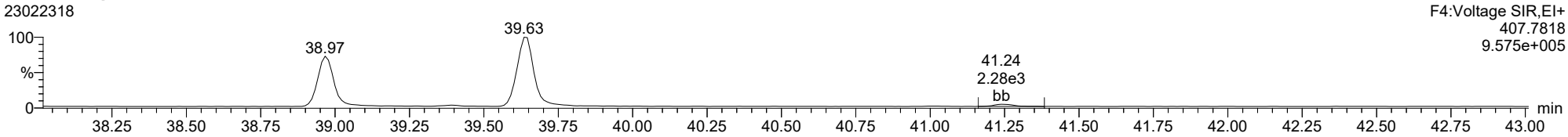
1234789-HpCDF



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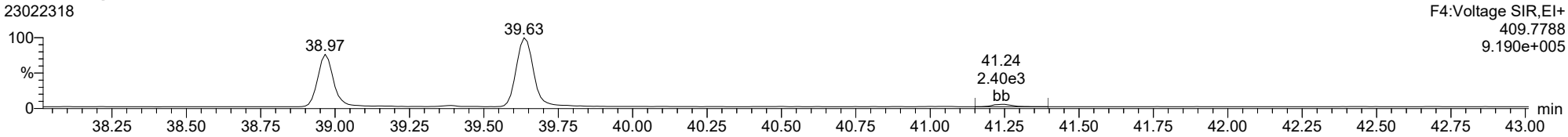

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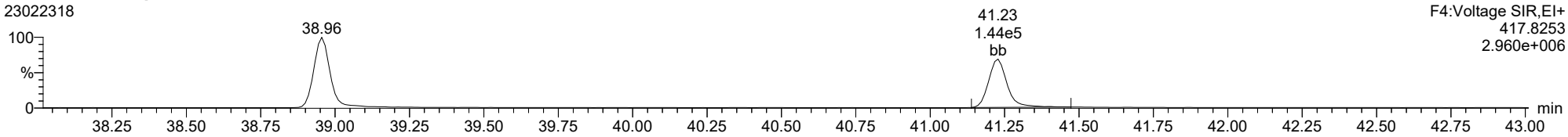

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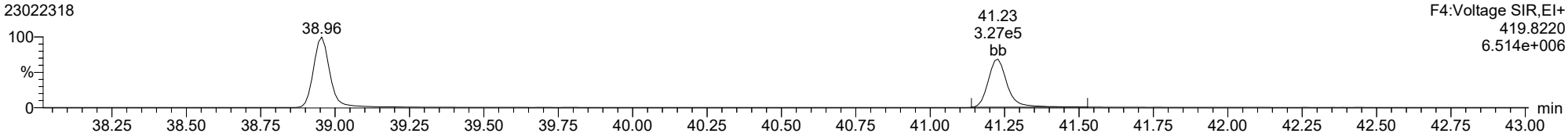
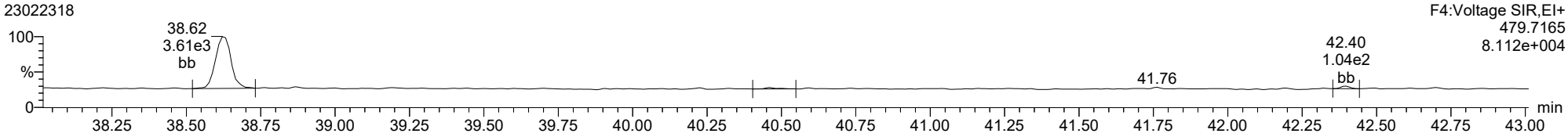


FUNCTION4 NCDPE



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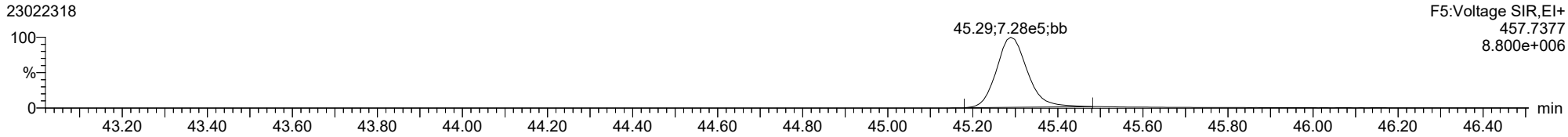
Printed: Friday, February 24, 2023 15:14:37 Pacific Standard Time

ID: 23A0207-02, Name: 23022318, Date: 24-Feb-2023, Time: 00:14:46, Conditions: AUTOSPEC01, User: pk

OCDD



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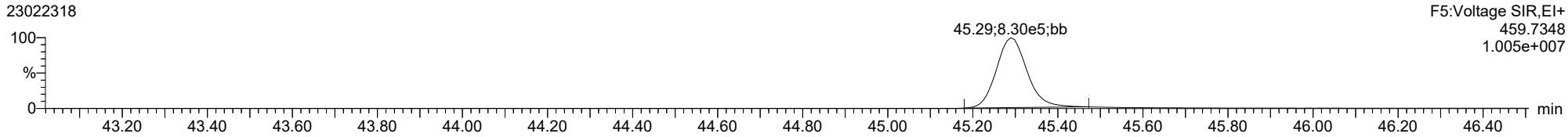

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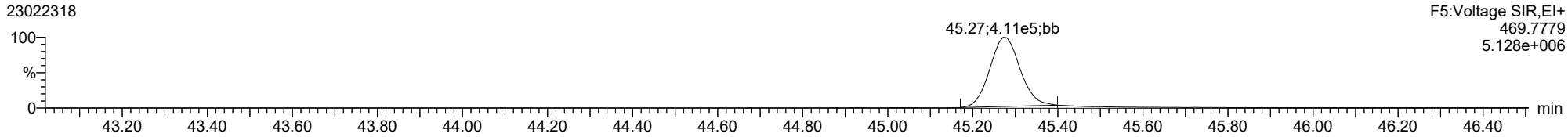

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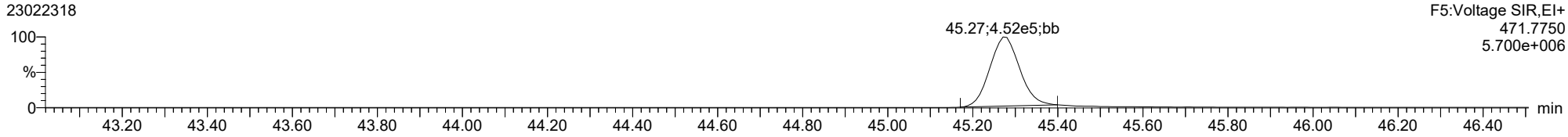
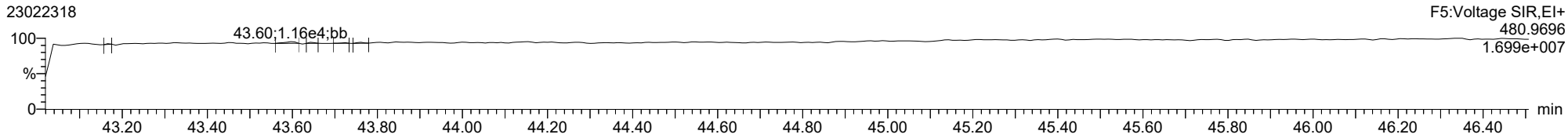
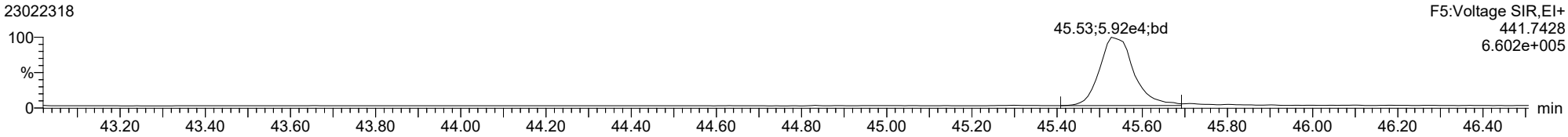


FUNCTION5 PFK

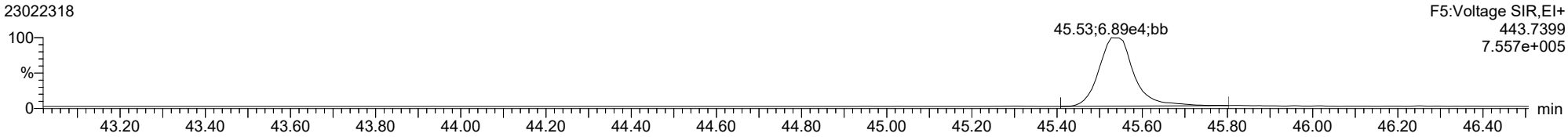


ID: 23A0207-02, Name: 23022318, Date: 24-Feb-2023, Time: 00:14:46, Conditions: AUTOSPEC01, User: pk

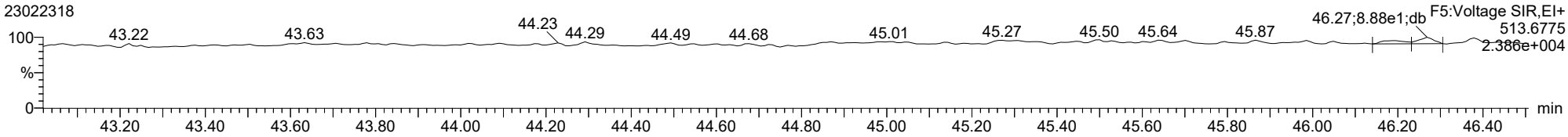
OCDF



OCDF

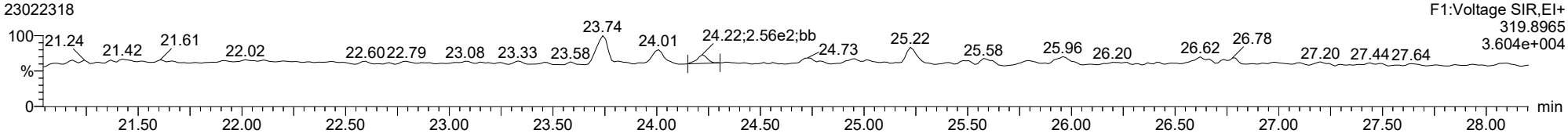


FUNCTION5 DCDPE

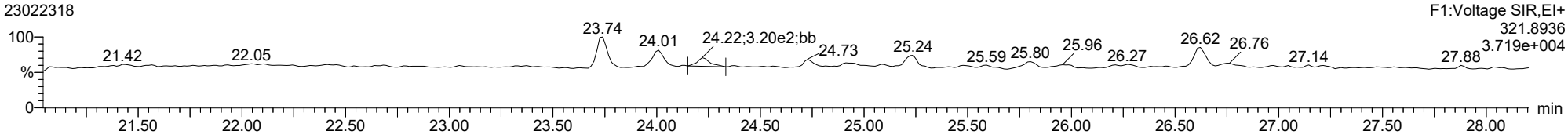


ID: 23A0207-02, Name: 23022318, Date: 24-Feb-2023, Time: 00:14:46, Conditions: AUTOSPEC01, User: pk

Total-tetradioxins



Total-tetradioxins



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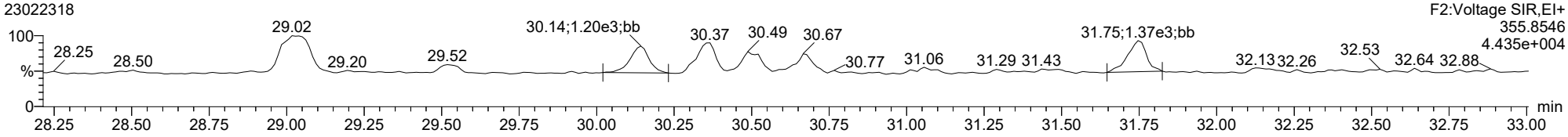
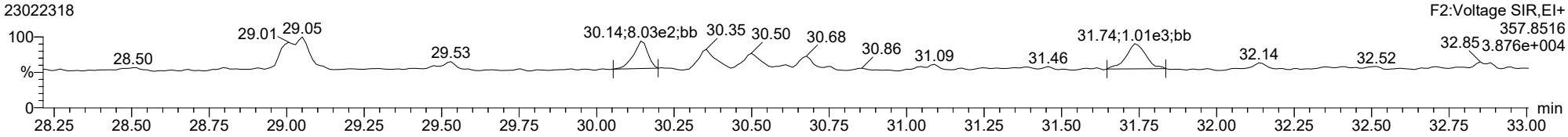
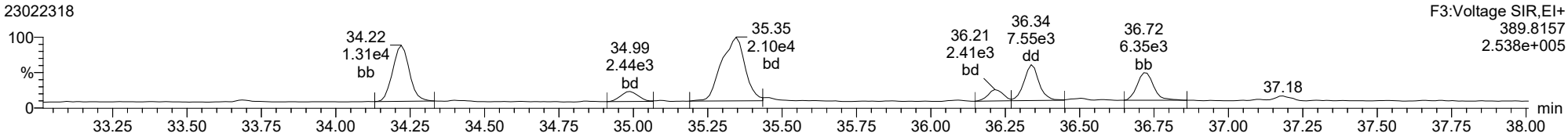


Total-pentadioxins

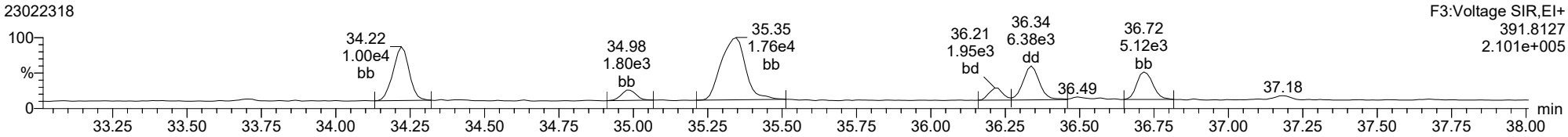


ID: 23A0207-02, Name: 23022318, Date: 24-Feb-2023, Time: 00:14:46, Conditions: AUTOSPEC01, User: pk

Total-hexadioxins



Total-hexadioxins



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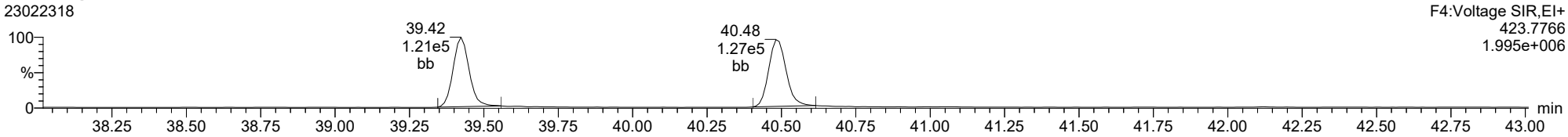

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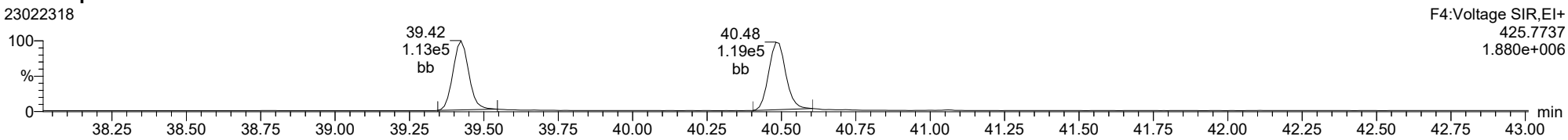
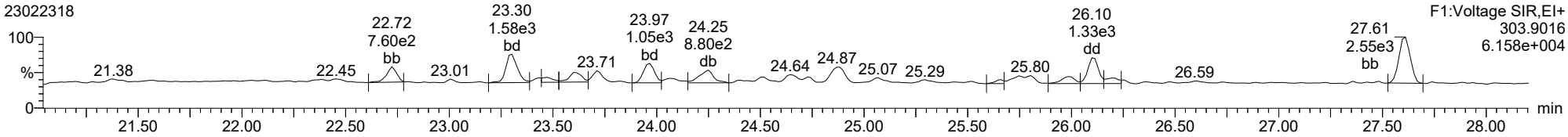
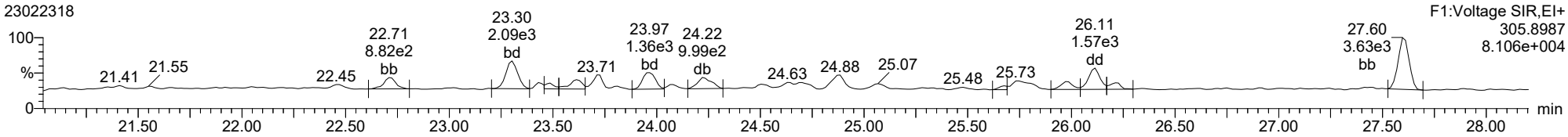


ID: 23A0207-02, Name: 23022318, Date: 24-Feb-2023, Time: 00:14:46, Conditions: AUTOSPEC01, User: pk

Total-tetrafurans



Total-tetrafurans



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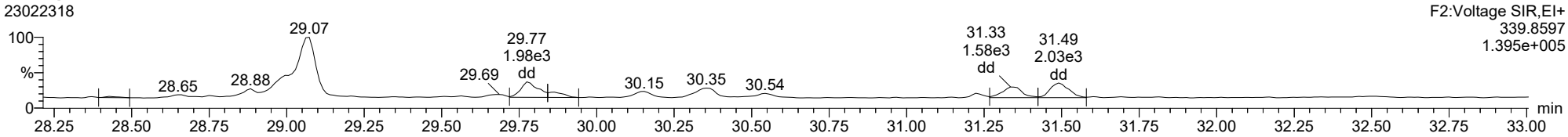
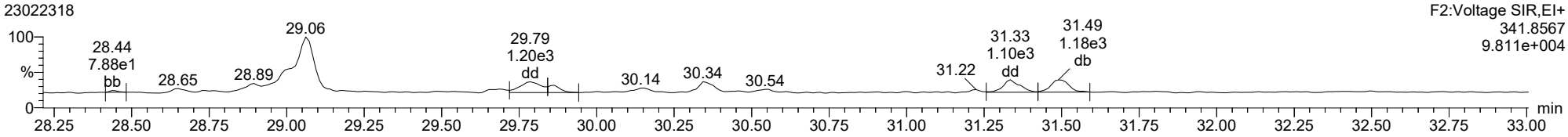


Total-pentafurans



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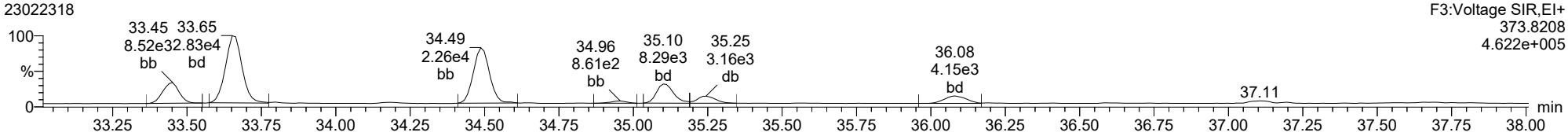
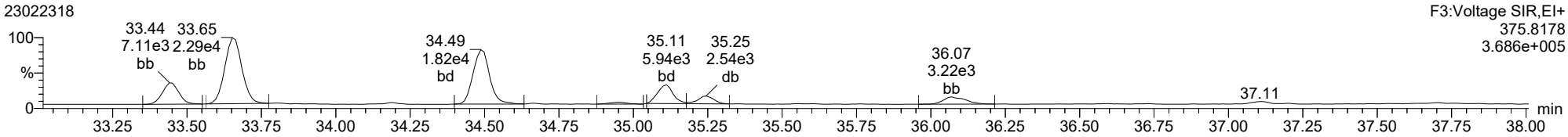
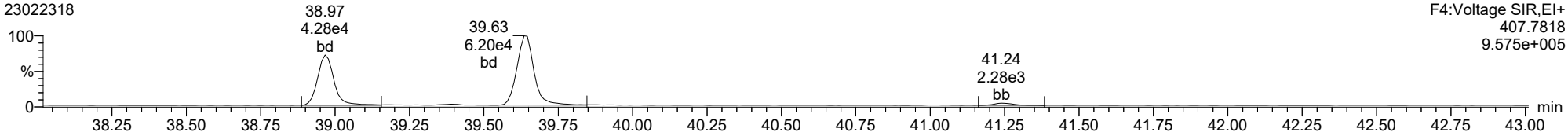
Total-hexafurans



Total-hexafurans



Total-heptafurans



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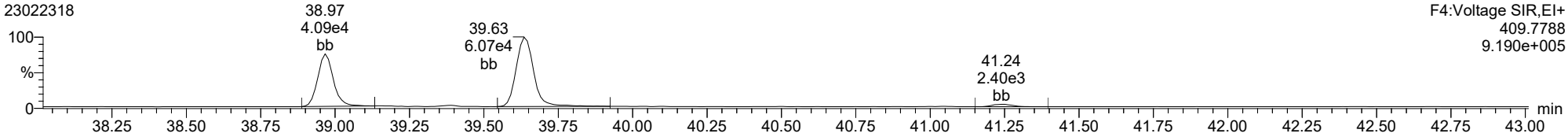

LDW23-IT1097

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-10 B	File ID:	23022319
Sampled:	01/11/23 11:32	Prepared:	01/24/23 13:10	Analyzed:	02/24/23 01:04
% Solids:	74.39	Preparation:	EPA 1613	Initial/Final:	13.44 g Wet / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.730	0.655-0.886	0.073	1.00	3.41	ng/kg	X, B
1746-01-6	2,3,7,8-TCDD	1	0.809	0.655-0.886	0.057	1.00	0.623	ng/kg	J
57117-41-6	1,2,3,7,8-PeCDF	1	1.586	1.318-1.783	0.116	1.00	1.60	ng/kg	
57117-31-4	2,3,4,7,8-PeCDF	1	1.513	1.318-1.783	0.109	1.00	3.52	ng/kg	
40321-76-4	1,2,3,7,8-PeCDD	1	1.517	1.318-1.783	0.145	1.00	2.73	ng/kg	
70648-26-9	1,2,3,4,7,8-HxCDF	1	1.188	1.054-1.426	0.080	1.00	4.75	ng/kg	B
57117-44-9	1,2,3,6,7,8-HxCDF	1	1.288	1.054-1.426	0.079	1.00	2.75	ng/kg	
60851-34-5	2,3,4,6,7,8-HxCDF	1	1.222	1.054-1.426	0.095	1.00	4.60	ng/kg	
72918-21-9	1,2,3,7,8,9-HxCDF	1	1.812	1.054-1.426	0.109	1.00	1.16	ng/kg	EMPC, B
39227-28-6	1,2,3,4,7,8-HxCDD	1	1.094	1.054-1.426	0.179	1.00	2.16	ng/kg	
57653-85-7	1,2,3,6,7,8-HxCDD	1	1.234	1.054-1.426	0.167	1.00	5.13	ng/kg	
19408-74-3	1,2,3,7,8,9-HxCDD	1	1.274	1.054-1.426	0.176	1.00	4.13	ng/kg	B
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	1.037	0.893-1.208	0.166	1.00	28.1	ng/kg	
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.971	0.893-1.208	0.217	1.00	1.86	ng/kg	
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.046	0.893-1.208	0.220	2.50	110	ng/kg	B
39001-02-0	OCDF	1	0.882	0.757-1.024	0.168	2.50	52.4	ng/kg	
3268-87-9	OCDD	1	0.882	0.757-1.024	0.363	10.0	796	ng/kg	B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			1.00	73.5	ng/kg	
41903-57-5	Total TCDD	1	0.000			1.00	21.4	ng/kg	
30402-15-4	Total PeCDF	1	0.000			1.00	104	ng/kg	
36088-22-9	Total PeCDD	1	0.000			1.00	23.8	ng/kg	
55684-94-1	Total HxCDF	1	0.000			1.00	75.8	ng/kg	
34465-46-8	Total HxCDD	1	0.000			1.00	66.1	ng/kg	
38998-75-3	Total HpCDF	1	0.000			1.00	80.7	ng/kg	
37871-00-4	Total HpCDD	1	0.000			1.00	249	ng/kg	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 8.92
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 8.92

LDW23-IT1097

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-10	File ID:	23022319
Sampled:	01/11/23 11:32	Prepared:	01/24/23 13:10	Analyzed:	02/24/23 01:04
Solids Wt%:	74.39	Preparation:	EPA 1613	Initial/Final:	13.44 g / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.771	0.655-0.886	0.061	88.6	24 - 169 %	
13C12-2,3,7,8-TCDD		0.762	0.655-0.886	0.106	116	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.558	1.318-1.783	0.111	97.9	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.563	1.318-1.783	0.115	98.5	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.672	1.318-1.783	0.096	81.1	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.508	0.434-0.587	0.209	129	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.514	0.434-0.587	0.204	128	26 - 123 %	*
13C12-2,3,4,6,7,8-HxCDF		0.496	0.434-0.587	0.217	110	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.504	0.434-0.587	0.237	106	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.239	1.054-1.426	0.203	115	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.216	1.054-1.426	0.197	121	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.453	0.374-0.506	0.190	93.4	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.440	0.374-0.506	0.217	97.3	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.088	0.893-1.208	0.198	98.4	23 - 140 %	
13C12-OCDD		0.923	0.757-1.024	0.262	89.2	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.037	91.5	35 - 197 %	

* Values outside of QC limits

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Printed: Friday, February 24, 2023 15:14:51 Pacific Standard Time

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Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: 23A0207-10, Name: 23022319, Date: 24-Feb-2023, Time: 01:04:12, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.986	1.000	7.366e3	1.009e4	0.876	0.730	0.770	823	1061	1.18e5	1.51e5	143.2	142.6	NO	bd	dd	1.702
12378-PeCDF	30.153	1.000	4.637e3	2.924e3	0.845	1.586	1.550	1123	1551	7.26e4	4.34e4	64.6	28.0	NO	bb	bb	0.801
23478-PeCDF	31.501	1.000	1.042e4	6.888e3	0.911	1.513	1.550	1123	1551	1.48e5	9.92e4	131.4	64.0	NO	db	db	1.760
123478-HxCDF	35.122	1.001	1.295e4	1.090e4	1.182	1.188	1.240	1184	986	2.11e5	1.74e5	178.4	176.1	NO	dd	dd	2.376
234678-HxCDF	36.114	1.000	1.078e4	8.825e3	1.229	1.222	1.240	1184	986	1.14e5	9.21e4	96.3	93.5	NO	bb	bb	2.302
123678-HxCDF	35.256	1.000	8.300e3	6.446e3	1.248	1.288	1.240	1184	986	1.28e5	1.02e5	108.0	103.3	NO	dd	db	1.375
123789-HxCDF	37.116	1.000	2.724e3	1.503e3	1.187	1.812	1.240	1184	986	4.15e4	2.57e4	35.1	26.1	YES	bd	bb	0.580
1234678-HpCDF	38.988	1.000	5.206e4	5.018e4	1.204	1.037	1.050	1120	2080	8.36e5	8.05e5	746.4	387.0	NO	bb	bd	14.060
1234789-HpCDF	41.261	1.000	2.932e3	3.020e3	1.165	0.971	1.050	1120	2080	4.35e4	4.28e4	38.8	20.6	NO	bb	MM	0.930
OCDF	45.563	1.006	6.392e4	7.247e4	1.186	0.882	0.890	752	1012	6.87e5	7.81e5	913.9	772.0	NO	bd	bd	26.197
2378-TCDD	26.636	1.001	1.642e3	2.029e3	1.236	0.809	0.770	847	916	2.24e4	3.11e4	26.5	34.0	NO	bd	bd	0.312
12378-PeCDD	31.758	1.001	4.956e3	3.267e3	1.087	1.517	1.550	1176	994	7.40e4	4.36e4	62.9	43.9	NO	bb	bb	1.365
123478-HxCDD	36.236	1.000	3.716e3	3.396e3	0.987	1.094	1.240	1366	1893	6.34e4	5.44e4	46.4	28.7	NO	bd	bd	1.078
123678-HxCDD	36.359	1.001	1.053e4	8.532e3	1.021	1.234	1.240	1366	1893	1.60e5	1.27e5	117.4	67.3	NO	dd	dd	2.564
123789-HxCDD	36.737	1.011	7.963e3	6.250e3	0.985	1.274	1.240	1366	1893	1.24e5	9.33e4	91.0	49.3	NO	bb	bb	2.065
1234678-HpCDD	40.503	1.000	1.685e5	1.610e5	1.253	1.046	1.050	1976	1409	2.52e6	2.42e6	1273.6	1718.8	NO	bb	bb	54.807
OCDD	45.316	1.000	9.019e5	1.023e6	1.103	0.882	0.890	2147	1391	1.06e7	1.21e7	4925.8	8693.5	NO	bb	bb	397.803
13C-2378-TCDF	25.972	1.007	5.098e5	6.609e5	1.768	0.771	0.770	1218	914	7.72e6	1.01e7	6334.9	11103.9	NO	bb	bb	88.578
13C-12378-PeCDF	30.142	1.169	6.810e5	4.371e5	1.527	1.558	1.550	2142	1217	1.00e7	6.39e6	4675.9	5252.1	NO	bd	bd	97.943
13C-23478-PeCDF	31.490	1.221	6.582e5	4.211e5	1.466	1.563	1.550	2142	1217	9.84e6	6.26e6	4594.7	5149.8	NO	bb	bd	98.473
13C-123478-HxCDF	35.100	0.956	2.861e5	5.630e5	1.054	0.508	0.510	1622	2110	4.63e6	9.02e6	2852.6	4275.5	NO	bd	bd	129.168
13C-123678-HxCDF	35.245	0.960	2.917e5	5.677e5	1.080	0.514	0.510	1622	2110	4.46e6	8.79e6	2752.7	4163.5	NO	db	db	127.560
13C-234678-HxCDF	36.103	0.983	2.299e5	4.633e5	1.014	0.496	0.510	1622	2110	3.69e6	7.54e6	2277.2	3574.2	NO	bb	bb	109.550
13C-123789-HxCDF	37.127	1.011	2.059e5	4.081e5	0.928	0.504	0.510	1622	2110	3.39e6	6.70e6	2088.4	3173.0	NO	bb	bb	106.058
13C-1234678-HpCDF	38.977	1.061	1.882e5	4.156e5	1.036	0.453	0.440	1499	1832	2.99e6	6.67e6	1995.1	3638.5	NO	bb	bb	93.422
13C-1234789-HpCDF	41.250	1.123	1.679e5	3.814e5	0.905	0.440	0.440	1499	1832	2.32e6	5.03e6	1544.8	2747.0	NO	bb	bb	97.302
13C-1234-TCDD	25.788	0.000	3.280e5	4.195e5	1.000	0.782	0.770	1430	896	5.23e6	6.72e6	3656.7	7499.8	NO	bb	bb	100.000
13C-2378-TCDD	26.608	1.032	4.119e5	5.406e5	1.103	0.762	0.770	1430	896	6.46e6	8.53e6	4520.4	9517.2	NO	bb	bb	115.533
13C-12378-PeCDD	31.736	1.231	3.468e5	2.074e5	0.914	1.672	1.550	821	916	5.18e6	3.09e6	6304.2	3376.8	NO	bb	bb	81.102
13C-123478-HxCDD	36.225	0.986	3.701e5	2.986e5	0.933	1.239	1.240	1530	1687	6.13e6	4.91e6	4005.6	2910.0	NO	bd	bd	114.897
13C-123678-HxCDD	36.337	0.989	3.996e5	3.287e5	0.965	1.216	1.240	1530	1687	6.28e6	5.17e6	4108.7	3065.2	NO	db	db	121.018
13C-1234678-HpCDD	40.492	1.102	2.502e5	2.299e5	0.782	1.088	1.050	1286	1332	3.83e6	3.52e6	2982.1	2640.9	NO	bb	bb	98.402
13C-OCDD	45.307	1.234	4.212e5	4.565e5	0.788	0.923	0.890	1768	1730	5.10e6	5.54e6	2881.3	3201.8	NO	bb	bb	178.487
13C-123789-HxCDD	36.726	0.000	3.418e5	2.820e5	1.000	1.212	1.240	1530	1687	5.57e6	4.53e6	3642.4	2685.9	NO	bb	bb	100.000
37CL-2378-TCDD	26.636	1.033	3.374e5		1.233			895		5.13e6		5729.3			bb		36.594

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
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Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.455	0.865	3.936e3	5.000e3	1.064	0.787	0.770	823	1061	5.98e4	8.06e4	72.6	76.0	NO	bb	bb	0.717
1289-TCDF	27.427	1.056	1.170e3	1.097e3	0.858	1.066	0.770	823	1061	1.07e4	1.39e4	13.0	13.1	YES	bd	bd	0.226
13468-PECDF					1.013		1.550	783	863								
12389-PECDF	32.471	1.077	9.674e2	9.055e2	0.844	1.068	1.550	1123	1551	1.74e4	1.06e4	15.5	6.9	YES	bd	bb	0.199
123468-HXCDF	33.462	0.953	1.744e4	1.492e4	1.197	1.169	1.240	1184	986	2.73e5	2.33e5	230.8	236.8	NO	bb	bb	3.183
1368-TCDD	23.740	0.892	1.635e4	2.146e4	1.084	0.762	0.770	847	916	2.66e5	3.49e5	314.2	381.4	NO	bb	bb	3.660
1289-TCDD	27.243	1.024	3.989e2	5.169e2	0.975	0.772	0.770	847	916	6.02e3	7.01e3	7.1	7.7	NO	bb	bb	0.099
12479-PECDD	29.051	0.915	1.954e4	1.218e4	1.837	1.604	1.550	1176	994	1.93e5	1.23e5	164.2	124.0	NO	MM	MM	3.116
12389-PECDD	32.148	1.013	1.444e3	1.014e3	1.252	1.424	1.550	1176	994	2.37e4	1.51e4	20.1	15.2	NO	bb	bb	0.354
124679-HXCDD	34.231	0.945	3.920e4	3.111e4	1.033	1.260	1.240	1366	1893	6.11e5	4.89e5	447.4	258.2	NO	bb	bd	10.179
1234679-HPCDD	39.445	0.974	2.191e5	2.096e5	1.286	1.045	1.050	1976	1409	3.44e6	3.27e6	1740.9	2321.6	NO	bb	bb	69.435
Total-tetrafurans			1.725e5		0.933			823		2.51e6							36.721
Total-penta1			1.523e5					783		2.32e6							24.724
Total-pentafurans			1.588e5		0.866			1123		1.94e6							27.396
Total-hexafurans			1.944e5		1.208			1184		2.96e6							37.877
Total-heptafurans			1.421e5		1.185			1120		2.23e6							40.346
Total-Furans			8.848e5		1.067			823		1.27e7							193.400
Total-tetradioxins			4.885e4		1.099			847		7.46e5							10.706
Total-pentadioxins			5.947e4		1.392			1176		8.25e5							11.918
Total-hexadioxins			1.289e5		1.007			1366		1.81e6							33.022
Total-heptadioxins			3.876e5		1.269			1976		5.96e6							124.242
Total-Dioxins			1.527e6		1.165			847		1.99e7							577.690
Total-TEQ			2.412e6					847		3.26e7							771.090
FUNCTION1 PFK			2.405e5					417474		6.93e6							
FUNCTION2 PFK			0.000e0					251393		0.00e0							
FUNCTION3 PFK			4.448e7					302208		4.00e7							0.000
FUNCTION4 PFK			7.008e5					226552		4.54e6							
FUNCTION5 PFK			1.469e5					158383		5.06e6							
FUNCTION1 HXCD...			6.563e3					624		1.06e5							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			4.814e2					716		6.74e3							0.000
FUNCTION3 OCDPE			1.774e2					634		5.01e3							0.000
FUNCTION4 NCDPE			1.456e4					579		2.38e5							0.000
FUNCTION5 DCDPE			0.000e0					425		0.00e0							

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
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Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.64	8.566e3	1.287e4	0.933	0.67	0.77	117.7	YES	NO	dd	dd	1.963
2	Total-tetrafurans	24.47	6.564e2	8.225e2	0.933	0.80	0.77	9.1	YES	NO	dd	dd	0.135
3	Total-tetrafurans	24.22	6.367e3	8.862e3	0.933	0.72	0.77	102.2	YES	NO	db	dd	1.395
4	Total-tetrafurans	24.08	3.099e3	4.644e3	0.933	0.67	0.77	64.9	YES	NO	dd	dd	0.709
5	Total-tetrafurans	23.97	1.721e4	2.151e4	0.933	0.80	0.77	326.7	YES	NO	dd	dd	3.546
6	Total-tetrafurans	23.81	3.933e3	5.476e3	0.933	0.72	0.77	80.2	YES	NO	dd	dd	0.862
7	Total-tetrafurans	23.73	9.541e3	1.205e4	0.933	0.79	0.77	188.7	YES	NO	dd	dd	1.978
8	Total-tetrafurans	23.63	6.868e3	8.489e3	0.933	0.81	0.77	121.9	YES	NO	dd	dd	1.406
9	Total-tetrafurans	23.50	9.873e3	1.453e4	0.933	0.68	0.77	112.8	YES	NO	dd	dd	2.235
10	Total-tetrafurans	23.30	2.638e4	3.160e4	0.933	0.83	0.77	467.6	YES	NO	bd	bd	5.311
11	Total-tetrafurans	22.72	5.031e3	6.775e3	0.933	0.74	0.77	93.8	YES	NO	bb	bb	1.081
12	1368-TCDF	22.45	3.936e3	5.000e3	1.064	0.79	0.77	72.6	YES	NO	bb	bb	0.717
13	Total-tetrafurans	27.61	1.405e3	1.812e3	0.933	0.78	0.77	25.8	YES	NO	db	db	0.295
14	Total-tetrafurans	26.49	2.398e2	3.251e2	0.933	0.74	0.77	5.4	YES	NO	db	db	0.052
15	Total-tetrafurans	26.38	1.856e3	2.435e3	0.933	0.76	0.77	35.8	YES	NO	dd	dd	0.393
16	Total-tetrafurans	26.21	8.589e3	1.126e4	0.933	0.76	0.77	157.8	YES	NO	dd	dd	1.817
17	Total-tetrafurans	26.11	5.359e3	7.504e3	0.933	0.71	0.77	96.9	YES	NO	dd	dd	1.178
18	2378-TCDF	25.99	7.366e3	1.009e4	0.876	0.73	0.77	143.2	YES	NO	bd	dd	1.702
19	Total-tetrafurans	25.80	2.992e3	4.366e3	0.933	0.69	0.77	58.4	YES	NO	db	dd	0.674
20	Total-tetrafurans	25.76	2.823e3	4.239e3	0.933	0.67	0.77	57.1	YES	NO	dd	dd	0.647
21	Total-tetrafurans	25.48	2.581e3	3.813e3	0.933	0.68	0.77	46.4	YES	NO	dd	dd	0.586
22	Total-tetrafurans	25.29	4.867e3	6.155e3	0.933	0.79	0.77	77.7	YES	NO	bd	dd	1.009
23	Total-tetrafurans	25.07	7.569e3	1.032e4	0.933	0.73	0.77	138.8	YES	NO	db	dd	1.638
24	Total-tetrafurans	24.88	2.006e4	2.710e4	0.933	0.74	0.77	353.6	YES	NO	dd	dd	4.318
25	Total-tetrafurans	24.73	5.364e3	6.361e3	0.933	0.84	0.77	86.6	YES	NO	dd	dd	1.074

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-penta1	27.41	1.523e5	1.012e5		1.50	1.55	2968.0	YES	NO	bb	bb	24.724

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PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	29.08	7.769e4	4.949e4	0.866	1.57	1.55	729.1	YES	NO	MM	MM	13.359
2	Total-pentafurans	28.89	1.030e4	7.175e3	0.866	1.44	1.55	108.2	YES	NO	dd	dd	1.836
3	Total-pentafurans	28.66	7.415e2	4.196e2	0.866	1.77	1.55	10.2	YES	NO	bd	bd	0.122
4	23478-PeCDF	31.50	1.042e4	6.888e3	0.911	1.51	1.55	131.4	YES	NO	db	db	1.760
5	Total-pentafurans	31.36	1.687e4	1.126e4	0.866	1.50	1.55	213.7	YES	NO	dd	dd	2.956
6	Total-pentafurans	31.25	5.203e3	3.458e3	0.866	1.50	1.55	72.2	YES	NO	bd	bd	0.910
7	Total-pentafurans	30.64	3.423e2	1.982e2	0.866	1.73	1.55	5.7	YES	NO	dd	bb	0.057
8	Total-pentafurans	30.36	9.627e3	6.458e3	0.866	1.49	1.55	134.8	YES	NO	bd	bd	1.690
9	12378-PeCDF	30.15	4.637e3	2.924e3	0.845	1.59	1.55	64.6	YES	NO	bb	bb	0.801
10	Total-pentafurans	29.80	2.299e4	1.420e4	0.866	1.62	1.55	257.0	YES	NO	db	db	3.907

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123678-HxCDF	35.26	8.300e3	6.446e3	1.248	1.29	1.24	108.0	YES	NO	dd	db	1.375
2	123478-HxCDF	35.12	1.295e4	1.090e4	1.182	1.19	1.24	178.4	YES	NO	dd	dd	2.376
3	Total-hexafurans	34.97	3.463e3	2.738e3	1.208	1.26	1.24	48.9	YES	NO	bd	bd	0.681
4	Total-hexafurans	34.50	6.580e4	5.230e4	1.208	1.26	1.24	868.5	YES	NO	bb	bd	12.961
5	Total-hexafurans	33.67	7.469e4	6.019e4	1.208	1.24	1.24	954.6	YES	NO	bd	bb	14.804
6	123468-HXCDF	33.46	1.744e4	1.492e4	1.197	1.17	1.24	230.8	YES	NO	bb	bb	3.183
7	234678-HxCDF	36.11	1.078e4	8.825e3	1.229	1.22	1.24	96.3	YES	NO	bb	bb	2.302
8	Total-hexafurans	35.78	3.991e2	3.108e2	1.208	1.28	1.24	6.6	YES	NO	bb	bb	0.078
9	Total-hexafurans	35.60	6.093e2	4.630e2	1.208	1.32	1.24	8.1	YES	NO	db	bb	0.118

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.26	2.932e3	3.020e3	1.165	0.97	1.05	38.8	YES	NO	bb	MM	0.930
2	Total-heptafurans	39.66	8.711e4	8.610e4	1.185	1.01	1.05	1201.9	YES	NO	bb	bb	25.355
3	1234678-HpCDF	38.99	5.206e4	5.018e4	1.204	1.04	1.05	746.4	YES	NO	bb	bd	14.060

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.64	8.566e3	1.287e4	0.933	0.67	0.77	117.7	YES	NO	dd	dd	1.963
2	Total-tetrafurans	24.47	6.564e2	8.225e2	0.933	0.80	0.77	9.1	YES	NO	dd	dd	0.135
3	Total-tetrafurans	24.22	6.367e3	8.862e3	0.933	0.72	0.77	102.2	YES	NO	db	dd	1.395
4	Total-tetrafurans	24.08	3.099e3	4.644e3	0.933	0.67	0.77	64.9	YES	NO	dd	dd	0.709
5	Total-tetrafurans	23.97	1.721e4	2.151e4	0.933	0.80	0.77	326.7	YES	NO	dd	dd	3.546
6	Total-tetrafurans	23.81	3.933e3	5.476e3	0.933	0.72	0.77	80.2	YES	NO	dd	dd	0.862
7	Total-tetrafurans	23.73	9.541e3	1.205e4	0.933	0.79	0.77	188.7	YES	NO	dd	dd	1.978
8	Total-tetrafurans	23.63	6.868e3	8.489e3	0.933	0.81	0.77	121.9	YES	NO	dd	dd	1.406
9	Total-tetrafurans	23.50	9.873e3	1.453e4	0.933	0.68	0.77	112.8	YES	NO	dd	dd	2.235
10	Total-tetrafurans	23.30	2.638e4	3.160e4	0.933	0.83	0.77	467.6	YES	NO	bd	bd	5.311
11	Total-tetrafurans	22.72	5.031e3	6.775e3	0.933	0.74	0.77	93.8	YES	NO	bb	bb	1.081
12	1368-TCDF	22.45	3.936e3	5.000e3	1.064	0.79	0.77	72.6	YES	NO	bb	bb	0.717
13	Total-Furans	21.40	2.814e2	3.829e2	1.067	0.73	0.77	4.7	YES	NO	bb	bd	0.053
14	Total-tetrafurans	27.61	1.405e3	1.812e3	0.933	0.78	0.77	25.8	YES	NO	db	db	0.295
15	Total-tetrafurans	26.49	2.398e2	3.251e2	0.933	0.74	0.77	5.4	YES	NO	db	db	0.052
16	Total-tetrafurans	26.38	1.856e3	2.435e3	0.933	0.76	0.77	35.8	YES	NO	dd	dd	0.393
17	Total-tetrafurans	26.21	8.589e3	1.126e4	0.933	0.76	0.77	157.8	YES	NO	dd	dd	1.817
18	Total-tetrafurans	26.11	5.359e3	7.504e3	0.933	0.71	0.77	96.9	YES	NO	dd	dd	1.178
19	2378-TCDF	25.99	7.366e3	1.009e4	0.876	0.73	0.77	143.2	YES	NO	bd	dd	1.702
20	Total-tetrafurans	25.80	2.992e3	4.366e3	0.933	0.69	0.77	58.4	YES	NO	db	dd	0.674
21	Total-tetrafurans	25.76	2.823e3	4.239e3	0.933	0.67	0.77	57.1	YES	NO	dd	dd	0.647
22	Total-tetrafurans	25.48	2.581e3	3.813e3	0.933	0.68	0.77	46.4	YES	NO	dd	dd	0.586
23	Total-tetrafurans	25.29	4.867e3	6.155e3	0.933	0.79	0.77	77.7	YES	NO	bd	dd	1.009
24	Total-tetrafurans	25.07	7.569e3	1.032e4	0.933	0.73	0.77	138.8	YES	NO	db	dd	1.638
25	Total-tetrafurans	24.88	2.006e4	2.710e4	0.933	0.74	0.77	353.6	YES	NO	dd	dd	4.318
26	Total-tetrafurans	24.73	5.364e3	6.361e3	0.933	0.84	0.77	86.6	YES	NO	dd	dd	1.074
27	Total-Furans	27.91	4.395e2	6.217e2	1.067	0.71	0.77	7.7	YES	NO	bb	bb	0.085
28	Total-pentafurans	29.08	7.769e4	4.949e4	0.866	1.57	1.55	729.1	YES	NO	MM	MM	13.359
29	Total-pentafurans	28.89	1.030e4	7.175e3	0.866	1.44	1.55	108.2	YES	NO	dd	dd	1.836
30	Total-pentafurans	28.66	7.415e2	4.196e2	0.866	1.77	1.55	10.2	YES	NO	bd	bd	0.122
31	23478-PeCDF	31.50	1.042e4	6.888e3	0.911	1.51	1.55	131.4	YES	NO	db	db	1.760
32	Total-pentafurans	31.36	1.687e4	1.126e4	0.866	1.50	1.55	213.7	YES	NO	dd	dd	2.956
33	Total-pentafurans	31.25	5.203e3	3.458e3	0.866	1.50	1.55	72.2	YES	NO	bd	bd	0.910
34	Total-pentafurans	30.64	3.423e2	1.982e2	0.866	1.73	1.55	5.7	YES	NO	dd	bb	0.057
35	Total-pentafurans	30.36	9.627e3	6.458e3	0.866	1.49	1.55	134.8	YES	NO	bd	bd	1.690
36	12378-PeCDF	30.15	4.637e3	2.924e3	0.845	1.59	1.55	64.6	YES	NO	bb	bb	0.801
37	Total-pentafurans	29.80	2.299e4	1.420e4	0.866	1.62	1.55	257.0	YES	NO	db	db	3.907

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	123678-HxCDF	35.26	8.300e3	6.446e3	1.248	1.29	1.24	108.0	YES	NO	dd	db	1.375
39	123478-HxCDF	35.12	1.295e4	1.090e4	1.182	1.19	1.24	178.4	YES	NO	dd	dd	2.376
40	Total-hexafurans	34.97	3.463e3	2.738e3	1.208	1.26	1.24	48.9	YES	NO	bd	bd	0.681
41	Total-hexafurans	34.50	6.580e4	5.230e4	1.208	1.26	1.24	868.5	YES	NO	bb	bd	12.961
42	Total-hexafurans	33.67	7.469e4	6.019e4	1.208	1.24	1.24	954.6	YES	NO	bd	bb	14.804
43	123468-HXCDF	33.46	1.744e4	1.492e4	1.197	1.17	1.24	230.8	YES	NO	bb	bb	3.183
44	234678-HxCDF	36.11	1.078e4	8.825e3	1.229	1.22	1.24	96.3	YES	NO	bb	bb	2.302
45	Total-hexafurans	35.78	3.991e2	3.108e2	1.208	1.28	1.24	6.6	YES	NO	bb	bb	0.078
46	Total-hexafurans	35.60	6.093e2	4.630e2	1.208	1.32	1.24	8.1	YES	NO	db	bb	0.118
47	1234789-HpCDF	41.26	2.932e3	3.020e3	1.165	0.97	1.05	38.8	YES	NO	bb	MM	0.930
48	Total-heptafurans	39.66	8.711e4	8.610e4	1.185	1.01	1.05	1201.9	YES	NO	bb	bb	25.355
49	1234678-HpCDF	38.99	5.206e4	5.018e4	1.204	1.04	1.05	746.4	YES	NO	bb	bd	14.060
50	OCDF	45.56	6.392e4	7.247e4	1.186	0.88	0.89	913.9	YES	NO	bd	bd	26.197
51	Total-penta1	27.41	1.523e5	1.012e5		1.50	1.55	2968.0	YES	NO	bb	bb	24.724

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.49	4.515e2	6.850e2	1.099	0.66	0.77	8.7	YES	NO	bd	bd	0.109
2	Total-tetradioxins	25.24	5.503e3	6.820e3	1.099	0.81	0.77	103.4	YES	NO	bd	bb	1.178
3	Total-tetradioxins	24.95	4.263e3	4.982e3	1.099	0.86	0.77	66.1	YES	NO	dd	bd	0.883
4	Total-tetradioxins	24.23	1.178e3	1.748e3	1.099	0.67	0.77	18.8	YES	NO	db	db	0.280
5	Total-tetradioxins	24.15	4.547e2	6.431e2	1.099	0.71	0.77	10.5	YES	NO	dd	dd	0.105
6	Total-tetradioxins	24.02	1.172e4	1.463e4	1.099	0.80	0.77	218.8	YES	NO	bd	bd	2.519
7	1368-TCDD	23.74	1.635e4	2.146e4	1.084	0.76	0.77	314.2	YES	NO	bb	bb	3.660
8	1289-TCDD	27.24	3.989e2	5.169e2	0.975	0.77	0.77	7.1	YES	NO	bb	bb	0.099
9	Total-tetradioxins	26.75	1.531e3	1.826e3	1.099	0.84	0.77	27.3	YES	NO	db	db	0.321
10	2378-TCDD	26.64	1.642e3	2.029e3	1.236	0.81	0.77	26.5	YES	NO	bd	bd	0.312
11	Total-tetradioxins	26.25	3.816e3	5.397e3	1.099	0.71	0.77	51.1	YES	NO	bb	bb	0.880
12	Total-tetradioxins	25.60	1.549e3	2.230e3	1.099	0.69	0.77	28.2	YES	NO	db	db	0.361

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PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentadioxins	30.70	3.477e3	2.198e3	1.392	1.58	1.55	39.1	YES	NO	bb	bb	0.736
2	Total-pentadioxins	30.51	8.197e3	5.091e3	1.392	1.61	1.55	118.9	YES	NO	db	bb	1.722
3	Total-pentadioxins	30.36	4.701e3	2.820e3	1.392	1.67	1.55	65.1	YES	NO	bd	bb	0.975
4	Total-pentadioxins	30.15	1.054e4	6.824e3	1.392	1.55	1.55	147.6	YES	NO	bb	bb	2.251
5	Total-pentadioxins	29.53	1.706e3	1.094e3	1.392	1.56	1.55	24.3	YES	NO	bb	bb	0.363
6	12389-PECDD	32.15	1.444e3	1.014e3	1.252	1.42	1.55	20.1	YES	NO	bb	bb	0.354
7	12378-PeCDD	31.76	4.956e3	3.267e3	1.087	1.52	1.55	62.9	YES	NO	bb	bb	1.365
8	Total-pentadioxins	31.08	4.900e3	3.083e3	1.392	1.59	1.55	59.4	YES	NO	bb	bb	1.035
9	12479-PECDD	29.05	1.954e4	1.218e4	1.837	1.60	1.55	164.2	YES	NO	MM	MM	3.116

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexadioxins	36.51	2.726e3	1.980e3	1.007	1.38	1.24	31.6	YES	NO	db	db	0.669
2	123678-HxCDD	36.36	1.053e4	8.532e3	1.021	1.23	1.24	117.4	YES	NO	dd	dd	2.564
3	123478-HxCDD	36.24	3.716e3	3.396e3	0.987	1.09	1.24	46.4	YES	NO	bd	bd	1.078
4	Total-hexadioxins	35.36	4.159e4	3.163e4	1.007	1.32	1.24	316.2	YES	NO	bd	bd	10.413
5	Total-hexadioxins	35.00	2.320e4	1.936e4	1.007	1.20	1.24	273.2	YES	NO	bb	bb	6.054
6	124679-HXCDD	34.23	3.920e4	3.111e4	1.033	1.26	1.24	447.4	YES	NO	bb	bd	10.179
7	123789-HxCDD	36.74	7.963e3	6.250e3	0.985	1.27	1.24	91.0	YES	NO	bb	bb	2.065

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.50	1.685e5	1.610e5	1.253	1.05	1.05	1273.6	YES	NO	bb	bb	54.807
2	1234679-HPCDD	39.44	2.191e5	2.096e5	1.286	1.05	1.05	1740.9	YES	NO	bb	bb	69.435

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.49	4.515e2	6.850e2	1.099	0.66	0.77	8.7	YES	NO	bd	bd	0.109
2	Total-tetradioxins	25.24	5.503e3	6.820e3	1.099	0.81	0.77	103.4	YES	NO	bd	bb	1.178
3	Total-tetradioxins	24.95	4.263e3	4.982e3	1.099	0.86	0.77	66.1	YES	NO	dd	bd	0.883
4	Total-tetradioxins	24.23	1.178e3	1.748e3	1.099	0.67	0.77	18.8	YES	NO	db	db	0.280
5	Total-tetradioxins	24.15	4.547e2	6.431e2	1.099	0.71	0.77	10.5	YES	NO	dd	dd	0.105
6	Total-tetradioxins	24.02	1.172e4	1.463e4	1.099	0.80	0.77	218.8	YES	NO	bd	bd	2.519
7	1368-TCDD	23.74	1.635e4	2.146e4	1.084	0.76	0.77	314.2	YES	NO	bb	bb	3.660
8	1289-TCDD	27.24	3.989e2	5.169e2	0.975	0.77	0.77	7.1	YES	NO	bb	bb	0.099
9	Total-tetradioxins	26.75	1.531e3	1.826e3	1.099	0.84	0.77	27.3	YES	NO	db	db	0.321
10	2378-TCDD	26.64	1.642e3	2.029e3	1.236	0.81	0.77	26.5	YES	NO	bd	bd	0.312
11	Total-tetradioxins	26.25	3.816e3	5.397e3	1.099	0.71	0.77	51.1	YES	NO	bb	bb	0.880
12	Total-tetradioxins	25.60	1.549e3	2.230e3	1.099	0.69	0.77	28.2	YES	NO	db	db	0.361
13	Total-pentadioxins	30.70	3.477e3	2.198e3	1.392	1.58	1.55	39.1	YES	NO	bb	bb	0.736
14	Total-pentadioxins	30.51	8.197e3	5.091e3	1.392	1.61	1.55	118.9	YES	NO	db	bb	1.722
15	Total-pentadioxins	30.36	4.701e3	2.820e3	1.392	1.67	1.55	65.1	YES	NO	bd	bb	0.975
16	Total-pentadioxins	30.15	1.054e4	6.824e3	1.392	1.55	1.55	147.6	YES	NO	bb	bb	2.251
17	Total-pentadioxins	29.53	1.706e3	1.094e3	1.392	1.56	1.55	24.3	YES	NO	bb	bb	0.363
18	12389-PECDD	32.15	1.444e3	1.014e3	1.252	1.42	1.55	20.1	YES	NO	bb	bb	0.354
19	12378-PeCDD	31.76	4.956e3	3.267e3	1.087	1.52	1.55	62.9	YES	NO	bb	bb	1.365
20	Total-pentadioxins	31.08	4.900e3	3.083e3	1.392	1.59	1.55	59.4	YES	NO	bb	bb	1.035
21	Total-hexadioxins	36.51	2.726e3	1.980e3	1.007	1.38	1.24	31.6	YES	NO	db	db	0.669
22	123678-HxCDD	36.36	1.053e4	8.532e3	1.021	1.23	1.24	117.4	YES	NO	dd	dd	2.564
23	123478-HxCDD	36.24	3.716e3	3.396e3	0.987	1.09	1.24	46.4	YES	NO	bd	bd	1.078
24	Total-hexadioxins	35.36	4.159e4	3.163e4	1.007	1.32	1.24	316.2	YES	NO	bd	bd	10.413
25	Total-hexadioxins	35.00	2.320e4	1.936e4	1.007	1.20	1.24	273.2	YES	NO	bb	bb	6.054
26	124679-HXCDD	34.23	3.920e4	3.111e4	1.033	1.26	1.24	447.4	YES	NO	bb	bd	10.179
27	123789-HxCDD	36.74	7.963e3	6.250e3	0.985	1.27	1.24	91.0	YES	NO	bb	bb	2.065
28	1234678-HpCDD	40.50	1.685e5	1.610e5	1.253	1.05	1.05	1273.6	YES	NO	bb	bb	54.807
29	1234679-HPCDD	39.44	2.191e5	2.096e5	1.286	1.05	1.05	1740.9	YES	NO	bb	bb	69.435
30	OCDD	45.32	9.019e5	1.023e6	1.103	0.88	0.89	4925.8	YES	NO	bb	bb	397.803
31	12479-PECDD	29.05	1.954e4	1.218e4	1.837	1.60	1.55	164.2	YES	NO	MM	MM	3.116

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.64	8.566e3	1.287e4	0.933	0.67	0.77	117.7	YES	NO	dd	dd	1.963
2	Total-tetrafurans	24.47	6.564e2	8.225e2	0.933	0.80	0.77	9.1	YES	NO	dd	dd	0.135
3	Total-tetrafurans	24.22	6.367e3	8.862e3	0.933	0.72	0.77	102.2	YES	NO	db	dd	1.395
4	Total-tetrafurans	24.08	3.099e3	4.644e3	0.933	0.67	0.77	64.9	YES	NO	dd	dd	0.709
5	Total-tetrafurans	23.97	1.721e4	2.151e4	0.933	0.80	0.77	326.7	YES	NO	dd	dd	3.546
6	Total-tetrafurans	23.81	3.933e3	5.476e3	0.933	0.72	0.77	80.2	YES	NO	dd	dd	0.862
7	Total-tetrafurans	23.73	9.541e3	1.205e4	0.933	0.79	0.77	188.7	YES	NO	dd	dd	1.978
8	Total-tetrafurans	23.63	6.868e3	8.489e3	0.933	0.81	0.77	121.9	YES	NO	dd	dd	1.406
9	Total-tetrafurans	23.50	9.873e3	1.453e4	0.933	0.68	0.77	112.8	YES	NO	dd	dd	2.235
10	Total-tetrafurans	23.30	2.638e4	3.160e4	0.933	0.83	0.77	467.6	YES	NO	bd	bd	5.311
11	Total-tetrafurans	22.72	5.031e3	6.775e3	0.933	0.74	0.77	93.8	YES	NO	bb	bb	1.081
12	1368-TCDF	22.45	3.936e3	5.000e3	1.064	0.79	0.77	72.6	YES	NO	bb	bb	0.717
13	Total-Furans	21.40	2.814e2	3.829e2	1.067	0.73	0.77	4.7	YES	NO	bb	bd	0.053
14	Total-tetrafurans	27.61	1.405e3	1.812e3	0.933	0.78	0.77	25.8	YES	NO	db	db	0.295
15	Total-tetrafurans	26.49	2.398e2	3.251e2	0.933	0.74	0.77	5.4	YES	NO	db	db	0.052
16	Total-tetrafurans	26.38	1.856e3	2.435e3	0.933	0.76	0.77	35.8	YES	NO	dd	dd	0.393
17	Total-tetrafurans	26.21	8.589e3	1.126e4	0.933	0.76	0.77	157.8	YES	NO	dd	dd	1.817
18	Total-tetrafurans	26.11	5.359e3	7.504e3	0.933	0.71	0.77	96.9	YES	NO	dd	dd	1.178
19	2378-TCDF	25.99	7.366e3	1.009e4	0.876	0.73	0.77	143.2	YES	NO	bd	dd	1.702
20	Total-tetrafurans	25.80	2.992e3	4.366e3	0.933	0.69	0.77	58.4	YES	NO	db	dd	0.674
21	Total-tetrafurans	25.76	2.823e3	4.239e3	0.933	0.67	0.77	57.1	YES	NO	dd	dd	0.647
22	Total-tetrafurans	25.48	2.581e3	3.813e3	0.933	0.68	0.77	46.4	YES	NO	dd	dd	0.586
23	Total-tetrafurans	25.29	4.867e3	6.155e3	0.933	0.79	0.77	77.7	YES	NO	bd	dd	1.009
24	Total-tetrafurans	25.07	7.569e3	1.032e4	0.933	0.73	0.77	138.8	YES	NO	db	dd	1.638
25	Total-tetrafurans	24.88	2.006e4	2.710e4	0.933	0.74	0.77	353.6	YES	NO	dd	dd	4.318
26	Total-tetrafurans	24.73	5.364e3	6.361e3	0.933	0.84	0.77	86.6	YES	NO	dd	dd	1.074
27	Total-Furans	27.91	4.395e2	6.217e2	1.067	0.71	0.77	7.7	YES	NO	bb	bb	0.085
28	Total-pentafurans	29.08	7.769e4	4.949e4	0.866	1.57	1.55	729.1	YES	NO	MM	MM	13.359
29	Total-pentafurans	28.89	1.030e4	7.175e3	0.866	1.44	1.55	108.2	YES	NO	dd	dd	1.836
30	Total-pentafurans	28.66	7.415e2	4.196e2	0.866	1.77	1.55	10.2	YES	NO	bd	bd	0.122
31	23478-PeCDF	31.50	1.042e4	6.888e3	0.911	1.51	1.55	131.4	YES	NO	db	db	1.760
32	Total-pentafurans	31.36	1.687e4	1.126e4	0.866	1.50	1.55	213.7	YES	NO	dd	dd	2.956
33	Total-pentafurans	31.25	5.203e3	3.458e3	0.866	1.50	1.55	72.2	YES	NO	bd	bd	0.910
34	Total-pentafurans	30.64	3.423e2	1.982e2	0.866	1.73	1.55	5.7	YES	NO	dd	bb	0.057
35	Total-pentafurans	30.36	9.627e3	6.458e3	0.866	1.49	1.55	134.8	YES	NO	bd	bd	1.690
36	12378-PeCDF	30.15	4.637e3	2.924e3	0.845	1.59	1.55	64.6	YES	NO	bb	bb	0.801
37	Total-pentafurans	29.80	2.299e4	1.420e4	0.866	1.62	1.55	257.0	YES	NO	db	db	3.907

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	123678-HxCDF	35.26	8.300e3	6.446e3	1.248	1.29	1.24	108.0	YES	NO	dd	db	1.375
39	123478-HxCDF	35.12	1.295e4	1.090e4	1.182	1.19	1.24	178.4	YES	NO	dd	dd	2.376
40	Total-hexafurans	34.97	3.463e3	2.738e3	1.208	1.26	1.24	48.9	YES	NO	bd	bd	0.681
41	Total-hexafurans	34.50	6.580e4	5.230e4	1.208	1.26	1.24	868.5	YES	NO	bb	bd	12.961
42	Total-hexafurans	33.67	7.469e4	6.019e4	1.208	1.24	1.24	954.6	YES	NO	bd	bb	14.804
43	123468-HXCDF	33.46	1.744e4	1.492e4	1.197	1.17	1.24	230.8	YES	NO	bb	bb	3.183
44	234678-HxCDF	36.11	1.078e4	8.825e3	1.229	1.22	1.24	96.3	YES	NO	bb	bb	2.302
45	Total-hexafurans	35.78	3.991e2	3.108e2	1.208	1.28	1.24	6.6	YES	NO	bb	bb	0.078
46	Total-hexafurans	35.60	6.093e2	4.630e2	1.208	1.32	1.24	8.1	YES	NO	db	bb	0.118
47	1234789-HpCDF	41.26	2.932e3	3.020e3	1.165	0.97	1.05	38.8	YES	NO	bb	MM	0.930
48	Total-heptafurans	39.66	8.711e4	8.610e4	1.185	1.01	1.05	1201.9	YES	NO	bb	bb	25.355
49	1234678-HpCDF	38.99	5.206e4	5.018e4	1.204	1.04	1.05	746.4	YES	NO	bb	bd	14.060
50	OCDF	45.56	6.392e4	7.247e4	1.186	0.88	0.89	913.9	YES	NO	bd	bd	26.197
51	Total-penta1	27.41	1.523e5	1.012e5		1.50	1.55	2968.0	YES	NO	bb	bb	24.724
52	Total-tetradioxins	25.49	4.515e2	6.850e2	1.099	0.66	0.77	8.7	YES	NO	bd	bd	0.109
53	Total-tetradioxins	25.24	5.503e3	6.820e3	1.099	0.81	0.77	103.4	YES	NO	bd	bb	1.178
54	Total-tetradioxins	24.95	4.263e3	4.982e3	1.099	0.86	0.77	66.1	YES	NO	dd	bd	0.883
55	Total-tetradioxins	24.23	1.178e3	1.748e3	1.099	0.67	0.77	18.8	YES	NO	db	db	0.280
56	Total-tetradioxins	24.15	4.547e2	6.431e2	1.099	0.71	0.77	10.5	YES	NO	dd	dd	0.105
57	Total-tetradioxins	24.02	1.172e4	1.463e4	1.099	0.80	0.77	218.8	YES	NO	bd	bd	2.519
58	1368-TCDD	23.74	1.635e4	2.146e4	1.084	0.76	0.77	314.2	YES	NO	bb	bb	3.660
59	1289-TCDD	27.24	3.989e2	5.169e2	0.975	0.77	0.77	7.1	YES	NO	bb	bb	0.099
60	Total-tetradioxins	26.75	1.531e3	1.826e3	1.099	0.84	0.77	27.3	YES	NO	db	db	0.321
61	2378-TCDD	26.64	1.642e3	2.029e3	1.236	0.81	0.77	26.5	YES	NO	bd	bd	0.312
62	Total-tetradioxins	26.25	3.816e3	5.397e3	1.099	0.71	0.77	51.1	YES	NO	bb	bb	0.880
63	Total-tetradioxins	25.60	1.549e3	2.230e3	1.099	0.69	0.77	28.2	YES	NO	db	db	0.361
64	Total-pentadioxins	30.70	3.477e3	2.198e3	1.392	1.58	1.55	39.1	YES	NO	bb	bb	0.736
65	Total-pentadioxins	30.51	8.197e3	5.091e3	1.392	1.61	1.55	118.9	YES	NO	db	bb	1.722
66	Total-pentadioxins	30.36	4.701e3	2.820e3	1.392	1.67	1.55	65.1	YES	NO	bd	bb	0.975
67	Total-pentadioxins	30.15	1.054e4	6.824e3	1.392	1.55	1.55	147.6	YES	NO	bb	bb	2.251
68	Total-pentadioxins	29.53	1.706e3	1.094e3	1.392	1.56	1.55	24.3	YES	NO	bb	bb	0.363
69	12389-PECDD	32.15	1.444e3	1.014e3	1.252	1.42	1.55	20.1	YES	NO	bb	bb	0.354
70	12378-PeCDD	31.76	4.956e3	3.267e3	1.087	1.52	1.55	62.9	YES	NO	bb	bb	1.365
71	Total-pentadioxins	31.08	4.900e3	3.083e3	1.392	1.59	1.55	59.4	YES	NO	bb	bb	1.035
72	Total-hexadioxins	36.51	2.726e3	1.980e3	1.007	1.38	1.24	31.6	YES	NO	db	db	0.669
73	123678-HxCDD	36.36	1.053e4	8.532e3	1.021	1.23	1.24	117.4	YES	NO	dd	dd	2.564
74	123478-HxCDD	36.24	3.716e3	3.396e3	0.987	1.09	1.24	46.4	YES	NO	bd	bd	1.078

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
75	Total-hexadioxins	35.36	4.159e4	3.163e4	1.007	1.32	1.24	316.2	YES	NO	bd	bd	10.413
76	Total-hexadioxins	35.00	2.320e4	1.936e4	1.007	1.20	1.24	273.2	YES	NO	bb	bb	6.054
77	124679-HXCDD	34.23	3.920e4	3.111e4	1.033	1.26	1.24	447.4	YES	NO	bb	bd	10.179
78	123789-HxCDD	36.74	7.963e3	6.250e3	0.985	1.27	1.24	91.0	YES	NO	bb	bb	2.065
79	1234678-HpCDD	40.50	1.685e5	1.610e5	1.253	1.05	1.05	1273.6	YES	NO	bb	bb	54.807
80	1234679-HPCDD	39.44	2.191e5	2.096e5	1.286	1.05	1.05	1740.9	YES	NO	bb	bb	69.435
81	OCDD	45.32	9.019e5	1.023e6	1.103	0.88	0.89	4925.8	YES	NO	bb	bb	397.803
82	12479-PECDD	29.05	1.954e4	1.218e4	1.837	1.60	1.55	164.2	YES	NO	MM	MM	3.116

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	26.17	1.267e4					1.2	NO		dd		
2	FUNCTION1 PFK	26.13	1.442e4					1.2	NO		bd		
3	FUNCTION1 PFK	25.83	1.949e4					1.5	NO		bb		
4	FUNCTION1 PFK	25.77	5.815e3					0.6	NO		bb		
5	FUNCTION1 PFK	25.65	1.615e4					0.9	NO		bb		
6	FUNCTION1 PFK	25.21	4.443e4					1.7	NO		bb		
7	FUNCTION1 PFK	24.87	4.103e3					0.7	NO		bb		
8	FUNCTION1 PFK	24.79	1.082e4					1.1	NO		db		
9	FUNCTION1 PFK	24.73	6.253e3					0.7	NO		bd		
10	FUNCTION1 PFK	24.63	2.911e3					0.5	NO		bb		
11	FUNCTION1 PFK	23.09	9.872e3					1.0	NO		bb		
12	FUNCTION1 PFK	23.03	1.369e4					1.2	NO		bb		
13	FUNCTION1 PFK	22.24	3.646e3					0.6	NO		bb		
14	FUNCTION1 PFK	21.81	2.593e4					1.1	NO		bb		
15	FUNCTION1 PFK	27.91	5.216e3					0.9	NO		bb		
16	FUNCTION1 PFK	26.23	4.510e4					1.7	NO		db		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	37.47	7.805e5					4.7	YES		bb		0.000
2	FUNCTION3 PFK	36.90	4.454e5					10.8	YES		db		0.000
3	FUNCTION3 PFK	35.81	5.504e6					25.6	YES		dd		0.000
4	FUNCTION3 PFK	35.06	8.672e6					43.0	YES		dd		0.000
5	FUNCTION3 PFK	34.61	2.908e7					48.1	YES		bd		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.79	2.885e3					1.1	NO		bb		
2	FUNCTION4 PFK	40.07	3.913e5					5.7	YES		bb		
3	FUNCTION4 PFK	39.80	3.066e5					13.1	YES		bb		

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.11	8.618e3					2.5	NO		dd		
2	FUNCTION5 PFK	43.08	1.084e4					2.8	NO		bd		
3	FUNCTION5 PFK	45.38	2.125e3					0.8	NO		bb		
4	FUNCTION5 PFK	45.20	7.645e3					1.2	NO		bb		
5	FUNCTION5 PFK	44.72	6.342e2					0.4	NO		bb		
6	FUNCTION5 PFK	44.67	2.388e3					0.9	NO		bb		
7	FUNCTION5 PFK	44.60	9.295e2					0.6	NO		bb		
8	FUNCTION5 PFK	44.57	7.336e3					1.7	NO		bb		
9	FUNCTION5 PFK	44.51	6.534e3					2.2	NO		bb		
10	FUNCTION5 PFK	44.42	8.843e2					0.6	NO		bb		
11	FUNCTION5 PFK	44.12	1.911e3					0.8	NO		bb		
12	FUNCTION5 PFK	44.08	3.404e3					1.2	NO		db		
13	FUNCTION5 PFK	44.05	5.525e3					1.5	NO		bd		
14	FUNCTION5 PFK	43.64	7.792e2					0.5	NO		bb		
15	FUNCTION5 PFK	43.49	6.798e2					0.5	NO		bb		
16	FUNCTION5 PFK	43.39	6.922e3					1.7	NO		db		
17	FUNCTION5 PFK	43.33	2.209e4					1.8	NO		bd		
18	FUNCTION5 PFK	43.15	3.527e4					3.1	YES		db		
19	FUNCTION5 PFK	46.41	1.895e3					0.7	NO		bb		
20	FUNCTION5 PFK	46.26	1.939e3					0.7	NO		bb		
21	FUNCTION5 PFK	45.99	1.178e3					0.8	NO		bb		
22	FUNCTION5 PFK	45.96	8.346e3					2.2	NO		bb		
23	FUNCTION5 PFK	45.90	6.636e2					0.5	NO		bb		
24	FUNCTION5 PFK	45.82	4.072e3					1.3	NO		bb		
25	FUNCTION5 PFK	45.78	4.244e3					0.9	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.13	1.770e2					5.5	YES		db		0.000
2	FUNCTION1 HXCD...	26.00	1.193e3					31.5	YES		bd		0.000
3	FUNCTION1 HXCD...	25.34	4.336e2					9.0	YES		bb		0.000
4	FUNCTION1 HXCD...	24.67	1.045e2					3.7	YES		bb		0.000
5	FUNCTION1 HXCD...	23.98	1.095e3					30.5	YES		bb		0.000
6	FUNCTION1 HXCD...	23.34	1.335e2					7.1	YES		bb		0.000
7	FUNCTION1 HXCD...	22.96	3.032e2					5.8	YES		bb		0.000
8	FUNCTION1 HXCD...	22.37	1.004e2					2.9	NO		bb		0.000
9	FUNCTION1 HXCD...	28.12	1.452e2					2.5	NO		bb		0.000
10	FUNCTION1 HXCD...	27.89	3.434e2					7.6	YES		bb		0.000
11	FUNCTION1 HXCD...	27.03	7.239e2					15.0	YES		bb		0.000
12	FUNCTION1 HXCD...	26.37	1.810e3					48.4	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	29.20	4.814e2					9.4	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	35.11	8.767e1					4.3	YES		bb		0.000
2	FUNCTION3 OCDPE	33.34	8.977e1					3.6	YES		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.02	7.409e1					3.5	YES		bb		0.000
2	FUNCTION4 NCDPE	40.49	9.231e1					3.1	YES		bb		0.000
3	FUNCTION4 NCDPE	38.90	8.152e1					4.5	YES		bb		0.000
4	FUNCTION4 NCDPE	38.63	1.431e4					400.1	YES		bb		0.000

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:14:51 Pacific Standard Time

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ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
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ID: 23A0207-10, Name: 23022319, Date: 24-Feb-2023, Time: 01:04:12, Conditions: AUTOSPEC01, User: pk

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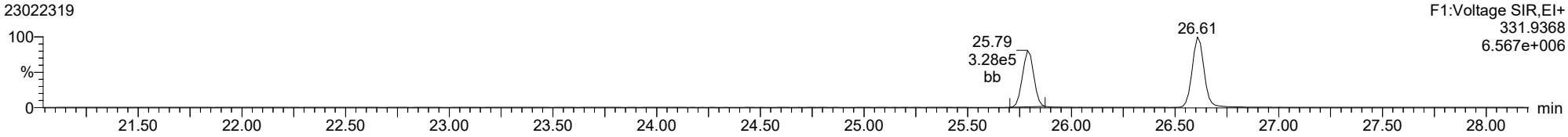

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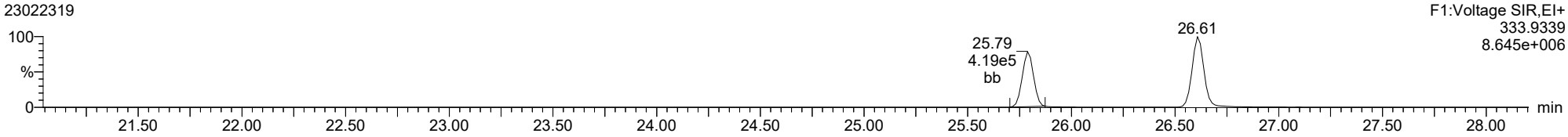
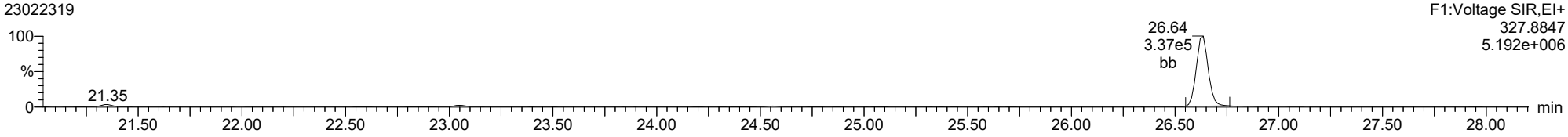


37CL-2378-TCDD



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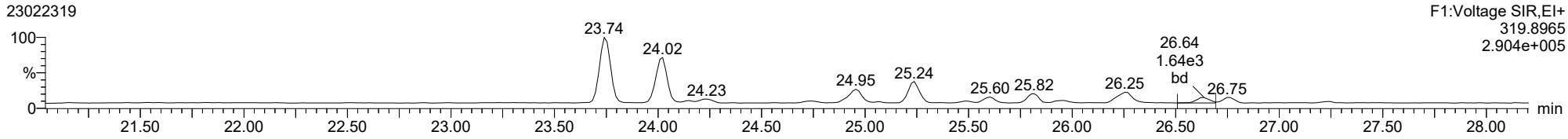
2378-TCDD



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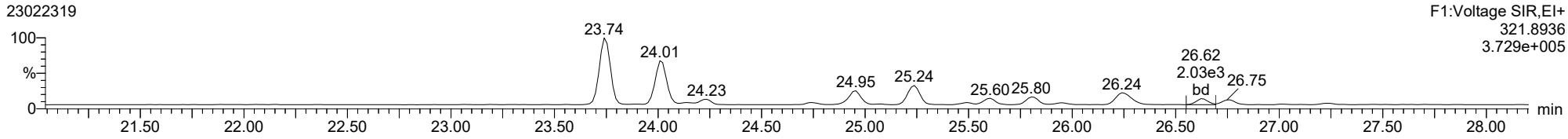

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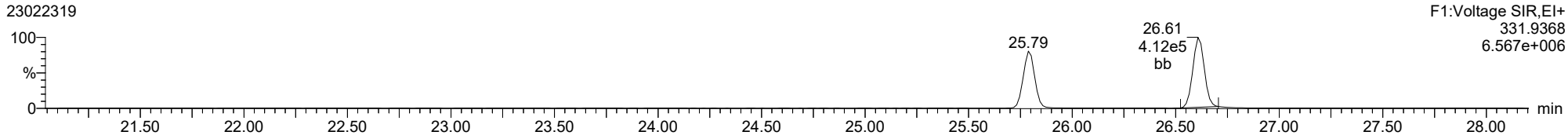

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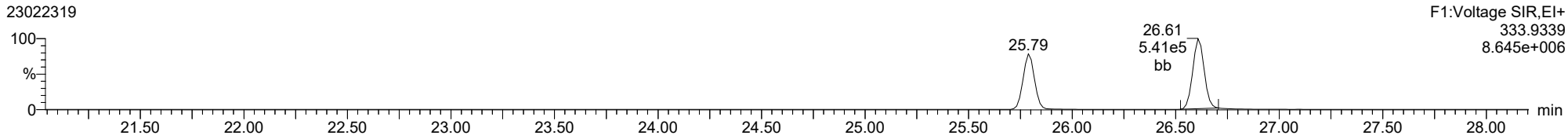

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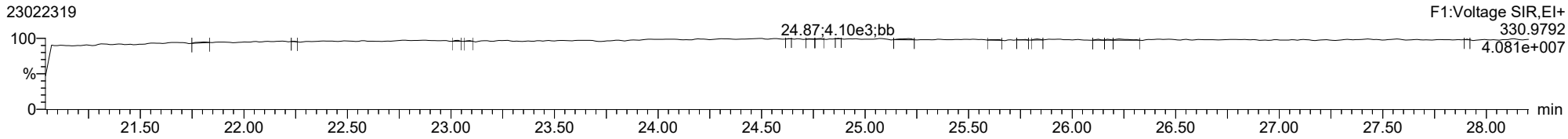

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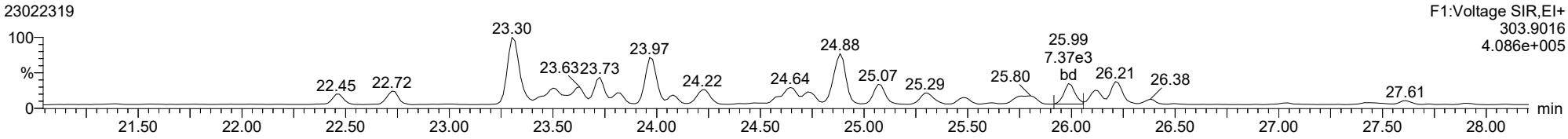
2378-TCDF



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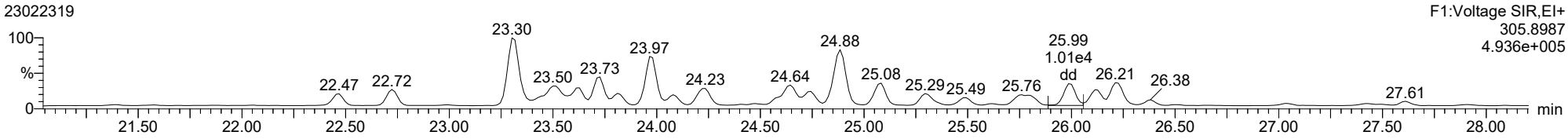

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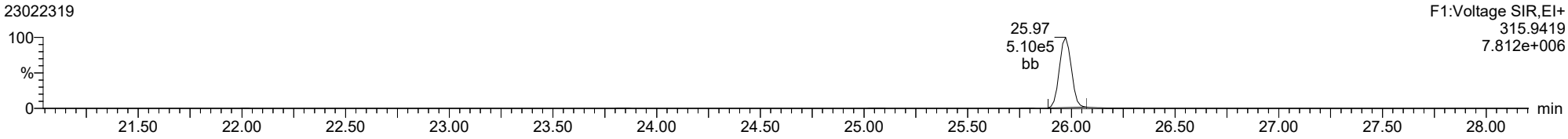

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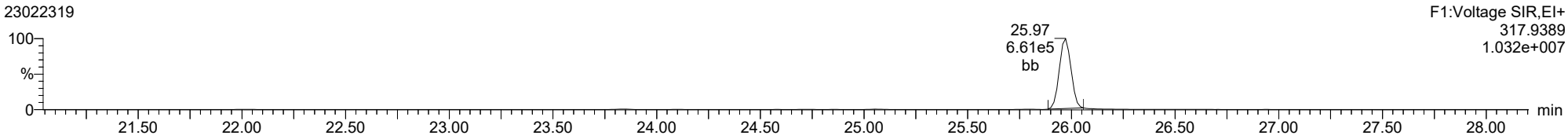

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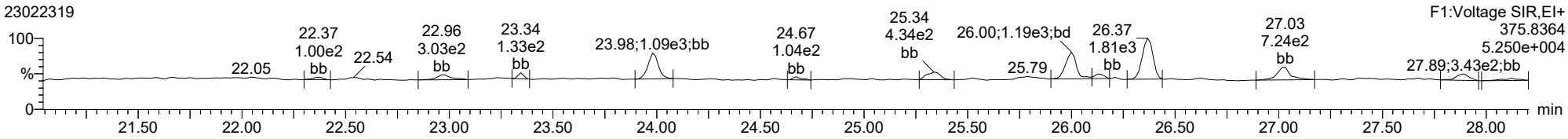

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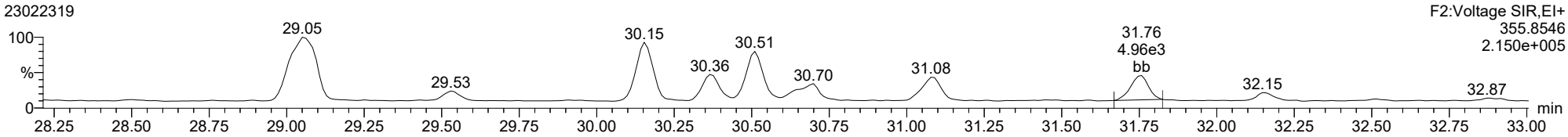
12378-PeCDD



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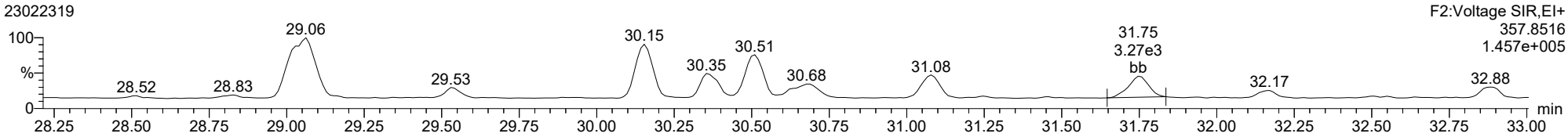

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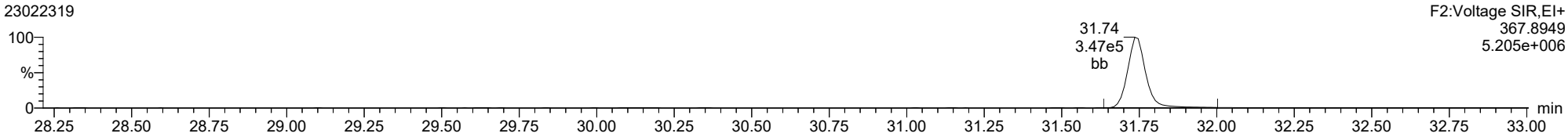

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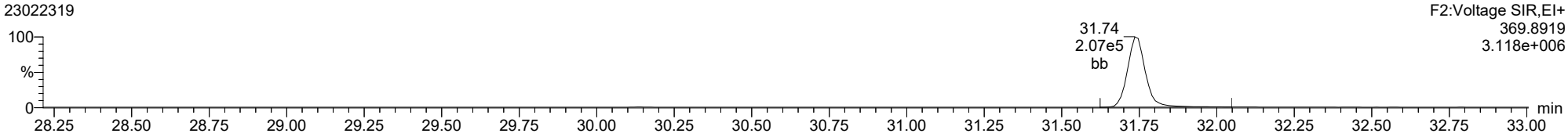

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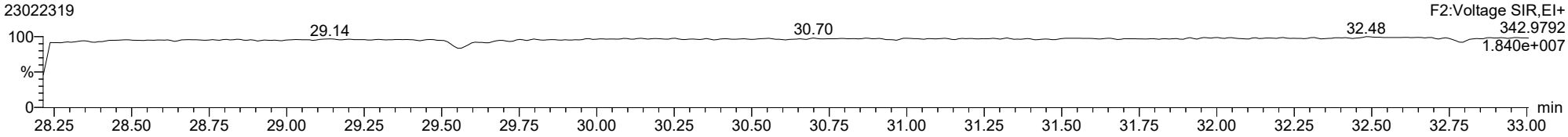

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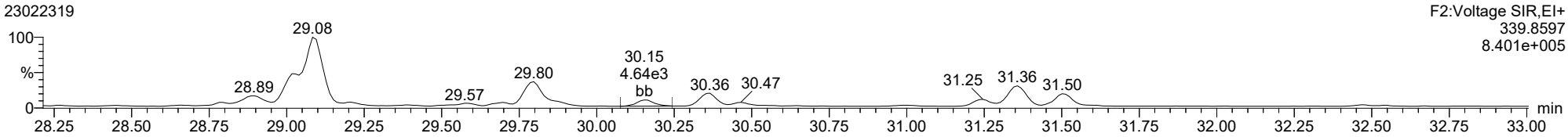

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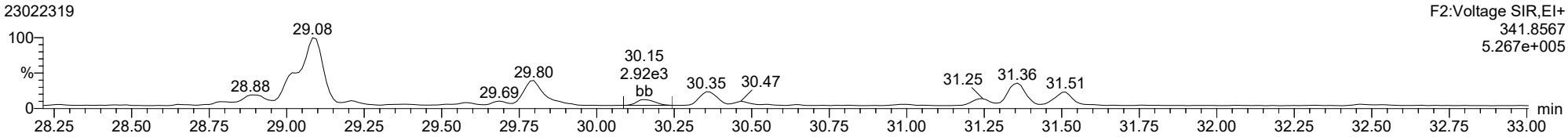

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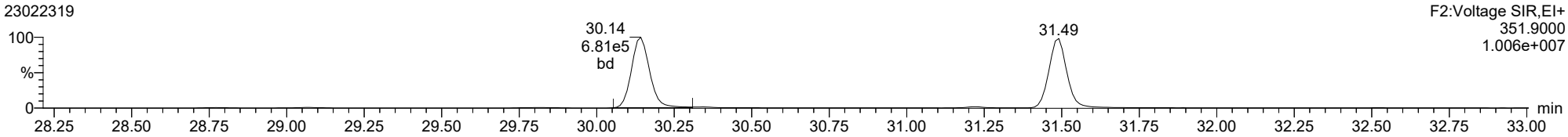

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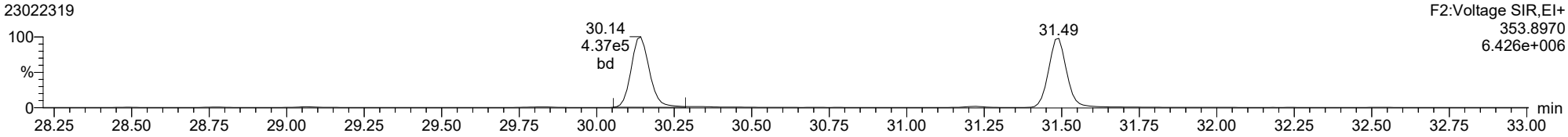

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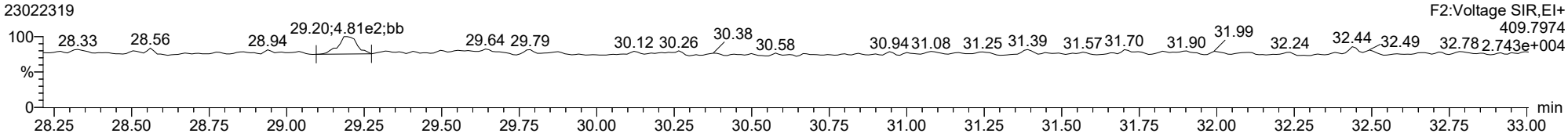

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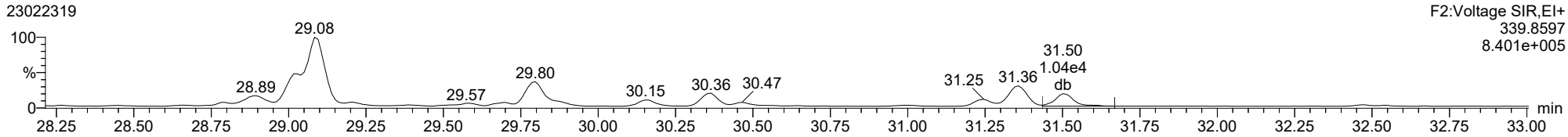

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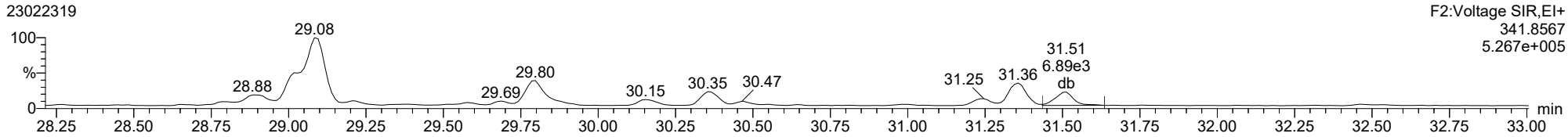

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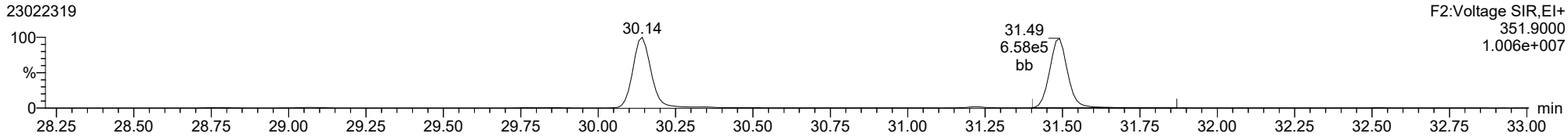

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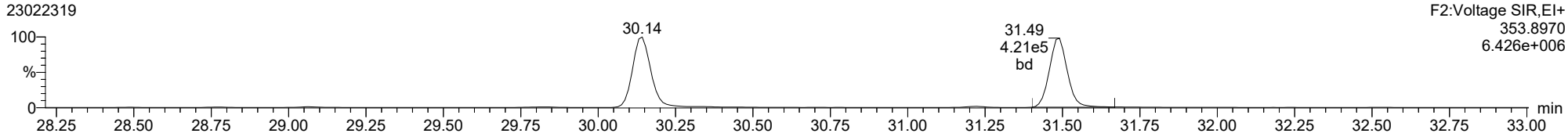

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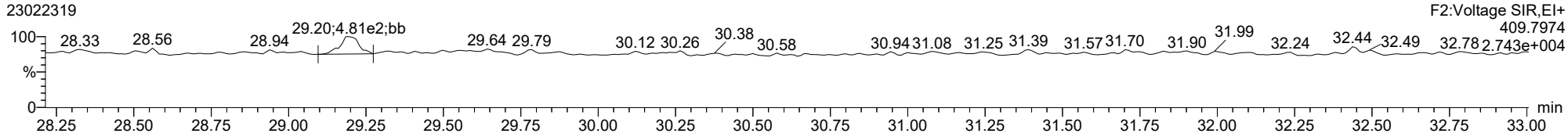

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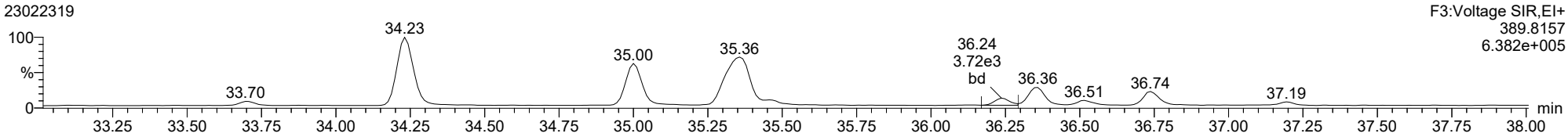
123478-HxCDD



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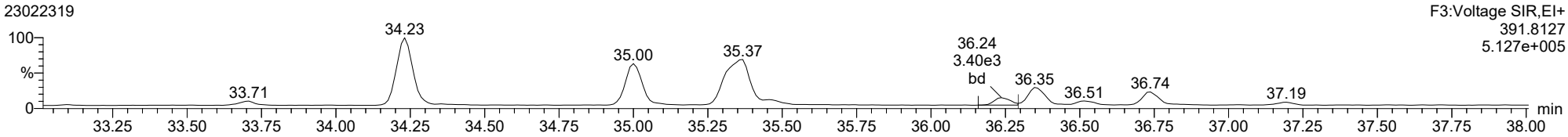

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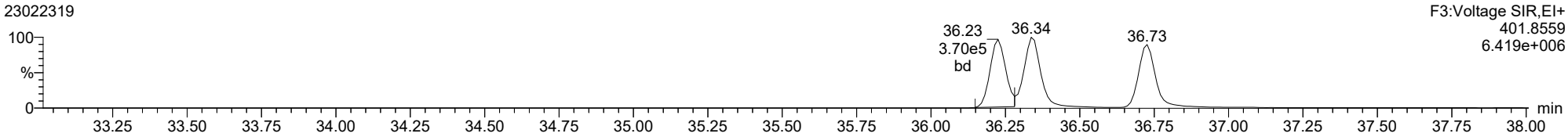

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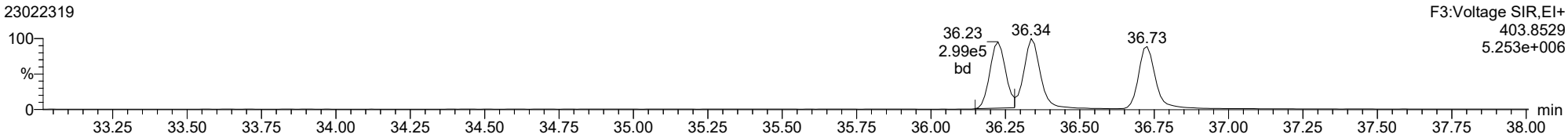

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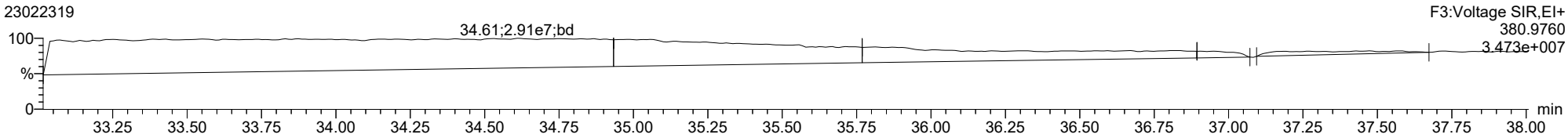

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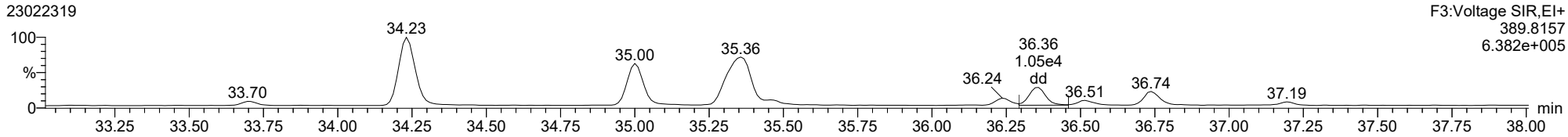

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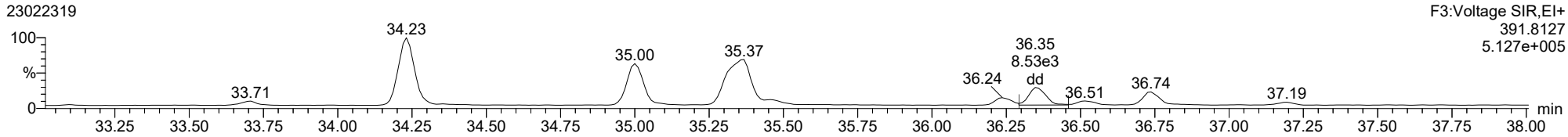

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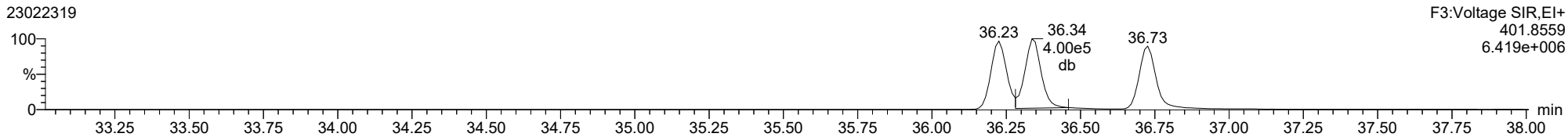

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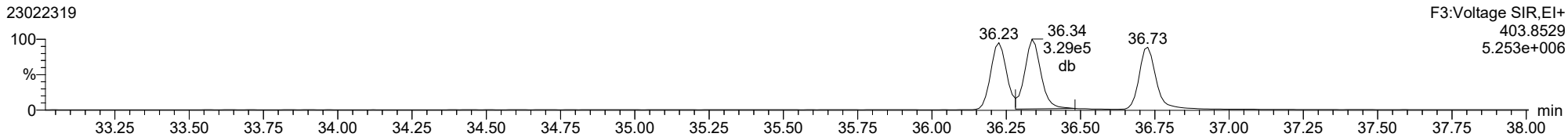

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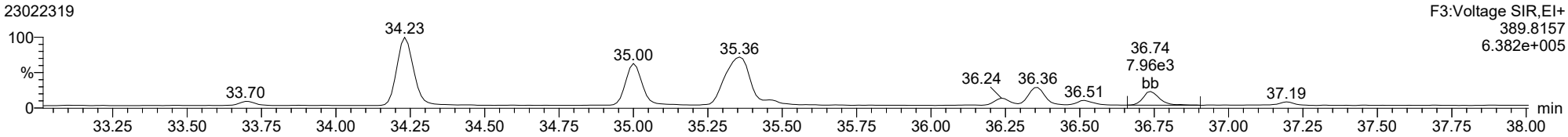

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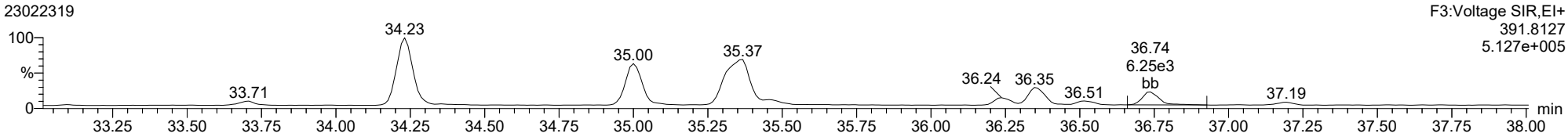

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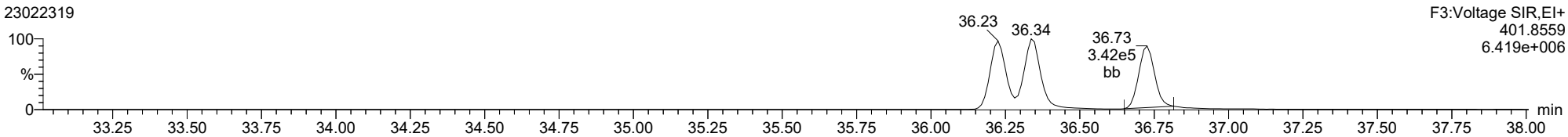

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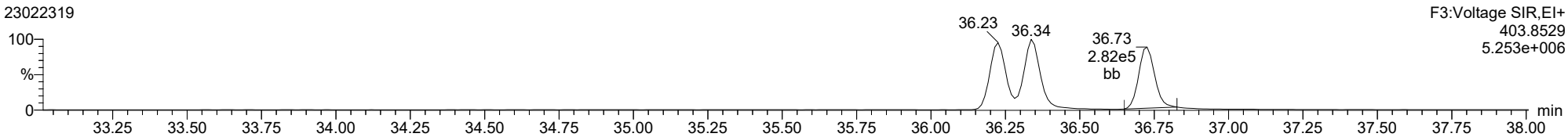

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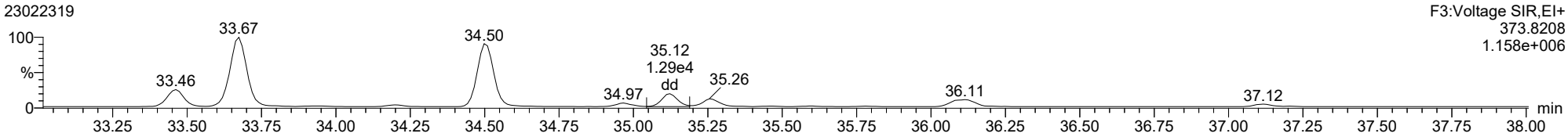

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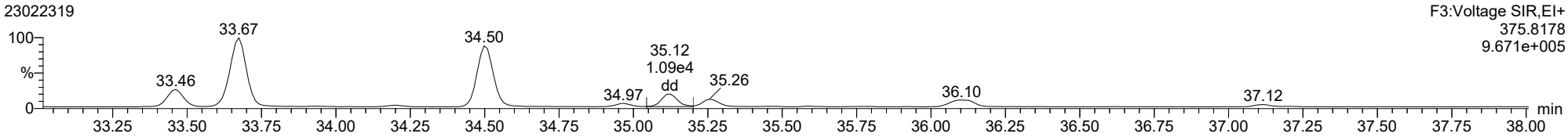

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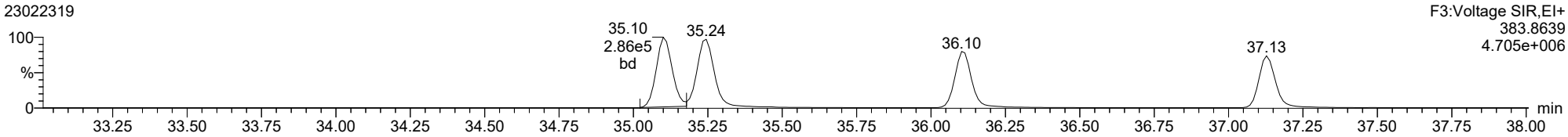

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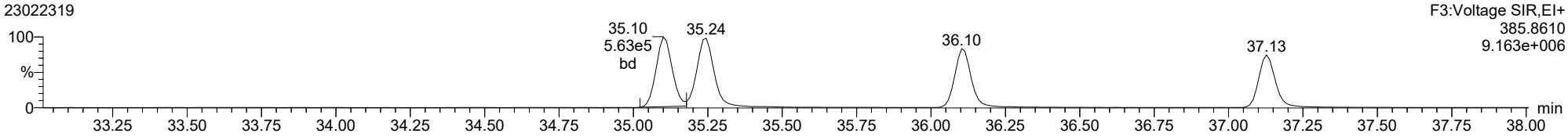

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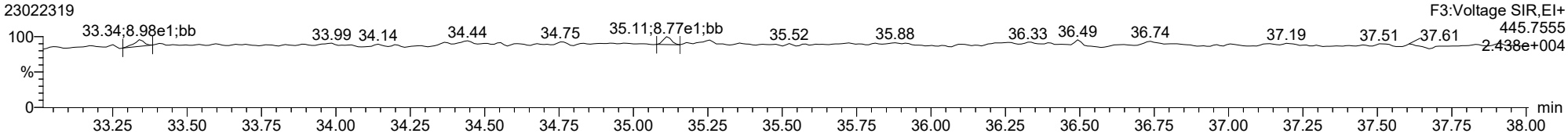

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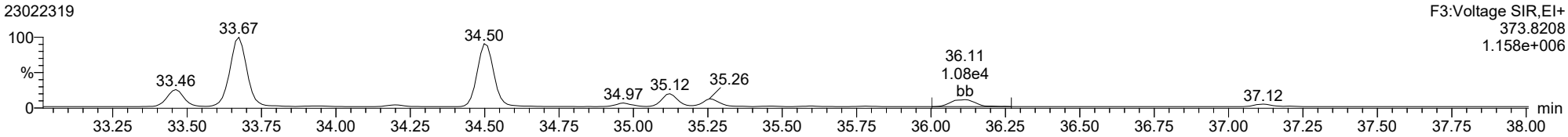
234678-HxCDF



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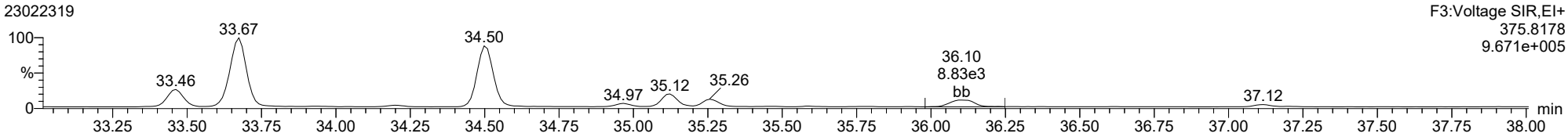

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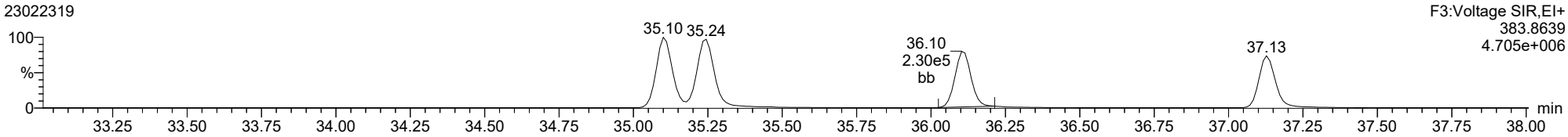

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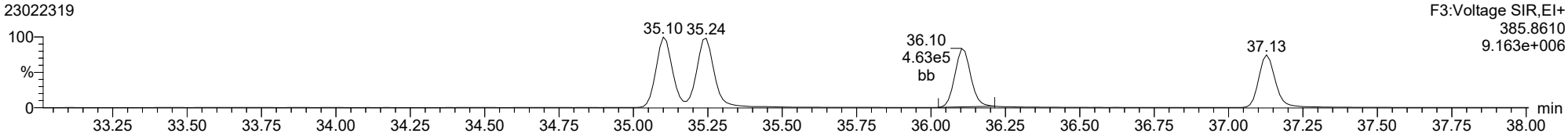

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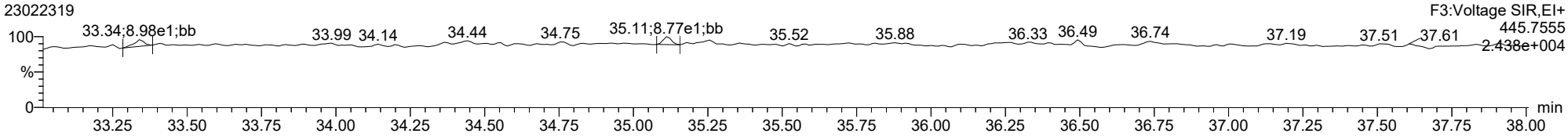

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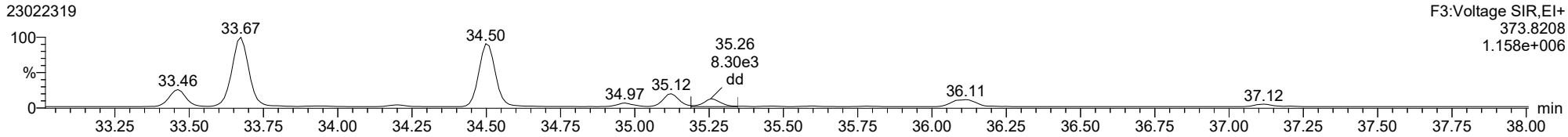

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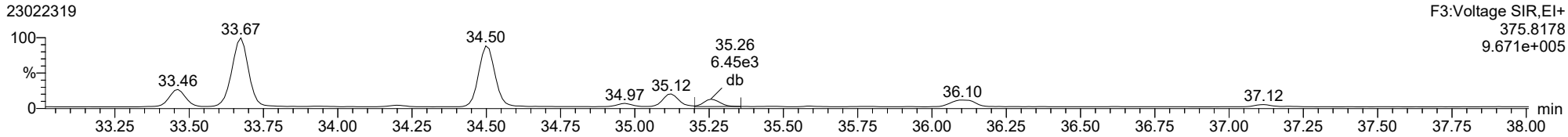

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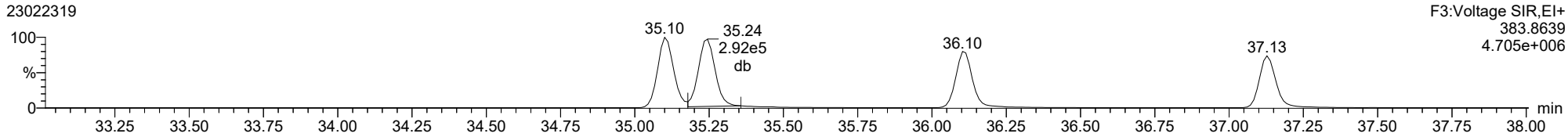

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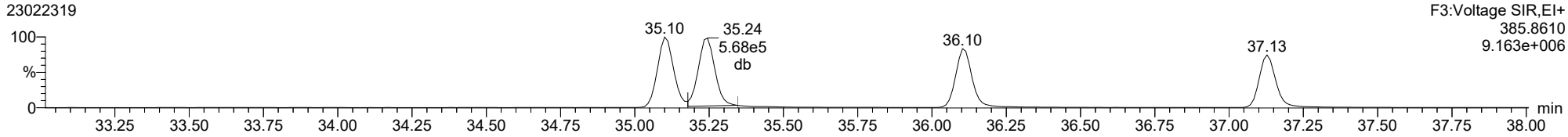

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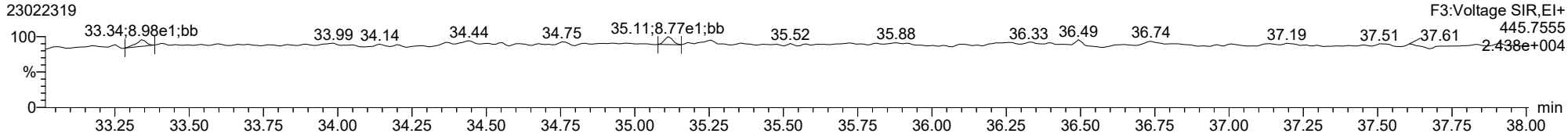

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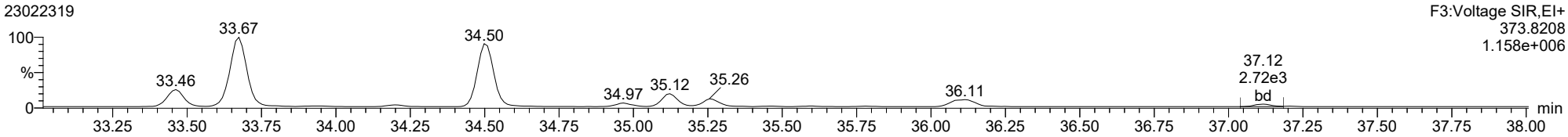

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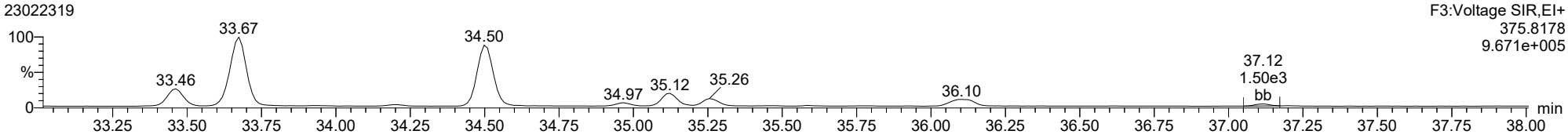

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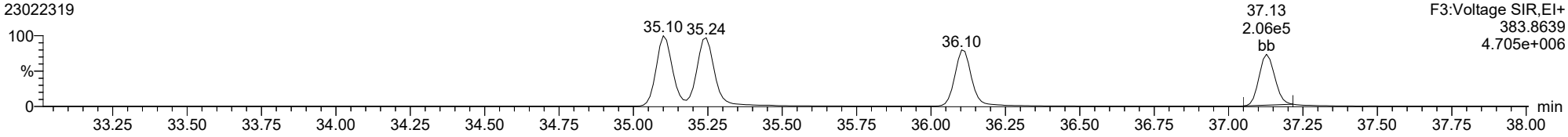

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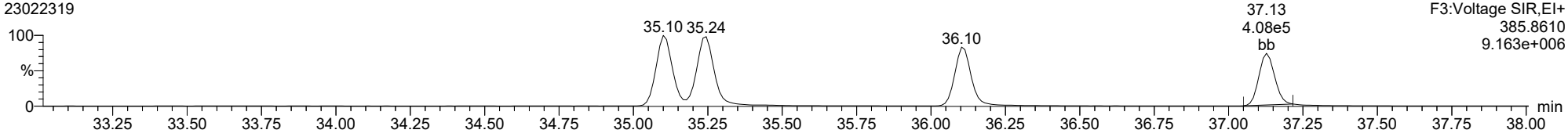

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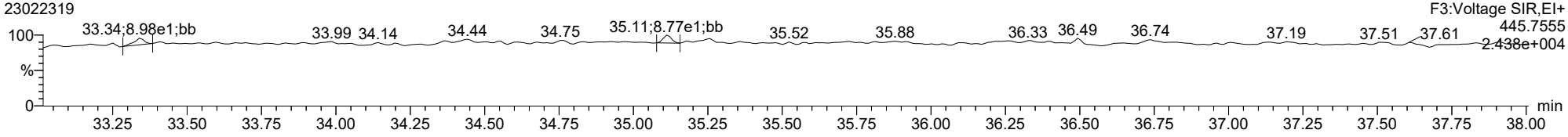

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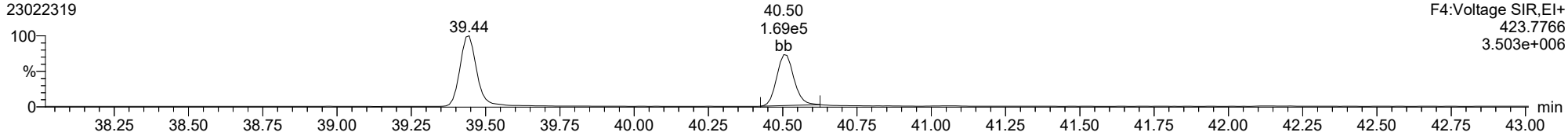

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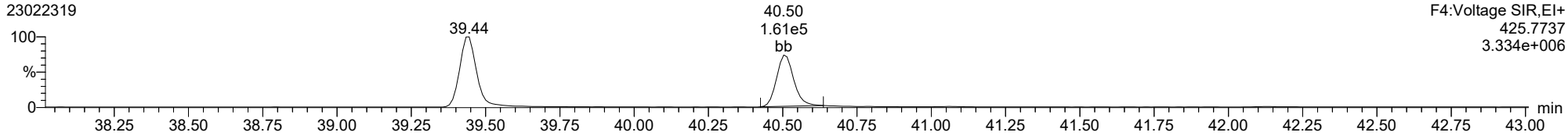

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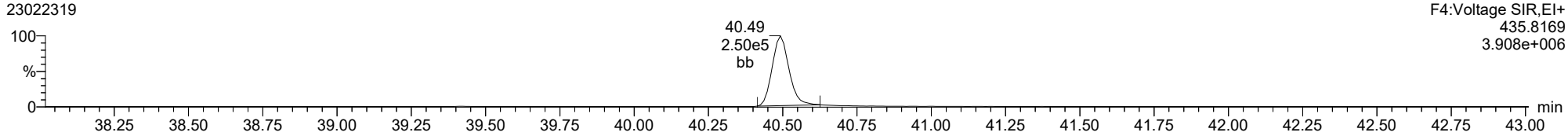

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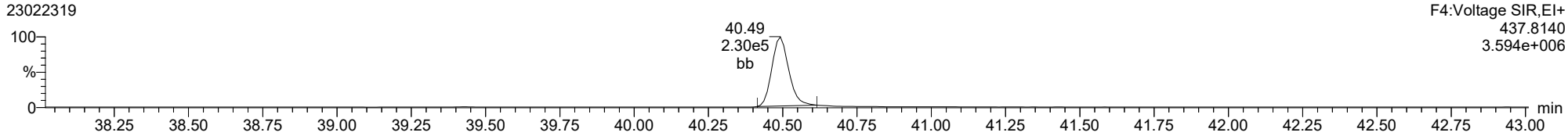
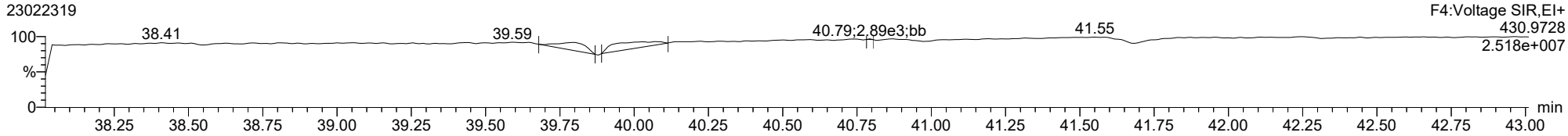


FUNCTION4 PFK



ID: 23A0207-10, Name: 23022319, Date: 24-Feb-2023, Time: 01:04:12, Conditions: AUTOSPEC01, User: pk

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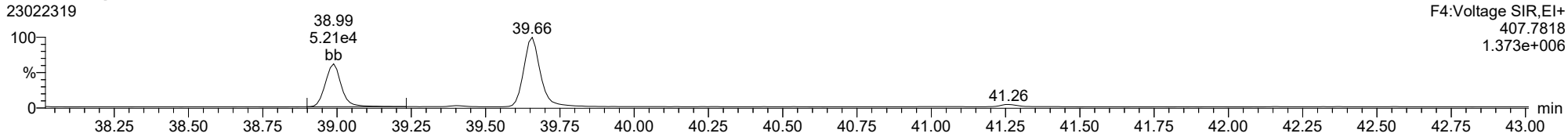

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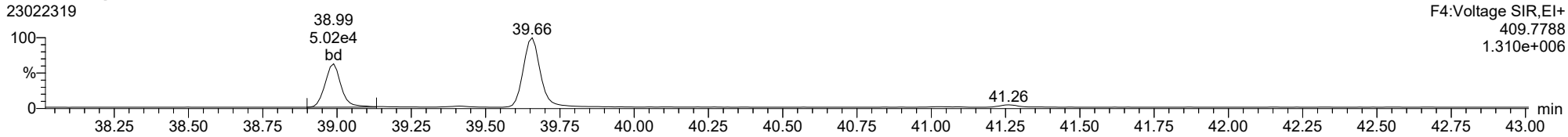

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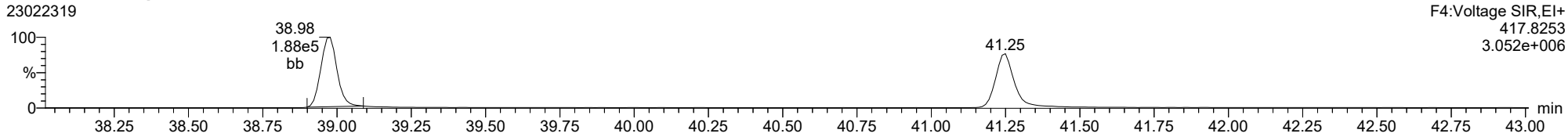

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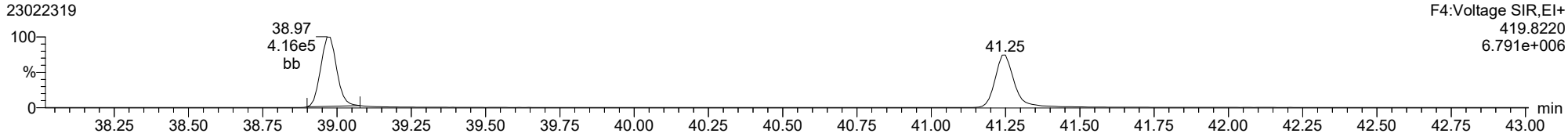
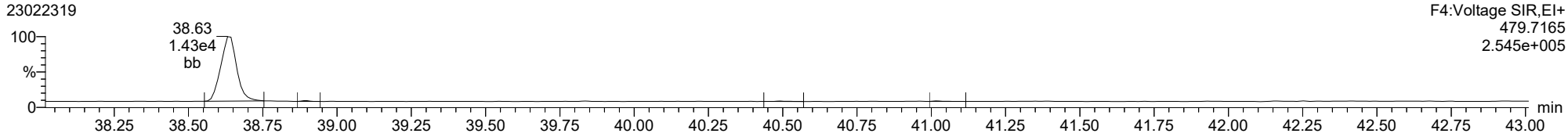
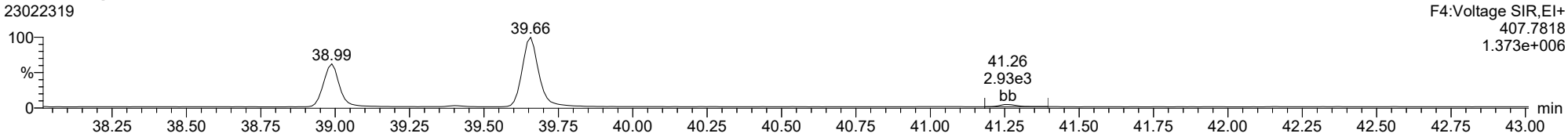


FUNCTION4 NCDPE



ID: 23A0207-10, Name: 23022319, Date: 24-Feb-2023, Time: 01:04:12, Conditions: AUTOSPEC01, User: pk

1234789-HpCDF



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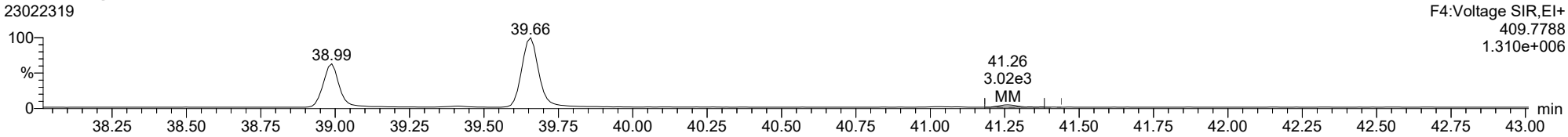

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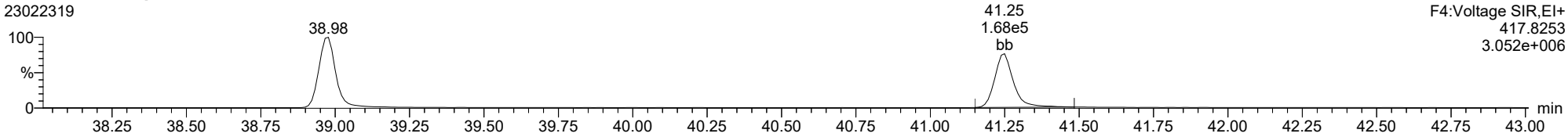

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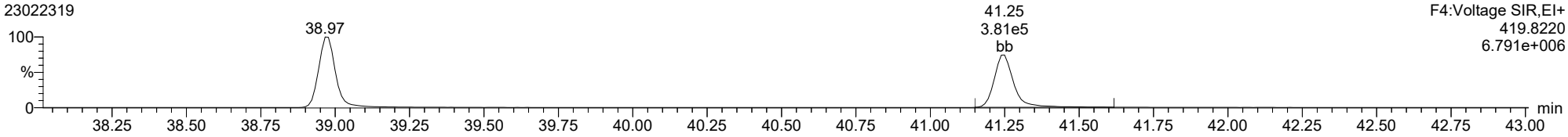
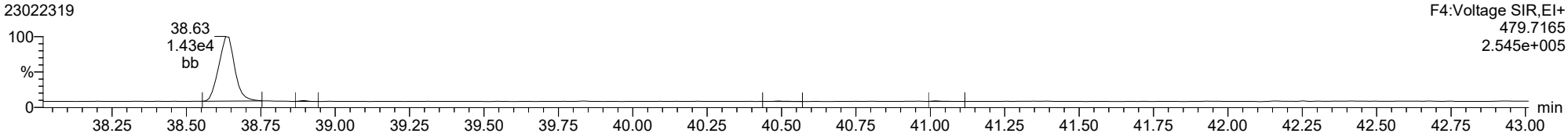
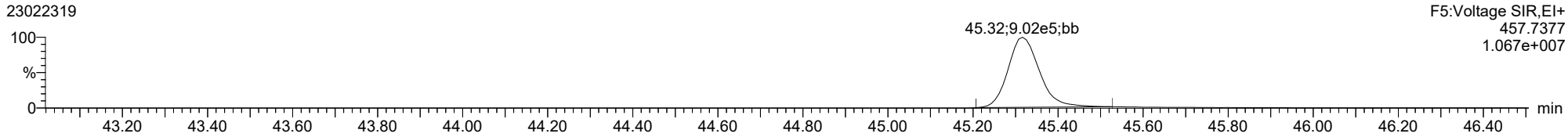


FUNCTION4 NCDPE



ID: 23A0207-10, Name: 23022319, Date: 24-Feb-2023, Time: 01:04:12, Conditions: AUTOSPEC01, User: pk

OCDD



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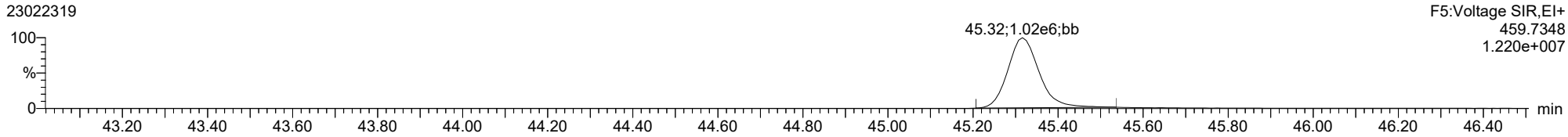
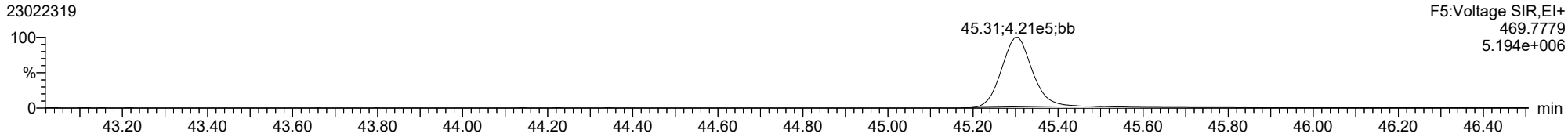
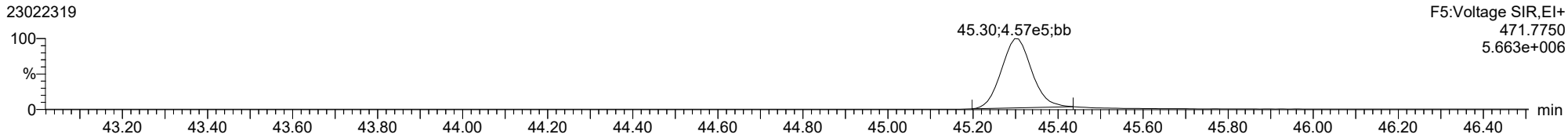


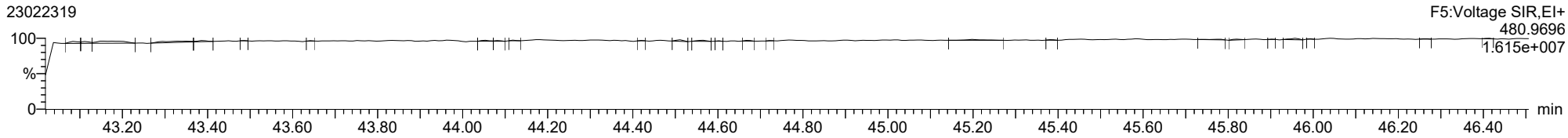
13C-OCDD



13C-OCDD

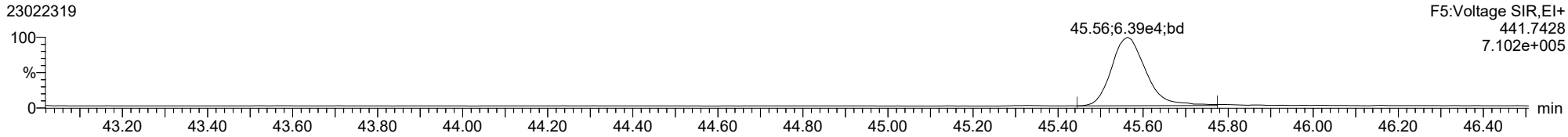


FUNCTION5 PFK

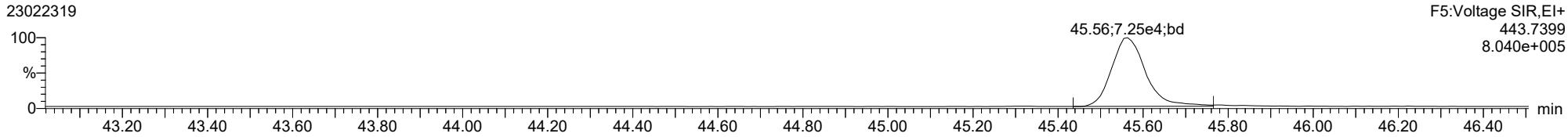


ID: 23A0207-10, Name: 23022319, Date: 24-Feb-2023, Time: 01:04:12, Conditions: AUTOSPEC01, User: pk

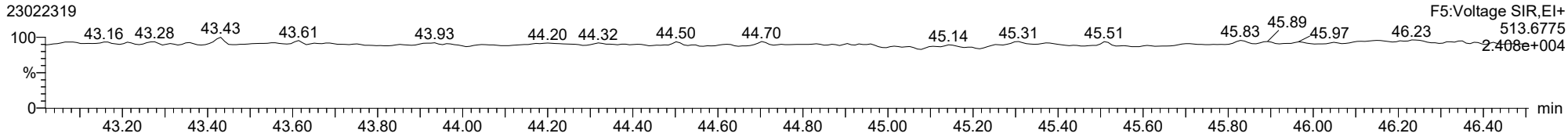
OCDF



OCDF

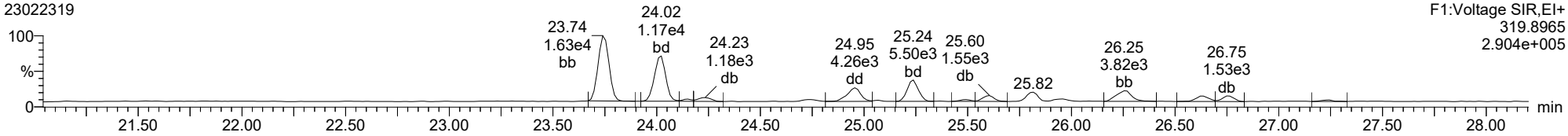


FUNCTION5 DCDPE

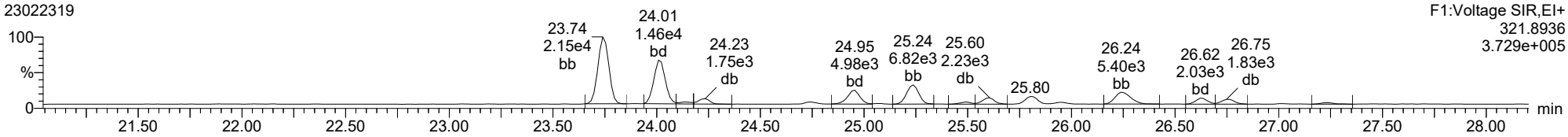


ID: 23A0207-10, Name: 23022319, Date: 24-Feb-2023, Time: 01:04:12, Conditions: AUTOSPEC01, User: pk

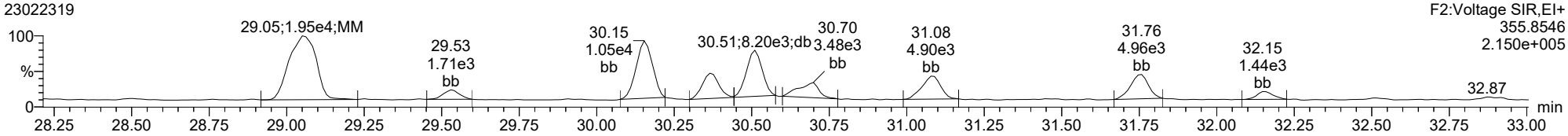
Total-tetradioxins



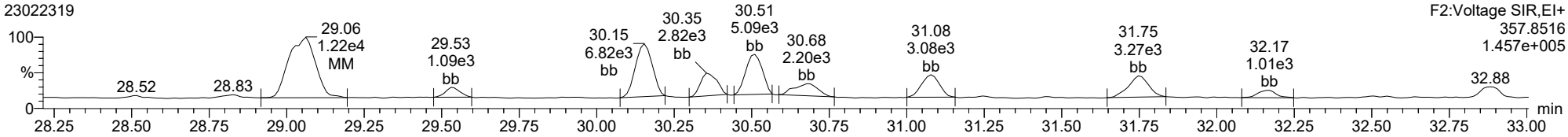
Total-tetradioxins



Total-pentadioxins

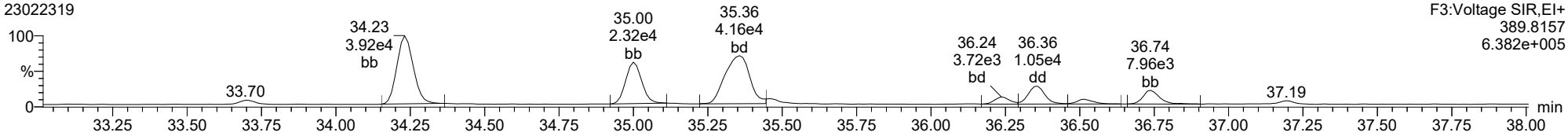


Total-pentadioxins

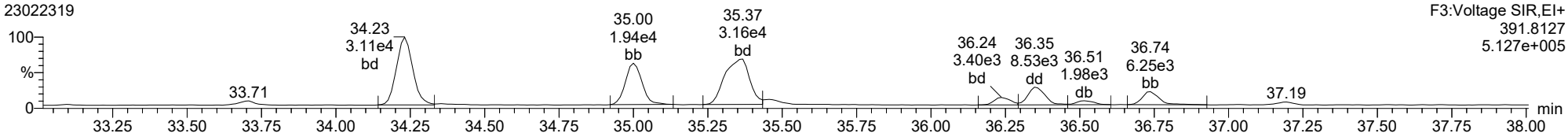


ID: 23A0207-10, Name: 23022319, Date: 24-Feb-2023, Time: 01:04:12, Conditions: AUTOSPEC01, User: pk

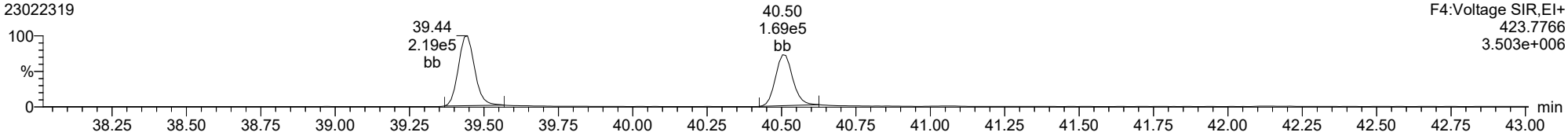
Total-hexadioxins



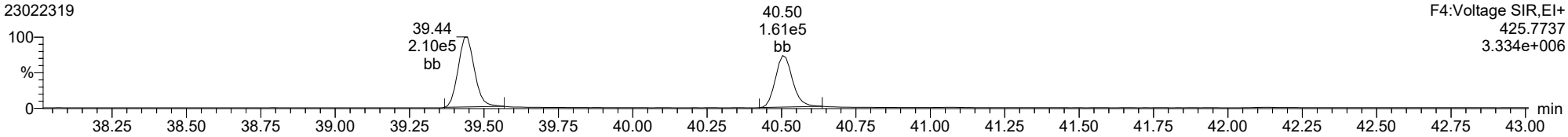
Total-hexadioxins



Total-heptadioxins

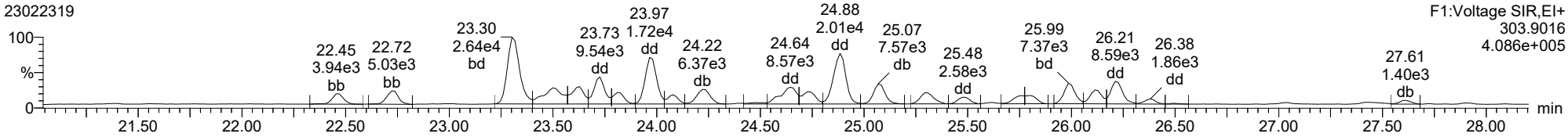


Total-heptadioxins

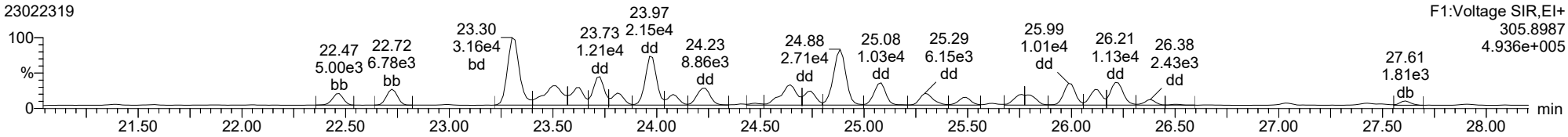


ID: 23A0207-10, Name: 23022319, Date: 24-Feb-2023, Time: 01:04:12, Conditions: AUTOSPEC01, User: pk

Total-tetrafurans



Total-tetrafurans



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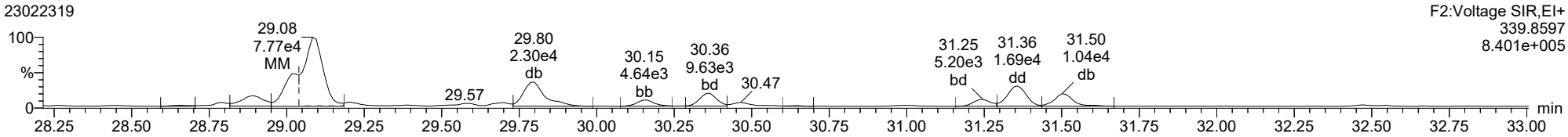
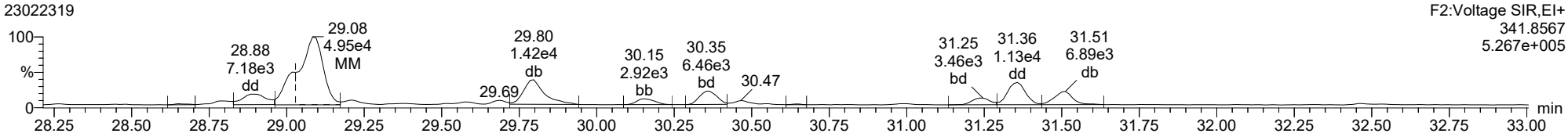
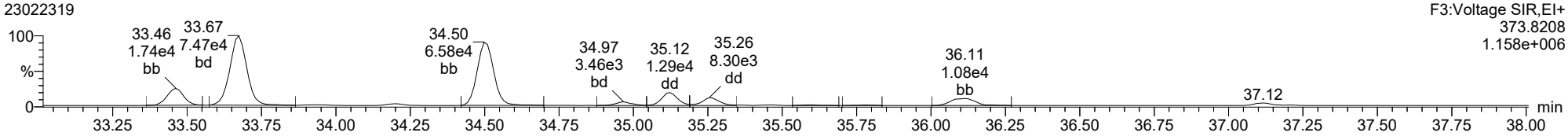


Total-pentafurans

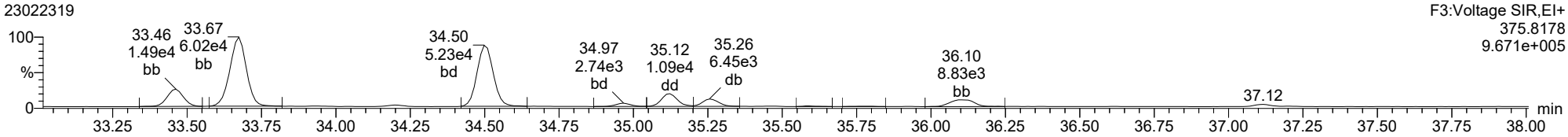


ID: 23A0207-10, Name: 23022319, Date: 24-Feb-2023, Time: 01:04:12, Conditions: AUTOSPEC01, User: pk

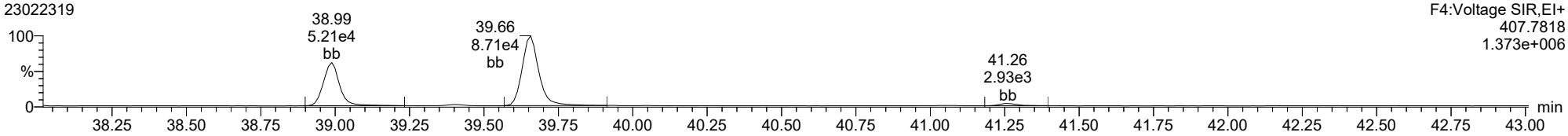
Total-hexafurans



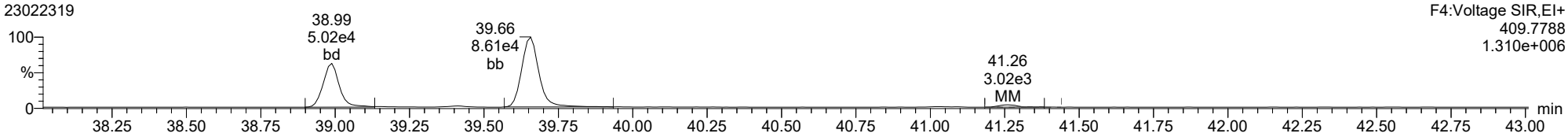
Total-hexafurans



Total-heptafurans



Total-heptafurans



Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-IT1209

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-17 B	File ID:	23022320
Sampled:	01/11/23 15:21	Prepared:	01/24/23 13:10	Analyzed:	02/24/23 01:53
% Solids:	64.48	Preparation:	EPA 1613	Initial/Final:	15.52 g Wet / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.783	0.655-0.886	0.079	0.999	2.55	ng/kg	X, B
1746-01-6	2,3,7,8-TCDD	1	0.709	0.655-0.886	0.064	0.999	1.30	ng/kg	
57117-41-6	1,2,3,7,8-PeCDF	1	1.667	1.318-1.783	0.128	0.999	1.81	ng/kg	
57117-31-4	2,3,4,7,8-PeCDF	1	1.500	1.318-1.783	0.123	0.999	3.81	ng/kg	
40321-76-4	1,2,3,7,8-PeCDD	1	1.460	1.318-1.783	0.326	0.999	7.28	ng/kg	
70648-26-9	1,2,3,4,7,8-HxCDF	1	1.225	1.054-1.426	0.105	0.999	9.86	ng/kg	B
57117-44-9	1,2,3,6,7,8-HxCDF	1	1.165	1.054-1.426	0.101	0.999	3.58	ng/kg	
60851-34-5	2,3,4,6,7,8-HxCDF	1	1.268	1.054-1.426	0.111	0.999	5.18	ng/kg	
72918-21-9	1,2,3,7,8,9-HxCDF	1	1.220	1.054-1.426	0.122	0.999	2.06	ng/kg	B
39227-28-6	1,2,3,4,7,8-HxCDD	1	1.376	1.054-1.426	0.392	0.999	6.44	ng/kg	
57653-85-7	1,2,3,6,7,8-HxCDD	1	1.219	1.054-1.426	0.382	0.999	36.1	ng/kg	
19408-74-3	1,2,3,7,8,9-HxCDD	1	1.276	1.054-1.426	0.394	0.999	21.9	ng/kg	B
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	1.063	0.893-1.208	0.151	0.999	85.8	ng/kg	
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	1.020	0.893-1.208	0.210	0.999	7.76	ng/kg	
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.038	0.893-1.208	0.682	2.50	1270	ng/kg	B
39001-02-0	OCDF	1	0.887	0.757-1.024	0.143	2.50	221	ng/kg	
3268-87-9	OCDD	1	0.865	0.757-1.024	0.335	9.99	9540	ng/kg	E, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			0.999	46.9	ng/kg	
41903-57-5	Total TCDD	1	0.000			0.999	10.3	ng/kg	
30402-15-4	Total PeCDF	1	0.000			0.999	61.2	ng/kg	
36088-22-9	Total PeCDD	1	0.000			0.999	32.1	ng/kg	
55684-94-1	Total HxCDF	1	0.000			0.999	127	ng/kg	
34465-46-8	Total HxCDD	1	0.000			0.999	326	ng/kg	
38998-75-3	Total HpCDF	1	0.000			0.999	312	ng/kg	
37871-00-4	Total HpCDD	1	0.000			0.999	2840	ng/kg	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 35.11

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 35.11

LDW23-IT1209

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0207-17	File ID:	23022320
Sampled:	01/11/23 15:21	Prepared:	01/24/23 13:10	Analyzed:	02/24/23 01:53
Solids Wt%:	64.48	Preparation:	EPA 1613	Initial/Final:	15.52 g / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.770	0.655-0.886	0.060	89.0	24 - 169 %	
13C12-2,3,7,8-TCDD		0.773	0.655-0.886	0.107	118	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.559	1.318-1.783	0.112	107	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.564	1.318-1.783	0.116	107	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.706	1.318-1.783	0.120	88.4	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.503	0.434-0.587	0.198	108	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.513	0.434-0.587	0.194	108	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.512	0.434-0.587	0.206	105	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.519	0.434-0.587	0.225	63.0	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.230	1.054-1.426	0.229	110	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.265	1.054-1.426	0.222	106	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.451	0.374-0.506	0.162	101	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.447	0.374-0.506	0.186	104	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.097	0.893-1.208	0.190	108	23 - 140 %	
13C12-OCDD		0.908	0.757-1.024	0.158	104	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.043	97.1	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:15:08 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: 23A0207-17, Name: 23022320, Date: 24-Feb-2023, Time: 01:53:40, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	26.028	1.001	6.764e3	8.642e3	0.876	0.783	0.770	795	1717	1.02e5	1.28e5	128.3	74.6	NO	bd	bd	1.278
12378-PeCDF	30.198	1.001	6.802e3	4.080e3	0.845	1.667	1.550	1528	2395	9.93e4	6.50e4	65.0	27.1	NO	bd	bb	0.905
23478-PeCDF	31.535	1.001	1.429e4	9.528e3	0.911	1.500	1.550	1528	2395	2.08e5	1.43e5	136.3	59.8	NO	dd	db	1.905
123478-HxCDF	35.167	1.001	2.841e4	2.319e4	1.182	1.225	1.240	1569	1310	4.29e5	3.45e5	273.3	263.7	NO	dd	dd	4.931
234678-HxCDF	36.147	0.999	1.483e4	1.170e4	1.229	1.268	1.240	1569	1310	1.35e5	9.89e4	86.3	75.5	NO	bb	bb	2.594
123678-HxCDF	35.301	1.001	1.095e4	9.401e3	1.248	1.165	1.240	1569	1310	1.63e5	1.35e5	103.9	103.0	NO	db	dd	1.790
123789-HxCDF	37.150	1.000	3.066e3	2.512e3	1.187	1.220	1.240	1569	1310	6.47e4	5.45e4	41.2	41.6	NO	bb	bb	1.029
1234678-HpCDF	38.999	1.000	2.171e5	2.043e5	1.204	1.063	1.050	2001	2019	3.51e6	3.28e6	1756.3	1623.3	NO	bb	bd	42.954
1234789-HpCDF	41.272	1.000	1.684e4	1.651e4	1.165	1.020	1.050	2001	2019	2.34e5	2.32e5	116.9	115.0	NO	bb	bb	3.885
OCDF	45.572	1.006	3.968e5	4.472e5	1.186	0.887	0.890	1454	760	4.38e6	4.93e6	3009.4	6484.7	NO	dd	dd	110.622
2378-TCDD	26.664	1.000	3.789e3	5.342e3	1.236	0.709	0.770	942	1270	5.07e4	6.89e4	53.8	54.2	NO	bd	bd	0.650
12378-PeCDD	31.780	1.000	1.661e4	1.137e4	1.087	1.460	1.550	3018	3041	2.50e5	1.64e5	82.9	54.1	NO	bb	bb	3.644
123478-HxCDD	36.314	1.001	1.471e4	1.070e4	0.987	1.376	1.240	3845	3924	2.32e5	1.70e5	60.3	43.3	NO	bd	bd	3.222
123678-HxCDD	36.426	1.000	8.100e4	6.643e4	1.021	1.219	1.240	3845	3924	1.23e6	1.04e6	320.8	264.2	NO	dd	dd	18.043
123789-HxCDD	36.816	1.011	4.844e4	3.797e4	0.985	1.276	1.240	3845	3924	7.44e5	5.79e5	193.6	147.6	NO	db	bb	10.962
1234678-HpCDD	40.514	1.000	2.672e6	2.573e6	1.253	1.038	1.050	6763	7880	4.27e7	4.12e7	6320.7	5226.1	NO	bb	bb	636.543
OCDD	45.334	1.000	1.570e7	1.816e7	1.103	0.865	0.890	3045	1759	1.95e8	2.25e8	63897.8	128067.1	NO	bb	bb	4774.380
13C-2378-TCDF	26.000	1.007	5.983e5	7.773e5	1.768	0.770	0.770	1196	1241	9.47e6	1.22e7	7920.8	9838.8	NO	bb	bb	88.955
13C-12378-PeCDF	30.176	1.169	8.673e5	5.563e5	1.527	1.559	1.550	2290	1656	1.32e7	8.35e6	5767.8	5039.0	NO	bd	bd	106.583
13C-23478-PeCDF	31.513	1.221	8.369e5	5.350e5	1.466	1.564	1.550	2290	1656	1.28e7	8.18e6	5572.2	4940.4	NO	bb	bb	106.979
13C-123478-HxCDF	35.145	0.955	2.962e5	5.893e5	1.054	0.503	0.510	1854	2497	4.65e6	9.24e6	2506.3	3698.6	NO	bd	bd	107.609
13C-123678-HxCDF	35.278	0.959	3.087e5	6.020e5	1.080	0.513	0.510	1854	2497	4.66e6	9.14e6	2515.5	3658.9	NO	db	db	107.990
13C-234678-HxCDF	36.181	0.983	2.818e5	5.503e5	1.014	0.512	0.510	1854	2497	4.30e6	8.50e6	2321.6	3404.9	NO	bb	bb	105.050
13C-123789-HxCDF	37.161	1.010	1.560e5	3.007e5	0.928	0.519	0.510	1854	2497	4.06e6	7.70e6	2187.8	3083.2	NO	bb	bb	63.026
13C-1234678-HpCDF	38.988	1.060	2.530e5	5.617e5	1.036	0.451	0.440	1379	2122	4.12e6	9.17e6	2987.3	4319.1	NO	bb	bb	100.686
13C-1234789-HpCDF	41.250	1.121	2.274e5	5.093e5	0.905	0.447	0.440	1379	2122	3.04e6	6.75e6	2206.7	3182.7	NO	bd	bb	104.254
13C-1234-TCDD	25.817	0.000	3.843e5	4.904e5	1.000	0.784	0.770	1834	890	6.09e6	7.82e6	3319.9	8786.7	NO	bb	bb	100.000
13C-2378-TCDD	26.650	1.032	4.956e5	6.410e5	1.103	0.773	0.770	1834	890	7.34e6	9.39e6	3999.2	10552.7	NO	bb	bb	117.819
13C-12378-PeCDD	31.769	1.231	4.455e5	2.612e5	0.914	1.706	1.550	1198	1331	6.46e6	3.76e6	5390.7	2824.1	NO	bb	bd	88.376
13C-123478-HxCDD	36.292	0.986	4.408e5	3.584e5	0.933	1.230	1.240	2839	1611	6.64e6	5.40e6	2340.3	3349.3	NO	bd	bd	109.699
13C-123678-HxCDD	36.415	0.990	4.470e5	3.535e5	0.965	1.265	1.240	2839	1611	6.67e6	5.42e6	2350.2	3361.9	NO	db	db	106.263
13C-1234678-HpCDD	40.503	1.101	3.441e5	3.137e5	0.782	1.097	1.050	1195	1892	5.37e6	4.94e6	4495.1	2613.2	NO	bb	bb	107.725
13C-OCDD	45.316	1.232	6.121e5	6.743e5	0.788	0.908	0.890	904	1692	7.43e6	8.26e6	8220.3	4881.2	NO	bb	bb	208.979
13C-123789-HxCDD	36.793	0.000	4.295e5	3.514e5	1.000	1.222	1.240	2839	1611	6.86e6	5.49e6	2418.0	3406.6	NO	bb	bb	100.000
37CL-2378-TCDD	26.664	1.033	4.189e5		1.233			1236		6.07e6		4912.7			bb		38.824

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:15:08 Pacific Standard Time

ID: 23A0207-17, Name: 23022320, Date: 24-Feb-2023, Time: 01:53:40, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.497	0.865	2.123e3	3.130e3	1.064	0.678	0.770	795	1717	3.26e4	5.00e4	41.1	29.1	NO	bb	bb	0.359
1289-TCDF	27.625	1.063	1.897e3	2.422e3	0.858	0.783	0.770	795	1717	2.91e4	3.87e4	36.6	22.5	NO	db	db	0.366
13468-PECDF					1.013		1.550	840	798								
12389-PECDF	32.571	1.079	6.867e2	3.411e2	0.844	2.013	1.550	1528	2395	1.49e4	6.43e3	9.8	2.7	YES	bb	bb	0.086
123468-HXCDF	33.496	0.953	2.925e4	2.372e4	1.197	1.233	1.240	1569	1310	4.52e5	3.69e5	288.3	281.7	NO	bb	bb	4.997
1368-TCDD	23.782	0.892	5.910e3	7.847e3	1.084	0.753	0.770	942	1270	9.67e4	1.28e5	102.7	101.0	NO	bb	bd	1.116
1289-TCDD					0.975		0.770	942	1270								
12479-PECDD					1.837		1.550	3018	3041								
12389-PECDD	32.192	1.013	2.873e3	2.188e3	1.252	1.313	1.550	3018	3041	4.25e4	2.47e4	14.1	8.1	YES	bb	bb	0.572
124679-HXCDD	34.264	0.944	2.179e5	1.777e5	1.033	1.226	1.240	3845	3924	3.45e6	2.77e6	896.0	705.0	NO	bb	bb	47.925
1234679-HPCDD	39.456	0.974	3.401e6	3.247e6	1.286	1.047	1.050	6763	7880	5.75e7	5.47e7	8506.1	6945.4	NO	bb	bb	785.761
Total-tetrafurans			1.310e5		0.933			795		1.92e6							23.447
Total-penta1			9.359e4					840		1.38e6							11.956
Total-pentafurans			1.397e5		0.866			1528		1.64e6							18.646
Total-hexafurans			3.336e5		1.208			1569		5.14e6							63.365
Total-heptafurans			7.448e5		1.185			2001		1.20e7							155.953
Total-Furans			1.840e6		1.067			795		2.64e7							383.989
Total-tetradioxins			2.825e4		1.099			942		4.25e5							5.153
Total-pentadioxins			8.931e4		1.392			3018		1.23e6							16.037
Total-hexadioxins			7.344e5		1.007			3845		9.99e6							163.129
Total-heptadioxins			6.072e6		1.269			6763		1.00e8							1422.303
Total-Dioxins			2.263e7		1.165			942		3.06e8							6381.001
Total-TEQ			2.446e7					942		3.33e8							6764.990
FUNCTION1 PFK			2.917e7					356120		2.05e8							
FUNCTION2 PFK			1.679e7					256067		3.77e7							0.000
FUNCTION3 PFK			2.067e7					241248		5.46e7							0.000
FUNCTION4 PFK			3.399e5					220872		3.27e6							
FUNCTION5 PFK			2.351e5					151153		6.03e6							
FUNCTION1 HXCD...			3.443e3					444		5.38e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			1.149e3					646		1.97e4							0.000
FUNCTION3 OCDPE			4.649e2					714		1.17e4							0.000
FUNCTION4 NCDPE			5.017e3					757		9.21e4							0.000
FUNCTION5 DCDPE			2.179e3					558		1.81e4							0.000

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: 23A0207-17, Name: 23022320, Date: 24-Feb-2023, Time: 01:53:40, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.50	5.177e2	6.715e2	0.933	0.77	0.77	11.0	YES	NO	bd	dd	0.093
2	Total-tetrafurans	24.25	8.888e3	1.104e4	0.933	0.80	0.77	168.5	YES	NO	db	db	1.553
3	Total-tetrafurans	24.11	5.423e3	6.263e3	0.933	0.87	0.77	112.8	YES	NO	dd	dd	0.911
4	Total-tetrafurans	24.01	7.334e3	9.013e3	0.933	0.81	0.77	146.8	YES	NO	bd	bd	1.274
5	Total-tetrafurans	23.85	1.992e3	2.527e3	0.933	0.79	0.77	46.4	YES	NO	db	db	0.352
6	Total-tetrafurans	23.77	8.996e3	1.233e4	0.933	0.73	0.77	170.7	YES	NO	dd	dd	1.662
7	Total-tetrafurans	23.66	1.129e4	1.625e4	0.933	0.69	0.77	189.6	YES	NO	dd	dd	2.146
8	Total-tetrafurans	23.49	3.304e3	4.210e3	0.933	0.78	0.77	67.2	YES	NO	dd	dd	0.586
9	Total-tetrafurans	23.36	1.034e4	1.322e4	0.933	0.78	0.77	195.4	YES	NO	bd	bd	1.836
10	Total-tetrafurans	22.77	4.319e3	5.384e3	0.933	0.80	0.77	94.4	YES	NO	db	bb	0.756
11	1368-TCDF	22.50	2.123e3	3.130e3	1.064	0.68	0.77	41.1	YES	NO	bb	bb	0.359
12	Total-tetrafurans	27.50	5.880e2	8.161e2	0.933	0.72	0.77	10.8	YES	NO	bd	dd	0.109
13	Total-tetrafurans	26.41	5.697e2	8.434e2	0.933	0.68	0.77	9.9	YES	NO	db	db	0.110
14	Total-tetrafurans	26.25	9.455e3	1.235e4	0.933	0.77	0.77	167.0	YES	NO	dd	dd	1.699
15	Total-tetrafurans	26.14	4.496e3	5.694e3	0.933	0.79	0.77	78.3	YES	NO	dd	dd	0.794
16	2378-TCDF	26.03	6.764e3	8.642e3	0.876	0.78	0.77	128.3	YES	NO	bd	bd	1.278
17	Total-tetrafurans	25.79	9.078e3	1.056e4	0.933	0.86	0.77	127.1	YES	NO	db	bb	1.530
18	Total-tetrafurans	25.52	1.735e3	2.226e3	0.933	0.78	0.77	28.1	YES	NO	dd	db	0.309
19	Total-tetrafurans	25.32	3.722e3	5.284e3	0.933	0.70	0.77	65.9	YES	NO	bd	bd	0.702
20	Total-tetrafurans	25.10	6.189e3	8.053e3	0.933	0.77	0.77	124.5	YES	NO	db	db	1.110
21	Total-tetrafurans	24.91	1.027e4	1.281e4	0.933	0.80	0.77	193.9	YES	NO	dd	dd	1.799
22	Total-tetrafurans	24.76	3.771e3	5.623e3	0.933	0.67	0.77	72.8	YES	NO	dd	dd	0.732
23	Total-tetrafurans	24.67	7.970e3	9.734e3	0.933	0.82	0.77	127.4	YES	NO	dd	dd	1.380
24	1289-TCDF	27.62	1.897e3	2.422e3	0.858	0.78	0.77	36.6	YES	NO	db	db	0.366

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-penta1	27.48	9.359e4	6.250e4		1.50	1.55	1645.0	YES	NO	bb	bb	11.956

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ID: 23A0207-17, Name: 23022320, Date: 24-Feb-2023, Time: 01:53:40, Conditions: AUTOSPEC01, User: pk

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	30.49	2.956e3	2.005e3	0.866	1.47	1.55	25.1	YES	NO	db	db	0.410
2	Total-pentafurans	30.40	9.961e3	6.210e3	0.866	1.60	1.55	105.3	YES	NO	dd	bd	1.335
3	12378-PeCDF	30.20	6.802e3	4.080e3	0.845	1.67	1.55	65.0	YES	NO	bd	bb	0.905
4	Total-pentafurans	29.84	1.013e4	7.320e3	0.866	1.38	1.55	90.0	YES	NO	dd	dd	1.441
5	Total-pentafurans	29.75	1.910e3	1.252e3	0.866	1.53	1.55	29.5	YES	NO	dd	dd	0.261
6	Total-pentafurans	29.25	6.099e4	3.579e4	0.866	1.70	1.55	369.7	YES	NO	dd	MM	7.990
7	Total-pentafurans	29.03	1.672e4	1.022e4	0.866	1.64	1.55	100.1	YES	NO	bd	bd	2.224
8	23478-PeCDF	31.53	1.429e4	9.528e3	0.911	1.50	1.55	136.3	YES	NO	dd	db	1.905
9	Total-pentafurans	31.38	1.010e4	6.367e3	0.866	1.59	1.55	98.4	YES	NO	dd	dd	1.360
10	Total-pentafurans	31.27	5.883e3	3.995e3	0.866	1.47	1.55	57.3	YES	NO	bd	bd	0.816

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexafurans	34.23	3.098e3	2.511e3	1.208	1.23	1.24	30.2	YES	NO	bb	bb	0.602
2	Total-hexafurans	33.71	9.393e4	7.594e4	1.208	1.24	1.24	956.5	YES	NO	bd	bb	18.224
3	123468-HXCDF	33.50	2.925e4	2.372e4	1.197	1.23	1.24	288.3	YES	NO	bb	bb	4.997
4	123789-HxCDF	37.15	3.066e3	2.512e3	1.187	1.22	1.24	41.2	YES	NO	bb	bb	1.029
5	234678-HxCDF	36.15	1.483e4	1.170e4	1.229	1.27	1.24	86.3	YES	NO	bb	bb	2.594
6	Total-hexafurans	35.82	4.444e2	3.603e2	1.208	1.23	1.24	5.2	YES	NO	bb	bb	0.086
7	123678-HxCDF	35.30	1.095e4	9.401e3	1.248	1.16	1.24	103.9	YES	NO	db	dd	1.790
8	123478-HxCDF	35.17	2.841e4	2.319e4	1.182	1.22	1.24	273.3	YES	NO	dd	dd	4.931
9	Total-hexafurans	35.00	4.367e3	3.588e3	1.208	1.22	1.24	42.9	YES	NO	bd	bd	0.853
10	Total-hexafurans	34.53	1.453e5	1.181e5	1.208	1.23	1.24	1449.1	YES	NO	bb	bd	28.257

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.27	1.684e4	1.651e4	1.165	1.02	1.05	116.9	YES	NO	bb	bb	3.885
2	Total-heptafurans	40.51	1.273e3	1.336e3	1.185	0.95	1.05	8.8	YES	NO	bb	bb	0.284
3	Total-heptafurans	39.67	5.056e5	4.866e5	1.185	1.04	1.05	4075.5	YES	NO	bd	bb	107.960
4	Total-heptafurans	39.42	4.013e3	3.986e3	1.185	1.01	1.05	23.9	YES	NO	bb	bb	0.870
5	1234678-HpCDF	39.00	2.171e5	2.043e5	1.204	1.06	1.05	1756.3	YES	NO	bb	bd	42.954

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.50	5.177e2	6.715e2	0.933	0.77	0.77	11.0	YES	NO	bd	dd	0.093
2	Total-tetrafurans	24.25	8.888e3	1.104e4	0.933	0.80	0.77	168.5	YES	NO	db	db	1.553
3	Total-tetrafurans	24.11	5.423e3	6.263e3	0.933	0.87	0.77	112.8	YES	NO	dd	dd	0.911
4	Total-tetrafurans	24.01	7.334e3	9.013e3	0.933	0.81	0.77	146.8	YES	NO	bd	bd	1.274
5	Total-tetrafurans	23.85	1.992e3	2.527e3	0.933	0.79	0.77	46.4	YES	NO	db	db	0.352
6	Total-tetrafurans	23.77	8.996e3	1.233e4	0.933	0.73	0.77	170.7	YES	NO	dd	dd	1.662
7	Total-tetrafurans	23.66	1.129e4	1.625e4	0.933	0.69	0.77	189.6	YES	NO	dd	dd	2.146
8	Total-tetrafurans	23.49	3.304e3	4.210e3	0.933	0.78	0.77	67.2	YES	NO	dd	dd	0.586
9	Total-tetrafurans	23.36	1.034e4	1.322e4	0.933	0.78	0.77	195.4	YES	NO	bd	bd	1.836
10	Total-tetrafurans	22.77	4.319e3	5.384e3	0.933	0.80	0.77	94.4	YES	NO	db	bb	0.756
11	1368-TCDF	22.50	2.123e3	3.130e3	1.064	0.68	0.77	41.1	YES	NO	bb	bb	0.359
12	Total-tetrafurans	27.50	5.880e2	8.161e2	0.933	0.72	0.77	10.8	YES	NO	bd	dd	0.109
13	Total-tetrafurans	26.41	5.697e2	8.434e2	0.933	0.68	0.77	9.9	YES	NO	db	db	0.110
14	Total-tetrafurans	26.25	9.455e3	1.235e4	0.933	0.77	0.77	167.0	YES	NO	dd	dd	1.699
15	Total-tetrafurans	26.14	4.496e3	5.694e3	0.933	0.79	0.77	78.3	YES	NO	dd	dd	0.794
16	2378-TCDF	26.03	6.764e3	8.642e3	0.876	0.78	0.77	128.3	YES	NO	bd	bd	1.278
17	Total-tetrafurans	25.79	9.078e3	1.056e4	0.933	0.86	0.77	127.1	YES	NO	db	bb	1.530
18	Total-tetrafurans	25.52	1.735e3	2.226e3	0.933	0.78	0.77	28.1	YES	NO	dd	db	0.309
19	Total-tetrafurans	25.32	3.722e3	5.284e3	0.933	0.70	0.77	65.9	YES	NO	bd	bd	0.702
20	Total-tetrafurans	25.10	6.189e3	8.053e3	0.933	0.77	0.77	124.5	YES	NO	db	db	1.110
21	Total-tetrafurans	24.91	1.027e4	1.281e4	0.933	0.80	0.77	193.9	YES	NO	dd	dd	1.799
22	Total-tetrafurans	24.76	3.771e3	5.623e3	0.933	0.67	0.77	72.8	YES	NO	dd	dd	0.732
23	Total-tetrafurans	24.67	7.970e3	9.734e3	0.933	0.82	0.77	127.4	YES	NO	dd	dd	1.380
24	1289-TCDF	27.62	1.897e3	2.422e3	0.858	0.78	0.77	36.6	YES	NO	db	db	0.366
25	Total-pentafurans	30.49	2.956e3	2.005e3	0.866	1.47	1.55	25.1	YES	NO	db	db	0.410
26	Total-pentafurans	30.40	9.961e3	6.210e3	0.866	1.60	1.55	105.3	YES	NO	dd	bd	1.335
27	12378-PeCDF	30.20	6.802e3	4.080e3	0.845	1.67	1.55	65.0	YES	NO	bd	bb	0.905
28	Total-pentafurans	29.84	1.013e4	7.320e3	0.866	1.38	1.55	90.0	YES	NO	dd	dd	1.441
29	Total-pentafurans	29.75	1.910e3	1.252e3	0.866	1.53	1.55	29.5	YES	NO	dd	dd	0.261
30	Total-pentafurans	29.25	6.099e4	3.579e4	0.866	1.70	1.55	369.7	YES	NO	dd	MM	7.990
31	Total-pentafurans	29.03	1.672e4	1.022e4	0.866	1.64	1.55	100.1	YES	NO	bd	bd	2.224
32	23478-PeCDF	31.53	1.429e4	9.528e3	0.911	1.50	1.55	136.3	YES	NO	dd	db	1.905
33	Total-pentafurans	31.38	1.010e4	6.367e3	0.866	1.59	1.55	98.4	YES	NO	dd	dd	1.360
34	Total-pentafurans	31.27	5.883e3	3.995e3	0.866	1.47	1.55	57.3	YES	NO	bd	bd	0.816
35	Total-hexafurans	34.23	3.098e3	2.511e3	1.208	1.23	1.24	30.2	YES	NO	bb	bb	0.602
36	Total-hexafurans	33.71	9.393e4	7.594e4	1.208	1.24	1.24	956.5	YES	NO	bd	bb	18.224
37	123468-HXCDF	33.50	2.925e4	2.372e4	1.197	1.23	1.24	288.3	YES	NO	bb	bb	4.997

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	123789-HxCDF	37.15	3.066e3	2.512e3	1.187	1.22	1.24	41.2	YES	NO	bb	bb	1.029
39	234678-HxCDF	36.15	1.483e4	1.170e4	1.229	1.27	1.24	86.3	YES	NO	bb	bb	2.594
40	Total-hexafurans	35.82	4.444e2	3.603e2	1.208	1.23	1.24	5.2	YES	NO	bb	bb	0.086
41	123678-HxCDF	35.30	1.095e4	9.401e3	1.248	1.16	1.24	103.9	YES	NO	db	dd	1.790
42	123478-HxCDF	35.17	2.841e4	2.319e4	1.182	1.22	1.24	273.3	YES	NO	dd	dd	4.931
43	Total-hexafurans	35.00	4.367e3	3.588e3	1.208	1.22	1.24	42.9	YES	NO	bd	bd	0.853
44	Total-hexafurans	34.53	1.453e5	1.181e5	1.208	1.23	1.24	1449.1	YES	NO	bb	bd	28.257
45	1234789-HpCDF	41.27	1.684e4	1.651e4	1.165	1.02	1.05	116.9	YES	NO	bb	bb	3.885
46	Total-heptafurans	40.51	1.273e3	1.336e3	1.185	0.95	1.05	8.8	YES	NO	bb	bb	0.284
47	Total-heptafurans	39.67	5.056e5	4.866e5	1.185	1.04	1.05	4075.5	YES	NO	bd	bb	107.960
48	Total-heptafurans	39.42	4.013e3	3.986e3	1.185	1.01	1.05	23.9	YES	NO	bb	bb	0.870
49	1234678-HpCDF	39.00	2.171e5	2.043e5	1.204	1.06	1.05	1756.3	YES	NO	bb	bd	42.954
50	OCDF	45.57	3.968e5	4.472e5	1.186	0.89	0.89	3009.4	YES	NO	dd	dd	110.622
51	Total-penta1	27.48	9.359e4	6.250e4		1.50	1.55	1645.0	YES	NO	bb	bb	11.956

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	24.05	4.461e3	5.691e3	1.099	0.78	0.77	74.5	YES	NO	bd	db	0.813
2	1368-TCDD	23.78	5.910e3	7.847e3	1.084	0.75	0.77	102.7	YES	NO	bb	bd	1.116
3	Total-tetradioxins	26.79	1.459e3	1.709e3	1.099	0.85	0.77	21.6	YES	NO	dd	db	0.254
4	2378-TCDD	26.66	3.789e3	5.342e3	1.236	0.71	0.77	53.8	YES	NO	bd	bd	0.650
5	Total-tetradioxins	26.28	3.466e3	4.405e3	1.099	0.79	0.77	45.1	YES	NO	bb	bb	0.630
6	Total-tetradioxins	25.83	8.909e2	1.221e3	1.099	0.73	0.77	16.9	YES	NO	bb	bd	0.169
7	Total-tetradioxins	25.27	5.366e3	6.882e3	1.099	0.78	0.77	86.4	YES	NO	bb	bb	0.981
8	Total-tetradioxins	24.77	1.079e3	1.286e3	1.099	0.84	0.77	19.7	YES	NO	bd	bb	0.189
9	Total-tetradioxins	24.25	1.828e3	2.546e3	1.099	0.72	0.77	30.6	YES	NO	db	bb	0.350

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PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentadioxins	29.21	2.752e4	1.837e4	1.392	1.50	1.55	86.2	YES	NO	bb	bb	4.665
2	12378-PeCDD	31.78	1.661e4	1.137e4	1.087	1.46	1.55	82.9	YES	NO	bb	bb	3.644
3	Total-pentadioxins	30.71	9.114e3	6.224e3	1.392	1.46	1.55	37.3	YES	NO	bb	db	1.559
4	Total-pentadioxins	30.54	6.422e3	4.872e3	1.392	1.32	1.55	38.8	YES	NO	bb	dd	1.148
5	Total-pentadioxins	30.40	1.776e4	1.255e4	1.392	1.42	1.55	99.3	YES	NO	bb	bd	3.082
6	Total-pentadioxins	30.19	9.366e3	5.633e3	1.392	1.66	1.55	47.5	YES	NO	bb	bb	1.525
7	Total-pentadioxins	29.63	2.516e3	1.551e3	1.392	1.62	1.55	15.9	YES	NO	bb	bb	0.413

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HXCDD	34.26	2.179e5	1.777e5	1.033	1.23	1.24	896.0	YES	NO	bb	bb	47.925
2	123789-HxCDD	36.82	4.844e4	3.797e4	0.985	1.28	1.24	193.6	YES	NO	db	bb	10.962
3	Total-hexadioxins	36.59	8.387e3	6.358e3	1.007	1.32	1.24	30.0	YES	NO	dd	db	1.831
4	123678-HxCDD	36.43	8.100e4	6.643e4	1.021	1.22	1.24	320.8	YES	NO	dd	dd	18.043
5	123478-HxCDD	36.31	1.471e4	1.070e4	0.987	1.38	1.24	60.3	YES	NO	bd	bd	3.222
6	Total-hexadioxins	35.51	1.903e4	1.560e4	1.007	1.22	1.24	78.9	YES	NO	db	dd	4.300
7	Total-hexadioxins	35.41	3.154e5	2.512e5	1.007	1.26	1.24	898.0	YES	NO	bd	bd	70.371
8	Total-hexadioxins	35.04	2.955e4	2.257e4	1.007	1.31	1.24	120.1	YES	NO	bb	bb	6.473

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.51	2.672e6	2.573e6	1.253	1.04	1.05	6320.7	YES	NO	bb	bb	636.543
2	1234679-HPCDD	39.46	3.401e6	3.247e6	1.286	1.05	1.05	8506.1	YES	NO	bb	bb	785.761

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	24.05	4.461e3	5.691e3	1.099	0.78	0.77	74.5	YES	NO	bd	db	0.813
2	1368-TCDD	23.78	5.910e3	7.847e3	1.084	0.75	0.77	102.7	YES	NO	bb	bd	1.116
3	Total-tetradioxins	26.79	1.459e3	1.709e3	1.099	0.85	0.77	21.6	YES	NO	dd	db	0.254
4	2378-TCDD	26.66	3.789e3	5.342e3	1.236	0.71	0.77	53.8	YES	NO	bd	bd	0.650
5	Total-tetradioxins	26.28	3.466e3	4.405e3	1.099	0.79	0.77	45.1	YES	NO	bb	bb	0.630
6	Total-tetradioxins	25.83	8.909e2	1.221e3	1.099	0.73	0.77	16.9	YES	NO	bb	bd	0.169
7	Total-tetradioxins	25.27	5.366e3	6.882e3	1.099	0.78	0.77	86.4	YES	NO	bb	bb	0.981
8	Total-tetradioxins	24.77	1.079e3	1.286e3	1.099	0.84	0.77	19.7	YES	NO	bd	bb	0.189
9	Total-tetradioxins	24.25	1.828e3	2.546e3	1.099	0.72	0.77	30.6	YES	NO	db	bb	0.350
10	Total-pentadioxins	29.21	2.752e4	1.837e4	1.392	1.50	1.55	86.2	YES	NO	bb	bb	4.665
11	12378-PeCDD	31.78	1.661e4	1.137e4	1.087	1.46	1.55	82.9	YES	NO	bb	bb	3.644
12	Total-pentadioxins	30.71	9.114e3	6.224e3	1.392	1.46	1.55	37.3	YES	NO	bb	db	1.559
13	Total-pentadioxins	30.54	6.422e3	4.872e3	1.392	1.32	1.55	38.8	YES	NO	bb	dd	1.148
14	Total-pentadioxins	30.40	1.776e4	1.255e4	1.392	1.42	1.55	99.3	YES	NO	bb	bd	3.082
15	Total-pentadioxins	30.19	9.366e3	5.633e3	1.392	1.66	1.55	47.5	YES	NO	bb	bb	1.525
16	Total-pentadioxins	29.63	2.516e3	1.551e3	1.392	1.62	1.55	15.9	YES	NO	bb	bb	0.413
17	124679-HXCDD	34.26	2.179e5	1.777e5	1.033	1.23	1.24	896.0	YES	NO	bb	bb	47.925
18	123789-HxCDD	36.82	4.844e4	3.797e4	0.985	1.28	1.24	193.6	YES	NO	db	bb	10.962
19	Total-hexadioxins	36.59	8.387e3	6.358e3	1.007	1.32	1.24	30.0	YES	NO	dd	db	1.831
20	123678-HxCDD	36.43	8.100e4	6.643e4	1.021	1.22	1.24	320.8	YES	NO	dd	dd	18.043
21	123478-HxCDD	36.31	1.471e4	1.070e4	0.987	1.38	1.24	60.3	YES	NO	bd	bd	3.222
22	Total-hexadioxins	35.51	1.903e4	1.560e4	1.007	1.22	1.24	78.9	YES	NO	db	dd	4.300
23	Total-hexadioxins	35.41	3.154e5	2.512e5	1.007	1.26	1.24	898.0	YES	NO	bd	bd	70.371
24	Total-hexadioxins	35.04	2.955e4	2.257e4	1.007	1.31	1.24	120.1	YES	NO	bb	bb	6.473
25	OCDD	45.33	1.570e7	1.816e7	1.103	0.86	0.89	63897.8	YES	NO	bb	bb	4774.3...
26	1234678-HpCDD	40.51	2.672e6	2.573e6	1.253	1.04	1.05	6320.7	YES	NO	bb	bb	636.543
27	1234679-HPCDD	39.46	3.401e6	3.247e6	1.286	1.05	1.05	8506.1	YES	NO	bb	bb	785.761

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.50	5.177e2	6.715e2	0.933	0.77	0.77	11.0	YES	NO	bd	dd	0.093
2	Total-tetrafurans	24.25	8.888e3	1.104e4	0.933	0.80	0.77	168.5	YES	NO	db	db	1.553
3	Total-tetrafurans	24.11	5.423e3	6.263e3	0.933	0.87	0.77	112.8	YES	NO	dd	dd	0.911
4	Total-tetrafurans	24.01	7.334e3	9.013e3	0.933	0.81	0.77	146.8	YES	NO	bd	bd	1.274
5	Total-tetrafurans	23.85	1.992e3	2.527e3	0.933	0.79	0.77	46.4	YES	NO	db	db	0.352
6	Total-tetrafurans	23.77	8.996e3	1.233e4	0.933	0.73	0.77	170.7	YES	NO	dd	dd	1.662
7	Total-tetrafurans	23.66	1.129e4	1.625e4	0.933	0.69	0.77	189.6	YES	NO	dd	dd	2.146
8	Total-tetrafurans	23.49	3.304e3	4.210e3	0.933	0.78	0.77	67.2	YES	NO	dd	dd	0.586
9	Total-tetrafurans	23.36	1.034e4	1.322e4	0.933	0.78	0.77	195.4	YES	NO	bd	bd	1.836
10	Total-tetrafurans	22.77	4.319e3	5.384e3	0.933	0.80	0.77	94.4	YES	NO	db	bb	0.756
11	1368-TCDF	22.50	2.123e3	3.130e3	1.064	0.68	0.77	41.1	YES	NO	bb	bb	0.359
12	Total-tetrafurans	27.50	5.880e2	8.161e2	0.933	0.72	0.77	10.8	YES	NO	bd	dd	0.109
13	Total-tetrafurans	26.41	5.697e2	8.434e2	0.933	0.68	0.77	9.9	YES	NO	db	db	0.110
14	Total-tetrafurans	26.25	9.455e3	1.235e4	0.933	0.77	0.77	167.0	YES	NO	dd	dd	1.699
15	Total-tetrafurans	26.14	4.496e3	5.694e3	0.933	0.79	0.77	78.3	YES	NO	dd	dd	0.794
16	2378-TCDF	26.03	6.764e3	8.642e3	0.876	0.78	0.77	128.3	YES	NO	bd	bd	1.278
17	Total-tetrafurans	25.79	9.078e3	1.056e4	0.933	0.86	0.77	127.1	YES	NO	db	bb	1.530
18	Total-tetrafurans	25.52	1.735e3	2.226e3	0.933	0.78	0.77	28.1	YES	NO	dd	db	0.309
19	Total-tetrafurans	25.32	3.722e3	5.284e3	0.933	0.70	0.77	65.9	YES	NO	bd	bd	0.702
20	Total-tetrafurans	25.10	6.189e3	8.053e3	0.933	0.77	0.77	124.5	YES	NO	db	db	1.110
21	Total-tetrafurans	24.91	1.027e4	1.281e4	0.933	0.80	0.77	193.9	YES	NO	dd	dd	1.799
22	Total-tetrafurans	24.76	3.771e3	5.623e3	0.933	0.67	0.77	72.8	YES	NO	dd	dd	0.732
23	Total-tetrafurans	24.67	7.970e3	9.734e3	0.933	0.82	0.77	127.4	YES	NO	dd	dd	1.380
24	1289-TCDF	27.62	1.897e3	2.422e3	0.858	0.78	0.77	36.6	YES	NO	db	db	0.366
25	Total-pentafurans	30.49	2.956e3	2.005e3	0.866	1.47	1.55	25.1	YES	NO	db	db	0.410
26	Total-pentafurans	30.40	9.961e3	6.210e3	0.866	1.60	1.55	105.3	YES	NO	dd	bd	1.335
27	12378-PeCDF	30.20	6.802e3	4.080e3	0.845	1.67	1.55	65.0	YES	NO	bd	bb	0.905
28	Total-pentafurans	29.84	1.013e4	7.320e3	0.866	1.38	1.55	90.0	YES	NO	dd	dd	1.441
29	Total-pentafurans	29.75	1.910e3	1.252e3	0.866	1.53	1.55	29.5	YES	NO	dd	dd	0.261
30	Total-pentafurans	29.25	6.099e4	3.579e4	0.866	1.70	1.55	369.7	YES	NO	dd	MM	7.990
31	Total-pentafurans	29.03	1.672e4	1.022e4	0.866	1.64	1.55	100.1	YES	NO	bd	bd	2.224
32	23478-PeCDF	31.53	1.429e4	9.528e3	0.911	1.50	1.55	136.3	YES	NO	dd	db	1.905
33	Total-pentafurans	31.38	1.010e4	6.367e3	0.866	1.59	1.55	98.4	YES	NO	dd	dd	1.360
34	Total-pentafurans	31.27	5.883e3	3.995e3	0.866	1.47	1.55	57.3	YES	NO	bd	bd	0.816
35	Total-hexafurans	34.23	3.098e3	2.511e3	1.208	1.23	1.24	30.2	YES	NO	bb	bb	0.602
36	Total-hexafurans	33.71	9.393e4	7.594e4	1.208	1.24	1.24	956.5	YES	NO	bd	bb	18.224
37	123468-HXCDF	33.50	2.925e4	2.372e4	1.197	1.23	1.24	288.3	YES	NO	bb	bb	4.997

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	123789-HxCDF	37.15	3.066e3	2.512e3	1.187	1.22	1.24	41.2	YES	NO	bb	bb	1.029
39	234678-HxCDF	36.15	1.483e4	1.170e4	1.229	1.27	1.24	86.3	YES	NO	bb	bb	2.594
40	Total-hexafurans	35.82	4.444e2	3.603e2	1.208	1.23	1.24	5.2	YES	NO	bb	bb	0.086
41	123678-HxCDF	35.30	1.095e4	9.401e3	1.248	1.16	1.24	103.9	YES	NO	db	dd	1.790
42	123478-HxCDF	35.17	2.841e4	2.319e4	1.182	1.22	1.24	273.3	YES	NO	dd	dd	4.931
43	Total-hexafurans	35.00	4.367e3	3.588e3	1.208	1.22	1.24	42.9	YES	NO	bd	bd	0.853
44	Total-hexafurans	34.53	1.453e5	1.181e5	1.208	1.23	1.24	1449.1	YES	NO	bb	bd	28.257
45	1234789-HpCDF	41.27	1.684e4	1.651e4	1.165	1.02	1.05	116.9	YES	NO	bb	bb	3.885
46	Total-heptafurans	40.51	1.273e3	1.336e3	1.185	0.95	1.05	8.8	YES	NO	bb	bb	0.284
47	Total-heptafurans	39.67	5.056e5	4.866e5	1.185	1.04	1.05	4075.5	YES	NO	bd	bb	107.960
48	Total-heptafurans	39.42	4.013e3	3.986e3	1.185	1.01	1.05	23.9	YES	NO	bb	bb	0.870
49	1234678-HpCDF	39.00	2.171e5	2.043e5	1.204	1.06	1.05	1756.3	YES	NO	bb	bd	42.954
50	OCDF	45.57	3.968e5	4.472e5	1.186	0.89	0.89	3009.4	YES	NO	dd	dd	110.622
51	Total-penta1	27.48	9.359e4	6.250e4		1.50	1.55	1645.0	YES	NO	bb	bb	11.956
52	Total-tetradioxins	24.05	4.461e3	5.691e3	1.099	0.78	0.77	74.5	YES	NO	bd	db	0.813
53	1368-TCDD	23.78	5.910e3	7.847e3	1.084	0.75	0.77	102.7	YES	NO	bb	bd	1.116
54	Total-tetradioxins	26.79	1.459e3	1.709e3	1.099	0.85	0.77	21.6	YES	NO	dd	db	0.254
55	2378-TCDD	26.66	3.789e3	5.342e3	1.236	0.71	0.77	53.8	YES	NO	bd	bd	0.650
56	Total-tetradioxins	26.28	3.466e3	4.405e3	1.099	0.79	0.77	45.1	YES	NO	bb	bb	0.630
57	Total-tetradioxins	25.83	8.909e2	1.221e3	1.099	0.73	0.77	16.9	YES	NO	bb	bd	0.169
58	Total-tetradioxins	25.27	5.366e3	6.882e3	1.099	0.78	0.77	86.4	YES	NO	bb	bb	0.981
59	Total-tetradioxins	24.77	1.079e3	1.286e3	1.099	0.84	0.77	19.7	YES	NO	bd	bb	0.189
60	Total-tetradioxins	24.25	1.828e3	2.546e3	1.099	0.72	0.77	30.6	YES	NO	db	bb	0.350
61	Total-pentadioxins	29.21	2.752e4	1.837e4	1.392	1.50	1.55	86.2	YES	NO	bb	bb	4.665
62	12378-PeCDD	31.78	1.661e4	1.137e4	1.087	1.46	1.55	82.9	YES	NO	bb	bb	3.644
63	Total-pentadioxins	30.71	9.114e3	6.224e3	1.392	1.46	1.55	37.3	YES	NO	bb	db	1.559
64	Total-pentadioxins	30.54	6.422e3	4.872e3	1.392	1.32	1.55	38.8	YES	NO	bb	dd	1.148
65	Total-pentadioxins	30.40	1.776e4	1.255e4	1.392	1.42	1.55	99.3	YES	NO	bb	bd	3.082
66	Total-pentadioxins	30.19	9.366e3	5.633e3	1.392	1.66	1.55	47.5	YES	NO	bb	bb	1.525
67	Total-pentadioxins	29.63	2.516e3	1.551e3	1.392	1.62	1.55	15.9	YES	NO	bb	bb	0.413
68	124679-HXCDD	34.26	2.179e5	1.777e5	1.033	1.23	1.24	896.0	YES	NO	bb	bb	47.925
69	123789-HxCDD	36.82	4.844e4	3.797e4	0.985	1.28	1.24	193.6	YES	NO	db	bb	10.962
70	Total-hexadioxins	36.59	8.387e3	6.358e3	1.007	1.32	1.24	30.0	YES	NO	dd	db	1.831
71	123678-HxCDD	36.43	8.100e4	6.643e4	1.021	1.22	1.24	320.8	YES	NO	dd	dd	18.043
72	123478-HxCDD	36.31	1.471e4	1.070e4	0.987	1.38	1.24	60.3	YES	NO	bd	bd	3.222
73	Total-hexadioxins	35.51	1.903e4	1.560e4	1.007	1.22	1.24	78.9	YES	NO	db	dd	4.300
74	Total-hexadioxins	35.41	3.154e5	2.512e5	1.007	1.26	1.24	898.0	YES	NO	bd	bd	70.371

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
75	Total-hexadioxins	35.04	2.955e4	2.257e4	1.007	1.31	1.24	120.1	YES	NO	bb	bb	6.473
76	OCDD	45.33	1.570e7	1.816e7	1.103	0.86	0.89	63897.8	YES	NO	bb	bb	4774.3...
77	1234678-HpCDD	40.51	2.672e6	2.573e6	1.253	1.04	1.05	6320.7	YES	NO	bb	bb	636.543
78	1234679-HPCDD	39.46	3.401e6	3.247e6	1.286	1.05	1.05	8506.1	YES	NO	bb	bb	785.761

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.78	6.823e4					4.7	YES		bb		
2	FUNCTION1 PFK	22.47	7.788e4					2.7	NO		bb		
3	FUNCTION1 PFK	22.21	7.852e5					14.2	YES		db		
4	FUNCTION1 PFK	22.03	7.371e5					17.3	YES		dd		
5	FUNCTION1 PFK	21.86	1.751e6					26.2	YES		dd		
6	FUNCTION1 PFK	21.65	1.371e6					32.9	YES		dd		
7	FUNCTION1 PFK	21.51	1.499e6					35.1	YES		dd		
8	FUNCTION1 PFK	21.31	3.351e6					45.6	YES		dd		
9	FUNCTION1 PFK	21.13	2.834e6					48.0	YES		bd		
10	FUNCTION1 PFK	27.68	1.194e6					29.1	YES		dd		
11	FUNCTION1 PFK	27.54	1.546e6					31.5	YES		bd		
12	FUNCTION1 PFK	27.31	2.229e6					31.2	YES		db		
13	FUNCTION1 PFK	27.14	4.559e5					24.2	YES		dd		
14	FUNCTION1 PFK	27.07	1.665e6					20.5	YES		bd		
15	FUNCTION1 PFK	25.73	9.316e5					14.2	YES		bb		
16	FUNCTION1 PFK	25.29	1.279e6					5.8	YES		bb		
17	FUNCTION1 PFK	24.60	2.294e5					7.2	YES		bb		
18	FUNCTION1 PFK	24.32	9.180e5					8.3	YES		bb		
19	FUNCTION1 PFK	23.61	7.318e5					15.2	YES		db		
20	FUNCTION1 PFK	23.47	2.182e5					11.2	YES		bd		
21	FUNCTION1 PFK	23.36	4.317e5					18.8	YES		db		
22	FUNCTION1 PFK	23.26	5.845e5					22.8	YES		dd		
23	FUNCTION1 PFK	23.20	7.099e5					20.9	YES		dd		
24	FUNCTION1 PFK	23.05	6.811e5					17.1	YES		bd		
25	FUNCTION1 PFK	22.89	3.176e5					12.8	YES		bb		
26	FUNCTION1 PFK	28.18	6.006e5					5.6	YES		bb		
27	FUNCTION1 PFK	27.92	1.297e6					28.0	YES		db		
28	FUNCTION1 PFK	27.82	6.699e5					25.8	YES		dd		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	32.97	3.656e5					6.7	YES		bb		0.000
2	FUNCTION2 PFK	32.64	1.095e6					22.3	YES		db		0.000
3	FUNCTION2 PFK	32.46	8.225e5					15.6	YES		bd		0.000
4	FUNCTION2 PFK	32.21	3.541e5					5.9	YES		bb		0.000
5	FUNCTION2 PFK	30.18	3.561e5					13.8	YES		db		0.000
6	FUNCTION2 PFK	30.11	1.800e6					17.2	YES		bd		0.000
7	FUNCTION2 PFK	28.64	1.173e7					35.3	YES		db		0.000
8	FUNCTION2 PFK	28.24	2.597e5					30.6	YES		bd		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.91	1.795e6					29.1	YES		dd		0.000
2	FUNCTION3 PFK	33.37	5.393e6					47.8	YES		dd		0.000
3	FUNCTION3 PFK	33.05	1.751e6					60.8	YES		bd		0.000
4	FUNCTION3 PFK	37.77	3.962e6					9.2	YES		bb		0.000
5	FUNCTION3 PFK	36.87	6.110e6					39.8	YES		bb		0.000
6	FUNCTION3 PFK	34.30	8.921e5					12.7	YES		bb		0.000
7	FUNCTION3 PFK	34.00	7.726e5					26.7	YES		db		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	39.97	2.625e5					8.7	YES		bb		
2	FUNCTION4 PFK	38.19	7.738e4					6.1	YES		bb		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.60	1.843e4					2.0	NO		bb		
2	FUNCTION5 PFK	44.42	1.999e3					1.0	NO		bb		
3	FUNCTION5 PFK	43.72	5.848e3					1.4	NO		bb		
4	FUNCTION5 PFK	43.66	2.252e4					2.2	NO		db		
5	FUNCTION5 PFK	43.54	6.596e3					1.7	NO		bd		
6	FUNCTION5 PFK	43.48	8.430e3					1.5	NO		bb		
7	FUNCTION5 PFK	43.17	3.870e4					3.7	YES		bb		
8	FUNCTION5 PFK	43.09	7.641e3					2.2	NO		bb		
9	FUNCTION5 PFK	46.13	3.206e3					1.1	NO		bb		
10	FUNCTION5 PFK	45.55	1.483e3					0.8	NO		db		
11	FUNCTION5 PFK	45.53	2.326e3					0.8	NO		bd		
12	FUNCTION5 PFK	45.48	1.289e4					2.0	NO		db		
13	FUNCTION5 PFK	45.44	2.560e4					3.5	YES		dd		
14	FUNCTION5 PFK	45.38	1.834e4					3.8	YES		bd		
15	FUNCTION5 PFK	45.31	2.807e3					1.0	NO		bb		
16	FUNCTION5 PFK	45.21	6.687e3					1.5	NO		bb		
17	FUNCTION5 PFK	45.14	2.178e4					3.2	YES		bb		
18	FUNCTION5 PFK	45.06	1.122e4					2.0	NO		bb		
19	FUNCTION5 PFK	44.90	1.107e4					1.7	NO		bb		
20	FUNCTION5 PFK	44.77	9.252e2					0.7	NO		bb		
21	FUNCTION5 PFK	44.68	1.646e3					0.9	NO		db		
22	FUNCTION5 PFK	44.65	4.927e3					1.5	NO		bd		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	22.06	2.088e2					9.5	YES		bb		0.000
2	FUNCTION1 HXCD...	27.03	1.479e2					4.9	YES		bb		0.000
3	FUNCTION1 HXCD...	26.38	6.750e2					25.3	YES		bb		0.000
4	FUNCTION1 HXCD...	26.16	7.550e2					20.9	YES		db		0.000
5	FUNCTION1 HXCD...	26.01	3.052e2					10.0	YES		bd		0.000
6	FUNCTION1 HXCD...	25.36	2.183e2					9.0	YES		bb		0.000
7	FUNCTION1 HXCD...	23.99	4.259e2					16.8	YES		bb		0.000
8	FUNCTION1 HXCD...	22.55	4.033e2					11.4	YES		bb		0.000
9	FUNCTION1 HXCD...	22.40	2.309e2					9.3	YES		bb		0.000
10	FUNCTION1 HXCD...	22.14	7.236e1					3.9	YES		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.67	7.070e2					16.2	YES		bb		0.000
2	FUNCTION2 HPCD...	32.50	8.489e1					3.8	YES		bb		0.000
3	FUNCTION2 HPCD...	31.99	1.050e2					3.9	YES		bb		0.000
4	FUNCTION2 HPCD...	29.25	2.523e2					6.5	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	33.37	7.052e1					2.8	NO		bb		0.000
2	FUNCTION3 OCDPE	37.61	9.306e1					3.7	YES		bb		0.000
3	FUNCTION3 OCDPE	34.82	8.790e1					3.5	YES		bb		0.000
4	FUNCTION3 OCDPE	34.47	1.036e2					3.9	YES		bb		0.000
5	FUNCTION3 OCDPE	34.26	1.099e2					2.6	NO		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	38.64	5.017e3					121.7	YES		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	45.35	2.179e3					32.4	YES		bb		0.000

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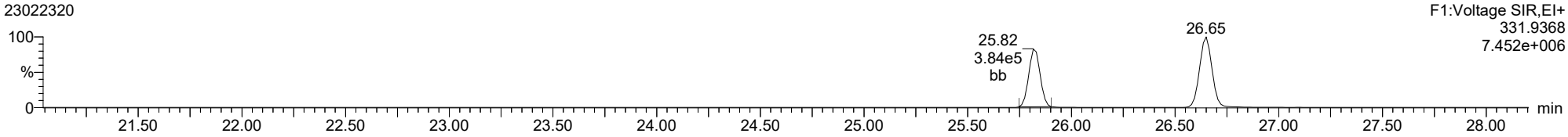

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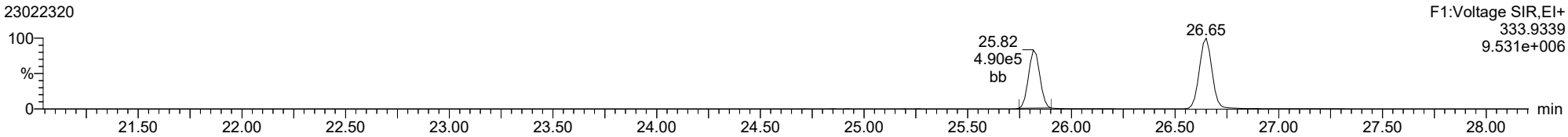

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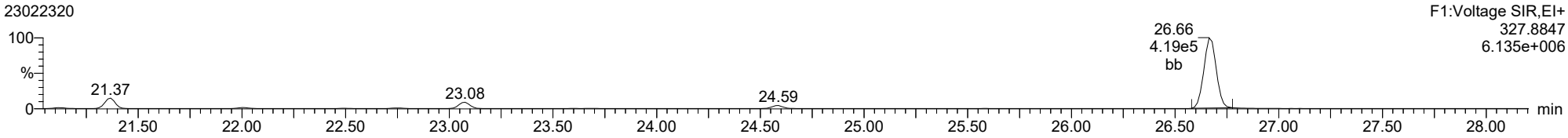

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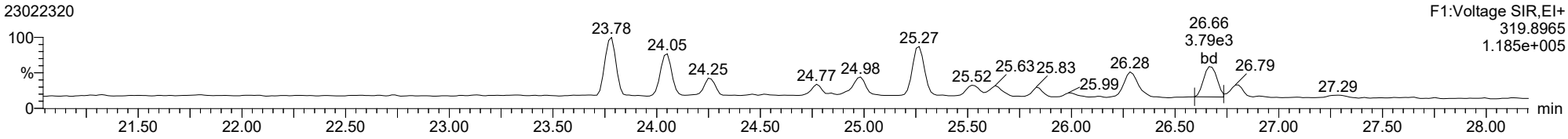
2378-TCDD



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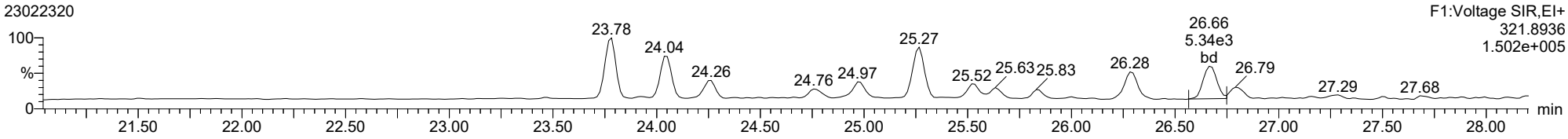

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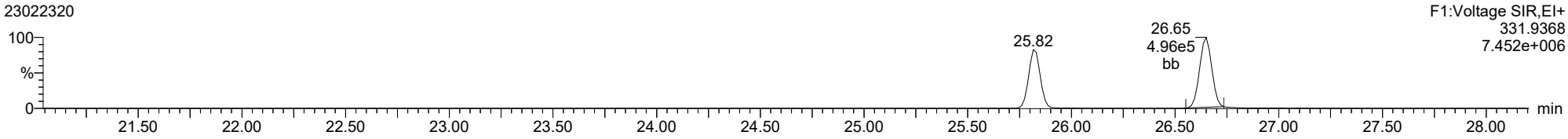

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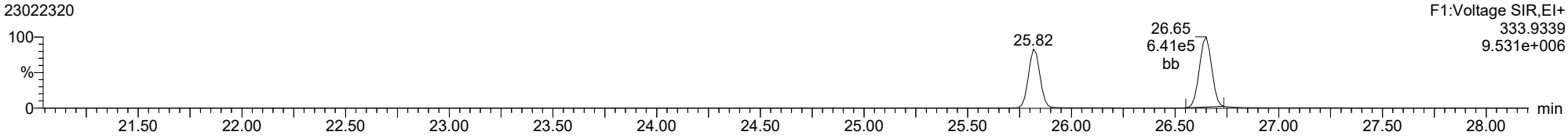

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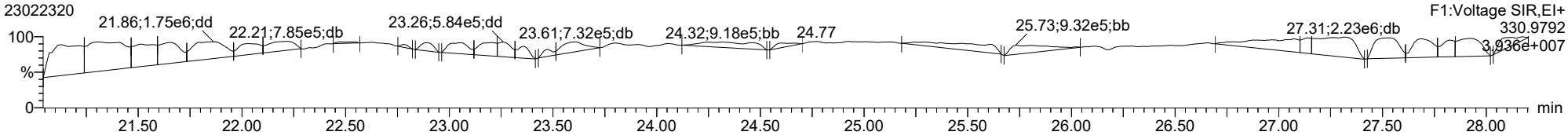

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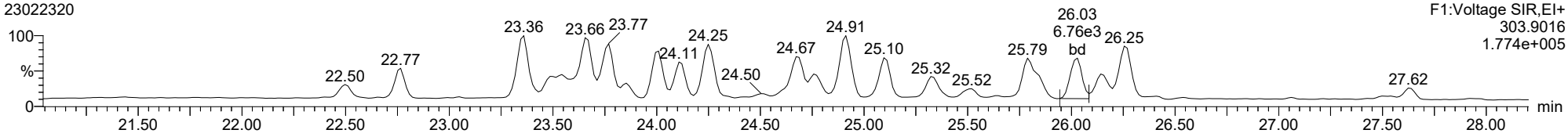
2378-TCDF



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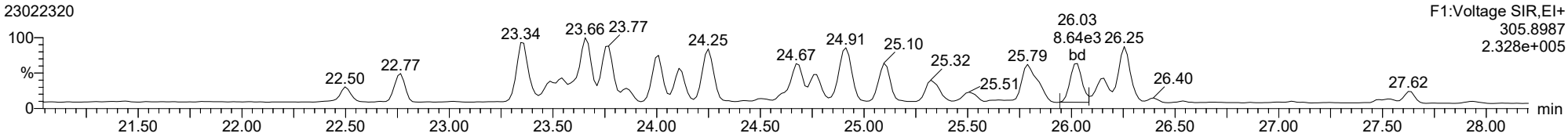

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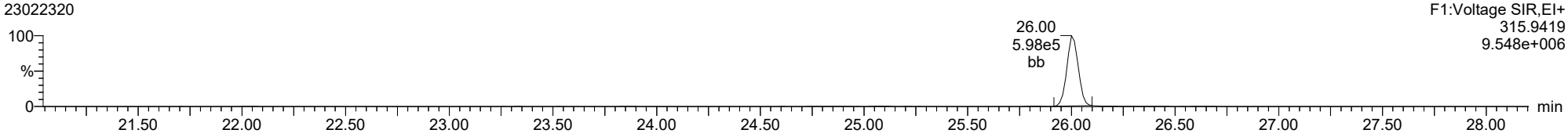

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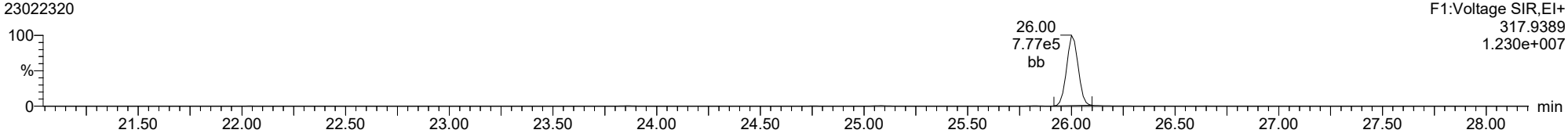

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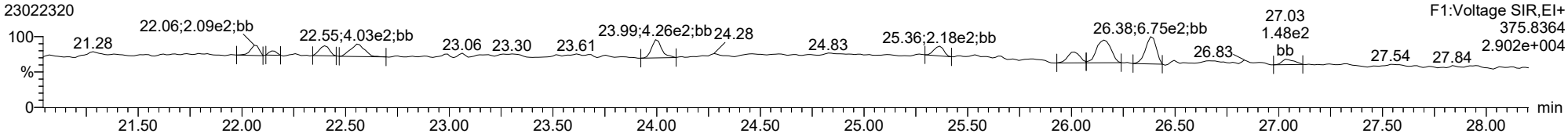

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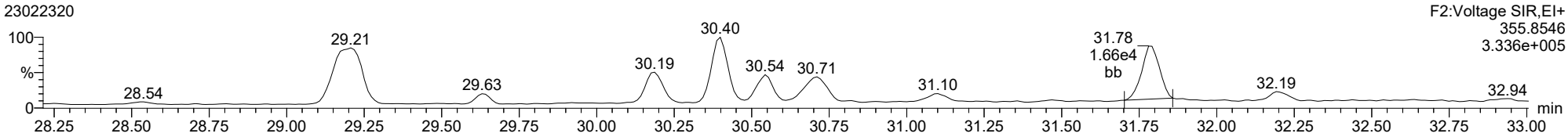

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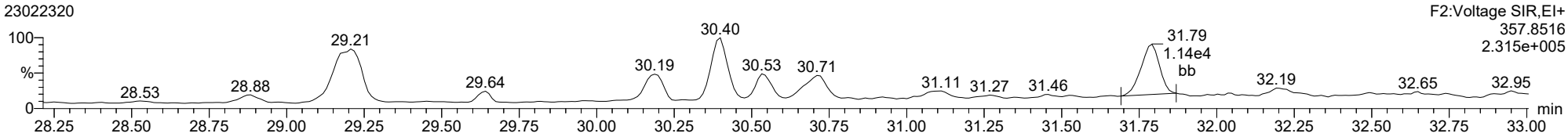

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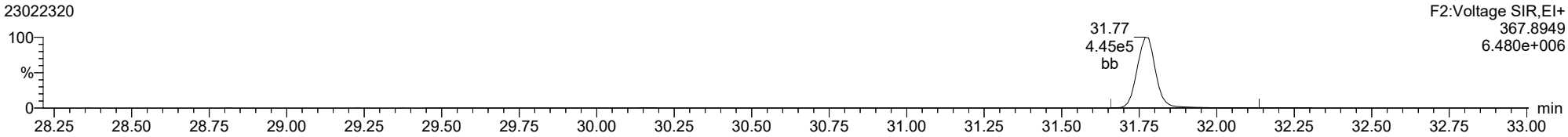

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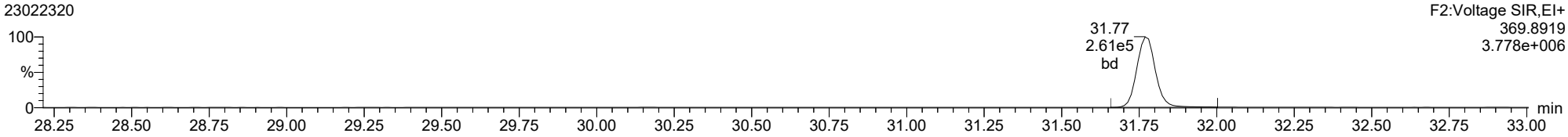

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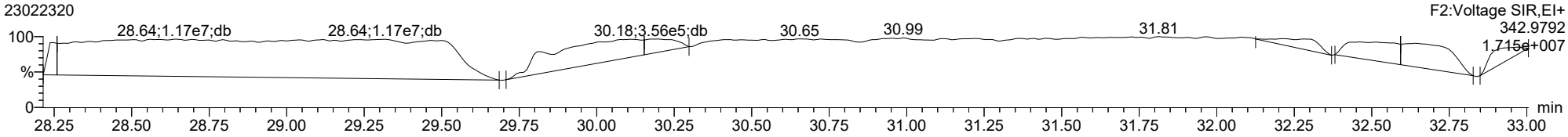

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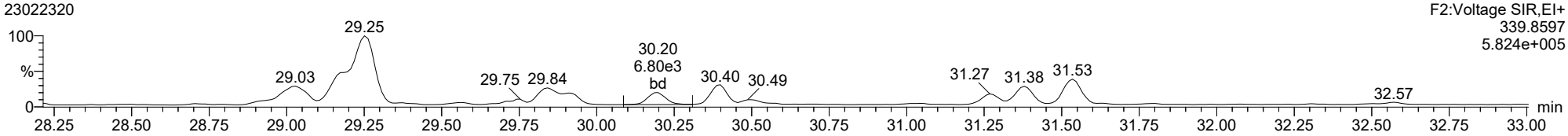

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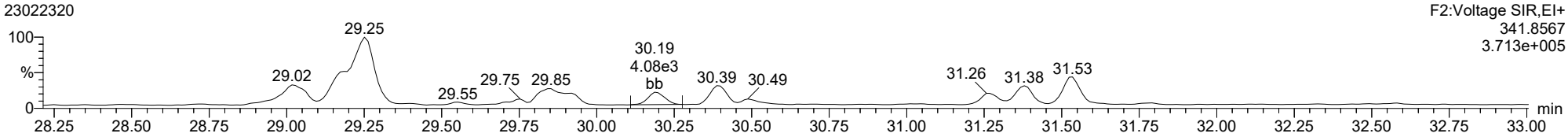

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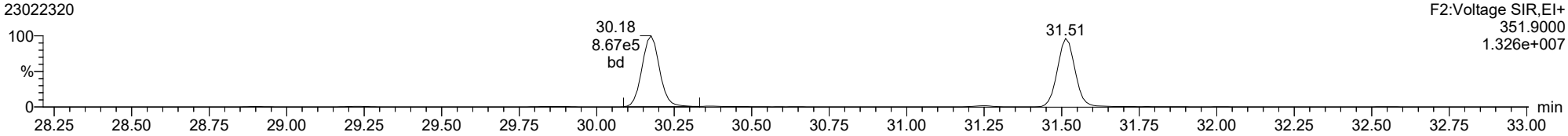

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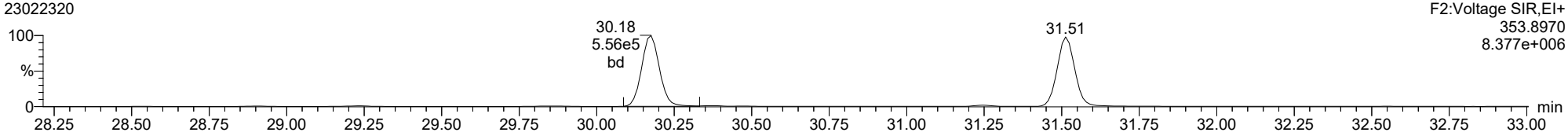

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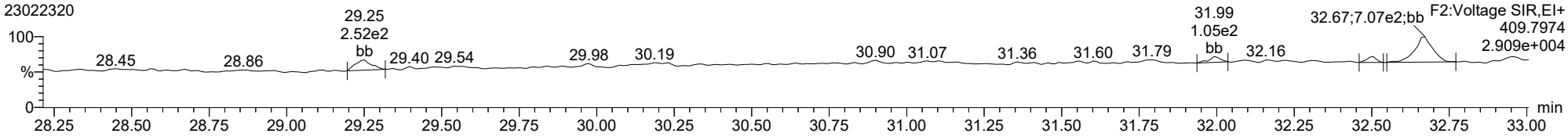

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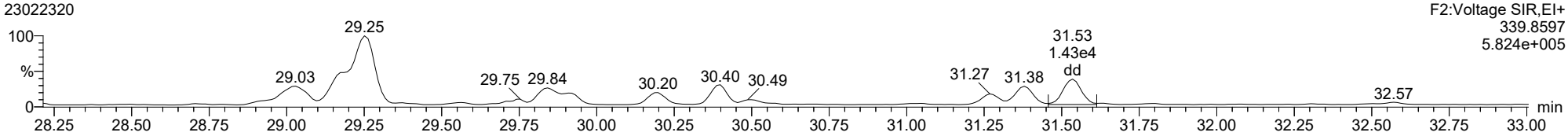

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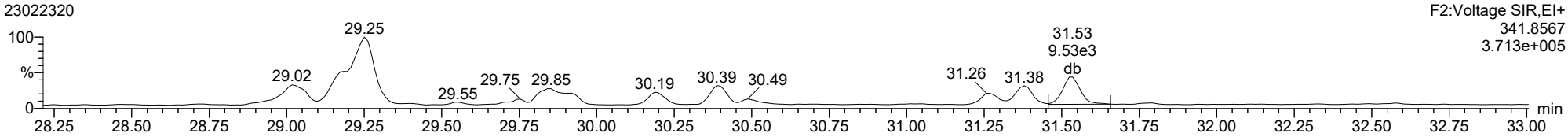

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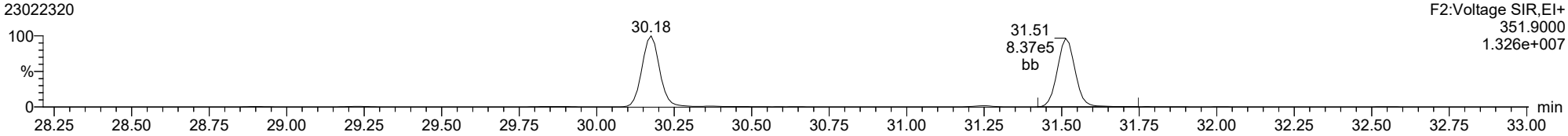

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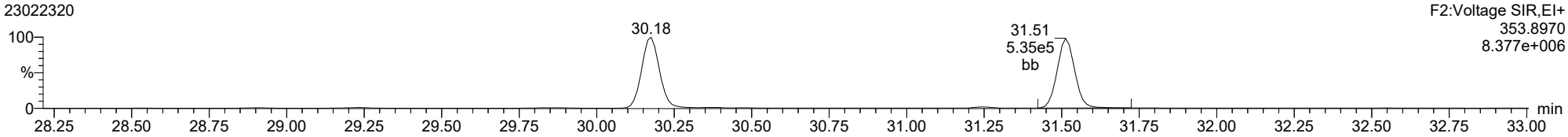

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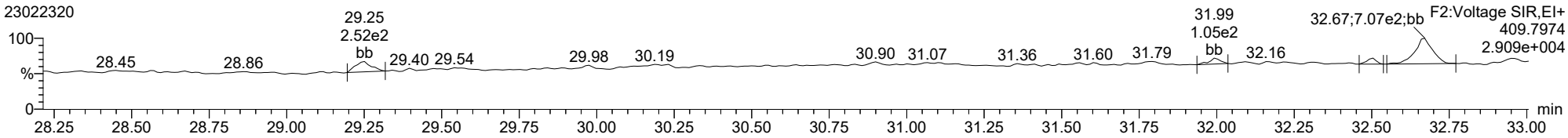

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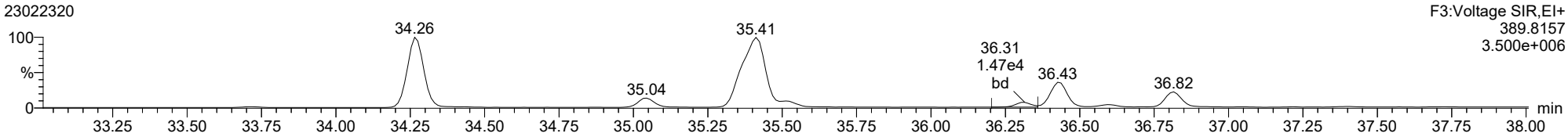

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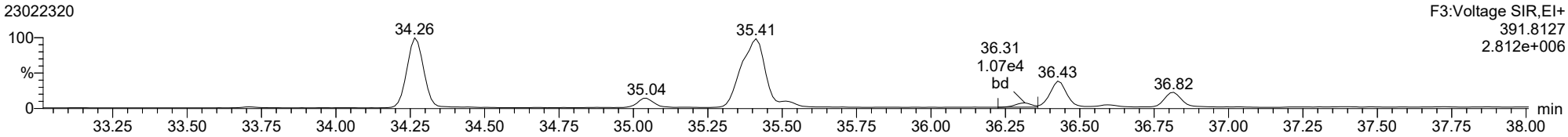

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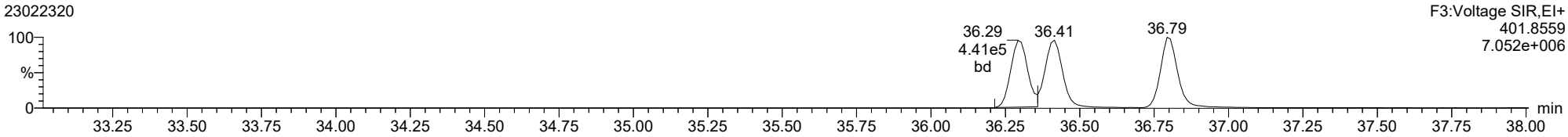

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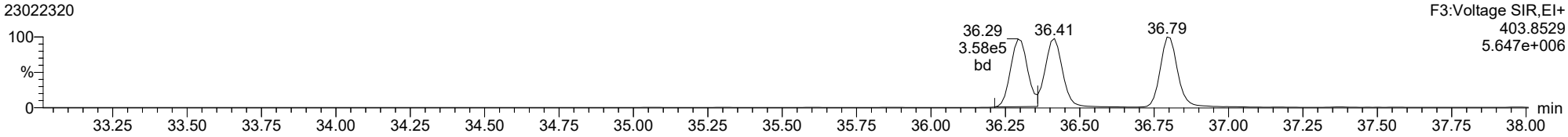

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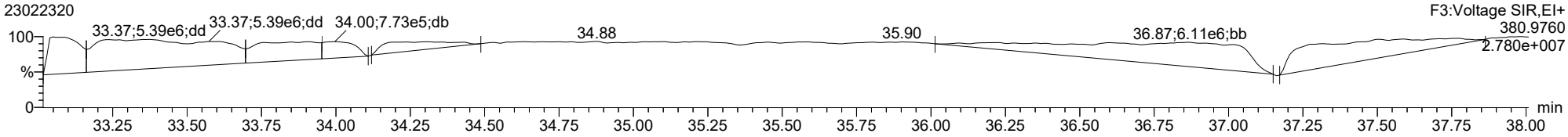

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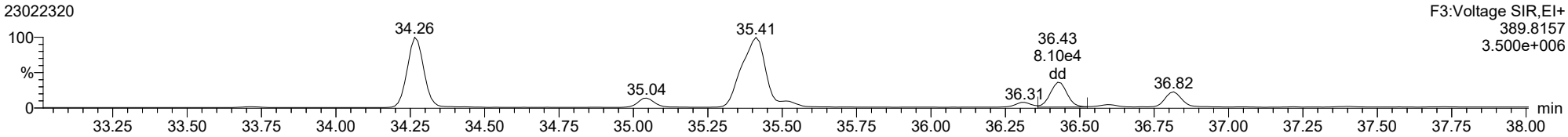

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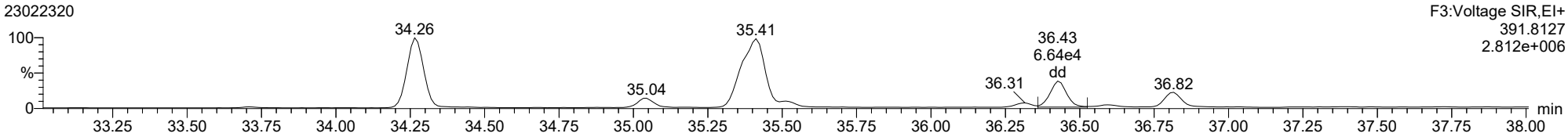

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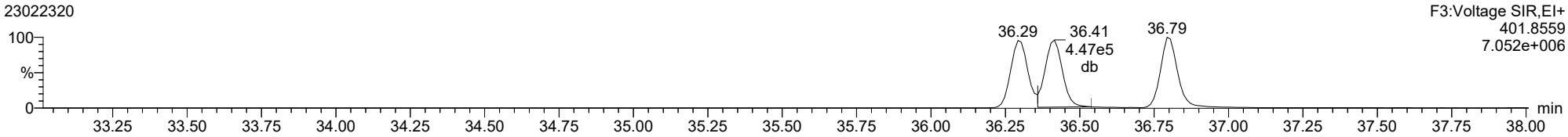

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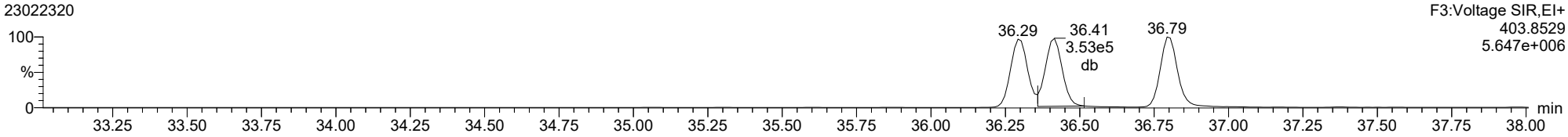

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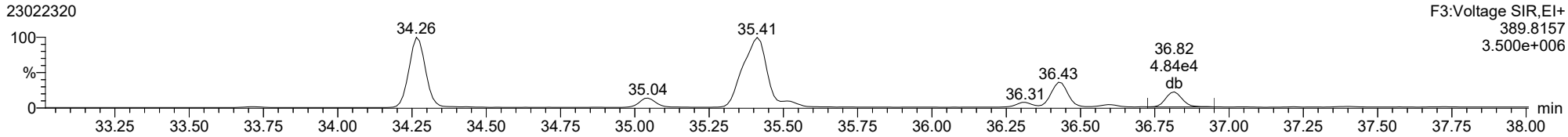

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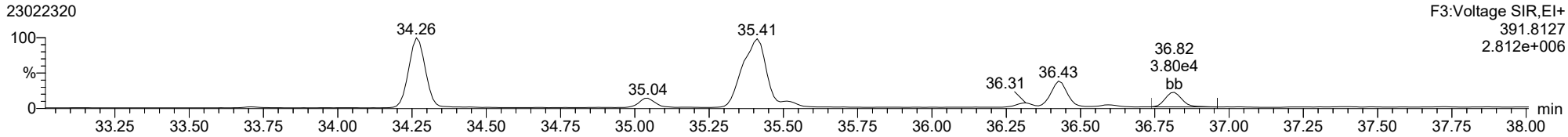

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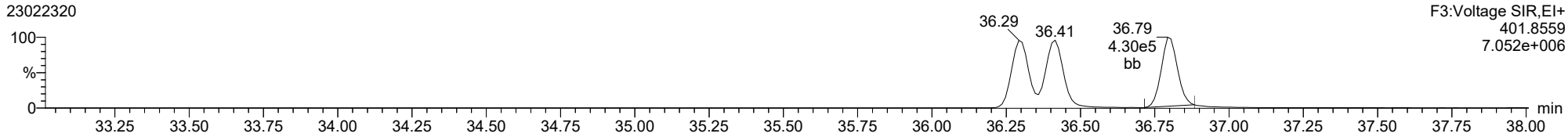

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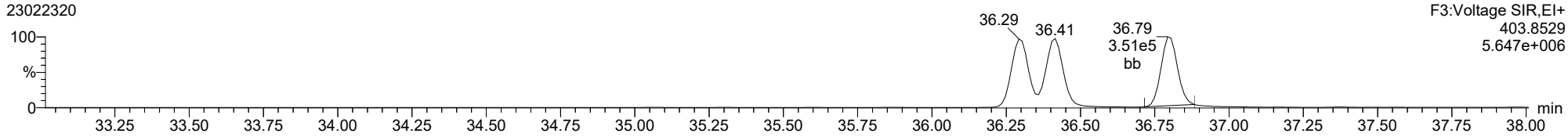

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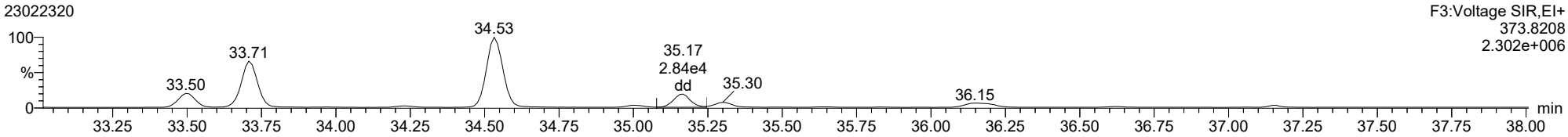

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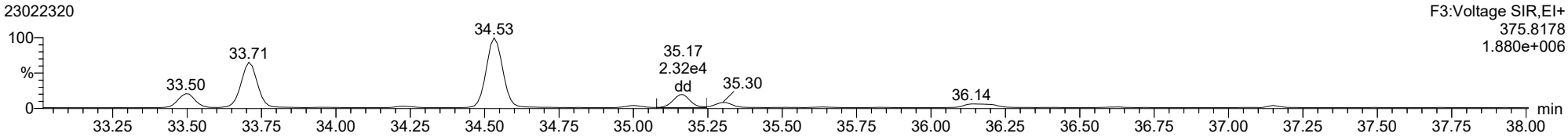

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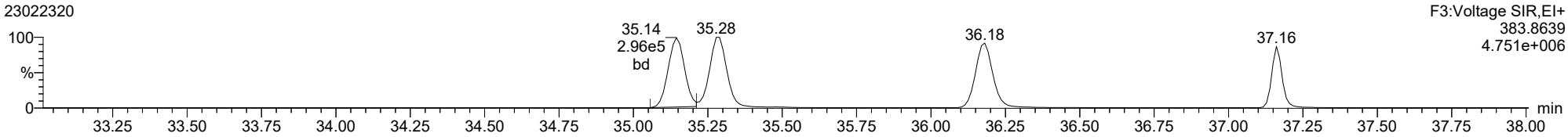

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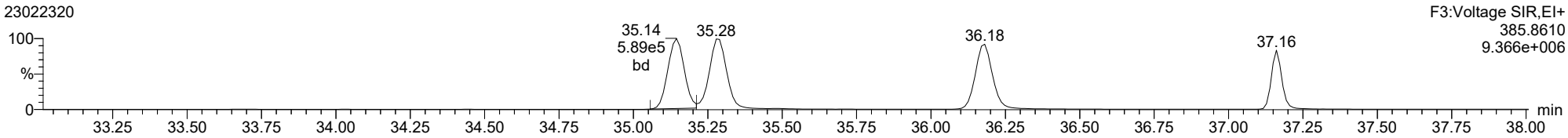

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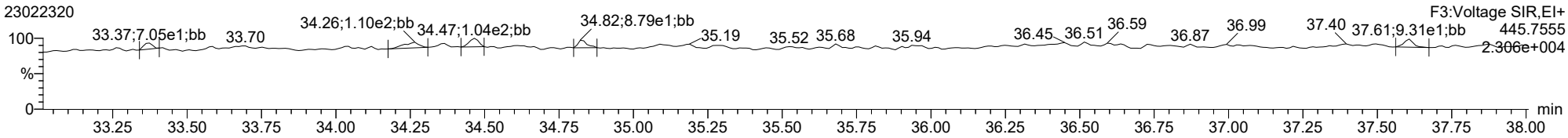

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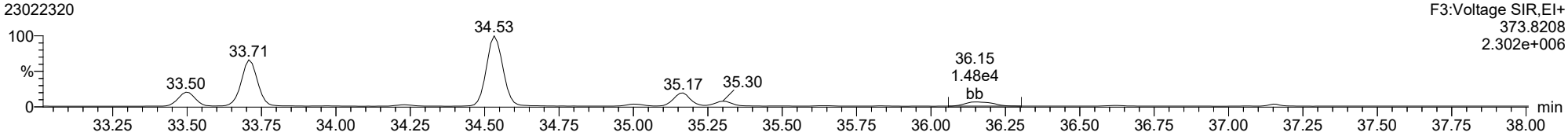

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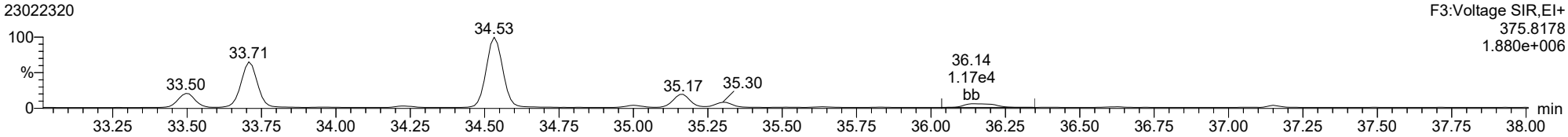

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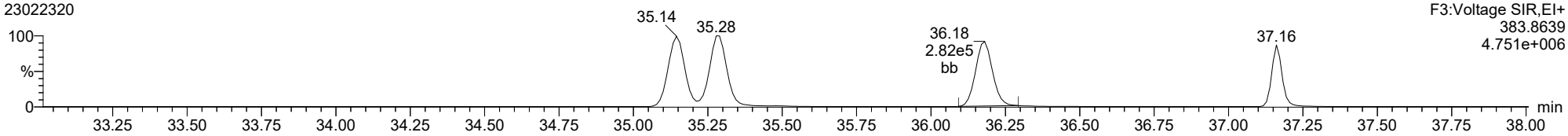

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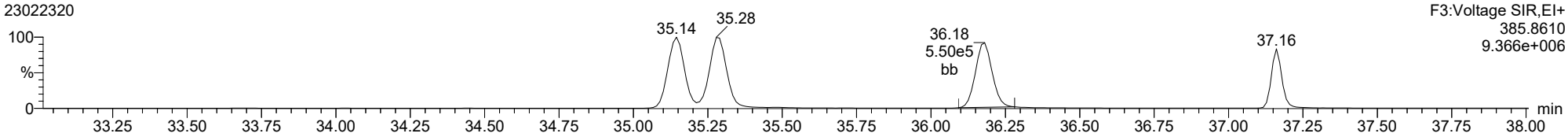

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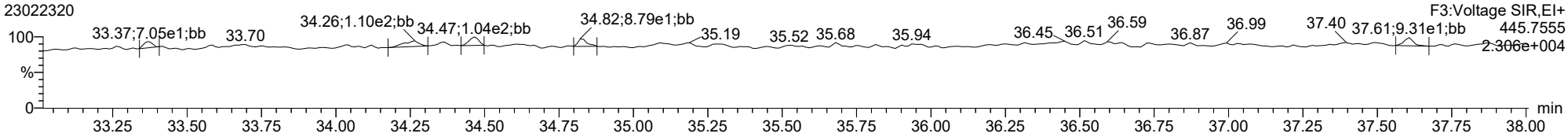

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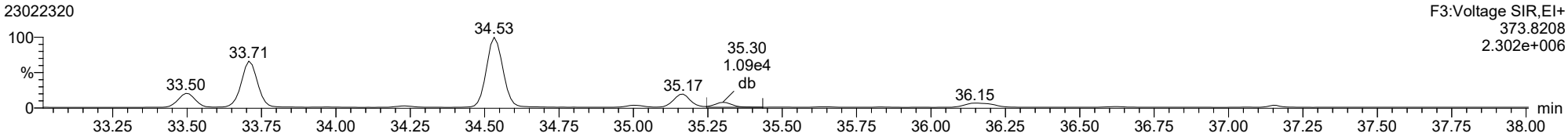

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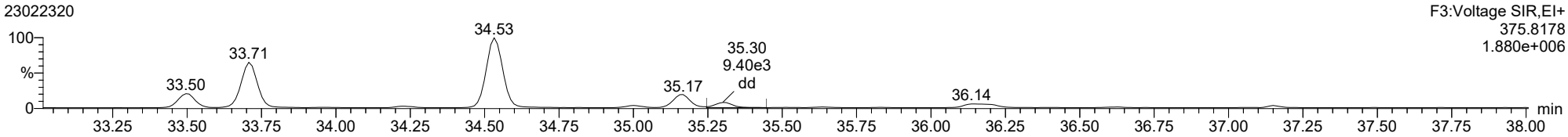

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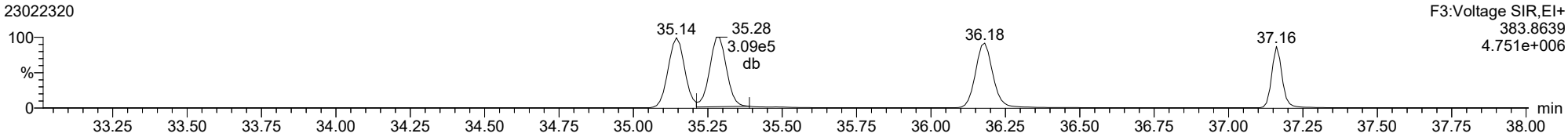

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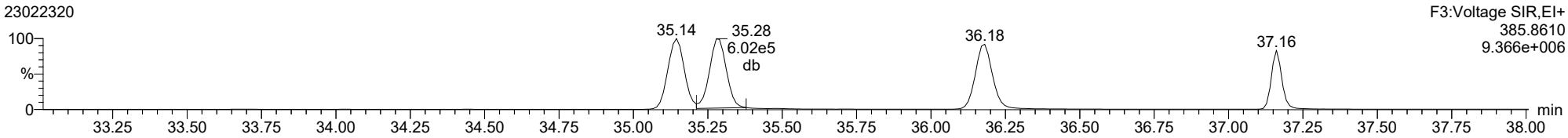

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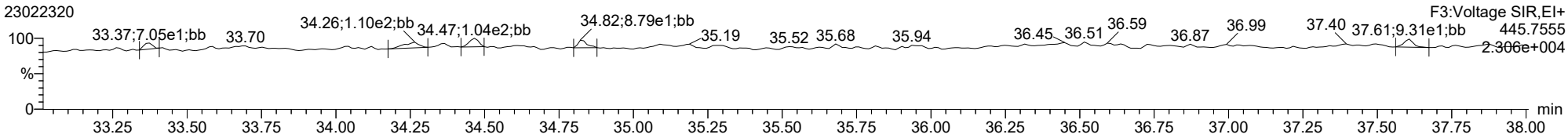

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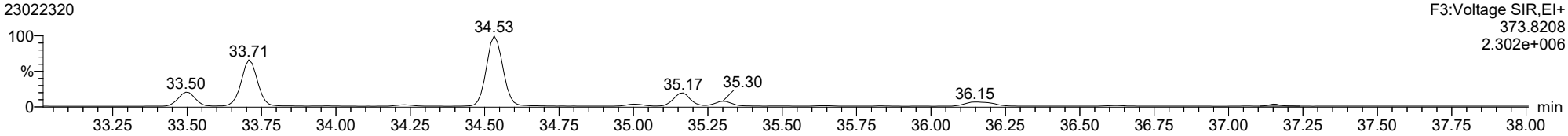

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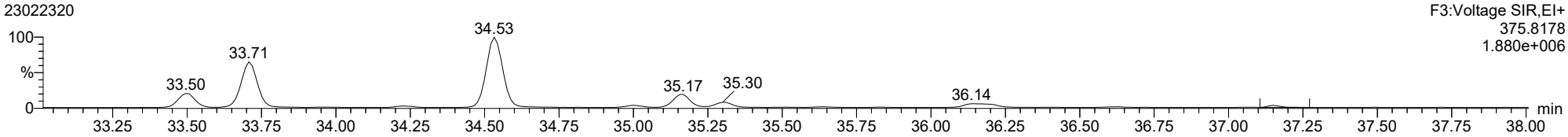

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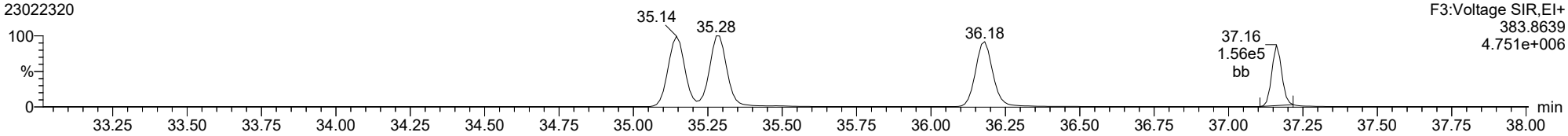

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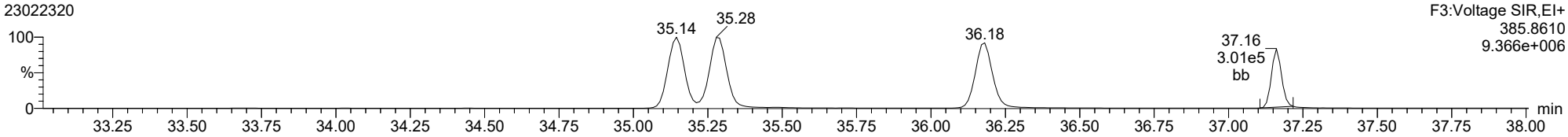

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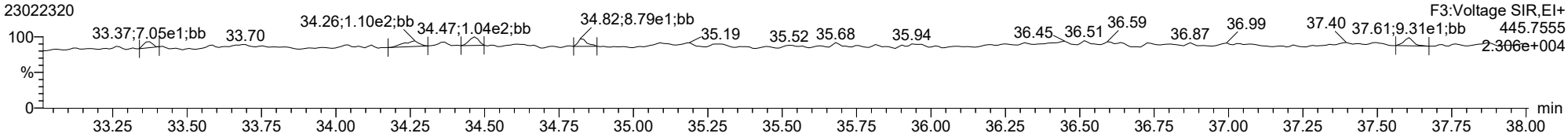

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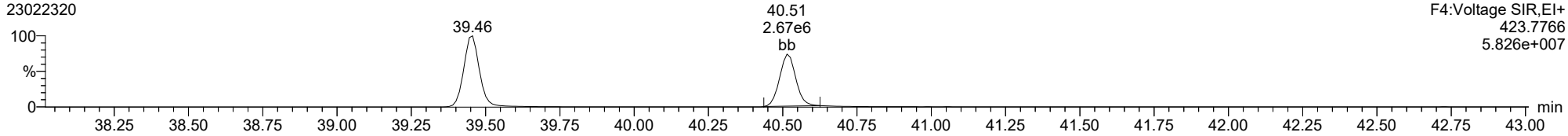

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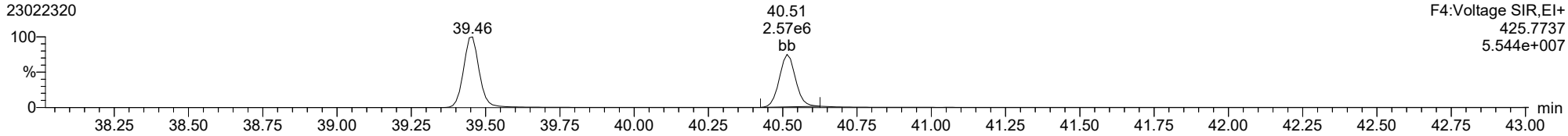

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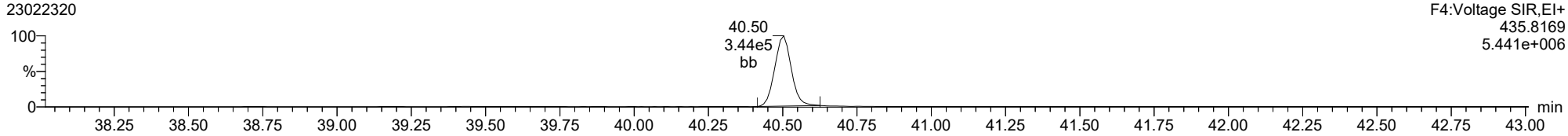

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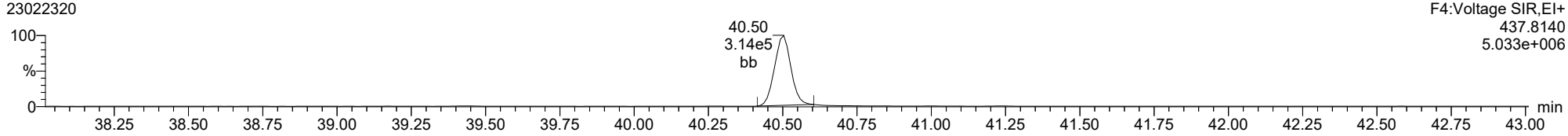
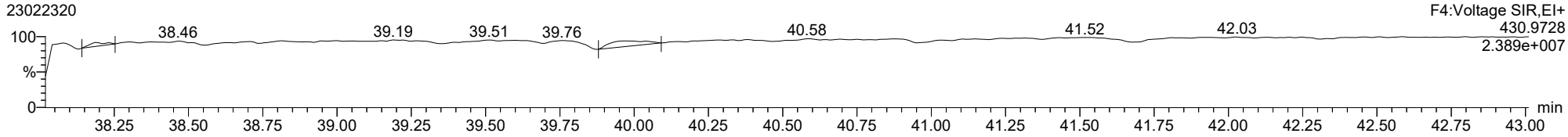
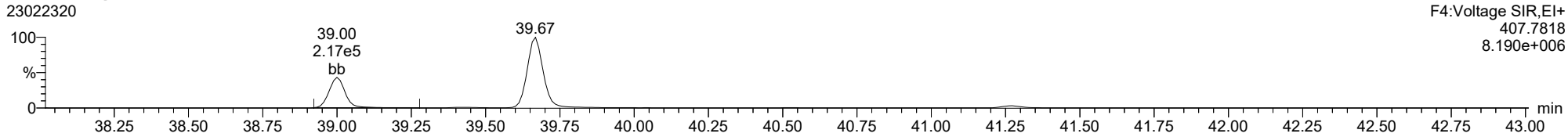


FUNCTION4 PFK



ID: 23A0207-17, Name: 23022320, Date: 24-Feb-2023, Time: 01:53:40, Conditions: AUTOSPEC01, User: pk

1234678-HpCDF



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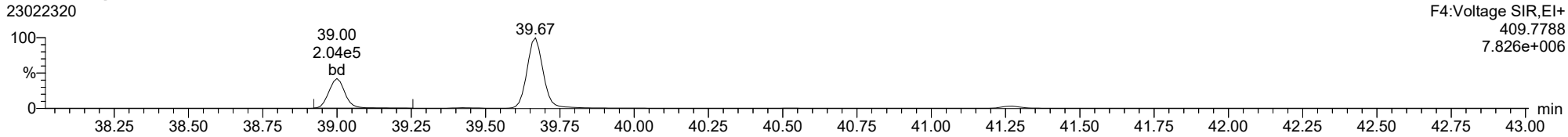

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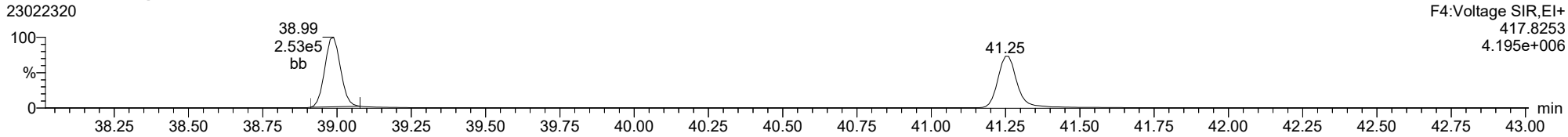

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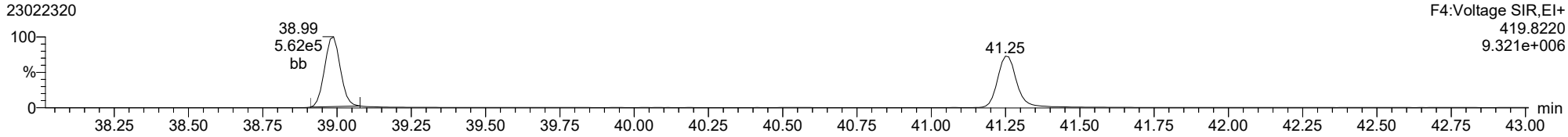

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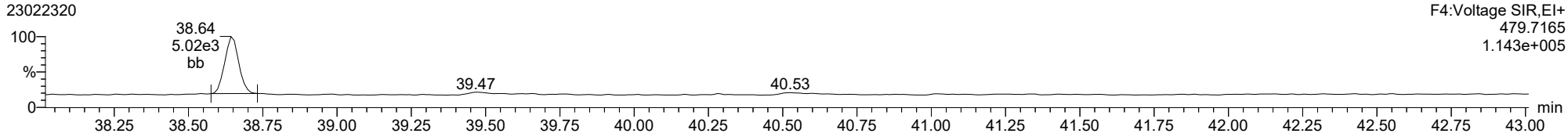

ID: 23A0207-17, Name: 23022320, Date: 24-Feb-2023, Time: 01:53:40, Conditions: AUTOSPEC01, User: pk

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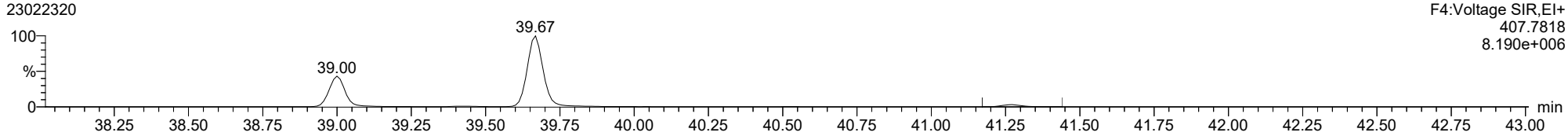

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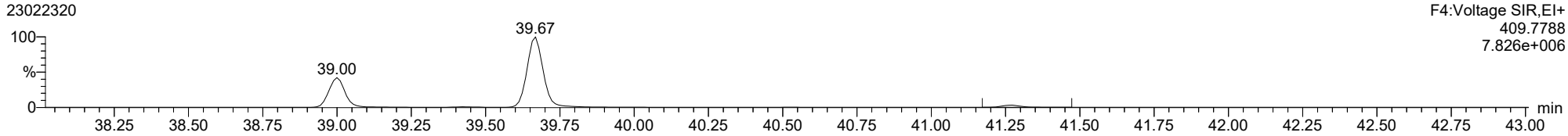

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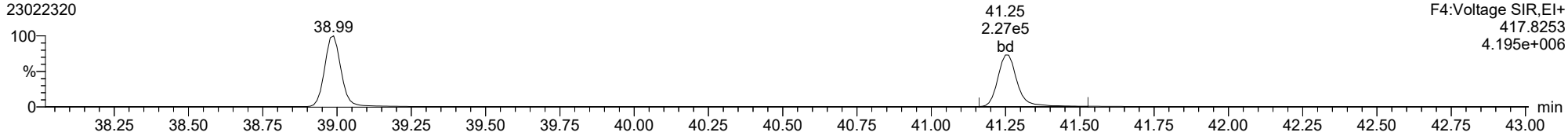

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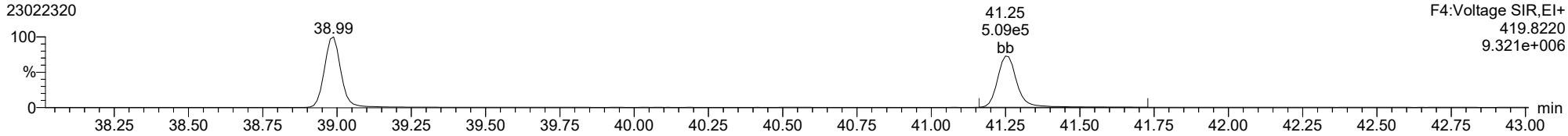
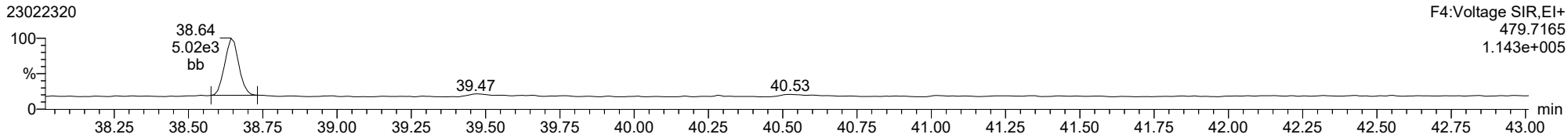


FUNCTION4 NCDPE



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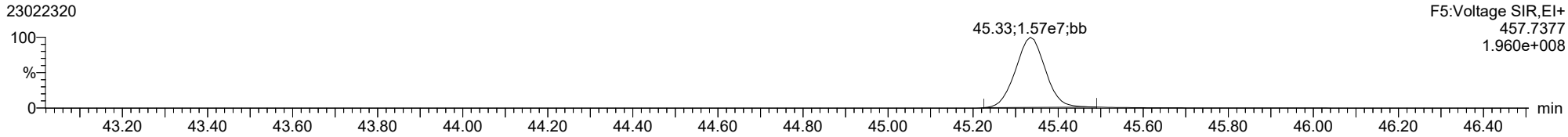
OCDD



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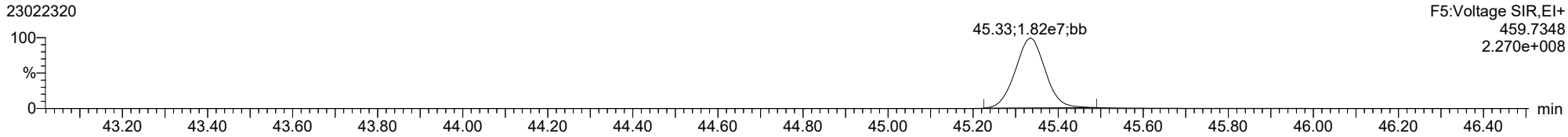

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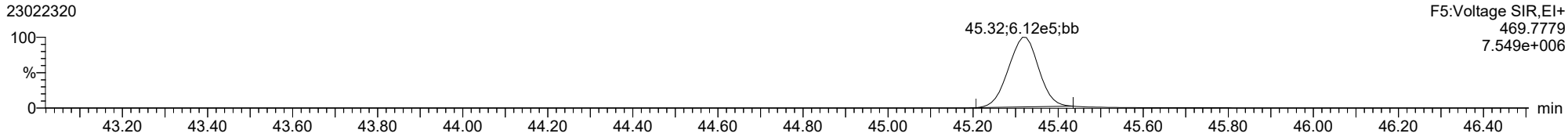

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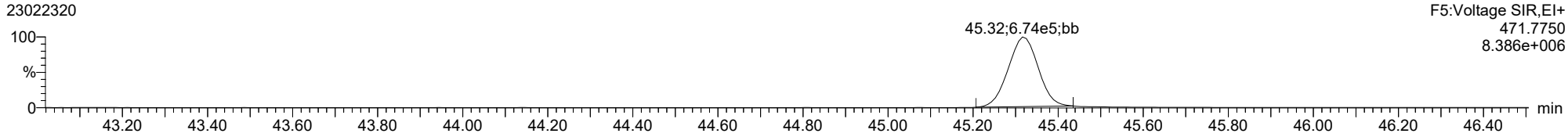

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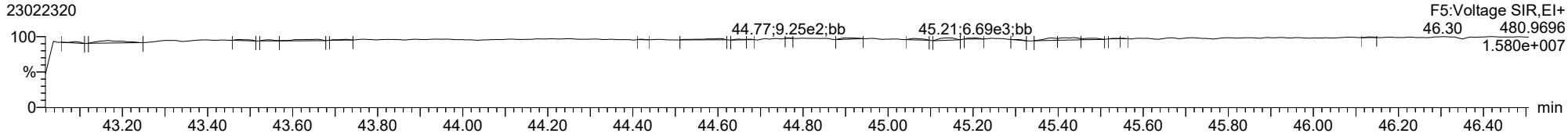
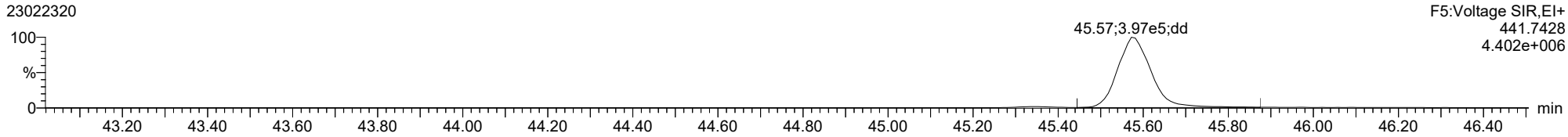


ID: 23A0207-17, Name: 23022320, Date: 24-Feb-2023, Time: 01:53:40, Conditions: AUTOSPEC01, User: pk

OCDF



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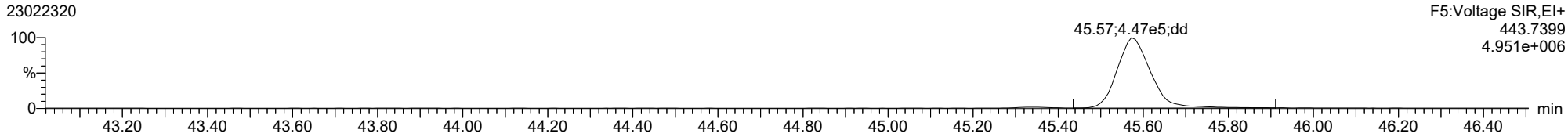

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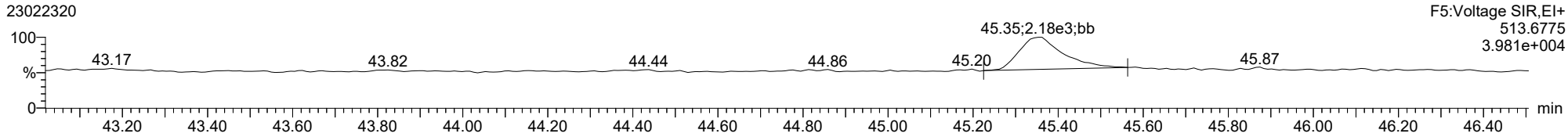

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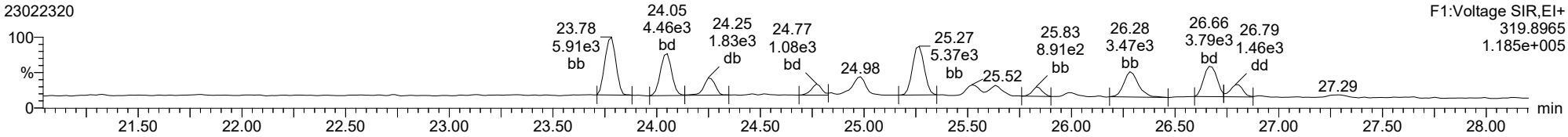
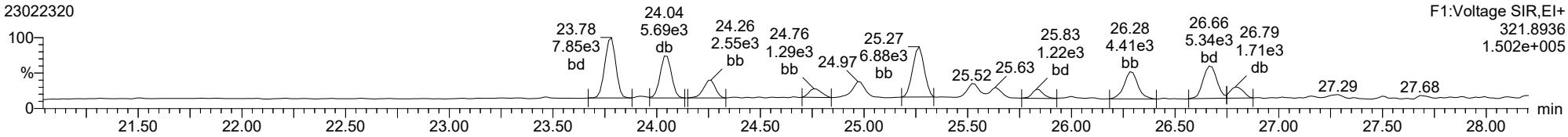
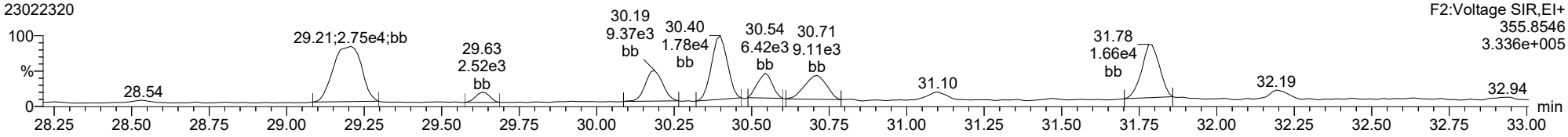


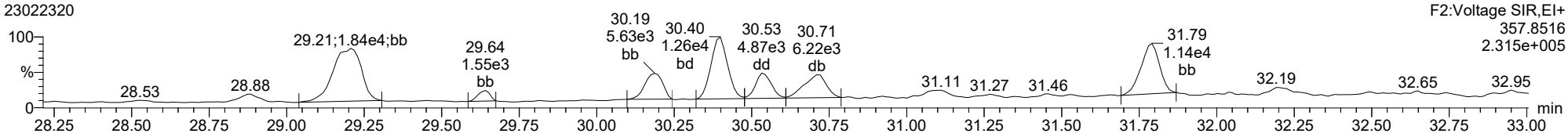
Total-tetradioxins



Total-pentadioxins

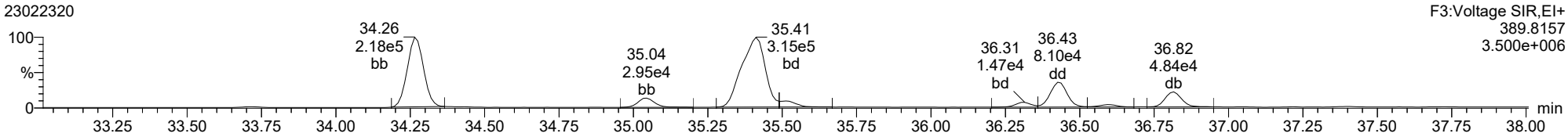


Total-pentadioxins

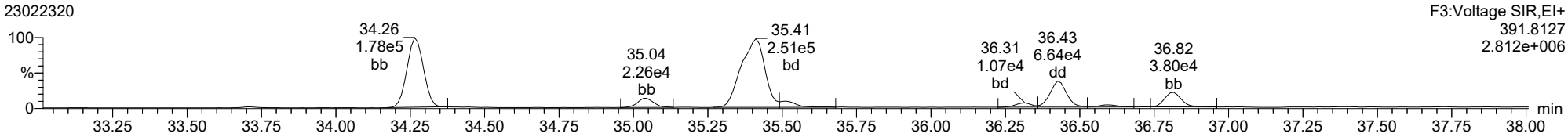


ID: 23A0207-17, Name: 23022320, Date: 24-Feb-2023, Time: 01:53:40, Conditions: AUTOSPEC01, User: pk

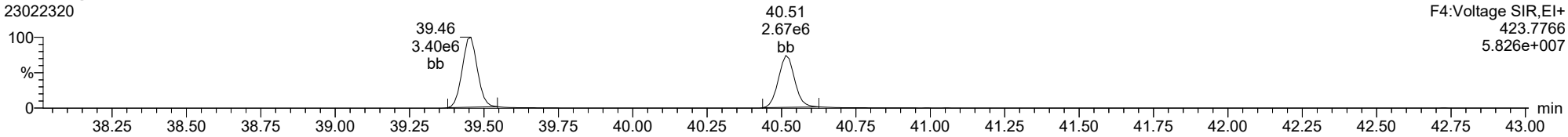
Total-hexadioxins



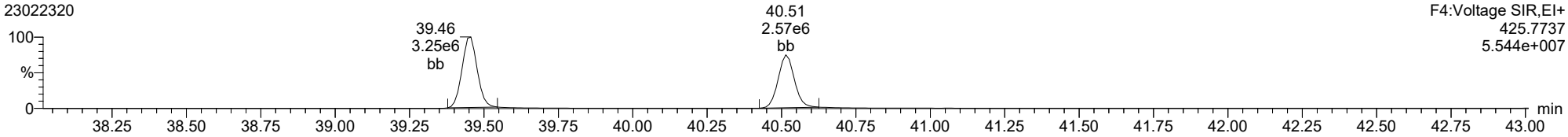
Total-hexadioxins



Total-heptadioxins



Total-heptadioxins



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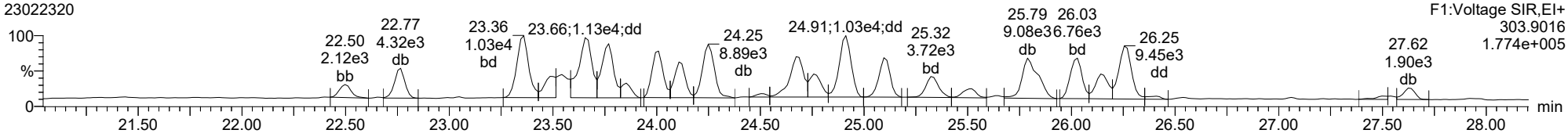
Total-tetrafurans



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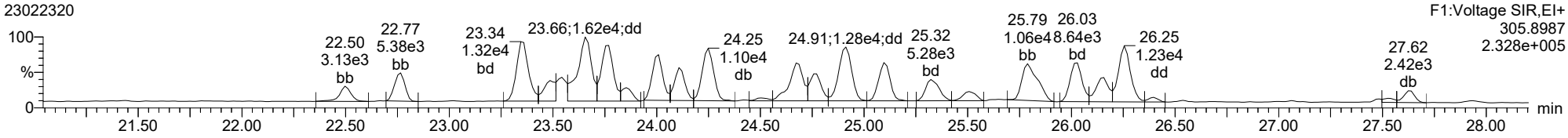

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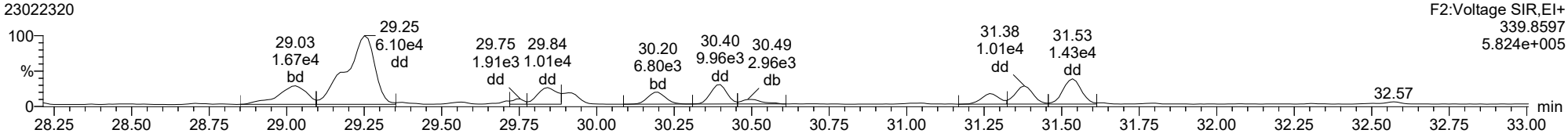

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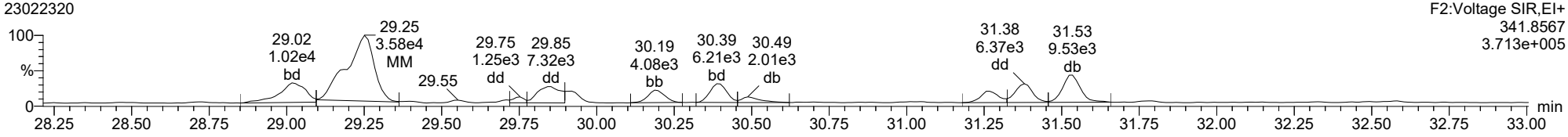

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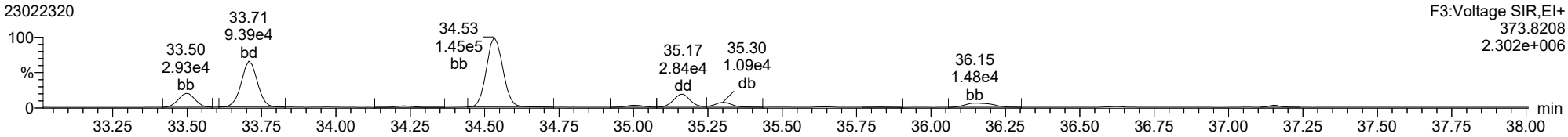
Total-hexafurans



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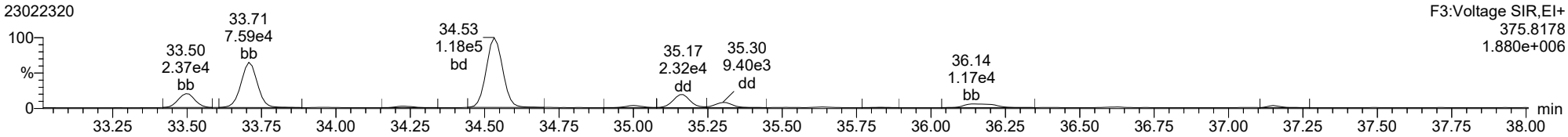

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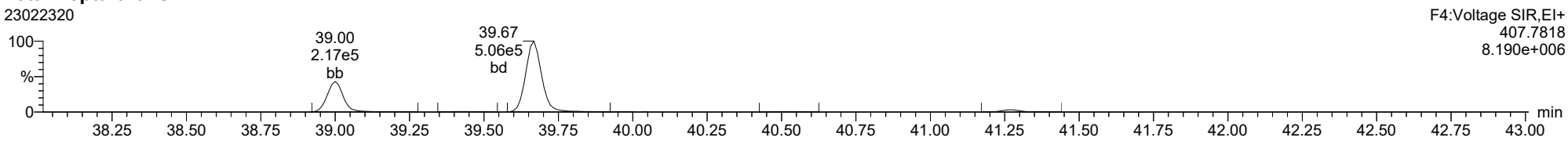
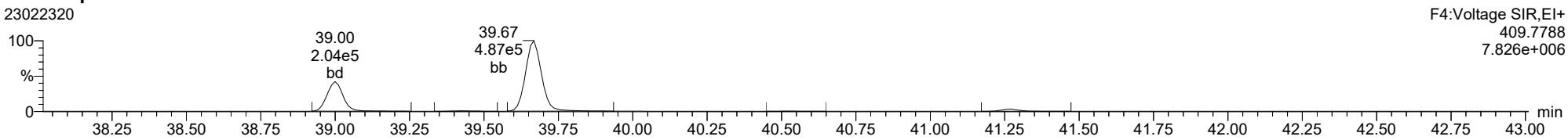


Total-heptafurans



PREPARATION BATCH SUMMARY

EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0261 Batch Matrix: Solid
Preparation: EPA 1613

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1089	23A0207-02	23022318	01/24/23 13:10	
LDW23-IT1097	23A0207-10	23022319	01/24/23 13:10	
LDW23-IT1209	23A0207-17	23022320	01/24/23 13:10	
Blank	BLA0261-BLK1	23022304	01/24/23 13:10	
LCS	BLA0261-BS1	23022401	01/24/23 13:10	
Reference	BLA0261-SRM1	23022306	01/24/23 13:10	

Analytical Resources, LLC
Analytical Chemists and Consultants

HRGCMS Dioxin/Furan Preparation Bench Sheet EPA Methods 8290A or 1613B

Batch: BLA0261

Solid Samples

ARI Work Orders: 23A0100,23A0133,23A0134,23A0207

Matrix (circle one)	(Soil)	Sediment	Oil Tissue
Extraction Method	Start Date/Time:	End Date/Time:	
(Soxhlet) SepF Shake out	1/24/23 13:10	1/25/23 0512	

Reagents/Equipment Used	NA	ID / Lot Number	Initials	Date
Glasswool		JQ12850	TW	1/26/23
Basic Silica		KQ02255	TW	1/26/23
Acid Silica		KQ11012	TW	1/26/23
Activated Florisil		KQ05756	TW	1/26/23
Balance		24650344	TW	1/24/23
Toluene		KQ11233	TW	1/24/23
Hexane		KQ08316	TW	1/25/23
CH2Cl2		KQ10561	TW	1/26/23
H2SO4		KQ09796	TW	1/25/23
Na2SO4		LQ00453	TW	1/24/23
Other (RM)		KQ11479	TW	1/24/23
0% Silica		KQ11054	TW	1/26/23
Nonane		HQ06038	TW	1/27/23

Lab Number & Container	Sample Name	% Solids	Sample Weight Equal to dry (g) (Target Dry)	Actual	RotoVap 45 °C	Water Trap Vol (mL)	Final Vol. (uL)
23A0100-09 C	LDW23-SS1226	55.33	(18.07)	18.08	(1)/2	6.5	20
23A0100-21 C	LDW23-SS1154	52.92	(18.90)	18.91	1/(2)	6.5	20
23A0133-06 B	LDW23-SC1241	48.97	(20.42)	20.44	(1)/2	7.0	20
23A0133-07 B	LDW23-IT1217	63.85	(15.66)	15.68	1/(2)	6.0	20
23A0133-10 B	LDW23-SC1215	54.04	(18.51)	18.53	(1)/2	7.0	20
23A0133-11 B	LDW23-SC1222	56.13	(17.82)	17.83	1/(2)	7.5	20
23A0134-06 B	LDW23-SS1160	46.51	(21.50)	21.52	(1)/2	10.0	20
23A0134-14 B	LDW23-IT1194	75.11	(13.31)	13.34	1/(2)	3.0	20
23A0207-02 B	LDW23-IT1089	80.6	(12.41)	12.41	(1)/2	2.0	20
23A0207-10 B	LDW23-IT1097	74.39	(13.44)	13.44	1/(2)	2.5	20
23A0207-17 B	LDW23-IT1209	64.48	(15.51)	15.52	(1)/2	5.5	20
BLA0261-BLK1	Blank	100	()	10.00	(1)/2	0.0	20
BLA0261-BS1	LCS	100	()	10.00	1/(2)	0.0	20
BLA0261-DUP1	Duplicate	55.33	(18.07)	18.08	(1)/2	6.5	20
BLA0261-SRM1	Reference	100	()	10.04	1/(2)	0.0	20
Prep Analyst / Date:				1/24/23 TW	1/25/23 TW	1/25/23 TW	

23A0100-09C

Standards Used	Vol	ID / Lot Number	Concentration	Expiration Date	Analyst	Witness	Date
Recovery Standard	1.0 mL	KQ11158	2/4 ng/mL	12/2/23	TW	M	1/24/23
OPR	1.0 mL	KQ06403	0.2/1.0/2.0 ng/mL	6/3/23	TW	M	1/24/23
~~QLS Standard~~	~~1.0 mL~~		~~0.1/0.05/0.1ng/mL ng/n~~				
Cleanu-up Standard	1.0 mL	KQ11157	0.8 ng/mL	12/2/23	TW	M	1/26/23

Verify Client ID

Analyst / Date: TW 1/24/23

Acid Clean (Y) N

Analyst / Date: TW 1/25/23

Silica-Florisil Clean (Y) N

Analyst / Date: TW 1/26/23

Supervisor Review By 2/3/23 Date

Printed: 1/18/2023 5:28:59AM

3083F

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TOTAL SOLIDS BENCHSHEET

Method HRSM01.2

(dry at 110 C)

Batch:	BLA0191
Date:	1/11/2023 5:17
Analyst:	TW
Drying Oven:	18
Analytical Balance:	24650344

Instrumentation

Batch drying time

Record times as mm/dd/yy hh:mm

Date/time in oven:	1/10/2023 12:03
Date/time out:	1/11/2023 5:17
Elapsed hrs:	17.2

Oven Temp, C 111

TS (%) calculated as:

Final dry wt (g) = (Dry Wt - Tare Wt)

TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)

Oven Temps, °C

Start Temp:	111
End Temp:	111

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0100-09	0.7800	11.1900	6.5400	5.76	**55.33%**	Yes
23A0100-21	0.8100	11.2600	6.3400	5.53	**52.92%**	Yes
23A0133-06	0.8200	11.4800	6.0400	5.22	**48.97%**	Yes
23A0133-07	0.8100	11.3500	7.5400	6.73	**63.85%**	No
23A0133-10	0.8100	11.7100	6.7000	5.89	**54.04%**	Yes
23A0133-11	0.8000	11.3300	6.7100	5.91	**56.13%**	Yes
23A0134-06	0.8100	11.5400	5.8000	4.99	**46.51%**	Yes
23A0134-14	0.7900	11.7600	9.0300	8.24	**75.11%**	Yes

TOTAL SOLIDS BENCHSHEET

Method HRSM01.2

(dry at 110 C)

Batch:	BLA0191
Date:	1/11/23 0517
Analyst:	TW
Drying Oven:	018
Analytical Balance:	24650344

Instrumentation

Batch drying time

Record times as mm/dd/yy hh:mm

			Oven Temp, C
Date/time in oven:	01/10/23	12:03	111
Date/time out:	1/11/23	~~0517~~ 1/11/23	111
Elapsed hrs:	0.0		

TS (%) calculated as:

Final dry wt (g) = (Dry Wt - Tare Wt)

TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)

Oven Temps, °C	
Start Temp:	111
End Temp:	111

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0100-09 C	0.78	11.19	6.54			~~No~~ Yes
23A0100-21 C	0.81	11.26	6.34			~~No~~ Yes
23A0133-06 B	0.82	11.48	6.64			~~No~~ Yes
23A0133-07	0.81	11.35	7.54			No
23A0133-10	0.81	11.71	6.76			~~No~~ Yes
23A0133-11	0.80	11.33	6.71			~~No~~ Yes
23A0134-06	0.81	11.54	≤ 80			~~No~~ Yes
23A0134-14	0.79	11.76	9.03			~~No~~ Yes

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: DIOXIN Extraction Batch ~~BLA0191~~ MI/7123

Total Solids Batch: BLA0191 Work Order(s): 23A0100, 133, 134

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☑ Standing Water Decanted (Not shared)= 100-9, 21, 133-06, 10, 11, 134-06, 14	TW 1/10/23
☐ Standing Water Homogenized (Shared samples)=	
☑ Clay/Clumps (Difficult to homogenize)= 100-9, 21, 133-06, 07, 10, 11, 134-06, 14	TW 1/10/23
☐ Rocks (%+size)?	
☑ Organics (Leaves/sticks/grass)= 100-9, 21, 134-06, 14 = roots, fine organics	TW 1/10/23
☑ Oily, obvious fuel/sulfur odors= 100-9, 21, 133-06, 10, 11, 134-06	TW 1/10/23
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

```
Injection Date  : 1/10/2023 4:40:07 PM          Seq. Line :  24
Sample Name     : CS4 STD                      Location : Vial 3
Acq. Operator   : TW                              Inj :   1
                                               Inj Volume : 1 µl

Sequence File   : C:\HPCHEM\2\SEQUENCE\011023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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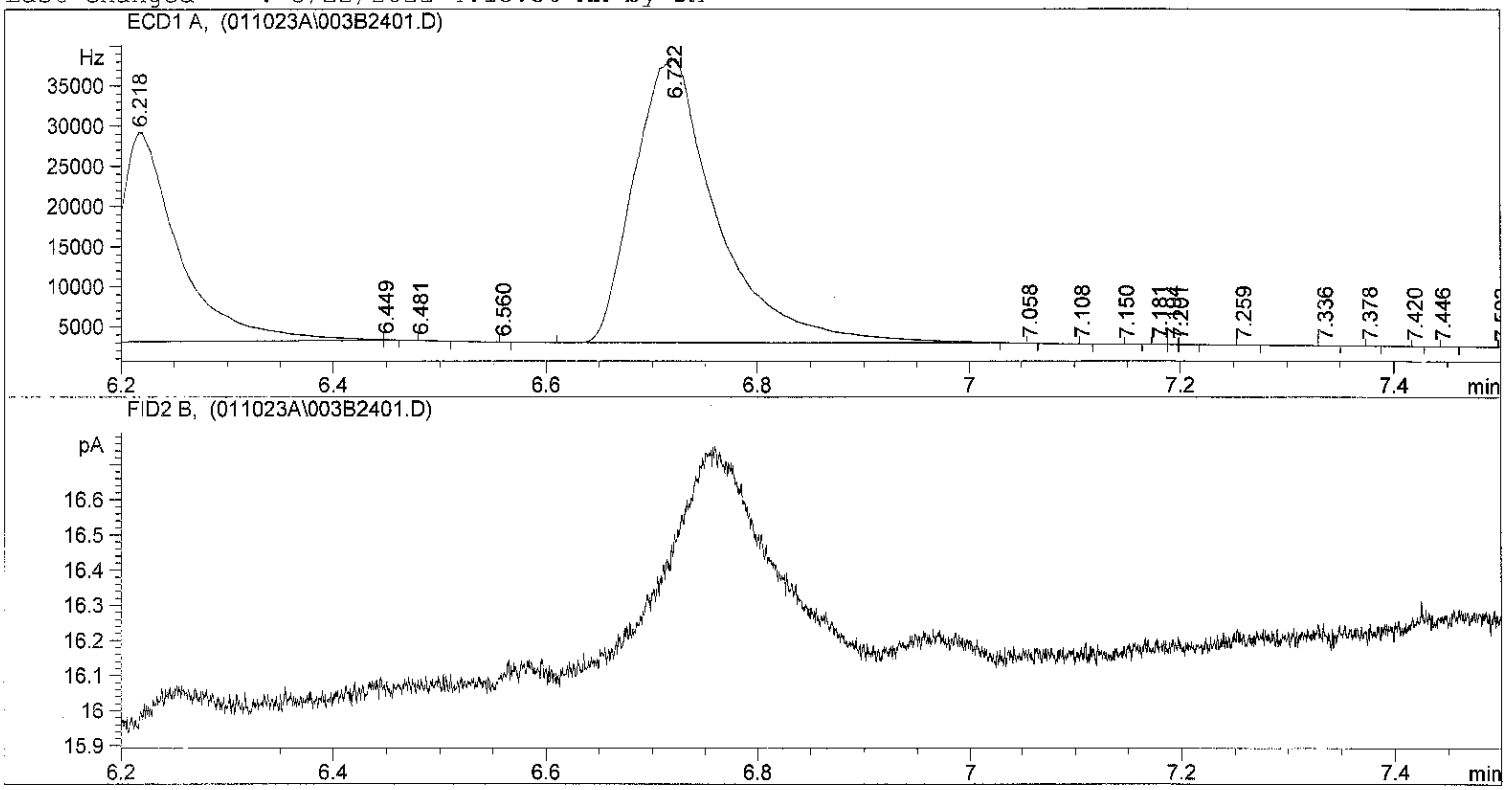

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.421	BP	0.0214	60.18620	33.77775	0.00409
2	5.532	VV S	0.0361	2.70709e5	1.02255e5	18.37671
3	5.628	VV S	0.0496	3.98342e5	1.33767e5	27.04087
4	5.690	VV S	0.0426	1.33533e5	5.22753e4	9.06473
5	5.745	VV S	0.0690	1.57568e5	3.80741e4	10.69628
6	5.985	VV S	0.0500	1.32034e5	4.40027e4	8.96293
7	6.140	VV S	0.0497	8.33965e4	2.79654e4	5.66125
8	6.218	VV S	0.0661	1.03474e5	2.60769e4	7.02420
9	6.449	VB S	6.46e-3	31.36730	80.95958	0.00213
10	6.481	BP	0.0132	20.37583	19.20737	0.00138
11	6.560	PB	3.76e-3	4.52826	16.71346	0.00031
12	6.722	PB S	0.0645	1.93644e5	3.53576e4	13.14523
13	7.058	PP	2.73e-3	2.51149	13.74796	0.00017
14	7.108	BP	4.18e-3	6.59377	21.50872	0.00045
15	7.150	PP	3.03e-3	3.70290	16.39653	0.00025
16	7.181	BP	5.11e-3	6.43688	19.23071	0.00044
17	7.194	VV	5.57e-3	7.11942	18.17810	0.00048

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	7.201	VP	6.94e-3	11.85726	22.51980	0.00080
19	7.259	PB	7.01e-3	3.54180	6.65123	0.00024
20	7.336	PB	0.0000	3.21669	1.35458e-1	0.00022
21	7.378	PB	2.66e-3	1.77213	10.04074	0.00012
22	7.420	BP	4.71e-3	3.31404	10.65795	0.00022
23	7.446	BP	3.87e-3	3.18037	11.34503	0.00022
24	7.502	BP	0.0000	6.46398e-1	3.55019	4.388e-5
25	7.539	BP	6.52e-3	3.48247	7.10520	0.00024
26	7.600	PP	1.88e-3	1.64885	14.97418	0.00011
27	7.612	VV	6.47e-3	6.67334	16.66188	0.00045
28	7.664	VP	0.0287	227.25983	94.45261	0.01543
Totals :				1.47311e6	4.60212e5	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

```
Injection Date  : 1/10/2023 5:13:27 PM          Seq. Line :  27
Sample Name     : 23A0100 09                    Location : Vial 20
Acq. Operator   : TW                               Inj :   1
                                                Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\011023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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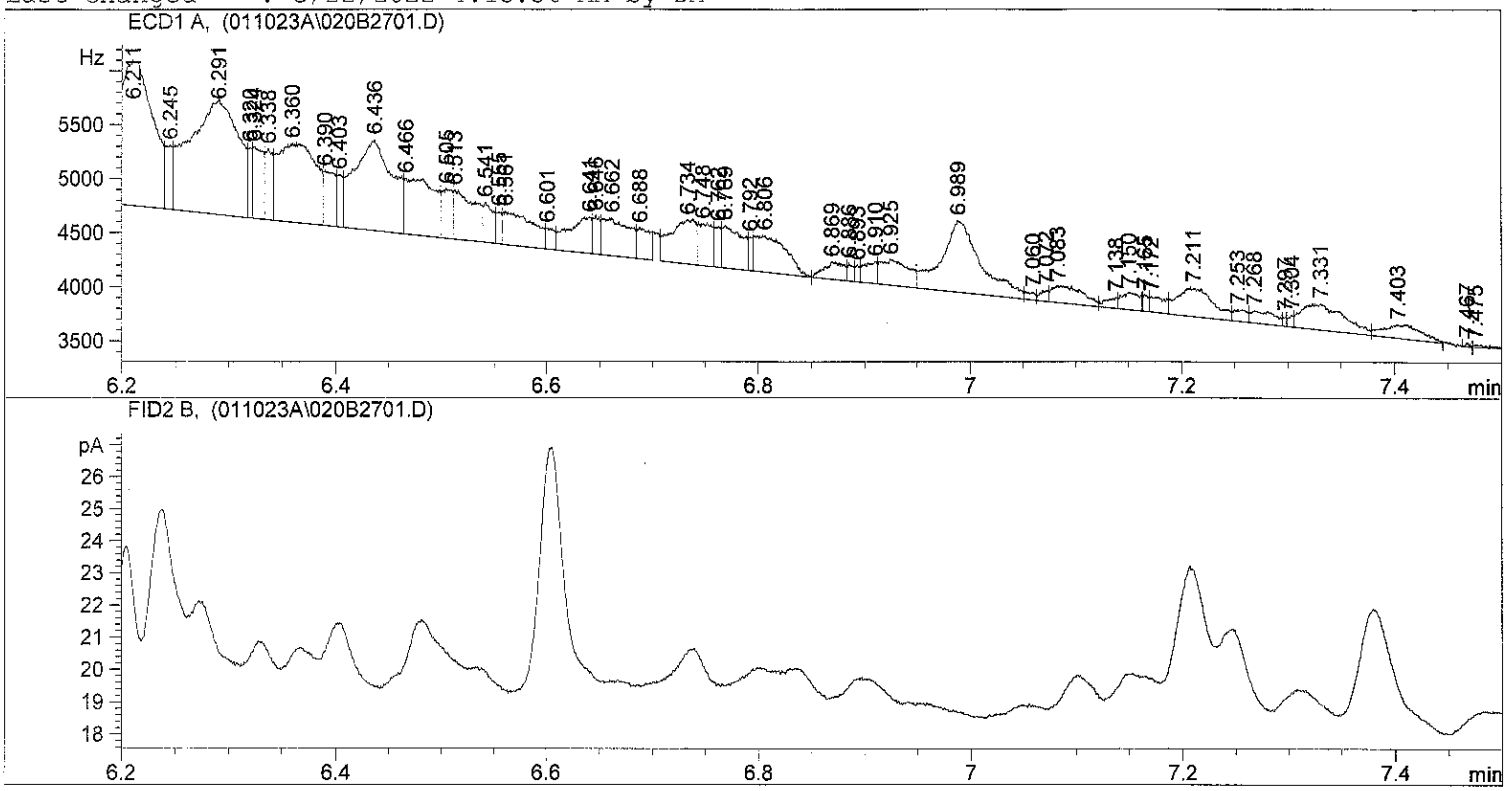

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.252	BV	0.0167	681.04175	487.32443	0.88730
2	5.261	VV	2.56e-3	88.70521	478.44360	0.11557
3	5.267	VV	0.0146	521.08209	461.81567	0.67890
4	5.298	VV	2.53e-3	13.47287	81.40771	0.01755
5	5.308	VV	0.0158	196.70804	150.98076	0.25628
6	5.340	VP	0.0108	94.06686	107.72036	0.12256
7	5.384	VV	0.0135	598.53204	541.84515	0.77980
8	5.410	VV	0.0241	1571.28320	801.19409	2.04716
9	5.449	VV	0.0200	2329.92676	1530.59985	3.03557
10	5.478	VV	0.0200	1847.49304	1172.36353	2.40703
11	5.514	VV	0.0273	2312.78223	1034.80603	3.01323
12	5.563	VV	3.08e-3	67.54485	317.52121	0.08800
13	5.587	VV	0.0130	822.40424	809.80719	1.07148
14	5.592	VV	6.25e-3	307.23917	818.93884	0.40029
15	5.600	VV	0.0124	801.43048	793.49200	1.04415
16	5.632	VV	0.0165	1255.04175	967.85748	1.63514
17	5.647	VV	0.0214	1717.62439	970.91089	2.23783

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.696	VV	0.0320	4848.03955	1836.49878	6.31632
19	5.759	VV	0.0245	4297.96045	2133.15820	5.59964
20	5.797	VV	0.0161	1344.94214	1055.25891	1.75227
21	5.817	VV	0.0234	3069.57666	1596.43762	3.99923
22	5.873	VV	0.0295	4865.64355	1961.88428	6.33926
23	5.911	VV	5.25e-3	395.38229	992.95477	0.51513
24	5.940	VV	0.0322	4005.26855	1480.89417	5.21831
25	5.972	VV	4.45e-3	391.97562	1130.10999	0.51069
26	5.983	VV	0.0102	944.49078	1199.73108	1.23054
27	6.010	VV	0.0239	2866.95020	1459.42529	3.73524
28	6.047	VV	0.0319	4593.51611	1702.87634	5.98471
29	6.088	VV	0.0126	903.66907	895.89905	1.17736
30	6.113	VV	8.59e-3	556.07532	812.20221	0.72449
31	6.118	VV	3.87e-3	228.79079	816.56281	0.29808
32	6.131	VV	0.0214	1488.48242	875.47430	1.93929
33	6.168	VV	0.0118	760.10773	803.76306	0.99031
34	6.174	VV	5.42e-3	319.94012	808.19312	0.41684
35	6.211	VV	0.0329	3767.90894	1352.02966	4.90906
36	6.245	VV	6.10e-3	280.49030	595.37469	0.36544
37	6.291	VV	0.0380	3384.92773	1060.92749	4.41009
38	6.320	VV	3.61e-3	155.73657	649.38007	0.20290
39	6.324	VV	8.65e-3	444.36484	660.38025	0.57895
40	6.338	VV	6.18e-3	312.99323	654.38605	0.40779
41	6.360	VV	0.0292	1770.55566	728.37500	2.30679
42	6.390	VV	9.32e-3	374.02289	500.61328	0.48730
43	6.403	VV	5.44e-3	192.59837	483.85846	0.25093
44	6.436	VV	0.0298	2101.85596	839.43127	2.73843
45	6.466	VV	0.0232	994.48676	513.22430	1.29568
46	6.505	VV	8.52e-3	316.14075	454.26230	0.41189
47	6.513	VB	0.0170	635.41992	450.68619	0.82786
48	6.541	BV	8.13e-3	244.37936	368.99796	0.31839
49	6.555	VV	4.65e-3	97.87543	296.58463	0.12752
50	6.561	VV	0.0341	625.73700	305.55957	0.81525
51	6.601	VV	6.96e-3	109.39624	194.67686	0.14253
52	6.641	VV	0.0179	488.19360	333.76514	0.63605
53	6.646	VV	7.54e-3	159.21011	351.75204	0.20743
54	6.662	VV	0.0225	613.07050	348.54056	0.79875
55	6.688	VB	0.0144	243.13919	282.13303	0.31678
56	6.734	BV	0.0205	693.62860	405.77200	0.90370
57	6.748	VV	0.0116	355.22034	384.80527	0.46280
58	6.762	VV	6.47e-3	146.10582	376.22815	0.19036
59	6.769	VV	0.0159	510.58475	389.53198	0.66522
60	6.792	VV	3.92e-3	82.98141	310.75638	0.10811
61	6.806	VP	0.0247	698.00122	337.89227	0.90940
62	6.869	VV	0.0160	205.54623	155.98642	0.26780
63	6.886	VV	4.93e-3	62.72736	161.46371	0.08173
64	6.893	VV	3.95e-3	43.46125	151.39304	0.05662
65	6.910	VV	0.0105	173.21948	205.16260	0.22568
66	6.925	VV	0.0221	436.24203	235.02486	0.56836
67	6.989	VV	0.0307	1711.47437	658.81812	2.22981
68	7.060	VV	8.61e-3	43.16754	66.21706	0.05624
69	7.072	VV	7.23e-3	52.80255	99.04352	0.06879
70	7.083	VV	0.0248	318.34476	152.32964	0.41476
71	7.138	VV	8.96e-3	73.50501	102.59936	0.09577
72	7.150	VV	0.0148	183.70160	155.28217	0.23934
73	7.165	VV	4.71e-3	52.88215	150.18152	0.06890
74	7.172	VB	0.0122	139.58995	140.10622	0.18187
75	7.211	BV	0.0300	617.22235	260.95901	0.80415
76	7.253	VV	0.0112	97.13154	107.07098	0.12655
77	7.268	VV	0.0199	181.16748	109.40671	0.23604
78	7.297	VV	3.38e-3	18.65541	84.32295	0.02431
79	7.304	VV	4.28e-3	35.15025	111.36844	0.04580
80	7.331	VV	0.0328	665.65851	239.92424	0.86726
81	7.403	VP	0.0307	312.34064	122.83429	0.40694
82	7.467	PP	3.43e-3	8.96816	36.91663	0.01168

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.475	VB	0.0109	21.34477	24.20552	0.02781
84	7.520	PV	3.27e-3	5.67376	26.81939	0.00739
85	7.526	VP	4.01e-3	7.14111	24.45399	0.00930
86	7.611	PV	9.78e-3	82.02930	106.59660	0.10687
87	7.626	VV	0.0213	247.40669	138.30247	0.32234
88	7.657	VB	5.14e-3	17.45796	44.82317	0.02275
89	7.699	BB	8.16e-3	15.09860	23.94218	0.01967
90	7.720	BP	4.94e-3	9.17297	23.59593	0.01195
91	7.726	VB	7.23e-3	9.66963	16.51853	0.01260
Totals :				7.67542e4	5.06539e4	

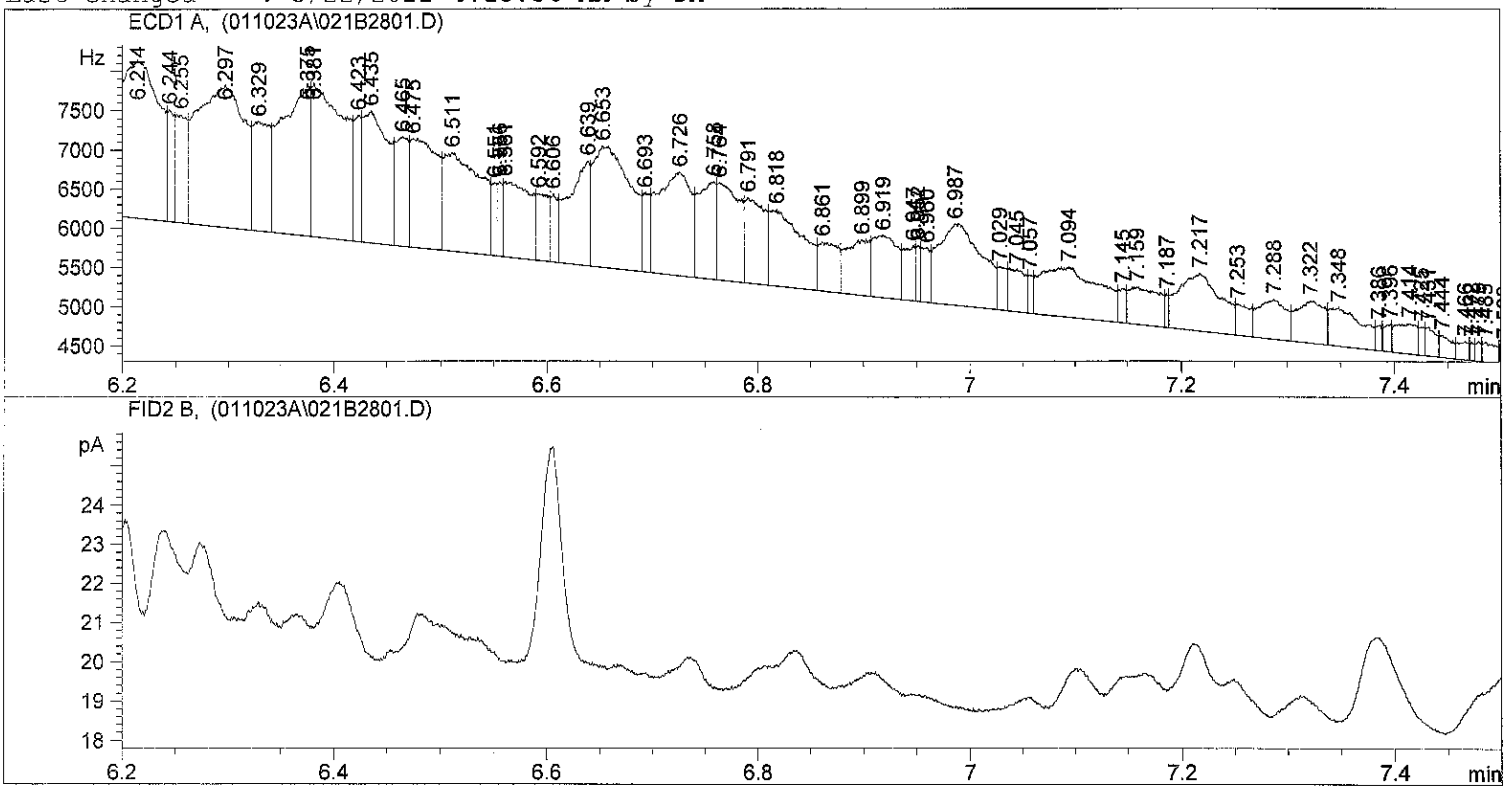
Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

Injection Date : 1/10/2023 5:24:27 PM Seq. Line : 28
Sample Name : 23A0100 21 Location : Vial 21
Acq. Operator : TW Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\2\SEQUENCE\011023A.S
Method : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed : 3/22/2022 4:13:36 AM by DM



Area Percent Report

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.238	BP	0.0222	1873.94849	1023.81146	1.16809
2	5.288	VV	3.95e-3	19.19676	63.13660	0.01197
3	5.296	VV	7.91e-3	86.04298	141.14536	0.05363
4	5.317	VP	9.59e-3	112.03368	152.12117	0.06983
5	5.345	VV	9.78e-3	114.70499	152.39954	0.07150
6	5.381	VV	0.0151	1232.81934	995.21521	0.76846
7	5.390	VV	4.82e-3	349.34677	964.95587	0.21776
8	5.400	VV	8.09e-3	693.33710	1079.49719	0.43218
9	5.408	VV	0.0131	1115.01050	1053.63757	0.69502
10	5.449	VV	0.0189	2422.72852	1525.24463	1.51017
11	5.481	VV	0.0189	2913.97070	1918.37378	1.81637
12	5.502	VV	3.13e-3	251.95189	1161.62146	0.15705
13	5.516	VV	0.0179	1959.67212	1352.76660	1.22153
14	5.539	VV	6.69e-3	329.30508	725.71710	0.20527
15	5.582	VV	0.0365	4752.43066	1545.66772	2.96235
16	5.629	VV	0.0314	5961.51416	2244.47461	3.71601
17	5.697	VV	0.0326	8780.02832	3201.89062	5.47288

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.758	VV	0.0281	5619.84277	2421.97974	3.50303
19	5.784	VV	6.49e-3	688.45410	1519.42773	0.42914
20	5.790	VV	8.60e-3	1000.09570	1495.74207	0.62339
21	5.821	VV	0.0274	5109.61768	2276.81567	3.18499
22	5.873	VV	0.0311	8019.85742	3044.55811	4.99904
23	5.905	VV	0.0130	1632.95251	2089.53662	1.01787
24	5.939	VV	0.0301	6268.51465	2477.22729	3.90737
25	5.988	VV	0.0216	4133.97754	2314.30933	2.57684
26	6.008	VV	0.0214	4316.89795	2421.58569	2.69086
27	6.039	VV	0.0300	5967.78271	2356.10742	3.71991
28	6.083	VV	9.44e-3	1305.86133	1722.46863	0.81399
29	6.087	VV	8.89e-3	922.69775	1729.13098	0.57515
30	6.100	VV	6.64e-3	876.61664	1813.30554	0.54642
31	6.113	VV	0.0316	5219.25293	1977.14124	3.25333
32	6.173	VV	0.0235	3096.48853	1636.68433	1.93014
33	6.187	VV	5.42e-3	637.15515	1607.51184	0.39716
34	6.214	VV	0.0313	5319.37500	2011.35535	3.31574
35	6.244	VV	6.06e-3	618.41577	1426.08020	0.38548
36	6.255	VV	9.48e-3	1048.75403	1377.87781	0.65372
37	6.297	VV	0.0366	5527.58789	1811.88660	3.44553
38	6.329	VV	0.0138	1552.09827	1392.34180	0.96747
39	6.375	VV	0.0222	3594.82666	1938.20715	2.24077
40	6.381	VV	0.0343	4014.51733	1951.26282	2.50238
41	6.423	VV	6.50e-3	756.05347	1604.36694	0.47127
42	6.435	VV	0.0203	2784.45972	1680.17590	1.73564
43	6.465	VV	0.0113	1198.83667	1387.90466	0.74727
44	6.475	VV	0.0207	2342.39624	1383.81445	1.46009
45	6.511	VV	0.0287	3026.01025	1257.35400	1.88621
46	6.551	VV	4.38e-3	300.25977	927.21338	0.18716
47	6.556	VV	4.91e-3	318.37289	949.10645	0.19845
48	6.561	VV	0.0205	1634.97510	960.47595	1.01913
49	6.592	VV	0.0104	688.93097	853.01038	0.42943
50	6.606	VV	6.00e-3	413.37646	861.76306	0.25767
51	6.639	VV	0.0169	1821.64490	1336.12585	1.13549
52	6.653	VV	0.0293	3805.98804	1545.25146	2.37240
53	6.693	VV	6.59e-3	496.98312	1001.11224	0.30979
54	6.726	VV	0.0260	2869.26880	1317.38000	1.78851
55	6.758	VV	0.0147	1448.13623	1251.60693	0.90267
56	6.764	VV	0.0169	1745.99573	1236.88794	1.08834
57	6.791	VV	0.0156	1396.86914	1088.06238	0.87071
58	6.818	VV	0.0272	2173.83618	975.48615	1.35502
59	6.861	VV	0.0157	775.09570	624.93512	0.48314
60	6.899	VV	0.0187	1077.43750	705.58179	0.67160
61	6.919	VV	0.0208	1282.38708	789.22302	0.79935
62	6.947	VV	9.19e-3	513.14740	696.68005	0.31986
63	6.952	VV	4.60e-3	232.76831	713.87085	0.14509
64	6.960	VV	7.16e-3	389.49902	692.25873	0.24279
65	6.987	VV	0.0343	2956.24951	1028.31250	1.84273
66	7.029	VB	7.33e-3	308.51691	551.51343	0.19231
67	7.045	BV	0.0136	600.00842	536.74084	0.37400
68	7.057	VV	4.63e-3	167.20189	483.55469	0.10422
69	7.094	VV	0.0455	2454.65234	634.93262	1.53006
70	7.145	VV	6.94e-3	222.59998	436.89816	0.13875
71	7.159	VV	0.0236	942.92187	473.32614	0.58775
72	7.187	VV	3.17e-3	100.52439	423.55707	0.06266
73	7.217	VV	0.0325	2001.69775	732.50909	1.24772
74	7.253	VV	0.0117	379.52219	397.50311	0.23657
75	7.288	VV	0.0213	906.55280	511.14642	0.56508
76	7.322	VV	0.0225	978.78406	541.30365	0.61011
77	7.348	VV	0.0260	1052.55322	494.45645	0.65609
78	7.386	VV	5.55e-3	118.98990	319.45078	0.07417
79	7.396	VV	6.77e-3	161.55260	350.98413	0.10070
80	7.414	VV	0.0171	532.12708	385.80386	0.33169
81	7.425	VV	4.51e-3	127.93536	363.13388	0.07975
82	7.431	VV	8.33e-3	244.62889	369.17621	0.15249

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.444	VV	0.0104	227.45105	276.14926	0.14178
84	7.466	VV	9.18e-3	170.74687	232.17390	0.10643
85	7.472	VV	3.89e-3	65.98145	234.24075	0.04113
86	7.479	VV	4.74e-3	89.73297	253.14749	0.05593
87	7.485	VB	0.0113	223.39510	248.71796	0.13925
88	7.503	BV	6.10e-3	105.84186	245.93547	0.06597
89	7.508	VV	0.0139	305.76898	267.43109	0.19060
90	7.530	VV	3.36e-3	52.63671	207.12512	0.03281
91	7.536	VP	0.0259	347.87799	223.62790	0.21684
92	7.627	VV	0.0431	1181.19812	324.59351	0.73628
93	7.696	VV	7.03e-3	47.87330	99.14868	0.02984
94	7.706	VV	7.64e-3	45.67104	99.63440	0.02847
95	7.722	VV	0.0212	216.90851	125.02407	0.13521
96	7.752	VV	3.60e-3	10.80337	45.02313	0.00673
97	7.759	VV	6.72e-3	35.78472	66.04220	0.02231
98	7.775	VV	7.83e-3	42.62664	91.62818	0.02657
99	7.779	VB	6.68e-3	48.25491	92.52290	0.03008

Totals : 1.60428e5 1.02120e5

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

```
Injection Date  : 1/10/2023 5:35:42 PM          Seq. Line :  29
Sample Name     : 23A0133 06                    Location : Vial 22
Acq. Operator   : TW                               Inj :   1
                                                Inj Volume : 1 µl

Sequence File   : C:\HPCHEM\2\SEQUENCE\011023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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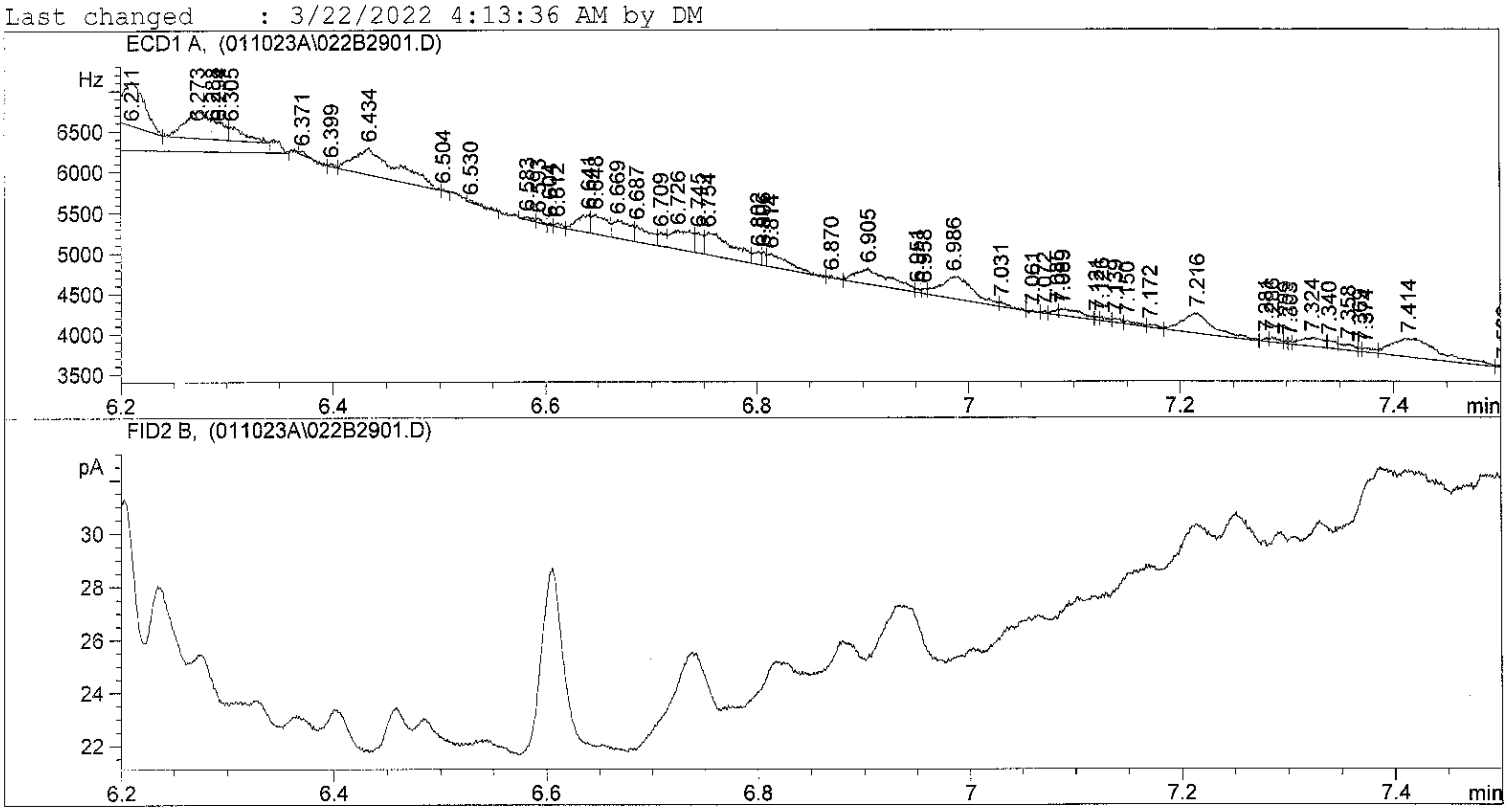

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.244	BV	0.0146	612.29938	568.81592	1.06309
2	5.255	VV	0.0150	635.57019	515.52716	1.10349
3	5.293	VV	0.0154	303.46655	238.82466	0.52688
4	5.326	VP	0.0165	1139.85547	895.18976	1.97904
5	5.383	VV	9.69e-3	591.63867	759.19122	1.02721
6	5.393	VV	0.0245	1551.59619	778.48651	2.69391
7	5.448	VV	0.0178	1338.01697	907.07227	2.32309
8	5.485	VV	0.0164	2023.24573	1496.30945	3.51280
9	5.516	VV	0.0188	1241.53259	803.53174	2.15557
10	5.594	VV	0.0257	1521.03027	724.02692	2.64084
11	5.634	VV	0.0170	919.46991	669.88330	1.59640
12	5.647	VV	5.86e-3	311.40720	665.01447	0.54067
13	5.652	VB	6.48e-3	335.54205	665.63159	0.58257
14	5.700	BV	0.0322	4075.17456	1555.57507	7.07540
15	5.729	VV	7.70e-3	507.87119	859.23499	0.88178
16	5.738	VV	4.77e-3	303.92957	850.64941	0.52769
17	5.761	VV	0.0238	2762.03174	1427.35840	4.79549

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.792	VV	9.72e-3	657.98810	823.71356	1.14241
19	5.819	VV	0.0231	2286.98438	1219.79089	3.97071
20	5.844	VV	5.17e-3	222.61830	717.10535	0.38651
21	5.849	VV	3.75e-3	198.91112	737.36340	0.34535
22	5.873	VV	0.0261	3366.83813	1562.38989	5.84557
23	5.905	VV	4.19e-3	242.08788	833.79419	0.42032
24	5.917	VV	9.35e-3	537.80713	853.31152	0.93375
25	5.955	VV S	0.0234	7517.47510	4524.56641	13.05198
26	6.062	VV S	0.0828	7769.44824	1564.17969	13.48946
27	6.112	VB S	0.0708	5877.33203	1384.21411	10.20434
28	6.149	BV T	5.48e-3	26.10163	62.44853	0.04532
29	6.162	VV T	0.0122	130.27094	132.97401	0.22618
30	6.178	VV T	0.0117	154.71031	160.03830	0.26861
31	6.211	VV T	0.0196	853.76392	548.02124	1.48232
32	6.273	PV T	0.0185	507.58777	342.93500	0.88128
33	6.288	PV T	4.82e-3	76.12974	263.38724	0.13218
34	6.294	PV T	9.59e-3	125.61470	218.28059	0.21809
35	6.305	PB T	0.0174	178.44576	170.44955	0.30982
36	6.371	BP	5.84e-3	15.04439	41.41626	0.02612
37	6.399	VV	4.43e-3	13.26947	38.40532	0.02304
38	6.434	VV	0.0324	921.47748	337.70844	1.59989
39	6.504	VP	3.18e-3	5.42450	24.55944	0.00942
40	6.530	PB	8.77e-3	15.77707	23.70165	0.02739
41	6.583	PV	7.14e-3	18.00468	35.36163	0.03126
42	6.593	VP	4.48e-3	17.41158	55.15138	0.03023
43	6.604	VV	2.74e-3	4.86604	29.20659	0.00845
44	6.612	VV	5.15e-3	20.06841	51.43213	0.03484
45	6.641	VV	0.0109	187.68631	221.22353	0.32586
46	6.648	VV	0.0131	235.79785	234.36105	0.40940
47	6.669	VV	0.0139	257.99216	225.67096	0.44793
48	6.687	VV	0.0115	191.66493	204.44031	0.33277
49	6.709	VV	6.32e-3	84.08810	171.37331	0.14600
50	6.726	VV	0.0170	330.53522	232.82910	0.57388
51	6.745	VV	6.22e-3	126.90698	254.32698	0.22034
52	6.754	VV	0.0228	522.90613	274.72330	0.90788
53	6.802	VV	6.22e-3	75.32269	156.40343	0.13078
54	6.806	VV	4.05e-3	46.71222	167.85699	0.08110
55	6.814	VB	0.0232	223.89308	160.99278	0.38873
56	6.870	BP	5.47e-3	8.77137	26.73923	0.01523
57	6.905	VV	0.0266	444.48401	199.53027	0.77172
58	6.951	VV	3.77e-3	14.21693	52.34454	0.02468
59	6.958	VV	4.55e-3	20.19215	62.75348	0.03506
60	6.986	VV	0.0251	576.63031	272.33908	1.00116
61	7.031	VP	7.07e-3	30.96366	59.52934	0.05376
62	7.061	BV	0.0000	5.67603e-1	14.11697	0.00099
63	7.072	VV	3.82e-3	6.64697	25.68062	0.01154
64	7.085	VV	6.08e-3	25.21995	72.10282	0.04379
65	7.089	VV	0.0174	121.47299	83.45010	0.21090
66	7.121	VV	4.37e-3	11.29449	39.09271	0.01961
67	7.126	VV	5.59e-3	23.50047	52.77926	0.04080
68	7.139	VV	6.61e-3	26.87504	52.14564	0.04666
69	7.150	VV	9.34e-3	34.80832	46.45424	0.06043
70	7.172	VP	0.0116	25.28228	36.28760	0.04390
71	7.216	VP	0.0237	497.23746	250.87393	0.86331
72	7.281	VV	3.99e-3	15.31032	49.71627	0.02658
73	7.286	VV	6.55e-3	32.71588	62.10408	0.05680
74	7.299	VV	2.32e-3	5.99487	40.72983	0.01041
75	7.303	VV	2.67e-3	6.30741	35.59186	0.01095
76	7.324	VV	0.0166	155.58310	111.90555	0.27013
77	7.340	VB	6.95e-3	54.51270	100.14571	0.09465
78	7.358	BV	0.0112	67.41943	74.20908	0.11705
79	7.369	VV	2.79e-3	8.43929	45.01439	0.01465
80	7.374	VV	9.22e-3	38.85703	53.81880	0.06746
81	7.414	VP	0.0371	723.65784	230.21101	1.25643
82	7.503	VV	8.39e-3	20.12090	31.76292	0.03493

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.518	VP	6.14e-3	12.07282	24.52885	0.02096
84	7.544	BV	1.58e-3	1.94280	23.06863	0.00337
85	7.580	VV	0.0234	239.70518	122.88408	0.41618
86	7.611	VV	2.86e-3	7.71628	36.61987	0.01340
87	7.625	VB	0.0172	101.58657	71.46624	0.17638
88	7.703	BP	6.73e-3	10.37789	25.71481	0.01802
89	7.733	PP	7.16e-3	7.29397	13.37346	0.01266
Totals :				5.75964e4	3.59395e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Height [pA]	Area %
1	5.318	BV	0.0345	56.86142	21.19361	55.58530
2	5.376	VP	0.0198	45.43437	31.91228	44.41470
Totals :				102.29579	53.10589	

Results obtained with enhanced integrator!

*** End of Report ***

```
Injection Date  : 1/10/2023 5:46:42 PM          Seq. Line :  30
Sample Name     : 23A0133 07                    Location : Vial 23
Acq. Operator   : TW                               Inj :   1
                                                Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\011023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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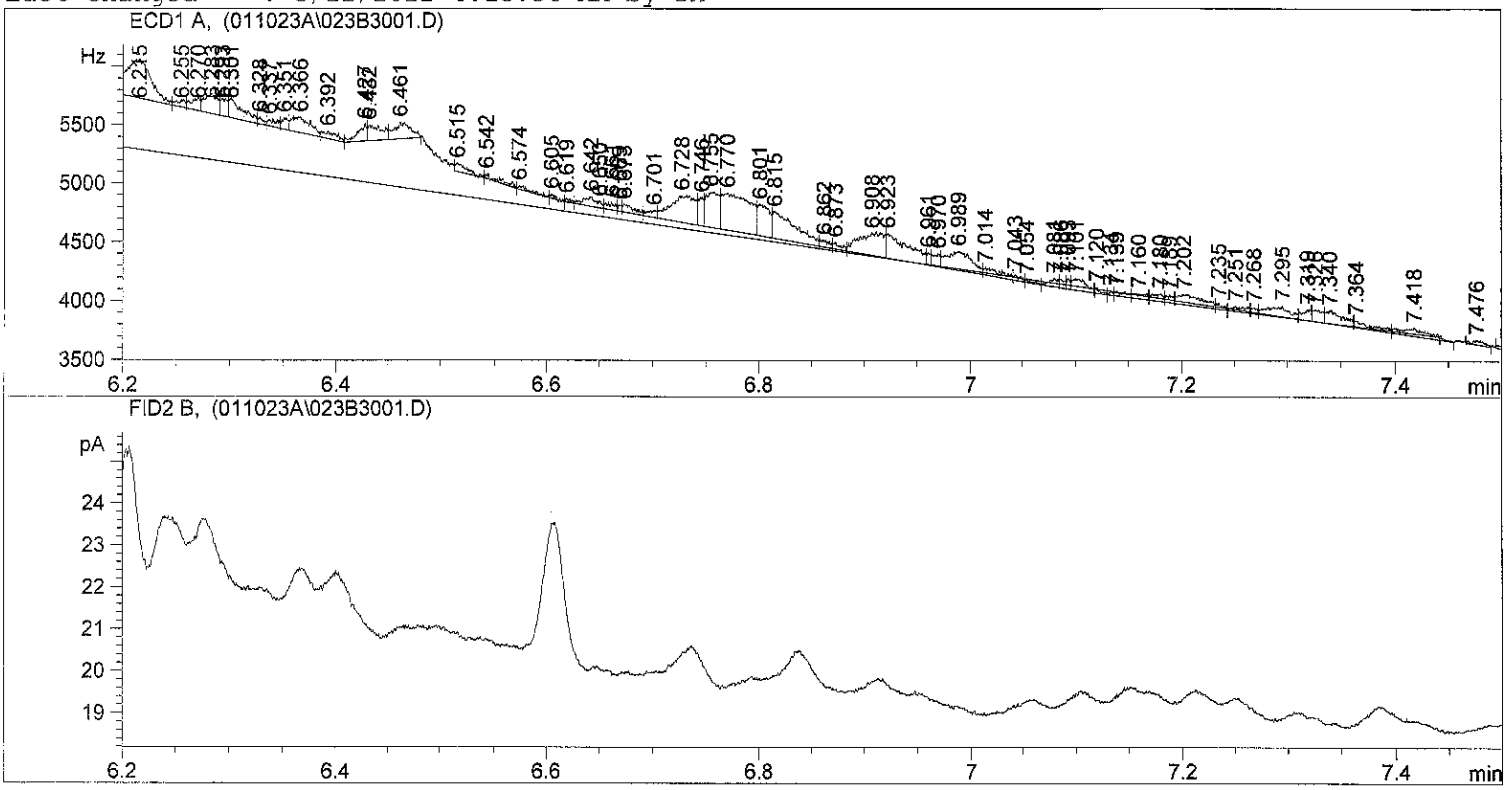

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.237	BV	7.62e-3	60.52505	100.65115	0.09271
2	5.251	VP	0.0126	168.16995	169.49529	0.25760
3	5.281	VV	3.33e-3	22.43650	89.39955	0.03437
4	5.301	VP	0.0184	451.20325	295.46307	0.69115
5	5.342	VV	5.95e-3	61.26715	133.53162	0.09385
6	5.380	VV	0.0195	3175.86084	2052.61377	4.86477
7	5.413	VV	0.0166	893.29773	696.15533	1.36835
8	5.447	VV	0.0177	1303.15930	887.27344	1.99617
9	5.480	VV S	0.0284	9908.49805	4621.61572	15.17778
10	5.518	BB T	9.47e-3	324.17050	436.07257	0.49656
11	5.571	BV T	0.0120	187.46783	213.96573	0.28716
12	5.582	PV T	7.53e-3	122.56742	206.25702	0.18775
13	5.598	PV T	0.0145	256.46640	214.50966	0.39285
14	5.631	PV T	0.0123	260.73203	259.42282	0.39939
15	5.637	VV T	7.54e-3	145.62337	244.92928	0.22307
16	5.649	PV T	6.57e-3	76.42119	193.98842	0.11706
17	5.654	VV T	5.77e-3	67.02200	193.65630	0.10266

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.698	VB S	0.1300	3.12397e4	2843.70435	47.85280
19	5.729	BV T	2.76e-3	9.50861	51.32150	0.01457
20	5.738	PV T	7.30e-3	93.11758	167.19565	0.14264
21	5.756	VV T	0.0170	599.83875	426.23233	0.91883
22	5.789	PV T	3.77e-3	20.17670	89.15858	0.03091
23	5.793	PV T	5.58e-3	29.98103	89.47176	0.04592
24	5.816	PV T	0.0129	277.61765	264.06155	0.42525
25	5.833	PV T	7.73e-3	98.06387	211.37704	0.15021
26	5.845	PV T	5.03e-3	62.68344	190.79144	0.09602
27	5.876	PV T	0.0190	1738.89990	1124.37976	2.66364
28	5.908	PV T	0.0135	423.88358	394.32553	0.64930
29	5.956	PV T	0.0290	2308.87866	963.15247	3.53673
30	5.974	VV T	0.0217	811.88043	623.32831	1.24363
31	6.009	PV T	0.0222	1161.98499	622.56720	1.77992
32	6.039	PV T	5.08e-3	150.81564	392.76163	0.23102
33	6.048	PV T	0.0245	867.81512	442.17014	1.32931
34	6.090	PV T	0.0153	208.23770	226.44887	0.31898
35	6.109	PV T	0.0197	400.25873	244.37082	0.61311
36	6.137	PV T	8.71e-3	99.51347	190.38301	0.15243
37	6.149	PV T	7.71e-3	71.25487	153.98352	0.10915
38	6.156	PV T	3.53e-3	40.51991	161.58812	0.06207
39	6.162	PV T	0.0118	209.47050	218.34335	0.32087
40	6.179	PV T	5.58e-3	62.61734	187.14285	0.09592
41	6.184	PV T	8.58e-3	100.68195	195.48441	0.15422
42	6.215	PV T	0.0209	589.59149	338.22562	0.90313
43	6.255	PV T	7.00e-3	33.37911	60.87574	0.05113
44	6.270	PV T	7.66e-3	60.08153	112.00895	0.09203
45	6.283	PV T	0.0104	144.34174	172.48317	0.22110
46	6.293	PV T	7.07e-3	62.01329	146.15459	0.09499
47	6.301	PV T	0.0152	148.50743	162.37361	0.22748
48	6.328	PV T	5.76e-3	19.24261	55.66401	0.02948
49	6.337	PV T	0.0112	36.39331	53.97169	0.05575
50	6.351	PV T	4.99e-3	38.21723	97.05670	0.05854
51	6.366	PV T	0.0154	162.06024	130.91086	0.24824
52	6.392	PV T	0.0144	55.04098	63.83871	0.08431
53	6.427	PV T	7.44e-3	83.82493	142.89787	0.12840
54	6.432	PV T	0.0152	120.89467	132.72334	0.18519
55	6.461	PB T	0.0138	155.59860	141.32208	0.23835
56	6.515	BV T	0.0125	51.53232	68.97178	0.07894
57	6.542	PV T	0.0161	35.74825	37.05116	0.05476
58	6.574	PV T	0.0124	22.02710	29.53053	0.03374
59	6.605	PV T	5.05e-3	9.83228	32.45513	0.01506
60	6.619	PV T	5.09e-3	9.38065	30.73148	0.01437
61	6.642	PV T	9.42e-3	58.10738	80.54819	0.08901
62	6.650	PV T	4.12e-3	13.08819	52.93780	0.02005
63	6.661	PV T	6.66e-3	33.64548	62.70876	0.05154
64	6.669	PV T	3.33e-3	10.97520	54.94667	0.01681
65	6.673	PV T	0.0132	52.05566	65.73598	0.07974
66	6.701	PV T	7.50e-3	34.45409	58.29053	0.05278
67	6.728	PV T	0.0200	361.93759	226.83083	0.55441
68	6.746	PV T	5.02e-3	86.92395	240.51088	0.13315
69	6.755	PV T	0.0106	257.38458	299.85144	0.39426
70	6.770	PV T	0.0231	595.54828	316.91217	0.91226
71	6.801	PV T	0.0133	212.44676	265.92966	0.32542
72	6.815	PV T	0.0262	353.26987	225.07777	0.54114
73	6.862	PV T	9.73e-3	34.09356	58.40981	0.05222
74	6.873	PV T	6.38e-3	26.78282	54.07108	0.04103
75	6.908	PV T	0.0214	319.68945	183.28177	0.48970
76	6.923	PV T	0.0250	310.82541	207.08769	0.47612
77	6.961	PV T	3.71e-3	25.68607	102.86993	0.03935
78	6.970	PV T	7.50e-3	49.31721	109.60079	0.07554
79	6.989	PV T	0.0196	261.14056	159.92982	0.40001
80	7.014	PV T	0.0218	76.46458	58.53350	0.11713
81	7.043	PV T	6.73e-3	19.36163	47.98312	0.02966
82	7.054	PV T	7.46e-3	11.65792	26.03885	0.01786

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.081	PV T	7.66e-3	40.32930	68.60429	0.06178
84	7.086	PV T	5.43e-3	24.26955	74.50557	0.03718
85	7.093	PV T	3.53e-3	18.04250	85.26215	0.02764
86	7.101	PV T	0.0159	90.30009	94.92358	0.13832
87	7.120	PV T	5.65e-3	15.30370	45.14074	0.02344
88	7.134	PV T	3.10e-3	7.36799	34.37783	0.01129
89	7.139	PV T	8.98e-3	28.55143	39.76492	0.04373
90	7.160	PV T	0.0103	35.70971	43.84323	0.05470
91	7.180	PV T	9.16e-3	42.36913	62.11914	0.06490
92	7.189	PV T	5.70e-3	27.71349	60.98224	0.04245
93	7.202	PV T	0.0210	144.16217	83.11406	0.22083
94	7.235	PV T	6.63e-3	20.44642	51.40030	0.03132
95	7.251	PV T	0.0157	38.25452	40.73576	0.05860
96	7.268	PV T	6.17e-3	18.59734	50.26978	0.02849
97	7.295	PV T	0.0162	128.37013	94.88189	0.19664
98	7.319	PV T	7.36e-3	52.75975	91.01861	0.08082
99	7.326	PV T	8.89e-3	66.54156	95.98929	0.10193
100	7.340	PV T	0.0183	116.31078	105.76897	0.17816
101	7.364	PV T	0.0155	46.49176	49.95780	0.07122
102	7.418	PB T	0.0165	62.17491	46.07780	0.09524
103	7.476	PB	0.0107	29.33693	37.50960	0.04494
104	7.506	BV	7.80e-3	28.09713	44.29510	0.04304
105	7.515	VV	5.34e-3	20.27016	49.91647	0.03105
106	7.526	VV	0.0171	85.57520	59.66505	0.13108
107	7.552	VB	7.00e-3	31.00447	56.51242	0.04749
108	7.639	PV	0.0290	251.91705	103.53011	0.38589
109	7.661	VV	0.0129	60.00706	77.65726	0.09192
110	7.677	VB	0.0115	68.36611	73.16644	0.10472
111	7.700	BP	7.29e-3	28.60193	51.38385	0.04381
112	7.712	VP	5.41e-3	11.32471	27.49092	0.01735
113	7.753	PB	4.18e-3	4.40393	17.57430	0.00675
114	7.782	BV	6.39e-3	13.62052	27.46167	0.02086
115	7.790	VBA	5.90e-3	11.46302	32.40670	0.01756
Totals :				6.52829e4	2.84274e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

```
Injection Date  : 1/10/2023 5:57:59 PM          Seq. Line :  31
Sample Name     : 23A0133 10                    Location : Vial 24
Acq. Operator   : TW                               Inj :  1
                                               Inj Volume : 1 µl

Sequence File   : C:\HPCHEM\2\SEQUENCE\011023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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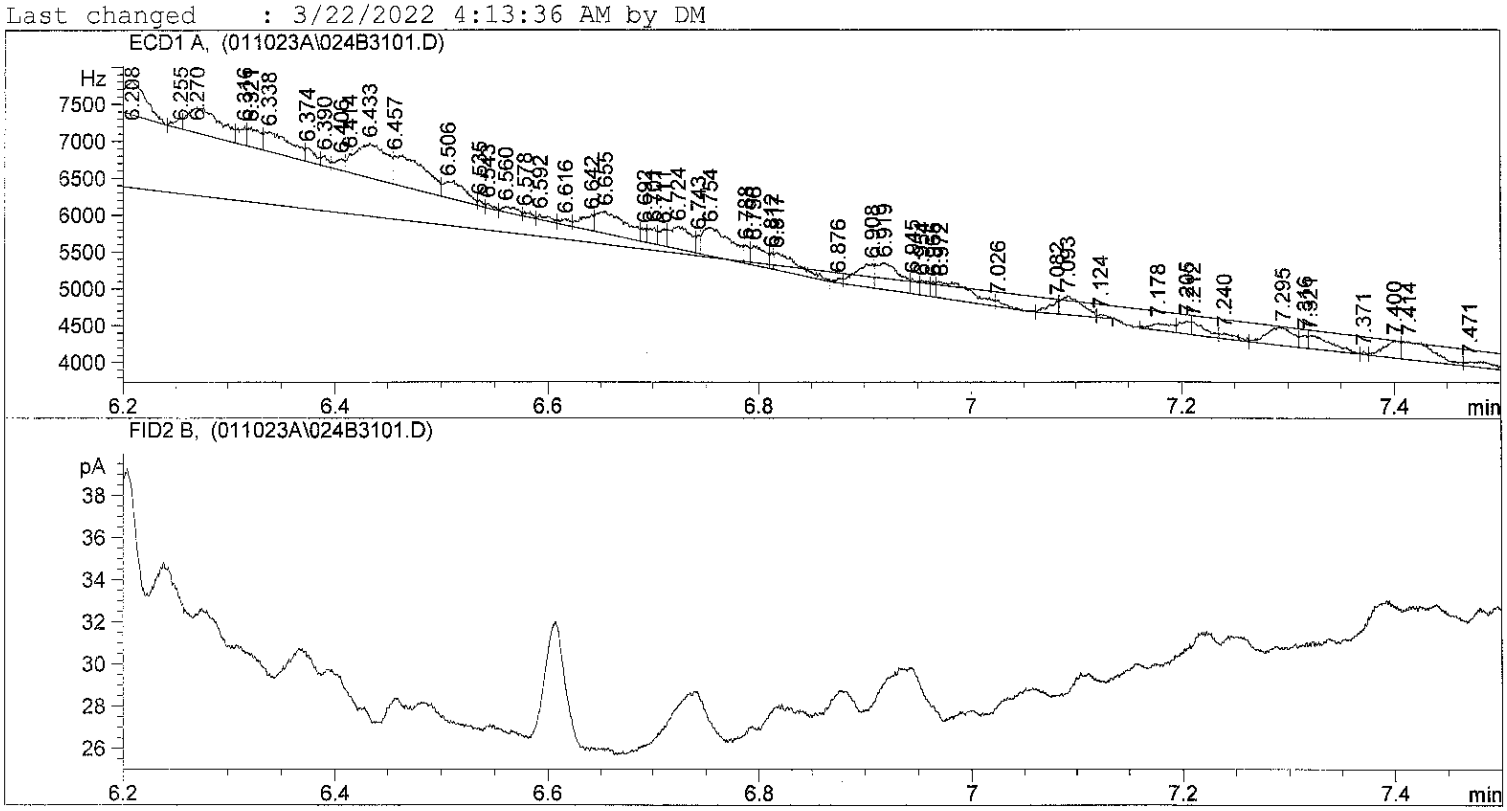

Area Percent Report

```
Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.202	BV S	0.0000	8521.00391	658.11603	6.32272
2	5.260	PV T	0.0131	553.09137	563.10364	0.41040
3	5.287	PV T	0.0161	938.62018	698.34790	0.69647
4	5.326	PV T	0.0154	738.75049	606.99664	0.54816
5	5.344	PV T	4.64e-3	20.32547	65.06798	0.01508
6	5.384	PV S	0.0229	1.35290e4	8342.24121	10.03877
7	5.415	BV T	9.44e-3	286.98816	396.90286	0.21295
8	5.449	PV T	0.0102	299.39288	372.83328	0.22215
9	5.485	PV S	0.0198	3.08669e4	2.27877e4	22.90375
10	5.519	BV T	0.0121	779.57916	1004.12549	0.57846
11	5.575	PV T	0.0141	213.60008	183.93614	0.15849
12	5.598	PV T	0.0181	552.46857	381.41422	0.40994
13	5.632	PV T	6.28e-3	81.35230	167.11098	0.06036
14	5.656	PV T	0.0115	294.54755	315.21719	0.21856
15	5.702	PV S	0.0313	1.94262e4	8433.10742	14.41453
16	5.731	BV T	3.02e-3	8.12703	44.84336	0.00603
17	5.749	PV T	9.11e-3	124.90369	184.20203	0.09268

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.771	PV T	0.0147	320.09189	294.85684	0.23751
19	5.791	PV T	5.71e-3	44.59769	98.02155	0.03309
20	5.801	PV T	6.64e-3	22.95658	57.65438	0.01703
21	5.819	PV T	0.0148	344.64243	290.64978	0.25573
22	5.851	PV T	4.53e-3	28.91170	81.77005	0.02145
23	5.878	PV S	0.0304	7378.87451	3257.67676	5.47525
24	5.910	BV T	7.40e-3	47.08858	80.82181	0.03494
25	5.957	PBAS	0.0694	3.19162e4	5620.94189	23.68236
26	5.991	BV T	5.20e-3	14.86493	41.29556	0.01103
27	6.000	PV T	2.76e-3	8.81095	53.26691	0.00654
28	6.004	PB T	5.20e-3	35.60543	98.95611	0.02642
29	6.042	BV T	7.27e-3	176.70619	318.58081	0.13112
30	6.062	PV T	0.0179	1193.07214	806.79163	0.88528
31	6.110	PV T	0.0149	1000.64124	807.61993	0.74249
32	6.140	PV T	7.05e-3	73.81334	174.46703	0.05477
33	6.151	PV T	5.02e-3	71.84731	198.82561	0.05331
34	6.155	PV T	5.75e-3	78.99754	229.16792	0.05862
35	6.164	PV T	0.0134	300.61337	270.42603	0.22306
36	6.185	PV T	3.32e-3	46.10256	197.71739	0.03421
37	6.189	PV T	6.30e-3	73.10487	193.48703	0.05425
38	6.208	PV T	0.0191	706.23425	454.67929	0.52404
39	6.255	PV T	6.68e-3	70.53098	139.95470	0.05234
40	6.270	PV T	0.0272	768.65472	344.78879	0.57035
41	6.316	PV T	7.87e-3	135.74365	252.66788	0.10072
42	6.321	PV T	0.0104	212.29465	264.17834	0.15753
43	6.338	PV T	0.0305	494.61008	270.54477	0.36701
44	6.374	PV T	0.0106	122.26417	192.50021	0.09072
45	6.390	PV T	6.63e-3	56.55354	142.14203	0.04196
46	6.406	PV T	7.94e-3	94.97431	159.61732	0.07047
47	6.414	PV T	4.28e-3	76.95046	257.90262	0.05710
48	6.433	PV T	0.0231	916.80261	472.00058	0.68028
49	6.457	PV T	0.0373	878.75891	392.58896	0.65205
50	6.506	PV T	0.0189	340.29462	219.67250	0.25250
51	6.535	PV T	5.69e-3	25.74959	75.41034	0.01911
52	6.543	PV T	6.94e-3	27.53024	66.14136	0.02043
53	6.560	PV T	0.0121	81.83069	83.37642	0.06072
54	6.578	PV T	6.56e-3	33.93367	64.25134	0.02518
55	6.592	PV T	0.0120	50.09398	69.71783	0.03717
56	6.616	PV T	7.93e-3	49.63623	78.98442	0.03683
57	6.642	PV T	0.0101	171.32834	214.69916	0.12713
58	6.655	PV T	0.0245	612.23663	304.36151	0.45429
59	6.692	PV T	5.62e-3	62.12588	184.10376	0.04610
60	6.701	PV T	6.99e-3	121.38299	221.72023	0.09007
61	6.711	PV T	6.27e-3	110.12238	235.04979	0.08171
62	6.724	PV T	0.0164	421.14044	311.10791	0.31249
63	6.743	PV T	3.66e-3	55.28650	251.61234	0.04102
64	6.754	PV T	0.0239	733.81848	384.32339	0.54451
65	6.788	PV T	6.26e-3	93.66893	249.35707	0.06950
66	6.796	PV T	0.0113	244.50093	265.83487	0.18142
67	6.812	PV T	3.86e-3	50.57629	218.47319	0.03753
68	6.817	PV T	0.0287	387.95523	225.53362	0.28787
69	6.876	PV T	6.62e-3	26.37236	63.78611	0.01957
70	6.908	PV T	0.0154	354.46805	322.81238	0.26302
71	6.919	PV T	0.0196	577.97333	362.39014	0.42887
72	6.945	PV T	7.92e-3	95.66992	201.35149	0.07099
73	6.954	PV T	9.77e-3	111.85142	190.83725	0.08300
74	6.965	PV T	4.35e-3	53.61713	205.35318	0.03978
75	6.972	PV T	0.0288	530.50073	219.65729	0.39364
76	7.026	PV T	9.07e-3	48.94696	89.92014	0.03632
77	7.082	PV T	8.62e-3	120.38598	175.07814	0.08933
78	7.093	PV T	0.0171	360.18167	263.92862	0.26726
79	7.124	PB T	9.77e-3	25.27410	43.09675	0.01875
80	7.178	BV T	0.0173	141.60271	97.88611	0.10507
81	7.205	PV T	8.90e-3	124.43013	174.81778	0.09233
82	7.212	PV T	0.0148	155.00696	174.22107	0.11502

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.240	PV T	0.0180	80.12846	74.24090	0.05946
84	7.295	PV T	0.0199	413.85318	247.71562	0.30709
85	7.316	PV T	6.20e-3	81.54340	169.86420	0.06051
86	7.321	PV T	0.0254	275.33096	180.57054	0.20430
87	7.371	PV T	2.89e-3	9.50028	44.53003	0.00705
88	7.400	PV T	0.0127	249.61143	236.65576	0.18522
89	7.414	PV T	0.0243	501.25180	247.24228	0.37194
90	7.471	PV T	0.0235	133.30510	67.78533	0.09891
91	7.513	PV T	0.0150	106.10216	87.20834	0.07873
92	7.553	PV T	7.70e-3	19.76770	42.79890	0.01467
93	7.581	PV T	0.0177	233.20416	161.31445	0.17304
94	7.595	PV T	9.76e-3	81.17523	138.55910	0.06023
95	7.634	PV T	0.0282	636.59747	267.36435	0.47237
96	7.659	PV T	8.73e-3	78.74953	150.30055	0.05843
97	7.670	PV T	8.14e-3	74.15862	111.77367	0.05503
98	7.694	PV T	0.0140	128.56975	115.08860	0.09540
99	7.707	PV T	0.0244	183.13712	124.87239	0.13589
100	7.732	PV T	0.0179	125.06499	116.31034	0.09280
101	7.785	PV T	2.70e-3	3.98525	22.11845	0.00296
102	7.794	PBAT	4.68e-3	6.58284	22.05867	0.00488
Totals :				1.34768e5	7.06591e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Height [pA]	Area %
1	5.378	PB	0.0158	29.82101	27.54385	1.000e2
Totals :				29.82101	27.54385	

Results obtained with enhanced integrator!

*** End of Report ***

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Injection Date  : 1/10/2023 6:08:59 PM          Seq. Line :  32
Sample Name     : 23A0133 11                    Location : Vial 25
Acq. Operator   : TW                               Inj :   1
                                                Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\011023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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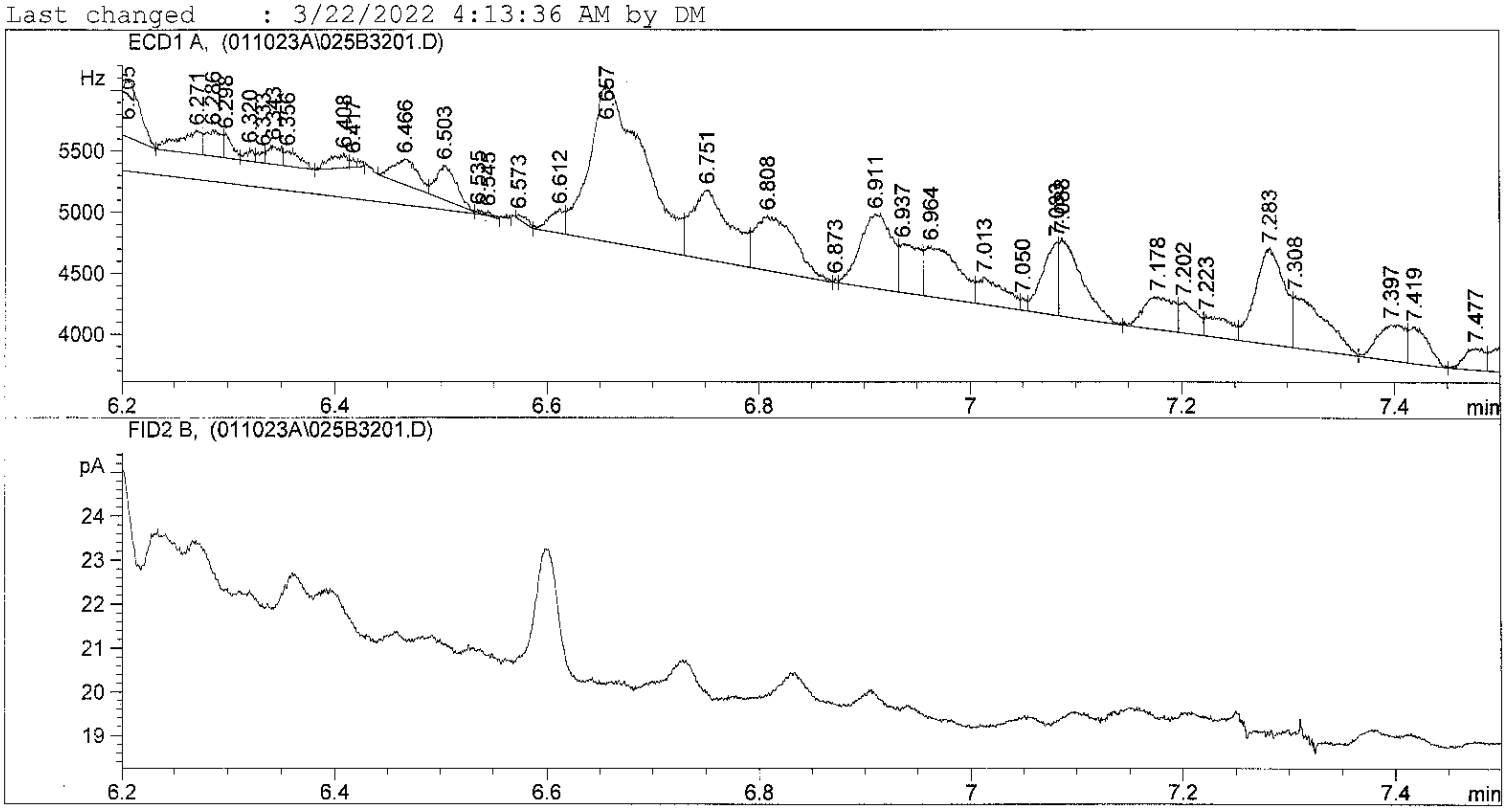

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
```

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.261	BV	0.0216	1336.92151	735.07190	1.47042
2	5.292	VV	3.09e-3	81.60104	382.37515	0.08975
3	5.307	VV	0.0213	900.52502	516.74805	0.99045
4	5.341	VV	0.0100	284.38058	367.71228	0.31278
5	5.379	VV	0.0198	2406.01392	1490.26331	2.64627
6	5.396	VV	7.68e-3	549.22144	904.82159	0.60406
7	5.437	VV	0.0248	6529.94238	3369.10937	7.18199
8	5.477	VV S	0.0218	9339.82715	5748.34619	10.27246
9	5.512	VV S	0.0711	7986.19434	1870.87317	8.78366
10	5.556	BV T	4.77e-3	20.73194	60.85885	0.02280
11	5.566	VV T	2.16e-3	4.77751	35.76314	0.00525
12	5.601	VV T	0.0244	1589.92358	785.61725	1.74869
13	5.695	VV T	0.0171	2124.98584	1617.96790	2.33718
14	5.727	VV T	3.29e-3	4.80031	24.32063	0.00528
15	5.756	VB S	0.0608	2.65285e4	5485.05322	29.17755
16	5.790	BV X	3.58e-3	13.39368	62.35421	0.01473
17	5.802	VV T	4.34e-3	18.45156	64.52848	0.02029

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.812	VV T	0.0136	229.03903	211.91388	0.25191
19	5.871	PV T	0.0188	1899.67676	1335.82825	2.08937
20	5.951	PV T	0.0242	1348.99597	673.56030	1.48370
21	6.004	VB T	0.0324	4154.62207	1522.84106	4.56949
22	6.087	BV T	4.60e-3	34.95192	101.95492	0.03844
23	6.105	PV T	0.0165	342.54099	248.18336	0.37675
24	6.122	PV T	0.0213	229.60019	179.93987	0.25253
25	6.157	PV T	0.0205	287.04810	167.94449	0.31571
26	6.205	PV T	0.0228	871.45923	454.69321	0.95848
27	6.271	PV T	0.0187	296.68707	191.67935	0.32631
28	6.286	PV T	0.0165	210.76595	213.16266	0.23181
29	6.298	PV T	9.50e-3	110.76598	194.30421	0.12183
30	6.320	PV T	6.20e-3	50.46003	101.45130	0.05550
31	6.333	PV T	6.28e-3	42.48829	93.80320	0.04673
32	6.343	PV T	0.0116	123.88230	151.04961	0.13625
33	6.356	PV T	0.0178	128.00243	119.69357	0.14078
34	6.408	PV T	0.0132	126.09591	114.88260	0.13869
35	6.417	PB T	9.75e-3	39.58123	67.64394	0.04353
36	6.466	BV T	0.0197	342.27368	211.51645	0.37645
37	6.503	PV T	0.0160	378.34201	282.96701	0.41612
38	6.535	PV T	6.07e-3	9.39928	21.02854	0.01034
39	6.545	PB T	7.38e-3	14.65515	33.09489	0.01612
40	6.573	BP	0.0105	32.39604	38.03336	0.03563
41	6.612	VV	0.0128	199.46332	193.60698	0.21938
42	6.657	VV	0.0418	4559.59326	1285.45935	5.01490
43	6.751	VV	0.0298	1437.36987	570.29089	1.58090
44	6.808	VP	0.0312	1181.11035	447.80786	1.29905
45	6.873	VV	2.70e-3	5.48909	30.43679	0.00604
46	6.911	VV	0.0251	1284.82935	607.31116	1.41313
47	6.937	VV	0.0160	538.36426	402.51291	0.59212
48	6.964	VV	0.0267	924.86255	413.64063	1.01722
49	7.013	VV	0.0229	404.32382	217.63084	0.44470
50	7.050	VV	5.41e-3	37.68169	96.83687	0.04144
51	7.083	VV	0.0132	615.35217	596.18799	0.67680
52	7.088	VP	0.0178	929.89337	637.48468	1.02275
53	7.178	VV	0.0239	540.55927	270.48981	0.59454
54	7.202	VV	0.0188	291.16306	258.79114	0.32024
55	7.223	VB	0.0284	281.53745	164.98097	0.30965
56	7.283	BV	0.0233	1503.37036	779.12512	1.65349
57	7.308	VV	0.0252	899.02551	425.84662	0.98880
58	7.397	VV	0.0217	531.66119	294.06073	0.58475
59	7.419	VP	0.0156	382.65991	300.93408	0.42087
60	7.477	VV	0.0181	238.64912	182.32680	0.26248
61	7.507	VV	0.0227	480.60263	251.89511	0.52859
62	7.545	VV	7.09e-3	24.74870	43.16238	0.02722
63	7.556	VV	3.79e-3	11.60878	46.28155	0.01277
64	7.563	VP	7.95e-3	28.58931	46.64909	0.03144
65	7.623	VV	0.0381	1874.20630	593.34808	2.06136
66	7.718	VV	0.0287	606.19086	250.29985	0.66672
67	7.754	VP	3.82e-3	5.89040	21.33632	0.00648
68	7.773	VV	5.79e-3	23.90085	51.73820	0.02629
69	7.779	VV	6.35e-3	25.17148	56.99943	0.02768
70	7.786	VB	6.70e-3	29.20069	55.82658	0.03212
Totals :				9.09210e4	3.98463e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

```
Injection Date  : 1/10/2023 6:19:42 PM          Seq. Line :  33
Sample Name     : 23A0134 06                    Location : Vial 26
Acq. Operator   : TW                               Inj :   1
                                                Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\011023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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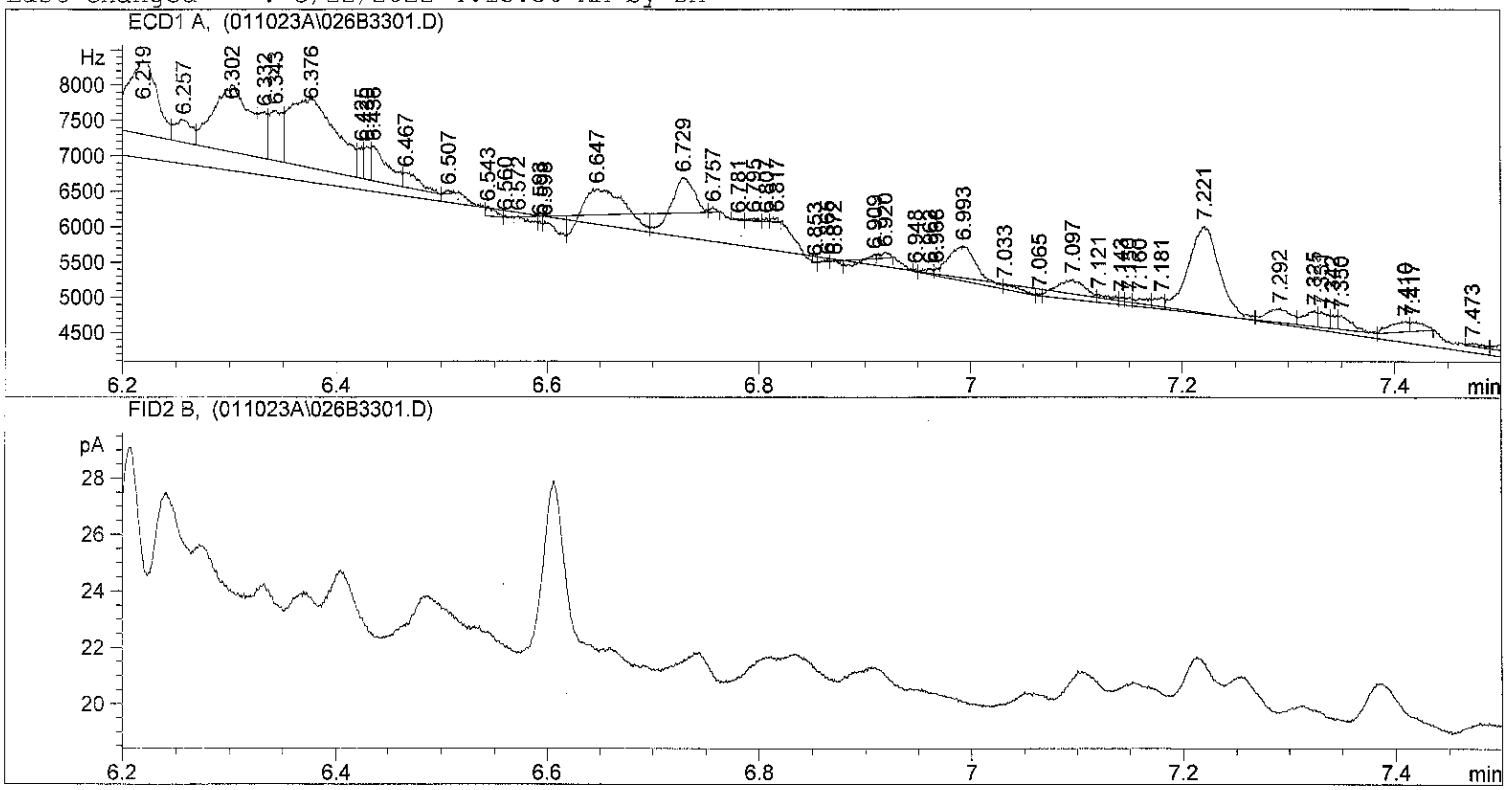

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
```

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.228	BV S	0.0491	2.11592e4	5221.05371	20.25181
2	5.299	PV T	5.61e-3	22.68953	55.08806	0.02172
3	5.311	PV T	3.54e-3	34.17997	145.42409	0.03271
4	5.315	PP T	0.0000	107.57045	158.54823	0.10296
5	5.347	PV T	0.6227	195.08470	3.66114	0.18672
6	5.389	PV T	0.0150	1562.15076	1364.87842	1.49516
7	5.405	PV T	0.0148	1511.73706	1277.21448	1.44691
8	5.448	PV T	9.96e-3	388.31091	517.39789	0.37166
9	5.493	PV T	0.0170	1560.74744	1108.03320	1.49382
10	5.515	PV T	0.0000	197.78839	499.50079	0.18931
11	5.584	PV T	0.0000	515.08350	244.15511	0.49300
12	5.591	PV T	0.0118	195.71399	277.02902	0.18732
13	5.630	PB S	0.0965	3.60504e4	4478.57275	34.50445
14	5.693	BV T	0.0238	3960.67187	2026.60986	3.79083
15	5.730	PV T	0.0106	177.12770	279.52185	0.16953
16	5.762	PV T	0.0184	1733.78137	1175.85120	1.65943
17	5.827	PV T	0.0184	1162.02942	763.39630	1.11220

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.874	PV T	0.0210	3243.50952	1854.75403	3.10442
19	5.910	PV T	0.0106	452.20389	540.82452	0.43281
20	5.922	PV T	5.68e-3	170.77803	501.42413	0.16345
21	5.940	PV T	0.0185	1210.33154	778.27240	1.15843
22	5.959	PV T	0.0163	744.23950	760.66553	0.71232
23	5.983	PV T	9.49e-3	555.09937	781.64478	0.53130
24	5.989	PV T	9.50e-3	470.13446	825.02313	0.44997
25	6.009	PV T	9.59e-3	729.74518	946.68372	0.69845
26	6.015	PV T	4.95e-3	397.34436	1019.05621	0.38031
27	6.040	PV T	0.0285	4425.88916	1863.32056	4.23610
28	6.091	PV T	6.73e-3	88.30241	218.80661	0.08452
29	6.116	PV T	0.0191	1251.51318	804.72388	1.19784
30	6.147	PV T	0.0198	765.16028	470.96353	0.73235
31	6.219	PV T	0.0250	2216.65088	1061.67334	2.12159
32	6.257	PV T	0.0148	365.12134	317.99316	0.34946
33	6.302	PV T	0.0278	2122.85791	937.25909	2.03182
34	6.332	PV T	7.80e-3	374.77606	662.16516	0.35870
35	6.343	PV T	0.0112	651.03040	713.20227	0.62311
36	6.376	PV T	0.0367	2987.66748	977.15826	2.85955
37	6.425	PV T	6.37e-3	170.57213	446.47556	0.16326
38	6.430	PV T	5.99e-3	196.35744	459.37012	0.18794
39	6.436	PV T	0.0184	536.35419	485.96899	0.51335
40	6.467	PV T	0.0183	224.87691	204.49385	0.21523
41	6.507	PB T	5.89e-3	20.75228	49.53226	0.01986
42	6.543	BV T	9.90e-3	74.82203	125.90578	0.07161
43	6.560	PV T	2.30e-3	2.13750	15.49012	0.00205
44	6.572	PV T	0.0000	59.22992	13.22085	0.05669
45	6.593	PV T	5.80e-3	24.49053	70.32876	0.02344
46	6.598	PV T	0.0523	238.45232	76.02994	0.22823
47	6.647	PV T	0.0162	489.26041	365.06934	0.46828
48	6.729	PV T	0.0116	445.74557	499.40939	0.42663
49	6.757	PB T	5.04e-3	24.40188	67.06898	0.02336
50	6.781	BV T	5.56e-3	7.60649	22.78533	0.00728
51	6.795	PV T	8.29e-3	19.60178	39.42309	0.01876
52	6.807	PV T	3.63e-3	10.73905	41.30555	0.01028
53	6.817	PB T	5.14e-3	24.22234	62.21202	0.02318
54	6.853	BV T	1.48e-3	1.33630	15.06412	0.00128
55	6.865	PV T	3.53e-3	4.76449	23.86197	0.00456
56	6.872	PV T	0.0000	9.01915	15.21343	0.00863
57	6.909	PV T	0.0000	47.47112	60.68282	0.04544
58	6.920	PB T	8.00e-3	46.96777	76.10533	0.04495
59	6.948	BV T	2.54e-3	5.65908	37.06041	0.00542
60	6.962	PV T	7.40e-3	45.75134	80.84416	0.04379
61	6.968	PV T	3.81e-3	29.49934	107.19189	0.02823
62	6.993	PV T	0.0229	903.56525	493.79843	0.86482
63	7.033	PV T	0.0180	75.04240	69.29934	0.07182
64	7.065	PV T	3.41e-3	7.04340	34.39769	0.00674
65	7.097	PV T	0.0237	541.60626	281.24701	0.51838
66	7.121	PV T	0.0181	122.04520	112.63263	0.11681
67	7.143	PV T	4.69e-3	29.75797	105.68455	0.02848
68	7.150	PV T	4.91e-3	43.11105	116.78288	0.04126
69	7.160	PV T	0.0117	114.44446	124.50150	0.10954
70	7.181	PV T	9.16e-3	111.47330	163.32953	0.10669
71	7.221	PV T	0.0242	2520.43530	1246.53809	2.41235
72	7.292	PV T	0.0191	308.87128	197.15616	0.29563
73	7.325	PV T	0.0107	192.33154	222.70224	0.18408
74	7.331	PV T	9.82e-3	132.42430	224.69366	0.12675
75	7.342	PV T	6.91e-3	81.04735	195.45763	0.07757
76	7.350	PV T	0.0143	170.73369	199.48566	0.16341
77	7.410	PV T	0.0163	185.96838	140.20345	0.17799
78	7.417	PB T	0.0135	115.72649	142.99974	0.11076
79	7.473	BV T	0.0115	44.09354	46.23389	0.04220
80	7.519	PB T	0.0277	300.91327	134.44070	0.28801
81	7.629	BV	0.0161	440.41904	343.95349	0.42153
82	7.635	VV	9.06e-3	226.50308	336.14392	0.21679

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.647	VV	0.0124	287.66403	284.29523	0.27533
84	7.669	VB	0.0166	229.63559	171.25723	0.21979
85	7.707	BV	6.20e-3	18.31117	49.20847	0.01753
86	7.725	VP	0.0133	41.12469	39.64447	0.03936
87	7.778	VBA	0.0231	719.43970	386.94943	0.68859
Totals :				1.04480e5	4.49547e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

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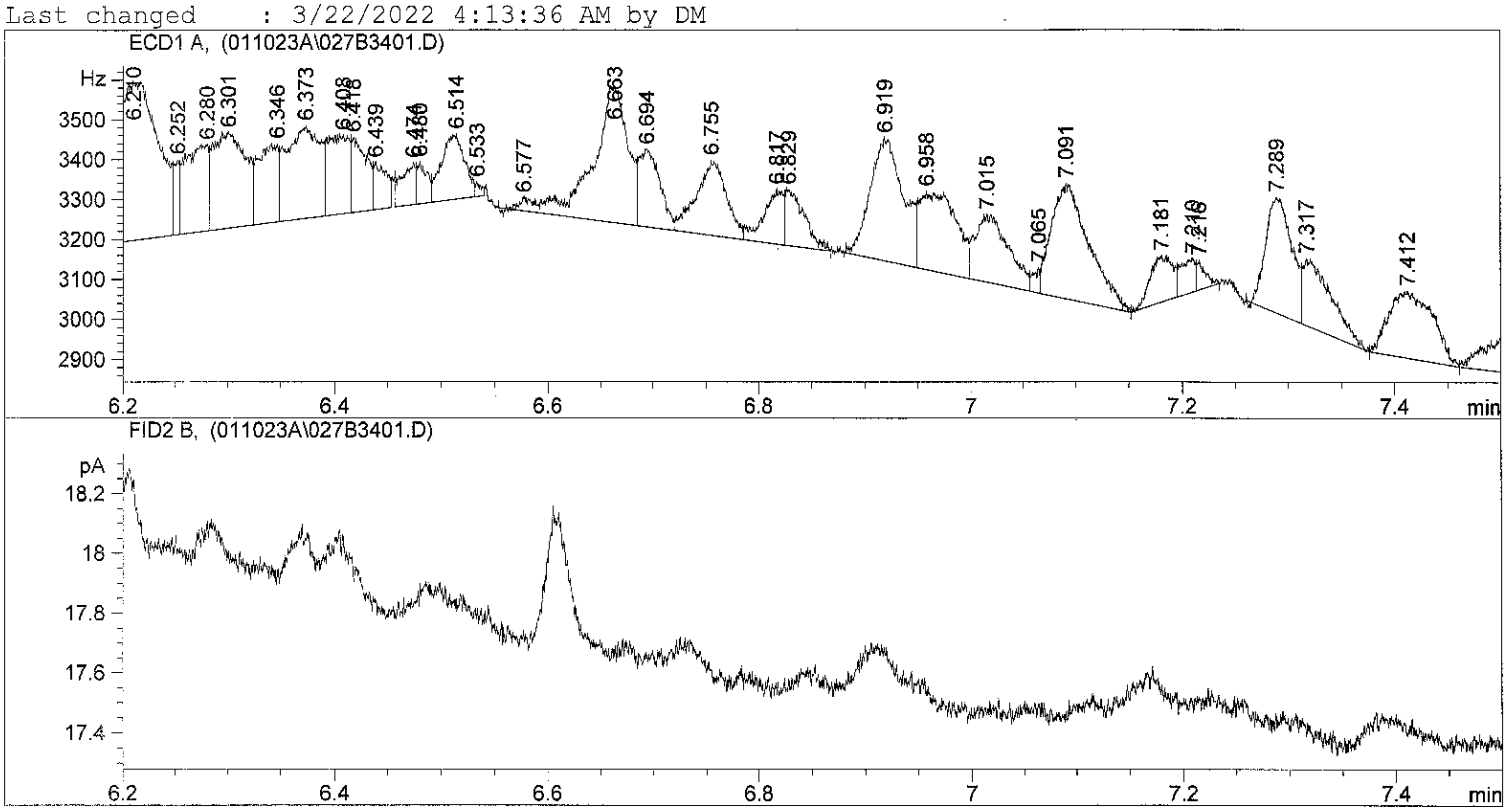
*** End of Report ***

Injection Date : 1/10/2023 6:31:52 PM Seq. Line : 34
Sample Name : 23A0134 14 Location : Vial 27
Acq. Operator : TW Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\2\SEQUENCE\011023A.S
Method : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed : 3/22/2022 4:13:36 AM by DM



Area Percent Report

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.229	BB	3.47e-3	3.07419	14.51647	0.00991
2	5.278	PV	0.0150	161.77228	131.00050	0.52125
3	5.282	VB	8.92e-3	68.90590	128.79027	0.22202
4	5.295	BV	8.00e-3	75.07994	121.72447	0.24192
5	5.333	VV	0.0288	294.23926	123.69019	0.94807
6	5.346	VV	4.44e-3	34.52481	110.52535	0.11124
7	5.383	VV	0.0265	627.03131	291.72308	2.02036
8	5.419	VV	0.0243	393.22125	198.95546	1.26700
9	5.485	VV	0.0293	1390.13293	576.35162	4.47915
10	5.517	VV	0.0235	605.03247	308.12732	1.94948
11	5.552	VV	0.0137	247.43813	223.28055	0.79727
12	5.602	VV	0.0301	648.08313	259.41418	2.08819
13	5.657	VV	0.0331	1407.92615	505.63867	4.53648
14	5.702	VV	0.0324	1514.04175	559.58801	4.87840
15	5.762	VV	0.0251	1811.06604	890.66693	5.83544
16	5.799	VV	8.89e-3	279.79590	393.74881	0.90153
17	5.808	VV	5.79e-3	188.32840	423.17780	0.60681

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.822	VV	0.0118	432.68564	452.29379	1.39416
19	5.828	VV	4.07e-3	121.77089	433.85043	0.39236
20	5.837	VV	6.96e-3	220.50105	431.31256	0.71048
21	5.852	VV	9.94e-3	382.41901	477.90097	1.23219
22	5.875	VV	0.0238	1078.23999	551.66187	3.47420
23	5.902	VV	9.97e-3	391.01505	497.51471	1.25989
24	5.906	VV	0.0123	491.44180	496.59726	1.58348
25	5.924	VV	5.23e-3	145.28998	420.38562	0.46814
26	5.957	VV	0.0221	889.88544	495.60803	2.86730
27	5.967	VV	0.0102	413.78207	504.46637	1.33325
28	5.977	VV	5.02e-3	149.91061	498.20679	0.48303
29	5.988	VV	9.17e-3	358.22107	524.53625	1.15422
30	5.994	VV	4.39e-3	169.35416	521.38983	0.54568
31	6.002	VV	6.50e-3	242.88931	515.15900	0.78261
32	6.012	VV	0.0147	653.23767	532.12512	2.10480
33	6.028	VB	8.29e-3	307.30798	491.72269	0.99018
34	6.041	BV	5.58e-3	214.91748	503.30139	0.69249
35	6.052	VV	0.0287	1184.98254	513.80450	3.81813
36	6.088	VV	3.65e-3	116.19648	417.04987	0.37440
37	6.093	VV	0.0126	433.06265	421.62866	1.39537
38	6.116	VV	7.12e-3	216.54976	387.46390	0.69775
39	6.137	VV	0.0275	946.08606	440.03351	3.04839
40	6.164	VV	0.0151	445.11194	391.56046	1.43420
41	6.180	VV	5.82e-3	150.10031	348.79605	0.48364
42	6.187	VV	3.46e-3	84.28869	343.45963	0.27159
43	6.210	VV	0.0328	1088.64807	399.84866	3.50774
44	6.252	VV	4.95e-3	69.81255	187.12798	0.22494
45	6.280	VV	0.0190	336.14246	215.18098	1.08309
46	6.301	VV	0.0259	511.20987	238.05656	1.64717
47	6.346	VV	0.0161	260.36612	195.39104	0.83893
48	6.373	VV	0.0258	499.14862	231.46349	1.60831
49	6.408	VV	0.0168	271.57849	195.60472	0.87505
50	6.428	VV	0.0124	188.57491	187.08542	0.60761
51	6.439	VB	0.0104	95.90443	116.92256	0.30901
52	6.474	BV	0.0116	98.68539	104.28423	0.31797
53	6.480	VB	7.91e-3	65.41029	104.39767	0.21076
54	6.514	BV	0.0191	247.67200	163.00961	0.79802
55	6.533	VB	4.81e-3	12.96668	35.89327	0.04178
56	6.577	PV	0.0108	28.45155	32.44989	0.09167
57	6.663	VV	0.0290	780.63763	339.54977	2.51529
58	6.694	VV	0.0171	270.02670	193.05754	0.87005
59	6.755	VV	0.0249	373.95773	186.97466	1.20493
60	6.817	VV	0.0159	173.95636	136.01123	0.56051
61	6.829	VP	0.0153	175.47621	139.41750	0.56540
62	6.919	BV	0.0256	663.36298	306.93195	2.13742
63	6.958	VV	0.0293	482.42606	194.65158	1.55443
64	7.015	VV	0.0262	372.59705	168.17921	1.20055
65	7.065	VV	5.69e-3	27.56389	63.22916	0.08881
66	7.091	VP	0.0304	710.91248	287.65945	2.29063
67	7.181	VV	0.0176	169.15604	114.97651	0.54504
68	7.210	VV	0.0124	82.82612	81.98586	0.26687
69	7.216	VB	7.20e-3	40.69283	71.95134	0.13112
70	7.289	PV	0.0210	503.09280	287.82770	1.62102
71	7.317	VP	0.0226	315.77863	165.74341	1.01747
72	7.412	VP	0.0341	476.03589	165.88821	1.53384
73	7.512	VV	0.0303	315.01624	123.86129	1.01501
74	7.548	VV	5.89e-3	13.14349	31.34298	0.04235
75	7.569	VV	8.82e-3	30.88825	43.84755	0.09953
76	7.574	VV	4.08e-3	12.31449	47.29460	0.03968
77	7.634	VV	0.0420	1020.03571	286.06885	3.28666
78	7.721	VP	0.0263	231.50536	106.62041	0.74593
79	7.786	VV	0.0116	25.56510	27.10668	0.08237
80	7.793	VP	3.55e-3	5.15719	20.37687	0.01662
Totals :				3.10356e4	2.28700e4	

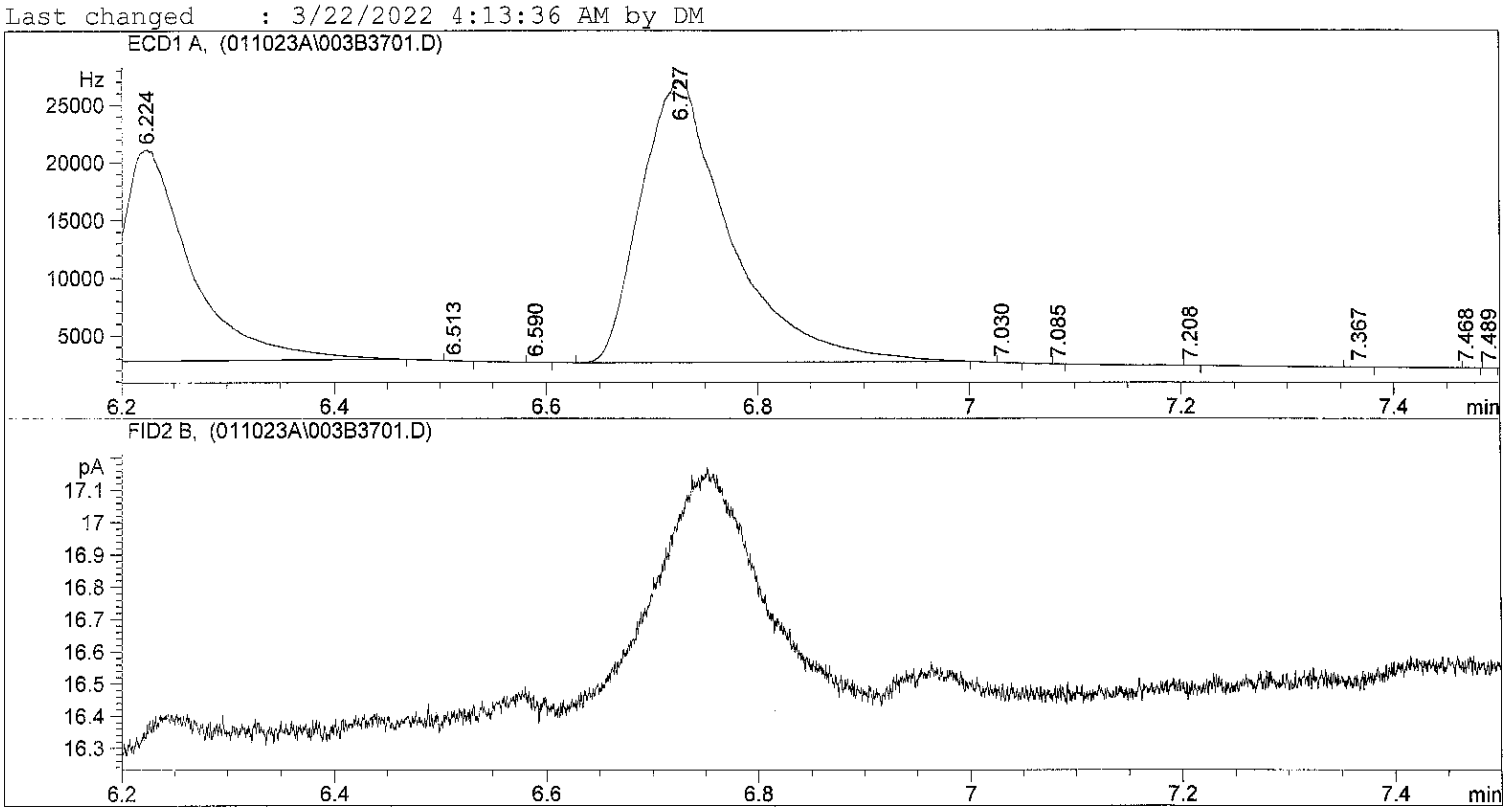
Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

Injection Date : 1/10/2023 7:05:35 PM Seq. Line : 37
Sample Name : CS4 STD Location : Vial 3
Acq. Operator : TW Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\2\SEQUENCE\011023A.S
Method : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed : 3/22/2022 4:13:36 AM by DM



Area Percent Report

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.467	PP	0.0000	7.01997e-1	7.63667	5.633e-5
2	5.535	VV S	0.0377	2.37360e5	8.74061e4	19.04476
3	5.631	VV S	0.0521	3.46041e5	1.10596e5	27.76491
4	5.691	VV S	0.0455	1.20826e5	4.42671e4	9.69457
5	5.750	VV S	0.0724	1.37677e5	3.16967e4	11.04664
6	5.986	VV S	0.0542	1.10833e5	3.40515e4	8.89277
7	6.142	VV S	0.0528	6.68054e4	2.10905e4	5.36019
8	6.224	VB S	0.0762	8.37530e4	1.83260e4	6.71999
9	6.513	PP	0.0000	2.13323e-1	3.15643	1.712e-5
10	6.590	PP	9.04e-3	16.86399	24.46356	0.00135
11	6.727	PB S	0.0701	1.42830e5	2.44125e4	11.46009
12	7.030	PP	0.0108	13.49655	15.38340	0.00108
13	7.085	PB	4.16e-3	3.05957	12.26168	0.00025
14	7.208	PB	6.98e-3	5.75799	11.61666	0.00046
15	7.367	BP	8.46e-3	13.77203	19.92431	0.00111
16	7.468	PB	3.15e-3	2.79147	12.77946	0.00022
17	7.489	BP	3.95e-3	2.26348	9.60899	0.00018

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	7.538	PP	0.0000	8.74833e-1	4.55805	7.019e-5
19	7.619	PP	3.79e-3	2.38221	8.20597	0.00019
20	7.660	BB	0.0229	94.50393	48.89766	0.00758
21	7.694	BB	7.43e-3	12.95466	22.13354	0.00104
22	7.720	BB	0.0101	10.53837	12.97600	0.00085
23	7.755	BP	5.29e-3	5.50425	14.96309	0.00044
24	7.762	VV	2.10e-3	2.21606	15.19379	0.00018
25	7.769	VBA	0.0118	12.31639	12.87944	0.00099

Totals : 1.24633e6 3.72103e5

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

23A0207 CLP_LIKE (Rev3) - Page 1946 of 3315

```
Injection Date  : 1/16/2023 2:54:15 PM          Seq. Line :   3
Sample Name     : CS4 STANDARD                   Location : Vial 11
Acq. Operator   : DXP                               Inj :   1
                                                Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\011623A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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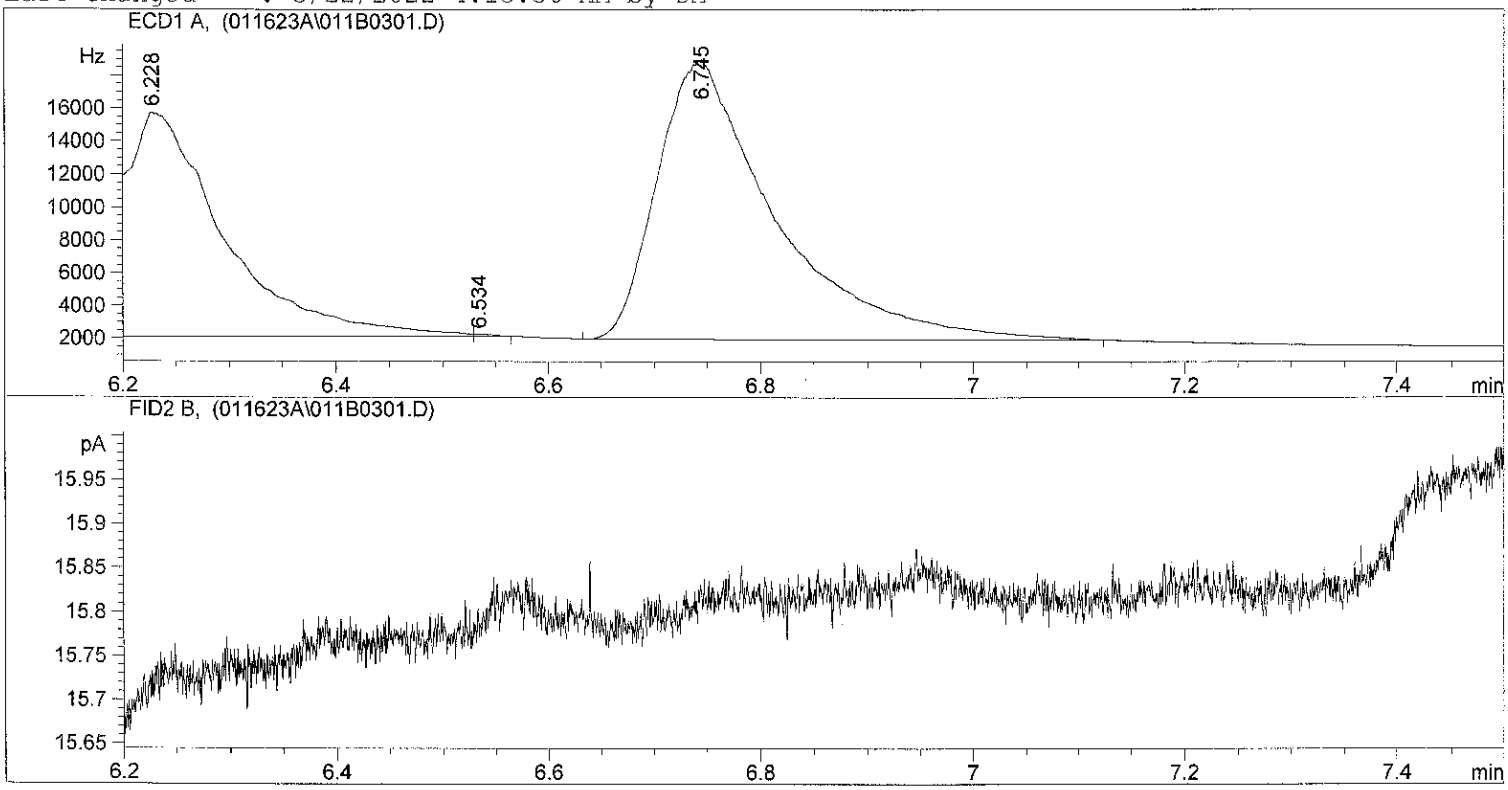

Area Percent Report

```
Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
```

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.540	BV S	0.0377	2.19817e5	7.47713e4	18.51561
2	5.635	VV S	0.0598	3.38457e5	9.44083e4	28.50886
3	5.695	VV S	0.0428	1.03991e5	4.04864e4	8.75936
4	5.746	VV S	0.0858	1.42898e5	2.77472e4	12.03659
5	5.994	VV S	0.0691	1.07870e5	2.60086e4	9.08605
6	6.150	VV S	0.0645	5.76439e4	1.48884e4	4.85545
7	6.228	VV S	0.1060	8.67672e4	1.36447e4	7.30855
8	6.534	VB S	0.0201	167.18159	138.40277	0.01408
9	6.745	PB S	0.0896	1.29574e5	1.70237e4	10.91424
10	7.533	BP	9.94e-3	7.73250	9.65665	0.00065
11	7.594	PP	1.80e-3	1.05785	10.28531	8.910e-5
12	7.613	PP	7.59e-3	5.46853	9.12779	0.00046
Totals :				1.18720e6	3.09146e5	

Results obtained with enhanced integrator!

23A0207 CLPLME (Rev3) - Page 1947 of 3315

Signal 2: FID2 B,

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*** End of Report ***

23A0207 CLP LIKE (Revs) - Page 1948 of 3315

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Injection Date  : 1/16/2023 5:40:57 PM          Seq. Line :  18
Sample Name     : 23A0207 02                    Location : Vial 24
Acq. Operator   : DXP                               Inj :  1
                                               Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\011623A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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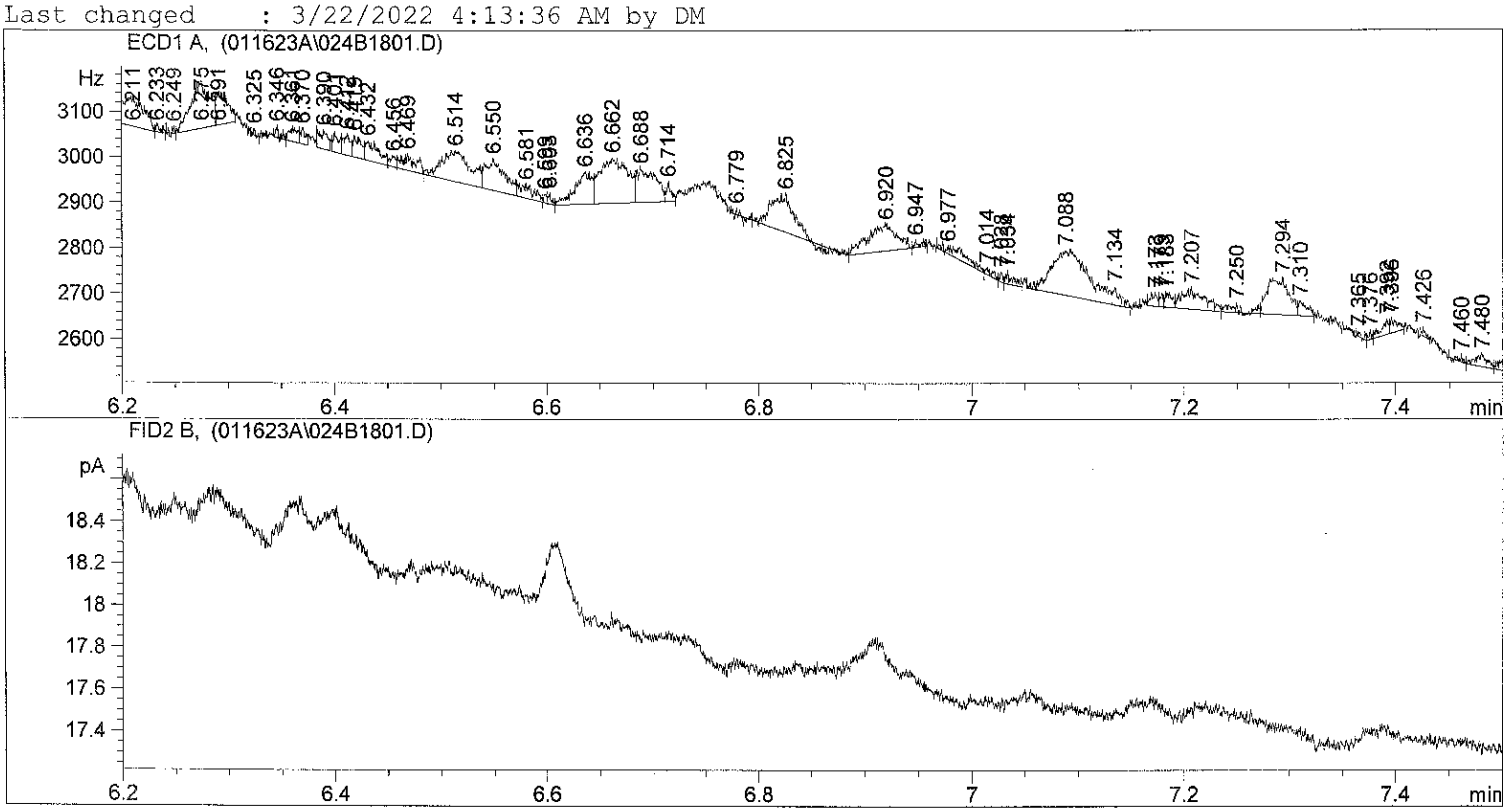


Area Percent Report

```
Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
```

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.287	BV	0.0169	148.57916	108.97947	1.75113
2	5.297	VV	6.61e-3	35.16692	70.62211	0.41447
3	5.307	VB	5.98e-3	23.67327	53.32178	0.27901
4	5.380	BV	0.0251	667.89038	336.68658	7.87164
5	5.412	VB	0.0187	147.67381	95.27809	1.74046
6	5.480	BV	0.0186	1219.24622	858.36792	14.36982
7	5.515	VV	0.0201	246.75024	163.07648	2.90815
8	5.549	VV	8.14e-3	37.15849	60.73095	0.43794
9	5.610	VV	0.0269	191.18887	85.43890	2.25332
10	5.652	VV	0.0184	201.91083	132.08418	2.37968
11	5.656	VV	8.09e-3	91.08881	141.82895	1.07356
12	5.697	VV	0.0245	644.87006	315.28787	7.60032
13	5.732	VV	7.49e-3	75.60886	124.38763	0.89111
14	5.760	VV	0.0222	553.86725	307.24954	6.52778
15	5.828	VV	0.0282	350.88519	148.59013	4.13547
16	5.876	VV	0.0281	426.90771	180.89912	5.03146
17	5.897	VV	6.05e-3	66.23891	136.70319	0.78068

23A0207 CLPLIKE (Rev3) Page 1949 of 3315

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.903	VV	3.13e-3	27.68118	127.67915	0.32625
19	5.907	VV	6.79e-3	61.95396	113.05527	0.73018
20	5.960	VV	0.0274	284.43573	124.01330	3.35231
21	5.971	VV	7.32e-3	60.96825	102.75842	0.71856
22	6.012	VV	0.0304	419.56992	167.40480	4.94498
23	6.039	VB	0.0111	63.60933	71.80996	0.74969
24	6.087	BP	3.19e-3	3.76095	20.07493	0.04433
25	6.112	BV	6.52e-3	16.91619	34.51904	0.19937
26	6.130	VV	0.0198	94.18166	56.53273	1.11001
27	6.175	VV	0.0182	69.22485	45.85841	0.81587
28	6.211	VP	0.0169	94.94120	67.02078	1.11896
29	6.233	VP	3.72e-3	4.51154	16.89083	0.05317
30	6.249	BP	2.35e-3	1.53439	13.25322	0.01808
31	6.275	VV	0.0156	128.51006	102.63912	1.51460
32	6.291	VB	9.36e-3	52.01651	69.29709	0.61306
33	6.325	PP	1.83e-3	1.40142	13.30448	0.01652
34	6.346	BV	3.12e-3	5.96623	27.63069	0.07032
35	6.361	VV	6.78e-3	16.75246	30.64992	0.19744
36	6.370	VB	4.32e-3	10.53328	33.04438	0.12414
37	6.390	BB	6.77e-3	22.27529	40.80514	0.26253
38	6.401	BB	5.08e-3	16.88225	43.99216	0.19897
39	6.412	BV	6.16e-3	20.80172	45.25386	0.24517
40	6.419	VV	6.36e-3	22.85696	46.28327	0.26939
41	6.432	VB	0.0111	36.39904	42.17062	0.42899
42	6.456	BV	5.81e-3	8.66752	21.91477	0.10215
43	6.469	VP	0.0108	30.86499	34.63340	0.36377
44	6.514	VV	0.0224	126.56197	67.24179	1.49164
45	6.550	VB	0.0153	86.43136	68.81509	1.01866
46	6.581	BV	0.0116	27.37184	28.58545	0.32260
47	6.599	VV	3.19e-3	3.67118	17.92261	0.04327
48	6.603	VP	3.14e-3	4.66193	21.42123	0.05494
49	6.636	VV	0.0136	77.61913	69.76479	0.91481
50	6.662	VV	0.0211	175.35164	99.00315	2.06666
51	6.688	VV	0.0157	92.35135	73.10036	1.08844
52	6.714	VV	4.32e-3	13.30046	41.66791	0.15676
53	6.779	PB	1.06e-3	4.73667e-1	11.95798	0.00558
54	6.825	BP	0.0194	113.41196	82.93789	1.33665
55	6.920	VP	0.0233	108.79445	55.95485	1.28223
56	6.947	VB	4.81e-3	5.25792	14.56025	0.06197
57	6.977	BV	0.0355	30.51836	14.31016	0.35968
58	7.014	VP	6.65e-3	6.47282	12.49198	0.07629
59	7.028	VP	2.90e-3	3.56943	19.87731	0.04207
60	7.034	VB	8.38e-3	12.68304	25.21926	0.14948
61	7.088	BV	0.0296	239.00577	96.86974	2.81688
62	7.134	VP	6.80e-3	19.88435	38.65346	0.23435
63	7.173	BV	5.79e-3	11.45944	26.78061	0.13506
64	7.179	VV	2.93e-3	5.70107	28.52108	0.06719
65	7.183	VB	5.64e-3	13.84358	30.80024	0.16316
66	7.207	BP	0.0170	64.47075	45.91431	0.75984
67	7.250	VB	0.0113	15.67978	18.03928	0.18480
68	7.294	BV	0.0165	109.54167	80.34286	1.29104
69	7.310	VB	7.35e-3	18.53575	32.03506	0.21846
70	7.365	PP	3.88e-3	2.21097	8.96678	0.02606
71	7.376	VV	3.23e-3	3.13274	16.35970	0.03692
72	7.392	VV	6.66e-3	14.51976	31.04320	0.17113
73	7.396	VB	5.66e-3	13.73673	31.67677	0.16190
74	7.426	BB	3.04e-3	3.74720	16.57687	0.04416
75	7.460	PP	4.48e-3	2.52333	12.91850	0.02974
76	7.480	VV	9.43e-3	20.90482	28.26265	0.24638
77	7.506	VV	8.26e-3	21.84679	33.28683	0.25748
78	7.517	VP	0.0123	35.27191	37.86517	0.41571
79	7.566	BP	3.53e-3	4.25648	15.85394	0.05017
80	7.588	BP	4.07e-3	2.96290	11.26443	0.03492
81	7.627	VB	0.0289	175.83839	76.81888	2.07240
82	7.683	BP	2.79e-3	2.06158	12.05888	0.02430

23A0207 CLP_LIKE (Revs) - Page 1930 of 3315

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.719	VB	0.0196	71.83527	46.99170	0.84664
84	7.784	PPA	0.0117	17.37662	18.18227	0.20480

Totals : 8484.77204 6352.93790

Results obtained with enhanced integrator!

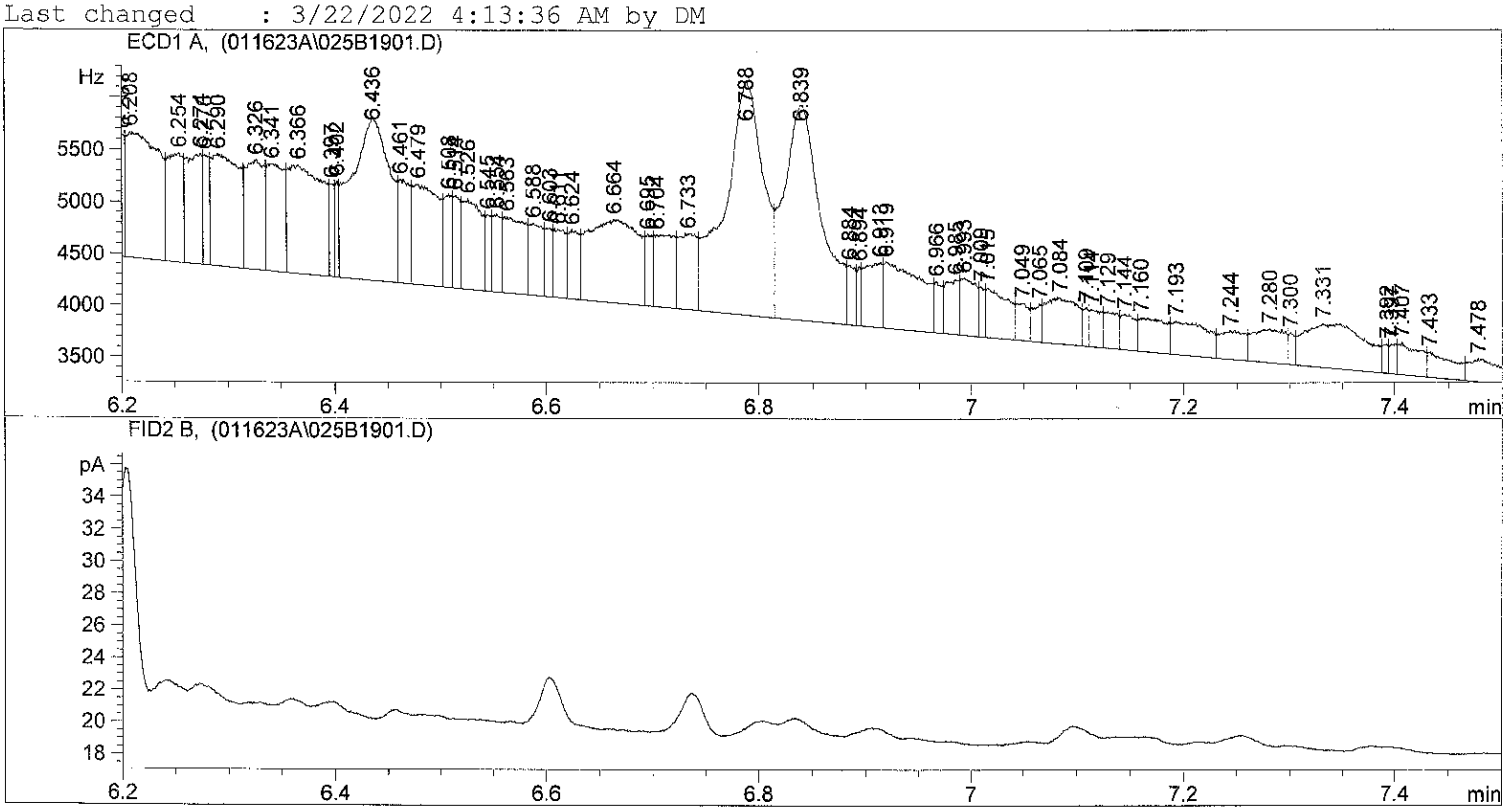
Signal 2: FID2 B,

*** End of Report ***

23A0207 CLP LIKE (Rev3) - Page 1931 of 3315

Injection Date : 1/16/2023 5:52:11 PM Seq. Line : 19
Sample Name : 23A0207 10 Location : Vial 25
Acq. Operator : DXP Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\2\SEQUENCE\011623A.S
Method : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed : 3/22/2022 4:13:36 AM by DM



Area Percent Report

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.240	BV	0.0298	3124.94556	1276.02820	2.62268
2	5.299	VV	0.0107	433.90390	501.49243	0.36416
3	5.309	VV	0.0187	800.24469	532.43854	0.67162
4	5.345	VV	6.02e-3	116.31822	241.60114	0.09762
5	5.366	VV	0.0235	953.97540	485.78229	0.80065
6	5.411	VV	0.0167	811.08502	578.78162	0.68072
7	5.422	VV	8.65e-3	350.72742	521.11151	0.29436
8	5.434	VV	6.03e-3	232.59988	519.01862	0.19521
9	5.454	VV	0.0136	652.37775	603.25977	0.54752
10	5.480	VV	0.0210	2082.37231	1189.61145	1.74768
11	5.515	VV	0.0199	1472.43066	939.24121	1.23577
12	5.538	VV	3.89e-3	150.48964	534.26953	0.12630
13	5.542	VV	5.59e-3	174.36371	519.44659	0.14634
14	5.592	VV	0.0407	3780.44824	1095.53796	3.17283
15	5.637	VV	0.0300	3518.09229	1387.91272	2.95264
16	5.697	VV	0.0345	6225.64404	2209.57056	5.22502
17	5.743	VV	0.0107	1135.47034	1337.79761	0.95297

23A0207 CLPLIKE (Rev5) - Page 1902 of 3315

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.757	VV	0.0191	2158.31201	1364.52161	1.81141
19	5.780	VV	3.41e-3	265.15881	1102.60181	0.22254
20	5.786	VV	0.0105	884.53137	1139.41956	0.74236
21	5.797	VV	7.85e-3	700.25757	1096.89026	0.58771
22	5.827	VV	0.0267	2790.95337	1248.33032	2.34237
23	5.875	VV	0.0289	4895.79248	2090.26050	4.10891
24	5.939	VV	0.0472	8734.71289	2213.82080	7.33081
25	5.979	VV	7.93e-3	1080.57336	1767.94458	0.90690
26	5.989	VV	6.17e-3	849.98517	1780.59656	0.71337
27	6.004	VV	0.0235	3384.92603	1753.66211	2.84088
28	6.036	VV	0.0339	4415.26465	1595.73999	3.70562
29	6.081	VV	0.0127	1365.74414	1315.49304	1.14623
30	6.098	VV	8.31e-3	780.16467	1244.37183	0.65477
31	6.110	VV	6.63e-3	674.93512	1264.59839	0.56646
32	6.116	VV	3.13e-3	274.17633	1263.56982	0.23011
33	6.122	VV	0.0219	2318.41016	1271.72266	1.94578
34	6.153	VV	5.76e-3	484.59482	1139.08899	0.40671
35	6.167	VV	0.0106	1039.77075	1234.13220	0.87265
36	6.175	VV	7.18e-3	710.28510	1221.86597	0.59612
37	6.186	VV	0.0102	970.53094	1185.36670	0.81454
38	6.201	VV	5.28e-3	452.37845	1177.78003	0.37967
39	6.208	VV	0.0249	2536.26270	1206.83557	2.12862
40	6.254	VV	0.0135	1081.68469	1047.17017	0.90783
41	6.274	VV	0.0123	1073.14185	1067.70850	0.90066
42	6.278	VV	5.11e-3	427.00909	1056.67383	0.35838
43	6.290	VV	0.0222	1927.73474	1072.50549	1.61790
44	6.326	VV	0.0147	1268.17627	1051.13525	1.06435
45	6.341	VV	0.0142	1170.41089	1030.68542	0.98230
46	6.366	VV	0.0264	2317.35303	1046.08313	1.94489
47	6.397	VV	4.48e-3	267.03391	895.69092	0.22411
48	6.402	VV	3.36e-3	218.60709	922.50159	0.18347
49	6.436	VV	0.0299	3894.18262	1562.24341	3.26829
50	6.461	VV	9.56e-3	765.90961	997.48090	0.64281
51	6.479	VV	0.0213	1657.71851	972.36102	1.39128
52	6.508	VV	6.56e-3	473.56247	896.26038	0.39745
53	6.514	VV	6.17e-3	412.12473	895.68353	0.34589
54	6.526	VV	0.0156	1119.83777	871.48724	0.93985
55	6.545	VV	4.91e-3	260.04114	738.68872	0.21825
56	6.554	VV	0.0101	456.08865	752.74780	0.38278
57	6.563	VV	0.0169	1040.68005	737.84644	0.87342
58	6.588	VV	0.0107	613.94293	696.13257	0.51527
59	6.603	VV	6.21e-3	321.84119	669.81787	0.27011
60	6.611	VV	9.31e-3	490.97125	657.79291	0.41206
61	6.624	VV	9.06e-3	492.20026	663.37537	0.41309
62	6.664	VV	0.0387	2610.68799	804.50610	2.19108
63	6.695	VV	6.34e-3	327.35782	688.79724	0.27474
64	6.704	VV	0.0216	900.99927	695.61096	0.75618
65	6.733	VV	0.0149	909.89758	733.31262	0.76365
66	6.788	VV	0.0305	5684.32275	2247.14722	4.77070
67	6.839	VV	0.0297	4969.95215	2064.70947	4.17115
68	6.884	VV	9.15e-3	314.95895	573.48706	0.26434
69	6.894	VV	3.41e-3	137.75288	572.47601	0.11561
70	6.913	VV	0.0137	715.90375	629.55798	0.60084
71	6.919	VV	0.0300	1584.62634	638.12494	1.32994
72	6.966	VV	6.98e-3	260.76315	492.47516	0.21885
73	6.985	VV	0.0109	461.71375	524.70380	0.38750
74	6.993	VV	0.0135	579.95026	551.71039	0.48674
75	7.009	VV	5.25e-3	185.27823	485.48682	0.15550
76	7.015	VV	0.0183	707.21613	477.72296	0.59355
77	7.049	VV	0.0106	278.80869	359.95441	0.23400
78	7.065	VV	8.01e-3	224.63374	365.35010	0.18853
79	7.084	VV	0.0250	940.54132	450.22772	0.78937
80	7.109	VV	4.68e-3	131.48769	376.36807	0.11035
81	7.114	VV	9.54e-3	275.61652	359.68445	0.23132
82	7.129	VV	0.0109	299.71158	353.99985	0.25154

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.144	VV	0.0122	333.45117	339.99341	0.27986
84	7.160	VV	0.0295	570.58777	322.18216	0.47888
85	7.193	VV	0.0283	750.50092	321.31470	0.62988
86	7.244	VV	0.0194	437.54465	271.47699	0.36722
87	7.280	VV	0.0253	691.02081	326.23993	0.57996
88	7.300	VV	5.22e-3	121.40380	306.25595	0.10189
89	7.331	VV	0.0483	1739.46375	423.96033	1.45989
90	7.392	VV	6.13e-3	114.27633	281.92908	0.09591
91	7.397	VV	5.90e-3	129.67094	285.43649	0.10883
92	7.407	VV	0.0181	442.90817	309.00952	0.37172
93	7.433	VV	0.0196	395.26379	242.66505	0.33173
94	7.478	VV	0.0237	421.06589	218.76604	0.35339
95	7.512	VV	0.0177	279.23132	190.58142	0.23435
96	7.534	VV	9.01e-3	86.12434	159.39920	0.07228
97	7.544	VV	0.0143	182.44044	155.83250	0.15312
98	7.579	VP	4.15e-3	9.95726	32.76343	0.00836
99	7.626	VV	0.0277	304.98819	131.28871	0.25597
100	7.654	VB	0.0102	45.48045	64.86250	0.03817
101	7.680	BV	4.38e-3	5.79532	18.88080	0.00486
102	7.689	VB	4.06e-3	5.82994	22.20481	0.00489
103	7.730	BB	0.0131	19.73060	25.18986	0.01656
104	7.761	BP	2.49e-3	1.52296	16.27187	0.00128
105	7.770	VV	5.69e-3	11.81573	30.70541	0.00992
106	7.784	VPA	9.95e-3	14.92385	20.85231	0.01253
Totals :				1.19151e5	8.44171e4	

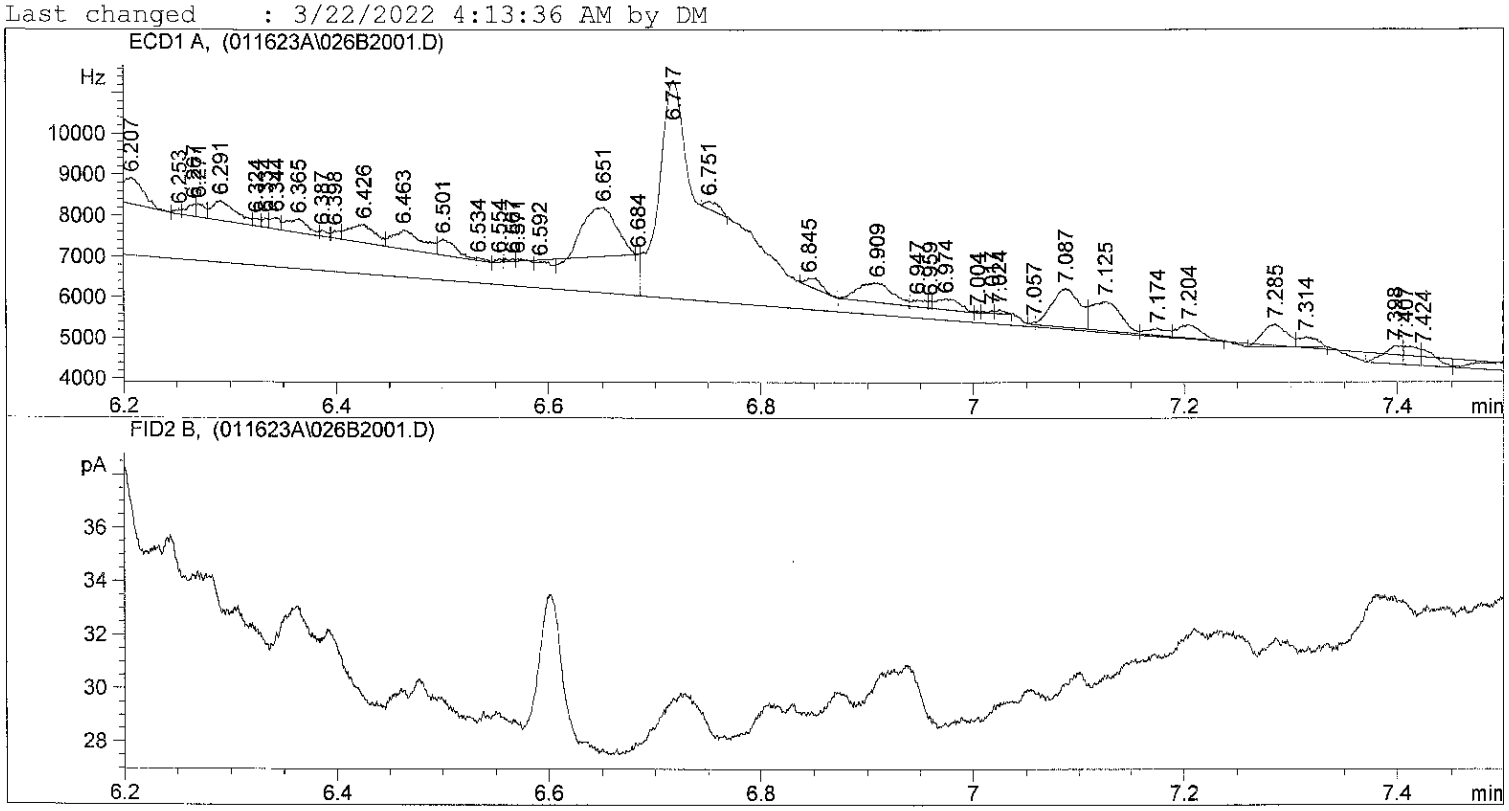
Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

Injection Date : 1/16/2023 6:03:10 PM Seq. Line : 20
Sample Name : 23A0207 17 Location : Vial 26
Acq. Operator : DXP Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\2\SEQUENCE\011623A.S
Method : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed : 3/22/2022 4:13:36 AM by DM



Area Percent Report

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.283	BV S	0.0201	4791.64648	2863.42261	2.41147
2	5.323	VP S	0.0208	1093.65186	875.62787	0.55040
3	5.381	VV S	0.0265	6050.03613	2882.46167	3.04477
4	5.433	VV S	0.0317	5949.65430	3123.98535	2.99425
5	5.480	VV S	0.0460	2.27913e4	8265.79395	11.47009
6	5.563	BV T	0.0185	2658.97900	1756.61731	1.33817
7	5.590	VV T	0.0142	1110.63672	995.06311	0.55894
8	5.631	VV T	0.0109	621.02600	750.64685	0.31254
9	5.676	VV S	0.0331	2.04576e4	7782.18262	10.29560
10	5.757	VV S	0.0768	2.37658e4	5157.59424	11.96049
11	5.808	BV T	9.95e-3	547.39758	697.98163	0.27549
12	5.814	VV T	9.93e-3	374.74750	628.90198	0.18860
13	5.831	VV T	9.66e-3	323.79907	407.76776	0.16296
14	5.865	PV T	0.0142	725.62561	620.63318	0.36518
15	5.900	VV T	0.0153	991.88464	809.48987	0.49918
16	5.926	VV T	4.91e-3	28.13276	72.84813	0.01416
17	5.953	VV S	0.0202	1.17034e4	7854.75928	5.88992

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.977	VV S	0.0270	6024.15674	3712.59717	3.03175
19	6.005	VV S	0.2781	4.47492e4	2682.21021	22.52070
20	6.058	BV T	0.0172	1538.68372	1120.37439	0.77437
21	6.091	PV T	7.50e-3	309.68011	523.95251	0.15585
22	6.110	VV T	0.0168	1435.17529	1090.10193	0.72227
23	6.139	PV T	7.04e-3	158.99734	297.36417	0.08002
24	6.143	PV T	6.84e-3	101.73583	247.74300	0.05120
25	6.158	PV T	0.0183	232.48434	211.46112	0.11700
26	6.179	PV T	7.71e-3	49.90465	107.85330	0.02512
27	6.207	PV T	0.0189	981.26727	631.25079	0.49384
28	6.253	PV T	4.89e-3	42.53971	110.50652	0.02141
29	6.267	PV T	7.46e-3	173.22839	294.56366	0.08718
30	6.271	PV T	8.69e-3	169.85101	325.75488	0.08548
31	6.291	PV T	0.0190	745.33704	482.97571	0.37510
32	6.324	PV T	6.81e-3	91.56882	183.93329	0.04608
33	6.334	PV T	4.92e-3	81.49857	230.98293	0.04102
34	6.344	PV T	7.38e-3	169.45378	283.03998	0.08528
35	6.365	PV T	0.0164	464.29309	339.02612	0.23366
36	6.387	PV T	6.97e-3	76.18125	144.12776	0.03834
37	6.398	PV T	6.71e-3	97.66360	186.54813	0.04915
38	6.426	PV T	0.0208	764.53577	454.87976	0.38476
39	6.463	PV T	0.0232	920.99579	475.55286	0.46350
40	6.501	PV T	0.0143	463.50595	393.47641	0.23327
41	6.534	PV T	0.0101	40.38167	66.60812	0.02032
42	6.554	PV T	4.80e-3	33.14666	92.16893	0.01668
43	6.567	PV T	6.64e-3	32.00493	63.91315	0.01611
44	6.571	PV T	2.66e-3	9.49507	59.41621	0.00478
45	6.592	PV T	0.0320	103.47183	38.17243	0.05207
46	6.651	PV T	0.0258	2591.29736	1200.96155	1.30411
47	6.684	PV T	2.95e-3	4.42754	24.99069	0.00223
48	6.717	PBAS	0.0463	1.98507e4	5342.46338	9.99018
49	6.751	BB T	0.0129	199.72641	195.83043	0.10052
50	6.845	BV T	0.0147	240.70921	199.16229	0.12114
51	6.909	PV T	0.0283	1080.40515	480.12299	0.54373
52	6.947	PV T	0.0109	148.90408	168.88684	0.07494
53	6.959	PV T	3.74e-3	38.67131	172.23109	0.01946
54	6.974	PV T	0.0190	415.06137	268.28058	0.20889
55	7.004	PV T	4.51e-3	8.97585	28.23443	0.00452
56	7.017	PV T	5.41e-3	29.10902	70.54433	0.01465
57	7.024	PB T	6.44e-3	48.33448	96.60530	0.02433
58	7.057	BV T	3.20e-3	16.25640	73.07719	0.00818
59	7.087	PV T	0.0233	1775.49597	944.28571	0.89355
60	7.125	PV T	0.0234	1388.32556	724.22382	0.69870
61	7.174	PV T	0.0163	222.65869	167.68399	0.11206
62	7.204	PB T	0.0186	489.97067	324.66000	0.24659
63	7.285	BV T	0.0188	874.44409	560.65668	0.44008
64	7.314	PB T	0.0152	315.59641	256.18430	0.15883
65	7.398	BV T	0.0147	549.10461	446.63135	0.27635
66	7.407	PV T	0.0153	420.74533	459.76639	0.21175
67	7.424	PV T	0.0149	362.63794	405.31479	0.18250
68	7.505	PV T	0.0348	770.04779	266.02899	0.38754
69	7.553	PV T	0.0120	83.15952	90.49993	0.04185
70	7.569	PV T	7.79e-3	87.37181	138.00558	0.04397
71	7.575	PV T	8.58e-3	80.62099	156.58119	0.04057
72	7.627	PV T	0.0362	1836.33154	609.05054	0.92416
73	7.702	PV T	0.0136	231.73167	207.85164	0.11662
74	7.713	PV T	0.0230	448.45239	233.79054	0.22569
75	7.779	PBAT	0.0113	47.34584	52.41156	0.02383
Totals :				1.98702e5	7.47614e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Height [pA]	Area %
1	5.373	PB	0.0168	26.49011	24.22663	1.000e2
Totals :				26.49011	24.22663	

Results obtained with enhanced integrator!

*** End of Report ***

23A0207 CLPLIKE (Rev3) - Page 1957 of 3315

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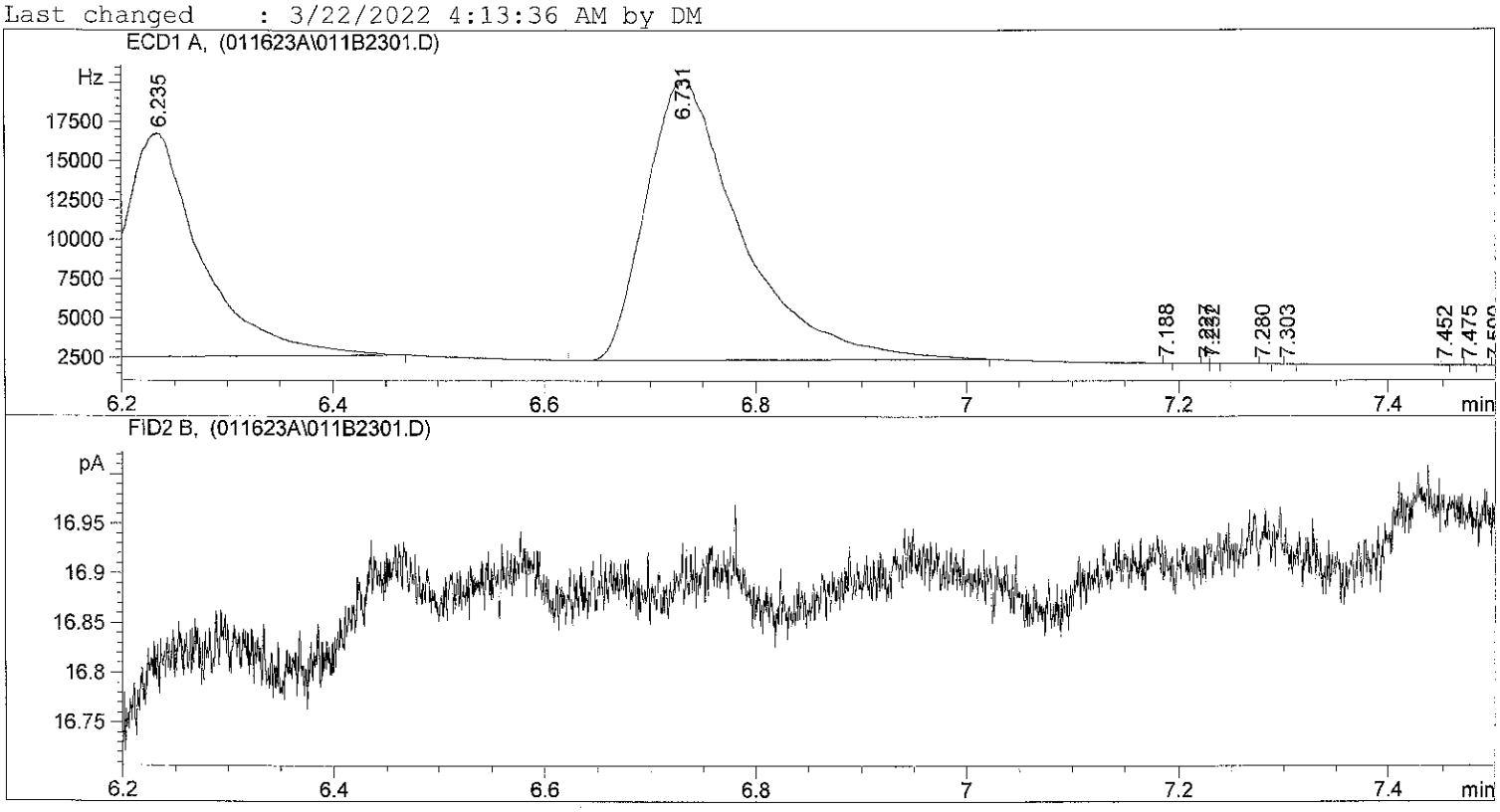
Injection Date : 1/16/2023 6:35:45 PM Seq. Line : 23
Sample Name : CS4 STANDARD Location : Vial 11
Acq. Operator : DXP Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\2\SEQUENCE\011623A.S
Method : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed : 3/22/2022 4:13:36 AM by DM



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Area Percent Report

==========

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.387	BP	3.76e-3	6.73550	23.38311	0.00061
2	5.426	PP	1.91e-3	5.61193	50.03798	0.00051
3	5.540	VV S	0.0375	2.19397e5	7.92904e4	19.96961
4	5.633	VV S	0.0515	3.17148e5	1.02691e5	28.86701
5	5.696	VV S	0.0467	1.10937e5	3.95519e4	10.09752
6	5.750	VV S	0.0708	1.20410e5	2.83515e4	10.95979
7	5.989	VV S	0.0591	9.51110e4	2.68172e4	8.65706
8	6.146	VV S	0.0571	5.54376e4	1.61712e4	5.04597
9	6.235	VB S	0.0811	6.91785e4	1.42134e4	6.29667
10	6.731	PB S	0.0740	1.10879e5	1.78229e4	10.09229
11	7.188	BP	2.09e-3	1.64488	12.89897	0.00015
12	7.227	BP	4.34e-3	4.60406	17.08595	0.00042
13	7.232	VP	4.83e-3	4.55880	13.19342	0.00041
14	7.280	PP	1.77e-3	8.96034e-1	8.90398	8.156e-5
15	7.303	BP	2.12e-3	1.75317	13.42507	0.00016
16	7.452	PP	2.95e-3	1.95807	8.95854	0.00018
17	7.475	PP	3.77e-3	2.89440	10.64370	0.00026

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	7.500	PP	3.29e-3	1.66892	7.22919	0.00015
19	7.543	PB	1.92e-3	9.27373e-1	8.21267	8.441e-5
20	7.572	BP	7.59e-3	5.66413	9.45509	0.00052
21	7.661	BP	0.0253	113.56325	53.72012	0.01034
22	7.727	PP	3.29e-3	2.20621	8.89274	0.00020
Totals :				1.09865e6	3.25155e5	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

Dioxin Extraction Laboratory – Glassware

Batch ID: BLA0261 Work Order: 23A0100, 23A0133, 23A0134, 23A0207 Extraction Parameter: Dioxin ARI Analyst: TW

ARI Sample ID		300 mL Flat Bottom	Small Soxhlet	Large Soxhlet	250 mL Beaker	Funnel	Column	Florisil Column	Turbo Tube	Sep Funnel	Erlenmeyer Flask	Centrifuge Bottle	Turbo-Vap	Vortex Mixer	Heating Mantle
BLA0261	- BLK1	6	5		19	46	9	12	37				4	4	A1
	- BS1	40	15		17	38	15	67	20				4	4	A2
	- DUP1	32		71	239	60	198	139	3				4	4	A3
	- SRM1	70	64		23	16	41	7	17				4	4	A5
23A0100	- 09	18		23	39	61	185	150	32				4	4	A6
	- 21	49		25	31	5	43	166	25				4	4	B1
23A0133	- 06	4		67	138	59	2	136	82				4	4	B2
	- 07	38	11		49	11	36	16	31				4	4	B3
	- 10	79		28	50	25	31	29	35				4	4	B4
	- 11	67		35	43	24	45	49	57				4	4	B5
23A0134	- 06	60		3	33	28	35	2	85				4	4	B6
	- 14	39	70		41	37	38	61	42				4	4	C1
23A0207	- 02	17	25		3	27	11	70	10				4	4	C2
	- 10	53	26		13	65	16	71	24				4	4	C3
	- 17	43	23		25	3	14	60	23				4	4	C4
													4	4	
													4	4	
													4	4	
													4	4	
													4	4	
													4	4	
													4	4	
													4	4	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLA0236	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665 Sulfuric Acid Cleanup - uL	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Reference	BLA0261-SRM1	23022306	01/25/2023	
LCS	BLA0261-BS1	23022401	01/25/2023	
Blank	BLA0261-BLK1	23022304	01/25/2023	
LDW23-IT1089	23A0207-02	23022318	01/25/2023	
LDW23-IT1209	23A0207-17	23022320	01/25/2023	
LDW23-IT1097	23A0207-10	23022319	01/25/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLA0236

Matrix: Solid **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 1/27/2023 10:22:01AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0100-09	C	LDW23-SS1226	C 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0100-21	C	LDW23-SS1154	C 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0133-06	B	LDW23-SC1241	B 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0133-07	B	LDW23-IT1217	B 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0133-10	B	LDW23-SC1215	B 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0133-11	B	LDW23-SC1222	B 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0134-06	B	LDW23-SS1160	B 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0134-14	B	LDW23-IT1194	B 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0207-02	B	LDW23-IT1089	B 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0207-10	B	LDW23-IT1097	B 01	20	20	1613B Dioxin	1/25/2023	TW	
23A0207-17	B	LDW23-IT1209	B 01	20	20	1613B Dioxin	1/25/2023	TW	
BLA0261-BLK1	-	Blank	-	20	20	-	1/25/2023	TW	
BLA0261-BS1	-	LCS	-	20	20	-	1/25/2023	TW	
BLA0261-DUP1	-	Duplicate	-	20	20	-	1/25/2023	TW	
BLA0261-SRM1	-	Reference	-	20	20	-	1/25/2023	TW	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLA0237	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LCS	BLA0261-BS1	23022401	01/26/2023	
Blank	BLA0261-BLK1	23022304	01/26/2023	
LDW23-IT1209	23A0207-17	23022320	01/26/2023	
LDW23-IT1097	23A0207-10	23022319	01/26/2023	
LDW23-IT1089	23A0207-02	23022318	01/26/2023	
Reference	BLA0261-SRM1	23022306	01/26/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLA0237

Matrix: Solid **Cleanup using: Organics - EPA 3660C Silica Gel Cleanup - uL** **Printed: 1/27/2023 10:23:03AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0100-09	C	LDW23-SS1226	C 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0100-21	C	LDW23-SS1154	C 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0133-06	B	LDW23-SC1241	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0133-07	B	LDW23-IT1217	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0133-10	B	LDW23-SC1215	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0133-11	B	LDW23-SC1222	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0134-06	B	LDW23-SS1160	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0134-14	B	LDW23-IT1194	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0207-02	B	LDW23-IT1089	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0207-10	B	LDW23-IT1097	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0207-17	B	LDW23-IT1209	B 01	20	20	1613B Dioxin	1/26/2023	TW	
BLA0261-BLK1	-	Blank	-	20	20	-	1/26/2023	TW	
BLA0261-BS1	-	LCS	-	20	20	-	1/26/2023	TW	
BLA0261-DUP1	-	Duplicate	-	20	20	-	1/26/2023	TW	
BLA0261-SRM1	-	Reference	-	20	20	-	1/26/2023	TW	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLA0238	Cleanup Type:	Florisil
Cleanup Method:	EPA 3620B Florisil Cleanup (uL)	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1097	23A0207-10	23022319	01/26/2023	
LDW23-IT1209	23A0207-17	23022320	01/26/2023	
Blank	BLA0261-BLK1	23022304	01/26/2023	
LDW23-IT1089	23A0207-02	23022318	01/26/2023	
Reference	BLA0261-SRM1	23022306	01/26/2023	
LCS	BLA0261-BS1	23022401	01/26/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLA0238

Matrix: Solid **Cleanup using: Organics - EPA 3620B Florisil Cleanup (uL)** **Check Standard: CKK0015-FLO1** **Printed: 1/27/2023 10:23:47AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0100-09	C	LDW23-SS1226	C 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0100-21	C	LDW23-SS1154	C 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0133-06	B	LDW23-SC1241	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0133-07	B	LDW23-IT1217	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0133-10	B	LDW23-SC1215	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0133-11	B	LDW23-SC1222	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0134-06	B	LDW23-SS1160	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0134-14	B	LDW23-IT1194	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0207-02	B	LDW23-IT1089	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0207-10	B	LDW23-IT1097	B 01	20	20	1613B Dioxin	1/26/2023	TW	
23A0207-17	B	LDW23-IT1209	B 01	20	20	1613B Dioxin	1/26/2023	TW	
BLA0261-BLK1	-	Blank	-	20	20	-	1/26/2023	TW	
BLA0261-BS1	-	LCS	-	20	20	-	1/26/2023	TW	
BLA0261-DUP1	-	Duplicate	-	20	20	-	1/26/2023	TW	
BLA0261-SRM1	-	Reference	-	20	20	-	1/26/2023	TW	

Analytical Resources, LLC
Analytical Chemists and Consultants

Blank

Form 1
METHOD BLANK DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLA0261-BLK1	File ID:	23022304
Sampled:	N/A	Prepared:	01/24/23 13:10	Analyzed:	02/23/23 12:35
Solids Wt%:		Preparation:	EPA 1613	Initial/Final:	10 g / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	2.534	0.655-0.886	0.056	1.00	0.0551	ng/kg	EMPC, J
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.048	1.00	ND	ng/kg	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.000	1.318-1.783	0.067	1.00	ND	ng/kg	U
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	0.064	1.00	ND	ng/kg	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	0.090	1.00	ND	ng/kg	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	1.151	1.054-1.426	0.037	1.00	0.0596	ng/kg	J
57117-44-9	1,2,3,6,7,8-HxCDF	1	0.000	1.054-1.426	0.033	1.00	ND	ng/kg	U
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.037	1.00	ND	ng/kg	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	1.077	1.054-1.426	0.047	1.00	0.0913	ng/kg	J
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	0.047	1.00	ND	ng/kg	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.000	1.054-1.426	0.047	1.00	ND	ng/kg	U
19408-74-3	1,2,3,7,8,9-HxCDD	1	1.301	1.054-1.426	0.048	1.00	0.0582	ng/kg	J
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	0.000	0.893-1.208	0.044	1.00	ND	ng/kg	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.000	0.893-1.208	0.066	1.00	ND	ng/kg	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.610	0.893-1.208	0.061	2.50	0.221	ng/kg	EMPC, J
39001-02-0	OCDF	1	0.000	0.757-1.024	0.132	2.50	ND	ng/kg	U
3268-87-9	OCDD	1	0.816	0.757-1.024	0.132	10.0	0.979	ng/kg	J

Homologue Groups

55722-27-5	Total TCDF	1	0.000			1.00	ND	ng/kg
41903-57-5	Total TCDD	1	0.000			1.00	ND	ng/kg
30402-15-4	Total PeCDF	1	0.000			1.00	ND	ng/kg
36088-22-9	Total PeCDD	1	0.000			1.00	ND	ng/kg
55684-94-1	Total HxCDF	1	0.000			1.00	0.151	ng/kg
34465-46-8	Total HxCDD	1	0.000			1.00	0.0582	ng/kg
38998-75-3	Total HpCDF	1	0.000			1.00	ND	ng/kg
37871-00-4	Total HpCDD	1	0.000			1.00	ND	ng/kg

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.029
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.118

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Blank

Form 2
METHOD BLANK DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0207
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLA0261-BLK1	File ID:	23022304
Sampled:	N/A	Prepared:	01/24/23 13:10	Analyzed:	02/23/23 12:35
Solids Wt%:	0.00	Preparation:	EPA 1613	Initial/Final:	10 g / 20 uL
Result Basis:	Dry	Sequence:	SLB0345	Calibration:	GB00010
Batch:	BLA0261	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF	1	0.769	0.655-0.886	0.09	101	24 - 169 %	
13C12-2,3,7,8-TCDD	1	0.759	0.655-0.886	0.12	135	25 - 164 %	
13C12-1,2,3,7,8-PeCDF	1	1.574	1.318-1.783	0.16	83.3	24 - 185 %	
13C12-2,3,4,7,8-PeCDF	1	1.554	1.318-1.783	0.17	85.6	21 - 178 %	
13C12-1,2,3,7,8-PeCDD	1	1.648	1.318-1.783	0.10	73.0	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF	1	0.506	0.434-0.587	0.24	121	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF	1	0.507	0.434-0.587	0.24	130	26 - 123 %	*
13C12-2,3,4,6,7,8-HxCDF	1	0.503	0.434-0.587	0.25	120	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF	1	0.503	0.434-0.587	0.28	107	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD	1	1.213	1.054-1.426	0.25	142	32 - 141 %	*
13C12-1,2,3,6,7,8-HxCDD	1	1.224	1.054-1.426	0.24	147	28 - 130 %	*
13C12-1,2,3,4,6,7,8-HpCDF	1	0.440	0.374-0.506	0.24	95.9	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF	1	0.449	0.374-0.506	0.27	96.7	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD	1	1.063	0.893-1.208	0.25	98.0	23 - 140 %	
13C12-OCDD	1	0.933	0.757-1.024	0.27	69.1	17 - 157 %	
37Cl4-2,3,7,8-TCDD	1	328.000		0.06	107	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:10:10 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	26.028	1.002	2.527e2	9.974e1	0.876	2.534	0.770	779	1106	3.24e3	1.78e3	4.2	1.6	YES	dd	db	0.028
12378-PeCDF					0.845		1.550	624	788								
23478-PeCDF					0.911		1.550	624	788								
123478-HxCDF	35.111	1.000	1.813e2	1.575e2	1.182	1.151	1.240	591	509	2.80e3	2.45e3	4.7	4.8	NO	bd	bb	0.030
234678-HxCDF					1.229		1.240	591	509								
123678-HxCDF					1.248		1.240	591	509								
123789-HxCDF	37.172	1.001	2.109e2	1.958e2	1.187	1.077	1.240	591	509	3.28e3	2.49e3	5.5	4.9	NO	bb	bb	0.046
1234678-HpCDF					1.204		1.050	508	576								
1234789-HpCDF					1.165		1.050	508	576								
OCDF					1.186		0.890	446	850								
2378-TCDD					1.236		0.770	1139	753								
12378-PeCDD					1.087		1.550	719	570								
123478-HxCDD					0.987		1.240	569	719								
123678-HxCDD					1.021		1.240	569	719								
123789-HxCDD	36.738	1.011	1.674e2	1.286e2	0.985	1.301	1.240	569	719	2.35e3	2.73e3	4.1	3.8	NO	bb	db	0.029
1234678-HpCDD	40.493	1.000	4.924e2	3.058e2	1.253	1.610	1.050	576	509	4.98e3	4.07e3	8.7	8.0	YES	bb	bd	0.110
OCDD	45.317	1.001	9.963e2	1.221e3	1.103	0.816	0.890	625	579	1.22e4	1.35e4	19.5	23.4	NO	bb	MM	0.490
13C-2378-TCDF	25.986	1.007	6.345e5	8.255e5	1.768	0.769	0.770	1891	1391	9.93e6	1.30e7	5251.4	9328.9	NO	bb	bb	100.508
13C-12378-PeCDF	30.153	1.169	6.390e5	4.060e5	1.527	1.574	1.550	3111	2266	9.20e6	5.82e6	2956.8	2569.0	NO	bd	bd	83.282
13C-23478-PeCDF	31.490	1.220	6.273e5	4.036e5	1.466	1.554	1.550	3111	2266	8.79e6	5.63e6	2825.4	2486.4	NO	bd	bb	85.576
13C-123478-HxCDF	35.111	0.956	3.235e5	6.388e5	1.054	0.506	0.510	2306	2921	5.01e6	9.80e6	2172.9	3356.9	NO	bd	bd	121.121
13C-123678-HxCDF	35.245	0.960	3.566e5	7.032e5	1.080	0.507	0.510	2306	2921	5.45e6	1.09e7	2364.5	3728.2	NO	db	db	130.152
13C-234678-HxCDF	36.103	0.983	3.067e5	6.098e5	1.014	0.503	0.510	2306	2921	4.86e6	9.67e6	2105.2	3309.4	NO	bb	bb	119.835
13C-123789-HxCDF	37.139	1.011	2.511e5	4.996e5	0.928	0.503	0.510	2306	2921	3.99e6	7.95e6	1729.8	2722.5	NO	bb	bb	107.285
13C-1234678-HpCDF	38.966	1.061	2.290e5	5.202e5	1.036	0.440	0.440	2462	2574	3.73e6	8.30e6	1513.4	3223.9	NO	bb	bb	95.898
13C-1234789-HpCDF	41.239	1.123	2.046e5	4.554e5	0.905	0.449	0.440	2462	2574	2.62e6	5.87e6	1062.8	2280.1	NO	bd	bd	96.716
13C-1234-TCDD	25.802	0.000	3.591e5	4.625e5	1.000	0.776	0.770	1830	1062	5.72e6	7.35e6	3124.7	6925.5	NO	bb	bb	100.000
13C-2378-TCDD	26.622	1.032	5.295e5	6.977e5	1.103	0.759	0.770	1830	1062	8.17e6	1.09e7	4464.1	10228.8	NO	bb	bb	135.430
13C-12378-PeCDD	31.747	1.230	3.413e5	2.071e5	0.914	1.648	1.550	894	1059	4.92e6	2.91e6	5507.8	2744.0	NO	bb	bb	73.020
13C-123478-HxCDD	36.225	0.986	5.457e5	4.498e5	0.933	1.213	1.240	2192	2580	9.04e6	7.42e6	4125.6	2876.1	NO	bd	bd	141.521
13C-123678-HxCDD	36.337	0.989	5.889e5	4.810e5	0.965	1.224	1.240	2192	2580	8.84e6	7.35e6	4035.6	2846.5	NO	db	db	147.089
13C-1234678-HpCDD	40.481	1.102	2.977e5	2.802e5	0.782	1.063	1.050	1895	2007	4.37e6	4.12e6	2307.2	2054.1	NO	bb	bb	98.020
13C-OCDD	45.289	1.233	3.965e5	4.249e5	0.788	0.933	0.890	1644	2744	4.79e6	5.18e6	2910.8	1886.5	NO	bb	bb	138.210
13C-123789-HxCDD	36.727	0.000	4.195e5	3.345e5	1.000	1.254	1.240	2192	2580	6.80e6	5.36e6	3101.6	2078.0	NO	bb	bb	100.000
37CL-2378-TCDD	26.650	1.033	4.340e5		1.233			1497		6.50e6		4344.7			bb		42.821

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:10:10 Pacific Standard Time

ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					1.064		0.770	779	1106								
1289-TCDF					0.858		0.770	779	1106								
13468-PECDF					1.013		1.550	627	904								
12389-PECDF					0.844		1.550	624	788								
123468-HXCDF					1.197		1.240	591	509								
1368-TCDD					1.084		0.770	1139	753								
1289-TCDD					0.975		0.770	1139	753								
12479-PECDD					1.837		1.550	719	570								
12389-PECDD					1.252		1.550	719	570								
124679-HXCDD					1.033		1.240	569	719								
1234679-HPCDD	39.445	0.974	2.223e2	1.065e2	1.286	2.089	1.050	576	509	4.28e3	1.75e3	7.4	3.4	YES	db	bb	0.044
Total-tetrafurans			0.000e0		0.933			779		0.00e0							
Total-penta1			0.000e0					627		0.00e0							
Total-pentafurans			0.000e0		0.866			624		0.00e0							
Total-hexafurans			3.923e2		1.208			591		6.08e3							0.075
Total-heptafurans			0.000e0		1.185			508		0.00e0							
Total-Furans			3.923e2		1.067			779		6.08e3							0.075
Total-tetradioxins			0.000e0		1.099			1139		0.00e0							
Total-pentadioxins			0.000e0		1.392			719		0.00e0							
Total-hexadioxins			1.674e2		1.007			569		2.35e3							0.029
Total-heptadioxins			0.000e0		1.269			576		0.00e0							
Total-Dioxins			1.164e3		1.165			1139		1.46e4							0.519
Total-TEQ			1.556e3					1139		2.06e4							0.594
FUNCTION1 PFK			8.985e7					473182		1.85e7							
FUNCTION2 PFK			2.188e7					303374		2.10e7							0.000
FUNCTION3 PFK			6.972e4					326888		2.73e6							0.000
FUNCTION4 PFK			3.101e5					246927		8.42e6							
FUNCTION5 PFK			8.823e6					168164		1.08e7							
FUNCTION1 HXCD...			1.135e3					640		1.11e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			3.361e2					1099		6.75e3							0.000
FUNCTION3 OCDPE			5.134e2					657		9.86e3							0.000
FUNCTION4 NCDPE			7.772e1					613		1.23e3							0.000
FUNCTION5 DCDPE			8.698e1					464		2.12e3							0.000

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.17	2.109e2	1.958e2	1.187	1.08	1.24	5.5	YES	NO	bb	bb	0.046
2	123478-HxCDF	35.11	1.813e2	1.575e2	1.182	1.15	1.24	4.7	YES	NO	bd	bb	0.030

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.17	2.109e2	1.958e2	1.187	1.08	1.24	5.5	YES	NO	bb	bb	0.046
2	123478-HxCDF	35.11	1.813e2	1.575e2	1.182	1.15	1.24	4.7	YES	NO	bd	bb	0.030

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.74	1.674e2	1.286e2	0.985	1.30	1.24	4.1	YES	NO	bb	db	0.029

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.74	1.674e2	1.286e2	0.985	1.30	1.24	4.1	YES	NO	bb	db	0.029
2	OCDD	45.32	9.963e2	1.221e3	1.103	0.82	0.89	19.5	YES	NO	bb	MM	0.490

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.17	2.109e2	1.958e2	1.187	1.08	1.24	5.5	YES	NO	bb	bb	0.046
2	123478-HxCDF	35.11	1.813e2	1.575e2	1.182	1.15	1.24	4.7	YES	NO	bd	bb	0.030
3	123789-HxCDD	36.74	1.674e2	1.286e2	0.985	1.30	1.24	4.1	YES	NO	bb	db	0.029
4	OCDD	45.32	9.963e2	1.221e3	1.103	0.82	0.89	19.5	YES	NO	bb	MM	0.490

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	28.13	2.702e5					3.2	YES		db		
2	FUNCTION1 PFK	26.88	1.305e7					15.6	YES		dd		
3	FUNCTION1 PFK	25.68	7.653e7					20.1	YES		bd		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	31.92	4.077e5					4.8	YES		bb		0.000
2	FUNCTION2 PFK	28.37	2.147e7					64.3	YES		bb		0.000

ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	37.15	7.233e3					1.2	NO		bb		0.000
2	FUNCTION3 PFK	35.90	1.054e4					1.3	NO		bb		0.000
3	FUNCTION3 PFK	35.72	2.581e3					0.7	NO		bb		0.000
4	FUNCTION3 PFK	35.09	3.036e4					1.7	NO		bb		0.000
5	FUNCTION3 PFK	34.35	2.022e3					0.6	NO		bb		0.000
6	FUNCTION3 PFK	34.29	6.449e3					1.0	NO		bb		0.000
7	FUNCTION3 PFK	33.19	2.387e3					0.7	NO		bb		0.000
8	FUNCTION3 PFK	33.15	8.147e3					1.3	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	39.14	1.304e3					0.5	NO		bb		
2	FUNCTION4 PFK	39.09	1.592e4					1.9	NO		bb		
3	FUNCTION4 PFK	38.87	1.272e3					0.5	NO		bb		
4	FUNCTION4 PFK	38.38	1.836e4					1.7	NO		bb		
5	FUNCTION4 PFK	38.15	8.765e3					1.4	NO		db		
6	FUNCTION4 PFK	38.12	2.112e4					3.3	YES		bd		
7	FUNCTION4 PFK	42.38	9.910e3					1.6	NO		bb		
8	FUNCTION4 PFK	42.29	1.735e3					0.6	NO		bb		
9	FUNCTION4 PFK	42.24	3.487e4					1.8	NO		bb		
10	FUNCTION4 PFK	42.01	4.943e3					0.9	NO		bb		
11	FUNCTION4 PFK	41.93	1.785e3					0.6	NO		bb		
12	FUNCTION4 PFK	41.89	4.935e3					0.9	NO		bb		
13	FUNCTION4 PFK	41.81	6.348e3					0.9	NO		bb		
14	FUNCTION4 PFK	41.61	1.278e4					1.6	NO		bb		
15	FUNCTION4 PFK	41.37	9.718e3					1.6	NO		db		
16	FUNCTION4 PFK	41.33	1.369e4					1.5	NO		bd		
17	FUNCTION4 PFK	40.90	5.227e4					2.3	NO		bb		
18	FUNCTION4 PFK	40.67	1.576e4					1.7	NO		bb		
19	FUNCTION4 PFK	40.58	4.789e3					0.8	NO		bb		
20	FUNCTION4 PFK	40.40	2.503e3					0.9	NO		bb		
21	FUNCTION4 PFK	40.12	6.875e3					0.9	NO		bb		
22	FUNCTION4 PFK	39.28	3.051e3					0.4	NO		bb		
23	FUNCTION4 PFK	42.94	2.824e4					2.8	NO		bb		
24	FUNCTION4 PFK	42.52	1.732e4					1.3	NO		db		
25	FUNCTION4 PFK	42.48	1.187e4					1.8	NO		bd		

ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.75	1.100e5					4.0	YES		db		
2	FUNCTION5 PFK	43.20	8.713e6					59.9	YES		bd		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.64	7.297e1					2.9	NO		bb		0.000
2	FUNCTION1 HXCD...	25.84	8.690e2					10.1	YES		db		0.000
3	FUNCTION1 HXCD...	25.63	1.935e2					4.2	YES		bd		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.75	1.376e2					1.8	NO		db		0.000
2	FUNCTION2 HPCD...	30.63	9.702e1					2.3	NO		bd		0.000
3	FUNCTION2 HPCD...	28.86	1.015e2					2.0	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.23	1.179e2					3.9	YES		bd		0.000
2	FUNCTION3 OCDPE	37.70	1.179e2					4.6	YES		bb		0.000
3	FUNCTION3 OCDPE	36.73	1.515e2					3.4	YES		bb		0.000
4	FUNCTION3 OCDPE	36.35	1.261e2					3.0	YES		db		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.51	7.772e1					2.0	NO		bb		0.000

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:10:10 Pacific Standard Time

ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

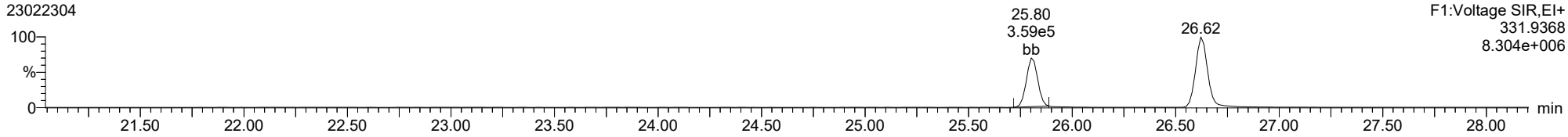
ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	43.25	8.698e1					4.6	YES		bb		0.000

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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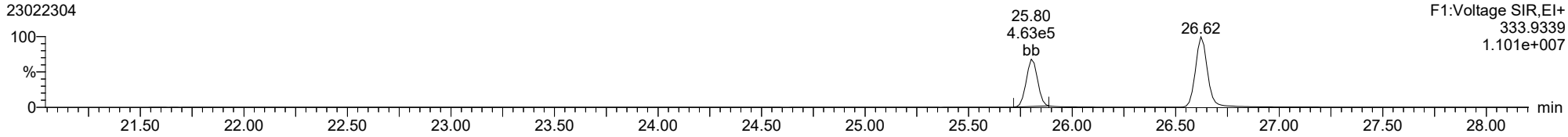

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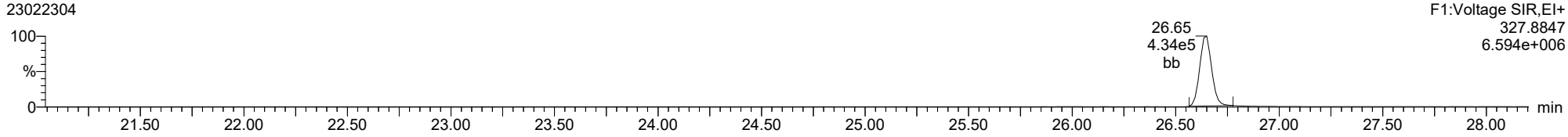

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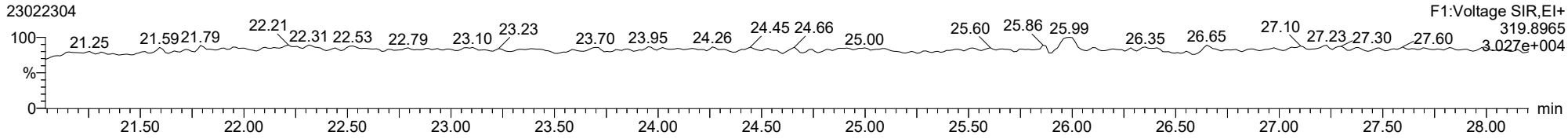
2378-TCDD



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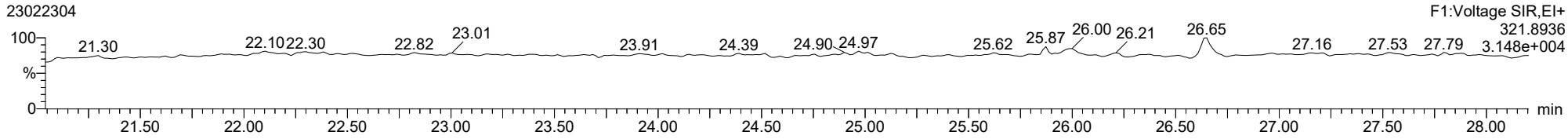

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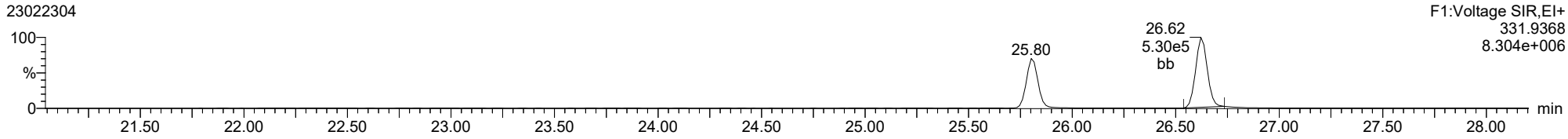

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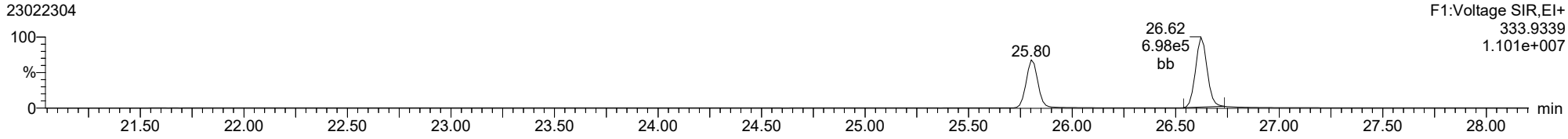

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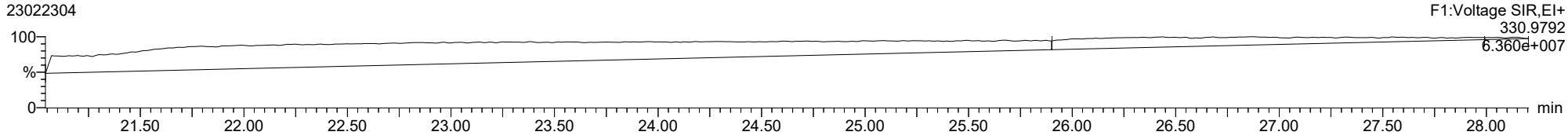

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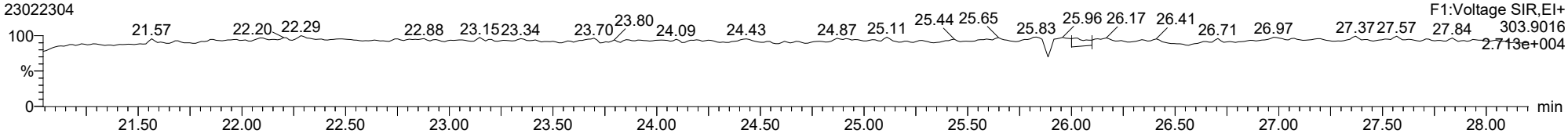
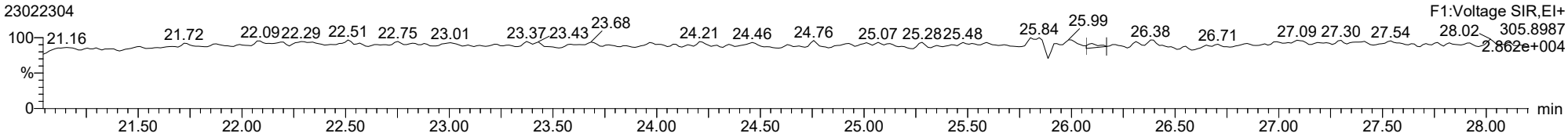
2378-TCDF



2378-TCDF



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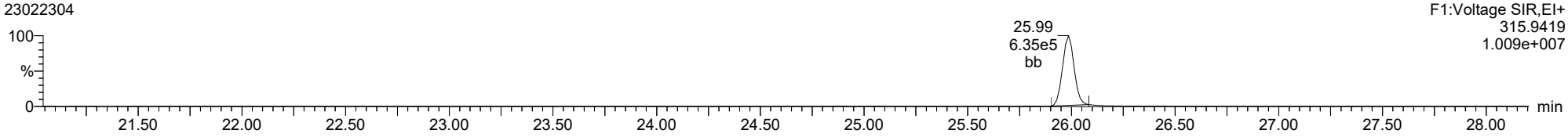

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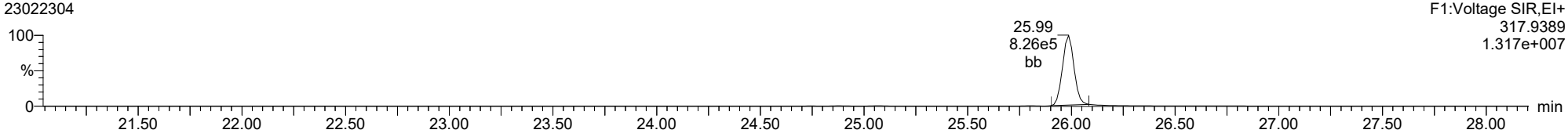

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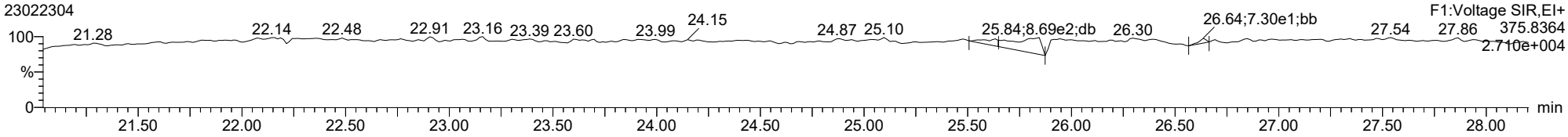

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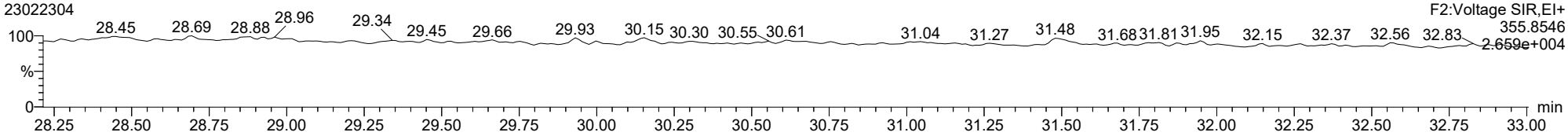

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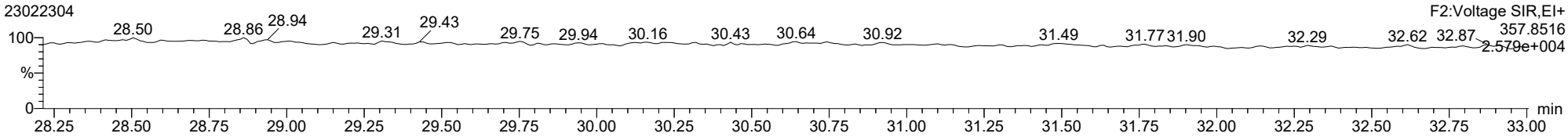

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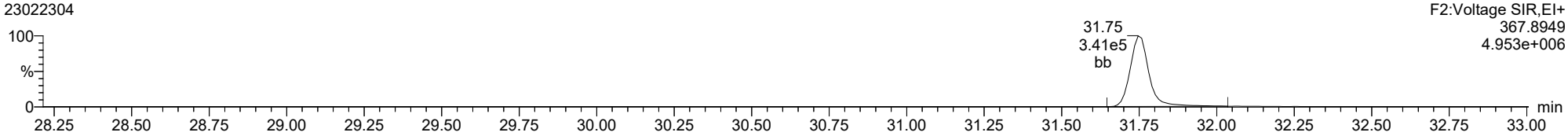

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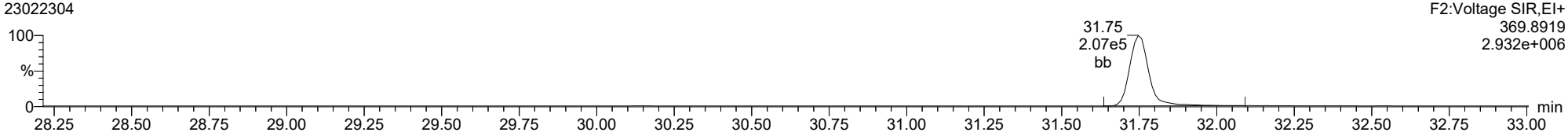

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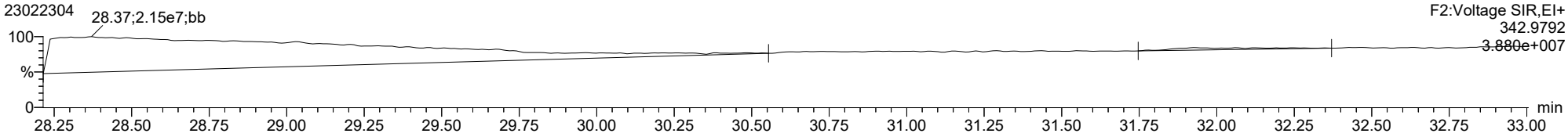

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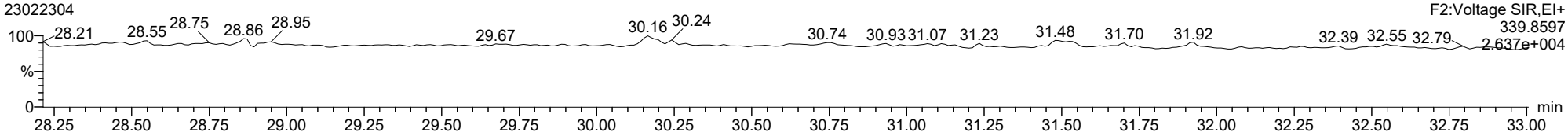

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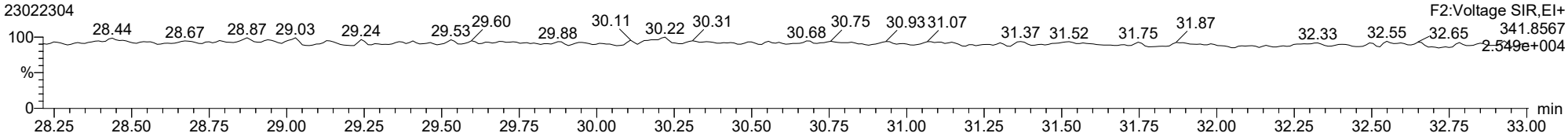

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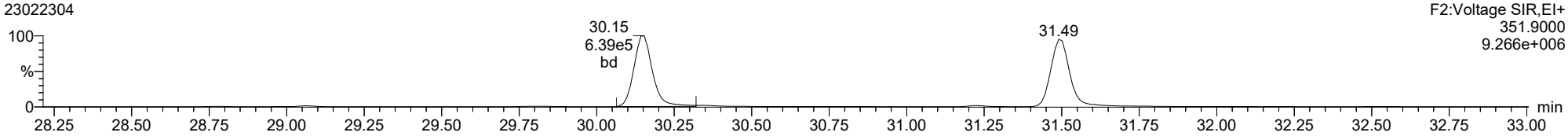

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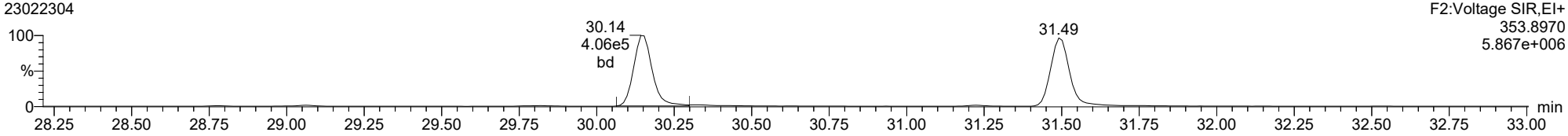
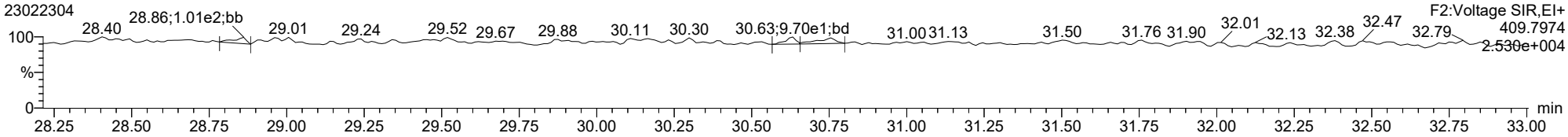


FUNCTION2 HPCDPE



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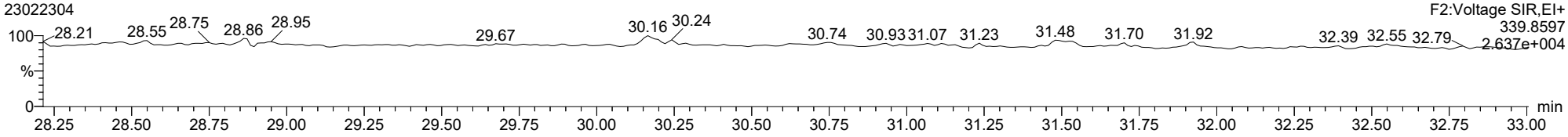
23478-PeCDF



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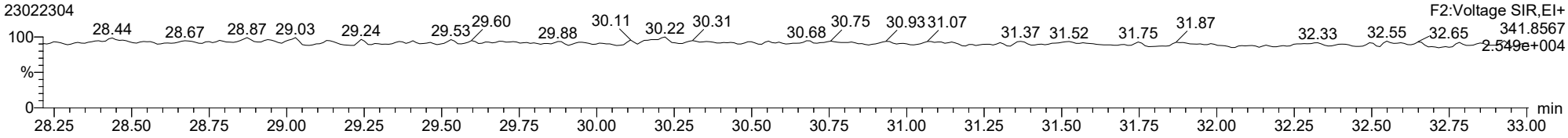

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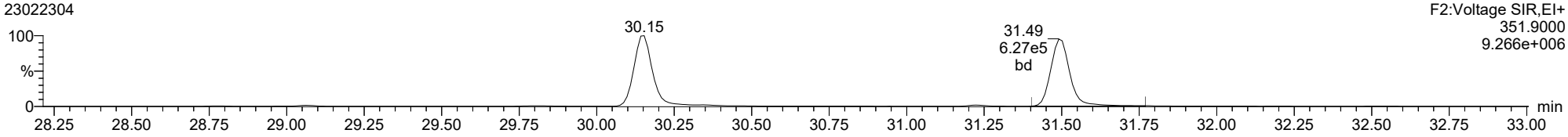

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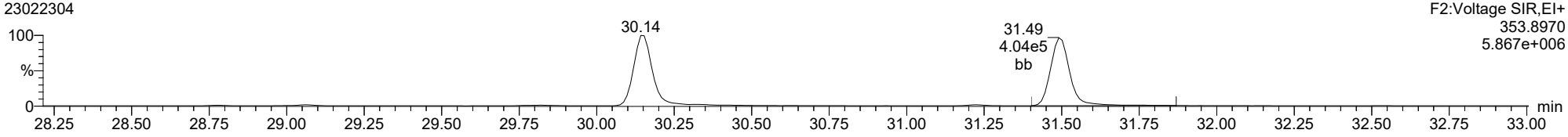
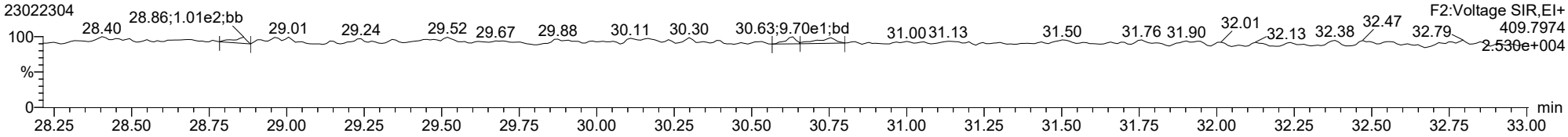


FUNCTION2 HPCDPE



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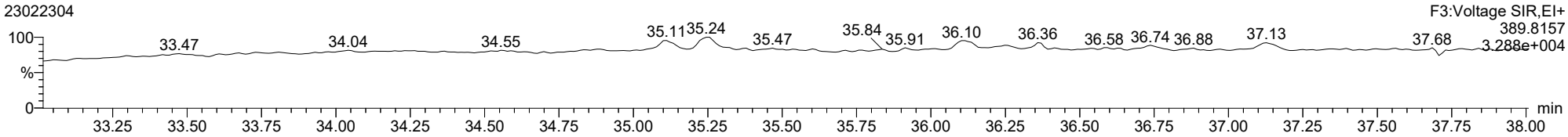

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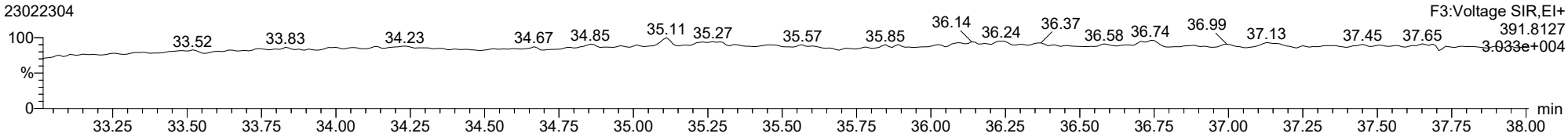

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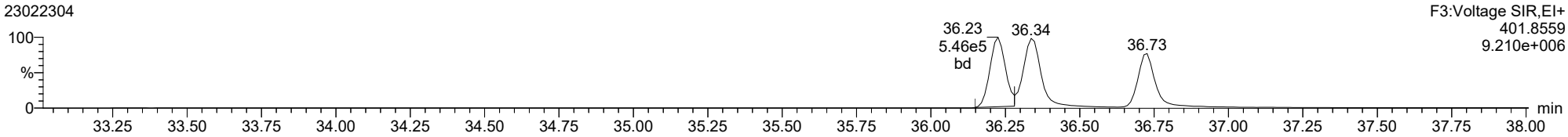

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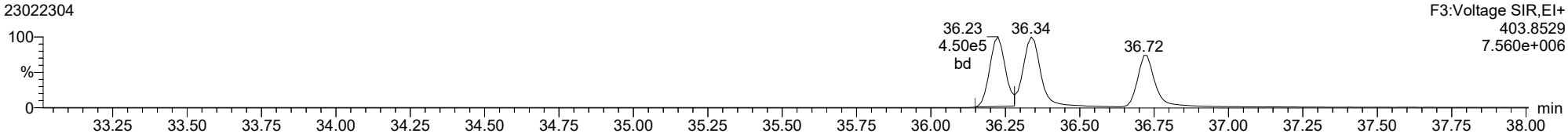
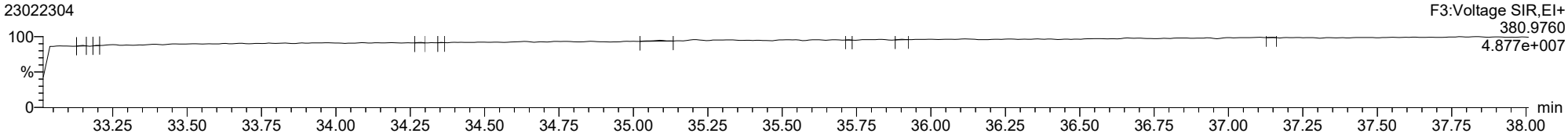


FUNCTION3 PFK



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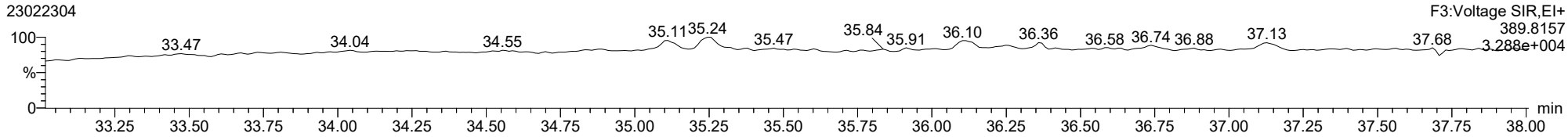

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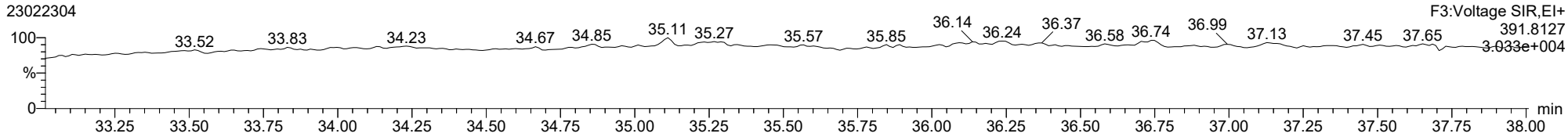

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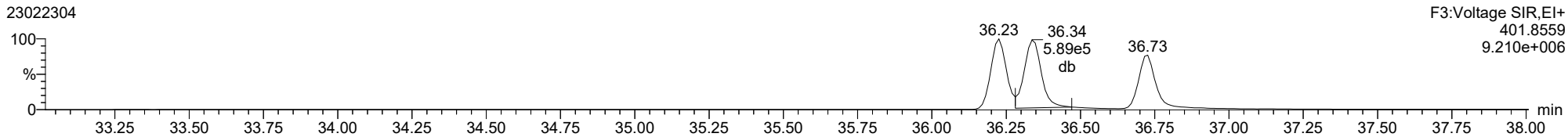

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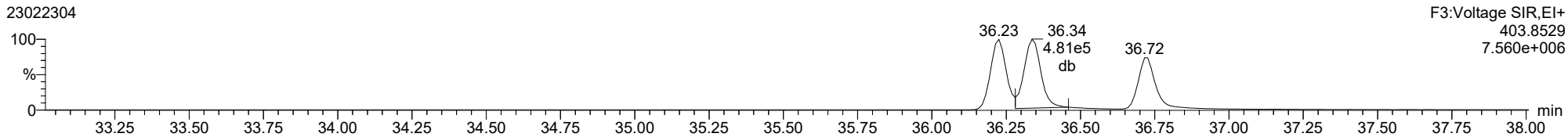

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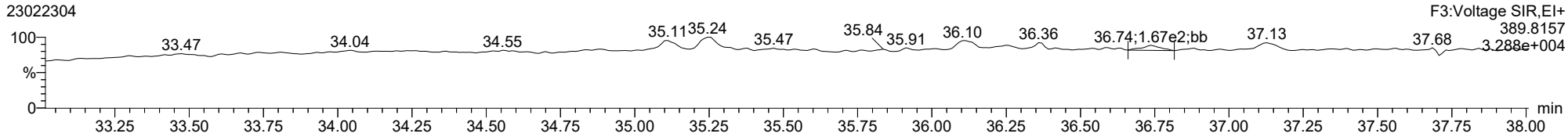

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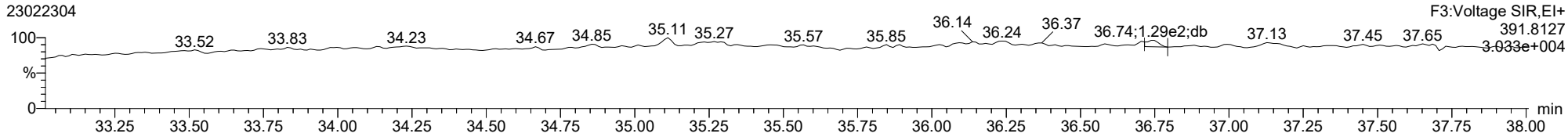

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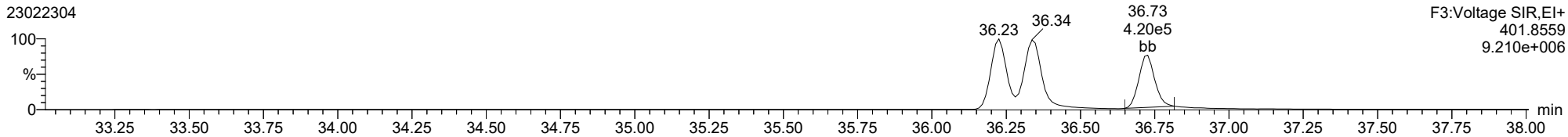

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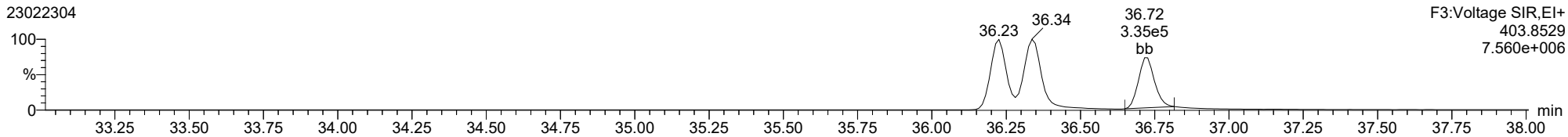

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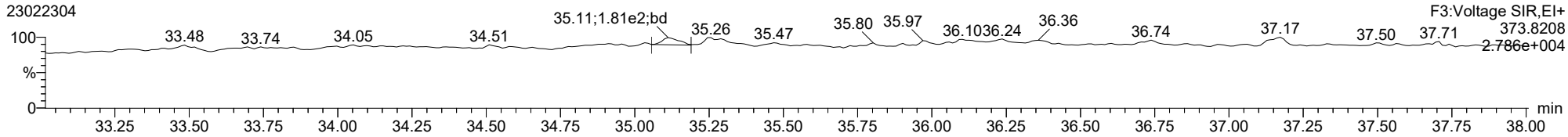

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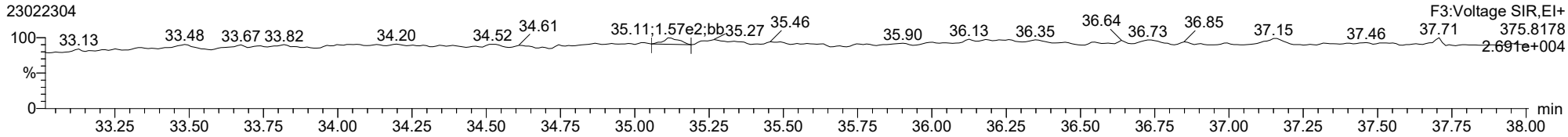

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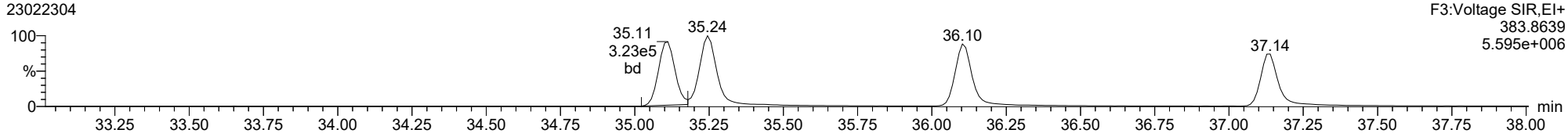

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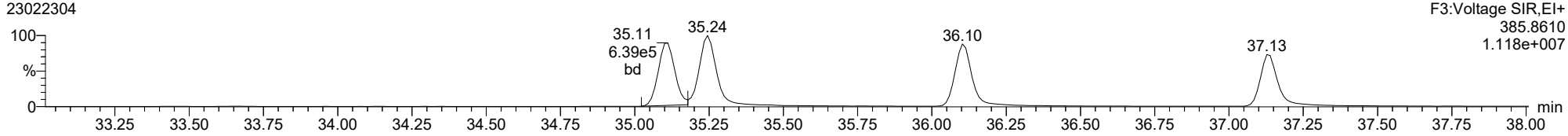
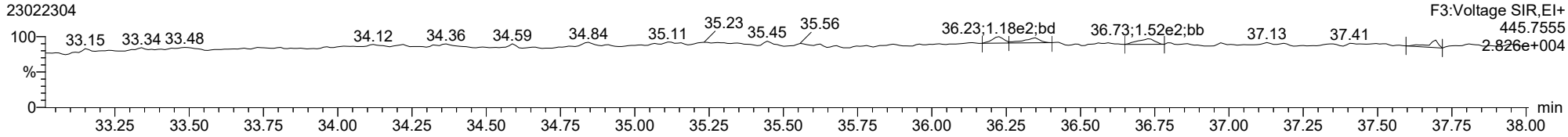


FUNCTION3 OCDPE



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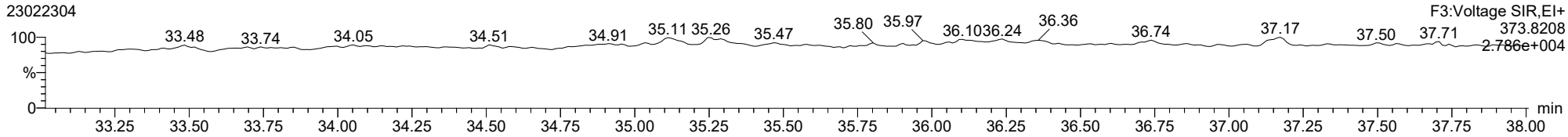

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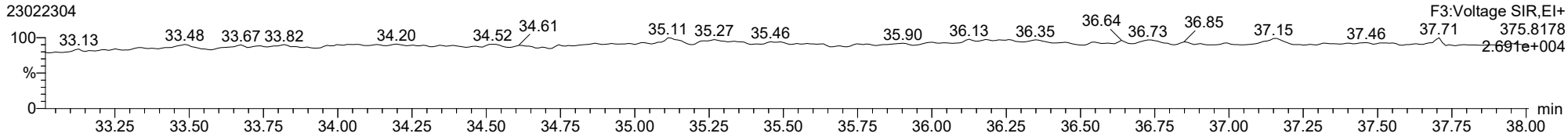

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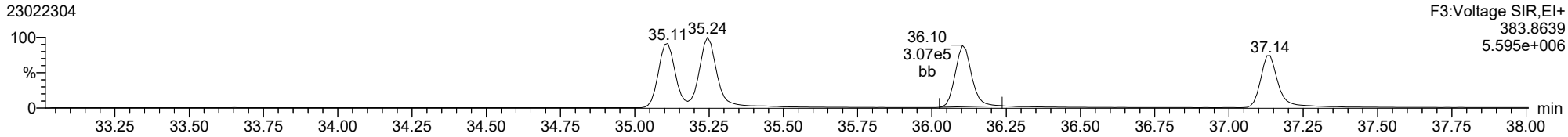

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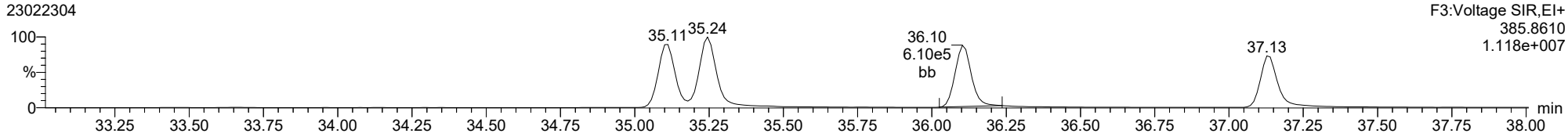
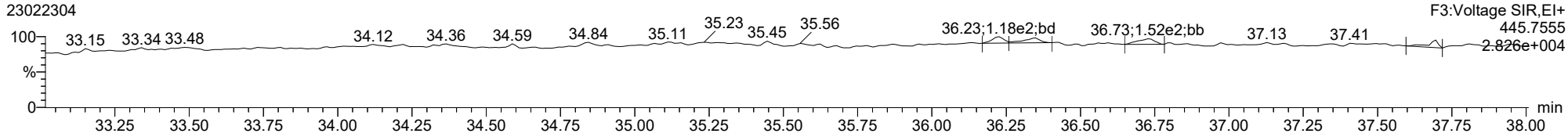


FUNCTION3 OCDPE



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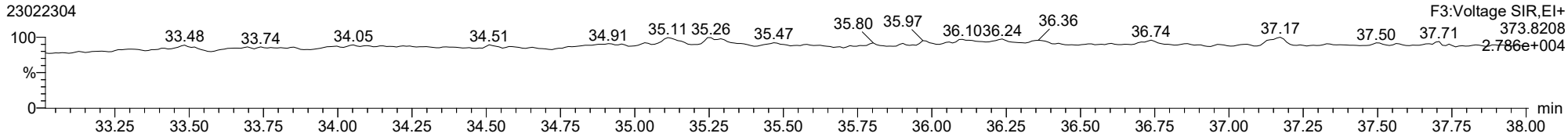

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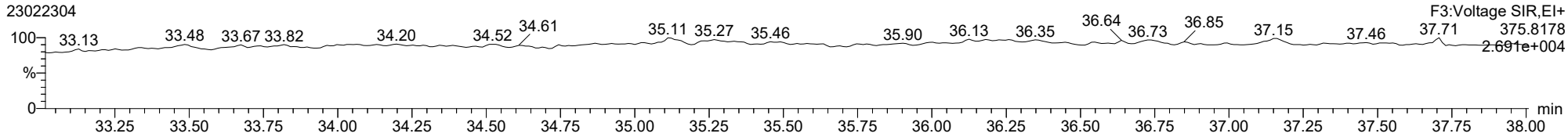

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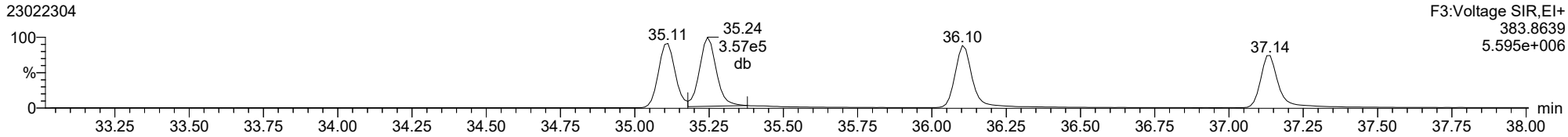

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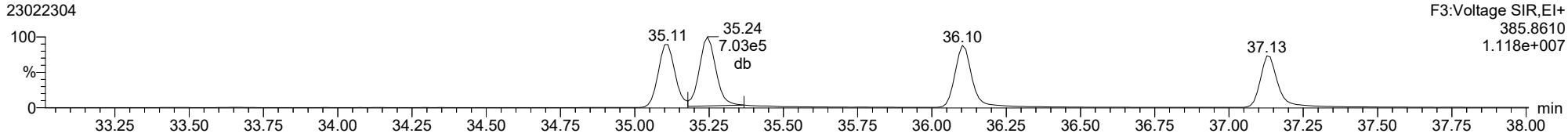
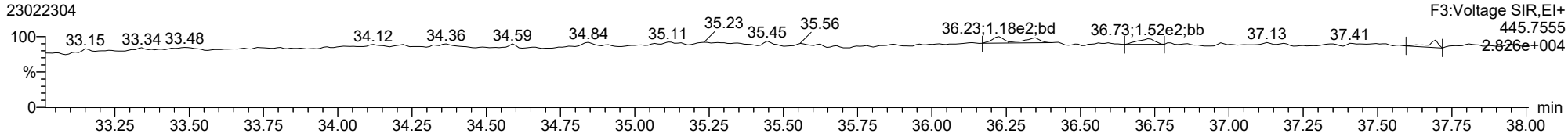


FUNCTION3 OCDPE



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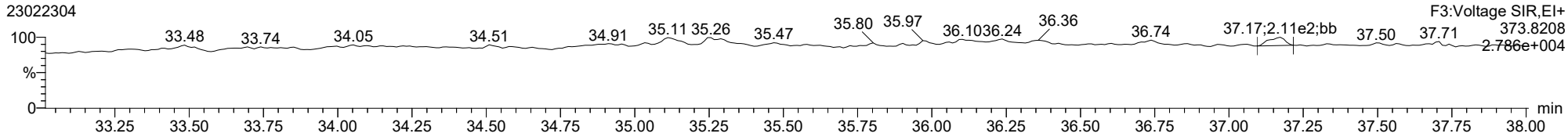

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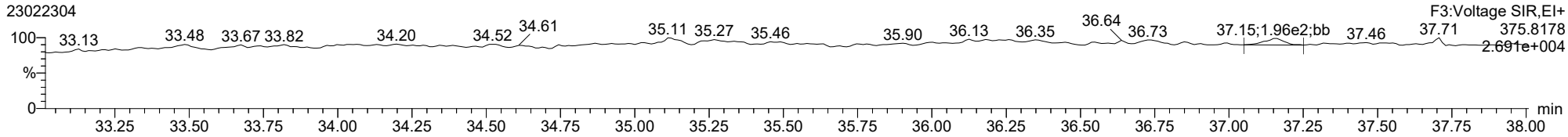

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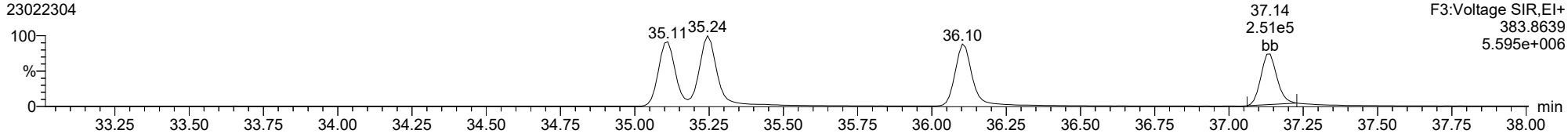

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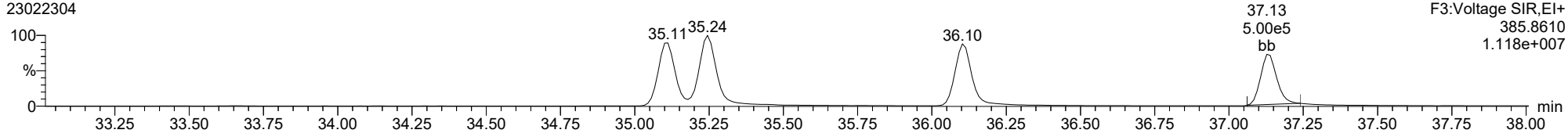
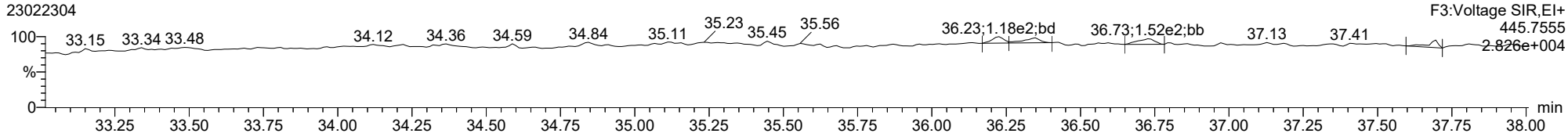
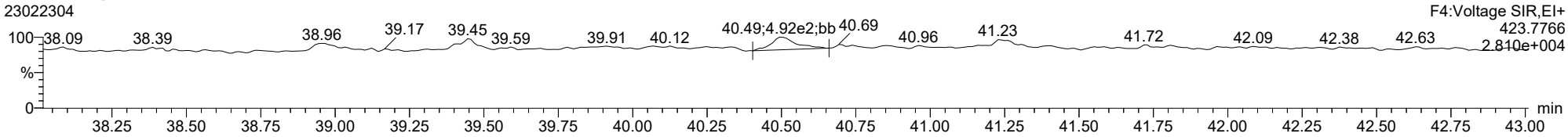


FUNCTION3 OCDPE



ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

1234678-HpCDD



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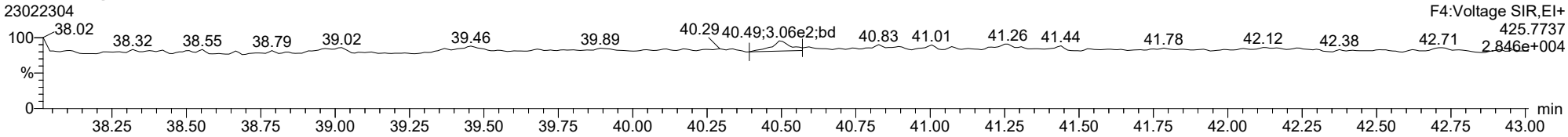
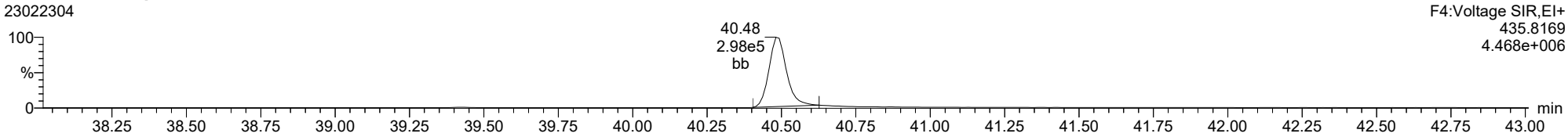


13C-1234678-HpCDD



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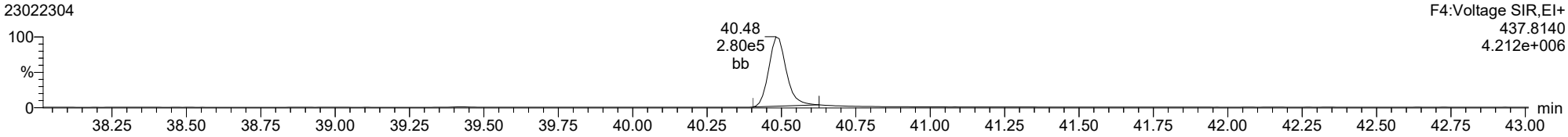
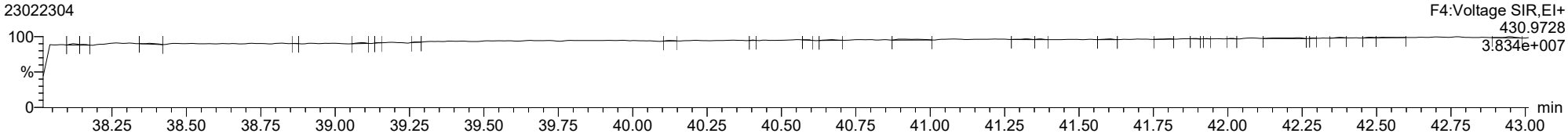
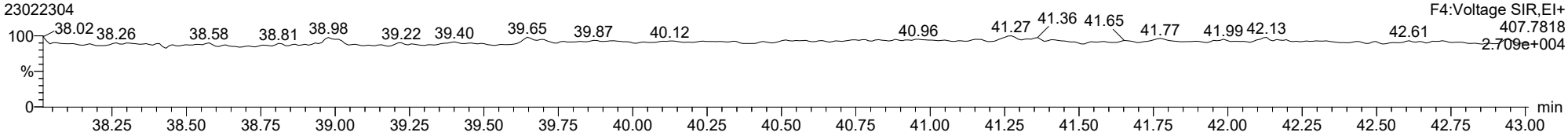


FUNCTION4 PFK



ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

1234678-HpCDF



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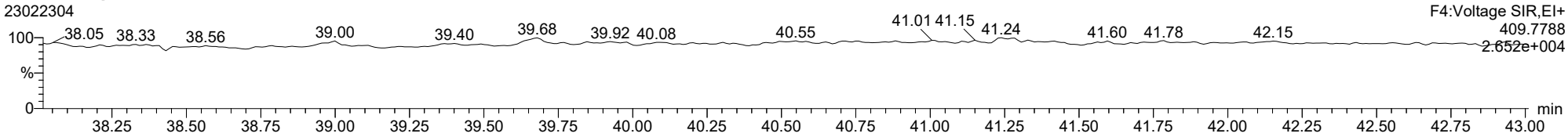

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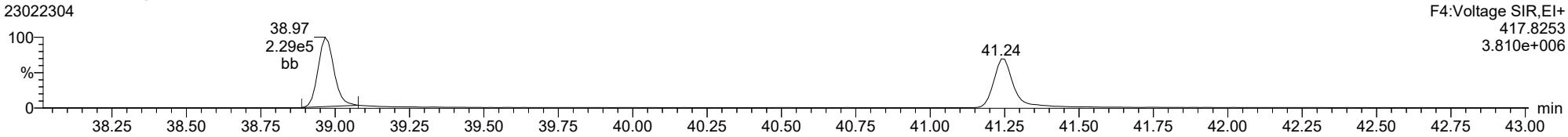

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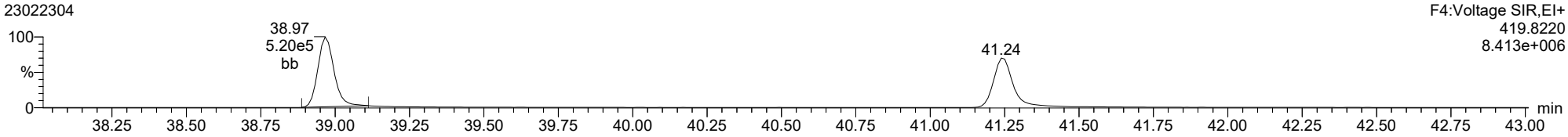
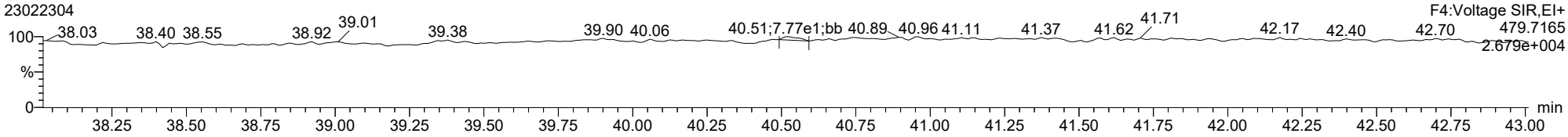
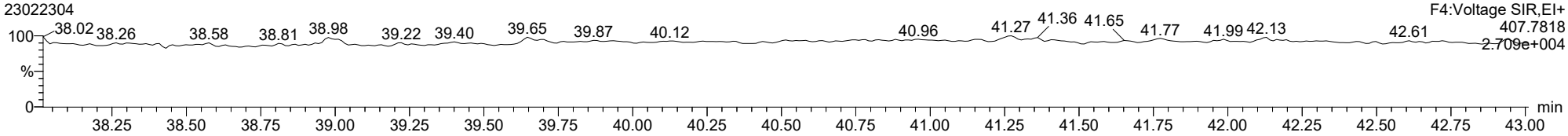


FUNCTION4 NCDPE

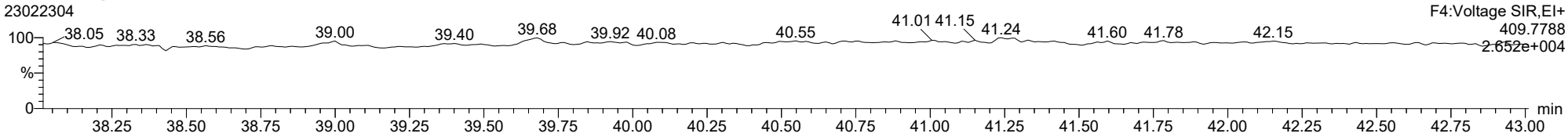


ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

1234789-HpCDF



1234789-HpCDF



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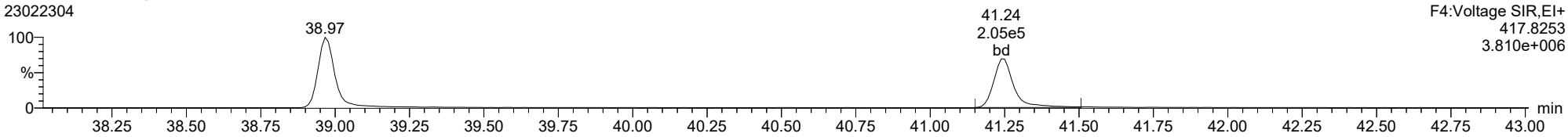

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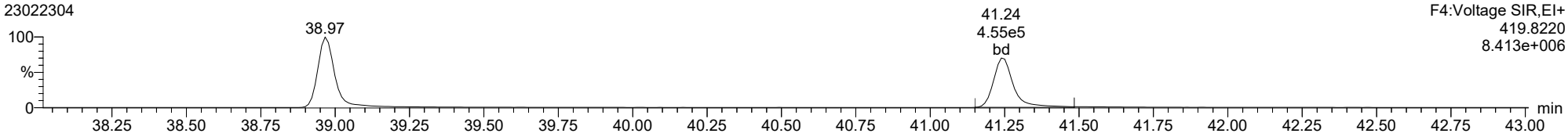
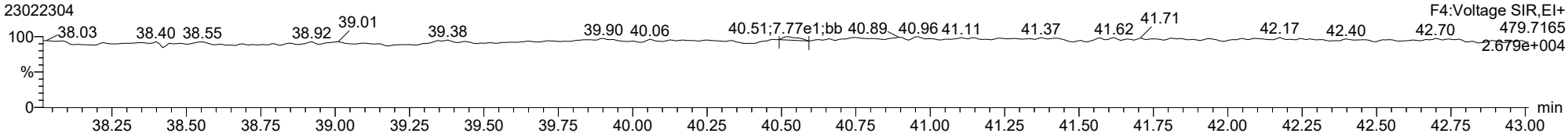
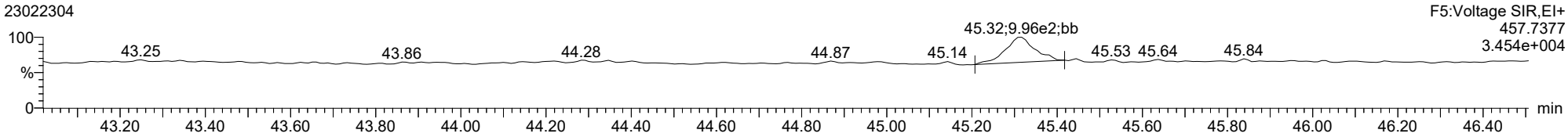


FUNCTION4 NCDPE

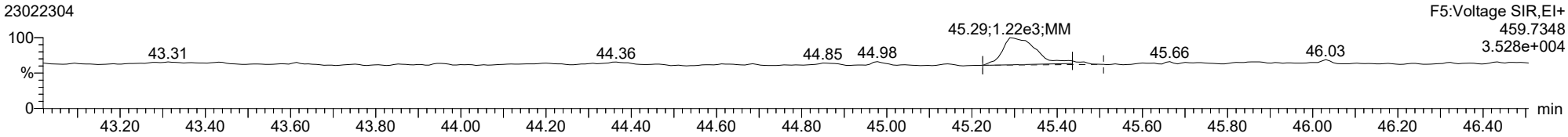


ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

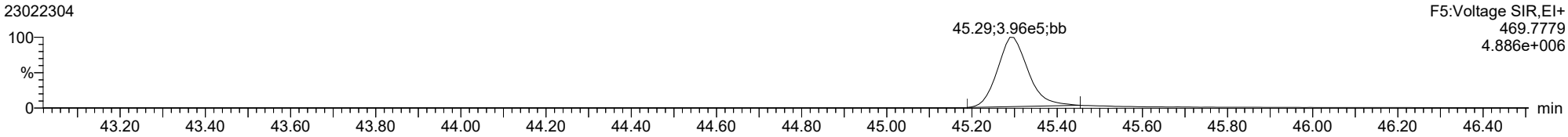
OCDD



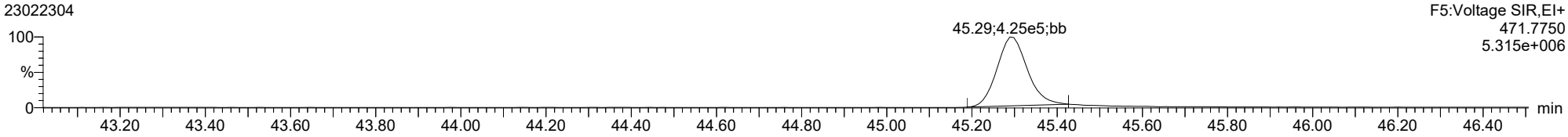
OCDD



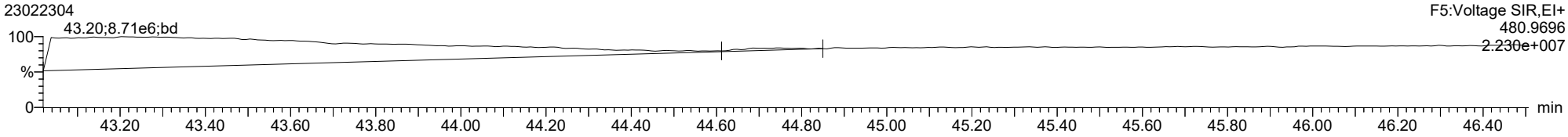
13C-OCDD



13C-OCDD



FUNCTION5 PFK



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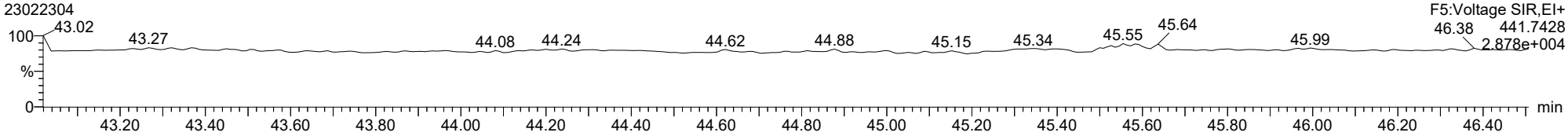
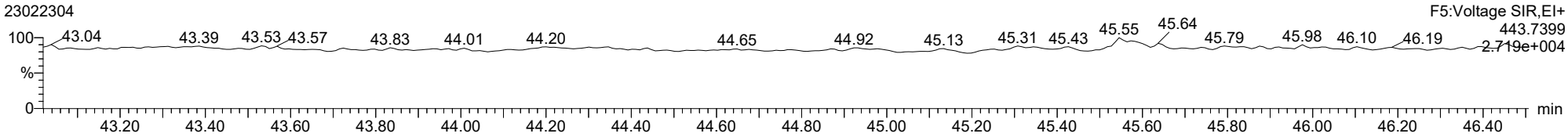
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:10:10 Pacific Standard Time

ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

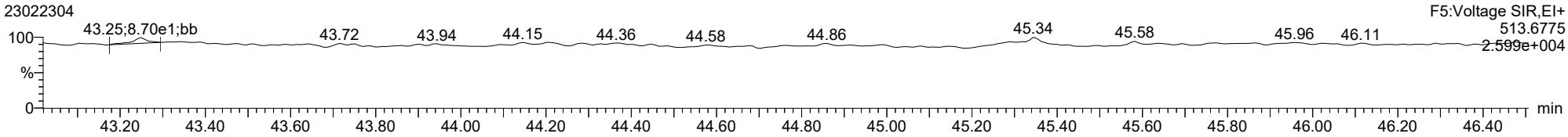
OCDF



OCDF



FUNCTION5 DCDPE



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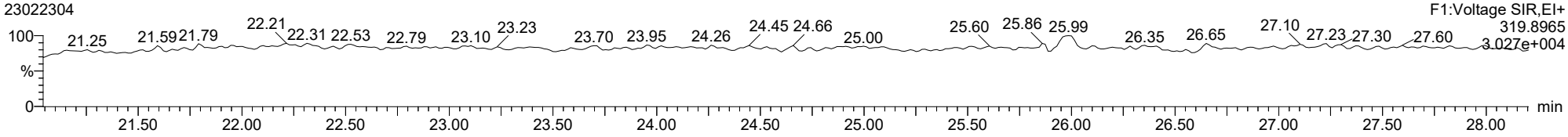
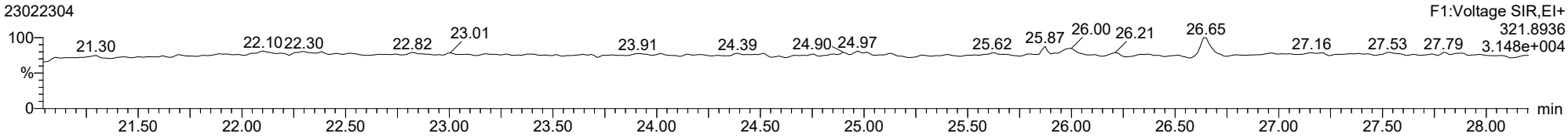
ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

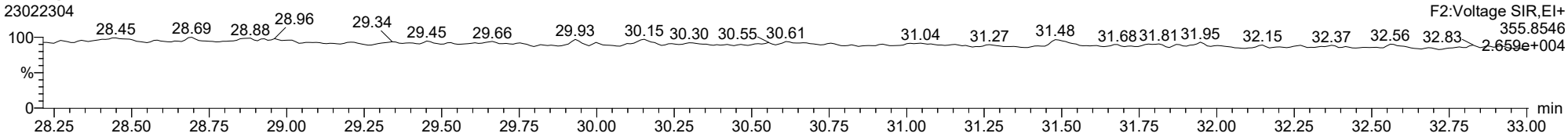
Total-tetradioxins



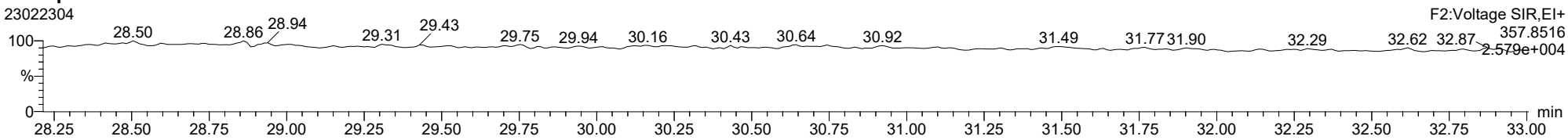
Total-tetradioxins



Total-pentadioxins

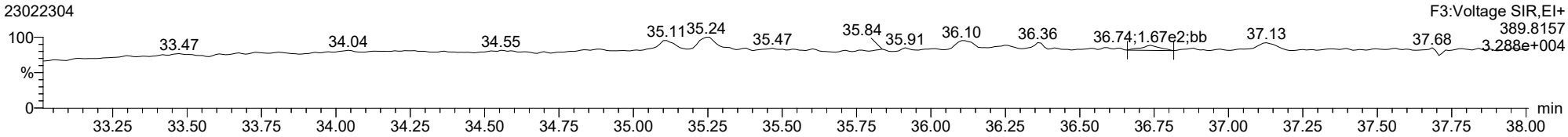


Total-pentadioxins

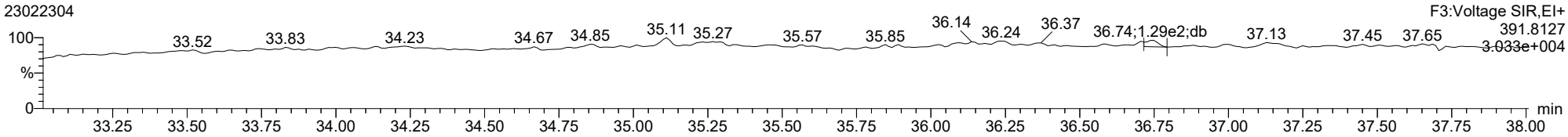


ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

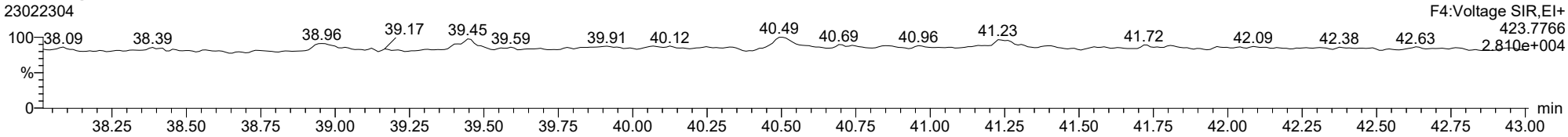
Total-hexadioxins



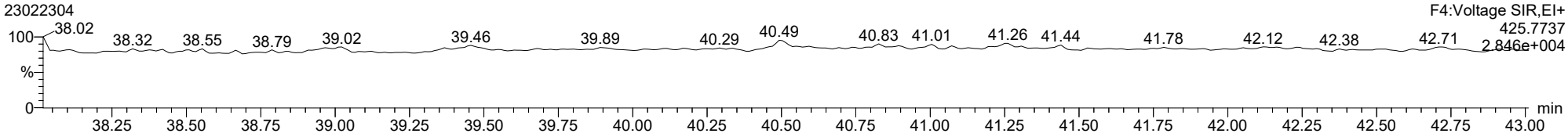
Total-hexadioxins



Total-heptadioxins



Total-heptadioxins



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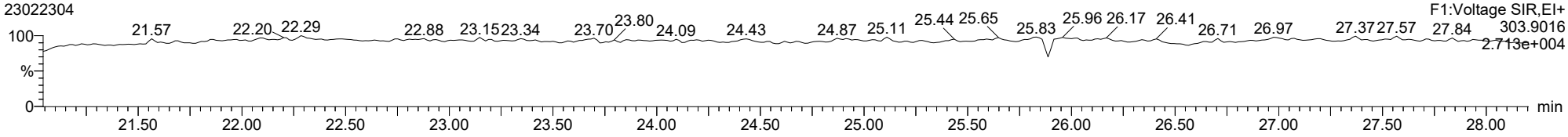
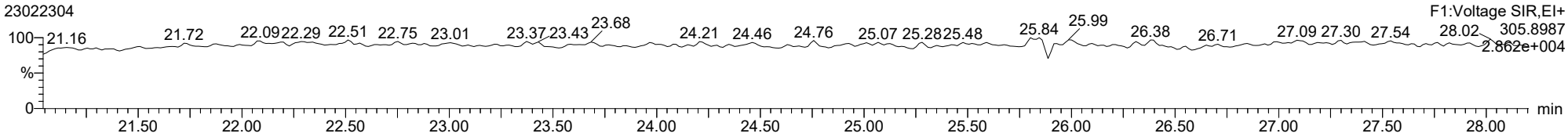
ID: BLA0261-BLK1, Name: 23022304, Date: 23-Feb-2023, Time: 12:35:43, Conditions: AUTOSPEC01, User: pk

Total-tetrafurans



Total-tetrafurans



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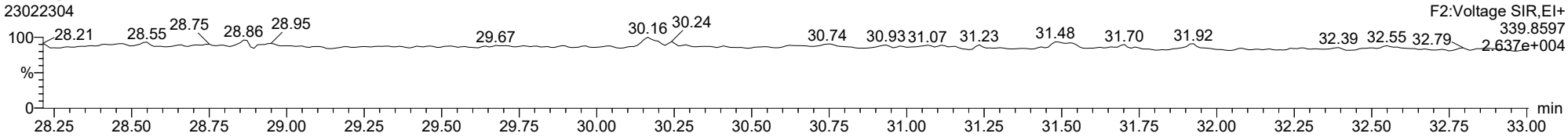

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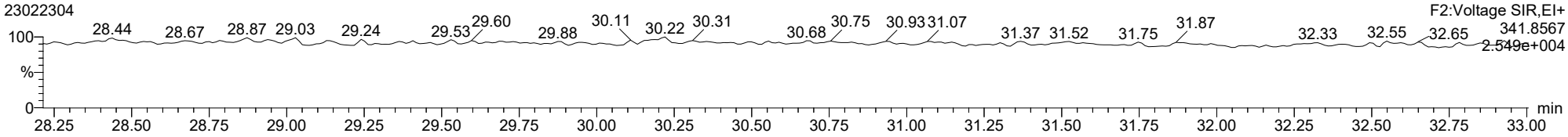

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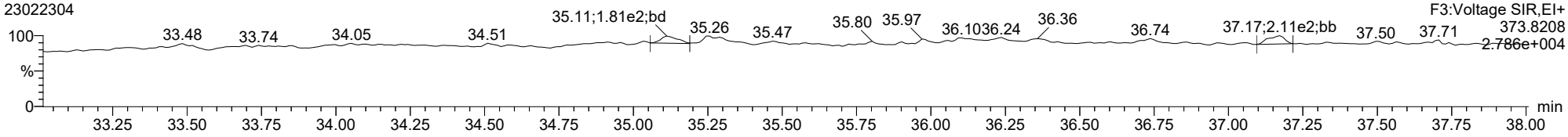
Total-hexafurans



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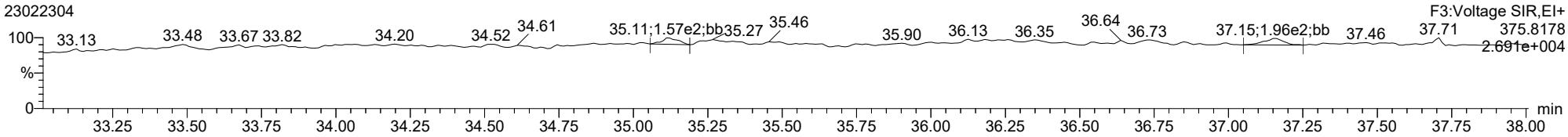

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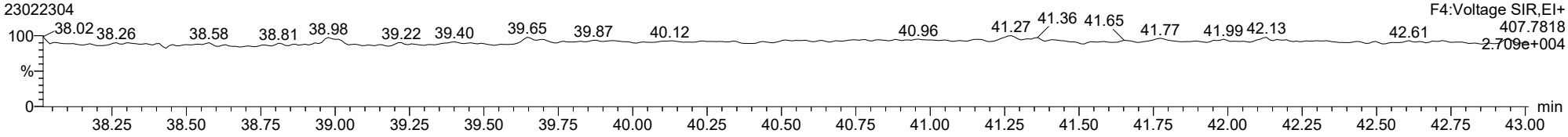
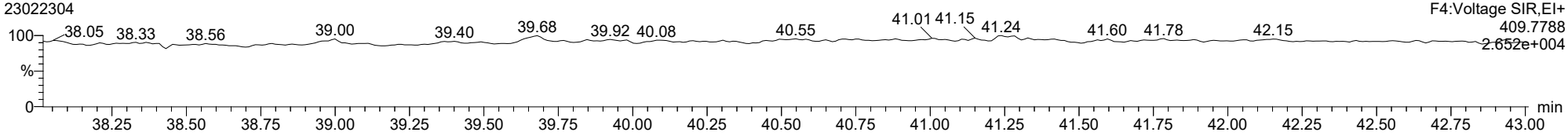


Total-heptafurans



LCS RECOVERY
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/24/23 10:33
Batch:	BLA0261	Laboratory ID:	BLA0261-BS1
Preparation:	EPA 1613	Sequence Name:	LCS
Initial/Final:	18.08 g / 20 uL		

COMPOUND	SPIKE ADDED (ng/kg wet)	LCS CONCENTRATION (ng/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
2,3,7,8-TCDF	11.1	10.4	B	93.8	75 - 158
2,3,7,8-TCDD	11.1	9.36		84.6	67 - 158
1,2,3,7,8-PeCDF	55.3	53.0		95.8	80 - 134
2,3,4,7,8-PeCDF	55.3	53.1		96.0	68 - 160
1,2,3,7,8-PeCDD	55.3	57.2		103	70 - 142
1,2,3,4,7,8-HxCDF	55.3	47.6	B	86.0	72 - 134
1,2,3,6,7,8-HxCDF	55.3	46.4	*	83.9 *	84 - 130
2,3,4,6,7,8-HxCDF	55.3	47.8		86.4	70 - 156
1,2,3,7,8,9-HxCDF	55.3	47.3	B	85.5	78 - 130
1,2,3,4,7,8-HxCDD	55.3	49.2		89.0	70 - 164
1,2,3,6,7,8-HxCDD	55.3	46.5		84.1	76 - 134
1,2,3,7,8,9-HxCDD	55.3	44.6	B	80.7	64 - 162
1,2,3,4,6,7,8-HpCDF	55.3	53.6		96.9	82 - 122
1,2,3,4,7,8,9-HpCDF	55.3	47.7		86.3	78 - 138
1,2,3,4,6,7,8-HpCDD	55.3	51.1	B	92.4	70 - 140
OCDF	111	86.9		78.6	63 - 170
OCDD	111	113	B	102	78 - 144

* Indicates values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IHBS.qld
Last Altered: Friday, February 24, 2023 15:04:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:05:19 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.986	1.001	3.400e4	4.355e4	0.876	0.781	0.770	973	992	4.96e5	6.52e5	510.1	657.1	NO	bd	dd	9.375
12378-PeCDF	30.153	1.001	2.181e5	1.465e5	0.845	1.489	1.550	1763	1819	3.26e6	2.11e6	1851.2	1158.0	NO	bb	bd	47.922
23478-PeCDF	31.490	1.000	2.276e5	1.506e5	0.911	1.512	1.550	1763	1819	3.44e6	2.24e6	1949.2	1234.0	NO	bb	bb	47.988
123478-HxCDF	35.100	1.000	2.029e5	1.668e5	1.182	1.217	1.240	1576	1373	3.12e6	2.59e6	1978.6	1884.8	NO	bd	bd	42.987
234678-HxCDF	36.103	1.000	2.120e5	1.722e5	1.229	1.231	1.240	1576	1373	3.10e6	2.51e6	1968.2	1831.6	NO	bd	bd	43.203
123678-HxCDF	35.245	1.001	2.399e5	1.944e5	1.248	1.234	1.240	1576	1373	3.32e6	2.66e6	2107.6	1935.9	NO	dd	dd	41.949
123789-HxCDF	37.128	1.000	1.781e5	1.494e5	1.187	1.192	1.240	1576	1373	2.62e6	2.13e6	1661.1	1551.9	NO	bd	bd	42.753
1234678-HpCDF	38.966	1.000	1.790e5	1.793e5	1.204	0.998	1.050	1648	1731	2.77e6	2.67e6	1679.4	1543.3	NO	bd	bd	48.435
1234789-HpCDF	41.239	1.000	1.403e5	1.344e5	1.165	1.044	1.050	1648	1731	1.84e6	1.79e6	1115.7	1032.3	NO	bd	bb	43.131
OCDF	45.528	1.006	1.863e5	2.046e5	1.186	0.911	0.890	868	1912	2.08e6	2.29e6	2402.1	1195.8	NO	bd	bd	78.556
2378-TCDD	26.622	1.001	3.176e4	4.061e4	1.236	0.782	0.770	804	823	4.78e5	6.11e5	594.6	742.8	NO	bd	bd	8.459
12378-PeCDD	31.747	1.001	1.603e5	9.965e4	1.087	1.609	1.550	707	1191	2.44e6	1.54e6	3449.9	1294.6	NO	bb	bb	51.675
123478-HxCDD	36.214	1.000	1.799e5	1.487e5	0.987	1.209	1.240	1973	1435	2.78e6	2.34e6	1410.4	1630.5	NO	bd	bd	44.513
123678-HxCDD	36.337	1.001	2.052e5	1.707e5	1.021	1.203	1.240	1973	1435	3.03e6	2.46e6	1536.8	1717.1	NO	dd	db	42.068
123789-HxCDD	36.716	1.011	1.788e5	1.437e5	0.985	1.244	1.240	1973	1435	2.72e6	2.15e6	1381.0	1499.4	NO	bb	bb	40.325
1234678-HpCDD	40.481	1.000	1.402e5	1.411e5	1.253	0.994	1.050	1458	1730	2.05e6	1.95e6	1405.6	1127.6	NO	bb	bd	46.180
OCDD	45.290	1.000	2.185e5	2.531e5	1.103	0.863	0.890	2342	1624	2.42e6	2.81e6	1035.1	1728.9	NO	bd	bd	101.935
13C-2378-TCDF	25.972	1.007	4.079e5	5.364e5	1.768	0.760	0.770	1086	1029	6.10e6	7.93e6	5617.0	7704.5	NO	bb	bb	84.444
13C-12378-PeCDF	30.131	1.168	5.502e5	3.505e5	1.527	1.570	1.550	2130	5526	8.07e6	5.16e6	3789.0	933.0	NO	bd	bd	93.254
13C-23478-PeCDF	31.479	1.221	5.309e5	3.340e5	1.466	1.589	1.550	2130	5526	7.44e6	4.77e6	3493.0	862.5	NO	bb	bb	93.264
13C-123478-HxCDF	35.089	0.956	2.403e5	4.875e5	1.054	0.493	0.510	2965	2559	3.84e6	7.79e6	1293.8	3045.7	NO	bd	bd	108.338
13C-123678-HxCDF	35.223	0.960	2.757e5	5.539e5	1.080	0.498	0.510	2965	2559	3.99e6	8.17e6	1346.6	3192.1	NO	db	db	120.486
13C-234678-HxCDF	36.092	0.983	2.450e5	4.788e5	1.014	0.512	0.510	2965	2559	3.75e6	7.40e6	1264.3	2893.1	NO	bb	bb	111.921
13C-123789-HxCDF	37.117	1.011	2.163e5	4.293e5	0.928	0.504	0.510	2965	2559	3.39e6	6.73e6	1141.6	2631.2	NO	bb	bb	109.123
13C-1234678-HpCDF	38.955	1.061	1.903e5	4.241e5	1.036	0.449	0.440	2164	2327	3.04e6	6.71e6	1403.5	2884.1	NO	bb	bb	92.999
13C-1234789-HpCDF	41.228	1.123	1.679e5	3.788e5	0.905	0.443	0.440	2164	2327	2.10e6	4.74e6	971.8	2038.0	NO	bb	bd	94.758
13C-1234-TCDD	25.788	0.000	2.747e5	3.578e5	1.000	0.768	0.770	1268	851	4.42e6	5.69e6	3485.6	6688.0	NO	bb	bb	100.000
13C-2378-TCDD	26.608	1.032	3.012e5	3.908e5	1.103	0.771	0.770	1268	851	4.73e6	6.10e6	3727.4	7174.9	NO	bb	bb	99.193
13C-12378-PeCDD	31.725	1.230	2.937e5	1.693e5	0.914	1.735	1.550	1164	1230	4.05e6	2.37e6	3475.0	1923.7	NO	bb	bb	80.071
13C-123478-HxCDD	36.203	0.986	4.046e5	3.432e5	0.933	1.179	1.240	2164	1936	6.56e6	5.43e6	3033.1	2806.2	NO	bd	bd	125.729
13C-123678-HxCDD	36.314	0.989	4.668e5	4.085e5	0.965	1.143	1.240	2164	1936	6.98e6	5.70e6	3225.4	2943.1	NO	db	db	142.329
13C-1234678-HpCDD	40.470	1.103	2.530e5	2.334e5	0.782	1.084	1.050	1685	1365	3.54e6	3.33e6	2101.6	2435.8	NO	bb	bb	97.559
13C-OCDD	45.271	1.233	3.987e5	4.403e5	0.788	0.906	0.890	2071	2053	4.69e6	5.13e6	2265.1	2497.7	NO	bb	bb	166.955
13C-123789-HxCDD	36.704	0.000	3.470e5	2.905e5	1.000	1.194	1.240	2164	1936	5.51e6	4.59e6	2547.9	2372.1	NO	bb	bb	100.000
37CL-2378-TCDD	26.622	1.032	2.495e5		1.233			1118		3.75e6		3349.2			bb		31.985

Dataset: T:\Autospec\Processed Data Batch\230223IHBS.qld
Last Altered: Friday, February 24, 2023 15:04:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:05:19 Pacific Standard Time

ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRF	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.469	0.865	3.150e2	3.857e2	1.064	0.817	0.770	973	992	4.67e3	5.93e3	4.8	6.0	NO	bb	bb	0.070
1289-TCDF	27.483	1.058	1.673e2	1.312e2	0.858	1.275	0.770	973	992	2.65e3	3.62e3	2.7	3.7	YES	bb	bb	0.037
13468-PECDF	27.342	0.907	2.284e3	1.590e3	1.013	1.437	1.550	551	718	2.59e4	1.96e4	47.1	27.3	NO	bb	bb	0.425
12389-PECDF	32.527	1.079	3.080e3	2.164e3	0.844	1.423	1.550	1763	1819	4.48e4	2.85e4	25.4	15.7	NO	bb	bd	0.690
123468-HXCDF	33.451	0.953	2.077e3	1.661e3	1.197	1.251	1.240	1576	1373	3.00e4	2.58e4	19.0	18.8	NO	bd	bb	0.429
1368-TCDD	23.740	0.892	2.649e2	2.386e2	1.084	1.110	0.770	804	823	3.62e3	3.69e3	4.5	4.5	YES	bb	bb	0.067
1289-TCDD					0.975		0.770	804	823								
12479-PECDD	29.006	0.914	1.806e3	8.510e2	1.837	2.123	1.550	707	1191	2.00e4	9.14e3	28.3	7.7	YES	bb	bb	0.312
12389-PECDD	32.137	1.013	1.418e3	8.009e2	1.252	1.771	1.550	707	1191	2.03e4	1.37e4	28.7	11.5	NO	bb	bb	0.383
124679-HXCDD	34.209	0.945	1.691e3	1.275e3	1.033	1.326	1.240	1973	1435	2.48e4	1.79e4	12.6	12.5	NO	bb	bb	0.384
1234679-HPCDD	39.423	0.974	7.538e3	7.019e3	1.286	1.074	1.050	1458	1730	1.10e5	1.01e5	75.2	58.5	NO	bb	bb	2.327
Total-tetrafurans			3.604e4		0.933			973		5.28e5							9.915
Total-penta1			2.284e3					551		2.59e4							0.425
Total-pentafurans			4.494e5		0.866			1763		6.76e6							96.723
Total-hexafurans			8.351e5		1.208			1576		1.22e7							171.320
Total-heptafurans			3.193e5		1.185			1648		4.61e6							91.565
Total-Furans			1.828e6		1.067			973		2.62e7							448.504
Total-tetradioxins			3.440e4		1.099			804		5.12e5							9.239
Total-pentadioxins			1.617e5		1.392			707		2.46e6							52.058
Total-hexadioxins			5.656e5		1.007			1973		8.56e6							127.290
Total-heptadioxins			1.478e5		1.269			1458		2.16e6							48.507
Total-Dioxins			1.128e6		1.165			804		1.61e7							339.028
Total-TEQ			2.956e6					804		4.23e7							787.532
FUNCTION1 PFK			5.290e7					267379		2.31e7							
FUNCTION2 PFK			1.054e5					121995		3.57e6							0.000
FUNCTION3 PFK			2.584e5					298195		8.18e6							0.000
FUNCTION4 PFK			7.994e6					199842		1.31e7							
FUNCTION5 PFK			3.348e4					130260		1.36e6							
FUNCTION1 HXCD...			1.639e2					417		2.72e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			3.008e2					786		4.68e3							0.000
FUNCTION3 OCDPE			5.773e2					700		1.60e4							0.000
FUNCTION4 NCDPE			2.107e3					783		2.66e4							0.000
FUNCTION5 DCDPE			0.000e0					528		0.00e0							

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.99	3.400e4	4.355e4	0.876	0.78	0.77	510.1	YES	NO	bd	dd	9.375
2	Total-tetrafurans	25.80	9.248e2	1.294e3	0.933	0.71	0.77	15.3	YES	NO	bb	bd	0.252
3	Total-tetrafurans	25.07	4.227e2	6.355e2	0.933	0.67	0.77	6.5	YES	NO	db	db	0.120
4	Total-tetrafurans	24.74	3.752e2	4.914e2	0.933	0.76	0.77	6.2	YES	NO	bd	bd	0.098
5	1368-TCDF	22.47	3.150e2	3.857e2	1.064	0.82	0.77	4.8	YES	NO	bb	bb	0.070

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.34	2.284e3	1.590e3	1.013	1.44	1.55	47.1	YES	NO	bb	bb	0.425

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.53	3.080e3	2.164e3	0.844	1.42	1.55	25.4	YES	NO	bb	bd	0.690
2	23478-PeCDF	31.49	2.276e5	1.506e5	0.911	1.51	1.55	1949.2	YES	NO	bb	bb	47.988
3	12378-PeCDF	30.15	2.181e5	1.465e5	0.845	1.49	1.55	1851.2	YES	NO	bb	bd	47.922
4	Total-pentafurans	29.77	5.740e2	3.641e2	0.866	1.58	1.55	5.7	YES	NO	bb	bb	0.123

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123468-HXCDF	33.45	2.077e3	1.661e3	1.197	1.25	1.24	19.0	YES	NO	bd	bb	0.429
2	123789-HxCDF	37.13	1.781e5	1.494e5	1.187	1.19	1.24	1661.1	YES	NO	bd	bd	42.753
3	234678-HxCDF	36.10	2.120e5	1.722e5	1.229	1.23	1.24	1968.2	YES	NO	bd	bd	43.203
4	123678-HxCDF	35.25	2.399e5	1.944e5	1.248	1.23	1.24	2107.6	YES	NO	dd	dd	41.949
5	123478-HxCDF	35.10	2.029e5	1.668e5	1.182	1.22	1.24	1978.6	YES	NO	bd	bd	42.987

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.97	1.790e5	1.793e5	1.204	1.00	1.05	1679.4	YES	NO	bd	bd	48.435
2	1234789-HpCDF	41.24	1.403e5	1.344e5	1.165	1.04	1.05	1115.7	YES	NO	bd	bb	43.131

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.99	3.400e4	4.355e4	0.876	0.78	0.77	510.1	YES	NO	bd	dd	9.375
2	Total-tetrafurans	25.80	9.248e2	1.294e3	0.933	0.71	0.77	15.3	YES	NO	bb	bd	0.252
3	Total-tetrafurans	25.07	4.227e2	6.355e2	0.933	0.67	0.77	6.5	YES	NO	db	db	0.120
4	Total-tetrafurans	24.74	3.752e2	4.914e2	0.933	0.76	0.77	6.2	YES	NO	bd	bd	0.098
5	1368-TCDF	22.47	3.150e2	3.857e2	1.064	0.82	0.77	4.8	YES	NO	bb	bb	0.070
6	12389-PECDF	32.53	3.080e3	2.164e3	0.844	1.42	1.55	25.4	YES	NO	bb	bd	0.690
7	23478-PeCDF	31.49	2.276e5	1.506e5	0.911	1.51	1.55	1949.2	YES	NO	bb	bb	47.988
8	12378-PeCDF	30.15	2.181e5	1.465e5	0.845	1.49	1.55	1851.2	YES	NO	bb	bd	47.922
9	Total-pentafurans	29.77	5.740e2	3.641e2	0.866	1.58	1.55	5.7	YES	NO	bb	bb	0.123
10	123468-HXCDF	33.45	2.077e3	1.661e3	1.197	1.25	1.24	19.0	YES	NO	bd	bb	0.429
11	123789-HxCDF	37.13	1.781e5	1.494e5	1.187	1.19	1.24	1661.1	YES	NO	bd	bd	42.753
12	234678-HxCDF	36.10	2.120e5	1.722e5	1.229	1.23	1.24	1968.2	YES	NO	bd	bd	43.203
13	123678-HxCDF	35.25	2.399e5	1.944e5	1.248	1.23	1.24	2107.6	YES	NO	dd	dd	41.949
14	123478-HxCDF	35.10	2.029e5	1.668e5	1.182	1.22	1.24	1978.6	YES	NO	bd	bd	42.987
15	1234678-HpCDF	38.97	1.790e5	1.793e5	1.204	1.00	1.05	1679.4	YES	NO	bd	bd	48.435
16	OCDF	45.53	1.863e5	2.046e5	1.186	0.91	0.89	2402.1	YES	NO	bd	bd	78.556
17	1234789-HpCDF	41.24	1.403e5	1.344e5	1.165	1.04	1.05	1115.7	YES	NO	bd	bb	43.131
18	13468-PECDF	27.34	2.284e3	1.590e3	1.013	1.44	1.55	47.1	YES	NO	bb	bb	0.425

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	26.75	1.550e3	1.976e3	1.099	0.78	0.77	26.5	YES	NO	db	db	0.464
2	2378-TCDD	26.62	3.176e4	4.061e4	1.236	0.78	0.77	594.6	YES	NO	bd	bd	8.459
3	Total-tetradioxins	26.24	1.095e3	1.308e3	1.099	0.84	0.77	15.2	YES	NO	bb	bb	0.316

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	32.14	1.418e3	8.009e2	1.252	1.77	1.55	28.7	YES	NO	bb	bb	0.383
2	12378-PeCDD	31.75	1.603e5	9.965e4	1.087	1.61	1.55	3449.9	YES	NO	bb	bb	51.675

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HXCDD	34.21	1.691e3	1.275e3	1.033	1.33	1.24	12.6	YES	NO	bb	bb	0.384
2	123789-HxCDD	36.72	1.788e5	1.437e5	0.985	1.24	1.24	1381.0	YES	NO	bb	bb	40.325
3	123678-HxCDD	36.34	2.052e5	1.707e5	1.021	1.20	1.24	1536.8	YES	NO	dd	db	42.068
4	123478-HxCDD	36.21	1.799e5	1.487e5	0.987	1.21	1.24	1410.4	YES	NO	bd	bd	44.513

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.48	1.402e5	1.411e5	1.253	0.99	1.05	1405.6	YES	NO	bb	bd	46.180
2	1234679-HPCDD	39.42	7.538e3	7.019e3	1.286	1.07	1.05	75.2	YES	NO	bb	bb	2.327

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	26.75	1.550e3	1.976e3	1.099	0.78	0.77	26.5	YES	NO	db	db	0.464
2	2378-TCDD	26.62	3.176e4	4.061e4	1.236	0.78	0.77	594.6	YES	NO	bd	bd	8.459
3	Total-tetradioxins	26.24	1.095e3	1.308e3	1.099	0.84	0.77	15.2	YES	NO	bb	bb	0.316
4	124679-HXCDD	34.21	1.691e3	1.275e3	1.033	1.33	1.24	12.6	YES	NO	bb	bb	0.384
5	12389-PECDD	32.14	1.418e3	8.009e2	1.252	1.77	1.55	28.7	YES	NO	bb	bb	0.383
6	12378-PeCDD	31.75	1.603e5	9.965e4	1.087	1.61	1.55	3449.9	YES	NO	bb	bb	51.675
7	123789-HxCDD	36.72	1.788e5	1.437e5	0.985	1.24	1.24	1381.0	YES	NO	bb	bb	40.325
8	123678-HxCDD	36.34	2.052e5	1.707e5	1.021	1.20	1.24	1536.8	YES	NO	dd	db	42.068
9	123478-HxCDD	36.21	1.799e5	1.487e5	0.987	1.21	1.24	1410.4	YES	NO	bd	bd	44.513
10	1234678-HpCDD	40.48	1.402e5	1.411e5	1.253	0.99	1.05	1405.6	YES	NO	bb	bd	46.180
11	1234679-HPCDD	39.42	7.538e3	7.019e3	1.286	1.07	1.05	75.2	YES	NO	bb	bb	2.327
12	OCDD	45.29	2.185e5	2.531e5	1.103	0.86	0.89	1035.1	YES	NO	bd	bd	101.935

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.99	3.400e4	4.355e4	0.876	0.78	0.77	510.1	YES	NO	bd	dd	9.375
2	Total-tetrafurans	25.80	9.248e2	1.294e3	0.933	0.71	0.77	15.3	YES	NO	bb	bd	0.252
3	Total-tetrafurans	25.07	4.227e2	6.355e2	0.933	0.67	0.77	6.5	YES	NO	db	db	0.120
4	Total-tetrafurans	24.74	3.752e2	4.914e2	0.933	0.76	0.77	6.2	YES	NO	bd	bd	0.098
5	1368-TCDF	22.47	3.150e2	3.857e2	1.064	0.82	0.77	4.8	YES	NO	bb	bb	0.070
6	12389-PECDF	32.53	3.080e3	2.164e3	0.844	1.42	1.55	25.4	YES	NO	bb	bd	0.690
7	23478-PeCDF	31.49	2.276e5	1.506e5	0.911	1.51	1.55	1949.2	YES	NO	bb	bb	47.988
8	12378-PeCDF	30.15	2.181e5	1.465e5	0.845	1.49	1.55	1851.2	YES	NO	bb	bd	47.922
9	Total-pentafurans	29.77	5.740e2	3.641e2	0.866	1.58	1.55	5.7	YES	NO	bb	bb	0.123
10	123468-HXCDF	33.45	2.077e3	1.661e3	1.197	1.25	1.24	19.0	YES	NO	bd	bb	0.429
11	123789-HxCDF	37.13	1.781e5	1.494e5	1.187	1.19	1.24	1661.1	YES	NO	bd	bd	42.753
12	234678-HxCDF	36.10	2.120e5	1.722e5	1.229	1.23	1.24	1968.2	YES	NO	bd	bd	43.203
13	123678-HxCDF	35.25	2.399e5	1.944e5	1.248	1.23	1.24	2107.6	YES	NO	dd	dd	41.949
14	123478-HxCDF	35.10	2.029e5	1.668e5	1.182	1.22	1.24	1978.6	YES	NO	bd	bd	42.987
15	1234678-HpCDF	38.97	1.790e5	1.793e5	1.204	1.00	1.05	1679.4	YES	NO	bd	bd	48.435
16	OCDF	45.53	1.863e5	2.046e5	1.186	0.91	0.89	2402.1	YES	NO	bd	bd	78.556
17	1234789-HpCDF	41.24	1.403e5	1.344e5	1.165	1.04	1.05	1115.7	YES	NO	bd	bb	43.131
18	13468-PECDF	27.34	2.284e3	1.590e3	1.013	1.44	1.55	47.1	YES	NO	bb	bb	0.425
19	Total-tetradioxins	26.75	1.550e3	1.976e3	1.099	0.78	0.77	26.5	YES	NO	db	db	0.464
20	2378-TCDD	26.62	3.176e4	4.061e4	1.236	0.78	0.77	594.6	YES	NO	bd	bd	8.459
21	Total-tetradioxins	26.24	1.095e3	1.308e3	1.099	0.84	0.77	15.2	YES	NO	bb	bb	0.316
22	124679-HXCDD	34.21	1.691e3	1.275e3	1.033	1.33	1.24	12.6	YES	NO	bb	bb	0.384
23	12389-PECDD	32.14	1.418e3	8.009e2	1.252	1.77	1.55	28.7	YES	NO	bb	bb	0.383
24	12378-PeCDD	31.75	1.603e5	9.965e4	1.087	1.61	1.55	3449.9	YES	NO	bb	bb	51.675
25	123789-HxCDD	36.72	1.788e5	1.437e5	0.985	1.24	1.24	1381.0	YES	NO	bb	bb	40.325
26	123678-HxCDD	36.34	2.052e5	1.707e5	1.021	1.20	1.24	1536.8	YES	NO	dd	db	42.068
27	123478-HxCDD	36.21	1.799e5	1.487e5	0.987	1.21	1.24	1410.4	YES	NO	bd	bd	44.513
28	1234678-HpCDD	40.48	1.402e5	1.411e5	1.253	0.99	1.05	1405.6	YES	NO	bb	bd	46.180
29	1234679-HPCDD	39.42	7.538e3	7.019e3	1.286	1.07	1.05	75.2	YES	NO	bb	bb	2.327
30	OCDD	45.29	2.185e5	2.531e5	1.103	0.86	0.89	1035.1	YES	NO	bd	bd	101.935

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	25.52	2.089e7					31.8	YES		db		
2	FUNCTION1 PFK	21.32	3.201e7					54.5	YES		bd		

ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.88	3.453e3					1.2	NO		bb		0.000
2	FUNCTION2 PFK	28.84	2.664e3					0.9	NO		bb		0.000
3	FUNCTION2 PFK	28.40	2.132e3					0.8	NO		bb		0.000
4	FUNCTION2 PFK	28.27	2.537e3					1.1	NO		bb		0.000
5	FUNCTION2 PFK	31.80	1.156e3					0.6	NO		bd		0.000
6	FUNCTION2 PFK	31.76	2.457e3					0.8	NO		bb		0.000
7	FUNCTION2 PFK	31.27	5.747e3					1.4	NO		bb		0.000
8	FUNCTION2 PFK	30.89	6.468e3					1.6	NO		bb		0.000
9	FUNCTION2 PFK	30.81	2.168e3					0.8	NO		bb		0.000
10	FUNCTION2 PFK	30.43	7.800e3					1.4	NO		db		0.000
11	FUNCTION2 PFK	30.35	7.234e3					1.6	NO		bd		0.000
12	FUNCTION2 PFK	29.84	4.582e3					1.2	NO		db		0.000
13	FUNCTION2 PFK	29.81	1.093e3					0.6	NO		bd		0.000
14	FUNCTION2 PFK	29.71	4.583e3					1.3	NO		db		0.000
15	FUNCTION2 PFK	29.67	3.394e3					1.2	NO		bd		0.000
16	FUNCTION2 PFK	29.63	6.024e2					0.4	NO		bb		0.000
17	FUNCTION2 PFK	29.56	3.126e3					0.8	NO		bb		0.000
18	FUNCTION2 PFK	29.27	2.192e3					0.8	NO		bb		0.000
19	FUNCTION2 PFK	29.18	7.018e3					1.4	NO		bb		0.000
20	FUNCTION2 PFK	28.96	4.651e3					1.2	NO		bb		0.000
21	FUNCTION2 PFK	32.94	6.480e2					0.5	NO		bb		0.000
22	FUNCTION2 PFK	32.72	7.948e2					0.5	NO		bb		0.000
23	FUNCTION2 PFK	32.59	2.063e3					0.8	NO		db		0.000
24	FUNCTION2 PFK	32.54	6.761e3					1.3	NO		bd		0.000
25	FUNCTION2 PFK	32.34	5.413e3					1.4	NO		db		0.000
26	FUNCTION2 PFK	32.27	7.088e3					1.4	NO		bd		0.000
27	FUNCTION2 PFK	31.91	2.787e3					1.0	NO		bb		0.000
28	FUNCTION2 PFK	31.84	4.770e3					1.1	NO		db		0.000

ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.74	5.173e3					0.7	NO		db		0.000
2	FUNCTION3 PFK	33.70	1.599e4					1.3	NO		bd		0.000
3	FUNCTION3 PFK	33.28	1.160e4					1.3	NO		bb		0.000
4	FUNCTION3 PFK	33.22	6.639e3					1.1	NO		bb		0.000
5	FUNCTION3 PFK	33.18	1.832e3					0.5	NO		db		0.000
6	FUNCTION3 PFK	33.12	1.060e4					1.2	NO		dd		0.000
7	FUNCTION3 PFK	33.08	1.046e4					1.2	NO		bd		0.000
8	FUNCTION3 PFK	37.38	5.375e3					0.8	NO		bb		0.000
9	FUNCTION3 PFK	37.12	8.851e3					1.4	NO		bb		0.000
10	FUNCTION3 PFK	36.85	5.951e3					0.8	NO		bb		0.000
11	FUNCTION3 PFK	36.54	2.451e3					0.5	NO		bb		0.000
12	FUNCTION3 PFK	36.26	1.660e4					1.7	NO		bb		0.000
13	FUNCTION3 PFK	35.42	6.974e3					0.9	NO		bb		0.000
14	FUNCTION3 PFK	35.27	5.983e3					0.8	NO		bb		0.000
15	FUNCTION3 PFK	35.22	5.450e3					0.7	NO		db		0.000
16	FUNCTION3 PFK	35.18	9.041e3					1.1	NO		bd		0.000
17	FUNCTION3 PFK	35.12	7.176e3					1.0	NO		bb		0.000
18	FUNCTION3 PFK	34.98	1.696e3					0.5	NO		bb		0.000
19	FUNCTION3 PFK	34.93	3.042e3					0.5	NO		bb		0.000
20	FUNCTION3 PFK	34.52	1.528e4					1.5	NO		db		0.000
21	FUNCTION3 PFK	34.47	4.164e4					1.7	NO		bd		0.000
22	FUNCTION3 PFK	34.38	6.283e3					0.7	NO		bb		0.000
23	FUNCTION3 PFK	34.30	1.861e4					1.7	NO		bb		0.000
24	FUNCTION3 PFK	37.87	1.327e4					1.8	NO		db		0.000
25	FUNCTION3 PFK	37.84	6.074e3					1.0	NO		bd		0.000
26	FUNCTION3 PFK	37.64	1.632e4					1.4	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	39.02	6.487e6					22.0	YES		db		
2	FUNCTION4 PFK	38.11	1.507e6					43.4	YES		bd		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	46.35	8.388e3					1.8	NO		bb		
2	FUNCTION5 PFK	44.80	3.819e3					1.4	NO		bb		
3	FUNCTION5 PFK	44.62	5.855e2					0.5	NO		bb		
4	FUNCTION5 PFK	44.49	6.111e2					0.5	NO		bb		
5	FUNCTION5 PFK	44.06	9.205e3					2.1	NO		bb		
6	FUNCTION5 PFK	43.84	4.303e3					1.3	NO		bb		
7	FUNCTION5 PFK	43.63	1.813e3					0.8	NO		bb		
8	FUNCTION5 PFK	43.47	4.159e3					1.5	NO		bb		
9	FUNCTION5 PFK	43.15	5.974e2					0.5	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.72	7.222e1					2.8	NO		bb		0.000
2	FUNCTION1 HXCD...	21.08	9.166e1					3.7	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.67	9.233e1					1.9	NO		bb		0.000
2	FUNCTION2 HPCD...	31.81	9.840e1					2.0	NO		bb		0.000
3	FUNCTION2 HPCD...	28.50	1.101e2					2.1	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	37.90	1.596e2					9.3	YES		bb		0.000
2	FUNCTION3 OCDPE	37.54	1.167e2					2.0	NO		bb		0.000
3	FUNCTION3 OCDPE	37.14	1.111e2					5.3	YES		bb		0.000
4	FUNCTION3 OCDPE	33.59	1.088e2					1.6	NO		bb		0.000
5	FUNCTION3 OCDPE	33.13	8.116e1					4.6	YES		bb		0.000

ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	38.41	2.150e2					5.7	YES		db		0.000
2	FUNCTION4 NCDPE	38.18	3.742e2					1.2	NO		bd		0.000
3	FUNCTION4 NCDPE	41.75	8.586e1					1.6	NO		bb		0.000
4	FUNCTION4 NCDPE	41.44	8.211e1					4.2	YES		db		0.000
5	FUNCTION4 NCDPE	41.43	2.356e2					4.5	YES		dd		0.000
6	FUNCTION4 NCDPE	41.31	1.836e2					2.6	NO		bd		0.000
7	FUNCTION4 NCDPE	38.79	9.675e1					2.5	NO		db		0.000
8	FUNCTION4 NCDPE	38.75	8.022e1					2.5	NO		dd		0.000
9	FUNCTION4 NCDPE	38.59	5.490e2					5.0	YES		dd		0.000
10	FUNCTION4 NCDPE	38.49	2.044e2					4.2	YES		bd		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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Printed: Friday, February 24, 2023 15:05:19 Pacific Standard Time

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ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

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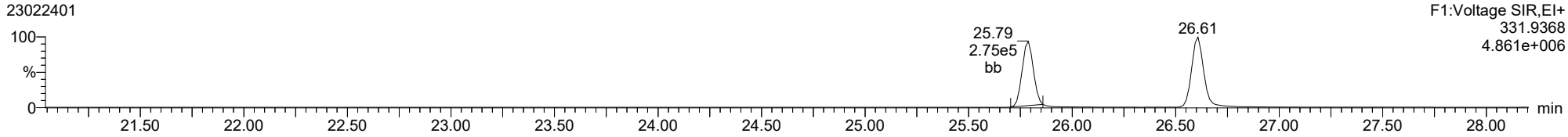

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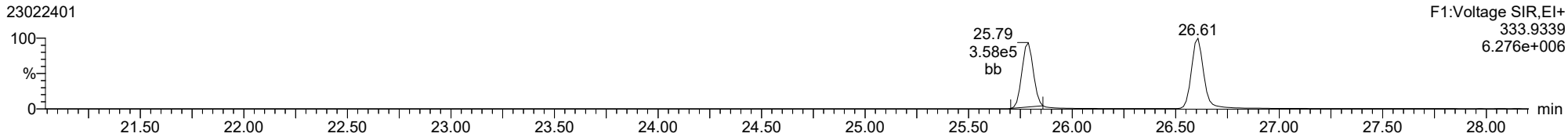
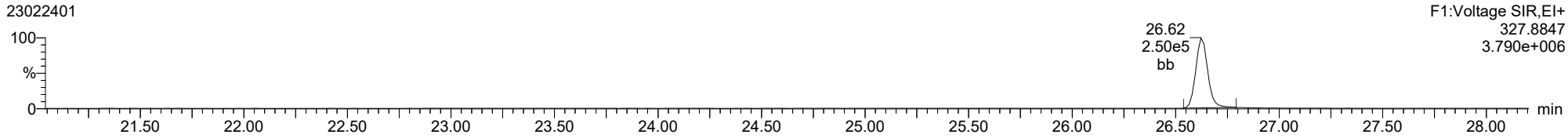


37CL-2378-TCDD



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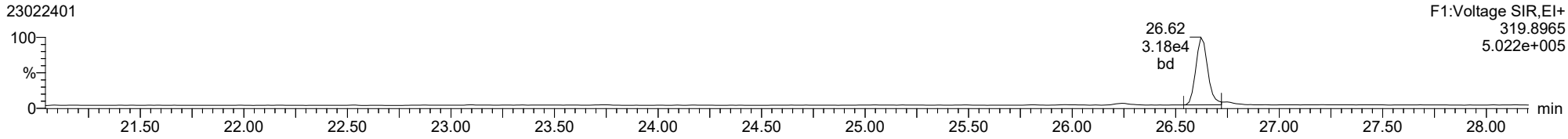

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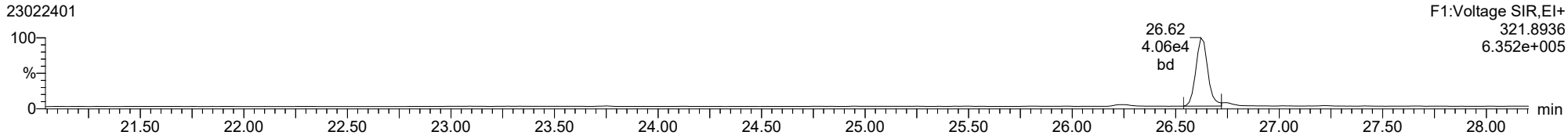

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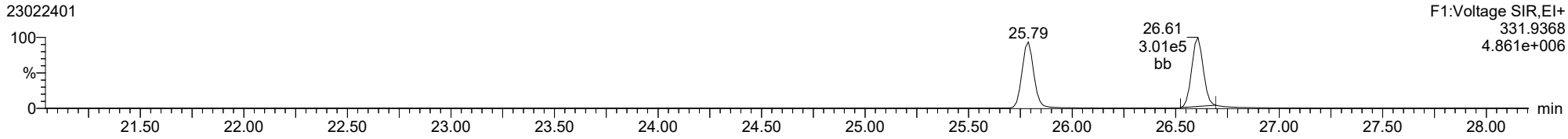

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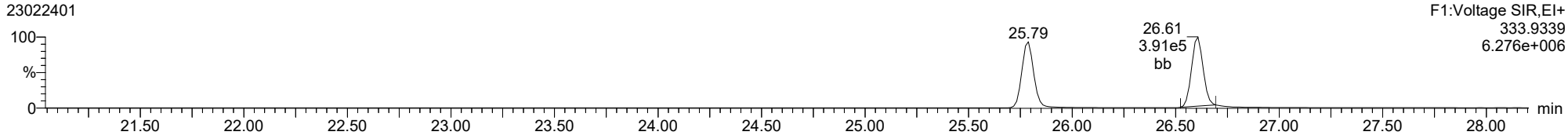
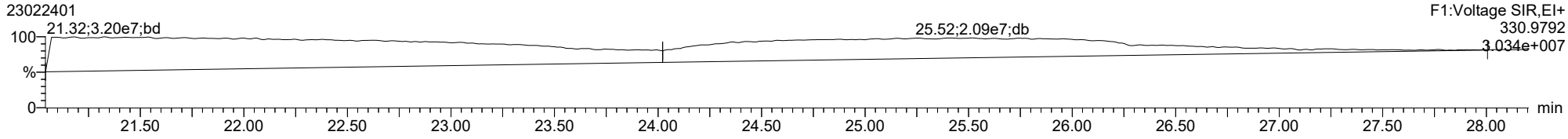


FUNCTION1 PFK



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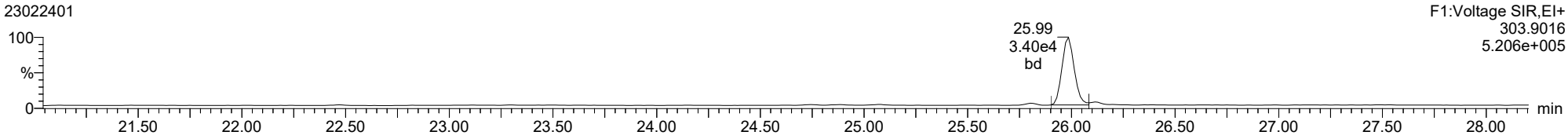
ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

2378-TCDF



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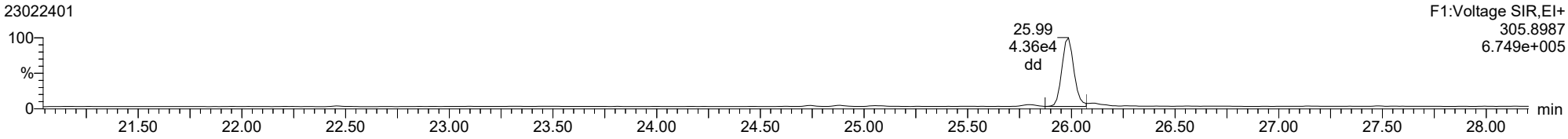

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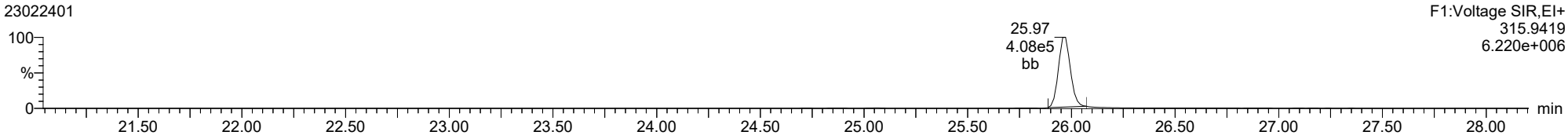

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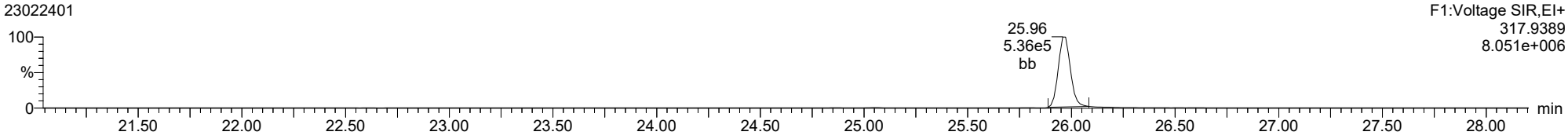

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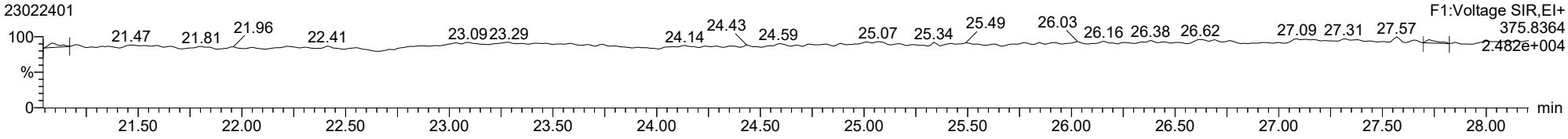

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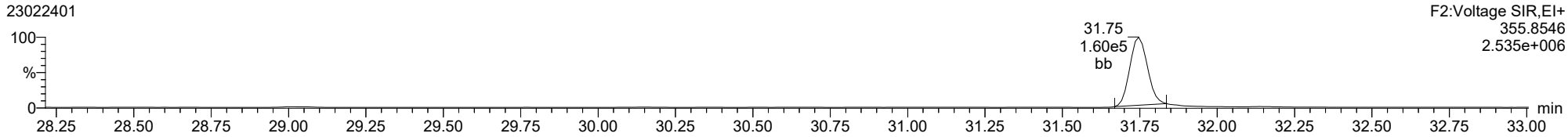
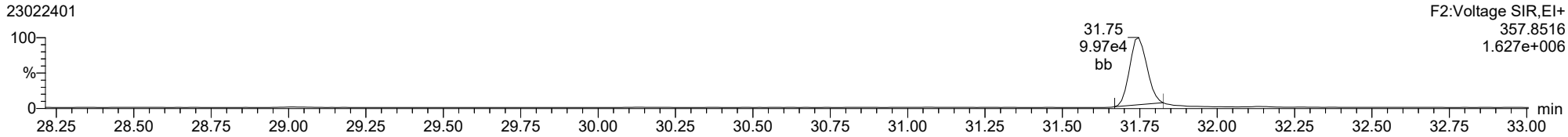
ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



12378-PeCDD



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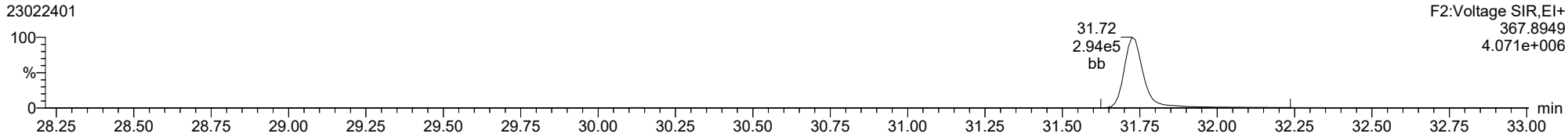

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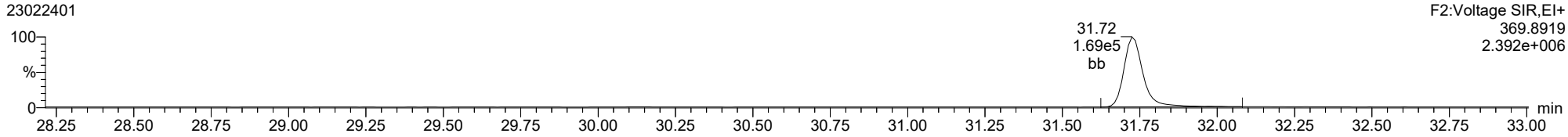
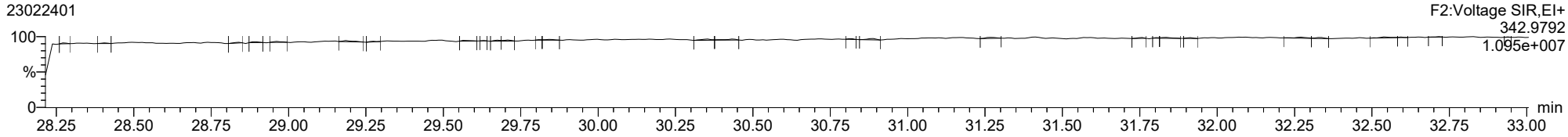


FUNCTION2 PFK



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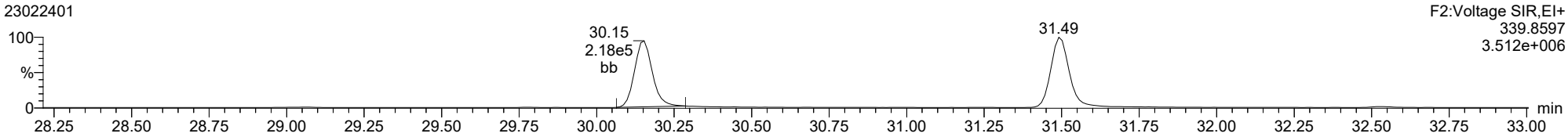
12378-PeCDF



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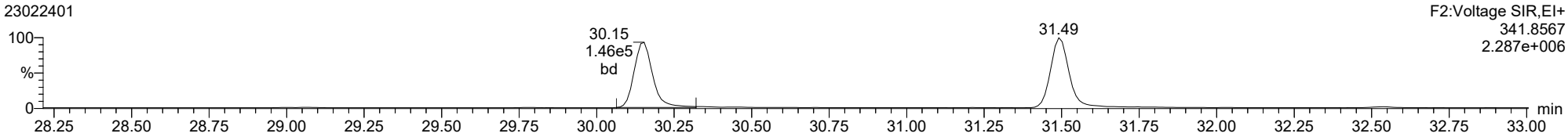

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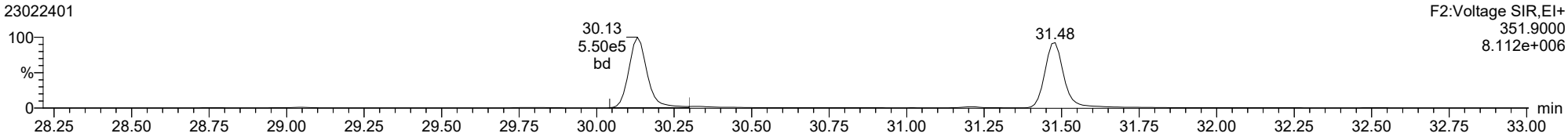

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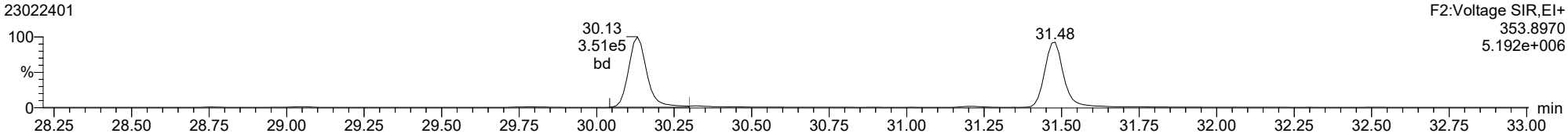
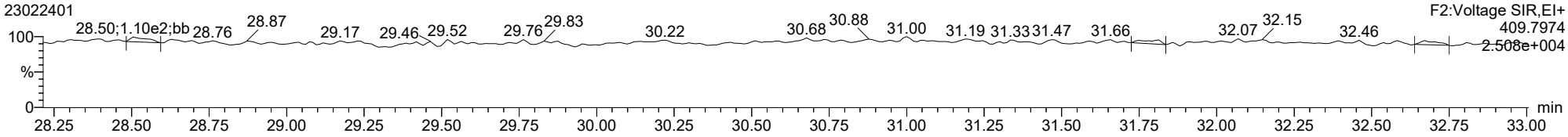


FUNCTION2 HPCDPE



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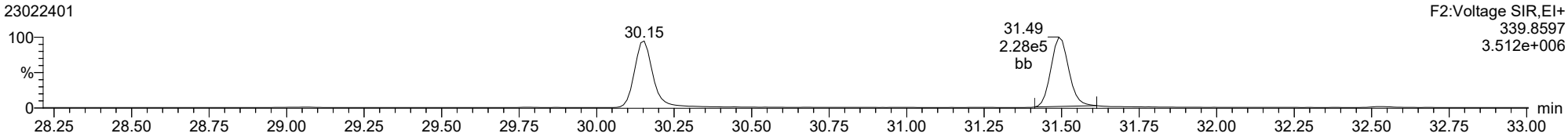

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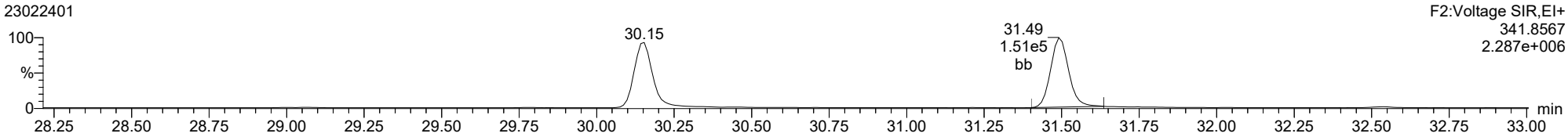

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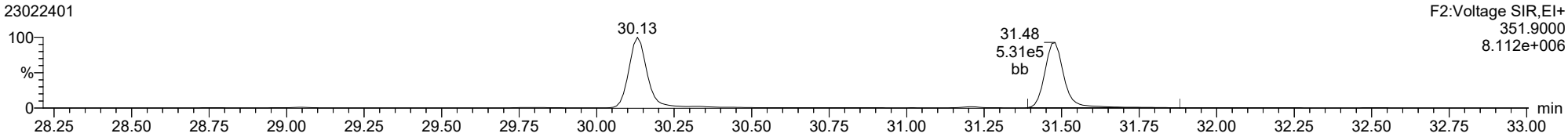

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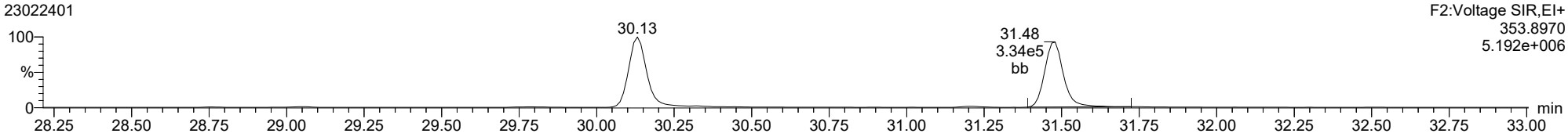

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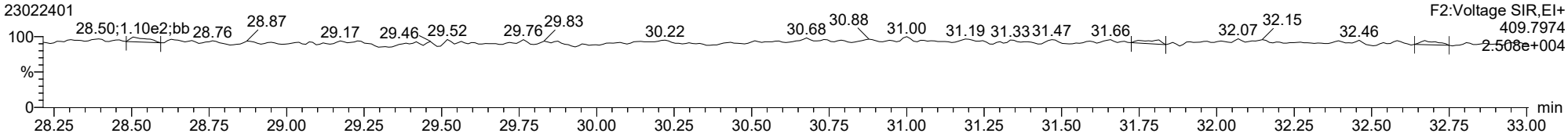

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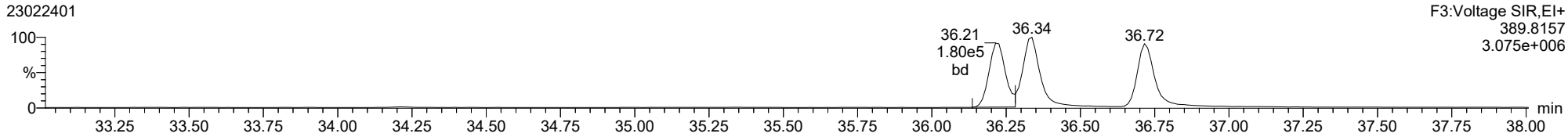
123478-HxCDD



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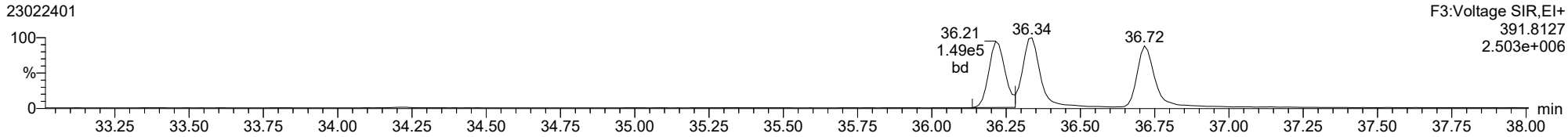

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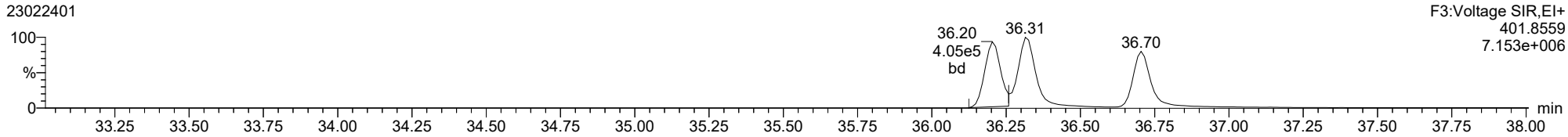

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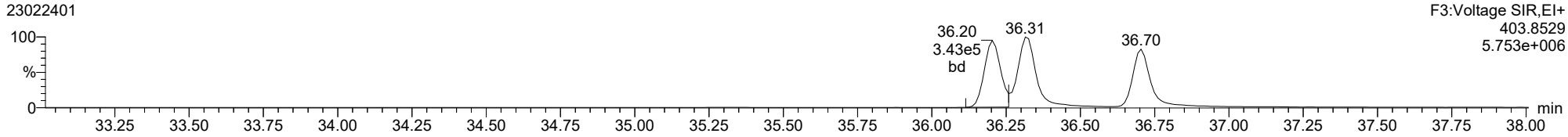

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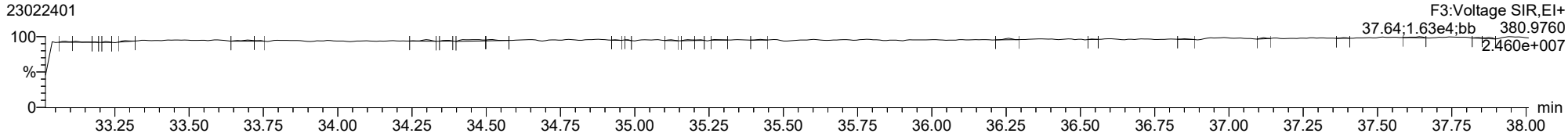

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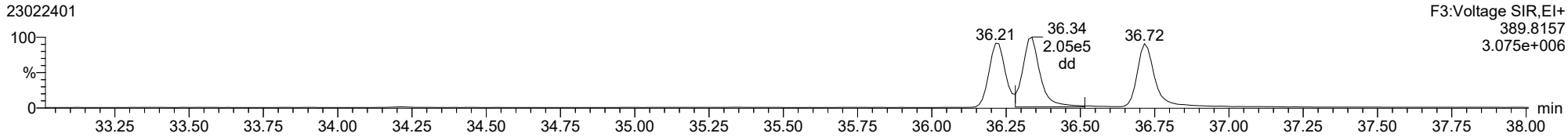

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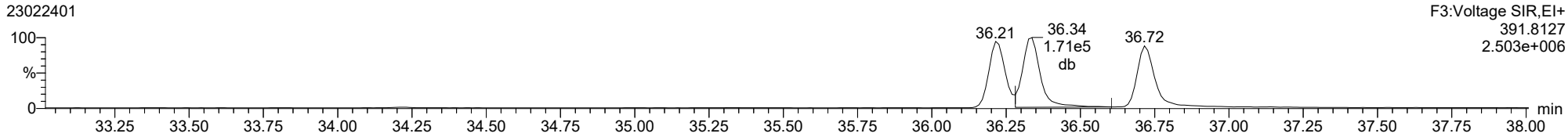

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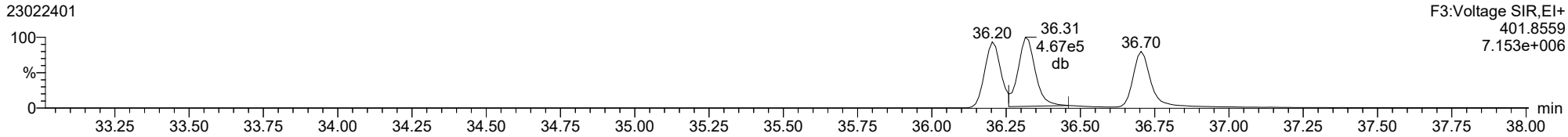

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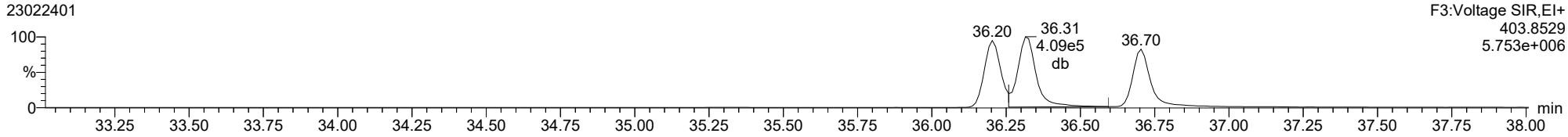

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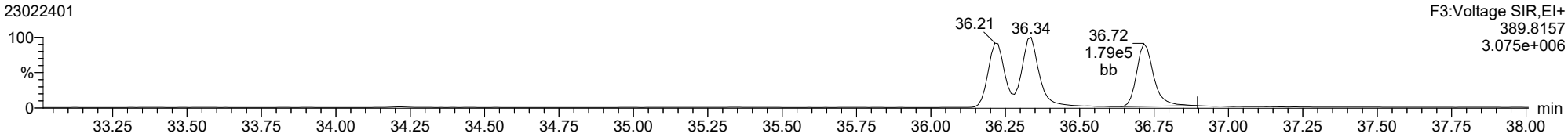

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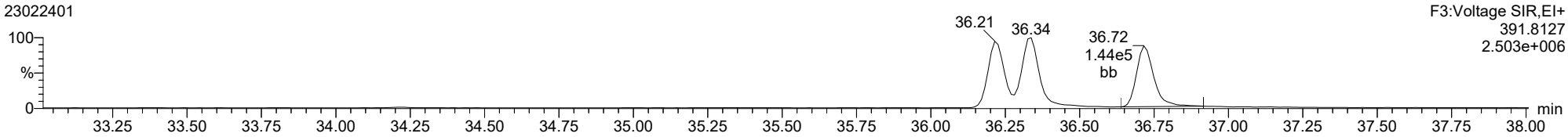

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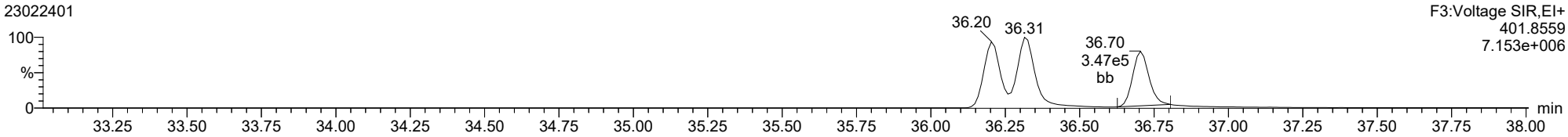

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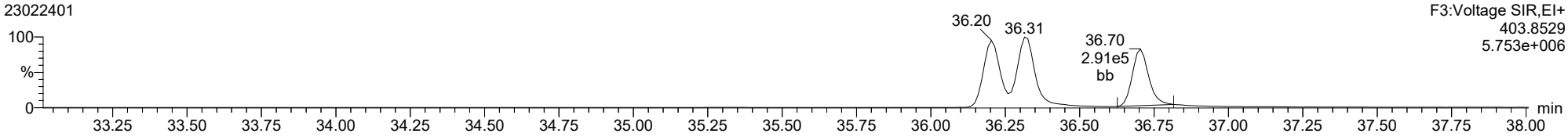

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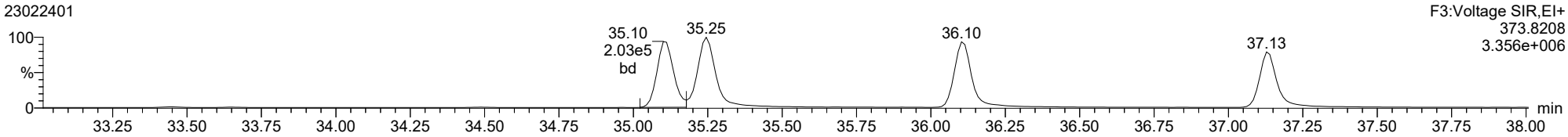

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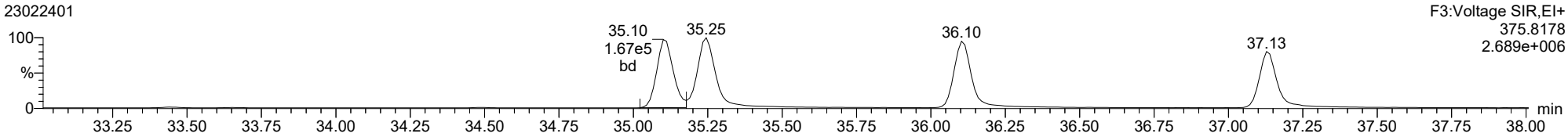

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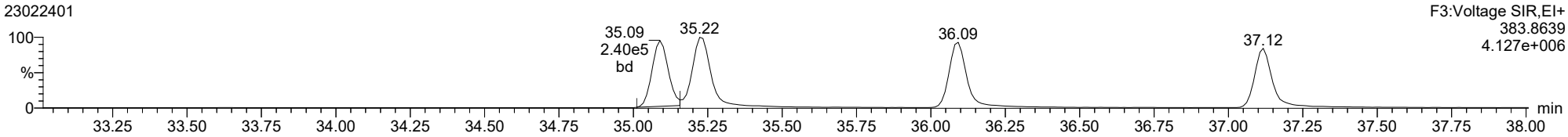

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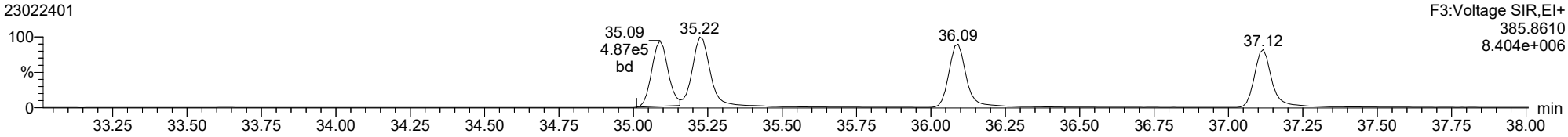
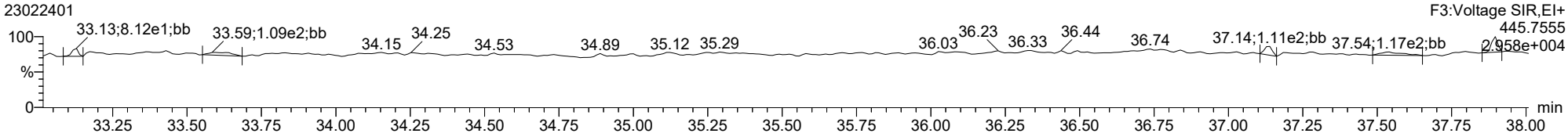


FUNCTION3 OCDPE



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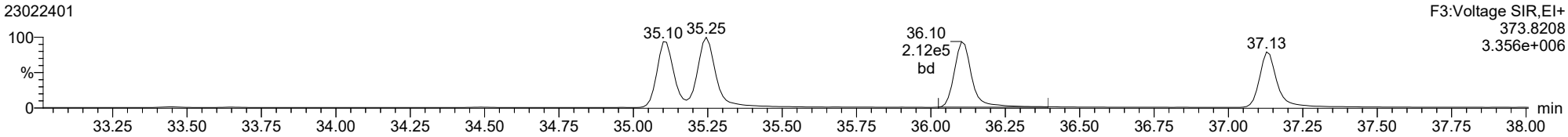
234678-HxCDF



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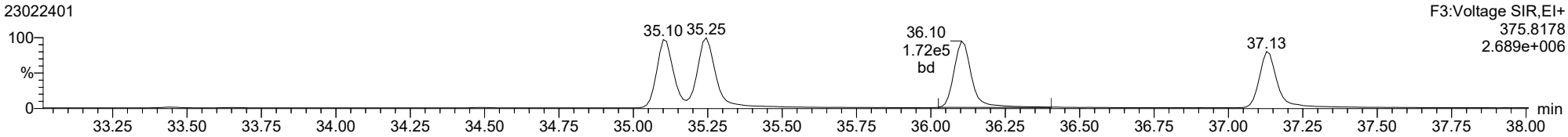

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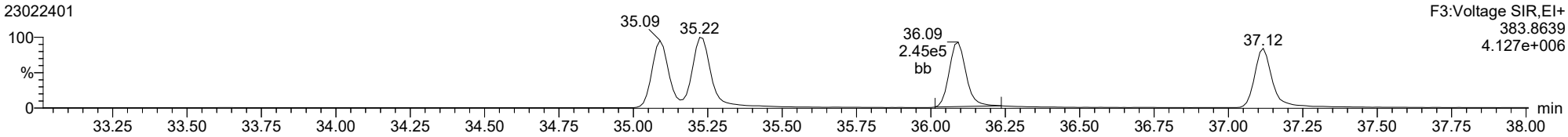

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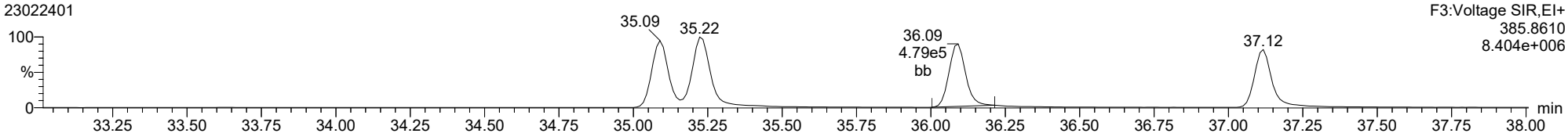

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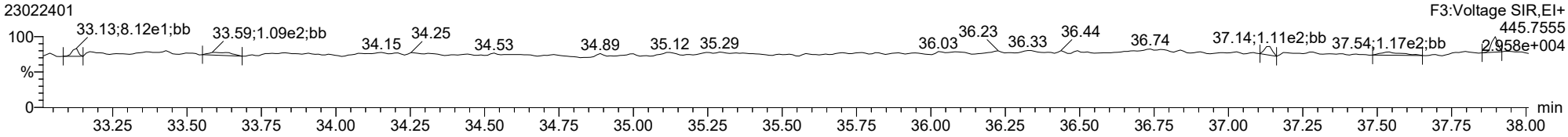

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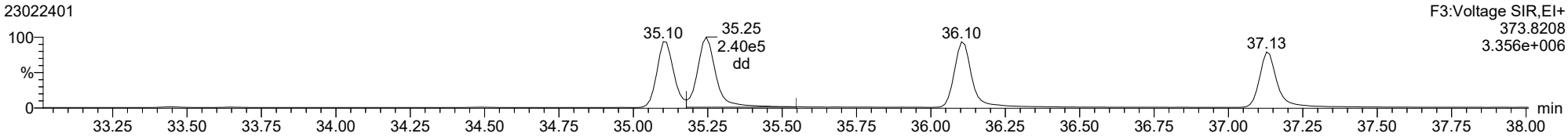
123678-HxCDF



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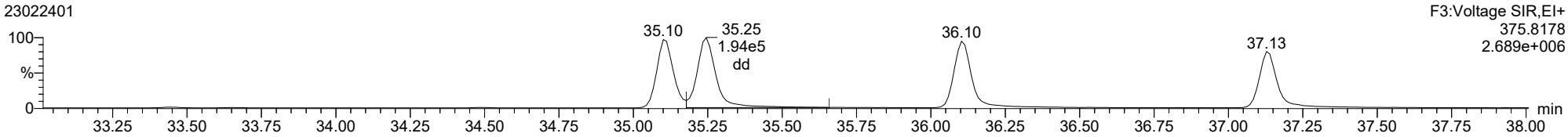

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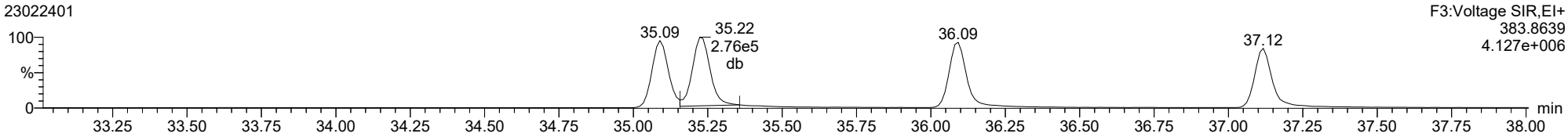

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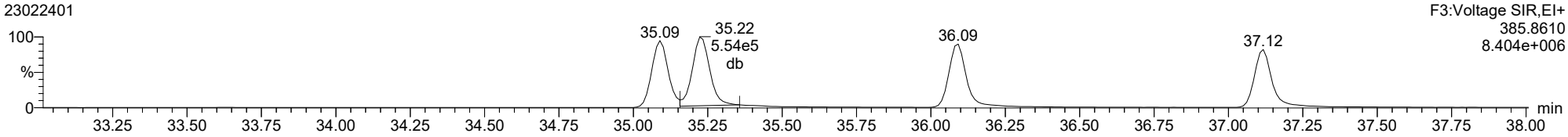

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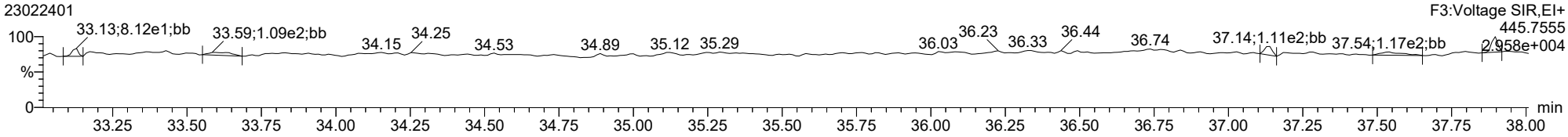

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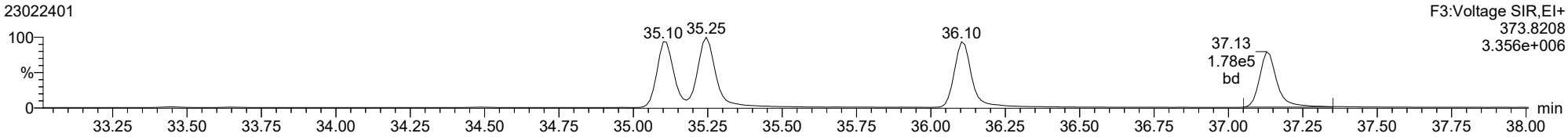

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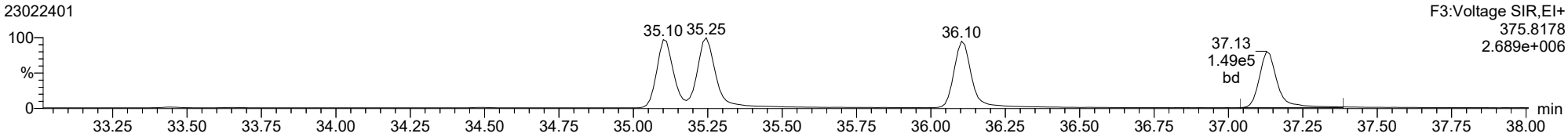

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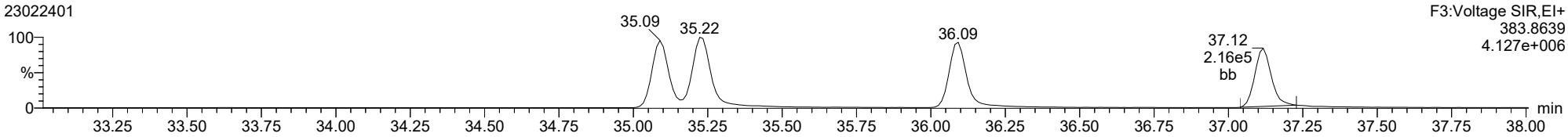

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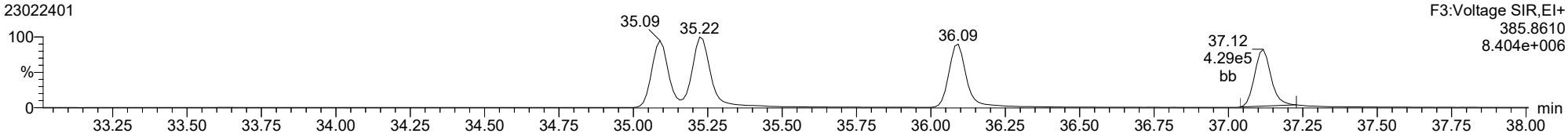
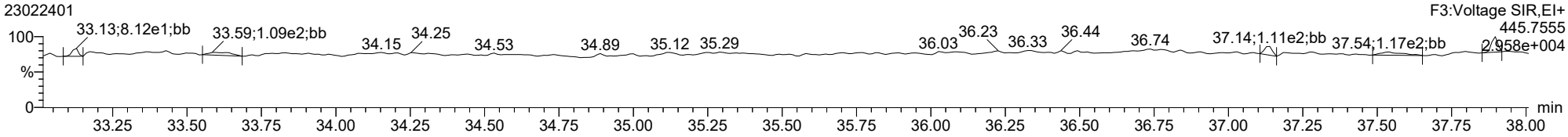


FUNCTION3 OCDPE



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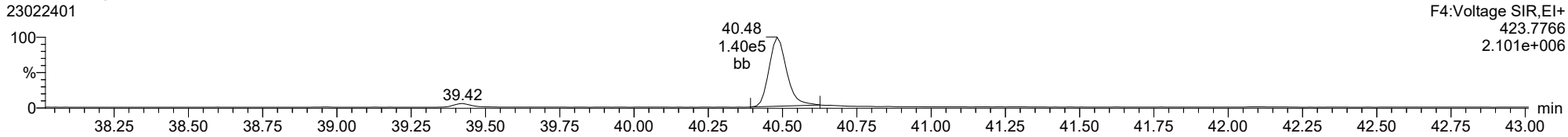
1234678-HpCDD



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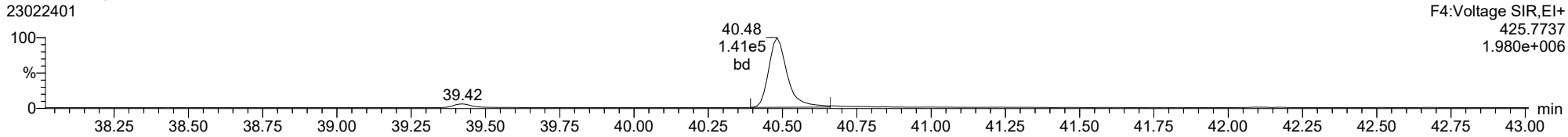

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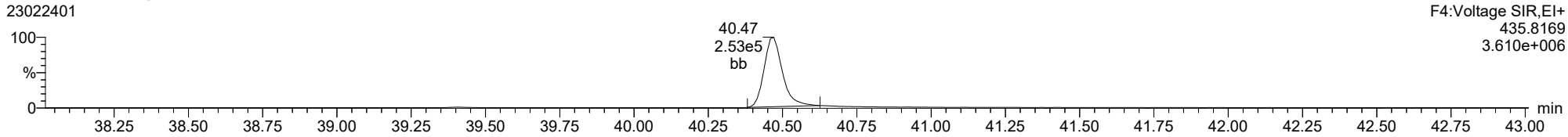

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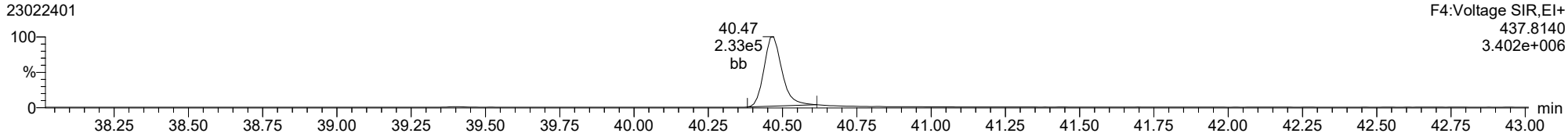
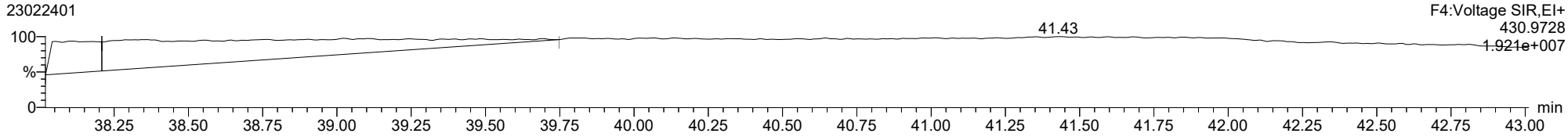


FUNCTION4 PFK



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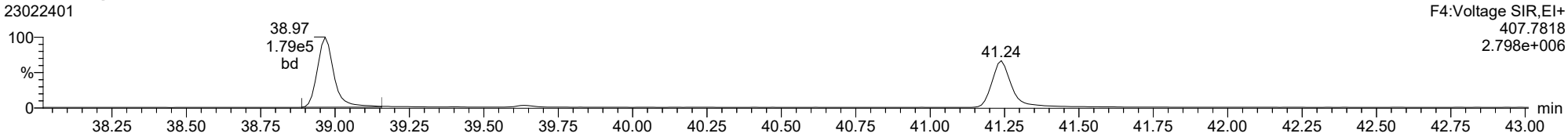
1234678-HpCDF



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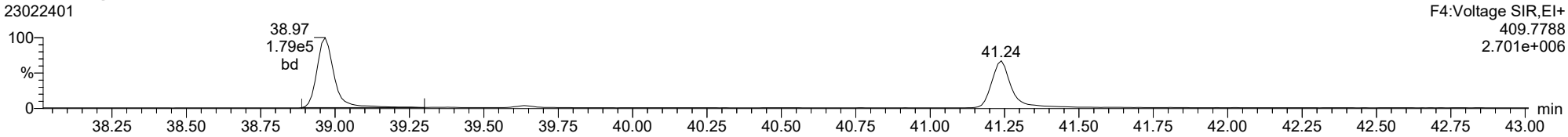

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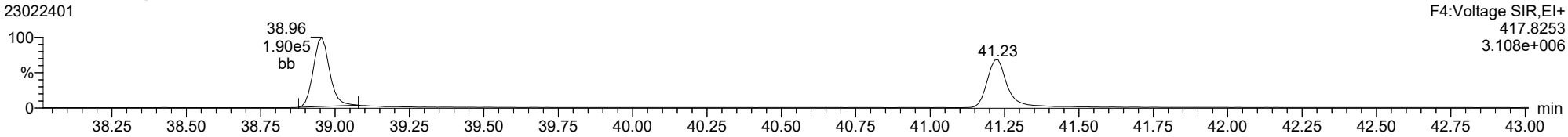

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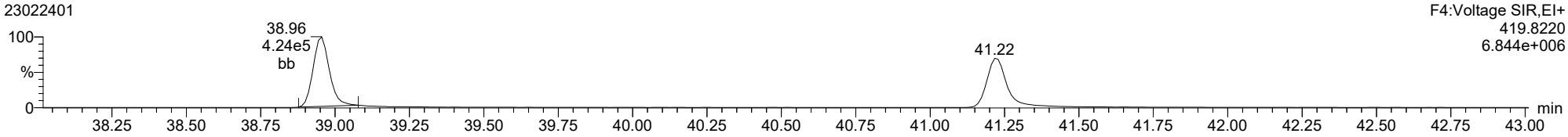
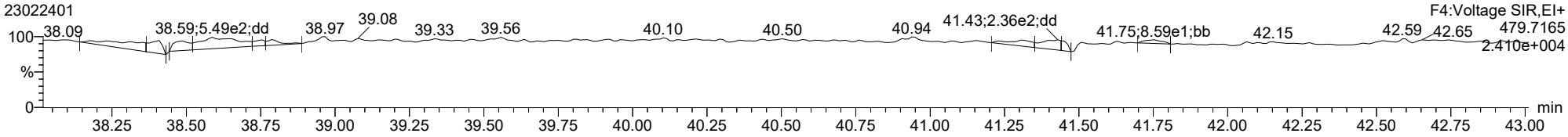
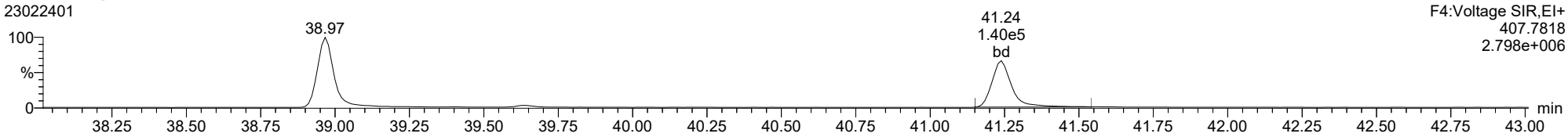


FUNCTION4 NCDPE

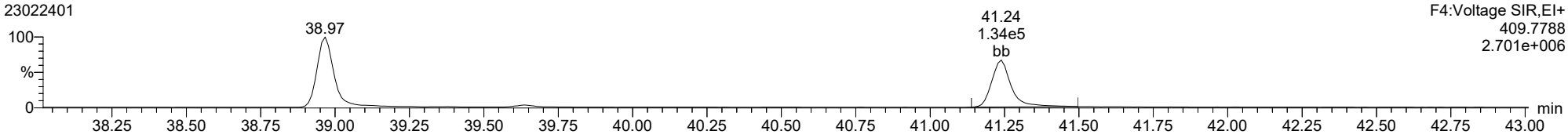


ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

1234789-HpCDF



1234789-HpCDF



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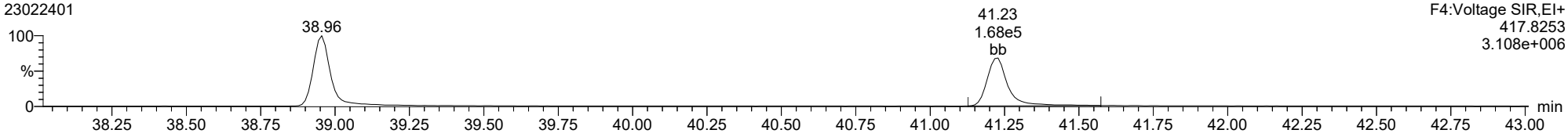

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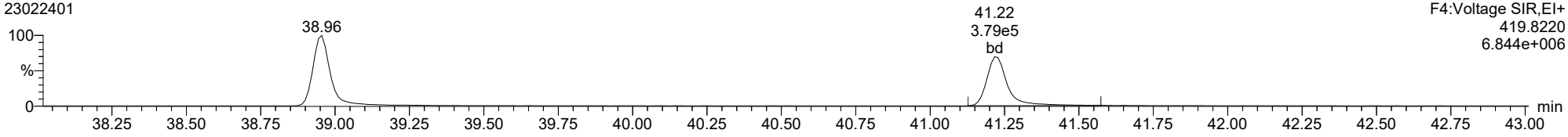
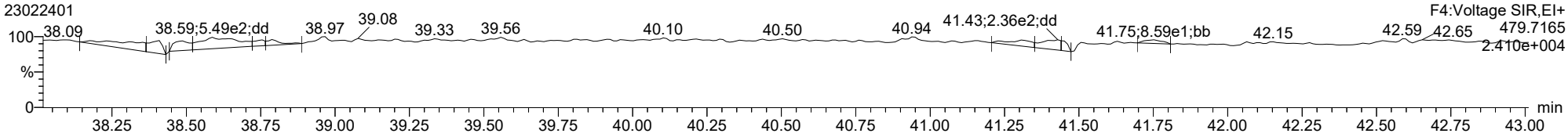
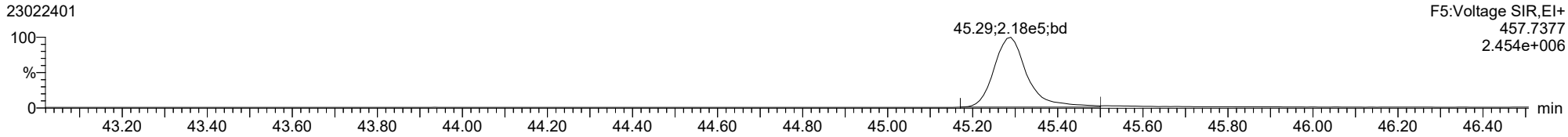


FUNCTION4 NCDPE

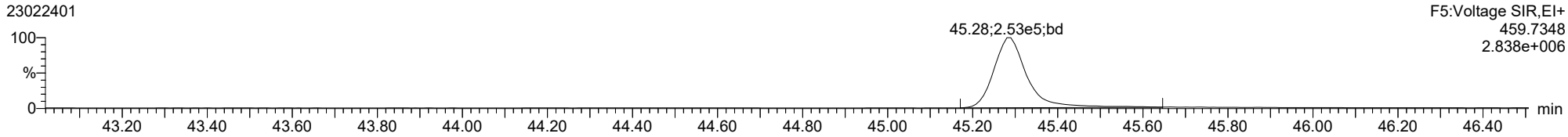


ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

OCDD



OCDD



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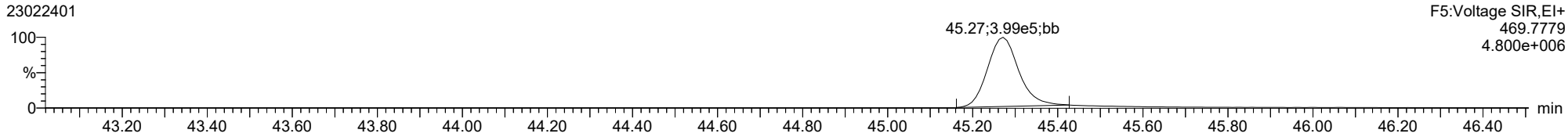
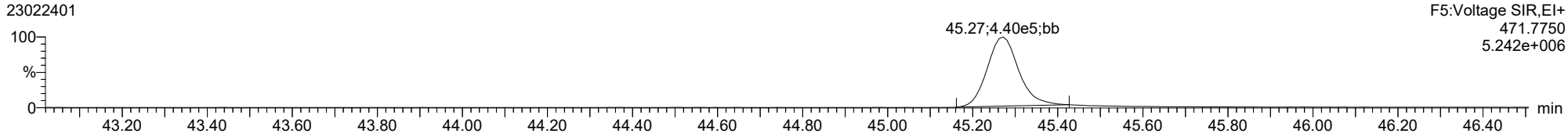
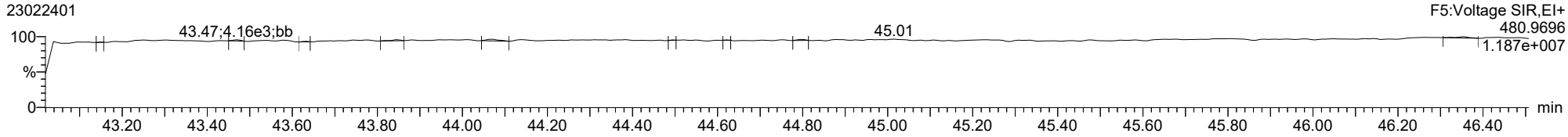


13C-OCDD

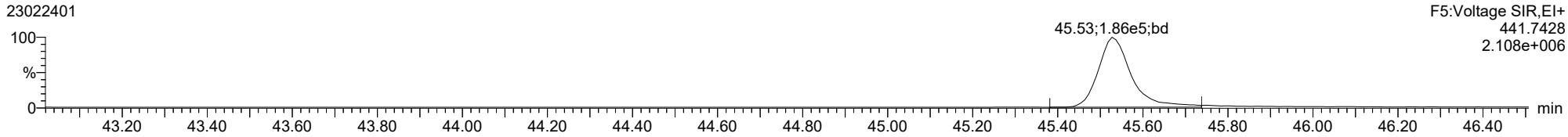


FUNCTION5 PFK



ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

OCDF



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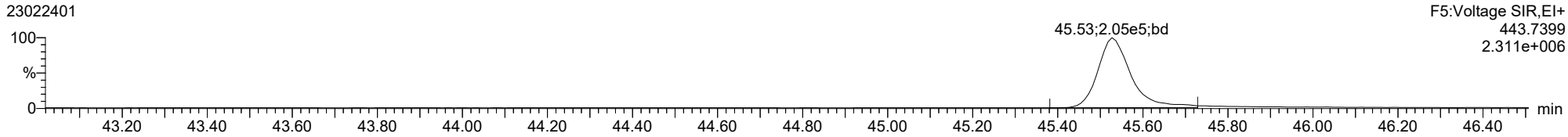
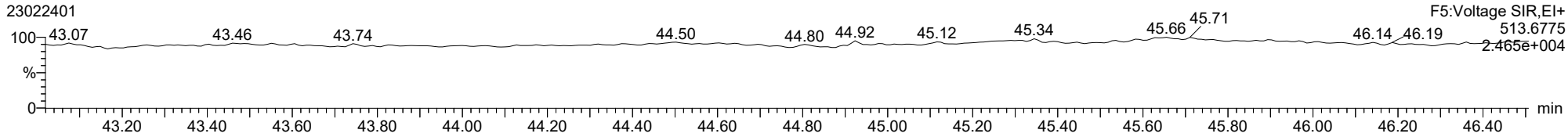
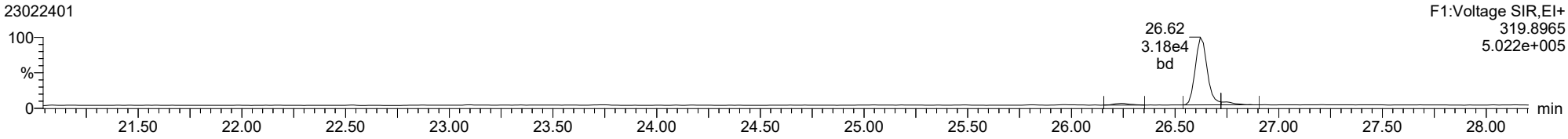


FUNCTION5 DCDPE

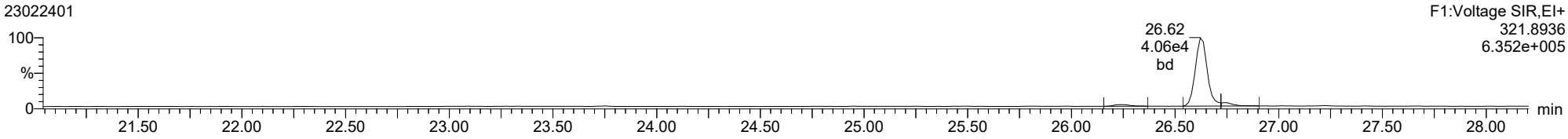


ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

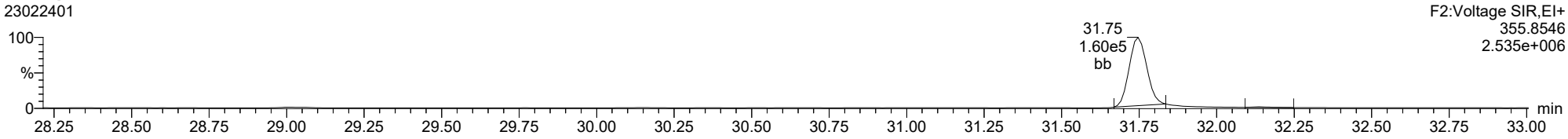
Total-tetradioxins



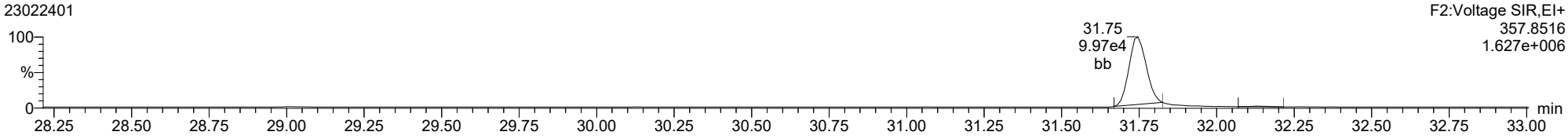
Total-tetradioxins



Total-pentadioxins

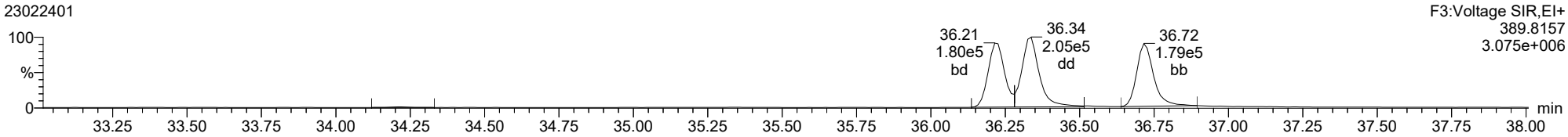


Total-pentadioxins

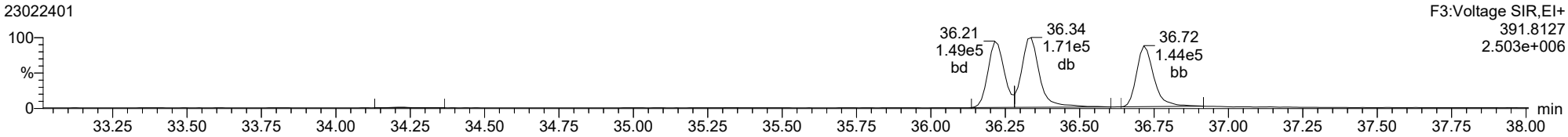


ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

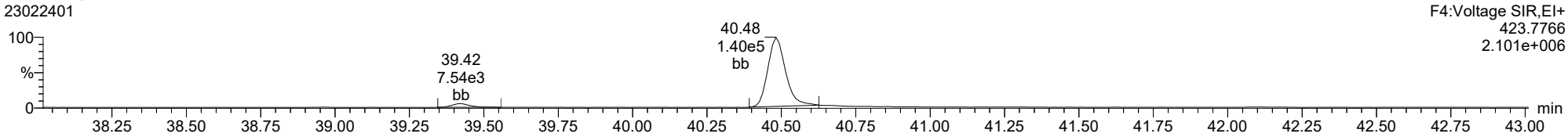
Total-hexadioxins



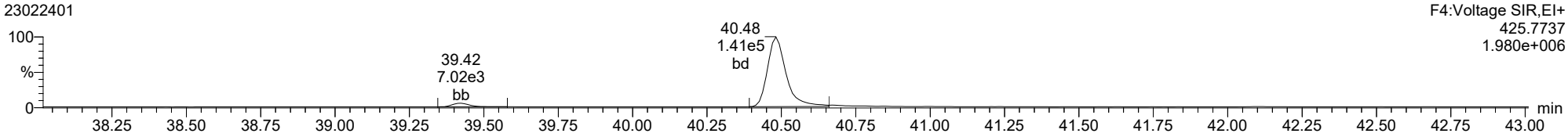
Total-hexadioxins



Total-heptadioxins



Total-heptadioxins



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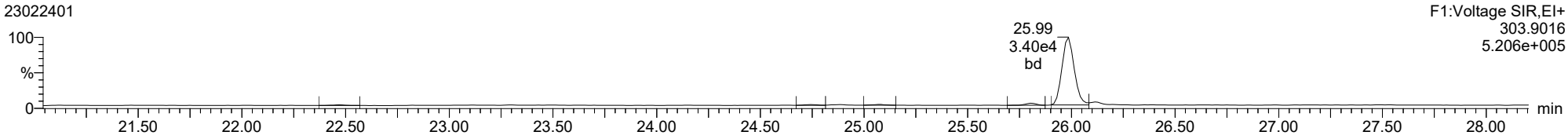
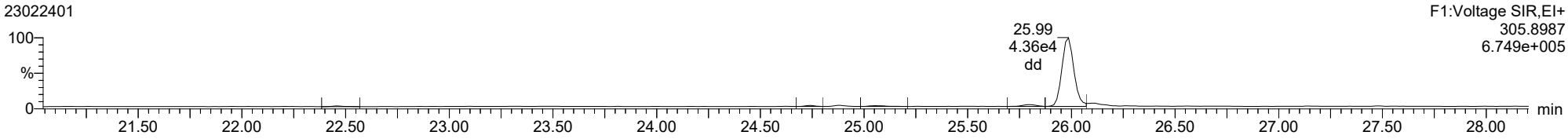
Last Altered: Friday, February 24, 2023 15:04:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:05:19 Pacific Standard Time

ID: BLA0261-BS1, Name: 23022401, Date: 24-Feb-2023, Time: 10:33:09, Conditions: AUTOSPEC01, User: pk

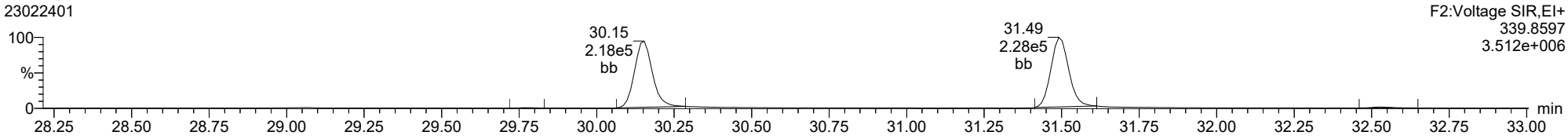
Total-tetrafurans



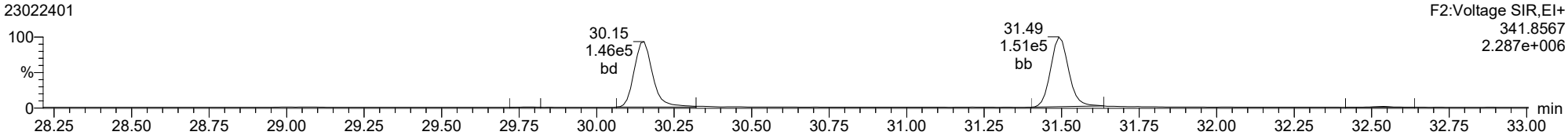
Total-tetrafurans



Total-pentafurans



Total-pentafurans



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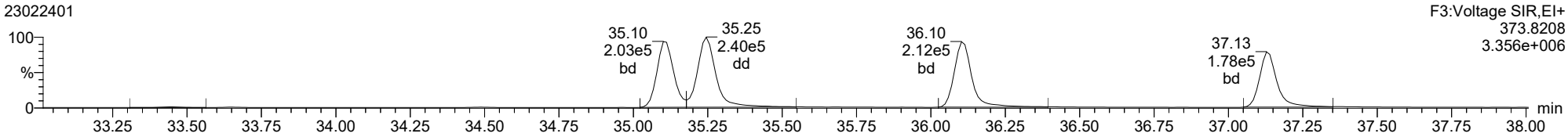
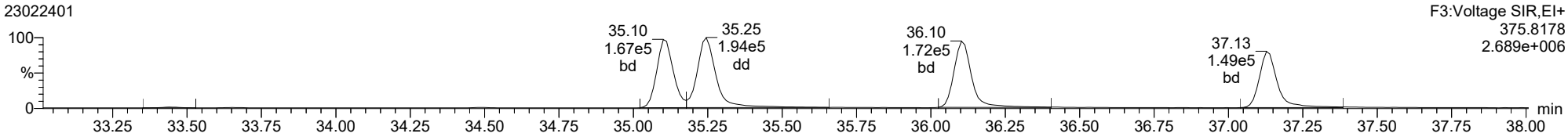
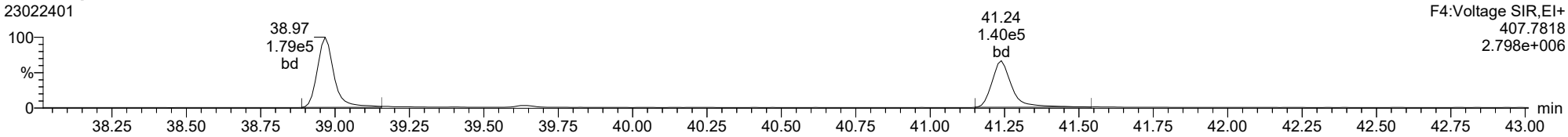
Total-hexafurans



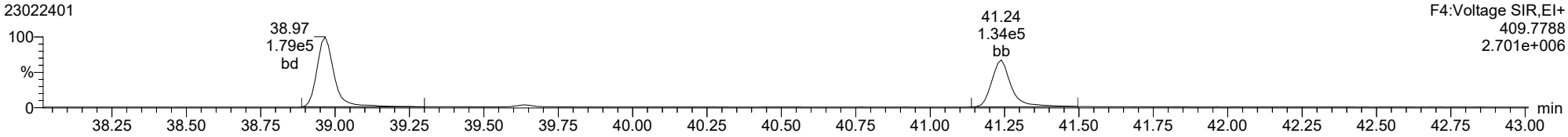
Total-hexafurans



Total-heptafurans



Total-heptafurans



Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0261-SRM1
Batch: BLA0261
Initial/Final: 10.04 g / 20 uL
Preparation: EPA 1613
Analyzed: 02/23/2023 14:14
Standard ID: K011479
Expires: 06/11/2023
Standard Lot#: PSRM0171
Description: Puget Sound reference-SRM

ANALYTE	TRUE (ng/kg wet)	FOUND (ng/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
2,3,7,8-TCDF	1.1100	0.771	0.148	0.996	J, B	69.5	50 - 150
2,3,7,8-TCDD	1.0500	0.707	0.149	0.996	J	67.3	50 - 150
1,2,3,7,8-PeCDF	1.2300	0.911	0.239	0.996	J	74.1	50 - 150
2,3,4,7,8-PeCDF	1.0700	0.732	0.219	0.996	EMPC, J	68.4	50 - 150
1,2,3,7,8-PeCDD	1.0800	1.06	0.169	0.996		98.5	50 - 150
1,2,3,4,7,8-HxCDF	3.0200	2.21	0.279	0.996	B	73.2	50 - 150
1,2,3,6,7,8-HxCDF	1.0900	0.783	0.199	0.996	J	71.8	50 - 150
2,3,4,6,7,8-HxCDF	1.8300	1.47	0.169	0.996		80.1	50 - 150
1,2,3,7,8,9-HxCDF	0.51100	0.543	0.189	0.996	J, B	106	50 - 150
1,2,3,4,7,8-HxCDD	1.5900	1.11	0.169	0.996		69.8	50 - 150
1,2,3,6,7,8-HxCDD	3.8800	2.73	0.179	0.996		70.3	50 - 150
1,2,3,7,8,9-HxCDD	3.0400	2.08	0.219	0.996	B	68.4	50 - 150
1,2,3,4,6,7,8-HpCDF	18.700	17.3	0.209	0.996		92.5	50 - 150
1,2,3,4,7,8,9-HpCDF	1.6300	1.16	0.239	0.996		71.3	50 - 150
1,2,3,4,6,7,8-HpCDD	90.600	79.5	0.558	2.49	B	87.8	50 - 150
OCDF	58.400	46.9	1.10	2.49		80.4	50 - 150
OCDD	811.00	746	4.58	9.96	B	92.0	50 - 150

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:10:37 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.986	1.000	1.490e3	2.065e3	0.876	0.721	0.770	2093	1354	2.18e4	3.10e4	10.4	22.9	NO	bd	dd	0.387
12378-PeCDF	30.165	1.001	2.707e3	1.831e3	0.845	1.478	1.550	2123	1895	3.98e4	2.71e4	18.7	14.3	NO	bb	bb	0.457
23478-PeCDF	31.513	1.001	2.644e3	1.319e3	0.911	2.004	1.550	2123	1895	3.70e4	2.39e4	17.4	12.6	YES	db	db	0.367
123478-HxCDF	35.123	1.001	7.421e3	5.888e3	1.182	1.260	1.240	1627	1194	1.13e5	9.40e4	69.5	78.8	NO	bd	dd	1.109
234678-HxCDF	36.114	1.000	4.864e3	3.968e3	1.229	1.226	1.240	1627	1194	5.85e4	4.65e4	35.9	39.0	NO	bb	bb	0.736
123678-HxCDF	35.256	1.001	2.952e3	2.478e3	1.248	1.191	1.240	1627	1194	4.11e4	3.23e4	25.2	27.0	NO	db	db	0.393
123789-HxCDF	37.117	1.000	1.769e3	1.416e3	1.187	1.249	1.240	1627	1194	2.56e4	1.72e4	15.7	14.4	NO	bb	bb	0.273
1234678-HpCDF	38.977	1.000	4.071e4	3.883e4	1.204	1.048	1.050	1731	1088	6.34e5	6.32e5	366.3	580.7	NO	bd	bd	8.680
1234789-HpCDF	41.261	1.000	2.355e3	2.143e3	1.165	1.099	1.050	1731	1088	3.69e4	3.34e4	21.3	30.7	NO	bb	bb	0.584
OCDF	45.555	1.006	7.644e4	8.880e4	1.186	0.861	0.890	1036	1654	8.76e5	9.84e5	846.1	595.0	NO	bd	bd	23.559
2378-TCDD	26.636	1.000	1.501e3	2.257e3	1.236	0.665	0.770	1306	909	2.16e4	3.72e4	16.5	40.9	NO	bd	bd	0.355
12378-PeCDD	31.747	1.000	2.205e3	1.575e3	1.087	1.400	1.550	1312	1071	2.70e4	1.95e4	20.6	18.2	NO	bb	bb	0.534
123478-HxCDD	36.237	1.000	3.070e3	2.414e3	0.987	1.272	1.240	1401	1631	5.59e4	4.15e4	39.9	25.5	NO	bd	bd	0.557
123678-HxCDD	36.359	1.001	8.648e3	7.042e3	1.021	1.228	1.240	1401	1631	1.37e5	1.12e5	97.7	68.7	NO	dd	dd	1.369
123789-HxCDD	36.738	1.011	6.151e3	4.756e3	0.985	1.293	1.240	1401	1631	1.01e5	8.07e4	72.0	49.5	NO	bd	bb	1.044
1234678-HpCDD	40.504	1.001	1.413e5	1.338e5	1.253	1.056	1.050	2820	2410	2.05e6	1.94e6	726.7	803.8	NO	bb	bb	39.934
OCDD	45.307	1.000	1.173e6	1.268e6	1.103	0.926	0.890	2573	3359	1.35e7	1.50e7	5232.3	4461.0	NO	bd	bb	374.389
13C-2378-TCDF	25.972	1.007	4.580e5	5.900e5	1.768	0.776	0.770	1680	1435	6.93e6	9.05e6	4123.1	6307.9	NO	bb	bb	85.579
13C-12378-PeCDF	30.142	1.168	7.145e5	4.607e5	1.527	1.551	1.550	2070	2113	1.03e7	6.70e6	4961.1	3171.3	NO	bd	bd	111.105
13C-23478-PeCDF	31.490	1.220	7.208e5	4.631e5	1.466	1.556	1.550	2070	2113	1.04e7	6.66e6	5029.2	3150.5	NO	bd	bd	116.572
13C-123478-HxCDF	35.100	0.956	3.404e5	6.750e5	1.054	0.504	0.510	2458	1812	5.27e6	1.05e7	2144.5	5804.1	NO	bd	bd	95.925
13C-123678-HxCDF	35.234	0.959	3.655e5	7.419e5	1.080	0.493	0.510	2458	1812	5.49e6	1.09e7	2231.6	6041.5	NO	db	db	102.070
13C-234678-HxCDF	36.103	0.983	3.336e5	6.435e5	1.014	0.518	0.510	2458	1812	5.22e6	1.01e7	2123.7	5546.8	NO	bb	bb	95.889
13C-123789-HxCDF	37.128	1.011	3.333e5	6.507e5	0.928	0.512	0.510	2458	1812	5.56e6	1.09e7	2263.9	6023.3	NO	bb	bb	105.563
13C-1234678-HpCDF	38.966	1.061	2.334e5	5.276e5	1.036	0.442	0.440	1680	2928	3.92e6	8.72e6	2335.0	2976.9	NO	bb	bb	73.118
13C-1234789-HpCDF	41.239	1.123	2.067e5	4.544e5	0.905	0.455	0.440	1680	2928	2.75e6	6.14e6	1639.3	2098.0	NO	bb	bb	72.721
13C-1234-TCDD	25.802	0.000	2.999e5	3.927e5	1.000	0.764	0.770	1699	3120	4.89e6	6.37e6	2878.0	2042.9	NO	bb	bb	100.000
13C-2378-TCDD	26.622	1.032	3.745e5	4.819e5	1.103	0.777	0.770	1699	3120	5.68e6	7.34e6	3341.1	2353.6	NO	bb	bb	112.107
13C-12378-PeCDD	31.747	1.230	4.031e5	2.484e5	0.914	1.623	1.550	878	851	5.52e6	3.39e6	6283.8	3983.9	NO	bb	bb	102.902
13C-123478-HxCDD	36.225	0.986	5.505e5	4.471e5	0.933	1.231	1.240	1963	1478	9.19e6	7.44e6	4680.6	5035.2	NO	bd	bd	106.441
13C-123678-HxCDD	36.337	0.989	6.187e5	5.038e5	0.965	1.228	1.240	1963	1478	9.17e6	7.60e6	4672.0	5141.8	NO	db	db	115.829
13C-1234678-HpCDD	40.481	1.102	2.864e5	2.635e5	0.782	1.087	1.050	1317	1343	4.22e6	3.94e6	3204.1	2935.1	NO	bb	bb	70.002
13C-OCDD	45.289	1.233	5.699e5	6.126e5	0.788	0.930	0.890	1142	2138	6.80e6	7.48e6	5957.0	3496.9	NO	bb	bb	149.333
13C-123789-HxCDD	36.727	0.000	5.514e5	4.532e5	1.000	1.217	1.240	1963	1478	9.26e6	7.44e6	4714.5	5036.2	NO	bb	bb	100.000
37CL-2378-TCDD	26.636	1.032	3.205e5		1.233			1103		4.82e6		4367.4			bb		37.513

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Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.483	0.866	1.259e3	8.238e2	1.064	1.528	0.770	2093	1354	1.23e4	9.94e3	5.9	7.3	YES	bd	bd	0.187
1289-TCDF					0.858		0.770	2093	1354								
13468-PECDF					1.013		1.550	2347	750								
12389-PECDF					0.844		1.550	2123	1895								
123468-HXCDF	33.463	0.953	6.750e3	5.122e3	1.197	1.318	1.240	1627	1194	1.01e5	7.95e4	62.3	66.6	NO	bd	bb	0.977
1368-TCDD	23.754	0.892	1.536e3	2.057e3	1.084	0.747	0.770	1306	909	2.38e4	3.14e4	18.3	34.5	NO	bb	bb	0.387
1289-TCDD					0.975		0.770	1306	909								
12479-PECDD	29.062	0.915	3.327e3	2.164e3	1.837	1.538	1.550	1312	1071	3.36e4	2.36e4	25.6	22.0	NO	bb	bb	0.459
12389-PECDD					1.252		1.550	1312	1071								
124679-HXCDD	34.231	0.945	2.247e4	1.756e4	1.033	1.280	1.240	1401	1631	3.51e5	2.73e5	250.4	167.4	NO	bb	bb	3.885
1234679-HPCDD	39.434	0.974	2.236e5	2.006e5	1.286	1.115	1.050	2820	2410	3.37e6	3.15e6	1193.9	1305.9	NO	bd	bb	59.987
Total-tetrafurans			1.280e4		0.933			2093		1.92e5							3.128
Total-penta1			1.558e4					2347		2.21e5							2.460
Total-pentafurans			1.679e4		0.866			2123		2.47e5							2.704
Total-hexafurans			7.747e4		1.208			1627		1.14e6							11.365
Total-heptafurans			1.151e5		1.185			1731		1.76e6							26.272
Total-Furans			3.143e5		1.067			2093		4.44e6							69.531
Total-tetradioxins			4.588e3		1.099			1306		6.85e4							1.130
Total-pentadioxins			1.093e4		1.392			1312		1.37e5							2.000
Total-hexadioxins			7.391e4		1.007			1401		1.05e6							12.562
Total-heptadioxins			3.649e5		1.269			2820		5.42e6							99.921
Total-Dioxins			1.628e6		1.165			1306		2.01e7							490.003
Total-TEQ			1.942e6					1306		2.46e7							559.534
FUNCTION1 PFK			6.838e7					464327		6.47e7							
FUNCTION2 PFK			1.538e6					357943		5.72e6							0.000
FUNCTION3 PFK			3.739e6					407640		1.55e7							0.000
FUNCTION4 PFK			1.797e7					268547		1.59e7							
FUNCTION5 PFK			0.000e0					158110		0.00e0							
FUNCTION1 HXCD...			8.340e3					1780		9.06e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			3.830e2					799		9.72e3							0.000
FUNCTION3 OCDPE			0.000e0					622		0.00e0							
FUNCTION4 NCDPE			1.835e4					811		2.96e5							0.000
FUNCTION5 DCDPE			0.000e0					621		0.00e0							

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	27.61	6.306e2	7.524e2	0.933	0.84	0.77	4.9	YES	NO	bb	bb	0.141
2	Total-tetrafurans	26.21	1.302e3	1.823e3	0.933	0.71	0.77	7.7	YES	NO	db	db	0.320
3	Total-tetrafurans	26.13	1.116e3	1.581e3	0.933	0.71	0.77	8.2	YES	NO	dd	dd	0.276
4	2378-TCDF	25.99	1.490e3	2.065e3	0.876	0.72	0.77	10.4	YES	NO	bd	dd	0.387
5	Total-tetrafurans	25.80	6.956e2	9.698e2	0.933	0.72	0.77	5.6	YES	NO	db	dd	0.170
6	Total-tetrafurans	25.31	5.781e2	7.095e2	0.933	0.81	0.77	3.5	YES	NO	bb	db	0.132
7	Total-tetrafurans	25.08	2.256e3	3.073e3	0.933	0.73	0.77	17.2	YES	NO	bb	dd	0.545
8	Total-tetrafurans	24.88	1.248e3	1.883e3	0.933	0.66	0.77	9.2	YES	NO	db	dd	0.320
9	Total-tetrafurans	24.74	3.481e3	4.694e3	0.933	0.74	0.77	25.0	YES	NO	dd	dd	0.836

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-penta1	27.41	1.558e4	1.093e4		1.42	1.55	94.3	YES	NO	bd	bd	2.460

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	28.73	2.124e3	1.248e3	0.866	1.70	1.55	13.0	YES	NO	dd	dd	0.330
2	Total-pentafurans	28.44	1.100e3	7.083e2	0.866	1.55	1.55	8.4	YES	NO	bb	bb	0.177
3	Total-pentafurans	31.36	1.602e3	1.199e3	0.866	1.34	1.55	12.5	YES	NO	dd	dd	0.274
4	12378-PeCDF	30.16	2.707e3	1.831e3	0.845	1.48	1.55	18.7	YES	NO	bb	bb	0.457
5	Total-pentafurans	29.10	6.068e3	3.824e3	0.866	1.59	1.55	40.6	YES	NO	db	db	0.968
6	Total-pentafurans	29.02	3.187e3	1.903e3	0.866	1.68	1.55	23.1	YES	NO	dd	dd	0.498

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HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.12	1.769e3	1.416e3	1.187	1.25	1.24	15.7	YES	NO	bb	bb	0.273
2	234678-HxCDF	36.11	4.864e3	3.968e3	1.229	1.23	1.24	35.9	YES	NO	bb	bb	0.736
3	123678-HxCDF	35.26	2.952e3	2.478e3	1.248	1.19	1.24	25.2	YES	NO	db	db	0.393
4	123478-HxCDF	35.12	7.421e3	5.888e3	1.182	1.26	1.24	69.5	YES	NO	bd	dd	1.109
5	Total-hexafurans	34.97	1.026e3	8.770e2	1.208	1.17	1.24	10.0	YES	NO	bb	bd	0.154
6	Total-hexafurans	34.50	3.000e4	2.423e4	1.208	1.24	1.24	282.4	YES	NO	bb	bb	4.395
7	Total-hexafurans	33.67	2.268e4	1.839e4	1.208	1.23	1.24	199.1	YES	NO	db	bb	3.329
8	123468-HXCDF	33.46	6.750e3	5.122e3	1.197	1.32	1.24	62.3	YES	NO	bd	bb	0.977

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.98	4.071e4	3.883e4	1.204	1.05	1.05	366.3	YES	NO	bd	bd	8.680
2	1234789-HpCDF	41.26	2.355e3	2.143e3	1.165	1.10	1.05	21.3	YES	NO	bb	bb	0.584
3	Total-heptafurans	39.96	2.381e2	2.392e2	1.185	1.00	1.05	3.1	YES	NO	db	db	0.057
4	Total-heptafurans	39.65	7.177e4	7.103e4	1.185	1.01	1.05	628.7	YES	NO	bd	bd	16.952

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-Furans	21.59	1.946e2	2.729e2	1.067	0.71	0.77	1.5	NO	NO	db	bb	0.042
2	Total-tetrafurans	27.61	6.306e2	7.524e2	0.933	0.84	0.77	4.9	YES	NO	bb	bb	0.141
3	Total-tetrafurans	26.21	1.302e3	1.823e3	0.933	0.71	0.77	7.7	YES	NO	db	db	0.320
4	Total-tetrafurans	26.13	1.116e3	1.581e3	0.933	0.71	0.77	8.2	YES	NO	dd	dd	0.276
5	2378-TCDF	25.99	1.490e3	2.065e3	0.876	0.72	0.77	10.4	YES	NO	bd	dd	0.387
6	Total-tetrafurans	25.80	6.956e2	9.698e2	0.933	0.72	0.77	5.6	YES	NO	db	dd	0.170
7	Total-tetrafurans	25.31	5.781e2	7.095e2	0.933	0.81	0.77	3.5	YES	NO	bb	db	0.132
8	Total-tetrafurans	25.08	2.256e3	3.073e3	0.933	0.73	0.77	17.2	YES	NO	bb	dd	0.545
9	Total-tetrafurans	24.88	1.248e3	1.883e3	0.933	0.66	0.77	9.2	YES	NO	db	dd	0.320
10	Total-tetrafurans	24.74	3.481e3	4.694e3	0.933	0.74	0.77	25.0	YES	NO	dd	dd	0.836
11	Total-pentafurans	28.73	2.124e3	1.248e3	0.866	1.70	1.55	13.0	YES	NO	dd	dd	0.330
12	Total-pentafurans	28.44	1.100e3	7.083e2	0.866	1.55	1.55	8.4	YES	NO	bb	bb	0.177
13	Total-pentafurans	31.36	1.602e3	1.199e3	0.866	1.34	1.55	12.5	YES	NO	dd	dd	0.274
14	12378-PeCDF	30.16	2.707e3	1.831e3	0.845	1.48	1.55	18.7	YES	NO	bb	bb	0.457
15	Total-pentafurans	29.10	6.068e3	3.824e3	0.866	1.59	1.55	40.6	YES	NO	db	db	0.968
16	Total-pentafurans	29.02	3.187e3	1.903e3	0.866	1.68	1.55	23.1	YES	NO	dd	dd	0.498
17	123789-HxCDF	37.12	1.769e3	1.416e3	1.187	1.25	1.24	15.7	YES	NO	bb	bb	0.273
18	234678-HxCDF	36.11	4.864e3	3.968e3	1.229	1.23	1.24	35.9	YES	NO	bb	bb	0.736
19	123678-HxCDF	35.26	2.952e3	2.478e3	1.248	1.19	1.24	25.2	YES	NO	db	db	0.393
20	123478-HxCDF	35.12	7.421e3	5.888e3	1.182	1.26	1.24	69.5	YES	NO	bd	dd	1.109
21	Total-hexafurans	34.97	1.026e3	8.770e2	1.208	1.17	1.24	10.0	YES	NO	bb	bd	0.154
22	Total-hexafurans	34.50	3.000e4	2.423e4	1.208	1.24	1.24	282.4	YES	NO	bb	bb	4.395
23	Total-hexafurans	33.67	2.268e4	1.839e4	1.208	1.23	1.24	199.1	YES	NO	db	bb	3.329
24	123468-HXCDF	33.46	6.750e3	5.122e3	1.197	1.32	1.24	62.3	YES	NO	bd	bb	0.977
25	1234678-HpCDF	38.98	4.071e4	3.883e4	1.204	1.05	1.05	366.3	YES	NO	bd	bd	8.680
26	1234789-HpCDF	41.26	2.355e3	2.143e3	1.165	1.10	1.05	21.3	YES	NO	bb	bb	0.584
27	Total-heptafurans	39.96	2.381e2	2.392e2	1.185	1.00	1.05	3.1	YES	NO	db	db	0.057
28	Total-heptafurans	39.65	7.177e4	7.103e4	1.185	1.01	1.05	628.7	YES	NO	bd	bd	16.952
29	OCDF	45.55	7.644e4	8.880e4	1.186	0.86	0.89	846.1	YES	NO	bd	bd	23.559
30	Total-penta1	27.41	1.558e4	1.093e4		1.42	1.55	94.3	YES	NO	bd	bd	2.460

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TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.64	1.501e3	2.257e3	1.236	0.67	0.77	16.5	YES	NO	bd	bd	0.355
2	Total-tetradioxins	26.25	5.008e2	5.759e2	1.099	0.87	0.77	4.7	YES	NO	db	bd	0.114
3	Total-tetradioxins	24.97	2.859e2	4.170e2	1.099	0.69	0.77	3.5	YES	NO	bb	bb	0.075
4	Total-tetradioxins	24.02	7.640e2	1.108e3	1.099	0.69	0.77	9.5	YES	NO	bb	bd	0.199
5	1368-TCDD	23.75	1.536e3	2.057e3	1.084	0.75	0.77	18.3	YES	NO	bb	bb	0.387

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12479-PECDD	29.06	3.327e3	2.164e3	1.837	1.54	1.55	25.6	YES	NO	bb	bb	0.459
2	12378-PeCDD	31.75	2.205e3	1.575e3	1.087	1.40	1.55	20.6	YES	NO	bb	bb	0.534
3	Total-pentadioxins	30.68	1.313e3	9.597e2	1.392	1.37	1.55	12.5	YES	NO	db	db	0.251
4	Total-pentadioxins	30.50	1.134e3	8.247e2	1.392	1.37	1.55	13.0	YES	NO	dd	dd	0.216
5	Total-pentadioxins	30.38	1.960e3	1.274e3	1.392	1.54	1.55	21.2	YES	NO	bd	bd	0.357
6	Total-pentadioxins	29.54	9.906e2	6.870e2	1.392	1.44	1.55	11.5	YES	NO	bb	bb	0.185

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123478-HxCDD	36.24	3.070e3	2.414e3	0.987	1.27	1.24	39.9	YES	NO	bd	bd	0.557
2	Total-hexadioxins	35.46	3.052e3	2.219e3	1.007	1.38	1.24	34.2	YES	NO	dd	db	0.494
3	Total-hexadioxins	35.36	2.525e4	2.051e4	1.007	1.23	1.24	191.1	YES	NO	bd	bd	4.289
4	Total-hexadioxins	35.00	3.989e3	3.436e3	1.007	1.16	1.24	46.6	YES	NO	bb	bb	0.696
5	124679-HXCDD	34.23	2.247e4	1.756e4	1.033	1.28	1.24	250.4	YES	NO	bb	bb	3.885
6	123789-HxCDD	36.74	6.151e3	4.756e3	0.985	1.29	1.24	72.0	YES	NO	bd	bb	1.044
7	Total-hexadioxins	36.52	1.278e3	1.160e3	1.007	1.10	1.24	16.9	YES	NO	db	db	0.228
8	123678-HxCDD	36.36	8.648e3	7.042e3	1.021	1.23	1.24	97.7	YES	NO	dd	dd	1.369

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.50	1.413e5	1.338e5	1.253	1.06	1.05	726.7	YES	NO	bb	bb	39.934
2	1234679-HPCDD	39.43	2.236e5	2.006e5	1.286	1.11	1.05	1193.9	YES	NO	bd	bb	59.987

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.64	1.501e3	2.257e3	1.236	0.67	0.77	16.5	YES	NO	bd	bd	0.355
2	Total-tetradioxins	26.25	5.008e2	5.759e2	1.099	0.87	0.77	4.7	YES	NO	db	bd	0.114
3	Total-tetradioxins	24.97	2.859e2	4.170e2	1.099	0.69	0.77	3.5	YES	NO	bb	bb	0.075
4	Total-tetradioxins	24.02	7.640e2	1.108e3	1.099	0.69	0.77	9.5	YES	NO	bb	bd	0.199
5	1368-TCDD	23.75	1.536e3	2.057e3	1.084	0.75	0.77	18.3	YES	NO	bb	bb	0.387
6	12479-PECDD	29.06	3.327e3	2.164e3	1.837	1.54	1.55	25.6	YES	NO	bb	bb	0.459
7	12378-PeCDD	31.75	2.205e3	1.575e3	1.087	1.40	1.55	20.6	YES	NO	bb	bb	0.534
8	Total-pentadioxins	30.68	1.313e3	9.597e2	1.392	1.37	1.55	12.5	YES	NO	db	db	0.251
9	Total-pentadioxins	30.50	1.134e3	8.247e2	1.392	1.37	1.55	13.0	YES	NO	dd	dd	0.216
10	Total-pentadioxins	30.38	1.960e3	1.274e3	1.392	1.54	1.55	21.2	YES	NO	bd	bd	0.357
11	Total-pentadioxins	29.54	9.906e2	6.870e2	1.392	1.44	1.55	11.5	YES	NO	bb	bb	0.185
12	123478-HxCDD	36.24	3.070e3	2.414e3	0.987	1.27	1.24	39.9	YES	NO	bd	bd	0.557
13	Total-hexadioxins	35.46	3.052e3	2.219e3	1.007	1.38	1.24	34.2	YES	NO	dd	db	0.494
14	Total-hexadioxins	35.36	2.525e4	2.051e4	1.007	1.23	1.24	191.1	YES	NO	bd	bd	4.289
15	Total-hexadioxins	35.00	3.989e3	3.436e3	1.007	1.16	1.24	46.6	YES	NO	bb	bb	0.696
16	124679-HXCDD	34.23	2.247e4	1.756e4	1.033	1.28	1.24	250.4	YES	NO	bb	bb	3.885
17	123789-HxCDD	36.74	6.151e3	4.756e3	0.985	1.29	1.24	72.0	YES	NO	bd	bb	1.044
18	Total-hexadioxins	36.52	1.278e3	1.160e3	1.007	1.10	1.24	16.9	YES	NO	db	db	0.228
19	123678-HxCDD	36.36	8.648e3	7.042e3	1.021	1.23	1.24	97.7	YES	NO	dd	dd	1.369
20	1234678-HpCDD	40.50	1.413e5	1.338e5	1.253	1.06	1.05	726.7	YES	NO	bb	bb	39.934
21	1234679-HPCDD	39.43	2.236e5	2.006e5	1.286	1.11	1.05	1193.9	YES	NO	bd	bb	59.987
22	OCDD	45.31	1.173e6	1.268e6	1.103	0.93	0.89	5232.3	YES	NO	bd	bb	374.389

ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-Furans	21.59	1.946e2	2.729e2	1.067	0.71	0.77	1.5	NO	NO	db	bb	0.042
2	Total-tetrafurans	27.61	6.306e2	7.524e2	0.933	0.84	0.77	4.9	YES	NO	bb	bb	0.141
3	Total-tetrafurans	26.21	1.302e3	1.823e3	0.933	0.71	0.77	7.7	YES	NO	db	db	0.320
4	Total-tetrafurans	26.13	1.116e3	1.581e3	0.933	0.71	0.77	8.2	YES	NO	dd	dd	0.276
5	2378-TCDF	25.99	1.490e3	2.065e3	0.876	0.72	0.77	10.4	YES	NO	bd	dd	0.387
6	Total-tetrafurans	25.80	6.956e2	9.698e2	0.933	0.72	0.77	5.6	YES	NO	db	dd	0.170
7	Total-tetrafurans	25.31	5.781e2	7.095e2	0.933	0.81	0.77	3.5	YES	NO	bb	db	0.132
8	Total-tetrafurans	25.08	2.256e3	3.073e3	0.933	0.73	0.77	17.2	YES	NO	bb	dd	0.545
9	Total-tetrafurans	24.88	1.248e3	1.883e3	0.933	0.66	0.77	9.2	YES	NO	db	dd	0.320
10	Total-tetrafurans	24.74	3.481e3	4.694e3	0.933	0.74	0.77	25.0	YES	NO	dd	dd	0.836
11	Total-pentafurans	28.73	2.124e3	1.248e3	0.866	1.70	1.55	13.0	YES	NO	dd	dd	0.330
12	Total-pentafurans	28.44	1.100e3	7.083e2	0.866	1.55	1.55	8.4	YES	NO	bb	bb	0.177
13	Total-pentafurans	31.36	1.602e3	1.199e3	0.866	1.34	1.55	12.5	YES	NO	dd	dd	0.274
14	12378-PeCDF	30.16	2.707e3	1.831e3	0.845	1.48	1.55	18.7	YES	NO	bb	bb	0.457
15	Total-pentafurans	29.10	6.068e3	3.824e3	0.866	1.59	1.55	40.6	YES	NO	db	db	0.968
16	Total-pentafurans	29.02	3.187e3	1.903e3	0.866	1.68	1.55	23.1	YES	NO	dd	dd	0.498
17	123789-HxCDF	37.12	1.769e3	1.416e3	1.187	1.25	1.24	15.7	YES	NO	bb	bb	0.273
18	234678-HxCDF	36.11	4.864e3	3.968e3	1.229	1.23	1.24	35.9	YES	NO	bb	bb	0.736
19	123678-HxCDF	35.26	2.952e3	2.478e3	1.248	1.19	1.24	25.2	YES	NO	db	db	0.393
20	123478-HxCDF	35.12	7.421e3	5.888e3	1.182	1.26	1.24	69.5	YES	NO	bd	dd	1.109
21	Total-hexafurans	34.97	1.026e3	8.770e2	1.208	1.17	1.24	10.0	YES	NO	bb	bd	0.154
22	Total-hexafurans	34.50	3.000e4	2.423e4	1.208	1.24	1.24	282.4	YES	NO	bb	bb	4.395
23	Total-hexafurans	33.67	2.268e4	1.839e4	1.208	1.23	1.24	199.1	YES	NO	db	bb	3.329
24	123468-HXCDF	33.46	6.750e3	5.122e3	1.197	1.32	1.24	62.3	YES	NO	bd	bb	0.977
25	1234678-HpCDF	38.98	4.071e4	3.883e4	1.204	1.05	1.05	366.3	YES	NO	bd	bd	8.680
26	1234789-HpCDF	41.26	2.355e3	2.143e3	1.165	1.10	1.05	21.3	YES	NO	bb	bb	0.584
27	Total-heptafurans	39.96	2.381e2	2.392e2	1.185	1.00	1.05	3.1	YES	NO	db	db	0.057
28	Total-heptafurans	39.65	7.177e4	7.103e4	1.185	1.01	1.05	628.7	YES	NO	bd	bd	16.952
29	OCDF	45.55	7.644e4	8.880e4	1.186	0.86	0.89	846.1	YES	NO	bd	bd	23.559
30	Total-penta1	27.41	1.558e4	1.093e4		1.42	1.55	94.3	YES	NO	bd	bd	2.460
31	2378-TCDD	26.64	1.501e3	2.257e3	1.236	0.67	0.77	16.5	YES	NO	bd	bd	0.355
32	Total-tetradioxins	26.25	5.008e2	5.759e2	1.099	0.87	0.77	4.7	YES	NO	db	bd	0.114
33	Total-tetradioxins	24.97	2.859e2	4.170e2	1.099	0.69	0.77	3.5	YES	NO	bb	bb	0.075
34	Total-tetradioxins	24.02	7.640e2	1.108e3	1.099	0.69	0.77	9.5	YES	NO	bb	bd	0.199
35	1368-TCDD	23.75	1.536e3	2.057e3	1.084	0.75	0.77	18.3	YES	NO	bb	bb	0.387
36	12479-PECDD	29.06	3.327e3	2.164e3	1.837	1.54	1.55	25.6	YES	NO	bb	bb	0.459
37	12378-PeCDD	31.75	2.205e3	1.575e3	1.087	1.40	1.55	20.6	YES	NO	bb	bb	0.534

ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	Total-pentadioxins	30.68	1.313e3	9.597e2	1.392	1.37	1.55	12.5	YES	NO	db	db	0.251
39	Total-pentadioxins	30.50	1.134e3	8.247e2	1.392	1.37	1.55	13.0	YES	NO	dd	dd	0.216
40	Total-pentadioxins	30.38	1.960e3	1.274e3	1.392	1.54	1.55	21.2	YES	NO	bd	bd	0.357
41	Total-pentadioxins	29.54	9.906e2	6.870e2	1.392	1.44	1.55	11.5	YES	NO	bb	bb	0.185
42	123478-HxCDD	36.24	3.070e3	2.414e3	0.987	1.27	1.24	39.9	YES	NO	bd	bd	0.557
43	Total-hexadioxins	35.46	3.052e3	2.219e3	1.007	1.38	1.24	34.2	YES	NO	dd	db	0.494
44	Total-hexadioxins	35.36	2.525e4	2.051e4	1.007	1.23	1.24	191.1	YES	NO	bd	bd	4.289
45	Total-hexadioxins	35.00	3.989e3	3.436e3	1.007	1.16	1.24	46.6	YES	NO	bb	bb	0.696
46	124679-HXCDD	34.23	2.247e4	1.756e4	1.033	1.28	1.24	250.4	YES	NO	bb	bb	3.885
47	123789-HxCDD	36.74	6.151e3	4.756e3	0.985	1.29	1.24	72.0	YES	NO	bd	bb	1.044
48	Total-hexadioxins	36.52	1.278e3	1.160e3	1.007	1.10	1.24	16.9	YES	NO	db	db	0.228
49	123678-HxCDD	36.36	8.648e3	7.042e3	1.021	1.23	1.24	97.7	YES	NO	dd	dd	1.369
50	1234678-HpCDD	40.50	1.413e5	1.338e5	1.253	1.06	1.05	726.7	YES	NO	bb	bb	39.934
51	1234679-HPCDD	39.43	2.236e5	2.006e5	1.286	1.11	1.05	1193.9	YES	NO	bd	bb	59.987
52	OCDD	45.31	1.173e6	1.268e6	1.103	0.93	0.89	5232.3	YES	NO	bd	bb	374.389

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	28.13	3.105e5					2.6	NO		bb		
2	FUNCTION1 PFK	27.48	3.340e6					8.4	YES		bb		
3	FUNCTION1 PFK	23.92	1.084e7					30.4	YES		db		
4	FUNCTION1 PFK	23.39	1.424e7					41.0	YES		dd		
5	FUNCTION1 PFK	21.31	3.965e7					57.1	YES		bd		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.77	3.768e5					3.7	YES		bb		0.000
2	FUNCTION2 PFK	29.43	1.161e6					12.2	YES		bb		0.000

ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	37.70	3.007e4					2.6	NO		bb		0.000
2	FUNCTION3 PFK	37.56	3.366e5					7.4	YES		db		0.000
3	FUNCTION3 PFK	37.46	1.225e5					7.2	YES		bd		0.000
4	FUNCTION3 PFK	37.31	5.733e5					2.9	NO		bb		0.000
5	FUNCTION3 PFK	36.77	2.343e6					11.6	YES		bb		0.000
6	FUNCTION3 PFK	36.04	3.296e5					5.2	YES		bb		0.000
7	FUNCTION3 PFK	33.15	4.206e3					0.9	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.44	1.797e7					59.1	YES		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	23.02	5.172e2					6.9	YES		db		0.000
2	FUNCTION1 HXCD...	22.96	2.351e3					6.6	YES		dd		0.000
3	FUNCTION1 HXCD...	22.61	8.690e1					1.3	NO		bd		0.000
4	FUNCTION1 HXCD...	22.40	7.817e1					1.1	NO		bb		0.000
5	FUNCTION1 HXCD...	22.13	1.367e2					1.5	NO		bb		0.000
6	FUNCTION1 HXCD...	27.75	1.083e2					1.0	NO		bb		0.000
7	FUNCTION1 HXCD...	26.37	1.187e2					1.2	NO		bb		0.000
8	FUNCTION1 HXCD...	26.16	2.548e3					22.5	YES		bb		0.000
9	FUNCTION1 HXCD...	25.08	7.774e1					1.0	NO		bb		0.000
10	FUNCTION1 HXCD...	23.99	2.007e2					1.9	NO		bb		0.000
11	FUNCTION1 HXCD...	23.51	1.225e2					1.6	NO		db		0.000
12	FUNCTION1 HXCD...	23.46	2.764e2					1.7	NO		dd		0.000
13	FUNCTION1 HXCD...	23.33	1.718e3					2.6	NO		bd		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.67	1.012e2					1.8	NO		bb		0.000
2	FUNCTION2 HPCD...	32.43	1.279e2					5.2	YES		bb		0.000
3	FUNCTION2 HPCD...	29.77	7.146e1					2.7	NO		bb		0.000
4	FUNCTION2 HPCD...	29.37	8.240e1					2.4	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	38.63	1.792e4					354.2	YES		bd		0.000
2	FUNCTION4 NCDPE	38.73	4.339e2					11.3	YES		db		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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Printed: Friday, February 24, 2023 15:10:37 Pacific Standard Time

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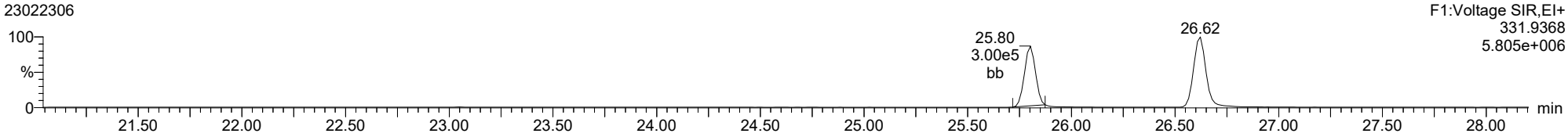
ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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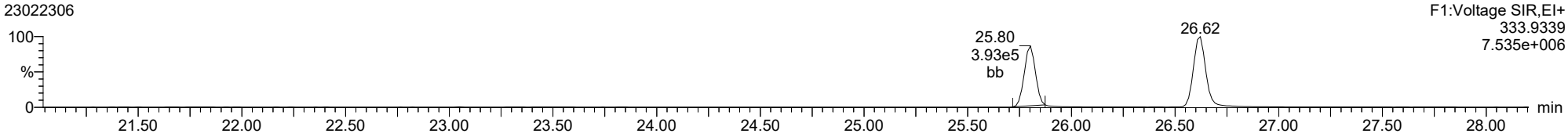

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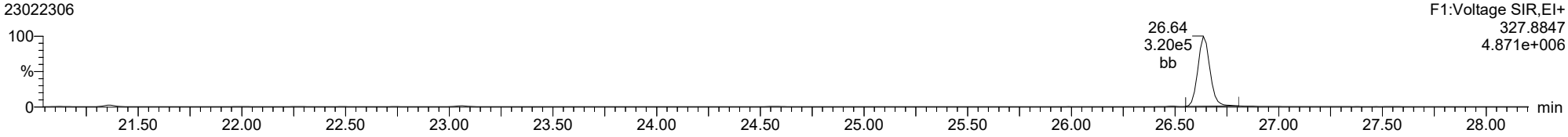

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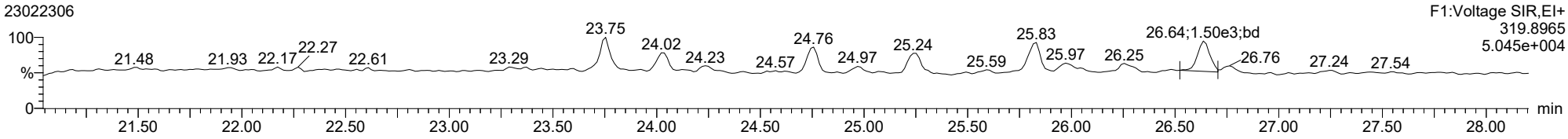

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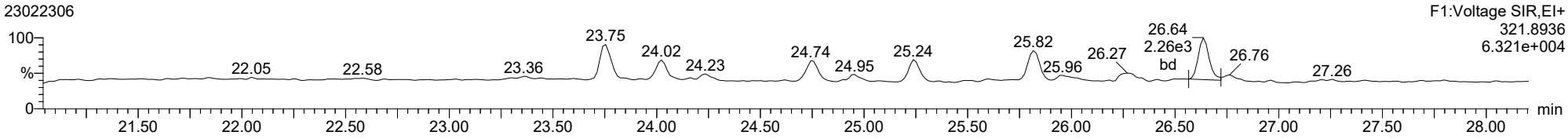

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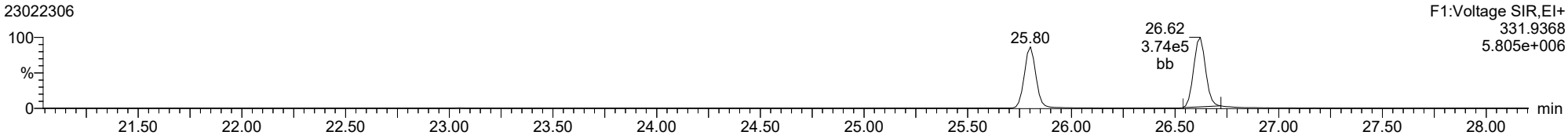

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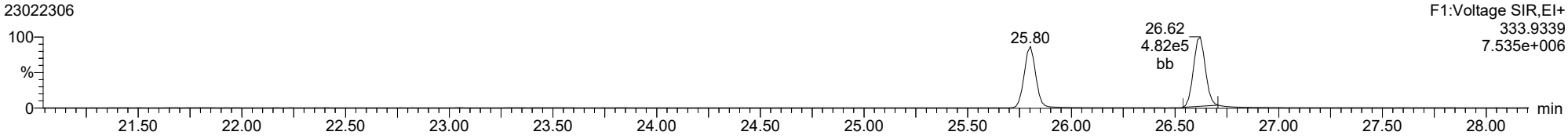
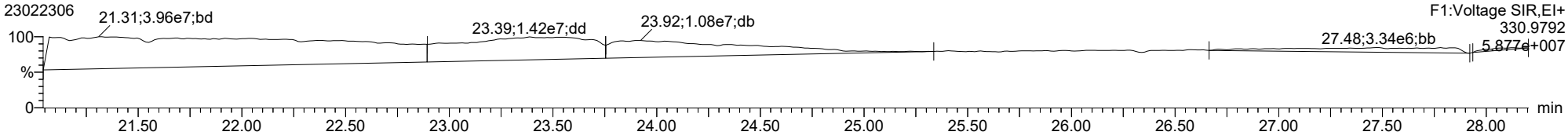
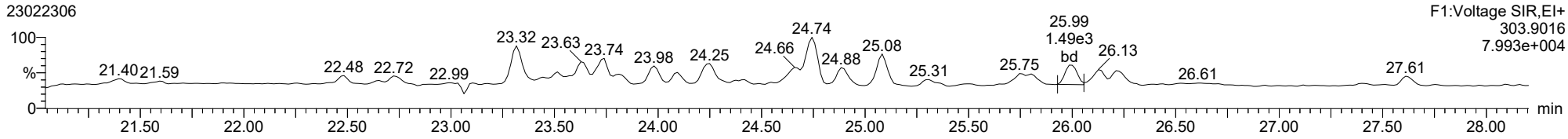


FUNCTION1 PFK



ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

2378-TCDF



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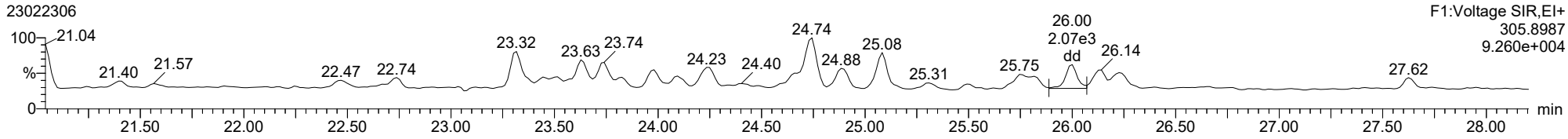

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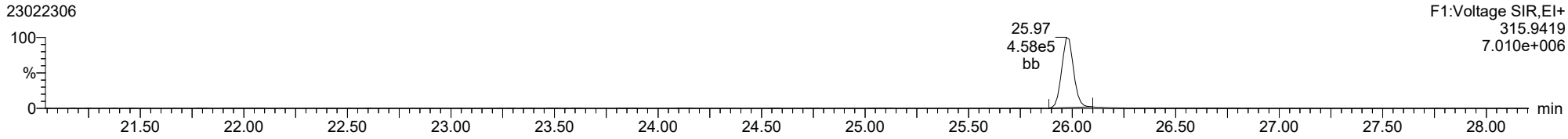

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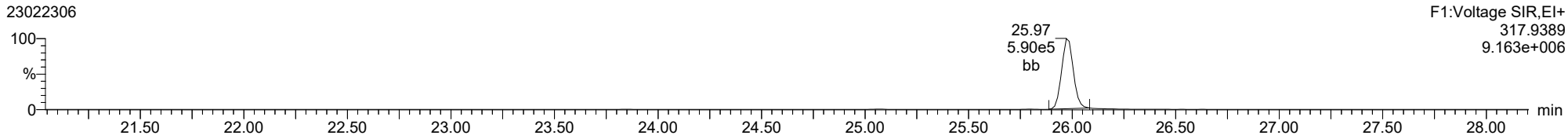

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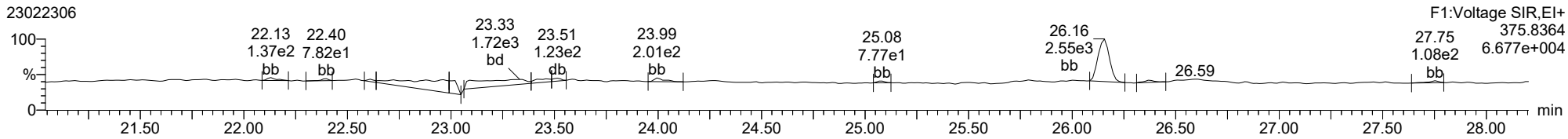
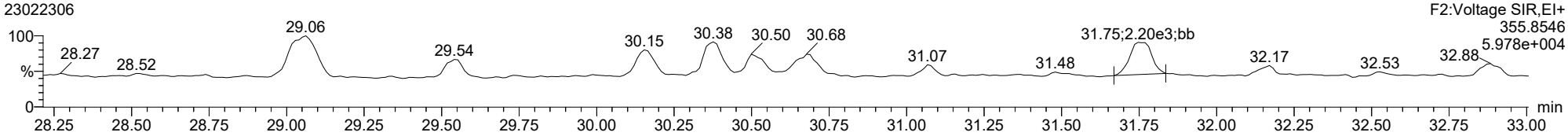


ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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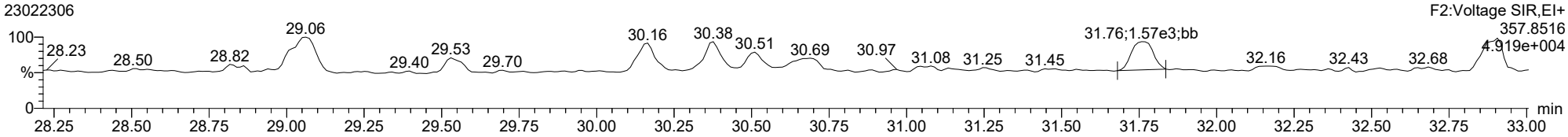

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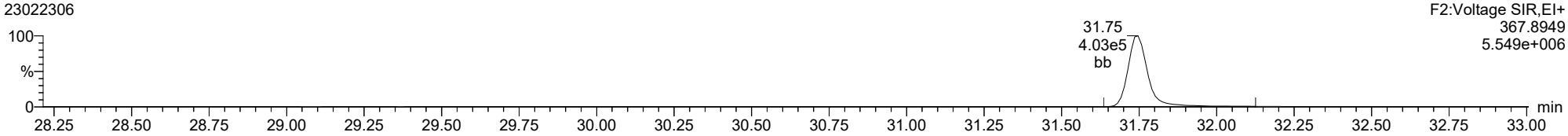

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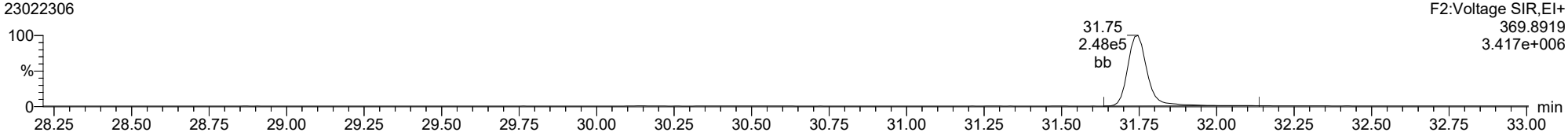

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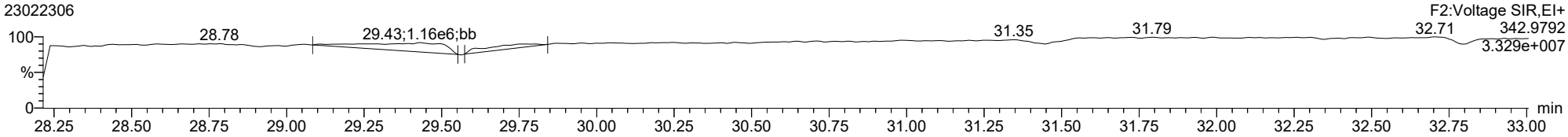
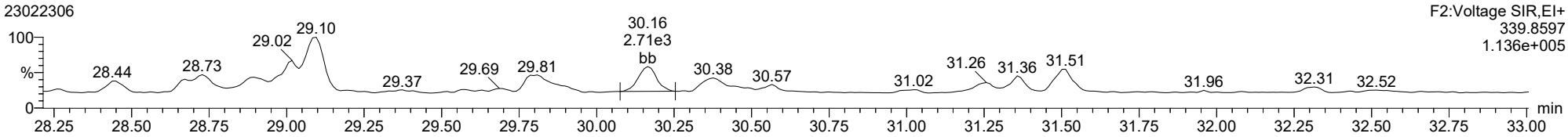


ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

12378-PeCDF



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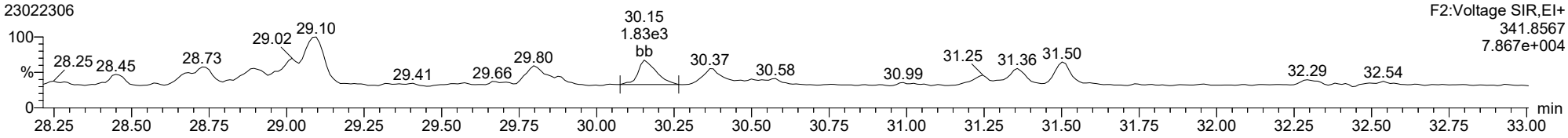

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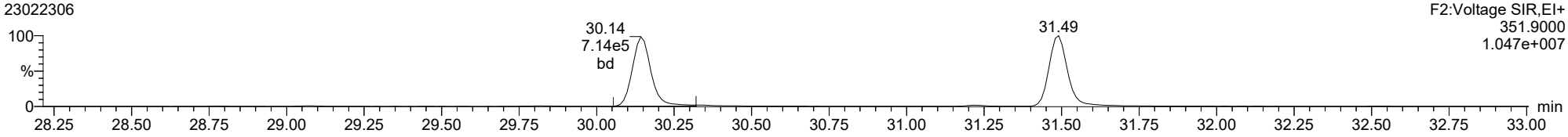

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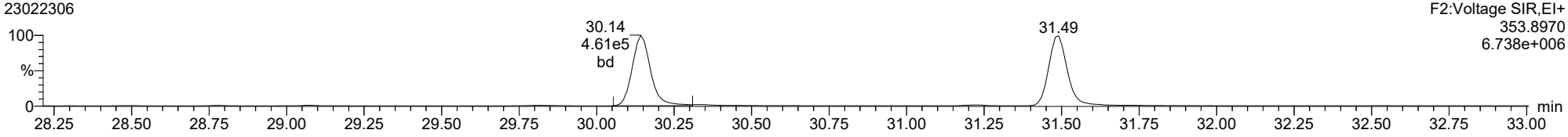
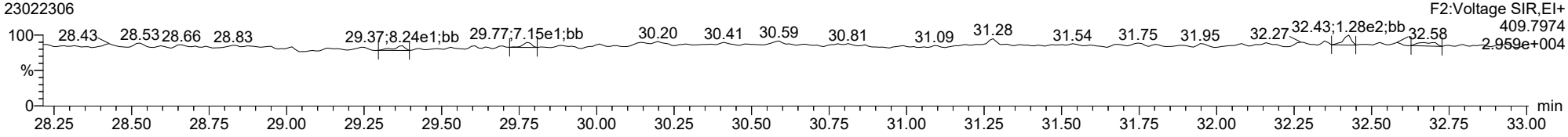


FUNCTION2 HPCDPE



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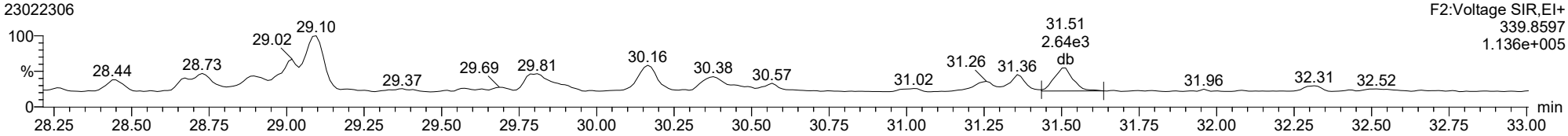
23478-PeCDF



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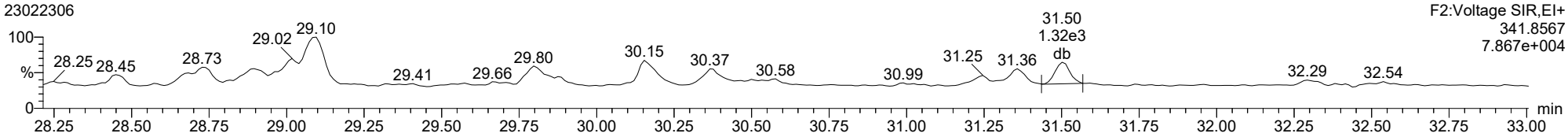

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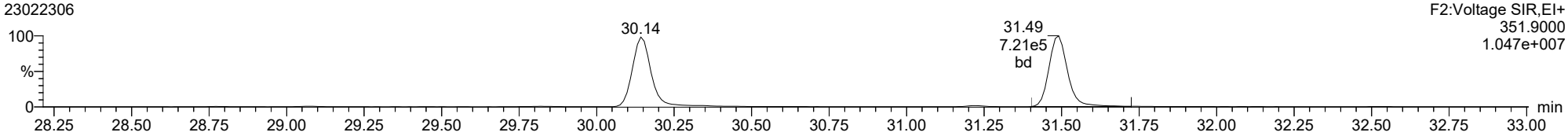

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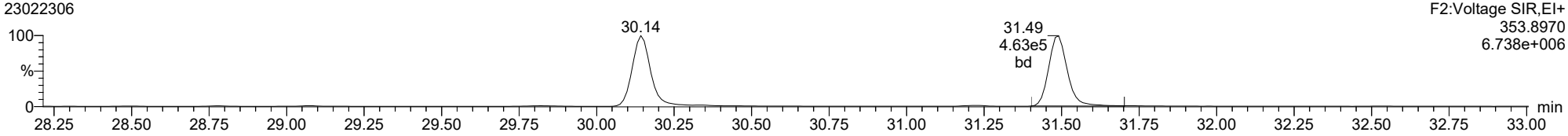
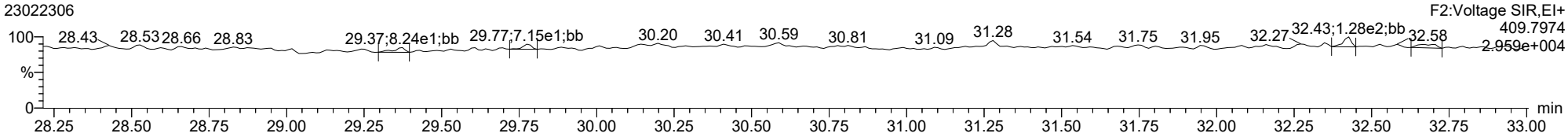


FUNCTION2 HPCDPE



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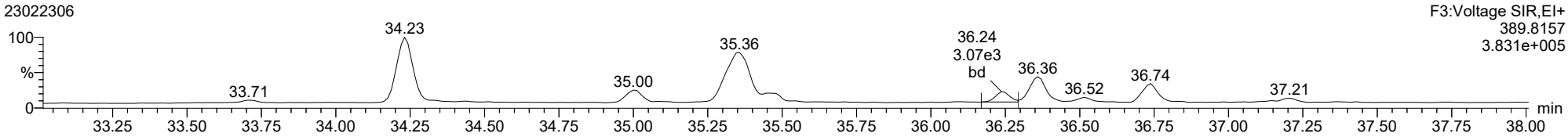
123478-HxCDD



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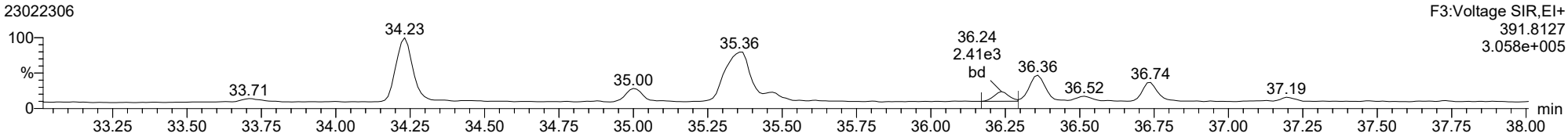

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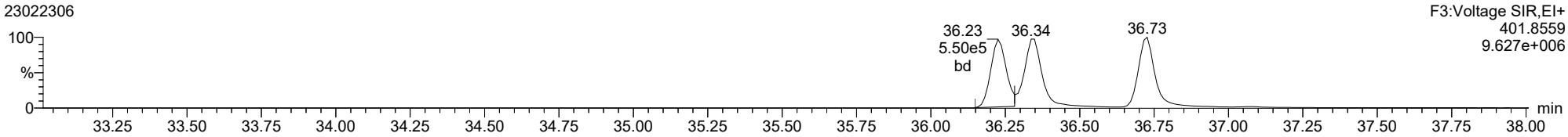

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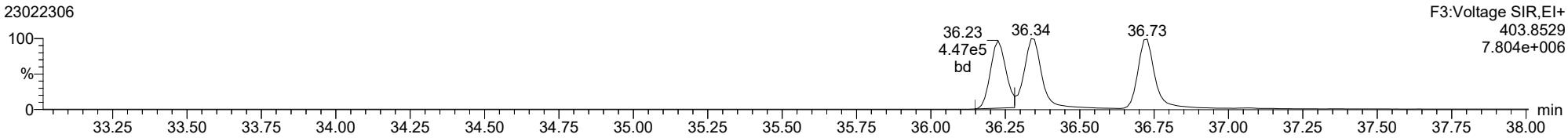
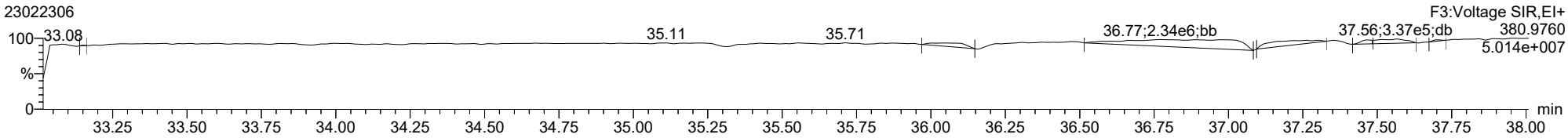


FUNCTION3 PFK



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ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

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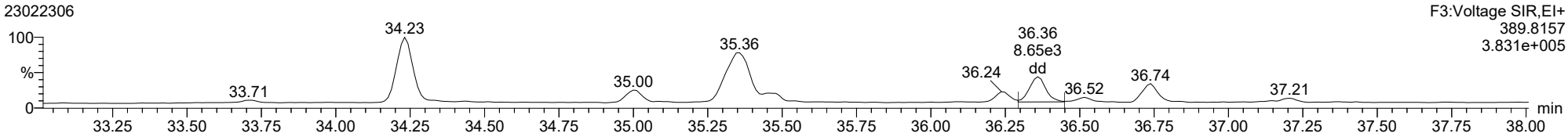

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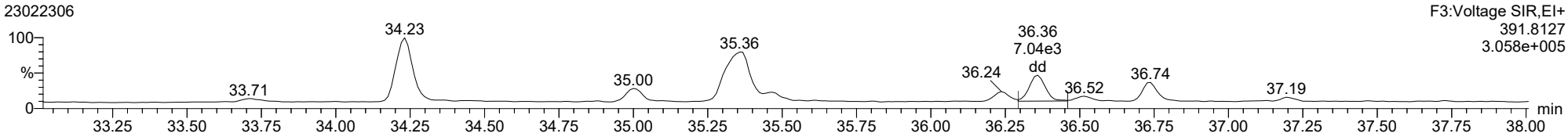

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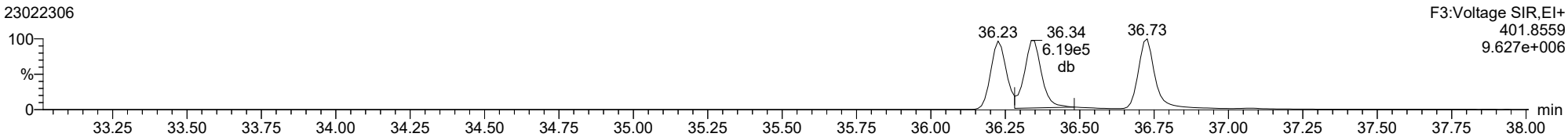

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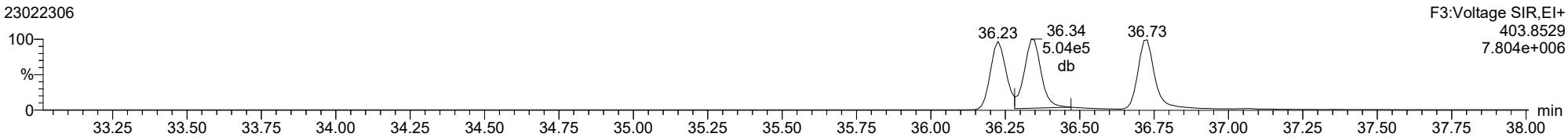

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ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

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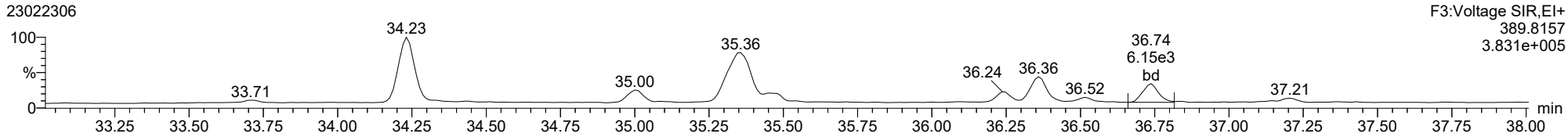

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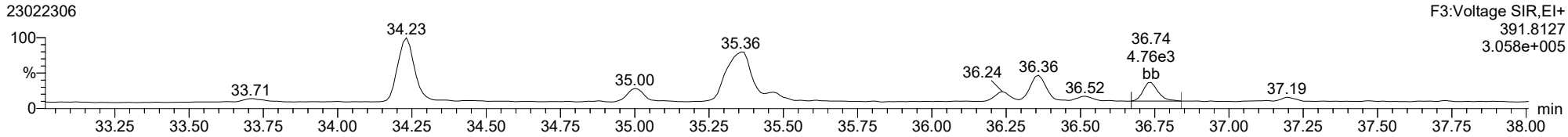

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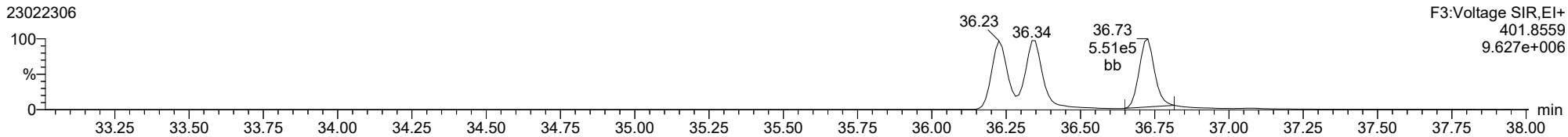

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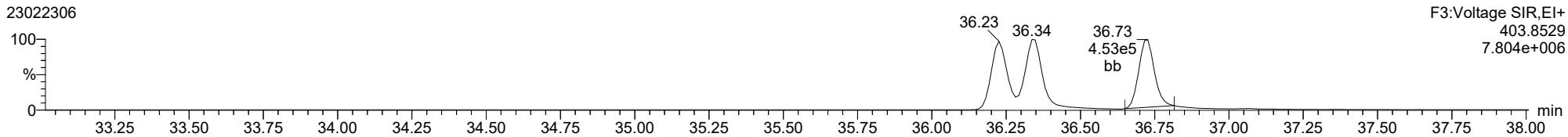

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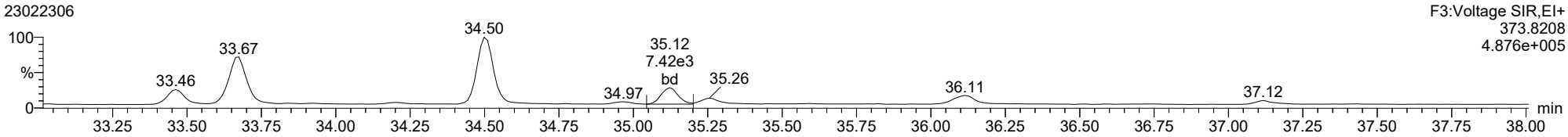

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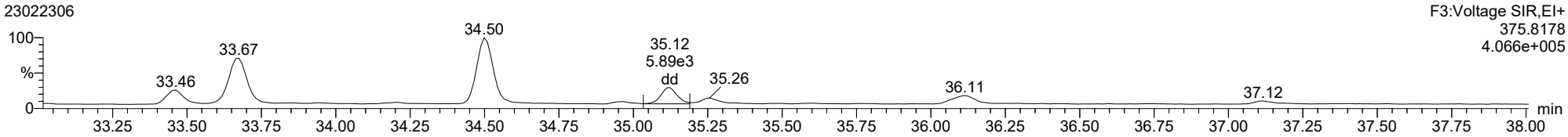

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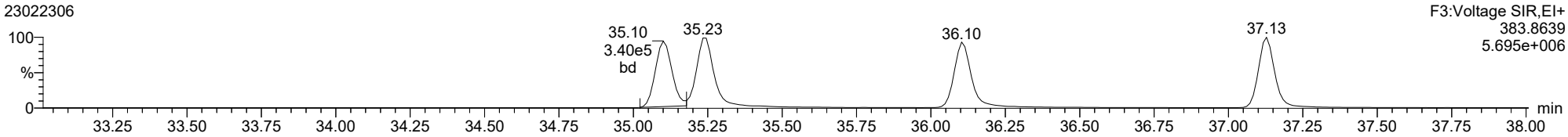

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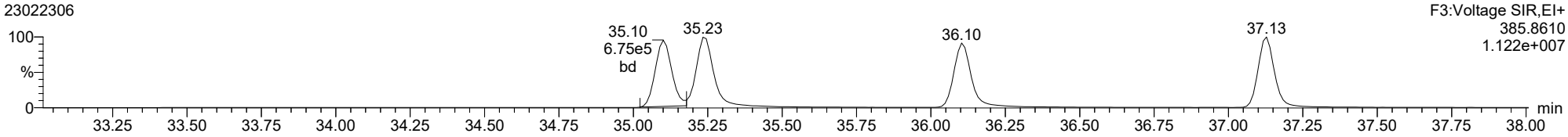
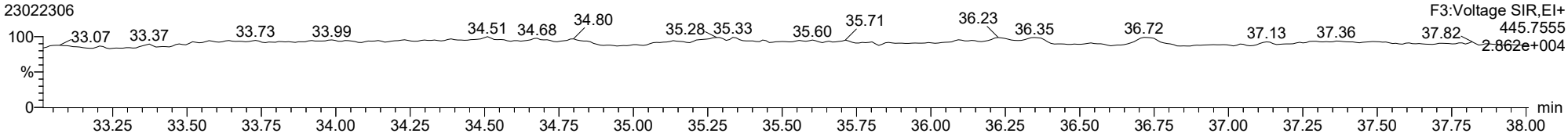
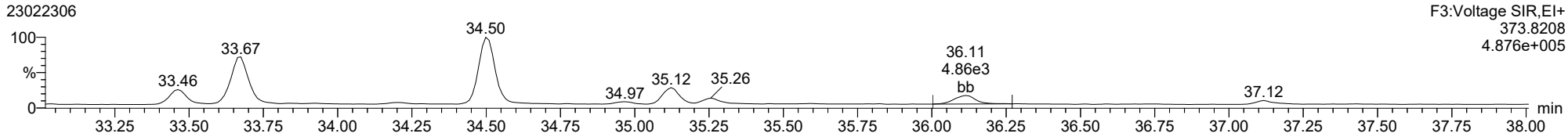


FUNCTION3 OCDPE

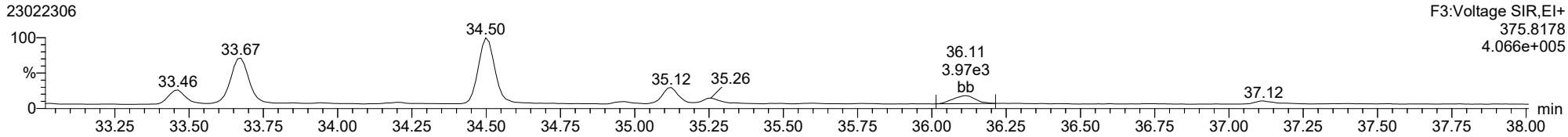


ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

234678-HxCDF



234678-HxCDF



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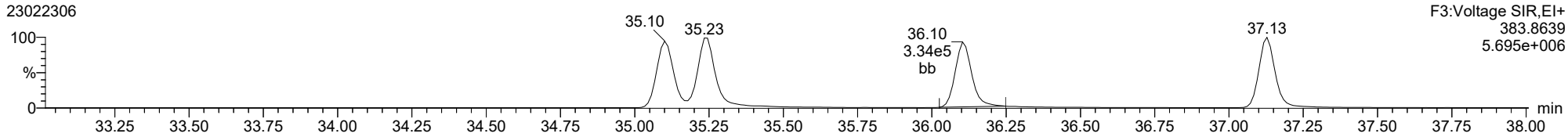

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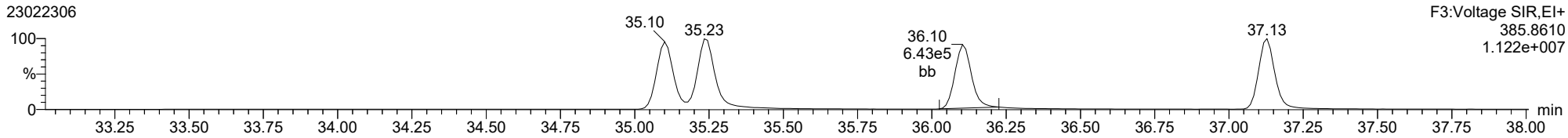
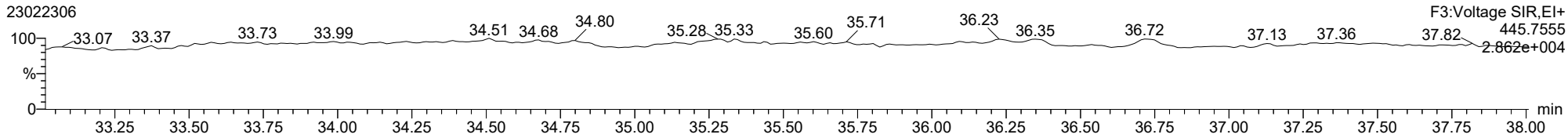


FUNCTION3 OCDPE



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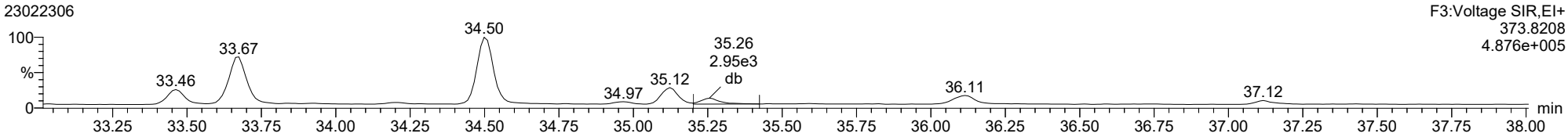

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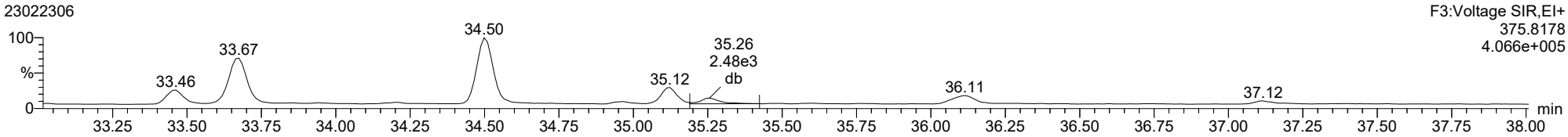

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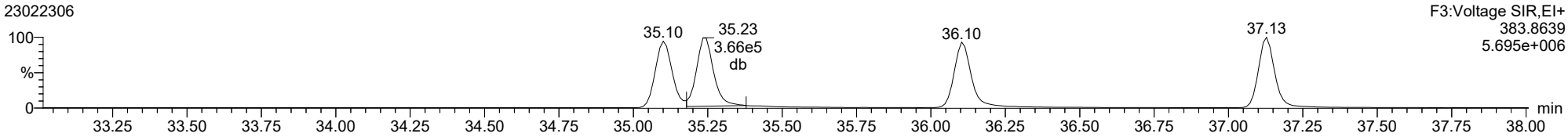

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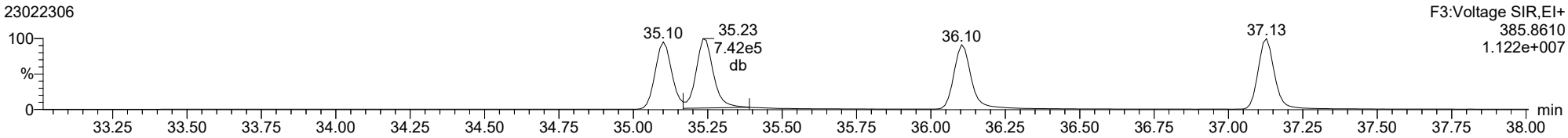
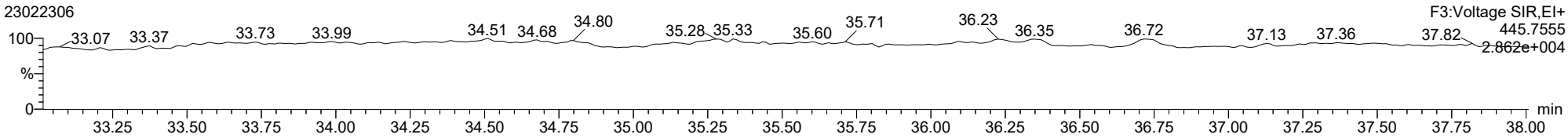


FUNCTION3 OCDPE



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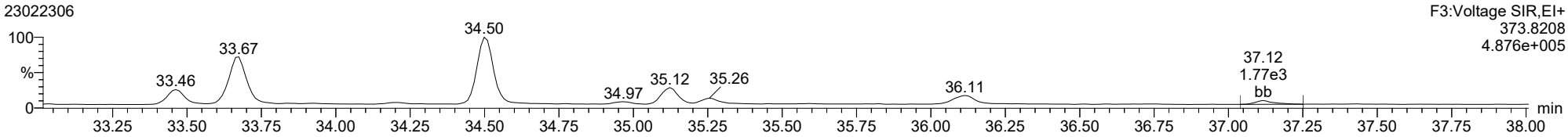

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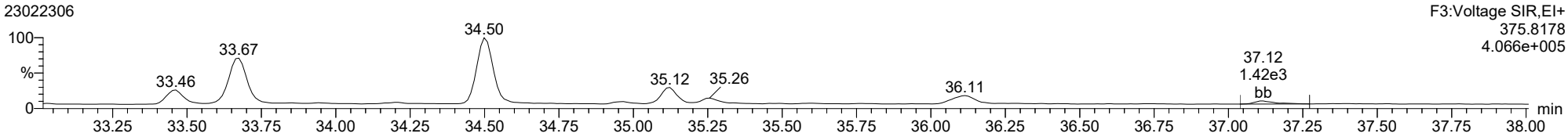

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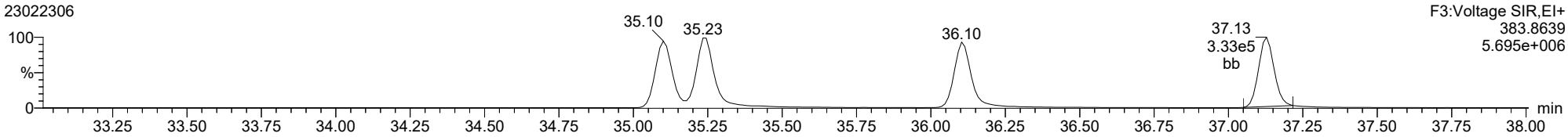

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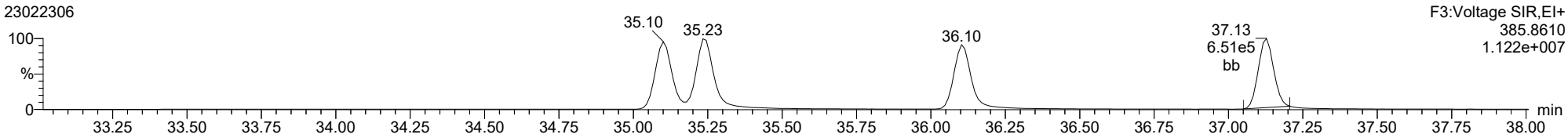
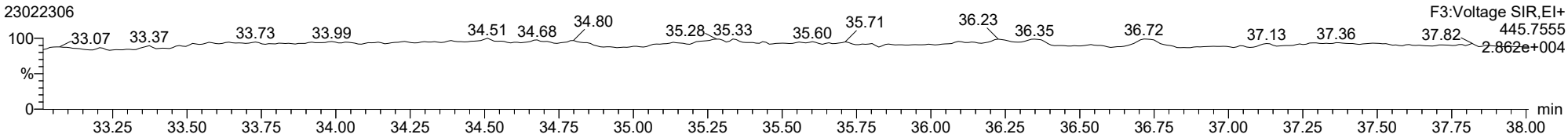


FUNCTION3 OCDPE



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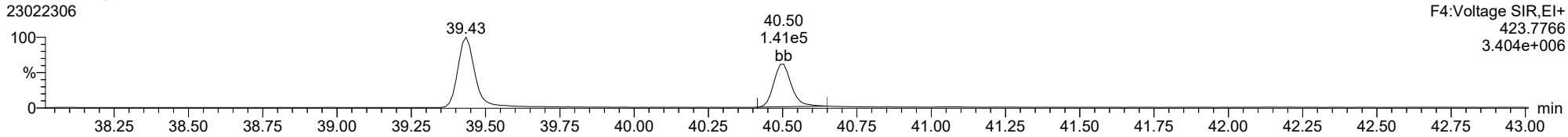
1234678-HpCDD



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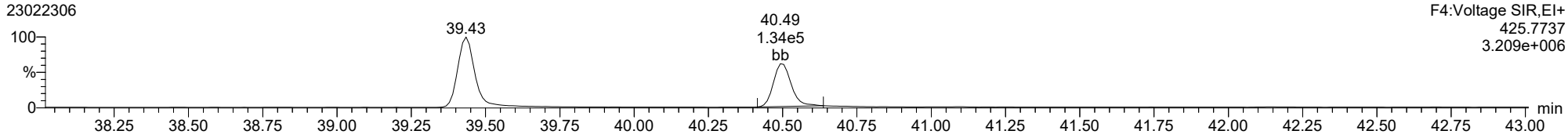
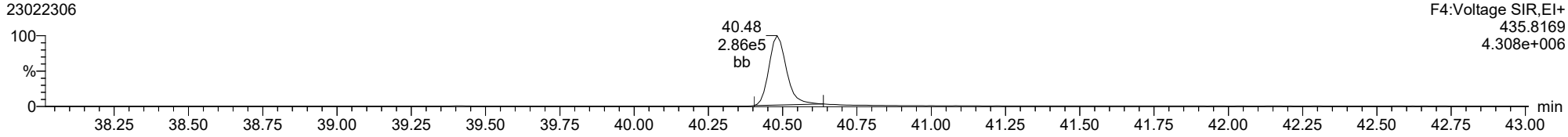


13C-1234678-HpCDD



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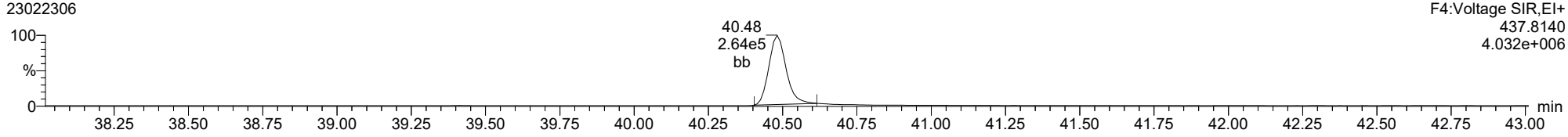
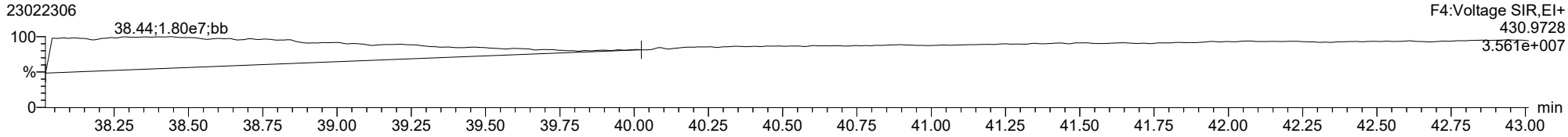
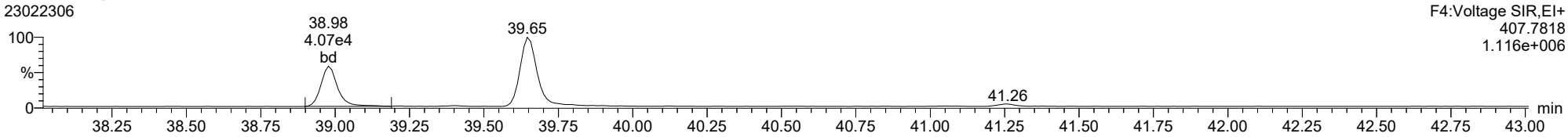


FUNCTION4 PFK



ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

1234678-HpCDF



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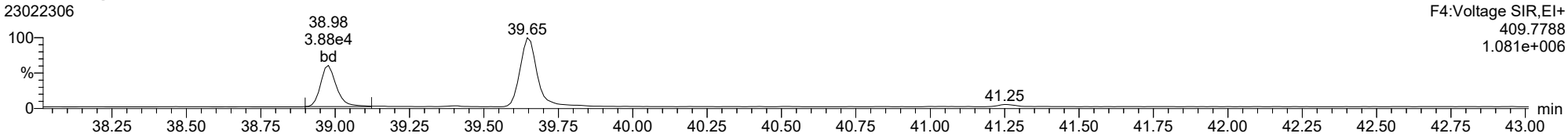

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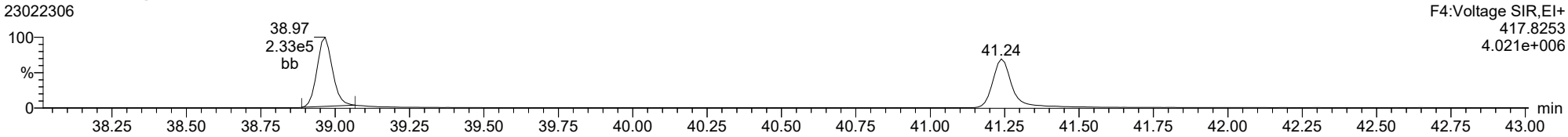

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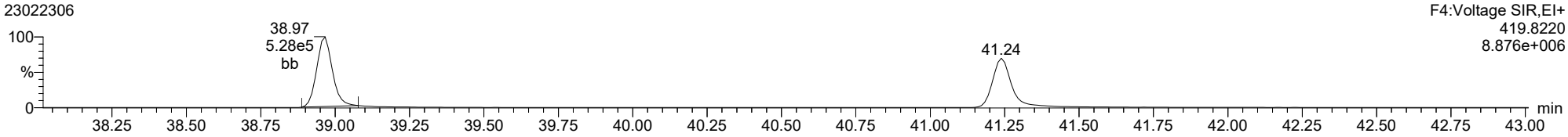
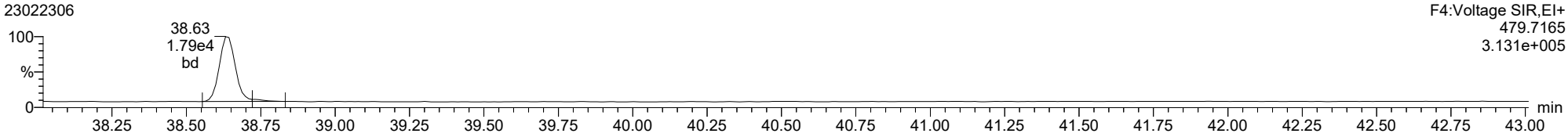
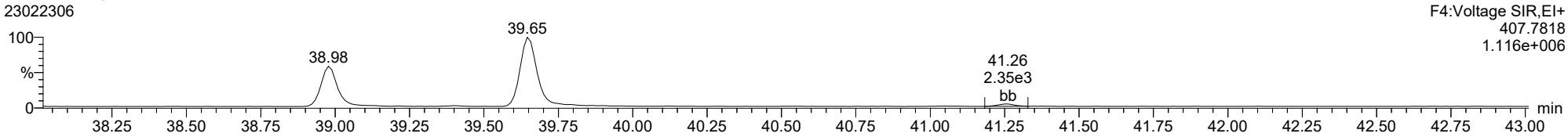


FUNCTION4 NCDPE

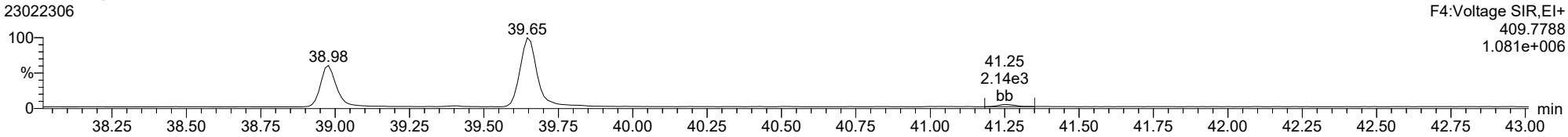


ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

1234789-HpCDF



1234789-HpCDF



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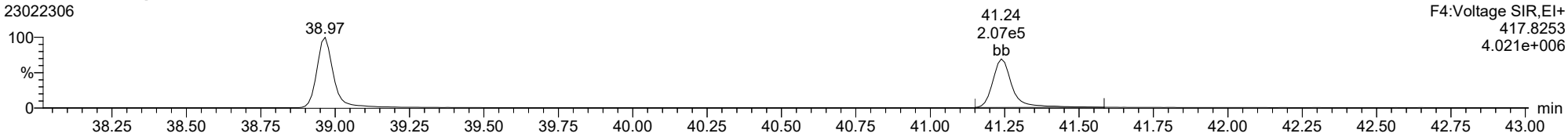

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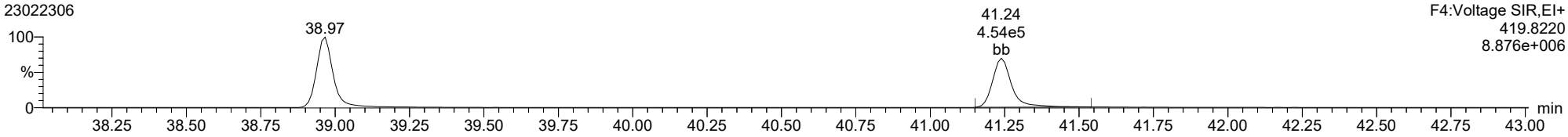
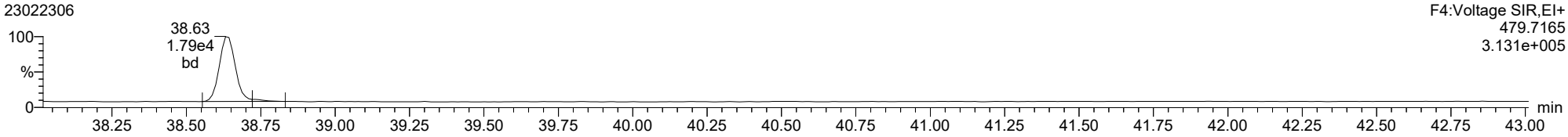
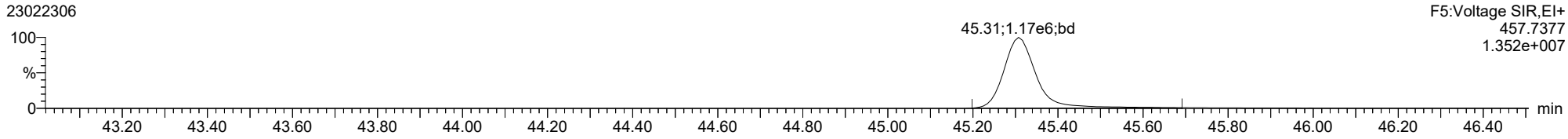


FUNCTION4 NCDPE

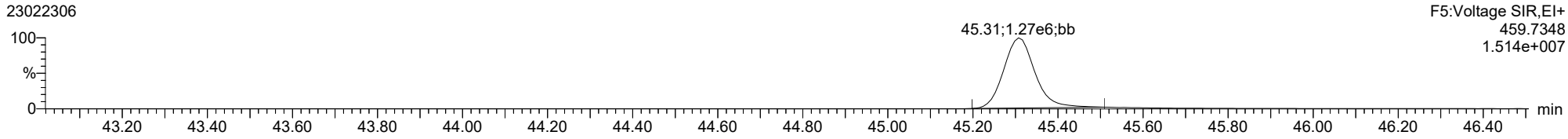


ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

OCDD



OCDD



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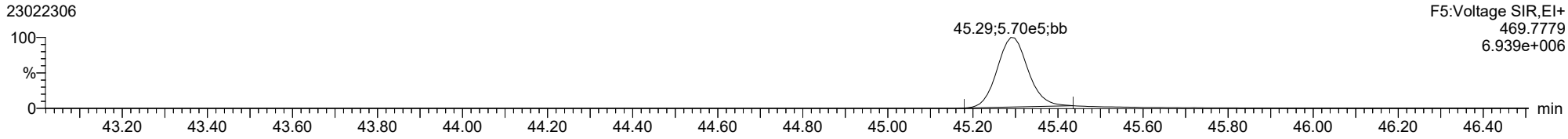
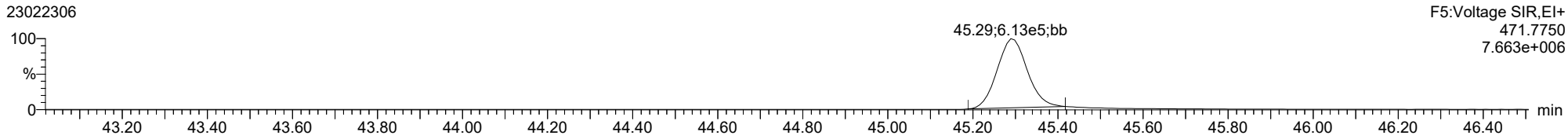
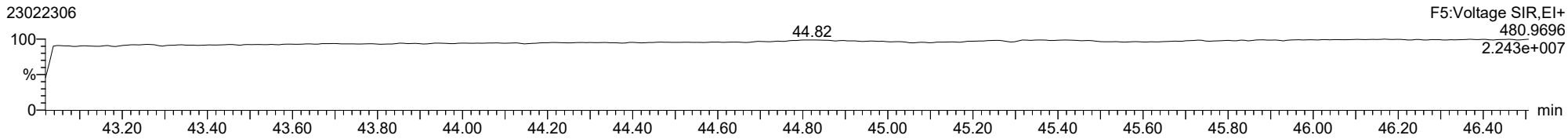


13C-OCDD

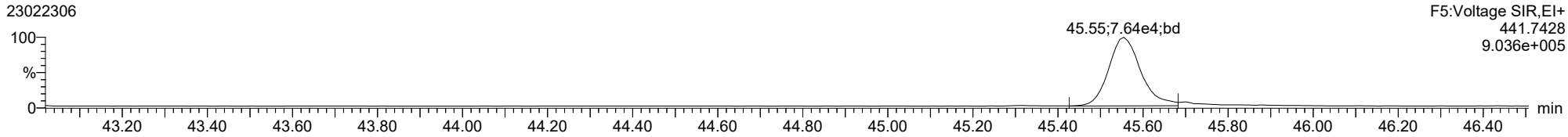


FUNCTION5 PFK

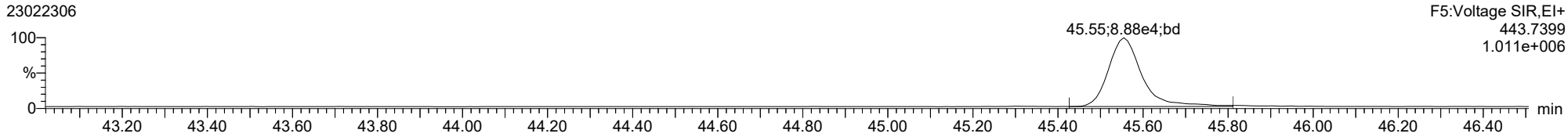


ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

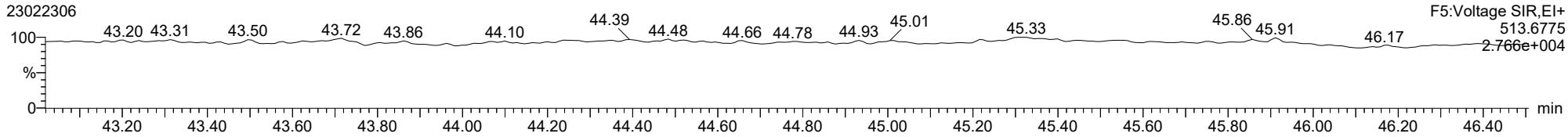
OCDF



OCDF

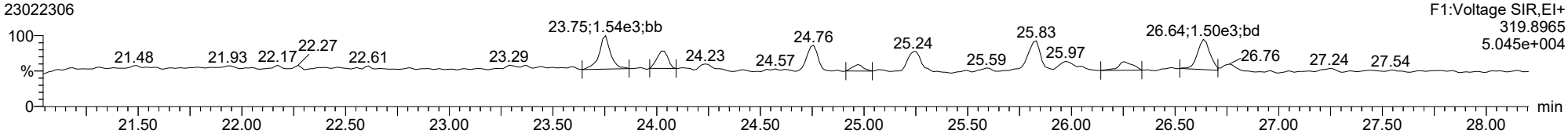


FUNCTION5 DCDPE

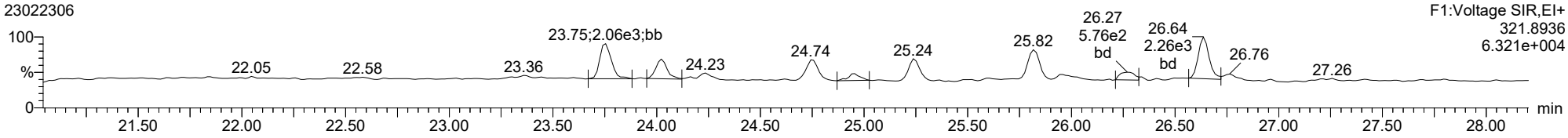


ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

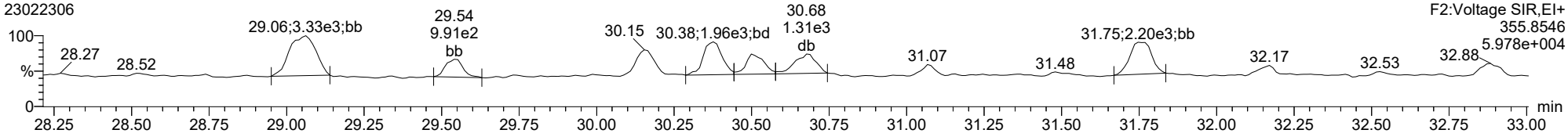
Total-tetradioxins



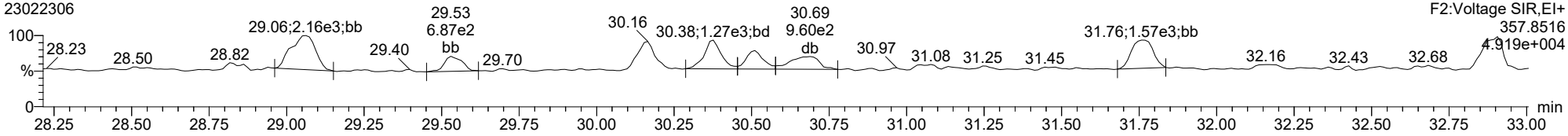
Total-tetradioxins



Total-pentadioxins

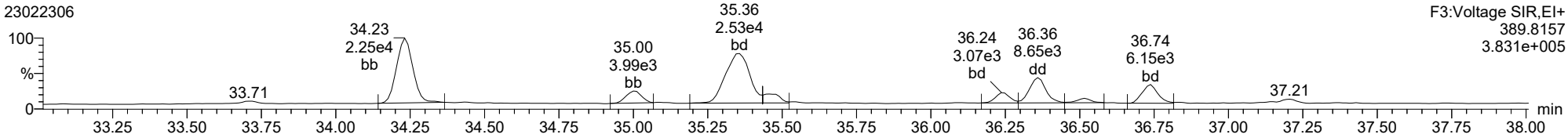


Total-pentadioxins

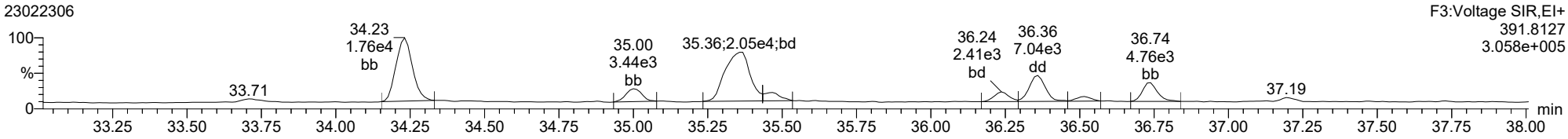


ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

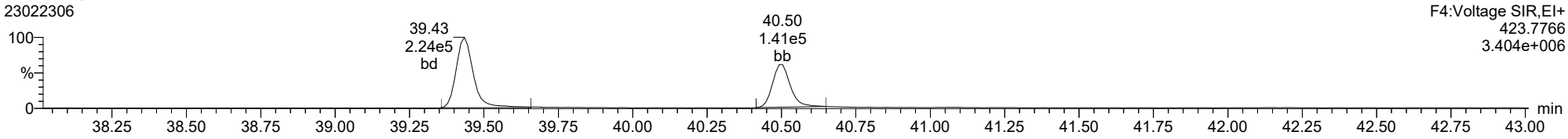
Total-hexadioxins



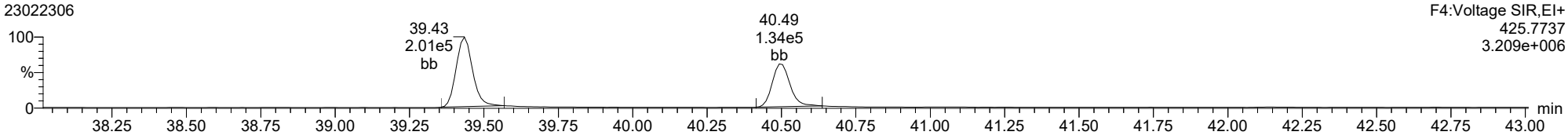
Total-hexadioxins



Total-heptadioxins

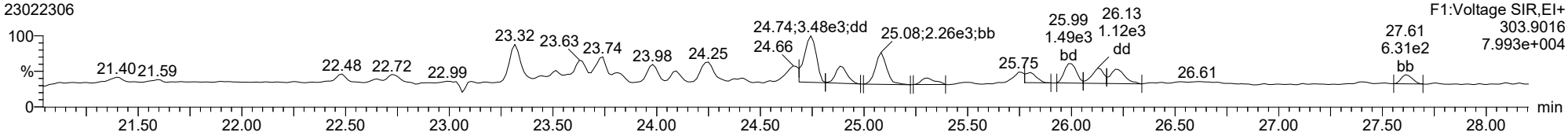


Total-heptadioxins

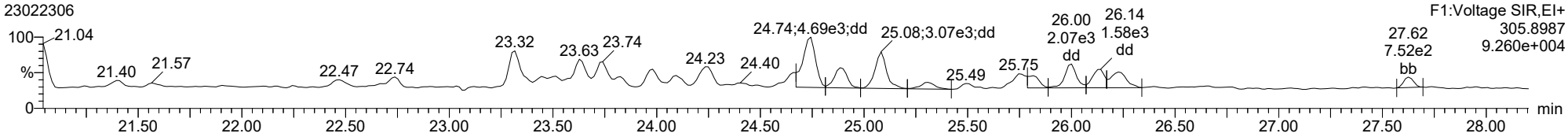


ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

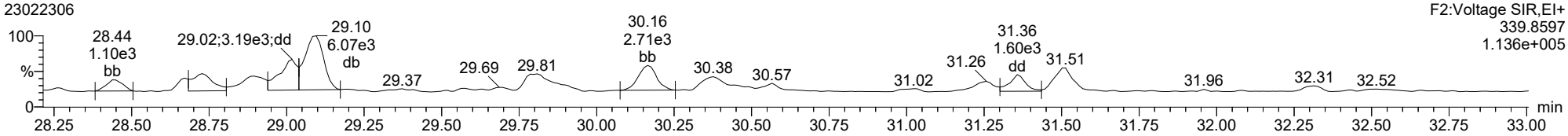
Total-tetrafurans



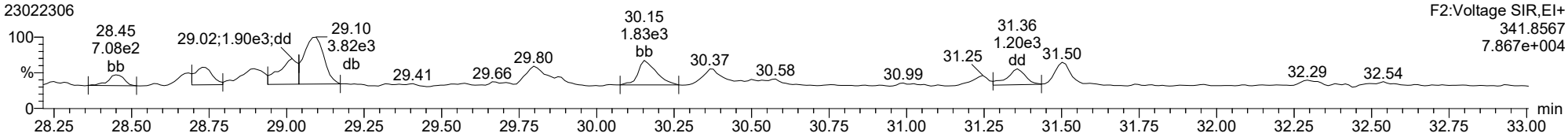
Total-tetrafurans



Total-pentafurans

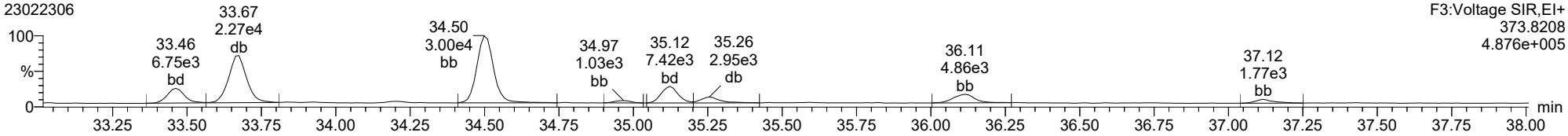


Total-pentafurans

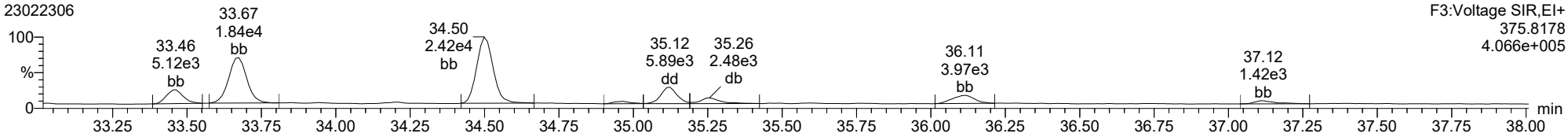


ID: BLA0261-SRM1, Name: 23022306, Date: 23-Feb-2023, Time: 14:14:35, Conditions: AUTOSPEC01, User: pk

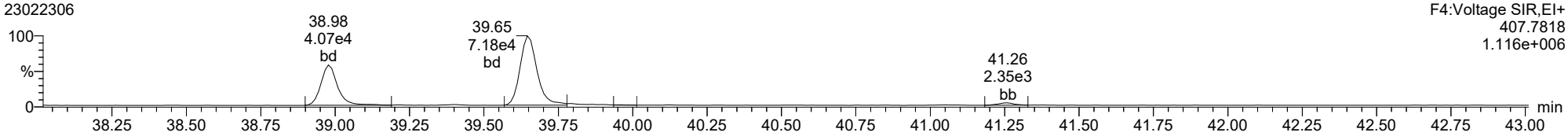
Total-hexafurans



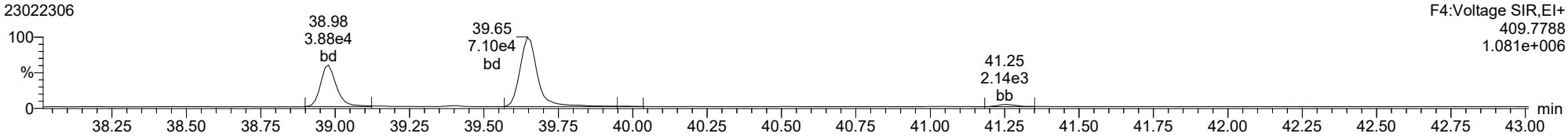
Total-hexafurans



Total-heptafurans



Total-heptafurans



INITIAL CALIBRATION DATA
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00010	Instrument:	AUTOSPEC01
Calibration Date:	02/01/2023	Column (1):	RTX-Dioxin2

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
2,3,7,8-TCDF			0.5	0.877532	2	0.8642547	10	0.9061172	40	0.8618622	200	0.870536
2,3,7,8-TCDD			0.5	1.33035	2	1.248621	10	1.137397	40	1.237049	200	1.228383
1,2,3,7,8-PeCDF	0.5	0.8845981	2.5	0.8294231	10	0.8519399	50	0.8286668	200	0.8328816	1000	0.8404146
2,3,4,7,8-PeCDF	0.5	0.9010853	2.5	0.8749834	10	0.9503804	50	0.9063511	200	0.9081631	1000	0.9261047
1,2,3,7,8-PeCDD	0.5	1.076975	2.5	1.101718	10	1.081557	50	1.083093	200	1.079692	1000	1.097073
1,2,3,4,7,8-HxCDF	0.5	1.197722	2.5	1.179021	10	1.141778	50	1.167137	200	1.188102	1000	1.216357
1,2,3,6,7,8-HxCDF	0.5	1.253033	2.5	1.219645	10	1.232591	50	1.230384	200	1.272527	1000	1.280106
2,3,4,6,7,8-HxCDF	0.5	1.220454	2.5	1.190231	10	1.230824	50	1.241416	200	1.24972	1000	1.240458
1,2,3,7,8,9-HxCDF	0.5	1.289076	2.5	1.125812	10	1.1524	50	1.182788	200	1.184457	1000	1.18469
1,2,3,4,7,8-HxCDD	0.5	0.980203	2.5	0.9572147	10	0.9836815	50	0.9739271	200	1.007401	1000	1.019376
1,2,3,6,7,8-HxCDD	0.5	1.134416	2.5	1.030295	10	0.9857061	50	1.001378	200	0.9828882	1000	0.9896475
1,2,3,7,8,9-HxCDD	0.5	1.002595	2.5	0.9852727	10	0.9574018	50	0.9845218	200	0.9780696	1000	1.005007
1,2,3,4,6,7,8-HpCDF	0.5	1.324418	2.5	1.241402	10	1.191769	50	1.137863	200	1.167606	1000	1.161655
1,2,3,4,7,8,9-HpCDF	0.5	1.241104	2.5	1.123881	10	1.176079	50	1.125517	200	1.167259	1000	1.157988
1,2,3,4,6,7,8-HpCDD	0.5	1.539399	2.5	1.221931	10	1.205401	50	1.160679	200	1.191041	1000	1.196962
OCDF	1	1.504532	5	1.206799	20	1.118843	100	1.047747	400	1.115678	2000	1.123986
OCDD			5	1.311834	20	1.098771	100	1.020503	400	1.035617	2000	1.04661
13C12-2,3,7,8-TCDF	100	1.794277	100	1.759625	100	1.739873	100	1.673566	100	1.790703	100	1.850313
13C12-2,3,7,8-TCDD	100	1.096674	100	1.073836	100	1.076512	100	1.133427	100	1.068055	100	1.169179
13C12-1,2,3,7,8-PeCDF	100	1.498324	100	1.483018	100	1.508724	100	1.460163	100	1.478051	100	1.734472
13C12-2,3,4,7,8-PeCDF	100	1.43808	100	1.438214	100	1.422382	100	1.41533	100	1.419969	100	1.663731
13C12-1,2,3,7,8-PeCDD	100	0.8950759	100	0.9011154	100	0.8899914	100	0.8624621	100	0.887379	100	1.048887
13C12-1,2,3,4,7,8-HxCDF	100	1.054544	100	1.077759	100	1.075116	100	1.061315	100	1.049772	100	1.003461
13C12-1,2,3,6,7,8-HxCDF	100	1.068197	100	1.101907	100	1.090557	100	1.088609	100	1.088766	100	1.041682
13C12-2,3,4,6,7,8-HxCDF	100	0.9969267	100	1.031453	100	1.020521	100	1.007653	100	1.020588	100	1.008816
13C12-1,2,3,7,8,9-HxCDF	100	0.9015813	100	0.9303539	100	0.9398705	100	0.9240461	100	0.9405347	100	0.9312132
13C12-1,2,3,4,7,8-HxCDD	100	0.9319648	100	0.9598064	100	0.9330427	100	0.9375516	100	0.9212584	100	0.9139779
13C12-1,2,3,6,7,8-HxCDD	100	0.9536719	100	0.9762285	100	0.9776812	100	0.9576787	100	0.9642386	100	0.9582641

INITIAL CALIBRATION DATA

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00010	Instrument:	AUTOSPEC01
Calibration Date:	02/01/2023	Column (1):	RTX-Dioxin2

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
13C12-1,2,3,4,6,7,8-HpCDF	100	1.009495	100	1.017629	100	1.046802	100	1.034238	100	1.053933	100	1.054435
13C12-1,2,3,4,7,8,9-HpCDF	100	0.8702856	100	0.8813287	100	0.9193412	100	0.9336903	100	0.9100344	100	0.9149429
13C12-1,2,3,4,6,7,8-HpCDD	100	0.7540434	100	0.7706109	100	0.7896711	100	0.7862201	100	0.7996856	100	0.7916329
13C12-OCDD	200	0.7447514	200	0.7401513	200	0.7909367	200	0.7980945	200	0.8130205	200	0.8424516
37Cl4-2,3,7,8-TCDD	0.1	1.457715	0.5	1.244154	2	1.209026	10	1.112721	40	1.137195	200	1.239891
13C12-1,2,3,4-TCDD	100	1	100	1	100	1	100	1	100	1	100	1
13C12-1,2,3,7,8,9-HxCDD	100	1	100	1	100	1	100	1	100	1	100	1

INITIAL CALIBRATION DATA

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00010	Instrument:	AUTOSPEC01
Calibration Date:	02/01/2023	Column (1):	RTX-Dioxin2

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
2,3,7,8-TCDF	0.8760604	2.0			RSD ()	
2,3,7,8-TCDD	1.23636	5.6			RSD ()	
1,2,3,7,8-PeCDF	0.844654	2.5			RSD ()	
2,3,4,7,8-PeCDF	0.911178	2.8			RSD ()	
1,2,3,7,8-PeCDD	1.086685	0.9			RSD ()	
1,2,3,4,7,8-HxCDF	1.181686	2.2			RSD ()	
1,2,3,6,7,8-HxCDF	1.248048	2.0			RSD ()	
2,3,4,6,7,8-HxCDF	1.22885	1.7			RSD ()	
1,2,3,7,8,9-HxCDF	1.186537	4.7			RSD ()	
1,2,3,4,7,8-HxCDD	0.9869672	2.3			RSD ()	
1,2,3,6,7,8-HxCDD	1.020722	5.7			RSD ()	
1,2,3,7,8,9-HxCDD	0.985478	1.8			RSD ()	
1,2,3,4,6,7,8-HpCDF	1.204119	5.7			RSD ()	
1,2,3,4,7,8,9-HpCDF	1.165305	3.7			RSD ()	
1,2,3,4,6,7,8-HpCDD	1.252569	11.3			RSD ()	
OCDF	1.186264	13.8			RSD ()	
OCDD	1.102667	10.9			RSD ()	
13C12-2,3,7,8-TCDF	1.768059	3.4			RSD ()	
13C12-2,3,7,8-TCDD	1.102947	3.7			RSD ()	
13C12-1,2,3,7,8-PeCDF	1.527125	6.7			RSD ()	
13C12-2,3,4,7,8-PeCDF	1.466284	6.6			RSD ()	
13C12-1,2,3,7,8-PeCDD	0.9141518	7.4			RSD ()	
13C12-1,2,3,4,7,8-HxCDF	1.053661	2.6			RSD ()	
13C12-1,2,3,6,7,8-HxCDF	1.079953	2.0			RSD ()	
13C12-2,3,4,6,7,8-HxCDF	1.014326	1.2			RSD ()	
13C12-1,2,3,7,8,9-HxCDF	0.9279333	1.5			RSD ()	
13C12-1,2,3,4,7,8-HxCDD	0.9329336	1.7			RSD ()	
13C12-1,2,3,6,7,8-HxCDD	0.9646272	1.1			RSD ()	
13C12-1,2,3,4,6,7,8-HpCDF	1.036089	1.8			RSD ()	
13C12-1,2,3,4,7,8,9-HpCDF	0.9049372	2.7			RSD ()	
13C12-1,2,3,4,6,7,8-HpCDD	0.7819773	2.1			RSD ()	

INITIAL CALIBRATION DATA

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00010	Instrument:	AUTOSPEC01
Calibration Date:	02/01/2023	Column (1):	RTX-Dioxin2

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
13C12-OCDD	0.7882343	5.0			RSD ()	
37Cl4-2,3,7,8-TCDD	1.23345	9.9			RSD ()	
13C12-1,2,3,4-TCDD	1	0.0			RSD ()	
13C12-1,2,3,7,8,9-HxCDD	1	0.0			RSD ()	

ANALYSIS SEQUENCE

SLB0026

Instrument: AUTOSPEC01 HRGCMS Column ID: K11292
Calibration ID: GB00010 Tune File: JAN3023
EM Voltage: 350 Resolution check times : 11:48, 22:06

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLB0026-ICV1	CS3R1	QC		1	K009821		02/01/2023 10:37	23020102	PK	
SLB0026-RES1	ISCR1	QC		2	K003933		02/01/2023 13:02	23020103	PK	
SLB0026-CAL1	CSLCR	QC		3	I005460		02/01/2023 14:39	23020104	PK	
SLB0026-CAL2	CS1CR	QC		4	I005456		02/01/2023 15:28	23020105	PK	
SLB0026-CAL3	CS2CR	QC		5	I005457		02/01/2023 17:07	23020106	PK	
SLB0026-CAL4	CS3CR	QC		6	K009821		02/01/2023 17:56	23020107	PK	
SLB0026-CAL5	CS4CR	QC		7	I005458		02/01/2023 18:45	23020108	PK	
SLB0026-CAL6	CS5CR	QC		8	I005459		02/01/2023 19:34	23020109	PK	
SLB0026-SCV1	ICVCR	QC		9	H008219		02/01/2023 20:23	23020110	PK	
SLB0026-CCV1	CS3R2	QC		10	K009821		02/01/2023 21:12	23020111	PK	
SLB0026-RES2	ISCR2	QC		11	K003933		02/01/2023 22:06	23020112	PK	

Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:36:13 Pacific Standard Time 2/3/23 pk

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Calibrate		
Process Quantify		
Dataset Created		
Peak deleted	Sample:23020104, Compound:TF, RT:25.882	1
Peak deleted	Sample:23020104, Compound:TD, RT:26.532	1
Peak deleted	Sample:23020104, Compound:OD, RT:45.120	1
Peak deleted	Sample:23020109, Compound:TF, RT:27.273	6
Peak deleted	Sample:23020109, Compound:TF, RT:27.379	6
Peak deleted	Sample:23020108, Compound:PP, RT:27.107	5
Peak deleted	Sample:23020106, Compound:PF, RT:32.432	3
Peak deleted	Sample:23020108, Compound:HF, RT:33.335	5
Peak deleted	Sample:23020109, Compound:HF, RT:33.335	6
Peak deleted	Sample:23020108, Compound:TD, RT:27.122	5
Peak deleted	Sample:23020108, Compound:TD, RT:27.061	5
Peak deleted	Sample:23020109, Compound:TD, RT:27.107	6
Peak deleted	Sample:23020109, Compound:TD, RT:27.167	6
Peak deleted	Sample:23020104, Compound:HPD, RT:39.318	1
Peak deleted	Sample:23020105, Compound:HPD, RT:39.318	2
Peak deleted	Sample:23020106, Compound:HPD, RT:39.329	3
Peak deleted	Sample:23020108, Compound:HPD, RT:39.296	5
Peak deleted	Sample:23020109, Compound:HPD, RT:39.307	6
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230201ICIH.qld'	

Dataset: T:\Autospec\Processed Data Batch\230201IHOP.qld
Last Altered: Friday, February 03, 2023 11:20:37 Pacific Standard Time
Printed: Friday, February 03, 2023 11:21:40 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3R1, Name: 23020102, Date: 01-Feb-2023, Time: 10:37:16, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.897	1.001	1.633e4	2.121e4	0.876	0.770	0.770	844	1016	2.38e5	3.19e5	282.5	314.0	NO	bb	bb	8.996
12378-PeCDF	30.050	1.001	1.109e5	7.631e4	0.845	1.453	1.550	1249	1693	1.63e6	1.11e6	1307.7	657.1	NO	bb	bd	45.474
23478-PeCDF	31.387	1.001	1.159e5	7.903e4	0.911	1.467	1.550	1249	1693	1.77e6	1.19e6	1420.2	702.0	NO	bd	bd	46.006
123478-HxCDF	34.997	1.000	1.295e5	1.045e5	1.182	1.240	1.240	1714	1368	2.02e6	1.66e6	1181.4	1216.7	NO	bd	bd	43.803
234678-HxCDF	35.988	1.000	1.343e5	1.093e5	1.229	1.229	1.240	1714	1368	2.03e6	1.64e6	1185.6	1198.5	NO	bd	bb	45.575
123678-HxCDF	35.131	1.000	1.458e5	1.151e5	1.248	1.266	1.240	1714	1368	2.05e6	1.65e6	1195.7	1205.2	NO	db	dd	44.655
123789-HxCDF	37.025	1.001	1.158e5	9.218e4	1.187	1.257	1.240	1714	1368	1.74e6	1.39e6	1013.6	1013.7	NO	bb	bb	44.499
1234678-HpCDF	38.852	1.000	1.090e5	1.104e5	1.204	0.988	1.050	1381	2036	1.81e6	1.80e6	1312.8	883.5	NO	bb	bd	45.091
1234789-HpCDF	41.113	1.001	9.861e4	9.166e4	1.165	1.076	1.050	1381	2036	1.37e6	1.36e6	990.9	669.9	NO	bd	bb	47.733
OCDF	45.368	1.006	1.600e5	1.827e5	1.186	0.875	0.890	1512	1583	1.89e6	2.17e6	1249.6	1369.4	NO	bd	bd	86.348
2378-TCDD	26.532	1.001	1.602e4	2.106e4	1.236	0.761	0.770	1110	975	2.31e5	3.09e5	207.8	317.0	NO	bb	bd	7.999
12378-PeCDD	31.643	1.001	9.866e4	5.958e4	1.087	1.656	1.550	1646	1001	1.48e6	9.13e5	896.9	912.1	NO	bd	bb	49.739
123478-HxCDD	36.111	1.000	1.092e5	8.877e4	0.987	1.230	1.240	1547	1532	1.85e6	1.48e6	1198.0	965.8	NO	bd	bd	44.758
123678-HxCDD	36.234	1.001	1.208e5	9.232e4	1.021	1.308	1.240	1547	1532	1.90e6	1.47e6	1225.9	960.4	NO	db	db	43.840
123789-HxCDD	36.612	1.011	1.096e5	9.138e4	0.985	1.199	1.240	1547	1532	1.82e6	1.52e6	1178.1	989.3	NO	bb	bb	44.134
1234678-HpCDD	40.367	1.001	9.142e4	8.634e4	1.253	1.059	1.050	1287	1635	1.36e6	1.30e6	1055.7	793.5	NO	bd	bb	44.175
OCDD	45.130	1.000	1.558e5	1.797e5	1.103	0.867	0.890	1087	1881	1.97e6	2.25e6	1808.2	1195.6	NO	bb	bb	90.946
13C-2378-TCDF	25.867	1.006	2.092e5	2.671e5	1.768	0.783	0.770	1473	1226	3.13e6	4.02e6	2126.4	3281.6	NO	bb	bb	81.841
13C-12378-PeCDF	30.028	1.168	2.959e5	1.916e5	1.527	1.544	1.550	2999	2197	4.50e6	2.95e6	1498.8	1341.1	NO	bb	bb	96.965
13C-23478-PeCDF	31.365	1.220	2.816e5	1.834e5	1.466	1.535	1.550	2999	2197	4.34e6	2.84e6	1446.0	1290.5	NO	bb	bb	96.345
13C-123478-HxCDF	34.986	0.956	1.509e5	3.011e5	1.054	0.501	0.510	1539	2587	2.37e6	4.78e6	1539.0	1847.3	NO	bd	bd	88.697
13C-123678-HxCDF	35.119	0.960	1.595e5	3.087e5	1.080	0.517	0.510	1539	2587	2.51e6	4.86e6	1632.0	1878.9	NO	db	db	89.641
13C-234678-HxCDF	35.977	0.983	1.463e5	2.887e5	1.014	0.507	0.510	1539	2587	2.39e6	4.73e6	1553.6	1829.5	NO	bb	bb	88.660
13C-123789-HxCDF	37.002	1.011	1.315e5	2.625e5	0.928	0.501	0.510	1539	2587	2.16e6	4.40e6	1402.9	1699.3	NO	bb	bb	87.781
13C-1234678-HpCDF	38.841	1.062	1.240e5	2.800e5	1.036	0.443	0.440	1596	2193	2.11e6	4.68e6	1322.3	2133.9	NO	bb	bb	80.624
13C-1234789-HpCDF	41.091	1.123	1.084e5	2.336e5	0.905	0.464	0.440	1596	2193	1.58e6	3.44e6	991.3	1568.5	NO	bb	bb	78.158
13C-1234-TCDD	25.700	0.000	1.445e5	1.847e5	1.000	0.782	0.770	1667	873	2.18e6	2.81e6	1307.2	3212.9	NO	bb	bb	100.000
13C-2378-TCDD	26.517	1.032	1.635e5	2.114e5	1.103	0.774	0.770	1667	873	2.52e6	3.27e6	1513.3	3746.2	NO	bb	bb	103.258
13C-12378-PeCDD	31.621	1.230	1.783e5	1.145e5	0.914	1.557	1.550	940	1014	2.71e6	1.73e6	2879.6	1709.2	NO	bb	bb	97.286
13C-123478-HxCDD	36.100	0.987	2.492e5	1.989e5	0.933	1.253	1.240	1846	1567	4.13e6	3.30e6	2236.6	2103.6	NO	bd	bd	99.308
13C-123678-HxCDD	36.211	0.990	2.631e5	2.131e5	0.965	1.234	1.240	1846	1567	4.22e6	3.43e6	2285.9	2187.7	NO	db	db	102.074
13C-1234678-HpCDD	40.345	1.103	1.659e5	1.554e5	0.782	1.067	1.050	1641	1171	2.51e6	2.40e6	1529.6	2051.4	NO	bb	bb	84.947
13C-OCDD	45.111	1.233	3.174e5	3.517e5	0.788	0.903	0.890	3114	1814	4.07e6	4.46e6	1307.4	2459.0	NO	bb	bb	175.516
13C-123789-HxCDD	36.590	0.000	2.678e5	2.158e5	1.000	1.241	1.240	1846	1567	4.30e6	3.43e6	2331.6	2186.8	NO	bb	bb	100.000
37CL-2378-TCDD	26.532	1.032	3.482e4		1.233			850		5.25e5		617.9			bb		8.577

Dataset: T:\Autospec\Processed Data Batch\230201IHOP.qld
Last Altered: Friday, February 03, 2023 11:20:37 Pacific Standard Time
Printed: Friday, February 03, 2023 11:21:40 Pacific Standard Time

ID: CS3R1, Name: 23020102, Date: 01-Feb-2023, Time: 10:37:16, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.389	0.866	1.928e4	2.641e4	1.064	0.730	0.770	844	1016	3.12e5	4.35e5	369.4	427.9	NO	bb	bb	9.011
1289-TCDF	27.394	1.059	1.506e4	2.111e4	0.858	0.713	0.770	844	1016	2.15e5	3.01e5	254.4	296.4	NO	db	dd	8.854
13468-PECDF	27.243	0.907	1.732e5	1.184e5	1.013	1.464	1.550	906	933	2.67e6	1.81e6	2951.1	1944.9	NO	bb	bb	59.051
12389-PECDF	32.423	1.080	1.096e5	7.394e4	0.844	1.482	1.550	1249	1693	1.63e6	1.06e6	1301.6	627.3	NO	bb	bd	44.621
123468-HXCDF	33.337	0.953	1.333e5	1.071e5	1.197	1.245	1.240	1714	1368	1.94e6	1.63e6	1132.0	1192.1	NO	bb	bd	44.431
1368-TCDD	23.674	0.893	1.559e4	1.973e4	1.084	0.790	0.770	1110	975	2.48e5	3.06e5	223.8	314.1	NO	bb	bb	8.690
1289-TCDD	27.137	1.023	1.343e4	1.711e4	0.975	0.785	0.770	1110	975	2.02e5	2.57e5	181.6	263.1	NO	bb	bd	8.354
12479-PECDD	28.925	0.915	1.617e5	1.030e5	1.837	1.569	1.550	1646	1001	1.58e6	1.01e6	962.4	1010.4	NO	bb	bb	49.217
12389-PECDD	32.033	1.013	1.065e5	6.755e4	1.252	1.576	1.550	1646	1001	1.60e6	1.04e6	973.2	1039.9	NO	bb	bb	47.467
124679-HXCDD	34.117	0.945	1.151e5	9.437e4	1.033	1.219	1.240	1547	1532	1.82e6	1.49e6	1174.2	973.0	NO	bb	bb	45.255
1234679-HPCDD	39.309	0.974	9.857e4	9.267e4	1.286	1.064	1.050	1287	1635	1.62e6	1.55e6	1257.2	945.5	NO	bb	bb	46.288
Total-tetrafurans			5.067e4		0.933			844		7.65e5							26.861
Total-penta1			1.732e5					906		2.67e6							59.051
Total-pentafurans			3.556e5		0.866			1249		5.33e6							143.542
Total-hexafurans			6.587e5		1.208			1714		9.78e6							222.964
Total-heptafurans			2.076e5		1.185			1381		3.18e6							92.824
Total-Furans			1.606e6		1.067			844		2.36e7							631.589
Total-tetradioxins			7.564e4		1.099			1110		1.04e6							41.916
Total-pentadioxins			3.670e5		1.392			1646		4.67e6							146.491
Total-hexadioxins			4.546e5		1.007			1547		7.39e6							177.988
Total-heptadioxins			1.900e5		1.269			1287		2.98e6							90.463
Total-Dioxins			1.243e6		1.165			1110		1.80e7							547.804
Total-TEQ			2.849e6					1110		4.17e7							1179.393
FUNCTION1 PFK			6.977e5					215892		1.30e7							
FUNCTION2 PFK			7.329e6					149595		7.20e7							0.000
FUNCTION3 PFK			1.409e7					224809		7.00e7							0.000
FUNCTION4 PFK			7.505e3					156562		3.03e5							
FUNCTION5 PFK			1.269e4					142532		5.28e5							
FUNCTION1 HXCD...			3.884e2					838		8.06e3							0.000
FUNCTION1 HPCD...			3.094e2					854		6.24e3							0.000
FUNCTION2 HPCD...			4.137e2					755		7.38e3							0.000
FUNCTION3 OCDPE			2.422e2					659		4.44e3							0.000
FUNCTION4 NCDPE			2.399e2					738		4.58e3							0.000
FUNCTION5 DCDPE			0.000e0					686		0.00e0							

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3R1, Name: 23020102, Date: 01-Feb-2023, Time: 10:37:16, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.39	1.506e4	2.111e4	0.858	0.71	0.77	254.4	YES	NO	db	dd	8.854
2	2378-TCDF	25.90	1.633e4	2.121e4	0.876	0.77	0.77	282.5	YES	NO	bb	bb	8.996
3	1368-TCDF	22.39	1.928e4	2.641e4	1.064	0.73	0.77	369.4	YES	NO	bb	bb	9.011

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.24	1.732e5	1.184e5	1.013	1.46	1.55	2951.1	YES	NO	bb	bb	59.051

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.42	1.096e5	7.394e4	0.844	1.48	1.55	1301.6	YES	NO	bb	bd	44.621
2	23478-PeCDF	31.39	1.159e5	7.903e4	0.911	1.47	1.55	1420.2	YES	NO	bd	bd	46.006
3	12378-PeCDF	30.05	1.109e5	7.631e4	0.845	1.45	1.55	1307.7	YES	NO	bb	bd	45.474
4	Total-pentafurans	28.90	1.918e4	1.152e4	0.866	1.67	1.55	232.8	YES	NO	bb	bb	7.440

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	234678-HxCDF	35.99	1.343e5	1.093e5	1.229	1.23	1.24	1185.6	YES	NO	bd	bb	45.575
2	123678-HxCDF	35.13	1.458e5	1.151e5	1.248	1.27	1.24	1195.7	YES	NO	db	dd	44.655
3	123478-HxCDF	35.00	1.295e5	1.045e5	1.182	1.24	1.24	1181.4	YES	NO	bd	bd	43.803
4	123468-HXCDF	33.34	1.333e5	1.071e5	1.197	1.24	1.24	1132.0	YES	NO	bb	bd	44.431
5	123789-HxCDF	37.02	1.158e5	9.218e4	1.187	1.26	1.24	1013.6	YES	NO	bb	bb	44.499

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.11	9.861e4	9.166e4	1.165	1.08	1.05	990.9	YES	NO	bd	bb	47.733
2	1234678-HpCDF	38.85	1.090e5	1.104e5	1.204	0.99	1.05	1312.8	YES	NO	bb	bd	45.091

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.39	1.506e4	2.111e4	0.858	0.71	0.77	254.4	YES	NO	db	dd	8.854
2	2378-TCDF	25.90	1.633e4	2.121e4	0.876	0.77	0.77	282.5	YES	NO	bb	bb	8.996
3	1368-TCDF	22.39	1.928e4	2.641e4	1.064	0.73	0.77	369.4	YES	NO	bb	bb	9.011
4	12389-PECDF	32.42	1.096e5	7.394e4	0.844	1.48	1.55	1301.6	YES	NO	bb	bd	44.621
5	23478-PeCDF	31.39	1.159e5	7.903e4	0.911	1.47	1.55	1420.2	YES	NO	bd	bd	46.006
6	12378-PeCDF	30.05	1.109e5	7.631e4	0.845	1.45	1.55	1307.7	YES	NO	bb	bd	45.474
7	Total-pentafurans	28.90	1.918e4	1.152e4	0.866	1.67	1.55	232.8	YES	NO	bb	bb	7.440
8	234678-HxCDF	35.99	1.343e5	1.093e5	1.229	1.23	1.24	1185.6	YES	NO	bd	bb	45.575
9	123678-HxCDF	35.13	1.458e5	1.151e5	1.248	1.27	1.24	1195.7	YES	NO	db	dd	44.655
10	123478-HxCDF	35.00	1.295e5	1.045e5	1.182	1.24	1.24	1181.4	YES	NO	bd	bd	43.803
11	123468-HXCDF	33.34	1.333e5	1.071e5	1.197	1.24	1.24	1132.0	YES	NO	bb	bd	44.431
12	123789-HxCDF	37.02	1.158e5	9.218e4	1.187	1.26	1.24	1013.6	YES	NO	bb	bb	44.499
13	1234789-HpCDF	41.11	9.861e4	9.166e4	1.165	1.08	1.05	990.9	YES	NO	bd	bb	47.733
14	1234678-HpCDF	38.85	1.090e5	1.104e5	1.204	0.99	1.05	1312.8	YES	NO	bb	bd	45.091
15	OCDF	45.37	1.600e5	1.827e5	1.186	0.88	0.89	1249.6	YES	NO	bd	bd	86.348
16	13468-PECDF	27.24	1.732e5	1.184e5	1.013	1.46	1.55	2951.1	YES	NO	bb	bb	59.051

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.67	1.559e4	1.973e4	1.084	0.79	0.77	223.8	YES	NO	bb	bb	8.690
2	1289-TCDD	27.14	1.343e4	1.711e4	0.975	0.79	0.77	181.6	YES	NO	bb	bd	8.354
3	2378-TCDD	26.53	1.602e4	2.106e4	1.236	0.76	0.77	207.8	YES	NO	bb	bd	7.999
4	Total-tetradioxins	26.21	2.312e4	2.981e4	1.099	0.78	0.77	216.6	YES	NO	bb	bb	12.852
5	Total-tetradioxins	25.73	7.468e3	9.090e3	1.099	0.82	0.77	105.7	YES	NO	bb	bb	4.020

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	32.03	1.065e5	6.755e4	1.252	1.58	1.55	973.2	YES	NO	bb	bb	47.467
2	Total-pentadioxins	31.87	1.652e2	1.080e2	1.392	1.53	1.55	3.2	YES	NO	db	bb	0.067
3	12378-PeCDD	31.64	9.866e4	5.958e4	1.087	1.66	1.55	896.9	YES	NO	bd	bb	49.739
4	12479-PECDD	28.92	1.617e5	1.030e5	1.837	1.57	1.55	962.4	YES	NO	bb	bb	49.217

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.61	1.096e5	9.138e4	0.985	1.20	1.24	1178.1	YES	NO	bb	bb	44.134
2	123678-HxCDD	36.23	1.208e5	9.232e4	1.021	1.31	1.24	1225.9	YES	NO	db	db	43.840
3	123478-HxCDD	36.11	1.092e5	8.877e4	0.987	1.23	1.24	1198.0	YES	NO	bd	bd	44.758
4	124679-HXCDD	34.12	1.151e5	9.437e4	1.033	1.22	1.24	1174.2	YES	NO	bb	bb	45.255

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.37	9.142e4	8.634e4	1.253	1.06	1.05	1055.7	YES	NO	bd	bb	44.175
2	1234679-HPCDD	39.31	9.857e4	9.267e4	1.286	1.06	1.05	1257.2	YES	NO	bb	bb	46.288

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.67	1.559e4	1.973e4	1.084	0.79	0.77	223.8	YES	NO	bb	bb	8.690
2	1289-TCDD	27.14	1.343e4	1.711e4	0.975	0.79	0.77	181.6	YES	NO	bb	bd	8.354
3	2378-TCDD	26.53	1.602e4	2.106e4	1.236	0.76	0.77	207.8	YES	NO	bb	bd	7.999
4	Total-tetradioxins	26.21	2.312e4	2.981e4	1.099	0.78	0.77	216.6	YES	NO	bb	bb	12.852
5	Total-tetradioxins	25.73	7.468e3	9.090e3	1.099	0.82	0.77	105.7	YES	NO	bb	bb	4.020
6	12389-PECDD	32.03	1.065e5	6.755e4	1.252	1.58	1.55	973.2	YES	NO	bb	bb	47.467
7	Total-pentadioxins	31.87	1.652e2	1.080e2	1.392	1.53	1.55	3.2	YES	NO	db	bb	0.067
8	12378-PeCDD	31.64	9.866e4	5.958e4	1.087	1.66	1.55	896.9	YES	NO	bd	bb	49.739
9	12479-PECDD	28.92	1.617e5	1.030e5	1.837	1.57	1.55	962.4	YES	NO	bb	bb	49.217
10	123789-HxCDD	36.61	1.096e5	9.138e4	0.985	1.20	1.24	1178.1	YES	NO	bb	bb	44.134
11	123678-HxCDD	36.23	1.208e5	9.232e4	1.021	1.31	1.24	1225.9	YES	NO	db	db	43.840
12	123478-HxCDD	36.11	1.092e5	8.877e4	0.987	1.23	1.24	1198.0	YES	NO	bd	bd	44.758
13	124679-HXCDD	34.12	1.151e5	9.437e4	1.033	1.22	1.24	1174.2	YES	NO	bb	bb	45.255
14	1234678-HpCDD	40.37	9.142e4	8.634e4	1.253	1.06	1.05	1055.7	YES	NO	bd	bb	44.175
15	1234679-HPCDD	39.31	9.857e4	9.267e4	1.286	1.06	1.05	1257.2	YES	NO	bb	bb	46.288
16	OCDD	45.13	1.558e5	1.797e5	1.103	0.87	0.89	1808.2	YES	NO	bb	bb	90.946

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.39	1.506e4	2.111e4	0.858	0.71	0.77	254.4	YES	NO	db	dd	8.854
2	2378-TCDF	25.90	1.633e4	2.121e4	0.876	0.77	0.77	282.5	YES	NO	bb	bb	8.996
3	1368-TCDF	22.39	1.928e4	2.641e4	1.064	0.73	0.77	369.4	YES	NO	bb	bb	9.011
4	12389-PECDF	32.42	1.096e5	7.394e4	0.844	1.48	1.55	1301.6	YES	NO	bb	bd	44.621
5	23478-PeCDF	31.39	1.159e5	7.903e4	0.911	1.47	1.55	1420.2	YES	NO	bd	bd	46.006
6	12378-PeCDF	30.05	1.109e5	7.631e4	0.845	1.45	1.55	1307.7	YES	NO	bb	bd	45.474
7	Total-pentafurans	28.90	1.918e4	1.152e4	0.866	1.67	1.55	232.8	YES	NO	bb	bb	7.440
8	234678-HxCDF	35.99	1.343e5	1.093e5	1.229	1.23	1.24	1185.6	YES	NO	bd	bb	45.575
9	123678-HxCDF	35.13	1.458e5	1.151e5	1.248	1.27	1.24	1195.7	YES	NO	db	dd	44.655
10	123478-HxCDF	35.00	1.295e5	1.045e5	1.182	1.24	1.24	1181.4	YES	NO	bd	bd	43.803
11	123468-HXCDF	33.34	1.333e5	1.071e5	1.197	1.24	1.24	1132.0	YES	NO	bb	bd	44.431
12	123789-HxCDF	37.02	1.158e5	9.218e4	1.187	1.26	1.24	1013.6	YES	NO	bb	bb	44.499
13	1234789-HpCDF	41.11	9.861e4	9.166e4	1.165	1.08	1.05	990.9	YES	NO	bd	bb	47.733
14	1234678-HpCDF	38.85	1.090e5	1.104e5	1.204	0.99	1.05	1312.8	YES	NO	bb	bd	45.091
15	OCDF	45.37	1.600e5	1.827e5	1.186	0.88	0.89	1249.6	YES	NO	bd	bd	86.348
16	13468-PECDF	27.24	1.732e5	1.184e5	1.013	1.46	1.55	2951.1	YES	NO	bb	bb	59.051
17	1368-TCDD	23.67	1.559e4	1.973e4	1.084	0.79	0.77	223.8	YES	NO	bb	bb	8.690
18	1289-TCDD	27.14	1.343e4	1.711e4	0.975	0.79	0.77	181.6	YES	NO	bb	bd	8.354
19	2378-TCDD	26.53	1.602e4	2.106e4	1.236	0.76	0.77	207.8	YES	NO	bb	bd	7.999
20	Total-tetradioxins	26.21	2.312e4	2.981e4	1.099	0.78	0.77	216.6	YES	NO	bb	bb	12.852
21	Total-tetradioxins	25.73	7.468e3	9.090e3	1.099	0.82	0.77	105.7	YES	NO	bb	bb	4.020
22	12389-PECDD	32.03	1.065e5	6.755e4	1.252	1.58	1.55	973.2	YES	NO	bb	bb	47.467
23	Total-pentadioxins	31.87	1.652e2	1.080e2	1.392	1.53	1.55	3.2	YES	NO	db	bb	0.067
24	12378-PeCDD	31.64	9.866e4	5.958e4	1.087	1.66	1.55	896.9	YES	NO	bd	bb	49.739
25	12479-PECDD	28.92	1.617e5	1.030e5	1.837	1.57	1.55	962.4	YES	NO	bb	bb	49.217
26	123789-HxCDD	36.61	1.096e5	9.138e4	0.985	1.20	1.24	1178.1	YES	NO	bb	bb	44.134
27	123678-HxCDD	36.23	1.208e5	9.232e4	1.021	1.31	1.24	1225.9	YES	NO	db	db	43.840
28	123478-HxCDD	36.11	1.092e5	8.877e4	0.987	1.23	1.24	1198.0	YES	NO	bd	bd	44.758
29	124679-HXCDD	34.12	1.151e5	9.437e4	1.033	1.22	1.24	1174.2	YES	NO	bb	bb	45.255
30	1234678-HpCDD	40.37	9.142e4	8.634e4	1.253	1.06	1.05	1055.7	YES	NO	bd	bb	44.175
31	1234679-HPCDD	39.31	9.857e4	9.267e4	1.286	1.06	1.05	1257.2	YES	NO	bb	bb	46.288
32	OCDD	45.13	1.558e5	1.797e5	1.103	0.87	0.89	1808.2	YES	NO	bb	bb	90.946

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.12	9.025e3					1.5	NO		bb		
2	FUNCTION1 PFK	23.39	1.564e4					1.7	NO		db		
3	FUNCTION1 PFK	23.33	1.699e4					1.8	NO		dd		
4	FUNCTION1 PFK	23.21	3.674e4					1.8	NO		dd		
5	FUNCTION1 PFK	23.15	1.668e4					1.7	NO		bd		
6	FUNCTION1 PFK	23.07	1.606e4					2.1	NO		bb		
7	FUNCTION1 PFK	22.69	6.506e3					1.1	NO		db		
8	FUNCTION1 PFK	22.57	5.324e4					2.0	NO		bd		
9	FUNCTION1 PFK	22.46	2.047e3					0.6	NO		bb		
10	FUNCTION1 PFK	22.18	2.854e4					1.8	NO		bb		
11	FUNCTION1 PFK	22.00	2.061e4					1.1	NO		bb		
12	FUNCTION1 PFK	21.88	1.276e3					0.4	NO		bb		
13	FUNCTION1 PFK	21.48	1.972e3					0.6	NO		bb		
14	FUNCTION1 PFK	21.36	4.333e4					3.4	YES		db		
15	FUNCTION1 PFK	21.33	3.930e4					3.3	YES		dd		
16	FUNCTION1 PFK	21.25	3.950e4					3.7	YES		dd		
17	FUNCTION1 PFK	21.22	1.839e4					1.7	NO		bd		
18	FUNCTION1 PFK	26.44	2.008e3					0.6	NO		bb		
19	FUNCTION1 PFK	26.37	1.096e4					1.2	NO		bb		
20	FUNCTION1 PFK	26.06	5.687e3					0.8	NO		bb		
21	FUNCTION1 PFK	25.85	4.606e4					2.0	NO		bb		
22	FUNCTION1 PFK	25.67	1.822e4					1.6	NO		db		
23	FUNCTION1 PFK	25.59	5.429e3					0.7	NO		bd		
24	FUNCTION1 PFK	25.41	3.678e3					0.7	NO		bb		
25	FUNCTION1 PFK	25.35	1.804e3					0.6	NO		bb		
26	FUNCTION1 PFK	24.69	1.276e4					1.4	NO		bb		
27	FUNCTION1 PFK	24.46	1.415e3					0.4	NO		bb		
28	FUNCTION1 PFK	24.23	1.486e4					1.4	NO		db		
29	FUNCTION1 PFK	24.16	3.220e4					2.1	NO		dd		
30	FUNCTION1 PFK	24.07	1.916e4					1.5	NO		bd		
31	FUNCTION1 PFK	23.86	1.041e4					1.2	NO		bb		
32	FUNCTION1 PFK	23.75	2.252e4					1.8	NO		bb		
33	FUNCTION1 PFK	23.46	2.488e3					0.5	NO		bb		
34	FUNCTION1 PFK	28.21	1.683e4					1.3	NO		bb		
35	FUNCTION1 PFK	28.13	1.846e4					1.2	NO		db		
36	FUNCTION1 PFK	27.97	3.589e4					1.9	NO		bd		
37	FUNCTION1 PFK	27.85	3.272e3					0.6	NO		bb		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	27.55	1.459e3					0.4	NO		bb		
39	FUNCTION1 PFK	27.48	1.620e3					0.5	NO		bb		
40	FUNCTION1 PFK	27.36	8.182e3					1.0	NO		bb		
41	FUNCTION1 PFK	27.27	3.811e3					0.8	NO		db		
42	FUNCTION1 PFK	27.24	6.329e3					0.8	NO		bd		
43	FUNCTION1 PFK	27.03	6.469e3					1.1	NO		db		
44	FUNCTION1 PFK	26.99	1.869e4					1.7	NO		bd		
45	FUNCTION1 PFK	26.88	1.188e3					0.4	NO		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.61	1.089e6					38.3	YES		dd		0.000
2	FUNCTION2 PFK	28.42	5.461e5					42.0	YES		dd		0.000
3	FUNCTION2 PFK	28.36	4.208e5					43.0	YES		bd		0.000
4	FUNCTION2 PFK	30.22	3.292e4					7.2	YES		dd		0.000
5	FUNCTION2 PFK	30.16	1.231e5					8.8	YES		dd		0.000
6	FUNCTION2 PFK	30.05	1.117e5					10.9	YES		dd		0.000
7	FUNCTION2 PFK	29.99	9.120e4					11.4	YES		dd		0.000
8	FUNCTION2 PFK	29.94	2.092e5					12.7	YES		dd		0.000
9	FUNCTION2 PFK	29.76	2.907e5					15.9	YES		dd		0.000
10	FUNCTION2 PFK	29.69	1.383e5					17.3	YES		dd		0.000
11	FUNCTION2 PFK	29.58	3.090e5					19.5	YES		dd		0.000
12	FUNCTION2 PFK	29.52	2.750e5					21.8	YES		dd		0.000
13	FUNCTION2 PFK	29.39	4.070e5					23.3	YES		dd		0.000
14	FUNCTION2 PFK	29.28	4.078e5					25.5	YES		dd		0.000
15	FUNCTION2 PFK	29.18	3.023e5					27.3	YES		dd		0.000
16	FUNCTION2 PFK	29.14	2.357e5					29.1	YES		dd		0.000
17	FUNCTION2 PFK	28.99	6.311e5					30.4	YES		dd		0.000
18	FUNCTION2 PFK	28.92	2.637e5					32.6	YES		dd		0.000
19	FUNCTION2 PFK	28.71	1.202e6					36.5	YES		dd		0.000
20	FUNCTION2 PFK	32.81	9.753e3					1.3	NO		bb		0.000
21	FUNCTION2 PFK	32.42	4.488e3					1.0	NO		db		0.000
22	FUNCTION2 PFK	32.38	3.779e3					1.0	NO		bd		0.000
23	FUNCTION2 PFK	31.96	1.738e4					2.2	NO		bb		0.000
24	FUNCTION2 PFK	31.88	6.239e3					1.5	NO		db		0.000
25	FUNCTION2 PFK	31.82	6.444e3					1.4	NO		bd		0.000
26	FUNCTION2 PFK	31.71	6.215e3					1.3	NO		db		0.000
27	FUNCTION2 PFK	31.68	5.289e3					1.0	NO		bd		0.000
28	FUNCTION2 PFK	31.61	3.799e3					1.0	NO		bb		0.000
29	FUNCTION2 PFK	31.29	5.305e3					1.2	NO		bb		0.000
30	FUNCTION2 PFK	31.23	7.886e3					2.2	NO		bb		0.000
31	FUNCTION2 PFK	30.99	1.453e4					1.9	NO		bb		0.000
32	FUNCTION2 PFK	30.82	9.920e3					1.5	NO		bb		0.000
33	FUNCTION2 PFK	30.75	8.792e3					1.2	NO		bb		0.000
34	FUNCTION2 PFK	30.57	3.072e3					0.9	NO		bb		0.000
35	FUNCTION2 PFK	30.26	1.206e5					6.2	YES		db		0.000
36	FUNCTION2 PFK	32.91	8.369e3					1.2	NO		bb		0.000

ID: CS3R1, Name: 23020102, Date: 01-Feb-2023, Time: 10:37:16, Conditions: AUTOSPEC01, User: pk

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	36.94	1.363e3					0.5	NO		bb		0.000
2	FUNCTION3 PFK	36.89	2.597e3					0.7	NO		bb		0.000
3	FUNCTION3 PFK	36.63	5.216e4					2.1	NO		bb		0.000
4	FUNCTION3 PFK	35.98	3.727e4					3.2	YES		bb		0.000
5	FUNCTION3 PFK	35.89	8.881e3					1.2	NO		bb		0.000
6	FUNCTION3 PFK	35.60	1.234e3					0.5	NO		bb		0.000
7	FUNCTION3 PFK	34.97	3.658e3					1.5	NO		bb		0.000
8	FUNCTION3 PFK	34.76	1.198e4					1.2	NO		bb		0.000
9	FUNCTION3 PFK	34.41	7.167e5					12.6	YES		db		0.000
10	FUNCTION3 PFK	34.27	1.814e5					18.8	YES		dd		0.000
11	FUNCTION3 PFK	33.46	8.929e6					56.3	YES		dd		0.000
12	FUNCTION3 PFK	33.26	1.470e6					65.1	YES		dd		0.000
13	FUNCTION3 PFK	33.14	1.013e6					69.2	YES		dd		0.000
14	FUNCTION3 PFK	33.07	1.616e6					73.1	YES		bd		0.000
15	FUNCTION3 PFK	37.87	2.660e3					0.7	NO		bb		0.000
16	FUNCTION3 PFK	37.70	1.990e4					1.9	NO		bb		0.000
17	FUNCTION3 PFK	37.50	4.098e3					0.8	NO		bb		0.000
18	FUNCTION3 PFK	37.39	4.630e3					0.7	NO		bb		0.000
19	FUNCTION3 PFK	37.31	1.274e4					1.3	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	42.07	7.505e3					1.9	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.80	5.683e3					1.8	NO		bb		
2	FUNCTION5 PFK	43.45	7.005e3					1.9	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	28.15	7.677e1					2.2	NO		bb		0.000
2	FUNCTION1 HXCD...	27.41	8.186e1					1.7	NO		bb		0.000
3	FUNCTION1 HXCD...	26.21	8.899e1					2.8	NO		bb		0.000
4	FUNCTION1 HXCD...	24.48	1.408e2					2.9	NO		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	25.28	8.635e1					2.2	NO		bb		0.000
2	FUNCTION1 HPCD...	24.58	7.600e1					1.7	NO		bb		0.000
3	FUNCTION1 HPCD...	22.57	1.471e2					3.3	YES		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.97	1.041e2					2.4	NO		bb		0.000
2	FUNCTION2 HPCD...	31.62	1.168e2					2.5	NO		bb		0.000
3	FUNCTION2 HPCD...	31.26	1.928e2					4.9	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.10	7.435e1					2.4	NO		bb		0.000
2	FUNCTION3 OCDPE	35.85	7.444e1					2.1	NO		bb		0.000
3	FUNCTION3 OCDPE	35.30	9.337e1					2.3	NO		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	42.04	7.794e1					1.9	NO		bb		0.000
2	FUNCTION4 NCDPE	41.07	7.754e1					1.8	NO		bb		0.000
3	FUNCTION4 NCDPE	39.75	8.441e1					2.5	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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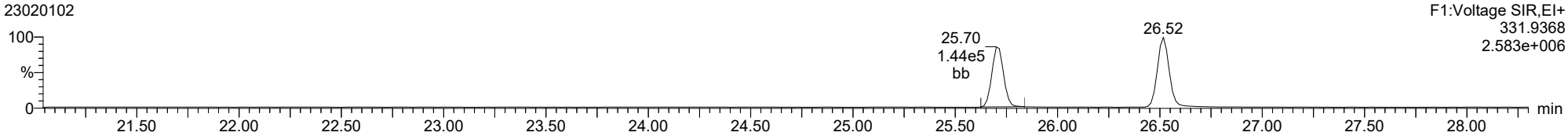
ID: CS3R1, Name: 23020102, Date: 01-Feb-2023, Time: 10:37:16, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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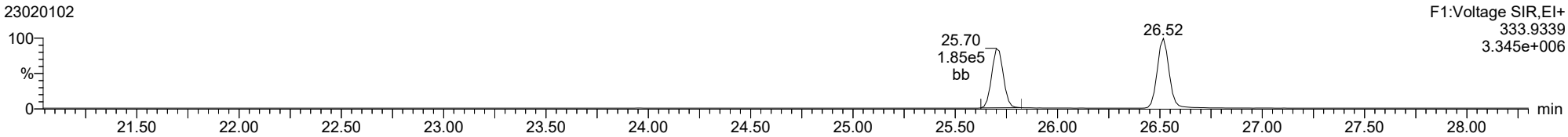

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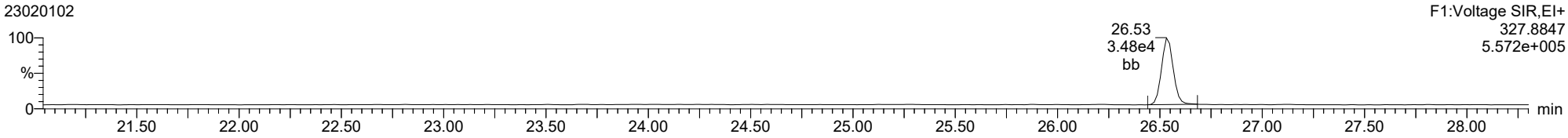

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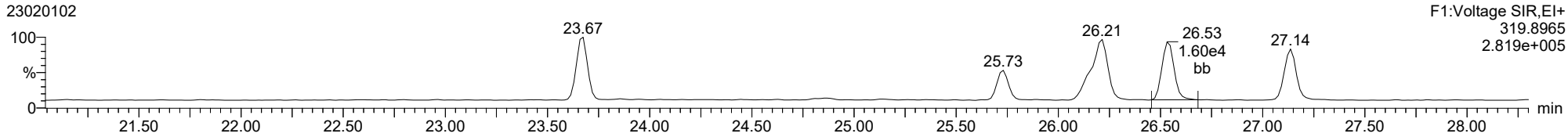

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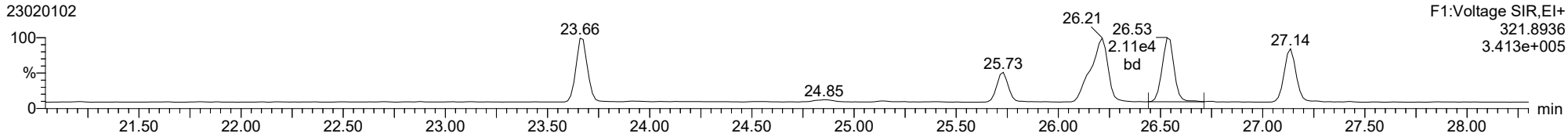

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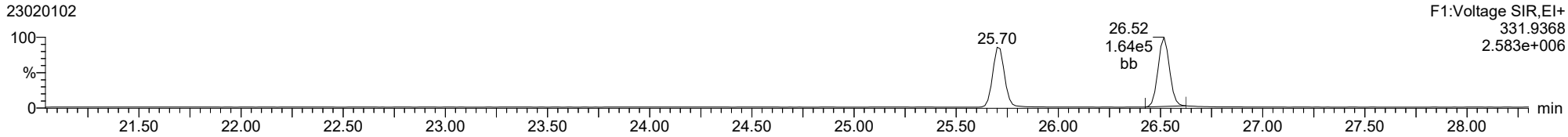

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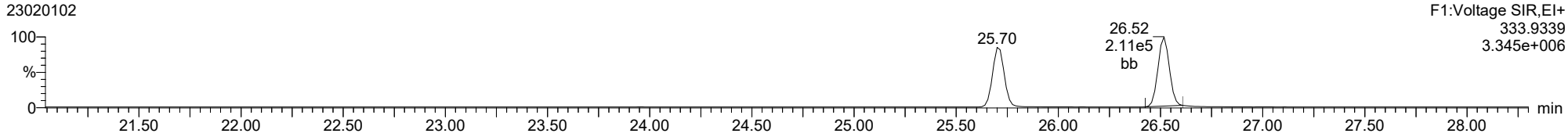

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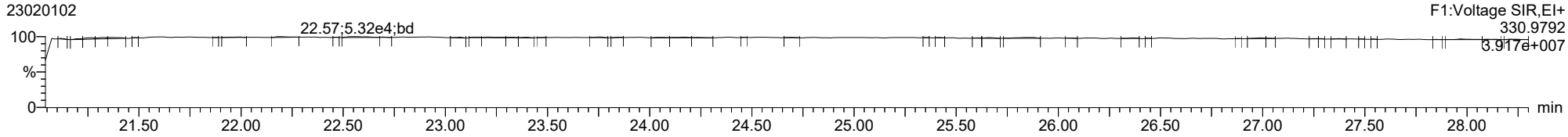

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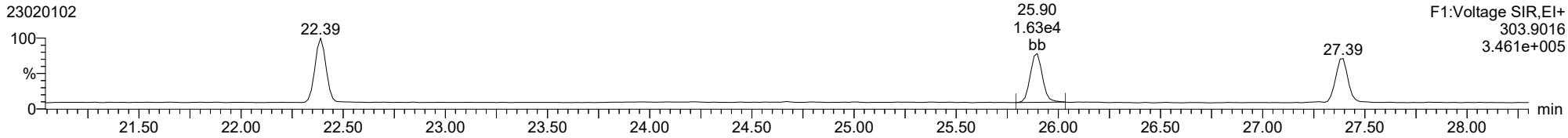

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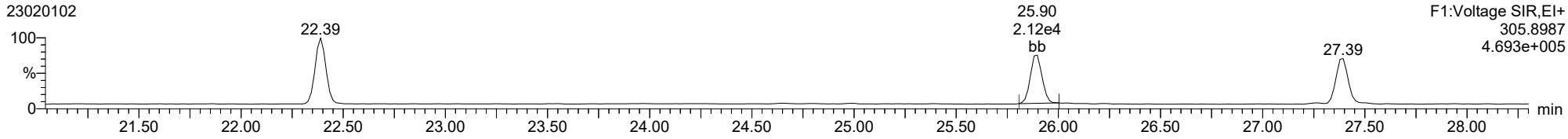

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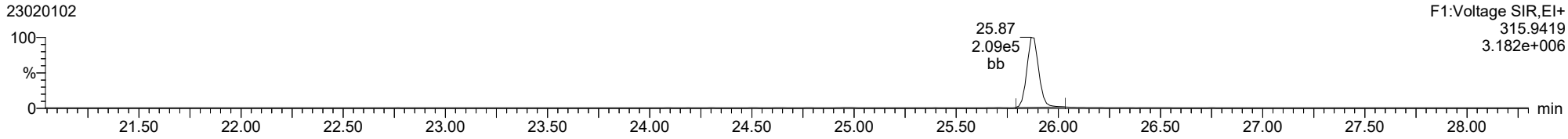

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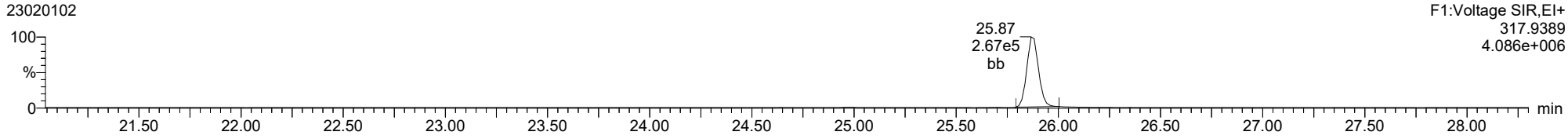
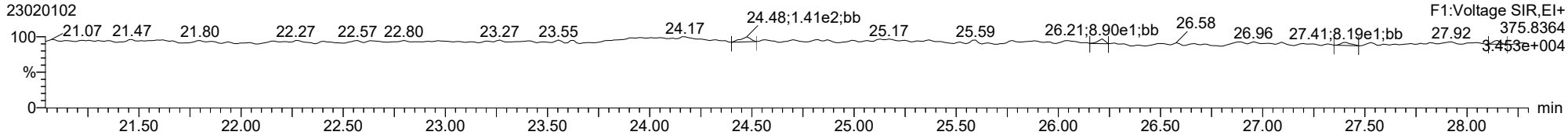


FUNCTION1 HXCDPE



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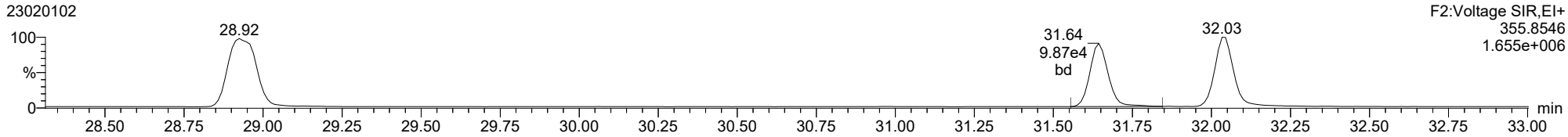
12378-PeCDD



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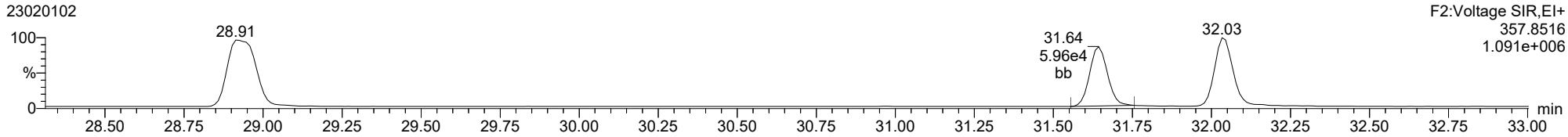

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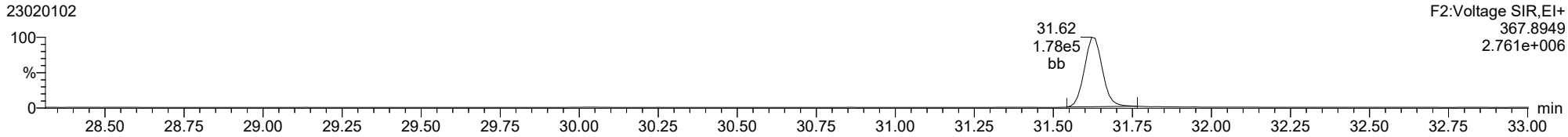

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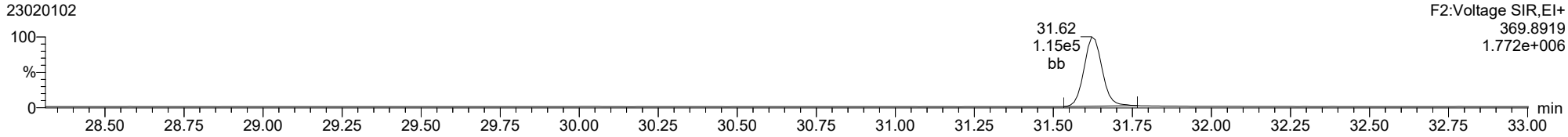
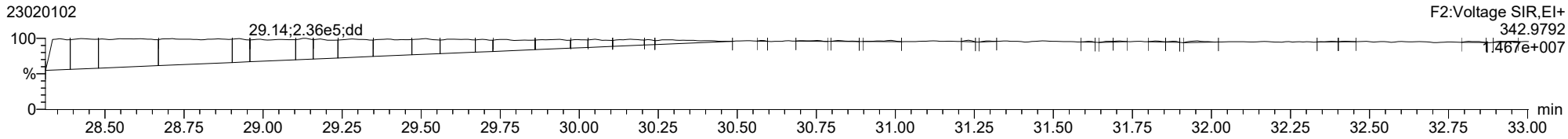


FUNCTION2 PFK



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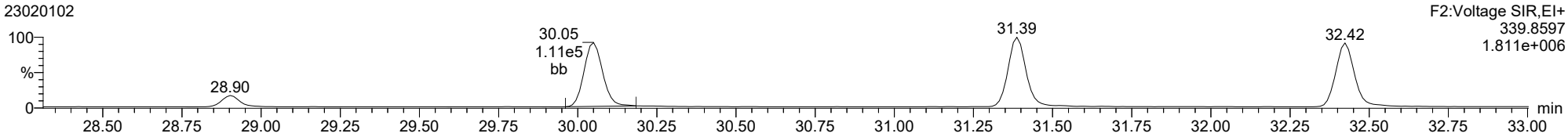
12378-PeCDF



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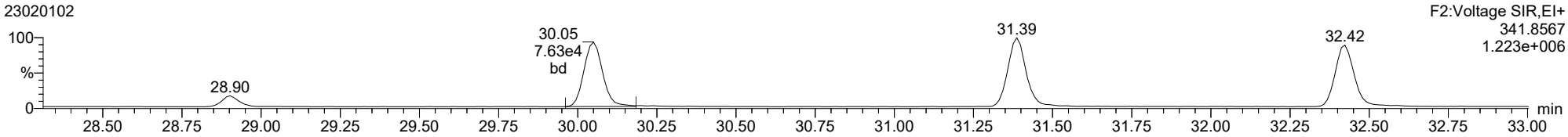

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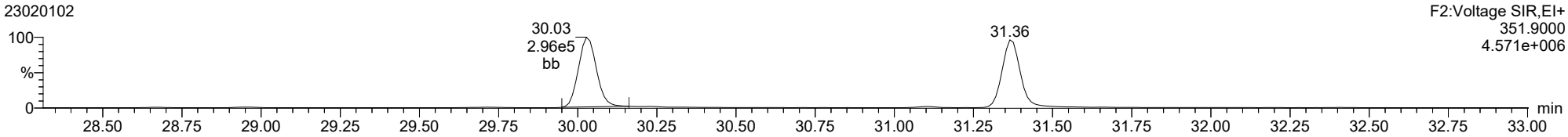

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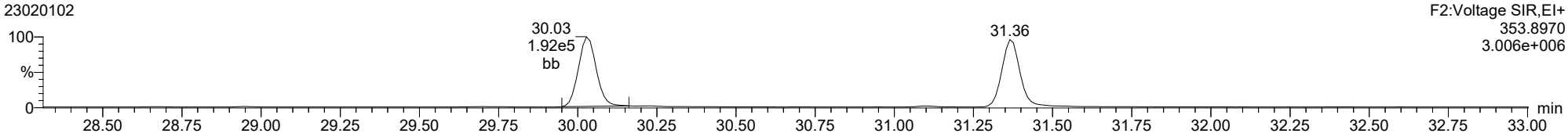
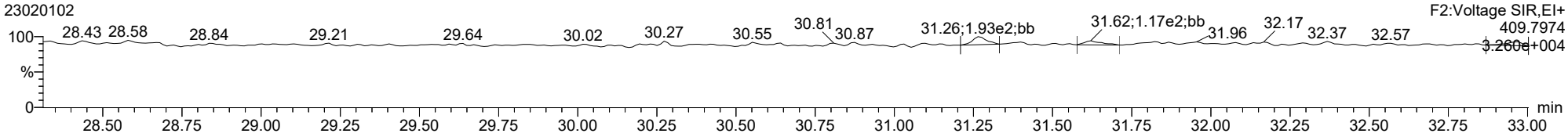


FUNCTION2 HPCDPE



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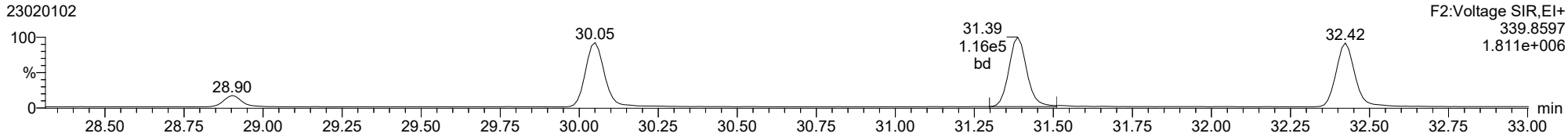
23478-PeCDF



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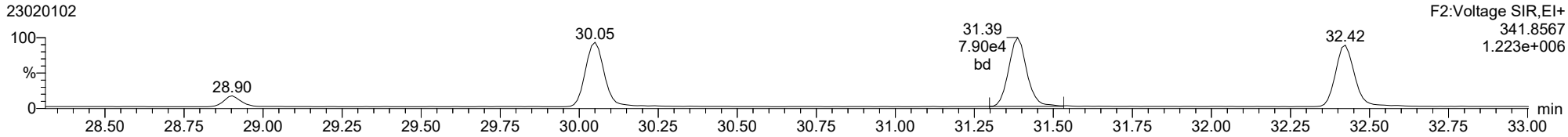

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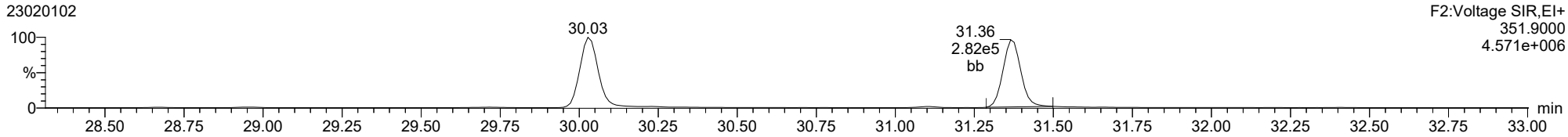

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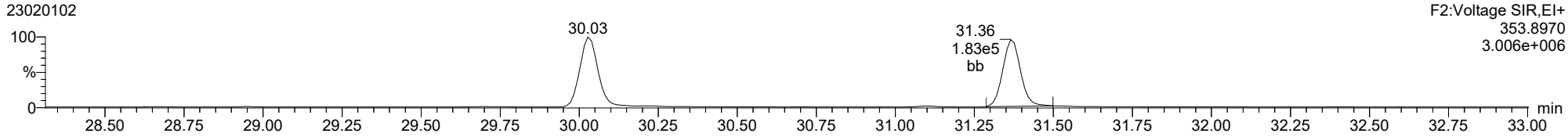
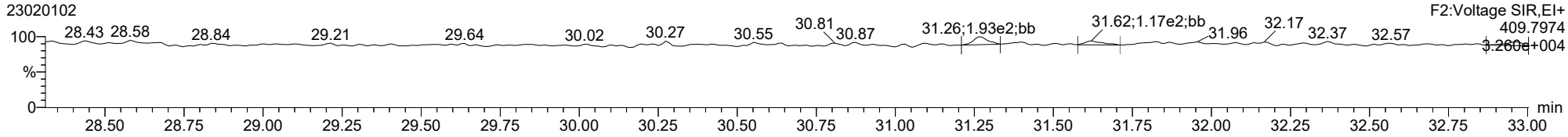


FUNCTION2 HPCDPE



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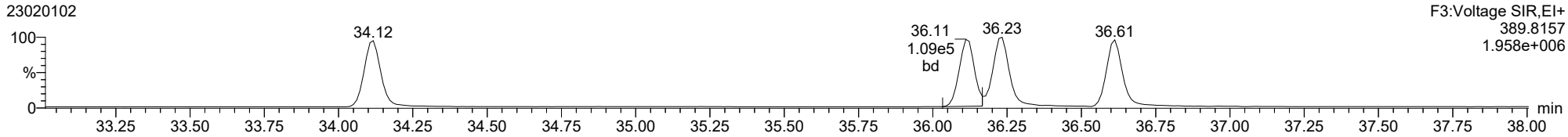
123478-HxCDD



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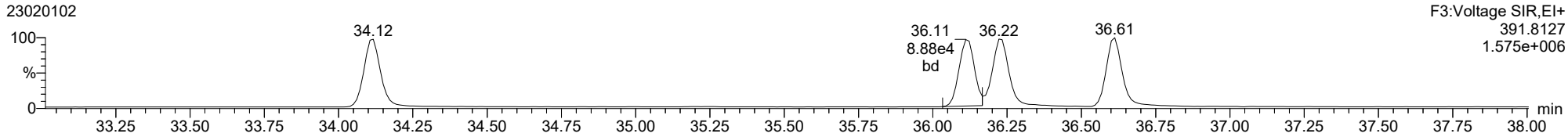

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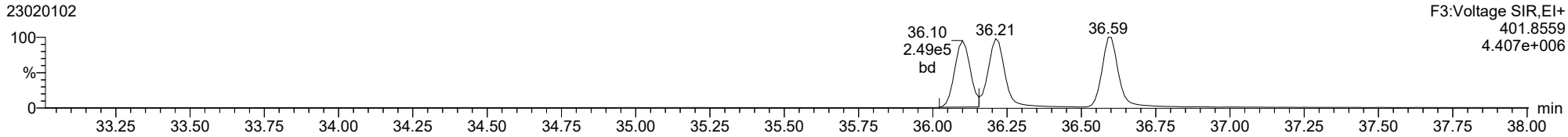

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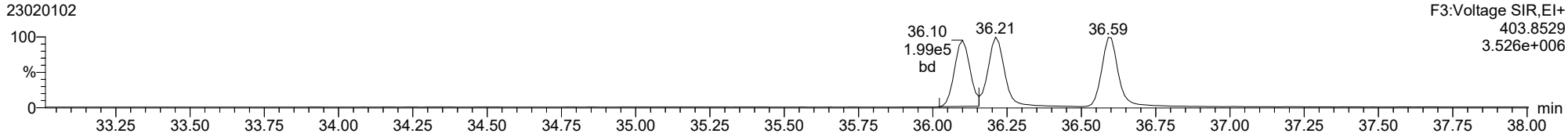

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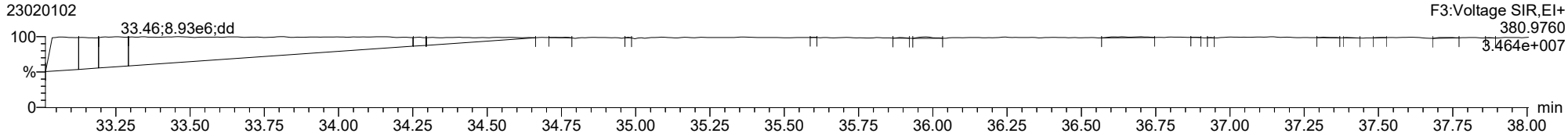

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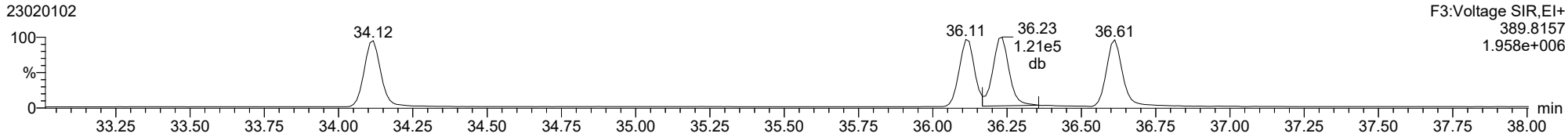

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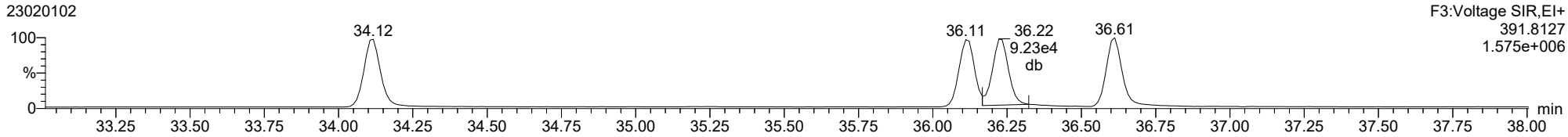

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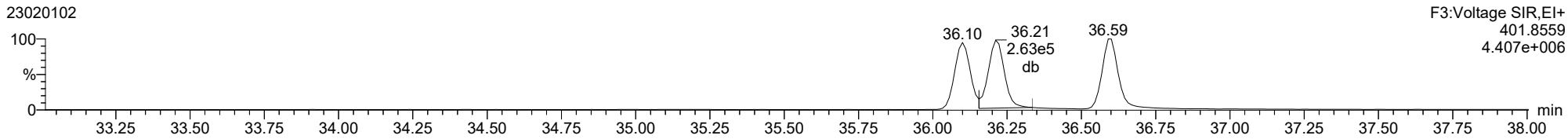

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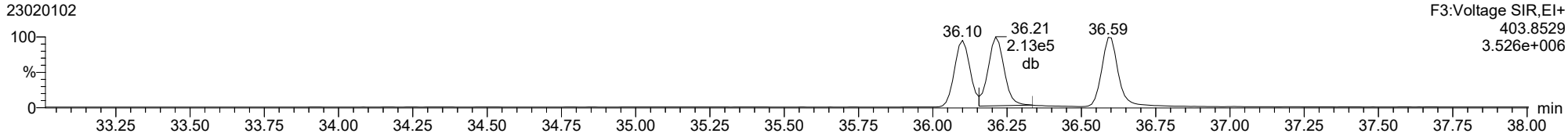

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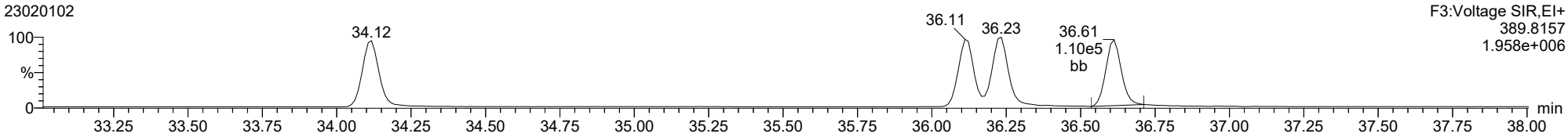
123789-HxCDD



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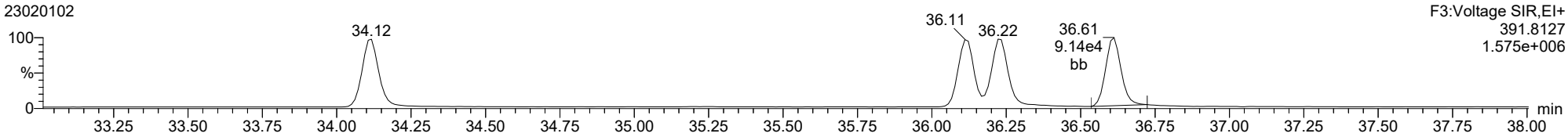

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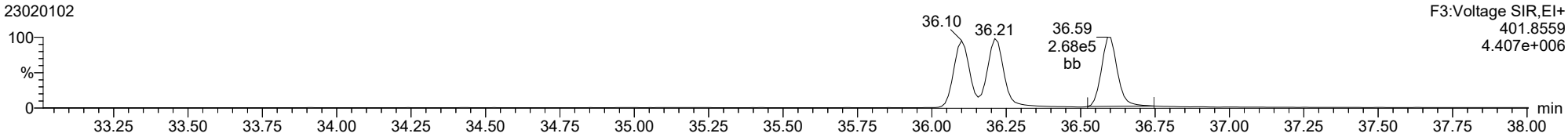

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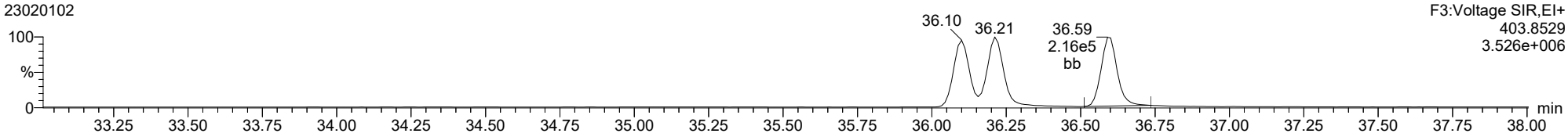

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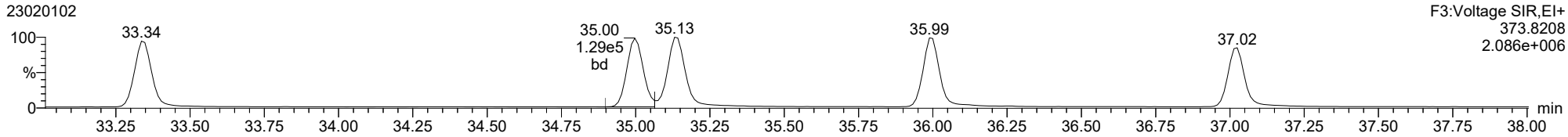

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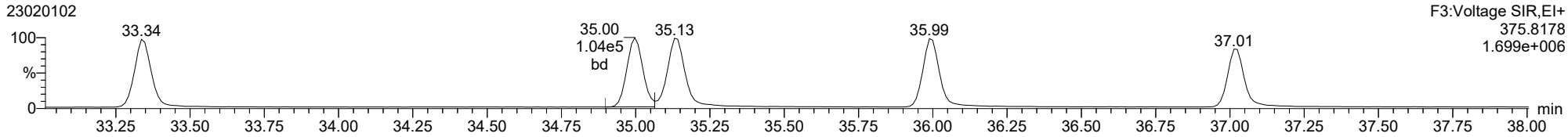

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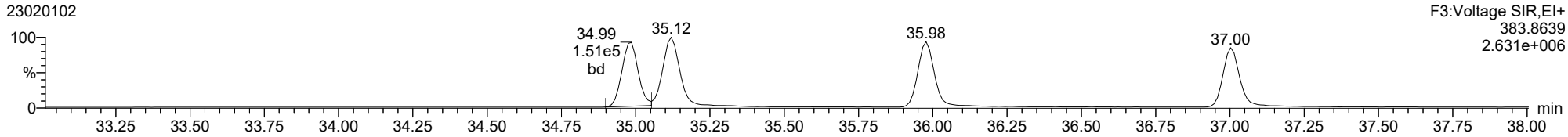

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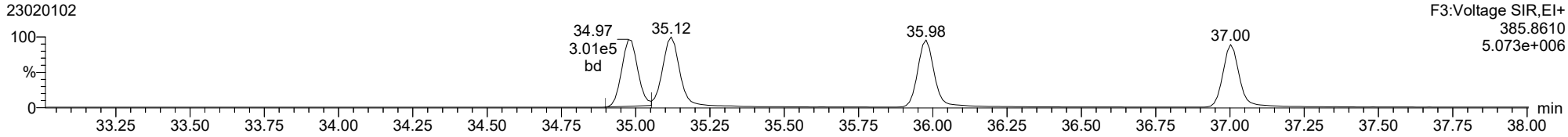

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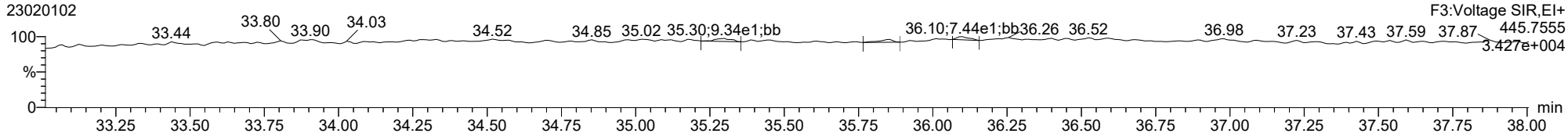

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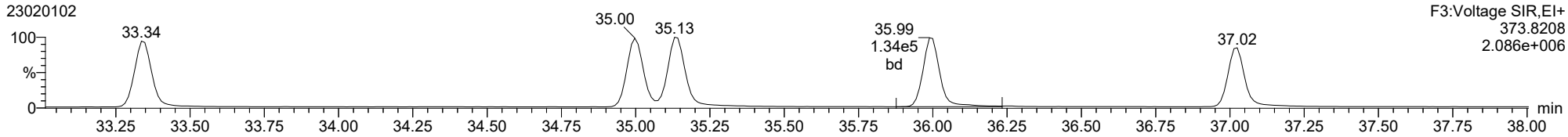

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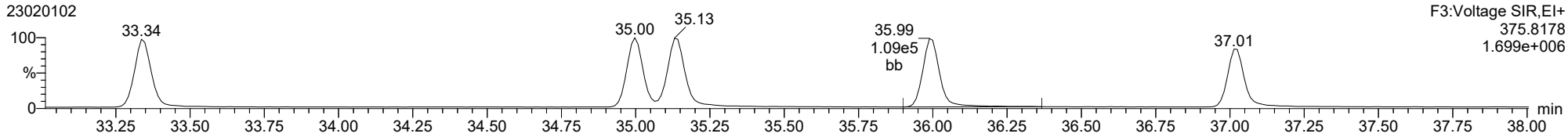

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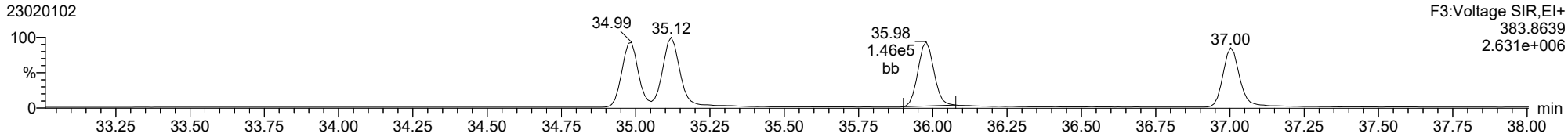

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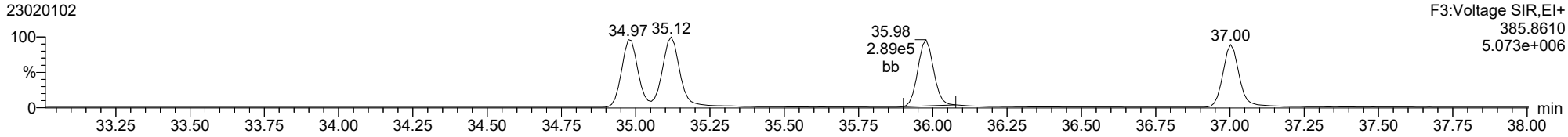

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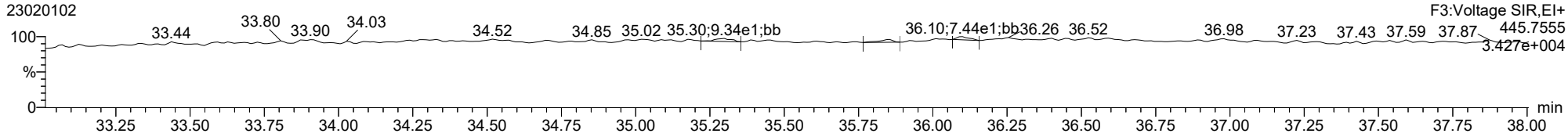

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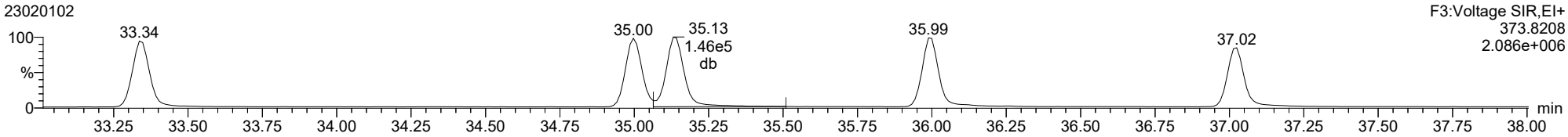

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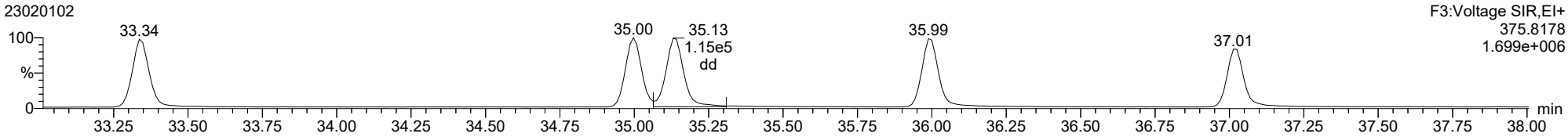

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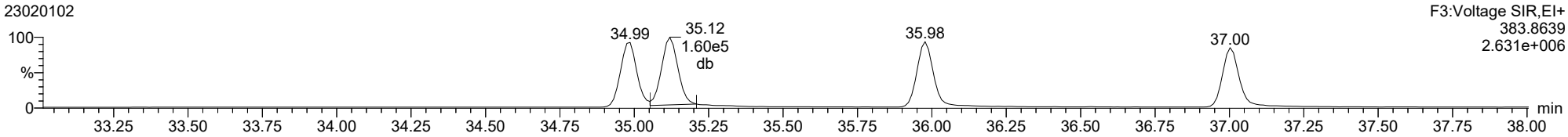

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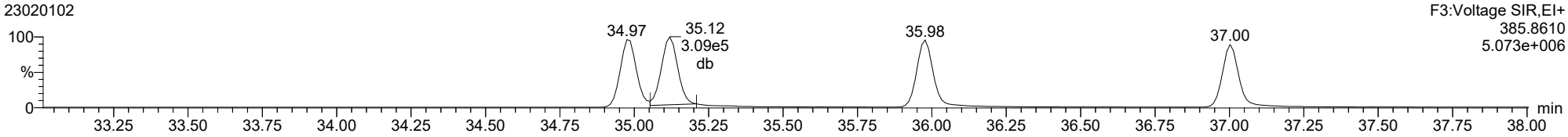

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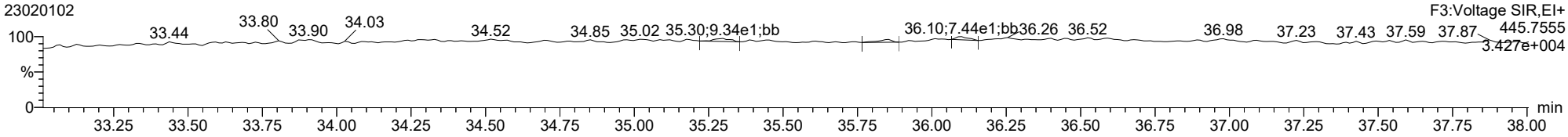

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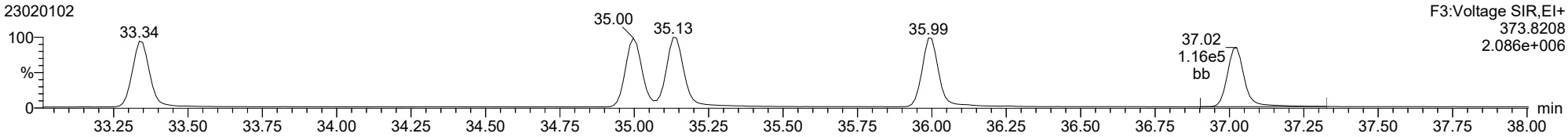

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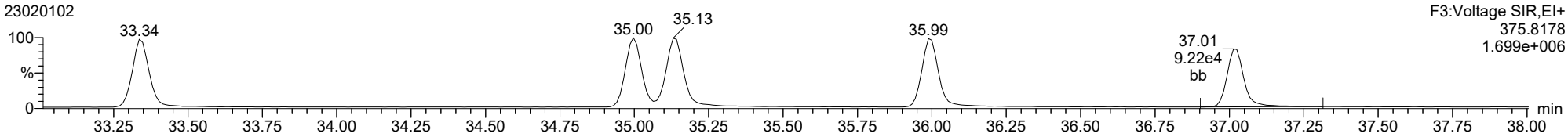

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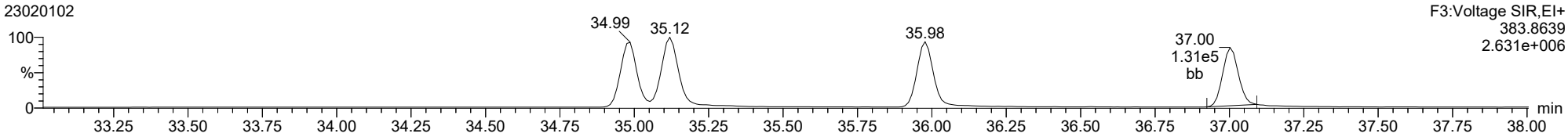

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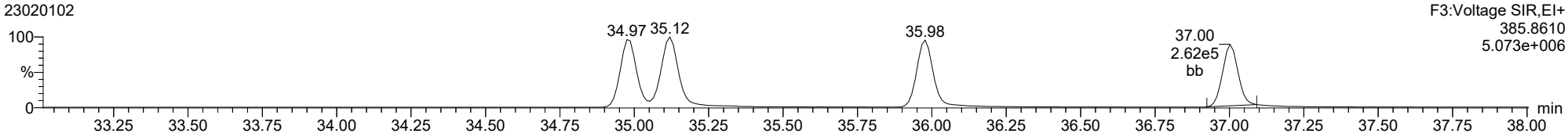

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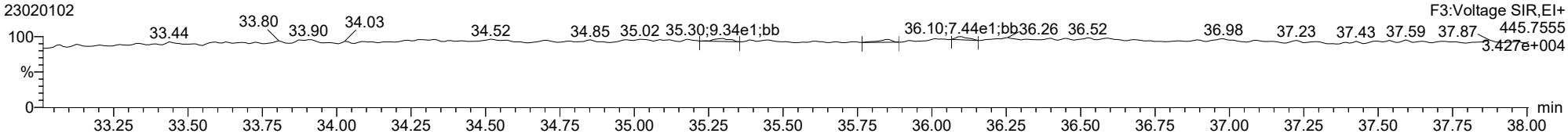

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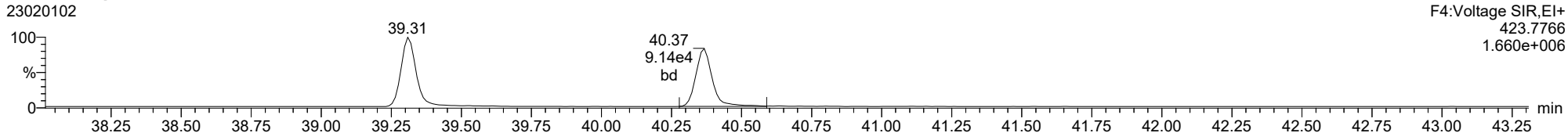

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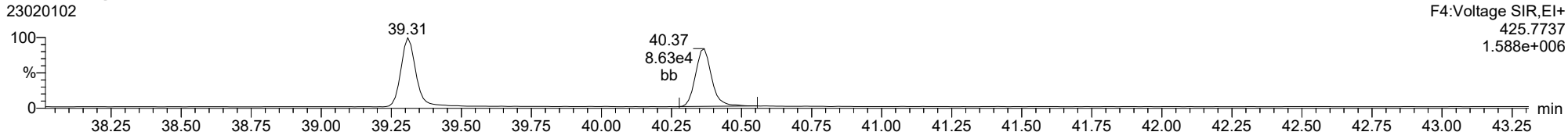

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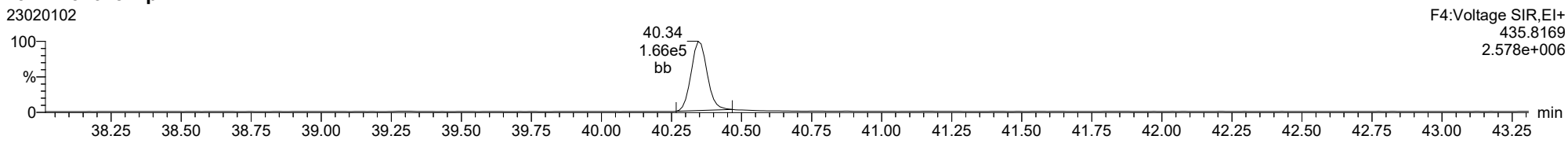

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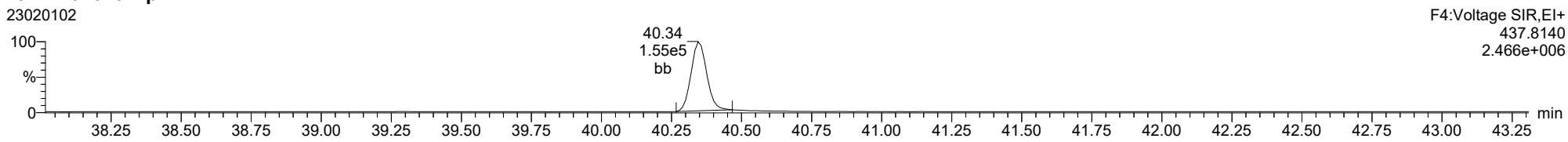

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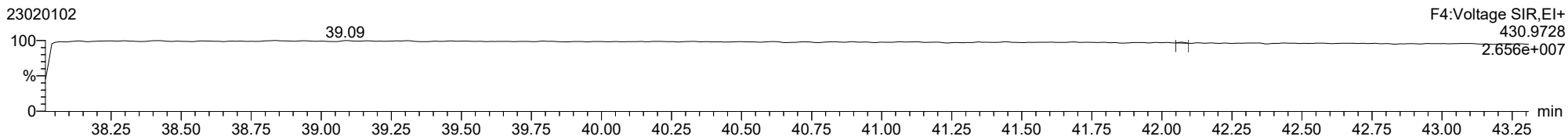

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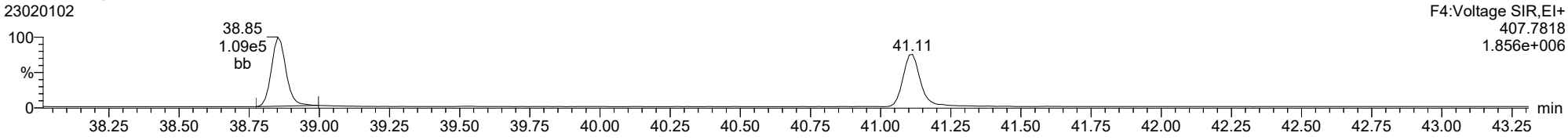

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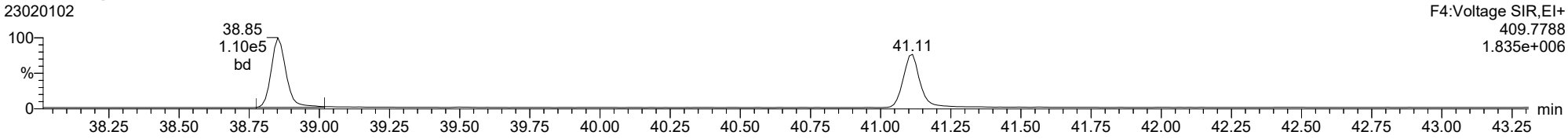

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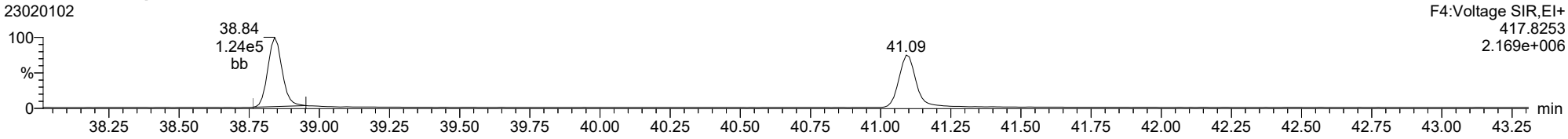

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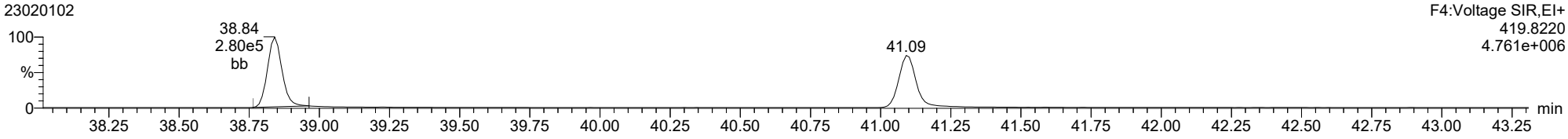

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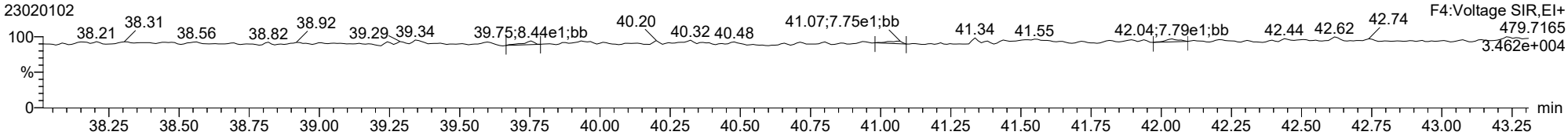

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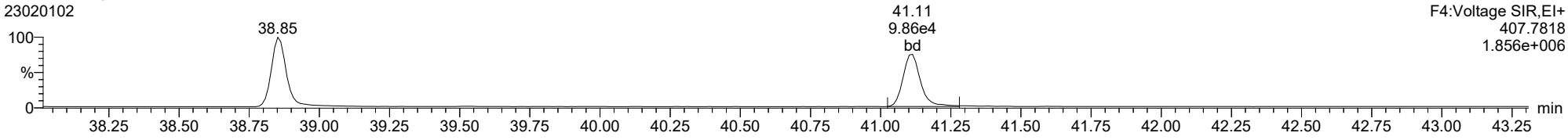

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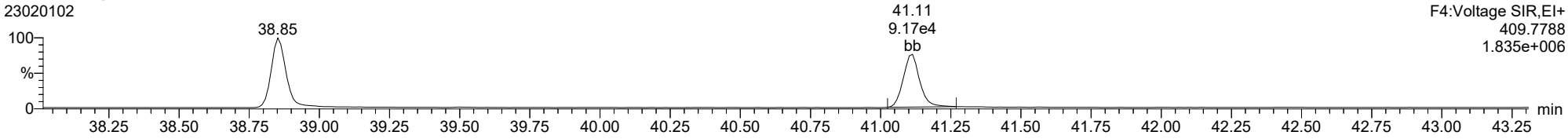

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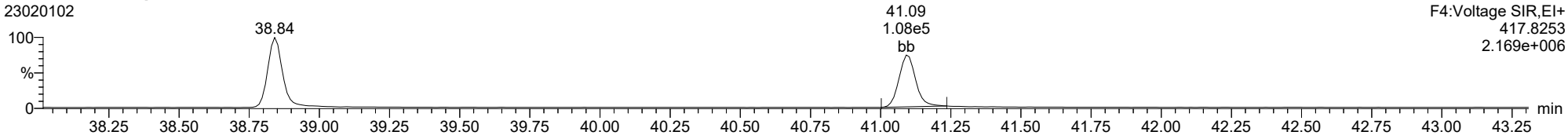

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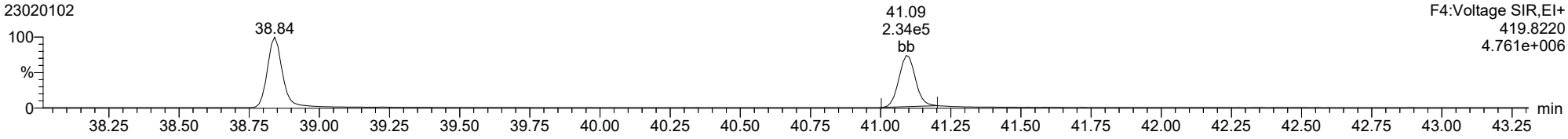

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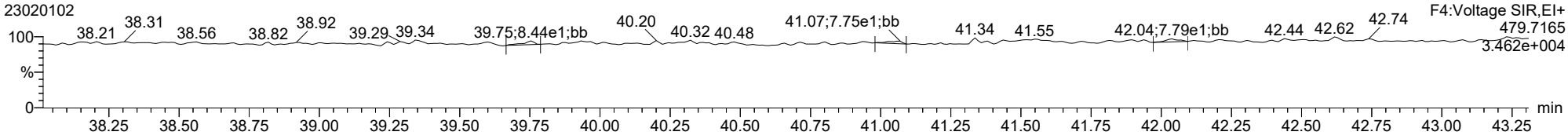

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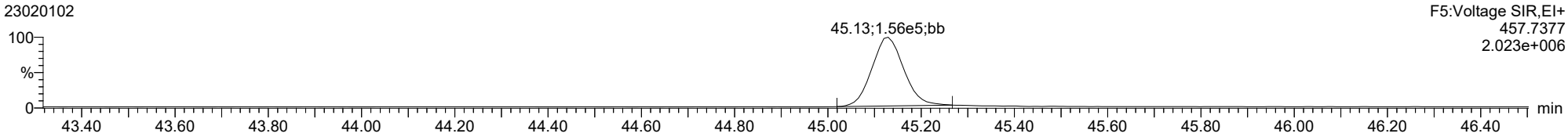

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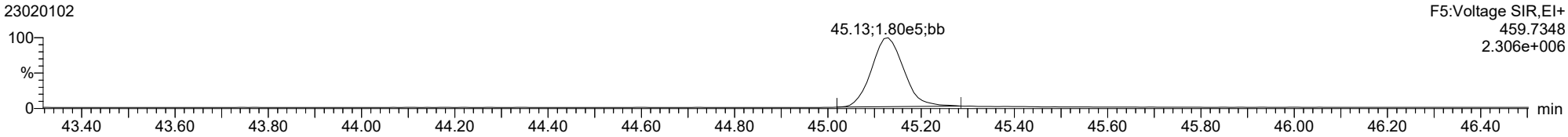

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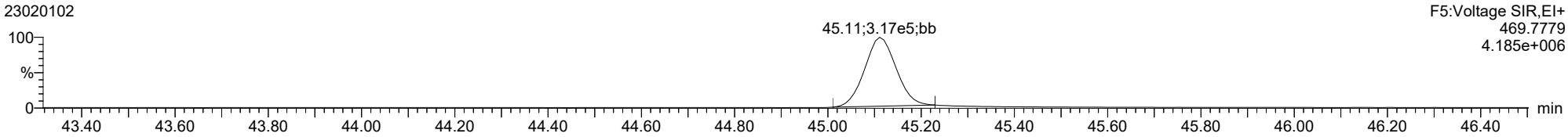

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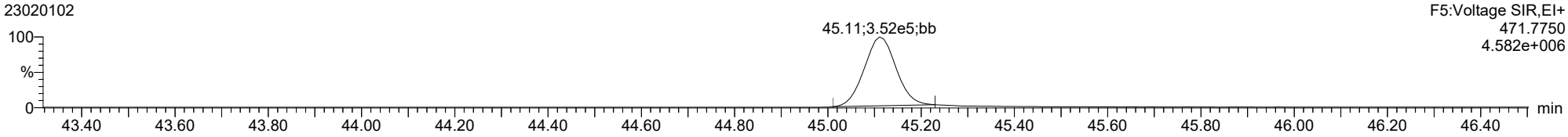
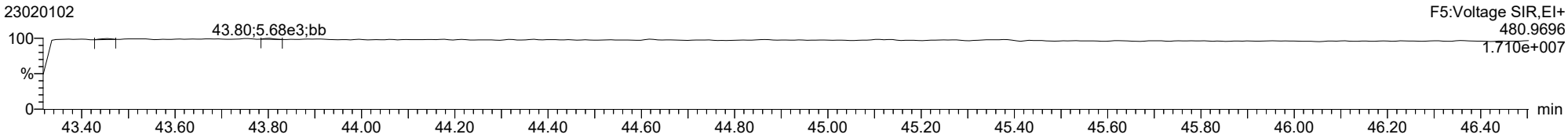


FUNCTION5 PFK



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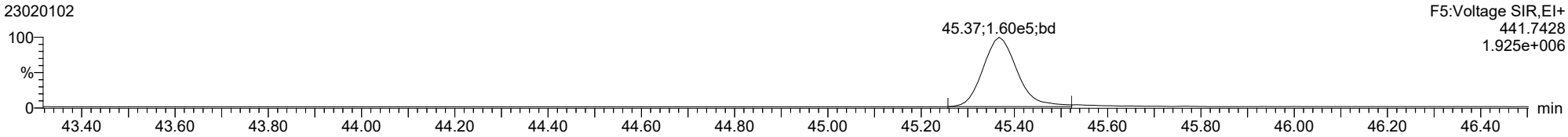

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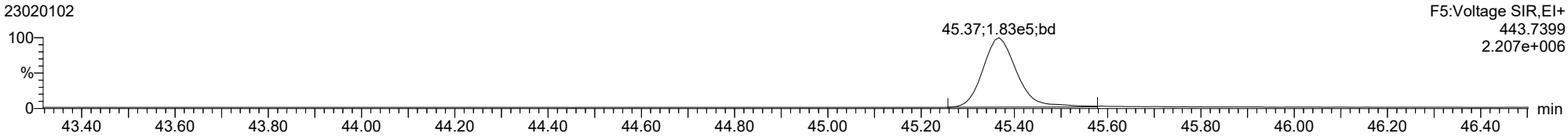

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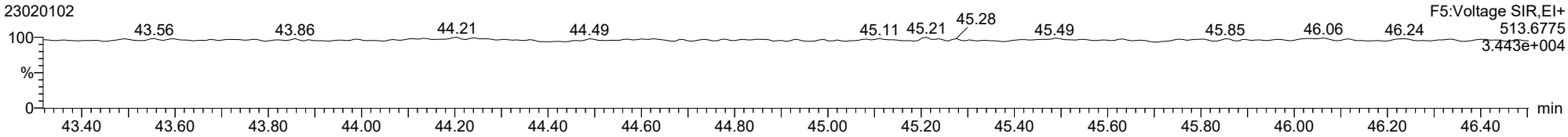

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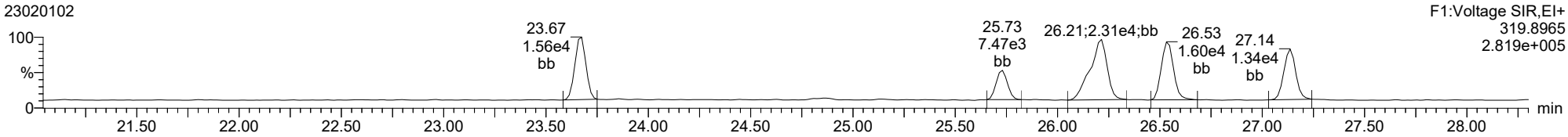

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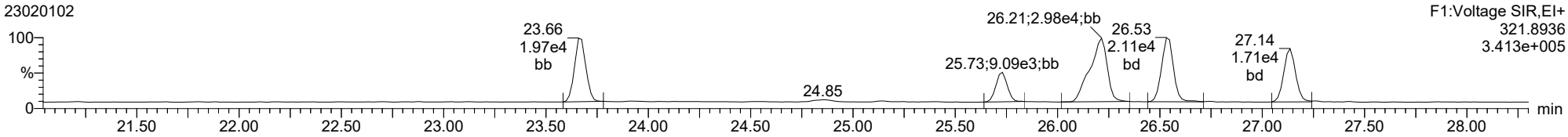

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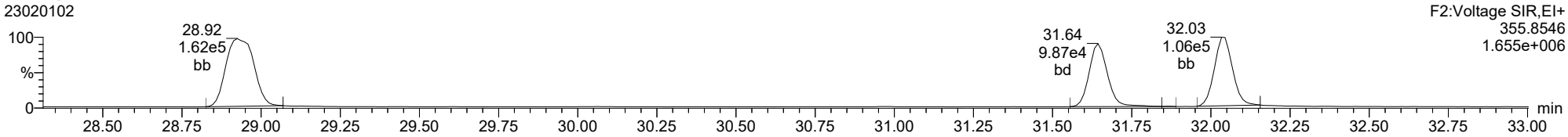

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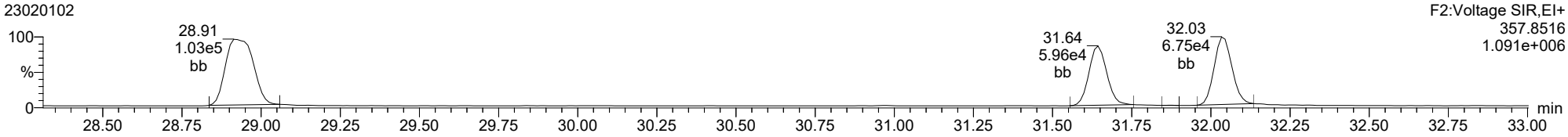

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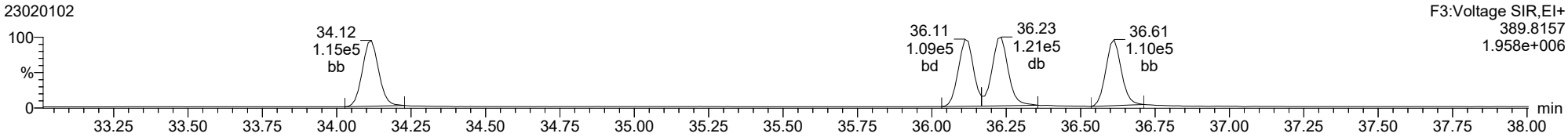
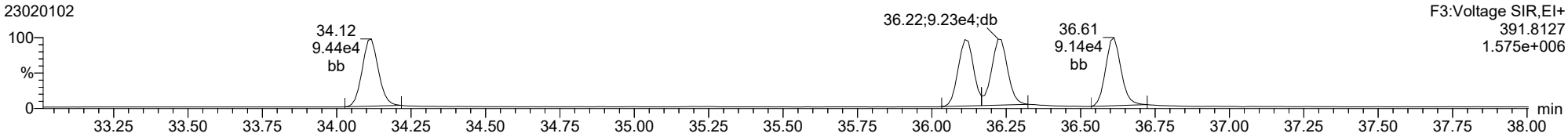
Total-hexadioxins



Total-hexadioxins



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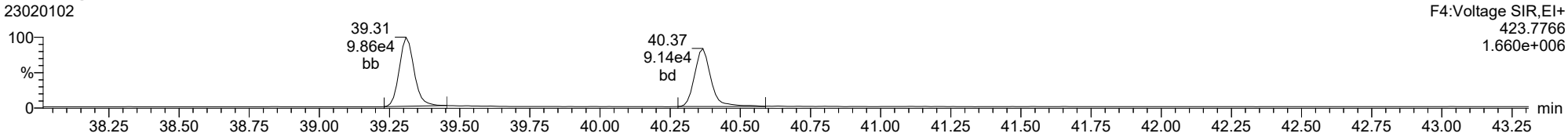

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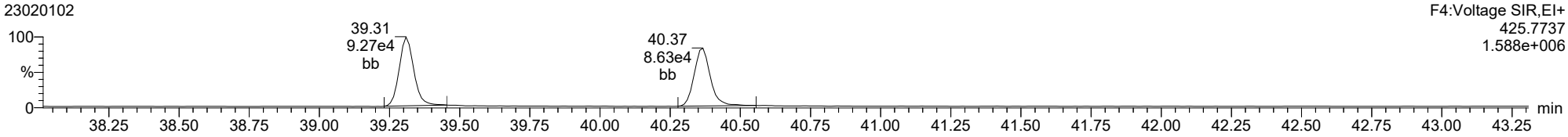

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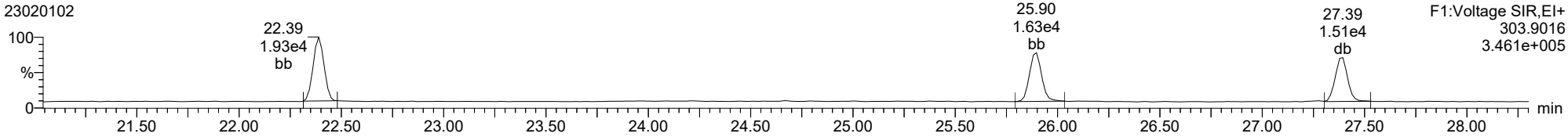
Total-tetrafurans



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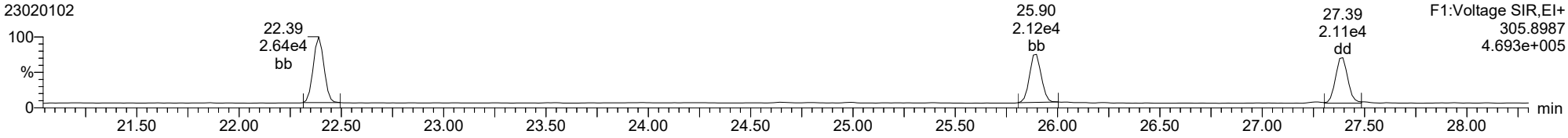

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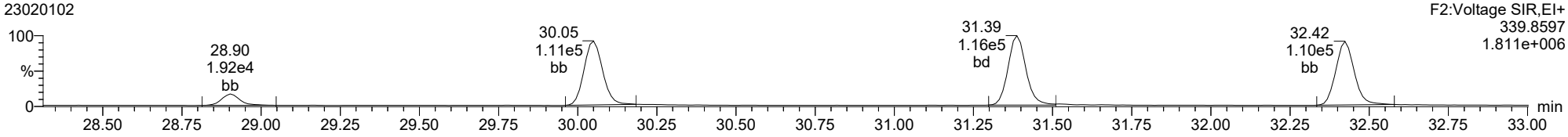

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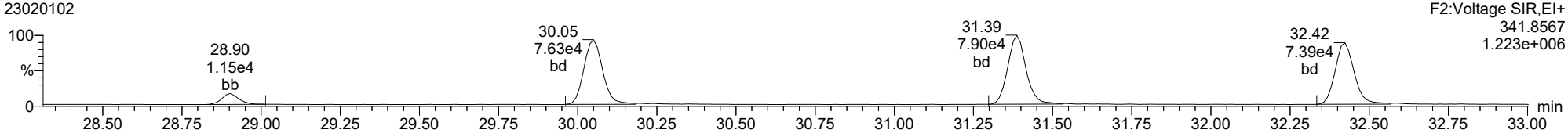

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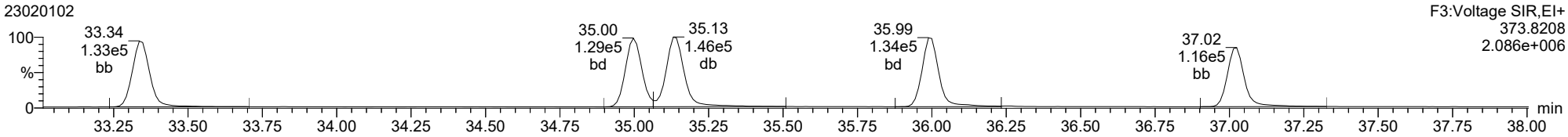
Total-hexafurans



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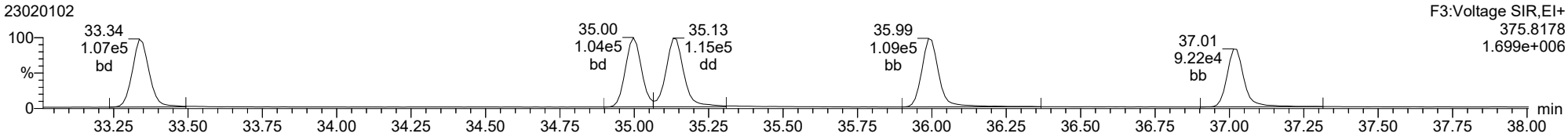

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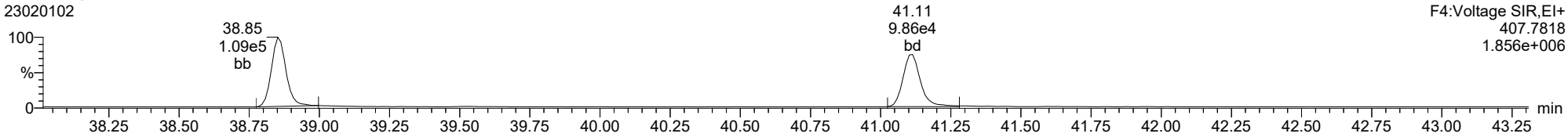

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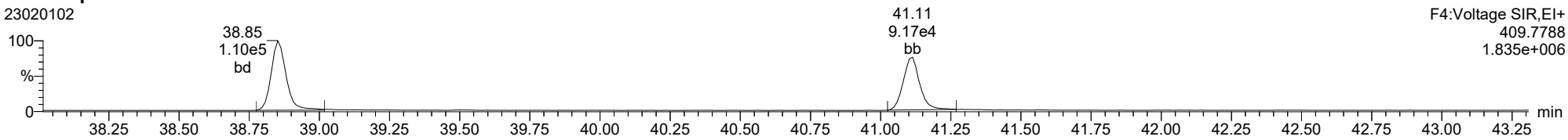

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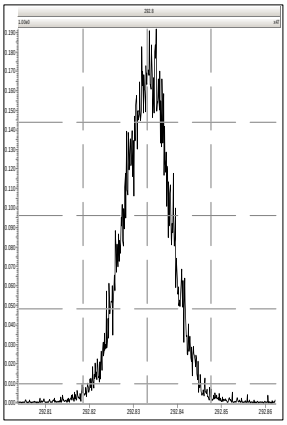
M 292.9824 R 11917



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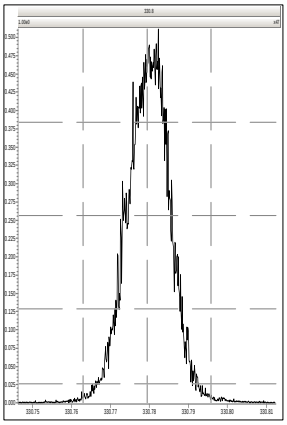
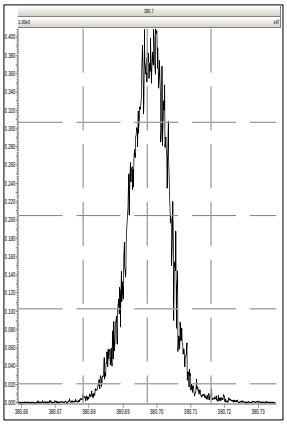
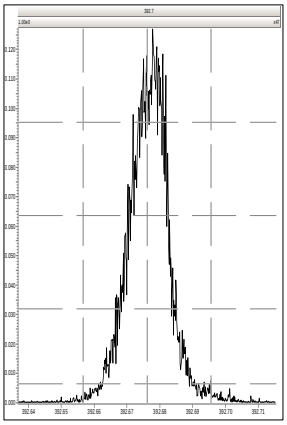


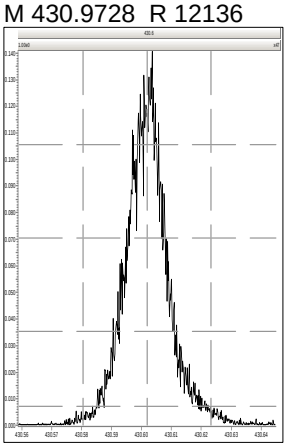
M 380.9760 R 14418



M 392.9760 R 14368



M 430.9728 R 12136



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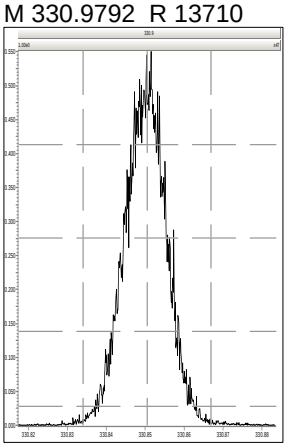

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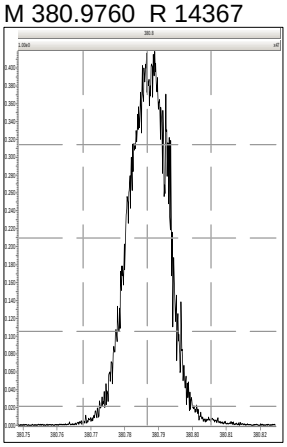
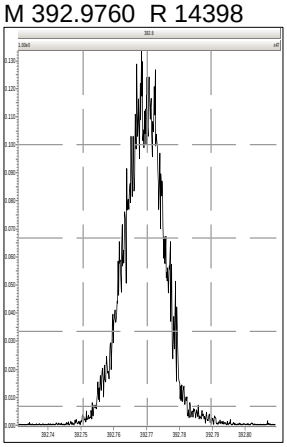
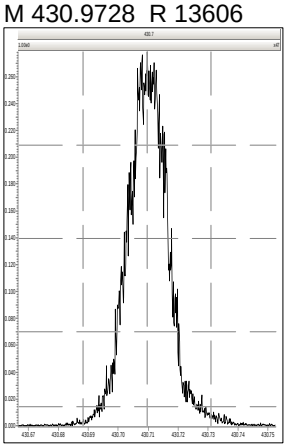


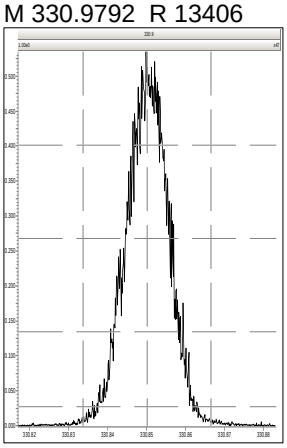
M 392.9760 R 14398



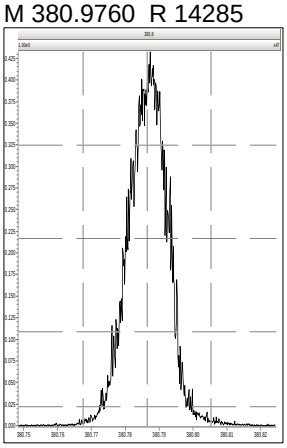
M 430.9728 R 13606



M 330.9792 R 13406



M 380.9760 R 14285



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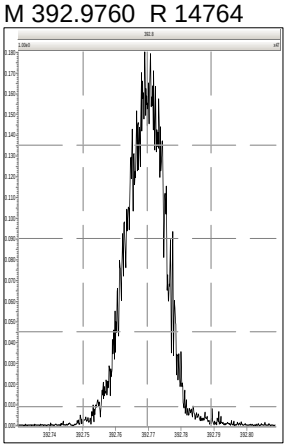
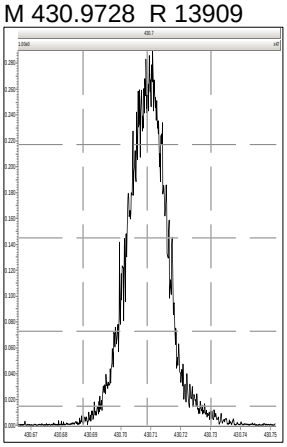


M 430.9728 R 13909



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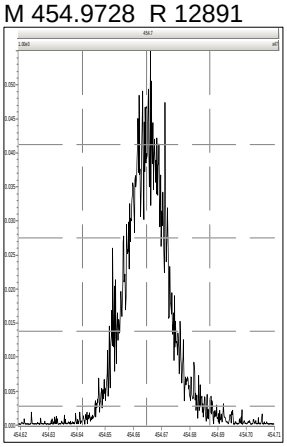
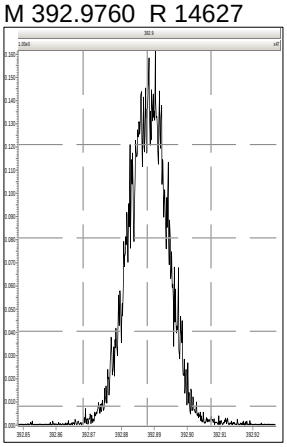
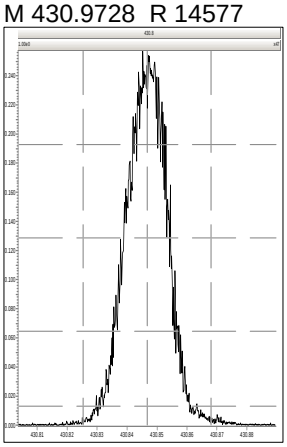


M 392.9760 R 14627



M 430.9728 R 14577



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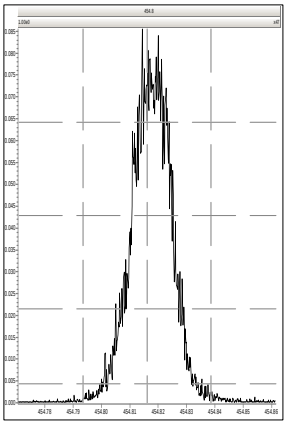
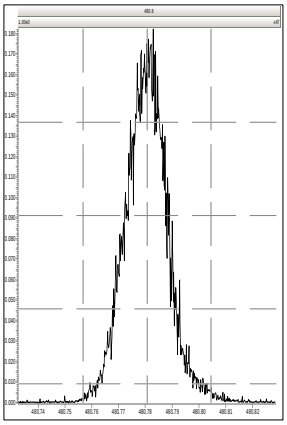
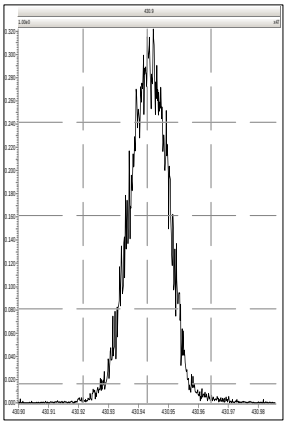
M 454.9728 R 14287



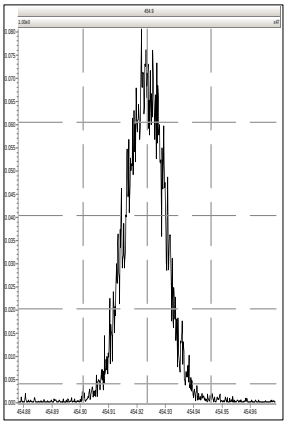
M 480.9696 R 13699



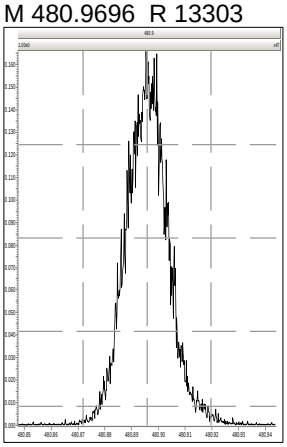
M 430.9728 R 15291



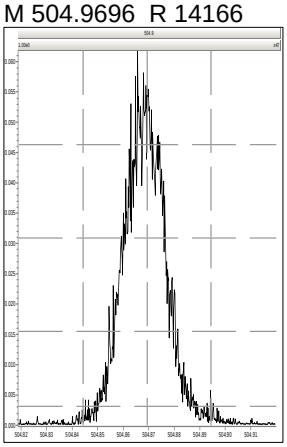
M 454.9728 R 15060



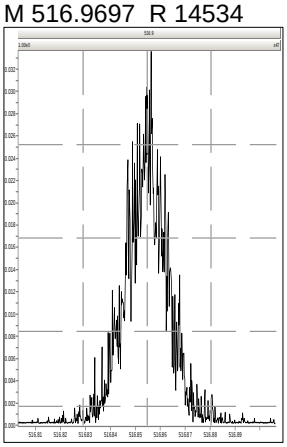
M 480.9696 R 13303

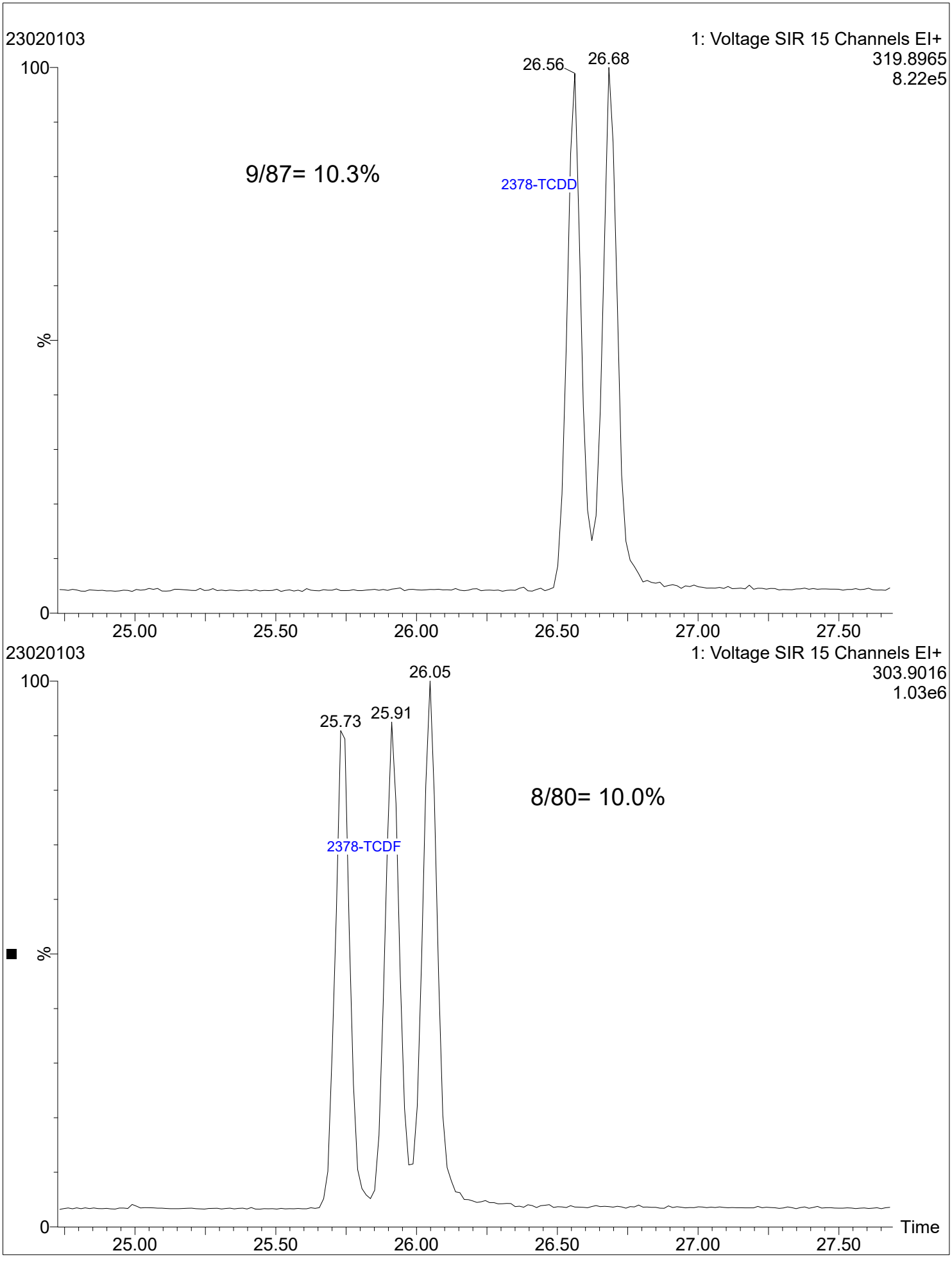


M 504.9696 R 14166



M 516.9697 R 14534

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319.8965
8.22e5
100
26.56
26.68
9/87= 10.3%
2378-TCDD
%
0
25.00
25.50
26.00
26.50
27.00
27.50
23020103
1: Voltage SIR 15 Channels EI+
303.9016
1.03e6
100
26.05
25.73
25.91
8/80= 10.0%
2378-TCDF
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

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Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:36:56 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CSLCR, Name: 23020104, Date: 01-Feb-2023, Time: 14:39:51, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.876		0.770	1080	1324								
12378-PeCDF	30.038	1.000	4.271e3	3.157e3	0.845	1.353	1.550	952	1114	6.59e4	5.26e4	69.3	47.2	NO	bb	bd	0.524
23478-PeCDF	31.374	1.000	4.511e3	2.751e3	0.911	1.640	1.550	952	1114	6.73e4	4.18e4	70.7	37.5	NO	bb	bb	0.494
123478-HxCDF	34.995	1.001	4.104e3	3.031e3	1.182	1.354	1.240	1010	1011	5.83e4	4.33e4	57.7	42.8	NO	bd	bd	0.507
234678-HxCDF	35.987	1.000	3.766e3	3.106e3	1.229	1.212	1.240	1010	1011	5.67e4	5.22e4	56.2	51.6	NO	bb	bb	0.497
123678-HxCDF	35.129	1.000	4.222e3	3.339e3	1.248	1.264	1.240	1010	1011	6.34e4	4.53e4	62.8	44.8	NO	db	db	0.502
123789-HxCDF	37.012	1.000	3.644e3	2.921e3	1.187	1.248	1.240	1010	1011	5.58e4	4.74e4	55.3	46.9	NO	bb	bb	0.543
1234678-HpCDF	38.850	1.000	3.896e3	3.656e3	1.204	1.066	1.050	999	874	7.14e4	6.60e4	71.5	75.5	NO	bb	bb	0.550
1234789-HpCDF	41.101	1.000	3.001e3	3.100e3	1.165	0.968	1.050	999	874	4.75e4	4.72e4	47.6	54.0	NO	bb	bb	0.533
OCDF	45.376	1.006	5.786e3	6.873e3	1.186	0.842	0.890	933	1403	7.23e4	8.24e4	77.5	58.8	NO	bb	bd	1.268
2378-TCDD					1.236		0.770	1059	950								
12378-PeCDD	31.642	1.001	3.215e3	2.188e3	1.087	1.469	1.550	1079	785	5.52e4	3.24e4	51.2	41.3	NO	bd	bb	0.496
123478-HxCDD	36.109	1.000	2.827e3	2.333e3	0.987	1.212	1.240	1001	800	4.34e4	4.15e4	43.4	51.9	NO	dd	bd	0.497
123678-HxCDD	36.221	1.000	3.387e3	2.724e3	1.021	1.243	1.240	1001	800	5.33e4	4.23e4	53.3	52.9	NO	db	db	0.556
123789-HxCDD	36.611	1.011	2.961e3	2.378e3	0.985	1.245	1.240	1001	800	5.48e4	3.89e4	54.8	48.6	NO	bb	bb	0.509
1234678-HpCDD	40.354	1.000	3.173e3	3.384e3	1.253	0.938	1.050	1384	648	4.91e4	5.67e4	35.5	87.6	NO	bb	bb	0.614
OCDD					1.103		0.890	865	2890								
13C-2378-TCDF	25.867	1.007	8.880e5	1.123e6	1.768	0.791	0.770	2432	2065	1.34e7	1.70e7	5499.3	8229.7	NO	bb	bb	101.483
13C-12378-PeCDF	30.026	1.168	1.020e6	6.593e5	1.527	1.547	1.550	4351	2458	1.57e7	1.01e7	3618.6	4108.9	NO	bb	bb	98.114
13C-23478-PeCDF	31.363	1.220	9.713e5	6.405e5	1.466	1.516	1.550	4351	2458	1.47e7	9.63e6	3385.5	3917.5	NO	bb	bb	98.077
13C-123478-HxCDF	34.973	0.956	3.987e5	7.926e5	1.054	0.503	0.510	2002	3102	6.44e6	1.29e7	3217.2	4143.2	NO	bd	bd	100.084
13C-123678-HxCDF	35.118	0.960	4.078e5	7.990e5	1.080	0.510	0.510	2002	3102	6.70e6	1.31e7	3346.6	4215.9	NO	db	db	98.911
13C-234678-HxCDF	35.976	0.983	3.811e5	7.451e5	1.014	0.512	0.510	2002	3102	6.35e6	1.23e7	3171.4	3951.0	NO	bb	bb	98.285
13C-123789-HxCDF	37.001	1.011	3.510e5	6.676e5	0.928	0.526	0.510	2002	3102	5.85e6	1.13e7	2920.8	3645.7	NO	bb	bb	97.160
13C-1234678-HpCDF	38.839	1.061	3.505e5	7.899e5	1.036	0.444	0.440	2536	4120	5.96e6	1.33e7	2351.6	3236.3	NO	bb	bb	97.433
13C-1234789-HpCDF	41.090	1.123	3.059e5	6.773e5	0.905	0.452	0.440	2536	4120	4.61e6	1.03e7	1815.9	2503.7	NO	bb	bb	96.171
13C-1234-TCDD	25.700	0.000	4.959e5	6.249e5	1.000	0.794	0.770	2405	1251	7.82e6	9.77e6	3252.7	7808.7	NO	bb	bb	100.000
13C-2378-TCDD	26.517	1.032	5.458e5	6.834e5	1.103	0.799	0.770	2405	1251	8.30e6	1.04e7	3451.4	8324.3	NO	bb	bb	99.431
13C-12378-PeCDD	31.619	1.230	6.125e5	3.907e5	0.914	1.568	1.550	1178	1168	9.36e6	5.78e6	7947.4	4944.2	NO	bb	bd	97.913
13C-123478-HxCDD	36.098	0.987	5.901e5	4.628e5	0.933	1.275	1.240	2011	1749	9.65e6	7.66e6	4801.0	4381.0	NO	bd	bd	99.896
13C-123678-HxCDD	36.209	0.990	6.061e5	4.713e5	0.965	1.286	1.240	2011	1749	9.81e6	7.59e6	4881.2	4342.3	NO	db	db	98.864
13C-1234678-HpCDD	40.343	1.103	4.400e5	4.119e5	0.782	1.068	1.050	2377	2314	6.98e6	6.54e6	2937.2	2824.0	NO	bb	bb	96.428
13C-OCDD	45.102	1.233	8.036e5	8.792e5	0.788	0.914	0.890	2320	2081	1.01e7	1.12e7	4365.2	5363.3	NO	bb	bb	188.967
13C-123789-HxCDD	36.588	0.000	6.276e5	5.021e5	1.000	1.250	1.240	2011	1749	1.01e7	8.07e6	5029.1	4612.9	NO	bb	bb	100.000
37CL-2378-TCDD	26.532	1.032	1.634e3		1.233			1257		2.25e4		17.9			bb		0.118

Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:36:56 Pacific Standard Time

ID: CSLCR, Name: 23020104, Date: 01-Feb-2023, Time: 14:39:51, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					1.064		0.770	1080	1324								
1289-TCDF					0.858		0.770	1080	1324								
13468-PECDF					1.013		1.550	869	1005								
12389-PECDF					0.844		1.550	952	1114								
123468-HXCDF					1.197		1.240	1010	1011								
1368-TCDD					1.084		0.770	1059	950								
1289-TCDD					0.975		0.770	1059	950								
12479-PECDD					1.837		1.550	1079	785								
12389-PECDD					1.252		1.550	1079	785								
124679-HXCDD					1.033		1.240	1001	800								
1234679-HPCDD					1.286		1.050	1384	648								
Total-tetrafurans			0.000e0		0.933			1080		0.00e0							
Total-penta1			0.000e0					869		0.00e0							
Total-pentafurans			8.782e3		0.866			952		1.33e5							1.018
Total-hexafurans			1.574e4		1.208			1010		2.34e5							2.049
Total-heptafurans			6.897e3		1.185			999		1.19e5							1.082
Total-Furans			3.720e4		1.067			1080		5.59e5							5.417
Total-tetradioxins			0.000e0		1.099			1059		0.00e0							
Total-pentadioxins			3.215e3		1.392			1079		5.52e4							0.496
Total-hexadioxins			9.529e3		1.007			1001		1.58e5							1.624
Total-heptadioxins			3.173e3		1.269			1384		4.91e4							0.614
Total-Dioxins			1.601e4		1.165			1059		2.65e5							2.750
Total-TEQ			5.321e4					1059		8.24e5							8.168
FUNCTION1 PFK			3.664e5					577038		8.77e6							
FUNCTION2 PFK			5.803e5					248887		1.44e7							0.000
FUNCTION3 PFK			1.568e5					462057		5.36e6							0.000
FUNCTION4 PFK			0.000e0					300538		0.00e0							
FUNCTION5 PFK			6.700e4					200836		2.35e6							
FUNCTION1 HXCD...			8.333e2					859		1.29e4							0.000
FUNCTION1 HPCD...			1.557e3					919		1.93e4							0.000
FUNCTION2 HPCD...			7.646e2					998		1.65e4							0.000
FUNCTION3 OCDPE			1.789e3					773		2.75e4							0.000
FUNCTION4 NCDPE			1.690e2					924		5.87e3							0.000
FUNCTION5 DCDPE			8.847e1					800		2.49e3							0.000

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.37	4.511e3	2.751e3	0.911	1.64	1.55	70.7	YES	NO	bb	bb	0.494
2	12378-PeCDF	30.04	4.271e3	3.157e3	0.845	1.35	1.55	69.3	YES	NO	bb	bd	0.524

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.01	3.644e3	2.921e3	1.187	1.25	1.24	55.3	YES	NO	bb	bb	0.543
2	234678-HxCDF	35.99	3.766e3	3.106e3	1.229	1.21	1.24	56.2	YES	NO	bb	bb	0.497
3	123678-HxCDF	35.13	4.222e3	3.339e3	1.248	1.26	1.24	62.8	YES	NO	db	db	0.502
4	123478-HxCDF	35.00	4.104e3	3.031e3	1.182	1.35	1.24	57.7	YES	NO	bd	bd	0.507

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.10	3.001e3	3.100e3	1.165	0.97	1.05	47.6	YES	NO	bb	bb	0.533
2	1234678-HpCDF	38.85	3.896e3	3.656e3	1.204	1.07	1.05	71.5	YES	NO	bb	bb	0.550

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.37	4.511e3	2.751e3	0.911	1.64	1.55	70.7	YES	NO	bb	bb	0.494
2	12378-PeCDF	30.04	4.271e3	3.157e3	0.845	1.35	1.55	69.3	YES	NO	bb	bd	0.524
3	123789-HxCDF	37.01	3.644e3	2.921e3	1.187	1.25	1.24	55.3	YES	NO	bb	bb	0.543
4	234678-HxCDF	35.99	3.766e3	3.106e3	1.229	1.21	1.24	56.2	YES	NO	bb	bb	0.497
5	123678-HxCDF	35.13	4.222e3	3.339e3	1.248	1.26	1.24	62.8	YES	NO	db	db	0.502
6	123478-HxCDF	35.00	4.104e3	3.031e3	1.182	1.35	1.24	57.7	YES	NO	bd	bd	0.507
7	1234789-HpCDF	41.10	3.001e3	3.100e3	1.165	0.97	1.05	47.6	YES	NO	bb	bb	0.533
8	1234678-HpCDF	38.85	3.896e3	3.656e3	1.204	1.07	1.05	71.5	YES	NO	bb	bb	0.550
9	OCDF	45.38	5.786e3	6.873e3	1.186	0.84	0.89	77.5	YES	NO	bb	bd	1.268

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.64	3.215e3	2.188e3	1.087	1.47	1.55	51.2	YES	NO	bd	bb	0.496

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.61	2.961e3	2.378e3	0.985	1.24	1.24	54.8	YES	NO	bb	bb	0.509
2	123678-HxCDD	36.22	3.387e3	2.724e3	1.021	1.24	1.24	53.3	YES	NO	db	db	0.556
3	123478-HxCDD	36.11	2.827e3	2.333e3	0.987	1.21	1.24	43.4	YES	NO	dd	bd	0.497
4	Total-hexadioxins	35.12	3.540e2	3.166e2	1.007	1.12	1.24	6.7	YES	NO	db	bb	0.063

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.35	3.173e3	3.384e3	1.253	0.94	1.05	35.5	YES	NO	bb	bb	0.614

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-Dioxins	22.28	9.641e1	1.412e2	1.165	0.68	0.77	2.5	NO	NO	bd	bb	0.017
2	12378-PeCDD	31.64	3.215e3	2.188e3	1.087	1.47	1.55	51.2	YES	NO	bd	bb	0.496
3	123789-HxCDD	36.61	2.961e3	2.378e3	0.985	1.24	1.24	54.8	YES	NO	bb	bb	0.509
4	123678-HxCDD	36.22	3.387e3	2.724e3	1.021	1.24	1.24	53.3	YES	NO	db	db	0.556
5	123478-HxCDD	36.11	2.827e3	2.333e3	0.987	1.21	1.24	43.4	YES	NO	dd	bd	0.497
6	Total-hexadioxins	35.12	3.540e2	3.166e2	1.007	1.12	1.24	6.7	YES	NO	db	bb	0.063
7	1234678-HpCDD	40.35	3.173e3	3.384e3	1.253	0.94	1.05	35.5	YES	NO	bb	bb	0.614

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.37	4.511e3	2.751e3	0.911	1.64	1.55	70.7	YES	NO	bb	bb	0.494
2	12378-PeCDF	30.04	4.271e3	3.157e3	0.845	1.35	1.55	69.3	YES	NO	bb	bd	0.524
3	123789-HxCDF	37.01	3.644e3	2.921e3	1.187	1.25	1.24	55.3	YES	NO	bb	bb	0.543
4	234678-HxCDF	35.99	3.766e3	3.106e3	1.229	1.21	1.24	56.2	YES	NO	bb	bb	0.497
5	123678-HxCDF	35.13	4.222e3	3.339e3	1.248	1.26	1.24	62.8	YES	NO	db	db	0.502
6	123478-HxCDF	35.00	4.104e3	3.031e3	1.182	1.35	1.24	57.7	YES	NO	bd	bd	0.507
7	1234789-HpCDF	41.10	3.001e3	3.100e3	1.165	0.97	1.05	47.6	YES	NO	bb	bb	0.533
8	1234678-HpCDF	38.85	3.896e3	3.656e3	1.204	1.07	1.05	71.5	YES	NO	bb	bb	0.550
9	OCDF	45.38	5.786e3	6.873e3	1.186	0.84	0.89	77.5	YES	NO	bb	bd	1.268
10	Total-Dioxins	22.28	9.641e1	1.412e2	1.165	0.68	0.77	2.5	NO	NO	bd	bb	0.017
11	12378-PeCDD	31.64	3.215e3	2.188e3	1.087	1.47	1.55	51.2	YES	NO	bd	bb	0.496
12	123789-HxCDD	36.61	2.961e3	2.378e3	0.985	1.24	1.24	54.8	YES	NO	bb	bb	0.509
13	123678-HxCDD	36.22	3.387e3	2.724e3	1.021	1.24	1.24	53.3	YES	NO	db	db	0.556
14	123478-HxCDD	36.11	2.827e3	2.333e3	0.987	1.21	1.24	43.4	YES	NO	dd	bd	0.497
15	Total-hexadioxins	35.12	3.540e2	3.166e2	1.007	1.12	1.24	6.7	YES	NO	db	bb	0.063
16	1234678-HpCDD	40.35	3.173e3	3.384e3	1.253	0.94	1.05	35.5	YES	NO	bb	bb	0.614

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	27.58	8.439e4					1.7	NO		bb		
2	FUNCTION1 PFK	27.45	2.771e4					1.5	NO		bb		
3	FUNCTION1 PFK	27.17	2.484e4					1.4	NO		bb		
4	FUNCTION1 PFK	26.40	1.936e4					1.3	NO		bb		
5	FUNCTION1 PFK	26.11	4.980e4					1.6	NO		bb		
6	FUNCTION1 PFK	25.62	1.288e4					0.9	NO		bb		
7	FUNCTION1 PFK	23.40	2.240e4					0.8	NO		bb		
8	FUNCTION1 PFK	22.69	1.568e4					1.0	NO		bb		
9	FUNCTION1 PFK	22.18	2.261e4					1.3	NO		bb		
10	FUNCTION1 PFK	22.10	4.769e4					1.5	NO		bb		
11	FUNCTION1 PFK	21.98	1.078e4					0.8	NO		bb		
12	FUNCTION1 PFK	21.92	2.828e4					1.5	NO		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.52	1.267e4					1.4	NO		dd		0.000
2	FUNCTION2 PFK	29.46	2.595e4					2.1	NO		bd		0.000
3	FUNCTION2 PFK	29.36	9.698e3					1.3	NO		db		0.000
4	FUNCTION2 PFK	29.26	3.530e4					1.9	NO		dd		0.000
5	FUNCTION2 PFK	29.20	3.010e4					2.1	NO		dd		0.000
6	FUNCTION2 PFK	29.12	1.008e4					1.1	NO		dd		0.000
7	FUNCTION2 PFK	29.07	1.252e4					1.4	NO		bd		0.000
8	FUNCTION2 PFK	29.00	5.699e3					0.9	NO		db		0.000
9	FUNCTION2 PFK	28.97	2.160e4					1.6	NO		dd		0.000
10	FUNCTION2 PFK	28.81	1.772e4					0.9	NO		bd		0.000
11	FUNCTION2 PFK	28.71	1.302e4					0.8	NO		bb		0.000
12	FUNCTION2 PFK	28.64	1.871e3					0.4	NO		bb		0.000
13	FUNCTION2 PFK	28.51	4.178e3					0.8	NO		bb		0.000
14	FUNCTION2 PFK	28.42	7.027e3					0.8	NO		bb		0.000
15	FUNCTION2 PFK	28.34	4.550e3					0.9	NO		bb		0.000
16	FUNCTION2 PFK	31.02	8.571e3					1.3	NO		dd		0.000
17	FUNCTION2 PFK	30.97	2.370e4					2.0	NO		dd		0.000
18	FUNCTION2 PFK	30.86	2.515e4					1.6	NO		dd		0.000
19	FUNCTION2 PFK	30.83	6.842e3					1.2	NO		bd		0.000
20	FUNCTION2 PFK	30.75	1.931e4					1.6	NO		bb		0.000
21	FUNCTION2 PFK	30.62	1.066e4					1.2	NO		db		0.000
22	FUNCTION2 PFK	30.58	5.541e3					1.0	NO		bd		0.000
23	FUNCTION2 PFK	30.53	9.069e3					1.2	NO		bb		0.000
24	FUNCTION2 PFK	30.44	1.277e4					1.2	NO		db		0.000
25	FUNCTION2 PFK	30.39	1.436e4					1.3	NO		bd		0.000
26	FUNCTION2 PFK	30.19	7.186e3					0.8	NO		bb		0.000
27	FUNCTION2 PFK	30.03	1.599e4					1.2	NO		bb		0.000
28	FUNCTION2 PFK	29.91	1.518e3					0.4	NO		bb		0.000
29	FUNCTION2 PFK	29.80	6.143e3					0.8	NO		bb		0.000
30	FUNCTION2 PFK	29.65	1.120e4					1.0	NO		db		0.000
31	FUNCTION2 PFK	29.56	1.510e4					1.6	NO		dd		0.000
32	FUNCTION2 PFK	32.43	5.171e3					1.0	NO		db		0.000
33	FUNCTION2 PFK	32.40	8.945e3					1.4	NO		bd		0.000
34	FUNCTION2 PFK	32.33	8.546e3					0.8	NO		db		0.000
35	FUNCTION2 PFK	32.28	1.923e3					0.6	NO		bd		0.000
36	FUNCTION2 PFK	32.23	9.966e3					1.3	NO		db		0.000
37	FUNCTION2 PFK	32.18	8.875e3					1.2	NO		bd		0.000

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION2 PFK	32.09	1.451e4					1.2	NO		db		0.000
39	FUNCTION2 PFK	32.04	5.136e3					0.8	NO		dd		0.000
40	FUNCTION2 PFK	32.01	7.259e3					1.1	NO		bd		0.000
41	FUNCTION2 PFK	31.94	6.720e3					0.8	NO		bb		0.000
42	FUNCTION2 PFK	31.74	5.803e3					0.8	NO		bb		0.000
43	FUNCTION2 PFK	31.61	6.954e3					1.2	NO		db		0.000
44	FUNCTION2 PFK	31.59	1.111e4					1.2	NO		bd		0.000
45	FUNCTION2 PFK	31.45	7.843e2					0.3	NO		bb		0.000
46	FUNCTION2 PFK	31.41	1.192e4					1.2	NO		bb		0.000
47	FUNCTION2 PFK	31.07	1.965e3					0.4	NO		db		0.000
48	FUNCTION2 PFK	32.80	6.019e3					1.1	NO		db		0.000
49	FUNCTION2 PFK	32.77	9.084e3					1.2	NO		bd		0.000
50	FUNCTION2 PFK	32.64	3.494e4					1.5	NO		db		0.000
51	FUNCTION2 PFK	32.60	5.286e3					0.9	NO		dd		0.000
52	FUNCTION2 PFK	32.53	4.308e3					0.5	NO		bd		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	36.14	4.336e3					0.7	NO		db		0.000
2	FUNCTION3 PFK	36.11	5.755e3					0.7	NO		bd		0.000
3	FUNCTION3 PFK	36.06	7.687e3					0.9	NO		bb		0.000
4	FUNCTION3 PFK	36.02	1.796e4					1.6	NO		bb		0.000
5	FUNCTION3 PFK	35.81	1.736e4					1.2	NO		bb		0.000
6	FUNCTION3 PFK	35.69	5.338e4					1.7	NO		bb		0.000
7	FUNCTION3 PFK	35.20	3.054e3					0.6	NO		bb		0.000
8	FUNCTION3 PFK	34.12	1.673e4					1.2	NO		bb		0.000
9	FUNCTION3 PFK	33.89	1.577e4					1.4	NO		bb		0.000
10	FUNCTION3 PFK	33.50	1.199e4					1.1	NO		bb		0.000
11	FUNCTION3 PFK	36.41	2.803e3					0.5	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	46.30	6.353e3					1.3	NO		bb		
2	FUNCTION5 PFK	45.94	1.054e4					1.7	NO		bb		
3	FUNCTION5 PFK	45.79	1.187e3					0.6	NO		bb		
4	FUNCTION5 PFK	45.60	4.997e3					1.0	NO		bb		
5	FUNCTION5 PFK	45.34	9.354e3					1.4	NO		db		
6	FUNCTION5 PFK	45.31	2.478e3					1.0	NO		bd		
7	FUNCTION5 PFK	45.26	5.509e3					1.0	NO		bb		
8	FUNCTION5 PFK	43.99	1.588e4					1.1	NO		bb		
9	FUNCTION5 PFK	43.56	6.413e3					1.4	NO		db		
10	FUNCTION5 PFK	43.53	4.291e3					1.1	NO		bd		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	22.28	8.501e1					1.7	NO		bb		0.000
2	FUNCTION1 HXCD...	21.98	1.104e2					2.3	NO		bb		0.000
3	FUNCTION1 HXCD...	26.53	2.072e2					2.6	NO		bb		0.000
4	FUNCTION1 HXCD...	26.29	8.524e1					1.7	NO		bb		0.000
5	FUNCTION1 HXCD...	25.91	1.063e2					2.1	NO		db		0.000
6	FUNCTION1 HXCD...	25.87	8.437e1					1.9	NO		bd		0.000
7	FUNCTION1 HXCD...	25.00	7.918e1					1.2	NO		bb		0.000
8	FUNCTION1 HXCD...	24.64	7.557e1					1.6	NO		bb		0.000

ID: CSLCR, Name: 23020104, Date: 01-Feb-2023, Time: 14:39:51, Conditions: AUTOSPEC01, User: pk

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	26.37	8.294e1					2.3	NO		dd		0.000
2	FUNCTION1 HPCD...	26.31	7.445e1					1.6	NO		bd		0.000
3	FUNCTION1 HPCD...	25.85	3.079e2					2.6	NO		db		0.000
4	FUNCTION1 HPCD...	25.72	1.912e2					2.1	NO		bd		0.000
5	FUNCTION1 HPCD...	25.35	9.102e1					2.4	NO		bb		0.000
6	FUNCTION1 HPCD...	24.26	7.312e1					0.4	NO		bb		0.000
7	FUNCTION1 HPCD...	23.34	2.139e2					1.8	NO		bb		0.000
8	FUNCTION1 HPCD...	22.66	8.267e1					0.8	NO		bb		0.000
9	FUNCTION1 HPCD...	21.38	7.618e1					1.4	NO		bb		0.000
10	FUNCTION1 HPCD...	27.98	9.946e1					3.1	YES		bb		0.000
11	FUNCTION1 HPCD...	26.99	8.404e1					1.1	NO		bb		0.000
12	FUNCTION1 HPCD...	26.52	1.802e2					1.5	NO		db		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.64	1.571e2					2.9	NO		bb		0.000
2	FUNCTION2 HPCD...	31.35	7.515e1					1.4	NO		bb		0.000
3	FUNCTION2 HPCD...	30.72	8.443e1					1.4	NO		bb		0.000
4	FUNCTION2 HPCD...	30.46	1.124e2					2.4	NO		bb		0.000
5	FUNCTION2 HPCD...	30.06	1.840e2					5.0	YES		bb		0.000
6	FUNCTION2 HPCD...	28.49	7.182e1					1.7	NO		bb		0.000
7	FUNCTION2 HPCD...	28.27	7.966e1					1.8	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	35.88	1.145e2					2.3	NO		bd		0.000
2	FUNCTION3 OCDPE	35.18	2.003e2					3.4	YES		bb		0.000
3	FUNCTION3 OCDPE	34.09	1.081e2					2.7	NO		db		0.000
4	FUNCTION3 OCDPE	34.04	7.302e1					3.0	YES		bd		0.000
5	FUNCTION3 OCDPE	37.75	1.221e2					3.1	YES		bb		0.000
6	FUNCTION3 OCDPE	36.64	1.574e2					3.5	YES		db		0.000
7	FUNCTION3 OCDPE	36.60	2.003e2					4.2	YES		bd		0.000
8	FUNCTION3 OCDPE	36.20	2.806e2					4.2	YES		db		0.000
9	FUNCTION3 OCDPE	36.12	3.227e2					5.3	YES		dd		0.000
10	FUNCTION3 OCDPE	35.99	2.101e2					3.8	YES		dd		0.000

ID: CSLCR, Name: 23020104, Date: 01-Feb-2023, Time: 14:39:51, Conditions: AUTOSPEC01, User: pk

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.48	9.634e1					2.9	NO		bb		0.000
2	FUNCTION4 NCDPE	38.52	7.264e1					3.4	YES		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	44.32	8.847e1					3.1	YES		bb		0.000

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Printed: Friday, February 03, 2023 10:36:56 Pacific Standard Time

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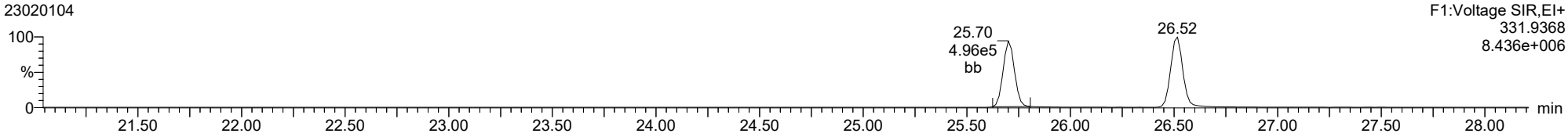

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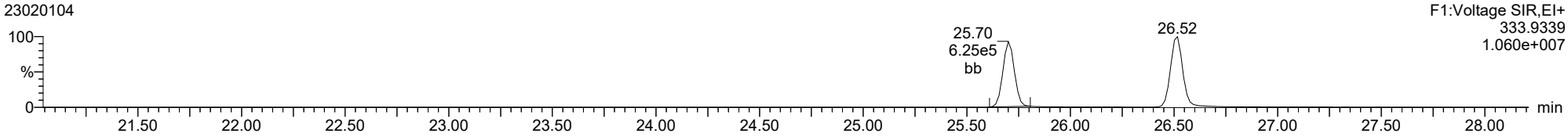

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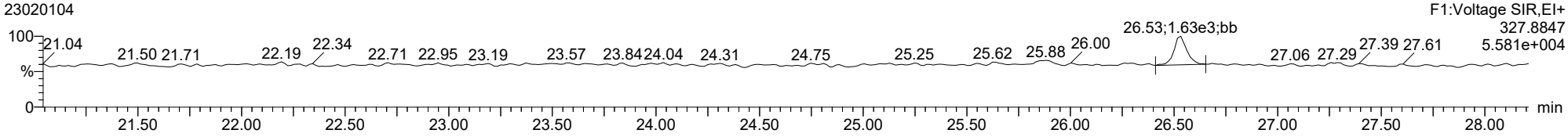

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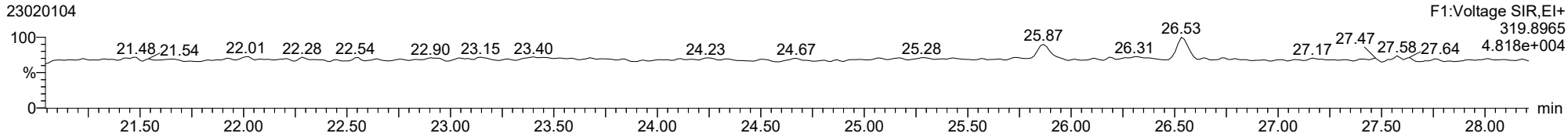

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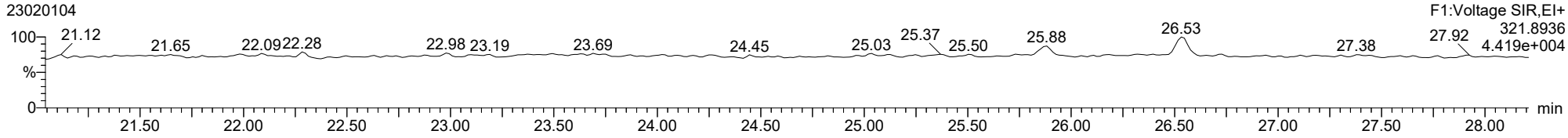

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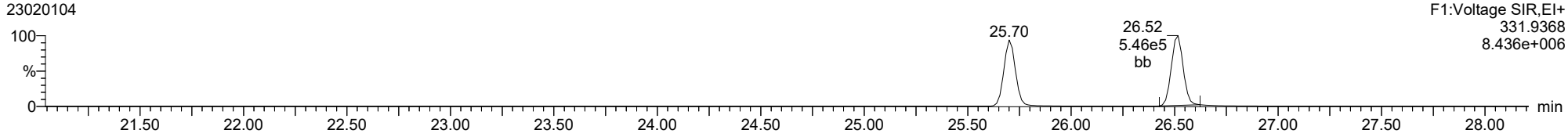

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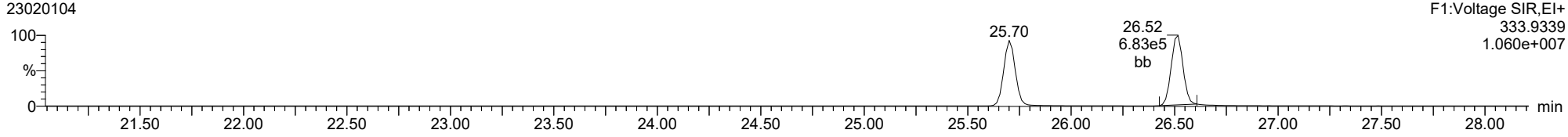

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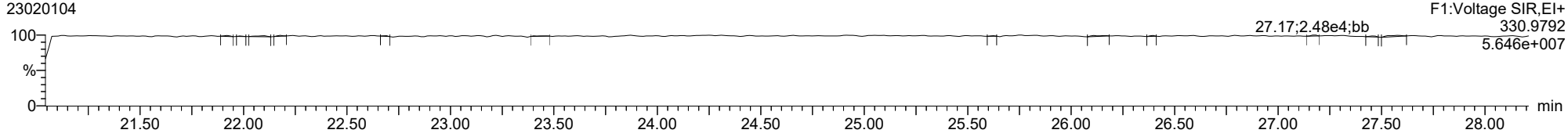

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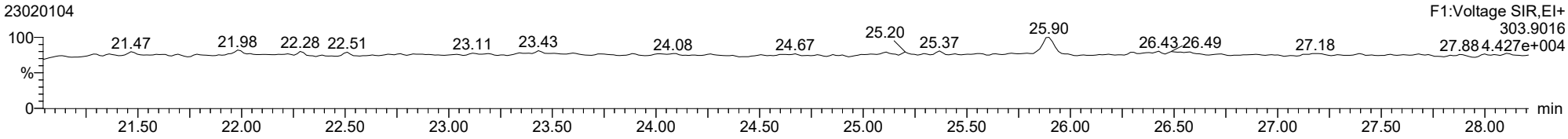

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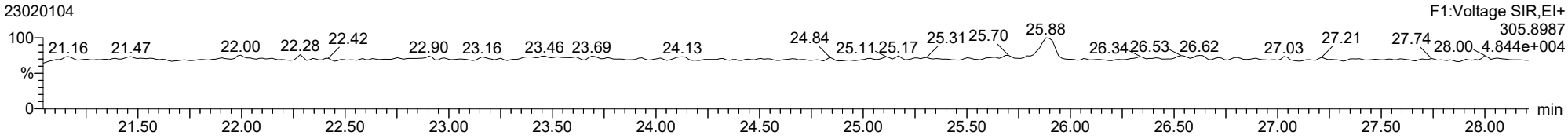

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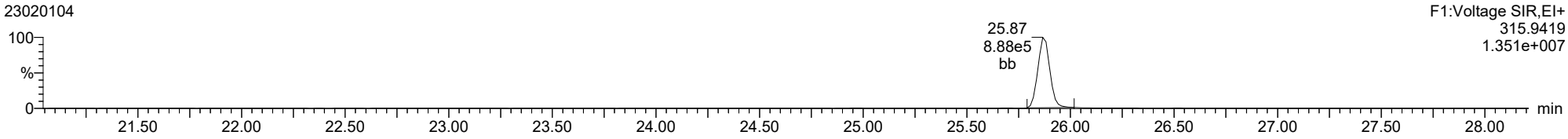

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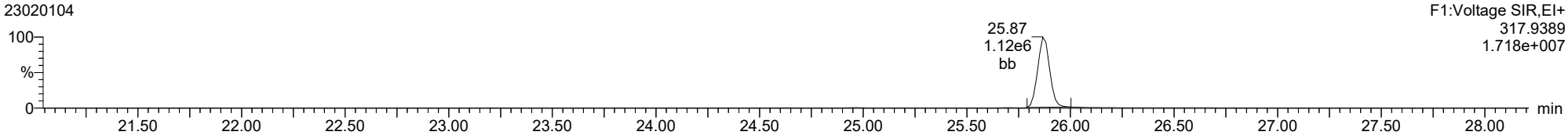

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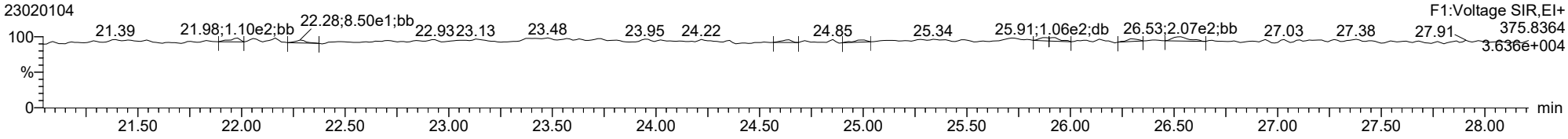

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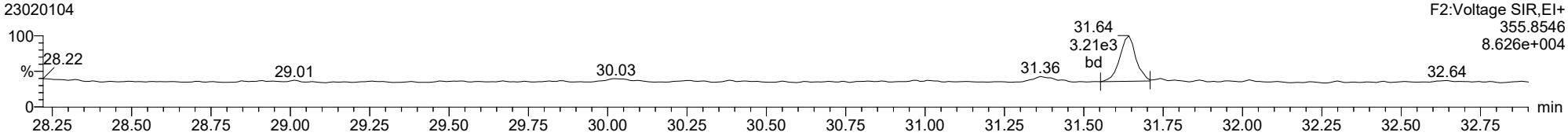

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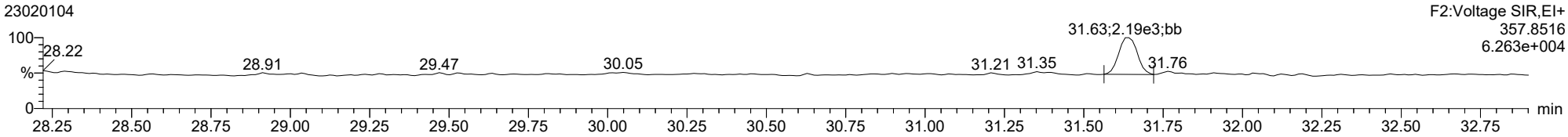

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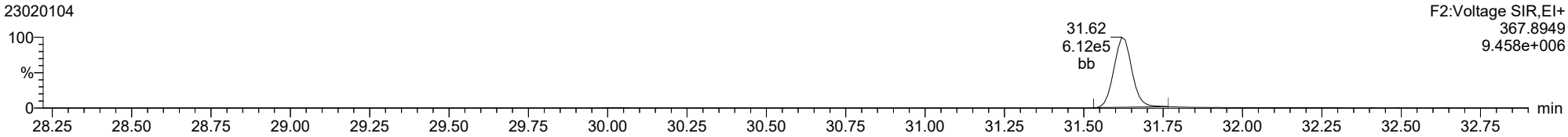

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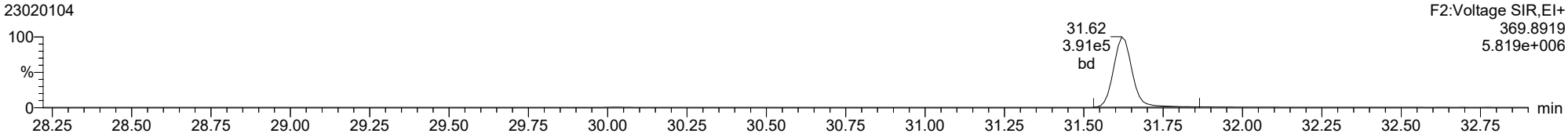
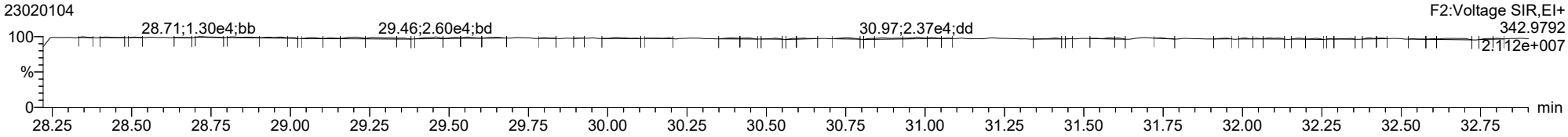


FUNCTION2 PFK



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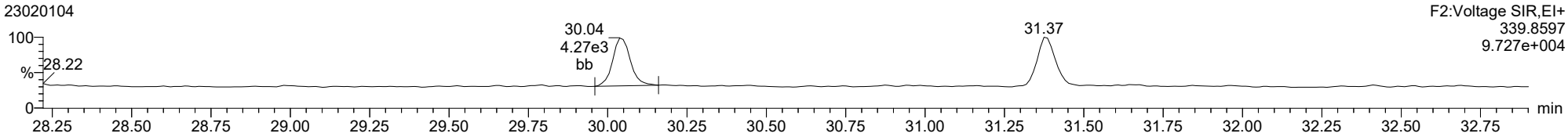

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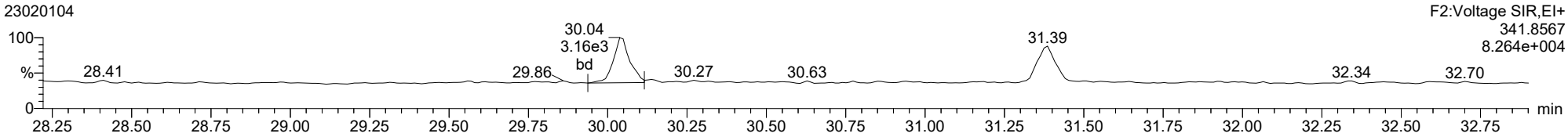

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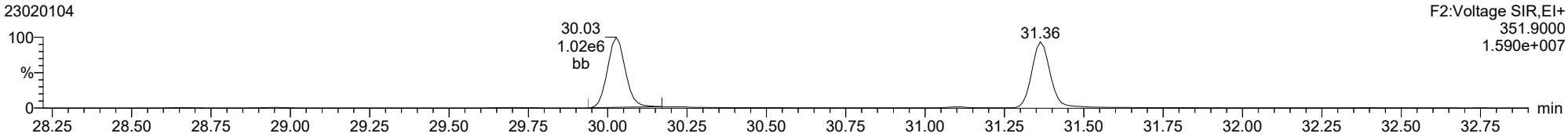

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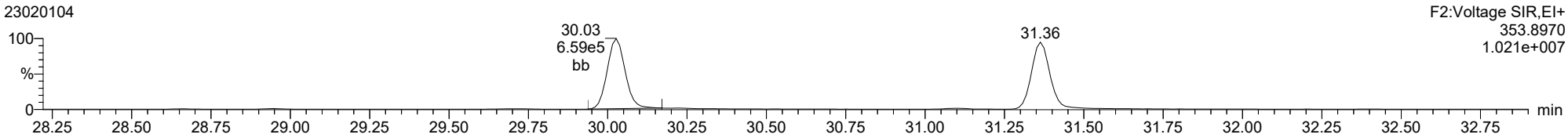

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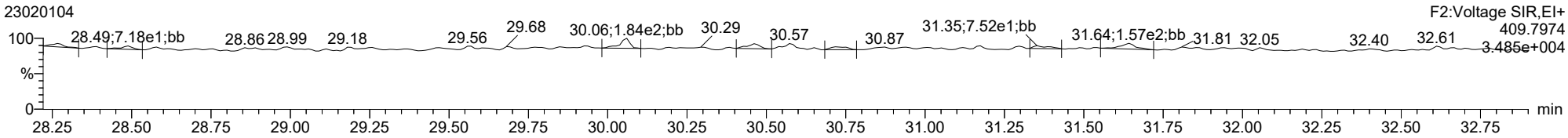

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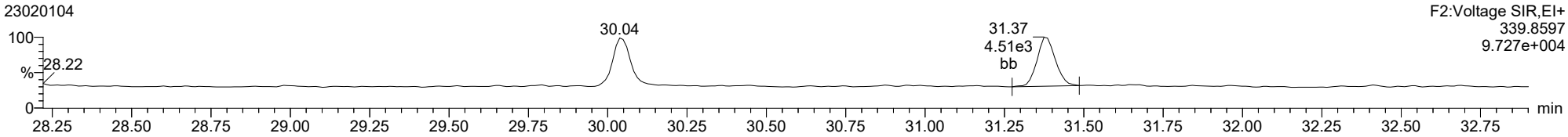
23478-PeCDF



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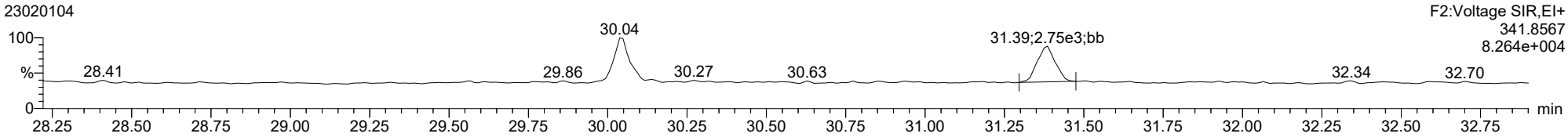

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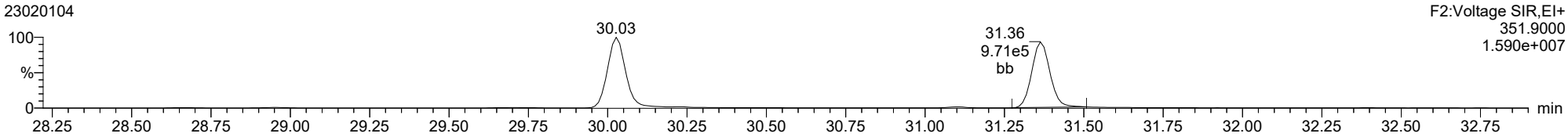

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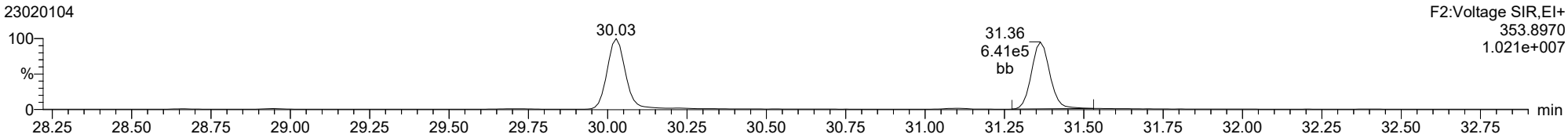

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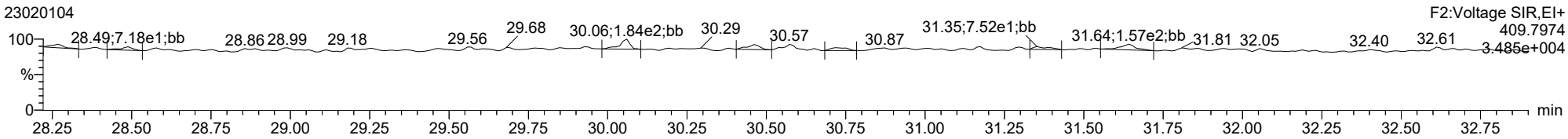

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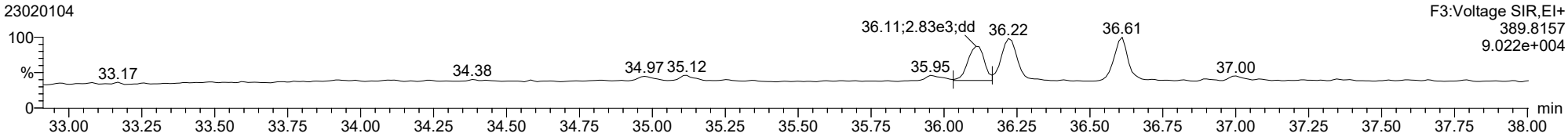
123478-HxCDD



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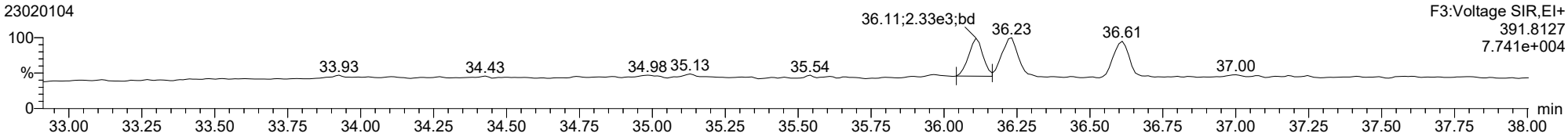

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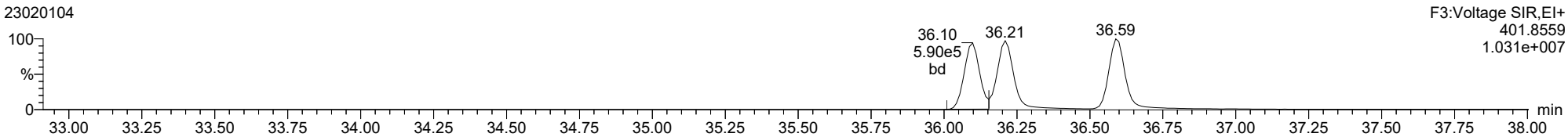

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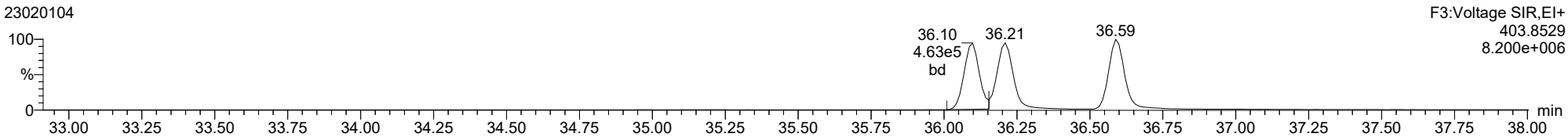

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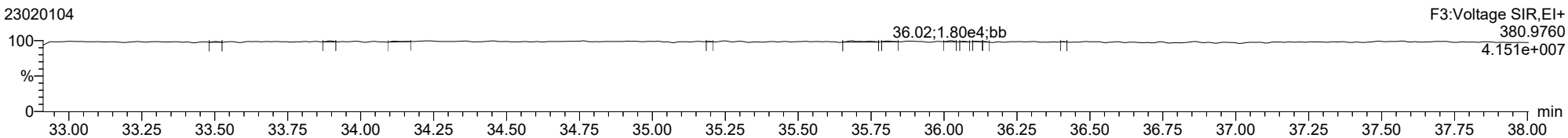

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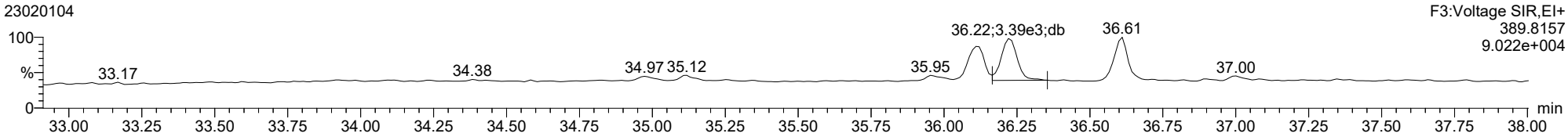
123678-HxCDD



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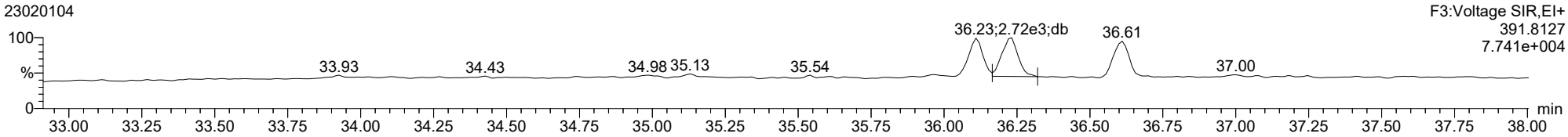

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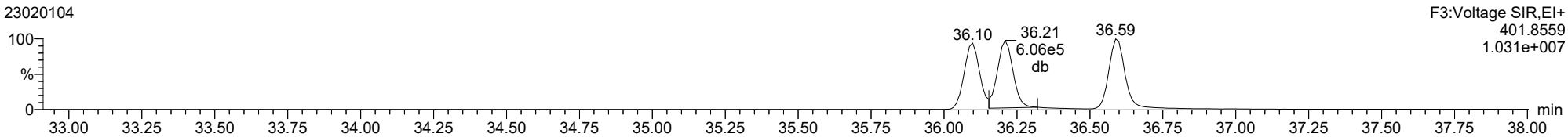

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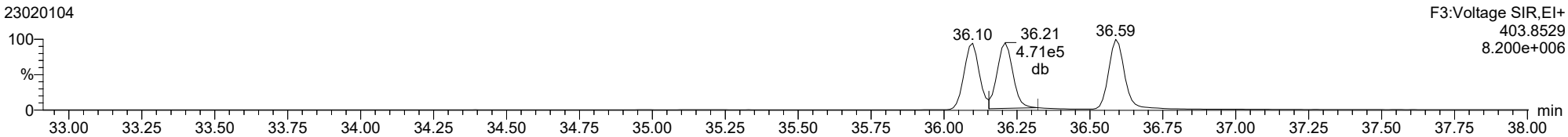

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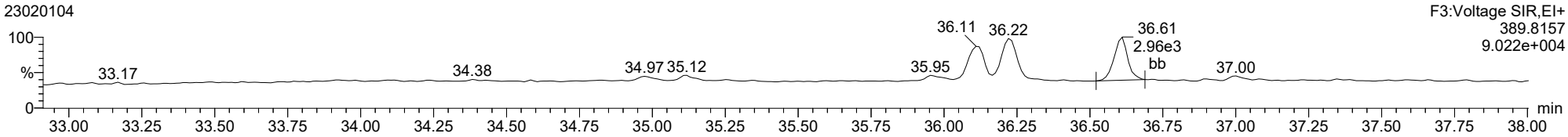

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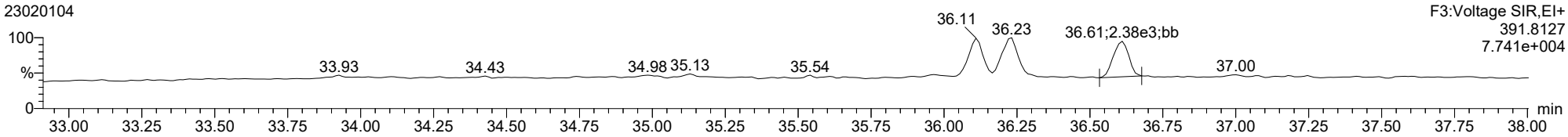

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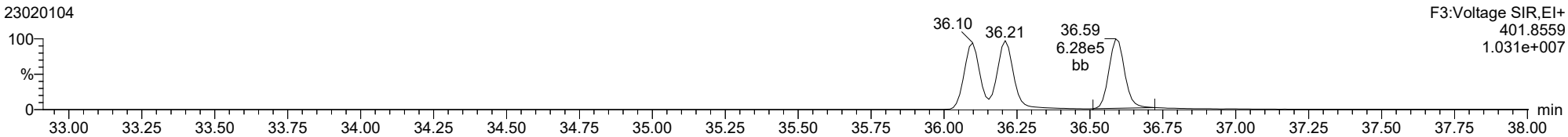

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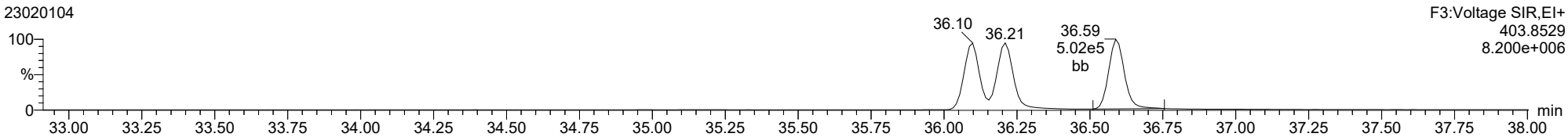

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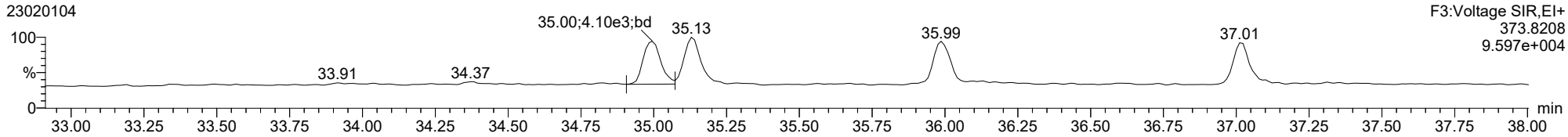

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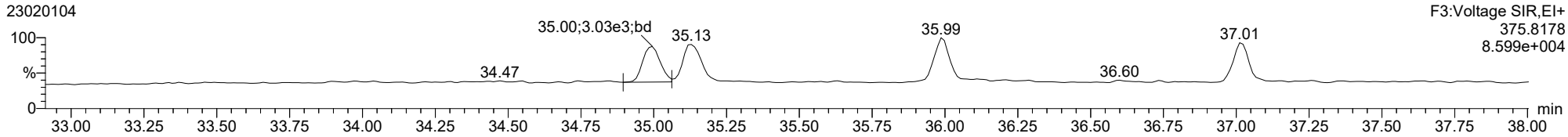

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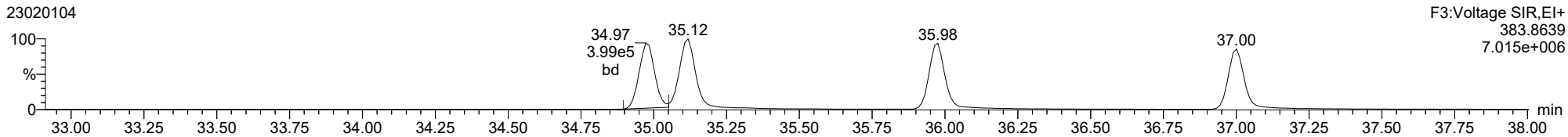

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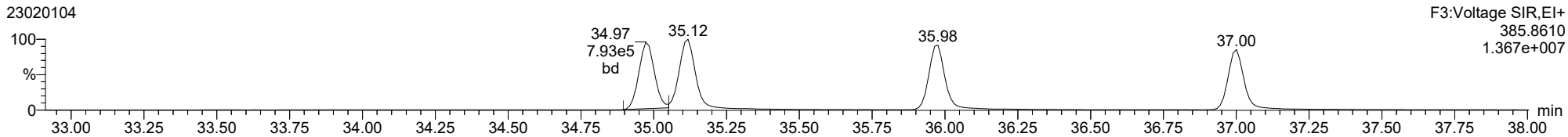

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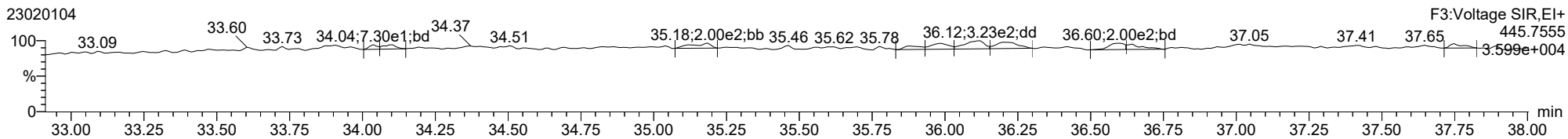

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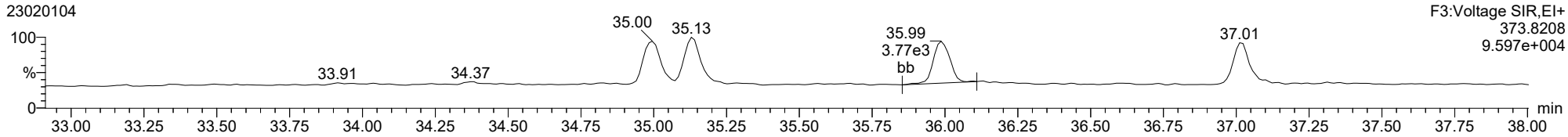

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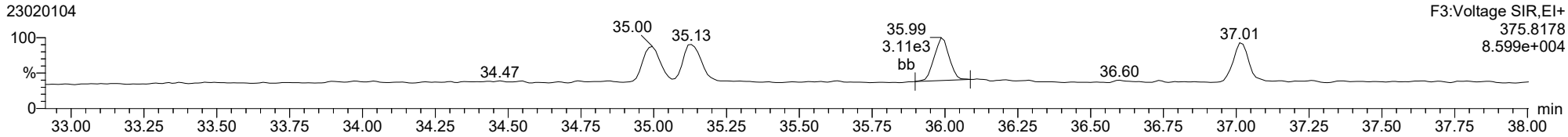

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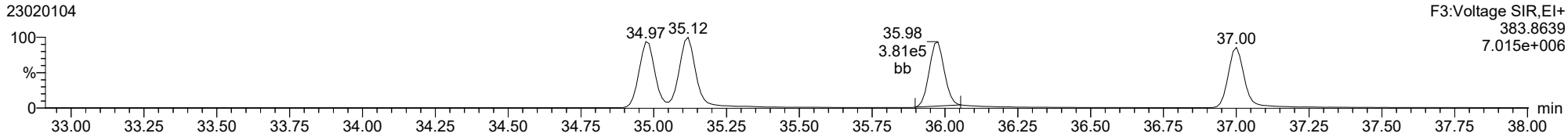

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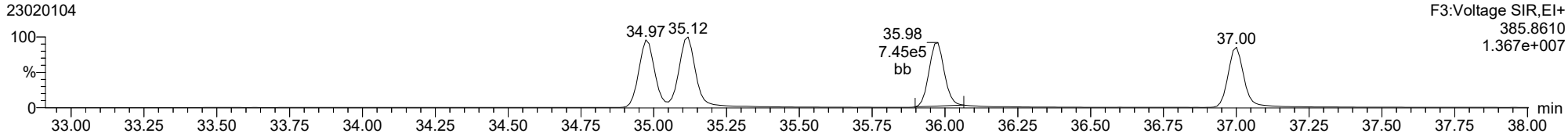

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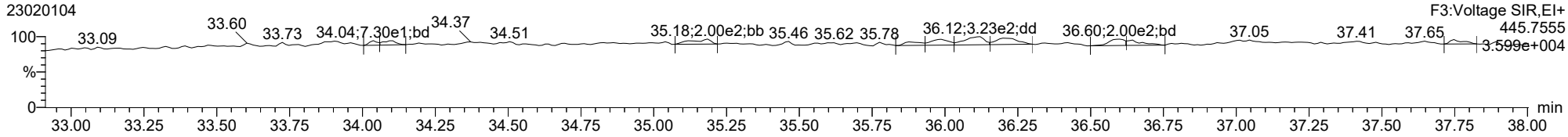

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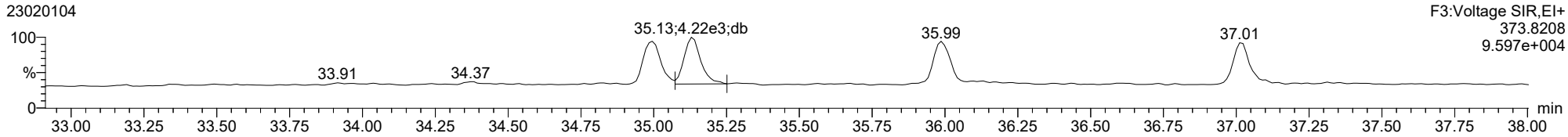

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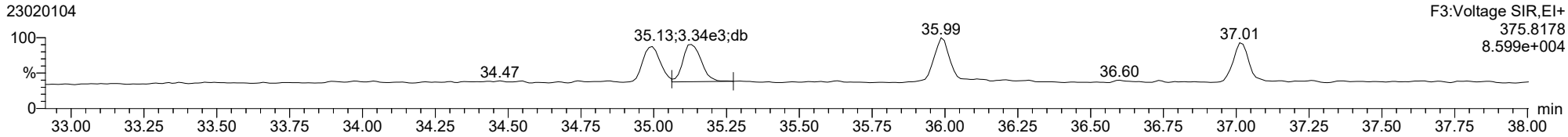

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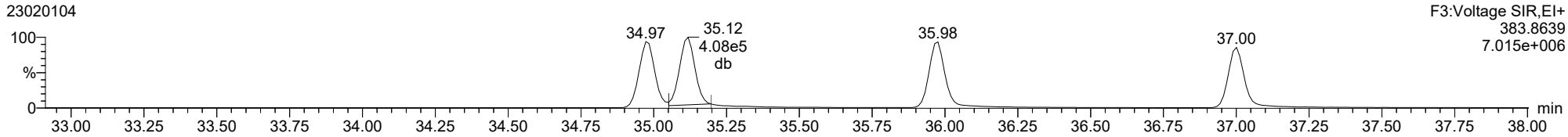

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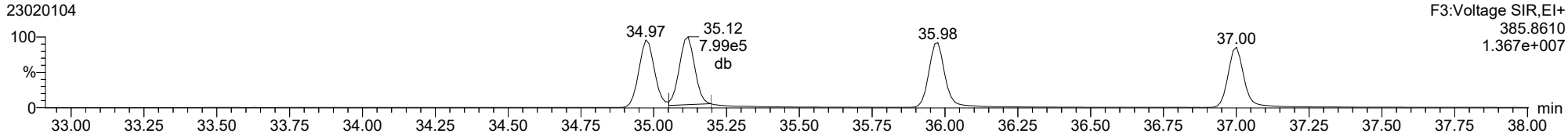

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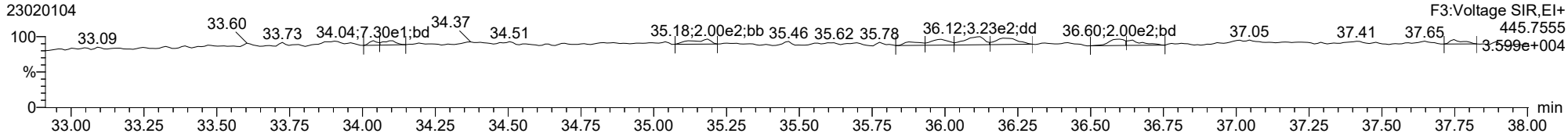

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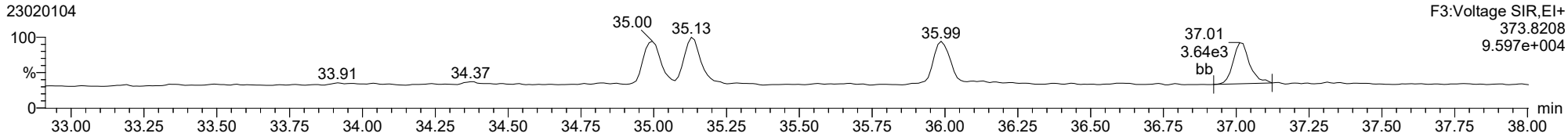

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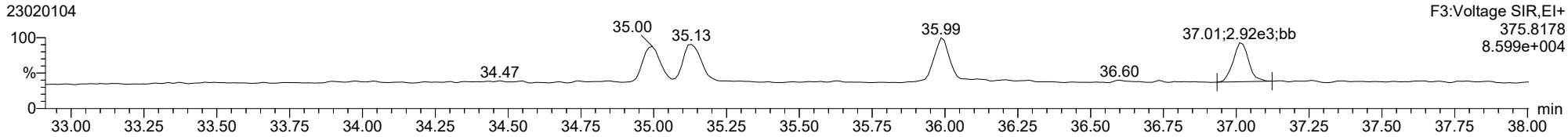

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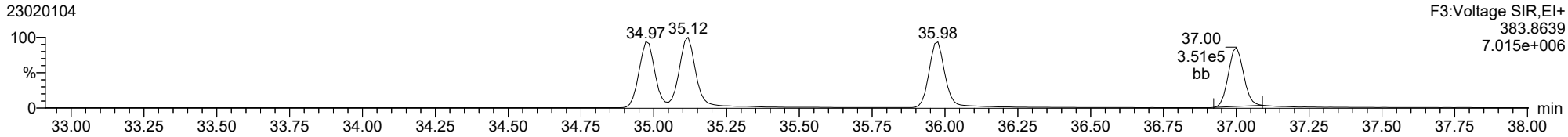

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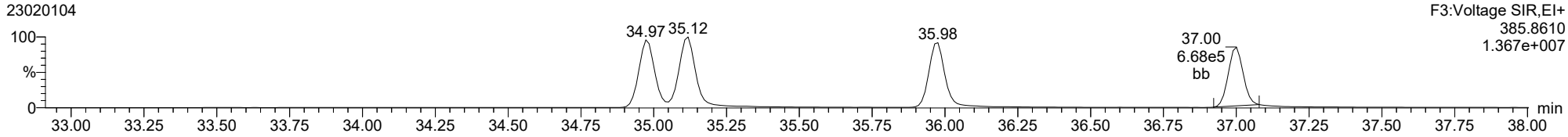

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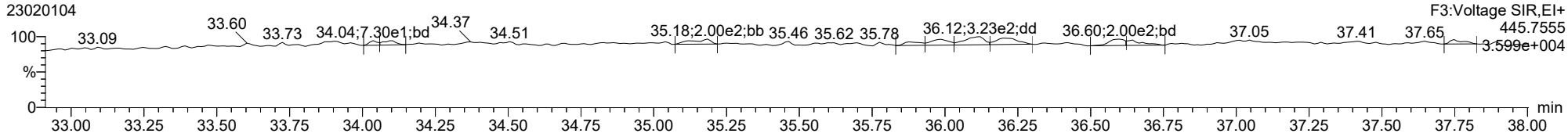

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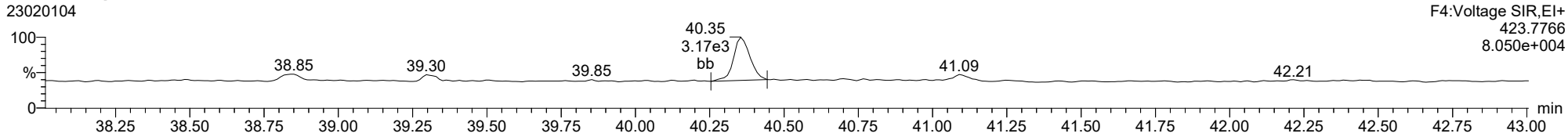

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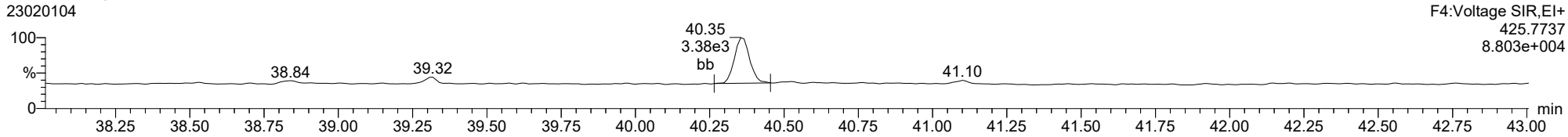

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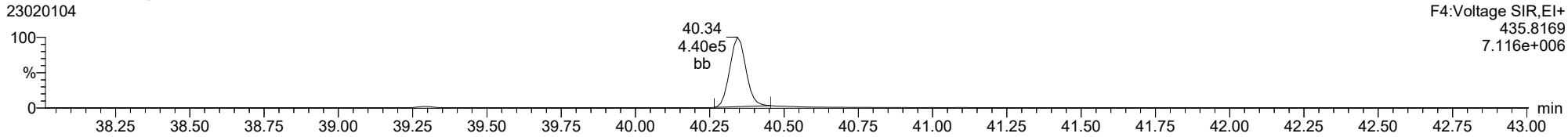

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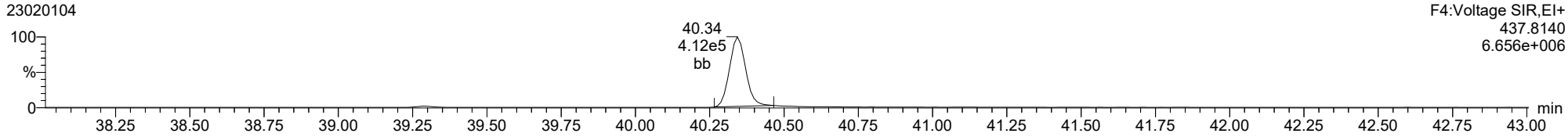

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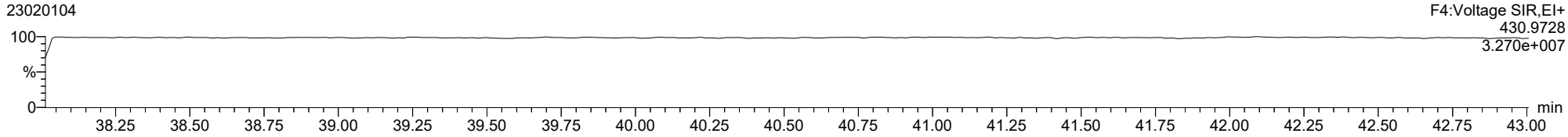

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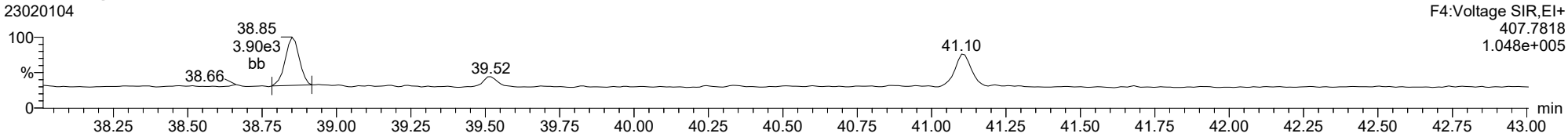

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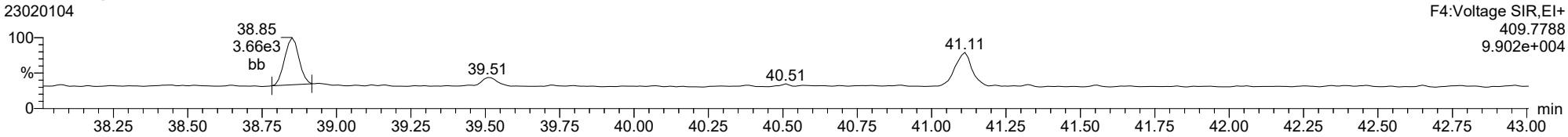

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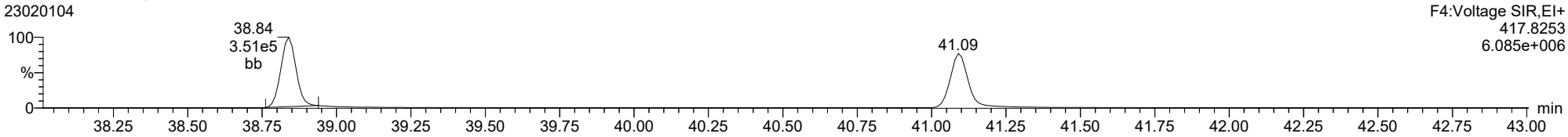

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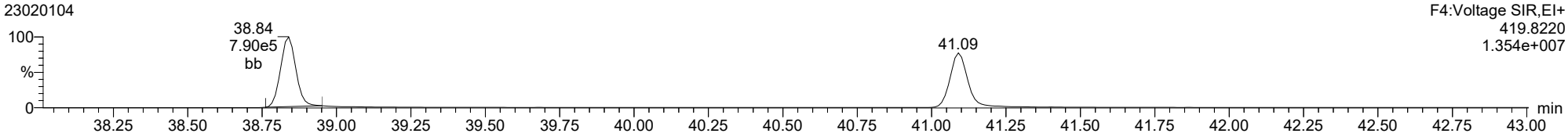

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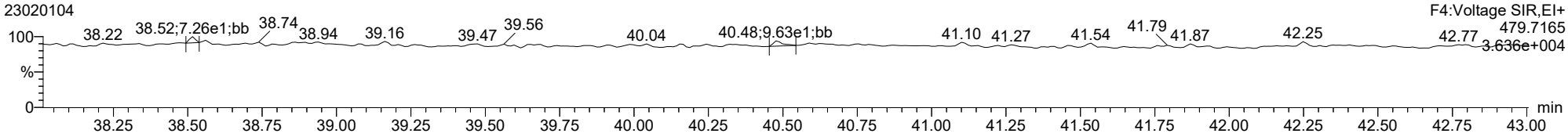

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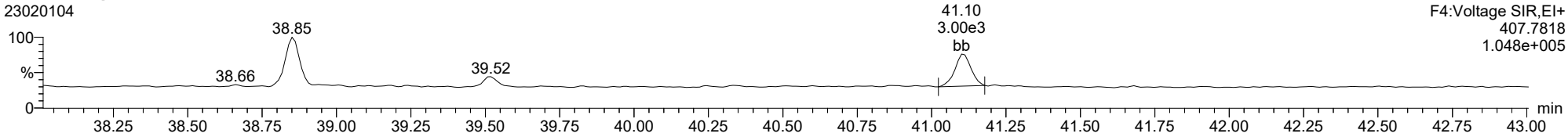

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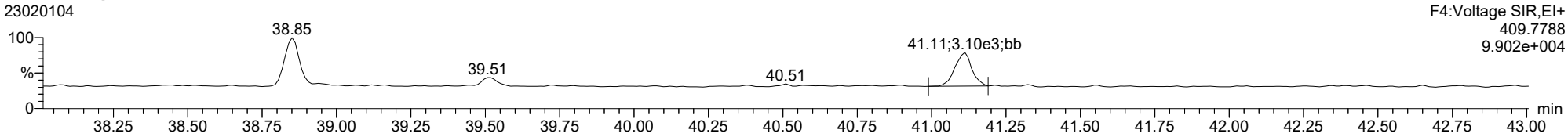

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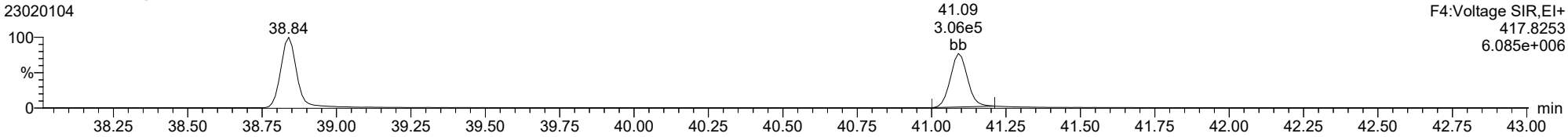

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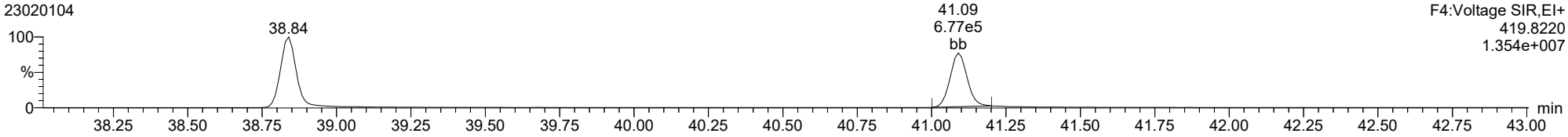

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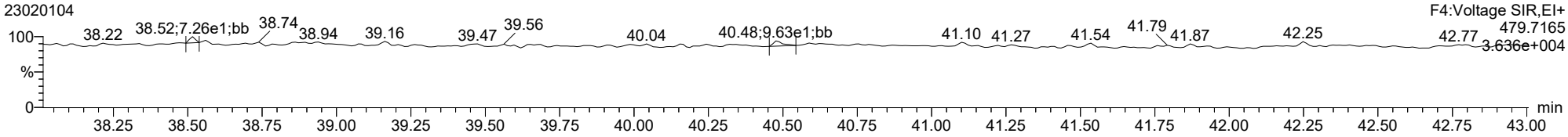

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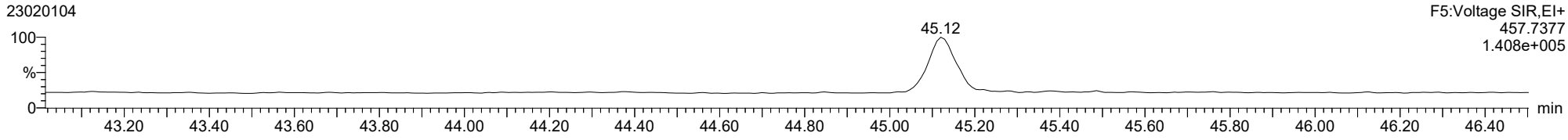
OCDD



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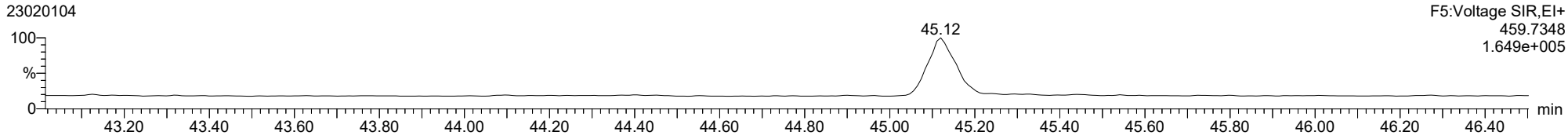

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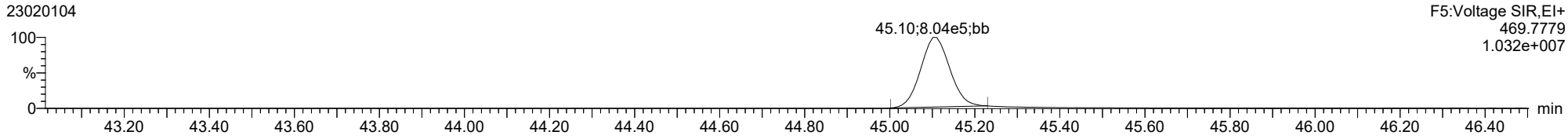

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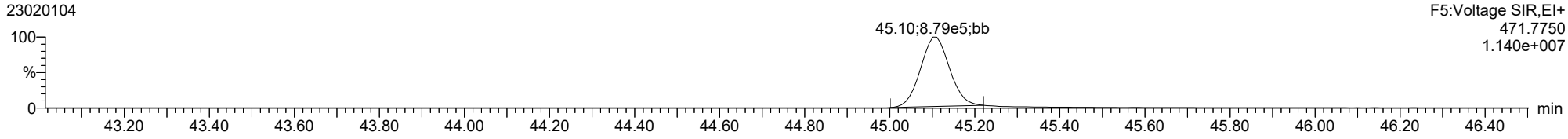
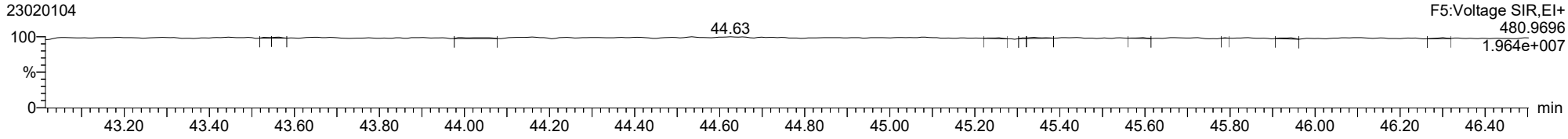


FUNCTION5 PFK



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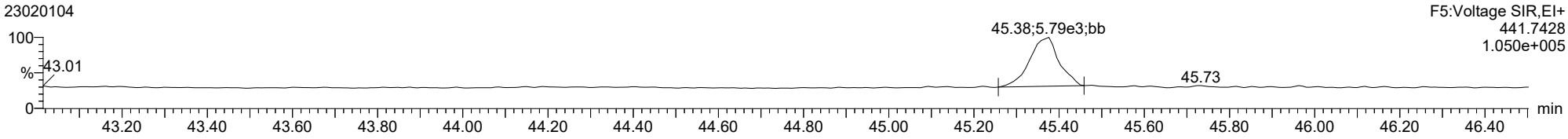

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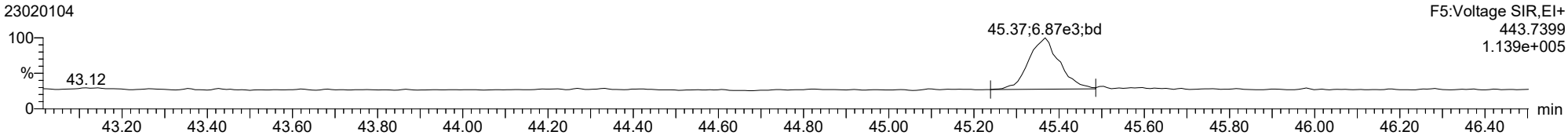

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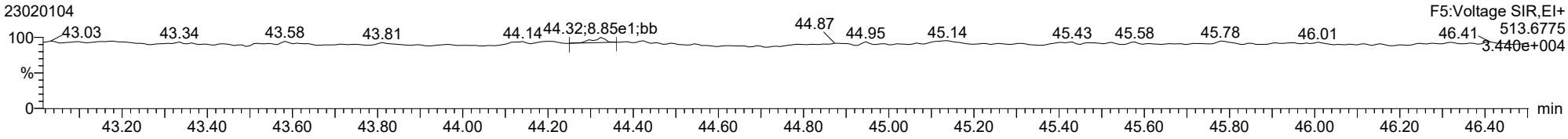

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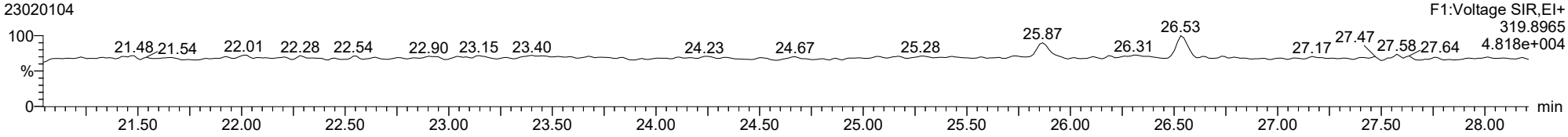
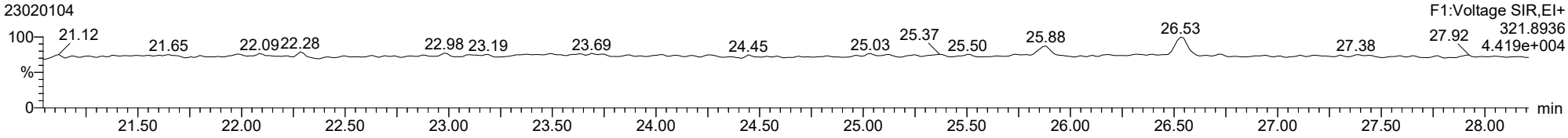
Total-tetradioxins



Total-tetradioxins



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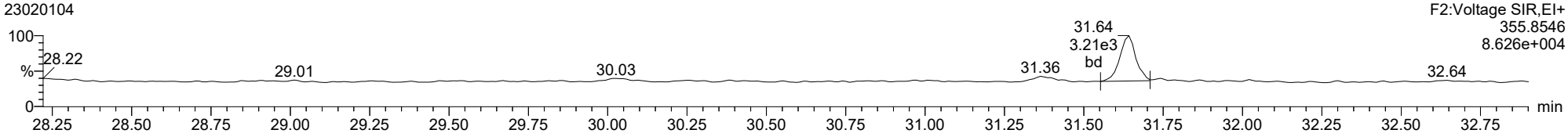
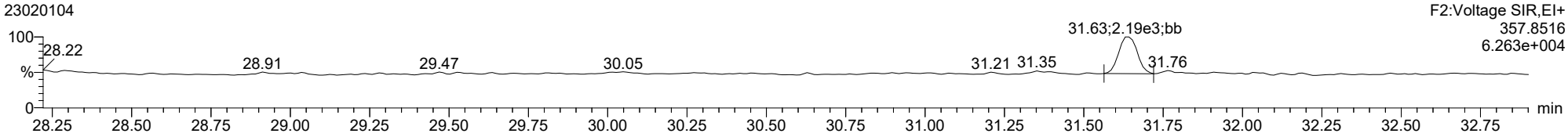


Total-pentadioxins



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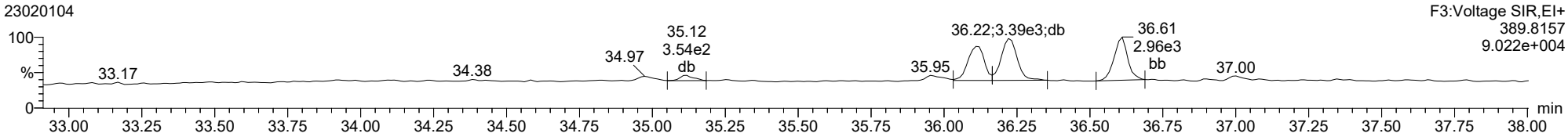

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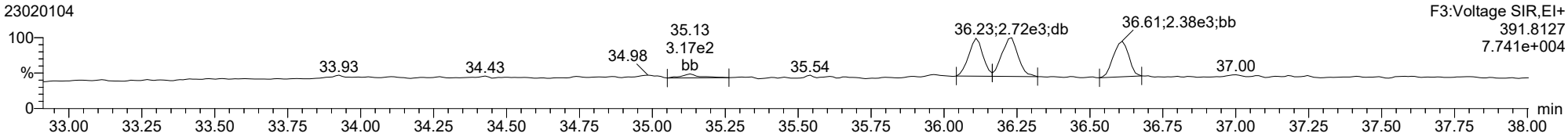
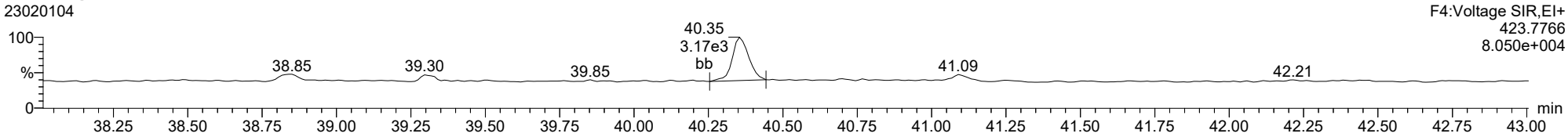
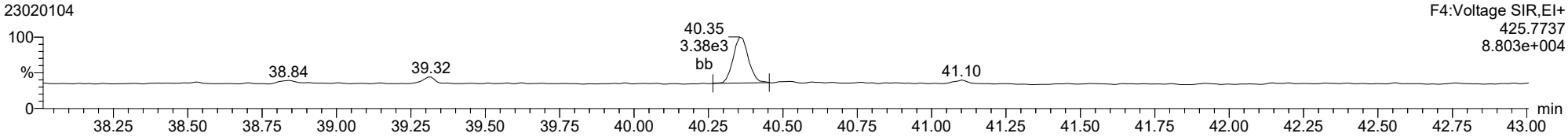


Total-heptadioxins

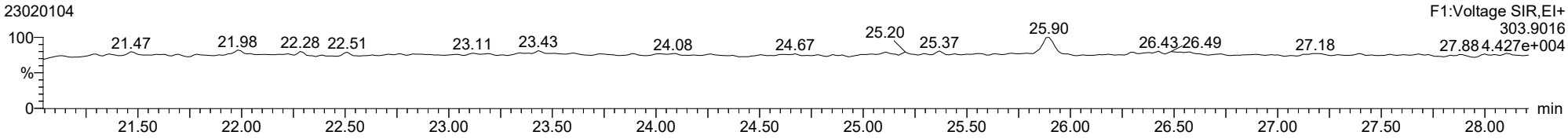


Total-heptadioxins

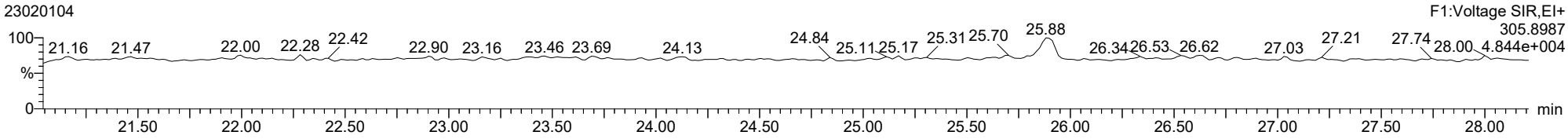


ID: CSLCR, Name: 23020104, Date: 01-Feb-2023, Time: 14:39:51, Conditions: AUTOSPEC01, User: pk

Total-tetrafurans



Total-tetrafurans



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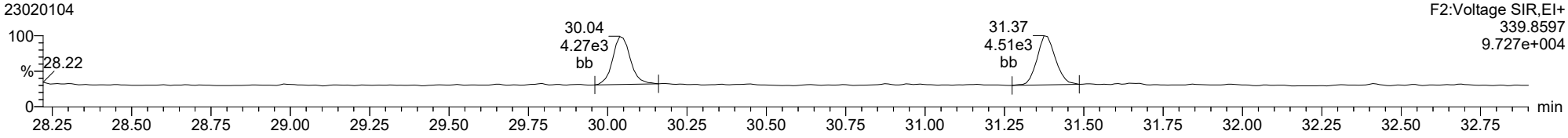

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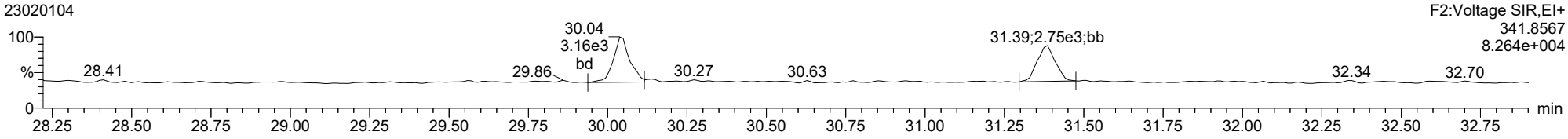

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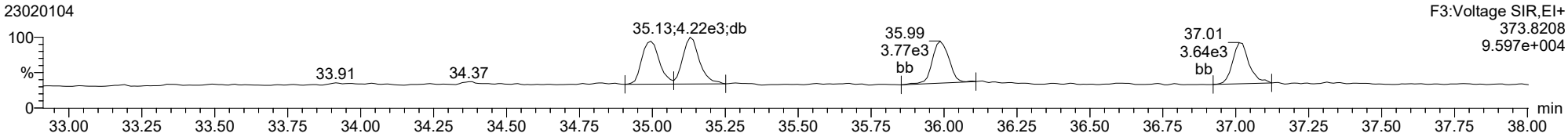
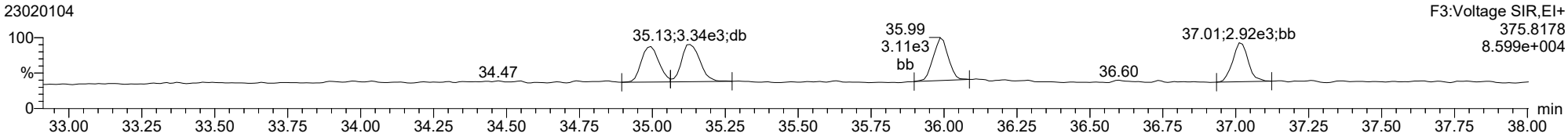
Total-hexafurans



Total-hexafurans



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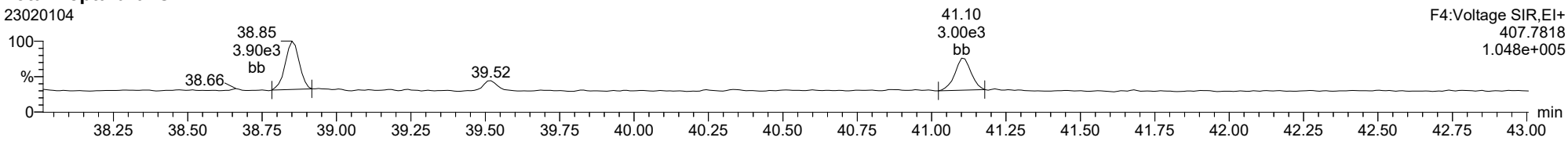
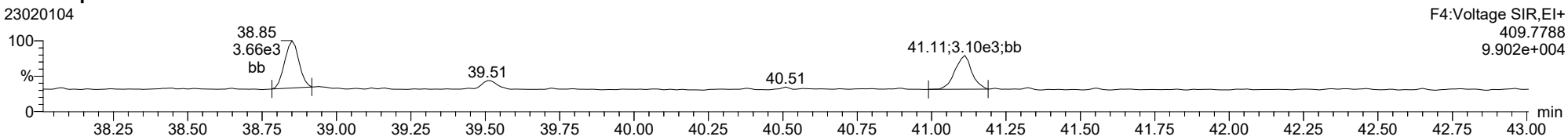


Total-heptafurans



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Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:37:09 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS1CR, Name: 23020105, Date: 01-Feb-2023, Time: 15:28:53, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.897	1.001	3.165e3	3.812e3	0.876	0.830	0.770	851	1202	5.14e4	5.60e4	60.4	46.6	NO	db	bb	0.501
12378-PeCDF	30.048	1.000	1.657e4	1.122e4	0.845	1.477	1.550	1016	1248	2.51e5	1.73e5	247.1	138.5	NO	bb	bb	2.455
23478-PeCDF	31.385	1.000	1.669e4	1.174e4	0.911	1.422	1.550	1016	1248	2.63e5	1.81e5	259.2	145.3	NO	bb	bd	2.401
123478-HxCDF	35.006	1.001	1.544e4	1.249e4	1.182	1.236	1.240	890	1056	2.44e5	1.98e5	274.0	187.0	NO	bd	bd	2.494
234678-HxCDF	35.998	1.001	1.543e4	1.155e4	1.229	1.336	1.240	890	1056	2.60e5	1.91e5	292.0	180.6	NO	bd	bb	2.421
123678-HxCDF	35.140	1.001	1.636e4	1.318e4	1.248	1.241	1.240	890	1056	2.60e5	2.03e5	291.7	192.2	NO	dd	db	2.443
123789-HxCDF	37.023	1.000	1.293e4	1.008e4	1.187	1.282	1.240	890	1056	2.13e5	1.63e5	239.4	154.3	NO	bd	bb	2.372
1234678-HpCDF	38.861	1.000	1.439e4	1.337e4	1.204	1.077	1.050	1098	1117	2.42e5	2.23e5	220.8	199.9	NO	bb	bd	2.577
1234789-HpCDF	41.112	1.000	1.117e4	1.059e4	1.165	1.055	1.050	1098	1117	1.62e5	1.56e5	147.3	139.5	NO	bb	bb	2.411
OCDF	45.367	1.006	1.860e4	2.066e4	1.186	0.900	0.890	1237	861	2.12e5	2.52e5	171.2	292.2	NO	bb	bb	5.087
2378-TCDD	26.547	1.001	2.836e3	3.619e3	1.236	0.784	0.770	1261	742	4.26e4	5.78e4	33.8	77.9	NO	bb	bb	0.538
12378-PeCDD	31.642	1.000	1.354e4	8.892e3	1.087	1.522	1.550	1167	972	2.08e5	1.36e5	178.2	140.0	NO	bd	bd	2.535
123478-HxCDD	36.120	1.001	1.109e4	9.100e3	0.987	1.219	1.240	1079	803	1.88e5	1.54e5	174.2	191.5	NO	bd	bd	2.425
123678-HxCDD	36.232	1.000	1.193e4	1.017e4	1.021	1.173	1.240	1079	803	2.08e5	1.71e5	192.4	213.0	NO	db	dd	2.523
123789-HxCDD	36.611	1.011	1.141e4	9.550e3	0.985	1.195	1.240	1079	803	1.90e5	1.59e5	175.6	197.5	NO	bb	bd	2.499
1234678-HpCDD	40.365	1.000	1.047e4	1.022e4	1.253	1.025	1.050	924	912	1.67e5	1.57e5	180.8	172.2	NO	bb	bb	2.439
OCDD	45.129	1.000	2.025e4	2.243e4	1.103	0.903	0.890	770	1015	2.54e5	2.74e5	329.8	270.4	NO	bb	bb	5.948
13C-2378-TCDF	25.882	1.007	6.992e5	8.909e5	1.768	0.785	0.770	1890	1690	1.07e7	1.37e7	5679.3	8103.6	NO	bb	bb	99.523
13C-12378-PeCDF	30.037	1.168	8.127e5	5.274e5	1.527	1.541	1.550	2822	3217	1.25e7	8.12e6	4447.1	2523.6	NO	bb	bb	97.112
13C-23478-PeCDF	31.374	1.220	7.914e5	5.082e5	1.466	1.557	1.550	2822	3217	1.22e7	7.90e6	4335.0	2456.5	NO	bb	bb	98.086
13C-123478-HxCDF	34.984	0.956	3.203e5	6.270e5	1.054	0.511	0.510	2242	2569	5.23e6	1.03e7	2333.1	3994.8	NO	bd	bd	102.287
13C-123678-HxCDF	35.118	0.960	3.331e5	6.354e5	1.080	0.524	0.510	2242	2569	5.30e6	1.04e7	2362.3	4050.9	NO	db	db	102.033
13C-234678-HxCDF	35.975	0.983	3.012e5	6.055e5	1.014	0.497	0.510	2242	2569	5.04e6	1.01e7	2247.8	3935.5	NO	bb	bb	101.688
13C-123789-HxCDF	37.012	1.011	2.780e5	5.398e5	0.928	0.515	0.510	2242	2569	4.60e6	8.89e6	2053.4	3459.1	NO	bb	bb	100.261
13C-1234678-HpCDF	38.850	1.061	2.750e5	6.195e5	1.036	0.444	0.440	2698	3387	4.63e6	1.03e7	1714.9	3048.9	NO	bb	bb	98.218
13C-1234789-HpCDF	41.100	1.123	2.400e5	5.347e5	0.905	0.449	0.440	2698	3387	3.64e6	7.83e6	1350.8	2311.2	NO	bb	bb	97.391
13C-1234-TCDD	25.715	0.000	4.030e5	5.006e5	1.000	0.805	0.770	2070	1290	6.17e6	7.63e6	2981.3	5910.4	NO	bb	bb	100.000
13C-2378-TCDD	26.517	1.031	4.334e5	5.370e5	1.103	0.807	0.770	2070	1290	6.64e6	8.43e6	3208.6	6536.2	NO	bb	bb	97.361
13C-12378-PeCDD	31.630	1.230	5.002e5	3.141e5	0.914	1.593	1.550	1571	1429	7.70e6	4.72e6	4905.0	3303.0	NO	bb	bd	98.574
13C-123478-HxCDD	36.098	0.986	4.774e5	3.663e5	0.933	1.303	1.240	2711	2219	7.76e6	6.04e6	2862.5	2723.9	NO	bd	bd	102.880
13C-123678-HxCDD	36.221	0.990	4.780e5	3.801e5	0.965	1.258	1.240	2711	2219	7.94e6	6.30e6	2926.7	2837.8	NO	db	db	101.203
13C-1234678-HpCDD	40.354	1.103	3.494e5	3.280e5	0.782	1.065	1.050	1617	1571	5.50e6	5.16e6	3401.2	3284.5	NO	bb	bb	98.546
13C-OCDD	45.111	1.233	6.222e5	6.790e5	0.788	0.916	0.890	1719	2376	7.89e6	8.58e6	4588.0	3611.7	NO	bb	bb	187.800
13C-123789-HxCDD	36.599	0.000	4.932e5	3.858e5	1.000	1.278	1.240	2711	2219	8.15e6	6.30e6	3006.5	2840.6	NO	bb	bb	100.000
37CL-2378-TCDD	26.547	1.032	5.621e3		1.233			1648		8.22e4		49.9			bb		0.504

Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:37:09 Pacific Standard Time

ID: CS1CR, Name: 23020105, Date: 01-Feb-2023, Time: 15:28:53, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					1.064		0.770	851	1202								
1289-TCDF					0.858		0.770	851	1202								
13468-PECDF					1.013		1.550	923	968								
12389-PECDF					0.844		1.550	1016	1248								
123468-HXCDF					1.197		1.240	890	1056								
1368-TCDD					1.084		0.770	1261	742								
1289-TCDD					0.975		0.770	1261	742								
12479-PECDD					1.837		1.550	1167	972								
12389-PECDD					1.252		1.550	1167	972								
124679-HXCDD					1.033		1.240	1079	803								
1234679-HPCDD					1.286		1.050	924	912								
Total-tetrafurans			3.165e3		0.933			851		5.14e4							0.501
Total-penta1			0.000e0					923		0.00e0							
Total-pentafurans			3.326e4		0.866			1016		5.14e5							4.856
Total-hexafurans			6.015e4		1.208			890		9.76e5							9.731
Total-heptafurans			2.643e4		1.185			1098		4.18e5							5.166
Total-Furans			1.416e5		1.067			851		2.17e6							25.340
Total-tetradioxins			2.907e3		1.099			1261		4.45e4							0.554
Total-pentadioxins			1.372e4		1.392			1167		2.12e5							2.561
Total-hexadioxins			3.443e4		1.007			1079		5.85e5							7.448
Total-heptadioxins			1.047e4		1.269			924		1.67e5							2.439
Total-Dioxins			8.178e4		1.165			1261		1.26e6							18.950
Total-TEQ			2.234e5					1261		3.43e6							44.290
FUNCTION1 PFK			2.400e7					626106		1.90e8							
FUNCTION2 PFK			0.000e0					236572		0.00e0							
FUNCTION3 PFK			4.302e5					501624		1.34e7							0.000
FUNCTION4 PFK			4.347e5					324457		1.19e7							
FUNCTION5 PFK			8.590e4					209539		3.93e6							
FUNCTION1 HXCD...			1.828e3					784		2.65e4							0.000
FUNCTION1 HPCD...			8.634e2					852		1.29e4							0.000
FUNCTION2 HPCD...			2.922e2					978		5.26e3							0.000
FUNCTION3 OCDPE			8.271e2					835		1.40e4							0.000
FUNCTION4 NCDPE			1.900e2					822		4.03e3							0.000
FUNCTION5 DCDPE			0.000e0					732		0.00e0							

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS1CR, Name: 23020105, Date: 01-Feb-2023, Time: 15:28:53, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.90	3.165e3	3.812e3	0.876	0.83	0.77	60.4	YES	NO	db	bb	0.501

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.39	1.669e4	1.174e4	0.911	1.42	1.55	259.2	YES	NO	bb	bd	2.401
2	12378-PeCDF	30.05	1.657e4	1.122e4	0.845	1.48	1.55	247.1	YES	NO	bb	bb	2.455

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.02	1.293e4	1.008e4	1.187	1.28	1.24	239.4	YES	NO	bd	bb	2.372
2	234678-HxCDF	36.00	1.543e4	1.155e4	1.229	1.34	1.24	292.0	YES	NO	bd	bb	2.421
3	123678-HxCDF	35.14	1.636e4	1.318e4	1.248	1.24	1.24	291.7	YES	NO	dd	db	2.443
4	123478-HxCDF	35.01	1.544e4	1.249e4	1.182	1.24	1.24	274.0	YES	NO	bd	bd	2.494

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.11	1.117e4	1.059e4	1.165	1.05	1.05	147.3	YES	NO	bb	bb	2.411
2	Total-heptafurans	39.52	8.567e2	9.013e2	1.185	0.95	1.05	12.7	YES	NO	bb	bb	0.178
3	1234678-HpCDF	38.86	1.439e4	1.337e4	1.204	1.08	1.05	220.8	YES	NO	bb	bd	2.577

ID: CS1CR, Name: 23020105, Date: 01-Feb-2023, Time: 15:28:53, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.90	3.165e3	3.812e3	0.876	0.83	0.77	60.4	YES	NO	db	bb	0.501
2	23478-PeCDF	31.39	1.669e4	1.174e4	0.911	1.42	1.55	259.2	YES	NO	bb	bd	2.401
3	12378-PeCDF	30.05	1.657e4	1.122e4	0.845	1.48	1.55	247.1	YES	NO	bb	bb	2.455
4	123789-HxCDF	37.02	1.293e4	1.008e4	1.187	1.28	1.24	239.4	YES	NO	bd	bb	2.372
5	234678-HxCDF	36.00	1.543e4	1.155e4	1.229	1.34	1.24	292.0	YES	NO	bd	bb	2.421
6	123678-HxCDF	35.14	1.636e4	1.318e4	1.248	1.24	1.24	291.7	YES	NO	dd	db	2.443
7	123478-HxCDF	35.01	1.544e4	1.249e4	1.182	1.24	1.24	274.0	YES	NO	bd	bd	2.494
8	1234789-HpCDF	41.11	1.117e4	1.059e4	1.165	1.05	1.05	147.3	YES	NO	bb	bb	2.411
9	Total-heptafurans	39.52	8.567e2	9.013e2	1.185	0.95	1.05	12.7	YES	NO	bb	bb	0.178
10	1234678-HpCDF	38.86	1.439e4	1.337e4	1.204	1.08	1.05	220.8	YES	NO	bb	bd	2.577
11	OCDF	45.37	1.860e4	2.066e4	1.186	0.90	0.89	171.2	YES	NO	bb	bb	5.087

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	24.26	7.113e1	9.739e1	1.099	0.73	0.77	1.5	NO	NO	bb	bb	0.016
2	2378-TCDD	26.55	2.836e3	3.619e3	1.236	0.78	0.77	33.8	YES	NO	bb	bb	0.538

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentadioxins	31.80	1.875e2	1.127e2	1.392	1.66	1.55	3.4	YES	NO	db	db	0.026
2	12378-PeCDD	31.64	1.354e4	8.892e3	1.087	1.52	1.55	178.2	YES	NO	bd	bd	2.535

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.61	1.141e4	9.550e3	0.985	1.19	1.24	175.6	YES	NO	bb	bd	2.499
2	123678-HxCDD	36.23	1.193e4	1.017e4	1.021	1.17	1.24	192.4	YES	NO	db	dd	2.523
3	123478-HxCDD	36.12	1.109e4	9.100e3	0.987	1.22	1.24	174.2	YES	NO	bd	bd	2.425

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.37	1.047e4	1.022e4	1.253	1.02	1.05	180.8	YES	NO	bb	bb	2.439

ID: CS1CR, Name: 23020105, Date: 01-Feb-2023, Time: 15:28:53, Conditions: AUTOSPEC01, User: pk

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	24.26	7.113e1	9.739e1	1.099	0.73	0.77	1.5	NO	NO	bb	bb	0.016
2	2378-TCDD	26.55	2.836e3	3.619e3	1.236	0.78	0.77	33.8	YES	NO	bb	bb	0.538
3	Total-pentadioxins	31.80	1.875e2	1.127e2	1.392	1.66	1.55	3.4	YES	NO	db	db	0.026
4	12378-PeCDD	31.64	1.354e4	8.892e3	1.087	1.52	1.55	178.2	YES	NO	bd	bd	2.535
5	123789-HxCDD	36.61	1.141e4	9.550e3	0.985	1.19	1.24	175.6	YES	NO	bb	bd	2.499
6	123678-HxCDD	36.23	1.193e4	1.017e4	1.021	1.17	1.24	192.4	YES	NO	db	dd	2.523
7	123478-HxCDD	36.12	1.109e4	9.100e3	0.987	1.22	1.24	174.2	YES	NO	bd	bd	2.425
8	1234678-HpCDD	40.37	1.047e4	1.022e4	1.253	1.02	1.05	180.8	YES	NO	bb	bb	2.439
9	OCDD	45.13	2.025e4	2.243e4	1.103	0.90	0.89	329.8	YES	NO	bb	bb	5.948

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.90	3.165e3	3.812e3	0.876	0.83	0.77	60.4	YES	NO	db	bb	0.501
2	23478-PeCDF	31.39	1.669e4	1.174e4	0.911	1.42	1.55	259.2	YES	NO	bb	bd	2.401
3	12378-PeCDF	30.05	1.657e4	1.122e4	0.845	1.48	1.55	247.1	YES	NO	bb	bb	2.455
4	123789-HxCDF	37.02	1.293e4	1.008e4	1.187	1.28	1.24	239.4	YES	NO	bd	bb	2.372
5	234678-HxCDF	36.00	1.543e4	1.155e4	1.229	1.34	1.24	292.0	YES	NO	bd	bb	2.421
6	123678-HxCDF	35.14	1.636e4	1.318e4	1.248	1.24	1.24	291.7	YES	NO	dd	db	2.443
7	123478-HxCDF	35.01	1.544e4	1.249e4	1.182	1.24	1.24	274.0	YES	NO	bd	bd	2.494
8	1234789-HpCDF	41.11	1.117e4	1.059e4	1.165	1.05	1.05	147.3	YES	NO	bb	bb	2.411
9	Total-heptafurans	39.52	8.567e2	9.013e2	1.185	0.95	1.05	12.7	YES	NO	bb	bb	0.178
10	1234678-HpCDF	38.86	1.439e4	1.337e4	1.204	1.08	1.05	220.8	YES	NO	bb	bd	2.577
11	OCDF	45.37	1.860e4	2.066e4	1.186	0.90	0.89	171.2	YES	NO	bb	bb	5.087
12	Total-tetradioxins	24.26	7.113e1	9.739e1	1.099	0.73	0.77	1.5	NO	NO	bb	bb	0.016
13	2378-TCDD	26.55	2.836e3	3.619e3	1.236	0.78	0.77	33.8	YES	NO	bb	bb	0.538
14	Total-pentadioxins	31.80	1.875e2	1.127e2	1.392	1.66	1.55	3.4	YES	NO	db	db	0.026
15	12378-PeCDD	31.64	1.354e4	8.892e3	1.087	1.52	1.55	178.2	YES	NO	bd	bd	2.535
16	123789-HxCDD	36.61	1.141e4	9.550e3	0.985	1.19	1.24	175.6	YES	NO	bb	bd	2.499
17	123678-HxCDD	36.23	1.193e4	1.017e4	1.021	1.17	1.24	192.4	YES	NO	db	dd	2.523
18	123478-HxCDD	36.12	1.109e4	9.100e3	0.987	1.22	1.24	174.2	YES	NO	bd	bd	2.425
19	1234678-HpCDD	40.37	1.047e4	1.022e4	1.253	1.02	1.05	180.8	YES	NO	bb	bb	2.439
20	OCDD	45.13	2.025e4	2.243e4	1.103	0.90	0.89	329.8	YES	NO	bb	bb	5.948

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.24	1.348e6					15.3	YES		dd		
2	FUNCTION1 PFK	22.18	4.644e5					16.9	YES		dd		
3	FUNCTION1 PFK	22.16	1.313e6					16.6	YES		dd		
4	FUNCTION1 PFK	21.98	1.487e6					20.5	YES		dd		
5	FUNCTION1 PFK	21.88	1.450e6					22.1	YES		dd		
6	FUNCTION1 PFK	21.72	1.801e6					24.8	YES		dd		
7	FUNCTION1 PFK	21.60	1.955e6					26.8	YES		dd		
8	FUNCTION1 PFK	21.39	6.532e6					30.5	YES		dd		
9	FUNCTION1 PFK	21.12	3.552e6					35.4	YES		bd		
10	FUNCTION1 PFK	24.35	3.975e3					0.4	NO		bb		
11	FUNCTION1 PFK	24.08	2.445e4					0.9	NO		bb		
12	FUNCTION1 PFK	23.89	1.855e4					1.0	NO		bb		
13	FUNCTION1 PFK	23.81	2.526e4					1.3	NO		bb		
14	FUNCTION1 PFK	23.73	2.606e4					1.2	NO		db		
15	FUNCTION1 PFK	23.63	3.953e4					0.9	NO		bd		
16	FUNCTION1 PFK	23.40	1.725e4					0.8	NO		db		
17	FUNCTION1 PFK	23.36	2.281e4					0.8	NO		bd		
18	FUNCTION1 PFK	23.28	4.142e4					1.3	NO		bb		
19	FUNCTION1 PFK	23.08	3.989e4					1.2	NO		db		
20	FUNCTION1 PFK	23.01	5.719e4					2.6	NO		dd		
21	FUNCTION1 PFK	22.78	6.498e5					6.6	YES		dd		
22	FUNCTION1 PFK	22.62	7.070e5					9.1	YES		dd		
23	FUNCTION1 PFK	22.51	7.554e5					10.8	YES		dd		
24	FUNCTION1 PFK	22.43	4.428e5					12.6	YES		dd		
25	FUNCTION1 PFK	22.39	4.834e5					13.1	YES		dd		
26	FUNCTION1 PFK	26.44	1.834e4					0.9	NO		bb		
27	FUNCTION1 PFK	26.31	1.630e4					0.8	NO		db		
28	FUNCTION1 PFK	26.24	2.476e4					1.0	NO		bd		
29	FUNCTION1 PFK	26.17	2.817e4					1.0	NO		bb		
30	FUNCTION1 PFK	26.03	3.473e4					1.3	NO		db		
31	FUNCTION1 PFK	25.97	2.971e4					1.1	NO		dd		
32	FUNCTION1 PFK	25.90	2.965e4					1.4	NO		bd		
33	FUNCTION1 PFK	25.84	6.319e3					0.7	NO		bb		
34	FUNCTION1 PFK	25.76	2.805e4					1.0	NO		db		
35	FUNCTION1 PFK	25.69	1.550e4					0.7	NO		bd		
36	FUNCTION1 PFK	25.43	1.865e4					0.8	NO		bb		
37	FUNCTION1 PFK	25.29	2.496e4					1.2	NO		bb		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	25.16	1.218e4					0.7	NO		bb		
39	FUNCTION1 PFK	24.90	4.251e4					1.2	NO		bb		
40	FUNCTION1 PFK	24.82	9.911e3					0.6	NO		bb		
41	FUNCTION1 PFK	24.70	1.084e4					0.7	NO		bb		
42	FUNCTION1 PFK	28.13	1.191e4					0.5	NO		bb		
43	FUNCTION1 PFK	28.06	1.157e4					0.7	NO		bb		
44	FUNCTION1 PFK	27.94	2.880e4					1.2	NO		bb		
45	FUNCTION1 PFK	27.73	2.725e4					1.2	NO		db		
46	FUNCTION1 PFK	27.65	2.104e4					0.9	NO		bd		
47	FUNCTION1 PFK	27.53	9.466e3					0.5	NO		bb		
48	FUNCTION1 PFK	27.45	2.859e4					0.9	NO		db		
49	FUNCTION1 PFK	27.32	3.854e4					1.1	NO		bd		
50	FUNCTION1 PFK	27.18	2.011e4					0.9	NO		db		
51	FUNCTION1 PFK	27.11	5.101e4					1.6	NO		dd		
52	FUNCTION1 PFK	27.05	7.101e4					1.7	NO		dd		
53	FUNCTION1 PFK	26.97	2.738e4					1.1	NO		bd		
54	FUNCTION1 PFK	26.85	5.698e3					0.5	NO		bb		
55	FUNCTION1 PFK	26.79	9.173e3					0.6	NO		bb		
56	FUNCTION1 PFK	26.65	1.932e4					1.0	NO		bb		
57	FUNCTION1 PFK	26.50	1.249e4					0.8	NO		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	35.28	1.720e4					1.2	NO		bb		0.000
2	FUNCTION3 PFK	35.17	3.494e4					1.4	NO		bb		0.000
3	FUNCTION3 PFK	35.02	1.498e4					0.7	NO		bb		0.000
4	FUNCTION3 PFK	34.97	2.068e4					1.6	NO		db		0.000
5	FUNCTION3 PFK	34.92	3.898e4					1.7	NO		bd		0.000
6	FUNCTION3 PFK	34.84	3.344e4					2.0	NO		db		0.000
7	FUNCTION3 PFK	34.79	4.044e4					2.0	NO		bd		0.000
8	FUNCTION3 PFK	34.56	1.848e4					1.0	NO		bb		0.000
9	FUNCTION3 PFK	34.43	3.131e3					0.6	NO		bb		0.000
10	FUNCTION3 PFK	33.97	1.059e4					1.1	NO		bb		0.000
11	FUNCTION3 PFK	33.91	7.198e3					0.6	NO		bb		0.000
12	FUNCTION3 PFK	33.77	2.029e4					1.1	NO		bb		0.000
13	FUNCTION3 PFK	33.51	2.578e4					1.1	NO		bb		0.000
14	FUNCTION3 PFK	33.23	2.194e3					0.4	NO		bb		0.000
15	FUNCTION3 PFK	37.66	2.055e4					1.5	NO		db		0.000
16	FUNCTION3 PFK	37.61	1.552e4					1.3	NO		bd		0.000
17	FUNCTION3 PFK	37.55	2.721e4					1.4	NO		bb		0.000
18	FUNCTION3 PFK	37.30	3.274e4					1.5	NO		bb		0.000
19	FUNCTION3 PFK	36.81	9.296e3					0.9	NO		bb		0.000
20	FUNCTION3 PFK	36.47	5.665e3					0.6	NO		bb		0.000
21	FUNCTION3 PFK	36.37	1.213e4					0.9	NO		bb		0.000
22	FUNCTION3 PFK	35.99	5.368e3					0.6	NO		bb		0.000
23	FUNCTION3 PFK	35.72	2.308e3					0.4	NO		bb		0.000
24	FUNCTION3 PFK	35.61	2.395e3					0.4	NO		bb		0.000
25	FUNCTION3 PFK	35.56	8.733e3					0.7	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.48	1.749e3					0.5	NO		bb		
2	FUNCTION4 PFK	38.35	9.022e3					0.9	NO		bb		
3	FUNCTION4 PFK	38.24	3.875e3					0.6	NO		bb		
4	FUNCTION4 PFK	38.13	2.737e4					1.8	NO		bb		
5	FUNCTION4 PFK	41.33	1.294e4					1.5	NO		bd		
6	FUNCTION4 PFK	41.23	4.010e4					1.6	NO		db		
7	FUNCTION4 PFK	41.09	3.801e4					1.9	NO		bd		
8	FUNCTION4 PFK	40.99	2.136e4					1.8	NO		bb		
9	FUNCTION4 PFK	40.59	8.289e3					0.7	NO		bb		
10	FUNCTION4 PFK	40.23	3.985e3					0.6	NO		bb		
11	FUNCTION4 PFK	39.88	1.184e3					0.3	NO		bb		
12	FUNCTION4 PFK	39.83	1.945e3					0.5	NO		bb		
13	FUNCTION4 PFK	39.52	8.163e3					1.0	NO		bb		
14	FUNCTION4 PFK	39.21	1.232e3					0.3	NO		bb		
15	FUNCTION4 PFK	39.07	1.853e4					1.3	NO		db		
16	FUNCTION4 PFK	38.94	5.337e4					2.0	NO		dd		
17	FUNCTION4 PFK	38.87	1.627e4					1.6	NO		dd		
18	FUNCTION4 PFK	38.84	1.863e4					1.8	NO		bd		
19	FUNCTION4 PFK	38.69	3.030e4					2.1	NO		bb		
20	FUNCTION4 PFK	38.54	2.688e3					0.5	NO		bb		
21	FUNCTION4 PFK	42.75	7.635e3					1.1	NO		bb		
22	FUNCTION4 PFK	42.65	3.824e3					0.5	NO		db		
23	FUNCTION4 PFK	42.62	3.380e3					0.6	NO		bd		
24	FUNCTION4 PFK	42.55	8.483e3					1.1	NO		bb		
25	FUNCTION4 PFK	42.45	5.962e3					0.8	NO		db		
26	FUNCTION4 PFK	42.40	5.418e3					0.7	NO		bd		
27	FUNCTION4 PFK	42.27	7.694e3					0.9	NO		bb		
28	FUNCTION4 PFK	42.10	9.463e3					1.2	NO		db		
29	FUNCTION4 PFK	42.05	1.039e4					1.1	NO		bd		
30	FUNCTION4 PFK	41.81	3.060e3					0.9	NO		bb		
31	FUNCTION4 PFK	41.77	4.237e3					0.7	NO		bb		
32	FUNCTION4 PFK	41.71	3.440e3					0.6	NO		bb		
33	FUNCTION4 PFK	41.67	1.592e3					0.4	NO		bb		
34	FUNCTION4 PFK	41.57	2.688e4					1.3	NO		bb		
35	FUNCTION4 PFK	41.37	1.425e4					1.5	NO		db		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	46.31	4.706e3					1.2	NO		bb		
2	FUNCTION5 PFK	46.25	4.425e3					1.1	NO		bb		
3	FUNCTION5 PFK	46.16	2.646e3					0.9	NO		bb		
4	FUNCTION5 PFK	46.03	5.117e3					1.5	NO		db		
5	FUNCTION5 PFK	46.01	6.487e3					1.4	NO		bd		
6	FUNCTION5 PFK	45.67	8.229e3					1.3	NO		bb		
7	FUNCTION5 PFK	45.46	1.002e3					0.5	NO		bb		
8	FUNCTION5 PFK	45.18	2.741e3					0.8	NO		db		
9	FUNCTION5 PFK	45.15	2.119e3					0.7	NO		bd		
10	FUNCTION5 PFK	44.83	3.811e3					1.2	NO		bb		
11	FUNCTION5 PFK	44.20	1.148e4					1.5	NO		bb		
12	FUNCTION5 PFK	44.06	5.518e3					1.3	NO		bb		
13	FUNCTION5 PFK	44.02	1.106e3					0.6	NO		bb		
14	FUNCTION5 PFK	43.71	1.195e4					1.8	NO		bb		
15	FUNCTION5 PFK	43.46	1.476e3					0.8	NO		bb		
16	FUNCTION5 PFK	43.39	1.169e4					1.4	NO		bb		
17	FUNCTION5 PFK	46.43	1.400e3					0.7	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.97	1.637e2					3.3	YES		bb		0.000
2	FUNCTION1 HXCD...	27.23	1.144e2					2.0	NO		bb		0.000
3	FUNCTION1 HXCD...	26.82	1.144e2					2.2	NO		bb		0.000
4	FUNCTION1 HXCD...	25.91	1.100e2					2.2	NO		bb		0.000
5	FUNCTION1 HXCD...	25.23	1.805e2					5.5	YES		bb		0.000
6	FUNCTION1 HXCD...	24.26	1.341e2					2.3	NO		bb		0.000
7	FUNCTION1 HXCD...	24.08	1.268e2					1.9	NO		bb		0.000
8	FUNCTION1 HXCD...	23.43	1.602e2					2.4	NO		bb		0.000
9	FUNCTION1 HXCD...	22.78	1.018e2					1.8	NO		bb		0.000
10	FUNCTION1 HXCD...	22.39	1.626e2					2.8	NO		bb		0.000
11	FUNCTION1 HXCD...	22.06	1.129e2					2.5	NO		bb		0.000
12	FUNCTION1 HXCD...	21.53	1.052e2					1.2	NO		db		0.000
13	FUNCTION1 HXCD...	21.36	9.992e1					1.3	NO		bd		0.000
14	FUNCTION1 HXCD...	21.16	1.410e2					2.5	NO		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	28.16	7.208e1					2.1	NO		bb		0.000
2	FUNCTION1 HPCD...	27.42	1.038e2					2.0	NO		db		0.000
3	FUNCTION1 HPCD...	27.27	1.034e2					2.2	NO		bd		0.000
4	FUNCTION1 HPCD...	25.70	1.308e2					1.7	NO		bb		0.000
5	FUNCTION1 HPCD...	24.05	1.613e2					1.7	NO		bb		0.000
6	FUNCTION1 HPCD...	22.59	1.423e2					2.0	NO		bb		0.000
7	FUNCTION1 HPCD...	22.39	1.496e2					3.4	YES		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.14	1.080e2					1.8	NO		db		0.000
2	FUNCTION2 HPCD...	30.05	1.026e2					1.8	NO		bd		0.000
3	FUNCTION2 HPCD...	28.74	8.165e1					1.9	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.11	9.641e1					2.4	NO		db		0.000
2	FUNCTION3 OCDPE	36.03	1.029e2					1.5	NO		bd		0.000
3	FUNCTION3 OCDPE	34.77	8.096e1					1.2	NO		bb		0.000
4	FUNCTION3 OCDPE	37.01	1.018e2					2.8	NO		bb		0.000
5	FUNCTION3 OCDPE	36.73	1.470e2					3.1	YES		bb		0.000
6	FUNCTION3 OCDPE	36.60	1.766e2					3.1	YES		bb		0.000
7	FUNCTION3 OCDPE	36.22	1.214e2					2.7	NO		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.34	9.946e1					2.4	NO		bb		0.000
2	FUNCTION4 NCDPE	39.96	9.057e1					2.5	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

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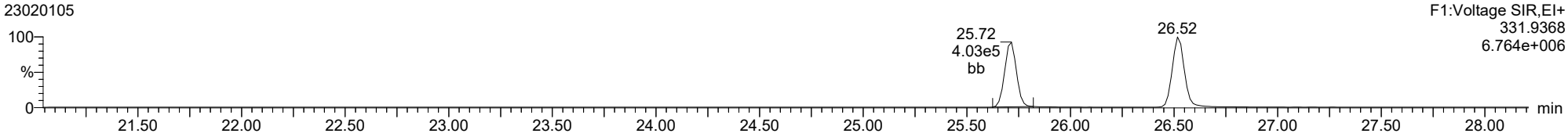
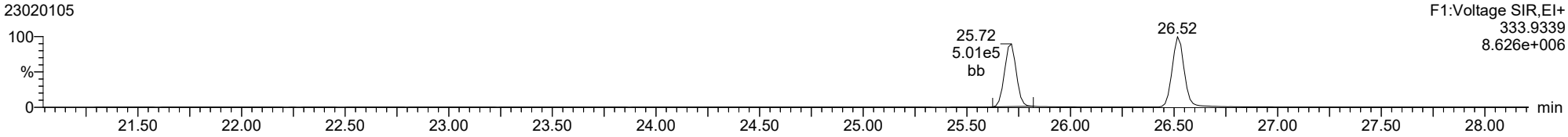
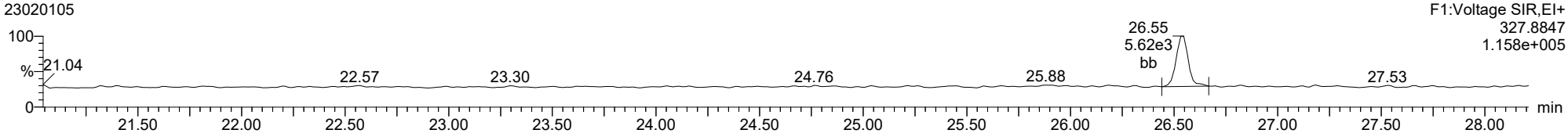
13C-1234-TCDD



13C-1234-TCDD



37CL-2378-TCDD



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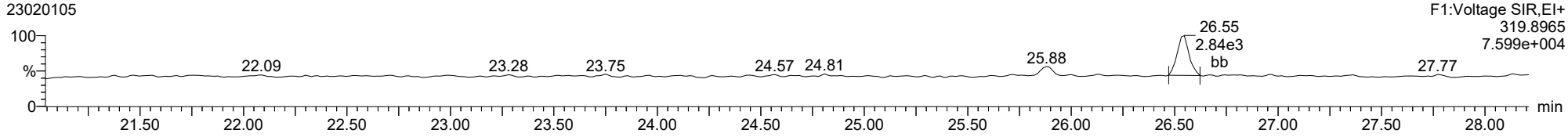

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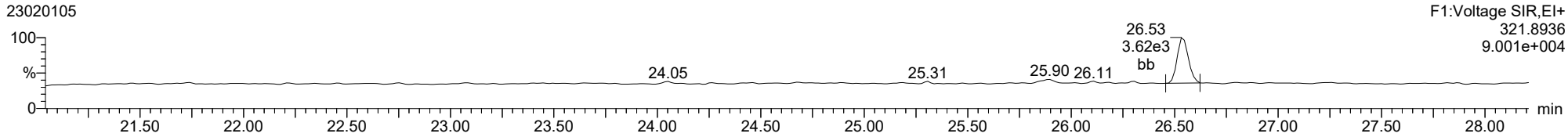

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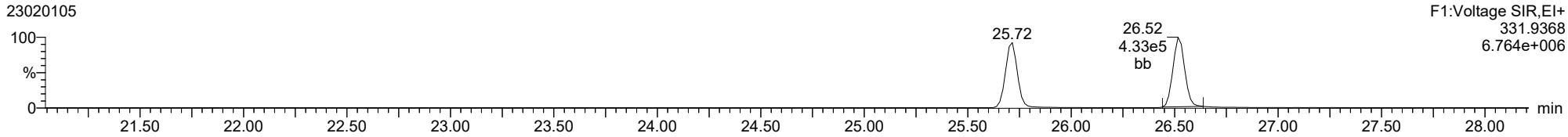

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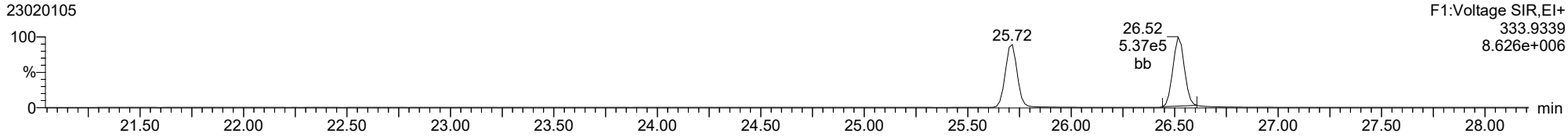

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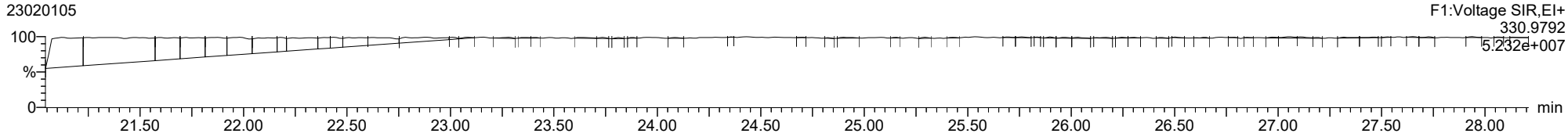

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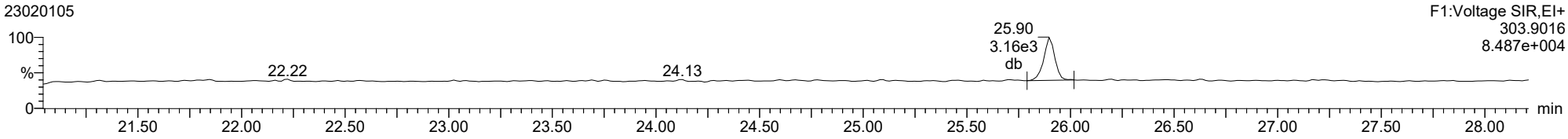

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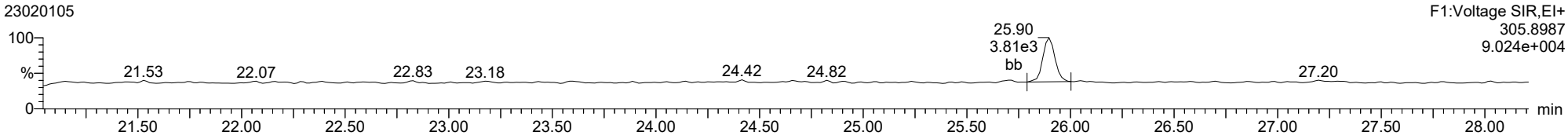

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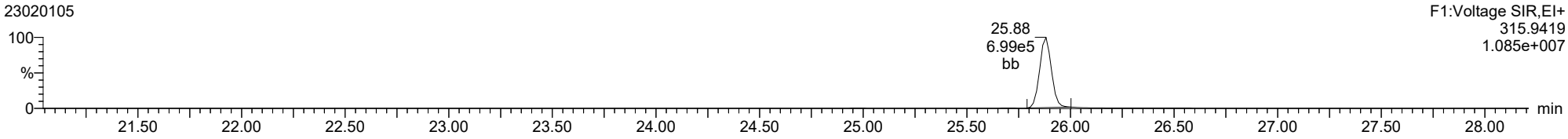

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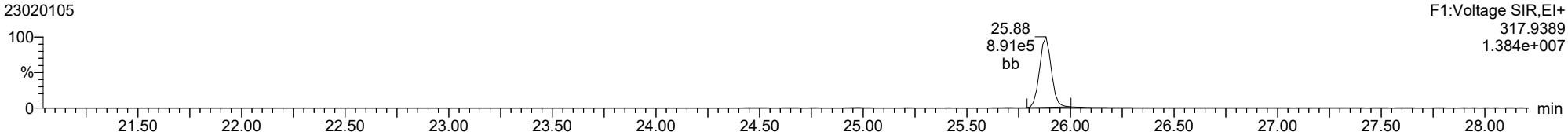

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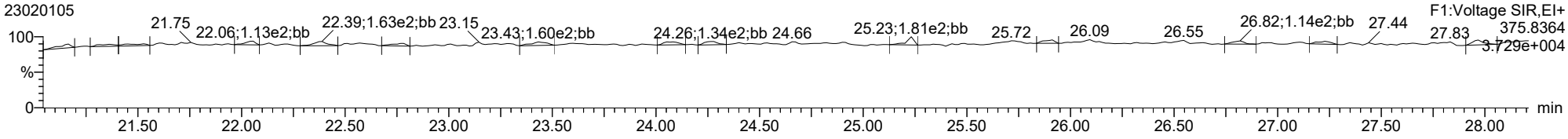

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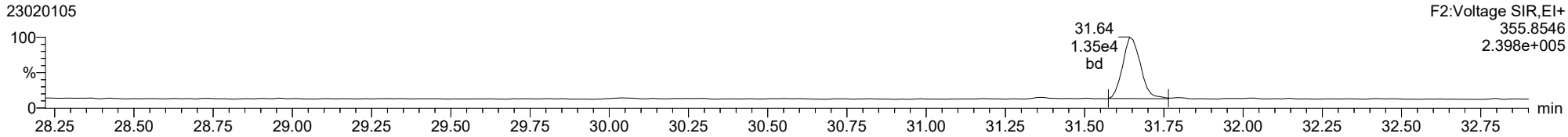
12378-PeCDD



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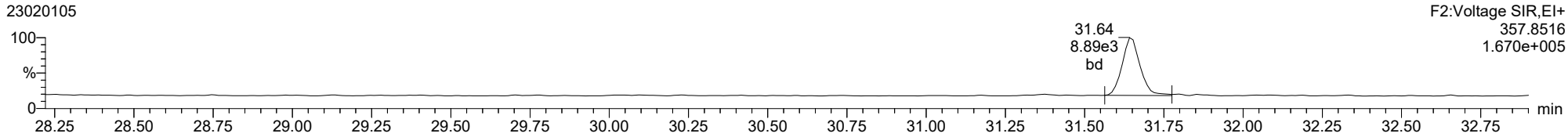

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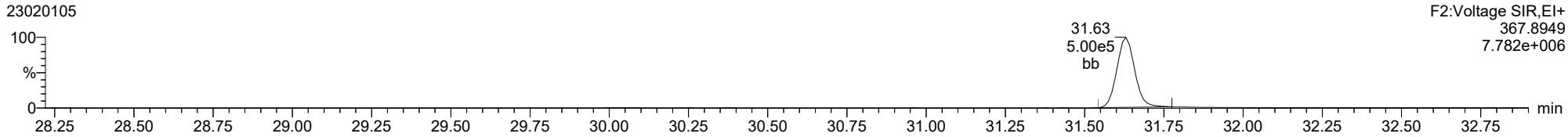

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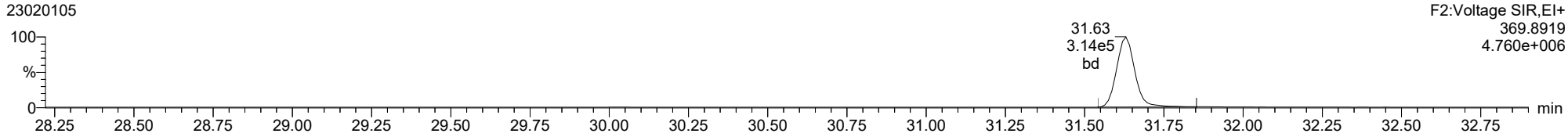

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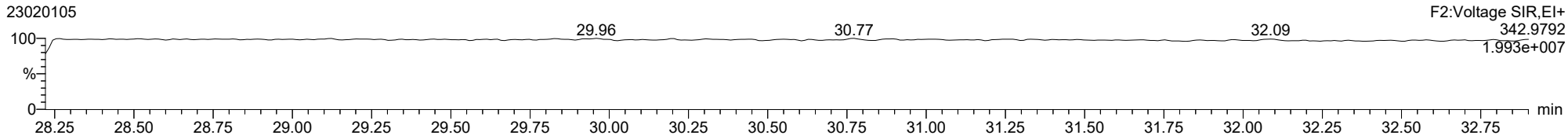

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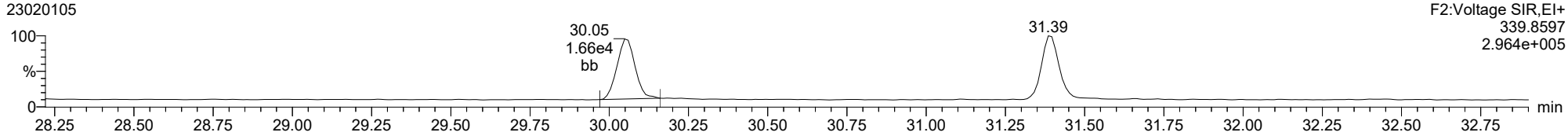

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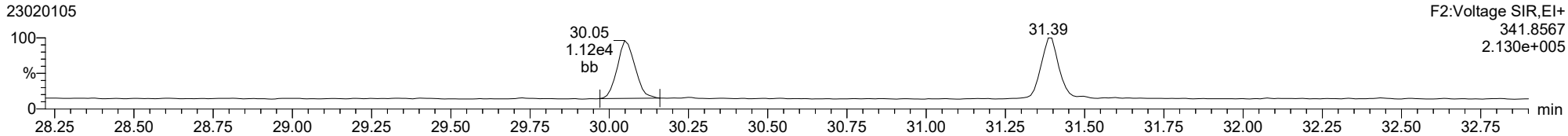

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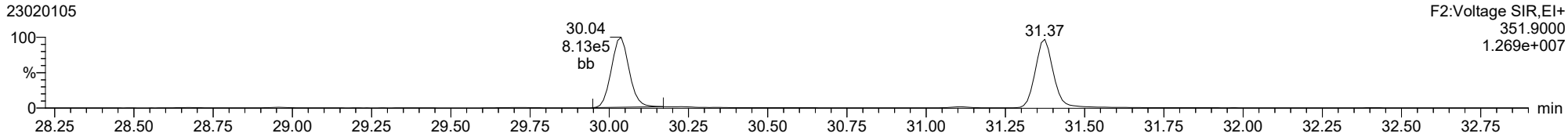

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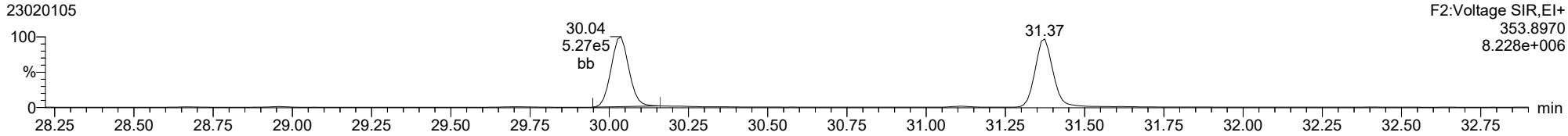
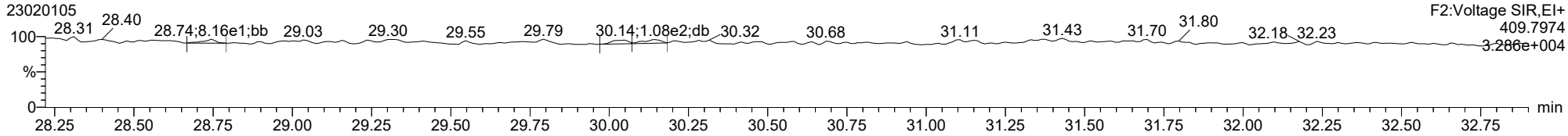


FUNCTION2 HPCDPE



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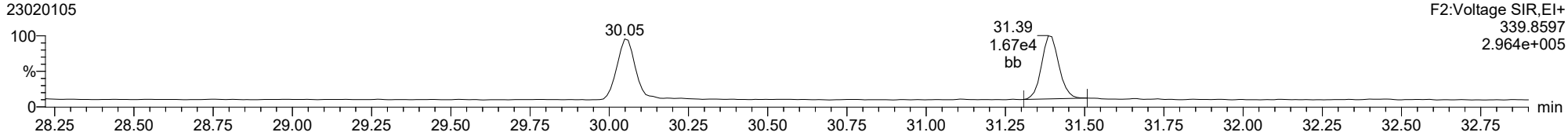

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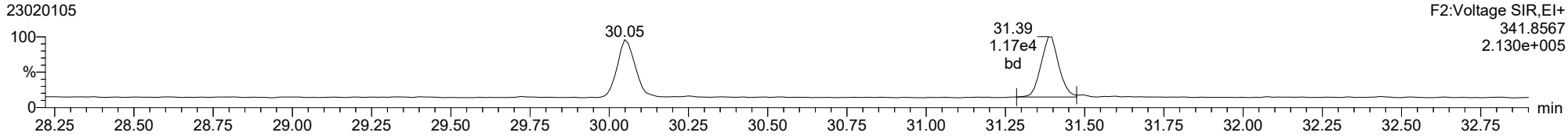

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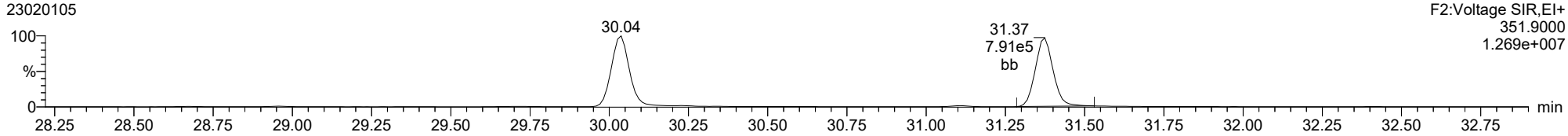

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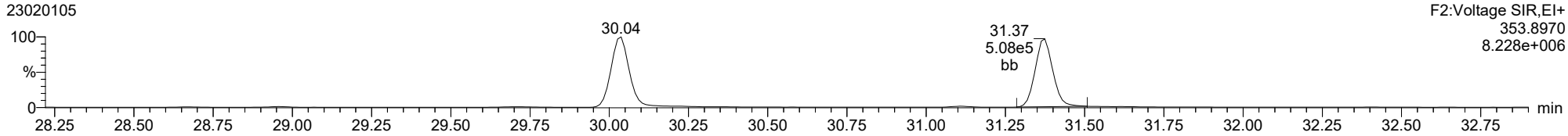

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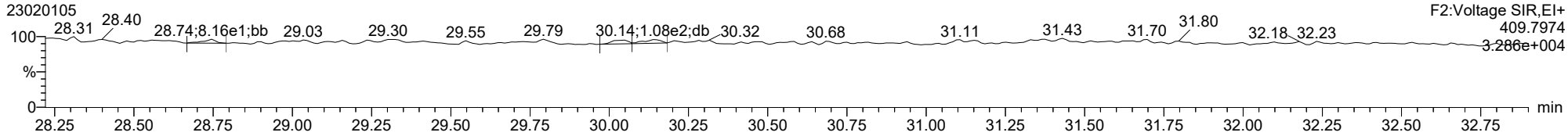

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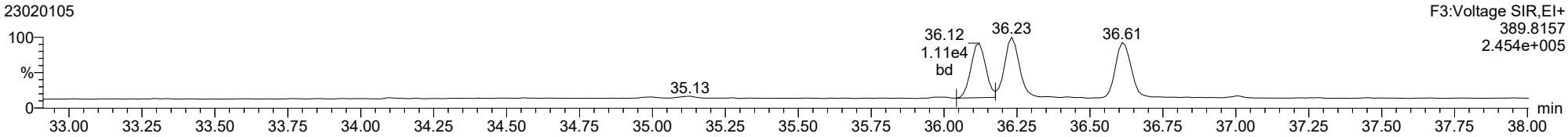

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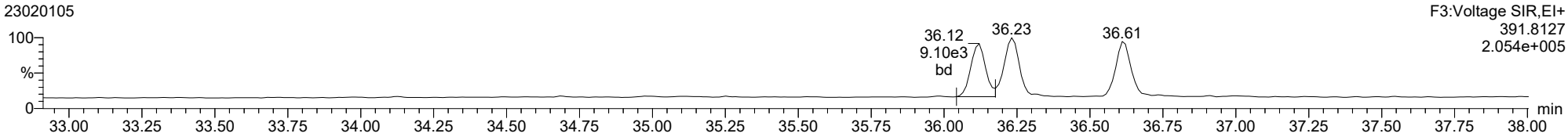

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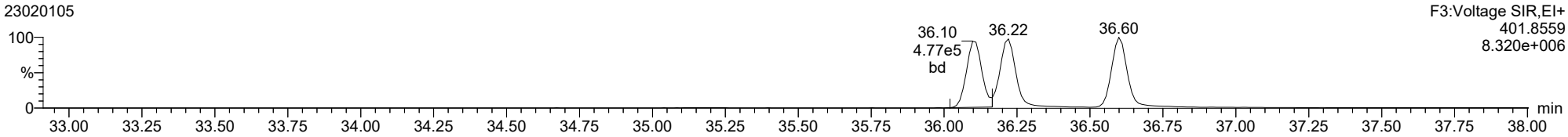

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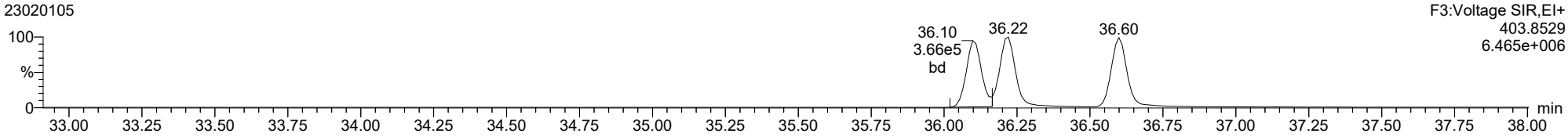

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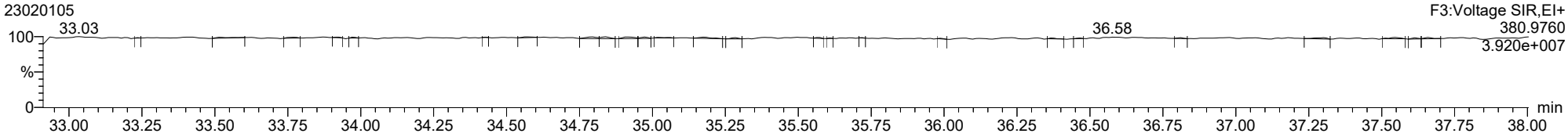

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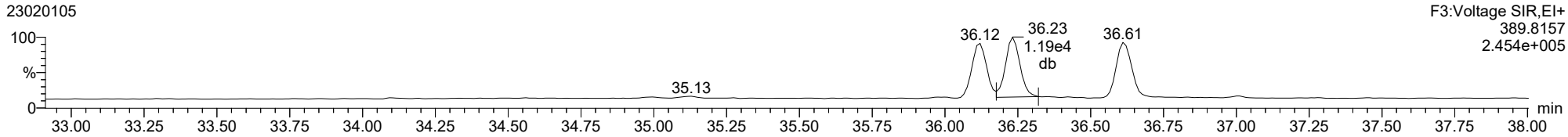

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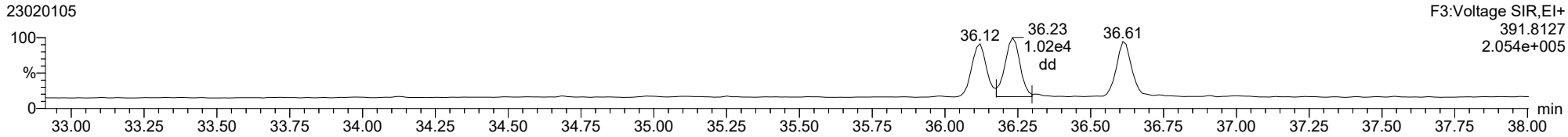

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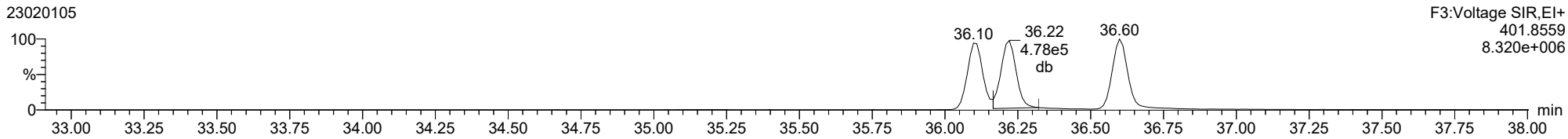

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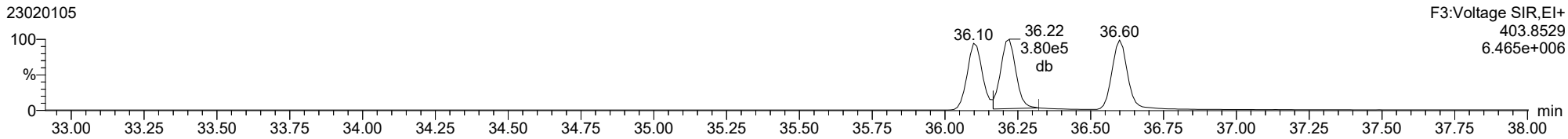

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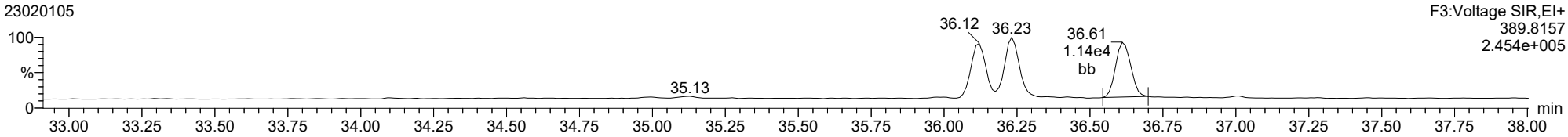

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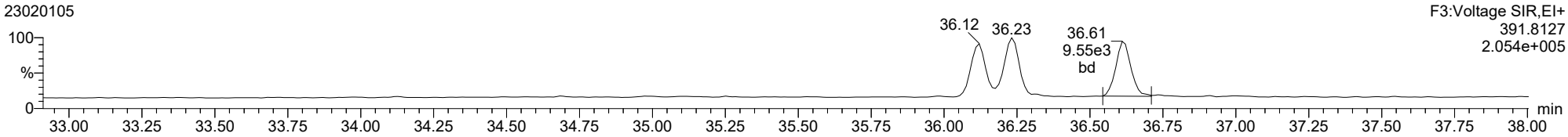

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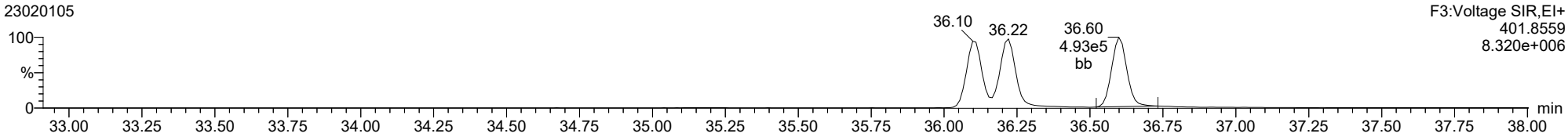

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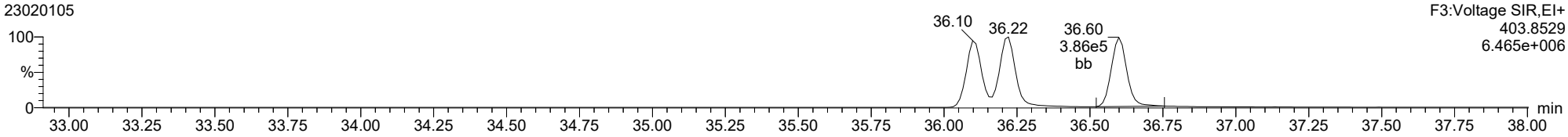

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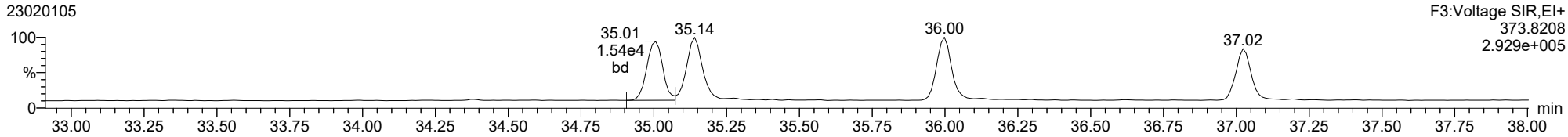

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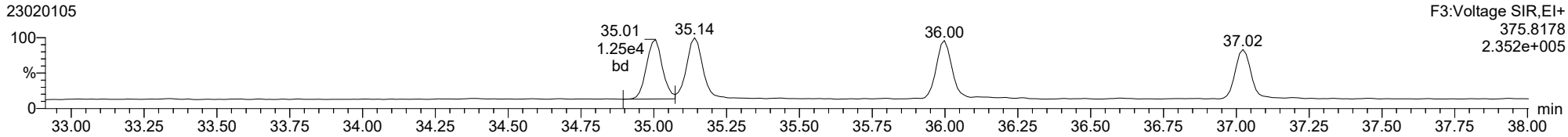

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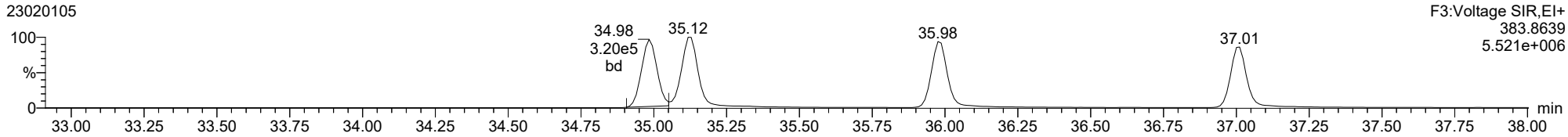

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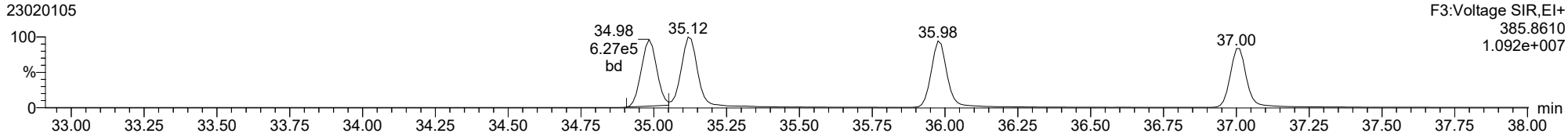

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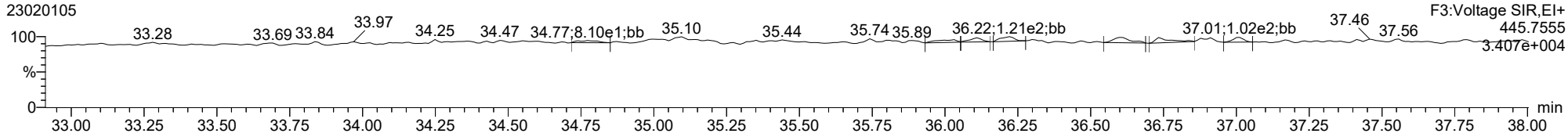

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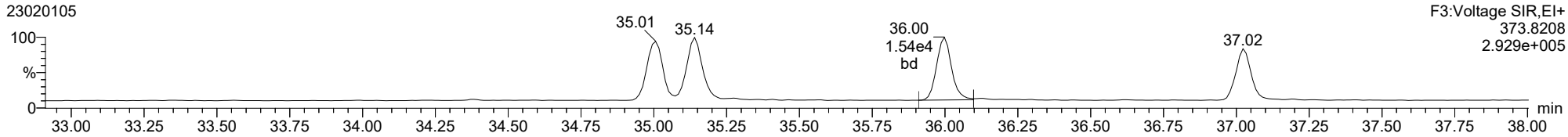

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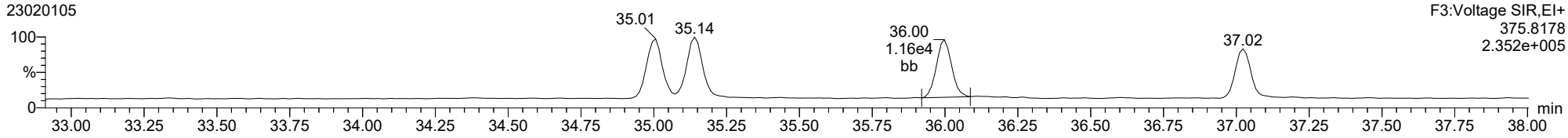

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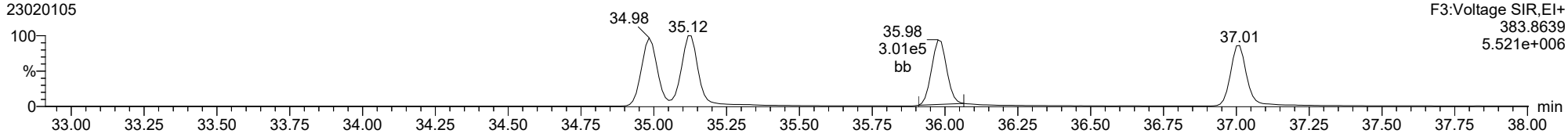

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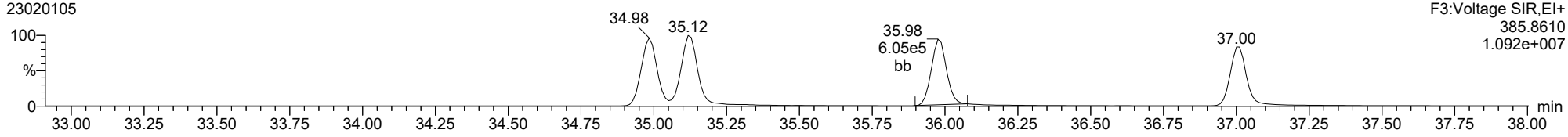
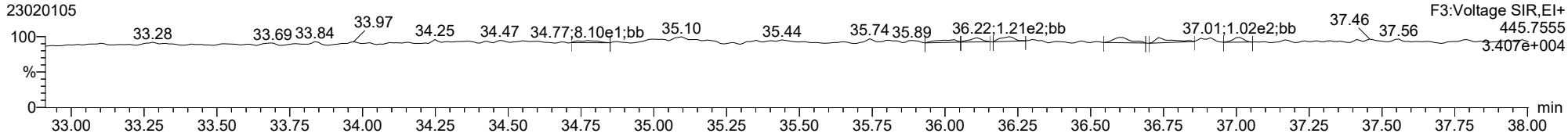


FUNCTION3 OCDPE



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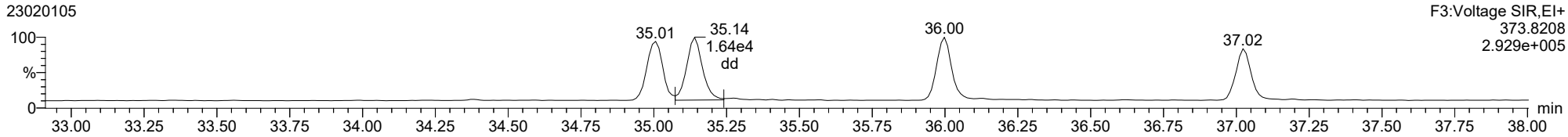

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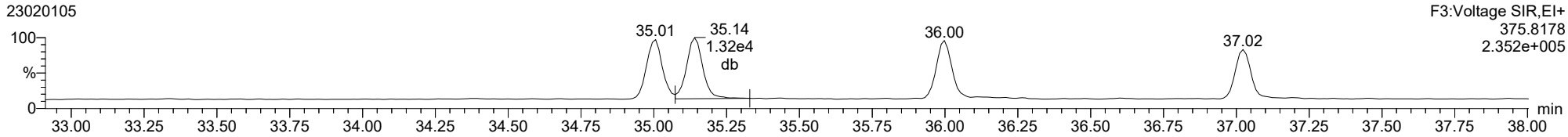

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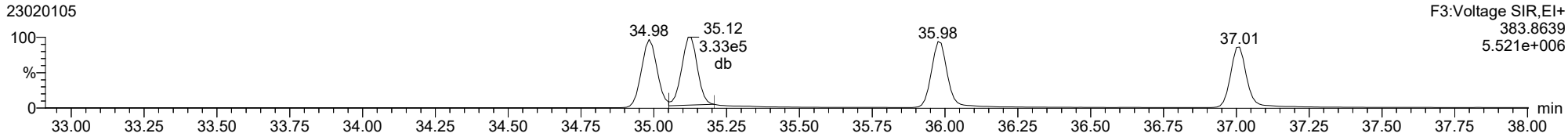

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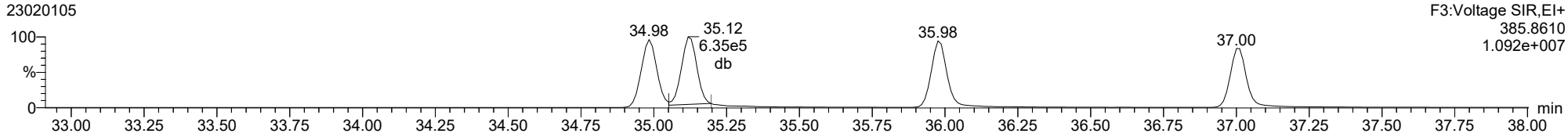
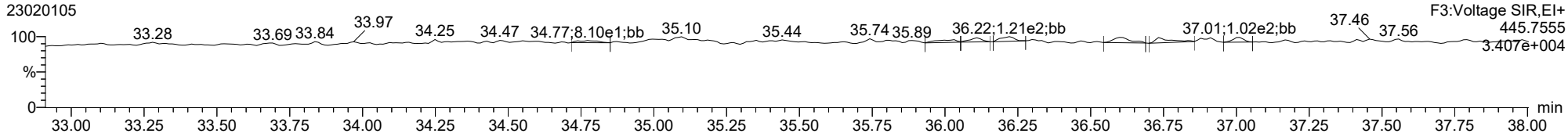


FUNCTION3 OCDPE



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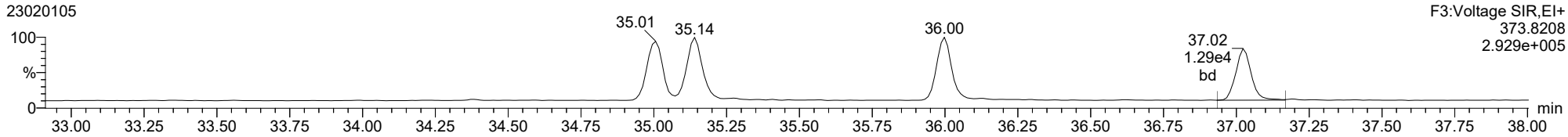

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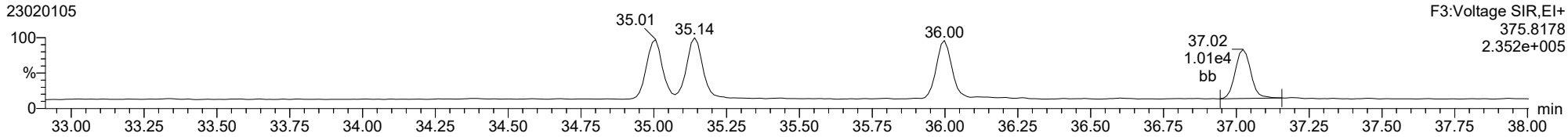

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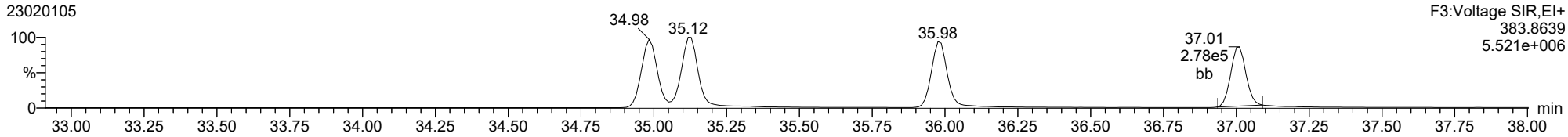

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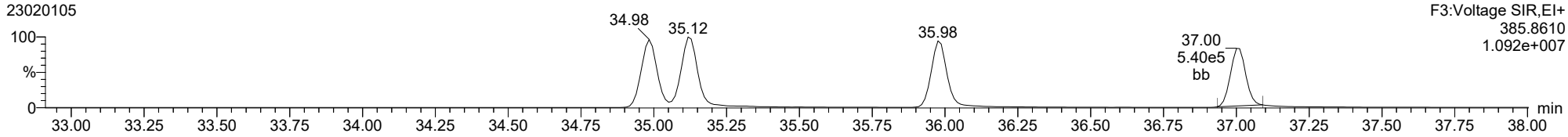

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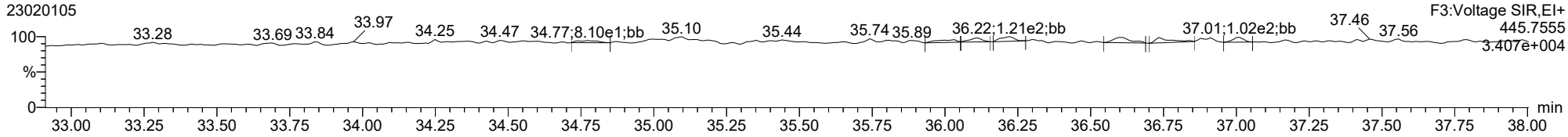

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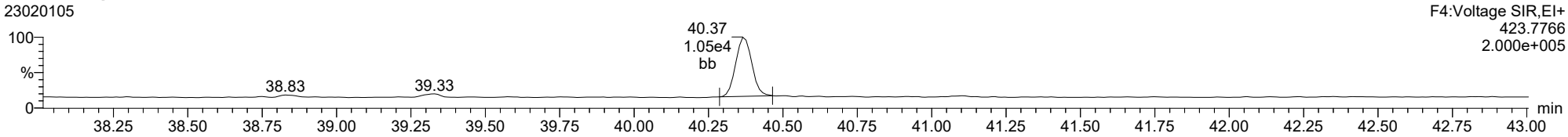

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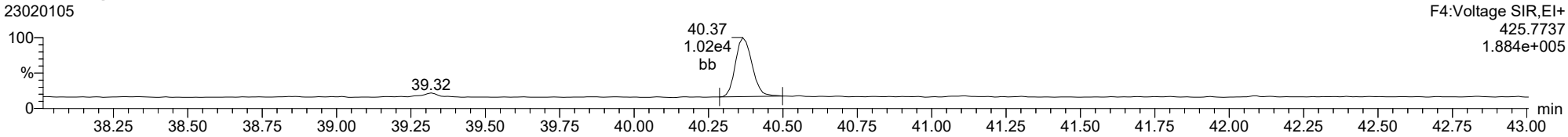

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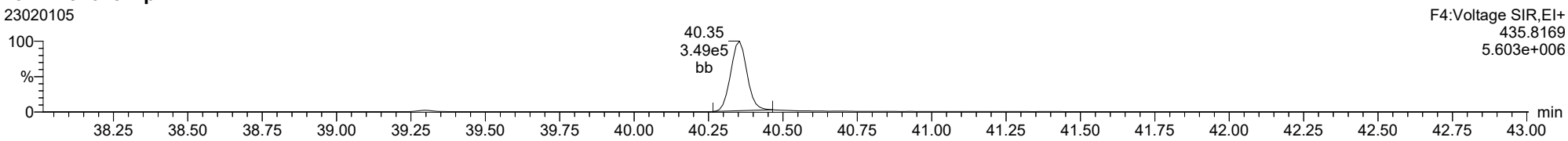

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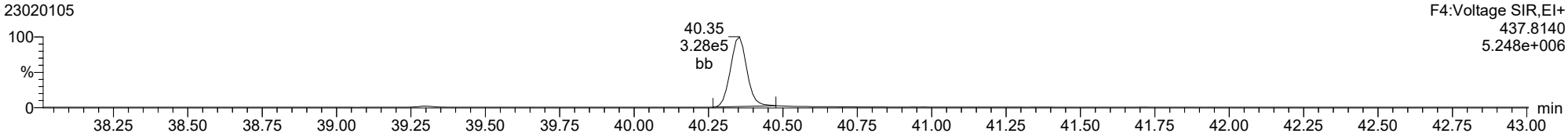
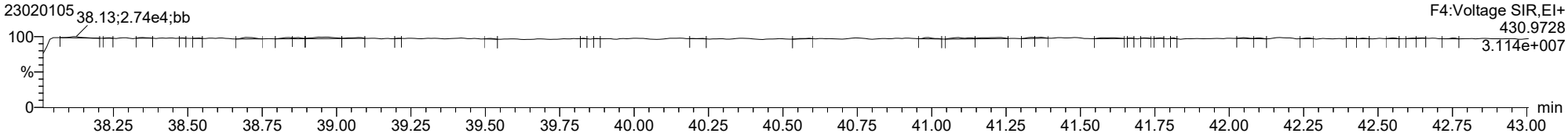


FUNCTION4 PFK



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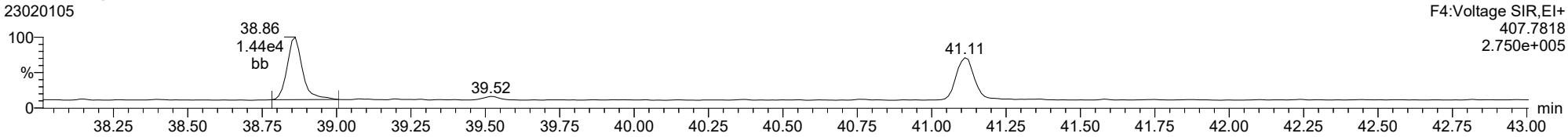

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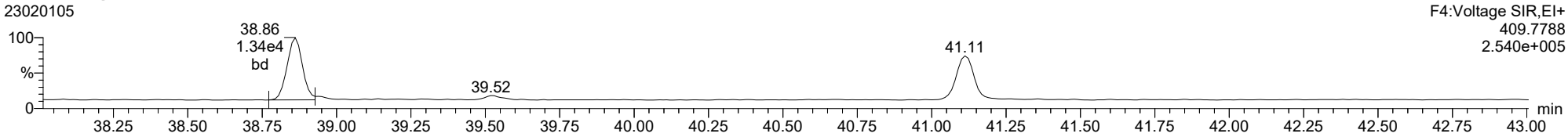

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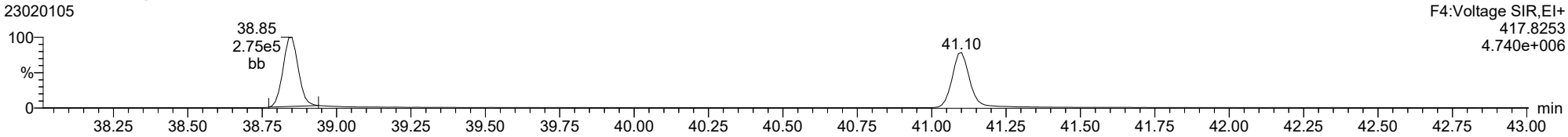

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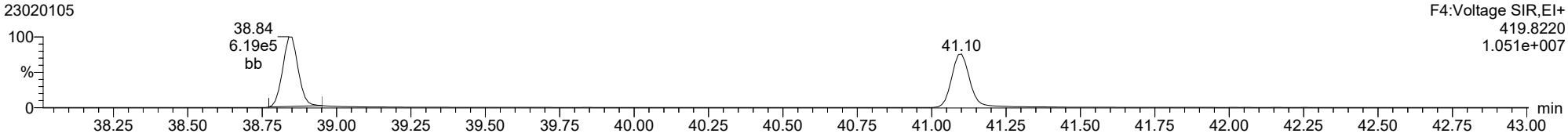
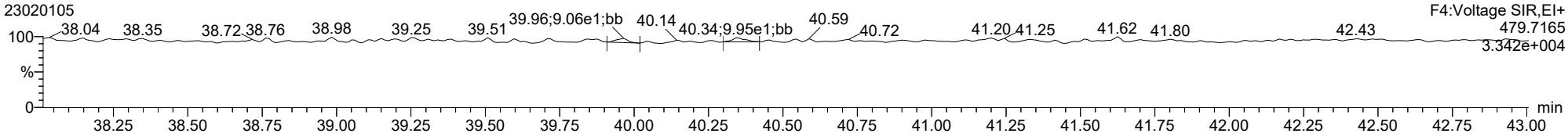


FUNCTION4 NCDPE



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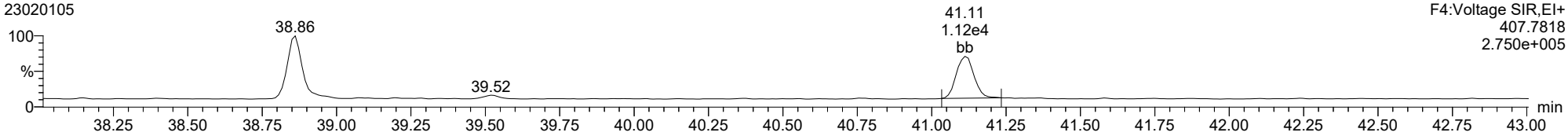

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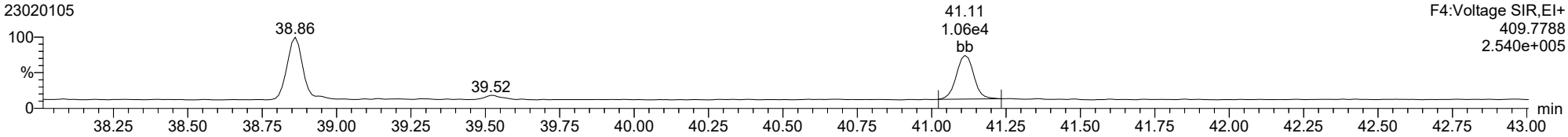

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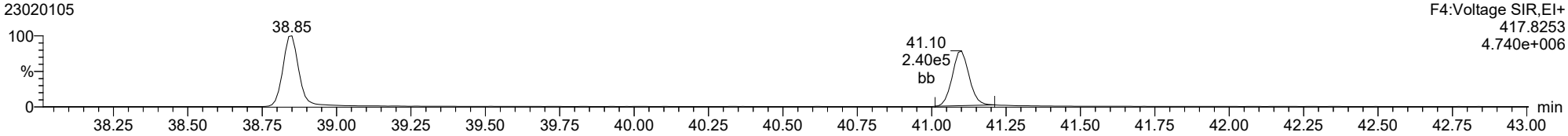

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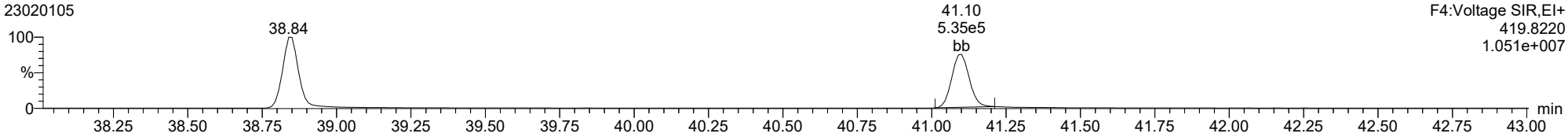
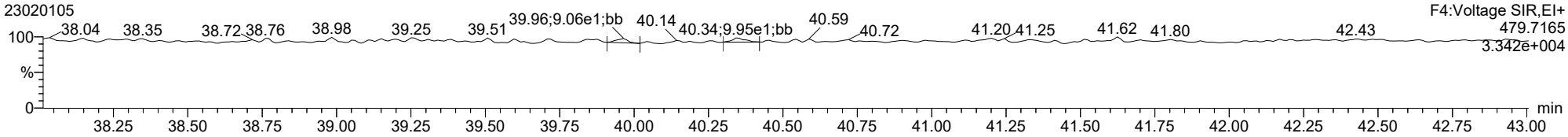


FUNCTION4 NCDPE



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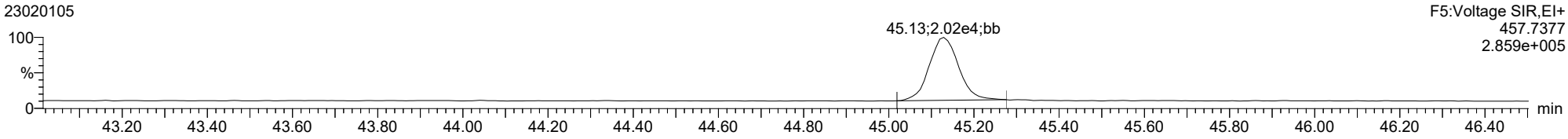
OCDD



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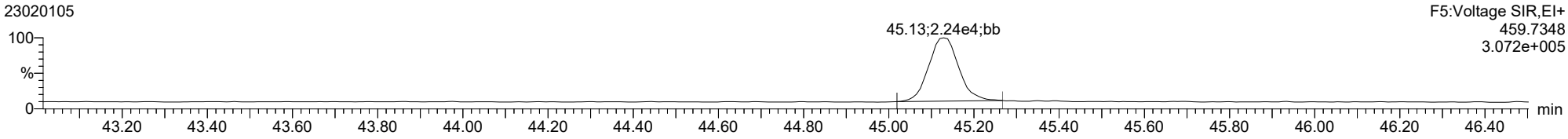

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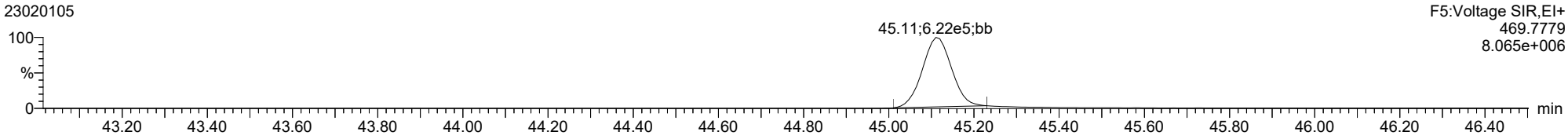

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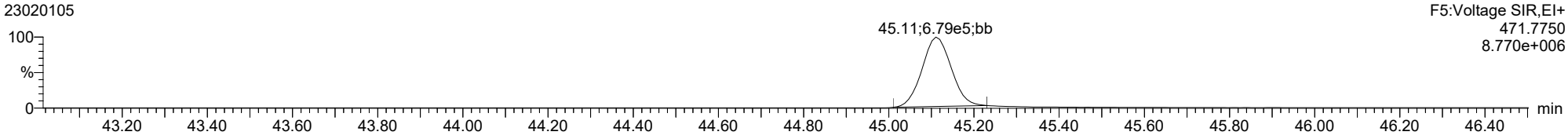
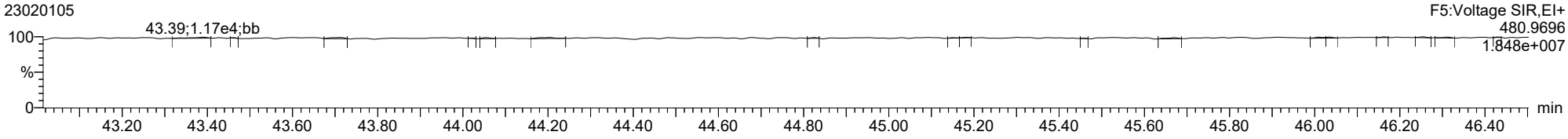


FUNCTION5 PFK



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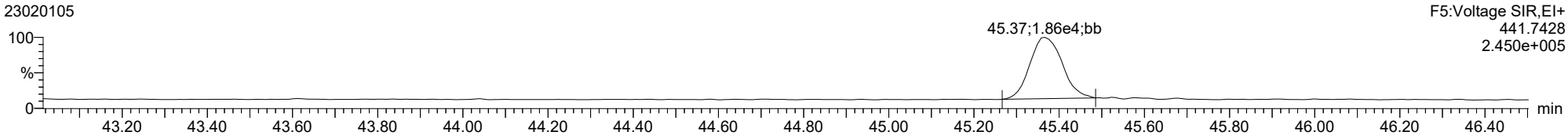

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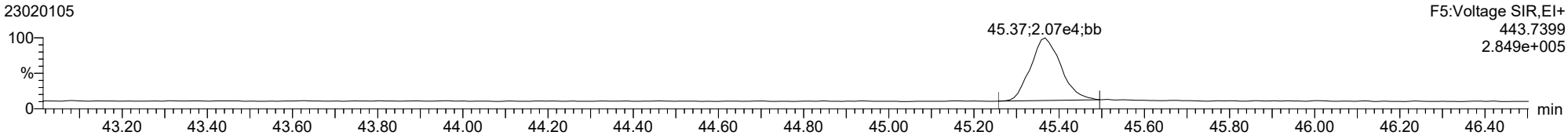
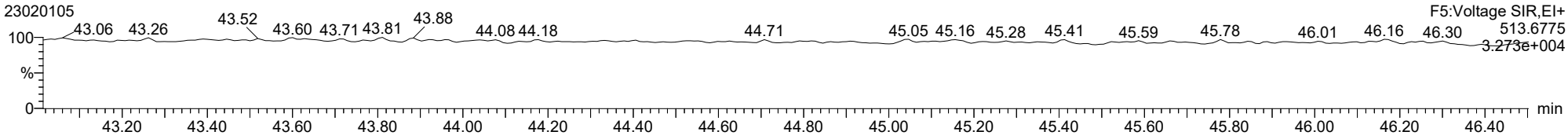


FUNCTION5 DCDPE



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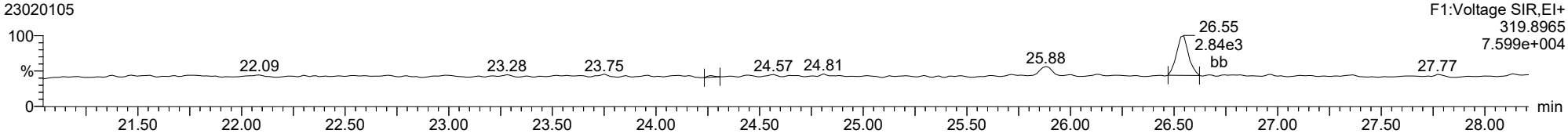
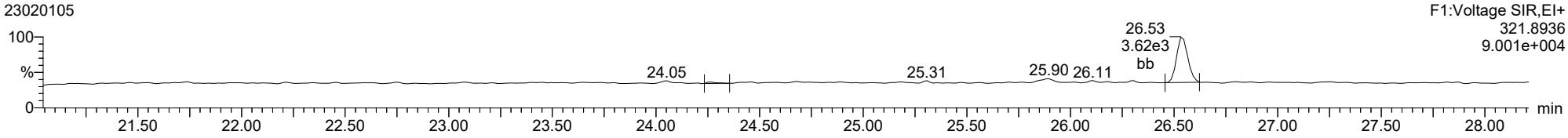
Total-tetradioxins



Total-tetradioxins



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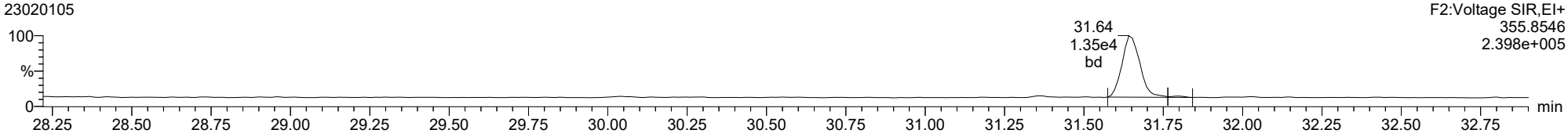
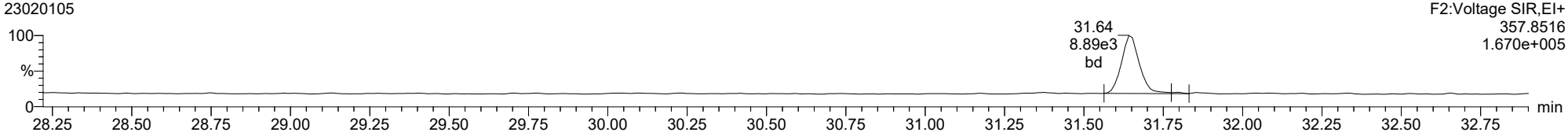


Total-pentadioxins



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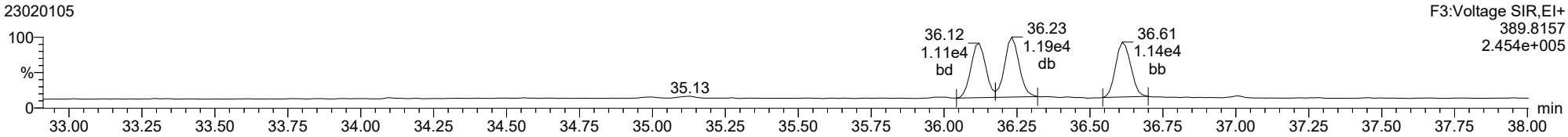

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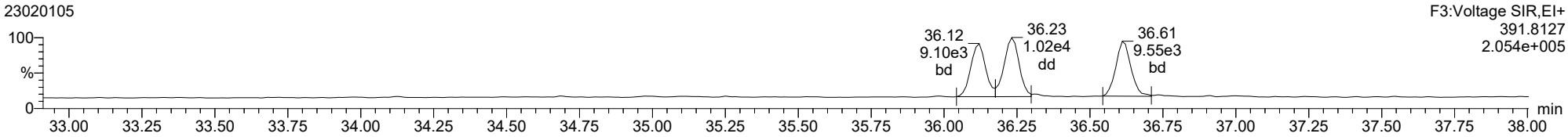

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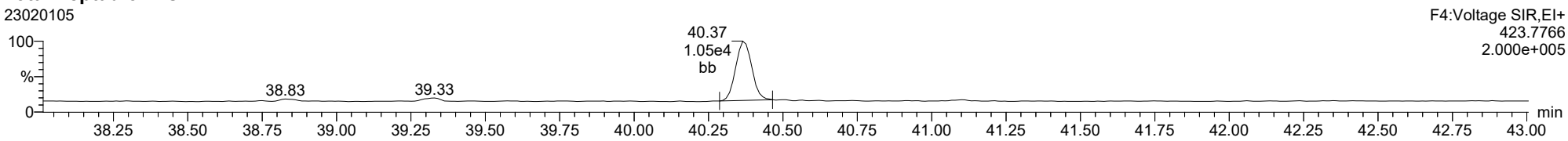

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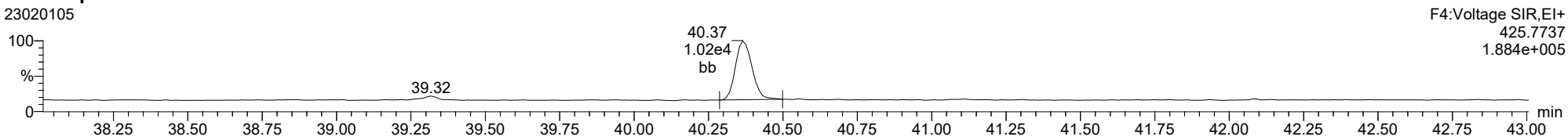

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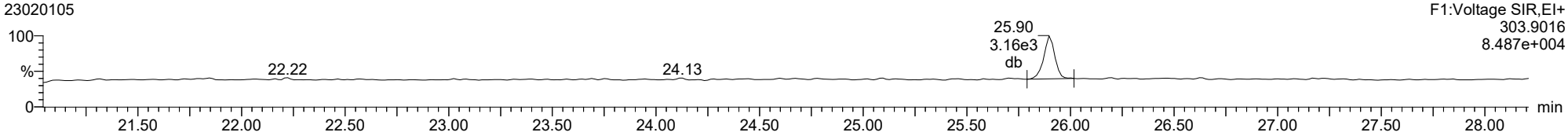
Total-tetrafurans



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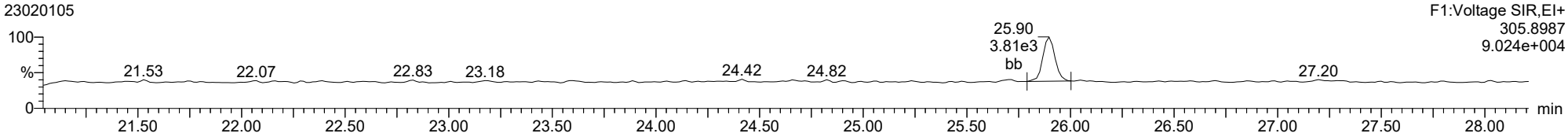

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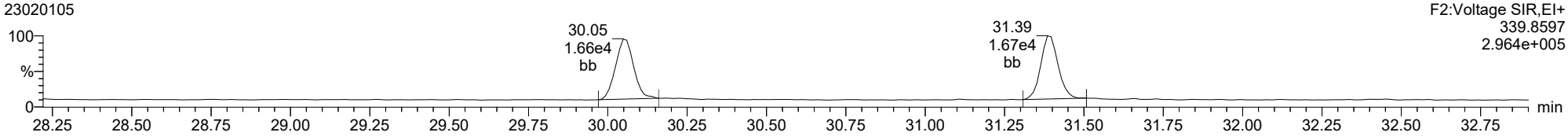

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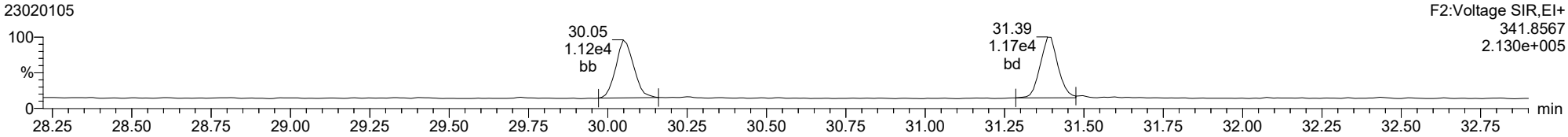

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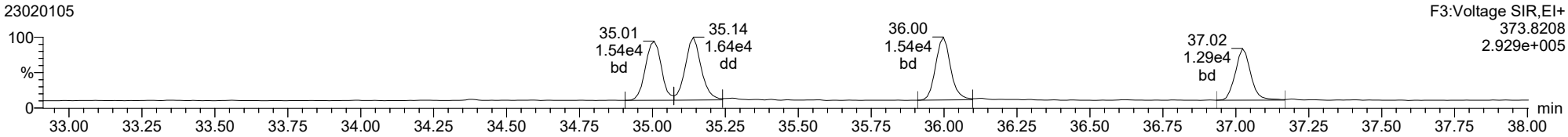

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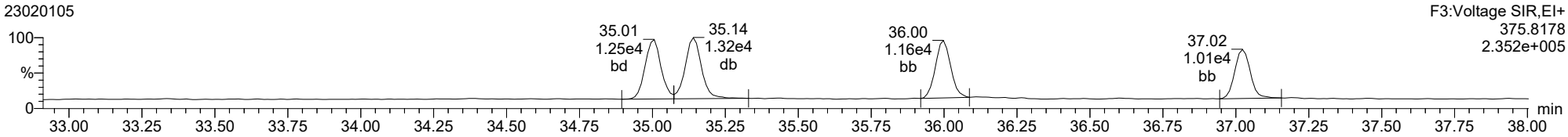

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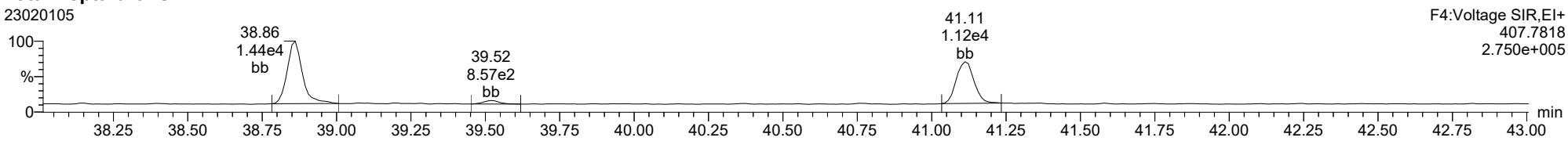
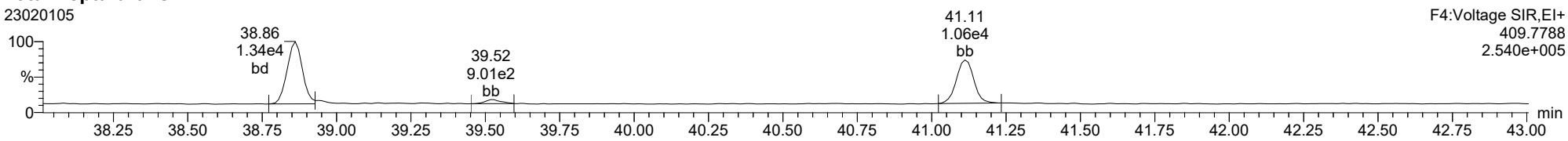


Total-heptafurans



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Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:37:25 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS2CR, Name: 23020106, Date: 01-Feb-2023, Time: 17:07:07, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.897	1.001	1.375e4	1.851e4	0.876	0.743	0.770	838	1562	2.10e5	2.76e5	250.5	176.4	NO	bb	bb	1.973
12378-PeCDF	30.059	1.001	8.384e4	5.404e4	0.845	1.551	1.550	1494	1842	1.30e6	8.45e5	870.6	458.6	NO	bd	bd	10.086
23478-PeCDF	31.396	1.001	8.811e4	5.691e4	0.911	1.548	1.550	1494	1842	1.31e6	8.58e5	880.0	466.0	NO	dd	bd	10.430
123478-HxCDF	35.006	1.001	7.445e4	5.785e4	1.182	1.287	1.240	1528	1565	1.21e6	9.52e5	791.3	608.7	NO	bd	bd	9.662
234678-HxCDF	35.998	1.000	7.554e4	5.984e4	1.229	1.262	1.240	1528	1565	1.18e6	9.11e5	774.2	582.4	NO	bd	bd	10.016
123678-HxCDF	35.140	1.000	8.156e4	6.332e4	1.248	1.288	1.240	1528	1565	1.23e6	9.70e5	801.6	619.6	NO	dd	dd	9.876
123789-HxCDF	37.023	1.000	6.616e4	5.058e4	1.187	1.308	1.240	1528	1565	1.05e6	8.18e5	687.4	522.6	NO	bd	bd	9.712
1234678-HpCDF	38.861	1.000	6.989e4	6.457e4	1.204	1.082	1.050	1538	1410	1.20e6	1.09e6	782.0	769.9	NO	bd	bb	9.897
1234789-HpCDF	41.111	1.000	5.916e4	5.737e4	1.165	1.031	1.050	1538	1410	8.45e5	8.21e5	549.5	582.6	NO	bd	bd	10.092
OCDF	45.376	1.006	9.214e4	9.862e4	1.186	0.934	0.890	1525	1454	1.11e6	1.20e6	727.4	823.3	NO	bd	bb	18.863
2378-TCDD	26.547	1.001	1.298e4	1.586e4	1.236	0.818	0.770	817	918	1.95e5	2.41e5	239.3	262.4	NO	bb	bb	2.020
12378-PeCDD	31.653	1.001	6.323e4	4.003e4	1.087	1.579	1.550	957	1113	9.67e5	6.22e5	1010.9	558.7	NO	bb	bb	9.953
123478-HxCDD	36.120	1.000	5.350e4	4.542e4	0.987	1.178	1.240	1419	1111	9.15e5	7.70e5	644.4	692.8	NO	bd	bd	9.967
123678-HxCDD	36.232	1.000	5.670e4	4.717e4	1.021	1.202	1.240	1419	1111	9.21e5	7.75e5	649.0	697.0	NO	db	db	9.657
123789-HxCDD	36.621	1.011	5.462e4	4.396e4	0.985	1.243	1.240	1419	1111	9.23e5	7.40e5	650.4	666.2	NO	bb	bb	9.715
1234678-HpCDD	40.376	1.001	5.329e4	4.930e4	1.253	1.081	1.050	939	1025	8.27e5	7.64e5	880.9	744.9	NO	bd	bb	9.623
OCDD	45.129	1.000	8.911e4	9.822e4	1.103	0.907	0.890	1078	1353	1.09e6	1.23e6	1009.3	912.1	NO	bd	bb	19.929
13C-2378-TCDF	25.882	1.007	8.175e5	1.049e6	1.768	0.779	0.770	2768	1604	1.28e7	1.62e7	4615.3	10118.2	NO	bb	bb	98.406
13C-12378-PeCDF	30.037	1.168	9.651e5	6.534e5	1.527	1.477	1.550	2685	2564	1.52e7	9.92e6	5664.2	3868.0	NO	bb	bd	98.795
13C-23478-PeCDF	31.374	1.220	9.289e5	5.970e5	1.466	1.556	1.550	2685	2564	1.42e7	9.15e6	5285.2	3567.7	NO	bb	bb	97.006
13C-123478-HxCDF	34.984	0.956	3.919e5	7.668e5	1.054	0.511	0.510	2280	2951	6.27e6	1.23e7	2748.9	4152.3	NO	bd	bd	102.036
13C-123678-HxCDF	35.129	0.960	3.972e5	7.782e5	1.080	0.510	0.510	2280	2951	6.52e6	1.27e7	2858.6	4308.7	NO	db	db	100.982
13C-234678-HxCDF	35.987	0.983	3.723e5	7.276e5	1.014	0.512	0.510	2280	2951	6.20e6	1.20e7	2719.4	4079.1	NO	bb	bb	100.611
13C-123789-HxCDF	37.012	1.011	3.411e5	6.719e5	0.928	0.508	0.510	2280	2951	5.87e6	1.14e7	2576.5	3878.0	NO	bb	bb	101.286
13C-1234678-HpCDF	38.850	1.061	3.519e5	7.764e5	1.036	0.453	0.440	2948	3056	6.15e6	1.36e7	2085.9	4456.3	NO	bb	bb	101.034
13C-1234789-HpCDF	41.100	1.123	3.071e5	6.837e5	0.905	0.449	0.440	2948	3056	4.66e6	1.03e7	1581.8	3383.9	NO	bb	bb	101.592
13C-1234-TCDD	25.715	0.000	4.761e5	5.966e5	1.000	0.798	0.770	1722	1260	7.44e6	9.39e6	4318.3	7453.5	NO	bb	bb	100.000
13C-2378-TCDD	26.517	1.031	5.086e5	6.462e5	1.103	0.787	0.770	1722	1260	7.59e6	9.61e6	4407.4	7623.5	NO	bb	bb	97.603
13C-12378-PeCDD	31.631	1.230	5.873e5	3.674e5	0.914	1.599	1.550	1804	1493	9.15e6	5.75e6	5075.5	3848.9	NO	bb	bb	97.357
13C-123478-HxCDD	36.109	0.987	5.695e5	4.361e5	0.933	1.306	1.240	2351	1925	9.66e6	7.35e6	4110.6	3818.4	NO	bd	bd	100.012
13C-123678-HxCDD	36.221	0.990	5.923e5	4.615e5	0.965	1.283	1.240	2351	1925	9.93e6	7.73e6	4224.3	4014.3	NO	db	db	101.353
13C-1234678-HpCDD	40.354	1.103	4.427e5	4.084e5	0.782	1.084	1.050	2415	1836	6.98e6	6.52e6	2888.8	3549.1	NO	bb	bb	100.984
13C-OCDD	45.110	1.232	8.153e5	8.896e5	0.788	0.916	0.890	2586	2058	1.02e7	1.13e7	3959.4	5482.6	NO	bb	bb	200.686
13C-123789-HxCDD	36.599	0.000	5.962e5	4.816e5	1.000	1.238	1.240	2351	1925	9.93e6	8.01e6	4225.3	4157.6	NO	bb	bb	100.000
37CL-2378-TCDD	26.547	1.032	2.594e4		1.233			1770		3.86e5		217.9			bb		1.960

Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
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ID: CS2CR, Name: 23020106, Date: 01-Feb-2023, Time: 17:07:07, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					1.064		0.770	838	1562								
1289-TCDF					0.858		0.770	838	1562								
13468-PECDF					1.013		1.550	818	1180								
12389-PECDF					0.844		1.550	1494	1842								
123468-HXCDF					1.197		1.240	1528	1565								
1368-TCDD					1.084		0.770	817	918								
1289-TCDD					0.975		0.770	817	918								
12479-PECDD					1.837		1.550	957	1113								
12389-PECDD					1.252		1.550	957	1113								
124679-HXCDD					1.033		1.240	1419	1111								
1234679-HPCDD					1.286		1.050	939	1025								
Total-tetrafurans			1.375e4		0.933			838		2.10e5							1.973
Total-penta1			0.000e0					818		0.00e0							
Total-pentafurans			1.724e5		0.866			1494		2.63e6							20.570
Total-hexafurans			2.977e5		1.208			1528		4.67e6							39.267
Total-heptafurans			1.291e5		1.185			1538		2.05e6							19.990
Total-Furans			7.051e5		1.067			838		1.07e7							100.663
Total-tetradioxins			1.298e4		1.099			817		1.95e5							2.020
Total-pentadioxins			6.323e4		1.392			957		9.67e5							9.953
Total-hexadioxins			1.650e5		1.007			1419		2.76e6							29.363
Total-heptadioxins			5.329e4		1.269			939		8.27e5							9.623
Total-Dioxins			3.836e5		1.165			817		5.84e6							70.888
Total-TEQ			1.089e6					817		1.65e7							171.552
FUNCTION1 PFK			0.000e0					575758		0.00e0							
FUNCTION2 PFK			0.000e0					203146		0.00e0							
FUNCTION3 PFK			1.946e5					441294		6.25e6							0.000
FUNCTION4 PFK			6.766e5					326212		1.14e7							
FUNCTION5 PFK			7.829e4					177933		3.00e6							
FUNCTION1 HXCD...			6.944e2					716		1.19e4							0.000
FUNCTION1 HPCD...			4.187e2					801		7.47e3							0.000
FUNCTION2 HPCD...			7.244e2					1047		1.53e4							0.000
FUNCTION3 OCDPE			2.025e2					783		3.00e3							0.000
FUNCTION4 NCDPE			5.677e2					836		9.38e3							0.000
FUNCTION5 DCDPE			1.012e2					822		1.66e3							0.000

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.90	1.375e4	1.851e4	0.876	0.74	0.77	250.5	YES	NO	bb	bb	1.973

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.40	8.811e4	5.691e4	0.911	1.55	1.55	880.0	YES	NO	dd	bd	10.430
2	Total-pentafurans	30.25	4.556e2	2.766e2	0.866	1.65	1.55	7.1	YES	NO	dd	db	0.054
3	12378-PeCDF	30.06	8.384e4	5.404e4	0.845	1.55	1.55	870.6	YES	NO	bd	bd	10.086

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	234678-HxCDF	36.00	7.554e4	5.984e4	1.229	1.26	1.24	774.2	YES	NO	bd	bd	10.016
2	123678-HxCDF	35.14	8.156e4	6.332e4	1.248	1.29	1.24	801.6	YES	NO	dd	dd	9.876
3	123478-HxCDF	35.01	7.445e4	5.785e4	1.182	1.29	1.24	791.3	YES	NO	bd	bd	9.662
4	123789-HxCDF	37.02	6.616e4	5.058e4	1.187	1.31	1.24	687.4	YES	NO	bd	bd	9.712

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.11	5.916e4	5.737e4	1.165	1.03	1.05	549.5	YES	NO	bd	bd	10.092
2	1234678-HpCDF	38.86	6.989e4	6.457e4	1.204	1.08	1.05	782.0	YES	NO	bd	bb	9.897

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.90	1.375e4	1.851e4	0.876	0.74	0.77	250.5	YES	NO	bb	bb	1.973
2	23478-PeCDF	31.40	8.811e4	5.691e4	0.911	1.55	1.55	880.0	YES	NO	dd	bd	10.430
3	Total-pentafurans	30.25	4.556e2	2.766e2	0.866	1.65	1.55	7.1	YES	NO	dd	db	0.054
4	12378-PeCDF	30.06	8.384e4	5.404e4	0.845	1.55	1.55	870.6	YES	NO	bd	bd	10.086
5	234678-HxCDF	36.00	7.554e4	5.984e4	1.229	1.26	1.24	774.2	YES	NO	bd	bd	10.016
6	123678-HxCDF	35.14	8.156e4	6.332e4	1.248	1.29	1.24	801.6	YES	NO	dd	dd	9.876
7	123478-HxCDF	35.01	7.445e4	5.785e4	1.182	1.29	1.24	791.3	YES	NO	bd	bd	9.662
8	123789-HxCDF	37.02	6.616e4	5.058e4	1.187	1.31	1.24	687.4	YES	NO	bd	bd	9.712
9	1234789-HpCDF	41.11	5.916e4	5.737e4	1.165	1.03	1.05	549.5	YES	NO	bd	bd	10.092
10	1234678-HpCDF	38.86	6.989e4	6.457e4	1.204	1.08	1.05	782.0	YES	NO	bd	bb	9.897
11	OCDF	45.38	9.214e4	9.862e4	1.186	0.93	0.89	727.4	YES	NO	bd	bb	18.863

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.55	1.298e4	1.586e4	1.236	0.82	0.77	239.3	YES	NO	bb	bb	2.020

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.65	6.323e4	4.003e4	1.087	1.58	1.55	1010.9	YES	NO	bb	bb	9.953

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexadioxins	36.88	1.448e2	1.055e2	1.007	1.37	1.24	2.8	NO	NO	bb	bb	0.024
2	123789-HxCDD	36.62	5.462e4	4.396e4	0.985	1.24	1.24	650.4	YES	NO	bb	bb	9.715
3	123678-HxCDD	36.23	5.670e4	4.717e4	1.021	1.20	1.24	649.0	YES	NO	db	db	9.657
4	123478-HxCDD	36.12	5.350e4	4.542e4	0.987	1.18	1.24	644.4	YES	NO	bd	bd	9.967

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.38	5.329e4	4.930e4	1.253	1.08	1.05	880.9	YES	NO	bd	bb	9.623

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.65	6.323e4	4.003e4	1.087	1.58	1.55	1010.9	YES	NO	bb	bb	9.953
2	2378-TCDD	26.55	1.298e4	1.586e4	1.236	0.82	0.77	239.3	YES	NO	bb	bb	2.020
3	Total-hexadioxins	36.88	1.448e2	1.055e2	1.007	1.37	1.24	2.8	NO	NO	bb	bb	0.024
4	123789-HxCDD	36.62	5.462e4	4.396e4	0.985	1.24	1.24	650.4	YES	NO	bb	bb	9.715
5	123678-HxCDD	36.23	5.670e4	4.717e4	1.021	1.20	1.24	649.0	YES	NO	db	db	9.657
6	123478-HxCDD	36.12	5.350e4	4.542e4	0.987	1.18	1.24	644.4	YES	NO	bd	bd	9.967
7	1234678-HpCDD	40.38	5.329e4	4.930e4	1.253	1.08	1.05	880.9	YES	NO	bd	bb	9.623
8	OCDD	45.13	8.911e4	9.822e4	1.103	0.91	0.89	1009.3	YES	NO	bd	bb	19.929

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.90	1.375e4	1.851e4	0.876	0.74	0.77	250.5	YES	NO	bb	bb	1.973
2	23478-PeCDF	31.40	8.811e4	5.691e4	0.911	1.55	1.55	880.0	YES	NO	dd	bd	10.430
3	Total-pentafurans	30.25	4.556e2	2.766e2	0.866	1.65	1.55	7.1	YES	NO	dd	db	0.054
4	12378-PeCDF	30.06	8.384e4	5.404e4	0.845	1.55	1.55	870.6	YES	NO	bd	bd	10.086
5	234678-HxCDF	36.00	7.554e4	5.984e4	1.229	1.26	1.24	774.2	YES	NO	bd	bd	10.016
6	123678-HxCDF	35.14	8.156e4	6.332e4	1.248	1.29	1.24	801.6	YES	NO	dd	dd	9.876
7	123478-HxCDF	35.01	7.445e4	5.785e4	1.182	1.29	1.24	791.3	YES	NO	bd	bd	9.662
8	123789-HxCDF	37.02	6.616e4	5.058e4	1.187	1.31	1.24	687.4	YES	NO	bd	bd	9.712
9	1234789-HpCDF	41.11	5.916e4	5.737e4	1.165	1.03	1.05	549.5	YES	NO	bd	bd	10.092
10	1234678-HpCDF	38.86	6.989e4	6.457e4	1.204	1.08	1.05	782.0	YES	NO	bd	bb	9.897
11	OCDF	45.38	9.214e4	9.862e4	1.186	0.93	0.89	727.4	YES	NO	bd	bb	18.863
12	12378-PeCDD	31.65	6.323e4	4.003e4	1.087	1.58	1.55	1010.9	YES	NO	bb	bb	9.953
13	2378-TCDD	26.55	1.298e4	1.586e4	1.236	0.82	0.77	239.3	YES	NO	bb	bb	2.020
14	Total-hexadioxins	36.88	1.448e2	1.055e2	1.007	1.37	1.24	2.8	NO	NO	bb	bb	0.024
15	123789-HxCDD	36.62	5.462e4	4.396e4	0.985	1.24	1.24	650.4	YES	NO	bb	bb	9.715
16	123678-HxCDD	36.23	5.670e4	4.717e4	1.021	1.20	1.24	649.0	YES	NO	db	db	9.657
17	123478-HxCDD	36.12	5.350e4	4.542e4	0.987	1.18	1.24	644.4	YES	NO	bd	bd	9.967
18	1234678-HpCDD	40.38	5.329e4	4.930e4	1.253	1.08	1.05	880.9	YES	NO	bd	bb	9.623
19	OCDD	45.13	8.911e4	9.822e4	1.103	0.91	0.89	1009.3	YES	NO	bd	bb	19.929

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.84	3.684e4					1.4	NO		bb		0.000
2	FUNCTION3 PFK	37.56	3.248e4					1.4	NO		bb		0.000
3	FUNCTION3 PFK	37.40	1.502e4					1.5	NO		bb		0.000
4	FUNCTION3 PFK	36.84	6.471e3					0.8	NO		bb		0.000
5	FUNCTION3 PFK	36.52	9.443e3					0.9	NO		bb		0.000
6	FUNCTION3 PFK	36.37	4.140e3					0.7	NO		db		0.000
7	FUNCTION3 PFK	36.33	1.297e4					1.2	NO		bd		0.000
8	FUNCTION3 PFK	36.13	6.608e3					0.8	NO		bb		0.000
9	FUNCTION3 PFK	35.98	2.009e4					1.5	NO		bb		0.000
10	FUNCTION3 PFK	35.88	2.554e3					0.5	NO		bb		0.000
11	FUNCTION3 PFK	34.30	1.671e4					1.6	NO		bb		0.000
12	FUNCTION3 PFK	34.23	8.316e3					0.4	NO		bb		0.000
13	FUNCTION3 PFK	33.98	2.293e4					1.5	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.23	5.785e4					4.4	YES		dd		
2	FUNCTION4 PFK	38.15	1.010e5					5.4	YES		dd		
3	FUNCTION4 PFK	38.09	1.883e5					5.6	YES		bd		
4	FUNCTION4 PFK	42.87	1.204e4					1.0	NO		bb		
5	FUNCTION4 PFK	42.31	2.496e4					1.3	NO		bb		
6	FUNCTION4 PFK	41.49	1.586e4					1.0	NO		bb		
7	FUNCTION4 PFK	41.10	1.494e4					1.1	NO		bb		
8	FUNCTION4 PFK	40.87	1.555e4					1.4	NO		bb		
9	FUNCTION4 PFK	40.79	1.700e4					1.3	NO		bb		
10	FUNCTION4 PFK	40.65	5.082e3					0.8	NO		bb		
11	FUNCTION4 PFK	40.61	1.525e3					0.4	NO		bb		
12	FUNCTION4 PFK	40.14	1.620e4					1.6	NO		bb		
13	FUNCTION4 PFK	39.90	9.157e3					1.0	NO		bb		
14	FUNCTION4 PFK	39.83	9.091e3					1.1	NO		bb		
15	FUNCTION4 PFK	39.77	4.172e3					0.6	NO		bb		
16	FUNCTION4 PFK	39.63	1.903e3					0.5	NO		bb		
17	FUNCTION4 PFK	39.46	1.766e4					0.8	NO		bb		
18	FUNCTION4 PFK	38.45	3.531e4					1.7	NO		db		
19	FUNCTION4 PFK	38.27	1.290e5					3.8	YES		dd		

ID: CS2CR, Name: 23020106, Date: 01-Feb-2023, Time: 17:07:07, Conditions: AUTOSPEC01, User: pk

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	46.27	9.001e2					0.6	NO		bb		
2	FUNCTION5 PFK	46.15	5.202e3					1.0	NO		bb		
3	FUNCTION5 PFK	45.97	3.660e3					1.2	NO		bb		
4	FUNCTION5 PFK	45.51	1.153e4					2.2	NO		bb		
5	FUNCTION5 PFK	45.41	4.532e3					1.3	NO		db		
6	FUNCTION5 PFK	45.38	1.706e3					0.8	NO		bd		
7	FUNCTION5 PFK	45.15	2.865e3					1.0	NO		bb		
8	FUNCTION5 PFK	44.80	1.877e3					0.7	NO		bb		
9	FUNCTION5 PFK	44.65	3.851e3					1.1	NO		bb		
10	FUNCTION5 PFK	44.56	1.141e4					1.8	NO		bb		
11	FUNCTION5 PFK	44.31	2.169e4					1.9	NO		bb		
12	FUNCTION5 PFK	43.92	8.765e2					0.5	NO		bb		
13	FUNCTION5 PFK	43.88	8.623e2					0.5	NO		db		
14	FUNCTION5 PFK	43.86	1.005e3					0.6	NO		bd		
15	FUNCTION5 PFK	43.82	4.471e3					1.0	NO		bb		
16	FUNCTION5 PFK	46.36	1.842e3					0.7	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.26	9.013e1					2.4	NO		bb		0.000
2	FUNCTION1 HXCD...	26.52	1.374e2					3.3	YES		bb		0.000
3	FUNCTION1 HXCD...	26.35	1.141e2					2.2	NO		bb		0.000
4	FUNCTION1 HXCD...	25.31	7.923e1					2.3	NO		bb		0.000
5	FUNCTION1 HXCD...	24.07	1.307e2					3.2	YES		bb		0.000
6	FUNCTION1 HXCD...	22.72	1.428e2					3.3	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	26.58	7.978e1					2.2	NO		db		0.000
2	FUNCTION1 HPCD...	26.53	1.102e2					2.3	NO		bd		0.000
3	FUNCTION1 HPCD...	24.69	7.048e1					1.7	NO		bb		0.000
4	FUNCTION1 HPCD...	24.48	8.580e1					1.5	NO		bb		0.000
5	FUNCTION1 HPCD...	21.38	7.239e1					1.7	NO		bb		0.000

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ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	28.37	7.170e1					2.5	NO		bb		0.000
2	FUNCTION2 HPCD...	31.76	2.583e2					2.7	NO		db		0.000
3	FUNCTION2 HPCD...	31.64	1.965e2					4.2	YES		bd		0.000
4	FUNCTION2 HPCD...	31.30	1.054e2					1.6	NO		bb		0.000
5	FUNCTION2 HPCD...	29.60	9.241e1					3.7	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.22	9.361e1					1.8	NO		bb		0.000
2	FUNCTION3 OCDPE	33.01	1.089e2					2.0	NO		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.21	1.123e2					2.3	NO		db		0.000
2	FUNCTION4 NCDPE	41.16	1.047e2					2.3	NO		bd		0.000
3	FUNCTION4 NCDPE	41.00	7.125e1					1.9	NO		bb		0.000
4	FUNCTION4 NCDPE	38.88	9.103e1					1.9	NO		bb		0.000
5	FUNCTION4 NCDPE	38.50	1.884e2					2.9	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	44.32	1.012e2					2.0	NO		bb		0.000

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Printed: Friday, February 03, 2023 10:37:25 Pacific Standard Time

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ID: CS2CR, Name: 23020106, Date: 01-Feb-2023, Time: 17:07:07, Conditions: AUTOSPEC01, User: pk

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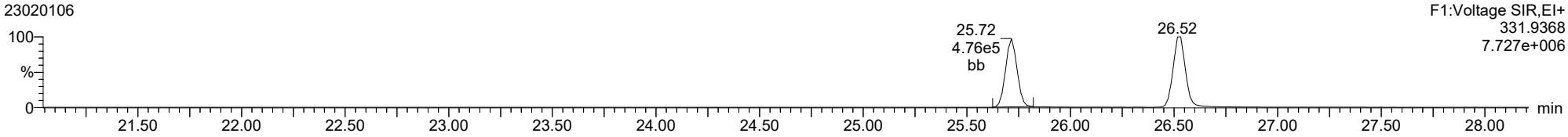

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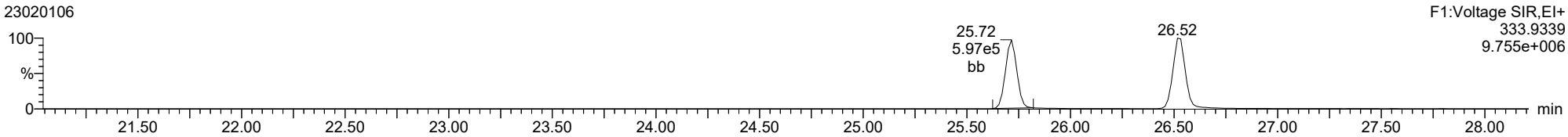

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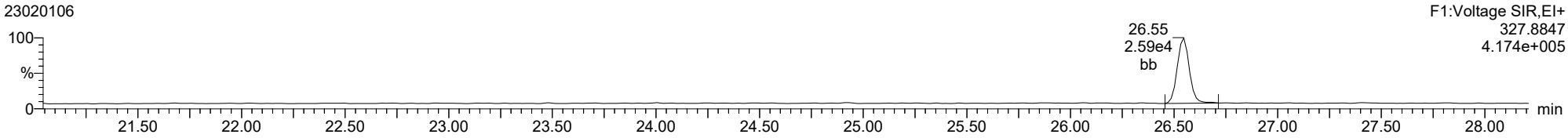

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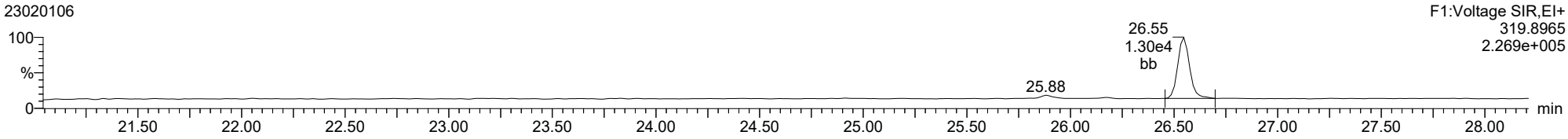

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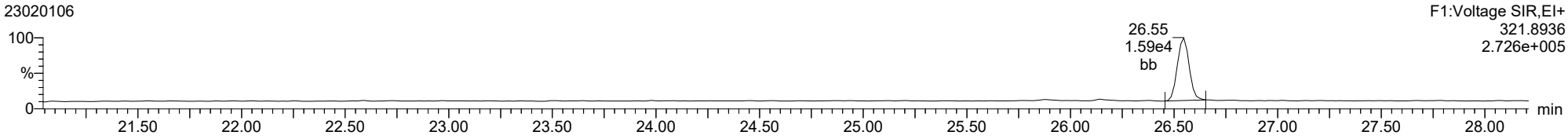

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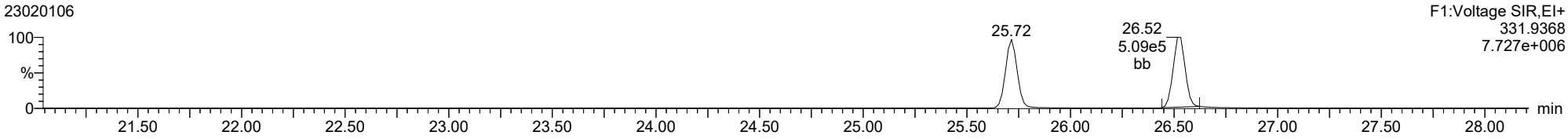

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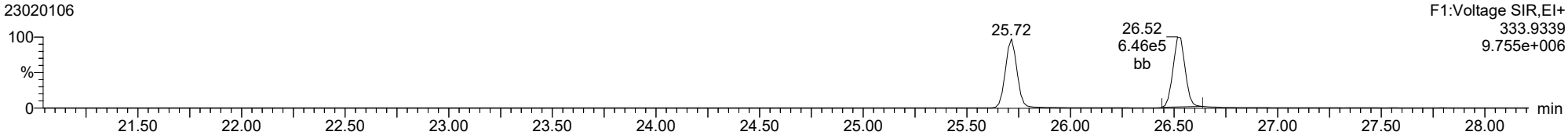

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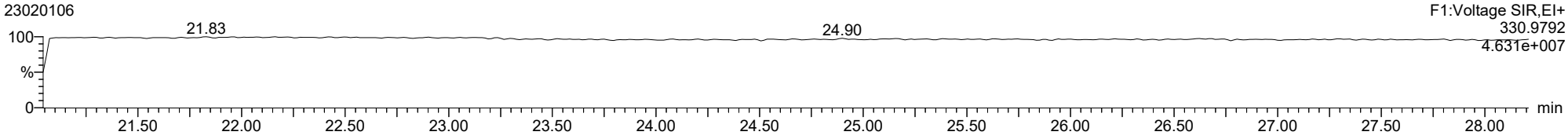

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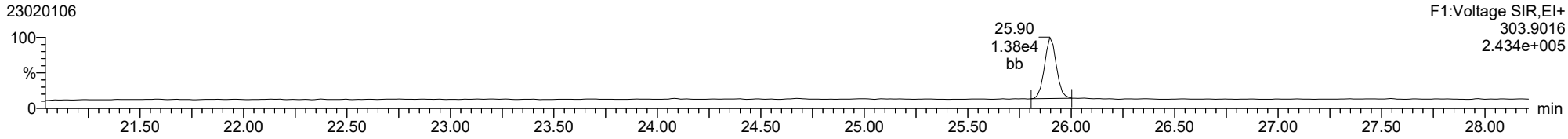
2378-TCDF



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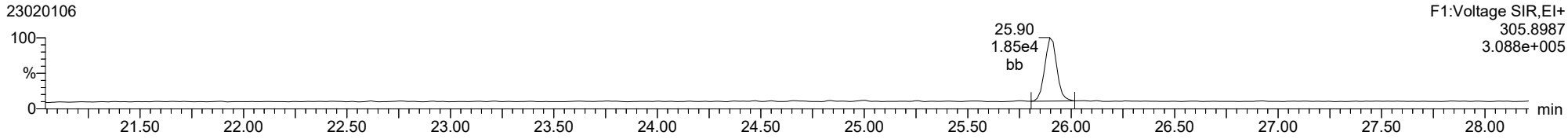

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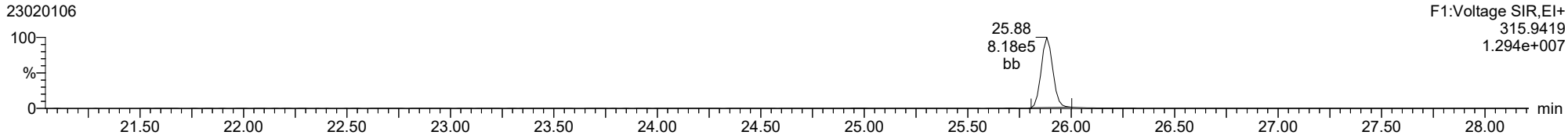

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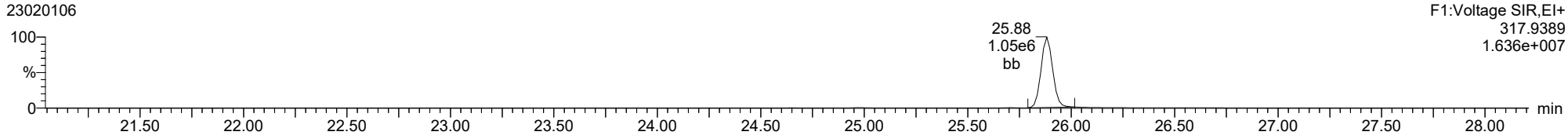

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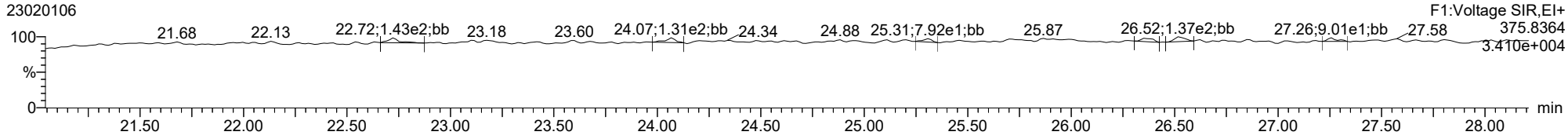

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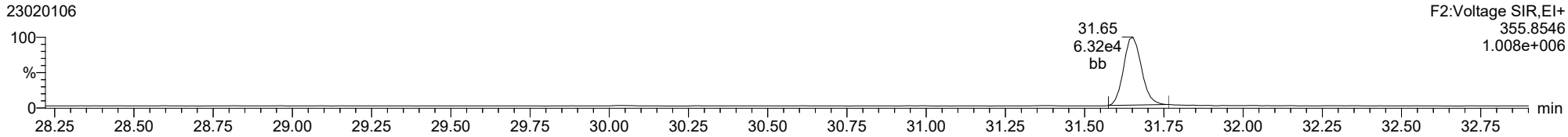
12378-PeCDD



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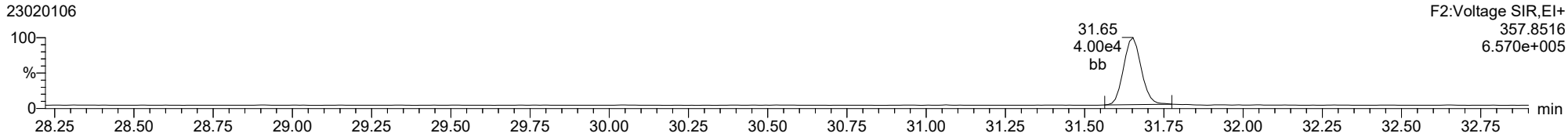

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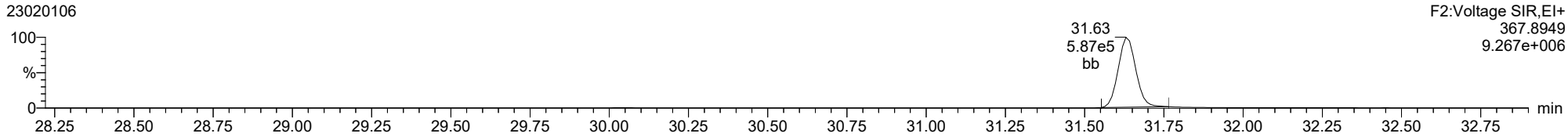

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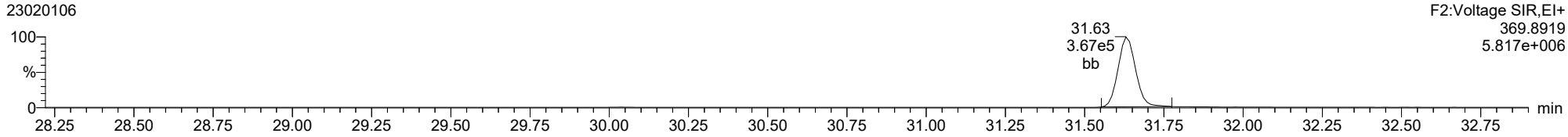
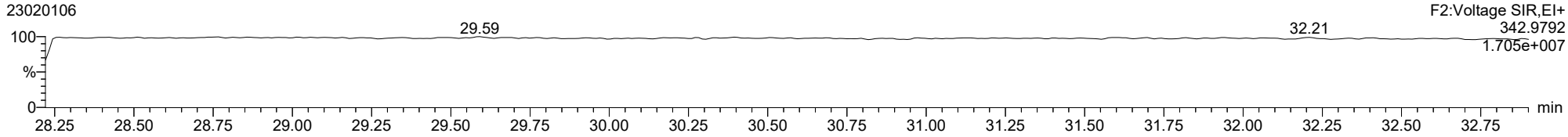


FUNCTION2 PFK



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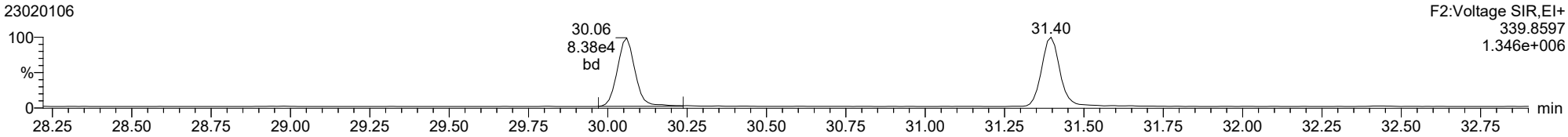

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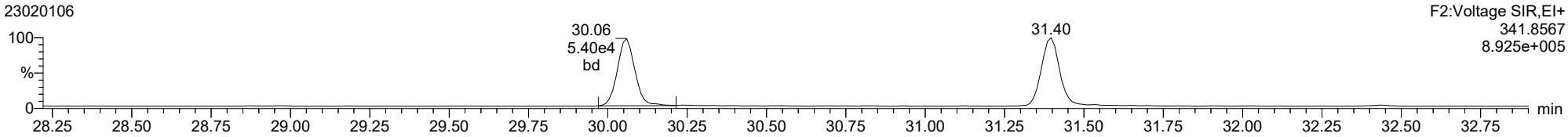

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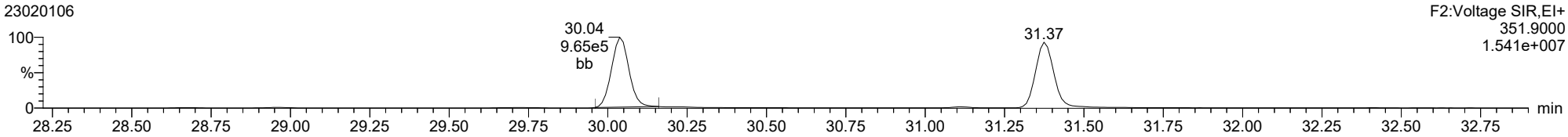

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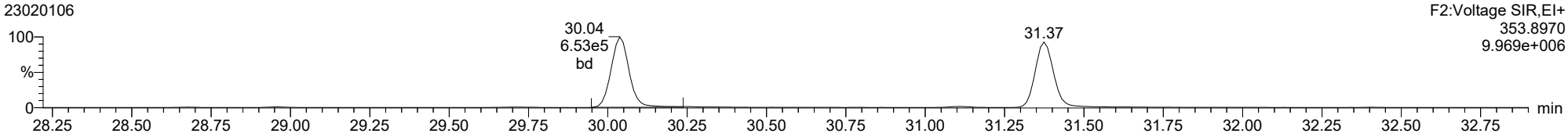
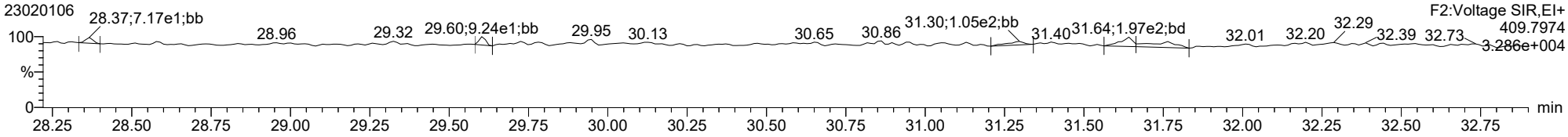


FUNCTION2 HPCDPE



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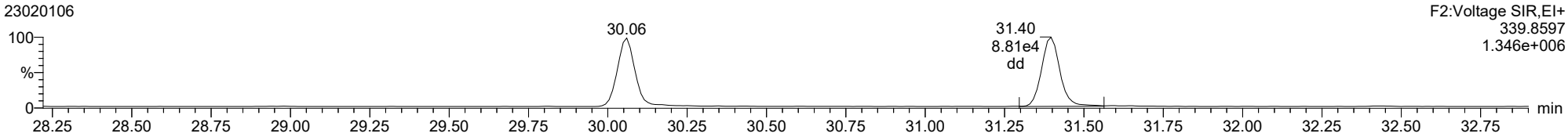
23478-PeCDF



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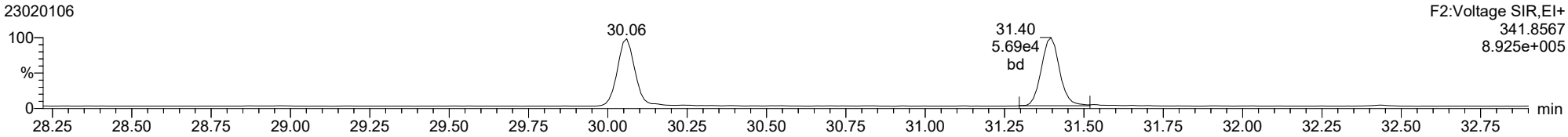

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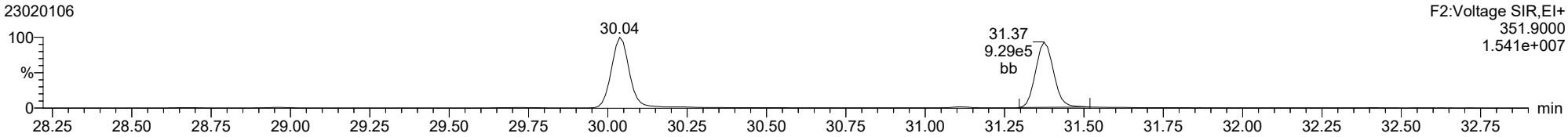

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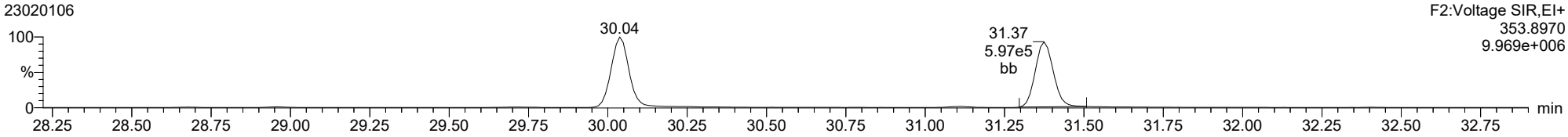
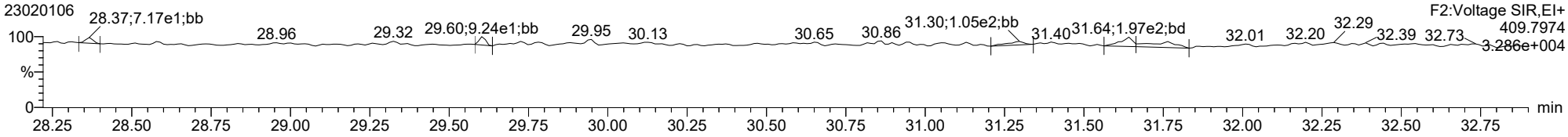


FUNCTION2 HPCDPE



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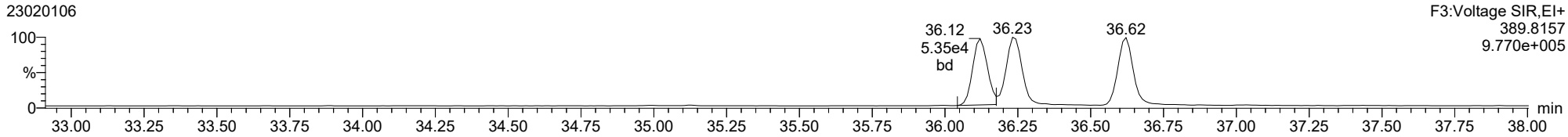
123478-HxCDD



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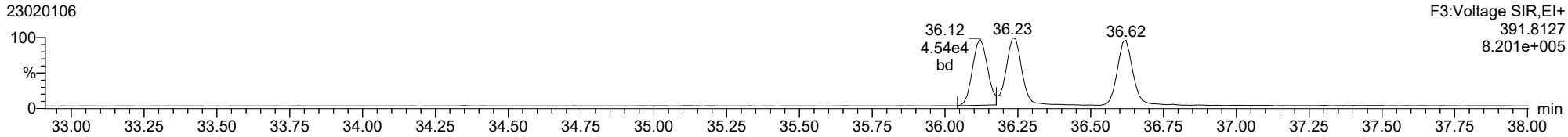

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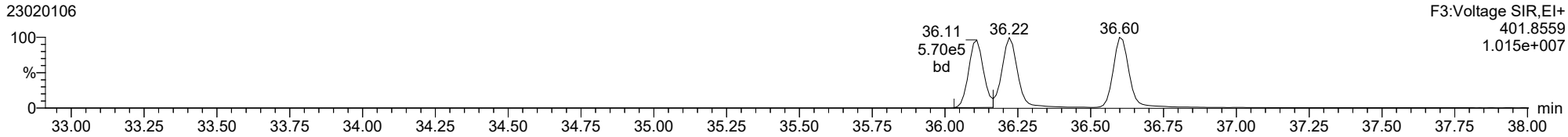

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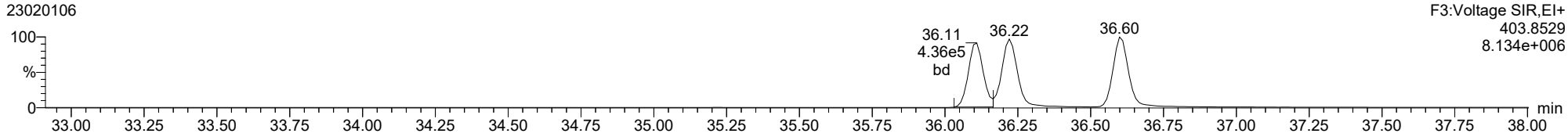
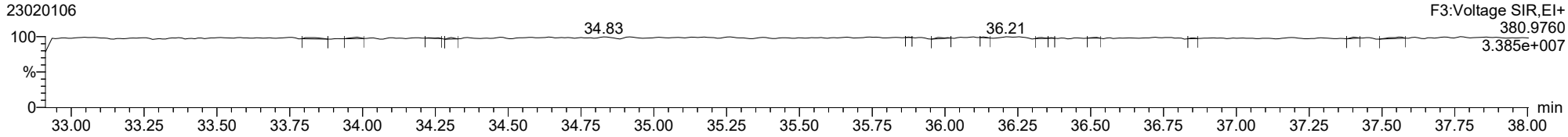


FUNCTION3 PFK



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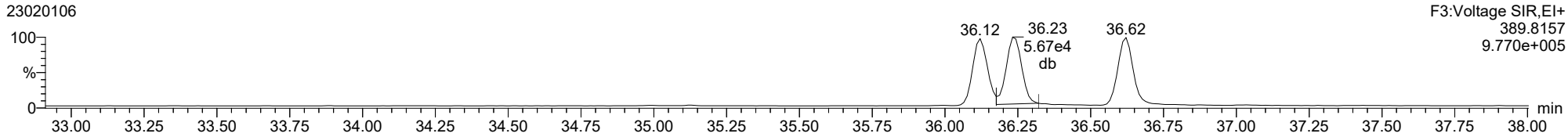
123678-HxCDD



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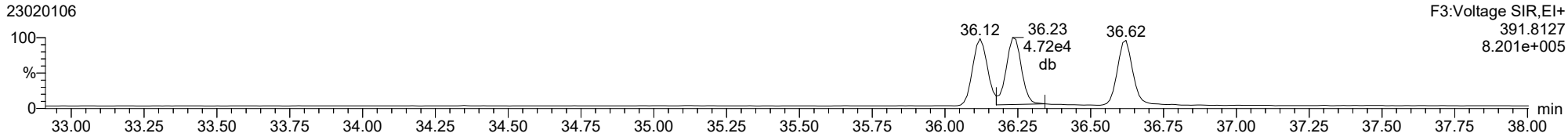

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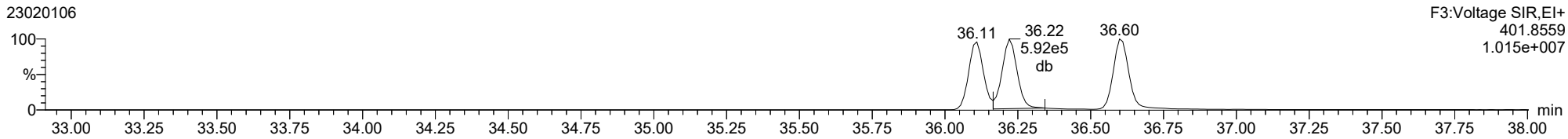

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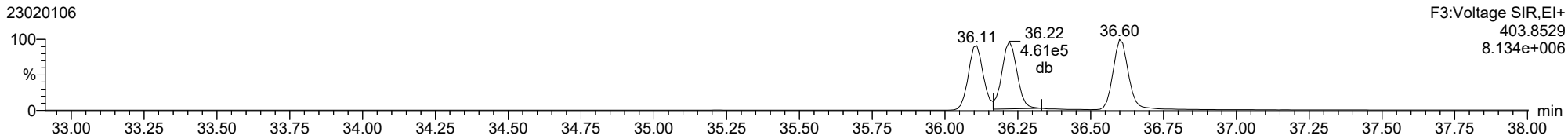

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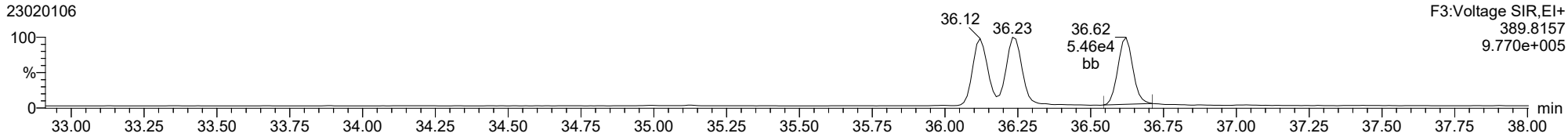

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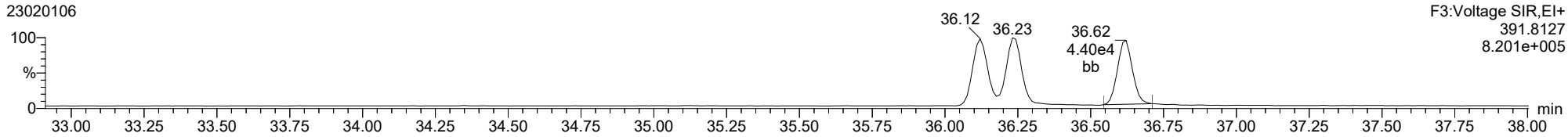

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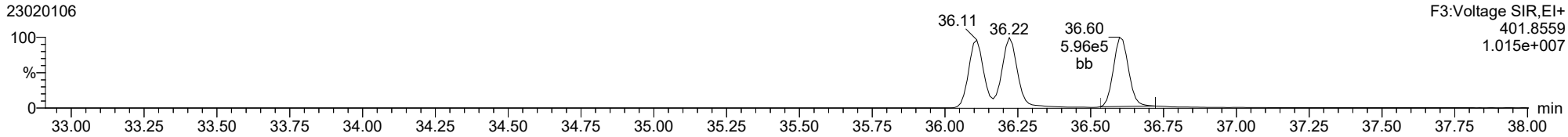

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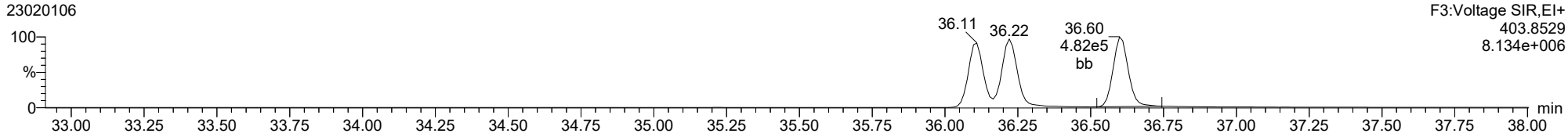

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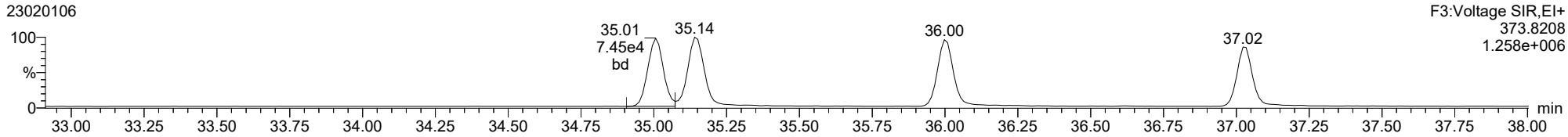

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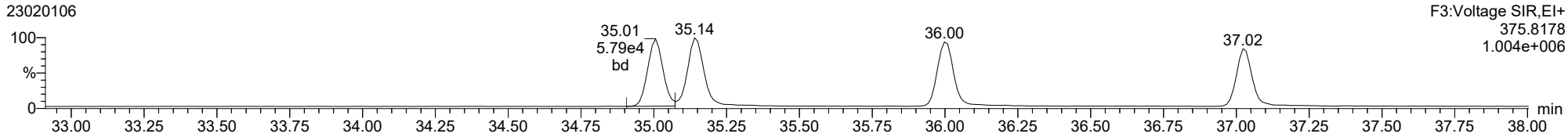

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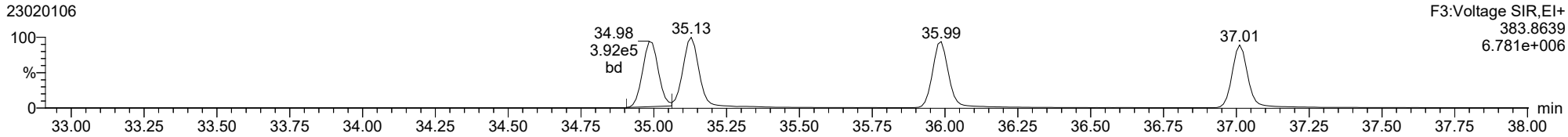

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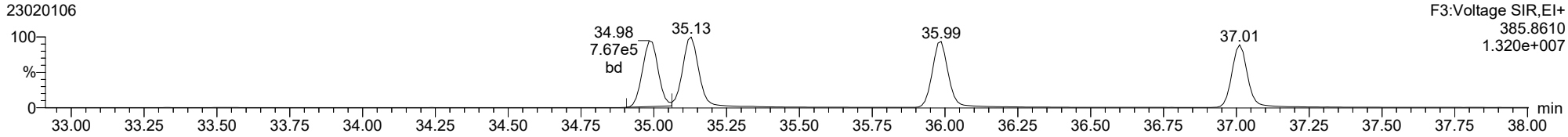

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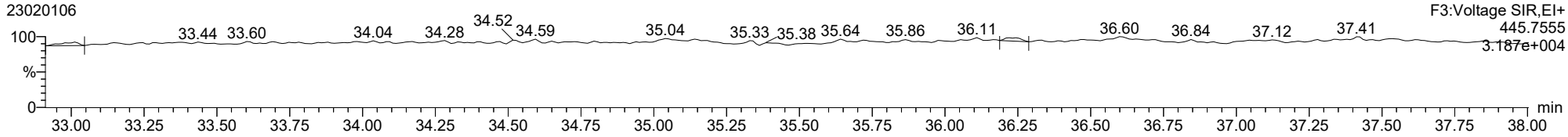

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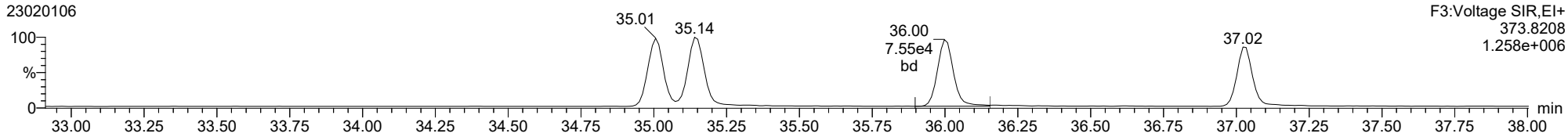

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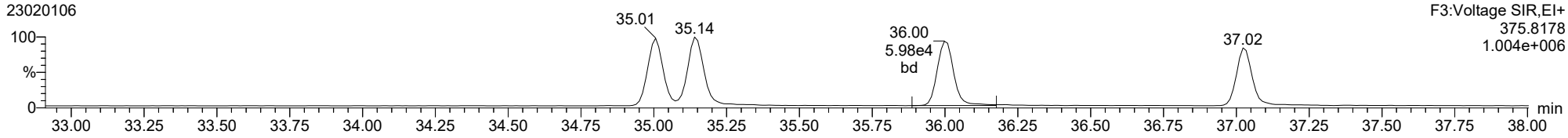

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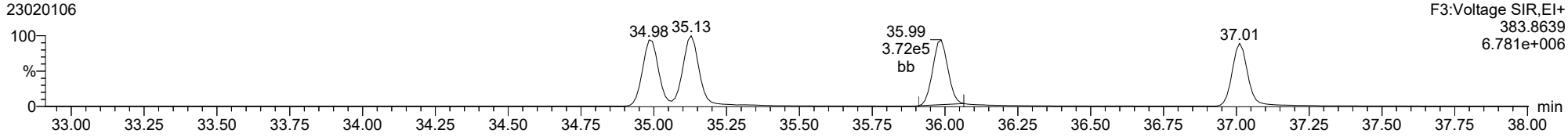

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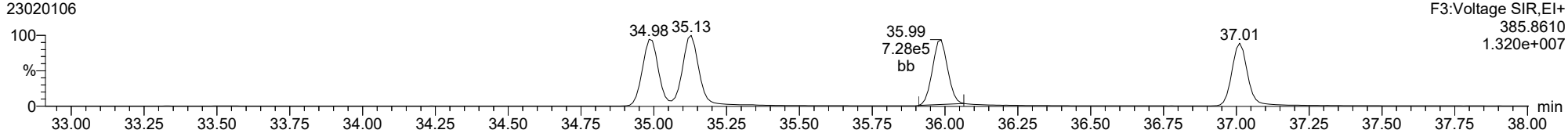

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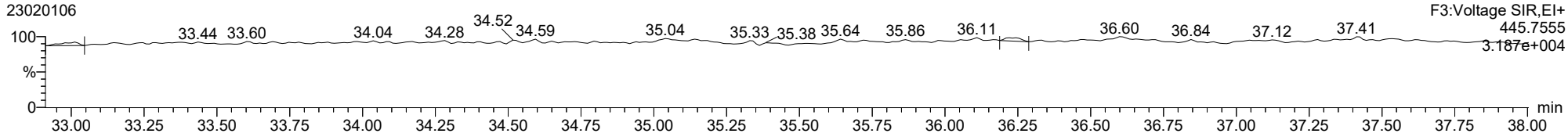

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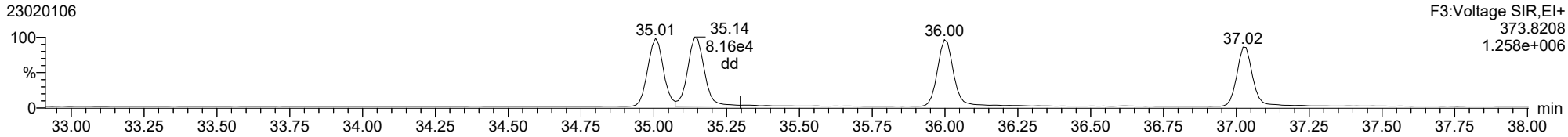

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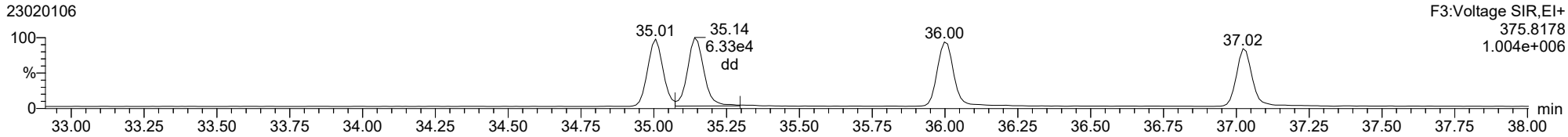

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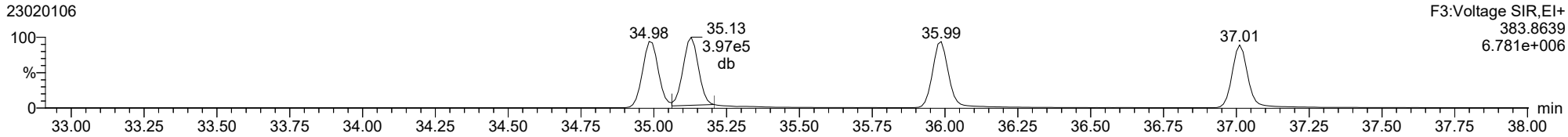

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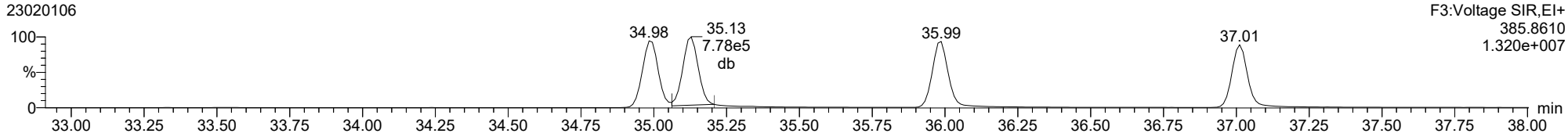

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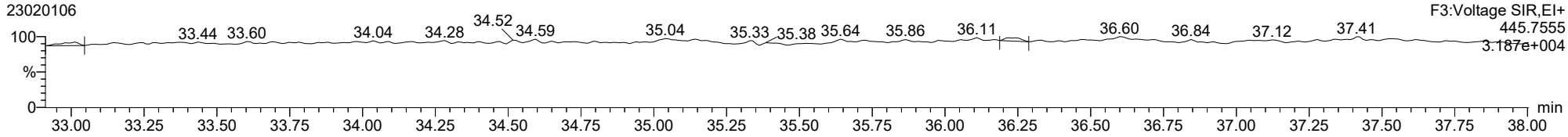

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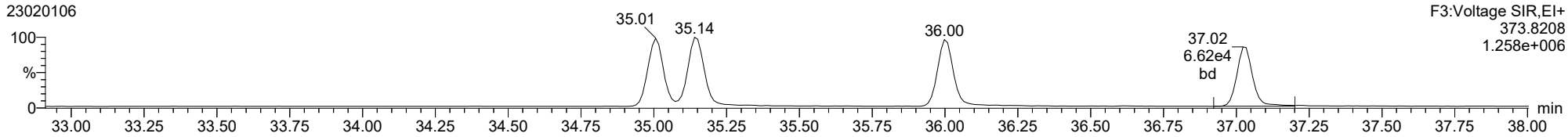

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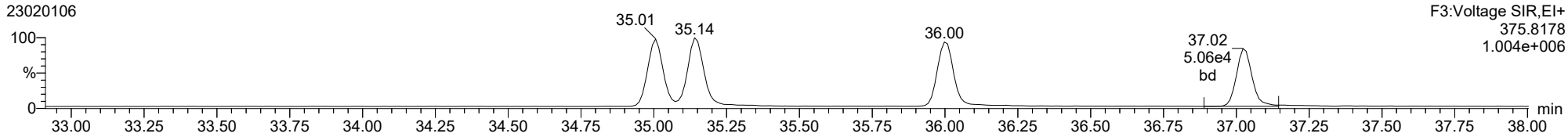

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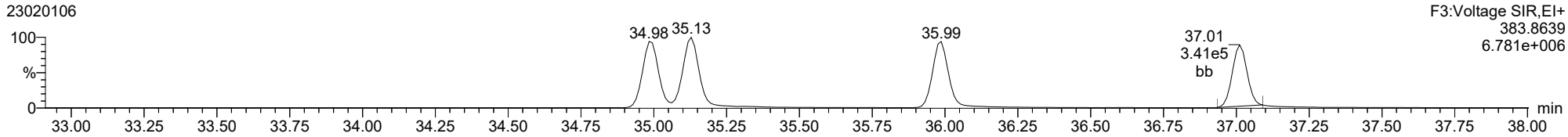

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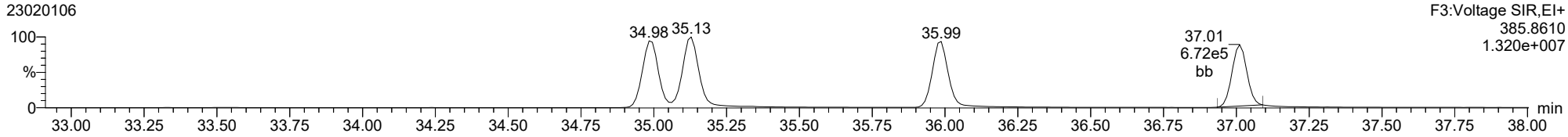

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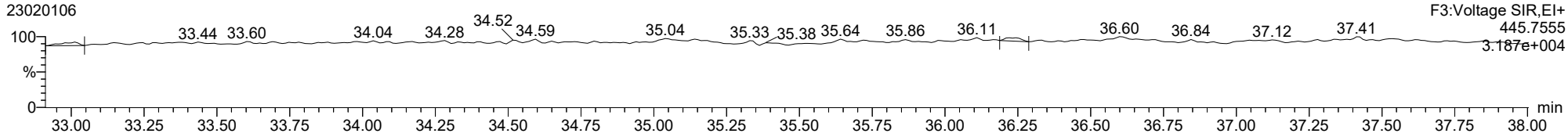

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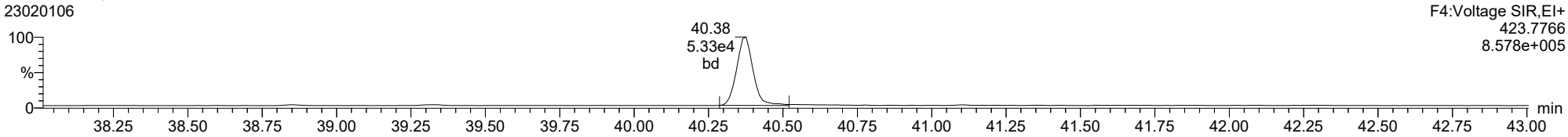

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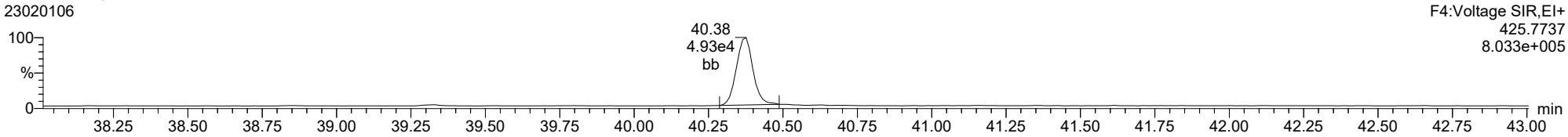

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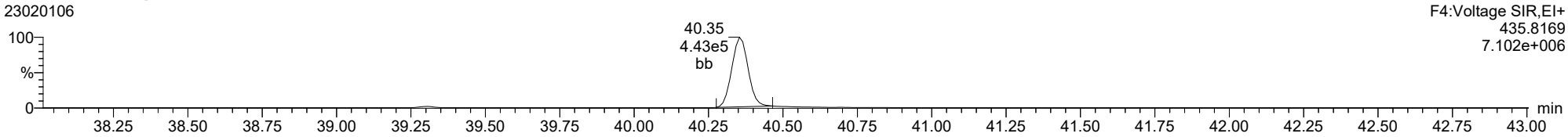

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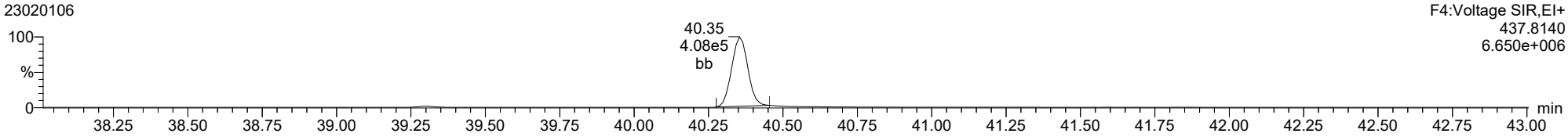

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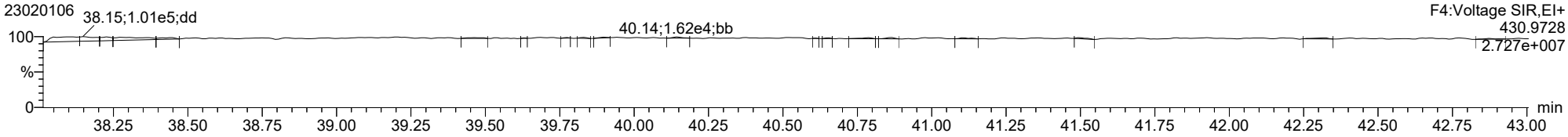

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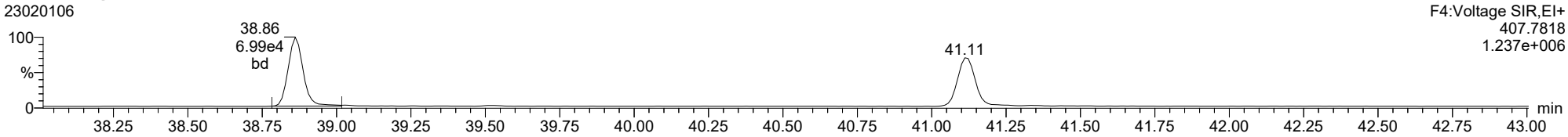

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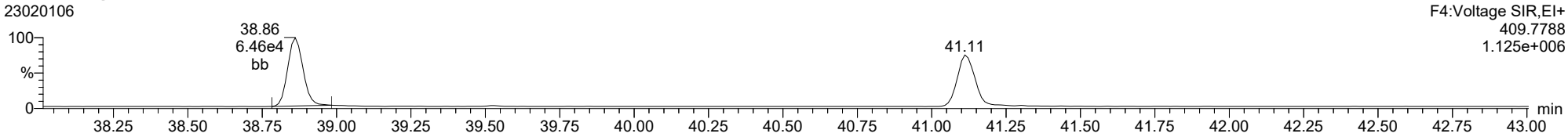

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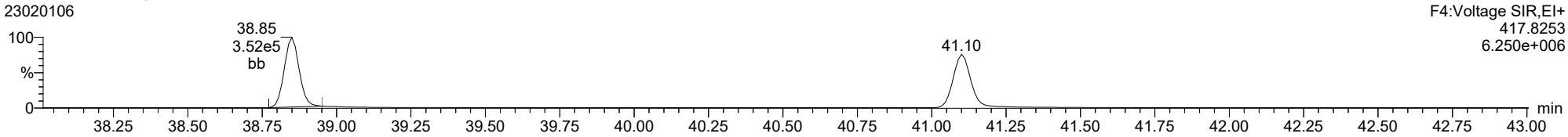

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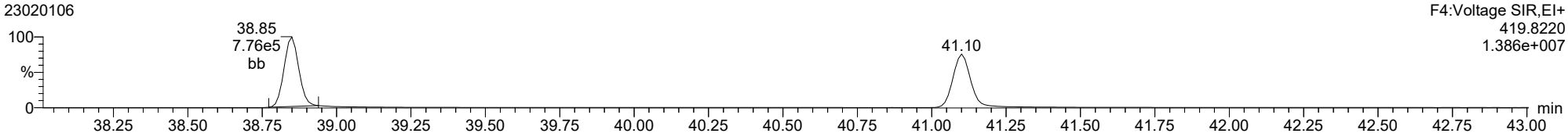

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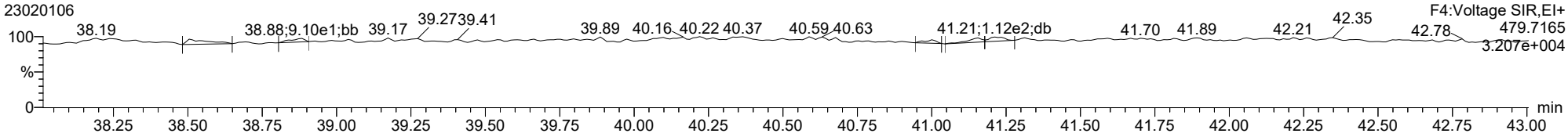

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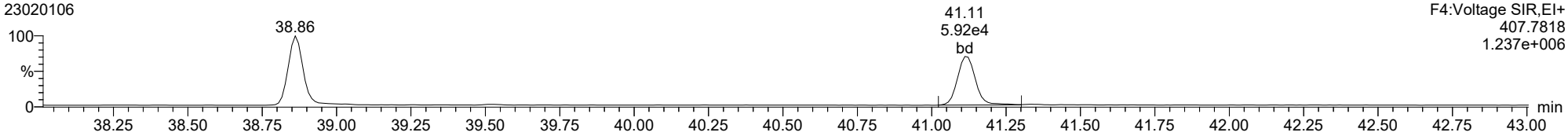

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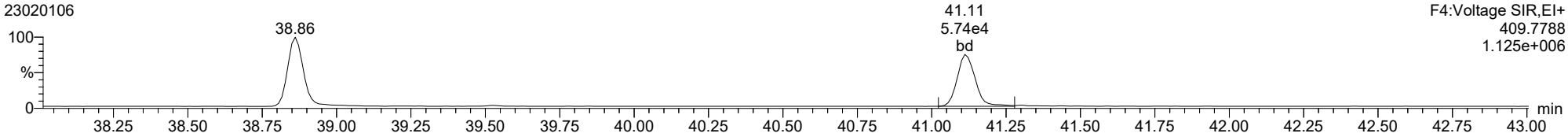

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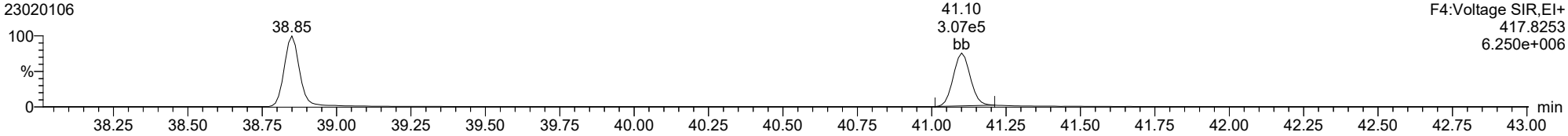

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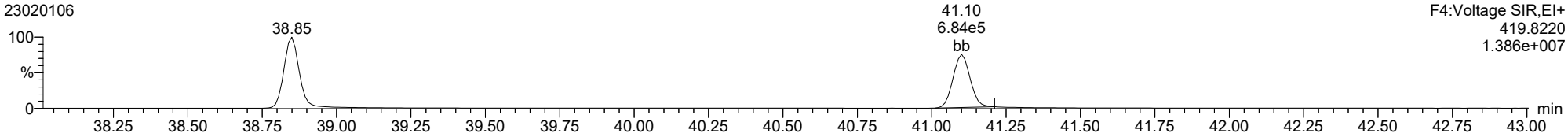

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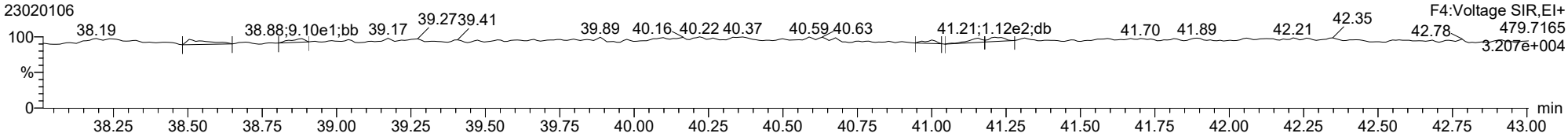

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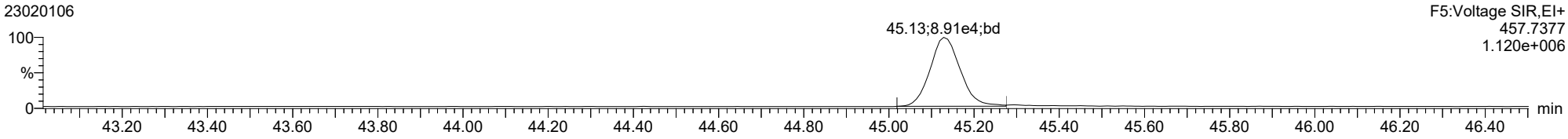

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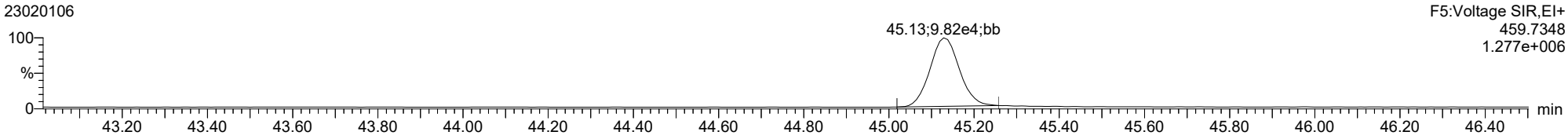

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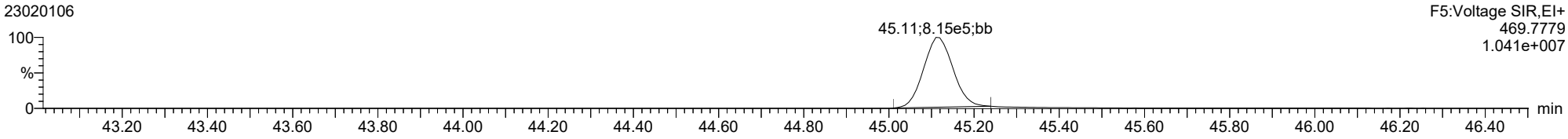

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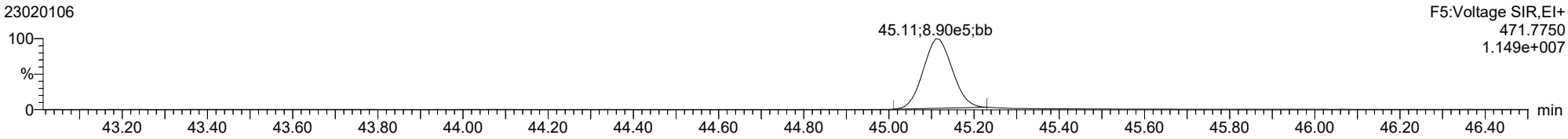
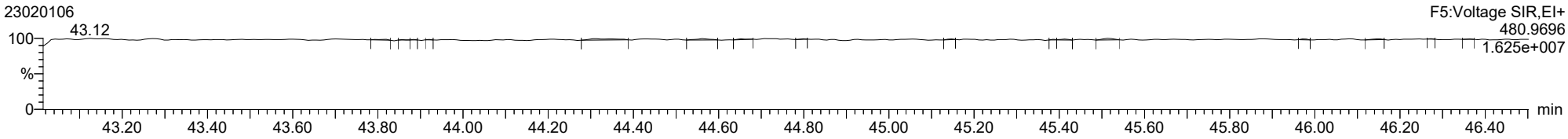


FUNCTION5 PFK



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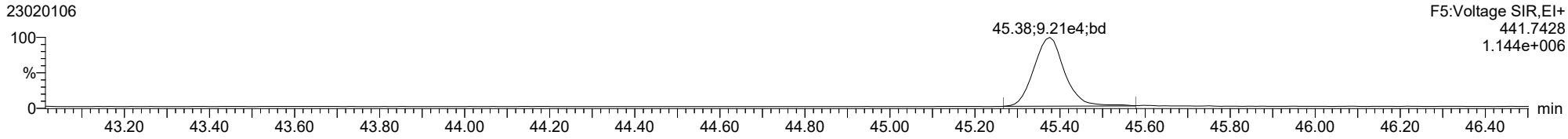
OCDF



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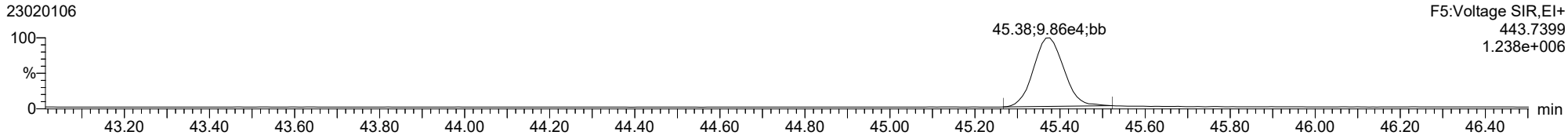

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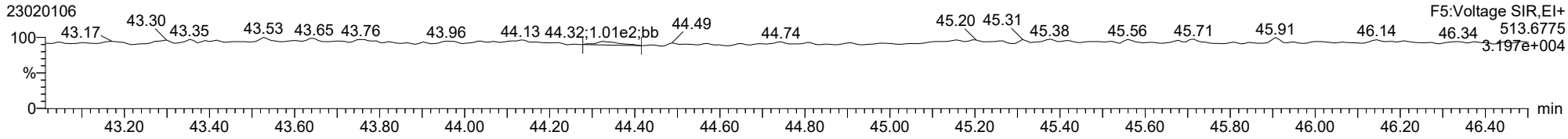

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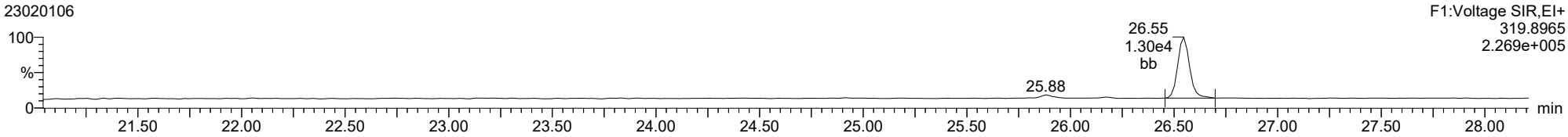

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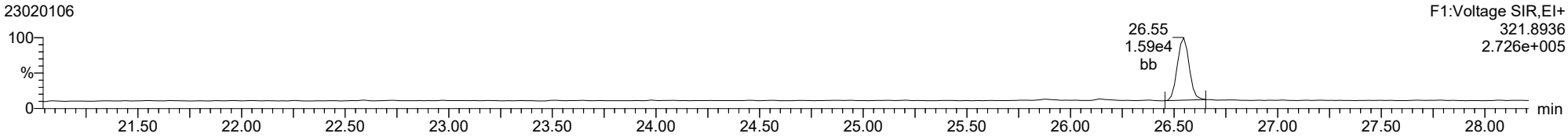

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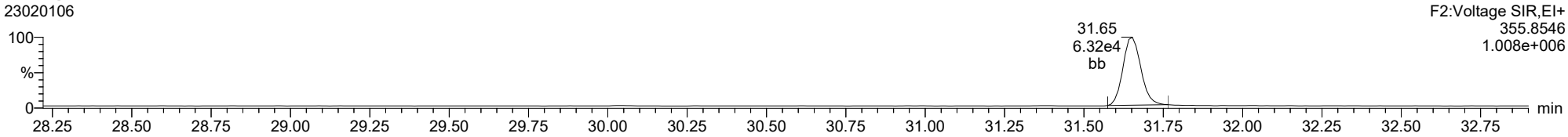
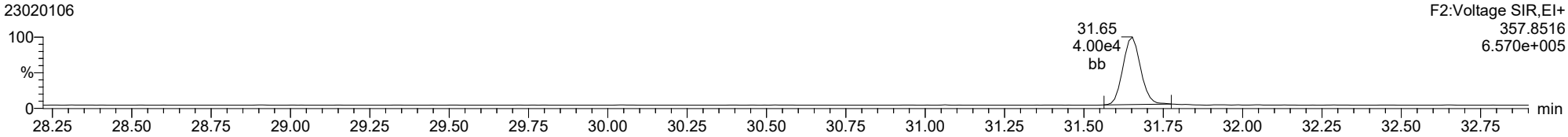


Total-pentadioxins



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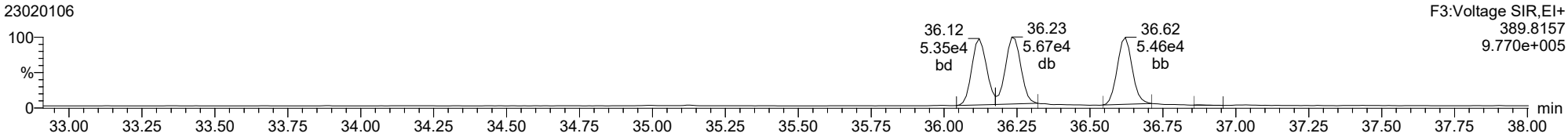
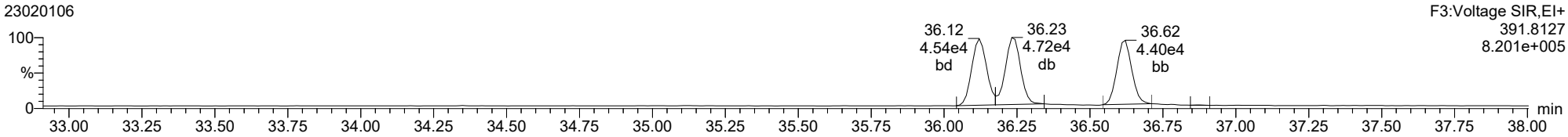
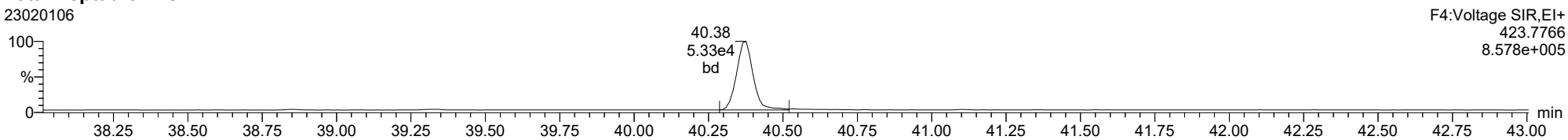
Total-hexadioxins



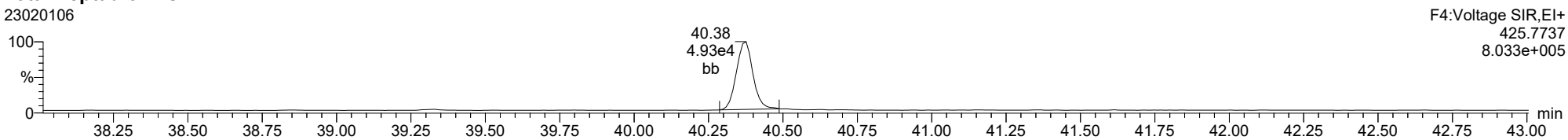
Total-hexadioxins



Total-heptadioxins



Total-heptadioxins



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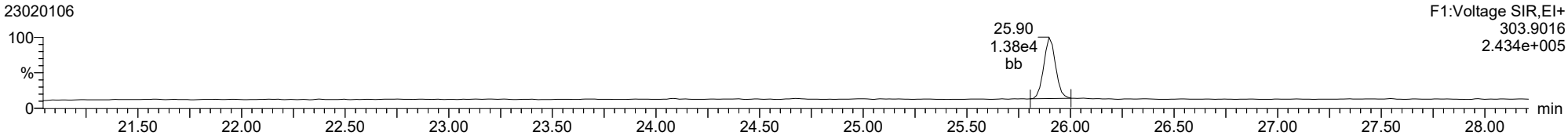
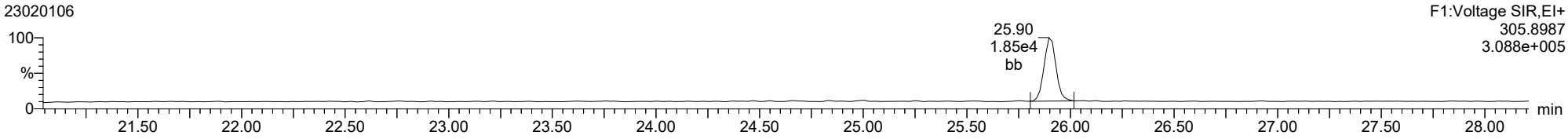
ID: CS2CR, Name: 23020106, Date: 01-Feb-2023, Time: 17:07:07, Conditions: AUTOSPEC01, User: pk

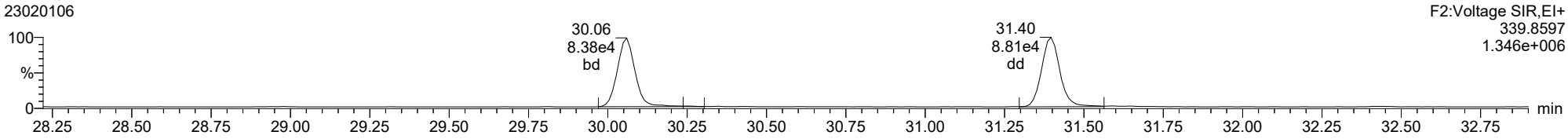
Total-tetrafurans



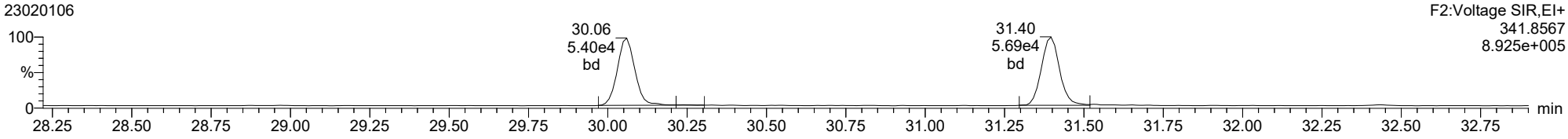
Total-tetrafurans



Total-pentafurans



Total-pentafurans



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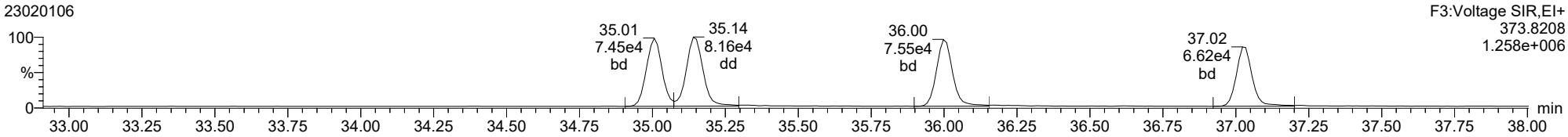
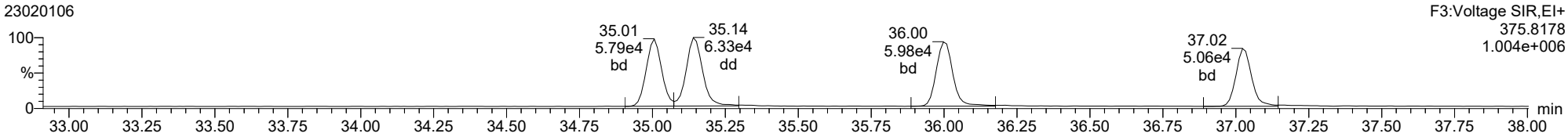
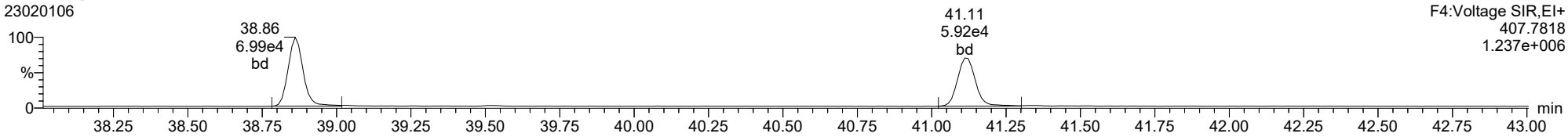
Total-hexafurans



Total-hexafurans



Total-heptafurans



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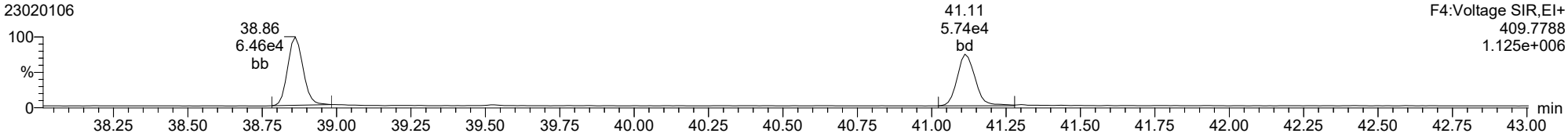

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Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS3CR, Name: 23020107, Date: 01-Feb-2023, Time: 17:56:19, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.882	1.001	6.453e4	8.749e4	0.876	0.738	0.770	1099	2026	9.86e5	1.33e6	897.2	656.5	NO	bb	bb	10.343
12378-PeCDF	30.048	1.001	3.683e5	2.382e5	0.845	1.546	1.550	3190	2595	5.70e6	3.69e6	1785.6	1421.3	NO	bb	bb	49.054
23478-PeCDF	31.385	1.001	3.878e5	2.552e5	0.911	1.520	1.550	3190	2595	5.98e6	3.95e6	1875.0	1521.7	NO	bb	bb	49.735
123478-HxCDF	34.995	1.001	3.439e5	2.707e5	1.182	1.271	1.240	3530	2719	5.57e6	4.47e6	1578.6	1645.2	NO	bd	bd	49.384
234678-HxCDF	35.987	1.000	3.473e5	2.734e5	1.229	1.270	1.240	3530	2719	5.49e6	4.36e6	1554.3	1603.8	NO	bd	bd	50.511
123678-HxCDF	35.129	1.000	3.705e5	2.941e5	1.248	1.260	1.240	3530	2719	5.50e6	4.37e6	1557.7	1606.9	NO	db	db	49.292
123789-HxCDF	37.012	1.000	3.044e5	2.379e5	1.187	1.279	1.240	3530	2719	4.78e6	3.76e6	1354.6	1383.4	NO	bb	bd	49.842
1234678-HpCDF	38.850	1.000	2.941e5	2.898e5	1.204	1.015	1.050	2499	2461	4.94e6	4.87e6	1976.6	1980.3	NO	bb	bb	47.249
1234789-HpCDF	41.100	1.000	2.575e5	2.639e5	1.165	0.976	1.050	2499	2461	3.86e6	3.76e6	1546.5	1528.6	NO	bb	bb	48.293
OCDF	45.357	1.006	3.904e5	4.394e5	1.186	0.889	0.890	2361	1464	4.77e6	5.34e6	2021.3	3646.6	NO	bb	bb	88.323
2378-TCDD	26.532	1.001	5.783e4	7.140e4	1.236	0.810	0.770	1261	1356	8.71e5	1.09e6	690.6	804.6	NO	bb	bb	9.200
12378-PeCDD	31.642	1.001	2.871e5	1.811e5	1.087	1.585	1.550	1935	1700	4.52e6	2.88e6	2335.1	1692.4	NO	bb	bb	49.835
123478-HxCDD	36.109	1.000	2.492e5	2.039e5	0.987	1.222	1.240	2775	1957	4.32e6	3.49e6	1555.2	1781.3	NO	bd	bd	49.339
123678-HxCDD	36.221	1.000	2.605e5	2.153e5	1.021	1.210	1.240	2775	1957	4.30e6	3.56e6	1550.9	1817.2	NO	db	db	49.052
123789-HxCDD	36.611	1.011	2.521e5	2.108e5	0.985	1.196	1.240	2775	1957	4.16e6	3.46e6	1500.2	1770.2	NO	bb	bb	49.951
1234678-HpCDD	40.354	1.000	2.309e5	2.219e5	1.253	1.041	1.050	2551	2394	3.57e6	3.40e6	1399.4	1422.4	NO	bb	bb	46.332
OCDD	45.119	1.000	3.877e5	4.205e5	1.103	0.922	0.890	2154	2574	4.65e6	5.24e6	2156.8	2035.9	NO	bd	bb	92.549
13C-2378-TCDF	25.867	1.007	7.414e5	9.363e5	1.768	0.792	0.770	2053	1619	1.15e7	1.43e7	5585.3	8856.7	NO	bb	bb	94.656
13C-12378-PeCDF	30.026	1.168	8.877e5	5.760e5	1.527	1.541	1.550	2967	1853	1.38e7	8.94e6	4662.3	4827.2	NO	bb	bb	95.615
13C-23478-PeCDF	31.363	1.220	8.562e5	5.626e5	1.466	1.522	1.550	2967	1853	1.33e7	8.64e6	4491.7	4663.8	NO	bb	bb	96.525
13C-123478-HxCDF	34.973	0.956	3.562e5	6.970e5	1.054	0.511	0.510	1992	2758	5.88e6	1.16e7	2952.0	4191.7	NO	bd	bd	100.726
13C-123678-HxCDF	35.118	0.960	3.647e5	7.156e5	1.080	0.510	0.510	1992	2758	5.88e6	1.14e7	2953.9	4143.1	NO	db	db	100.801
13C-234678-HxCDF	35.975	0.983	3.384e5	6.615e5	1.014	0.512	0.510	1992	2758	5.68e6	1.10e7	2849.9	4002.3	NO	bb	bb	99.342
13C-123789-HxCDF	37.000	1.011	3.154e5	6.016e5	0.928	0.524	0.510	1992	2758	5.40e6	1.05e7	2709.2	3801.7	NO	bb	bb	99.581
13C-1234678-HpCDF	38.839	1.061	3.227e5	7.036e5	1.036	0.459	0.440	2621	3052	5.41e6	1.21e7	2065.5	3959.7	NO	bb	bb	99.821
13C-1234789-HpCDF	41.089	1.123	2.972e5	6.294e5	0.905	0.472	0.440	2621	3052	4.32e6	9.59e6	1649.5	3143.4	NO	bd	bb	103.177
13C-1234-TCDD	25.700	0.000	4.469e5	5.555e5	1.000	0.804	0.770	2398	1542	7.04e6	8.78e6	2935.5	5692.9	NO	bb	bb	100.000
13C-2378-TCDD	26.517	1.032	4.991e5	6.371e5	1.103	0.783	0.770	2398	1542	7.48e6	9.58e6	3119.3	6212.6	NO	bb	bb	102.763
13C-12378-PeCDD	31.619	1.230	5.354e5	3.292e5	0.914	1.626	1.550	1302	1293	8.28e6	5.07e6	6359.2	3923.9	NO	bb	bb	94.346
13C-123478-HxCDD	36.098	0.987	5.251e5	4.053e5	0.933	1.296	1.240	1973	3288	8.80e6	6.71e6	4459.6	2041.7	NO	bd	bd	100.495
13C-123678-HxCDD	36.209	0.990	5.354e5	4.149e5	0.965	1.291	1.240	1973	3288	8.89e6	6.90e6	4507.2	2100.1	NO	db	db	99.280
13C-1234678-HpCDD	40.343	1.103	4.018e5	3.784e5	0.782	1.062	1.050	1997	2297	6.40e6	6.01e6	3207.1	2617.9	NO	bb	bb	100.543
13C-OCDD	45.101	1.233	7.578e5	8.262e5	0.788	0.917	0.890	2644	3522	9.52e6	1.02e7	3599.3	2906.4	NO	bb	bb	202.502
13C-123789-HxCDD	36.588	0.000	5.534e5	4.389e5	1.000	1.261	1.240	1973	3288	9.19e6	7.27e6	4657.5	2210.2	NO	bb	bb	100.000
37CL-2378-TCDD	26.532	1.032	1.115e5		1.233			1579		1.70e6		1075.4			bb		9.021

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ID: CS3CR, Name: 23020107, Date: 01-Feb-2023, Time: 17:56:19, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.389	0.866	7.831e4	1.003e5	1.064	0.781	0.770	1099	2026	1.24e6	1.58e6	1124.6	780.3	NO	bb	bb	10.000
1289-TCDF	27.378	1.058	6.314e4	8.075e4	0.858	0.782	0.770	1099	2026	9.07e5	1.18e6	825.1	582.8	NO	db	db	10.000
13468-PECDF	27.243	0.907	4.504e5	2.910e5	1.013	1.548	1.550	1001	928	7.08e6	4.58e6	7076.3	4935.5	NO	bb	bb	50.000
12389-PECDF	32.422	1.080	3.693e5	2.481e5	0.844	1.488	1.550	3190	2595	5.63e6	3.73e6	1765.9	1435.6	NO	bb	bb	50.000
123468-HXCDF	33.335	0.953	3.538e5	2.768e5	1.197	1.278	1.240	3530	2719	5.41e6	4.18e6	1531.9	1537.1	NO	bb	bd	50.000
1368-TCDD	23.659	0.892	5.365e4	6.956e4	1.084	0.771	0.770	1261	1356	8.58e5	1.11e6	680.3	820.3	NO	bb	bb	10.000
1289-TCDD	27.122	1.023	4.896e4	6.184e4	0.975	0.792	0.770	1261	1356	7.39e5	9.25e5	586.4	682.2	NO	bb	bb	10.000
12479-PECDD	28.912	0.914	4.860e5	3.082e5	1.837	1.577	1.550	1935	1700	4.68e6	2.92e6	2418.8	1714.3	NO	bb	bb	50.000
12389-PECDD	32.032	1.013	3.312e5	2.102e5	1.252	1.576	1.550	1935	1700	5.26e6	3.30e6	2720.3	1940.3	NO	bb	bb	50.000
124679-HXCDD	34.104	0.945	2.650e5	2.155e5	1.033	1.230	1.240	2775	1957	4.22e6	3.42e6	1521.7	1748.3	NO	bb	bb	50.000
1234679-HPCDD	39.307	0.974	2.579e5	2.438e5	1.286	1.058	1.050	2551	2394	4.26e6	3.98e6	1669.1	1662.1	NO	bb	bb	50.000
Total-tetrafurans			2.076e5		0.933			1099		3.16e6							30.586
Total-penta1			4.504e5					1001		7.08e6							50.000
Total-pentafurans			1.187e6		0.866			3190		1.83e7							156.881
Total-hexafurans			1.720e6		1.208			3530		2.67e7							249.030
Total-heptafurans			5.536e5		1.185			2499		8.83e6							95.864
Total-Furans			4.509e6		1.067			1099		6.89e7							670.685
Total-tetradioxins			2.732e5		1.099			1261		3.78e6							49.490
Total-pentadioxins			1.106e6		1.392			1935		1.45e7							150.052
Total-hexadioxins			1.027e6		1.007			2775		1.70e7							198.343
Total-heptadioxins			4.888e5		1.269			2551		7.83e6							96.332
Total-Dioxins			3.282e6		1.165			1261		4.77e7							586.766
Total-TEQ			7.791e6					1261		1.17e8							1257.451
FUNCTION1 PFK			2.071e7					567379		2.38e8							
FUNCTION2 PFK			0.000e0					180306		0.00e0							
FUNCTION3 PFK			2.786e4					420708		9.12e5							0.000
FUNCTION4 PFK			7.534e5					257681		1.24e7							
FUNCTION5 PFK			1.239e5					175535		5.02e6							
FUNCTION1 HXCD...			1.237e3					791		2.01e4							0.000
FUNCTION1 HPCD...			1.368e3					947		2.24e4							0.000
FUNCTION2 HPCD...			4.817e2					887		9.10e3							0.000
FUNCTION3 OCDPE			4.485e2					809		9.17e3							0.000
FUNCTION4 NCDPE			3.809e2					922		7.31e3							0.000
FUNCTION5 DCDPE			0.000e0					753		0.00e0							

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS3CR, Name: 23020107, Date: 01-Feb-2023, Time: 17:56:19, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	6.314e4	8.075e4	0.858	0.78	0.77	825.1	YES	NO	db	db	10.000
2	Total-tetrafurans	27.24	1.177e3	1.490e3	0.933	0.79	0.77	17.2	YES	NO	bd	bd	0.170
3	2378-TCDF	25.88	6.453e4	8.749e4	0.876	0.74	0.77	897.2	YES	NO	bb	bb	10.343
4	Total-tetrafurans	24.81	4.913e2	6.353e2	0.933	0.77	0.77	7.1	YES	NO	dd	db	0.072
5	1368-TCDF	22.39	7.831e4	1.003e5	1.064	0.78	0.77	1124.6	YES	NO	bb	bb	10.000

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.24	4.504e5	2.910e5	1.013	1.55	1.55	7076.3	YES	NO	bb	bb	50.000

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.42	3.693e5	2.481e5	0.844	1.49	1.55	1765.9	YES	NO	bb	bb	50.000
2	23478-PeCDF	31.39	3.878e5	2.552e5	0.911	1.52	1.55	1875.0	YES	NO	bb	bb	49.735
3	12378-PeCDF	30.05	3.683e5	2.382e5	0.845	1.55	1.55	1785.6	YES	NO	bb	bb	49.054
4	Total-pentafurans	28.90	6.175e4	3.932e4	0.866	1.57	1.55	301.5	YES	NO	bb	bb	8.093

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123678-HxCDF	35.13	3.705e5	2.941e5	1.248	1.26	1.24	1557.7	YES	NO	db	db	49.292
2	123478-HxCDF	34.99	3.439e5	2.707e5	1.182	1.27	1.24	1578.6	YES	NO	bd	bd	49.384
3	123468-HXCDF	33.34	3.538e5	2.768e5	1.197	1.28	1.24	1531.9	YES	NO	bb	bd	50.000
4	123789-HxCDF	37.01	3.044e5	2.379e5	1.187	1.28	1.24	1354.6	YES	NO	bb	bd	49.842
5	234678-HxCDF	35.99	3.473e5	2.734e5	1.229	1.27	1.24	1554.3	YES	NO	bd	bd	50.511

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.10	2.575e5	2.639e5	1.165	0.98	1.05	1546.5	YES	NO	bb	bb	48.293
2	Total-heptafurans	39.51	1.970e3	1.765e3	1.185	1.12	1.05	11.2	YES	NO	bb	bb	0.323
3	1234678-HpCDF	38.85	2.941e5	2.898e5	1.204	1.01	1.05	1976.6	YES	NO	bb	bb	47.249

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	6.314e4	8.075e4	0.858	0.78	0.77	825.1	YES	NO	db	db	10.000
2	Total-tetrafurans	27.24	1.177e3	1.490e3	0.933	0.79	0.77	17.2	YES	NO	bd	bd	0.170
3	2378-TCDF	25.88	6.453e4	8.749e4	0.876	0.74	0.77	897.2	YES	NO	bb	bb	10.343
4	Total-tetrafurans	24.81	4.913e2	6.353e2	0.933	0.77	0.77	7.1	YES	NO	dd	db	0.072
5	1368-TCDF	22.39	7.831e4	1.003e5	1.064	0.78	0.77	1124.6	YES	NO	bb	bb	10.000
6	12389-PECDF	32.42	3.693e5	2.481e5	0.844	1.49	1.55	1765.9	YES	NO	bb	bb	50.000
7	23478-PeCDF	31.39	3.878e5	2.552e5	0.911	1.52	1.55	1875.0	YES	NO	bb	bb	49.735
8	12378-PeCDF	30.05	3.683e5	2.382e5	0.845	1.55	1.55	1785.6	YES	NO	bb	bb	49.054
9	Total-pentafurans	28.90	6.175e4	3.932e4	0.866	1.57	1.55	301.5	YES	NO	bb	bb	8.093
10	123678-HxCDF	35.13	3.705e5	2.941e5	1.248	1.26	1.24	1557.7	YES	NO	db	db	49.292
11	123478-HxCDF	34.99	3.439e5	2.707e5	1.182	1.27	1.24	1578.6	YES	NO	bd	bd	49.384
12	123468-HXCDF	33.34	3.538e5	2.768e5	1.197	1.28	1.24	1531.9	YES	NO	bb	bd	50.000
13	123789-HxCDF	37.01	3.044e5	2.379e5	1.187	1.28	1.24	1354.6	YES	NO	bb	bd	49.842
14	234678-HxCDF	35.99	3.473e5	2.734e5	1.229	1.27	1.24	1554.3	YES	NO	bd	bd	50.511
15	1234789-HpCDF	41.10	2.575e5	2.639e5	1.165	0.98	1.05	1546.5	YES	NO	bb	bb	48.293
16	Total-heptafurans	39.51	1.970e3	1.765e3	1.185	1.12	1.05	11.2	YES	NO	bb	bb	0.323
17	1234678-HpCDF	38.85	2.941e5	2.898e5	1.204	1.01	1.05	1976.6	YES	NO	bb	bb	47.249
18	OCDF	45.36	3.904e5	4.394e5	1.186	0.89	0.89	2021.3	YES	NO	bb	bb	88.323
19	13468-PECDF	27.24	4.504e5	2.910e5	1.013	1.55	1.55	7076.3	YES	NO	bb	bb	50.000

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	27.12	4.896e4	6.184e4	0.975	0.79	0.77	586.4	YES	NO	bb	bb	10.000
2	2378-TCDD	26.53	5.783e4	7.140e4	1.236	0.81	0.77	690.6	YES	NO	bb	bb	9.200
3	Total-tetradioxins	26.20	8.471e4	1.070e5	1.099	0.79	0.77	703.2	YES	NO	bb	bb	15.362
4	Total-tetradioxins	25.72	2.731e4	3.262e4	1.099	0.84	0.77	331.8	YES	NO	bd	bb	4.800
5	Total-tetradioxins	25.14	7.197e2	8.821e2	1.099	0.82	0.77	7.0	YES	NO	bb	bb	0.128
6	1368-TCDD	23.66	5.365e4	6.956e4	1.084	0.77	0.77	680.3	YES	NO	bb	bb	10.000

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PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	32.03	3.312e5	2.102e5	1.252	1.58	1.55	2720.3	YES	NO	bb	bb	50.000
2	12378-PeCDD	31.64	2.871e5	1.811e5	1.087	1.59	1.55	2335.1	YES	NO	bb	bb	49.835
3	Total-pentadioxins	30.97	1.319e3	9.625e2	1.392	1.37	1.55	9.7	YES	NO	bb	bb	0.190
4	Total-pentadioxins	29.24	2.122e2	1.231e2	1.392	1.72	1.55	2.9	NO	NO	bb	bb	0.028
5	12479-PECDD	28.91	4.860e5	3.082e5	1.837	1.58	1.55	2418.8	YES	NO	bb	bb	50.000

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HXCDD	34.10	2.650e5	2.155e5	1.033	1.23	1.24	1521.7	YES	NO	bb	bb	50.000
2	123789-HxCDD	36.61	2.521e5	2.108e5	0.985	1.20	1.24	1500.2	YES	NO	bb	bb	49.951
3	123678-HxCDD	36.22	2.605e5	2.153e5	1.021	1.21	1.24	1550.9	YES	NO	db	db	49.052
4	123478-HxCDD	36.11	2.492e5	2.039e5	0.987	1.22	1.24	1555.2	YES	NO	bd	bd	49.339

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.35	2.309e5	2.219e5	1.253	1.04	1.05	1399.4	YES	NO	bb	bb	46.332
2	1234679-HPCDD	39.31	2.579e5	2.438e5	1.286	1.06	1.05	1669.1	YES	NO	bb	bb	50.000

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	27.12	4.896e4	6.184e4	0.975	0.79	0.77	586.4	YES	NO	bb	bb	10.000
2	2378-TCDD	26.53	5.783e4	7.140e4	1.236	0.81	0.77	690.6	YES	NO	bb	bb	9.200
3	Total-tetradioxins	26.20	8.471e4	1.070e5	1.099	0.79	0.77	703.2	YES	NO	bb	bb	15.362
4	Total-tetradioxins	25.72	2.731e4	3.262e4	1.099	0.84	0.77	331.8	YES	NO	bd	bb	4.800
5	Total-tetradioxins	25.14	7.197e2	8.821e2	1.099	0.82	0.77	7.0	YES	NO	bb	bb	0.128
6	1368-TCDD	23.66	5.365e4	6.956e4	1.084	0.77	0.77	680.3	YES	NO	bb	bb	10.000
7	12389-PECDD	32.03	3.312e5	2.102e5	1.252	1.58	1.55	2720.3	YES	NO	bb	bb	50.000
8	12378-PeCDD	31.64	2.871e5	1.811e5	1.087	1.59	1.55	2335.1	YES	NO	bb	bb	49.835
9	Total-pentadioxins	30.97	1.319e3	9.625e2	1.392	1.37	1.55	9.7	YES	NO	bb	bb	0.190
10	Total-pentadioxins	29.24	2.122e2	1.231e2	1.392	1.72	1.55	2.9	NO	NO	bb	bb	0.028
11	12479-PECDD	28.91	4.860e5	3.082e5	1.837	1.58	1.55	2418.8	YES	NO	bb	bb	50.000
12	124679-HXCDD	34.10	2.650e5	2.155e5	1.033	1.23	1.24	1521.7	YES	NO	bb	bb	50.000
13	123789-HxCDD	36.61	2.521e5	2.108e5	0.985	1.20	1.24	1500.2	YES	NO	bb	bb	49.951
14	123678-HxCDD	36.22	2.605e5	2.153e5	1.021	1.21	1.24	1550.9	YES	NO	db	db	49.052
15	123478-HxCDD	36.11	2.492e5	2.039e5	0.987	1.22	1.24	1555.2	YES	NO	bd	bd	49.339
16	1234678-HpCDD	40.35	2.309e5	2.219e5	1.253	1.04	1.05	1399.4	YES	NO	bb	bb	46.332
17	1234679-HPCDD	39.31	2.579e5	2.438e5	1.286	1.06	1.05	1669.1	YES	NO	bb	bb	50.000
18	OCDD	45.12	3.877e5	4.205e5	1.103	0.92	0.89	2156.8	YES	NO	bd	bb	92.549

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	6.314e4	8.075e4	0.858	0.78	0.77	825.1	YES	NO	db	db	10.000
2	Total-tetrafurans	27.24	1.177e3	1.490e3	0.933	0.79	0.77	17.2	YES	NO	bd	bd	0.170
3	2378-TCDF	25.88	6.453e4	8.749e4	0.876	0.74	0.77	897.2	YES	NO	bb	bb	10.343
4	Total-tetrafurans	24.81	4.913e2	6.353e2	0.933	0.77	0.77	7.1	YES	NO	dd	db	0.072
5	1368-TCDF	22.39	7.831e4	1.003e5	1.064	0.78	0.77	1124.6	YES	NO	bb	bb	10.000
6	12389-PECDF	32.42	3.693e5	2.481e5	0.844	1.49	1.55	1765.9	YES	NO	bb	bb	50.000
7	23478-PeCDF	31.39	3.878e5	2.552e5	0.911	1.52	1.55	1875.0	YES	NO	bb	bb	49.735
8	12378-PeCDF	30.05	3.683e5	2.382e5	0.845	1.55	1.55	1785.6	YES	NO	bb	bb	49.054
9	Total-pentafurans	28.90	6.175e4	3.932e4	0.866	1.57	1.55	301.5	YES	NO	bb	bb	8.093
10	123678-HxCDF	35.13	3.705e5	2.941e5	1.248	1.26	1.24	1557.7	YES	NO	db	db	49.292
11	123478-HxCDF	34.99	3.439e5	2.707e5	1.182	1.27	1.24	1578.6	YES	NO	bd	bd	49.384
12	123468-HXCDF	33.34	3.538e5	2.768e5	1.197	1.28	1.24	1531.9	YES	NO	bb	bd	50.000
13	123789-HxCDF	37.01	3.044e5	2.379e5	1.187	1.28	1.24	1354.6	YES	NO	bb	bd	49.842
14	234678-HxCDF	35.99	3.473e5	2.734e5	1.229	1.27	1.24	1554.3	YES	NO	bd	bd	50.511
15	1234789-HpCDF	41.10	2.575e5	2.639e5	1.165	0.98	1.05	1546.5	YES	NO	bb	bb	48.293
16	Total-heptafurans	39.51	1.970e3	1.765e3	1.185	1.12	1.05	11.2	YES	NO	bb	bb	0.323
17	1234678-HpCDF	38.85	2.941e5	2.898e5	1.204	1.01	1.05	1976.6	YES	NO	bb	bb	47.249
18	OCDF	45.36	3.904e5	4.394e5	1.186	0.89	0.89	2021.3	YES	NO	bb	bb	88.323
19	13468-PECDF	27.24	4.504e5	2.910e5	1.013	1.55	1.55	7076.3	YES	NO	bb	bb	50.000
20	1289-TCDD	27.12	4.896e4	6.184e4	0.975	0.79	0.77	586.4	YES	NO	bb	bb	10.000
21	2378-TCDD	26.53	5.783e4	7.140e4	1.236	0.81	0.77	690.6	YES	NO	bb	bb	9.200
22	Total-tetradioxins	26.20	8.471e4	1.070e5	1.099	0.79	0.77	703.2	YES	NO	bb	bb	15.362
23	Total-tetradioxins	25.72	2.731e4	3.262e4	1.099	0.84	0.77	331.8	YES	NO	bd	bb	4.800
24	Total-tetradioxins	25.14	7.197e2	8.821e2	1.099	0.82	0.77	7.0	YES	NO	bb	bb	0.128
25	1368-TCDD	23.66	5.365e4	6.956e4	1.084	0.77	0.77	680.3	YES	NO	bb	bb	10.000
26	12389-PECDD	32.03	3.312e5	2.102e5	1.252	1.58	1.55	2720.3	YES	NO	bb	bb	50.000
27	12378-PeCDD	31.64	2.871e5	1.811e5	1.087	1.59	1.55	2335.1	YES	NO	bb	bb	49.835
28	Total-pentadioxins	30.97	1.319e3	9.625e2	1.392	1.37	1.55	9.7	YES	NO	bb	bb	0.190
29	Total-pentadioxins	29.24	2.122e2	1.231e2	1.392	1.72	1.55	2.9	NO	NO	bb	bb	0.028
30	12479-PECDD	28.91	4.860e5	3.082e5	1.837	1.58	1.55	2418.8	YES	NO	bb	bb	50.000
31	124679-HXCDD	34.10	2.650e5	2.155e5	1.033	1.23	1.24	1521.7	YES	NO	bb	bb	50.000
32	123789-HxCDD	36.61	2.521e5	2.108e5	0.985	1.20	1.24	1500.2	YES	NO	bb	bb	49.951
33	123678-HxCDD	36.22	2.605e5	2.153e5	1.021	1.21	1.24	1550.9	YES	NO	db	db	49.052
34	123478-HxCDD	36.11	2.492e5	2.039e5	0.987	1.22	1.24	1555.2	YES	NO	bd	bd	49.339
35	1234678-HpCDD	40.35	2.309e5	2.219e5	1.253	1.04	1.05	1399.4	YES	NO	bb	bb	46.332
36	1234679-HPCDD	39.31	2.579e5	2.438e5	1.286	1.06	1.05	1669.1	YES	NO	bb	bb	50.000
37	OCDD	45.12	3.877e5	4.205e5	1.103	0.92	0.89	2156.8	YES	NO	bd	bb	92.549

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.91	6.852e5					20.8	YES		dd		
2	FUNCTION1 PFK	21.84	1.096e6					22.0	YES		dd		
3	FUNCTION1 PFK	21.77	5.746e5					22.9	YES		dd		
4	FUNCTION1 PFK	21.71	1.001e6					23.9	YES		dd		
5	FUNCTION1 PFK	21.59	1.735e6					26.6	YES		dd		
6	FUNCTION1 PFK	21.47	1.869e6					28.4	YES		dd		
7	FUNCTION1 PFK	21.35	2.030e6					30.8	YES		dd		
8	FUNCTION1 PFK	21.25	1.366e6					32.7	YES		dd		
9	FUNCTION1 PFK	21.13	3.514e6					34.9	YES		bd		
10	FUNCTION1 PFK	23.42	1.745e4					0.9	NO		db		
11	FUNCTION1 PFK	23.36	2.629e4					1.1	NO		dd		
12	FUNCTION1 PFK	23.30	5.605e4					1.4	NO		bd		
13	FUNCTION1 PFK	23.16	2.732e4					0.9	NO		bb		
14	FUNCTION1 PFK	22.89	1.080e5					3.0	YES		db		
15	FUNCTION1 PFK	22.81	1.442e5					3.9	YES		dd		
16	FUNCTION1 PFK	22.75	1.516e5					4.8	YES		dd		
17	FUNCTION1 PFK	22.69	1.790e5					5.6	YES		dd		
18	FUNCTION1 PFK	22.56	6.347e5					8.4	YES		dd		
19	FUNCTION1 PFK	22.42	5.662e5					10.5	YES		dd		
20	FUNCTION1 PFK	22.36	4.892e5					12.2	YES		dd		
21	FUNCTION1 PFK	22.30	4.241e5					12.7	YES		dd		
22	FUNCTION1 PFK	22.18	1.005e6					15.7	YES		dd		
23	FUNCTION1 PFK	22.10	6.911e5					16.7	YES		dd		
24	FUNCTION1 PFK	22.04	6.019e5					18.1	YES		dd		
25	FUNCTION1 PFK	21.98	6.245e5					18.6	YES		dd		
26	FUNCTION1 PFK	25.17	1.799e4					0.9	NO		bb		
27	FUNCTION1 PFK	25.05	6.677e4					1.7	NO		bb		
28	FUNCTION1 PFK	24.97	5.669e3					0.4	NO		db		
29	FUNCTION1 PFK	24.93	2.665e4					1.1	NO		bd		
30	FUNCTION1 PFK	24.79	9.106e3					0.5	NO		bb		
31	FUNCTION1 PFK	24.70	2.803e4					1.0	NO		bb		
32	FUNCTION1 PFK	24.60	2.266e4					1.1	NO		bb		
33	FUNCTION1 PFK	24.51	2.481e3					0.3	NO		bb		
34	FUNCTION1 PFK	24.26	2.953e3					0.3	NO		bb		
35	FUNCTION1 PFK	24.07	3.464e4					0.9	NO		db		
36	FUNCTION1 PFK	23.95	2.818e4					0.8	NO		bd		
37	FUNCTION1 PFK	23.86	1.761e4					1.0	NO		bb		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	23.80	2.745e4					1.4	NO		db		
39	FUNCTION1 PFK	23.75	2.279e4					1.2	NO		bd		
40	FUNCTION1 PFK	23.57	1.177e3					0.1	NO		bb		
41	FUNCTION1 PFK	23.51	3.339e4					1.1	NO		bb		
42	FUNCTION1 PFK	26.92	1.624e4					0.8	NO		bd		
43	FUNCTION1 PFK	26.85	6.743e4					2.0	NO		db		
44	FUNCTION1 PFK	26.77	3.605e4					1.4	NO		dd		
45	FUNCTION1 PFK	26.71	5.041e4					1.7	NO		dd		
46	FUNCTION1 PFK	26.64	3.066e4					1.2	NO		dd		
47	FUNCTION1 PFK	26.58	3.222e4					1.5	NO		bd		
48	FUNCTION1 PFK	26.50	4.287e4					1.3	NO		bb		
49	FUNCTION1 PFK	26.32	9.896e3					0.6	NO		bb		
50	FUNCTION1 PFK	26.26	3.724e4					1.5	NO		bb		
51	FUNCTION1 PFK	26.18	3.323e3					0.4	NO		bb		
52	FUNCTION1 PFK	26.05	1.864e4					1.0	NO		bb		
53	FUNCTION1 PFK	25.91	1.114e4					0.6	NO		bb		
54	FUNCTION1 PFK	25.79	1.895e4					1.1	NO		db		
55	FUNCTION1 PFK	25.72	1.527e4					0.8	NO		bd		
56	FUNCTION1 PFK	25.56	6.069e4					1.2	NO		bb		
57	FUNCTION1 PFK	25.32	2.043e4					0.8	NO		bb		
58	FUNCTION1 PFK	28.10	6.905e3					0.5	NO		bb		
59	FUNCTION1 PFK	28.04	4.818e3					0.4	NO		bb		
60	FUNCTION1 PFK	27.71	1.514e4					0.8	NO		bb		
61	FUNCTION1 PFK	27.65	3.709e4					1.3	NO		db		
62	FUNCTION1 PFK	27.59	2.458e4					1.3	NO		dd		
63	FUNCTION1 PFK	27.53	4.906e4					1.8	NO		bd		
64	FUNCTION1 PFK	27.44	2.074e4					1.1	NO		db		
65	FUNCTION1 PFK	27.38	2.487e4					1.2	NO		dd		
66	FUNCTION1 PFK	27.24	6.345e4					1.2	NO		bd		
67	FUNCTION1 PFK	26.99	2.492e4					1.1	NO		db		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.79	2.481e4					1.5	NO		bb		0.000
2	FUNCTION3 PFK	33.58	3.048e3					0.6	NO		bb		0.000

Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
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ID: CS3CR, Name: 23020107, Date: 01-Feb-2023, Time: 17:56:19, Conditions: AUTOSPEC01, User: pk

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.11	2.881e5					5.9	YES		bd		
2	FUNCTION4 PFK	40.30	1.799e3					0.6	NO		bb		
3	FUNCTION4 PFK	40.24	8.794e3					0.9	NO		bb		
4	FUNCTION4 PFK	39.76	2.592e4					1.9	NO		bb		
5	FUNCTION4 PFK	39.53	1.727e3					0.6	NO		bb		
6	FUNCTION4 PFK	39.42	8.213e3					1.1	NO		db		
7	FUNCTION4 PFK	39.37	5.168e3					0.8	NO		bd		
8	FUNCTION4 PFK	39.28	3.722e4					2.1	NO		bb		
9	FUNCTION4 PFK	39.18	4.002e3					0.6	NO		bb		
10	FUNCTION4 PFK	39.14	3.342e3					0.8	NO		bb		
11	FUNCTION4 PFK	38.74	2.110e3					0.5	NO		bb		
12	FUNCTION4 PFK	38.66	1.735e4					1.0	NO		bb		
13	FUNCTION4 PFK	38.54	3.610e3					0.6	NO		db		
14	FUNCTION4 PFK	38.50	2.411e3					0.6	NO		bd		
15	FUNCTION4 PFK	38.43	2.873e4					2.5	NO		db		
16	FUNCTION4 PFK	38.38	2.222e4					2.3	NO		dd		
17	FUNCTION4 PFK	38.32	4.040e4					3.1	YES		dd		
18	FUNCTION4 PFK	42.54	1.660e3					0.6	NO		bb		
19	FUNCTION4 PFK	42.49	5.115e3					0.7	NO		db		
20	FUNCTION4 PFK	42.43	1.342e4					1.1	NO		dd		
21	FUNCTION4 PFK	42.39	8.107e3					1.2	NO		dd		
22	FUNCTION4 PFK	42.35	1.540e4					1.7	NO		bd		
23	FUNCTION4 PFK	42.28	2.692e4					2.0	NO		bb		
24	FUNCTION4 PFK	41.95	3.858e3					0.8	NO		bb		
25	FUNCTION4 PFK	41.80	3.979e4					2.0	NO		db		
26	FUNCTION4 PFK	41.65	1.699e4					1.5	NO		bd		
27	FUNCTION4 PFK	41.55	1.804e4					1.5	NO		db		
28	FUNCTION4 PFK	41.49	1.585e4					1.6	NO		dd		
29	FUNCTION4 PFK	41.42	1.775e4					1.4	NO		dd		
30	FUNCTION4 PFK	41.29	3.051e4					1.6	NO		bd		
31	FUNCTION4 PFK	41.07	3.910e3					0.8	NO		bb		
32	FUNCTION4 PFK	40.83	2.327e4					1.7	NO		bb		
33	FUNCTION4 PFK	40.44	5.321e3					0.8	NO		bb		
34	FUNCTION4 PFK	42.75	1.970e3					0.4	NO		bb		
35	FUNCTION4 PFK	42.66	4.393e3					0.6	NO		bb		

Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
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ID: CS3CR, Name: 23020107, Date: 01-Feb-2023, Time: 17:56:19, Conditions: AUTOSPEC01, User: pk

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.93	2.684e3					0.8	NO		bb		
2	FUNCTION5 PFK	44.87	6.256e3					1.5	NO		bb		
3	FUNCTION5 PFK	44.78	1.077e4					1.6	NO		bb		
4	FUNCTION5 PFK	44.72	7.200e2					0.5	NO		bb		
5	FUNCTION5 PFK	44.65	1.235e3					0.8	NO		bb		
6	FUNCTION5 PFK	44.28	7.736e2					0.5	NO		bb		
7	FUNCTION5 PFK	44.24	1.418e3					0.7	NO		db		
8	FUNCTION5 PFK	44.21	4.442e3					1.2	NO		bd		
9	FUNCTION5 PFK	44.18	5.811e3					0.9	NO		bb		
10	FUNCTION5 PFK	43.82	5.499e3					1.3	NO		bb		
11	FUNCTION5 PFK	43.56	1.617e4					1.7	NO		bb		
12	FUNCTION5 PFK	43.36	1.625e3					0.7	NO		bb		
13	FUNCTION5 PFK	43.23	2.679e3					0.9	NO		bb		
14	FUNCTION5 PFK	46.45	4.419e3					1.2	NO		bb		
15	FUNCTION5 PFK	46.36	5.978e3					1.0	NO		bb		
16	FUNCTION5 PFK	46.26	2.259e3					0.8	NO		bb		
17	FUNCTION5 PFK	46.07	3.509e3					1.0	NO		bb		
18	FUNCTION5 PFK	45.84	4.173e3					1.3	NO		bb		
19	FUNCTION5 PFK	45.76	6.984e2					0.4	NO		bb		
20	FUNCTION5 PFK	45.72	1.077e3					0.7	NO		bb		
21	FUNCTION5 PFK	45.60	7.851e2					0.5	NO		bb		
22	FUNCTION5 PFK	45.54	4.517e3					1.2	NO		db		
23	FUNCTION5 PFK	45.49	1.078e4					1.5	NO		dd		
24	FUNCTION5 PFK	45.41	6.756e3					1.7	NO		dd		
25	FUNCTION5 PFK	45.38	1.279e4					2.2	NO		bd		
26	FUNCTION5 PFK	45.28	8.503e2					0.4	NO		bb		
27	FUNCTION5 PFK	45.04	4.420e3					1.2	NO		bb		
28	FUNCTION5 PFK	44.98	7.643e2					0.5	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.82	2.306e2					4.0	YES		db		0.000
2	FUNCTION1 HXCD...	27.74	8.055e1					1.8	NO		bd		0.000
3	FUNCTION1 HXCD...	27.59	1.178e2					2.5	NO		bb		0.000
4	FUNCTION1 HXCD...	27.21	1.030e2					1.7	NO		bb		0.000
5	FUNCTION1 HXCD...	27.02	8.155e1					1.5	NO		db		0.000
6	FUNCTION1 HXCD...	26.85	8.440e1					2.6	NO		bd		0.000
7	FUNCTION1 HXCD...	26.52	1.203e2					2.7	NO		bb		0.000
8	FUNCTION1 HXCD...	25.93	1.681e2					3.0	YES		bb		0.000
9	FUNCTION1 HXCD...	24.22	7.069e1					2.3	NO		bb		0.000
10	FUNCTION1 HXCD...	23.52	8.011e1					1.5	NO		bb		0.000
11	FUNCTION1 HXCD...	21.12	9.981e1					1.8	NO		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	23.48	8.076e1					2.6	NO		bb		0.000
2	FUNCTION1 HPCD...	21.66	8.657e1					2.4	NO		bb		0.000
3	FUNCTION1 HPCD...	21.27	8.855e1					2.3	NO		db		0.000
4	FUNCTION1 HPCD...	21.16	2.367e2					2.7	NO		bd		0.000
5	FUNCTION1 HPCD...	27.79	1.270e2					2.7	NO		bb		0.000
6	FUNCTION1 HPCD...	26.52	1.210e2					2.0	NO		bb		0.000
7	FUNCTION1 HPCD...	25.97	9.169e1					1.5	NO		db		0.000
8	FUNCTION1 HPCD...	25.88	1.471e2					2.3	NO		dd		0.000
9	FUNCTION1 HPCD...	25.73	1.363e2					1.9	NO		bd		0.000
10	FUNCTION1 HPCD...	24.82	1.792e2					1.5	NO		db		0.000
11	FUNCTION1 HPCD...	24.63	7.297e1					1.7	NO		bd		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.64	8.233e1					2.0	NO		bb		0.000
2	FUNCTION2 HPCD...	31.26	3.994e2					8.3	YES		bb		0.000

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ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.42	1.052e2					1.7	NO		bb		0.000
2	FUNCTION3 OCDPE	36.19	9.953e1					2.2	NO		bb		0.000
3	FUNCTION3 OCDPE	34.50	7.262e1					2.2	NO		bb		0.000
4	FUNCTION3 OCDPE	33.58	9.379e1					1.9	NO		bb		0.000
5	FUNCTION3 OCDPE	33.20	7.737e1					3.3	YES		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	42.82	9.720e1					2.9	NO		bb		0.000
2	FUNCTION4 NCDPE	42.34	7.165e1					2.1	NO		bb		0.000
3	FUNCTION4 NCDPE	40.58	7.068e1					1.3	NO		bb		0.000
4	FUNCTION4 NCDPE	40.40	1.414e2					1.7	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
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Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
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ID: CS3CR, Name: 23020107, Date: 01-Feb-2023, Time: 17:56:19, Conditions: AUTOSPEC01, User: pk

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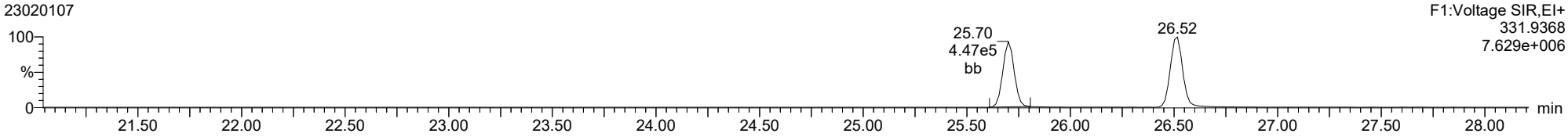

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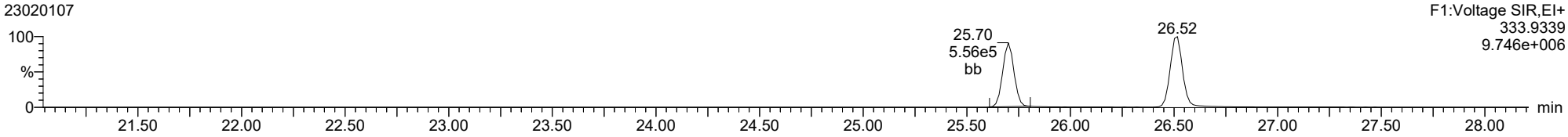

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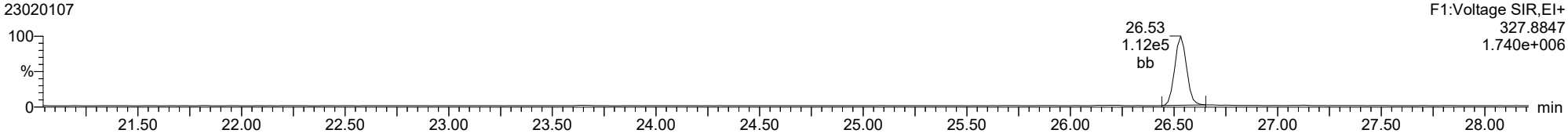

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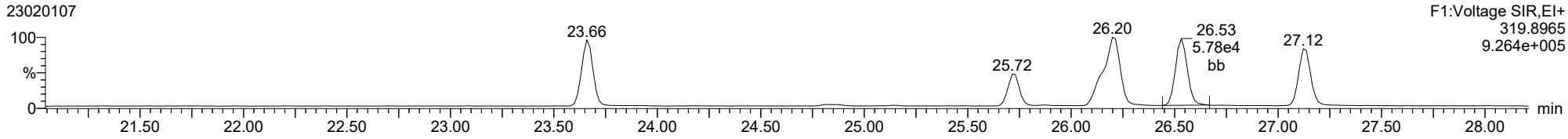

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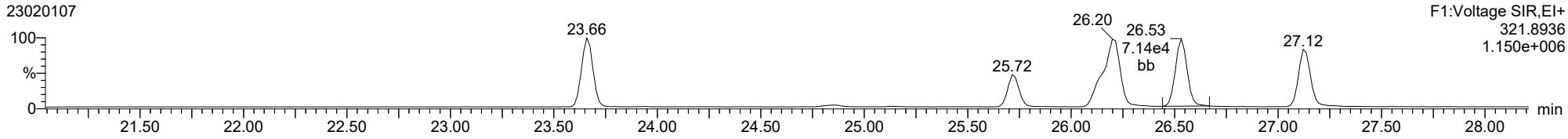

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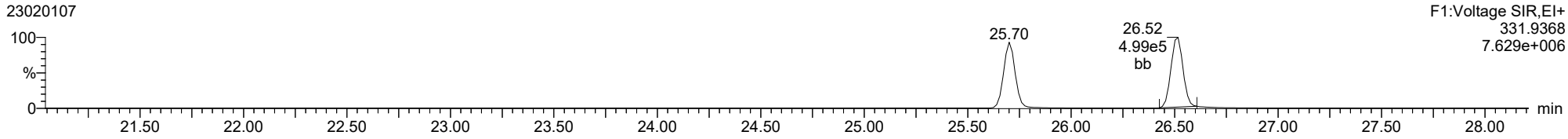

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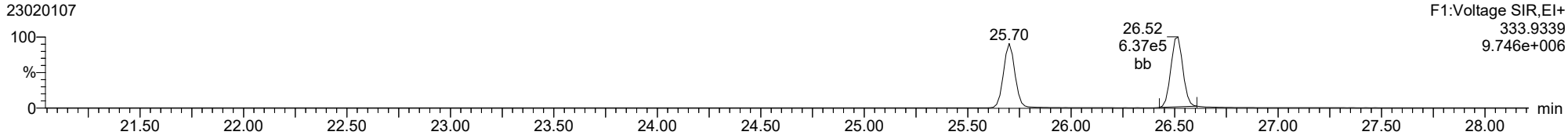
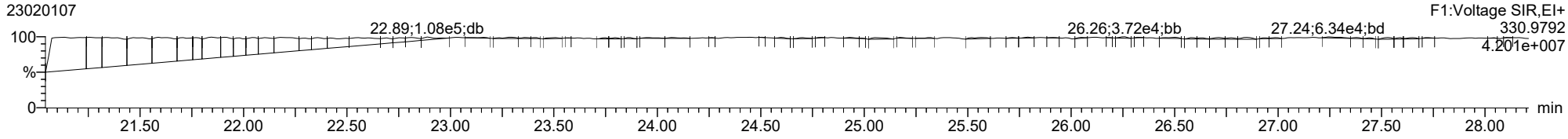


FUNCTION1 PFK



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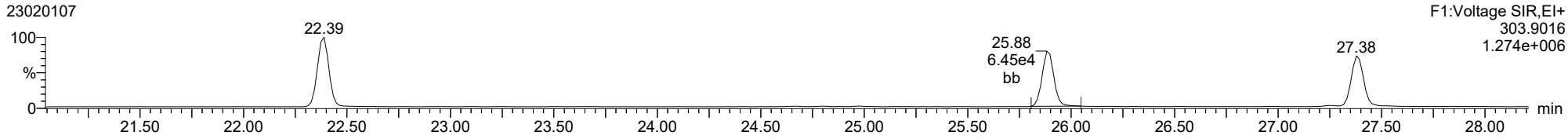

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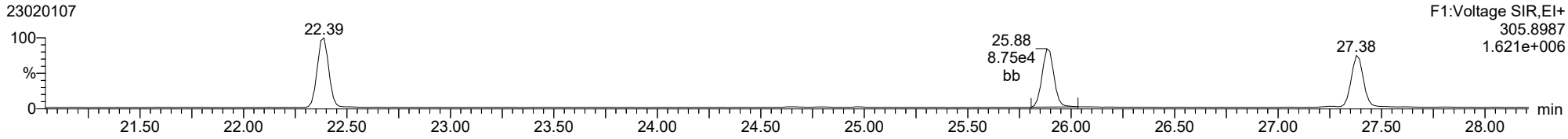

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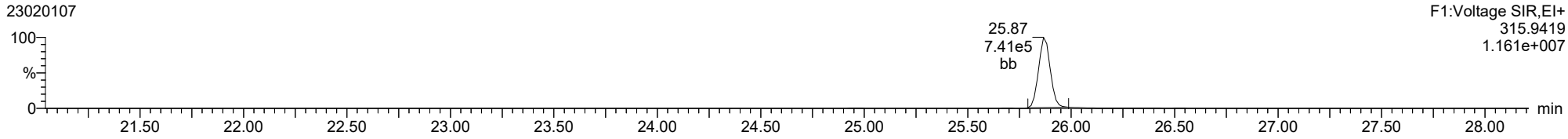

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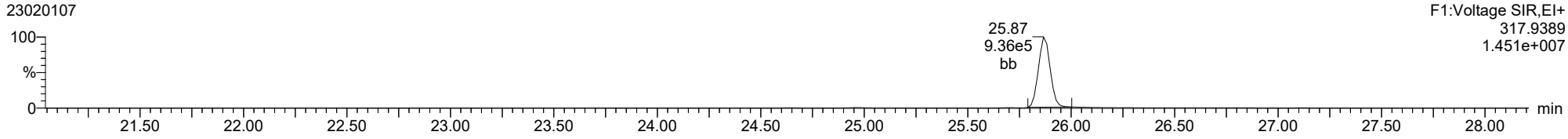
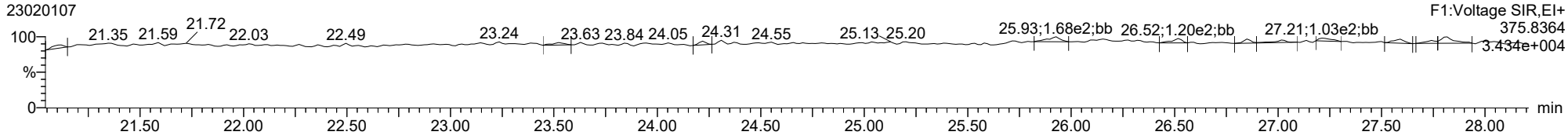


FUNCTION1 HXCDPE



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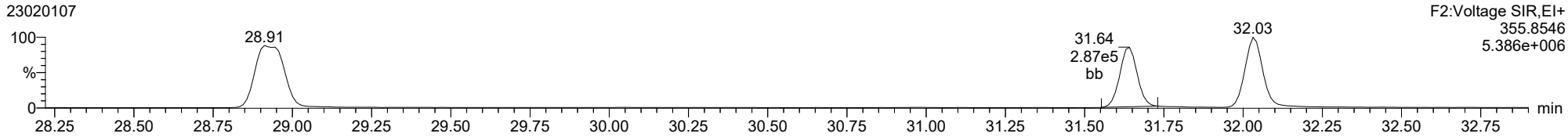
12378-PeCDD



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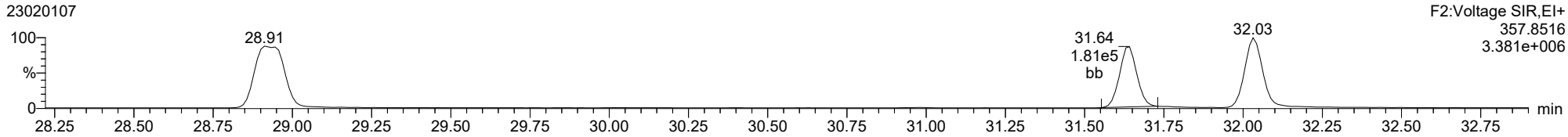

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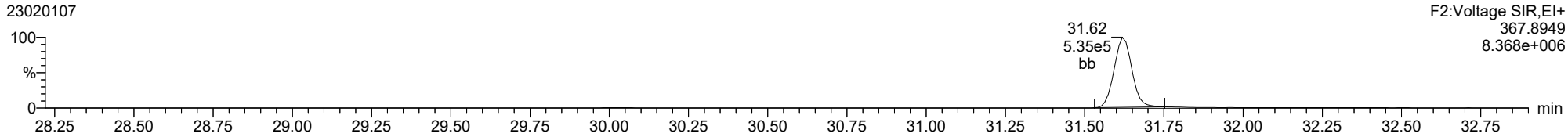

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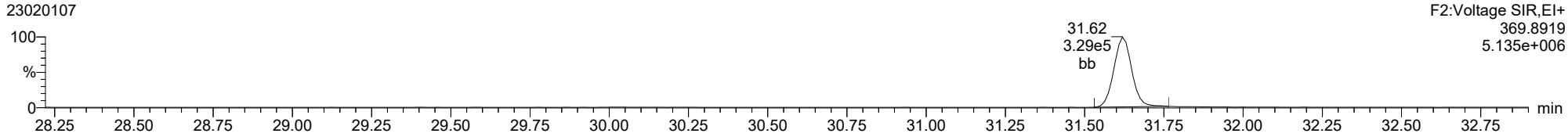
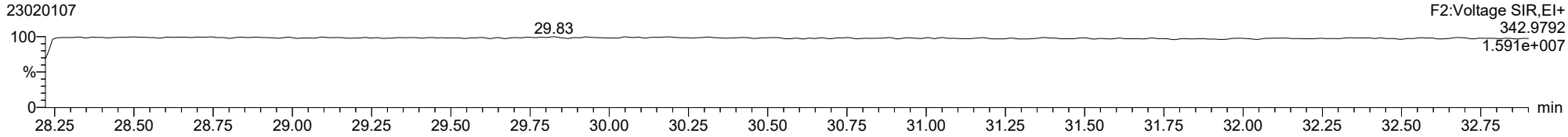


FUNCTION2 PFK



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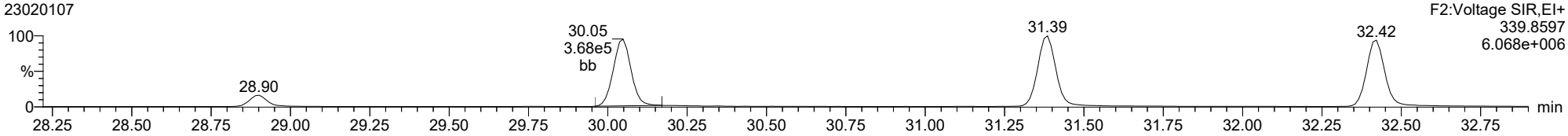
12378-PeCDF



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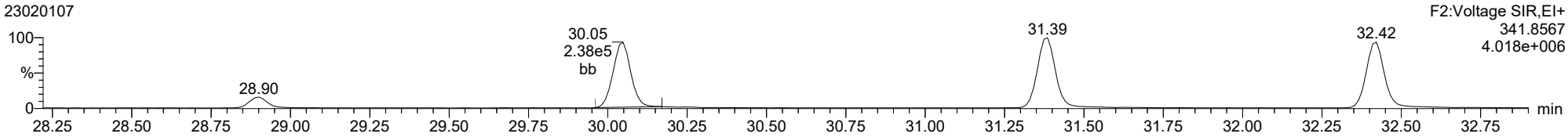

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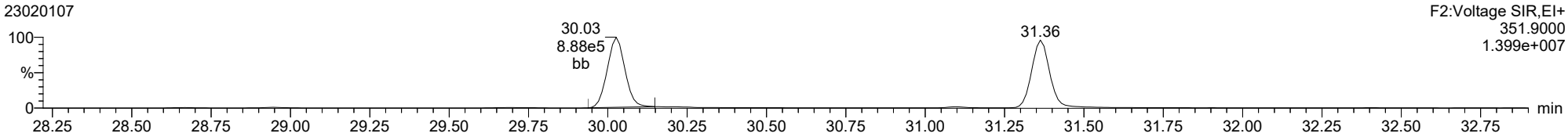

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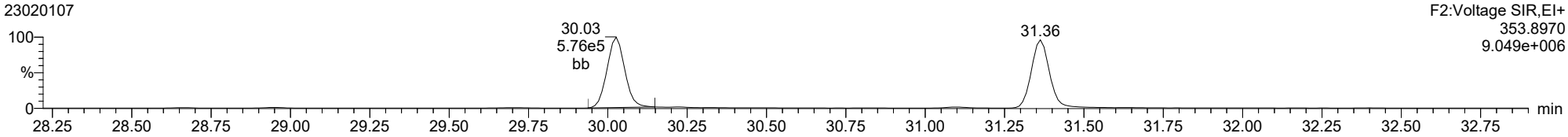
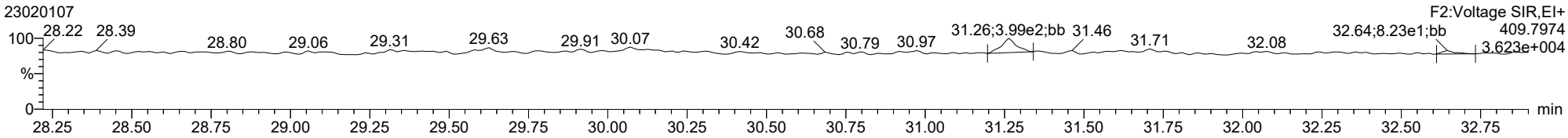


FUNCTION2 HPCDPE



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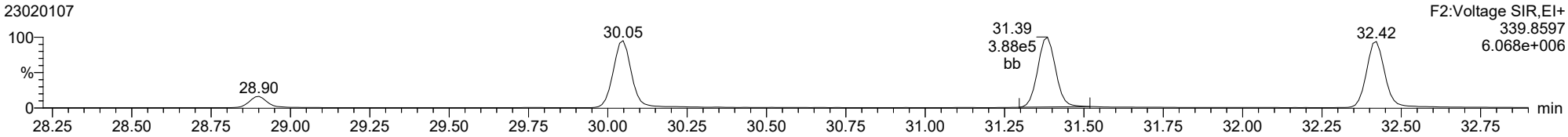
23478-PeCDF



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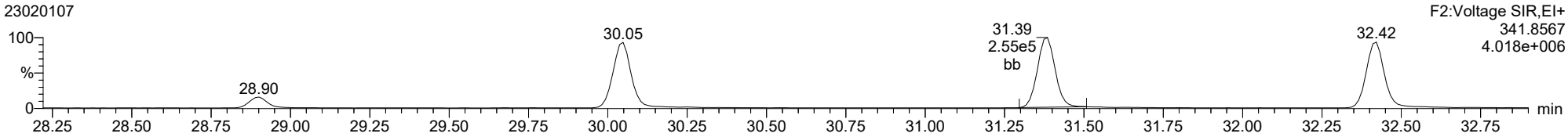

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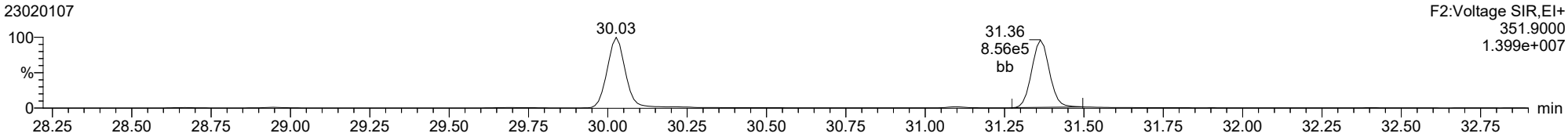

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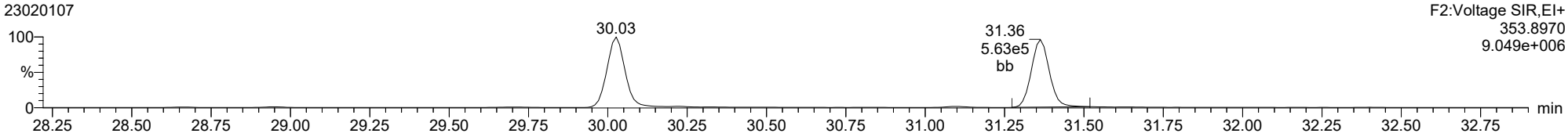
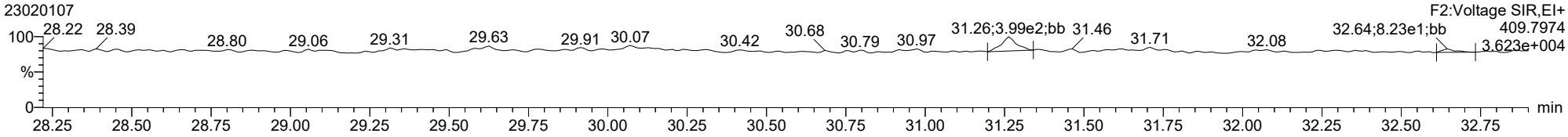
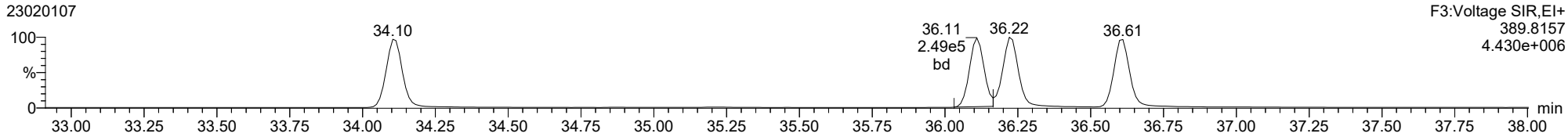


FUNCTION2 HPCDPE



ID: CS3CR, Name: 23020107, Date: 01-Feb-2023, Time: 17:56:19, Conditions: AUTOSPEC01, User: pk

123478-HxCDD



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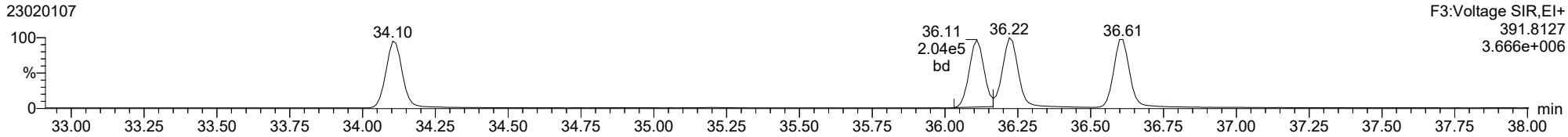

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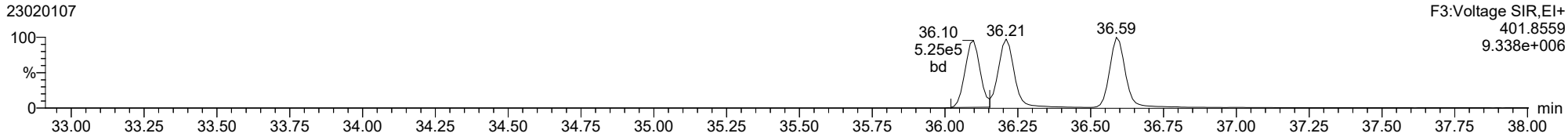

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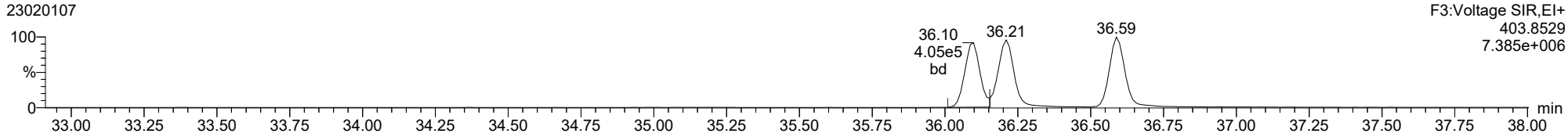
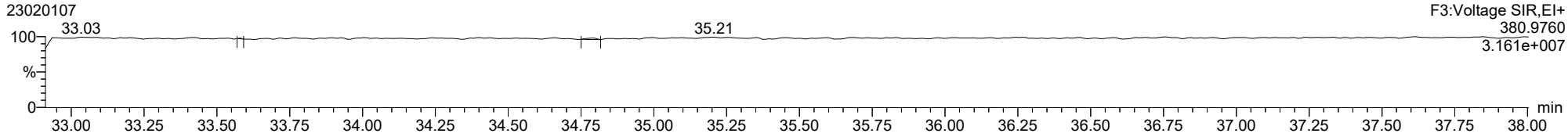


FUNCTION3 PFK



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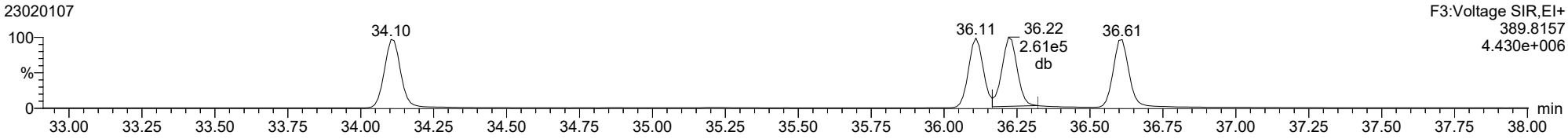

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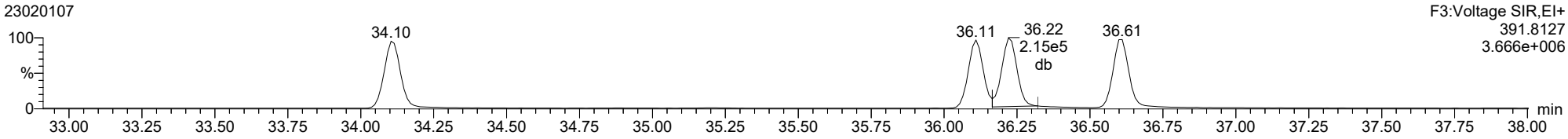

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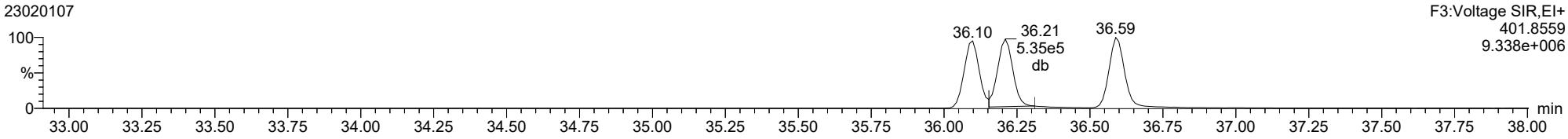

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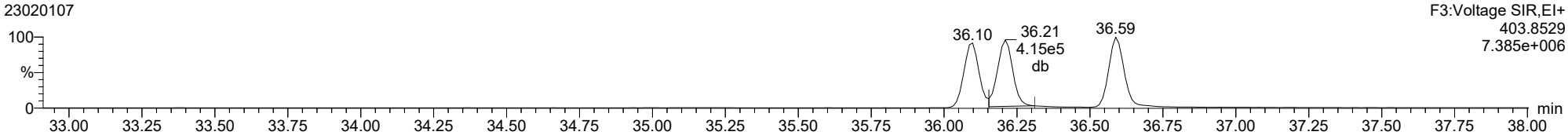

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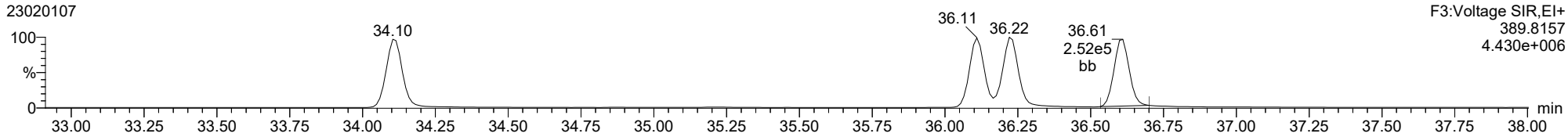

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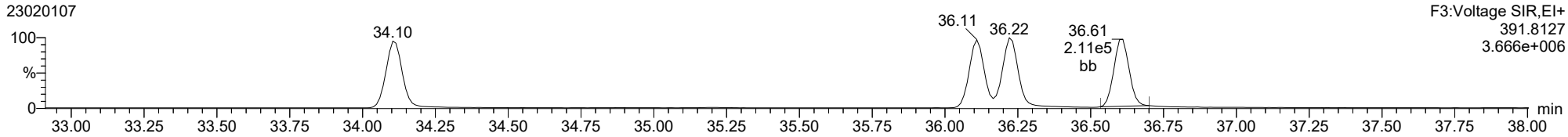

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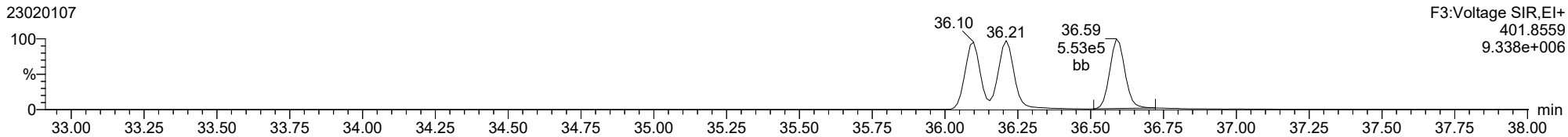

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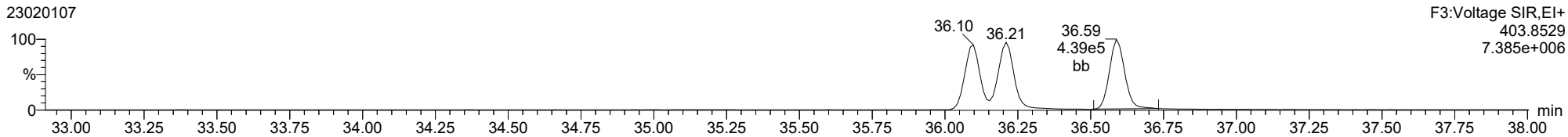

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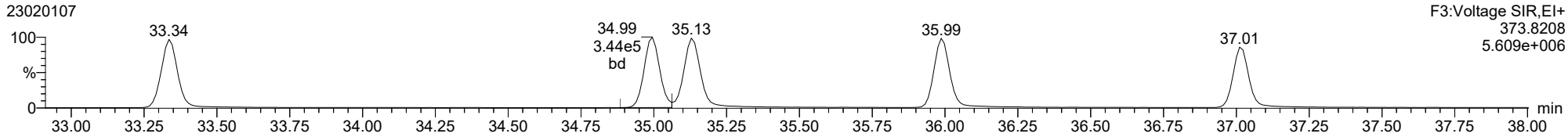

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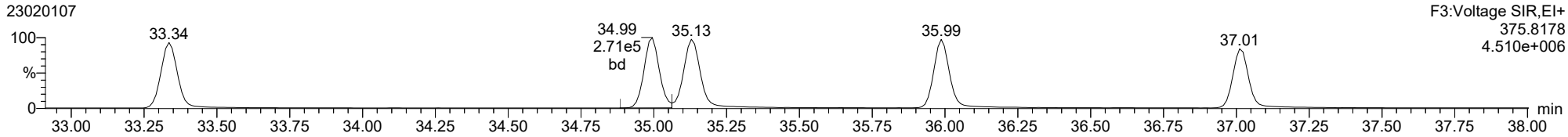

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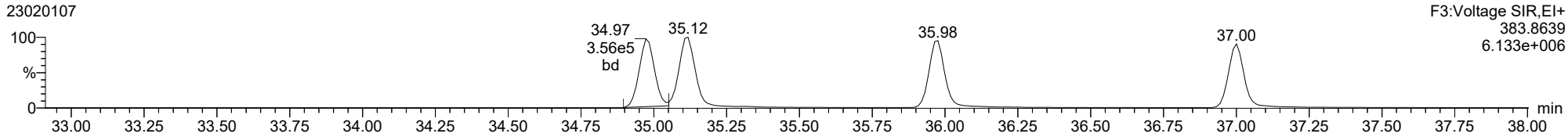

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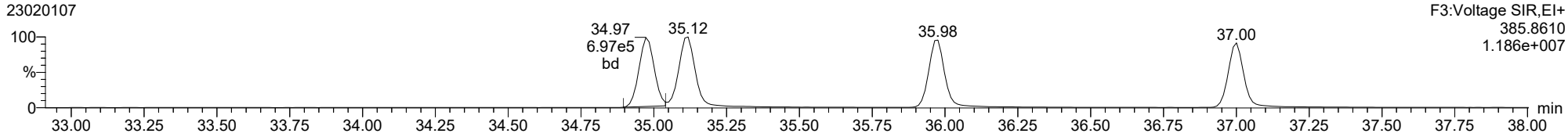
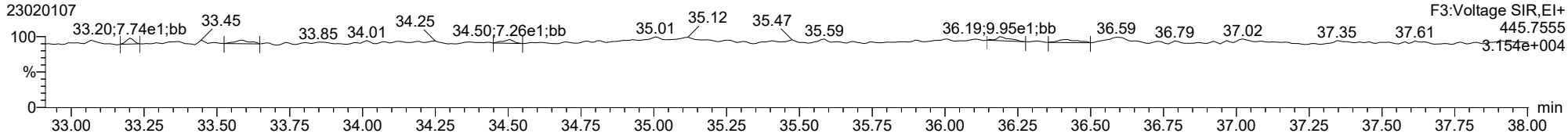


FUNCTION3 OCDPE



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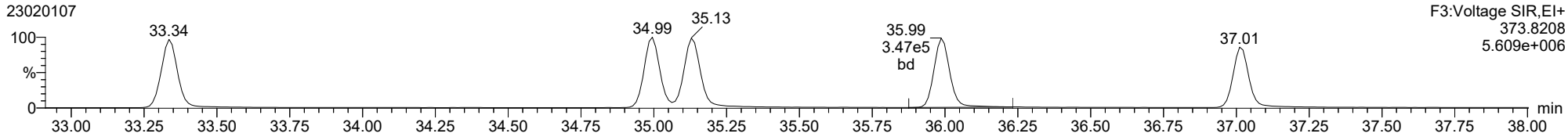
234678-HxCDF



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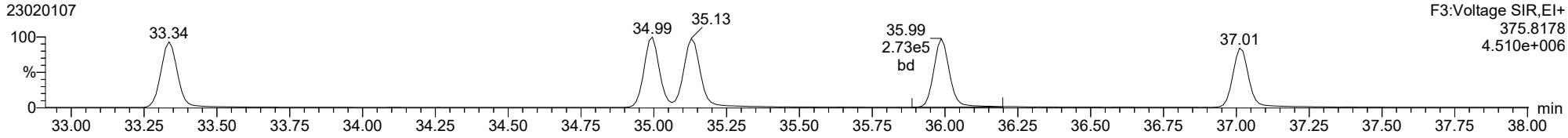

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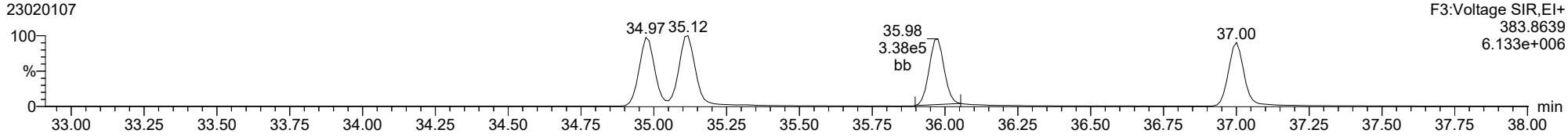

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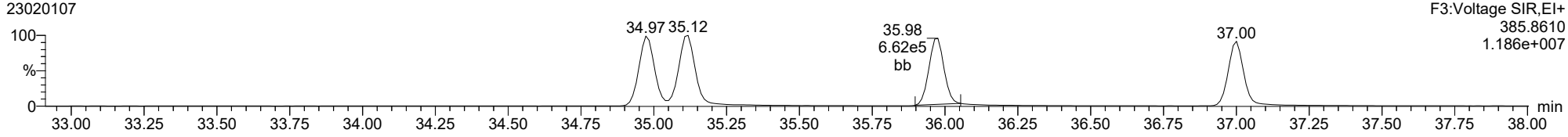
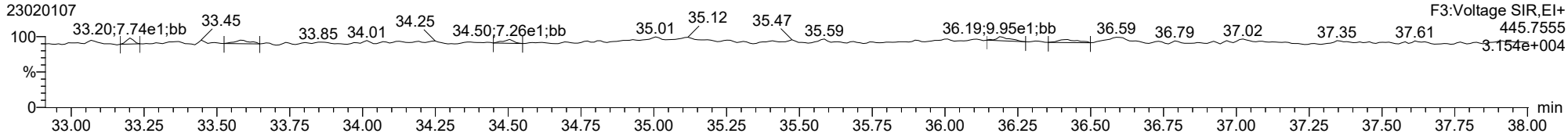


FUNCTION3 OCDPE



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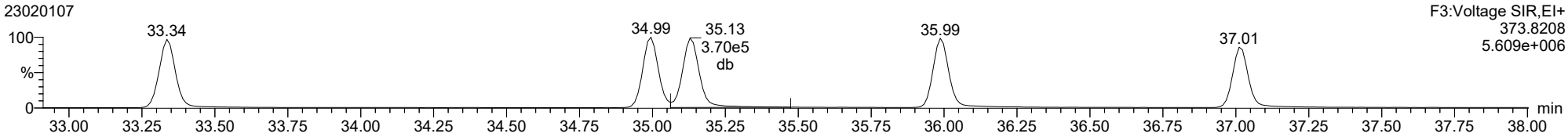

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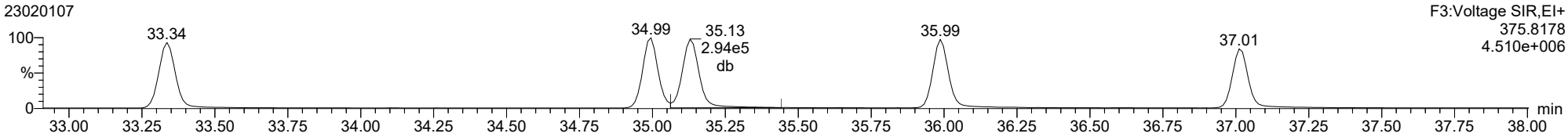

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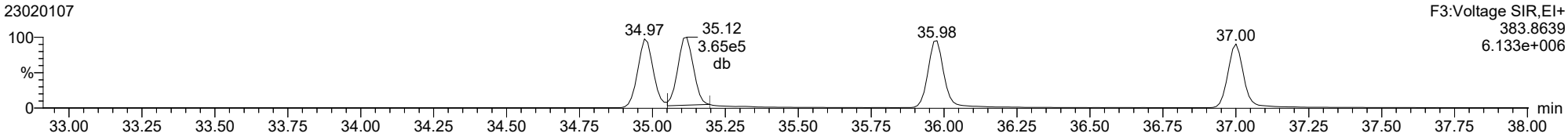

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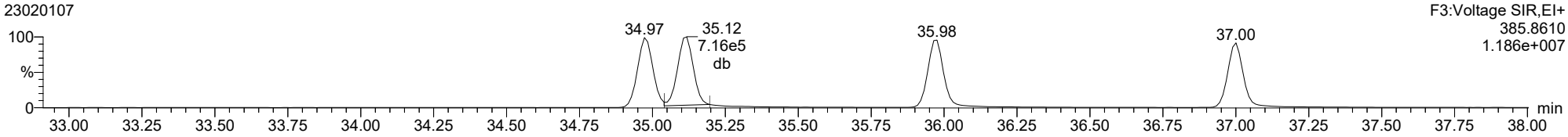
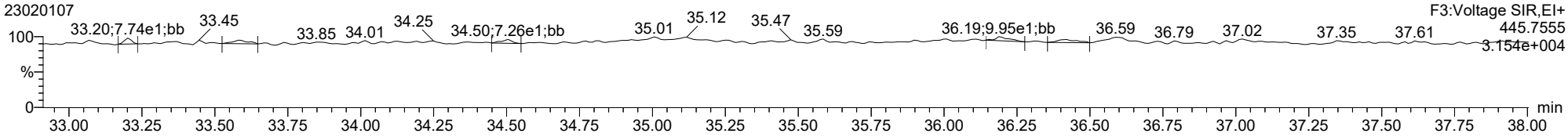


FUNCTION3 OCDPE



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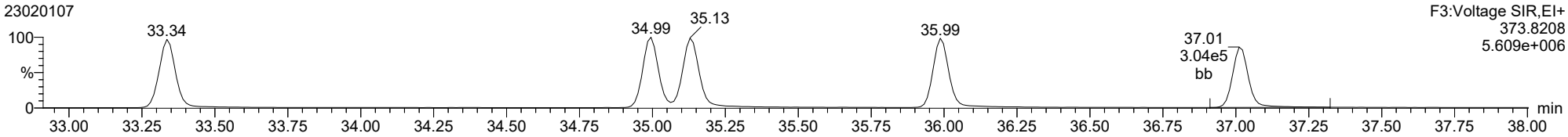

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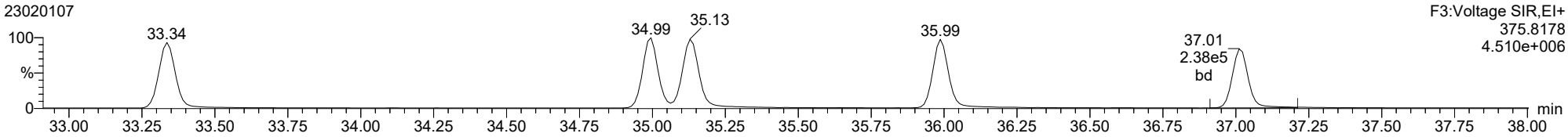

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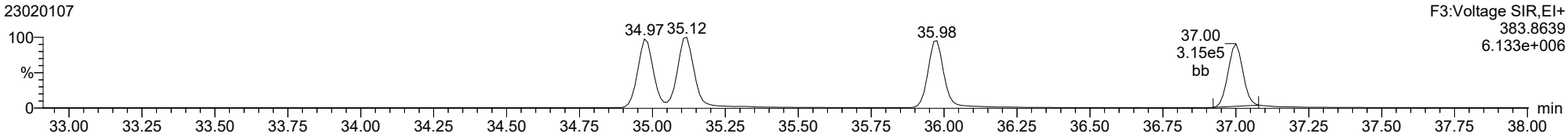

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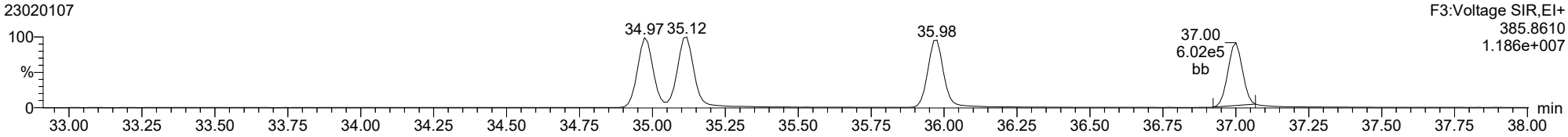
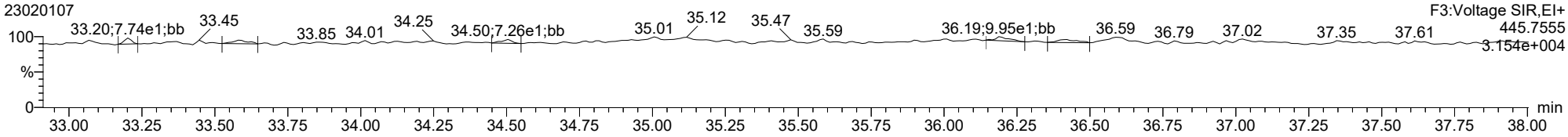


FUNCTION3 OCDPE



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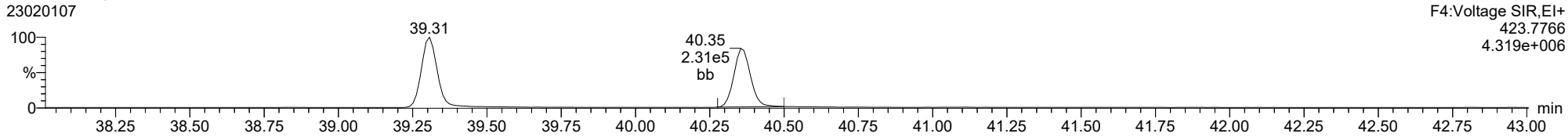
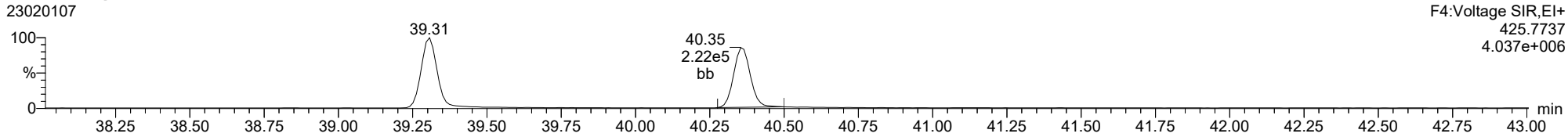


1234678-HpCDD



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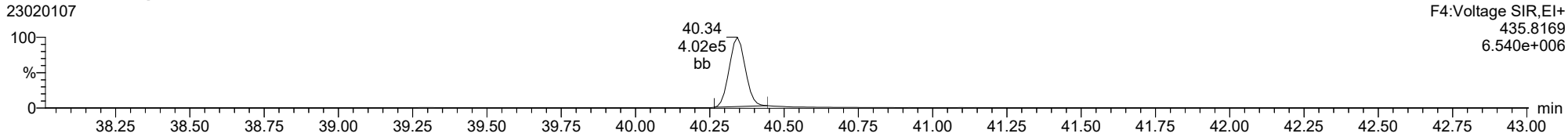

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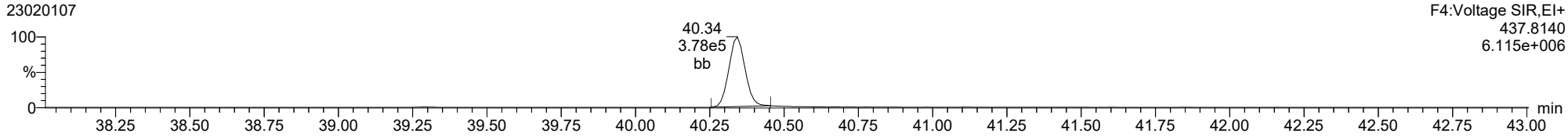
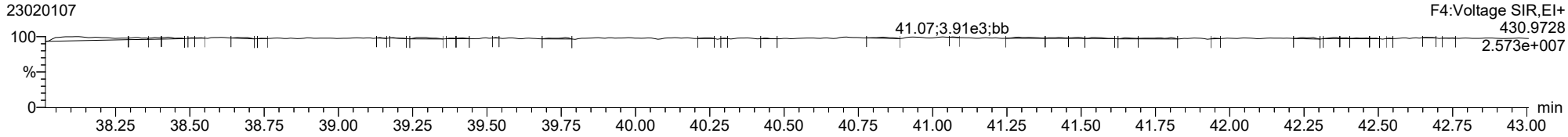


FUNCTION4 PFK



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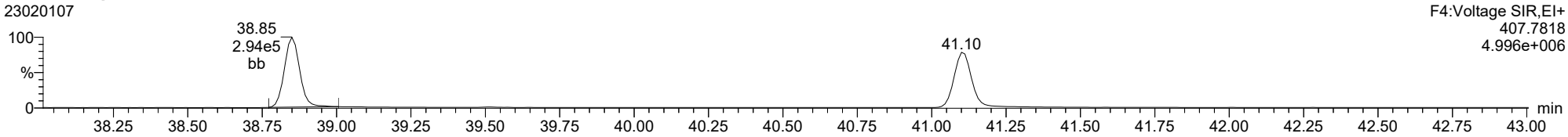

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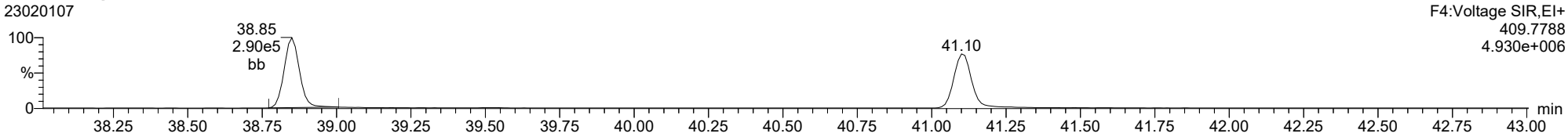

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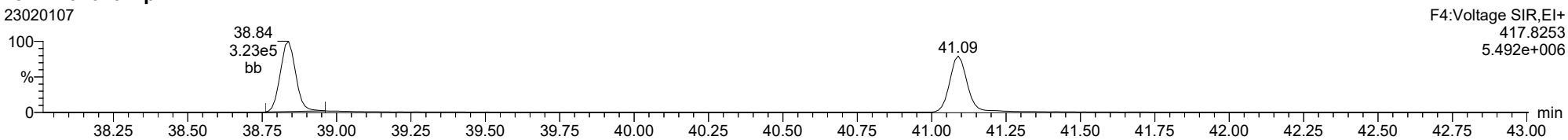

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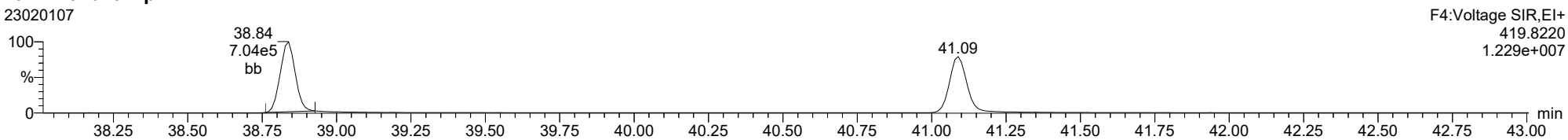
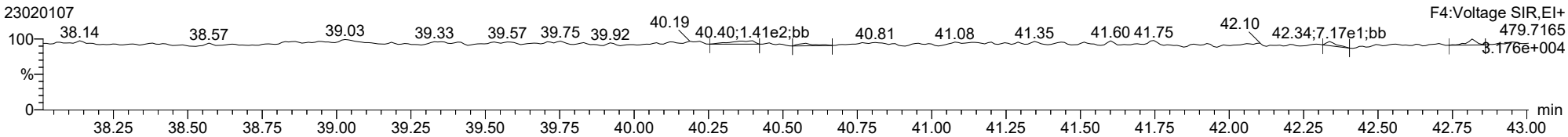


FUNCTION4 NCDPE



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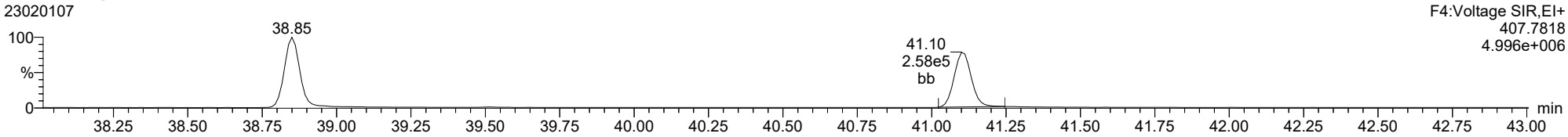
1234789-HpCDF



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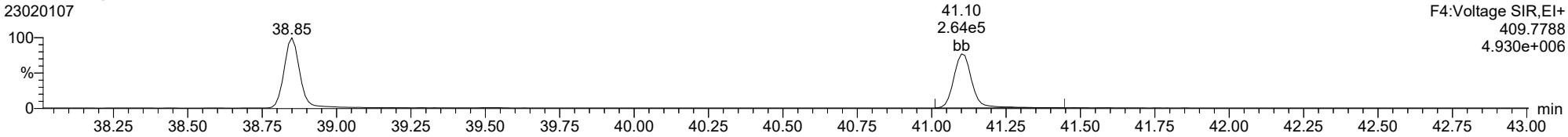

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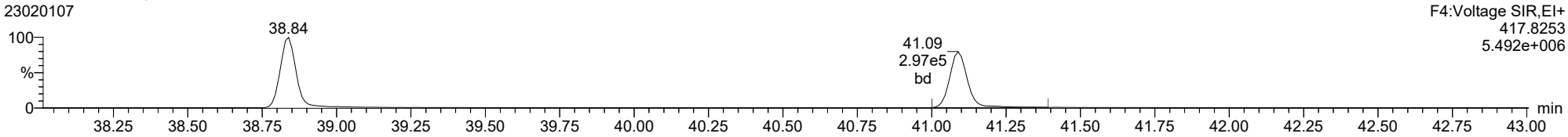

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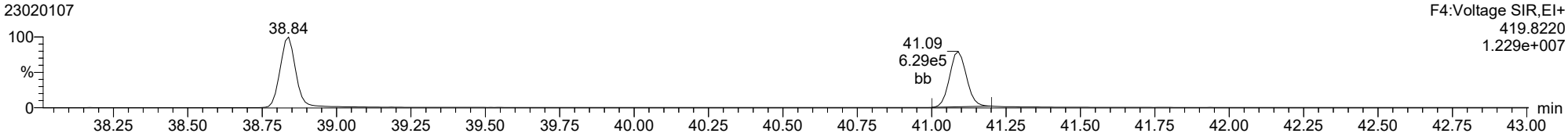
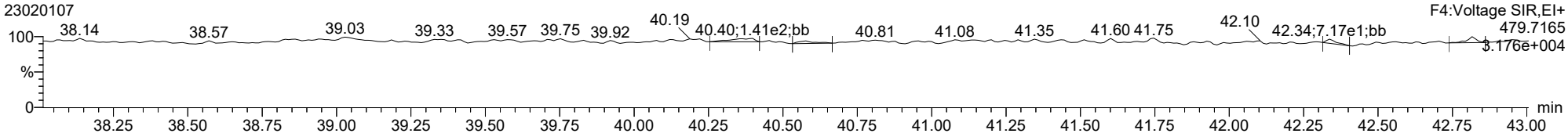


FUNCTION4 NCDPE



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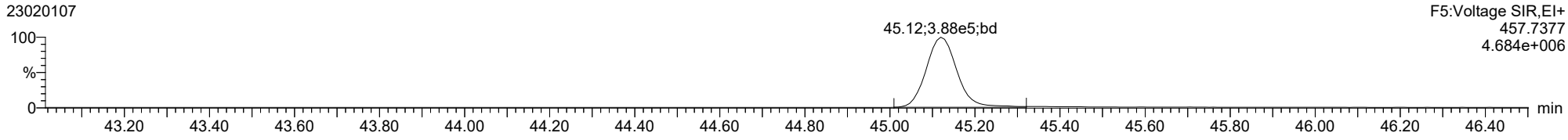
OCDD



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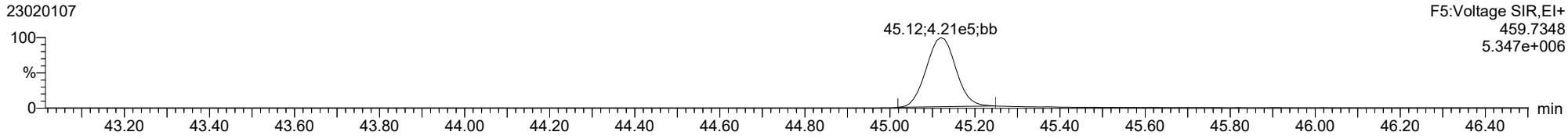
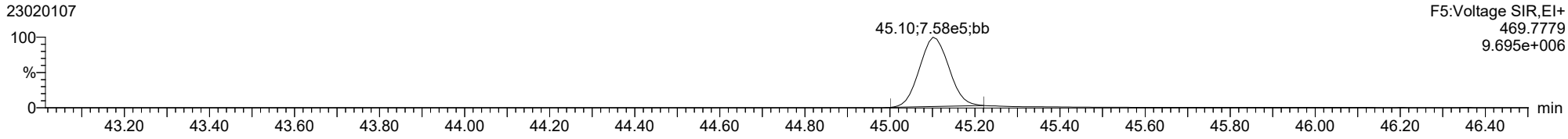
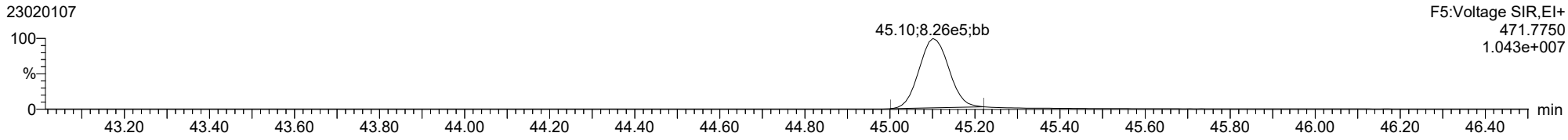


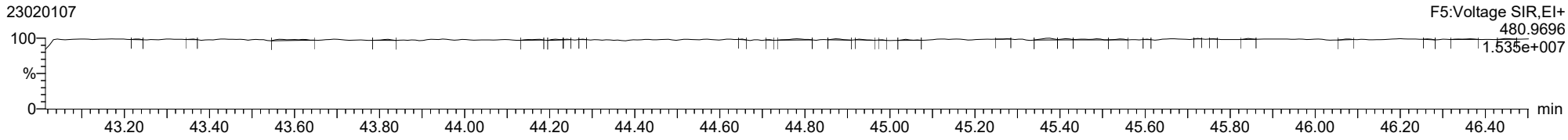
13C-OCDD



13C-OCDD

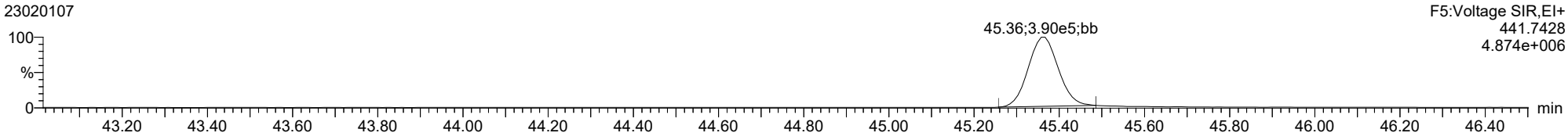


FUNCTION5 PFK

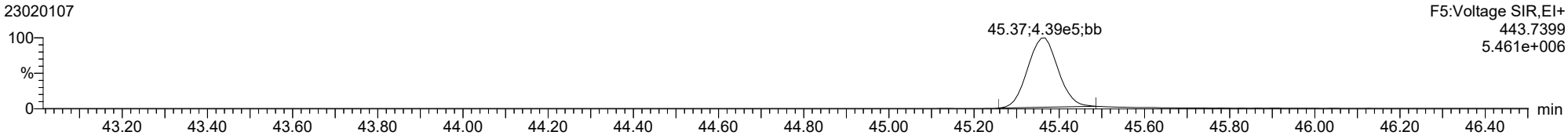


ID: CS3CR, Name: 23020107, Date: 01-Feb-2023, Time: 17:56:19, Conditions: AUTOSPEC01, User: pk

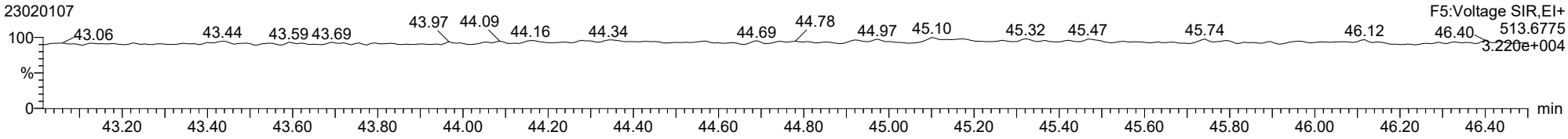
OCDF



OCDF

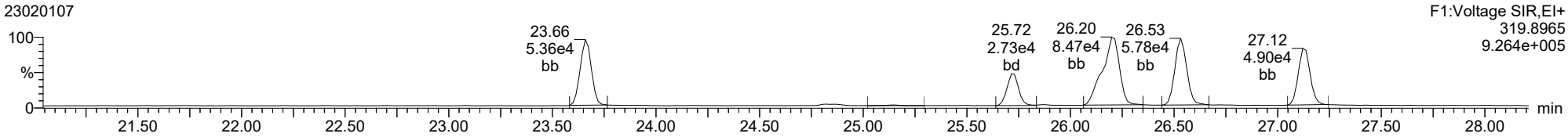


FUNCTION5 DCDPE

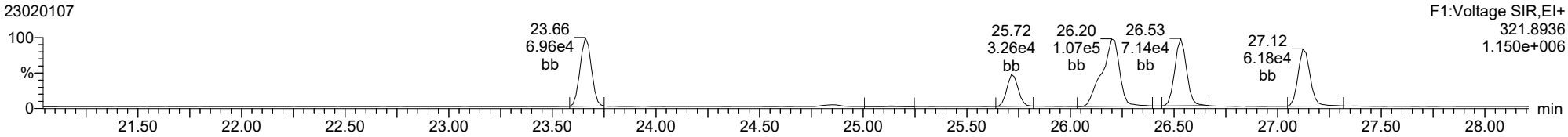


ID: CS3CR, Name: 23020107, Date: 01-Feb-2023, Time: 17:56:19, Conditions: AUTOSPEC01, User: pk

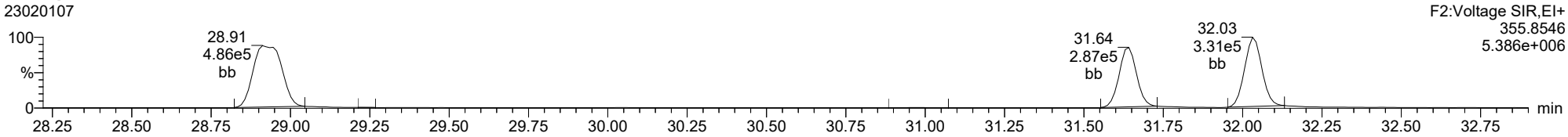
Total-tetradioxins



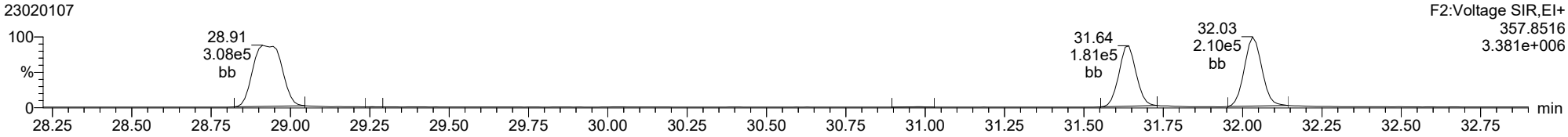
Total-tetradioxins



Total-pentadioxins

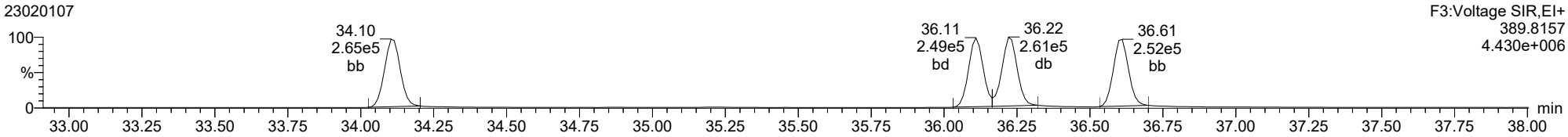


Total-pentadioxins

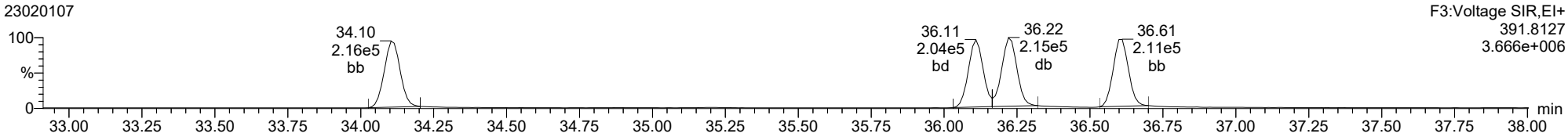


ID: CS3CR, Name: 23020107, Date: 01-Feb-2023, Time: 17:56:19, Conditions: AUTOSPEC01, User: pk

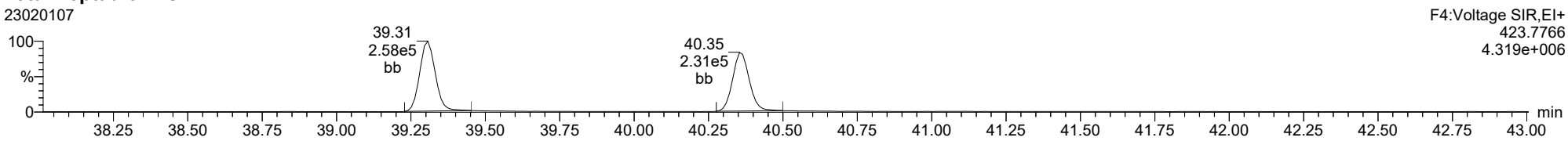
Total-hexadioxins



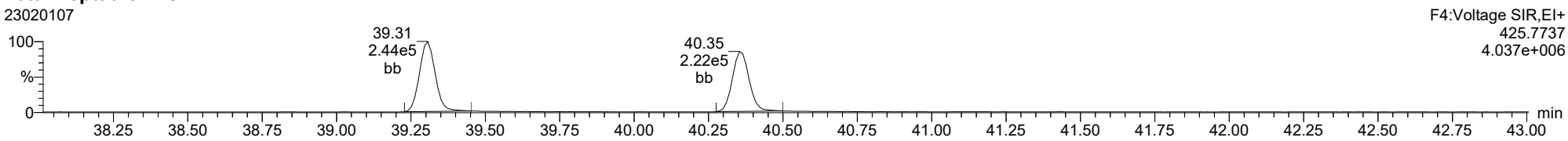
Total-hexadioxins



Total-heptadioxins

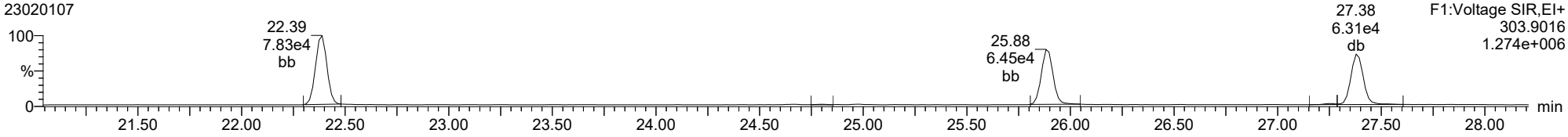


Total-heptadioxins

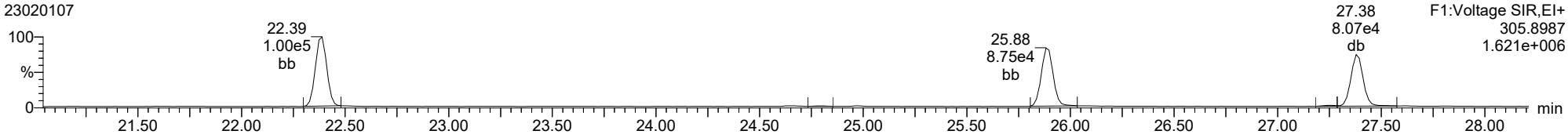


ID: CS3CR, Name: 23020107, Date: 01-Feb-2023, Time: 17:56:19, Conditions: AUTOSPEC01, User: pk

Total-tetrafurans



Total-tetrafurans



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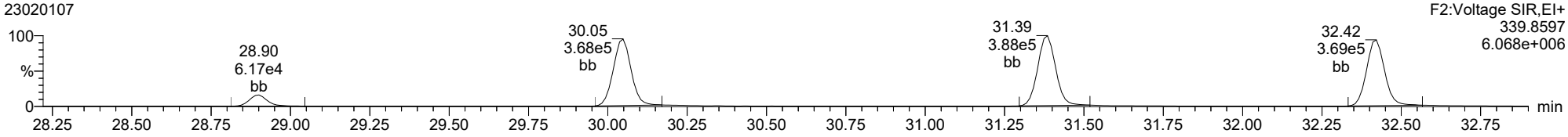

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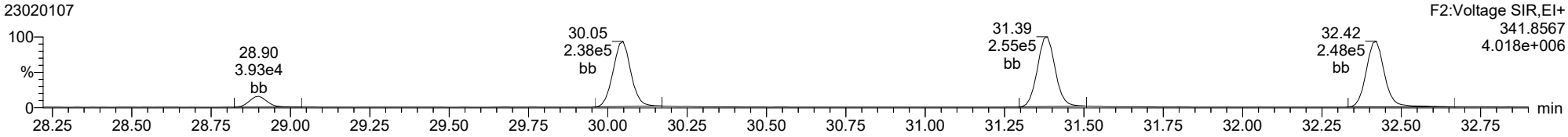

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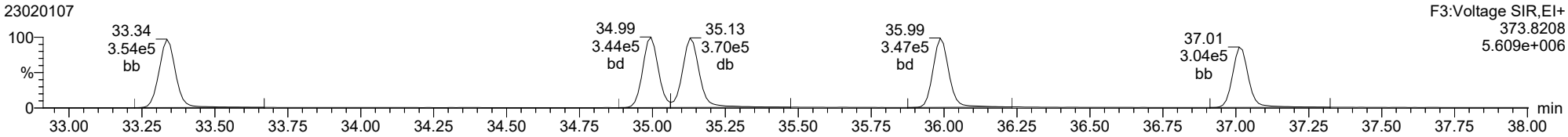
Total-hexafurans



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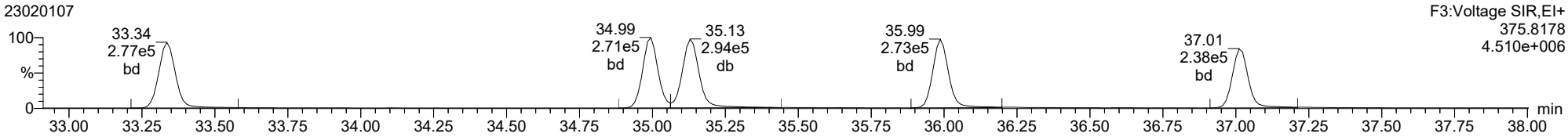
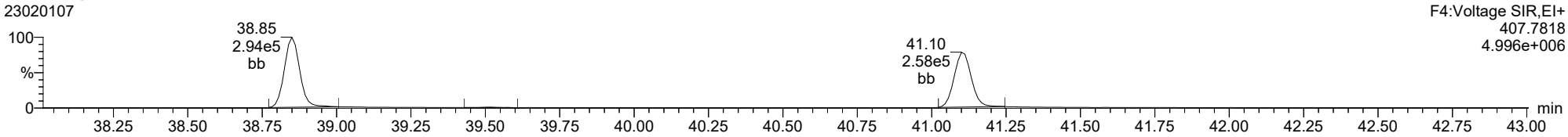
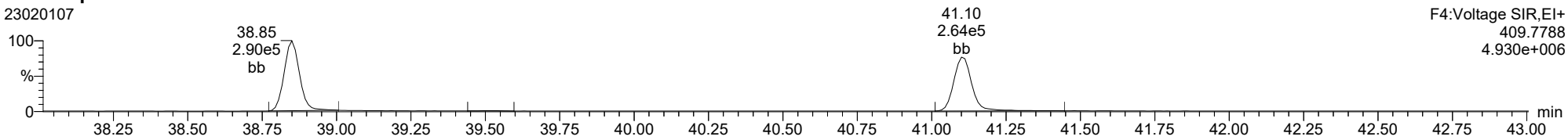


Total-heptafurans



Total-heptafurans



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Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:37:53 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS4CR, Name: 23020108, Date: 01-Feb-2023, Time: 18:45:20, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.882	1.001	3.837e5	5.095e5	0.876	0.753	0.770	3306	1852	5.94e6	7.78e6	1796.5	4201.3	NO	bb	bb	39.352
12378-PeCDF	30.037	1.000	2.144e6	1.419e6	0.845	1.511	1.550	3774	3458	3.38e7	2.23e7	8947.1	6442.4	NO	bb	bb	197.212
23478-PeCDF	31.374	1.000	2.253e6	1.479e6	0.911	1.523	1.550	3774	3458	3.50e7	2.30e7	9263.9	6657.7	NO	bb	bb	199.338
123478-HxCDF	34.984	1.000	2.037e6	1.599e6	1.182	1.274	1.240	4016	3299	3.25e7	2.54e7	8086.7	7697.9	NO	dd	dd	201.086
234678-HxCDF	35.987	1.001	2.093e6	1.626e6	1.229	1.288	1.240	4016	3299	3.22e7	2.54e7	8018.2	7699.6	NO	dd	bd	203.397
123678-HxCDF	35.129	1.001	2.269e6	1.771e6	1.248	1.281	1.240	4016	3299	3.41e7	2.66e7	8495.8	8063.9	NO	dd	dd	203.923
123789-HxCDF	37.012	1.001	1.817e6	1.431e6	1.187	1.269	1.240	4016	3299	2.86e7	2.23e7	7125.7	6768.1	NO	dd	bd	199.649
1234678-HpCDF	38.839	1.000	1.816e6	1.772e6	1.204	1.025	1.050	5173	5540	3.02e7	2.97e7	5847.4	5361.2	NO	bb	bb	193.935
1234789-HpCDF	41.100	1.000	1.575e6	1.522e6	1.165	1.034	1.050	5173	5540	2.37e7	2.31e7	4579.3	4164.7	NO	bb	bb	200.336
OCDF	45.357	1.006	2.485e6	2.804e6	1.186	0.886	0.890	4624	3331	3.05e7	3.43e7	6601.2	10303.1	NO	bb	bb	376.199
2378-TCDD	26.532	1.001	3.417e5	4.230e5	1.236	0.808	0.770	1943	1502	5.26e6	6.49e6	2709.1	4323.6	NO	bb	bb	40.022
12378-PeCDD	31.631	1.000	1.695e6	1.077e6	1.087	1.574	1.550	2803	1572	2.73e7	1.72e7	9745.0	10948.2	NO	bb	bb	198.713
123478-HxCDD	36.109	1.001	1.491e6	1.215e6	0.987	1.227	1.240	2230	3671	2.51e7	2.05e7	11249.2	5579.6	NO	bd	bd	204.141
123678-HxCDD	36.221	1.000	1.525e6	1.238e6	1.021	1.232	1.240	2230	3671	2.55e7	2.09e7	11440.8	5702.6	NO	db	db	192.587
123789-HxCDD	36.599	1.011	1.475e6	1.213e6	0.985	1.216	1.240	2230	3671	2.48e7	2.06e7	11134.5	5610.2	NO	bb	bb	198.496
1234678-HpCDD	40.354	1.001	1.416e6	1.361e6	1.253	1.040	1.050	2506	3274	2.22e7	2.13e7	8870.2	6512.5	NO	bb	bb	190.176
OCDD	45.120	1.000	2.302e6	2.608e6	1.103	0.883	0.890	2646	4665	2.90e7	3.29e7	10978.0	7047.3	NO	bb	bb	375.677
13C-2378-TCDF	25.867	1.007	1.141e6	1.450e6	1.768	0.786	0.770	2983	2394	1.77e7	2.25e7	5940.4	9386.6	NO	bb	bb	101.281
13C-12378-PeCDF	30.026	1.168	1.284e6	8.547e5	1.527	1.502	1.550	4680	2502	1.96e7	1.27e7	4184.1	5065.1	NO	bb	bd	96.786
13C-23478-PeCDF	31.363	1.220	1.245e6	8.091e5	1.466	1.539	1.550	4680	2502	1.90e7	1.23e7	4051.1	4925.5	NO	bb	bb	96.841
13C-123478-HxCDF	34.973	0.956	5.210e5	1.009e6	1.054	0.516	0.510	2637	3506	8.67e6	1.67e7	3288.9	4772.6	NO	bd	bd	99.631
13C-123678-HxCDF	35.107	0.960	5.527e5	1.035e6	1.080	0.534	0.510	2637	3506	9.01e6	1.71e7	3417.9	4869.2	NO	db	db	100.816
13C-234678-HxCDF	35.965	0.983	5.043e5	9.836e5	1.014	0.513	0.510	2637	3506	8.34e6	1.63e7	3164.3	4660.4	NO	bb	bb	100.617
13C-123789-HxCDF	36.989	1.011	4.610e5	9.102e5	0.928	0.507	0.510	2637	3506	7.75e6	1.54e7	2939.3	4390.8	NO	bb	bb	101.358
13C-1234678-HpCDF	38.828	1.061	4.731e5	1.063e6	1.036	0.445	0.440	3133	3783	8.09e6	1.82e7	2583.3	4811.1	NO	bb	bb	101.722
13C-1234789-HpCDF	41.089	1.123	4.094e5	9.173e5	0.905	0.446	0.440	3133	3783	6.17e6	1.38e7	1971.0	3639.0	NO	bb	bb	100.563
13C-1234-TCDD	25.700	0.000	6.435e5	8.034e5	1.000	0.801	0.770	2264	5824	1.00e7	1.24e7	4417.3	2128.2	NO	bb	bb	100.000
13C-2378-TCDD	26.502	1.031	6.869e5	8.584e5	1.103	0.800	0.770	2264	5824	1.05e7	1.31e7	4634.7	2257.9	NO	bb	bb	96.836
13C-12378-PeCDD	31.619	1.230	7.945e5	4.894e5	0.914	1.623	1.550	1351	1735	1.23e7	7.56e6	9139.9	4356.9	NO	bb	bb	97.071
13C-123478-HxCDD	36.087	0.986	7.592e5	5.838e5	0.933	1.300	1.240	2349	1779	1.29e7	9.89e6	5485.2	5561.8	NO	bd	bd	98.749
13C-123678-HxCDD	36.210	0.990	7.891e5	6.166e5	0.965	1.280	1.240	2349	1779	1.26e7	9.87e6	5351.9	5549.2	NO	db	db	99.960
13C-1234678-HpCDD	40.332	1.102	6.034e5	5.625e5	0.782	1.073	1.050	2813	2017	9.31e6	8.69e6	3310.2	4307.9	NO	bb	bb	102.265
13C-OCDD	45.101	1.233	1.130e6	1.241e6	0.788	0.911	0.890	2295	1626	1.42e7	1.55e7	6172.7	9561.2	NO	bb	bb	206.289
13C-123789-HxCDD	36.588	0.000	8.190e5	6.388e5	1.000	1.282	1.240	2349	1779	1.32e7	1.04e7	5620.6	5858.2	NO	bb	bb	100.000
37CL-2378-TCDD	26.532	1.032	6.581e5		1.233			1941		1.01e7		5210.0			bb		36.879

Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:37:53 Pacific Standard Time

ID: CS4CR, Name: 23020108, Date: 01-Feb-2023, Time: 18:45:20, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					1.064		0.770	3306	1852								
1289-TCDF					0.858		0.770	3306	1852								
13468-PECDF					1.013		1.550	3731	5783								
12389-PECDF					0.844		1.550	3774	3458								
123468-HXCDF					1.197		1.240	4016	3299								
1368-TCDD					1.084		0.770	1943	1502								
1289-TCDD					0.975		0.770	1943	1502								
12479-PECDD					1.837		1.550	2803	1572								
12389-PECDD					1.252		1.550	2803	1572								
124679-HXCDD					1.033		1.240	2230	3671								
1234679-HPCDD					1.286		1.050	2506	3274								
Total-tetrafurans			3.913e5		0.933			3306		6.07e6							40.082
Total-penta1			0.000e0					3731		0.00e0							
Total-pentafurans			4.421e6		0.866			3774		6.91e7							398.784
Total-hexafurans			8.218e6		1.208			4016		1.27e8							808.248
Total-heptafurans			3.395e6		1.185			5173		5.40e7							394.809
Total-Furans			1.891e7		1.067			3306		2.87e8							2018.122
Total-tetradioxins			3.511e5		1.099			1943		5.38e6							41.245
Total-pentadioxins			1.697e6		1.392			2803		2.73e7							198.842
Total-hexadioxins			4.491e6		1.007			2230		7.54e7							595.224
Total-heptadioxins			1.416e6		1.269			2506		2.22e7							190.176
Total-Dioxins			1.026e7		1.165			1943		1.59e8							1401.163
Total-TEQ			2.917e7					1943		4.47e8							3419.285
FUNCTION1 PFK			4.404e5					580120		1.21e7							
FUNCTION2 PFK			1.273e5					196333		3.80e6							0.000
FUNCTION3 PFK			0.000e0					408061		0.00e0							
FUNCTION4 PFK			2.183e5					275800		6.18e6							
FUNCTION5 PFK			0.000e0					154157		0.00e0							
FUNCTION1 HXCD...			1.662e4					8726		3.10e5							0.000
FUNCTION1 HPCD...			1.579e4					6150		2.65e5							0.000
FUNCTION2 HPCD...			2.593e3					848		4.54e4							0.000
FUNCTION3 OCDPE			1.183e3					745		1.55e4							0.000
FUNCTION4 NCDPE			4.176e2					872		5.06e3							0.000
FUNCTION5 DCDPE			3.248e2					814		4.90e3							0.000

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS4CR, Name: 23020108, Date: 01-Feb-2023, Time: 18:45:20, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.88	3.837e5	5.095e5	0.876	0.75	0.77	1796.5	YES	NO	bb	bb	39.352
2	Total-tetrafurans	24.97	2.571e3	3.313e3	0.933	0.78	0.77	11.3	YES	NO	bb	bb	0.243
3	Total-tetrafurans	24.64	3.935e3	5.312e3	0.933	0.74	0.77	18.1	YES	NO	bd	dd	0.383
4	Total-tetrafurans	24.51	1.158e3	1.353e3	0.933	0.86	0.77	9.5	YES	NO	db	dd	0.104

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	31.62	2.192e3	1.347e3	0.866	1.63	1.55	9.8	YES	NO	bb	bd	0.195
2	23478-PeCDF	31.37	2.253e6	1.479e6	0.911	1.52	1.55	9263.9	YES	NO	bb	bb	199.338
3	Total-pentafurans	31.11	2.570e3	1.840e3	0.866	1.40	1.55	11.2	YES	NO	bb	bb	0.243
4	12378-PeCDF	30.04	2.144e6	1.419e6	0.845	1.51	1.55	8947.1	YES	NO	bb	bb	197.212
5	Total-pentafurans	29.67	1.564e3	9.796e2	0.866	1.60	1.55	6.5	YES	NO	bd	bd	0.140
6	Total-pentafurans	32.41	1.819e4	1.189e4	0.866	1.53	1.55	66.2	YES	NO	bb	bb	1.656

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	234678-HxCDF	35.99	2.093e6	1.626e6	1.229	1.29	1.24	8018.2	YES	NO	dd	bd	203.397
2	123678-HxCDF	35.13	2.269e6	1.771e6	1.248	1.28	1.24	8495.8	YES	NO	dd	dd	203.923
3	123478-HxCDF	34.98	2.037e6	1.599e6	1.182	1.27	1.24	8086.7	YES	NO	dd	dd	201.086
4	Total-hexafurans	33.52	1.932e3	1.561e3	1.208	1.24	1.24	6.5	YES	NO	bb	bb	0.193
5	123789-HxCDF	37.01	1.817e6	1.431e6	1.187	1.27	1.24	7125.7	YES	NO	dd	bd	199.649

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.10	1.575e6	1.522e6	1.165	1.03	1.05	4579.3	YES	NO	bb	bb	200.336
2	Total-heptafurans	39.51	4.373e3	4.751e3	1.185	0.92	1.05	13.2	YES	NO	bb	bb	0.538
3	1234678-HpCDF	38.84	1.816e6	1.772e6	1.204	1.02	1.05	5847.4	YES	NO	bb	bb	193.935

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.88	3.837e5	5.095e5	0.876	0.75	0.77	1796.5	YES	NO	bb	bb	39.352
2	Total-tetrafurans	24.97	2.571e3	3.313e3	0.933	0.78	0.77	11.3	YES	NO	bb	bb	0.243
3	Total-tetrafurans	24.64	3.935e3	5.312e3	0.933	0.74	0.77	18.1	YES	NO	bd	dd	0.383
4	Total-tetrafurans	24.51	1.158e3	1.353e3	0.933	0.86	0.77	9.5	YES	NO	db	dd	0.104
5	Total-pentafurans	31.62	2.192e3	1.347e3	0.866	1.63	1.55	9.8	YES	NO	bb	bd	0.195
6	23478-PeCDF	31.37	2.253e6	1.479e6	0.911	1.52	1.55	9263.9	YES	NO	bb	bb	199.338
7	Total-pentafurans	31.11	2.570e3	1.840e3	0.866	1.40	1.55	11.2	YES	NO	bb	bb	0.243
8	12378-PeCDF	30.04	2.144e6	1.419e6	0.845	1.51	1.55	8947.1	YES	NO	bb	bb	197.212
9	Total-pentafurans	29.67	1.564e3	9.796e2	0.866	1.60	1.55	6.5	YES	NO	bd	bd	0.140
10	Total-pentafurans	32.41	1.819e4	1.189e4	0.866	1.53	1.55	66.2	YES	NO	bb	bb	1.656
11	234678-HxCDF	35.99	2.093e6	1.626e6	1.229	1.29	1.24	8018.2	YES	NO	dd	bd	203.397
12	123678-HxCDF	35.13	2.269e6	1.771e6	1.248	1.28	1.24	8495.8	YES	NO	dd	dd	203.923
13	123478-HxCDF	34.98	2.037e6	1.599e6	1.182	1.27	1.24	8086.7	YES	NO	dd	dd	201.086
14	Total-hexafurans	33.52	1.932e3	1.561e3	1.208	1.24	1.24	6.5	YES	NO	bb	bb	0.193
15	123789-HxCDF	37.01	1.817e6	1.431e6	1.187	1.27	1.24	7125.7	YES	NO	dd	bd	199.649
16	1234789-HpCDF	41.10	1.575e6	1.522e6	1.165	1.03	1.05	4579.3	YES	NO	bb	bb	200.336
17	Total-heptafurans	39.51	4.373e3	4.751e3	1.185	0.92	1.05	13.2	YES	NO	bb	bb	0.538
18	1234678-HpCDF	38.84	1.816e6	1.772e6	1.204	1.02	1.05	5847.4	YES	NO	bb	bb	193.935
19	OCDF	45.36	2.485e6	2.804e6	1.186	0.89	0.89	6601.2	YES	NO	bb	bb	376.199

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.53	3.417e5	4.230e5	1.236	0.81	0.77	2709.1	YES	NO	bb	bb	40.022
2	Total-tetradioxins	26.14	8.070e3	9.722e3	1.099	0.83	0.77	49.8	YES	NO	bb	bb	1.048
3	Total-tetradioxins	25.38	3.531e2	4.421e2	1.099	0.80	0.77	2.4	NO	NO	bb	bb	0.047
4	Total-tetradioxins	26.96	1.013e3	1.157e3	1.099	0.88	0.77	7.2	YES	NO	bd	bd	0.128

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.63	1.695e6	1.077e6	1.087	1.57	1.55	9745.0	YES	NO	bb	bb	198.713
2	Total-pentadioxins	30.04	1.464e3	8.371e2	1.392	1.75	1.55	8.8	YES	NO	bb	bb	0.129

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.60	1.475e6	1.213e6	0.985	1.22	1.24	11134.5	YES	NO	bb	bb	198.496
2	123678-HxCDD	36.22	1.525e6	1.238e6	1.021	1.23	1.24	11440.8	YES	NO	db	db	192.587
3	123478-HxCDD	36.11	1.491e6	1.215e6	0.987	1.23	1.24	11249.2	YES	NO	bd	bd	204.141

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.35	1.416e6	1.361e6	1.253	1.04	1.05	8870.2	YES	NO	bb	bb	190.176

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.53	3.417e5	4.230e5	1.236	0.81	0.77	2709.1	YES	NO	bb	bb	40.022
2	Total-tetradioxins	26.14	8.070e3	9.722e3	1.099	0.83	0.77	49.8	YES	NO	bb	bb	1.048
3	Total-tetradioxins	25.38	3.531e2	4.421e2	1.099	0.80	0.77	2.4	NO	NO	bb	bb	0.047
4	Total-tetradioxins	26.96	1.013e3	1.157e3	1.099	0.88	0.77	7.2	YES	NO	bd	bd	0.128
5	12378-PeCDD	31.63	1.695e6	1.077e6	1.087	1.57	1.55	9745.0	YES	NO	bb	bb	198.713
6	Total-pentadioxins	30.04	1.464e3	8.371e2	1.392	1.75	1.55	8.8	YES	NO	bb	bb	0.129
7	123789-HxCDD	36.60	1.475e6	1.213e6	0.985	1.22	1.24	11134.5	YES	NO	bb	bb	198.496
8	123678-HxCDD	36.22	1.525e6	1.238e6	1.021	1.23	1.24	11440.8	YES	NO	db	db	192.587
9	123478-HxCDD	36.11	1.491e6	1.215e6	0.987	1.23	1.24	11249.2	YES	NO	bd	bd	204.141
10	1234678-HpCDD	40.35	1.416e6	1.361e6	1.253	1.04	1.05	8870.2	YES	NO	bb	bb	190.176
11	OCDD	45.12	2.302e6	2.608e6	1.103	0.88	0.89	10978.0	YES	NO	bb	bb	375.677

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.88	3.837e5	5.095e5	0.876	0.75	0.77	1796.5	YES	NO	bb	bb	39.352
2	Total-tetrafurans	24.97	2.571e3	3.313e3	0.933	0.78	0.77	11.3	YES	NO	bb	bb	0.243
3	Total-tetrafurans	24.64	3.935e3	5.312e3	0.933	0.74	0.77	18.1	YES	NO	bd	dd	0.383
4	Total-tetrafurans	24.51	1.158e3	1.353e3	0.933	0.86	0.77	9.5	YES	NO	db	dd	0.104
5	Total-pentafurans	31.62	2.192e3	1.347e3	0.866	1.63	1.55	9.8	YES	NO	bb	bd	0.195
6	23478-PeCDF	31.37	2.253e6	1.479e6	0.911	1.52	1.55	9263.9	YES	NO	bb	bb	199.338
7	Total-pentafurans	31.11	2.570e3	1.840e3	0.866	1.40	1.55	11.2	YES	NO	bb	bb	0.243
8	12378-PeCDF	30.04	2.144e6	1.419e6	0.845	1.51	1.55	8947.1	YES	NO	bb	bb	197.212
9	Total-pentafurans	29.67	1.564e3	9.796e2	0.866	1.60	1.55	6.5	YES	NO	bd	bd	0.140
10	Total-pentafurans	32.41	1.819e4	1.189e4	0.866	1.53	1.55	66.2	YES	NO	bb	bb	1.656
11	234678-HxCDF	35.99	2.093e6	1.626e6	1.229	1.29	1.24	8018.2	YES	NO	dd	bd	203.397
12	123678-HxCDF	35.13	2.269e6	1.771e6	1.248	1.28	1.24	8495.8	YES	NO	dd	dd	203.923
13	123478-HxCDF	34.98	2.037e6	1.599e6	1.182	1.27	1.24	8086.7	YES	NO	dd	dd	201.086
14	Total-hexafurans	33.52	1.932e3	1.561e3	1.208	1.24	1.24	6.5	YES	NO	bb	bb	0.193
15	123789-HxCDF	37.01	1.817e6	1.431e6	1.187	1.27	1.24	7125.7	YES	NO	dd	bd	199.649
16	1234789-HpCDF	41.10	1.575e6	1.522e6	1.165	1.03	1.05	4579.3	YES	NO	bb	bb	200.336
17	Total-heptafurans	39.51	4.373e3	4.751e3	1.185	0.92	1.05	13.2	YES	NO	bb	bb	0.538
18	1234678-HpCDF	38.84	1.816e6	1.772e6	1.204	1.02	1.05	5847.4	YES	NO	bb	bb	193.935
19	OCDF	45.36	2.485e6	2.804e6	1.186	0.89	0.89	6601.2	YES	NO	bb	bb	376.199
20	2378-TCDD	26.53	3.417e5	4.230e5	1.236	0.81	0.77	2709.1	YES	NO	bb	bb	40.022
21	Total-tetradioxins	26.14	8.070e3	9.722e3	1.099	0.83	0.77	49.8	YES	NO	bb	bb	1.048
22	Total-tetradioxins	25.38	3.531e2	4.421e2	1.099	0.80	0.77	2.4	NO	NO	bb	bb	0.047
23	Total-tetradioxins	26.96	1.013e3	1.157e3	1.099	0.88	0.77	7.2	YES	NO	bd	bd	0.128
24	12378-PeCDD	31.63	1.695e6	1.077e6	1.087	1.57	1.55	9745.0	YES	NO	bb	bb	198.713
25	Total-pentadioxins	30.04	1.464e3	8.371e2	1.392	1.75	1.55	8.8	YES	NO	bb	bb	0.129
26	123789-HxCDD	36.60	1.475e6	1.213e6	0.985	1.22	1.24	11134.5	YES	NO	bb	bb	198.496
27	123678-HxCDD	36.22	1.525e6	1.238e6	1.021	1.23	1.24	11440.8	YES	NO	db	db	192.587
28	123478-HxCDD	36.11	1.491e6	1.215e6	0.987	1.23	1.24	11249.2	YES	NO	bd	bd	204.141
29	1234678-HpCDD	40.35	1.416e6	1.361e6	1.253	1.04	1.05	8870.2	YES	NO	bb	bb	190.176
30	OCDD	45.12	2.302e6	2.608e6	1.103	0.88	0.89	10978.0	YES	NO	bb	bb	375.677

Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	24.96	2.020e4					1.1	NO		bb		
2	FUNCTION1 PFK	24.40	2.455e4					1.2	NO		bb		
3	FUNCTION1 PFK	23.70	1.570e4					0.9	NO		bb		
4	FUNCTION1 PFK	22.21	1.520e4					0.8	NO		bb		
5	FUNCTION1 PFK	21.98	2.815e4					1.2	NO		bb		
6	FUNCTION1 PFK	21.62	2.203e4					0.8	NO		bb		
7	FUNCTION1 PFK	21.38	1.821e4					1.0	NO		bb		
8	FUNCTION1 PFK	28.09	4.216e4					1.7	NO		bb		
9	FUNCTION1 PFK	27.48	1.001e4					0.6	NO		bb		
10	FUNCTION1 PFK	27.36	2.341e4					1.3	NO		bb		
11	FUNCTION1 PFK	27.09	4.217e3					0.5	NO		bb		
12	FUNCTION1 PFK	26.77	7.075e3					0.7	NO		bb		
13	FUNCTION1 PFK	26.65	1.537e4					1.0	NO		bb		
14	FUNCTION1 PFK	26.53	2.228e4					1.3	NO		bb		
15	FUNCTION1 PFK	26.06	1.292e4					0.8	NO		bb		
16	FUNCTION1 PFK	25.75	9.216e3					0.7	NO		bb		
17	FUNCTION1 PFK	25.69	2.942e4					1.5	NO		bb		
18	FUNCTION1 PFK	25.47	3.380e4					1.3	NO		bb		
19	FUNCTION1 PFK	25.35	5.518e4					1.2	NO		db		
20	FUNCTION1 PFK	25.23	3.130e4					1.5	NO		bd		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.88	2.296e4					1.8	NO		bb		0.000
2	FUNCTION2 PFK	28.30	1.717e4					1.6	NO		bb		0.000
3	FUNCTION2 PFK	32.49	5.254e3					1.3	NO		bb		0.000
4	FUNCTION2 PFK	32.37	7.309e3					1.1	NO		bb		0.000
5	FUNCTION2 PFK	32.29	1.359e3					0.6	NO		bb		0.000
6	FUNCTION2 PFK	32.17	6.182e3					1.2	NO		bb		0.000
7	FUNCTION2 PFK	31.90	1.405e4					1.8	NO		bb		0.000
8	FUNCTION2 PFK	31.55	3.011e3					0.9	NO		bb		0.000
9	FUNCTION2 PFK	31.41	1.210e4					1.2	NO		bb		0.000
10	FUNCTION2 PFK	30.57	3.830e3					0.9	NO		bb		0.000
11	FUNCTION2 PFK	30.45	4.598e3					1.0	NO		bb		0.000
12	FUNCTION2 PFK	29.87	5.333e3					1.1	NO		bb		0.000
13	FUNCTION2 PFK	29.60	5.195e3					1.1	NO		db		0.000
14	FUNCTION2 PFK	29.56	5.154e3					1.1	NO		bd		0.000
15	FUNCTION2 PFK	29.50	7.364e3					1.4	NO		bb		0.000
16	FUNCTION2 PFK	29.17	6.453e3					1.3	NO		bb		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.21	5.273e3					0.9	NO		bb		
2	FUNCTION4 PFK	40.14	5.827e3					1.0	NO		bb		
3	FUNCTION4 PFK	40.00	4.667e3					0.8	NO		bb		
4	FUNCTION4 PFK	39.82	1.112e3					0.4	NO		bb		
5	FUNCTION4 PFK	39.74	4.984e3					0.8	NO		bb		
6	FUNCTION4 PFK	39.65	3.641e4					1.9	NO		db		
7	FUNCTION4 PFK	39.60	1.243e4					1.6	NO		bd		
8	FUNCTION4 PFK	39.21	6.478e3					1.0	NO		bb		
9	FUNCTION4 PFK	38.98	1.375e3					0.4	NO		bb		
10	FUNCTION4 PFK	38.83	5.023e3					0.8	NO		bb		
11	FUNCTION4 PFK	38.78	4.916e3					0.9	NO		bb		
12	FUNCTION4 PFK	38.68	8.802e3					1.2	NO		bb		
13	FUNCTION4 PFK	38.54	1.096e4					1.2	NO		bb		
14	FUNCTION4 PFK	38.35	1.188e4					1.5	NO		db		
15	FUNCTION4 PFK	38.32	9.581e3					1.3	NO		bd		
16	FUNCTION4 PFK	38.09	5.192e4					1.9	NO		bb		
17	FUNCTION4 PFK	42.95	1.120e3					0.4	NO		bb		
18	FUNCTION4 PFK	42.68	3.847e3					0.6	NO		bb		
19	FUNCTION4 PFK	42.38	1.500e4					1.7	NO		bb		
20	FUNCTION4 PFK	41.06	1.232e4					1.2	NO		bb		
21	FUNCTION4 PFK	40.81	4.336e3					0.7	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.09	1.365e2					0.3	NO		bb		0.000
2	FUNCTION1 HXCD...	25.88	7.559e1					0.2	NO		bb		0.000
3	FUNCTION1 HXCD...	25.69	1.535e2					0.2	NO		bb		0.000
4	FUNCTION1 HXCD...	25.38	9.009e1					0.2	NO		bb		0.000
5	FUNCTION1 HXCD...	24.76	1.387e2					0.2	NO		bb		0.000
6	FUNCTION1 HXCD...	24.49	2.087e3					4.8	YES		db		0.000
7	FUNCTION1 HXCD...	24.42	1.113e3					3.5	YES		bd		0.000
8	FUNCTION1 HXCD...	24.07	1.214e2					0.2	NO		bb		0.000
9	FUNCTION1 HXCD...	22.93	9.005e1					0.3	NO		bb		0.000
10	FUNCTION1 HXCD...	28.03	7.580e1					0.2	NO		bb		0.000
11	FUNCTION1 HXCD...	27.80	7.466e1					0.2	NO		bb		0.000
12	FUNCTION1 HXCD...	27.64	9.719e1					0.2	NO		bb		0.000
13	FUNCTION1 HXCD...	27.11	4.735e3					11.6	YES		db		0.000
14	FUNCTION1 HXCD...	27.06	1.264e3					2.6	NO		dd		0.000
15	FUNCTION1 HXCD...	26.99	2.557e3					3.1	YES		dd		0.000
16	FUNCTION1 HXCD...	26.82	1.150e3					2.1	NO		dd		0.000
17	FUNCTION1 HXCD...	26.76	1.090e3					2.6	NO		dd		0.000
18	FUNCTION1 HXCD...	26.68	5.202e2					1.1	NO		dd		0.000
19	FUNCTION1 HXCD...	26.59	4.632e2					0.7	NO		dd		0.000
20	FUNCTION1 HXCD...	26.50	3.837e2					0.7	NO		dd		0.000
21	FUNCTION1 HXCD...	26.44	7.925e1					0.2	NO		bd		0.000
22	FUNCTION1 HXCD...	26.26	1.202e2					0.3	NO		bb		0.000

ID: CS4CR, Name: 23020108, Date: 01-Feb-2023, Time: 18:45:20, Conditions: AUTOSPEC01, User: pk

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	21.53	8.754e1					0.3	NO		dd		0.000
2	FUNCTION1 HPCD...	21.39	1.338e2					0.2	NO		bd		0.000
3	FUNCTION1 HPCD...	27.06	1.227e3					3.5	YES		dd		0.000
4	FUNCTION1 HPCD...	26.96	2.312e3					4.3	YES		dd		0.000
5	FUNCTION1 HPCD...	26.83	1.175e3					2.8	NO		dd		0.000
6	FUNCTION1 HPCD...	26.76	1.583e3					4.1	YES		dd		0.000
7	FUNCTION1 HPCD...	26.67	5.135e2					1.6	NO		dd		0.000
8	FUNCTION1 HPCD...	26.58	6.861e2					1.1	NO		dd		0.000
9	FUNCTION1 HPCD...	26.50	1.748e2					0.8	NO		dd		0.000
10	FUNCTION1 HPCD...	26.44	2.373e2					0.4	NO		dd		0.000
11	FUNCTION1 HPCD...	26.26	1.300e2					0.4	NO		bd		0.000
12	FUNCTION1 HPCD...	25.91	1.988e2					0.2	NO		bb		0.000
13	FUNCTION1 HPCD...	25.72	1.012e2					0.3	NO		bb		0.000
14	FUNCTION1 HPCD...	25.53	1.466e2					0.3	NO		db		0.000
15	FUNCTION1 HPCD...	25.32	1.918e2					0.4	NO		bd		0.000
16	FUNCTION1 HPCD...	24.51	2.090e3					6.7	YES		db		0.000
17	FUNCTION1 HPCD...	24.42	8.854e2					3.8	YES		bd		0.000
18	FUNCTION1 HPCD...	21.60	9.175e1					0.3	NO		db		0.000
19	FUNCTION1 HPCD...	27.77	9.425e1					0.4	NO		bb		0.000
20	FUNCTION1 HPCD...	27.65	7.376e1					0.3	NO		db		0.000
21	FUNCTION1 HPCD...	27.53	1.152e2					0.4	NO		bd		0.000
22	FUNCTION1 HPCD...	27.12	3.540e3					10.6	YES		db		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.63	1.971e2					4.5	YES		bb		0.000
2	FUNCTION2 HPCD...	31.26	2.238e3					45.1	YES		bb		0.000
3	FUNCTION2 HPCD...	29.60	1.581e2					4.1	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.60	5.924e2					8.6	YES		bb		0.000
2	FUNCTION3 OCDPE	36.21	3.178e2					6.7	YES		db		0.000
3	FUNCTION3 OCDPE	36.10	2.730e2					5.6	YES		bd		0.000

ID: CS4CR, Name: 23020108, Date: 01-Feb-2023, Time: 18:45:20, Conditions: AUTOSPEC01, User: pk

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.40	3.196e2					3.7	YES		bb		0.000
2	FUNCTION4 NCDPE	38.52	9.797e1					2.1	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	45.14	3.248e2					6.0	YES		bb		0.000

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Printed: Friday, February 03, 2023 10:37:53 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
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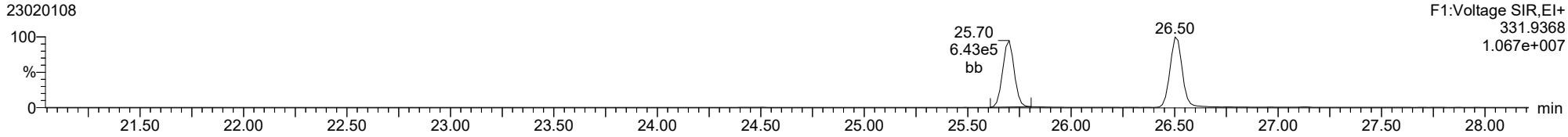
ID: CS4CR, Name: 23020108, Date: 01-Feb-2023, Time: 18:45:20, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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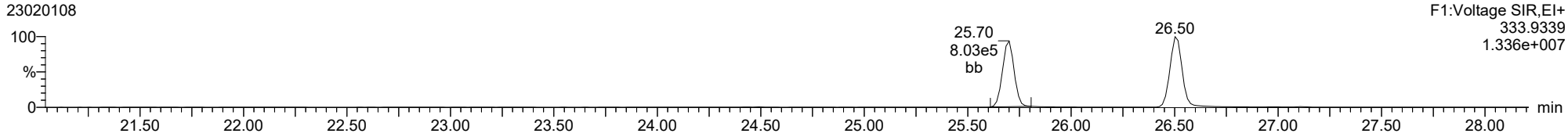
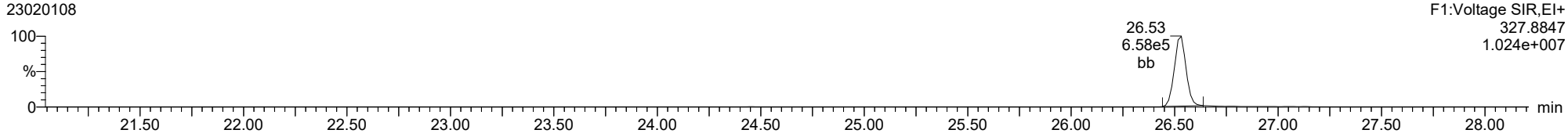


37CL-2378-TCDD



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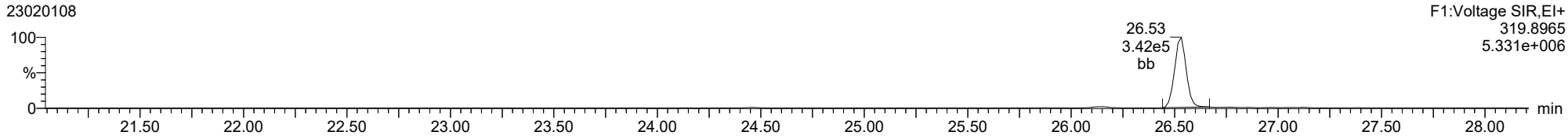

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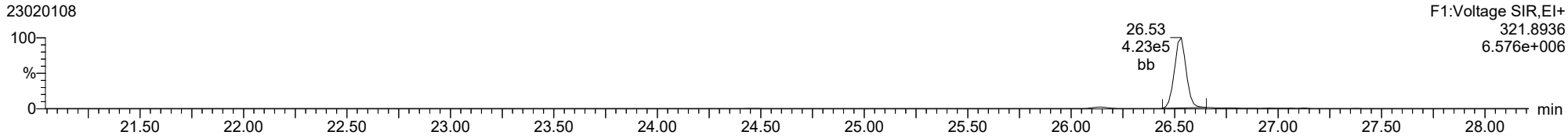

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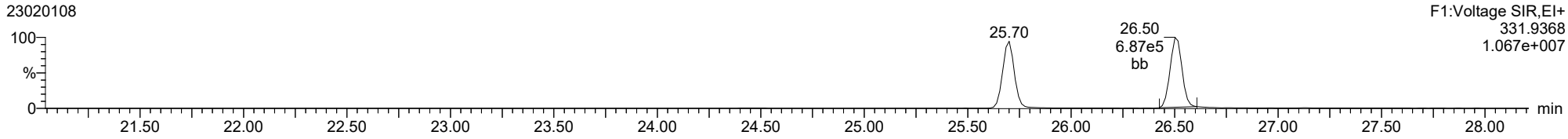

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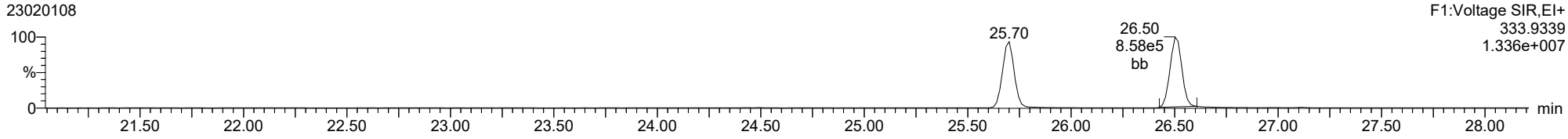

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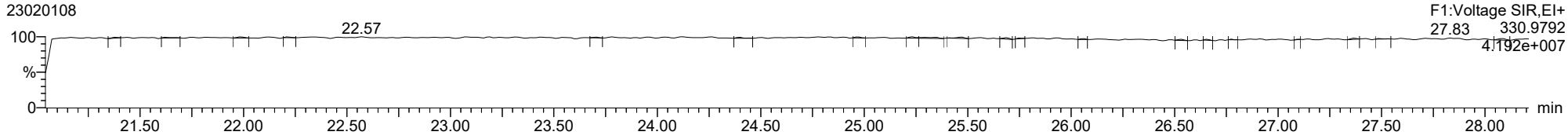

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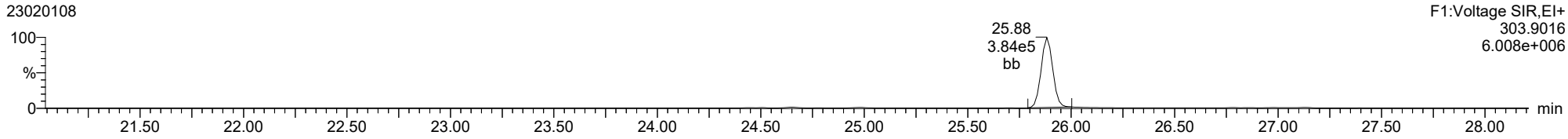
2378-TCDF



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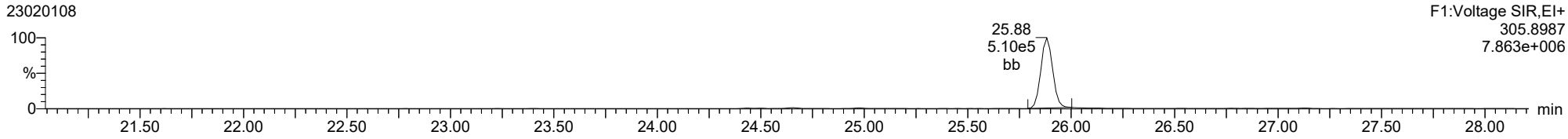

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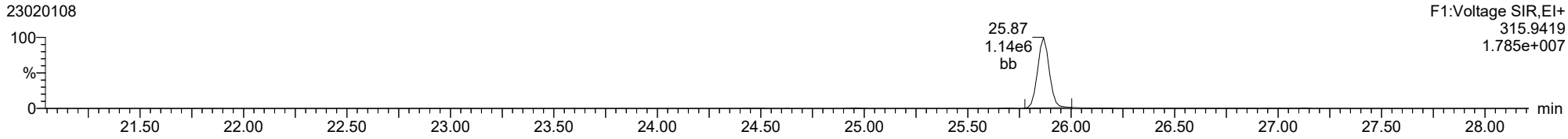

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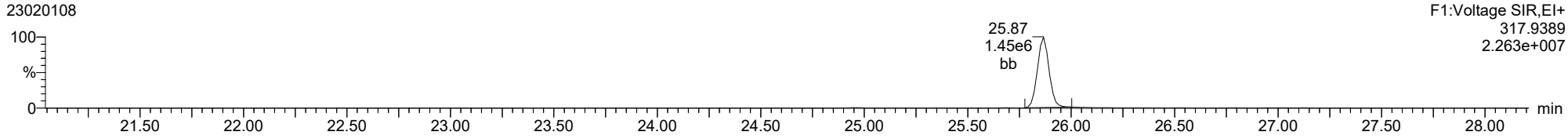
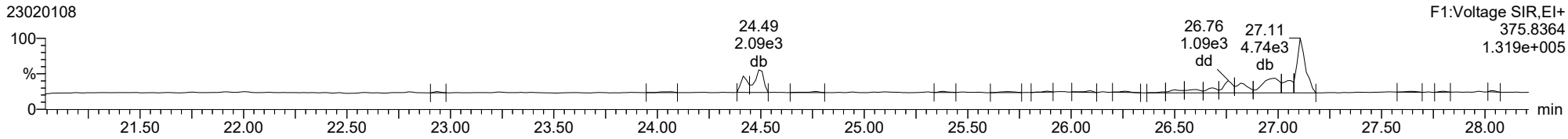


FUNCTION1 HXCDPE



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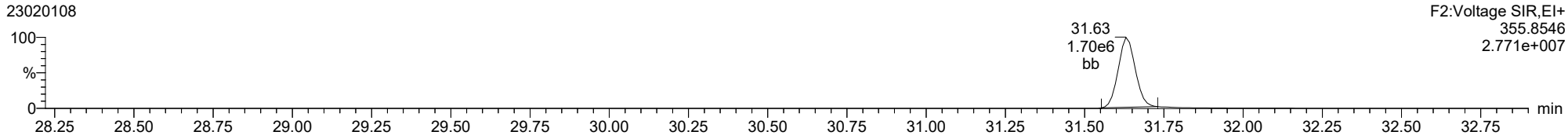
12378-PeCDD



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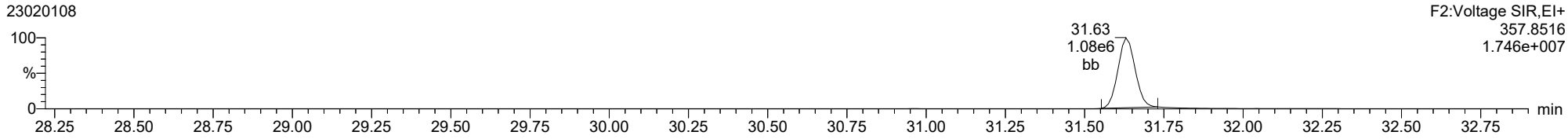

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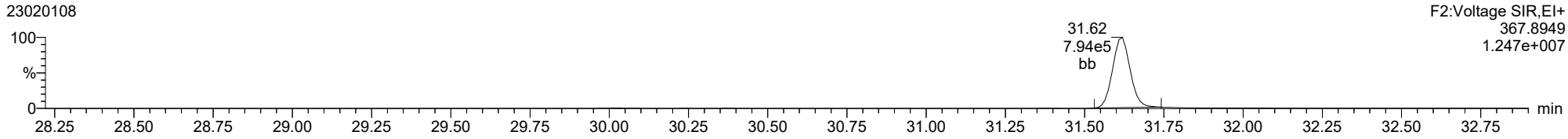

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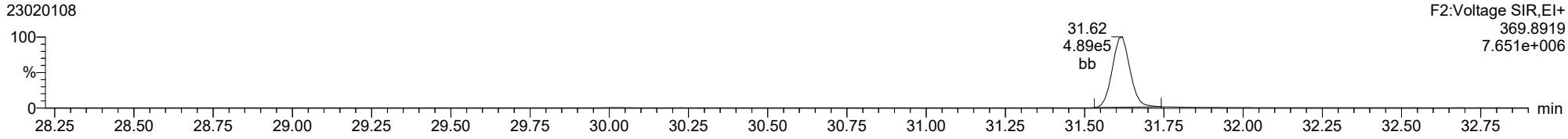
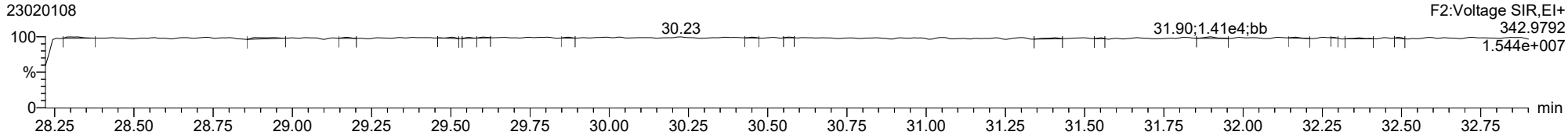


FUNCTION2 PFK



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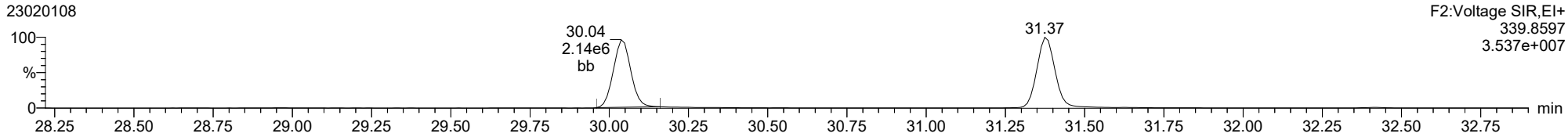

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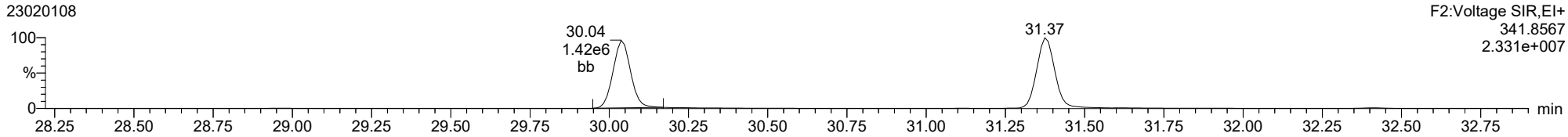

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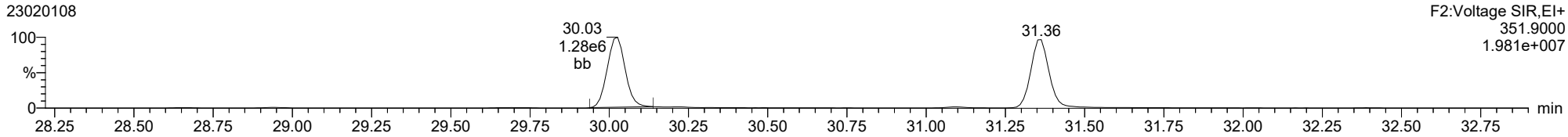

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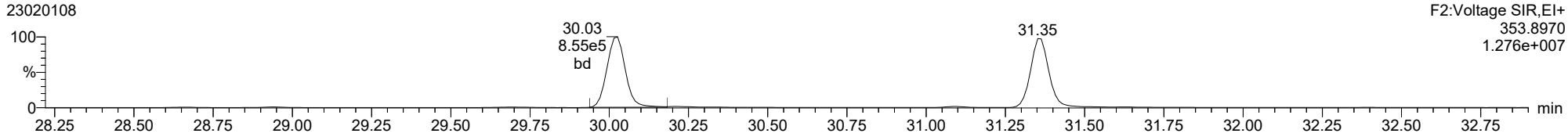
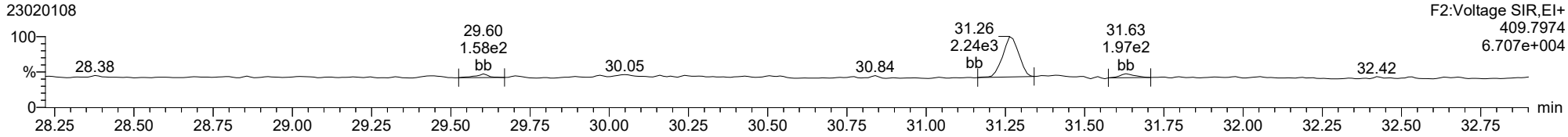


FUNCTION2 HPCDPE



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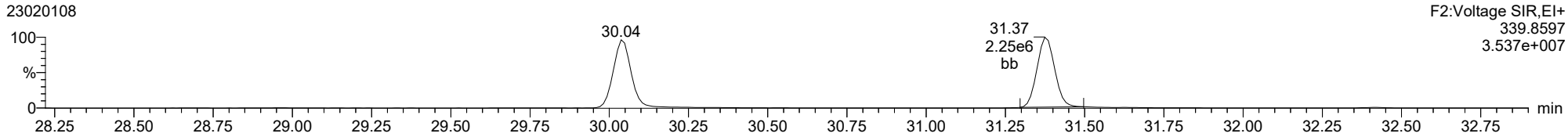
23478-PeCDF



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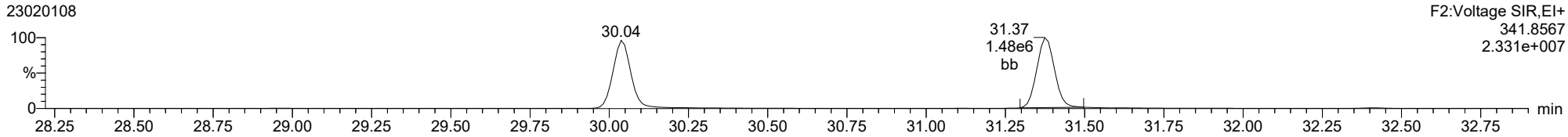

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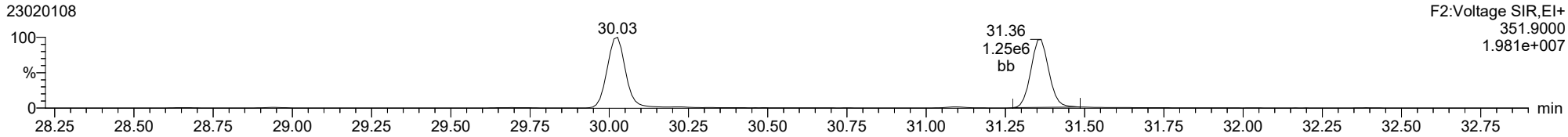

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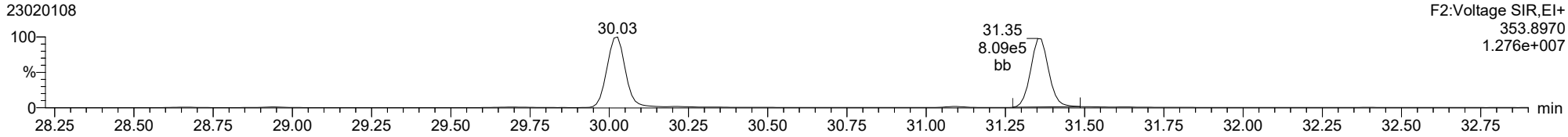
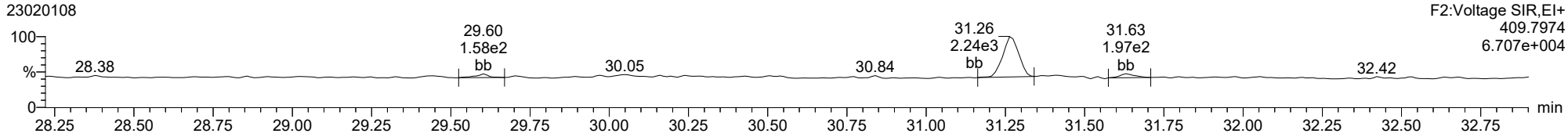


FUNCTION2 HPCDPE



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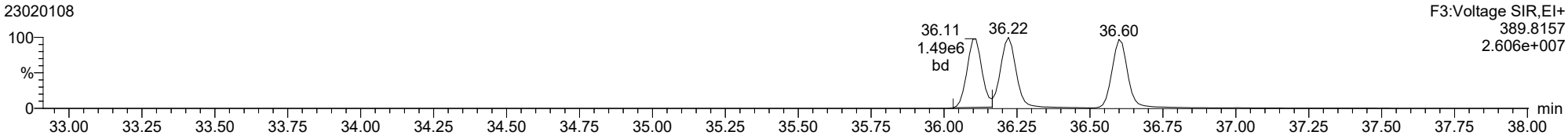
123478-HxCDD



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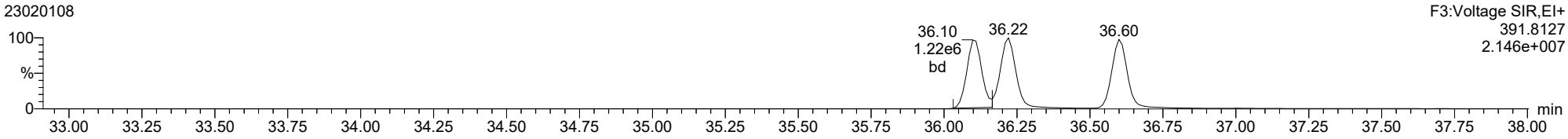

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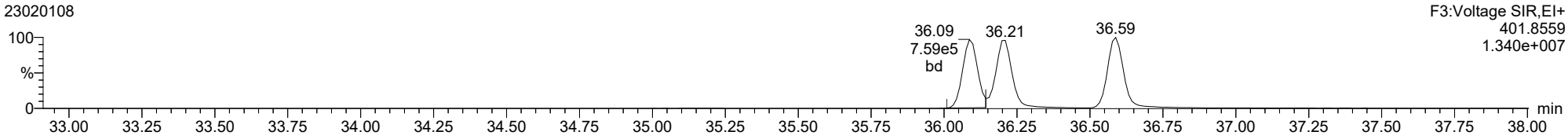

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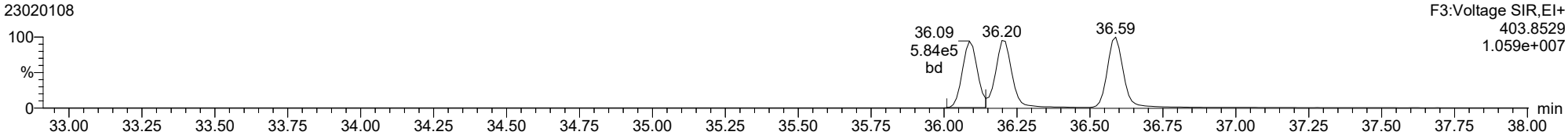

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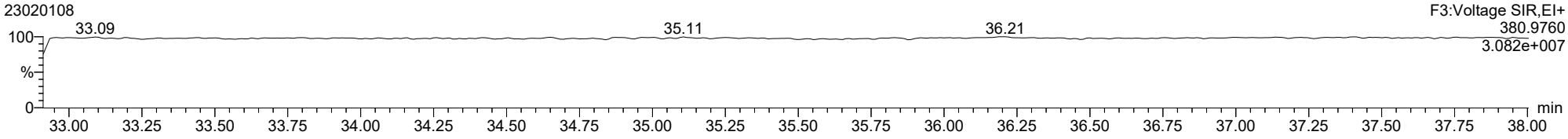

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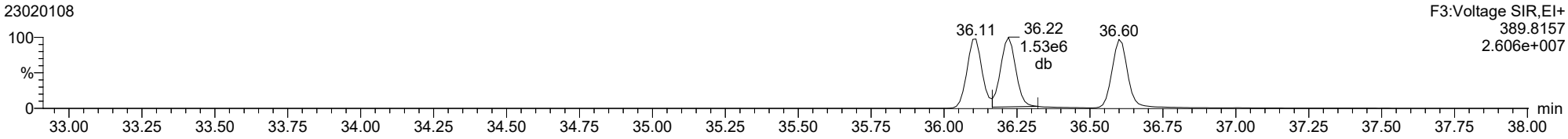
123678-HxCDD



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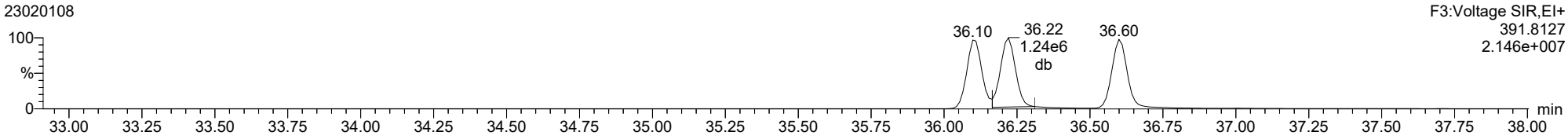

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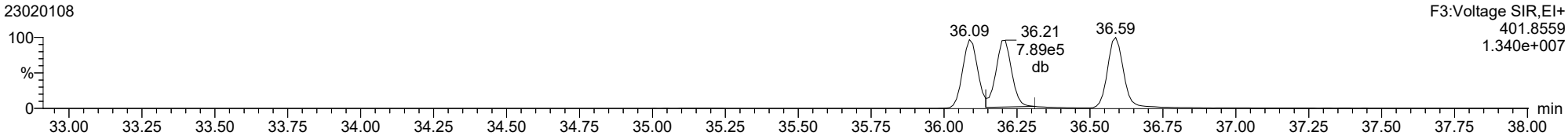

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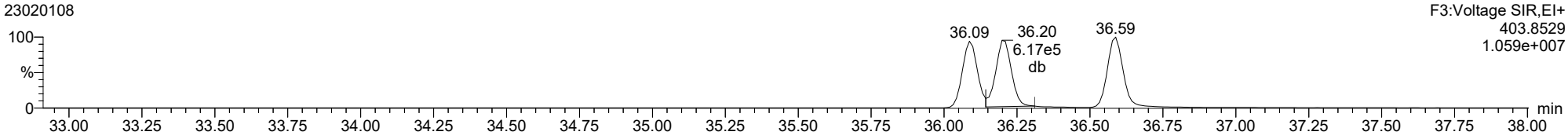

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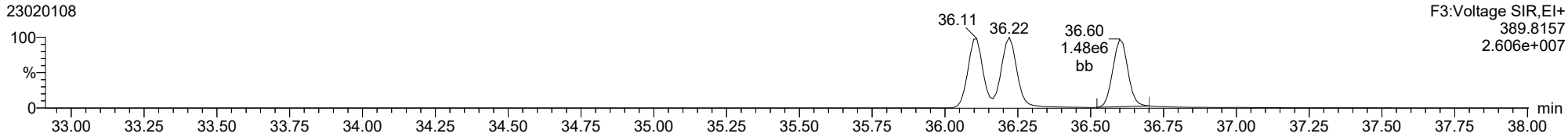

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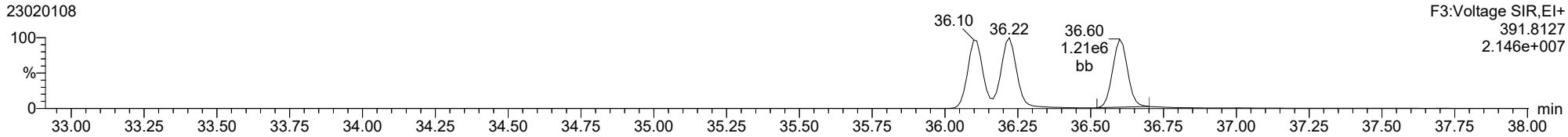

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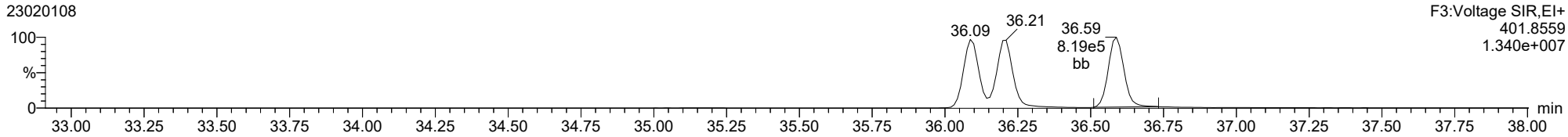

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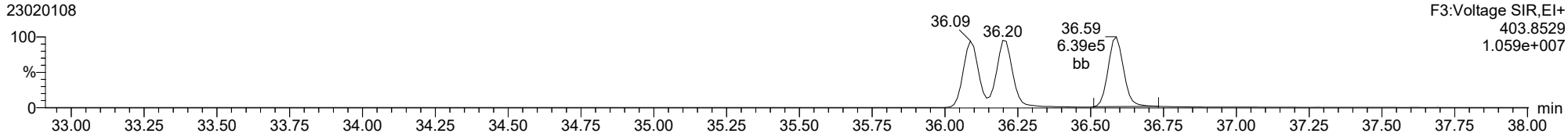

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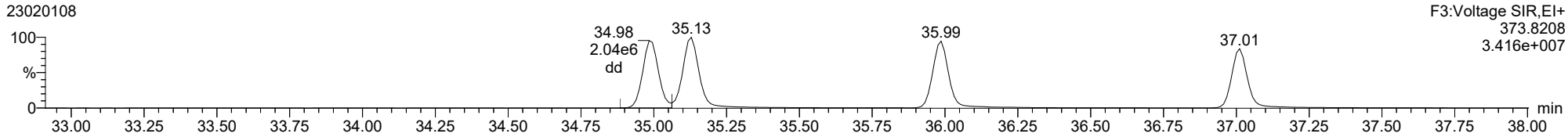

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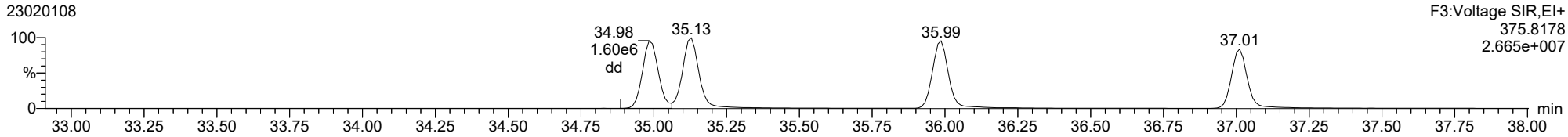

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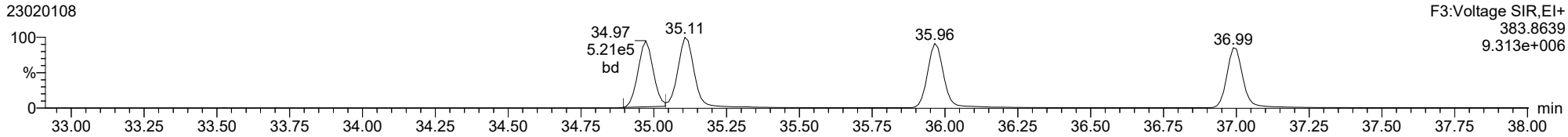

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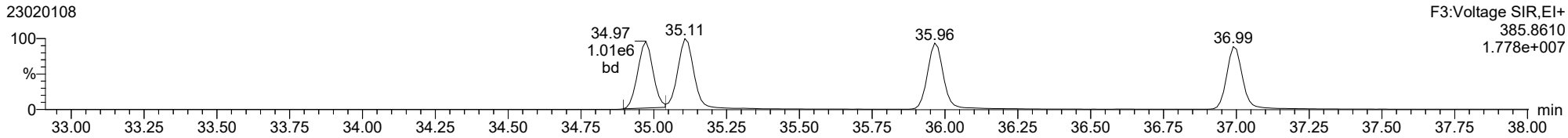

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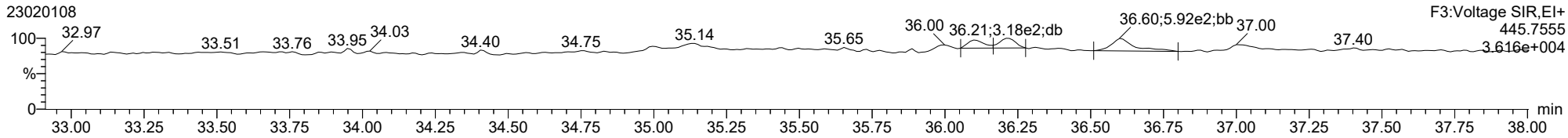

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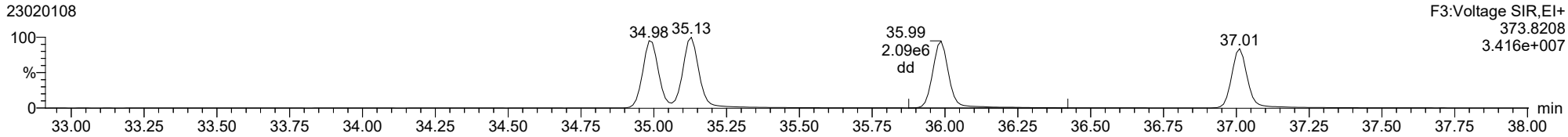

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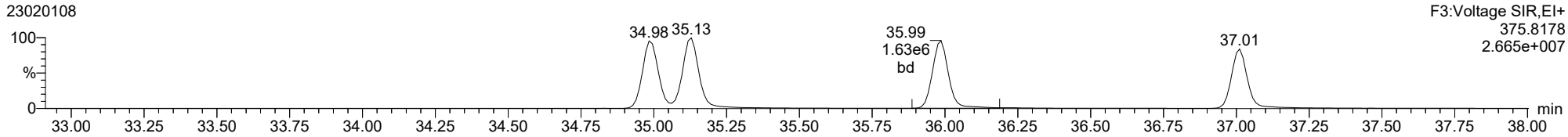

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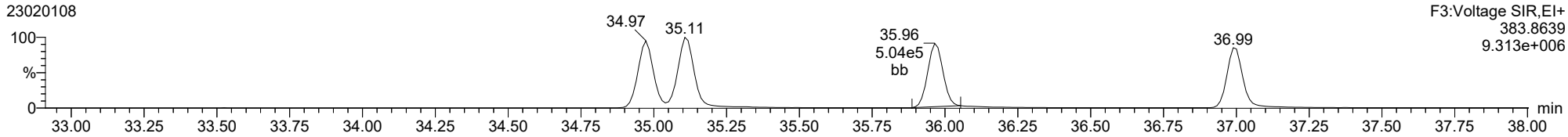

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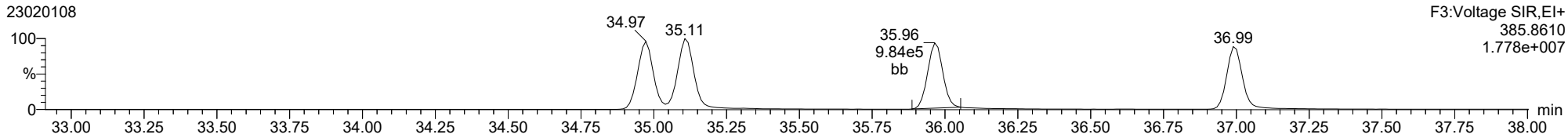

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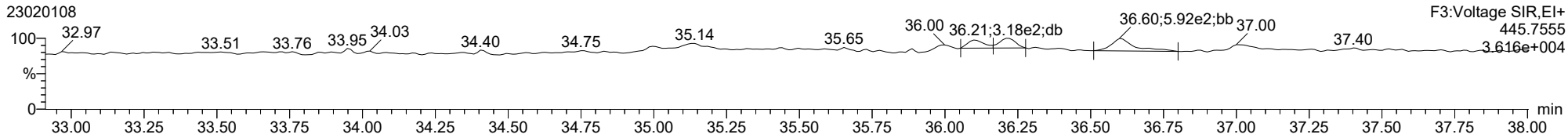

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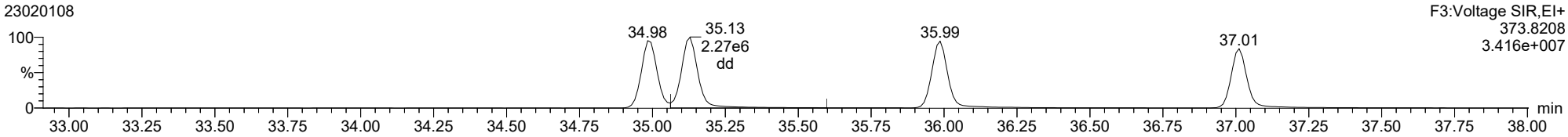

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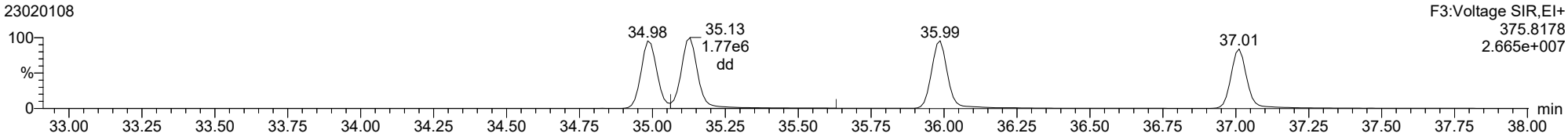

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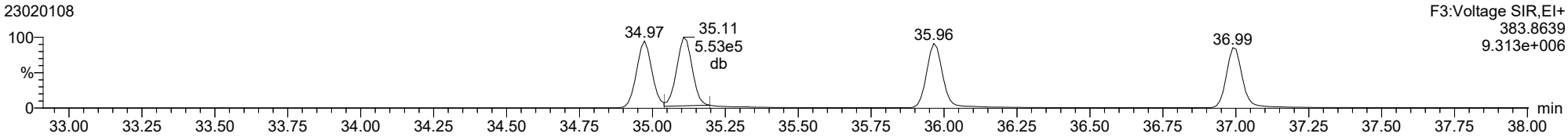

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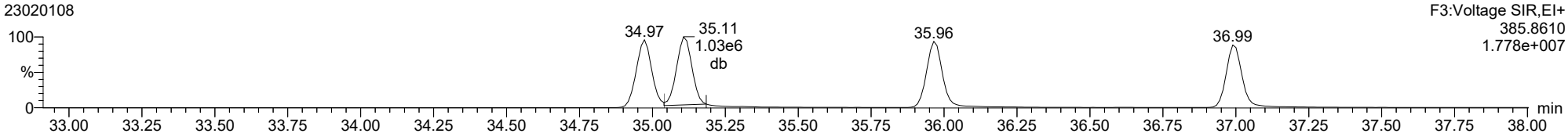

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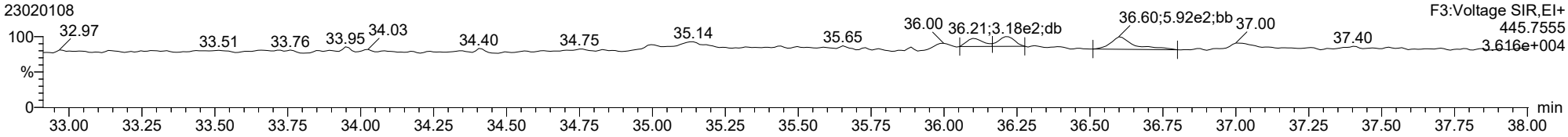

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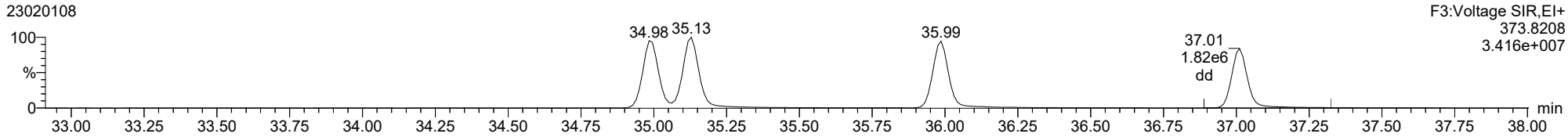

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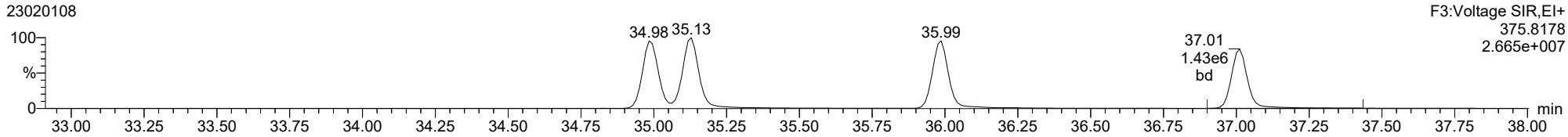

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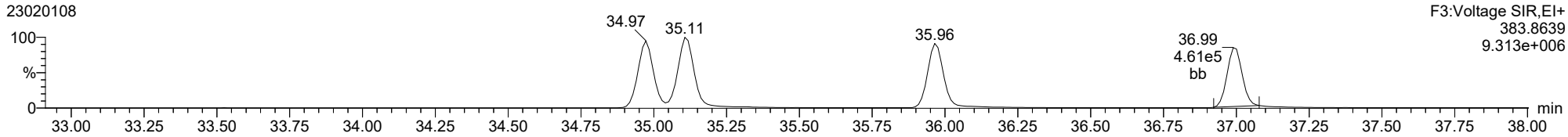

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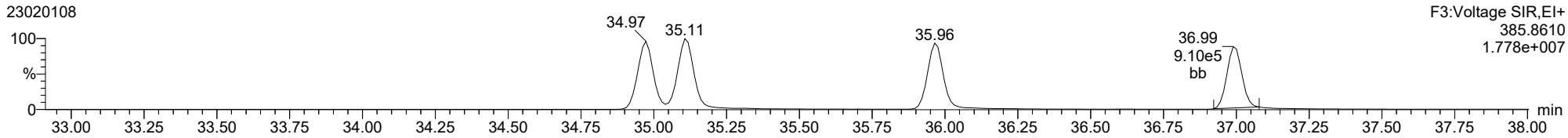

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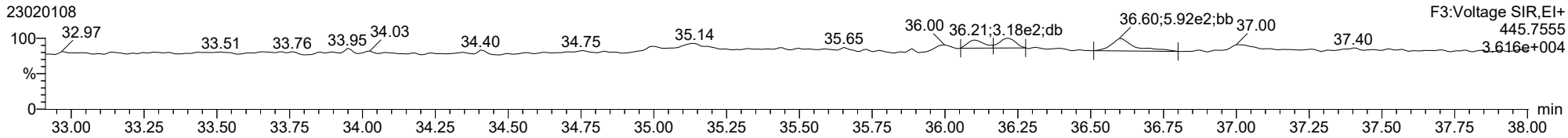

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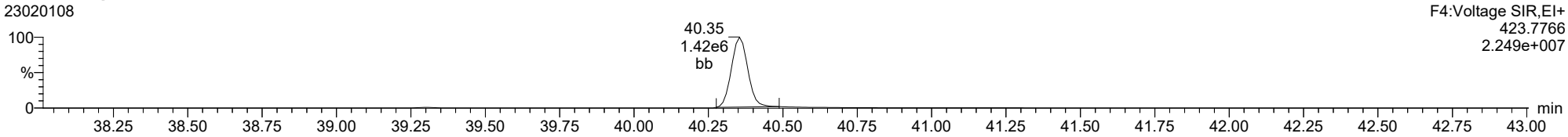

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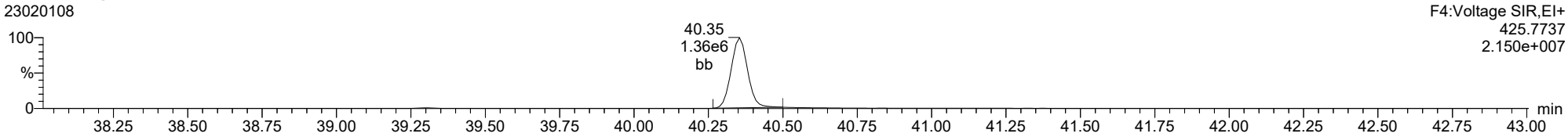

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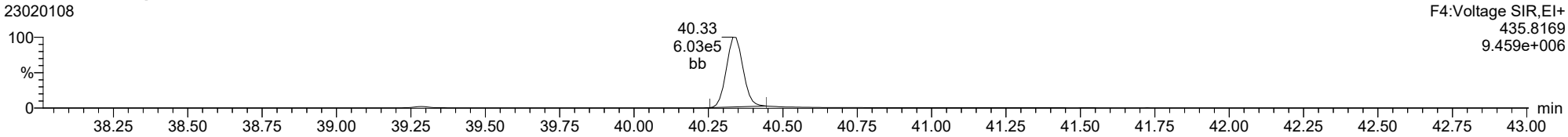

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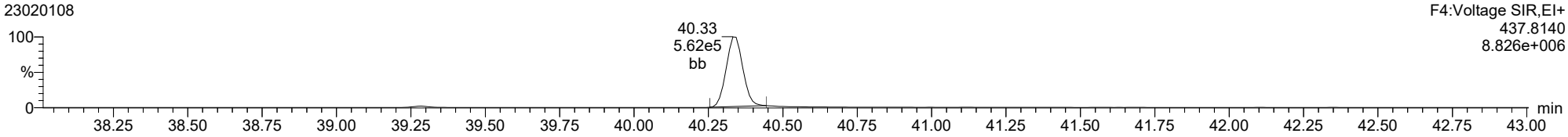

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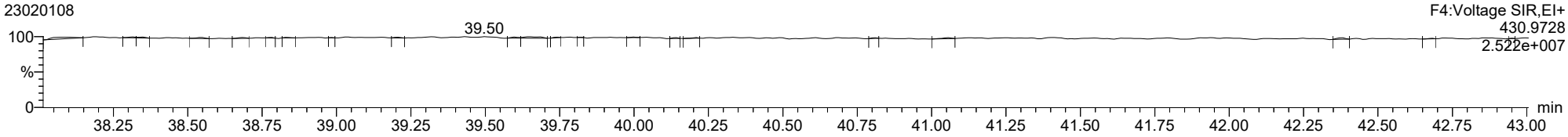

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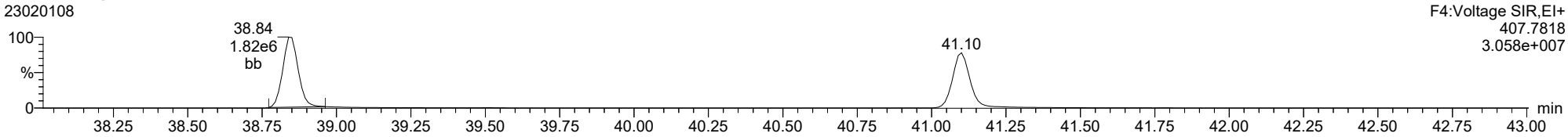

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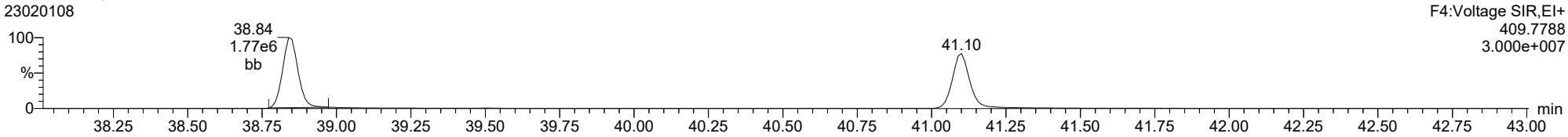

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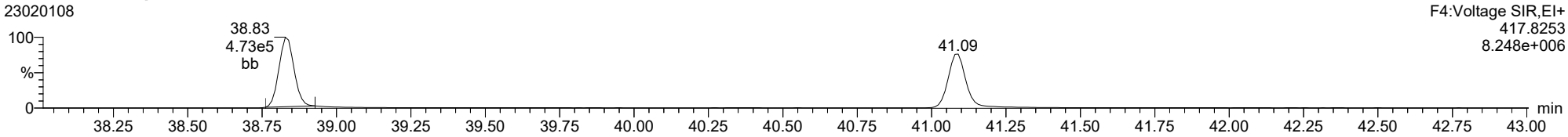

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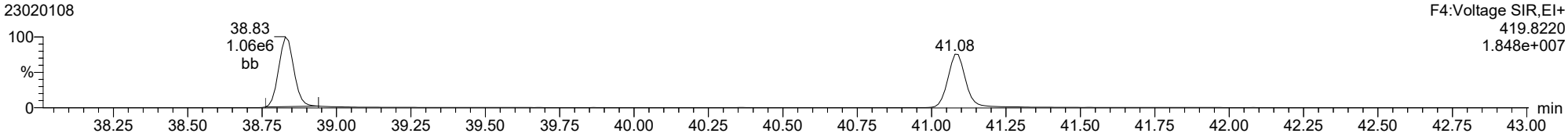

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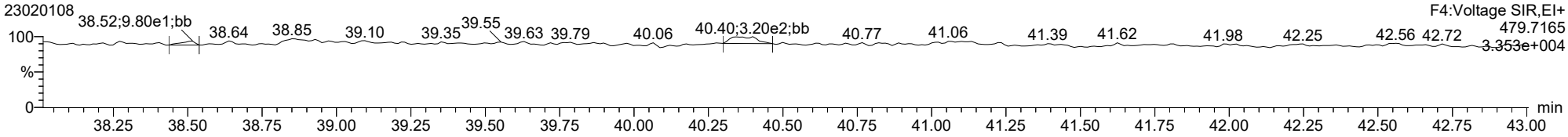

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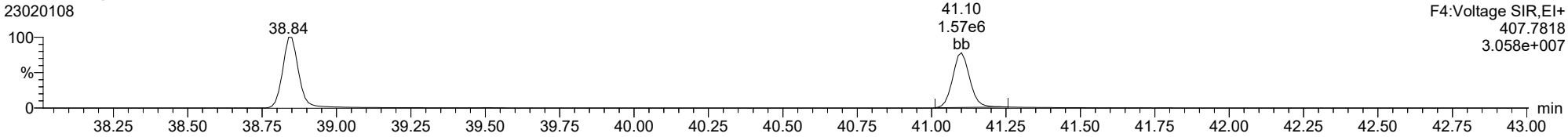

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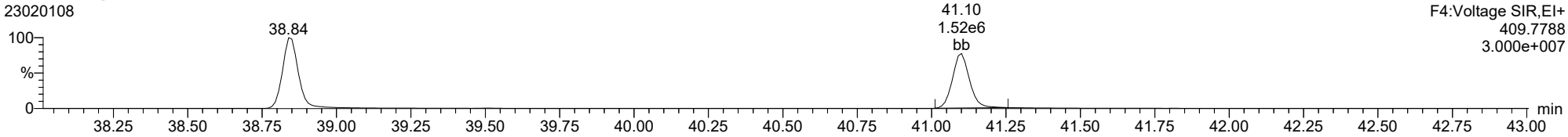

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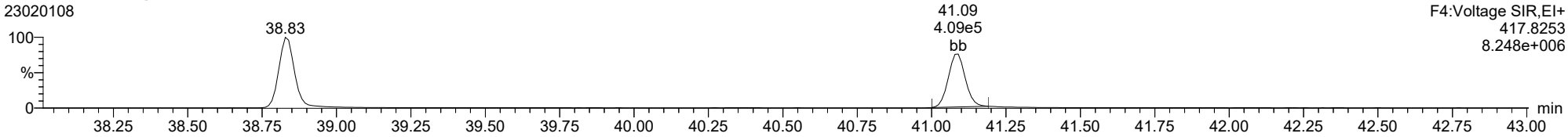

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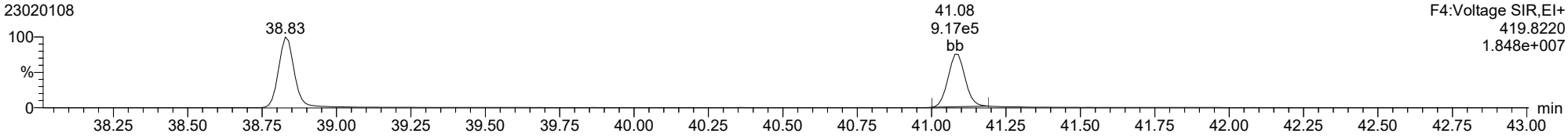

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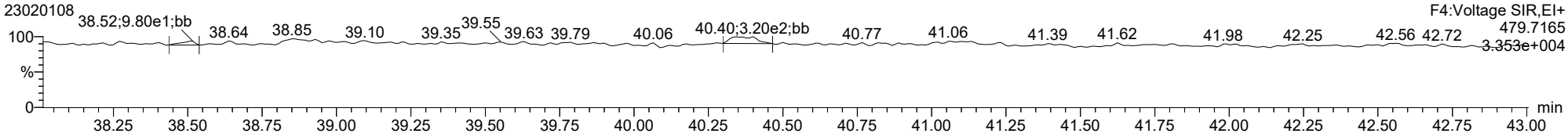

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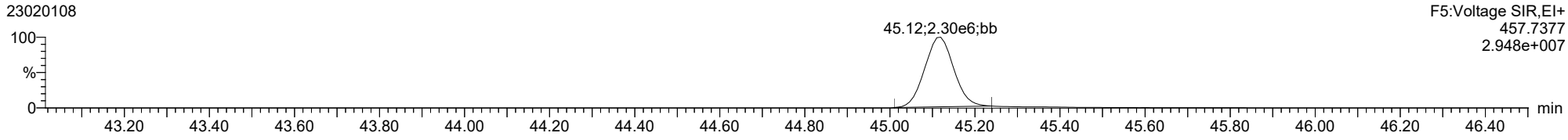
OCDD



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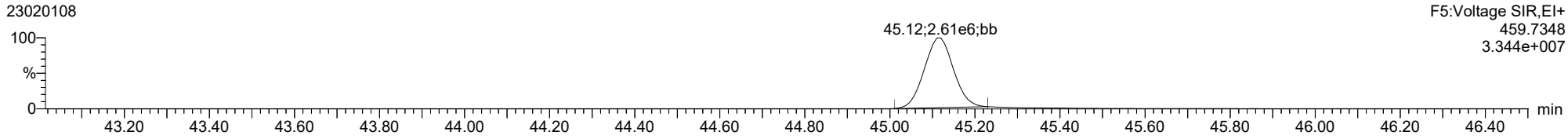

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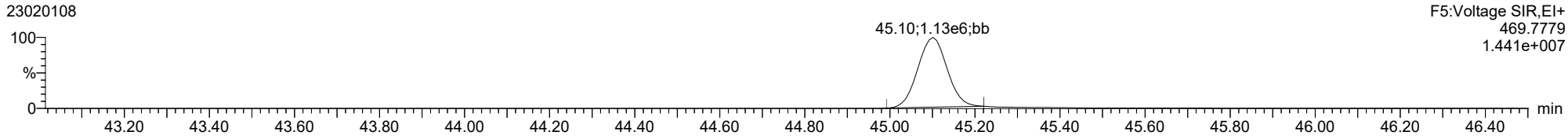

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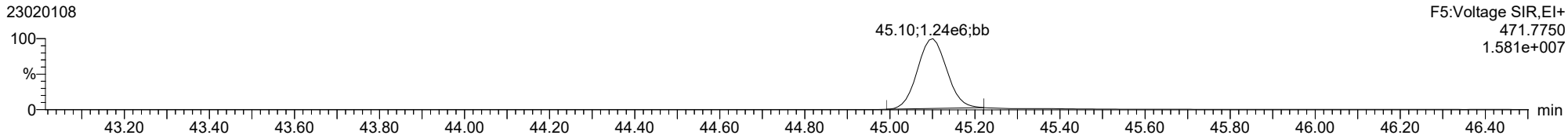
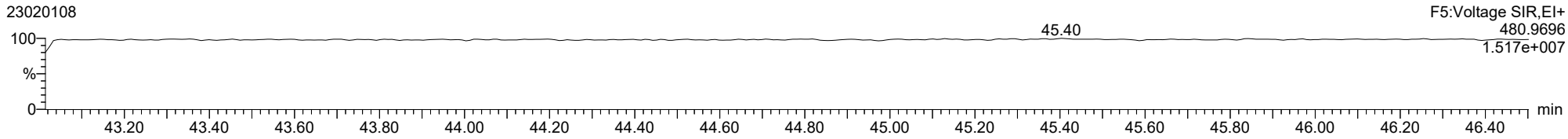


FUNCTION5 PFK



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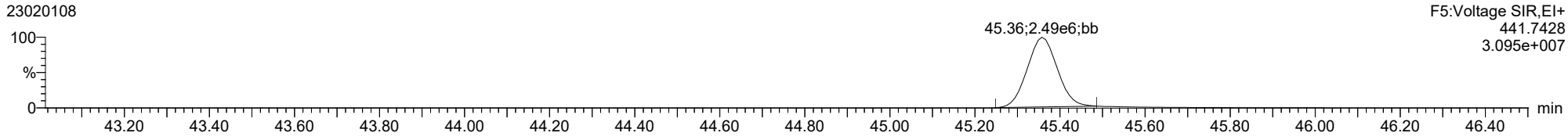
OCDF



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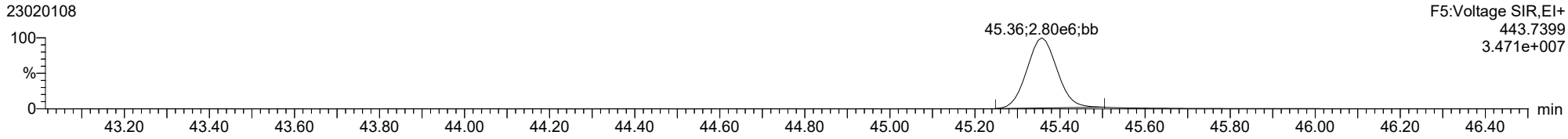

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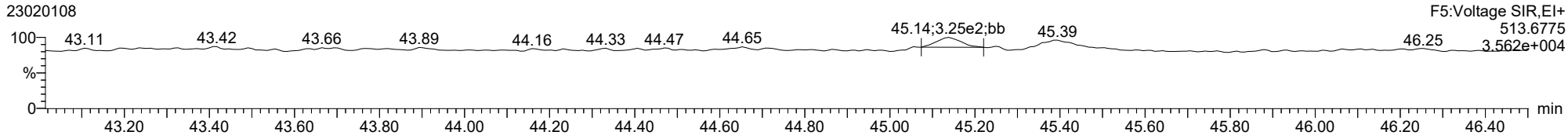

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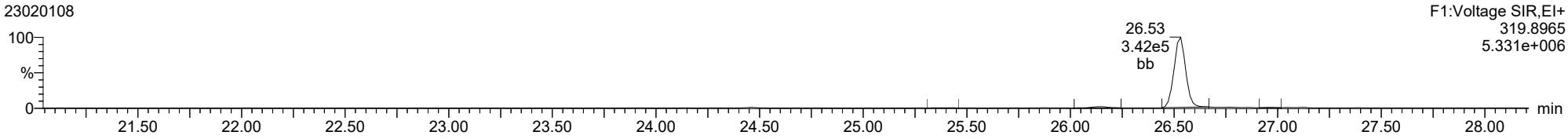
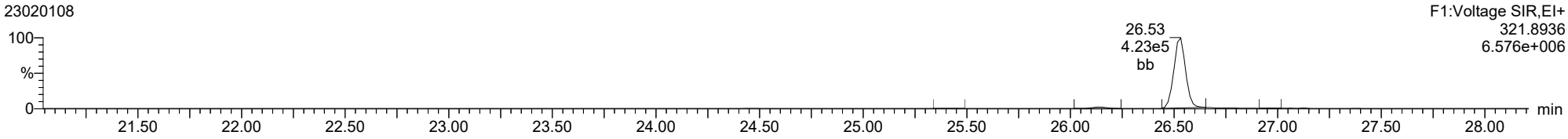


Total-tetradioxins



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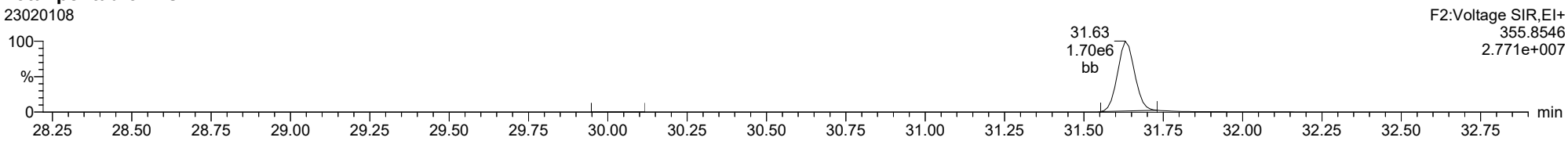
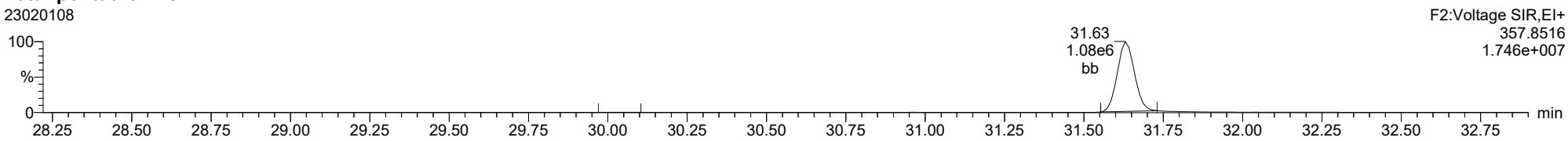


Total-pentadioxins



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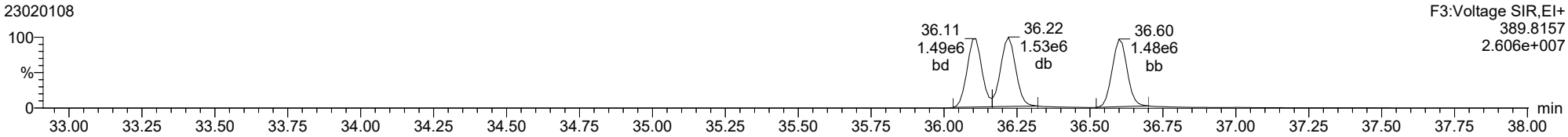

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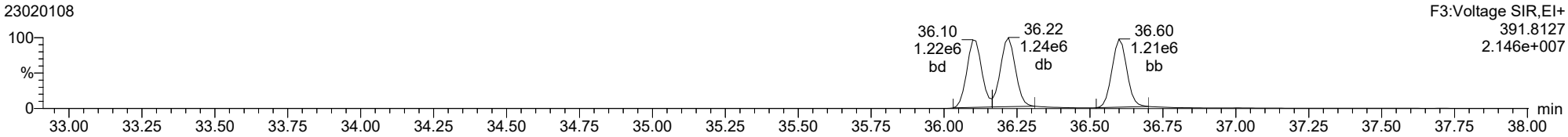

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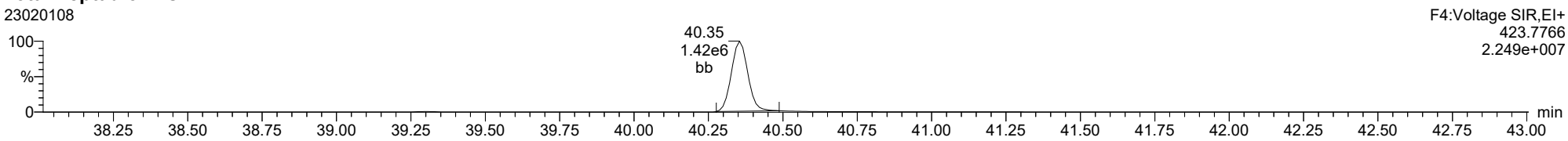

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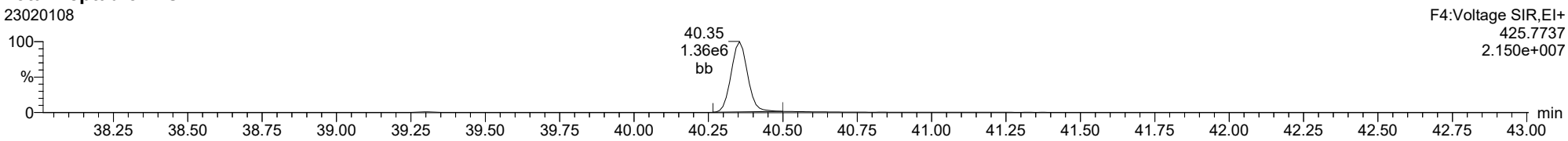
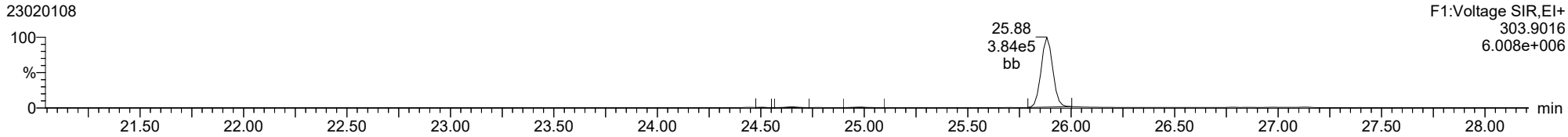


ID: CS4CR, Name: 23020108, Date: 01-Feb-2023, Time: 18:45:20, Conditions: AUTOSPEC01, User: pk

Total-tetrafurans



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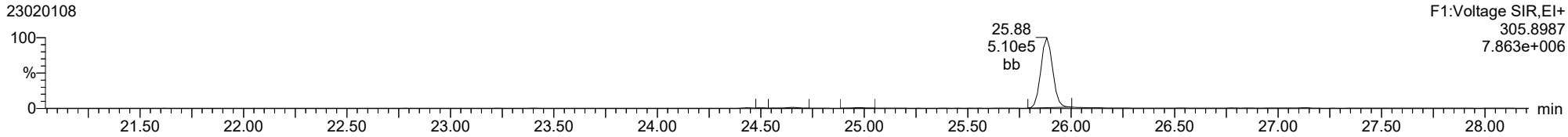

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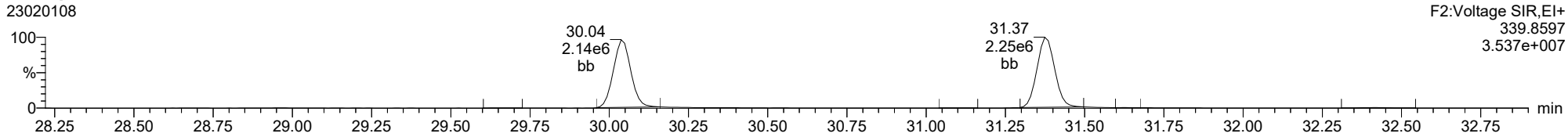

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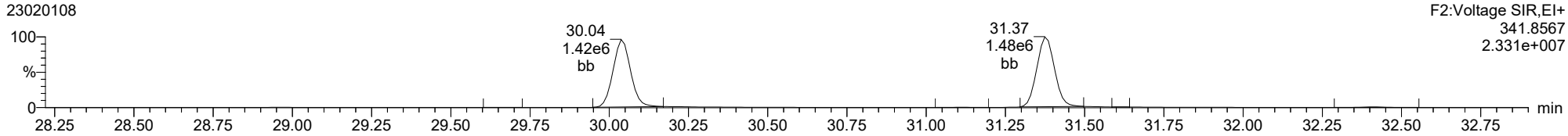

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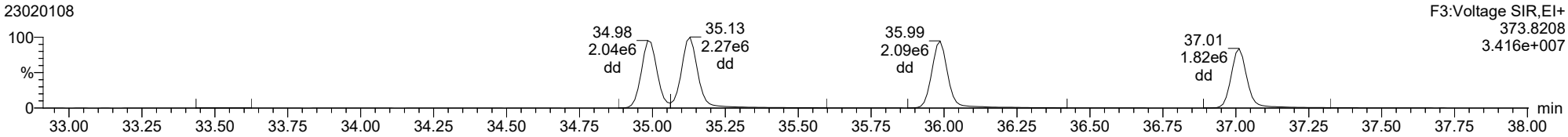
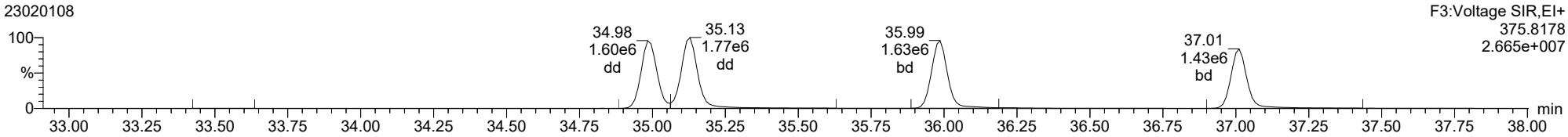
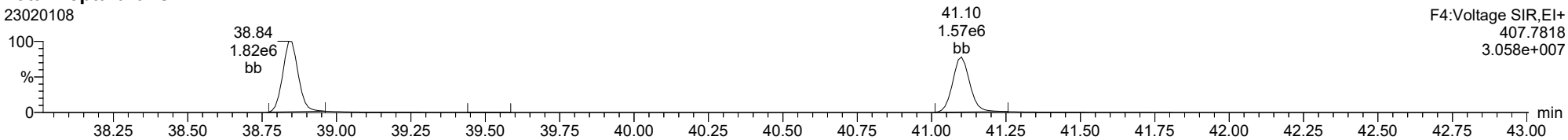
Total-hexafurans



Total-hexafurans



Total-heptafurans



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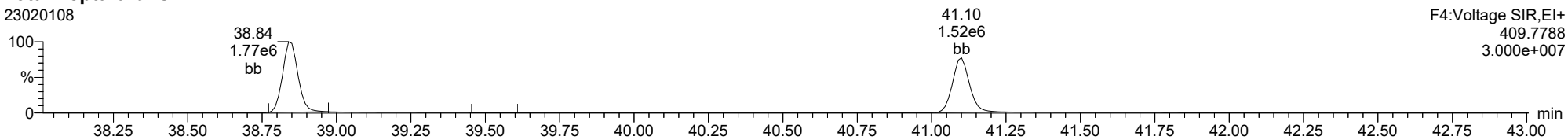

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Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
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Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS5CR, Name: 23020109, Date: 01-Feb-2023, Time: 19:34:25, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.897	1.001	1.902e6	2.502e6	0.876	0.760	0.770	2083	2633	2.83e7	3.68e7	13592.2	13978.0	NO	bb	bb	198.739
12378-PeCDF	30.049	1.000	1.205e7	7.874e6	0.845	1.531	1.550	7373	5488	1.93e8	1.26e8	26224.5	23031.6	NO	bb	bb	994.981
23478-PeCDF	31.386	1.000	1.269e7	8.370e6	0.911	1.517	1.550	7373	5488	2.06e8	1.36e8	27965.2	24705.2	NO	bb	bb	1016.382
123478-HxCDF	34.995	1.000	1.141e7	8.950e6	1.182	1.275	1.240	3920	5169	1.84e8	1.47e8	46993.0	28370.7	NO	dd	dd	1029.340
234678-HxCDF	35.998	1.001	1.171e7	9.171e6	1.229	1.276	1.240	3920	5169	1.90e8	1.49e8	48596.8	28890.8	NO	dd	dd	1009.446
123678-HxCDF	35.140	1.001	1.235e7	9.894e6	1.248	1.248	1.240	3920	5169	1.94e8	1.54e8	49388.8	29696.3	NO	dd	dd	1025.687
123789-HxCDF	37.023	1.001	1.031e7	8.091e6	1.187	1.275	1.240	3920	5169	1.66e8	1.30e8	42476.6	25233.9	NO	bd	bd	998.443
1234678-HpCDF	38.850	1.000	1.032e7	1.012e7	1.204	1.019	1.050	8904	8155	1.75e8	1.74e8	19676.2	21311.7	NO	bb	bb	964.735
1234789-HpCDF	41.112	1.000	8.967e6	8.709e6	1.165	1.030	1.050	8904	8155	1.36e8	1.32e8	15298.2	16219.3	NO	bb	bb	993.722
OCDF	45.375	1.006	1.493e7	1.667e7	1.186	0.896	0.890	4510	4269	1.90e8	2.12e8	42161.0	49693.7	NO	bb	bb	1895.001
2378-TCDD	26.532	1.001	1.752e6	2.174e6	1.236	0.806	0.770	1459	2196	2.70e7	3.36e7	18498.5	15304.9	NO	bb	bb	198.710
12378-PeCDD	31.642	1.000	9.606e6	6.125e6	1.087	1.568	1.550	3423	1668	1.56e8	9.91e7	45448.5	59405.3	NO	bb	bb	1009.559
123478-HxCDD	36.120	1.001	8.528e6	7.016e6	0.987	1.215	1.240	3213	2854	1.40e8	1.15e8	43594.1	40358.9	NO	bd	bd	1032.837
123678-HxCDD	36.232	1.000	8.754e6	7.068e6	1.021	1.239	1.240	3213	2854	1.51e8	1.23e8	47081.5	43211.8	NO	db	db	969.556
123789-HxCDD	36.611	1.011	8.604e6	7.092e6	0.985	1.213	1.240	3213	2854	1.49e8	1.23e8	46396.6	43264.5	NO	bb	bb	1019.817
1234678-HpCDD	40.365	1.001	8.084e6	7.725e6	1.253	1.046	1.050	4704	6048	1.30e8	1.24e8	27631.4	20454.3	NO	bb	bb	955.606
OCDD	45.138	1.000	1.379e7	1.563e7	1.103	0.882	0.890	4246	3833	1.77e8	2.00e8	41633.2	52271.8	NO	bb	bb	1898.324
13C-2378-TCDF	25.867	1.007	1.117e6	1.412e6	1.768	0.791	0.770	2137	1536	1.68e7	2.15e7	7867.7	13974.0	NO	bb	bb	104.652
13C-12378-PeCDF	30.037	1.169	1.439e6	9.319e5	1.527	1.544	1.550	3190	2679	2.23e7	1.46e7	6993.2	5456.9	NO	bb	bb	113.578
13C-23478-PeCDF	31.375	1.221	1.384e6	8.910e5	1.466	1.553	1.550	3190	2679	2.11e7	1.37e7	6621.6	5099.2	NO	bb	bb	113.466
13C-123478-HxCDF	34.984	0.956	5.247e5	1.149e6	1.054	0.456	0.510	2046	3816	8.96e6	1.85e7	4377.9	4858.6	NO	bb	bd	95.236
13C-123678-HxCDF	35.118	0.960	5.447e5	1.193e6	1.080	0.456	0.510	2046	3816	9.54e6	1.96e7	4663.8	5131.1	NO	bb	db	96.456
13C-234678-HxCDF	35.976	0.983	5.724e5	1.111e6	1.014	0.515	0.510	2046	3816	9.48e6	1.86e7	4633.3	4871.3	NO	bb	bb	99.457
13C-123789-HxCDF	37.001	1.011	5.244e5	1.029e6	0.928	0.510	0.510	2046	3816	8.87e6	1.74e7	4335.4	4558.1	NO	bb	bb	100.353
13C-1234678-HpCDF	38.839	1.061	5.492e5	1.210e6	1.036	0.454	0.440	2607	3522	9.31e6	2.08e7	3570.6	5900.4	NO	bb	bb	101.771
13C-1234789-HpCDF	41.100	1.123	4.687e5	1.058e6	0.905	0.443	0.440	2607	3522	6.97e6	1.56e7	2673.2	4442.5	NO	bb	bb	101.106
13C-1234-TCDD	25.700	0.000	6.087e5	7.585e5	1.000	0.803	0.770	1970	1516	9.39e6	1.18e7	4765.4	7760.6	NO	bb	bb	100.000
13C-2378-TCDD	26.517	1.032	7.055e5	8.929e5	1.103	0.790	0.770	1970	1516	1.10e7	1.38e7	5597.9	9134.2	NO	bb	bb	106.005
13C-12378-PeCDD	31.631	1.231	8.888e5	5.452e5	0.914	1.630	1.550	1596	1437	1.37e7	8.34e6	8557.4	5803.5	NO	bb	bb	114.739
13C-123478-HxCDD	36.098	0.986	8.648e5	6.600e5	0.933	1.310	1.240	2021	1546	1.43e7	1.10e7	7083.3	7089.6	NO	bd	bd	97.968
13C-123678-HxCDD	36.221	0.990	8.909e5	7.079e5	0.965	1.258	1.240	2021	1546	1.49e7	1.18e7	7371.3	7606.4	NO	db	db	99.340
13C-1234678-HpCDD	40.343	1.102	6.795e5	6.413e5	0.782	1.059	1.050	2204	1955	1.08e7	1.02e7	4901.5	5191.4	NO	bb	bb	101.235
13C-OCDD	45.119	1.233	1.338e6	1.473e6	0.788	0.908	0.890	3227	1633	1.70e7	1.87e7	5253.8	11468.7	NO	bb	bb	213.757
13C-123789-HxCDD	36.600	0.000	9.379e5	7.305e5	1.000	1.284	1.240	2021	1546	1.55e7	1.24e7	7683.2	7996.3	NO	bb	bb	100.000
37CL-2378-TCDD	26.532	1.032	3.390e6		1.233			2288		5.24e7		22881.9			bb		201.044

Dataset: T:\Autospec\Processed Data Batch\230201ICIH.qld
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ID: CS5CR, Name: 23020109, Date: 01-Feb-2023, Time: 19:34:25, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					1.064		0.770	2083	2633								
1289-TCDF					0.858		0.770	2083	2633								
13468-PECDF					1.013		1.550	1030	1210								
12389-PECDF					0.844		1.550	7373	5488								
123468-HXCDF					1.197		1.240	3920	5169								
1368-TCDD					1.084		0.770	1459	2196								
1289-TCDD					0.975		0.770	1459	2196								
12479-PECDD					1.837		1.550	3423	1668								
12389-PECDD					1.252		1.550	3423	1668								
124679-HXCDD					1.033		1.240	3213	2854								
1234679-HPCDD					1.286		1.050	4704	6048								
Total-tetrafurans			1.936e6		0.933			2083		2.88e7							202.080
Total-penta1			0.000e0					1030		0.00e0							
Total-pentafurans			2.494e7		0.866			7373		4.02e8							2027.255
Total-hexafurans			4.602e7		1.208			3920		7.37e8							4083.100
Total-heptafurans			1.932e7		1.185			8904		3.12e8							1962.233
Total-Furans			1.071e8		1.067			2083		1.67e9							10169.669
Total-tetradioxins			1.793e6		1.099			1459		2.75e7							203.813
Total-pentadioxins			9.627e6		1.392			3423		1.56e8							1011.307
Total-hexadioxins			2.592e7		1.007			3213		4.41e8							3025.757
Total-heptadioxins			8.084e6		1.269			4704		1.30e8							955.606
Total-Dioxins			5.921e7		1.165			1459		9.31e8							7094.807
Total-TEQ			1.664e8					1459		2.60e9							17264.476
FUNCTION1 PFK			2.029e7					574211		2.20e8							
FUNCTION2 PFK			0.000e0					188547		0.00e0							
FUNCTION3 PFK			1.011e6					450058		2.54e7							0.000
FUNCTION4 PFK			3.839e5					271819		2.65e6							
FUNCTION5 PFK			1.416e4					194883		8.19e5							
FUNCTION1 HXCD...			1.885e3					653		2.55e4							0.000
FUNCTION1 HPCD...			1.625e3					761		2.22e4							0.000
FUNCTION2 HPCD...			1.554e4					835		2.29e5							0.000
FUNCTION3 OCDPE			7.873e3					764		8.87e4							0.000
FUNCTION4 NCDPE			2.525e3					778		3.44e4							0.000
FUNCTION5 DCDPE			4.222e3					726		3.75e4							0.000

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Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
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Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: 03 Feb 2023 10:33:40

ID: CS5CR, Name: 23020109, Date: 01-Feb-2023, Time: 19:34:25, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	26.53	2.226e3	3.396e3	0.933	0.66	0.77	11.6	YES	NO	bb	bd	0.238
2	2378-TCDF	25.90	1.902e6	2.502e6	0.876	0.76	0.77	13592.2	YES	NO	bb	bb	198.739
3	Total-tetrafurans	25.72	1.842e3	2.753e3	0.933	0.67	0.77	10.6	YES	NO	bb	bb	0.195
4	Total-tetrafurans	24.97	1.224e4	1.625e4	0.933	0.75	0.77	91.6	YES	NO	db	dd	1.208
5	Total-tetrafurans	24.66	1.707e4	2.304e4	0.933	0.74	0.77	124.7	YES	NO	bd	dd	1.700

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	28.97	3.816e4	2.465e4	0.866	1.55	1.55	67.9	YES	NO	bb	bb	3.121
2	Total-pentafurans	28.68	1.252e3	7.687e2	0.866	1.63	1.55	2.7	NO	NO	bb	bb	0.100
3	Total-pentafurans	31.64	2.450e4	1.763e4	0.866	1.39	1.55	52.8	YES	NO	bb	bb	2.093
4	23478-PeCDF	31.39	1.269e7	8.370e6	0.911	1.52	1.55	27965.2	YES	NO	bb	bb	1016.3...
5	Total-pentafurans	31.12	1.334e4	8.233e3	0.866	1.62	1.55	28.5	YES	NO	bb	bb	1.072
6	Total-pentafurans	30.35	1.243e4	7.715e3	0.866	1.61	1.55	30.7	YES	NO	bb	bb	1.001
7	12378-PeCDF	30.05	1.205e7	7.874e6	0.845	1.53	1.55	26224.5	YES	NO	bb	bb	994.981
8	Total-pentafurans	29.76	8.085e3	5.894e3	0.866	1.37	1.55	15.9	YES	NO	db	db	0.695
9	Total-pentafurans	29.68	6.865e3	3.988e3	0.866	1.72	1.55	14.4	YES	NO	bd	bd	0.539
10	Total-pentafurans	32.42	8.774e4	5.860e4	0.866	1.50	1.55	183.2	YES	NO	bb	bd	7.271

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HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123478-HxCDF	35.00	1.141e7	8.950e6	1.182	1.28	1.24	46993.0	YES	NO	dd	dd	1029.3...
2	Total-hexafurans	34.84	1.696e4	1.325e4	1.208	1.28	1.24	72.5	YES	NO	bd	bd	1.504
3	Total-hexafurans	33.55	9.817e3	7.389e3	1.208	1.33	1.24	34.0	YES	NO	dd	db	0.857
4	123789-HxCDF	37.02	1.031e7	8.091e6	1.187	1.27	1.24	42476.6	YES	NO	bd	bd	998.443
5	Total-hexafurans	36.62	3.175e4	2.702e4	1.208	1.17	1.24	85.2	YES	NO	dd	db	2.926
6	Total-hexafurans	36.53	6.162e3	4.947e3	1.208	1.25	1.24	37.3	YES	NO	dd	dd	0.553
7	Total-hexafurans	36.23	1.664e5	1.218e5	1.208	1.37	1.24	331.3	YES	NO	dd	dd	14.345
8	234678-HxCDF	36.00	1.171e7	9.171e6	1.229	1.28	1.24	48596.8	YES	NO	dd	dd	1009.4...
9	123678-HxCDF	35.14	1.235e7	9.894e6	1.248	1.25	1.24	49388.8	YES	NO	dd	dd	1025.6...

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.11	8.967e6	8.709e6	1.165	1.03	1.05	15298.2	YES	NO	bb	bb	993.722
2	Total-heptafurans	40.38	1.043e4	1.014e4	1.185	1.03	1.05	14.2	YES	NO	bb	bb	1.057
3	Total-heptafurans	39.52	2.112e4	2.199e4	1.185	0.96	1.05	42.5	YES	NO	bb	bb	2.215
4	Total-heptafurans	39.26	5.058e3	4.749e3	1.185	1.07	1.05	11.5	YES	NO	bb	bb	0.504
5	1234678-HpCDF	38.85	1.032e7	1.012e7	1.204	1.02	1.05	19676.2	YES	NO	bb	bb	964.735

ID: CS5CR, Name: 23020109, Date: 01-Feb-2023, Time: 19:34:25, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	26.53	2.226e3	3.396e3	0.933	0.66	0.77	11.6	YES	NO	bb	bd	0.238
2	2378-TCDF	25.90	1.902e6	2.502e6	0.876	0.76	0.77	13592.2	YES	NO	bb	bb	198.739
3	Total-tetrafurans	25.72	1.842e3	2.753e3	0.933	0.67	0.77	10.6	YES	NO	bb	bb	0.195
4	Total-tetrafurans	24.97	1.224e4	1.625e4	0.933	0.75	0.77	91.6	YES	NO	db	dd	1.208
5	Total-tetrafurans	24.66	1.707e4	2.304e4	0.933	0.74	0.77	124.7	YES	NO	bd	dd	1.700
6	Total-pentafurans	28.97	3.816e4	2.465e4	0.866	1.55	1.55	67.9	YES	NO	bb	bb	3.121
7	Total-pentafurans	28.68	1.252e3	7.687e2	0.866	1.63	1.55	2.7	NO	NO	bb	bb	0.100
8	Total-pentafurans	31.64	2.450e4	1.763e4	0.866	1.39	1.55	52.8	YES	NO	bb	bb	2.093
9	23478-PeCDF	31.39	1.269e7	8.370e6	0.911	1.52	1.55	27965.2	YES	NO	bb	bb	1016.3...
10	Total-pentafurans	31.12	1.334e4	8.233e3	0.866	1.62	1.55	28.5	YES	NO	bb	bb	1.072
11	Total-pentafurans	30.35	1.243e4	7.715e3	0.866	1.61	1.55	30.7	YES	NO	bb	bb	1.001
12	12378-PeCDF	30.05	1.205e7	7.874e6	0.845	1.53	1.55	26224.5	YES	NO	bb	bb	994.981
13	Total-pentafurans	29.76	8.085e3	5.894e3	0.866	1.37	1.55	15.9	YES	NO	db	db	0.695
14	Total-pentafurans	29.68	6.865e3	3.988e3	0.866	1.72	1.55	14.4	YES	NO	bd	bd	0.539
15	Total-pentafurans	32.42	8.774e4	5.860e4	0.866	1.50	1.55	183.2	YES	NO	bb	bd	7.271
16	123478-HxCDF	35.00	1.141e7	8.950e6	1.182	1.28	1.24	46993.0	YES	NO	dd	dd	1029.3...
17	Total-hexafurans	34.84	1.696e4	1.325e4	1.208	1.28	1.24	72.5	YES	NO	bd	bd	1.504
18	Total-hexafurans	33.55	9.817e3	7.389e3	1.208	1.33	1.24	34.0	YES	NO	dd	db	0.857
19	123789-HxCDF	37.02	1.031e7	8.091e6	1.187	1.27	1.24	42476.6	YES	NO	bd	bd	998.443
20	Total-hexafurans	36.62	3.175e4	2.702e4	1.208	1.17	1.24	85.2	YES	NO	dd	db	2.926
21	Total-hexafurans	36.53	6.162e3	4.947e3	1.208	1.25	1.24	37.3	YES	NO	dd	dd	0.553
22	Total-hexafurans	36.23	1.664e5	1.218e5	1.208	1.37	1.24	331.3	YES	NO	dd	dd	14.345
23	234678-HxCDF	36.00	1.171e7	9.171e6	1.229	1.28	1.24	48596.8	YES	NO	dd	dd	1009.4...
24	123678-HxCDF	35.14	1.235e7	9.894e6	1.248	1.25	1.24	49388.8	YES	NO	dd	dd	1025.6...
25	1234789-HpCDF	41.11	8.967e6	8.709e6	1.165	1.03	1.05	15298.2	YES	NO	bb	bb	993.722
26	Total-heptafurans	40.38	1.043e4	1.014e4	1.185	1.03	1.05	14.2	YES	NO	bb	bb	1.057
27	Total-heptafurans	39.52	2.112e4	2.199e4	1.185	0.96	1.05	42.5	YES	NO	bb	bb	2.215
28	Total-heptafurans	39.26	5.058e3	4.749e3	1.185	1.07	1.05	11.5	YES	NO	bb	bb	0.504
29	1234678-HpCDF	38.85	1.032e7	1.012e7	1.204	1.02	1.05	19676.2	YES	NO	bb	bb	964.735
30	OCDF	45.38	1.493e7	1.667e7	1.186	0.90	0.89	42161.0	YES	NO	bb	bb	1895.0...

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.53	1.752e6	2.174e6	1.236	0.81	0.77	18498.5	YES	NO	bb	bb	198.710
2	Total-tetradioxins	26.15	3.848e4	4.731e4	1.099	0.81	0.77	307.2	YES	NO	bb	bb	4.885
3	Total-tetradioxins	25.40	1.655e3	2.163e3	1.099	0.76	0.77	18.7	YES	NO	bb	bb	0.217

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PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.64	9.606e6	6.125e6	1.087	1.57	1.55	45448.5	YES	NO	bb	bb	1009.5...
2	Total-pentadioxins	30.97	1.150e4	6.979e3	1.392	1.65	1.55	51.3	YES	NO	bb	bd	0.925
3	Total-pentadioxins	30.41	1.660e3	1.100e3	1.392	1.51	1.55	6.6	YES	NO	db	db	0.138
4	Total-pentadioxins	30.05	7.800e3	5.854e3	1.392	1.33	1.55	33.3	YES	NO	bd	bd	0.684

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexadioxins	34.88	8.900e2	7.985e2	1.007	1.11	1.24	4.5	YES	NO	bd	bd	0.107
2	Total-hexadioxins	37.15	6.920e2	5.023e2	1.007	1.38	1.24	4.7	YES	NO	db	bb	0.076
3	Total-hexadioxins	37.02	2.963e4	2.325e4	1.007	1.27	1.24	128.2	YES	NO	bd	bb	3.364
4	123789-HxCDD	36.61	8.604e6	7.092e6	0.985	1.21	1.24	46396.6	YES	NO	bb	bb	1019.8...
5	123678-HxCDD	36.23	8.754e6	7.068e6	1.021	1.24	1.24	47081.5	YES	NO	db	db	969.556
6	123478-HxCDD	36.12	8.528e6	7.016e6	0.987	1.22	1.24	43594.1	YES	NO	bd	bd	1032.8...

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.37	8.084e6	7.725e6	1.253	1.05	1.05	27631.4	YES	NO	bb	bb	955.606

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.53	1.752e6	2.174e6	1.236	0.81	0.77	18498.5	YES	NO	bb	bb	198.710
2	Total-tetradioxins	26.15	3.848e4	4.731e4	1.099	0.81	0.77	307.2	YES	NO	bb	bb	4.885
3	Total-tetradioxins	25.40	1.655e3	2.163e3	1.099	0.76	0.77	18.7	YES	NO	bb	bb	0.217
4	12378-PeCDD	31.64	9.606e6	6.125e6	1.087	1.57	1.55	45448.5	YES	NO	bb	bb	1009.5...
5	Total-pentadioxins	30.97	1.150e4	6.979e3	1.392	1.65	1.55	51.3	YES	NO	bb	bd	0.925
6	Total-pentadioxins	30.41	1.660e3	1.100e3	1.392	1.51	1.55	6.6	YES	NO	db	db	0.138
7	Total-pentadioxins	30.05	7.800e3	5.854e3	1.392	1.33	1.55	33.3	YES	NO	bd	bd	0.684
8	Total-hexadioxins	34.88	8.900e2	7.985e2	1.007	1.11	1.24	4.5	YES	NO	bd	bd	0.107
9	Total-hexadioxins	37.15	6.920e2	5.023e2	1.007	1.38	1.24	4.7	YES	NO	db	bb	0.076
10	Total-hexadioxins	37.02	2.963e4	2.325e4	1.007	1.27	1.24	128.2	YES	NO	bd	bb	3.364
11	123789-HxCDD	36.61	8.604e6	7.092e6	0.985	1.21	1.24	46396.6	YES	NO	bb	bb	1019.8...
12	123678-HxCDD	36.23	8.754e6	7.068e6	1.021	1.24	1.24	47081.5	YES	NO	db	db	969.556
13	123478-HxCDD	36.12	8.528e6	7.016e6	0.987	1.22	1.24	43594.1	YES	NO	bd	bd	1032.8...
14	1234678-HpCDD	40.37	8.084e6	7.725e6	1.253	1.05	1.05	27631.4	YES	NO	bb	bb	955.606
15	OCDD	45.14	1.379e7	1.563e7	1.103	0.88	0.89	41633.2	YES	NO	bb	bb	1898.3...

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	26.53	2.226e3	3.396e3	0.933	0.66	0.77	11.6	YES	NO	bb	bd	0.238
2	2378-TCDF	25.90	1.902e6	2.502e6	0.876	0.76	0.77	13592.2	YES	NO	bb	bb	198.739
3	Total-tetrafurans	25.72	1.842e3	2.753e3	0.933	0.67	0.77	10.6	YES	NO	bb	bb	0.195
4	Total-tetrafurans	24.97	1.224e4	1.625e4	0.933	0.75	0.77	91.6	YES	NO	db	dd	1.208
5	Total-tetrafurans	24.66	1.707e4	2.304e4	0.933	0.74	0.77	124.7	YES	NO	bd	dd	1.700
6	Total-pentafurans	28.97	3.816e4	2.465e4	0.866	1.55	1.55	67.9	YES	NO	bb	bb	3.121
7	Total-pentafurans	28.68	1.252e3	7.687e2	0.866	1.63	1.55	2.7	NO	NO	bb	bb	0.100
8	Total-pentafurans	31.64	2.450e4	1.763e4	0.866	1.39	1.55	52.8	YES	NO	bb	bb	2.093
9	23478-PeCDF	31.39	1.269e7	8.370e6	0.911	1.52	1.55	27965.2	YES	NO	bb	bb	1016.3...
10	Total-pentafurans	31.12	1.334e4	8.233e3	0.866	1.62	1.55	28.5	YES	NO	bb	bb	1.072
11	Total-pentafurans	30.35	1.243e4	7.715e3	0.866	1.61	1.55	30.7	YES	NO	bb	bb	1.001
12	12378-PeCDF	30.05	1.205e7	7.874e6	0.845	1.53	1.55	26224.5	YES	NO	bb	bb	994.981
13	Total-pentafurans	29.76	8.085e3	5.894e3	0.866	1.37	1.55	15.9	YES	NO	db	db	0.695
14	Total-pentafurans	29.68	6.865e3	3.988e3	0.866	1.72	1.55	14.4	YES	NO	bd	bd	0.539
15	Total-pentafurans	32.42	8.774e4	5.860e4	0.866	1.50	1.55	183.2	YES	NO	bb	bd	7.271
16	123478-HxCDF	35.00	1.141e7	8.950e6	1.182	1.28	1.24	46993.0	YES	NO	dd	dd	1029.3...
17	Total-hexafurans	34.84	1.696e4	1.325e4	1.208	1.28	1.24	72.5	YES	NO	bd	bd	1.504
18	Total-hexafurans	33.55	9.817e3	7.389e3	1.208	1.33	1.24	34.0	YES	NO	dd	db	0.857
19	123789-HxCDF	37.02	1.031e7	8.091e6	1.187	1.27	1.24	42476.6	YES	NO	bd	bd	998.443
20	Total-hexafurans	36.62	3.175e4	2.702e4	1.208	1.17	1.24	85.2	YES	NO	dd	db	2.926
21	Total-hexafurans	36.53	6.162e3	4.947e3	1.208	1.25	1.24	37.3	YES	NO	dd	dd	0.553
22	Total-hexafurans	36.23	1.664e5	1.218e5	1.208	1.37	1.24	331.3	YES	NO	dd	dd	14.345
23	234678-HxCDF	36.00	1.171e7	9.171e6	1.229	1.28	1.24	48596.8	YES	NO	dd	dd	1009.4...
24	123678-HxCDF	35.14	1.235e7	9.894e6	1.248	1.25	1.24	49388.8	YES	NO	dd	dd	1025.6...
25	1234789-HpCDF	41.11	8.967e6	8.709e6	1.165	1.03	1.05	15298.2	YES	NO	bb	bb	993.722
26	Total-heptafurans	40.38	1.043e4	1.014e4	1.185	1.03	1.05	14.2	YES	NO	bb	bb	1.057
27	Total-heptafurans	39.52	2.112e4	2.199e4	1.185	0.96	1.05	42.5	YES	NO	bb	bb	2.215
28	Total-heptafurans	39.26	5.058e3	4.749e3	1.185	1.07	1.05	11.5	YES	NO	bb	bb	0.504
29	1234678-HpCDF	38.85	1.032e7	1.012e7	1.204	1.02	1.05	19676.2	YES	NO	bb	bb	964.735
30	OCDF	45.38	1.493e7	1.667e7	1.186	0.90	0.89	42161.0	YES	NO	bb	bb	1895.0...
31	2378-TCDD	26.53	1.752e6	2.174e6	1.236	0.81	0.77	18498.5	YES	NO	bb	bb	198.710
32	Total-tetradioxins	26.15	3.848e4	4.731e4	1.099	0.81	0.77	307.2	YES	NO	bb	bb	4.885
33	Total-tetradioxins	25.40	1.655e3	2.163e3	1.099	0.76	0.77	18.7	YES	NO	bb	bb	0.217
34	12378-PeCDD	31.64	9.606e6	6.125e6	1.087	1.57	1.55	45448.5	YES	NO	bb	bb	1009.5...
35	Total-pentadioxins	30.97	1.150e4	6.979e3	1.392	1.65	1.55	51.3	YES	NO	bb	bd	0.925
36	Total-pentadioxins	30.41	1.660e3	1.100e3	1.392	1.51	1.55	6.6	YES	NO	db	db	0.138
37	Total-pentadioxins	30.05	7.800e3	5.854e3	1.392	1.33	1.55	33.3	YES	NO	bd	bd	0.684

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	Total-hexadioxins	34.88	8.900e2	7.985e2	1.007	1.11	1.24	4.5	YES	NO	bd	bd	0.107
39	Total-hexadioxins	37.15	6.920e2	5.023e2	1.007	1.38	1.24	4.7	YES	NO	db	bb	0.076
40	Total-hexadioxins	37.02	2.963e4	2.325e4	1.007	1.27	1.24	128.2	YES	NO	bd	bb	3.364
41	123789-HxCDD	36.61	8.604e6	7.092e6	0.985	1.21	1.24	46396.6	YES	NO	bb	bb	1019.8...
42	123678-HxCDD	36.23	8.754e6	7.068e6	1.021	1.24	1.24	47081.5	YES	NO	db	db	969.556
43	123478-HxCDD	36.12	8.528e6	7.016e6	0.987	1.22	1.24	43594.1	YES	NO	bd	bd	1032.8...
44	1234678-HpCDD	40.37	8.084e6	7.725e6	1.253	1.05	1.05	27631.4	YES	NO	bb	bb	955.606
45	OCDD	45.14	1.379e7	1.563e7	1.103	0.88	0.89	41633.2	YES	NO	bb	bb	1898.3...

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.86	8.873e5					21.2	YES		dd		
2	FUNCTION1 PFK	21.80	7.665e5					22.5	YES		dd		
3	FUNCTION1 PFK	21.74	1.019e6					23.9	YES		dd		
4	FUNCTION1 PFK	21.59	1.959e6					26.2	YES		dd		
5	FUNCTION1 PFK	21.53	6.962e5					27.3	YES		dd		
6	FUNCTION1 PFK	21.47	1.211e6					28.6	YES		dd		
7	FUNCTION1 PFK	21.41	1.009e6					29.4	YES		dd		
8	FUNCTION1 PFK	21.13	5.872e6					34.2	YES		bd		
9	FUNCTION1 PFK	23.67	5.720e3					0.4	NO		bb		
10	FUNCTION1 PFK	23.28	9.896e3					0.7	NO		bb		
11	FUNCTION1 PFK	23.24	1.090e4					0.7	NO		bb		
12	FUNCTION1 PFK	23.16	1.031e4					0.6	NO		bb		
13	FUNCTION1 PFK	22.96	3.707e4					1.5	NO		db		
14	FUNCTION1 PFK	22.84	1.630e5					3.4	YES		dd		
15	FUNCTION1 PFK	22.72	3.257e5					5.8	YES		dd		
16	FUNCTION1 PFK	22.59	5.378e5					8.3	YES		dd		
17	FUNCTION1 PFK	22.53	8.039e5					8.9	YES		dd		
18	FUNCTION1 PFK	22.37	3.709e5					11.1	YES		dd		
19	FUNCTION1 PFK	22.31	5.024e5					12.0	YES		dd		
20	FUNCTION1 PFK	22.18	9.225e5					14.7	YES		dd		
21	FUNCTION1 PFK	22.12	3.970e5					15.8	YES		dd		
22	FUNCTION1 PFK	22.07	7.082e5					16.9	YES		dd		
23	FUNCTION1 PFK	22.00	6.094e5					18.0	YES		dd		
24	FUNCTION1 PFK	21.94	6.575e5					19.5	YES		dd		
25	FUNCTION1 PFK	26.06	4.194e4					1.5	NO		bb		
26	FUNCTION1 PFK	25.69	3.568e4					1.2	NO		bb		
27	FUNCTION1 PFK	25.56	8.323e3					0.5	NO		bb		
28	FUNCTION1 PFK	25.49	1.374e4					0.7	NO		bb		
29	FUNCTION1 PFK	25.10	2.036e4					1.0	NO		db		
30	FUNCTION1 PFK	25.02	2.247e4					1.0	NO		bd		
31	FUNCTION1 PFK	24.96	3.286e4					1.5	NO		db		
32	FUNCTION1 PFK	24.90	1.152e4					0.7	NO		bd		
33	FUNCTION1 PFK	24.84	1.639e4					1.0	NO		bb		
34	FUNCTION1 PFK	24.78	2.451e4					1.1	NO		db		
35	FUNCTION1 PFK	24.72	2.714e4					1.2	NO		bd		
36	FUNCTION1 PFK	24.55	3.918e3					0.5	NO		bb		
37	FUNCTION1 PFK	24.37	3.551e4					1.1	NO		bb		

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION1 PFK	24.01	2.091e4					0.9	NO		bb		
39	FUNCTION1 PFK	23.87	1.925e4					0.9	NO		db		
40	FUNCTION1 PFK	23.80	1.436e4					0.7	NO		bd		
41	FUNCTION1 PFK	27.74	4.148e4					1.2	NO		bb		
42	FUNCTION1 PFK	27.61	1.687e4					0.9	NO		bb		
43	FUNCTION1 PFK	27.36	2.823e4					1.3	NO		bb		
44	FUNCTION1 PFK	27.23	1.221e4					0.7	NO		bb		
45	FUNCTION1 PFK	27.11	2.196e4					0.8	NO		bb		
46	FUNCTION1 PFK	27.03	4.103e4					1.6	NO		db		
47	FUNCTION1 PFK	26.97	5.610e4					1.7	NO		dd		
48	FUNCTION1 PFK	26.86	5.847e4					1.3	NO		dd		
49	FUNCTION1 PFK	26.79	3.039e4					1.0	NO		bd		
50	FUNCTION1 PFK	26.68	1.065e4					0.6	NO		db		
51	FUNCTION1 PFK	26.64	8.185e3					0.7	NO		bd		
52	FUNCTION1 PFK	26.52	5.718e4					1.5	NO		bb		
53	FUNCTION1 PFK	26.40	1.679e4					0.7	NO		bb		
54	FUNCTION1 PFK	26.32	9.414e3					0.6	NO		bb		
55	FUNCTION1 PFK	26.18	2.178e4					1.0	NO		db		
56	FUNCTION1 PFK	26.14	1.887e4					1.1	NO		bd		
57	FUNCTION1 PFK	27.98	3.090e3					0.4	NO		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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ID: CS5CR, Name: 23020109, Date: 01-Feb-2023, Time: 19:34:25, Conditions: AUTOSPEC01, User: pk

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.39	1.483e4					1.1	NO		db		0.000
2	FUNCTION3 PFK	34.35	2.582e4					1.3	NO		bd		0.000
3	FUNCTION3 PFK	34.26	2.395e4					1.1	NO		bb		0.000
4	FUNCTION3 PFK	34.15	1.551e4					1.0	NO		db		0.000
5	FUNCTION3 PFK	34.09	2.978e3					0.4	NO		bd		0.000
6	FUNCTION3 PFK	33.87	2.703e4					1.3	NO		db		0.000
7	FUNCTION3 PFK	33.76	2.846e4					1.4	NO		dd		0.000
8	FUNCTION3 PFK	33.70	9.928e3					0.9	NO		bd		0.000
9	FUNCTION3 PFK	33.66	2.430e3					0.5	NO		bb		0.000
10	FUNCTION3 PFK	33.47	5.051e4					0.9	NO		db		0.000
11	FUNCTION3 PFK	33.37	2.100e4					1.4	NO		bd		0.000
12	FUNCTION3 PFK	33.17	1.358e4					1.0	NO		db		0.000
13	FUNCTION3 PFK	33.13	8.975e3					0.9	NO		bd		0.000
14	FUNCTION3 PFK	35.80	8.372e3					0.8	NO		bb		0.000
15	FUNCTION3 PFK	35.71	2.156e4					1.3	NO		db		0.000
16	FUNCTION3 PFK	35.67	2.235e4					1.3	NO		bd		0.000
17	FUNCTION3 PFK	35.59	9.805e3					0.8	NO		bb		0.000
18	FUNCTION3 PFK	35.53	4.290e3					0.5	NO		bb		0.000
19	FUNCTION3 PFK	35.33	9.302e3					1.0	NO		db		0.000
20	FUNCTION3 PFK	35.30	1.165e4					1.0	NO		bd		0.000
21	FUNCTION3 PFK	35.25	5.126e3					0.7	NO		bb		0.000
22	FUNCTION3 PFK	35.14	1.556e4					0.8	NO		bb		0.000
23	FUNCTION3 PFK	35.10	5.550e3					0.6	NO		bb		0.000
24	FUNCTION3 PFK	35.06	1.779e3					0.4	NO		bb		0.000
25	FUNCTION3 PFK	34.91	4.171e3					0.5	NO		bb		0.000
26	FUNCTION3 PFK	34.86	1.499e4					1.4	NO		bb		0.000
27	FUNCTION3 PFK	34.81	6.634e3					0.6	NO		bb		0.000
28	FUNCTION3 PFK	34.58	1.500e4					1.1	NO		bb		0.000
29	FUNCTION3 PFK	34.53	1.395e3					0.3	NO		bb		0.000
30	FUNCTION3 PFK	37.08	1.137e4					1.0	NO		dd		0.000
31	FUNCTION3 PFK	36.99	7.110e4					2.2	NO		bd		0.000
32	FUNCTION3 PFK	36.92	2.314e3					0.5	NO		bb		0.000
33	FUNCTION3 PFK	36.88	7.392e3					0.6	NO		db		0.000
34	FUNCTION3 PFK	36.81	7.817e3					0.4	NO		bd		0.000
35	FUNCTION3 PFK	36.77	1.226e4					0.8	NO		bb		0.000
36	FUNCTION3 PFK	36.61	7.220e4					1.7	NO		bb		0.000
37	FUNCTION3 PFK	36.40	2.247e4					1.6	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION3 PFK	36.31	3.432e4					1.8	NO		db		0.000
39	FUNCTION3 PFK	36.24	7.551e4					2.3	NO		dd		0.000
40	FUNCTION3 PFK	36.14	2.231e4					1.5	NO		dd		0.000
41	FUNCTION3 PFK	36.11	4.985e4					2.3	NO		dd		0.000
42	FUNCTION3 PFK	36.04	1.685e4					1.5	NO		dd		0.000
43	FUNCTION3 PFK	36.00	8.077e4					2.9	NO		dd		0.000
44	FUNCTION3 PFK	35.92	1.428e4					1.1	NO		dd		0.000
45	FUNCTION3 PFK	35.89	1.321e4					0.9	NO		bd		0.000
46	FUNCTION3 PFK	37.91	1.145e4					1.0	NO		bb		0.000
47	FUNCTION3 PFK	37.83	2.759e4					1.3	NO		bb		0.000
48	FUNCTION3 PFK	37.75	1.842e3					0.4	NO		bb		0.000
49	FUNCTION3 PFK	37.67	1.331e3					0.3	NO		bb		0.000
50	FUNCTION3 PFK	37.58	1.178e4					0.7	NO		bb		0.000
51	FUNCTION3 PFK	37.52	1.786e3					0.4	NO		bb		0.000
52	FUNCTION3 PFK	37.38	1.181e4					0.8	NO		bb		0.000
53	FUNCTION3 PFK	37.32	2.852e3					0.5	NO		db		0.000
54	FUNCTION3 PFK	37.29	1.067e4					0.9	NO		bd		0.000
55	FUNCTION3 PFK	37.12	1.332e4					1.1	NO		db		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.07	3.839e5					9.7	YES		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.91	3.198e3					0.9	NO		bb		
2	FUNCTION5 PFK	44.44	5.621e3					1.1	NO		bb		
3	FUNCTION5 PFK	43.72	1.296e3					0.7	NO		bb		
4	FUNCTION5 PFK	46.00	2.951e3					0.9	NO		bb		
5	FUNCTION5 PFK	45.63	1.092e3					0.6	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.32	1.271e2					3.2	YES		db		0.000
2	FUNCTION1 HXCD...	27.27	1.266e2					3.9	YES		bd		0.000
3	FUNCTION1 HXCD...	26.97	8.256e1					1.6	NO		bb		0.000
4	FUNCTION1 HXCD...	26.55	4.280e2					6.1	YES		bb		0.000
5	FUNCTION1 HXCD...	26.02	1.029e2					2.7	NO		db		0.000
6	FUNCTION1 HXCD...	25.90	2.502e2					4.4	YES		dd		0.000
7	FUNCTION1 HXCD...	25.72	2.101e2					3.6	YES		bd		0.000
8	FUNCTION1 HXCD...	23.72	8.529e1					3.0	YES		bb		0.000
9	FUNCTION1 HXCD...	22.99	9.923e1					2.5	NO		bb		0.000
10	FUNCTION1 HXCD...	22.00	7.560e1					1.7	NO		db		0.000
11	FUNCTION1 HXCD...	21.89	1.928e2					3.3	YES		bd		0.000
12	FUNCTION1 HXCD...	21.10	1.048e2					3.0	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	26.67	7.036e1					1.9	NO		db		0.000
2	FUNCTION1 HPCD...	26.53	4.357e2					5.6	YES		bd		0.000
3	FUNCTION1 HPCD...	25.91	1.719e2					2.5	NO		bb		0.000
4	FUNCTION1 HPCD...	25.70	1.553e2					2.9	NO		bb		0.000
5	FUNCTION1 HPCD...	24.63	1.444e2					3.1	YES		bb		0.000
6	FUNCTION1 HPCD...	24.20	7.285e1					2.2	NO		bb		0.000
7	FUNCTION1 HPCD...	23.45	7.383e1					2.1	NO		bb		0.000
8	FUNCTION1 HPCD...	23.34	1.346e2					1.9	NO		bb		0.000
9	FUNCTION1 HPCD...	22.31	1.729e2					2.3	NO		bb		0.000
10	FUNCTION1 HPCD...	22.01	7.908e1					1.1	NO		bb		0.000
11	FUNCTION1 HPCD...	21.22	1.137e2					3.5	YES		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.40	9.562e2					13.4	YES		dd		0.000
2	FUNCTION2 HPCD...	31.27	1.162e4					218.9	YES		bd		0.000
3	FUNCTION2 HPCD...	30.07	9.742e2					11.5	YES		bb		0.000
4	FUNCTION2 HPCD...	28.81	1.484e2					3.1	YES		bb		0.000
5	FUNCTION2 HPCD...	32.66	5.798e2					8.9	YES		bb		0.000
6	FUNCTION2 HPCD...	31.65	1.260e3					18.3	YES		db		0.000

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ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	37.03	6.482e2					9.9	YES		bb		0.000
2	FUNCTION3 OCDPE	36.61	1.390e3					18.8	YES		bb		0.000
3	FUNCTION3 OCDPE	36.23	1.589e3					24.2	YES		db		0.000
4	FUNCTION3 OCDPE	36.12	1.347e3					19.9	YES		dd		0.000
5	FUNCTION3 OCDPE	36.01	6.921e2					11.8	YES		bd		0.000
6	FUNCTION3 OCDPE	35.14	1.254e3					15.1	YES		db		0.000
7	FUNCTION3 OCDPE	35.01	7.695e2					12.4	YES		bd		0.000
8	FUNCTION3 OCDPE	33.86	1.826e2					4.0	YES		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.12	8.339e2					10.8	YES		bb		0.000
2	FUNCTION4 NCDPE	40.38	7.844e2					14.4	YES		bb		0.000
3	FUNCTION4 NCDPE	39.21	1.191e2					4.5	YES		bb		0.000
4	FUNCTION4 NCDPE	38.86	6.704e2					11.4	YES		bb		0.000
5	FUNCTION4 NCDPE	41.43	1.172e2					3.2	YES		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	45.38	2.060e3					22.7	YES		db		0.000
2	FUNCTION5 DCDPE	45.15	2.089e3					25.1	YES		bd		0.000
3	FUNCTION5 DCDPE	44.92	7.340e1					3.7	YES		bb		0.000

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Last Altered: Friday, February 03, 2023 10:33:40 Pacific Standard Time
Printed: Friday, February 03, 2023 10:38:07 Pacific Standard Time

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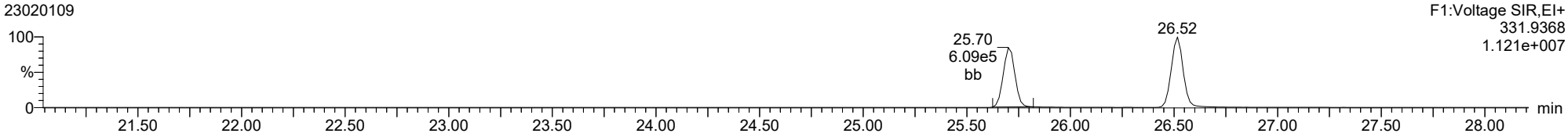
Calibration: 03 Feb 2023 10:33:40

ID: CS5CR, Name: 23020109, Date: 01-Feb-2023, Time: 19:34:25, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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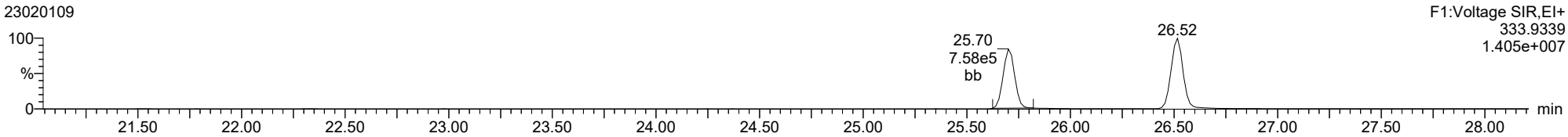

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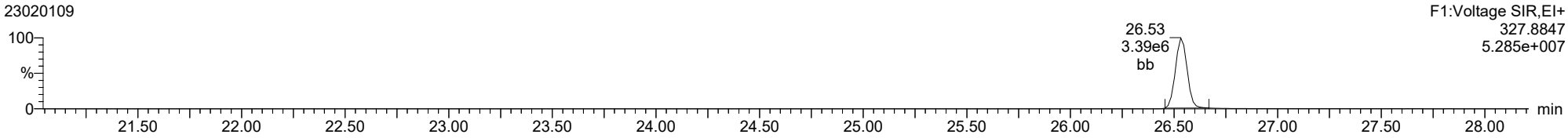

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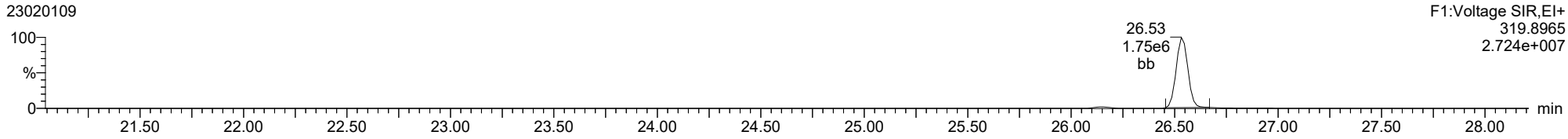

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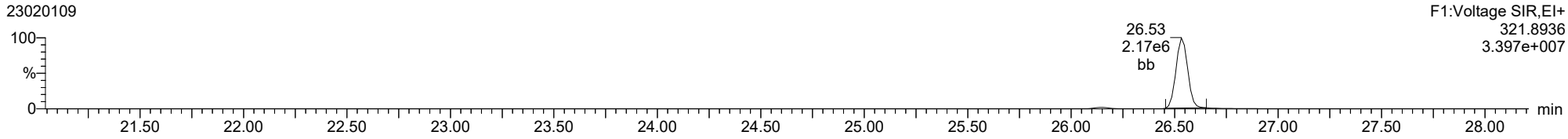

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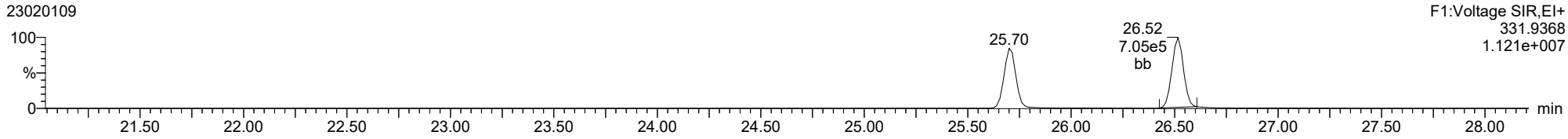

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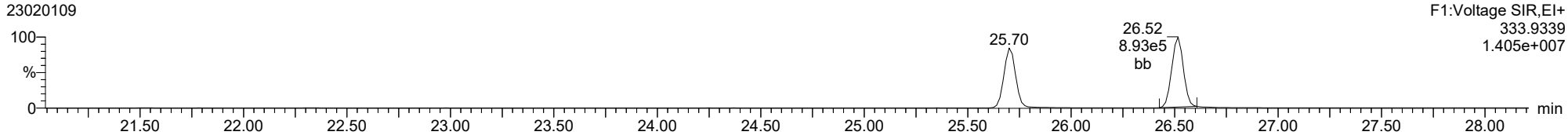

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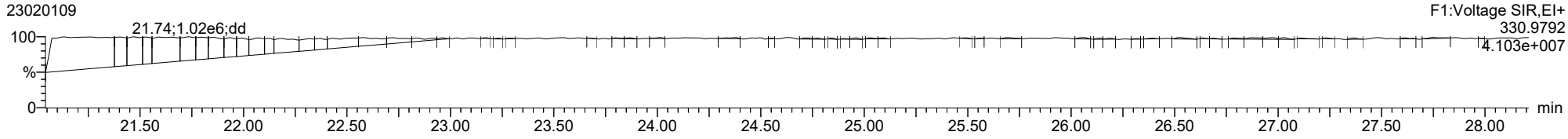

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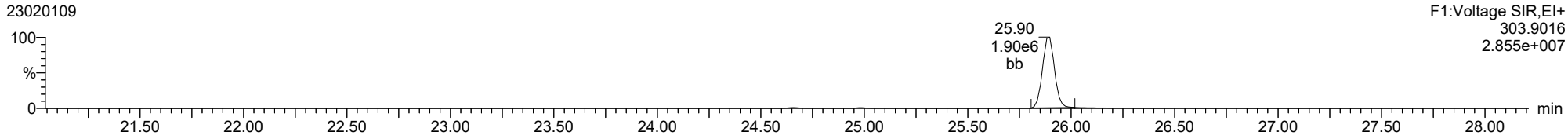
2378-TCDF



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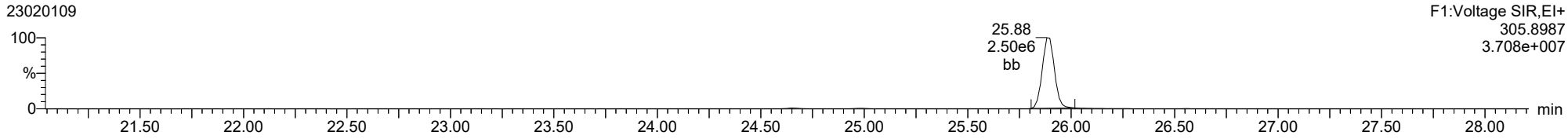

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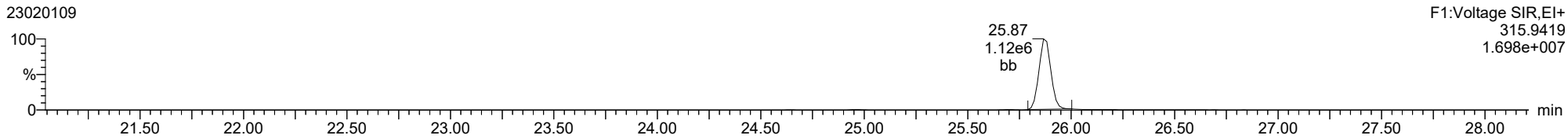

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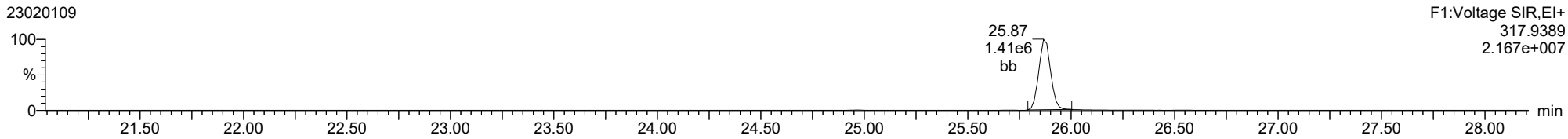

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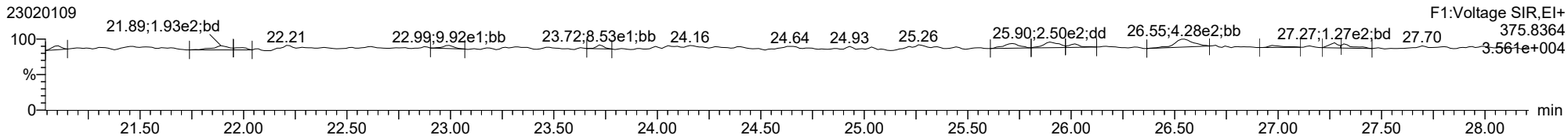

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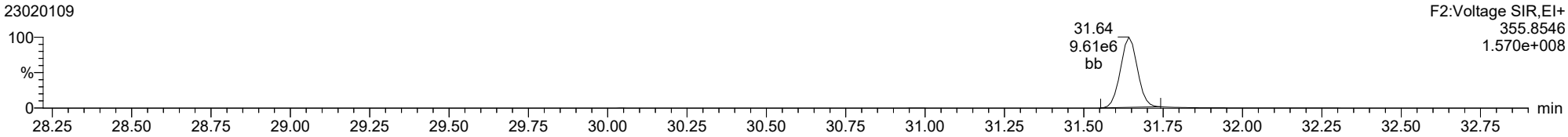
12378-PeCDD



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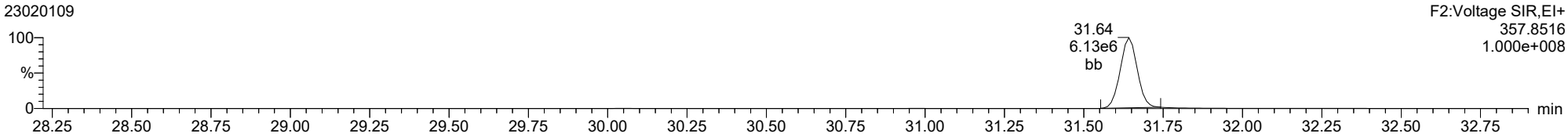

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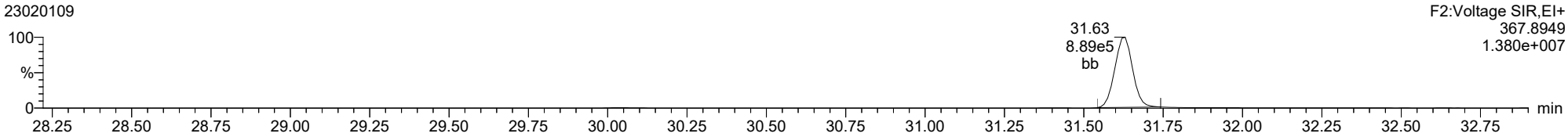

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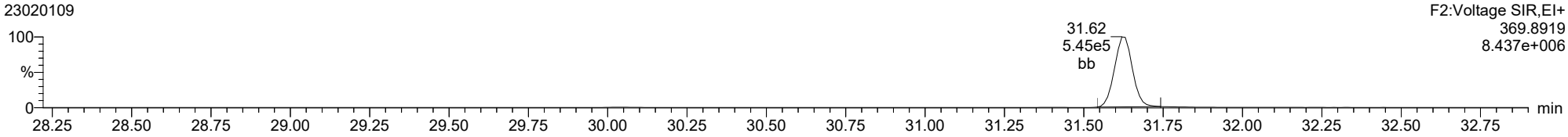
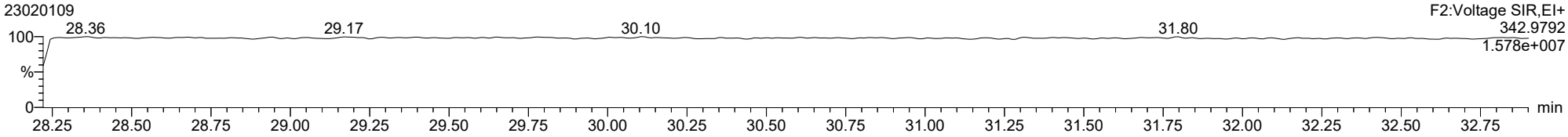


FUNCTION2 PFK



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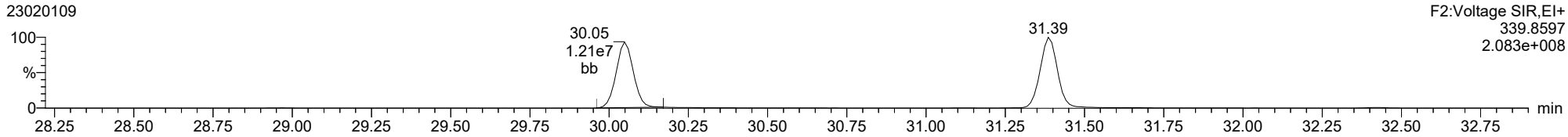
12378-PeCDF



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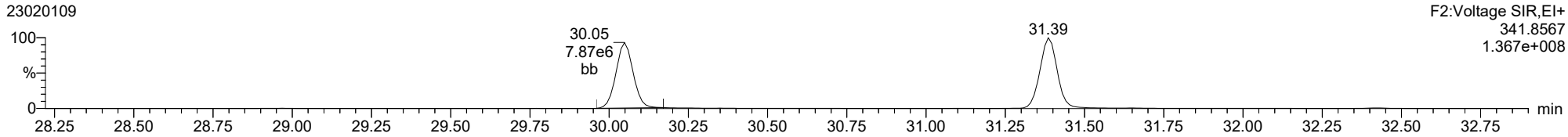

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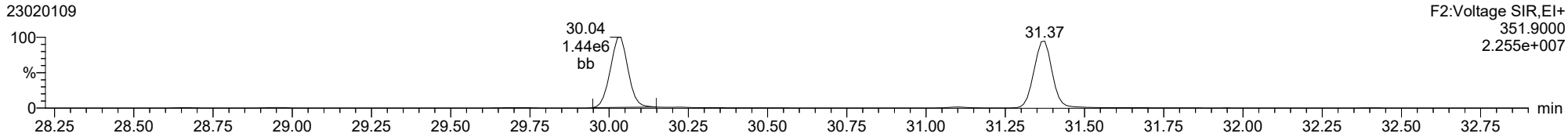

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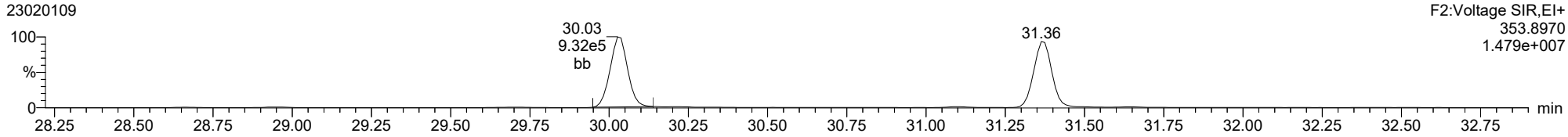

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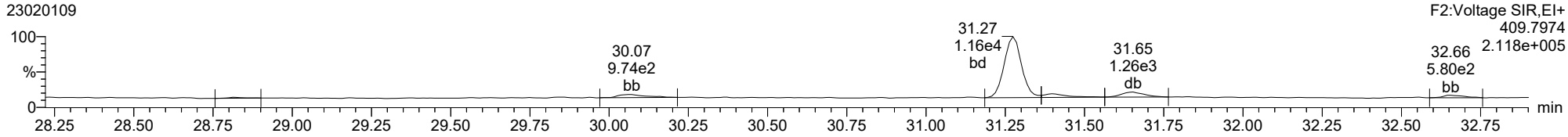

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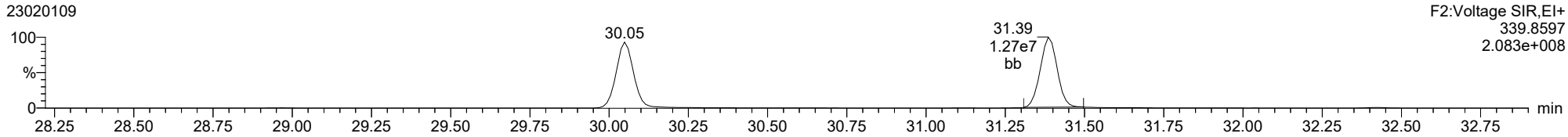
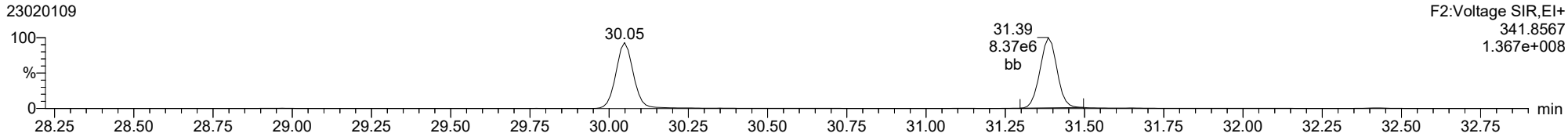
23478-PeCDF



23478-PeCDF



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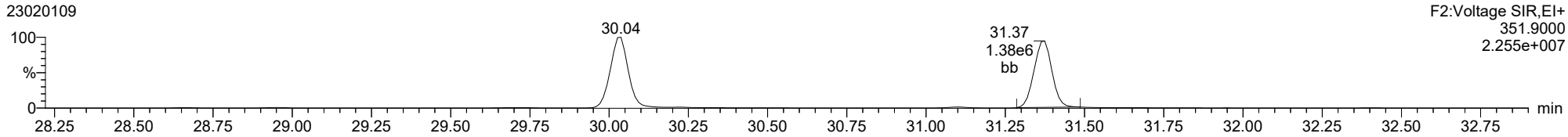

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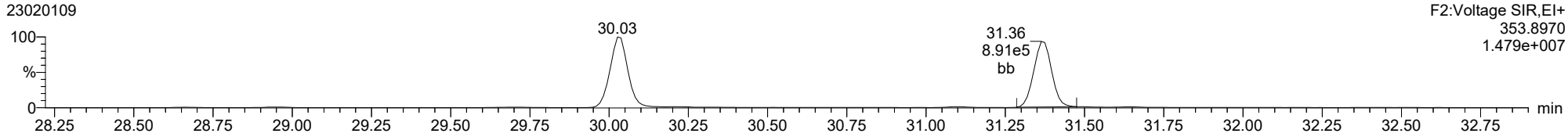

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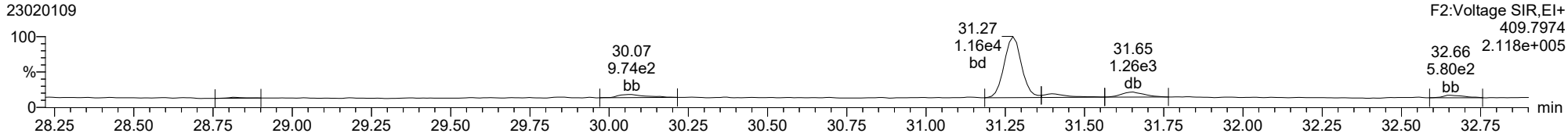

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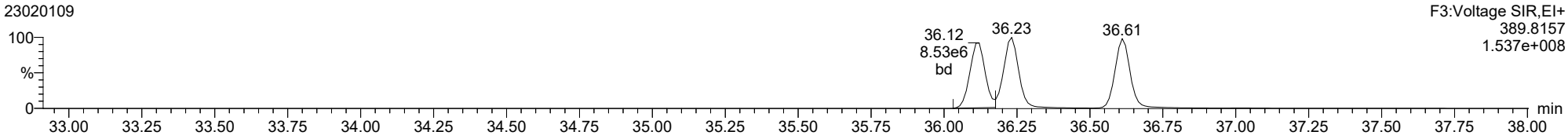

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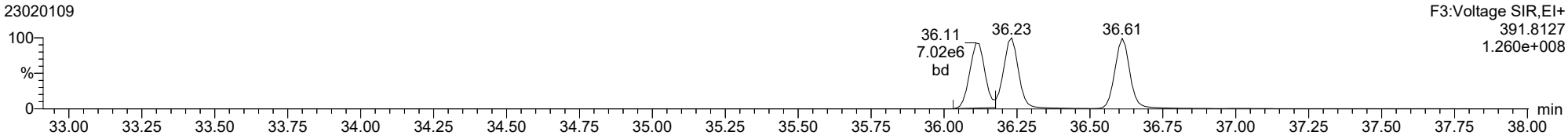

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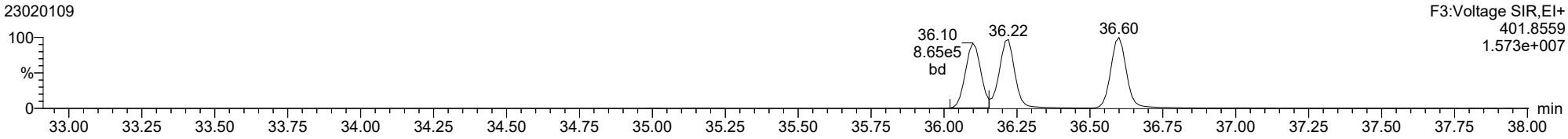

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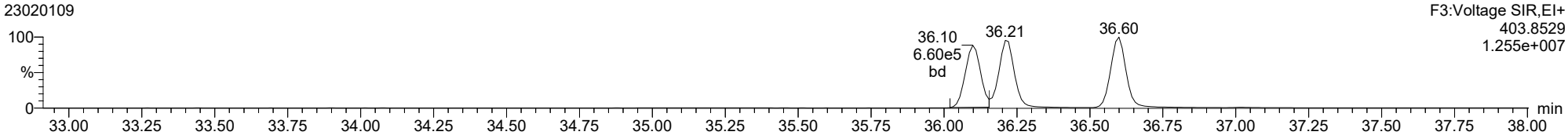
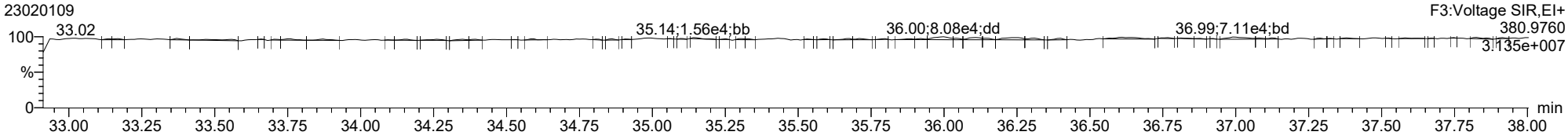


FUNCTION3 PFK



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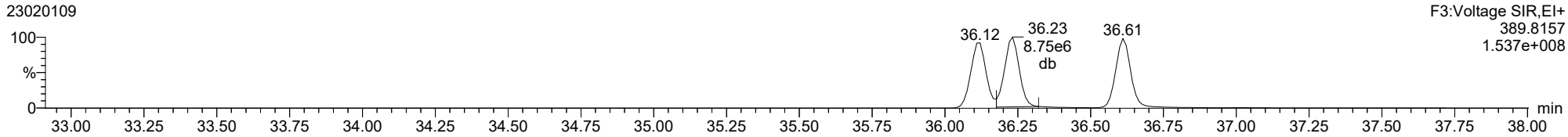

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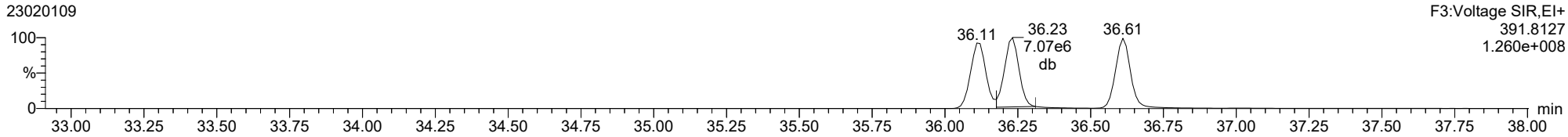

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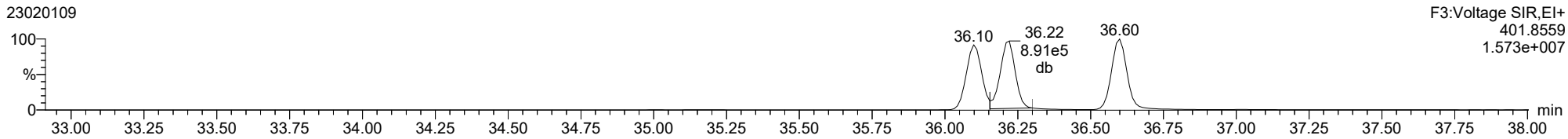

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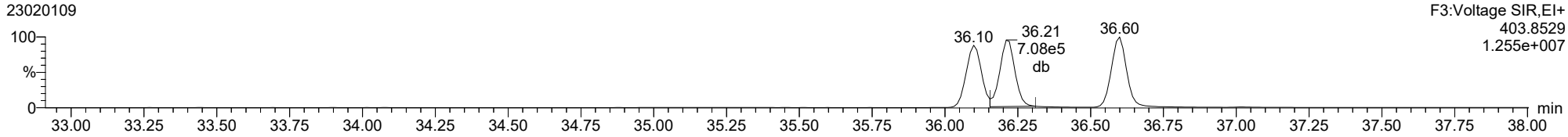

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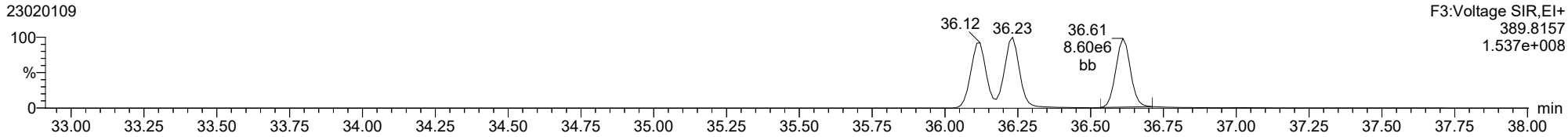

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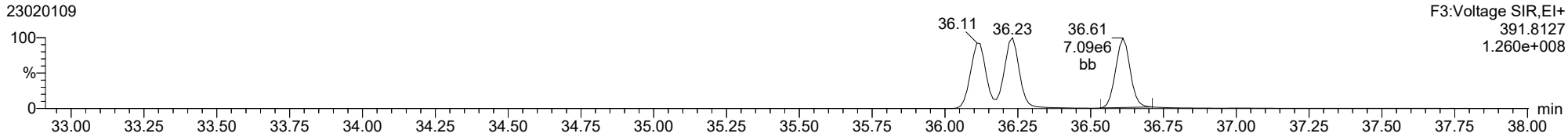

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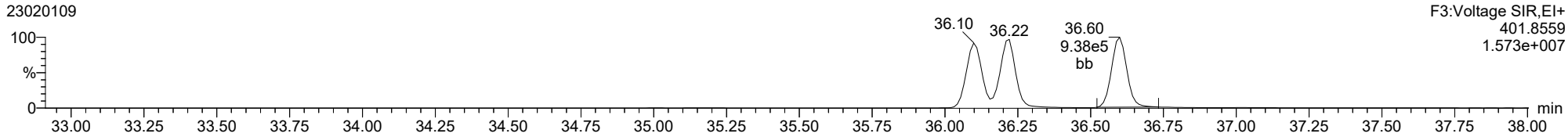

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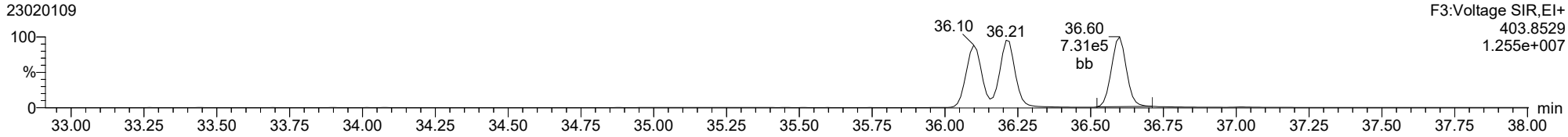

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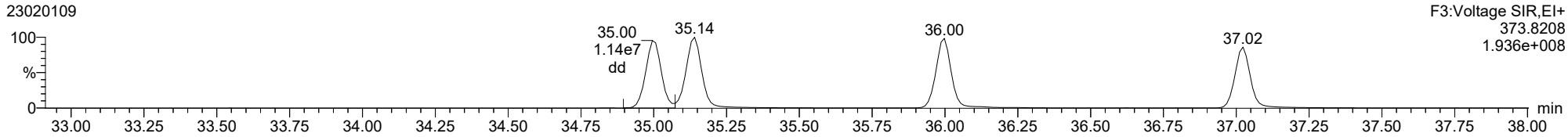

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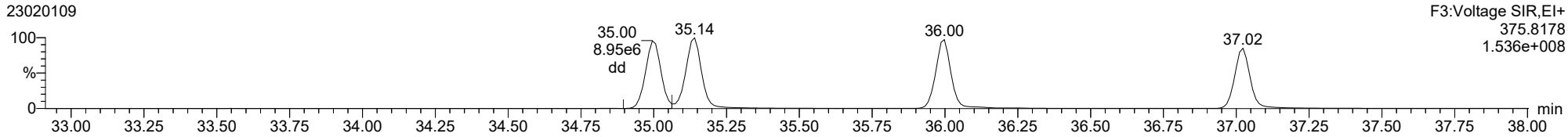

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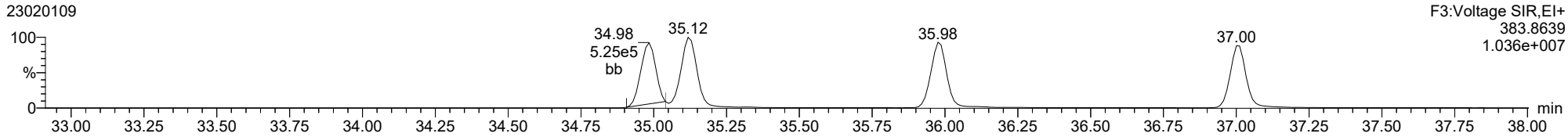

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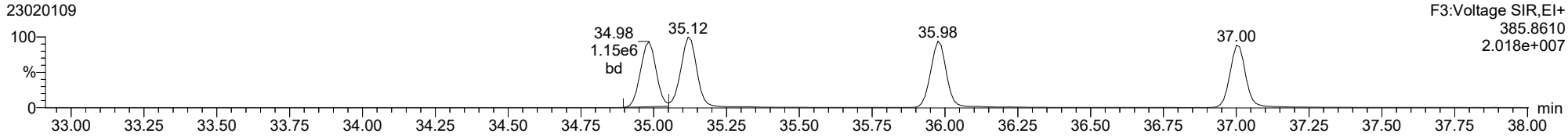

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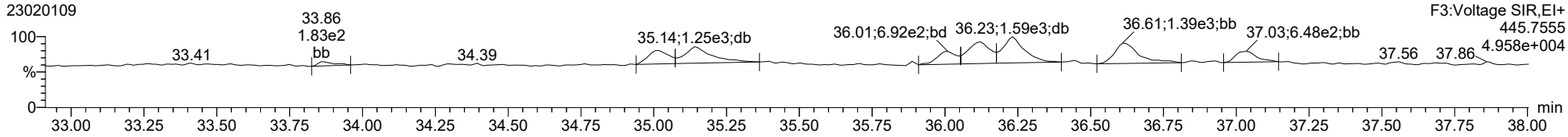

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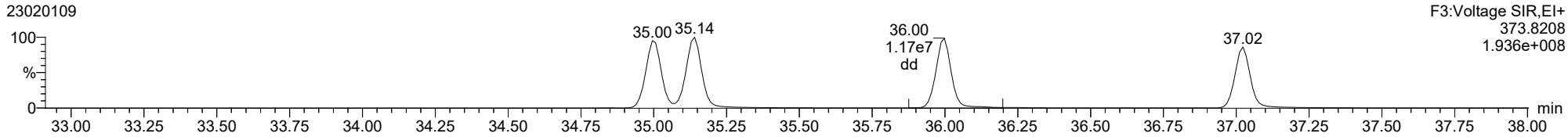

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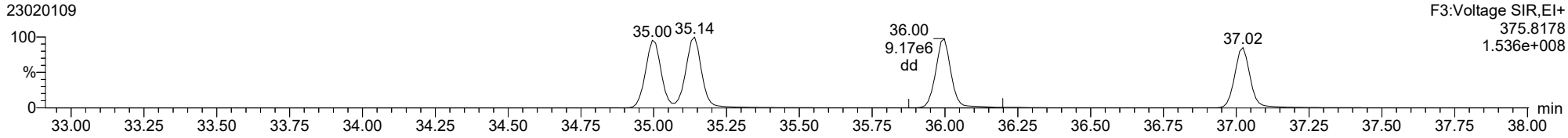

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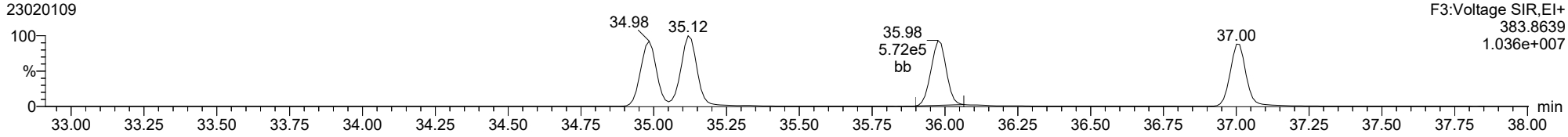

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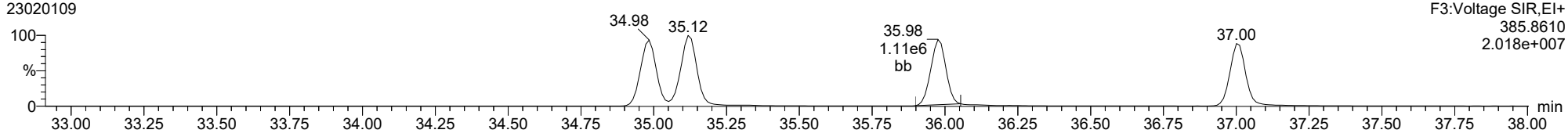
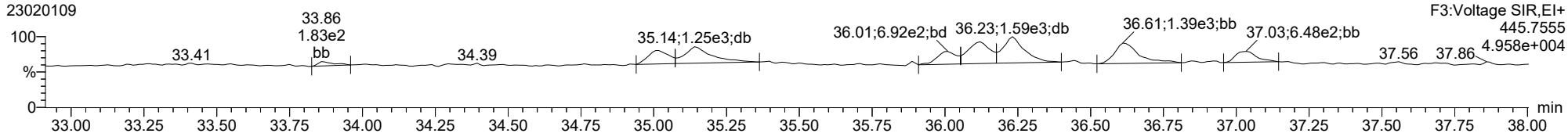


FUNCTION3 OCDPE



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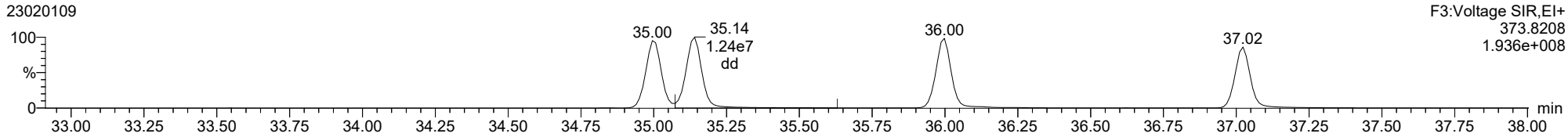

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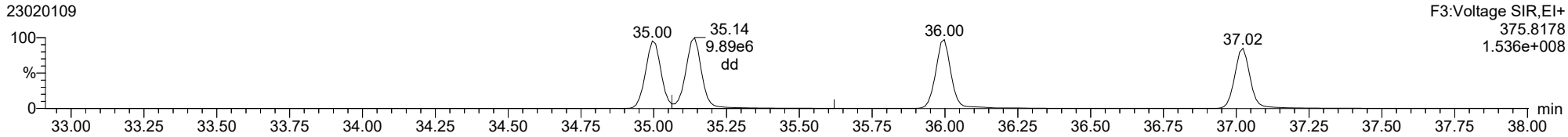

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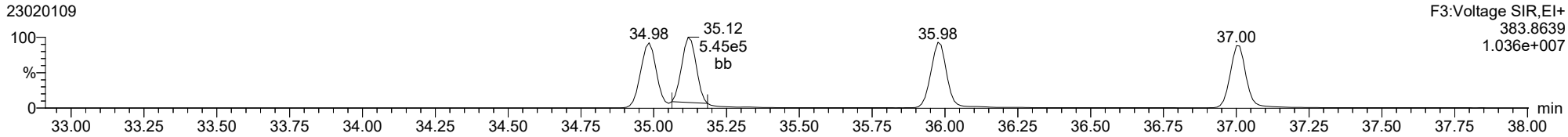

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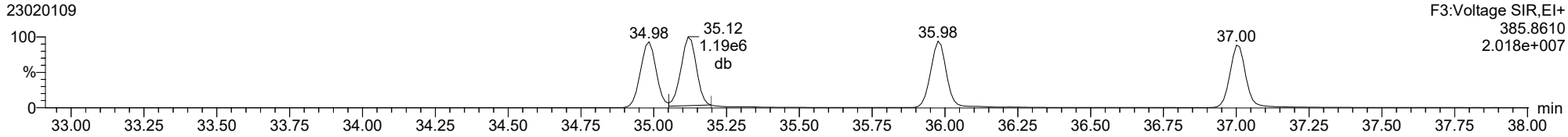
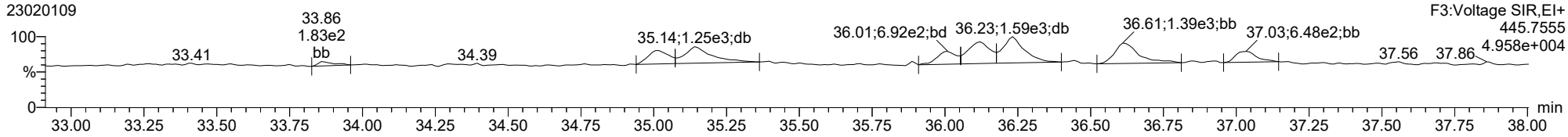


FUNCTION3 OCDPE



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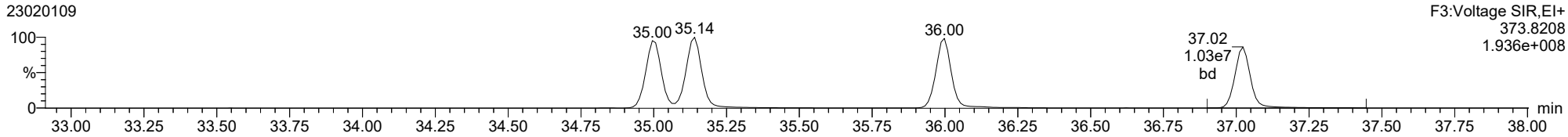

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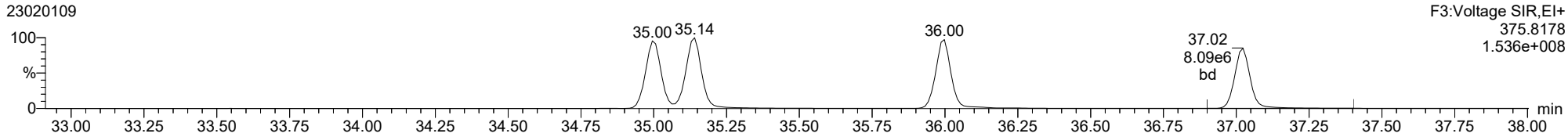

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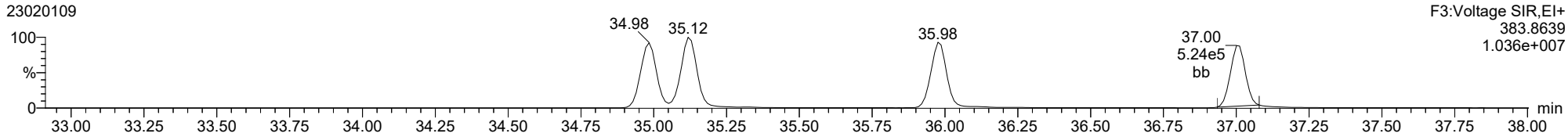

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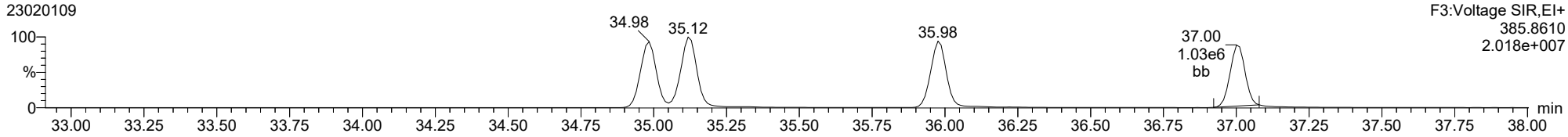
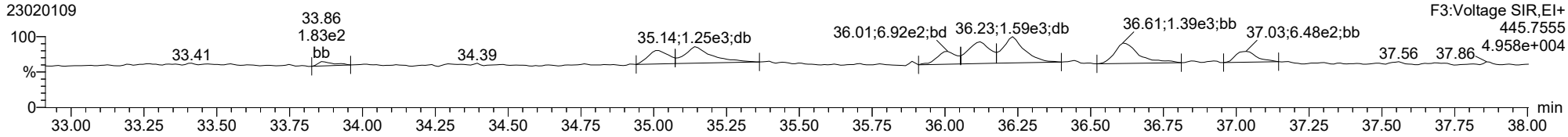


FUNCTION3 OCDPE



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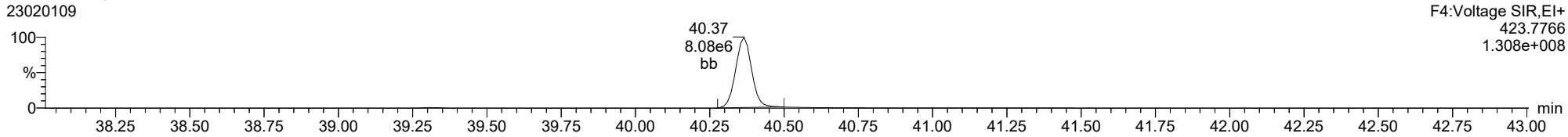

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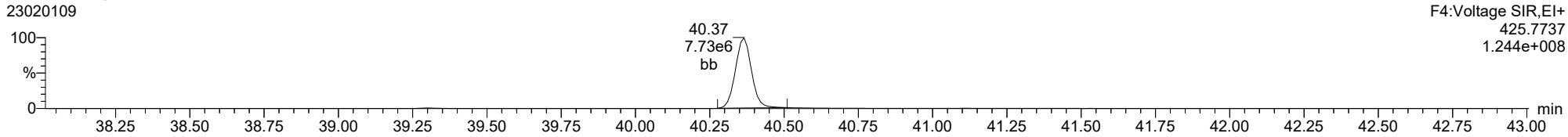

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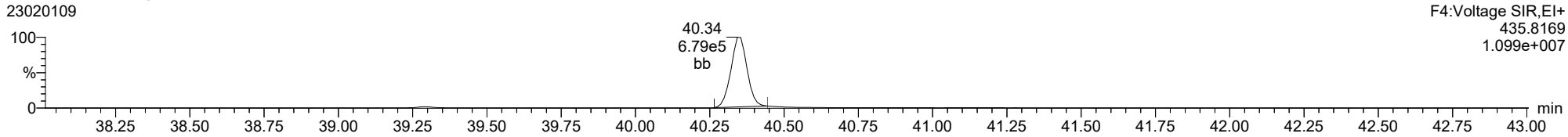

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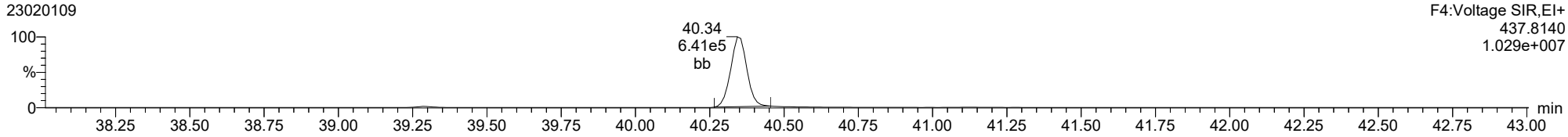
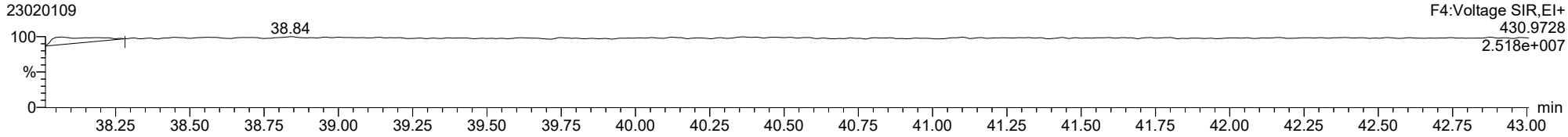


FUNCTION4 PFK



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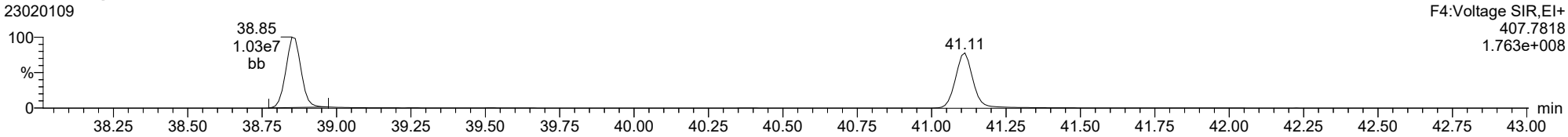

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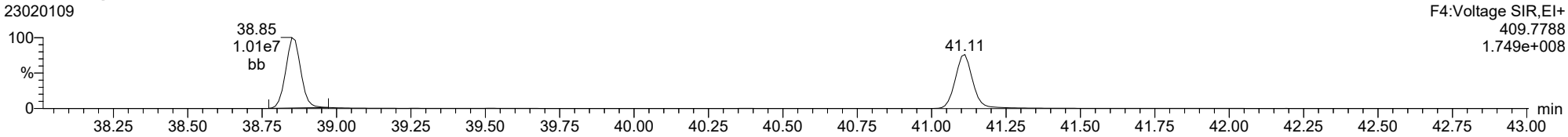

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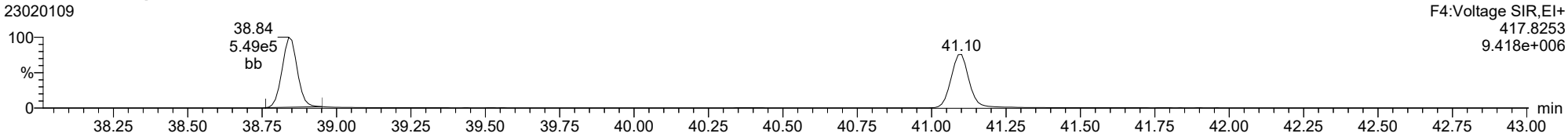

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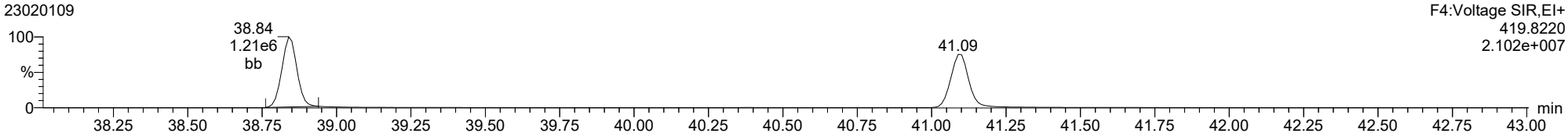
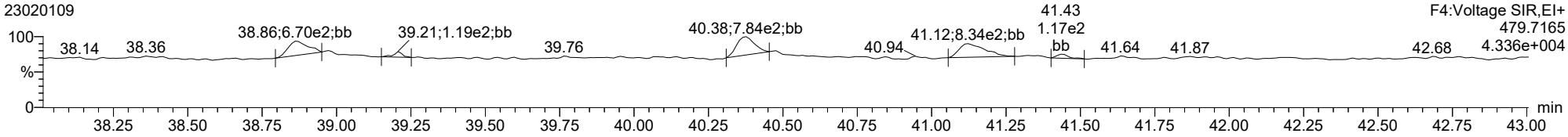


FUNCTION4 NCDPE



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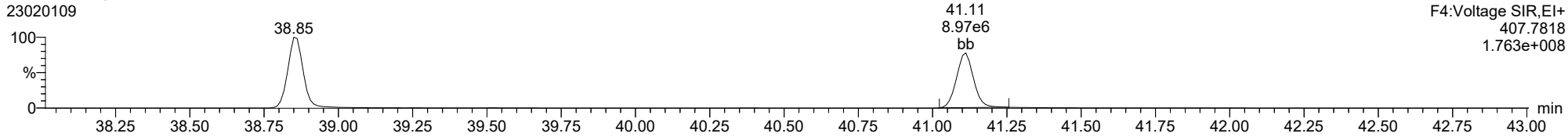

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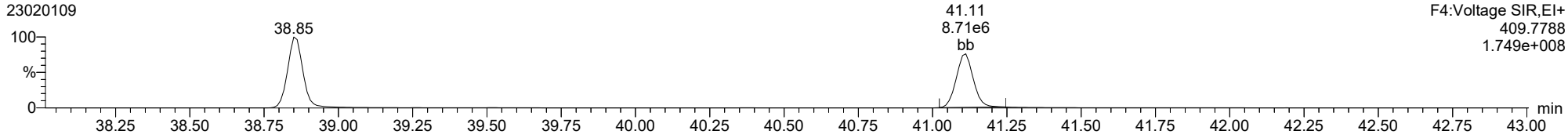

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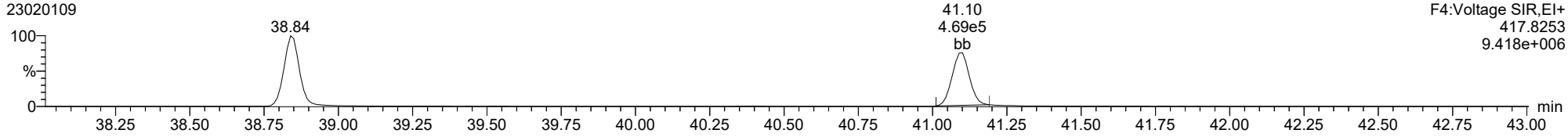

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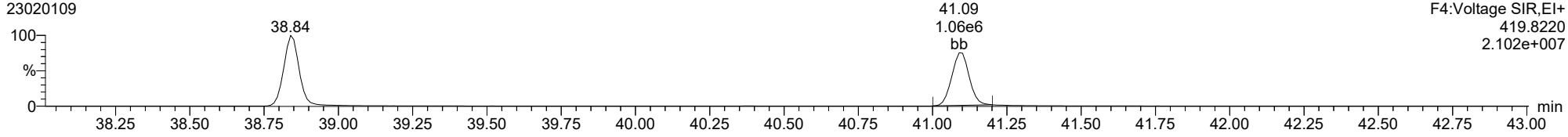
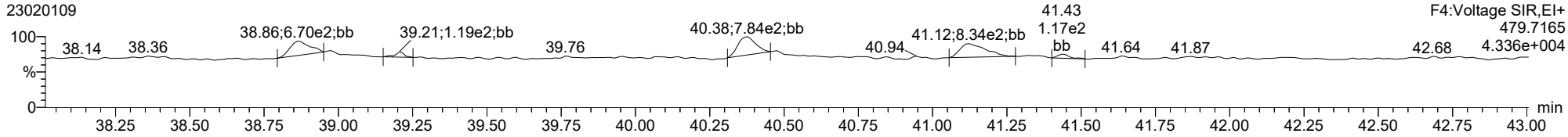


FUNCTION4 NCDPE



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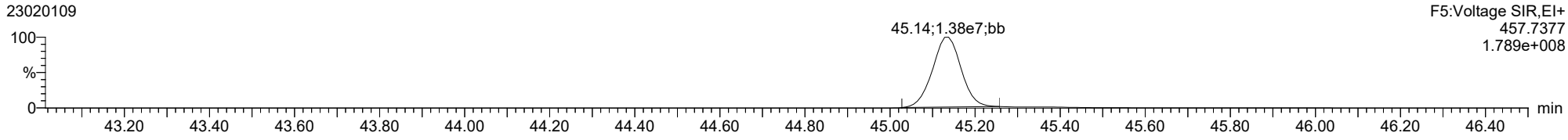
OCDD



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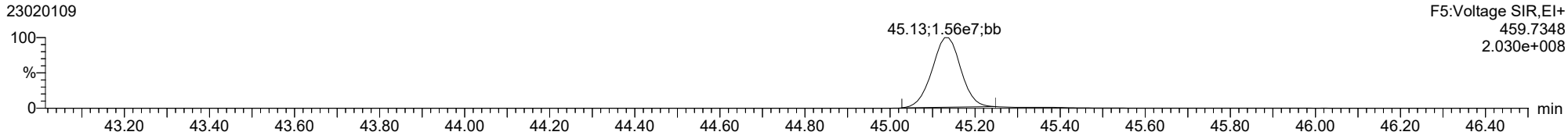
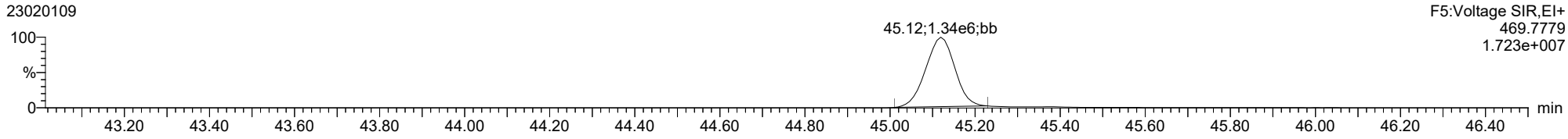
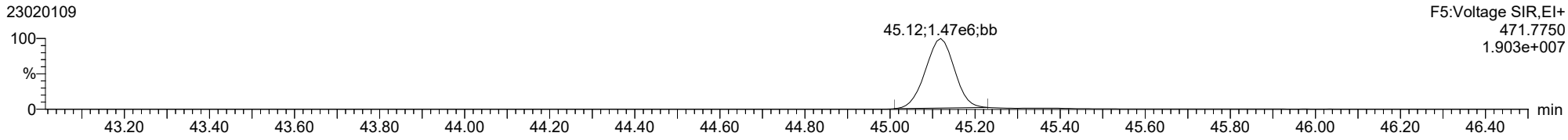


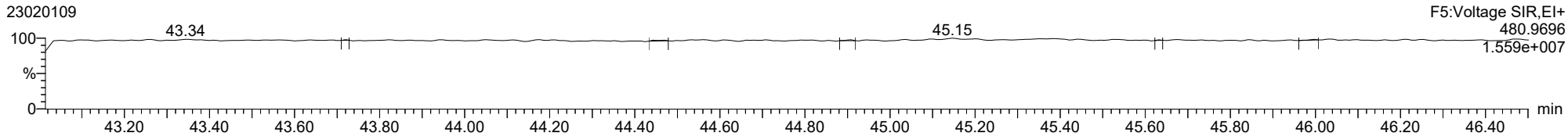
13C-OCDD



13C-OCDD



FUNCTION5 PFK



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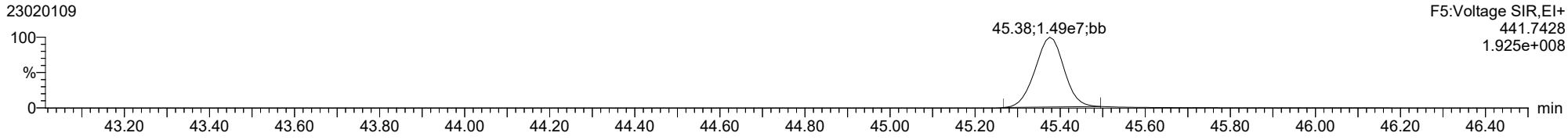
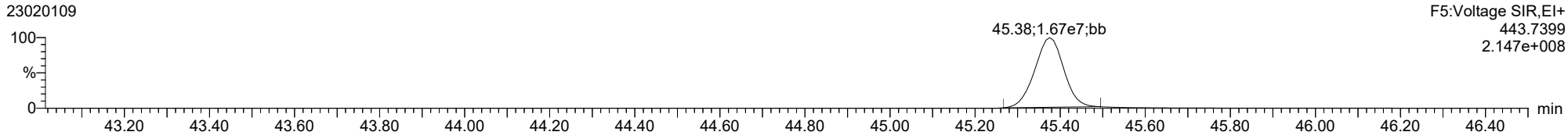
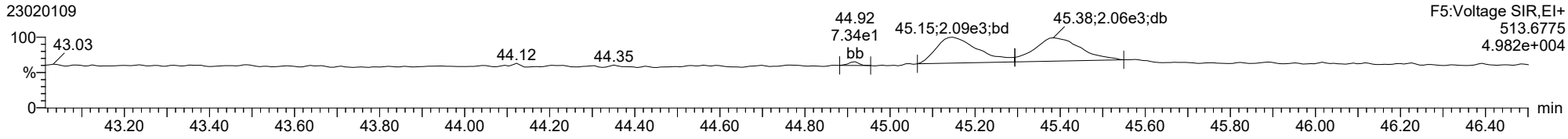
OCDF



OCDF



FUNCTION5 DCDPE



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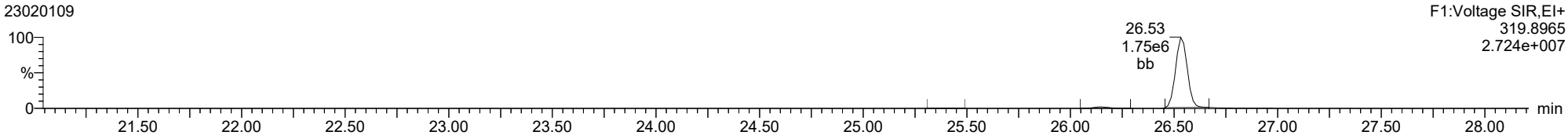
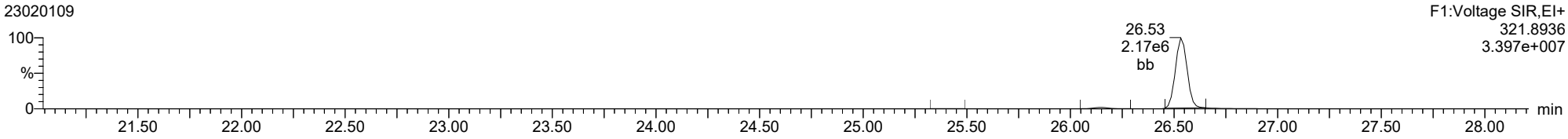
Total-tetradioxins



Total-tetradioxins



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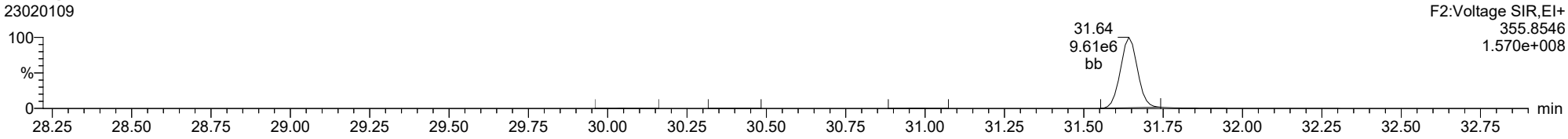
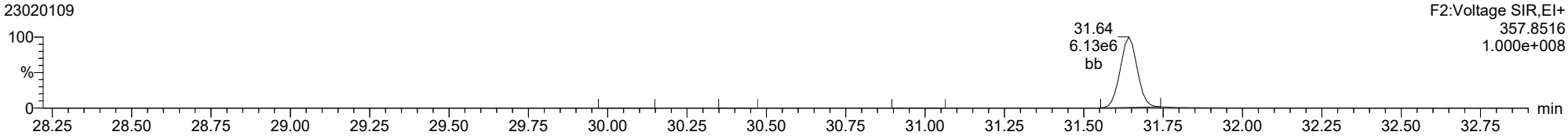
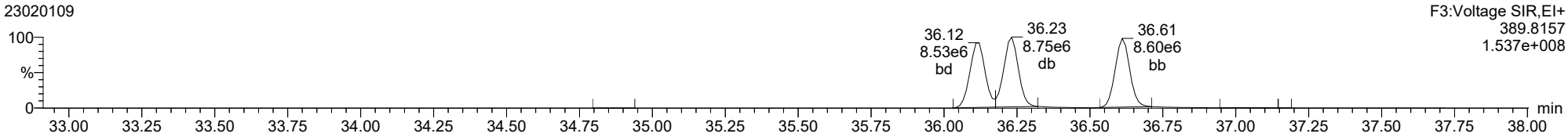


Total-pentadioxins

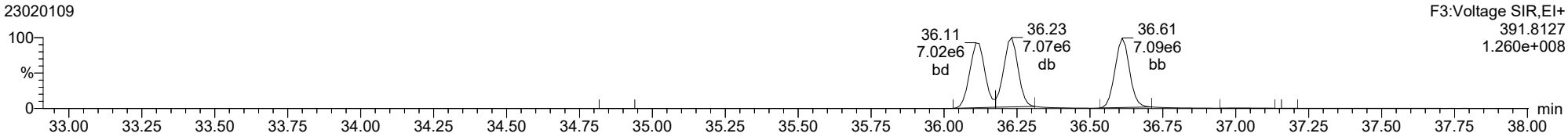


ID: CS5CR, Name: 23020109, Date: 01-Feb-2023, Time: 19:34:25, Conditions: AUTOSPEC01, User: pk

Total-hexadioxins



Total-hexadioxins



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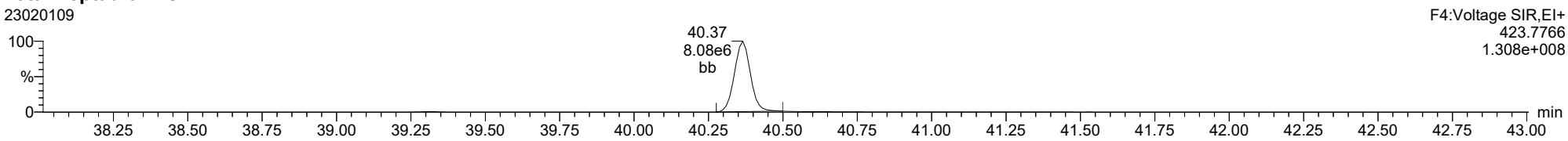
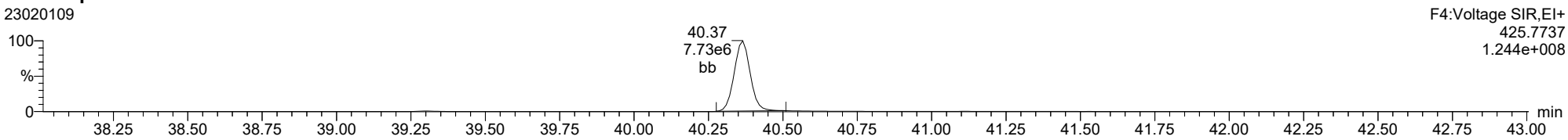


Total-heptadioxins



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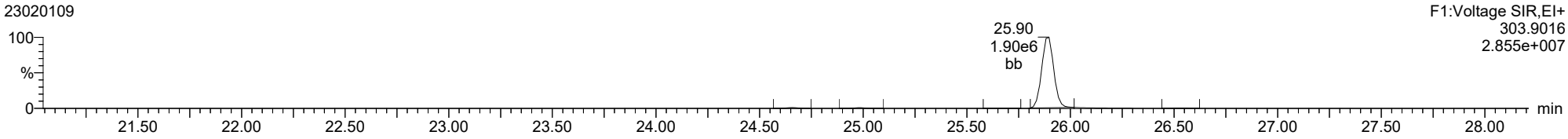
Total-tetrafurans



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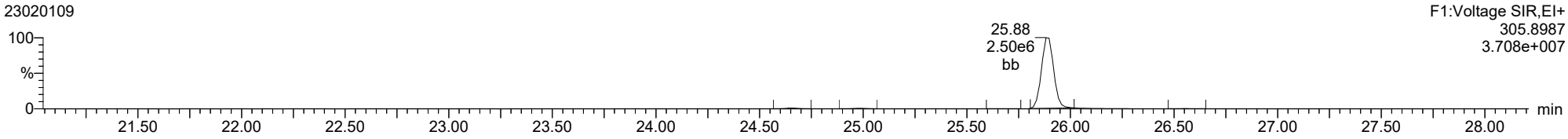

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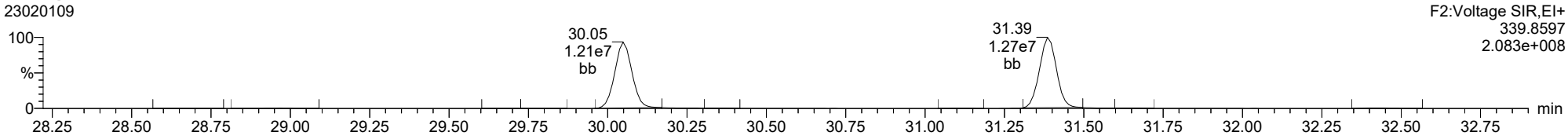

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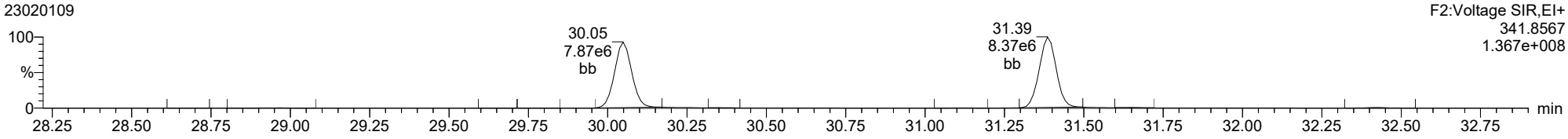

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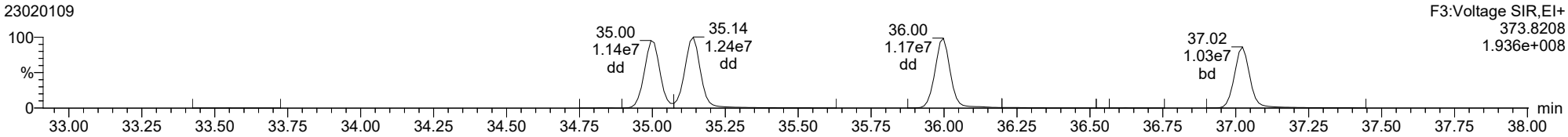
Total-hexafurans



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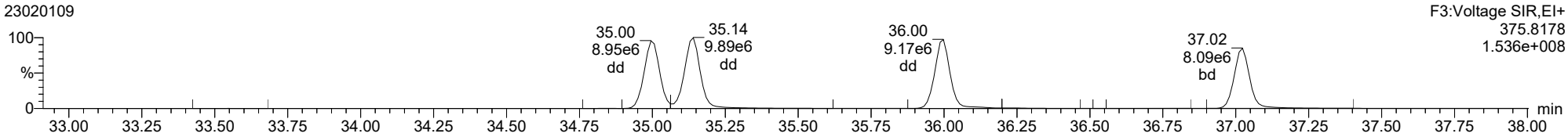

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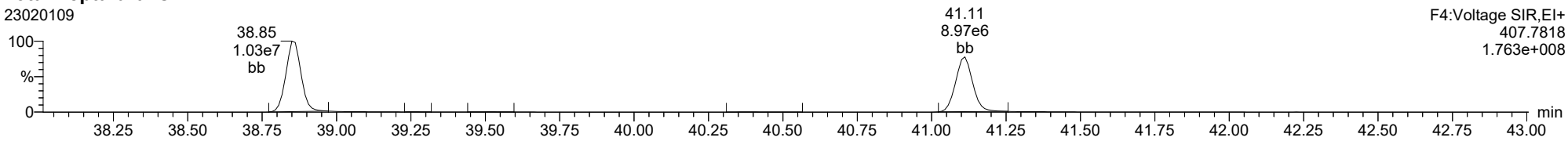
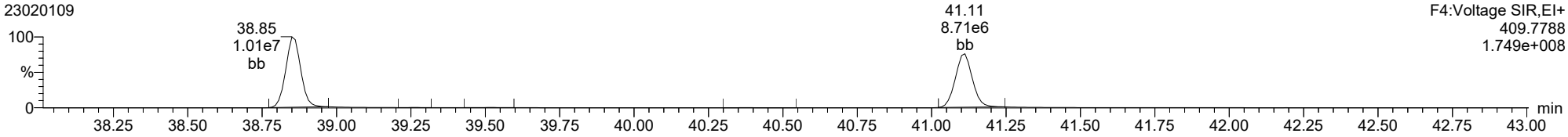


Total-heptafurans



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ID: ICVCR, Name: 23020110, Date: 01-Feb-2023, Time: 20:23:25, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.882	1.001	7.583e4	1.018e5	0.876	0.744	0.770	1312	1705	1.17e6	1.55e6	895.7	911.1	NO	bb	bb	9.802
12378-PeCDF	30.037	1.000	4.347e5	2.900e5	0.845	1.499	1.550	3463	2713	6.78e6	4.53e6	1956.5	1669.5	NO	bb	bb	49.435
23478-PeCDF	31.374	1.000	4.582e5	2.969e5	0.911	1.543	1.550	3463	2713	6.90e6	4.53e6	1992.7	1668.4	NO	bb	bb	50.720
123478-HxCDF	34.984	1.000	3.962e5	3.152e5	1.182	1.257	1.240	2904	2208	6.26e6	4.98e6	2155.7	2257.5	NO	bd	bd	50.838
234678-HxCDF	35.987	1.001	4.056e5	3.185e5	1.229	1.273	1.240	2904	2208	6.27e6	4.93e6	2160.6	2231.5	NO	bb	bd	51.528
123678-HxCDF	35.129	1.001	4.284e5	3.437e5	1.248	1.247	1.240	2904	2208	6.50e6	5.14e6	2238.5	2329.7	NO	dd	db	51.066
123789-HxCDF	37.012	1.001	3.438e5	2.711e5	1.187	1.268	1.240	2904	2208	5.39e6	4.21e6	1855.6	1906.8	NO	bb	bb	49.890
1234678-HpCDF	38.850	1.001	3.527e5	3.436e5	1.204	1.027	1.050	3342	3138	5.81e6	5.69e6	1739.4	1813.0	NO	bb	bb	48.984
1234789-HpCDF	41.101	1.000	3.197e5	3.013e5	1.165	1.061	1.050	3342	3138	4.62e6	4.44e6	1383.4	1415.4	NO	bd	bb	51.470
OCDF	45.357	1.006	4.733e5	5.396e5	1.186	0.877	0.890	2772	1582	5.77e6	6.54e6	2082.4	4133.4	NO	bb	bb	92.994
2378-TCDD	26.532	1.001	6.792e4	8.768e4	1.236	0.775	0.770	1380	1753	1.03e6	1.34e6	749.1	761.7	NO	bb	bb	10.105
12378-PeCDD	31.631	1.000	3.290e5	2.096e5	1.087	1.569	1.550	3204	3195	5.14e6	3.30e6	1603.9	1031.8	NO	bb	bb	48.876
123478-HxCDD	36.109	1.001	2.890e5	2.319e5	0.987	1.246	1.240	2459	2022	4.84e6	3.91e6	1968.4	1935.9	NO	bd	bd	50.975
123678-HxCDD	36.221	1.000	2.990e5	2.445e5	1.021	1.223	1.240	2459	2022	4.88e6	4.06e6	1984.4	2008.5	NO	db	db	48.307
123789-HxCDD	36.599	1.011	2.845e5	2.378e5	0.985	1.196	1.240	2459	2022	4.82e6	3.99e6	1960.3	1972.8	NO	bb	bb	49.580
1234678-HpCDD	40.354	1.001	2.858e5	2.609e5	1.253	1.095	1.050	2240	2747	4.24e6	3.98e6	1890.7	1447.3	NO	bd	bb	48.846
OCDD	45.111	1.000	4.553e5	5.144e5	1.103	0.885	0.890	2050	2803	5.81e6	6.65e6	2832.1	2371.2	NO	bb	bb	95.778
13C-2378-TCDF	25.867	1.006	9.159e5	1.153e6	1.768	0.794	0.770	2721	1646	1.40e7	1.78e7	5149.2	10794.2	NO	bb	bb	100.832
13C-12378-PeCDF	30.026	1.168	1.059e6	6.764e5	1.527	1.566	1.550	3804	2727	1.61e7	1.02e7	4228.7	3742.1	NO	bb	bb	97.924
13C-23478-PeCDF	31.363	1.220	9.914e5	6.424e5	1.466	1.543	1.550	3804	2727	1.49e7	9.56e6	3917.8	3506.2	NO	bb	bb	96.003
13C-123478-HxCDF	34.973	0.956	4.014e5	7.827e5	1.054	0.513	0.510	2311	3449	6.56e6	1.28e7	2840.4	3698.0	NO	bd	bd	98.968
13C-123678-HxCDF	35.106	0.960	4.085e5	8.030e5	1.080	0.509	0.510	2311	3449	6.64e6	1.32e7	2872.8	3823.9	NO	db	db	98.793
13C-234678-HxCDF	35.964	0.983	3.869e5	7.566e5	1.014	0.511	0.510	2311	3449	6.49e6	1.28e7	2809.7	3704.0	NO	bb	bb	99.278
13C-123789-HxCDF	36.989	1.011	3.535e5	6.852e5	0.928	0.516	0.510	2311	3449	5.90e6	1.14e7	2552.6	3318.4	NO	bb	bb	98.576
13C-1234678-HpCDF	38.828	1.061	3.652e5	8.153e5	1.036	0.448	0.440	3274	4191	6.12e6	1.38e7	1868.5	3294.0	NO	bb	bb	100.340
13C-1234789-HpCDF	41.090	1.123	3.190e5	7.164e5	0.905	0.445	0.440	3274	4191	4.81e6	1.07e7	1468.7	2563.9	NO	bb	bb	100.753
13C-1234-TCDD	25.700	0.000	5.137e5	6.469e5	1.000	0.794	0.770	2221	1552	7.96e6	9.97e6	3583.6	6423.2	NO	bb	bb	100.000
13C-2378-TCDD	26.501	1.031	5.549e5	6.905e5	1.103	0.804	0.770	2221	1552	8.40e6	1.04e7	3781.7	6727.2	NO	bb	bb	97.290
13C-12378-PeCDD	31.619	1.230	6.261e5	3.880e5	0.914	1.614	1.550	1580	2177	9.40e6	5.80e6	5947.9	2663.3	NO	bb	bb	95.581
13C-123478-HxCDD	36.087	0.986	5.808e5	4.547e5	0.933	1.277	1.240	2129	1763	9.84e6	7.81e6	4624.5	4431.4	NO	bd	bd	97.737
13C-123678-HxCDD	36.209	0.990	6.262e5	4.760e5	0.965	1.315	1.240	2129	1763	9.80e6	7.57e6	4603.5	4292.7	NO	db	db	100.625
13C-1234678-HpCDD	40.332	1.102	4.634e5	4.302e5	0.782	1.077	1.050	2527	2271	7.13e6	6.69e6	2821.9	2945.0	NO	bb	bb	100.628
13C-OCDD	45.101	1.233	8.768e5	9.596e5	0.788	0.914	0.890	3549	1603	1.12e7	1.23e7	3153.1	7665.3	NO	bb	bb	205.165
13C-123789-HxCDD	36.588	0.000	6.499e5	4.857e5	1.000	1.338	1.240	2129	1763	1.03e7	7.92e6	4860.1	4494.5	NO	bb	bb	100.000
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Dataset: T:\Autospec\Processed Data Batch\230201ICVIH.qld
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ID: ICVCR, Name: 23020110, Date: 01-Feb-2023, Time: 20:23:25, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.389	0.866	9.960e4	1.319e5	1.064	0.755	0.770	1312	1705	1.56e6	2.09e6	1186.8	1226.5	NO	bb	bb	10.509
1289-TCDF	27.378	1.058	7.533e4	1.022e5	0.858	0.737	0.770	1312	1705	1.14e6	1.52e6	867.5	889.5	NO	db	db	10.006
13468-PECDF	27.242	0.907	5.475e5	3.540e5	1.013	1.547	1.550	880	1149	8.31e6	5.37e6	9441.4	4673.6	NO	bb	bb	51.279
12389-PECDF					0.844		1.550	3463	2713								
123468-HXCDF	33.335	0.953	4.175e5	3.320e5	1.197	1.258	1.240	2904	2208	6.11e6	4.84e6	2104.7	2190.3	NO	bb	bb	52.862
1368-TCDD	23.659	0.893	6.883e4	8.714e4	1.084	0.790	0.770	1380	1753	1.12e6	1.44e6	811.7	819.2	NO	bb	bb	11.549
1289-TCDD	27.122	1.023	6.029e4	7.860e4	0.975	0.767	0.770	1380	1753	8.98e5	1.15e6	650.5	656.0	NO	bb	bd	11.436
12479-PECDD	28.912	0.914	6.082e5	3.865e5	1.837	1.574	1.550	3204	3195	5.92e6	3.73e6	1847.3	1168.6	NO	bb	bb	53.387
12389-PECDD	32.032	1.013	4.002e5	2.572e5	1.252	1.556	1.550	3204	3195	6.11e6	3.89e6	1906.1	1217.0	NO	bb	bb	51.760
124679-HXCDD	34.104	0.945	3.073e5	2.529e5	1.033	1.215	1.240	2459	2022	4.88e6	4.09e6	1984.3	2022.2	NO	bb	bb	52.384
1234679-HPCDD	39.296	0.974	2.978e5	2.984e5	1.286	0.998	1.050	2240	2747	4.86e6	4.77e6	2169.4	1735.2	NO	bb	bd	51.878
Total-tetrafurans			2.515e5		0.933			1312		3.88e6							30.410
Total-penta1			5.475e5					880		8.31e6							51.279
Total-pentafurans			1.407e6		0.866			3463		2.14e7							158.406
Total-hexafurans			1.992e6		1.208			2904		3.05e7							256.184
Total-heptafurans			6.724e5		1.185			3342		1.04e7							100.453
Total-Furans			5.343e6		1.067			1312		8.03e7							689.726
Total-tetradioxins			3.350e5		1.099			1380		4.69e6							55.818
Total-pentadioxins			1.337e6		1.392			3204		1.72e7							154.023
Total-hexadioxins			1.180e6		1.007			2459		1.94e7							201.246
Total-heptadioxins			5.836e5		1.269			2240		9.09e6							100.724
Total-Dioxins			3.891e6		1.165			1380		5.62e7							607.589
Total-TEQ			9.234e6					1380		1.36e8							1297.316
FUNCTION1 PFK			2.960e5					590383		7.93e6							
FUNCTION2 PFK			3.847e5					195923		1.00e7							0.000
FUNCTION3 PFK			3.926e5					364545		1.22e7							0.000
FUNCTION4 PFK			4.778e5					303163		3.90e6							
FUNCTION5 PFK			9.338e4					197261		3.25e6							
FUNCTION1 HXCD...			9.172e2					783		1.34e4							0.000
FUNCTION1 HPCD...			1.484e3					913		2.30e4							0.000
FUNCTION2 HPCD...			4.855e2					894		8.19e3							0.000
FUNCTION3 OCDPE			1.383e2					795		2.59e3							0.000
FUNCTION4 NCDPE			2.530e2					911		5.27e3							0.000
FUNCTION5 DCDPE			7.207e1					795		1.85e3							0.000

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	7.533e4	1.022e5	0.858	0.74	0.77	867.5	YES	NO	db	db	10.006
2	2378-TCDF	25.88	7.583e4	1.018e5	0.876	0.74	0.77	895.7	YES	NO	bb	bb	9.802
3	Total-tetrafurans	24.79	7.370e2	1.079e3	0.933	0.68	0.77	8.4	YES	NO	db	dd	0.094
4	1368-TCDF	22.39	9.960e4	1.319e5	1.064	0.76	0.77	1186.8	YES	NO	bb	bb	10.509

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.24	5.475e5	3.540e5	1.013	1.55	1.55	9441.4	YES	NO	bb	bb	51.279

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	32.41	4.363e5	2.872e5	0.866	1.52	1.55	1891.7	YES	NO	bb	bb	49.558
2	23478-PeCDF	31.37	4.582e5	2.969e5	0.911	1.54	1.55	1992.7	YES	NO	bb	bb	50.720
3	12378-PeCDF	30.04	4.347e5	2.900e5	0.845	1.50	1.55	1956.5	YES	NO	bb	bb	49.435
4	Total-pentafurans	28.89	7.749e4	4.941e4	0.866	1.57	1.55	335.4	YES	NO	bb	bb	8.693

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.01	3.438e5	2.711e5	1.187	1.27	1.24	1855.6	YES	NO	bb	bb	49.890
2	234678-HxCDF	35.99	4.056e5	3.185e5	1.229	1.27	1.24	2160.6	YES	NO	bb	bd	51.528
3	123678-HxCDF	35.13	4.284e5	3.437e5	1.248	1.25	1.24	2238.5	YES	NO	dd	db	51.066
4	123478-HxCDF	34.98	3.962e5	3.152e5	1.182	1.26	1.24	2155.7	YES	NO	bd	bd	50.838
5	123468-HXCDF	33.34	4.175e5	3.320e5	1.197	1.26	1.24	2104.7	YES	NO	bb	bb	52.862

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.85	3.527e5	3.436e5	1.204	1.03	1.05	1739.4	YES	NO	bb	bb	48.984
2	1234789-HpCDF	41.10	3.197e5	3.013e5	1.165	1.06	1.05	1383.4	YES	NO	bd	bb	51.470

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	7.533e4	1.022e5	0.858	0.74	0.77	867.5	YES	NO	db	db	10.006
2	2378-TCDF	25.88	7.583e4	1.018e5	0.876	0.74	0.77	895.7	YES	NO	bb	bb	9.802
3	Total-tetrafurans	24.79	7.370e2	1.079e3	0.933	0.68	0.77	8.4	YES	NO	db	dd	0.094
4	1368-TCDF	22.39	9.960e4	1.319e5	1.064	0.76	0.77	1186.8	YES	NO	bb	bb	10.509
5	Total-pentafurans	32.41	4.363e5	2.872e5	0.866	1.52	1.55	1891.7	YES	NO	bb	bb	49.558
6	23478-PeCDF	31.37	4.582e5	2.969e5	0.911	1.54	1.55	1992.7	YES	NO	bb	bb	50.720
7	12378-PeCDF	30.04	4.347e5	2.900e5	0.845	1.50	1.55	1956.5	YES	NO	bb	bb	49.435
8	Total-pentafurans	28.89	7.749e4	4.941e4	0.866	1.57	1.55	335.4	YES	NO	bb	bb	8.693
9	123789-HxCDF	37.01	3.438e5	2.711e5	1.187	1.27	1.24	1855.6	YES	NO	bb	bb	49.890
10	234678-HxCDF	35.99	4.056e5	3.185e5	1.229	1.27	1.24	2160.6	YES	NO	bb	bd	51.528
11	123678-HxCDF	35.13	4.284e5	3.437e5	1.248	1.25	1.24	2238.5	YES	NO	dd	db	51.066
12	123478-HxCDF	34.98	3.962e5	3.152e5	1.182	1.26	1.24	2155.7	YES	NO	bd	bd	50.838
13	123468-HXCDF	33.34	4.175e5	3.320e5	1.197	1.26	1.24	2104.7	YES	NO	bb	bb	52.862
14	1234678-HpCDF	38.85	3.527e5	3.436e5	1.204	1.03	1.05	1739.4	YES	NO	bb	bb	48.984
15	1234789-HpCDF	41.10	3.197e5	3.013e5	1.165	1.06	1.05	1383.4	YES	NO	bd	bb	51.470
16	OCDF	45.36	4.733e5	5.396e5	1.186	0.88	0.89	2082.4	YES	NO	bb	bb	92.994
17	13468-PECDF	27.24	5.475e5	3.540e5	1.013	1.55	1.55	9441.4	YES	NO	bb	bb	51.279

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.66	6.883e4	8.714e4	1.084	0.79	0.77	811.7	YES	NO	bb	bb	11.549
2	1289-TCDD	27.12	6.029e4	7.860e4	0.975	0.77	0.77	650.5	YES	NO	bb	bd	11.436
3	2378-TCDD	26.53	6.792e4	8.768e4	1.236	0.77	0.77	749.1	YES	NO	bb	bb	10.105
4	Total-tetradioxins	26.20	1.038e5	1.301e5	1.099	0.80	0.77	805.2	YES	NO	bb	bb	17.096
5	Total-tetradioxins	25.72	3.415e4	4.291e4	1.099	0.80	0.77	378.9	YES	NO	bd	bd	5.632

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	32.03	4.002e5	2.572e5	1.252	1.56	1.55	1906.1	YES	NO	bb	bb	51.760
2	12378-PeCDD	31.63	3.290e5	2.096e5	1.087	1.57	1.55	1603.9	YES	NO	bb	bb	48.876
3	12479-PECDD	28.91	6.082e5	3.865e5	1.837	1.57	1.55	1847.3	YES	NO	bb	bb	53.387

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.60	2.845e5	2.378e5	0.985	1.20	1.24	1960.3	YES	NO	bb	bb	49.580
2	123678-HxCDD	36.22	2.990e5	2.445e5	1.021	1.22	1.24	1984.4	YES	NO	db	db	48.307
3	123478-HxCDD	36.11	2.890e5	2.319e5	0.987	1.25	1.24	1968.4	YES	NO	bd	bd	50.975
4	124679-HXCDD	34.10	3.073e5	2.529e5	1.033	1.22	1.24	1984.3	YES	NO	bb	bb	52.384

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.35	2.858e5	2.609e5	1.253	1.10	1.05	1890.7	YES	NO	bd	bb	48.846
2	1234679-HPCDD	39.30	2.978e5	2.984e5	1.286	1.00	1.05	2169.4	YES	NO	bb	bd	51.878

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.66	6.883e4	8.714e4	1.084	0.79	0.77	811.7	YES	NO	bb	bb	11.549
2	1289-TCDD	27.12	6.029e4	7.860e4	0.975	0.77	0.77	650.5	YES	NO	bb	bd	11.436
3	2378-TCDD	26.53	6.792e4	8.768e4	1.236	0.77	0.77	749.1	YES	NO	bb	bb	10.105
4	Total-tetradioxins	26.20	1.038e5	1.301e5	1.099	0.80	0.77	805.2	YES	NO	bb	bb	17.096
5	Total-tetradioxins	25.72	3.415e4	4.291e4	1.099	0.80	0.77	378.9	YES	NO	bd	bd	5.632
6	12389-PECDD	32.03	4.002e5	2.572e5	1.252	1.56	1.55	1906.1	YES	NO	bb	bb	51.760
7	12378-PeCDD	31.63	3.290e5	2.096e5	1.087	1.57	1.55	1603.9	YES	NO	bb	bb	48.876
8	12479-PECDD	28.91	6.082e5	3.865e5	1.837	1.57	1.55	1847.3	YES	NO	bb	bb	53.387
9	123789-HxCDD	36.60	2.845e5	2.378e5	0.985	1.20	1.24	1960.3	YES	NO	bb	bb	49.580
10	123678-HxCDD	36.22	2.990e5	2.445e5	1.021	1.22	1.24	1984.4	YES	NO	db	db	48.307
11	123478-HxCDD	36.11	2.890e5	2.319e5	0.987	1.25	1.24	1968.4	YES	NO	bd	bd	50.975
12	124679-HXCDD	34.10	3.073e5	2.529e5	1.033	1.22	1.24	1984.3	YES	NO	bb	bb	52.384
13	1234678-HpCDD	40.35	2.858e5	2.609e5	1.253	1.10	1.05	1890.7	YES	NO	bd	bb	48.846
14	1234679-HPCDD	39.30	2.978e5	2.984e5	1.286	1.00	1.05	2169.4	YES	NO	bb	bd	51.878
15	OCDD	45.11	4.553e5	5.144e5	1.103	0.89	0.89	2832.1	YES	NO	bb	bb	95.778

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	7.533e4	1.022e5	0.858	0.74	0.77	867.5	YES	NO	db	db	10.006
2	2378-TCDF	25.88	7.583e4	1.018e5	0.876	0.74	0.77	895.7	YES	NO	bb	bb	9.802
3	Total-tetrafurans	24.79	7.370e2	1.079e3	0.933	0.68	0.77	8.4	YES	NO	db	dd	0.094
4	1368-TCDF	22.39	9.960e4	1.319e5	1.064	0.76	0.77	1186.8	YES	NO	bb	bb	10.509
5	Total-pentafurans	32.41	4.363e5	2.872e5	0.866	1.52	1.55	1891.7	YES	NO	bb	bb	49.558
6	23478-PeCDF	31.37	4.582e5	2.969e5	0.911	1.54	1.55	1992.7	YES	NO	bb	bb	50.720
7	12378-PeCDF	30.04	4.347e5	2.900e5	0.845	1.50	1.55	1956.5	YES	NO	bb	bb	49.435
8	Total-pentafurans	28.89	7.749e4	4.941e4	0.866	1.57	1.55	335.4	YES	NO	bb	bb	8.693
9	123789-HxCDF	37.01	3.438e5	2.711e5	1.187	1.27	1.24	1855.6	YES	NO	bb	bb	49.890
10	234678-HxCDF	35.99	4.056e5	3.185e5	1.229	1.27	1.24	2160.6	YES	NO	bb	bd	51.528
11	123678-HxCDF	35.13	4.284e5	3.437e5	1.248	1.25	1.24	2238.5	YES	NO	dd	db	51.066
12	123478-HxCDF	34.98	3.962e5	3.152e5	1.182	1.26	1.24	2155.7	YES	NO	bd	bd	50.838
13	123468-HXCDF	33.34	4.175e5	3.320e5	1.197	1.26	1.24	2104.7	YES	NO	bb	bb	52.862
14	1234678-HpCDF	38.85	3.527e5	3.436e5	1.204	1.03	1.05	1739.4	YES	NO	bb	bb	48.984
15	1234789-HpCDF	41.10	3.197e5	3.013e5	1.165	1.06	1.05	1383.4	YES	NO	bd	bb	51.470
16	OCDF	45.36	4.733e5	5.396e5	1.186	0.88	0.89	2082.4	YES	NO	bb	bb	92.994
17	13468-PECDF	27.24	5.475e5	3.540e5	1.013	1.55	1.55	9441.4	YES	NO	bb	bb	51.279
18	1368-TCDD	23.66	6.883e4	8.714e4	1.084	0.79	0.77	811.7	YES	NO	bb	bb	11.549
19	1289-TCDD	27.12	6.029e4	7.860e4	0.975	0.77	0.77	650.5	YES	NO	bb	bd	11.436
20	2378-TCDD	26.53	6.792e4	8.768e4	1.236	0.77	0.77	749.1	YES	NO	bb	bb	10.105
21	Total-tetradioxins	26.20	1.038e5	1.301e5	1.099	0.80	0.77	805.2	YES	NO	bb	bb	17.096
22	Total-tetradioxins	25.72	3.415e4	4.291e4	1.099	0.80	0.77	378.9	YES	NO	bd	bd	5.632
23	12389-PECDD	32.03	4.002e5	2.572e5	1.252	1.56	1.55	1906.1	YES	NO	bb	bb	51.760
24	12378-PeCDD	31.63	3.290e5	2.096e5	1.087	1.57	1.55	1603.9	YES	NO	bb	bb	48.876
25	12479-PECDD	28.91	6.082e5	3.865e5	1.837	1.57	1.55	1847.3	YES	NO	bb	bb	53.387
26	123789-HxCDD	36.60	2.845e5	2.378e5	0.985	1.20	1.24	1960.3	YES	NO	bb	bb	49.580
27	123678-HxCDD	36.22	2.990e5	2.445e5	1.021	1.22	1.24	1984.4	YES	NO	db	db	48.307
28	123478-HxCDD	36.11	2.890e5	2.319e5	0.987	1.25	1.24	1968.4	YES	NO	bd	bd	50.975
29	124679-HXCDD	34.10	3.073e5	2.529e5	1.033	1.22	1.24	1984.3	YES	NO	bb	bb	52.384
30	1234678-HpCDD	40.35	2.858e5	2.609e5	1.253	1.10	1.05	1890.7	YES	NO	bd	bb	48.846
31	1234679-HPCDD	39.30	2.978e5	2.984e5	1.286	1.00	1.05	2169.4	YES	NO	bb	bd	51.878
32	OCDD	45.11	4.553e5	5.144e5	1.103	0.89	0.89	2832.1	YES	NO	bb	bb	95.778

Dataset: T:\Autospec\Processed Data Batch\230201ICVIH.qld
Last Altered: Friday, February 03, 2023 11:22:32 Pacific Standard Time
Printed: Friday, February 03, 2023 11:23:11 Pacific Standard Time

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	27.86	1.802e4					0.8	NO		bb		
2	FUNCTION1 PFK	27.44	9.566e3					0.7	NO		bb		
3	FUNCTION1 PFK	27.12	3.959e3					0.4	NO		bb		
4	FUNCTION1 PFK	26.97	4.648e4					1.4	NO		bb		
5	FUNCTION1 PFK	26.85	1.177e4					0.8	NO		bb		
6	FUNCTION1 PFK	26.26	3.797e3					0.4	NO		bb		
7	FUNCTION1 PFK	25.26	1.715e4					0.9	NO		bb		
8	FUNCTION1 PFK	24.10	5.099e4					1.3	NO		bb		
9	FUNCTION1 PFK	22.39	1.400e4					0.8	NO		bb		
10	FUNCTION1 PFK	22.18	2.255e4					1.2	NO		bb		
11	FUNCTION1 PFK	21.91	1.341e4					0.9	NO		bb		
12	FUNCTION1 PFK	21.72	1.562e4					0.9	NO		bb		
13	FUNCTION1 PFK	21.54	1.217e4					0.8	NO		bb		
14	FUNCTION1 PFK	21.48	3.458e4					0.9	NO		bb		
15	FUNCTION1 PFK	28.06	2.191e4					1.2	NO		bb		

Dataset: T:\Autospec\Processed Data Batch\230201ICVIH.qld
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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	30.07	6.452e3					0.9	NO		bd		0.000
2	FUNCTION2 PFK	29.81	1.293e4					1.6	NO		db		0.000
3	FUNCTION2 PFK	29.78	4.561e3					1.1	NO		bd		0.000
4	FUNCTION2 PFK	29.68	5.711e3					1.0	NO		db		0.000
5	FUNCTION2 PFK	29.64	1.700e4					1.8	NO		bd		0.000
6	FUNCTION2 PFK	29.47	2.480e4					1.9	NO		db		0.000
7	FUNCTION2 PFK	29.36	1.696e4					1.9	NO		bd		0.000
8	FUNCTION2 PFK	29.29	2.861e3					0.7	NO		bb		0.000
9	FUNCTION2 PFK	29.16	1.091e4					1.2	NO		bb		0.000
10	FUNCTION2 PFK	28.90	2.320e3					0.6	NO		bb		0.000
11	FUNCTION2 PFK	28.80	2.770e3					0.8	NO		bb		0.000
12	FUNCTION2 PFK	28.54	5.899e3					1.2	NO		db		0.000
13	FUNCTION2 PFK	28.50	1.397e4					2.0	NO		bd		0.000
14	FUNCTION2 PFK	28.32	1.175e3					0.5	NO		bb		0.000
15	FUNCTION2 PFK	31.69	3.508e3					0.9	NO		bb		0.000
16	FUNCTION2 PFK	31.63	1.016e4					1.4	NO		bb		0.000
17	FUNCTION2 PFK	31.53	8.675e3					0.8	NO		bb		0.000
18	FUNCTION2 PFK	31.49	1.869e3					0.7	NO		bb		0.000
19	FUNCTION2 PFK	31.40	1.095e4					1.3	NO		bb		0.000
20	FUNCTION2 PFK	31.20	1.018e4					1.4	NO		db		0.000
21	FUNCTION2 PFK	31.14	9.902e3					1.4	NO		bd		0.000
22	FUNCTION2 PFK	31.04	2.521e3					0.6	NO		bb		0.000
23	FUNCTION2 PFK	30.92	4.486e3					1.1	NO		db		0.000
24	FUNCTION2 PFK	30.88	6.090e3					1.2	NO		bd		0.000
25	FUNCTION2 PFK	30.81	3.856e3					0.6	NO		bb		0.000
26	FUNCTION2 PFK	30.76	7.571e3					1.5	NO		db		0.000
27	FUNCTION2 PFK	30.72	1.009e4					1.3	NO		bd		0.000
28	FUNCTION2 PFK	30.37	7.200e3					1.1	NO		db		0.000
29	FUNCTION2 PFK	30.32	1.863e4					2.0	NO		bd		0.000
30	FUNCTION2 PFK	30.12	8.431e3					1.5	NO		db		0.000
31	FUNCTION2 PFK	32.82	1.531e4					1.7	NO		bb		0.000
32	FUNCTION2 PFK	32.76	2.617e4					2.0	NO		db		0.000
33	FUNCTION2 PFK	32.66	9.185e3					1.4	NO		dd		0.000
34	FUNCTION2 PFK	32.61	2.742e4					2.3	NO		dd		0.000
35	FUNCTION2 PFK	32.51	2.015e4					1.8	NO		dd		0.000
36	FUNCTION2 PFK	32.38	1.541e4					2.0	NO		bd		0.000
37	FUNCTION2 PFK	32.27	1.620e3					0.7	NO		bb		0.000

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION2 PFK	32.22	6.522e3					1.4	NO		bb		0.000
39	FUNCTION2 PFK	31.96	8.002e3					1.0	NO		bb		0.000
40	FUNCTION2 PFK	31.73	2.461e3					0.8	NO		bb		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.03	4.935e3					0.7	NO		bb		0.000
2	FUNCTION3 PFK	33.76	5.855e3					0.9	NO		bb		0.000
3	FUNCTION3 PFK	33.65	2.046e4					1.3	NO		bb		0.000
4	FUNCTION3 PFK	33.29	1.061e4					1.2	NO		bb		0.000
5	FUNCTION3 PFK	33.10	1.235e4					0.9	NO		bb		0.000
6	FUNCTION3 PFK	36.89	5.964e3					0.8	NO		bb		0.000
7	FUNCTION3 PFK	36.67	1.246e4					1.3	NO		db		0.000
8	FUNCTION3 PFK	36.59	3.645e4					2.5	NO		bd		0.000
9	FUNCTION3 PFK	36.47	1.165e4					0.9	NO		bb		0.000
10	FUNCTION3 PFK	36.40	4.348e3					0.7	NO		bb		0.000
11	FUNCTION3 PFK	36.32	3.325e4					1.9	NO		bb		0.000
12	FUNCTION3 PFK	36.24	1.791e4					1.4	NO		db		0.000
13	FUNCTION3 PFK	36.19	2.043e4					1.6	NO		bd		0.000
14	FUNCTION3 PFK	35.34	7.839e3					0.9	NO		bb		0.000
15	FUNCTION3 PFK	35.04	1.130e4					1.2	NO		bb		0.000
16	FUNCTION3 PFK	34.98	1.757e4					1.3	NO		bb		0.000
17	FUNCTION3 PFK	34.66	3.150e4					2.1	NO		db		0.000
18	FUNCTION3 PFK	34.63	2.204e4					2.2	NO		bd		0.000
19	FUNCTION3 PFK	34.51	2.015e4					1.6	NO		db		0.000
20	FUNCTION3 PFK	34.43	2.373e4					2.0	NO		dd		0.000
21	FUNCTION3 PFK	34.39	1.491e4					1.8	NO		bd		0.000
22	FUNCTION3 PFK	37.97	9.526e3					1.1	NO		bb		0.000
23	FUNCTION3 PFK	37.61	4.551e3					0.8	NO		bb		0.000
24	FUNCTION3 PFK	37.03	2.911e4					1.8	NO		db		0.000
25	FUNCTION3 PFK	36.98	3.696e3					0.6	NO		bd		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	42.71	9.457e3					0.9	NO		bb		
2	FUNCTION4 PFK	42.55	1.416e3					0.4	NO		bb		
3	FUNCTION4 PFK	42.33	2.050e4					1.4	NO		bb		
4	FUNCTION4 PFK	40.90	3.965e3					0.7	NO		bb		
5	FUNCTION4 PFK	40.40	4.095e3					0.7	NO		bb		
6	FUNCTION4 PFK	40.20	2.031e3					0.6	NO		bb		
7	FUNCTION4 PFK	39.89	7.818e3					1.2	NO		bb		
8	FUNCTION4 PFK	39.30	3.577e3					0.7	NO		db		
9	FUNCTION4 PFK	39.23	1.513e4					1.5	NO		bd		
10	FUNCTION4 PFK	38.50	5.085e3					0.8	NO		bb		
11	FUNCTION4 PFK	38.22	4.047e5					4.0	YES		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	46.44	6.785e3					1.5	NO		db		
2	FUNCTION5 PFK	46.41	4.268e3					1.1	NO		bd		
3	FUNCTION5 PFK	46.32	3.211e3					0.9	NO		bb		
4	FUNCTION5 PFK	46.25	5.782e3					1.5	NO		bb		
5	FUNCTION5 PFK	46.21	2.148e3					0.5	NO		bb		
6	FUNCTION5 PFK	45.92	1.180e4					1.5	NO		bb		
7	FUNCTION5 PFK	45.78	2.503e3					0.9	NO		bb		
8	FUNCTION5 PFK	45.72	1.015e3					0.6	NO		bb		
9	FUNCTION5 PFK	45.60	1.955e3					0.7	NO		bb		
10	FUNCTION5 PFK	45.57	1.104e3					0.6	NO		bb		
11	FUNCTION5 PFK	45.45	1.042e4					1.3	NO		bb		
12	FUNCTION5 PFK	44.52	3.296e3					0.9	NO		bb		
13	FUNCTION5 PFK	44.38	2.843e4					2.4	NO		bb		
14	FUNCTION5 PFK	44.01	6.535e3					1.0	NO		bb		
15	FUNCTION5 PFK	43.51	4.124e3					1.1	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.80	1.077e2					3.2	YES		bb		0.000
2	FUNCTION1 HXCD...	27.23	8.014e1					1.9	NO		bb		0.000
3	FUNCTION1 HXCD...	25.90	4.015e2					4.7	YES		db		0.000
4	FUNCTION1 HXCD...	25.72	1.078e2					2.6	NO		bd		0.000
5	FUNCTION1 HXCD...	22.96	9.275e1					1.5	NO		bb		0.000
6	FUNCTION1 HXCD...	21.89	1.274e2					3.2	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	24.78	7.643e1					1.2	NO		bb		0.000
2	FUNCTION1 HPCD...	24.10	1.351e2					2.2	NO		db		0.000
3	FUNCTION1 HPCD...	23.90	1.347e2					2.0	NO		dd		0.000
4	FUNCTION1 HPCD...	23.73	7.182e1					1.5	NO		dd		0.000
5	FUNCTION1 HPCD...	23.60	1.453e2					1.7	NO		bd		0.000
6	FUNCTION1 HPCD...	22.30	7.288e1					1.3	NO		bb		0.000
7	FUNCTION1 HPCD...	21.72	1.050e2					2.3	NO		db		0.000
8	FUNCTION1 HPCD...	21.65	1.092e2					1.7	NO		bd		0.000
9	FUNCTION1 HPCD...	27.77	1.087e2					2.2	NO		db		0.000
10	FUNCTION1 HPCD...	27.64	1.853e2					2.8	NO		bd		0.000
11	FUNCTION1 HPCD...	26.97	7.971e1					1.8	NO		db		0.000
12	FUNCTION1 HPCD...	26.89	8.957e1					2.2	NO		bd		0.000
13	FUNCTION1 HPCD...	25.88	1.706e2					2.4	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.25	4.855e2					9.2	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	34.13	1.383e2					3.3	YES		bb		0.000

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ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.71	9.570e1					1.7	NO		bb		0.000
2	FUNCTION4 NCDPE	40.15	8.625e1					2.5	NO		bb		0.000
3	FUNCTION4 NCDPE	39.82	7.102e1					1.6	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	45.11	7.207e1					2.3	NO		bb		0.000

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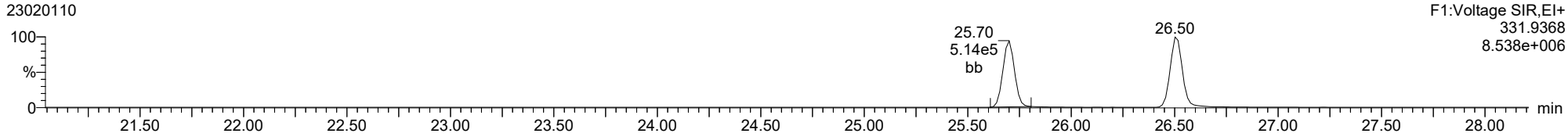

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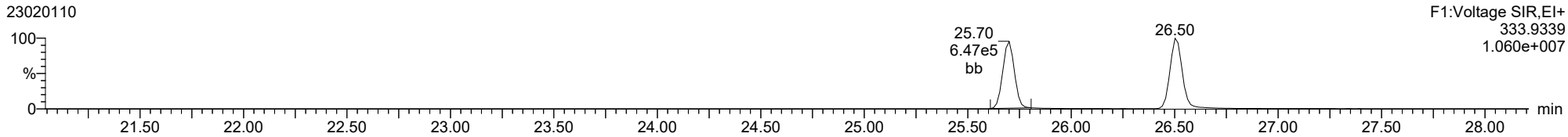

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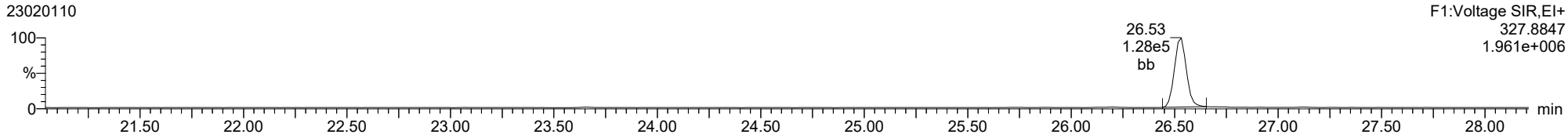

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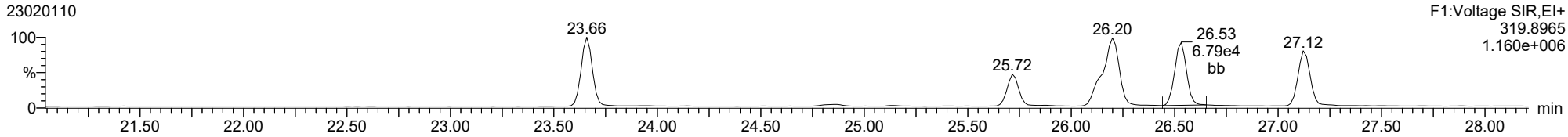

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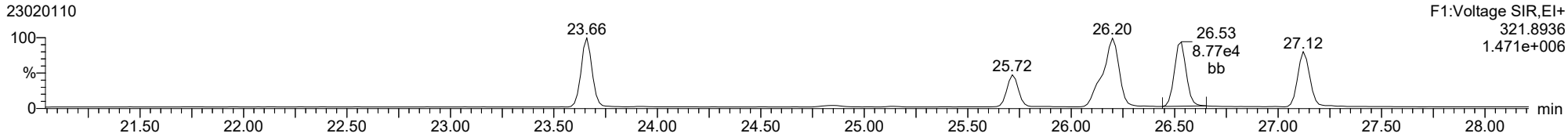

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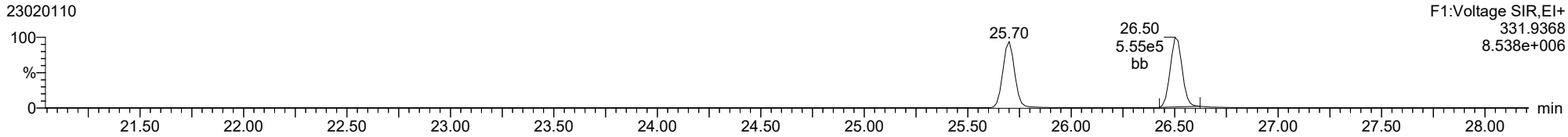

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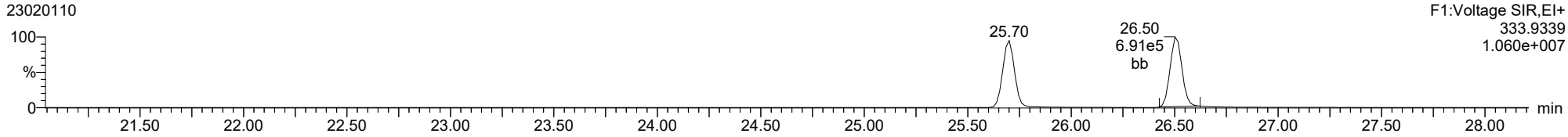
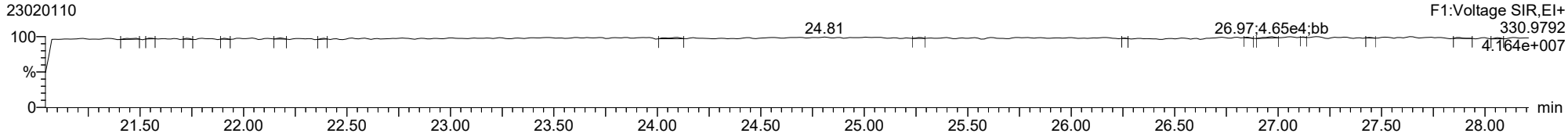


FUNCTION1 PFK



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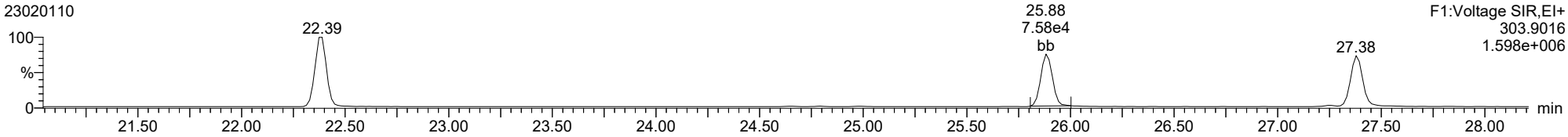

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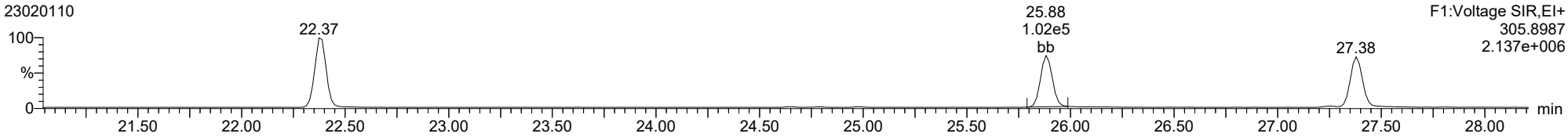

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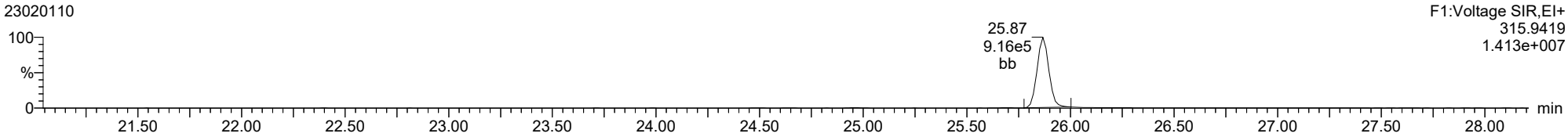

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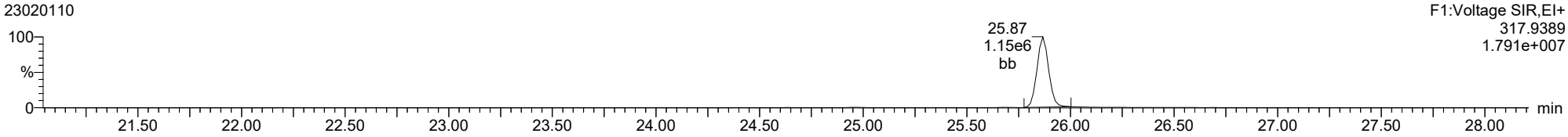
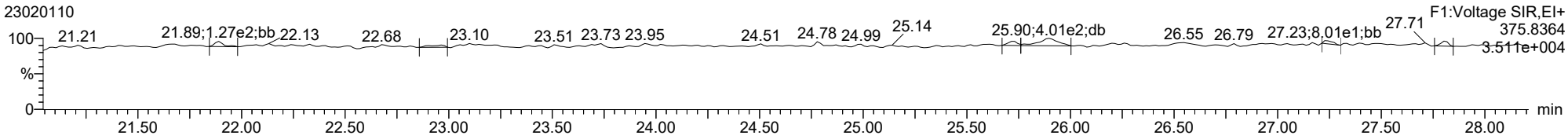


FUNCTION1 HXCDPE



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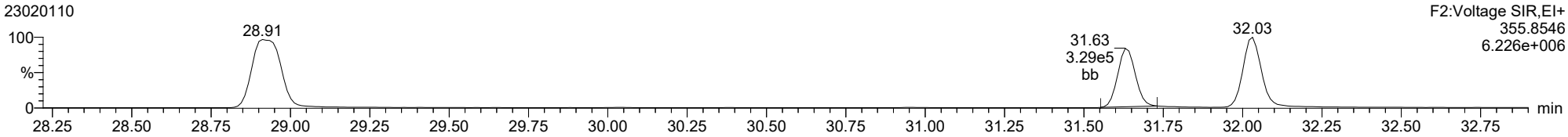
12378-PeCDD



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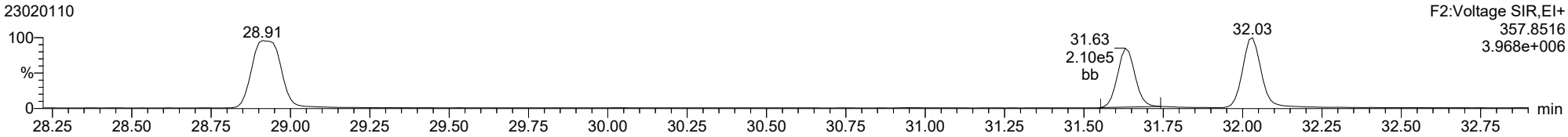

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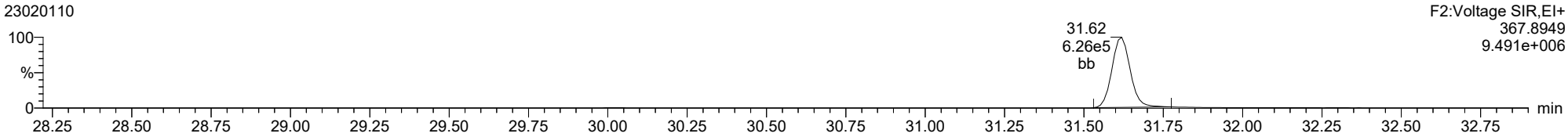

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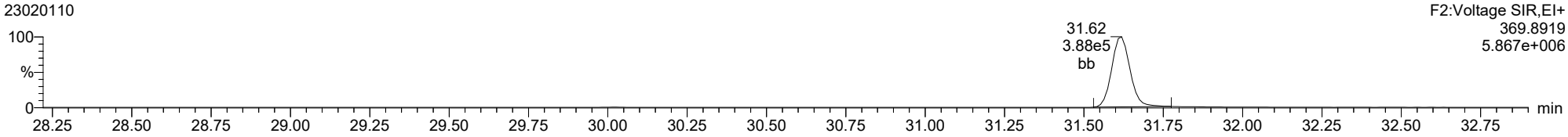
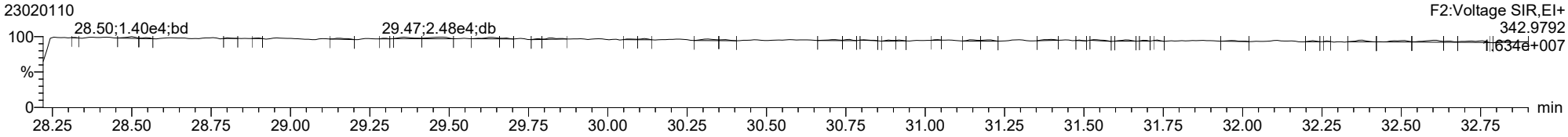


FUNCTION2 PFK



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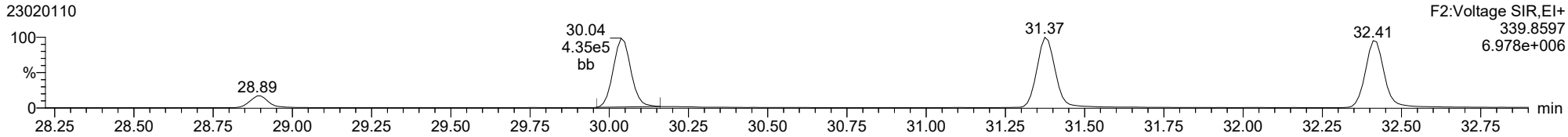
12378-PeCDF



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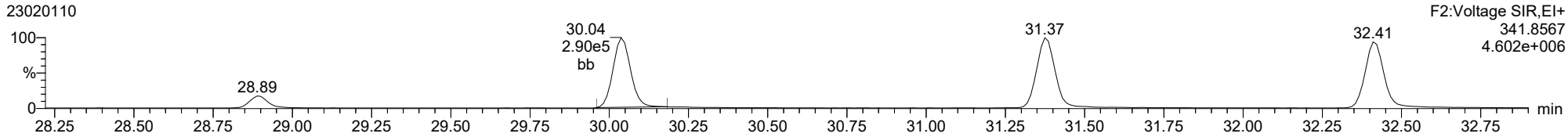

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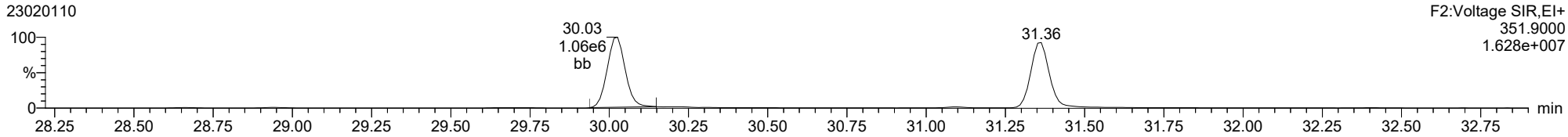

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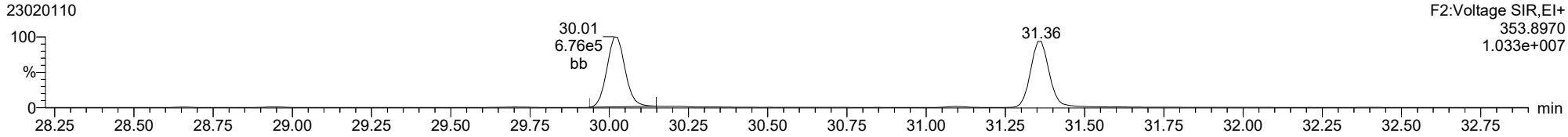
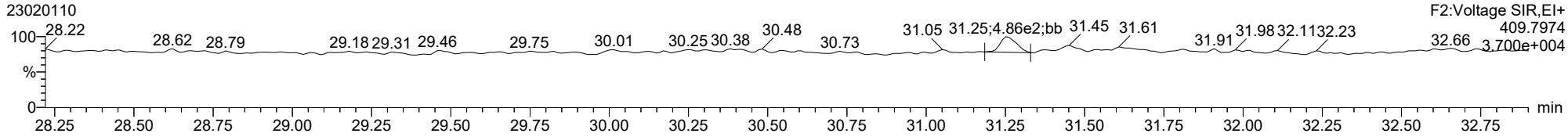


FUNCTION2 HPCDPE



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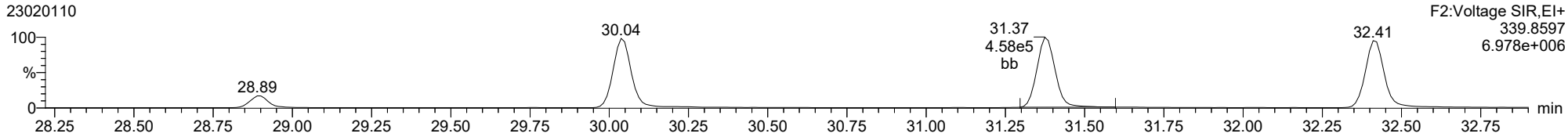
23478-PeCDF



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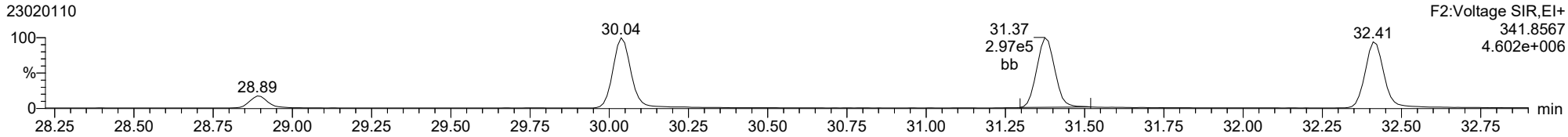

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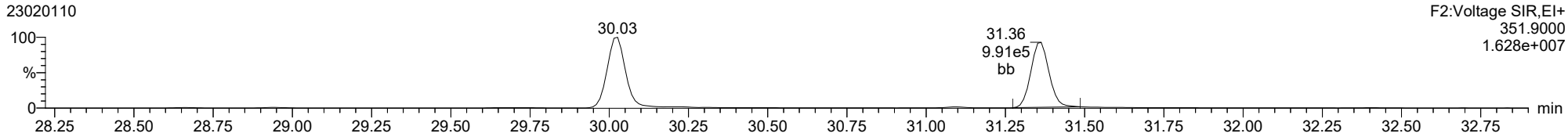

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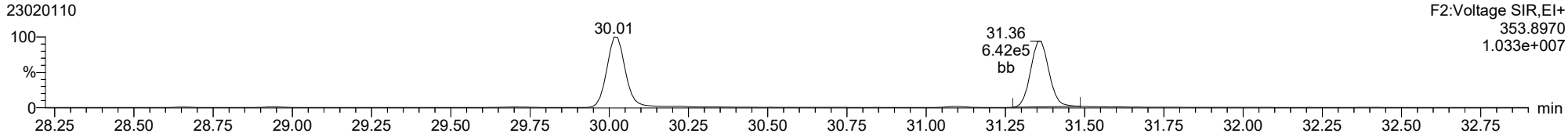
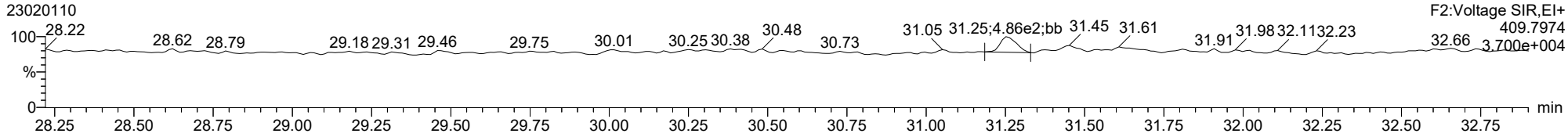


FUNCTION2 HPCDPE



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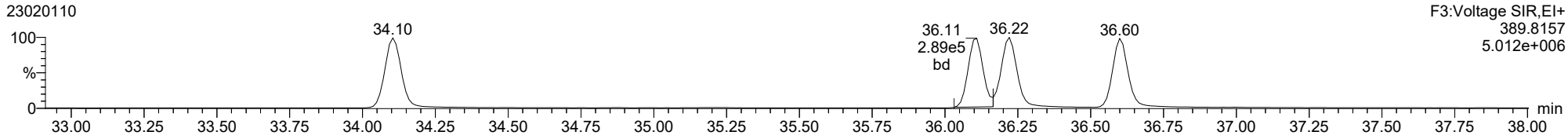

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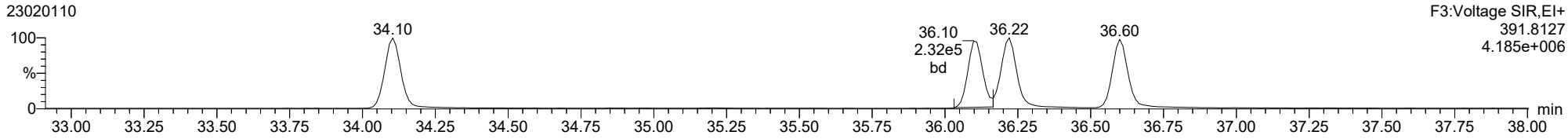

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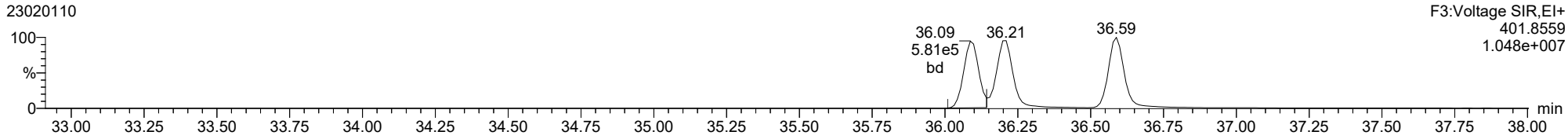

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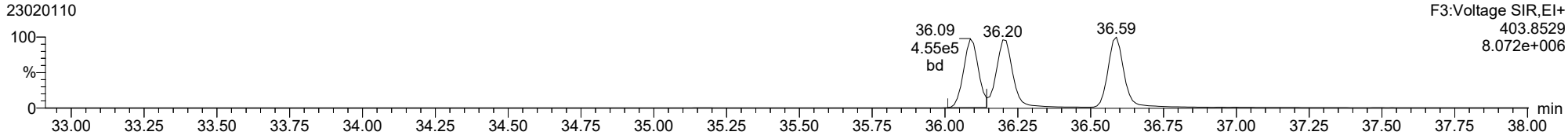

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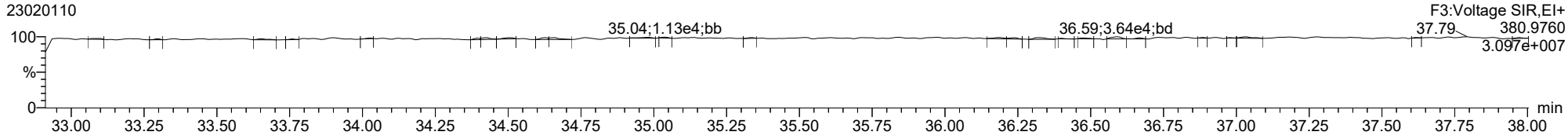

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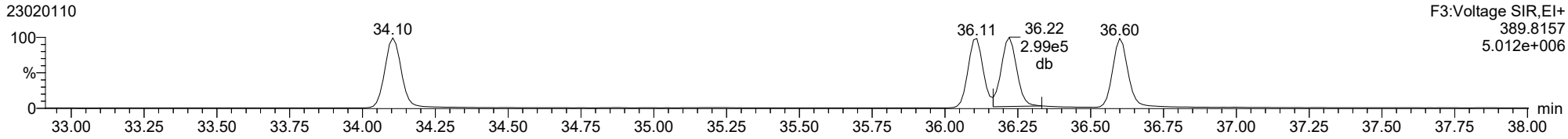

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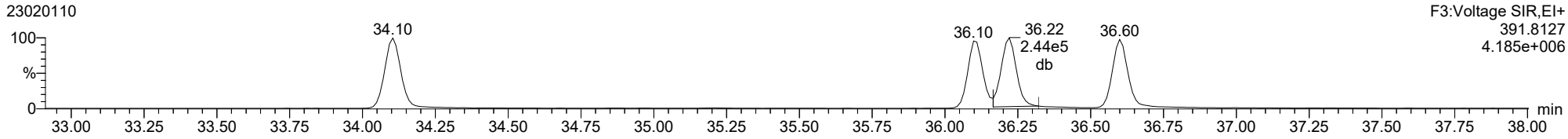

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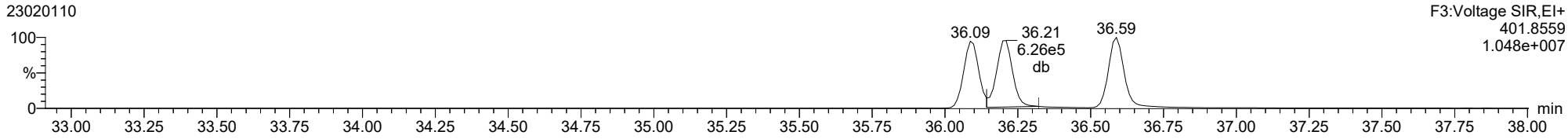

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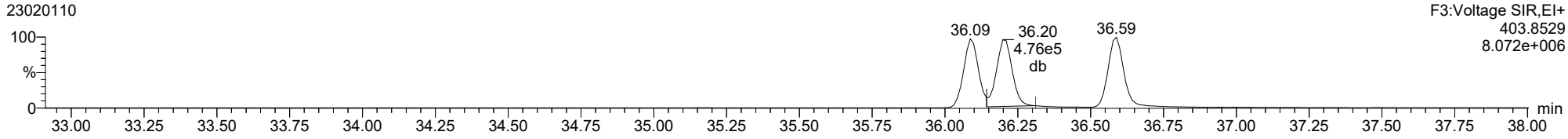

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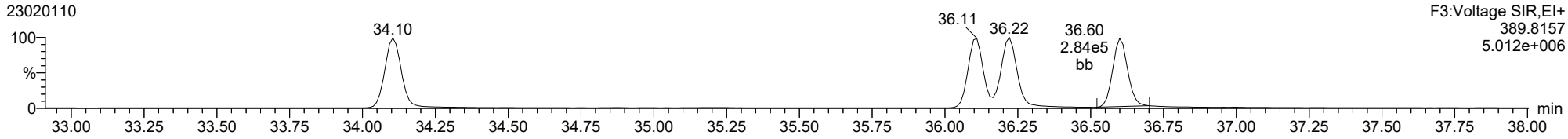

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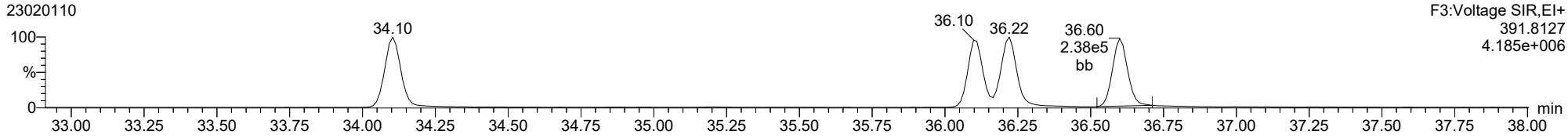

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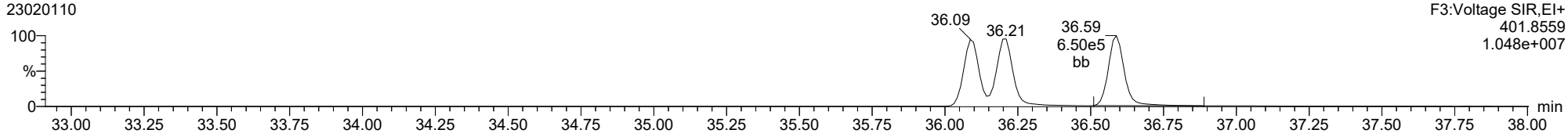

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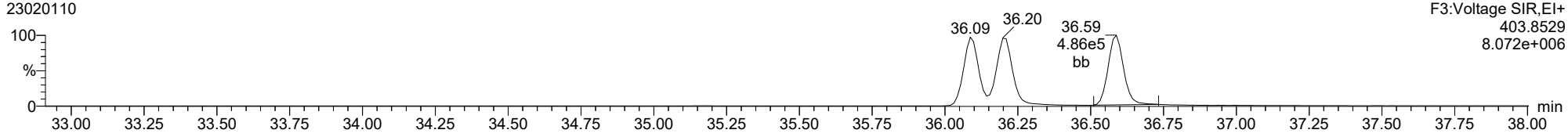

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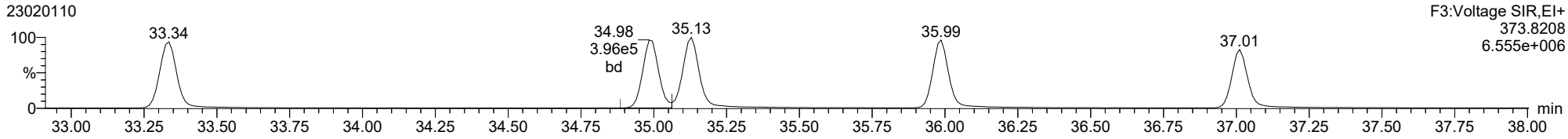

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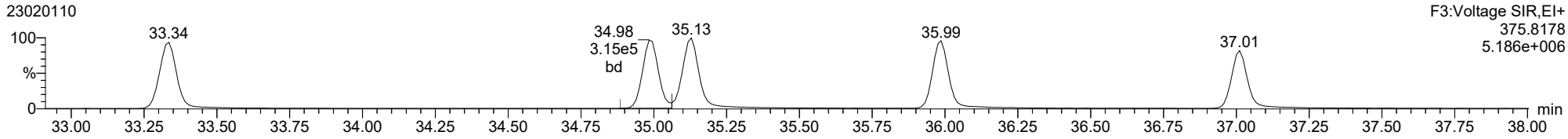

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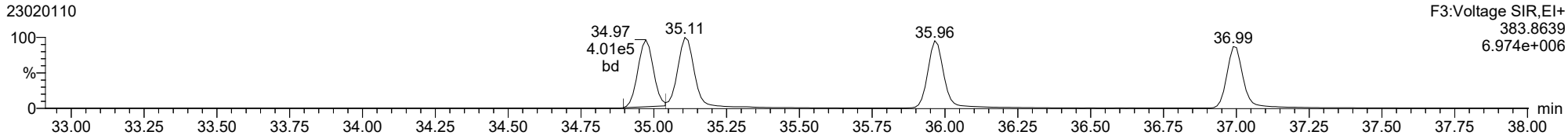

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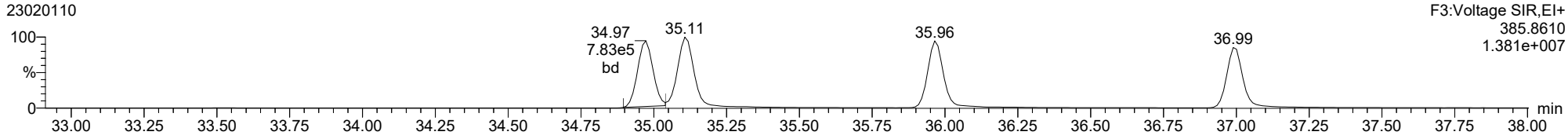

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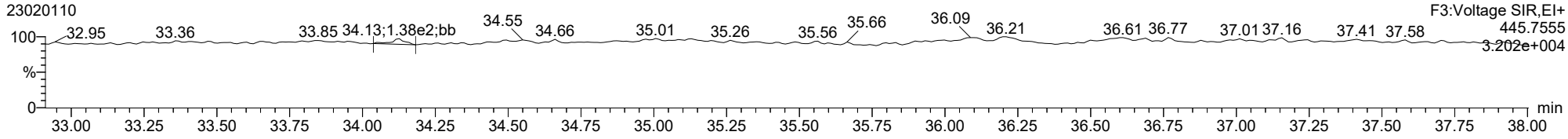

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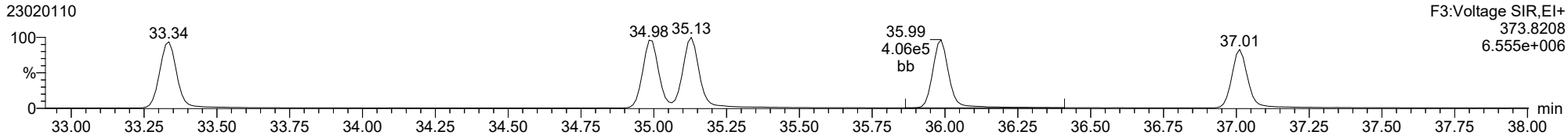

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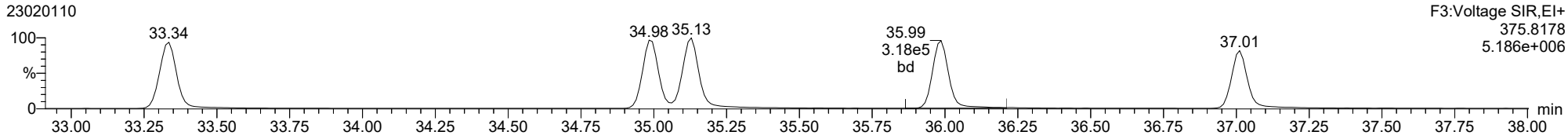

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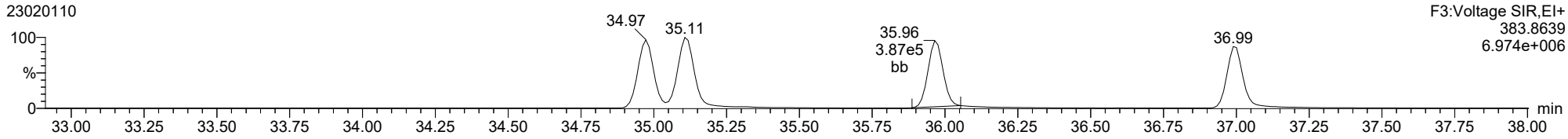

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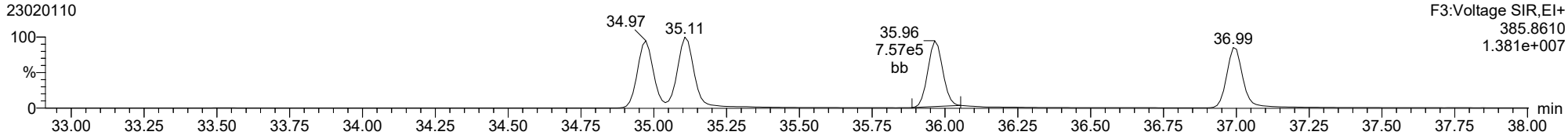

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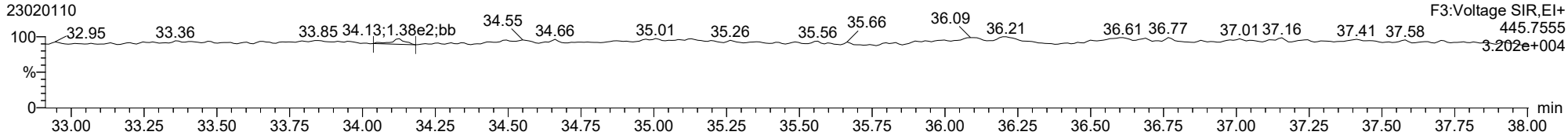

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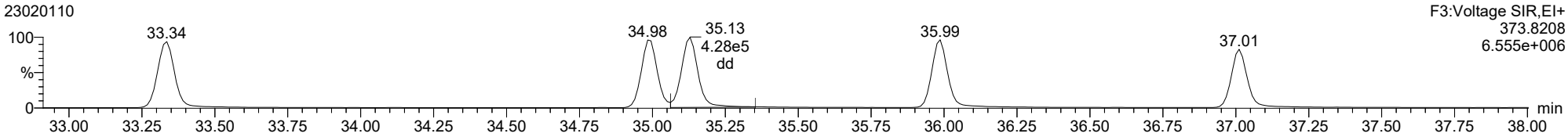

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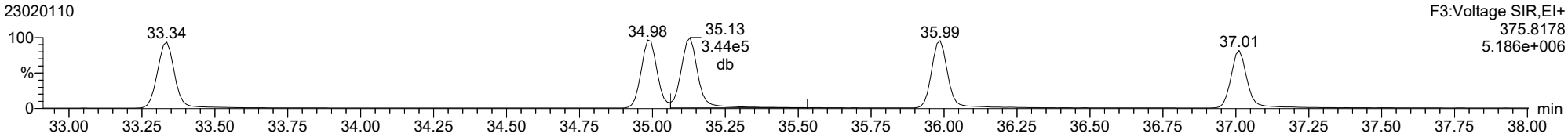

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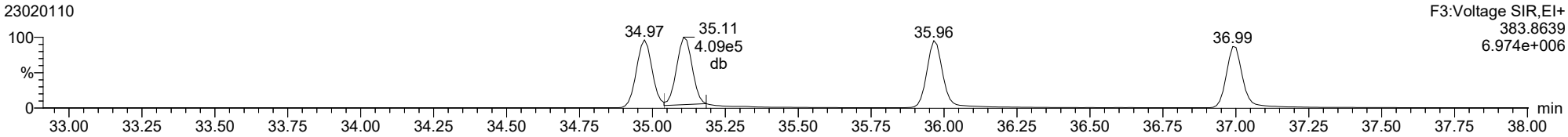

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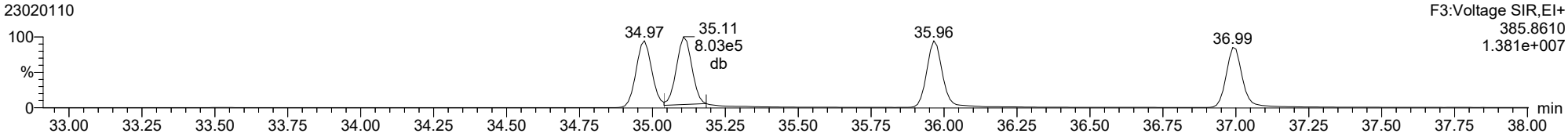

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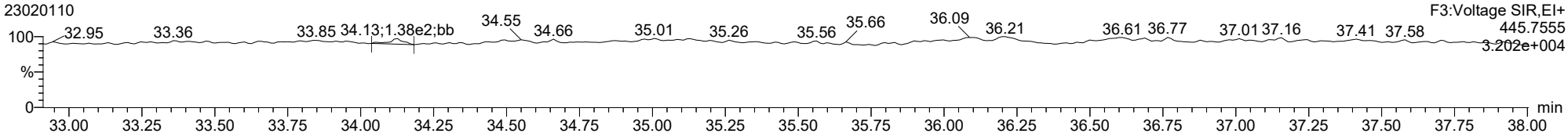

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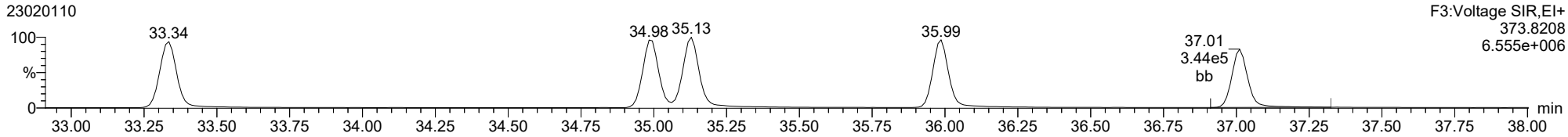

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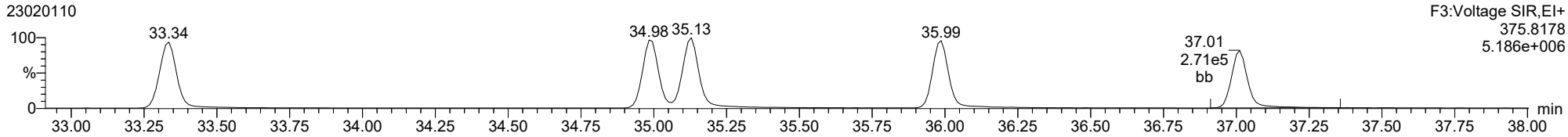

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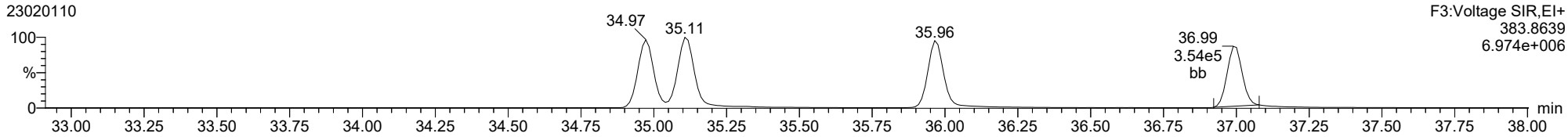

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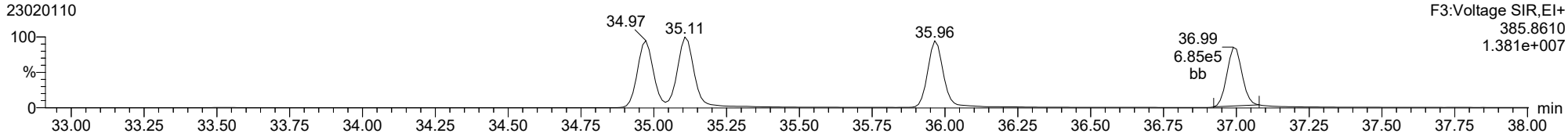

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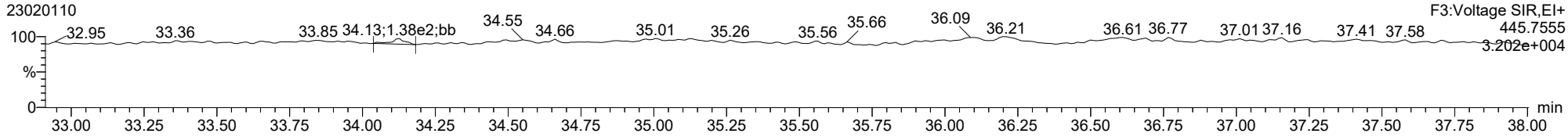

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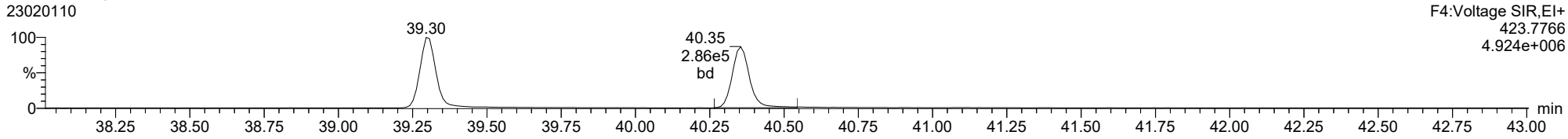

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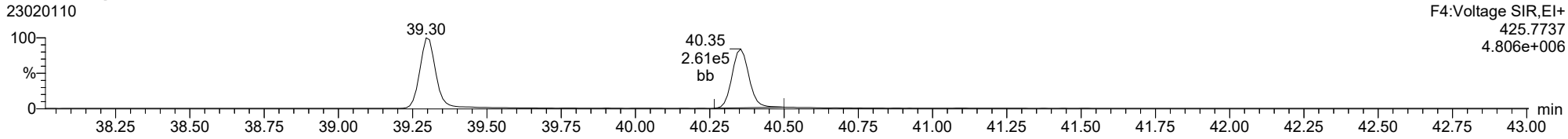

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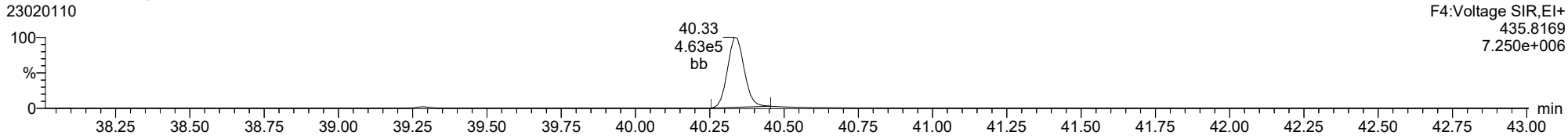

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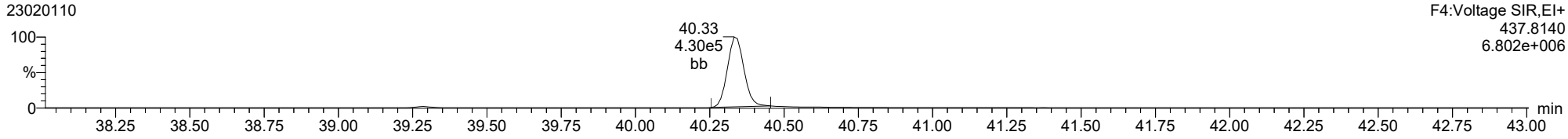

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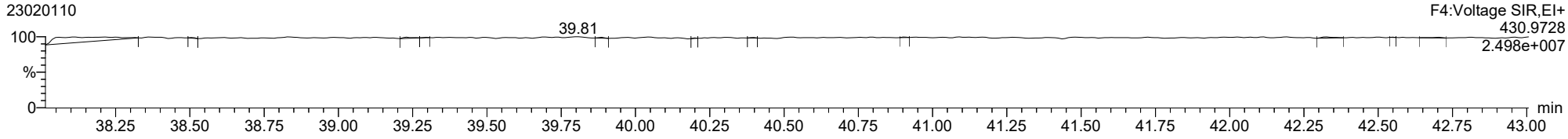

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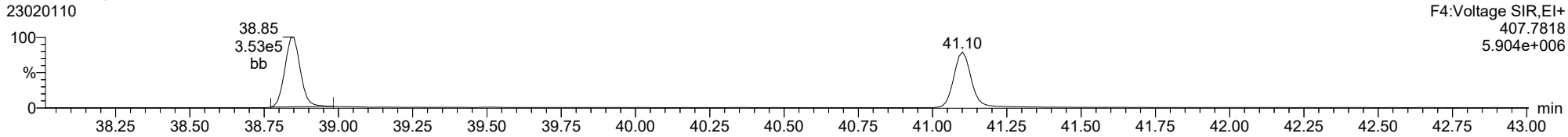

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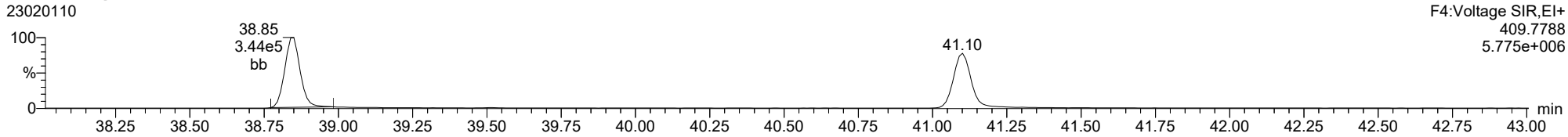

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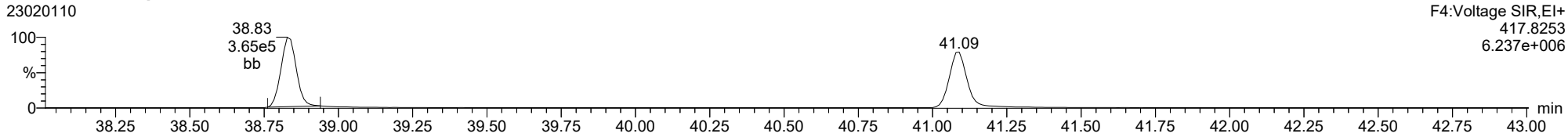

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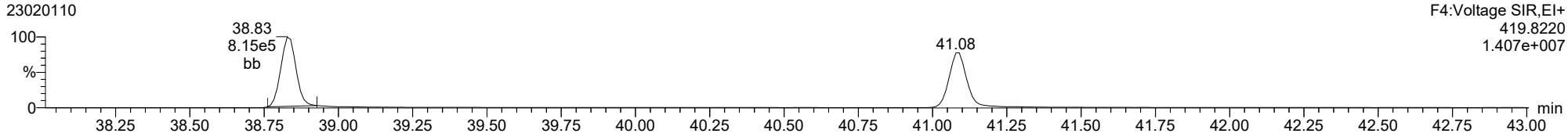
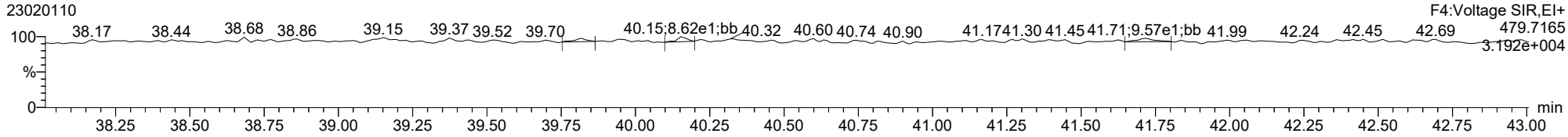


FUNCTION4 NCDPE



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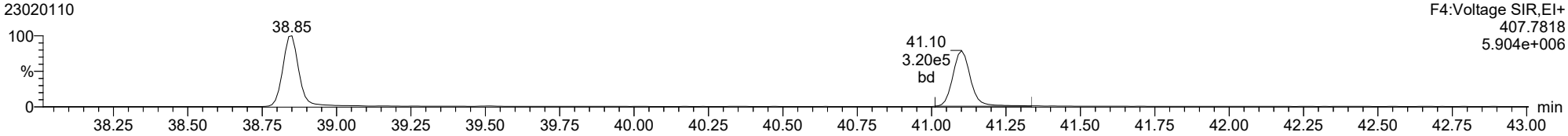

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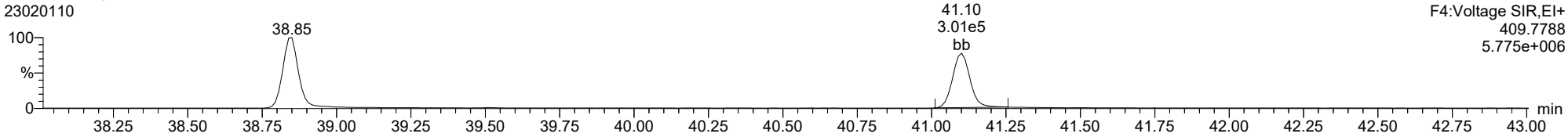

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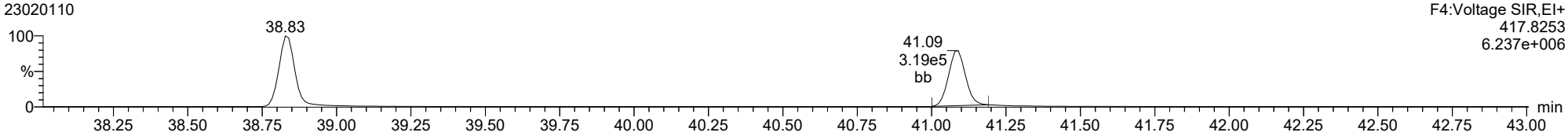

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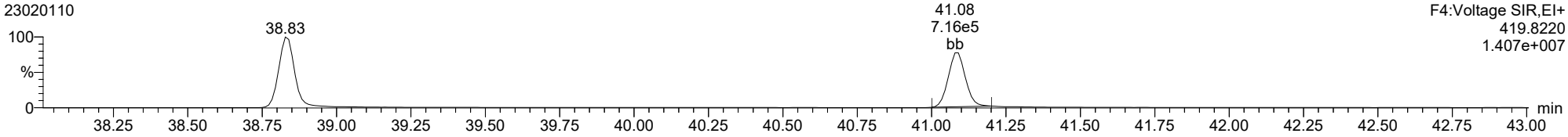

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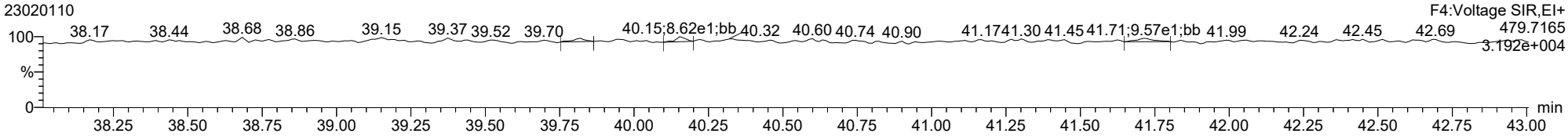

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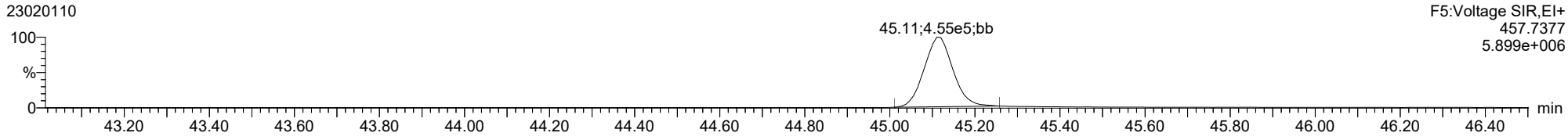

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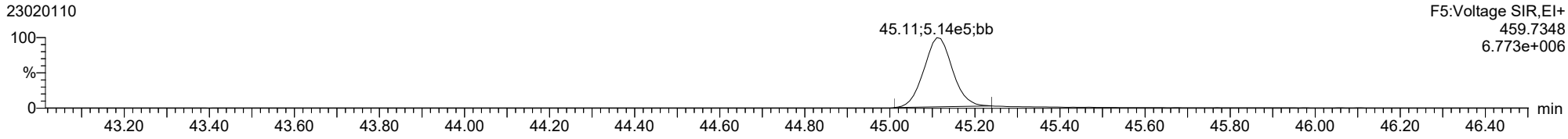
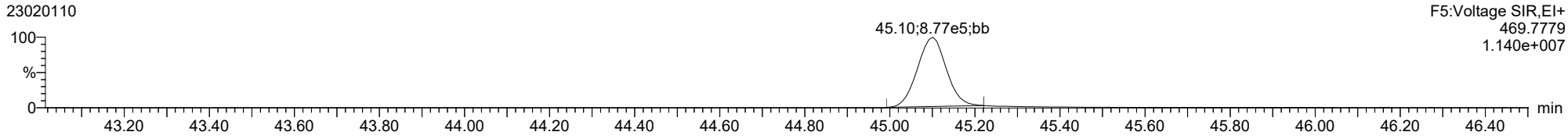
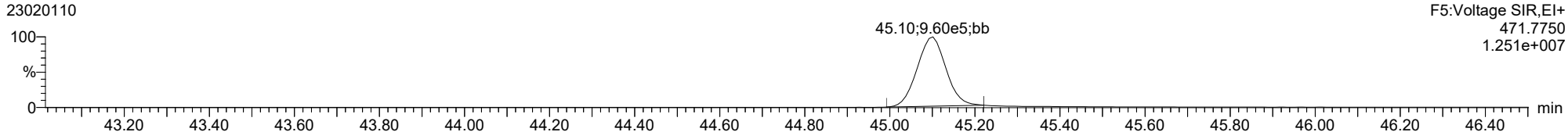


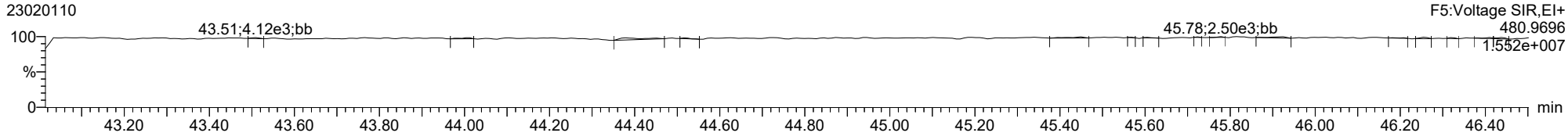
13C-OCDD



13C-OCDD



FUNCTION5 PFK



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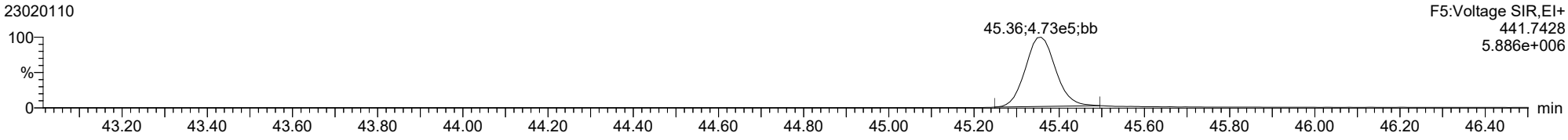
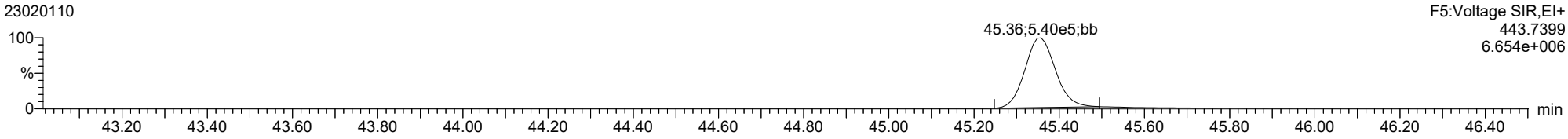
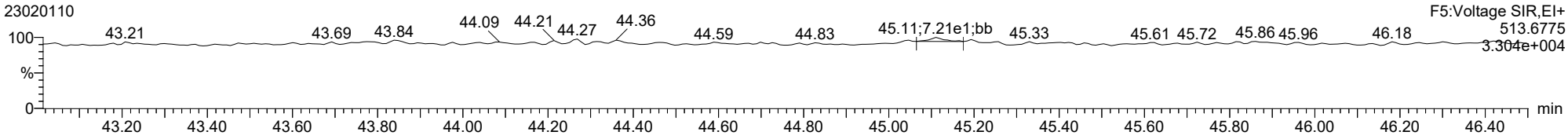
OCDF



OCDF



FUNCTION5 DCDPE



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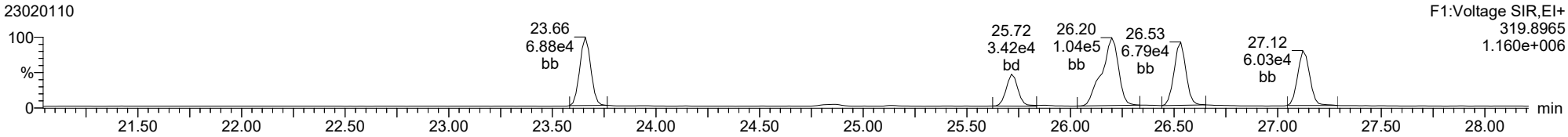
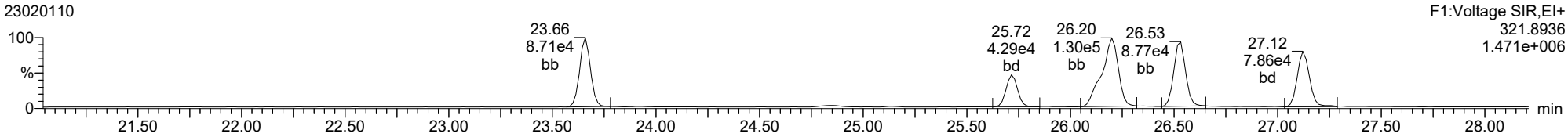
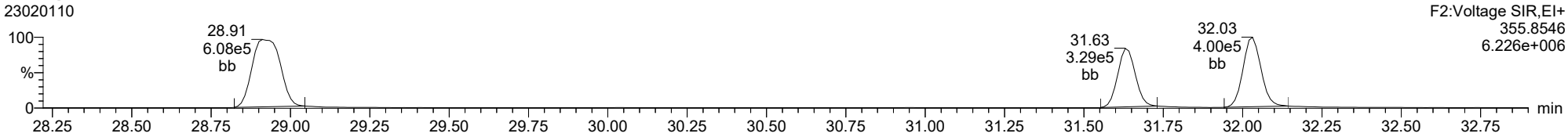
Total-tetradioxins



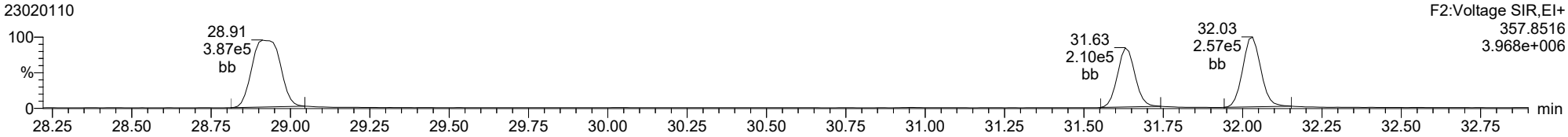
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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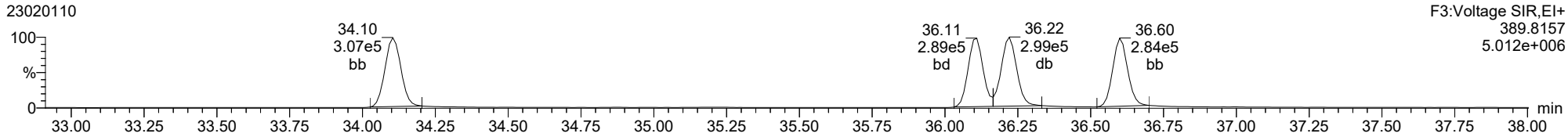
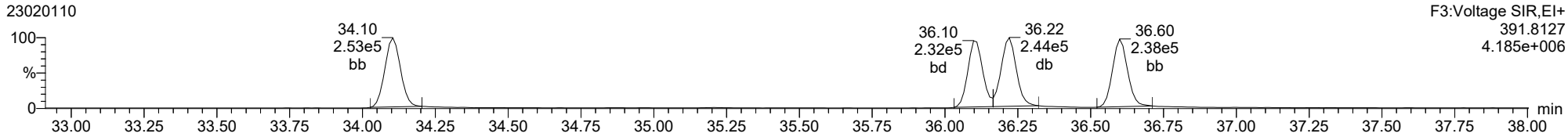
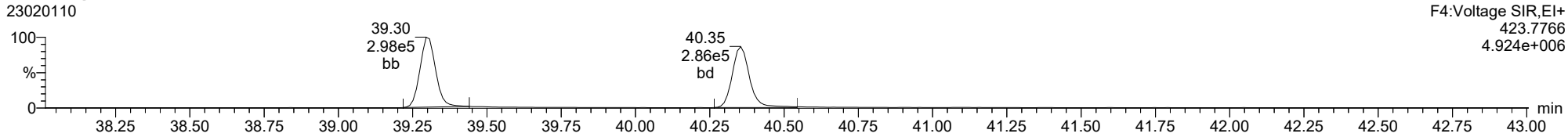
Total-hexadioxins



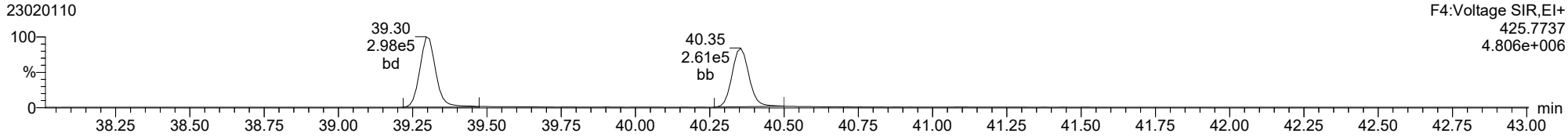
Total-hexadioxins



Total-heptadioxins



Total-heptadioxins



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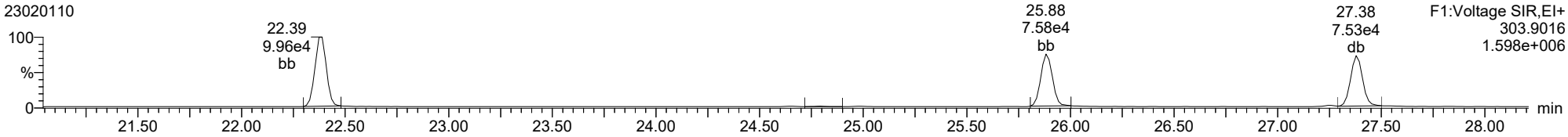
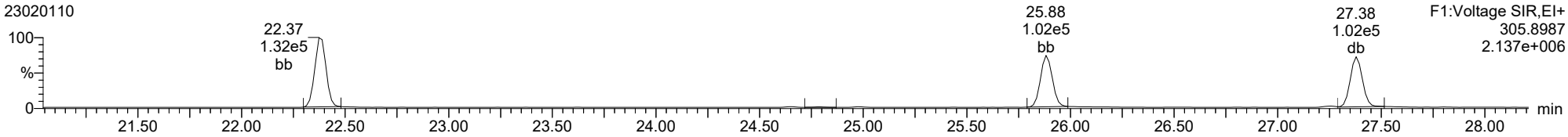
Total-tetrafurans



Total-tetrafurans



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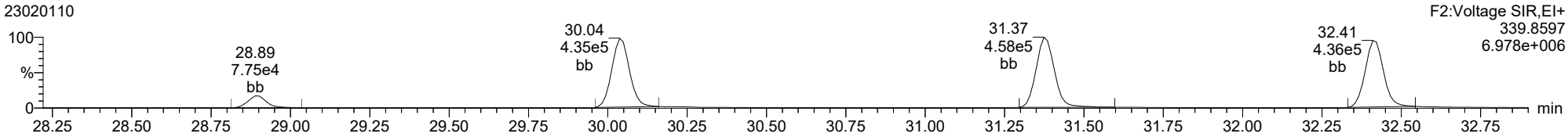

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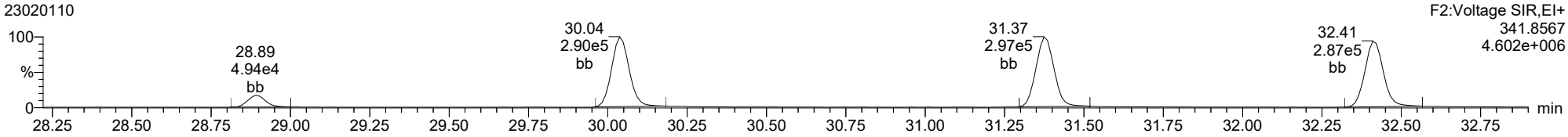

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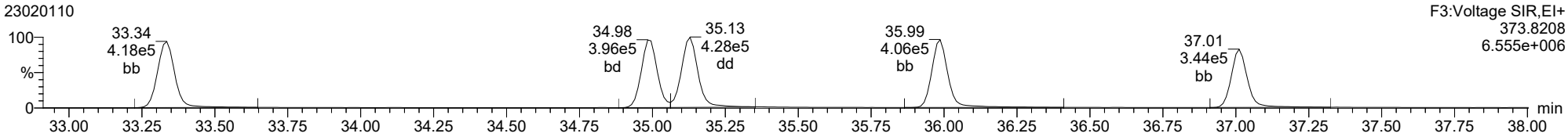
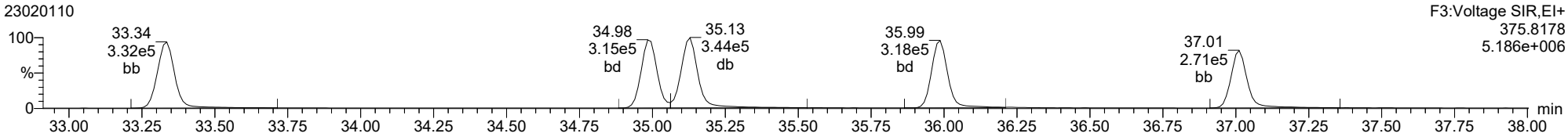
Total-hexafurans



Total-hexafurans



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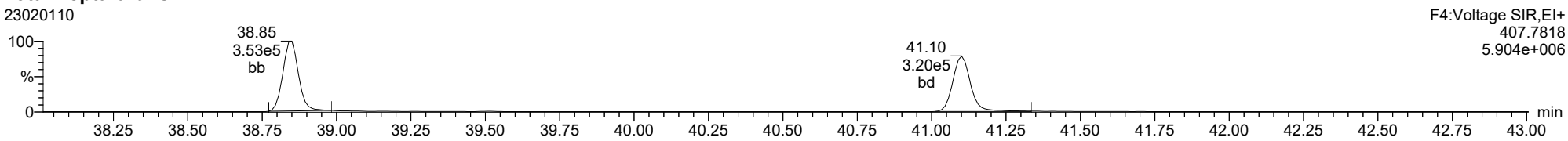

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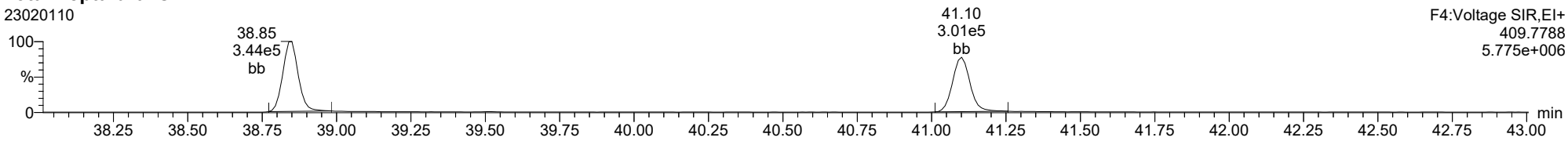

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Last Altered: Friday, February 03, 2023 11:22:32 Pacific Standard Time
Printed: Friday, February 03, 2023 11:23:25 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3R2, Name: 23020111, Date: 01-Feb-2023, Time: 21:12:31, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.882	1.001	6.336e4	8.393e4	0.876	0.755	0.770	1070	1746	9.70e5	1.26e6	906.6	721.7	NO	bb	bb	10.162
12378-PeCDF	30.048	1.001	3.709e5	2.488e5	0.845	1.491	1.550	3113	3215	5.69e6	3.70e6	1826.3	1149.4	NO	bb	bd	50.020
23478-PeCDF	31.385	1.001	3.851e5	2.639e5	0.911	1.459	1.550	3113	3215	5.96e6	3.97e6	1913.7	1234.6	NO	bb	bd	50.684
123478-HxCDF	34.995	1.001	3.366e5	2.649e5	1.182	1.270	1.240	2488	2037	5.32e6	4.21e6	2136.8	2067.1	NO	bd	bd	49.625
234678-HxCDF	35.986	1.000	3.507e5	2.736e5	1.229	1.282	1.240	2488	2037	5.45e6	4.23e6	2188.7	2078.3	NO	bb	bd	52.648
123678-HxCDF	35.129	1.000	3.745e5	2.918e5	1.248	1.283	1.240	2488	2037	5.41e6	4.26e6	2174.2	2090.5	NO	dd	dd	50.908
123789-HxCDF	37.012	1.000	2.970e5	2.380e5	1.187	1.248	1.240	2488	2037	4.75e6	3.76e6	1910.9	1845.7	NO	bd	bb	50.440
1234678-HpCDF	38.850	1.000	2.932e5	2.919e5	1.204	1.004	1.050	3100	2795	4.79e6	4.70e6	1544.8	1680.6	NO	bb	bd	48.294
1234789-HpCDF	41.100	1.000	2.671e5	2.524e5	1.165	1.058	1.050	3100	2795	3.96e6	3.73e6	1278.4	1333.4	NO	bb	bb	49.677
OCDF	45.358	1.006	3.958e5	4.645e5	1.186	0.852	0.890	1455	4440	4.72e6	5.37e6	3247.1	1209.2	NO	bb	bd	90.445
2378-TCDD	26.532	1.001	5.892e4	7.101e4	1.236	0.830	0.770	1225	1339	8.91e5	1.09e6	727.0	817.8	NO	dd	bb	9.397
12378-PeCDD	31.642	1.001	2.888e5	1.854e5	1.087	1.558	1.550	2693	2242	4.44e6	2.82e6	1647.5	1257.1	NO	bb	bb	51.126
123478-HxCDD	36.109	1.000	2.420e5	2.004e5	0.987	1.207	1.240	3333	2112	4.15e6	3.36e6	1245.4	1591.3	NO	bd	bd	50.303
123678-HxCDD	36.221	1.000	2.536e5	2.261e5	1.021	1.122	1.240	3333	2112	4.16e6	3.48e6	1248.0	1648.2	NO	db	db	51.010
123789-HxCDD	36.611	1.011	2.491e5	2.029e5	0.985	1.228	1.240	3333	2112	4.05e6	3.32e6	1216.5	1574.2	NO	bb	bb	50.610
1234678-HpCDD	40.354	1.000	2.244e5	2.131e5	1.253	1.053	1.050	2651	2455	3.41e6	3.28e6	1286.0	1334.6	NO	bb	bb	45.500
OCDD	45.120	1.000	3.894e5	4.309e5	1.103	0.904	0.890	2219	2267	4.59e6	5.31e6	2068.3	2340.4	NO	bd	bb	92.775
13C-2378-TCDF	25.867	1.006	7.314e5	9.230e5	1.768	0.792	0.770	2216	1949	1.12e7	1.43e7	5056.1	7338.5	NO	bb	bb	95.256
13C-12378-PeCDF	30.026	1.168	8.745e5	5.922e5	1.527	1.477	1.550	3934	3547	1.37e7	8.95e6	3469.6	2522.0	NO	bb	bd	97.769
13C-23478-PeCDF	31.363	1.220	8.488e5	5.566e5	1.466	1.525	1.550	3934	3547	1.32e7	8.62e6	3344.9	2430.1	NO	bb	bb	97.572
13C-123478-HxCDF	34.973	0.956	3.485e5	6.773e5	1.054	0.515	0.510	2953	4567	5.67e6	1.10e7	1918.4	2413.6	NO	bd	bd	101.894
13C-123678-HxCDF	35.118	0.960	3.543e5	6.945e5	1.080	0.510	0.510	2953	4567	5.60e6	1.10e7	1895.3	2409.2	NO	db	db	101.648
13C-234678-HxCDF	35.975	0.983	3.286e5	6.364e5	1.014	0.516	0.510	2953	4567	5.48e6	1.04e7	1855.6	2267.5	NO	bb	bb	99.572
13C-123789-HxCDF	37.000	1.011	3.031e5	5.907e5	0.928	0.513	0.510	2953	4567	5.28e6	1.02e7	1789.2	2235.2	NO	bb	bb	100.817
13C-1234678-HpCDF	38.839	1.062	3.130e5	6.930e5	1.036	0.452	0.440	2151	4289	5.21e6	1.16e7	2423.7	2703.6	NO	bb	bb	101.637
13C-1234789-HpCDF	41.089	1.123	2.806e5	6.168e5	0.905	0.455	0.440	2151	4289	4.21e6	9.25e6	1954.9	2156.4	NO	bb	bb	103.794
13C-1234-TCDD	25.700	0.000	4.358e5	5.465e5	1.000	0.797	0.770	2468	2151	6.80e6	8.50e6	2756.9	3953.0	NO	bb	bb	100.000
13C-2378-TCDD	26.517	1.032	4.953e5	6.230e5	1.103	0.795	0.770	2468	2151	7.43e6	9.28e6	3010.2	4316.3	NO	bb	bb	103.212
13C-12378-PeCDD	31.619	1.230	5.254e5	3.282e5	0.914	1.601	1.550	1809	1341	8.04e6	5.00e6	4443.5	3732.3	NO	bb	bb	95.052
13C-123478-HxCDD	36.098	0.987	5.053e5	3.859e5	0.933	1.309	1.240	2226	2294	8.20e6	6.16e6	3683.0	2686.4	NO	bd	bd	99.984
13C-123678-HxCDD	36.209	0.990	5.186e5	4.029e5	0.965	1.287	1.240	2226	2294	8.41e6	6.65e6	3779.0	2898.5	NO	db	db	99.982
13C-1234678-HpCDD	40.343	1.103	3.959e5	3.716e5	0.782	1.065	1.050	2537	2687	6.19e6	5.69e6	2441.5	2116.3	NO	bb	bb	102.734
13C-OCDD	45.101	1.233	7.625e5	8.412e5	0.788	0.906	0.890	3243	2707	9.59e6	1.05e7	2957.5	3872.2	NO	bb	bb	212.953
13C-123789-HxCDD	36.588	0.000	5.441e5	4.113e5	1.000	1.323	1.240	2226	2294	8.88e6	6.75e6	3989.4	2943.5	NO	bb	bb	100.000
37CL-2378-TCDD	26.532	1.032	1.096e5		1.233			1635		1.65e6		1009.4			bb		9.045

Dataset: T:\Autospec\Processed Data Batch\230201ICVIH.qld
Last Altered: Friday, February 03, 2023 11:22:32 Pacific Standard Time
Printed: Friday, February 03, 2023 11:23:25 Pacific Standard Time

ID: CS3R2, Name: 23020111, Date: 01-Feb-2023, Time: 21:12:31, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.389	0.866	7.606e4	1.001e5	1.064	0.760	0.770	1070	1746	1.19e6	1.52e6	1110.3	869.1	NO	bb	bb	10.001
1289-TCDF	27.378	1.058	6.304e4	8.031e4	0.858	0.785	0.770	1070	1746	9.18e5	1.16e6	858.3	662.3	NO	dd	db	10.103
13468-PECDF	27.242	0.907	4.375e5	2.852e5	1.013	1.534	1.550	920	1180	6.83e6	4.45e6	7421.7	3771.3	NO	bb	bb	48.645
12389-PECDF	32.421	1.080	3.692e5	2.469e5	0.844	1.495	1.550	3113	3215	5.48e6	3.56e6	1760.8	1106.5	NO	bb	bd	49.793
123468-HXCDF	33.335	0.953	3.502e5	2.713e5	1.197	1.291	1.240	2488	2037	5.19e6	4.08e6	2086.3	2002.8	NO	bb	bd	50.610
1368-TCDD	23.659	0.892	5.296e4	6.607e4	1.084	0.802	0.770	1225	1339	8.46e5	1.08e6	690.5	804.7	NO	bb	bb	9.816
1289-TCDD	27.121	1.023	4.842e4	6.049e4	0.975	0.800	0.770	1225	1339	7.05e5	8.85e5	575.4	661.1	NO	bb	bb	9.987
12479-PECDD	28.912	0.914	4.728e5	3.089e5	1.837	1.530	1.550	2693	2242	4.61e6	3.01e6	1713.2	1342.4	NO	bb	bb	49.845
12389-PECDD	32.032	1.013	3.302e5	2.107e5	1.252	1.567	1.550	2693	2242	5.03e6	3.18e6	1869.4	1418.4	NO	bb	bb	50.596
124679-HXCDD	34.104	0.945	2.577e5	2.083e5	1.033	1.237	1.240	3333	2112	4.11e6	3.36e6	1234.1	1592.7	NO	bb	bb	50.624
1234679-HPCDD	39.307	0.974	2.468e5	2.463e5	1.286	1.002	1.050	2651	2455	3.99e6	3.89e6	1503.1	1583.0	NO	bb	bd	49.957
Total-tetrafurans			2.030e5		0.933			1070		3.09e6							30.345
Total-penta1			4.375e5					920		6.83e6							48.645
Total-pentafurans			1.184e6		0.866			3113		1.80e7							158.351
Total-hexafurans			1.709e6		1.208			2488		2.61e7							254.231
Total-heptafurans			5.602e5		1.185			3100		8.75e6							97.972
Total-Furans			4.489e6		1.067			1070		6.75e7							679.989
Total-tetradioxins			2.729e5		1.099			1225		3.70e6							49.674
Total-pentadioxins			1.093e6		1.392			2693		1.41e7							151.752
Total-hexadioxins			1.003e6		1.007			3333		1.65e7							202.708
Total-heptadioxins			4.712e5		1.269			2651		7.39e6							95.457
Total-Dioxins			3.230e6		1.165			1225		4.63e7							592.366
Total-TEQ			7.719e6					1225		1.14e8							1272.355
FUNCTION1 PFK			5.445e5					518107		1.64e7							
FUNCTION2 PFK			0.000e0					179627		0.00e0							
FUNCTION3 PFK			0.000e0					451502		0.00e0							
FUNCTION4 PFK			1.511e5					331096		1.60e6							
FUNCTION5 PFK			9.048e3					184760		4.73e5							
FUNCTION1 HXCD...			1.131e3					606		1.62e4							0.000
FUNCTION1 HPCD...			5.247e2					900		8.84e3							0.000
FUNCTION2 HPCD...			8.476e2					1136		1.98e4							0.000
FUNCTION3 OCDPE			4.428e2					714		7.64e3							0.000
FUNCTION4 NCDPE			0.000e0					982		0.00e0							
FUNCTION5 DCDPE			0.000e0					815		0.00e0							

Method: T:\Autospec\Methods\Dioxin230131IH.mdb 03 Feb 2023 10:31:33
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	6.304e4	8.031e4	0.858	0.79	0.77	858.3	YES	NO	dd	db	10.103
2	2378-TCDF	25.88	6.336e4	8.393e4	0.876	0.75	0.77	906.6	YES	NO	bb	bb	10.162
3	Total-tetrafurans	24.97	5.535e2	6.624e2	0.933	0.84	0.77	8.4	YES	NO	bb	bb	0.079
4	1368-TCDF	22.39	7.606e4	1.001e5	1.064	0.76	0.77	1110.3	YES	NO	bb	bb	10.001

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.24	4.375e5	2.852e5	1.013	1.53	1.55	7421.7	YES	NO	bb	bb	48.645

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	28.90	5.868e4	3.904e4	0.866	1.50	1.55	293.6	YES	NO	bb	bb	7.853
2	12389-PECDF	32.42	3.692e5	2.469e5	0.844	1.50	1.55	1760.8	YES	NO	bb	bd	49.793
3	23478-PeCDF	31.39	3.851e5	2.639e5	0.911	1.46	1.55	1913.7	YES	NO	bb	bd	50.684
4	12378-PeCDF	30.05	3.709e5	2.488e5	0.845	1.49	1.55	1826.3	YES	NO	bb	bd	50.020

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	37.01	2.970e5	2.380e5	1.187	1.25	1.24	1910.9	YES	NO	bd	bb	50.440
2	234678-HxCDF	35.99	3.507e5	2.736e5	1.229	1.28	1.24	2188.7	YES	NO	bb	bd	52.648
3	123678-HxCDF	35.13	3.745e5	2.918e5	1.248	1.28	1.24	2174.2	YES	NO	dd	dd	50.908
4	123478-HxCDF	34.99	3.366e5	2.649e5	1.182	1.27	1.24	2136.8	YES	NO	bd	bd	49.625
5	123468-HXCDF	33.33	3.502e5	2.713e5	1.197	1.29	1.24	2086.3	YES	NO	bb	bd	50.610

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.85	2.932e5	2.919e5	1.204	1.00	1.05	1544.8	YES	NO	bb	bd	48.294
2	1234789-HpCDF	41.10	2.671e5	2.524e5	1.165	1.06	1.05	1278.4	YES	NO	bb	bb	49.677

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	6.304e4	8.031e4	0.858	0.79	0.77	858.3	YES	NO	dd	db	10.103
2	2378-TCDF	25.88	6.336e4	8.393e4	0.876	0.75	0.77	906.6	YES	NO	bb	bb	10.162
3	Total-tetrafurans	24.97	5.535e2	6.624e2	0.933	0.84	0.77	8.4	YES	NO	bb	bb	0.079
4	1368-TCDF	22.39	7.606e4	1.001e5	1.064	0.76	0.77	1110.3	YES	NO	bb	bb	10.001
5	Total-pentafurans	28.90	5.868e4	3.904e4	0.866	1.50	1.55	293.6	YES	NO	bb	bb	7.853
6	12389-PECDF	32.42	3.692e5	2.469e5	0.844	1.50	1.55	1760.8	YES	NO	bb	bd	49.793
7	23478-PeCDF	31.39	3.851e5	2.639e5	0.911	1.46	1.55	1913.7	YES	NO	bb	bd	50.684
8	12378-PeCDF	30.05	3.709e5	2.488e5	0.845	1.49	1.55	1826.3	YES	NO	bb	bd	50.020
9	123789-HxCDF	37.01	2.970e5	2.380e5	1.187	1.25	1.24	1910.9	YES	NO	bd	bb	50.440
10	234678-HxCDF	35.99	3.507e5	2.736e5	1.229	1.28	1.24	2188.7	YES	NO	bb	bd	52.648
11	123678-HxCDF	35.13	3.745e5	2.918e5	1.248	1.28	1.24	2174.2	YES	NO	dd	dd	50.908
12	123478-HxCDF	34.99	3.366e5	2.649e5	1.182	1.27	1.24	2136.8	YES	NO	bd	bd	49.625
13	123468-HXCDF	33.33	3.502e5	2.713e5	1.197	1.29	1.24	2086.3	YES	NO	bb	bd	50.610
14	1234678-HpCDF	38.85	2.932e5	2.919e5	1.204	1.00	1.05	1544.8	YES	NO	bb	bd	48.294
15	1234789-HpCDF	41.10	2.671e5	2.524e5	1.165	1.06	1.05	1278.4	YES	NO	bb	bb	49.677
16	OCDF	45.36	3.958e5	4.645e5	1.186	0.85	0.89	3247.1	YES	NO	bb	bd	90.445
17	13468-PECDF	27.24	4.375e5	2.852e5	1.013	1.53	1.55	7421.7	YES	NO	bb	bb	48.645

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.53	5.892e4	7.101e4	1.236	0.83	0.77	727.0	YES	NO	dd	bb	9.397
2	Total-tetradioxins	26.21	8.373e4	1.038e5	1.099	0.81	0.77	673.5	YES	NO	bd	bb	15.262
3	Total-tetradioxins	25.72	2.649e4	3.214e4	1.099	0.82	0.77	333.6	YES	NO	bb	bb	4.772
4	Total-tetradioxins	24.85	2.420e3	2.985e3	1.099	0.81	0.77	19.9	YES	NO	bb	bb	0.440
5	1368-TCDD	23.66	5.296e4	6.607e4	1.084	0.80	0.77	690.5	YES	NO	bb	bb	9.816
6	1289-TCDD	27.12	4.842e4	6.049e4	0.975	0.80	0.77	575.4	YES	NO	bb	bb	9.987

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12479-PECDD	28.91	4.728e5	3.089e5	1.837	1.53	1.55	1713.2	YES	NO	bb	bb	49.845
2	12389-PECDD	32.03	3.302e5	2.107e5	1.252	1.57	1.55	1869.4	YES	NO	bb	bb	50.596
3	12378-PeCDD	31.64	2.888e5	1.854e5	1.087	1.56	1.55	1647.5	YES	NO	bb	bb	51.126
4	Total-pentadioxins	30.97	1.315e3	8.851e2	1.392	1.49	1.55	7.1	YES	NO	bb	bb	0.185

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.61	2.491e5	2.029e5	0.985	1.23	1.24	1216.5	YES	NO	bb	bb	50.610
2	123678-HxCDD	36.22	2.536e5	2.261e5	1.021	1.12	1.24	1248.0	YES	NO	db	db	51.010
3	123478-HxCDD	36.11	2.420e5	2.004e5	0.987	1.21	1.24	1245.4	YES	NO	bd	bd	50.303
4	Total-hexadioxins	34.86	7.769e2	6.946e2	1.007	1.12	1.24	3.9	YES	NO	bd	bb	0.161
5	124679-HXCDD	34.10	2.577e5	2.083e5	1.033	1.24	1.24	1234.1	YES	NO	bb	bb	50.624

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234679-HPCDD	39.31	2.468e5	2.463e5	1.286	1.00	1.05	1503.1	YES	NO	bb	bd	49.957
2	1234678-HpCDD	40.35	2.244e5	2.131e5	1.253	1.05	1.05	1286.0	YES	NO	bb	bb	45.500

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.53	5.892e4	7.101e4	1.236	0.83	0.77	727.0	YES	NO	dd	bb	9.397
2	Total-tetradioxins	26.21	8.373e4	1.038e5	1.099	0.81	0.77	673.5	YES	NO	bd	bb	15.262
3	Total-tetradioxins	25.72	2.649e4	3.214e4	1.099	0.82	0.77	333.6	YES	NO	bb	bb	4.772
4	Total-tetradioxins	24.85	2.420e3	2.985e3	1.099	0.81	0.77	19.9	YES	NO	bb	bb	0.440
5	1368-TCDD	23.66	5.296e4	6.607e4	1.084	0.80	0.77	690.5	YES	NO	bb	bb	9.816
6	12479-PECDD	28.91	4.728e5	3.089e5	1.837	1.53	1.55	1713.2	YES	NO	bb	bb	49.845
7	1289-TCDD	27.12	4.842e4	6.049e4	0.975	0.80	0.77	575.4	YES	NO	bb	bb	9.987
8	12389-PECDD	32.03	3.302e5	2.107e5	1.252	1.57	1.55	1869.4	YES	NO	bb	bb	50.596
9	12378-PeCDD	31.64	2.888e5	1.854e5	1.087	1.56	1.55	1647.5	YES	NO	bb	bb	51.126
10	Total-pentadioxins	30.97	1.315e3	8.851e2	1.392	1.49	1.55	7.1	YES	NO	bb	bb	0.185
11	123789-HxCDD	36.61	2.491e5	2.029e5	0.985	1.23	1.24	1216.5	YES	NO	bb	bb	50.610
12	123678-HxCDD	36.22	2.536e5	2.261e5	1.021	1.12	1.24	1248.0	YES	NO	db	db	51.010
13	123478-HxCDD	36.11	2.420e5	2.004e5	0.987	1.21	1.24	1245.4	YES	NO	bd	bd	50.303
14	Total-hexadioxins	34.86	7.769e2	6.946e2	1.007	1.12	1.24	3.9	YES	NO	bd	bb	0.161
15	124679-HXCDD	34.10	2.577e5	2.083e5	1.033	1.24	1.24	1234.1	YES	NO	bb	bb	50.624
16	1234679-HPCDD	39.31	2.468e5	2.463e5	1.286	1.00	1.05	1503.1	YES	NO	bb	bd	49.957
17	1234678-HpCDD	40.35	2.244e5	2.131e5	1.253	1.05	1.05	1286.0	YES	NO	bb	bb	45.500
18	OCDD	45.12	3.894e5	4.309e5	1.103	0.90	0.89	2068.3	YES	NO	bd	bb	92.775

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.38	6.304e4	8.031e4	0.858	0.79	0.77	858.3	YES	NO	dd	db	10.103
2	2378-TCDF	25.88	6.336e4	8.393e4	0.876	0.75	0.77	906.6	YES	NO	bb	bb	10.162
3	Total-tetrafurans	24.97	5.535e2	6.624e2	0.933	0.84	0.77	8.4	YES	NO	bb	bb	0.079
4	1368-TCDF	22.39	7.606e4	1.001e5	1.064	0.76	0.77	1110.3	YES	NO	bb	bb	10.001
5	Total-pentafurans	28.90	5.868e4	3.904e4	0.866	1.50	1.55	293.6	YES	NO	bb	bb	7.853
6	12389-PECDF	32.42	3.692e5	2.469e5	0.844	1.50	1.55	1760.8	YES	NO	bb	bd	49.793
7	23478-PeCDF	31.39	3.851e5	2.639e5	0.911	1.46	1.55	1913.7	YES	NO	bb	bd	50.684
8	12378-PeCDF	30.05	3.709e5	2.488e5	0.845	1.49	1.55	1826.3	YES	NO	bb	bd	50.020
9	123789-HxCDF	37.01	2.970e5	2.380e5	1.187	1.25	1.24	1910.9	YES	NO	bd	bb	50.440
10	234678-HxCDF	35.99	3.507e5	2.736e5	1.229	1.28	1.24	2188.7	YES	NO	bb	bd	52.648
11	123678-HxCDF	35.13	3.745e5	2.918e5	1.248	1.28	1.24	2174.2	YES	NO	dd	dd	50.908
12	123478-HxCDF	34.99	3.366e5	2.649e5	1.182	1.27	1.24	2136.8	YES	NO	bd	bd	49.625
13	123468-HXCDF	33.33	3.502e5	2.713e5	1.197	1.29	1.24	2086.3	YES	NO	bb	bd	50.610
14	1234678-HpCDF	38.85	2.932e5	2.919e5	1.204	1.00	1.05	1544.8	YES	NO	bb	bd	48.294
15	1234789-HpCDF	41.10	2.671e5	2.524e5	1.165	1.06	1.05	1278.4	YES	NO	bb	bb	49.677
16	OCDF	45.36	3.958e5	4.645e5	1.186	0.85	0.89	3247.1	YES	NO	bb	bd	90.445
17	13468-PECDF	27.24	4.375e5	2.852e5	1.013	1.53	1.55	7421.7	YES	NO	bb	bb	48.645
18	2378-TCDD	26.53	5.892e4	7.101e4	1.236	0.83	0.77	727.0	YES	NO	dd	bb	9.397
19	Total-tetradioxins	26.21	8.373e4	1.038e5	1.099	0.81	0.77	673.5	YES	NO	bd	bb	15.262
20	Total-tetradioxins	25.72	2.649e4	3.214e4	1.099	0.82	0.77	333.6	YES	NO	bb	bb	4.772
21	Total-tetradioxins	24.85	2.420e3	2.985e3	1.099	0.81	0.77	19.9	YES	NO	bb	bb	0.440
22	1368-TCDD	23.66	5.296e4	6.607e4	1.084	0.80	0.77	690.5	YES	NO	bb	bb	9.816
23	12479-PECDD	28.91	4.728e5	3.089e5	1.837	1.53	1.55	1713.2	YES	NO	bb	bb	49.845
24	1289-TCDD	27.12	4.842e4	6.049e4	0.975	0.80	0.77	575.4	YES	NO	bb	bb	9.987
25	12389-PECDD	32.03	3.302e5	2.107e5	1.252	1.57	1.55	1869.4	YES	NO	bb	bb	50.596
26	12378-PeCDD	31.64	2.888e5	1.854e5	1.087	1.56	1.55	1647.5	YES	NO	bb	bb	51.126
27	Total-pentadioxins	30.97	1.315e3	8.851e2	1.392	1.49	1.55	7.1	YES	NO	bb	bb	0.185
28	123789-HxCDD	36.61	2.491e5	2.029e5	0.985	1.23	1.24	1216.5	YES	NO	bb	bb	50.610
29	123678-HxCDD	36.22	2.536e5	2.261e5	1.021	1.12	1.24	1248.0	YES	NO	db	db	51.010
30	123478-HxCDD	36.11	2.420e5	2.004e5	0.987	1.21	1.24	1245.4	YES	NO	bd	bd	50.303
31	Total-hexadioxins	34.86	7.769e2	6.946e2	1.007	1.12	1.24	3.9	YES	NO	bd	bb	0.161
32	124679-HXCDD	34.10	2.577e5	2.083e5	1.033	1.24	1.24	1234.1	YES	NO	bb	bb	50.624
33	1234679-HPCDD	39.31	2.468e5	2.463e5	1.286	1.00	1.05	1503.1	YES	NO	bb	bd	49.957
34	1234678-HpCDD	40.35	2.244e5	2.131e5	1.253	1.05	1.05	1286.0	YES	NO	bb	bb	45.500
35	OCDD	45.12	3.894e5	4.309e5	1.103	0.90	0.89	2068.3	YES	NO	bd	bb	92.775

Dataset: T:\Autospec\Processed Data Batch\230201ICVIH.qld
Last Altered: Friday, February 03, 2023 11:22:32 Pacific Standard Time
Printed: Friday, February 03, 2023 11:23:25 Pacific Standard Time

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	23.43	3.727e4					1.3	NO		bb		
2	FUNCTION1 PFK	23.18	1.916e4					1.1	NO		bb		
3	FUNCTION1 PFK	22.75	3.142e3					0.4	NO		bb		
4	FUNCTION1 PFK	22.69	1.169e4					0.7	NO		bb		
5	FUNCTION1 PFK	22.63	7.039e3					0.6	NO		bb		
6	FUNCTION1 PFK	22.57	1.283e4					0.8	NO		db		
7	FUNCTION1 PFK	22.51	2.158e4					1.2	NO		bd		
8	FUNCTION1 PFK	22.36	1.134e4					0.8	NO		bb		
9	FUNCTION1 PFK	22.22	4.269e4					1.3	NO		bb		
10	FUNCTION1 PFK	22.10	3.052e4					1.6	NO		bb		
11	FUNCTION1 PFK	21.62	2.765e4					1.4	NO		bb		
12	FUNCTION1 PFK	21.54	1.965e4					1.2	NO		bb		
13	FUNCTION1 PFK	21.48	1.090e4					0.8	NO		bb		
14	FUNCTION1 PFK	21.29	3.708e4					1.3	NO		bb		
15	FUNCTION1 PFK	26.79	7.221e3					0.6	NO		bb		
16	FUNCTION1 PFK	26.49	8.249e3					0.4	NO		bb		
17	FUNCTION1 PFK	26.41	9.337e3					0.7	NO		db		
18	FUNCTION1 PFK	26.35	9.113e3					0.6	NO		bd		
19	FUNCTION1 PFK	26.15	5.974e3					0.5	NO		bb		
20	FUNCTION1 PFK	26.09	1.716e4					0.9	NO		bb		
21	FUNCTION1 PFK	25.96	1.452e4					1.0	NO		bb		
22	FUNCTION1 PFK	25.59	3.325e3					0.4	NO		bb		
23	FUNCTION1 PFK	25.34	4.402e3					0.6	NO		bb		
24	FUNCTION1 PFK	24.87	9.404e3					0.7	NO		bb		
25	FUNCTION1 PFK	24.75	2.747e4					1.4	NO		bb		
26	FUNCTION1 PFK	24.35	3.959e3					0.5	NO		bb		
27	FUNCTION1 PFK	24.04	7.708e3					0.6	NO		bb		
28	FUNCTION1 PFK	23.69	6.646e3					0.9	NO		bb		
29	FUNCTION1 PFK	23.63	5.706e3					0.6	NO		db		
30	FUNCTION1 PFK	23.57	2.430e4					1.1	NO		bd		
31	FUNCTION1 PFK	28.10	1.253e4					0.8	NO		bb		
32	FUNCTION1 PFK	28.03	8.849e3					0.7	NO		bb		
33	FUNCTION1 PFK	27.95	1.020e4					0.7	NO		bb		
34	FUNCTION1 PFK	27.88	1.726e4					1.1	NO		bb		
35	FUNCTION1 PFK	27.76	3.581e3					0.5	NO		bb		
36	FUNCTION1 PFK	27.41	1.709e4					1.1	NO		bb		
37	FUNCTION1 PFK	27.26	1.794e4					1.0	NO		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.07	1.511e5					4.8	YES		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.55	2.727e3					1.0	NO		bb		
2	FUNCTION5 PFK	43.63	6.321e3					1.6	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	21.22	7.029e1					2.0	NO		bb		0.000
2	FUNCTION1 HXCD...	27.79	7.872e1					1.6	NO		bb		0.000
3	FUNCTION1 HXCD...	27.44	8.510e1					1.7	NO		bb		0.000
4	FUNCTION1 HXCD...	27.24	1.425e2					4.1	YES		bb		0.000
5	FUNCTION1 HXCD...	26.86	9.476e1					2.1	NO		bb		0.000
6	FUNCTION1 HXCD...	26.52	1.068e2					2.9	NO		bb		0.000
7	FUNCTION1 HXCD...	24.76	1.755e2					3.8	YES		db		0.000
8	FUNCTION1 HXCD...	24.66	1.713e2					3.1	YES		bd		0.000
9	FUNCTION1 HXCD...	22.65	7.687e1					2.7	NO		bb		0.000
10	FUNCTION1 HXCD...	21.59	1.290e2					2.9	NO		bb		0.000

ID: CS3R2, Name: 23020111, Date: 01-Feb-2023, Time: 21:12:31, Conditions: AUTOSPEC01, User: pk

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HPCD...	28.01	1.182e2					1.3	NO		bb		0.000
2	FUNCTION1 HPCD...	26.91	1.043e2					2.5	NO		bb		0.000
3	FUNCTION1 HPCD...	26.31	8.865e1					2.0	NO		bb		0.000
4	FUNCTION1 HPCD...	24.76	1.293e2					2.4	NO		bb		0.000
5	FUNCTION1 HPCD...	22.60	8.433e1					1.6	NO		bb		0.000

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.44	1.012e2					2.5	NO		bb		0.000
2	FUNCTION2 HPCD...	31.41	1.119e2					1.8	NO		db		0.000
3	FUNCTION2 HPCD...	31.27	2.407e2					5.1	YES		bd		0.000
4	FUNCTION2 HPCD...	30.62	8.382e1					2.0	NO		db		0.000
5	FUNCTION2 HPCD...	30.52	8.939e1					1.4	NO		bd		0.000
6	FUNCTION2 HPCD...	28.80	1.157e2					1.7	NO		bb		0.000
7	FUNCTION2 HPCD...	28.49	1.048e2					3.0	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	35.99	8.499e1					2.5	NO		bb		0.000
2	FUNCTION3 OCDPE	34.37	1.004e2					2.7	NO		bb		0.000
3	FUNCTION3 OCDPE	33.49	7.795e1					2.6	NO		bb		0.000
4	FUNCTION3 OCDPE	33.13	1.794e2					2.9	NO		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
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ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
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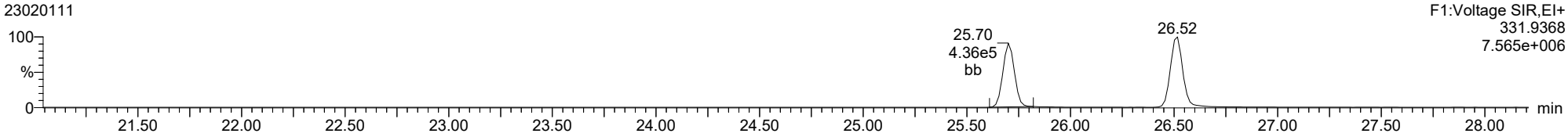

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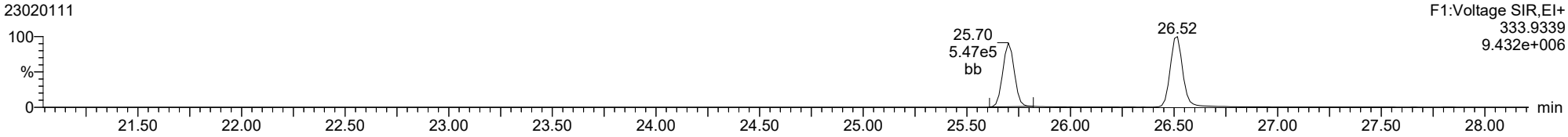

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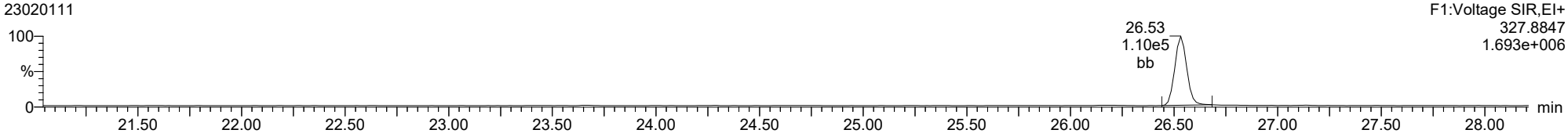

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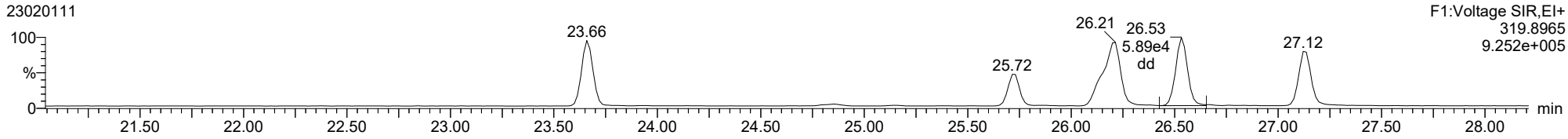

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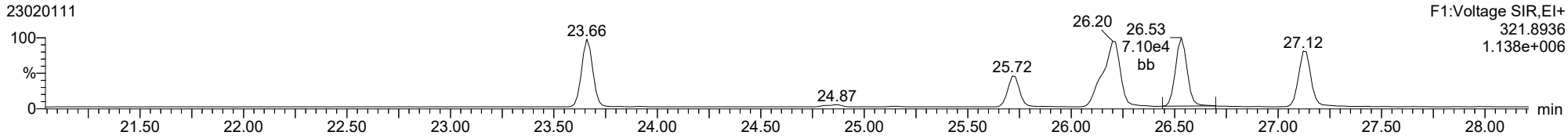

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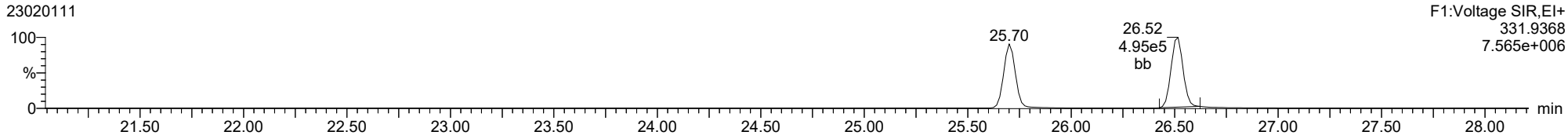

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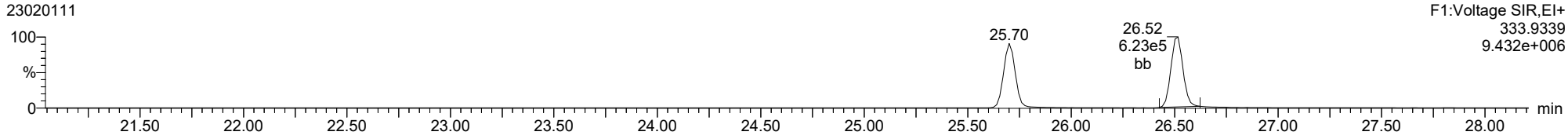

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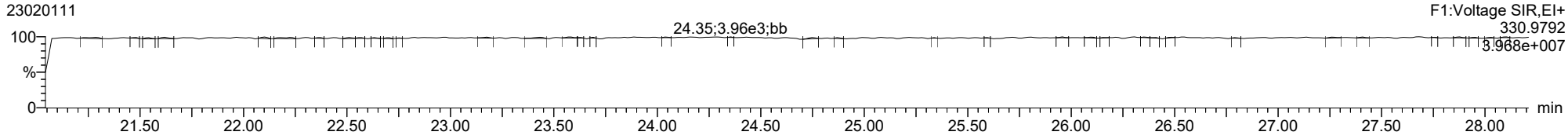

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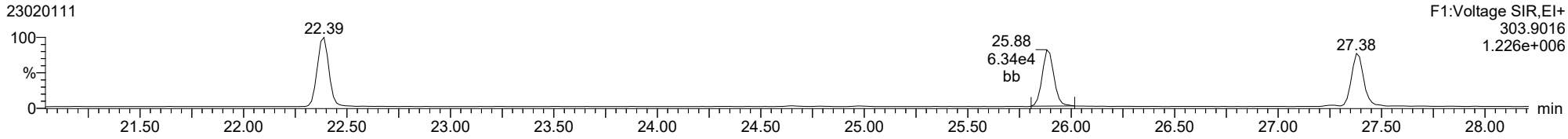

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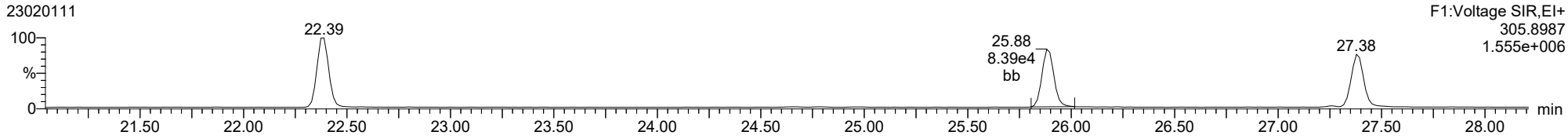

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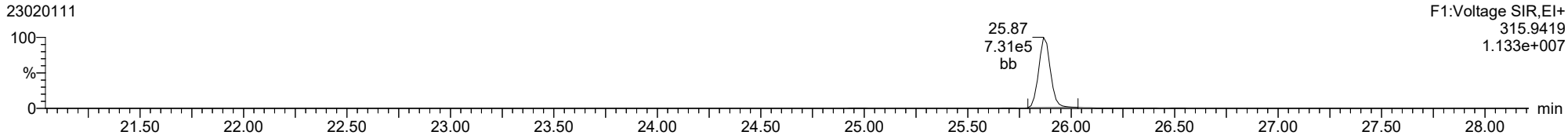

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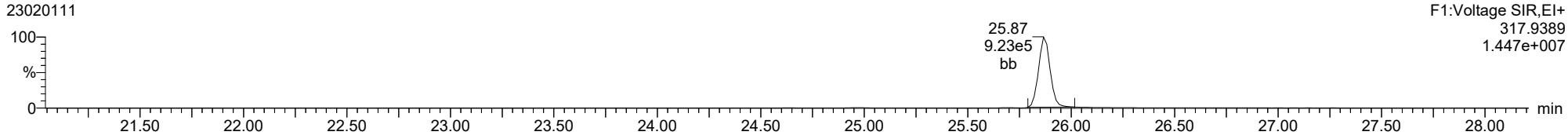

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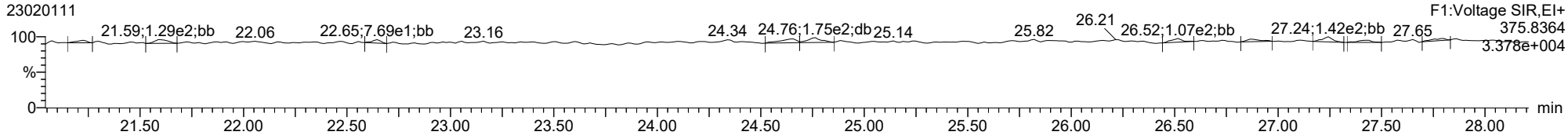

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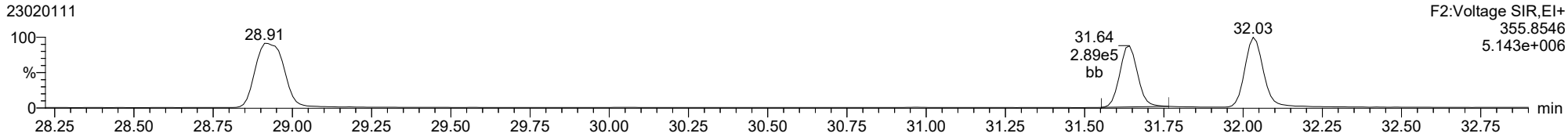

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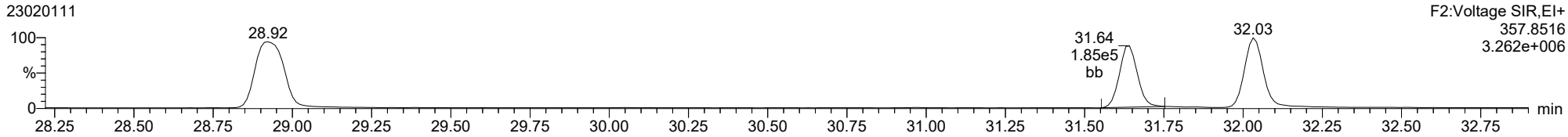

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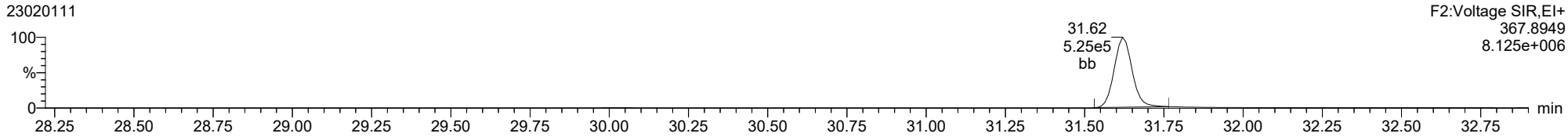

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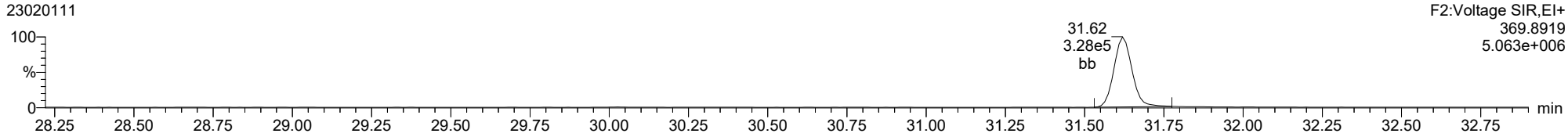

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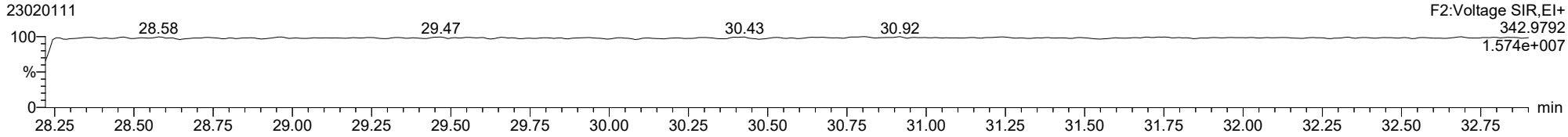

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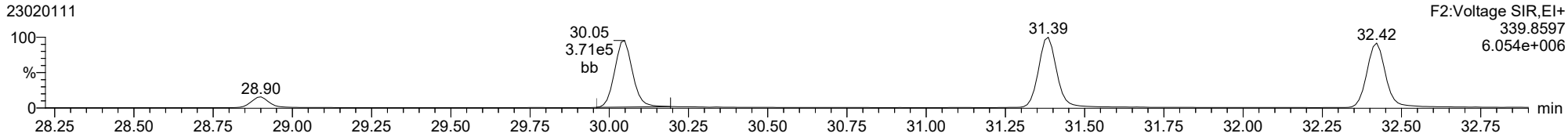

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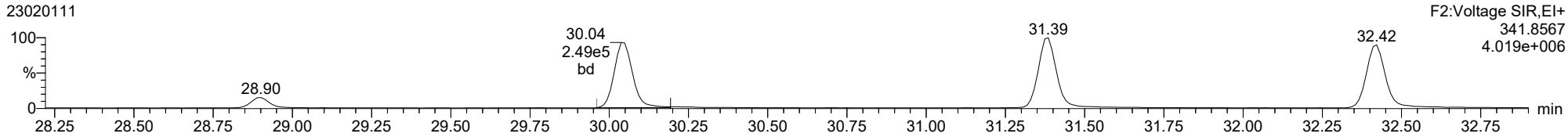

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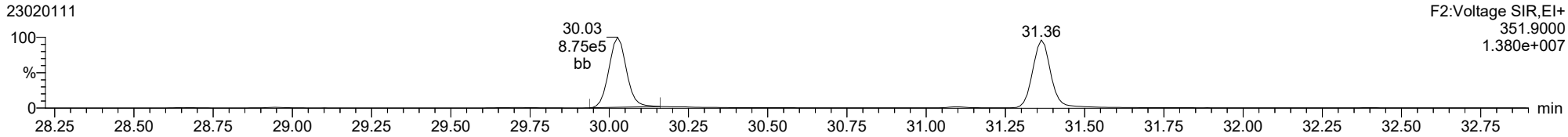

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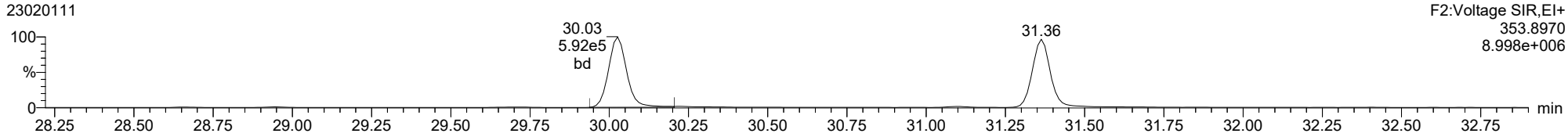
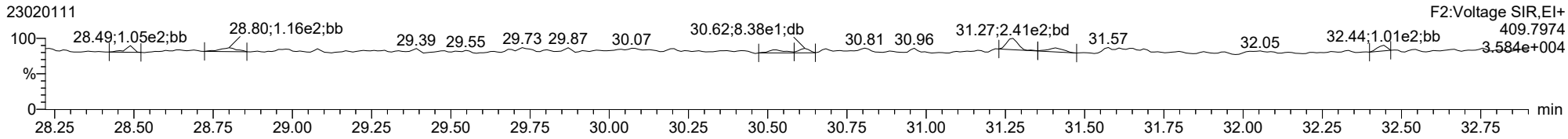


FUNCTION2 HPCDPE



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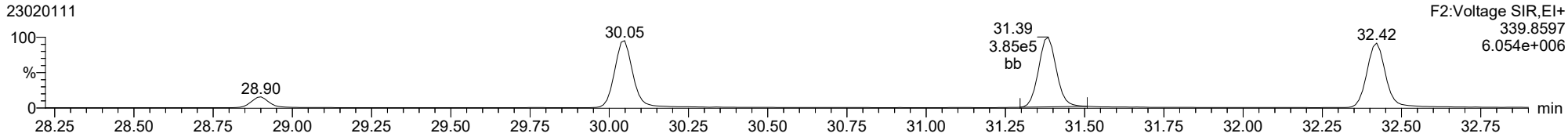

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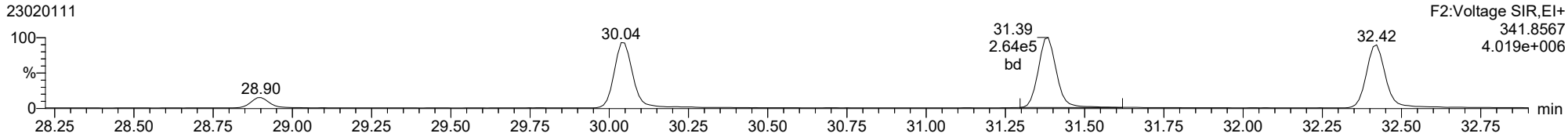

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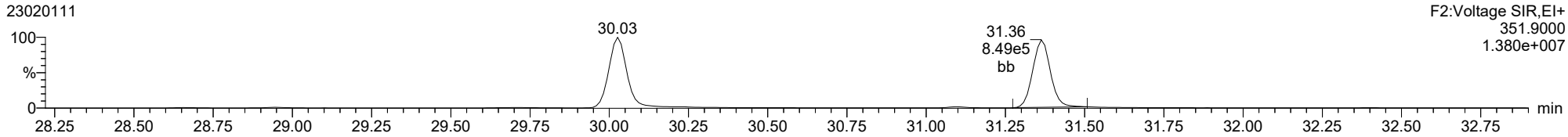

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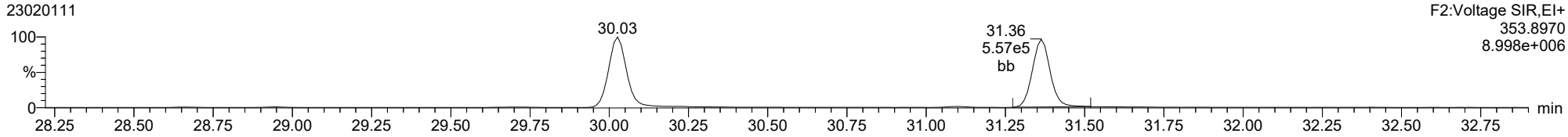

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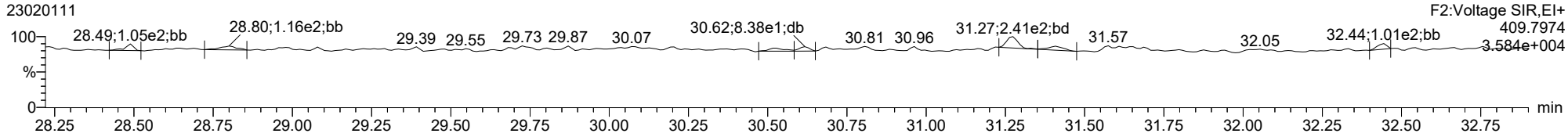

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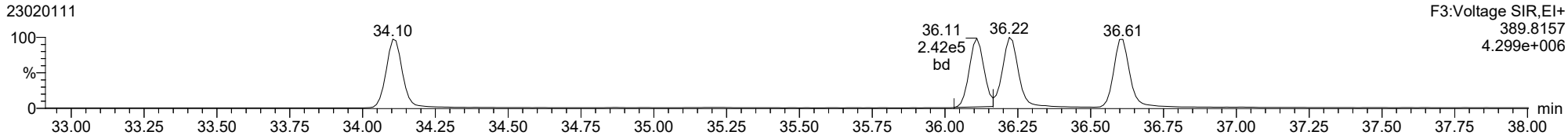

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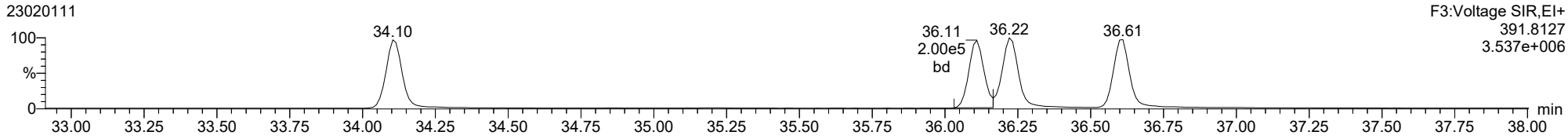

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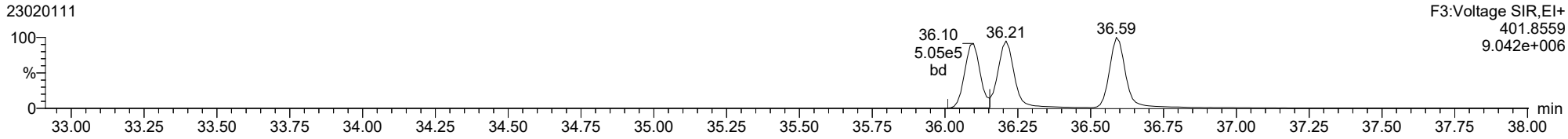

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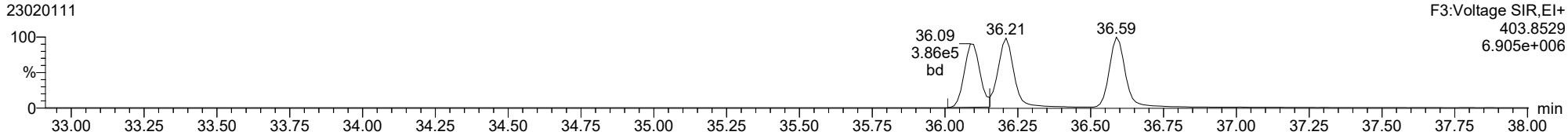

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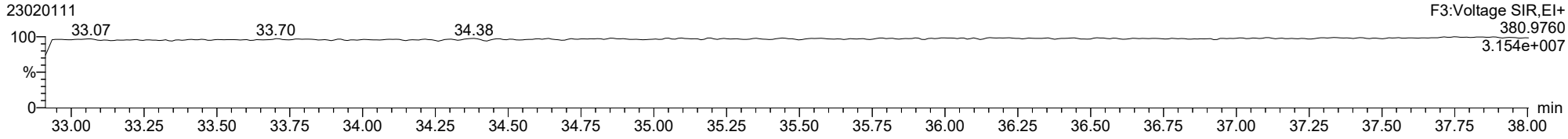

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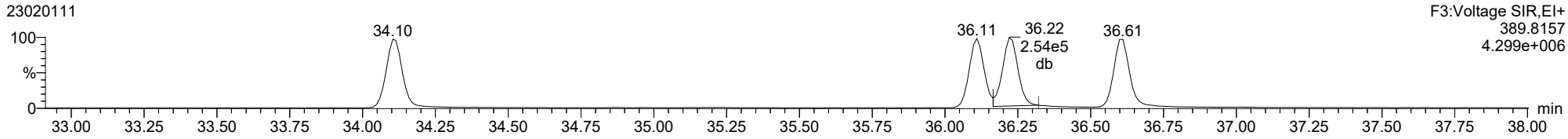

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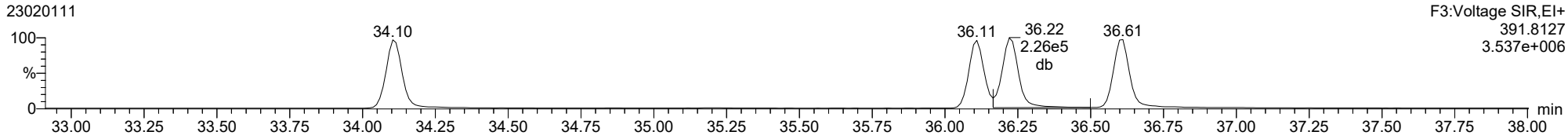

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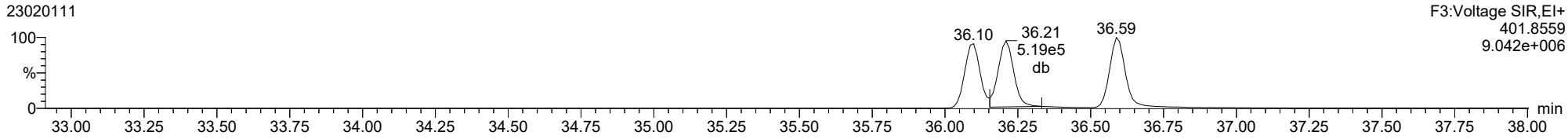

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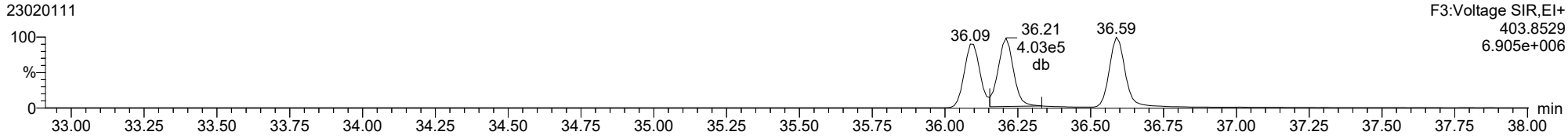

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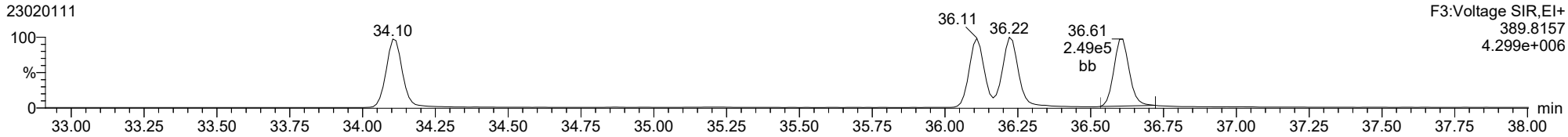

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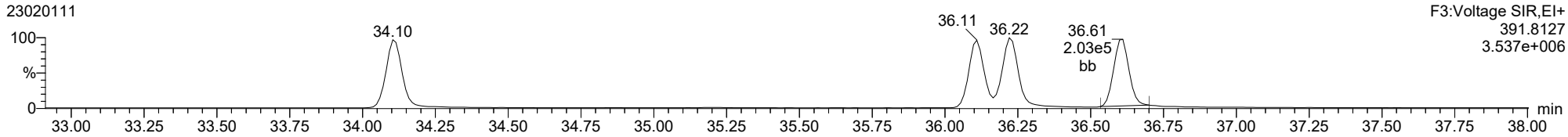

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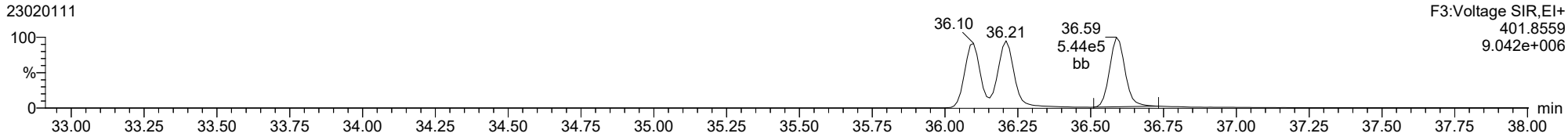

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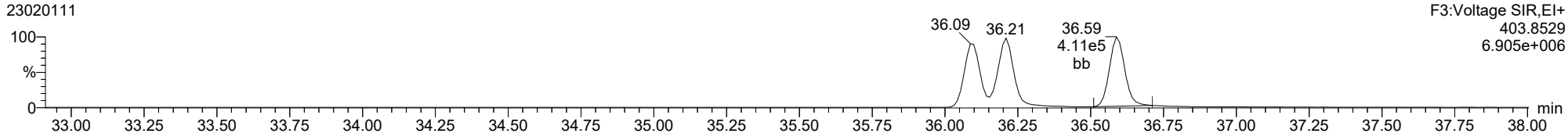

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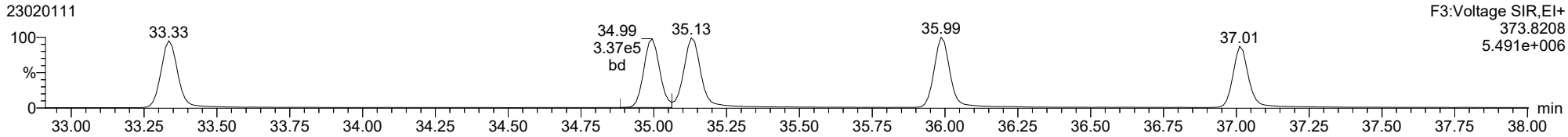

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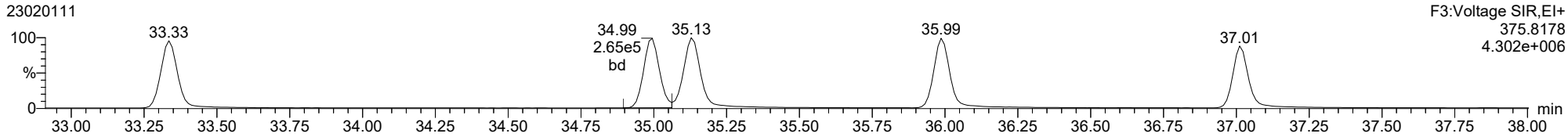

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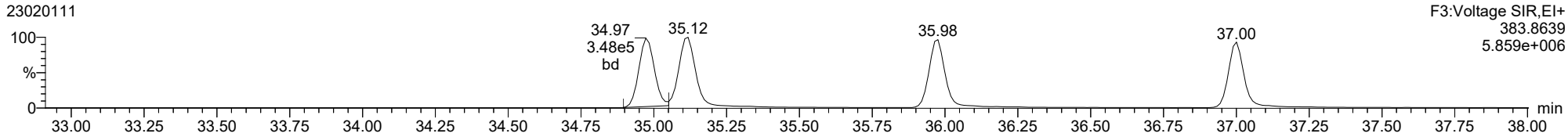

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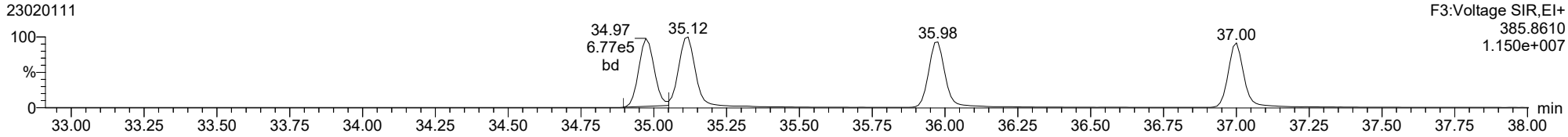

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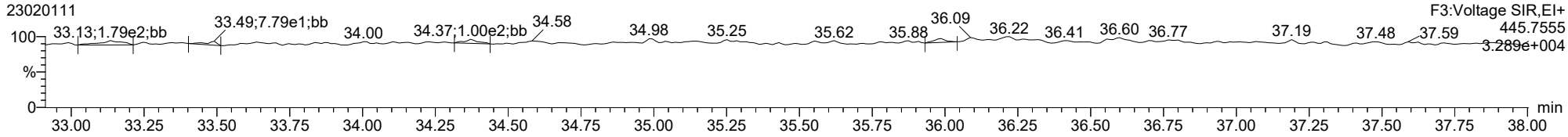

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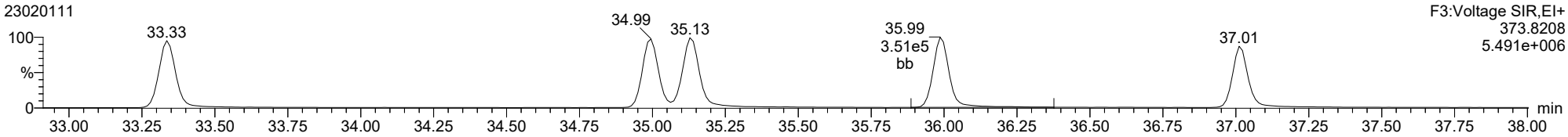

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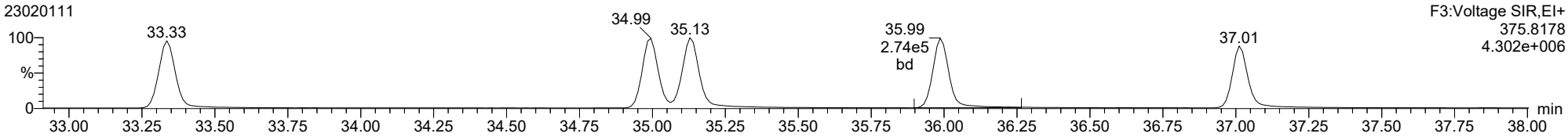

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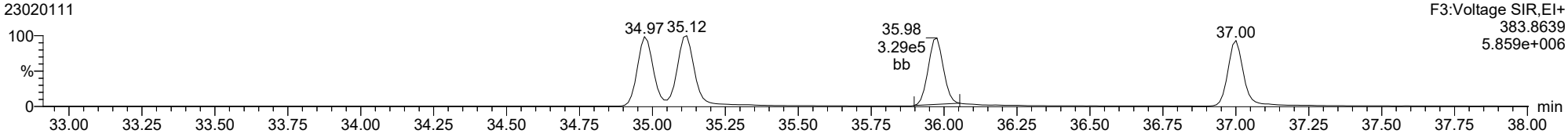

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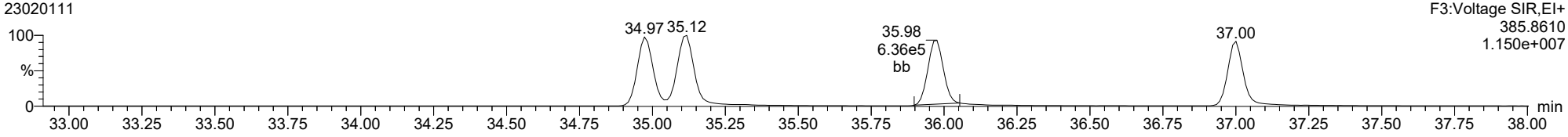

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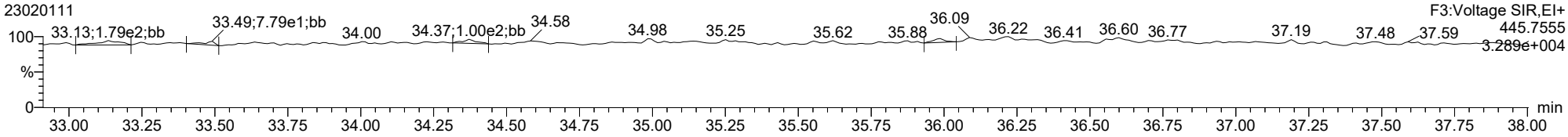

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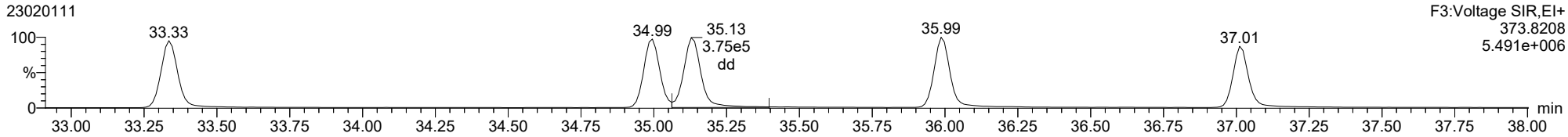

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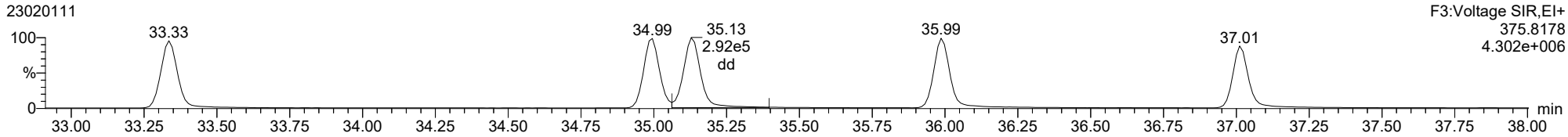

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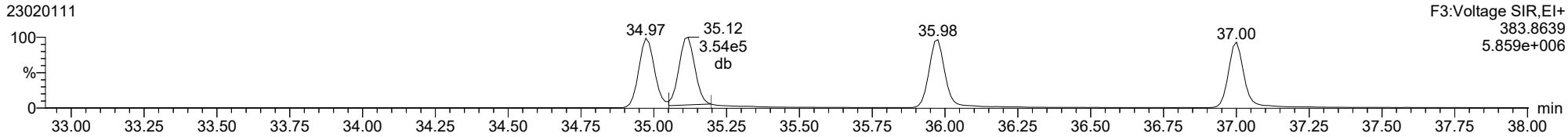

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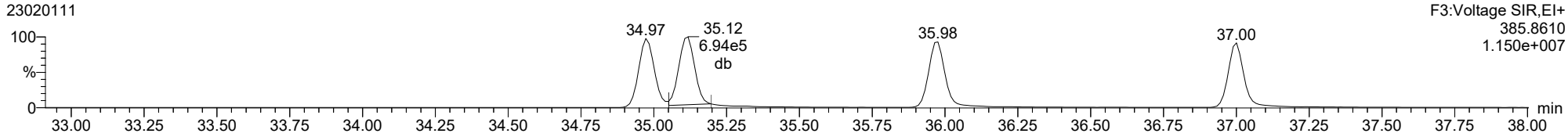

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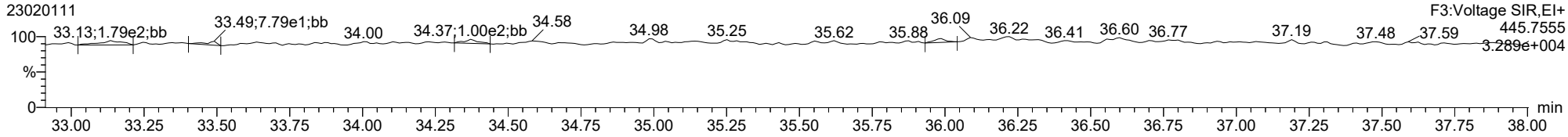

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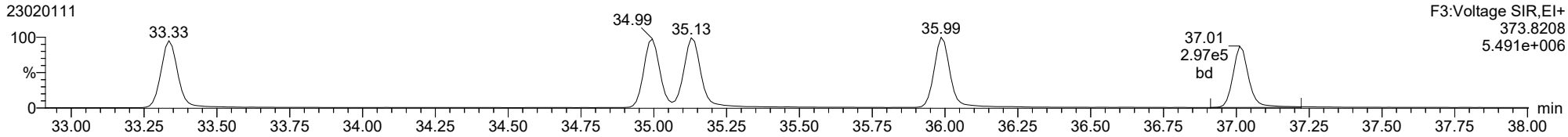

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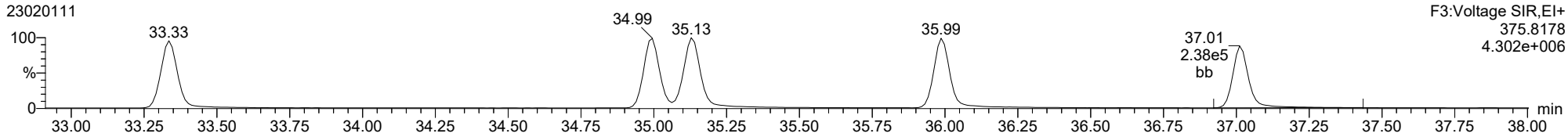

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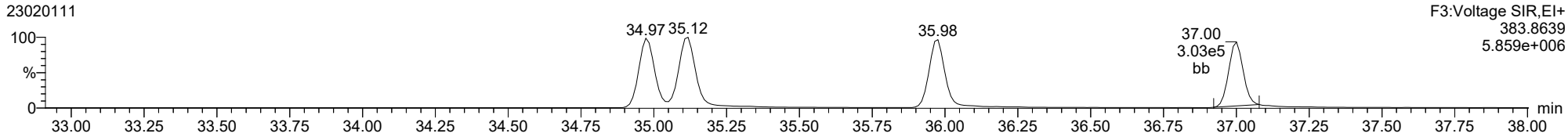

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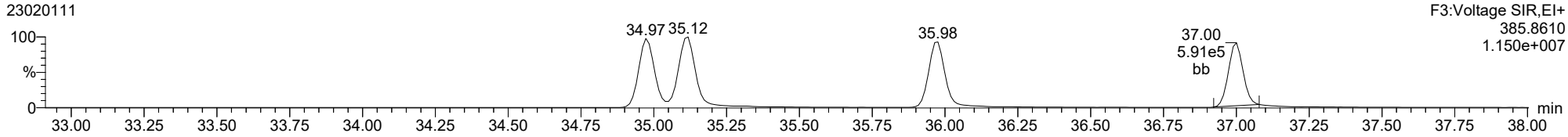
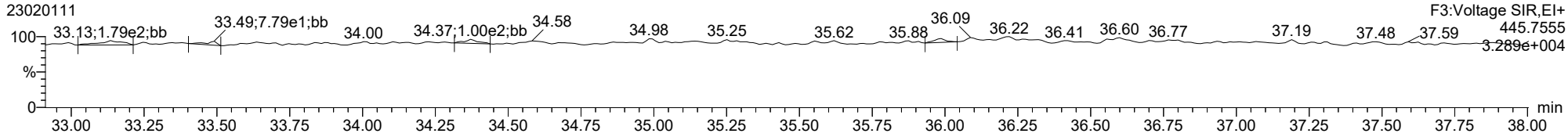


FUNCTION3 OCDPE



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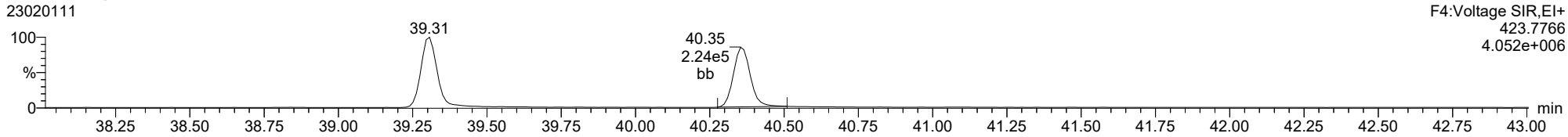

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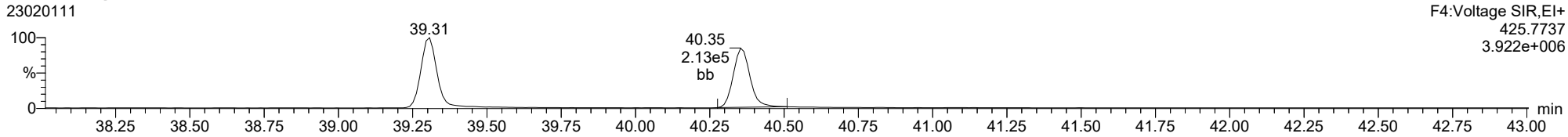

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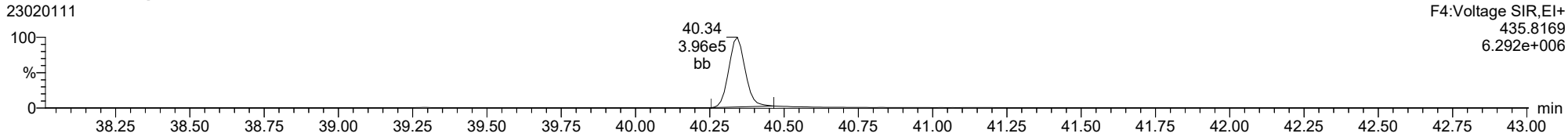

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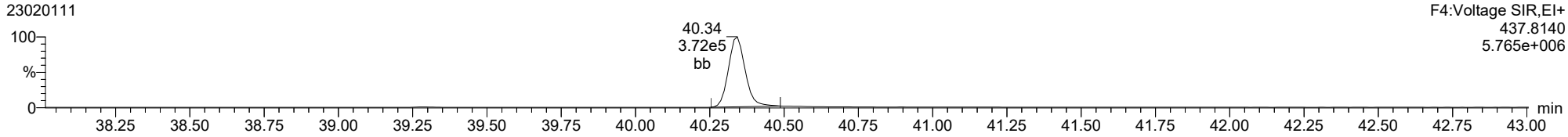
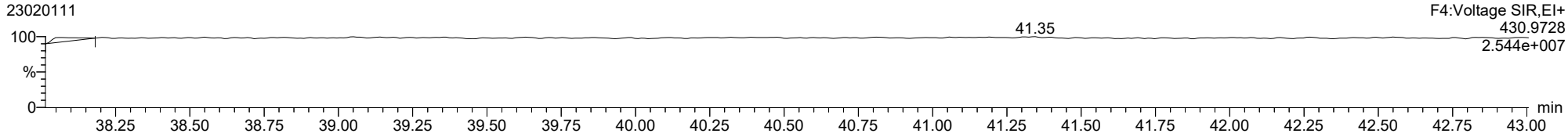


FUNCTION4 PFK



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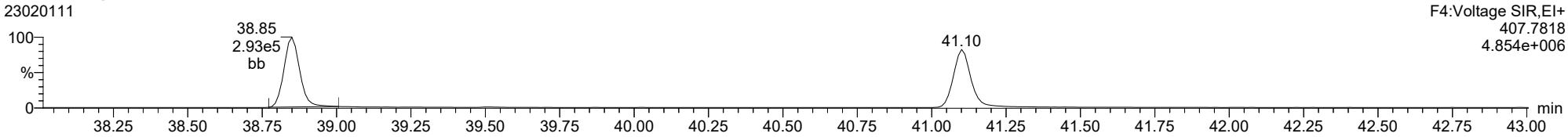

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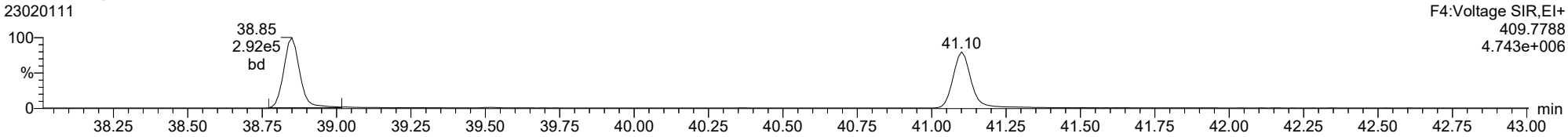

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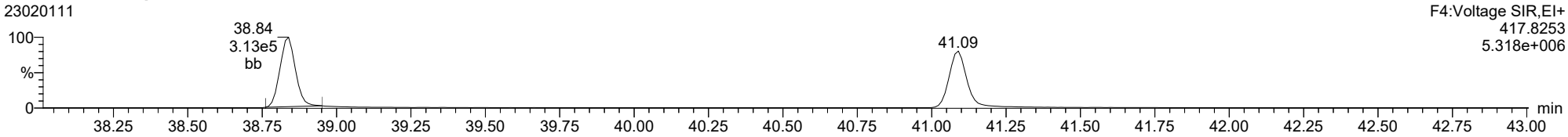

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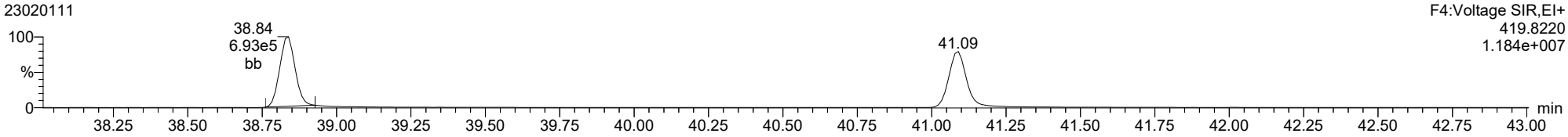
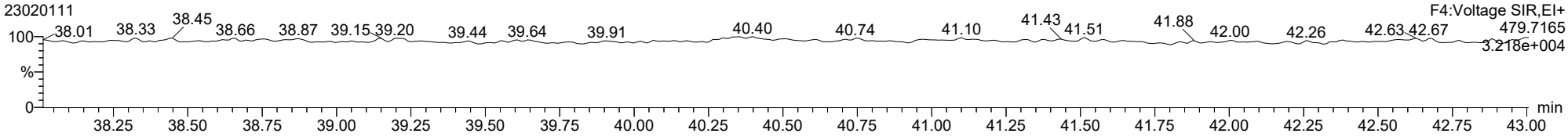


FUNCTION4 NCDPE



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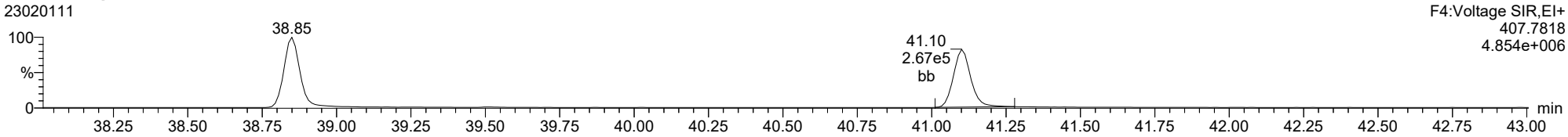

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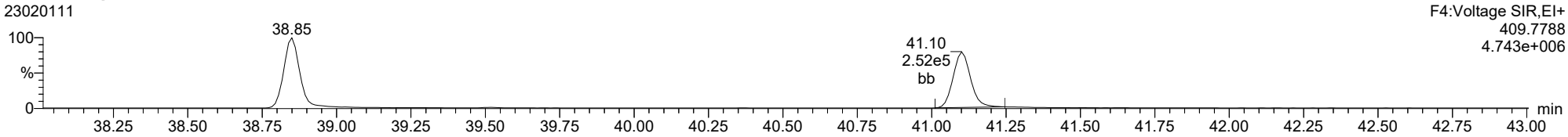

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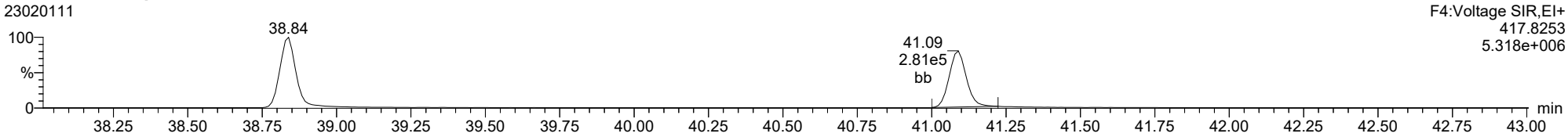

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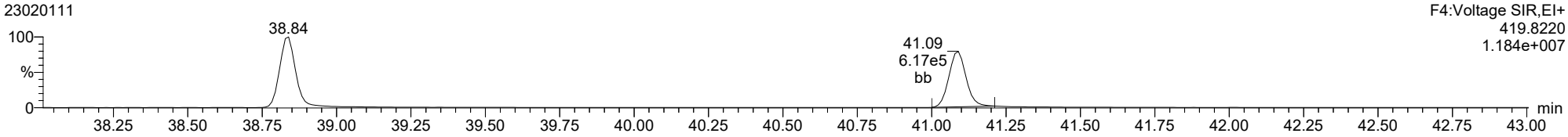

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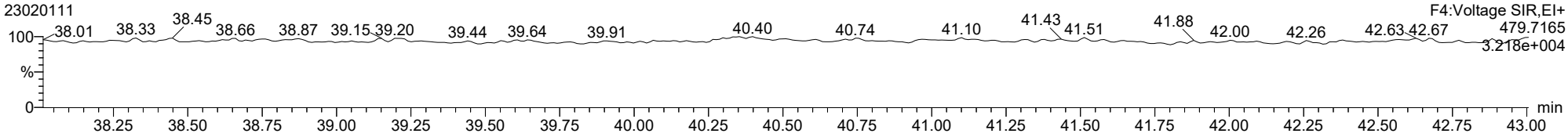

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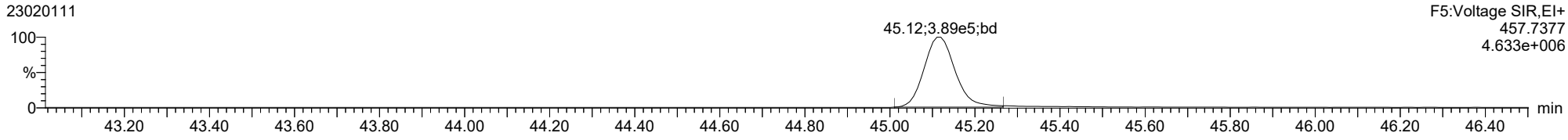

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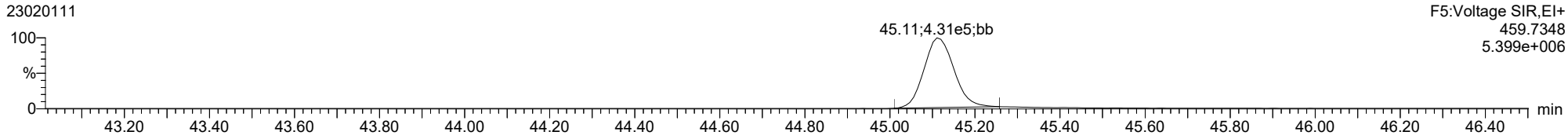

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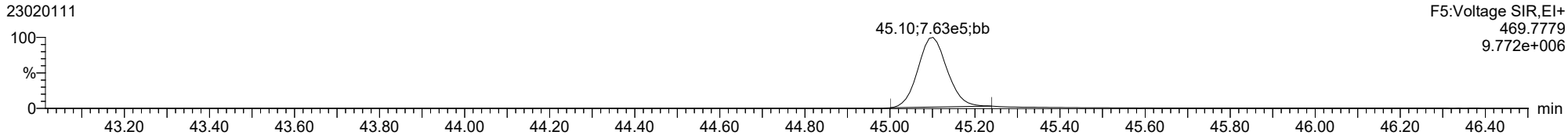

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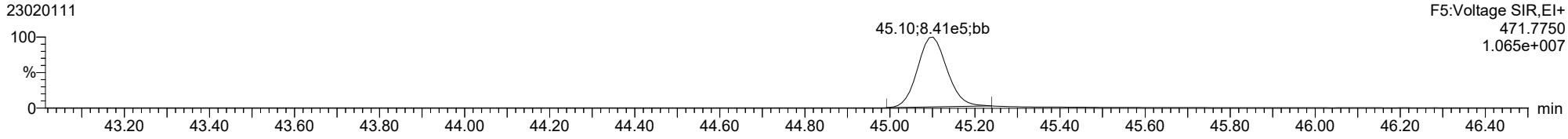
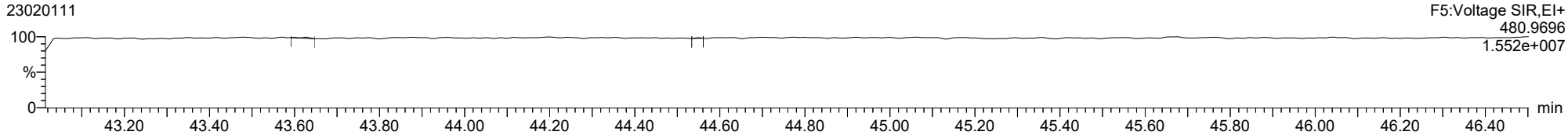


FUNCTION5 PFK



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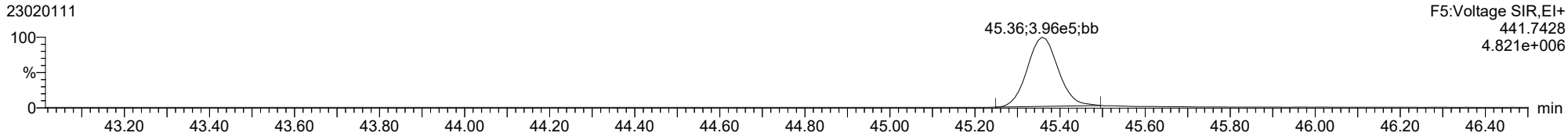
Printed: Friday, February 03, 2023 11:23:25 Pacific Standard Time

ID: CS3R2, Name: 23020111, Date: 01-Feb-2023, Time: 21:12:31, Conditions: AUTOSPEC01, User: pk

OCDF



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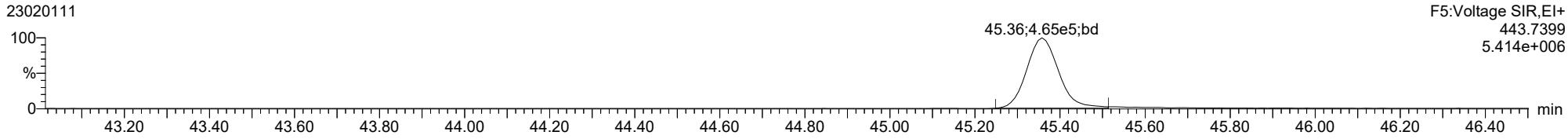

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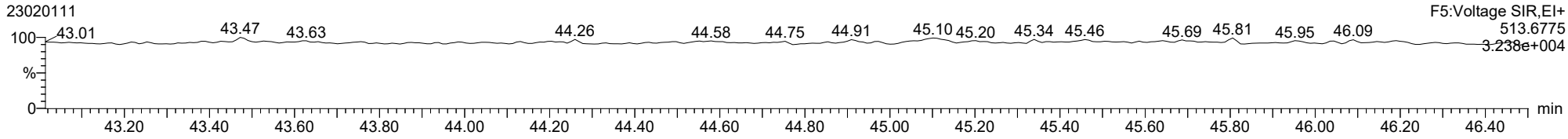

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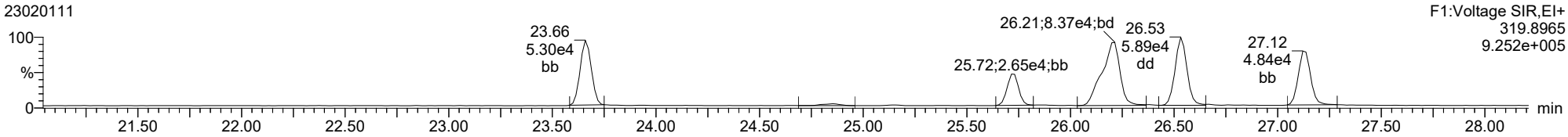
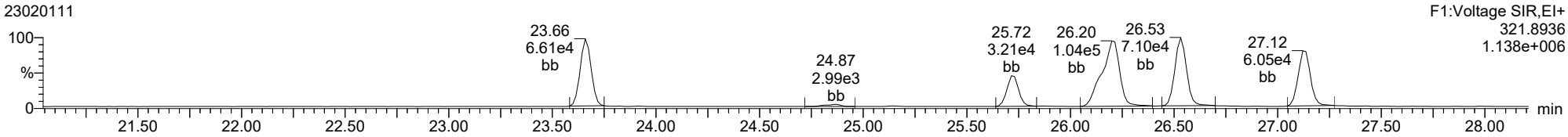


Total-tetradioxins



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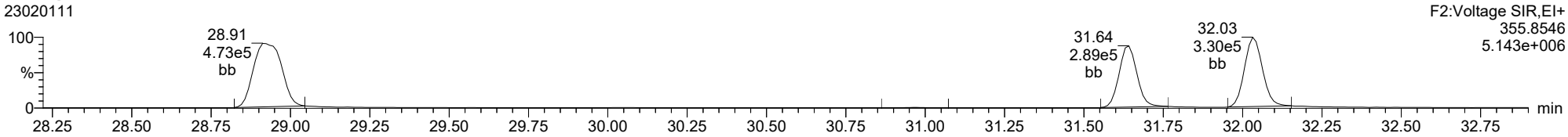
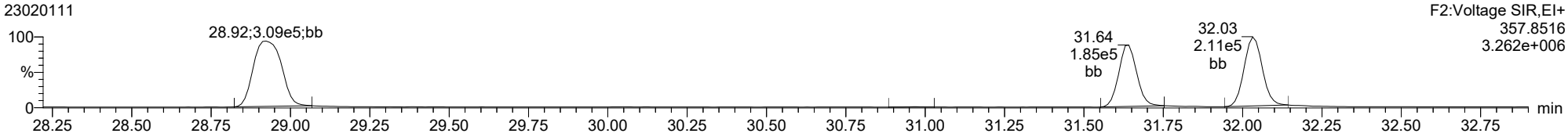


Total-pentadioxins



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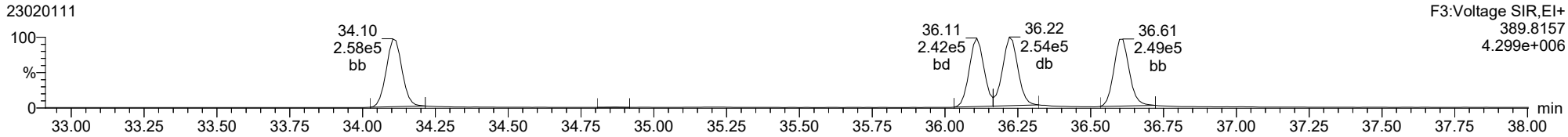
Total-hexadioxins



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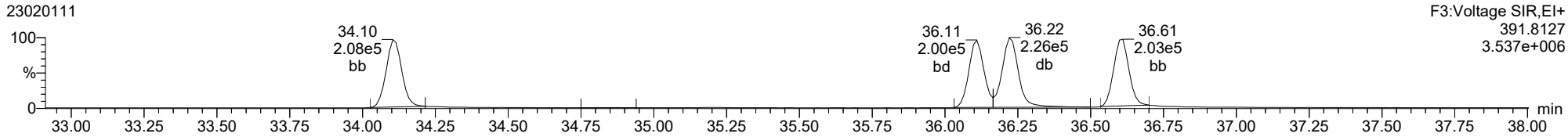
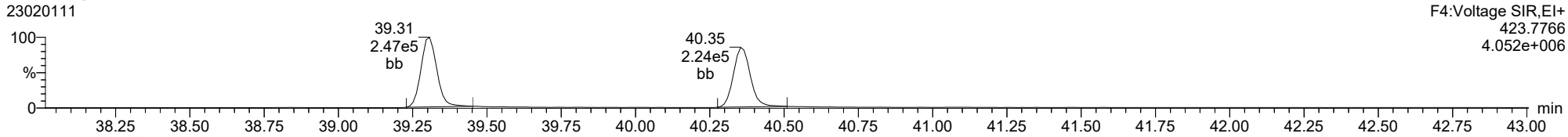


Total-heptadioxins



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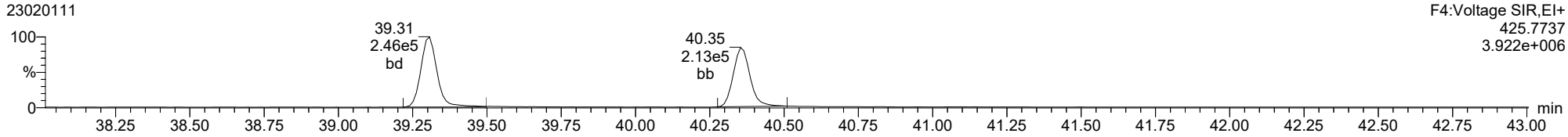

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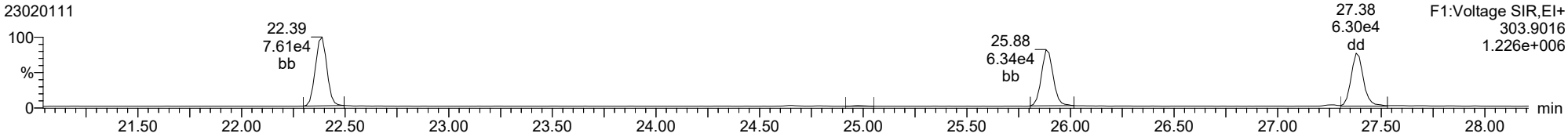
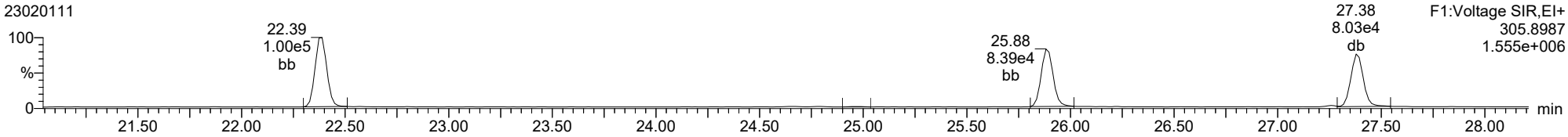
Total-tetrafurans



Total-tetrafurans



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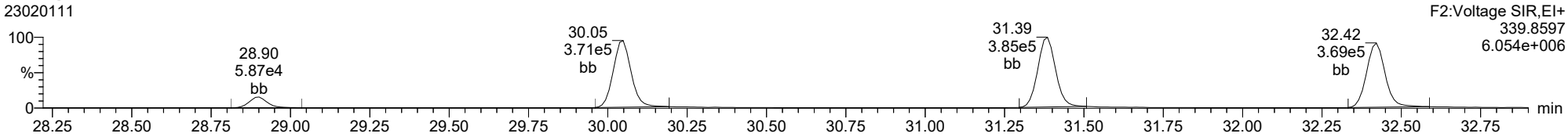

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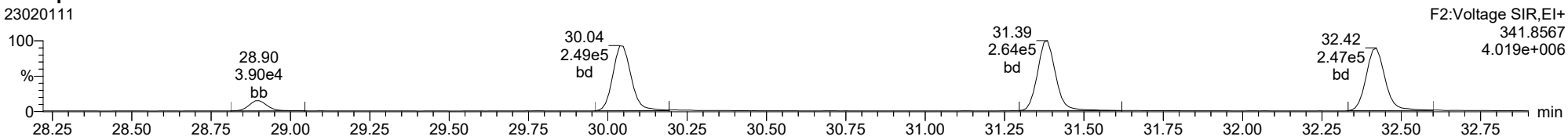

ID: CS3R2, Name: 23020111, Date: 01-Feb-2023, Time: 21:12:31, Conditions: AUTOSPEC01, User: pk

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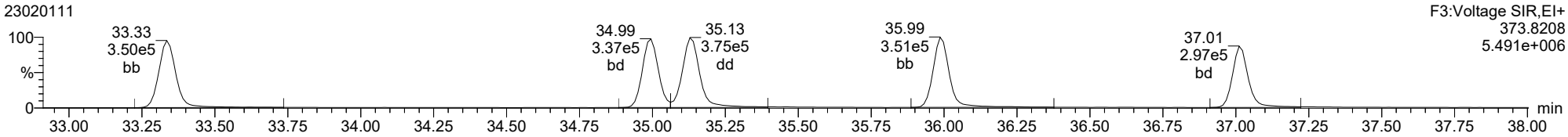

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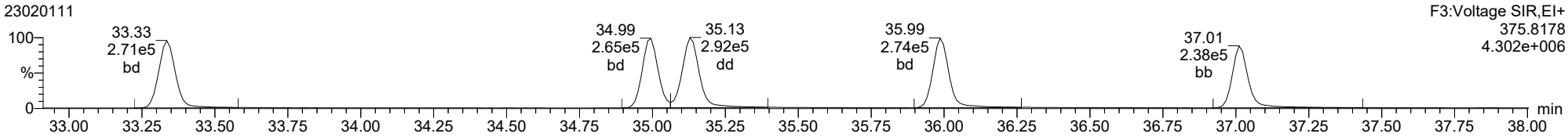

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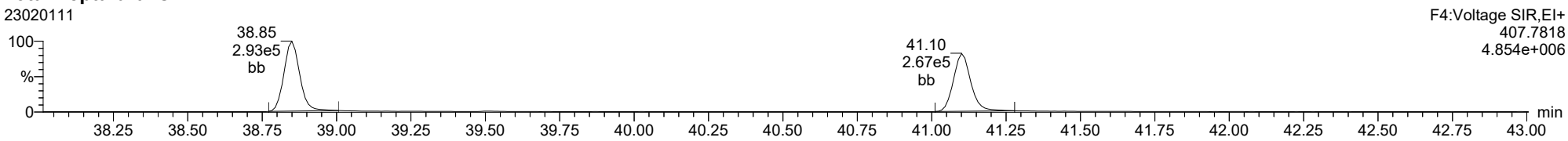

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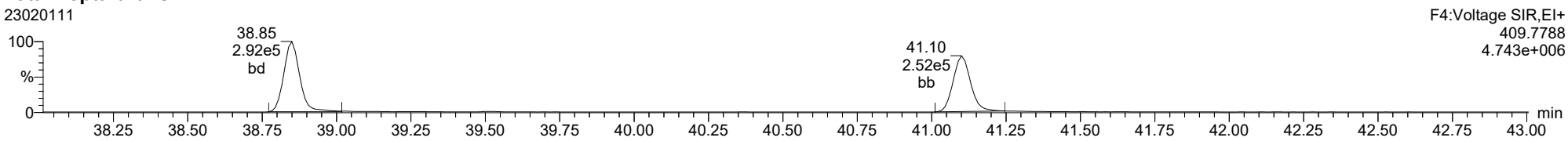

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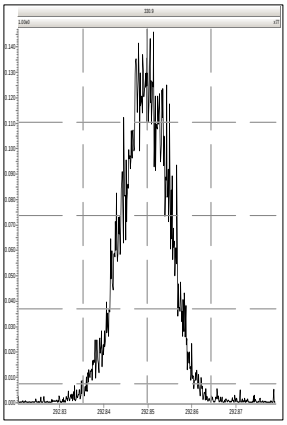
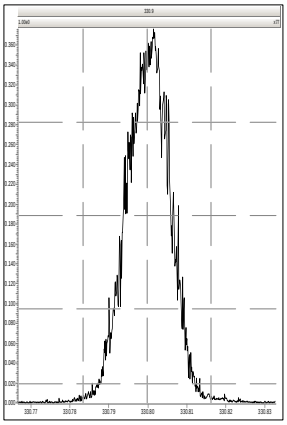
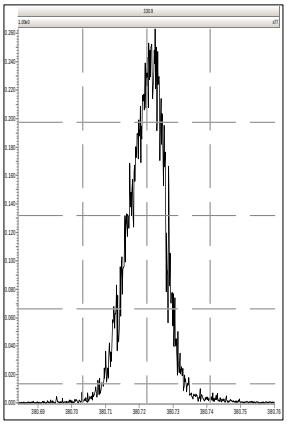
M 292.9824 R 12286



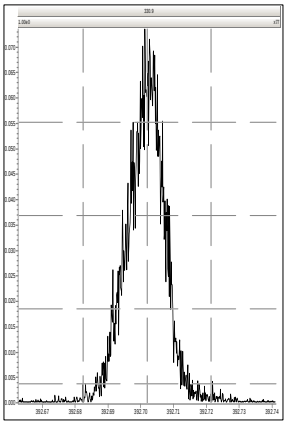
M 330.9792 R 13297



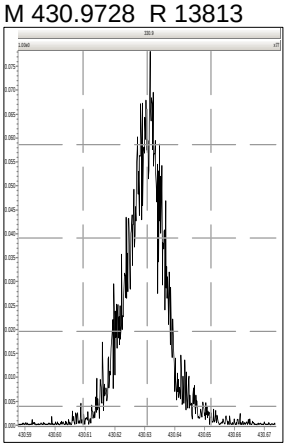
M 380.9760 R 15928



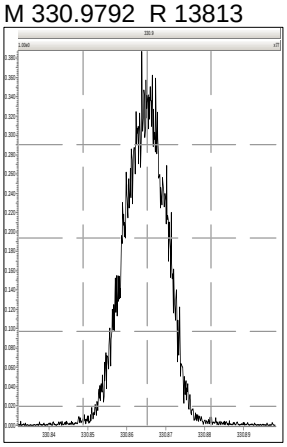
M 392.9760 R 16091



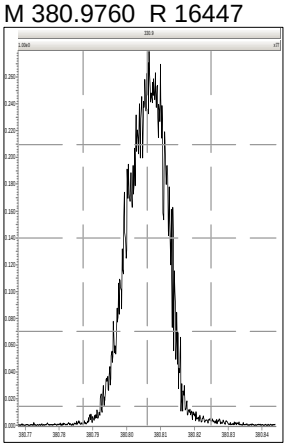
M 430.9728 R 13813



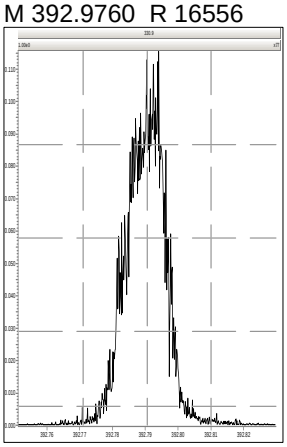
M 330.9792 R 13813



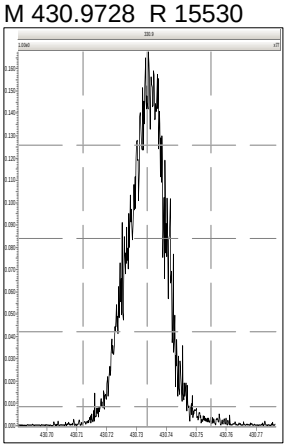
M 380.9760 R 16447



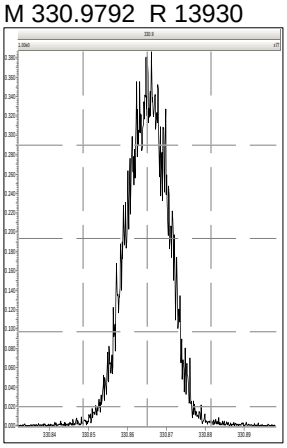
M 392.9760 R 16556



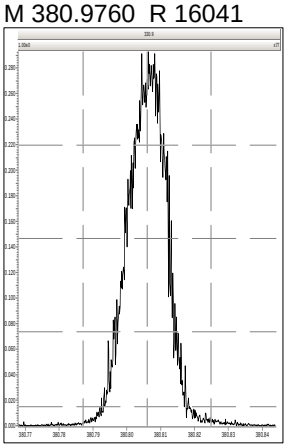
M 430.9728 R 15530



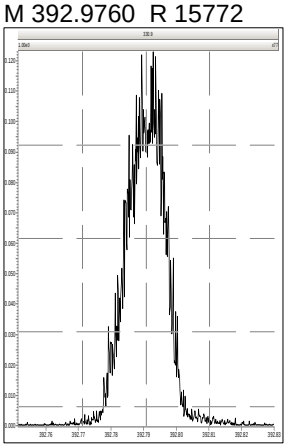
M 330.9792 R 13930



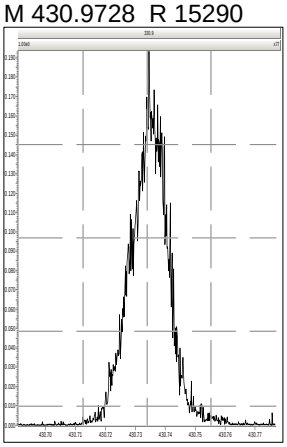
M 380.9760 R 16041



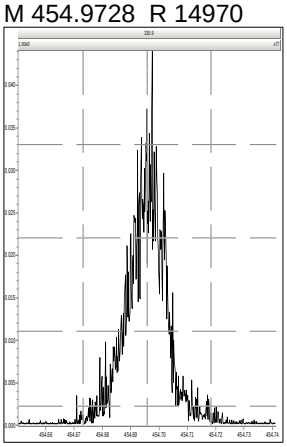
M 392.9760 R 15772



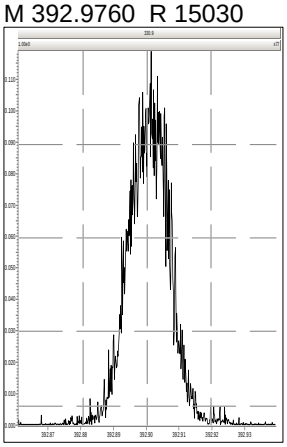
M 430.9728 R 15290



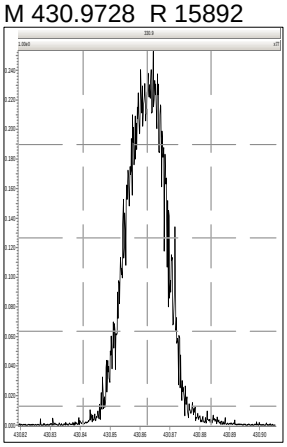
M 454.9728 R 14970



M 392.9760 R 15030



M 430.9728 R 15892



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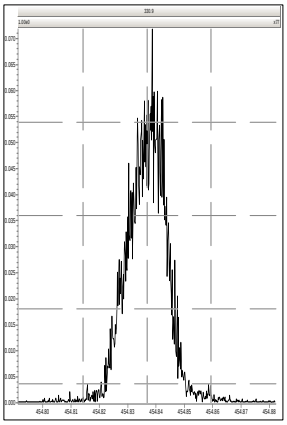
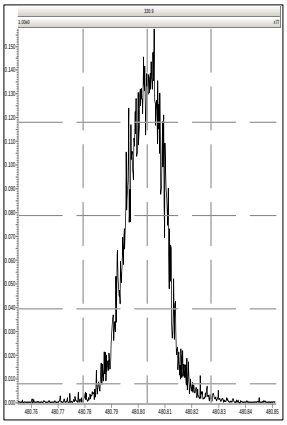
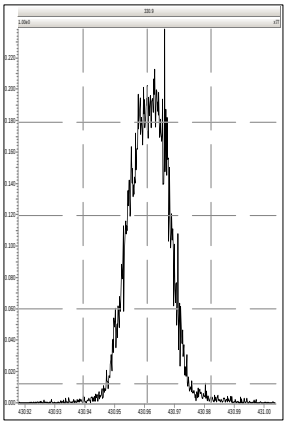
M 454.9728 R 15556



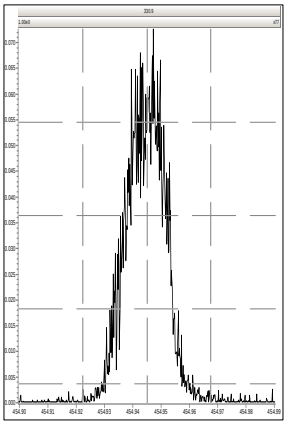
M 480.9696 R 15064



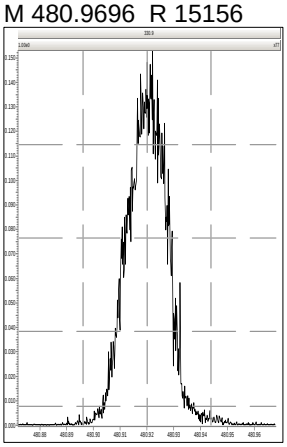
M 430.9728 R 15337



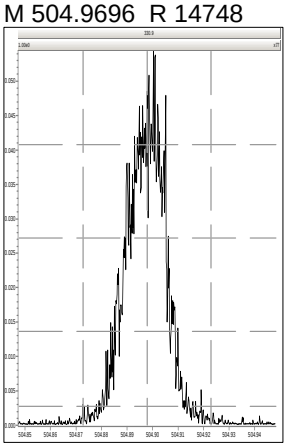
M 454.9728 R 16464



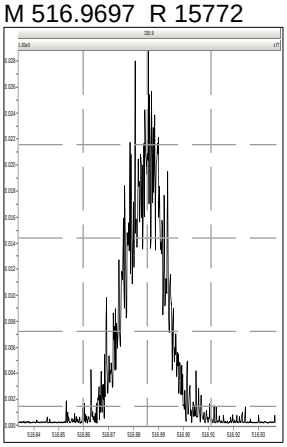
M 480.9696 R 15156

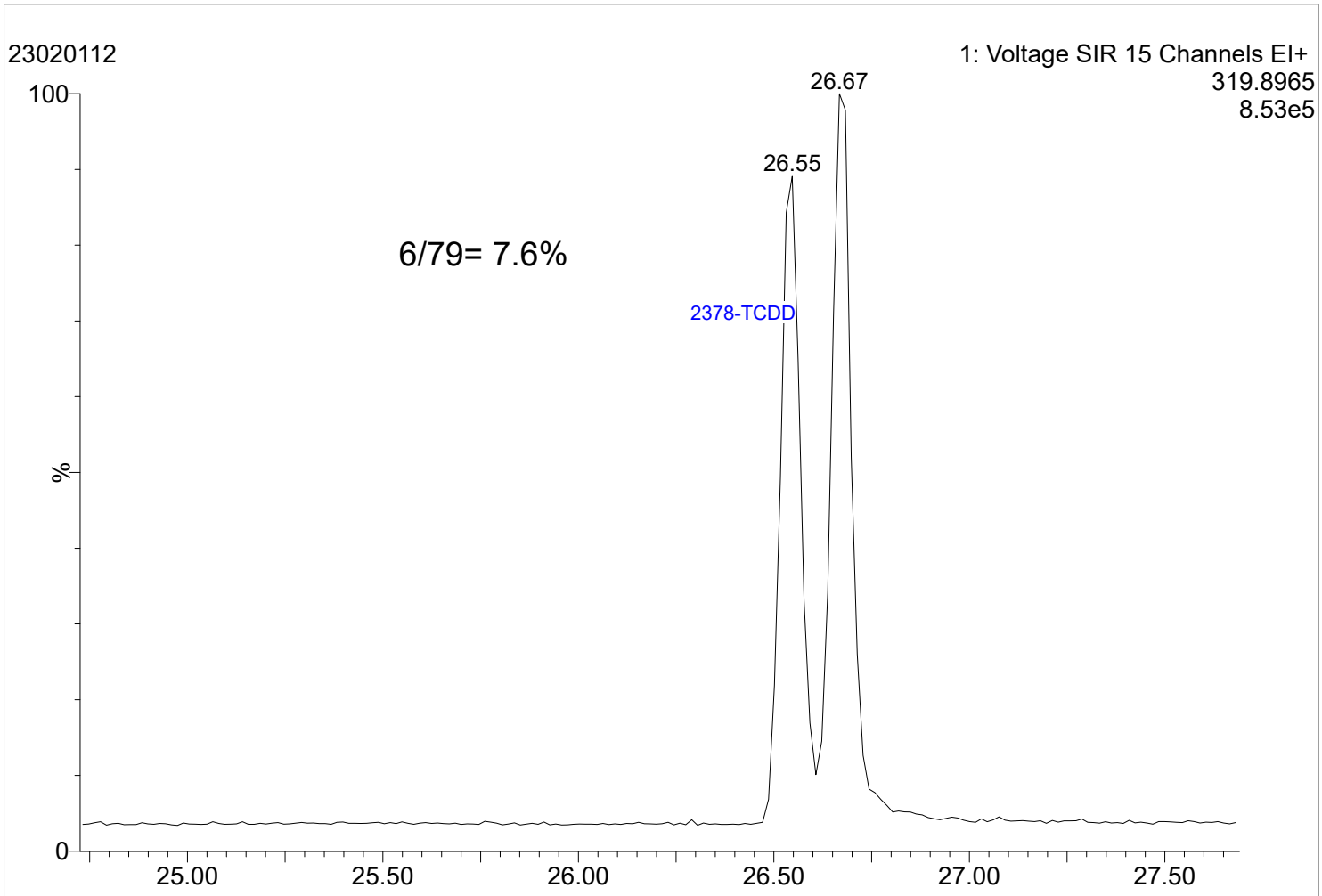


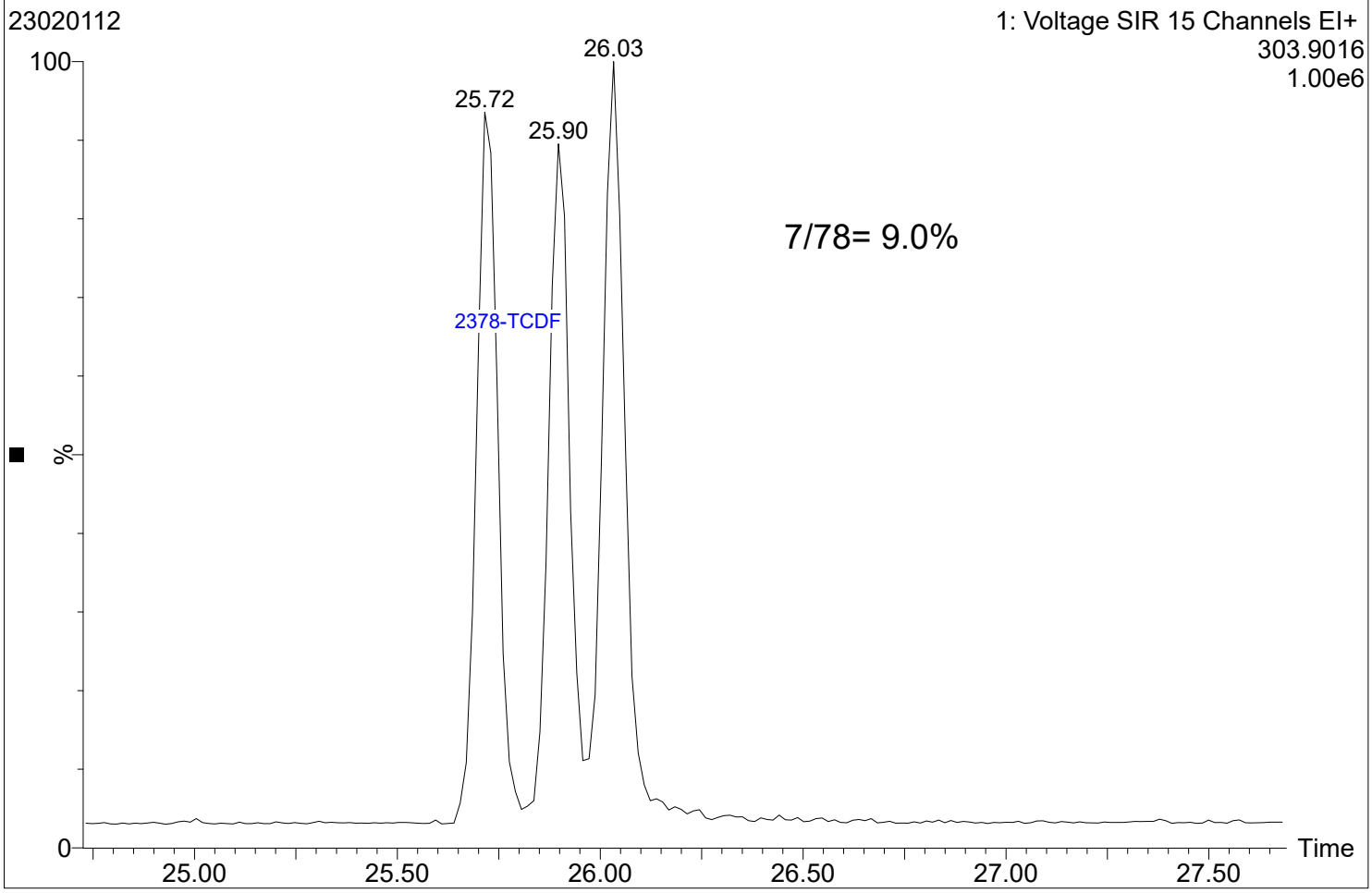
M 504.9696 R 14748



M 516.9697 R 15772




23020112
1: Voltage SIR 15 Channels EI+
319.8965
8.53e5
100
26.67
26.55
6/79= 7.6%
2378-TCDD
%
0
25.00
25.50
26.00
26.50
27.00
27.50


23020112
1: Voltage SIR 15 Channels EI+
303.9016
1.00e6
100
26.03
25.72
25.90
7/78= 9.0%
2378-TCDF
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00010
Laboratory ID: SLB0026-SCV1
Sequence: SLB0026
Sequence Name: ICVCR
Standard ID: H008219

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
2,3,7,8-TCDF	10.000	9.80	-2.0	
2,3,7,8-TCDD	10.000	10.1	1.0	
1,2,3,7,8-PeCDF	50.000	49.4	-1.1	
2,3,4,7,8-PeCDF	50.000	50.7	1.4	
1,2,3,7,8-PeCDD	50.000	48.9	-2.2	
1,2,3,4,7,8-HxCDF	50.000	50.8	1.7	
1,2,3,6,7,8-HxCDF	50.000	51.1	2.1	
2,3,4,6,7,8-HxCDF	50.000	51.5	3.1	
1,2,3,7,8,9-HxCDF	50.000	49.9	-0.2	
1,2,3,4,7,8-HxCDD	50.000	51.0	2.0	
1,2,3,6,7,8-HxCDD	50.000	48.3	-3.4	
1,2,3,7,8,9-HxCDD	50.000	49.6	-0.8	
1,2,3,4,6,7,8-HpCDF	50.000	49.0	-2.0	
1,2,3,4,7,8,9-HpCDF	50.000	51.5	2.9	
1,2,3,4,6,7,8-HpCDD	50.000	48.8	-2.3	
OCDF	100.00	93.0	-7.0	
OCDD	100.00	95.8	-4.2	
13C12-2,3,7,8-TCDF	100.00	101	0.8	
13C12-2,3,7,8-TCDD	100.00	97.3	-2.7	
13C12-1,2,3,7,8-PeCDF	100.00	97.9	-2.1	
13C12-2,3,4,7,8-PeCDF	100.00	96.0	-4.0	
13C12-1,2,3,7,8-PeCDD	100.00	95.6	-4.4	
13C12-1,2,3,4,7,8-HxCDF	100.00	99.0	-1.0	
13C12-1,2,3,6,7,8-HxCDF	100.00	98.8	-1.2	
13C12-2,3,4,6,7,8-HxCDF	100.00	99.3	-0.7	
13C12-1,2,3,7,8,9-HxCDF	100.00	98.6	-1.4	
13C12-1,2,3,4,7,8-HxCDD	100.00	97.7	-2.3	
13C12-1,2,3,6,7,8-HxCDD	100.00	101	0.6	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	100	0.3	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	101	0.8	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	101	0.6	
13C12-OCDD	200.00	205	2.6	
37Cl4-2,3,7,8-TCDD	10.000	8.94	-10.6	

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 1613B

Laboratory:	Analytical Resources, LLC	**SDG:**	23A0207
Client:	Anchor QEA, LLC	**Project:**	AOC5 MR Phase 1
Calibration:	GB00010	**Laboratory ID:**	SLB0026-SCV1
Sequence:	SLB0026	**Sequence Name:**	ICVCR
		Standard ID:	H008219

* Indicates values outside of QC limits

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00010
Laboratory ID: SLB0026-SCV1
Sequence: SLB0026
Standard ID: H008219

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
OCDF	100.00	93.0	-7.0	
OCDD	100.00	95.8	-4.2	
13C12-2,3,7,8-TCDF	100.00	101	0.8	
13C12-2,3,7,8-TCDD	100.00	97.3	-2.7	
13C12-1,2,3,7,8-PeCDF	100.00	97.9	-2.1	
13C12-2,3,4,7,8-PeCDF	100.00	96.0	-4.0	
13C12-1,2,3,7,8-PeCDD	100.00	95.6	-4.4	
13C12-1,2,3,4,7,8-HxCDF	100.00	99.0	-1.0	
13C12-1,2,3,6,7,8-HxCDF	100.00	98.8	-1.2	
13C12-2,3,4,6,7,8-HxCDF	100.00	99.3	-0.7	
13C12-1,2,3,7,8,9-HxCDF	100.00	98.6	-1.4	
13C12-1,2,3,4,7,8-HxCDD	100.00	97.7	-2.3	
13C12-1,2,3,6,7,8-HxCDD	100.00	101	0.6	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	100	0.3	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	101	0.8	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	101	0.6	
13C12-OCDD	200.00	205	2.6	
37Cl4-2,3,7,8-TCDD	10.000	8.94	-10.6	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GB00010
Lab File ID:	23020102	Calibration Date:	02/01/2023
Sequence:	SLB0026	Injection Date:	02/01/23
Lab Sample ID:	SLB0026-ICV1	Injection Time:	10:37
Sequence Name:	CS3R1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
2,3,7,8-TCDF	A	10.000	9.00	0.8760604	0.7881394		-10.0	+/-16	
2,3,7,8-TCDD	A	10.000	8.00	1.2363600	0.9890074		-20.0	+/-22	
1,2,3,7,8-PeCDF	A	50.000	45.5	0.8446540	0.7681961		-9.1	+/-18	
2,3,4,7,8-PeCDF	A	50.000	46.0	0.9111780	0.8383961		-8.0	+/-18	
1,2,3,7,8-PeCDD	A	50.000	49.7	1.0866850	1.0810230		-0.5	+/-22	
1,2,3,4,7,8-HxCDF	A	50.000	43.8	1.1816860	1.0352320		-12.4	+/-10	*
1,2,3,6,7,8-HxCDF	A	50.000	44.7	1.2480480	1.1146430		-10.7	+/-12	
2,3,4,6,7,8-HxCDF	A	50.000	45.6	1.2288500	1.1200940		-8.9	+/-12	
1,2,3,7,8,9-HxCDF	A	50.000	44.5	1.1865370	1.0560050		-11.0	+/-10	*
1,2,3,4,7,8-HxCDD	A	50.000	44.8	0.9869672	0.8835021		-10.5	+/-22	
1,2,3,6,7,8-HxCDD	A	50.000	43.8	1.0207220	0.8949701		-12.3	+/-22	
1,2,3,7,8,9-HxCDD	A	50.000	44.1	0.9854780	0.8698650		-11.7	+/-18	
1,2,3,4,6,7,8-HpCDF	A	50.000	45.1	1.2041190	1.0859080		-9.8	+/-10	
1,2,3,4,7,8,9-HpCDF	A	50.000	47.7	1.1653050	1.1124610		-4.5	+/-14	
1,2,3,4,6,7,8-HpCDD	A	50.000	44.2	1.2525690	1.1066520		-11.6	+/-14	
OCDF	A	100.00	86.3	1.1862640	1.0243110		-13.7	+/-37	
OCDD	A	100.00	90.9	1.1026670	1.0028370		-9.1	+/-21	
13C12-2,3,7,8-TCDF	A	100.00	81.8	1.7680590	1.4469997		-18.2	+/-29	
13C12-2,3,7,8-TCDD	A	100.00	103	1.1029470	1.1388769		3.3	+/-18	
13C12-1,2,3,7,8-PeCDF	A	100.00	97.0	1.5271250	1.4807739		-3.0	+/-24	
13C12-2,3,4,7,8-PeCDF	A	100.00	96.3	1.4662840	1.4126920		-3.7	+/-23	
13C12-1,2,3,7,8-PeCDD	A	100.00	97.3	0.9141518	0.8893426		-2.7	+/-38	
13C12-1,2,3,4,7,8-HxCDF	A	100.00	88.7	1.0536610	0.9345708		-11.3	+/-24	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	89.6	1.0799530	0.9680754		-10.4	+/-30	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	88.7	1.0143260	0.8993069		-11.3	+/-27	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	87.8	0.9279333	0.8145455		-12.2	+/-26	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	99.3	0.9329336	0.9264810		-0.7	+/-15	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	102	0.9646272	0.9846310		2.1	+/-15	
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	80.6	1.0360890	0.8353360		-19.4	+/-22	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	78.2	0.9049372	0.7072834		-21.8	+/-23	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GB00010
Lab File ID:	23020102	Calibration Date:	02/01/2023
Sequence:	SLB0026	Injection Date:	02/01/23
Lab Sample ID:	SLB0026-ICV1	Injection Time:	10:37
Sequence Name:	CS3R1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	84.9	0.7819773	0.6642647		-15.1	+/-28
13C12-OCDD	A	200.00	176	0.7882343	0.6917393		-12.2	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	8.58	1.2334500	1.0578858		-14.2	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GB00010
Lab File ID:	23022302	Calibration Date:	02/01/2023
Sequence:	SLB0345	Injection Date:	02/23/23
Lab Sample ID:	SLB0345-ICV1	Injection Time:	10:49
Sequence Name:	CS3V1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
2,3,7,8-TCDF	A	10.000	9.94	0.8760604	0.8710791		-0.6	+/-16	
2,3,7,8-TCDD	A	10.000	8.91	1.2363600	1.1014280		-10.9	+/-22	
1,2,3,7,8-PeCDF	A	50.000	49.1	0.8446540	0.8298602		-1.8	+/-18	
2,3,4,7,8-PeCDF	A	50.000	50.0	0.9111780	0.9119257		0.08	+/-18	
1,2,3,7,8-PeCDD	A	50.000	52.2	1.0866850	1.1338300		4.3	+/-22	
1,2,3,4,7,8-HxCDF	A	50.000	45.9	1.1816860	1.0839590		-8.3	+/-10	
1,2,3,6,7,8-HxCDF	A	50.000	44.5	1.2480480	1.1115030		-10.9	+/-12	
2,3,4,6,7,8-HxCDF	A	50.000	44.9	1.2288500	1.1036700		-10.2	+/-12	
1,2,3,7,8,9-HxCDF	A	50.000	46.1	1.1865370	1.0937280		-7.8	+/-10	
1,2,3,4,7,8-HxCDD	A	50.000	46.3	0.9869672	0.9135761		-7.4	+/-22	
1,2,3,6,7,8-HxCDD	A	50.000	44.7	1.0207220	0.9127573		-10.6	+/-22	
1,2,3,7,8,9-HxCDD	A	50.000	45.3	0.9854780	0.8931803		-9.4	+/-18	
1,2,3,4,6,7,8-HpCDF	A	50.000	49.5	1.2041190	1.1917490		-1.0	+/-10	
1,2,3,4,7,8,9-HpCDF	A	50.000	48.1	1.1653050	1.1204430		-3.8	+/-14	
1,2,3,4,6,7,8-HpCDD	A	50.000	44.8	1.2525690	1.1228770		-10.4	+/-14	
OCDF	A	100.00	88.9	1.1862640	1.0551250		-11.1	+/-37	
OCDD	A	100.00	98.6	1.1026670	1.0876320		-1.4	+/-21	
13C12-2,3,7,8-TCDF	A	100.00	86.1	1.7680590	1.5222670		-13.9	+/-29	
13C12-2,3,7,8-TCDD	A	100.00	97.7	1.1029470	1.0779528		-2.3	+/-18	
13C12-1,2,3,7,8-PeCDF	A	100.00	81.5	1.5271250	1.2439282		-18.5	+/-24	
13C12-2,3,4,7,8-PeCDF	A	100.00	86.2	1.4662840	1.2644457		-13.8	+/-23	
13C12-1,2,3,7,8-PeCDD	A	100.00	77.8	0.9141518	0.7111381		-22.2	+/-38	
13C12-1,2,3,4,7,8-HxCDF	A	100.00	93.7	1.0536610	0.9872913		-6.3	+/-24	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	103	1.0799530	1.1125471		3.0	+/-30	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	98.2	1.0143260	0.9963427		-1.8	+/-27	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	86.6	0.9279333	0.8039159		-13.4	+/-26	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	109	0.9329336	1.0205916		9.4	+/-15	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	119	0.9646272	1.1482316		19.0	+/-15	*
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	80.7	1.0360890	0.8356636		-19.3	+/-22	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	75.8	0.9049372	0.6863893		-24.2	+/-23	*

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GB00010
Lab File ID:	23022302	Calibration Date:	02/01/2023
Sequence:	SLB0345	Injection Date:	02/23/23
Lab Sample ID:	SLB0345-ICV1	Injection Time:	10:49
Sequence Name:	CS3V1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	79.3	0.7819773	0.6200338		-20.7	+/-28
13C12-OCDD	A	200.00	129	0.7882343	0.5073239		-35.6	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	8.39	1.2334500	1.0344777		-16.1	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:09:38 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3V1, Name: 23022302, Date: 23-Feb-2023, Time: 10:49:54, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	26.000	1.000	5.096e4	6.610e4	0.876	0.771	0.770	821	1402	7.40e5	9.48e5	900.6	676.3	NO	bd	bb	9.943
12378-PeCDF	30.176	1.001	2.790e5	1.766e5	0.845	1.580	1.550	2218	1980	4.16e6	2.60e6	1877.1	1311.6	NO	bb	bb	49.124
23478-PeCDF	31.524	1.001	3.112e5	1.977e5	0.911	1.574	1.550	2218	1980	4.68e6	2.97e6	2108.3	1497.3	NO	bb	bb	50.041
123478-HxCDF	35.122	1.000	2.818e5	2.274e5	1.182	1.239	1.240	1989	1821	4.43e6	3.56e6	2225.4	1954.0	NO	bd	bd	45.865
234678-HxCDF	36.125	1.001	2.834e5	2.398e5	1.229	1.182	1.240	1989	1821	4.30e6	3.53e6	2160.4	1936.2	NO	bd	bb	44.907
123678-HxCDF	35.267	1.001	3.238e5	2.646e5	1.248	1.224	1.240	1989	1821	4.48e6	3.62e6	2253.9	1989.2	NO	dd	dd	44.530
123789-HxCDF	37.150	1.000	2.324e5	1.860e5	1.187	1.249	1.240	1989	1821	3.33e6	2.69e6	1675.7	1478.6	NO	bd	bd	46.089
1234678-HpCDF	38.988	1.001	2.410e5	2.329e5	1.204	1.035	1.050	2746	1908	3.59e6	3.50e6	1307.1	1836.5	NO	bd	bd	49.486
1234789-HpCDF	41.261	1.000	1.867e5	1.793e5	1.165	1.041	1.050	2746	1908	2.41e6	2.32e6	877.1	1217.8	NO	bd	bd	48.075
OCDF	45.563	1.006	2.403e5	2.691e5	1.186	0.893	0.890	1156	1285	2.57e6	2.82e6	2224.2	2195.9	NO	bd	bd	88.945
2378-TCDD	26.650	1.000	4.585e4	5.896e4	1.236	0.778	0.770	1257	1023	6.77e5	8.61e5	539.0	842.0	NO	bd	bb	8.909
12378-PeCDD	31.769	1.000	2.216e5	1.343e5	1.087	1.649	1.550	1815	1331	3.51e6	2.16e6	1933.4	1621.8	NO	bb	bb	52.169
123478-HxCDD	36.236	1.000	2.461e5	1.976e5	0.987	1.246	1.240	2750	1748	3.86e6	3.12e6	1403.4	1787.9	NO	bd	bd	46.282
123678-HxCDD	36.359	1.001	2.742e5	2.245e5	1.021	1.221	1.240	2750	1748	3.96e6	3.21e6	1439.7	1837.5	NO	dd	dd	44.711
123789-HxCDD	36.738	1.011	2.506e5	2.103e5	0.985	1.192	1.240	2750	1748	3.81e6	3.20e6	1386.8	1831.0	NO	bd	bd	45.317
1234678-HpCDD	40.504	1.000	1.702e5	1.611e5	1.253	1.056	1.050	2023	1994	2.58e6	2.42e6	1277.0	1211.9	NO	bb	bb	44.823
OCDD	45.316	1.000	2.436e5	2.815e5	1.103	0.865	0.890	1448	1602	2.70e6	3.08e6	1863.8	1923.2	NO	bd	bd	98.636
13C-2378-TCDF	25.986	1.007	5.885e5	7.554e5	1.768	0.779	0.770	1541	1472	8.81e6	1.13e7	5714.2	7695.9	NO	bb	bb	86.098
13C-12378-PeCDF	30.153	1.168	6.677e5	4.304e5	1.527	1.551	1.550	3165	1900	9.39e6	6.09e6	2968.0	3202.2	NO	bd	bd	81.456
13C-23478-PeCDF	31.501	1.220	6.855e5	4.308e5	1.466	1.591	1.550	3165	1900	9.74e6	6.20e6	3076.3	3261.4	NO	bb	bb	86.235
13C-123478-HxCDF	35.111	0.956	3.166e5	6.230e5	1.054	0.508	0.510	2579	1903	5.15e6	1.01e7	1995.2	5329.3	NO	bd	bd	93.701
13C-123678-HxCDF	35.245	0.960	3.554e5	7.034e5	1.080	0.505	0.510	2579	1903	5.32e6	1.04e7	2061.6	5481.5	NO	db	db	103.018
13C-234678-HxCDF	36.103	0.983	3.355e5	6.127e5	1.014	0.548	0.510	2579	1903	4.84e6	9.72e6	1875.9	5108.0	NO	bb	bb	98.227
13C-123789-HxCDF	37.139	1.011	2.533e5	5.118e5	0.928	0.495	0.510	2579	1903	3.95e6	7.89e6	1530.1	4146.2	NO	bb	bb	86.635
13C-1234678-HpCDF	38.966	1.061	2.492e5	5.461e5	1.036	0.456	0.440	1814	2302	3.94e6	8.81e6	2171.8	3824.6	NO	bb	bb	80.656
13C-1234789-HpCDF	41.250	1.123	2.014e5	4.518e5	0.905	0.446	0.440	1814	2302	2.56e6	5.76e6	1412.0	2500.0	NO	bb	bb	75.849
13C-1234-TCDD	25.816	0.000	3.873e5	4.955e5	1.000	0.782	0.770	1580	1077	6.22e6	7.90e6	3935.4	7336.8	NO	bb	bb	100.000
13C-2378-TCDD	26.636	1.032	4.118e5	5.398e5	1.103	0.763	0.770	1580	1077	6.13e6	7.99e6	3880.6	7420.6	NO	bb	bb	97.734
13C-12378-PeCDD	31.758	1.230	3.843e5	2.435e5	0.914	1.578	1.550	1355	906	5.35e6	3.39e6	3949.5	3739.8	NO	bb	bb	77.792
13C-123478-HxCDD	36.225	0.986	5.426e5	4.287e5	0.933	1.265	1.240	2021	2615	8.90e6	7.06e6	4402.8	2697.6	NO	bd	bd	109.396
13C-123678-HxCDD	36.337	0.989	6.019e5	4.909e5	0.965	1.226	1.240	2021	2615	9.17e6	7.53e6	4534.6	2878.6	NO	db	db	119.034
13C-1234678-HpCDD	40.492	1.102	3.078e5	2.823e5	0.782	1.090	1.050	1427	1415	4.47e6	4.13e6	3132.8	2921.6	NO	bb	bb	79.290
13C-OCDD	45.298	1.233	4.579e5	5.077e5	0.788	0.902	0.890	1770	1465	5.37e6	5.98e6	3032.4	4082.5	NO	bb	bb	128.724
13C-123789-HxCDD	36.727	0.000	5.261e5	4.256e5	1.000	1.236	1.240	2021	2615	8.58e6	7.03e6	4242.6	2686.5	NO	bb	bb	100.000
37CL-2378-TCDD	26.650	1.032	9.132e4		1.233			1585		1.35e6		849.6			bb		8.387

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:09:38 Pacific Standard Time

ID: CS3V1, Name: 23022302, Date: 23-Feb-2023, Time: 10:49:54, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.483	0.865	5.967e4	7.753e4	1.064	0.770	0.770	821	1402	9.12e5	1.22e6	1110.8	868.4	NO	bb	bd	9.591
1289-TCDF	27.511	1.059	3.665e4	4.918e4	0.858	0.745	0.770	821	1402	5.11e5	6.83e5	621.6	486.8	NO	dd	dd	7.447
13468-PECDF	27.356	0.907	3.814e5	2.575e5	1.013	1.481	1.550	725	1035	5.89e6	4.03e6	8127.0	3893.1	NO	bb	bb	57.439
12389-PECDF	32.560	1.080	3.056e5	1.850e5	0.844	1.652	1.550	2218	1980	4.16e6	2.68e6	1876.2	1351.5	NO	bd	bb	52.952
123468-HXCDF	33.473	0.953	2.906e5	2.358e5	1.197	1.232	1.240	1989	1821	4.18e6	3.36e6	2100.3	1845.0	NO	bd	bb	46.796
1368-TCDD	23.768	0.892	4.574e4	5.748e4	1.084	0.796	0.770	1257	1023	7.26e5	9.04e5	577.5	883.9	NO	bb	bd	10.002
1289-TCDD	27.243	1.023	3.430e4	4.182e4	0.975	0.820	0.770	1257	1023	4.76e5	5.75e5	378.6	562.3	NO	bb	bd	8.203
12479-PECDD	29.039	0.914	3.314e5	2.120e5	1.837	1.563	1.550	1815	1331	3.30e6	2.07e6	1817.5	1554.0	NO	bb	bb	47.115
12389-PECDD	32.170	1.013	2.530e5	1.547e5	1.252	1.635	1.550	1815	1331	3.84e6	2.37e6	2116.5	1784.5	NO	bb	bb	51.863
124679-HXCDD	34.242	0.945	2.593e5	2.138e5	1.033	1.213	1.240	2750	1748	3.90e6	3.34e6	1417.4	1912.8	NO	bb	bb	47.159
1234679-HPCDD	39.434	0.974	1.938e5	1.988e5	1.286	0.975	1.050	2023	1994	2.92e6	2.84e6	1445.3	1424.4	NO	bb	bd	51.735
Total-tetrafurans			1.490e5		0.933			821		2.19e6							27.311
Total-penta1			3.814e5					725		5.89e6							57.439
Total-pentafurans			9.393e5		0.866			2218		1.36e7							159.601
Total-hexafurans			1.412e6		1.208			1989		2.07e7							228.187
Total-heptafurans			4.289e5		1.185			2746		6.01e6							97.828
Total-Furans			3.551e6		1.067			821		5.10e7							659.311
Total-tetradioxins			2.199e5		1.099			1257		2.98e6							47.244
Total-pentadioxins			8.067e5		1.392			1815		1.07e7							151.288
Total-hexadioxins			1.030e6		1.007			2750		1.55e7							183.470
Total-heptadioxins			3.640e5		1.269			2023		5.51e6							96.558
Total-Dioxins			2.664e6		1.165			1257		3.74e7							577.196
Total-TEQ			6.215e6					1257		8.84e7							1236.507
FUNCTION1 PFK			1.020e8					456801		3.28e7							
FUNCTION2 PFK			1.157e5					357493		4.11e6							0.000
FUNCTION3 PFK			4.934e3					448560		4.42e5							0.000
FUNCTION4 PFK			5.621e7					272625		2.42e7							
FUNCTION5 PFK			9.510e3					163795		4.83e5							
FUNCTION1 HXCD...			8.321e1					570		1.71e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			2.854e2					1047		5.03e3							0.000
FUNCTION3 OCDPE			6.774e2					500		1.12e4							0.000
FUNCTION4 NCDPE			5.523e2					693		7.20e3							0.000
FUNCTION5 DCDPE			8.340e1					626		1.71e3							0.000

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3V1, Name: 23022302, Date: 23-Feb-2023, Time: 10:49:54, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.51	3.665e4	4.918e4	0.858	0.75	0.77	621.6	YES	NO	dd	dd	7.447
2	Total-tetrafurans	27.37	8.285e2	1.184e3	0.933	0.70	0.77	15.4	YES	NO	bd	bd	0.161
3	2378-TCDF	26.00	5.096e4	6.610e4	0.876	0.77	0.77	900.6	YES	NO	bd	bb	9.943
4	Total-tetrafurans	24.90	3.797e2	4.729e2	0.933	0.80	0.77	5.7	YES	NO	db	db	0.068
5	Total-tetrafurans	24.76	5.084e2	7.685e2	0.933	0.66	0.77	10.8	YES	NO	bd	bd	0.102
6	1368-TCDF	22.48	5.967e4	7.753e4	1.064	0.77	0.77	1110.8	YES	NO	bb	bd	9.591

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.36	3.814e5	2.575e5	1.013	1.48	1.55	8127.0	YES	NO	bb	bb	57.439

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.52	3.112e5	1.977e5	0.911	1.57	1.55	2108.3	YES	NO	bb	bb	50.041
2	12378-PeCDF	30.18	2.790e5	1.766e5	0.845	1.58	1.55	1877.1	YES	NO	bb	bb	49.124
3	Total-pentafurans	29.03	4.342e4	2.837e4	0.866	1.53	1.55	280.0	YES	NO	bb	bb	7.483
4	12389-PECDF	32.56	3.056e5	1.850e5	0.844	1.65	1.55	1876.2	YES	NO	bd	bb	52.952

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	234678-HxCDF	36.13	2.834e5	2.398e5	1.229	1.18	1.24	2160.4	YES	NO	bd	bb	44.907
2	123678-HxCDF	35.27	3.238e5	2.646e5	1.248	1.22	1.24	2253.9	YES	NO	dd	dd	44.530
3	123478-HxCDF	35.12	2.818e5	2.274e5	1.182	1.24	1.24	2225.4	YES	NO	bd	bd	45.865
4	123468-HXCDF	33.47	2.906e5	2.358e5	1.197	1.23	1.24	2100.3	YES	NO	bd	bb	46.796
5	123789-HxCDF	37.15	2.324e5	1.860e5	1.187	1.25	1.24	1675.7	YES	NO	bd	bd	46.089

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.26	1.867e5	1.793e5	1.165	1.04	1.05	877.1	YES	NO	bd	bd	48.075
2	Total-heptafurans	39.66	1.239e3	1.050e3	1.185	1.18	1.05	6.1	YES	NO	bb	bb	0.267
3	1234678-HpCDF	38.99	2.410e5	2.329e5	1.204	1.03	1.05	1307.1	YES	NO	bd	bd	49.486

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.51	3.665e4	4.918e4	0.858	0.75	0.77	621.6	YES	NO	dd	dd	7.447
2	Total-tetrafurans	27.37	8.285e2	1.184e3	0.933	0.70	0.77	15.4	YES	NO	bd	bd	0.161
3	2378-TCDF	26.00	5.096e4	6.610e4	0.876	0.77	0.77	900.6	YES	NO	bd	bb	9.943
4	Total-tetrafurans	24.90	3.797e2	4.729e2	0.933	0.80	0.77	5.7	YES	NO	db	db	0.068
5	Total-tetrafurans	24.76	5.084e2	7.685e2	0.933	0.66	0.77	10.8	YES	NO	bd	bd	0.102
6	1368-TCDF	22.48	5.967e4	7.753e4	1.064	0.77	0.77	1110.8	YES	NO	bb	bd	9.591
7	23478-PeCDF	31.52	3.112e5	1.977e5	0.911	1.57	1.55	2108.3	YES	NO	bb	bb	50.041
8	12378-PeCDF	30.18	2.790e5	1.766e5	0.845	1.58	1.55	1877.1	YES	NO	bb	bb	49.124
9	Total-pentafurans	29.03	4.342e4	2.837e4	0.866	1.53	1.55	280.0	YES	NO	bb	bb	7.483
10	12389-PECDF	32.56	3.056e5	1.850e5	0.844	1.65	1.55	1876.2	YES	NO	bd	bb	52.952
11	234678-HxCDF	36.13	2.834e5	2.398e5	1.229	1.18	1.24	2160.4	YES	NO	bd	bb	44.907
12	123678-HxCDF	35.27	3.238e5	2.646e5	1.248	1.22	1.24	2253.9	YES	NO	dd	dd	44.530
13	123478-HxCDF	35.12	2.818e5	2.274e5	1.182	1.24	1.24	2225.4	YES	NO	bd	bd	45.865
14	123468-HXCDF	33.47	2.906e5	2.358e5	1.197	1.23	1.24	2100.3	YES	NO	bd	bb	46.796
15	123789-HxCDF	37.15	2.324e5	1.860e5	1.187	1.25	1.24	1675.7	YES	NO	bd	bd	46.089
16	1234789-HpCDF	41.26	1.867e5	1.793e5	1.165	1.04	1.05	877.1	YES	NO	bd	bd	48.075
17	Total-heptafurans	39.66	1.239e3	1.050e3	1.185	1.18	1.05	6.1	YES	NO	bb	bb	0.267
18	1234678-HpCDF	38.99	2.410e5	2.329e5	1.204	1.03	1.05	1307.1	YES	NO	bd	bd	49.486
19	OCDF	45.56	2.403e5	2.691e5	1.186	0.89	0.89	2224.2	YES	NO	bd	bd	88.945
20	13468-PECDF	27.36	3.814e5	2.575e5	1.013	1.48	1.55	8127.0	YES	NO	bb	bb	57.439

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.83	2.339e4	2.841e4	1.099	0.82	0.77	288.8	YES	NO	bd	bd	4.955
2	1368-TCDD	23.77	4.574e4	5.748e4	1.084	0.80	0.77	577.5	YES	NO	bb	bd	10.002
3	1289-TCDD	27.24	3.430e4	4.182e4	0.975	0.82	0.77	378.6	YES	NO	bb	bd	8.203
4	2378-TCDD	26.65	4.585e4	5.896e4	1.236	0.78	0.77	539.0	YES	NO	bd	bb	8.909
5	Total-tetradioxins	26.33	7.058e4	8.808e4	1.099	0.80	0.77	590.8	YES	NO	bb	bb	15.175

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	32.17	2.530e5	1.547e5	1.252	1.64	1.55	2116.5	YES	NO	bb	bb	51.863
2	12378-PeCDD	31.77	2.216e5	1.343e5	1.087	1.65	1.55	1933.4	YES	NO	bb	bb	52.169
3	Total-pentadioxins	30.15	7.111e2	5.152e2	1.392	1.38	1.55	5.8	YES	NO	bb	bb	0.140
4	12479-PECDD	29.04	3.314e5	2.120e5	1.837	1.56	1.55	1817.5	YES	NO	bb	bb	47.115

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HXCDD	34.24	2.593e5	2.138e5	1.033	1.21	1.24	1417.4	YES	NO	bb	bb	47.159
2	123789-HxCDD	36.74	2.506e5	2.103e5	0.985	1.19	1.24	1386.8	YES	NO	bd	bd	45.317
3	123678-HxCDD	36.36	2.742e5	2.245e5	1.021	1.22	1.24	1439.7	YES	NO	dd	dd	44.711
4	123478-HxCDD	36.24	2.461e5	1.976e5	0.987	1.25	1.24	1403.4	YES	NO	bd	bd	46.282

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234679-HPCDD	39.43	1.938e5	1.988e5	1.286	0.97	1.05	1445.3	YES	NO	bb	bd	51.735
2	1234678-HpCDD	40.50	1.702e5	1.611e5	1.253	1.06	1.05	1277.0	YES	NO	bb	bb	44.823

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.83	2.339e4	2.841e4	1.099	0.82	0.77	288.8	YES	NO	bd	bd	4.955
2	1368-TCDD	23.77	4.574e4	5.748e4	1.084	0.80	0.77	577.5	YES	NO	bb	bd	10.002
3	1289-TCDD	27.24	3.430e4	4.182e4	0.975	0.82	0.77	378.6	YES	NO	bb	bd	8.203
4	2378-TCDD	26.65	4.585e4	5.896e4	1.236	0.78	0.77	539.0	YES	NO	bd	bb	8.909
5	Total-tetradioxins	26.33	7.058e4	8.808e4	1.099	0.80	0.77	590.8	YES	NO	bb	bb	15.175
6	12389-PECDD	32.17	2.530e5	1.547e5	1.252	1.64	1.55	2116.5	YES	NO	bb	bb	51.863
7	12378-PeCDD	31.77	2.216e5	1.343e5	1.087	1.65	1.55	1933.4	YES	NO	bb	bb	52.169
8	Total-pentadioxins	30.15	7.111e2	5.152e2	1.392	1.38	1.55	5.8	YES	NO	bb	bb	0.140
9	12479-PECDD	29.04	3.314e5	2.120e5	1.837	1.56	1.55	1817.5	YES	NO	bb	bb	47.115
10	124679-HXCDD	34.24	2.593e5	2.138e5	1.033	1.21	1.24	1417.4	YES	NO	bb	bb	47.159
11	123789-HxCDD	36.74	2.506e5	2.103e5	0.985	1.19	1.24	1386.8	YES	NO	bd	bd	45.317
12	123678-HxCDD	36.36	2.742e5	2.245e5	1.021	1.22	1.24	1439.7	YES	NO	dd	dd	44.711
13	123478-HxCDD	36.24	2.461e5	1.976e5	0.987	1.25	1.24	1403.4	YES	NO	bd	bd	46.282
14	1234679-HPCDD	39.43	1.938e5	1.988e5	1.286	0.97	1.05	1445.3	YES	NO	bb	bd	51.735
15	1234678-HpCDD	40.50	1.702e5	1.611e5	1.253	1.06	1.05	1277.0	YES	NO	bb	bb	44.823
16	OCDD	45.32	2.436e5	2.815e5	1.103	0.87	0.89	1863.8	YES	NO	bd	bd	98.636

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.51	3.665e4	4.918e4	0.858	0.75	0.77	621.6	YES	NO	dd	dd	7.447
2	Total-tetrafurans	27.37	8.285e2	1.184e3	0.933	0.70	0.77	15.4	YES	NO	bd	bd	0.161
3	2378-TCDF	26.00	5.096e4	6.610e4	0.876	0.77	0.77	900.6	YES	NO	bd	bb	9.943
4	Total-tetrafurans	24.90	3.797e2	4.729e2	0.933	0.80	0.77	5.7	YES	NO	db	db	0.068
5	Total-tetrafurans	24.76	5.084e2	7.685e2	0.933	0.66	0.77	10.8	YES	NO	bd	bd	0.102
6	1368-TCDF	22.48	5.967e4	7.753e4	1.064	0.77	0.77	1110.8	YES	NO	bb	bd	9.591
7	23478-PeCDF	31.52	3.112e5	1.977e5	0.911	1.57	1.55	2108.3	YES	NO	bb	bb	50.041
8	12378-PeCDF	30.18	2.790e5	1.766e5	0.845	1.58	1.55	1877.1	YES	NO	bb	bb	49.124
9	Total-pentafurans	29.03	4.342e4	2.837e4	0.866	1.53	1.55	280.0	YES	NO	bb	bb	7.483
10	12389-PECDF	32.56	3.056e5	1.850e5	0.844	1.65	1.55	1876.2	YES	NO	bd	bb	52.952
11	234678-HxCDF	36.13	2.834e5	2.398e5	1.229	1.18	1.24	2160.4	YES	NO	bd	bb	44.907
12	123678-HxCDF	35.27	3.238e5	2.646e5	1.248	1.22	1.24	2253.9	YES	NO	dd	dd	44.530
13	123478-HxCDF	35.12	2.818e5	2.274e5	1.182	1.24	1.24	2225.4	YES	NO	bd	bd	45.865
14	123468-HXCDF	33.47	2.906e5	2.358e5	1.197	1.23	1.24	2100.3	YES	NO	bd	bb	46.796
15	123789-HxCDF	37.15	2.324e5	1.860e5	1.187	1.25	1.24	1675.7	YES	NO	bd	bd	46.089
16	1234789-HpCDF	41.26	1.867e5	1.793e5	1.165	1.04	1.05	877.1	YES	NO	bd	bd	48.075
17	Total-heptafurans	39.66	1.239e3	1.050e3	1.185	1.18	1.05	6.1	YES	NO	bb	bb	0.267
18	1234678-HpCDF	38.99	2.410e5	2.329e5	1.204	1.03	1.05	1307.1	YES	NO	bd	bd	49.486
19	OCDF	45.56	2.403e5	2.691e5	1.186	0.89	0.89	2224.2	YES	NO	bd	bd	88.945
20	13468-PECDF	27.36	3.814e5	2.575e5	1.013	1.48	1.55	8127.0	YES	NO	bb	bb	57.439
21	Total-tetradioxins	25.83	2.339e4	2.841e4	1.099	0.82	0.77	288.8	YES	NO	bd	bd	4.955
22	1368-TCDD	23.77	4.574e4	5.748e4	1.084	0.80	0.77	577.5	YES	NO	bb	bd	10.002
23	1289-TCDD	27.24	3.430e4	4.182e4	0.975	0.82	0.77	378.6	YES	NO	bb	bd	8.203
24	2378-TCDD	26.65	4.585e4	5.896e4	1.236	0.78	0.77	539.0	YES	NO	bd	bb	8.909
25	Total-tetradioxins	26.33	7.058e4	8.808e4	1.099	0.80	0.77	590.8	YES	NO	bb	bb	15.175
26	12389-PECDD	32.17	2.530e5	1.547e5	1.252	1.64	1.55	2116.5	YES	NO	bb	bb	51.863
27	12378-PeCDD	31.77	2.216e5	1.343e5	1.087	1.65	1.55	1933.4	YES	NO	bb	bb	52.169
28	Total-pentadioxins	30.15	7.111e2	5.152e2	1.392	1.38	1.55	5.8	YES	NO	bb	bb	0.140
29	12479-PECDD	29.04	3.314e5	2.120e5	1.837	1.56	1.55	1817.5	YES	NO	bb	bb	47.115
30	124679-HXCDD	34.24	2.593e5	2.138e5	1.033	1.21	1.24	1417.4	YES	NO	bb	bb	47.159
31	123789-HxCDD	36.74	2.506e5	2.103e5	0.985	1.19	1.24	1386.8	YES	NO	bd	bd	45.317
32	123678-HxCDD	36.36	2.742e5	2.245e5	1.021	1.22	1.24	1439.7	YES	NO	dd	dd	44.711
33	123478-HxCDD	36.24	2.461e5	1.976e5	0.987	1.25	1.24	1403.4	YES	NO	bd	bd	46.282
34	1234679-HPCDD	39.43	1.938e5	1.988e5	1.286	0.97	1.05	1445.3	YES	NO	bb	bd	51.735
35	1234678-HpCDD	40.50	1.702e5	1.611e5	1.253	1.06	1.05	1277.0	YES	NO	bb	bb	44.823
36	OCDD	45.32	2.436e5	2.815e5	1.103	0.87	0.89	1863.8	YES	NO	bd	bd	98.636

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	26.28	1.128e7					34.1	YES		db		
2	FUNCTION1 PFK	25.70	9.072e7					37.7	YES		bd		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	31.26	1.086e4					1.0	NO		bb		0.000
2	FUNCTION2 PFK	31.20	2.033e3					0.5	NO		bb		0.000
3	FUNCTION2 PFK	30.26	2.041e3					0.5	NO		bb		0.000
4	FUNCTION2 PFK	29.01	6.523e3					0.9	NO		bb		0.000
5	FUNCTION2 PFK	28.38	1.608e4					1.9	NO		db		0.000
6	FUNCTION2 PFK	28.36	1.704e4					1.9	NO		bd		0.000
7	FUNCTION2 PFK	28.32	1.436e4					1.4	NO		bb		0.000
8	FUNCTION2 PFK	32.84	2.212e4					1.5	NO		bb		0.000
9	FUNCTION2 PFK	32.15	1.947e4					1.0	NO		bb		0.000
10	FUNCTION2 PFK	31.85	5.153e3					0.8	NO		bb		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.40	4.934e3					1.0	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	41.27	6.337e6					40.1	YES		db		
2	FUNCTION4 PFK	40.82	4.988e7					48.6	YES		bd		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.20	3.336e3					0.9	NO		bb		
2	FUNCTION5 PFK	43.08	6.174e3					2.0	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.90	8.321e1					3.0	YES		bb		0.000

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ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.39	2.854e2					4.8	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	37.93	1.453e2					3.9	YES		bb		0.000
2	FUNCTION3 OCDPE	37.55	8.088e1					4.0	YES		bb		0.000
3	FUNCTION3 OCDPE	37.13	1.355e2					3.2	YES		bb		0.000
4	FUNCTION3 OCDPE	36.73	1.840e2					5.7	YES		bb		0.000
5	FUNCTION3 OCDPE	36.23	1.317e2					5.6	YES		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	42.11	8.045e1					1.9	NO		bb		0.000
2	FUNCTION4 NCDPE	41.90	1.341e2					1.9	NO		bb		0.000
3	FUNCTION4 NCDPE	40.54	1.361e2					2.8	NO		bb		0.000
4	FUNCTION4 NCDPE	39.47	1.174e2					1.9	NO		bb		0.000
5	FUNCTION4 NCDPE	38.99	8.424e1					1.9	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	43.12	8.340e1					2.7	NO		bb		0.000

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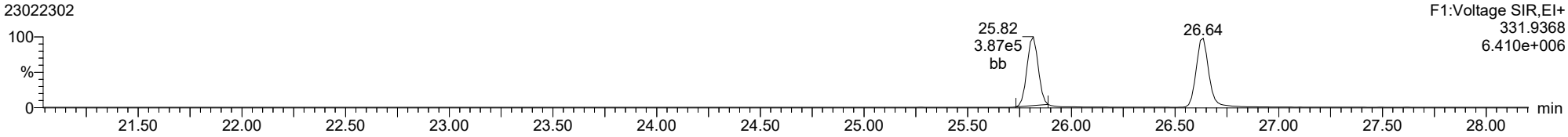
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:09:38 Pacific Standard Time

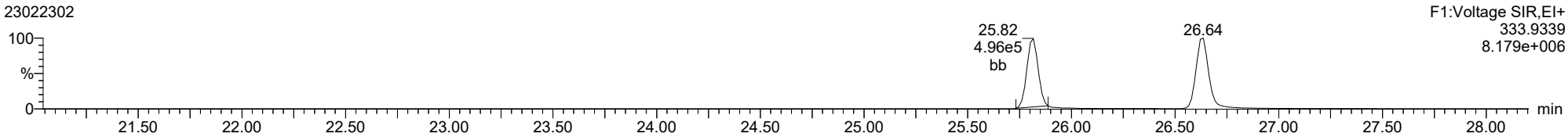
Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3V1, Name: 23022302, Date: 23-Feb-2023, Time: 10:49:54, Conditions: AUTOSPEC01, User: pk

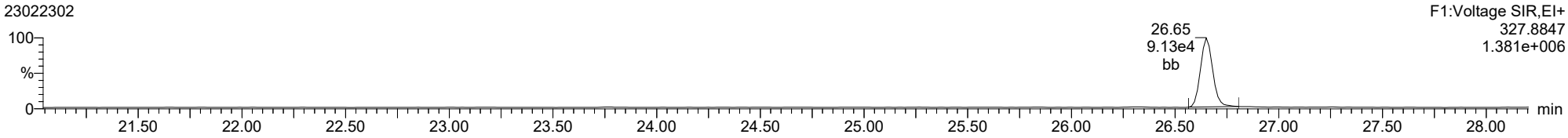
13C-1234-TCDD



13C-1234-TCDD



37CL-2378-TCDD



ID: CS3V1, Name: 23022302, Date: 23-Feb-2023, Time: 10:49:54, Conditions: AUTOSPEC01, User: pk

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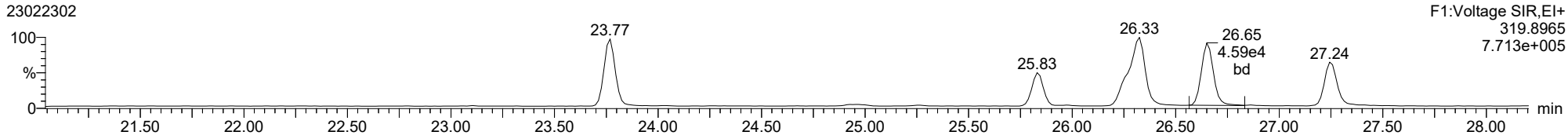

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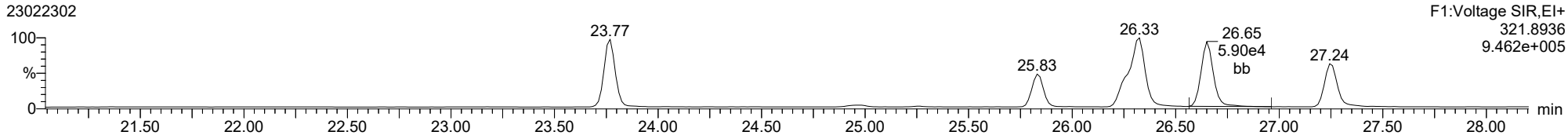

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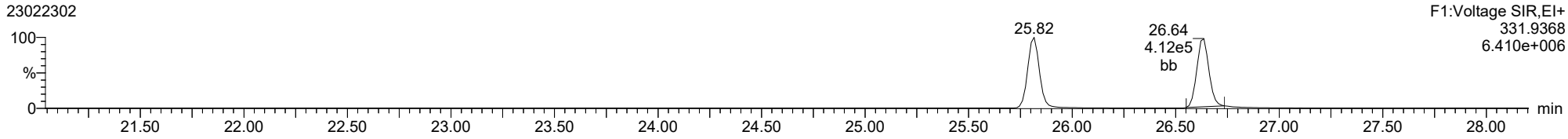

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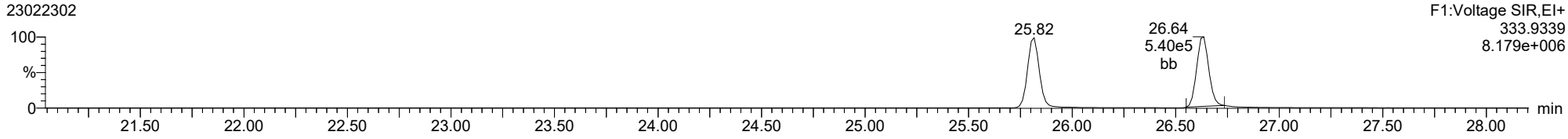
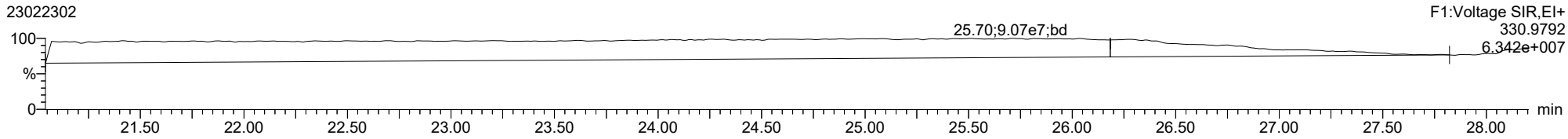


FUNCTION1 PFK



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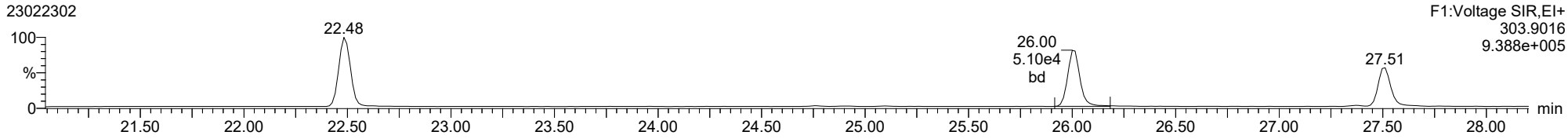
2378-TCDF



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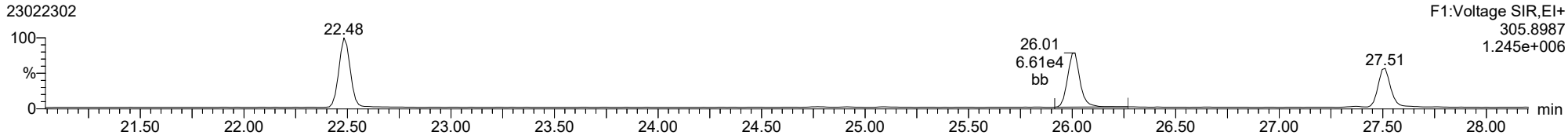

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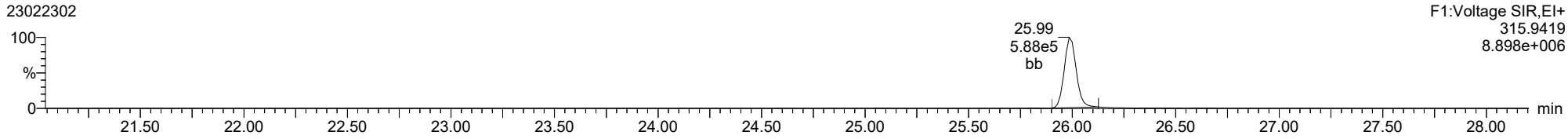

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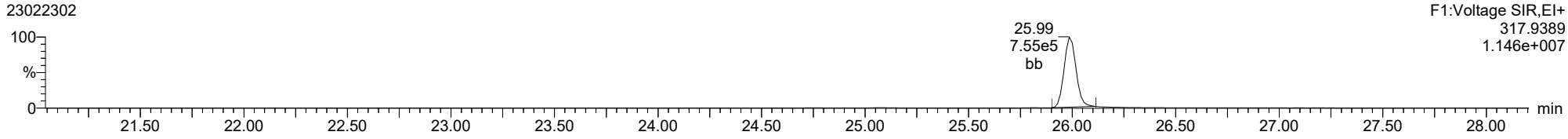
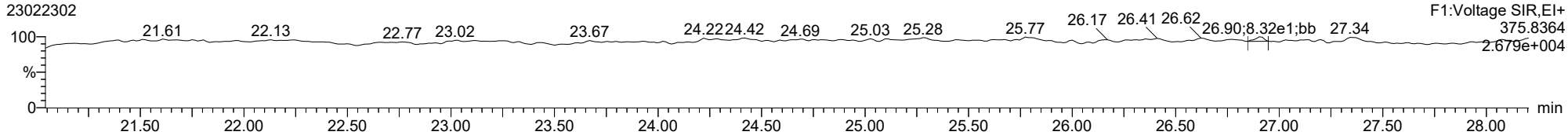
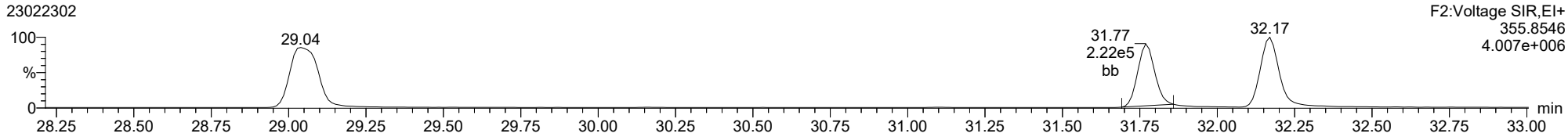


FUNCTION1 HXCDPE



ID: CS3V1, Name: 23022302, Date: 23-Feb-2023, Time: 10:49:54, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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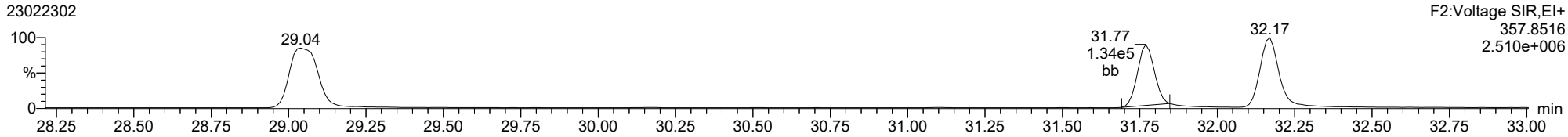

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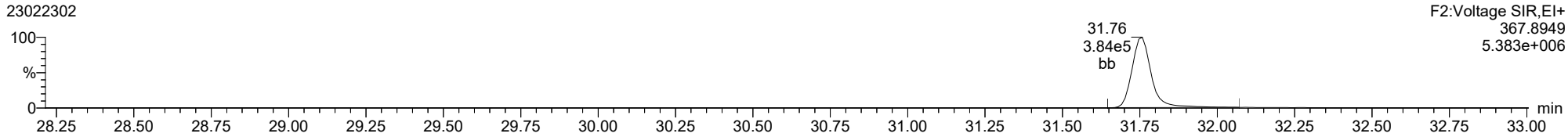

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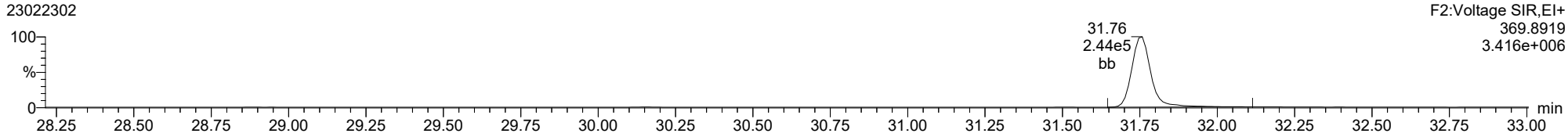
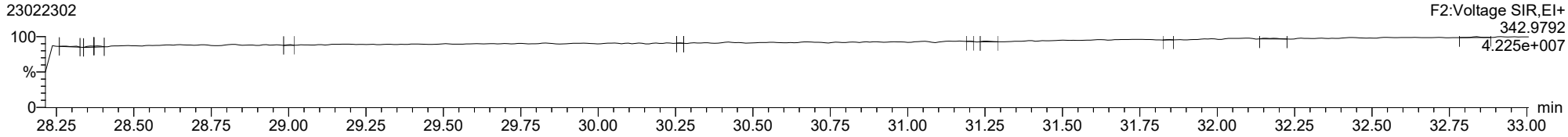


FUNCTION2 PFK



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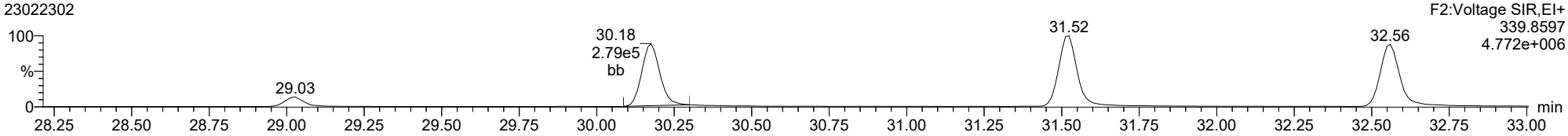

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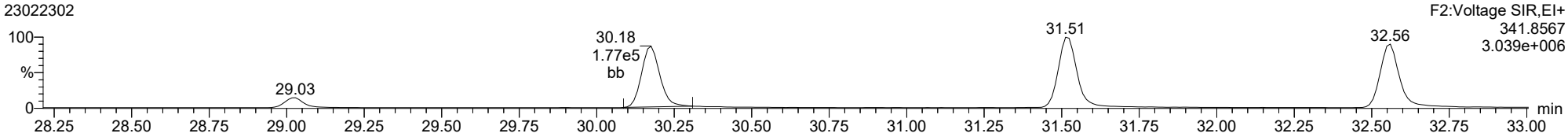

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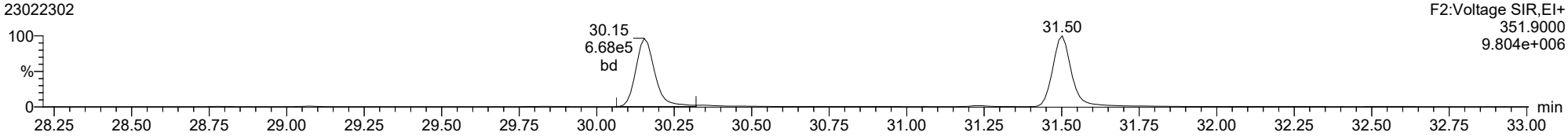

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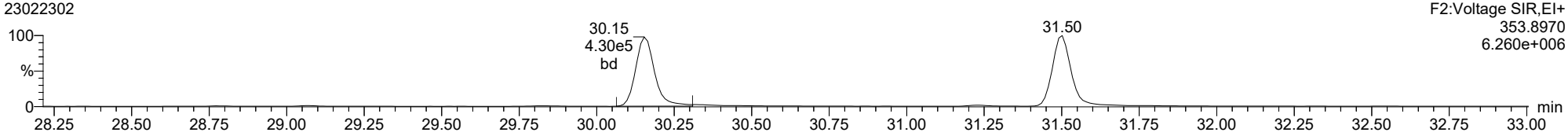
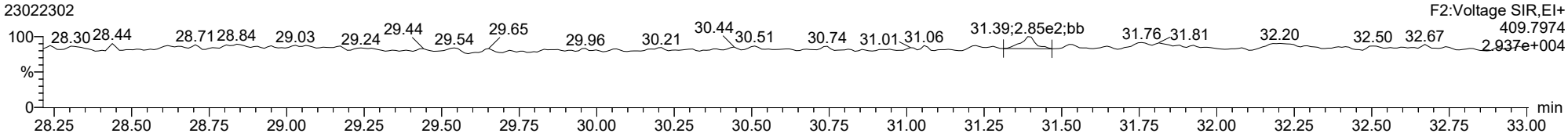


FUNCTION2 HPCDPE



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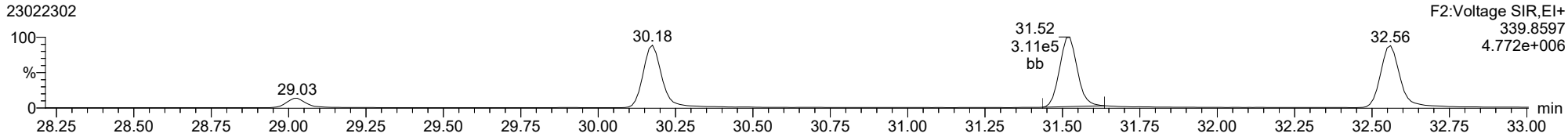
23478-PeCDF



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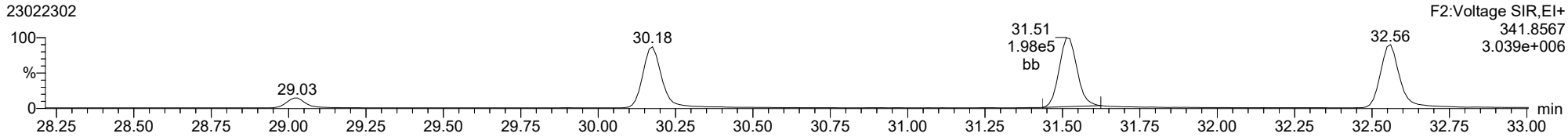

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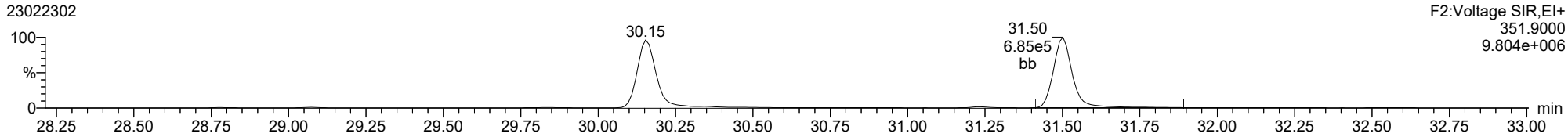

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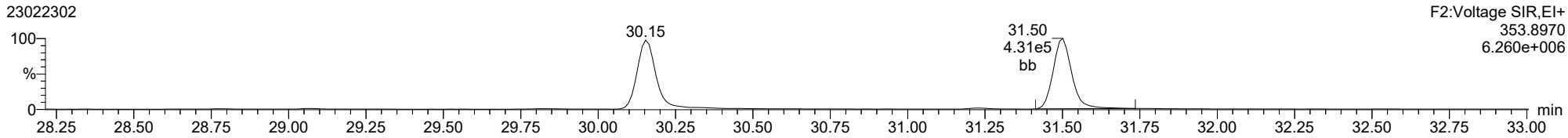

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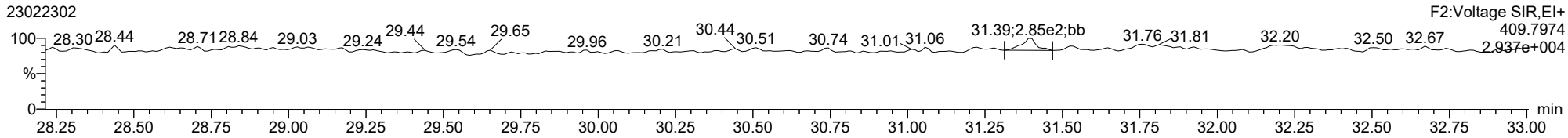

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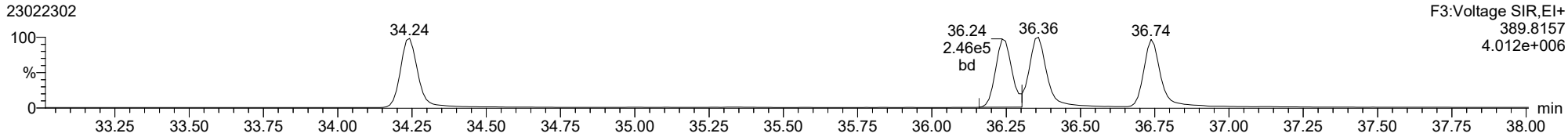
123478-HxCDD



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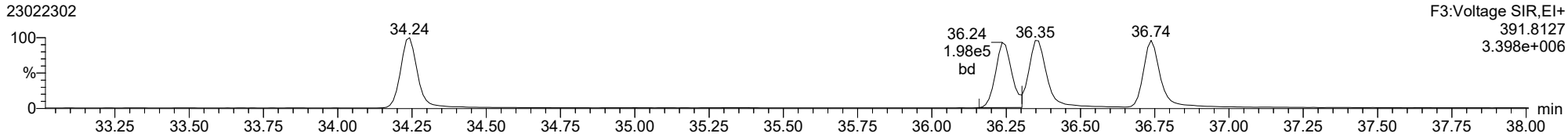

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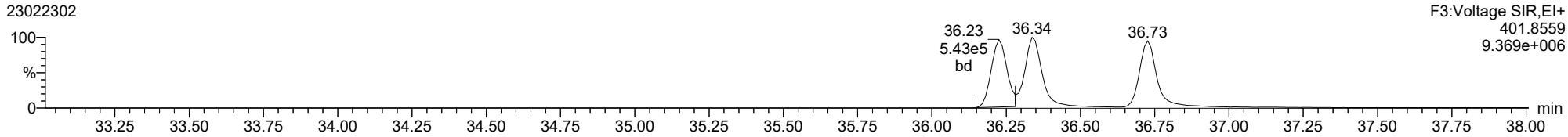

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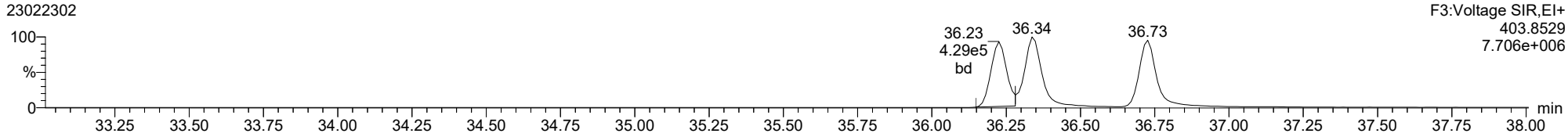
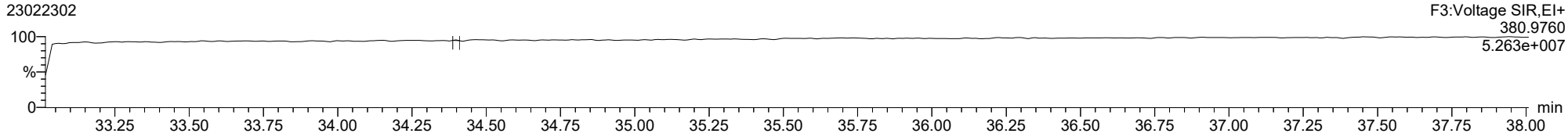


FUNCTION3 PFK



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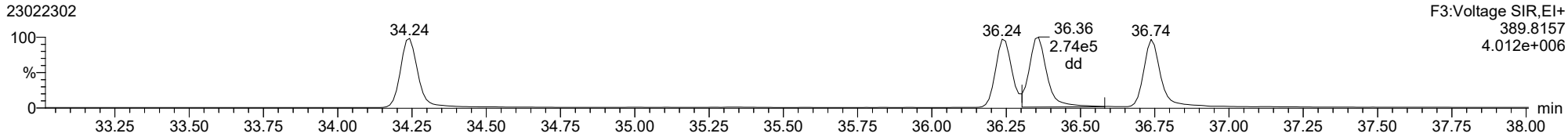

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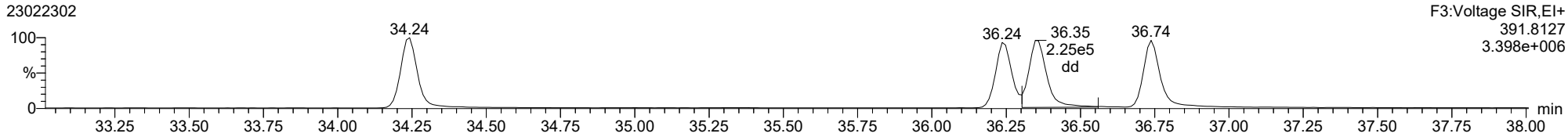

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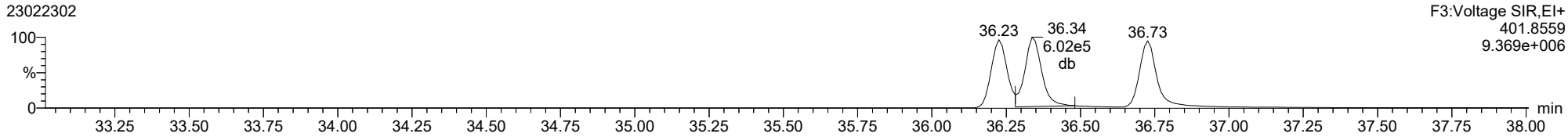

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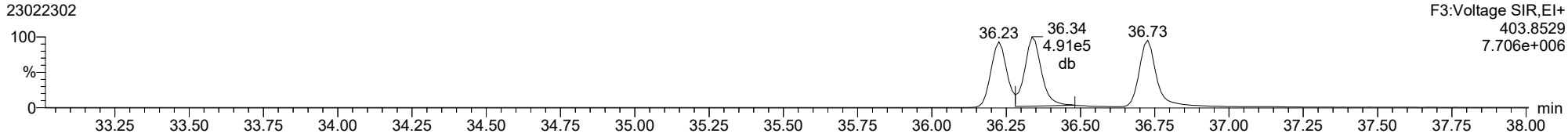

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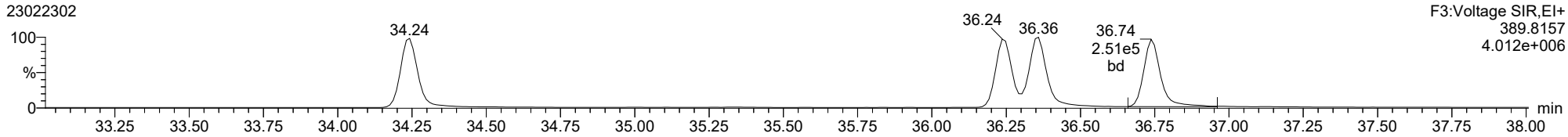

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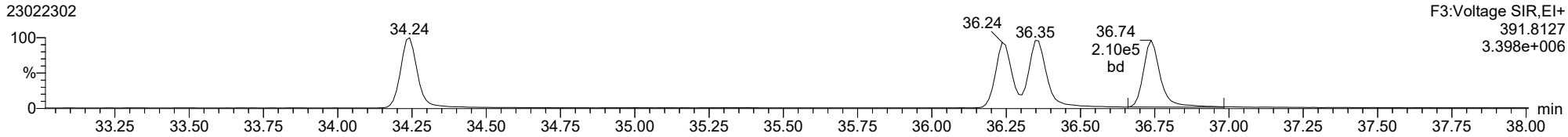

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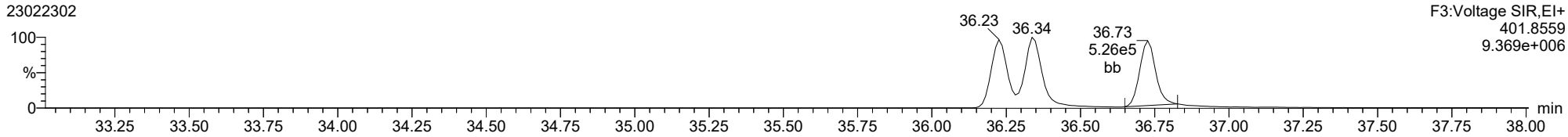

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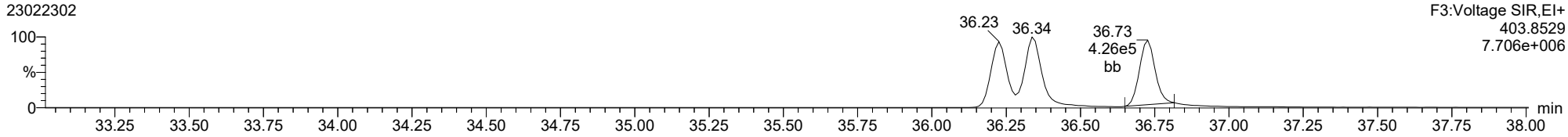

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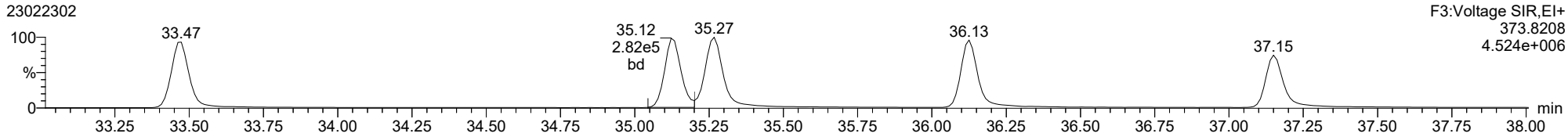

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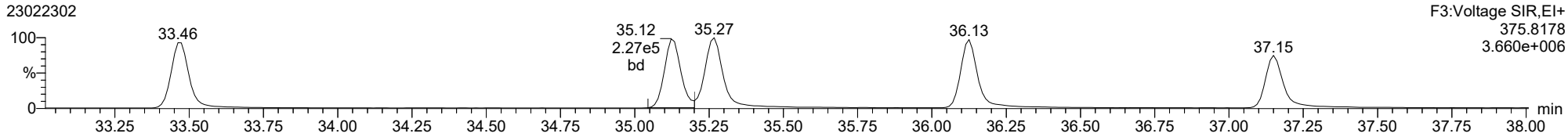

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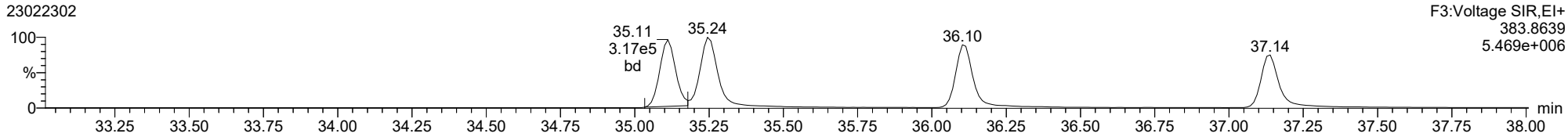

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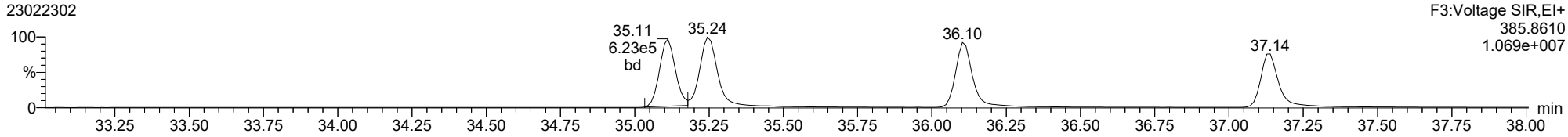
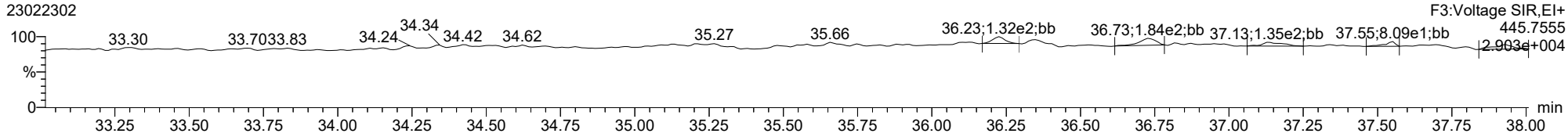


FUNCTION3 OCDPE



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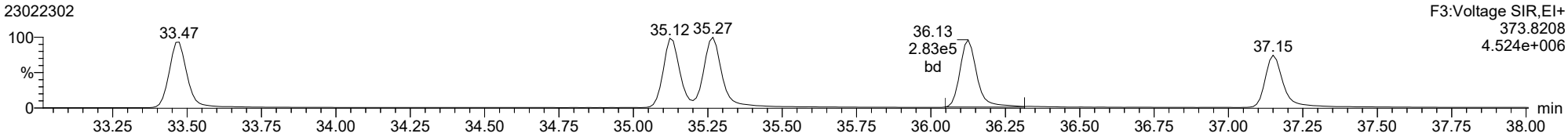
234678-HxCDF



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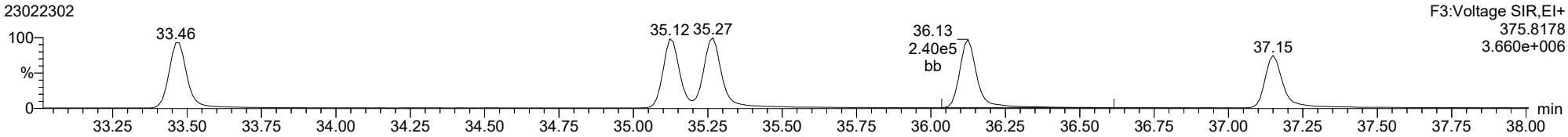

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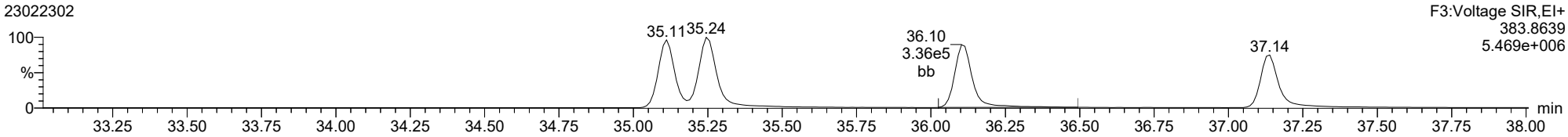

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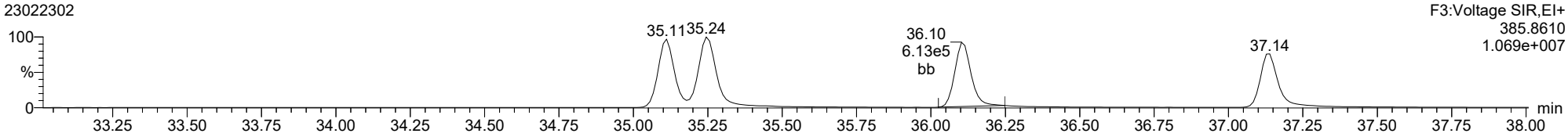
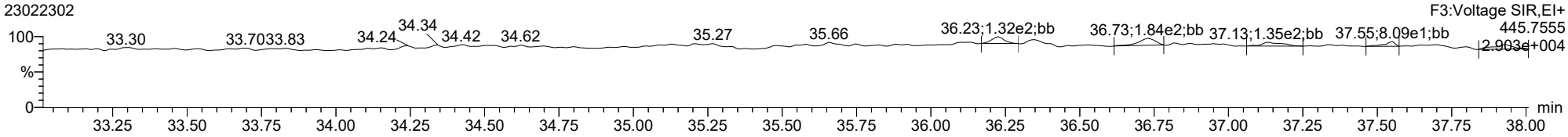


FUNCTION3 OCDPE



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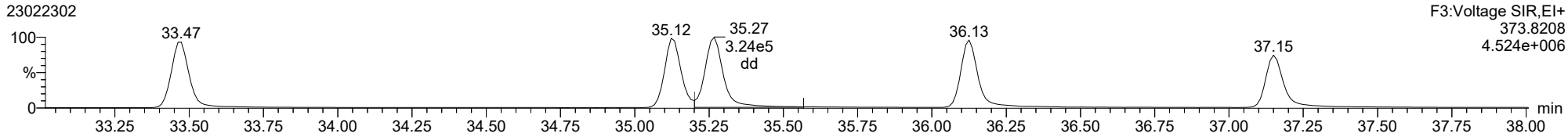

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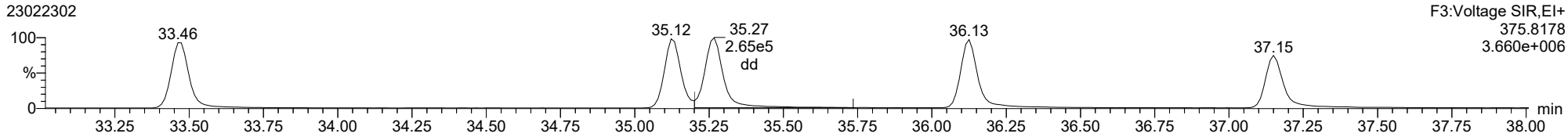

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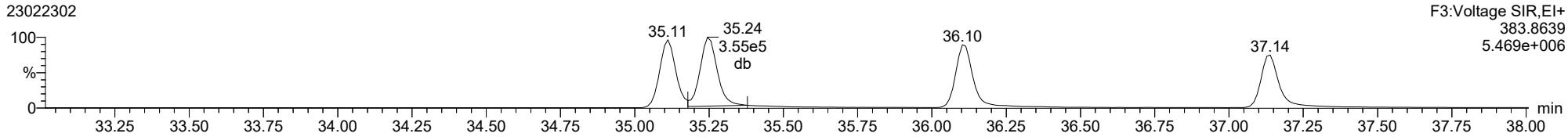

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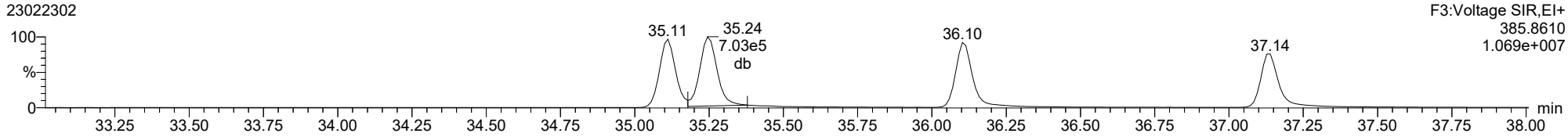

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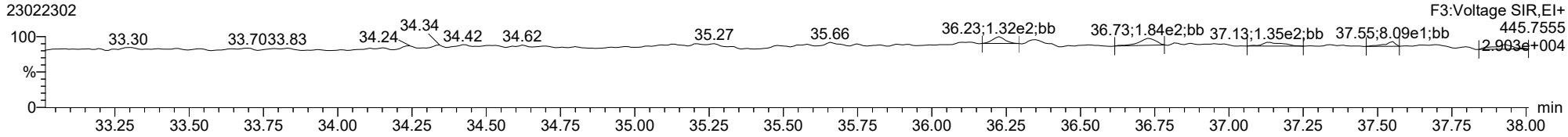

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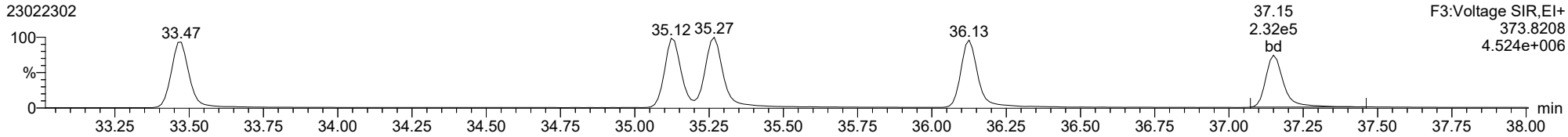

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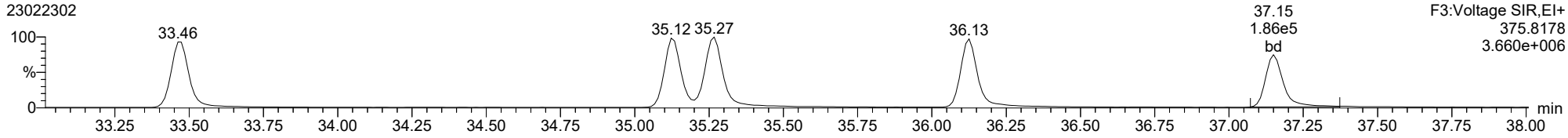

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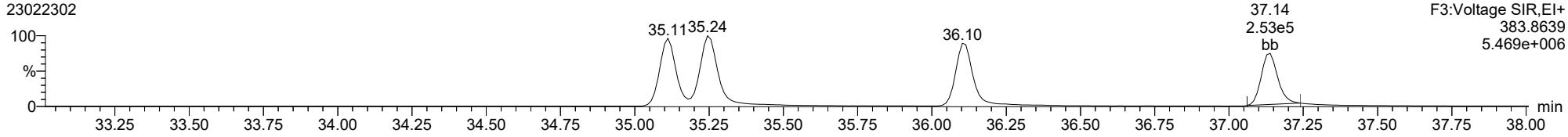

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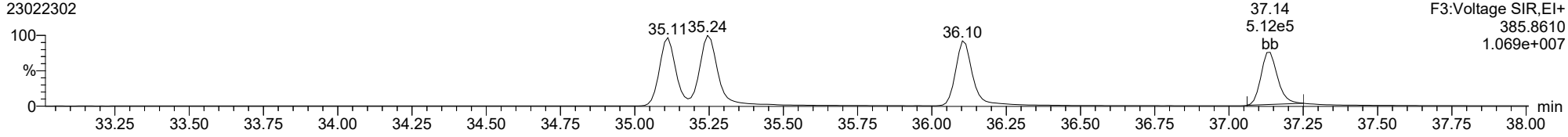

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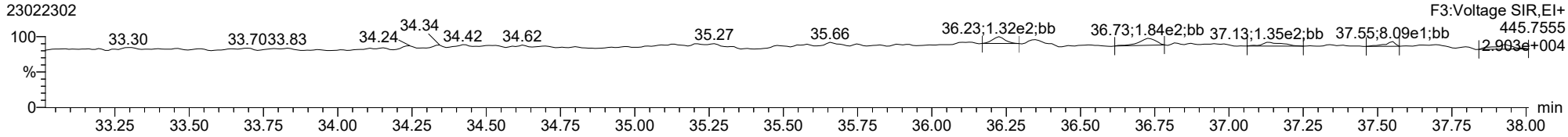

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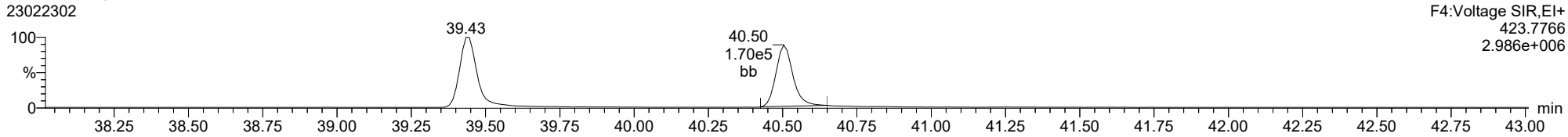

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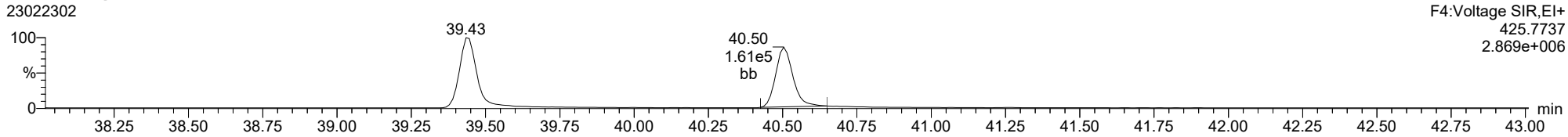

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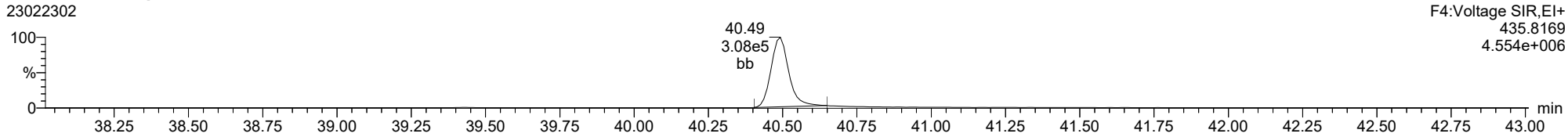

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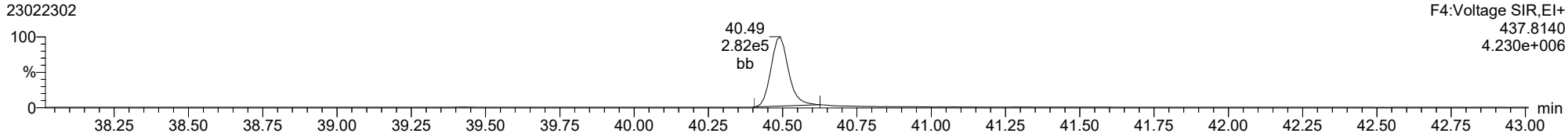

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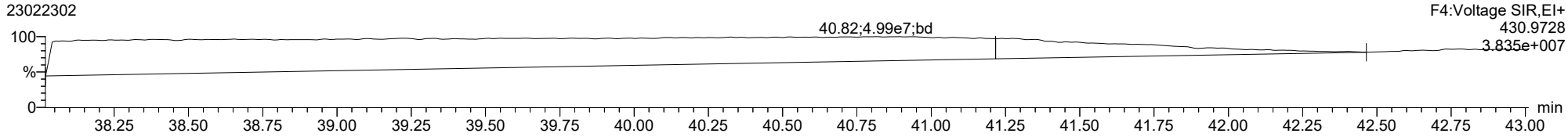

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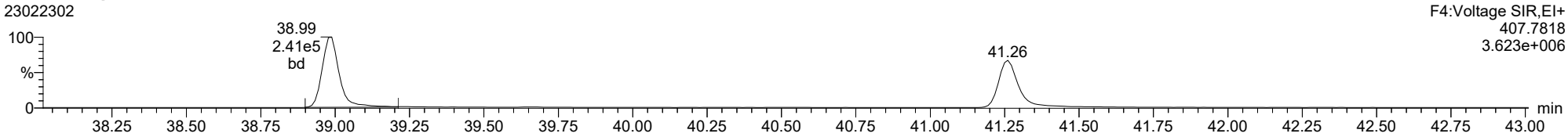

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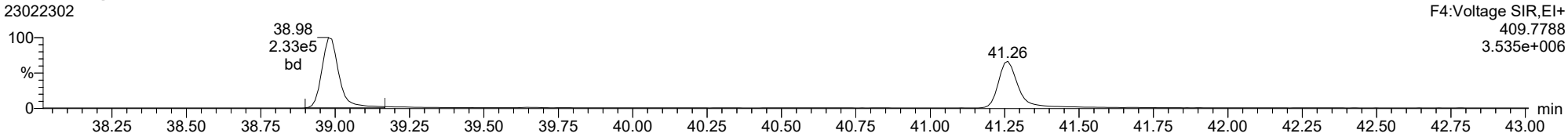

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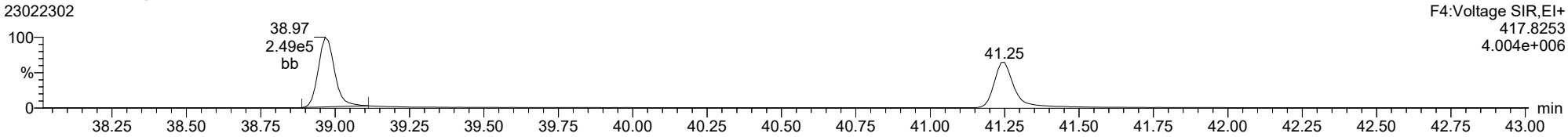

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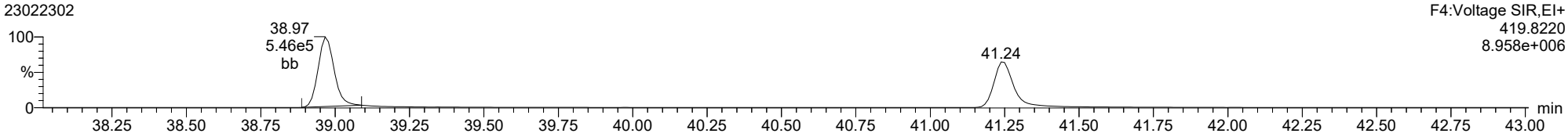

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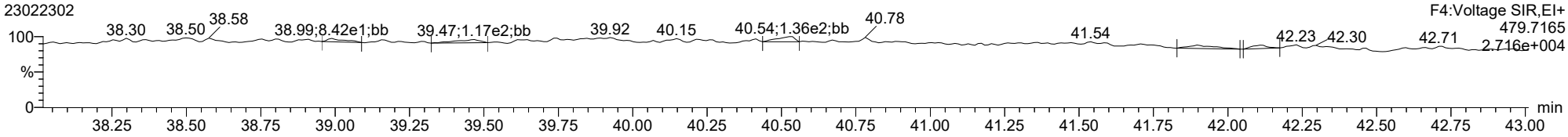

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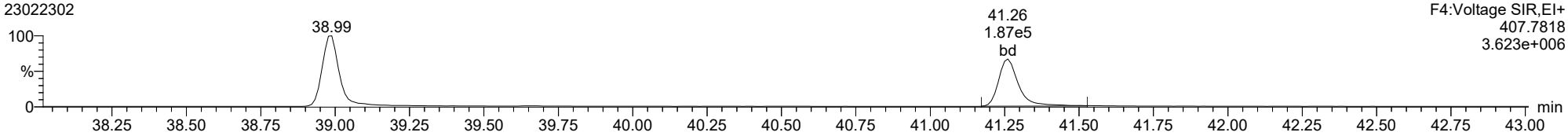

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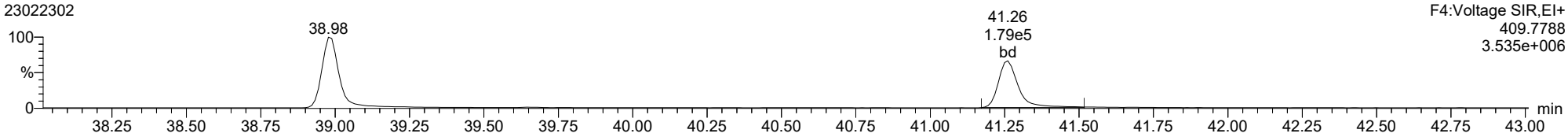

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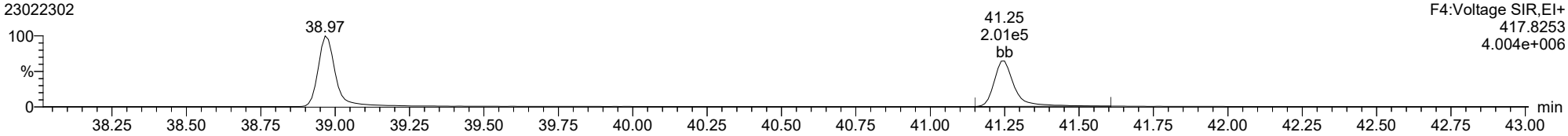

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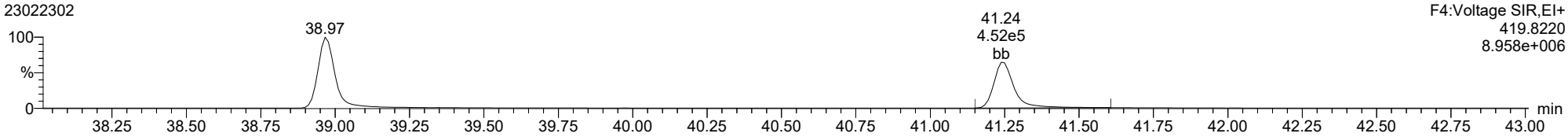

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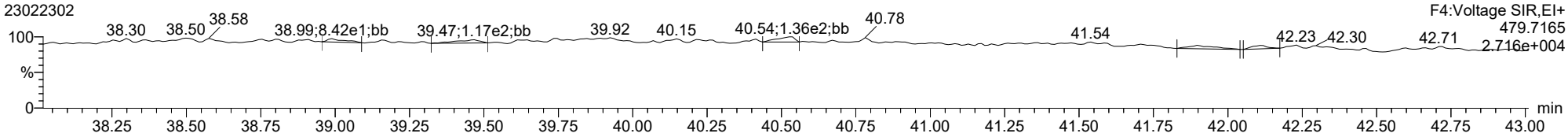

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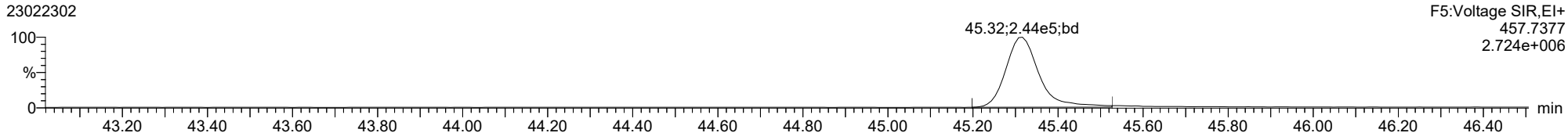

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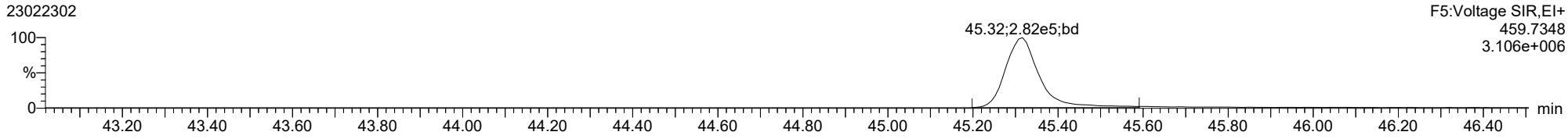

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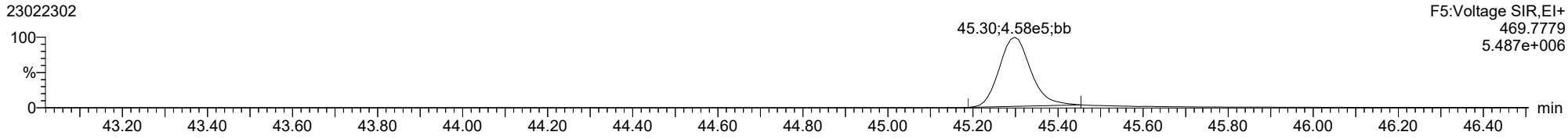

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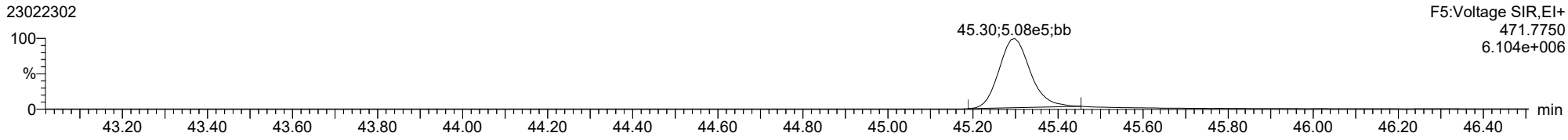
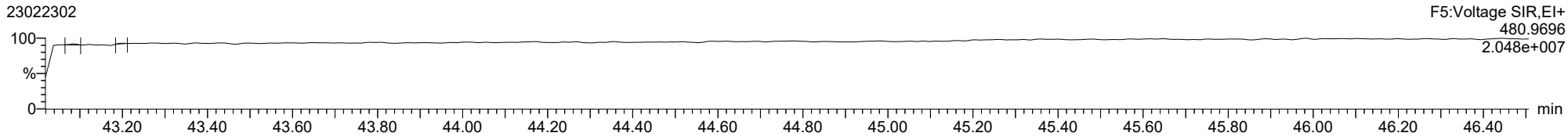


FUNCTION5 PFK



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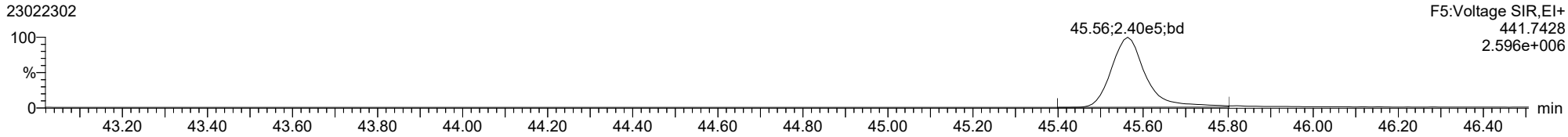
OCDF



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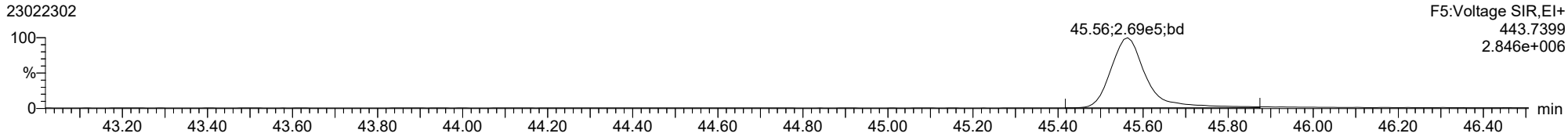

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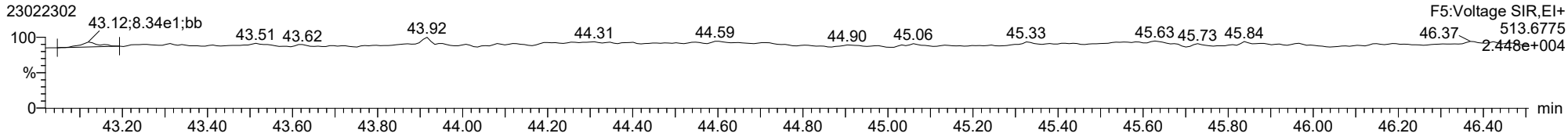

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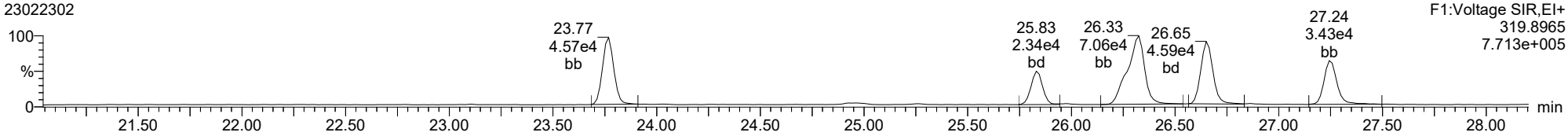
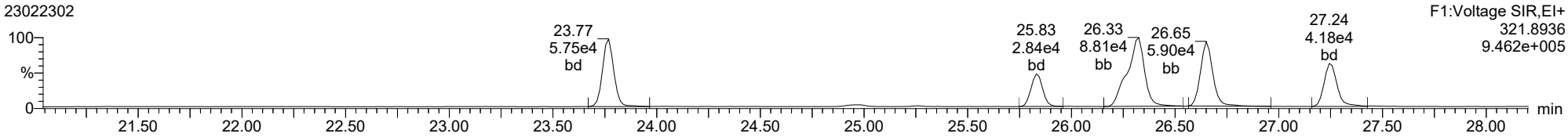


Total-tetradioxins



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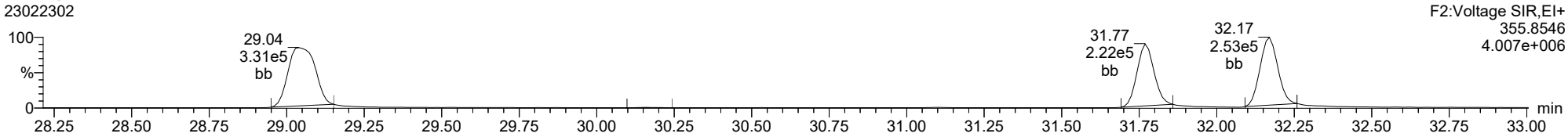

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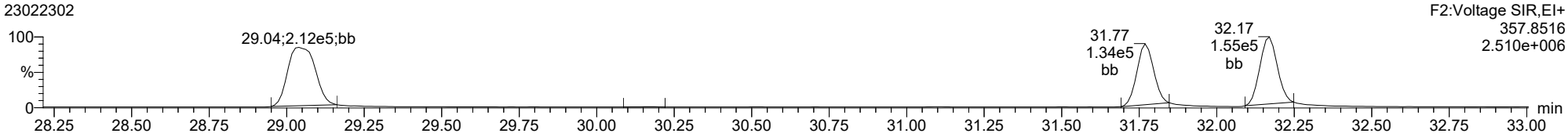

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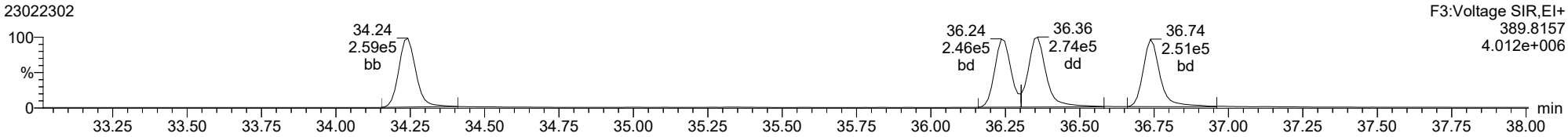

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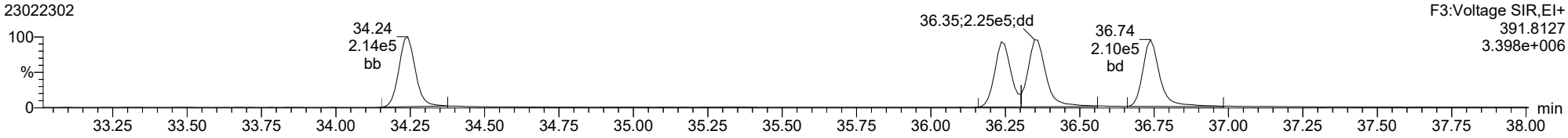

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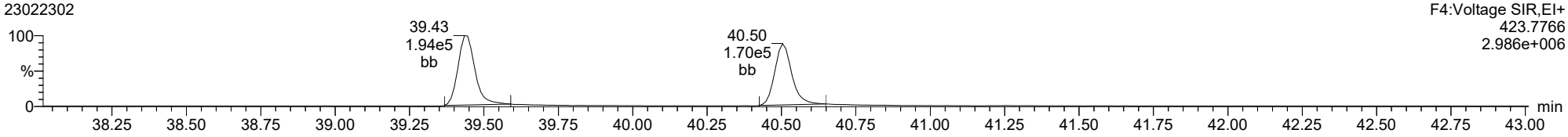

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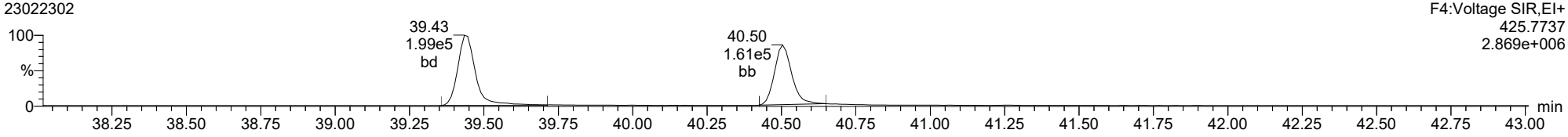

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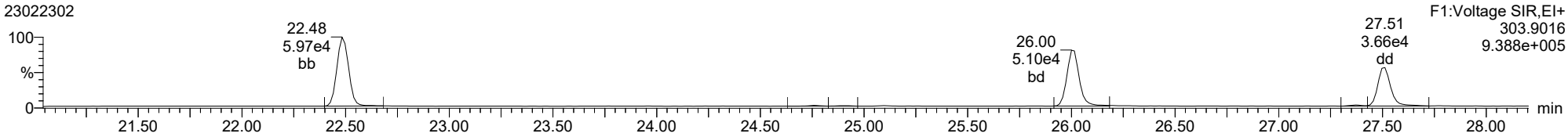
Total-tetrafurans



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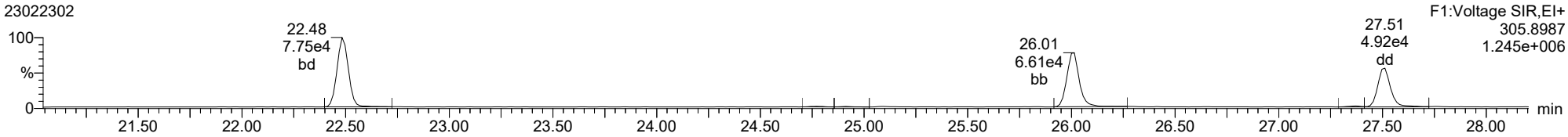

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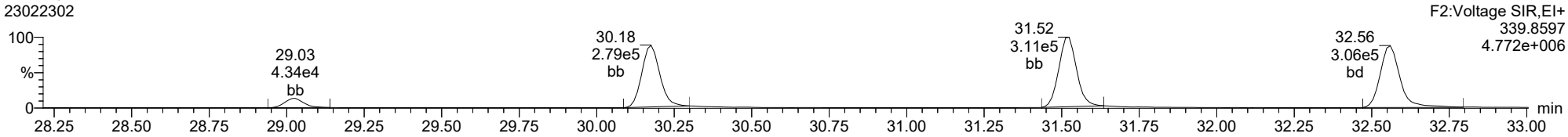

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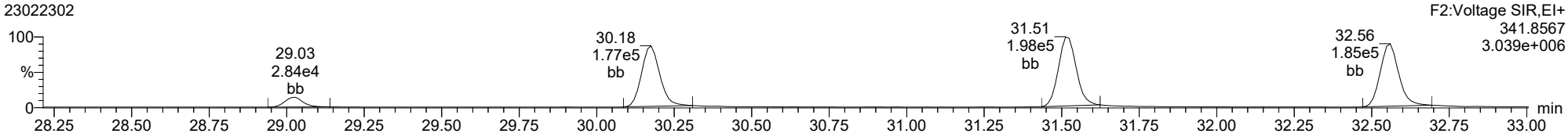

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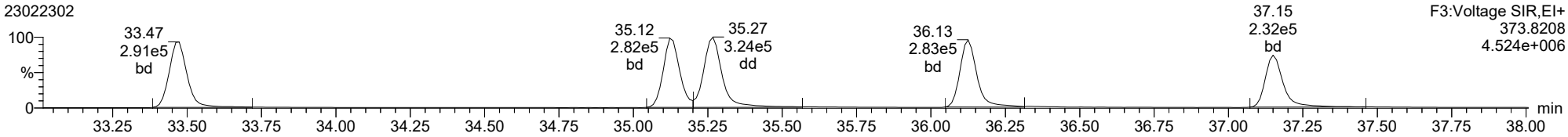

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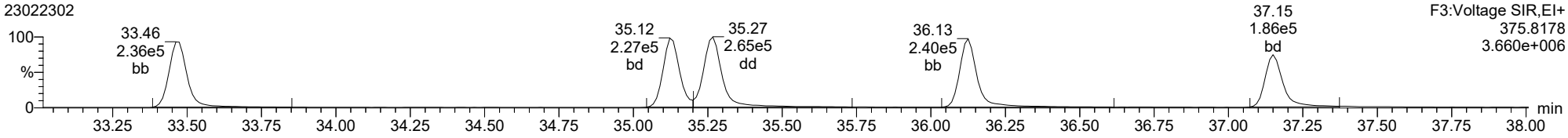

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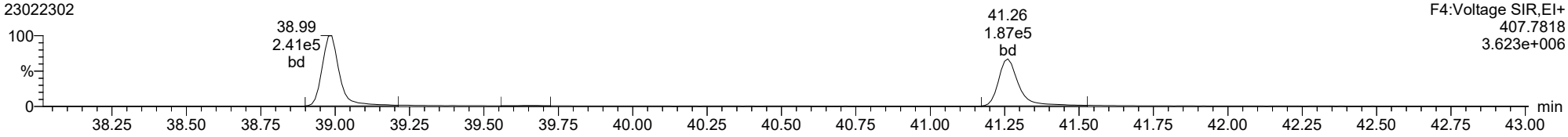

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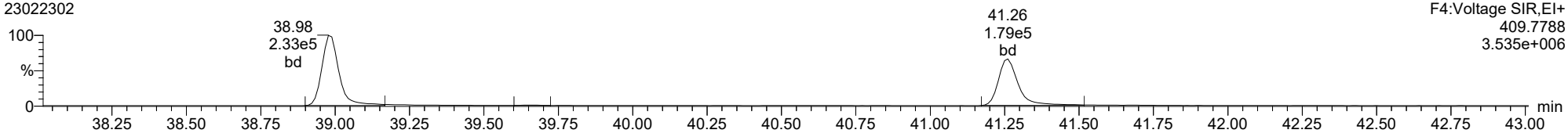

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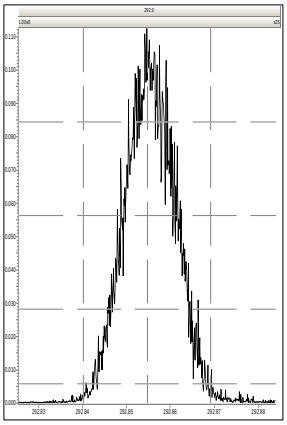
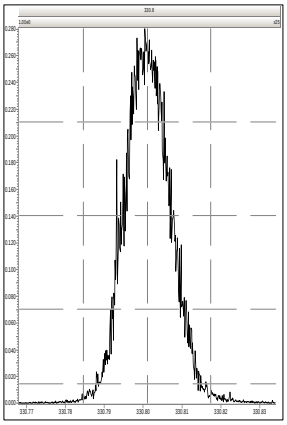
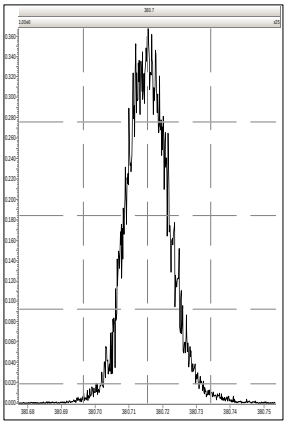


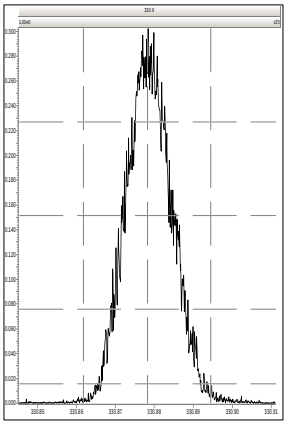
M 330.9792 R 12953



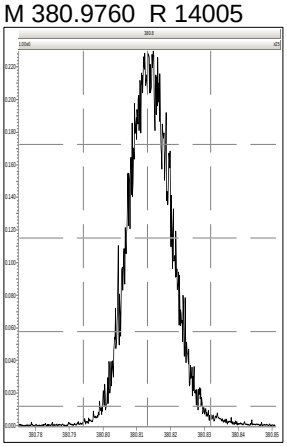
M 380.9760 R 13199



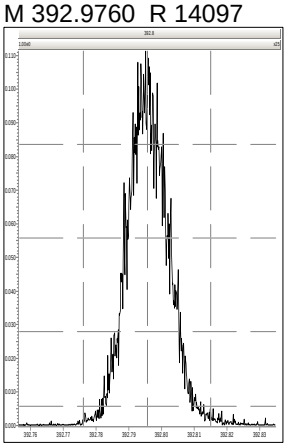
M 330.9792 R 12535



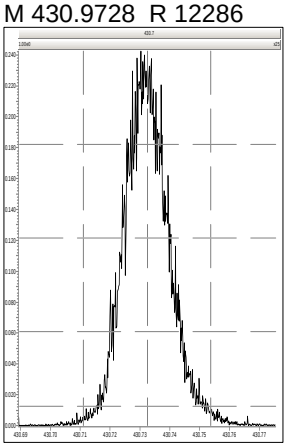
M 380.9760 R 14005



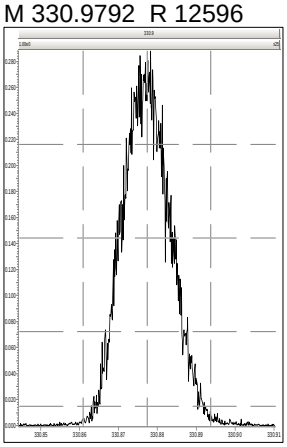
M 392.9760 R 14097



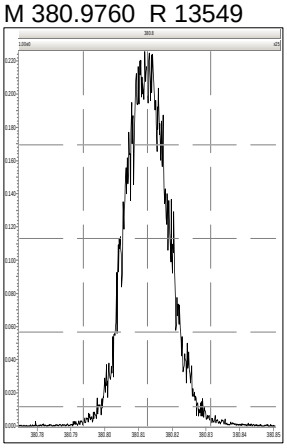
M 430.9728 R 12286



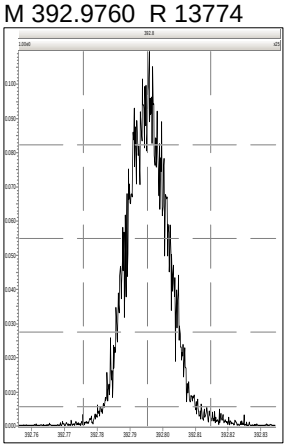
M 330.9792 R 12596



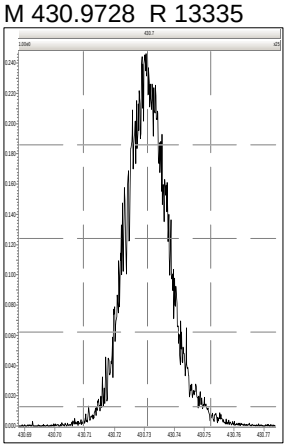
M 380.9760 R 13549



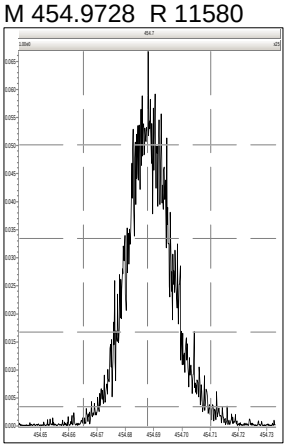
M 392.9760 R 13774



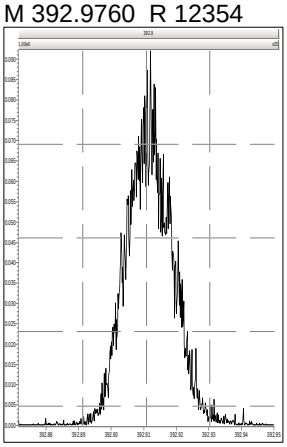
M 430.9728 R 13335



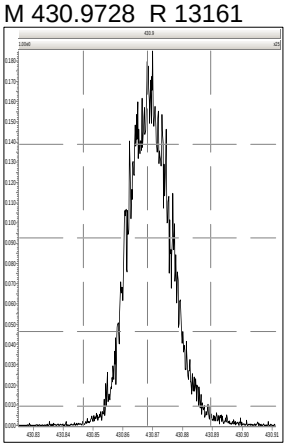
M 454.9728 R 11580



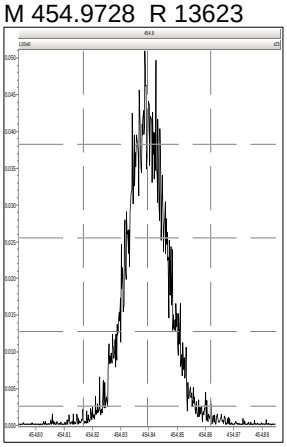
M 392.9760 R 12354



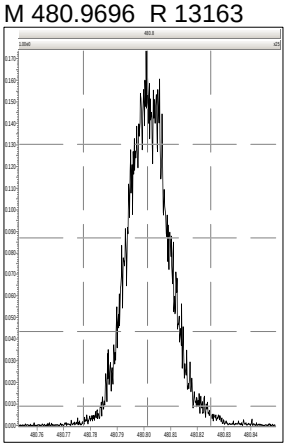
M 430.9728 R 13161



M 454.9728 R 13623

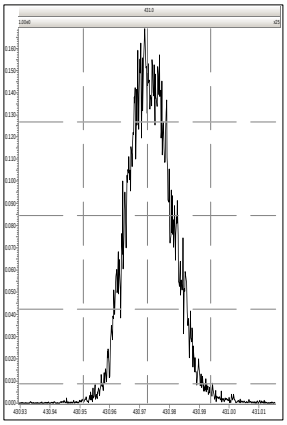


M 480.9696 R 13163

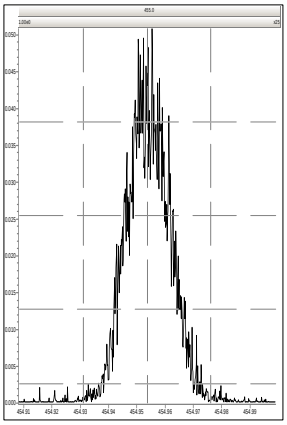


Printed: Thursday, February 23, 2023 09:43:40 Pacific Standard Time

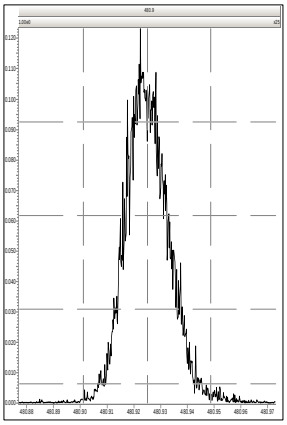
M 430.9728 R 12857



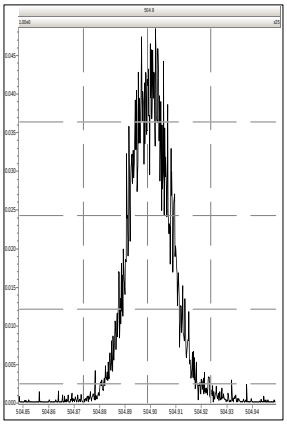
M 454.9728 R 14205



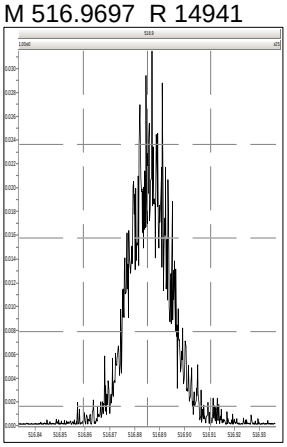
M 480.9696 R 13715

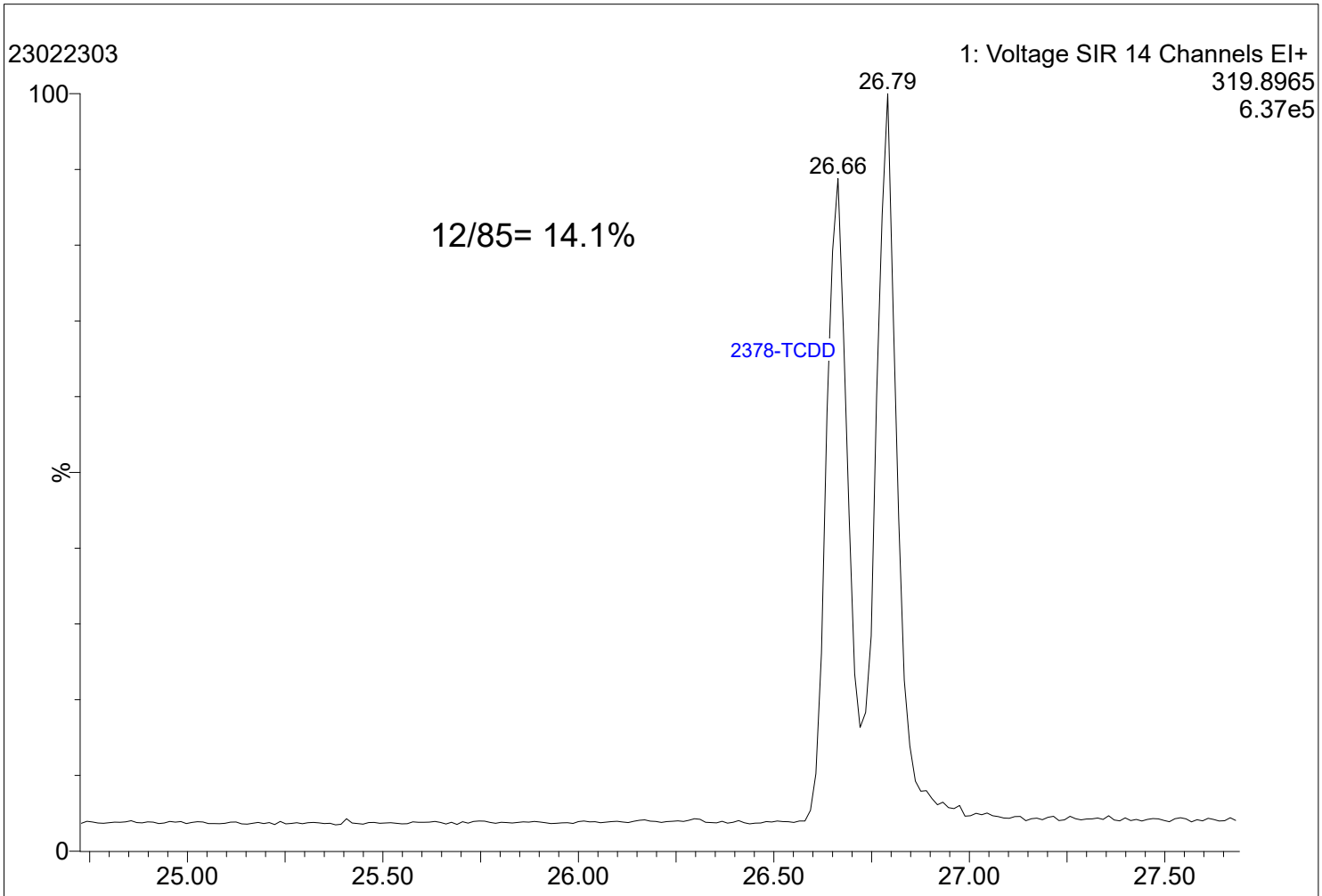


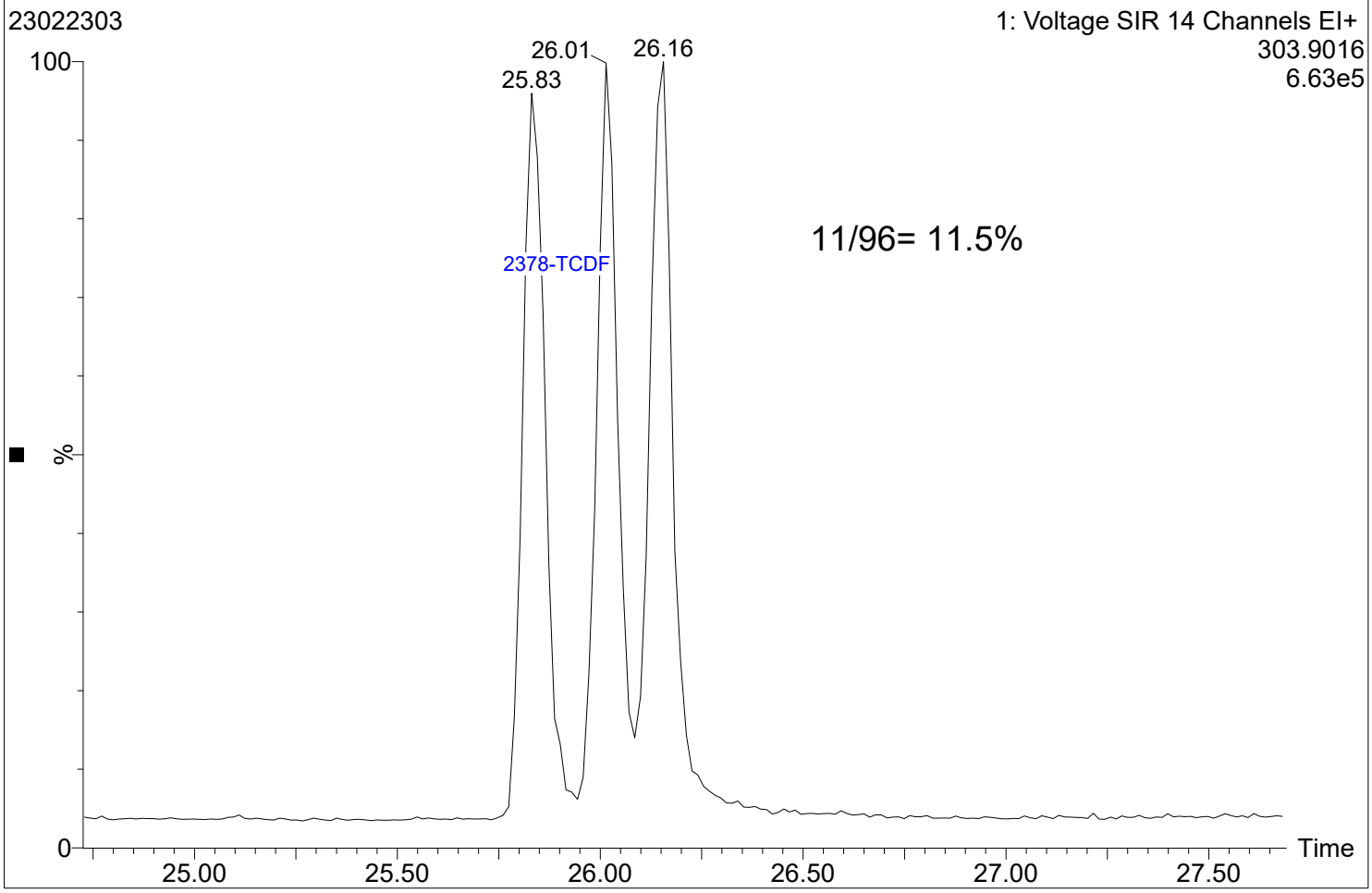
M 504.9696 R 13054



M 516.9697 R 14941




23022303
1: Voltage SIR 14 Channels EI+
319.8965
6.37e5
100
26.79
26.66
12/85= 14.1%
2378-TCDD
%
0
25.00
25.50
26.00
26.50
27.00
27.50


23022303
1: Voltage SIR 14 Channels EI+
303.9016
6.63e5
100
26.01
26.16
25.83
11/96= 11.5%
2378-TCDF
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GB00010
Lab File ID:	23020111	Calibration Date:	02/01/2023
Sequence:	SLB0026	Injection Date:	02/01/23
Lab Sample ID:	SLB0026-CCV1	Injection Time:	21:12
Sequence Name:	CS3R2		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	10.2	0.8760604	0.8902585		1.6	+/-16
2,3,7,8-TCDD	A	10.000	9.40	1.2363600	1.1618360		-6.0	+/-22
1,2,3,7,8-PeCDF	A	50.000	50.0	0.8446540	0.8449929		0.04	+/-18
2,3,4,7,8-PeCDF	A	50.000	50.7	0.9111780	0.9236419		1.4	+/-18
1,2,3,7,8-PeCDD	A	50.000	51.1	1.0866850	1.1111520		2.3	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	49.6	1.1816860	1.1728360		-0.7	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	50.9	1.2480480	1.2707090		1.8	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	52.6	1.2288500	1.2939400		5.3	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	50.4	1.1865370	1.1969780		0.9	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	50.3	0.9869672	0.9929396		0.6	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	51.0	1.0207220	1.0413320		2.0	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	50.6	0.9854780	0.9974984		1.2	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	48.3	1.2041190	1.1630460		-3.4	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	49.7	1.1653050	1.1577820		-0.6	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	45.5	1.2525690	1.1398400		-9.0	+/-14
OCDF	A	100.00	90.4	1.1862640	1.0729150		-9.6	+/-37
OCDD	A	100.00	92.8	1.1026670	1.0229970		-7.2	+/-21
13C12-2,3,7,8-TCDF	A	100.00	95.3	1.7680590	1.6841852		-4.7	+/-29
13C12-2,3,7,8-TCDD	A	100.00	103	1.1029470	1.1383762		3.2	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	97.8	1.5271250	1.4930478		-2.2	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	97.6	1.4662840	1.4306770		-2.4	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	95.1	0.9141518	0.8689207		-4.9	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	102	1.0536610	1.0736203		1.9	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	102	1.0799530	1.0977524		1.6	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	99.6	1.0143260	1.0099883		-0.4	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	101	0.9279333	0.9355105		0.8	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	100	0.9329336	0.9327825		-0.02	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	100	0.9646272	0.9644574		-0.02	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	102	1.0360890	1.0530458		1.6	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	104	0.9049372	0.9392673		3.8	+/-23
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	103	0.7819773	0.8033582		2.7	+/-28
13C12-OCDD	A	200.00	213	0.7882343	0.8392826		6.5	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	9.04	1.2334500	1.1156124		-9.6	

* Values outside of QC limits

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GB00010
Lab File ID:	23020110	Calibration Date:	02/01/2023
Sequence:	SLB0026	Injection Date:	02/01/23
Lab Sample ID:	SLB0026-SCV1	Injection Time:	20:23
Sequence Name:	ICVCR		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	9.80	0.8760604	0.8586768		-2.0	
2,3,7,8-TCDD	A	10.000	10.1	1.2363600	1.2492920		1.0	
1,2,3,7,8-PeCDF	A	50.000	49.4	0.8446540	0.8351133		-1.1	
2,3,4,7,8-PeCDF	A	50.000	50.7	0.9111780	0.9242915		1.4	
1,2,3,7,8-PeCDD	A	50.000	48.9	1.0866850	1.0622540		-2.2	
1,2,3,4,7,8-HxCDF	A	50.000	50.8	1.1816860	1.2014960		1.7	
1,2,3,6,7,8-HxCDF	A	50.000	51.1	1.2480480	1.2746570		2.1	
2,3,4,6,7,8-HxCDF	A	50.000	51.5	1.2288500	1.2663990		3.1	
1,2,3,7,8,9-HxCDF	A	50.000	49.9	1.1865370	1.1839220		-0.2	
1,2,3,4,7,8-HxCDD	A	50.000	51.0	0.9869672	1.0062160		2.0	
1,2,3,6,7,8-HxCDD	A	50.000	48.3	1.0207220	0.9861518		-3.4	
1,2,3,7,8,9-HxCDD	A	50.000	49.6	0.9854780	10444.61		-0.8	
1,2,3,4,6,7,8-HpCDF	A	50.000	49.0	1.2041190	1.1796410		-2.0	
1,2,3,4,7,8,9-HpCDF	A	50.000	51.5	1.1653050	1.1995620		2.9	
1,2,3,4,6,7,8-HpCDD	A	50.000	48.8	1.2525690	1.2236480		-2.3	
OCDF	A	100.00	93.0	1.1862640	1.1031570		-7.0	
OCDD	A	100.00	95.8	1.1026670	1.0561160		-4.2	
13C12-2,3,7,8-TCDF	A	100.00	101	1.7680590	1.7827674		0.8	
13C12-2,3,7,8-TCDD	A	100.00	97.3	1.1029470	1.0730574		-2.7	
13C12-1,2,3,7,8-PeCDF	A	100.00	97.9	1.5271250	1.4954172		-2.1	
13C12-2,3,4,7,8-PeCDF	A	100.00	96.0	1.4662840	1.4076825		-4.0	
13C12-1,2,3,7,8-PeCDD	A	100.00	95.6	0.9141518	0.8737537		-4.4	
13C12-1,2,3,4,7,8-HxCDF	A	100.00	99.0	1.0536610	1.0427881		-1.0	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	98.8	1.0799530	1.0669191		-1.2	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	99.3	1.0143260	1.0069993		-0.7	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	98.6	0.9279333	0.9147189		-1.4	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	97.7	0.9329336	0.9118251		-2.3	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	101	0.9646272	0.9706530		0.6	
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	100	1.0360890	1.0396134		0.3	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	101	0.9049372	0.9117511		0.8	
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	101	0.7819773	0.7868918		0.6	
13C12-OCDD	A	200.00	205	0.7882343	0.8085897		2.6	
37Cl4-2,3,7,8-TCDD	A	10.000	8.94	1.2334500	1.1023697		-10.6	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GB00010
Lab File ID:	23022312	Calibration Date:	02/01/2023
Sequence:	SLB0345	Injection Date:	02/23/23
Lab Sample ID:	SLB0345-CCV1	Injection Time:	19:11
Sequence Name:	CS3V4		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
2,3,7,8-TCDF	A	10.000	9.68	0.8760604	0.8478234		-3.2	+/-16	
2,3,7,8-TCDD	A	10.000	8.69	1.2363600	1.0738920		-13.1	+/-22	
1,2,3,7,8-PeCDF	A	50.000	50.2	0.8446540	0.8474479		0.3	+/-18	
2,3,4,7,8-PeCDF	A	50.000	51.0	0.9111780	0.9295542		2.0	+/-18	
1,2,3,7,8-PeCDD	A	50.000	56.9	1.0866850	1.2357730		13.7	+/-22	
1,2,3,4,7,8-HxCDF	A	50.000	46.1	1.1816860	1.0902010		-7.7	+/-10	
1,2,3,6,7,8-HxCDF	A	50.000	44.2	1.2480480	1.1026150		-11.7	+/-12	
2,3,4,6,7,8-HxCDF	A	50.000	45.7	1.2288500	1.1233860		-8.6	+/-12	
1,2,3,7,8,9-HxCDF	A	50.000	46.5	1.1865370	1.1043270		-6.9	+/-10	
1,2,3,4,7,8-HxCDD	A	50.000	48.1	0.9869672	0.9503983		-3.7	+/-22	
1,2,3,6,7,8-HxCDD	A	50.000	46.5	1.0207220	0.9493121		-7.0	+/-22	
1,2,3,7,8,9-HxCDD	A	50.000	47.7	0.9854780	0.9398482		-4.6	+/-18	
1,2,3,4,6,7,8-HpCDF	A	50.000	47.7	1.2041190	1.1498960		-4.5	+/-10	
1,2,3,4,7,8,9-HpCDF	A	50.000	47.1	1.1653050	1.0971080		-5.9	+/-14	
1,2,3,4,6,7,8-HpCDD	A	50.000	44.9	1.2525690	1.1247070		-10.2	+/-14	
OCDF	A	100.00	82.9	1.1862640	0.9833408		-17.1	+/-37	
OCDD	A	100.00	96.4	1.1026670	1.0626510		-3.6	+/-21	
13C12-2,3,7,8-TCDF	A	100.00	82.6	1.7680590	1.4609158		-17.4	+/-29	
13C12-2,3,7,8-TCDD	A	100.00	102	1.1029470	1.1211812		1.7	+/-18	
13C12-1,2,3,7,8-PeCDF	A	100.00	74.0	1.5271250	1.1307157		-26.0	+/-24	*
13C12-2,3,4,7,8-PeCDF	A	100.00	76.9	1.4662840	1.1269041		-23.1	+/-23	*
13C12-1,2,3,7,8-PeCDD	A	100.00	65.3	0.9141518	0.5969997		-34.7	+/-38	
13C12-1,2,3,4,7,8-HxCDF	A	100.00	94.5	1.0536610	0.9960034		-5.5	+/-24	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	98.1	1.0799530	1.0591562		-1.9	+/-30	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	97.8	1.0143260	0.9918777		-2.2	+/-27	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	90.0	0.9279333	0.8349472		-10.0	+/-26	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	104	0.9329336	0.9684278		3.8	+/-15	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	109	0.9646272	1.0474637		8.6	+/-15	
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	82.5	1.0360890	0.8551825		-17.5	+/-22	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	81.2	0.9049372	0.7345442		-18.8	+/-23	
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	83.7	0.7819773	0.6545189		-16.3	+/-28	
13C12-OCDD	A	200.00	114	0.7882343	0.4493649		-43.0	+/-52	
37Cl4-2,3,7,8-TCDD	A	10.000	8.82	1.2334500	1.0874118		-11.8		

* Values outside of QC limits

* Values outside of QC limits

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:12:04 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3V4, Name: 23022312, Date: 23-Feb-2023, Time: 19:11:19, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.986	1.001	5.786e4	7.447e4	0.876	0.777	0.770	926	1155	8.37e5	1.09e6	904.5	943.7	NO	bd	bd	9.678
12378-PeCDF	30.142	1.000	3.118e5	2.000e5	0.845	1.559	1.550	1733	1558	4.66e6	3.04e6	2691.8	1953.5	NO	bb	bb	50.165
23478-PeCDF	31.490	1.000	3.399e5	2.196e5	0.911	1.548	1.550	1733	1558	5.20e6	3.44e6	3000.2	2204.4	NO	bb	bb	51.008
123478-HxCDF	35.100	1.000	3.191e5	2.577e5	1.182	1.238	1.240	1940	2280	4.96e6	4.03e6	2557.3	1766.1	NO	bd	bd	46.129
234678-HxCDF	36.103	1.000	3.283e5	2.636e5	1.229	1.245	1.240	1940	2280	5.11e6	4.15e6	2633.5	1821.2	NO	bd	bd	45.709
123678-HxCDF	35.245	1.001	3.420e5	2.783e5	1.248	1.229	1.240	1940	2280	5.20e6	4.17e6	2678.6	1831.0	NO	dd	dd	44.174
123789-HxCDF	37.128	1.000	2.727e5	2.171e5	1.187	1.257	1.240	1940	2280	4.07e6	3.27e6	2099.5	1432.7	NO	bb	bd	46.536
1234678-HpCDF	38.966	1.000	2.671e5	2.552e5	1.204	1.047	1.050	1822	1789	4.23e6	4.16e6	2320.6	2328.5	NO	bb	bb	47.748
1234789-HpCDF	41.239	1.000	2.186e5	2.095e5	1.165	1.043	1.050	1822	1789	3.03e6	2.98e6	1663.9	1663.6	NO	bb	bd	47.074
OCDF	45.536	1.006	2.222e5	2.472e5	1.186	0.899	0.890	1133	1249	2.47e6	2.75e6	2182.4	2203.3	NO	bd	bd	82.894
2378-TCDD	26.622	1.000	5.667e4	7.196e4	1.236	0.788	0.770	896	925	8.48e5	1.08e6	946.0	1168.0	NO	bd	bb	8.686
12378-PeCDD	31.747	1.000	2.432e5	1.509e5	1.087	1.611	1.550	1479	1815	3.89e6	2.40e6	2628.6	1321.8	NO	bb	bb	56.860
123478-HxCDD	36.225	1.001	2.684e5	2.205e5	0.987	1.217	1.240	2170	1775	4.31e6	3.49e6	1986.7	1965.1	NO	bd	bd	48.147
123678-HxCDD	36.336	1.001	2.870e5	2.412e5	1.021	1.189	1.240	2170	1775	4.74e6	3.78e6	2185.0	2128.6	NO	db	db	46.502
123789-HxCDD	36.715	1.011	2.735e5	2.297e5	0.985	1.191	1.240	2170	1775	4.35e6	3.67e6	2006.1	2068.9	NO	bb	bd	47.685
1234678-HpCDD	40.481	1.000	2.012e5	1.898e5	1.253	1.060	1.050	1857	1722	3.08e6	2.91e6	1659.0	1690.3	NO	bb	bb	44.896
OCDD	45.289	1.000	2.295e5	2.778e5	1.103	0.826	0.890	1297	1580	2.69e6	3.16e6	2076.9	1998.5	NO	bb	bd	96.371
13C-2378-TCDF	25.958	1.007	6.748e5	8.859e5	1.768	0.762	0.770	1458	1044	1.03e7	1.35e7	7094.3	12917.3	NO	bb	bb	82.628
13C-12378-PeCDF	30.131	1.168	7.362e5	4.717e5	1.527	1.561	1.550	2243	2092	1.09e7	6.96e6	4845.7	3329.2	NO	bd	bd	74.042
13C-23478-PeCDF	31.479	1.221	7.317e5	4.722e5	1.466	1.549	1.550	2243	2092	1.10e7	7.01e6	4901.7	3353.0	NO	bb	bb	76.854
13C-123478-HxCDF	35.089	0.956	3.561e5	7.021e5	1.054	0.507	0.510	1487	1440	5.76e6	1.13e7	3875.9	7828.6	NO	bd	bd	94.528
13C-123678-HxCDF	35.222	0.960	3.809e5	7.443e5	1.080	0.512	0.510	1487	1440	5.92e6	1.16e7	3985.2	8074.4	NO	db	db	98.074
13C-234678-HxCDF	36.091	0.983	3.533e5	7.004e5	1.014	0.504	0.510	1487	1440	5.73e6	1.12e7	3856.4	7783.1	NO	bb	bb	97.787
13C-123789-HxCDF	37.117	1.011	3.009e5	5.861e5	0.928	0.513	0.510	1487	1440	4.97e6	9.58e6	3340.4	6653.4	NO	bb	bb	89.979
13C-1234678-HpCDF	38.955	1.061	2.821e5	6.264e5	1.036	0.450	0.440	2337	2208	4.70e6	1.04e7	2008.8	4707.3	NO	bb	bb	82.540
13C-1234789-HpCDF	41.228	1.123	2.404e5	5.399e5	0.905	0.445	0.440	2337	2208	3.35e6	7.45e6	1431.6	3372.9	NO	bd	bb	81.171
13C-1234-TCDD	25.788	0.000	4.683e5	6.001e5	1.000	0.780	0.770	1615	891	7.54e6	9.66e6	4666.9	10840.8	NO	bb	bb	100.000
13C-2378-TCDD	26.608	1.032	5.202e5	6.776e5	1.103	0.768	0.770	1615	891	7.92e6	1.02e7	4903.0	11492.4	NO	bb	bb	101.653
13C-12378-PeCDD	31.735	1.231	4.012e5	2.366e5	0.914	1.696	1.550	740	953	5.86e6	3.57e6	7923.3	3749.0	NO	bd	bd	65.306
13C-123478-HxCDD	36.203	0.986	5.690e5	4.599e5	0.933	1.237	1.240	2113	1973	9.26e6	7.60e6	4384.4	3854.9	NO	bd	bd	103.805
13C-123678-HxCDD	36.314	0.989	6.152e5	4.976e5	0.965	1.236	1.240	2113	1973	9.82e6	7.94e6	4649.6	4025.3	NO	db	db	108.587
13C-1234678-HpCDD	40.470	1.103	3.599e5	3.355e5	0.782	1.073	1.050	1366	1367	5.34e6	4.97e6	3904.8	3634.6	NO	bb	bb	83.700
13C-OCDD	45.271	1.233	4.537e5	5.011e5	0.788	0.905	0.890	1300	1582	5.48e6	6.05e6	4218.2	3821.9	NO	bb	bb	114.018
13C-123789-HxCDD	36.704	0.000	5.902e5	4.722e5	1.000	1.250	1.240	2113	1973	1.00e7	7.86e6	4737.9	3986.0	NO	bb	bb	100.000
37CL-2378-TCDD	26.622	1.032	1.162e5		1.233			1550		1.75e6		1132.0			bb		8.816

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:12:04 Pacific Standard Time

ID: CS3V4, Name: 23022312, Date: 23-Feb-2023, Time: 19:11:19, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.455	0.865	6.460e4	8.492e4	1.064	0.761	0.770	926	1155	1.06e6	1.35e6	1142.5	1165.0	NO	bb	bd	9.000
1289-TCDF	27.483	1.059	4.491e4	5.945e4	0.858	0.755	0.770	926	1155	6.61e5	8.64e5	713.6	748.2	NO	dd	dd	7.797
13468-PECDF	27.328	0.907	4.681e5	3.124e5	1.013	1.498	1.550	774	937	7.37e6	4.94e6	9521.8	5276.8	NO	bb	bb	63.786
12389-PECDF	32.537	1.080	3.283e5	2.140e5	0.844	1.534	1.550	1733	1558	4.88e6	3.16e6	2818.2	2030.5	NO	bb	bb	53.213
123468-HXCDF	33.440	0.953	3.235e5	2.608e5	1.197	1.241	1.240	1940	2280	4.84e6	3.94e6	2497.1	1728.8	NO	bb	bb	46.116
1368-TCDD	23.740	0.892	5.449e4	7.052e4	1.084	0.773	0.770	896	925	8.81e5	1.13e6	983.1	1223.9	NO	bd	bd	9.625
1289-TCDD	27.229	1.023	4.375e4	5.687e4	0.975	0.769	0.770	896	925	6.31e5	8.09e5	703.8	874.1	NO	bd	bb	8.615
12479-PECDD	29.006	0.914	3.740e5	2.382e5	1.837	1.570	1.550	1479	1815	3.76e6	2.41e6	2539.2	1326.1	NO	bb	bb	52.242
12389-PECDD	32.136	1.013	2.801e5	1.757e5	1.252	1.594	1.550	1479	1815	4.34e6	2.74e6	2933.4	1511.1	NO	bb	bb	57.067
124679-HXCDD	34.220	0.945	2.856e5	2.287e5	1.033	1.249	1.240	2170	1775	4.61e6	3.64e6	2124.4	2048.1	NO	bb	bb	48.394
1234679-HPCDD	39.423	0.974	2.317e5	2.277e5	1.286	1.018	1.050	1857	1722	3.79e6	3.56e6	2042.1	2068.1	NO	bb	bd	51.372
Total-tetrafurans			1.690e5		0.933			926		2.58e6							26.721
Total-penta1			4.681e5					774		7.37e6							63.786
Total-pentafurans			1.029e6		0.866			1733		1.55e7							162.210
Total-hexafurans			1.586e6		1.208			1940		2.42e7							228.663
Total-heptafurans			4.857e5		1.185			1822		7.26e6							94.822
Total-Furans			3.960e6		1.067			926		5.94e7							659.098
Total-tetradioxins			2.681e5		1.099			896		3.70e6							46.610
Total-pentadioxins			8.972e5		1.392			1479		1.20e7							166.169
Total-hexadioxins			1.115e6		1.007			2170		1.80e7							190.728
Total-heptadioxins			4.330e5		1.269			1857		6.87e6							96.268
Total-Dioxins			2.942e6		1.165			896		4.33e7							596.147
Total-TEQ			6.902e6					896		1.03e8							1255.244
FUNCTION1 PFK			1.198e8					366741		3.18e7							
FUNCTION2 PFK			0.000e0					234171		0.00e0							
FUNCTION3 PFK			0.000e0					333302		0.00e0							
FUNCTION4 PFK			1.087e7					273300		6.48e7							
FUNCTION5 PFK			4.978e6					148167		8.37e6							
FUNCTION1 HXCD...			7.245e2					599		1.04e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			6.086e2					1040		1.13e4							0.000
FUNCTION3 OCDPE			0.000e0					572		0.00e0							
FUNCTION4 NCDPE			3.524e2					719		4.49e3							0.000
FUNCTION5 DCDPE			0.000e0					471		0.00e0							

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3V4, Name: 23022312, Date: 23-Feb-2023, Time: 19:11:19, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.48	4.491e4	5.945e4	0.858	0.76	0.77	713.6	YES	NO	dd	dd	7.797
2	Total-tetrafurans	27.34	1.676e3	1.921e3	0.933	0.87	0.77	28.7	YES	NO	bd	bd	0.247
3	2378-TCDF	25.99	5.786e4	7.447e4	0.876	0.78	0.77	904.5	YES	NO	bd	bd	9.678
4	1368-TCDF	22.45	6.460e4	8.492e4	1.064	0.76	0.77	1142.5	YES	NO	bb	bd	9.000

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.33	4.681e5	3.124e5	1.013	1.50	1.55	9521.8	YES	NO	bb	bb	63.786

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	28.99	4.877e4	3.196e4	0.866	1.53	1.55	431.6	YES	NO	bb	bb	7.726
2	12389-PECDF	32.54	3.283e5	2.140e5	0.844	1.53	1.55	2818.2	YES	NO	bb	bb	53.213
3	23478-PeCDF	31.49	3.399e5	2.196e5	0.911	1.55	1.55	3000.2	YES	NO	bb	bb	51.008
4	12378-PeCDF	30.14	3.118e5	2.000e5	0.845	1.56	1.55	2691.8	YES	NO	bb	bb	50.165
5	Total-pentafurans	29.87	6.243e2	3.922e2	0.866	1.59	1.55	5.7	YES	NO	db	bb	0.097

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123678-HxCDF	35.24	3.420e5	2.783e5	1.248	1.23	1.24	2678.6	YES	NO	dd	dd	44.174
2	123478-HxCDF	35.10	3.191e5	2.577e5	1.182	1.24	1.24	2557.3	YES	NO	bd	bd	46.129
3	123468-HXCDF	33.44	3.235e5	2.608e5	1.197	1.24	1.24	2497.1	YES	NO	bb	bb	46.116
4	123789-HxCDF	37.13	2.727e5	2.171e5	1.187	1.26	1.24	2099.5	YES	NO	bb	bd	46.536
5	234678-HxCDF	36.10	3.283e5	2.636e5	1.229	1.25	1.24	2633.5	YES	NO	bd	bd	45.709

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.24	2.186e5	2.095e5	1.165	1.04	1.05	1663.9	YES	NO	bb	bd	47.074
2	1234678-HpCDF	38.97	2.671e5	2.552e5	1.204	1.05	1.05	2320.6	YES	NO	bb	bb	47.748

ID: CS3V4, Name: 23022312, Date: 23-Feb-2023, Time: 19:11:19, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.48	4.491e4	5.945e4	0.858	0.76	0.77	713.6	YES	NO	dd	dd	7.797
2	Total-tetrafurans	27.34	1.676e3	1.921e3	0.933	0.87	0.77	28.7	YES	NO	bd	bd	0.247
3	2378-TCDF	25.99	5.786e4	7.447e4	0.876	0.78	0.77	904.5	YES	NO	bd	bd	9.678
4	1368-TCDF	22.45	6.460e4	8.492e4	1.064	0.76	0.77	1142.5	YES	NO	bb	bd	9.000
5	Total-pentafurans	28.99	4.877e4	3.196e4	0.866	1.53	1.55	431.6	YES	NO	bb	bb	7.726
6	12389-PECDF	32.54	3.283e5	2.140e5	0.844	1.53	1.55	2818.2	YES	NO	bb	bb	53.213
7	23478-PeCDF	31.49	3.399e5	2.196e5	0.911	1.55	1.55	3000.2	YES	NO	bb	bb	51.008
8	12378-PeCDF	30.14	3.118e5	2.000e5	0.845	1.56	1.55	2691.8	YES	NO	bb	bb	50.165
9	Total-pentafurans	29.87	6.243e2	3.922e2	0.866	1.59	1.55	5.7	YES	NO	db	bb	0.097
10	123678-HxCDF	35.24	3.420e5	2.783e5	1.248	1.23	1.24	2678.6	YES	NO	dd	dd	44.174
11	123478-HxCDF	35.10	3.191e5	2.577e5	1.182	1.24	1.24	2557.3	YES	NO	bd	bd	46.129
12	123468-HXCDF	33.44	3.235e5	2.608e5	1.197	1.24	1.24	2497.1	YES	NO	bb	bb	46.116
13	123789-HxCDF	37.13	2.727e5	2.171e5	1.187	1.26	1.24	2099.5	YES	NO	bb	bd	46.536
14	234678-HxCDF	36.10	3.283e5	2.636e5	1.229	1.25	1.24	2633.5	YES	NO	bd	bd	45.709
15	1234789-HpCDF	41.24	2.186e5	2.095e5	1.165	1.04	1.05	1663.9	YES	NO	bb	bd	47.074
16	1234678-HpCDF	38.97	2.671e5	2.552e5	1.204	1.05	1.05	2320.6	YES	NO	bb	bb	47.748
17	OCDF	45.54	2.222e5	2.472e5	1.186	0.90	0.89	2182.4	YES	NO	bd	bd	82.894
18	13468-PECDF	27.33	4.681e5	3.124e5	1.013	1.50	1.55	9521.8	YES	NO	bb	bb	63.786

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.80	2.690e4	3.468e4	1.099	0.78	0.77	465.0	YES	NO	bd	bd	4.680
2	Total-tetradioxins	25.22	7.046e2	8.143e2	1.099	0.87	0.77	12.1	YES	NO	bb	db	0.115
3	Total-tetradioxins	24.01	3.004e2	4.154e2	1.099	0.72	0.77	5.9	YES	NO	db	db	0.054
4	1368-TCDD	23.74	5.449e4	7.052e4	1.084	0.77	0.77	983.1	YES	NO	bd	bd	9.625
5	1289-TCDD	27.23	4.375e4	5.687e4	0.975	0.77	0.77	703.8	YES	NO	bd	bb	8.615
6	2378-TCDD	26.62	5.667e4	7.196e4	1.236	0.79	0.77	946.0	YES	NO	bd	bb	8.686
7	Total-tetradioxins	26.30	8.525e4	1.100e5	1.099	0.78	0.77	1016.8	YES	NO	bb	bb	14.835

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	32.14	2.801e5	1.757e5	1.252	1.59	1.55	2933.4	YES	NO	bb	bb	57.067
2	12378-PeCDD	31.75	2.432e5	1.509e5	1.087	1.61	1.55	2628.6	YES	NO	bb	bb	56.860
3	12479-PECDD	29.01	3.740e5	2.382e5	1.837	1.57	1.55	2539.2	YES	NO	bb	bb	52.242

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.72	2.735e5	2.297e5	0.985	1.19	1.24	2006.1	YES	NO	bb	bd	47.685
2	123678-HxCDD	36.34	2.870e5	2.412e5	1.021	1.19	1.24	2185.0	YES	NO	db	db	46.502
3	123478-HxCDD	36.23	2.684e5	2.205e5	0.987	1.22	1.24	1986.7	YES	NO	bd	bd	48.147
4	124679-HXCDD	34.22	2.856e5	2.287e5	1.033	1.25	1.24	2124.4	YES	NO	bb	bb	48.394

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.48	2.012e5	1.898e5	1.253	1.06	1.05	1659.0	YES	NO	bb	bb	44.896
2	1234679-HPCDD	39.42	2.317e5	2.277e5	1.286	1.02	1.05	2042.1	YES	NO	bb	bd	51.372

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.80	2.690e4	3.468e4	1.099	0.78	0.77	465.0	YES	NO	bd	bd	4.680
2	Total-tetradioxins	25.22	7.046e2	8.143e2	1.099	0.87	0.77	12.1	YES	NO	bb	db	0.115
3	Total-tetradioxins	24.01	3.004e2	4.154e2	1.099	0.72	0.77	5.9	YES	NO	db	db	0.054
4	1368-TCDD	23.74	5.449e4	7.052e4	1.084	0.77	0.77	983.1	YES	NO	bd	bd	9.625
5	1289-TCDD	27.23	4.375e4	5.687e4	0.975	0.77	0.77	703.8	YES	NO	bd	bb	8.615
6	2378-TCDD	26.62	5.667e4	7.196e4	1.236	0.79	0.77	946.0	YES	NO	bd	bb	8.686
7	Total-tetradioxins	26.30	8.525e4	1.100e5	1.099	0.78	0.77	1016.8	YES	NO	bb	bb	14.835
8	12389-PECDD	32.14	2.801e5	1.757e5	1.252	1.59	1.55	2933.4	YES	NO	bb	bb	57.067
9	12378-PeCDD	31.75	2.432e5	1.509e5	1.087	1.61	1.55	2628.6	YES	NO	bb	bb	56.860
10	12479-PECDD	29.01	3.740e5	2.382e5	1.837	1.57	1.55	2539.2	YES	NO	bb	bb	52.242
11	123789-HxCDD	36.72	2.735e5	2.297e5	0.985	1.19	1.24	2006.1	YES	NO	bb	bd	47.685
12	123678-HxCDD	36.34	2.870e5	2.412e5	1.021	1.19	1.24	2185.0	YES	NO	db	db	46.502
13	123478-HxCDD	36.23	2.684e5	2.205e5	0.987	1.22	1.24	1986.7	YES	NO	bd	bd	48.147
14	124679-HXCDD	34.22	2.856e5	2.287e5	1.033	1.25	1.24	2124.4	YES	NO	bb	bb	48.394
15	1234678-HpCDD	40.48	2.012e5	1.898e5	1.253	1.06	1.05	1659.0	YES	NO	bb	bb	44.896
16	1234679-HPCDD	39.42	2.317e5	2.277e5	1.286	1.02	1.05	2042.1	YES	NO	bb	bd	51.372
17	OCDD	45.29	2.295e5	2.778e5	1.103	0.83	0.89	2076.9	YES	NO	bb	bd	96.371

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.48	4.491e4	5.945e4	0.858	0.76	0.77	713.6	YES	NO	dd	dd	7.797
2	Total-tetrafurans	27.34	1.676e3	1.921e3	0.933	0.87	0.77	28.7	YES	NO	bd	bd	0.247
3	2378-TCDF	25.99	5.786e4	7.447e4	0.876	0.78	0.77	904.5	YES	NO	bd	bd	9.678
4	1368-TCDF	22.45	6.460e4	8.492e4	1.064	0.76	0.77	1142.5	YES	NO	bb	bd	9.000
5	Total-pentafurans	28.99	4.877e4	3.196e4	0.866	1.53	1.55	431.6	YES	NO	bb	bb	7.726
6	12389-PECDF	32.54	3.283e5	2.140e5	0.844	1.53	1.55	2818.2	YES	NO	bb	bb	53.213
7	23478-PeCDF	31.49	3.399e5	2.196e5	0.911	1.55	1.55	3000.2	YES	NO	bb	bb	51.008
8	12378-PeCDF	30.14	3.118e5	2.000e5	0.845	1.56	1.55	2691.8	YES	NO	bb	bb	50.165
9	Total-pentafurans	29.87	6.243e2	3.922e2	0.866	1.59	1.55	5.7	YES	NO	db	bb	0.097
10	123678-HxCDF	35.24	3.420e5	2.783e5	1.248	1.23	1.24	2678.6	YES	NO	dd	dd	44.174
11	123478-HxCDF	35.10	3.191e5	2.577e5	1.182	1.24	1.24	2557.3	YES	NO	bd	bd	46.129
12	123468-HXCDF	33.44	3.235e5	2.608e5	1.197	1.24	1.24	2497.1	YES	NO	bb	bb	46.116
13	123789-HxCDF	37.13	2.727e5	2.171e5	1.187	1.26	1.24	2099.5	YES	NO	bb	bd	46.536
14	234678-HxCDF	36.10	3.283e5	2.636e5	1.229	1.25	1.24	2633.5	YES	NO	bd	bd	45.709
15	1234789-HpCDF	41.24	2.186e5	2.095e5	1.165	1.04	1.05	1663.9	YES	NO	bb	bd	47.074
16	1234678-HpCDF	38.97	2.671e5	2.552e5	1.204	1.05	1.05	2320.6	YES	NO	bb	bb	47.748
17	OCDF	45.54	2.222e5	2.472e5	1.186	0.90	0.89	2182.4	YES	NO	bd	bd	82.894
18	13468-PECDF	27.33	4.681e5	3.124e5	1.013	1.50	1.55	9521.8	YES	NO	bb	bb	63.786
19	Total-tetradioxins	25.80	2.690e4	3.468e4	1.099	0.78	0.77	465.0	YES	NO	bd	bd	4.680
20	Total-tetradioxins	25.22	7.046e2	8.143e2	1.099	0.87	0.77	12.1	YES	NO	bb	db	0.115
21	Total-tetradioxins	24.01	3.004e2	4.154e2	1.099	0.72	0.77	5.9	YES	NO	db	db	0.054
22	1368-TCDD	23.74	5.449e4	7.052e4	1.084	0.77	0.77	983.1	YES	NO	bd	bd	9.625
23	1289-TCDD	27.23	4.375e4	5.687e4	0.975	0.77	0.77	703.8	YES	NO	bd	bb	8.615
24	2378-TCDD	26.62	5.667e4	7.196e4	1.236	0.79	0.77	946.0	YES	NO	bd	bb	8.686
25	Total-tetradioxins	26.30	8.525e4	1.100e5	1.099	0.78	0.77	1016.8	YES	NO	bb	bb	14.835
26	12389-PECDD	32.14	2.801e5	1.757e5	1.252	1.59	1.55	2933.4	YES	NO	bb	bb	57.067
27	12378-PeCDD	31.75	2.432e5	1.509e5	1.087	1.61	1.55	2628.6	YES	NO	bb	bb	56.860
28	12479-PECDD	29.01	3.740e5	2.382e5	1.837	1.57	1.55	2539.2	YES	NO	bb	bb	52.242
29	123789-HxCDD	36.72	2.735e5	2.297e5	0.985	1.19	1.24	2006.1	YES	NO	bb	bd	47.685
30	123678-HxCDD	36.34	2.870e5	2.412e5	1.021	1.19	1.24	2185.0	YES	NO	db	db	46.502
31	123478-HxCDD	36.23	2.684e5	2.205e5	0.987	1.22	1.24	1986.7	YES	NO	bd	bd	48.147
32	124679-HXCDD	34.22	2.856e5	2.287e5	1.033	1.25	1.24	2124.4	YES	NO	bb	bb	48.394
33	1234678-HpCDD	40.48	2.012e5	1.898e5	1.253	1.06	1.05	1659.0	YES	NO	bb	bb	44.896
34	1234679-HPCDD	39.42	2.317e5	2.277e5	1.286	1.02	1.05	2042.1	YES	NO	bb	bd	51.372
35	OCDD	45.29	2.295e5	2.778e5	1.103	0.83	0.89	2076.9	YES	NO	bb	bd	96.371

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	26.31	1.440e7					42.8	YES		db		
2	FUNCTION1 PFK	26.25	1.054e8					43.9	YES		bd		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	41.48	3.923e4					1.9	NO		bb		
2	FUNCTION4 PFK	41.38	2.976e4					1.7	NO		bb		
3	FUNCTION4 PFK	40.63	1.760e3					0.6	NO		bb		
4	FUNCTION4 PFK	40.58	1.246e4					1.0	NO		bb		
5	FUNCTION4 PFK	39.28	2.007e5					7.5	YES		db		
6	FUNCTION4 PFK	39.06	1.573e6					16.4	YES		dd		
7	FUNCTION4 PFK	38.83	8.436e5					25.2	YES		dd		
8	FUNCTION4 PFK	38.73	5.560e6					29.2	YES		dd		
9	FUNCTION4 PFK	38.20	4.418e5					48.9	YES		dd		
10	FUNCTION4 PFK	38.13	1.053e6					50.8	YES		dd		
11	FUNCTION4 PFK	38.07	1.113e6					53.0	YES		bd		
12	FUNCTION4 PFK	41.73	5.639e3					0.9	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.13	4.978e6					56.5	YES		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.34	2.198e2					4.4	YES		bb		0.000
2	FUNCTION1 HXCD...	26.42	7.682e1					2.5	NO		bb		0.000
3	FUNCTION1 HXCD...	25.80	1.117e2					2.9	NO		bb		0.000
4	FUNCTION1 HXCD...	24.66	1.639e2					2.9	NO		bb		0.000
5	FUNCTION1 HXCD...	22.60	7.192e1					2.9	NO		db		0.000
6	FUNCTION1 HXCD...	22.50	8.043e1					1.8	NO		bd		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.45	7.793e1					1.7	NO		bb		0.000
2	FUNCTION2 HPCD...	32.17	8.383e1					1.0	NO		bb		0.000
3	FUNCTION2 HPCD...	31.37	2.641e2					3.8	YES		db		0.000
4	FUNCTION2 HPCD...	31.22	8.237e1					1.5	NO		bd		0.000
5	FUNCTION2 HPCD...	30.15	1.004e2					2.9	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	42.55	1.730e2					3.1	YES		db		0.000
2	FUNCTION4 NCDPE	42.32	1.794e2					3.1	YES		bd		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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Printed: Friday, February 24, 2023 15:12:04 Pacific Standard Time

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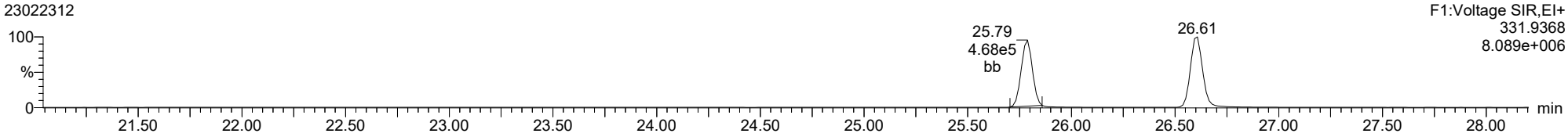
13C-1234-TCDD



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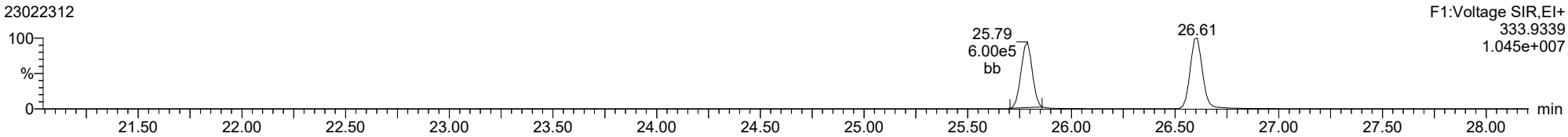

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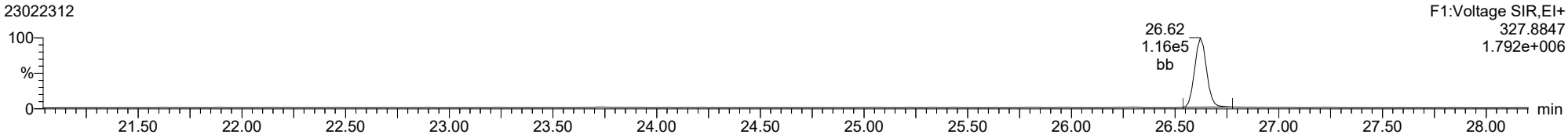

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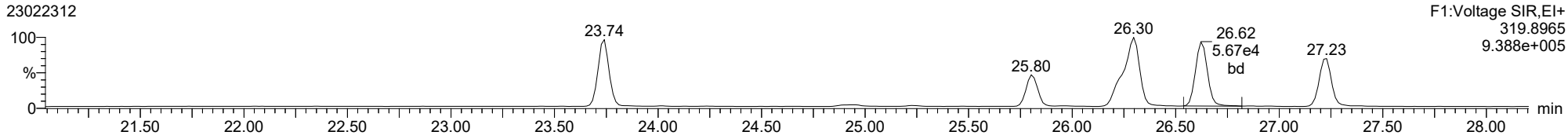

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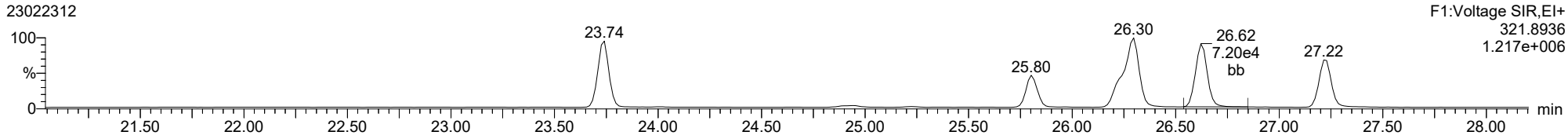

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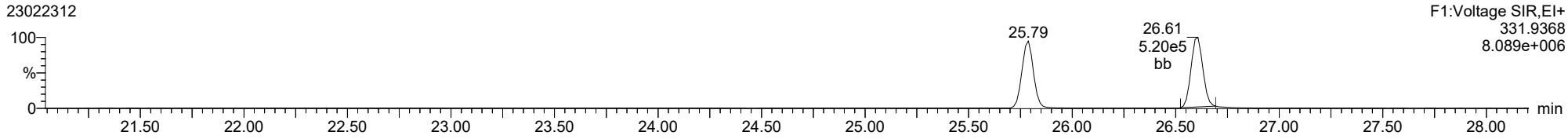

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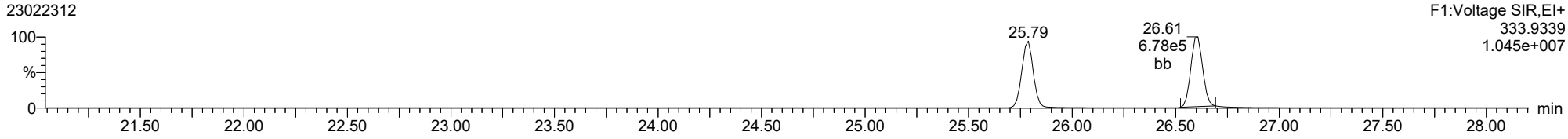
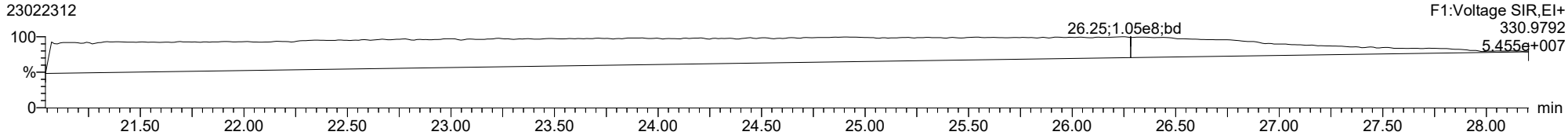


FUNCTION1 PFK



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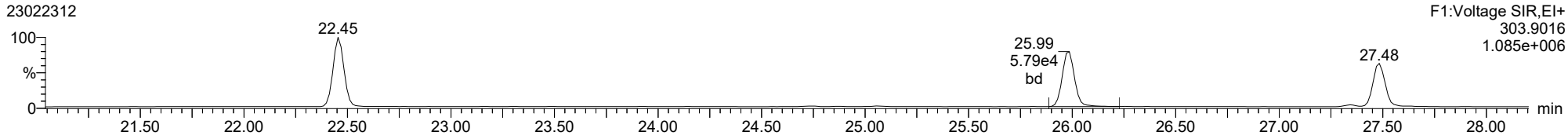

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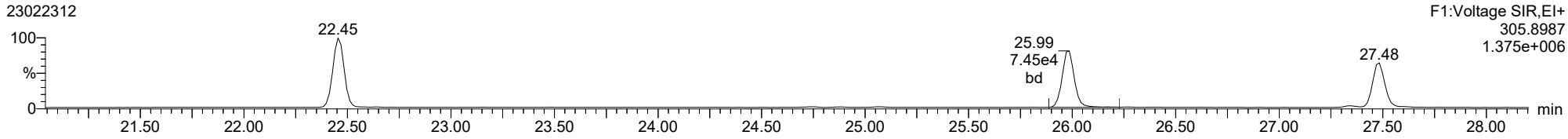

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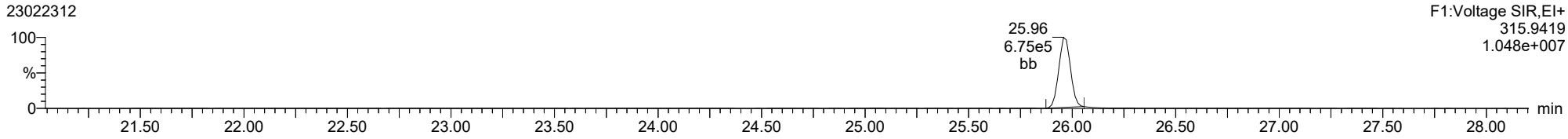

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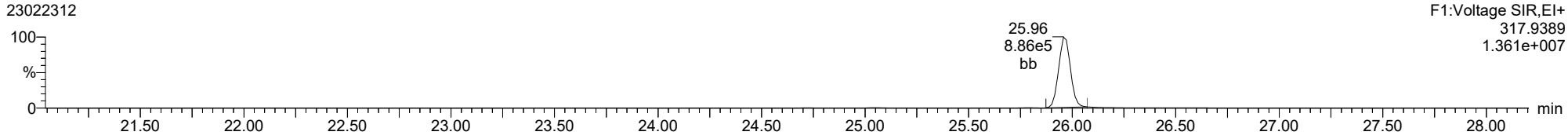

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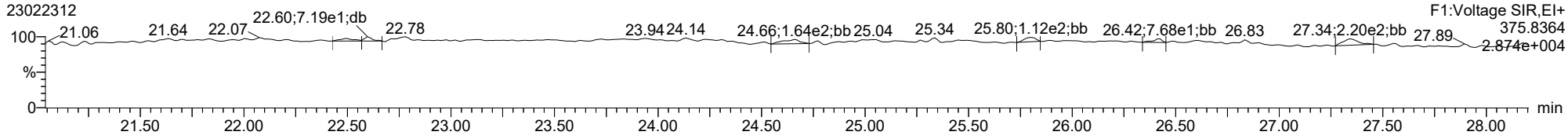

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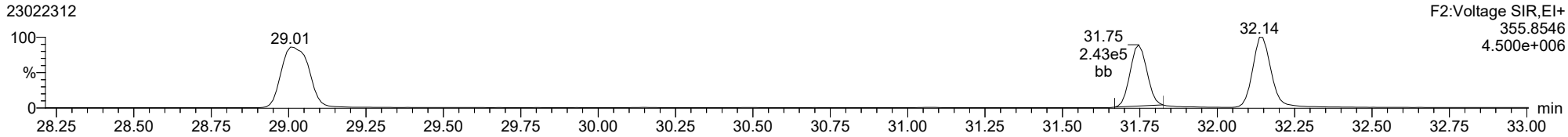
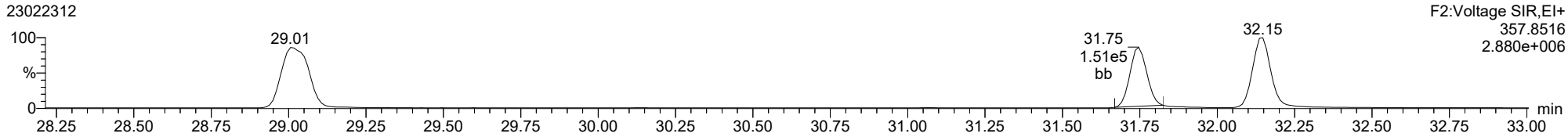
12378-PeCDD



12378-PeCDD



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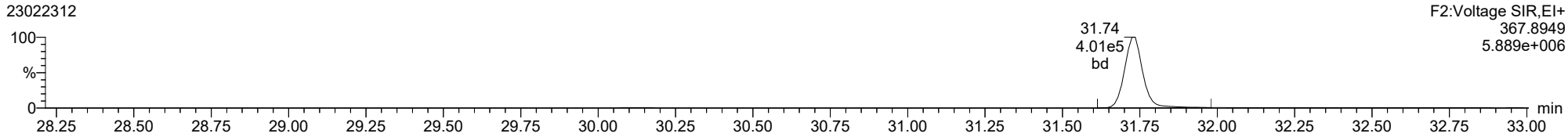

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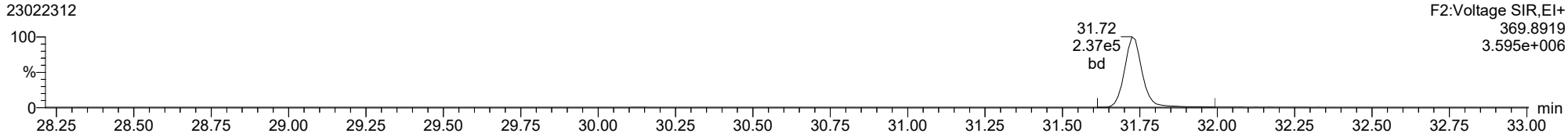
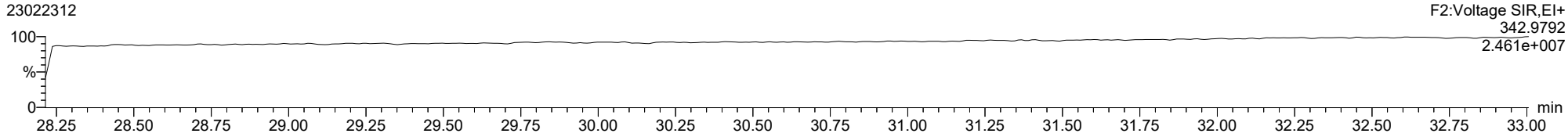


FUNCTION2 PFK



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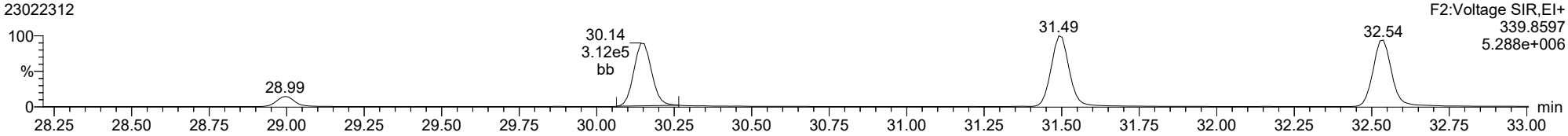

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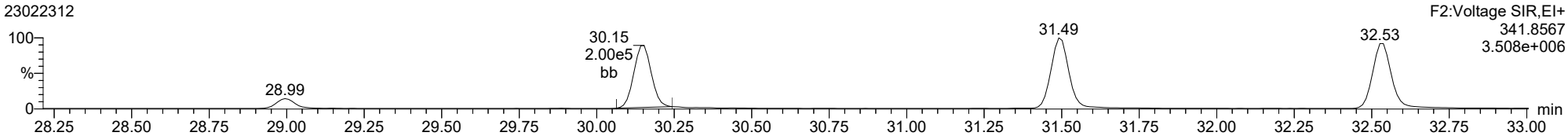

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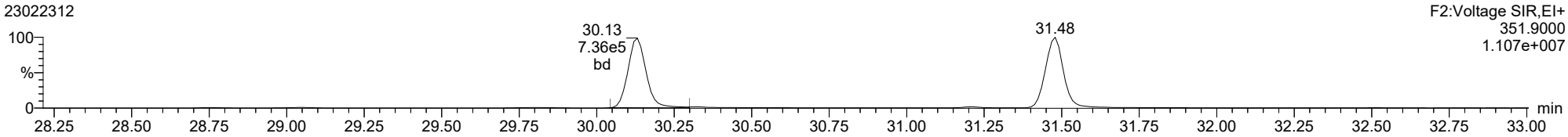

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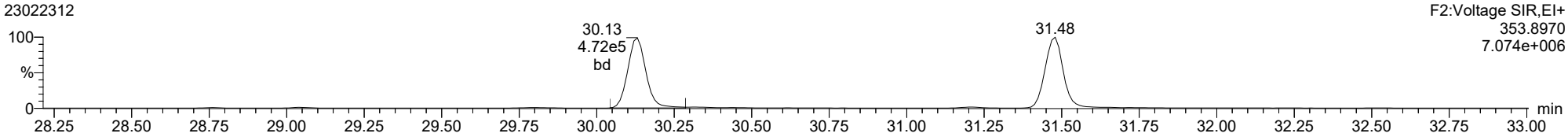
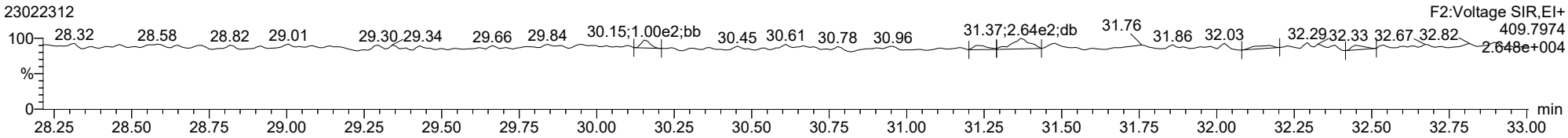


FUNCTION2 HPCDPE



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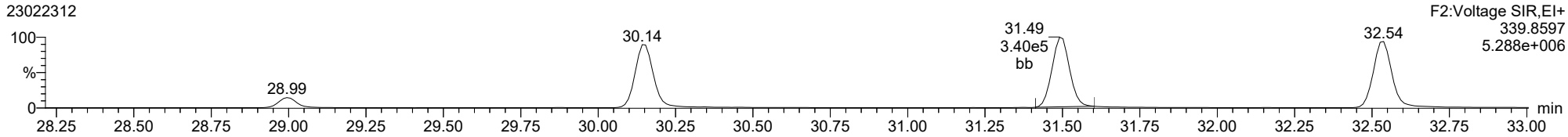

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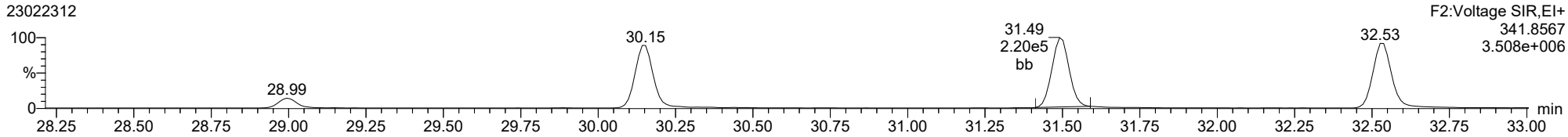

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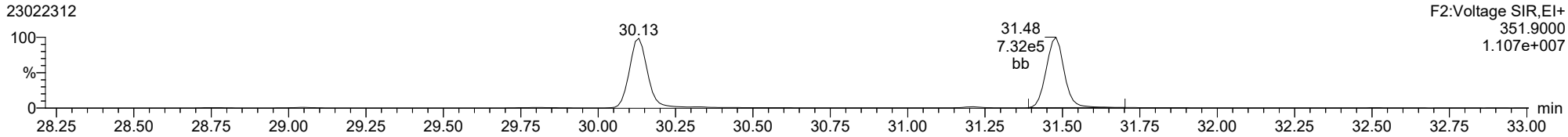

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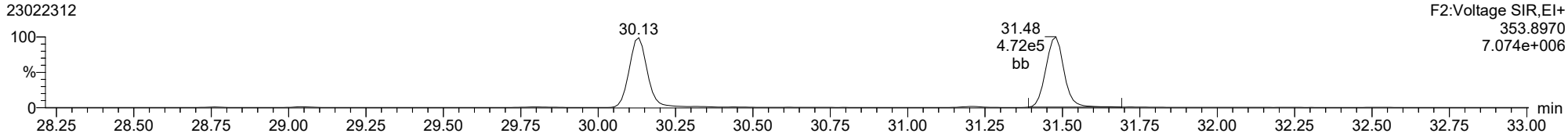

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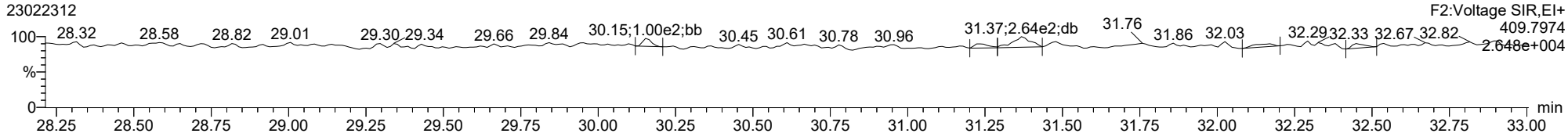

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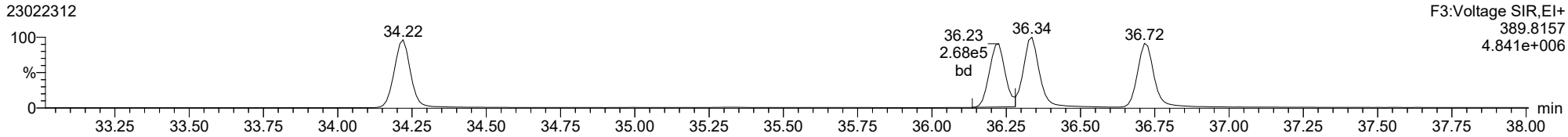

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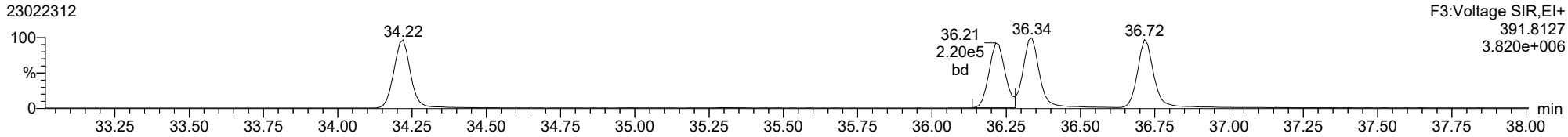

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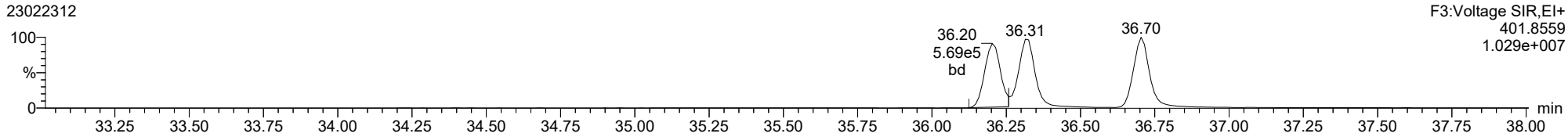

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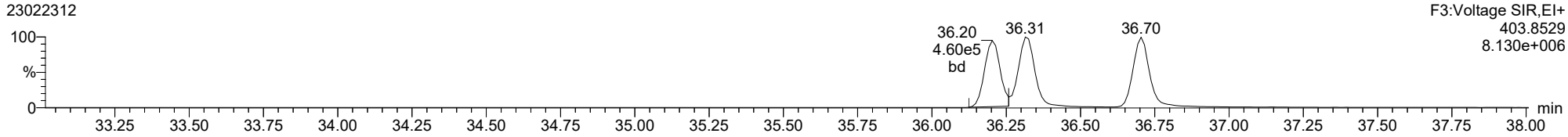
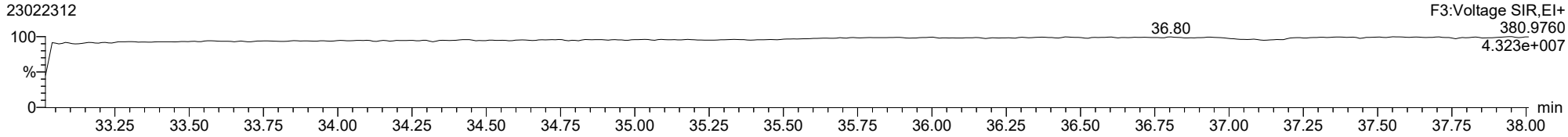


FUNCTION3 PFK



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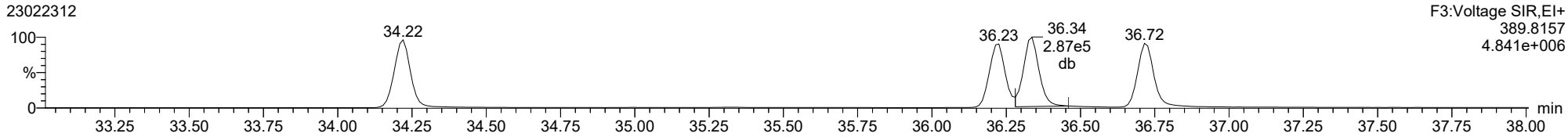

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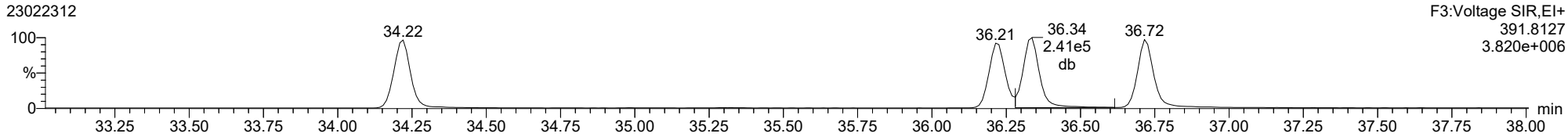

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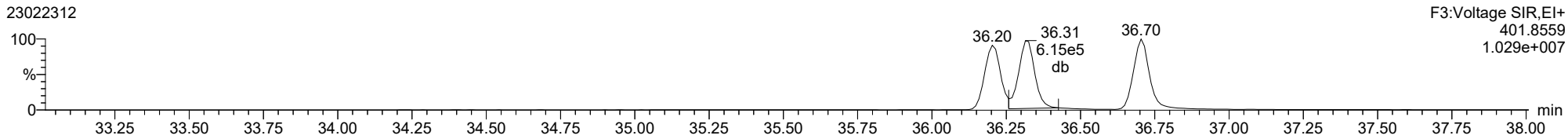

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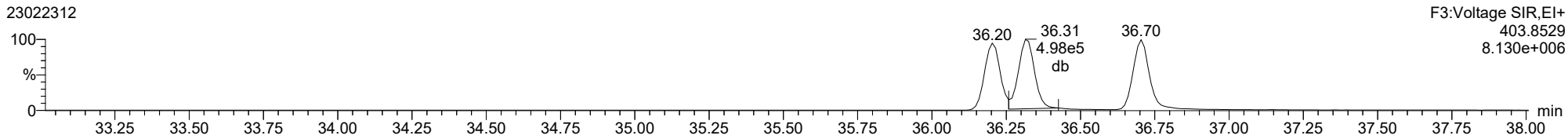

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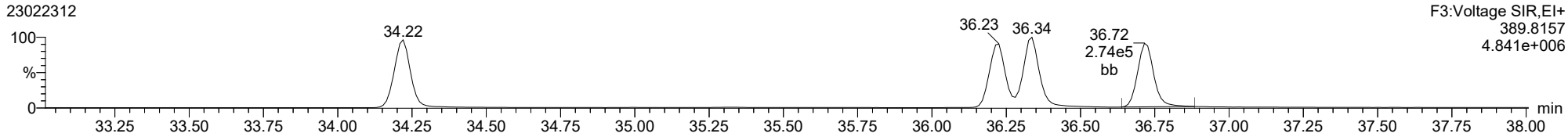

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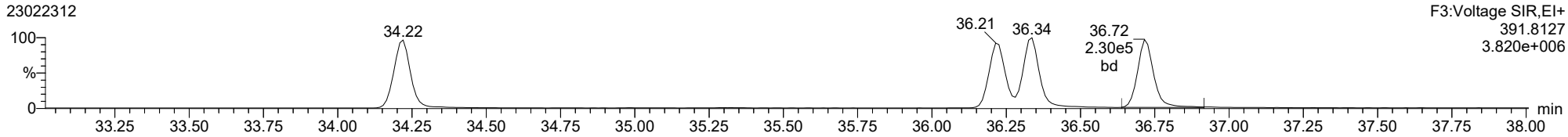

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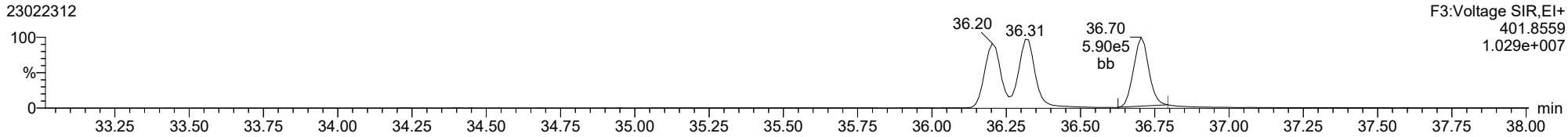

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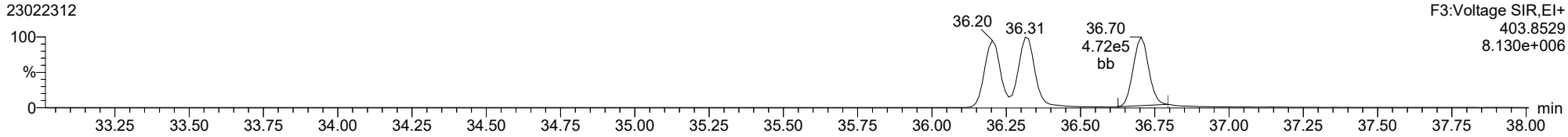

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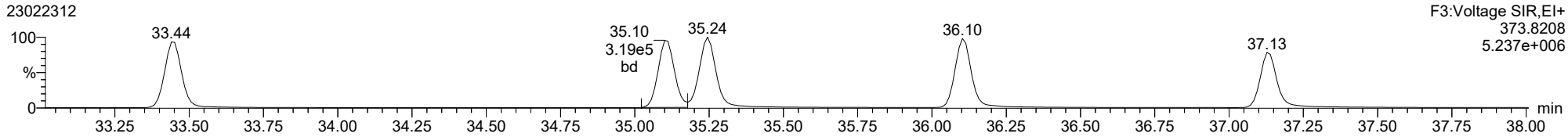

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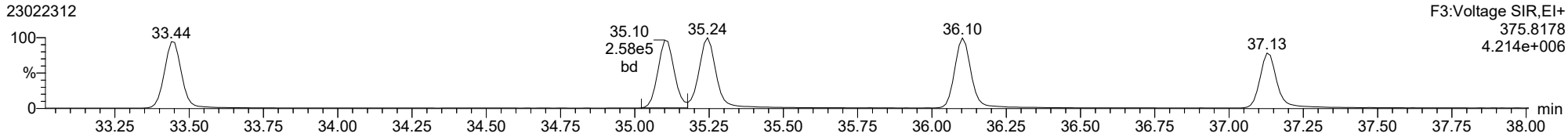

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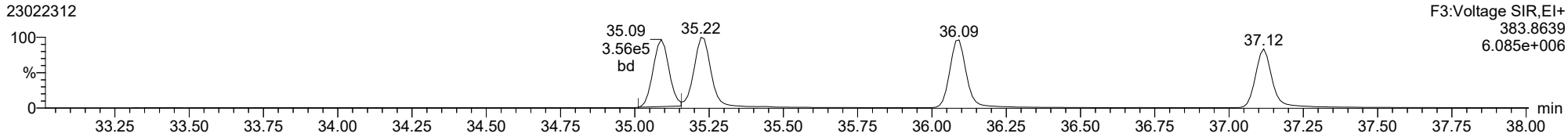

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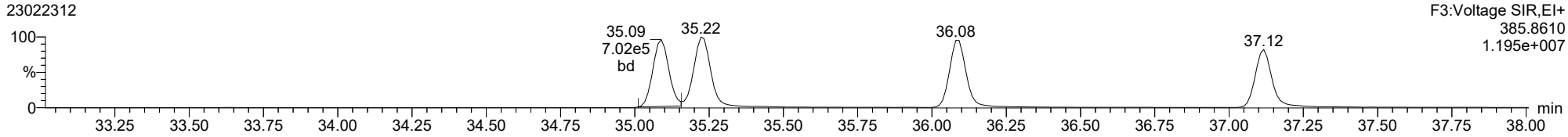
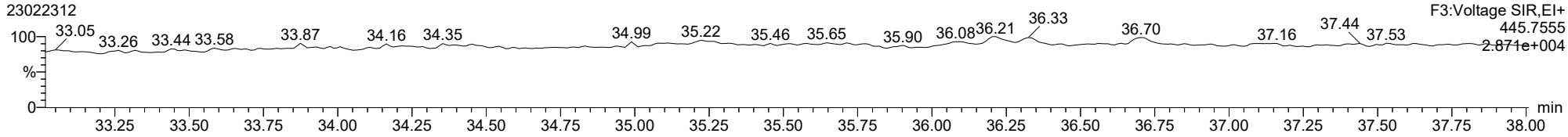


FUNCTION3 OCDPE



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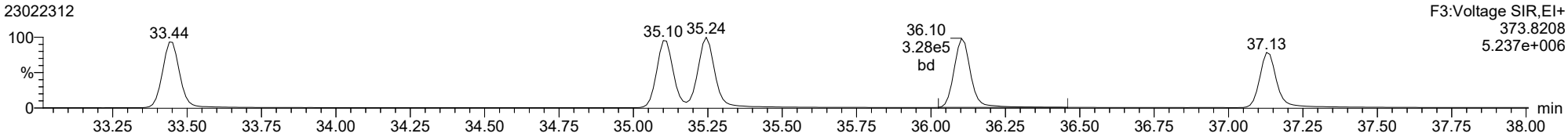
234678-HxCDF



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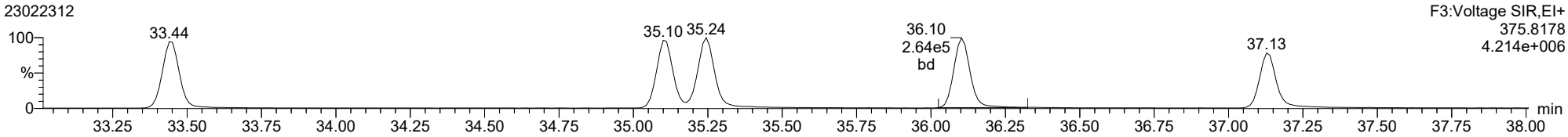

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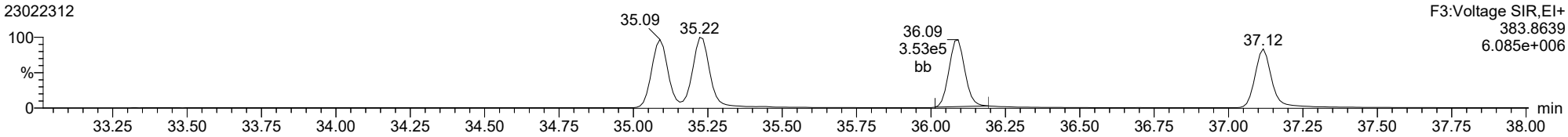

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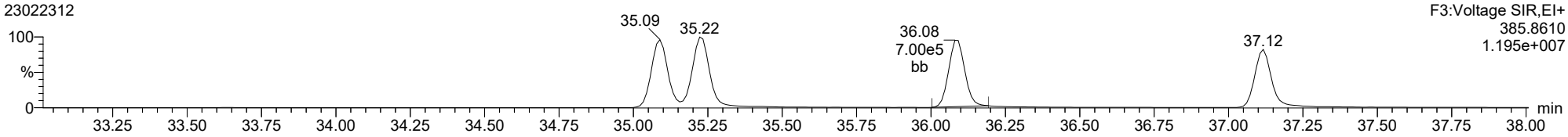
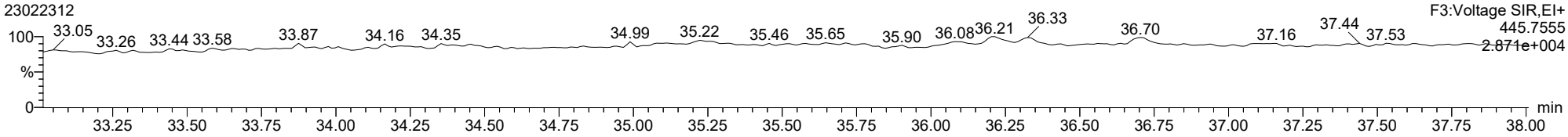


FUNCTION3 OCDPE



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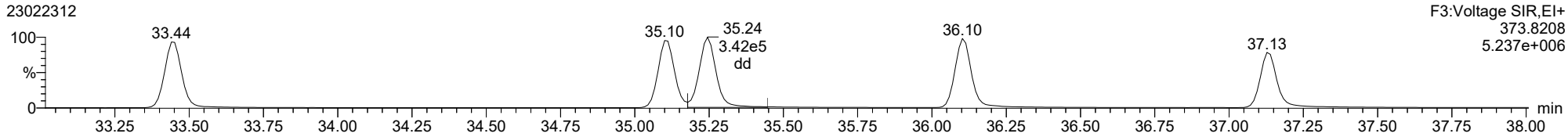

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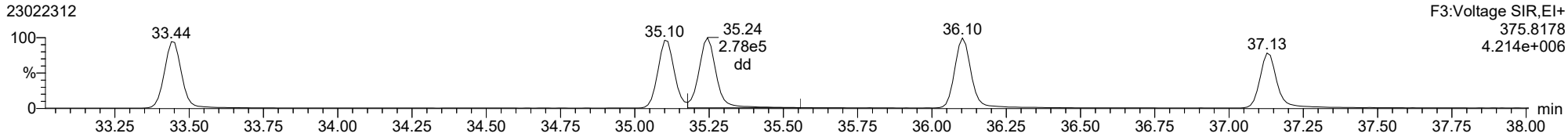

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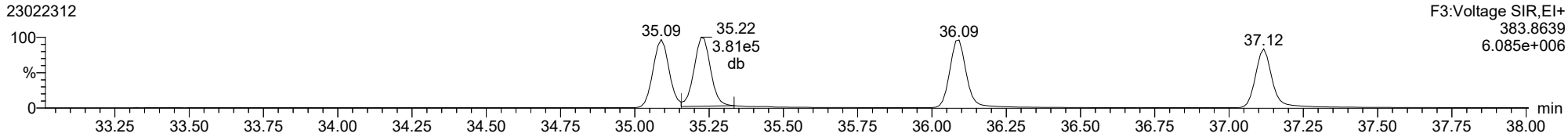

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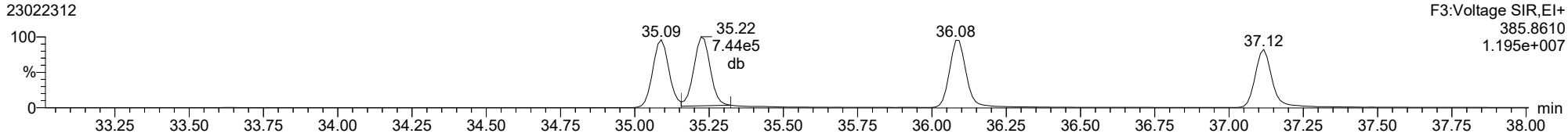
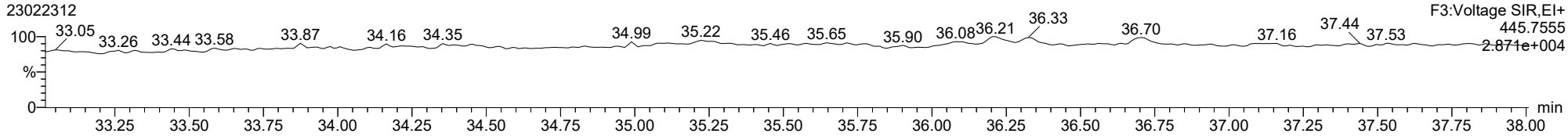


FUNCTION3 OCDPE



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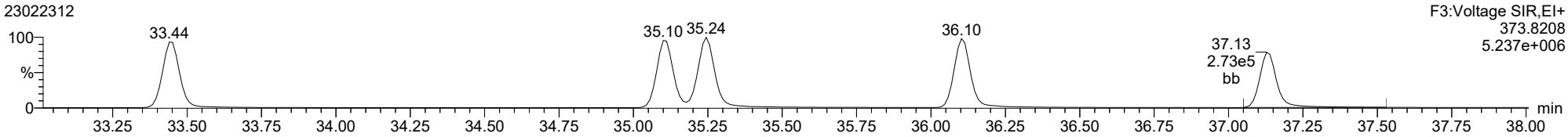

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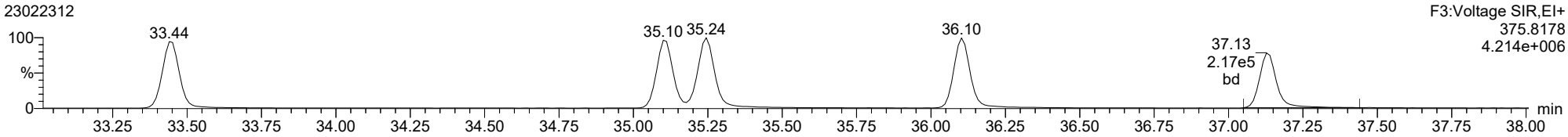

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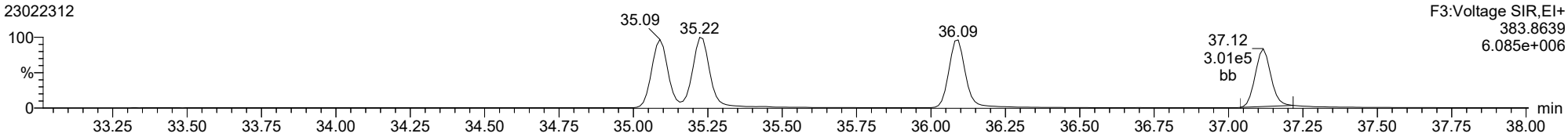

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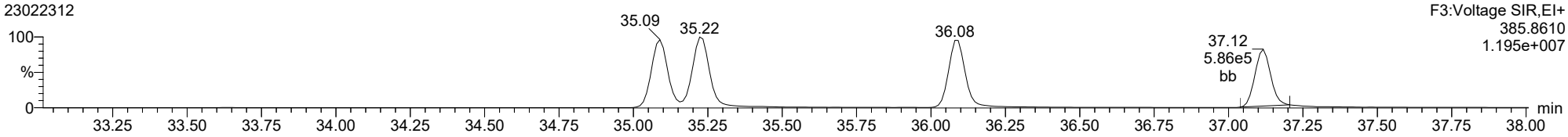
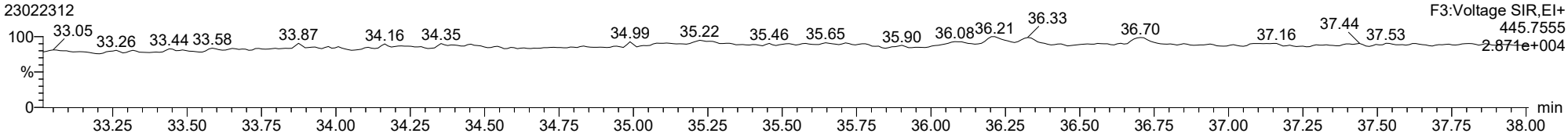


FUNCTION3 OCDPE



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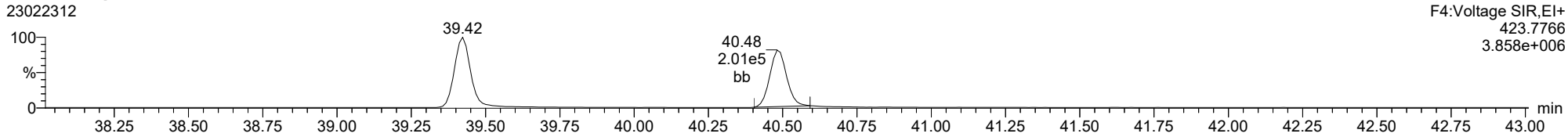
1234678-HpCDD



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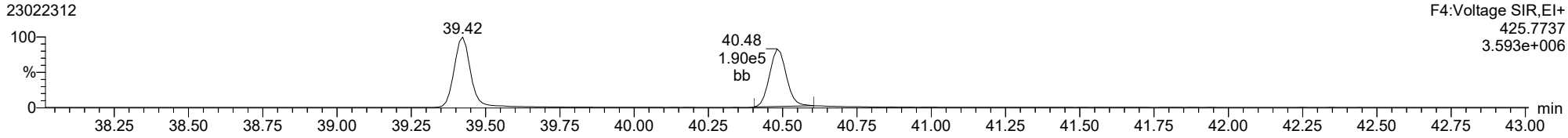

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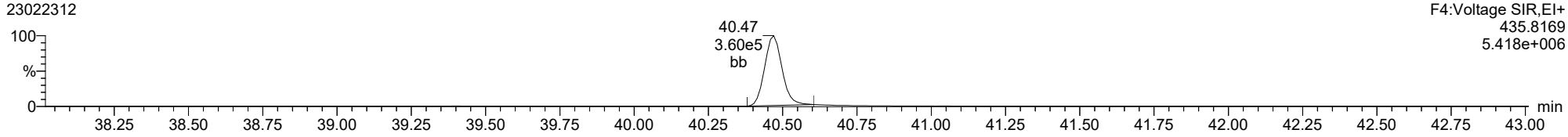

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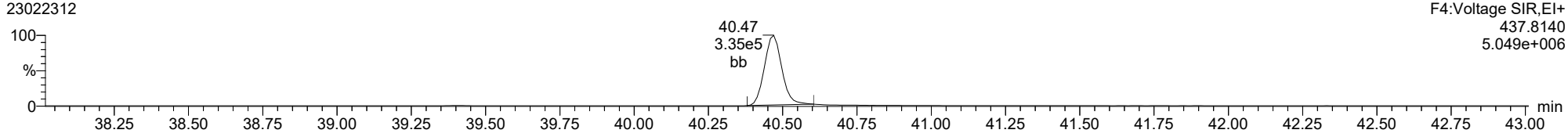
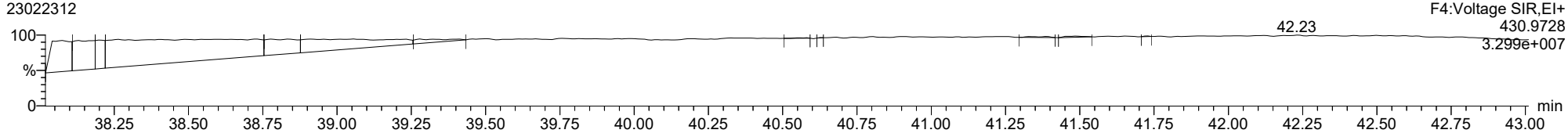


FUNCTION4 PFK



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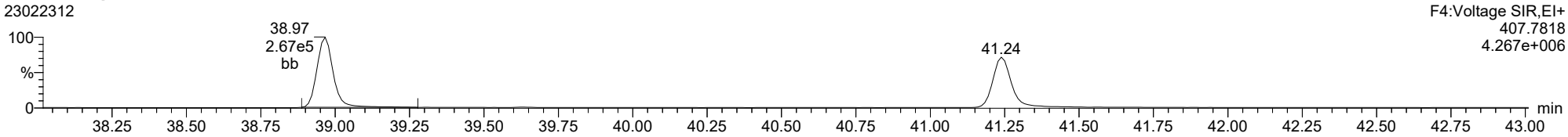
1234678-HpCDF



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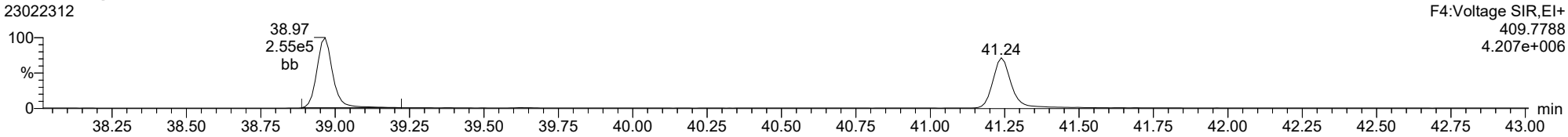

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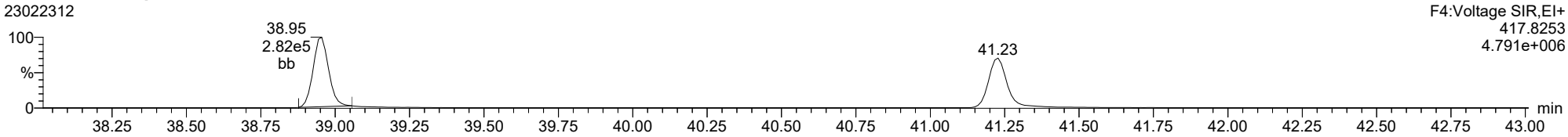

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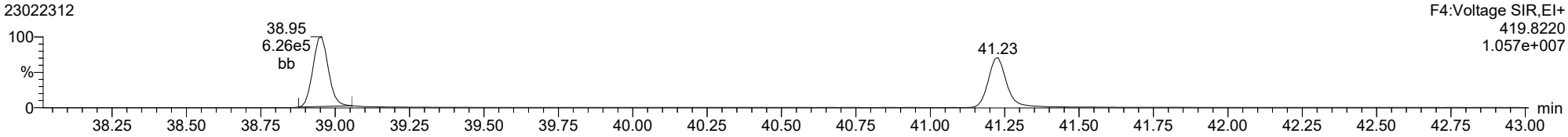

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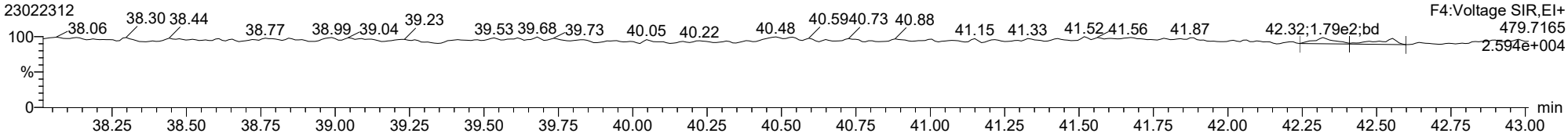

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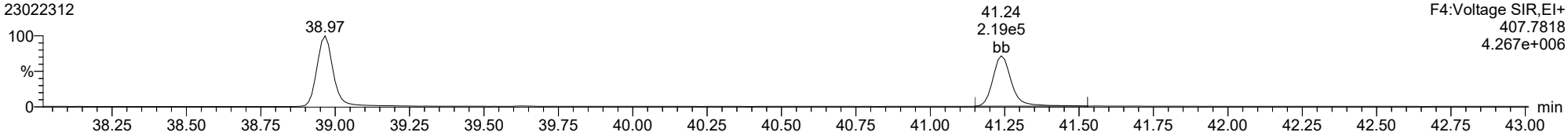

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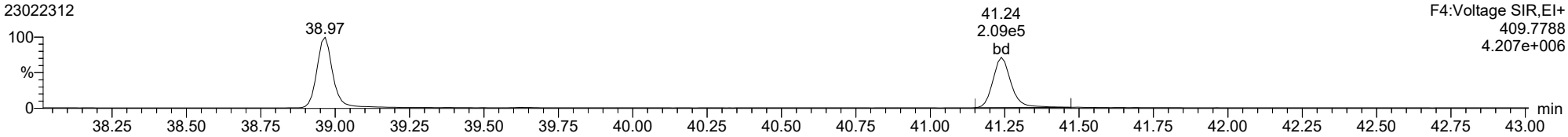

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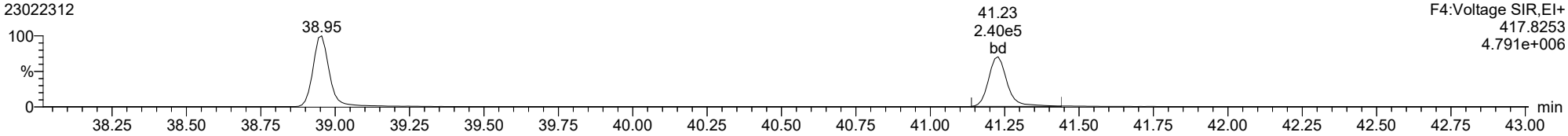

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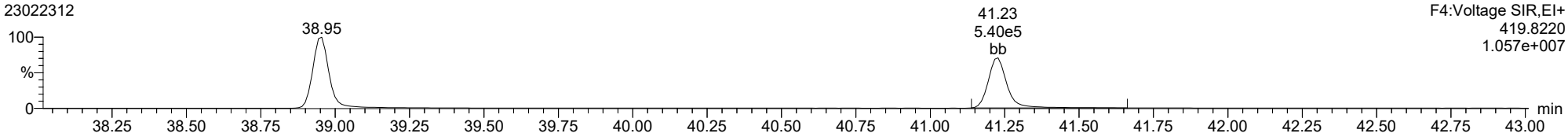
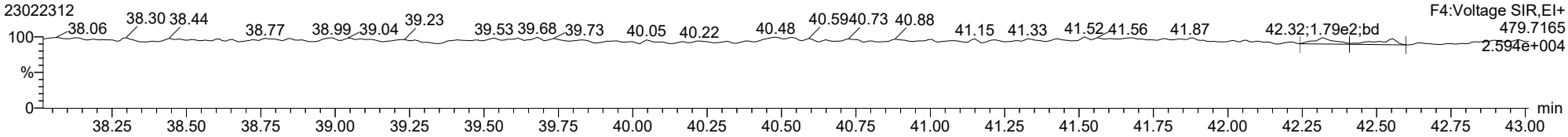


FUNCTION4 NCDPE



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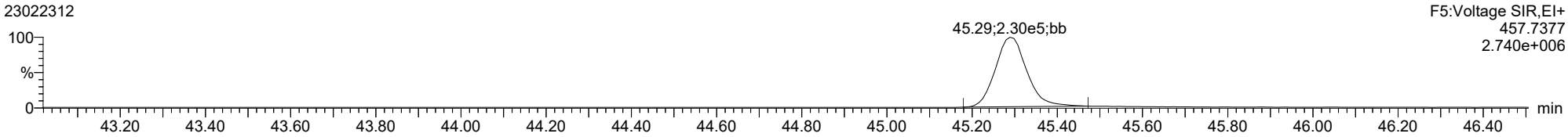
ID: CS3V4, Name: 23022312, Date: 23-Feb-2023, Time: 19:11:19, Conditions: AUTOSPEC01, User: pk

OCDD



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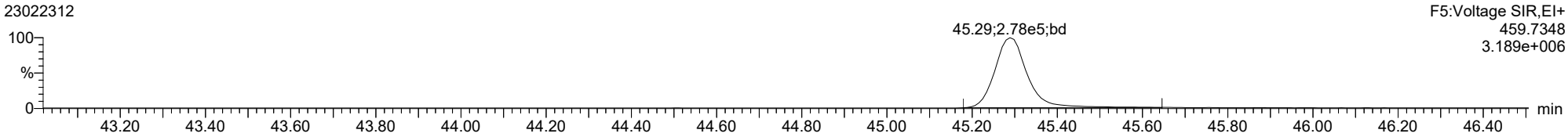

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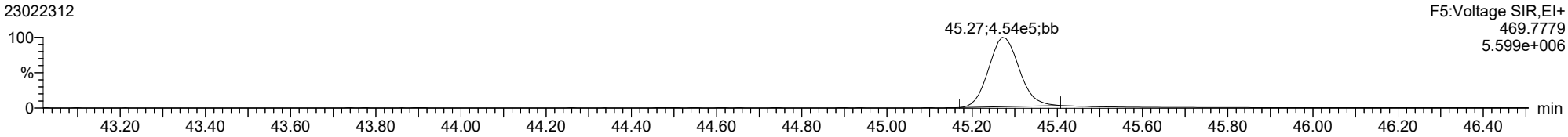

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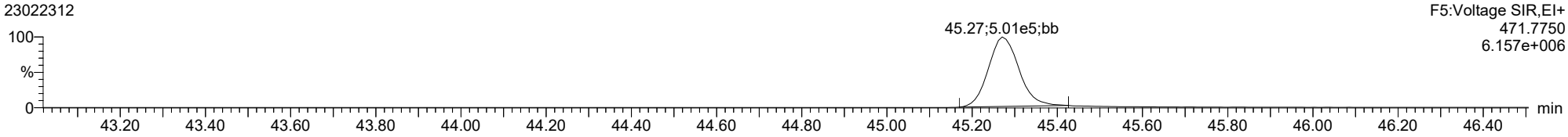
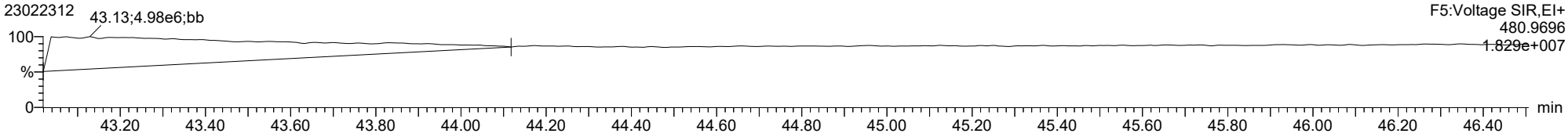


FUNCTION5 PFK



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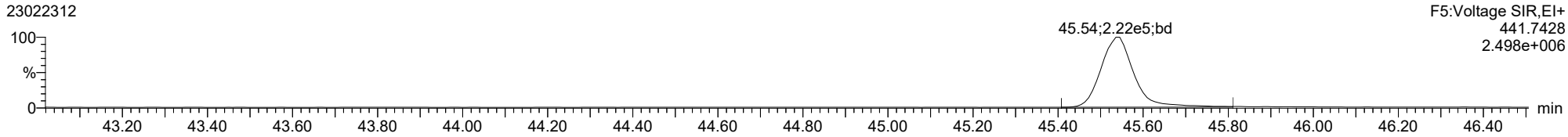
OCDF



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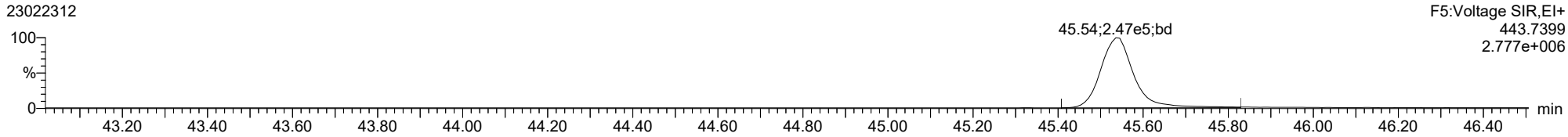
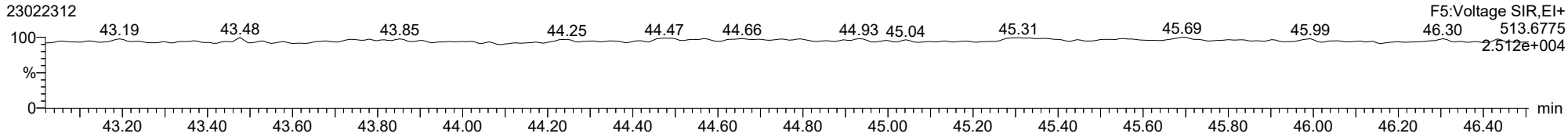


FUNCTION5 DCDPE



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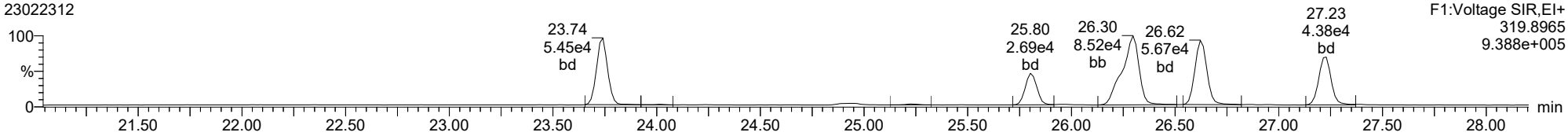

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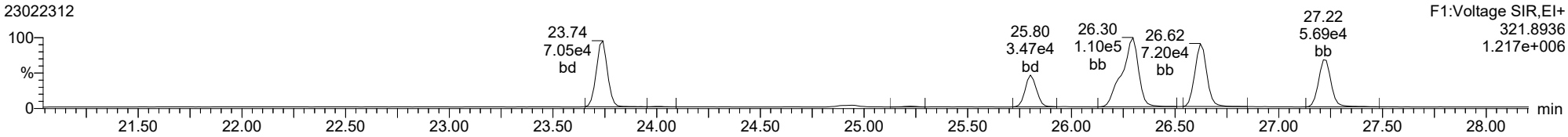

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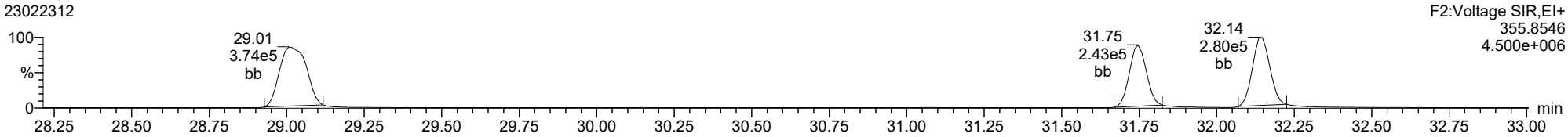

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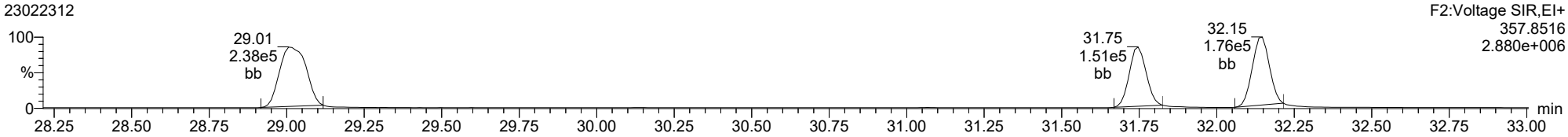

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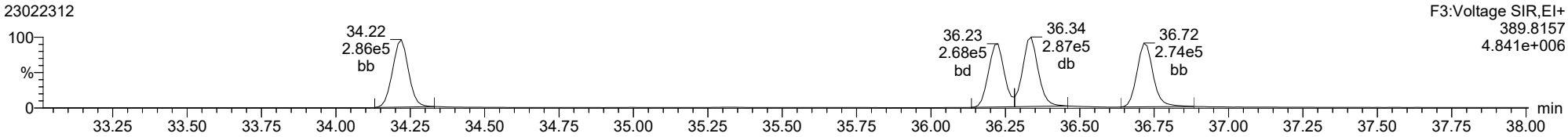

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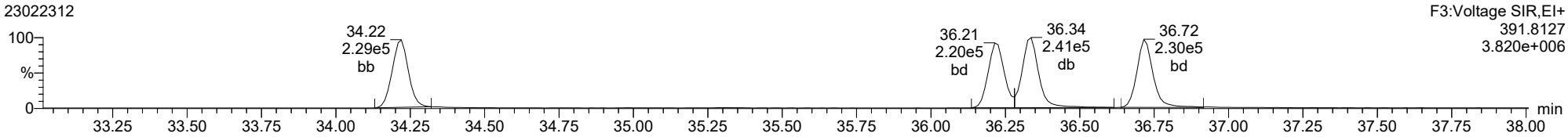

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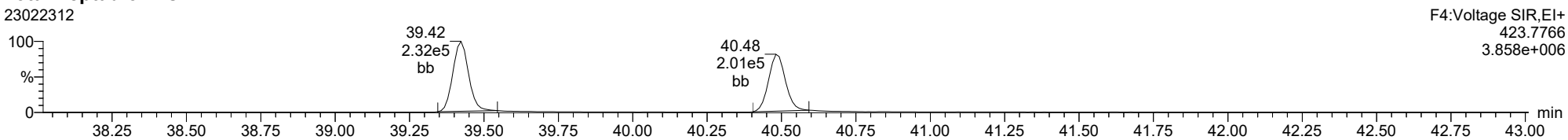

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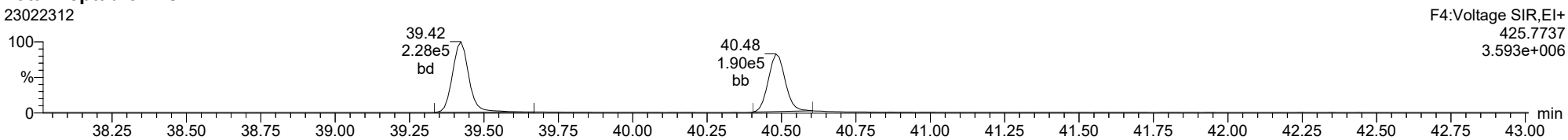

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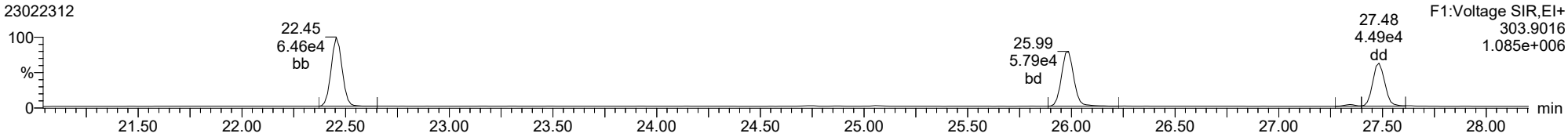
Total-tetrafurans



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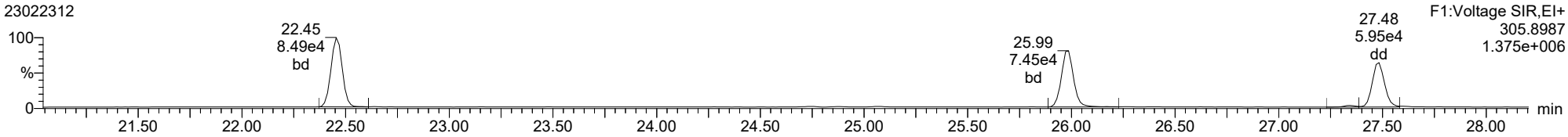

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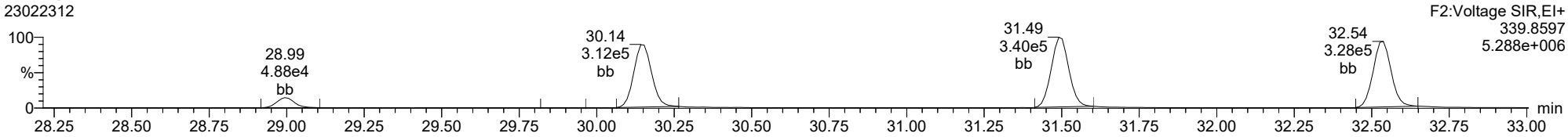

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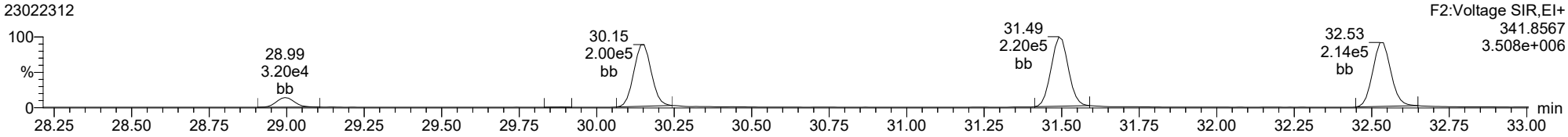

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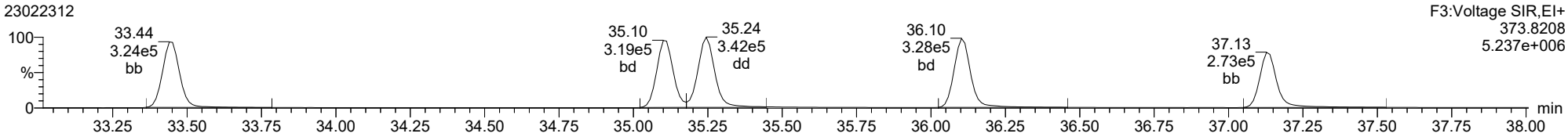
Total-hexafurans



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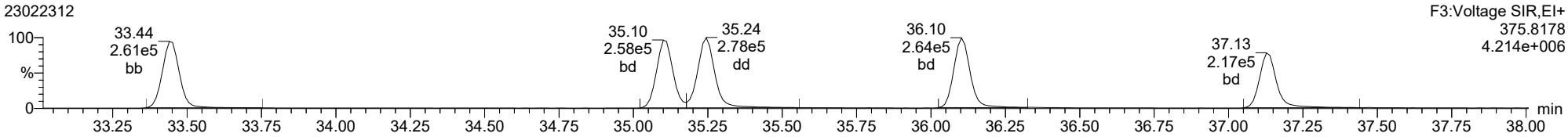

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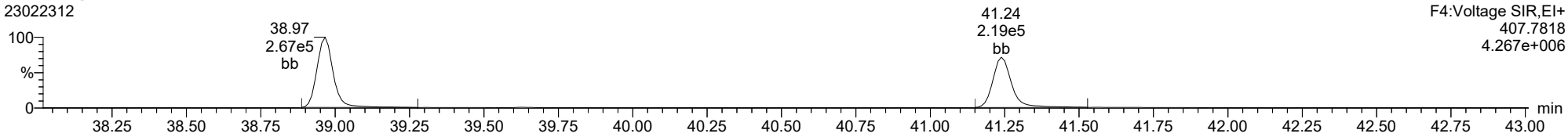

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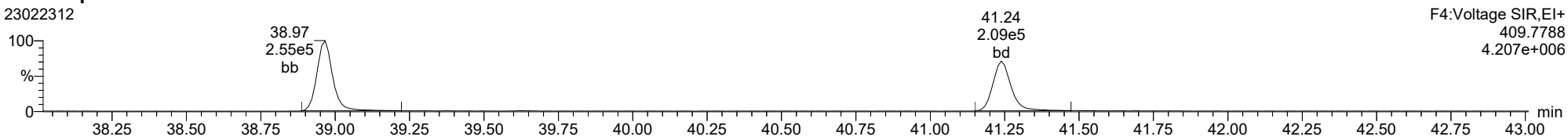

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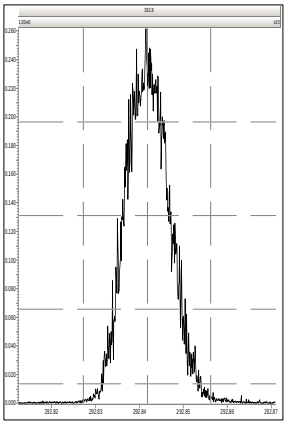
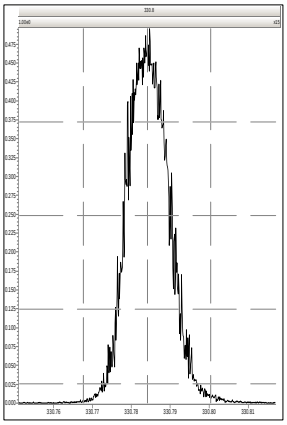


M 330.9792 R 14244



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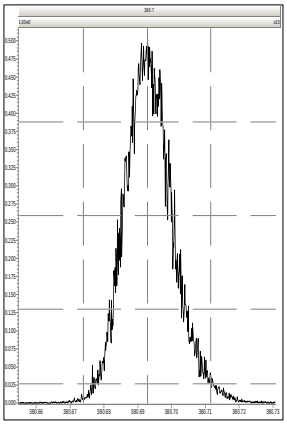

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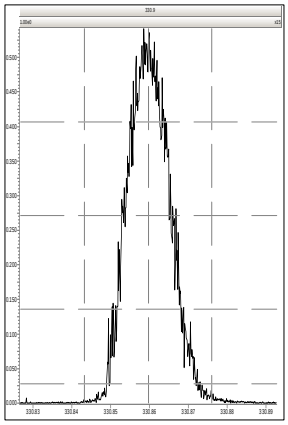

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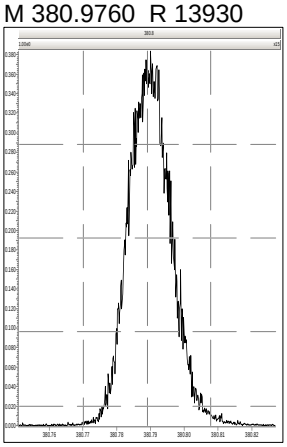

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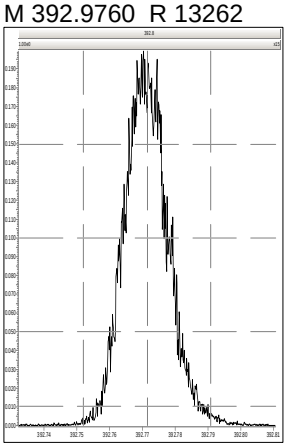

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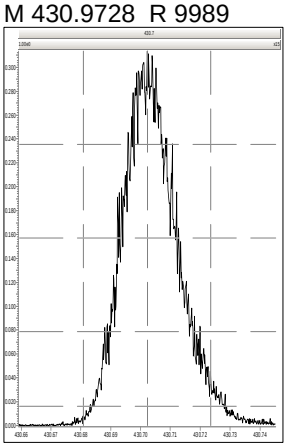

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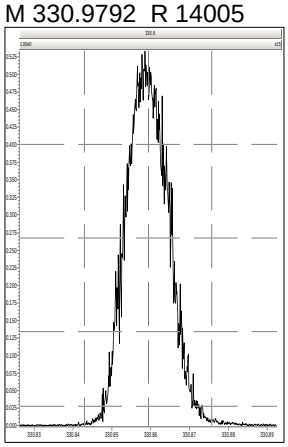

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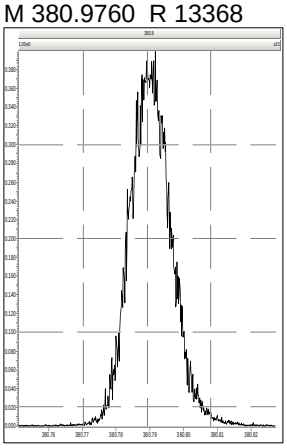
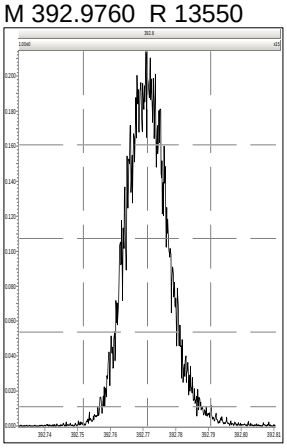


M 392.9760 R 13550



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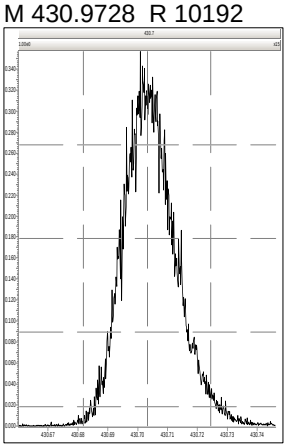

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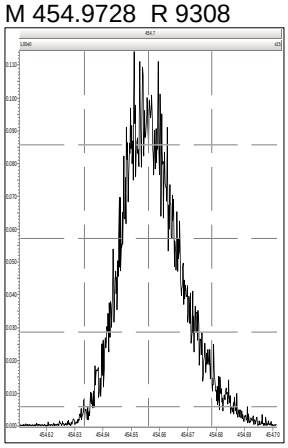

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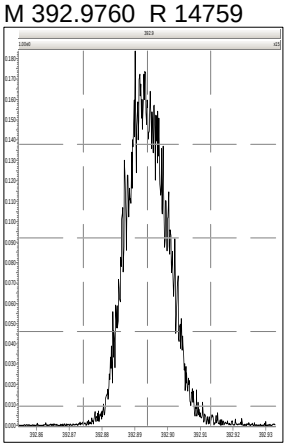

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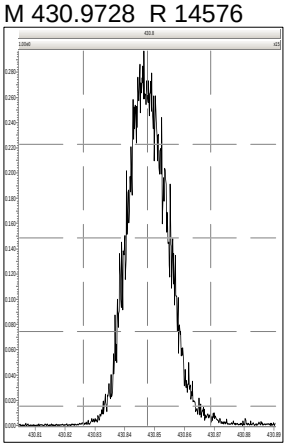

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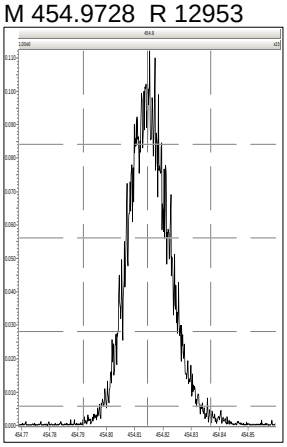
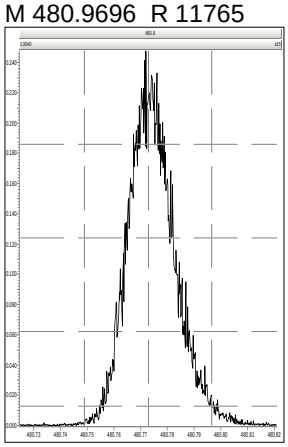
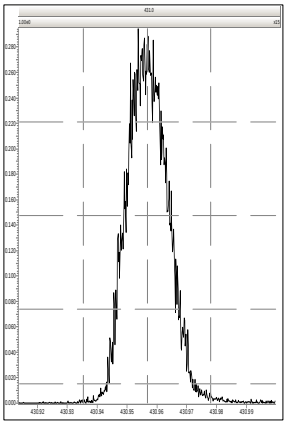


M 480.9696 R 11765

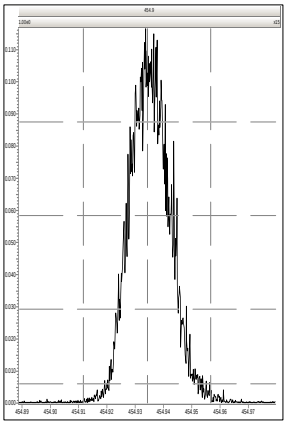


Printed: Thursday, February 23, 2023 20:04:42 Pacific Standard Time

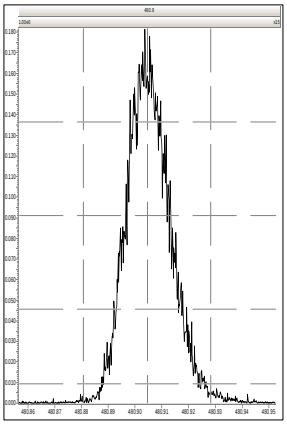
M 430.9728 R 14797



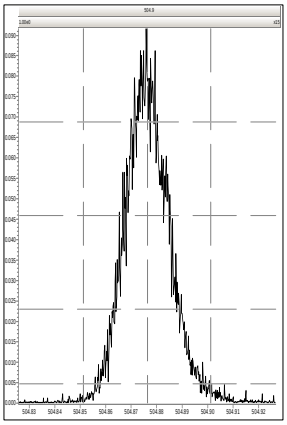
M 454.9728 R 14800



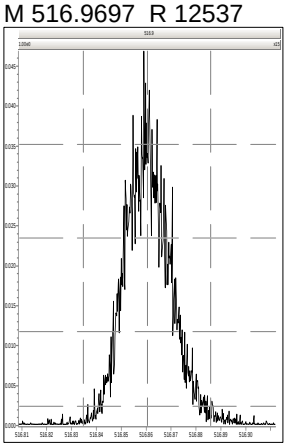
M 480.9696 R 13130

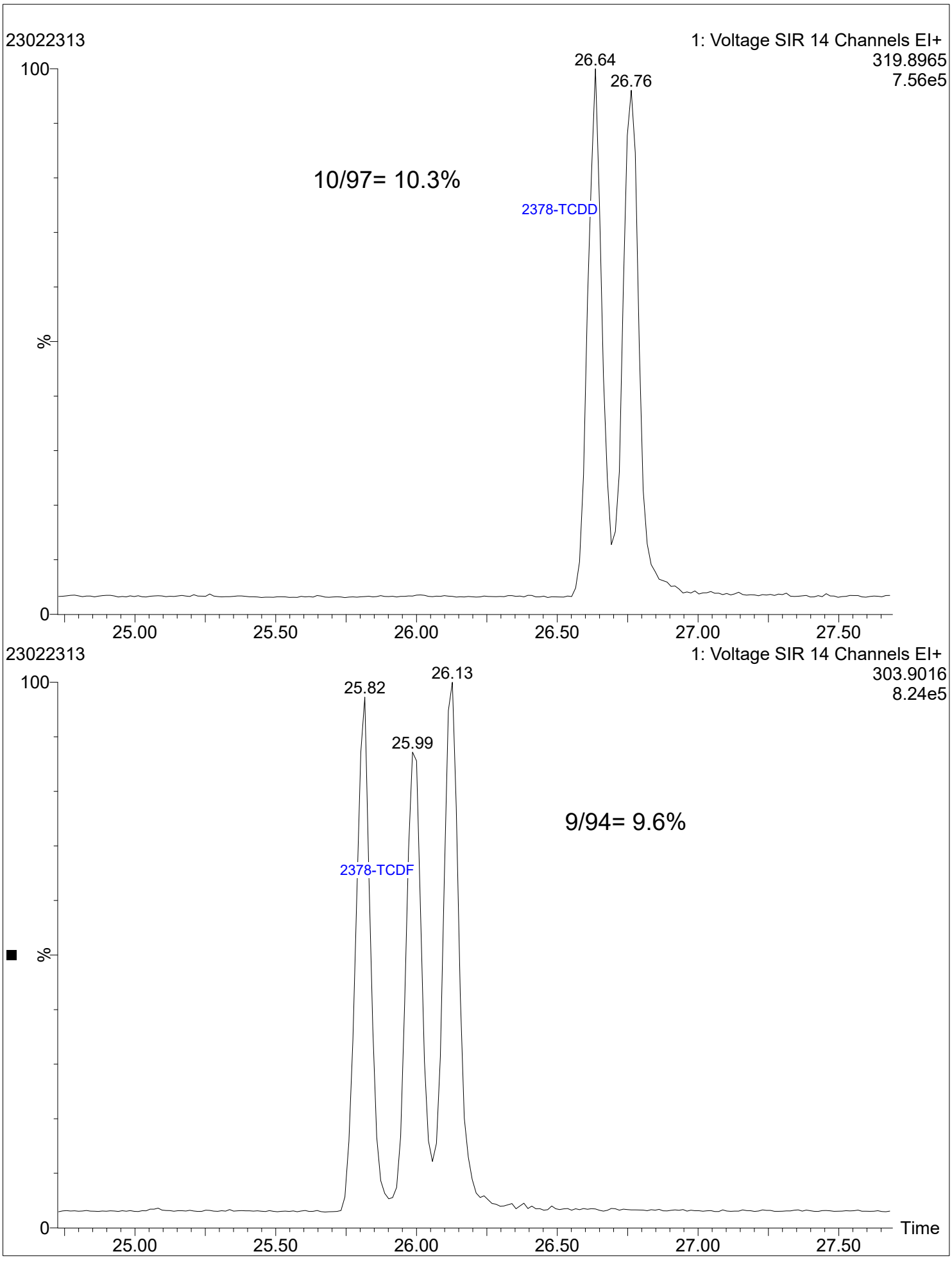


M 504.9696 R 12570



M 516.9697 R 12537




23022313
1: Voltage SIR 14 Channels EI+
319.8965
7.56e5
26.64
26.76
10/97= 10.3%
2378-TCDD
100
%
0
25.00
25.50
26.00
26.50
27.00
27.50
23022313
1: Voltage SIR 14 Channels EI+
303.9016
8.24e5
26.13
25.82
25.99
9/94= 9.6%
2378-TCDF
100
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GB00010
Lab File ID:	23022321A	Calibration Date:	02/01/2023
Sequence:	SLB0345	Injection Date:	02/24/23
Lab Sample ID:	SLB0345-CCV2	Injection Time:	02:43
Sequence Name:	CS3V5		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
2,3,7,8-TCDF	A	10.000	9.24	0.8760604	0.8091039		-7.6	+/-16	
2,3,7,8-TCDD	A	10.000	8.38	1.2363600	1.0358980		-16.2	+/-22	
1,2,3,7,8-PeCDF	A	50.000	50.9	0.8446540	0.8601509		1.8	+/-18	
2,3,4,7,8-PeCDF	A	50.000	51.5	0.9111780	0.9380720		3.0	+/-18	
1,2,3,7,8-PeCDD	A	50.000	62.0	1.0866850	1.3467870		23.9	+/-22	
1,2,3,4,7,8-HxCDF	A	50.000	45.1	1.1816860	1.0653080		-9.8	+/-10	
1,2,3,6,7,8-HxCDF	A	50.000	42.9	1.2480480	1.0698460		-14.3	+/-12	*
2,3,4,6,7,8-HxCDF	A	50.000	44.3	1.2288500	1.0888570		-11.4	+/-12	
1,2,3,7,8,9-HxCDF	A	50.000	45.5	1.1865370	1.0789550		-9.1	+/-10	
1,2,3,4,7,8-HxCDD	A	50.000	47.0	0.9869672	0.9271368		-6.1	+/-22	
1,2,3,6,7,8-HxCDD	A	50.000	48.0	1.0207220	0.9797215		-4.0	+/-22	
1,2,3,7,8,9-HxCDD	A	50.000	49.0	0.9854780	0.9649724		-2.1	+/-18	
1,2,3,4,6,7,8-HpCDF	A	50.000	47.2	1.2041190	1.1366090		-5.6	+/-10	
1,2,3,4,7,8,9-HpCDF	A	50.000	45.6	1.1653050	1.0625080		-8.8	+/-14	
1,2,3,4,6,7,8-HpCDD	A	50.000	48.8	1.2525690	1.2233040		-2.3	+/-14	
OCDF	A	100.00	71.3	1.1862640	0.8452952		-28.7	+/-37	
OCDD	A	100.00	125	1.1026670	1.3780580		25.0	+/-21	
13C12-2,3,7,8-TCDF	A	100.00	81.2	1.7680590	1.4358260		-18.8	+/-29	
13C12-2,3,7,8-TCDD	A	100.00	110	1.1029470	1.2154117		10.2	+/-18	
13C12-1,2,3,7,8-PeCDF	A	100.00	73.6	1.5271250	1.1245532		-26.4	+/-24	*
13C12-2,3,4,7,8-PeCDF	A	100.00	73.8	1.4662840	1.0819503		-26.2	+/-23	*
13C12-1,2,3,7,8-PeCDD	A	100.00	57.3	0.9141518	0.5234609		-42.7	+/-38	*
13C12-1,2,3,4,7,8-HxCDF	A	100.00	97.6	1.0536610	1.0281616		-2.4	+/-24	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	99.0	1.0799530	1.0693713		-1.0	+/-30	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	97.8	1.0143260	0.9923079		-2.2	+/-27	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	97.7	0.9279333	0.9066590		-2.3	+/-26	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	104	0.9329336	0.9665548		3.6	+/-15	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	106	0.9646272	1.0196339		5.7	+/-15	
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	89.3	1.0360890	0.9253654		-10.7	+/-22	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	91.7	0.9049372	0.8298028		-8.3	+/-23	
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	93.5	0.7819773	0.7314846		-6.5	+/-28	
13C12-OCDD	A	200.00	146	0.7882343	0.5739002		-27.2	+/-52	
37Cl4-2,3,7,8-TCDD	A	10.000	9.43	1.2334500	1.1629976		-5.7		

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:13:02 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3V5, Name: 23022321, Date: 24-Feb-2023, Time: 02:43:06, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.972	1.000	5.957e4	8.413e4	0.876	0.708	0.770	792	1020	9.44e5	1.34e6	1192.5	1311.2	NO	bb	bb	9.236
12378-PeCDF	30.142	1.001	3.621e5	2.361e5	0.845	1.534	1.550	1751	1549	5.70e6	3.69e6	3257.3	2382.0	NO	bb	bb	50.917
23478-PeCDF	31.490	1.001	3.785e5	2.492e5	0.911	1.518	1.550	1751	1549	5.86e6	3.86e6	3348.2	2495.4	NO	bb	bb	51.476
123478-HxCDF	35.100	1.000	3.705e5	3.032e5	1.182	1.222	1.240	2317	2033	5.89e6	4.83e6	2544.2	2373.6	NO	MM	MM	45.076
234678-HxCDF	36.103	1.001	3.684e5	2.962e5	1.229	1.244	1.240	2317	2033	5.88e6	4.74e6	2536.3	2333.9	NO	bd	bd	44.304
123678-HxCDF	35.234	1.000	3.859e5	3.178e5	1.248	1.214	1.240	2317	2033	5.84e6	4.75e6	2520.3	2334.3	NO	dd	dd	42.861
123789-HxCDF	37.128	1.000	3.339e5	2.678e5	1.187	1.247	1.240	2317	2033	5.15e6	4.15e6	2223.4	2041.4	NO	MM	MM	45.467
1234678-HpCDF	38.966	1.000	3.295e5	3.174e5	1.204	1.038	1.050	1349	1718	5.37e6	5.19e6	3977.8	3022.8	NO	bd	bd	47.197
1234789-HpCDF	41.239	1.000	2.735e5	2.688e5	1.165	1.017	1.050	1349	1718	3.79e6	3.68e6	2808.7	2143.5	NO	bd	bd	45.589
OCDF	45.536	1.006	2.815e5	3.153e5	1.186	0.893	0.890	1296	1410	3.15e6	3.48e6	2430.3	2468.0	NO	bd	bd	71.257
2378-TCDD	26.622	1.001	6.857e4	8.717e4	1.236	0.787	0.770	733	767	1.04e6	1.32e6	1418.5	1720.9	NO	bb	bb	8.379
12378-PeCDD	31.747	1.001	2.681e5	1.679e5	1.087	1.597	1.550	2368	1264	4.22e6	2.70e6	1781.6	2135.1	NO	bb	bb	61.968
123478-HxCDD	36.214	1.000	3.071e5	2.442e5	0.987	1.258	1.240	1209	2018	5.15e6	4.07e6	4259.2	2016.6	NO	bd	bd	46.969
123678-HxCDD	36.337	1.001	3.473e5	2.671e5	1.021	1.300	1.240	1209	2018	5.44e6	4.38e6	4498.6	2171.9	NO	db	db	47.992
123789-HxCDD	36.715	1.011	3.270e5	2.625e5	0.985	1.246	1.240	1209	2018	5.38e6	4.29e6	4448.5	2128.3	NO	bb	bb	48.960
1234678-HpCDD	40.481	1.000	2.810e5	2.694e5	1.253	1.043	1.050	2032	1965	4.41e6	4.17e6	2172.9	2121.2	NO	bb	bb	48.832
OCDD	45.289	1.000	4.598e5	5.132e5	1.103	0.896	0.890	1629	2365	5.33e6	5.99e6	3269.6	2532.5	NO	bd	bb	124.975
13C-2378-TCDF	25.958	1.007	7.641e5	1.012e6	1.768	0.755	0.770	1186	1005	1.24e7	1.63e7	10456.0	16171.9	NO	bb	bb	81.209
13C-12378-PeCDF	30.120	1.169	8.432e5	5.478e5	1.527	1.539	1.550	2108	2750	1.28e7	8.23e6	6054.4	2991.4	NO	bd	bd	73.639
13C-23478-PeCDF	31.468	1.221	8.177e5	5.206e5	1.466	1.571	1.550	2108	2750	1.25e7	8.00e6	5927.6	2909.6	NO	bb	bb	73.789
13C-123478-HxCDF	35.089	0.956	4.239e5	8.410e5	1.054	0.504	0.510	1840	2172	6.66e6	1.32e7	3617.0	6084.1	NO	bd	bd	97.580
13C-123678-HxCDF	35.223	0.960	4.428e5	8.728e5	1.080	0.507	0.510	1840	2172	7.23e6	1.43e7	3931.5	6603.2	NO	db	db	99.020
13C-234678-HxCDF	36.081	0.983	4.146e5	8.061e5	1.014	0.514	0.510	1840	2172	6.71e6	1.30e7	3648.5	5989.1	NO	bb	bb	97.829
13C-123789-HxCDF	37.117	1.011	3.708e5	7.446e5	0.928	0.498	0.510	1840	2172	6.08e6	1.21e7	3302.4	5547.1	NO	bb	bb	97.707
13C-1234678-HpCDF	38.955	1.061	3.538e5	7.846e5	1.036	0.451	0.440	1640	2190	5.90e6	1.30e7	3599.3	5945.1	NO	bb	bb	89.313
13C-1234789-HpCDF	41.216	1.123	3.164e5	7.044e5	0.905	0.449	0.440	1640	2190	4.38e6	9.76e6	2669.7	4455.2	NO	bd	bd	91.697
13C-1234-TCDD	25.774	0.000	5.396e5	6.973e5	1.000	0.774	0.770	1741	946	8.89e6	1.15e7	5107.8	12119.9	NO	bb	bb	100.000
13C-2378-TCDD	26.594	1.032	6.551e5	8.483e5	1.103	0.772	0.770	1741	946	1.04e7	1.34e7	5948.8	14191.3	NO	bb	bb	110.197
13C-12378-PeCDD	31.724	1.231	4.031e5	2.444e5	0.914	1.649	1.550	791	846	5.74e6	3.54e6	7254.8	4180.6	NO	bb	bb	57.262
13C-123478-HxCDD	36.203	0.986	6.597e5	5.294e5	0.933	1.246	1.240	2290	1746	1.08e7	8.69e6	4705.7	4979.5	NO	bd	bd	103.604
13C-123678-HxCDD	36.314	0.989	6.892e5	5.652e5	0.965	1.219	1.240	2290	1746	1.15e7	9.22e6	5022.4	5282.2	NO	db	db	105.702
13C-1234678-HpCDD	40.470	1.103	4.680e5	4.318e5	0.782	1.084	1.050	1509	1406	7.06e6	6.47e6	4680.2	4603.1	NO	bb	bb	93.543
13C-OCDD	45.271	1.233	6.752e5	7.369e5	0.788	0.916	0.890	1570	1174	8.12e6	8.87e6	5172.5	7553.4	NO	bb	bb	145.617
13C-123789-HxCDD	36.704	0.000	6.841e5	5.461e5	1.000	1.253	1.240	2290	1746	1.15e7	9.24e6	5035.7	5294.5	NO	bb	bb	100.000
37CL-2378-TCDD	26.622	1.033	1.439e5		1.233			1433		2.22e6		1549.3			bb		9.429

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:13:02 Pacific Standard Time

ID: CS3V5, Name: 23022321, Date: 24-Feb-2023, Time: 02:43:06, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.455	0.865	6.529e4	8.606e4	1.064	0.759	0.770	792	1020	1.10e6	1.41e6	1389.2	1381.7	NO	bb	bb	8.005
1289-TCDF	27.469	1.058	5.846e4	7.730e4	0.858	0.756	0.770	792	1020	8.40e5	1.11e6	1060.4	1090.5	NO	db	dd	8.913
13468-PECDF	27.328	0.907	6.207e5	4.139e5	1.013	1.500	1.550	743	931	9.98e6	6.64e6	13422.4	7127.5	NO	bb	bb	73.426
12389-PECDF	32.527	1.080	3.688e5	2.395e5	0.844	1.540	1.550	1751	1549	5.54e6	3.58e6	3163.9	2313.0	NO	bb	bb	51.827
123468-HXCDF	33.440	0.953	3.518e5	2.840e5	1.197	1.239	1.240	2317	2033	5.51e6	4.44e6	2377.8	2185.8	NO	bd	bd	41.986
1368-TCDD	23.726	0.892	5.272e4	6.918e4	1.084	0.762	0.770	733	767	8.51e5	1.12e6	1161.1	1462.0	NO	bb	bd	7.477
1289-TCDD	27.215	1.023	5.957e4	7.659e4	0.975	0.778	0.770	733	767	8.95e5	1.18e6	1220.9	1536.1	NO	bb	bd	9.287
12479-PECDD	29.006	0.914	4.949e5	3.008e5	1.837	1.645	1.550	2368	1264	4.99e6	3.12e6	2107.4	2466.2	NO	bb	bb	66.888
12389-PECDD	32.137	1.013	3.126e5	1.975e5	1.252	1.583	1.550	2368	1264	5.07e6	3.23e6	2140.2	2552.0	NO	bb	bb	62.904
124679-HXCDD	34.209	0.945	3.138e5	2.551e5	1.033	1.230	1.240	1209	2018	4.96e6	4.09e6	4104.6	2026.7	NO	bb	bb	46.325
1234679-HPCDD	39.423	0.974	3.189e5	3.022e5	1.286	1.055	1.050	2032	1965	5.11e6	4.80e6	2515.1	2444.5	NO	bb	bb	53.671
Total-tetrafurans			1.869e5		0.933			792		2.94e6							26.631
Total-penta1			6.207e5					743		9.98e6							73.426
Total-pentafurans			1.174e6		0.866			1751		1.81e7							163.337
Total-hexafurans			1.812e6		1.208			2317		2.83e7							219.918
Total-heptafurans			6.099e5		1.185			1349		9.27e6							93.889
Total-Furans			4.686e6		1.067			792		7.17e7							648.458
Total-tetradioxins			3.151e5		1.099			733		4.37e6							43.699
Total-pentadioxins			1.076e6		1.392			2368		1.43e7							191.760
Total-hexadioxins			1.295e6		1.007			1209		2.09e7							190.245
Total-heptadioxins			6.000e5		1.269			2032		9.53e6							102.517
Total-Dioxins			3.746e6		1.165			733		5.44e7							653.196
Total-TEQ			8.431e6					733		1.26e8							1301.655
FUNCTION1 PFK			2.918e7					478238		1.79e7							
FUNCTION2 PFK			6.817e6					200812		7.73e6							0.000
FUNCTION3 PFK			8.758e3					318213		4.68e5							0.000
FUNCTION4 PFK			8.948e6					265973		6.94e7							
FUNCTION5 PFK			1.488e7					126485		1.67e7							
FUNCTION1 HXCD...			1.050e3					449		1.35e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			3.885e2					785		9.31e3							0.000
FUNCTION3 OCDPE			2.597e2					761		4.85e3							0.000
FUNCTION4 NCDPE			1.357e2					895		2.94e3							0.000
FUNCTION5 DCDPE			0.000e0					610		0.00e0							

Method: T:\Autospec\Methods\Dioxin230223.mdb 24 Feb 2023 10:11:53
Calibration: T:\Autospec\Curves\230201ICIH.cdb 03 Feb 2023 10:33:40

ID: CS3V5, Name: 23022321, Date: 24-Feb-2023, Time: 02:43:06, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.47	5.846e4	7.730e4	0.858	0.76	0.77	1060.4	YES	NO	db	dd	8.913
2	Total-tetrafurans	27.34	2.896e3	3.555e3	0.933	0.81	0.77	57.0	YES	NO	bd	dd	0.389
3	2378-TCDF	25.97	5.957e4	8.413e4	0.876	0.71	0.77	1192.5	YES	NO	bb	bb	9.236
4	Total-tetrafurans	25.82	9.770e1	1.478e2	0.933	0.66	0.77	3.5	NO	NO	bb	bb	0.015
5	Total-tetrafurans	24.87	5.424e2	6.653e2	0.933	0.82	0.77	7.5	YES	NO	dd	db	0.073
6	1368-TCDF	22.45	6.529e4	8.606e4	1.064	0.76	0.77	1389.2	YES	NO	bb	bb	8.005

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.33	6.207e5	4.139e5	1.013	1.50	1.55	13422.4	YES	NO	bb	bb	73.426

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDF	30.14	3.621e5	2.361e5	0.845	1.53	1.55	3257.3	YES	NO	bb	bb	50.917
2	Total-pentafurans	28.99	6.496e4	4.285e4	0.866	1.52	1.55	564.7	YES	NO	bb	bb	9.117
3	12389-PECDF	32.53	3.688e5	2.395e5	0.844	1.54	1.55	3163.9	YES	NO	bb	bb	51.827
4	23478-PeCDF	31.49	3.785e5	2.492e5	0.911	1.52	1.55	3348.2	YES	NO	bb	bb	51.476

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	234678-HxCDF	36.10	3.684e5	2.962e5	1.229	1.24	1.24	2536.3	YES	NO	bd	bd	44.304
2	123678-HxCDF	35.23	3.859e5	3.178e5	1.248	1.21	1.24	2520.3	YES	NO	dd	dd	42.861
3	123478-HxCDF	35.10	3.705e5	3.032e5	1.182	1.22	1.24	2544.2	YES	NO	MM	MM	45.076
4	Total-hexafurans	34.49	1.750e3	1.594e3	1.208	1.10	1.24	11.3	YES	NO	bb	bb	0.225
5	123468-HXCDF	33.44	3.518e5	2.840e5	1.197	1.24	1.24	2377.8	YES	NO	bd	bd	41.986
6	123789-HxCDF	37.13	3.339e5	2.678e5	1.187	1.25	1.24	2223.4	YES	NO	MM	MM	45.467

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HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.24	2.735e5	2.688e5	1.165	1.02	1.05	2808.7	YES	NO	bd	bd	45.589
2	Total-heptafurans	39.63	6.865e3	7.241e3	1.185	0.95	1.05	83.0	YES	NO	bb	bb	1.103
3	1234678-HpCDF	38.97	3.295e5	3.174e5	1.204	1.04	1.05	3977.8	YES	NO	bd	bd	47.197

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.47	5.846e4	7.730e4	0.858	0.76	0.77	1060.4	YES	NO	db	dd	8.913
2	Total-tetrafurans	27.34	2.896e3	3.555e3	0.933	0.81	0.77	57.0	YES	NO	bd	dd	0.389
3	2378-TCDF	25.97	5.957e4	8.413e4	0.876	0.71	0.77	1192.5	YES	NO	bb	bb	9.236
4	Total-tetrafurans	25.82	9.770e1	1.478e2	0.933	0.66	0.77	3.5	NO	NO	bb	bb	0.015
5	Total-tetrafurans	24.87	5.424e2	6.653e2	0.933	0.82	0.77	7.5	YES	NO	dd	db	0.073
6	1368-TCDF	22.45	6.529e4	8.606e4	1.064	0.76	0.77	1389.2	YES	NO	bb	bb	8.005
7	12378-PeCDF	30.14	3.621e5	2.361e5	0.845	1.53	1.55	3257.3	YES	NO	bb	bb	50.917
8	Total-pentafurans	28.99	6.496e4	4.285e4	0.866	1.52	1.55	564.7	YES	NO	bb	bb	9.117
9	12389-PECDF	32.53	3.688e5	2.395e5	0.844	1.54	1.55	3163.9	YES	NO	bb	bb	51.827
10	23478-PeCDF	31.49	3.785e5	2.492e5	0.911	1.52	1.55	3348.2	YES	NO	bb	bb	51.476
11	234678-HxCDF	36.10	3.684e5	2.962e5	1.229	1.24	1.24	2536.3	YES	NO	bd	bd	44.304
12	123678-HxCDF	35.23	3.859e5	3.178e5	1.248	1.21	1.24	2520.3	YES	NO	dd	dd	42.861
13	123478-HxCDF	35.10	3.705e5	3.032e5	1.182	1.22	1.24	2544.2	YES	NO	MM	MM	45.076
14	Total-hexafurans	34.49	1.750e3	1.594e3	1.208	1.10	1.24	11.3	YES	NO	bb	bb	0.225
15	123468-HXCDF	33.44	3.518e5	2.840e5	1.197	1.24	1.24	2377.8	YES	NO	bd	bd	41.986
16	123789-HxCDF	37.13	3.339e5	2.678e5	1.187	1.25	1.24	2223.4	YES	NO	MM	MM	45.467
17	1234789-HpCDF	41.24	2.735e5	2.688e5	1.165	1.02	1.05	2808.7	YES	NO	bd	bd	45.589
18	Total-heptafurans	39.63	6.865e3	7.241e3	1.185	0.95	1.05	83.0	YES	NO	bb	bb	1.103
19	1234678-HpCDF	38.97	3.295e5	3.174e5	1.204	1.04	1.05	3977.8	YES	NO	bd	bd	47.197
20	OCDF	45.54	2.815e5	3.153e5	1.186	0.89	0.89	2430.3	YES	NO	bd	bd	71.257
21	13468-PECDF	27.33	6.207e5	4.139e5	1.013	1.50	1.55	13422.4	YES	NO	bb	bb	73.426

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TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	27.22	5.957e4	7.659e4	0.975	0.78	0.77	1220.9	YES	NO	bb	bd	9.287
2	2378-TCDD	26.62	6.857e4	8.717e4	1.236	0.79	0.77	1418.5	YES	NO	bb	bb	8.379
3	Total-tetradioxins	26.28	9.961e4	1.278e5	1.099	0.78	0.77	1437.2	YES	NO	bb	bd	13.768
4	Total-tetradioxins	25.80	3.077e4	3.971e4	1.099	0.77	0.77	669.2	YES	NO	bd	bb	4.267
5	Total-tetradioxins	25.22	8.756e2	1.093e3	1.099	0.80	0.77	17.2	YES	NO	bb	bb	0.119
6	Total-tetradioxins	24.94	2.677e3	3.360e3	1.099	0.80	0.77	34.9	YES	NO	bb	bb	0.366
7	Total-tetradioxins	23.99	2.760e2	3.136e2	1.099	0.88	0.77	6.0	YES	NO	bb	db	0.036
8	1368-TCDD	23.73	5.272e4	6.918e4	1.084	0.76	0.77	1161.1	YES	NO	bb	bd	7.477

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	32.14	3.126e5	1.975e5	1.252	1.58	1.55	2140.2	YES	NO	bb	bb	62.904
2	12378-PeCDD	31.75	2.681e5	1.679e5	1.087	1.60	1.55	1781.6	YES	NO	bb	bb	61.968
3	12479-PECDD	29.01	4.949e5	3.008e5	1.837	1.65	1.55	2107.4	YES	NO	bb	bb	66.888

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123678-HxCDD	36.34	3.473e5	2.671e5	1.021	1.30	1.24	4498.6	YES	NO	db	db	47.992
2	123478-HxCDD	36.21	3.071e5	2.442e5	0.987	1.26	1.24	4259.2	YES	NO	bd	bd	46.969
3	124679-HXCDD	34.21	3.138e5	2.551e5	1.033	1.23	1.24	4104.6	YES	NO	bb	bb	46.325
4	123789-HxCDD	36.72	3.270e5	2.625e5	0.985	1.25	1.24	4448.5	YES	NO	bb	bb	48.960

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.48	2.810e5	2.694e5	1.253	1.04	1.05	2172.9	YES	NO	bb	bb	48.832
2	Total-heptadioxins	40.02	8.158e1	8.418e1	1.269	0.97	1.05	1.7	NO	NO	bb	bb	0.015
3	1234679-HPCDD	39.42	3.189e5	3.022e5	1.286	1.06	1.05	2515.1	YES	NO	bb	bb	53.671

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:13:02 Pacific Standard Time

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	27.22	5.957e4	7.659e4	0.975	0.78	0.77	1220.9	YES	NO	bb	bd	9.287
2	2378-TCDD	26.62	6.857e4	8.717e4	1.236	0.79	0.77	1418.5	YES	NO	bb	bb	8.379
3	Total-tetradioxins	26.28	9.961e4	1.278e5	1.099	0.78	0.77	1437.2	YES	NO	bb	bd	13.768
4	Total-tetradioxins	25.80	3.077e4	3.971e4	1.099	0.77	0.77	669.2	YES	NO	bd	bb	4.267
5	Total-tetradioxins	25.22	8.756e2	1.093e3	1.099	0.80	0.77	17.2	YES	NO	bb	bb	0.119
6	Total-tetradioxins	24.94	2.677e3	3.360e3	1.099	0.80	0.77	34.9	YES	NO	bb	bb	0.366
7	Total-tetradioxins	23.99	2.760e2	3.136e2	1.099	0.88	0.77	6.0	YES	NO	bb	db	0.036
8	1368-TCDD	23.73	5.272e4	6.918e4	1.084	0.76	0.77	1161.1	YES	NO	bb	bd	7.477
9	12389-PECDD	32.14	3.126e5	1.975e5	1.252	1.58	1.55	2140.2	YES	NO	bb	bb	62.904
10	12378-PeCDD	31.75	2.681e5	1.679e5	1.087	1.60	1.55	1781.6	YES	NO	bb	bb	61.968
11	12479-PECDD	29.01	4.949e5	3.008e5	1.837	1.65	1.55	2107.4	YES	NO	bb	bb	66.888
12	123678-HxCDD	36.34	3.473e5	2.671e5	1.021	1.30	1.24	4498.6	YES	NO	db	db	47.992
13	123478-HxCDD	36.21	3.071e5	2.442e5	0.987	1.26	1.24	4259.2	YES	NO	bd	bd	46.969
14	124679-HXCDD	34.21	3.138e5	2.551e5	1.033	1.23	1.24	4104.6	YES	NO	bb	bb	46.325
15	123789-HxCDD	36.72	3.270e5	2.625e5	0.985	1.25	1.24	4448.5	YES	NO	bb	bb	48.960
16	1234678-HpCDD	40.48	2.810e5	2.694e5	1.253	1.04	1.05	2172.9	YES	NO	bb	bb	48.832
17	Total-heptadioxins	40.02	8.158e1	8.418e1	1.269	0.97	1.05	1.7	NO	NO	bb	bb	0.015
18	1234679-HPCDD	39.42	3.189e5	3.022e5	1.286	1.06	1.05	2515.1	YES	NO	bb	bb	53.671
19	OCDD	45.29	4.598e5	5.132e5	1.103	0.90	0.89	3269.6	YES	NO	bd	bb	124.975

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.47	5.846e4	7.730e4	0.858	0.76	0.77	1060.4	YES	NO	db	dd	8.913
2	Total-tetrafurans	27.34	2.896e3	3.555e3	0.933	0.81	0.77	57.0	YES	NO	bd	dd	0.389
3	2378-TCDF	25.97	5.957e4	8.413e4	0.876	0.71	0.77	1192.5	YES	NO	bb	bb	9.236
4	Total-tetrafurans	25.82	9.770e1	1.478e2	0.933	0.66	0.77	3.5	NO	NO	bb	bb	0.015
5	Total-tetrafurans	24.87	5.424e2	6.653e2	0.933	0.82	0.77	7.5	YES	NO	dd	db	0.073
6	1368-TCDF	22.45	6.529e4	8.606e4	1.064	0.76	0.77	1389.2	YES	NO	bb	bb	8.005
7	12378-PeCDF	30.14	3.621e5	2.361e5	0.845	1.53	1.55	3257.3	YES	NO	bb	bb	50.917
8	Total-pentafurans	28.99	6.496e4	4.285e4	0.866	1.52	1.55	564.7	YES	NO	bb	bb	9.117
9	12389-PECDF	32.53	3.688e5	2.395e5	0.844	1.54	1.55	3163.9	YES	NO	bb	bb	51.827
10	23478-PeCDF	31.49	3.785e5	2.492e5	0.911	1.52	1.55	3348.2	YES	NO	bb	bb	51.476
11	234678-HxCDF	36.10	3.684e5	2.962e5	1.229	1.24	1.24	2536.3	YES	NO	bd	bd	44.304
12	123678-HxCDF	35.23	3.859e5	3.178e5	1.248	1.21	1.24	2520.3	YES	NO	dd	dd	42.861
13	123478-HxCDF	35.10	3.705e5	3.032e5	1.182	1.22	1.24	2544.2	YES	NO	MM	MM	45.076
14	Total-hexafurans	34.49	1.750e3	1.594e3	1.208	1.10	1.24	11.3	YES	NO	bb	bb	0.225
15	123468-HXCDF	33.44	3.518e5	2.840e5	1.197	1.24	1.24	2377.8	YES	NO	bd	bd	41.986
16	123789-HxCDF	37.13	3.339e5	2.678e5	1.187	1.25	1.24	2223.4	YES	NO	MM	MM	45.467
17	1234789-HpCDF	41.24	2.735e5	2.688e5	1.165	1.02	1.05	2808.7	YES	NO	bd	bd	45.589
18	Total-heptafurans	39.63	6.865e3	7.241e3	1.185	0.95	1.05	83.0	YES	NO	bb	bb	1.103
19	1234678-HpCDF	38.97	3.295e5	3.174e5	1.204	1.04	1.05	3977.8	YES	NO	bd	bd	47.197
20	OCDF	45.54	2.815e5	3.153e5	1.186	0.89	0.89	2430.3	YES	NO	bd	bd	71.257
21	13468-PECDF	27.33	6.207e5	4.139e5	1.013	1.50	1.55	13422.4	YES	NO	bb	bb	73.426
22	1289-TCDD	27.22	5.957e4	7.659e4	0.975	0.78	0.77	1220.9	YES	NO	bb	bd	9.287
23	2378-TCDD	26.62	6.857e4	8.717e4	1.236	0.79	0.77	1418.5	YES	NO	bb	bb	8.379
24	Total-tetradioxins	26.28	9.961e4	1.278e5	1.099	0.78	0.77	1437.2	YES	NO	bb	bd	13.768
25	Total-tetradioxins	25.80	3.077e4	3.971e4	1.099	0.77	0.77	669.2	YES	NO	bd	bb	4.267
26	Total-tetradioxins	25.22	8.756e2	1.093e3	1.099	0.80	0.77	17.2	YES	NO	bb	bb	0.119
27	Total-tetradioxins	24.94	2.677e3	3.360e3	1.099	0.80	0.77	34.9	YES	NO	bb	bb	0.366
28	Total-tetradioxins	23.99	2.760e2	3.136e2	1.099	0.88	0.77	6.0	YES	NO	bb	db	0.036
29	1368-TCDD	23.73	5.272e4	6.918e4	1.084	0.76	0.77	1161.1	YES	NO	bb	bd	7.477
30	12389-PECDD	32.14	3.126e5	1.975e5	1.252	1.58	1.55	2140.2	YES	NO	bb	bb	62.904
31	12378-PeCDD	31.75	2.681e5	1.679e5	1.087	1.60	1.55	1781.6	YES	NO	bb	bb	61.968
32	12479-PECDD	29.01	4.949e5	3.008e5	1.837	1.65	1.55	2107.4	YES	NO	bb	bb	66.888
33	123678-HxCDD	36.34	3.473e5	2.671e5	1.021	1.30	1.24	4498.6	YES	NO	db	db	47.992
34	123478-HxCDD	36.21	3.071e5	2.442e5	0.987	1.26	1.24	4259.2	YES	NO	bd	bd	46.969
35	124679-HXCDD	34.21	3.138e5	2.551e5	1.033	1.23	1.24	4104.6	YES	NO	bb	bb	46.325
36	123789-HxCDD	36.72	3.270e5	2.625e5	0.985	1.25	1.24	4448.5	YES	NO	bb	bb	48.960
37	1234678-HpCDD	40.48	2.810e5	2.694e5	1.253	1.04	1.05	2172.9	YES	NO	bb	bb	48.832

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	Total-heptadioxins	40.02	8.158e1	8.418e1	1.269	0.97	1.05	1.7	NO	NO	bb	bb	0.015
39	1234679-HPCDD	39.42	3.189e5	3.022e5	1.286	1.06	1.05	2515.1	YES	NO	bb	bb	53.671
40	OCDD	45.29	4.598e5	5.132e5	1.103	0.90	0.89	3269.6	YES	NO	bd	bb	124.975

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.32	2.918e7					37.4	YES		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.47	6.817e6					38.5	YES		bb		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	36.88	8.758e3					1.5	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.13	1.011e6					44.2	YES		dd		
2	FUNCTION4 PFK	38.09	9.260e5					45.2	YES		bd		
3	FUNCTION4 PFK	40.92	7.061e3					1.1	NO		db		
4	FUNCTION4 PFK	40.85	7.079e3					1.0	NO		bd		
5	FUNCTION4 PFK	40.76	1.152e4					1.2	NO		db		
6	FUNCTION4 PFK	40.68	1.188e4					1.4	NO		bd		
7	FUNCTION4 PFK	40.15	1.611e4					1.5	NO		bb		
8	FUNCTION4 PFK	40.07	1.228e4					1.0	NO		bb		
9	FUNCTION4 PFK	39.89	1.317e4					1.2	NO		bb		
10	FUNCTION4 PFK	39.51	1.382e4					1.2	NO		bb		
11	FUNCTION4 PFK	39.38	4.839e4					2.0	NO		db		
12	FUNCTION4 PFK	39.22	1.784e5					7.5	YES		dd		
13	FUNCTION4 PFK	39.12	2.647e5					11.9	YES		dd		
14	FUNCTION4 PFK	39.08	4.361e5					12.4	YES		dd		
15	FUNCTION4 PFK	38.90	4.504e5					18.5	YES		dd		
16	FUNCTION4 PFK	38.78	3.116e6					23.0	YES		dd		
17	FUNCTION4 PFK	38.33	1.763e6					38.4	YES		dd		
18	FUNCTION4 PFK	38.23	6.025e5					41.3	YES		dd		
19	FUNCTION4 PFK	42.59	8.351e3					1.4	NO		bb		
20	FUNCTION4 PFK	42.23	1.053e4					1.1	NO		bb		
21	FUNCTION4 PFK	42.17	1.036e3					0.4	NO		bb		
22	FUNCTION4 PFK	42.04	6.956e3					1.1	NO		bb		
23	FUNCTION4 PFK	41.99	1.302e4					1.2	NO		bb		
24	FUNCTION4 PFK	41.77	1.334e4					1.3	NO		bb		
25	FUNCTION4 PFK	40.99	5.604e3					0.8	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	45.21	1.508e6					25.2	YES		db		
2	FUNCTION5 PFK	44.35	4.374e6					51.3	YES		dd		
3	FUNCTION5 PFK	44.03	8.999e6					55.8	YES		bd		

ID: CS3V5, Name: 23022321, Date: 24-Feb-2023, Time: 02:43:06, Conditions: AUTOSPEC01, User: pk

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	25.83	8.826e1					2.6	NO		bd		0.000
2	FUNCTION1 HXCD...	25.24	8.189e1					2.1	NO		bb		0.000
3	FUNCTION1 HXCD...	23.84	8.058e1					2.1	NO		bb		0.000
4	FUNCTION1 HXCD...	22.96	1.045e2					2.7	NO		bb		0.000
5	FUNCTION1 HXCD...	27.86	1.099e2					6.0	YES		bb		0.000
6	FUNCTION1 HXCD...	27.33	9.820e1					3.0	YES		bb		0.000
7	FUNCTION1 HXCD...	26.61	2.116e2					4.7	YES		bb		0.000
8	FUNCTION1 HXCD...	26.10	1.017e2					2.3	NO		db		0.000
9	FUNCTION1 HXCD...	25.97	1.734e2					4.7	YES		dd		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.36	1.300e2					4.9	YES		bb		0.000
2	FUNCTION2 HPCD...	31.25	1.022e2					2.7	NO		bb		0.000
3	FUNCTION2 HPCD...	30.55	7.554e1					2.8	NO		bb		0.000
4	FUNCTION2 HPCD...	29.46	8.081e1					1.5	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.11	8.310e1					2.2	NO		bb		0.000
2	FUNCTION3 OCDPE	34.38	8.182e1					3.0	YES		bb		0.000
3	FUNCTION3 OCDPE	33.66	9.479e1					1.1	NO		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	38.62	1.357e2					3.3	YES		bb		0.000

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Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:13:02 Pacific Standard Time

ID: CS3V5, Name: 23022321, Date: 24-Feb-2023, Time: 02:43:06, Conditions: AUTOSPEC01, User: pk

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
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Printed: Friday, February 24, 2023 15:13:02 Pacific Standard Time

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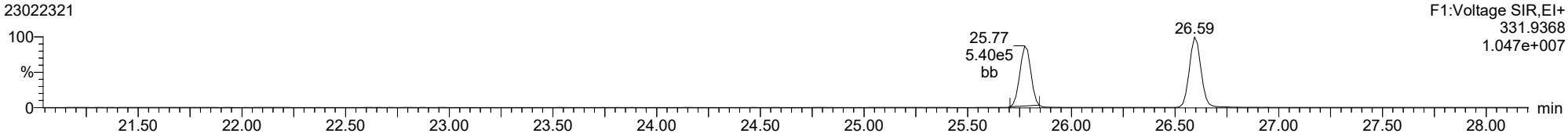
ID: CS3V5, Name: 23022321, Date: 24-Feb-2023, Time: 02:43:06, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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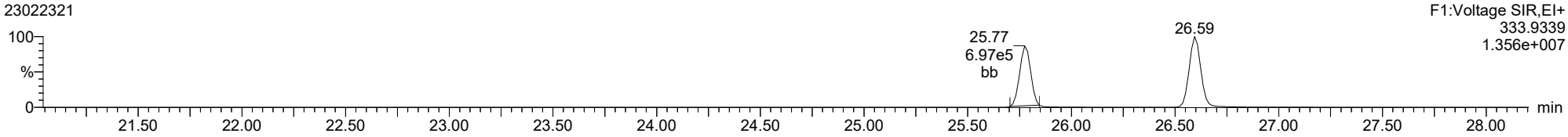
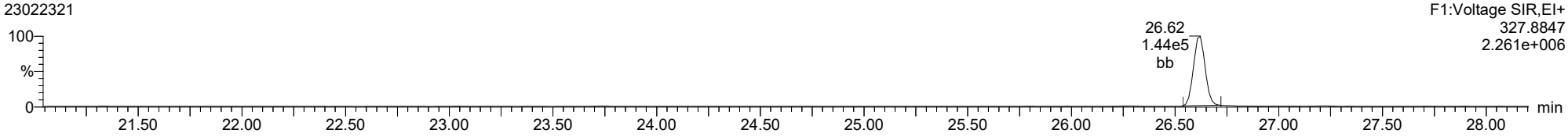


37CL-2378-TCDD



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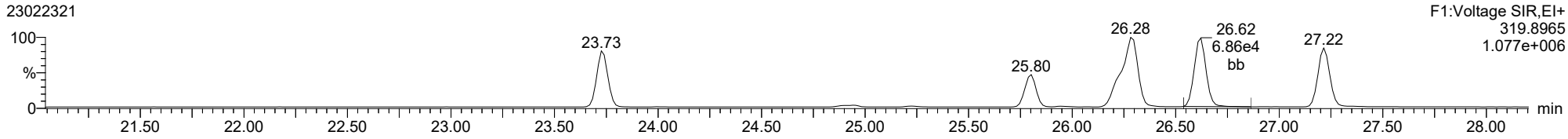

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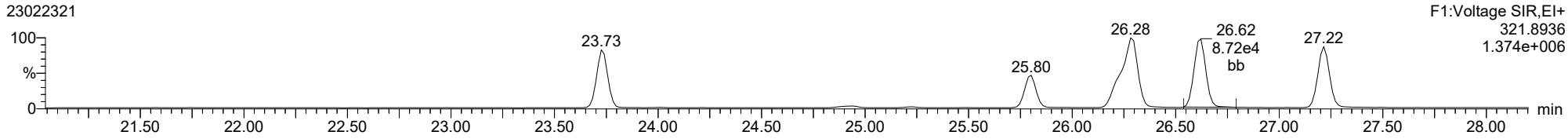

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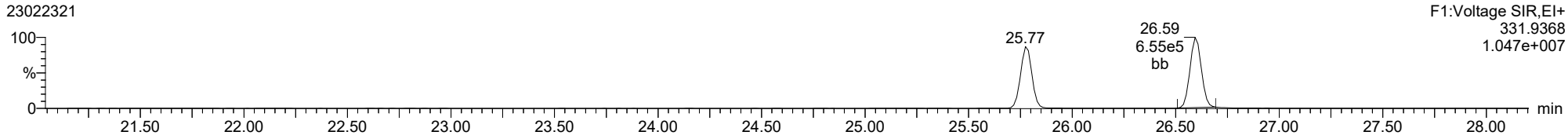

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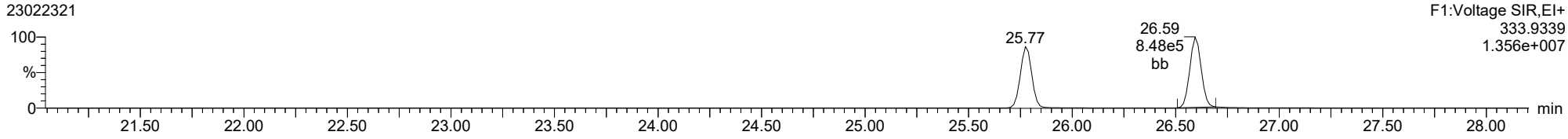

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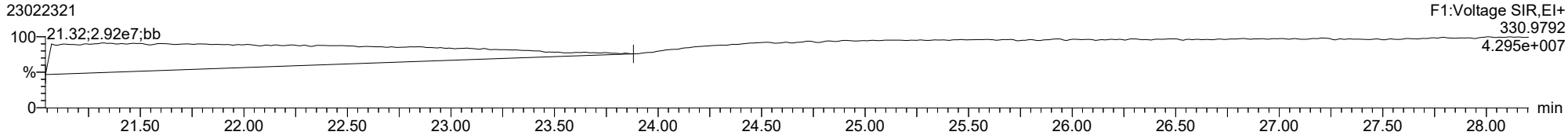

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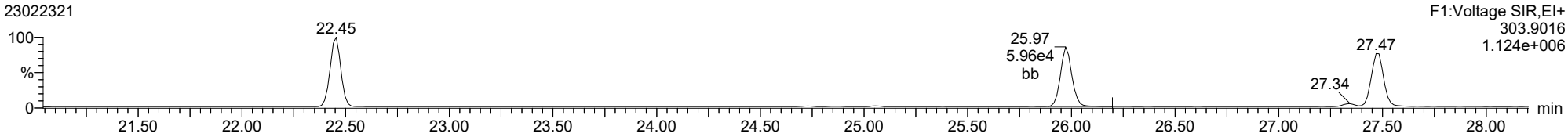

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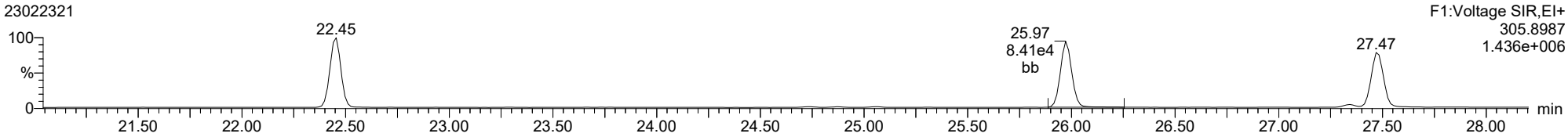

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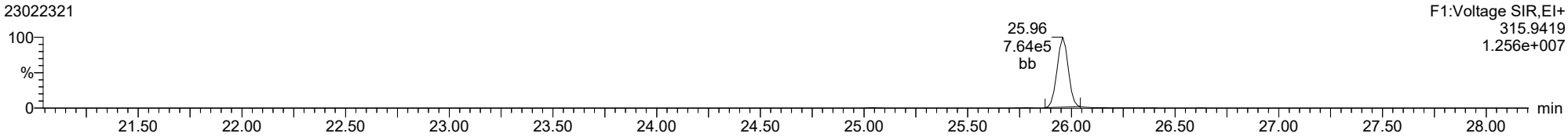

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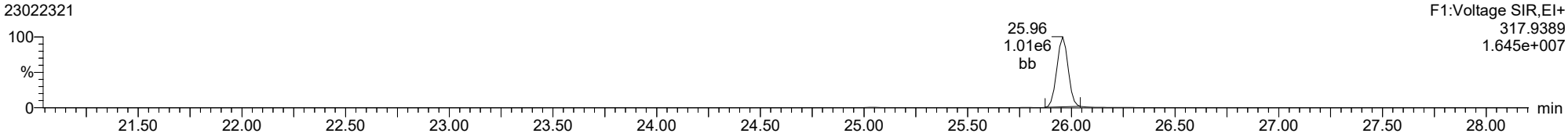

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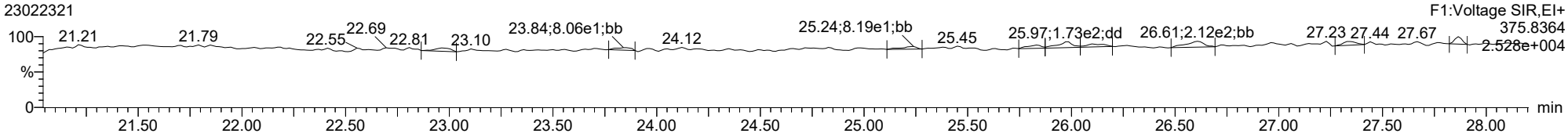

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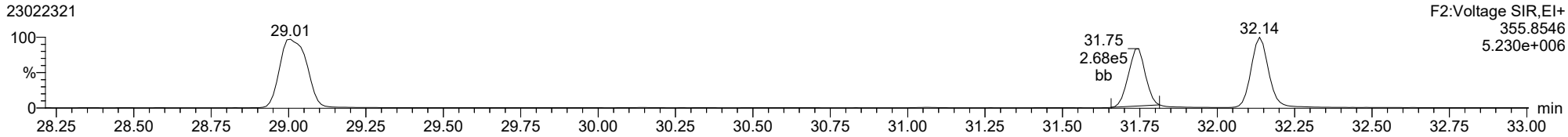
12378-PeCDD



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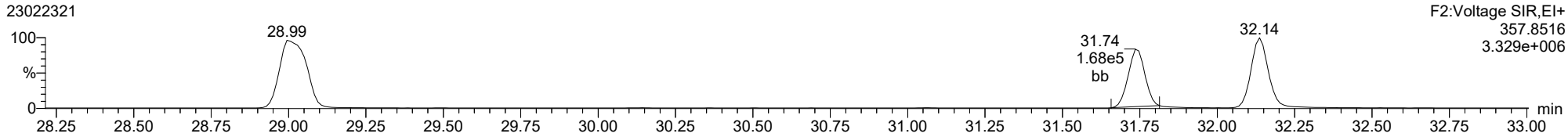

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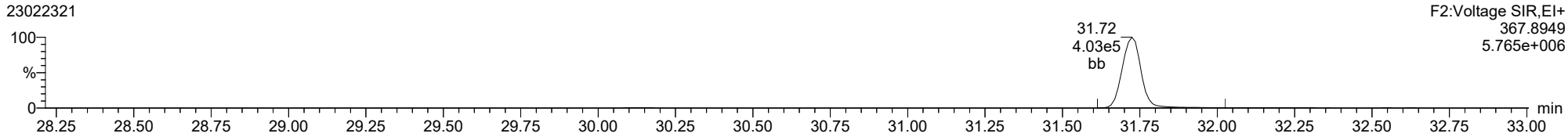

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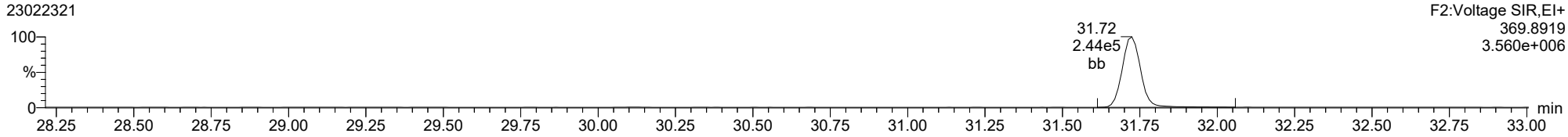
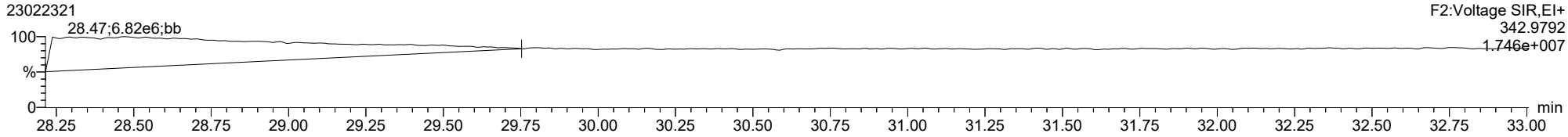


FUNCTION2 PFK



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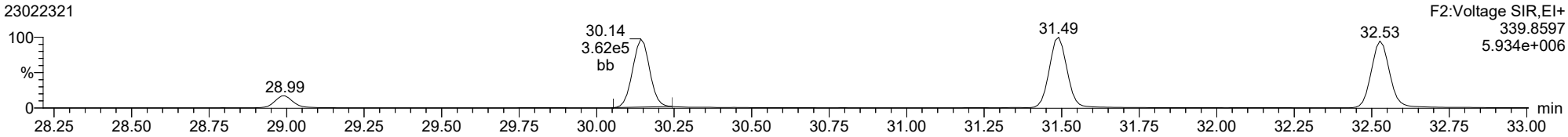

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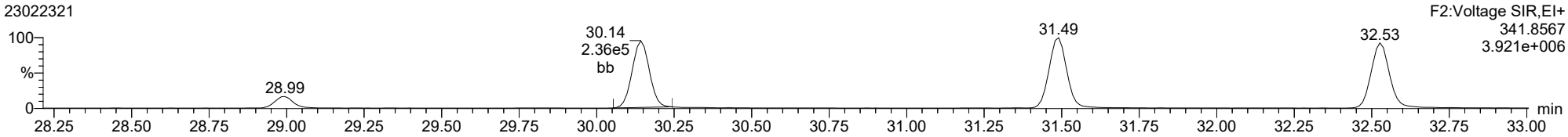

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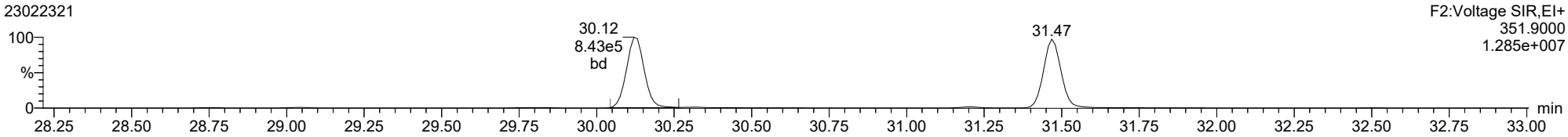

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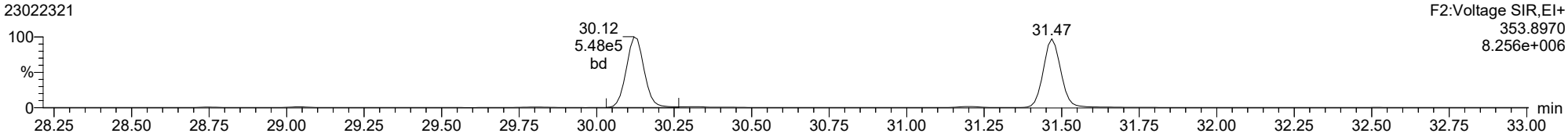
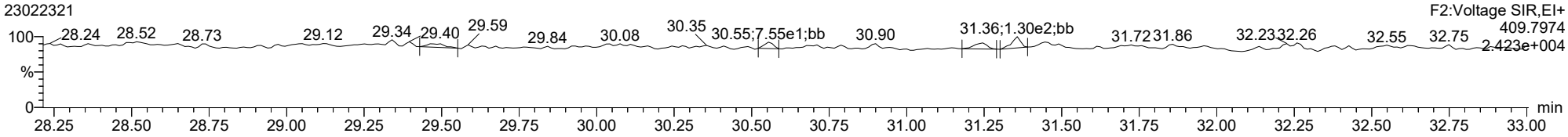


FUNCTION2 HPCDPE



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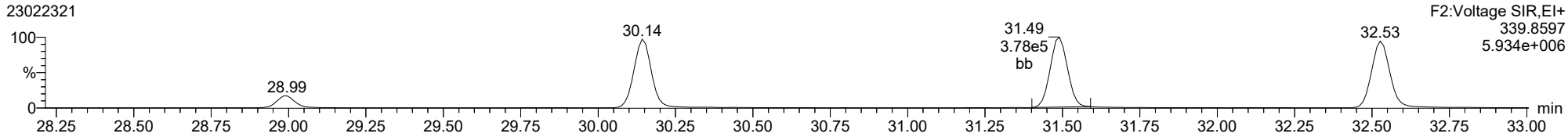
23478-PeCDF



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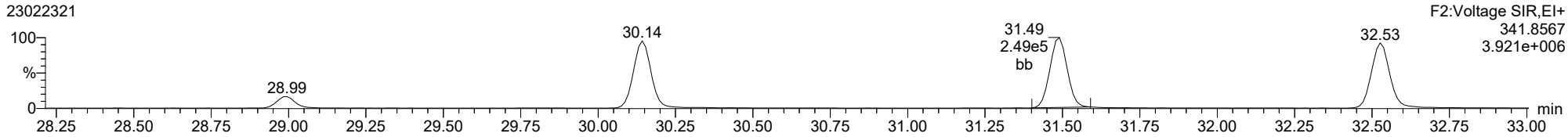

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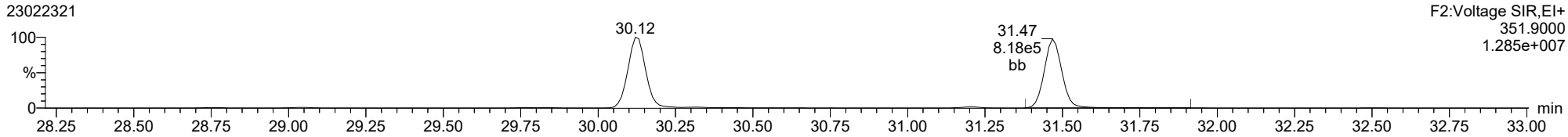

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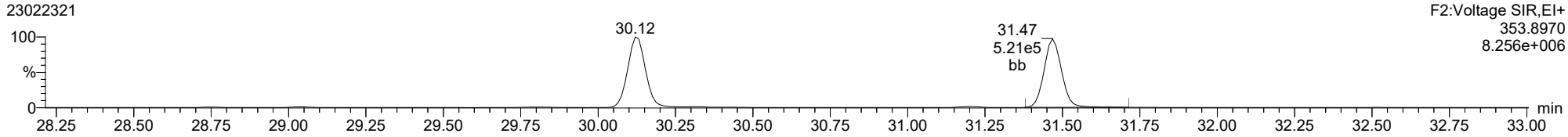
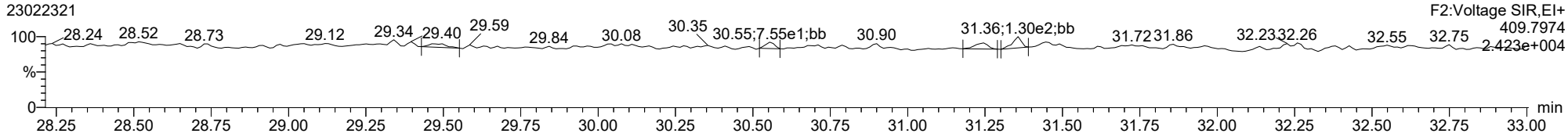


FUNCTION2 HPCDPE



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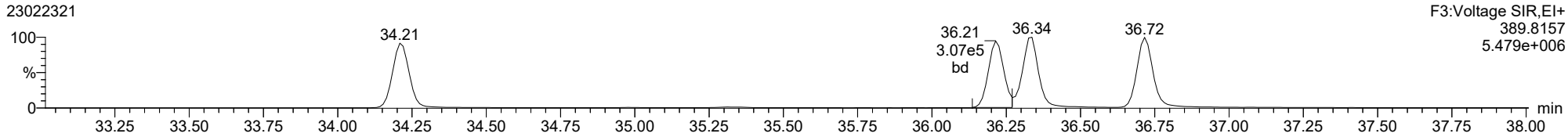
123478-HxCDD



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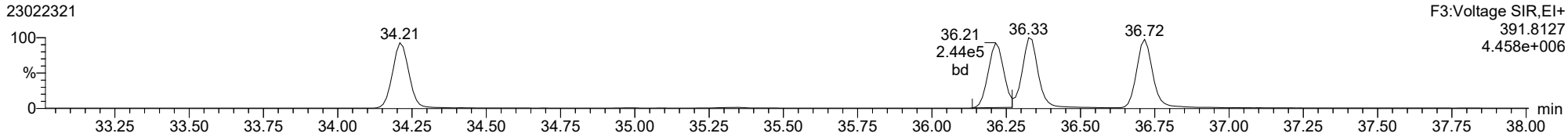

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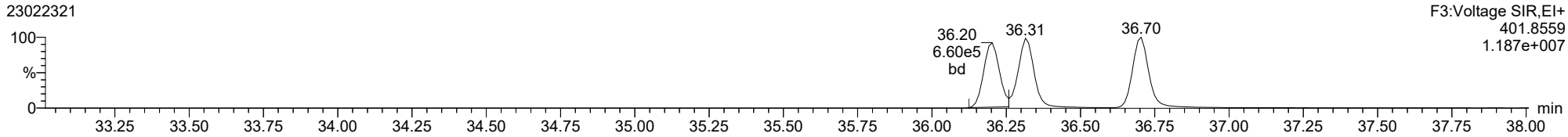

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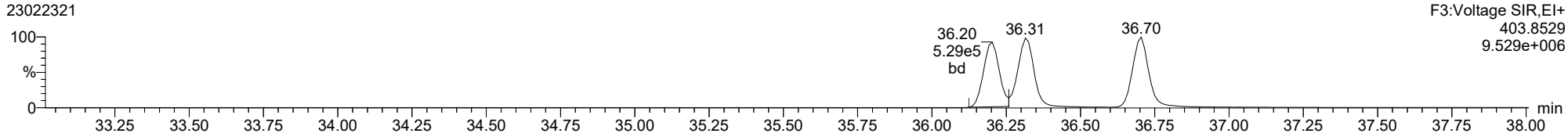

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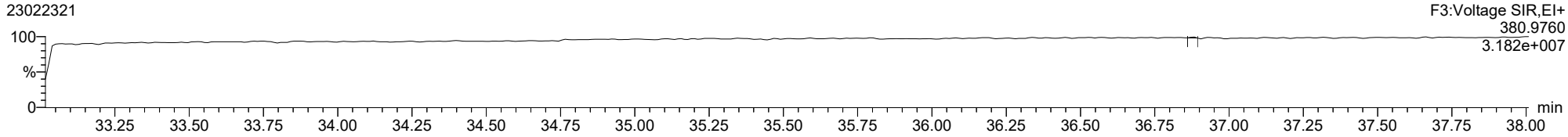

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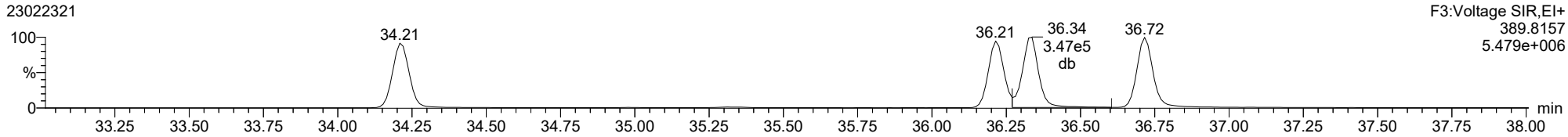

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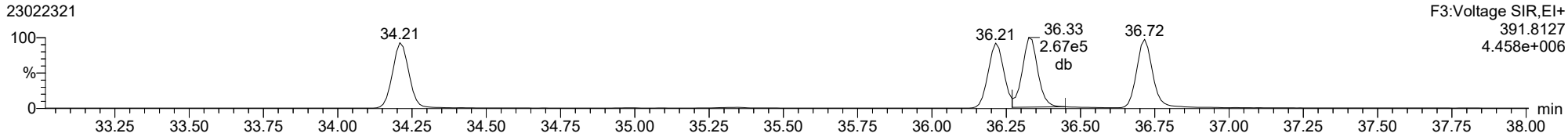

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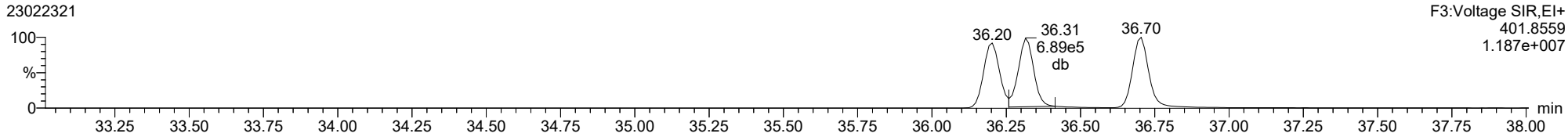

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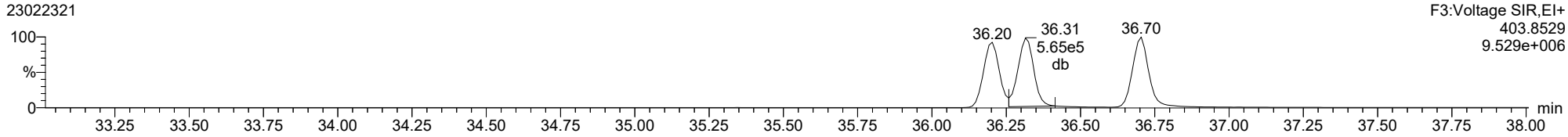

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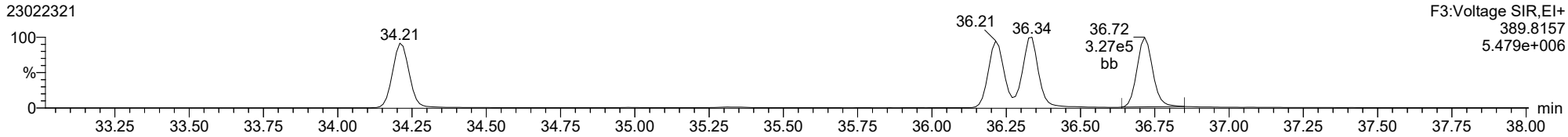

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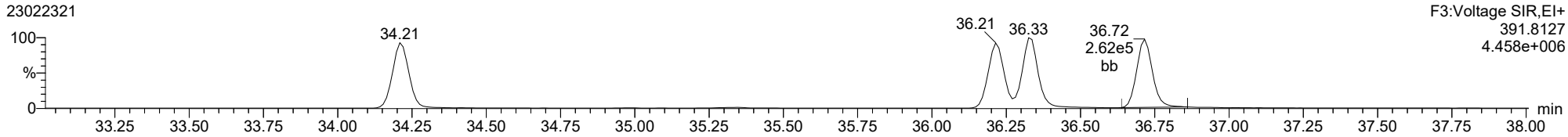

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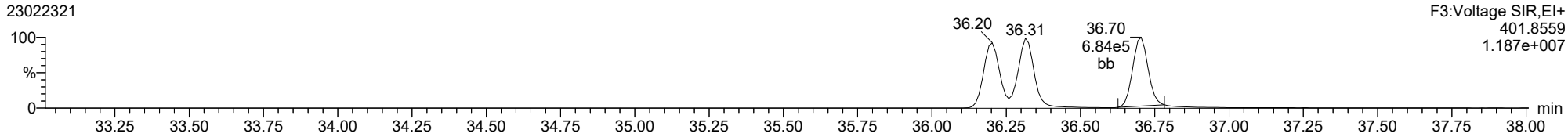

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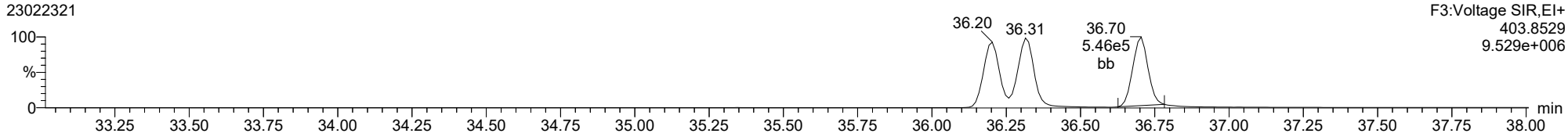

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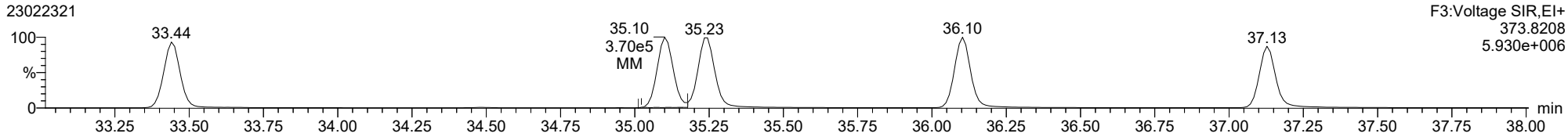

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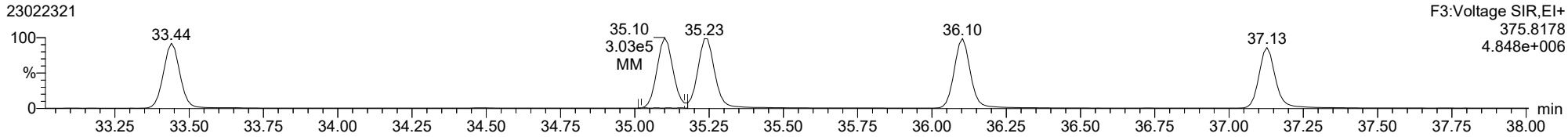

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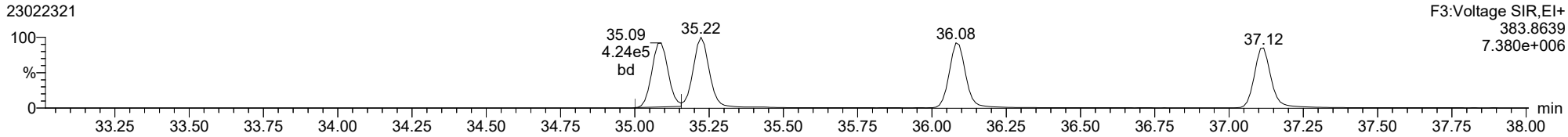

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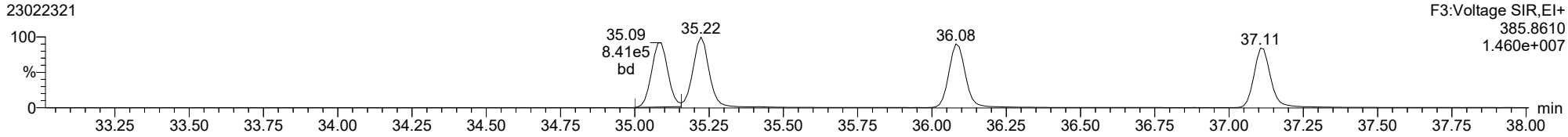

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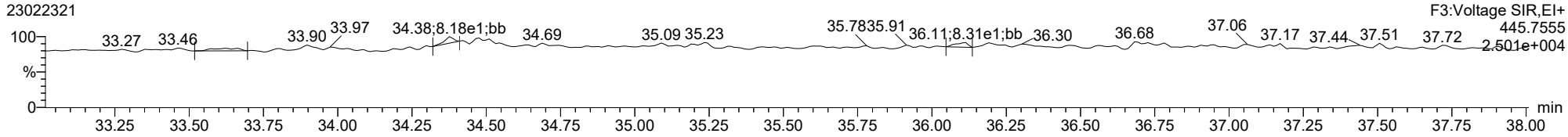

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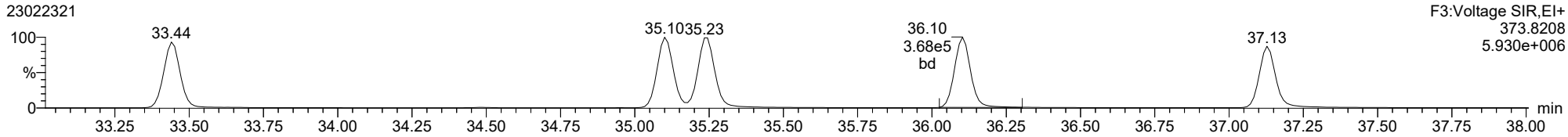

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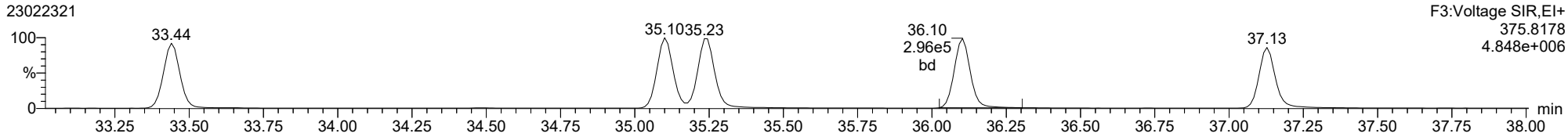

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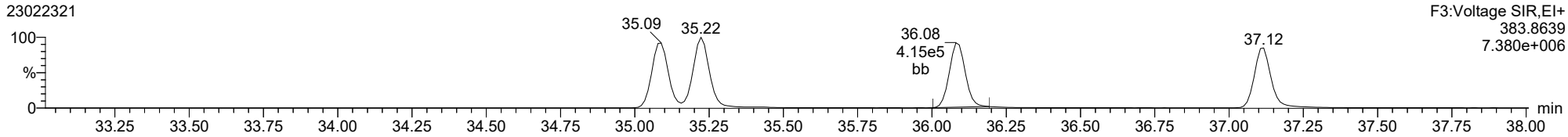

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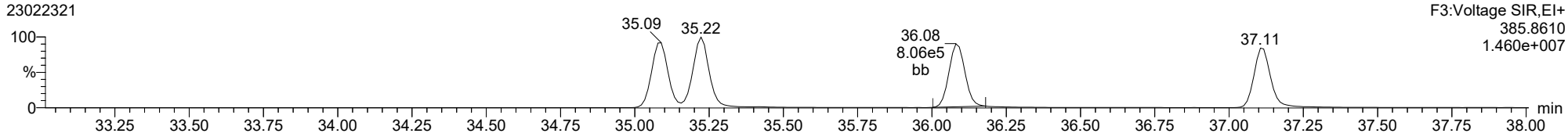

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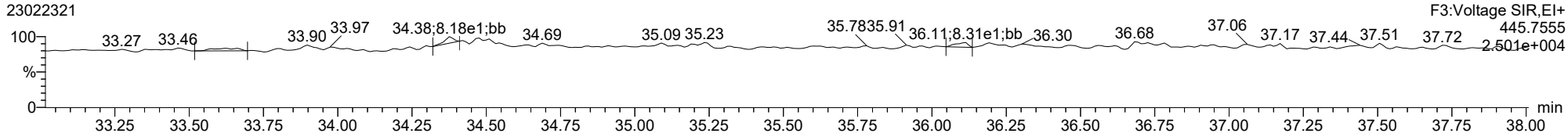

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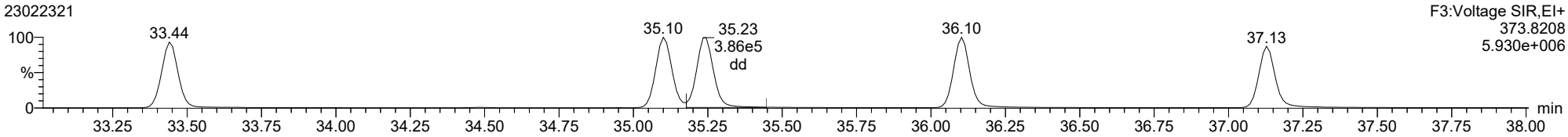

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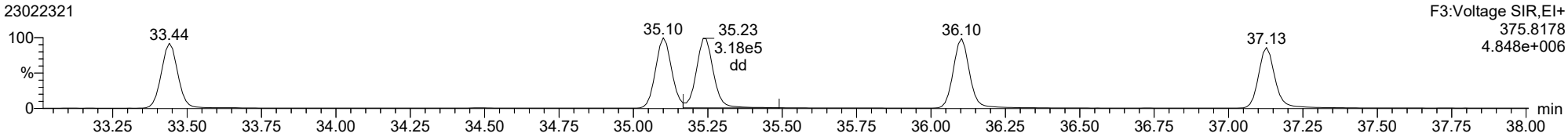

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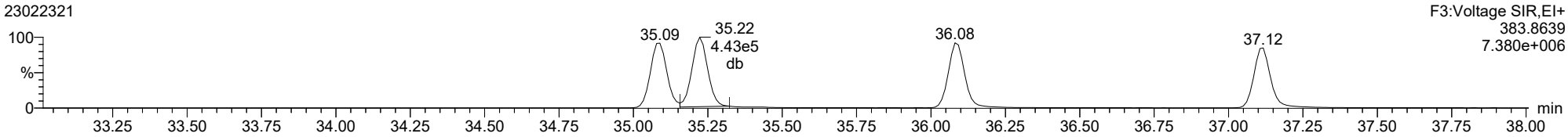

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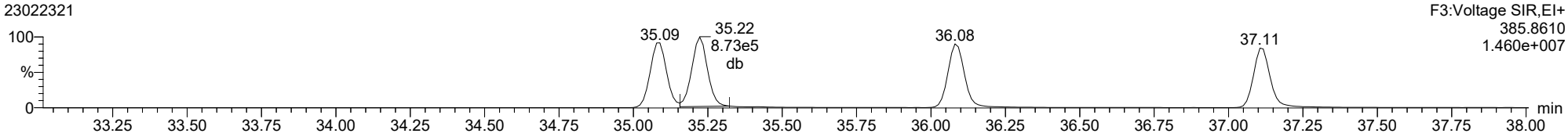

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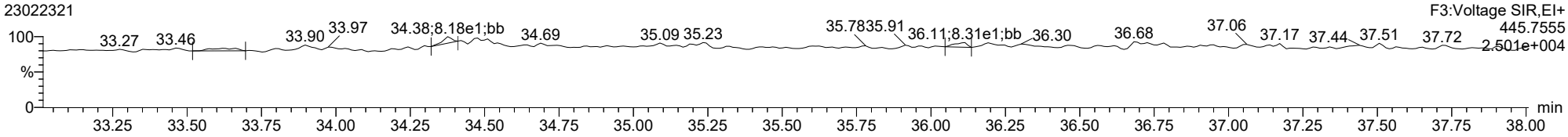

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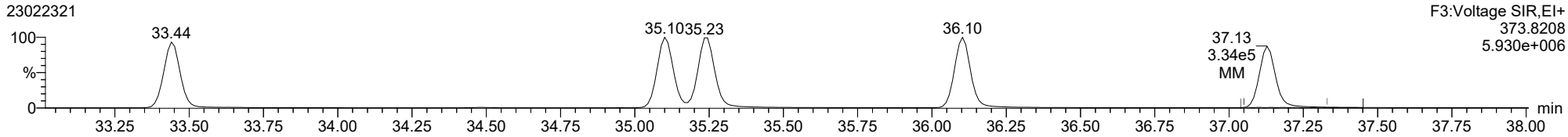

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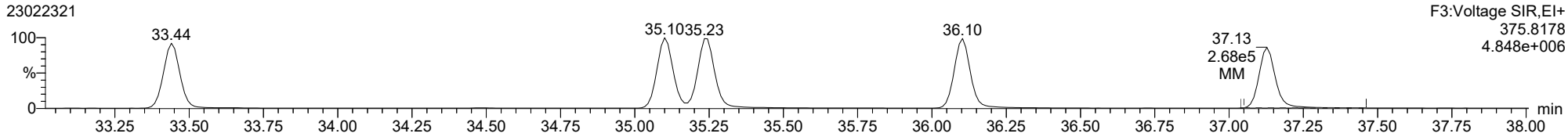

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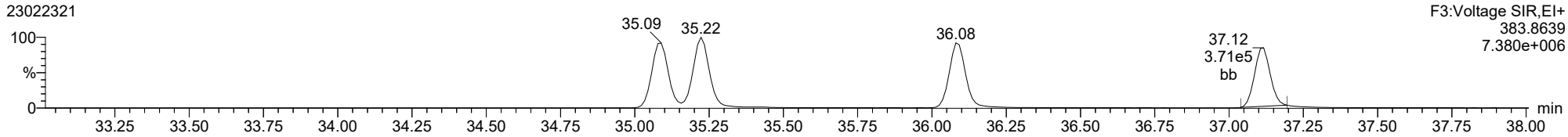

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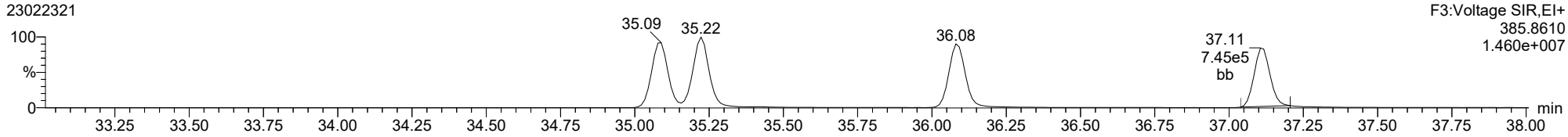

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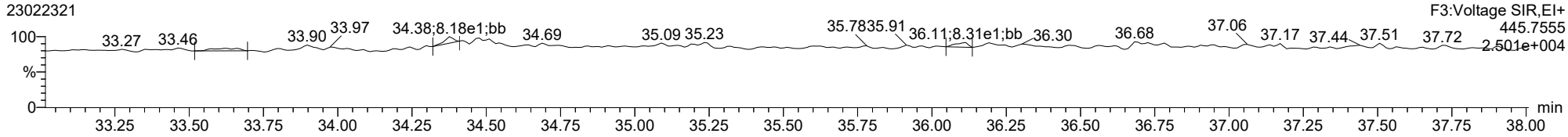

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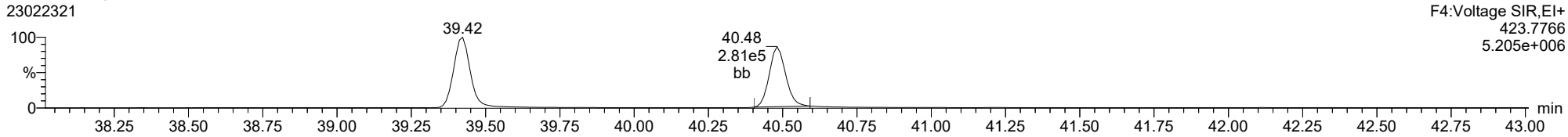

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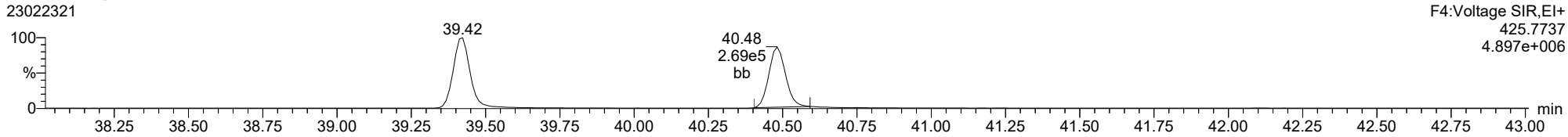

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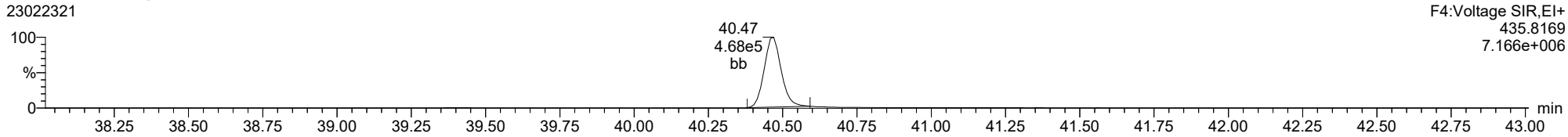

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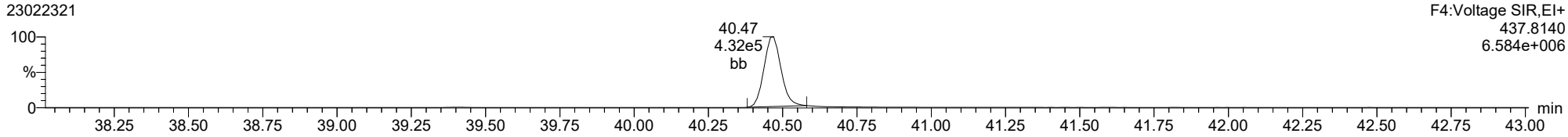
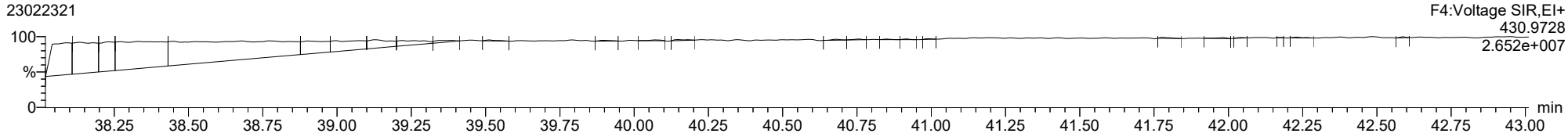


FUNCTION4 PFK



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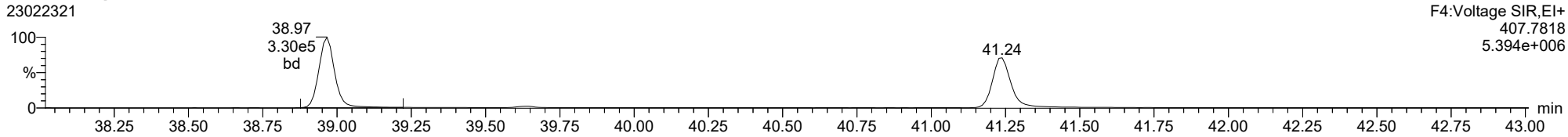

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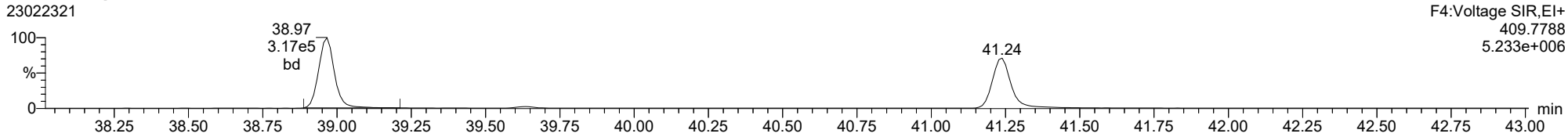

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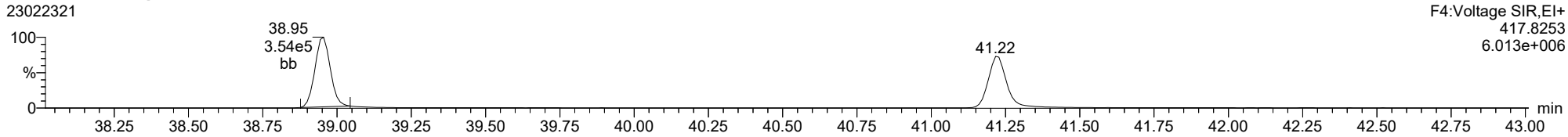

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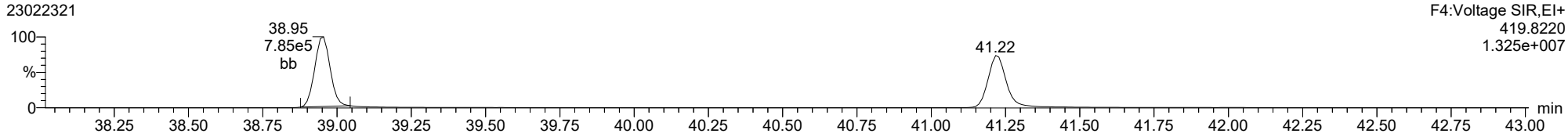
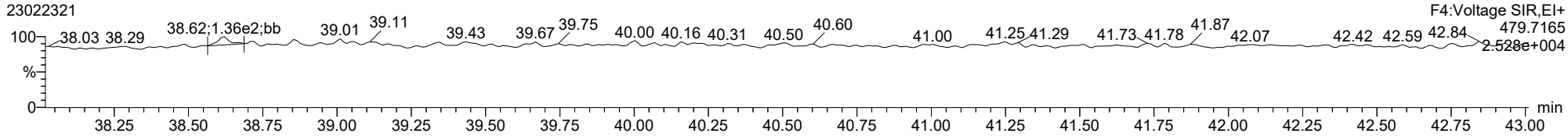


FUNCTION4 NCDPE



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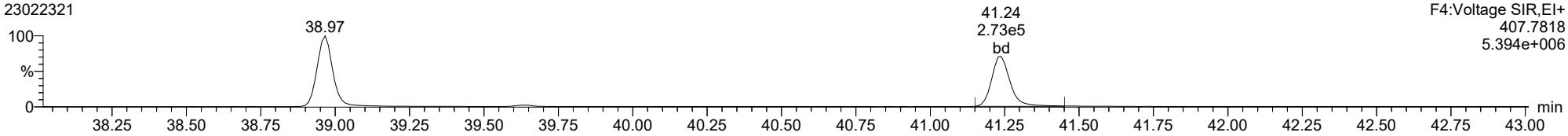

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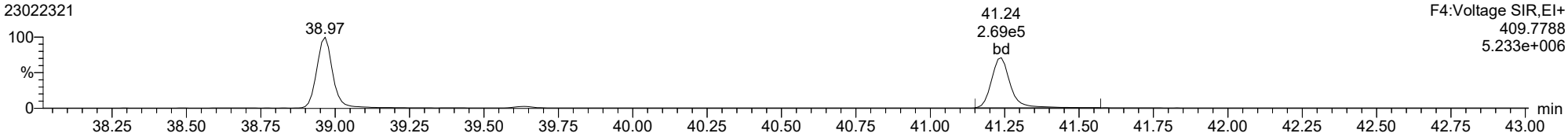

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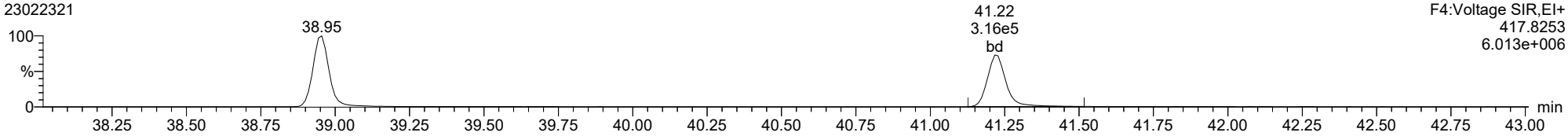

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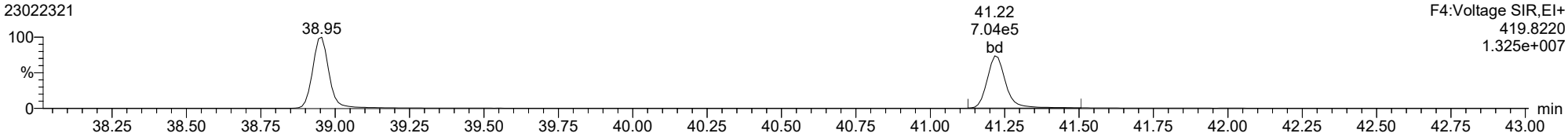

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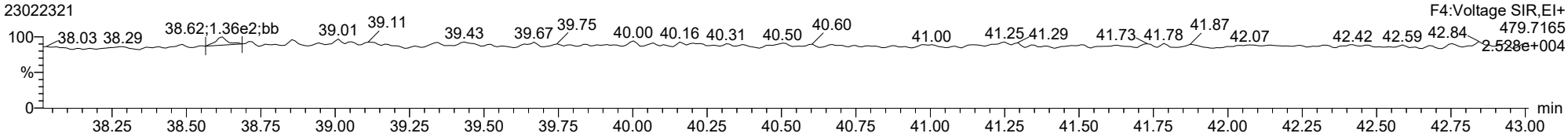

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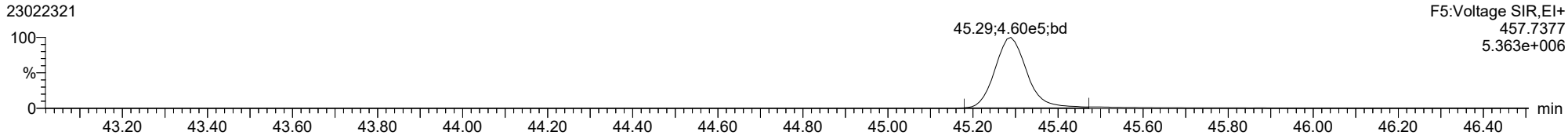

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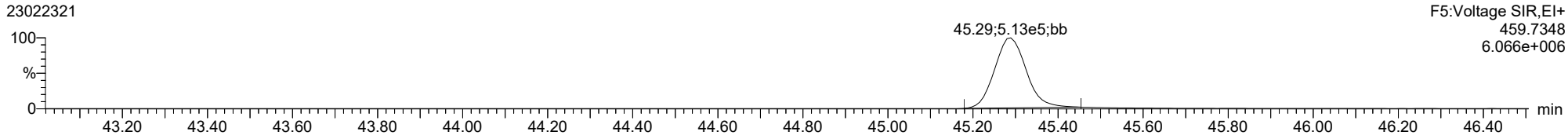

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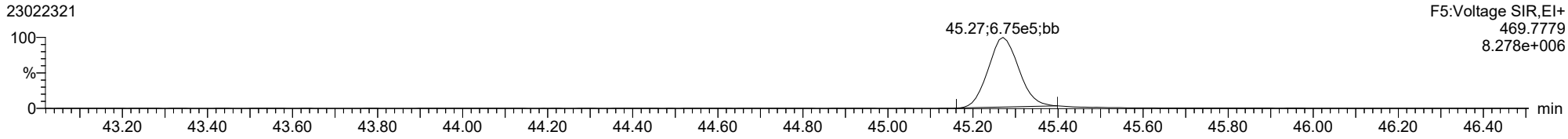
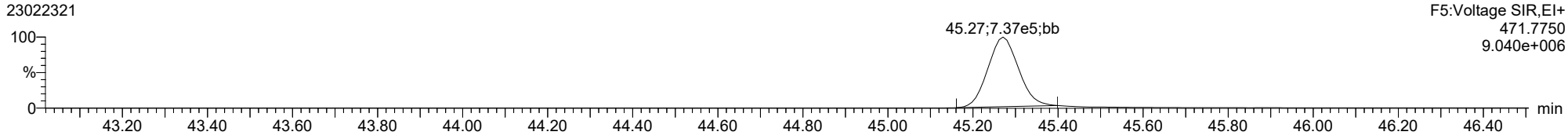
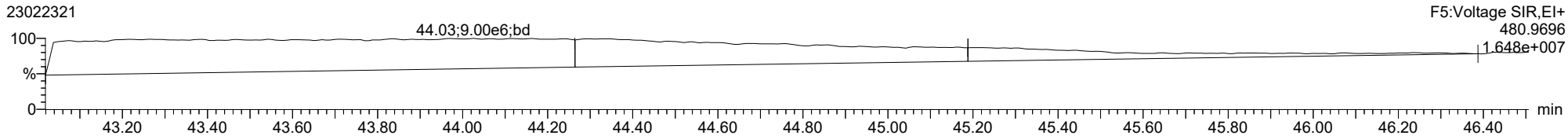


13C-OCDD



FUNCTION5 PFK



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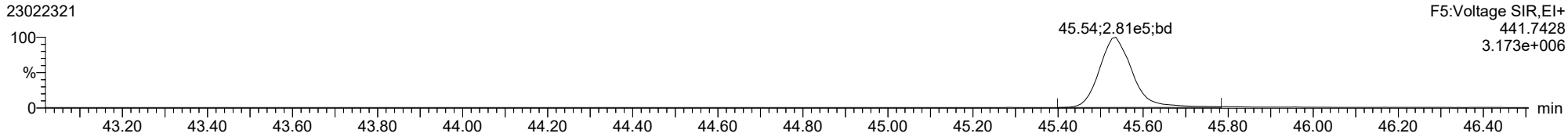

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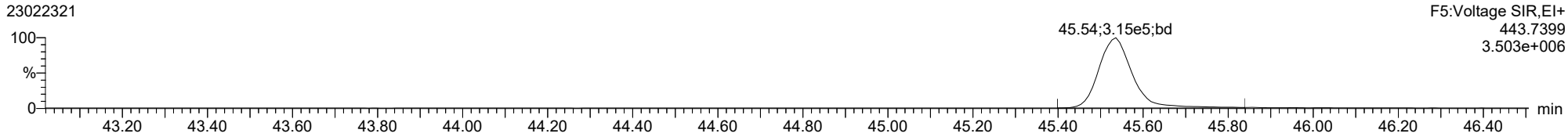

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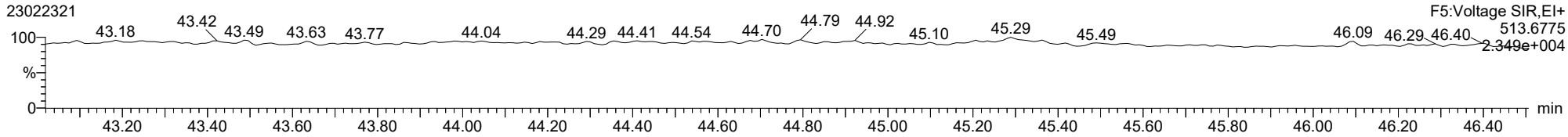

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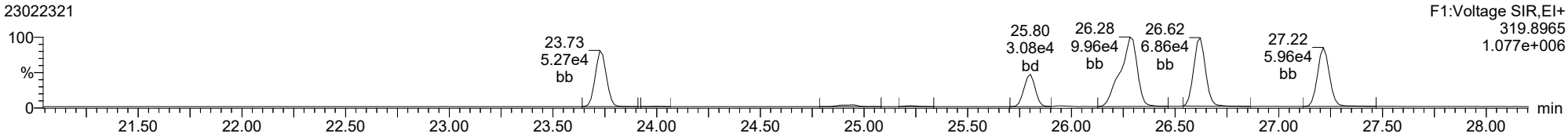
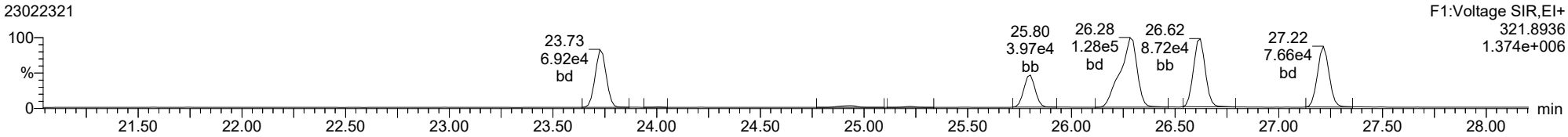
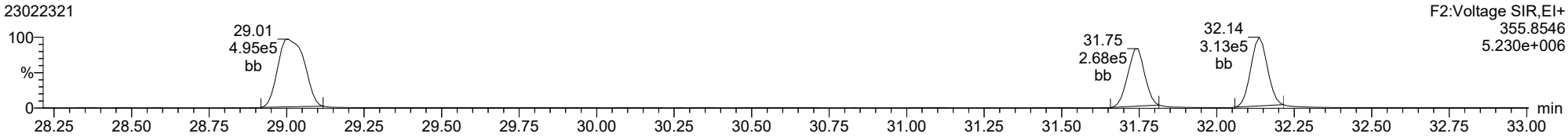


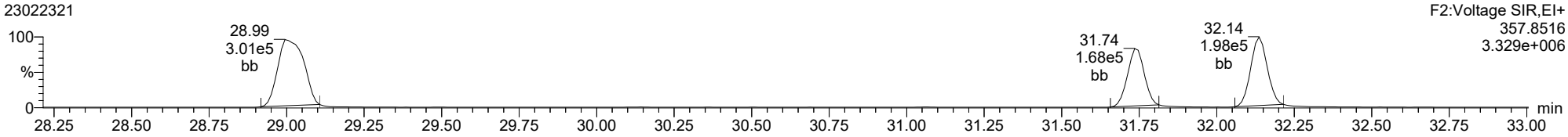
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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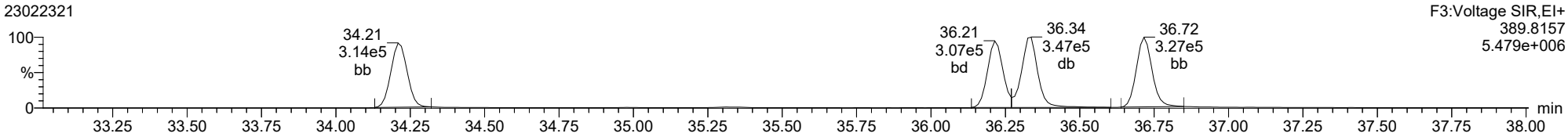

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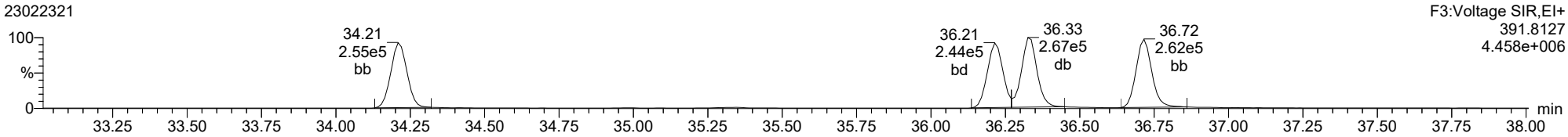

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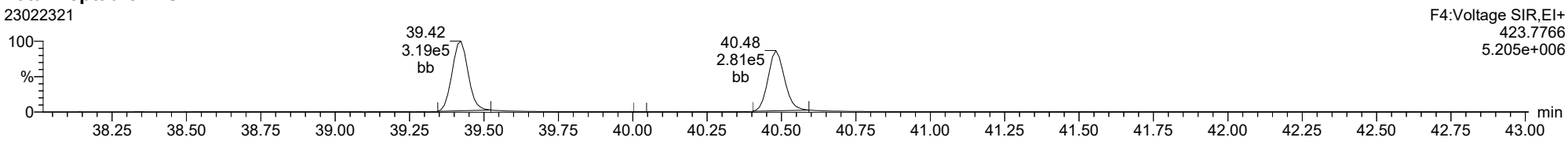

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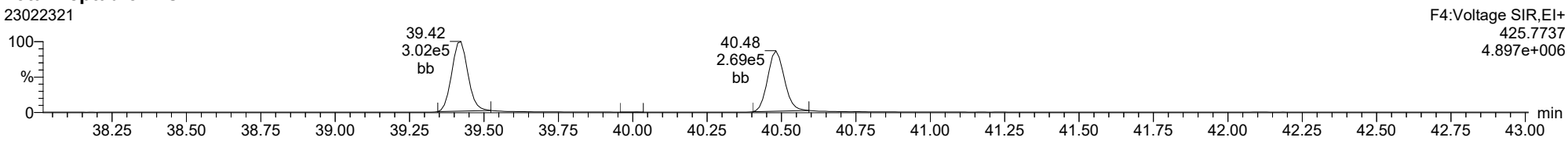

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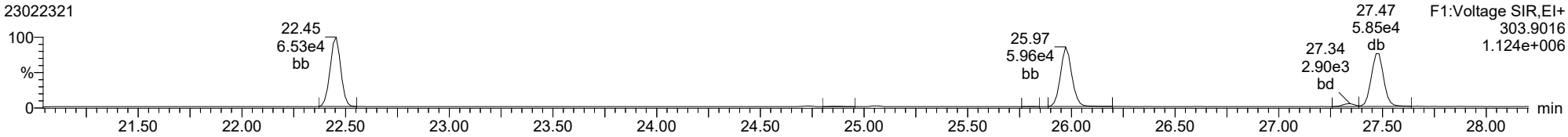
Total-tetrafurans



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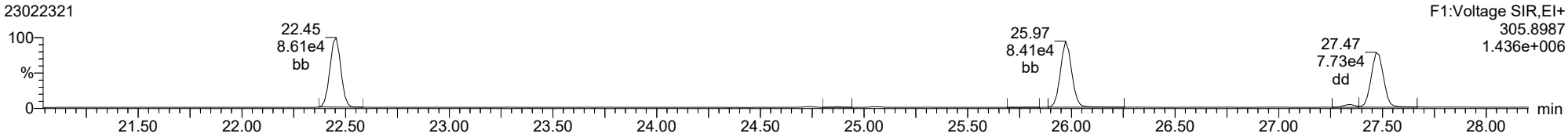
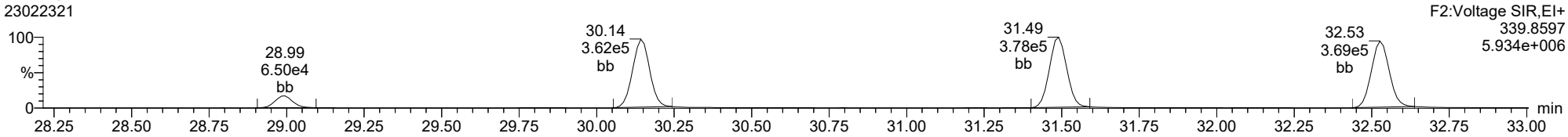
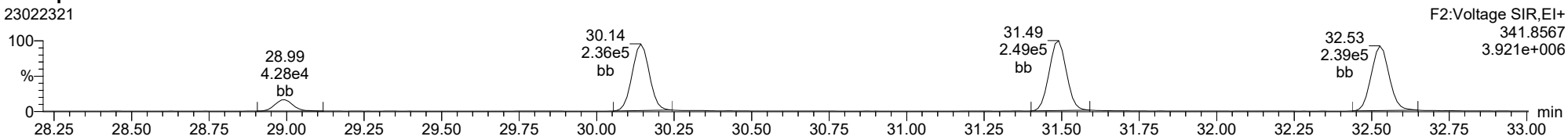


Total-pentafurans

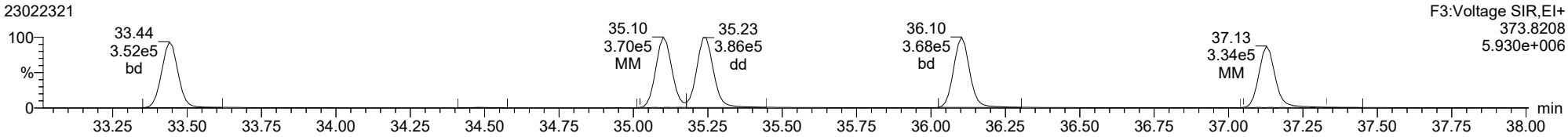


Total-pentafurans

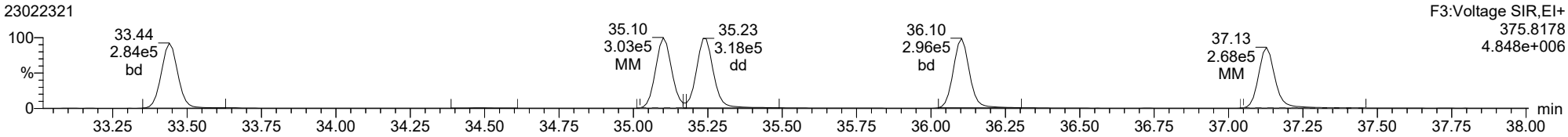


ID: CS3V5, Name: 23022321, Date: 24-Feb-2023, Time: 02:43:06, Conditions: AUTOSPEC01, User: pk

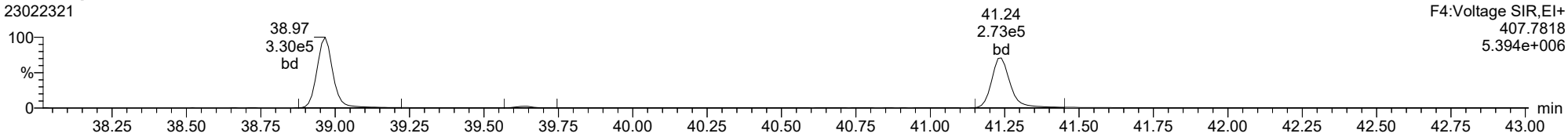
Total-hexafurans



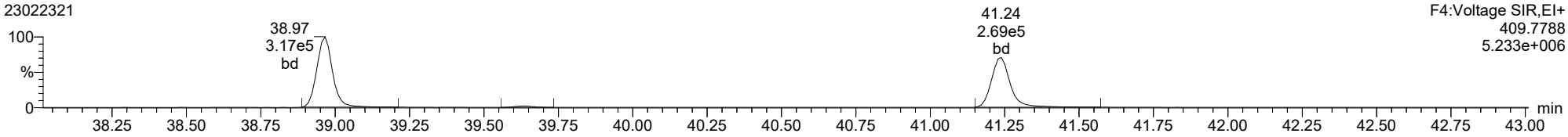
Total-hexafurans



Total-heptafurans

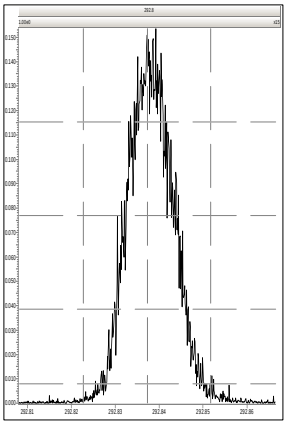


Total-heptafurans

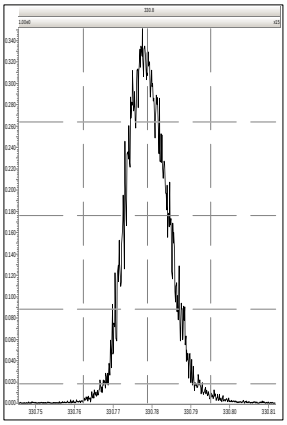


Printed: Friday, February 24, 2023 03:36:34 Pacific Standard Time

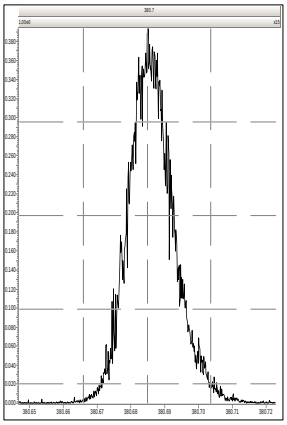
M 292.9824 R 13552



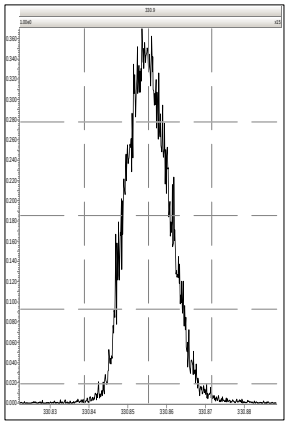
M 330.9792 R 14208



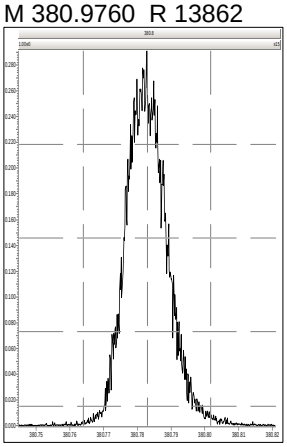
M 380.9760 R 12165



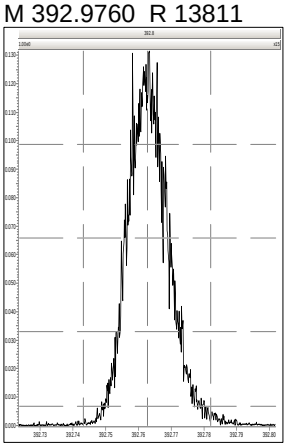
M 330.9792 R 13774



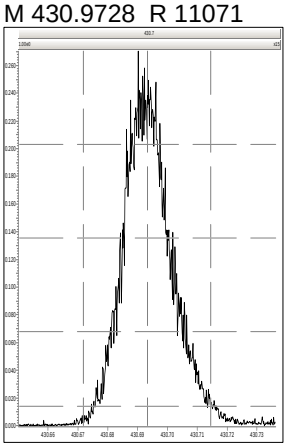
M 380.9760 R 13862



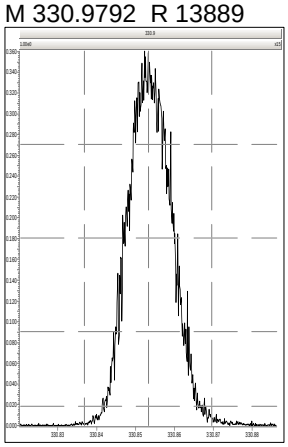
M 392.9760 R 13811



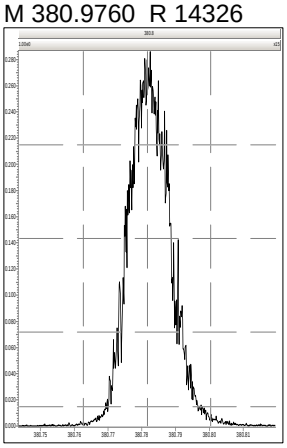
M 430.9728 R 11071



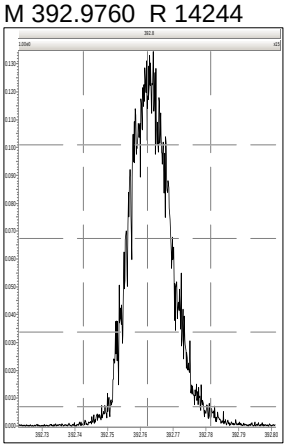
M 330.9792 R 13889



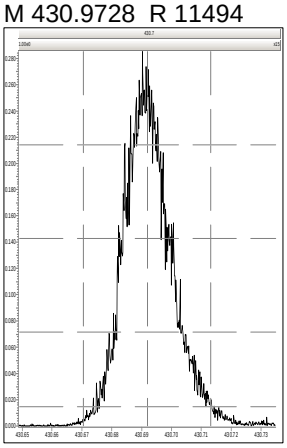
M 380.9760 R 14326



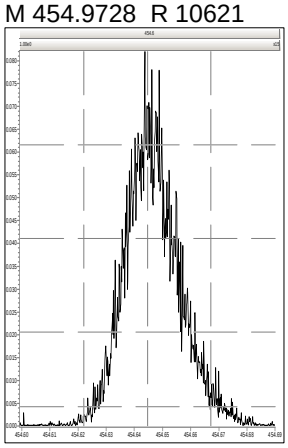
M 392.9760 R 14244



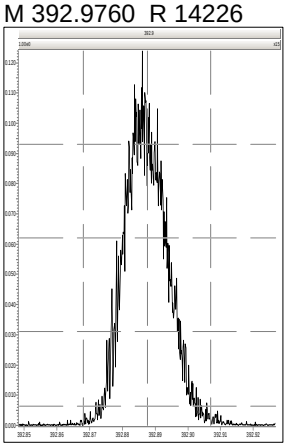
M 430.9728 R 11494



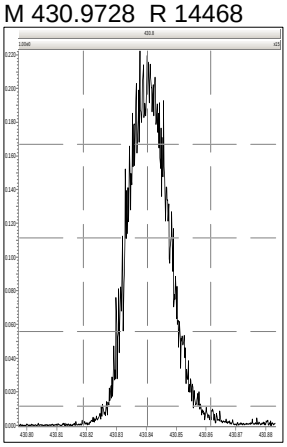
M 454.9728 R 10621



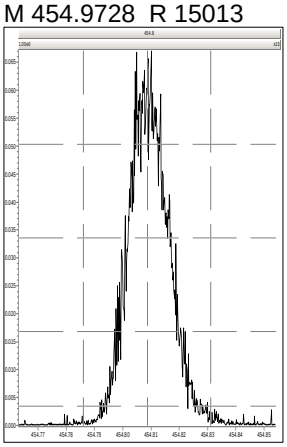
M 392.9760 R 14226



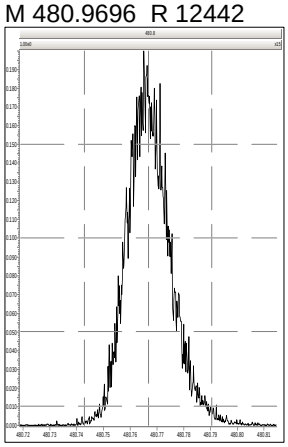
M 430.9728 R 14468



M 454.9728 R 15013

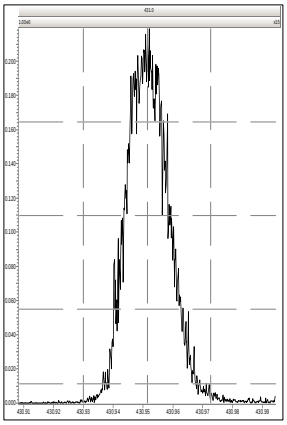


M 480.9696 R 12442

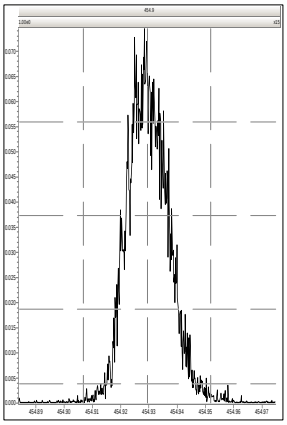


Printed: Friday, February 24, 2023 03:36:34 Pacific Standard Time

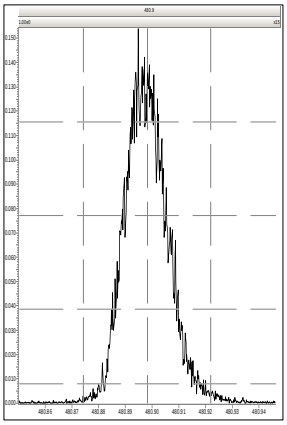
M 430.9728 R 14793



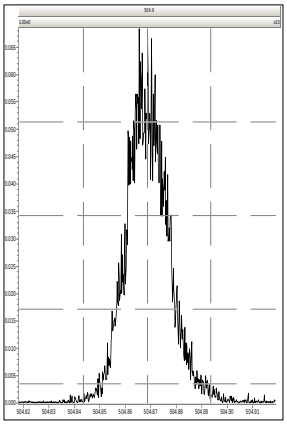
M 454.9728 R 15074



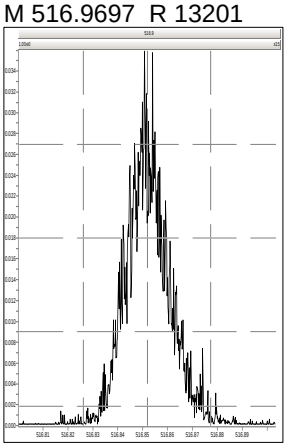
M 480.9696 R 14005

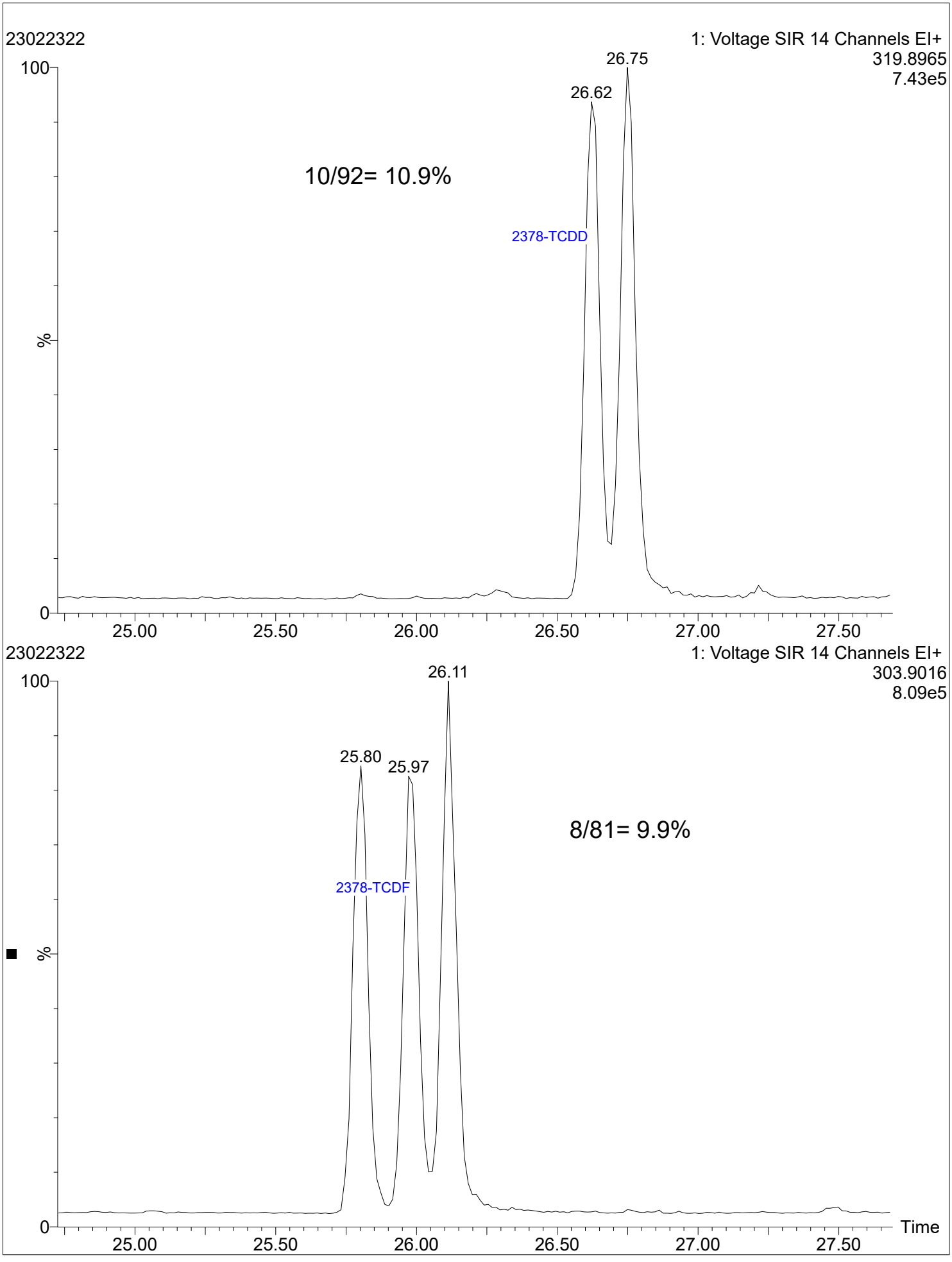


M 504.9696 R 13125



M 516.9697 R 13201




23022322
1: Voltage SIR 14 Channels EI+
319.8965
7.43e5
100
26.75
26.62
10/92= 10.9%
2378-TCDD
%
0
25.00
25.50
26.00
26.50
27.00
27.50
23022322
1: Voltage SIR 14 Channels EI+
303.9016
8.09e5
100
26.11
25.80
25.97
8/81= 9.9%
2378-TCDF
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC SDG: 23A0207

Instrument .ID: AUTOSPEC01 Lab File ID: 23020103

Date Analyzed: 02/01/23 Time Analyzed: 13:02

Lab Sample ID: SLB0026-RES1 Sequence: SLB0026

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 10.3

3467-TCDF/2378-TCDF: 10

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLB0026-ICV1	CS3R1	23020102	02/01/2023	10:37
SLB0026-RES1	ISCR1	23020103	02/01/2023	13:02
SLB0026-CAL1	CSLCR	23020104	02/01/2023	14:39
SLB0026-CAL2	CS1CR	23020105	02/01/2023	15:28
SLB0026-CAL3	CS2CR	23020106	02/01/2023	17:07
SLB0026-CAL4	CS3CR	23020107	02/01/2023	17:56
SLB0026-CAL5	CS4CR	23020108	02/01/2023	18:45
SLB0026-CAL6	CS5CR	23020109	02/01/2023	19:34
SLB0026-SCV1	ICVCR	23020110	02/01/2023	20:23
SLB0026-CCV1	CS3R2	23020111	02/01/2023	21:12
SLB0026-RES2	ISCR2	23020112	02/01/2023	22:06

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23A0207
Instrument .ID: AUTOSPEC01
Lab File ID: 23020112
Date Analyzed: 02/01/23
Time Analyzed: 22:06
Lab Sample ID: SLB0026-RES2
Sequence: SLB0026

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 7.6

3467-TCDF/2378-TCDF: 9

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLB0026-ICV1	CS3R1	23020102	02/01/2023	10:37
SLB0026-RES1	ISCR1	23020103	02/01/2023	13:02
SLB0026-CAL1	CSLCR	23020104	02/01/2023	14:39
SLB0026-CAL2	CS1CR	23020105	02/01/2023	15:28
SLB0026-CAL3	CS2CR	23020106	02/01/2023	17:07
SLB0026-CAL4	CS3CR	23020107	02/01/2023	17:56
SLB0026-CAL5	CS4CR	23020108	02/01/2023	18:45
SLB0026-CAL6	CS5CR	23020109	02/01/2023	19:34
SLB0026-SCV1	ICVCR	23020110	02/01/2023	20:23
SLB0026-CCV1	CS3R2	23020111	02/01/2023	21:12
SLB0026-RES2	ISCR2	23020112	02/01/2023	22:06

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC SDG: 23A0207

Instrument .ID: AUTOSPEC01 Lab File ID: 23022303

Date Analyzed: 02/23/23 Time Analyzed: 11:47

Lab Sample ID: SLB0345-RES1 Sequence: SLB0345

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 14.1

3467-TCDF/2378-TCDF: 11.5

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLB0345-ICV1	CS3V1	23022302	02/23/2023	10:49
SLB0345-RES1	ISCV1	23022303	02/23/2023	11:47
BLA0261-BLK1	Blank	23022304	02/23/2023	12:35
BLA0261-SRM1	Reference	23022306	02/23/2023	14:14
SLB0345-CCV1	CS3V4	23022312	02/23/2023	19:11
SLB0345-RES2	ISCV4	23022313	02/23/2023	20:04
23A0207-02	LDW23-IT1089	23022318	02/24/2023	00:14
23A0207-10	LDW23-IT1097	23022319	02/24/2023	01:04
23A0207-17	LDW23-IT1209	23022320	02/24/2023	01:53
SLB0345-CCV2	CS3V5	23022321A	02/24/2023	02:43
SLB0345-RES3	ISCV5	23022322	02/24/2023	03:36
BLA0261-BS1	LCS	23022401	02/24/2023	10:33

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23A0207
Instrument .ID: AUTOSPEC01
Lab File ID: 23022313
Date Analyzed: 02/23/23
Time Analyzed: 20:04
Lab Sample ID: SLB0345-RES2
Sequence: SLB0345

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 10.3

3467-TCDF/2378-TCDF: 9.6

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLB0345-ICV1	CS3V1	23022302	02/23/2023	10:49
SLB0345-RES1	ISCV1	23022303	02/23/2023	11:47
BLA0261-BLK1	Blank	23022304	02/23/2023	12:35
BLA0261-SRM1	Reference	23022306	02/23/2023	14:14
SLB0345-CCV1	CS3V4	23022312	02/23/2023	19:11
SLB0345-RES2	ISCV4	23022313	02/23/2023	20:04
23A0207-02	LDW23-IT1089	23022318	02/24/2023	00:14
23A0207-10	LDW23-IT1097	23022319	02/24/2023	01:04
23A0207-17	LDW23-IT1209	23022320	02/24/2023	01:53
SLB0345-CCV2	CS3V5	23022321A	02/24/2023	02:43
SLB0345-RES3	ISCV5	23022322	02/24/2023	03:36
BLA0261-BS1	LCS	23022401	02/24/2023	10:33

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23A0207
Instrument .ID: AUTOSPEC01
Lab File ID: 23022322
Date Analyzed: 02/24/23
Time Analyzed: 03:36
Lab Sample ID: SLB0345-RES3
Sequence: SLB0345

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 10.9

3467-TCDF/2378-TCDF: 9.9

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLB0345-ICV1	CS3V1	23022302	02/23/2023	10:49
SLB0345-RES1	ISCV1	23022303	02/23/2023	11:47
BLA0261-BLK1	Blank	23022304	02/23/2023	12:35
BLA0261-SRM1	Reference	23022306	02/23/2023	14:14
SLB0345-CCV1	CS3V4	23022312	02/23/2023	19:11
SLB0345-RES2	ISCV4	23022313	02/23/2023	20:04
23A0207-02	LDW23-IT1089	23022318	02/24/2023	00:14
23A0207-10	LDW23-IT1097	23022319	02/24/2023	01:04
23A0207-17	LDW23-IT1209	23022320	02/24/2023	01:53
SLB0345-CCV2	CS3V5	23022321A	02/24/2023	02:43
SLB0345-RES3	ISCV5	23022322	02/24/2023	03:36
BLA0261-BS1	LCS	23022401	02/24/2023	10:33

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0026	Instrument:	AUTOSPEC01
		Calibration:	GB00010

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CS3R1	SLB0026-ICV1	23020102	NA	02/01/23 10:37
ISCR1	SLB0026-RES1	23020103	NA	02/01/23 13:02
CSLCR	SLB0026-CAL1	23020104	NA	02/01/23 14:39
CS1CR	SLB0026-CAL2	23020105	NA	02/01/23 15:28
CS2CR	SLB0026-CAL3	23020106	NA	02/01/23 17:07
CS3CR	SLB0026-CAL4	23020107	NA	02/01/23 17:56
CS4CR	SLB0026-CAL5	23020108	NA	02/01/23 18:45
CS5CR	SLB0026-CAL6	23020109	NA	02/01/23 19:34
ICVCR	SLB0026-SCV1	23020110	NA	02/01/23 20:23
CS3R2	SLB0026-CCV1	23020111	NA	02/01/23 21:12
ISCR2	SLB0026-RES2	23020112	NA	02/01/23 22:06

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
		Calibration:	GB00010

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CS3V1	SLB0345-ICV1	23022302	NA	02/23/23 10:49
ISCV1	SLB0345-RES1	23022303	NA	02/23/23 11:47
Blank	BLA0261-BLK1	23022304	Solid	02/23/23 12:35
Reference	BLA0261-SRM1	23022306	Solid	02/23/23 14:14
CS3V4	SLB0345-CCV1	23022312	NA	02/23/23 19:11
ISCV4	SLB0345-RES2	23022313	NA	02/23/23 20:04
LDW23-IT1089	23A0207-02	23022318	Solid	02/24/23 00:14
LDW23-IT1097	23A0207-10	23022319	Solid	02/24/23 01:04
LDW23-IT1209	23A0207-17	23022320	Solid	02/24/23 01:53
CS3V5	SLB0345-CCV2	23022321A	NA	02/24/23 02:43
ISCV5	SLB0345-RES3	23022322	NA	02/24/23 03:36
LCS	BLA0261-BS1	23022401	Solid	02/24/23 10:33

ANALYSIS SEQUENCE

SLB0345

Instrument: AUTOSPEC01 HRGCMS Column ID: K11291
Calibration ID: GB00010 Tune File: FEB0923_1-5
EM Voltage: 350 Resolution check times : 09:43, 20:04, 03:36

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLB0345-ICV1	CS3V1	QC		1	K009821		02/23/2023 10:49	23022302	PK	
SLB0345-RES1	ISCV1	QC		2	K003933		02/23/2023 11:47	23022303	PK	
BLA0261-BLK1	Blank	QC		3		K011414	02/23/2023 12:35	23022304	PK	
BLA0261-BS1	LCS	QC		4		K011414	02/24/2023 10:33	23022401	PK	
BLA0261-SRM1	Reference	QC		5		K011414	02/23/2023 14:14	23022306	PK	
BLA0261-DUP1	Duplicate	QC		6		K011414	02/23/2023 15:04	23022307	PK	
23A0100-09	LDW23-SS1226	1613B Dioxin	C 01	7		K011414	02/23/2023 15:53	23022308	PK	
23A0100-21	LDW23-SS1154	1613B Dioxin	C 01	8		K011414	02/23/2023 16:42	23022309	PK	
23A0133-06	LDW23-SC1241	1613B Dioxin	B 01	9		K011414	02/23/2023 17:32	23022310	PK	
23A0133-07	LDW23-IT1217	1613B Dioxin	B 01	10		K011414	02/23/2023 18:21	23022311	PK	
SLB0345-CCV1	CS3V4	QC		11	K009821		02/23/2023 19:11	23022312	PK	
SLB0345-RES2	ISCV4	QC		12	K003933		02/23/2023 20:04	23022313	PK	
23A0133-10	LDW23-SC1215	1613B Dioxin	B 01	13		K011414	02/23/2023 20:56	23022314	PK	
23A0133-11	LDW23-SC1222	1613B Dioxin	B 01	14		K011414	02/23/2023 21:46	23022315	PK	
23A0134-06	LDW23-SS1160	1613B Dioxin	B 01	15		K011414	02/23/2023 22:35	23022316	PK	
23A0134-14	LDW23-IT1194	1613B Dioxin	B 01	16		K011414	02/23/2023 23:25	23022317	PK	
23A0207-02	LDW23-IT1089	1613B Dioxin	B 01	17		K011414	02/24/2023 00:14	23022318	PK	
23A0207-10	LDW23-IT1097	1613B Dioxin	B 01	18		K011414	02/24/2023 01:04	23022319	PK	
23A0207-17	LDW23-IT1209	1613B Dioxin	B 01	19		K011414	02/24/2023 01:53	23022320	PK	
SLB0345-CCV2	CS3V5	QC		20	K009821		02/24/2023 02:43	23022321A	PK	
SLB0345-RES3	ISCV5	QC		21	K003933		02/24/2023 03:36	23022322	PK	

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:08:59 Pacific Standard Time 2/24/23 pk

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Quantify		
Dataset Created		
Peak deleted	Sample:23022322, Compound:13C-123789-HxCDD, RT:36.704	21
Peak deleted	Sample:23022322, Compound:13C-1234-TCDD, RT:25.788	21
Peak deleted	Sample:23022313, Compound:13C-1234-TCDD, RT:25.802	12
Peak deleted	Sample:23022313, Compound:13C-123789-HxCDD, RT:36.704	12
Peak deleted	Sample:23022303, Compound:13C-123789-HxCDD, RT:36.749	2
Pre modification peak	Sample:23022321, Compound:HF, RT:37.128	20
Peak modified	Sample:23022321, Compound:HF, RT:37.128	20
Pre modification peak	Sample:23022321, Compound:HF, RT:37.128	20
Peak modified	Sample:23022321, Compound:HF, RT:37.128	20
Peak modified	Sample:23022321, Compound:HF, RT:37.128	20
Pre modification peak	Sample:23022321, Compound:HF, RT:35.100	20
Peak modified	Sample:23022321, Compound:HF, RT:35.100	20
Peak modified	Sample:23022321, Compound:HF, RT:35.100	20
Peak modified	Sample:23022321, Compound:HF, RT:35.100	20
Peak modified	Sample:23022321, Compound:HF, RT:35.100	20
Pre modification peak	Sample:23022321, Compound:HF, RT:35.100	20
Peak modified	Sample:23022321, Compound:HF, RT:35.100	20
Peak deleted	Sample:23022304, Compound:TD, RT:26.650	3
Pre modification peak	Sample:23022304, Compound:OD, RT:45.289	3
Peak modified	Sample:23022304, Compound:OD, RT:45.289	3
Pre modification peak	Sample:23022309, Compound:PF, RT:31.524	8
Peak modified	Sample:23022309, Compound:PF, RT:31.524	8
Pre modification peak	Sample:23022309, Compound:PF, RT:31.524	8
Peak modified	Sample:23022309, Compound:PF, RT:31.524	8
Peak added	Sample:23022310, Compound:HF, RT:36.125	9
Peak added	Sample:23022310, Compound:HF, RT:36.103	9
Pre modification peak	Sample:23022311, Compound:PF, RT:31.513	10
Peak modified	Sample:23022311, Compound:PF, RT:31.513	10
Pre modification peak	Sample:23022316, Compound:HF, RT:36.136	15
Peak modified	Sample:23022316, Compound:HF, RT:36.136	15
Pre modification peak	Sample:23022316, Compound:HPF, RT:41.250	15
Peak modified	Sample:23022316, Compound:HPF, RT:41.250	15
Pre modification peak	Sample:23022316, Compound:HPF, RT:41.250	15
Peak modified	Sample:23022316, Compound:HPF, RT:41.250	15
Pre modification peak	Sample:23022317, Compound:TF, RT:25.972	16
Peak modified	Sample:23022317, Compound:TF, RT:25.972	16
Pre modification peak	Sample:23022317, Compound:HF, RT:37.094	16
Peak modified	Sample:23022317, Compound:HF, RT:37.094	16
Pre modification peak	Sample:23022317, Compound:HF, RT:37.105	16
Peak modified	Sample:23022317, Compound:HF, RT:37.105	16
Pre modification peak	Sample:23022319, Compound:HPF, RT:41.261	18
Peak modified	Sample:23022319, Compound:HPF, RT:41.261	18
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230223IH.qld'	
Peak deleted	Sample:23022304, Compound:TF, RT:25.986	3
Peak deleted	Sample:23022306, Compound:HD, RT:37.195	5
Peak deleted	Sample:23022307, Compound:HF, RT:37.228	6
Peak deleted	Sample:23022308, Compound:PF, RT:29.596	7
Peak deleted	Sample:23022308, Compound:PF, RT:28.738	7
Peak deleted	Sample:23022308, Compound:PD, RT:31.479	7
Peak added	Sample:23022308, Compound:PD, RT:29.095	7
Peak added	Sample:23022308, Compound:PD, RT:29.273	7

Dataset: T:\Autospec\Processed Data Batch\230223IH.qld
Last Altered: Friday, February 24, 2023 14:40:25 Pacific Standard Time
Printed: Friday, February 24, 2023 15:08:59 Pacific Standard Time

Event	Details	Sample ID
Peak deleted	Sample:23022308, Compound:HPD, RT:39.634	7
Pre modification peak	Sample:23022309, Compound:13C-123478-HxCDF, RT:35.133	8
Peak modified	Sample:23022309, Compound:13C-123478-HxCDF, RT:35.133	8
Peak deleted	Sample:23022309, Compound:PP, RT:28.119	8
Peak deleted	Sample:23022309, Compound:HD, RT:34.008	8
Peak deleted	Sample:23022309, Compound:HPD, RT:40.837	8
Peak deleted	Sample:23022310, Compound:HD, RT:37.206	9
Pre modification peak	Sample:23022311, Compound:PF, RT:29.095	10
Peak modified	Sample:23022311, Compound:PF, RT:29.095	10
Pre modification peak	Sample:23022311, Compound:PF, RT:29.095	10
Peak modified	Sample:23022311, Compound:PF, RT:29.095	10
Peak deleted	Sample:23022311, Compound:HD, RT:35.680	10
Peak deleted	Sample:23022311, Compound:HPD, RT:40.838	10
Peak deleted	Sample:23022315, Compound:TF, RT:24.503	14
Peak added	Sample:23022315, Compound:PD, RT:29.061	14
Peak added	Sample:23022315, Compound:PD, RT:29.073	14
Peak deleted	Sample:23022315, Compound:HPD, RT:40.826	14
Peak deleted	Sample:23022316, Compound:HF, RT:37.194	15
Peak added	Sample:23022316, Compound:HF, RT:37.117	15
Peak added	Sample:23022316, Compound:HF, RT:37.117	15
Peak deleted	Sample:23022316, Compound:HD, RT:37.194	15
Peak deleted	Sample:23022317, Compound:PF, RT:28.883	16
Peak deleted	Sample:23022317, Compound:TD, RT:26.735	16
Pre modification peak	Sample:23022319, Compound:PF, RT:29.084	18
Peak modified	Sample:23022319, Compound:PF, RT:29.084	18
Pre modification peak	Sample:23022319, Compound:PF, RT:29.084	18
Peak modified	Sample:23022319, Compound:PF, RT:29.084	18
Peak added	Sample:23022319, Compound:PD, RT:29.062	18
Peak added	Sample:23022319, Compound:PD, RT:29.051	18
Peak deleted	Sample:23022319, Compound:HD, RT:37.194	18
Peak added	Sample:23022320, Compound:PF, RT:29.251	19
Peak added	Sample:23022320, Compound:PF, RT:29.251	19
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230223IH.qld'	

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0026	Instrument:	AUTOSPEC01
Sample ID:	SLB0026-ICV1	Calibration:	GB00010
File ID:	23020102	Analyzed:	02/01/23 10:37

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	81.8	71 - 129	25.8667	25.87167	-0.0050	N/A	
13C12-2,3,7,8-TCDD	100.00	103	82 - 118	26.5168	26.51423	0.0026	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	97.0	76 - 124	30.0278	30.03173	-0.0039	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	96.3	77 - 123	31.3648	31.36872	-0.0039	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	97.3	62 - 138	31.621	31.62498	-0.0040	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	88.7	76 - 124	34.9858	34.9784	0.0074	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	89.6	70 - 130	35.1195	35.11773	0.0018	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	88.7	73 - 127	35.9773	35.97562	0.0017	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	87.8	74 - 126	37.0023	37.00233	0.0000	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	99.3	85 - 115	36.0998	36.09812	0.0017	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	102	85 - 115	36.2113	36.21508	-0.0038	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	80.6	78 - 122	38.8407	38.84072	0.0000	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	78.2	77 - 123	41.0912	41.09488	-0.0037	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	84.9	72 - 128	40.3447	40.3447	0.0000	N/A	
13C12-OCDD	200.00	87.8	48 - 152	45.1112	45.10738	0.0038	N/A	
37Cl4-2,3,7,8-TCDD	10.000	85.8	0 - 200	26.5318	26.53683	-0.0050	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0026	Instrument:	AUTOSPEC01
Sample ID:	SLB0026-SCV1	Calibration:	GB00010
File ID:	23020110	Analyzed:	02/01/23 20:23

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	101	0 - 200	25.8667	25.87167	-0.0050	N/A	
13C12-2,3,7,8-TCDD	100.00	97.3	0 - 200	26.5015	26.51423	-0.0127	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	97.9	0 - 200	30.0262	30.03173	-0.0055	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	96.0	0 - 200	31.3632	31.36872	-0.0055	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	95.6	0 - 200	31.6193	31.62498	-0.0057	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	99.0	0 - 200	34.9728	34.9784	-0.0056	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	98.8	0 - 200	35.1065	35.11773	-0.0112	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	99.3	0 - 200	35.9643	35.97562	-0.0113	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	98.6	0 - 200	36.9893	37.00233	-0.0130	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	97.7	0 - 200	36.0868	36.09812	-0.0113	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	101	0 - 200	36.2095	36.21508	-0.0056	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	100	0 - 200	38.8278	38.84072	-0.0129	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	101	0 - 200	41.0895	41.09488	-0.0054	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	101	0 - 200	40.3318	40.3447	-0.0129	N/A	
13C12-OCDD	200.00	103	0 - 200	45.1013	45.10738	-0.0061	N/A	
37Cl4-2,3,7,8-TCDD	10.000	89.4	0 - 200	26.5318	26.53683	-0.0050	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0026	Instrument:	AUTOSPEC01
Sample ID:	SLB0026-CCV1	Calibration:	GB00010
File ID:	23020111	Analyzed:	02/01/23 21:12

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	95.3	71 - 129	25.8665	25.87167	-0.0052	N/A	
13C12-2,3,7,8-TCDD	100.00	103	82 - 118	26.5167	26.51423	0.0025	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	97.8	76 - 124	30.026	30.03173	-0.0057	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	97.6	77 - 123	31.363	31.36872	-0.0057	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	95.1	62 - 138	31.6193	31.62498	-0.0057	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	102	76 - 124	34.9727	34.9784	-0.0057	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	102	70 - 130	35.1175	35.11773	-0.0002	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	99.6	73 - 127	35.9753	35.97562	-0.0003	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	101	74 - 126	37.0005	37.00233	-0.0018	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	100	85 - 115	36.098	36.09812	-0.0001	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	100	85 - 115	36.2093	36.21508	-0.0058	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	102	78 - 122	38.8387	38.84072	-0.0020	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	104	77 - 123	41.0893	41.09488	-0.0056	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	103	72 - 128	40.3428	40.3447	-0.0019	N/A	
13C12-OCDD	200.00	106	48 - 152	45.1013	45.10738	-0.0061	N/A	
37Cl4-2,3,7,8-TCDD	10.000	90.4	0 - 200	26.5317	26.53683	-0.0051	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	SLB0345-ICV1	Calibration:	GB00010
File ID:	23022302	Analyzed:	02/23/23 10:49

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	86.1	71 - 129	25.986	25.87167	0.1143	N/A	
13C12-2,3,7,8-TCDD	100.00	97.7	82 - 118	26.6358	26.51423	0.1216	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	81.5	76 - 124	30.1535	30.03173	0.1218	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	86.2	77 - 123	31.5015	31.36872	0.1328	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	77.8	62 - 138	31.7578	31.62498	0.1328	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	93.7	76 - 124	35.1112	34.9784	0.1328	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	103	70 - 130	35.245	35.11773	0.1273	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	98.2	73 - 127	36.1028	35.97562	0.1272	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	86.6	74 - 126	37.1388	37.00233	0.1365	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	109	85 - 115	36.2253	36.09812	0.1272	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	119	85 - 115	36.3367	36.21508	0.1216	N/A	*
13C12-1,2,3,4,6,7,8-HpCDF	100.00	80.7	78 - 122	38.966	38.84072	0.1253	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	75.8	77 - 123	41.2498	41.09488	0.1549	N/A	*
13C12-1,2,3,4,6,7,8-HpCDD	100.00	79.3	72 - 128	40.4923	40.3447	0.1476	N/A	
13C12-OCDD	200.00	64.4	48 - 152	45.298	45.10738	0.1906	N/A	
37Cl4-2,3,7,8-TCDD	10.000	83.9	0 - 200	26.6498	26.53683	0.1130	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	BLA0261-BLK1	Calibration:	GB00010
File ID:	23022304	Analyzed:	02/23/23 12:35

Surrogate Compound	Spike Level ng/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	200.00	101	24 - 169	25.9862	25.87167	0.1145	N/A	
13C12-2,3,7,8-TCDD	200.00	135	25 - 164	26.6217	26.51423	0.1075	N/A	
13C12-1,2,3,7,8-PeCDF	200.00	83.3	24 - 185	30.1535	30.03173	0.1218	N/A	
13C12-2,3,4,7,8-PeCDF	200.00	85.6	21 - 178	31.4905	31.36872	0.1218	N/A	
13C12-1,2,3,7,8-PeCDD	200.00	73.0	25 - 181	31.7467	31.62498	0.1217	N/A	
13C12-1,2,3,4,7,8-HxCDF	200.00	121	26 - 152	35.1113	34.9784	0.1329	N/A	
13C12-1,2,3,6,7,8-HxCDF	200.00	130	26 - 123	35.245	35.11773	0.1273	N/A	*
13C12-2,3,4,6,7,8-HxCDF	200.00	120	28 - 136	36.1028	35.97562	0.1272	N/A	
13C12-1,2,3,7,8,9-HxCDF	200.00	107	29 - 147	37.1388	37.00233	0.1365	N/A	
13C12-1,2,3,4,7,8-HxCDD	200.00	142	32 - 141	36.2253	36.09812	0.1272	N/A	*
13C12-1,2,3,6,7,8-HxCDD	200.00	147	28 - 130	36.3367	36.21508	0.1216	N/A	*
13C12-1,2,3,4,6,7,8-HpCDF	200.00	95.9	28 - 143	38.9662	38.84072	0.1255	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	200.00	96.7	26 - 138	41.239	41.09488	0.1441	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	200.00	98.0	23 - 140	40.4813	40.3447	0.1366	N/A	
13C12-OCDD	400.00	69.1	17 - 157	45.2892	45.10738	0.1818	N/A	
37Cl4-2,3,7,8-TCDD	80.000	107	35 - 197	26.65	26.53683	0.1132	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	BLA0261-SRM1	Calibration:	GB00010
File ID:	23022306	Analyzed:	02/23/23 14:14

Surrogate Compound	Spike Level ng/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	199.20	85.6	24 - 169	25.972	25.87167	0.1003	N/A	
13C12-2,3,7,8-TCDD	199.20	112	25 - 164	26.6218	26.51423	0.1076	N/A	
13C12-1,2,3,7,8-PeCDF	199.20	111	24 - 185	30.1425	30.03173	0.1108	N/A	
13C12-2,3,4,7,8-PeCDF	199.20	117	21 - 178	31.4905	31.36872	0.1218	N/A	
13C12-1,2,3,7,8-PeCDD	199.20	103	25 - 181	31.7468	31.62498	0.1218	N/A	
13C12-1,2,3,4,7,8-HxCDF	199.20	95.9	26 - 152	35.1003	34.9784	0.1219	N/A	
13C12-1,2,3,6,7,8-HxCDF	199.20	102	26 - 123	35.234	35.11773	0.1163	N/A	
13C12-2,3,4,6,7,8-HxCDF	199.20	95.9	28 - 136	36.103	35.97562	0.1274	N/A	
13C12-1,2,3,7,8,9-HxCDF	199.20	106	29 - 147	37.1278	37.00233	0.1255	N/A	
13C12-1,2,3,4,7,8-HxCDD	199.20	106	32 - 141	36.2255	36.09812	0.1274	N/A	
13C12-1,2,3,6,7,8-HxCDD	199.20	116	28 - 130	36.3368	36.21508	0.1217	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	199.20	73.1	28 - 143	38.9662	38.84072	0.1255	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	199.20	72.7	26 - 138	41.2388	41.09488	0.1439	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	199.20	70.0	23 - 140	40.4812	40.3447	0.1365	N/A	
13C12-OCDD	398.41	74.7	17 - 157	45.2892	45.10738	0.1818	N/A	
37Cl4-2,3,7,8-TCDD	79.681	93.8	35 - 197	26.636	26.53683	0.0992	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	SLB0345-CCV1	Calibration:	GB00010
File ID:	23022312	Analyzed:	02/23/23 19:11

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	82.6	71 - 129	25.958	25.87167	0.0863	N/A	
13C12-2,3,7,8-TCDD	100.00	102	82 - 118	26.6077	26.51423	0.0935	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	74.0	76 - 124	30.131	30.03173	0.0993	N/A	*
13C12-2,3,4,7,8-PeCDF	100.00	76.9	77 - 123	31.4792	31.36872	0.1105	N/A	*
13C12-1,2,3,7,8-PeCDD	100.00	65.3	62 - 138	31.7353	31.62498	0.1103	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	94.5	76 - 124	35.0888	34.9784	0.1104	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	98.1	70 - 130	35.2225	35.11773	0.1048	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	97.8	73 - 127	36.0915	35.97562	0.1159	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	90.0	74 - 126	37.1165	37.00233	0.1142	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	104	85 - 115	36.2028	36.09812	0.1047	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	109	85 - 115	36.3142	36.21508	0.0991	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	82.5	78 - 122	38.9548	38.84072	0.1141	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	81.2	77 - 123	41.2277	41.09488	0.1328	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	83.7	72 - 128	40.4698	40.3447	0.1251	N/A	
13C12-OCDD	200.00	57.0	48 - 152	45.2705	45.10738	0.1631	N/A	
37Cl4-2,3,7,8-TCDD	10.000	88.2	0 - 200	26.6218	26.53683	0.0850	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	23A0207-02	Calibration:	GB00010
File ID:	23022318	Analyzed:	02/24/23 00:14

Surrogate Compound	Spike Level ng/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	199.95	84.1	24 - 169	25.9578	25.87167	0.0861	N/A	
13C12-2,3,7,8-TCDD	199.95	111	25 - 164	26.6077	26.51423	0.0935	N/A	
13C12-1,2,3,7,8-PeCDF	199.95	106	24 - 185	30.1313	30.03173	0.0996	N/A	
13C12-2,3,4,7,8-PeCDF	199.95	104	21 - 178	31.4683	31.36872	0.0996	N/A	
13C12-1,2,3,7,8-PeCDD	199.95	84.1	25 - 181	31.7245	31.62498	0.0995	N/A	
13C12-1,2,3,4,7,8-HxCDF	199.95	99.5	26 - 152	35.0892	34.9784	0.1108	N/A	
13C12-1,2,3,6,7,8-HxCDF	199.95	107	26 - 123	35.2228	35.11773	0.1051	N/A	
13C12-2,3,4,6,7,8-HxCDF	199.95	101	28 - 136	36.0918	35.97562	0.1162	N/A	
13C12-1,2,3,7,8,9-HxCDF	199.95	96.8	29 - 147	37.1168	37.00233	0.1145	N/A	
13C12-1,2,3,4,7,8-HxCDD	199.95	110	32 - 141	36.2032	36.09812	0.1051	N/A	
13C12-1,2,3,6,7,8-HxCDD	199.95	113	28 - 130	36.3257	36.21508	0.1106	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	199.95	70.8	28 - 143	38.9552	38.84072	0.1145	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	199.95	68.3	26 - 138	41.2278	41.09488	0.1329	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	199.95	72.8	23 - 140	40.4702	40.3447	0.1255	N/A	
13C12-OCDD	399.90	71.8	17 - 157	45.2712	45.10738	0.1638	N/A	
37Cl4-2,3,7,8-TCDD	79.980	89.7	35 - 197	26.6218	26.53683	0.0850	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	23A0207-10	Calibration:	GB00010
File ID:	23022319	Analyzed:	02/24/23 01:04

Surrogate Compound	Spike Level ng/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	200.04	88.6	24 - 169	25.9718	25.87167	0.1001	N/A	
13C12-2,3,7,8-TCDD	200.04	116	25 - 164	26.6075	26.51423	0.0933	N/A	
13C12-1,2,3,7,8-PeCDF	200.04	97.9	24 - 185	30.1422	30.03173	0.1105	N/A	
13C12-2,3,4,7,8-PeCDF	200.04	98.5	21 - 178	31.4903	31.36872	0.1216	N/A	
13C12-1,2,3,7,8-PeCDD	200.04	81.1	25 - 181	31.7355	31.62498	0.1105	N/A	
13C12-1,2,3,4,7,8-HxCDF	200.04	129	26 - 152	35.1	34.9784	0.1216	N/A	
13C12-1,2,3,6,7,8-HxCDF	200.04	128	26 - 123	35.2448	35.11773	0.1271	N/A	*
13C12-2,3,4,6,7,8-HxCDF	200.04	110	28 - 136	36.1027	35.97562	0.1271	N/A	
13C12-1,2,3,7,8,9-HxCDF	200.04	106	29 - 147	37.1275	37.00233	0.1252	N/A	
13C12-1,2,3,4,7,8-HxCDD	200.04	115	32 - 141	36.2252	36.09812	0.1271	N/A	
13C12-1,2,3,6,7,8-HxCDD	200.04	121	28 - 130	36.3367	36.21508	0.1216	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	200.04	93.4	28 - 143	38.977	38.84072	0.1363	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	200.04	97.3	26 - 138	41.2497	41.09488	0.1548	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	200.04	98.4	23 - 140	40.4922	40.3447	0.1475	N/A	
13C12-OCDD	400.08	89.2	17 - 157	45.3072	45.10738	0.1998	N/A	
37Cl4-2,3,7,8-TCDD	80.016	91.5	35 - 197	26.6358	26.53683	0.0990	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	23A0207-17	Calibration:	GB00010
File ID:	23022320	Analyzed:	02/24/23 01:53

Surrogate Compound	Spike Level ng/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	199.85	89.0	24 - 169	26.0002	25.87167	0.1285	N/A	
13C12-2,3,7,8-TCDD	199.85	118	25 - 164	26.65	26.51423	0.1358	N/A	
13C12-1,2,3,7,8-PeCDF	199.85	107	24 - 185	30.1757	30.03173	0.1440	N/A	
13C12-2,3,4,7,8-PeCDF	199.85	107	21 - 178	31.5127	31.36872	0.1440	N/A	
13C12-1,2,3,7,8-PeCDD	199.85	88.4	25 - 181	31.769	31.62498	0.1440	N/A	
13C12-1,2,3,4,7,8-HxCDF	199.85	108	26 - 152	35.1447	34.9784	0.1663	N/A	
13C12-1,2,3,6,7,8-HxCDF	199.85	108	26 - 123	35.2783	35.11773	0.1606	N/A	
13C12-2,3,4,6,7,8-HxCDF	199.85	105	28 - 136	36.1808	35.97562	0.2052	N/A	
13C12-1,2,3,7,8,9-HxCDF	199.85	63.0	29 - 147	37.161	37.00233	0.1587	N/A	
13C12-1,2,3,4,7,8-HxCDD	199.85	110	32 - 141	36.2922	36.09812	0.1941	N/A	
13C12-1,2,3,6,7,8-HxCDD	199.85	106	28 - 130	36.4147	36.21508	0.1996	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	199.85	101	28 - 143	38.9882	38.84072	0.1475	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	199.85	104	26 - 138	41.2497	41.09488	0.1548	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	199.85	108	23 - 140	40.5033	40.3447	0.1586	N/A	
13C12-OCDD	399.71	104	17 - 157	45.3162	45.10738	0.2088	N/A	
37Cl4-2,3,7,8-TCDD	79.942	97.1	35 - 197	26.6642	26.53683	0.1274	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	SLB0345-CCV2	Calibration:	GB00010
File ID:	23022321A	Analyzed:	02/24/23 02:43

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	81.2	71 - 129	25.9578	25.87167	0.0861	N/A	
13C12-2,3,7,8-TCDD	100.00	110	82 - 118	26.5935	26.51423	0.0793	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	73.6	76 - 124	30.12	30.03173	0.0883	N/A	*
13C12-2,3,4,7,8-PeCDF	100.00	73.8	77 - 123	31.468	31.36872	0.0993	N/A	*
13C12-1,2,3,7,8-PeCDD	100.00	57.3	62 - 138	31.7243	31.62498	0.0993	N/A	*
13C12-1,2,3,4,7,8-HxCDF	100.00	97.6	76 - 124	35.089	34.9784	0.1106	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	99.0	70 - 130	35.2227	35.11773	0.1050	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	97.8	73 - 127	36.0805	35.97562	0.1049	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	97.7	74 - 126	37.1165	37.00233	0.1142	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	104	85 - 115	36.203	36.09812	0.1049	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	106	85 - 115	36.3145	36.21508	0.0994	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	89.3	78 - 122	38.9548	38.84072	0.1141	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	91.7	77 - 123	41.2163	41.09488	0.1214	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	93.5	72 - 128	40.4698	40.3447	0.1251	N/A	
13C12-OCDD	200.00	72.8	48 - 152	45.2707	45.10738	0.1633	N/A	
37Cl4-2,3,7,8-TCDD	10.000	94.3	0 - 200	26.6217	26.53683	0.0849	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0345	Instrument:	AUTOSPEC01
Sample ID:	BLA0261-BS1	Calibration:	GB00010
File ID:	23022401	Analyzed:	02/24/23 10:33

Surrogate Compound	Spike Level ng/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	110.62	84.4	24 - 169	25.972	25.87167	0.1003	N/A	
13C12-2,3,7,8-TCDD	110.62	99.2	25 - 164	26.6077	26.51423	0.0935	N/A	
13C12-1,2,3,7,8-PeCDF	110.62	93.3	24 - 185	30.1312	30.03173	0.0995	N/A	
13C12-2,3,4,7,8-PeCDF	110.62	93.3	21 - 178	31.4793	31.36872	0.1106	N/A	
13C12-1,2,3,7,8-PeCDD	110.62	80.1	25 - 181	31.7245	31.62498	0.0995	N/A	
13C12-1,2,3,4,7,8-HxCDF	110.62	108	26 - 152	35.0892	34.9784	0.1108	N/A	
13C12-1,2,3,6,7,8-HxCDF	110.62	120	26 - 123	35.2228	35.11773	0.1051	N/A	
13C12-2,3,4,6,7,8-HxCDF	110.62	112	28 - 136	36.0918	35.97562	0.1162	N/A	
13C12-1,2,3,7,8,9-HxCDF	110.62	109	29 - 147	37.1168	37.00233	0.1145	N/A	
13C12-1,2,3,4,7,8-HxCDD	110.62	126	32 - 141	36.2032	36.09812	0.1051	N/A	
13C12-1,2,3,6,7,8-HxCDD	110.62	142	28 - 130	36.3145	36.21508	0.0994	N/A	*
13C12-1,2,3,4,6,7,8-HpCDF	110.62	93.0	28 - 143	38.9552	38.84072	0.1145	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	110.62	94.8	26 - 138	41.228	41.09488	0.1331	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	110.62	97.6	23 - 140	40.4703	40.3447	0.1256	N/A	
13C12-OCDD	221.24	83.5	17 - 157	45.2713	45.10738	0.1639	N/A	
37Cl4-2,3,7,8-TCDD	44.248	80.0	35 - 197	26.6218	26.53683	0.0850	N/A	

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 1613B

Laboratory: Analytical Resources, LLC SDG: 23A0207

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-IT1089 23A0207-02	01/11/23 08:42	01/11/23 16:45	01/24/23 13:10	13	365	02/24/23 00:14	30	365	
LDW23-IT1097 23A0207-10	01/11/23 11:32	01/11/23 16:45	01/24/23 13:10	13	365	02/24/23 01:04	30	365	
LDW23-IT1209 23A0207-17	01/11/23 15:21	01/11/23 16:45	01/24/23 13:10	12	365	02/24/23 01:53	31	365	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: AUTOSPEC01

Analyte	MDL	RL	Units
2,3,7,8-TCDF	0.058	1.00	ng/kg
2,3,7,8-TCDD	0.150	1.00	ng/kg
1,2,3,7,8-PeCDF	0.240	1.00	ng/kg
2,3,4,7,8-PeCDF	0.220	1.00	ng/kg
1,2,3,7,8-PeCDD	0.170	1.00	ng/kg
1,2,3,4,7,8-HxCDF	0.280	1.00	ng/kg
1,2,3,6,7,8-HxCDF	0.200	1.00	ng/kg
2,3,4,6,7,8-HxCDF	0.170	1.00	ng/kg
1,2,3,7,8,9-HxCDF	0.190	1.00	ng/kg
1,2,3,4,7,8-HxCDD	0.170	1.00	ng/kg
1,2,3,6,7,8-HxCDD	0.180	1.00	ng/kg
1,2,3,7,8,9-HxCDD	0.220	1.00	ng/kg
1,2,3,4,6,7,8-HpCDF	0.210	1.00	ng/kg
1,2,3,4,7,8,9-HpCDF	0.240	1.00	ng/kg
1,2,3,4,6,7,8-HpCDD	0.560	2.50	ng/kg
OCDF	1.10	2.50	ng/kg
OCDD	4.60	10.0	ng/kg
Total TCDF		1.00	ng/kg
Total TCDD		1.00	ng/kg
Total PeCDF		1.00	ng/kg
Total PeCDD		1.00	ng/kg
Total HxCDF		1.00	ng/kg
Total HxCDD		1.00	ng/kg
Total HpCDF		1.00	ng/kg
Total HpCDD		1.00	ng/kg

CS3WT

**Calibration and Verification Solution (EPA-1613CS3)
combined with Window Defining and 2,3,7,8-TCDD
Resolution Testing Congeners**

PRODUCT CODE:	CS3WT
LOT NUMBER:	CS3WT0918
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/24/2018
LAST TESTED: (mm/dd/yyyy)	10/29/2018
EXPIRY DATE: (mm/dd/yyyy)	10/29/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

CS3WT is a solution/mixture of native and $^{13}C_{12}$-labelled chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

CS3WT was designed and prepared to be used as a HRMS calibration standard according to U.S. EPA Method 1613B.

It is to be used for calibration verification in place of EPA-1613CS3 (Lot: 13CS30918). It also contains the PCDD and PCDF window defining congeners for a DB-5 (or equivalent) capillary column as well as the TCDD isomers required to test and confirm the resolution of 2,3,7,8-TCDD.

The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%. The individual native 2,3,7,8-substituted PCDD and PCDF congeners all have chemical purities of >98%; the other congeners (window defining and resolution testing) should only be considered semi-quantitative.

This current lot of CS3WT is to be used with the 1613 calibration solutions having the following lot numbers:

PRODUCT CODE	LOT NUMBER
EPA-1613CS1	13CS10918
EPA-1613CS2	13CS20918
EPA-1613CS3	13CS30918
EPA-1613CS4	13CS40918
EPA-1613CS5	13CS50918
EPA-1613CSL	13CSL0918
EPA-1613CS0.5	13CS0.50918

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.
- Only the 2,3,7,8-substituted PCDDs and PCDFs should be used for quantitation. The other congeners (window defining and 2378-TCDD resolution testing) should be considered semi-quantitative (within ±20% of their design value). Impurities have been identified where possible.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: CS3WT; Components and Concentrations (ng/ml, in nonane/4.5% toluene)

QUANTITATIVE ANALYTES (ng/ml, ±5%)	
Native PCDDs & PCDFs:	
2,3,7,8-TCDD	10
2,3,7,8-TCDF	10
1,2,3,7,8-PeCDD	50
1,2,3,7,8-PeCDF	50
2,3,4,7,8-PeCDF	50
1,2,3,4,7,8-HxCDD	50
1,2,3,6,7,8-HxCDD	50
1,2,3,7,8,9-HxCDD	50
1,2,3,4,7,8-HxCDF	50
1,2,3,6,7,8-HxCDF	50
1,2,3,7,8,9-HxCDF	50
2,3,4,6,7,8-HxCDF	50
1,2,3,4,6,7,8-HpCDD *(WD)*	50
1,2,3,4,6,7,8-HpCDF *(WD)*	50
1,2,3,4,7,8,9-HpCDF *(WD)*	50
OCDD	100
OCDF	100
Labelled PCDDs & PCDFs:	
$^{13}C_{12}$-2,3,7,8-TCDD	100
$^{13}C_{12}$-2,3,7,8-TCDF	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100
$^{13}C_{12}$-OCDD	200
Cleanup Standard:	
$^{37}Cl_4$-2,3,7,8-TCDD	10
Internal Standards:	
$^{13}C_{12}$-1,2,3,4-TCDD	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100

SEMI-QUANTITATIVE ANALYTES (ng/ml, ±20%)	
Window Definers:*	
1,3,6,8-TCDD	10
1,2,8,9-TCDD	10
1,3,6,8-TCDF	10
1,2,8,9-TCDF	10
1,2,4,6,8/1,2,4,7,9-PeCDD	50
1,2,3,8,9-PeCDD	50
1,3,4,6,8-PeCDF	50
1,2,3,8,9-PeCDF	50
1,2,4,6,7,9-HxCDD	50
1,2,3,4,6,8-HxCDF	50
1,2,3,4,6,7,9-HpCDD	50
2378-TCDD Resolution Testing Isomers:	
1,2,3,4-TCDD	5
1,2,3,7/1,2,3,8-TCDD	5
1,2,3,9-TCDD	10

** 1,2,3,4,6,7-HxCDD (last eluting HxCDD) not included; coelutes with 1,2,3,7,8,9-HxCDD. Use 1,2,3,4,6,7,9-HpCDD to set window.*

** 1,2,3,4,8,9-HxCDF (last eluting HxCDF) not included; can interfere with 1,2,3,7,8,9-HxCDF. Use 1,2,3,4,6,7,8-HpCDF to set window.*

WD – Window Definer

Certified By: _____ **Date:** 10/30/2018 (mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

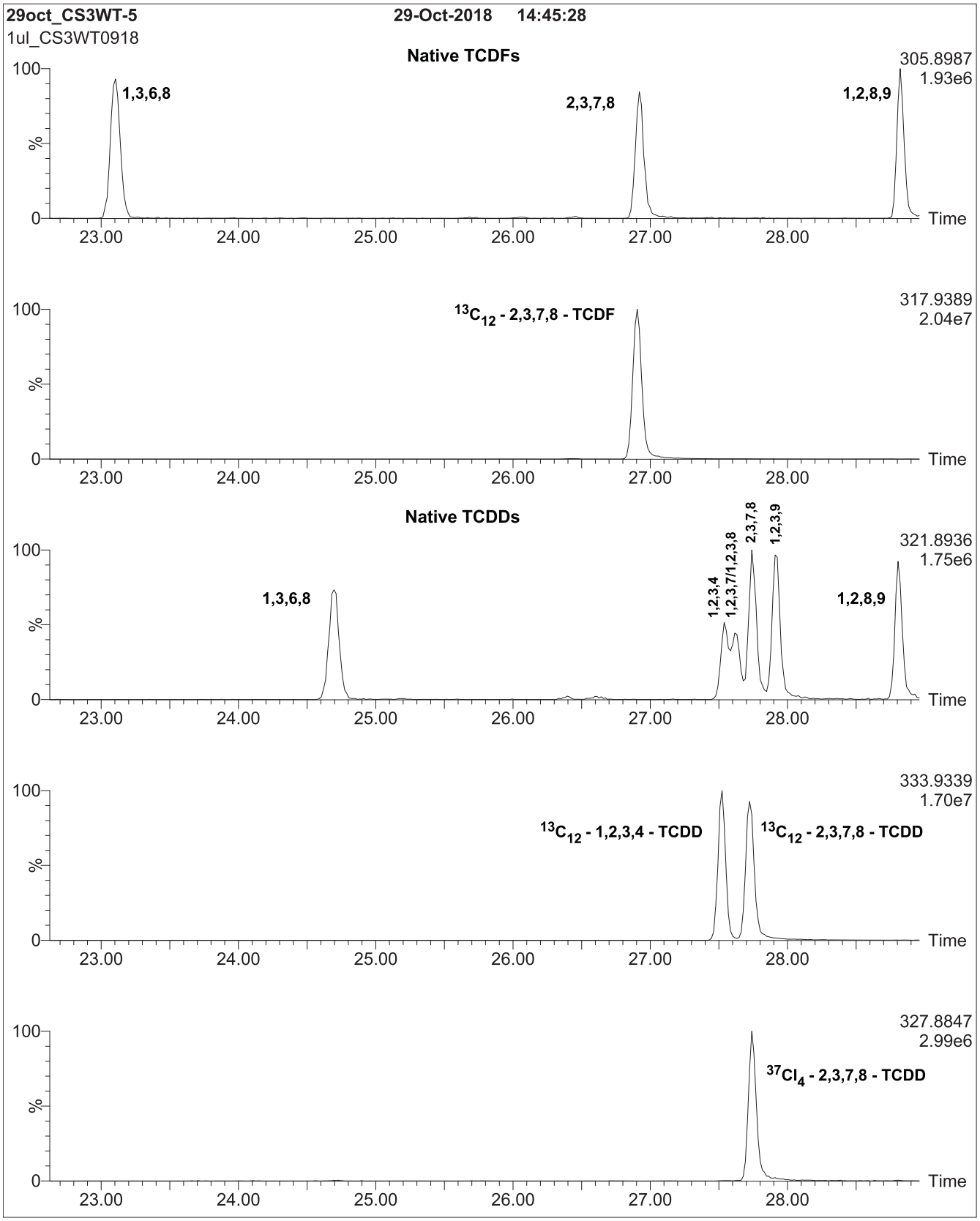


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

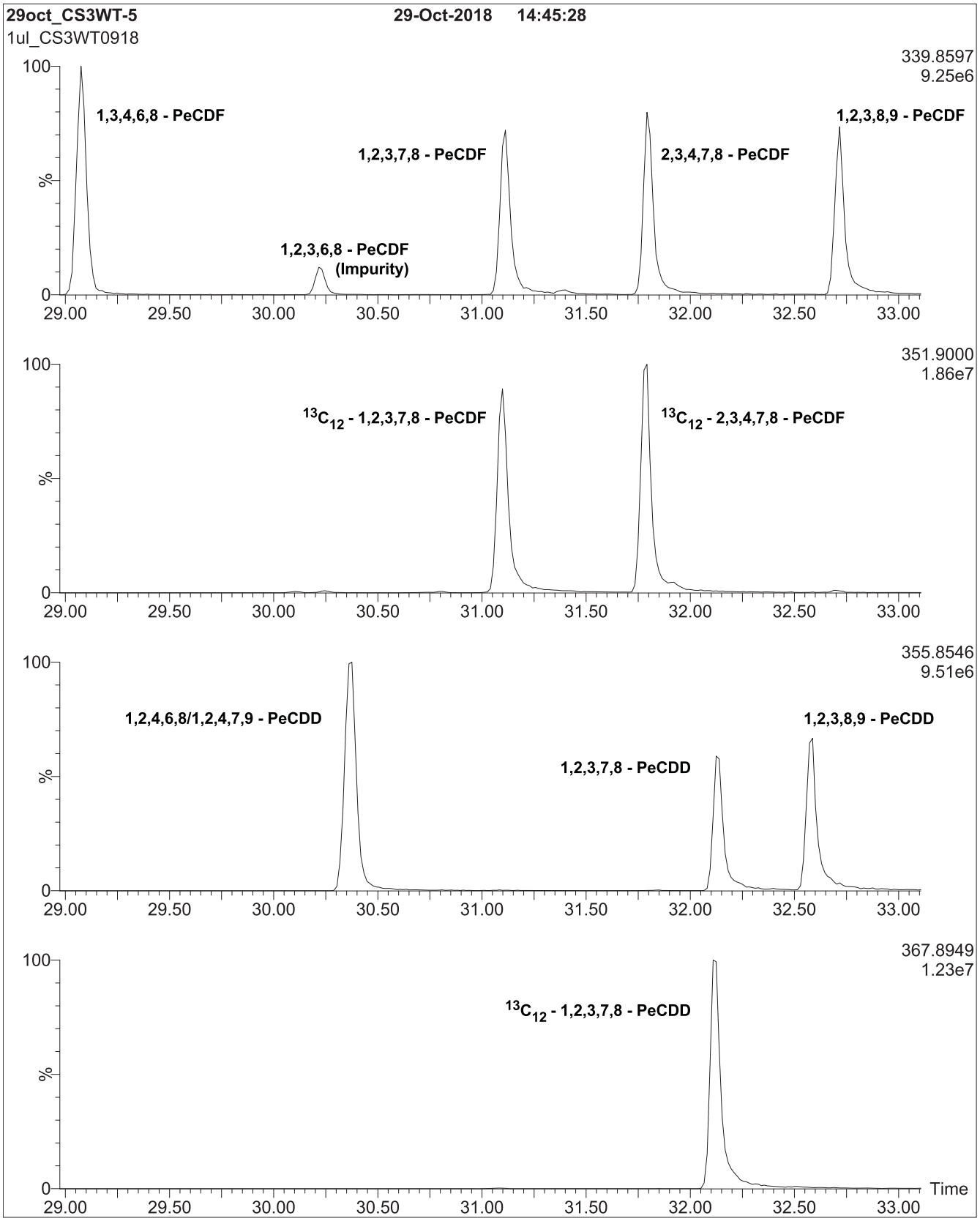


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

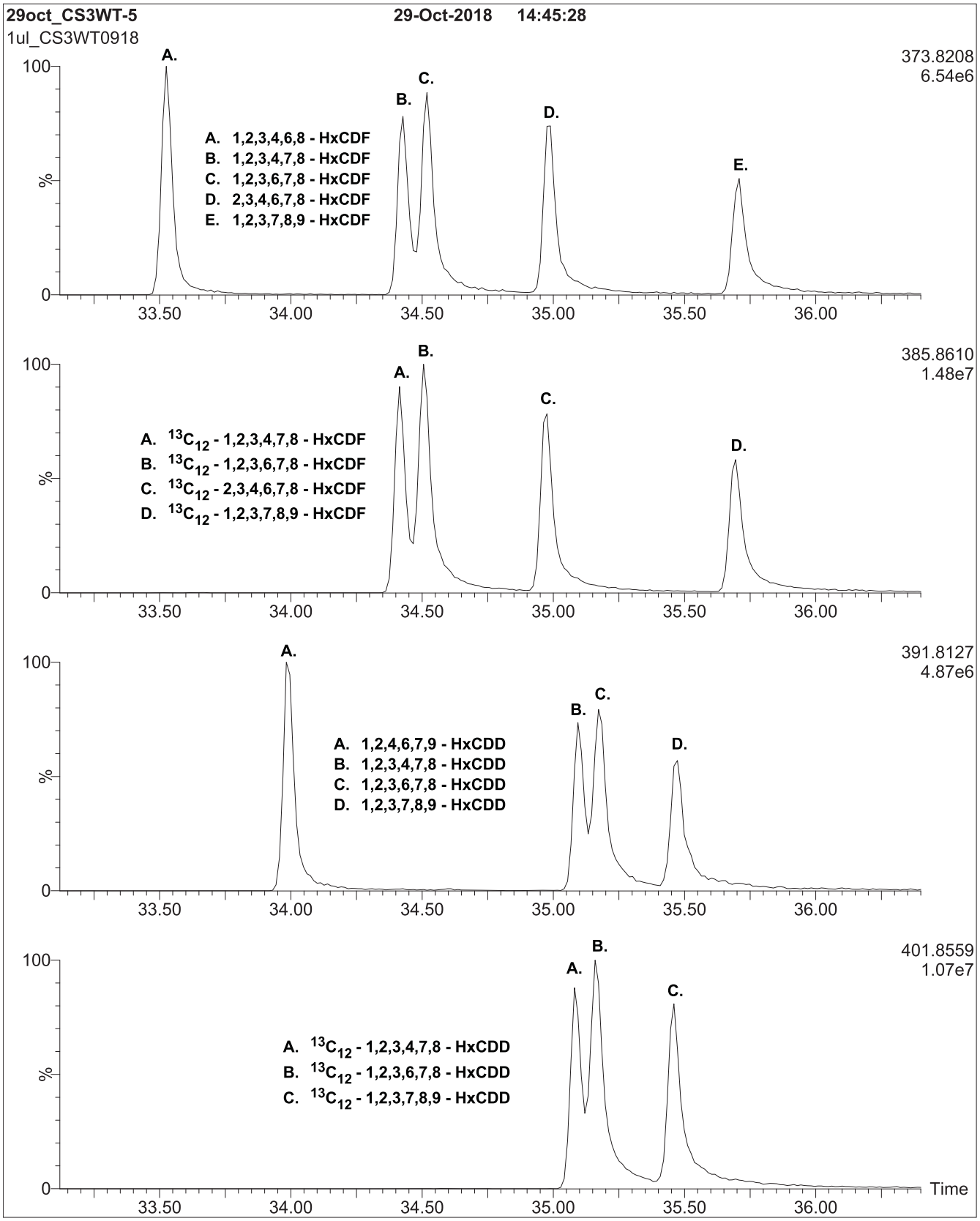


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

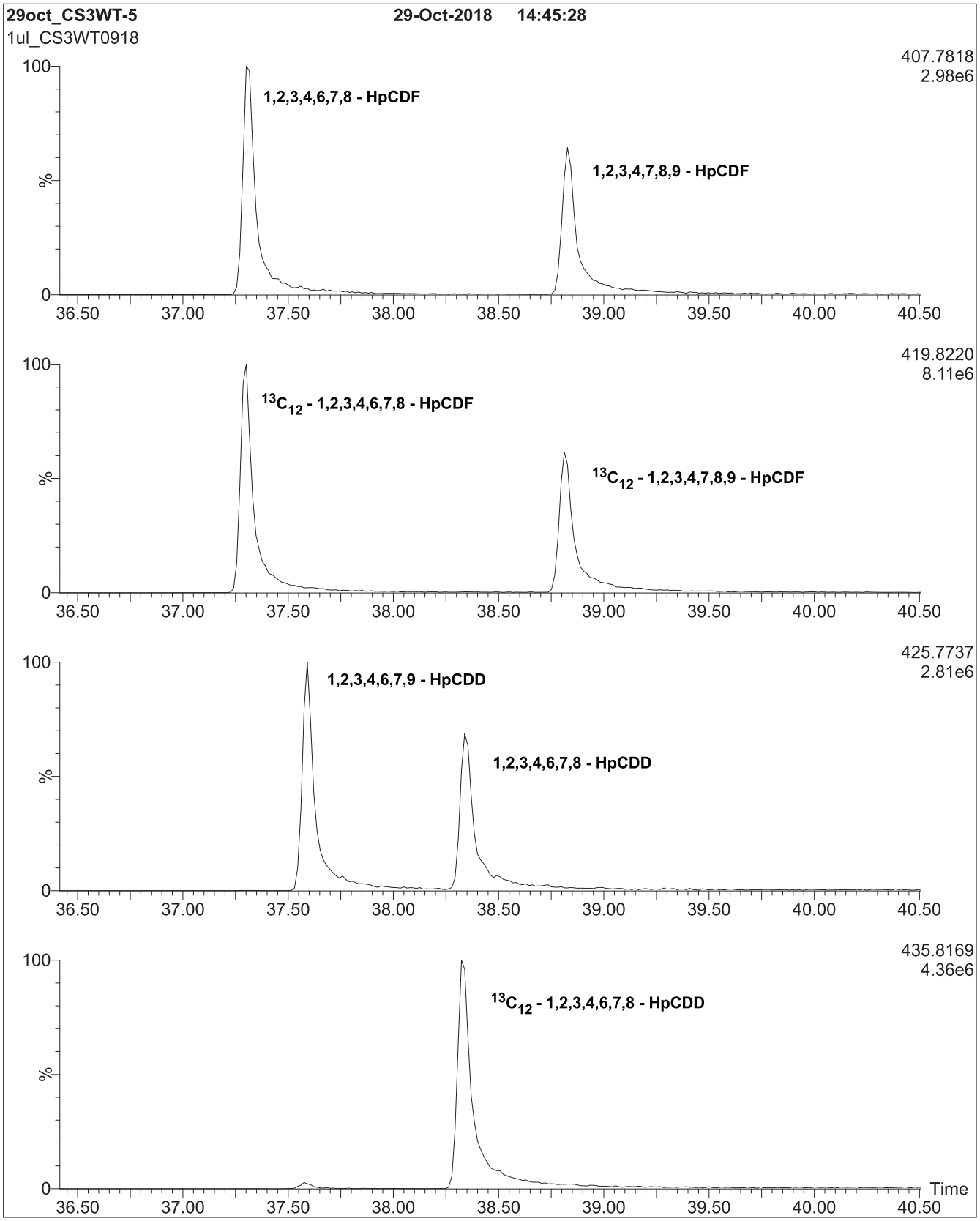
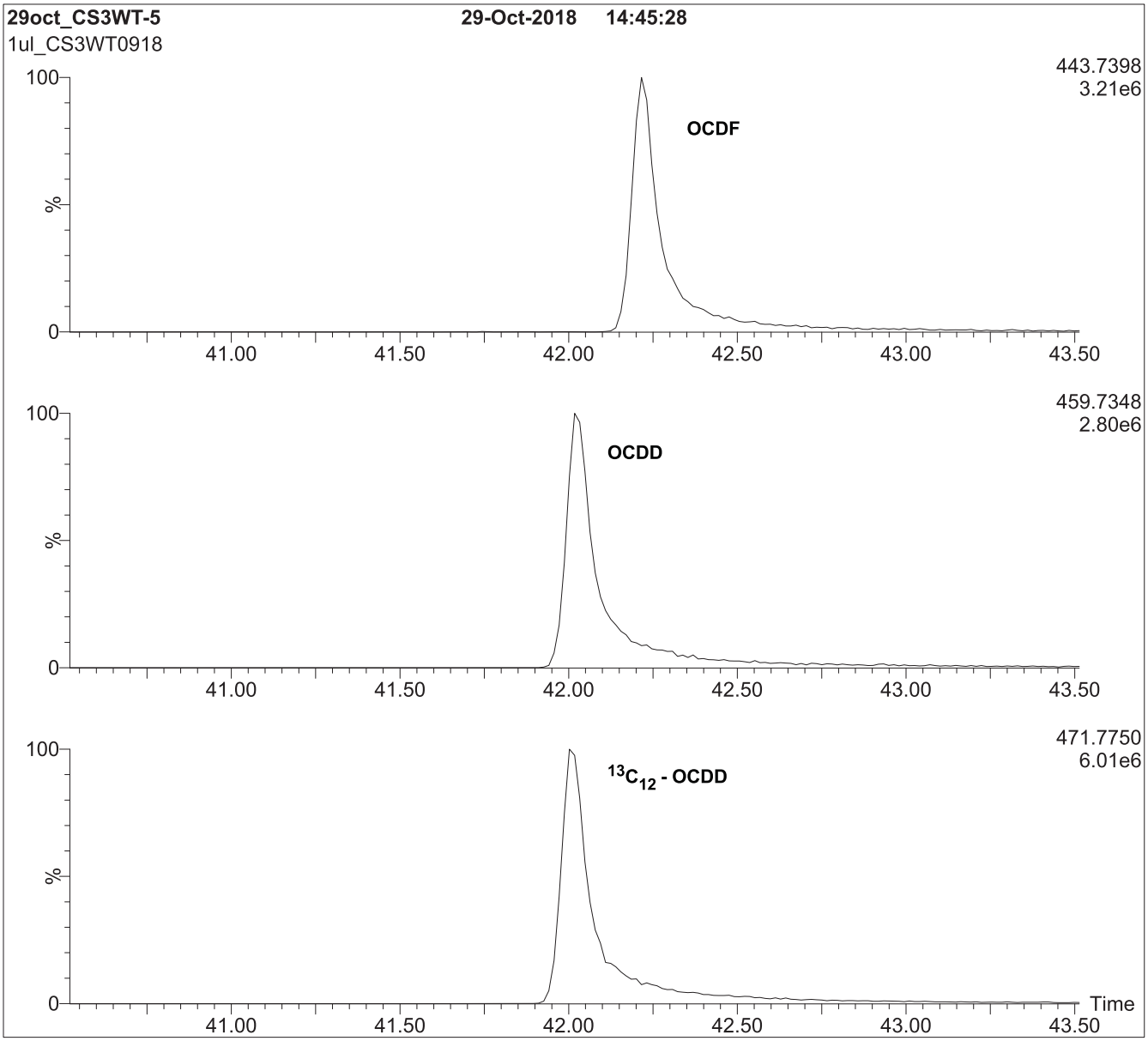


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow:	Constant at 1 ml/min	Oven:	150 °C (1 min)
Injector:	280 °C (Splitless Injection)		12 °C/min to 200 °C
Ionization:	EI+		3 °C/min to 235 °C
Detector:	280 °C		235 °C (8 min)
	SIR at 10,000 mass resolving power		8 °C/min to 310 °C
			310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

I005456
1613 CS1 CAL STD
Expires 10/24/2026
Prepared By Joshua Rains 6/23/2020

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By: _____ **Date:** 10/25/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

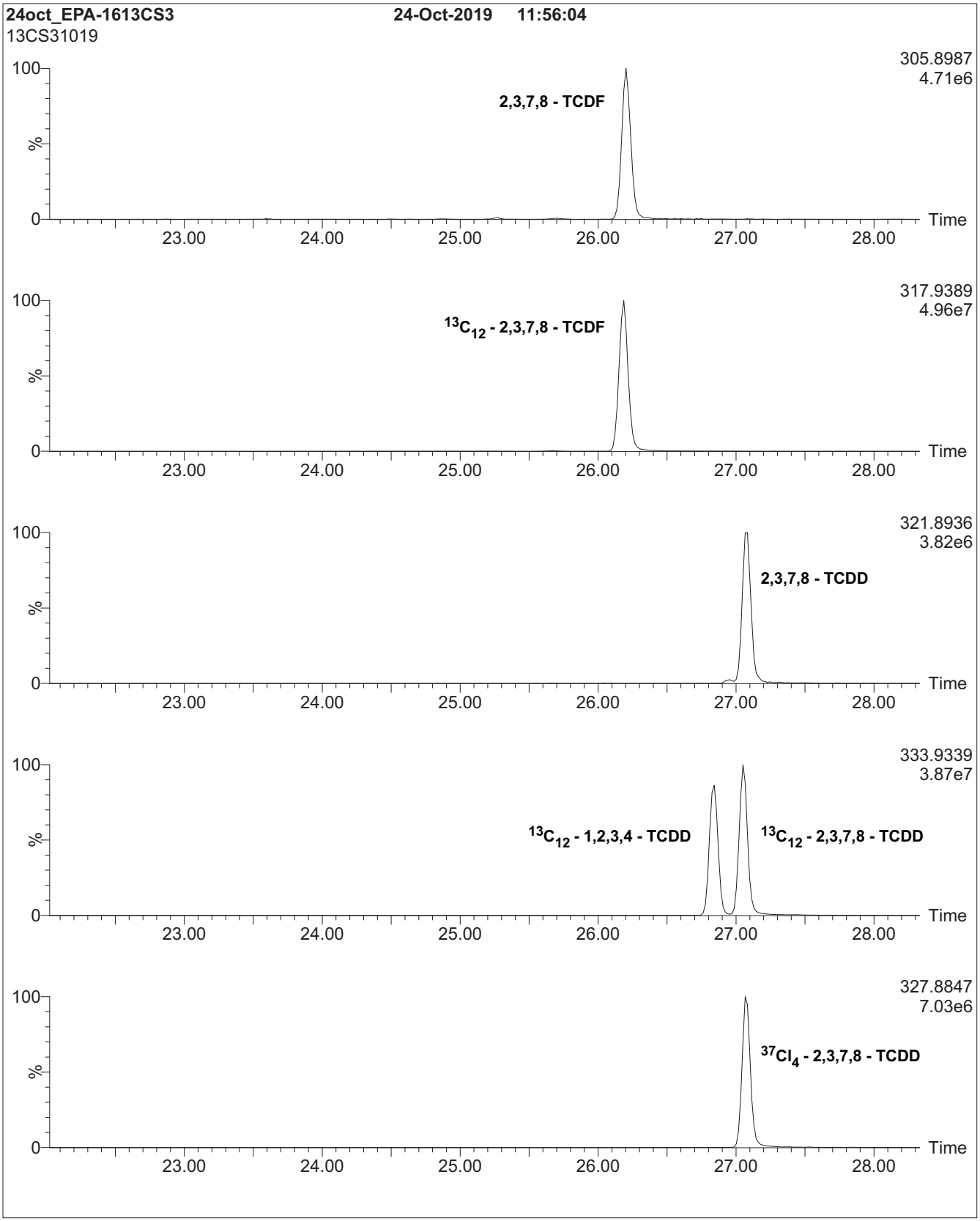


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

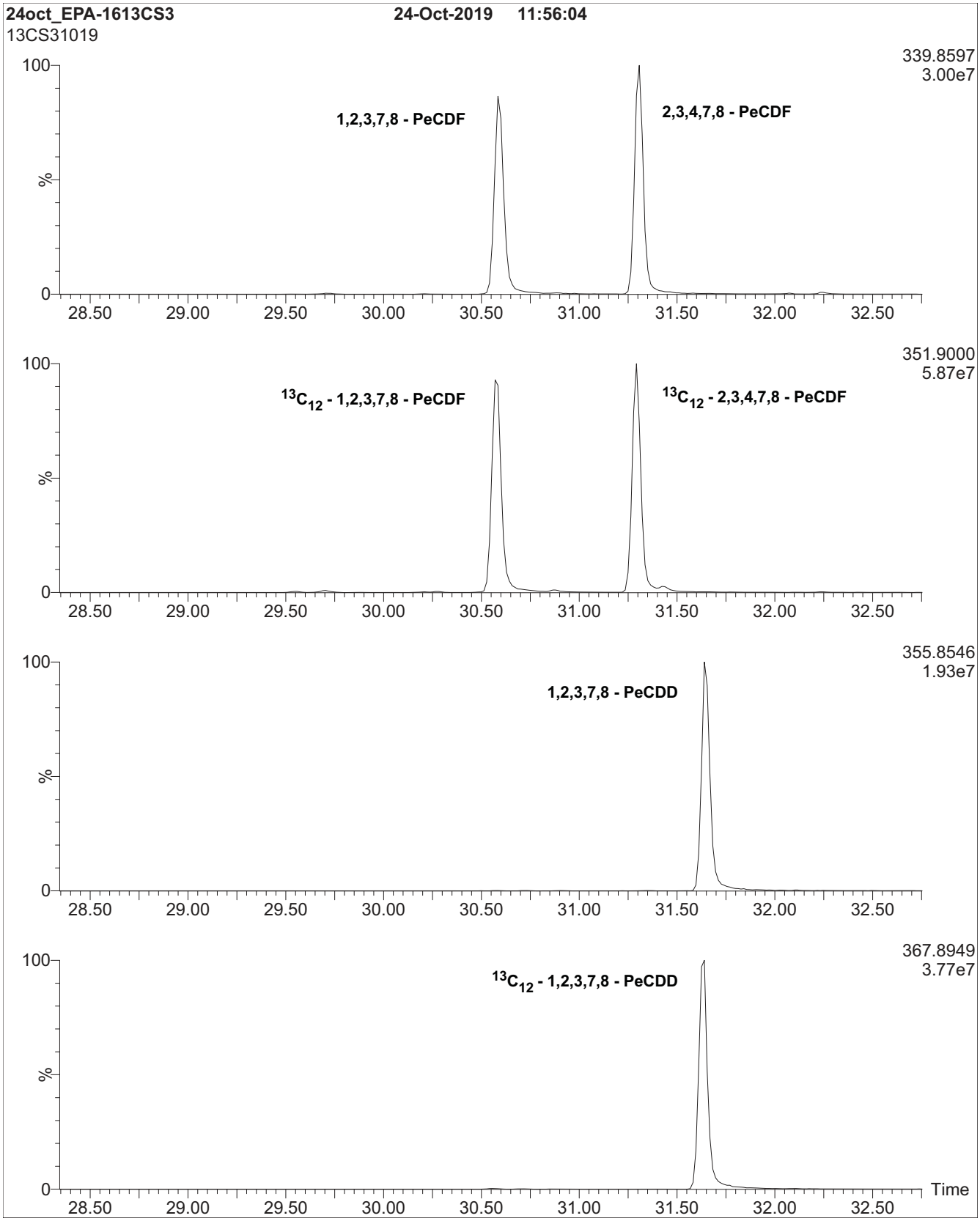


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

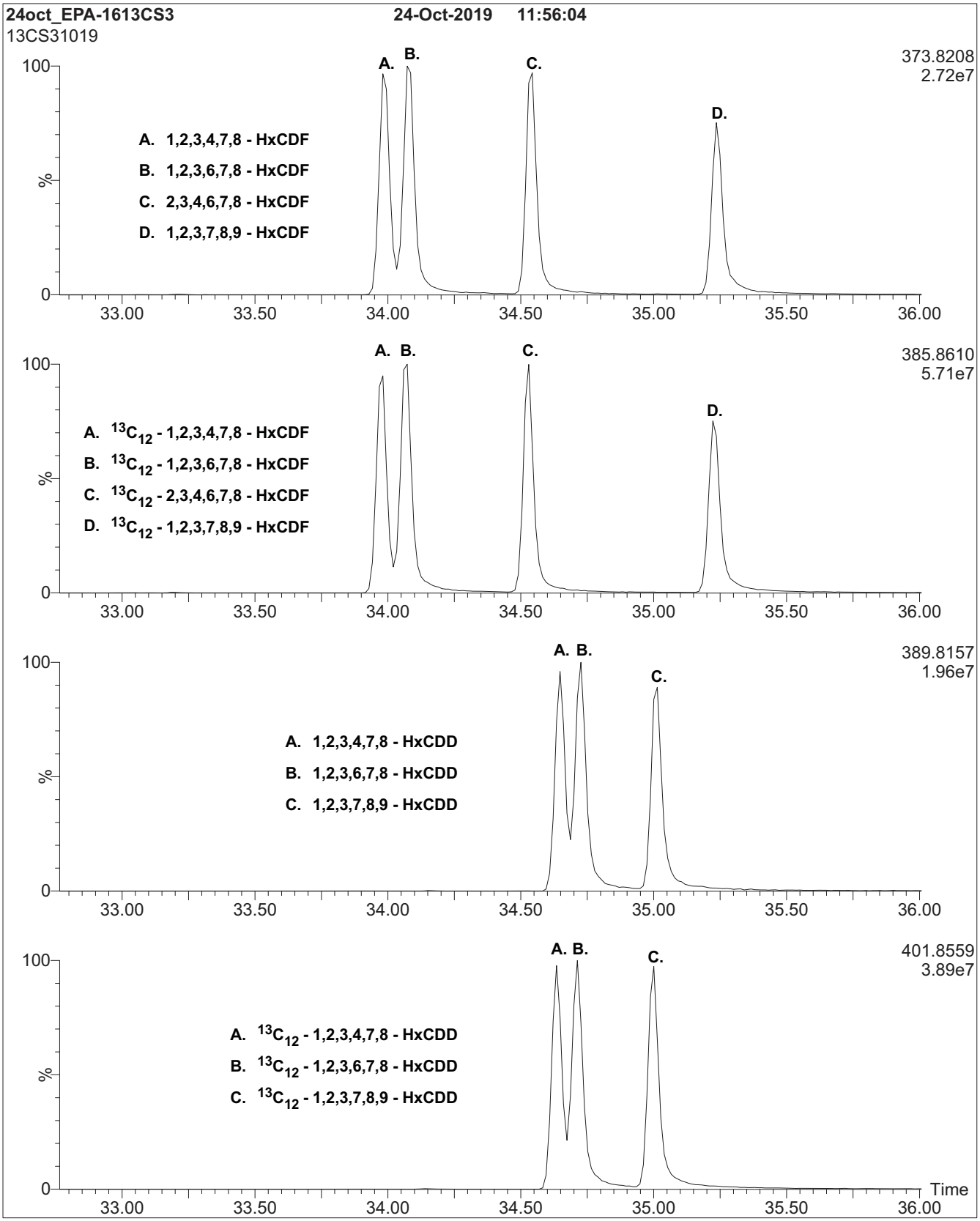


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

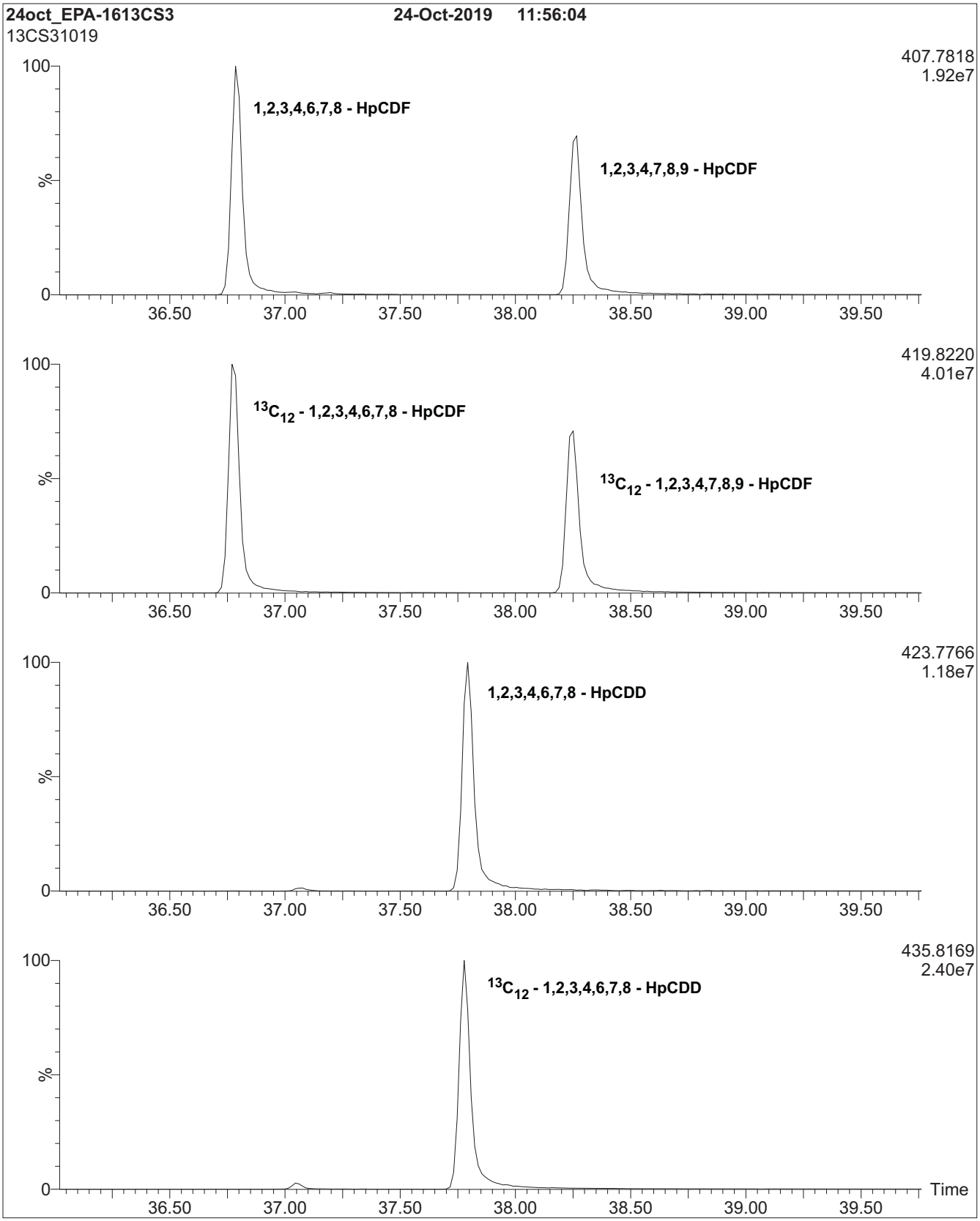
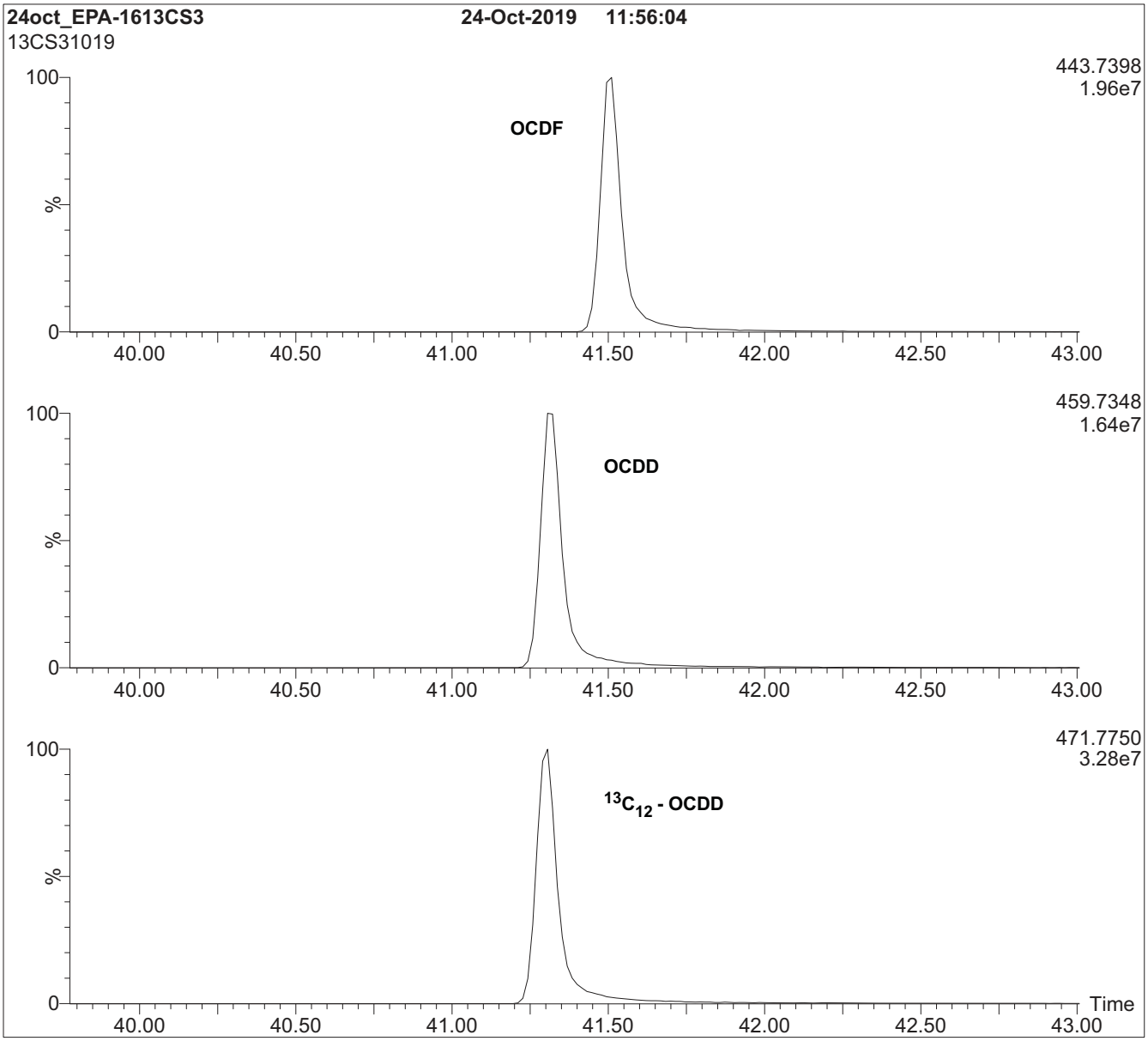


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

I005457
1613 CS2 CAL STD
Expires 10/24/2026
Prepared By Joshua Rains 6/23/2020

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By: _____ **Date:** 10/25/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

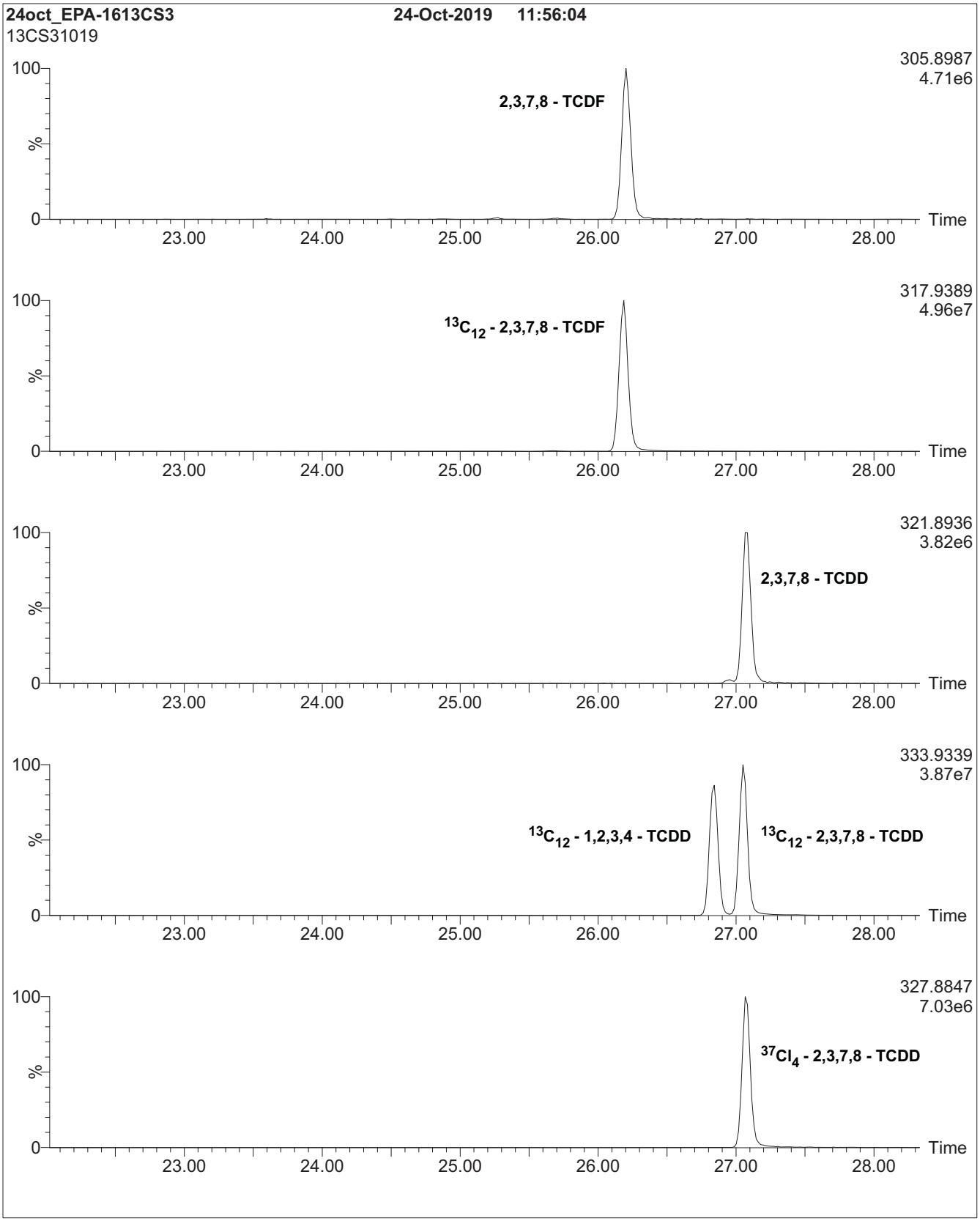


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

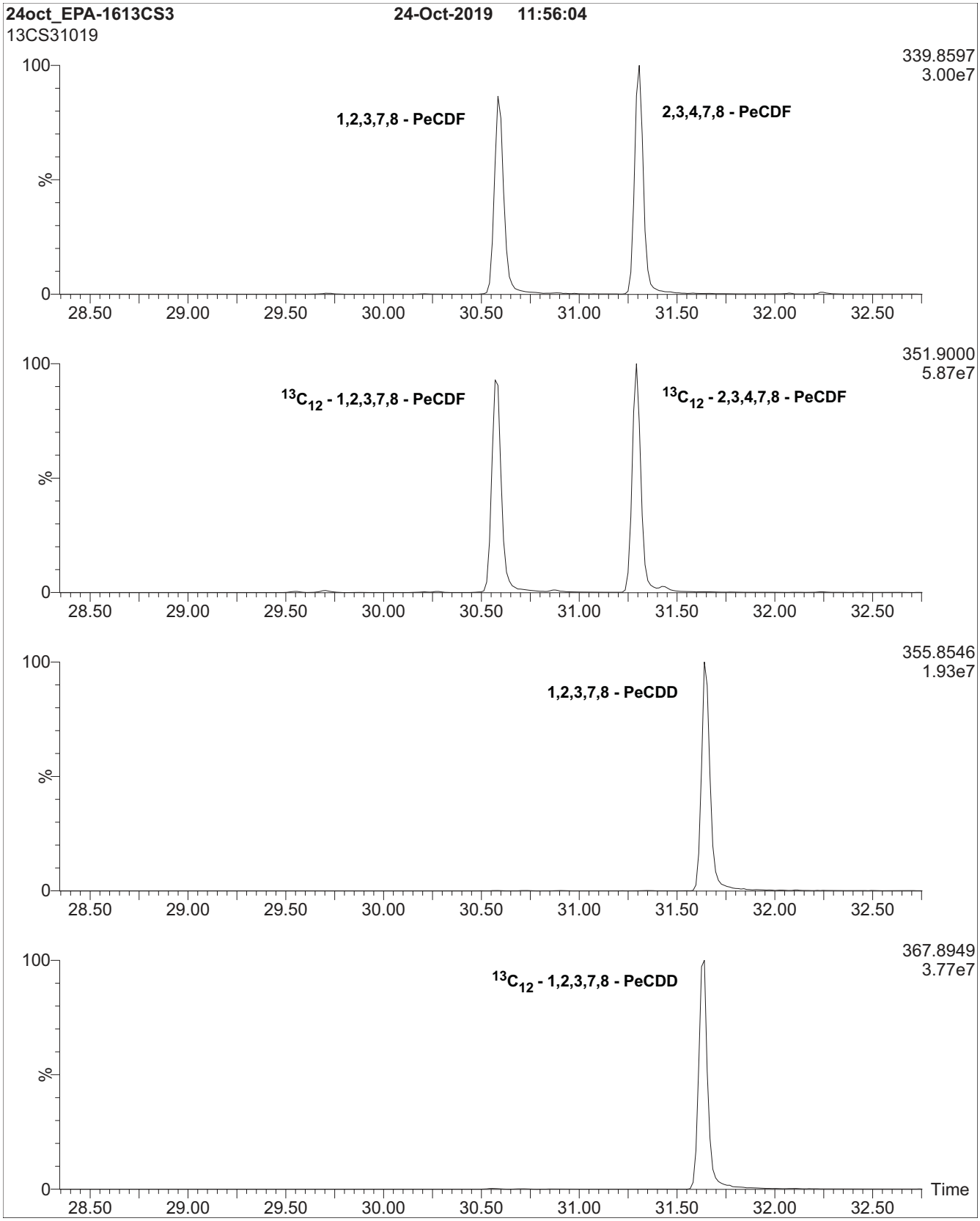


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

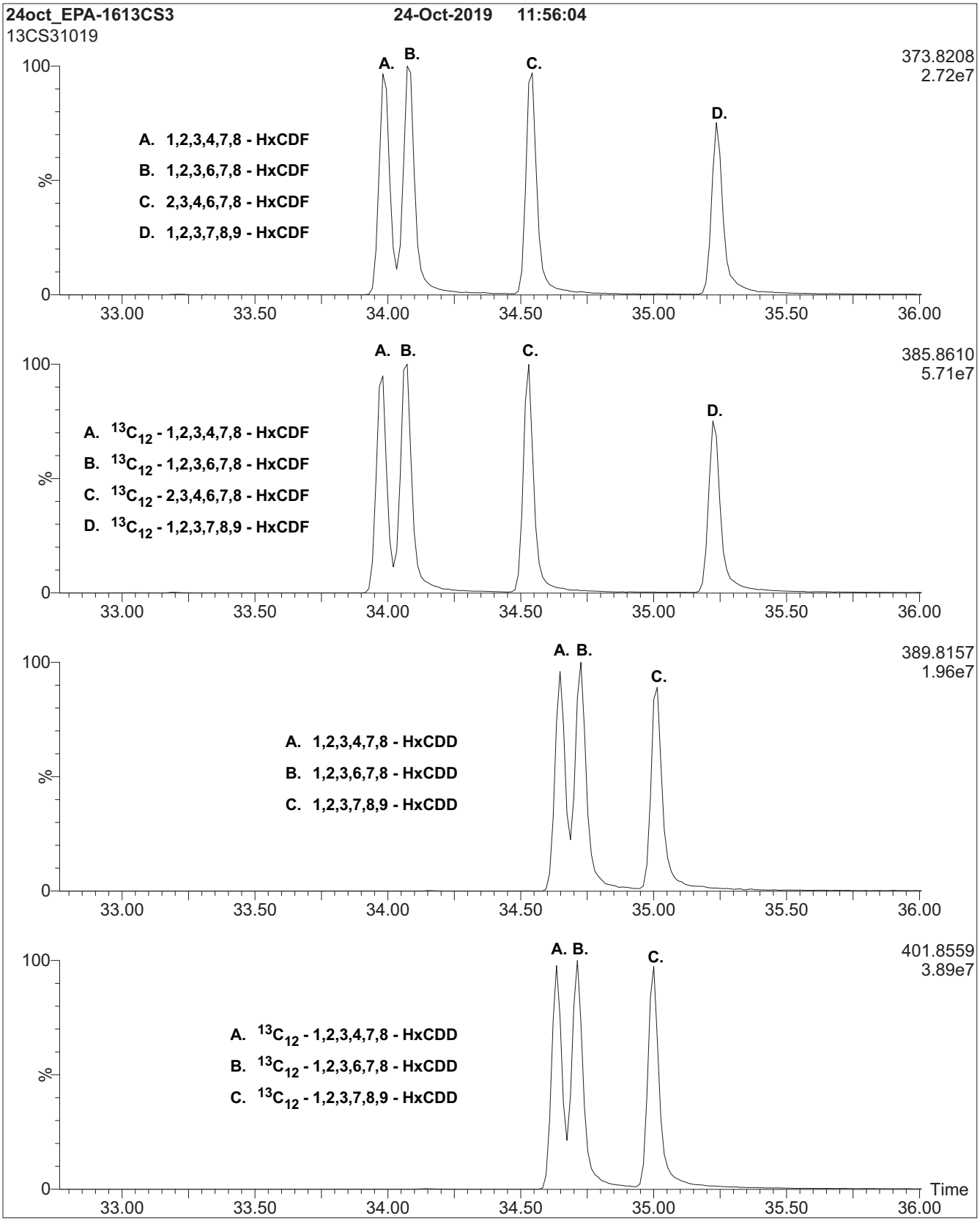


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

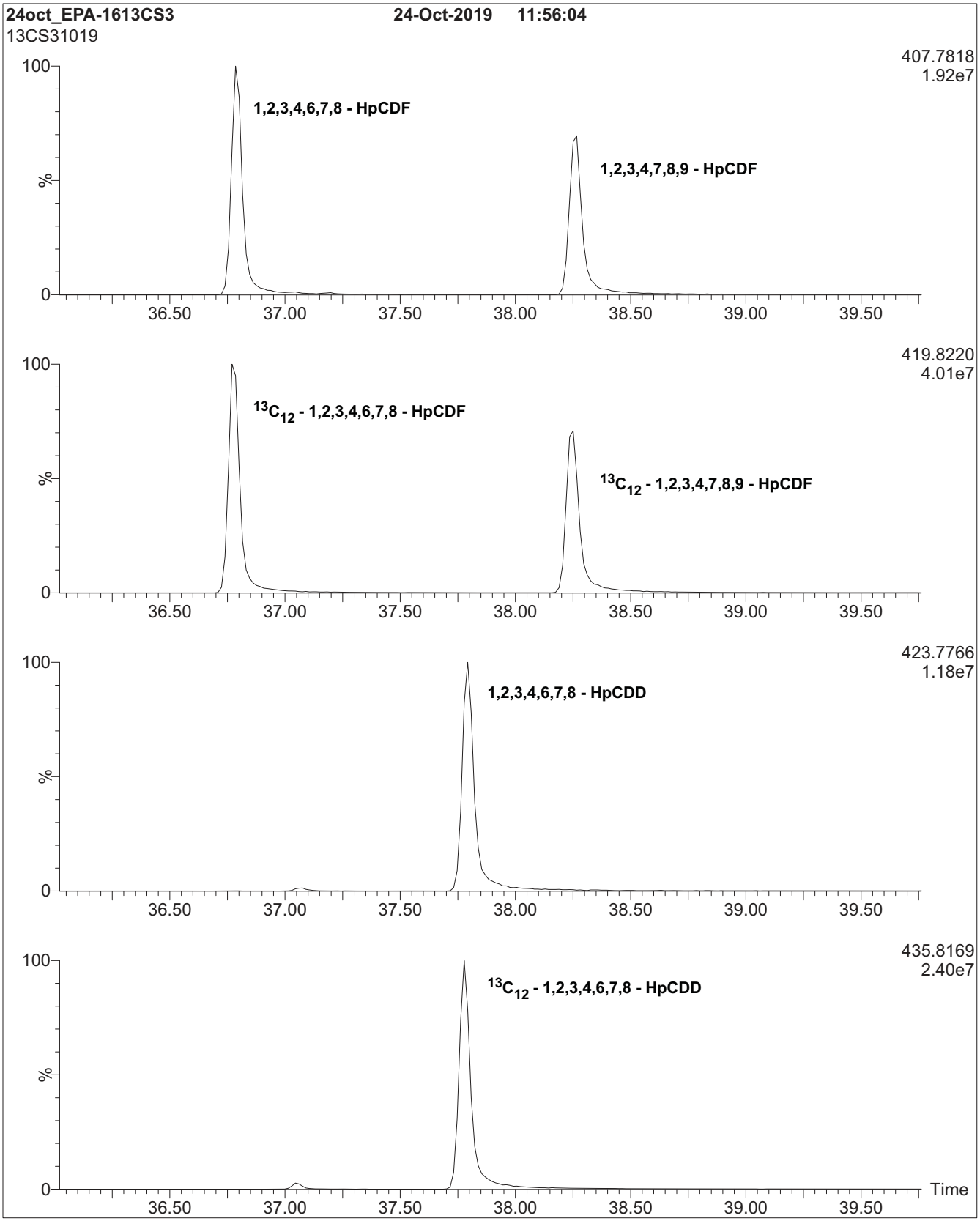
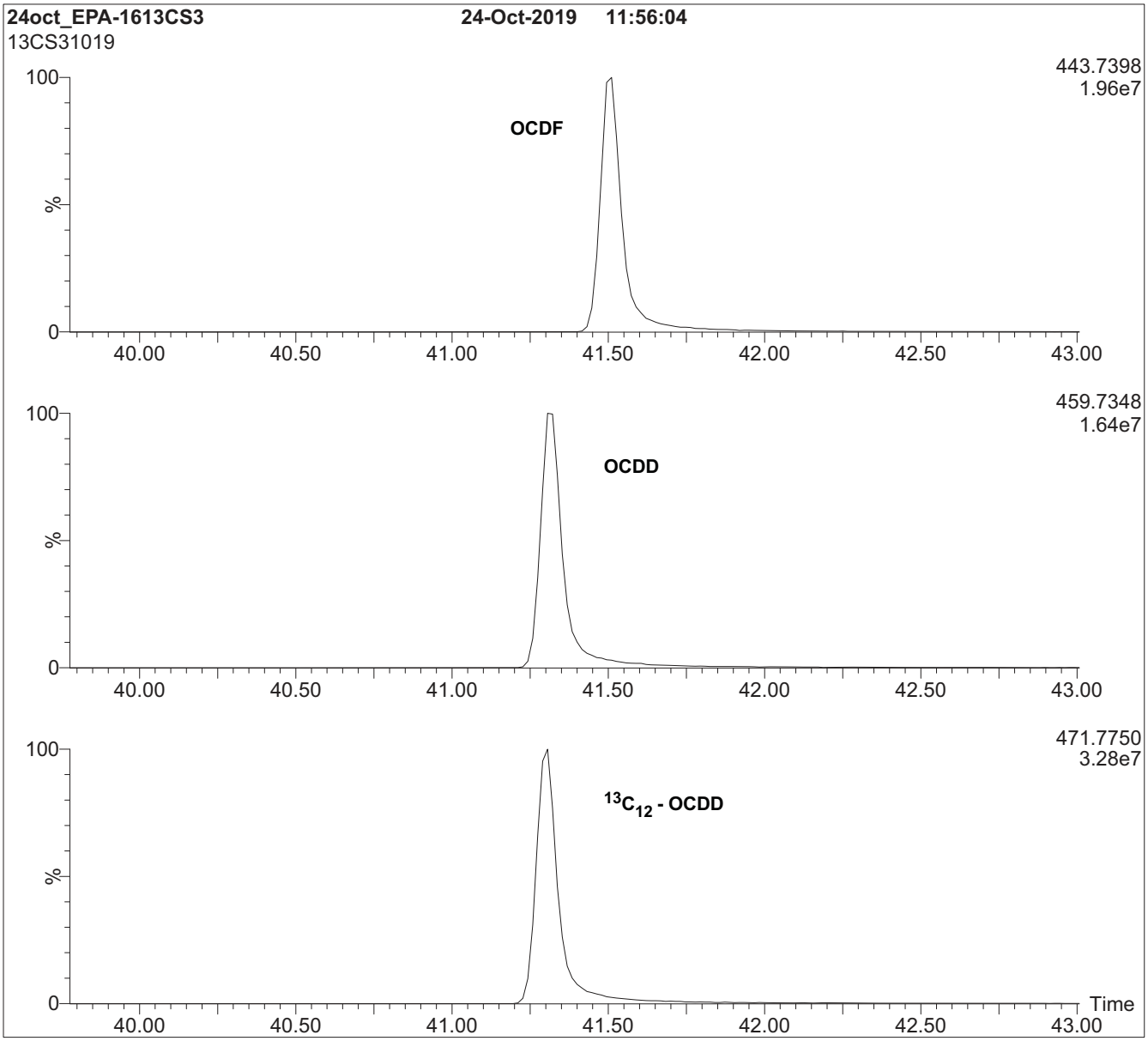


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow:	Constant at 1 ml/min	Oven:	150 °C (1 min)
Injector:	280 °C (Splitless Injection)		12 °C/min to 200 °C
Ionization:	EI+		3 °C/min to 235 °C
Detector:	280 °C		235 °C (8 min)
	SIR at 10,000 mass resolving power		8 °C/min to 310 °C
			310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

I005458
1613 CS4 CAL STD
Expires 10/24/2026
Prepared By Joshua Rains 6/23/2020

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By: _____ **Date:** 10/25/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

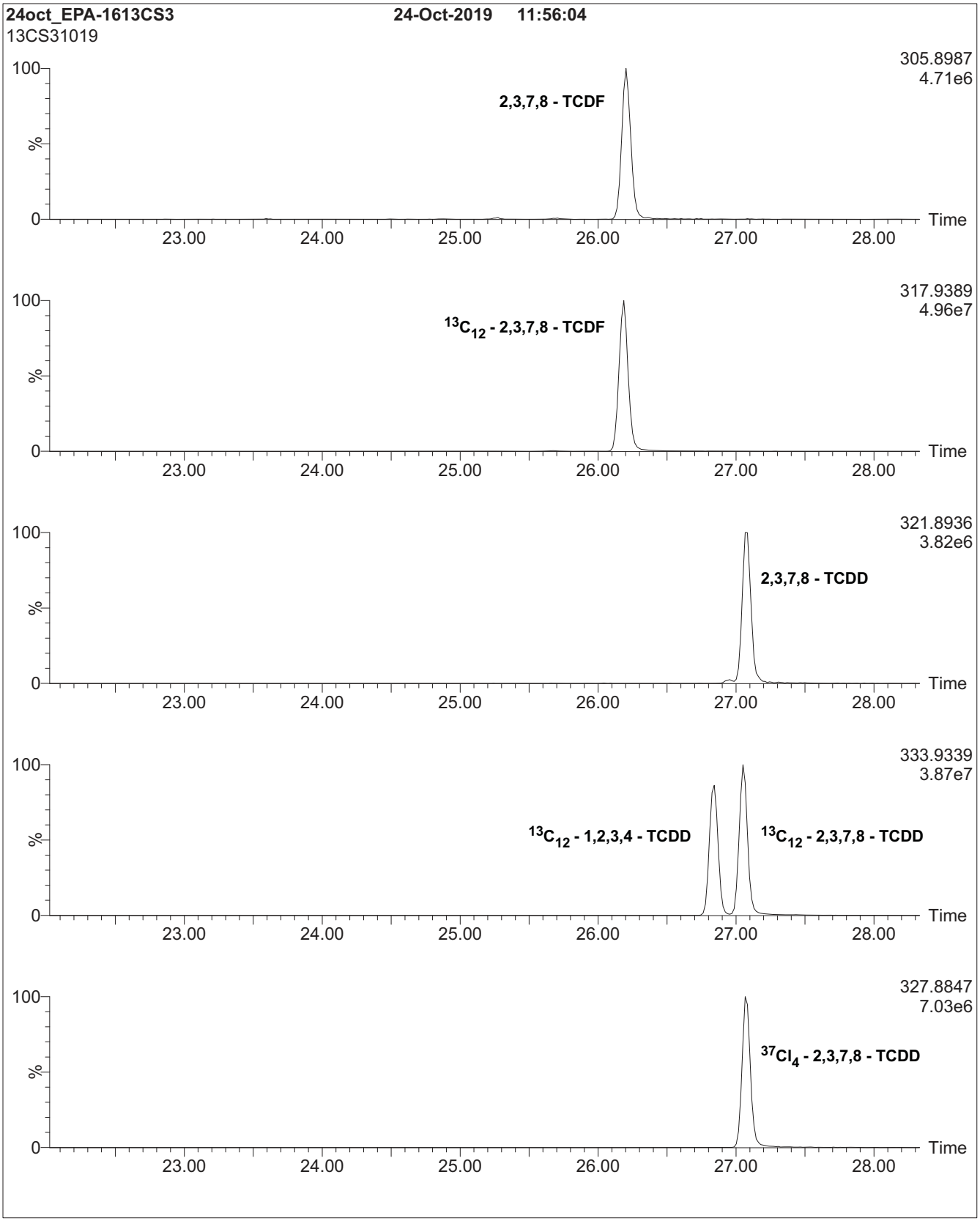


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

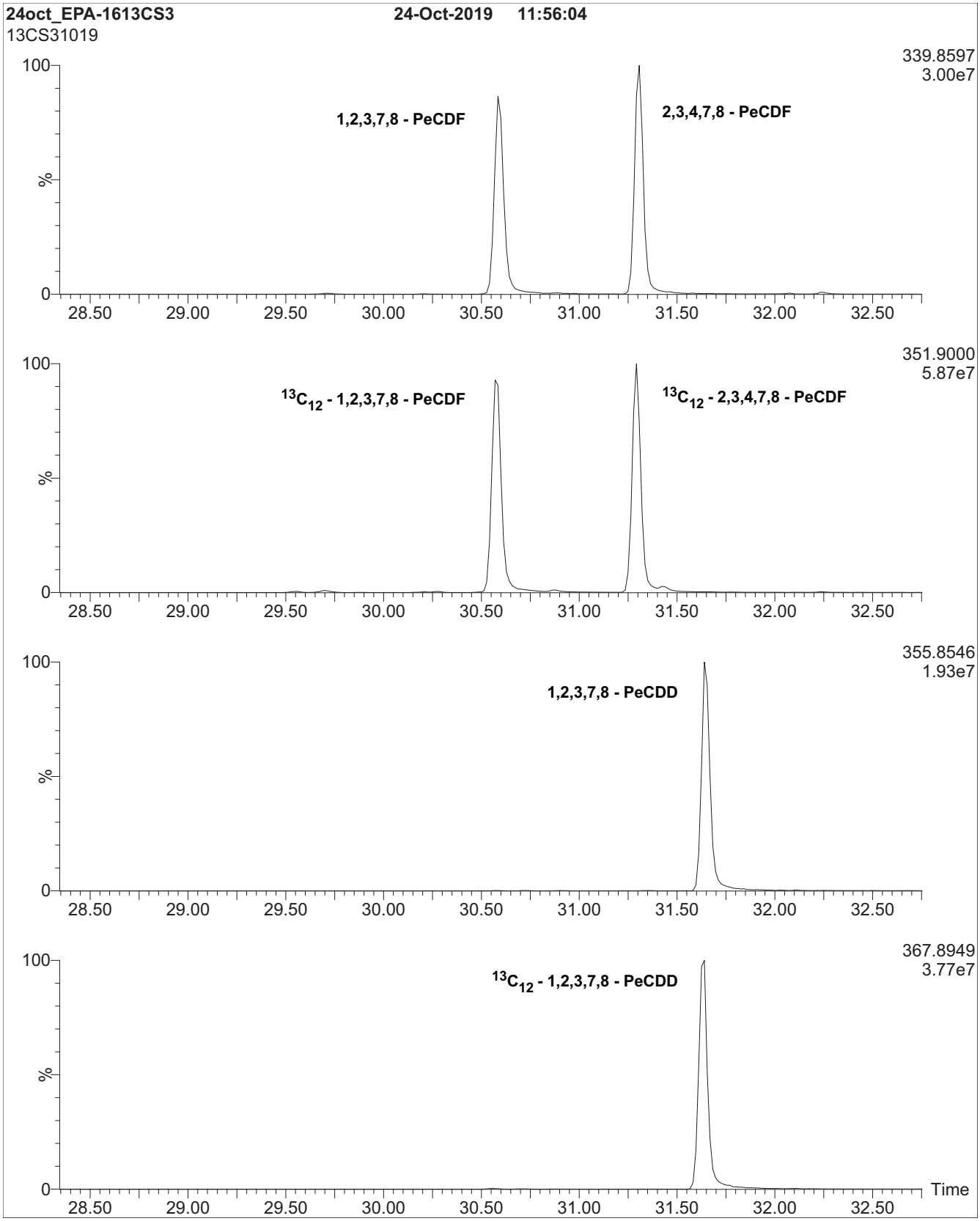


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

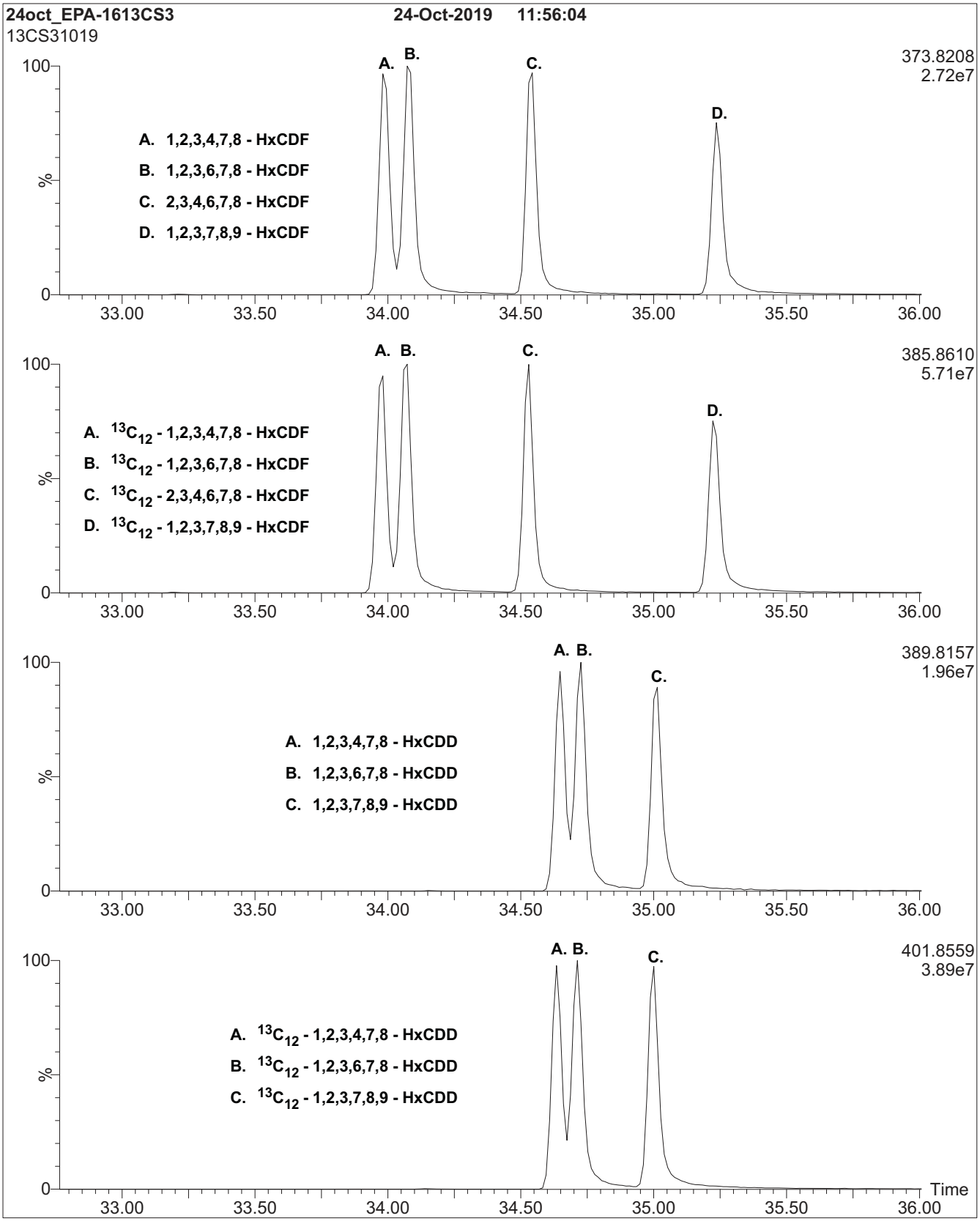


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

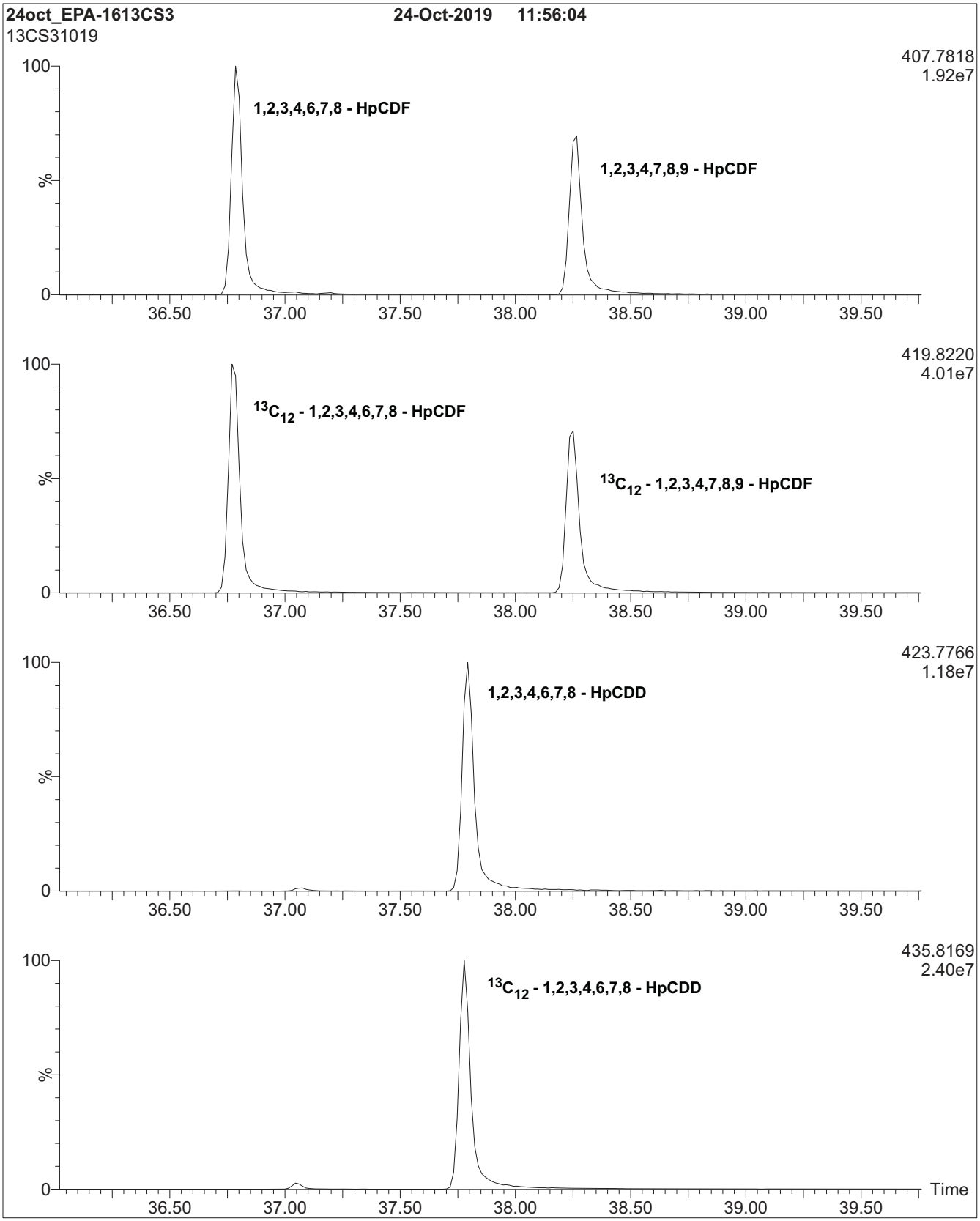
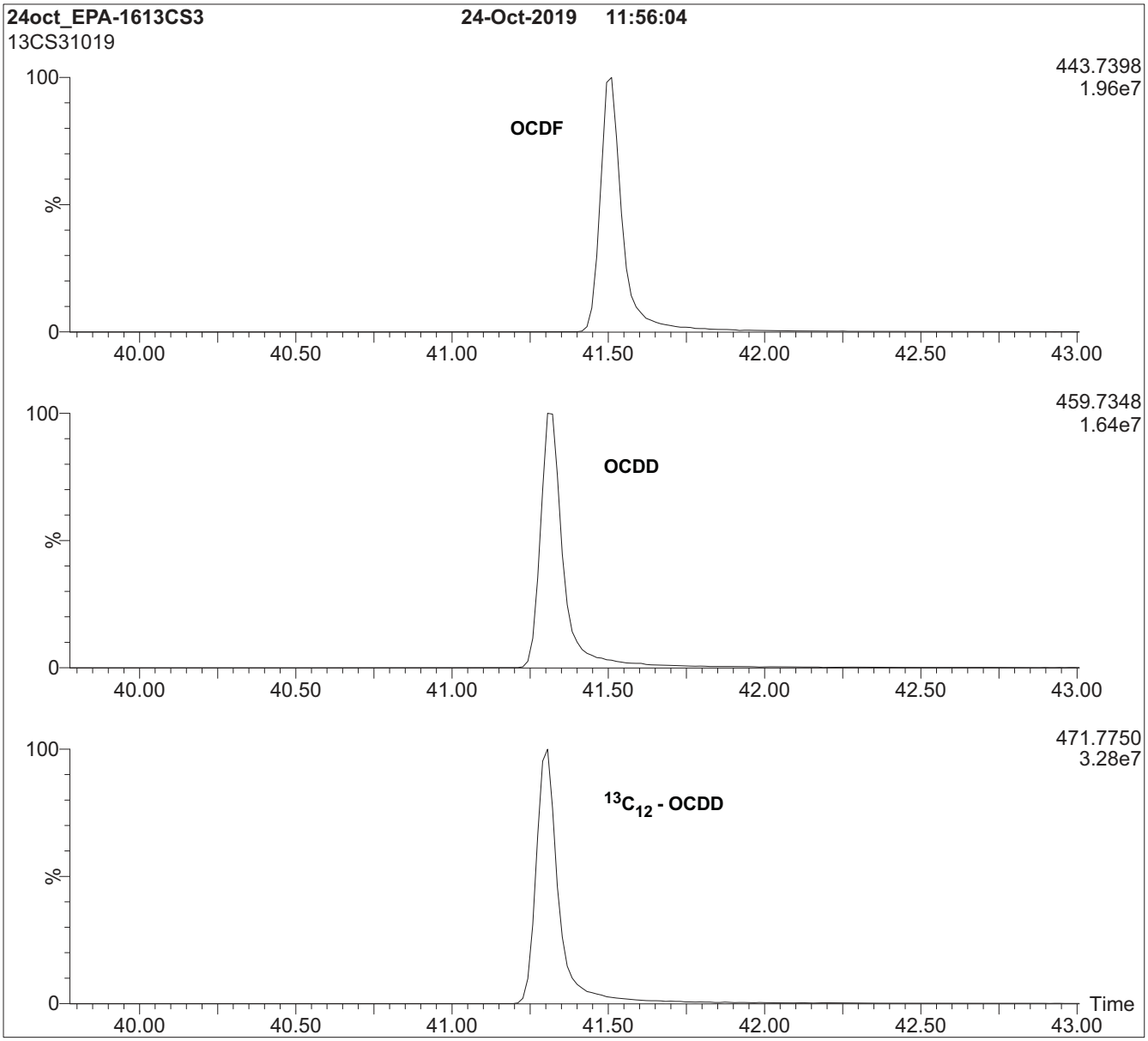


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

I005459
1613 CS5 CAL STD
Expires 10/24/2026
Prepared By Joshua Rains 6/23/2020

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By: **Date:** 10/25/2019
(mm/dd/yyyy)

B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

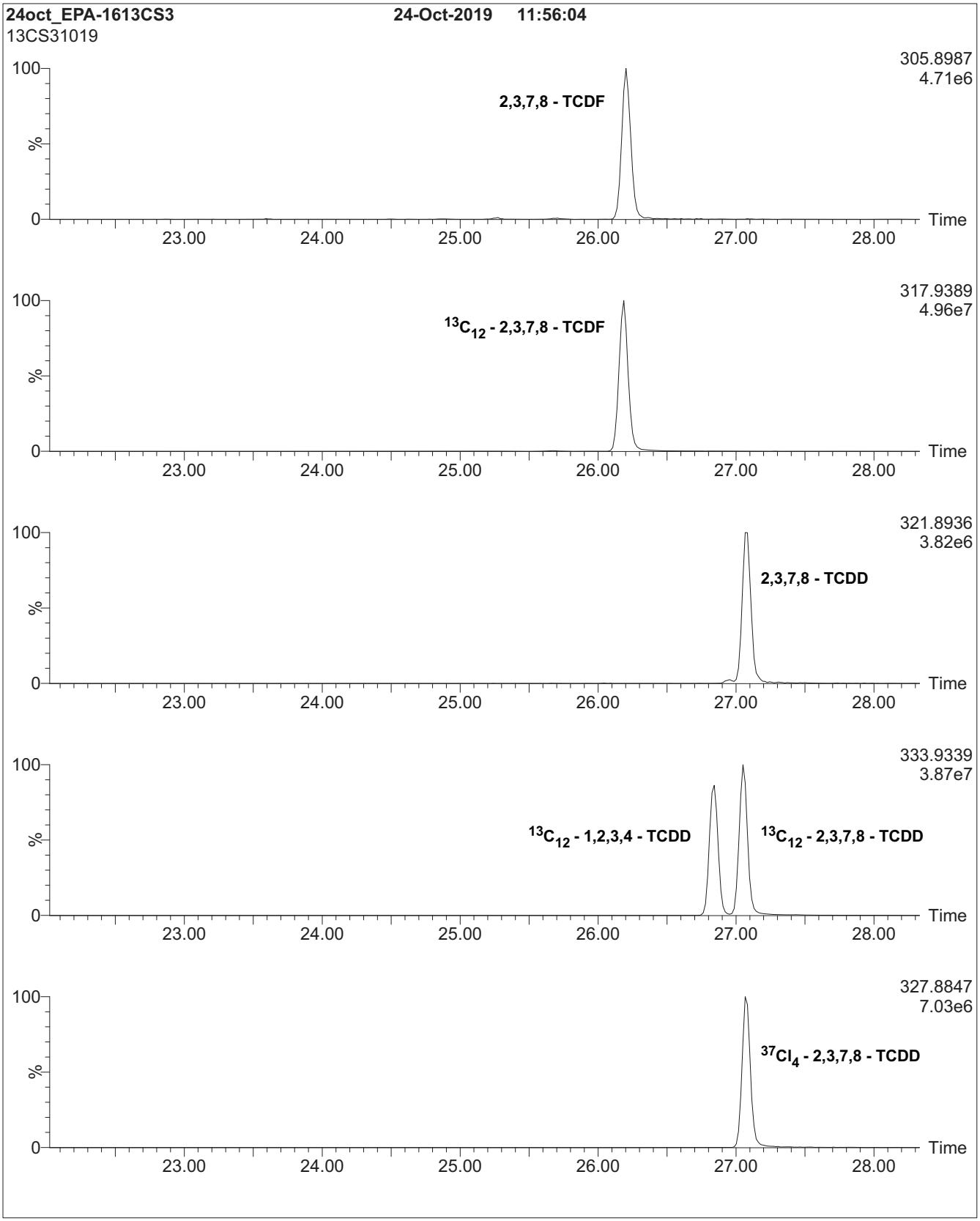


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

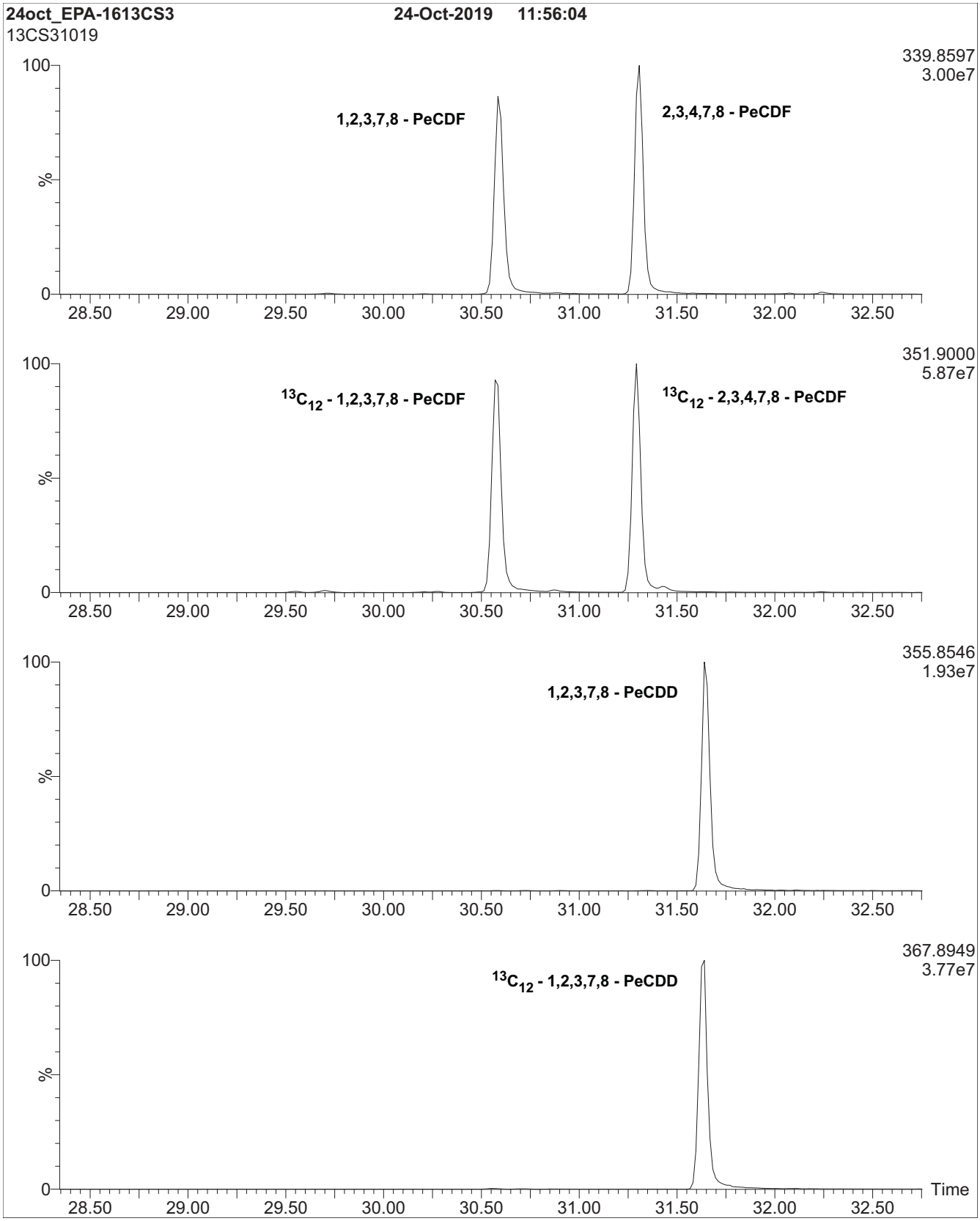


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

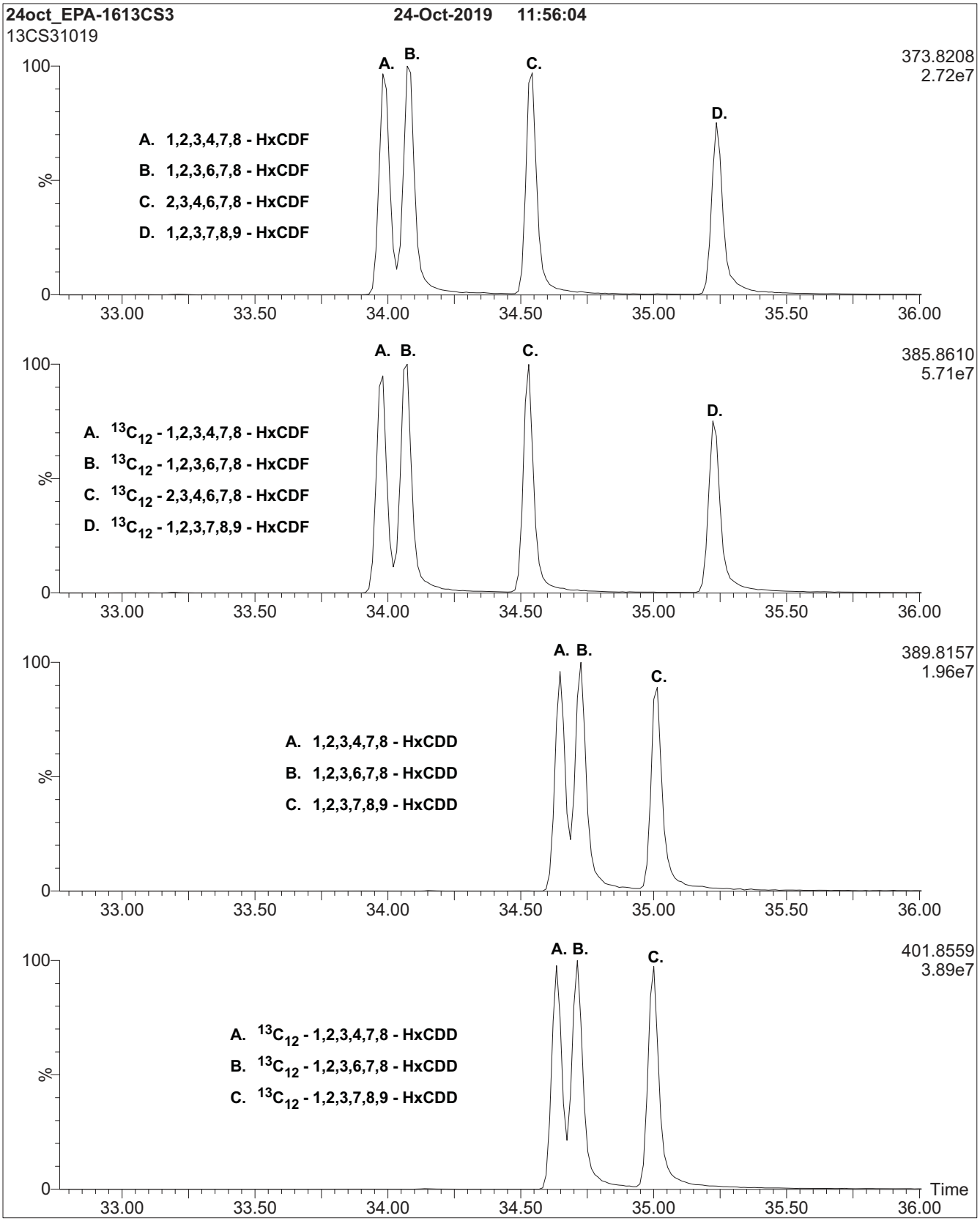


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

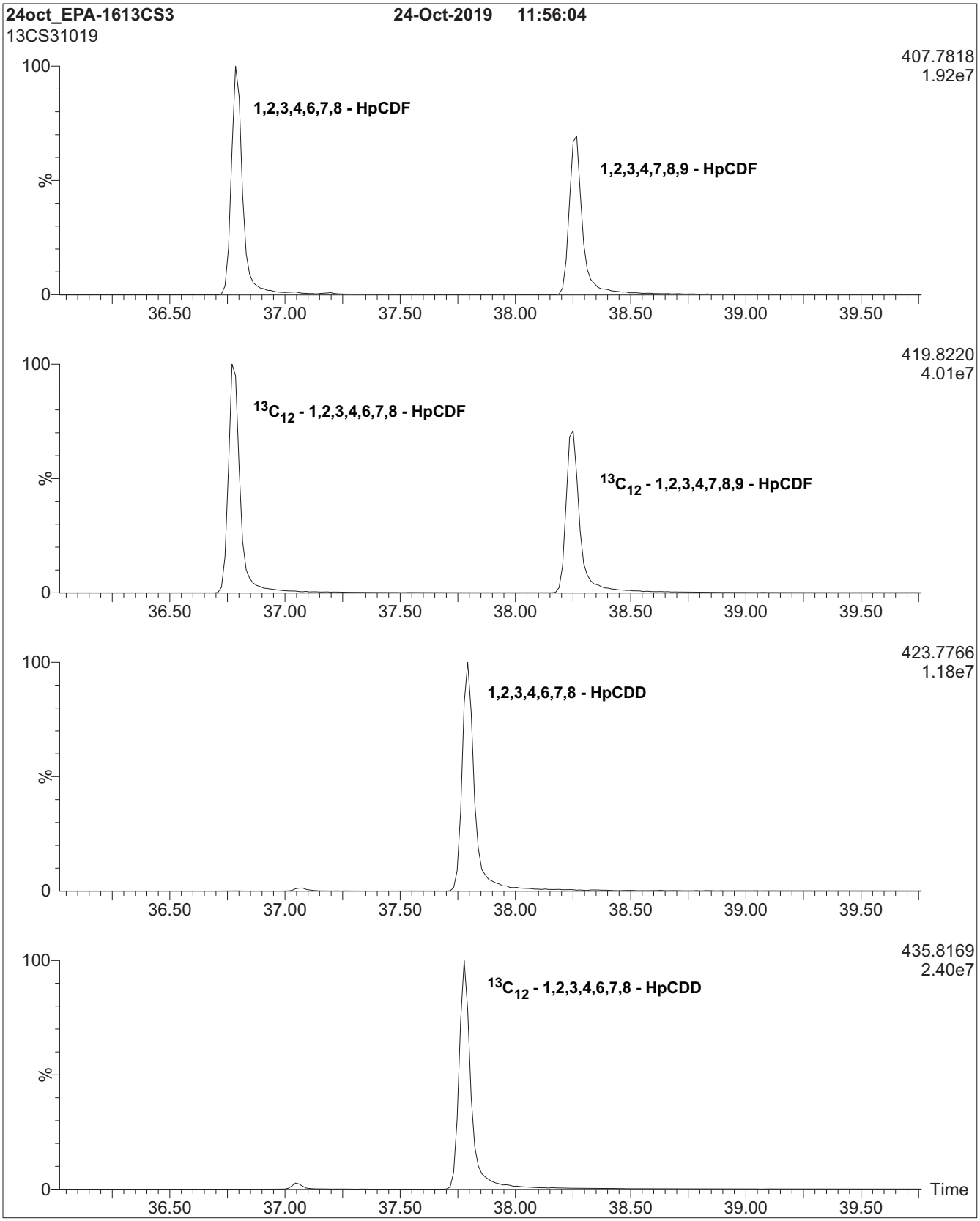
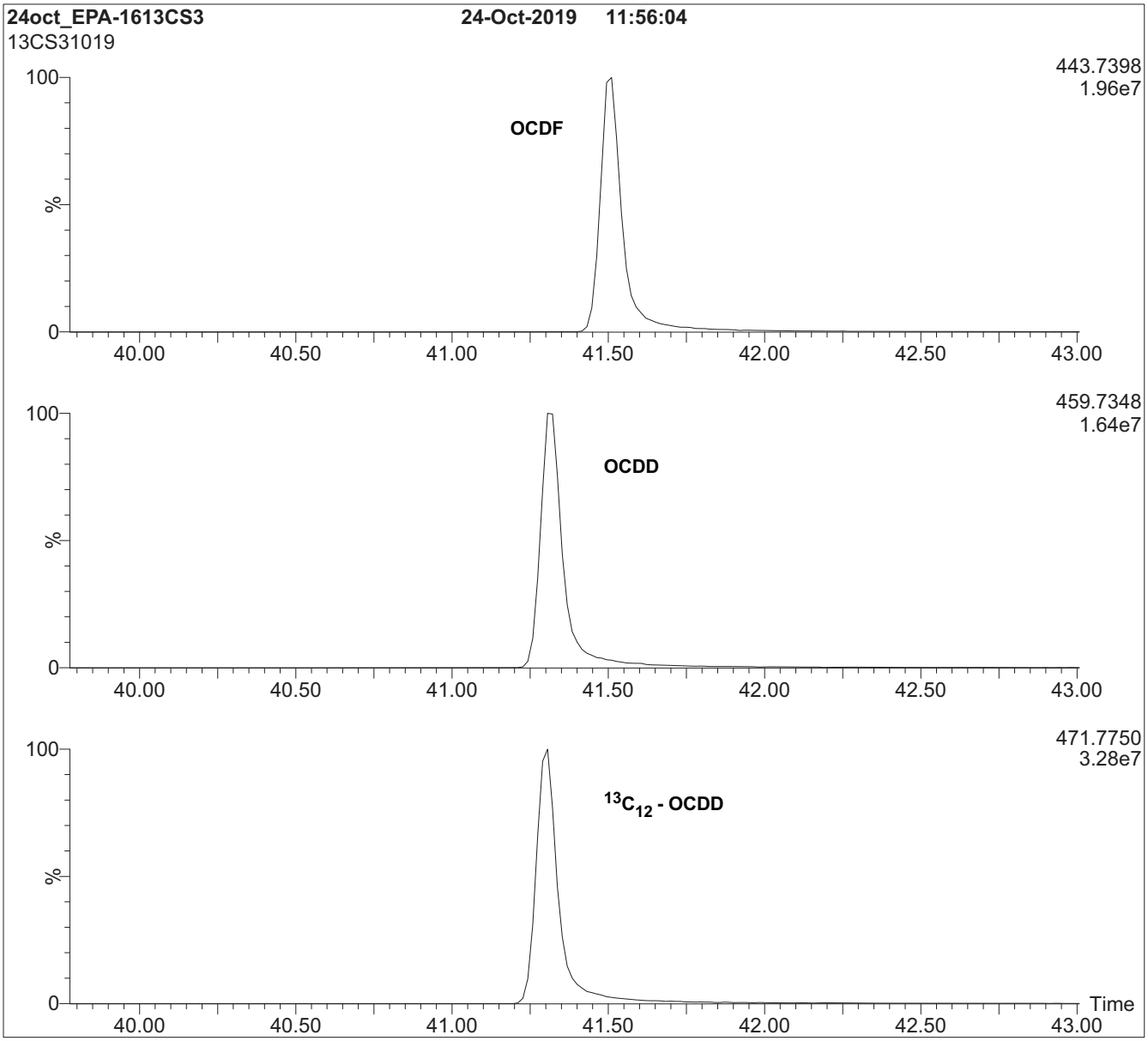


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow:	Constant at 1 ml/min	Oven:	150 °C (1 min)
Injector:	280 °C (Splitless Injection)		12 °C/min to 200 °C
Ionization:	EI+		3 °C/min to 235 °C
Detector:	280 °C		235 °C (8 min)
	SIR at 10,000 mass resolving power		8 °C/min to 310 °C
			310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

I005460
1613 CSL CAL STD
Expires 10/24/2026
Prepared By Joshua Rains 6/23/2020

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By: _____ **Date:** 10/25/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

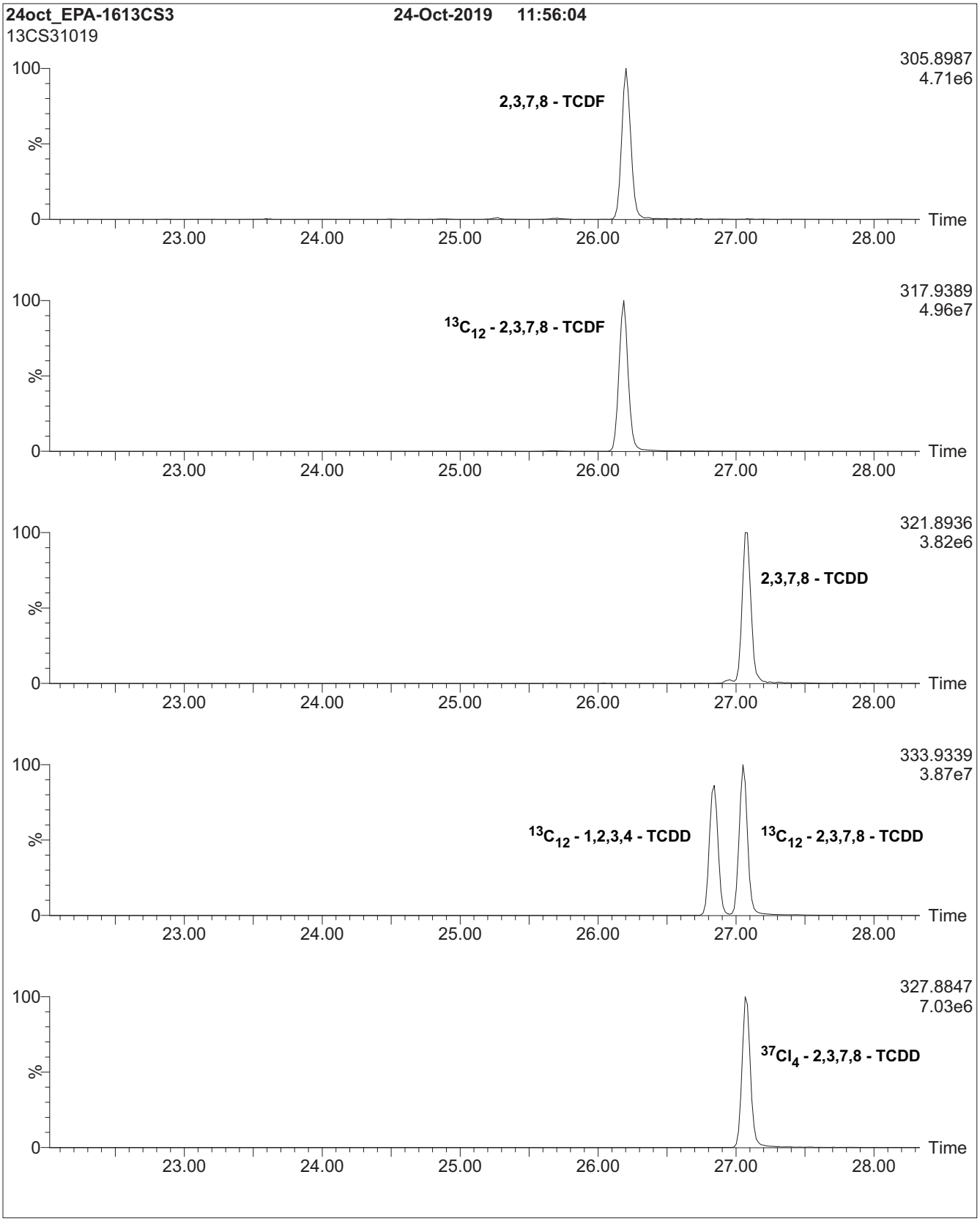


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

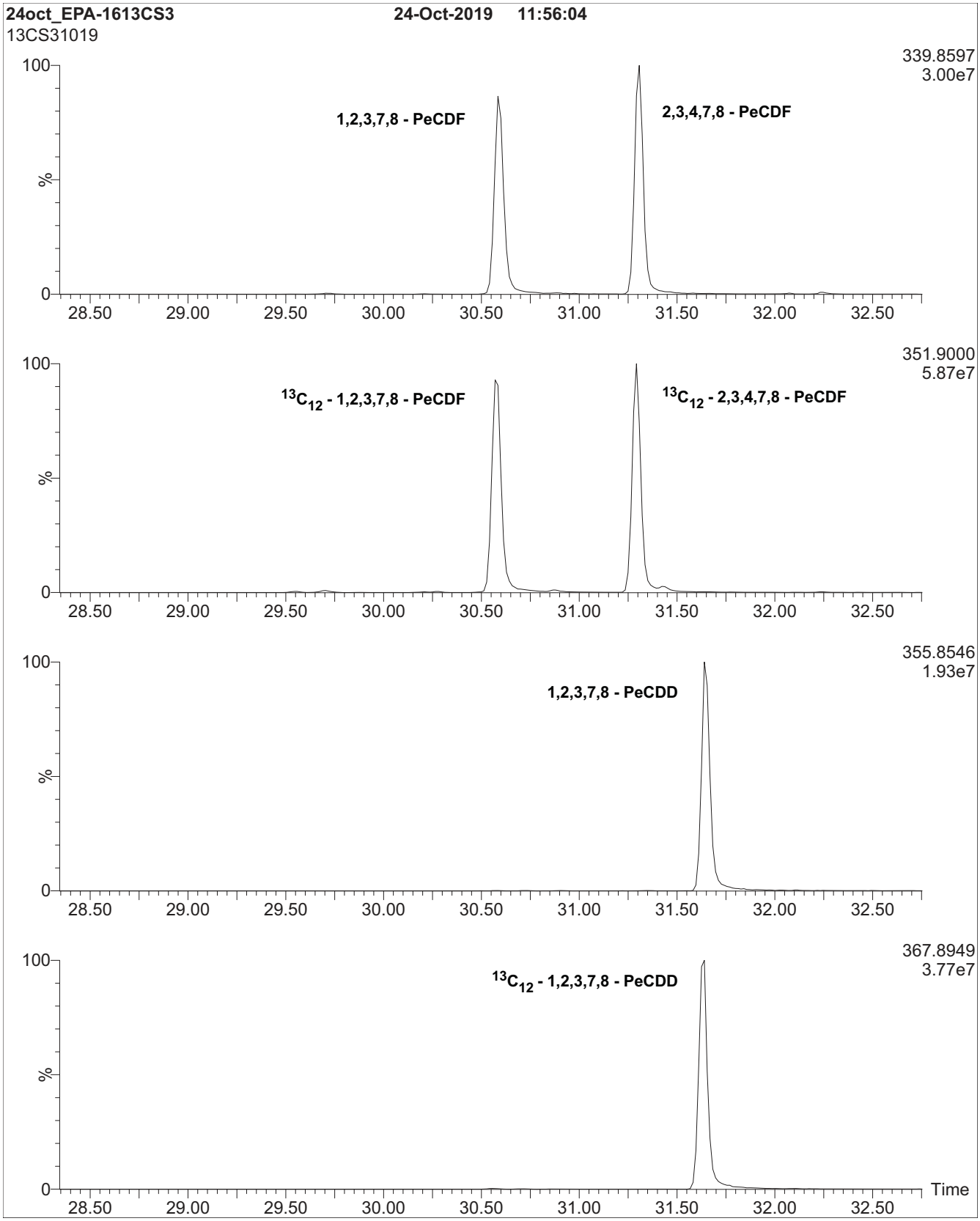


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

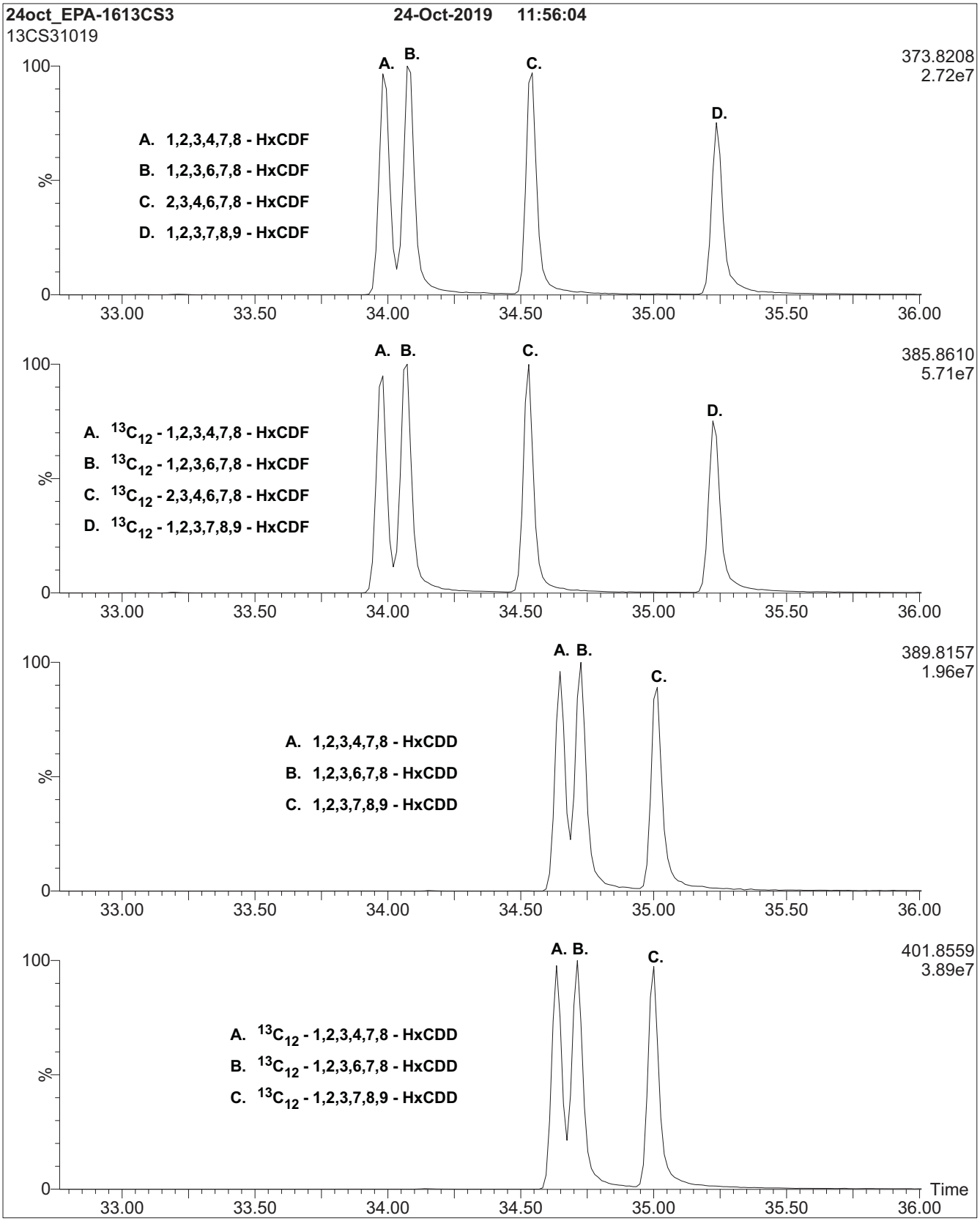


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

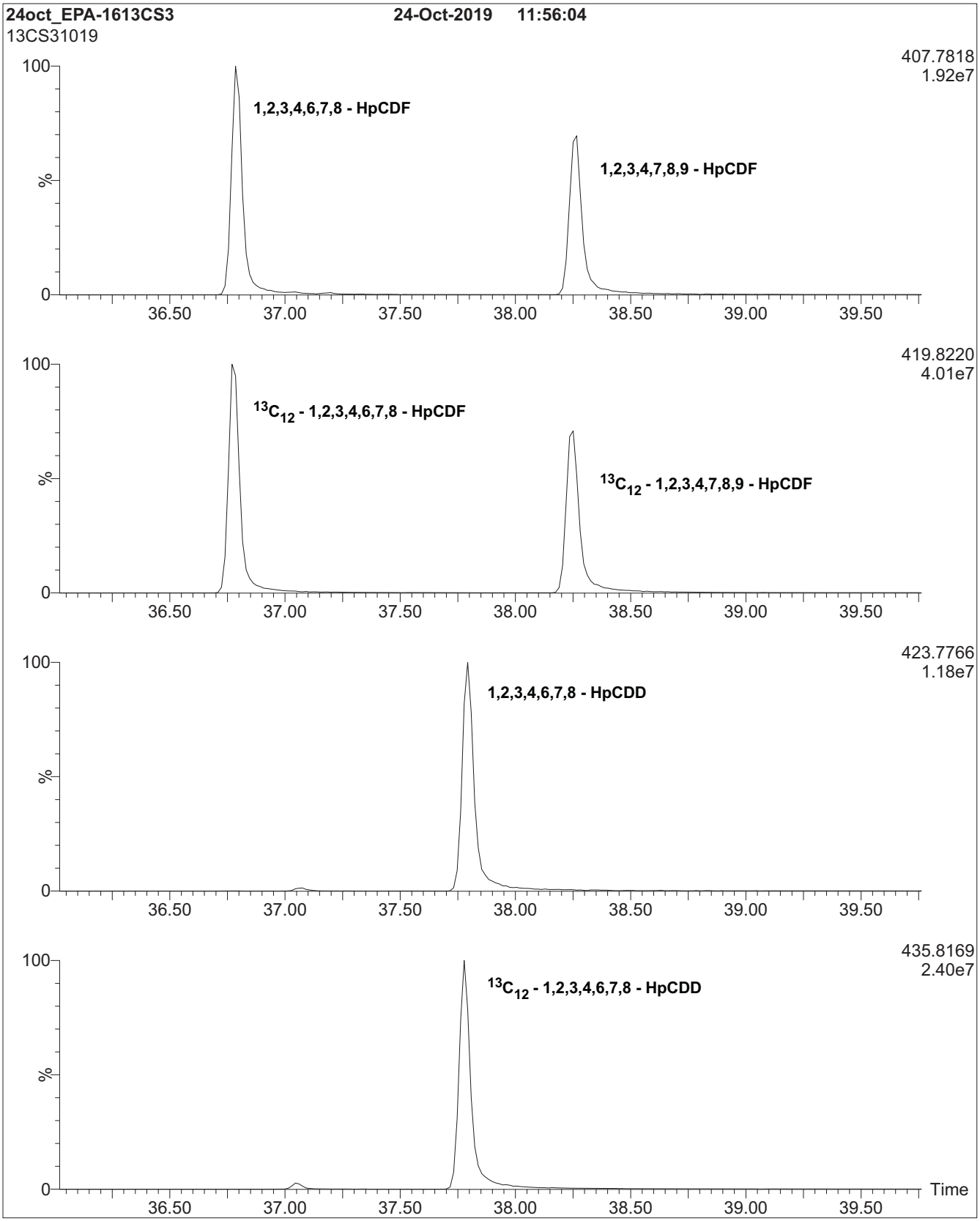
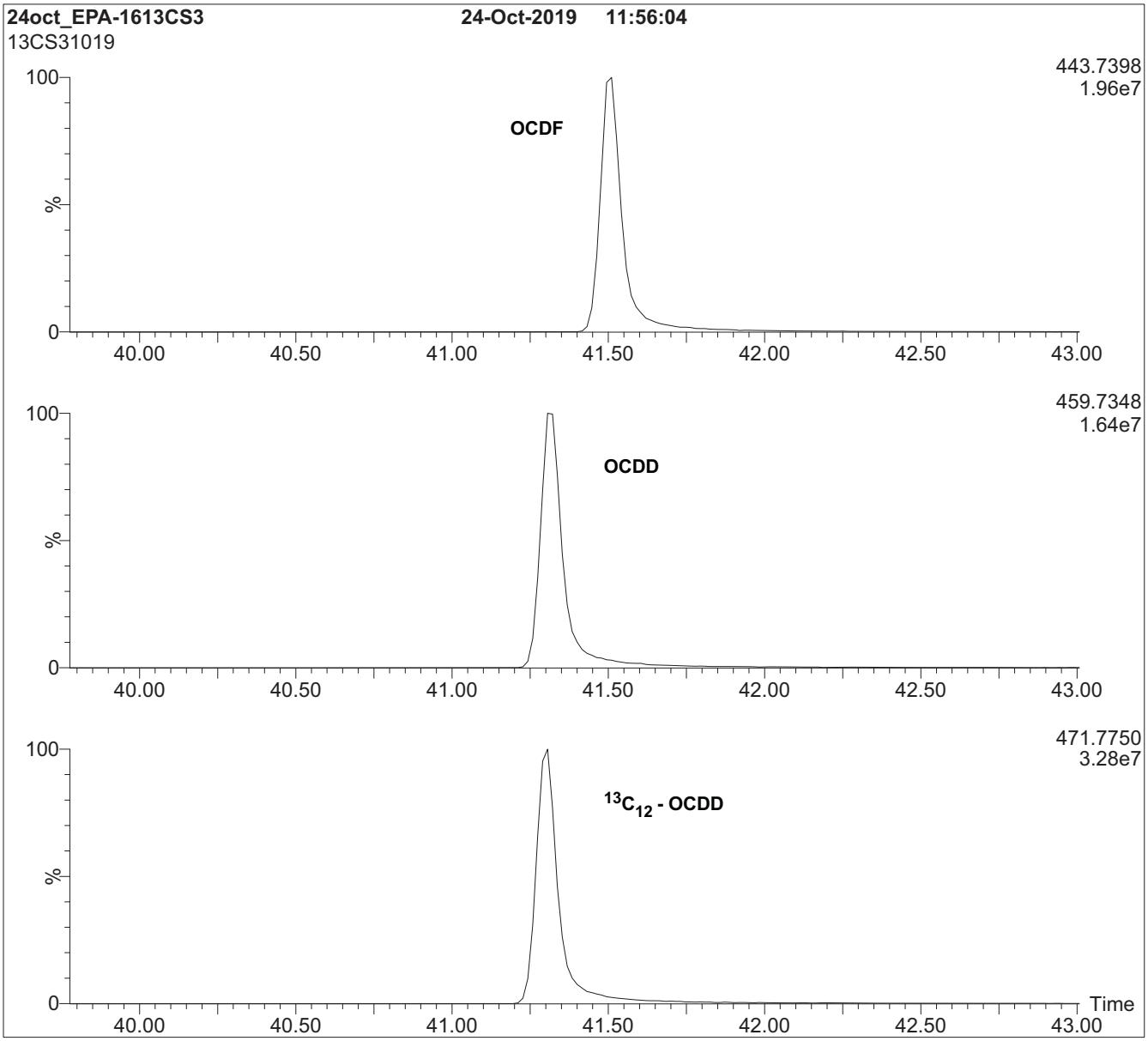


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF
Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR1021
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/25/2021
LAST TESTED: (mm/dd/yyyy)	11/03/2021
EXPIRY DATE: (mm/dd/yyyy)	11/03/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

J013397
Read. JR
12/20/21

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

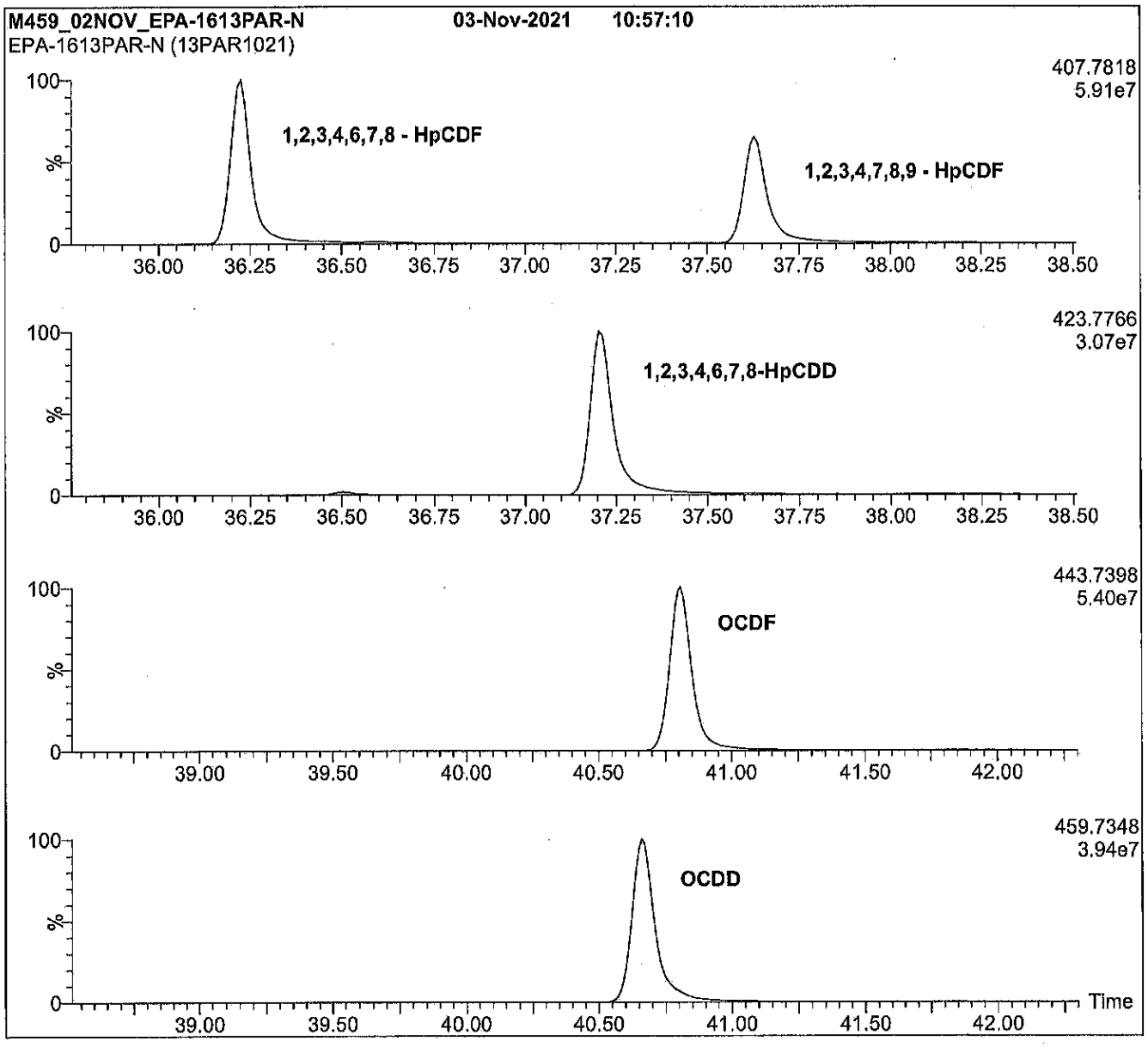
Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/mL, ± 5% in nonane/2.4% toluene)**

Compound	Acronym	CAS #	Concentration (ng/mL)
PCDDs:			
2,3,7,8-Tetrachlorodibenzo-*p*-dioxin	2,3,7,8-TCDD	1746-01-6	40.0
1,2,3,7,8-Pentachlorodibenzo-*p*-dioxin	1,2,3,7,8-PeCDD	40321-76-4	200
1,2,3,4,7,8-Hexachlorodibenzo-*p*-dioxin	1,2,3,4,7,8-HxCDD	39227-28-6	200
1,2,3,6,7,8-Hexachlorodibenzo-*p*-dioxin	1,2,3,6,7,8-HxCDD	57653-85-7	200
1,2,3,7,8,9-Hexachlorodibenzo-*p*-dioxin	1,2,3,7,8,9-HxCDD	19408-74-3	200
1,2,3,4,6,7,8-Heptachlorodibenzo-*p*-dioxin	1,2,3,4,6,7,8-HpCDD	35822-46-9	200
Octachlorodibenzo-*p*-dioxin	OCDD	3268-87-9	400
PCDFs:			
2,3,7,8-Tetrachlorodibenzofuran	2,3,7,8-TCDF	51207-31-9	40.0
1,2,3,7,8-Pentachlorodibenzofuran	1,2,3,7,8-PeCDF	57117-41-6	200
2,3,4,7,8-Pentachlorodibenzofuran	2,3,4,7,8-PeCDF	57117-31-4	200
1,2,3,4,7,8-Hexachlorodibenzofuran	1,2,3,4,7,8-HxCDF	70648-26-9	200
1,2,3,6,7,8-Hexachlorodibenzofuran	1,2,3,6,7,8-HxCDF	57117-44-9	200
1,2,3,7,8,9-Hexachlorodibenzofuran	1,2,3,7,8,9-HxCDF	72918-21-9	200
2,3,4,6,7,8-Hexachlorodibenzofuran	2,3,4,6,7,8-HxCDF	60851-34-5	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1,2,3,4,6,7,8-HpCDF	67562-39-4	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1,2,3,4,7,8,9-HpCDF	55673-89-7	200
Octachlorodibenzofuran	OCDF	39001-02-0	400

Certified By: _____ **Date:** 11/05/2021
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF
Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR1021
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/25/2021
LAST TESTED: (mm/dd/yyyy)	11/03/2021
EXPIRY DATE: (mm/dd/yyyy)	11/03/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

J013397
Read. JR
12/20/21

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

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Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Table A: **EPA-1613PAR; Components and Concentrations (ng/mL, ± 5% in nonane/2.4% toluene)**

Compound	Acronym	CAS #	Concentration (ng/mL)
PCDDs:			
2,3,7,8-Tetrachlorodibenzo-*p*-dioxin	2,3,7,8-TCDD	1746-01-6	40.0
1,2,3,7,8-Pentachlorodibenzo-*p*-dioxin	1,2,3,7,8-PeCDD	40321-76-4	200
1,2,3,4,7,8-Hexachlorodibenzo-*p*-dioxin	1,2,3,4,7,8-HxCDD	39227-28-6	200
1,2,3,6,7,8-Hexachlorodibenzo-*p*-dioxin	1,2,3,6,7,8-HxCDD	57653-85-7	200
1,2,3,7,8,9-Hexachlorodibenzo-*p*-dioxin	1,2,3,7,8,9-HxCDD	19408-74-3	200
1,2,3,4,6,7,8-Heptachlorodibenzo-*p*-dioxin	1,2,3,4,6,7,8-HpCDD	35822-46-9	200
Octachlorodibenzo-*p*-dioxin	OCDD	3268-87-9	400
PCDFs:			
2,3,7,8-Tetrachlorodibenzofuran	2,3,7,8-TCDF	51207-31-9	40.0
1,2,3,7,8-Pentachlorodibenzofuran	1,2,3,7,8-PeCDF	57117-41-6	200
2,3,4,7,8-Pentachlorodibenzofuran	2,3,4,7,8-PeCDF	57117-31-4	200
1,2,3,4,7,8-Hexachlorodibenzofuran	1,2,3,4,7,8-HxCDF	70648-26-9	200
1,2,3,6,7,8-Hexachlorodibenzofuran	1,2,3,6,7,8-HxCDF	57117-44-9	200
1,2,3,7,8,9-Hexachlorodibenzofuran	1,2,3,7,8,9-HxCDF	72918-21-9	200
2,3,4,6,7,8-Hexachlorodibenzofuran	2,3,4,6,7,8-HxCDF	60851-34-5	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1,2,3,4,6,7,8-HpCDF	67562-39-4	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1,2,3,4,7,8,9-HpCDF	55673-89-7	200
Octachlorodibenzofuran	OCDF	39001-02-0	400

Certified By: _____ **Date:** 11/05/2021
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**

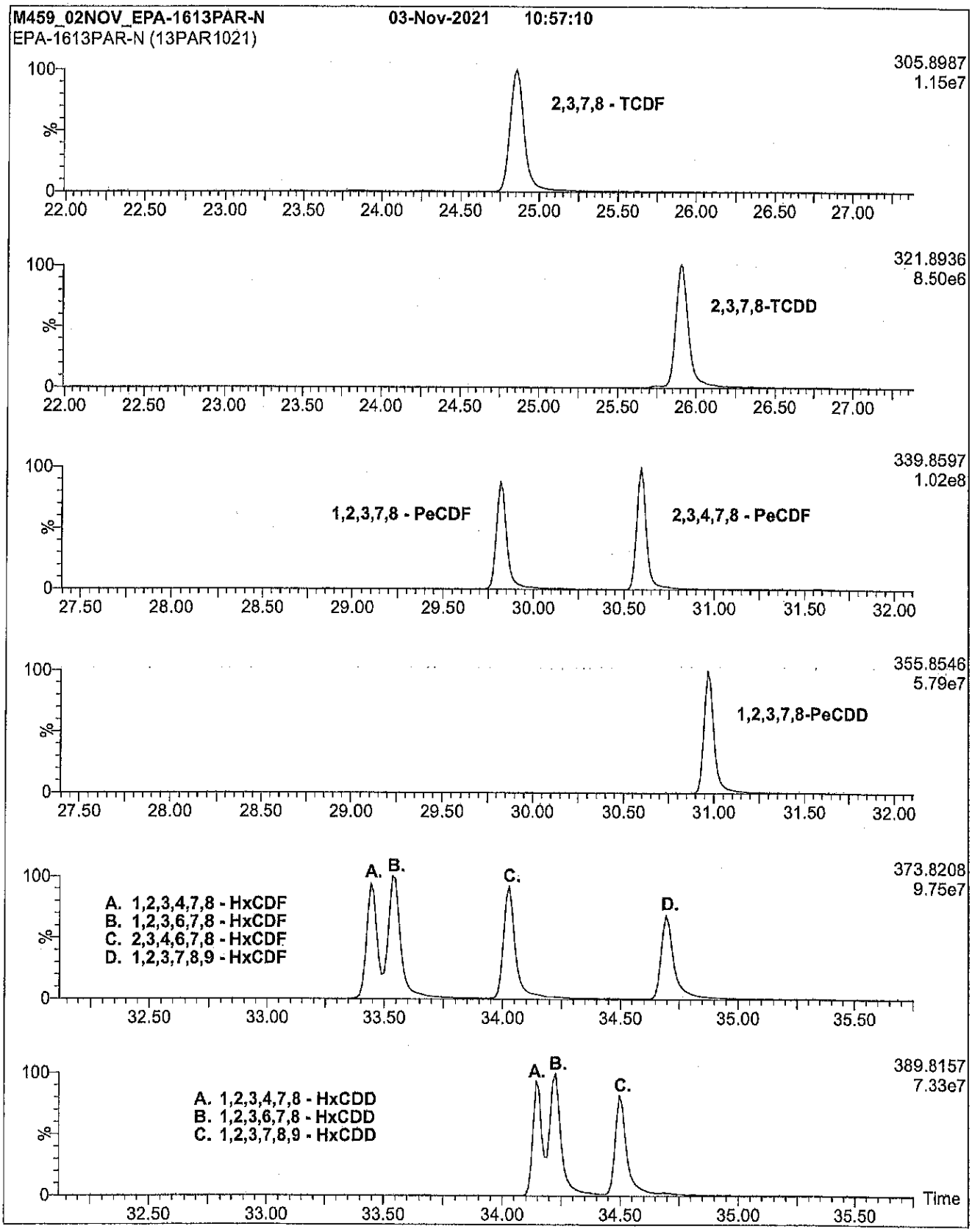
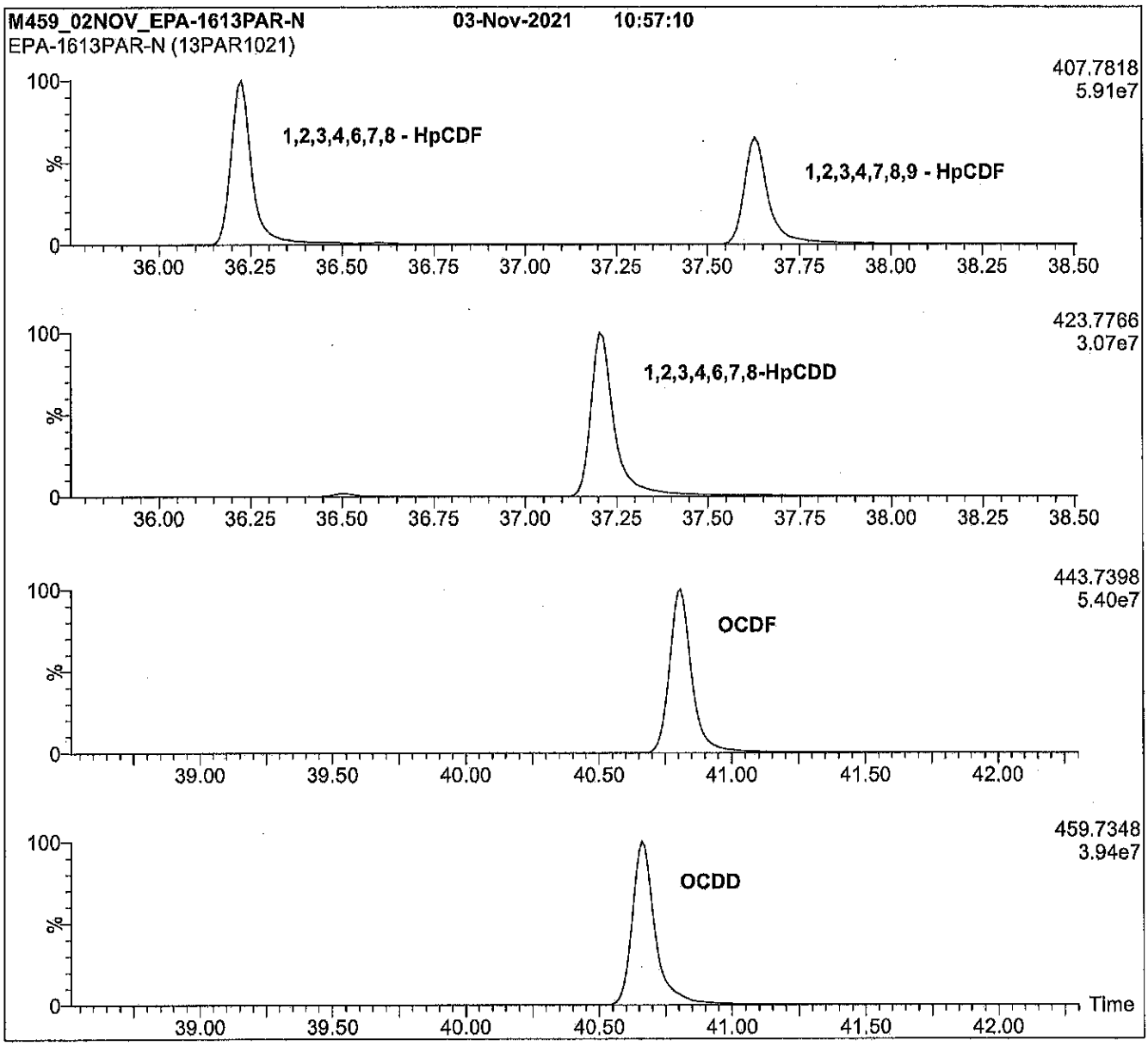


Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

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CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CSS

U.S. EPA Method 1613 Cleanup Standard Spiking Solution

PRODUCT CODE:	EPA-1613CSS
LOT NUMBER:	13CSS1021
SOLVENT(S):	Nonane
DATE PREPARED: (mm/dd/yyyy)	10/29/2021
LAST TESTED: (mm/dd/yyyy)	10/31/2021
EXPIRY DATE: (mm/dd/yyyy)	10/31/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION: K003104

EPA-1613CSS contains 2,3,7,8-($^{37}Cl_4$)tetrachlorodibenzo-*p*-dioxin at the concentration given in Table A.

EPA-1613CSS was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

2,3,7,8-($^{37}Cl_4$)Tetrachlorodibenzo-*p*-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

Table A: **EPA-1613CSS; Components and Concentrations (ng/mL, ± 5% in nonane)**

Compound	Acronym	CAS #	Concentration (ng/mL)
2,3,7,8-($^{37}Cl_4$)Tetrachlorodibenzo-*p*-dioxin	$^{37}Cl_4$-2,3,7,8-TCDD	85508-50-5	40.0

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Certified By: _____ **Date:** 11/05/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

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INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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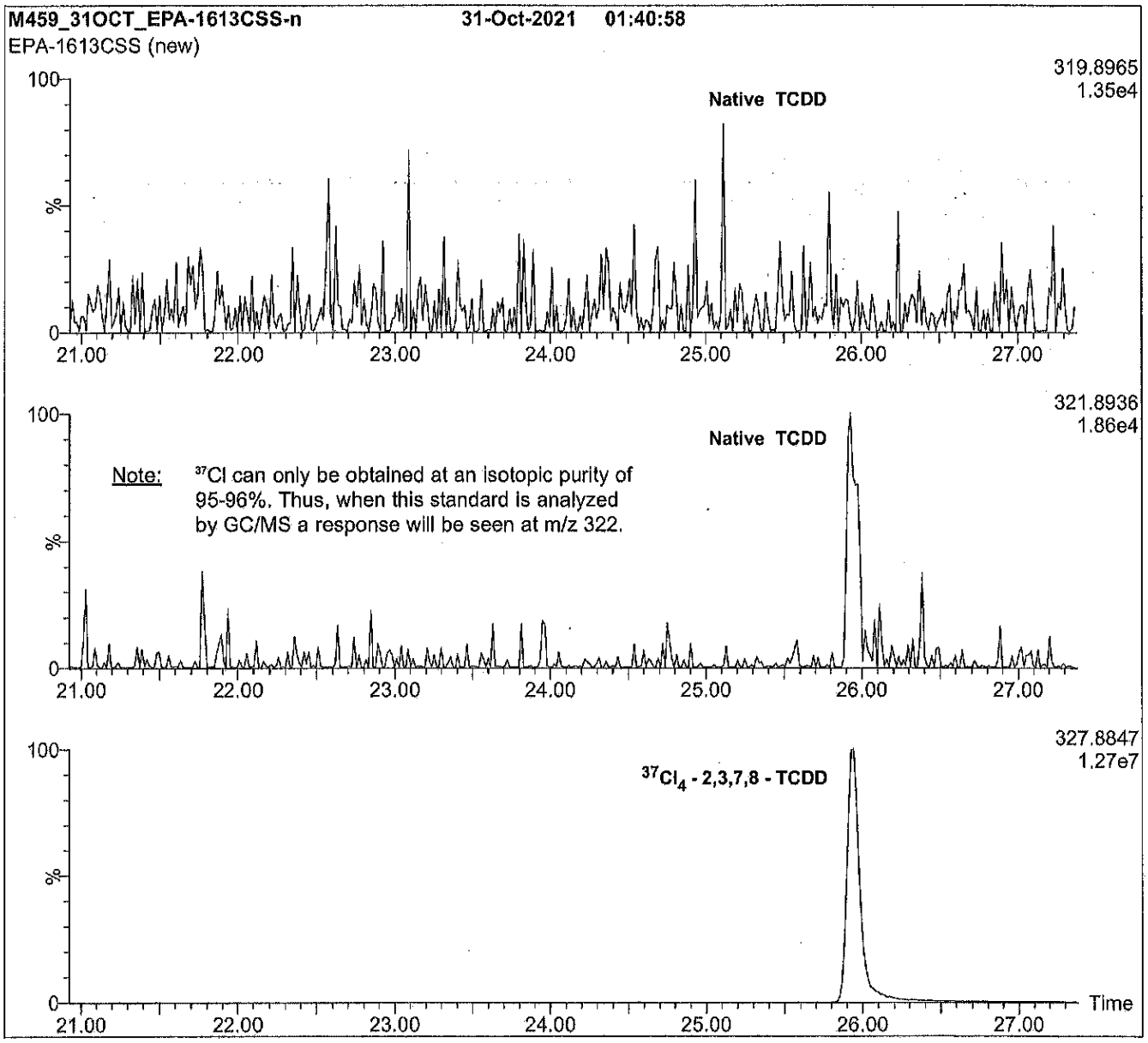
Figure 1: **EPA-1613CSS; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613LCS

U.S. EPA Method 1613
Labelled Compound Stock Solution

PRODUCT CODE:	EPA-1613LCS
LOT NUMBER:	13LCS1021
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/29/2021
LAST TESTED: (mm/dd/yyyy)	10/31/2021
EXPIRY DATE: (mm/dd/yyyy)	10/31/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION: K3105

EPA-1613LCS is a solution/mixture of mass-labelled ($^{13}C_{12}$) polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613LCS was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

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SYNTHESIS / CHARACTERIZATION:

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HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

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$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

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QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A1226

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Table A: **EPA-1613LCS; Components and Concentrations (ng/mL, ± 5% in nonane/3.2% toluene)**

Compound	Acronym	CAS #	Concentration (ng/mL)
Mass-Labelled PCDDs:			
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-2,3,7,8-TCDD	76523-40-5	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,7,8-PeCDD	109719-79-1	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	109719-80-4	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	109719-81-5	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	109719-83-7	100
Octachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-OCDD	114423-97-1	200
Mass-Labelled PCDFs:			
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,7,8-TCDF	89059-46-1	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,7,8-PeCDF	109719-77-9	100
2,3,4,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,4,7,8-PeCDF	116843-02-8	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	114423-98-2	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	116843-03-9	100
1,2,3,7,8,9-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	116843-04-0	100
2,3,4,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	116843-05-1	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	109719-84-8	100
1,2,3,4,7,8,9-Heptachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	109719-94-0	100

Certified By: _____ **Date:** 11/05/2021
(mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

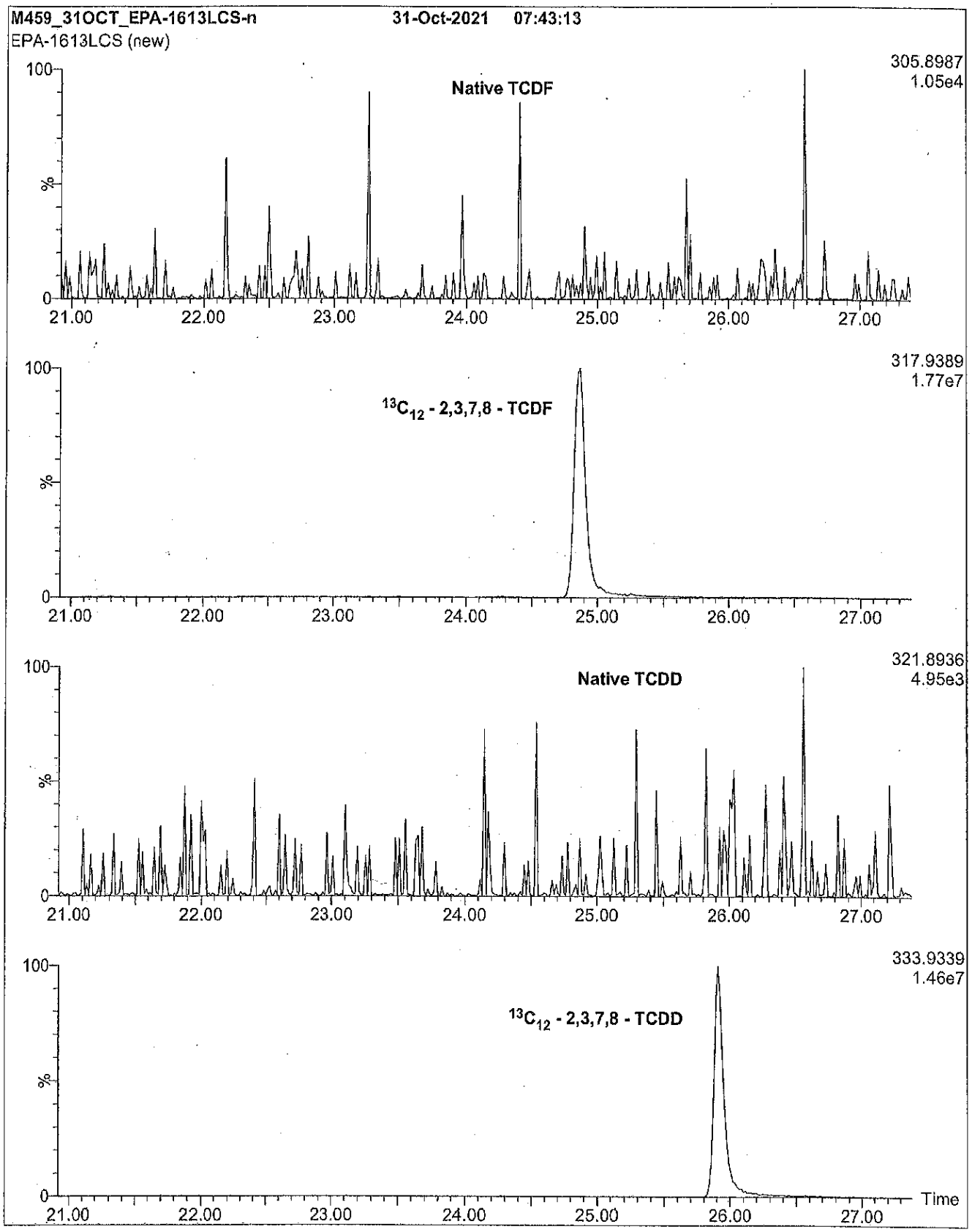


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

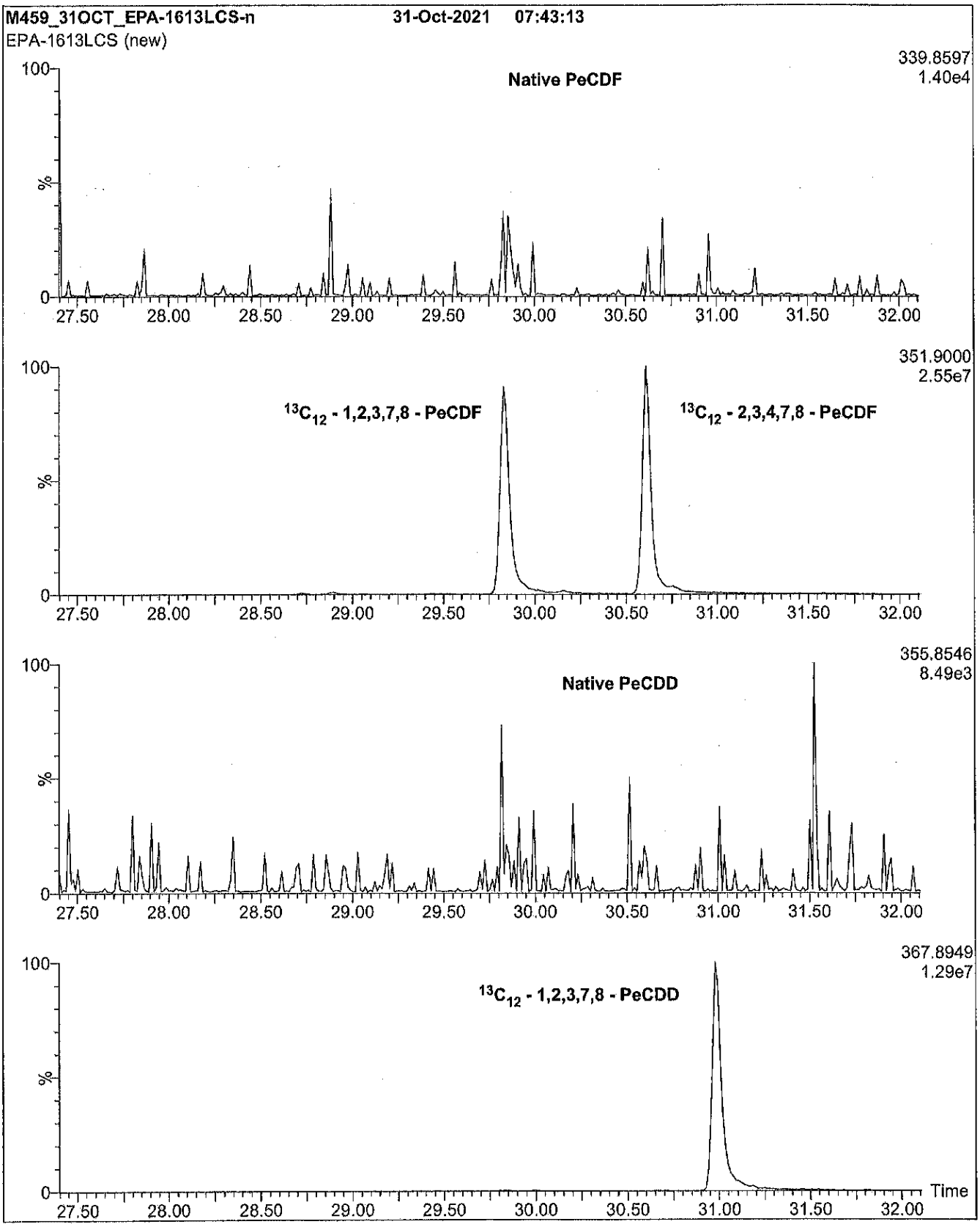


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

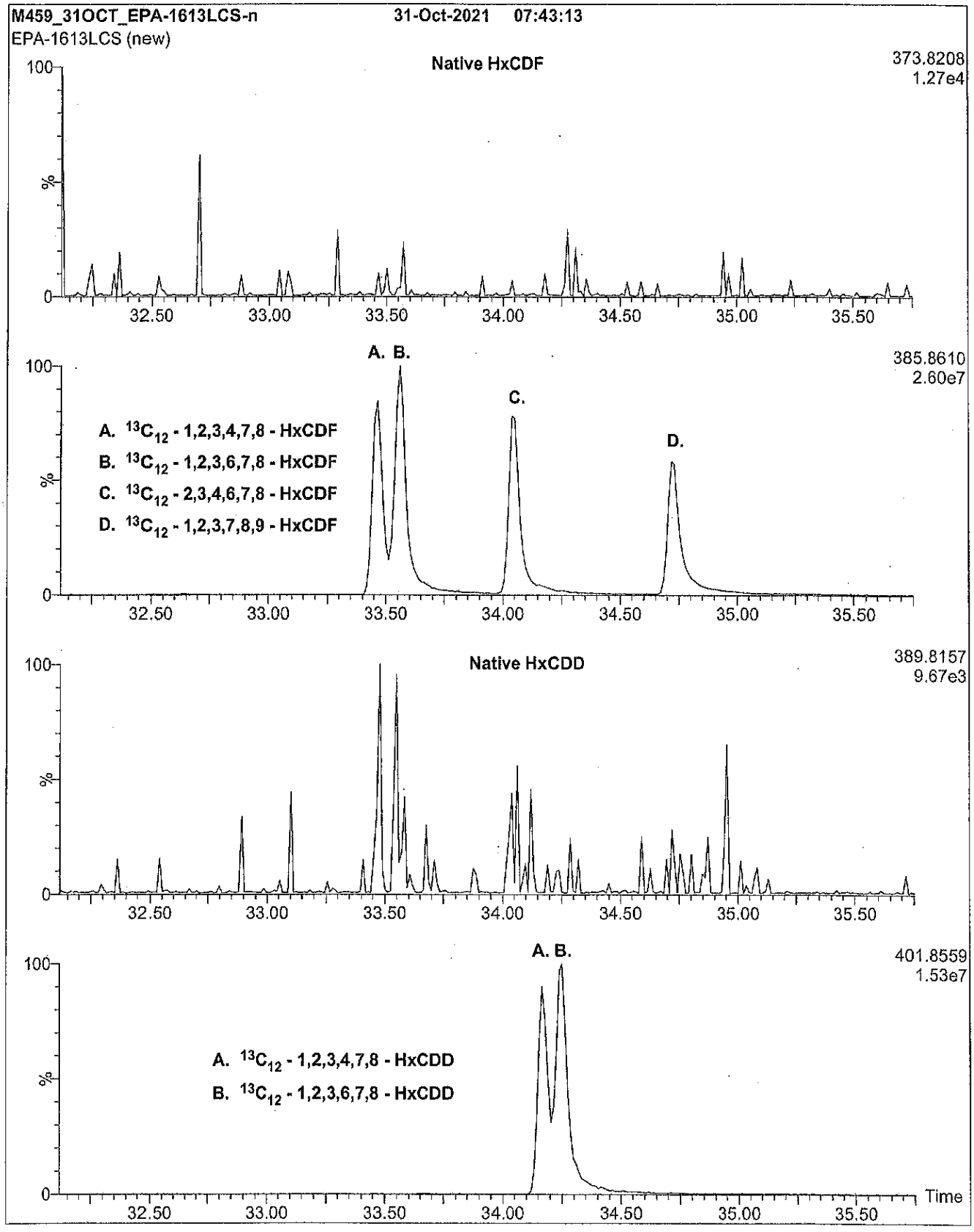


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

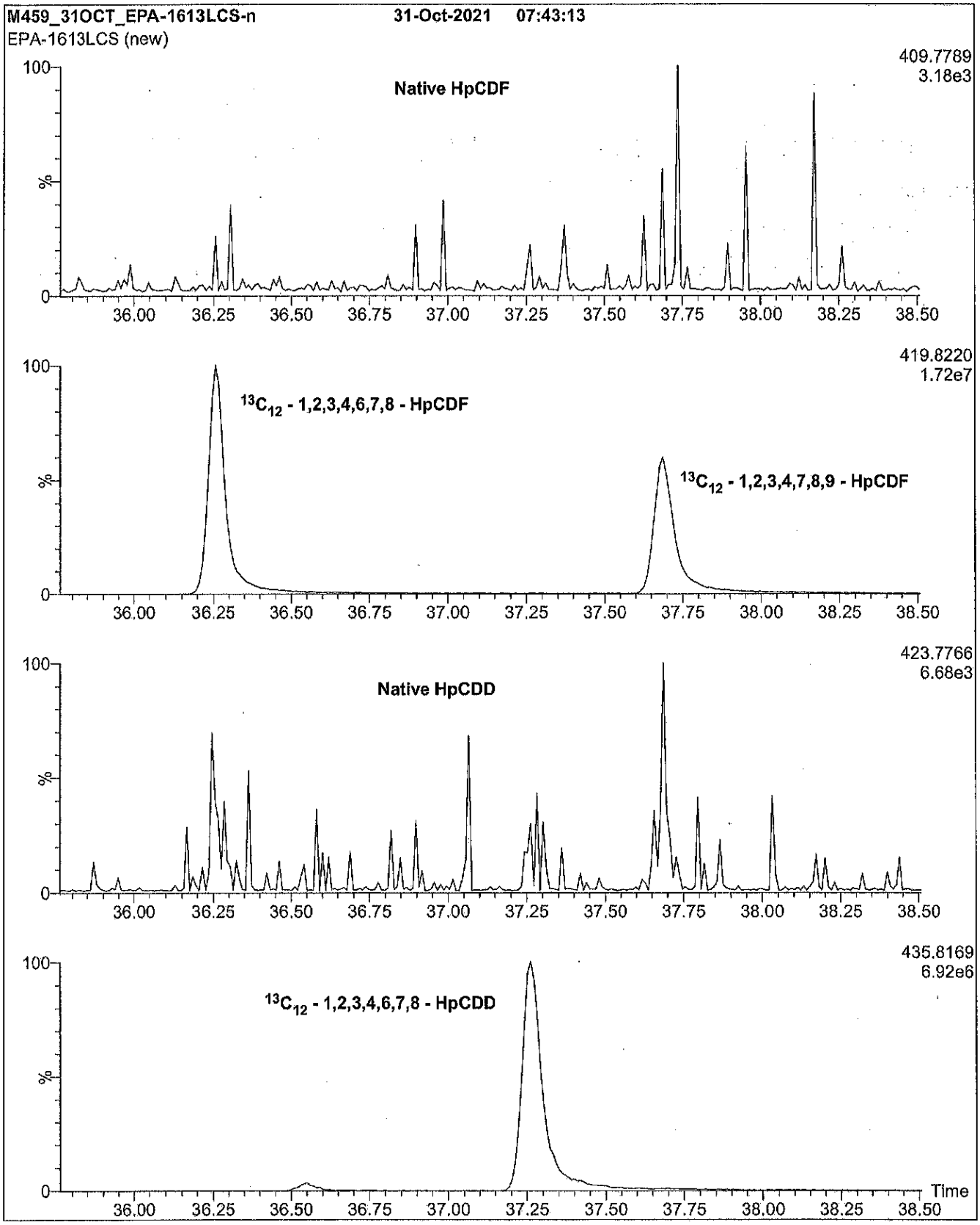
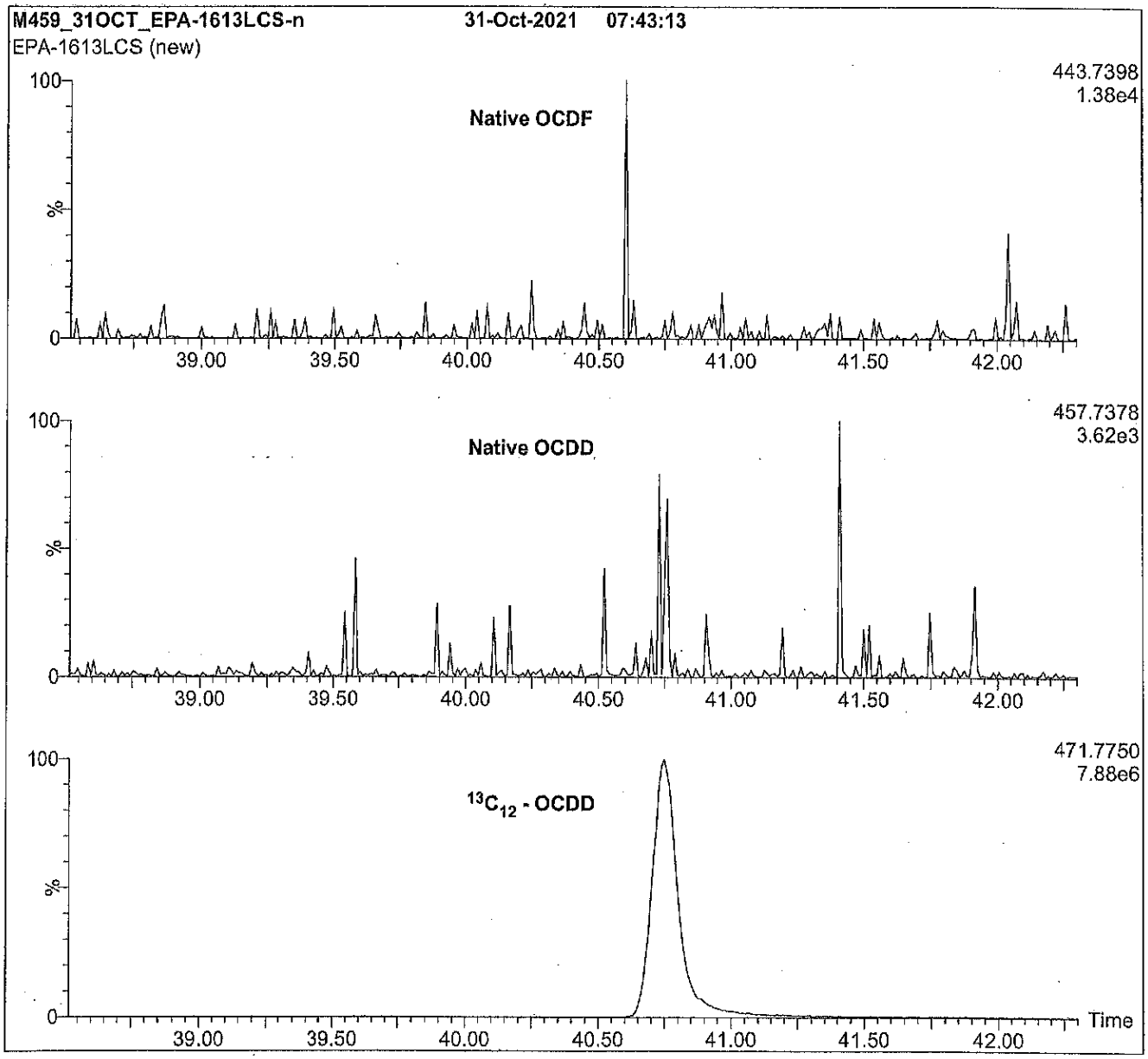


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

K9821

CS3WT

Calibration and Verification Solution (EPA-1613CS3) combined with Window Defining and 2,3,7,8-TCDD Resolution Testing Congeners

PRODUCT CODE:	CS3WT
LOT NUMBER:	CS3WT1021
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	11/01/2021
LAST TESTED: (mm/dd/yyyy)	11/02/2021
EXPIRY DATE: (mm/dd/yyyy)	11/02/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

CS3WT is a solution/mixture of native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$) polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Tables A and B.

CS3WT is an HRGC/HRMS calibration solution that was designed and prepared to be used according to U.S. EPA Method 1613, Revision B, in place of EPA-1613CS3 (lot: 13CS31021). Additionally, it contains the PCDD and PCDF isomers required to set retention time windows as well as test and establish isomer specificity for 2,3,7,8-TCDD on a DB-5 (or equivalent) capillary column.

The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-($^{37}Cl_4$)tetrachlorodibenzo-*p*-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%. The individual native 2,3,7,8-substituted PCDD and PCDF congeners all have chemical purities of >98%; the other congeners (window defining and resolution testing) should only be considered semi-quantitative.

This current lot of CS3WT is to be used with the 1613 calibration solutions having the following lot numbers:

PRODUCT CODE	LOT NUMBER
EPA-1613CS1	13CS11021
EPA-1613CS2	13CS21021
EPA-1613CS3	13CS31021
EPA-1613CS4	13CS41021
EPA-1613CS5	13CS51021
EPA-1613CSL	13CSL1021
EPA-1613CS0.5	13CS0.51021

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) has been assigned to the quantitative components in this product. A maximum combined percent relative uncertainty of ±20% has been assigned to the semi-quantitative components in this product.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **CS3WT; Quantitative Components and Concentrations (ng/mL, ± 5%, in nonane/4.5% toluene)**

Compound		Acronym	CAS #	Concentration (ng/mL)
Native PCDDs:	**Designation[a]**			
2,3,7,8-Tetrachlorodibenzo-*p*-dioxin		2,3,7,8-TCDD	1746-01-6	10.0
1,2,3,7,8-Pentachlorodibenzo-*p*-dioxin		1,2,3,7,8-PeCDD	40321-76-4	50.0
1,2,3,4,7,8-Hexachlorodibenzo-*p*-dioxin		1,2,3,4,7,8-HxCDD	39227-28-6	50.0
1,2,3,6,7,8-Hexachlorodibenzo-*p*-dioxin		1,2,3,6,7,8-HxCDD	57653-85-7	50.0
1,2,3,7,8,9-Hexachlorodibenzo-*p*-dioxin	Last HxCDD[b]	1,2,3,7,8,9-HxCDD	19408-74-3	50.0
1,2,3,4,6,7,8-Heptachlorodibenzo-*p*-dioxin	Last HpCDD	1,2,3,4,6,7,8-HpCDD	35822-46-9	50.0
Octachlorodibenzo-*p*-dioxin		OCDD	3268-87-9	100
Native PCDFs:	**Designation[a]**			
2,3,7,8-Tetrachlorodibenzofuran		2,3,7,8-TCDF	51207-31-9	10.0
1,2,3,7,8-Pentachlorodibenzofuran		1,2,3,7,8-PeCDF	57117-41-6	50.0
2,3,4,7,8-Pentachlorodibenzofuran		2,3,4,7,8-PeCDF	57117-31-4	50.0
1,2,3,4,7,8-Hexachlorodibenzofuran		1,2,3,4,7,8-HxCDF	70648-26-9	50.0
1,2,3,6,7,8-Hexachlorodibenzofuran		1,2,3,6,7,8-HxCDF	57117-44-9	50.0
1,2,3,7,8,9-Hexachlorodibenzofuran		1,2,3,7,8,9-HxCDF	72918-21-9	50.0
2,3,4,6,7,8-Hexachlorodibenzofuran		2,3,4,6,7,8-HxCDF	60851-34-5	50.0
1,2,3,4,6,7,8-Heptachlorodibenzofuran	First HpCDF[c]	1,2,3,4,6,7,8-HpCDF	67562-39-4	50.0
1,2,3,4,7,8,9-Heptachlorodibenzofuran	Last HpCDF	1,2,3,4,7,8,9-HpCDF	55673-89-7	50.0
Octachlorodibenzofuran		OCDF	39001-02-0	100
Mass-Labelled PCDDs:				
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-2,3,7,8-TCDD	76523-40-5	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,7,8-PeCDD	109719-79-1	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	109719-80-4	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	109719-81-5	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	109719-83-7	100
Octachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-OCDD	114423-97-1	200
Mass-Labelled PCDFs:				
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-2,3,7,8-TCDF	89059-46-1	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,7,8-PeCDF	109719-77-9	100
2,3,4,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-2,3,4,7,8-PeCDF	116843-02-8	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	114423-98-2	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	116843-03-9	100
1,2,3,7,8,9-Hexachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	116843-04-0	100
2,3,4,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	116843-05-1	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	109719-84-8	100
1,2,3,4,7,8,9-Heptachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	109719-94-0	100
Cleanup Standard:				
2,3,7,8-($^{37}Cl_4$)Tetrachlorodibenzo-*p*-dioxin		$^{37}Cl_4$-2,3,7,8-TCDD	85508-50-5	10.0
Internal Standards:				
1,2,3,4-Tetrachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,4-TCDD	114423-99-3	100
1,2,3,7,8,9-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	109719-82-6	100

[a] First/Last eluting isomer for the specified homologue group (see Table B for additional Window Definers).
[b, c] – see Table B for footnote.

Table B: **CS3WT; Semi-Quantitative Components and Concentrations (ng/mL, ± 20%, in nonane/4.5% toluene)**

Compound		Acronym	CAS #	Concentration (ng/mL)
PCDD Window Definers:	**Designation[a]**			
1,3,6,8-Tetrachlorodibenzo-*p*-dioxin	First TCDD	1,3,6,8-TCDD	33423-92-6	10.0
1,2,8,9-Tetrachlorodibenzo-*p*-dioxin	Last TCDD	1,2,8,9-TCDD	62470-54-6	10.0
1,2,4,6,8-/1,2,4,7,9-Pentachlorodibenzo-*p*-dioxin	First PeCDD	1,2,4,6,8-PeCDD 1,2,4,7,9-PeCDD	71998-76-0 82291-37-0	50.0[d]
1,2,3,8,9-Pentachlorodibenzo-*p*-dioxin	Last PeCDD	1,2,3,8,9-PeCDD	71925-18-3	50.0
1,2,4,6,7,9-Hexachlorodibenzo-*p*-dioxin	First HxCDD	1,2,4,6,7,9-HxCDD	39227-62-8	50.0
1,2,3,4,6,7,9-Heptachlorodibenzo-*p*-dioxin	First HpCDD	1,2,3,4,6,7,9-HpCDD	58200-70-7	50.0
PCDF Window Definers:	**Designation[a]**			
1,3,6,8-Tetrachlorodibenzofuran	First TCDF	1,3,6,8-TCDF	71998-72-6	10.0
1,2,8,9-Tetrachlorodibenzofuran	Last TCDF	1,2,8,9-TCDF	70648-22-5	10.0
1,3,4,6,8-Pentachlorodibenzofuran	First PeCDF	1,3,4,6,8-PeCDF	83704-55-6	50.0
1,2,3,8,9-Pentachlorodibenzofuran	Last PeCDF	1,2,3,8,9-PeCDF	83704-54-5	50.0
1,2,3,4,6,8-Hexachlorodibenzofuran	First HxCDF	1,2,3,4,6,8-HxCDF	69698-60-8	50.0
2,3,7,8-TCDD Resolution Testing Isomers:				
1,2,3,4-Tetrachlorodibenzo-*p*-dioxin		1,2,3,4-TCDD	30746-58-8	5.00
1,2,3,7-/1,2,3,8-Tetrachlorodibenzo-*p*-dioxin		1,2,3,7-TCDD 1,2,3,8-TCDD	67028-18-6 53555-02-5	5.00[d]
1,2,3,9-Tetrachlorodibenzo-*p*-dioxin		1,2,3,9-TCDD	71669-26-6	10.0

[a] First/Last eluting isomer for the specified homologue group (see Table A for additional Window Definers).

[b] 1,2,3,4,6,7-HxCDD (last eluting HxCDD) not included; coelutes with 1,2,3,7,8,9-HxCDD on a 60 m DB-5 column. Use 1,2,3,7,8,9-HxCDD (see Table A) and 1,2,3,4,6,7,9-HpCDD to approximate the end of the HxCDD window.

[c] 1,2,3,4,8,9-HxCDF (last eluting HxCDF) not included; can interfere with 1,2,3,7,8,9-HxCDF on a 60 m DB-5 column. Use 1,2,3,4,6,7,8-HpCDF (see Table A) to approximate the end of the HxCDF window.

[d] Total concentration of isomers.

Certified By: _____ **Date:** 11/05/2021 (mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

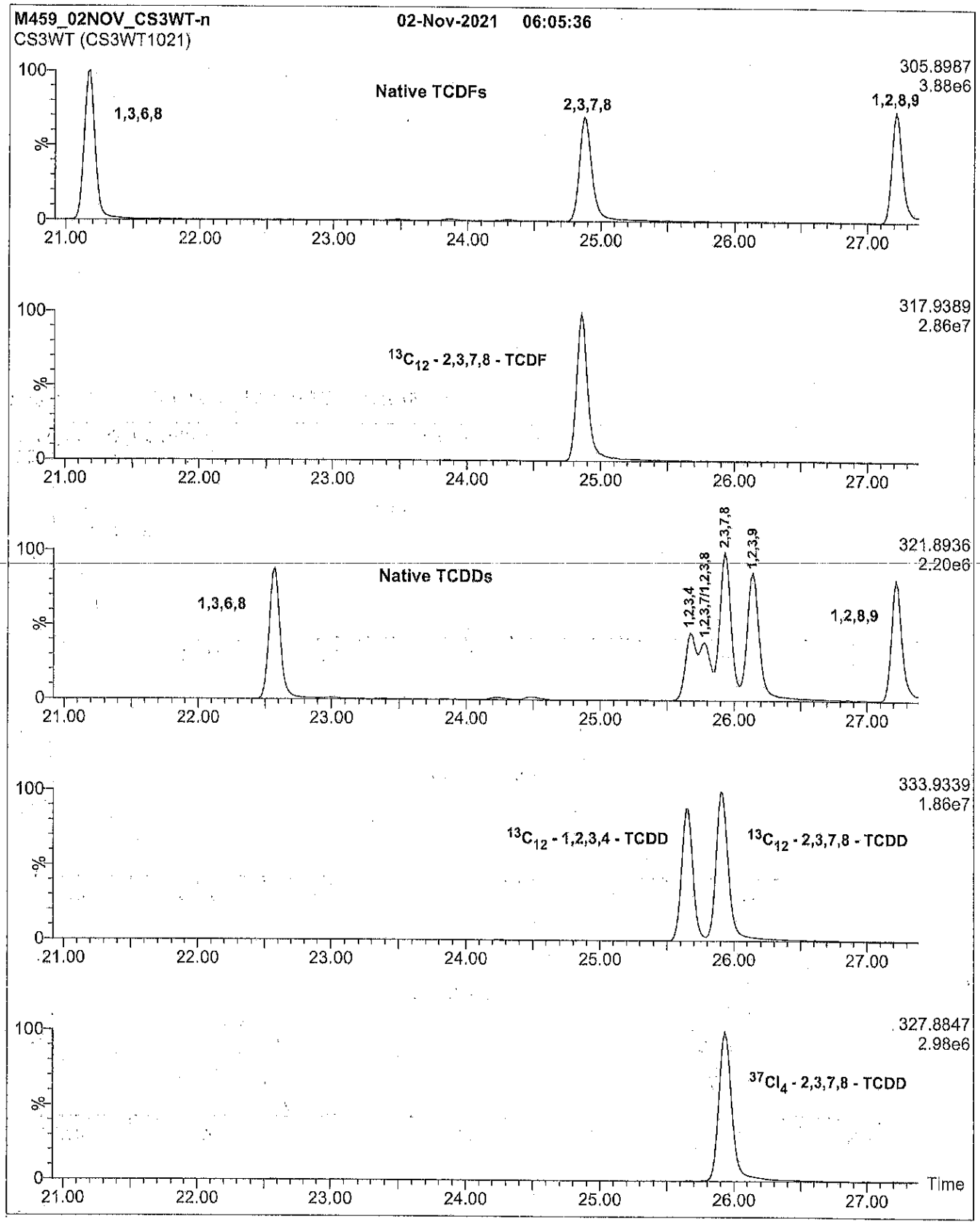


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

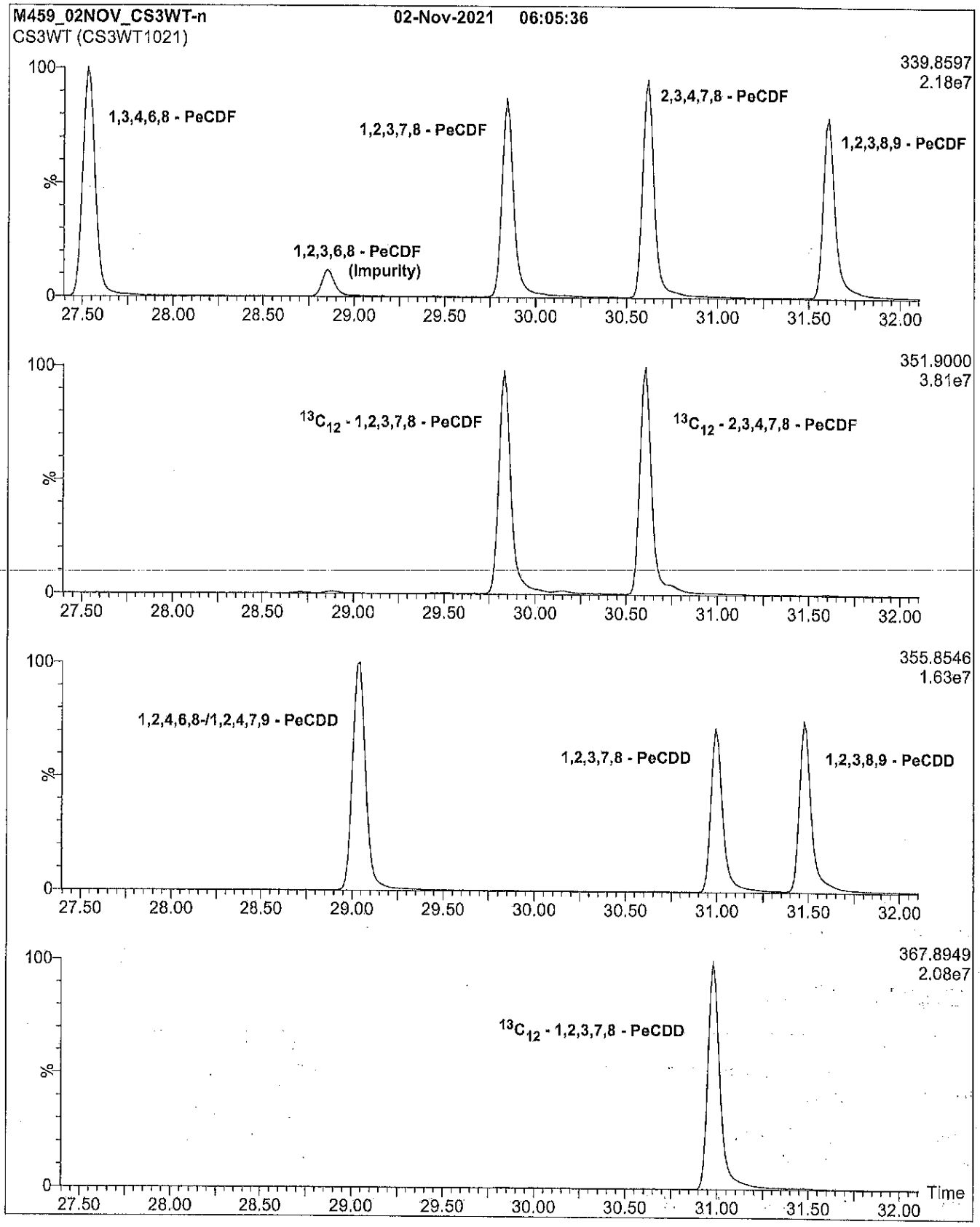


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

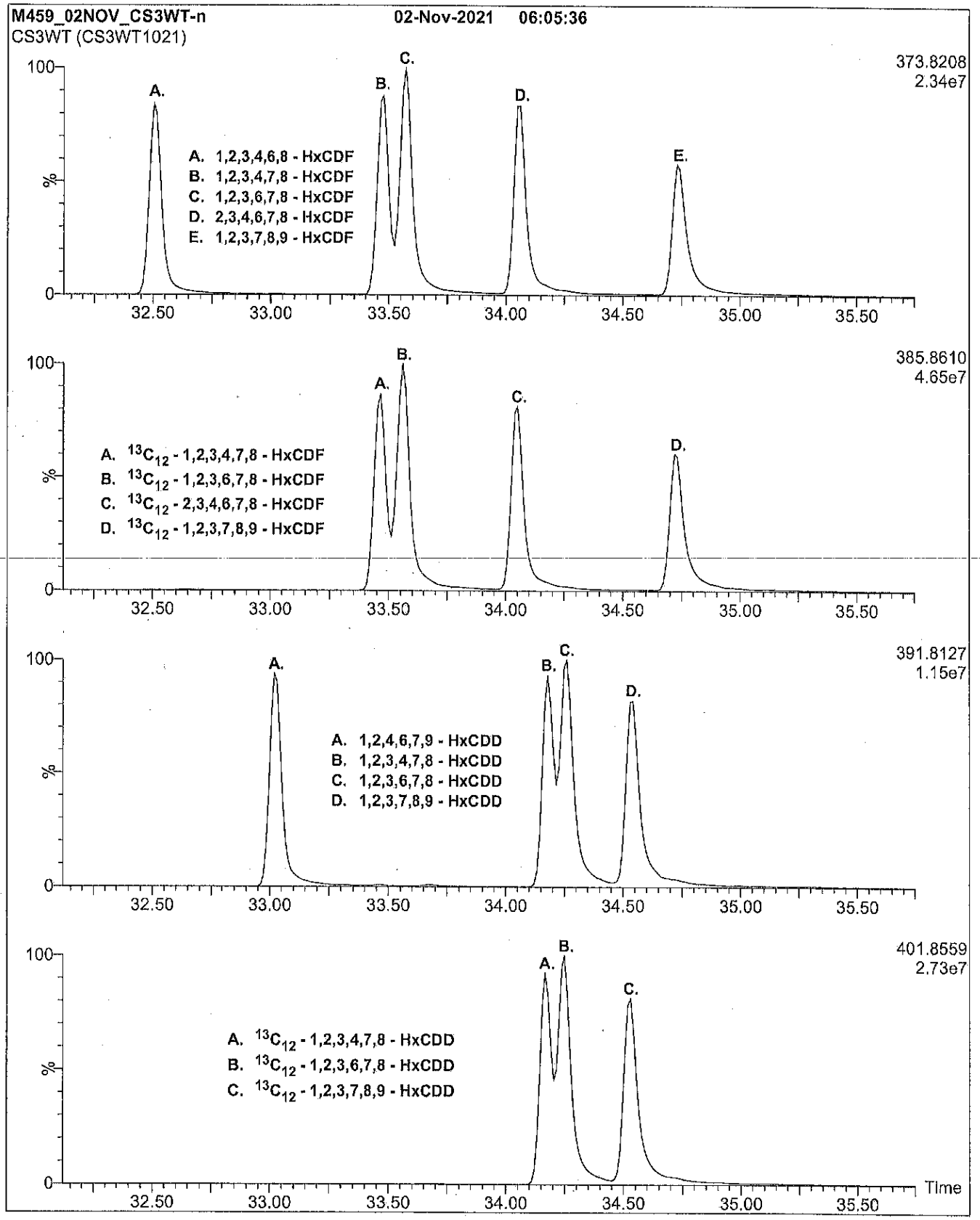


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

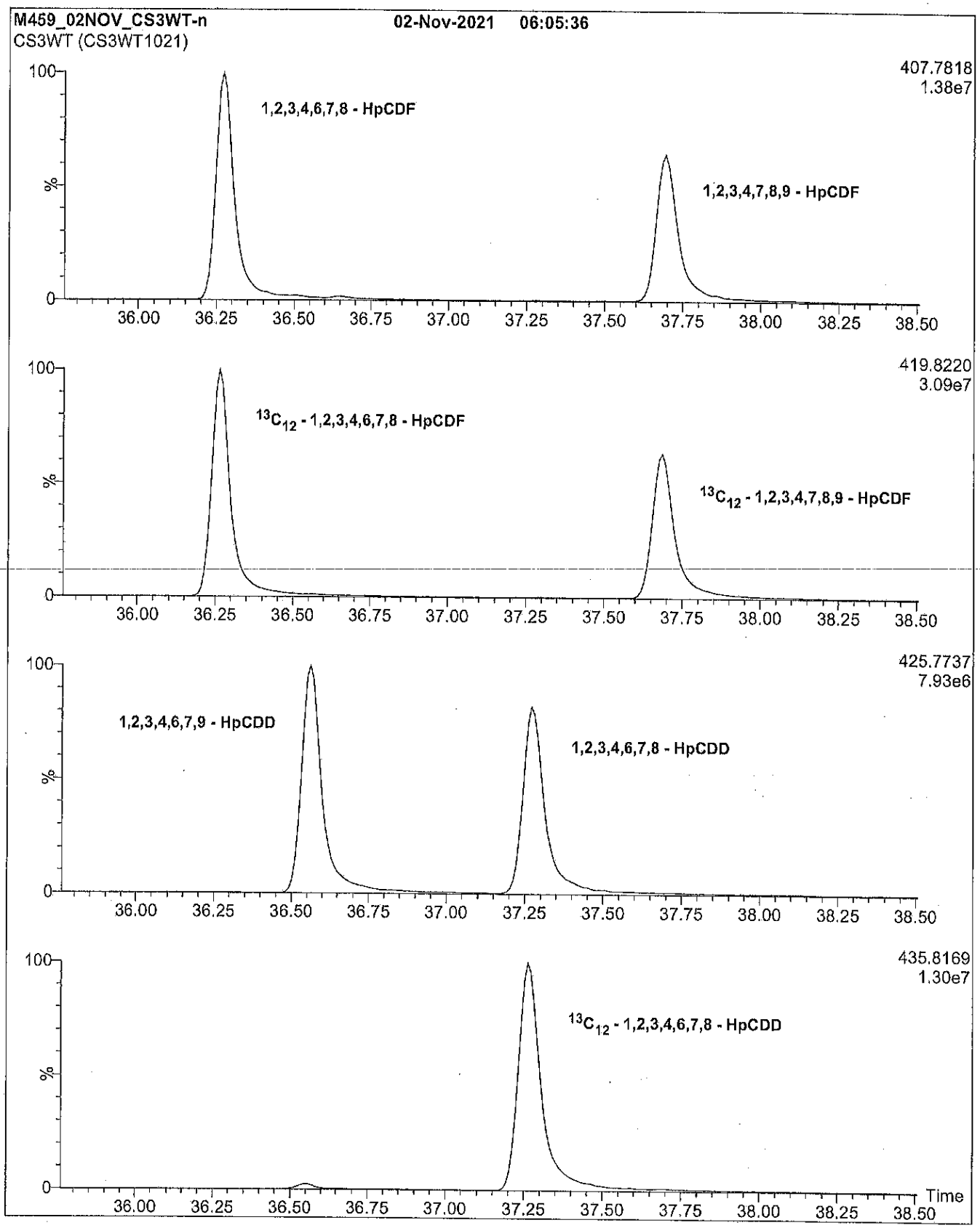
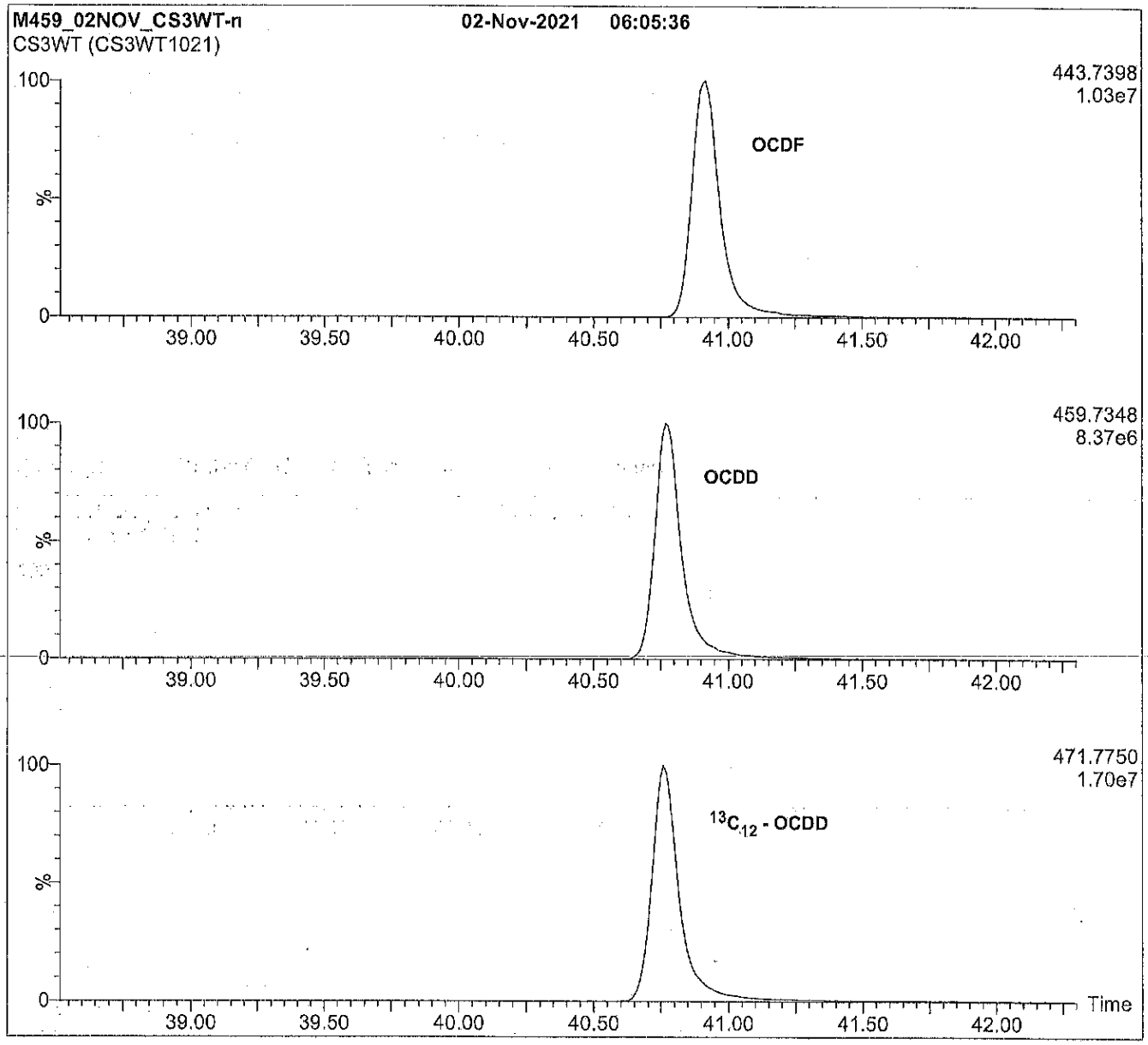


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613LCS

U.S. EPA Method 1613
Labelled Compound Stock Solution

PRODUCT CODE:	EPA-1613LCS
LOT NUMBER:	13LCS1021
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/29/2021
LAST TESTED: (mm/dd/yyyy)	10/31/2021
EXPIRY DATE: (mm/dd/yyyy)	10/31/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

K 9985 JK Reed 10/27/22

DESCRIPTION:

EPA-1613LCS is a solution/mixture of mass-labelled ($^{13}C_{12}$) polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613LCS was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots, x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Table A: **EPA-1613LCS; Components and Concentrations (ng/mL, ± 5% in nonane/3.2% toluene)**

Compound	Acronym	CAS #	Concentration (ng/mL)
Mass-Labelled PCDDs:			
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-2,3,7,8-TCDD	76523-40-5	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,7,8-PeCDD	109719-79-1	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	109719-80-4	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	109719-81-5	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	109719-83-7	100
Octachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-OCDD	114423-97-1	200
Mass-Labelled PCDFs:			
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,7,8-TCDF	89059-46-1	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,7,8-PeCDF	109719-77-9	100
2,3,4,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,4,7,8-PeCDF	116843-02-8	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	114423-98-2	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	116843-03-9	100
1,2,3,7,8,9-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	116843-04-0	100
2,3,4,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	116843-05-1	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	109719-84-8	100
1,2,3,4,7,8,9-Heptachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	109719-94-0	100

Certified By: _____ **Date:** 11/05/2021
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

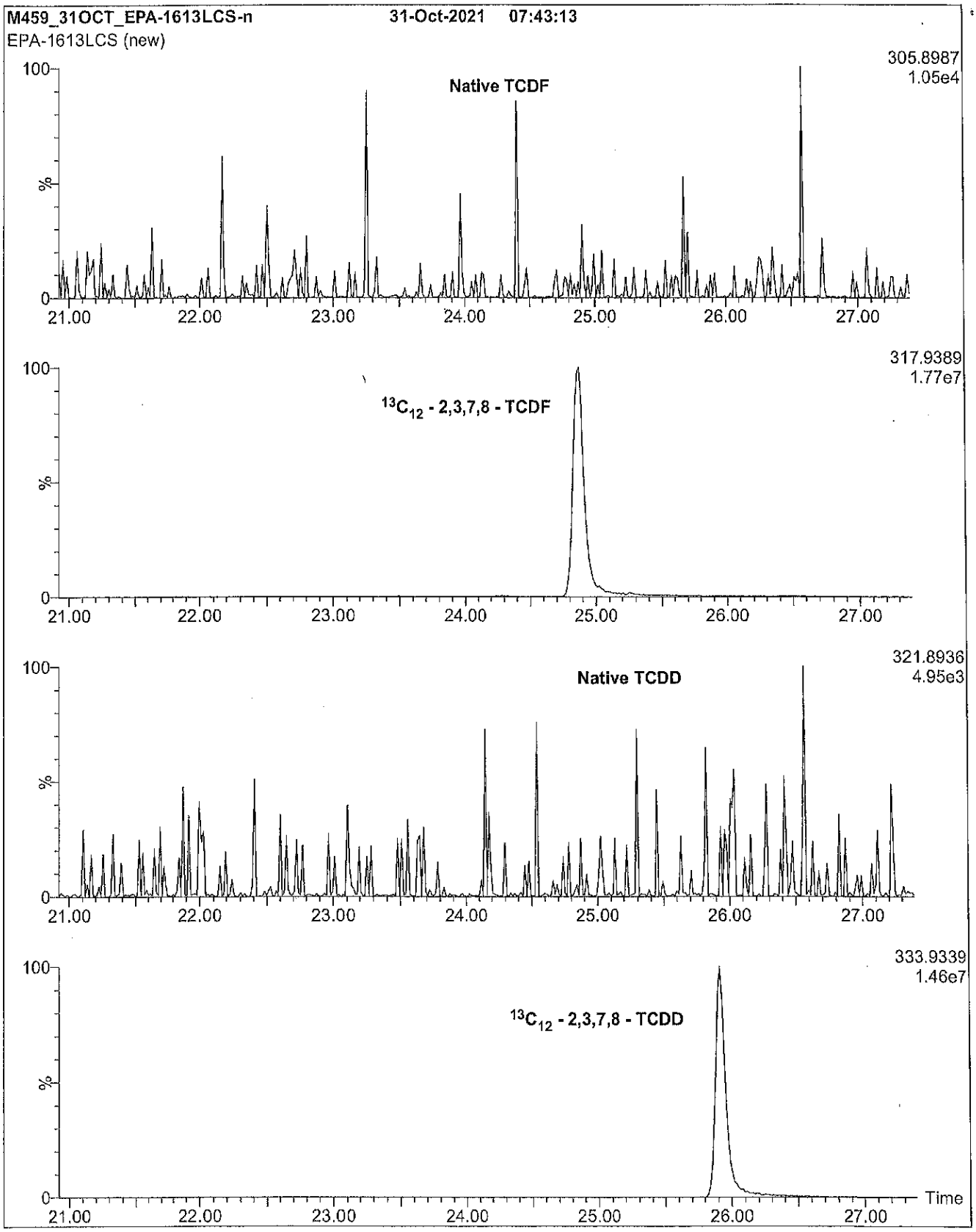


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

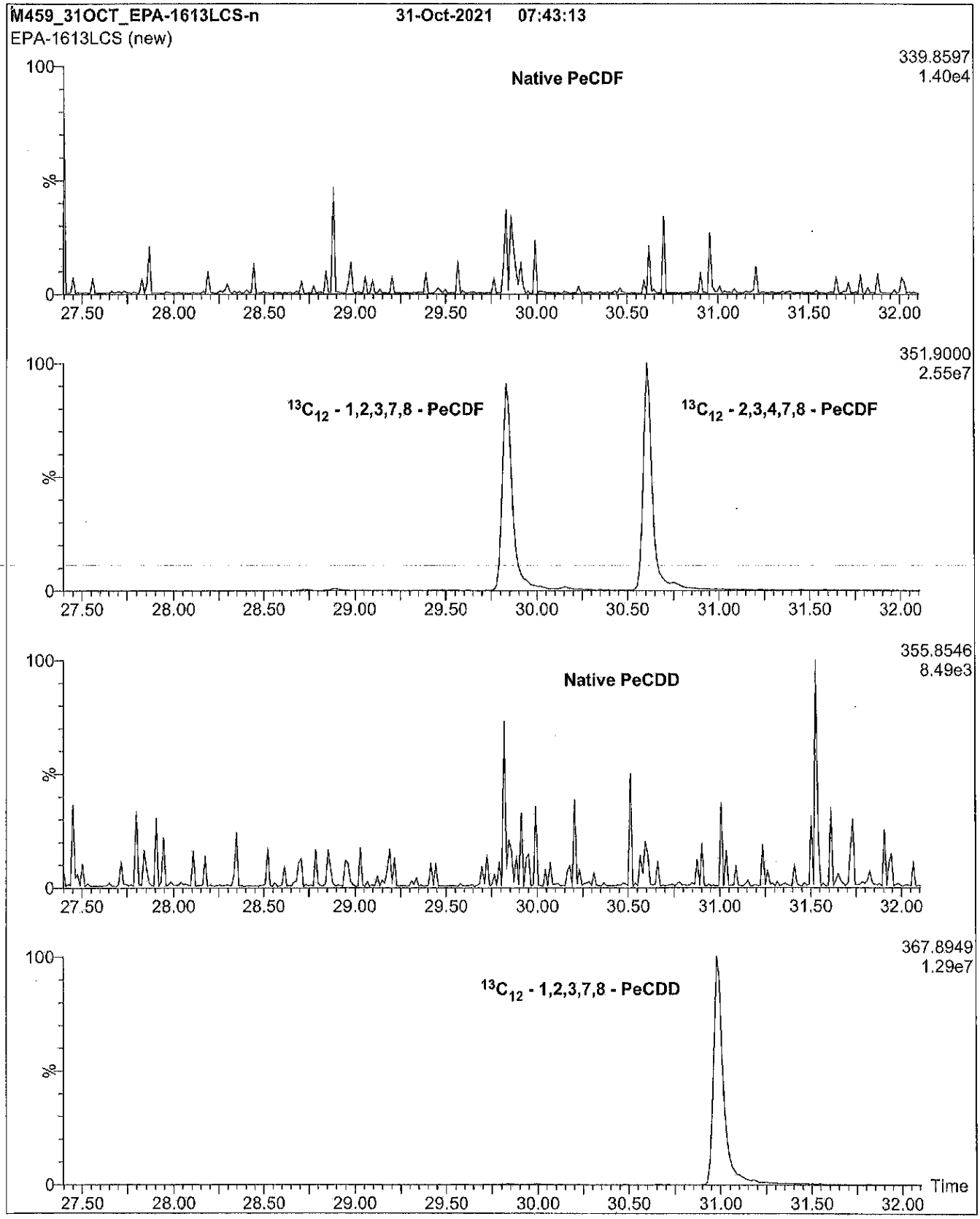


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

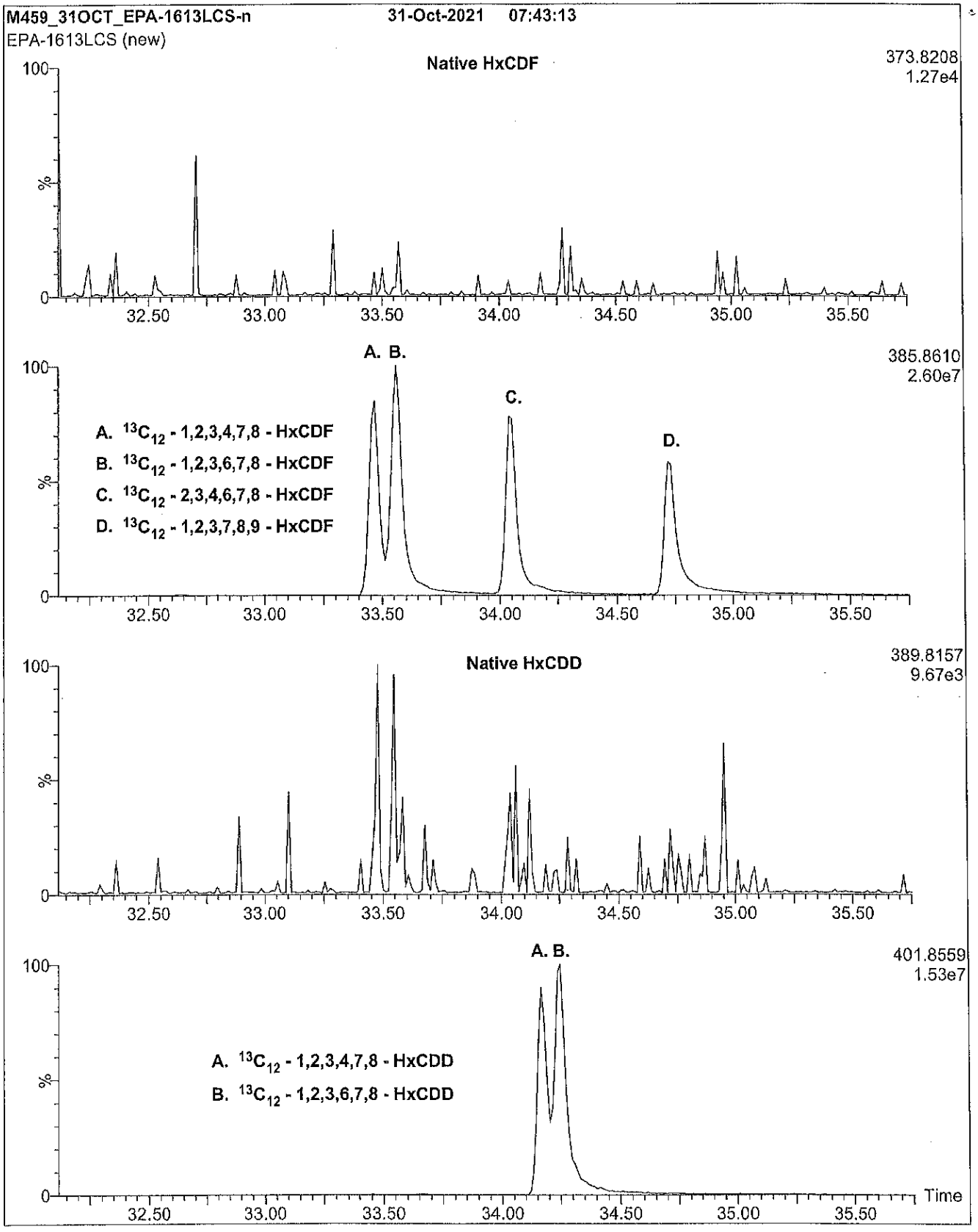


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

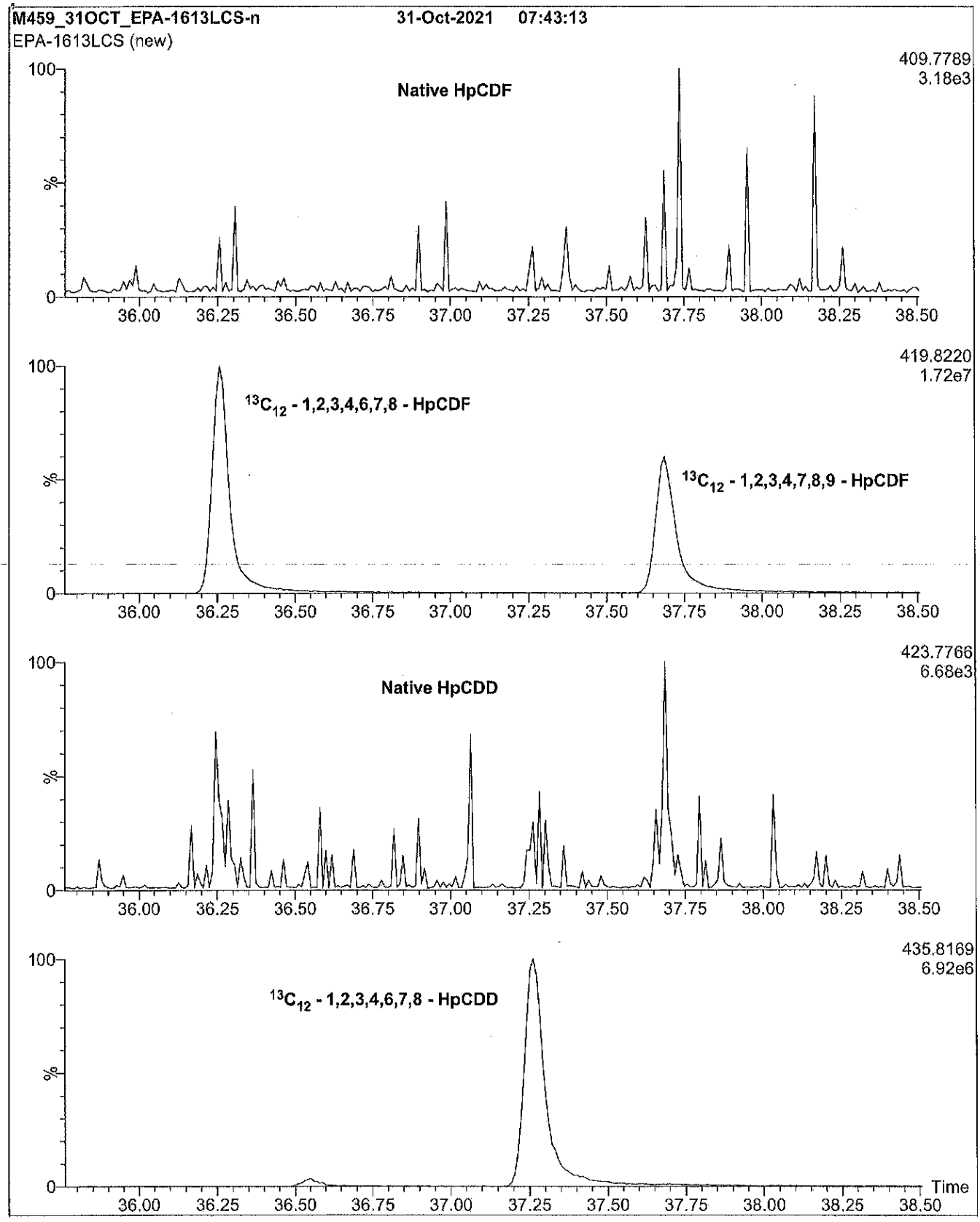
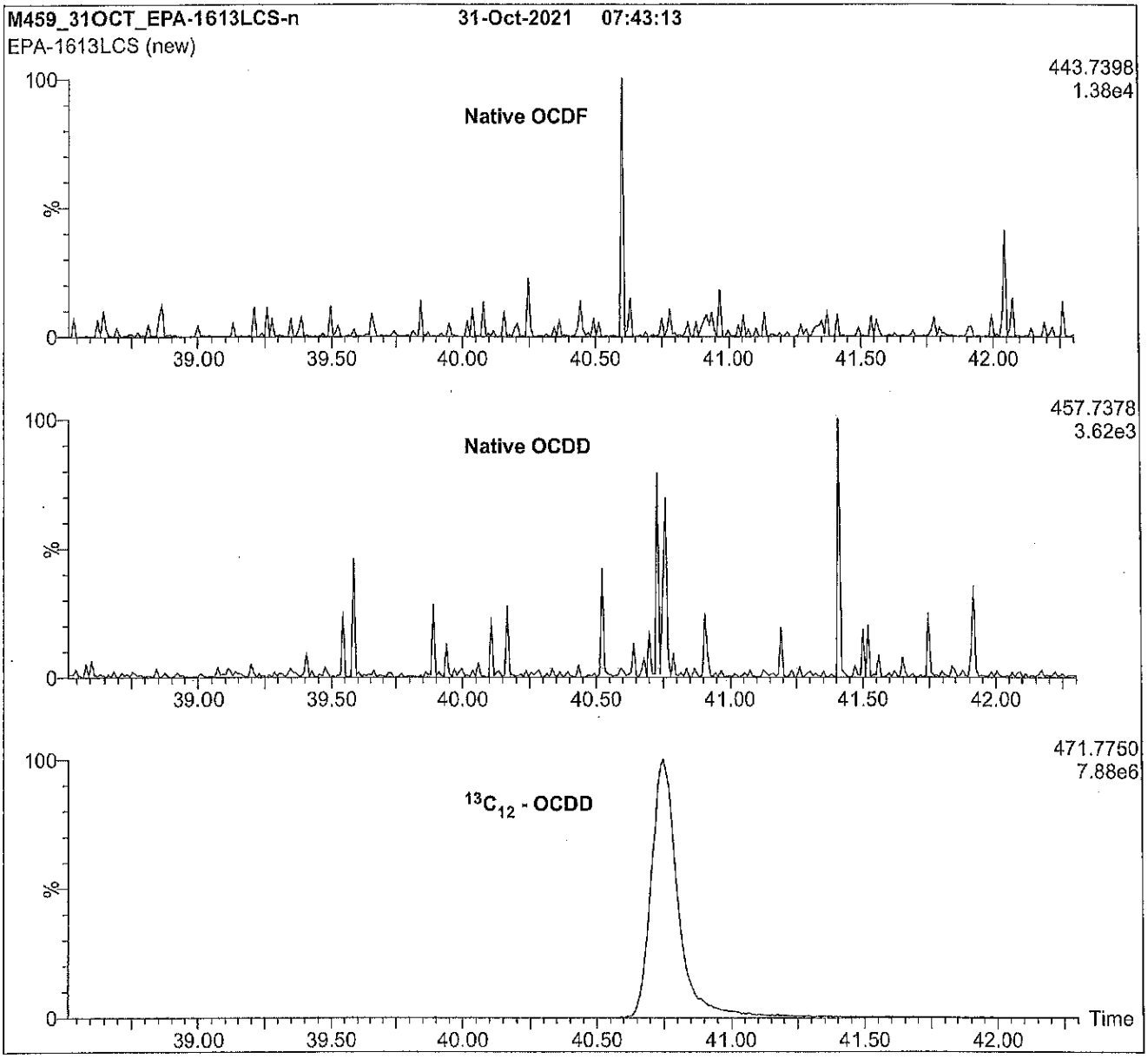


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

Recipient Copy

CHAIN-OF-CUSTODY RECORD

COC No. 15570

Order Number: CB014985

Date Shipped: 12/12/2022

AirBill No(s): 519204142631

From: QATS LABORATORY
2700 CHANDLER AVENUE, BLDG. B
LAS VEGAS, NV 89120
PHONE: 1-702-895-8712

To: SUE DUNNIHOO
ANALYTICAL RESOURCES INC.
4611 S. 134TH PLACE SUITE 100
TUKWILA WA 98168
250-695-6207

Sample ID	Sigma ID	Qty	Description/Remarks	→ Catalogue Number
KO1147 PSRM0168	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM
KO1147 PSRM0169	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM
KO1147 PSRM0171	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM

12/12/2022

PUGET SOUND SRM FOR DUWAMISH AOC4 PROJECT.

Please use the enclosed Sample Preparation Instructions. If catalogue number(s) are listed at the top of the Sample Preparation Instructions use the Sample Preparation Instructions with catalogue number(s) matching the catalogue number(s) of each of the samples listed above.

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	12/12/2022 (1400)	P Hilly [signature]	12/12/22 11:15
Custody Seal(s): Present/Absent	Remarks:		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

Report No. 00, 9/11/2014

SMP Version 3.3

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-IT1088

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-01 D	SDG:	23A0207
Sampled:	01/11/23 08:22	Prepared:	04/12/23 17:30	File ID:	XDT_m2230413-059
% Solids:	75.12	Preparation:	SWN EPA 3050B	Analyzed:	04/13/23 19:17
Batch:	BLD0243	Sequence:	SLD0219	Initial/Final:	1.022 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00041

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	2.44	20	0.05	0.26	

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Total Metals

LDW23-IT1089

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-02 D	SDG:	23A0207
Sampled:	01/11/23 08:42	Prepared:	04/12/23 17:30	File ID:	XDT_m2230413-057
% Solids:	78.98	Preparation:	SWN EPA 3050B	Analyzed:	04/13/23 19:09
Batch:	BLD0243	Sequence:	SLD0219	Initial/Final:	1.04 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00041

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	4.00	20	0.05	0.24	

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Total Metals

LDW23-IT1079

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-03 D	SDG:	23A0207
Sampled:	01/11/23 09:04	Prepared:	04/12/23 17:30	File ID:	XDT_m2230413-058
% Solids:	80.04	Preparation:	SWN EPA 3050B	Analyzed:	04/13/23 19:13
Batch:	BLD0243	Sequence:	SLD0219	Initial/Final:	1.051 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00041

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	5.03	20	0.05	0.24	

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Total Metals

LDW23-IT1080

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-04 D	SDG:	23A0207
Sampled:	01/11/23 09:24	Prepared:	04/12/23 17:30	File ID:	XDT_m2230413-067
% Solids:	73.44	Preparation:	SWN EPA 3050B	Analyzed:	04/13/23 19:53
Batch:	BLD0243	Sequence:	SLD0219	Initial/Final:	1.064 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00041

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	5.64	20	0.05	0.26	

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Total Metals

LDW23-IT1080-FD

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-05 D	SDG:	23A0207
Sampled:	01/11/23 09:24	Prepared:	04/12/23 17:30	File ID:	XDT_m2230413-068
% Solids:	73.50	Preparation:	SWN EPA 3050B	Analyzed:	04/13/23 19:57
Batch:	BLD0243	Sequence:	SLD0219	Initial/Final:	1.024 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00041

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	5.30	20	0.05	0.27	

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Total Metals

LDW23-IT1072

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-06 D	SDG:	23A0207
Sampled:	01/11/23 09:41	Prepared:	04/12/23 17:30	File ID:	XDT_m2230413-069
% Solids:	77.31	Preparation:	SWN EPA 3050B	Analyzed:	04/13/23 20:02
Batch:	BLD0243	Sequence:	SLD0219	Initial/Final:	1 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00041

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	2.51	20	0.05	0.26	

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Total Metals

LDW23-IT1081

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-07 D	SDG:	23A0207
Sampled:	01/11/23 10:15	Prepared:	04/12/23 17:30	File ID:	XDT_m2230413-070
% Solids:	80.18	Preparation:	SWN EPA 3050B	Analyzed:	04/13/23 20:06
Batch:	BLD0243	Sequence:	SLD0219	Initial/Final:	1.065 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00041

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	2.67	20	0.04	0.23	

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Total Metals

LDW23-IT1068

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-08 D	SDG:	23A0207
Sampled:	01/11/23 10:45	Prepared:	04/12/23 17:30	File ID:	XDT_m2230413-071
% Solids:	71.12	Preparation:	SWN EPA 3050B	Analyzed:	04/13/23 20:10
Batch:	BLD0243	Sequence:	SLD0219	Initial/Final:	1.065 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00041

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	3.84	20	0.05	0.26	

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Total Metals

LDW23-IT1062

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-09 D	SDG:	23A0207
Sampled:	01/11/23 11:03	Prepared:	04/12/23 17:30	File ID:	XDT_m2230413-072
% Solids:	75.58	Preparation:	SWN EPA 3050B	Analyzed:	04/13/23 20:14
Batch:	BLD0243	Sequence:	SLD0219	Initial/Final:	1.056 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00041

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	5.69	20	0.05	0.25	

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Total Metals

LDW23-IT1097

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-10 D	SDG:	23A0207
Sampled:	01/11/23 11:32	Prepared:	05/18/23 15:58	File ID:	XDT_m1230519-055
% Solids:	72.64	Preparation:	SWN EPA 3050B	Analyzed:	05/19/23 18:32
Batch:	BLE0306	Sequence:	SLE0358	Initial/Final:	1.029 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00066

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	8.85	20	0.05	0.27	

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Total Metals

LDW23-IT1078

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-15 D	SDG:	23A0207
Sampled:	01/11/23 14:13	Prepared:	04/12/23 17:30	File ID:	XDT_m2230413-073
% Solids:	78.03	Preparation:	SWN EPA 3050B	Analyzed:	04/13/23 20:18
Batch:	BLD0243	Sequence:	SLD0219	Initial/Final:	1.026 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00041

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	10.1	20	0.05	0.25	

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Total Metals

LDW23-IT1201

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-16 D	SDG:	23A0207
Sampled:	01/11/23 14:54	Prepared:	04/12/23 17:30	File ID:	XDT_m2230413-074
% Solids:	63.26	Preparation:	SWN EPA 3050B	Analyzed:	04/13/23 20:22
Batch:	BLD0243	Sequence:	SLD0219	Initial/Final:	1.089 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00041

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	9.50	20	0.06	0.29	

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Total Metals

LDW23-IT1209

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-17 D	SDG:	23A0207
Sampled:	01/11/23 15:21	Prepared:	04/12/23 17:30	File ID:	XDT_m2230413-075
% Solids:	62.08	Preparation:	SWN EPA 3050B	Analyzed:	04/13/23 20:27
Batch:	BLD0243	Sequence:	SLD0219	Initial/Final:	1.017 g Wet / 50 mL
Instrument:	ICPMS2			Calibration:	GD00041

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	9.73	20	0.06	0.32	

PREPARATION BATCH SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLD0243 Batch Matrix: Solid
Preparation: SWN EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1088	23A0207-01	XDT_m2230413-059	04/12/23 17:30	
LDW23-IT1089	23A0207-02	XDT_m2230413-057	04/12/23 17:30	
LDW23-IT1079	23A0207-03	XDT_m2230413-058	04/12/23 17:30	
LDW23-IT1080	23A0207-04	XDT_m2230413-067	04/12/23 17:30	
LDW23-IT1080-FD	23A0207-05	XDT_m2230413-068	04/12/23 17:30	
LDW23-IT1072	23A0207-06	XDT_m2230413-069	04/12/23 17:30	
LDW23-IT1081	23A0207-07	XDT_m2230413-070	04/12/23 17:30	
LDW23-IT1068	23A0207-08	XDT_m2230413-071	04/12/23 17:30	
LDW23-IT1062	23A0207-09	XDT_m2230413-072	04/12/23 17:30	
LDW23-IT1078	23A0207-15	XDT_m2230413-073	04/12/23 17:30	
LDW23-IT1201	23A0207-16	XDT_m2230413-074	04/12/23 17:30	
LDW23-IT1209	23A0207-17	XDT_m2230413-075	04/12/23 17:30	
Blank	BLD0243-BLK1	XDT_m2230413-055	04/12/23 17:30	
LCS	BLD0243-BS1	XDT_m2230413-056	04/12/23 17:30	
LDW23-IT1088	BLD0243-DUP1	XDT_m2230413-060	04/12/23 17:30	
LDW23-IT1088	BLD0243-MS1	XDT_m2230413-061	04/12/23 17:30	
LDW23-IT1088	BLD0243-MSD1	XDT_m2230413-062	04/12/23 17:30	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: AR Date: 4/11/23 Time: 1400 - 1730 (04/11/23 - 04/12/23) Balance ID: BALIO

Matrix: SOIL Block ID: 3 Block Temp: 94°C Thermometer: 20-2

ARI Sample ID	Btl #	pH<2	Prep Code: SWN Initial Wt (g) Vol (mL)	Prep Code: SWN Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
23A207-01	D		1.022	50			
-02			1.040				
-03			1.051				
-04			1.064				
-05			1.024				
-06			1.000				
-07			1.065				
-08			1.065				
-09			1.056				
-15			1.026				
-16			1.089				
-17			1.07				
BLD243-blk	—		—				23A207-01
-bs	—		—				
-dup	—		1.025				
-MS	—		1.020				
-MSD	—		1.022				

MM 04/12/23

Chemical/Reagent ID:

HNO_3: L20918 1:1 HNO_3: L33165 HCl: — H_2O_2: K110560

Tube Lot#: 220117 Boiling Chip Lot#: — (DoD Only)

PREPARATION BATCH SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLE0306 Batch Matrix: Solid
Preparation: SWN EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1097	23A0207-10	XDT_m1230519-055	05/18/23 15:58	FROZEN VOLUME USED
Blank	BLE0306-BLK1	XDT_m1230519-051	05/18/23 15:58	
LCS	BLE0306-BS1	XDT_m1230519-052	05/18/23 15:58	

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Digestion Log

Analyst: AB Date: 05/18/23 Time: 1040-1558 Balance ID: BAL10

Matrix: Soil Block ID: 3 Block Temp: 92C Thermometer: 20-2

ARI Sample ID	Btl #	pH<2	Prep Code: SWN Initial Wt (g) Vol (mL)	Prep Code: SWN Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
23A0207-10	D		1.029	50			
23E0009-01			1.016				
-03			1.049				
-05			1.017				
-07			1.027				
-09			1.006				
BLE0306-BLK	—		—				
-BS	—		—				
-DUP	—		1.017				23E0009-01
-MS	—		1.016				
-MSD	—		1.015				

MJ 05/19/23

Chemical/Reagent ID:

HNO_3: L4188 1:1 HNO_3: L4200 HCl: — H_2O_2: K11056

Tube Lot#: 221104 Boiling Chip Lot#: — (DoD Only)

5061F
Version 007

Form I

METHOD BLANK DATA SHEET

EPA 6020B UCT-KED

Total Metals

Blank

Laboratory: Analytical Resources, LLC | SDG: 23A0207

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

Batch: BLD0243 | Laboratory ID: BLD0243-BLK1 | Prepared: 04/12/23 17:30

Matrix: Solid | Preparation: SWN EPA 3050B | Analyzed: 04/13/23 19:00

Sequence: SLD0219 | Calibration: GD00041 | Instrument: ICPMS2

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic-75a	ND	20	0.04	0.20	U

Form I

METHOD BLANK DATA SHEET

EPA 6020B UCT-KED

Total Metals

Blank

Laboratory: Analytical Resources, LLC | SDG: 23A0207

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

Batch: BLE0306 | Laboratory ID: BLE0306-BLK1 | Prepared: 05/18/23 15:58

Matrix: Solid | Preparation: SWN EPA 3050B | Analyzed: 05/19/23 18:13

Sequence: SLE0358 | Calibration: GE00066 | Instrument: ICPMS1

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic-75a	ND	20	0.04	0.20	U

LCS / LCS DUPLICATE RECOVERY

EPA 6020B UCT-KED

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	04/13/23 19:04
Batch:	BLD0243	Laboratory ID:	BLD0243-BS1
Preparation:	SWN EPA 3050B	Sequence Name:	LCS
Initial/Final:	1 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Arsenic-75a	25.0	24.0		96.1	80 - 120

* Indicates values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

EPA 6020B UCT-KED

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/19/23 18:18
Batch:	BLE0306	Laboratory ID:	BLE0306-BS1
Preparation:	SWN EPA 3050B	Sequence Name:	LCS
Initial/Final:	1 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Arsenic-75a	25.0	23.5		94.2	80 - 120

* Indicates values outside of QC limits

DUPLICATES

EPA 6020B UCT-KED

Total Metals

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLD0243-DUP1
Batch: BLD0243
Lab Source ID: 23A0207-01
Preparation: SWN EPA 3050B
Initial/Final: 1.025 g / 50 mL
Source Sample Name: LDW23-IT1088
% Solids: 75.12

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Arsenic-75a	20	2.44	2.47	1.19	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

MS / MS DUPLICATE RECOVERY

EPA 6020B UCT-KED

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	04/13/23 19:25
Batch:	BLD0243	Laboratory ID:	BLD0243-MS1
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike
Initial/Final:	1.02 g / 50 mL	Source Sample:	LDW23-IT1088

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Arsenic-75a	32.6	2.44		34.4		98.0	75 - 125

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY

EPA 6020B UCT-KED

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	04/13/23 19:30
Batch:	BLD0243	Laboratory ID:	BLD0243-MSD1
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike Dup
Initial/Final:	1.022 g / 50 mL	Source Sample:	LDW23-IT1088

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Arsenic-75a	32.6	33.1		94.3	3.76	20	75 - 125

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GD00041	Instrument:	ICPMS2
Calibration Date:	04/13/2023 13:46		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Arsenic-75a	0	0	0.2	255	10	239.5	20	233.95	50	237.4	100	226.22

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC

Instrument: ICPMS2

Calibration: GD00041

Calibration Date: 4/13/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a	198.6783	49.2	0.9994		0.998	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS 02 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4/13/23 **Analyst:** SD **Sequence:** SLD0219 **Cal:** GD00041

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CAL1	L3725		
		-CAL2	L3806		
		-CAL3	L3807		
		-CAL4	L3808		
		-CAL5	L3944		
		-CAL6	L3809		
		-IBL1	—		
		-ICV1	L3575		
		-ICB1	L3725		
		-CCV1	L3944		
	✓	-CCB1			In-1 noisy
		-CCB1	L3725		
		-CRL1	L3806		
		-IFA1	L3578		Sc↑ V-1 & Cr^{53}↑
	✓	-IFA1			↓ ↓
		-IFB1	L3579		↓ Cr^{53}↑
		-HCV1	L3671		V, Cr^{52}, Ag, Sb^{121}, & Pb↑
		-HCV2	L3672		↓
		-IBL2			
		-IBL3			
		-CCV2			
		-CCB2			
	✓	-CAL1			REMOVED EVERYTHING BUT Ni, Cu, Zn, As, Cd, Pb
		-CCV3			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS 02 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4/13/23 **Analyst:** SD **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted. SD 4/13/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCB3			
		BLD03416-BLK1	REN		NO Pb
		↓ -BS1	↓		↓
	✓	BLD0292-BLK2			
	↓	↓ -BS2			
		23D0259-01		5	No Pb
		23D0273-01		2	Zn↑ ↓ Zn NR
		↓ -01RE1		10	Zn ONLY
ER→23		23D0120-01		2	No Pb
	✓	23D0219-01		↓	↓
	↓	23D0228-01	↓	5	
		SEQ-CCV4			Pb↑
		↓ -CCB4			
		23D0142-01	REN		No Pb
142→143		23D0143 -03			
		23D0143-06			
		23D0207-01		10	Zn↑ No Pb; Zn NR
D207→ D0207		↓ -01RE1		50	Zn ONLY
		23D0208-01		10	Zn↑ No Pb, Zn
		BLD03416-DUP1		↓	↓
		↓ -MS1	↓	↓	↓ Ni 3xR↓ Cu STL
		SEQ-IBL4			
		↓ -CCV5			
		↓ -CCB5			

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ICP/MS 02 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4/13/23 **Analyst:** SD **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted. SD 4/13/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		~~BLD0243-BL4~~	SWN	20	
		↓ -BS1			
		23A0207-02			
		↓ -03			
		↓ -01			
		BLD0243-DUP1			
		↓ -MS1			
		↓ -MSD1			
		↓ -PS1	↓	↓	
		SEQ-IBL5			
		↓ -CCV6			
		↓ -CCB6			
		23A0207-04	SWN	20	
		↓ -05			
		↓ -06			
		↓ -07			
		↓ -08			
		↓ -09			
		↓ -15			
		↓ -16			
		↓ -17	↓	↓	
		SEQ-IBL6			
		↓ -CCV7			
		↓ -CCB7			

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ICP/MS 02 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 4/13/23 **Analyst:** SD **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BLD0177-BLK1	REN		
		↓ -BS1	↓		
		BLD0178-BLK1			
		↓ -BS1			
		23C0578-05			
		BLD0177-SRL1		5	
		23C0578-04			
		BLD0177-DUP1			
		↓ -MS1			
		↓ -PS1	↓		
		SEQ-CCV8			
		↓ -CCB8			
		BLD0231-BLK1	REN		
		↓ -BS1	↓		
		23C0580-04			
		↓ -05	↓		
		↓ -07	↓		
		BLD0178-SRL1		5	
		23C0578-07			
		BLD0178-DUP1			
		↓ -MS1			
		↓ -PS1	↓		
		SEQ-CCV9			
		↓ -CCB9			
		RINSE/DI			

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Thursday, April 13, 2023 12:08:10
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.5680
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	5903.9	5896.268	107.343	1.8	Standard
	In	114.9	66431.8	-438661.246	1215.266	0.3	Standard
	U	238.1	46448.4	46448.391	294.288	0.6	Standard
⌈	CeO	155.9	1380.1	0.020	0.001	3.1	Standard
| >	Ce	139.9	67609.3	67609.342	152.200	0.2	Standard
⌊	Ce++	70.0	1558.8	0.023	0.001	3.3	Standard
	Bkgd	220.0	0.2	0.167	0.118	70.7	Standard

Current Conditions File Data

Current Value	Description
1.05	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-11.25	Deflector Voltage
1600.00	ICP RF Power
-1750.00	Analog Stage Voltage
1650.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-8.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.05	DRC Mode NEB
-10.00	DRC Mode QRO
-3.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-16.50	KED Mode CRO
-12.00	KED Mode QRO
-4.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
5.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Thursday, April 13, 2023 12:16:45
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.5687
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	5538.9	5538.941	132.521	2.4	Standard
	In	114.9	64958.4	64958.430	667.073	1.0	Standard
	U	238.1	44735.2	44735.202	201.909	0.5	Standard
⎡	CeO	155.9	1291.5	0.018	0.000	2.2	Standard
⎢>	Ce	139.9	71765.0	71765.012	480.273	0.7	Standard
⎣	Ce++	70.0	1313.6	0.018	0.000	1.6	Standard
	Bkgd	220.0	0.2	0.200	0.183	91.3	Standard

Current Conditions File Data

Current Value	Description
1.04	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-11.25	Deflector Voltage
1600.00	ICP RF Power
-1750.00	Analog Stage Voltage
1650.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-8.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.04	DRC Mode NEB
-10.00	DRC Mode QRO
-3.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-16.50	KED Mode CRO
-12.00	KED Mode QRO
-4.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
5.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 4/13/2023 12:08:08 PM
End Time: 4/13/2023 12:18:49 PM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 5903.89
Obtained Intensity (In 115): 66431.81
Obtained Intensity (U 238): 46448.39
Obtained Intensity (Bkgd 220): 0.17
Obtained Formula (Ce++ 70 / Ce 140): 0.023 (=1558.82 / 67609.34)
Obtained Formula (CeO 156 / Ce 140): 0.020 (=1380.07 / 67609.34)
Obtained RSD (Be 9): 0.0182
Obtained RSD (In 115): 0.0028
Obtained RSD (U 238): 0.0063

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.63 mm	0.52 mm	68964.06

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.04
Obtained Intensity (In 115): 58776.67
Obtained Formula (CeO 156 / Ce 140): 0.0224 (=1387.07 / 61818.46)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.699)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.689)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.720)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.700)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.991; Intercept = -11.82

KED Mode QID - Optimum value(s): Correlation Coefficient = 0.999; Intercept = -14.09

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 5538.94
Obtained Intensity (In 115): 64958.43
Obtained Intensity (U 238): 44735.20
Obtained Intensity (Bkgd 220): 0.20
Obtained Formula (Ce++ 70 / Ce 140): 0.018 (=1313.59 / 71765.01)
Obtained Formula (CeO 156 / Ce 140): 0.018 (=1291.46 / 71765.01)
Obtained RSD (Be 9): 0.0239
Obtained RSD (In 115): 0.0103
Obtained RSD (U 238): 0.0045

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 4/13/2023 12:08:08 PM

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000
		Intensity Criterion: In 115 > 40000
		Intensity Criterion: U 238 > 30000
		Intensity Criterion: Bkgd 220 <= 1
		Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
		Formula Criterion: CeO 156 / Ce 140 <= 0.025
		RSD Criterion: Be 9.0122 < 0.05
		RSD Criterion: In 114.904 < 0.05
		RSD Criterion: U 238.05 < 0.05

	Optimization Results:
	Initial Try
		Obtained Intensity (Be 9): 5903.89
		Obtained Intensity (In 115): 66431.81
		Obtained Intensity (U 238): 46448.39
		Obtained Intensity (Bkgd 220): 0.17
		Obtained Formula (Ce++ 70 / Ce 140): 0.023 (=1558.82 / 67609.34)
		Obtained Formula (CeO 156 / Ce 140): 0.020 (=1380.07 / 67609.34)
		Obtained RSD (Be 9): 0.0182
		Obtained RSD (In 115): 0.0028
		Obtained RSD (U 238): 0.0063

[Passed] Optimum value(s): N/A

Torch Alignment
	Optimization Settings:
		Method: Torch Alignment.mth.
		Intensity Criterion: In 115 Maximum

	Optimization Results:
		Vertical	Horizontal	Intensity
[Passed]	0.63 mm	0.52 mm	68964.06

Nebulizer Gas Flow STD/KED [NEB]
	Optimization Settings:
		Method: Optimize.mth.
			Initial Try - Start/End/Step: 1.02/1.06/0.01.
		Intensity Criterion: In 115 Maximum
		Formula Criterion: CeO 156 / Ce 140 <= 0.025

	Optimization Results:
	Initial Try

		Obtained Intensity (In 115): 58776.67
		Obtained Formula (CeO 156 / Ce 140): 0.0224 (=1387.07 / 61818.46)
[Passed] Optimum value(s): 1.04

Mass Calibration and Resolution
	Optimization Settings:
		Method: Tuning.mth.
		MassCal File: Default.tun
		Iterations: 6
		Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution
		Peak height (%) for Res. Opt.: 10

	Optimization Results:
	Initial Try
		Target/Obtained mass (7.016/6.975), Target/Obtained resolution (0.7/0.766) - <Target not achieved>
		Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.786) - <Target not achieved>
		Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.736) - <Target not achieved>
		Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.717)
		[Failed]
	Retry 1
		Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.699)
		Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.689)
		Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.720)
		Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.700)
[Passed] Optimum value(s): N/A

QID STD/DRC
	Optimization Settings:
		Method: QID Calibration.mth.
			Initial Try - Start/End/Step: -20/0/0.5.

	Optimization Results:
	Initial Try

  Optimum value(s): Correlation Coefficient = 0.991; Intercept = -11.82

	Analyte	Mass	Points	DAC	MaxIntensity

		Li	7	41	-12.5	24885.7
		Mg	24	41	-13	29514.5
		In	115	41	-9.5	66522.5
		Ce	140	41	-7.5	70935.7
		Pb	208	41	-7	27330.1
		U	238	41	-7	45945.8

KED Mode QID
	Optimization Settings:
		Method: QID Calibration.mth.
			Initial Try - Start/End/Step: -20/0/0.5.

	Optimization Results:
	Initial Try

  Optimum value(s): Correlation Coefficient = 0.999; Intercept = -14.09

	Analyte	Mass	Points	DAC	MaxIntensity

		Li	7	41	-13.5	16849.9
		Mg	24	41	-12.5	17434.6
		In	115	41	-9	42984.6
		Ce	140	41	-8.5	57820.8
		Pb	208	41	-6	26324.2
		U	238	41	-5.5	37645.5

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000
		Intensity Criterion: In 115 > 40000
		Intensity Criterion: U 238 > 30000
		Intensity Criterion: Bkgd 220 <= 1
		Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
		Formula Criterion: CeO 156 / Ce 140 <= 0.025
		RSD Criterion: Be 9.0122 < 0.05
		RSD Criterion: In 114.904 < 0.05
		RSD Criterion: U 238.05 < 0.05

	Optimization Results:
	Initial Try
		Obtained Intensity (Be 9): 5538.94
		Obtained Intensity (In 115): 64958.43
		Obtained Intensity (U 238): 44735.20
		Obtained Intensity (Bkgd 220): 0.20
		Obtained Formula (Ce++ 70 / Ce 140): 0.018 (=1313.59 / 71765.01)
		Obtained Formula (CeO 156 / Ce 140): 0.018 (=1291.46 / 71765.01)
		Obtained RSD (Be 9): 0.0239
		Obtained RSD (In 115): 0.0103
		Obtained RSD (U 238): 0.0045

[Passed] Optimum value(s): N/A

End Time: 4/13/2023 12:18:49 PM

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 13:46:04
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L				452600	4	Standard
⌊	**Be**	**9**		ug/L				3	50	Standard
	C	**13**		ug/L				24199	2	Standard
	Cl	**37**		ug/L				5164783	1	Standard
⌈>	**Sc**	**45**		ug/L				457113	0	Standard
|	**Na**	**23**		ug/L				24438	1	Standard
|	**V**	**51**		ug/L				6481	2	Standard
|	**V-1**	**51**		ug/L				139	4	Standard
|	**Cr**	**52**		ug/L				19269	1	Standard
|	**Cr**	**53**		ug/L				149	12	Standard
|	**Fe**	**54**		ug/L				62495	1	Standard
|	**Fe**	**57**		ug/L				17293	2	Standard
⌊	**Mn**	**55**		ug/L				672	1	Standard
⌈>	**Ge**	**72**		ug/L				32590	1	KED
|	**Co**	**59**		ug/L				16	35	KED
|	**Ni**	**60**		ug/L				2	114	KED
|	**Ni**	**62**		ug/L				1	86	KED
|	**Cu**	**63**		ug/L				37	39	KED
|	**Cu**	**65**		ug/L				20	39	KED
|	**Zn**	**66**		ug/L				17	37	KED
|	**Zn**	**67**		ug/L				5	78	KED
|	**As**	**75**		ug/L				5	31	KED
⌊	**Se**	**78**		ug/L				27	13	KED
	Y	**89**		ug/L				277213	2	Standard
	Kr	**83**		ug/L				45	25	Standard
⌈>	**In-1**	**115**		ug/L				10697	0	KED
|	**Mo**	**98**		ug/L				6	46	KED
|	**Cd**	**111**		ug/L				2	33	KED
⌊	**Cd**	**114**		ug/L				1	102	KED
⌈>	**In**	**115**		ug/L				419627	1	Standard
|	**Ag**	**107**		ug/L				27	10	Standard
|	**Sb**	**121**		ug/L				63	7	Standard
|	**Sb**	**123**		ug/L				41	14	Standard
|	**Ba**	**135**		ug/L				20	32	Standard
⌊	**Ba**	**137**		ug/L				13	51	Standard
⌈>	**Tb**	**159**		ug/L				693670	1	Standard
|	**Tl**	**205**		ug/L				217	6	Standard
⌊	**Pb**	**208**		ug/L				33	12	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 13:51:13
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			452600	468473	1	Standard
⌊	**Be**	**9**	**0.200**	ug/L	0.016	7	3	909	6	Standard
	C	**13**		ug/L			24199	25565	1	Standard
	Cl	**37**		ug/L			5164783	5352382	1	Standard
⌈>	**Sc**	**45**		ug/L			457113	469360	1	Standard
⌈	**Na**	**23**	**100.000**	ug/L	1.062	1	24438	2523249	1	Standard
⌊	**V**	**51**	**0.200**	ug/L	0.010	5	6481	10097	1	Standard
⌈	**V-1**	**51**	**0.200**	ug/L	0.003	1	139	3893	1	Standard
⌊	**Cr**	**52**	**0.500**	ug/L	0.029	5	19269	27134	0	Standard
⌈	**Cr**	**53**	**0.500**	ug/L	0.003	0	149	1082	1	Standard
⌊	**Fe**	**54**	**36.000**	ug/L	0.798	2	62495	106831	1	Standard
⌈	**Fe**	**57**	**36.000**	ug/L	1.703	4	17293	34303	2	Standard
⌊	**Mn**	**55**	**0.500**	ug/L	0.003	0	672	12219	0	Standard
⌈>	**Ge**	**72**		ug/L			32590	32193	5	KED
⌈	**Co**	**59**	**0.200**	ug/L	0.014	7	16	802	1	KED
⌊	**Ni**	**60**	**0.500**	ug/L	0.076	15	2	516	9	KED
⌈	**Ni**	**62**	**0.500**	ug/L	0.033	6	1	94	3	KED
⌊	**Cu**	**63**	**0.500**	ug/L	0.068	13	37	1655	7	KED
⌈	**Cu**	**65**	**0.500**	ug/L	0.025	4	20	805	1	KED
⌊	**Zn**	**66**	**6.000**	ug/L	0.423	7	17	2779	2	KED
⌈	**Zn**	**67**	**6.000**	ug/L	0.753	12	5	410	7	KED
⌊	**As**	**75**	**0.200**	ug/L	0.035	17	5	51	9	KED
⌈	**Se**	**78**	**0.500**	ug/L	0.144	28	27	40	5	KED
	Y	**89**		ug/L			277213	283878	0	Standard
	Kr	**83**		ug/L			45	48	8	Standard
⌈>	**In-1**	**115**		ug/L			10697	10827	0	KED
⌈	**Mo**	**98**	**0.200**	ug/L	0.014	7	6	218	6	KED
⌊	**Cd**	**111**	**0.100**	ug/L	0.013	12	2	27	11	KED
⌈	**Cd**	**114**	**0.100**	ug/L	0.004	3	1	90	3	KED
⌈>	**In**	**115**		ug/L			419627	423984	1	Standard
⌈	**Ag**	**107**	**0.200**	ug/L	0.007	3	27	2826	3	Standard
⌊	**Sb**	**121**	**0.200**	ug/L	0.006	2	63	2230	1	Standard
⌈	**Sb**	**123**	**0.200**	ug/L	0.001	0	41	1672	1	Standard
⌊	**Ba**	**135**	**0.500**	ug/L	0.027	5	20	1908	6	Standard
⌈	**Ba**	**137**	**0.500**	ug/L	0.020	3	13	3458	3	Standard
⌈>	**Tb**	**159**		ug/L			693670	707871	1	Standard
⌈	**Tl**	**205**	**0.200**	ug/L	0.004	2	217	6000	0	Standard
⌊	**Pb**	**208**	**0.100**	ug/L	0.002	1	33	3849	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 13:56:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			452600	463102	1	Standard
⌊	**Be**	**9**	**10.000**	ug/L	0.293	2	3	46358	1	Standard
	C	**13**		ug/L			24199	27008	3	Standard
	Cl	**37**		ug/L			5164783	5384824	1	Standard
⌈>	**Sc**	**45**		ug/L			457113	485867	0	Standard
⌈	**Na**	**23**	**999.962**	ug/L	8.922	0	24438	25787943	1	Standard
⌊	**V**	**51**	**10.000**	ug/L	0.095	0	6481	201991	1	Standard
⌈	**V-1**	**51**	**10.000**	ug/L	0.032	0	139	198272	0	Standard
⌊	**Cr**	**52**	**10.002**	ug/L	0.196	1	19269	185271	2	Standard
⌈	**Cr**	**53**	**10.000**	ug/L	0.100	0	149	19746	0	Standard
⌊	**Fe**	**54**	**1000.000**	ug/L	10.318	1	62495	1293323	0	Standard
⌈	**Fe**	**57**	**1000.045**	ug/L	23.080	2	17293	511387	2	Standard
⌊	**Mn**	**55**	**10.000**	ug/L	0.080	0	672	238375	0	Standard
⌈>	**Ge**	**72**		ug/L			32590	34611	0	KED
⌈	**Co**	**59**	**10.000**	ug/L	0.121	1	16	39586	0	KED
⌊	**Ni**	**60**	**10.001**	ug/L	0.349	3	2	11568	2	KED
⌈	**Ni**	**62**	**9.999**	ug/L	0.319	3	1	1922	3	KED
⌊	**Cu**	**63**	**9.999**	ug/L	0.226	2	37	33708	1	KED
⌈	**Cu**	**65**	**9.999**	ug/L	0.451	4	20	16496	4	KED
⌊	**Zn**	**66**	**9.975**	ug/L	0.250	2	17	4934	2	KED
⌈	**Zn**	**67**	**10.172**	ug/L	0.357	3	5	785	2	KED
⌊	**As**	**75**	**10.000**	ug/L	0.132	1	5	2395	1	KED
⌊	**Se**	**78**	**10.000**	ug/L	0.524	5	27	321	4	KED
	Y	**89**		ug/L			277213	293402	1	Standard
	Kr	**83**		ug/L			45	42	33	Standard
⌈>	**In-1**	**115**		ug/L			10697	11343	2	KED
⌈	**Mo**	**98**	**10.000**	ug/L	0.124	1	6	11303	3	KED
⌊	**Cd**	**111**	**10.000**	ug/L	0.300	3	2	3251	1	KED
⌊	**Cd**	**114**	**10.000**	ug/L	0.239	2	1	7976	4	KED
⌈>	**In**	**115**		ug/L			419627	429471	0	Standard
⌈	**Ag**	**107**	**10.000**	ug/L	0.285	2	27	144621	2	Standard
⌊	**Sb**	**121**	**10.000**	ug/L	0.210	2	63	118639	1	Standard
⌈	**Sb**	**123**	**10.000**	ug/L	0.145	1	41	90442	0	Standard
⌊	**Ba**	**135**	**10.001**	ug/L	0.141	1	20	39423	1	Standard
⌊	**Ba**	**137**	**10.000**	ug/L	0.067	0	13	68826	0	Standard
⌈>	**Tb**	**159**		ug/L			693670	720914	1	Standard
⌈	**Tl**	**205**	**10.000**	ug/L	0.253	2	217	301104	0	Standard
⌊	**Pb**	**208**	**10.000**	ug/L	0.156	1	33	387031	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 14:01:45
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			452600	466297	2	Standard
[	**Be**	**9**	**19.987**	ug/L	0.732	3	3	93039	2	Standard
	C	**13**		ug/L			24199	27699	4	Standard
	Cl	**37**		ug/L			5164783	5464810	1	Standard
[>	**Sc**	**45**		ug/L			457113	483798	1	Standard
[	**Na**	**23**	**1999.581**	ug/L	50.926	2	24438	51264681	1	Standard
[	**V**	**51**	**20.019**	ug/L	0.178	0	6481	397232	0	Standard
[	**V-1**	**51**	**20.006**	ug/L	0.162	0	139	395303	0	Standard
[	**Cr**	**52**	**20.004**	ug/L	0.249	1	19269	348776	0	Standard
[	**Cr**	**53**	**19.962**	ug/L	0.203	1	149	38794	0	Standard
[	**Fe**	**54**	**2024.462**	ug/L	36.935	1	62495	2666926	3	Standard
[	**Fe**	**57**	**1997.927**	ug/L	26.159	1	17293	994804	0	Standard
[	**Mn**	**55**	**19.977**	ug/L	0.278	1	672	471320	0	Standard
[>	**Ge**	**72**		ug/L			32590	34300	1	KED
[	**Co**	**59**	**19.965**	ug/L	0.586	2	16	77753	1	KED
[	**Ni**	**60**	**19.864**	ug/L	0.431	2	2	22171	2	KED
[	**Ni**	**62**	**19.811**	ug/L	0.970	4	1	3636	5	KED
[	**Cu**	**63**	**19.971**	ug/L	0.438	2	37	66288	1	KED
[	**Cu**	**65**	**19.949**	ug/L	0.327	1	20	32272	2	KED
[	**Zn**	**66**	**19.686**	ug/L	0.320	1	17	9208	1	KED
[	**Zn**	**67**	**20.131**	ug/L	0.762	3	5	1565	4	KED
[	**As**	**75**	**19.945**	ug/L	0.077	0	5	4679	0	KED
[	**Se**	**78**	**20.134**	ug/L	0.247	1	27	627	1	KED
	Y	**89**		ug/L			277213	297715	1	Standard
	Kr	**83**		ug/L			45	47	32	Standard
[>	**In-1**	**115**		ug/L			10697	11241	1	KED
[	**Mo**	**98**	**20.044**	ug/L	0.043	0	6	22642	1	KED
[	**Cd**	**111**	**19.997**	ug/L	0.496	2	2	6438	1	KED
[	**Cd**	**114**	**19.931**	ug/L	0.327	1	1	15534	2	KED
[>	**In**	**115**		ug/L			419627	430349	1	Standard
[	**Ag**	**107**	**20.045**	ug/L	0.223	1	27	293132	2	Standard
[	**Sb**	**121**	**19.986**	ug/L	0.304	1	63	236853	1	Standard
[	**Sb**	**123**	**19.898**	ug/L	0.175	0	41	176665	1	Standard
[	**Ba**	**135**	**19.900**	ug/L	0.186	0	20	77053	1	Standard
[	**Ba**	**137**	**19.947**	ug/L	0.364	1	13	136113	2	Standard
[>	**Tb**	**159**		ug/L			693670	737726	1	Standard
[	**Tl**	**205**	**19.786**	ug/L	0.193	0	217	584602	0	Standard
[	**Pb**	**208**	**19.848**	ug/L	0.020	0	33	762975	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 14:07:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			452600	462690	2	Standard
[	**Be**	**9**	**49.856**	ug/L	1.275	2	3	227021	0	Standard
	C	**13**		ug/L			24199	22902	2	Standard
	Cl	**37**		ug/L			5164783	5506358	0	Standard
[>	**Sc**	**45**		ug/L			457113	485242	0	Standard
[	**Na**	**23**	**4971.544**	ug/L	76.246	1	24438	124293381	0	Standard
[	**V**	**51**	**49.880**	ug/L	0.908	1	6481	970919	1	Standard
[	**V-1**	**51**	**49.877**	ug/L	0.854	1	139	976232	1	Standard
[	**Cr**	**52**	**49.960**	ug/L	0.849	1	19269	839821	1	Standard
[	**Cr**	**53**	**49.946**	ug/L	0.763	1	149	96598	0	Standard
[	**Fe**	**54**	**5003.063**	ug/L	10.580	0	62495	6531622	0	Standard
[	**Fe**	**57**	**5087.774**	ug/L	51.491	1	17293	2752750	1	Standard
[	**Mn**	**55**	**49.898**	ug/L	0.377	0	672	1167868	0	Standard
[>	**Ge**	**72**		ug/L			32590	34441	1	KED
[	**Co**	**59**	**50.062**	ug/L	0.873	1	16	196964	1	KED
[	**Ni**	**60**	**49.850**	ug/L	0.301	0	2	55035	1	KED
[	**Ni**	**62**	**50.007**	ug/L	1.408	2	1	9216	1	KED
[	**Cu**	**63**	**49.615**	ug/L	1.426	2	37	159150	1	KED
[	**Cu**	**65**	**49.815**	ug/L	1.134	2	20	79406	2	KED
[	**Zn**	**66**	**49.860**	ug/L	1.224	2	17	23087	2	KED
[	**Zn**	**67**	**49.711**	ug/L	1.020	2	5	3771	1	KED
[	**As**	**75**	**50.071**	ug/L	0.557	1	5	11870	1	KED
[	**Se**	**78**	**49.923**	ug/L	0.406	0	27	1506	1	KED
	Y	**89**		ug/L			277213	288351	1	Standard
	Kr	**83**		ug/L			45	46	20	Standard
[>	**In-1**	**115**		ug/L			10697	11054	2	KED
[	**Mo**	**98**	**50.193**	ug/L	1.245	2	6	56819	0	KED
[	**Cd**	**111**	**49.913**	ug/L	0.635	1	2	15662	1	KED
[	**Cd**	**114**	**49.968**	ug/L	0.595	1	1	38164	1	KED
[>	**In**	**115**		ug/L			419627	421807	1	Standard
[	**Ag**	**107**	**49.998**	ug/L	0.321	0	27	716418	1	Standard
[	**Sb**	**121**	**49.913**	ug/L	1.150	2	63	574609	1	Standard
[	**Sb**	**123**	**50.057**	ug/L	0.790	1	41	438012	0	Standard
[	**Ba**	**135**	**50.124**	ug/L	1.383	2	20	192548	1	Standard
[	**Ba**	**137**	**50.054**	ug/L	1.435	2	13	336524	1	Standard
[>	**Tb**	**159**		ug/L			693670	733526	1	Standard
[	**Tl**	**205**	**49.917**	ug/L	1.142	2	217	1454447	3	Standard
[	**Pb**	**208**	**49.795**	ug/L	0.212	0	33	1864856	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 14:14:31
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			452600	459847	4	Standard
⌊	**Be**	**9**	**99.770**	ug/L	6.834	6	3	447383	2	Standard
	C	**13**		ug/L			24199	26844	1	Standard
	Cl	**37**		ug/L			5164783	5473165	1	Standard
⌈>	**Sc**	**45**		ug/L			457113	478662	1	Standard
⌈	**Na**	**23**	**10003.715**	ug/L	172.424	1	24438	246959229	0	Standard
⌊	**V**	**51**	**99.982**	ug/L	1.734	1	6481	1911676	1	Standard
⌈	**V-1**	**51**	**99.977**	ug/L	2.169	2	139	1928460	1	Standard
⌊	**Cr**	**52**	**99.780**	ug/L	2.560	2	19269	1622381	1	Standard
⌈	**Cr**	**53**	**99.772**	ug/L	3.572	3	149	188696	1	Standard
⌊	**Fe**	**54**	**10025.446**	ug/L	408.523	4	62495	12949159	2	Standard
⌈	**Fe**	**57**	**9989.856**	ug/L	267.939	2	17293	5295944	2	Standard
⌊	**Mn**	**55**	**102.453**	ug/L	3.432	3	672	2574325	1	Standard
⌈>	**Ge**	**72**		ug/L			32590	33227	1	KED
⌈	**Co**	**59**	**100.019**	ug/L	1.374	1	16	379940	2	KED
⌊	**Ni**	**60**	**100.226**	ug/L	2.799	2	2	107537	1	KED
⌈	**Ni**	**62**	**99.933**	ug/L	1.804	1	1	17734	2	KED
⌊	**Cu**	**63**	**99.818**	ug/L	2.012	2	37	307053	1	KED
⌈	**Cu**	**65**	**99.981**	ug/L	2.101	2	20	153625	0	KED
⌊	**Zn**	**66**	**99.117**	ug/L	2.362	2	17	43010	2	KED
⌈	**Zn**	**67**	**98.732**	ug/L	1.079	1	5	6933	1	KED
⌊	**As**	**75**	**99.753**	ug/L	1.325	1	5	22622	0	KED
⌊	**Se**	**78**	**99.302**	ug/L	1.310	1	27	2798	0	KED
	Y	**89**		ug/L			277213	293540	2	Standard
	Kr	**83**		ug/L			45	63	3	Standard
⌈>	**In-1**	**115**		ug/L			10697	10559	1	KED
⌈	**Mo**	**98**	**100.468**	ug/L	3.374	3	6	110364	2	KED
⌊	**Cd**	**111**	**99.950**	ug/L	1.955	1	2	29908	0	KED
⌊	**Cd**	**114**	**99.576**	ug/L	3.546	3	1	71622	2	KED
⌈>	**In**	**115**		ug/L			419627	425531	1	Standard
⌈	**Ag**	**107**	**98.467**	ug/L	0.723	0	27	1354223	1	Standard
⌊	**Sb**	**121**	**99.436**	ug/L	0.621	0	63	1133599	0	Standard
⌈	**Sb**	**123**	**99.518**	ug/L	3.243	3	41	864454	2	Standard
⌊	**Ba**	**135**	**99.434**	ug/L	3.025	3	20	378159	1	Standard
⌊	**Ba**	**137**	**99.578**	ug/L	2.081	2	13	666021	0	Standard
⌈>	**Tb**	**159**		ug/L			693670	723431	2	Standard
⌈	**Tl**	**205**	**103.193**	ug/L	2.602	2	217	3316693	1	Standard
⌊	**Pb**	**208**	**99.806**	ug/L	2.768	2	33	3661711	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 14:22:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			452600	462902	2	Standard
⌊	**Be**	**9**	**0.001**	ug/L	0.001	83	3	8	44	Standard
	C	**13**		ug/L			24199	27419	2	Standard
	Cl	**37**		ug/L			5164783	5487260	3	Standard
⌈>	**Sc**	**45**		ug/L			457113	465217	0	Standard
⌈	**Na**	**23**	**0.455**	ug/L	0.048	10	24438	35784	2	Standard
⌊	**V**	**51**	**0.003**	ug/L	0.013	375	6481	6659	3	Standard
⌈	**V-1**	**51**	**-0.001**	ug/L	0.001	104	139	130	8	Standard
⌊	**Cr**	**52**	**0.006**	ug/L	0.041	658	19269	19708	3	Standard
⌈	**Cr**	**53**	**-0.007**	ug/L	0.002	30	149	139	2	Standard
⌊	**Fe**	**54**	**1.630**	ug/L	0.798	48	62495	65641	1	Standard
⌈	**Fe**	**57**	**1.196**	ug/L	0.742	61	17293	18213	1	Standard
⌊	**Mn**	**55**	**-0.001**	ug/L	0.001	69	672	651	4	Standard
⌈>	**Ge**	**72**		ug/L			32590	32742	5	KED
⌈	**Co**	**59**	**0.005**	ug/L	0.006	123	16	34	65	KED
⌊	**Ni**	**60**	**0.011**	ug/L	0.009	82	2	13	68	KED
⌈	**Ni**	**62**	**0.004**	ug/L	0.011	290	1	1	100	KED
⌈	**Cu**	**63**	**0.008**	ug/L	0.006	75	37	62	32	KED
⌊	**Cu**	**65**	**0.010**	ug/L	0.010	103	20	36	46	KED
⌈	**Zn**	**66**	**0.037**	ug/L	0.016	41	17	33	18	KED
⌊	**Zn**	**67**	**0.009**	ug/L	0.026	299	5	5	33	KED
⌈	**As**	**75**	**0.011**	ug/L	0.007	66	5	7	25	KED
⌊	**Se**	**78**	**0.084**	ug/L	0.237	281	27	30	16	KED
	Y	**89**		ug/L			277213	284328	1	Standard
	Kr	**83**		ug/L			45	34	30	Standard
⌈>	**In-1**	**115**		ug/L			10697	10905	2	KED
⌈	**Mo**	**98**	**0.015**	ug/L	0.003	19	6	23	12	KED
⌈	**Cd**	**111**	**-0.001**	ug/L	0.005	370	2	2	57	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.001	138	1	1	90	KED
⌈>	**In**	**115**		ug/L			419627	419021	1	Standard
⌈	**Ag**	**107**	**0.002**	ug/L	0.000	18	27	49	6	Standard
⌈	**Sb**	**121**	**0.081**	ug/L	0.004	4	63	977	2	Standard
⌊	**Sb**	**123**	**0.079**	ug/L	0.003	3	41	717	1	Standard
⌈	**Ba**	**135**	**0.018**	ug/L	0.006	33	20	87	23	Standard
⌊	**Ba**	**137**	**0.026**	ug/L	0.003	13	13	185	10	Standard
⌈>	**Tb**	**159**		ug/L			693670	690408	1	Standard
⌈	**Tl**	**205**	**0.003**	ug/L	0.000	18	217	296	5	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	9	33	113	7	Standard

Sample Information

Sample Date/Time: Thursday, April 13, 2023 14:14:31
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED
Mass Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**1.0000**	0.010	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
Na	23	**1.0000**	0.052	100.00	1000	2000	5000	10000
V	51	**1.0000**	0.040	0.20	10	20	50	100
V-1	51	**1.0000**	0.040	0.20	10	20	50	100
Cr	52	**1.0000**	0.034	0.50	10	20	50	100
Cr	53	**1.0000**	0.004	0.50	10	20	50	100
Fe	54	**1.0000**	0.003	36.00	1000	2000	5000	10000
Fe	57	**0.9998**	0.001	36.00	1000	2000	5000	10000
Mn	55	**0.9990**	0.052	0.50	10	20	50	100
Ge	72							
Co	59	**1.0000**	0.114	0.20	10	20	50	100
Ni	60	**1.0000**	0.032	0.50	10	20	50	100
Ni	62	**1.0000**	0.005	0.50	10	20	50	100
Cu	63	**1.0000**	0.093	0.50	10	20	50	100
Cu	65	**1.0000**	0.046	0.50	10	20	50	100
Zn	66	**0.9999**	0.013	6.00	10	20	50	100
Zn	67	**0.9997**	0.002	6.00	10	20	50	100
As	75	**1.0000**	0.007	0.20	10	20	50	100
Se	78	**0.9999**	0.001	0.50	10	20	50	100
Y	89							
Kr	83							
In-1	115							
Mo	98	**1.0000**	0.104	0.20	10	20	50	100
Cd	111	**1.0000**	0.028	0.10	10	20	50	100
Cd	114	**1.0000**	0.068	0.10	10	20	50	100
In	115							
Ag	107	**0.9996**	0.032	0.20	10	20	50	100
Sb	121	**0.9999**	0.027	0.20	10	20	50	100
Sb	123	**1.0000**	0.020	0.20	10	20	50	100
Ba	135	**0.9999**	0.009	0.50	10	20	50	100
Ba	137	**1.0000**	0.016	0.50	10	20	50	100
Tb	159							
Tl	205	**0.9983**	0.044	0.20	10	20	50	100
Pb	208	**1.0000**	0.051	0.10	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 15:00:28
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			452600	485456	0	Standard
⌊	**Be**	**9**	**48.753**	ug/L	1.245	2	3	231259	3	Standard
	C	**13**		ug/L			24199	26510	1	Standard
	Cl	**37**		ug/L			5164783	5574435	0	Standard
⌈>	**Sc**	**45**		ug/L			457113	489355	0	Standard
⌈	**Na**	**23**	**5221.203**	ug/L	65.014	1	24438	131803528	0	Standard
⌊	**V**	**51**	**52.667**	ug/L	0.249	0	6481	1032904	0	Standard
⌈	**V-1**	**51**	**52.627**	ug/L	0.184	0	139	1038043	0	Standard
⌊	**Cr**	**52**	**51.599**	ug/L	0.621	1	19269	867873	0	Standard
⌈	**Cr**	**53**	**51.513**	ug/L	0.599	1	149	99713	0	Standard
⌊	**Fe**	**54**	**5139.262**	ug/L	74.770	1	62495	6821403	0	Standard
⌈	**Fe**	**57**	**5245.190**	ug/L	79.410	1	17293	2851608	1	Standard
⌊	**Mn**	**55**	**47.637**	ug/L	0.936	1	672	1224560	2	Standard
⌈>	**Ge**	**72**		ug/L			32590	34530	1	KED
⌈	**Co**	**59**	**53.304**	ug/L	0.952	1	16	210440	2	KED
⌊	**Ni**	**60**	**51.706**	ug/L	0.800	1	2	57662	0	KED
⌈	**Ni**	**62**	**52.822**	ug/L	1.424	2	1	9739	1	KED
⌊	**Cu**	**63**	**53.077**	ug/L	0.279	0	37	169711	0	KED
⌈	**Cu**	**65**	**52.757**	ug/L	0.520	0	20	84267	1	KED
⌊	**Zn**	**66**	**51.426**	ug/L	1.208	2	17	23195	1	KED
⌈	**Zn**	**67**	**52.273**	ug/L	1.449	2	5	3817	2	KED
⌊	**As**	**75**	**48.445**	ug/L	0.722	1	5	11420	0	KED
⌊	**Se**	**78**	**80.793**	ug/L	0.645	0	27	2372	1	KED
	Y	**89**		ug/L			277213	300534	1	Standard
	Kr	**83**		ug/L			45	53	4	Standard
⌈>	**In-1**	**115**		ug/L			10697	11293	1	KED
⌈	**Mo**	**98**	**48.954**	ug/L	0.746	1	6	57539	2	KED
⌊	**Cd**	**111**	**49.337**	ug/L	0.563	1	2	15794	2	KED
⌊	**Cd**	**114**	**51.268**	ug/L	0.759	1	1	39447	0	KED
⌈>	**In**	**115**		ug/L			419627	436931	1	Standard
⌈	**Ag**	**107**	**53.468**	ug/L	1.047	1	27	754949	1	Standard
⌊	**Sb**	**121**	**50.865**	ug/L	0.137	0	63	595450	0	Standard
⌈	**Sb**	**123**	**50.667**	ug/L	0.678	1	41	452010	1	Standard
⌊	**Ba**	**135**	**51.484**	ug/L	0.921	1	20	201084	1	Standard
⌊	**Ba**	**137**	**51.482**	ug/L	0.963	1	13	353599	1	Standard
⌈>	**Tb**	**159**		ug/L			693670	747795	0	Standard
⌈	**Tl**	**205**	**45.352**	ug/L	1.161	2	217	1507073	1	Standard
⌊	**Pb**	**208**	**52.002**	ug/L	0.403	0	33	1972728	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 15:08:21
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			452600	451440	2	Standard
⌊	**Be**	**9**	**0.023**	ug/L	0.038	163	3	102	157	Standard
	C	**13**		ug/L			24199	23878	5	Standard
	Cl	**37**		ug/L			5164783	5357921	1	Standard
⌈>	**Sc**	**45**		ug/L			457113	451452	0	Standard
⌈	**Na**	**23**	**1.823**	ug/L	3.292	180	24438	66619	115	Standard
⌊	**V**	**51**	**0.033**	ug/L	0.036	108	6481	6997	9	Standard
⌈	**V-1**	**51**	**0.018**	ug/L	0.034	191	139	458	134	Standard
⌊	**Cr**	**52**	**0.066**	ug/L	0.046	69	19269	20024	3	Standard
⌈	**Cr**	**53**	**0.014**	ug/L	0.038	276	149	171	39	Standard
⌊	**Fe**	**54**	**2.920**	ug/L	1.583	54	62495	65263	3	Standard
⌈	**Fe**	**57**	**1.891**	ug/L	2.258	119	17293	18021	6	Standard
⌊	**Mn**	**55**	**0.014**	ug/L	0.023	165	672	989	54	Standard
⌈>	**Ge**	**72**		ug/L			32590	32474	2	KED
⌈	**Co**	**59**	**0.001**	ug/L	0.001	222	16	18	21	KED
⌊	**Ni**	**60**	**0.001**	ug/L	0.002	146	2	3	50	KED
⌈	**Ni**	**62**	**0.022**	ug/L	0.033	153	1	5	114	KED
⌊	**Cu**	**63**	**0.001**	ug/L	0.002	174	37	40	12	KED
⌈	**Cu**	**65**	**-0.002**	ug/L	0.007	334	20	17	61	KED
⌊	**Zn**	**66**	**0.000**	ug/L	0.012	3081	17	17	24	KED
⌈	**Zn**	**67**	**0.010**	ug/L	0.027	285	5	5	33	KED
⌊	**As**	**75**	**-0.003**	ug/L	0.005	198	5	4	26	KED
⌊	**Se**	**78**	**-0.010**	ug/L	0.092	882	27	27	5	KED
	Y	**89**		ug/L			277213	279963	0	Standard
	Kr	**83**		ug/L			45	43	17	Standard
⌈>	**In-1**	**115**		ug/L			10697	10946	1	KED
⌈	**Mo**	**98**	**0.008**	ug/L	0.004	57	6	15	32	KED
⌊	**Cd**	**111**	**-0.003**	ug/L	0.005	165	2	1	86	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.002	90	1	3	35	KED
⌈>	**In**	**115**		ug/L			419627	407203	1	Standard
⌈	**Ag**	**107**	**0.021**	ug/L	0.032	149	27	312	137	Standard
⌊	**Sb**	**121**	**0.055**	ug/L	0.040	73	63	667	67	Standard
⌈	**Sb**	**123**	**0.067**	ug/L	0.046	68	41	598	65	Standard
⌊	**Ba**	**135**	**0.020**	ug/L	0.040	201	20	93	157	Standard
⌊	**Ba**	**137**	**0.032**	ug/L	0.051	161	13	219	152	Standard
⌈>	**Tb**	**159**		ug/L			693670	686565	2	Standard
⌈	**Tl**	**205**	**0.025**	ug/L	0.038	155	217	951	119	Standard
⌊	**Pb**	**208**	**0.027**	ug/L	0.045	167	33	940	161	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 15:13:52
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			452600	466921	3	Standard
[	**Be**	**9**	**49.867**	ug/L	2.365	4	3	227231	1	Standard
	C	**13**		ug/L			24199	22536	1	Standard
	Cl	**37**		ug/L			5164783	5544326	0	Standard
[>	**Sc**	**45**		ug/L			457113	483534	1	Standard
[	**Na**	**23**	**4975.199**	ug/L	39.648	0	24438	124107843	1	Standard
[	**V**	**51**	**50.455**	ug/L	0.702	1	6481	977920	0	Standard
[	**V-1**	**51**	**50.388**	ug/L	0.527	1	139	981962	0	Standard
[	**Cr**	**52**	**50.152**	ug/L	1.782	3	19269	833823	2	Standard
[	**Cr**	**53**	**49.944**	ug/L	1.198	2	149	95514	1	Standard
[	**Fe**	**54**	**4979.415**	ug/L	66.459	1	62495	6532324	0	Standard
[	**Fe**	**57**	**5157.214**	ug/L	84.378	1	17293	2770500	0	Standard
[	**Mn**	**55**	**46.234**	ug/L	1.101	2	672	1174194	1	Standard
[>	**Ge**	**72**		ug/L			32590	34524	1	KED
[	**Co**	**59**	**49.266**	ug/L	0.900	1	16	194431	0	KED
[	**Ni**	**60**	**50.001**	ug/L	0.339	0	2	55756	0	KED
[	**Ni**	**62**	**50.769**	ug/L	1.874	3	1	9359	3	KED
[	**Cu**	**63**	**49.817**	ug/L	0.874	1	37	159250	0	KED
[	**Cu**	**65**	**49.945**	ug/L	0.215	0	20	79766	1	KED
[	**Zn**	**66**	**51.049**	ug/L	0.899	1	17	23024	0	KED
[	**Zn**	**67**	**51.055**	ug/L	2.360	4	5	3726	3	KED
[	**As**	**75**	**49.630**	ug/L	0.420	0	5	11699	1	KED
[	**Se**	**78**	**50.735**	ug/L	1.081	2	27	1500	1	KED
	Y	**89**		ug/L			277213	295012	0	Standard
	Kr	**83**		ug/L			45	50	5	Standard
[>	**In-1**	**115**		ug/L			10697	10788	2	KED
[	**Mo**	**98**	**50.073**	ug/L	2.257	4	6	56174	2	KED
[	**Cd**	**111**	**51.424**	ug/L	1.396	2	2	15718	1	KED
[	**Cd**	**114**	**51.382**	ug/L	1.616	3	1	37752	1	KED
[>	**In**	**115**		ug/L			419627	436444	1	Standard
[	**Ag**	**107**	**50.552**	ug/L	0.489	0	27	712983	0	Standard
[	**Sb**	**121**	**49.572**	ug/L	0.861	1	63	579577	1	Standard
[	**Sb**	**123**	**49.174**	ug/L	1.238	2	41	438158	2	Standard
[	**Ba**	**135**	**49.982**	ug/L	1.516	3	20	194960	1	Standard
[	**Ba**	**137**	**48.731**	ug/L	0.278	0	13	334350	1	Standard
[>	**Tb**	**159**		ug/L			693670	728338	1	Standard
[	**Tl**	**205**	**45.073**	ug/L	0.749	1	217	1459153	2	Standard
[	**Pb**	**208**	**50.828**	ug/L	0.270	0	33	1878089	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB1
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Thursday, April 13, 2023 15:21:26
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
>	Li	6		ug/L			452600	463962	2	Standard
	Be	9	0.002	ug/L	0.004	175	3	13	125	Standard
	C	13		ug/L			24199	23907	3	Standard
	Cl	37		ug/L			5164783	5325720	1	Standard
>	Sc	45		ug/L			457113	462434	0	Standard
	Na	23	0.047	ug/L	0.193	405	24438	25872	18	Standard
	V	51	-0.004	ug/L	0.003	88	6481	6490	1	Standard
	V-1	51	-0.000	ug/L	0.003	695	139	133	39	Standard
	Cr	52	-0.019	ug/L	0.016	80	19269	19192	1	Standard
	Cr	53	-0.008	ug/L	0.003	37	149	135	4	Standard
	Fe	54	0.044	ug/L	0.600	1354	62495	63275	0	Standard
	Fe	57	1.125	ug/L	1.620	143	17293	18073	5	Standard
	Mn	55	-0.000	ug/L	0.002	10314	672	679	6	Standard
>	Ge	72		ug/L			32590	33564	0	KED
	Co	59	-0.001	ug/L	0.001	160	16	13	34	KED
	Ni	60	0.001	ug/L	0.001	198	2	3	34	KED
	Ni	62	-0.004	ug/L	0.006	165	1	0	173	KED
	Cu	63	0.001	ug/L	0.006	631	37	41	41	KED
	Cu	65	-0.002	ug/L	0.003	128	20	17	26	KED
	Zn	66	-0.008	ug/L	0.005	60	17	14	15	KED
	Zn	67	-0.029	ug/L	0.015	53	5	3	34	KED
	As	75	0.003	ug/L	0.004	159	5	6	16	KED
	Se	78	0.198	ug/L	0.036	18	27	34	3	KED
	Y	89		ug/L			277213	283485	1	Standard
	Kr	83		ug/L			45	39	2	Standard
>	In-1	115		ug/L			10697	9925	14	KED
	Mo	98	0.009	ug/L	0.006	59	6	15	36	KED
	Cd	111	-0.002	ug/L	0.011	684	2	1	132	KED
	Cd	114	0.005	ug/L	0.003	49	1	4	22	KED
>	In	115		ug/L			419627	415960	1	Standard
	Ag	107	0.003	ug/L	0.002	64	27	62	37	Standard
	Sb	121	0.051	ug/L	0.003	5	63	630	6	Standard
	Sb	123	0.055	ug/L	0.005	8	41	504	7	Standard
	Ba	135	-0.001	ug/L	0.001	61	20	15	21	Standard
	Ba	137	0.003	ug/L	0.004	137	13	33	83	Standard
>	Tb	159		ug/L			693670	694189	0	Standard
	Tl	205	0.005	ug/L	0.003	71	217	361	28	Standard
	Pb	208	0.002	ug/L	0.003	128	33	106	88	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 15:27:12
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			452600	453271	1	Standard
⌊	**Be**	**9**	**0.001**	ug/L	0.000	32	3	6	15	Standard
	C	**13**		ug/L			24199	23956	2	Standard
	Cl	**37**		ug/L			5164783	5430691	2	Standard
⌈>	**Sc**	**45**		ug/L			457113	464824	1	Standard
⌈	**Na**	**23**	**-0.192**	ug/L	0.007	3	24438	20241	1	Standard
⌊	**V**	**51**	**0.004**	ug/L	0.003	66	6481	6672	1	Standard
⌈	**V-1**	**51**	**-0.001**	ug/L	0.000	37	139	118	8	Standard
⌊	**Cr**	**52**	**0.009**	ug/L	0.012	138	19269	19729	0	Standard
⌈	**Cr**	**53**	**-0.010**	ug/L	0.013	128	149	133	16	Standard
⌊	**Fe**	**54**	**0.216**	ug/L	1.047	485	62495	63817	2	Standard
⌈	**Fe**	**57**	**0.721**	ug/L	2.317	321	17293	17949	5	Standard
⌊	**Mn**	**55**	**-0.003**	ug/L	0.001	17	672	606	1	Standard
⌈>	**Ge**	**72**		ug/L			32590	33469	1	KED
⌈	**Co**	**59**	**-0.001**	ug/L	0.002	209	16	13	47	KED
⌊	**Ni**	**60**	**0.002**	ug/L	0.003	116	2	5	57	KED
⌈	**Ni**	**62**	**0.014**	ug/L	0.011	77	1	3	50	KED
⌊	**Cu**	**63**	**0.003**	ug/L	0.001	51	37	46	9	KED
⌈	**Cu**	**65**	**-0.004**	ug/L	0.002	56	20	15	21	KED
⌊	**Zn**	**66**	**-0.011**	ug/L	0.004	35	17	13	14	KED
⌈	**Zn**	**67**	**-0.038**	ug/L	0.031	80	5	2	86	KED
⌊	**As**	**75**	**-0.003**	ug/L	0.005	187	5	4	26	KED
⌊	**Se**	**78**	**0.096**	ug/L	0.148	154	27	31	11	KED
	Y	**89**		ug/L			277213	273535	1	Standard
	Kr	**83**		ug/L			45	40	12	Standard
⌈>	**In-1**	**115**		ug/L			10697	10851	3	KED
⌈	**Mo**	**98**	**0.002**	ug/L	0.006	365	6	7	78	KED
⌊	**Cd**	**111**	**0.009**	ug/L	0.010	106	2	5	50	KED
⌊	**Cd**	**114**	**0.009**	ug/L	0.008	93	1	8	71	KED
⌈>	**In**	**115**		ug/L			419627	414100	1	Standard
⌈	**Ag**	**107**	**0.001**	ug/L	0.000	51	27	34	12	Standard
⌊	**Sb**	**121**	**0.014**	ug/L	0.002	14	63	222	10	Standard
⌈	**Sb**	**123**	**0.014**	ug/L	0.003	24	41	158	17	Standard
⌊	**Ba**	**135**	**-0.003**	ug/L	0.001	38	20	10	39	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.002	142	13	22	57	Standard
⌈>	**Tb**	**159**		ug/L			693670	693561	1	Standard
⌈	**Tl**	**205**	**0.001**	ug/L	0.001	39	217	259	5	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	54	33	47	16	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CRL1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 15:34:47
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			452600	453435	0	Standard
⌊	**Be**	**9**	**0.212**	ug/L	0.013	5	3	942	5	Standard
	C	**13**		ug/L			24199	23818	1	Standard
	Cl	**37**		ug/L			5164783	5327329	2	Standard
⌈>	**Sc**	**45**		ug/L			457113	465081	2	Standard
⌈	**Na**	**23**	**99.714**	ug/L	5.221	5	24438	2415588	3	Standard
⌊	**V**	**51**	**0.201**	ug/L	0.020	10	6481	10318	1	Standard
⌈	**V-1**	**51**	**0.198**	ug/L	0.005	2	139	3861	0	Standard
⌊	**Cr**	**52**	**0.505**	ug/L	0.045	8	19269	27471	0	Standard
⌈	**Cr**	**53**	**0.483**	ug/L	0.009	1	149	1039	3	Standard
⌊	**Fe**	**54**	**34.154**	ug/L	3.251	9	62495	106200	2	Standard
⌈	**Fe**	**57**	**33.871**	ug/L	3.339	9	17293	34961	2	Standard
⌊	**Mn**	**55**	**0.449**	ug/L	0.018	4	672	11652	2	Standard
⌈>	**Ge**	**72**		ug/L			32590	33737	1	KED
⌈	**Co**	**59**	**0.199**	ug/L	0.003	1	16	782	2	KED
⌊	**Ni**	**60**	**0.494**	ug/L	0.034	6	2	540	5	KED
⌈	**Ni**	**62**	**0.451**	ug/L	0.051	11	1	82	10	KED
⌊	**Cu**	**63**	**0.526**	ug/L	0.018	3	37	1681	2	KED
⌈	**Cu**	**65**	**0.512**	ug/L	0.050	9	20	819	9	KED
⌊	**Zn**	**66**	**6.256**	ug/L	0.291	4	17	2772	3	KED
⌈	**Zn**	**67**	**5.712**	ug/L	0.354	6	5	412	5	KED
⌊	**As**	**75**	**0.196**	ug/L	0.026	13	5	50	12	KED
⌈	**Se**	**78**	**0.375**	ug/L	0.029	7	27	39	3	KED
	Y	**89**		ug/L			277213	282584	1	Standard
	Kr	**83**		ug/L			45	43	30	Standard
⌈>	**In-1**	**115**		ug/L			10697	10882	1	KED
⌈	**Mo**	**98**	**0.191**	ug/L	0.009	4	6	222	3	KED
⌊	**Cd**	**111**	**0.081**	ug/L	0.014	17	2	27	16	KED
⌈	**Cd**	**114**	**0.098**	ug/L	0.020	20	1	74	19	KED
⌈>	**In**	**115**		ug/L			419627	416711	1	Standard
⌈	**Ag**	**107**	**0.210**	ug/L	0.014	6	27	2849	6	Standard
⌊	**Sb**	**121**	**0.209**	ug/L	0.012	5	63	2400	5	Standard
⌈	**Sb**	**123**	**0.210**	ug/L	0.004	1	41	1824	0	Standard
⌊	**Ba**	**135**	**0.507**	ug/L	0.029	5	20	1909	4	Standard
⌈	**Ba**	**137**	**0.494**	ug/L	0.007	1	13	3249	0	Standard
⌈>	**Tb**	**159**		ug/L			693670	701167	1	Standard
⌈	**Tl**	**205**	**0.180**	ug/L	0.004	2	217	5818	1	Standard
⌊	**Pb**	**208**	**0.107**	ug/L	0.001	0	33	3824	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 15:41:01
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
>	**Li**	**6**		ug/L			452600	491104	1	Standard
	Be	**9**	**0.011**	ug/L	0.002	15	3	59	14	Standard
	C	**13**		ug/L			24199	113704	1	Standard
	Cl	**37**		ug/L			5164783	13226918	0	Standard
>	**Sc**	**45**		ug/L			457113	596599	0	Standard
	Na	**23**	**21857.469**	ug/L	465.398	2	24438	672554517	1	Standard
	V	**51**	**0.040**	ug/L	0.032	80	6481	9400	7	Standard
	V-1	**51**	**1.470**	ug/L	0.039	2	139	35519	1	Standard
	Cr	**52**	**0.843**	ug/L	0.079	9	19269	42007	2	Standard
	Cr	**53**	**5.478**	ug/L	0.166	3	149	13099	2	Standard
	Fe	**54**	**19381.163**	ug/L	269.567	1	62495	31136513	0	Standard
	Fe	**57**	**19718.806**	ug/L	218.172	1	17293	13007512	0	Standard
	Mn	**55**	**0.067**	ug/L	0.001	1	672	2978	1	Standard
>	**Ge**	**72**		ug/L			32590	31467	3	KED
	Co	**59**	**0.031**	ug/L	0.009	29	16	126	23	KED
	Ni	**60**	**0.114**	ug/L	0.028	24	2	118	21	KED
	Ni	**62**	**0.201**	ug/L	0.034	16	1	34	13	KED
	Cu	**63**	**0.053**	ug/L	0.004	7	37	189	3	KED
	Cu	**65**	**0.065**	ug/L	0.002	3	20	114	2	KED
	Zn	**66**	**0.261**	ug/L	0.042	16	17	123	11	KED
	Zn	**67**	**0.211**	ug/L	0.065	30	5	19	26	KED
	As	**75**	**0.035**	ug/L	0.019	55	5	12	31	KED
	Se	**78**	**-0.090**	ug/L	0.096	107	27	24	12	KED
	Y	**89**		ug/L			277213	326006	2	Standard
	Kr	**83**		ug/L			45	107	14	Standard
>	**In-1**	**115**		ug/L			10697	10963	2	KED
	Mo	**98**	**377.976**	ug/L	12.410	3	6	430957	0	KED
	Cd	**111**	**0.047**	ug/L	0.006	11	2	17	8	KED
	Cd	**114**	**0.047**	ug/L	0.008	16	1	37	16	KED
>	**In**	**115**		ug/L			419627	462503	1	Standard
	Ag	**107**	**0.011**	ug/L	0.001	6	27	193	6	Standard
	Sb	**121**	**0.036**	ug/L	0.003	9	63	513	8	Standard
	Sb	**123**	**0.040**	ug/L	0.002	6	41	418	4	Standard
	Ba	**135**	**0.123**	ug/L	0.009	7	20	531	5	Standard
	Ba	**137**	**0.109**	ug/L	0.007	6	13	808	4	Standard
>	**Tb**	**159**		ug/L			693670	770059	1	Standard
	Tl	**205**	**0.015**	ug/L	0.000	1	217	760	1	Standard
	Pb	**208**	**0.041**	ug/L	0.001	2	33	1626	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 15:47:48

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
>	Li	6		ug/L			452600	471877	3	Standard
	Be	9	0.010	ug/L	0.002	24	3	48	19	Standard
	C	13		ug/L			24199	112020	1	Standard
	Cl	37		ug/L			5164783	12905325	1	Standard
>	Sc	45		ug/L			457113	590824	2	Standard
	Na	23	22739.622	ug/L	1401.925	6	24438	692579826	5	Standard
	V	51	0.057	ug/L	0.019	32	6481	9708	1	Standard
	V-1	51	1.461	ug/L	0.043	2	139	34958	0	Standard
	Cr	52	0.912	ug/L	0.069	7	19269	42957	1	Standard
	Cr	53	5.461	ug/L	0.149	2	149	12929	1	Standard
	Fe	54	20097.328	ug/L	507.358	2	62495	31960167	0	Standard
	Fe	57	20098.888	ug/L	288.326	1	17293	13127521	1	Standard
	Mn	55	0.071	ug/L	0.001	1	672	3055	1	Standard
>	Ge	72		ug/L			32590	30000	1	KED
	Co	59	0.033	ug/L	0.008	23	16	128	22	KED
	Ni	60	0.104	ug/L	0.006	5	2	102	4	KED
	Ni	62	0.171	ug/L	0.010	5	1	28	6	KED
	Cu	63	0.063	ug/L	0.010	16	37	209	15	KED
	Cu	65	0.063	ug/L	0.015	23	20	106	19	KED
	Zn	66	0.277	ug/L	0.067	24	17	125	22	KED
	Zn	67	0.157	ug/L	0.014	8	5	14	7	KED
	As	75	0.035	ug/L	0.010	28	5	12	18	KED
	Se	78	0.032	ug/L	0.105	327	27	26	10	KED
	Y	89		ug/L			277213	326460	0	Standard
	Kr	83		ug/L			45	109	9	Standard
>	In-1	115		ug/L			10697	10367	1	KED
	Mo	98	386.526	ug/L	4.697	1	6	416939	0	KED
	Cd	111	0.064	ug/L	0.014	21	2	21	17	KED
	Cd	114	0.045	ug/L	0.011	24	1	33	23	KED
>	In	115		ug/L			419627	456545	0	Standard
	Ag	107	0.011	ug/L	0.001	10	27	190	9	Standard
	Sb	121	0.036	ug/L	0.003	7	63	507	6	Standard
	Sb	123	0.033	ug/L	0.002	7	41	348	6	Standard
	Ba	135	0.125	ug/L	0.015	12	20	533	11	Standard
	Ba	137	0.117	ug/L	0.001	1	13	850	0	Standard
>	Tb	159		ug/L			693670	761532	1	Standard
	Tl	205	0.015	ug/L	0.001	8	217	746	6	Standard
	Pb	208	0.041	ug/L	0.002	4	33	1638	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 15:52:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
>	**Li**	**6**		ug/L			452600	474813	1	Standard
	Be	**9**	**0.011**	ug/L	0.002	21	3	52	18	Standard
	C	**13**		ug/L			24199	116072	1	Standard
	Cl	**37**		ug/L			5164783	13166700	2	Standard
>	**Sc**	**45**		ug/L			457113	604562	1	Standard
	Na	**23**	**22133.084**	ug/L	558.438	2	24438	689994937	1	Standard
	V	**51**	**-0.172**	ug/L	0.150	86	6481	4464	82	Standard
	V-1	**51**	**1.440**	ug/L	0.016	1	139	35276	2	Standard
	Cr	**52**	**20.783**	ug/L	0.285	1	19269	447142	2	Standard
	Cr	**53**	**25.208**	ug/L	0.227	0	149	60380	1	Standard
	Fe	**54**	**20064.297**	ug/L	71.817	0	62495	32663854	2	Standard
	Fe	**57**	**20151.889**	ug/L	292.179	1	17293	13468374	0	Standard
	Mn	**55**	**18.437**	ug/L	0.318	1	672	586127	3	Standard
>	**Ge**	**72**		ug/L			32590	29213	1	KED
	Co	**59**	**20.736**	ug/L	0.480	2	16	69242	0	KED
	Ni	**60**	**20.856**	ug/L	0.468	2	2	19675	0	KED
	Ni	**62**	**20.532**	ug/L	0.571	2	1	3204	4	KED
	Cu	**63**	**20.789**	ug/L	0.133	0	37	56259	1	KED
	Cu	**65**	**20.514**	ug/L	0.128	0	20	27734	2	KED
	Zn	**66**	**19.426**	ug/L	0.537	2	17	7422	2	KED
	Zn	**67**	**17.694**	ug/L	0.421	2	5	1095	0	KED
	As	**75**	**19.556**	ug/L	0.436	2	5	3902	1	KED
	Se	**78**	**0.031**	ug/L	0.094	306	27	25	7	KED
	Y	**89**		ug/L			277213	329643	0	Standard
	Kr	**83**		ug/L			45	100	6	Standard
>	**In-1**	**115**		ug/L			10697	10165	2	KED
	Mo	**98**	**396.200**	ug/L	11.509	2	6	418872	1	KED
	Cd	**111**	**19.517**	ug/L	0.676	3	2	5621	1	KED
	Cd	**114**	**19.673**	ug/L	0.320	1	1	13623	1	KED
>	**In**	**115**		ug/L			419627	460864	1	Standard
	Ag	**107**	**18.897**	ug/L	0.313	1	27	281493	2	Standard
	Sb	**121**	**0.026**	ug/L	0.001	4	63	395	4	Standard
	Sb	**123**	**0.028**	ug/L	0.000	0	41	304	1	Standard
	Ba	**135**	**0.115**	ug/L	0.006	5	20	499	6	Standard
	Ba	**137**	**0.108**	ug/L	0.007	6	13	796	4	Standard
>	**Tb**	**159**		ug/L			693670	761555	1	Standard
	Tl	**205**	**0.009**	ug/L	0.001	7	217	552	4	Standard
	Pb	**208**	**0.031**	ug/L	0.002	6	33	1234	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 15:58:21
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
>	Li	6		ug/L			452600	461368	1	Standard
	Be	9	200.119	ug/L	3.974	1	3	901859	0	Standard
	C	13		ug/L			24199	31837	2	Standard
	Cl	37		ug/L			5164783	6248802	0	Standard
>	Sc	45		ug/L			457113	541561	0	Standard
	Na	23	21503.543	ug/L	418.231	1	24438	600755672	2	Standard
	V	51	232.312	ug/L	1.227	0	6481	5015975	0	Standard
	V-1	51	224.177	ug/L	0.263	0	139	4893027	0	Standard
	Cr	52	227.764	ug/L	2.725	1	19269	4161647	0	Standard
	Cr	53	201.399	ug/L	0.495	0	149	430948	0	Standard
	Fe	54	19901.002	ug/L	372.498	1	62495	29020703	1	Standard
	Fe	57	19906.355	ug/L	106.923	0	17293	11920454	1	Standard
	Mn	55	203.748	ug/L	2.075	1	672	5793680	1	Standard
>	Ge	72		ug/L			32590	29156	1	KED
	Co	59	208.780	ug/L	4.421	2	16	695764	1	KED
	Ni	60	205.930	ug/L	1.831	0	2	193915	0	KED
	Ni	62	200.646	ug/L	4.442	2	1	31236	1	KED
	Cu	63	202.047	ug/L	3.083	1	37	545384	1	KED
	Cu	65	202.656	ug/L	5.914	2	20	273254	2	KED
	Zn	66	197.922	ug/L	1.632	0	17	75344	0	KED
	Zn	67	193.971	ug/L	1.349	0	5	11948	1	KED
	As	75	200.225	ug/L	3.116	1	5	39838	0	KED
	Se	78	193.821	ug/L	1.473	0	27	4770	1	KED
	Y	89		ug/L			277213	311636	1	Standard
	Kr	83		ug/L			45	112	17	Standard
>	In-1	115		ug/L			10697	10098	0	KED
	Mo	98	200.185	ug/L	3.798	1	6	210338	1	KED
	Cd	111	195.607	ug/L	4.838	2	2	55975	1	KED
	Cd	114	199.363	ug/L	0.263	0	1	137177	0	KED
>	In	115		ug/L			419627	427487	0	Standard
	Ag	107	225.384	ug/L	4.414	1	27	3113718	1	Standard
	Sb	121	227.739	ug/L	2.308	1	63	2608131	0	Standard
	Sb	123	199.430	ug/L	3.400	1	41	1740564	1	Standard
	Ba	135	193.866	ug/L	2.457	1	20	740823	0	Standard
	Ba	137	192.016	ug/L	3.908	2	13	1290298	1	Standard
>	Tb	159		ug/L			693670	717523	1	Standard
	Tl	205	212.182	ug/L	5.247	2	217	6764308	1	Standard
	Pb	208	233.890	ug/L	10.941	4	33	8510603	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 16:03:30
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
>	Li	6		ug/L			452600	442760	1	Standard
	Be	9	295.396	ug/L	4.051	1	3	1277654	1	Standard
	C	13		ug/L			24199	31474	0	Standard
	Cl	37		ug/L			5164783	6003399	0	Standard
>	Sc	45		ug/L			457113	515760	1	Standard
	Na	23	30713.815	ug/L	1375.023	4	24438	817317090	5	Standard
	V	51	352.358	ug/L	2.875	0	6481	7241370	0	Standard
	V-1	51	339.959	ug/L	2.956	0	139	7066123	0	Standard
	Cr	52	342.193	ug/L	7.310	2	19269	5942692	0	Standard
	Cr	53	302.138	ug/L	6.860	2	149	615481	0	Standard
	Fe	54	29967.574	ug/L	177.103	0	62495	41584622	1	Standard
	Fe	57	30169.459	ug/L	711.612	2	17293	17193042	1	Standard
	Mn	55	306.091	ug/L	6.513	2	672	8287127	1	Standard
>	Ge	72		ug/L			32590	29059	0	KED
	Co	59	311.386	ug/L	6.169	1	16	1034408	2	KED
	Ni	60	298.509	ug/L	3.460	1	2	280179	1	KED
	Ni	62	295.611	ug/L	4.630	1	1	45871	1	KED
	Cu	63	293.632	ug/L	5.795	1	37	789995	2	KED
	Cu	65	298.171	ug/L	6.265	2	20	400679	1	KED
	Zn	66	282.915	ug/L	8.741	3	17	107328	2	KED
	Zn	67	277.417	ug/L	4.921	1	5	17028	0	KED
	As	75	290.941	ug/L	1.432	0	5	57700	0	KED
	Se	78	284.327	ug/L	0.874	0	27	6962	0	KED
	Y	89		ug/L			277213	294828	1	Standard
	Kr	83		ug/L			45	134	9	Standard
>	In-1	115		ug/L			10697	9998	2	KED
	Mo	98	302.766	ug/L	5.126	1	6	314930	0	KED
	Cd	111	285.187	ug/L	5.612	1	2	80791	0	KED
	Cd	114	287.619	ug/L	3.991	1	1	195912	1	KED
>	In	115		ug/L			419627	410122	1	Standard
	Ag	107	337.392	ug/L	6.824	2	27	4471335	1	Standard
	Sb	121	338.749	ug/L	5.970	1	63	3721427	0	Standard
	Sb	123	337.398	ug/L	0.878	0	41	2825186	1	Standard
	Ba	135	293.869	ug/L	3.118	1	20	1077301	0	Standard
	Ba	137	288.980	ug/L	4.018	1	13	1862937	0	Standard
>	Tb	159		ug/L			693670	689144	1	Standard
	Tl	205	317.836	ug/L	1.229	0	217	9732894	1	Standard
	Pb	208	357.782	ug/L	4.027	1	33	12506755	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 16:11:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			452600	468155	1	Standard
⌊	**Be**	**9**	**0.003**	ug/L	0.002	63	3	17	48	Standard
	C	**13**		ug/L			24199	30591	1	Standard
	Cl	**37**		ug/L			5164783	5763107	1	Standard
⌈>	**Sc**	**45**		ug/L			457113	504670	0	Standard
⌈	**Na**	**23**	**3.308**	ug/L	0.098	2	24438	113084	1	Standard
⌊	**V**	**51**	**0.004**	ug/L	0.004	91	6481	7236	0	Standard
⌈	**V-1**	**51**	**0.031**	ug/L	0.001	3	139	783	1	Standard
⌊	**Cr**	**52**	**0.009**	ug/L	0.029	327	19269	21420	1	Standard
⌈	**Cr**	**53**	**0.097**	ug/L	0.020	20	149	356	10	Standard
⌊	**Fe**	**54**	**1.403**	ug/L	1.257	89	62495	70908	3	Standard
⌈	**Fe**	**57**	**0.125**	ug/L	0.295	236	17293	19162	1	Standard
⌊	**Mn**	**55**	**0.011**	ug/L	0.000	4	672	1022	0	Standard
⌈>	**Ge**	**72**		ug/L			32590	31654	1	KED
⌈	**Co**	**59**	**0.002**	ug/L	0.006	410	16	21	106	KED
⌊	**Ni**	**60**	**0.006**	ug/L	0.001	19	2	8	13	KED
⌈	**Ni**	**62**	**0.042**	ug/L	0.024	57	1	8	48	KED
⌈	**Cu**	**63**	**0.008**	ug/L	0.004	58	37	58	21	KED
⌊	**Cu**	**65**	**0.012**	ug/L	0.008	66	20	37	29	KED
⌈	**Zn**	**66**	**0.026**	ug/L	0.009	36	17	27	14	KED
⌊	**Zn**	**67**	**0.021**	ug/L	0.044	205	5	6	45	KED
⌈	**As**	**75**	**0.010**	ug/L	0.011	101	5	7	30	KED
⌊	**Se**	**78**	**-0.080**	ug/L	0.187	232	27	24	18	KED
	Y	**89**		ug/L			277213	301033	1	Standard
	Kr	**83**		ug/L			45	57	15	Standard
⌈>	**In-1**	**115**		ug/L			10697	10544	1	KED
⌈	**Mo**	**98**	**0.031**	ug/L	0.011	36	6	39	29	KED
⌊	**Cd**	**111**	**-0.001**	ug/L	0.004	416	2	2	43	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.004	113	1	4	66	KED
⌈>	**In**	**115**		ug/L			419627	437607	1	Standard
⌈	**Ag**	**107**	**0.006**	ug/L	0.000	3	27	116	3	Standard
⌈	**Sb**	**121**	**0.185**	ug/L	0.007	3	63	2240	2	Standard
⌊	**Sb**	**123**	**0.185**	ug/L	0.003	1	41	1699	2	Standard
⌈	**Ba**	**135**	**0.001**	ug/L	0.001	114	20	26	21	Standard
⌊	**Ba**	**137**	**0.003**	ug/L	0.001	29	13	36	19	Standard
⌈>	**Tb**	**159**		ug/L			693670	706775	1	Standard
⌈	**Tl**	**205**	**0.023**	ug/L	0.002	9	217	935	5	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.000	11	33	168	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 16:18:26
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			452600	459536	3	Standard
⌊	**Be**	**9**	**0.002**	ug/L	0.000	9	3	12	9	Standard
	C	**13**		ug/L			24199	30437	1	Standard
	Cl	**37**		ug/L			5164783	5570948	1	Standard
⌈>	**Sc**	**45**		ug/L			457113	505126	2	Standard
⎢	**Na**	**23**	**1.779**	ug/L	0.051	2	24438	73371	3	Standard
⎢	**V**	**51**	**0.011**	ug/L	0.014	125	6481	7384	1	Standard
⎢	**V-1**	**51**	**0.018**	ug/L	0.003	16	139	526	9	Standard
⎢	**Cr**	**52**	**0.040**	ug/L	0.041	103	19269	21962	1	Standard
⎢	**Cr**	**53**	**0.062**	ug/L	0.004	6	149	288	1	Standard
⎢	**Fe**	**54**	**1.543**	ug/L	0.637	41	62495	71142	1	Standard
⎢	**Fe**	**57**	**0.186**	ug/L	1.677	899	17293	19201	3	Standard
⌊	**Mn**	**55**	**0.006**	ug/L	0.003	40	672	910	7	Standard
⌈>	**Ge**	**72**		ug/L			32590	31711	1	KED
⎢	**Co**	**59**	**0.000**	ug/L	0.001	1092	16	16	29	KED
⎢	**Ni**	**60**	**0.003**	ug/L	0.001	44	2	5	21	KED
⎢	**Ni**	**62**	**0.030**	ug/L	0.017	57	1	6	45	KED
⎢	**Cu**	**63**	**0.004**	ug/L	0.006	133	37	49	35	KED
⎢	**Cu**	**65**	**0.008**	ug/L	0.006	83	20	31	29	KED
⎢	**Zn**	**66**	**0.006**	ug/L	0.011	192	17	19	24	KED
⎢	**Zn**	**67**	**0.012**	ug/L	0.076	650	5	5	88	KED
⎢	**As**	**75**	**-0.000**	ug/L	0.006	12530	5	5	23	KED
⌊	**Se**	**78**	**0.163**	ug/L	0.178	109	27	31	14	KED
	Y	**89**		ug/L			277213	299540	2	Standard
	Kr	**83**		ug/L			45	52	12	Standard
⌈>	**In-1**	**115**		ug/L			10697	10519	2	KED
⎢	**Mo**	**98**	**0.003**	ug/L	0.002	99	6	8	32	KED
⎢	**Cd**	**111**	**-0.001**	ug/L	0.007	859	2	2	78	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.007	127	1	5	87	KED
⌈>	**In**	**115**		ug/L			419627	434752	2	Standard
⎢	**Ag**	**107**	**0.002**	ug/L	0.001	47	27	50	22	Standard
⎢	**Sb**	**121**	**0.058**	ug/L	0.003	5	63	740	7	Standard
⎢	**Sb**	**123**	**0.056**	ug/L	0.003	5	41	541	3	Standard
⎢	**Ba**	**135**	**-0.001**	ug/L	0.002	178	20	17	50	Standard
⌊	**Ba**	**137**	**0.004**	ug/L	0.001	14	13	39	7	Standard
⌈>	**Tb**	**159**		ug/L			693670	716120	2	Standard
⎢	**Tl**	**205**	**0.008**	ug/L	0.001	12	217	488	6	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	9	33	123	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 16:23:37
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
[>	**Li**	**6**		ug/L			452600	492305	3	Standard
[	**Be**	**9**	**49.324**	ug/L	1.873	3	3	237083	2	Standard
	C	**13**		ug/L			24199	26930	3	Standard
	Cl	**37**		ug/L			5164783	5894190	1	Standard
[>	**Sc**	**45**		ug/L			457113	536521	2	Standard
[	**Na**	**23**	**5182.574**	ug/L	119.954	2	24438	143389621	0	Standard
[	**V**	**51**	**49.465**	ug/L	1.189	2	6481	1063641	0	Standard
[	**V-1**	**51**	**49.320**	ug/L	1.404	2	139	1066062	0	Standard
[	**Cr**	**52**	**49.898**	ug/L	1.637	3	19269	920398	0	Standard
[	**Cr**	**53**	**49.409**	ug/L	2.401	4	149	104779	2	Standard
[	**Fe**	**54**	**4974.500**	ug/L	134.692	2	62495	7238520	0	Standard
[	**Fe**	**57**	**5055.441**	ug/L	31.377	0	17293	3014318	2	Standard
[	**Mn**	**55**	**46.073**	ug/L	0.769	1	672	1298472	3	Standard
[>	**Ge**	**72**		ug/L			32590	32040	2	KED
[	**Co**	**59**	**51.401**	ug/L	1.396	2	16	188220	2	KED
[	**Ni**	**60**	**51.223**	ug/L	1.287	2	2	52988	0	KED
[	**Ni**	**62**	**50.721**	ug/L	1.572	3	1	8675	0	KED
[	**Cu**	**63**	**51.841**	ug/L	1.497	2	37	153751	1	KED
[	**Cu**	**65**	**51.261**	ug/L	1.139	2	20	75945	0	KED
[	**Zn**	**66**	**52.555**	ug/L	2.035	3	17	21985	1	KED
[	**Zn**	**67**	**53.266**	ug/L	0.574	1	5	3608	1	KED
[	**As**	**75**	**49.594**	ug/L	0.782	1	5	10846	1	KED
[	**Se**	**78**	**49.781**	ug/L	1.214	2	27	1366	3	KED
	Y	**89**		ug/L			277213	315463	2	Standard
	Kr	**83**		ug/L			45	52	23	Standard
[>	**In-1**	**115**		ug/L			10697	10688	2	KED
[	**Mo**	**98**	**49.129**	ug/L	1.361	2	6	54623	1	KED
[	**Cd**	**111**	**50.256**	ug/L	1.795	3	2	15216	1	KED
[	**Cd**	**114**	**50.760**	ug/L	1.393	2	1	36951	0	KED
[>	**In**	**115**		ug/L			419627	439878	0	Standard
[	**Ag**	**107**	**51.277**	ug/L	0.834	1	27	729047	2	Standard
[	**Sb**	**121**	**50.482**	ug/L	0.800	1	63	594984	2	Standard
[	**Sb**	**123**	**50.579**	ug/L	0.316	0	41	454308	1	Standard
[	**Ba**	**135**	**49.066**	ug/L	0.384	0	20	192961	1	Standard
[	**Ba**	**137**	**49.414**	ug/L	0.301	0	13	341701	0	Standard
[>	**Tb**	**159**		ug/L			693670	743252	1	Standard
[	**Tl**	**205**	**45.793**	ug/L	0.493	1	217	1512489	1	Standard
[	**Pb**	**208**	**52.179**	ug/L	0.393	0	33	1967407	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 16:31:30
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
⌈>	**Li**	**6**		ug/L			452600	457907	1	Standard
⌊	**Be**	**9**	**0.002**	ug/L	0.001	35	3	12	22	Standard
	C	**13**		ug/L			24199	26877	1	Standard
	Cl	**37**		ug/L			5164783	5702299	2	Standard
⌈>	**Sc**	**45**		ug/L			457113	500466	1	Standard
⌈	**Na**	**23**	**0.893**	ug/L	0.086	9	24438	49788	3	Standard
⌈	**V**	**51**	**0.004**	ug/L	0.009	208	6481	7181	1	Standard
⌈	**V-1**	**51**	**0.011**	ug/L	0.001	7	139	367	3	Standard
⌈	**Cr**	**52**	**0.002**	ug/L	0.017	722	19269	21135	0	Standard
⌈	**Cr**	**53**	**0.023**	ug/L	0.011	48	149	209	11	Standard
⌈	**Fe**	**54**	**-0.595**	ug/L	0.977	164	62495	67626	2	Standard
⌈	**Fe**	**57**	**0.162**	ug/L	1.051	649	17293	19025	3	Standard
⌊	**Mn**	**55**	**0.009**	ug/L	0.002	24	672	982	7	Standard
⌈>	**Ge**	**72**		ug/L			32590	31456	3	KED
⌈	**Co**	**59**	**0.000**	ug/L	0.001	688	16	16	24	KED
⌈	**Ni**	**60**	**0.004**	ug/L	0.005	117	2	6	78	KED
⌈	**Ni**	**62**	**0.012**	ug/L	0.014	115	1	3	69	KED
⌈	**Cu**	**63**	**0.001**	ug/L	0.001	102	37	40	12	KED
⌈	**Cu**	**65**	**0.003**	ug/L	0.004	129	20	24	26	KED
⌈	**Zn**	**66**	**-0.015**	ug/L	0.031	210	17	11	115	KED
⌈	**Zn**	**67**	**-0.045**	ug/L	0.029	65	5	1	100	KED
⌈	**As**	**75**	**-0.003**	ug/L	0.004	150	5	4	24	KED
⌊	**Se**	**78**	**0.087**	ug/L	0.086	98	27	29	8	KED
	Y	**89**		ug/L			277213	292414	4	Standard
	Kr	**83**		ug/L			45	44	13	Standard
⌈>	**In-1**	**115**		ug/L			10697	10330	1	KED
⌈	**Mo**	**98**	**0.008**	ug/L	0.004	47	6	14	26	KED
⌈	**Cd**	**111**	**-0.005**	ug/L	0.005	95	2	1	114	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.004	54	1	6	41	KED
⌈>	**In**	**115**		ug/L			419627	426567	1	Standard
⌈	**Ag**	**107**	**0.001**	ug/L	0.000	31	27	47	14	Standard
⌈	**Sb**	**121**	**0.069**	ug/L	0.000	0	63	853	1	Standard
⌈	**Sb**	**123**	**0.065**	ug/L	0.003	3	41	611	3	Standard
⌈	**Ba**	**135**	**-0.003**	ug/L	0.001	39	20	8	53	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.000	31	13	19	11	Standard
⌈>	**Tb**	**159**		ug/L			693670	706851	1	Standard
⌈	**Tl**	**205**	**0.007**	ug/L	0.001	16	217	428	7	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	49	33	53	17	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1

DEL

Sample Dil Factor:

Comments:

Sample Date/Time: Thursday, April 13, 2023 16:43:18

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				27190	2	Standard
	Cl	**37**		ug/L				5497601	2	Standard
⌈>	**Ge**	**72**		ug/L				31194	3	KED
|	**Ni**	**60**		ug/L				3	86	KED
|	**Ni**	**62**		ug/L				1	100	KED
|	**Cu**	**63**		ug/L				48	9	KED
|	**Cu**	**65**		ug/L				17	29	KED
|	**Zn**	**66**		ug/L				16	40	KED
|	**Zn**	**67**		ug/L				3	50	KED
⌊	**As**	**75**		ug/L				4	65	KED
	Y	**89**		ug/L				276294	0	Standard
	Kr	**83**		ug/L				48	18	Standard
⌈>	**In-1**	**115**		ug/L				10483	2	KED
|	**Cd**	**111**		ug/L				3	43	KED
⌊	**Cd**	**114**		ug/L				3	72	KED
⌈>	**Tb**	**159**		ug/L				725004	1	Standard
⌊	**Pb**	**208**		ug/L				81	23	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 16:47:29
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	26702	2	Standard
	Cl	**37**		ug/L			5497601	5567729	2	Standard
⎡>	**Ge**	**72**		ug/L			31194	32676	0	KED
⎢	**Ni**	**60**	**49.990**	ug/L	0.181	0	3	52763	0	KED
⎢	**Ni**	**62**	**50.410**	ug/L	1.217	2	1	8797	1	KED
⎢	**Cu**	**63**	**51.731**	ug/L	0.143	0	48	156543	0	KED
⎢	**Cu**	**65**	**50.718**	ug/L	0.676	1	17	76655	0	KED
⎢	**Zn**	**66**	**51.421**	ug/L	0.716	1	16	21951	1	KED
⎢	**Zn**	**67**	**50.179**	ug/L	2.362	4	3	3466	4	KED
⎣	**As**	**75**	**49.170**	ug/L	0.613	1	4	10969	0	KED
	Y	**89**		ug/L			276294	290568	4	Standard
	Kr	**83**		ug/L			48	63	13	Standard
⎡>	**In-1**	**115**		ug/L			10483	10437	5	KED
⎢	**Cd**	**111**	**51.407**	ug/L	1.425	2	3	15195	2	KED
⎣	**Cd**	**114**	**52.451**	ug/L	2.455	4	3	37243	1	KED
⎡>	**Tb**	**159**		ug/L			725004	757146	0	Standard
⎣	**Pb**	**208**	**53.708**	ug/L	0.521	0	81	2062863	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 16:54:23
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	25979	0	Standard
	Cl	**37**		ug/L			5497601	5564993	1	Standard
⎡>	**Ge**	**72**		ug/L			31194	31353	1	KED
⎢	**Ni**	**60**	**0.002**	ug/L	0.002	96	3	5	33	KED
⎢	**Ni**	**62**	**0.015**	ug/L	0.024	157	1	4	89	KED
⎢	**Cu**	**63**	**-0.002**	ug/L	0.005	196	48	42	31	KED
⎢	**Cu**	**65**	**0.002**	ug/L	0.005	244	17	20	37	KED
⎢	**Zn**	**66**	**-0.014**	ug/L	0.017	119	16	10	66	KED
⎢	**Zn**	**67**	**-0.039**	ug/L	0.033	83	3	1	173	KED
⎣	**As**	**75**	**-0.004**	ug/L	0.005	128	4	3	24	KED
	Y	**89**		ug/L			276294	278406	0	Standard
	Kr	**83**		ug/L			48	46	4	Standard
⎡>	**In-1**	**115**		ug/L			10483	10396	0	KED
⎢	**Cd**	**111**	**-0.005**	ug/L	0.008	154	3	2	107	KED
⎣	**Cd**	**114**	**-0.003**	ug/L	0.003	118	3	1	192	KED
⎡>	**Tb**	**159**		ug/L			725004	722427	1	Standard
⎣	**Pb**	**208**	**0.001**	ug/L	0.002	159	81	132	61	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0346-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 17:07:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	33243	1	Standard
	Cl	**37**		ug/L			5497601	5465802	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	32018	2	KED
|	**Ni**	**60**	**0.005**	ug/L	0.007	120	3	9	72	KED
|	**Ni**	**62**	**0.026**	ug/L	0.029	111	1	6	75	KED
|	**Cu**	**63**	**0.018**	ug/L	0.002	11	48	102	3	KED
|	**Cu**	**65**	**0.018**	ug/L	0.009	46	17	44	27	KED
|	**Zn**	**66**	**0.121**	ug/L	0.034	28	16	67	20	KED
|	**Zn**	**67**	**0.169**	ug/L	0.148	87	3	15	64	KED
⌊	**As**	**75**	**0.008**	ug/L	0.011	127	4	6	32	KED
	Y	**89**		ug/L			276294	282416	3	Standard
	Kr	**83**		ug/L			48	41	24	Standard
⌈>	**In-1**	**115**		ug/L			10483	10756	3	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.008	1583	3	3	66	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.005	797	3	3	105	KED
⌈>	**Tb**	**159**		ug/L			725004	736036	1	Standard
⌊	**Pb**	**208**	**0.009**	ug/L	0.001	10	81	413	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0346-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 17:11:43
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27190	36245	4	Standard
	Cl	37		ug/L			5497601	5529614	1	Standard
⌈>	Ge	72		ug/L			31194	32961	0	KED
|	Ni	60	25.373	ug/L	0.444	1	3	27016	1	KED
|	Ni	62	25.224	ug/L	0.581	2	1	4441	2	KED
|	Cu	63	26.162	ug/L	0.147	0	48	79886	0	KED
|	Cu	65	25.718	ug/L	0.043	0	17	39220	0	KED
|	Zn	66	84.389	ug/L	1.313	1	16	36329	1	KED
|	Zn	67	81.215	ug/L	0.752	0	3	5657	0	KED
⌊	As	75	24.632	ug/L	0.288	1	4	5545	1	KED
	Y	89		ug/L			276294	290090	1	Standard
	Kr	83		ug/L			48	43	8	Standard
⌈>	In-1	115		ug/L			10483	10864	1	KED
|	Cd	111	25.084	ug/L	0.249	0	3	7727	0	KED
⌊	Cd	114	25.455	ug/L	0.353	1	3	18845	0	KED
⌈>	Tb	159		ug/L			725004	749535	1	Standard
⌊	Pb	208	28.188	ug/L	0.665	2	81	1071710	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0292-BLK2

Sample Dil Factor:

DEL

Comments:

Sample Date/Time: Thursday, April 13, 2023 17:15:53

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	35841	2	Standard
	Cl	**37**		ug/L			5497601	5600520	2	Standard
⌈>	**Ge**	**72**		ug/L			31194	32947	1	KED
|	**Ni**	**60**	**0.012**	ug/L	0.004	34	3	16	26	KED
|	**Ni**	**62**	**0.010**	ug/L	0.010	103	1	3	50	KED
|	**Cu**	**63**	**0.036**	ug/L	0.004	12	48	160	6	KED
|	**Cu**	**65**	**0.034**	ug/L	0.008	24	17	69	17	KED
|	**Zn**	**66**	**0.841**	ug/L	0.083	9	16	379	8	KED
|	**Zn**	**67**	**1.013**	ug/L	0.235	23	3	74	20	KED
⌊	**As**	**75**	**-0.001**	ug/L	0.004	338	4	4	17	KED
	Y	**89**		ug/L			276294	283341	3	Standard
	Kr	**83**		ug/L			48	43	19	Standard
⌈>	**In-1**	**115**		ug/L			10483	10591	2	KED
|	**Cd**	**111**	**-0.008**	ug/L	0.005	62	3	1	91	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.002	43	3	6	18	KED
⌈>	**Tb**	**159**		ug/L			725004	720363	2	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.000	12	81	202	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0292-BS2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 17:20:03

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	37160	0	Standard
	Cl	**37**		ug/L			5497601	5456173	4	Standard
⌈>	**Ge**	**72**		ug/L			31194	33318	2	KED
|	**Ni**	**60**	**25.954**	ug/L	0.357	1	3	27929	0	KED
|	**Ni**	**62**	**24.631**	ug/L	0.412	1	1	4384	2	KED
|	**Cu**	**63**	**25.638**	ug/L	0.509	1	48	79115	0	KED
|	**Cu**	**65**	**25.453**	ug/L	1.075	4	17	39215	2	KED
|	**Zn**	**66**	**82.358**	ug/L	2.361	2	16	35828	1	KED
|	**Zn**	**67**	**79.337**	ug/L	2.202	2	3	5589	4	KED
⌊	**As**	**75**	**25.331**	ug/L	0.960	3	4	5761	1	KED
	Y	**89**		ug/L			276294	285364	4	Standard
	Kr	**83**		ug/L			48	62	21	Standard
⌈>	**In-1**	**115**		ug/L			10483	10647	2	KED
|	**Cd**	**111**	**26.006**	ug/L	0.695	2	3	7847	0	KED
⌊	**Cd**	**114**	**26.264**	ug/L	0.413	1	3	19052	0	KED
⌈>	**Tb**	**159**		ug/L			725004	751692	1	Standard
⌊	**Pb**	**208**	**27.827**	ug/L	0.772	2	81	1060899	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0259-01
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, April 13, 2023 17:24:13
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	109874	1	Standard
	Cl	**37**		ug/L			5497601	5820991	0	Standard
⌈>	**Ge**	**72**		ug/L			31194	31330	1	KED
|	**Ni**	**60**	**1.375**	ug/L	0.068	4	3	1395	5	KED
|	**Ni**	**62**	**1.334**	ug/L	0.254	19	1	224	17	KED
|	**Cu**	**63**	**0.104**	ug/L	0.011	10	48	349	8	KED
|	**Cu**	**65**	**0.100**	ug/L	0.012	11	17	162	11	KED
|	**Zn**	**66**	**1.324**	ug/L	0.067	5	16	558	4	KED
|	**Zn**	**67**	**1.324**	ug/L	0.168	12	3	91	12	KED
⌊	**As**	**75**	**0.059**	ug/L	0.004	6	4	17	5	KED
	Y	**89**		ug/L			276294	290154	1	Standard
	Kr	**83**		ug/L			48	71	16	Standard
⌈>	**In-1**	**115**		ug/L			10483	10513	3	KED
|	**Cd**	**111**	**0.002**	ug/L	0.004	188	3	4	24	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.006	115	3	6	59	KED
⌈>	**Tb**	**159**		ug/L			725004	750506	0	Standard
⌊	**Pb**	**208**	**0.011**	ug/L	0.001	10	81	508	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0273-01
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 13, 2023 17:28:24
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	37624	2	Standard
	Cl	**37**		ug/L			5497601	5757045	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	32050	0	KED
|	**Ni**	**60**	**0.223**	ug/L	0.011	4	3	234	5	KED
|	**Ni**	**62**	**0.271**	ug/L	0.035	12	1	48	11	KED
|	**Cu**	**63**	**3.012**	ug/L	0.041	1	48	8987	2	KED
|	**Cu**	**65**	**2.944**	ug/L	0.116	3	17	4380	2	KED
|	**Zn**	**66**	**282.009**	ug/L	7.406	2	16	118031	3	KED
|	**Zn**	**67**	**259.779**	ug/L	3.273	1	3	17588	1	KED
⌊	**As**	**75**	**0.360**	ug/L	0.018	4	4	83	3	KED
	Y	**89**		ug/L			276294	291267	0	Standard
	Kr	**83**		ug/L			48	57	28	Standard
⌈>	**In-1**	**115**		ug/L			10483	10749	1	KED
|	**Cd**	**111**	**0.585**	ug/L	0.035	5	3	182	6	KED
⌊	**Cd**	**114**	**0.581**	ug/L	0.038	6	3	428	6	KED
⌈>	**Tb**	**159**		ug/L			725004	744948	0	Standard
⌊	**Pb**	**208**	**0.213**	ug/L	0.001	0	81	8136	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0273-01RE1
Sample Dil Factor: 10
Comments:
Sample Date/Time: Thursday, April 13, 2023 17:32:34
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	32171	1	Standard
	Cl	**37**		ug/L			5497601	5658712	2	Standard
⌈>	**Ge**	**72**		ug/L			31194	32413	1	KED
|	**Ni**	**60**	**0.053**	ug/L	0.003	5	3	59	3	KED
|	**Ni**	**62**	**0.058**	ug/L	0.013	22	1	12	18	KED
|	**Cu**	**63**	**0.595**	ug/L	0.014	2	48	1835	4	KED
|	**Cu**	**65**	**0.584**	ug/L	0.048	8	17	892	6	KED
|	**Zn**	**66**	**58.219**	ug/L	1.596	2	16	24644	0	KED
|	**Zn**	**67**	**53.504**	ug/L	1.289	2	3	3667	4	KED
⌊	**As**	**75**	**0.088**	ug/L	0.014	16	4	24	10	KED
	Y	**89**		ug/L			276294	288851	2	Standard
	Kr	**83**		ug/L			48	48	6	Standard
⌈>	**In-1**	**115**		ug/L			10483	10739	1	KED
|	**Cd**	**111**	**0.131**	ug/L	0.021	15	3	43	13	KED
⌊	**Cd**	**114**	**0.109**	ug/L	0.006	5	3	83	5	KED
⌈>	**Tb**	**159**		ug/L			725004	741970	0	Standard
⌊	**Pb**	**208**	**0.044**	ug/L	0.002	4	81	1749	4	Standard

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ICP-MS Quantitative Analysis - Summary Report

Sample ID: ERD0120-01
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 13, 2023 17:36:44

SKD 04-13-23

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27190	327427	0	Standard
	Cl	37		ug/L			5497601	6167917	3	Standard
>	Ge	72		ug/L			31194	26801	0	KED
	Ni	60	5.431	ug/L	0.115	2	3	4704	2	KED
	Ni	62	5.250	ug/L	0.306	5	1	753	5	KED
	Cu	63	1.663	ug/L	0.009	0	48	4168	0	KED
	Cu	65	1.645	ug/L	0.121	7	17	2054	7	KED
	Zn	66	2.878	ug/L	0.108	3	16	1020	3	KED
	Zn	67	3.486	ug/L	0.275	7	3	200	8	KED
	As	75	0.135	ug/L	0.015	11	4	28	9	KED
	Y	89		ug/L			276294	296118	0	Standard
	Kr	83		ug/L			48	73	16	Standard
>	In-1	115		ug/L			10483	9437	0	KED
	Cd	111	0.017	ug/L	0.011	64	3	7	36	KED
	Cd	114	0.023	ug/L	0.018	79	3	17	66	KED
>	Tb	159		ug/L			725004	725654	1	Standard
	Pb	208	0.046	ug/L	0.001	2	81	1789	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0219-01
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, April 13, 2023 17:40:54

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	966616	2	Standard
	Cl	**37**		ug/L			5497601	6244953	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	26358	0	KED
|	**Ni**	**60**	**22.455**	ug/L	0.768	3	3	19115	2	KED
|	**Ni**	**62**	**23.102**	ug/L	1.092	4	1	3252	3	KED
|	**Cu**	**63**	**8.095**	ug/L	0.050	0	48	19793	0	KED
|	**Cu**	**65**	**7.870**	ug/L	0.039	0	17	9607	0	KED
|	**Zn**	**66**	**6.832**	ug/L	0.225	3	16	2364	3	KED
|	**Zn**	**67**	**7.482**	ug/L	0.401	5	3	419	5	KED
⌊	**As**	**75**	**0.075**	ug/L	0.021	27	4	17	22	KED
	Y	**89**		ug/L			276294	292809	1	Standard
	Kr	**83**		ug/L			48	89	22	Standard
⌈>	**In-1**	**115**		ug/L			10483	9591	1	KED
|	**Cd**	**111**	**0.070**	ug/L	0.026	37	3	22	31	KED
⌊	**Cd**	**114**	**0.082**	ug/L	0.010	12	3	56	10	KED
⌈>	**Tb**	**159**		ug/L			725004	736748	1	Standard
⌊	**Pb**	**208**	**0.239**	ug/L	0.004	1	81	9022	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0228-01
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, April 13, 2023 17:45:04
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	142406	3	Standard
	Cl	**37**		ug/L			5497601	6195304	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	25254	0	KED
|	**Ni**	**60**	**8.658**	ug/L	0.216	2	3	7064	1	KED
|	**Ni**	**62**	**8.219**	ug/L	0.159	1	1	1109	1	KED
|	**Cu**	**63**	**1.271**	ug/L	0.053	4	48	3009	3	KED
|	**Cu**	**65**	**1.254**	ug/L	0.020	1	17	1478	1	KED
|	**Zn**	**66**	**20.414**	ug/L	0.302	1	16	6743	0	KED
|	**Zn**	**67**	**19.864**	ug/L	1.688	8	3	1062	8	KED
⌊	**As**	**75**	**0.078**	ug/L	0.028	36	4	17	27	KED
	Y	**89**		ug/L			276294	291664	2	Standard
	Kr	**83**		ug/L			48	96	19	Standard
⌈>	**In-1**	**115**		ug/L			10483	9230	1	KED
|	**Cd**	**111**	**0.150**	ug/L	0.029	19	3	42	16	KED
⌊	**Cd**	**114**	**0.186**	ug/L	0.015	8	3	119	7	KED
⌈>	**Tb**	**159**		ug/L			725004	712060	0	Standard
⌊	**Pb**	**208**	**0.087**	ug/L	0.002	2	81	3213	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 17:49:15
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	34454	1	Standard
	Cl	**37**		ug/L			5497601	5800578	1	Standard
⌈>	**Ge**	**72**		ug/L			31194	29659	2	KED
|	**Ni**	**60**	**52.615**	ug/L	1.803	3	3	50380	1	KED
|	**Ni**	**62**	**52.067**	ug/L	1.912	3	1	8244	2	KED
|	**Cu**	**63**	**53.039**	ug/L	1.090	2	48	145639	1	KED
|	**Cu**	**65**	**52.603**	ug/L	1.397	2	17	72137	0	KED
|	**Zn**	**66**	**52.107**	ug/L	1.893	3	16	20179	1	KED
|	**Zn**	**67**	**51.164**	ug/L	2.397	4	3	3206	2	KED
⌊	**As**	**75**	**50.906**	ug/L	1.253	2	4	10304	0	KED
	Y	**89**		ug/L			276294	292671	1	Standard
	Kr	**83**		ug/L			48	57	14	Standard
⌈>	**In-1**	**115**		ug/L			10483	10384	1	KED
|	**Cd**	**111**	**50.866**	ug/L	0.588	1	3	14971	0	KED
⌊	**Cd**	**114**	**50.751**	ug/L	0.711	1	3	35907	0	KED
⌈>	**Tb**	**159**		ug/L			725004	751527	0	Standard
⌊	**Pb**	**208**	**56.240**	ug/L	0.785	1	81	2144173	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 17:56:09
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	30147	2	Standard
	Cl	**37**		ug/L			5497601	5703614	2	Standard
⌈>	**Ge**	**72**		ug/L			31194	30090	4	KED
|	**Ni**	**60**	**0.005**	ug/L	0.007	144	3	8	81	KED
|	**Ni**	**62**	**0.005**	ug/L	0.019	399	1	2	114	KED
|	**Cu**	**63**	**-0.003**	ug/L	0.001	49	48	39	5	KED
|	**Cu**	**65**	**0.001**	ug/L	0.004	485	17	17	34	KED
|	**Zn**	**66**	**-0.005**	ug/L	0.012	227	16	13	34	KED
|	**Zn**	**67**	**-0.037**	ug/L	0.018	47	3	1	86	KED
⌊	**As**	**75**	**-0.002**	ug/L	0.006	244	4	4	29	KED
	Y	**89**		ug/L			276294	281445	3	Standard
	Kr	**83**		ug/L			48	46	8	Standard
⌈>	**In-1**	**115**		ug/L			10483	10363	0	KED
|	**Cd**	**111**	**-0.005**	ug/L	0.008	158	3	2	107	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.004	545	3	2	115	KED
⌈>	**Tb**	**159**		ug/L			725004	730358	0	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	146	81	74	12	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0142-01
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 18:01:36
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	39809	1	Standard
	Cl	**37**		ug/L			5497601	7069018	4	Standard
⌈>	**Ge**	**72**		ug/L			31194	29854	1	KED
|	**Ni**	**60**	**0.536**	ug/L	0.007	1	3	520	0	KED
|	**Ni**	**62**	**0.486**	ug/L	0.031	6	1	79	7	KED
|	**Cu**	**63**	**1.361**	ug/L	0.032	2	48	3808	3	KED
|	**Cu**	**65**	**1.297**	ug/L	0.066	5	17	1807	5	KED
|	**Zn**	**66**	**3.224**	ug/L	0.067	2	16	1272	2	KED
|	**Zn**	**67**	**4.011**	ug/L	0.122	3	3	256	1	KED
⌊	**As**	**75**	**8.142**	ug/L	0.049	0	4	1663	0	KED
	Y	**89**		ug/L			276294	281110	5	Standard
	Kr	**83**		ug/L			48	53	26	Standard
⌈>	**In-1**	**115**		ug/L			10483	10324	0	KED
|	**Cd**	**111**	**0.009**	ug/L	0.013	147	3	6	60	KED
⌊	**Cd**	**114**	**0.021**	ug/L	0.007	33	3	17	27	KED
⌈>	**Tb**	**159**		ug/L			725004	722382	1	Standard
⌊	**Pb**	**208**	**0.147**	ug/L	0.003	2	81	5452	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0142-03
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 18:05:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	55209	1	Standard
	Cl	**37**		ug/L			5497601	5594015	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	31893	1	KED
|	**Ni**	**60**	**0.352**	ug/L	0.014	3	3	366	2	KED
|	**Ni**	**62**	**0.271**	ug/L	0.086	31	1	48	31	KED
|	**Cu**	**63**	**15.347**	ug/L	0.076	0	48	45364	1	KED
|	**Cu**	**65**	**15.181**	ug/L	0.265	1	17	22405	0	KED
|	**Zn**	**66**	**81.219**	ug/L	0.821	1	16	33831	0	KED
|	**Zn**	**67**	**75.789**	ug/L	0.146	0	3	5108	1	KED
⌊	**As**	**75**	**0.372**	ug/L	0.045	12	4	85	10	KED
	Y	**89**		ug/L			276294	282993	5	Standard
	Kr	**83**		ug/L			48	44	4	Standard
⌈>	**In-1**	**115**		ug/L			10483	10785	1	KED
|	**Cd**	**111**	**0.073**	ug/L	0.003	4	3	26	5	KED
⌊	**Cd**	**114**	**0.060**	ug/L	0.011	18	3	47	17	KED
⌈>	**Tb**	**159**		ug/L			725004	735197	1	Standard
⌊	**Pb**	**208**	**0.880**	ug/L	0.014	1	81	32893	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0143-06
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 18:09:56
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	49687	4	Standard
	Cl	**37**		ug/L			5497601	5499425	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	30381	0	KED
|	**Ni**	**60**	**0.394**	ug/L	0.033	8	3	389	7	KED
|	**Ni**	**62**	**0.423**	ug/L	0.145	34	1	70	33	KED
|	**Cu**	**63**	**5.263**	ug/L	0.042	0	48	14849	0	KED
|	**Cu**	**65**	**5.221**	ug/L	0.124	2	17	7352	2	KED
|	**Zn**	**66**	**36.318**	ug/L	0.948	2	16	14420	2	KED
|	**Zn**	**67**	**34.063**	ug/L	0.464	1	3	2189	1	KED
⌊	**As**	**75**	**1.504**	ug/L	0.039	2	4	316	2	KED
	Y	**89**		ug/L			276294	288044	2	Standard
	Kr	**83**		ug/L			48	56	22	Standard
⌈>	**In-1**	**115**		ug/L			10483	10338	0	KED
|	**Cd**	**111**	**0.315**	ug/L	0.030	9	3	96	9	KED
⌊	**Cd**	**114**	**0.327**	ug/L	0.006	1	3	233	1	KED
⌈>	**Tb**	**159**		ug/L			725004	728594	0	Standard
⌊	**Pb**	**208**	**1.682**	ug/L	0.016	0	81	62245	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0207-01
Sample Dil Factor: 10
Comments:
Sample Date/Time: Thursday, April 13, 2023 18:14:06
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27190	33093	0	Standard
	Cl	37		ug/L			5497601	5517798	3	Standard
>	Ge	72		ug/L			31194	30824	2	KED
	Ni	60	6.932	ug/L	0.241	3	3	6901	1	KED
	Ni	62	7.090	ug/L	0.342	4	1	1168	5	KED
	Cu	63	38.790	ug/L	0.396	1	48	110734	2	KED
	Cu	65	38.470	ug/L	0.794	2	17	54851	3	KED
	Zn	66	374.616	ug/L	5.207	1	16	150726	1	KED
	Zn	67	350.855	ug/L	5.134	1	3	22839	1	KED
	As	75	0.857	ug/L	0.055	6	4	185	8	KED
	Y	89		ug/L			276294	299013	3	Standard
	Kr	83		ug/L			48	48	18	Standard
>	In-1	115		ug/L			10483	10566	3	KED
	Cd	111	0.656	ug/L	0.027	4	3	200	7	KED
	Cd	114	0.655	ug/L	0.047	7	3	474	5	KED
>	Tb	159		ug/L			725004	740411	0	Standard
	Pb	208	71.226	ug/L	0.475	0	81	2675347	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D207-01RE1
Sample Dil Factor: 50
Comments:
Sample Date/Time: Thursday, April 13, 2023 18:22:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	27332	1	Standard
	Cl	**37**		ug/L			5497601	5361636	2	Standard
⌈>	**Ge**	**72**		ug/L			31194	31609	2	KED
|	**Ni**	**60**	**1.415**	ug/L	0.113	8	3	1447	5	KED
|	**Ni**	**62**	**1.507**	ug/L	0.053	3	1	256	5	KED
|	**Cu**	**63**	**7.770**	ug/L	0.256	3	48	22775	1	KED
|	**Cu**	**65**	**7.888**	ug/L	0.307	3	17	11545	3	KED
|	**Zn**	**66**	**75.444**	ug/L	1.646	2	16	31139	0	KED
|	**Zn**	**67**	**71.499**	ug/L	2.513	3	3	4774	1	KED
⌊	**As**	**75**	**0.153**	ug/L	0.015	9	4	37	10	KED
	Y	**89**		ug/L			276294	281730	4	Standard
	Kr	**83**		ug/L			48	49	6	Standard
⌈>	**In-1**	**115**		ug/L			10483	10825	2	KED
|	**Cd**	**111**	**0.127**	ug/L	0.011	8	3	42	10	KED
⌊	**Cd**	**114**	**0.150**	ug/L	0.006	4	3	113	5	KED
⌈>	**Tb**	**159**		ug/L			725004	719399	1	Standard
⌊	**Pb**	**208**	**14.968**	ug/L	0.086	0	81	546307	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0208-01
Sample Dil Factor: 10
Comments:
Sample Date/Time: Thursday, April 13, 2023 18:26:43
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27190	33205	1	Standard
	Cl	37		ug/L			5497601	5480729	2	Standard
>	Ge	72		ug/L			31194	32336	2	KED
	Ni	60	8.121	ug/L	0.263	3	3	8481	0	KED
	Ni	62	8.143	ug/L	0.452	5	1	1407	3	KED
	Cu	63	48.558	ug/L	1.218	2	48	145405	3	KED
	Cu	65	48.441	ug/L	0.881	1	17	72444	2	KED
	Zn	66	464.309	ug/L	16.894	3	16	195924	2	KED
	Zn	67	439.584	ug/L	3.872	0	3	30020	1	KED
	As	75	0.832	ug/L	0.021	2	4	188	3	KED
	Y	89		ug/L			276294	294220	2	Standard
	Kr	83		ug/L			48	48	12	Standard
>	In-1	115		ug/L			10483	10767	2	KED
	Cd	111	0.848	ug/L	0.059	6	3	262	6	KED
	Cd	114	0.905	ug/L	0.054	5	3	666	3	KED
>	Tb	159		ug/L			725004	737629	1	Standard
	Pb	208	89.160	ug/L	1.986	2	81	3335869	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0346-DUP1
Sample Dil Factor: 10
Comments:
Sample Date/Time: Thursday, April 13, 2023 18:30:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27190	32012	0	Standard
	Cl	37		ug/L			5497601	5439408	2	Standard
>	Ge	72		ug/L			31194	32006	0	KED
	Ni	60	7.832	ug/L	0.109	1	3	8100	1	KED
	Ni	62	7.942	ug/L	0.075	0	1	1359	0	KED
	Cu	63	49.139	ug/L	0.670	1	48	145655	1	KED
	Cu	65	48.185	ug/L	1.397	2	17	71343	3	KED
	Zn	66	460.490	ug/L	7.766	1	16	192433	2	KED
	Zn	67	436.979	ug/L	11.720	2	3	29541	2	KED
	As	75	0.742	ug/L	0.036	4	4	166	4	KED
	Y	89		ug/L			276294	292776	3	Standard
	Kr	83		ug/L			48	51	9	Standard
>	In-1	115		ug/L			10483	10776	1	KED
	Cd	111	0.832	ug/L	0.023	2	3	258	1	KED
	Cd	114	0.844	ug/L	0.104	12	3	622	11	KED
>	Tb	159		ug/L			725004	749012	1	Standard
	Pb	208	88.366	ug/L	1.736	1	81	3357060	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0346-MS1
Sample Dil Factor: 10
Comments:
Sample Date/Time: Thursday, April 13, 2023 18:35:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units		Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L				27190	31977	1	Standard
	Cl	37		ug/L				5497601	5327718	2	Standard
>	Ge	72		ug/L				31194	31925	1	KED
	Ni	60	9.946	ug/L		0.027	0	3	10259	1	KED
	Ni	62	9.817	ug/L		0.380	3	1	1676	5	KED
	Cu	63	50.049	ug/L	STL	0.710	1	48	147959	0	KED
	Cu	65	49.298	ug/L		0.508	1	17	72800	1	KED
	Zn	66	464.437	ug/L		11.159	2	16	193544	1	KED
	Zn	67	445.021	ug/L		2.933	0	3	30007	0	KED
	As	75	2.902	ug/L		0.107	3	4	636	3	KED
	Y	89		ug/L				276294	292611	2	Standard
	Kr	83		ug/L				48	52	17	Standard
>	In-1	115		ug/L				10483	10625	1	KED
	Cd	111	3.367	ug/L		0.149	4	3	1017	3	KED
	Cd	114	3.441	ug/L		0.079	2	3	2494	3	KED
>	Tb	159		ug/L				725004	741996	1	Standard
	Pb	208	88.570	ug/L		0.951	1	81	3333654	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 18:40:11
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	27807	1	Standard
	Cl	**37**		ug/L			5497601	5314052	1	Standard
⎡>	**Ge**	**72**		ug/L			31194	31184	1	KED
⎢	**Ni**	**60**	**0.010**	ug/L	0.004	40	3	13	28	KED
⎢	**Ni**	**62**	**0.012**	ug/L	0.020	174	1	3	86	KED
⎢	**Cu**	**63**	**-0.000**	ug/L	0.002	463	48	47	14	KED
⎢	**Cu**	**65**	**0.003**	ug/L	0.008	280	17	20	50	KED
⎢	**Zn**	**66**	**0.037**	ug/L	0.011	28	16	31	13	KED
⎢	**Zn**	**67**	**0.000**	ug/L	0.030	9423	3	3	50	KED
⎣	**As**	**75**	**-0.002**	ug/L	0.006	249	4	4	29	KED
	Y	**89**		ug/L			276294	272995	2	Standard
	Kr	**83**		ug/L			48	43	24	Standard
⎡>	**In-1**	**115**		ug/L			10483	10370	2	KED
⎢	**Cd**	**111**	**-0.010**	ug/L	0.003	32	3	0	100	KED
⎣	**Cd**	**114**	**-0.001**	ug/L	0.002	175	3	2	43	KED
⎡>	**Tb**	**159**		ug/L			725004	710556	1	Standard
⎣	**Pb**	**208**	**0.002**	ug/L	0.001	27	81	154	12	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 18:44:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	25607	2	Standard
	Cl	**37**		ug/L			5497601	5338917	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	31642	1	KED
|	**Ni**	**60**	**50.473**	ug/L	0.063	0	3	51586	1	KED
|	**Ni**	**62**	**50.485**	ug/L	1.382	2	1	8532	2	KED
|	**Cu**	**63**	**50.733**	ug/L	0.173	0	48	148664	1	KED
|	**Cu**	**65**	**50.414**	ug/L	0.789	1	17	73792	2	KED
|	**Zn**	**66**	**51.806**	ug/L	0.528	1	16	21414	0	KED
|	**Zn**	**67**	**51.420**	ug/L	1.059	2	3	3439	1	KED
⌊	**As**	**75**	**50.314**	ug/L	0.931	1	4	10868	1	KED
	Y	**89**		ug/L			276294	280543	1	Standard
	Kr	**83**		ug/L			48	56	17	Standard
⌈>	**In-1**	**115**		ug/L			10483	10456	3	KED
|	**Cd**	**111**	**51.039**	ug/L	0.561	1	3	15125	2	KED
⌊	**Cd**	**114**	**51.988**	ug/L	0.878	1	3	37030	1	KED
⌈>	**Tb**	**159**		ug/L			725004	741075	1	Standard
⌊	**Pb**	**208**	**54.710**	ug/L	1.619	2	81	2056338	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 18:51:16
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	25710	2	Standard
	Cl	**37**		ug/L			5497601	5343248	2	Standard
⎡>	**Ge**	**72**		ug/L			31194	31369	0	KED
⎢	**Ni**	**60**	**0.002**	ug/L	0.002	100	3	5	33	KED
⎢	**Ni**	**62**	**-0.000**	ug/L	0.011	24143	1	1	100	KED
⎢	**Cu**	**63**	**-0.001**	ug/L	0.005	949	48	47	31	KED
⎢	**Cu**	**65**	**0.003**	ug/L	0.001	49	17	21	10	KED
⎢	**Zn**	**66**	**0.001**	ug/L	0.020	1568	16	17	48	KED
⎢	**Zn**	**67**	**-0.010**	ug/L	0.060	592	3	3	124	KED
⎣	**As**	**75**	**0.007**	ug/L	0.012	178	4	6	40	KED
	Y	**89**		ug/L			276294	268271	1	Standard
	Kr	**83**		ug/L			48	42	11	Standard
⎡>	**In-1**	**115**		ug/L			10483	10324	0	KED
⎢	**Cd**	**111**	**-0.002**	ug/L	0.002	97	3	3	17	KED
⎣	**Cd**	**114**	**-0.003**	ug/L	0.002	61	3	1	90	KED
⎡>	**Tb**	**159**		ug/L			725004	708164	1	Standard
⎣	**Pb**	**208**	**-0.000**	ug/L	0.000	30	81	68	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0243-BLK1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 19:00:47
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	32078	1	Standard
	Cl	**37**		ug/L			5497601	5307842	2	Standard
⌈>	**Ge**	**72**		ug/L			31194	31987	1	KED
|	**Ni**	**60**	**-0.001**	ug/L	0.002	321	3	3	69	KED
|	**Ni**	**62**	**0.011**	ug/L	0.023	204	1	3	100	KED
|	**Cu**	**63**	**0.003**	ug/L	0.005	178	48	57	24	KED
|	**Cu**	**65**	**0.007**	ug/L	0.003	47	17	27	17	KED
|	**Zn**	**66**	**0.132**	ug/L	0.029	22	16	71	15	KED
|	**Zn**	**67**	**0.102**	ug/L	0.070	68	3	10	44	KED
⌊	**As**	**75**	**-0.005**	ug/L	0.012	245	4	3	66	KED
	Y	**89**		ug/L			276294	278599	3	Standard
	Kr	**83**		ug/L			48	48	11	Standard
⌈>	**In-1**	**115**		ug/L			10483	10682	1	KED
|	**Cd**	**111**	**0.002**	ug/L	0.008	417	3	4	53	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.008	333	3	4	119	KED
⌈>	**Tb**	**159**		ug/L			725004	732376	0	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.000	3	81	206	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0243-BS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 19:04:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	32314	0	Standard
	Cl	**37**		ug/L			5497601	5391784	1	Standard
⌈>	**Ge**	**72**		ug/L			31194	32544	1	KED
|	**Ni**	**60**	**25.292**	ug/L	0.327	1	3	26587	0	KED
|	**Ni**	**62**	**24.956**	ug/L	0.408	1	1	4339	1	KED
|	**Cu**	**63**	**25.931**	ug/L	0.425	1	48	78172	0	KED
|	**Cu**	**65**	**25.649**	ug/L	0.135	0	17	38619	0	KED
|	**Zn**	**66**	**77.730**	ug/L	1.094	1	16	33038	0	KED
|	**Zn**	**67**	**73.609**	ug/L	0.893	1	3	5063	1	KED
⌊	**As**	**75**	**24.031**	ug/L	0.492	2	4	5341	1	KED
	Y	**89**		ug/L			276294	284929	2	Standard
	Kr	**83**		ug/L			48	54	10	Standard
⌈>	**In-1**	**115**		ug/L			10483	10884	1	KED
|	**Cd**	**111**	**24.516**	ug/L	0.152	0	3	7566	1	KED
⌊	**Cd**	**114**	**24.189**	ug/L	0.229	0	3	17941	0	KED
⌈>	**Tb**	**159**		ug/L			725004	735202	0	Standard
⌊	**Pb**	**208**	**28.006**	ug/L	0.340	1	81	1044567	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0207-02
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 19:09:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	32653	0	Standard
	Cl	**37**		ug/L			5497601	5322769	4	Standard
⌈>	**Ge**	**72**		ug/L			31194	33188	1	KED
|	**Ni**	**60**	**5.964**	ug/L	0.158	2	3	6396	2	KED
|	**Ni**	**62**	**6.132**	ug/L	0.173	2	1	1088	3	KED
|	**Cu**	**63**	**15.025**	ug/L	0.116	0	48	46217	0	KED
|	**Cu**	**65**	**15.049**	ug/L	0.194	1	17	23114	0	KED
|	**Zn**	**66**	**22.400**	ug/L	0.418	1	16	9722	1	KED
|	**Zn**	**67**	**20.667**	ug/L	1.126	5	3	1452	4	KED
⌊	**As**	**75**	**3.287**	ug/L	0.119	3	4	749	3	KED
	Y	**89**		ug/L			276294	411585	3	Standard
	Kr	**83**		ug/L			48	64	13	Standard
⌈>	**In-1**	**115**		ug/L			10483	11250	1	KED
|	**Cd**	**111**	**0.033**	ug/L	0.009	26	3	14	19	KED
⌊	**Cd**	**114**	**0.052**	ug/L	0.019	35	3	43	32	KED
⌈>	**Tb**	**159**		ug/L			725004	759774	2	Standard
⌊	**Pb**	**208**	**29.904**	ug/L	0.945	3	81	1152117	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0207-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 19:13:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	31989	1	Standard
	Cl	**37**		ug/L			5497601	5281837	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	31815	1	KED
|	**Ni**	**60**	**14.784**	ug/L	0.033	0	3	15195	1	KED
|	**Ni**	**62**	**14.999**	ug/L	0.480	3	1	2549	1	KED
|	**Cu**	**63**	**20.851**	ug/L	0.091	0	48	61464	1	KED
|	**Cu**	**65**	**20.643**	ug/L	0.195	0	17	30387	1	KED
|	**Zn**	**66**	**45.510**	ug/L	0.811	1	16	18917	1	KED
|	**Zn**	**67**	**44.540**	ug/L	1.664	3	3	2995	2	KED
⌊	**As**	**75**	**4.232**	ug/L	0.134	3	4	923	2	KED
	Y	**89**		ug/L			276294	423351	3	Standard
	Kr	**83**		ug/L			48	86	16	Standard
⌈>	**In-1**	**115**		ug/L			10483	10693	0	KED
|	**Cd**	**111**	**0.115**	ug/L	0.023	19	3	38	18	KED
⌊	**Cd**	**114**	**0.107**	ug/L	0.015	13	3	80	12	KED
⌈>	**Tb**	**159**		ug/L			725004	753389	0	Standard
⌊	**Pb**	**208**	**66.700**	ug/L	1.050	1	81	2549297	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0207-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 19:17:29
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	32605	1	Standard
	Cl	**37**		ug/L			5497601	5353776	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	33178	0	KED
|	**Ni**	**60**	**4.907**	ug/L	0.076	1	3	5261	1	KED
|	**Ni**	**62**	**4.817**	ug/L	0.227	4	1	855	3	KED
|	**Cu**	**63**	**8.902**	ug/L	0.225	2	48	27391	1	KED
|	**Cu**	**65**	**8.689**	ug/L	0.156	1	17	13351	2	KED
|	**Zn**	**66**	**23.945**	ug/L	0.317	1	16	10388	1	KED
|	**Zn**	**67**	**23.525**	ug/L	1.032	4	3	1652	4	KED
⌊	**As**	**75**	**1.872**	ug/L	0.072	3	4	428	3	KED
	Y	**89**		ug/L			276294	396345	5	Standard
	Kr	**83**		ug/L			48	54	2	Standard
⌈>	**In-1**	**115**		ug/L			10483	10834	1	KED
|	**Cd**	**111**	**0.011**	ug/L	0.010	88	3	7	39	KED
⌊	**Cd**	**114**	**0.019**	ug/L	0.004	22	3	16	16	KED
⌈>	**Tb**	**159**		ug/L			725004	756058	0	Standard
⌊	**Pb**	**208**	**4.074**	ug/L	0.040	0	81	156347	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0243-DUP1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 19:21:40
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	34452	1	Standard
	Cl	**37**		ug/L			5497601	5321281	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	33036	0	KED
|	**Ni**	**60**	**4.984**	ug/L	0.099	1	3	5322	2	KED
|	**Ni**	**62**	**5.171**	ug/L	0.059	1	1	914	1	KED
|	**Cu**	**63**	**7.087**	ug/L	0.212	2	48	21728	3	KED
|	**Cu**	**65**	**6.793**	ug/L	0.070	1	17	10395	0	KED
|	**Zn**	**66**	**19.389**	ug/L	0.093	0	16	8379	0	KED
|	**Zn**	**67**	**19.199**	ug/L	0.177	0	3	1343	1	KED
⌊	**As**	**75**	**1.900**	ug/L	0.031	1	4	433	1	KED
	Y	**89**		ug/L			276294	400864	2	Standard
	Kr	**83**		ug/L			48	58	3	Standard
⌈>	**In-1**	**115**		ug/L			10483	10943	1	KED
|	**Cd**	**111**	**0.009**	ug/L	0.014	162	3	6	65	KED
⌊	**Cd**	**114**	**0.013**	ug/L	0.005	34	3	13	26	KED
⌈>	**Tb**	**159**		ug/L			725004	765853	0	Standard
⌊	**Pb**	**208**	**3.906**	ug/L	0.073	1	81	151820	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0243-MS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 19:25:51
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	32869	1	Standard
	Cl	**37**		ug/L			5497601	5234535	1	Standard
⌈>	**Ge**	**72**		ug/L			31194	33094	1	KED
|	**Ni**	**60**	**30.415**	ug/L	1.401	4	3	32506	3	KED
|	**Ni**	**62**	**30.017**	ug/L	0.950	3	1	5305	2	KED
|	**Cu**	**63**	**33.100**	ug/L	0.614	1	48	101449	0	KED
|	**Cu**	**65**	**32.225**	ug/L	0.517	1	17	49332	1	KED
|	**Zn**	**66**	**100.428**	ug/L	2.618	2	16	43397	1	KED
|	**Zn**	**67**	**97.782**	ug/L	2.766	2	3	6837	2	KED
⌊	**As**	**75**	**26.362**	ug/L	0.180	0	4	5958	1	KED
	Y	**89**		ug/L			276294	405724	2	Standard
	Kr	**83**		ug/L			48	65	13	Standard
⌈>	**In-1**	**115**		ug/L			10483	11080	1	KED
|	**Cd**	**111**	**24.788**	ug/L	0.801	3	3	7786	2	KED
⌊	**Cd**	**114**	**25.084**	ug/L	0.390	1	3	18938	0	KED
⌈>	**Tb**	**159**		ug/L			725004	759834	0	Standard
⌊	**Pb**	**208**	**31.875**	ug/L	0.575	1	81	1228747	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0243-MSD1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 19:30:01
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	32643	2	Standard
	Cl	**37**		ug/L			5497601	5350839	1	Standard
⌈>	**Ge**	**72**		ug/L			31194	33216	1	KED
|	**Ni**	**60**	**30.445**	ug/L	0.525	1	3	32665	1	KED
|	**Ni**	**62**	**29.772**	ug/L	0.567	1	1	5283	2	KED
|	**Cu**	**63**	**32.785**	ug/L	0.512	1	48	100866	1	KED
|	**Cu**	**65**	**32.783**	ug/L	0.395	1	17	50375	1	KED
|	**Zn**	**66**	**98.292**	ug/L	2.231	2	16	42640	2	KED
|	**Zn**	**67**	**94.194**	ug/L	1.411	1	3	6611	1	KED
⌊	**As**	**75**	**25.440**	ug/L	0.442	1	4	5771	0	KED
	Y	**89**		ug/L			276294	398580	3	Standard
	Kr	**83**		ug/L			48	74	2	Standard
⌈>	**In-1**	**115**		ug/L			10483	10807	1	KED
|	**Cd**	**111**	**24.618**	ug/L	0.499	2	3	7542	0	KED
⌊	**Cd**	**114**	**24.775**	ug/L	0.066	0	3	18247	1	KED
⌈>	**Tb**	**159**		ug/L			725004	768465	0	Standard
⌊	**Pb**	**208**	**31.121**	ug/L	0.418	1	81	1213325	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0243-PS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 19:34:12
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	33897	1	Standard
	Cl	**37**		ug/L			5497601	5238358	4	Standard
⌈>	**Ge**	**72**		ug/L			31194	33212	1	KED
|	**Ni**	**60**	**31.247**	ug/L	0.840	2	3	33512	1	KED
|	**Ni**	**62**	**31.902**	ug/L	0.278	0	1	5659	0	KED
|	**Cu**	**63**	**36.859**	ug/L	0.349	0	48	113375	0	KED
|	**Cu**	**65**	**35.174**	ug/L	0.591	1	17	54042	2	KED
|	**Zn**	**66**	**106.213**	ug/L	0.583	0	16	46067	1	KED
|	**Zn**	**67**	**103.385**	ug/L	0.886	0	3	7256	2	KED
⌊	**As**	**75**	**27.397**	ug/L	0.622	2	4	6213	1	KED
	Y	**89**		ug/L			276294	393558	2	Standard
	Kr	**83**		ug/L			48	66	33	Standard
⌈>	**In-1**	**115**		ug/L			10483	10748	2	KED
|	**Cd**	**111**	**25.859**	ug/L	0.771	2	3	7876	0	KED
⌊	**Cd**	**114**	**26.169**	ug/L	0.774	2	3	19160	1	KED
⌈>	**Tb**	**159**		ug/L			725004	745921	0	Standard
⌊	**Pb**	**208**	**31.990**	ug/L	0.404	1	81	1210548	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 19:38:23
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	29664	4	Standard
	Cl	**37**		ug/L			5497601	5123395	4	Standard
⎡>	**Ge**	**72**		ug/L			31194	31729	2	KED
⎢	**Ni**	**60**	**-0.000**	ug/L	0.004	20961	3	3	100	KED
⎢	**Ni**	**62**	**0.015**	ug/L	0.013	89	1	4	49	KED
⎢	**Cu**	**63**	**-0.000**	ug/L	0.004	1330	48	48	25	KED
⎢	**Cu**	**65**	**0.002**	ug/L	0.007	273	17	20	45	KED
⎢	**Zn**	**66**	**0.010**	ug/L	0.010	98	16	20	18	KED
⎢	**Zn**	**67**	**-0.001**	ug/L	0.001	122	3	3	0	KED
⎣	**As**	**75**	**-0.000**	ug/L	0.004	919	4	4	17	KED
	Y	**89**		ug/L			276294	270781	4	Standard
	Kr	**83**		ug/L			48	41	20	Standard
⎡>	**In-1**	**115**		ug/L			10483	10093	0	KED
⎢	**Cd**	**111**	**-0.010**	ug/L	0.003	34	3	0	100	KED
⎣	**Cd**	**114**	**-0.001**	ug/L	0.002	183	3	2	44	KED
⎡>	**Tb**	**159**		ug/L			725004	708832	0	Standard
⎣	**Pb**	**208**	**0.000**	ug/L	0.000	76	81	92	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 19:42:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	25677	4	Standard
	Cl	**37**		ug/L			5497601	5209040	2	Standard
⌈>	**Ge**	**72**		ug/L			31194	32809	1	KED
|	**Ni**	**60**	**50.048**	ug/L	0.978	1	3	53033	0	KED
|	**Ni**	**62**	**49.216**	ug/L	1.141	2	1	8624	1	KED
|	**Cu**	**63**	**50.039**	ug/L	0.542	1	48	152033	0	KED
|	**Cu**	**65**	**49.870**	ug/L	0.933	1	17	75678	1	KED
|	**Zn**	**66**	**50.645**	ug/L	0.899	1	16	21707	0	KED
|	**Zn**	**67**	**50.568**	ug/L	1.878	3	3	3507	3	KED
⌊	**As**	**75**	**49.936**	ug/L	0.548	1	4	11185	0	KED
	Y	**89**		ug/L			276294	281808	4	Standard
	Kr	**83**		ug/L			48	51	23	Standard
⌈>	**In-1**	**115**		ug/L			10483	10652	2	KED
|	**Cd**	**111**	**50.216**	ug/L	0.867	1	3	15159	0	KED
⌊	**Cd**	**114**	**50.338**	ug/L	1.740	3	3	36519	1	KED
⌈>	**Tb**	**159**		ug/L			725004	746353	0	Standard
⌊	**Pb**	**208**	**53.369**	ug/L	1.026	1	81	2020562	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 19:49:30
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	25220	3	Standard
	Cl	**37**		ug/L			5497601	5137142	4	Standard
⌈>	**Ge**	**72**		ug/L			31194	31155	2	KED
|	**Ni**	**60**	**0.003**	ug/L	0.002	65	3	6	31	KED
|	**Ni**	**62**	**0.004**	ug/L	0.013	337	1	2	86	KED
|	**Cu**	**63**	**-0.003**	ug/L	0.003	78	48	38	17	KED
|	**Cu**	**65**	**0.004**	ug/L	0.007	185	17	22	40	KED
|	**Zn**	**66**	**-0.017**	ug/L	0.008	45	16	9	34	KED
|	**Zn**	**67**	**0.000**	ug/L	0.002	1598	3	3	0	KED
⌊	**As**	**75**	**0.013**	ug/L	0.008	58	4	7	22	KED
	Y	**89**		ug/L			276294	270391	3	Standard
	Kr	**83**		ug/L			48	41	11	Standard
⌈>	**In-1**	**115**		ug/L			10483	10201	3	KED
|	**Cd**	**111**	**-0.008**	ug/L	0.004	44	3	1	86	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.000	7	3	1	1	KED
⌈>	**Tb**	**159**		ug/L			725004	702185	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	112	81	88	12	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0207-04
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 19:53:41
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	35052	0	Standard
	Cl	**37**		ug/L			5497601	5351322	1	Standard
>	**Ge**	**72**		ug/L			31194	33007	1	KED
	Ni	**60**	**12.405**	ug/L	0.231	1	3	13227	0	KED
	Ni	**62**	**12.295**	ug/L	0.501	4	1	2169	3	KED
	Cu	**63**	**18.605**	ug/L	0.329	1	48	56914	2	KED
	Cu	**65**	**18.625**	ug/L	0.329	1	17	28444	0	KED
	Zn	**66**	**45.228**	ug/L	1.342	2	16	19504	2	KED
	Zn	**67**	**44.024**	ug/L	0.746	1	3	3072	1	KED
	As	**75**	**4.407**	ug/L	0.135	3	4	997	4	KED
	Y	**89**		ug/L			276294	466686	2	Standard
	Kr	**83**		ug/L			48	81	14	Standard
>	**In-1**	**115**		ug/L			10483	10971	2	KED
	Cd	**111**	**0.129**	ug/L	0.008	6	3	44	6	KED
	Cd	**114**	**0.134**	ug/L	0.012	9	3	103	6	KED
>	**Tb**	**159**		ug/L			725004	770232	0	Standard
	Pb	**208**	**34.093**	ug/L	0.841	2	81	1332058	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0207-05
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 19:57:52
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	35085	4	Standard
	Cl	**37**		ug/L			5497601	5278538	4	Standard
⌈>	**Ge**	**72**		ug/L			31194	33673	1	KED
|	**Ni**	**60**	**10.568**	ug/L	0.364	3	3	11494	2	KED
|	**Ni**	**62**	**10.482**	ug/L	0.421	4	1	1886	3	KED
|	**Cu**	**63**	**17.847**	ug/L	0.205	1	48	55686	0	KED
|	**Cu**	**65**	**17.600**	ug/L	0.181	1	17	27425	1	KED
|	**Zn**	**66**	**105.267**	ug/L	2.168	2	16	46288	1	KED
|	**Zn**	**67**	**100.668**	ug/L	2.451	2	3	7164	3	KED
⌊	**As**	**75**	**3.989**	ug/L	0.112	2	4	921	2	KED
	Y	**89**		ug/L			276294	442891	5	Standard
	Kr	**83**		ug/L			48	77	9	Standard
⌈>	**In-1**	**115**		ug/L			10483	10917	0	KED
|	**Cd**	**111**	**0.114**	ug/L	0.013	11	3	39	10	KED
⌊	**Cd**	**114**	**0.166**	ug/L	0.017	10	3	127	10	KED
⌈>	**Tb**	**159**		ug/L			725004	753959	1	Standard
⌊	**Pb**	**208**	**40.781**	ug/L	0.642	1	81	1559752	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0207-06
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 20:02:03
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	33843	2	Standard
	Cl	**37**		ug/L			5497601	5309116	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	32800	1	KED
|	**Ni**	**60**	**8.910**	ug/L	0.064	0	3	9442	0	KED
|	**Ni**	**62**	**9.004**	ug/L	0.404	4	1	1578	3	KED
|	**Cu**	**63**	**22.160**	ug/L	0.639	2	48	67329	1	KED
|	**Cu**	**65**	**22.294**	ug/L	0.098	0	17	33836	1	KED
|	**Zn**	**66**	**20.968**	ug/L	0.412	1	16	8994	1	KED
|	**Zn**	**67**	**20.592**	ug/L	0.248	1	3	1430	2	KED
⌊	**As**	**75**	**1.940**	ug/L	0.044	2	4	439	1	KED
	Y	**89**		ug/L			276294	466817	0	Standard
	Kr	**83**		ug/L			48	81	28	Standard
⌈>	**In-1**	**115**		ug/L			10483	11060	0	KED
|	**Cd**	**111**	**0.030**	ug/L	0.008	27	3	13	18	KED
⌊	**Cd**	**114**	**0.043**	ug/L	0.012	28	3	35	26	KED
⌈>	**Tb**	**159**		ug/L			725004	753433	3	Standard
⌊	**Pb**	**208**	**8.985**	ug/L	0.092	1	81	343409	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0207-07
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 20:06:14
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	34528	1	Standard
	Cl	**37**		ug/L			5497601	5439087	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	33572	3	KED
|	**Ni**	**60**	**7.626**	ug/L	0.142	1	3	8271	2	KED
|	**Ni**	**62**	**7.779**	ug/L	0.277	3	1	1395	0	KED
|	**Cu**	**63**	**9.083**	ug/L	0.444	4	48	28252	1	KED
|	**Cu**	**65**	**9.385**	ug/L	0.360	3	17	14576	1	KED
|	**Zn**	**66**	**24.070**	ug/L	0.914	3	16	10558	0	KED
|	**Zn**	**67**	**22.985**	ug/L	1.507	6	3	1631	4	KED
⌊	**As**	**75**	**2.284**	ug/L	0.038	1	4	528	2	KED
	Y	**89**		ug/L			276294	433316	2	Standard
	Kr	**83**		ug/L			48	74	12	Standard
⌈>	**In-1**	**115**		ug/L			10483	10702	2	KED
|	**Cd**	**111**	**0.040**	ug/L	0.013	32	3	15	22	KED
⌊	**Cd**	**114**	**0.034**	ug/L	0.005	15	3	28	15	KED
⌈>	**Tb**	**159**		ug/L			725004	773501	0	Standard
⌊	**Pb**	**208**	**6.803**	ug/L	0.067	0	81	267025	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0207-08
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 20:10:24
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	36653	2	Standard
	Cl	**37**		ug/L			5497601	5345689	0	Standard
>	**Ge**	**72**		ug/L			31194	33446	0	KED
	Ni	**60**	**9.293**	ug/L	0.369	3	3	10042	3	KED
	Ni	**62**	**9.701**	ug/L	0.286	2	1	1734	2	KED
	Cu	**63**	**18.005**	ug/L	0.462	2	48	55799	1	KED
	Cu	**65**	**17.867**	ug/L	0.340	1	17	27652	1	KED
	Zn	**66**	**25.421**	ug/L	0.648	2	16	11117	2	KED
	Zn	**67**	**26.099**	ug/L	0.320	1	3	1847	1	KED
	As	**75**	**2.907**	ug/L	0.013	0	4	668	0	KED
	Y	**89**		ug/L			276294	502817	3	Standard
	Kr	**83**		ug/L			48	85	17	Standard
>	**In-1**	**115**		ug/L			10483	10820	2	KED
	Cd	**111**	**0.033**	ug/L	0.013	41	3	13	32	KED
	Cd	**114**	**0.039**	ug/L	0.006	16	3	31	17	KED
>	**Tb**	**159**		ug/L			725004	769145	1	Standard
	Pb	**208**	**3.003**	ug/L	0.030	0	81	117248	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0207-09
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 20:14:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	34420	2	Standard
	Cl	**37**		ug/L			5497601	5432019	0	Standard
⌈>	**Ge**	**72**		ug/L			31194	32487	0	KED
|	**Ni**	**60**	**46.181**	ug/L	0.173	0	3	48461	0	KED
|	**Ni**	**62**	**46.239**	ug/L	0.914	1	1	8023	1	KED
|	**Cu**	**63**	**22.000**	ug/L	0.317	1	48	66215	0	KED
|	**Cu**	**65**	**21.848**	ug/L	0.472	2	17	32839	1	KED
|	**Zn**	**66**	**53.073**	ug/L	0.745	1	16	22524	0	KED
|	**Zn**	**67**	**53.574**	ug/L	1.945	3	3	3679	3	KED
⌊	**As**	**75**	**4.539**	ug/L	0.142	3	4	1011	2	KED
	Y	**89**		ug/L			276294	487181	0	Standard
	Kr	**83**		ug/L			48	81	30	Standard
⌈>	**In-1**	**115**		ug/L			10483	10858	2	KED
|	**Cd**	**111**	**0.150**	ug/L	0.013	8	3	50	5	KED
⌊	**Cd**	**114**	**0.121**	ug/L	0.022	18	3	92	17	KED
⌈>	**Tb**	**159**		ug/L			725004	759037	0	Standard
⌊	**Pb**	**208**	**11.186**	ug/L	0.139	1	81	430785	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0207-15
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 20:18:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	40385	2	Standard
	Cl	**37**		ug/L			5497601	5468122	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	32805	1	KED
|	**Ni**	**60**	**13.858**	ug/L	0.135	0	3	14686	0	KED
|	**Ni**	**62**	**13.604**	ug/L	0.211	1	1	2384	0	KED
|	**Cu**	**63**	**44.870**	ug/L	0.938	2	48	136336	2	KED
|	**Cu**	**65**	**44.059**	ug/L	0.504	1	17	66865	2	KED
|	**Zn**	**66**	**101.504**	ug/L	1.008	0	16	43490	2	KED
|	**Zn**	**67**	**98.531**	ug/L	1.523	1	3	6830	2	KED
⌊	**As**	**75**	**8.090**	ug/L	0.113	1	4	1815	0	KED
	Y	**89**		ug/L			276294	456347	4	Standard
	Kr	**83**		ug/L			48	84	4	Standard
⌈>	**In-1**	**115**		ug/L			10483	10990	1	KED
|	**Cd**	**111**	**0.113**	ug/L	0.012	10	3	39	8	KED
⌊	**Cd**	**114**	**0.087**	ug/L	0.006	7	3	68	8	KED
⌈>	**Tb**	**159**		ug/L			725004	760815	1	Standard
⌊	**Pb**	**208**	**134.269**	ug/L	0.261	0	81	5182179	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0207-16
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 20:22:56
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	37571	3	Standard
	Cl	**37**		ug/L			5497601	5415228	2	Standard
⌈>	**Ge**	**72**		ug/L			31194	32182	1	KED
|	**Ni**	**60**	**10.489**	ug/L	0.467	4	3	10902	3	KED
|	**Ni**	**62**	**10.382**	ug/L	0.092	0	1	1786	1	KED
|	**Cu**	**63**	**27.342**	ug/L	0.642	2	48	81493	0	KED
|	**Cu**	**65**	**26.968**	ug/L	0.480	1	17	40147	0	KED
|	**Zn**	**66**	**82.580**	ug/L	2.716	3	16	34700	2	KED
|	**Zn**	**67**	**77.820**	ug/L	3.592	4	3	5291	3	KED
⌊	**As**	**75**	**6.541**	ug/L	0.274	4	4	1441	3	KED
	Y	**89**		ug/L			276294	471133	2	Standard
	Kr	**83**		ug/L			48	93	14	Standard
⌈>	**In-1**	**115**		ug/L			10483	10806	1	KED
|	**Cd**	**111**	**0.280**	ug/L	0.040	14	3	89	14	KED
⌊	**Cd**	**114**	**0.214**	ug/L	0.009	4	3	160	4	KED
⌈>	**Tb**	**159**		ug/L			725004	769179	1	Standard
⌊	**Pb**	**208**	**32.010**	ug/L	0.791	2	81	1248802	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0207-17
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, April 13, 2023 20:27:07
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	39471	2	Standard
	Cl	**37**		ug/L			5497601	5293894	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	32851	2	KED
|	**Ni**	**60**	**11.424**	ug/L	0.347	3	3	12123	2	KED
|	**Ni**	**62**	**11.872**	ug/L	0.856	7	1	2082	5	KED
|	**Cu**	**63**	**28.013**	ug/L	0.848	3	48	85214	1	KED
|	**Cu**	**65**	**27.952**	ug/L	0.550	1	17	42487	3	KED
|	**Zn**	**66**	**75.106**	ug/L	1.669	2	16	32216	0	KED
|	**Zn**	**67**	**72.584**	ug/L	1.420	1	3	5038	0	KED
⌊	**As**	**75**	**6.145**	ug/L	0.294	4	4	1381	2	KED
	Y	**89**		ug/L			276294	498104	5	Standard
	Kr	**83**		ug/L			48	92	18	Standard
⌈>	**In-1**	**115**		ug/L			10483	11108	1	KED
|	**Cd**	**111**	**0.384**	ug/L	0.065	16	3	124	15	KED
⌊	**Cd**	**114**	**0.379**	ug/L	0.041	10	3	290	12	KED
⌈>	**Tb**	**159**		ug/L			725004	763416	1	Standard
⌊	**Pb**	**208**	**45.930**	ug/L	0.259	0	81	1778747	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 20:31:19
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	29952	2	Standard
	Cl	**37**		ug/L			5497601	5262176	6	Standard
⎡>	**Ge**	**72**		ug/L			31194	32055	1	KED
⎢	**Ni**	**60**	**0.006**	ug/L	0.004	65	3	10	39	KED
⎢	**Ni**	**62**	**-0.000**	ug/L	0.011	3227	1	1	100	KED
⎢	**Cu**	**63**	**-0.004**	ug/L	0.005	135	48	38	40	KED
⎢	**Cu**	**65**	**0.006**	ug/L	0.003	55	17	26	18	KED
⎢	**Zn**	**66**	**0.008**	ug/L	0.014	180	16	20	30	KED
⎢	**Zn**	**67**	**-0.030**	ug/L	0.048	159	3	1	173	KED
⎣	**As**	**75**	**-0.009**	ug/L	0.009	105	4	3	63	KED
	Y	**89**		ug/L			276294	274656	2	Standard
	Kr	**83**		ug/L			48	49	7	Standard
⎡>	**In-1**	**115**		ug/L			10483	10658	2	KED
⎢	**Cd**	**111**	**-0.012**	ug/L	0.002	15	3	0	173	KED
⎣	**Cd**	**114**	**0.001**	ug/L	0.002	305	3	3	49	KED
⎡>	**Tb**	**159**		ug/L			725004	714986	1	Standard
⎣	**Pb**	**208**	**0.001**	ug/L	0.000	7	81	132	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 20:35:30
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	26494	4	Standard
	Cl	**37**		ug/L			5497601	5328965	1	Standard
⎡>	**Ge**	**72**		ug/L			31194	32502	1	KED
⎢	**Ni**	**60**	**50.165**	ug/L	0.518	1	3	52661	0	KED
⎢	**Ni**	**62**	**49.231**	ug/L	1.661	3	1	8544	1	KED
⎢	**Cu**	**63**	**51.052**	ug/L	0.406	0	48	153658	0	KED
⎢	**Cu**	**65**	**51.064**	ug/L	1.343	2	17	76755	1	KED
⎢	**Zn**	**66**	**50.637**	ug/L	1.769	3	16	21495	2	KED
⎢	**Zn**	**67**	**52.396**	ug/L	1.433	2	3	3599	1	KED
⎣	**As**	**75**	**49.418**	ug/L	0.620	1	4	10965	0	KED
	Y	**89**		ug/L			276294	283975	0	Standard
	Kr	**83**		ug/L			48	57	20	Standard
⎡>	**In-1**	**115**		ug/L			10483	10584	1	KED
⎢	**Cd**	**111**	**50.018**	ug/L	0.429	0	3	15005	0	KED
⎣	**Cd**	**114**	**50.352**	ug/L	0.792	1	3	36310	1	KED
⎡>	**Tb**	**159**		ug/L			725004	742950	0	Standard
⎣	**Pb**	**208**	**53.786**	ug/L	0.442	0	81	2027154	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 20:42:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	24998	2	Standard
	Cl	**37**		ug/L			5497601	5289697	4	Standard
⌈>	**Ge**	**72**		ug/L			31194	31697	2	KED
|	**Ni**	**60**	**0.002**	ug/L	0.003	183	3	5	57	KED
|	**Ni**	**62**	**0.003**	ug/L	0.013	378	1	2	86	KED
|	**Cu**	**63**	**-0.005**	ug/L	0.002	46	48	35	16	KED
|	**Cu**	**65**	**0.004**	ug/L	0.002	40	17	23	9	KED
|	**Zn**	**66**	**-0.002**	ug/L	0.010	497	16	15	24	KED
|	**Zn**	**67**	**-0.001**	ug/L	0.001	137	3	3	0	KED
⌊	**As**	**75**	**-0.006**	ug/L	0.005	86	4	3	34	KED
	Y	**89**		ug/L			276294	267339	5	Standard
	Kr	**83**		ug/L			48	46	10	Standard
⌈>	**In-1**	**115**		ug/L			10483	10346	1	KED
|	**Cd**	**111**	**-0.007**	ug/L	0.002	25	3	1	34	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.003	152	3	1	102	KED
⌈>	**Tb**	**159**		ug/L			725004	695454	2	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	689	81	79	13	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0177-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 20:46:37
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	34971	0	Standard
	Cl	**37**		ug/L			5497601	5145899	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	32023	1	KED
|	**Ni**	**60**	**0.052**	ug/L	0.013	26	3	57	23	KED
|	**Ni**	**62**	**0.055**	ug/L	0.011	19	1	11	16	KED
|	**Cu**	**63**	**0.019**	ug/L	0.002	9	48	106	5	KED
|	**Cu**	**65**	**0.027**	ug/L	0.012	44	17	57	30	KED
|	**Zn**	**66**	**0.510**	ug/L	0.077	15	16	229	13	KED
|	**Zn**	**67**	**0.421**	ug/L	0.097	23	3	32	20	KED
⌊	**As**	**75**	**0.000**	ug/L	0.006	3283	4	4	24	KED
	Y	**89**		ug/L			276294	268704	1	Standard
	Kr	**83**		ug/L			48	52	7	Standard
⌈>	**In-1**	**115**		ug/L			10483	10737	1	KED
|	**Cd**	**111**	**0.005**	ug/L	0.006	131	3	5	36	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.003	704	3	2	74	KED
⌈>	**Tb**	**159**		ug/L			725004	717349	0	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.000	9	81	177	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0177-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 20:50:47
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	33889	0	Standard
	Cl	**37**		ug/L			5497601	5267340	4	Standard
⌈>	**Ge**	**72**		ug/L			31194	32386	1	KED
|	**Ni**	**60**	**26.167**	ug/L	0.154	0	3	27374	0	KED
|	**Ni**	**62**	**25.638**	ug/L	0.918	3	1	4434	2	KED
|	**Cu**	**63**	**25.865**	ug/L	0.486	1	48	77593	1	KED
|	**Cu**	**65**	**25.861**	ug/L	0.429	1	17	38747	1	KED
|	**Zn**	**66**	**83.990**	ug/L	1.752	2	16	35522	1	KED
|	**Zn**	**67**	**81.007**	ug/L	0.425	0	3	5544	0	KED
⌊	**As**	**75**	**25.819**	ug/L	0.445	1	4	5710	0	KED
	Y	**89**		ug/L			276294	278344	3	Standard
	Kr	**83**		ug/L			48	54	16	Standard
⌈>	**In-1**	**115**		ug/L			10483	10912	1	KED
|	**Cd**	**111**	**24.918**	ug/L	0.844	3	3	7708	2	KED
⌊	**Cd**	**114**	**25.298**	ug/L	0.785	3	3	18808	1	KED
⌈>	**Tb**	**159**		ug/L			725004	734756	1	Standard
⌊	**Pb**	**208**	**27.537**	ug/L	0.477	1	81	1026310	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0178-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 20:54:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	35604	1	Standard
	Cl	**37**		ug/L			5497601	5091623	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	32953	2	KED
|	**Ni**	**60**	**0.010**	ug/L	0.007	74	3	14	52	KED
|	**Ni**	**62**	**0.003**	ug/L	0.017	522	1	2	114	KED
|	**Cu**	**63**	**0.029**	ug/L	0.006	19	48	141	12	KED
|	**Cu**	**65**	**0.036**	ug/L	0.011	29	17	72	20	KED
|	**Zn**	**66**	**0.200**	ug/L	0.025	12	16	103	11	KED
|	**Zn**	**67**	**0.288**	ug/L	0.109	37	3	24	32	KED
⌊	**As**	**75**	**-0.003**	ug/L	0.009	345	4	4	43	KED
	Y	**89**		ug/L			276294	273961	4	Standard
	Kr	**83**		ug/L			48	43	8	Standard
⌈>	**In-1**	**115**		ug/L			10483	10953	2	KED
|	**Cd**	**111**	**-0.008**	ug/L	0.002	22	3	1	34	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.006	288	3	4	95	KED
⌈>	**Tb**	**159**		ug/L			725004	728809	2	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.001	27	81	178	13	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0178-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 20:59:09
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	35692	0	Standard
	Cl	**37**		ug/L			5497601	5179736	2	Standard
⌈>	**Ge**	**72**		ug/L			31194	32907	1	KED
|	**Ni**	**60**	**25.263**	ug/L	0.731	2	3	26845	0	KED
|	**Ni**	**62**	**24.453**	ug/L	1.507	6	1	4295	4	KED
|	**Cu**	**63**	**25.843**	ug/L	0.637	2	48	78763	1	KED
|	**Cu**	**65**	**25.727**	ug/L	0.458	1	17	39161	0	KED
|	**Zn**	**66**	**80.985**	ug/L	0.485	0	16	34809	2	KED
|	**Zn**	**67**	**77.343**	ug/L	2.086	2	3	5378	2	KED
⌊	**As**	**75**	**24.181**	ug/L	0.445	1	4	5434	0	KED
	Y	**89**		ug/L			276294	272760	0	Standard
	Kr	**83**		ug/L			48	55	19	Standard
⌈>	**In-1**	**115**		ug/L			10483	10727	2	KED
|	**Cd**	**111**	**24.622**	ug/L	0.519	2	3	7487	0	KED
⌊	**Cd**	**114**	**25.206**	ug/L	0.310	1	3	18423	1	KED
⌈>	**Tb**	**159**		ug/L			725004	725156	2	Standard
⌊	**Pb**	**208**	**27.488**	ug/L	0.682	2	81	1010868	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0578-05
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 21:03:19
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	38908	2	Standard
	Cl	**37**		ug/L			5497601	5155931	2	Standard
⌈>	**Ge**	**72**		ug/L			31194	32670	1	KED
|	**Ni**	**60**	**0.254**	ug/L	0.018	7	3	271	8	KED
|	**Ni**	**62**	**0.305**	ug/L	0.042	13	1	55	12	KED
|	**Cu**	**63**	**1.295**	ug/L	0.012	0	48	3966	0	KED
|	**Cu**	**65**	**1.299**	ug/L	0.047	3	17	1981	3	KED
|	**Zn**	**66**	**37.525**	ug/L	1.172	3	16	16018	2	KED
|	**Zn**	**67**	**34.198**	ug/L	0.861	2	3	2363	1	KED
⌊	**As**	**75**	**0.340**	ug/L	0.034	9	4	80	10	KED
	Y	**89**		ug/L			276294	280502	2	Standard
	Kr	**83**		ug/L			48	46	34	Standard
⌈>	**In-1**	**115**		ug/L			10483	10689	1	KED
|	**Cd**	**111**	**0.018**	ug/L	0.013	73	3	9	41	KED
⌊	**Cd**	**114**	**0.023**	ug/L	0.005	23	3	19	19	KED
⌈>	**Tb**	**159**		ug/L			725004	741061	1	Standard
⌊	**Pb**	**208**	**0.338**	ug/L	0.010	2	81	12790	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0177-SRL1
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, April 13, 2023 21:07:30
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	30056	1	Standard
	Cl	**37**		ug/L			5497601	4950884	2	Standard
⌈>	**Ge**	**72**		ug/L			31194	33084	3	KED
|	**Ni**	**60**	**0.050**	ug/L	0.004	7	3	57	10	KED
|	**Ni**	**62**	**0.079**	ug/L	0.037	46	1	15	38	KED
|	**Cu**	**63**	**0.251**	ug/L	0.009	3	48	820	1	KED
|	**Cu**	**65**	**0.256**	ug/L	0.027	10	17	410	9	KED
|	**Zn**	**66**	**7.604**	ug/L	0.260	3	16	3299	0	KED
|	**Zn**	**67**	**7.069**	ug/L	0.557	7	3	497	4	KED
⌊	**As**	**75**	**0.061**	ug/L	0.011	17	4	18	10	KED
	Y	**89**		ug/L			276294	270673	3	Standard
	Kr	**83**		ug/L			48	48	9	Standard
⌈>	**In-1**	**115**		ug/L			10483	10778	1	KED
|	**Cd**	**111**	**-0.008**	ug/L	0.005	61	3	1	91	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.004	261	3	4	68	KED
⌈>	**Tb**	**159**		ug/L			725004	731328	0	Standard
⌊	**Pb**	**208**	**0.066**	ug/L	0.001	1	81	2515	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0578-04
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 21:11:41
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	40272	1	Standard
	Cl	**37**		ug/L			5497601	5234844	5	Standard
⌈>	**Ge**	**72**		ug/L			31194	33151	0	KED
|	**Ni**	**60**	**0.227**	ug/L	0.005	1	3	247	2	KED
|	**Ni**	**62**	**0.229**	ug/L	0.020	8	1	42	9	KED
|	**Cu**	**63**	**1.335**	ug/L	0.154	11	48	4146	10	KED
|	**Cu**	**65**	**1.227**	ug/L	0.030	2	17	1899	1	KED
|	**Zn**	**66**	**37.295**	ug/L	0.442	1	16	16158	2	KED
|	**Zn**	**67**	**34.869**	ug/L	0.536	1	3	2445	1	KED
⌊	**As**	**75**	**0.315**	ug/L	0.004	1	4	76	2	KED
	Y	**89**		ug/L			276294	282885	5	Standard
	Kr	**83**		ug/L			48	40	22	Standard
⌈>	**In-1**	**115**		ug/L			10483	10659	0	KED
|	**Cd**	**111**	**0.001**	ug/L	0.002	222	3	4	13	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.004	348	3	3	69	KED
⌈>	**Tb**	**159**		ug/L			725004	749623	0	Standard
⌊	**Pb**	**208**	**0.316**	ug/L	0.004	1	81	12099	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0177-DUP1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 21:15:52
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	39677	1	Standard
	Cl	**37**		ug/L			5497601	5188266	1	Standard
⌈>	**Ge**	**72**		ug/L			31194	32859	1	KED
|	**Ni**	**60**	**0.252**	ug/L	0.012	4	3	271	3	KED
|	**Ni**	**62**	**0.257**	ug/L	0.058	22	1	46	20	KED
|	**Cu**	**63**	**1.293**	ug/L	0.010	0	48	3984	0	KED
|	**Cu**	**65**	**1.290**	ug/L	0.041	3	17	1977	2	KED
|	**Zn**	**66**	**36.518**	ug/L	0.960	2	16	15682	2	KED
|	**Zn**	**67**	**33.954**	ug/L	1.531	4	3	2359	3	KED
⌊	**As**	**75**	**0.319**	ug/L	0.026	8	4	76	8	KED
	Y	**89**		ug/L			276294	280815	1	Standard
	Kr	**83**		ug/L			48	38	13	Standard
⌈>	**In-1**	**115**		ug/L			10483	10959	2	KED
|	**Cd**	**111**	**0.009**	ug/L	0.011	130	3	6	51	KED
⌊	**Cd**	**114**	**0.020**	ug/L	0.004	18	3	17	12	KED
⌈>	**Tb**	**159**		ug/L			725004	737349	0	Standard
⌊	**Pb**	**208**	**0.360**	ug/L	0.062	17	81	13539	17	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0177-MS1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 21:20:02
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	35392	0	Standard
	Cl	**37**		ug/L			5497601	5274515	2	Standard
⌈>	**Ge**	**72**		ug/L			31194	31509	1	KED
|	**Ni**	**60**	**25.196**	ug/L	0.209	0	3	25647	2	KED
|	**Ni**	**62**	**25.488**	ug/L	0.146	0	1	4290	1	KED
|	**Cu**	**63**	**26.148**	ug/L	0.115	0	48	76327	1	KED
|	**Cu**	**65**	**26.781**	ug/L	0.429	1	17	39036	0	KED
|	**Zn**	**66**	**114.643**	ug/L	2.126	1	16	47166	0	KED
|	**Zn**	**67**	**107.508**	ug/L	3.481	3	3	7156	1	KED
⌊	**As**	**75**	**25.279**	ug/L	0.158	0	4	5440	0	KED
	Y	**89**		ug/L			276294	278661	3	Standard
	Kr	**83**		ug/L			48	55	17	Standard
⌈>	**In-1**	**115**		ug/L			10483	10811	3	KED
|	**Cd**	**111**	**23.934**	ug/L	0.664	2	3	7332	0	KED
⌊	**Cd**	**114**	**24.294**	ug/L	0.590	2	3	17890	0	KED
⌈>	**Tb**	**159**		ug/L			725004	732838	0	Standard
⌊	**Pb**	**208**	**27.175**	ug/L	0.293	1	81	1010345	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0177-PS1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 21:24:13
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	39518	1	Standard
	Cl	**37**		ug/L			5497601	5227025	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	33195	1	KED
|	**Ni**	**60**	**24.459**	ug/L	0.648	2	3	26220	1	KED
|	**Ni**	**62**	**24.190**	ug/L	0.735	3	1	4289	2	KED
|	**Cu**	**63**	**26.302**	ug/L	0.249	0	48	80881	1	KED
|	**Cu**	**65**	**25.884**	ug/L	0.599	2	17	39743	0	KED
|	**Zn**	**66**	**116.827**	ug/L	4.466	3	16	50624	2	KED
|	**Zn**	**67**	**110.857**	ug/L	5.486	4	3	7771	3	KED
⌊	**As**	**75**	**24.583**	ug/L	0.395	1	4	5573	0	KED
	Y	**89**		ug/L			276294	290843	4	Standard
	Kr	**83**		ug/L			48	43	15	Standard
⌈>	**In-1**	**115**		ug/L			10483	10657	0	KED
|	**Cd**	**111**	**24.521**	ug/L	0.280	1	3	7409	0	KED
⌊	**Cd**	**114**	**24.538**	ug/L	0.338	1	3	17820	0	KED
⌈>	**Tb**	**159**		ug/L			725004	741958	0	Standard
⌊	**Pb**	**208**	**27.014**	ug/L	0.663	2	81	1016804	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 21:28:24
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	25034	0	Standard
	Cl	**37**		ug/L			5497601	5080934	4	Standard
⌈>	**Ge**	**72**		ug/L			31194	32649	2	KED
|	**Ni**	**60**	**49.959**	ug/L	0.489	0	3	52682	1	KED
|	**Ni**	**62**	**48.603**	ug/L	0.853	1	1	8474	1	KED
|	**Cu**	**63**	**50.674**	ug/L	0.883	1	48	153191	1	KED
|	**Cu**	**65**	**49.279**	ug/L	0.727	1	17	74410	1	KED
|	**Zn**	**66**	**50.338**	ug/L	0.160	0	16	21472	2	KED
|	**Zn**	**67**	**49.944**	ug/L	0.691	1	3	3448	3	KED
⌊	**As**	**75**	**48.638**	ug/L	1.344	2	4	10838	1	KED
	Y	**89**		ug/L			276294	275932	4	Standard
	Kr	**83**		ug/L			48	52	13	Standard
⌈>	**In-1**	**115**		ug/L			10483	10606	0	KED
|	**Cd**	**111**	**49.277**	ug/L	0.525	1	3	14815	0	KED
⌊	**Cd**	**114**	**49.676**	ug/L	0.863	1	3	35901	1	KED
⌈>	**Tb**	**159**		ug/L			725004	734821	0	Standard
⌊	**Pb**	**208**	**52.601**	ug/L	0.960	1	81	1960652	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 21:35:20
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	25109	0	Standard
	Cl	**37**		ug/L			5497601	5017512	1	Standard
⌈>	**Ge**	**72**		ug/L			31194	31445	0	KED
|	**Ni**	**60**	**0.003**	ug/L	0.006	185	3	6	83	KED
|	**Ni**	**62**	**0.004**	ug/L	0.017	461	1	2	114	KED
|	**Cu**	**63**	**-0.005**	ug/L	0.002	43	48	35	16	KED
|	**Cu**	**65**	**-0.000**	ug/L	0.003	3025	17	17	29	KED
|	**Zn**	**66**	**-0.010**	ug/L	0.003	27	16	12	8	KED
|	**Zn**	**67**	**-0.000**	ug/L	0.000	108	3	3	0	KED
⌊	**As**	**75**	**-0.003**	ug/L	0.003	105	4	4	17	KED
	Y	**89**		ug/L			276294	260037	1	Standard
	Kr	**83**		ug/L			48	44	13	Standard
⌈>	**In-1**	**115**		ug/L			10483	10285	1	KED
|	**Cd**	**111**	**-0.004**	ug/L	0.002	49	3	2	21	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.003	106	3	5	44	KED
⌈>	**Tb**	**159**		ug/L			725004	699468	1	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	83	81	61	22	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0231-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 21:39:31
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	35739	4	Standard
	Cl	**37**		ug/L			5497601	5037884	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	33217	0	KED
|	**Ni**	**60**	**0.008**	ug/L	0.005	66	3	12	45	KED
|	**Ni**	**62**	**0.010**	ug/L	0.019	184	1	3	86	KED
|	**Cu**	**63**	**0.049**	ug/L	0.000	0	48	201	0	KED
|	**Cu**	**65**	**0.046**	ug/L	0.007	15	17	88	12	KED
|	**Zn**	**66**	**0.699**	ug/L	0.021	2	16	320	3	KED
|	**Zn**	**67**	**0.648**	ug/L	0.139	21	3	49	19	KED
⌊	**As**	**75**	**0.007**	ug/L	0.004	52	4	6	12	KED
	Y	**89**		ug/L			276294	262731	3	Standard
	Kr	**83**		ug/L			48	37	42	Standard
⌈>	**In-1**	**115**		ug/L			10483	10699	2	KED
|	**Cd**	**111**	**-0.006**	ug/L	0.003	50	3	1	50	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.003	752	3	2	74	KED
⌈>	**Tb**	**159**		ug/L			725004	709666	2	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.000	9	81	228	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0231-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 21:43:42
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	36411	2	Standard
	Cl	**37**		ug/L			5497601	4972516	2	Standard
⌈>	**Ge**	**72**		ug/L			31194	32681	1	KED
|	**Ni**	**60**	**25.320**	ug/L	0.878	3	3	26724	2	KED
|	**Ni**	**62**	**24.915**	ug/L	0.620	2	1	4350	3	KED
|	**Cu**	**63**	**26.100**	ug/L	1.589	6	48	78981	4	KED
|	**Cu**	**65**	**26.168**	ug/L	0.017	0	17	39568	1	KED
|	**Zn**	**66**	**81.228**	ug/L	2.364	2	16	34669	2	KED
|	**Zn**	**67**	**78.688**	ug/L	2.919	3	3	5435	4	KED
⌊	**As**	**75**	**24.406**	ug/L	0.994	4	4	5446	2	KED
	Y	**89**		ug/L			276294	272491	3	Standard
	Kr	**83**		ug/L			48	44	21	Standard
⌈>	**In-1**	**115**		ug/L			10483	10827	3	KED
|	**Cd**	**111**	**24.546**	ug/L	0.375	1	3	7533	1	KED
⌊	**Cd**	**114**	**24.581**	ug/L	1.141	4	3	18120	1	KED
⌈>	**Tb**	**159**		ug/L			725004	733195	2	Standard
⌊	**Pb**	**208**	**26.705**	ug/L	1.178	4	81	992579	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0580-04
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 21:47:53
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	37905	2	Standard
	Cl	**37**		ug/L			5497601	5026873	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	32090	0	KED
|	**Ni**	**60**	**0.231**	ug/L	0.008	3	3	243	4	KED
|	**Ni**	**62**	**0.207**	ug/L	0.056	27	1	37	26	KED
|	**Cu**	**63**	**1.848**	ug/L	0.056	3	48	5540	2	KED
|	**Cu**	**65**	**1.806**	ug/L	0.068	3	17	2698	3	KED
|	**Zn**	**66**	**47.393**	ug/L	0.784	1	16	19869	0	KED
|	**Zn**	**67**	**44.495**	ug/L	2.140	4	3	3018	3	KED
⌊	**As**	**75**	**0.091**	ug/L	0.009	9	4	24	8	KED
	Y	**89**		ug/L			276294	270382	5	Standard
	Kr	**83**		ug/L			48	48	2	Standard
⌈>	**In-1**	**115**		ug/L			10483	10836	2	KED
|	**Cd**	**111**	**0.043**	ug/L	0.016	37	3	17	27	KED
⌊	**Cd**	**114**	**0.052**	ug/L	0.014	26	3	41	25	KED
⌈>	**Tb**	**159**		ug/L			725004	723090	1	Standard
⌊	**Pb**	**208**	**0.900**	ug/L	0.020	2	81	33093	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0580-05
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 21:52:03
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	39295	0	Standard
	Cl	**37**		ug/L			5497601	5061085	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	32685	0	KED
|	**Ni**	**60**	**0.245**	ug/L	0.031	12	3	262	12	KED
|	**Ni**	**62**	**0.287**	ug/L	0.077	26	1	52	25	KED
|	**Cu**	**63**	**2.085**	ug/L	0.035	1	48	6362	1	KED
|	**Cu**	**65**	**2.038**	ug/L	0.097	4	17	3098	4	KED
|	**Zn**	**66**	**49.089**	ug/L	0.620	1	16	20962	0	KED
|	**Zn**	**67**	**45.585**	ug/L	0.398	0	3	3150	1	KED
⌊	**As**	**75**	**0.091**	ug/L	0.020	22	4	25	17	KED
	Y	**89**		ug/L			276294	271726	5	Standard
	Kr	**83**		ug/L			48	40	20	Standard
⌈>	**In-1**	**115**		ug/L			10483	10919	3	KED
|	**Cd**	**111**	**0.068**	ug/L	0.009	13	3	25	12	KED
⌊	**Cd**	**114**	**0.076**	ug/L	0.004	5	3	59	2	KED
⌈>	**Tb**	**159**		ug/L			725004	732965	2	Standard
⌊	**Pb**	**208**	**1.040**	ug/L	0.025	2	81	38734	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0580-07
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 21:56:14
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	35049	3	Standard
	Cl	**37**		ug/L			5497601	4949703	1	Standard
⌈>	**Ge**	**72**		ug/L			31194	32754	2	KED
|	**Ni**	**60**	**0.126**	ug/L	0.015	11	3	137	11	KED
|	**Ni**	**62**	**0.159**	ug/L	0.023	14	1	29	14	KED
|	**Cu**	**63**	**0.764**	ug/L	0.050	6	48	2365	4	KED
|	**Cu**	**65**	**0.747**	ug/L	0.008	1	17	1149	3	KED
|	**Zn**	**66**	**34.027**	ug/L	1.073	3	16	14559	1	KED
|	**Zn**	**67**	**31.575**	ug/L	0.221	0	3	2188	2	KED
⌊	**As**	**75**	**0.047**	ug/L	0.011	23	4	15	15	KED
	Y	**89**		ug/L			276294	268334	4	Standard
	Kr	**83**		ug/L			48	40	17	Standard
⌈>	**In-1**	**115**		ug/L			10483	10827	0	KED
|	**Cd**	**111**	**0.026**	ug/L	0.028	105	3	12	71	KED
⌊	**Cd**	**114**	**0.022**	ug/L	0.009	41	3	19	35	KED
⌈>	**Tb**	**159**		ug/L			725004	718418	1	Standard
⌊	**Pb**	**208**	**0.043**	ug/L	0.002	4	81	1640	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0178-SRL1
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, April 13, 2023 22:00:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	29584	2	Standard
	Cl	**37**		ug/L			5497601	4827820	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	32642	2	KED
|	**Ni**	**60**	**0.054**	ug/L	0.007	12	3	60	13	KED
|	**Ni**	**62**	**0.061**	ug/L	0.024	39	1	12	34	KED
|	**Cu**	**63**	**0.734**	ug/L	0.031	4	48	2270	5	KED
|	**Cu**	**65**	**0.706**	ug/L	0.048	6	17	1084	7	KED
|	**Zn**	**66**	**7.801**	ug/L	0.298	3	16	3341	4	KED
|	**Zn**	**67**	**7.736**	ug/L	0.813	10	3	536	8	KED
⌊	**As**	**75**	**0.069**	ug/L	0.005	6	4	20	5	KED
	Y	**89**		ug/L			276294	262135	2	Standard
	Kr	**83**		ug/L			48	38	31	Standard
⌈>	**In-1**	**115**		ug/L			10483	10612	2	KED
|	**Cd**	**111**	**-0.007**	ug/L	0.003	47	3	1	50	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.009	269	3	5	118	KED
⌈>	**Tb**	**159**		ug/L			725004	723772	2	Standard
⌊	**Pb**	**208**	**0.037**	ug/L	0.003	8	81	1447	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0578-07
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 22:04:36
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	39099	4	Standard
	Cl	**37**		ug/L			5497601	5091114	4	Standard
⌈>	**Ge**	**72**		ug/L			31194	32934	0	KED
|	**Ni**	**60**	**0.248**	ug/L	0.023	9	3	267	8	KED
|	**Ni**	**62**	**0.234**	ug/L	0.042	17	1	43	16	KED
|	**Cu**	**63**	**3.448**	ug/L	0.039	1	48	10565	1	KED
|	**Cu**	**65**	**3.488**	ug/L	0.040	1	17	5329	0	KED
|	**Zn**	**66**	**36.008**	ug/L	0.929	2	16	15497	1	KED
|	**Zn**	**67**	**33.585**	ug/L	0.773	2	3	2339	1	KED
⌊	**As**	**75**	**0.279**	ug/L	0.007	2	4	67	1	KED
	Y	**89**		ug/L			276294	276853	3	Standard
	Kr	**83**		ug/L			48	45	2	Standard
⌈>	**In-1**	**115**		ug/L			10483	10827	2	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.006	396	3	3	56	KED
⌊	**Cd**	**114**	**0.014**	ug/L	0.010	73	3	13	58	KED
⌈>	**Tb**	**159**		ug/L			725004	744819	1	Standard
⌊	**Pb**	**208**	**0.177**	ug/L	0.004	2	81	6761	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0178-DUP1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 22:08:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	39220	0	Standard
	Cl	**37**		ug/L			5497601	5184484	5	Standard
⌈>	**Ge**	**72**		ug/L			31194	33028	0	KED
|	**Ni**	**60**	**0.251**	ug/L	0.019	7	3	271	8	KED
|	**Ni**	**62**	**0.259**	ug/L	0.085	32	1	47	31	KED
|	**Cu**	**63**	**3.322**	ug/L	0.094	2	48	10208	2	KED
|	**Cu**	**65**	**3.346**	ug/L	0.081	2	17	5129	2	KED
|	**Zn**	**66**	**35.771**	ug/L	0.356	0	16	15440	0	KED
|	**Zn**	**67**	**33.007**	ug/L	1.431	4	3	2306	4	KED
⌊	**As**	**75**	**0.309**	ug/L	0.028	9	4	74	7	KED
	Y	**89**		ug/L			276294	279100	3	Standard
	Kr	**83**		ug/L			48	48	6	Standard
⌈>	**In-1**	**115**		ug/L			10483	10597	0	KED
|	**Cd**	**111**	**0.008**	ug/L	0.002	21	3	6	8	KED
⌊	**Cd**	**114**	**0.017**	ug/L	0.004	24	3	15	18	KED
⌈>	**Tb**	**159**		ug/L			725004	730538	0	Standard
⌊	**Pb**	**208**	**0.176**	ug/L	0.002	1	81	6608	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0178-MS1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 22:12:57
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	39159	2	Standard
	Cl	**37**		ug/L			5497601	5139126	2	Standard
⌈>	**Ge**	**72**		ug/L			31194	33255	1	KED
|	**Ni**	**60**	**25.633**	ug/L	0.121	0	3	27535	1	KED
|	**Ni**	**62**	**25.322**	ug/L	0.179	0	1	4499	2	KED
|	**Cu**	**63**	**29.352**	ug/L	0.517	1	48	90402	0	KED
|	**Cu**	**65**	**29.364**	ug/L	0.819	2	17	45164	1	KED
|	**Zn**	**66**	**115.432**	ug/L	3.752	3	16	50111	1	KED
|	**Zn**	**67**	**107.327**	ug/L	2.218	2	3	7541	2	KED
⌊	**As**	**75**	**24.851**	ug/L	0.477	1	4	5643	0	KED
	Y	**89**		ug/L			276294	281395	4	Standard
	Kr	**83**		ug/L			48	39	13	Standard
⌈>	**In-1**	**115**		ug/L			10483	10966	0	KED
|	**Cd**	**111**	**24.602**	ug/L	0.408	1	3	7649	1	KED
⌊	**Cd**	**114**	**25.060**	ug/L	0.121	0	3	18727	0	KED
⌈>	**Tb**	**159**		ug/L			725004	749553	2	Standard
⌊	**Pb**	**208**	**27.750**	ug/L	1.009	3	81	1054683	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0178-PS1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 22:17:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	40037	3	Standard
	Cl	**37**		ug/L			5497601	5159069	5	Standard
⌈>	**Ge**	**72**		ug/L			31194	33091	0	KED
|	**Ni**	**60**	**25.204**	ug/L	0.183	0	3	26940	0	KED
|	**Ni**	**62**	**25.426**	ug/L	0.142	0	1	4495	1	KED
|	**Cu**	**63**	**28.770**	ug/L	0.099	0	48	88190	0	KED
|	**Cu**	**65**	**28.010**	ug/L	0.679	2	17	42876	1	KED
|	**Zn**	**66**	**114.000**	ug/L	2.274	1	16	49259	1	KED
|	**Zn**	**67**	**105.762**	ug/L	4.597	4	3	7393	3	KED
⌊	**As**	**75**	**24.118**	ug/L	0.140	0	4	5451	0	KED
	Y	**89**		ug/L			276294	280846	2	Standard
	Kr	**83**		ug/L			48	47	24	Standard
⌈>	**In-1**	**115**		ug/L			10483	9888	12	KED
|	**Cd**	**111**	**26.075**	ug/L	2.282	8	3	7258	4	KED
⌊	**Cd**	**114**	**26.143**	ug/L	2.358	9	3	17488	3	KED
⌈>	**Tb**	**159**		ug/L			725004	738878	0	Standard
⌊	**Pb**	**208**	**27.309**	ug/L	0.289	1	81	1023633	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV9
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 22:21:19
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	26165	1	Standard
	Cl	**37**		ug/L			5497601	5121303	1	Standard
⌈>	**Ge**	**72**		ug/L			31194	32394	0	KED
|	**Ni**	**60**	**49.800**	ug/L	0.305	0	3	52109	0	KED
|	**Ni**	**62**	**49.655**	ug/L	1.782	3	1	8590	2	KED
|	**Cu**	**63**	**50.145**	ug/L	1.228	2	48	150430	2	KED
|	**Cu**	**65**	**49.279**	ug/L	0.620	1	17	73847	2	KED
|	**Zn**	**66**	**50.404**	ug/L	0.348	0	16	21332	0	KED
|	**Zn**	**67**	**50.770**	ug/L	1.202	2	3	3477	2	KED
⌊	**As**	**75**	**49.278**	ug/L	0.316	0	4	10898	0	KED
	Y	**89**		ug/L			276294	269767	3	Standard
	Kr	**83**		ug/L			48	50	15	Standard
⌈>	**In-1**	**115**		ug/L			10483	10704	2	KED
|	**Cd**	**111**	**49.098**	ug/L	0.706	1	3	14895	2	KED
⌊	**Cd**	**114**	**49.233**	ug/L	1.274	2	3	35893	0	KED
⌈>	**Tb**	**159**		ug/L			725004	724906	1	Standard
⌊	**Pb**	**208**	**53.342**	ug/L	1.090	2	81	1961395	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB9
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 22:28:15
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	24829	2	Standard
	Cl	**37**		ug/L			5497601	4983151	1	Standard
⎡>	**Ge**	**72**		ug/L			31194	31913	1	KED
⎢	**Ni**	**60**	**-0.000**	ug/L	0.002	1926	3	3	50	KED
⎢	**Ni**	**62**	**0.003**	ug/L	0.017	501	1	2	114	KED
⎢	**Cu**	**63**	**-0.004**	ug/L	0.002	53	48	37	16	KED
⎢	**Cu**	**65**	**-0.000**	ug/L	0.007	2910	17	17	55	KED
⎢	**Zn**	**66**	**0.007**	ug/L	0.016	239	16	19	33	KED
⎢	**Zn**	**67**	**-0.020**	ug/L	0.016	81	3	2	43	KED
⎣	**As**	**75**	**-0.003**	ug/L	0.006	220	4	4	29	KED
	Y	**89**		ug/L			276294	258935	2	Standard
	Kr	**83**		ug/L			48	34	3	Standard
⎡>	**In-1**	**115**		ug/L			10483	10313	1	KED
⎢	**Cd**	**111**	**-0.001**	ug/L	0.010	1199	3	3	83	KED
⎣	**Cd**	**114**	**0.005**	ug/L	0.006	124	3	6	63	KED
⎡>	**Tb**	**159**		ug/L			725004	694750	1	Standard
⎣	**Pb**	**208**	**0.000**	ug/L	0.000	68	81	85	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 22:32:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	33345	3	Standard
	Cl	**37**		ug/L			5497601	5437263	1	Standard
⌈>	**Ge**	**72**		ug/L			31194	33549	1	KED
|	**Ni**	**60**	**-0.000**	ug/L	0.002	606	3	3	50	KED
|	**Ni**	**62**	**-0.001**	ug/L	0.010	1161	1	1	100	KED
|	**Cu**	**63**	**0.001**	ug/L	0.003	240	48	56	17	KED
|	**Cu**	**65**	**0.007**	ug/L	0.004	48	17	29	18	KED
|	**Zn**	**66**	**0.016**	ug/L	0.019	121	16	24	35	KED
|	**Zn**	**67**	**-0.031**	ug/L	0.027	88	3	1	100	KED
⌊	**As**	**75**	**0.003**	ug/L	0.010	367	4	5	38	KED
	Y	**89**		ug/L			276294	315882	2	Standard
	Kr	**83**		ug/L			48	49	7	Standard
⌈>	**In-1**	**115**		ug/L			10483	11595	1	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.003	154	3	3	31	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.002	119	3	1	109	KED
⌈>	**Tb**	**159**		ug/L			725004	786812	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	15	81	92	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 22:36:37
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	34241	3	Standard
	Cl	**37**		ug/L			5497601	5426077	2	Standard
⌈>	**Ge**	**72**		ug/L			31194	33666	1	KED
|	**Ni**	**60**	**0.001**	ug/L	0.005	553	3	5	108	KED
|	**Ni**	**62**	**-0.001**	ug/L	0.010	1207	1	1	100	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.004	345	48	48	26	KED
|	**Cu**	**65**	**0.008**	ug/L	0.006	75	17	30	28	KED
|	**Zn**	**66**	**0.001**	ug/L	0.011	817	16	18	26	KED
|	**Zn**	**67**	**0.005**	ug/L	0.040	890	3	4	65	KED
⌊	**As**	**75**	**-0.006**	ug/L	0.007	101	4	3	39	KED
	Y	**89**		ug/L			276294	303572	4	Standard
	Kr	**83**		ug/L			48	46	19	Standard
⌈>	**In-1**	**115**		ug/L			10483	11379	1	KED
|	**Cd**	**111**	**-0.007**	ug/L	0.003	41	3	1	50	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.000	2	3	1		KED
⌈>	**Tb**	**159**		ug/L			725004	796534	1	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.001	646	81	85	28	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 22:40:48
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	33933	1	Standard
	Cl	**37**		ug/L			5497601	5330481	2	Standard
⎡>	**Ge**	**72**		ug/L			31194	34321	0	KED
⎢	**Ni**	**60**	**-0.001**	ug/L	0.001	106	3	3	34	KED
⎢	**Ni**	**62**	**0.006**	ug/L	0.016	270	1	3	91	KED
⎢	**Cu**	**63**	**-0.001**	ug/L	0.005	458	48	50	31	KED
⎢	**Cu**	**65**	**0.003**	ug/L	0.007	249	17	23	48	KED
⎢	**Zn**	**66**	**0.010**	ug/L	0.009	82	16	22	16	KED
⎢	**Zn**	**67**	**0.039**	ug/L	0.085	217	3	6	87	KED
⎣	**As**	**75**	**-0.001**	ug/L	0.003	433	4	5	14	KED
	Y	**89**		ug/L			276294	304629	3	Standard
	Kr	**83**		ug/L			48	42	5	Standard
⎡>	**In-1**	**115**		ug/L			10483	11572	0	KED
⎢	**Cd**	**111**	**-0.008**	ug/L	0.002	21	3	1	34	KED
⎣	**Cd**	**114**	**0.000**	ug/L	0.004	992	3	3	91	KED
⎡>	**Tb**	**159**		ug/L			725004	780700	1	Standard
⎣	**Pb**	**208**	**-0.000**	ug/L	0.000	27	81	73	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 22:44:59
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	25335	2	Standard
	Cl	**37**		ug/L			5497601	4621727	2	Standard
⌈>	**Ge**	**72**		ug/L			31194	30593	1	KED
|	**Ni**	**60**	**-0.001**	ug/L	0.001	95	3	2	43	KED
|	**Ni**	**62**	**0.004**	ug/L	0.018	428	1	2	114	KED
|	**Cu**	**63**	**-0.008**	ug/L	0.002	31	48	26	25	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.005	677	17	15	42	KED
|	**Zn**	**66**	**0.015**	ug/L	0.016	103	16	22	27	KED
|	**Zn**	**67**	**0.001**	ug/L	0.030	2378	3	3	50	KED
⌊	**As**	**75**	**-0.004**	ug/L	0.008	195	4	3	45	KED
	Y	**89**		ug/L			276294	234664	2	Standard
	Kr	**83**		ug/L			48	38	27	Standard
⌈>	**In-1**	**115**		ug/L			10483	9730	0	KED
|	**Cd**	**111**	**-0.006**	ug/L	0.007	116	3	1	100	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.002	516	3	3	34	KED
⌈>	**Tb**	**159**		ug/L			725004	646116	0	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	45	81	47	24	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 22:49:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	24233	2	Standard
	Cl	**37**		ug/L			5497601	4583477	2	Standard
⎡>	**Ge**	**72**		ug/L			31194	30630	1	KED
⎢	**Ni**	**60**	**-0.002**	ug/L	0.002	102	3	1	100	KED
⎢	**Ni**	**62**	**-0.004**	ug/L	0.013	356	1	1	173	KED
⎢	**Cu**	**63**	**-0.007**	ug/L	0.003	37	48	27	28	KED
⎢	**Cu**	**65**	**-0.002**	ug/L	0.003	158	17	13	34	KED
⎢	**Zn**	**66**	**-0.001**	ug/L	0.002	282	16	15	6	KED
⎢	**Zn**	**67**	**-0.019**	ug/L	0.045	235	3	2	114	KED
⎣	**As**	**75**	**-0.003**	ug/L	0.005	185	4	4	26	KED
	Y	**89**		ug/L			276294	235760	1	Standard
	Kr	**83**		ug/L			48	34	13	Standard
⎡>	**In-1**	**115**		ug/L			10483	9455	2	KED
⎢	**Cd**	**111**	**-0.010**	ug/L	0.002	19	3	0	86	KED
⎣	**Cd**	**114**	**-0.002**	ug/L	0.003	176	3	1	101	KED
⎡>	**Tb**	**159**		ug/L			725004	639768	0	Standard
⎣	**Pb**	**208**	**-0.002**	ug/L	0.000	10	81	22	22	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, April 13, 2023 22:53:21
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\041323A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27190	25163	0	Standard
	Cl	**37**		ug/L			5497601	4603568	3	Standard
⌈>	**Ge**	**72**		ug/L			31194	31099	0	KED
|	**Ni**	**60**	**-0.003**	ug/L	0.001	43	3	1	86	KED
|	**Ni**	**62**	**0.012**	ug/L	0.012	99	1	3	50	KED
|	**Cu**	**63**	**-0.006**	ug/L	0.002	25	48	31	13	KED
|	**Cu**	**65**	**0.000**	ug/L	0.005	15050	17	17	40	KED
|	**Zn**	**66**	**-0.003**	ug/L	0.017	555	16	15	45	KED
|	**Zn**	**67**	**-0.019**	ug/L	0.017	87	3	2	43	KED
⌊	**As**	**75**	**0.001**	ug/L	0.009	1098	4	4	39	KED
	Y	**89**		ug/L			276294	237536	4	Standard
	Kr	**83**		ug/L			48	42	11	Standard
⌈>	**In-1**	**115**		ug/L			10483	9587	6	KED
|	**Cd**	**111**	**-0.008**	ug/L	0.002	22	3	1	43	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.003	223	3	1	102	KED
⌈>	**Tb**	**159**		ug/L			725004	651824	2	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	16	81	26	29	Standard

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00066	Instrument:	ICPMS1
Calibration Date:	05/19/2023 14:18		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Arsenic-75a	0	0	0.2	270	10	267.6	20	266.1	50	260.72	100	266.77

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Instrument: ICPMS1
Calibration: GE00066
Calibration Date: 5/19/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a	221.865	49.0	0.9999		0.998	

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/19/23 **Analyst:** MB **Sequence:** SLEØ358 **Cal:** GEØØØ66

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
	✓	SEQ-CAL1			
		-CAL2			
		-CAL3			
		-CAL4			
		-CAL5			In-1 noisy
		Rinse			
		SEQ-CAL1	L5617		
		-CAL2	L547Ø		
		-CAL3	L5471		
		-CAL4	L5472		
		-CAL5	L5618		
		-CAL6	L5473		
		-IBL1	—		Mn R-Value poor
		-ICV1	L3575		
		-ICB1	L5617		
		-CCV1	L5618		
		-CCB1	L5617		
		-CRL1	L547Ø		
		-IFA1	L5318		Ca 53↑
		-IFB1	L5319		
		-HCV1	L5468		
		-HCV2	L5469		
		-IBL2	—		(56?)
		-IBL3	—		

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 5/19/23 **Analyst:** MB/SD **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCV2			Mn↓ - No Mn all run
		-CCB2			
	✓	-CAL1			
		-CCV3			
		-CCB3			
		BLE0572-BLK1	REN		
		↓ -BS1			
		230Φ617-Φ2		5	As, Pb, Sb only
		-Φ4			↓
		-Φ6			Pb, Sb only
		-Φ1			
		-Φ3			
		-Φ5			
		230Φ171-Φ8		10	As only
		SEQ-IBL4			
		-CCV4			
		-CCB4			
	✓	-CAL1			Sb Removed
		-CCV5			
		-CCB5			
		BLE0306-BLK1	SVN	20	
		↓ -BS1			
		BLE0442-BLK1			
		↓ -BS1			

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 5/19/23 **Analyst:** SD/MS **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted. SD 5/19/23 / MS 5/19/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23A04207-10	SWN	20	
		23E0018-01	REN	50	Ag/Pb ONLY
#2→#3		BLE0405-DUP#3	↓	↓	↓
↓		↓ -MS#3			
↓		↓ -MSD#3			
		SEQ-IBL5			(sl. noisy)
		↓ -CCV6			
		↓ -CCB6			
		23E0009-08	SWN	20	
		↓ -03	↓	↓	
		-05			
		-07			
		↓ -01			
		BLE0306-DUP1			
		↓ -MS1			
		-MSD1			
		↓ -PS1			60 mL K7409
		SEQ-IBL6			
		↓ -CCV7			
		↓ -CCB7			
		23E0219-03	SWN	20	
		↓ -05	↓	↓	
		-07			
		↓ -09			

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/19/23 **Analyst:** SD/MS **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23E0219-02	SWN	20	
		BLE0442-DUP1	↓	↓	
		-MS1			Ag %R↓
		-MSD1			Ag, Cr %R↓
		-PS1	↓	↓	60 mL K7409
		SEQ-IBL7			
		-CCV8			
		-CCB8			
		BLE0574-BLK1	REN		
		-BS1	↓		
		23E0219-10	SWN	20	
		-13			SC↑ No Cr
		-04			
		-06			
		-08			
		-11			
		-12	↓	↓	
		SEQ-IBL8			
		-CCV9			
		-CCB9			
	✓	-CAL1			
		-CCVA			
		-CCBA			
		23E0185-01	REN	2	

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/19/23 **Analyst:** SD/MS **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted. SD 5/19/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23E0307-01	REN	2	
		↓ -02	↓	↓	
		↓ -03	↓	↓	
		SEQ-IBL9			
		23E0164-03	REN		
		↓ -01	↓		
		BLE0572-DUP1	↓		
		↓ -MS1	↓		
		SEQ-IBLA			
		↓ -CCVB			
		↓ -CCBB			
		23E0195-01	REN	20	
		23D0171-05	↓	↓	Ag, Cd, Cr, Cu, Ni, Pb, Se, Zn only
		BLD0643-DUP3	↓	↓	↓
		↓ -MS3	↓	↓	Zn %R ↓
		↓ -MSD3	↓	↓	↓
		23D0171-06	↓	↓	Cu, Zn only
		BLD~~0643~~ 561-DUP3	↓	↓	↓
		↓ -MS3	↓	↓	Zn %R ↑
		↓ -MSD3	↓	↓	↓ ↓
		SEQ-IBLB			
		↓ -CCVC			
		↓ -CCBC			
		23E0169-01	REN		

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/19/23 **Analyst:** SD/MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted. SD 5/19/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23E0169-03	REN		
		↓ -05	↓		
		23E0202-01	↓		
		23E0166-01	↓	50	
		23D0281-09	↓	↓	Ag, Cd, Cr, Cu, Ni, Pb Se, Zn only
		BLD0755-DUP3	↓	↓	↓
		↓ -MS3	↓	↓	Zn spike Diluted out / Cr, Cu % R↑
		↓ -MSD3	↓	↓	↓ / Cu % R↑
		SEQ-IBLC			
		↓ -CCVD			
		↓ -CCBD			
	✓	↓ -CAL1			
		↓ -CCVE			
		↓ -CCBE			
		23E0167-01	REN		
		↓ -04	↓		
		↓ -05	↓		
		↓ -06	↓		
		↓ -07	↓		
		↓ -08	↓		
		↓ -09	↓		Ge sl. noisy No As, Cu, Se, Zn
		↓ -10	↓		
		23E0174-01	↓		
		SEQ-IBLD			

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 5/19/23 **Analyst:** SD/MS **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted. MS 5/19/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCVF			
		↓ -CCBF			
23D→23E		23E0167-02	REN		
↓		↓ -03	↓		
		23E0178-01			
		↓ -03			
		23E0184-01			
		23E0172-03			
↓		↓ -01		2	
		BLE0574-DUP1		↓	
		↓ -MS1	↓		
		SEQ-IBLE			
		↓ -CCVG			MnV
		↓ -CCBG			
		23E0187-01	REN		
		23E0188-01	↓	10	
		23E0191-01			
		23E0193-01			
		↓ -02		5	
		23E0194-01			
		23E0196-01			
		↓ -02		2	
		23E0200-01	↓		
		SEQ-IBLF			

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/19/23 **Analyst:** SD/MS **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCVH			
		↓ -CCBH			
	✓	23E0203-01	REN		
	✓	23E0205-01	↓		
	✓	↓ -02	↓		
					AS Error - End of Run
			MS 5/19/23		

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Friday, May 19, 2023 12:57:38
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.221
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	4787.3	4787.269	57.937	1.2	Standard
	In	114.9	70017.8	70017.845	1666.650	2.4	Standard
	U	238.1	66898.0	66897.972	1117.389	1.7	Standard
⌈	CeO	155.9	2581.5	0.023	0.000	1.8	Standard
| >	Ce	139.9	109963.8	109963.758	974.166	0.9	Standard
⌊	Ce++	70.0	740.6	0.007	0.000	1.2	Standard
	Bkgd	220.0	3.1	3.067	0.796	26.0	Standard

Current Conditions File Data

Current Value	Description
0.93	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1600.00	Analog Stage Voltage
1000.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-10.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-5.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.93	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Friday, May 19, 2023 13:06:23
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.227
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	4448.4	4448.426	58.521	1.3	Standard
	In	114.9	72376.4	72376.418	461.887	0.6	Standard
	U	238.1	72857.3	72857.327	679.831	0.9	Standard
⌈	CeO	155.9	2751.4	0.024	0.001	2.4	Standard
| >	Ce	139.9	115354.2	115354.208	782.762	0.7	Standard
⌊	Ce++	70.0	775.9	0.007	0.000	3.5	Standard
	Bkgd	220.0	3.4	3.367	0.946	28.1	Standard

Current Conditions File Data

Current Value	Description
0.93	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1600.00	Analog Stage Voltage
1000.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-10.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-5.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.93	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 5/19/2023 12:57:36 PM
End Time: 5/19/2023 1:08:27 PM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 4787.27
Obtained Intensity (In 115): 70017.85
Obtained Intensity (U 238): 66897.97
Obtained Intensity (Bkgd 220): 3.07
Obtained Formula (Ce++ 70 / Ce 140): 0.007 (=740.62 / 109963.76)
Obtained Formula (CeO 156 / Ce 140): 0.023 (=2581.50 / 109963.76)
Obtained RSD (Be 9): 0.0121
Obtained RSD (In 115): 0.0238
Obtained RSD (U 238): 0.0167

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.97 mm	0.83 mm	83809.12

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 0.93
Obtained Intensity (In 115): 68607.35
Obtained Formula (CeO 156 / Ce 140): 0.0204 (=2201.17 / 108128.67)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.680)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.675)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.698)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.704)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 1.000; Intercept = -17.74

KED Mode QID - Optimum value(s): Correlation Coefficient = 0.999; Intercept = -15.30

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 4448.43
Obtained Intensity (In 115): 72376.42
Obtained Intensity (U 238): 72857.33
Obtained Intensity (Bkgd 220): 3.37
Obtained Formula (Ce++ 70 / Ce 140): 0.007 (=775.89 / 115354.21)
Obtained Formula (CeO 156 / Ce 140): 0.024 (=2751.40 / 115354.21)
Obtained RSD (Be 9): 0.0132
Obtained RSD (In 115): 0.0064
Obtained RSD (U 238): 0.0093

SmartTune Wizard - Details

```
Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 5/19/2023 12:57:36 PM

STD Performance Check
        Optimization Settings:
                Method: STD Performance Check.mth.
                Intensity Criterion: Be 9 > 2000
                Intensity Criterion: In 115 > 40000
                Intensity Criterion: U 238 > 30000
                Intensity Criterion: Bkgd 220 <= 5
                Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
                Formula Criterion: CeO 156 / Ce 140 <= 0.025
                RSD Criterion: Be 9.0122 < 0.05
                RSD Criterion: In 114.904 < 0.05
                RSD Criterion: U 238.05 < 0.05

        Optimization Results:
        Initial Try
                Obtained Intensity (Be 9): 4787.27
                Obtained Intensity (In 115): 70017.85
                Obtained Intensity (U 238): 66897.97
                Obtained Intensity (Bkgd 220): 3.07
                Obtained Formula (Ce++ 70 / Ce 140): 0.007 (=740.62 / 109963.76)
                Obtained Formula (CeO 156 / Ce 140): 0.023 (=2581.50 / 109963.76)
                Obtained RSD (Be 9): 0.0121
                Obtained RSD (In 115): 0.0238
                Obtained RSD (U 238): 0.0167

[Passed]  Optimum value(s): N/A

Torch Alignment
        Optimization Settings:
                Method: Torch Alignment.mth.
                Intensity Criterion: In 115 Maximum

        Optimization Results:
                Vertical      Horizontal      Intensity
[Passed]        0.97 mm     0.83 mm       83809.12

Nebulizer Gas Flow STD/KED [NEB]
        Optimization Settings:
                Method: Optimize.mth.
                        Initial Try - Start/End/Step: 0.92/0.95/0.01.
                Intensity Criterion: In 115 Maximum
                Formula Criterion: CeO 156 / Ce 140 <= 0.025

        Optimization Results:
        Initial Try

                Obtained Intensity (In 115): 68607.35
                Obtained Formula (CeO 156 / Ce 140): 0.0204 (=2201.17 / 108128.67)
[Passed]  Optimum value(s): 0.93
```

Mass Calibration and Resolution
Optimization Settings:
Method: Tuning.mth.
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Iterations: 6
Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution
Peak height (%) for Res. Opt.: 10

Optimization Results:
Initial Try
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.680)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.675)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.698)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.704)
[Passed] Optimum value(s): N/A

QID STD/DRC
Optimization Settings:
Method: QID Calibration.mth.
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:
Initial Try

Optimum value(s): Correlation Coefficient = 1.000; Intercept = -17.74

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-17	32617.2
Mg	24	41	-15.5	32484.9
In	115	41	-12	77381
Ce	140	41	-12	122382
Pb	208	41	-12	47009.2
U	238	41	-11.5	73850.4

KED Mode QID
Optimization Settings:
Method: QID Calibration.mth.
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:
Initial Try

Optimum value(s): Correlation Coefficient = 0.999; Intercept = -15.30

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-15	25194.2
Mg	24	41	-14.5	52082.8
In	115	41	-12	115574
Ce	140	41	-11.5	106032
Pb	208	41	-10	42434.9
U	238	41	-10.5	95325

STD Performance Check
Optimization Settings:
Method: STD Performance Check.mth.
Intensity Criterion: Be 9 > 2000
Intensity Criterion: In 115 > 40000

```
            Intensity Criterion: U 238 > 30000
            Intensity Criterion: Bkgd 220 <= 5
            Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
            Formula Criterion: CeO 156 / Ce 140 <= 0.025
            RSD Criterion: Be 9.0122 < 0.05
            RSD Criterion: In 114.904 < 0.05
            RSD Criterion: U 238.05 < 0.05

       Optimization Results:
       Initial Try
            Obtained Intensity (Be 9): 4448.43
            Obtained Intensity (In 115): 72376.42
            Obtained Intensity (U 238): 72857.33
            Obtained Intensity (Bkgd 220): 3.37
            Obtained Formula (Ce++ 70 / Ce 140): 0.007 (=775.89 / 115354.21)
            Obtained Formula (CeO 156 / Ce 140): 0.024 (=2751.40 / 115354.21)
            Obtained RSD (Be 9): 0.0132
            Obtained RSD (In 115): 0.0064
            Obtained RSD (U 238): 0.0093

[Passed]  Optimum value(s): N/A

End Time: 5/19/2023 1:08:27 PM
```

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 13:43:49

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				17839	3	Standard
>	**Sc**	**45**		ug/L				559345	1	Standard
	Cr	**52**		ug/L				16889	4	Standard
	Cr	**53**		ug/L				146	5	Standard
	Mn	**55**		ug/L				267	5	Standard
>	**Ge**	**72**		ug/L				32630	1	KED
	Ni	**60**		ug/L				41	25	KED
	Ni	**62**		ug/L				6	34	KED
	Cu	**63**		ug/L				43	28	KED
	Cu	**65**		ug/L				22	17	KED
	Zn	**66**		ug/L				27	19	KED
	Zn	**67**		ug/L				8	81	KED
	As	**75**		ug/L				3	18	KED
	Se	**78**		ug/L				9	18	KED
	Kr	**83**		ug/L				46	8	Standard
>	**In-1**	**115**		ug/L				7021	4	KED
	Cd	**111**		ug/L				1	86	KED
	Cd	**114**		ug/L				2	47	KED
>	**In**	**115**		ug/L				437695	3	Standard
	Ag	**107**		ug/L				48	35	Standard
	Sb	**121**		ug/L				366	5	Standard
	Sb	**123**		ug/L				258	5	Standard
	Ba	**135**		ug/L				15	48	Standard
	Ba	**137**		ug/L				29	22	Standard
>	**Tb**	**159**		ug/L				185058	1	Standard
	Pb	**208**		ug/L				115	13	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Friday, May 19, 2023 13:48:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			17839	19505	5	Standard
⌈>	**Sc**	**45**		ug/L			559345	549223	4	Standard
|	**Cr**	**52**	**0.500**	ug/L	0.016	3	16889	24147	3	Standard
|	**Cr**	**53**	**0.500**	ug/L	0.014	2	146	951	3	Standard
⌊	**Mn**	**55**	**0.500**	ug/L	0.006	1	267	10738	3	Standard
⌈>	**Ge**	**72**		ug/L			32630	31916	3	KED
|	**Ni**	**60**	**0.500**	ug/L	0.037	7	41	826	4	KED
|	**Ni**	**62**	**0.500**	ug/L	0.118	23	6	135	25	KED
|	**Cu**	**63**	**0.500**	ug/L	0.015	3	43	2431	4	KED
|	**Cu**	**65**	**0.500**	ug/L	0.024	4	22	1275	0	KED
|	**Zn**	**66**	**6.000**	ug/L	0.037	0	27	3106	4	KED
|	**Zn**	**67**	**6.000**	ug/L	0.254	4	8	499	7	KED
|	**As**	**75**	**0.200**	ug/L	0.014	6	3	55	3	KED
⌊	**Se**	**78**	**0.500**	ug/L	0.256	51	9	20	28	KED
	Kr	**83**		ug/L			46	40	8	Standard
⌈>	**In-1**	**115**		ug/L			7021	6861	2	KED
|	**Cd**	**111**	**0.100**	ug/L	0.013	13	1	27	13	KED
⌊	**Cd**	**114**	**0.100**	ug/L	0.022	21	2	67	22	KED
⌈>	**In**	**115**		ug/L			437695	440211	5	Standard
|	**Ag**	**107**	**0.200**	ug/L	0.015	7	48	3397	2	Standard
|	**Sb**	**121**	**0.200**	ug/L	0.019	9	366	2632	2	Standard
|	**Sb**	**123**	**0.200**	ug/L	0.012	6	258	2004	2	Standard
|	**Ba**	**135**	**0.500**	ug/L	0.023	4	15	2980	1	Standard
⌊	**Ba**	**137**	**0.500**	ug/L	0.038	7	29	5345	2	Standard
⌈>	**Tb**	**159**		ug/L			185058	187779	1	Standard
⌊	**Pb**	**208**	**0.100**	ug/L	0.002	1	115	7071	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3
Sample Dil Factor:
Comments: DEL
Sample Date/Time: Friday, May 19, 2023 13:53:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			17839	23862	6	Standard
>	**Sc**	**45**		ug/L			559345	541851	3	Standard
	Cr	**52**	**9.999**	ug/L	0.230	2	16889	161556	5	Standard
	Cr	**53**	**10.001**	ug/L	0.061	0	146	16766	3	Standard
	Mn	**55**	**10.001**	ug/L	0.145	1	267	211574	2	Standard
>	**Ge**	**72**		ug/L			32630	32746	0	KED
	Ni	**60**	**9.998**	ug/L	0.148	1	41	15087	1	KED
	Ni	**62**	**9.998**	ug/L	0.334	3	6	2428	3	KED
	Cu	**63**	**9.998**	ug/L	0.235	2	43	45225	2	KED
	Cu	**65**	**9.997**	ug/L	0.103	1	22	22972	1	KED
	Zn	**66**	**9.903**	ug/L	0.239	2	27	5105	2	KED
	Zn	**67**	**10.084**	ug/L	0.354	3	8	873	3	KED
	As	**75**	**10.000**	ug/L	0.048	0	3	2574	0	KED
	Se	**78**	**10.001**	ug/L	0.404	4	9	242	3	KED
	Kr	**83**		ug/L			46	43	18	Standard
>	**In-1**	**115**		ug/L			7021	6971	2	KED
	Cd	**111**	**10.000**	ug/L	0.151	1	1	2452	1	KED
	Cd	**114**	**10.000**	ug/L	0.199	1	2	6271	1	KED
>	**In**	**115**		ug/L			437695	431863	1	Standard
	Ag	**107**	**10.000**	ug/L	0.194	1	48	170185	1	Standard
	Sb	**121**	**10.001**	ug/L	0.311	3	366	129592	2	Standard
	Sb	**123**	**10.001**	ug/L	0.166	1	258	102301	0	Standard
	Ba	**135**	**10.000**	ug/L	0.317	3	15	57172	2	Standard
	Ba	**137**	**9.999**	ug/L	0.389	3	29	101825	2	Standard
>	**Tb**	**159**		ug/L			185058	186172	2	Standard
	Pb	**208**	**10.000**	ug/L	0.248	2	115	681511	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Friday, May 19, 2023 13:58:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			17839	23597	2	Standard
⌈>	**Sc**	**45**		ug/L			559345	556012	3	Standard
|	**Cr**	**52**	**19.955**	ug/L	0.351	1	16889	311390	3	Standard
|	**Cr**	**53**	**19.948**	ug/L	0.202	1	146	33818	2	Standard
⌊	**Mn**	**55**	**19.903**	ug/L	0.158	0	267	423741	3	Standard
⌈>	**Ge**	**72**		ug/L			32630	32175	1	KED
|	**Ni**	**60**	**20.173**	ug/L	0.113	0	41	30935	0	KED
|	**Ni**	**62**	**20.166**	ug/L	0.445	2	6	4970	2	KED
|	**Cu**	**63**	**19.984**	ug/L	0.275	1	43	88491	0	KED
|	**Cu**	**65**	**19.961**	ug/L	0.378	1	22	44694	0	KED
|	**Zn**	**66**	**20.138**	ug/L	0.272	1	27	10383	2	KED
|	**Zn**	**67**	**20.118**	ug/L	0.930	4	8	1733	3	KED
|	**As**	**75**	**20.134**	ug/L	0.139	0	3	5228	1	KED
⌊	**Se**	**78**	**19.739**	ug/L	0.729	3	9	438	2	KED
	Kr	**83**		ug/L			46	55	13	Standard
⌈>	**In-1**	**115**		ug/L			7021	7104	1	KED
|	**Cd**	**111**	**20.060**	ug/L	1.121	5	1	5070	3	KED
⌊	**Cd**	**114**	**20.015**	ug/L	0.587	2	2	12828	2	KED
⌈>	**In**	**115**		ug/L			437695	423934	3	Standard
|	**Ag**	**107**	**19.934**	ug/L	0.208	1	48	328602	2	Standard
|	**Sb**	**121**	**19.971**	ug/L	0.794	3	366	252074	1	Standard
|	**Sb**	**123**	**19.997**	ug/L	1.306	6	258	200201	3	Standard
|	**Ba**	**135**	**19.902**	ug/L	1.099	5	15	109424	2	Standard
⌊	**Ba**	**137**	**20.093**	ug/L	0.952	4	29	204489	1	Standard
⌈>	**Tb**	**159**		ug/L			185058	187575	2	Standard
⌊	**Pb**	**208**	**19.861**	ug/L	0.620	3	115	1326582	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Friday, May 19, 2023 14:03:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			17839	16917	1	Standard
>	Sc	45		ug/L			559345	559207	3	Standard
	Cr	52	49.630	ug/L	0.972	1	16889	727437	3	Standard
	Cr	53	49.711	ug/L	1.476	2	146	82137	0	Standard
	Mn	55	49.708	ug/L	0.668	1	267	1033548	2	Standard
>	Ge	72		ug/L			32630	32524	0	KED
	Ni	60	49.655	ug/L	1.863	3	41	74344	3	KED
	Ni	62	49.699	ug/L	1.541	3	6	12013	3	KED
	Cu	63	49.742	ug/L	0.590	1	43	216998	1	KED
	Cu	65	49.802	ug/L	0.545	1	22	110521	1	KED
	Zn	66	49.655	ug/L	1.909	3	27	25030	3	KED
	Zn	67	49.488	ug/L	2.080	4	8	4103	4	KED
	As	75	49.774	ug/L	0.200	0	3	12773	0	KED
	Se	78	50.133	ug/L	0.915	1	9	1125	1	KED
	Kr	83		ug/L			46	53	14	Standard
>	In-1	115		ug/L			7021	6088	10	KED
	Cd	111	50.535	ug/L	4.006	7	1	11507	2	KED
	Cd	114	50.538	ug/L	3.548	7	2	29200	3	KED
>	In	115		ug/L			437695	408025	1	Standard
	Ag	107	50.077	ug/L	0.282	0	48	800743	0	Standard
	Sb	121	50.091	ug/L	0.866	1	366	614129	2	Standard
	Sb	123	49.807	ug/L	1.469	2	258	471017	1	Standard
	Ba	135	49.760	ug/L	0.523	1	15	257414	0	Standard
	Ba	137	49.844	ug/L	1.344	2	29	481115	2	Standard
>	Tb	159		ug/L			185058	176437	1	Standard
	Pb	208	49.987	ug/L	0.179	0	115	3138060	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:13:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			0	20088	7	Standard
⎡>	**Sc**	**45**		ug/L			0	567265	2	Standard
⎢	**Cr**	**52**		ug/L			0	17737	6	Standard
⎢	**Cr**	**53**		ug/L			0	129	5	Standard
⎣	**Mn**	**55**		ug/L			0	304	7	Standard
⎡>	**Ge**	**72**		ug/L			0	34443	3	KED
⎢	**Ni**	**60**		ug/L			0	19	103	KED
⎢	**Ni**	**62**		ug/L			0	5	57	KED
⎢	**Cu**	**63**		ug/L			0	87	73	KED
⎢	**Cu**	**65**		ug/L			0	38	65	KED
⎢	**Zn**	**66**		ug/L			0	45	27	KED
⎢	**Zn**	**67**		ug/L			0	10	44	KED
⎢	**As**	**75**		ug/L			0	5	48	KED
⎣	**Se**	**78**		ug/L			0	13	24	KED
	Kr	**83**		ug/L			0	50	12	Standard
⎡>	**In-1**	**115**		ug/L			0	7450	1	KED
⎢	**Cd**	**111**		ug/L			0	3	68	KED
⎣	**Cd**	**114**		ug/L			0	4	88	KED
⎡>	**In**	**115**		ug/L			0	421069	1	Standard
⎢	**Ag**	**107**		ug/L			0	34	17	Standard
⎢	**Sb**	**121**		ug/L			0	422	2	Standard
⎢	**Sb**	**123**		ug/L			0	313	3	Standard
⎢	**Ba**	**135**		ug/L			0	20	48	Standard
⎣	**Ba**	**137**		ug/L			0	29	24	Standard
⎡>	**Tb**	**159**		ug/L			0	181251	2	Standard
⎣	**Pb**	**208**		ug/L			0	208	16	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:18:42
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				18596	5	Standard
⎡>	**Sc**	**45**		ug/L				572689	3	Standard
⎢	**Cr**	**52**		ug/L				17437	4	Standard
⎢	**Cr**	**53**		ug/L				140	13	Standard
⎣	**Mn**	**55**		ug/L				280	5	Standard
⎡>	**Ge**	**72**		ug/L				33867	3	KED
⎢	**Ni**	**60**		ug/L				17	6	KED
⎢	**Ni**	**62**		ug/L				4	98	KED
⎢	**Cu**	**63**		ug/L				49	20	KED
⎢	**Cu**	**65**		ug/L				10	26	KED
⎢	**Zn**	**66**		ug/L				20	48	KED
⎢	**Zn**	**67**		ug/L				6	15	KED
⎢	**As**	**75**		ug/L				1	17	KED
⎣	**Se**	**78**		ug/L				11	15	KED
	Kr	**83**		ug/L				43	30	Standard
⎡>	**In-1**	**115**		ug/L				7349	1	KED
⎢	**Cd**	**111**		ug/L				3	56	KED
⎣	**Cd**	**114**		ug/L				6	46	KED
⎡>	**In**	**115**		ug/L				429903	0	Standard
⎢	**Ag**	**107**		ug/L				25	18	Standard
⎢	**Sb**	**121**		ug/L				233	10	Standard
⎢	**Sb**	**123**		ug/L				162	8	Standard
⎢	**Ba**	**135**		ug/L				14	32	Standard
⎣	**Ba**	**137**		ug/L				22	27	Standard
⎡>	**Tb**	**159**		ug/L				185011	1	Standard
⎣	**Pb**	**208**		ug/L				121	13	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:23:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	19774	6	Standard
⌈>	**Sc**	**45**		ug/L			572689	566746	3	Standard
|	**Cr**	**52**	**0.500**	ug/L	0.029	5	17437	24322	4	Standard
|	**Cr**	**53**	**0.500**	ug/L	0.003	0	140	1004	3	Standard
⌊	**Mn**	**55**	**0.500**	ug/L	0.026	5	280	10995	5	Standard
⌈>	**Ge**	**72**		ug/L			33867	33450	2	KED
|	**Ni**	**60**	**0.500**	ug/L	0.032	6	17	785	8	KED
|	**Ni**	**62**	**0.500**	ug/L	0.014	2	4	139	4	KED
|	**Cu**	**63**	**0.500**	ug/L	0.014	2	49	2434	1	KED
|	**Cu**	**65**	**0.500**	ug/L	0.025	5	10	1241	6	KED
|	**Zn**	**66**	**6.000**	ug/L	0.205	3	20	3528	2	KED
|	**Zn**	**67**	**6.000**	ug/L	0.112	1	6	558	2	KED
|	**As**	**75**	**0.200**	ug/L	0.006	3	1	54	1	KED
⌊	**Se**	**78**	**0.500**	ug/L	0.148	29	11	22	17	KED
	Kr	**83**		ug/L			43	43	5	Standard
⌈>	**In-1**	**115**		ug/L			7349	7233	0	KED
|	**Cd**	**111**	**0.100**	ug/L	0.018	17	3	27	15	KED
⌊	**Cd**	**114**	**0.100**	ug/L	0.014	14	6	69	13	KED
⌈>	**In**	**115**		ug/L			429903	436006	3	Standard
|	**Ag**	**107**	**0.200**	ug/L	0.007	3	25	3486	2	Standard
|	**Sb**	**121**	**0.200**	ug/L	0.017	8	233	2605	3	Standard
|	**Sb**	**123**	**0.200**	ug/L	0.007	3	162	2068	2	Standard
|	**Ba**	**135**	**0.500**	ug/L	0.021	4	14	2814	2	Standard
⌊	**Ba**	**137**	**0.500**	ug/L	0.035	6	22	5185	2	Standard
⌈>	**Tb**	**159**		ug/L			185011	185056	0	Standard
⌊	**Pb**	**208**	**0.100**	ug/L	0.005	4	121	7095	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:28:17
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	24676	4	Standard
⌈>	**Sc**	**45**		ug/L			572689	563225	5	Standard
|	**Cr**	**52**	**10.001**	ug/L	0.406	4	17437	163144	3	Standard
|	**Cr**	**53**	**10.000**	ug/L	0.342	3	140	17204	4	Standard
⌊	**Mn**	**55**	**10.000**	ug/L	0.329	3	280	213650	1	Standard
⌈>	**Ge**	**72**		ug/L			33867	33332	1	KED
|	**Ni**	**60**	**10.001**	ug/L	0.220	2	17	15964	1	KED
|	**Ni**	**62**	**9.999**	ug/L	0.145	1	4	2613	0	KED
|	**Cu**	**63**	**9.999**	ug/L	0.189	1	49	45786	0	KED
|	**Cu**	**65**	**9.998**	ug/L	0.332	3	10	23038	1	KED
|	**Zn**	**66**	**9.723**	ug/L	0.183	1	20	5281	1	KED
|	**Zn**	**67**	**9.930**	ug/L	0.143	1	6	898	0	KED
|	**As**	**75**	**10.000**	ug/L	0.224	2	1	2676	1	KED
⌊	**Se**	**78**	**10.001**	ug/L	0.466	4	11	246	2	KED
	Kr	**83**		ug/L			43	47	31	Standard
⌈>	**In-1**	**115**		ug/L			7349	7274	2	KED
|	**Cd**	**111**	**10.000**	ug/L	0.697	6	3	2487	4	KED
⌊	**Cd**	**114**	**10.000**	ug/L	0.127	1	6	6563	1	KED
⌈>	**In**	**115**		ug/L			429903	418558	1	Standard
|	**Ag**	**107**	**10.000**	ug/L	0.432	4	25	172261	3	Standard
|	**Sb**	**121**	**10.000**	ug/L	0.284	2	233	129530	1	Standard
|	**Sb**	**123**	**10.000**	ug/L	0.339	3	162	99371	3	Standard
|	**Ba**	**135**	**10.001**	ug/L	0.261	2	14	56971	1	Standard
⌊	**Ba**	**137**	**10.001**	ug/L	0.239	2	22	104992	1	Standard
⌈>	**Tb**	**159**		ug/L			185011	185120	1	Standard
⌊	**Pb**	**208**	**10.000**	ug/L	0.078	0	121	659823	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:33:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	23673	6	Standard
⌈>	**Sc**	**45**		ug/L			572689	564817	2	Standard
|	**Cr**	**52**	**19.995**	ug/L	0.387	1	17437	309906	2	Standard
|	**Cr**	**53**	**19.969**	ug/L	0.237	1	140	34124	3	Standard
⌊	**Mn**	**55**	**19.999**	ug/L	0.259	1	280	428636	3	Standard
⌈>	**Ge**	**72**		ug/L			33867	33756	1	KED
|	**Ni**	**60**	**19.829**	ug/L	0.261	1	17	30985	0	KED
|	**Ni**	**62**	**19.750**	ug/L	0.820	4	4	4974	2	KED
|	**Cu**	**63**	**19.875**	ug/L	0.575	2	49	89881	1	KED
|	**Cu**	**65**	**20.005**	ug/L	0.690	3	10	46720	2	KED
|	**Zn**	**66**	**19.720**	ug/L	0.180	0	20	10400	2	KED
|	**Zn**	**67**	**19.825**	ug/L	1.554	7	6	1763	6	KED
|	**As**	**75**	**19.926**	ug/L	0.124	0	1	5322	0	KED
⌊	**Se**	**78**	**19.925**	ug/L	0.602	3	11	479	3	KED
	Kr	**83**		ug/L			43	50	13	Standard
⌈>	**In-1**	**115**		ug/L			7349	7192	2	KED
|	**Cd**	**111**	**20.139**	ug/L	0.782	3	3	5096	2	KED
⌊	**Cd**	**114**	**20.025**	ug/L	0.834	4	6	13048	1	KED
⌈>	**In**	**115**		ug/L			429903	420633	1	Standard
|	**Ag**	**107**	**19.863**	ug/L	0.545	2	25	334737	2	Standard
|	**Sb**	**121**	**19.847**	ug/L	0.291	1	233	250545	2	Standard
|	**Sb**	**123**	**19.872**	ug/L	0.604	3	162	193326	2	Standard
|	**Ba**	**135**	**19.841**	ug/L	0.328	1	14	110105	0	Standard
⌊	**Ba**	**137**	**19.821**	ug/L	0.182	0	22	201920	1	Standard
⌈>	**Tb**	**159**		ug/L			185011	184496	1	Standard
⌊	**Pb**	**208**	**19.999**	ug/L	0.501	2	121	1314594	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:38:30
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	17237	3	Standard
⌈>	**Sc**	**45**		ug/L			572689	574437	4	Standard
|	**Cr**	**52**	**49.845**	ug/L	1.137	2	17437	748082	3	Standard
|	**Cr**	**53**	**49.545**	ug/L	0.848	1	140	82172	4	Standard
⌊	**Mn**	**55**	**49.588**	ug/L	0.925	1	280	1037256	3	Standard
⌈>	**Ge**	**72**		ug/L			33867	32834	0	KED
|	**Ni**	**60**	**50.015**	ug/L	0.923	1	17	76117	1	KED
|	**Ni**	**62**	**50.067**	ug/L	0.705	1	4	12346	1	KED
|	**Cu**	**63**	**49.936**	ug/L	1.358	2	49	218244	2	KED
|	**Cu**	**65**	**49.700**	ug/L	1.290	2	10	109629	2	KED
|	**Zn**	**66**	**49.802**	ug/L	0.642	1	20	25055	1	KED
|	**Zn**	**67**	**50.133**	ug/L	1.494	2	6	4384	2	KED
|	**As**	**75**	**50.030**	ug/L	0.355	0	1	13036	0	KED
⌊	**Se**	**78**	**49.947**	ug/L	1.197	2	11	1145	2	KED
	Kr	**83**		ug/L			43	55	12	Standard
⌈>	**In-1**	**115**		ug/L			7349	6890	3	KED
|	**Cd**	**111**	**49.924**	ug/L	2.009	4	3	12002	1	KED
⌊	**Cd**	**114**	**49.935**	ug/L	1.952	3	6	30969	3	KED
⌈>	**In**	**115**		ug/L			429903	410440	0	Standard
|	**Ag**	**107**	**49.854**	ug/L	0.376	0	25	808032	0	Standard
|	**Sb**	**121**	**49.881**	ug/L	0.223	0	233	606866	0	Standard
|	**Sb**	**123**	**49.791**	ug/L	0.834	1	162	462864	1	Standard
|	**Ba**	**135**	**49.468**	ug/L	1.833	3	14	254342	3	Standard
⌊	**Ba**	**137**	**49.822**	ug/L	0.467	0	22	486564	0	Standard
⌈>	**Tb**	**159**		ug/L			185011	177212	2	Standard
⌊	**Pb**	**208**	**49.833**	ug/L	0.899	1	121	3094307	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:45:22
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	22327	10	Standard
⌈>	**Sc**	**45**		ug/L			572689	570052	4	Standard
|	**Cr**	**52**	**100.241**	ug/L	0.948	0	17437	1487389	3	Standard
|	**Cr**	**53**	**101.102**	ug/L	1.787	1	140	172492	2	Standard
⌊	**Mn**	**55**	**102.277**	ug/L	1.404	1	280	2297193	3	Standard
⌈>	**Ge**	**72**		ug/L			33867	33465	1	KED
|	**Ni**	**60**	**99.717**	ug/L	2.302	2	17	153211	2	KED
|	**Ni**	**62**	**99.047**	ug/L	0.194	0	4	24125	1	KED
|	**Cu**	**63**	**99.582**	ug/L	0.817	0	49	437436	2	KED
|	**Cu**	**65**	**99.366**	ug/L	2.633	2	10	218728	2	KED
|	**Zn**	**66**	**99.862**	ug/L	3.829	3	20	50969	5	KED
|	**Zn**	**67**	**98.989**	ug/L	0.975	0	6	8532	1	KED
|	**As**	**75**	**100.110**	ug/L	1.683	1	1	26677	0	KED
⌊	**Se**	**78**	**100.360**	ug/L	3.937	3	11	2361	4	KED
	Kr	**83**		ug/L			43	64	11	Standard
⌈>	**In-1**	**115**		ug/L			7349	7204	1	KED
|	**Cd**	**111**	**99.799**	ug/L	1.626	1	3	24934	0	KED
⌊	**Cd**	**114**	**99.752**	ug/L	1.852	1	6	64169	1	KED
⌈>	**In**	**115**		ug/L			429903	388495	1	Standard
|	**Ag**	**107**	**100.886**	ug/L	2.692	2	25	1595009	3	Standard
|	**Sb**	**121**	**100.565**	ug/L	3.110	3	233	1179894	2	Standard
|	**Sb**	**123**	**100.524**	ug/L	1.215	1	162	900163	2	Standard
|	**Ba**	**135**	**99.327**	ug/L	2.429	2	14	472840	3	Standard
⌊	**Ba**	**137**	**99.210**	ug/L	2.406	2	22	893715	3	Standard
⌈>	**Tb**	**159**		ug/L			185011	174710	1	Standard
⌊	**Pb**	**208**	**100.113**	ug/L	2.447	2	121	6151231	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:52:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	19570	7	Standard
⌈>	**Sc**	**45**		ug/L			572689	603475	3	Standard
|	**Cr**	**52**	**0.014**	ug/L	0.028	200	17437	18594	4	Standard
|	**Cr**	**53**	**0.013**	ug/L	0.009	70	140	171	11	Standard
⌊	**Mn**	**55**	**0.011**	ug/L	0.009	79	280	558	39	Standard
⌈>	**Ge**	**72**		ug/L			33867	35210	2	KED
|	**Ni**	**60**	**0.001**	ug/L	0.002	135	17	20	14	KED
|	**Ni**	**62**	**-0.003**	ug/L	0.013	384	4	3	86	KED
|	**Cu**	**63**	**-0.003**	ug/L	0.001	41	49	37	17	KED
|	**Cu**	**65**	**0.007**	ug/L	0.001	9	10	27	3	KED
|	**Zn**	**66**	**0.007**	ug/L	0.017	247	20	25	33	KED
|	**Zn**	**67**	**-0.003**	ug/L	0.013	458	6	6	15	KED
|	**As**	**75**	**0.005**	ug/L	0.004	74	1	3	34	KED
⌊	**Se**	**78**	**0.018**	ug/L	0.034	184	11	12	8	KED
	Kr	**83**		ug/L			43	45	31	Standard
⌈>	**In-1**	**115**		ug/L			7349	7492	2	KED
|	**Cd**	**111**	**0.008**	ug/L	0.013	155	3	5	60	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.002	294	6	6	16	KED
⌈>	**In**	**115**		ug/L			429903	417249	1	Standard
|	**Ag**	**107**	**0.013**	ug/L	0.009	66	25	252	60	Standard
|	**Sb**	**121**	**0.106**	ug/L	0.009	8	233	1560	7	Standard
|	**Sb**	**123**	**0.112**	ug/L	0.014	12	162	1235	11	Standard
|	**Ba**	**135**	**0.009**	ug/L	0.006	70	14	60	54	Standard
⌊	**Ba**	**137**	**0.011**	ug/L	0.008	73	22	131	61	Standard
⌈>	**Tb**	**159**		ug/L			185011	180195	2	Standard
⌊	**Pb**	**208**	**0.011**	ug/L	0.009	81	121	829	70	Standard

Sample Information

Sample Date/Time: Friday, May 19, 2023 14:45:22
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.m
Mass Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

Calibration

Analyte	Mass	**r Corr Coef**	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Sc	45							
Cr	52	**1.0000**	0.026	0.50	10	20	50	100
Cr	53	**0.9998**	0.003	0.50	10	20	50	100
Mn	55	**0.9991**	0.039	0.50	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.046	0.50	10	20	50	100
Ni	62	**0.9998**	0.007	0.50	10	20	50	100
Cu	63	**1.0000**	0.131	0.50	10	20	50	100
Cu	65	**0.9999**	0.066	0.50	10	20	50	100
Zn	66	**1.0000**	0.015	6.00	10	20	50	100
Zn	67	**0.9998**	0.003	6.00	10	20	50	100
As	75	**1.0000**	0.008	0.20	10	20	50	100
Se	78	**1.0000**	0.001	0.50	10	20	50	100
Kr	83							
In-1	115							
Cd	111	**1.0000**	0.035	0.10	10	20	50	100
Cd	114	**1.0000**	0.089	0.10	10	20	50	100
In	115							
Ag	107	**0.9999**	0.041	0.20	10	20	50	100
Sb	121	**0.9999**	0.030	0.20	10	20	50	100
Sb	123	**0.9999**	0.023	0.20	10	20	50	100
Ba	135	**0.9999**	0.012	0.50	10	20	50	100
Ba	137	**0.9999**	0.023	0.50	10	20	50	100
Tb	159							
Pb	208	**1.0000**	0.352	0.10	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICV1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 14:59:06
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	22346	3	Standard
⌈>	**Sc**	**45**		ug/L			572689	586432	3	Standard
|	**Cr**	**52**	**50.986**	ug/L	0.606	1	17437	787049	2	Standard
|	**Cr**	**53**	**50.393**	ug/L	1.119	2	140	88593	5	Standard
⌊	**Mn**	**55**	**48.804**	ug/L	1.384	2	280	1128444	5	Standard
⌈>	**Ge**	**72**		ug/L			33867	34193	1	KED
|	**Ni**	**60**	**51.320**	ug/L	1.628	3	17	80557	2	KED
|	**Ni**	**62**	**52.641**	ug/L	1.414	2	4	13105	3	KED
|	**Cu**	**63**	**51.902**	ug/L	1.932	3	49	232916	2	KED
|	**Cu**	**65**	**51.803**	ug/L	1.183	2	10	116522	1	KED
|	**Zn**	**66**	**49.342**	ug/L	1.311	2	20	25734	2	KED
|	**Zn**	**67**	**49.483**	ug/L	1.744	3	6	4360	2	KED
|	**As**	**75**	**47.947**	ug/L	0.511	1	1	13057	0	KED
⌊	**Se**	**78**	**77.027**	ug/L	1.135	1	11	1854	1	KED
	Kr	**83**		ug/L			43	66	22	Standard
⌈>	**In-1**	**115**		ug/L			7349	7453	1	KED
|	**Cd**	**111**	**49.096**	ug/L	0.559	1	3	12692	1	KED
⌊	**Cd**	**114**	**48.705**	ug/L	0.730	1	6	32418	0	KED
⌈>	**In**	**115**		ug/L			429903	398548	4	Standard
|	**Ag**	**107**	**52.393**	ug/L	0.876	1	25	849269	2	Standard
|	**Sb**	**121**	**50.796**	ug/L	3.135	6	233	610591	2	Standard
|	**Sb**	**123**	**51.282**	ug/L	3.118	6	162	470395	2	Standard
|	**Ba**	**135**	**52.928**	ug/L	2.694	5	14	258089	1	Standard
⌊	**Ba**	**137**	**52.516**	ug/L	2.381	4	22	484692	2	Standard
⌈>	**Tb**	**159**		ug/L			185011	179253	1	Standard
⌊	**Pb**	**208**	**49.726**	ug/L	0.807	1	121	3135309	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICB1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:06:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	18589	5	Standard
⌈>	**Sc**	**45**		ug/L			572689	605979	4	Standard
|	**Cr**	**52**	**0.028**	ug/L	0.020	72	17437	18884	4	Standard
|	**Cr**	**53**	**0.000**	ug/L	0.003	938	140	149	7	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.000	22	280	322	5	Standard
⌈>	**Ge**	**72**		ug/L			33867	35683	3	KED
|	**Ni**	**60**	**-0.003**	ug/L	0.002	65	17	13	24	KED
|	**Ni**	**62**	**0.004**	ug/L	0.013	319	4	5	57	KED
|	**Cu**	**63**	**-0.004**	ug/L	0.002	53	49	34	29	KED
|	**Cu**	**65**	**0.005**	ug/L	0.002	44	10	23	24	KED
|	**Zn**	**66**	**0.002**	ug/L	0.010	625	20	22	22	KED
|	**Zn**	**67**	**-0.025**	ug/L	0.044	178	6	5	78	KED
|	**As**	**75**	**0.010**	ug/L	0.004	36	1	4	22	KED
⌊	**Se**	**78**	**0.050**	ug/L	0.084	168	11	13	15	KED
	Kr	**83**		ug/L			43	45	2	Standard
⌈>	**In-1**	**115**		ug/L			7349	7914	0	KED
|	**Cd**	**111**	**0.002**	ug/L	0.005	211	3	4	32	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.003	90	6	4	50	KED
⌈>	**In**	**115**		ug/L			429903	427508	1	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.000	15	25	54	8	Standard
|	**Sb**	**121**	**0.021**	ug/L	0.003	14	233	507	8	Standard
|	**Sb**	**123**	**0.021**	ug/L	0.001	6	162	368	4	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.002	255	14	19	60	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	109	22	33	35	Standard
⌈>	**Tb**	**159**		ug/L			185011	186223	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	25	121	160	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:11:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	18418	4	Standard
⌈>	**Sc**	**45**		ug/L			572689	614501	4	Standard
|	**Cr**	**52**	**48.559**	ug/L	0.206	0	17437	786618	4	Standard
|	**Cr**	**53**	**48.741**	ug/L	0.469	0	140	89774	4	Standard
⌊	**Mn**	**55**	**45.390**	ug/L	0.722	1	280	1098972	2	Standard
⌈>	**Ge**	**72**		ug/L			33867	35342	1	KED
|	**Ni**	**60**	**50.182**	ug/L	0.776	1	17	81440	2	KED
|	**Ni**	**62**	**50.853**	ug/L	1.027	2	4	13082	1	KED
|	**Cu**	**63**	**50.120**	ug/L	1.175	2	49	232496	1	KED
|	**Cu**	**65**	**50.179**	ug/L	0.631	1	10	116676	1	KED
|	**Zn**	**66**	**50.118**	ug/L	0.936	1	20	27015	1	KED
|	**Zn**	**67**	**49.534**	ug/L	0.763	1	6	4512	1	KED
|	**As**	**75**	**49.961**	ug/L	1.194	2	1	14061	1	KED
⌊	**Se**	**78**	**49.895**	ug/L	1.926	3	11	1245	2	KED
	Kr	**83**		ug/L			43	41	16	Standard
⌈>	**In-1**	**115**		ug/L			7349	7674	1	KED
|	**Cd**	**111**	**49.405**	ug/L	1.070	2	3	13149	1	KED
⌊	**Cd**	**114**	**48.071**	ug/L	0.933	1	6	32943	1	KED
⌈>	**In**	**115**		ug/L			429903	410333	2	Standard
|	**Ag**	**107**	**50.855**	ug/L	0.444	0	25	849057	2	Standard
|	**Sb**	**121**	**49.186**	ug/L	1.021	2	233	609558	0	Standard
|	**Sb**	**123**	**49.197**	ug/L	1.222	2	162	465431	4	Standard
|	**Ba**	**135**	**50.371**	ug/L	1.042	2	14	253312	4	Standard
⌊	**Ba**	**137**	**50.441**	ug/L	1.959	3	22	479633	2	Standard
⌈>	**Tb**	**159**		ug/L			185011	183453	4	Standard
⌊	**Pb**	**208**	**49.290**	ug/L	1.803	3	121	3177638	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:18:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	18844	4	Standard
⌈>	**Sc**	**45**		ug/L			572689	609815	4	Standard
|	**Cr**	**52**	**0.067**	ug/L	0.036	53	17437	19621	4	Standard
|	**Cr**	**53**	**0.015**	ug/L	0.029	198	140	176	29	Standard
⌊	**Mn**	**55**	**0.021**	ug/L	0.026	119	280	810	74	Standard
⌈>	**Ge**	**72**		ug/L			33867	36371	0	KED
|	**Ni**	**60**	**-0.002**	ug/L	0.001	36	17	15	6	KED
|	**Ni**	**62**	**0.008**	ug/L	0.011	131	4	6	41	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.002	148	49	47	17	KED
|	**Cu**	**65**	**0.006**	ug/L	0.001	8	10	25	4	KED
|	**Zn**	**66**	**0.027**	ug/L	0.024	87	20	37	34	KED
|	**Zn**	**67**	**-0.012**	ug/L	0.043	350	6	6	62	KED
|	**As**	**75**	**0.009**	ug/L	0.003	36	1	4	22	KED
⌊	**Se**	**78**	**-0.023**	ug/L	0.095	406	11	11	20	KED
	Kr	**83**		ug/L			43	43	14	Standard
⌈>	**In-1**	**115**		ug/L			7349	7952	0	KED
|	**Cd**	**111**	**0.007**	ug/L	0.010	147	3	5	50	KED
⌊	**Cd**	**114**	**-0.005**	ug/L	0.004	77	6	3	96	KED
⌈>	**In**	**115**		ug/L			429903	430191	3	Standard
|	**Ag**	**107**	**0.022**	ug/L	0.025	113	25	408	105	Standard
|	**Sb**	**121**	**0.084**	ug/L	0.035	41	233	1315	31	Standard
|	**Sb**	**123**	**0.084**	ug/L	0.030	36	162	987	27	Standard
|	**Ba**	**135**	**0.026**	ug/L	0.034	130	14	149	116	Standard
⌊	**Ba**	**137**	**0.020**	ug/L	0.027	133	22	215	119	Standard
⌈>	**Tb**	**159**		ug/L			185011	183219	2	Standard
⌊	**Pb**	**208**	**0.023**	ug/L	0.031	135	121	1537	122	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CRL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:25:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	21975	6	Standard
⌈>	**Sc**	**45**		ug/L			572689	611503	3	Standard
|	**Cr**	**52**	**0.580**	ug/L	0.053	9	17437	27752	4	Standard
|	**Cr**	**53**	**0.497**	ug/L	0.013	2	140	1059	3	Standard
⌊	**Mn**	**55**	**0.479**	ug/L	0.019	3	280	11840	3	Standard
⌈>	**Ge**	**72**		ug/L			33867	36151	1	KED
|	**Ni**	**60**	**0.491**	ug/L	0.014	2	17	833	2	KED
|	**Ni**	**62**	**0.571**	ug/L	0.035	6	4	154	6	KED
|	**Cu**	**63**	**0.541**	ug/L	0.031	5	49	2621	5	KED
|	**Cu**	**65**	**0.580**	ug/L	0.008	1	10	1391	0	KED
|	**Zn**	**66**	**6.378**	ug/L	0.219	3	20	3535	1	KED
|	**Zn**	**67**	**5.428**	ug/L	0.448	8	6	513	10	KED
|	**As**	**75**	**0.201**	ug/L	0.025	12	1	59	10	KED
⌊	**Se**	**78**	**0.699**	ug/L	0.235	33	11	30	18	KED
	Kr	**83**		ug/L			43	41	25	Standard
⌈>	**In-1**	**115**		ug/L			7349	7873	1	KED
|	**Cd**	**111**	**0.099**	ug/L	0.027	26	3	30	21	KED
⌊	**Cd**	**114**	**0.099**	ug/L	0.012	12	6	76	10	KED
⌈>	**In**	**115**		ug/L			429903	433276	1	Standard
|	**Ag**	**107**	**0.204**	ug/L	0.007	3	25	3613	1	Standard
|	**Sb**	**121**	**0.203**	ug/L	0.008	4	233	2892	5	Standard
|	**Sb**	**123**	**0.208**	ug/L	0.004	2	162	2240	0	Standard
|	**Ba**	**135**	**0.520**	ug/L	0.017	3	14	2772	3	Standard
⌊	**Ba**	**137**	**0.509**	ug/L	0.009	1	22	5133	2	Standard
⌈>	**Tb**	**159**		ug/L			185011	183395	2	Standard
⌊	**Pb**	**208**	**0.111**	ug/L	0.000	0	121	7257	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:33:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18596	55951	7	Standard
>	Sc	45		ug/L			572689	489744	3	Standard
	Cr	52	0.846	ug/L	0.036	4	17437	25569	3	Standard
	Cr	53	2.606	ug/L	0.130	4	140	3941	7	Standard
	Mn	55	0.076	ug/L	0.007	9	280	1708	6	Standard
>	Ge	72		ug/L			33867	30272	1	KED
	Ni	60	0.097	ug/L	0.016	16	17	150	15	KED
	Ni	62	0.129	ug/L	0.062	48	4	32	42	KED
	Cu	63	0.026	ug/L	0.004	13	49	149	8	KED
	Cu	65	0.034	ug/L	0.001	3	10	78	4	KED
	Zn	66	0.234	ug/L	0.037	15	20	126	12	KED
	Zn	67	0.132	ug/L	0.064	48	6	16	29	KED
	As	75	0.041	ug/L	0.007	16	1	11	15	KED
	Se	78	0.208	ug/L	0.101	48	11	14	13	KED
	Kr	83		ug/L			43	73	12	Standard
>	In-1	115		ug/L			7349	6677	1	KED
	Cd	111	0.062	ug/L	0.017	28	3	17	22	KED
	Cd	114	0.044	ug/L	0.012	26	6	32	21	KED
>	In	115		ug/L			429903	374851	0	Standard
	Ag	107	0.005	ug/L	0.000	8	25	91	6	Standard
	Sb	121	0.035	ug/L	0.001	3	233	596	2	Standard
	Sb	123	0.034	ug/L	0.003	8	162	435	6	Standard
	Ba	135	0.126	ug/L	0.013	9	14	590	10	Standard
	Ba	137	0.105	ug/L	0.000	0	22	928	0	Standard
>	Tb	159		ug/L			185011	161931	1	Standard
	Pb	208	0.019	ug/L	0.001	4	121	1170	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFB1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:38:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	60786	7	Standard
⌈>	**Sc**	**45**		ug/L			572689	518191	4	Standard
|	**Cr**	**52**	**20.261**	ug/L	0.222	1	17437	285848	3	Standard
|	**Cr**	**53**	**22.014**	ug/L	0.160	0	140	34250	3	Standard
⌊	**Mn**	**55**	**18.723**	ug/L	0.417	2	280	382353	2	Standard
⌈>	**Ge**	**72**		ug/L			33867	30213	0	KED
|	**Ni**	**60**	**19.427**	ug/L	0.214	1	17	26960	1	KED
|	**Ni**	**62**	**20.004**	ug/L	0.993	4	4	4401	4	KED
|	**Cu**	**63**	**19.852**	ug/L	0.558	2	49	78769	3	KED
|	**Cu**	**65**	**19.817**	ug/L	0.549	2	10	39400	3	KED
|	**Zn**	**66**	**18.296**	ug/L	0.176	0	20	8443	0	KED
|	**Zn**	**67**	**16.789**	ug/L	0.570	3	6	1311	3	KED
|	**As**	**75**	**19.519**	ug/L	0.254	1	1	4698	1	KED
⌊	**Se**	**78**	**0.130**	ug/L	0.020	15	11	13	3	KED
	Kr	**83**		ug/L			43	78	21	Standard
⌈>	**In-1**	**115**		ug/L			7349	6631	3	KED
|	**Cd**	**111**	**18.800**	ug/L	0.691	3	3	4322	0	KED
⌊	**Cd**	**114**	**18.485**	ug/L	0.217	1	6	10949	3	KED
⌈>	**In**	**115**		ug/L			429903	377748	2	Standard
|	**Ag**	**107**	**16.915**	ug/L	0.339	2	25	259939	0	Standard
|	**Sb**	**121**	**0.021**	ug/L	0.003	14	233	443	8	Standard
|	**Sb**	**123**	**0.028**	ug/L	0.002	8	162	383	6	Standard
|	**Ba**	**135**	**0.126**	ug/L	0.010	7	14	594	6	Standard
⌊	**Ba**	**137**	**0.104**	ug/L	0.008	8	22	927	5	Standard
⌈>	**Tb**	**159**		ug/L			185011	165679	2	Standard
⌊	**Pb**	**208**	**0.018**	ug/L	0.001	8	121	1158	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:43:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	19500	4	Standard
⌈>	**Sc**	**45**		ug/L			572689	541523	5	Standard
|	**Cr**	**52**	**212.099**	ug/L	1.787	0	17437	2971421	4	Standard
|	**Cr**	**53**	**198.801**	ug/L	2.387	1	140	322108	3	Standard
⌊	**Mn**	**55**	**199.945**	ug/L	4.685	2	280	4264035	2	Standard
⌈>	**Ge**	**72**		ug/L			33867	31455	1	KED
|	**Ni**	**60**	**195.931**	ug/L	5.545	2	17	282885	1	KED
|	**Ni**	**62**	**194.272**	ug/L	1.271	0	4	44472	1	KED
|	**Cu**	**63**	**188.329**	ug/L	2.938	1	49	777468	0	KED
|	**Cu**	**65**	**191.218**	ug/L	1.749	0	10	395673	0	KED
|	**Zn**	**66**	**188.767**	ug/L	3.786	2	20	90515	2	KED
|	**Zn**	**67**	**185.945**	ug/L	3.918	2	6	15056	0	KED
|	**As**	**75**	**199.996**	ug/L	3.579	1	1	50097	1	KED
⌊	**Se**	**78**	**192.755**	ug/L	4.440	2	11	4252	1	KED
	Kr	**83**		ug/L			43	74	21	Standard
⌈>	**In-1**	**115**		ug/L			7349	7117	1	KED
|	**Cd**	**111**	**188.608**	ug/L	3.123	1	3	46549	0	KED
⌊	**Cd**	**114**	**186.588**	ug/L	3.821	2	6	118572	1	KED
⌈>	**In**	**115**		ug/L			429903	361899	1	Standard
|	**Ag**	**107**	**213.921**	ug/L	1.488	0	25	3150334	2	Standard
|	**Sb**	**121**	**214.435**	ug/L	7.916	3	233	2343016	2	Standard
|	**Sb**	**123**	**201.544**	ug/L	2.607	1	162	1680692	0	Standard
|	**Ba**	**135**	**187.953**	ug/L	2.565	1	14	833226	0	Standard
⌊	**Ba**	**137**	**180.313**	ug/L	5.080	2	22	1512420	1	Standard
⌈>	**Tb**	**159**		ug/L			185011	161591	1	Standard
⌊	**Pb**	**208**	**204.856**	ug/L	1.808	0	121	11644018	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:48:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18596	20128	5	Standard
>	Sc	45		ug/L			572689	554530	4	Standard
	Cr	52	316.510	ug/L	7.974	2	17437	4530964	3	Standard
	Cr	53	294.005	ug/L	2.911	0	140	487817	3	Standard
	Mn	55	291.784	ug/L	4.264	1	280	6374441	3	Standard
>	Ge	72		ug/L			33867	31687	1	KED
	Ni	60	288.697	ug/L	5.411	1	17	419883	0	KED
	Ni	62	287.471	ug/L	10.985	3	4	66261	2	KED
	Cu	63	277.370	ug/L	7.801	2	49	1153234	1	KED
	Cu	65	280.458	ug/L	3.743	1	10	584571	0	KED
	Zn	66	277.870	ug/L	2.036	0	20	134202	1	KED
	Zn	67	276.574	ug/L	4.308	1	6	22558	1	KED
	As	75	302.313	ug/L	4.891	1	1	76276	0	KED
	Se	78	288.981	ug/L	8.618	2	11	6415	1	KED
	Kr	83		ug/L			43	149	11	Standard
>	In-1	115		ug/L			7349	6898	2	KED
	Cd	111	284.282	ug/L	7.860	2	3	67980	1	KED
	Cd	114	280.011	ug/L	7.737	2	6	172404	1	KED
>	In	115		ug/L			429903	345046	2	Standard
	Ag	107	328.951	ug/L	11.092	3	25	4615744	1	Standard
	Sb	121	317.135	ug/L	7.698	2	233	3303393	0	Standard
	Sb	123	328.924	ug/L	10.350	3	162	2614003	0	Standard
	Ba	135	270.473	ug/L	15.737	5	14	1142339	3	Standard
	Ba	137	274.156	ug/L	5.944	2	22	2192202	0	Standard
>	Tb	159		ug/L			185011	142873	2	Standard
	Pb	208	323.757	ug/L	6.845	2	121	16268399	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 15:55:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	20672	3	Standard
⌈>	**Sc**	**45**		ug/L			572689	634662	3	Standard
|	**Cr**	**52**	**0.083**	ug/L	0.024	29	17437	20671	2	Standard
|	**Cr**	**53**	**0.025**	ug/L	0.005	18	140	203	7	Standard
⌊	**Mn**	**55**	**0.017**	ug/L	0.001	5	280	739	6	Standard
⌈>	**Ge**	**72**		ug/L			33867	36450	2	KED
|	**Ni**	**60**	**0.015**	ug/L	0.006	38	17	44	23	KED
|	**Ni**	**62**	**0.033**	ug/L	0.038	117	4	13	74	KED
|	**Cu**	**63**	**0.029**	ug/L	0.002	5	49	191	5	KED
|	**Cu**	**65**	**0.033**	ug/L	0.009	28	10	90	27	KED
|	**Zn**	**66**	**0.287**	ug/L	0.049	17	20	182	15	KED
|	**Zn**	**67**	**0.232**	ug/L	0.069	29	6	29	20	KED
|	**As**	**75**	**0.019**	ug/L	0.006	31	1	7	24	KED
⌊	**Se**	**78**	**0.043**	ug/L	0.107	246	11	13	19	KED
	Kr	**83**		ug/L			43	46	19	Standard
⌈>	**In-1**	**115**		ug/L			7349	8077	3	KED
|	**Cd**	**111**	**0.016**	ug/L	0.020	126	3	8	65	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.013	248	6	10	84	KED
⌈>	**In**	**115**		ug/L			429903	406967	2	Standard
|	**Ag**	**107**	**0.008**	ug/L	0.001	8	25	158	9	Standard
|	**Sb**	**121**	**0.269**	ug/L	0.014	5	233	3528	6	Standard
|	**Sb**	**123**	**0.274**	ug/L	0.017	6	162	2720	5	Standard
|	**Ba**	**135**	**0.046**	ug/L	0.007	14	14	244	10	Standard
⌊	**Ba**	**137**	**0.049**	ug/L	0.002	3	22	481	1	Standard
⌈>	**Tb**	**159**		ug/L			185011	181165	0	Standard
⌊	**Pb**	**208**	**0.010**	ug/L	0.001	7	121	724	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 16:03:13
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	21589	4	Standard
>	**Sc**	**45**		ug/L			572689	648065	3	Standard
	Cr	**52**	**0.064**	ug/L	0.029	45	17437	20784	2	Standard
	Cr	**53**	**0.016**	ug/L	0.002	12	140	190	4	Standard
	Mn	**55**	**0.015**	ug/L	0.001	4	280	693	1	Standard
>	**Ge**	**72**		ug/L			33867	38995	0	KED
	Ni	**60**	**0.017**	ug/L	0.007	41	17	50	24	KED
	Ni	**62**	**0.034**	ug/L	0.022	65	4	14	41	KED
	Cu	**63**	**0.028**	ug/L	0.003	12	49	198	8	KED
	Cu	**65**	**0.026**	ug/L	0.003	10	10	80	8	KED
	Zn	**66**	**0.432**	ug/L	0.099	22	20	281	21	KED
	Zn	**67**	**0.382**	ug/L	0.095	24	6	46	20	KED
	As	**75**	**0.013**	ug/L	0.004	32	1	5	22	KED
	Se	**78**	**0.010**	ug/L	0.042	408	11	13	9	KED
	Kr	**83**		ug/L			43	51	3	Standard
>	**In-1**	**115**		ug/L			7349	8582	3	KED
	Cd	**111**	**0.004**	ug/L	0.009	246	3	5	47	KED
	Cd	**114**	**-0.006**	ug/L	0.001	21	6	2	36	KED
>	**In**	**115**		ug/L			429903	404031	1	Standard
	Ag	**107**	**0.003**	ug/L	0.001	37	25	71	25	Standard
	Sb	**121**	**0.089**	ug/L	0.006	6	233	1299	4	Standard
	Sb	**123**	**0.091**	ug/L	0.007	7	162	997	5	Standard
	Ba	**135**	**0.052**	ug/L	0.001	1	14	273	2	Standard
	Ba	**137**	**0.052**	ug/L	0.006	11	22	511	10	Standard
>	**Tb**	**159**		ug/L			185011	187989	1	Standard
	Pb	**208**	**0.008**	ug/L	0.000	5	121	684	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 16:09:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	19491	4	Standard
>	**Sc**	**45**		ug/L			572689	644788	5	Standard
	Cr	**52**	**48.513**	ug/L	0.718	1	17437	824266	4	Standard
	Cr	**53**	**48.375**	ug/L	1.031	2	140	93409	3	Standard
	Mn	**55**	**44.806**	ug/L	0.823	1	280	1138162	4	Standard
>	**Ge**	**72**		ug/L			33867	38738	0	KED
	Ni	**60**	**48.028**	ug/L	1.495	3	17	85431	3	KED
	Ni	**62**	**48.250**	ug/L	1.256	2	4	13607	2	KED
	Cu	**63**	**48.128**	ug/L	0.810	1	49	244758	1	KED
	Cu	**65**	**48.476**	ug/L	0.609	1	10	123552	1	KED
	Zn	**66**	**48.737**	ug/L	0.311	0	20	28798	0	KED
	Zn	**67**	**48.666**	ug/L	0.773	1	6	4859	1	KED
	As	**75**	**49.484**	ug/L	0.285	0	1	15267	0	KED
	Se	**78**	**50.075**	ug/L	0.904	1	11	1370	1	KED
	Kr	**83**		ug/L			43	50	9	Standard
>	**In-1**	**115**		ug/L			7349	8308	2	KED
	Cd	**111**	**46.323**	ug/L	1.118	2	3	13345	0	KED
	Cd	**114**	**47.675**	ug/L	1.563	3	6	35355	0	KED
>	**In**	**115**		ug/L			429903	409167	2	Standard
	Ag	**107**	**51.215**	ug/L	2.105	4	25	852040	1	Standard
	Sb	**121**	**47.425**	ug/L	1.273	2	233	585960	1	Standard
	Sb	**123**	**48.584**	ug/L	0.893	1	162	458097	1	Standard
	Ba	**135**	**49.387**	ug/L	0.954	1	14	247511	2	Standard
	Ba	**137**	**48.884**	ug/L	0.647	1	22	463811	4	Standard
>	**Tb**	**159**		ug/L			185011	179856	2	Standard
	Pb	**208**	**47.512**	ug/L	1.089	2	121	3005099	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 16:16:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18596	19721	8	Standard
⌈>	**Sc**	**45**		ug/L			572689	674240	0	Standard
|	**Cr**	**52**	**-0.004**	ug/L	0.055	1290	17437	20452	4	Standard
|	**Cr**	**53**	**0.006**	ug/L	0.007	121	140	177	7	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.001	293	280	335	4	Standard
⌈>	**Ge**	**72**		ug/L			33867	40769	1	KED
|	**Ni**	**60**	**-0.004**	ug/L	0.001	30	17	14	15	KED
|	**Ni**	**62**	**-0.001**	ug/L	0.007	820	4	5	43	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.000	28	49	50	4	KED
|	**Cu**	**65**	**0.002**	ug/L	0.004	155	10	19	53	KED
|	**Zn**	**66**	**0.008**	ug/L	0.008	94	20	30	16	KED
|	**Zn**	**67**	**-0.044**	ug/L	0.032	72	6	3	86	KED
|	**As**	**75**	**0.009**	ug/L	0.007	71	1	4	43	KED
⌊	**Se**	**78**	**0.132**	ug/L	0.154	116	11	17	23	KED
	Kr	**83**		ug/L			43	41	23	Standard
⌈>	**In-1**	**115**		ug/L			7349	8569	2	KED
|	**Cd**	**111**	**0.002**	ug/L	0.011	514	3	4	72	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.004	158	6	9	34	KED
⌈>	**In**	**115**		ug/L			429903	415220	3	Standard
|	**Ag**	**107**	**0.003**	ug/L	0.000	12	25	67	10	Standard
|	**Sb**	**121**	**0.089**	ug/L	0.006	6	233	1341	2	Standard
|	**Sb**	**123**	**0.094**	ug/L	0.008	8	162	1055	4	Standard
|	**Ba**	**135**	**-0.000**	ug/L	0.000	223	14	13	14	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	106	22	27	21	Standard
⌈>	**Tb**	**159**		ug/L			185011	189644	2	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	59	121	191	19	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 16:24:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				18600	1	Standard
⎡>	**Sc**	**45**		ug/L				666809	3	Standard
⎢	**Cr**	**52**		ug/L				20488	1	Standard
⎢	**Cr**	**53**		ug/L				165	8	Standard
⎣	**Mn**	**55**		ug/L				366	3	Standard
⎡>	**Ge**	**72**		ug/L				39632	1	KED
⎢	**Ni**	**60**		ug/L				20	59	KED
⎢	**Ni**	**62**		ug/L				5	100	KED
⎢	**Cu**	**63**		ug/L				52	52	KED
⎢	**Cu**	**65**		ug/L				33	28	KED
⎢	**Zn**	**66**		ug/L				27	33	KED
⎢	**Zn**	**67**		ug/L				4	65	KED
⎢	**As**	**75**		ug/L				4	10	KED
⎣	**Se**	**78**		ug/L				13	12	KED
	Kr	**83**		ug/L				57	14	Standard
⎡>	**In-1**	**115**		ug/L				8321	0	KED
⎢	**Cd**	**111**		ug/L				5	10	KED
⎣	**Cd**	**114**		ug/L				3	87	KED
⎡>	**In**	**115**		ug/L				411513	0	Standard
⎢	**Ag**	**107**		ug/L				48	2	Standard
⎢	**Sb**	**121**		ug/L				601	6	Standard
⎢	**Sb**	**123**		ug/L				476	9	Standard
⎢	**Ba**	**135**		ug/L				12	39	Standard
⎣	**Ba**	**137**		ug/L				19	5	Standard
⎡>	**Tb**	**159**		ug/L				183140	2	Standard
⎣	**Pb**	**208**		ug/L				177	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 16:29:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18600	18966	6	Standard
⌈>	**Sc**	**45**		ug/L			666809	656065	4	Standard
|	**Cr**	**52**	**48.877**	ug/L	1.036	2	20488	844821	2	Standard
|	**Cr**	**53**	**48.337**	ug/L	0.993	2	165	95033	4	Standard
⌊	**Mn**	**55**	**46.083**	ug/L	1.596	3	366	1190714	1	Standard
⌈>	**Ge**	**72**		ug/L			39632	38442	0	KED
|	**Ni**	**60**	**49.050**	ug/L	1.226	2	20	86579	2	KED
|	**Ni**	**62**	**49.317**	ug/L	0.615	1	5	13802	1	KED
|	**Cu**	**63**	**49.394**	ug/L	1.646	3	52	249277	3	KED
|	**Cu**	**65**	**49.169**	ug/L	0.542	1	33	124384	1	KED
|	**Zn**	**66**	**50.016**	ug/L	0.492	0	27	29330	0	KED
|	**Zn**	**67**	**48.393**	ug/L	1.363	2	4	4791	2	KED
|	**As**	**75**	**50.002**	ug/L	0.828	1	4	15312	1	KED
⌊	**Se**	**78**	**48.882**	ug/L	1.322	2	13	1327	2	KED
	Kr	**83**		ug/L			57	43	13	Standard
⌈>	**In-1**	**115**		ug/L			8321	8350	1	KED
|	**Cd**	**111**	**47.297**	ug/L	1.732	3	5	13695	2	KED
⌊	**Cd**	**114**	**46.951**	ug/L	0.902	1	3	35004	0	KED
⌈>	**In**	**115**		ug/L			411513	410483	1	Standard
|	**Ag**	**107**	**51.499**	ug/L	1.562	3	48	859887	1	Standard
|	**Sb**	**121**	**48.099**	ug/L	1.611	3	601	596649	1	Standard
|	**Sb**	**123**	**48.823**	ug/L	0.680	1	476	462224	0	Standard
|	**Ba**	**135**	**49.439**	ug/L	1.555	3	12	248550	1	Standard
⌊	**Ba**	**137**	**48.674**	ug/L	0.685	1	19	463144	0	Standard
⌈>	**Tb**	**159**		ug/L			183140	183699	4	Standard
⌊	**Pb**	**208**	**47.966**	ug/L	2.028	4	177	3096075	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 16:36:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18600	18429	7	Standard
⌈>	**Sc**	**45**		ug/L			666809	665445	2	Standard
|	**Cr**	**52**	**0.030**	ug/L	0.013	41	20488	20962	2	Standard
|	**Cr**	**53**	**-0.007**	ug/L	0.005	68	165	150	9	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.000	131	366	367	2	Standard
⌈>	**Ge**	**72**		ug/L			39632	38682	0	KED
|	**Ni**	**60**	**-0.002**	ug/L	0.002	110	20	17	22	KED
|	**Ni**	**62**	**-0.009**	ug/L	0.010	121	5	3	91	KED
|	**Cu**	**63**	**0.001**	ug/L	0.001	235	52	53	14	KED
|	**Cu**	**65**	**-0.002**	ug/L	0.004	218	33	27	40	KED
|	**Zn**	**66**	**0.001**	ug/L	0.003	295	27	27	7	KED
|	**Zn**	**67**	**-0.018**	ug/L	0.022	123	4	2	86	KED
|	**As**	**75**	**-0.002**	ug/L	0.001	59	4	4	6	KED
⌊	**Se**	**78**	**0.147**	ug/L	0.075	51	13	17	11	KED
	Kr	**83**		ug/L			57	53	14	Standard
⌈>	**In-1**	**115**		ug/L			8321	8640	1	KED
|	**Cd**	**111**	**-0.006**	ug/L	0.018	304	5	3	150	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.004	187	3	5	59	KED
⌈>	**In**	**115**		ug/L			411513	422776	2	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.001	233	48	55	22	Standard
|	**Sb**	**121**	**0.044**	ug/L	0.006	12	601	1178	4	Standard
|	**Sb**	**123**	**0.038**	ug/L	0.004	11	476	860	4	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.002	192	12	16	48	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	125	19	27	34	Standard
⌈>	**Tb**	**159**		ug/L			183140	189917	2	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	79	177	206	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0572-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 16:42:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18600	30895	3	Standard
>	Sc	45		ug/L			666809	675760	2	Standard
	Cr	52	0.136	ug/L	0.013	9	20488	23130	1	Standard
	Cr	53	0.070	ug/L	0.010	14	165	307	4	Standard
	Mn	55	0.054	ug/L	0.005	8	366	1810	8	Standard
>	Ge	72		ug/L			39632	40713	1	KED
	Ni	60	0.012	ug/L	0.005	38	20	43	19	KED
	Ni	62	-0.003	ug/L	0.008	289	5	5	43	KED
	Cu	63	0.035	ug/L	0.009	25	52	239	19	KED
	Cu	65	0.025	ug/L	0.002	7	33	99	6	KED
	Zn	66	0.700	ug/L	0.078	11	27	462	9	KED
	Zn	67	0.610	ug/L	0.095	15	4	68	15	KED
	As	75	-0.006	ug/L	0.003	53	4	3	32	KED
	Se	78	-0.047	ug/L	0.073	155	13	12	15	KED
	Kr	83		ug/L			57	49	23	Standard
>	In-1	115		ug/L			8321	8665	1	KED
	Cd	111	-0.003	ug/L	0.008	271	5	4	53	KED
	Cd	114	0.001	ug/L	0.003	516	3	4	55	KED
>	In	115		ug/L			411513	428612	1	Standard
	Ag	107	0.000	ug/L	0.001	448	48	54	30	Standard
	Sb	121	0.004	ug/L	0.003	64	601	683	3	Standard
	Sb	123	0.003	ug/L	0.005	167	476	525	10	Standard
	Ba	135	0.096	ug/L	0.006	5	12	514	4	Standard
	Ba	137	0.090	ug/L	0.003	3	19	918	4	Standard
>	Tb	159		ug/L			183140	189629	2	Standard
	Pb	208	0.007	ug/L	0.001	14	177	680	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0572-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 16:47:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18600	31180	6	Standard
>	Sc	45		ug/L			666809	662615	2	Standard
	Cr	52	23.820	ug/L	0.771	3	20488	426696	5	Standard
	Cr	53	23.597	ug/L	0.572	2	165	46942	3	Standard
	Mn	55	22.239	ug/L	0.665	2	366	581167	4	Standard
>	Ge	72		ug/L			39632	39545	1	KED
	Ni	60	23.329	ug/L	0.969	4	20	42361	3	KED
	Ni	62	23.907	ug/L	0.694	2	5	6883	1	KED
	Cu	63	23.189	ug/L	0.826	3	52	120366	2	KED
	Cu	65	23.994	ug/L	0.276	1	33	62447	1	KED
	Zn	66	75.975	ug/L	1.898	2	27	45805	1	KED
	Zn	67	72.677	ug/L	1.042	1	4	7400	0	KED
	As	75	23.669	ug/L	0.045	0	4	7458	1	KED
	Se	78	75.693	ug/L	0.888	1	13	2108	2	KED
	Kr	83		ug/L			57	61	6	Standard
>	In-1	115		ug/L			8321	8197	0	KED
	Cd	111	23.844	ug/L	0.435	1	5	6782	1	KED
	Cd	114	23.694	ug/L	0.321	1	3	17347	1	KED
>	In	115		ug/L			411513	402028	2	Standard
	Ag	107	25.502	ug/L	0.515	2	48	417219	2	Standard
	Sb	121	-0.023	ug/L	0.004	16	601	308	16	Standard
	Sb	123	-0.023	ug/L	0.001	3	476	255	1	Standard
	Ba	135	24.084	ug/L	0.841	3	12	118646	4	Standard
	Ba	137	24.055	ug/L	1.705	7	19	223996	5	Standard
>	Tb	159		ug/L			183140	187791	1	Standard
	Pb	208	22.600	ug/L	0.268	1	177	1493002	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0617-02
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 19, 2023 16:56:42
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18600	25263	1	Standard
>	Sc	45		ug/L			666809	605693	5	Standard
	Cr	52	0.784	ug/L	0.010	1	20488	30832	5	Standard
	Cr	53	0.682	ug/L	0.042	6	165	1384	3	Standard
	Mn	55	0.273	ug/L	0.011	4	366	6834	3	Standard
>	Ge	72		ug/L			39632	35336	1	KED
	Ni	60	0.755	ug/L	0.043	5	20	1243	4	KED
	Ni	62	0.750	ug/L	0.074	9	5	198	9	KED
	Cu	63	1.210	ug/L	0.027	2	52	5658	0	KED
	Cu	65	1.235	ug/L	0.053	4	33	2899	3	KED
	Zn	66	0.563	ug/L	0.090	16	27	328	15	KED
	Zn	67	2.849	ug/L	0.327	11	4	262	10	KED
	As	75	0.556	ug/L	0.041	7	4	160	7	KED
	Se	78	0.739	ug/L	0.070	9	13	30	4	KED
	Kr	83		ug/L			57	48	12	Standard
>	In-1	115		ug/L			8321	7726	2	KED
	Cd	111	0.012	ug/L	0.015	126	5	7	49	KED
	Cd	114	0.012	ug/L	0.003	25	3	11	18	KED
>	In	115		ug/L			411513	355501	1	Standard
	Ag	107	-0.000	ug/L	0.001	544	48	40	29	Standard
	Sb	121	2.684	ug/L	0.051	1	601	29331	0	Standard
	Sb	123	2.747	ug/L	0.087	3	476	22906	2	Standard
	Ba	135	25.507	ug/L	0.337	1	12	111090	0	Standard
	Ba	137	24.371	ug/L	0.948	3	19	200825	3	Standard
>	Tb	159		ug/L			183140	157268	2	Standard
	Pb	208	10.028	ug/L	0.175	1	177	554802	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0617-04
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 19, 2023 17:01:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18600	24325	4	Standard
>	Sc	45		ug/L			666809	600024	2	Standard
	Cr	52	0.755	ug/L	0.005	0	20488	30091	3	Standard
	Cr	53	0.641	ug/L	0.026	4	165	1299	6	Standard
	Mn	55	0.648	ug/L	0.002	0	366	15657	2	Standard
>	Ge	72		ug/L			39632	34618	2	KED
	Ni	60	0.675	ug/L	0.036	5	20	1090	4	KED
	Ni	62	0.694	ug/L	0.066	9	5	179	7	KED
	Cu	63	0.886	ug/L	0.044	4	52	4067	3	KED
	Cu	65	0.877	ug/L	0.033	3	33	2024	1	KED
	Zn	66	0.516	ug/L	0.025	4	27	296	3	KED
	Zn	67	1.631	ug/L	0.072	4	4	149	5	KED
	As	75	5.087	ug/L	0.158	3	4	1405	1	KED
	Se	78	0.607	ug/L	0.080	13	13	26	6	KED
	Kr	83		ug/L			57	48	22	Standard
>	In-1	115		ug/L			8321	7325	2	KED
	Cd	111	0.026	ug/L	0.009	35	5	11	19	KED
	Cd	114	0.005	ug/L	0.004	83	3	6	44	KED
>	In	115		ug/L			411513	339317	0	Standard
	Ag	107	0.001	ug/L	0.000	37	48	55	10	Standard
	Sb	121	2.832	ug/L	0.042	1	601	29521	2	Standard
	Sb	123	2.835	ug/L	0.053	1	476	22556	1	Standard
	Ba	135	14.337	ug/L	0.246	1	12	59614	2	Standard
	Ba	137	14.234	ug/L	0.068	0	19	111989	1	Standard
>	Tb	159		ug/L			183140	158000	1	Standard
	Pb	208	0.299	ug/L	0.003	0	177	16790	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0617-06
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 19, 2023 17:06:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18600	25514	4	Standard
⌈>	Sc	45		ug/L			666809	618210	3	Standard
|	Cr	52	0.467	ug/L	0.030	6	20488	26422	4	Standard
|	Cr	53	0.371	ug/L	0.018	4	165	838	5	Standard
⌊	Mn	55	0.414	ug/L	0.010	2	366	10435	5	Standard
⌈>	Ge	72		ug/L			39632	34790	1	KED
|	Ni	60	0.458	ug/L	0.027	5	20	749	6	KED
|	Ni	62	0.429	ug/L	0.020	4	5	113	3	KED
|	Cu	63	0.444	ug/L	0.018	4	52	2070	3	KED
|	Cu	65	0.455	ug/L	0.009	2	33	1069	1	KED
|	Zn	66	0.475	ug/L	0.023	4	27	276	3	KED
|	Zn	67	0.836	ug/L	0.048	5	4	78	5	KED
|	As	75	0.428	ug/L	0.020	4	4	122	4	KED
⌊	Se	78	0.596	ug/L	0.227	37	13	26	19	KED
	Kr	83		ug/L			57	59	25	Standard
⌈>	In-1	115		ug/L			8321	7733	2	KED
|	Cd	111	-0.001	ug/L	0.011	896	5	4	68	KED
⌊	Cd	114	0.002	ug/L	0.003	192	3	4	51	KED
⌈>	In	115		ug/L			411513	351080	4	Standard
|	Ag	107	-0.000	ug/L	0.001	180	48	37	17	Standard
|	Sb	121	1.088	ug/L	0.050	4	601	12031	0	Standard
|	Sb	123	1.130	ug/L	0.062	5	476	9535	1	Standard
|	Ba	135	4.865	ug/L	0.022	0	12	20937	5	Standard
⌊	Ba	137	4.777	ug/L	0.244	5	19	38835	1	Standard
⌈>	Tb	159		ug/L			183140	160313	2	Standard
⌊	Pb	208	0.130	ug/L	0.004	2	177	7508	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0617-01
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 19, 2023 17:11:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18600	25510	3	Standard
>	Sc	45		ug/L			666809	620412	2	Standard
	Cr	52	0.761	ug/L	0.018	2	20488	31203	1	Standard
	Cr	53	0.711	ug/L	0.005	0	165	1473	2	Standard
	Mn	55	3.119	ug/L	0.035	1	366	76583	1	Standard
>	Ge	72		ug/L			39632	34370	3	KED
	Ni	60	1.030	ug/L	0.072	7	20	1640	3	KED
	Ni	62	1.028	ug/L	0.119	11	5	261	9	KED
	Cu	63	2.764	ug/L	0.108	3	52	12502	0	KED
	Cu	65	2.838	ug/L	0.049	1	33	6447	5	KED
	Zn	66	2.106	ug/L	0.075	3	27	1127	3	KED
	Zn	67	5.110	ug/L	0.279	5	4	455	1	KED
	As	75	5.783	ug/L	0.167	2	4	1586	0	KED
	Se	78	0.664	ug/L	0.231	34	13	27	21	KED
	Kr	83		ug/L			57	52	19	Standard
>	In-1	115		ug/L			8321	7583	3	KED
	Cd	111	0.012	ug/L	0.012	94	5	7	42	KED
	Cd	114	0.014	ug/L	0.007	47	3	12	38	KED
>	In	115		ug/L			411513	338142	2	Standard
	Ag	107	0.003	ug/L	0.000	9	48	80	5	Standard
	Sb	121	2.884	ug/L	0.134	4	601	29918	1	Standard
	Sb	123	2.930	ug/L	0.086	2	476	23213	0	Standard
	Ba	135	32.532	ug/L	1.709	5	12	134651	2	Standard
	Ba	137	31.474	ug/L	1.485	4	19	246524	1	Standard
>	Tb	159		ug/L			183140	158851	0	Standard
	Pb	208	17.778	ug/L	0.174	0	177	993564	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0617-03
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 19, 2023 17:15:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18600	25843	1	Standard
>	Sc	45		ug/L			666809	632415	1	Standard
	Cr	52	0.698	ug/L	0.054	7	20488	30786	3	Standard
	Cr	53	0.649	ug/L	0.020	3	165	1385	4	Standard
	Mn	55	1.219	ug/L	0.022	1	366	30728	2	Standard
>	Ge	72		ug/L			39632	35582	2	KED
	Ni	60	0.840	ug/L	0.013	1	20	1391	2	KED
	Ni	62	0.870	ug/L	0.048	5	5	230	7	KED
	Cu	63	1.383	ug/L	0.066	4	52	6500	2	KED
	Cu	65	1.405	ug/L	0.045	3	33	3316	1	KED
	Zn	66	1.101	ug/L	0.096	8	27	621	6	KED
	Zn	67	2.978	ug/L	0.140	4	4	276	6	KED
	As	75	5.290	ug/L	0.132	2	4	1503	4	KED
	Se	78	0.514	ug/L	0.058	11	13	24	7	KED
	Kr	83		ug/L			57	56	25	Standard
>	In-1	115		ug/L			8321	7744	1	KED
	Cd	111	0.015	ug/L	0.004	25	5	8	12	KED
	Cd	114	0.007	ug/L	0.006	92	3	7	53	KED
>	In	115		ug/L			411513	351738	2	Standard
	Ag	107	0.002	ug/L	0.001	35	48	66	14	Standard
	Sb	121	2.812	ug/L	0.016	0	601	30385	2	Standard
	Sb	123	2.828	ug/L	0.053	1	476	23333	4	Standard
	Ba	135	22.375	ug/L	1.140	5	12	96350	2	Standard
	Ba	137	22.335	ug/L	0.599	2	19	182055	0	Standard
>	Tb	159		ug/L			183140	166197	2	Standard
	Pb	208	9.479	ug/L	0.286	3	177	554086	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0617-05
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 19, 2023 17:20:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			18600	25441	4	Standard
>	Sc	45		ug/L			666809	632545	2	Standard
	Cr	52	0.483	ug/L	0.050	10	20488	27286	2	Standard
	Cr	53	0.428	ug/L	0.020	4	165	965	2	Standard
	Mn	55	0.930	ug/L	0.004	0	366	23535	2	Standard
>	Ge	72		ug/L			39632	36235	1	KED
	Ni	60	0.583	ug/L	0.013	2	20	989	2	KED
	Ni	62	0.545	ug/L	0.103	18	5	149	19	KED
	Cu	63	0.736	ug/L	0.017	2	52	3549	2	KED
	Cu	65	0.753	ug/L	0.008	1	33	1826	0	KED
	Zn	66	0.746	ug/L	0.045	6	27	437	6	KED
	Zn	67	1.775	ug/L	0.240	13	4	169	12	KED
	As	75	0.579	ug/L	0.021	3	4	171	2	KED
	Se	78	0.577	ug/L	0.069	12	13	26	6	KED
	Kr	83		ug/L			57	66	14	Standard
>	In-1	115		ug/L			8321	7354	12	KED
	Cd	111	0.022	ug/L	0.006	24	5	10	19	KED
	Cd	114	0.003	ug/L	0.007	243	3	5	94	KED
>	In	115		ug/L			411513	358033	0	Standard
	Ag	107	0.001	ug/L	0.001	209	48	52	40	Standard
	Sb	121	1.066	ug/L	0.007	0	601	12050	0	Standard
	Sb	123	1.056	ug/L	0.011	1	476	9125	0	Standard
	Ba	135	10.615	ug/L	0.137	1	12	46572	1	Standard
	Ba	137	10.245	ug/L	0.258	2	19	85045	1	Standard
>	Tb	159		ug/L			183140	162165	4	Standard
	Pb	208	6.013	ug/L	0.261	4	177	342707	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0171-08
Sample Dil Factor: 10
Comments:
Sample Date/Time: Friday, May 19, 2023 17:27:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18600	21578	3	Standard
⌈>	**Sc**	**45**		ug/L			666809	719011	3	Standard
|	**Cr**	**52**	**0.951**	ug/L	0.016	1	20488	39681	3	Standard
|	**Cr**	**53**	**1.201**	ug/L	0.007	0	165	2760	2	Standard
⌊	**Mn**	**55**	**225.953**	ug/L	2.408	1	366	6401455	2	Standard
⌈>	**Ge**	**72**		ug/L			39632	41351	1	KED
|	**Ni**	**60**	**5.002**	ug/L	0.088	1	20	9514	0	KED
|	**Ni**	**62**	**5.181**	ug/L	0.332	6	5	1563	4	KED
|	**Cu**	**63**	**1.186**	ug/L	0.016	1	52	6490	0	KED
|	**Cu**	**65**	**1.204**	ug/L	0.056	4	33	3307	3	KED
|	**Zn**	**66**	**4.396**	ug/L	0.041	0	27	2799	1	KED
|	**Zn**	**67**	**6.836**	ug/L	0.023	0	4	732	1	KED
|	**As**	**75**	**0.446**	ug/L	0.025	5	4	151	5	KED
⌊	**Se**	**78**	**0.448**	ug/L	0.084	18	13	27	8	KED
	Kr	**83**		ug/L			57	81	12	Standard
⌈>	**In-1**	**115**		ug/L			8321	9251	3	KED
|	**Cd**	**111**	**0.009**	ug/L	0.011	119	5	8	38	KED
⌊	**Cd**	**114**	**0.016**	ug/L	0.004	24	3	17	22	KED
⌈>	**In**	**115**		ug/L			411513	422596	1	Standard
|	**Ag**	**107**	**0.007**	ug/L	0.001	9	48	170	7	Standard
|	**Sb**	**121**	**-0.015**	ug/L	0.003	20	601	426	8	Standard
|	**Sb**	**123**	**-0.018**	ug/L	0.003	17	476	318	9	Standard
|	**Ba**	**135**	**30.544**	ug/L	0.677	2	12	158145	2	Standard
⌊	**Ba**	**137**	**30.079**	ug/L	1.076	3	19	294717	3	Standard
⌈>	**Tb**	**159**		ug/L			183140	190559	1	Standard
⌊	**Pb**	**208**	**0.313**	ug/L	0.001	0	177	21160	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 17:32:28
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18600	19387	1	Standard
⌈>	**Sc**	**45**		ug/L			666809	672297	3	Standard
|	**Cr**	**52**	**0.060**	ug/L	0.014	24	20488	21681	2	Standard
|	**Cr**	**53**	**-0.008**	ug/L	0.006	73	165	150	11	Standard
⌊	**Mn**	**55**	**0.003**	ug/L	0.001	26	366	458	8	Standard
⌈>	**Ge**	**72**		ug/L			39632	41635	1	KED
|	**Ni**	**60**	**-0.002**	ug/L	0.003	150	20	17	34	KED
|	**Ni**	**62**	**0.001**	ug/L	0.027	2074	5	6	124	KED
|	**Cu**	**63**	**0.000**	ug/L	0.001	355	52	56	10	KED
|	**Cu**	**65**	**-0.004**	ug/L	0.002	56	33	22	30	KED
|	**Zn**	**66**	**0.020**	ug/L	0.012	62	27	41	19	KED
|	**Zn**	**67**	**0.022**	ug/L	0.021	95	4	6	31	KED
|	**As**	**75**	**-0.005**	ug/L	0.005	98	4	3	49	KED
⌊	**Se**	**78**	**-0.002**	ug/L	0.087	4391	13	14	18	KED
	Kr	**83**		ug/L			57	41	20	Standard
⌈>	**In-1**	**115**		ug/L			8321	8739	1	KED
|	**Cd**	**111**	**-0.004**	ug/L	0.002	40	5	4	13	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.004	1827	3	3	88	KED
⌈>	**In**	**115**		ug/L			411513	420896	2	Standard
|	**Ag**	**107**	**-0.001**	ug/L	0.001	43	48	26	36	Standard
|	**Sb**	**121**	**-0.042**	ug/L	0.002	3	601	80	23	Standard
|	**Sb**	**123**	**-0.044**	ug/L	0.000	0	476	64	7	Standard
|	**Ba**	**135**	**0.003**	ug/L	0.002	50	12	30	31	Standard
⌊	**Ba**	**137**	**0.002**	ug/L	0.001	58	19	36	27	Standard
⌈>	**Tb**	**159**		ug/L			183140	184649	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	10	177	236	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 17:37:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18600	19751	4	Standard
>	**Sc**	**45**		ug/L			666809	685790	3	Standard
	Cr	**52**	**47.934**	ug/L	1.221	2	20488	866564	1	Standard
	Cr	**53**	**48.139**	ug/L	0.604	1	165	98937	3	Standard
	Mn	**55**	**46.546**	ug/L	0.444	0	366	1258154	2	Standard
>	**Ge**	**72**		ug/L			39632	40721	1	KED
	Ni	**60**	**45.802**	ug/L	1.293	2	20	85628	1	KED
	Ni	**62**	**47.048**	ug/L	1.195	2	5	13945	1	KED
	Cu	**63**	**46.330**	ug/L	0.773	1	52	247647	1	KED
	Cu	**65**	**47.964**	ug/L	1.990	4	33	128479	2	KED
	Zn	**66**	**49.537**	ug/L	1.019	2	27	30767	0	KED
	Zn	**67**	**48.691**	ug/L	1.556	3	4	5107	3	KED
	As	**75**	**49.136**	ug/L	0.547	1	4	15938	0	KED
	Se	**78**	**49.785**	ug/L	0.714	1	13	1432	0	KED
	Kr	**83**		ug/L			57	48	26	Standard
>	**In-1**	**115**		ug/L			8321	8567	2	KED
	Cd	**111**	**48.217**	ug/L	1.888	3	5	14322	2	KED
	Cd	**114**	**48.827**	ug/L	1.905	3	3	37345	3	KED
>	**In**	**115**		ug/L			411513	411859	0	Standard
	Ag	**107**	**53.514**	ug/L	1.268	2	48	896831	2	Standard
	Sb	**121**	**49.390**	ug/L	1.442	2	601	614978	3	Standard
	Sb	**123**	**49.659**	ug/L	0.711	1	476	471789	1	Standard
	Ba	**135**	**47.685**	ug/L	0.089	0	12	240624	0	Standard
	Ba	**137**	**48.291**	ug/L	1.035	2	19	461133	2	Standard
>	**Tb**	**159**		ug/L			183140	185564	1	Standard
	Pb	**208**	**47.300**	ug/L	1.315	2	177	3086676	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 17:44:49
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			18600	19139	3	Standard
⌈>	**Sc**	**45**		ug/L			666809	692114	3	Standard
|	**Cr**	**52**	**-0.003**	ug/L	0.044	1395	20488	21203	4	Standard
|	**Cr**	**53**	**-0.012**	ug/L	0.010	82	165	146	11	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.002	208	366	406	16	Standard
⌈>	**Ge**	**72**		ug/L			39632	42943	1	KED
|	**Ni**	**60**	**0.003**	ug/L	0.002	88	20	27	17	KED
|	**Ni**	**62**	**0.006**	ug/L	0.018	284	5	8	70	KED
|	**Cu**	**63**	**0.003**	ug/L	0.005	143	52	74	35	KED
|	**Cu**	**65**	**0.001**	ug/L	0.001	76	33	40	9	KED
|	**Zn**	**66**	**0.002**	ug/L	0.012	582	27	31	27	KED
|	**Zn**	**67**	**0.020**	ug/L	0.037	185	4	6	56	KED
|	**As**	**75**	**0.000**	ug/L	0.005	2621	4	5	32	KED
⌊	**Se**	**78**	**0.016**	ug/L	0.020	128	13	15	2	KED
	Kr	**83**		ug/L			57	60	8	Standard
⌈>	**In-1**	**115**		ug/L			8321	9261	0	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.010	1241	5	5	56	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.005	251	3	5	67	KED
⌈>	**In**	**115**		ug/L			411513	424207	1	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.000	97	48	53	7	Standard
|	**Sb**	**121**	**0.022**	ug/L	0.001	4	601	903	1	Standard
|	**Sb**	**123**	**0.023**	ug/L	0.004	17	476	713	5	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.001	73	12	17	19	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.000	20	19	26	4	Standard
⌈>	**Tb**	**159**		ug/L			183140	191658	2	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	86	177	159	15	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 17:52:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				19019	1	Standard
⌈>	**Sc**	**45**		ug/L				699560	2	Standard
|	**Cr**	**52**		ug/L				21056	1	Standard
|	**Cr**	**53**		ug/L				160	8	Standard
⌊	**Mn**	**55**		ug/L				394	4	Standard
⌈>	**Ge**	**72**		ug/L				43630	0	KED
|	**Ni**	**60**		ug/L				50	11	KED
|	**Ni**	**62**		ug/L				6	83	KED
|	**Cu**	**63**		ug/L				60	21	KED
|	**Cu**	**65**		ug/L				36	32	KED
|	**Zn**	**66**		ug/L				66	20	KED
|	**Zn**	**67**		ug/L				11	28	KED
|	**As**	**75**		ug/L				3	30	KED
⌊	**Se**	**78**		ug/L				13	21	KED
	Kr	**83**		ug/L				49	21	Standard
⌈>	**In-1**	**115**		ug/L				9463	0	KED
|	**Cd**	**111**		ug/L				3	41	KED
⌊	**Cd**	**114**		ug/L				1	112	KED
⌈>	**In**	**115**		ug/L				431494	1	Standard
|	**Ag**	**107**		ug/L				47	10	Standard
|	**Ba**	**135**		ug/L				56	11	Standard
⌊	**Ba**	**137**		ug/L				82	18	Standard
⌈>	**Tb**	**159**		ug/L				190968	0	Standard
⌊	**Pb**	**208**		ug/L				196	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 17:57:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	19295	4	Standard
⌈>	**Sc**	**45**		ug/L			699560	684515	2	Standard
|	**Cr**	**52**	**48.946**	ug/L	0.876	1	21056	882647	2	Standard
|	**Cr**	**53**	**48.920**	ug/L	0.277	0	160	100339	2	Standard
⌊	**Mn**	**55**	**47.148**	ug/L	0.557	1	394	1272253	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	41204	2	KED
|	**Ni**	**60**	**48.618**	ug/L	0.760	1	50	91994	0	KED
|	**Ni**	**62**	**48.099**	ug/L	1.393	2	6	14426	2	KED
|	**Cu**	**63**	**47.727**	ug/L	1.268	2	60	258072	0	KED
|	**Cu**	**65**	**48.518**	ug/L	1.651	3	36	131488	1	KED
|	**Zn**	**66**	**49.637**	ug/L	1.171	2	66	31225	1	KED
|	**Zn**	**67**	**48.701**	ug/L	1.543	3	11	5174	2	KED
|	**As**	**75**	**49.733**	ug/L	1.327	2	3	16317	1	KED
⌊	**Se**	**78**	**50.524**	ug/L	0.781	1	13	1469	3	KED
	Kr	**83**		ug/L			49	54	13	Standard
⌈>	**In-1**	**115**		ug/L			9463	8963	2	KED
|	**Cd**	**111**	**47.238**	ug/L	0.887	1	3	14682	0	KED
⌊	**Cd**	**114**	**48.261**	ug/L	0.628	1	1	38620	1	KED
⌈>	**In**	**115**		ug/L			431494	421848	1	Standard
|	**Ag**	**107**	**52.230**	ug/L	0.581	1	47	896463	1	Standard
|	**Ba**	**135**	**47.593**	ug/L	0.984	2	56	245988	1	Standard
⌊	**Ba**	**137**	**47.636**	ug/L	0.643	1	82	465910	1	Standard
⌈>	**Tb**	**159**		ug/L			190968	189782	2	Standard
⌊	**Pb**	**208**	**47.038**	ug/L	0.637	1	196	3139984	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 18:05:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	18753	3	Standard
⌈>	**Sc**	**45**		ug/L			699560	699900	4	Standard
|	**Cr**	**52**	**0.037**	ug/L	0.052	140	21056	21703	1	Standard
|	**Cr**	**53**	**-0.001**	ug/L	0.006	468	160	156	4	Standard
⌊	**Mn**	**55**	**-0.001**	ug/L	0.001	94	394	361	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	41945	1	KED
|	**Ni**	**60**	**-0.013**	ug/L	0.003	26	50	24	27	KED
|	**Ni**	**62**	**0.005**	ug/L	0.018	362	6	8	66	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.001	131	60	52	14	KED
|	**Cu**	**65**	**-0.004**	ug/L	0.001	34	36	24	15	KED
|	**Zn**	**66**	**-0.037**	ug/L	0.003	7	66	40	4	KED
|	**Zn**	**67**	**-0.043**	ug/L	0.021	48	11	6	34	KED
|	**As**	**75**	**0.012**	ug/L	0.004	37	3	7	19	KED
⌊	**Se**	**78**	**0.062**	ug/L	0.188	304	13	14	37	KED
	Kr	**83**		ug/L			49	41	27	Standard
⌈>	**In-1**	**115**		ug/L			9463	9142	1	KED
|	**Cd**	**111**	**0.003**	ug/L	0.005	138	3	4	32	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.001	22	1	6	16	KED
⌈>	**In**	**115**		ug/L			431494	434455	0	Standard
|	**Ag**	**107**	**0.008**	ug/L	0.002	19	47	189	14	Standard
|	**Ba**	**135**	**-0.007**	ug/L	0.002	28	56	22	43	Standard
⌊	**Ba**	**137**	**-0.005**	ug/L	0.001	18	82	34	24	Standard
⌈>	**Tb**	**159**		ug/L			190968	190634	0	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	281	196	201	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0306-BLK1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 18:13:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	26044	5	Standard
>	Sc	45		ug/L			699560	720854	2	Standard
	Cr	52	0.041	ug/L	0.015	37	21056	22462	3	Standard
	Cr	53	0.002	ug/L	0.009	353	160	170	13	Standard
	Mn	55	0.007	ug/L	0.000	4	394	594	3	Standard
>	Ge	72		ug/L			43630	42611	0	KED
	Ni	60	-0.010	ug/L	0.004	39	50	29	26	KED
	Ni	62	0.011	ug/L	0.015	143	6	10	47	KED
	Cu	63	0.005	ug/L	0.001	23	60	87	7	KED
	Cu	65	0.002	ug/L	0.002	90	36	41	11	KED
	Zn	66	0.064	ug/L	0.017	26	66	106	10	KED
	Zn	67	0.066	ug/L	0.061	91	11	18	36	KED
	As	75	-0.000	ug/L	0.007	4005	3	3	66	KED
	Se	78	0.235	ug/L	0.097	41	13	20	14	KED
	Kr	83		ug/L			49	48	18	Standard
>	In-1	115		ug/L			9463	9400	3	KED
	Cd	111	0.013	ug/L	0.015	121	3	7	66	KED
	Cd	114	0.002	ug/L	0.002	95	1	3	52	KED
>	In	115		ug/L			431494	439072	0	Standard
	Ag	107	0.003	ug/L	0.000	15	47	95	6	Standard
	Ba	135	-0.007	ug/L	0.002	25	56	19	50	Standard
	Ba	137	-0.003	ug/L	0.001	35	82	52	22	Standard
>	Tb	159		ug/L			190968	195662	2	Standard
	Pb	208	0.001	ug/L	0.000	30	196	248	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0306-BS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 18:18:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	25739	2	Standard
>	Sc	45		ug/L			699560	745220	2	Standard
	Cr	52	25.277	ug/L	0.500	1	21056	507056	2	Standard
	Cr	53	24.962	ug/L	0.514	2	160	55818	2	Standard
	Mn	55	23.689	ug/L	0.394	1	394	696280	4	Standard
>	Ge	72		ug/L			43630	41465	1	KED
	Ni	60	24.248	ug/L	1.089	4	50	46231	6	KED
	Ni	62	24.150	ug/L	0.907	3	6	7296	5	KED
	Cu	63	24.878	ug/L	0.294	1	60	135465	2	KED
	Cu	65	24.795	ug/L	0.681	2	36	67696	4	KED
	Zn	66	76.506	ug/L	1.225	1	66	48419	3	KED
	Zn	67	69.604	ug/L	2.005	2	11	7441	4	KED
	As	75	23.545	ug/L	0.280	1	3	7779	2	KED
	Se	78	75.323	ug/L	2.366	3	13	2198	3	KED
	Kr	83		ug/L			49	59	29	Standard
>	In-1	115		ug/L			9463	9206	0	KED
	Cd	111	24.071	ug/L	0.261	1	3	7688	1	KED
	Cd	114	23.355	ug/L	0.132	0	1	19201	1	KED
>	In	115		ug/L			431494	453581	1	Standard
	Ag	107	27.326	ug/L	0.571	2	47	504273	0	Standard
	Ba	135	24.906	ug/L	1.185	4	56	138393	3	Standard
	Ba	137	25.174	ug/L	1.516	6	82	264650	4	Standard
>	Tb	159		ug/L			190968	200894	1	Standard
	Pb	208	24.246	ug/L	0.869	3	196	1713138	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0442-BLK1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 18:22:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	34548	2	Standard
>	Sc	45		ug/L			699560	739019	2	Standard
	Cr	52	0.082	ug/L	0.013	15	21056	23811	3	Standard
	Cr	53	0.019	ug/L	0.005	28	160	211	8	Standard
	Mn	55	0.041	ug/L	0.004	9	394	1624	9	Standard
>	Ge	72		ug/L			43630	44029	1	KED
	Ni	60	-0.004	ug/L	0.002	55	50	42	11	KED
	Ni	62	-0.000	ug/L	0.003	1629	6	6	15	KED
	Cu	63	0.057	ug/L	0.009	15	60	389	11	KED
	Cu	65	0.049	ug/L	0.005	10	36	179	7	KED
	Zn	66	0.836	ug/L	0.035	4	66	627	4	KED
	Zn	67	0.700	ug/L	0.059	8	11	90	6	KED
	As	75	0.004	ug/L	0.005	140	3	5	32	KED
	Se	78	0.103	ug/L	0.063	61	13	16	9	KED
	Kr	83		ug/L			49	63	21	Standard
>	In-1	115		ug/L			9463	9545	3	KED
	Cd	111	0.019	ug/L	0.021	109	3	9	70	KED
	Cd	114	0.010	ug/L	0.008	85	1	9	68	KED
>	In	115		ug/L			431494	451521	2	Standard
	Ag	107	0.008	ug/L	0.001	11	47	193	7	Standard
	Ba	135	0.012	ug/L	0.003	28	56	125	15	Standard
	Ba	137	0.014	ug/L	0.002	14	82	229	10	Standard
>	Tb	159		ug/L			190968	202149	1	Standard
	Pb	208	0.012	ug/L	0.001	9	196	1038	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0442-BS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 18:27:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	33692	6	Standard
>	Sc	45		ug/L			699560	720038	4	Standard
	Cr	52	25.493	ug/L	0.748	2	21056	493631	3	Standard
	Cr	53	25.016	ug/L	0.492	1	160	54022	3	Standard
	Mn	55	24.226	ug/L	0.394	1	394	687605	4	Standard
>	Ge	72		ug/L			43630	42657	2	KED
	Ni	60	24.835	ug/L	1.378	5	50	48656	4	KED
	Ni	62	24.631	ug/L	0.901	3	6	7654	5	KED
	Cu	63	25.137	ug/L	0.258	1	60	140776	1	KED
	Cu	65	25.750	ug/L	0.579	2	36	72273	0	KED
	Zn	66	79.651	ug/L	2.101	2	66	51831	1	KED
	Zn	67	72.987	ug/L	2.745	3	11	8020	2	KED
	As	75	23.757	ug/L	0.370	1	3	8072	1	KED
	Se	78	77.361	ug/L	0.286	0	13	2322	2	KED
	Kr	83		ug/L			49	67	21	Standard
>	In-1	115		ug/L			9463	9174	4	KED
	Cd	111	23.750	ug/L	1.281	5	3	7548	1	KED
	Cd	114	23.657	ug/L	0.242	1	1	19378	3	KED
>	In	115		ug/L			431494	444567	4	Standard
	Ag	107	27.106	ug/L	1.036	3	47	489848	1	Standard
	Ba	135	25.011	ug/L	1.252	5	56	136099	2	Standard
	Ba	137	24.871	ug/L	1.118	4	82	256102	1	Standard
>	Tb	159		ug/L			190968	194312	2	Standard
	Pb	208	24.907	ug/L	0.595	2	196	1702247	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0207-10
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 18:32:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	31830	3	Standard
⌈>	Sc	45		ug/L			699560	775453	3	Standard
|	Cr	52	16.429	ug/L	0.379	2	21056	351089	2	Standard
|	Cr	53	16.171	ug/L	0.066	0	160	37697	3	Standard
⌊	Mn	55	174.742	ug/L	3.054	1	394	5340429	3	Standard
⌈>	Ge	72		ug/L			43630	41496	1	KED
|	Ni	60	21.647	ug/L	0.763	3	50	41270	2	KED
|	Ni	62	21.873	ug/L	0.821	3	6	6609	2	KED
|	Cu	63	42.098	ug/L	0.393	0	60	229324	1	KED
|	Cu	65	42.257	ug/L	0.327	0	36	115390	1	KED
|	Zn	66	85.690	ug/L	1.594	1	66	54249	1	KED
|	Zn	67	84.008	ug/L	3.428	4	11	8979	2	KED
|	As	75	6.618	ug/L	0.058	0	3	2190	0	KED
⌊	Se	78	1.230	ug/L	0.236	19	13	48	14	KED
	Kr	83		ug/L			49	97	11	Standard
⌈>	In-1	115		ug/L			9463	8929	0	KED
|	Cd	111	0.299	ug/L	0.029	9	3	95	8	KED
⌊	Cd	114	0.291	ug/L	0.014	4	1	233	5	KED
⌈>	In	115		ug/L			431494	429126	2	Standard
|	Ag	107	0.121	ug/L	0.004	3	47	2165	2	Standard
|	Ba	135	94.216	ug/L	1.108	1	56	495344	1	Standard
⌊	Ba	137	89.108	ug/L	2.942	3	82	886169	1	Standard
⌈>	Tb	159		ug/L			190968	212251	4	Standard
⌊	Pb	208	105.770	ug/L	3.507	3	196	7889407	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0018-01
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, May 19, 2023 18:36:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	22126	3	Standard
⌈>	**Sc**	**45**		ug/L			699560	685754	2	Standard
|	**Cr**	**52**	**0.109**	ug/L	0.027	24	21056	22575	4	Standard
|	**Cr**	**53**	**0.051**	ug/L	0.012	23	160	260	9	Standard
⌊	**Mn**	**55**	**27.428**	ug/L	0.210	0	394	741684	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	40397	3	KED
|	**Ni**	**60**	**0.013**	ug/L	0.002	19	50	70	7	KED
|	**Ni**	**62**	**0.023**	ug/L	0.005	20	6	13	14	KED
|	**Cu**	**63**	**0.014**	ug/L	0.003	23	60	131	16	KED
|	**Cu**	**65**	**0.013**	ug/L	0.002	14	36	69	6	KED
|	**Zn**	**66**	**0.524**	ug/L	0.053	10	66	384	12	KED
|	**Zn**	**67**	**0.453**	ug/L	0.043	9	11	57	11	KED
|	**As**	**75**	**0.014**	ug/L	0.002	11	3	8	5	KED
⌊	**Se**	**78**	**0.076**	ug/L	0.074	96	13	14	12	KED
	Kr	**83**		ug/L			49	56	19	Standard
⌈>	**In-1**	**115**		ug/L			9463	8947	1	KED
|	**Cd**	**111**	**0.004**	ug/L	0.009	252	3	4	65	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.004	59	1	6	44	KED
⌈>	**In**	**115**		ug/L			431494	432808	2	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	38	47	76	15	Standard
|	**Ba**	**135**	**0.397**	ug/L	0.008	2	56	2162	0	Standard
⌊	**Ba**	**137**	**0.398**	ug/L	0.001	0	82	4072	3	Standard
⌈>	**Tb**	**159**		ug/L			190968	192434	1	Standard
⌊	**Pb**	**208**	**0.011**	ug/L	0.001	8	196	974	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0405-~~DUP2~~ DUP3
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, May 19, 2023 18:41:37

MB 5/19/23

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	22403	2	Standard
>	Sc	45		ug/L			699560	732680	3	Standard
	Cr	52	0.071	ug/L	0.025	35	21056	23386	2	Standard
	Cr	53	0.053	ug/L	0.010	19	160	282	6	Standard
	Mn	55	26.619	ug/L	0.353	1	394	768747	2	Standard
>	Ge	72		ug/L			43630	42335	0	KED
	Ni	60	0.010	ug/L	0.012	119	50	67	32	KED
	Ni	62	0.013	ug/L	0.003	26	6	10	10	KED
	Cu	63	0.019	ug/L	0.002	12	60	165	8	KED
	Cu	65	0.020	ug/L	0.004	21	36	90	12	KED
	Zn	66	1.163	ug/L	0.070	5	66	813	5	KED
	Zn	67	1.314	ug/L	0.092	6	11	154	6	KED
	As	75	0.012	ug/L	0.009	80	3	7	40	KED
	Se	78	0.100	ug/L	0.196	195	13	15	36	KED
	Kr	83		ug/L			49	62	6	Standard
>	In-1	115		ug/L			9463	9218	1	KED
	Cd	111	0.004	ug/L	0.008	184	3	4	52	KED
	Cd	114	0.003	ug/L	0.004	113	1	4	70	KED
>	In	115		ug/L			431494	443823	2	Standard
	Ag	107	0.000	ug/L	0.001	253	47	55	27	Standard
	Ba	135	0.414	ug/L	0.025	6	56	2311	8	Standard
	Ba	137	0.413	ug/L	0.012	2	82	4331	0	Standard
>	Tb	159		ug/L			190968	199629	1	Standard
	Pb	208	0.020	ug/L	0.022	111	196	1600	96	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0405-~~MS2~~ MS3
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, May 19, 2023 18:46:20

MB 5/19/23

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	22749	5	Standard
>	Sc	45		ug/L			699560	731039	3	Standard
	Cr	52	0.617	ug/L	0.016	2	21056	33616	4	Standard
	Cr	53	0.534	ug/L	0.035	6	160	1334	5	Standard
	Mn	55	28.287	ug/L	0.487	1	394	815072	2	Standard
>	Ge	72		ug/L			43630	43342	1	KED
	Ni	60	0.489	ug/L	0.040	8	50	1022	5	KED
	Ni	62	0.532	ug/L	0.064	12	6	174	10	KED
	Cu	63	0.500	ug/L	0.024	4	60	2907	6	KED
	Cu	65	0.506	ug/L	0.010	1	36	1478	0	KED
	Zn	66	2.081	ug/L	0.125	6	66	1439	3	KED
	Zn	67	1.898	ug/L	0.217	11	11	222	9	KED
	As	75	0.523	ug/L	0.033	6	3	184	4	KED
	Se	78	1.789	ug/L	0.050	2	13	67	1	KED
	Kr	83		ug/L			49	55	10	Standard
>	In-1	115		ug/L			9463	9429	1	KED
	Cd	111	0.532	ug/L	0.023	4	3	177	4	KED
	Cd	114	0.508	ug/L	0.020	3	1	429	5	KED
>	In	115		ug/L			431494	442633	1	Standard
	Ag	107	0.542	ug/L	0.014	2	47	9809	2	Standard
	Ba	135	0.971	ug/L	0.028	2	56	5325	2	Standard
	Ba	137	0.932	ug/L	0.019	2	82	9649	0	Standard
>	Tb	159		ug/L			190968	200081	1	Standard
	Pb	208	0.484	ug/L	0.010	2	196	34252	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0405-~~MSD2~~ MSD3
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, May 19, 2023 18:51:03

MB 5/19/23

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	21575	3	Standard
>	Sc	45		ug/L			699560	726773	1	Standard
	Cr	52	0.626	ug/L	0.028	4	21056	33576	2	Standard
	Cr	53	0.535	ug/L	0.017	3	160	1329	3	Standard
	Mn	55	27.885	ug/L	0.350	1	394	799112	2	Standard
>	Ge	72		ug/L			43630	43374	3	KED
	Ni	60	0.472	ug/L	0.043	9	50	987	5	KED
	Ni	62	0.503	ug/L	0.012	2	6	165	4	KED
	Cu	63	0.516	ug/L	0.019	3	60	2997	0	KED
	Cu	65	0.504	ug/L	0.054	10	36	1470	7	KED
	Zn	66	2.132	ug/L	0.085	3	66	1473	2	KED
	Zn	67	1.724	ug/L	0.117	6	11	203	7	KED
	As	75	0.498	ug/L	0.020	4	3	176	7	KED
	Se	78	1.735	ug/L	0.291	16	13	65	10	KED
	Kr	83		ug/L			49	47	4	Standard
>	In-1	115		ug/L			9463	9246	1	KED
	Cd	111	0.444	ug/L	0.032	7	3	145	6	KED
	Cd	114	0.501	ug/L	0.022	4	1	414	3	KED
>	In	115		ug/L			431494	441472	5	Standard
	Ag	107	0.546	ug/L	0.021	3	47	9837	2	Standard
	Ba	135	0.940	ug/L	0.080	8	56	5125	3	Standard
	Ba	137	0.906	ug/L	0.024	2	82	9350	3	Standard
>	Tb	159		ug/L			190968	197203	1	Standard
	Pb	208	0.484	ug/L	0.005	1	196	33758	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL5
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 18:55:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	21487	6	Standard
>	**Sc**	**45**		ug/L			699560	698485	7	Standard
	Cr	**52**	**0.114**	ug/L	0.054	47	21056	23023	3	Standard
	Cr	**53**	**-0.006**	ug/L	0.005	78	160	146	8	Standard
	Mn	**55**	**-0.001**	ug/L	0.001	157	394	373	0	Standard
>	**Ge**	**72**		ug/L			43630	41323	6	KED
	Ni	**60**	**-0.016**	ug/L	0.004	22	50	17	40	KED
	Ni	**62**	**-0.008**	ug/L	0.007	87	6	4	49	KED
	Cu	**63**	**-0.004**	ug/L	0.003	66	60	36	32	KED
	Cu	**65**	**-0.002**	ug/L	0.002	82	36	29	16	KED
	Zn	**66**	**-0.043**	ug/L	0.009	21	66	35	13	KED
	Zn	**67**	**-0.041**	ug/L	0.015	36	11	6	17	KED
	As	**75**	**0.003**	ug/L	0.005	184	3	4	33	KED
	Se	**78**	**0.087**	ug/L	0.073	84	13	15	15	KED
	Kr	**83**		ug/L			49	56	21	Standard
>	**In-1**	**115**		ug/L			9463	8944	3	KED
	Cd	**111**	**0.007**	ug/L	0.011	168	3	5	66	KED
	Cd	**114**	**0.009**	ug/L	0.003	38	1	8	31	KED
>	**In**	**115**		ug/L			431494	430944	6	Standard
	Ag	**107**	**0.000**	ug/L	0.001	600	47	48	14	Standard
	Ba	**135**	**-0.008**	ug/L	0.000	4	56	13	14	Standard
	Ba	**137**	**-0.005**	ug/L	0.001	10	82	30	12	Standard
>	**Tb**	**159**		ug/L			190968	187155	9	Standard
	Pb	**208**	**-0.000**	ug/L	0.000	70	196	172	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 19:00:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	21433	4	Standard
⌈>	**Sc**	**45**		ug/L			699560	724175	5	Standard
|	**Cr**	**52**	**50.003**	ug/L	1.159	2	21056	952889	3	Standard
|	**Cr**	**53**	**48.508**	ug/L	1.123	2	160	105188	2	Standard
⌊	**Mn**	**55**	**47.758**	ug/L	1.368	2	394	1362250	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	42778	0	KED
|	**Ni**	**60**	**47.971**	ug/L	0.532	1	50	94258	1	KED
|	**Ni**	**62**	**47.570**	ug/L	1.012	2	6	14815	2	KED
|	**Cu**	**63**	**47.673**	ug/L	1.187	2	60	267719	2	KED
|	**Cu**	**65**	**48.598**	ug/L	1.142	2	36	136811	2	KED
|	**Zn**	**66**	**49.344**	ug/L	0.198	0	66	32235	0	KED
|	**Zn**	**67**	**49.243**	ug/L	1.837	3	11	5432	3	KED
|	**As**	**75**	**49.019**	ug/L	0.503	1	3	16703	1	KED
⌊	**Se**	**78**	**50.418**	ug/L	0.788	1	13	1522	1	KED
	Kr	**83**		ug/L			49	58	13	Standard
⌈>	**In-1**	**115**		ug/L			9463	9235	1	KED
|	**Cd**	**111**	**47.157**	ug/L	0.240	0	3	15104	0	KED
⌊	**Cd**	**114**	**47.096**	ug/L	0.918	1	1	38836	2	KED
⌈>	**In**	**115**		ug/L			431494	449333	3	Standard
|	**Ag**	**107**	**51.050**	ug/L	2.236	4	47	932606	2	Standard
|	**Ba**	**135**	**46.916**	ug/L	0.538	1	56	258271	2	Standard
⌊	**Ba**	**137**	**47.325**	ug/L	0.711	1	82	492904	2	Standard
⌈>	**Tb**	**159**		ug/L			190968	194303	1	Standard
⌊	**Pb**	**208**	**47.130**	ug/L	0.739	1	196	3221335	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 19:07:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	20177	4	Standard
⌈>	**Sc**	**45**		ug/L			699560	746575	3	Standard
|	**Cr**	**52**	**0.031**	ug/L	0.001	4	21056	23063	3	Standard
|	**Cr**	**53**	**-0.007**	ug/L	0.002	25	160	155	5	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.001	254	394	429	8	Standard
⌈>	**Ge**	**72**		ug/L			43630	45450	1	KED
|	**Ni**	**60**	**-0.018**	ug/L	0.003	17	50	14	45	KED
|	**Ni**	**62**	**-0.014**	ug/L	0.009	60	6	2	114	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.003	279	60	56	33	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.002	79	36	29	22	KED
|	**Zn**	**66**	**-0.044**	ug/L	0.015	33	66	38	27	KED
|	**Zn**	**67**	**-0.026**	ug/L	0.033	127	11	8	44	KED
|	**As**	**75**	**0.004**	ug/L	0.005	131	3	5	32	KED
⌊	**Se**	**78**	**0.048**	ug/L	0.046	95	13	15	8	KED
	Kr	**83**		ug/L			49	55	5	Standard
⌈>	**In-1**	**115**		ug/L			9463	9707	1	KED
|	**Cd**	**111**	**0.019**	ug/L	0.008	45	3	9	29	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.007	92	1	7	73	KED
⌈>	**In**	**115**		ug/L			431494	439197	1	Standard
|	**Ag**	**107**	**0.009**	ug/L	0.001	13	47	210	11	Standard
|	**Ba**	**135**	**-0.004**	ug/L	0.001	15	56	34	11	Standard
⌊	**Ba**	**137**	**-0.004**	ug/L	0.001	16	82	43	15	Standard
⌈>	**Tb**	**159**		ug/L			190968	200727	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	47	196	254	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0009-08
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:12:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	30799	7	Standard
>	Sc	45		ug/L			699560	829499	4	Standard
	Cr	52	13.096	ug/L	0.184	1	21056	304367	3	Standard
	Cr	53	12.984	ug/L	0.545	4	160	32370	1	Standard
	Mn	55	122.542	ug/L	4.841	3	394	4001888	2	Standard
>	Ge	72		ug/L			43630	43288	2	KED
	Ni	60	10.864	ug/L	0.203	1	50	21635	1	KED
	Ni	62	10.851	ug/L	0.342	3	6	3424	2	KED
	Cu	63	58.550	ug/L	3.334	5	60	332534	4	KED
	Cu	65	59.805	ug/L	2.024	3	36	170368	4	KED
	Zn	66	92.441	ug/L	2.177	2	66	61056	3	KED
	Zn	67	84.842	ug/L	3.357	3	11	9460	3	KED
	As	75	5.791	ug/L	0.185	3	3	2000	3	KED
	Se	78	0.969	ug/L	0.053	5	13	42	1	KED
	Kr	83		ug/L			49	88	16	Standard
>	In-1	115		ug/L			9463	9361	1	KED
	Cd	111	0.133	ug/L	0.019	14	3	46	12	KED
	Cd	114	0.136	ug/L	0.030	22	1	115	23	KED
>	In	115		ug/L			431494	440680	1	Standard
	Ag	107	0.107	ug/L	0.004	3	47	1960	2	Standard
	Ba	135	25.892	ug/L	0.435	1	56	139827	1	Standard
	Ba	137	25.428	ug/L	0.832	3	82	259779	1	Standard
>	Tb	159		ug/L			190968	212063	4	Standard
	Pb	208	20.819	ug/L	1.099	5	196	1551019	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0009-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:17:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	31628	6	Standard
>	Sc	45		ug/L			699560	841370	2	Standard
	Cr	52	14.592	ug/L	0.112	0	21056	341234	2	Standard
	Cr	53	14.362	ug/L	0.199	1	160	36352	3	Standard
	Mn	55	157.599	ug/L	3.151	1	394	5225581	2	Standard
>	Ge	72		ug/L			43630	42186	2	KED
	Ni	60	12.233	ug/L	0.451	3	50	23739	4	KED
	Ni	62	12.417	ug/L	0.221	1	6	3818	2	KED
	Cu	63	33.505	ug/L	0.878	2	60	185515	1	KED
	Cu	65	34.173	ug/L	0.999	2	36	94838	1	KED
	Zn	66	70.727	ug/L	1.242	1	66	45528	1	KED
	Zn	67	71.117	ug/L	1.413	1	11	7732	2	KED
	As	75	7.459	ug/L	0.124	1	3	2509	1	KED
	Se	78	1.320	ug/L	0.070	5	13	51	2	KED
	Kr	83		ug/L			49	91	13	Standard
>	In-1	115		ug/L			9463	9025	4	KED
	Cd	111	0.201	ug/L	0.043	21	3	66	16	KED
	Cd	114	0.201	ug/L	0.019	9	1	164	12	KED
>	In	115		ug/L			431494	443958	2	Standard
	Ag	107	0.176	ug/L	0.001	0	47	3219	2	Standard
	Ba	135	85.564	ug/L	0.403	0	56	465450	2	Standard
	Ba	137	85.617	ug/L	1.306	1	82	881292	2	Standard
>	Tb	159		ug/L			190968	212867	1	Standard
	Pb	208	15.650	ug/L	0.093	0	196	1172087	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0009-05
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:22:06
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	32274	7	Standard
>	Sc	45		ug/L			699560	822177	4	Standard
	Cr	52	13.603	ug/L	0.090	0	21056	312473	3	Standard
	Cr	53	13.652	ug/L	0.338	2	160	33745	1	Standard
	Mn	55	136.181	ug/L	5.898	4	394	4407344	0	Standard
>	Ge	72		ug/L			43630	42263	0	KED
	Ni	60	11.017	ug/L	0.288	2	50	21421	1	KED
	Ni	62	11.096	ug/L	0.231	2	6	3419	2	KED
	Cu	63	31.388	ug/L	0.695	2	60	174151	1	KED
	Cu	65	32.358	ug/L	0.464	1	36	89997	1	KED
	Zn	66	59.251	ug/L	1.180	1	66	38225	1	KED
	Zn	67	58.713	ug/L	0.525	0	11	6396	0	KED
	As	75	7.669	ug/L	0.080	1	3	2584	0	KED
	Se	78	1.047	ug/L	0.161	15	13	43	10	KED
	Kr	83		ug/L			49	75	10	Standard
>	In-1	115		ug/L			9463	9126	0	KED
	Cd	111	0.221	ug/L	0.020	9	3	73	8	KED
	Cd	114	0.224	ug/L	0.040	17	1	184	18	KED
>	In	115		ug/L			431494	435379	5	Standard
	Ag	107	0.174	ug/L	0.013	7	47	3129	2	Standard
	Ba	135	37.333	ug/L	3.126	8	56	198551	2	Standard
	Ba	137	35.841	ug/L	1.997	5	82	361065	0	Standard
>	Tb	159		ug/L			190968	212547	1	Standard
	Pb	208	14.506	ug/L	0.396	2	196	1084592	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0009-07
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:26:49
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	30896	2	Standard
>	Sc	45		ug/L			699560	812913	3	Standard
	Cr	52	12.793	ug/L	0.118	0	21056	292128	4	Standard
	Cr	53	13.136	ug/L	0.245	1	160	32144	4	Standard
	Mn	55	128.426	ug/L	2.230	1	394	4113198	1	Standard
>	Ge	72		ug/L			43630	42803	3	KED
	Ni	60	9.916	ug/L	0.412	4	50	19518	1	KED
	Ni	62	10.067	ug/L	0.656	6	6	3138	3	KED
	Cu	63	31.288	ug/L	1.346	4	60	175671	1	KED
	Cu	65	32.393	ug/L	1.312	4	36	91178	1	KED
	Zn	66	90.262	ug/L	3.365	3	66	58898	0	KED
	Zn	67	84.249	ug/L	3.502	4	11	9283	0	KED
	As	75	7.476	ug/L	0.218	2	3	2551	2	KED
	Se	78	0.909	ug/L	0.061	6	13	40	3	KED
	Kr	83		ug/L			49	81	17	Standard
>	In-1	115		ug/L			9463	9272	2	KED
	Cd	111	0.126	ug/L	0.014	11	3	43	7	KED
	Cd	114	0.110	ug/L	0.010	8	1	92	10	KED
>	In	115		ug/L			431494	437525	1	Standard
	Ag	107	0.110	ug/L	0.005	4	47	2003	2	Standard
	Ba	135	27.770	ug/L	0.659	2	56	148871	0	Standard
	Ba	137	27.510	ug/L	0.843	3	82	279025	1	Standard
>	Tb	159		ug/L			190968	210774	1	Standard
	Pb	208	22.485	ug/L	0.352	1	196	1667577	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0009-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:31:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	29330	2	Standard
>	Sc	45		ug/L			699560	831944	3	Standard
	Cr	52	10.435	ug/L	0.107	1	21056	248417	3	Standard
	Cr	53	10.229	ug/L	0.211	2	160	25642	2	Standard
	Mn	55	92.731	ug/L	2.623	2	394	3038817	0	Standard
>	Ge	72		ug/L			43630	42528	1	KED
	Ni	60	8.339	ug/L	0.143	1	50	16326	0	KED
	Ni	62	8.758	ug/L	0.301	3	6	2717	3	KED
	Cu	63	16.368	ug/L	0.221	1	60	91415	1	KED
	Cu	65	16.816	ug/L	0.394	2	36	47071	1	KED
	Zn	66	38.013	ug/L	0.366	0	66	24701	1	KED
	Zn	67	35.156	ug/L	0.580	1	11	3858	2	KED
	As	75	3.744	ug/L	0.051	1	3	1271	0	KED
	Se	78	0.854	ug/L	0.187	21	13	38	15	KED
	Kr	83		ug/L			49	87	13	Standard
>	In-1	115		ug/L			9463	9346	1	KED
	Cd	111	0.123	ug/L	0.024	19	3	43	16	KED
	Cd	114	0.109	ug/L	0.013	12	1	92	10	KED
>	In	115		ug/L			431494	451253	2	Standard
	Ag	107	0.106	ug/L	0.003	2	47	2000	3	Standard
	Ba	135	18.003	ug/L	1.235	6	56	99507	5	Standard
	Ba	137	17.627	ug/L	0.622	3	82	184403	1	Standard
>	Tb	159		ug/L			190968	218194	2	Standard
	Pb	208	11.174	ug/L	0.349	3	196	857404	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0306-DUP1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:36:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	28312	4	Standard
>	Sc	45		ug/L			699560	816415	2	Standard
	Cr	52	11.102	ug/L	0.426	3	21056	257845	4	Standard
	Cr	53	10.864	ug/L	0.336	3	160	26714	2	Standard
	Mn	55	88.730	ug/L	1.901	2	394	2854622	1	Standard
>	Ge	72		ug/L			43630	43460	2	KED
	Ni	60	8.458	ug/L	0.306	3	50	16926	4	KED
	Ni	62	8.726	ug/L	0.349	4	6	2767	5	KED
	Cu	63	15.073	ug/L	0.539	3	60	86002	1	KED
	Cu	65	15.409	ug/L	0.253	1	36	44086	1	KED
	Zn	66	37.630	ug/L	0.176	0	66	24990	2	KED
	Zn	67	37.110	ug/L	1.055	2	11	4163	4	KED
	As	75	3.351	ug/L	0.121	3	3	1163	3	KED
	Se	78	0.753	ug/L	0.114	15	13	36	7	KED
	Kr	83		ug/L			49	74	23	Standard
>	In-1	115		ug/L			9463	9456	0	KED
	Cd	111	0.105	ug/L	0.004	3	3	37	3	KED
	Cd	114	0.105	ug/L	0.010	9	1	90	9	KED
>	In	115		ug/L			431494	451033	0	Standard
	Ag	107	0.095	ug/L	0.004	4	47	1795	3	Standard
	Ba	135	29.351	ug/L	0.635	2	56	162230	1	Standard
	Ba	137	29.499	ug/L	1.327	4	82	308526	4	Standard
>	Tb	159		ug/L			190968	216596	1	Standard
	Pb	208	10.911	ug/L	0.099	0	196	831559	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0306-MS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:40:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	28232	7	Standard
>	Sc	45		ug/L			699560	819923	3	Standard
	Cr	52	31.346	ug/L	0.627	2	21056	686079	4	Standard
	Cr	53	30.819	ug/L	0.573	1	160	75754	2	Standard
	Mn	55	110.911	ug/L	4.281	3	394	3583733	5	Standard
>	Ge	72		ug/L			43630	43076	1	KED
	Ni	60	31.655	ug/L	0.531	1	50	62637	0	KED
	Ni	62	32.176	ug/L	1.663	5	6	10088	3	KED
	Cu	63	38.730	ug/L	0.828	2	60	218981	0	KED
	Cu	65	38.709	ug/L	0.712	1	36	109711	0	KED
	Zn	66	111.555	ug/L	2.171	1	66	73288	0	KED
	Zn	67	104.518	ug/L	3.197	3	11	11596	2	KED
	As	75	26.918	ug/L	0.263	0	3	9237	0	KED
	Se	78	75.634	ug/L	1.046	1	13	2293	2	KED
	Kr	83		ug/L			49	84	2	Standard
>	In-1	115		ug/L			9463	9226	2	KED
	Cd	111	23.629	ug/L	1.103	4	3	7556	2	KED
	Cd	114	23.630	ug/L	0.424	1	1	19463	1	KED
>	In	115		ug/L			431494	440764	1	Standard
	Ag	107	26.186	ug/L	0.595	2	47	469607	1	Standard
	Ba	135	45.958	ug/L	2.047	4	56	248191	4	Standard
	Ba	137	44.942	ug/L	1.164	2	82	459341	3	Standard
>	Tb	159		ug/L			190968	218906	2	Standard
	Pb	208	31.008	ug/L	1.303	4	196	2386600	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0306-MSD1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:45:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	27335	2	Standard
>	Sc	45		ug/L			699560	817655	2	Standard
	Cr	52	32.530	ug/L	1.570	4	21056	708823	4	Standard
	Cr	53	31.960	ug/L	0.698	2	160	78385	3	Standard
	Mn	55	109.501	ug/L	4.254	3	394	3528744	4	Standard
>	Ge	72		ug/L			43630	42575	1	KED
	Ni	60	32.184	ug/L	0.595	1	50	62944	0	KED
	Ni	62	33.243	ug/L	0.596	1	6	10305	1	KED
	Cu	63	39.211	ug/L	0.958	2	60	219138	1	KED
	Cu	65	40.473	ug/L	1.097	2	36	113375	1	KED
	Zn	66	115.402	ug/L	2.423	2	66	74937	1	KED
	Zn	67	111.886	ug/L	0.406	0	11	12270	0	KED
	As	75	27.430	ug/L	0.447	1	3	9303	0	KED
	Se	78	78.703	ug/L	1.927	2	13	2357	1	KED
	Kr	83		ug/L			49	80	9	Standard
>	In-1	115		ug/L			9463	9183	0	KED
	Cd	111	23.580	ug/L	0.493	2	3	7511	1	KED
	Cd	114	23.847	ug/L	0.603	2	1	19552	1	KED
>	In	115		ug/L			431494	446461	3	Standard
	Ag	107	26.270	ug/L	0.853	3	47	476880	0	Standard
	Ba	135	43.919	ug/L	1.339	3	56	240123	2	Standard
	Ba	137	42.726	ug/L	3.040	7	82	441511	3	Standard
>	Tb	159		ug/L			190968	222031	1	Standard
	Pb	208	33.346	ug/L	0.352	1	196	2604549	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0306-PS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 19:50:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	30865	7	Standard
⌈>	**Sc**	**45**		ug/L			699560	821398	4	Standard
|	**Cr**	**52**	**33.063**	ug/L	0.251	0	21056	723395	3	Standard
|	**Cr**	**53**	**32.500**	ug/L	0.940	2	160	79992	1	Standard
⌊	**Mn**	**55**	**112.899**	ug/L	3.046	2	394	3653432	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	42789	0	KED
|	**Ni**	**60**	**33.514**	ug/L	0.601	1	50	65874	0	KED
|	**Ni**	**62**	**34.192**	ug/L	1.127	3	6	10653	3	KED
|	**Cu**	**63**	**41.654**	ug/L	0.856	2	60	233964	1	KED
|	**Cu**	**65**	**42.667**	ug/L	0.829	1	36	120132	1	KED
|	**Zn**	**66**	**117.352**	ug/L	2.238	1	66	76585	1	KED
|	**Zn**	**67**	**111.382**	ug/L	2.785	2	11	12275	1	KED
|	**As**	**75**	**29.567**	ug/L	0.371	1	3	10078	0	KED
⌊	**Se**	**78**	**82.538**	ug/L	2.184	2	13	2484	1	KED
	Kr	**83**		ug/L			49	93	14	Standard
⌈>	**In-1**	**115**		ug/L			9463	8926	1	KED
|	**Cd**	**111**	**26.089**	ug/L	0.646	2	3	8077	1	KED
⌊	**Cd**	**114**	**25.832**	ug/L	0.062	0	1	20589	1	KED
⌈>	**In**	**115**		ug/L			431494	453457	3	Standard
|	**Ag**	**107**	**27.062**	ug/L	0.890	3	47	499143	2	Standard
|	**Ba**	**135**	**42.558**	ug/L	1.422	3	56	236379	2	Standard
⌊	**Ba**	**137**	**41.424**	ug/L	0.901	2	82	435492	3	Standard
⌈>	**Tb**	**159**		ug/L			190968	220662	2	Standard
⌊	**Pb**	**208**	**33.197**	ug/L	1.007	3	196	2575937	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL6
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 19:55:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	23055	0	Standard
⌈>	**Sc**	**45**		ug/L			699560	743341	3	Standard
|	**Cr**	**52**	**0.024**	ug/L	0.031	130	21056	22818	3	Standard
|	**Cr**	**53**	**-0.008**	ug/L	0.005	68	160	152	7	Standard
⌊	**Mn**	**55**	**0.002**	ug/L	0.001	35	394	475	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	44095	1	KED
|	**Ni**	**60**	**-0.015**	ug/L	0.004	28	50	21	39	KED
|	**Ni**	**62**	**-0.008**	ug/L	0.007	85	6	4	49	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.002	151	60	54	21	KED
|	**Cu**	**65**	**-0.000**	ug/L	0.002	707	36	36	18	KED
|	**Zn**	**66**	**-0.050**	ug/L	0.014	27	66	33	29	KED
|	**Zn**	**67**	**-0.057**	ug/L	0.034	60	11	5	78	KED
|	**As**	**75**	**0.004**	ug/L	0.008	214	3	5	50	KED
⌊	**Se**	**78**	**0.182**	ug/L	0.031	16	13	19	4	KED
	Kr	**83**		ug/L			49	43	18	Standard
⌈>	**In-1**	**115**		ug/L			9463	9193	1	KED
|	**Cd**	**111**	**0.022**	ug/L	0.015	69	3	10	47	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.007	98	1	7	76	KED
⌈>	**In**	**115**		ug/L			431494	451975	1	Standard
|	**Ag**	**107**	**0.008**	ug/L	0.001	9	47	191	8	Standard
|	**Ba**	**135**	**-0.005**	ug/L	0.001	13	56	29	13	Standard
⌊	**Ba**	**137**	**-0.004**	ug/L	0.001	31	82	46	26	Standard
⌈>	**Tb**	**159**		ug/L			190968	199729	3	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	28	196	316	12	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 19:59:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	21389	2	Standard
⌈>	**Sc**	**45**		ug/L			699560	726212	2	Standard
|	**Cr**	**52**	**49.577**	ug/L	1.360	2	21056	947868	0	Standard
|	**Cr**	**53**	**48.802**	ug/L	0.640	1	160	106188	2	Standard
⌊	**Mn**	**55**	**47.814**	ug/L	0.692	1	394	1368446	1	Standard
⌈>	**Ge**	**72**		ug/L			43630	43324	1	KED
|	**Ni**	**60**	**47.744**	ug/L	2.826	5	50	94936	4	KED
|	**Ni**	**62**	**48.350**	ug/L	2.027	4	6	15242	2	KED
|	**Cu**	**63**	**46.607**	ug/L	1.341	2	60	264981	1	KED
|	**Cu**	**65**	**48.799**	ug/L	2.067	4	36	139055	2	KED
|	**Zn**	**66**	**51.021**	ug/L	0.605	1	66	33757	2	KED
|	**Zn**	**67**	**49.488**	ug/L	1.345	2	11	5528	2	KED
|	**As**	**75**	**49.245**	ug/L	1.172	2	3	16990	1	KED
⌊	**Se**	**78**	**49.987**	ug/L	1.556	3	13	1528	1	KED
	Kr	**83**		ug/L			49	71	11	Standard
⌈>	**In-1**	**115**		ug/L			9463	9175	1	KED
|	**Cd**	**111**	**48.190**	ug/L	0.377	0	3	15335	1	KED
⌊	**Cd**	**114**	**47.066**	ug/L	0.778	1	1	38557	1	KED
⌈>	**In**	**115**		ug/L			431494	445057	2	Standard
|	**Ag**	**107**	**52.269**	ug/L	1.115	2	47	946229	1	Standard
|	**Ba**	**135**	**48.716**	ug/L	2.295	4	56	265438	1	Standard
⌊	**Ba**	**137**	**48.957**	ug/L	2.780	5	82	504677	3	Standard
⌈>	**Tb**	**159**		ug/L			190968	197526	2	Standard
⌊	**Pb**	**208**	**48.018**	ug/L	1.412	2	196	3335683	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 20:07:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	20888	3	Standard
⌈>	**Sc**	**45**		ug/L			699560	733072	1	Standard
|	**Cr**	**52**	**0.049**	ug/L	0.037	74	21056	22990	2	Standard
|	**Cr**	**53**	**-0.013**	ug/L	0.007	57	160	139	9	Standard
⌊	**Mn**	**55**	**-0.000**	ug/L	0.002	504	394	403	9	Standard
⌈>	**Ge**	**72**		ug/L			43630	45330	2	KED
|	**Ni**	**60**	**-0.016**	ug/L	0.004	23	50	20	37	KED
|	**Ni**	**62**	**-0.010**	ug/L	0.006	53	6	3	50	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.000	4	60	50	2	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.002	186	36	34	19	KED
|	**Zn**	**66**	**-0.049**	ug/L	0.023	47	66	34	44	KED
|	**Zn**	**67**	**-0.053**	ug/L	0.017	32	11	5	33	KED
|	**As**	**75**	**0.004**	ug/L	0.003	66	3	5	16	KED
⌊	**Se**	**78**	**0.017**	ug/L	0.092	539	13	14	22	KED
	Kr	**83**		ug/L			49	50	9	Standard
⌈>	**In-1**	**115**		ug/L			9463	9540	1	KED
|	**Cd**	**111**	**0.007**	ug/L	0.008	114	3	5	44	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.007	121	1	6	91	KED
⌈>	**In**	**115**		ug/L			431494	464135	1	Standard
|	**Ag**	**107**	**0.009**	ug/L	0.001	9	47	222	8	Standard
|	**Ba**	**135**	**-0.006**	ug/L	0.002	29	56	27	33	Standard
⌊	**Ba**	**137**	**-0.004**	ug/L	0.001	29	82	49	23	Standard
⌈>	**Tb**	**159**		ug/L			190968	201581	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	37	196	276	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:12:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	39609	10	Standard
>	Sc	45		ug/L			699560	821071	3	Standard
	Cr	52	11.439	ug/L	0.339	2	21056	266249	2	Standard
	Cr	53	11.357	ug/L	0.247	2	160	28090	4	Standard
	Mn	55	111.122	ug/L	3.342	3	394	3593519	1	Standard
>	Ge	72		ug/L			43630	44386	0	KED
	Ni	60	7.509	ug/L	0.115	1	50	15352	1	KED
	Ni	62	7.578	ug/L	0.006	0	6	2454	0	KED
	Cu	63	25.365	ug/L	0.255	1	60	147830	0	KED
	Cu	65	25.760	ug/L	0.272	1	36	75257	0	KED
	Zn	66	160.273	ug/L	4.346	2	66	108489	2	KED
	Zn	67	147.887	ug/L	2.253	1	11	16904	0	KED
	As	75	3.702	ug/L	0.036	0	3	1312	0	KED
	Se	78	0.909	ug/L	0.096	10	13	41	6	KED
	Kr	83		ug/L			49	80	17	Standard
>	In-1	115		ug/L			9463	9386	1	KED
	Cd	111	0.215	ug/L	0.030	13	3	73	15	KED
	Cd	114	0.231	ug/L	0.029	12	1	195	14	KED
>	In	115		ug/L			431494	447248	3	Standard
	Ag	107	0.087	ug/L	0.003	3	47	1640	1	Standard
	Ba	135	27.974	ug/L	1.199	4	56	153253	3	Standard
	Ba	137	27.040	ug/L	0.119	0	82	280428	2	Standard
>	Tb	159		ug/L			190968	214903	2	Standard
	Pb	208	34.065	ug/L	0.190	0	196	2575410	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-05
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:16:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	36149	8	Standard
>	Sc	45		ug/L			699560	819991	3	Standard
	Cr	52	12.751	ug/L	0.337	2	21056	293618	2	Standard
	Cr	53	12.621	ug/L	0.236	1	160	31158	4	Standard
	Mn	55	352.977	ug/L	6.797	1	394	11402344	1	Standard
>	Ge	72		ug/L			43630	44165	0	KED
	Ni	60	12.621	ug/L	0.336	2	50	25637	1	KED
	Ni	62	12.445	ug/L	0.525	4	6	4007	4	KED
	Cu	63	30.862	ug/L	0.304	0	60	178966	1	KED
	Cu	65	32.009	ug/L	0.721	2	36	93029	1	KED
	Zn	66	64.875	ug/L	1.415	2	66	43734	2	KED
	Zn	67	61.413	ug/L	1.467	2	11	6992	3	KED
	As	75	5.316	ug/L	0.262	4	3	1873	4	KED
	Se	78	0.935	ug/L	0.144	15	13	42	10	KED
	Kr	83		ug/L			49	95	12	Standard
>	In-1	115		ug/L			9463	9341	1	KED
	Cd	111	0.076	ug/L	0.010	13	3	27	12	KED
	Cd	114	0.061	ug/L	0.002	2	1	52	3	KED
>	In	115		ug/L			431494	461606	2	Standard
	Ag	107	0.084	ug/L	0.006	7	47	1633	5	Standard
	Ba	135	12.983	ug/L	0.615	4	56	73422	2	Standard
	Ba	137	12.114	ug/L	0.951	7	82	129564	5	Standard
>	Tb	159		ug/L			190968	215748	2	Standard
	Pb	208	17.109	ug/L	0.522	3	196	1298214	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-07
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:21:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	40820	2	Standard
>	Sc	45		ug/L			699560	837063	4	Standard
	Cr	52	15.550	ug/L	0.500	3	21056	359848	2	Standard
	Cr	53	15.157	ug/L	0.346	2	160	38127	2	Standard
	Mn	55	158.602	ug/L	4.861	3	394	5228149	2	Standard
>	Ge	72		ug/L			43630	43863	2	KED
	Ni	60	12.866	ug/L	0.243	1	50	25965	3	KED
	Ni	62	13.141	ug/L	0.484	3	6	4199	1	KED
	Cu	63	90.624	ug/L	3.224	3	60	521545	1	KED
	Cu	65	93.639	ug/L	2.365	2	36	270150	0	KED
	Zn	66	99.061	ug/L	2.182	2	66	66270	0	KED
	Zn	67	93.769	ug/L	1.548	1	11	10596	2	KED
	As	75	11.134	ug/L	0.382	3	3	3891	1	KED
	Se	78	0.947	ug/L	0.148	15	13	42	8	KED
	Kr	83		ug/L			49	88	14	Standard
>	In-1	115		ug/L			9463	9425	5	KED
	Cd	111	0.367	ug/L	0.054	14	3	122	9	KED
	Cd	114	0.337	ug/L	0.064	19	1	283	14	KED
>	In	115		ug/L			431494	441213	2	Standard
	Ag	107	0.265	ug/L	0.004	1	47	4810	2	Standard
	Ba	135	25.421	ug/L	0.382	1	56	137442	0	Standard
	Ba	137	24.608	ug/L	0.781	3	82	251767	3	Standard
>	Tb	159		ug/L			190968	216292	2	Standard
	Pb	208	22.187	ug/L	0.501	2	196	1687900	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-09
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:26:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	38042	9	Standard
>	Sc	45		ug/L			699560	830400	2	Standard
	Cr	52	16.717	ug/L	0.185	1	21056	382161	1	Standard
	Cr	53	16.527	ug/L	0.275	1	160	41240	0	Standard
	Mn	55	379.747	ug/L	14.770	3	394	12424731	3	Standard
>	Ge	72		ug/L			43630	43215	1	KED
	Ni	60	16.584	ug/L	0.626	3	50	32941	2	KED
	Ni	62	17.038	ug/L	0.722	4	6	5366	5	KED
	Cu	63	36.945	ug/L	0.797	2	60	209595	1	KED
	Cu	65	37.387	ug/L	0.574	1	36	106336	2	KED
	Zn	66	94.323	ug/L	3.853	4	66	62174	3	KED
	Zn	67	89.266	ug/L	2.230	2	11	9939	2	KED
	As	75	8.363	ug/L	0.207	2	3	2881	1	KED
	Se	78	1.036	ug/L	0.137	13	13	44	10	KED
	Kr	83		ug/L			49	112	19	Standard
>	In-1	115		ug/L			9463	9368	3	KED
	Cd	111	0.106	ug/L	0.010	9	3	37	10	KED
	Cd	114	0.088	ug/L	0.004	4	1	75	7	KED
>	In	115		ug/L			431494	452848	2	Standard
	Ag	107	0.096	ug/L	0.004	4	47	1810	3	Standard
	Ba	135	24.468	ug/L	0.414	1	56	135780	1	Standard
	Ba	137	23.015	ug/L	1.184	5	82	241605	4	Standard
>	Tb	159		ug/L			190968	212323	3	Standard
	Pb	208	11.720	ug/L	0.476	4	196	874656	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-02
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:30:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	39956	7	Standard
>	Sc	45		ug/L			699560	838920	2	Standard
	Cr	52	14.598	ug/L	0.249	1	21056	340316	1	Standard
	Cr	53	14.479	ug/L	0.061	0	160	36537	2	Standard
	Mn	55	143.833	ug/L	2.037	1	394	4754534	1	Standard
>	Ge	72		ug/L			43630	43127	1	KED
	Ni	60	12.591	ug/L	0.251	1	50	24973	1	KED
	Ni	62	12.842	ug/L	0.444	3	6	4036	2	KED
	Cu	63	34.279	ug/L	0.445	1	60	194081	1	KED
	Cu	65	34.485	ug/L	0.190	0	36	97880	1	KED
	Zn	66	70.277	ug/L	1.439	2	66	46258	2	KED
	Zn	67	67.789	ug/L	2.002	2	11	7534	2	KED
	As	75	6.081	ug/L	0.040	0	3	2092	1	KED
	Se	78	1.242	ug/L	0.187	15	13	50	10	KED
	Kr	83		ug/L			49	98	26	Standard
>	In-1	115		ug/L			9463	9081	1	KED
	Cd	111	0.174	ug/L	0.023	13	3	58	11	KED
	Cd	114	0.183	ug/L	0.014	7	1	149	6	KED
>	In	115		ug/L			431494	433058	3	Standard
	Ag	107	0.196	ug/L	0.020	10	47	3488	7	Standard
	Ba	135	69.342	ug/L	2.235	3	56	367707	0	Standard
	Ba	137	65.995	ug/L	1.643	2	82	662392	2	Standard
>	Tb	159		ug/L			190968	213419	1	Standard
	Pb	208	16.380	ug/L	0.514	3	196	1229526	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0442-DUP1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:35:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	37966	4	Standard
>	Sc	45		ug/L			699560	837961	2	Standard
	Cr	52	14.546	ug/L	0.074	0	21056	338875	2	Standard
	Cr	53	14.330	ug/L	0.230	1	160	36125	3	Standard
	Mn	55	137.435	ug/L	1.530	1	394	4538084	1	Standard
>	Ge	72		ug/L			43630	42202	1	KED
	Ni	60	12.368	ug/L	0.131	1	50	24011	1	KED
	Ni	62	12.870	ug/L	0.115	0	6	3959	1	KED
	Cu	63	34.109	ug/L	0.460	1	60	188971	0	KED
	Cu	65	35.038	ug/L	0.570	1	36	97306	0	KED
	Zn	66	68.425	ug/L	1.793	2	66	44068	2	KED
	Zn	67	68.555	ug/L	1.046	1	11	7457	2	KED
	As	75	6.038	ug/L	0.128	2	3	2033	1	KED
	Se	78	1.275	ug/L	0.204	16	13	50	12	KED
	Kr	83		ug/L			49	86	4	Standard
>	In-1	115		ug/L			9463	9033	1	KED
	Cd	111	0.197	ug/L	0.013	6	3	65	6	KED
	Cd	114	0.220	ug/L	0.002	0	1	178	1	KED
>	In	115		ug/L			431494	435030	1	Standard
	Ag	107	0.186	ug/L	0.002	1	47	3338	0	Standard
	Ba	135	60.986	ug/L	1.708	2	56	325152	3	Standard
	Ba	137	59.970	ug/L	0.943	1	82	604830	1	Standard
>	Tb	159		ug/L			190968	219747	2	Standard
	Pb	208	16.210	ug/L	0.450	2	196	1252732	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0442-MS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:40:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	36880	3	Standard
>	Sc	45		ug/L			699560	837078	4	Standard
	Cr	52	32.103	ug/L	0.636	1	21056	716500	3	Standard
	Cr	53	32.176	ug/L	1.171	3	160	80691	1	Standard
	Mn	55	150.085	ug/L	4.695	3	394	4946961	1	Standard
>	Ge	72		ug/L			43630	42296	0	KED
	Ni	60	33.157	ug/L	0.272	0	50	64431	1	KED
	Ni	62	33.608	ug/L	1.015	3	6	10352	3	KED
	Cu	63	54.798	ug/L	0.729	1	60	304241	0	KED
	Cu	65	54.756	ug/L	1.382	2	36	152389	2	KED
	Zn	66	130.789	ug/L	1.511	1	66	84377	1	KED
	Zn	67	123.723	ug/L	2.771	2	11	13479	2	KED
	As	75	26.785	ug/L	0.476	1	3	9025	1	KED
	Se	78	70.390	ug/L	0.937	1	13	2096	0	KED
	Kr	83		ug/L			49	101	9	Standard
>	In-1	115		ug/L			9463	9173	0	KED
	Cd	111	20.719	ug/L	0.171	0	3	6594	0	KED
	Cd	114	20.862	ug/L	0.397	1	1	17088	1	KED
>	In	115		ug/L			431494	439821	0	Standard
	Ag	107	9.656	ug/L	0.136	1	47	172850	1	Standard
	Ba	135	80.079	ug/L	1.412	1	56	431559	2	Standard
	Ba	137	76.265	ug/L	0.253	0	82	777725	1	Standard
>	Tb	159		ug/L			190968	210791	1	Standard
	Pb	208	35.913	ug/L	0.836	2	196	2662694	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0442-MSD1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:45:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	35225	4	Standard
>	Sc	45		ug/L			699560	837132	2	Standard
	Cr	52	34.307	ug/L	1.142	3	21056	764053	3	Standard
	Cr	53	34.085	ug/L	0.796	2	160	85531	0	Standard
	Mn	55	156.547	ug/L	1.233	0	394	5164589	2	Standard
>	Ge	72		ug/L			43630	41621	1	KED
	Ni	60	34.936	ug/L	0.167	0	50	66797	1	KED
	Ni	62	35.258	ug/L	0.184	0	6	10685	1	KED
	Cu	63	57.041	ug/L	0.456	0	60	311667	2	KED
	Cu	65	59.267	ug/L	2.572	4	36	162224	2	KED
	Zn	66	136.759	ug/L	6.305	4	66	86764	2	KED
	Zn	67	134.357	ug/L	1.962	1	11	14400	0	KED
	As	75	27.816	ug/L	0.566	2	3	9221	0	KED
	Se	78	72.726	ug/L	2.265	3	13	2129	1	KED
	Kr	83		ug/L			49	97	12	Standard
>	In-1	115		ug/L			9463	8857	2	KED
	Cd	111	22.054	ug/L	0.663	3	3	6773	0	KED
	Cd	114	21.874	ug/L	0.953	4	1	17286	1	KED
>	In	115		ug/L			431494	439388	0	Standard
	Ag	107	13.259	ug/L	0.291	2	47	237088	1	Standard
	Ba	135	88.258	ug/L	1.803	2	56	475172	2	Standard
	Ba	137	85.837	ug/L	2.007	2	82	874398	2	Standard
>	Tb	159		ug/L			190968	218435	0	Standard
	Pb	208	36.313	ug/L	0.662	1	196	2790464	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0442-PS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 20:49:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	40350	7	Standard
>	Sc	45		ug/L			699560	837376	2	Standard
	Cr	52	36.379	ug/L	0.738	2	21056	809335	4	Standard
	Cr	53	35.862	ug/L	0.843	2	160	90048	4	Standard
	Mn	55	164.579	ug/L	0.515	0	394	5431737	2	Standard
>	Ge	72		ug/L			43630	42558	0	KED
	Ni	60	37.195	ug/L	0.223	0	50	72718	0	KED
	Ni	62	39.051	ug/L	1.180	3	6	12100	2	KED
	Cu	63	58.569	ug/L	1.122	1	60	327200	1	KED
	Cu	65	59.607	ug/L	0.327	0	36	166923	0	KED
	Zn	66	146.024	ug/L	1.777	1	66	94776	0	KED
	Zn	67	140.877	ug/L	6.277	4	11	15440	4	KED
	As	75	30.954	ug/L	0.414	1	3	10495	1	KED
	Se	78	78.992	ug/L	1.116	1	13	2365	1	KED
	Kr	83		ug/L			49	111	10	Standard
>	In-1	115		ug/L			9463	8723	3	KED
	Cd	111	25.627	ug/L	1.036	4	3	7748	0	KED
	Cd	114	25.341	ug/L	0.674	2	1	19727	0	KED
>	In	115		ug/L			431494	442687	4	Standard
	Ag	107	27.779	ug/L	1.535	5	47	499620	1	Standard
	Ba	135	81.461	ug/L	5.305	6	56	441182	4	Standard
	Ba	137	81.485	ug/L	4.958	6	82	834939	2	Standard
>	Tb	159		ug/L			190968	215675	1	Standard
	Pb	208	39.122	ug/L	1.011	2	196	2967750	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL7
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 20:54:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	21559	2	Standard
⌈>	**Sc**	**45**		ug/L			699560	709397	1	Standard
|	**Cr**	**52**	**0.048**	ug/L	0.027	56	21056	22218	1	Standard
|	**Cr**	**53**	**-0.009**	ug/L	0.001	16	160	143	2	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.001	66	394	433	4	Standard
⌈>	**Ge**	**72**		ug/L			43630	42607	1	KED
|	**Ni**	**60**	**-0.016**	ug/L	0.001	4	50	18	5	KED
|	**Ni**	**62**	**-0.022**	ug/L	0.000	0	6	0		KED
|	**Cu**	**63**	**0.001**	ug/L	0.002	120	60	66	12	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.003	86	36	27	28	KED
|	**Zn**	**66**	**-0.048**	ug/L	0.012	24	66	33	23	KED
|	**Zn**	**67**	**-0.026**	ug/L	0.011	43	11	8	13	KED
|	**As**	**75**	**0.001**	ug/L	0.002	187	3	4	19	KED
⌊	**Se**	**78**	**0.113**	ug/L	0.115	102	13	16	21	KED
	Kr	**83**		ug/L			49	53	16	Standard
⌈>	**In-1**	**115**		ug/L			9463	9136	3	KED
|	**Cd**	**111**	**0.000**	ug/L	0.010	5412	3	3	95	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.001	7	1	7	2	KED
⌈>	**In**	**115**		ug/L			431494	442638	0	Standard
|	**Ag**	**107**	**0.005**	ug/L	0.001	14	47	137	8	Standard
|	**Ba**	**135**	**-0.006**	ug/L	0.001	9	56	22	14	Standard
⌊	**Ba**	**137**	**-0.004**	ug/L	0.000	4	82	40	5	Standard
⌈>	**Tb**	**159**		ug/L			190968	196898	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	30	196	280	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 20:59:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	21059	6	Standard
⌈>	**Sc**	**45**		ug/L			699560	732963	5	Standard
|	**Cr**	**52**	**49.417**	ug/L	1.178	2	21056	953292	3	Standard
|	**Cr**	**53**	**47.922**	ug/L	1.571	3	160	105149	3	Standard
⌊	**Mn**	**55**	**46.302**	ug/L	1.361	2	394	1336543	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	42664	1	KED
|	**Ni**	**60**	**47.999**	ug/L	0.477	0	50	94052	0	KED
|	**Ni**	**62**	**49.044**	ug/L	0.499	1	6	15234	2	KED
|	**Cu**	**63**	**47.578**	ug/L	1.369	2	60	266422	2	KED
|	**Cu**	**65**	**48.878**	ug/L	0.765	1	36	137203	0	KED
|	**Zn**	**66**	**48.849**	ug/L	1.680	3	66	31816	1	KED
|	**Zn**	**67**	**49.734**	ug/L	2.512	5	11	5470	4	KED
|	**As**	**75**	**48.766**	ug/L	0.558	1	3	16572	0	KED
⌊	**Se**	**78**	**49.750**	ug/L	0.427	0	13	1498	2	KED
	Kr	**83**		ug/L			49	64	37	Standard
⌈>	**In-1**	**115**		ug/L			9463	8899	2	KED
|	**Cd**	**111**	**50.118**	ug/L	1.458	2	3	15462	1	KED
⌊	**Cd**	**114**	**48.513**	ug/L	0.796	1	1	38538	0	KED
⌈>	**In**	**115**		ug/L			431494	453118	1	Standard
|	**Ag**	**107**	**51.071**	ug/L	1.209	2	47	941435	1	Standard
|	**Ba**	**135**	**49.336**	ug/L	2.930	5	56	273794	4	Standard
⌊	**Ba**	**137**	**49.367**	ug/L	2.172	4	82	518461	3	Standard
⌈>	**Tb**	**159**		ug/L			190968	200732	2	Standard
⌊	**Pb**	**208**	**47.298**	ug/L	2.045	4	196	3337391	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 21:06:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	21098	1	Standard
⌈>	**Sc**	**45**		ug/L			699560	754626	2	Standard
|	**Cr**	**52**	**0.033**	ug/L	0.014	43	21056	23350	1	Standard
|	**Cr**	**53**	**-0.015**	ug/L	0.006	41	160	138	12	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.000	15	394	454	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	44264	1	KED
|	**Ni**	**60**	**-0.011**	ug/L	0.004	35	50	28	29	KED
|	**Ni**	**62**	**-0.006**	ug/L	0.012	194	6	5	78	KED
|	**Cu**	**63**	**0.000**	ug/L	0.002	984	60	62	16	KED
|	**Cu**	**65**	**0.000**	ug/L	0.003	5514	36	37	22	KED
|	**Zn**	**66**	**-0.029**	ug/L	0.010	33	66	47	14	KED
|	**Zn**	**67**	**-0.029**	ug/L	0.027	91	11	8	35	KED
|	**As**	**75**	**0.002**	ug/L	0.001	65	3	4	10	KED
⌊	**Se**	**78**	**0.127**	ug/L	0.072	56	13	17	13	KED
	Kr	**83**		ug/L			49	57	9	Standard
⌈>	**In-1**	**115**		ug/L			9463	9512	3	KED
|	**Cd**	**111**	**0.005**	ug/L	0.012	240	3	5	75	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.004	84	1	5	59	KED
⌈>	**In**	**115**		ug/L			431494	454533	4	Standard
|	**Ag**	**107**	**0.010**	ug/L	0.003	28	47	231	18	Standard
|	**Ba**	**135**	**-0.006**	ug/L	0.001	19	56	25	24	Standard
⌊	**Ba**	**137**	**-0.004**	ug/L	0.002	43	82	42	41	Standard
⌈>	**Tb**	**159**		ug/L			190968	201262	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	39	196	273	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0574-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 21:11:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	31412	5	Standard
>	Sc	45		ug/L			699560	764632	4	Standard
	Cr	52	0.080	ug/L	0.044	54	21056	24575	4	Standard
	Cr	53	0.035	ug/L	0.013	37	160	254	12	Standard
	Mn	55	0.111	ug/L	0.006	5	394	3768	1	Standard
>	Ge	72		ug/L			43630	44965	1	KED
	Ni	60	0.010	ug/L	0.005	50	50	73	13	KED
	Ni	62	0.023	ug/L	0.015	65	6	14	32	KED
	Cu	63	0.057	ug/L	0.002	3	60	396	1	KED
	Cu	65	0.059	ug/L	0.012	20	36	211	17	KED
	Zn	66	0.670	ug/L	0.049	7	66	527	7	KED
	Zn	67	0.607	ug/L	0.151	24	11	81	20	KED
	As	75	0.006	ug/L	0.003	58	3	6	20	KED
	Se	78	0.165	ug/L	0.190	115	13	19	31	KED
	Kr	83		ug/L			49	46	29	Standard
>	In-1	115		ug/L			9463	9487	2	KED
	Cd	111	0.017	ug/L	0.020	114	3	9	72	KED
	Cd	114	0.005	ug/L	0.005	111	1	5	80	KED
>	In	115		ug/L			431494	477515	1	Standard
	Ag	107	0.003	ug/L	0.001	24	47	113	12	Standard
	Ba	135	0.075	ug/L	0.006	8	56	502	6	Standard
	Ba	137	0.079	ug/L	0.003	3	82	970	3	Standard
>	Tb	159		ug/L			190968	207155	1	Standard
	Pb	208	0.009	ug/L	0.001	11	196	875	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0574-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 21:16:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	31724	1	Standard
>	Sc	45		ug/L			699560	762314	3	Standard
	Cr	52	24.373	ug/L	0.332	1	21056	500915	3	Standard
	Cr	53	24.313	ug/L	0.239	0	160	55618	3	Standard
	Mn	55	23.189	ug/L	0.682	2	394	696529	1	Standard
>	Ge	72		ug/L			43630	44239	1	KED
	Ni	60	23.923	ug/L	0.364	1	50	48641	2	KED
	Ni	62	24.697	ug/L	1.121	4	6	7956	4	KED
	Cu	63	23.521	ug/L	0.750	3	60	136598	2	KED
	Cu	65	24.163	ug/L	0.527	2	36	70350	1	KED
	Zn	66	78.231	ug/L	1.031	1	66	52813	1	KED
	Zn	67	75.726	ug/L	2.488	3	11	8631	2	KED
	As	75	24.298	ug/L	0.148	0	3	8563	0	KED
	Se	78	79.565	ug/L	1.376	1	13	2476	0	KED
	Kr	83		ug/L			49	57	14	Standard
>	In-1	115		ug/L			9463	9457	1	KED
	Cd	111	23.578	ug/L	0.490	2	3	7735	1	KED
	Cd	114	23.696	ug/L	0.238	1	1	20009	0	KED
>	In	115		ug/L			431494	445463	0	Standard
	Ag	107	26.534	ug/L	0.230	0	47	481000	1	Standard
	Ba	135	25.231	ug/L	0.484	1	56	137765	2	Standard
	Ba	137	24.365	ug/L	0.967	3	82	251686	3	Standard
>	Tb	159		ug/L			190968	204816	2	Standard
	Pb	208	23.719	ug/L	0.606	2	196	1708610	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-10
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 21:20:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	34202	3	Standard
⌈>	Sc	45		ug/L			699560	825004	3	Standard
|	Cr	52	16.449	ug/L	0.325	1	21056	373936	2	Standard
|	Cr	53	15.777	ug/L	0.323	2	160	39117	2	Standard
⌊	Mn	55	490.616	ug/L	16.335	3	394	15945052	3	Standard
⌈>	Ge	72		ug/L			43630	44269	2	KED
|	Ni	60	12.985	ug/L	0.351	2	50	26428	0	KED
|	Ni	62	13.027	ug/L	0.806	6	6	4199	3	KED
|	Cu	63	21.384	ug/L	0.682	3	60	124245	1	KED
|	Cu	65	21.625	ug/L	0.540	2	36	62994	1	KED
|	Zn	66	38.713	ug/L	0.910	2	66	26175	0	KED
|	Zn	67	37.645	ug/L	1.909	5	11	4297	2	KED
|	As	75	3.192	ug/L	0.068	2	3	1129	2	KED
⌊	Se	78	0.704	ug/L	0.133	18	13	35	10	KED
	Kr	83		ug/L			49	95	4	Standard
⌈>	In-1	115		ug/L			9463	9180	1	KED
|	Cd	111	0.036	ug/L	0.011	31	3	14	25	KED
⌊	Cd	114	0.046	ug/L	0.012	25	1	39	23	KED
⌈>	In	115		ug/L			431494	445598	3	Standard
|	Ag	107	0.043	ug/L	0.001	3	47	833	3	Standard
|	Ba	135	14.930	ug/L	0.525	3	56	81500	0	Standard
⌊	Ba	137	14.601	ug/L	0.383	2	82	150827	1	Standard
⌈>	Tb	159		ug/L			190968	208187	1	Standard
⌊	Pb	208	2.502	ug/L	0.026	1	196	183420	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-13
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 21:25:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			19019	35393	2	Standard
> Sc	45		ug/L			699560	875686	3	Standard
Cr	52	9.688	ug/L	0.243	2	21056	244558	1	Standard
Cr	53	9.725	ug/L	0.059	0	160	25679	2	Standard
Mn	55	440.766	ug/L	11.514	2	394	15206518	2	Standard
> Ge	72		ug/L			43630	43885	1	KED
Ni	60	12.934	ug/L	0.138	1	50	26111	2	KED
Ni	62	13.820	ug/L	0.715	5	6	4419	4	KED
Cu	63	107.877	ug/L	1.000	0	60	621381	0	KED
Cu	65	110.353	ug/L	2.339	2	36	318586	1	KED
Zn	66	121.526	ug/L	3.899	3	66	81328	2	KED
Zn	67	115.548	ug/L	5.453	4	11	13057	3	KED
As	75	35.170	ug/L	0.334	0	3	12295	0	KED
Se	78	1.928	ug/L	0.330	17	13	72	13	KED
Kr	83		ug/L			49	140	10	Standard
> In-1	115		ug/L			9463	9505	2	KED
Cd	111	0.153	ug/L	0.011	7	3	53	8	KED
Cd	114	0.124	ug/L	0.015	11	1	107	13	KED
> In	115		ug/L			431494	458456	2	Standard
Ag	107	0.121	ug/L	0.001	0	47	2314	3	Standard
Ba	135	22.630	ug/L	1.108	4	56	127041	1	Standard
Ba	137	21.864	ug/L	0.412	1	82	232381	1	Standard
> Tb	159		ug/L			190968	233827	2	Standard
Pb	208	17.096	ug/L	0.448	2	196	1405808	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-04
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 21:30:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	40443	5	Standard
⌈>	Sc	45		ug/L			699560	826520	1	Standard
|	Cr	52	9.448	ug/L	0.355	3	21056	225772	2	Standard
|	Cr	53	9.228	ug/L	0.307	3	160	23004	2	Standard
⌊	Mn	55	94.658	ug/L	3.076	3	394	3082858	2	Standard
⌈>	Ge	72		ug/L			43630	44405	0	KED
|	Ni	60	5.824	ug/L	0.213	3	50	11924	3	KED
|	Ni	62	5.855	ug/L	0.093	1	6	1899	1	KED
|	Cu	63	13.071	ug/L	0.315	2	60	76241	2	KED
|	Cu	65	13.560	ug/L	0.513	3	36	39648	3	KED
|	Zn	66	28.846	ug/L	0.616	2	66	19588	1	KED
|	Zn	67	28.030	ug/L	0.876	3	11	3214	3	KED
|	As	75	3.309	ug/L	0.186	5	3	1174	5	KED
⌊	Se	78	1.012	ug/L	0.129	12	13	45	8	KED
	Kr	83		ug/L			49	76	12	Standard
⌈>	In-1	115		ug/L			9463	9426	2	KED
|	Cd	111	0.028	ug/L	0.013	45	3	12	34	KED
⌊	Cd	114	0.033	ug/L	0.010	30	1	29	30	KED
⌈>	In	115		ug/L			431494	459768	0	Standard
|	Ag	107	0.050	ug/L	0.005	9	47	991	8	Standard
|	Ba	135	21.127	ug/L	0.610	2	56	119061	2	Standard
⌊	Ba	137	20.374	ug/L	0.727	3	82	217231	3	Standard
⌈>	Tb	159		ug/L			190968	225743	0	Standard
⌊	Pb	208	4.768	ug/L	0.030	0	196	378884	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-06
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 21:35:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	38069	5	Standard
>	Sc	45		ug/L			699560	816569	4	Standard
	Cr	52	10.935	ug/L	0.342	3	21056	254145	1	Standard
	Cr	53	10.969	ug/L	0.326	2	160	26973	3	Standard
	Mn	55	303.797	ug/L	6.808	2	394	9770997	2	Standard
>	Ge	72		ug/L			43630	44852	1	KED
	Ni	60	6.471	ug/L	0.171	2	50	13373	1	KED
	Ni	62	6.656	ug/L	0.216	3	6	2179	2	KED
	Cu	63	10.916	ug/L	0.188	1	60	64314	0	KED
	Cu	65	11.038	ug/L	0.112	1	36	32608	1	KED
	Zn	66	30.030	ug/L	0.504	1	66	20597	2	KED
	Zn	67	28.468	ug/L	1.112	3	11	3296	2	KED
	As	75	2.306	ug/L	0.075	3	3	827	2	KED
	Se	78	0.721	ug/L	0.117	16	13	36	8	KED
	Kr	83		ug/L			49	107	29	Standard
>	In-1	115		ug/L			9463	9565	2	KED
	Cd	111	0.039	ug/L	0.007	17	3	16	14	KED
	Cd	114	0.026	ug/L	0.006	21	1	23	17	KED
>	In	115		ug/L			431494	461623	3	Standard
	Ag	107	0.047	ug/L	0.003	5	47	935	3	Standard
	Ba	135	12.383	ug/L	0.278	2	56	70074	3	Standard
	Ba	137	11.887	ug/L	0.831	6	82	127108	4	Standard
>	Tb	159		ug/L			190968	219292	1	Standard
	Pb	208	5.827	ug/L	0.145	2	196	449607	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-08
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 21:39:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			19019	39632	3	Standard
>	Sc	45		ug/L			699560	851730	3	Standard
	Cr	52	15.638	ug/L	0.559	3	21056	368109	2	Standard
	Cr	53	15.480	ug/L	0.382	2	160	39621	2	Standard
	Mn	55	127.278	ug/L	4.390	3	394	4268812	0	Standard
>	Ge	72		ug/L			43630	45090	0	KED
	Ni	60	11.589	ug/L	0.194	1	50	24041	1	KED
	Ni	62	11.873	ug/L	0.360	3	6	3902	2	KED
	Cu	63	29.766	ug/L	0.851	2	60	176216	2	KED
	Cu	65	30.172	ug/L	0.987	3	36	89533	2	KED
	Zn	66	66.030	ug/L	0.296	0	66	45444	0	KED
	Zn	67	62.844	ug/L	1.974	3	11	7304	2	KED
	As	75	6.743	ug/L	0.161	2	3	2425	2	KED
	Se	78	0.940	ug/L	0.076	8	13	43	5	KED
	Kr	83		ug/L			49	96	4	Standard
>	In-1	115		ug/L			9463	9225	1	KED
	Cd	111	0.245	ug/L	0.032	12	3	81	11	KED
	Cd	114	0.248	ug/L	0.033	13	1	205	14	KED
>	In	115		ug/L			431494	458813	0	Standard
	Ag	107	0.267	ug/L	0.017	6	47	5030	6	Standard
	Ba	135	31.160	ug/L	1.007	3	56	175216	3	Standard
	Ba	137	30.092	ug/L	0.930	3	82	320175	3	Standard
>	Tb	159		ug/L			190968	225421	0	Standard
	Pb	208	21.014	ug/L	0.226	1	196	1666615	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-11
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 21:44:28
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	33723	6	Standard
⌈>	**Sc**	**45**		ug/L			699560	819867	2	Standard
|	**Cr**	**52**	**8.893**	ug/L	0.284	3	21056	212390	5	Standard
|	**Cr**	**53**	**18.004**	ug/L	15.850	88	160	44161	87	Standard
⌊	**Mn**	**55**	**232.737**	ug/L	2.194	0	394	7518966	1	Standard
⌈>	**Ge**	**72**		ug/L			43630	43327	0	KED
|	**Ni**	**60**	**11.894**	ug/L	0.190	1	50	23709	1	KED
|	**Ni**	**62**	**12.028**	ug/L	0.355	2	6	3799	3	KED
|	**Cu**	**63**	**27.084**	ug/L	0.734	2	60	154052	1	KED
|	**Cu**	**65**	**27.557**	ug/L	0.678	2	36	78574	1	KED
|	**Zn**	**66**	**51.631**	ug/L	0.118	0	66	34158	0	KED
|	**Zn**	**67**	**54.219**	ug/L	1.246	2	11	6056	1	KED
|	**As**	**75**	**2.996**	ug/L	0.099	3	3	1037	3	KED
⌊	**Se**	**78**	**0.907**	ug/L	0.252	27	13	40	19	KED
	Kr	**83**		ug/L			49	155	82	Standard
⌈>	**In-1**	**115**		ug/L			9463	9121	0	KED
|	**Cd**	**111**	**0.073**	ug/L	0.013	18	3	26	16	KED
⌊	**Cd**	**114**	**0.056**	ug/L	0.006	11	1	47	11	KED
⌈>	**In**	**115**		ug/L			431494	446332	5	Standard
|	**Ag**	**107**	**0.050**	ug/L	0.008	15	47	953	11	Standard
|	**Ba**	**135**	**70.560**	ug/L	2.324	3	56	385453	2	Standard
⌊	**Ba**	**137**	**68.667**	ug/L	3.770	5	82	709426	2	Standard
⌈>	**Tb**	**159**		ug/L			190968	206041	3	Standard
⌊	**Pb**	**208**	**4.583**	ug/L	0.089	1	196	332224	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0219-12
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 21:49:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	36401	3	Standard
⌈>	**Sc**	**45**		ug/L			699560	818725	2	Standard
|	**Cr**	**52**	**11.611**	ug/L	0.318	2	21056	269283	3	Standard
|	**Cr**	**53**	**11.863**	ug/L	0.421	3	160	29251	4	Standard
⌊	**Mn**	**55**	**128.329**	ug/L	3.741	2	394	4140816	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	44363	1	KED
|	**Ni**	**60**	**9.797**	ug/L	0.209	2	50	19999	0	KED
|	**Ni**	**62**	**9.850**	ug/L	0.450	4	6	3187	4	KED
|	**Cu**	**63**	**12.809**	ug/L	0.644	5	60	74605	3	KED
|	**Cu**	**65**	**12.945**	ug/L	0.089	0	36	37816	1	KED
|	**Zn**	**66**	**38.283**	ug/L	0.894	2	66	25947	2	KED
|	**Zn**	**67**	**36.884**	ug/L	1.115	3	11	4221	1	KED
|	**As**	**75**	**3.557**	ug/L	0.112	3	3	1260	1	KED
⌊	**Se**	**78**	**0.937**	ug/L	0.089	9	13	42	6	KED
	Kr	**83**		ug/L			49	84	7	Standard
⌈>	**In-1**	**115**		ug/L			9463	9279	2	KED
|	**Cd**	**111**	**0.074**	ug/L	0.005	6	3	27	5	KED
⌊	**Cd**	**114**	**0.080**	ug/L	0.004	5	1	68	7	KED
⌈>	**In**	**115**		ug/L			431494	460826	1	Standard
|	**Ag**	**107**	**0.079**	ug/L	0.004	4	47	1537	3	Standard
|	**Ba**	**135**	**18.055**	ug/L	0.470	2	56	101970	1	Standard
⌊	**Ba**	**137**	**17.713**	ug/L	0.637	3	82	189252	2	Standard
⌈>	**Tb**	**159**		ug/L			190968	216693	2	Standard
⌊	**Pb**	**208**	**6.607**	ug/L	0.073	1	196	503812	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL8
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 21:53:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	21821	4	Standard
⌈>	**Sc**	**45**		ug/L			699560	756187	2	Standard
|	**Cr**	**52**	**-0.019**	ug/L	0.011	55	21056	22383	2	Standard
|	**Cr**	**53**	**-0.012**	ug/L	0.007	59	160	146	13	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.000	53	394	436	3	Standard
⌈>	**Ge**	**72**		ug/L			43630	43528	1	KED
|	**Ni**	**60**	**-0.019**	ug/L	0.002	10	50	12	32	KED
|	**Ni**	**62**	**-0.008**	ug/L	0.014	179	6	4	98	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.002	96	60	51	16	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.002	77	36	28	23	KED
|	**Zn**	**66**	**0.014**	ug/L	0.018	130	66	74	14	KED
|	**Zn**	**67**	**-0.028**	ug/L	0.010	37	11	8	13	KED
|	**As**	**75**	**-0.001**	ug/L	0.006	408	3	3	55	KED
⌊	**Se**	**78**	**0.096**	ug/L	0.102	106	13	16	20	KED
	Kr	**83**		ug/L			49	48	18	Standard
⌈>	**In-1**	**115**		ug/L			9463	8939	7	KED
|	**Cd**	**111**	**0.003**	ug/L	0.006	197	3	4	35	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.004	4448	1	1	188	KED
⌈>	**In**	**115**		ug/L			431494	458378	3	Standard
|	**Ag**	**107**	**-0.001**	ug/L	0.000	59	47	37	19	Standard
|	**Ba**	**135**	**-0.005**	ug/L	0.001	21	56	32	15	Standard
⌊	**Ba**	**137**	**-0.004**	ug/L	0.000	12	82	46	9	Standard
⌈>	**Tb**	**159**		ug/L			190968	199394	1	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	68	196	195	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV9
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 21:58:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	22266	4	Standard
⌈>	**Sc**	**45**		ug/L			699560	750652	3	Standard
|	**Cr**	**52**	**48.449**	ug/L	1.141	2	21056	957965	1	Standard
|	**Cr**	**53**	**48.145**	ug/L	0.827	1	160	108266	2	Standard
⌊	**Mn**	**55**	**46.075**	ug/L	0.857	1	394	1362906	1	Standard
⌈>	**Ge**	**72**		ug/L			43630	42264	2	KED
|	**Ni**	**60**	**49.151**	ug/L	2.199	4	50	95353	2	KED
|	**Ni**	**62**	**49.728**	ug/L	1.034	2	6	15296	0	KED
|	**Cu**	**63**	**48.036**	ug/L	0.725	1	60	266495	1	KED
|	**Cu**	**65**	**49.178**	ug/L	0.557	1	36	136751	1	KED
|	**Zn**	**66**	**50.203**	ug/L	1.242	2	66	32394	1	KED
|	**Zn**	**67**	**48.803**	ug/L	0.721	1	11	5318	0	KED
|	**As**	**75**	**50.666**	ug/L	1.088	2	3	17052	0	KED
⌊	**Se**	**78**	**51.878**	ug/L	0.156	0	13	1547	2	KED
	Kr	**83**		ug/L			49	53	36	Standard
⌈>	**In-1**	**115**		ug/L			9463	9030	2	KED
|	**Cd**	**111**	**48.626**	ug/L	0.925	1	3	15226	1	KED
⌊	**Cd**	**114**	**49.327**	ug/L	1.495	3	1	39757	1	KED
⌈>	**In**	**115**		ug/L			431494	432803	0	Standard
|	**Ag**	**107**	**54.498**	ug/L	0.416	0	47	959780	1	Standard
|	**Ba**	**135**	**52.188**	ug/L	1.144	2	56	276745	1	Standard
⌊	**Ba**	**137**	**51.271**	ug/L	0.441	0	82	514497	0	Standard
⌈>	**Tb**	**159**		ug/L			190968	195035	2	Standard
⌊	**Pb**	**208**	**48.753**	ug/L	1.792	3	196	3343302	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB9
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 22:06:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			19019	20846	6	Standard
⌈>	**Sc**	**45**		ug/L			699560	764966	1	Standard
|	**Cr**	**52**	**0.009**	ug/L	0.037	393	21056	23212	3	Standard
|	**Cr**	**53**	**-0.005**	ug/L	0.006	116	160	163	9	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.000	27	394	441	1	Standard
⌈>	**Ge**	**72**		ug/L			43630	44904	0	KED
|	**Ni**	**60**	**-0.016**	ug/L	0.002	14	50	19	24	KED
|	**Ni**	**62**	**-0.008**	ug/L	0.009	108	6	4	65	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.001	69	60	55	8	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.002	110	36	33	14	KED
|	**Zn**	**66**	**-0.037**	ug/L	0.012	32	66	42	20	KED
|	**Zn**	**67**	**-0.008**	ug/L	0.035	417	11	10	36	KED
|	**As**	**75**	**-0.001**	ug/L	0.003	354	3	3	25	KED
⌊	**Se**	**78**	**0.110**	ug/L	0.006	5	13	17	1	KED
	Kr	**83**		ug/L			49	62	16	Standard
⌈>	**In-1**	**115**		ug/L			9463	9606	3	KED
|	**Cd**	**111**	**0.002**	ug/L	0.002	115	3	4	13	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.002	94	1	3	49	KED
⌈>	**In**	**115**		ug/L			431494	463259	3	Standard
|	**Ag**	**107**	**0.007**	ug/L	0.002	21	47	186	11	Standard
|	**Ba**	**135**	**-0.006**	ug/L	0.002	26	56	24	35	Standard
⌊	**Ba**	**137**	**-0.004**	ug/L	0.001	16	82	40	15	Standard
⌈>	**Tb**	**159**		ug/L			190968	203509	2	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	14	196	237	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments: DEL
Sample Date/Time: Friday, May 19, 2023 22:10:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				21163	5	Standard
>	**Sc**	**45**		ug/L				765035	3	Standard
	Cr	**52**		ug/L				23495	4	Standard
	Cr	**53**		ug/L				145	11	Standard
	Mn	**55**		ug/L				409	3	Standard
>	**Ge**	**72**		ug/L				44602	2	KED
	Ni	**60**		ug/L				19	20	KED
	Ni	**62**		ug/L				4	24	KED
	Cu	**63**		ug/L				53	21	KED
	Cu	**65**		ug/L				26	18	KED
	Zn	**66**		ug/L				37	12	KED
	Zn	**67**		ug/L				7	108	KED
	As	**75**		ug/L				3	33	KED
	Se	**78**		ug/L				17	20	KED
	Kr	**83**		ug/L				60	14	Standard
>	**In-1**	**115**		ug/L				9591	2	KED
	Cd	**111**		ug/L				4	20	KED
	Cd	**114**		ug/L				2	46	KED
>	**In**	**115**		ug/L				453983	3	Standard
	Ag	**107**		ug/L				104	14	Standard
	Ba	**135**		ug/L				29	43	Standard
	Ba	**137**		ug/L				49	17	Standard
>	**Tb**	**159**		ug/L				201225	2	Standard
	Pb	**208**		ug/L				233	22	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVA
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 22:15:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	21915	4	Standard
⌈>	**Sc**	**45**		ug/L			765035	756719	2	Standard
|	**Cr**	**52**	**48.714**	ug/L	0.434	0	23495	971749	1	Standard
|	**Cr**	**53**	**48.164**	ug/L	0.891	1	145	109161	0	Standard
⌊	**Mn**	**55**	**46.076**	ug/L	1.178	2	409	1374913	4	Standard
⌈>	**Ge**	**72**		ug/L			44602	44025	1	KED
|	**Ni**	**60**	**47.562**	ug/L	0.910	1	19	96129	0	KED
|	**Ni**	**62**	**47.404**	ug/L	1.005	2	4	15188	0	KED
|	**Cu**	**63**	**46.672**	ug/L	0.664	1	53	269752	2	KED
|	**Cu**	**65**	**47.769**	ug/L	0.869	1	26	138358	1	KED
|	**Zn**	**66**	**50.201**	ug/L	1.934	3	37	33708	2	KED
|	**Zn**	**67**	**49.346**	ug/L	2.203	4	7	5596	3	KED
|	**As**	**75**	**48.516**	ug/L	0.827	1	3	17011	0	KED
⌊	**Se**	**78**	**49.749**	ug/L	1.092	2	17	1549	0	KED
	Kr	**83**		ug/L			60	54	12	Standard
⌈>	**In-1**	**115**		ug/L			9591	9336	3	KED
|	**Cd**	**111**	**47.659**	ug/L	1.801	3	4	15422	1	KED
⌊	**Cd**	**114**	**46.947**	ug/L	2.437	5	2	39096	2	KED
⌈>	**In**	**115**		ug/L			453983	448936	2	Standard
|	**Ag**	**107**	**53.206**	ug/L	2.335	4	104	971337	2	Standard
|	**Ba**	**135**	**49.388**	ug/L	0.834	1	29	271666	3	Standard
⌊	**Ba**	**137**	**48.556**	ug/L	0.768	1	49	505357	2	Standard
⌈>	**Tb**	**159**		ug/L			201225	200259	2	Standard
⌊	**Pb**	**208**	**47.827**	ug/L	2.117	4	233	3366854	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBA
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 22:23:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	21374	2	Standard
⌈>	**Sc**	**45**		ug/L			765035	774530	3	Standard
|	**Cr**	**52**	**-0.007**	ug/L	0.013	195	23495	23652	2	Standard
|	**Cr**	**53**	**-0.001**	ug/L	0.004	531	145	145	8	Standard
⌊	**Mn**	**55**	**-0.000**	ug/L	0.001	1189	409	412	7	Standard
⌈>	**Ge**	**72**		ug/L			44602	44864	2	KED
|	**Ni**	**60**	**0.000**	ug/L	0.002	569	19	20	14	KED
|	**Ni**	**62**	**0.006**	ug/L	0.015	254	4	6	75	KED
|	**Cu**	**63**	**0.001**	ug/L	0.001	122	53	57	8	KED
|	**Cu**	**65**	**0.000**	ug/L	0.002	541	26	27	21	KED
|	**Zn**	**66**	**0.015**	ug/L	0.007	50	37	47	10	KED
|	**Zn**	**67**	**0.033**	ug/L	0.017	52	7	11	16	KED
|	**As**	**75**	**0.010**	ug/L	0.006	58	3	7	30	KED
⌊	**Se**	**78**	**0.125**	ug/L	0.109	87	17	21	15	KED
	Kr	**83**		ug/L			60	62	14	Standard
⌈>	**In-1**	**115**		ug/L			9591	9738	2	KED
|	**Cd**	**111**	**0.005**	ug/L	0.007	129	4	6	37	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.001	64	2	4	25	KED
⌈>	**In**	**115**		ug/L			453983	451457	2	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.002	40	104	214	20	Standard
|	**Ba**	**135**	**-0.001**	ug/L	0.001	137	29	24	20	Standard
⌊	**Ba**	**137**	**-0.000**	ug/L	0.001	323	49	46	16	Standard
⌈>	**Tb**	**159**		ug/L			201225	206281	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	543	233	243	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0185-01
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, May 19, 2023 22:27:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	29140	6	Standard
>	Sc	45		ug/L			765035	753013	3	Standard
	Cr	52	54.999	ug/L	2.182	3	23495	1088829	5	Standard
	Cr	53	55.495	ug/L	1.631	2	145	125099	2	Standard
	Mn	55	2.829	ug/L	0.075	2	409	84336	3	Standard
>	Ge	72		ug/L			44602	42701	1	KED
	Ni	60	2.406	ug/L	0.085	3	19	4734	2	KED
	Ni	62	2.470	ug/L	0.094	3	4	772	4	KED
	Cu	63	7.277	ug/L	0.109	1	53	40830	0	KED
	Cu	65	7.417	ug/L	0.269	3	26	20855	2	KED
	Zn	66	12.942	ug/L	0.272	2	37	8457	1	KED
	Zn	67	12.428	ug/L	0.389	3	7	1373	4	KED
	As	75	0.132	ug/L	0.008	6	3	48	5	KED
	Se	78	0.035	ug/L	0.114	322	17	17	18	KED
	Kr	83		ug/L			60	63	16	Standard
>	In-1	115		ug/L			9591	8893	0	KED
	Cd	111	0.289	ug/L	0.015	5	4	93	4	KED
	Cd	114	0.296	ug/L	0.048	16	2	237	16	KED
>	In	115		ug/L			453983	416922	1	Standard
	Ag	107	0.018	ug/L	0.003	15	104	394	10	Standard
	Ba	135	2.075	ug/L	0.074	3	29	10622	2	Standard
	Ba	137	2.035	ug/L	0.108	5	49	19709	4	Standard
>	Tb	159		ug/L			201225	192744	0	Standard
	Pb	208	0.160	ug/L	0.003	2	233	11064	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0307-01
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, May 19, 2023 22:32:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	24907	7	Standard
>	Sc	45		ug/L			765035	634073	2	Standard
	Cr	52	5.864	ug/L	0.129	2	23495	115173	3	Standard
	Cr	53	5.889	ug/L	0.113	1	145	11294	3	Standard
	Mn	55	11.559	ug/L	0.374	3	409	289252	4	Standard
>	Ge	72		ug/L			44602	36200	1	KED
	Ni	60	1.613	ug/L	0.057	3	19	2696	2	KED
	Ni	62	1.589	ug/L	0.142	8	4	422	8	KED
	Cu	63	3.615	ug/L	0.118	3	53	17216	2	KED
	Cu	65	3.681	ug/L	0.028	0	26	8788	1	KED
	Zn	66	5.169	ug/L	0.252	4	37	2880	3	KED
	Zn	67	4.716	ug/L	0.364	7	7	445	8	KED
	As	75	0.052	ug/L	0.013	24	3	18	18	KED
	Se	78	0.130	ug/L	0.064	49	17	17	7	KED
	Kr	83		ug/L			60	56	7	Standard
>	In-1	115		ug/L			9591	7854	0	KED
	Cd	111	0.004	ug/L	0.005	125	4	5	28	KED
	Cd	114	0.004	ug/L	0.003	63	2	5	38	KED
>	In	115		ug/L			453983	392832	3	Standard
	Ag	107	-0.001	ug/L	0.001	44	104	69	11	Standard
	Ba	135	0.649	ug/L	0.045	6	29	3141	3	Standard
	Ba	137	0.632	ug/L	0.011	1	49	5796	2	Standard
>	Tb	159		ug/L			201225	189064	2	Standard
	Pb	208	0.017	ug/L	0.001	3	233	1325	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0307-02
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, May 19, 2023 22:37:30
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	25118	3	Standard
>	Sc	45		ug/L			765035	594068	3	Standard
	Cr	52	11.376	ug/L	0.285	2	23495	192109	3	Standard
	Cr	53	11.414	ug/L	0.092	0	145	20403	4	Standard
	Mn	55	11.235	ug/L	0.214	1	409	263270	3	Standard
>	Ge	72		ug/L			44602	34328	1	KED
	Ni	60	2.528	ug/L	0.089	3	19	3997	2	KED
	Ni	62	2.549	ug/L	0.257	10	4	639	8	KED
	Cu	63	3.432	ug/L	0.032	0	53	15504	1	KED
	Cu	65	3.567	ug/L	0.109	3	26	8073	1	KED
	Zn	66	6.681	ug/L	0.234	3	37	3523	2	KED
	Zn	67	6.535	ug/L	0.539	8	7	582	7	KED
	As	75	0.066	ug/L	0.003	3	3	20	4	KED
	Se	78	0.030	ug/L	0.061	205	17	14	12	KED
	Kr	83		ug/L			60	64	16	Standard
>	In-1	115		ug/L			9591	7290	0	KED
	Cd	111	0.006	ug/L	0.012	210	4	5	60	KED
	Cd	114	0.008	ug/L	0.003	32	2	7	23	KED
>	In	115		ug/L			453983	380669	0	Standard
	Ag	107	0.001	ug/L	0.000	43	104	101	6	Standard
	Ba	135	0.709	ug/L	0.030	4	29	3332	4	Standard
	Ba	137	0.687	ug/L	0.027	3	49	6101	4	Standard
>	Tb	159		ug/L			201225	183079	1	Standard
	Pb	208	0.058	ug/L	0.001	1	233	3942	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0307-03
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, May 19, 2023 22:43:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	26693	3	Standard
>	Sc	45		ug/L			765035	583173	3	Standard
	Cr	52	4.055	ug/L	0.039	0	23495	78774	3	Standard
	Cr	53	4.059	ug/L	0.098	2	145	7191	2	Standard
	Mn	55	10.356	ug/L	0.128	1	409	238272	2	Standard
>	Ge	72		ug/L			44602	33781	1	KED
	Ni	60	3.949	ug/L	0.061	1	19	6139	2	KED
	Ni	62	3.765	ug/L	0.141	3	4	928	4	KED
	Cu	63	3.495	ug/L	0.055	1	53	15536	1	KED
	Cu	65	3.528	ug/L	0.028	0	26	7860	0	KED
	Zn	66	1.803	ug/L	0.194	10	37	956	11	KED
	Zn	67	1.679	ug/L	0.138	8	7	151	8	KED
	As	75	0.055	ug/L	0.002	3	3	17	4	KED
	Se	78	0.044	ug/L	0.095	215	17	14	17	KED
	Kr	83		ug/L			60	52	2	Standard
>	In-1	115		ug/L			9591	7415	2	KED
	Cd	111	0.003	ug/L	0.011	357	4	4	61	KED
	Cd	114	0.006	ug/L	0.004	66	2	5	47	KED
>	In	115		ug/L			453983	371591	1	Standard
	Ag	107	-0.002	ug/L	0.000	20	104	51	14	Standard
	Ba	135	0.641	ug/L	0.010	1	29	2944	2	Standard
	Ba	137	0.636	ug/L	0.024	3	49	5514	2	Standard
>	Tb	159		ug/L			201225	179520	0	Standard
	Pb	208	0.007	ug/L	0.001	9	233	670	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL9
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 22:48:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	20869	4	Standard
⌈>	**Sc**	**45**		ug/L			765035	667324	2	Standard
|	**Cr**	**52**	**0.134**	ug/L	0.027	20	23495	22801	4	Standard
|	**Cr**	**53**	**0.026**	ug/L	0.008	31	145	178	7	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.001	242	409	368	8	Standard
⌈>	**Ge**	**72**		ug/L			44602	38043	1	KED
|	**Ni**	**60**	**-0.001**	ug/L	0.003	229	19	14	32	KED
|	**Ni**	**62**	**-0.002**	ug/L	0.008	348	4	3	69	KED
|	**Cu**	**63**	**0.000**	ug/L	0.002	4667	53	46	27	KED
|	**Cu**	**65**	**-0.000**	ug/L	0.002	698	26	22	17	KED
|	**Zn**	**66**	**0.031**	ug/L	0.004	13	37	50	4	KED
|	**Zn**	**67**	**-0.008**	ug/L	0.019	241	7	5	33	KED
|	**As**	**75**	**-0.002**	ug/L	0.006	320	3	2	66	KED
⌊	**Se**	**78**	**0.073**	ug/L	0.139	191	17	16	22	KED
	Kr	**83**		ug/L			60	55	21	Standard
⌈>	**In-1**	**115**		ug/L			9591	8270	2	KED
|	**Cd**	**111**	**-0.005**	ug/L	0.008	146	4	2	86	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.003	197	2	1	202	KED
⌈>	**In**	**115**		ug/L			453983	424417	2	Standard
|	**Ag**	**107**	**-0.004**	ug/L	0.000	10	104	27	27	Standard
|	**Ba**	**135**	**-0.001**	ug/L	0.000	30	29	20	10	Standard
⌊	**Ba**	**137**	**0.000**	ug/L	0.000	2134	49	46	2	Standard
⌈>	**Tb**	**159**		ug/L			201225	198061	2	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	25	233	170	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0164-03
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 22:53:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	28262	4	Standard
>	Sc	45		ug/L			765035	653499	3	Standard
	Cr	52	5.578	ug/L	0.139	2	23495	113870	4	Standard
	Cr	53	5.640	ug/L	0.110	1	145	11149	3	Standard
	Mn	55	46.087	ug/L	1.418	3	409	1187083	4	Standard
>	Ge	72		ug/L			44602	38941	1	KED
	Ni	60	3.910	ug/L	0.049	1	19	7006	0	KED
	Ni	62	4.119	ug/L	0.115	2	4	1170	2	KED
	Cu	63	126.730	ug/L	2.873	2	53	647590	0	KED
	Cu	65	129.763	ug/L	2.022	1	26	332391	0	KED
	Zn	66	101.542	ug/L	2.291	2	37	60285	1	KED
	Zn	67	91.526	ug/L	3.052	3	7	9175	1	KED
	As	75	0.893	ug/L	0.026	2	3	280	1	KED
	Se	78	-0.036	ug/L	0.152	422	17	14	29	KED
	Kr	83		ug/L			60	53	11	Standard
>	In-1	115		ug/L			9591	8523	0	KED
	Cd	111	0.413	ug/L	0.069	16	4	126	15	KED
	Cd	114	0.403	ug/L	0.056	13	2	308	13	KED
>	In	115		ug/L			453983	424082	2	Standard
	Ag	107	0.042	ug/L	0.002	5	104	815	3	Standard
	Ba	135	21.008	ug/L	0.207	0	29	109166	2	Standard
	Ba	137	21.200	ug/L	0.273	1	49	208424	1	Standard
>	Tb	159		ug/L			201225	196788	1	Standard
	Pb	208	1.463	ug/L	0.032	2	233	101481	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0164-01
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 22:58:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	28546	5	Standard
>	Sc	45		ug/L			765035	644214	1	Standard
	Cr	52	2.471	ug/L	0.215	8	23495	60727	5	Standard
	Cr	53	2.344	ug/L	0.132	5	145	4640	5	Standard
	Mn	55	13.543	ug/L	0.312	2	409	344132	2	Standard
>	Ge	72		ug/L			44602	38496	2	KED
	Ni	60	1.408	ug/L	0.038	2	19	2504	1	KED
	Ni	62	1.399	ug/L	0.082	5	4	395	4	KED
	Cu	63	53.150	ug/L	1.121	2	53	268526	1	KED
	Cu	65	54.715	ug/L	1.220	2	26	138551	0	KED
	Zn	66	47.953	ug/L	1.179	2	37	28159	1	KED
	Zn	67	44.217	ug/L	1.001	2	7	4388	4	KED
	As	75	0.319	ug/L	0.016	4	3	100	4	KED
	Se	78	0.089	ug/L	0.023	26	17	17	5	KED
	Kr	83		ug/L			60	48	14	Standard
>	In-1	115		ug/L			9591	8553	3	KED
	Cd	111	0.011	ug/L	0.003	28	4	7	12	KED
	Cd	114	0.012	ug/L	0.002	15	2	11	15	KED
>	In	115		ug/L			453983	421425	0	Standard
	Ag	107	0.003	ug/L	0.001	37	104	153	13	Standard
	Ba	135	10.488	ug/L	0.055	0	29	54175	0	Standard
	Ba	137	10.603	ug/L	0.028	0	49	103631	0	Standard
>	Tb	159		ug/L			201225	190462	1	Standard
	Pb	208	0.712	ug/L	0.024	3	233	47930	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0572-DUP1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 23:02:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	28557	6	Standard
>	Sc	45		ug/L			765035	663965	3	Standard
	Cr	52	2.395	ug/L	0.088	3	23495	61285	1	Standard
	Cr	53	2.415	ug/L	0.041	1	145	4924	4	Standard
	Mn	55	12.976	ug/L	0.081	0	409	339889	3	Standard
>	Ge	72		ug/L			44602	39307	1	KED
	Ni	60	1.307	ug/L	0.018	1	19	2376	0	KED
	Ni	62	1.380	ug/L	0.152	11	4	398	9	KED
	Cu	63	52.060	ug/L	1.134	2	53	268556	0	KED
	Cu	65	52.781	ug/L	1.372	2	26	136468	0	KED
	Zn	66	47.144	ug/L	0.614	1	37	28271	0	KED
	Zn	67	43.376	ug/L	1.042	2	7	4394	3	KED
	As	75	0.325	ug/L	0.010	2	3	105	4	KED
	Se	78	0.010	ug/L	0.068	684	17	15	10	KED
	Kr	83		ug/L			60	46	11	Standard
>	In-1	115		ug/L			9591	8583	1	KED
	Cd	111	0.007	ug/L	0.005	72	4	6	22	KED
	Cd	114	0.009	ug/L	0.004	43	2	8	32	KED
>	In	115		ug/L			453983	423677	2	Standard
	Ag	107	0.002	ug/L	0.001	24	104	135	5	Standard
	Ba	135	10.434	ug/L	0.359	3	29	54158	1	Standard
	Ba	137	10.227	ug/L	0.365	3	49	100446	1	Standard
>	Tb	159		ug/L			201225	195358	0	Standard
	Pb	208	0.770	ug/L	0.014	1	233	53111	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0572-MS1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 23:07:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	27963	5	Standard
>	Sc	45		ug/L			765035	686099	3	Standard
	Cr	52	25.892	ug/L	0.395	1	23495	478062	3	Standard
	Cr	53	26.125	ug/L	0.723	2	145	53734	3	Standard
	Mn	55	35.151	ug/L	0.577	1	409	950488	2	Standard
>	Ge	72		ug/L			44602	39036	2	KED
	Ni	60	24.573	ug/L	0.593	2	19	44036	0	KED
	Ni	62	25.148	ug/L	0.781	3	4	7144	1	KED
	Cu	63	74.036	ug/L	1.377	1	53	379255	0	KED
	Cu	65	73.595	ug/L	2.494	3	26	188922	1	KED
	Zn	66	120.491	ug/L	3.228	2	37	71687	0	KED
	Zn	67	114.888	ug/L	2.972	2	7	11544	0	KED
	As	75	24.366	ug/L	0.378	1	3	7576	0	KED
	Se	78	76.888	ug/L	2.179	2	17	2114	0	KED
	Kr	83		ug/L			60	55	19	Standard
>	In-1	115		ug/L			9591	8463	0	KED
	Cd	111	23.577	ug/L	0.730	3	4	6922	2	KED
	Cd	114	23.551	ug/L	0.458	1	2	17798	1	KED
>	In	115		ug/L			453983	424059	2	Standard
	Ag	107	25.150	ug/L	0.391	1	104	433972	0	Standard
	Ba	135	36.150	ug/L	0.153	0	29	187834	1	Standard
	Ba	137	34.820	ug/L	0.437	1	49	342306	0	Standard
>	Tb	159		ug/L			201225	189060	1	Standard
	Pb	208	24.938	ug/L	0.513	2	233	1658565	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLA
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 23:12:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	19479	3	Standard
⌈>	**Sc**	**45**		ug/L			765035	697901	3	Standard
|	**Cr**	**52**	**0.031**	ug/L	0.021	66	23495	21988	2	Standard
|	**Cr**	**53**	**0.001**	ug/L	0.007	766	145	134	12	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.001	79	409	405	4	Standard
⌈>	**Ge**	**72**		ug/L			44602	39896	1	KED
|	**Ni**	**60**	**0.000**	ug/L	0.001	1262	19	17	12	KED
|	**Ni**	**62**	**-0.001**	ug/L	0.013	1922	4	3	100	KED
|	**Cu**	**63**	**0.005**	ug/L	0.000	3	53	76	2	KED
|	**Cu**	**65**	**0.006**	ug/L	0.004	65	26	39	24	KED
|	**Zn**	**66**	**0.046**	ug/L	0.013	27	37	61	10	KED
|	**Zn**	**67**	**0.020**	ug/L	0.029	143	7	8	32	KED
|	**As**	**75**	**0.001**	ug/L	0.004	316	3	3	33	KED
⌊	**Se**	**78**	**-0.045**	ug/L	0.069	152	17	14	12	KED
	Kr	**83**		ug/L			60	53	16	Standard
⌈>	**In-1**	**115**		ug/L			9591	8388	1	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.004	172	4	3	31	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.003	1058	2	2	92	KED
⌈>	**In**	**115**		ug/L			453983	438055	1	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	54	104	121	7	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.003	405	29	31	45	Standard
⌊	**Ba**	**137**	**-0.000**	ug/L	0.001	3134	49	47	17	Standard
⌈>	**Tb**	**159**		ug/L			201225	195846	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	24	233	241	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVB
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 23:17:06
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	21271	1	Standard
⌈>	**Sc**	**45**		ug/L			765035	727461	4	Standard
|	**Cr**	**52**	**48.233**	ug/L	0.756	1	23495	924795	2	Standard
|	**Cr**	**53**	**48.562**	ug/L	0.459	0	145	105804	3	Standard
⌊	**Mn**	**55**	**46.686**	ug/L	1.172	2	409	1337774	2	Standard
⌈>	**Ge**	**72**		ug/L			44602	41460	1	KED
|	**Ni**	**60**	**47.703**	ug/L	0.526	1	19	90804	0	KED
|	**Ni**	**62**	**47.695**	ug/L	1.320	2	4	14392	2	KED
|	**Cu**	**63**	**47.689**	ug/L	0.999	2	53	259512	1	KED
|	**Cu**	**65**	**47.926**	ug/L	0.450	0	26	130738	0	KED
|	**Zn**	**66**	**49.550**	ug/L	0.909	1	37	31341	1	KED
|	**Zn**	**67**	**49.150**	ug/L	0.729	1	7	5251	1	KED
|	**As**	**75**	**49.537**	ug/L	0.335	0	3	16359	0	KED
⌊	**Se**	**78**	**50.005**	ug/L	1.030	2	17	1466	1	KED
	Kr	**83**		ug/L			60	50	9	Standard
⌈>	**In-1**	**115**		ug/L			9591	9003	2	KED
|	**Cd**	**111**	**49.029**	ug/L	1.022	2	4	15307	1	KED
⌊	**Cd**	**114**	**49.118**	ug/L	1.412	2	2	39471	1	KED
⌈>	**In**	**115**		ug/L			453983	444751	2	Standard
|	**Ag**	**107**	**51.642**	ug/L	0.794	1	104	934430	1	Standard
|	**Ba**	**135**	**50.847**	ug/L	1.812	3	29	276929	1	Standard
⌊	**Ba**	**137**	**50.274**	ug/L	1.742	3	49	518465	4	Standard
⌈>	**Tb**	**159**		ug/L			201225	205463	1	Standard
⌊	**Pb**	**208**	**46.670**	ug/L	0.646	1	233	3373145	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBB
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 19, 2023 23:24:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	20530	4	Standard
⌈>	**Sc**	**45**		ug/L			765035	738099	2	Standard
|	**Cr**	**52**	**0.000**	ug/L	0.045	13295	23495	22675	4	Standard
|	**Cr**	**53**	**-0.000**	ug/L	0.008	6391	145	140	15	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.001	254	409	406	9	Standard
⌈>	**Ge**	**72**		ug/L			44602	43324	1	KED
|	**Ni**	**60**	**-0.002**	ug/L	0.003	189	19	15	36	KED
|	**Ni**	**62**	**-0.002**	ug/L	0.000	12	4	3	0	KED
|	**Cu**	**63**	**0.003**	ug/L	0.002	60	53	69	15	KED
|	**Cu**	**65**	**0.001**	ug/L	0.002	209	26	29	22	KED
|	**Zn**	**66**	**0.006**	ug/L	0.018	284	37	40	30	KED
|	**Zn**	**67**	**0.001**	ug/L	0.057	4408	7	7	86	KED
|	**As**	**75**	**0.008**	ug/L	0.001	13	3	6	4	KED
⌊	**Se**	**78**	**-0.023**	ug/L	0.067	291	17	16	13	KED
	Kr	**83**		ug/L			60	54	16	Standard
⌈>	**In-1**	**115**		ug/L			9591	9517	3	KED
|	**Cd**	**111**	**0.004**	ug/L	0.008	192	4	6	39	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.002	26	2	8	15	KED
⌈>	**In**	**115**		ug/L			453983	437739	1	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.001	15	104	213	6	Standard
|	**Ba**	**135**	**0.000**	ug/L	0.000	68	29	29	3	Standard
⌊	**Ba**	**137**	**-0.000**	ug/L	0.001	874	49	46	11	Standard
⌈>	**Tb**	**159**		ug/L			201225	199618	2	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	10370	233	231	11	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0195-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 23:29:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	39597	2	Standard
>	Sc	45		ug/L			765035	724904	0	Standard
	Cr	52	71.635	ug/L	2.870	4	23495	1358596	4	Standard
	Cr	53	70.007	ug/L	0.226	0	145	151973	1	Standard
	Mn	55	42.426	ug/L	1.071	2	409	1212435	2	Standard
>	Ge	72		ug/L			44602	38447	1	KED
	Ni	60	0.923	ug/L	0.006	0	19	1645	1	KED
	Ni	62	0.915	ug/L	0.107	11	4	259	10	KED
	Cu	63	1.038	ug/L	0.024	2	53	5284	0	KED
	Cu	65	1.089	ug/L	0.032	2	26	2775	1	KED
	Zn	66	47.936	ug/L	1.131	2	37	28117	1	KED
	Zn	67	43.035	ug/L	1.538	3	7	4263	2	KED
	As	75	0.090	ug/L	0.003	3	3	30	4	KED
	Se	78	0.032	ug/L	0.054	167	17	15	7	KED
	Kr	83		ug/L			60	55	8	Standard
>	In-1	115		ug/L			9591	8916	2	KED
	Cd	111	0.416	ug/L	0.011	2	4	133	0	KED
	Cd	114	0.412	ug/L	0.025	6	2	330	6	KED
>	In	115		ug/L			453983	453670	1	Standard
	Ag	107	0.063	ug/L	0.002	3	104	1259	2	Standard
	Ba	135	1.674	ug/L	0.026	1	29	9334	2	Standard
	Ba	137	1.607	ug/L	0.053	3	49	16940	1	Standard
>	Tb	159		ug/L			201225	200257	2	Standard
	Pb	208	0.066	ug/L	0.005	7	233	4857	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0171-05
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 23:32:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	24180	4	Standard
>	Sc	45		ug/L			765035	734268	2	Standard
	Cr	52	0.593	ug/L	0.077	13	23495	33751	4	Standard
	Cr	53	0.828	ug/L	0.035	4	145	1957	3	Standard
	Mn	55	150.944	ug/L	3.132	2	409	4367043	0	Standard
>	Ge	72		ug/L			44602	38461	2	KED
	Ni	60	2.213	ug/L	0.054	2	19	3922	2	KED
	Ni	62	2.353	ug/L	0.207	8	4	663	11	KED
	Cu	63	0.572	ug/L	0.014	2	53	2931	0	KED
	Cu	65	0.563	ug/L	0.030	5	26	1445	4	KED
	Zn	66	3.409	ug/L	0.093	2	37	2031	4	KED
	Zn	67	3.897	ug/L	0.659	16	7	393	18	KED
	As	75	0.132	ug/L	0.004	3	3	43	3	KED
	Se	78	-0.063	ug/L	0.168	266	17	13	31	KED
	Kr	83		ug/L			60	55	27	Standard
>	In-1	115		ug/L			9591	8806	3	KED
	Cd	111	0.009	ug/L	0.009	105	4	6	39	KED
	Cd	114	0.009	ug/L	0.009	105	2	9	82	KED
>	In	115		ug/L			453983	443931	2	Standard
	Ag	107	-0.001	ug/L	0.000	36	104	81	8	Standard
	Ba	135	11.087	ug/L	0.696	6	29	60267	3	Standard
	Ba	137	11.180	ug/L	0.332	2	49	115060	1	Standard
>	Tb	159		ug/L			201225	203868	1	Standard
	Pb	208	0.040	ug/L	0.000	0	233	3129	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0643-DUP3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 23:36:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	22099	1	Standard
>	Sc	45		ug/L			765035	736233	2	Standard
	Cr	52	0.559	ug/L	0.039	6	23495	33202	3	Standard
	Cr	53	0.814	ug/L	0.005	0	145	1932	3	Standard
	Mn	55	147.782	ug/L	1.372	0	409	4287430	2	Standard
>	Ge	72		ug/L			44602	37044	4	KED
	Ni	60	2.291	ug/L	0.059	2	19	3909	1	KED
	Ni	62	2.324	ug/L	0.187	8	4	628	3	KED
	Cu	63	0.590	ug/L	0.006	0	53	2915	5	KED
	Cu	65	0.563	ug/L	0.009	1	26	1393	5	KED
	Zn	66	2.380	ug/L	0.132	5	37	1372	0	KED
	Zn	67	3.044	ug/L	0.339	11	7	296	12	KED
	As	75	0.146	ug/L	0.018	12	3	46	15	KED
	Se	78	-0.050	ug/L	0.119	239	17	13	27	KED
	Kr	83		ug/L			60	52	24	Standard
>	In-1	115		ug/L			9591	8600	0	KED
	Cd	111	0.005	ug/L	0.006	114	4	5	28	KED
	Cd	114	0.003	ug/L	0.003	102	2	4	49	KED
>	In	115		ug/L			453983	443460	1	Standard
	Ag	107	-0.002	ug/L	0.001	63	104	60	41	Standard
	Ba	135	10.890	ug/L	0.147	1	29	59197	2	Standard
	Ba	137	10.735	ug/L	0.286	2	49	110377	0	Standard
>	Tb	159		ug/L			201225	203852	2	Standard
	Pb	208	0.040	ug/L	0.001	3	233	3086	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0643-MS3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 23:40:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	24575	6	Standard
>	Sc	45		ug/L			765035	756522	3	Standard
	Cr	52	1.706	ug/L	0.054	3	23495	56455	5	Standard
	Cr	53	1.972	ug/L	0.037	1	145	4609	5	Standard
	Mn	55	141.024	ug/L	1.231	0	409	4204182	3	Standard
>	Ge	72		ug/L			44602	37624	2	KED
	Ni	60	3.465	ug/L	0.119	3	19	5999	2	KED
	Ni	62	3.536	ug/L	0.156	4	4	971	3	KED
	Cu	63	1.881	ug/L	0.032	1	53	9333	0	KED
	Cu	65	1.876	ug/L	0.048	2	26	4665	3	KED
	Zn	66	6.319	ug/L	0.245	3	37	3653	2	KED
	Zn	67	7.171	ug/L	0.638	8	7	700	7	KED
	As	75	1.481	ug/L	0.037	2	3	446	2	KED
	Se	78	4.248	ug/L	0.191	4	17	126	3	KED
	Kr	83		ug/L			60	56	13	Standard
>	In-1	115		ug/L			9591	8711	3	KED
	Cd	111	1.286	ug/L	0.094	7	4	392	4	KED
	Cd	114	1.247	ug/L	0.106	8	2	970	5	KED
>	In	115		ug/L			453983	459653	4	Standard
	Ag	107	1.309	ug/L	0.067	5	104	24563	1	Standard
	Ba	135	11.802	ug/L	0.595	5	29	66401	1	Standard
	Ba	137	11.499	ug/L	0.613	5	49	122421	2	Standard
>	Tb	159		ug/L			201225	204540	1	Standard
	Pb	208	1.307	ug/L	0.032	2	233	94284	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0643-MSD3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 23:43:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	25298	3	Standard
>	Sc	45		ug/L			765035	736164	2	Standard
	Cr	52	1.791	ug/L	0.062	3	23495	56529	2	Standard
	Cr	53	2.086	ug/L	0.080	3	145	4735	5	Standard
	Mn	55	146.105	ug/L	3.497	2	409	4237736	1	Standard
>	Ge	72		ug/L			44602	37926	0	KED
	Ni	60	3.522	ug/L	0.017	0	19	6148	0	KED
	Ni	62	3.619	ug/L	0.313	8	4	1002	8	KED
	Cu	63	1.881	ug/L	0.039	2	53	9408	2	KED
	Cu	65	1.890	ug/L	0.027	1	26	4737	1	KED
	Zn	66	6.590	ug/L	0.150	2	37	3841	2	KED
	Zn	67	6.868	ug/L	0.322	4	7	676	4	KED
	As	75	1.487	ug/L	0.009	0	3	452	0	KED
	Se	78	4.263	ug/L	0.198	4	17	127	4	KED
	Kr	83		ug/L			60	69	5	Standard
>	In-1	115		ug/L			9591	8531	0	KED
	Cd	111	1.295	ug/L	0.130	10	4	387	9	KED
	Cd	114	1.308	ug/L	0.144	10	2	998	10	KED
>	In	115		ug/L			453983	446914	1	Standard
	Ag	107	1.391	ug/L	0.032	2	104	25399	2	Standard
	Ba	135	12.185	ug/L	0.192	1	29	66739	1	Standard
	Ba	137	12.075	ug/L	0.400	3	49	125133	2	Standard
>	Tb	159		ug/L			201225	206594	1	Standard
	Pb	208	1.342	ug/L	0.029	2	233	97770	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0171-06
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 23:49:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	25451	6	Standard
⌈>	**Sc**	**45**		ug/L			765035	732106	1	Standard
|	**Cr**	**52**	**0.113**	ug/L	0.034	30	23495	24622	4	Standard
|	**Cr**	**53**	**0.344**	ug/L	0.014	3	145	893	5	Standard
⌊	**Mn**	**55**	**146.363**	ug/L	2.244	1	409	4222301	0	Standard
⌈>	**Ge**	**72**		ug/L			44602	37746	1	KED
|	**Ni**	**60**	**1.858**	ug/L	0.041	2	19	3235	1	KED
|	**Ni**	**62**	**1.816**	ug/L	0.269	14	4	502	14	KED
|	**Cu**	**63**	**0.269**	ug/L	0.019	7	53	1375	6	KED
|	**Cu**	**65**	**0.273**	ug/L	0.006	2	26	701	2	KED
|	**Zn**	**66**	**1.016**	ug/L	0.095	9	37	615	8	KED
|	**Zn**	**67**	**1.510**	ug/L	0.169	11	7	153	9	KED
|	**As**	**75**	**0.078**	ug/L	0.009	11	3	26	10	KED
⌊	**Se**	**78**	**-0.084**	ug/L	0.039	46	17	12	9	KED
	Kr	**83**		ug/L			60	53	18	Standard
⌈>	**In-1**	**115**		ug/L			9591	9084	1	KED
|	**Cd**	**111**	**0.003**	ug/L	0.013	426	4	5	71	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.005	168	2	4	85	KED
⌈>	**In**	**115**		ug/L			453983	441917	0	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.000	10	104	57	8	Standard
|	**Ba**	**135**	**9.701**	ug/L	0.121	1	29	52547	1	Standard
⌊	**Ba**	**137**	**9.256**	ug/L	0.378	4	49	94855	3	Standard
⌈>	**Tb**	**159**		ug/L			201225	202661	1	Standard
⌊	**Pb**	**208**	**0.006**	ug/L	0.000	6	233	679	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0561-DUP3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 23:52:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	25444	5	Standard
>	Sc	45		ug/L			765035	725435	5	Standard
	Cr	52	0.105	ug/L	0.011	10	23495	24240	4	Standard
	Cr	53	0.371	ug/L	0.021	5	145	942	4	Standard
	Mn	55	148.251	ug/L	4.405	2	409	4234144	2	Standard
>	Ge	72		ug/L			44602	37725	1	KED
	Ni	60	1.893	ug/L	0.098	5	19	3294	4	KED
	Ni	62	2.002	ug/L	0.265	13	4	554	15	KED
	Cu	63	0.254	ug/L	0.009	3	53	1304	5	KED
	Cu	65	0.251	ug/L	0.017	6	26	645	6	KED
	Zn	66	0.912	ug/L	0.081	8	37	555	7	KED
	Zn	67	1.455	ug/L	0.209	14	7	147	15	KED
	As	75	0.088	ug/L	0.021	23	3	29	21	KED
	Se	78	-0.083	ug/L	0.106	127	17	12	23	KED
	Kr	83		ug/L			60	50	15	Standard
>	In-1	115		ug/L			9591	8652	2	KED
	Cd	111	-0.002	ug/L	0.003	177	4	3	25	KED
	Cd	114	0.003	ug/L	0.003	88	2	4	47	KED
>	In	115		ug/L			453983	442836	2	Standard
	Ag	107	-0.004	ug/L	0.000	5	104	33	13	Standard
	Ba	135	9.311	ug/L	0.133	1	29	50543	2	Standard
	Ba	137	9.263	ug/L	0.021	0	49	95139	2	Standard
>	Tb	159		ug/L			201225	205736	0	Standard
	Pb	208	0.006	ug/L	0.000	7	233	668	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0561-MS3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 19, 2023 23:56:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	25718	6	Standard
>	Sc	45		ug/L			765035	736290	3	Standard
	Cr	52	1.374	ug/L	0.028	2	23495	48661	4	Standard
	Cr	53	1.691	ug/L	0.002	0	145	3864	3	Standard
	Mn	55	149.055	ug/L	2.687	1	409	4323337	2	Standard
>	Ge	72		ug/L			44602	38321	0	KED
	Ni	60	3.173	ug/L	0.084	2	19	5598	1	KED
	Ni	62	3.087	ug/L	0.186	6	4	864	6	KED
	Cu	63	1.581	ug/L	0.054	3	53	7996	2	KED
	Cu	65	1.615	ug/L	0.036	2	26	4093	1	KED
	Zn	66	5.272	ug/L	0.170	3	37	3110	2	KED
	Zn	67	5.790	ug/L	0.791	13	7	577	13	KED
	As	75	1.437	ug/L	0.094	6	3	441	6	KED
	Se	78	4.001	ug/L	0.126	3	17	122	1	KED
	Kr	83		ug/L			60	45	19	Standard
>	In-1	115		ug/L			9591	8471	1	KED
	Cd	111	1.289	ug/L	0.083	6	4	382	5	KED
	Cd	114	1.416	ug/L	0.040	2	2	1073	4	KED
>	In	115		ug/L			453983	443666	3	Standard
	Ag	107	1.387	ug/L	0.024	1	104	25139	2	Standard
	Ba	135	10.891	ug/L	0.536	4	29	59182	3	Standard
	Ba	137	11.010	ug/L	0.413	3	49	113201	0	Standard
>	Tb	159		ug/L			201225	203268	0	Standard
	Pb	208	1.315	ug/L	0.023	1	233	94243	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0561-MSD3
Sample Dil Factor: 20
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:00:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	24627	5	Standard
>	Sc	45		ug/L			765035	722688	2	Standard
	Cr	52	1.398	ug/L	0.049	3	23495	48199	3	Standard
	Cr	53	1.662	ug/L	0.070	4	145	3730	4	Standard
	Mn	55	156.297	ug/L	0.150	0	409	4451716	2	Standard
>	Ge	72		ug/L			44602	37682	1	KED
	Ni	60	3.299	ug/L	0.138	4	19	5720	2	KED
	Ni	62	3.378	ug/L	0.204	6	4	930	6	KED
	Cu	63	1.652	ug/L	0.024	1	53	8215	1	KED
	Cu	65	1.655	ug/L	0.006	0	26	4125	0	KED
	Zn	66	5.379	ug/L	0.185	3	37	3120	2	KED
	Zn	67	5.741	ug/L	0.068	1	7	563	0	KED
	As	75	1.526	ug/L	0.030	1	3	461	1	KED
	Se	78	4.137	ug/L	0.333	8	17	123	6	KED
	Kr	83		ug/L			60	62	18	Standard
>	In-1	115		ug/L			9591	8793	1	KED
	Cd	111	1.273	ug/L	0.053	4	4	392	4	KED
	Cd	114	1.381	ug/L	0.042	3	2	1086	2	KED
>	In	115		ug/L			453983	435961	1	Standard
	Ag	107	1.384	ug/L	0.022	1	104	24644	1	Standard
	Ba	135	11.590	ug/L	0.503	4	29	61904	3	Standard
	Ba	137	11.547	ug/L	0.302	2	49	116721	1	Standard
>	Tb	159		ug/L			201225	202210	2	Standard
	Pb	208	1.356	ug/L	0.036	2	233	96642	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLB
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:04:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	21126	5	Standard
⌈>	**Sc**	**45**		ug/L			765035	731858	4	Standard
|	**Cr**	**52**	**0.009**	ug/L	0.045	509	23495	22620	2	Standard
|	**Cr**	**53**	**0.018**	ug/L	0.003	15	145	178	6	Standard
⌊	**Mn**	**55**	**0.006**	ug/L	0.001	17	409	554	2	Standard
⌈>	**Ge**	**72**		ug/L			44602	37949	2	KED
|	**Ni**	**60**	**0.003**	ug/L	0.007	231	19	22	57	KED
|	**Ni**	**62**	**0.000**	ug/L	0.007	49149	4	3	50	KED
|	**Cu**	**63**	**-0.000**	ug/L	0.002	361	53	43	19	KED
|	**Cu**	**65**	**0.001**	ug/L	0.001	107	26	25	11	KED
|	**Zn**	**66**	**0.047**	ug/L	0.003	7	37	59	3	KED
|	**Zn**	**67**	**0.050**	ug/L	0.076	152	7	11	66	KED
|	**As**	**75**	**-0.000**	ug/L	0.002	975	3	3	22	KED
⌊	**Se**	**78**	**-0.050**	ug/L	0.110	222	17	13	23	KED
	Kr	**83**		ug/L			60	54	14	Standard
⌈>	**In-1**	**115**		ug/L			9591	8763	0	KED
|	**Cd**	**111**	**0.008**	ug/L	0.014	178	4	6	62	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.002	55	2	5	33	KED
⌈>	**In**	**115**		ug/L			453983	461801	2	Standard
|	**Ag**	**107**	**-0.004**	ug/L	0.001	15	104	36	27	Standard
|	**Ba**	**135**	**-0.000**	ug/L	0.001	702	29	28	26	Standard
⌊	**Ba**	**137**	**-0.001**	ug/L	0.002	218	49	42	37	Standard
⌈>	**Tb**	**159**		ug/L			201225	205242	2	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.001	75	233	175	24	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVC
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:07:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	20614	1	Standard
⌈>	**Sc**	**45**		ug/L			765035	728669	4	Standard
|	**Cr**	**52**	**48.477**	ug/L	0.967	1	23495	930877	2	Standard
|	**Cr**	**53**	**47.422**	ug/L	0.966	2	145	103528	4	Standard
⌊	**Mn**	**55**	**46.433**	ug/L	0.774	1	409	1333141	2	Standard
⌈>	**Ge**	**72**		ug/L			44602	37398	1	KED
|	**Ni**	**60**	**49.764**	ug/L	1.168	2	19	85438	1	KED
|	**Ni**	**62**	**50.317**	ug/L	2.234	4	4	13693	3	KED
|	**Cu**	**63**	**48.815**	ug/L	0.317	0	53	239639	0	KED
|	**Cu**	**65**	**50.782**	ug/L	1.619	3	26	124932	2	KED
|	**Zn**	**66**	**49.860**	ug/L	1.739	3	37	28444	2	KED
|	**Zn**	**67**	**50.147**	ug/L	0.749	1	7	4833	2	KED
|	**As**	**75**	**49.607**	ug/L	0.558	1	3	14776	0	KED
⌊	**Se**	**78**	**48.412**	ug/L	0.309	0	17	1281	1	KED
	Kr	**83**		ug/L			60	69	12	Standard
⌈>	**In-1**	**115**		ug/L			9591	8816	3	KED
|	**Cd**	**111**	**47.635**	ug/L	1.004	2	4	14561	0	KED
⌊	**Cd**	**114**	**46.702**	ug/L	1.576	3	2	36749	2	KED
⌈>	**In**	**115**		ug/L			453983	431978	2	Standard
|	**Ag**	**107**	**52.210**	ug/L	0.992	1	104	917544	0	Standard
|	**Ba**	**135**	**52.053**	ug/L	1.399	2	29	275405	0	Standard
⌊	**Ba**	**137**	**50.181**	ug/L	0.893	1	49	502618	3	Standard
⌈>	**Tb**	**159**		ug/L			201225	203607	1	Standard
⌊	**Pb**	**208**	**47.595**	ug/L	0.915	1	233	3408664	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBC
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:14:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	20320	4	Standard
⌈>	**Sc**	**45**		ug/L			765035	728411	1	Standard
|	**Cr**	**52**	**-0.009**	ug/L	0.036	416	23495	22217	4	Standard
|	**Cr**	**53**	**0.000**	ug/L	0.001	61799	145	138	1	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.001	82	409	414	3	Standard
⌈>	**Ge**	**72**		ug/L			44602	39276	0	KED
|	**Ni**	**60**	**0.002**	ug/L	0.005	228	19	20	39	KED
|	**Ni**	**62**	**0.002**	ug/L	0.004	211	4	4	24	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.001	94	53	40	17	KED
|	**Cu**	**65**	**0.001**	ug/L	0.001	151	26	25	11	KED
|	**Zn**	**66**	**0.018**	ug/L	0.008	45	37	43	11	KED
|	**Zn**	**67**	**-0.023**	ug/L	0.022	95	7	4	49	KED
|	**As**	**75**	**0.004**	ug/L	0.005	120	3	4	36	KED
⌊	**Se**	**78**	**-0.027**	ug/L	0.135	501	17	14	25	KED
	Kr	**83**		ug/L			60	50	24	Standard
⌈>	**In-1**	**115**		ug/L			9591	8843	2	KED
|	**Cd**	**111**	**0.004**	ug/L	0.007	150	4	5	33	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.007	222	2	4	117	KED
⌈>	**In**	**115**		ug/L			453983	448870	3	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	53	104	146	12	Standard
|	**Ba**	**135**	**-0.000**	ug/L	0.001	812	29	27	21	Standard
⌊	**Ba**	**137**	**-0.000**	ug/L	0.000	476	49	48	9	Standard
⌈>	**Tb**	**159**		ug/L			201225	204737	2	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	19	233	306	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0169-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:18:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	38980	5	Standard
⌈>	**Sc**	**45**		ug/L			765035	756084	3	Standard
|	**Cr**	**52**	**6.619**	ug/L	0.164	2	23495	151924	1	Standard
|	**Cr**	**53**	**8.135**	ug/L	0.239	2	145	18550	4	Standard
⌊	**Mn**	**55**	**99.302**	ug/L	1.108	1	409	2959900	4	Standard
⌈>	**Ge**	**72**		ug/L			44602	36335	2	KED
|	**Ni**	**60**	**5.124**	ug/L	0.244	4	19	8556	2	KED
|	**Ni**	**62**	**5.418**	ug/L	0.059	1	4	1436	2	KED
|	**Cu**	**63**	**24.884**	ug/L	0.409	1	53	118694	1	KED
|	**Cu**	**65**	**24.933**	ug/L	0.284	1	26	59618	2	KED
|	**Zn**	**66**	**89.157**	ug/L	2.707	3	37	49385	2	KED
|	**Zn**	**67**	**86.649**	ug/L	4.527	5	7	8102	3	KED
|	**As**	**75**	**2.859**	ug/L	0.057	1	3	830	4	KED
⌊	**Se**	**78**	**0.198**	ug/L	0.143	72	17	19	21	KED
	Kr	**83**		ug/L			60	62	8	Standard
⌈>	**In-1**	**115**		ug/L			9591	8231	2	KED
|	**Cd**	**111**	**0.088**	ug/L	0.018	20	4	29	15	KED
⌊	**Cd**	**114**	**0.102**	ug/L	0.016	15	2	76	12	KED
⌈>	**In**	**115**		ug/L			453983	420608	6	Standard
|	**Ag**	**107**	**0.033**	ug/L	0.001	4	104	665	3	Standard
|	**Ba**	**135**	**61.395**	ug/L	5.288	8	29	315170	2	Standard
⌊	**Ba**	**137**	**59.433**	ug/L	6.132	10	49	576889	3	Standard
⌈>	**Tb**	**159**		ug/L			201225	195592	0	Standard
⌊	**Pb**	**208**	**7.157**	ug/L	0.120	1	233	492682	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0169-03
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:21:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	38351	5	Standard
⌈>	**Sc**	**45**		ug/L			765035	752472	5	Standard
|	**Cr**	**52**	**3.835**	ug/L	0.245	6	23495	97201	0	Standard
|	**Cr**	**53**	**5.869**	ug/L	0.080	1	145	13349	4	Standard
⌊	**Mn**	**55**	**15.823**	ug/L	0.354	2	409	469228	3	Standard
⌈>	**Ge**	**72**		ug/L			44602	36056	0	KED
|	**Ni**	**60**	**5.201**	ug/L	0.158	3	19	8624	2	KED
|	**Ni**	**62**	**5.369**	ug/L	0.155	2	4	1412	2	KED
|	**Cu**	**63**	**13.878**	ug/L	0.164	1	53	65712	0	KED
|	**Cu**	**65**	**14.276**	ug/L	0.305	2	26	33884	2	KED
|	**Zn**	**66**	**23.919**	ug/L	0.347	1	37	13174	1	KED
|	**Zn**	**67**	**24.065**	ug/L	0.647	2	7	2239	3	KED
|	**As**	**75**	**1.245**	ug/L	0.032	2	3	360	2	KED
⌊	**Se**	**78**	**-0.018**	ug/L	0.058	321	17	13	10	KED
	Kr	**83**		ug/L			60	56	8	Standard
⌈>	**In-1**	**115**		ug/L			9591	8212	2	KED
|	**Cd**	**111**	**0.033**	ug/L	0.025	74	4	13	50	KED
⌊	**Cd**	**114**	**0.046**	ug/L	0.016	35	2	35	31	KED
⌈>	**In**	**115**		ug/L			453983	414802	0	Standard
|	**Ag**	**107**	**0.014**	ug/L	0.002	14	104	327	10	Standard
|	**Ba**	**135**	**42.158**	ug/L	2.435	5	29	214225	5	Standard
⌊	**Ba**	**137**	**41.429**	ug/L	0.685	1	49	398451	1	Standard
⌈>	**Tb**	**159**		ug/L			201225	196356	0	Standard
⌊	**Pb**	**208**	**2.690**	ug/L	0.047	1	233	186009	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0169-05
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:25:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	39411	4	Standard
⌈>	**Sc**	**45**		ug/L			765035	739214	3	Standard
|	**Cr**	**52**	**6.407**	ug/L	0.198	3	23495	144491	1	Standard
|	**Cr**	**53**	**8.045**	ug/L	0.335	4	145	17925	4	Standard
⌊	**Mn**	**55**	**93.328**	ug/L	3.841	4	409	2717280	2	Standard
⌈>	**Ge**	**72**		ug/L			44602	34778	0	KED
|	**Ni**	**60**	**4.831**	ug/L	0.103	2	19	7729	2	KED
|	**Ni**	**62**	**4.868**	ug/L	0.390	8	4	1234	7	KED
|	**Cu**	**63**	**24.377**	ug/L	0.064	0	53	111315	0	KED
|	**Cu**	**65**	**24.167**	ug/L	0.734	3	26	55306	2	KED
|	**Zn**	**66**	**81.017**	ug/L	2.873	3	37	42969	3	KED
|	**Zn**	**67**	**81.503**	ug/L	2.615	3	7	7299	2	KED
|	**As**	**75**	**2.814**	ug/L	0.057	2	3	782	1	KED
⌊	**Se**	**78**	**0.216**	ug/L	0.088	40	17	18	11	KED
	Kr	**83**		ug/L			60	45	17	Standard
⌈>	**In-1**	**115**		ug/L			9591	8069	3	KED
|	**Cd**	**111**	**0.086**	ug/L	0.040	46	4	27	37	KED
⌊	**Cd**	**114**	**0.098**	ug/L	0.013	13	2	72	10	KED
⌈>	**In**	**115**		ug/L			453983	417754	3	Standard
|	**Ag**	**107**	**0.033**	ug/L	0.000	1	104	652	2	Standard
|	**Ba**	**135**	**56.621**	ug/L	1.364	2	29	289674	1	Standard
⌊	**Ba**	**137**	**54.229**	ug/L	2.173	4	49	524894	2	Standard
⌈>	**Tb**	**159**		ug/L			201225	194001	1	Standard
⌊	**Pb**	**208**	**6.650**	ug/L	0.125	1	233	453973	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0202-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:29:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	33423	5	Standard
>	Sc	45		ug/L			765035	765925	2	Standard
	Cr	52	0.471	ug/L	0.055	11	23495	32803	2	Standard
	Cr	53	0.794	ug/L	0.027	3	145	1966	4	Standard
	Mn	55	37.230	ug/L	0.788	2	409	1123784	0	Standard
>	Ge	72		ug/L			44602	36143	2	KED
	Ni	60	0.186	ug/L	0.023	12	19	323	9	KED
	Ni	62	0.190	ug/L	0.031	16	4	53	12	KED
	Cu	63	7.874	ug/L	0.209	2	53	37379	1	KED
	Cu	65	8.039	ug/L	0.199	2	26	19127	0	KED
	Zn	66	250.165	ug/L	6.815	2	37	137763	0	KED
	Zn	67	231.142	ug/L	8.570	3	7	21492	1	KED
	As	75	5.828	ug/L	0.151	2	3	1679	1	KED
	Se	78	0.011	ug/L	0.035	307	17	14	4	KED
	Kr	83		ug/L			60	59	17	Standard
>	In-1	115		ug/L			9591	8168	1	KED
	Cd	111	0.034	ug/L	0.014	41	4	13	28	KED
	Cd	114	0.029	ug/L	0.010	36	2	22	33	KED
>	In	115		ug/L			453983	434044	3	Standard
	Ag	107	-0.001	ug/L	0.000	44	104	86	8	Standard
	Ba	135	5.230	ug/L	0.302	5	29	27807	3	Standard
	Ba	137	5.286	ug/L	0.250	4	49	53181	1	Standard
>	Tb	159		ug/L			201225	196874	3	Standard
	Pb	208	0.308	ug/L	0.011	3	233	21544	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0166-01
Sample Dil Factor: 50
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:34:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	48792	4	Standard
>	Sc	45		ug/L			765035	714352	4	Standard
	Cr	52	2.128	ug/L	0.112	5	23495	61046	5	Standard
	Cr	53	2.097	ug/L	0.056	2	145	4615	2	Standard
	Mn	55	13.417	ug/L	0.503	3	409	377823	3	Standard
>	Ge	72		ug/L			44602	38942	0	KED
	Ni	60	0.533	ug/L	0.028	5	19	970	5	KED
	Ni	62	0.542	ug/L	0.069	12	4	157	12	KED
	Cu	63	0.700	ug/L	0.031	4	53	3624	4	KED
	Cu	65	0.701	ug/L	0.046	6	26	1819	6	KED
	Zn	66	136.275	ug/L	0.931	0	37	80911	0	KED
	Zn	67	119.565	ug/L	1.899	1	7	11989	1	KED
	As	75	0.013	ug/L	0.004	29	3	7	16	KED
	Se	78	-0.104	ug/L	0.135	129	17	12	29	KED
	Kr	83		ug/L			60	39	29	Standard
>	In-1	115		ug/L			9591	8556	0	KED
	Cd	111	0.262	ug/L	0.033	12	4	81	11	KED
	Cd	114	0.226	ug/L	0.022	9	2	174	9	KED
>	In	115		ug/L			453983	444722	1	Standard
	Ag	107	-0.002	ug/L	0.000	8	104	59	4	Standard
	Ba	135	2.045	ug/L	0.086	4	29	11164	3	Standard
	Ba	137	2.093	ug/L	0.062	2	49	21618	1	Standard
>	Tb	159		ug/L			201225	196256	2	Standard
	Pb	208	0.047	ug/L	0.002	5	233	3450	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0281-09
Sample Dil Factor: 50
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:38:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	24024	6	Standard
>	Sc	45		ug/L			765035	727583	3	Standard
	Cr	52	0.060	ug/L	0.007	11	23495	23465	3	Standard
	Cr	53	0.297	ug/L	0.006	2	145	785	4	Standard
	Mn	55	188.594	ug/L	5.067	2	409	5405127	1	Standard
>	Ge	72		ug/L			44602	37911	1	KED
	Ni	60	2.077	ug/L	0.056	2	19	3632	4	KED
	Ni	62	2.039	ug/L	0.011	0	4	566	1	KED
	Cu	63	0.157	ug/L	0.010	6	53	824	4	KED
	Cu	65	0.159	ug/L	0.005	2	26	419	2	KED
	Zn	66	0.730	ug/L	0.043	5	37	453	5	KED
	Zn	67	2.380	ug/L	0.074	3	7	238	4	KED
	As	75	0.126	ug/L	0.014	11	3	41	12	KED
	Se	78	-0.060	ug/L	0.081	134	17	13	18	KED
	Kr	83		ug/L			60	66	11	Standard
>	In-1	115		ug/L			9591	8618	2	KED
	Cd	111	0.025	ug/L	0.029	112	4	11	68	KED
	Cd	114	0.006	ug/L	0.005	86	2	6	57	KED
>	In	115		ug/L			453983	435576	0	Standard
	Ag	107	-0.003	ug/L	0.001	22	104	40	33	Standard
	Ba	135	18.743	ug/L	0.316	1	29	100051	2	Standard
	Ba	137	19.222	ug/L	0.670	3	49	194180	4	Standard
>	Tb	159		ug/L			201225	196477	3	Standard
	Pb	208	0.018	ug/L	0.001	6	233	1463	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0755-DUP3
Sample Dil Factor: 50
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:42:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	23605	1	Standard
>	Sc	45		ug/L			765035	717795	2	Standard
	Cr	52	0.087	ug/L	0.024	27	23495	23639	2	Standard
	Cr	53	0.280	ug/L	0.023	8	145	739	9	Standard
	Mn	55	184.213	ug/L	0.709	0	409	5211297	2	Standard
>	Ge	72		ug/L			44602	38479	0	KED
	Ni	60	1.979	ug/L	0.014	0	19	3512	0	KED
	Ni	62	2.030	ug/L	0.306	15	4	572	14	KED
	Cu	63	0.154	ug/L	0.013	8	53	824	7	KED
	Cu	65	0.163	ug/L	0.004	2	26	436	2	KED
	Zn	66	0.717	ug/L	0.033	4	37	452	4	KED
	Zn	67	2.146	ug/L	0.391	18	7	219	17	KED
	As	75	0.110	ug/L	0.021	19	3	37	17	KED
	Se	78	-0.148	ug/L	0.081	54	17	11	20	KED
	Kr	83		ug/L			60	57	31	Standard
>	In-1	115		ug/L			9591	8538	2	KED
	Cd	111	0.003	ug/L	0.009	333	4	5	54	KED
	Cd	114	0.006	ug/L	0.009	133	2	6	92	KED
>	In	115		ug/L			453983	433504	1	Standard
	Ag	107	-0.003	ug/L	0.000	14	104	45	18	Standard
	Ba	135	18.364	ug/L	0.275	1	29	97558	2	Standard
	Ba	137	18.240	ug/L	0.195	1	49	183335	0	Standard
>	Tb	159		ug/L			201225	192099	4	Standard
	Pb	208	0.019	ug/L	0.000	2	233	1483	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0755-MS3
Sample Dil Factor: 50
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:45:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	23575	3	Standard
>	Sc	45		ug/L			765035	722415	1	Standard
	Cr	52	0.638	ug/L	0.003	0	23495	34052	1	Standard
	Cr	53	0.801	ug/L	0.032	3	145	1869	4	Standard
	Mn	55	184.773	ug/L	1.707	0	409	5260729	1	Standard
>	Ge	72		ug/L			44602	37854	2	KED
	Ni	60	2.601	ug/L	0.029	1	19	4536	1	KED
	Ni	62	2.679	ug/L	0.046	1	4	741	2	KED
	Cu	63	0.690	ug/L	0.030	4	53	3474	2	KED
	Cu	65	0.714	ug/L	0.023	3	26	1799	1	KED
	Zn	66	2.474	ug/L	0.042	1	37	1459	2	KED
	Zn	67	3.427	ug/L	0.061	1	7	340	1	KED
	As	75	0.640	ug/L	0.015	2	3	196	0	KED
	Se	78	1.460	ug/L	0.015	1	17	53	2	KED
	Kr	83		ug/L			60	55	21	Standard
>	In-1	115		ug/L			9591	8430	4	KED
	Cd	111	0.529	ug/L	0.012	2	4	158	4	KED
	Cd	114	0.536	ug/L	0.064	11	2	404	8	KED
>	In	115		ug/L			453983	426985	3	Standard
	Ag	107	0.582	ug/L	0.048	8	104	10197	5	Standard
	Ba	135	19.154	ug/L	0.621	3	29	100161	1	Standard
	Ba	137	19.327	ug/L	1.136	5	49	191123	2	Standard
>	Tb	159		ug/L			201225	196451	1	Standard
	Pb	208	0.534	ug/L	0.008	1	233	37109	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0755-MSD3
Sample Dil Factor: 50
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:49:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21163	23916	9	Standard
>	Sc	45		ug/L			765035	742961	3	Standard
	Cr	52	0.570	ug/L	0.026	4	23495	33707	1	Standard
	Cr	53	0.757	ug/L	0.014	1	145	1822	3	Standard
	Mn	55	183.105	ug/L	1.719	0	409	5360404	2	Standard
>	Ge	72		ug/L			44602	38407	1	KED
	Ni	60	2.676	ug/L	0.076	2	19	4736	3	KED
	Ni	62	2.533	ug/L	0.168	6	4	711	6	KED
	Cu	63	0.689	ug/L	0.013	1	53	3517	2	KED
	Cu	65	0.704	ug/L	0.027	3	26	1800	2	KED
	Zn	66	2.495	ug/L	0.046	1	37	1492	1	KED
	Zn	67	3.911	ug/L	0.323	8	7	393	7	KED
	As	75	0.707	ug/L	0.045	6	3	219	7	KED
	Se	78	1.597	ug/L	0.221	13	17	57	10	KED
	Kr	83		ug/L			60	57	29	Standard
>	In-1	115		ug/L			9591	8916	0	KED
	Cd	111	0.482	ug/L	0.020	4	4	153	3	KED
	Cd	114	0.499	ug/L	0.053	10	2	399	11	KED
>	In	115		ug/L			453983	438229	2	Standard
	Ag	107	0.553	ug/L	0.020	3	104	9962	1	Standard
	Ba	135	18.760	ug/L	0.900	4	29	100682	3	Standard
	Ba	137	19.102	ug/L	0.437	2	49	194030	0	Standard
>	Tb	159		ug/L			201225	195789	0	Standard
	Pb	208	0.541	ug/L	0.005	0	233	37523	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLC
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:53:42
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	21792	6	Standard
⌈>	**Sc**	**45**		ug/L			765035	737020	4	Standard
|	**Cr**	**52**	**0.019**	ug/L	0.040	209	23495	22973	1	Standard
|	**Cr**	**53**	**0.043**	ug/L	0.009	20	145	236	11	Standard
⌊	**Mn**	**55**	**0.006**	ug/L	0.002	35	409	580	7	Standard
⌈>	**Ge**	**72**		ug/L			44602	39400	4	KED
|	**Ni**	**60**	**-0.002**	ug/L	0.004	184	19	13	47	KED
|	**Ni**	**62**	**0.004**	ug/L	0.004	101	4	5	21	KED
|	**Cu**	**63**	**0.001**	ug/L	0.000	33	53	54	7	KED
|	**Cu**	**65**	**0.001**	ug/L	0.003	672	26	24	35	KED
|	**Zn**	**66**	**0.037**	ug/L	0.010	26	37	55	12	KED
|	**Zn**	**67**	**0.040**	ug/L	0.054	137	7	10	53	KED
|	**As**	**75**	**0.001**	ug/L	0.006	1104	3	3	51	KED
⌊	**Se**	**78**	**0.004**	ug/L	0.043	1210	17	15	11	KED
	Kr	**83**		ug/L			60	49	13	Standard
⌈>	**In-1**	**115**		ug/L			9591	8852	1	KED
|	**Cd**	**111**	**0.008**	ug/L	0.010	125	4	6	47	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.005	150	2	4	79	KED
⌈>	**In**	**115**		ug/L			453983	445257	1	Standard
|	**Ag**	**107**	**-0.004**	ug/L	0.001	13	104	35	27	Standard
|	**Ba**	**135**	**-0.000**	ug/L	0.002	947	29	27	40	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	117	49	55	15	Standard
⌈>	**Tb**	**159**		ug/L			201225	200937	2	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	30	233	185	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVD
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 00:57:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	21673	3	Standard
⌈>	**Sc**	**45**		ug/L			765035	753634	4	Standard
|	**Cr**	**52**	**48.894**	ug/L	0.827	1	23495	971108	3	Standard
|	**Cr**	**53**	**47.591**	ug/L	1.371	2	145	107364	1	Standard
⌊	**Mn**	**55**	**45.438**	ug/L	0.813	1	409	1349190	2	Standard
⌈>	**Ge**	**72**		ug/L			44602	36970	0	KED
|	**Ni**	**60**	**50.736**	ug/L	0.028	0	19	86126	0	KED
|	**Ni**	**62**	**51.673**	ug/L	1.281	2	4	13907	3	KED
|	**Cu**	**63**	**51.386**	ug/L	1.459	2	53	249385	2	KED
|	**Cu**	**65**	**52.021**	ug/L	0.754	1	26	126535	0	KED
|	**Zn**	**66**	**51.371**	ug/L	0.796	1	37	28974	1	KED
|	**Zn**	**67**	**50.201**	ug/L	1.752	3	7	4783	3	KED
|	**As**	**75**	**51.820**	ug/L	0.565	1	3	15261	2	KED
⌊	**Se**	**78**	**50.615**	ug/L	1.405	2	17	1323	2	KED
	Kr	**83**		ug/L			60	55	11	Standard
⌈>	**In-1**	**115**		ug/L			9591	8709	1	KED
|	**Cd**	**111**	**48.459**	ug/L	0.937	1	4	14636	0	KED
⌊	**Cd**	**114**	**48.798**	ug/L	0.575	1	2	37944	0	KED
⌈>	**In**	**115**		ug/L			453983	441208	2	Standard
|	**Ag**	**107**	**52.664**	ug/L	1.417	2	104	945044	0	Standard
|	**Ba**	**135**	**49.617**	ug/L	1.378	2	29	268188	3	Standard
⌊	**Ba**	**137**	**48.069**	ug/L	2.055	4	49	491343	1	Standard
⌈>	**Tb**	**159**		ug/L			201225	190096	2	Standard
⌊	**Pb**	**208**	**49.808**	ug/L	1.440	2	233	3329338	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBD
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:03:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21163	20331	2	Standard
⌈>	**Sc**	**45**		ug/L			765035	746555	2	Standard
|	**Cr**	**52**	**0.005**	ug/L	0.024	452	23495	23023	0	Standard
|	**Cr**	**53**	**0.012**	ug/L	0.002	15	145	168	4	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.001	282	409	410	6	Standard
⌈>	**Ge**	**72**		ug/L			44602	39444	2	KED
|	**Ni**	**60**	**-0.001**	ug/L	0.001	76	19	15	6	KED
|	**Ni**	**62**	**0.002**	ug/L	0.010	576	4	4	65	KED
|	**Cu**	**63**	**0.002**	ug/L	0.001	69	53	57	10	KED
|	**Cu**	**65**	**0.003**	ug/L	0.002	87	26	30	18	KED
|	**Zn**	**66**	**0.016**	ug/L	0.031	196	37	42	43	KED
|	**Zn**	**67**	**-0.023**	ug/L	0.010	43	7	4	24	KED
|	**As**	**75**	**0.007**	ug/L	0.004	49	3	5	22	KED
⌊	**Se**	**78**	**-0.045**	ug/L	0.023	51	17	14	3	KED
	Kr	**83**		ug/L			60	47	21	Standard
⌈>	**In-1**	**115**		ug/L			9591	8962	2	KED
|	**Cd**	**111**	**0.017**	ug/L	0.009	53	4	9	31	KED
⌊	**Cd**	**114**	**0.016**	ug/L	0.012	73	2	15	63	KED
⌈>	**In**	**115**		ug/L			453983	441336	2	Standard
|	**Ag**	**107**	**0.003**	ug/L	0.001	20	104	161	6	Standard
|	**Ba**	**135**	**-0.000**	ug/L	0.001	157	29	26	11	Standard
⌊	**Ba**	**137**	**-0.000**	ug/L	0.001	3456	49	47	20	Standard
⌈>	**Tb**	**159**		ug/L			201225	196119	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	38	233	296	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments: DEL
Sample Date/Time: Saturday, May 20, 2023 01:07:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				21176	5	Standard
>	**Sc**	**45**		ug/L				726273	4	Standard
	Cr	**52**		ug/L				22358	2	Standard
	Cr	**53**		ug/L				167	3	Standard
	Mn	**55**		ug/L				417	6	Standard
>	**Ge**	**72**		ug/L				37795	1	KED
	Ni	**60**		ug/L				24	20	KED
	Ni	**62**		ug/L				6	45	KED
	Cu	**63**		ug/L				46	2	KED
	Cu	**65**		ug/L				20	9	KED
	Zn	**66**		ug/L				37	10	KED
	Zn	**67**		ug/L				6	91	KED
	As	**75**		ug/L				3	37	KED
	Se	**78**		ug/L				13	27	KED
	Kr	**83**		ug/L				45	21	Standard
>	**In-1**	**115**		ug/L				9034	2	KED
	Cd	**111**		ug/L				5	65	KED
	Cd	**114**		ug/L				2	132	KED
>	**In**	**115**		ug/L				445066	0	Standard
	Ag	**107**		ug/L				62	14	Standard
	Ba	**135**		ug/L				20	63	Standard
	Ba	**137**		ug/L				42	25	Standard
>	**Tb**	**159**		ug/L				196002	1	Standard
	Pb	**208**		ug/L				206	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVE
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:11:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	20802	1	Standard
⌈>	**Sc**	**45**		ug/L			726273	747832	3	Standard
|	**Cr**	**52**	**47.818**	ug/L	0.818	1	22358	942984	2	Standard
|	**Cr**	**53**	**47.795**	ug/L	0.483	1	167	107095	2	Standard
⌊	**Mn**	**55**	**45.517**	ug/L	0.426	0	417	1341629	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	38376	3	KED
|	**Ni**	**60**	**48.309**	ug/L	2.415	4	24	85049	2	KED
|	**Ni**	**62**	**50.264**	ug/L	2.547	5	6	14031	3	KED
|	**Cu**	**63**	**49.008**	ug/L	1.511	3	46	246732	0	KED
|	**Cu**	**65**	**49.576**	ug/L	2.069	4	20	125071	0	KED
|	**Zn**	**66**	**50.186**	ug/L	2.734	5	37	29356	2	KED
|	**Zn**	**67**	**48.942**	ug/L	1.302	2	6	4837	0	KED
|	**As**	**75**	**49.717**	ug/L	1.720	3	3	15186	1	KED
⌊	**Se**	**78**	**48.523**	ug/L	1.706	3	13	1316	3	KED
	Kr	**83**		ug/L			45	54	2	Standard
⌈>	**In-1**	**115**		ug/L			9034	8885	1	KED
|	**Cd**	**111**	**47.344**	ug/L	0.935	1	5	14589	0	KED
⌊	**Cd**	**114**	**47.710**	ug/L	0.215	0	2	37852	1	KED
⌈>	**In**	**115**		ug/L			445066	434094	1	Standard
|	**Ag**	**107**	**53.496**	ug/L	1.370	2	62	944657	0	Standard
|	**Ba**	**135**	**50.054**	ug/L	2.477	4	20	266157	4	Standard
⌊	**Ba**	**137**	**47.488**	ug/L	2.330	4	42	477629	2	Standard
⌈>	**Tb**	**159**		ug/L			196002	197967	0	Standard
⌊	**Pb**	**208**	**47.113**	ug/L	0.557	1	206	3281251	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBE
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:17:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	21255	3	Standard
⌈>	**Sc**	**45**		ug/L			726273	729944	3	Standard
|	**Cr**	**52**	**0.013**	ug/L	0.042	311	22358	22711	2	Standard
|	**Cr**	**53**	**-0.010**	ug/L	0.004	43	167	147	9	Standard
⌊	**Mn**	**55**	**-0.001**	ug/L	0.001	49	417	386	1	Standard
⌈>	**Ge**	**72**		ug/L			37795	40366	2	KED
|	**Ni**	**60**	**-0.005**	ug/L	0.002	34	24	16	24	KED
|	**Ni**	**62**	**-0.008**	ug/L	0.010	126	6	4	65	KED
|	**Cu**	**63**	**0.001**	ug/L	0.001	71	46	55	9	KED
|	**Cu**	**65**	**0.004**	ug/L	0.007	167	20	33	53	KED
|	**Zn**	**66**	**0.011**	ug/L	0.032	307	37	46	41	KED
|	**Zn**	**67**	**0.008**	ug/L	0.016	209	6	7	25	KED
|	**As**	**75**	**0.013**	ug/L	0.005	40	3	7	19	KED
⌊	**Se**	**78**	**-0.004**	ug/L	0.026	733	13	14	7	KED
	Kr	**83**		ug/L			45	46	24	Standard
⌈>	**In-1**	**115**		ug/L			9034	8848	3	KED
|	**Cd**	**111**	**0.004**	ug/L	0.006	154	5	6	24	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.006	113	2	6	64	KED
⌈>	**In**	**115**		ug/L			445066	429649	0	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.000	5	62	165	2	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.001	145	20	24	22	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.000	21	42	46	2	Standard
⌈>	**Tb**	**159**		ug/L			196002	199955	0	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	30	206	318	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0167-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:21:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	35151	4	Standard
>	Sc	45		ug/L			726273	751425	4	Standard
	Cr	52	5.384	ug/L	0.171	3	22358	127140	2	Standard
	Cr	53	5.337	ug/L	0.034	0	167	12174	4	Standard
	Mn	55	41.806	ug/L	1.129	2	417	1237679	3	Standard
>	Ge	72		ug/L			37795	39881	3	KED
	Ni	60	1.553	ug/L	0.035	2	24	2870	5	KED
	Ni	62	1.596	ug/L	0.193	12	6	469	10	KED
	Cu	63	11.545	ug/L	0.335	2	46	60462	3	KED
	Cu	65	11.899	ug/L	0.086	0	20	31245	3	KED
	Zn	66	84.957	ug/L	2.733	3	37	51643	0	KED
	Zn	67	79.793	ug/L	1.665	2	6	8196	3	KED
	As	75	0.877	ug/L	0.064	7	3	281	4	KED
	Se	78	0.175	ug/L	0.055	31	13	19	5	KED
	Kr	83		ug/L			45	57	12	Standard
>	In-1	115		ug/L			9034	8918	1	KED
	Cd	111	0.092	ug/L	0.022	23	5	33	18	KED
	Cd	114	0.076	ug/L	0.023	29	2	63	26	KED
>	In	115		ug/L			445066	432539	2	Standard
	Ag	107	0.016	ug/L	0.000	2	62	339	3	Standard
	Ba	135	25.694	ug/L	0.520	2	20	136148	1	Standard
	Ba	137	25.325	ug/L	0.750	2	42	253893	1	Standard
>	Tb	159		ug/L			196002	201904	0	Standard
	Pb	208	1.805	ug/L	0.027	1	206	128405	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0167-04
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:25:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	36721	3	Standard
>	Sc	45		ug/L			726273	752248	0	Standard
	Cr	52	1.926	ug/L	0.052	2	22358	60453	2	Standard
	Cr	53	2.024	ug/L	0.053	2	167	4729	3	Standard
	Mn	55	96.402	ug/L	2.958	3	417	2858615	3	Standard
>	Ge	72		ug/L			37795	38459	0	KED
	Ni	60	0.916	ug/L	0.028	3	24	1642	2	KED
	Ni	62	0.897	ug/L	0.096	10	6	257	11	KED
	Cu	63	3.611	ug/L	0.067	1	46	18277	2	KED
	Cu	65	3.682	ug/L	0.093	2	20	9337	2	KED
	Zn	66	56.400	ug/L	1.016	1	37	33093	1	KED
	Zn	67	53.935	ug/L	1.375	2	6	5345	3	KED
	As	75	0.909	ug/L	0.081	8	3	281	8	KED
	Se	78	0.150	ug/L	0.082	54	13	17	12	KED
	Kr	83		ug/L			45	43	18	Standard
>	In-1	115		ug/L			9034	8934	1	KED
	Cd	111	0.069	ug/L	0.022	31	5	26	27	KED
	Cd	114	0.082	ug/L	0.008	9	2	68	10	KED
>	In	115		ug/L			445066	445484	4	Standard
	Ag	107	0.005	ug/L	0.001	24	62	150	14	Standard
	Ba	135	20.389	ug/L	1.104	5	20	111129	1	Standard
	Ba	137	21.245	ug/L	0.603	2	42	219375	4	Standard
>	Tb	159		ug/L			196002	196066	0	Standard
	Pb	208	0.555	ug/L	0.013	2	206	38458	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0167-05
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:28:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	35716	5	Standard
>	Sc	45		ug/L			726273	749194	3	Standard
	Cr	52	2.215	ug/L	0.119	5	22358	65721	0	Standard
	Cr	53	2.302	ug/L	0.100	4	167	5330	2	Standard
	Mn	55	122.768	ug/L	0.859	0	417	3624573	2	Standard
>	Ge	72		ug/L			37795	38808	0	KED
	Ni	60	1.048	ug/L	0.040	3	24	1893	4	KED
	Ni	62	1.052	ug/L	0.077	7	6	303	6	KED
	Cu	63	4.175	ug/L	0.137	3	46	21307	2	KED
	Cu	65	4.195	ug/L	0.002	0	20	10731	0	KED
	Zn	66	64.980	ug/L	1.009	1	37	38472	1	KED
	Zn	67	62.082	ug/L	0.807	1	6	6207	1	KED
	As	75	1.012	ug/L	0.057	5	3	316	5	KED
	Se	78	0.248	ug/L	0.038	15	13	20	4	KED
	Kr	83		ug/L			45	59	16	Standard
>	In-1	115		ug/L			9034	8824	0	KED
	Cd	111	0.121	ug/L	0.015	12	5	41	11	KED
	Cd	114	0.085	ug/L	0.005	5	2	70	6	KED
>	In	115		ug/L			445066	450993	2	Standard
	Ag	107	0.006	ug/L	0.001	16	62	163	8	Standard
	Ba	135	21.812	ug/L	0.472	2	20	120504	0	Standard
	Ba	137	21.691	ug/L	0.438	2	42	226771	0	Standard
>	Tb	159		ug/L			196002	197731	2	Standard
	Pb	208	0.676	ug/L	0.010	1	206	47248	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0167-06
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:32:42
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	35022	4	Standard
>	Sc	45		ug/L			726273	746159	2	Standard
	Cr	52	0.550	ug/L	0.026	4	22358	33519	1	Standard
	Cr	53	1.307	ug/L	0.032	2	167	3091	4	Standard
	Mn	55	92.475	ug/L	0.945	1	417	2719996	3	Standard
>	Ge	72		ug/L			37795	38215	1	KED
	Ni	60	1.414	ug/L	0.046	3	24	2504	2	KED
	Ni	62	1.425	ug/L	0.059	4	6	402	3	KED
	Cu	63	2.089	ug/L	0.107	5	46	10521	4	KED
	Cu	65	2.173	ug/L	0.046	2	20	5484	2	KED
	Zn	66	52.952	ug/L	1.545	2	37	30872	1	KED
	Zn	67	49.984	ug/L	1.364	2	6	4923	3	KED
	As	75	0.346	ug/L	0.006	1	3	108	1	KED
	Se	78	-0.041	ug/L	0.167	407	13	12	36	KED
	Kr	83		ug/L			45	42	21	Standard
>	In-1	115		ug/L			9034	8470	2	KED
	Cd	111	0.022	ug/L	0.016	75	5	11	42	KED
	Cd	114	0.031	ug/L	0.011	35	2	26	28	KED
>	In	115		ug/L			445066	432236	3	Standard
	Ag	107	0.005	ug/L	0.000	9	62	153	6	Standard
	Ba	135	12.734	ug/L	0.595	4	20	67442	5	Standard
	Ba	137	12.698	ug/L	0.399	3	42	127183	0	Standard
>	Tb	159		ug/L			196002	198366	1	Standard
	Pb	208	0.135	ug/L	0.003	2	206	9608	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0167-07
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:36:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	37164	1	Standard
>	Sc	45		ug/L			726273	747367	3	Standard
	Cr	52	3.413	ug/L	0.152	4	22358	88576	1	Standard
	Cr	53	3.476	ug/L	0.108	3	167	7941	3	Standard
	Mn	55	9.310	ug/L	0.200	2	417	274477	1	Standard
>	Ge	72		ug/L			37795	38302	1	KED
	Ni	60	0.441	ug/L	0.027	6	24	800	4	KED
	Ni	62	0.421	ug/L	0.045	10	6	123	10	KED
	Cu	63	2.814	ug/L	0.034	1	46	14192	0	KED
	Cu	65	2.754	ug/L	0.091	3	20	6957	1	KED
	Zn	66	45.193	ug/L	0.232	0	37	26418	1	KED
	Zn	67	42.751	ug/L	1.242	2	6	4219	1	KED
	As	75	1.162	ug/L	0.019	1	3	357	2	KED
	Se	78	0.029	ug/L	0.177	605	13	14	33	KED
	Kr	83		ug/L			45	49	17	Standard
>	In-1	115		ug/L			9034	8846	1	KED
	Cd	111	0.107	ug/L	0.014	13	5	37	10	KED
	Cd	114	0.106	ug/L	0.019	17	2	87	18	KED
>	In	115		ug/L			445066	455309	3	Standard
	Ag	107	0.003	ug/L	0.001	20	62	124	13	Standard
	Ba	135	10.754	ug/L	0.602	5	20	59944	3	Standard
	Ba	137	10.997	ug/L	0.398	3	42	116032	0	Standard
>	Tb	159		ug/L			196002	196161	1	Standard
	Pb	208	0.452	ug/L	0.001	0	206	31386	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0167-08
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:40:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	35714	4	Standard
>	Sc	45		ug/L			726273	735771	4	Standard
	Cr	52	1.277	ug/L	0.045	3	22358	46819	3	Standard
	Cr	53	1.239	ug/L	0.034	2	167	2896	1	Standard
	Mn	55	21.947	ug/L	0.211	0	417	636707	3	Standard
>	Ge	72		ug/L			37795	38353	2	KED
	Ni	60	0.399	ug/L	0.004	1	24	727	3	KED
	Ni	62	0.445	ug/L	0.026	5	6	130	8	KED
	Cu	63	2.007	ug/L	0.081	4	46	10142	1	KED
	Cu	65	2.027	ug/L	0.077	3	20	5132	1	KED
	Zn	66	32.937	ug/L	0.991	3	37	19280	1	KED
	Zn	67	31.161	ug/L	1.438	4	6	3080	3	KED
	As	75	2.004	ug/L	0.055	2	3	615	2	KED
	Se	78	-0.020	ug/L	0.050	254	13	13	9	KED
	Kr	83		ug/L			45	45	2	Standard
>	In-1	115		ug/L			9034	8833	3	KED
	Cd	111	0.094	ug/L	0.015	16	5	33	10	KED
	Cd	114	0.081	ug/L	0.006	7	2	66	10	KED
>	In	115		ug/L			445066	448499	1	Standard
	Ag	107	0.005	ug/L	0.002	38	62	147	22	Standard
	Ba	135	8.009	ug/L	0.246	3	20	44020	2	Standard
	Ba	137	7.935	ug/L	0.287	3	42	82539	3	Standard
>	Tb	159		ug/L			196002	205163	0	Standard
	Pb	208	0.365	ug/L	0.007	1	206	26541	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0167-09
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:43:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	32166	4	Standard
>	Sc	45		ug/L			726273	737837	3	Standard
	Cr	52	1.017	ug/L	0.050	4	22358	42006	1	Standard
	Cr	53	0.979	ug/L	0.062	6	167	2330	4	Standard
	Mn	55	13.430	ug/L	0.155	1	417	390802	2	Standard
>	Ge	72		ug/L			37795	36543	6	KED
	Ni	60	0.472	ug/L	0.007	1	24	816	6	KED
	Ni	62	0.486	ug/L	0.074	15	6	134	9	KED
	Cu	63	2.385	ug/L	0.111	4	46	11464	1	KED
	Cu	65	2.516	ug/L	0.159	6	20	6055	2	KED
	Zn	66	47.578	ug/L	3.036	6	37	26471	2	KED
	Zn	67	43.349	ug/L	1.829	4	6	4076	2	KED
	As	75	1.037	ug/L	0.051	4	3	304	3	KED
	Se	78	0.098	ug/L	0.058	59	13	15	15	KED
	Kr	83		ug/L			45	53	18	Standard
>	In-1	115		ug/L			9034	8499	2	KED
	Cd	111	0.172	ug/L	0.043	24	5	55	20	KED
	Cd	114	0.139	ug/L	0.009	6	2	107	4	KED
>	In	115		ug/L			445066	437931	1	Standard
	Ag	107	0.002	ug/L	0.000	26	62	92	7	Standard
	Ba	135	11.745	ug/L	0.272	2	20	63027	1	Standard
	Ba	137	11.501	ug/L	0.243	2	42	116779	0	Standard
>	Tb	159		ug/L			196002	196994	0	Standard
	Pb	208	0.258	ug/L	0.002	0	206	18109	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0167-10
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:47:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	34763	7	Standard
>	Sc	45		ug/L			726273	735878	1	Standard
	Cr	52	3.231	ug/L	0.112	3	22358	83843	3	Standard
	Cr	53	3.290	ug/L	0.015	0	167	7413	2	Standard
	Mn	55	43.773	ug/L	0.902	2	417	1269719	2	Standard
>	Ge	72		ug/L			37795	37741	2	KED
	Ni	60	6.098	ug/L	0.045	0	24	10589	2	KED
	Ni	62	6.398	ug/L	0.135	2	6	1763	2	KED
	Cu	63	16.428	ug/L	0.284	1	46	81432	3	KED
	Cu	65	16.293	ug/L	0.233	1	20	40466	0	KED
	Zn	66	45.385	ug/L	0.831	1	37	26137	1	KED
	Zn	67	45.354	ug/L	1.625	3	6	4409	1	KED
	As	75	0.951	ug/L	0.042	4	3	288	2	KED
	Se	78	0.256	ug/L	0.161	63	13	20	22	KED
	Kr	83		ug/L			45	57	26	Standard
>	In-1	115		ug/L			9034	8337	1	KED
	Cd	111	0.081	ug/L	0.028	34	5	28	30	KED
	Cd	114	0.086	ug/L	0.027	30	2	66	29	KED
>	In	115		ug/L			445066	441121	1	Standard
	Ag	107	0.026	ug/L	0.002	7	62	527	6	Standard
	Ba	135	30.251	ug/L	1.556	5	20	163489	4	Standard
	Ba	137	30.354	ug/L	0.997	3	42	310398	2	Standard
>	Tb	159		ug/L			196002	195301	1	Standard
	Pb	208	4.039	ug/L	0.090	2	206	277655	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0174-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:52:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	32791	2	Standard
>	Sc	45		ug/L			726273	728044	4	Standard
	Cr	52	0.198	ug/L	0.049	25	22358	26084	1	Standard
	Cr	53	0.275	ug/L	0.014	5	167	767	8	Standard
	Mn	55	17.076	ug/L	0.463	2	417	489917	2	Standard
>	Ge	72		ug/L			37795	37785	1	KED
	Ni	60	0.450	ug/L	0.021	4	24	805	3	KED
	Ni	62	0.434	ug/L	0.035	8	6	125	8	KED
	Cu	63	22.389	ug/L	0.451	2	46	111077	2	KED
	Cu	65	23.083	ug/L	0.948	4	20	57386	3	KED
	Zn	66	55.110	ug/L	1.509	2	37	31773	2	KED
	Zn	67	52.941	ug/L	0.601	1	6	5155	2	KED
	As	75	0.142	ug/L	0.007	4	3	45	3	KED
	Se	78	-0.051	ug/L	0.188	368	13	12	40	KED
	Kr	83		ug/L			45	53	22	Standard
>	In-1	115		ug/L			9034	8645	2	KED
	Cd	111	-0.001	ug/L	0.008	542	5	4	53	KED
	Cd	114	0.014	ug/L	0.007	49	2	13	36	KED
>	In	115		ug/L			445066	435439	4	Standard
	Ag	107	0.000	ug/L	0.000	76	62	65	9	Standard
	Ba	135	16.291	ug/L	0.789	4	20	86821	2	Standard
	Ba	137	16.088	ug/L	0.966	6	42	162183	2	Standard
>	Tb	159		ug/L			196002	203493	0	Standard
	Pb	208	0.092	ug/L	0.001	1	206	6770	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLD
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 01:56:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	21404	3	Standard
⌈>	**Sc**	**45**		ug/L			726273	710622	2	Standard
|	**Cr**	**52**	**0.046**	ug/L	0.046	98	22358	22712	3	Standard
|	**Cr**	**53**	**0.018**	ug/L	0.012	66	167	203	14	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.001	152	417	429	9	Standard
⌈>	**Ge**	**72**		ug/L			37795	39255	4	KED
|	**Ni**	**60**	**-0.007**	ug/L	0.002	33	24	12	37	KED
|	**Ni**	**62**	**0.008**	ug/L	0.021	258	6	8	65	KED
|	**Cu**	**63**	**0.006**	ug/L	0.002	43	46	77	19	KED
|	**Cu**	**65**	**0.008**	ug/L	0.004	48	20	42	24	KED
|	**Zn**	**66**	**0.015**	ug/L	0.016	108	37	47	17	KED
|	**Zn**	**67**	**0.028**	ug/L	0.048	169	6	9	52	KED
|	**As**	**75**	**-0.001**	ug/L	0.005	376	3	2	50	KED
⌊	**Se**	**78**	**-0.120**	ug/L	0.085	71	13	10	18	KED
	Kr	**83**		ug/L			45	50	24	Standard
⌈>	**In-1**	**115**		ug/L			9034	8686	2	KED
|	**Cd**	**111**	**0.005**	ug/L	0.005	105	5	6	22	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.003	60	2	6	33	KED
⌈>	**In**	**115**		ug/L			445066	436690	2	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.001	28	62	27	37	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.001	80	20	27	21	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.002	190	42	53	42	Standard
⌈>	**Tb**	**159**		ug/L			196002	194398	0	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	74	206	167	17	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVF
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:00:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	20943	7	Standard
⌈>	**Sc**	**45**		ug/L			726273	727155	3	Standard
|	**Cr**	**52**	**49.875**	ug/L	1.385	2	22358	954982	0	Standard
|	**Cr**	**53**	**48.887**	ug/L	1.617	3	167	106447	1	Standard
⌊	**Mn**	**55**	**46.646**	ug/L	0.735	1	417	1336881	3	Standard
⌈>	**Ge**	**72**		ug/L			37795	38680	2	KED
|	**Ni**	**60**	**47.890**	ug/L	0.936	1	24	85041	0	KED
|	**Ni**	**62**	**47.636**	ug/L	0.591	1	6	13417	3	KED
|	**Cu**	**63**	**47.748**	ug/L	1.411	2	46	242349	0	KED
|	**Cu**	**65**	**48.758**	ug/L	0.758	1	20	124069	0	KED
|	**Zn**	**66**	**49.588**	ug/L	1.525	3	37	29259	1	KED
|	**Zn**	**67**	**47.852**	ug/L	2.071	4	6	4767	2	KED
|	**As**	**75**	**49.101**	ug/L	0.902	1	3	15125	1	KED
⌊	**Se**	**78**	**47.497**	ug/L	0.950	1	13	1299	2	KED
	Kr	**83**		ug/L			45	52	2	Standard
⌈>	**In-1**	**115**		ug/L			9034	8690	0	KED
|	**Cd**	**111**	**48.057**	ug/L	1.123	2	5	14485	2	KED
⌊	**Cd**	**114**	**48.540**	ug/L	0.789	1	2	37669	2	KED
⌈>	**In**	**115**		ug/L			445066	432654	2	Standard
|	**Ag**	**107**	**53.373**	ug/L	0.413	0	62	939536	1	Standard
|	**Ba**	**135**	**48.970**	ug/L	1.268	2	20	259530	2	Standard
⌊	**Ba**	**137**	**48.421**	ug/L	1.685	3	42	485483	2	Standard
⌈>	**Tb**	**159**		ug/L			196002	197582	1	Standard
⌊	**Pb**	**208**	**46.794**	ug/L	1.136	2	206	3251858	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBF
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:06:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	20738	4	Standard
⌈>	**Sc**	**45**		ug/L			726273	744414	3	Standard
|	**Cr**	**52**	**-0.016**	ug/L	0.042	265	22358	22611	4	Standard
|	**Cr**	**53**	**-0.010**	ug/L	0.006	59	167	149	11	Standard
⌊	**Mn**	**55**	**-0.002**	ug/L	0.000	31	417	382	1	Standard
⌈>	**Ge**	**72**		ug/L			37795	39573	1	KED
|	**Ni**	**60**	**-0.007**	ug/L	0.001	18	24	12	17	KED
|	**Ni**	**62**	**-0.014**	ug/L	0.004	26	6	2	43	KED
|	**Cu**	**63**	**0.000**	ug/L	0.001	674	46	50	13	KED
|	**Cu**	**65**	**0.002**	ug/L	0.004	212	20	26	37	KED
|	**Zn**	**66**	**0.011**	ug/L	0.010	97	37	45	15	KED
|	**Zn**	**67**	**0.022**	ug/L	0.053	243	6	8	61	KED
|	**As**	**75**	**0.006**	ug/L	0.005	83	3	5	31	KED
⌊	**Se**	**78**	**0.044**	ug/L	0.155	352	13	15	27	KED
	Kr	**83**		ug/L			45	50	41	Standard
⌈>	**In-1**	**115**		ug/L			9034	8954	1	KED
|	**Cd**	**111**	**-0.004**	ug/L	0.003	81	5	3	25	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.002	483	2	3	60	KED
⌈>	**In**	**115**		ug/L			445066	433220	1	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.001	18	62	172	9	Standard
|	**Ba**	**135**	**0.002**	ug/L	0.001	58	20	30	18	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	46	42	55	10	Standard
⌈>	**Tb**	**159**		ug/L			196002	199553	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	27	206	284	5	Standard

23E

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~23D~~0167-02
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:10:15
Number of Replicates: 3

MB 5/19/23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	35093	2	Standard
>	Sc	45		ug/L			726273	748066	2	Standard
	Cr	52	2.269	ug/L	0.067	2	22358	66690	1	Standard
	Cr	53	2.358	ug/L	0.017	0	167	5450	2	Standard
	Mn	55	96.235	ug/L	0.722	0	417	2837267	2	Standard
>	Ge	72		ug/L			37795	39062	2	KED
	Ni	60	1.053	ug/L	0.023	2	24	1912	0	KED
	Ni	62	1.086	ug/L	0.166	15	6	314	12	KED
	Cu	63	5.888	ug/L	0.084	1	46	30242	4	KED
	Cu	65	5.854	ug/L	0.122	2	20	15059	0	KED
	Zn	66	85.167	ug/L	2.124	2	37	50718	0	KED
	Zn	67	80.477	ug/L	6.257	7	6	8087	5	KED
	As	75	0.954	ug/L	0.026	2	3	300	2	KED
	Se	78	0.344	ug/L	0.171	49	13	23	19	KED
	Kr	83		ug/L			45	57	8	Standard
>	In-1	115		ug/L			9034	8656	4	KED
	Cd	111	0.116	ug/L	0.011	9	5	39	3	KED
	Cd	114	0.106	ug/L	0.010	9	2	84	6	KED
>	In	115		ug/L			445066	438887	2	Standard
	Ag	107	0.009	ug/L	0.001	8	62	213	7	Standard
	Ba	135	17.110	ug/L	0.344	2	20	92042	3	Standard
	Ba	137	16.174	ug/L	0.186	1	42	164630	3	Standard
>	Tb	159		ug/L			196002	198612	0	Standard
	Pb	208	0.754	ug/L	0.002	0	206	52904	0	Standard

23E

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~23D~~0167-03
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:13:58

MB 5/19/23

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	33894	1	Standard
>	Sc	45		ug/L			726273	758098	3	Standard
	Cr	52	2.007	ug/L	0.043	2	22358	62481	1	Standard
	Cr	53	2.116	ug/L	0.089	4	167	4971	1	Standard
	Mn	55	84.516	ug/L	0.650	0	417	2525068	2	Standard
>	Ge	72		ug/L			37795	38691	2	KED
	Ni	60	0.976	ug/L	0.025	2	24	1759	4	KED
	Ni	62	0.954	ug/L	0.071	7	6	274	6	KED
	Cu	63	4.012	ug/L	0.049	1	46	20423	3	KED
	Cu	65	4.137	ug/L	0.097	2	20	10549	0	KED
	Zn	66	75.827	ug/L	0.673	0	37	44749	2	KED
	Zn	67	70.356	ug/L	1.259	1	6	7011	2	KED
	As	75	0.802	ug/L	0.020	2	3	250	2	KED
	Se	78	0.290	ug/L	0.249	85	13	21	29	KED
	Kr	83		ug/L			45	51	22	Standard
>	In-1	115		ug/L			9034	8572	6	KED
	Cd	111	0.111	ug/L	0.018	16	5	37	7	KED
	Cd	114	0.101	ug/L	0.023	23	2	79	24	KED
>	In	115		ug/L			445066	450270	2	Standard
	Ag	107	0.006	ug/L	0.000	8	62	166	2	Standard
	Ba	135	14.564	ug/L	0.386	2	20	80318	0	Standard
	Ba	137	14.187	ug/L	0.276	1	42	148088	1	Standard
>	Tb	159		ug/L			196002	203183	2	Standard
	Pb	208	0.625	ug/L	0.007	1	206	44873	1	Standard

ICP-MS Quantitative Analysis - Summary Report

23E

Sample ID: ~~23D~~**0178-01**

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, May 20, 2023 02:17:35

MB 5/19/23

Number of Replicates: 3

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth

Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	39172	4	Standard
>	Sc	45		ug/L			726273	737851	1	Standard
	Cr	52	1.157	ug/L	0.057	4	22358	44686	3	Standard
	Cr	53	1.814	ug/L	0.025	1	167	4175	0	Standard
	Mn	55	38.707	ug/L	1.148	2	417	1126208	4	Standard
>	Ge	72		ug/L			37795	36973	3	KED
	Ni	60	1.235	ug/L	0.060	4	24	2118	1	KED
	Ni	62	1.181	ug/L	0.072	6	6	323	6	KED
	Cu	63	11.843	ug/L	0.295	2	46	57493	2	KED
	Cu	65	11.872	ug/L	0.248	2	20	28893	3	KED
	Zn	66	69.645	ug/L	2.211	3	37	39253	0	KED
	Zn	67	64.586	ug/L	3.179	4	6	6146	3	KED
	As	75	0.932	ug/L	0.037	4	3	277	3	KED
	Se	78	0.195	ug/L	0.114	58	13	18	13	KED
	Kr	83		ug/L			45	48	11	Standard
>	In-1	115		ug/L			9034	8273	3	KED
	Cd	111	0.107	ug/L	0.023	21	5	35	17	KED
	Cd	114	0.083	ug/L	0.006	7	2	64	10	KED
>	In	115		ug/L			445066	430728	2	Standard
	Ag	107	0.010	ug/L	0.001	8	62	235	8	Standard
	Ba	135	14.019	ug/L	0.472	3	20	73961	1	Standard
	Ba	137	13.996	ug/L	0.316	2	42	139752	1	Standard
>	Tb	159		ug/L			196002	203492	1	Standard
	Pb	208	0.678	ug/L	0.015	2	206	48769	1	Standard

ICP-MS Quantitative Analysis - Summary Report

23E

Sample ID: ~~23D~~**0178-03**

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, May 20, 2023 02:21:19

Number of Replicates: 3

MB 5/19/23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth

Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	31908	4	Standard
>	**Sc**	**45**		ug/L			726273	757240	2	Standard
	Cr	**52**	**0.426**	ug/L	0.071	16	22358	31611	4	Standard
	Cr	**53**	**4.400**	ug/L	0.199	4	167	10142	5	Standard
	Mn	**55**	**3.422**	ug/L	0.085	2	417	102497	0	Standard
>	**Ge**	**72**		ug/L			37795	35501	2	KED
	Ni	**60**	**0.550**	ug/L	0.030	5	24	918	3	KED
	Ni	**62**	**0.560**	ug/L	0.041	7	6	150	5	KED
	Cu	**63**	**2.588**	ug/L	0.119	4	46	12095	2	KED
	Cu	**65**	**2.639**	ug/L	0.071	2	20	6181	0	KED
	Zn	**66**	**2.342**	ug/L	0.162	6	37	1301	4	KED
	Zn	**67**	**2.944**	ug/L	0.162	5	6	274	6	KED
	As	**75**	**1.378**	ug/L	0.059	4	3	392	1	KED
	Se	**78**	**0.025**	ug/L	0.189	745	13	13	37	KED
	Kr	**83**		ug/L			45	46	13	Standard
>	**In-1**	**115**		ug/L			9034	8192	1	KED
	Cd	**111**	**0.012**	ug/L	0.005	43	5	7	18	KED
	Cd	**114**	**0.013**	ug/L	0.005	39	2	12	31	KED
>	**In**	**115**		ug/L			445066	408772	2	Standard
	Ag	**107**	**0.007**	ug/L	0.002	25	62	172	15	Standard
	Ba	**135**	**9.121**	ug/L	0.416	4	20	45675	3	Standard
	Ba	**137**	**9.151**	ug/L	0.402	4	42	86728	3	Standard
>	**Tb**	**159**		ug/L			196002	196098	1	Standard
	Pb	**208**	**0.163**	ug/L	0.005	2	206	11425	1	Standard

ICP-MS Quantitative Analysis - Summary Report

23E

Sample ID: ~~23D~~**0184-01**

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, May 20, 2023 02:24:56

MB 5/19/23

Number of Replicates: 3

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth

Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	42455	4	Standard
>	Sc	45		ug/L			726273	759897	0	Standard
	Cr	52	0.719	ug/L	0.062	8	22358	37453	3	Standard
	Cr	53	0.862	ug/L	0.018	2	167	2136	2	Standard
	Mn	55	14.981	ug/L	0.125	0	417	449094	1	Standard
>	Ge	72		ug/L			37795	37296	2	KED
	Ni	60	9.035	ug/L	0.048	0	24	15494	1	KED
	Ni	62	9.130	ug/L	0.220	2	6	2484	2	KED
	Cu	63	6.391	ug/L	0.166	2	46	31318	0	KED
	Cu	65	6.565	ug/L	0.196	2	20	16122	1	KED
	Zn	66	14.720	ug/L	0.530	3	37	8401	2	KED
	Zn	67	18.860	ug/L	0.085	0	6	1816	2	KED
	As	75	0.504	ug/L	0.047	9	3	153	10	KED
	Se	78	0.110	ug/L	0.037	33	13	16	6	KED
	Kr	83		ug/L			45	48	9	Standard
>	In-1	115		ug/L			9034	8435	2	KED
	Cd	111	0.037	ug/L	0.004	10	5	15	9	KED
	Cd	114	0.043	ug/L	0.009	21	2	34	21	KED
>	In	115		ug/L			445066	451325	1	Standard
	Ag	107	0.004	ug/L	0.001	17	62	140	9	Standard
	Ba	135	69.838	ug/L	2.061	2	20	386223	3	Standard
	Ba	137	68.189	ug/L	0.771	1	42	713498	1	Standard
>	Tb	159		ug/L			196002	205005	4	Standard
	Pb	208	0.133	ug/L	0.006	4	206	9776	0	Standard

ICP-MS Quantitative Analysis - Summary Report

23E

Sample ID: ~~23D~~0172-03

Sample Dil Factor:

Comments:

Sample Date/Time: Saturday, May 20, 2023 02:28:33

Number of Replicates: 3

MB 5/19/23

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth

Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	36263	8	Standard
>	Sc	45		ug/L			726273	728744	2	Standard
	Cr	52	5.434	ug/L	0.145	2	22358	124359	4	Standard
	Cr	53	6.785	ug/L	0.079	1	167	14961	2	Standard
	Mn	55	18.240	ug/L	0.235	1	417	524230	2	Standard
>	Ge	72		ug/L			37795	36206	2	KED
	Ni	60	2.416	ug/L	0.095	3	24	4036	2	KED
	Ni	62	2.498	ug/L	0.193	7	6	663	5	KED
	Cu	63	16.376	ug/L	0.588	3	46	77817	1	KED
	Cu	65	16.782	ug/L	0.076	0	20	39991	2	KED
	Zn	66	49.631	ug/L	1.274	2	37	27411	0	KED
	Zn	67	46.286	ug/L	0.880	1	6	4320	4	KED
	As	75	1.749	ug/L	0.117	6	3	506	4	KED
	Se	78	0.012	ug/L	0.131	1078	13	13	24	KED
	Kr	83		ug/L			45	40	13	Standard
>	In-1	115		ug/L			9034	8050	3	KED
	Cd	111	0.045	ug/L	0.007	15	5	17	14	KED
	Cd	114	0.051	ug/L	0.011	21	2	39	20	KED
>	In	115		ug/L			445066	418151	0	Standard
	Ag	107	0.008	ug/L	0.002	19	62	198	13	Standard
	Ba	135	24.737	ug/L	0.703	2	20	126733	2	Standard
	Ba	137	24.903	ug/L	0.229	0	42	241451	1	Standard
>	Tb	159		ug/L			196002	197679	1	Standard
	Pb	208	2.504	ug/L	0.037	1	206	174342	0	Standard

ICP-MS Quantitative Analysis - Summary Report

23E

Sample ID: ~~23D~~**0172-01**

Sample Dil Factor: **2**

Comments:

Sample Date/Time: Saturday, May 20, 2023 02:32:16

MB 5/19/23

Number of Replicates: 3

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth

Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	29416	4	Standard
>	Sc	45		ug/L			726273	715882	1	Standard
	Cr	52	4.757	ug/L	0.209	4	22358	109717	5	Standard
	Cr	53	5.628	ug/L	0.032	0	167	12218	1	Standard
	Mn	55	78.219	ug/L	0.498	0	417	2207126	1	Standard
>	Ge	72		ug/L			37795	36483	1	KED
	Ni	60	2.531	ug/L	0.065	2	24	4263	3	KED
	Ni	62	2.555	ug/L	0.050	1	6	684	2	KED
	Cu	63	16.709	ug/L	0.732	4	46	80028	3	KED
	Cu	65	16.999	ug/L	0.174	1	20	40815	0	KED
	Zn	66	65.635	ug/L	0.832	1	37	36526	0	KED
	Zn	67	61.401	ug/L	1.002	1	6	5770	1	KED
	As	75	1.369	ug/L	0.110	7	3	400	8	KED
	Se	78	0.531	ug/L	0.454	85	13	26	45	KED
	Kr	83		ug/L			45	52	12	Standard
>	In-1	115		ug/L			9034	8153	0	KED
	Cd	111	0.074	ug/L	0.020	27	5	25	22	KED
	Cd	114	0.074	ug/L	0.010	13	2	56	12	KED
>	In	115		ug/L			445066	421747	3	Standard
	Ag	107	0.018	ug/L	0.001	5	62	375	5	Standard
	Ba	135	32.725	ug/L	1.491	4	20	168913	0	Standard
	Ba	137	32.965	ug/L	0.682	2	42	322421	5	Standard
>	Tb	159		ug/L			196002	197017	3	Standard
	Pb	208	5.535	ug/L	0.203	3	206	383574	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0574-DUP1
Sample Dil Factor: 2
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:35:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	32051	4	Standard
>	Sc	45		ug/L			726273	715481	2	Standard
	Cr	52	4.704	ug/L	0.062	1	22358	108633	2	Standard
	Cr	53	5.414	ug/L	0.078	1	167	11754	2	Standard
	Mn	55	77.704	ug/L	4.658	5	417	2193201	8	Standard
>	Ge	72		ug/L			37795	36840	0	KED
	Ni	60	2.578	ug/L	0.038	1	24	4384	0	KED
	Ni	62	2.582	ug/L	0.014	0	6	698	0	KED
	Cu	63	16.929	ug/L	0.190	1	46	81897	0	KED
	Cu	65	17.129	ug/L	0.190	1	20	41532	0	KED
	Zn	66	65.311	ug/L	0.440	0	37	36705	0	KED
	Zn	67	61.760	ug/L	2.088	3	6	5860	2	KED
	As	75	1.365	ug/L	0.048	3	3	403	3	KED
	Se	78	0.032	ug/L	0.058	177	13	13	9	KED
	Kr	83		ug/L			45	40	16	Standard
>	In-1	115		ug/L			9034	8142	1	KED
	Cd	111	0.102	ug/L	0.011	10	5	33	8	KED
	Cd	114	0.086	ug/L	0.029	33	2	65	31	KED
>	In	115		ug/L			445066	424507	0	Standard
	Ag	107	0.018	ug/L	0.000	1	62	376	1	Standard
	Ba	135	33.126	ug/L	1.351	4	20	172270	3	Standard
	Ba	137	33.059	ug/L	0.850	2	42	325379	2	Standard
>	Tb	159		ug/L			196002	193756	2	Standard
	Pb	208	5.354	ug/L	0.178	3	206	364992	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0574-MS1
Sample Dil Factor: 2
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:40:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	29563	6	Standard
>	Sc	45		ug/L			726273	727897	3	Standard
	Cr	52	15.923	ug/L	0.365	2	22358	320513	1	Standard
	Cr	53	16.057	ug/L	0.329	2	167	35124	1	Standard
	Mn	55	88.760	ug/L	2.854	3	417	2545171	2	Standard
>	Ge	72		ug/L			37795	37029	1	KED
	Ni	60	14.500	ug/L	0.118	0	24	24676	2	KED
	Ni	62	14.120	ug/L	0.214	1	6	3811	2	KED
	Cu	63	28.206	ug/L	0.589	2	46	137134	3	KED
	Cu	65	28.079	ug/L	0.785	2	20	68420	3	KED
	Zn	66	101.891	ug/L	2.683	2	37	57520	1	KED
	Zn	67	93.743	ug/L	2.062	2	6	8938	1	KED
	As	75	13.273	ug/L	0.285	2	3	3916	2	KED
	Se	78	37.345	ug/L	1.096	2	13	980	1	KED
	Kr	83		ug/L			45	55	28	Standard
>	In-1	115		ug/L			9034	8412	3	KED
	Cd	111	11.596	ug/L	0.218	1	5	3386	1	KED
	Cd	114	11.559	ug/L	0.530	4	2	8679	3	KED
>	In	115		ug/L			445066	408615	1	Standard
	Ag	107	12.740	ug/L	0.262	2	62	211817	0	Standard
	Ba	135	45.800	ug/L	0.345	0	20	229277	1	Standard
	Ba	137	45.510	ug/L	1.041	2	42	431081	2	Standard
>	Tb	159		ug/L			196002	189378	1	Standard
	Pb	208	17.467	ug/L	0.197	1	206	1163751	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLE
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:43:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	20358	2	Standard
⌈>	**Sc**	**45**		ug/L			726273	708294	2	Standard
|	**Cr**	**52**	**0.057**	ug/L	0.060	104	22358	22845	5	Standard
|	**Cr**	**53**	**0.058**	ug/L	0.008	14	167	286	3	Standard
⌊	**Mn**	**55**	**0.003**	ug/L	0.000	6	417	487	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	35690	5	KED
|	**Ni**	**60**	**-0.005**	ug/L	0.004	86	24	15	50	KED
|	**Ni**	**62**	**0.012**	ug/L	0.013	110	6	8	32	KED
|	**Cu**	**63**	**0.008**	ug/L	0.003	41	46	80	21	KED
|	**Cu**	**65**	**0.011**	ug/L	0.002	15	20	46	9	KED
|	**Zn**	**66**	**0.030**	ug/L	0.006	20	37	51	6	KED
|	**Zn**	**67**	**0.024**	ug/L	0.009	38	6	8	13	KED
|	**As**	**75**	**0.007**	ug/L	0.003	51	3	4	24	KED
⌊	**Se**	**78**	**0.113**	ug/L	0.192	170	13	15	25	KED
	Kr	**83**		ug/L			45	41	2	Standard
⌈>	**In-1**	**115**		ug/L			9034	8432	3	KED
|	**Cd**	**111**	**0.012**	ug/L	0.014	112	5	8	48	KED
⌊	**Cd**	**114**	**0.013**	ug/L	0.003	26	2	12	17	KED
⌈>	**In**	**115**		ug/L			445066	446232	1	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.000	65	62	66	2	Standard
|	**Ba**	**135**	**0.003**	ug/L	0.002	96	20	34	37	Standard
⌊	**Ba**	**137**	**0.002**	ug/L	0.002	86	42	66	30	Standard
⌈>	**Tb**	**159**		ug/L			196002	194779	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.001	132	206	235	15	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVG
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:47:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	20586	5	Standard
⌈>	**Sc**	**45**		ug/L			726273	726010	3	Standard
|	**Cr**	**52**	**48.792**	ug/L	1.357	2	22358	933227	1	Standard
|	**Cr**	**53**	**47.942**	ug/L	0.854	1	167	104323	4	Standard
⌊	**Mn**	**55**	**44.739**	ug/L	1.098	2	417	1279760	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	37083	0	KED
|	**Ni**	**60**	**49.575**	ug/L	0.679	1	24	84420	1	KED
|	**Ni**	**62**	**50.370**	ug/L	1.054	2	6	13598	2	KED
|	**Cu**	**63**	**49.781**	ug/L	0.765	1	46	242342	1	KED
|	**Cu**	**65**	**50.209**	ug/L	0.966	1	20	122511	1	KED
|	**Zn**	**66**	**50.567**	ug/L	0.748	1	37	28615	1	KED
|	**Zn**	**67**	**48.902**	ug/L	1.741	3	6	4673	3	KED
|	**As**	**75**	**50.688**	ug/L	0.972	1	3	14972	1	KED
⌊	**Se**	**78**	**48.799**	ug/L	0.954	1	13	1279	1	KED
	Kr	**83**		ug/L			45	58	21	Standard
⌈>	**In-1**	**115**		ug/L			9034	8381	1	KED
|	**Cd**	**111**	**49.360**	ug/L	0.931	1	5	14351	2	KED
⌊	**Cd**	**114**	**49.002**	ug/L	0.571	1	2	36670	1	KED
⌈>	**In**	**115**		ug/L			445066	426654	2	Standard
|	**Ag**	**107**	**53.305**	ug/L	0.766	1	62	925192	1	Standard
|	**Ba**	**135**	**50.953**	ug/L	1.935	3	20	266153	0	Standard
⌊	**Ba**	**137**	**48.688**	ug/L	1.860	3	42	481675	5	Standard
⌈>	**Tb**	**159**		ug/L			196002	193204	2	Standard
⌊	**Pb**	**208**	**47.092**	ug/L	1.306	2	206	3199592	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBG
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:54:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	20033	1	Standard
⌈>	**Sc**	**45**		ug/L			726273	737195	3	Standard
|	**Cr**	**52**	**0.030**	ug/L	0.016	52	22358	23276	5	Standard
|	**Cr**	**53**	**0.006**	ug/L	0.006	106	167	184	11	Standard
⌊	**Mn**	**55**	**-0.001**	ug/L	0.000	26	417	388	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	38471	0	KED
|	**Ni**	**60**	**-0.006**	ug/L	0.003	52	24	14	37	KED
|	**Ni**	**62**	**0.002**	ug/L	0.014	758	6	6	56	KED
|	**Cu**	**63**	**0.001**	ug/L	0.001	93	46	54	12	KED
|	**Cu**	**65**	**0.002**	ug/L	0.003	197	20	25	31	KED
|	**Zn**	**66**	**-0.004**	ug/L	0.009	198	37	35	13	KED
|	**Zn**	**67**	**0.050**	ug/L	0.018	36	6	11	16	KED
|	**As**	**75**	**0.005**	ug/L	0.010	193	3	4	62	KED
⌊	**Se**	**78**	**0.081**	ug/L	0.056	69	13	15	9	KED
	Kr	**83**		ug/L			45	39	10	Standard
⌈>	**In-1**	**115**		ug/L			9034	8917	2	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.010	596	5	4	65	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.007	208	2	5	95	KED
⌈>	**In**	**115**		ug/L			445066	435682	5	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.000	5	62	174	2	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.000	21	20	23	4	Standard
⌊	**Ba**	**137**	**0.000**	ug/L	0.001	291	42	44	21	Standard
⌈>	**Tb**	**159**		ug/L			196002	197230	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	9	206	302	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0187-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 02:57:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	37286	2	Standard
⌈>	**Sc**	**45**		ug/L			726273	745527	2	Standard
|	**Cr**	**52**	**1.297**	ug/L	0.092	7	22358	47844	4	Standard
|	**Cr**	**53**	**1.221**	ug/L	0.017	1	167	2895	2	Standard
⌊	**Mn**	**55**	**16.377**	ug/L	0.164	1	417	481592	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	39117	1	KED
|	**Ni**	**60**	**1.924**	ug/L	0.072	3	24	3480	3	KED
|	**Ni**	**62**	**1.937**	ug/L	0.065	3	6	558	4	KED
|	**Cu**	**63**	**19.855**	ug/L	0.681	3	46	102016	4	KED
|	**Cu**	**65**	**19.658**	ug/L	0.573	2	20	50620	4	KED
|	**Zn**	**66**	**34.165**	ug/L	0.516	1	37	20406	1	KED
|	**Zn**	**67**	**32.313**	ug/L	0.536	1	6	3260	2	KED
|	**As**	**75**	**0.378**	ug/L	0.048	12	3	121	13	KED
⌊	**Se**	**78**	**0.086**	ug/L	0.163	188	13	16	28	KED
	Kr	**83**		ug/L			45	55	13	Standard
⌈>	**In-1**	**115**		ug/L			9034	8649	1	KED
|	**Cd**	**111**	**0.151**	ug/L	0.010	6	5	50	3	KED
⌊	**Cd**	**114**	**0.177**	ug/L	0.022	12	2	139	13	KED
⌈>	**In**	**115**		ug/L			445066	448435	1	Standard
|	**Ag**	**107**	**0.017**	ug/L	0.002	10	62	377	8	Standard
|	**Ba**	**135**	**9.034**	ug/L	0.229	2	20	49642	1	Standard
⌊	**Ba**	**137**	**8.580**	ug/L	0.218	2	42	89230	2	Standard
⌈>	**Tb**	**159**		ug/L			196002	200706	1	Standard
⌊	**Pb**	**208**	**1.828**	ug/L	0.061	3	206	129215	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0188-01
Sample Dil Factor: 10
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:01:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	26069	4	Standard
⌈>	**Sc**	**45**		ug/L			726273	728757	1	Standard
|	**Cr**	**52**	**0.906**	ug/L	0.084	9	22358	39439	4	Standard
|	**Cr**	**53**	**1.069**	ug/L	0.039	3	167	2499	3	Standard
⌊	**Mn**	**55**	**12.487**	ug/L	0.309	2	417	359077	3	Standard
⌈>	**Ge**	**72**		ug/L			37795	38278	0	KED
|	**Ni**	**60**	**0.819**	ug/L	0.027	3	24	1464	3	KED
|	**Ni**	**62**	**0.818**	ug/L	0.026	3	6	234	3	KED
|	**Cu**	**63**	**2.350**	ug/L	0.033	1	46	11856	1	KED
|	**Cu**	**65**	**2.367**	ug/L	0.098	4	20	5982	4	KED
|	**Zn**	**66**	**8.879**	ug/L	0.192	2	37	5218	2	KED
|	**Zn**	**67**	**9.107**	ug/L	0.132	1	6	903	0	KED
|	**As**	**75**	**0.399**	ug/L	0.015	3	3	124	3	KED
⌊	**Se**	**78**	**0.110**	ug/L	0.083	74	13	16	13	KED
	Kr	**83**		ug/L			45	64	20	Standard
⌈>	**In-1**	**115**		ug/L			9034	8768	1	KED
|	**Cd**	**111**	**0.013**	ug/L	0.009	70	5	8	32	KED
⌊	**Cd**	**114**	**0.019**	ug/L	0.001	6	2	17	6	KED
⌈>	**In**	**115**		ug/L			445066	427580	1	Standard
|	**Ag**	**107**	**0.007**	ug/L	0.001	20	62	180	14	Standard
|	**Ba**	**135**	**6.258**	ug/L	0.182	2	20	32812	4	Standard
⌊	**Ba**	**137**	**6.060**	ug/L	0.157	2	42	60088	0	Standard
⌈>	**Tb**	**159**		ug/L			196002	193966	0	Standard
⌊	**Pb**	**208**	**0.738**	ug/L	0.006	0	206	50593	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0191-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:05:01
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	36514	2	Standard
>	Sc	45		ug/L			726273	795433	5	Standard
	Cr	52	0.246	ug/L	0.010	4	22358	29524	4	Standard
	Cr	53	1.495	ug/L	0.017	1	167	3742	4	Standard
	Mn	55	55.212	ug/L	1.881	3	417	1729214	2	Standard
>	Ge	72		ug/L			37795	36025	2	KED
	Ni	60	0.316	ug/L	0.025	8	24	544	4	KED
	Ni	62	0.297	ug/L	0.030	10	6	83	7	KED
	Cu	63	4.241	ug/L	0.077	1	46	20092	1	KED
	Cu	65	4.293	ug/L	0.179	4	20	10187	1	KED
	Zn	66	7.032	ug/L	0.218	3	37	3894	0	KED
	Zn	67	7.007	ug/L	0.273	3	6	655	1	KED
	As	75	0.237	ug/L	0.037	15	3	71	16	KED
	Se	78	-0.025	ug/L	0.092	365	13	12	17	KED
	Kr	83		ug/L			45	52	11	Standard
>	In-1	115		ug/L			9034	8053	3	KED
	Cd	111	0.028	ug/L	0.009	32	5	12	23	KED
	Cd	114	0.022	ug/L	0.006	27	2	18	20	KED
>	In	115		ug/L			445066	394308	2	Standard
	Ag	107	0.004	ug/L	0.001	18	62	114	8	Standard
	Ba	135	2.656	ug/L	0.069	2	20	12843	0	Standard
	Ba	137	2.588	ug/L	0.138	5	42	23681	3	Standard
>	Tb	159		ug/L			196002	190716	1	Standard
	Pb	208	0.331	ug/L	0.010	2	206	22401	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0193-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:08:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	35354	2	Standard
⌈>	**Sc**	**45**		ug/L			726273	755002	1	Standard
|	**Cr**	**52**	**1.307**	ug/L	0.039	2	22358	48635	3	Standard
|	**Cr**	**53**	**1.707**	ug/L	0.045	2	167	4029	3	Standard
⌊	**Mn**	**55**	**133.783**	ug/L	4.653	3	417	3981572	4	Standard
⌈>	**Ge**	**72**		ug/L			37795	37033	1	KED
|	**Ni**	**60**	**1.858**	ug/L	0.105	5	24	3182	5	KED
|	**Ni**	**62**	**1.816**	ug/L	0.157	8	6	495	7	KED
|	**Cu**	**63**	**4.235**	ug/L	0.140	3	46	20625	2	KED
|	**Cu**	**65**	**4.280**	ug/L	0.031	0	20	10446	1	KED
|	**Zn**	**66**	**31.422**	ug/L	0.771	2	37	17767	0	KED
|	**Zn**	**67**	**30.886**	ug/L	1.208	3	6	2948	2	KED
|	**As**	**75**	**1.376**	ug/L	0.040	2	3	408	2	KED
⌊	**Se**	**78**	**0.307**	ug/L	0.073	23	13	21	7	KED
	Kr	**83**		ug/L			45	55	6	Standard
⌈>	**In-1**	**115**		ug/L			9034	8154	3	KED
|	**Cd**	**111**	**0.023**	ug/L	0.006	24	5	11	13	KED
⌊	**Cd**	**114**	**0.036**	ug/L	0.006	17	2	29	18	KED
⌈>	**In**	**115**		ug/L			445066	418824	2	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.001	19	62	165	11	Standard
|	**Ba**	**135**	**20.081**	ug/L	0.419	2	20	103020	0	Standard
⌊	**Ba**	**137**	**19.386**	ug/L	0.529	2	42	188179	0	Standard
⌈>	**Tb**	**159**		ug/L			196002	193176	1	Standard
⌊	**Pb**	**208**	**0.762**	ug/L	0.003	0	206	52014	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0193-02
Sample Dil Factor: 5
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:12:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	27248	3	Standard
⌈>	**Sc**	**45**		ug/L			726273	710566	2	Standard
|	**Cr**	**52**	**1.074**	ug/L	0.028	2	22358	41511	2	Standard
|	**Cr**	**53**	**1.046**	ug/L	0.050	4	167	2390	6	Standard
⌊	**Mn**	**55**	**23.821**	ug/L	0.101	0	417	667453	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	36682	3	KED
|	**Ni**	**60**	**0.858**	ug/L	0.060	6	24	1467	4	KED
|	**Ni**	**62**	**0.783**	ug/L	0.029	3	6	215	5	KED
|	**Cu**	**63**	**3.840**	ug/L	0.098	2	46	18526	2	KED
|	**Cu**	**65**	**3.846**	ug/L	0.098	2	20	9297	0	KED
|	**Zn**	**66**	**21.041**	ug/L	0.457	2	37	11794	0	KED
|	**Zn**	**67**	**19.416**	ug/L	1.533	7	6	1836	4	KED
|	**As**	**75**	**0.305**	ug/L	0.027	8	3	91	6	KED
⌊	**Se**	**78**	**0.054**	ug/L	0.107	198	13	14	21	KED
	Kr	**83**		ug/L			45	50	10	Standard
⌈>	**In-1**	**115**		ug/L			9034	8536	1	KED
|	**Cd**	**111**	**0.027**	ug/L	0.009	32	5	12	18	KED
⌊	**Cd**	**114**	**0.034**	ug/L	0.017	49	2	29	45	KED
⌈>	**In**	**115**		ug/L			445066	427792	0	Standard
|	**Ag**	**107**	**0.004**	ug/L	0.000	0	62	130	0	Standard
|	**Ba**	**135**	**5.686**	ug/L	0.151	2	20	29822	3	Standard
⌊	**Ba**	**137**	**5.655**	ug/L	0.067	1	42	56116	0	Standard
⌈>	**Tb**	**159**		ug/L			196002	189724	0	Standard
⌊	**Pb**	**208**	**1.415**	ug/L	0.007	0	206	94645	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0194-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:15:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	38162	3	Standard
⌈>	**Sc**	**45**		ug/L			726273	680390	2	Standard
|	**Cr**	**52**	**0.724**	ug/L	0.057	7	22358	33630	4	Standard
|	**Cr**	**53**	**0.687**	ug/L	0.021	3	167	1555	5	Standard
⌊	**Mn**	**55**	**1.117**	ug/L	0.022	2	417	30353	4	Standard
⌈>	**Ge**	**72**		ug/L			37795	36063	1	KED
|	**Ni**	**60**	**1.832**	ug/L	0.061	3	24	3056	1	KED
|	**Ni**	**62**	**2.064**	ug/L	0.112	5	6	547	6	KED
|	**Cu**	**63**	**125.316**	ug/L	1.920	1	46	593144	1	KED
|	**Cu**	**65**	**126.640**	ug/L	2.412	1	20	300422	1	KED
|	**Zn**	**66**	**167.346**	ug/L	6.983	4	37	91970	2	KED
|	**Zn**	**67**	**153.965**	ug/L	2.390	1	6	14293	0	KED
|	**As**	**75**	**1.055**	ug/L	0.116	11	3	305	9	KED
⌊	**Se**	**78**	**0.164**	ug/L	0.037	22	13	16	5	KED
	Kr	**83**		ug/L			45	49	19	Standard
⌈>	**In-1**	**115**		ug/L			9034	8260	3	KED
|	**Cd**	**111**	**0.271**	ug/L	0.064	23	5	81	19	KED
⌊	**Cd**	**114**	**0.300**	ug/L	0.031	10	2	224	10	KED
⌈>	**In**	**115**		ug/L			445066	413496	3	Standard
|	**Ag**	**107**	**0.014**	ug/L	0.001	7	62	299	9	Standard
|	**Ba**	**135**	**16.699**	ug/L	0.190	1	20	84630	4	Standard
⌊	**Ba**	**137**	**17.059**	ug/L	0.572	3	42	163451	1	Standard
⌈>	**Tb**	**159**		ug/L			196002	188855	3	Standard
⌊	**Pb**	**208**	**0.161**	ug/L	0.001	0	206	10924	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0196-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:19:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	39674	2	Standard
⌈>	Sc	45		ug/L			726273	708390	2	Standard
|	Cr	52	0.970	ug/L	0.017	1	22358	39498	2	Standard
|	Cr	53	0.886	ug/L	0.038	4	167	2043	5	Standard
⌊	Mn	55	25.084	ug/L	0.630	2	417	700649	3	Standard
⌈>	Ge	72		ug/L			37795	37720	1	KED
|	Ni	60	0.792	ug/L	0.028	3	24	1394	2	KED
|	Ni	62	0.708	ug/L	0.138	19	6	200	18	KED
|	Cu	63	4.275	ug/L	0.068	1	46	21210	1	KED
|	Cu	65	4.247	ug/L	0.112	2	20	10557	1	KED
|	Zn	66	44.861	ug/L	0.980	2	37	25821	0	KED
|	Zn	67	41.567	ug/L	0.515	1	6	4041	2	KED
|	As	75	0.303	ug/L	0.011	3	3	94	3	KED
⌊	Se	78	0.051	ug/L	0.109	212	13	14	18	KED
	Kr	83		ug/L			45	53	3	Standard
⌈>	In-1	115		ug/L			9034	8384	2	KED
|	Cd	111	0.033	ug/L	0.006	18	5	14	13	KED
⌊	Cd	114	0.018	ug/L	0.010	52	2	16	44	KED
⌈>	In	115		ug/L			445066	420838	3	Standard
|	Ag	107	0.005	ug/L	0.001	9	62	149	4	Standard
|	Ba	135	11.186	ug/L	0.310	2	20	57667	2	Standard
⌊	Ba	137	11.396	ug/L	0.187	1	42	111177	2	Standard
⌈>	Tb	159		ug/L			196002	193170	1	Standard
⌊	Pb	208	1.060	ug/L	0.020	1	206	72200	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0196-02
Sample Dil Factor: 2
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:23:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	31913	5	Standard
>	Sc	45		ug/L			726273	726511	2	Standard
	Cr	52	0.685	ug/L	0.015	2	22358	35170	3	Standard
	Cr	53	0.649	ug/L	0.013	1	167	1579	4	Standard
	Mn	55	10.149	ug/L	0.091	0	417	291026	3	Standard
>	Ge	72		ug/L			37795	36892	1	KED
	Ni	60	0.791	ug/L	0.055	6	24	1364	7	KED
	Ni	62	0.828	ug/L	0.020	2	6	228	3	KED
	Cu	63	3.304	ug/L	0.049	1	46	16041	0	KED
	Cu	65	3.438	ug/L	0.091	2	20	8366	4	KED
	Zn	66	36.292	ug/L	1.089	3	37	20439	3	KED
	Zn	67	33.457	ug/L	0.830	2	6	3181	1	KED
	As	75	0.188	ug/L	0.018	9	3	58	9	KED
	Se	78	0.088	ug/L	0.150	171	13	15	24	KED
	Kr	83		ug/L			45	37	21	Standard
>	In-1	115		ug/L			9034	8589	1	KED
	Cd	111	0.020	ug/L	0.005	24	5	10	13	KED
	Cd	114	0.017	ug/L	0.005	29	2	15	23	KED
>	In	115		ug/L			445066	436028	1	Standard
	Ag	107	0.004	ug/L	0.001	12	62	136	7	Standard
	Ba	135	14.436	ug/L	0.786	5	20	77129	5	Standard
	Ba	137	14.001	ug/L	0.399	2	42	141544	2	Standard
>	Tb	159		ug/L			196002	200014	3	Standard
	Pb	208	0.779	ug/L	0.025	3	206	54949	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0200-01
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:26:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21176	40737	6	Standard
>	Sc	45		ug/L			726273	730586	3	Standard
	Cr	52	0.544	ug/L	0.081	14	22358	32689	2	Standard
	Cr	53	3.828	ug/L	0.067	1	167	8534	2	Standard
	Mn	55	315.422	ug/L	3.194	1	417	9079525	2	Standard
>	Ge	72		ug/L			37795	34666	2	KED
	Ni	60	1.041	ug/L	0.032	3	24	1678	2	KED
	Ni	62	1.113	ug/L	0.134	12	6	286	11	KED
	Cu	63	1.409	ug/L	0.022	1	46	6453	3	KED
	Cu	65	1.379	ug/L	0.017	1	20	3163	2	KED
	Zn	66	4.044	ug/L	0.199	4	37	2169	2	KED
	Zn	67	5.270	ug/L	0.195	3	6	476	5	KED
	As	75	0.424	ug/L	0.031	7	3	120	9	KED
	Se	78	0.131	ug/L	0.035	26	13	15	8	KED
	Kr	83		ug/L			45	92	17	Standard
>	In-1	115		ug/L			9034	7811	2	KED
	Cd	111	0.000	ug/L	0.009	10442	5	4	53	KED
	Cd	114	0.015	ug/L	0.015	99	2	12	81	KED
>	In	115		ug/L			445066	394591	1	Standard
	Ag	107	0.002	ug/L	0.001	54	62	81	19	Standard
	Ba	135	18.963	ug/L	0.482	2	20	91665	1	Standard
	Ba	137	18.443	ug/L	0.901	4	42	168684	3	Standard
>	Tb	159		ug/L			196002	186697	1	Standard
	Pb	208	0.057	ug/L	0.001	1	206	3911	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLF
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:30:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	21001	5	Standard
⌈>	**Sc**	**45**		ug/L			726273	755393	1	Standard
|	**Cr**	**52**	**0.027**	ug/L	0.047	171	22358	23792	4	Standard
|	**Cr**	**53**	**0.131**	ug/L	0.009	6	167	469	4	Standard
⌊	**Mn**	**55**	**0.014**	ug/L	0.017	120	417	840	57	Standard
⌈>	**Ge**	**72**		ug/L			37795	39036	2	KED
|	**Ni**	**60**	**-0.005**	ug/L	0.002	39	24	17	22	KED
|	**Ni**	**62**	**0.004**	ug/L	0.007	192	6	7	25	KED
|	**Cu**	**63**	**0.002**	ug/L	0.002	157	46	56	23	KED
|	**Cu**	**65**	**0.004**	ug/L	0.002	40	20	32	10	KED
|	**Zn**	**66**	**0.011**	ug/L	0.009	81	37	45	10	KED
|	**Zn**	**67**	**0.049**	ug/L	0.051	104	6	11	44	KED
|	**As**	**75**	**0.004**	ug/L	0.006	151	3	4	37	KED
⌊	**Se**	**78**	**0.039**	ug/L	0.190	490	13	14	32	KED
	Kr	**83**		ug/L			45	50	22	Standard
⌈>	**In-1**	**115**		ug/L			9034	8840	2	KED
|	**Cd**	**111**	**-0.009**	ug/L	0.002	17	5	2	24	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.001	565	2	3	35	KED
⌈>	**In**	**115**		ug/L			445066	459082	3	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.000	15	62	24	26	Standard
|	**Ba**	**135**	**0.002**	ug/L	0.003	157	20	33	54	Standard
⌊	**Ba**	**137**	**0.000**	ug/L	0.001	180	42	46	10	Standard
⌈>	**Tb**	**159**		ug/L			196002	201918	3	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.001	187	206	191	18	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVH
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:34:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	20592	6	Standard
⌈>	**Sc**	**45**		ug/L			726273	745570	0	Standard
|	**Cr**	**52**	**48.200**	ug/L	1.382	2	22358	947633	2	Standard
|	**Cr**	**53**	**48.092**	ug/L	1.134	2	167	107445	2	Standard
⌊	**Mn**	**55**	**46.433**	ug/L	0.904	1	417	1364674	1	Standard
⌈>	**Ge**	**72**		ug/L			37795	39029	0	KED
|	**Ni**	**60**	**49.305**	ug/L	1.153	2	24	88360	1	KED
|	**Ni**	**62**	**49.589**	ug/L	1.298	2	6	14092	3	KED
|	**Cu**	**63**	**49.369**	ug/L	0.563	1	46	252954	1	KED
|	**Cu**	**65**	**50.087**	ug/L	0.828	1	20	128621	1	KED
|	**Zn**	**66**	**48.942**	ug/L	0.719	1	37	29150	1	KED
|	**Zn**	**67**	**49.949**	ug/L	2.090	4	6	5024	4	KED
|	**As**	**75**	**49.630**	ug/L	0.706	1	3	15429	1	KED
⌊	**Se**	**78**	**46.869**	ug/L	0.122	0	13	1293	0	KED
	Kr	**83**		ug/L			45	50	5	Standard
⌈>	**In-1**	**115**		ug/L			9034	8659	0	KED
|	**Cd**	**111**	**48.872**	ug/L	0.491	1	5	14680	1	KED
⌊	**Cd**	**114**	**48.832**	ug/L	0.721	1	2	37759	1	KED
⌈>	**In**	**115**		ug/L			445066	429929	0	Standard
|	**Ag**	**107**	**53.533**	ug/L	0.574	1	62	936531	1	Standard
|	**Ba**	**135**	**48.683**	ug/L	0.795	1	20	256456	2	Standard
⌊	**Ba**	**137**	**48.787**	ug/L	0.376	0	42	486282	0	Standard
⌈>	**Tb**	**159**		ug/L			196002	193230	3	Standard
⌊	**Pb**	**208**	**47.515**	ug/L	0.992	2	206	3228486	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBH
Sample Dil Factor:
Comments:
Sample Date/Time: Saturday, May 20, 2023 03:40:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	20624	5	Standard
⌈>	**Sc**	**45**		ug/L			726273	768431	2	Standard
|	**Cr**	**52**	**-0.033**	ug/L	0.013	38	22358	22996	1	Standard
|	**Cr**	**53**	**0.014**	ug/L	0.005	33	167	209	6	Standard
⌊	**Mn**	**55**	**-0.001**	ug/L	0.001	67	417	418	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	40447	0	KED
|	**Ni**	**60**	**-0.004**	ug/L	0.003	67	24	19	26	KED
|	**Ni**	**62**	**-0.004**	ug/L	0.007	178	6	5	33	KED
|	**Cu**	**63**	**0.002**	ug/L	0.002	109	46	61	19	KED
|	**Cu**	**65**	**0.002**	ug/L	0.001	87	20	26	14	KED
|	**Zn**	**66**	**-0.002**	ug/L	0.013	580	37	38	19	KED
|	**Zn**	**67**	**0.014**	ug/L	0.010	74	6	8	13	KED
|	**As**	**75**	**0.002**	ug/L	0.002	74	3	4	13	KED
⌊	**Se**	**78**	**0.146**	ug/L	0.026	17	13	18	4	KED
	Kr	**83**		ug/L			45	47	36	Standard
⌈>	**In-1**	**115**		ug/L			9034	9038	1	KED
|	**Cd**	**111**	**0.003**	ug/L	0.005	153	5	6	24	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.006	212	2	5	94	KED
⌈>	**In**	**115**		ug/L			445066	459012	0	Standard
|	**Ag**	**107**	**0.005**	ug/L	0.001	25	62	162	15	Standard
|	**Ba**	**135**	**0.002**	ug/L	0.001	41	20	33	14	Standard
⌊	**Ba**	**137**	**0.002**	ug/L	0.001	54	42	64	17	Standard
⌈>	**Tb**	**159**		ug/L			196002	197696	2	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.001	34	206	337	14	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0203-01
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Saturday, May 20, 2023 03:44:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	35044	4	Standard
⌈>	**Sc**	**45**		ug/L			726273	751903	2	Standard
|	**Cr**	**52**	**0.540**	ug/L	0.040	7	22358	33580	0	Standard
|	**Cr**	**53**	**0.473**	ug/L	0.021	4	167	1238	3	Standard
⌊	**Mn**	**55**	**19.169**	ug/L	0.565	2	417	568262	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	40202	2	KED
|	**Ni**	**60**	**0.534**	ug/L	0.012	2	24	1012	4	KED
|	**Ni**	**62**	**0.559**	ug/L	0.063	11	6	170	9	KED
|	**Cu**	**63**	**1.990**	ug/L	0.016	0	46	10547	2	KED
|	**Cu**	**65**	**2.024**	ug/L	0.095	4	20	5371	2	KED
|	**Zn**	**66**	**34.958**	ug/L	0.978	2	37	21447	0	KED
|	**Zn**	**67**	**32.070**	ug/L	0.429	1	6	3325	3	KED
|	**As**	**75**	**0.208**	ug/L	0.008	3	3	69	5	KED
⌊	**Se**	**78**	**-0.056**	ug/L	0.043	75	13	12	7	KED
	Kr	**83**		ug/L			45	41	13	Standard
⌈>	**In-1**	**115**		ug/L			9034	8772	3	KED
|	**Cd**	**111**	**0.022**	ug/L	0.004	19	5	11	12	KED
⌊	**Cd**	**114**	**0.037**	ug/L	0.006	16	2	31	18	KED
⌈>	**In**	**115**		ug/L			445066	452709	1	Standard
|	**Ag**	**107**	**0.004**	ug/L	0.001	14	62	132	6	Standard
|	**Ba**	**135**	**6.025**	ug/L	0.293	4	20	33416	3	Standard
⌊	**Ba**	**137**	**6.156**	ug/L	0.219	3	42	64652	3	Standard
⌈>	**Tb**	**159**		ug/L			196002	204039	3	Standard
⌊	**Pb**	**208**	**0.207**	ug/L	0.005	2	206	15091	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0205-01
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Saturday, May 20, 2023 03:48:13
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	34247	0	Standard
⌈>	**Sc**	**45**		ug/L			726273	756166	1	Standard
|	**Cr**	**52**	**0.458**	ug/L	0.032	6	22358	32204	3	Standard
|	**Cr**	**53**	**1.127**	ug/L	0.025	2	167	2724	1	Standard
⌊	**Mn**	**55**	**11.757**	ug/L	0.284	2	417	350798	3	Standard
⌈>	**Ge**	**72**		ug/L			37795	34792	6	KED
|	**Ni**	**60**	**0.194**	ug/L	0.018	9	24	331	4	KED
|	**Ni**	**62**	**0.201**	ug/L	0.060	30	6	57	31	KED
|	**Cu**	**63**	**0.980**	ug/L	0.089	9	46	4499	2	KED
|	**Cu**	**65**	**0.938**	ug/L	0.012	1	20	2165	5	KED
|	**Zn**	**66**	**4.254**	ug/L	0.152	3	37	2286	3	KED
|	**Zn**	**67**	**4.365**	ug/L	0.304	6	6	395	1	KED
|	**As**	**75**	**18.971**	ug/L	1.136	5	3	5245	0	KED
⌊	**Se**	**78**	**0.405**	ug/L	0.101	25	13	22	12	KED
	Kr	**83**		ug/L			45	51	12	Standard
⌈>	**In-1**	**115**		ug/L			9034	8042	1	KED
|	**Cd**	**111**	**0.011**	ug/L	0.009	78	5	7	33	KED
⌊	**Cd**	**114**	**0.010**	ug/L	0.010	103	2	9	74	KED
⌈>	**In**	**115**		ug/L			445066	406469	0	Standard
|	**Ag**	**107**	**7.090**	ug/L	0.106	1	62	117308	0	Standard
|	**Ba**	**135**	**4.323**	ug/L	0.126	2	20	21547	2	Standard
⌊	**Ba**	**137**	**4.233**	ug/L	0.118	2	42	39923	2	Standard
⌈>	**Tb**	**159**		ug/L			196002	190309	1	Standard
⌊	**Pb**	**208**	**0.137**	ug/L	0.006	4	206	9363	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0205-02
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Saturday, May 20, 2023 03:51:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051923_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21176	46924	3	Standard
⌈>	**Sc**	**45**		ug/L			726273	726620	5	Standard
|	**Cr**	**52**	**0.785**	ug/L	0.073	9	22358	37012	3	Standard
|	**Cr**	**53**	**0.670**	ug/L	0.044	6	167	1621	1	Standard
⌊	**Mn**	**55**	**7.902**	ug/L	0.341	4	417	226328	2	Standard
⌈>	**Ge**	**72**		ug/L			37795	38932	1	KED
|	**Ni**	**60**	**0.903**	ug/L	0.029	3	24	1639	2	KED
|	**Ni**	**62**	**0.858**	ug/L	0.045	5	6	249	3	KED
|	**Cu**	**63**	**3.987**	ug/L	0.110	2	46	20418	1	KED
|	**Cu**	**65**	**4.036**	ug/L	0.059	1	20	10358	0	KED
|	**Zn**	**66**	**112.937**	ug/L	2.999	2	37	67034	1	KED
|	**Zn**	**67**	**104.666**	ug/L	1.795	1	6	10492	0	KED
|	**As**	**75**	**0.452**	ug/L	0.044	9	3	143	10	KED
⌊	**Se**	**78**	**0.119**	ug/L	0.106	88	13	17	18	KED
	Kr	**83**		ug/L			45	52	5	Standard
⌈>	**In-1**	**115**		ug/L			9034	8493	1	KED
|	**Cd**	**111**	**0.044**	ug/L	0.023	52	5	17	38	KED
⌊	**Cd**	**114**	**0.034**	ug/L	0.015	43	2	28	37	KED
⌈>	**In**	**115**		ug/L			445066	425033	3	Standard
|	**Ag**	**107**	**0.004**	ug/L	0.001	32	62	132	17	Standard
|	**Ba**	**135**	**2.822**	ug/L	0.167	5	20	14693	2	Standard
⌊	**Ba**	**137**	**2.843**	ug/L	0.118	4	42	28034	1	Standard
⌈>	**Tb**	**159**		ug/L			196002	192063	1	Standard
⌊	**Pb**	**208**	**0.563**	ug/L	0.015	2	206	38217	1	Standard

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00041
Control Limt: +/- 10.00%
Sequence: SLD0219

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0219-ICV1	Arsenic-75a	50.000	48.4	96.9	ug/L	PA 6020B UCT-KE
SLD0219-CCV1	Arsenic-75a	50.000	49.6	99.3	ug/L	PA 6020B UCT-KE
SLD0219-CCV2	Arsenic-75a	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
SLD0219-CCV3	Arsenic-75a	50.000	49.2	98.3	ug/L	PA 6020B UCT-KE
SLD0219-CCV4	Arsenic-75a	50.000	50.9	102	ug/L	PA 6020B UCT-KE
SLD0219-CCV5	Arsenic-75a	50.000	50.3	101	ug/L	PA 6020B UCT-KE
SLD0219-CCV6	Arsenic-75a	50.000	49.9	99.9	ug/L	PA 6020B UCT-KE
SLD0219-CCV7	Arsenic-75a	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
SLD0219-CCV8	Arsenic-75a	50.000	48.6	97.3	ug/L	PA 6020B UCT-KE
SLD0219-CCV9	Arsenic-75a	50.000	49.3	98.6	ug/L	PA 6020B UCT-KE

* Values outside of QC limits

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00066
Control Limt: +/- 10.00%
Sequence: SLE0358

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0358-ICV1	Arsenic-75a	50.000	47.9	95.9	ug/L	PA 6020B UCT-KE
SLE0358-CCV1	Arsenic-75a	50.000	50.0	99.9	ug/L	PA 6020B UCT-KE
SLE0358-CCV2	Arsenic-75a	50.000	49.5	99.0	ug/L	PA 6020B UCT-KE
SLE0358-CCV3	Arsenic-75a	50.000	50.0	100	ug/L	PA 6020B UCT-KE
SLE0358-CCV4	Arsenic-75a	50.000	49.1	98.3	ug/L	PA 6020B UCT-KE
SLE0358-CCV5	Arsenic-75a	50.000	49.7	99.5	ug/L	PA 6020B UCT-KE
SLE0358-CCV6	Arsenic-75a	50.000	49.0	98.0	ug/L	PA 6020B UCT-KE
SLE0358-CCV7	Arsenic-75a	50.000	49.2	98.5	ug/L	PA 6020B UCT-KE
SLE0358-CCV8	Arsenic-75a	50.000	48.8	97.5	ug/L	PA 6020B UCT-KE
SLE0358-CCV9	Arsenic-75a	50.000	50.7	101	ug/L	PA 6020B UCT-KE
SLE0358-CCVA	Arsenic-75a	50.000	48.5	97.0	ug/L	PA 6020B UCT-KE
SLE0358-CCVB	Arsenic-75a	50.000	49.5	99.1	ug/L	PA 6020B UCT-KE
SLE0358-CCVC	Arsenic-75a	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
SLE0358-CCVD	Arsenic-75a	50.000	51.8	104	ug/L	PA 6020B UCT-KE
SLE0358-CCVE	Arsenic-75a	50.000	49.7	99.4	ug/L	PA 6020B UCT-KE
SLE0358-CCVF	Arsenic-75a	50.000	49.1	98.2	ug/L	PA 6020B UCT-KE
SLE0358-CCVG	Arsenic-75a	50.000	50.7	101	ug/L	PA 6020B UCT-KE
SLE0358-CCVH	Arsenic-75a	50.000	49.6	99.3	ug/L	PA 6020B UCT-KE

* Values outside of QC limits

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLD0219

SDG: 23A0207
Project: AOC5 MR Phase 1
Calibration: GD00041
Date Analyzed: 04/13/23 14:22

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0219-IBL1	Arsenic-75a	0.0110	0.0373	0.200	ug/L	
SLD0219-ICB1	Arsenic-75a	-0.00300	0.0373	0.200	ug/L	
SLD0219-CCB1	Arsenic-75a	-0.00300	0.0373	0.200	ug/L	
SLD0219-IBL2	Arsenic-75a	0.0100	0.0373	0.200	ug/L	
SLD0219-IBL3	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SLD0219-CCB2	Arsenic-75a	-0.00300	0.0373	0.200	ug/L	
SLD0219-CCB3	Arsenic-75a	-0.00400	0.0373	0.200	ug/L	
SLD0219-CCB4	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SLD0219-IBL4	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SLD0219-CCB5	Arsenic-75a	0.00700	0.0373	0.200	ug/L	
SLD0219-IBL5	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SLD0219-CCB6	Arsenic-75a	0.0130	0.0373	0.200	ug/L	
SLD0219-IBL6	Arsenic-75a	-0.00900	0.0373	0.200	ug/L	
SLD0219-CCB7	Arsenic-75a	-0.00600	0.0373	0.200	ug/L	
SLD0219-CCB8	Arsenic-75a	-0.00300	0.0373	0.200	ug/L	
SLD0219-CCB9	Arsenic-75a	-0.00300	0.0373	0.200	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0358

SDG: 23A0207
Project: AOC5 MR Phase 1
Calibration: GE00066
Date Analyzed: 05/19/23 14:52

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0358-IBL1	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SLE0358-ICB1	Arsenic-75a	0.0100	0.0373	0.200	ug/L	
SLE0358-CCB1	Arsenic-75a	0.00900	0.0373	0.200	ug/L	
SLE0358-IBL2	Arsenic-75a	0.0190	0.0373	0.200	ug/L	
SLE0358-IBL3	Arsenic-75a	0.0130	0.0373	0.200	ug/L	
SLE0358-CCB2	Arsenic-75a	0.00900	0.0373	0.200	ug/L	
SLE0358-CCB3	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SLE0358-IBL4	Arsenic-75a	-0.00500	0.0373	0.200	ug/L	
SLE0358-CCB4	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SLE0358-CCB5	Arsenic-75a	0.0120	0.0373	0.200	ug/L	
SLE0358-IBL5	Arsenic-75a	0.00300	0.0373	0.200	ug/L	
SLE0358-CCB6	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SLE0358-IBL6	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SLE0358-CCB7	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SLE0358-IBL7	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLE0358-CCB8	Arsenic-75a	0.00200	0.0373	0.200	ug/L	
SLE0358-IBL8	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SLE0358-CCB9	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SLE0358-CCBA	Arsenic-75a	0.0100	0.0373	0.200	ug/L	
SLE0358-IBL9	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SLE0358-IBLA	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLE0358-CCBB	Arsenic-75a	0.00800	0.0373	0.200	ug/L	
SLE0358-IBLB	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SLE0358-CCBC	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SLE0358-IBLC	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLE0358-CCBD	Arsenic-75a	0.00700	0.0373	0.200	ug/L	
SLE0358-CCBE	Arsenic-75a	0.0130	0.0373	0.200	ug/L	
SLE0358-IBLD	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SLE0358-CCBF	Arsenic-75a	0.00600	0.0373	0.200	ug/L	
SLE0358-IBLE	Arsenic-75a	0.00700	0.0373	0.200	ug/L	
SLE0358-CCBG	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SLE0358-IBLF	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SLE0358-CCBH	Arsenic-75a	0.00200	0.0373	0.200	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLD0219	Instrument:	ICPMS2
		Calibration:	GD00041

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLD0219-CAL1	XDT_m2230413-006	NA	04/13/23 13:46
CAL 1 - LOW CHECK	SLD0219-CAL2	XDT_m2230413-007	NA	04/13/23 13:51
CAL 2	SLD0219-CAL3	XDT_m2230413-008	NA	04/13/23 13:56
CAL 3	SLD0219-CAL4	XDT_m2230413-009	NA	04/13/23 14:01
CAL 4	SLD0219-CAL5	XDT_m2230413-010	NA	04/13/23 14:07
CAL 5	SLD0219-CAL6	XDT_m2230413-011	NA	04/13/23 14:14
RINSE	SLD0219-IBL1	XDT_m2230413-012	NA	04/13/23 14:22
Initial Cal Check	SLD0219-ICV1	XDT_m2230413-014	NA	04/13/23 15:00
Initial Cal Blank	SLD0219-ICB1	XDT_m2230413-015	NA	04/13/23 15:08
Calibration Check	SLD0219-CCV1	XDT_m2230413-016	NA	04/13/23 15:13
Calibration Blank	SLD0219-CCB1	XDT_m2230413-018	NA	04/13/23 15:27
Instrument RL Check	SLD0219-CRL1	XDT_m2230413-019	NA	04/13/23 15:34
Interference Check A	SLD0219-IFA1	XDT_m2230413-020	NA	04/13/23 15:41
Interference Check B	SLD0219-IFB1	XDT_m2230413-022	NA	04/13/23 15:52
LR200	SLD0219-HCV1	XDT_m2230413-023	NA	04/13/23 15:58
LR300	SLD0219-HCV2	XDT_m2230413-024	NA	04/13/23 16:03
Instrument Blank	SLD0219-IBL2	XDT_m2230413-025	NA	04/13/23 16:11
Instrument Blank	SLD0219-IBL3	XDT_m2230413-026	NA	04/13/23 16:18
Calibration Check	SLD0219-CCV2	XDT_m2230413-027	NA	04/13/23 16:23
Calibration Blank	SLD0219-CCB2	XDT_m2230413-028	NA	04/13/23 16:31
Calibration Check	SLD0219-CCV3	XDT_m2230413-030	NA	04/13/23 16:47
Calibration Blank	SLD0219-CCB3	XDT_m2230413-031	NA	04/13/23 16:54
ZZZZZ	BLD0346-BLK1	XDT_m2230413-032	Water	04/13/23 17:07
ZZZZZ	BLD0346-BS1	XDT_m2230413-033	Water	04/13/23 17:11
Calibration Check	SLD0219-CCV4	XDT_m2230413-042	NA	04/13/23 17:49
Calibration Blank	SLD0219-CCB4	XDT_m2230413-043	NA	04/13/23 17:56
ZZZZZ	23D0208-01	XDT_m2230413-049	Water	04/13/23 18:26
ZZZZZ	23D0208-01	XDT_m2230413-049	Water	04/13/23 18:26
ZZZZZ	23D0208-01	XDT_m2230413-049	Water	04/13/23 18:26

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLD0219	Instrument:	ICPMS2
		Calibration:	GD00041

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0208-01	XDT_m2230413-049	Water	04/13/23 18:26
ZZZZZ	BLD0346-DUP1	XDT_m2230413-050	Water	04/13/23 18:30
ZZZZZ	BLD0346-MS1	XDT_m2230413-051	Water	04/13/23 18:35
Instrument Blank	SLD0219-IBL4	XDT_m2230413-052	NA	04/13/23 18:40
Calibration Check	SLD0219-CCV5	XDT_m2230413-053	NA	04/13/23 18:44
Calibration Blank	SLD0219-CCB5	XDT_m2230413-054	NA	04/13/23 18:51
Blank	BLD0243-BLK1	XDT_m2230413-055	Solid	04/13/23 19:00
LCS	BLD0243-BS1	XDT_m2230413-056	Solid	04/13/23 19:04
LDW23-IT1089	23A0207-02	XDT_m2230413-057	Solid	04/13/23 19:09
LDW23-IT1079	23A0207-03	XDT_m2230413-058	Solid	04/13/23 19:13
LDW23-IT1088	23A0207-01	XDT_m2230413-059	Solid	04/13/23 19:17
LDW23-IT1088	BLD0243-DUP1	XDT_m2230413-060	Solid	04/13/23 19:21
LDW23-IT1088	BLD0243-MS1	XDT_m2230413-061	Solid	04/13/23 19:25
LDW23-IT1088	BLD0243-MSD1	XDT_m2230413-062	Solid	04/13/23 19:30
Instrument Blank	SLD0219-IBL5	XDT_m2230413-064	NA	04/13/23 19:38
Calibration Check	SLD0219-CCV6	XDT_m2230413-065	NA	04/13/23 19:42
Calibration Blank	SLD0219-CCB6	XDT_m2230413-066	NA	04/13/23 19:49
LDW23-IT1080	23A0207-04	XDT_m2230413-067	Solid	04/13/23 19:53
LDW23-IT1080-FD	23A0207-05	XDT_m2230413-068	Solid	04/13/23 19:57
LDW23-IT1072	23A0207-06	XDT_m2230413-069	Solid	04/13/23 20:02
LDW23-IT1081	23A0207-07	XDT_m2230413-070	Solid	04/13/23 20:06
LDW23-IT1068	23A0207-08	XDT_m2230413-071	Solid	04/13/23 20:10
LDW23-IT1062	23A0207-09	XDT_m2230413-072	Solid	04/13/23 20:14
LDW23-IT1078	23A0207-15	XDT_m2230413-073	Solid	04/13/23 20:18
LDW23-IT1201	23A0207-16	XDT_m2230413-074	Solid	04/13/23 20:22
LDW23-IT1209	23A0207-17	XDT_m2230413-075	Solid	04/13/23 20:27
Instrument Blank	SLD0219-IBL6	XDT_m2230413-076	NA	04/13/23 20:31
Calibration Check	SLD0219-CCV7	XDT_m2230413-077	NA	04/13/23 20:35
Calibration Blank	SLD0219-CCB7	XDT_m2230413-078	NA	04/13/23 20:42

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLD0219	Instrument:	ICPMS2
		Calibration:	GD00041

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SLD0219-CCV8	XDT_m2230413-089	NA	04/13/23 21:28
Calibration Blank	SLD0219-CCB8	XDT_m2230413-090	NA	04/13/23 21:35
Calibration Check	SLD0219-CCV9	XDT_m2230413-101	NA	04/13/23 22:21
Calibration Blank	SLD0219-CCB9	XDT_m2230413-102	NA	04/13/23 22:28

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0358
Instrument: ICPMS1
Calibration: GE00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLE0358-CAL1	XDT_m1230519-012	NA	05/19/23 14:18
CAL 1 - LOW CHECK	SLE0358-CAL2	XDT_m1230519-013	NA	05/19/23 14:23
CAL 2	SLE0358-CAL3	XDT_m1230519-014	NA	05/19/23 14:28
CAL 3	SLE0358-CAL4	XDT_m1230519-015	NA	05/19/23 14:33
CAL 4	SLE0358-CAL5	XDT_m1230519-016	NA	05/19/23 14:38
CAL 5	SLE0358-CAL6	XDT_m1230519-017	NA	05/19/23 14:45
RINSE	SLE0358-IBL1	XDT_m1230519-018	NA	05/19/23 14:52
Initial Cal Check	SLE0358-ICV1	XDT_m1230519-020	NA	05/19/23 14:59
Initial Cal Blank	SLE0358-ICB1	XDT_m1230519-021	NA	05/19/23 15:06
Calibration Check	SLE0358-CCV1	XDT_m1230519-022	NA	05/19/23 15:11
Calibration Blank	SLE0358-CCB1	XDT_m1230519-023	NA	05/19/23 15:18
Instrument RL Check	SLE0358-CRL1	XDT_m1230519-024	NA	05/19/23 15:25
Interference Check A	SLE0358-IFA1	XDT_m1230519-025	NA	05/19/23 15:33
Interference Check B	SLE0358-IFB1	XDT_m1230519-026	NA	05/19/23 15:38
LR200	SLE0358-HCV1	XDT_m1230519-027	NA	05/19/23 15:43
LR300	SLE0358-HCV2	XDT_m1230519-028	NA	05/19/23 15:48
Instrument Blank	SLE0358-IBL2	XDT_m1230519-029	NA	05/19/23 15:55
Instrument Blank	SLE0358-IBL3	XDT_m1230519-030	NA	05/19/23 16:03
Calibration Check	SLE0358-CCV2	XDT_m1230519-031	NA	05/19/23 16:09
Calibration Blank	SLE0358-CCB2	XDT_m1230519-032	NA	05/19/23 16:16
Calibration Check	SLE0358-CCV3	XDT_m1230519-034	NA	05/19/23 16:29
Calibration Blank	SLE0358-CCB3	XDT_m1230519-035	NA	05/19/23 16:36
Instrument Blank	SLE0358-IBL4	XDT_m1230519-045	NA	05/19/23 17:32
Calibration Check	SLE0358-CCV4	XDT_m1230519-046	NA	05/19/23 17:37
Calibration Blank	SLE0358-CCB4	XDT_m1230519-047	NA	05/19/23 17:44
Calibration Check	SLE0358-CCV5	XDT_m1230519-049	NA	05/19/23 17:57
Calibration Blank	SLE0358-CCB5	XDT_m1230519-050	NA	05/19/23 18:05
Blank	BLE0306-BLK1	XDT_m1230519-051	Solid	05/19/23 18:13
LCS	BLE0306-BS1	XDT_m1230519-052	Solid	05/19/23 18:18

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLE0358

SDG: 23A0207
Project: AOC5 MR Phase 1
Instrument: ICPMS1
Calibration: GE00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	BLE0442-BLK1	XDT_m1230519-053	Solid	05/19/23 18:22
ZZZZZ	BLE0442-BS1	XDT_m1230519-054	Solid	05/19/23 18:27
LDW23-IT1097	23A0207-10	XDT_m1230519-055	Solid	05/19/23 18:32
Instrument Blank	SLE0358-IBL5	XDT_m1230519-060	NA	05/19/23 18:55
Calibration Check	SLE0358-CCV6	XDT_m1230519-061	NA	05/19/23 19:00
Calibration Blank	SLE0358-CCB6	XDT_m1230519-062	NA	05/19/23 19:07
ZZZZZ	23E0009-08	XDT_m1230519-063	Solid	05/19/23 19:12
ZZZZZ	23E0009-03	XDT_m1230519-064	Solid	05/19/23 19:17
ZZZZZ	23E0009-03	XDT_m1230519-064	Solid	05/19/23 19:17
ZZZZZ	23E0009-03	XDT_m1230519-064	Solid	05/19/23 19:17
ZZZZZ	23E0009-03	XDT_m1230519-064	Solid	05/19/23 19:17
ZZZZZ	23E0009-05	XDT_m1230519-065	Solid	05/19/23 19:22
ZZZZZ	23E0009-05	XDT_m1230519-065	Solid	05/19/23 19:22
ZZZZZ	23E0009-05	XDT_m1230519-065	Solid	05/19/23 19:22
ZZZZZ	23E0009-05	XDT_m1230519-065	Solid	05/19/23 19:22
ZZZZZ	23E0009-07	XDT_m1230519-066	Solid	05/19/23 19:26
ZZZZZ	23E0009-07	XDT_m1230519-066	Solid	05/19/23 19:26
ZZZZZ	23E0009-07	XDT_m1230519-066	Solid	05/19/23 19:26
ZZZZZ	23E0009-07	XDT_m1230519-066	Solid	05/19/23 19:26
ZZZZZ	23E0009-01	XDT_m1230519-067	Solid	05/19/23 19:31
ZZZZZ	23E0009-01	XDT_m1230519-067	Solid	05/19/23 19:31
ZZZZZ	23E0009-01	XDT_m1230519-067	Solid	05/19/23 19:31
ZZZZZ	23E0009-01	XDT_m1230519-067	Solid	05/19/23 19:31
Instrument Blank	SLE0358-IBL6	XDT_m1230519-072	NA	05/19/23 19:55
Calibration Check	SLE0358-CCV7	XDT_m1230519-073	NA	05/19/23 19:59
Calibration Blank	SLE0358-CCB7	XDT_m1230519-074	NA	05/19/23 20:07
ZZZZZ	23E0219-03	XDT_m1230519-075	Solid	05/19/23 20:12
ZZZZZ	23E0219-03	XDT_m1230519-075	Solid	05/19/23 20:12
ZZZZZ	23E0219-03	XDT_m1230519-075	Solid	05/19/23 20:12

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0358
Instrument: ICPMS1
Calibration: GE00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23E0219-03	XDT_m1230519-075	Solid	05/19/23 20:12
ZZZZZ	23E0219-05	XDT_m1230519-076	Solid	05/19/23 20:16
ZZZZZ	23E0219-05	XDT_m1230519-076	Solid	05/19/23 20:16
ZZZZZ	23E0219-05	XDT_m1230519-076	Solid	05/19/23 20:16
ZZZZZ	23E0219-05	XDT_m1230519-076	Solid	05/19/23 20:16
ZZZZZ	23E0219-07	XDT_m1230519-077	Solid	05/19/23 20:21
ZZZZZ	23E0219-07	XDT_m1230519-077	Solid	05/19/23 20:21
ZZZZZ	23E0219-07	XDT_m1230519-077	Solid	05/19/23 20:21
ZZZZZ	23E0219-07	XDT_m1230519-077	Solid	05/19/23 20:21
ZZZZZ	23E0219-09	XDT_m1230519-078	Solid	05/19/23 20:26
ZZZZZ	23E0219-09	XDT_m1230519-078	Solid	05/19/23 20:26
ZZZZZ	23E0219-09	XDT_m1230519-078	Solid	05/19/23 20:26
ZZZZZ	23E0219-09	XDT_m1230519-078	Solid	05/19/23 20:26
ZZZZZ	23E0219-02	XDT_m1230519-079	Solid	05/19/23 20:30
ZZZZZ	23E0219-02	XDT_m1230519-079	Solid	05/19/23 20:30
ZZZZZ	23E0219-02	XDT_m1230519-079	Solid	05/19/23 20:30
ZZZZZ	23E0219-02	XDT_m1230519-079	Solid	05/19/23 20:30
ZZZZZ	BLE0442-DUP1	XDT_m1230519-080	Solid	05/19/23 20:35
ZZZZZ	BLE0442-MS1	XDT_m1230519-081	Solid	05/19/23 20:40
ZZZZZ	BLE0442-MSD1	XDT_m1230519-082	Solid	05/19/23 20:45
Instrument Blank	SLE0358-IBL7	XDT_m1230519-084	NA	05/19/23 20:54
Calibration Check	SLE0358-CCV8	XDT_m1230519-085	NA	05/19/23 20:59
Calibration Blank	SLE0358-CCB8	XDT_m1230519-086	NA	05/19/23 21:06
ZZZZZ	23E0219-10	XDT_m1230519-089	Solid	05/19/23 21:20
ZZZZZ	23E0219-10	XDT_m1230519-089	Solid	05/19/23 21:20
ZZZZZ	23E0219-10	XDT_m1230519-089	Solid	05/19/23 21:20
ZZZZZ	23E0219-10	XDT_m1230519-089	Solid	05/19/23 21:20
ZZZZZ	23E0219-13	XDT_m1230519-090	Solid	05/19/23 21:25
ZZZZZ	23E0219-13	XDT_m1230519-090	Solid	05/19/23 21:25

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0358
Instrument: ICPMS1
Calibration: GE00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23E0219-13	XDT_m1230519-090	Solid	05/19/23 21:25
ZZZZZ	23E0219-13	XDT_m1230519-090	Solid	05/19/23 21:25
ZZZZZ	23E0219-04	XDT_m1230519-091	Solid	05/19/23 21:30
ZZZZZ	23E0219-06	XDT_m1230519-092	Solid	05/19/23 21:35
ZZZZZ	23E0219-08	XDT_m1230519-093	Solid	05/19/23 21:39
ZZZZZ	23E0219-11	XDT_m1230519-094	Solid	05/19/23 21:44
ZZZZZ	23E0219-12	XDT_m1230519-095	Solid	05/19/23 21:49
Instrument Blank	SLE0358-IBL8	XDT_m1230519-096	NA	05/19/23 21:53
Calibration Check	SLE0358-CCV9	XDT_m1230519-097	NA	05/19/23 21:58
Calibration Blank	SLE0358-CCB9	XDT_m1230519-098	NA	05/19/23 22:06
Calibration Check	SLE0358-CCVA	XDT_m1230519-100	NA	05/19/23 22:15
Calibration Blank	SLE0358-CCBA	XDT_m1230519-101	NA	05/19/23 22:23
Instrument Blank	SLE0358-IBL9	XDT_m1230519-106	NA	05/19/23 22:48
Instrument Blank	SLE0358-IBLA	XDT_m1230519-111	NA	05/19/23 23:12
Calibration Check	SLE0358-CCVB	XDT_m1230519-112	NA	05/19/23 23:17
Calibration Blank	SLE0358-CCBB	XDT_m1230519-113	NA	05/19/23 23:24
Instrument Blank	SLE0358-IBLB	XDT_m1230519-123	NA	05/20/23 00:04
Calibration Check	SLE0358-CCVC	XDT_m1230519-124	NA	05/20/23 00:07
Calibration Blank	SLE0358-CCBC	XDT_m1230519-125	NA	05/20/23 00:14
Instrument Blank	SLE0358-IBLC	XDT_m1230519-135	NA	05/20/23 00:53
Calibration Check	SLE0358-CCVD	XDT_m1230519-136	NA	05/20/23 00:57
Calibration Blank	SLE0358-CCBD	XDT_m1230519-137	NA	05/20/23 01:03
Calibration Check	SLE0358-CCVE	XDT_m1230519-139	NA	05/20/23 01:11
Calibration Blank	SLE0358-CCBE	XDT_m1230519-140	NA	05/20/23 01:17
Instrument Blank	SLE0358-IBLD	XDT_m1230519-150	NA	05/20/23 01:56
Calibration Check	SLE0358-CCVF	XDT_m1230519-151	NA	05/20/23 02:00
Calibration Blank	SLE0358-CCBF	XDT_m1230519-152	NA	05/20/23 02:06
Instrument Blank	SLE0358-IBLE	XDT_m1230519-162	NA	05/20/23 02:43
Calibration Check	SLE0358-CCVG	XDT_m1230519-163	NA	05/20/23 02:47

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0358	Instrument:	ICPMS1
		Calibration:	GE00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SLE0358-CCBG	XDT_m1230519-164	NA	05/20/23 02:54
Instrument Blank	SLE0358-IBLF	XDT_m1230519-174	NA	05/20/23 03:30
Calibration Check	SLE0358-CCVH	XDT_m1230519-175	NA	05/20/23 03:34
Calibration Blank	SLE0358-CCBH	XDT_m1230519-176	NA	05/20/23 03:40

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00041
Sequence: SLD0219
Standard ID: L003578

Lab Sample ID	Analyte	True	Found	%R	Units
SLD0219-IFA1	Arsenic-75a	0	0.0350		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00041
Sequence: SLD0219
Standard ID: L003578

Lab Sample ID	Analyte	True	Found	%R	Units
SLD0219-IFB1	Arsenic-75a	20.000	19.556	97.8	ug/L

* Indicates %R outside of QC limits
NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00066
Sequence: SLE0358
Standard ID: L005318

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0358-IFA1	Arsenic-75a	0	0.0410		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00066
Sequence: SLE0358
Standard ID: L005318

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0358-IFB1	Arsenic-75a	20.000	19.519	97.6	ug/L

* Indicates %R outside of QC limits
NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

DETECTION LEVEL STANDARD
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GD00041
Sequence: SLD0219
Lab Sample ID: SLD0219-CRL1

Analyte	True	Found	%R	Units	QC Limts
Arsenic-75a	0.20000	0.196	98.0	ug/L	50 - 150

* Values outside of QC limits

DETECTION LEVEL STANDARD
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00066
Sequence: SLE0358
Lab Sample ID: SLE0358-CRL1

Analyte	True	Found	%R	Units	QC Limts
Arsenic-75a	0.20000	0.201	101	ug/L	50 - 150

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GD00041
Laboratory ID: SLD0219-HCV1
Sequence: SLD0219
Standard ID: L003671

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	200.00	200	0.1	10.00

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GD00041
Laboratory ID: SLD0219-HCV2
Sequence: SLD0219
Standard ID: L003672

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	300.00	291	-3.0	10.00

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00066
Laboratory ID: SLE0358-HCV1
Sequence: SLE0358
Standard ID: L005468

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	200.00	200	-0.002	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00066
Laboratory ID: SLE0358-HCV2
Sequence: SLE0358
Standard ID: L005469

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	300.00	302	0.8	10.00

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-IT1088 23A0207-01	01/11/23 08:22	01/11/23 16:45	04/12/23 17:30	91	180	04/13/23 19:17	92	180	
LDW23-IT1089 23A0207-02	01/11/23 08:42	01/11/23 16:45	04/12/23 17:30	91	180	04/13/23 19:09	92	180	
LDW23-IT1079 23A0207-03	01/11/23 09:04	01/11/23 16:45	04/12/23 17:30	91	180	04/13/23 19:13	92	180	
LDW23-IT1080 23A0207-04	01/11/23 09:24	01/11/23 16:45	04/12/23 17:30	91	180	04/13/23 19:53	92	180	
LDW23-IT1080-FD 23A0207-05	01/11/23 09:24	01/11/23 16:45	04/12/23 17:30	91	180	04/13/23 19:57	92	180	
LDW23-IT1072 23A0207-06	01/11/23 09:41	01/11/23 16:45	04/12/23 17:30	91	180	04/13/23 20:02	92	180	
LDW23-IT1081 23A0207-07	01/11/23 10:15	01/11/23 16:45	04/12/23 17:30	91	180	04/13/23 20:06	92	180	
LDW23-IT1068 23A0207-08	01/11/23 10:45	01/11/23 16:45	04/12/23 17:30	91	180	04/13/23 20:10	92	180	
LDW23-IT1062 23A0207-09	01/11/23 11:03	01/11/23 16:45	04/12/23 17:30	91	180	04/13/23 20:14	92	180	
LDW23-IT1097 23A0207-10	01/11/23 11:32	01/11/23 16:45	05/18/23 15:58	127	365	05/19/23 18:32	128	365	
LDW23-IT1078 23A0207-15	01/11/23 14:13	01/11/23 16:45	04/12/23 17:30	91	180	04/13/23 20:18	92	180	
LDW23-IT1201 23A0207-16	01/11/23 14:54	01/11/23 16:45	04/12/23 17:30	91	180	04/13/23 20:22	92	180	
LDW23-IT1209 23A0207-17	01/11/23 15:21	01/11/23 16:45	04/12/23 17:30	91	180	04/13/23 20:27	92	180	
Duplicate BLD0243-DUP1	01/11/23 08:22	01/11/23 16:45	04/12/23 17:30	91	180	04/13/23 19:21	92	180	
Matrix Spike BLD0243-MS1	01/11/23 08:22	01/11/23 16:45	04/12/23 17:30	91	180	04/13/23 19:25	92	180	
Matrix Spike Dup BLD0243-MSD1	01/11/23 08:22	01/11/23 16:45	04/12/23 17:30	91	180	04/13/23 19:30	92	180	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ICPMS1

Analyte	MDL	RL	Units
Arsenic-75a	0.04	0.20	mg/kg

METHOD DETECTION AND REPORTING LIMITS

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ICPMS2

Analyte	MDL	RL	Units
Arsenic-75a	0.04	0.20	mg/kg

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCU10
Lot Number:	P2-CU682108
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Copper
Starting Material:	Cu Metal
Starting Material Lot#:	2095
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10013 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9977 ± 50 µg/mL**
ICP Assay NIST SRM 3114 Lot Number: 121207

Assay Method #2 **10024 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10007 ± 46 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.007542	M	Eu	<	0.000942	O	Na		0.001434	M	Se	<	0.016971	M	Zn	<	0.005657
O	Al	<	0.000609	O	Fe		0.008700	M	Nb	<	0.000942	O	Si		0.003052	M	Zr	<	0.000942
M	As	<	0.010371	M	Ga	<	0.000942	M	Nd	<	0.000942	M	Sm	<	0.000942				
M	Au	<	0.001885	M	Gd	<	0.000942	M	Ni		0.003781	M	Sn	<	0.005657				
O	B		0.003663	M	Ge	<	0.005657	M	Os	<	0.000942	M	Sr	<	0.000942				
M	Ba		0.004253	M	Hf	<	0.000942	O	P	<	0.031668	M	Ta	<	0.000942				
M	Be	<	0.000942	O	Hg	<	0.007064	M	Pb		0.005789	M	Tb	<	0.000942				
M	Bi	<	0.000942	M	Ho	<	0.000942	M	Pd	<	0.000942	M	Te	<	0.004714				
O	Ca		0.002304	M	In	<	0.000942	M	Pr	<	0.000942	M	Th	<	0.000942				
M	Cd	<	0.000942	M	Ir	<	0.000942	M	Pt	<	0.000942	O	Ti	<	0.002801				
M	Ce	<	0.000942	O	K		0.000763	M	Rb	<	0.000942	M	Tl	<	0.000942				
M	Co		0.001890	M	La	<	0.000942	M	Re	<	0.000942	M	Tm	<	0.000942				
M	Cr	<	0.005657	O	Li	<	0.000243	i	Rh	<		M	U	<	0.000942				
M	Cs	<	0.000942	M	Lu	<	0.000942	M	Ru	<	0.039588	M	V	<	0.003771				
s	Cu	<		O	Mg		0.000320	O	S		0.007174	M	W	<	0.005657				
M	Dy	<	0.000942	O	Mn		0.000793	M	Sb	<	0.001885	M	Y	<	0.000942				
M	Er	<	0.000942	M	Mo	<	0.005657	M	Sc	<	0.000942	M	Yb	<	0.000942				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 63.55 +2 6 $Cu(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cu Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 63 amu	10 ppt	n/a	40Ar23Na 47Ti16O, 14N12C37Cl, 16O12C35Cl, 23Na40Ca
ICP-OES 219.958 nm	0.01/.002 µg/mL	1	Th, Ta, Nb, U, Hf
ICP-OES 224.700 nm	0.01/.001 µg/mL	1	Pb, Ir, Ni, W
ICP-OES 324.754 nm	0.06/.001 µg/mL		Nb, U, Th, Mo, Hf

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 24, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 24, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGPB10
Lot Number:	S2-PB713228
Matrix:	0.5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Lead
Starting Material:	Lead Nitrate
Starting Material Lot#:	2343
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10042 ± 31 µg/mL

Density: 1.015 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10024 ± 41 µg/mL**
ICP Assay NIST SRM 3128 Lot Number: 101026

Assay Method #2 **10054 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	M	Na		0.001470	M	Se	<	0.009100	O	Zn	0.006155
O	Al		0.017098	O	Fe		0.002496	M	Nb	<	0.000310	O	Si		0.003761	O	Zr	< 0.001700
M	As	<	0.003100	M	Ga	<	0.000310	M	Nd	<	0.000310	M	Sm	<	0.000310			
M	Au	<	0.000910	M	Gd	<	0.000310	O	Ni		0.001709	M	Sn	<	0.001300			
O	B	<	0.005600	M	Ge	<	0.002200	M	Os	<	0.000310	O	Sr		0.000444			
O	Ba		0.007865	M	Hf	<	0.000310	O	P	<	0.038000	M	Ta	<	0.000310			
O	Be	<	0.000320	M	Hg	<	0.002200	s	Pb	<		M	Tb	<	0.000610			
M	Bi	<	0.028000	M	Ho	<	0.000310	M	Pd	<	0.000610	M	Te	<	0.000310			
O	Ca		0.019834	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.000310			
O	Cd	<	0.000630	M	Ir	<	0.000310	M	Pt	<	0.000910	O	Ti		0.005129			
M	Ce		0.004787	O	K		0.008207	M	Rb	<	0.006700	M	Tl	<	0.016000			
M	Co	<	0.000610	M	La	<	0.001900	M	Re	<	0.000310	M	Tm	<	0.000310			
O	Cr	<	0.001500	O	Li	<	0.000110	O	Rh	<	0.007700	M	U	<	0.000310			
M	Cs	<	0.006100	M	Lu	<	0.000310	M	Ru	<	0.001300	M	V	<	0.001600			
M	Cu	<	0.001600	O	Mg		0.003317	O	S	<	0.052000	M	W	<	0.000910			
M	Dy	<	0.000310	O	Mn	<	0.001600	O	Sb	<	0.015000	M	Y	<	0.000310			
M	Er	<	0.000310	M	Mo	<	0.000610	O	Sc	<	0.000630	M	Yb	<	0.000310			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 207.20 +2 6 $Pb(H_2O)_6^{+2}$

Chemical Compatibility - Soluble in HCl, HF and HNO_3. Avoid H_2SO_4. Stable with most metals and inorganic anions forming insoluble carbonate, borate, sulfate, sulfite, sulfide, phosphate, oxalate, chromate, tannate, iodate, and cyanide in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO_3 / LDPE container.

Pb Containing Samples (Preparation and Solution) -Metal (Best dissolved in 1:1 H_2O / HNO_3); Oxides (The many different Pb oxides are soluble in HNO_3 with the exception of PbO_2 which is soluble in HCl or HF); Ores and Alloys (Best attacked using 1:1 H_2O / HNO_3); Organic Matrices (Dry ash and dissolve in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 208 amu	5 ppt	n/a	192Pt16O, 192Os16O
ICP-OES 168.215 nm	0.03 / 0.003 µg/mL	1	Co
ICP-OES 217.000 nm	0.09 / 0.03 µg/mL	1	W, Ir, Hf, Sb, Th
ICP-OES 220.353 nm	0.04 / 0.006 µg/mL	1	Bi, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

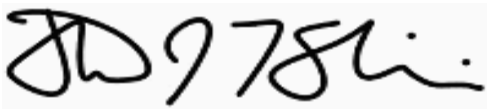
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGZN10
Lot Number:	S2-ZN711249
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Zinc
Starting Material:	Zinc Metal
Starting Material Lot#:	2349
Starting Material Purity:	99.9988%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**9981 ± 56 µg/mL** ICP Assay NIST SRM 3168a Lot Number: 120629
Assay Method #2	**9987 ± 32 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10002 ± 32 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002000	M	Eu	<	0.000500	O	Na		0.008713	M	Se	<	0.048000	s	Zn	<	
O	Al	<	0.011000	O	Fe		0.015467	M	Nb	<	0.000500	O	Si		0.007842	M	Zr	<	0.000500
O	As	<	0.012000	M	Ga	<	0.004900	M	Nd	<	0.000500	M	Sm	<	0.000500				
M	Au	<	0.006500	M	Gd	<	0.000500	O	Ni		0.003049	M	Sn		0.002614				
O	B	<	0.019000	M	Ge	<	0.009100	M	Os	<	0.000500	M	Sr	<	0.000500				
M	Ba	<	0.000500	M	Hf	<	0.000500	O	P	<	0.059000	M	Ta	<	0.000500				
O	Be	<	0.000230	O	Hg	<	0.003800	M	Pb		0.016774	M	Tb	<	0.000500				
M	Bi	<	0.002400	M	Ho	<	0.000500	M	Pd	<	0.001000	M	Te	<	0.017000				
O	Ca		0.052283	M	In	<	0.003500	M	Pr	<	0.000500	M	Th	<	0.000500				
O	Cd		0.000588	M	Ir	<	0.001000	M	Pt	<	0.000500	M	Ti	<	0.002000				
M	Ce	<	0.000500	O	K		0.017209	M	Rb	<	0.002500	M	Tl	<	0.000500				
M	Co		0.000653	M	La	<	0.000500	M	Re	<	0.000500	M	Tm	<	0.000500				
O	Cr		0.001089	O	Li	<	0.000230	M	Rh	<	0.000500	M	U	<	0.000500				
M	Cs	<	0.000500	M	Lu	<	0.000500	M	Ru	<	0.005000	M	V	<	0.000500				
O	Cu		0.001938	O	Mg		0.000871	O	S	<	0.048000	M	W	<	0.001000				
M	Dy	<	0.000500	O	Mn		0.000172	M	Sb	<	0.004300	M	Y	<	0.000500				
M	Er	<	0.000500	M	Mo	<	0.001500	O	Sc	<	0.000900	M	Yb	<	0.000500				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 65.39 +2 4 Zn(OH)(aq)1+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media forming insoluble carbonate and hydroxide. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Zn Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3); Organic based (dry ash at 4500C and dissolve ash in HCl) (sulfuric/peroxide acid digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 66 amu	7 ppt	N/A	50Ti16O,50Cr16O, 50V16O, 34S16O2, 32S16O18O, 32S17O2, 33S16O17O, 32S34S, 33S2
ICP-OES 202.548 nm	0.004/0.0002 µg/mL	1	Nb, Cu, Co, Hf
ICP-OES 206.200 nm	0.006/0.0006 µg/mL	1	Sb, Ta, Bi, Os
ICP-OES 213.856 nm	0.002/0.0004 µg/mL	1	Ni, Cu, V

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 22, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

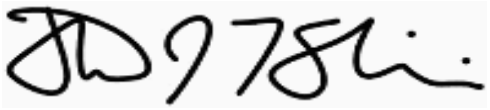
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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Christiansburg, VA 24073 USA
inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSE10
Lot Number:	S2-SE711004
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Selenium
Starting Material:	Se Metal
Starting Material Lot#:	1962
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9955 ± 61 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9955 ± 50 µg/mL**
ICP Assay NIST SRM 3149 Lot Number: 100901

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002242	M	Eu	<	0.000373	O	Na		0.013654	s	Se	<		O	Zn		0.002374
M	Al		0.004450	M	Fe		0.008478	O	Nb	<	0.002975	O	Si		0.006249	M	Zr	<	0.001868
O	As	<	0.022040	M	Ga	<	0.000373	M	Nd	<	0.000373	M	Sm	<	0.000373				
M	Au	<	0.000373	M	Gd	<	0.000373	O	Ni		0.001843	M	Sn		0.000847				
O	B	<	0.007714	M	Ge	<	0.002616	M	Os	<	0.000373	M	Sr	<	0.001121				
M	Ba	<	0.001495	M	Hf	<	0.000373	O	P	<	0.022040	M	Ta	<	0.000373				
M	Be	<	0.001495	M	Hg	<	0.002240	M	Pb		0.006358	M	Tb	<	0.006353				
M	Bi	<	0.000373	M	Ho	<	0.000373	M	Pd	<	0.000373	M	Te	<	0.012707				
O	Ca		0.006530	M	In	<	0.000373	M	Pr	<	0.001495	M	Th	<	0.002990				
M	Cd		0.001165	M	Ir	<	0.000373	M	Pt	<	0.000373	M	Ti	<	0.003363				
M	Ce	<	0.000373	O	K		0.001999	M	Rb	<	0.001868	M	Tl		0.008584				
M	Co	<	0.000373	M	La	<	0.001121	M	Re	<	0.000373	M	Tm	<	0.000373				
M	Cr		0.002861	O	Li		0.000062	M	Rh	<	0.000373	M	U	<	0.000373				
M	Cs	<	0.001121	M	Lu	<	0.000373	M	Ru	<	0.001493	M	V	<	0.000747				
M	Cu	<	0.000747	O	Mg		0.001156	O	S		0.024591	M	W	<	0.002242				
M	Dy	<	0.000373	M	Mn	<	0.000373	M	Sb	<	0.002242	M	Y	<	0.000373				
M	Er	<	0.000373	O	Mo	<	0.003195	M	Sc	<	0.001121	M	Yb	<	0.000373				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 78.96 +4 6 H_2SeO_3

Chemical Compatibility -Soluble in HCl, HNO_3,H_3PO_4, H_2SO_4 and HF aqueous matrices and water. It is stable with most inorganic anions but many cationic metals form the insoluble selenites under pH neutral conditions. When fluorinated and/or under acidic conditions precipitation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Se Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (readily soluble in water); Minerals and alloys (acid digestion with HNO_3or HNO_3 / HF); Organic Matrices (acid digestion with hot concentrated H_2SO_4 accompanied by the careful dropwise addition of H_2O_2 until clear).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 82 amu	200 ppt	N/A	12C35Cl2
ICP-OES 196.026 nm	0.08/0.006 µg/mL	1	Fe
ICP-OES 203.985 nm	0.2/0.05 µg/mL	1	Sb, Ir, Cr, Ta
ICP-OES 206.279 nm	0.3/0.16 µg/mL	1	Cr, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 17, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO10
Lot Number:	S2-MO706255
Matrix:	H2O tr. NH4OH
Value / Analyte(s):	10 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2361
Starting Material Purity:	99.9893%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10026 ± 47 µg/mL

Density: 1.011 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10032 ± 68 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

Assay Method #2 **10020 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000590	M	Eu	<	0.000300	M	Na		0.008739	M	Se	<	0.008000	M	Zn		0.005942
M	Al		0.005592	M	Fe	<	0.006500	M	Nb	<	0.029000	i	Si	<		M	Zr	<	0.001800
M	As	<	0.002100	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.000300	M	Gd	<	0.000300	M	Ni	<	0.008000	M	Sn	<	0.008900				
M	B	<	0.003300	M	Ge	<	0.000300	M	Os	<	0.000590	M	Sr		0.001747				
M	Ba		0.016778	M	Hf	<	0.001800	i	P	<		M	Ta	<	0.004200				
M	Be	<	0.000890	M	Hg	<	0.003300	M	Pb	<	0.000300	M	Tb	<	0.000300				
M	Bi	<	0.000890	M	Ho	<	0.000300	M	Pd	<	0.001800	M	Te	<	0.021000				
O	Ca		0.062920	M	In	<	0.032000	M	Pr	<	0.013000	M	Th	<	0.000300				
O	Cd	<	0.026000	M	Ir	<	0.000300	M	Pt	<	0.000300	O	Ti	<	0.032000				
M	Ce	<	0.008300	M	K		1.293372	M	Rb		0.045442	M	Tl		0.012584				
M	Co		0.005942	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.005243	O	Li		0.000594	M	Rh	<	0.000300	M	U	<	0.005300				
M	Cs		0.005243	M	Lu	<	0.000300	M	Ru	<	0.079000	M	V	<	0.000890				
M	Cu		0.022371	M	Mg		0.005592	i	S	<		M	W		0.873900				
M	Dy	<	0.000300	M	Mn	<	0.005900	M	Sb		0.015031	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.001200	M	Yb	<	0.000300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 95.94 +6 6,7,8,9 [MoO4]-2(chemical form as received)

Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br16O,190Os2+,190Pt2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 04, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 04, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTL10
Lot Number:	T2-TL714687
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Thallium
Starting Material:	TlNO3
Starting Material Lot#:	2118
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10030 ± 42 µg/mL

Density: 1.036 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10040 ± 43 µg/mL**
ICP Assay NIST SRM 3158 Lot Number: 151215

Assay Method #2 **10010 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL(

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000200	O	Na		0.002489	M	Se	<	0.011019	O	Zn		0.002298
O	Al	<	0.004184	O	Fe	<	0.002824	M	Nb	<	0.000200	O	Si		0.003760	M	Zr	<	0.000200
M	As	<	0.002003	M	Ga	<	0.000200	M	Nd	<	0.000200	M	Sm	<	0.000200				
O	Au	<	0.002824	M	Gd	<	0.000200	M	Ni		0.001724	M	Sn	<	0.000601				
O	B	<	0.004184	M	Ge	<	0.000801	M	Os	<	0.000198	O	Sr	<	0.000313				
M	Ba	<	0.000400	M	Hf	<	0.000200	O	P	<	0.010460	M	Ta	<	0.000200				
O	Be	<	0.000104	M	Hg	<	0.000794	M	Pb		0.000811	M	Tb	<	0.000200				
M	Bi	<	0.005209	M	Ho	<	0.000200	M	Pd	<	0.000400	M	Te	<	0.005008				
O	Ca		0.002436	M	In	<	0.000200	M	Pr	<	0.000200	M	Th	<	0.000200				
M	Cd		0.001318	M	Ir	<	0.000198	M	Pt	<	0.000801	O	Ti	<	0.001255				
M	Ce	<	0.000200	O	K		0.006175	M	Rb	<	0.000200	s	Tl	<					
M	Co	<	0.000601	M	La	<	0.000200	M	Re	<	0.000200	M	Tm	<	0.000200				
M	Cr	<	0.000801	O	Li	<	0.000177	M	Rh	<	0.000200	M	U	<	0.000200				
M	Cs	<	0.003606	M	Lu	<	0.000200	M	Ru	<	0.000397	M	V	<	0.002203				
M	Cu	<	0.001001	O	Mg		0.000529	O	S	<	0.015690	M	W	<	0.000601				
M	Dy	<	0.000200	M	Mn	<	0.000801	M	Sb	<	0.000400	M	Y	<	0.000200				
M	Er	<	0.000200	M	Mo	<	0.001202	O	Sc	<	0.000711	M	Yb	<	0.000200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 204.38 +1 6 Tl(H2O)61+
Chemical Compatibility - Soluble in HCl, HNO3, and H2SO4. Stable with most metals and inorganic anions. The sulfite, thiocyanate and oxalate are moderately soluble; the phosphate and arsenite are slightly soluble and the sulfide is insoluble.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Tl Containing Samples)Preparation and Solution) -Metal (Best dissolved in HNO3 which forms chiefly the Tl1+ ion.); Oxide (The thallous oxide is readily soluble in water. The thallic oxide requires high levels of acid); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 205 amu	2 ppt	N/A	189Os16O
ICP-OES 190.864 nm	0.04 / 0.004 µg/mL	1	V, Ti
ICP-OES 276.787 nm	0.1 / 0.01 µg/mL	1	Ta, V, Fe, Cr
ICP-OES 351.924 nm	0.2 / 0.02 µg/mL	1	Th, Ce, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 08, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 08, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

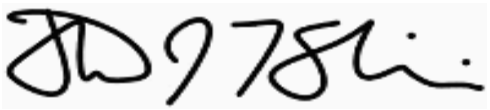
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCD10
Lot Number:	S2-CD710508
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cadmium
Starting Material:	Cd Metal
Starting Material Lot#:	1953
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10008 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10010 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **10011 ± 30 µg/mL**
ICP Assay NIST SRM 3108 Lot Number: 130116

Assay Method #3 **10003 ± 30 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	<	0.003200	O	Eu	<	0.002500	O	Na		0.005499	M	Se	<	0.005700	O	Zn	<	0.001100
O	Al		0.008903	O	Fe		0.000602	M	Nb	<	0.000400	O	Si		0.016758	O	Zr	<	0.002600
M	As	<	0.003600	M	Ga	<	0.001200	M	Nd	<	0.000800	M	Sm	<	0.000400				
M	Au	<	0.000810	M	Gd	<	0.000400	M	Ni	<	0.003600	M	Sn	<	0.003200				
O	B		0.004189	O	Ge	<	0.012000	M	Os	<	0.000810	O	Sr	<	0.000330				
M	Ba	<	0.002400	M	Hf	<	0.000400	O	P	<	0.022000	M	Ta	<	0.000800				
M	Be	<	0.000400	M	Hg	<	0.001700	M	Pb	<	0.002400	M	Tb	<	0.000400				
M	Bi	<	0.000400	M	Ho	<	0.000400	M	Pd	<	0.001200	M	Te	<	0.008000				
O	Ca		0.011259	O	In	<	0.013000	M	Pr	<	0.000400	M	Th	<	0.000400				
s	Cd	<		M	Ir	<	0.000410	M	Pt	<	0.000400	O	Ti		0.000602				
M	Ce	<	0.000400	O	K		0.005237	M	Rb	<	0.004400	M	Tl		0.000523				
M	Co	<	0.000400	M	La	<	0.000400	M	Re	<	0.000400	M	Tm	<	0.000400				
O	Cr	<	0.005100	O	Li	<	0.000054	M	Rh	<	0.000400	M	U	<	0.000400				
M	Cs	<	0.002400	M	Lu	<	0.000400	M	Ru	<	0.002500	M	V	<	0.002000				
O	Cu	<	0.004800	O	Mg		0.000288	O	S	<	0.022000	M	W	<	0.000400				
M	Dy	<	0.000400	O	Mn	<	0.000860	O	Sb	<	0.018000	M	Y	<	0.000400				
M	Er	<	0.000400	M	Mo	<	0.001600	O	Sc	<	0.000430	M	Yb	<	0.000400				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 112.41 +2 4 Cd2(OH) (aq)3+ and Cd(OH)(aq)

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 , and HF. Avoid basic media forming insoluble carbonate and hydroxide.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3 / LDPE container.

Cd Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (soluble in HCl or HNO3); Ores (dissolve in HCl /HNO3 then take to fumes with H2SO4. The silica and lead sulfate are filtered off after the addition of water); Organic based (dry ash at 450°C and dissolve ash in HCl), (sulfuric / peroxide acid digestion).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 111 amu	11 ppt	n/a	95Mo16O
ICP-OES 214.438 nm	0.003 / 0.0003 µg/mL	1	Pt, Ir
ICP-OES 226.502 nm	0.003 / 0.0003 µg/mL	1	Ir
ICP-OES 228.802 nm	0.003 / 0.0003 µg/mL	1	Co, Ir, As, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 01, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 01, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMN10
Lot Number:	S2-MN704240
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Manganese
Starting Material:	Mn Metal
Starting Material Lot#:	2275
Starting Material Purity:	99.9909%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10011 ± 30 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9989 ± 69 µg/mL**
ICP Assay NIST SRM 3132 Lot Number: 050429

Assay Method #2 **10011 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10024 ± 47 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001500	M	Eu	<	0.000730	O	Na		0.176097	M	Se	<	0.006600	M	Zn		0.009925
O	Al		0.004322	M	Fe	<	0.650000	M	Nb	<	0.000730	O	Si		0.097654	M	Zr	<	0.000730
M	As	<	0.008000	M	Ga		0.004322	M	Nd	<	0.001500	M	Sm	<	0.000730				
M	Au	<	0.000730	M	Gd	<	0.000730	M	Ni		0.024013	M	Sn	<	0.002200				
M	B		0.068838	M	Ge	<	0.004400	M	Os	<	0.000730	O	Sr		0.000928				
M	Ba	<	0.001500	M	Hf	<	0.000730	i	P	<		M	Ta	<	0.000730				
M	Be	<	0.000730	M	Hg	<	0.002200	M	Pb		0.007364	M	Tb	<	0.000730				
M	Bi	<	0.003000	M	Ho	<	0.000730	M	Pd	<	0.000730	M	Te	<	0.019000				
O	Ca		0.062434	M	In	<	0.003000	M	Pr	<	0.000730	M	Th	<	0.000730				
M	Cd	<	0.001500	M	Ir	<	0.000730	M	Pt	<	0.000730	O	Ti	<	0.006500				
M	Ce	<	0.007300	O	K		0.006403	M	Rb	<	0.006600	M	Tl	<	0.000730				
O	Co		0.014728	M	La	<	0.003000	M	Re	<	0.000730	M	Tm	<	0.000730				
O	Cr		0.272151	O	Li		0.000416	M	Rh	<	0.003000	M	U	<	0.001500				
M	Cs	<	0.000730	M	Lu	<	0.000730	M	Ru	<	0.004400	M	V	<	0.000730				
O	Cu		0.007684	O	Mg		0.320177	i	S	<		M	W	<	0.004400				
M	Dy	<	0.001500	s	Mn	<		M	Sb	<	0.021000	O	Y		0.001360				
M	Er	<	0.001500	M	Mo		0.010245	O	Sc	<	0.004100	M	Yb	<	0.000730				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 54.94 +2 6 $Mn(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO_3/LDPE container.

Mn Containing Samples (Preparation and Solution) -Metal (Soluble in dilute acids); Oxides (Soluble in dilute acids); Ores (Dissolve with HCl. If silica is present add HF and then fume off silica by adding H_2SO_4 and heat to SO_3 fumes - dense white fumes).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 55 amu	10 ppt	n/a	40Ar14N1H,39K16O,37Cl18O,40Ar15N,38Ar17O,36Ar18O1H ,38Ar16O1H,37Cl17O1H,23Na32S
ICP-OES 257.610 nm	0.0014 / 0.00002 µg/mL	1	Ce, W, Re
ICP-OES 259.373 nm	0.0016 / 0.00002 µg/mL	1	U, Ta, Mo, Fe, Nb
ICP-OES 260.569 nm	0.0021 / 0.00002 µg/mL	1	Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 17, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSB10
Lot Number:	R2-SB688559
Matrix:	3% (v/v) HNO3 3% (w/v) tartaric acid
Value / Analyte(s):	10 000 µg/mL ea: Antimony
Starting Material:	Antimony Metal
Starting Material Lot#:	1857
Starting Material Purity:	99.9894%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10003 ± 47 µg/mL

Density: 1.061 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10003 ± 41 µg/mL**
ICP Assay NIST SRM 3102a Lot Number: 140911

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$
w_i = the weighting factors for each method calculated using the inverse square of the variance:
$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2
$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method
u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with
$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2
$u_{char\ a}$ = the errors from characterization
u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000300	O	Na		0.140000	M	Se	<	0.007300	O	Zn		0.005000
M	Al		0.003200	O	Fe		0.060000	M	Nb	<	0.000100	O	Si		0.150000	O	Zr	<	0.006300
M	As	<	0.004400	M	Ga	<	0.000400	M	Nd	<	0.000100	M	Sm	<	0.000100				
M	Au	<	0.000210	M	Gd	<	0.000100	O	Ni		0.004800	M	Sn	<	0.001800				
M	B	<	0.011000	M	Ge	<	0.000600	M	Os	<	0.000110	O	Sr		0.000750				
O	Ba	<	0.004900	M	Hf	<	0.000100	O	P		0.540000	M	Ta		0.003300				
M	Be	<	0.000400	M	Hg	<	0.000110	M	Pb	<	0.000400	M	Tb	<	0.000100				
M	Bi	<	0.000200	M	Ho	<	0.000100	M	Pd	<	0.000210	M	Te	<	0.000600				
O	Ca		0.110000	M	In	<	0.000100	M	Pr	<	0.001600	M	Th	<	0.000100				
M	Cd	<	0.000200	M	Ir	<	0.000110	M	Pt	<	0.000600	M	Ti	<	0.002800				
M	Ce		0.006500	O	K		0.020000	M	Rb	<	0.001000	M	Tl	<	0.000100				
M	Co	<	0.000200	O	La	<	0.016000	M	Re	<	0.000100	M	Tm	<	0.000100				
M	Cr		0.006900	O	Li	<	0.000430	M	Rh	<	0.000300	M	U	<	0.000100				
M	Cs	<	0.000200	M	Lu	<	0.000100	M	Ru	<	0.000310	M	V	<	0.000800				
M	Cu	<	0.000600	O	Mg		0.021000	n	S	<		M	W	<	0.000200				
M	Dy	<	0.000100	O	Mn		0.001900	s	Sb	<		M	Y	<	0.000100				
M	Er	<	0.000100	M	Mo	<	0.000500	O	Sc	<	0.002300	M	Yb	<	0.000100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 121.75 +3 6 Sb(O)C4H4O6-1

Chemical Compatibility -Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.

Sb Containing Samples (Preparation and Solution) -Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides (Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 30, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 30, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS10
Lot Number:	T2-AS718260
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Arsenic
Starting Material:	As Metal
Starting Material Lot#:	2208
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10060 ± 40 µg/mL

Density: 1.037 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10062 ± 46 µg/mL**
ICP Assay NIST SRM 3103a Lot Number: 100818

Assay Method #2 **10055 ± 76 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	< 0.003200	M	Eu	< 0.000530	O	Na	0.032544	M	Se	< 0.006300	O	Zn	0.001952			
M	Al	0.007593	O	Fe	0.001475	O	Nb	< 0.012000	O	Si	0.238658	O	Zr	< 0.004100			
s	As	<	M	Ga	< 0.000530	M	Nd	< 0.000530	M	Sm	< 0.000530						
M	Au	< 0.003100	M	Gd	< 0.000530	M	Ni	< 0.002100	M	Sn	< 0.000530						
M	B	0.026035	M	Ge	< 0.001600	M	Os	< 0.000520	M	Sr	< 0.000530						
M	Ba	< 0.000530	M	Hf	< 0.000530	O	P	< 0.043000	M	Ta	< 0.000530						
O	Be	< 0.000360	M	Hg	< 0.001600	M	Pb	< 0.002100	M	Tb	< 0.000530						
M	Bi	< 0.000530	M	Ho	< 0.000530	M	Pd	< 0.001100	M	Te	< 0.004700						
O	Ca	0.004339	M	In	< 0.023000	M	Pr	< 0.005300	M	Th	< 0.000530						
M	Cd	< 0.001100	M	Ir	< 0.000520	M	Pt	< 0.000530	O	Ti	< 0.002300						
M	Ce	< 0.000530	O	K	0.002061	M	Rb	< 0.000530	M	Tl	< 0.000530						
M	Co	< 0.000530	M	La	< 0.001100	M	Re	< 0.000530	M	Tm	< 0.000530						
O	Cr	< 0.001800	O	Li	< 0.000120	M	Rh	< 0.000530	M	U	< 0.000530						
M	Cs	< 0.005300	M	Lu	< 0.000530	M	Ru	< 0.000520	M	V	< 0.002700						
M	Cu	< 0.001600	O	Mg	0.000154	O	S	0.028205	M	W	< 0.012000						
M	Dy	< 0.000530	O	Mn	0.000154	M	Sb	< 0.000530	M	Y	< 0.000530						
M	Er	< 0.000530	M	Mo	< 0.000530	O	Sc	< 0.001700	M	Yb	< 0.000530						

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 74.92 ; mix of +3 and +5 ; 6 ; H3AsO4 and HAsO2

Chemical Compatibility - Arsenic has no cationic chemistry. It is soluble in HCl, HNO3,H3PO4, H2SO4 and HF aqueous matrices water and NH4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO3 / LDPE container.

As Containing Samples (Preparation and Solution) - Metal (soluble in 1:1 H2O / HNO3); Oxides (the oxide exists in crystalline and amorphous forms where the amorphic form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K2CO3 and KNO3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na2CO3 / Na2O2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 75 amu	20 ppt	N/A	40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37Cl,Ar39K, 150Nd2+,150Sm2+
ICP-OES 189.042 nm	0.05/0.005 µg/mL	1	Cr
ICP-OES 193.696 nm	0.1/0.01 µg/mL	1	V, Ge
ICP-OES 228.812 nm	0.1/0.01 µg/mL	1	Cd, Pt, Ir, Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBA10
Lot Number:	R2-BA692576
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Barium
Starting Material:	Barium Nitrate
Starting Material Lot#:	1969
Starting Material Purity:	99.9982%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**10018 ± 50 µg/mL** ICP Assay NIST SRM 3104a Lot Number: 140909
Assay Method #2	**10023 ± 31 µg/mL** Gravimetric NIST SRM Lot Number: See Sec. 4.2
Assay Method #3	**10023 ± 30 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000410	O	Eu	<	0.005200	O	Na		0.004610	M	Se	<	0.003700	O	Zn		0.000658
M	Al	<	0.003100	O	Fe		0.015707	M	Nb	<	0.000210	O	Si		0.005573	M	Zr	<	0.001300
M	As	<	0.001300	M	Ga	<	0.000210	M	Nd	<	0.000210	O	Sm	<	0.021000				
M	Au	<	0.001300	M	Gd	<	0.000210	M	Ni	<	0.000810	M	Sn	<	0.000410				
O	B	<	0.005200	M	Ge	<	0.002500	M	Os	<	0.000410	O	Sr		0.003850				
s	Ba	<		M	Hf	<	0.000810	O	P	<	0.026000	M	Ta	<	0.000410				
O	Be	<	0.000320	M	Hg	<	0.000210	M	Pb	<	0.002300	M	Tb	<	0.000210				
M	Bi	<	0.000210	M	Ho	<	0.000210	M	Pd	<	0.000210	M	Te	<	0.001900				
O	Ca		0.007093	M	In	<	0.000210	M	Pr	<	0.000210	M	Th	<	0.000210				
M	Cd	<	0.000210	M	Ir	<	0.000210	M	Pt	<	0.000210	M	Ti	<	0.002100				
M	Ce	<	0.001300	O	K		0.035467	M	Rb	<	0.002100	M	Tl	<	0.000210				
M	Co	<	0.000410	O	La	<	0.005200	M	Re	<	0.000210	M	Tm	<	0.000410				
M	Cr	<	0.001700	O	Li	<	0.000630	M	Rh	<	0.000210	M	U	<	0.000210				
M	Cs	<	0.003300	M	Lu	<	0.001700	M	Ru	<	0.000210	O	V	<	0.005200				
M	Cu	<	0.001300	O	Mg		0.000861	O	S		0.268539	M	W	<	0.000410				
M	Dy	<	0.000210	M	Mn	<	0.000410	M	Sb	<	0.001300	O	Y	<	0.005200				
M	Er	<	0.001300	M	Mo	<	0.000410	M	Sc	<	0.000410	M	Yb	<	0.001300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 137.33 +2 6 $Ba(H_2O)_6^{+2}$
Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, iodate, molybdate, sulfite and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1 -10,000 ppm solutions chemically stable for years in 1-3.5% HNO_3 / LDPE container.
Ba Containing Samples (Preparation and Solution) -Metal(is best dissolved in diluted HNO_3); Ores(Carbonate fusion in Pt0 followed by HCl dissolution. If sulfate is present dissolve the fuseate using HCl / tartaric acid to prevent $BaSO_4$ precipitate); Organic Matrices (dry ash and dissolve in dilute HCl.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 138 amu	1 ppt	N/A	122Sn16O, 122Te16O
ICP-OES 230.424 nm	0.004/0.0005 µg/mL	1	Mo, Ir, Co
ICP-OES 233.527 nm	0.004/0.0003 µg/mL	1	
ICP-OES 455.403 nm	0.002/0.0001 µg/mL	1	Zr, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 11, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 11, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

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Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBE10
Lot Number:	R2-BE692992
Matrix:	6% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Beryllium
Starting Material:	Beryllium Acetate
Starting Material Lot#:	2281
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10032 ± 41 µg/mL

Density: 1.128 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10042 ± 67 µg/mL**
ICP Assay NIST SRM 3105a Lot Number: 090514

Assay Method #2 **10025 ± 51 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001100	M	Eu	<	0.000270	O	Na		0.040962	M	Se	<	0.005000	M	Zn		0.013054
O	Al		0.016205	O	Fe		0.015754	M	Nb	<	0.000270	O	Si		0.024307	O	Zr	<	0.001900
M	As	<	0.002900	M	Ga	<	0.000270	M	Nd	<	0.000270	M	Sm	<	0.000270				
M	Au	<	0.000520	M	Gd	<	0.000270	M	Ni	<	0.003700	M	Sn	<	0.000790				
M	B	<	0.091000	M	Ge	<	0.000270	M	Os	<	0.000260	M	Sr		0.000630				
M	Ba		0.002700	M	Hf	<	0.000270	O	P	<	0.066000	M	Ta	<	0.000270				
s	Be	<		M	Hg	<	0.000520	M	Pb	<	0.000270	M	Tb	<	0.000270				
M	Bi	<	0.000530	M	Ho	<	0.000270	M	Pd	<	0.000520	M	Te	<	0.003700				
O	Ca		0.072022	M	In	<	0.000790	M	Pr	<	0.000270	M	Th	<	0.000270				
M	Cd	<	0.000790	M	Ir	<	0.000260	M	Pt	<	0.000270	O	Ti	<	0.000400				
M	Ce	<	0.000270	O	K		0.045014	M	Rb	<	0.000270	M	Tl	<	0.000790				
O	Co	<	0.003200	M	La	<	0.000270	M	Re	<	0.000270	M	Tm	<	0.000270				
O	Cr	<	0.001800	O	Li	<	0.000660	M	Rh	<	0.001100	M	U	<	0.000270				
M	Cs		0.001440	M	Lu	<	0.000270	M	Ru	<	0.000260	M	V	<	0.000790				
M	Cu	<	0.002100	O	Mg		0.016205	i	S	<		M	W	<	0.000530				
M	Dy	<	0.000270	M	Mn		0.001215	M	Sb	<	0.000270	M	Y	<	0.000270				
M	Er	<	0.000270	M	Mo	<	0.000530	O	Sc	<	0.000930	M	Yb	<	0.000270				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 9.01 +2 4 $Be(H_2O)_4^{+2}$

Chemical Compatibility -Soluble in HCl, HNO_3, H_2SO_4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1 % HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 5-10 % HNO_3 / LDPE container.

Be Containing Samples (Preparation and Solution) - Meta l(is best dissolved in diluted H_2SO_4); BeO (boiling nitric, hydrochloric, or sulfuric acids or KHSO4 fusion); Ores (H_2SO_4/HF digestion or carbonate fusion in Pt0); Organic Matrices (sulfuric/peroxide digestion or nitric/sulfuric/perchloric acid decomposition, or dry ash and dissolution according to the BeO procedure above).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 9 amu	4 ppt	N/A	
ICP-OES 234.861 nm	0.0003/0.00016 µg/mL	1	Fe, Ta, Mo
ICP-OES 313.042 nm	0.0003/0.00009 µg/mL	1	V, Ce, U
ICP-OES 313.107 nm	0.0007/0.0005 µg/mL	1	Ce, Th, Tm

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

11.1 Certification Issue Date

May 13, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 13, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

11.4 Revision Status

- Revision 1 - Revised on Thursday, Jan 14, 2021 by utruong. Revision was made for the following reason: Modified Section 7 Chemical Form in Solution.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCO10
Lot Number:	R2-CO695285
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cobalt
Starting Material:	Co Metal
Starting Material Lot#:	2326
Starting Material Purity:	99.9934%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10012 ± 31 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10031 ± 67 µg/mL**
ICP Assay NIST SRM 3113 Lot Number: 190630

Assay Method #2 **10019 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10000 ± 35 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	0.014660	M	Eu	<	0.000590	O	Na	0.007534	M	Se	<	0.019000	M	Zn	0.003461	
M	Al	< 0.024000	M	Fe	0.050905	M	Nb	<	0.000590	O	Si	0.075340	M	Zr	<	0.001200	
i	As	<	M	Ga	<	0.000590	M	Nd	<	0.000590	M	Sm	<	0.000590			
M	Au	< 0.004100	M	Gd	<	0.000590	O	Ni	0.427608	M	Sn	<	0.001200				
M	B	< 0.031000	M	Ge	<	0.003000	M	Os	<	0.000590	O	Sr	<	0.000260			
M	Ba	< 0.000590	M	Hf	<	0.000590	n	P	<		M	Ta	<	0.001200			
O	Be	< 0.001300	M	Hg	<	0.001800	M	Pb	0.003257	M	Tb	<	0.000590				
M	Bi	< 0.003000	M	Ho	<	0.000590	M	Pd	<	0.000590	M	Te	<	0.005300			
O	Ca	0.010588	M	In	<	0.001200	M	Pr	<	0.000590	M	Th	<	0.000590			
M	Cd	< 0.004700	M	Ir	<	0.001200	M	Pt	<	0.002400	M	Ti	<	0.014000			
M	Ce	< 0.000590	O	K	0.008144	M	Rb	<	0.000590	M	Tl	0.002647					
s	Co	<	M	La	<	0.000590	M	Re	<	0.000590	M	Tm	<	0.000590			
M	Cr	< 0.021000	O	Li	<	0.000130	M	Rh	<	0.000590	M	U	<	0.000590			
M	Cs	< 0.002400	M	Lu	<	0.000590	M	Ru	<	0.007100	O	V	<	0.000880			
M	Cu	0.189369	O	Mg	0.001893	n	S	<		M	W	<	0.000590				
M	Dy	< 0.000590	M	Mn	<	0.001800	M	Sb	<	0.003600	M	Y	<	0.000590			
M	Er	< 0.000590	M	Mo	<	0.002400	O	Sc	<	0.001600	M	Yb	<	0.000590			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.93 +2 6 $Co(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Co Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 59 amu	2 ppt	n/a	42Ca16O1H , 40Ar18O1H , 36Ar23Na, 43Ca16O, 24Mg35Cl
ICP-OES 228.616 nm	0.01/0.001 µg/mL	1	
ICP-OES 237.862 nm	0.01/0.002 µg/mL	1	W, Re, Al, Ta
ICP-OES 238.892 nm	0.01/0.002 µg/mL	1	Fe, W, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 04, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 04, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAG10
Lot Number:	S2-AG712977
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Silver
Starting Material:	Ag Shot
Starting Material Lot#:	2289
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10051 ± 30 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10051 ± 52 µg/mL**
ICP Assay NIST SRM 3151 Lot Number: 160729

Assay Method #2 **10051 ± 19 µg/mL**
Volhard NIST SRM 999c Lot Number: 999c

Assay Method #3 **10049 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

s	Ag	<		M	Eu	<	0.000260	O	Na		0.003811	M	Se	<	0.003900	O	Zn		0.048146
M	Al		0.002688	O	Fe		0.006419	M	Nb	<	0.000260	O	Si		0.005215	M	Zr	<	0.000260
M	As	<	0.001100	M	Ga	<	0.000260	M	Nd	<	0.000260	M	Sm	<	0.000260				
M	Au	<	0.000260	M	Gd	<	0.000260	O	Ni		0.001765	M	Sn		0.020060				
O	B	<	0.004300	M	Ge	<	0.002300	M	Os	<	0.001100	O	Sr	<	0.000110				
M	Ba	<	0.000520	M	Hf	<	0.000260	O	P	<	0.017000	M	Ta	<	0.000260				
O	Be	<	0.001100	M	Hg	<	0.000770	M	Pb	<	0.003600	M	Tb	<	0.000260				
M	Bi		0.004814	M	Ho	<	0.000260	M	Pd		0.044134	M	Te	<	0.009000				
O	Ca		0.005215	M	In		0.003691	M	Pr	<	0.000260	M	Th	<	0.000260				
M	Cd	<	0.000260	M	Ir	<	0.000520	M	Pt	<	0.001100	O	Ti	<	0.000440				
M	Ce	<	0.002100	O	K	<	0.008700	M	Rb	<	0.001100	M	Tl	<	0.004100				
O	Co	<	0.000330	M	La	<	0.000260	M	Re	<	0.000260	M	Tm	<	0.000260				
O	Cr	<	0.002500	O	Li	<	0.000110	M	Rh	<	0.000520	M	U	<	0.000260				
M	Cs	<	0.002600	M	Lu	<	0.000260	M	Ru	<	0.000260	M	V	<	0.000260				
O	Cu		0.357085	O	Mg		0.001203	O	S	<	0.017000	M	W	<	0.000260				
M	Dy	<	0.000260	O	Mn	<	0.000220	M	Sb	<	0.014000	M	Y	<	0.000260				
M	Er	<	0.000260	M	Mo	<	0.000260	O	Sc	<	0.000220	M	Yb	<	0.000260				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 107.87 +1 6 $Ag(H_2O)_6^+$

Chemical Compatibility -Stable in HNO_3, and HF. Avoid basic media. Ag forms more insoluble salts than any other metal. It also is subject to photochemical reduction to the metal in HCl media although 10 µg/mL solutions in 10% HCl [$AgCl_{x1-x}$] are commonly used in the analytical laboratory. The most common solubility problems exist with arsenate, arsenite , bromide, chloride, iodide, carbonate , chromate, cyanide, iodate, oxalate, oxide, sulfate, sulfide, tartrate, and thiocyanate in aqueous media. The addition of nitric acid renders many of these salts soluble.

Stability - 2-100 ppb levels stable for 75+ days when mixed with equivalent levels of all other elements including the precious metals (where chloride is present) when in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Ag Containing Samples (Preparation and Solution) -Metal (Soluble in HNO_3); Oxides (Soluble in HNO_3); Ores (Digestion with conc. HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 107 amu	1 ppt	N/A	91Zr16O
ICP-OES 243.779 nm	0.12/0.01 µg/mL	1	Mn, Th, Ni, Rh
ICP-OES 328.068 nm	0.007/0.0007 µg/mL	1	Ce, Rh, V
ICP-OES 338.289 nm	0.013/0.001 µg/mL	1	Ce, Cr, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCR(3)10
Lot Number:	S2-CR709784
Matrix:	10% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chromium
Starting Material:	Cr Metal
Starting Material Lot#:	2328
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10027 ± 41 µg/mL

Density: 1.072 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10027 ± 40 µg/mL**
ICP Assay NIST SRM 3112a Lot Number: 170630

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001700	M	Eu	<	0.003400	O	Na		0.090372	M	Se	<	0.012000	O	Zn	<	0.006100
M	Al		0.034916	O	Fe		0.246471	M	Nb	<	0.017000	n	Si	<		M	Zr	<	0.007800
M	As	<	0.028000	O	Ga	<	0.013000	M	Nd	<	0.013000	M	Sm	<	0.006900				
M	Au	<	0.001700	M	Gd	<	0.000560	M	Ni		0.016020	M	Sn		0.006983				
O	B	<	0.025000	O	Ge	<	0.014000	M	Os	<	0.000560	M	Sr		0.006367				
M	Ba	<	0.008900	M	Hf	<	0.000560	i	P	<		M	Ta	<	0.000560				
M	Be	<	0.013000	M	Hg	<	0.001700	M	Pb		0.010064	M	Tb	<	0.000560				
M	Bi	<	0.002300	M	Ho	<	0.000560	M	Pd	<	0.021000	M	Te	<	0.010000				
O	Ca		0.075995	M	In	<	0.000560	M	Pr	<	0.001700	M	Th	<	0.000560				
M	Cd	<	0.000560	M	Ir	<	0.000560	M	Pt	<	0.001200	O	Ti		0.013555				
M	Ce	<	0.001200	O	K		0.043132	i	Rb	<		M	Tl	<	0.000560				
M	Co	<	0.002600	M	La	<	0.001200	M	Re	<	0.001200	O	Tm	<	0.013000				
s	Cr	<		O	Li		0.000390	M	Rh	<	0.095000	M	U	<	0.000560				
M	Cs	<	0.007800	M	Lu	<	0.000560	M	Ru	<	0.087000	O	V		0.014993				
O	Cu		0.007599	O	Mg		0.000883	i	S	<		M	W	<	0.049000				
M	Dy	<	0.000560	M	Mn		0.008626	M	Sb	<	0.003400	M	Y	<	0.001700				
M	Er	<	0.019000	M	Mo	<	0.032000	M	Sc		0.003080	M	Yb	<	0.000560				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 52.00 +3 6 $Cr(H_2O)_6^{3+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cr3 Containing Samples (Preparation and Solution) -Metal (soluble in HCl); Oxides/Ores (Chrome ore/oxides are very difficult to dissolve. The following procedures [A-D] are commonly used: A. Fusion with $KHSO_4$ and extraction with hot KCl. The residue fused with Na_2CO_3 and $KClO_3$, 3:1. B. Fusion with $NaKSO_4$ and NaF 2:1, C. Fusion with magnesia or lime and sodium or potassium carbonates, 4:1. D. Fusion with Na_2O_2 or NaOH and KNO_3 or NaOH and Na_2O_2. Nickel, iron, copper, or silver crucibles should be used for D. Platinum may be used for A, <, C); Organic Matrices (ash at 4500C followed by one of the fusion methods above or sulfuric/hydrogen peroxide acid digestions may be applicable to non oxide containing samples).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 52 amu	40 ppt	N/A	36S16O, 36Ar16O - The 50Cr, 53Cr, 54Cr lines suffer from many more potential interferences from sulfur, chlorine and argon compounds of oxygen, nitrogen and carbon.
ICP-OES 205.552 nm	0.006/0.0008 µg/mL	1	Os
ICP-OES 276.654 nm	0.01/0.001 µg/mL	1	Cu, Ta, V
ICP-OES 284.325 nm	0.008/0.0007 µg/mL	1	

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 26, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **October 26, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNI10
Lot Number:	P2-NI686384
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Nickel
Starting Material:	Ni Metal
Starting Material Lot#:	2277 and 2282
Starting Material Purity:	99.9992%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9979 ± 30 µg/mL

Density: 1.038 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9971 ± 54 µg/mL**
ICP Assay NIST SRM 3136 Lot Number: 120619

Assay Method #2 **9970 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **9993 ± 33 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.002606	M	Eu	<	0.001100	O	Na		0.004965	O	Se	<	0.067000	M	Zn		0.006578
M	Al	<	0.013000	O	Fe		0.018618	M	Nb	<	0.001100	O	Si		0.010923	M	Zr	<	0.001100
O	As	<	0.067000	M	Ga	<	0.001100	M	Nd	<	0.001100	M	Sm	<	0.001100				
M	Au	<	0.002100	M	Gd	<	0.001100	s	Ni	<		M	Sn	<	0.016000				
M	B	<	0.017000	M	Ge	<	0.004200	M	Os		0.002110	O	Sr	<	0.000940				
M	Ba	<	0.001100	M	Hf	<	0.001100	i	P	<		M	Ta	<	0.001100				
O	Be	<	0.000410	M	Hg		0.014895	M	Pb		0.006578	M	Tb	<	0.001100				
M	Bi	<	0.004200	M	Ho	<	0.001100	M	Pd	<	0.001100	M	Te	<	0.015000				
O	Ca		0.003351	M	In	<	0.001100	M	Pr	<	0.001100	M	Th	<	0.001100				
M	Cd		0.001365	M	Ir		0.004716	M	Pt	<	0.001100	M	Ti	<	0.004200				
M	Ce	<	0.001100	O	K		0.004716	M	Rb	<	0.001100	M	Tl	<	0.001100				
O	Co		0.017377	M	La	<	0.001100	M	Re		0.001737	M	Tm	<	0.001100				
O	Cr	<	0.006700	O	Li	<	0.000140	M	Rh	<	0.006300	M	U	<	0.001100				
M	Cs	<	0.007300	M	Lu	<	0.001100	M	Ru	<	0.019000	M	V	<	0.002100				
M	Cu		0.004096	O	Mg		0.000372	i	S	<		M	W	<	0.006300				
M	Dy	<	0.001100	O	Mn	<	0.001900	M	Sb		0.005833	O	Y	<	0.000540				
M	Er	<	0.001100	M	Mo	<	0.008400	M	Sc	<	0.002100	M	Yb	<	0.001100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.69 +2 6 Ni(H2O)62+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Ni Containing Samples (Preparation and Solution) -Metal (Soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 60 amu	100 ppt	n/a	43Ca16O1H , 44Ca16O, 23Na37Cl
ICP-OES 221.647 nm	0.01 / 0.0009 µg/mL	1	Si
ICP-OES 231.604 nm	0.02 / 0.002 µg/mL	1	Sb, Ta, Co
ICP-OES 232.003 nm	0.02 / 0.006 µg/mL	1	Cr, Re, Os, Nb, Ag, Pt, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGV10
Lot Number:	S2-V711005
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Vanadium
Starting Material:	Vanadium Pentoxide
Starting Material Lot#:	1782
Starting Material Purity:	99.9877%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10014 ± 30 µg/mL

Density: 1.104 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10017 ± 42 µg/mL**
ICP Assay NIST SRM 3165 Lot Number: 160906

Assay Method #2 **10013 ± 30 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000110	M	Eu	<	0.000110	O	Na		0.120000	M	Se	<	0.009400	M	Zn		0.009400
O	Al		0.120000	O	Fe		0.460000	M	Nb	<	0.001300	O	Si		0.270000	M	Zr	<	0.002900
M	As	<	0.000210	M	Ga	<	0.009300	M	Nd	<	0.000610	M	Sm	<	0.000110				
M	Au	<	0.004700	M	Gd	<	0.000110	M	Ni		0.012000	M	Sn		0.003900				
M	B		0.051000	M	Ge	<	0.000410	M	Os	<	0.000110	O	Sr		0.007100				
M	Ba		0.003600	M	Hf	<	0.000110	O	P	<	0.034000	M	Ta	<	0.000110				
O	Be	<	0.000560	M	Hg	<	0.000410	M	Pb		0.001400	M	Tb	<	0.000110				
M	Bi	<	0.000210	M	Ho	<	0.000110	M	Pd	<	0.000410	M	Te	<	0.000110				
O	Ca		0.730000	M	In	<	0.000110	M	Pr	<	0.000110	M	Th	<	0.000210				
M	Cd	<	0.000610	M	Ir	<	0.000110	M	Pt	<	0.000110	M	Ti		0.017000				
M	Ce	<	0.000610	M	K		0.052000	M	Rb	<	0.000310	M	Tl	<	0.000110				
M	Co	<	0.001300	M	La	<	0.000410	M	Re		0.001700	M	Tm	<	0.000110				
O	Cr		0.170000	M	Li	<	0.000810	M	Rh	<	0.000110	M	U	<	0.000410				
M	Cs		0.005600	M	Lu	<	0.000110	M	Ru	<	0.000110	s	V	<					
M	Cu	<	0.001300	M	Mg		0.053000	i	S	<		M	W		0.002000				
M	Dy	<	0.000110	M	Mn		0.007900	M	Sb		0.078000	M	Y	<	0.000110				
M	Er	<	0.000110	M	Mo		0.094000	M	Sc	<	0.000410	M	Yb	<	0.000110				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 50.94 +5 6 $H_2V_{10}O_{28}^{4-}$

Chemical Compatibility -Soluble in HCl, HNO_3, H_2SO_4, HF, H_3PO_4 and strong basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

V Containing Samples (Preparation and Solution) -Metal (Fusion with NaOH or KOH in Ni0 or Na_2CO_3 / KNO_3); Oxides (V_2O_3 - use HCl, V_2O_4 - use HCl or HNO_3, V_2O_5 - use concentrated acids); Ores (Na_2CO_3 / KNO_3 in Pt0 caution - nitrates attack Pto followed by water extraction of fuseate); Organic Matrices (Ash at 450 EC followed by dissolving according to V_2O_5 above) .

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 51 amu	4 ppt	N/A	34S16O1H, 35Cl16O, 38Ar13C, 36Ar15N, 36Ar14N1H, 37Cl14N,36S15N, 33S18O, 34S17O, 102Ru+2,02Pd+2
ICP-OES 290.882 nm	0.008 / 0.0008 µg/mL	1	Hf, Nb
ICP-OES 292.402 nm	0.006 / 0.001 µg/mL	1	Th
ICP-OES 309.311 nm	0.005 / 0.001 µg/mL	1	Mg, U, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

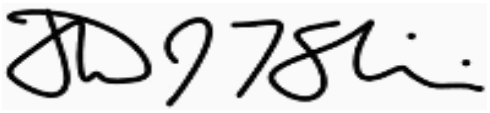
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAL10
Lot Number:	T2-AL716102
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Aluminum
Starting Material:	Aluminum Nitrate Nonahydrate
Starting Material Lot#:	2460
Starting Material Purity:	99.9938%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10049 ± 31 µg/mL

Density: 1.087 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10059 ± 40 µg/mL**
ICP Assay NIST SRM 3101a Lot Number: 140903

Assay Method #2 **10044 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10049 ± 35 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002100	M	Eu	<	0.002100	O	Na		0.352819	M	Se	<	0.005200	M	Zn	0.006018
s	Al	<		O	Fe		0.074714	M	Nb	<	0.000520	O	Si		0.017848	O	Zr	0.004358
M	As		0.008716	O	Ga		0.112072	M	Nd	<	0.000520	M	Sm	<	0.000520			
M	Au	<	0.008400	M	Gd	<	0.001100	O	Ni	<	0.006000	M	Sn		0.000747			
O	B	<	0.014000	M	Ge	<	0.005200	M	Os	<	0.000650	O	Sr		0.000518			
O	Ba		0.012867	M	Hf	<	0.004100	n	P	<		M	Ta	<	0.000520			
O	Be	<	0.000270	M	Hg	<	0.002000	M	Pb		0.002282	M	Tb	<	0.000520			
M	Bi		0.001930	M	Ho	<	0.000520	M	Pd	<	0.000520	M	Te	<	0.001100			
O	Ca		0.076790	M	In	<	0.002100	M	Pr	<	0.000520	M	Th	<	0.000520			
M	Cd	<	0.000520	M	Ir	<	0.000650	M	Pt	<	0.000520	O	Ti		0.001930			
M	Ce	<	0.001100	O	K		0.043583	M	Rb	<	0.000520	M	Tl	<	0.000520			
O	Co	<	0.005400	M	La	<	0.002100	M	Re	<	0.000520	M	Tm	<	0.000520			
O	Cr		0.006018	O	Li		0.000112	M	Rh	<	0.000520	M	U	<	0.000520			
M	Cs		0.000643	M	Lu	<	0.000520	M	Ru	<	0.002000	M	V		0.001286			
O	Cu	<	0.008300	O	Mg		0.068488	i	S	<		M	W	<	0.009800			
M	Dy	<	0.002100	O	Mn		0.000913	M	Sb	<	0.003100	M	Y	<	0.001100			
M	Er	<	0.000520	M	Mo		0.005396	O	Sc	<	0.000950	M	Yb	<	0.000520			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 26.98 +3 6 Al(H2O)6+3
Chemical Compatibility -Soluble in HCl, HNO3, v F and v 2SO4. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)4(H2O)21- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Al Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); a- Al2O3 (Na2CO3 fusion in Pt0);
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 22, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 22, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

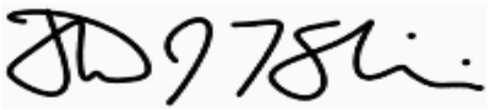
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGK10
Lot Number:	S2-K711973
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Potassium
Starting Material:	KNO3
Starting Material Lot#:	2313
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.024 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9987 ± 24 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **10004 ± 84 µg/mL**
ICP Assay NIST SRM 3141a Lot Number: 140813

Assay Method #3 **10007 ± 45 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001400	M	Eu	<	0.000660	O	Na		0.246220	M	Se	<	0.007900	O	Zn	0.018056
O	Al		0.001592	O	Fe		0.005909	M	Nb	<	0.000660	O	Si		0.011490	O	Zr	< 0.001600
M	As	<	0.005300	M	Ga	<	0.000660	M	Nd	<	0.000660	M	Sm	<	0.000660			
M	Au	<	0.002000	M	Gd	<	0.000660	O	Ni	<	0.004900	M	Sn	<	0.000660			
O	B	<	0.005600	M	Ge	<	0.002000	M	Os	<	0.003300	O	Sr		0.000055			
O	Ba	<	0.000860	M	Hf	<	0.000660	O	P	<	0.032000	M	Ta	<	0.000660			
O	Be	<	0.000082	M	Hg	<	0.002000	M	Pb	<	0.002300	M	Tb	<	0.000660			
M	Bi	<	0.006600	M	Ho	<	0.000660	M	Pd	<	0.000660	M	Te	<	0.017000			
O	Ca		0.031187	M	In	<	0.000660	M	Pr	<	0.000660	M	Th	<	0.000660			
O	Cd	<	0.000450	M	Ir	<	0.000660	M	Pt	<	0.002700	M	Ti	<	0.000660			
M	Ce	<	0.000660	s	K	<		M	Rb		0.476026	M	Tl	<	0.000660			
O	Co	<	0.000780	M	La	<	0.000660	M	Re	<	0.000660	M	Tm	<	0.000660			
O	Cr		0.000541	O	Li	<	0.000084	M	Rh	<	0.000660	M	U	<	0.000660			
M	Cs	<	0.000660	M	Lu	<	0.000660	M	Ru	<	0.000660	O	V	<	0.001100			
M	Cu	<	0.002700	O	Mg		0.006237	O	S		0.027905	M	W	<	0.000660			
M	Dy	<	0.000660	O	Mn		0.000476	M	Sb	<	0.000660	M	Y	<	0.000660			
M	Er	<	0.000660	M	Mo	<	0.000660	O	Sc	<	0.000340	O	Yb	<	0.000270			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 39.10 +1 (6) K+(aq)
Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Avoid use of HClO4 due to insolubility of the perchlorate. Stable with all metals and inorganic anions except ClO4-.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
K Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Sodium carbonate fusion in Pt0 followed by HCl dissolution-blank levels of K in sodium carbonate critical); Organic Matrices (Sulfuric/peroxide digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 39 amu	10 ppt	n/a	38ArH, 23Na16O, 78Se
ICP-OES 404.721 nm	1.1 / 0.05 µg/mL	1	U, Ce
ICP-OES 766.490 nm	0.4 / 0.001 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 771.531 nm	1.0 / 0.03 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 10, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 10, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

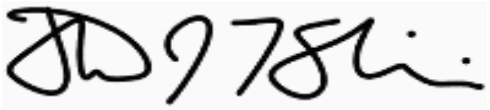
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMG10
Lot Number:	S2-MG704239
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Magnesium
Starting Material:	Magnesium Metal
Starting Material Lot#:	2168
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10053 ± 30 µg/mL

Density: 1.053 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10022 ± 62 µg/mL**
ICP Assay NIST SRM 3131a Lot Number: 140110

Assay Method #2 **10078 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10033 ± 26 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.002106	M	Eu	<	0.000910	O	Na		0.071075	O	Se	<	0.048000	O	Zn		0.003299
M	Al		0.003553	M	Fe		0.002538	M	Nb	<	0.000460	O	Si	<	0.032000	O	Zr	<	0.002700
M	As	<	0.001400	M	Ga	<	0.000460	M	Nd	<	0.000910	M	Sm	<	0.000460				
M	Au	<	0.001400	M	Gd	<	0.000460	O	Ni	<	0.001600	M	Sn	<	0.002300				
O	B		0.006853	M	Ge	<	0.001400	M	Os	<	0.000460	O	Sr		0.000279				
O	Ba		0.000964	M	Hf	<	0.000460	O	P		0.015230	M	Ta	<	0.000460				
O	Be	<	0.000120	M	Hg	<	0.000460	M	Pb	<	0.000460	M	Tb	<	0.000460				
M	Bi	<	0.000460	M	Ho	<	0.000460	M	Pd	<	0.003200	M	Te	<	0.007300				
O	Ca		0.053306	M	In	<	0.000460	M	Pr	<	0.000460	M	Th	<	0.000460				
O	Cd	<	0.000360	M	Ir	<	0.000460	M	Pt	<	0.001900	O	Ti	<	0.001700				
M	Ce	<	0.002300	M	K		0.048229	M	Rb		0.002411	M	Tl		0.003046				
M	Co	<	0.000910	M	La	<	0.002800	M	Re	<	0.000460	M	Tm	<	0.000460				
M	Cr	<	0.002300	O	Li		0.027922	M	Rh	<	0.000460	M	U	<	0.000460				
M	Cs		0.001040	M	Lu	<	0.000460	M	Ru	<	0.000460	M	V	<	0.000460				
O	Cu	<	0.003000	s	Mg	<		O	S	<	0.190000	M	W	<	0.000460				
M	Dy	<	0.000460	O	Mn		0.015230	M	Sb		0.020814	O	Y	<	0.000720				
M	Er	<	0.000460	M	Mo	<	0.000910	O	Sc	<	0.000480	M	Yb	<	0.000460				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 24.31 +2 6 $Mg(H_2O)_6^{+2}$

Chemical Compatibility -Soluble in HCl, HNO_3, and H_2SO_4 avoid HF, H_3PO_4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicates, carbonates, hydroxides, oxides, and tungstates in neutral and slightly acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO_3 / LDPE container.

Mg Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO_3); Oxide (Readily soluble in above compatible aqueous acidic solutions); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition, or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 24 amu	42 ppt	n/a	7Li17O, 48Ti+2 , 48Ca+2
ICP-OES 279.553 nm	0.0002 / 0.00003 µg/mL	1	Th
ICP-OES 280.270 nm	0.0003 / 0.00005 µg/mL	1	U, V
ICP-OES 285.213 nm	0.002 / 0.00003 µg/mL	1	U, Hf, Cr, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 23, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 23, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCA10
Lot Number:	T2-CA716103
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Calcium
Starting Material:	CaCO3
Starting Material Lot#:	2472
Starting Material Purity:	99.9950%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10005 ± 30 µg/mL

Density: 1.039 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**10005 ± 45 µg/mL** ICP Assay NIST SRM 3109a Lot Number: 130213
Assay Method #2	**10005 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10005 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001200	M	Eu	<	0.001200	O	Na		0.006112	M	Se	<	0.024000	M	Zn		0.005362
M	Al		0.065419	O	Fe		0.009115	M	Nb	<	0.001200	O	Si		0.139417	O	Zr	<	0.006700
O	As	<	0.013000	M	Ga	<	0.015000	M	Nd	<	0.020000	M	Sm	<	0.001200				
M	Au	<	0.017000	M	Gd	<	0.004800	O	Ni		0.000793	M	Sn	<	0.003600				
O	B		0.001179	M	Ge	<	0.003600	M	Os	<	0.001200	M	Sr		0.081505				
O	Ba		0.002788	M	Hf	<	0.001200	O	P	<	0.041000	M	Ta	<	0.001200				
O	Be	<	0.000410	M	Hg	<	0.004800	M	Pb		0.001608	M	Tb	<	0.001200				
M	Bi		0.001608	M	Ho	<	0.001200	M	Pd	<	0.001200	M	Te	<	0.003600				
s	Ca	<		M	In	<	0.001200	M	Pr		0.000257	M	Th	<	0.001200				
O	Cd	<	0.001300	M	Ir	<	0.001200	M	Pt	<	0.003600	O	Ti	<	0.001900				
M	Ce		0.001029	O	K		0.009759	M	Rb	<	0.001200	M	Tl	<	0.001200				
O	Co		0.000418	M	La		0.001823	M	Re	<	0.001200	M	Tm	<	0.001200				
O	Cr		0.003324	O	Li	<	0.007300	M	Rh	<	0.001200	M	U		0.002144				
M	Cs		0.007399	M	Lu		0.000128	M	Ru	<	0.001200	M	V		0.001286				
O	Cu	<	0.011000	M	Mg		1.286934	O	S		0.055767	O	W	<	0.024000				
M	Dy	<	0.002400	O	Mn		0.004611	M	Sb	<	0.009600	O	Y		0.000536				
M	Er	<	0.002400	M	Mo		0.003539	O	Sc	<	0.001400	M	Yb	<	0.001200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 40.08 +2 6 Ca(H2O)6+2
Chemical Compatibility - Soluble in HCl and HNO3. Avoid H2SO4, vF, v3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.
Ca Containing Samples)Preparation and Solution) -Metal (best dissolved in diluted HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (dry ash and dissolution in dilute HCl. Do not heat when dissolving to avoid precipitation of SiO2). The oxide, hydroxide, carbonate, phosphate, and fluoride of calcium are soluble in % levels of HCl or HNO3. The sulfates (gypsum, anhydrite, etc.), certain silicates, and complex compounds require fusion with Na2CO3 followed by HCl / water dissolution. Note that contamination is a very real problem when analyzing for trace levels.
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 44 amu	1200 ppt	n/a	16O212C, 28Si16O, 88Sr
ICP-OES 393.366 nm	0.0002 / 0.00004 µg/mL	1	U, Ce
ICP-OES 396.847 nm	0.0005 / 0.00006 µg/mL	1	Th
ICP-OES 422.673 nm	0.01 / 0.001 µg/mL	1	Ge

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 14, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 14, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

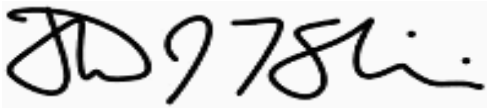
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNA10
Lot Number:	T2-NA717221
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Sodium
Starting Material:	Na2CO3
Starting Material Lot#:	2358 and 2453
Starting Material Purity:	99.9977%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9977 ± 30 µg/mL

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9974 ± 18 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **9977 ± 34 µg/mL**
ICP Assay NIST SRM 3152a Lot Number: 200413

Assay Method #3 **9987 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000930	M	Eu	<	0.000930	s	Na	<		M	Se	<	0.003800	O	Zn	0.000138
M	Al		0.004409	O	Fe		0.002393	M	Nb	<	0.000930	O	Si		0.056696	O	Zr	< 0.003200
O	As	<	0.023000	M	Ga	<	0.000930	M	Nd	<	0.000930	M	Sm	<	0.000930			
O	Au	<	0.004100	M	Gd	<	0.000930	O	Ni	<	0.003000	M	Sn	<	0.002800			
O	B		0.001385	M	Ge	<	0.004700	M	Os	<	0.000930	O	Sr		0.000251			
M	Ba		0.004031	M	Hf	<	0.000930	O	P		0.010205	M	Ta	<	0.000930			
O	Be	<	0.000130	M	Hg	<	0.000930	M	Pb	<	0.000930	M	Tb	<	0.000930			
M	Bi	<	0.000930	M	Ho	<	0.000930	M	Pd	<	0.000930	M	Te	<	0.001900			
O	Ca		0.176388	M	In	<	0.000930	M	Pr	<	0.000930	M	Th		0.000352			
O	Cd	<	0.000860	M	Ir	<	0.000930	M	Pt	<	0.000930	O	Ti		0.000592			
M	Ce	<	0.001900	O	K		0.302380	M	Rb	<	0.000930	M	Tl	<	0.000930			
O	Co	<	0.001800	O	La	<	0.002100	M	Re	<	0.000930	M	Tm	<	0.000930			
M	Cr	<	0.002800	O	Li		0.000031	M	Rh	<	0.000930	M	U	<	0.000930			
M	Cs	<	0.000930	M	Lu	<	0.000930	M	Ru	<	0.001900	O	V	<	0.001600			
O	Cu	<	0.003900	O	Mg		0.026458	O	S		0.040317	O	W	<	0.028000			
M	Dy	<	0.000930	O	Mn	<	0.000740	M	Sb	<	0.000930	O	Y	<	0.000860			
M	Er	<	0.000930	O	Mo	<	0.003600	O	Sc	<	0.000610	O	Yb	<	0.000250			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 22.99 +1 (6) Na+(aq) largely ionic in nature

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Na Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 23 amu	310 ppt	n/a	46Ti+2 , 46Ca+2
ICP-OES 330.237 nm	2.0 / 0.09 µg/mL	1	Pd, Zn
ICP-OES 588.995 nm	0.03 / 0.006 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 589.595 nm	0.07 / 0.00009 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 20, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 20, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

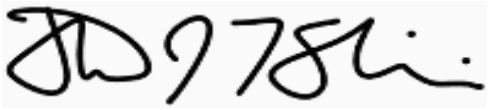
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGU1
Lot Number:	S2-U707914
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Uranium
Starting Material:	Uranyl Nitrate Hexahydrate
Starting Material Lot#:	P2-2322
Starting Material Purity:	99.9997%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 5 µg/mL

Density: 1.010 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **998 ± 5 µg/mL**
ICP Assay NIST SRM 3164 Lot Number: 080521

Assay Method #2 **1001 ± 6 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000270	M	Eu	<	0.000270	M	Na	<	0.011000	M	Se	<	0.009300	M	Zn	0.002358
M	Al	<	0.011000	M	Fe		0.003222	M	Nb	<	0.000270	M	Si	<	0.160000	M	Zr	< 0.001100
M	As	<	0.002400	M	Ga	<	0.000270	M	Nd	<	0.000270	M	Sm	<	0.000270			
M	Au	<	0.000270	M	Gd	<	0.000270	M	Ni	<	0.020000	M	Sn	<	0.011000			
M	B	<	0.000270	M	Ge	<	0.000800	M	Os	<	0.001900	M	Sr	<	0.000270			
M	Ba	<	0.003800	M	Hf	<	0.000270	i	P	<		M	Ta	<	0.000270			
M	Be	<	0.000270	M	Hg	<	0.000540	M	Pb	<	0.002200	M	Tb	<	0.000270			
M	Bi	<	0.000270	M	Ho	<	0.000270	M	Pd	<	0.000540	M	Te	<	0.003800			
M	Ca	<	0.140000	M	In	<	0.000270	M	Pr	<	0.000270	M	Th		0.000129			
M	Cd	<	0.000270	M	Ir	<	0.000270	M	Pt	<	0.000270	M	Ti	<	0.002700			
M	Ce	<	0.000540	O	K	<	0.250000	M	Rb	<	0.000800	M	Tl	<	0.000270			
M	Co	<	0.000800	M	La		0.000117	M	Re	<	0.064000	M	Tm	<	0.000270			
M	Cr		0.000943	M	Li	<	0.003000	M	Rh	<	0.000270	s	U	<				
M	Cs		0.000106	M	Lu	<	0.000270	M	Ru	<	0.000540	M	V	<	0.000540			
M	Cu	<	0.001100	M	Mg	<	0.003000	i	S	<		M	W	<	0.000540			
M	Dy	<	0.000270	M	Mn	<	0.006900	M	Sb	<	0.000270	M	Y	<	0.000270			
M	Er	<	0.000270	M	Mo	<	0.006400	M	Sc	<	0.000540	M	Yb	<	0.000270			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 238.03 +6 8 UO22+(uranyl)
Chemical Compatibility - Soluble in HCl and HNO3. Avoid H3PO4. H2SO4 and HF matrices should not be a problem depending upon [U]. Although the UO22+ ion is distinctly basic, any U+4 will precipitate in basic media. UO22+salts are generally soluble in water and UO22+ is stable with most metals and inorganic anions. The uranyl phosphate is insoluble in water. UF4 and UF6 are water soluble.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
U Containing Samples (Preparation and Solution) -Metal (Dissolves rapidly in HCl and HNO3); Oxide (Soluble in HNO3); Ores (Digest for 1-2 hours with 1 gram of ore to 30 mL 1:1 HNO3. Silica insolubles are removed by filtration after bringing the sample to fumes with conc. H2SO4.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 238 amu	2 ppt	N/A	206Pb16O2
ICP-OES 263.553 nm	0.3 / 0.01 µg/mL	1	Ce, Ir, Th, Rh, W, Zr, Ta, Ti, V, Hf, Fe, Re, Ru
ICP-OES 367.007 nm	0.3 / 0.02 µg/mL	1	Th, Ce
ICP-OES 385.958 nm	0.3 / 0.01 µg/mL	1	Th, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-2
Lot Number:	T2-MEB719895
Matrix:	3% (v/v) HNO3 tr. HF
Value / Analyte(s):	2.5 µg/mL ea: Molybdenum, Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**2.499 ± 0.015 µg/mL**	**Molybdenum, Mo**	**2.500 ± 0.017 µg/mL**

Density: 1.014 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

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u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

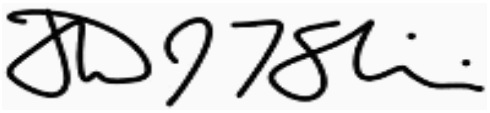
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-3
Lot Number:	T2-MEB719896
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	250 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

4 µg/mL ea:
Selenium,

2.5 µg/mL ea:

Thorium,	Thallium,
Uranium,	Vanadium,
Zinc,	Manganese,
Cadmium,	Cobalt,
Chromium,	Copper,
Arsenic,	Barium,
Beryllium,	Nickel,
Lead,	Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	250.0 ± 0.9 µg/mL	Arsenic, As	2.500 ± 0.018 µg/mL
Barium, Ba	2.501 ± 0.013 µg/mL	Beryllium, Be	2.501 ± 0.015 µg/mL
Cadmium, Cd	2.501 ± 0.013 µg/mL	Calcium, Ca	250.0 ± 1.3 µg/mL
Chromium, Cr	2.500 ± 0.015 µg/mL	Cobalt, Co	2.500 ± 0.014 µg/mL
Copper, Cu	2.500 ± 0.014 µg/mL	Iron, Fe	250.0 ± 1.0 µg/mL
Lead, Pb	2.500 ± 0.013 µg/mL	Magnesium, Mg	250.0 ± 1.3 µg/mL
Manganese, Mn	2.500 ± 0.014 µg/mL	Nickel, Ni	2.500 ± 0.014 µg/mL
Potassium, K	250.0 ± 1.2 µg/mL	Selenium, Se	4.002 ± 0.024 µg/mL
Silver, Ag	2.501 ± 0.017 µg/mL	Sodium, Na	250.0 ± 1.2 µg/mL
Thallium, Tl	2.500 ± 0.017 µg/mL	Thorium, Th	2.499 ± 0.013 µg/mL
Uranium, U	2.501 ± 0.015 µg/mL	Vanadium, V	2.500 ± 0.014 µg/mL
Zinc, Zn	2.500 ± 0.014 µg/mL		

Density: 1.042 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Calculated		See Sec. 4.2
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Mn	Calculated		See Sec. 4.2
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2

V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

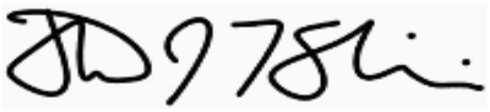
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-6020ICS-0A10
Lot Number:	T2-MEB719898
Matrix:	1.4% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Chloride,
	200 µg/mL ea: Carbon,
	100 µg/mL ea: Calcium, Aluminum, Iron, Potassium, Magnesium, Sodium, Phosphorus, Sulfur,
	2 µg/mL ea: Titanium, Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**100.0 ± 0.4 µg/mL**	**Calcium, Ca**	**100.0 ± 0.5 µg/mL**
Carbon, C	**200.1 ± 0.5 µg/mL**	**Chloride, Cl**	**1 000 ± 5 µg/mL**
Iron, Fe	**100.0 ± 0.5 µg/mL**	**Magnesium, Mg**	**100.0 ± 0.5 µg/mL**
Molybdenum, Mo	**2.001 ± 0.014 µg/mL**	**Phosphorus, P**	**100.0 ± 0.6 µg/mL**
Potassium, K	**100.0 ± 0.5 µg/mL**	**Sodium, Na**	**100.0 ± 0.5 µg/mL**
Sulfur, S	**100.0 ± 0.5 µg/mL**	**Titanium, Ti**	**2.001 ± 0.015 µg/mL**

Density: 1.009 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cl	Acidimetric	84L	84L
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 07, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 07, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

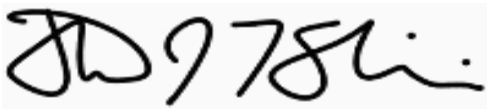
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-IT1088

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-01 D	SDG:	23A0207
Sampled:	01/11/23 08:22	Prepared:	01/13/23 15:06	File ID:	
% Solids:	75.12	Preparation:	No Prep Wet Chem	Analyzed:	01/13/23 15:08
Batch:	BLA0349	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	75.12	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-IT1089

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-02 D	SDG:	23A0207
Sampled:	01/11/23 08:42	Prepared:	01/13/23 15:06	File ID:	
% Solids:	78.98	Preparation:	No Prep Wet Chem	Analyzed:	01/13/23 15:08
Batch:	BLA0349	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	78.98	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-IT1079

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-03 D	SDG:	23A0207
Sampled:	01/11/23 09:04	Prepared:	01/13/23 15:06	File ID:	
% Solids:	80.04	Preparation:	No Prep Wet Chem	Analyzed:	01/13/23 15:08
Batch:	BLA0349	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	80.04	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-IT1080

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-04 D	SDG:	23A0207
Sampled:	01/11/23 09:24	Prepared:	01/13/23 15:06	File ID:	
% Solids:	73.44	Preparation:	No Prep Wet Chem	Analyzed:	01/13/23 15:08
Batch:	BLA0349	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	73.44	1	0.04	0.04	

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LDW23-IT1080-FD

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-05 D	SDG:	23A0207
Sampled:	01/11/23 09:24	Prepared:	01/13/23 15:06	File ID:	
% Solids:	73.50	Preparation:	No Prep Wet Chem	Analyzed:	01/13/23 15:08
Batch:	BLA0349	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	73.50	1	0.04	0.04	

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LDW23-IT1072

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-06 D	SDG:	23A0207
Sampled:	01/11/23 09:41	Prepared:	01/13/23 15:06	File ID:	
% Solids:	77.31	Preparation:	No Prep Wet Chem	Analyzed:	01/13/23 15:08
Batch:	BLA0349	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	77.31	1	0.04	0.04	

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LDW23-IT1081

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-07 D	SDG:	23A0207
Sampled:	01/11/23 10:15	Prepared:	01/13/23 15:06	File ID:	
% Solids:	80.18	Preparation:	No Prep Wet Chem	Analyzed:	01/13/23 15:08
Batch:	BLA0349	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	80.18	1	0.04	0.04	

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LDW23-IT1068

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-08 D	SDG:	23A0207
Sampled:	01/11/23 10:45	Prepared:	01/13/23 15:06	File ID:	
% Solids:	71.12	Preparation:	No Prep Wet Chem	Analyzed:	01/13/23 15:08
Batch:	BLA0349	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	71.12	1	0.04	0.04	

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LDW23-IT1062

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-09 D	SDG:	23A0207
Sampled:	01/11/23 11:03	Prepared:	01/13/23 15:06	File ID:	
% Solids:	75.58	Preparation:	No Prep Wet Chem	Analyzed:	01/13/23 15:08
Batch:	BLA0349	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	75.58	1	0.04	0.04	

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LDW23-IT1097

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-10 D	SDG:	23A0207
Sampled:	01/11/23 11:32	Prepared:	01/13/23 15:06	File ID:	
% Solids:	72.64	Preparation:	No Prep Wet Chem	Analyzed:	01/13/23 15:08
Batch:	BLA0349	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	72.64	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
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LDW23-SC1085

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-11 C	SDG:	23A0207
Sampled:	01/11/23 12:34	Prepared:	01/13/23 15:06	File ID:	
% Solids:	48.36	Preparation:	No Prep Wet Chem	Analyzed:	01/13/23 15:08
Batch:	BLA0349	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	48.36	1	0.04	0.04	

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INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SC1069

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-12 C	SDG:	23A0207
Sampled:	01/11/23 13:22	Prepared:	01/13/23 15:06	File ID:	
% Solids:	76.75	Preparation:	No Prep Wet Chem	Analyzed:	01/13/23 15:08
Batch:	BLA0349	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	76.75	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SC1058

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-13 C	SDG:	23A0207
Sampled:	01/11/23 13:09	Prepared:	01/13/23 15:06	File ID:	
% Solids:	50.95	Preparation:	No Prep Wet Chem	Analyzed:	01/13/23 15:08
Batch:	BLA0349	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	50.95	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SC1073

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-14 C	SDG:	23A0207
Sampled:	01/11/23 13:37	Prepared:	01/13/23 15:06	File ID:	
% Solids:	72.22	Preparation:	No Prep Wet Chem	Analyzed:	01/13/23 15:08
Batch:	BLA0349	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	72.22	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-IT1078

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-15 D	SDG:	23A0207
Sampled:	01/11/23 14:13	Prepared:	01/13/23 15:06	File ID:	
% Solids:	78.03	Preparation:	No Prep Wet Chem	Analyzed:	01/13/23 15:08
Batch:	BLA0349	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	78.03	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-IT1201

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-16 D	SDG:	23A0207
Sampled:	01/11/23 14:54	Prepared:	01/13/23 15:06	File ID:	
% Solids:	63.26	Preparation:	No Prep Wet Chem	Analyzed:	01/13/23 15:08
Batch:	BLA0349	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	63.26	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-IT1209

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-17 D	SDG:	23A0207
Sampled:	01/11/23 15:21	Prepared:	01/13/23 15:06	File ID:	
% Solids:	62.08	Preparation:	No Prep Wet Chem	Analyzed:	01/13/23 15:08
Batch:	BLA0349	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	62.08	1	0.04	0.04	

PREPARATION BATCH SUMMARY

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0349 Batch Matrix: Solid
Preparation: No Prep Wet Chem

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1088	23A0207-01		01/13/23 15:06	
LDW23-IT1089	23A0207-02		01/13/23 15:06	
LDW23-IT1079	23A0207-03		01/13/23 15:06	
LDW23-IT1080	23A0207-04		01/13/23 15:06	
LDW23-IT1080-FD	23A0207-05		01/13/23 15:06	
LDW23-IT1072	23A0207-06		01/13/23 15:06	
LDW23-IT1081	23A0207-07		01/13/23 15:06	
LDW23-IT1068	23A0207-08		01/13/23 15:06	
LDW23-IT1062	23A0207-09		01/13/23 15:06	
LDW23-IT1097	23A0207-10		01/13/23 15:06	
LDW23-SC1085	23A0207-11		01/13/23 15:06	
LDW23-SC1069	23A0207-12		01/13/23 15:06	
LDW23-SC1058	23A0207-13		01/13/23 15:06	
LDW23-SC1073	23A0207-14		01/13/23 15:06	
LDW23-IT1078	23A0207-15		01/13/23 15:06	
LDW23-IT1201	23A0207-16		01/13/23 15:06	
LDW23-IT1209	23A0207-17		01/13/23 15:06	
Blank	BLA0349-BLK1		01/13/23 15:06	
LDW23-IT1088	BLA0349-DUP1		01/13/23 15:06	
LDW23-IT1088	BLA0349-DUP2		01/13/23 15:06	

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET for Solid samples

Method: PSEP 1986, SM2540, EPA 160.1

(dry at 104 (12-24 hr) then combust at 550 (30 min))

Batch:	BLA0349
Date:	1/13/2023 15:08
Analyst:	UW

Instrumentation			
Drying Ovens:	12	**Analytical Balance:**	BAL2
Muffle Furnace:	2		

Batch drying time				**Oven Temps, °C**	
record times as mm/dd/yy hh:mm		TS (%) calculated as:		Start Temp	103
date/time in oven:	1/13/2023 16:00	Final dry wt (g) = (Dry Wt - Tare Wt)		Dry Cycle 1	105
date/time out:	1/14/2023 14:50	TS = (Final Dry Wt)/ (grams Sample-Tare)		Dry Cycle 2	
elapsed hrs =	22.8	OK		Dry Cycle 3	

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000
if ash wt > dry wt, "Chk for Err"
if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000

Balance Calibration Check

Record weights to 4 places											
	Cal Weight ID:	CV-02	CV-02	CV-02	CV-02	CV-02		CV-02	CV-02	CV-02	
	Date & Time:	1/13/23 15:10	1/13/23 15:15	1/14/23 15:10							
Cal Wt (g):	10.0000	10.0000	10.0000	10.0000							
		Cal OK!	Cal OK!	Cal OK!							

Sample ID	**Dish #**	**Tare Wt. (g)**	**Dish & Sample (g)**	**Dry Wt 104C (grams)**			**dry Wt (g)**	**TS (%)**	**Notes**	**ASH WT 550C (grams)**			**Ash Wt (g)**	**TVS**		**Notes**
				1	**2**	**3**				**1**	**2**	**3**		**(mg/kg)**	**(%)**	
BLA0349-BLK1	41	0.8468	0.0000	0.8466			-0.0002	0.02%								
23A0207-01	42	0.8327	7.7386	6.0201			5.1874	75.12%								
BLA0349-DUP1	43	0.8125	8.3601	6.4691			5.6566	74.95%	RPD=0.2							
BLA0349-DUP2	44	0.8074	7.6600	5.9335			5.1261	74.81%	RSD=0.2							
23A0207-02	45	0.8102	9.1862	7.4255			6.6153	78.98%								
23A0207-03	46	0.8224	8.7525	7.1698			6.3474	80.04%								
23A0207-04	47	0.8080	9.9145	7.4961			6.6881	73.44%								
23A0207-05	48	0.7948	9.5325	7.2167			6.4219	73.50%								
23A0207-06	49	0.8258	6.7688	5.4206			4.5948	77.31%								
23A0207-07	50	0.8109	8.0542	6.6184			5.8075	80.18%								
23A0207-08	51	0.8074	7.8144	5.7907			4.9833	71.12%								
23A0207-09	52	0.8050	9.4464	7.3366			6.5316	75.58%								
23A0207-10	53	0.8010	9.1670	6.8781			6.0771	72.64%								
23A0207-11	54	0.8036	8.2502	4.4045			3.6009	48.36%								
23A0207-12	55	0.7990	9.1917	7.2407			6.4417	76.75%								
23A0207-13	56	0.8195	7.0063	3.9715			3.1520	50.95%								
23A0207-14	57	0.8107	9.0369	6.7517			5.9410	72.22%								
23A0207-15	58	0.8068	7.5156	6.0415			5.2347	78.03%								
23A0207-16	59	0.7984	8.0120	5.3614			4.5630	63.26%								
23A0207-17	60	0.8172	9.5883	6.2626			5.4454	62.08%								

Form I

METHOD BLANK DATA SHEET

SM 2540 G-97

TotalAnalytes

Blank

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0349
Laboratory ID: BLA0349-BLK1
Prepared: 01/13/23 15:06
Matrix: Solid
Preparation: No Prep Wet Chem
Analyzed: 01/13/23 15:08
Sequence:
Calibration:
Instrument: BAL2

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	ND	1	0.04	0.04	U

DUPLICATES

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0349-DUP1
Batch: BLA0349
Lab Source ID: 23A0207-01
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW23-IT1088
% Solids: 75.12

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Solids	20	75.12	74.95	0.226	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

DUPLICATES

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0349-DUP2
Batch: BLA0349
Lab Source ID: 23A0207-01
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW23-IT1088
% Solids: 75.12

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Solids	20	75.12	74.81	0.414	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

HOLDING TIME SUMMARY

Analysis: SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-IT1088 23A0207-01	01/11/23 08:22	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	
LDW23-IT1089 23A0207-02	01/11/23 08:42	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	
LDW23-IT1079 23A0207-03	01/11/23 09:04	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	
LDW23-IT1080 23A0207-04	01/11/23 09:24	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	
LDW23-IT1080-FD 23A0207-05	01/11/23 09:24	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	
LDW23-IT1072 23A0207-06	01/11/23 09:41	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	
LDW23-IT1081 23A0207-07	01/11/23 10:15	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	
LDW23-IT1068 23A0207-08	01/11/23 10:45	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	
LDW23-IT1062 23A0207-09	01/11/23 11:03	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	
LDW23-IT1097 23A0207-10	01/11/23 11:32	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	
LDW23-SC1085 23A0207-11	01/11/23 12:34	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	
LDW23-SC1069 23A0207-12	01/11/23 13:22	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	
LDW23-SC1058 23A0207-13	01/11/23 13:09	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	
LDW23-SC1073 23A0207-14	01/11/23 13:37	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	
LDW23-IT1078 23A0207-15	01/11/23 14:13	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	
LDW23-IT1201 23A0207-16	01/11/23 14:54	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	
LDW23-IT1209 23A0207-17	01/11/23 15:21	01/11/23 16:45	01/13/23 15:06	1	180	01/13/23 15:08	2	180	
Duplicate BLA0349-DUP1	01/11/23 08:22	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	
Duplicate BLA0349-DUP2	01/11/23 08:22	01/11/23 16:45	01/13/23 15:06	2	180	01/13/23 15:08	2	180	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument:

Analyte	MDL	RL	Units
Total Solids	0.04	0.04	%

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-IT1088

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-01 D	SDG:	23A0207
Sampled:	01/11/23 08:22	Prepared:	01/13/23 09:35	File ID:	CubeData_01182023@1339-127
% Solids:	75.12	Preparation:	Plumb 1981	Analyzed:	01/17/23 12:50
Batch:	BLA0321	Sequence:	SLA0148	Initial/Final:	0.5248 g Wet / 0.5248 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.14	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-IT1089

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-02 D	SDG:	23A0207
Sampled:	01/11/23 08:42	Prepared:	01/13/23 09:35	File ID:	CubeData_01182023@1339-128
% Solids:	78.98	Preparation:	Plumb 1981	Analyzed:	01/17/23 13:20
Batch:	BLA0321	Sequence:	SLA0148	Initial/Final:	0.5051 g Wet / 0.5051 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.07	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-IT1079

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-03 D	SDG:	23A0207
Sampled:	01/11/23 09:04	Prepared:	01/13/23 09:35	File ID:	CubeData_01182023@1339-129
% Solids:	80.04	Preparation:	Plumb 1981	Analyzed:	01/17/23 13:51
Batch:	BLA0321	Sequence:	SLA0148	Initial/Final:	0.5147 g Wet / 0.5147 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.24	1	0.02	0.02	

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Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-IT1080

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-04 D	SDG:	23A0207
Sampled:	01/11/23 09:24	Prepared:	01/13/23 09:35	File ID:	CubeData_01182023@1339-130
% Solids:	73.44	Preparation:	Plumb 1981	Analyzed:	01/17/23 14:21
Batch:	BLA0321	Sequence:	SLA0148	Initial/Final:	0.5675 g Wet / 0.5675 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.49	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-IT1080-FD

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-05 D	SDG:	23A0207
Sampled:	01/11/23 09:24	Prepared:	01/13/23 09:35	File ID:	CubeData_01182023@1339-131
% Solids:	73.50	Preparation:	Plumb 1981	Analyzed:	01/17/23 14:51
Batch:	BLA0321	Sequence:	SLA0148	Initial/Final:	0.5569 g Wet / 0.5569 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.52	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-IT1072

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-06 D	SDG:	23A0207
Sampled:	01/11/23 09:41	Prepared:	01/13/23 09:35	File ID:	CubeData_01182023@1339-132
% Solids:	77.31	Preparation:	Plumb 1981	Analyzed:	01/17/23 15:21
Batch:	BLA0321	Sequence:	SLA0148	Initial/Final:	0.5933 g Wet / 0.5933 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.35	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-IT1081

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-07 D	SDG:	23A0207
Sampled:	01/11/23 10:15	Prepared:	01/13/23 09:35	File ID:	CubeData_01182023@1339-133
% Solids:	80.18	Preparation:	Plumb 1981	Analyzed:	01/17/23 15:52
Batch:	BLA0321	Sequence:	SLA0148	Initial/Final:	0.574 g Wet / 0.574 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.13	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-IT1068

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-08 D	SDG:	23A0207
Sampled:	01/11/23 10:45	Prepared:	01/13/23 09:35	File ID:	CubeData_01182023@1339-134
% Solids:	71.12	Preparation:	Plumb 1981	Analyzed:	01/17/23 16:22
Batch:	BLA0321	Sequence:	SLA0148	Initial/Final:	0.5066 g Wet / 0.5066 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.79	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-IT1062

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-09 D	SDG:	23A0207
Sampled:	01/11/23 11:03	Prepared:	01/13/23 09:35	File ID:	CubeData_01182023@1339-135
% Solids:	75.58	Preparation:	Plumb 1981	Analyzed:	01/17/23 16:52
Batch:	BLA0321	Sequence:	SLA0148	Initial/Final:	0.5195 g Wet / 0.5195 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.26	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-IT1097

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-10 D	SDG:	23A0207
Sampled:	01/11/23 11:32	Prepared:	01/13/23 09:35	File ID:	CubeData_01182023@1339-138
% Solids:	72.64	Preparation:	Plumb 1981	Analyzed:	01/17/23 18:23
Batch:	BLA0321	Sequence:	SLA0148	Initial/Final:	0.5193 g Wet / 0.5193 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.22	1	0.02	0.02	

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Form I
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EPA 9060A m

LDW23-SC1085

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-11 C	SDG:	23A0207
Sampled:	01/11/23 12:34	Prepared:	01/13/23 09:35	File ID:	CubeData_01182023@1339-139
% Solids:	48.36	Preparation:	Plumb 1981	Analyzed:	01/17/23 18:53
Batch:	BLA0321	Sequence:	SLA0148	Initial/Final:	0.5052 g Wet / 0.5052 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.53	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SC1069

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-12 C	SDG:	23A0207
Sampled:	01/11/23 13:22	Prepared:	01/13/23 09:35	File ID:	CubeData_01182023@1339-140
% Solids:	76.75	Preparation:	Plumb 1981	Analyzed:	01/17/23 19:23
Batch:	BLA0321	Sequence:	SLA0148	Initial/Final:	0.5376 g Wet / 0.5376 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.30	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SC1058

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-13 C	SDG:	23A0207
Sampled:	01/11/23 13:09	Prepared:	01/13/23 09:35	File ID:	CubeData_01182023@1339-141
% Solids:	50.95	Preparation:	Plumb 1981	Analyzed:	01/17/23 19:54
Batch:	BLA0321	Sequence:	SLA0148	Initial/Final:	0.5726 g Wet / 0.5726 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.31	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SC1073

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-14 C	SDG:	23A0207
Sampled:	01/11/23 13:37	Prepared:	01/13/23 09:35	File ID:	CubeData_01182023@1339-142
% Solids:	72.22	Preparation:	Plumb 1981	Analyzed:	01/17/23 20:24
Batch:	BLA0321	Sequence:	SLA0148	Initial/Final:	0.5358 g Wet / 0.5358 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.65	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-IT1078

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-15 D	SDG:	23A0207
Sampled:	01/11/23 14:13	Prepared:	01/16/23 10:35	File ID:	CubeData_01182023@1339-147
% Solids:	78.03	Preparation:	Plumb 1981	Analyzed:	01/17/23 22:56
Batch:	BLA0360	Sequence:	SLA0148	Initial/Final:	0.502 g Wet / 0.502 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.86	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-IT1201

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-16 D	SDG:	23A0207
Sampled:	01/11/23 14:54	Prepared:	01/16/23 10:35	File ID:	CubeData_01182023@1339-152
% Solids:	63.26	Preparation:	Plumb 1981	Analyzed:	01/18/23 01:28
Batch:	BLA0360	Sequence:	SLA0148	Initial/Final:	0.5524 g Wet / 0.5524 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.57	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-IT1209

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0207-17 D	SDG:	23A0207
Sampled:	01/11/23 15:21	Prepared:	01/16/23 10:35	File ID:	CubeData_01182023@1339-153
% Solids:	62.08	Preparation:	Plumb 1981	Analyzed:	01/18/23 01:58
Batch:	BLA0360	Sequence:	SLA0148	Initial/Final:	0.516 g Wet / 0.516 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.57	1	0.02	0.02	

PREPARATION BATCH SUMMARY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0321 Batch Matrix: Solid
Preparation: Plumb 1981

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1088	23A0207-01	eData_01182023@1339-	01/13/23 09:35	
LDW23-IT1089	23A0207-02	eData_01182023@1339-	01/13/23 09:35	
LDW23-IT1079	23A0207-03	eData_01182023@1339-	01/13/23 09:35	
LDW23-IT1080	23A0207-04	eData_01182023@1339-	01/13/23 09:35	
LDW23-IT1080-FD	23A0207-05	eData_01182023@1339-	01/13/23 09:35	
LDW23-IT1072	23A0207-06	eData_01182023@1339-	01/13/23 09:35	
LDW23-IT1081	23A0207-07	eData_01182023@1339-	01/13/23 09:35	
LDW23-IT1068	23A0207-08	eData_01182023@1339-	01/13/23 09:35	
LDW23-IT1062	23A0207-09	eData_01182023@1339-	01/13/23 09:35	
LDW23-IT1097	23A0207-10	eData_01182023@1339-	01/13/23 09:35	
LDW23-SC1085	23A0207-11	eData_01182023@1339-	01/13/23 09:35	
LDW23-SC1069	23A0207-12	eData_01182023@1339-	01/13/23 09:35	
LDW23-SC1058	23A0207-13	eData_01182023@1339-	01/13/23 09:35	
LDW23-SC1073	23A0207-14	eData_01182023@1339-	01/13/23 09:35	
Blank	BLA0321-BLK1	eData_01182023@1339-	01/13/23 09:35	
LCS	BLA0321-BS1	eData_01182023@1339-	01/13/23 09:35	
MRL Check	BLA0321-MRL1	eData_01182023@1339-	01/13/23 09:35	
Reference	BLA0321-SRM1	eData_01182023@1339-	01/13/23 09:35	

PREPARATION BATCH SUMMARY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0360 Batch Matrix: Solid
Preparation: Plumb 1981

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1078	23A0207-15	eData_01182023@1339-	01/16/23 10:35	
LDW23-IT1201	23A0207-16	eData_01182023@1339-	01/16/23 10:35	
LDW23-IT1209	23A0207-17	eData_01182023@1339-	01/16/23 10:35	
Blank	BLA0360-BLK1	eData_01182023@1339-	01/16/23 10:35	
LCS	BLA0360-BS1	eData_01182023@1339-	01/16/23 10:35	
LDW23-IT1078	BLA0360-DUP1	eData_01182023@1339-	01/16/23 10:35	
MRL Check	BLA0360-MRL1	eData_01182023@1339-	01/16/23 10:35	
LDW23-IT1078	BLA0360-MS1	eData_01182023@1339-	01/16/23 10:35	
Reference	BLA0360-SRM1	eData_01182023@1339-	01/16/23 10:35	

Form I

METHOD BLANK DATA SHEET

EPA 9060A m

TotalAnalytes

Blank

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0321
Laboratory ID: BLA0321-BLK1
Prepared: 01/13/23 09:35
Matrix: Solid
Preparation: Plumb 1981
Analyzed: 01/17/23 03:43
Sequence: SLA0148
Calibration: FD00070
Instrument: TOC Cube

CAS NO.	Analyte	Concentration (% wet)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	ND	1	0.02	0.02	U

Form I

METHOD BLANK DATA SHEET

EPA 9060A m

TotalAnalytes

Blank

Laboratory: Analytical Resources, LLC | SDG: 23A0207

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

Batch: BLA0360 | Laboratory ID: BLA0360-BLK1 | Prepared: 01/16/23 10:35

Matrix: Solid | Preparation: Plumb 1981 | Analyzed: 01/17/23 21:25

Sequence: SLA0148 | Calibration: FD00070 | Instrument: TOC Cube

CAS NO.	Analyte	Concentration (% wet)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	ND	1	0.02	0.02	U

LCS / LCS DUPLICATE RECOVERY

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	01/17/23 04:14
Batch:	BLA0321	Laboratory ID:	BLA0321-BS1
Preparation:	Plumb 1981	Sequence Name:	LCS
Initial/Final:	0.0185 g / 0.0185 g		

COMPOUND	SPIKE ADDED (% wet)	LCS CONCENTRATION (% wet)	Q	LCS % REC. #	QC LIMITS REC.
Total Organic Carbon	44.4	43.9		98.8	80 - 120

* Indicates values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	01/17/23 21:55
Batch:	BLA0360	Laboratory ID:	BLA0360-BS1
Preparation:	Plumb 1981	Sequence Name:	LCS
Initial/Final:	0.0192 g / 0.0192 g		

COMPOUND	SPIKE ADDED (% wet)	LCS CONCENTRATION (% wet)	Q	LCS % REC. #	QC LIMITS REC.
Total Organic Carbon	44.4	45.6		103	80 - 120

* Indicates values outside of QC limits

DUPLICATES

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0360-DUP1
Batch: BLA0360
Lab Source ID: 23A0207-15
Preparation: Plumb 1981
Initial/Final: 0.5237 g / 0.5237 g
Source Sample Name: LDW23-IT1078
% Solids: 78.03

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Organic Carbon	20	0.86	0.64	29.7	*

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

MS / MS DUPLICATE RECOVERY
EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	01/18/23 00:58
Batch:	BLA0360	Laboratory ID:	BLA0360-MS1
Preparation:	Plumb 1981	Sequence Name:	Matrix Spike
Initial/Final:	0.5216 g / 0.5216 g	Source Sample:	LDW23-IT1078

COMPOUND	SPIKE ADDED (% dry)	SAMPLE CONCENTRATION (% dry)	Q	MS CONCENTRATION (% dry)	Q	MS % REC. #	QC LIMITS REC.
Total Organic Carbon	0.972	0.86		1.74		90.6	75 - 125

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SKD0371	Instrument:	TOC Cube
		Calibration:	FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SKD0371-CAL1	CubeData_04272022@1136-001	NA	04/26/22 12:30
Cal Standard	SKD0371-CAL2	CubeData_04272022@1136-002	NA	04/26/22 13:00
Cal Standard	SKD0371-CAL3	CubeData_04272022@1136-003	NA	04/26/22 13:30
Cal Standard	SKD0371-CAL4	CubeData_04272022@1136-004	NA	04/26/22 14:00
Cal Standard	SKD0371-CAL5	CubeData_04272022@1136-005	NA	04/26/22 14:30
Cal Standard	SKD0371-CAL6	CubeData_04272022@1136-006	NA	04/26/22 15:00
Cal Standard	SKD0371-CAL7	CubeData_04272022@1136-007	NA	04/26/22 15:30
Cal Standard	SKD0371-CAL8	CubeData_04272022@1136-008	NA	04/26/22 16:00
Cal Standard	SKD0371-CAL9	CubeData_04272022@1136-009	NA	04/26/22 16:30
Cal Standard	SKD0371-CALA	CubeData_04272022@1136-010	NA	04/26/22 17:00
Cal Standard	SKD0371-CALB	CubeData_04272022@1136-011	NA	04/26/22 17:30
Cal Standard	SKD0371-CALC	CubeData_04272022@1136-012	NA	04/26/22 18:00
Cal Standard	SKD0371-CALD	CubeData_04272022@1136-013	NA	04/26/22 18:30
Cal Standard	SKD0371-CALE	CubeData_04272022@1136-014	NA	04/26/22 19:00
Cal Standard	SKD0371-CALF	CubeData_04272022@1136-015	NA	04/26/22 19:31
Cal Standard	SKD0371-CALG	CubeData_04272022@1136-016	NA	04/26/22 20:01
Cal Standard	SKD0371-CALH	CubeData_04272022@1136-017	NA	04/26/22 20:31
Cal Standard	SKD0371-CALI	CubeData_04272022@1136-018	NA	04/26/22 21:01
Cal Standard	SKD0371-CALJ	CubeData_04272022@1136-019	NA	04/26/22 21:31
Cal Standard	SKD0371-CALK	CubeData_04272022@1136-020	NA	04/26/22 22:01
Initial Cal Check	SKD0371-ICV1	CubeData_04272022@1136-027	NA	04/27/22 02:03
Initial Cal Blank	SKD0371-ICB1	CubeData_04272022@1136-028	NA	04/27/22 02:33
Cal Standard	SKD0371-CALL	CubeData_04272022@1136-021	NA	04/27/22 11:08
Cal Standard	SKD0371-CALM	CubeData_04272022@1136-022	NA	04/27/22 11:08
Cal Standard	SKD0371-CALN	CubeData_04272022@1136-023	NA	04/27/22 11:09
Cal Standard	SKD0371-CALO	CubeData_04272022@1136-024	NA	04/27/22 11:09

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLA0148	Instrument:	TOC Cube
		Calibration:	FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLA0148-ICV1	CubeData_01182023@1339-019	NA	01/16/23 11:02
Initial Cal Blank	SLA0148-ICB1	CubeData_01182023@1339-026	NA	01/16/23 11:32
Calibration Check	SLA0148-CCV1	CubeData_01182023@1339-089	NA	01/16/23 17:06
Calibration Blank	SLA0148-CCB1	CubeData_01182023@1339-090	NA	01/16/23 17:36
Calibration Check	SLA0148-CCV2	CubeData_01182023@1339-101	NA	01/16/23 23:10
Calibration Blank	SLA0148-CCB2	CubeData_01182023@1339-102	NA	01/16/23 23:40
MRL Check	BLA0321-MRL1	CubeData_01182023@1339-109	Solid	01/17/23 03:13
Blank	BLA0321-BLK1	CubeData_01182023@1339-110	Solid	01/17/23 03:43
LCS	BLA0321-BS1	CubeData_01182023@1339-111	Solid	01/17/23 04:14
Reference	BLA0321-SRM1	CubeData_01182023@1339-112	Solid	01/17/23 04:44
Calibration Check	SLA0148-CCV3	CubeData_01182023@1339-113	NA	01/17/23 05:15
Calibration Blank	SLA0148-CCB3	CubeData_01182023@1339-114	NA	01/17/23 05:45
Calibration Check	SLA0148-CCV4	CubeData_01182023@1339-124	NA	01/17/23 11:19
Calibration Blank	SLA0148-CCB4	CubeData_01182023@1339-125	NA	01/17/23 11:49
LDW23-IT1088	23A0207-01	CubeData_01182023@1339-127	Solid	01/17/23 12:50
LDW23-IT1089	23A0207-02	CubeData_01182023@1339-128	Solid	01/17/23 13:20
LDW23-IT1079	23A0207-03	CubeData_01182023@1339-129	Solid	01/17/23 13:51
LDW23-IT1080	23A0207-04	CubeData_01182023@1339-130	Solid	01/17/23 14:21
LDW23-IT1080-FD	23A0207-05	CubeData_01182023@1339-131	Solid	01/17/23 14:51
LDW23-IT1072	23A0207-06	CubeData_01182023@1339-132	Solid	01/17/23 15:21
LDW23-IT1081	23A0207-07	CubeData_01182023@1339-133	Solid	01/17/23 15:52
LDW23-IT1068	23A0207-08	CubeData_01182023@1339-134	Solid	01/17/23 16:22
LDW23-IT1062	23A0207-09	CubeData_01182023@1339-135	Solid	01/17/23 16:52
Calibration Check	SLA0148-CCV5	CubeData_01182023@1339-136	NA	01/17/23 17:22
Calibration Blank	SLA0148-CCB5	CubeData_01182023@1339-137	NA	01/17/23 17:52
LDW23-IT1097	23A0207-10	CubeData_01182023@1339-138	Solid	01/17/23 18:23
LDW23-SC1085	23A0207-11	CubeData_01182023@1339-139	Solid	01/17/23 18:53
LDW23-SC1069	23A0207-12	CubeData_01182023@1339-140	Solid	01/17/23 19:23
LDW23-SC1058	23A0207-13	CubeData_01182023@1339-141	Solid	01/17/23 19:54

ANALYSIS BATCH (SEQUENCE) SUMMARY

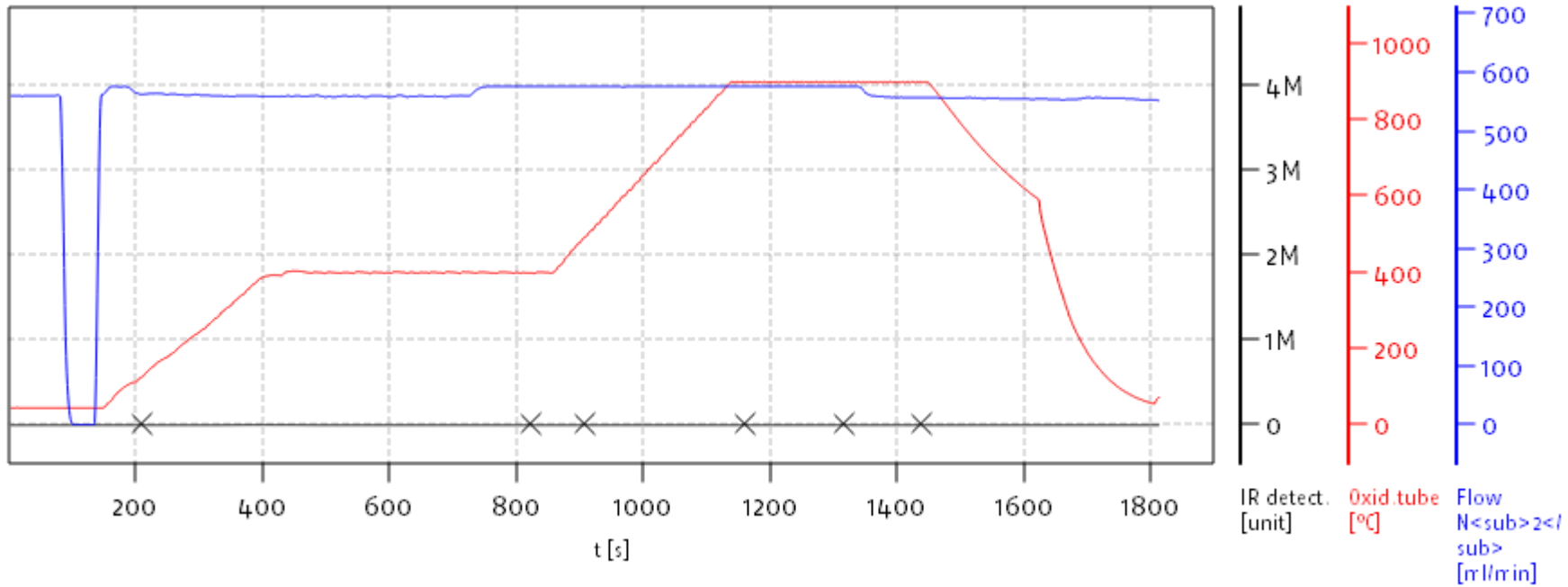
EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLA0148	Instrument:	TOC Cube
		Calibration:	FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SC1073	23A0207-14	CubeData_01182023@1339-142	Solid	01/17/23 20:24
MRL Check	BLA0360-MRL1	CubeData_01182023@1339-143	Solid	01/17/23 20:55
Blank	BLA0360-BLK1	CubeData_01182023@1339-144	Solid	01/17/23 21:25
LCS	BLA0360-BS1	CubeData_01182023@1339-145	Solid	01/17/23 21:55
Reference	BLA0360-SRM1	CubeData_01182023@1339-146	Solid	01/17/23 22:26
LDW23-IT1078	23A0207-15	CubeData_01182023@1339-147	Solid	01/17/23 22:56
Calibration Check	SLA0148-CCV6	CubeData_01182023@1339-148	NA	01/17/23 23:27
Calibration Blank	SLA0148-CCB6	CubeData_01182023@1339-149	NA	01/17/23 23:57
LDW23-IT1078	BLA0360-DUP1	CubeData_01182023@1339-150	Solid	01/18/23 00:27
LDW23-IT1078	BLA0360-MS1	CubeData_01182023@1339-151	Solid	01/18/23 00:58
LDW23-IT1201	23A0207-16	CubeData_01182023@1339-152	Solid	01/18/23 01:28
LDW23-IT1209	23A0207-17	CubeData_01182023@1339-153	Solid	01/18/23 01:58
Calibration Check	SLA0148-CCV7	CubeData_01182023@1339-160	NA	01/18/23 05:31
Calibration Blank	SLA0148-CCB7	CubeData_01182023@1339-161	NA	01/18/23 06:02
Calibration Check	SLA0148-CCV8	CubeData_01182023@1339-064	NA	01/18/23 11:35
Calibration Blank	SLA0148-CCB8	CubeData_01182023@1339-070	NA	01/18/23 12:05
Calibration Check	SLA0148-CCV9	CubeData_01182023@1339-082	NA	01/18/23 13:06
Calibration Blank	SLA0148-CCB9	CubeData_01182023@1339-088	NA	01/18/23 13:36

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		CARBON	1/ 16/2023 9:31 AM	bl	0.000	15 236	0.000	0.000	1 307	2 043	0.000	0.000	1.0000	1.0000



Name:

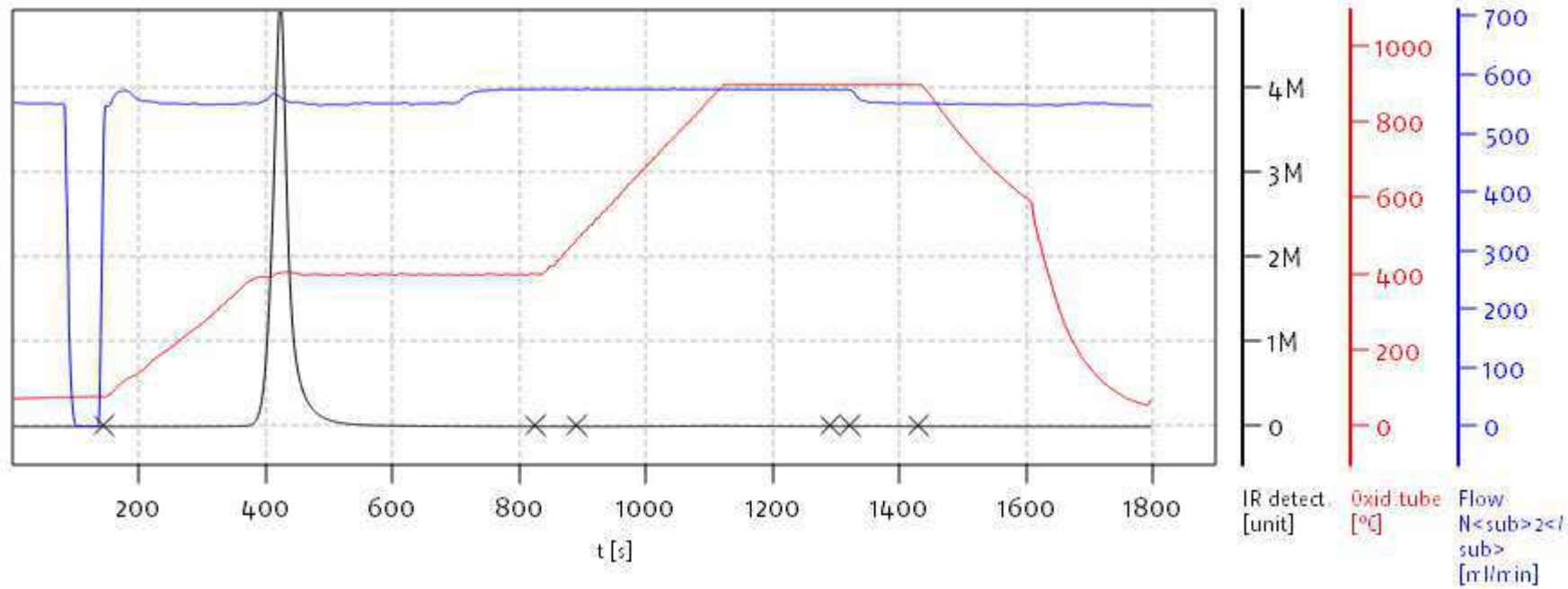
Access: soliTOC superuser

Date: Wed Jan 18 13:37:19 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
2	2	Dfactor	18.70		CARBON	1/16/2023 10:01 AM	bl	44.446	5 710 410	44.766	0.000	12 695	65 222	44.446	0.320	0.9446	1.0000



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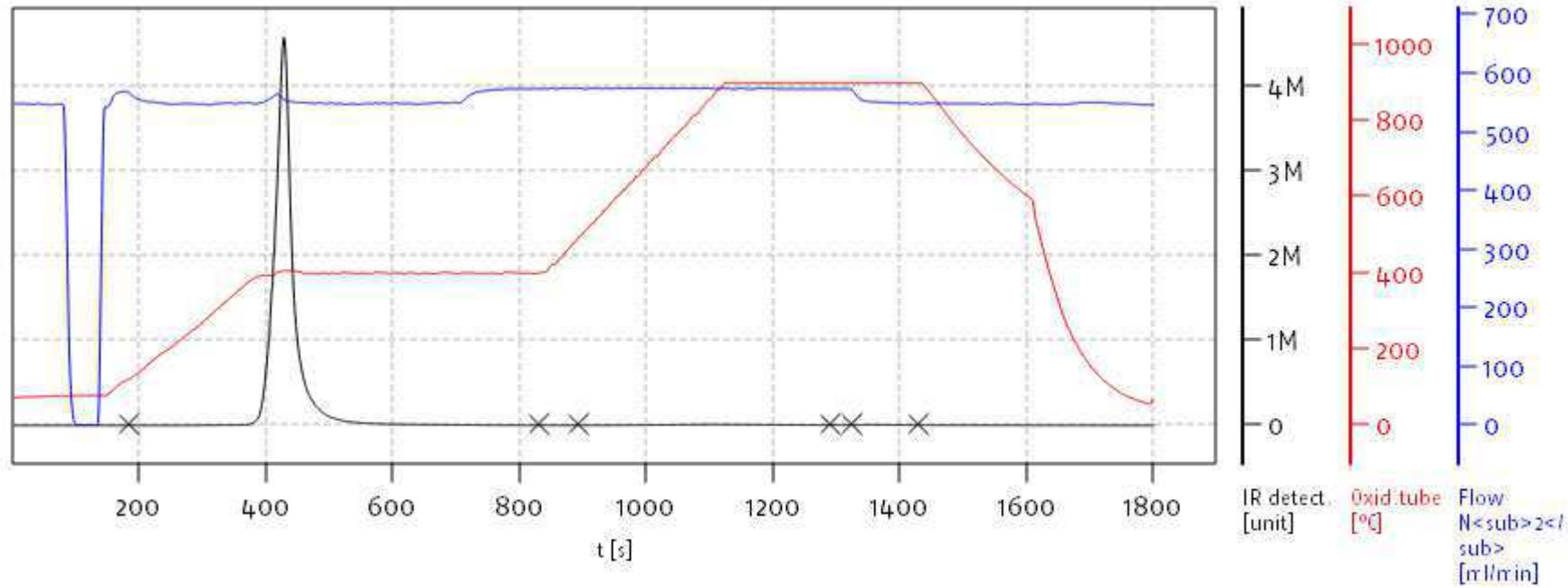
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
3	3	Dfactor	19.40		CARBON	1/16/2023 10:32 AM	bl	44.446	5 756 476	44.952	0.000	22 589	90 023	44.446	0.507	0.9721	1.0000



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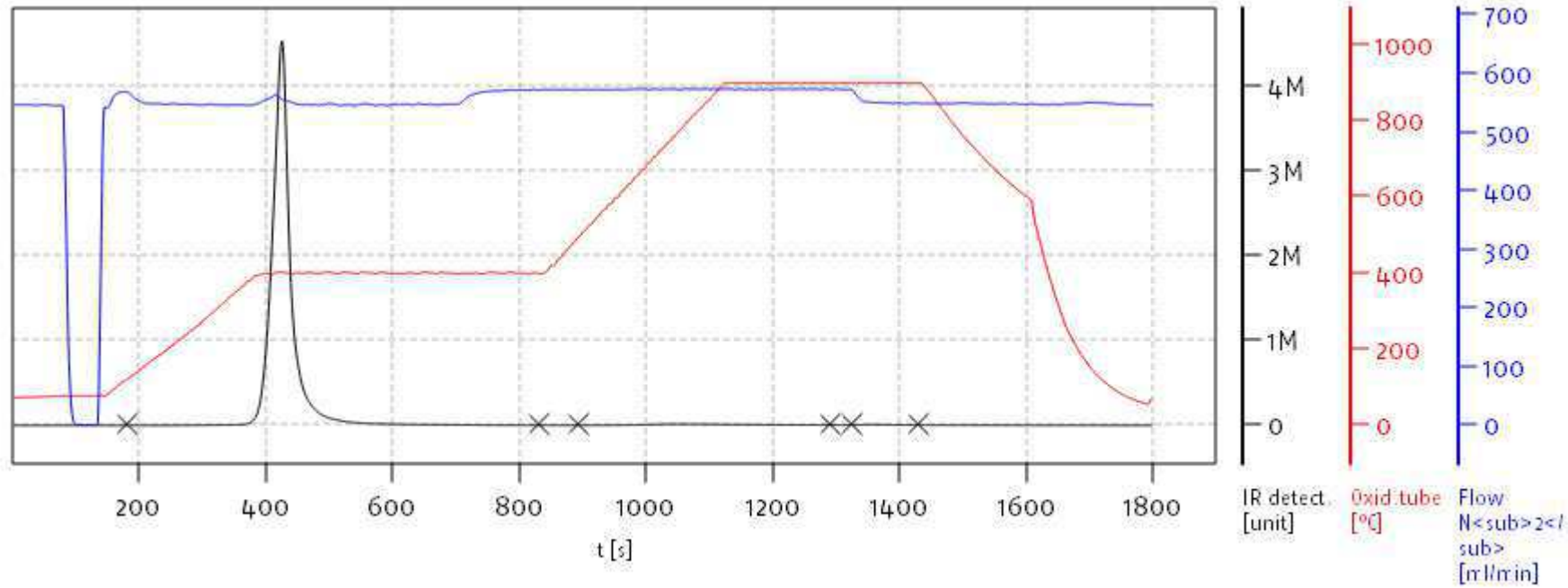
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
4	4	SLA0148-ICV1	19.10		CARBON	1/16/2023 11:02 AM	bl	44.090	5 702 940	44.849	0.000	26 450	120 201	44.090	0.759	0.9583	1.0000



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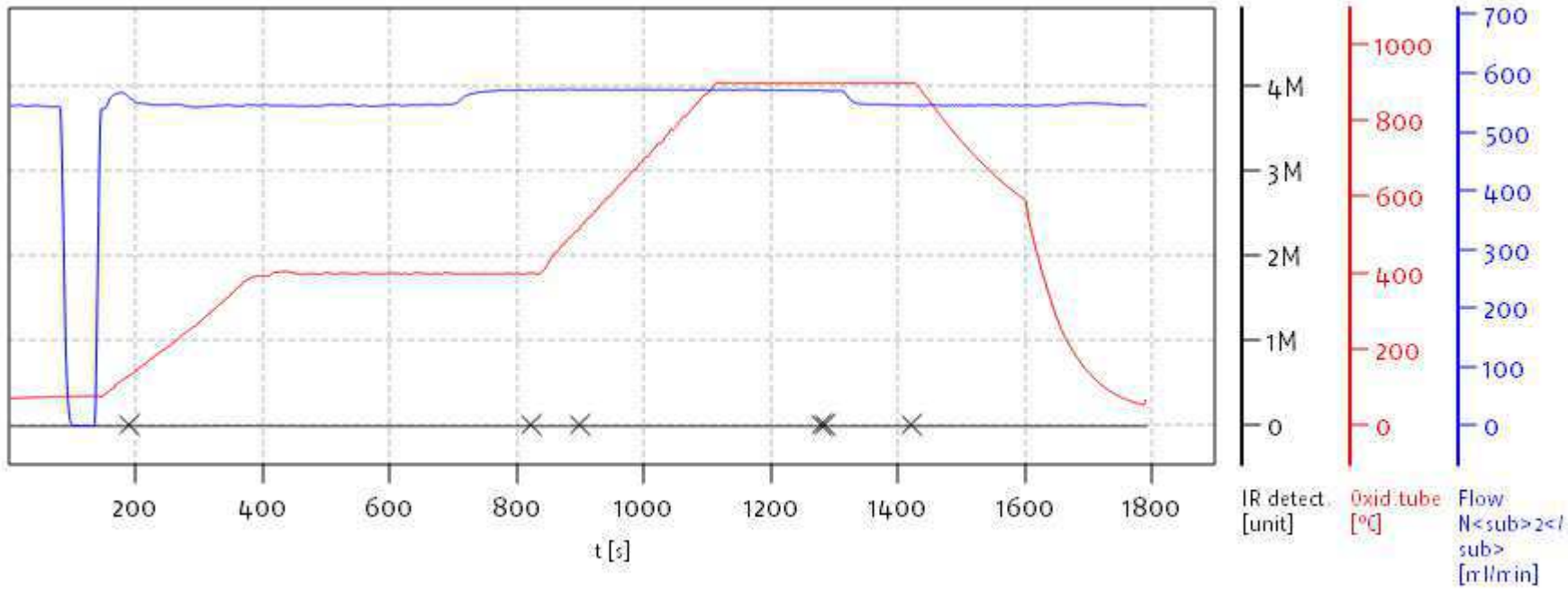
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
5	5	SLA0148-ICB1	504.80		CARBON	1/16/2023 11:32 AM	bl,C3u,C2u	0.000	9 918	0.000	0.000	1 077	150	0.000	0.000	0.9583	1.0000



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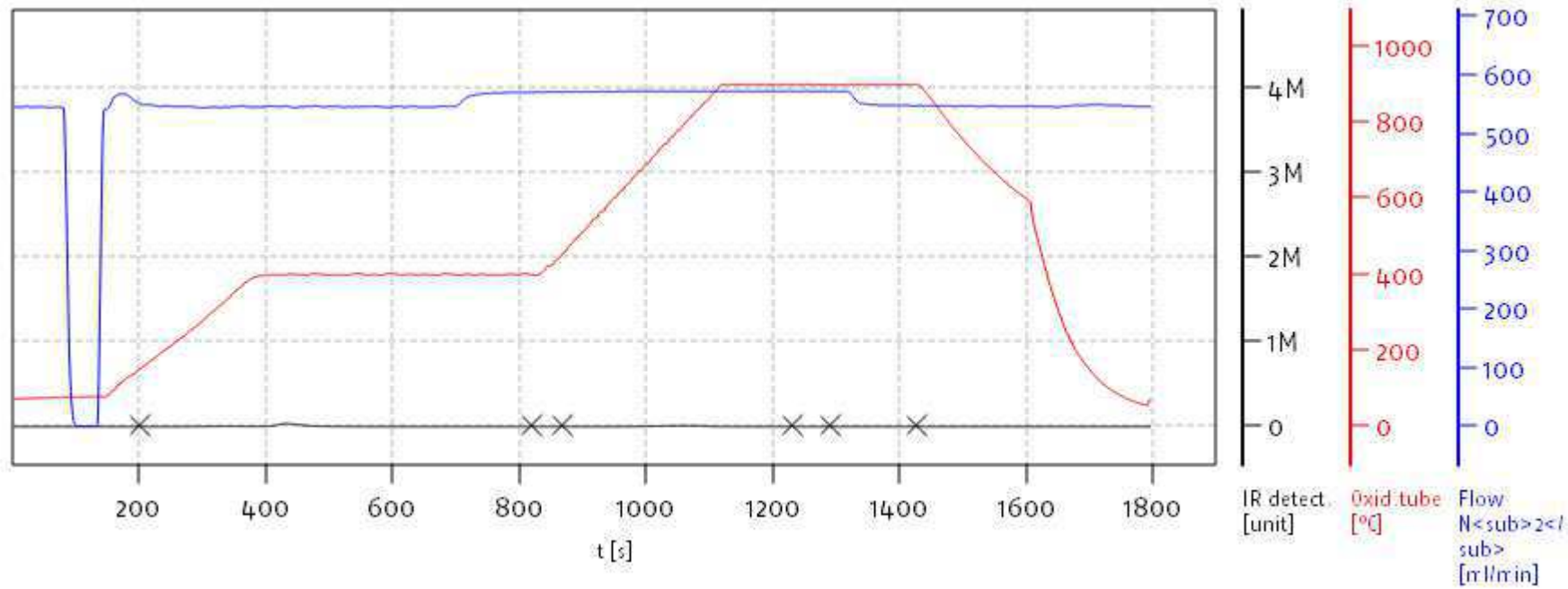
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
6	6	BLA0320-MRL1	517.50		CARBON	1/16/2023 12:03 PM	bl,C2u	0.014	76 742	0.017	0.000	1 087	35 567	0.014	0.003	0.9583	1.0000



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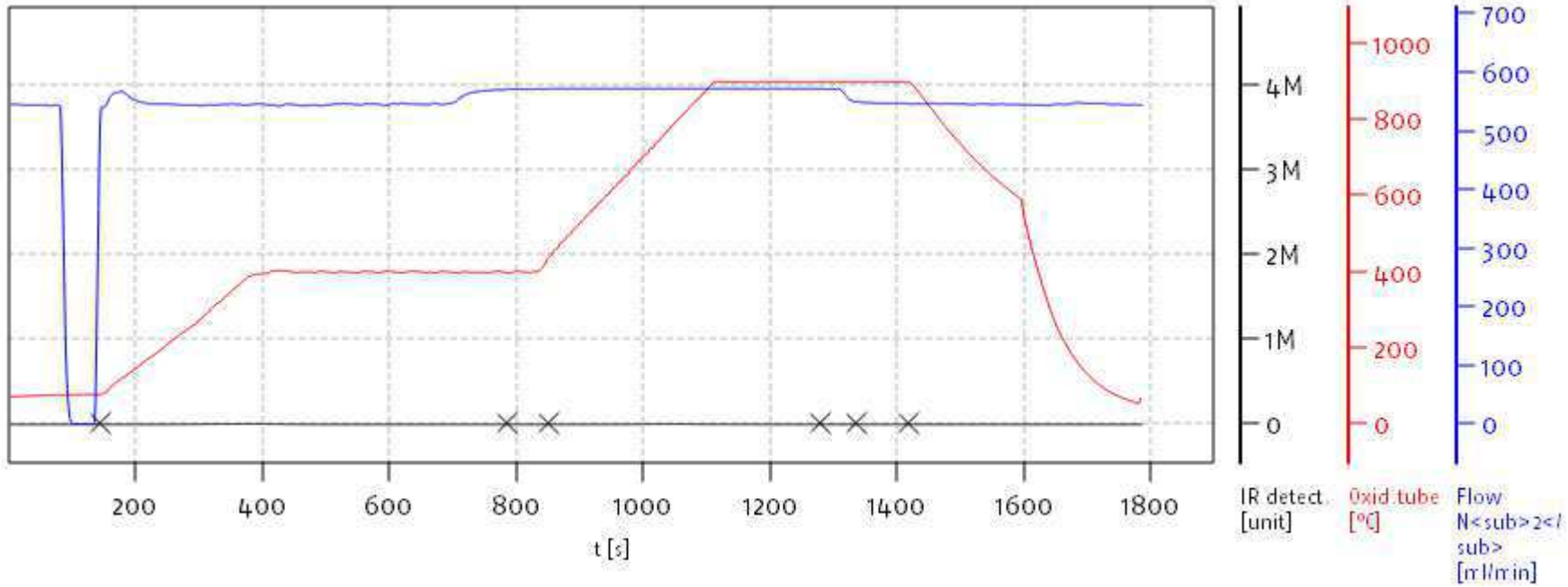
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
7	7	BLA0320-BLK1	506.00		CARBON	1/16/2023 12:33 PM	bl,C2u	0.002	32 730	0.002	0.000	631	23 200	0.002	0.000	0.9583	1.0000



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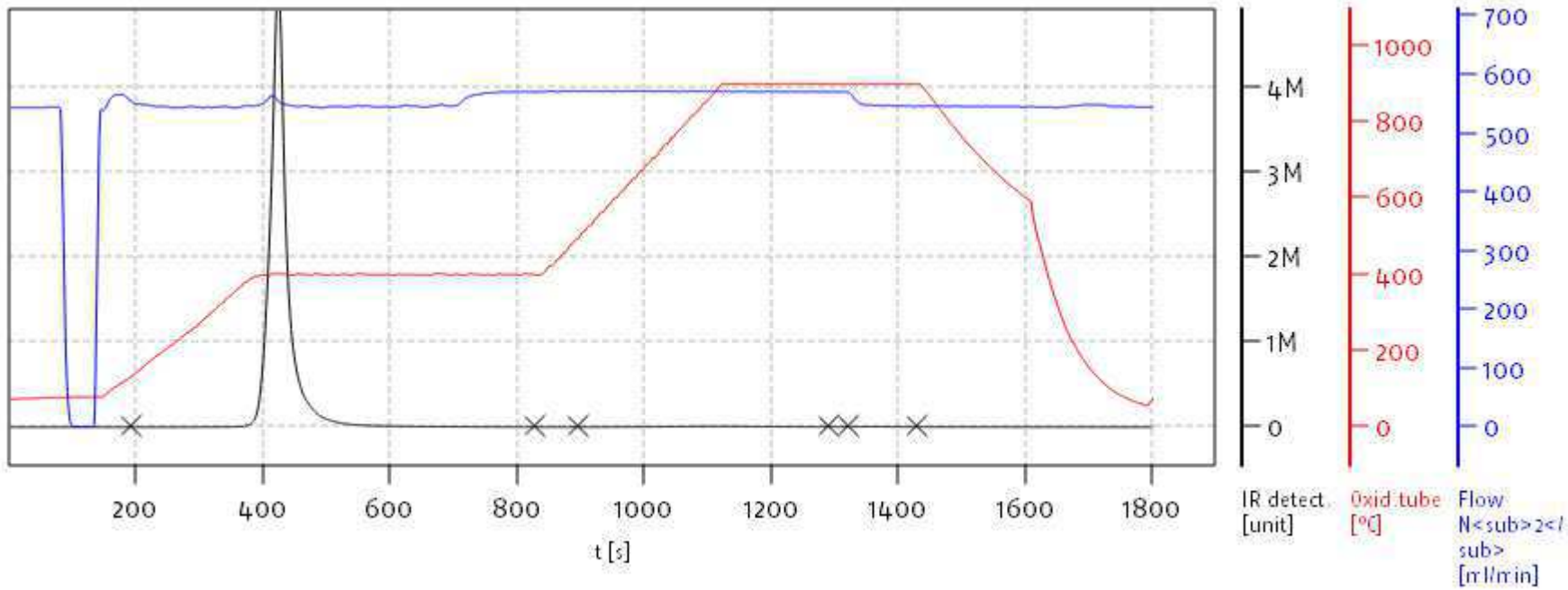
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
8	8	BLA0320-BS1	19.70		CARBON	1/16/2023 1:03 PM	bl	44.897	5 988 412	45.292	0.000	17 663	76 812	44.897	0.395	0.9583	1.0000



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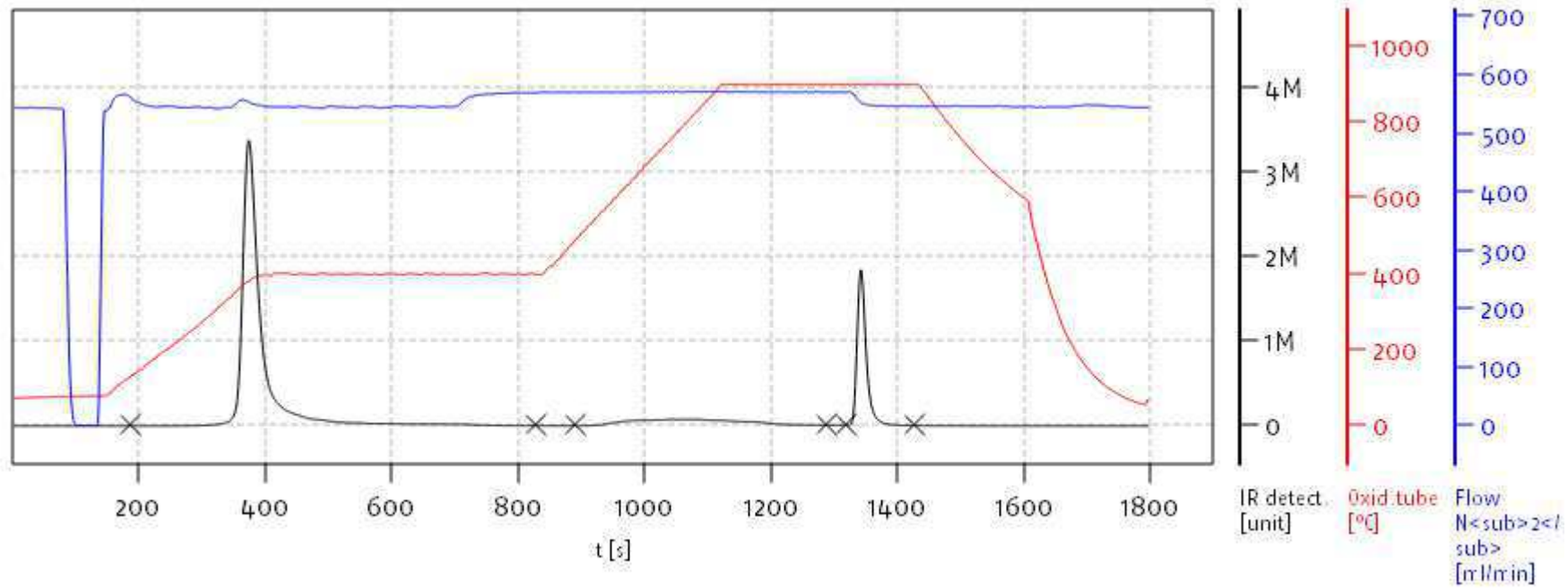
Date: Wed Jan 18 13:37:19 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
9	9	BLA0320-SRM1	273.40		CARBON	1/16/2023 1:34 PM	bl	2.944	4 256 130	3.297	0.648	1 171 743	650 313	2.295	0.353	0.9583	1.0000



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Date: Wed Jan 18 13:37:19 2023

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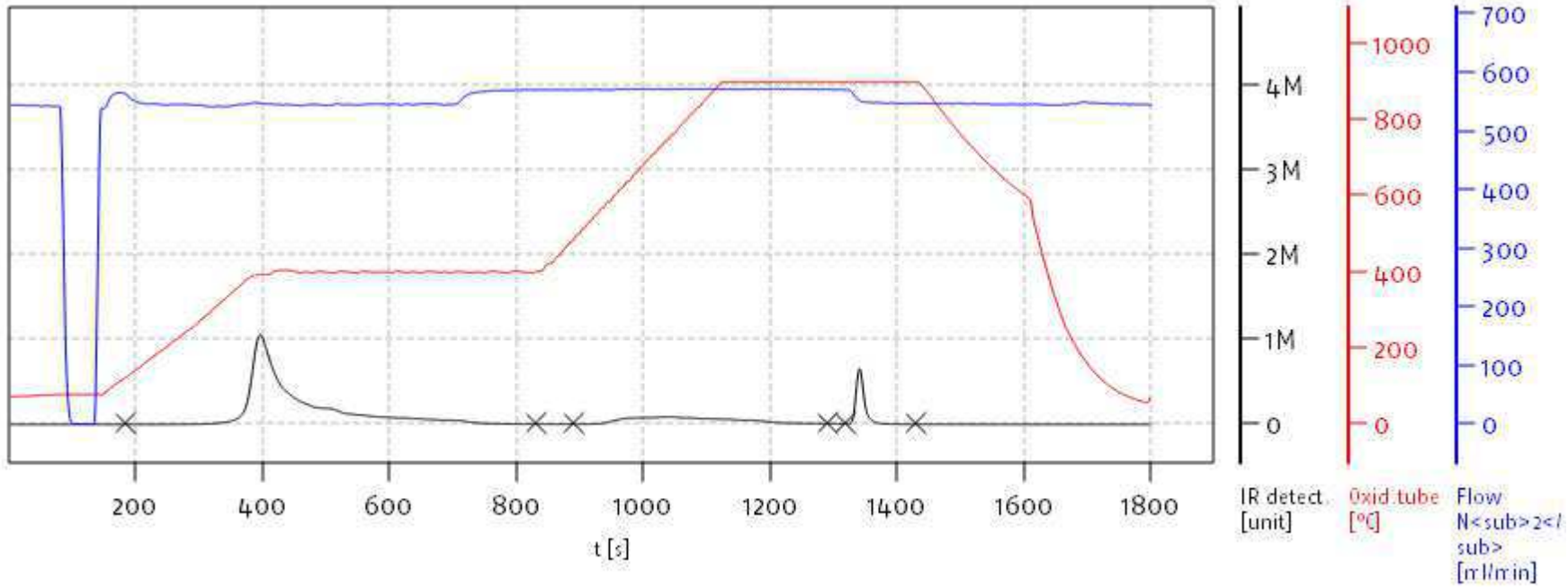
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
10	10	23A0179-01	550.40		CARBON	1/16/2023 2:04 PM	bl	0.930	3 107 756	1.119	0.099	380 052	699 448	0.831	0.189	0.9583	1.0000



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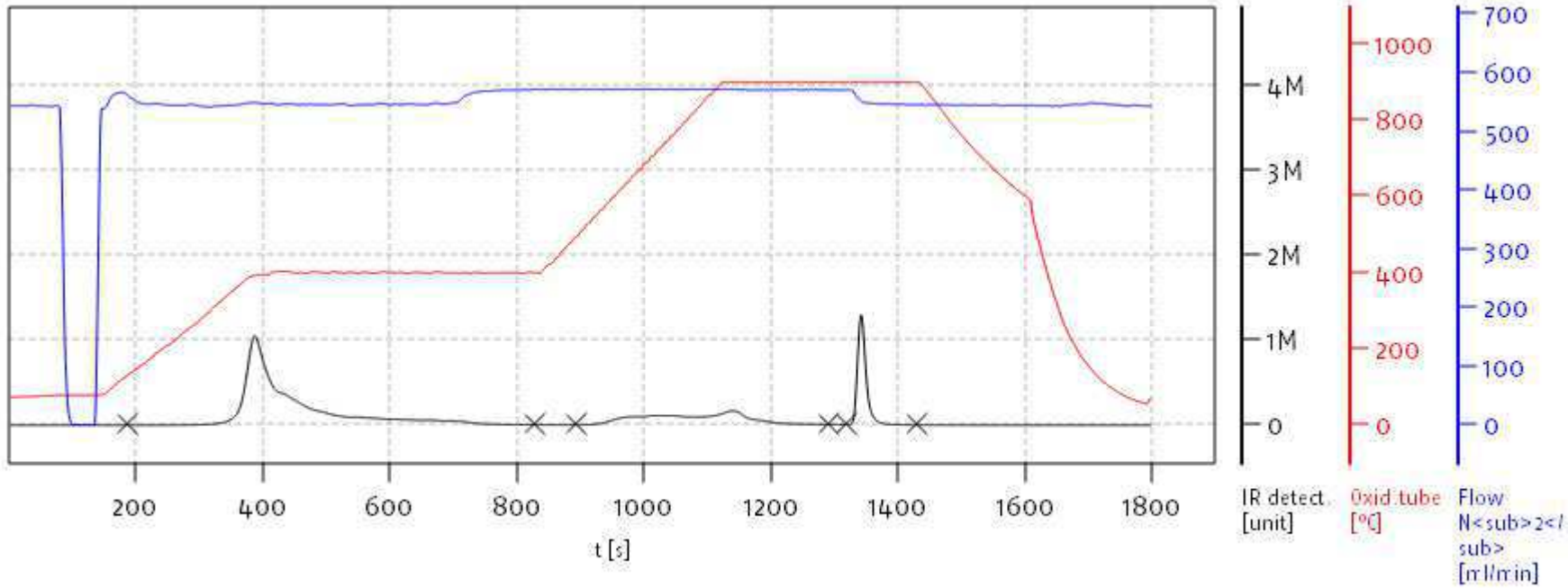
Date: Wed Jan 18 13:37:19 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
11	11	BLA0320-DUP1	573.80		CARBON	1/16/2023 2:35 PM	bl	0.968	2 987 709	1.243	0.202	775 319	1 048 083	0.766	0.276	0.9583	1.0000



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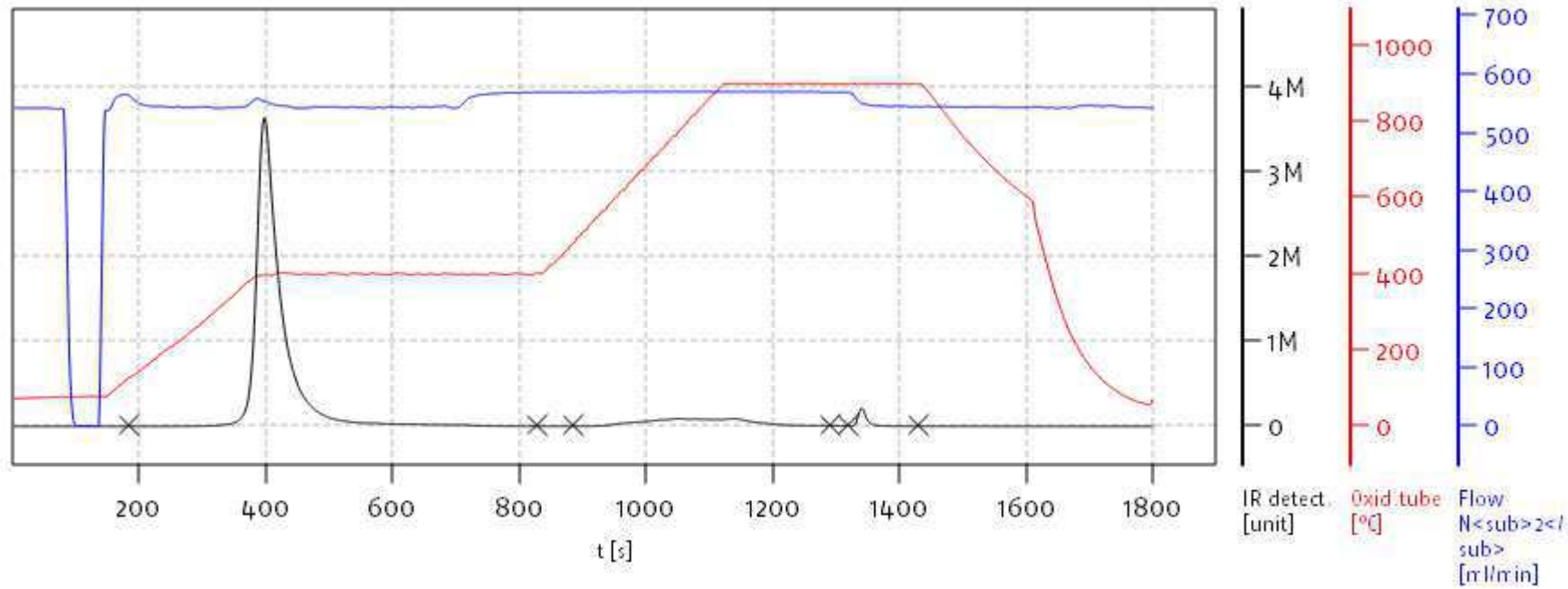
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
12	12	BLA0320-MS1	561.00	0.0085	CARBON	1/16/2023 3:05 PM	bl	1.640	6 120 581	1.823	0.029	129 963	688 573	1.612	0.183	0.9583	1.0000



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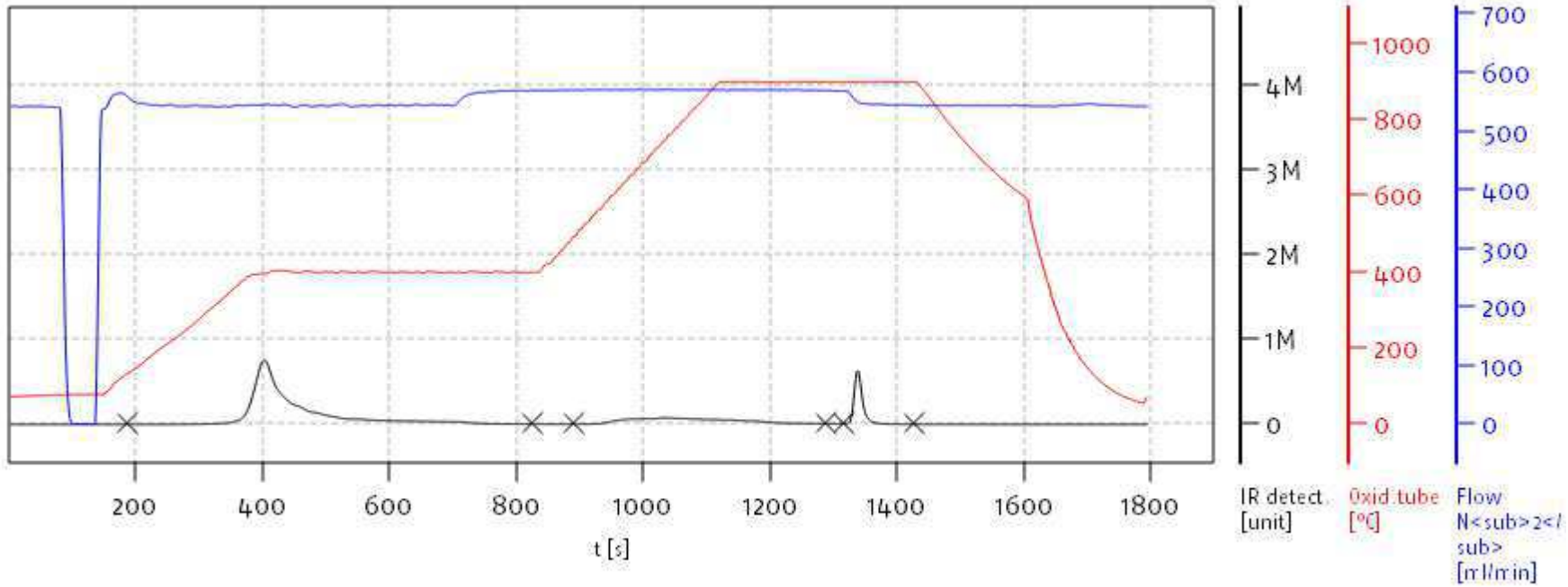
Date: Wed Jan 18 13:37:19 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
13	13	23A0179-02	511.60		CARBON	1/16/2023 3:35 PM	bl	0.698	2 074 463	0.872	0.104	371 323	602 218	0.594	0.174	0.9583	1.0000



Name:

Access: soliTOC superuser

Date: Wed Jan 18 13:37:19 2023

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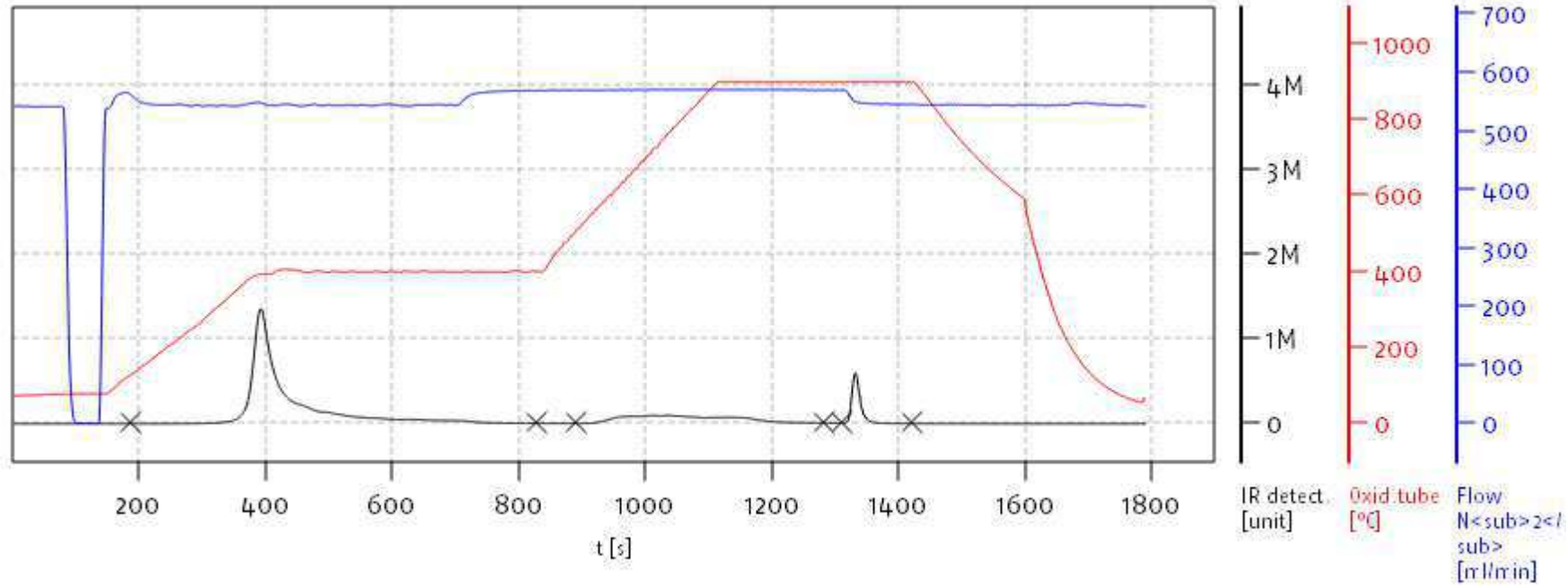
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
14	14	23A0179-03	538.20		CARBON	1/16/2023 4:06 PM	bl	0.889	2 906 309	1.113	0.095	355 802	807 719	0.794	0.225	0.9583	1.0000



Name:

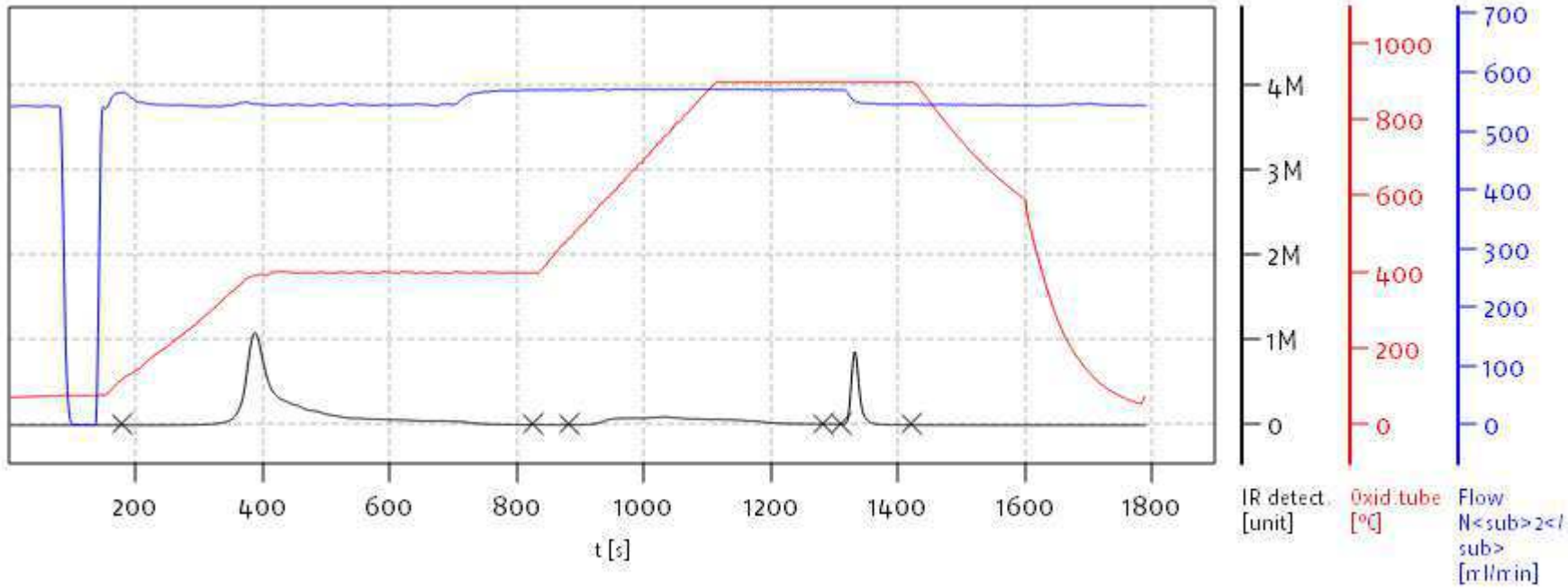
Access: soliTOC superuser

Date: Wed Jan 18 13:37:19 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
15	15	23A0179-04	524.30		CARBON	1/16/2023 4:36 PM	bl	0.922	2 791 519	1.144	0.139	498 729	778 093	0.782	0.222	0.9583	1.0000



Name:

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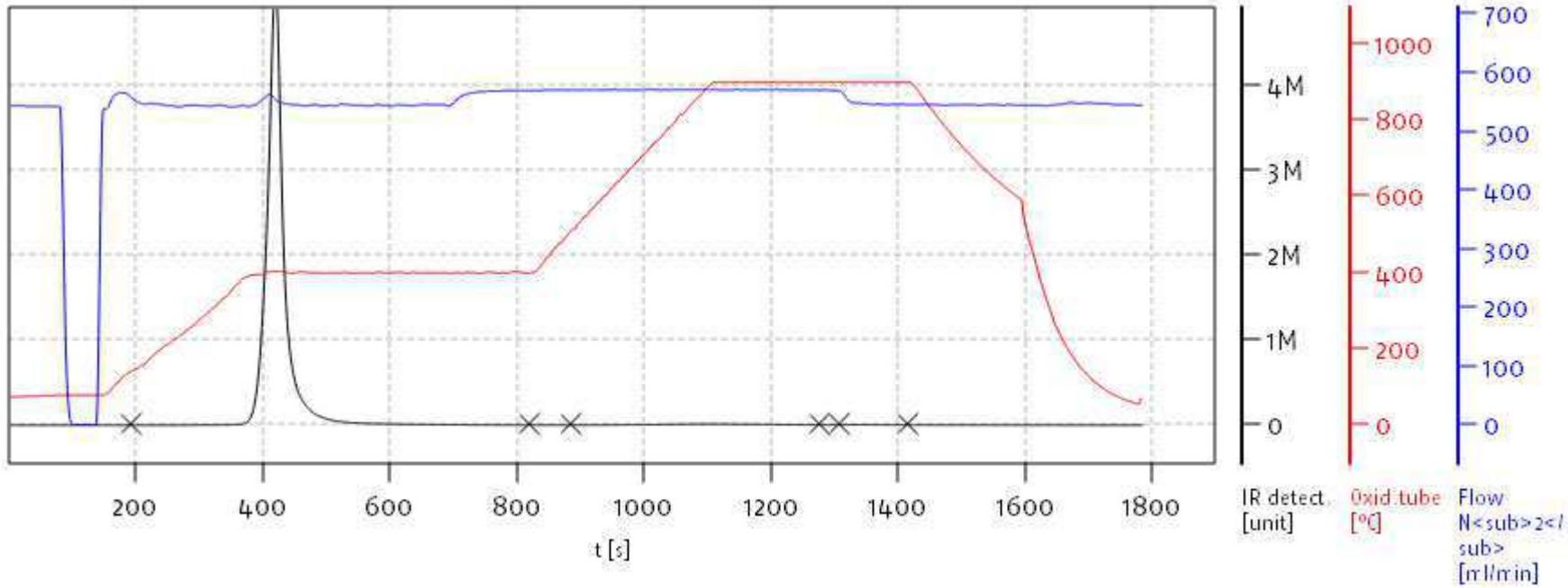
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
16	16	SLA0148-CCV1	19.70		CARBON	1/16/2023 5:06 PM	bl	44.513	5 937 466	45.114	0.000	15 484	103 025	44.513	0.601	0.9583	1.0000



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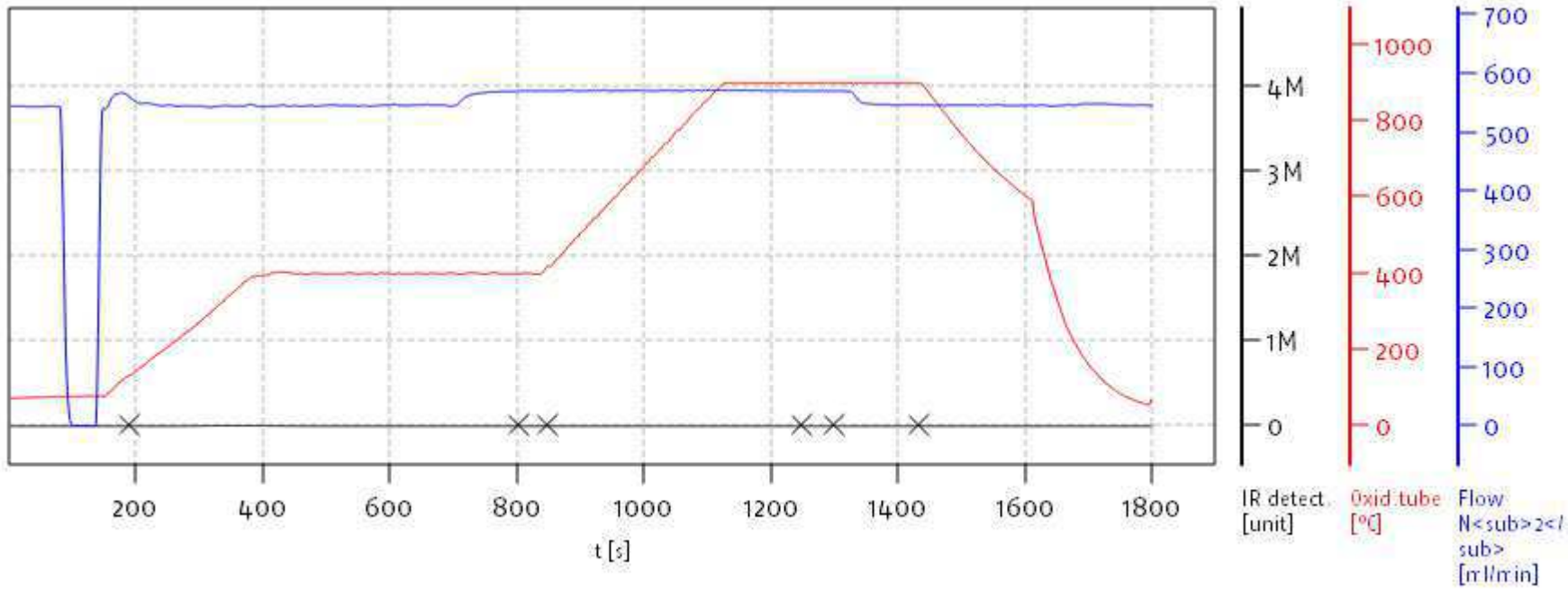
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
17	17	SLA0148-CCB1	537.30		CARBON	1/16/2023 5:36 PM	bl,C2u	0.001	29 984	0.001	0.000	667	3 187	0.001	0.000	0.9583	1.0000



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Access: soliTOC superuser

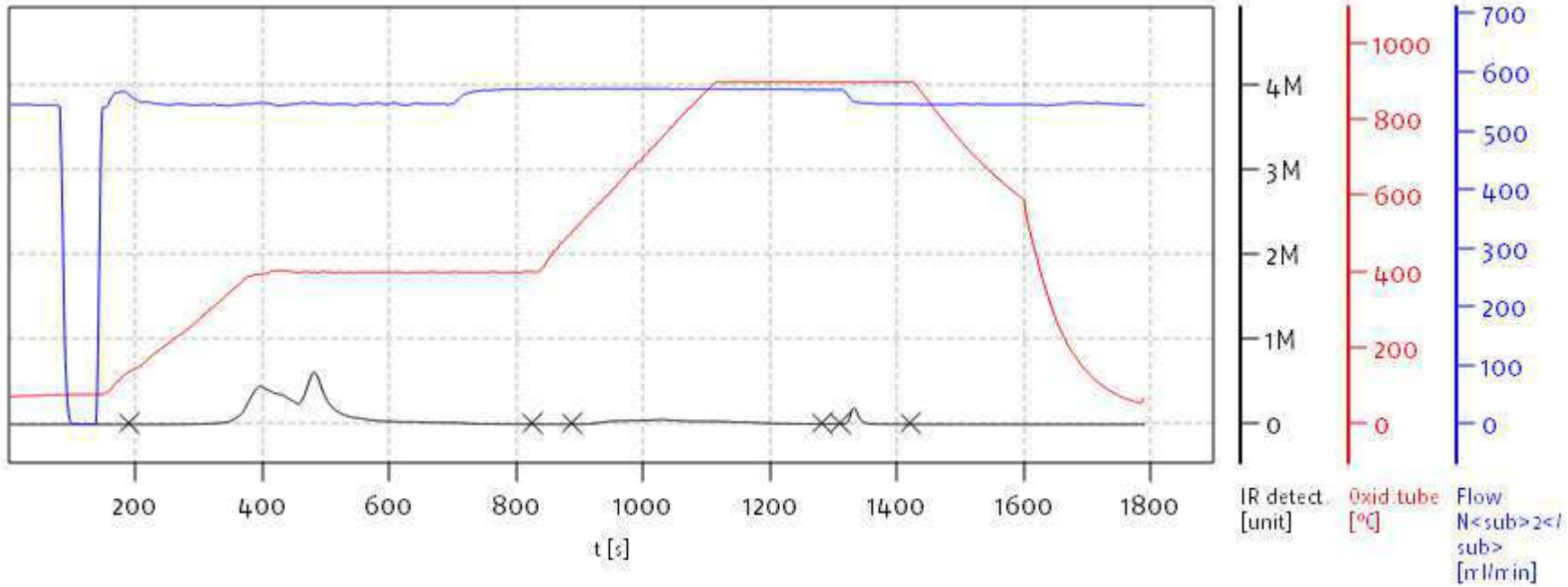
Date: Wed Jan 18 13:37:19 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
18	18	23A0179-05	586.50		CARBON	1/16/2023 6:06 PM	bl	0.635	2 440 609	0.736	0.024	117 833	411 090	0.611	0.102	0.9583	1.0000



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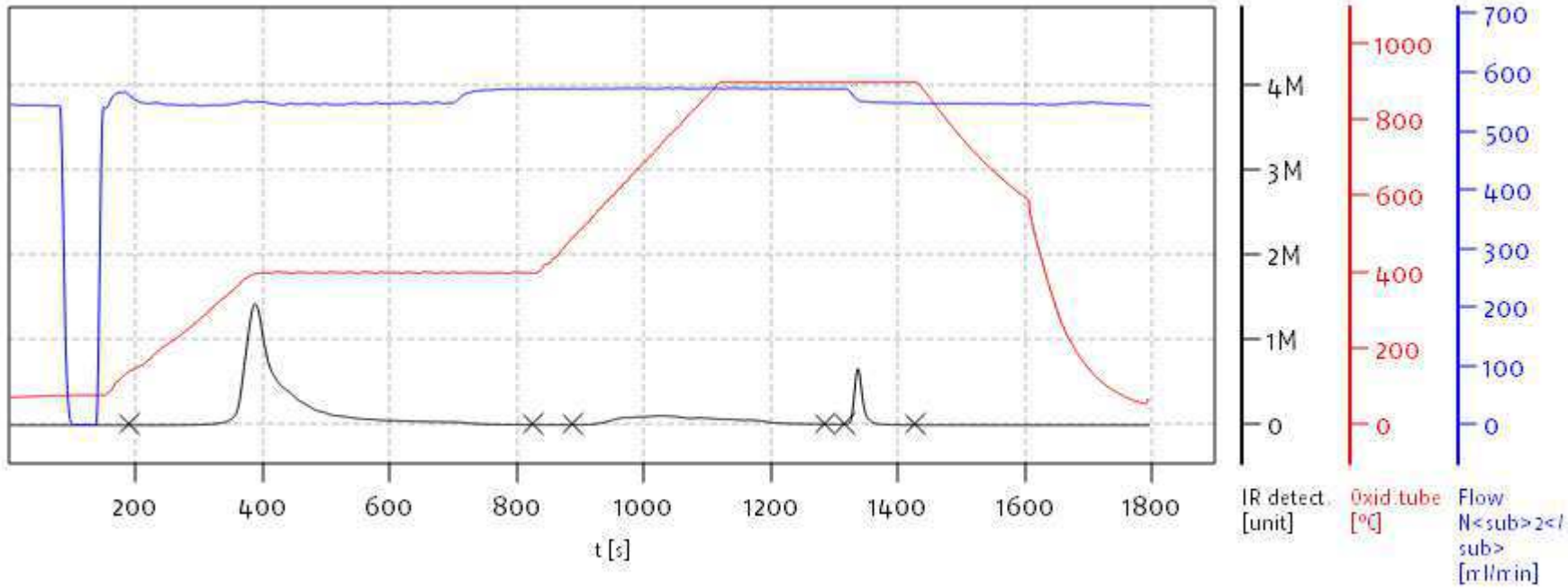
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
19	19	23A0179-06	537.40		CARBON	1/16/2023 6:37 PM	bl	1.084	3 573 030	1.321	0.105	390 098	851 677	0.979	0.238	0.9583	1.0000



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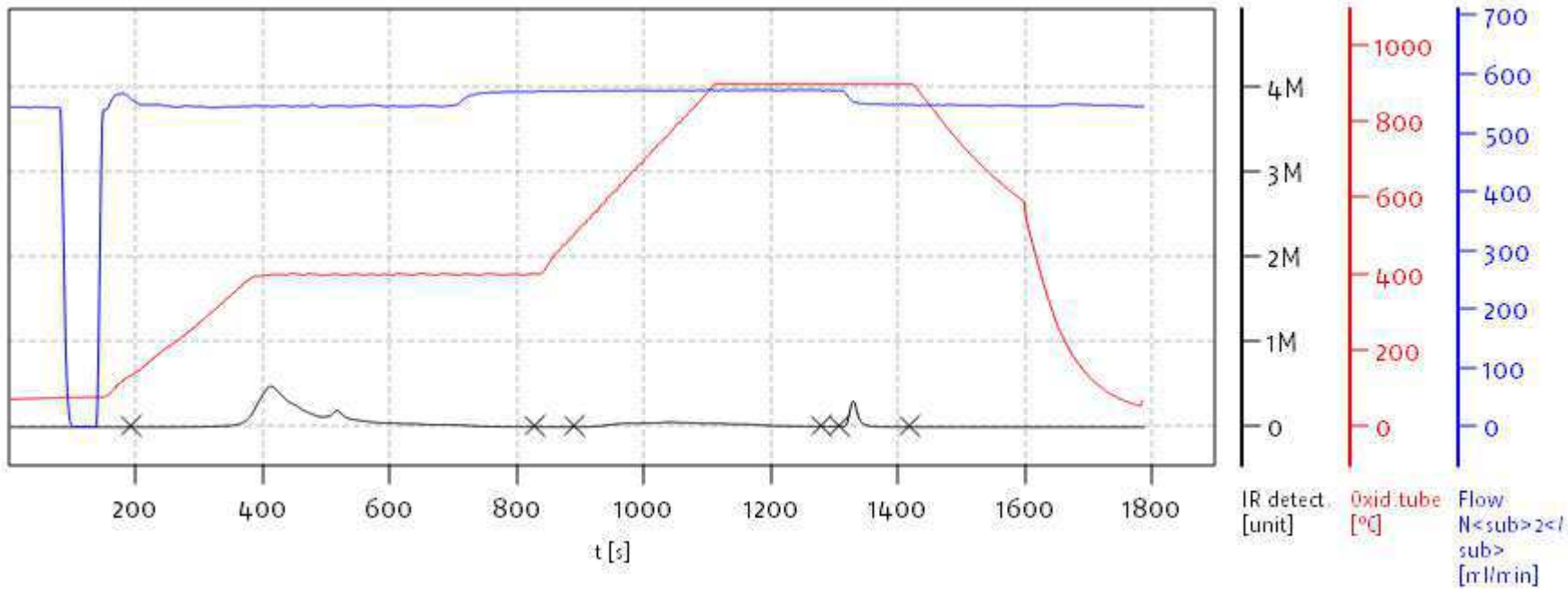
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
20	20	23A0179-07	546.00		CARBON	1/16/2023 7:07 PM	bl	0.536	1 836 701	0.653	0.044	181 543	439 951	0.492	0.117	0.9583	1.0000



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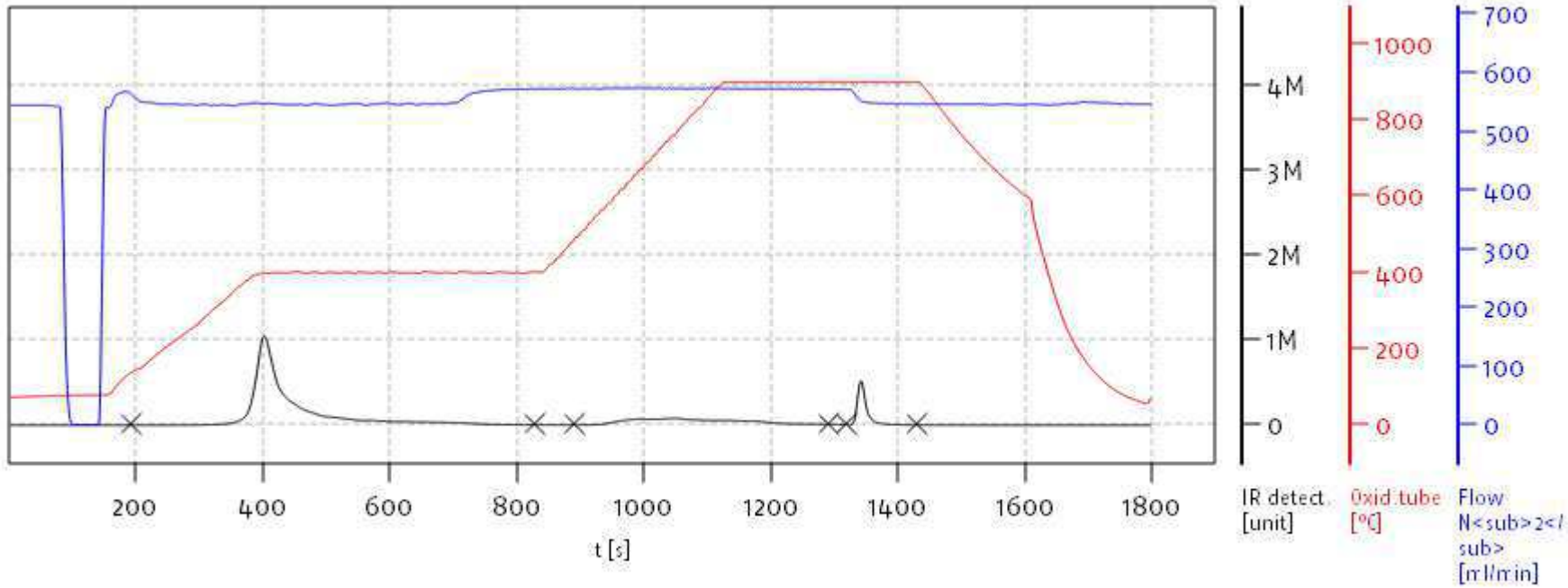
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
21	21	23A0179-08	523.50		CARBON	1/16/2023 7:37 PM	bl	0.745	2 344 092	0.923	0.088	325 497	628 081	0.657	0.178	0.9583	1.0000



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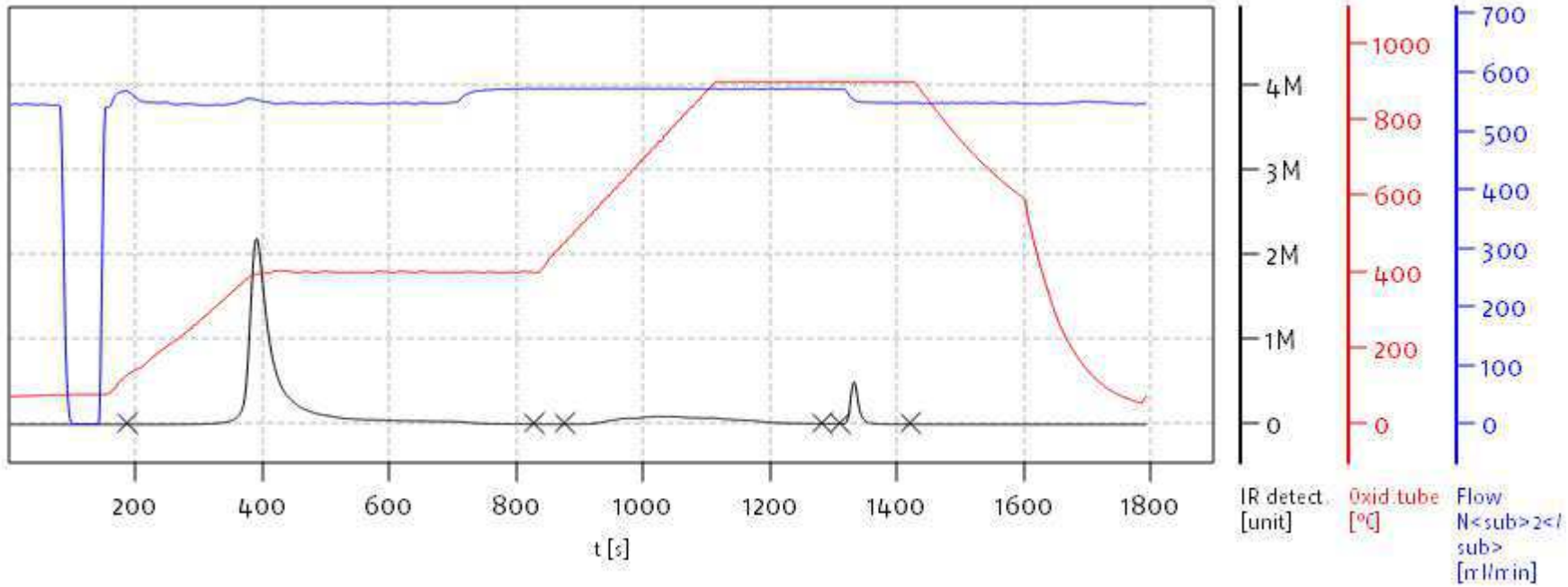
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
22	22	23A0179-09	533.30		CARBON	1/16/2023 8:08 PM	bl	1.117	3 775 743	1.320	0.074	283 141	726 044	1.043	0.203	0.9583	1.0000



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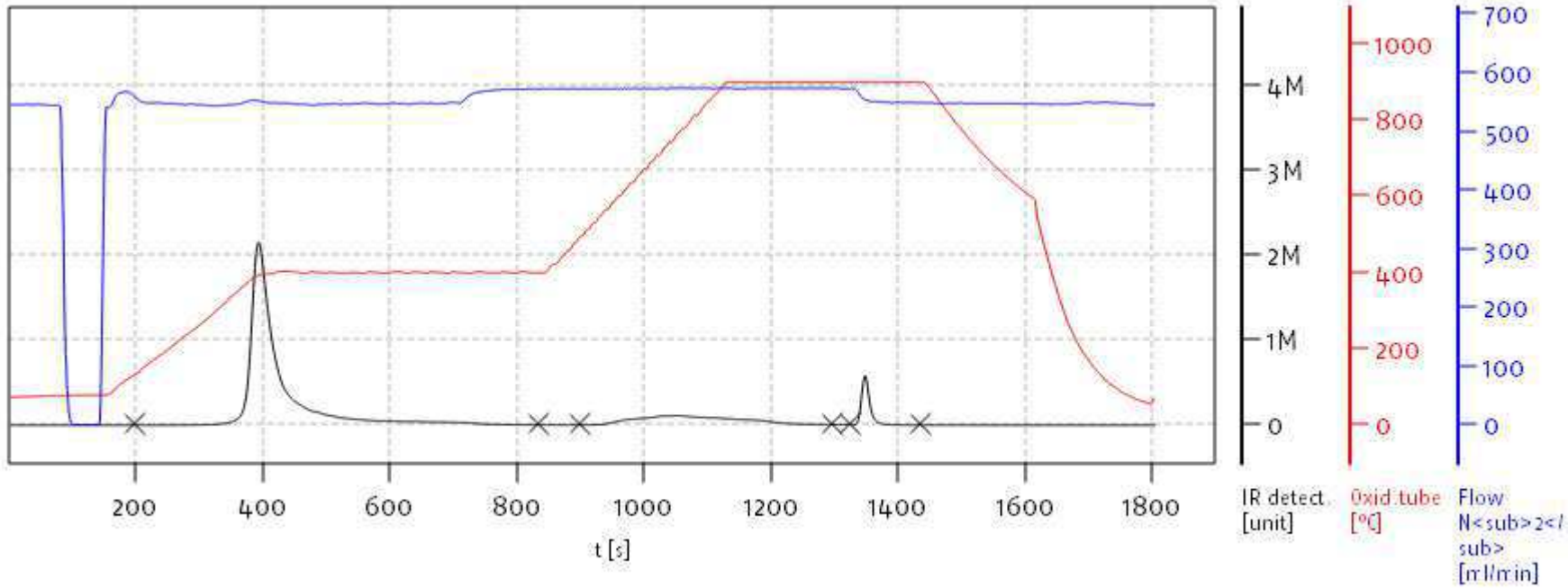
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
23	23	23A0179-10	539.70		CARBON	1/16/2023 8:38 PM	bl	1.151	3 895 653	1.379	0.088	331 906	822 198	1.064	0.228	0.9583	1.0000



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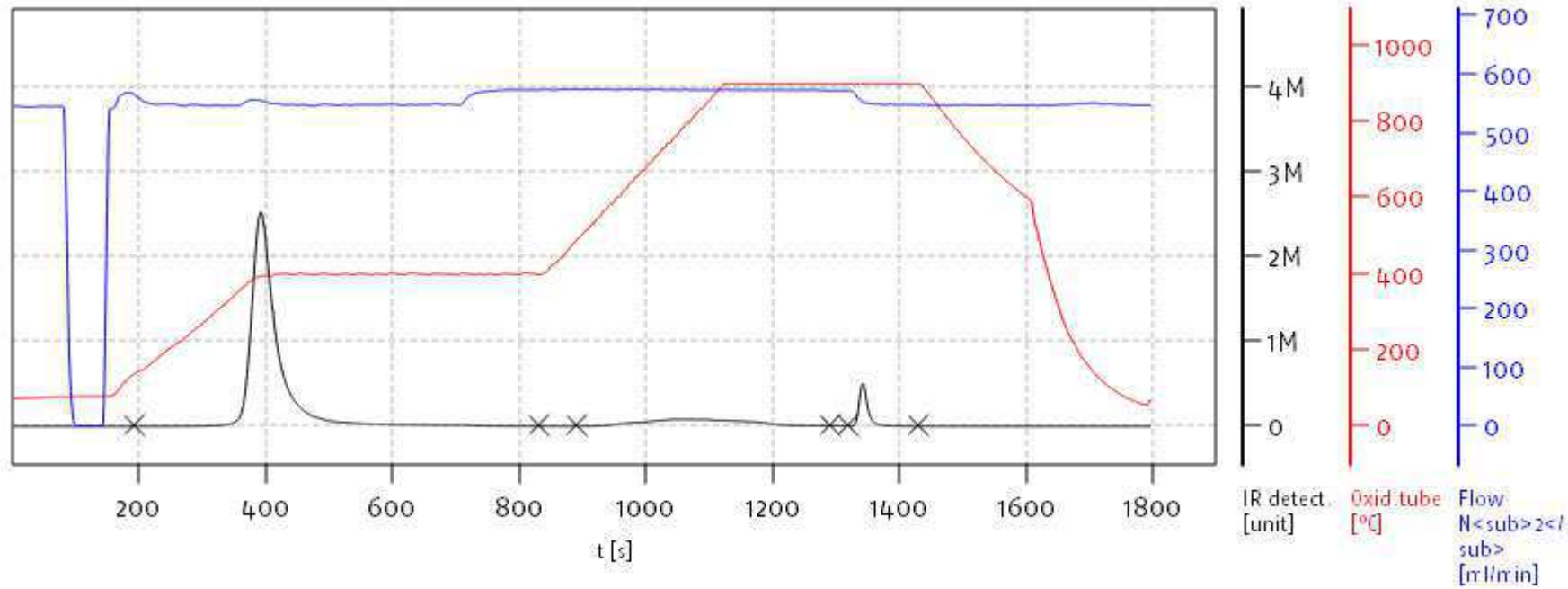
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
24	24	23A0179-11	533.30		CARBON	1/16/2023 9:08 PM	bl	1.297	4 402 925	1.473	0.080	301 709	632 226	1.217	0.176	0.9583	1.0000



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Balance: BAL3
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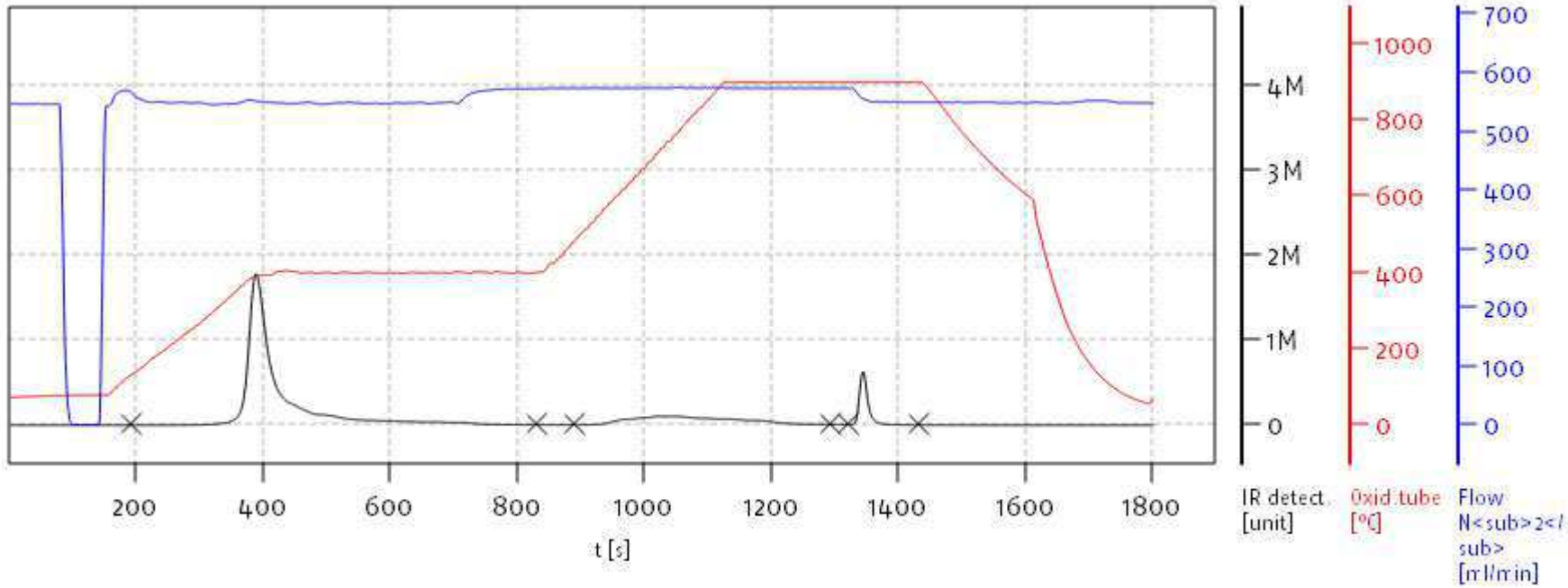
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
25	25	23A0179-12	507.00		CARBON	1/16/2023 9:39 PM	bl	1.069	3 319 753	1.307	0.106	373 163	805 635	0.964	0.238	0.9583	1.0000



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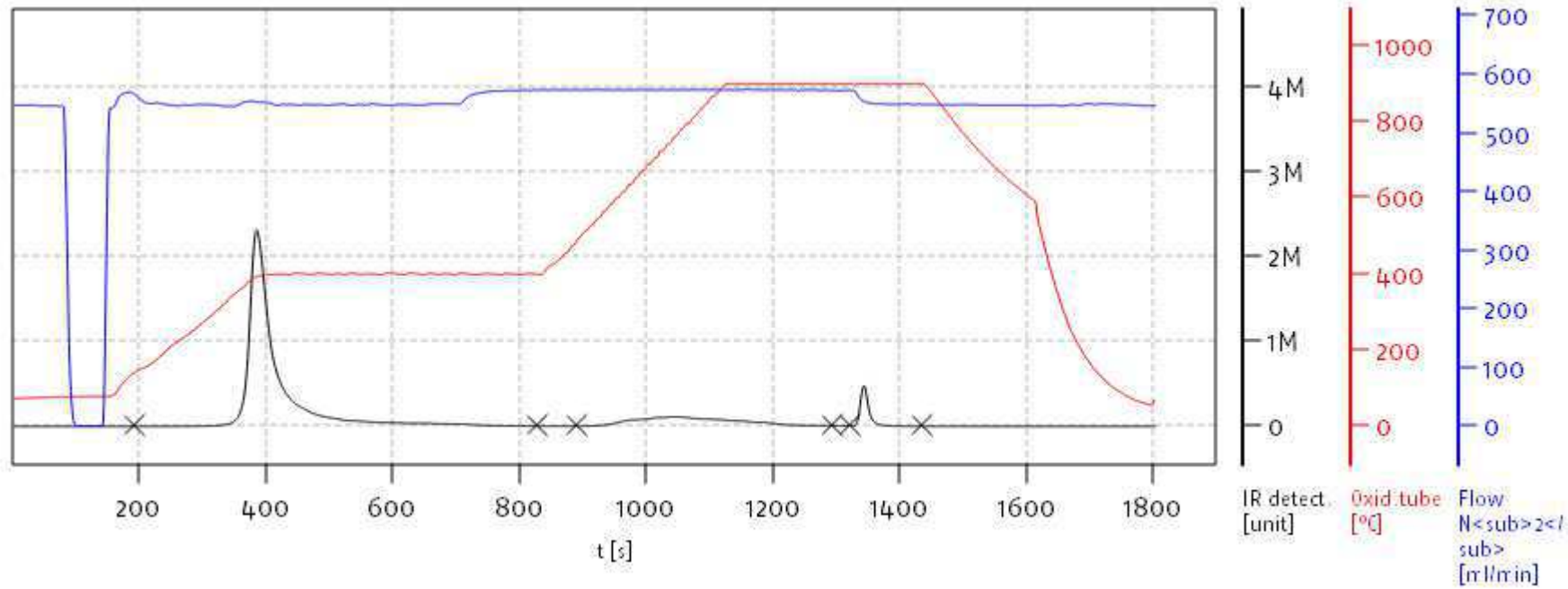
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
26	26	23A0206-01	538.90		CARBON	1/16/2023 10:09 PM	bl	1.185	4 065 661	1.411	0.073	281 380	811 312	1.112	0.225	0.9583	1.0000



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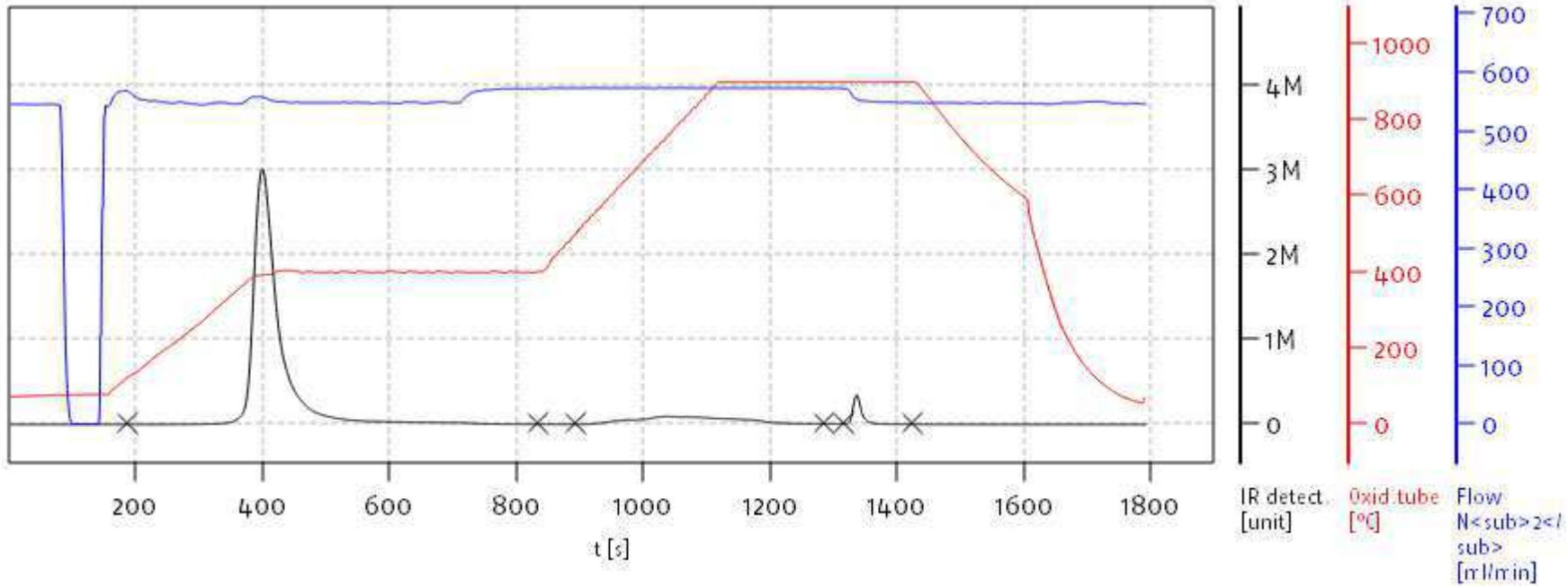
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
27	27	23A0206-02	595.70		CARBON	1/16/2023 10:40 PM	bl	1.331	5 179 834	1.503	0.047	208 772	687 920	1.283	0.172	0.9583	1.0000



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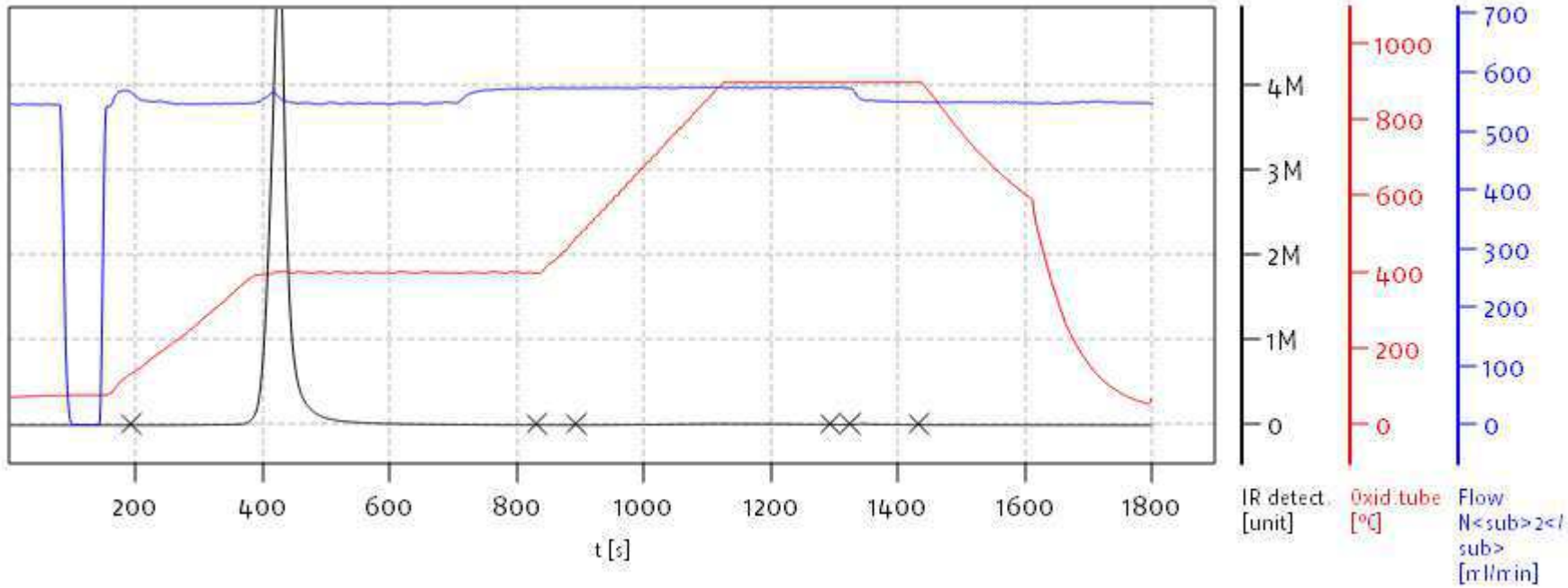
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
28	28	SLA0148-CCV2	21.20		CARBON	1/16/2023 11:10 PM	bl	44.489	6 382 964	45.293	0.008	27 673	136 581	44.481	0.804	0.9583	1.0000



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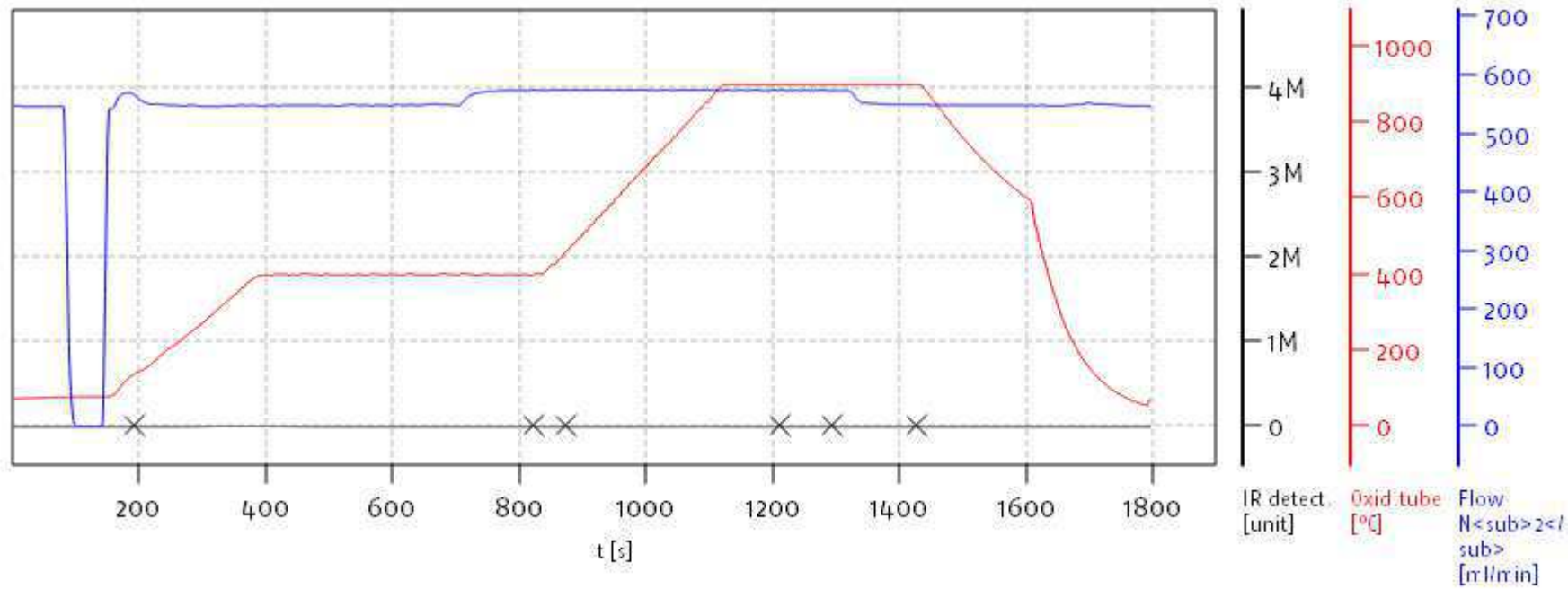
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
29	29	SLA0148-CCB2	509.10		CARBON	1/16/2023 11:40 PM	bl,C2u	0.001	29 959	0.001	0.000	569	4 288	0.001	0.000	0.9583	1.0000



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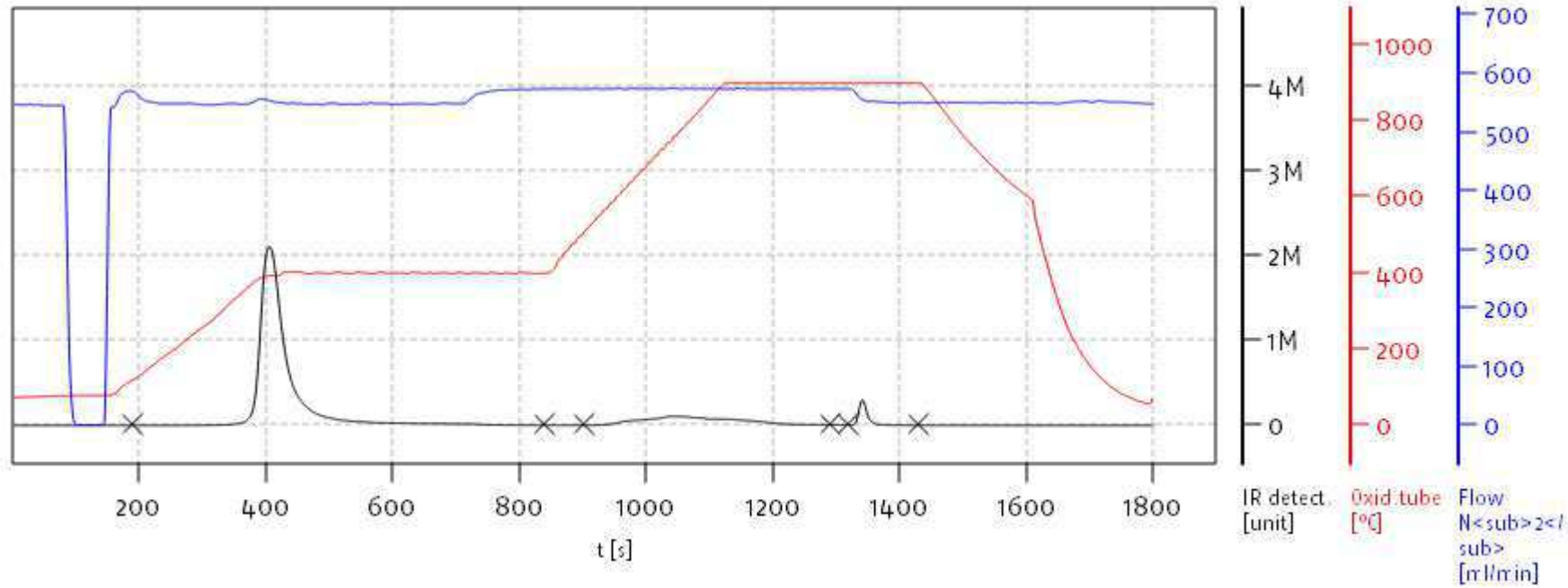
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
30	30	23A0206-03	527.60		CARBON	1/17/2023 12:11 AM	bl	1.101	3 783 421	1.304	0.045	179 081	717 491	1.056	0.203	0.9583	1.0000



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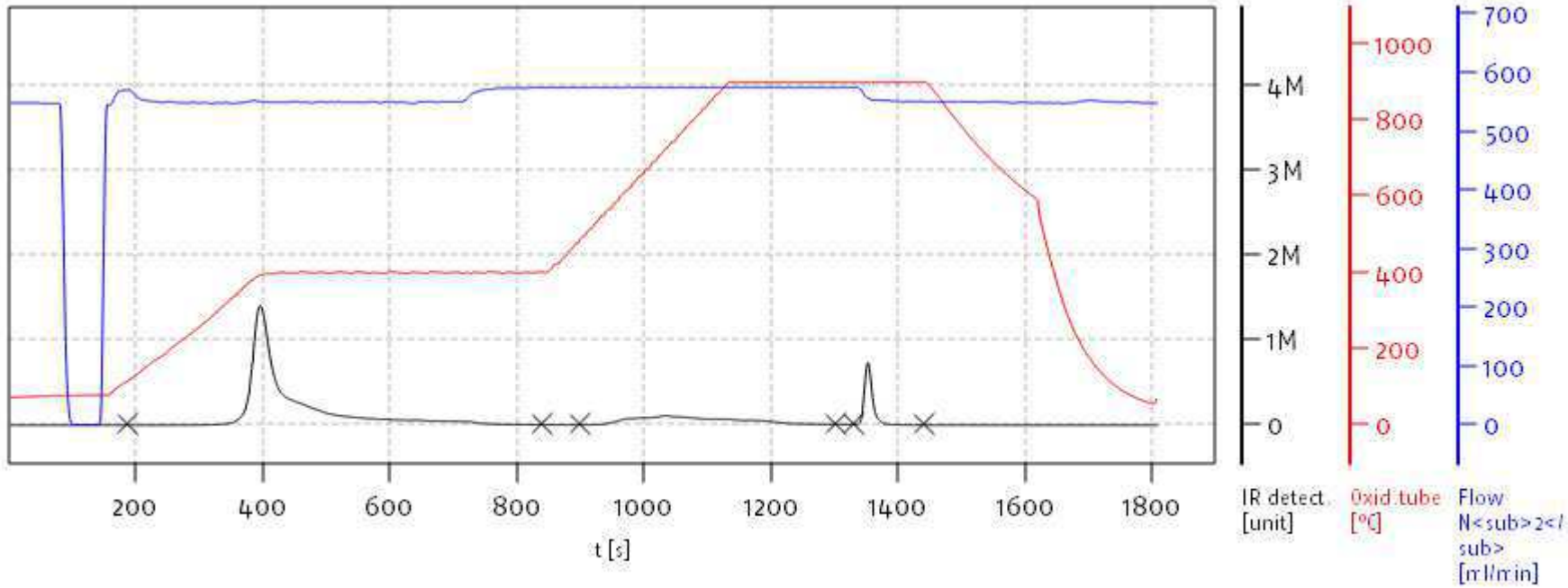
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
31	31	23A0206-04	565.50		CARBON	1/17/2023 12:41 AM	bl	0.919	3 121 037	1.128	0.107	416 415	790 792	0.812	0.209	0.9583	1.0000



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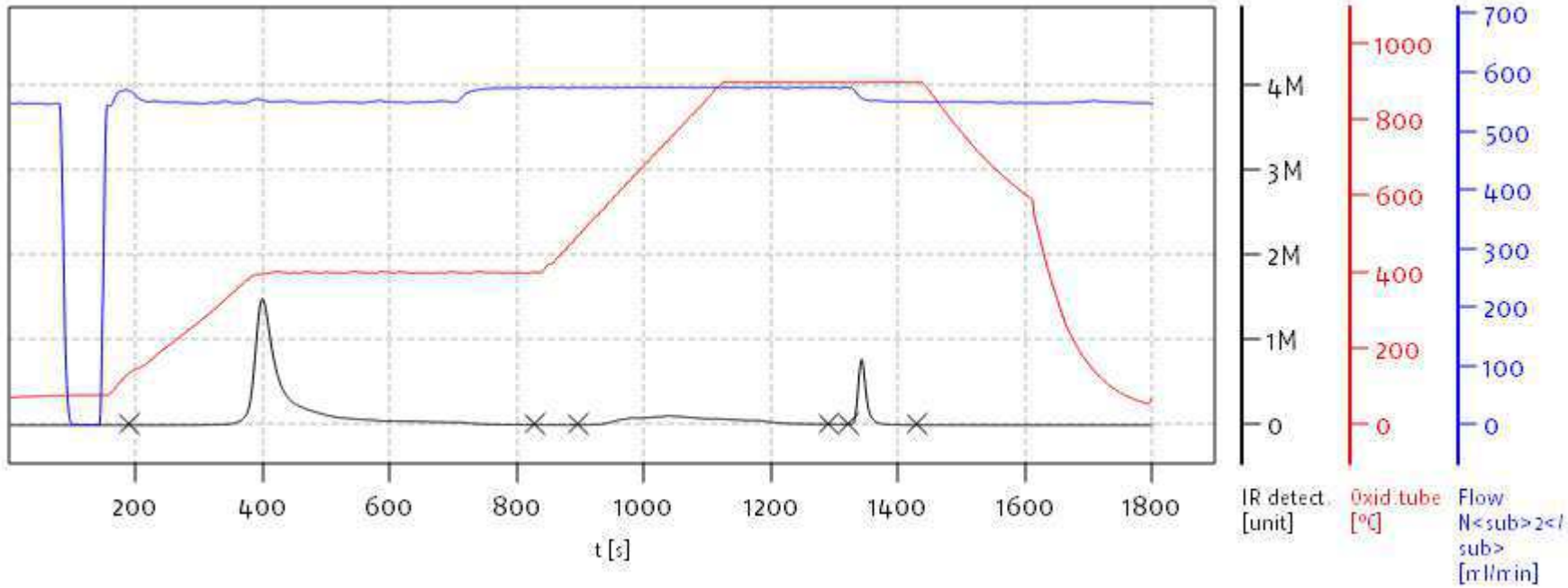
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
32	32	23A0206-05	534.60		CARBON	1/17/2023 1:12 AM	bl	0.927	2 930 701	1.152	0.121	445 880	801 402	0.806	0.224	0.9583	1.0000



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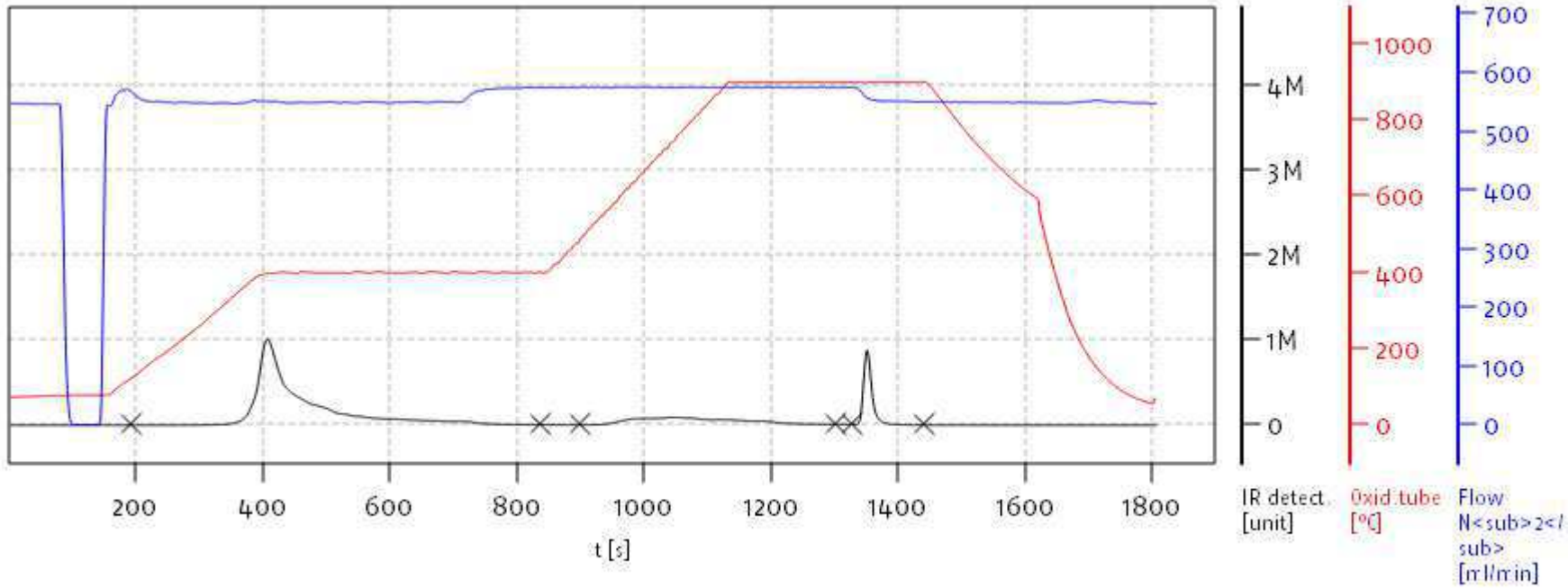
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
33	33	23A0206-06	546.00		CARBON	1/17/2023 1:42 AM	bl	0.919	2 897 945	1.113	0.139	517 584	708 789	0.780	0.193	0.9583	1.0000



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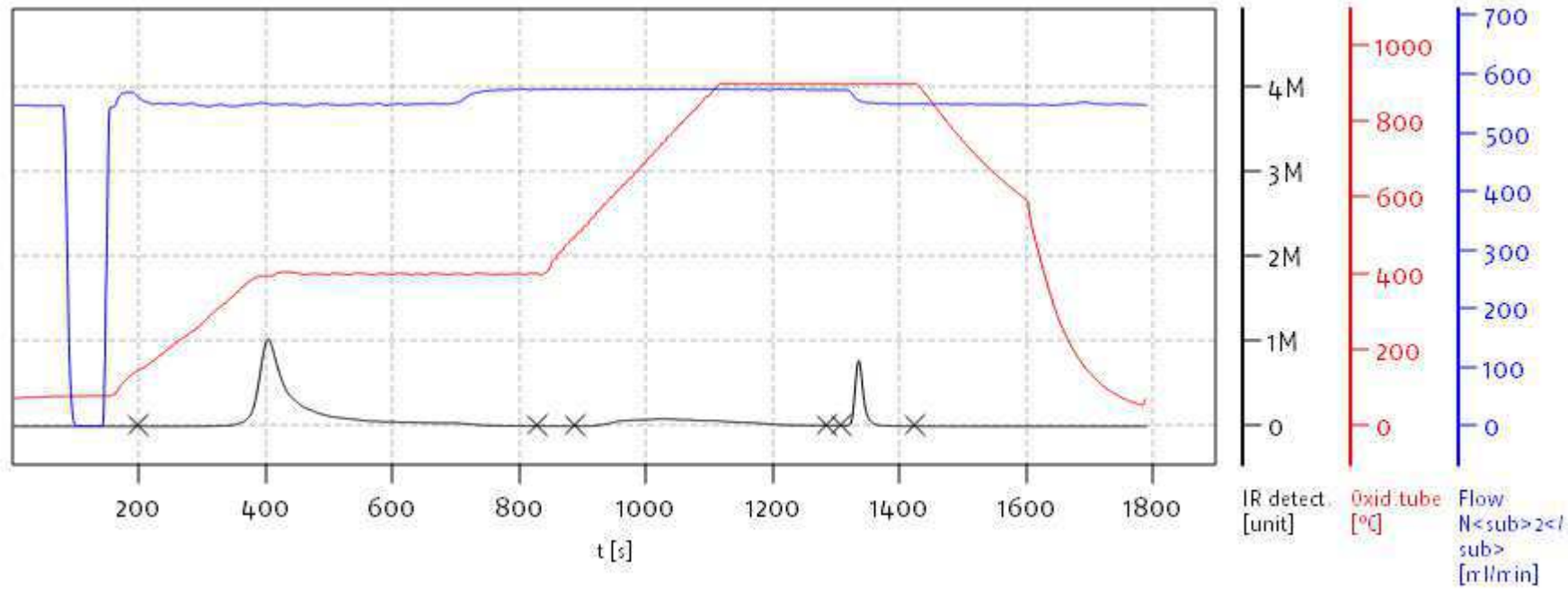
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
34	34	23A0206-07	541.40		CARBON	1/17/2023 2:12 AM	bl	0.816	2 552 373	1.004	0.123	458 212	683 862	0.692	0.188	0.9583	1.0000



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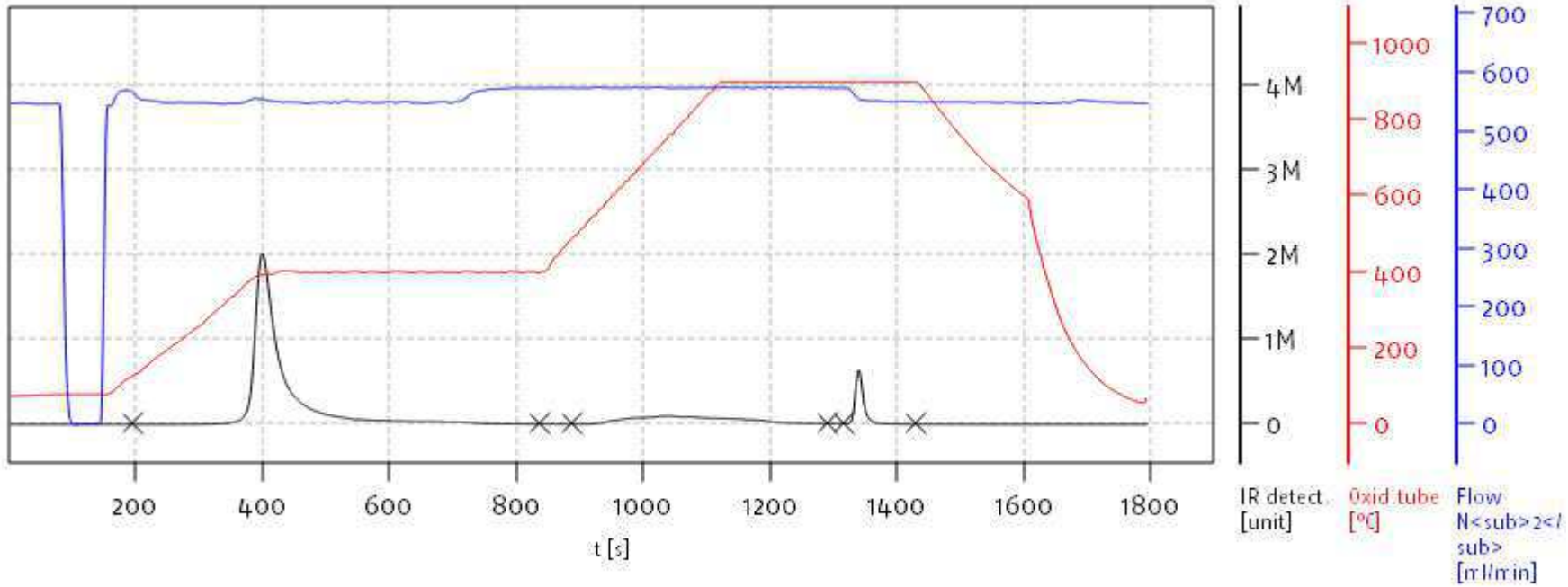
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
35	35	23A0206-08	542.60		CARBON	1/17/2023 2:43 AM	bl	1.095	3 672 818	1.308	0.098	371 616	771 677	0.997	0.213	0.9583	1.0000



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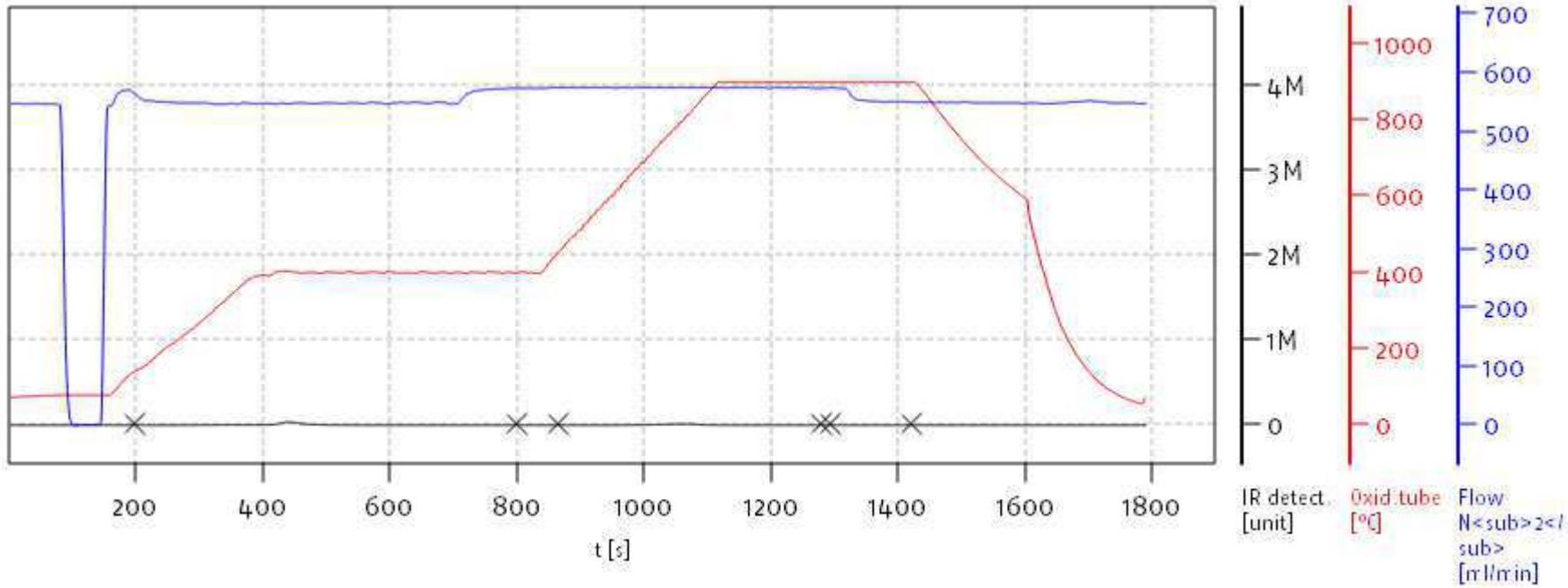
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
36	36	BLA0321-MRL1	551.00		CARBON	1/17/2023 3:13 AM	bl,C2u	0.013	73 850	0.016	0.000	351	37 528	0.013	0.003	0.9583	1.0000



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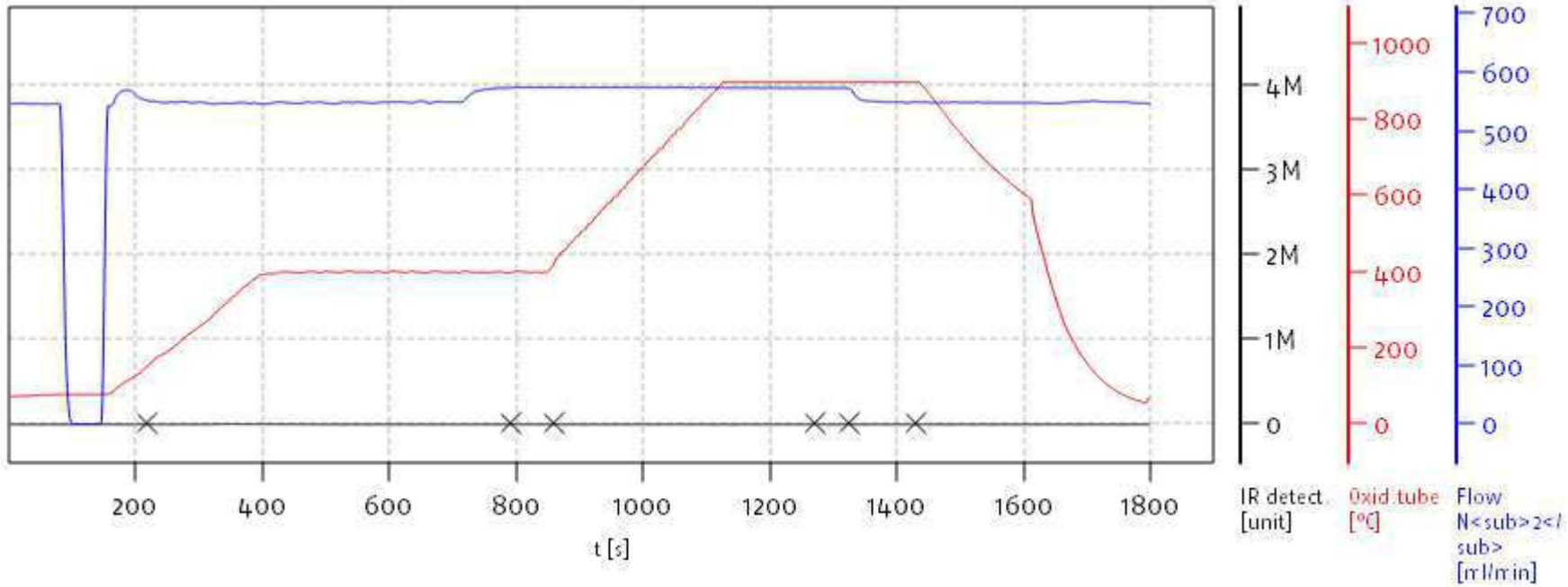
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
37	37	BLA0321-BLK1	507.90		CARBON	1/17/2023 3:43 AM	bl,C2u	0.000	16 938	0.000	0.000	340	2 891	0.000	0.000	0.9583	1.0000



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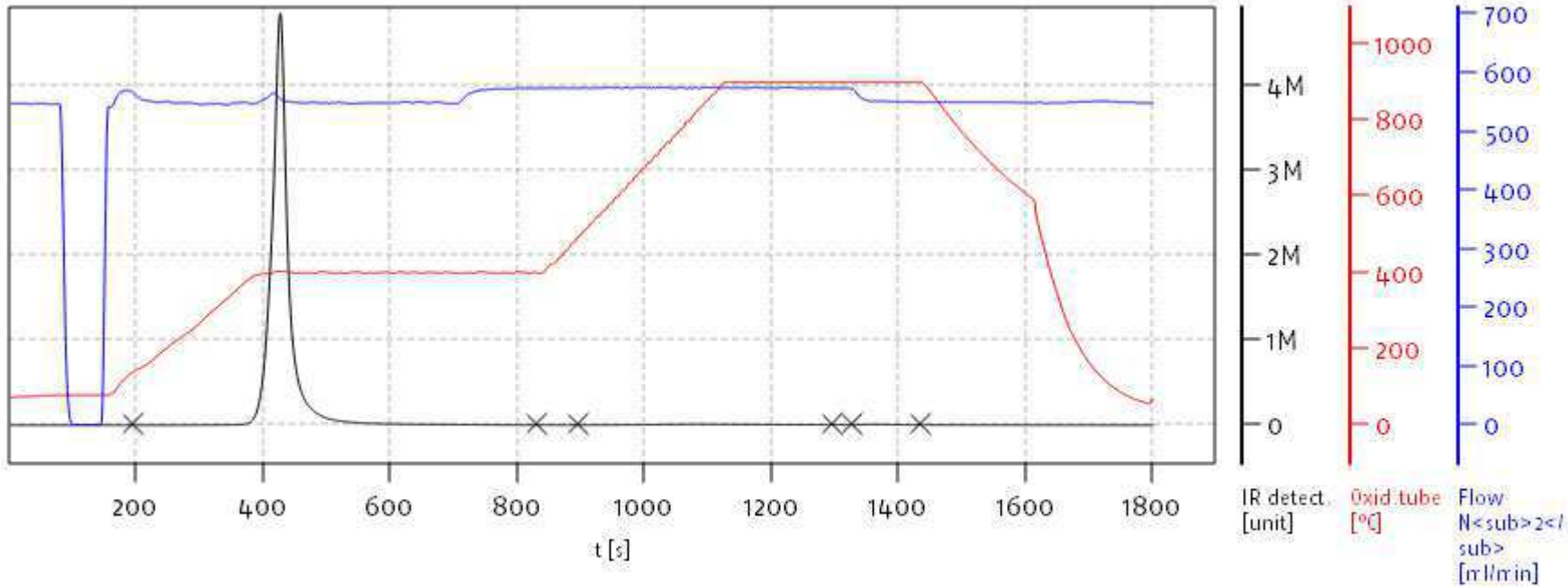
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
38	38	BLA0321-BS1	18.50		CARBON	1/17/2023 4:14 AM	bl	43.915	5 502 834	44.504	0.000	22 858	96 952	43.915	0.589	0.9583	1.0000



Name:

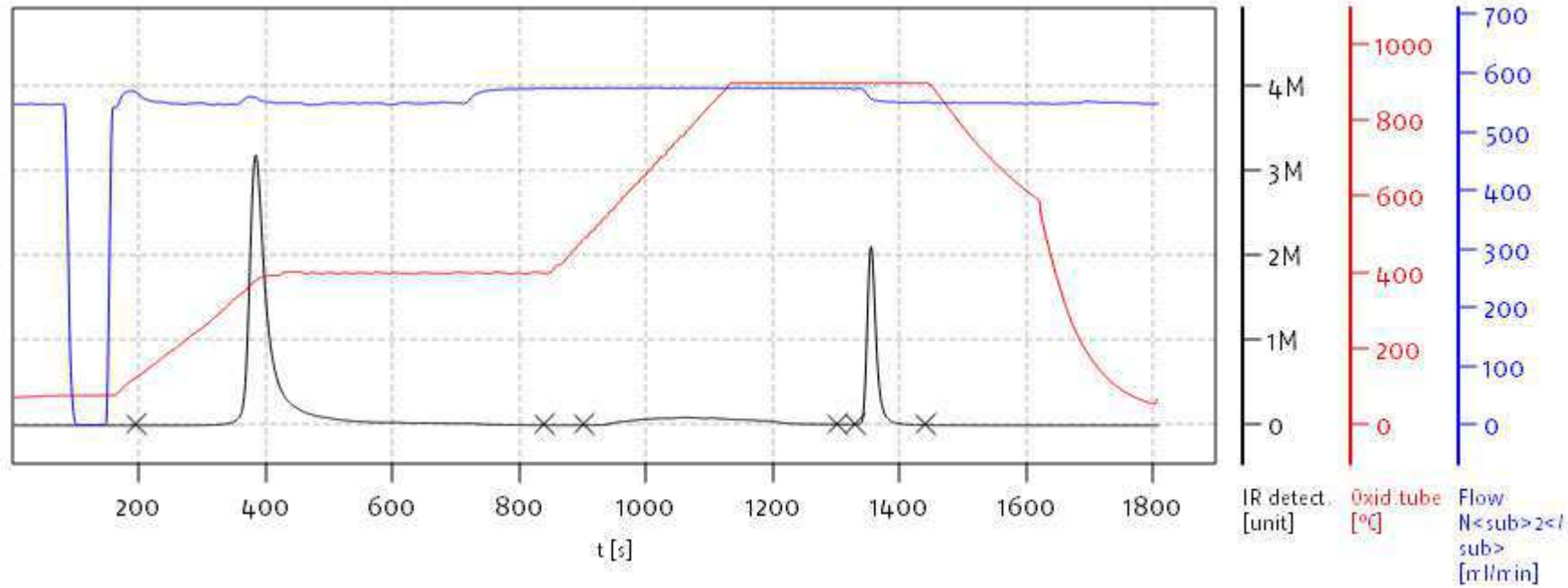
Access: soliTOC superuser

Date: Wed Jan 18 13:37:19 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
39	39	BLA0321-SRM1	294.00		CARBON	1/17/2023 4:44 AM	bl	2.898	4 412 704	3.287	0.684	1 326 301	765 392	2.213	0.389	0.9583	1.0000



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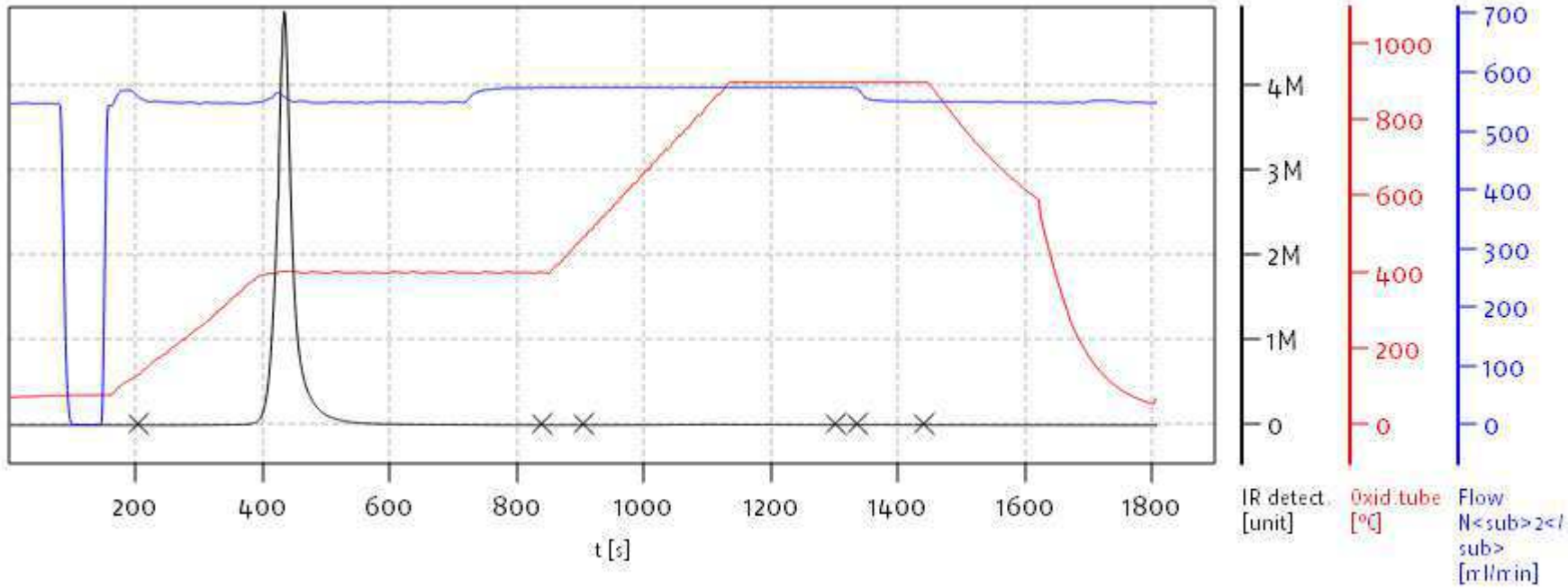
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
40	40	SLA0148-CCV3	18.20		CARBON	1/17/2023 5:15 AM	bl	44.338	5 465 921	44.656	0.000	13 304	63 966	44.338	0.318	0.9583	1.0000



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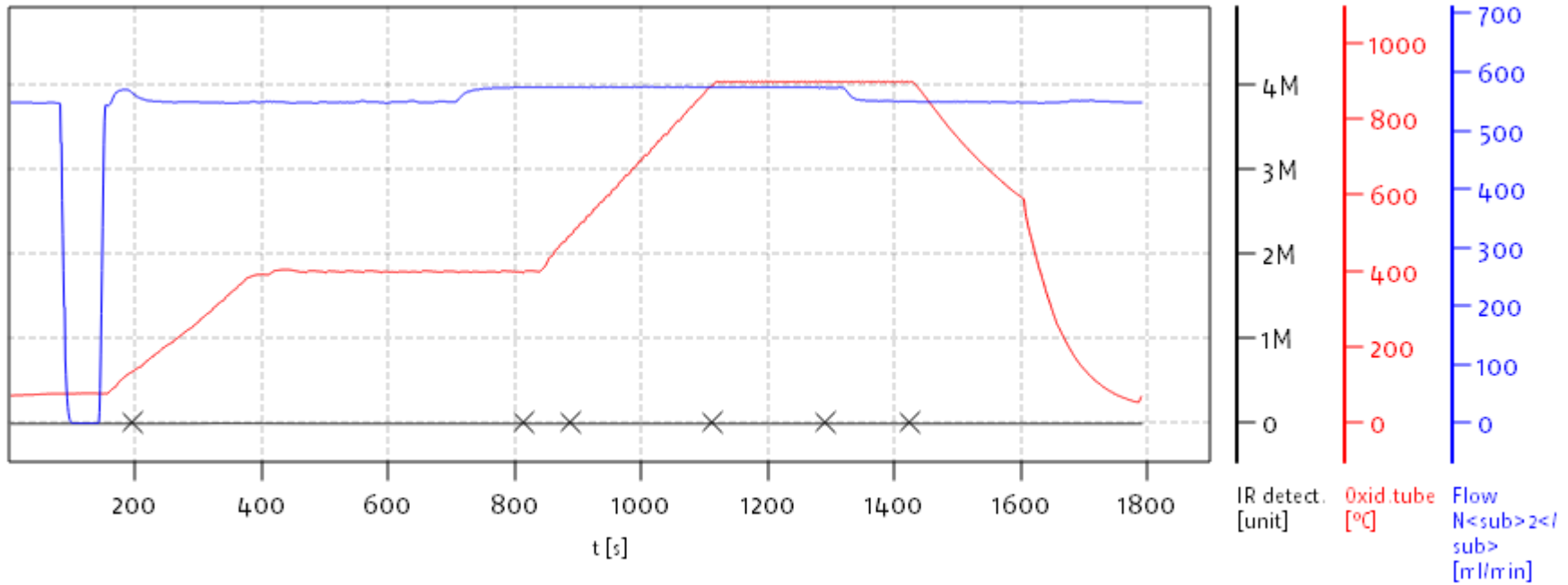
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
41	41	SLA0148-CCB3	512.60		CARBON	1/17/2023 5:45 AM	bl,C3u,C2u	0.000	16 219	0.000	0.000	695	406	0.000	0.000	0.9583	1.0000



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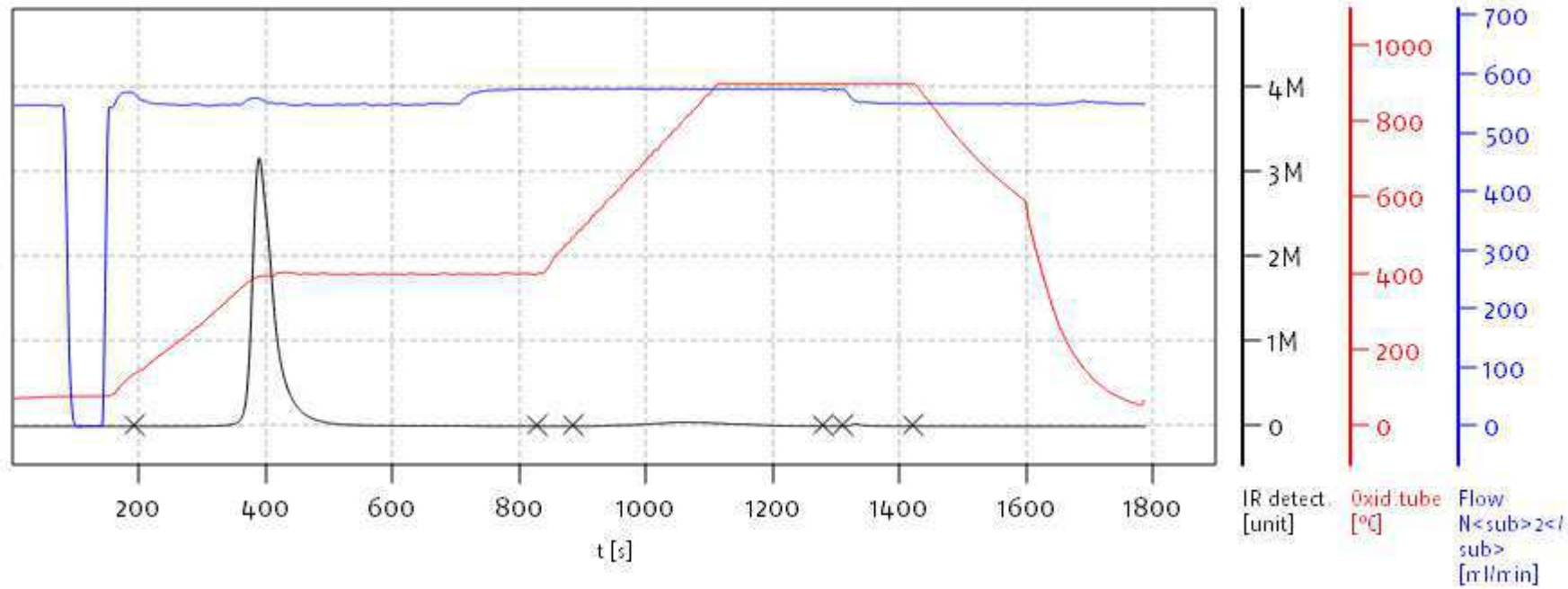
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
42	42	23A0206-09	535.50		CARBON	1/17/2023 6:15 AM	bl	1.301	4 722 741	1.381	0.000	25 580	301 825	1.301	0.080	0.9583	1.0000



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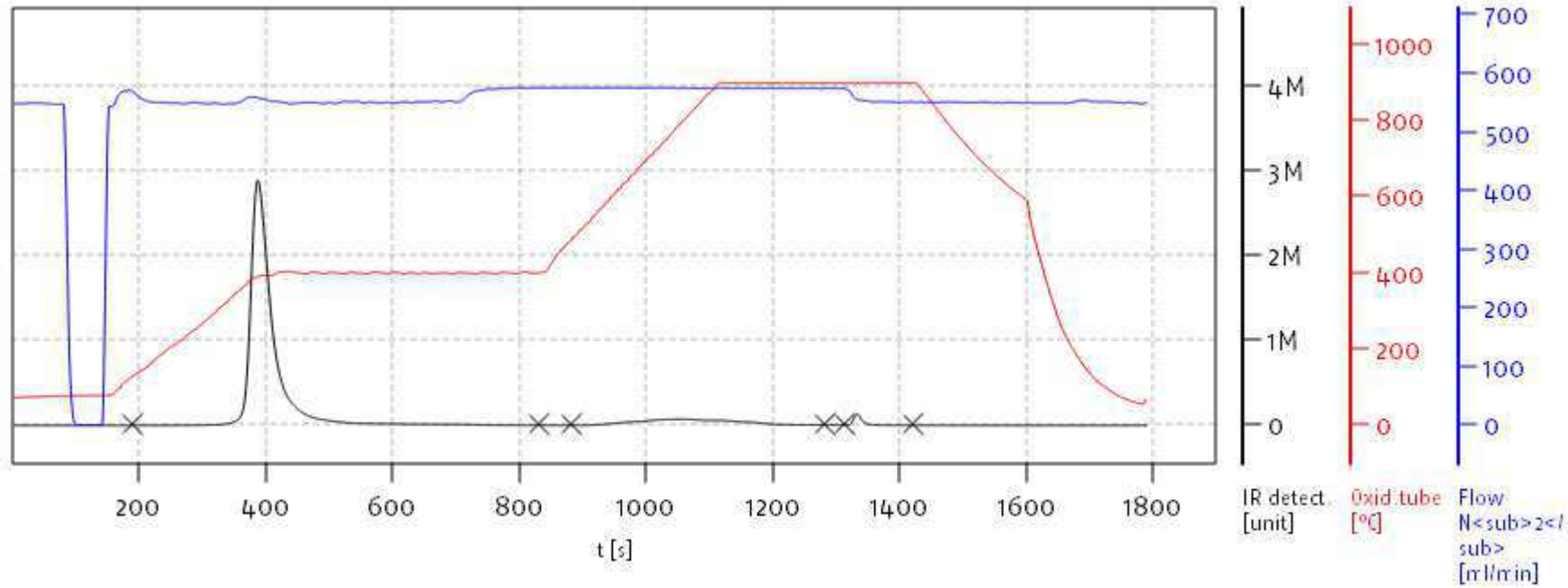
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
43	43	BLA0321-DUP1	540.40		CARBON	1/17/2023 6:45 AM	bl	1.192	4 311 721	1.335	0.016	81 914	525 701	1.176	0.143	0.9583	1.0000



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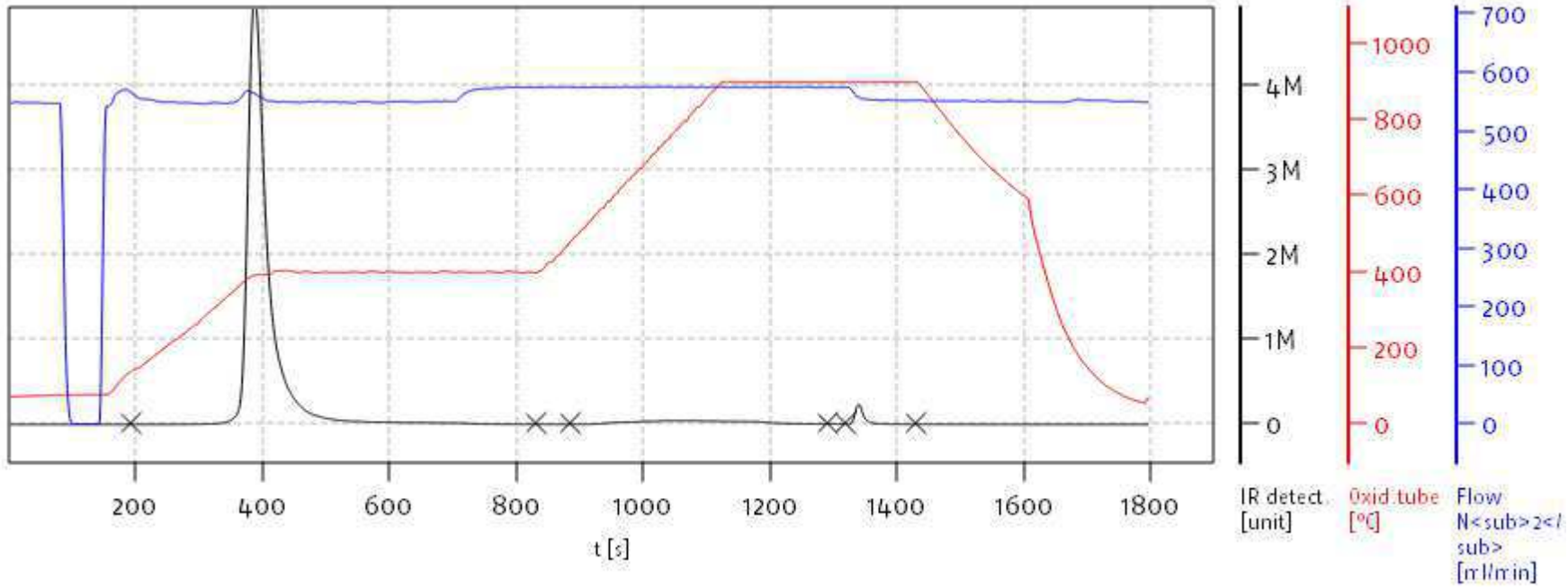
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
44	44	BLA0321-MS1	531.20	0.0086	CARBON	1/17/2023 7:16 AM	bl	1.979	6 987 269	2.082	0.035	145 757	381 087	1.944	0.103	0.9583	1.0000



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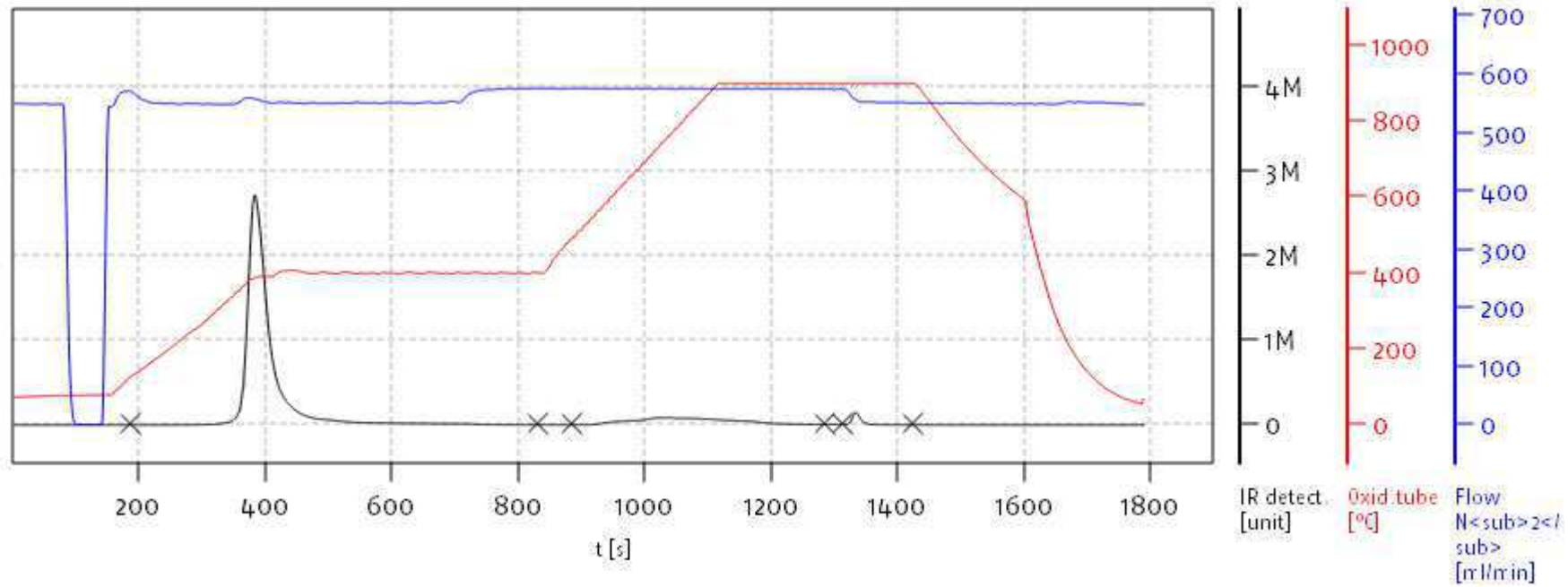
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
45	45	23A0206-10	530.00		CARBON	1/17/2023 7:46 AM	bl	1.160	4 102 333	1.332	0.019	91 444	614 819	1.141	0.172	0.9583	1.0000



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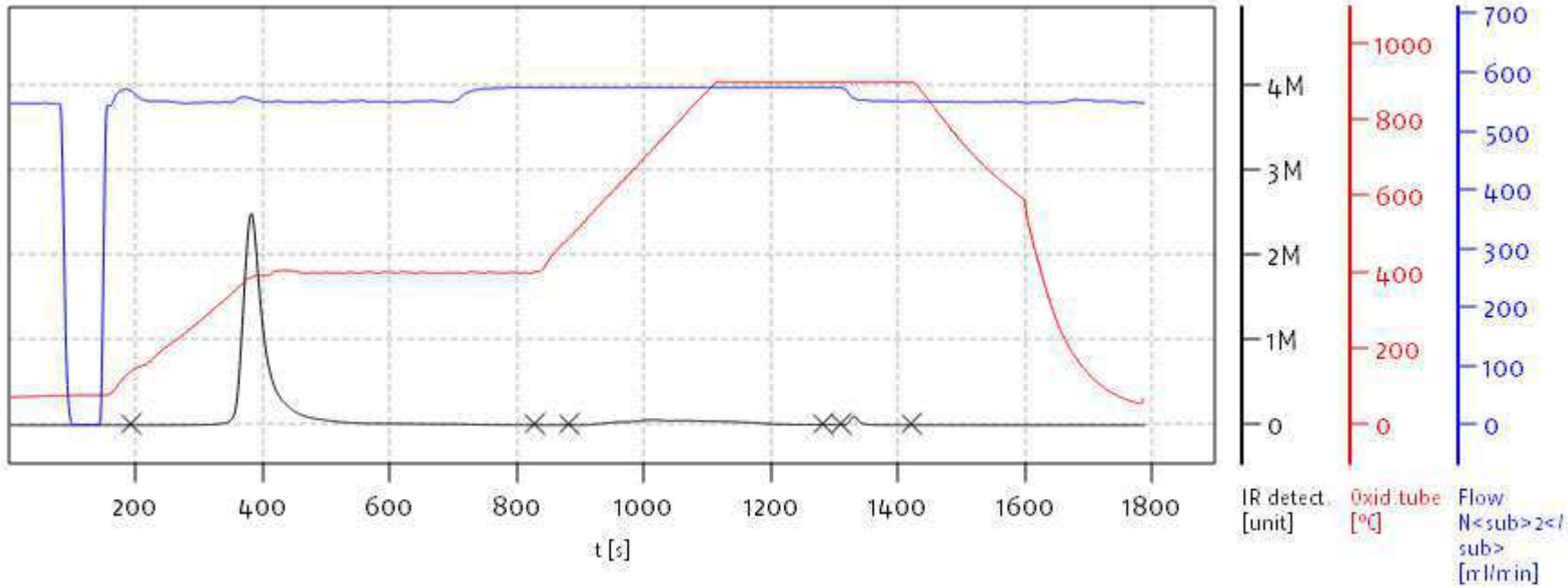
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
46	46	23A0206-11	503.00		CARBON	1/17/2023 8:16 AM	bl	1.139	3 847 919	1.272	0.012	65 258	459 603	1.127	0.133	0.9583	1.0000



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Balance: BAL3
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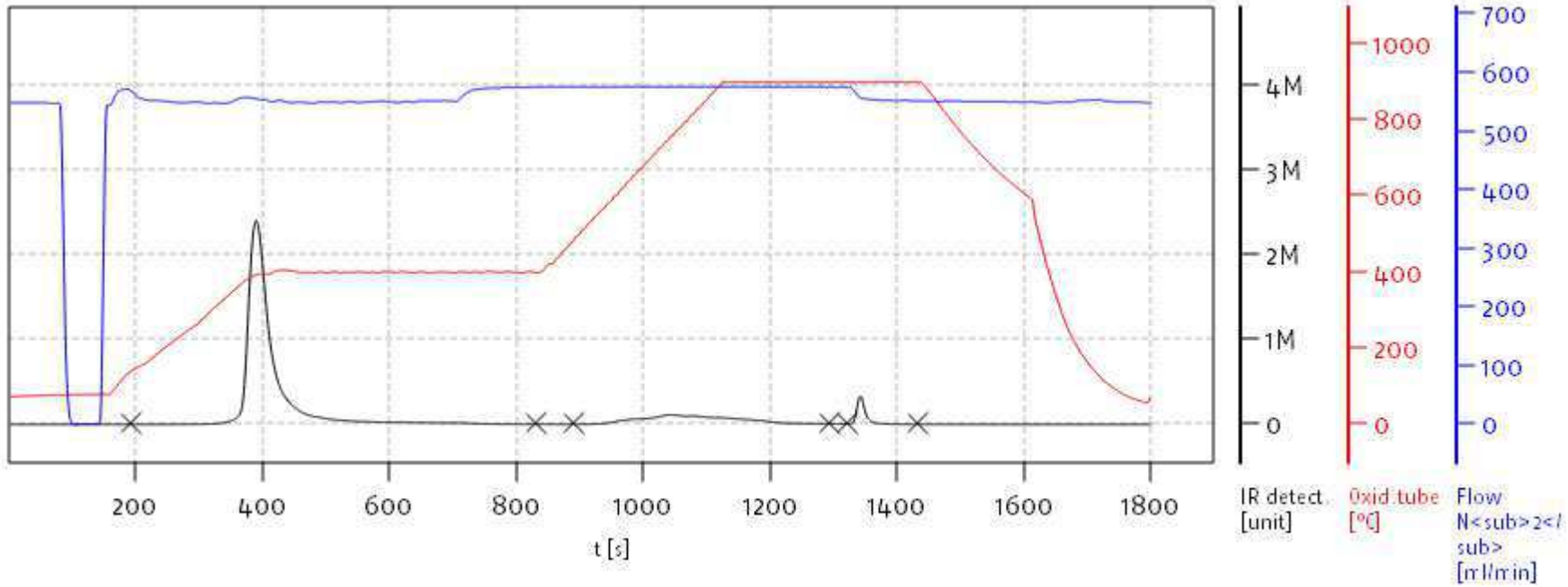
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
47	47	23A0206-12	521.90		CARBON	1/17/2023 8:47 AM	bl	1.141	3 858 454	1.356	0.051	199 526	752 031	1.089	0.215	0.9583	1.0000



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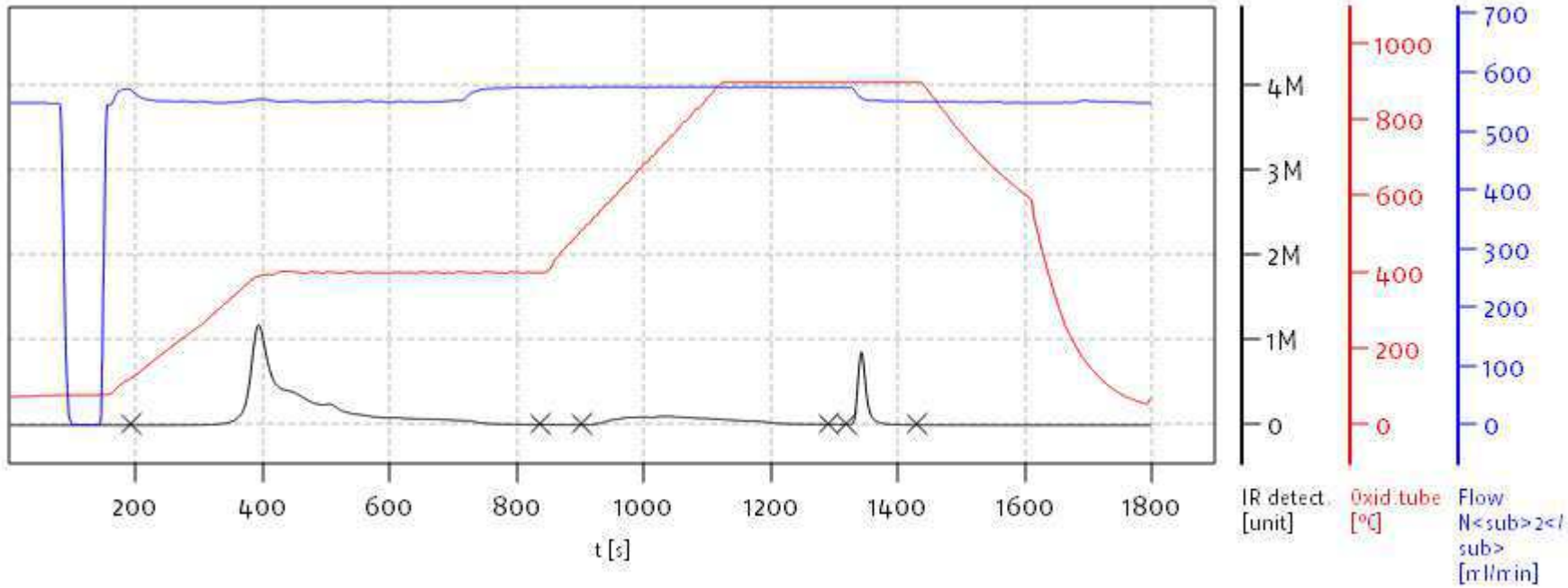
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
48	48	23A0206-13	594.10		CARBON	1/17/2023 9:17 AM	bl	0.981	3 446 021	1.183	0.127	512 506	803 767	0.854	0.203	0.9583	1.0000



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Balance: BAL3
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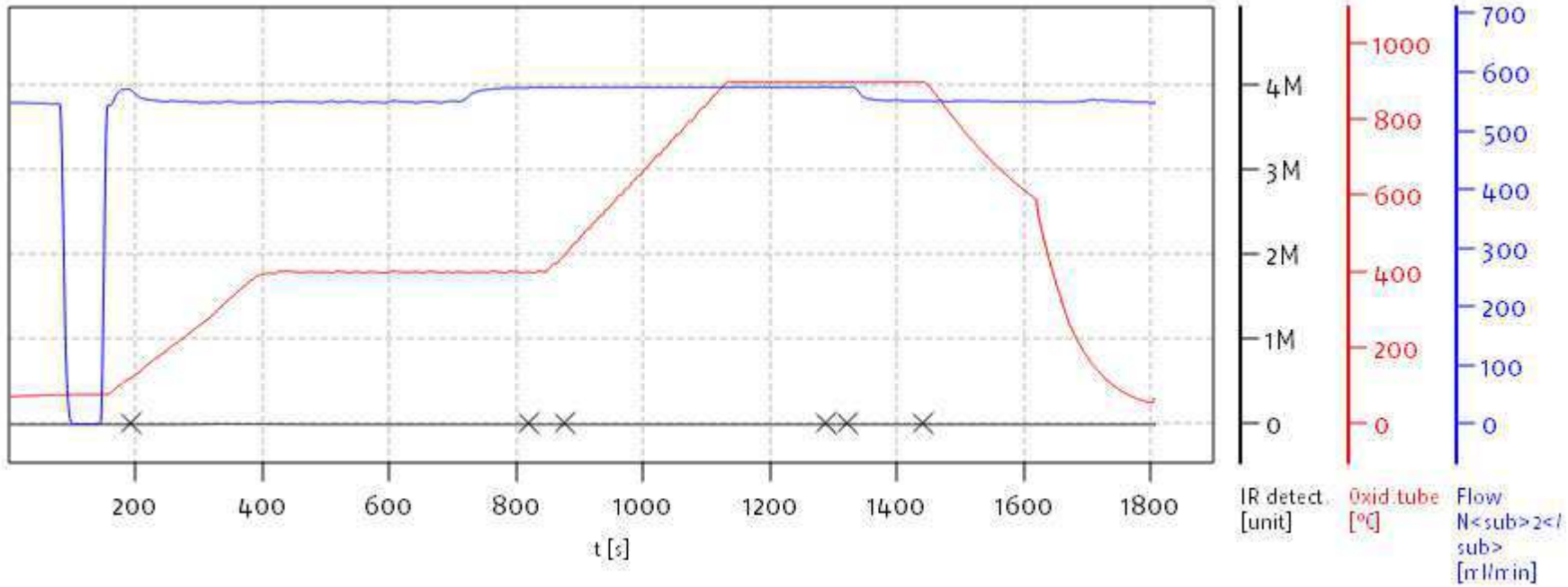
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
49	49	BLANK	1.00		CARBON	1/ 17/2023 9:48 AM	bl	0.000	22 067	0.000	0.000	258	1 144	0.000	0.000	0.9583	1.0000



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Balance: BAL3
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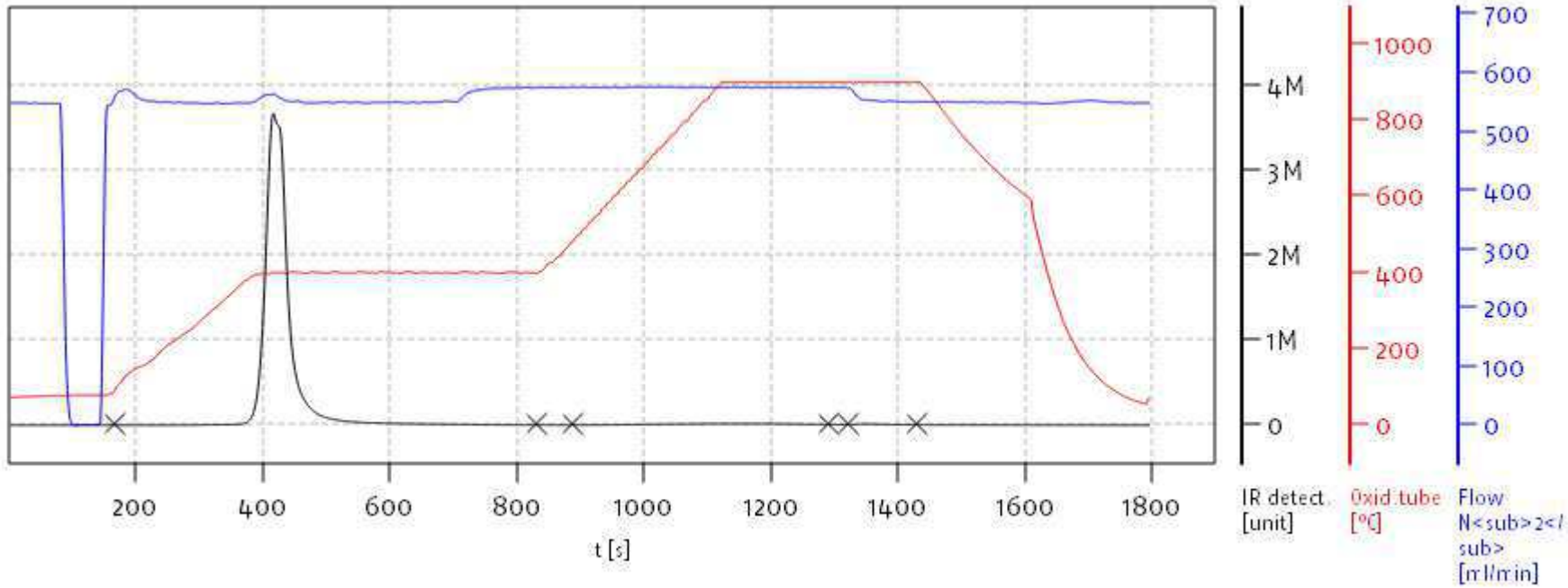
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
50	50	Dfactor	19.70		CARBON	1/17/2023 10:18 AM	bl	44.505	5 734 193	45.613	0.059	34 072	167 607	44.446	1.109	0.9910	1.0000



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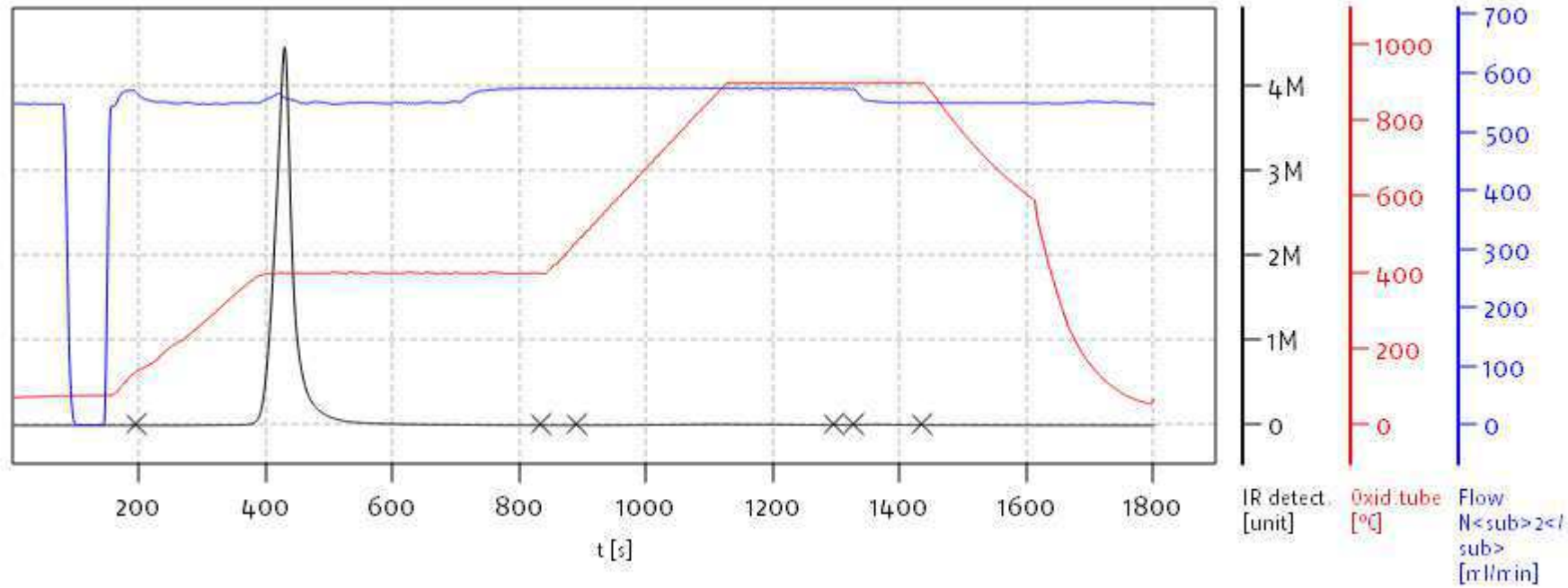
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
51	51	Dfactor	19.10		CARBON	1/17/2023 10:48 AM	bl	44.446	5 655 417	45.088	0.000	24 705	105 786	44.446	0.642	0.9742	1.0000



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Balance: BAL3
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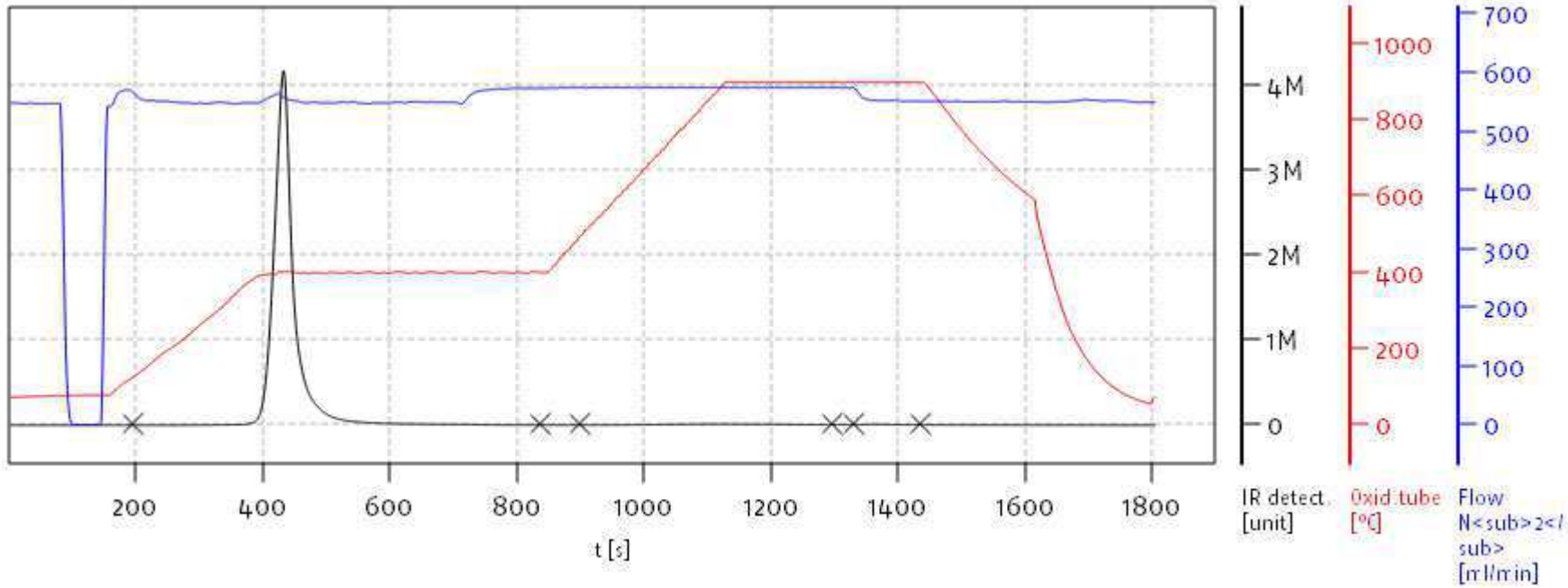
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
52	52	SLA0148-CCV4	18.90		CARBON	1/17/2023 11:19 AM	bl	44.605	5 568 819	45.299	0.000	26 421	111 248	44.605	0.694	0.9826	1.0000



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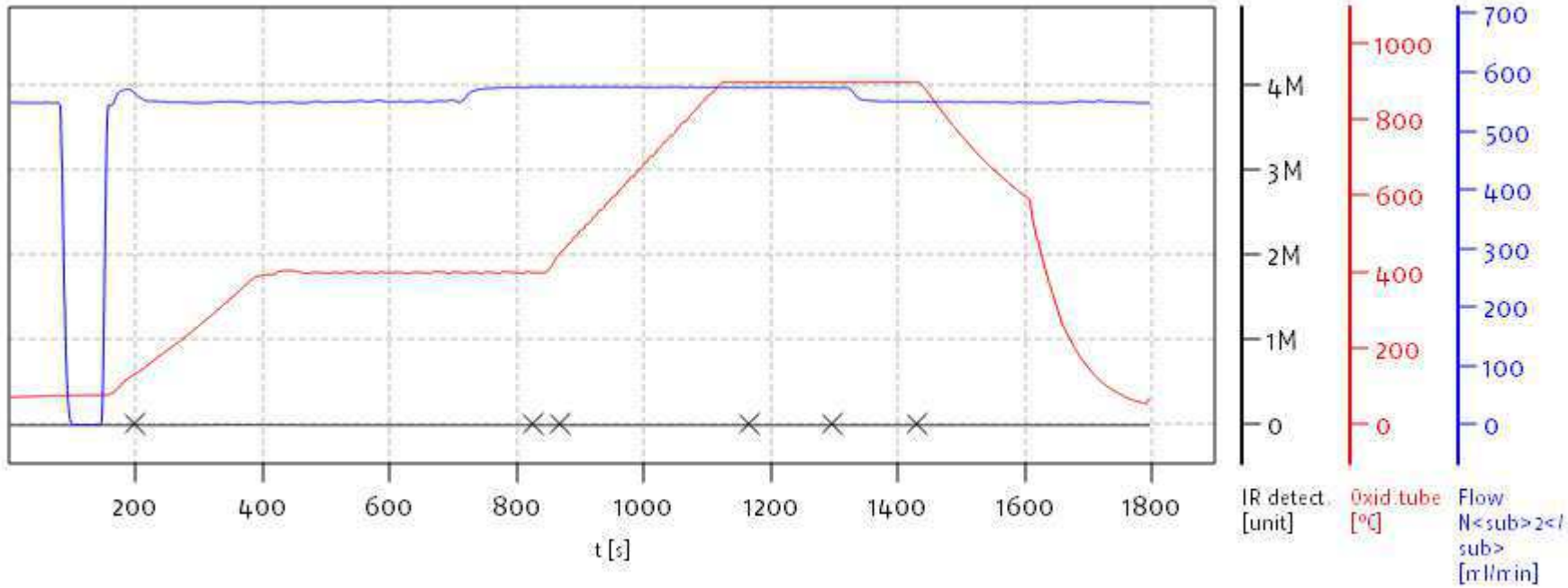
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
53	53	SLA0148-CCB4	509.70		CARBON	1/17/2023 11:49 AM	bl,C3u,C2u	0.000	14 661	0.000	0.000	1 210	1 349	0.000	0.000	0.9826	1.0000



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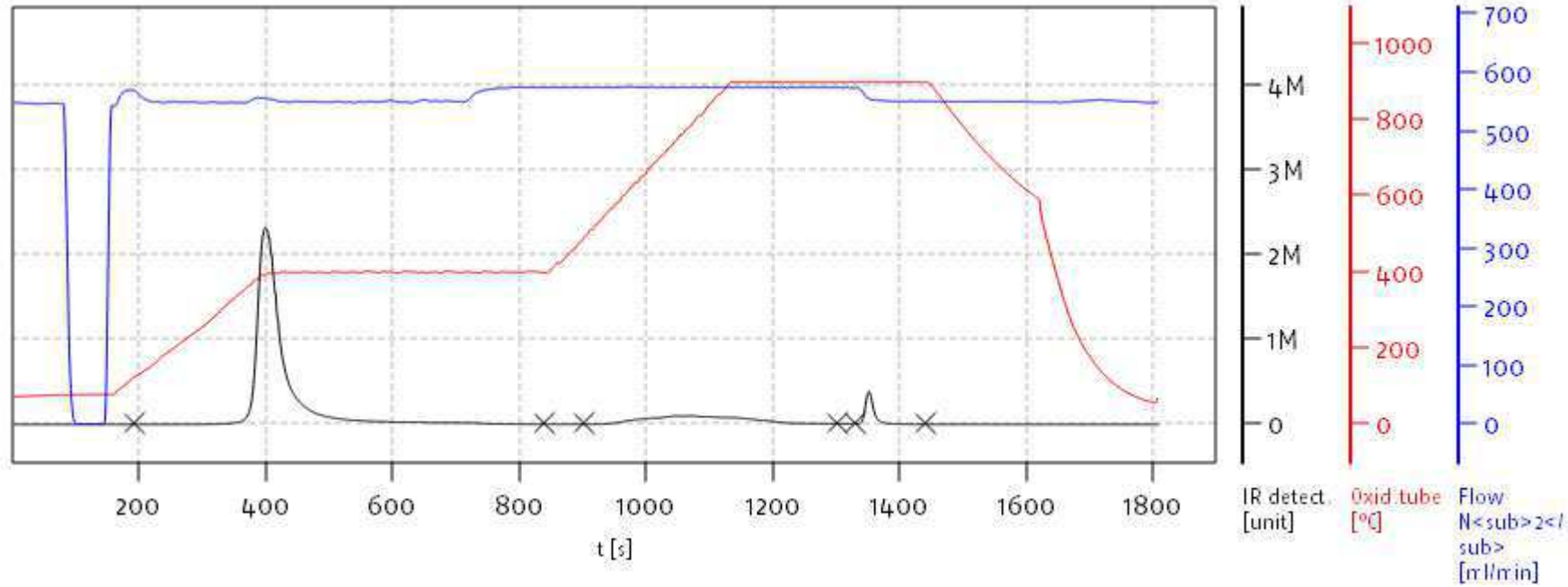
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
54	54	23A0206-14	505.80		CARBON	1/17/2023 12:20 PM	bl	1.246	3 962 404	1.465	0.062	228 979	743 918	1.184	0.220	0.9826	1.0000



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Balance: BAL3
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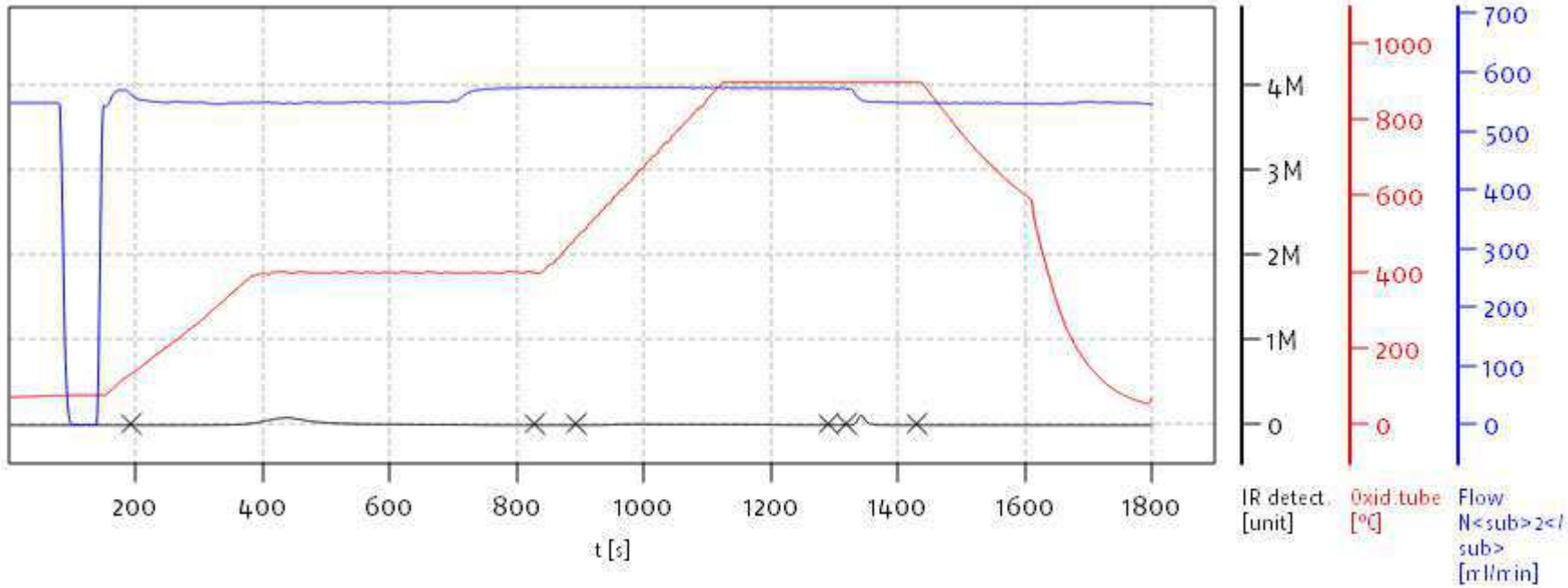
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
55	55	23A0207-01	524.80		CARBON	1/17/2023 12:50 PM	bl	0.108	360 901	0.126	0.011	64 298	88 542	0.097	0.018	0.9826	1.0000



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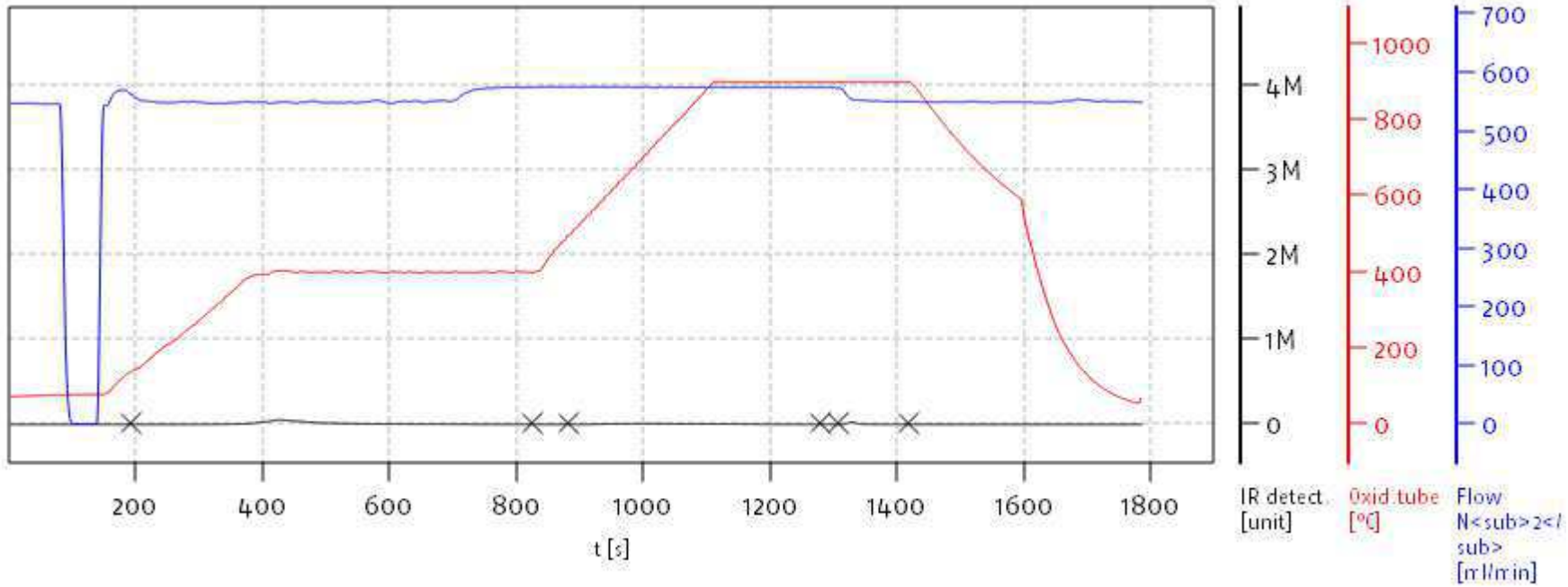
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
56	56	23A0207-02	505.10		CARBON	1/17/2023 1:20 PM	bl	0.057	214 540	0.069	0.000	17 142	66 276	0.057	0.012	0.9826	1.0000



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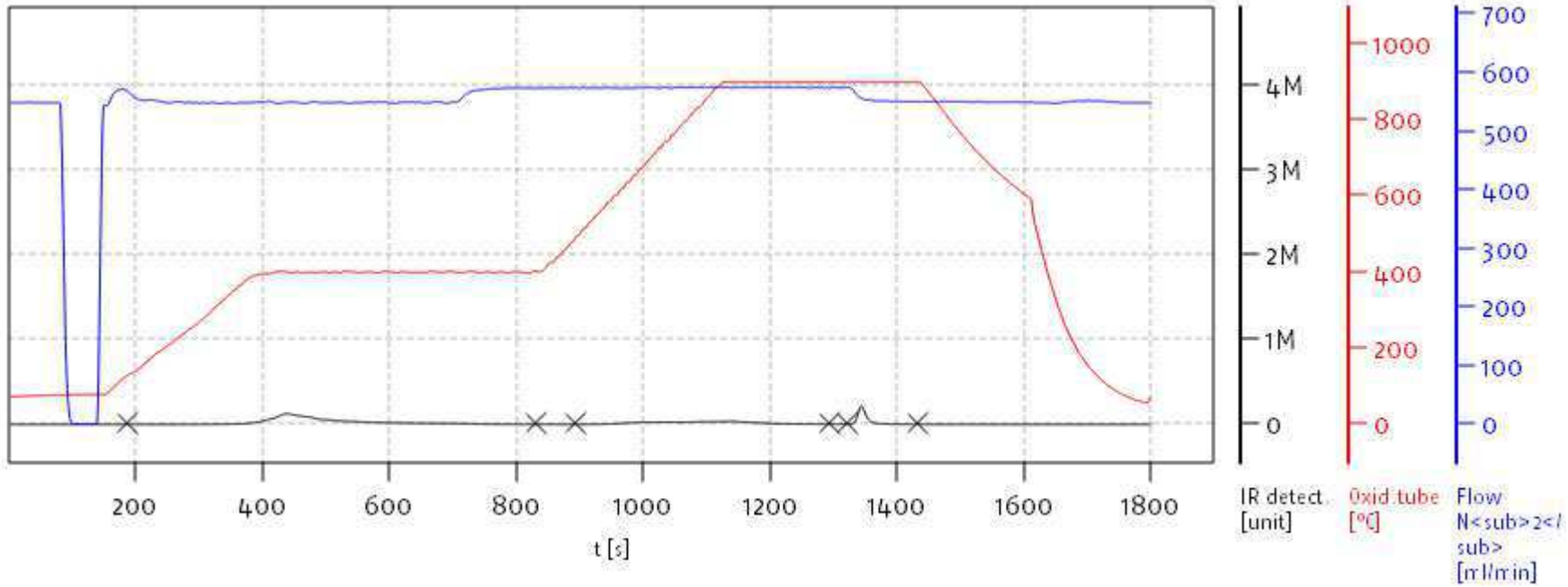
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
57	57	23A0207-03	514.70		CARBON	1/17/2023 1:51 PM	bl	0.190	558 944	0.261	0.032	133 457	262 697	0.157	0.071	0.9826	1.0000



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Balance: BAL3
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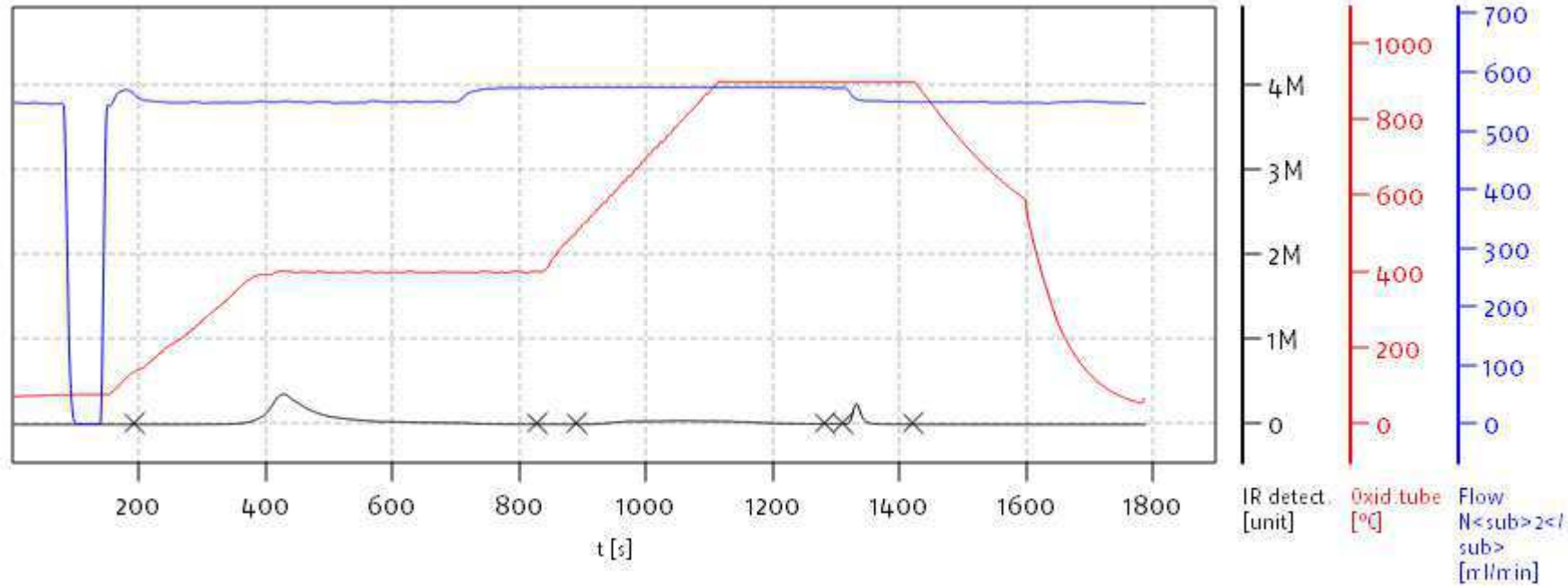
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
58	58	23A0207-04	567.50		CARBON	1/17/2023 2:21 PM	bl	0.359	1 242 170	0.449	0.033	146 774	358 056	0.326	0.090	0.9826	1.0000



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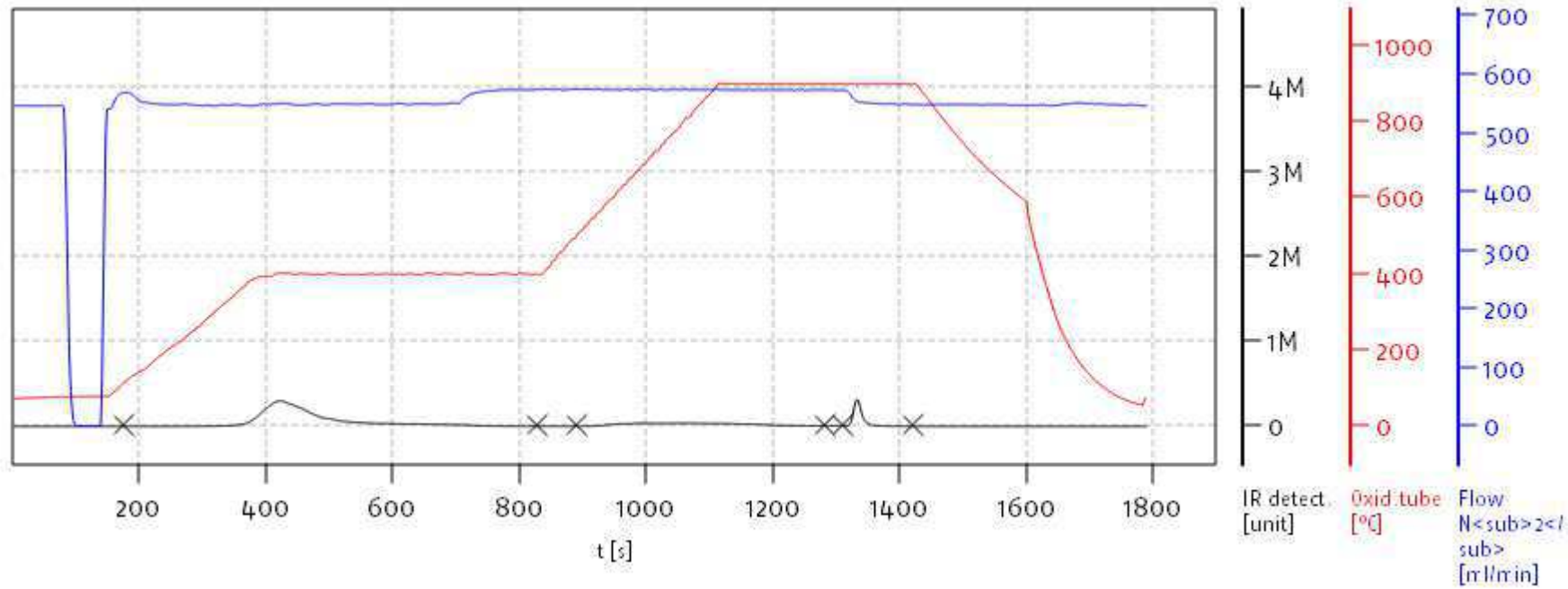
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
59	59	23A0207-05	556.90		CARBON	1/17/2023 2:51 PM	bl	0.381	1 252 552	0.469	0.046	190 843	345 102	0.335	0.089	0.9826	1.0000



Name:

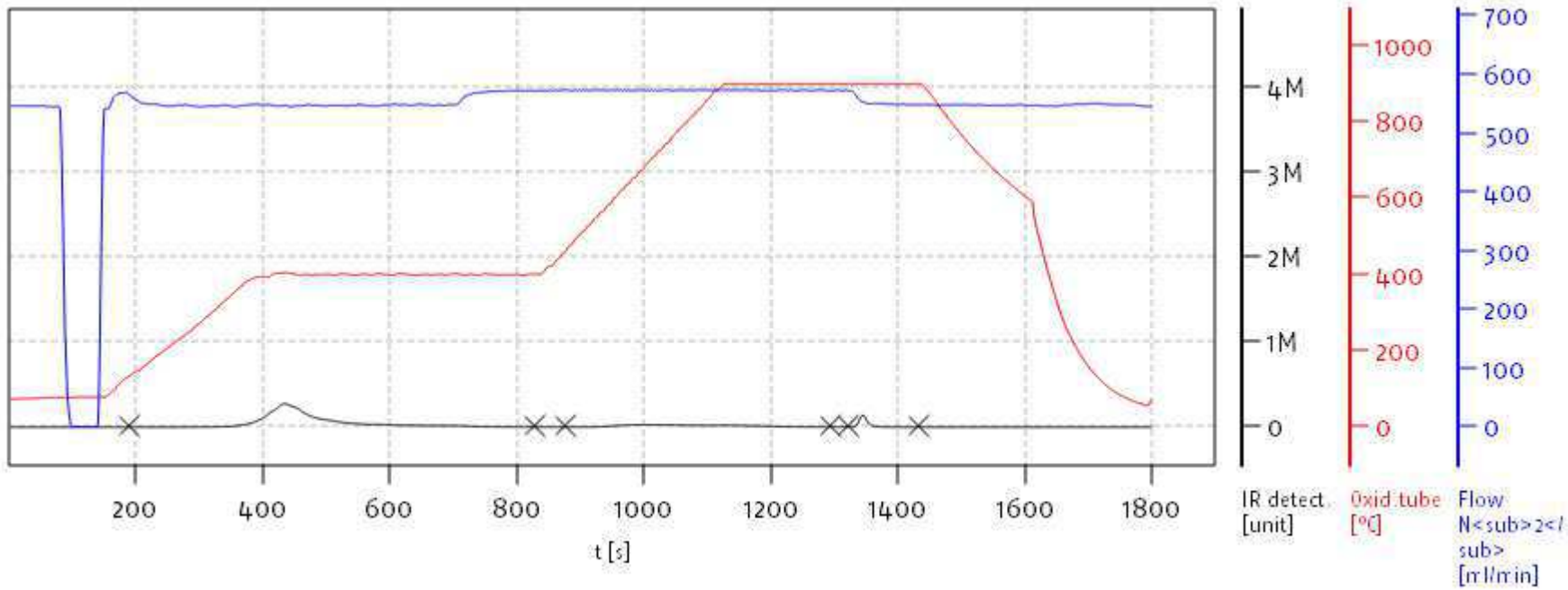
Access: soliTOC superuser

Date: Wed Jan 18 13:37:19 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
60	60	23A0207-06	593.30		CARBON	1/17/2023 3:21 PM	bl	0.271	1 028 931	0.322	0.014	79 257	221 719	0.257	0.051	0.9826	1.0000



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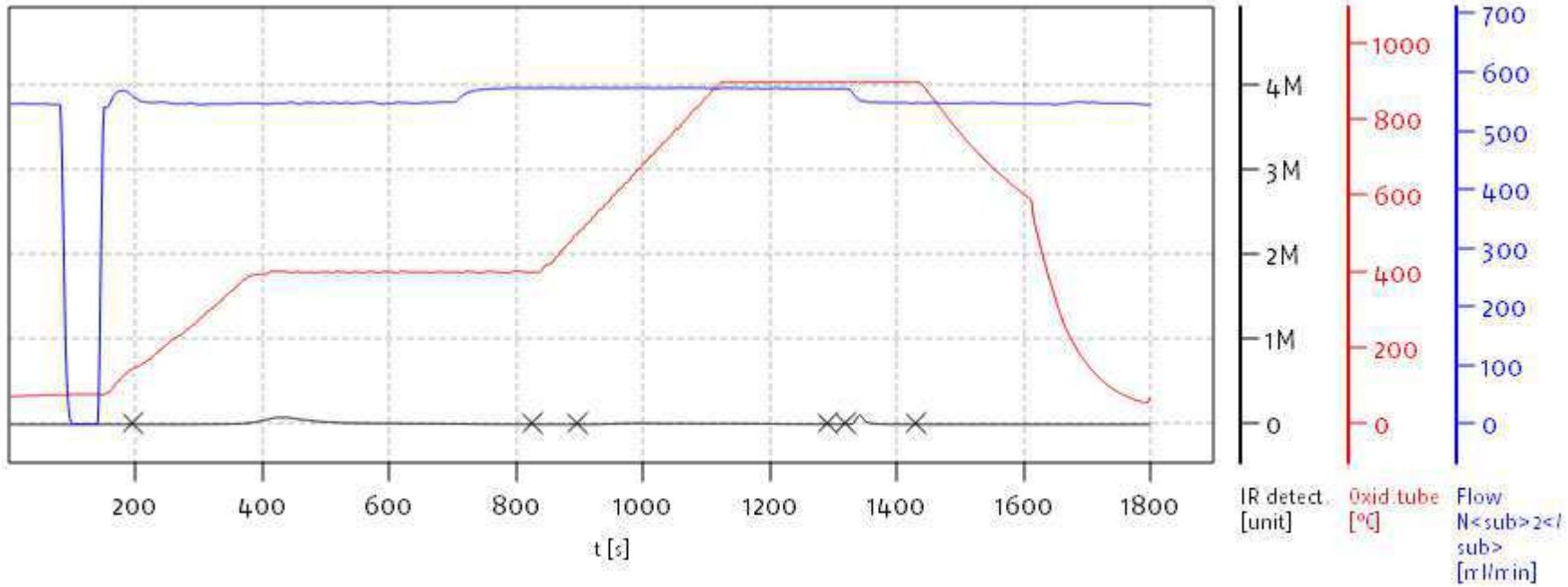
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
61	61	23A0207-07	574.00		CARBON	1/17/2023 3:52 PM	bl	0.102	372 439	0.125	0.011	66 241	109 758	0.092	0.022	0.9826	1.0000



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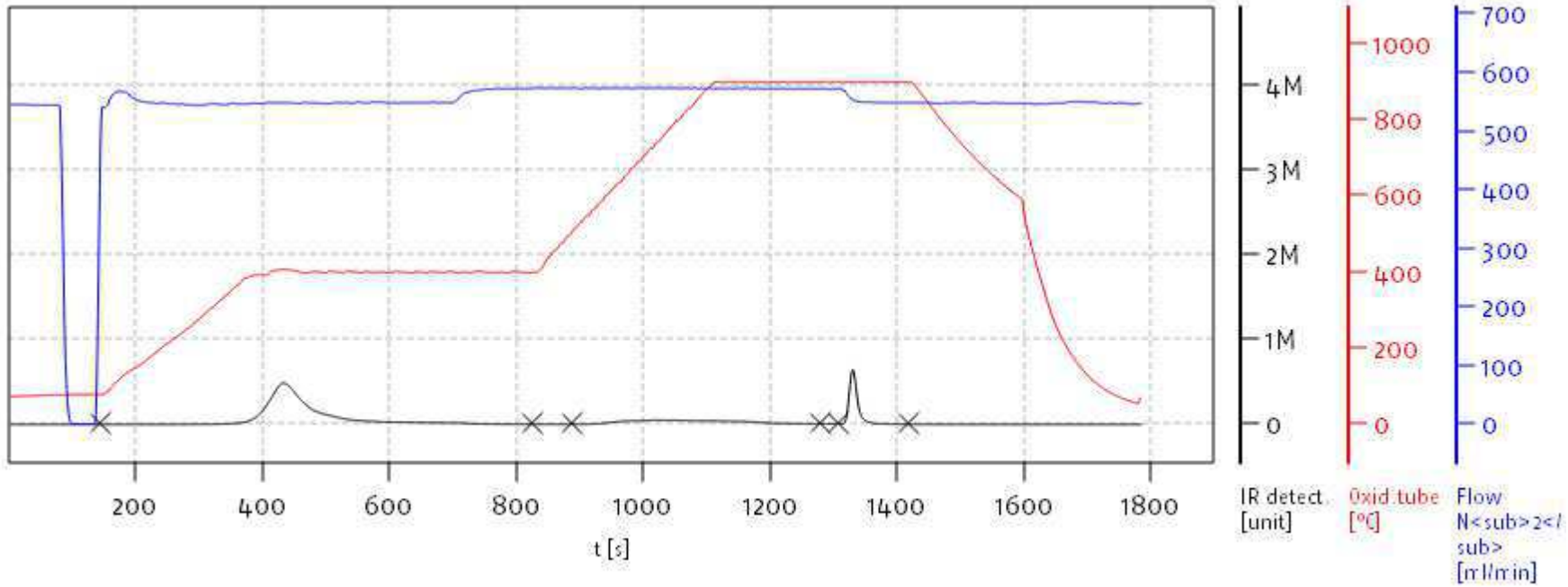
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
62	62	23A0207-08	506.60		CARBON	1/17/2023 4:22 PM	bl	0.561	1 537 159	0.681	0.107	377 546	420 971	0.454	0.121	0.9826	1.0000



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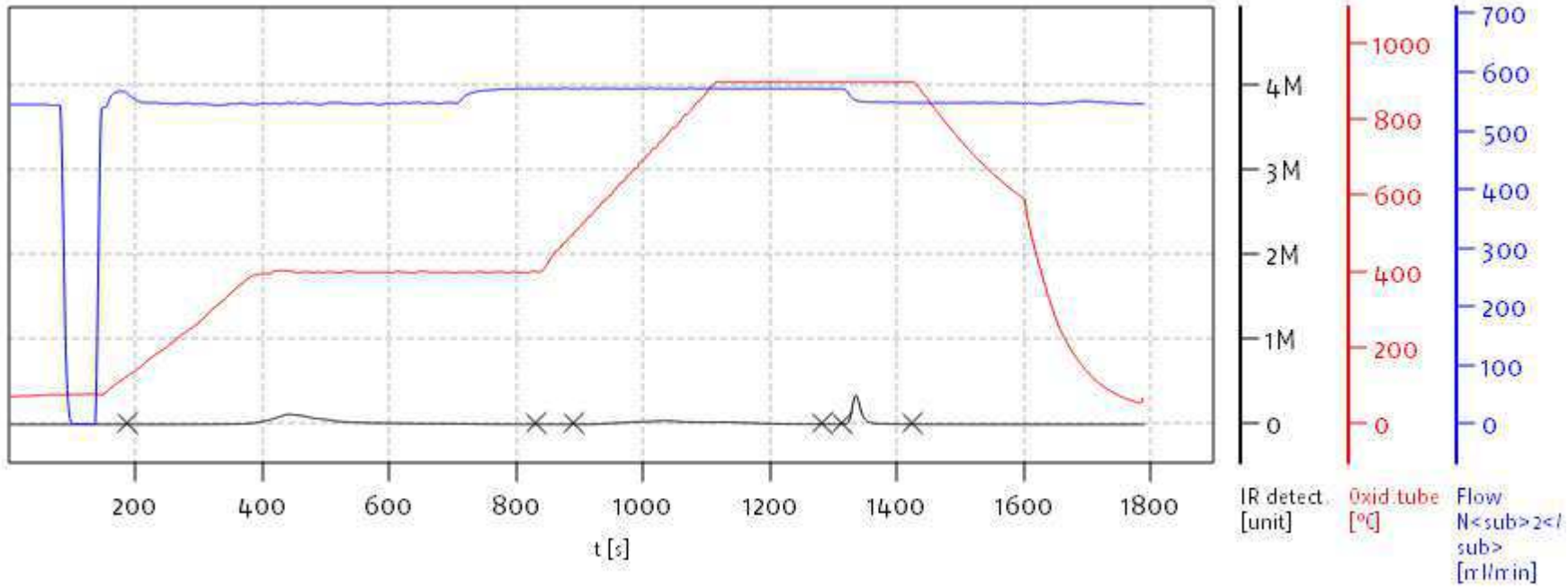
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
63	63	23A0207-09	519.50		CARBON	1/17/2023 4:52 PM	bl	0.197	503 753	0.270	0.057	219 352	271 907	0.140	0.073	0.9826	1.0000



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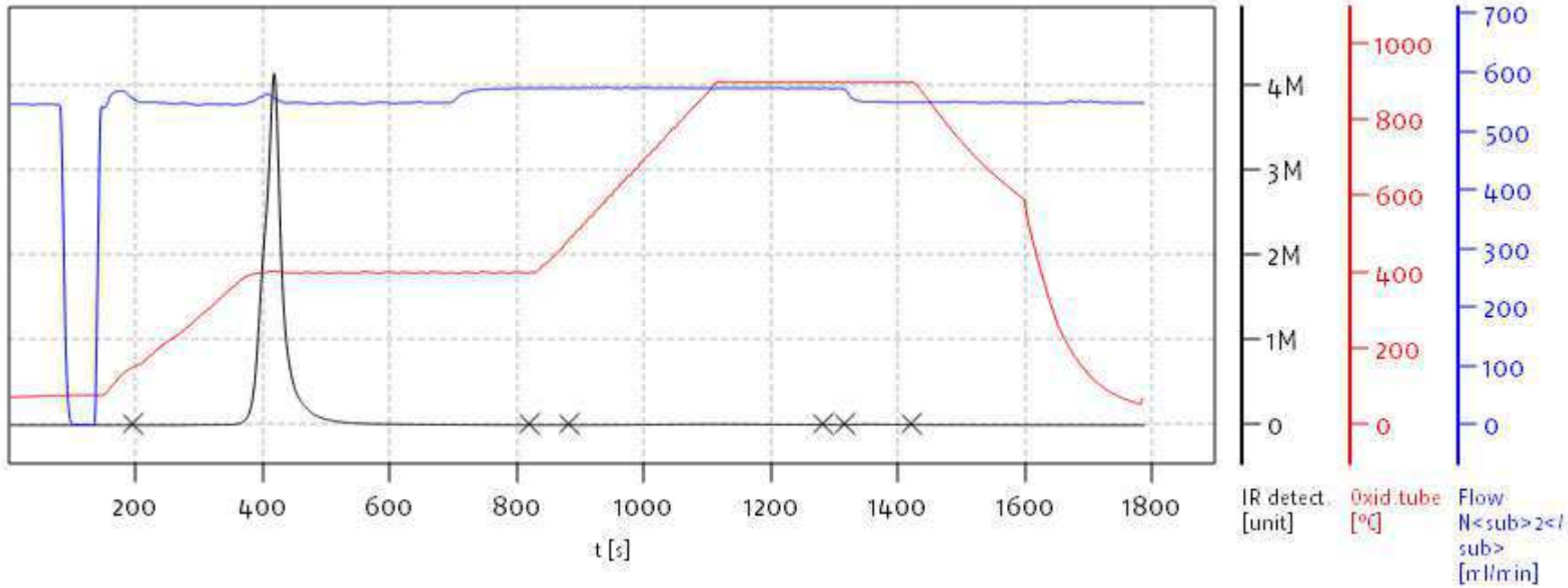
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
64	64	SLA0148-CCV5	18.10		CARBON	1/17/2023 5:22 PM	bl	44.630	5 337 249	45.204	0.000	24 950	93 670	44.630	0.574	0.9826	1.0000



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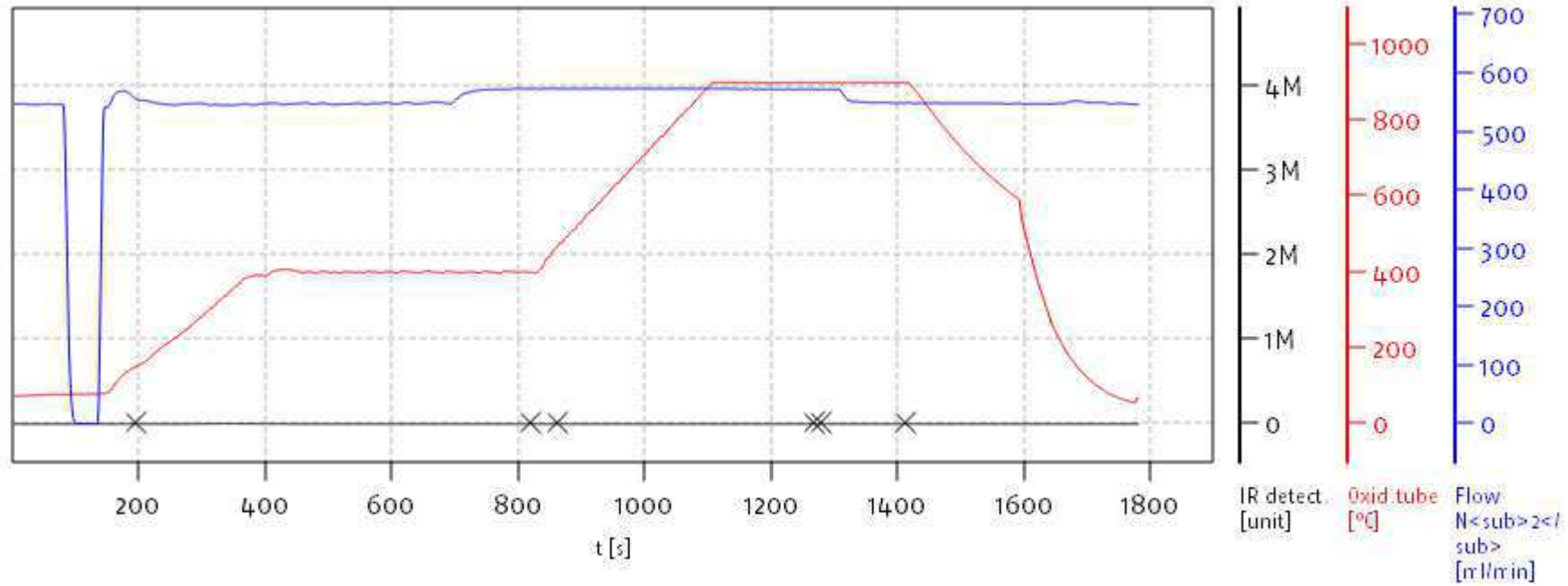
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
65	65	SLA0148-CCB5	501.60		CARBON	1/17/2023 5:52 PM	bl,C3u,C2u	0.000	16 009	0.000	0.000	699	45	0.000	0.000	0.9826	1.0000



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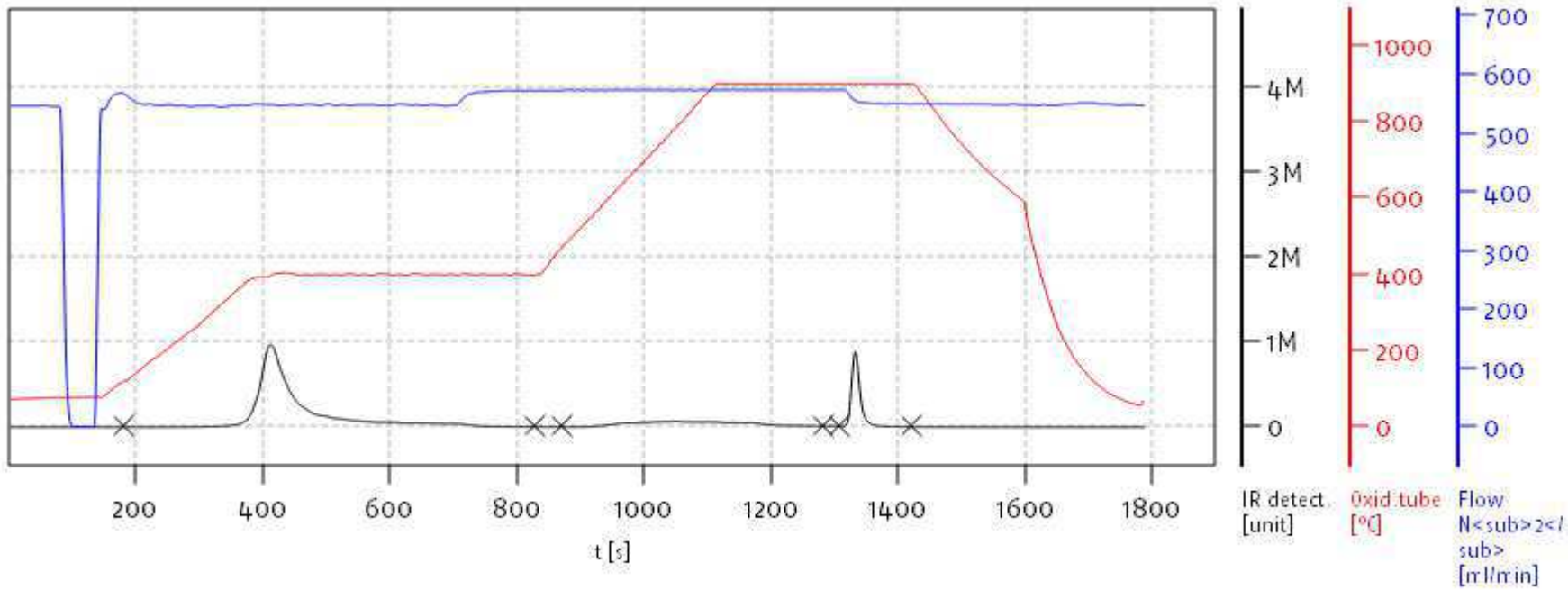
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
66	66	23A0207-10	519.30		CARBON	1/17/2023 6:23 PM	bl	0.886	2 535 122	1.050	0.151	533 436	577 676	0.735	0.164	0.9826	1.0000



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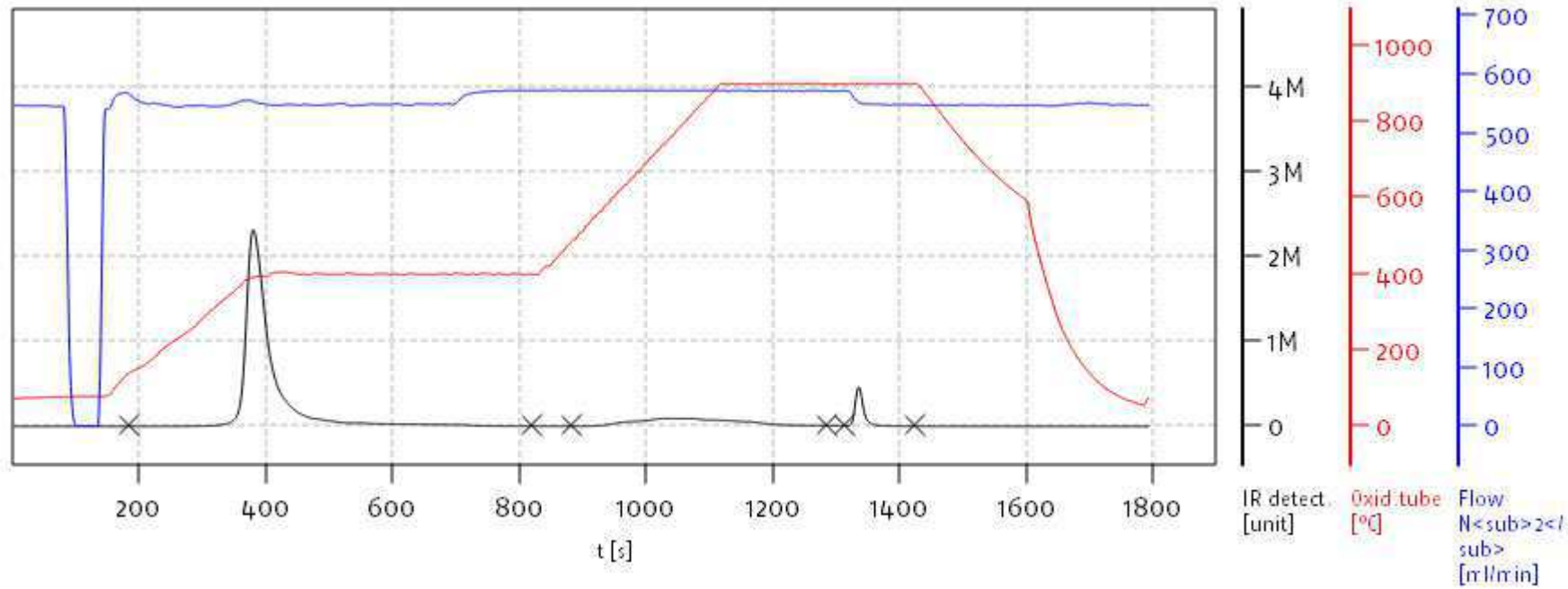
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
67	67	23A0207-11	505.20		CARBON	1/17/2023 6:53 PM	bl	1.224	3 842 570	1.432	0.075	272 685	704 277	1.149	0.208	0.9826	1.0000



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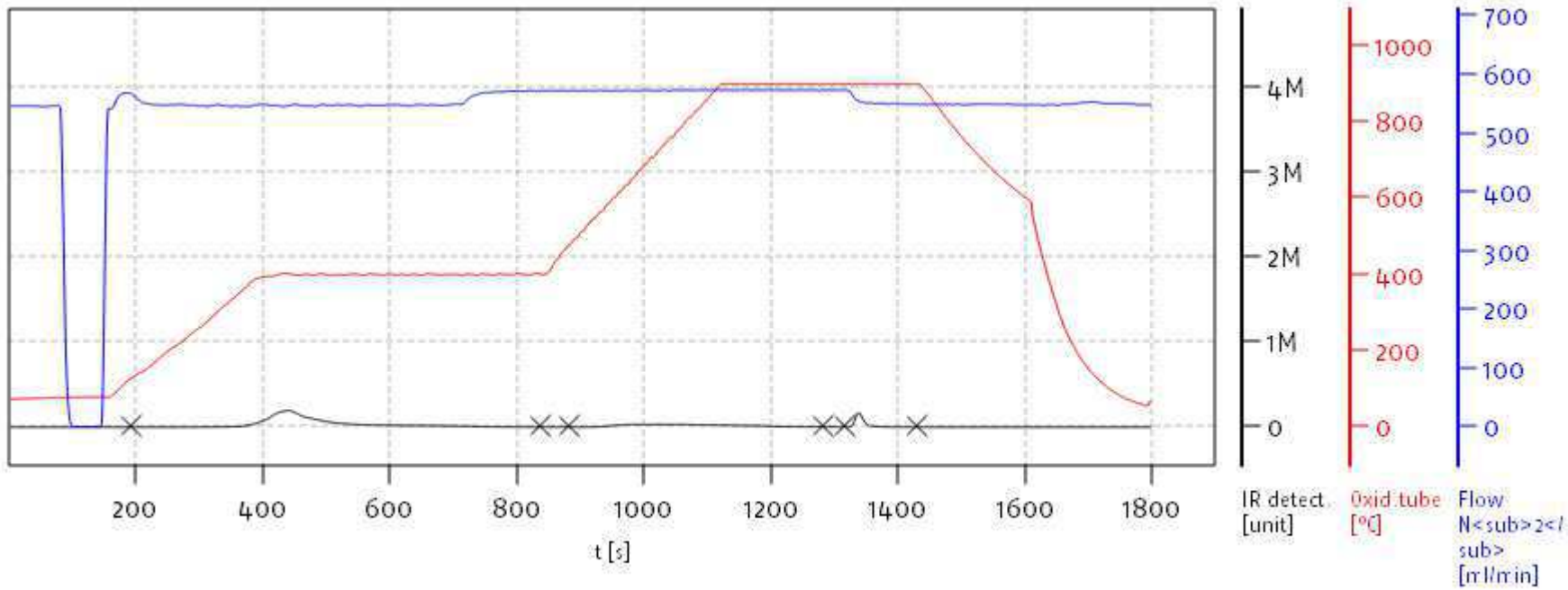
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
68	68	23A0207-12	537.60		CARBON	1/17/2023 7:23 PM	bl	0.231	768 347	0.299	0.022	101 528	259 991	0.210	0.067	0.9826	1.0000



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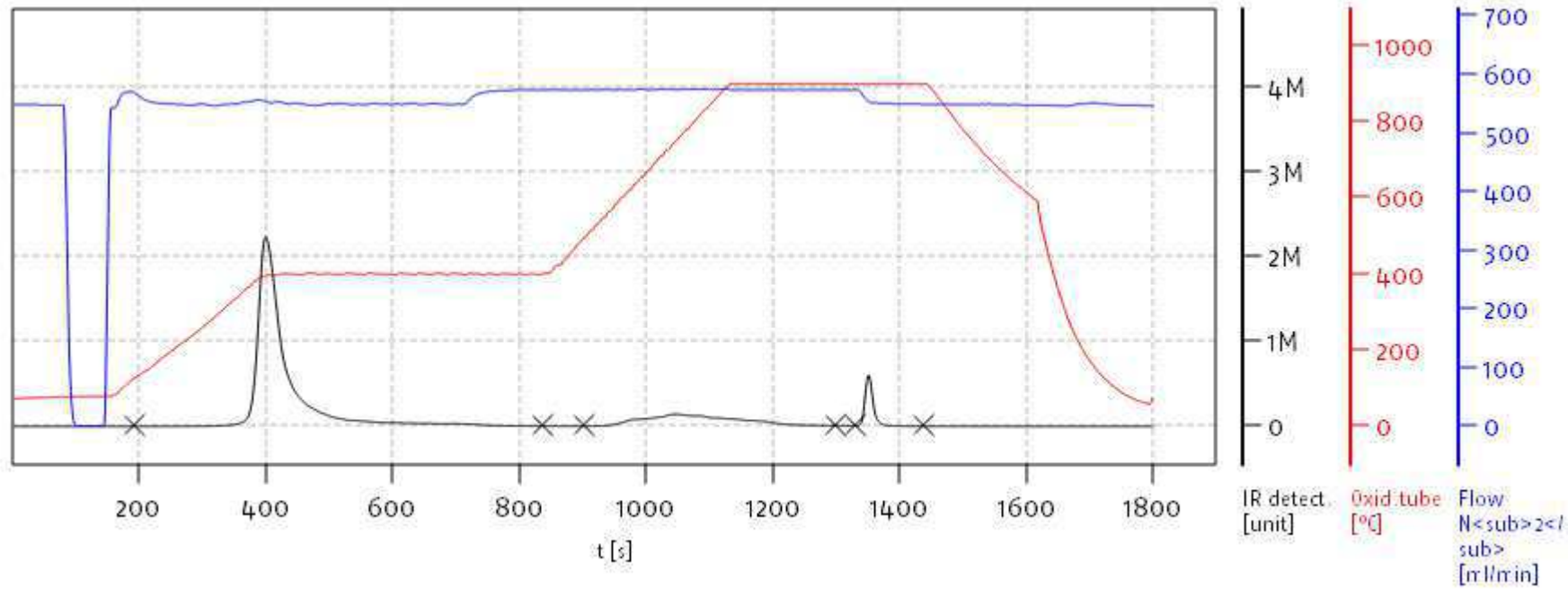
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
69	69	23A0207-13	572.60		CARBON	1/17/2023 7:54 PM	bl	1.178	4 140 946	1.428	0.085	341 935	949 075	1.093	0.249	0.9826	1.0000



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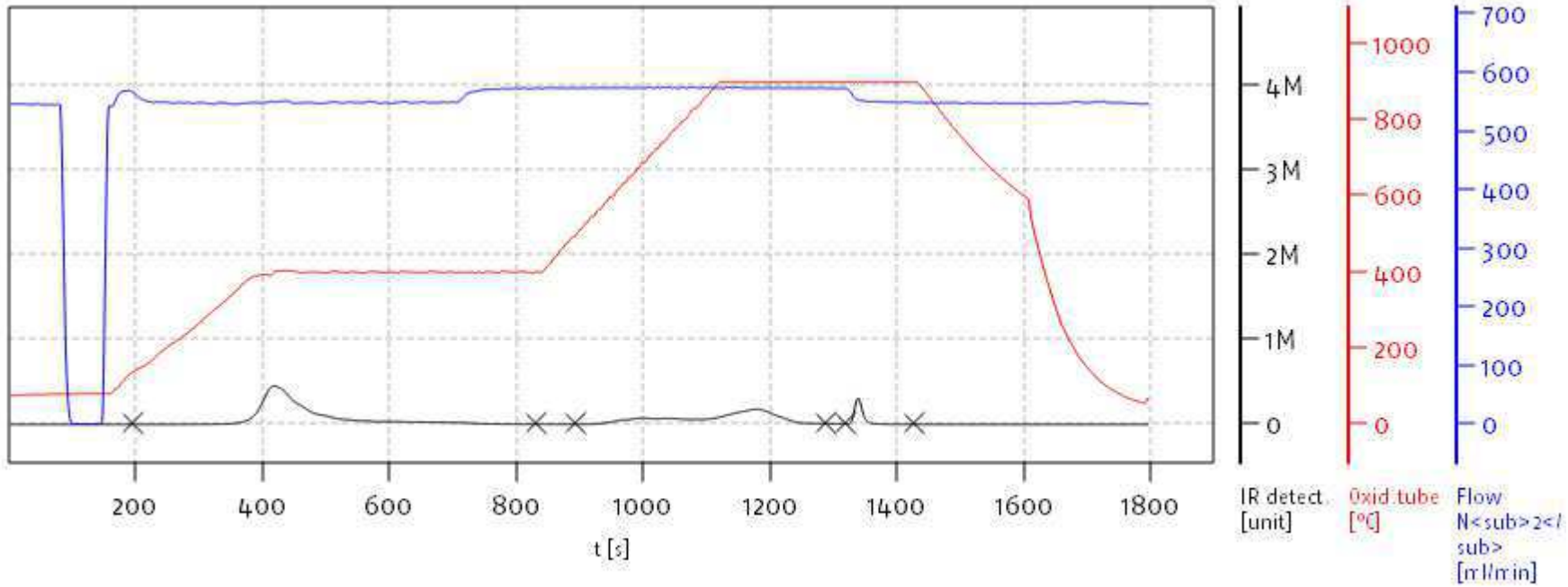
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
70	70	23A0207-14	535.80		CARBON	1/17/2023 8:24 PM	bl	0.468	1 521 378	0.750	0.043	176 963	1 003 228	0.424	0.282	0.9826	1.0000



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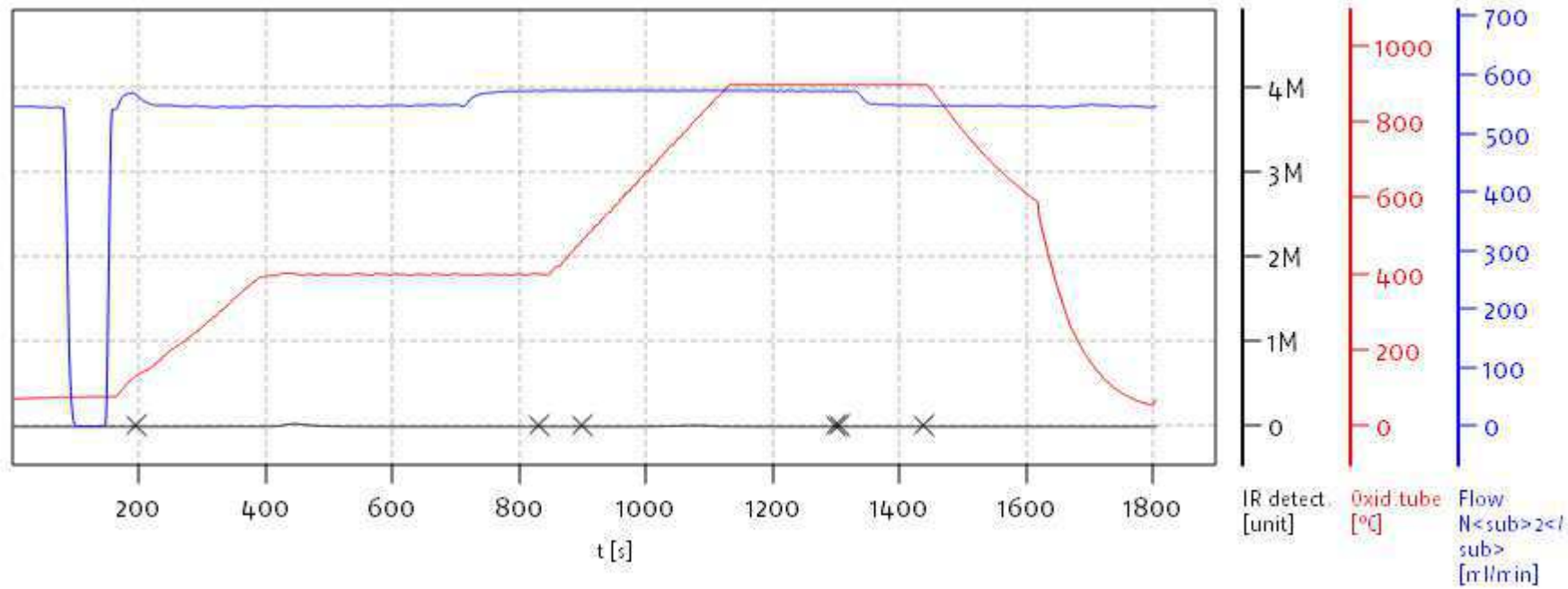
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
71	71	BLA0360-MRL1	534.50		CARBON	1/17/2023 8:55 PM	bl,C2u	0.011	66 244	0.014	0.000	420	36 334	0.011	0.003	0.9826	1.0000



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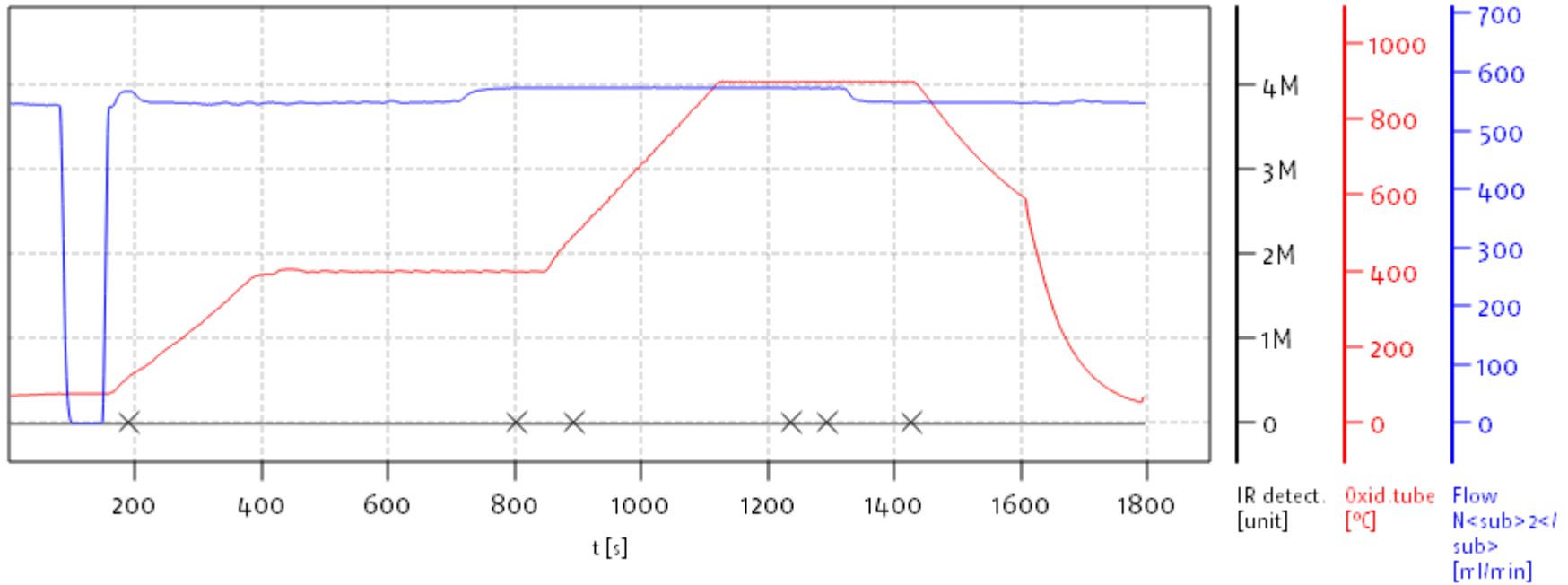
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
72	72	BLA0360-BLK1	514.60		CARBON	1/17/2023 9:25 PM	bl,C3u,C2u	0.000	8 477	0.000	0.000	417	1 320	0.000	0.000	0.9826	1.0000



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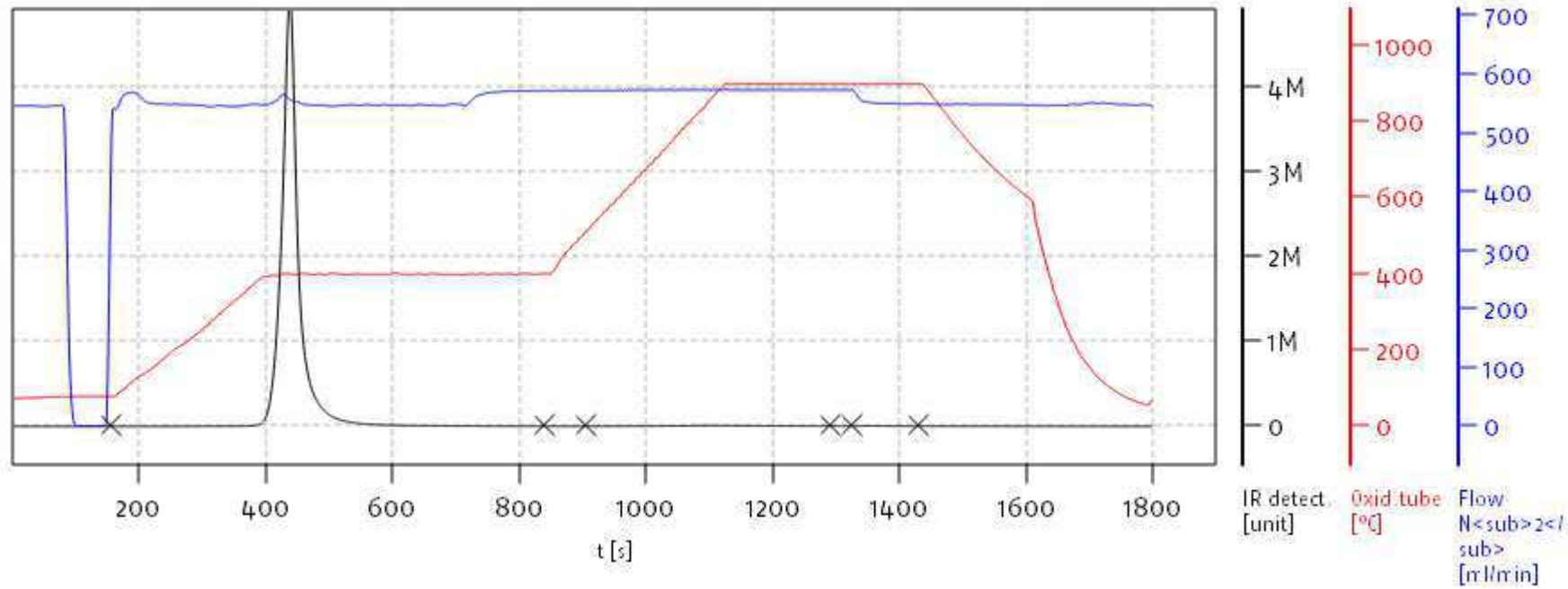
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
73	73	BLA0360-BS1	19.20		CARBON	1/17/2023 9:55 PM	bl	45.589	5 781 031	46.003	0.000	16 504	77 894	45.589	0.414	0.9826	1.0000



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Balance: BAL3
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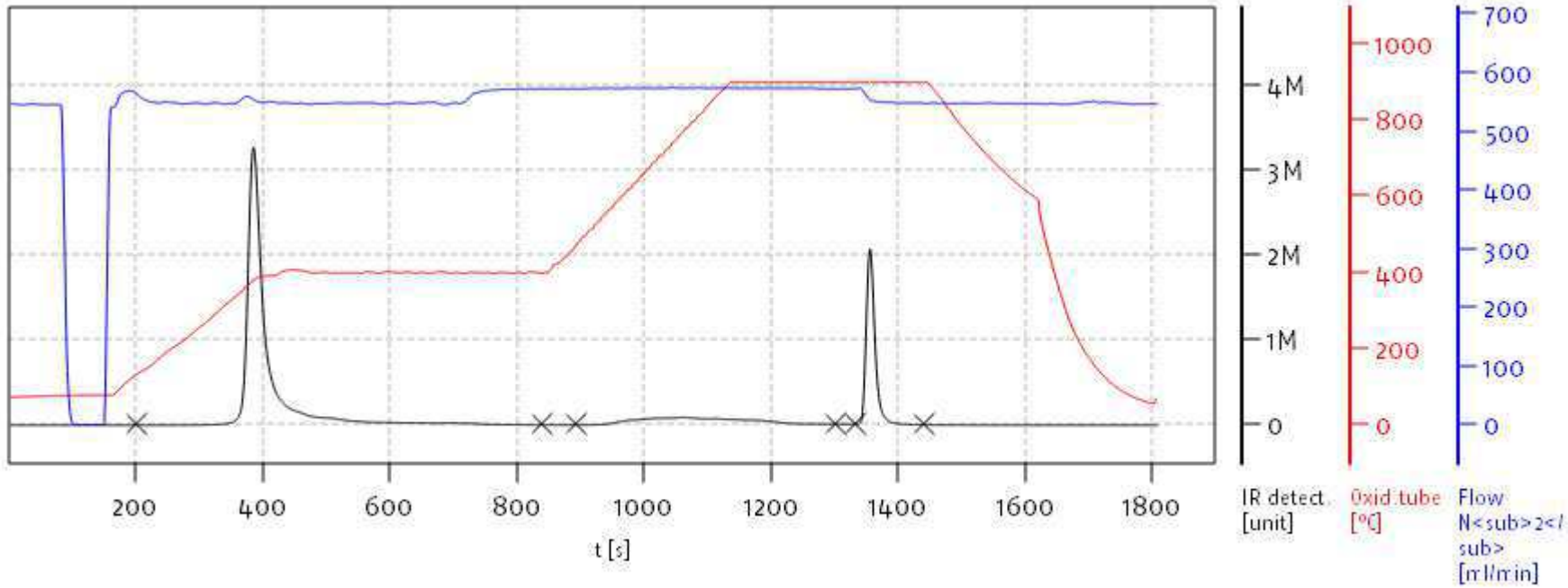
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
74	74	BLA0360-SRM1	271.60		CARBON	1/17/2023 10:26 PM	bl	2.929	3 997 719	3.331	0.704	1 262 519	732 188	2.224	0.402	0.9826	1.0000



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Balance: BAL3
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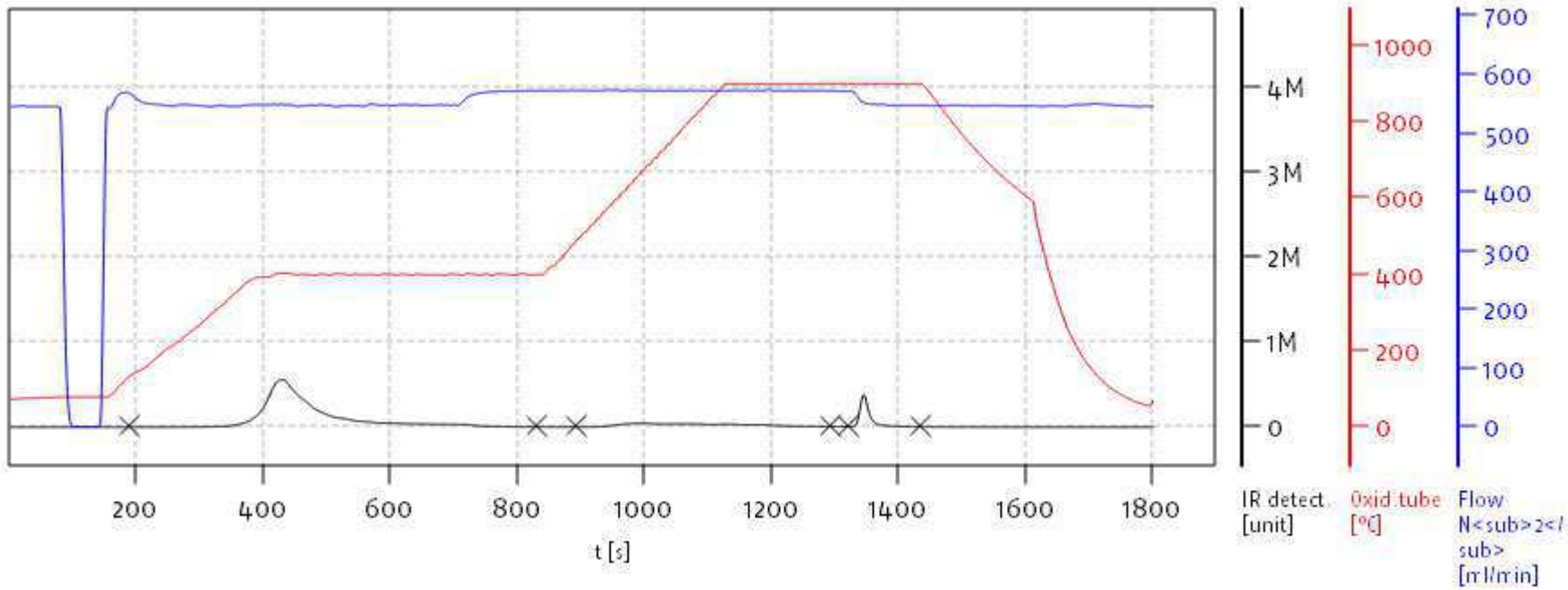
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
75	75	23A0207-15	502.00		CARBON	1/17/2023 10:56 PM	bl	0.673	2 012 825	0.778	0.071	256 058	367 456	0.602	0.105	0.9826	1.0000



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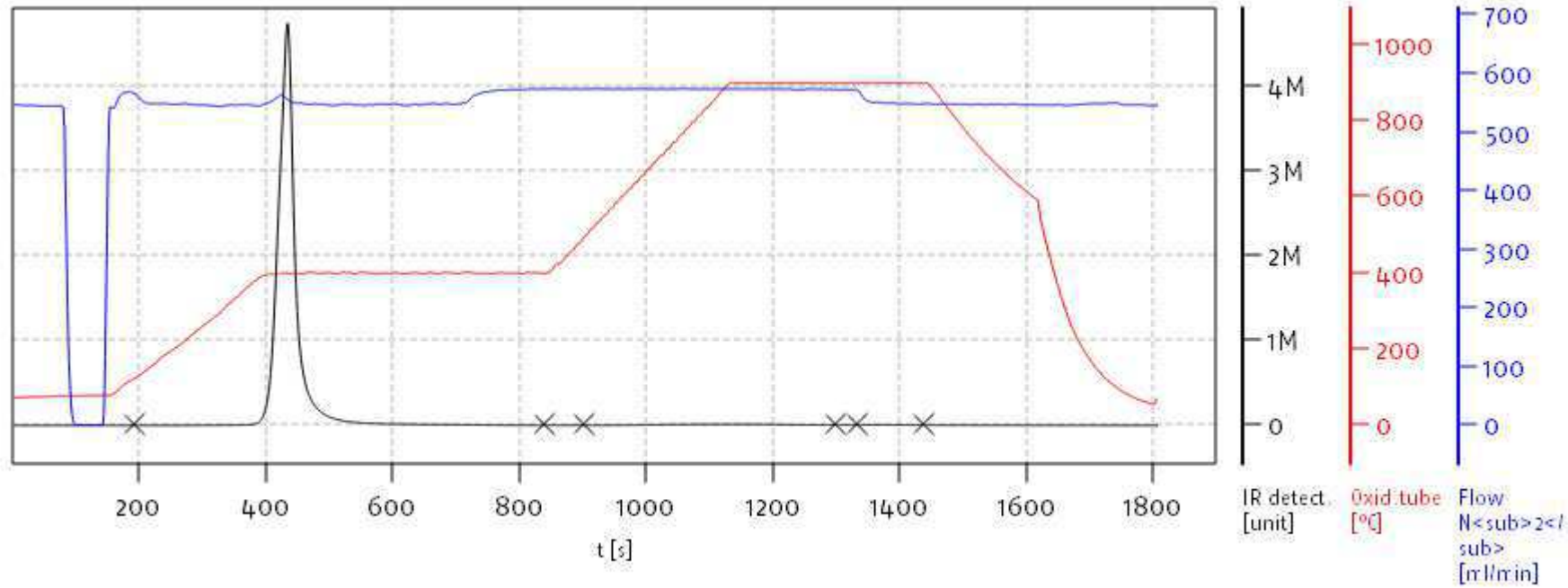
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
76	76	SLA0148-CCV6	18.90		CARBON	1/17/2023 11:27 PM	bl	44.706	5 581 413	45.464	0.000	22 229	119 103	44.706	0.758	0.9826	1.0000



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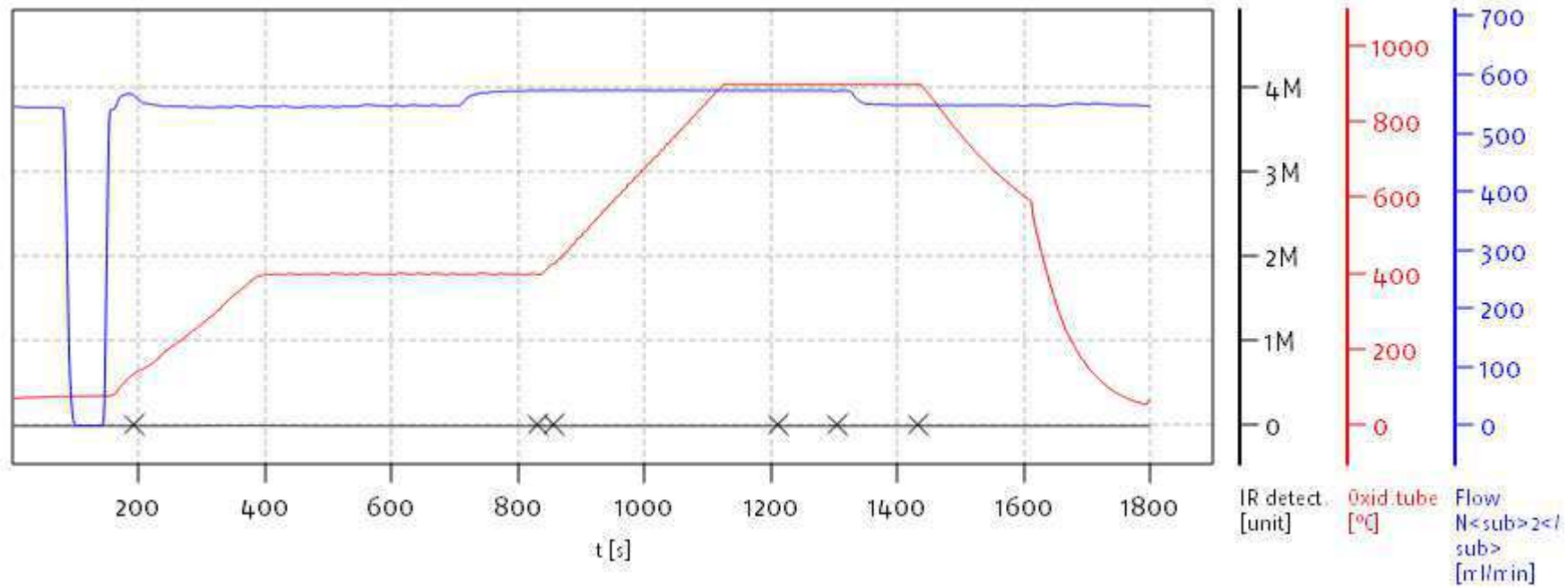
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
77	77	SLA0148-CCB6	504.70		CARBON	1/17/2023 11:57 PM	bl,C3u,C2u	0.000	18 696	0.000	0.000	767	1 023	0.000	0.000	0.9826	1.0000



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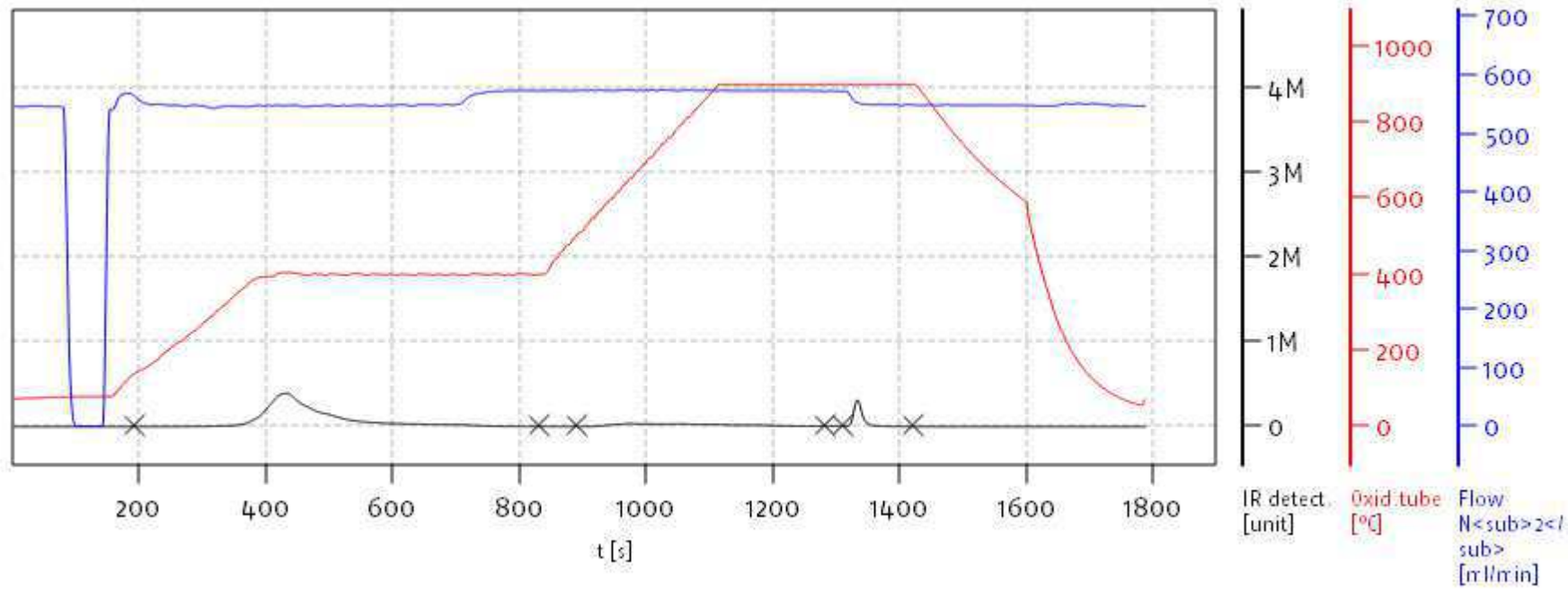
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
78	78	BLA0360-DUP1	523.70		CARBON	1/18/2023 12:27 AM	bl	0.499	1 578 973	0.574	0.048	189 635	281 124	0.451	0.075	0.9826	1.0000



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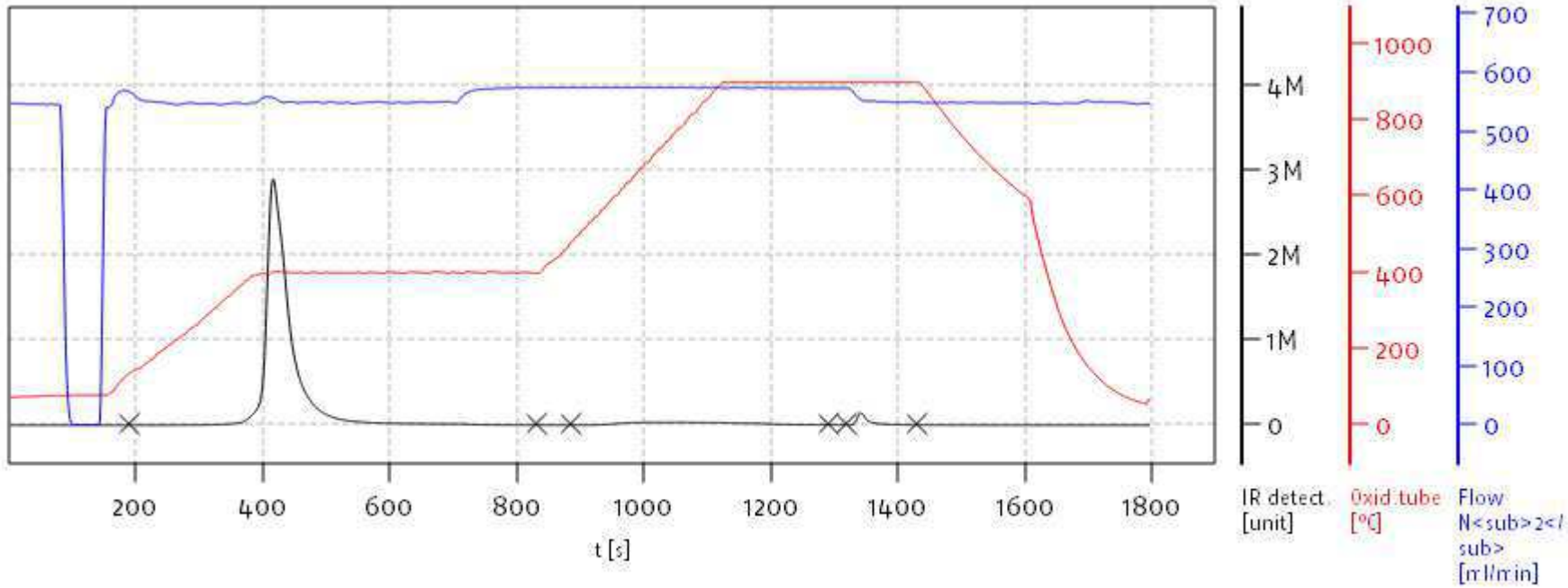
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
79	79	BLA0360-MS1	521.60	0.0089	CARBON	1/18/2023 12:58 AM	bl	1.360	4 600 108	1.436	0.026	113 939	285 145	1.334	0.077	0.9826	1.0000



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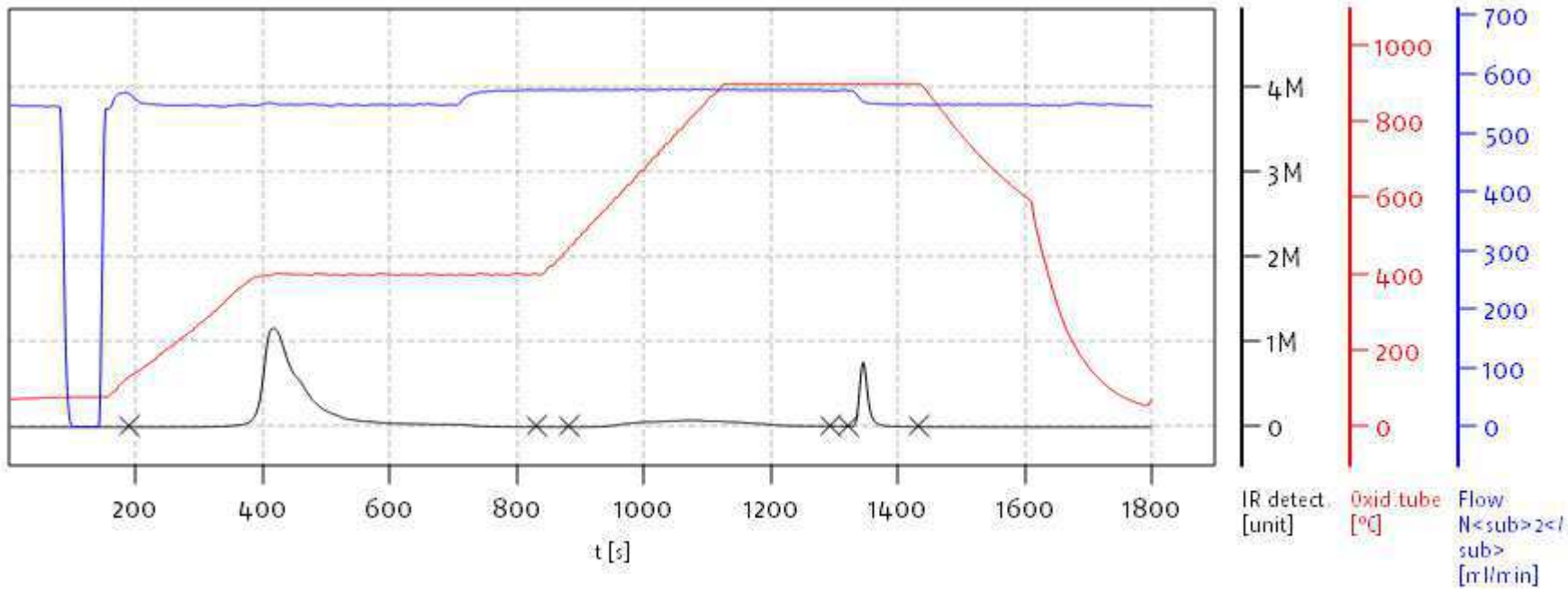
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
80	80	23A0207-16	552.40		CARBON	1/18/2023 1:28 AM	bl	0.991	3 189 056	1.153	0.120	456 012	604 548	0.871	0.162	0.9826	1.0000



Name:

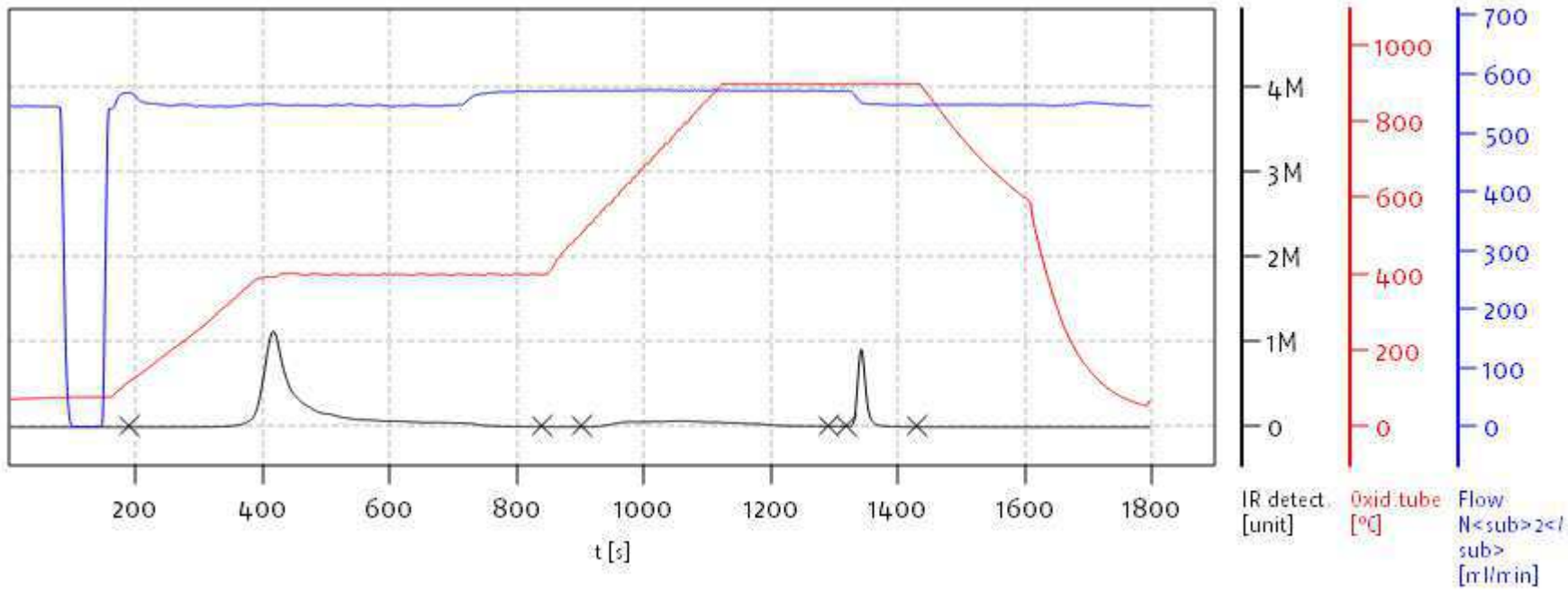
Access: soliTOC superuser

Date: Wed Jan 18 13:37:19 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
81	81	23A0207-17	516.00		CARBON	1/18/2023 1:58 AM	bl	0.972	2 816 461	1.141	0.150	525 981	589 173	0.822	0.169	0.9826	1.0000



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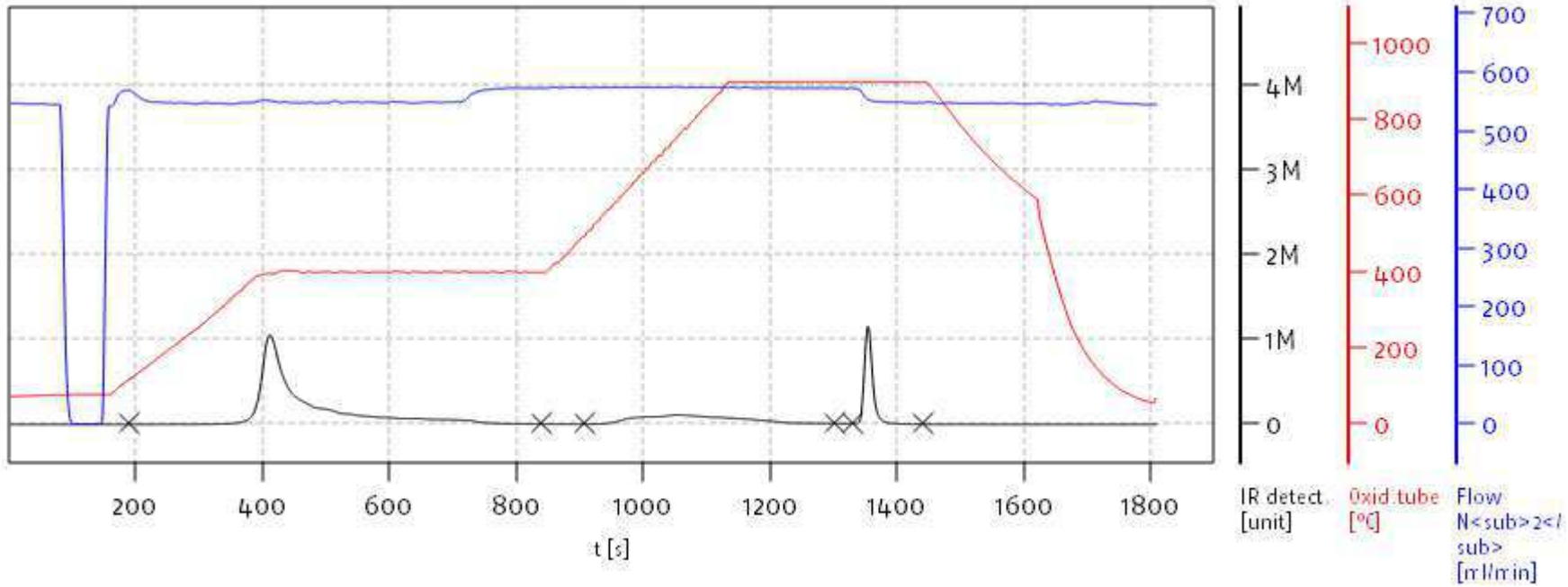
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
82	82	23A0249-01	549.00		CARBON	1/18/2023 2:29 AM	bl	0.948	2 794 266	1.172	0.181	667 249	823 322	0.767	0.225	0.9826	1.0000



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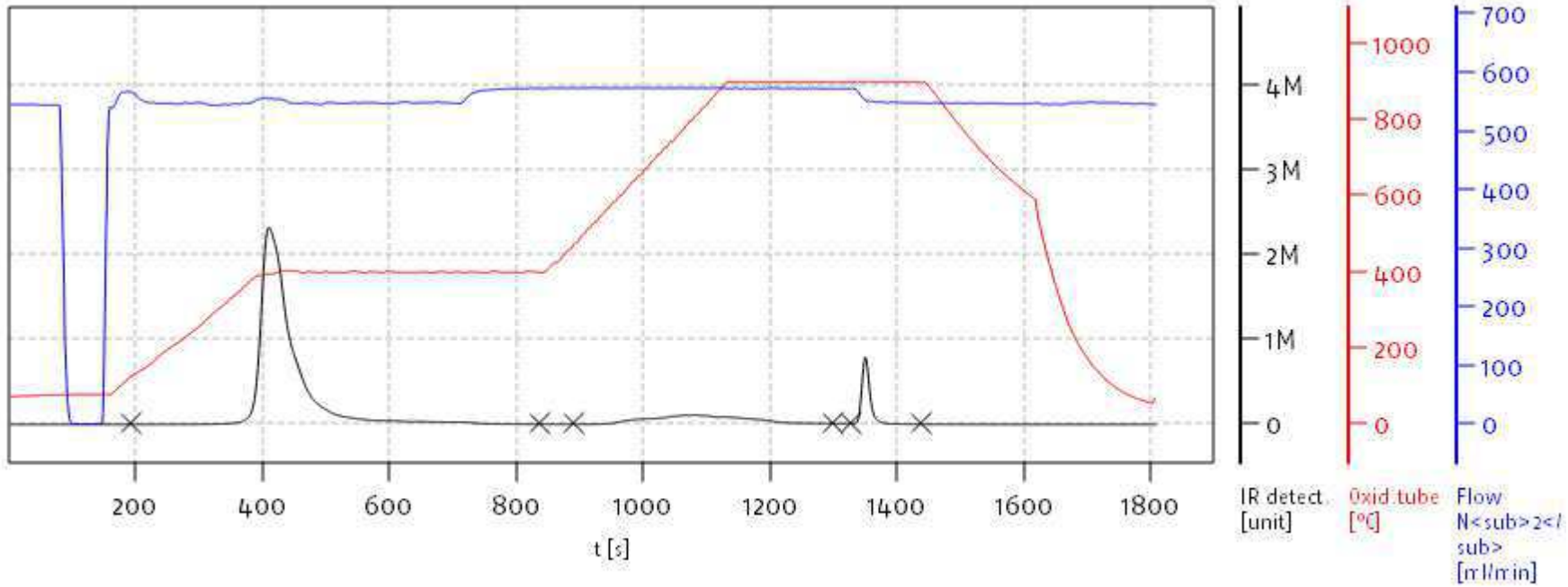
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
83	83	23A0249-02	503.40		CARBON	1/18/2023 3:00 AM	bl	1.616	4 944 138	1.847	0.130	449 280	779 060	1.486	0.231	0.9826	1.0000



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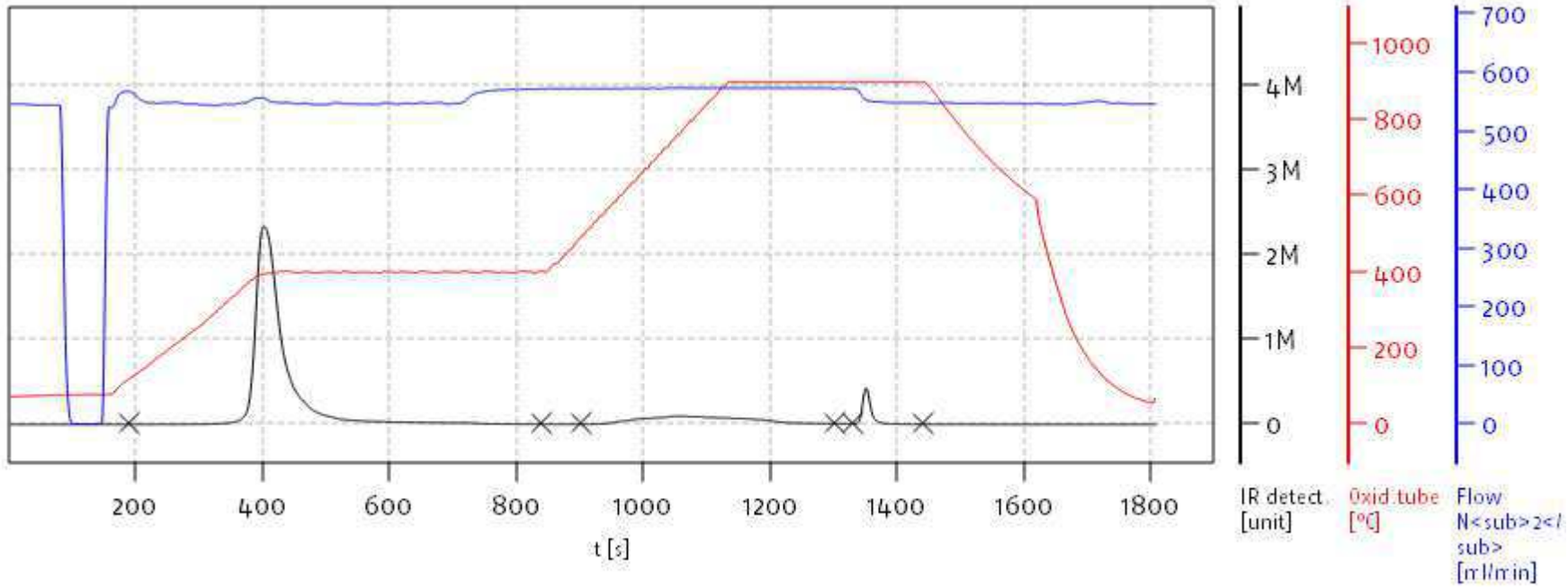
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
84	84	23A0249-03	553.70		CARBON	1/18/2023 3:30 AM	bl	1.267	4 411 510	1.469	0.062	248 732	750 566	1.205	0.202	0.9826	1.0000



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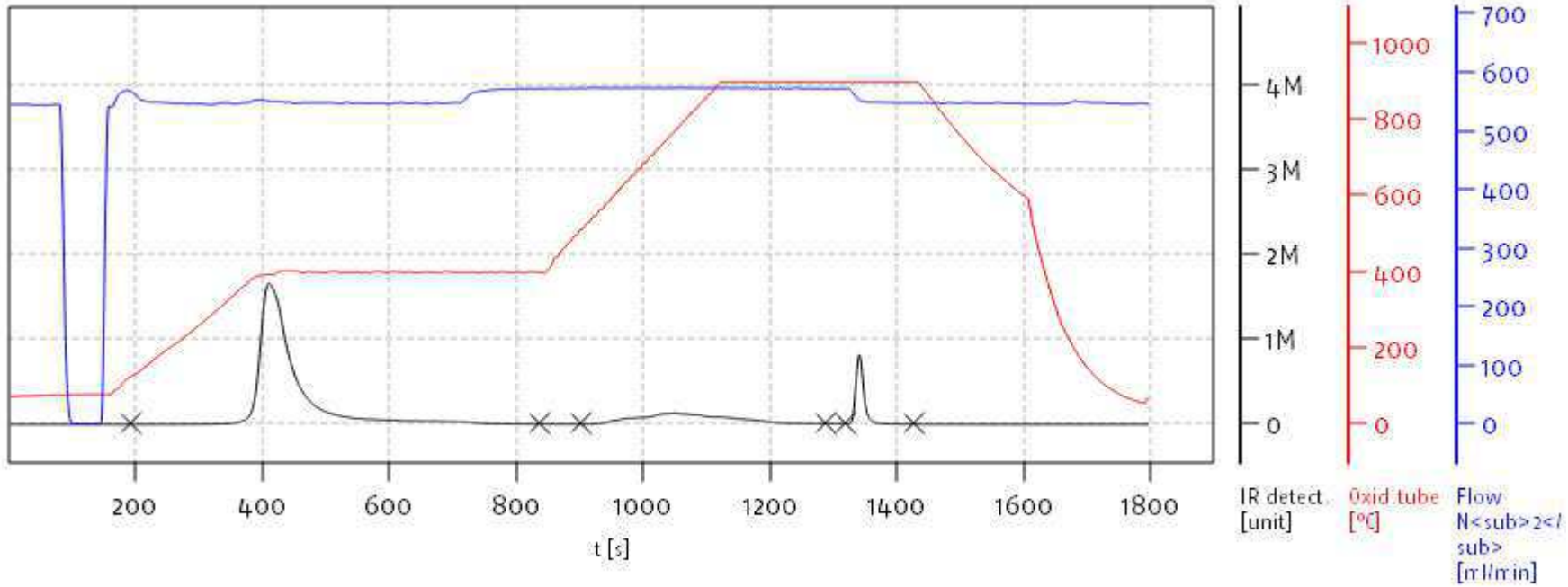
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
85	85	23A0249-04	548.80		CARBON	1/18/2023 4:00 AM	bl	1.190	3 882 005	1.430	0.122	458 638	876 354	1.069	0.240	0.9826	1.0000



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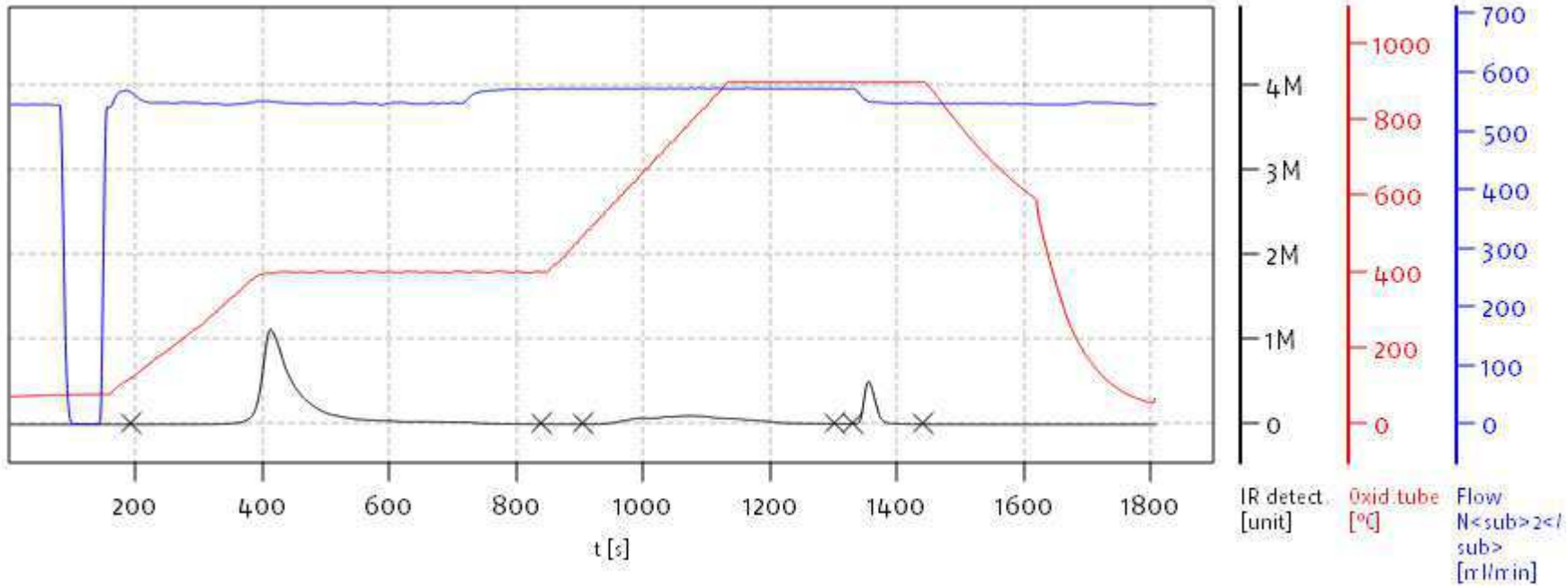
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
86	86	23A0249-05	525.90		CARBON	1/18/2023 4:31 AM	bl	0.887	2 713 600	1.091	0.110	399 743	720 763	0.777	0.204	0.9826	1.0000



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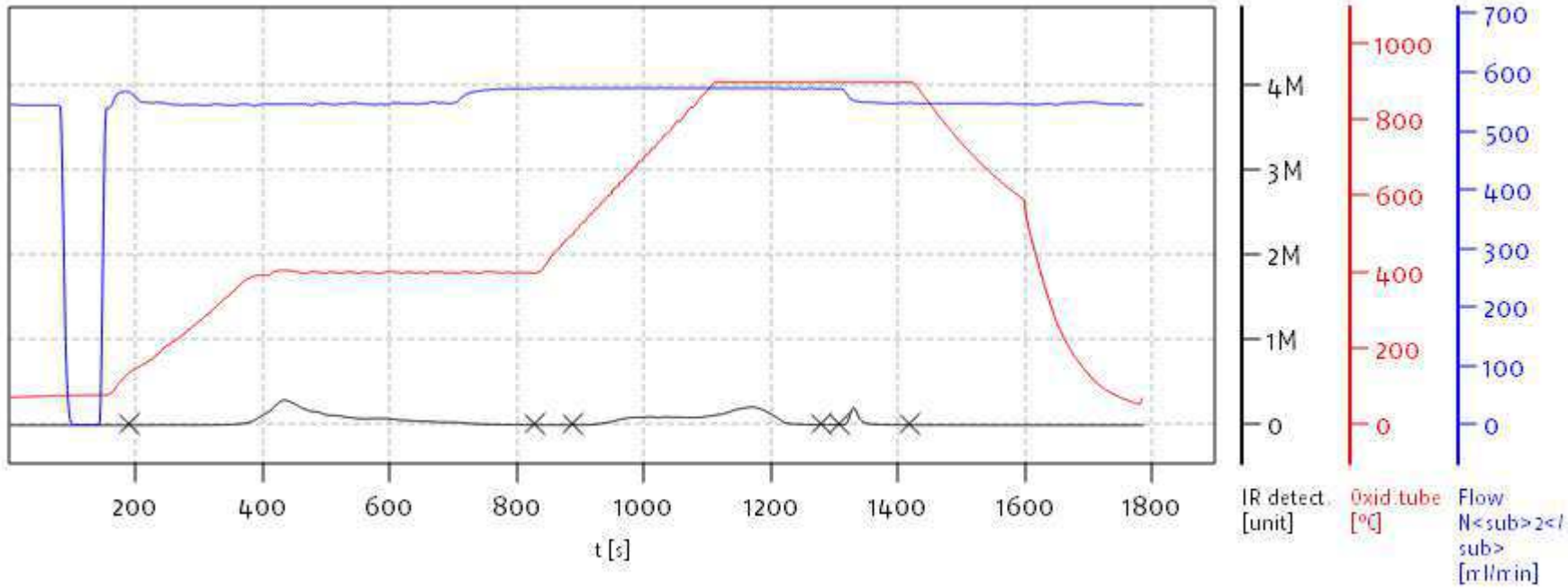
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
87	87	23A0249-06	603.40		CARBON	1/18/2023 5:01 AM	bl	0.380	1 421 243	0.691	0.028	137 203	1 240 470	0.352	0.311	0.9826	1.0000



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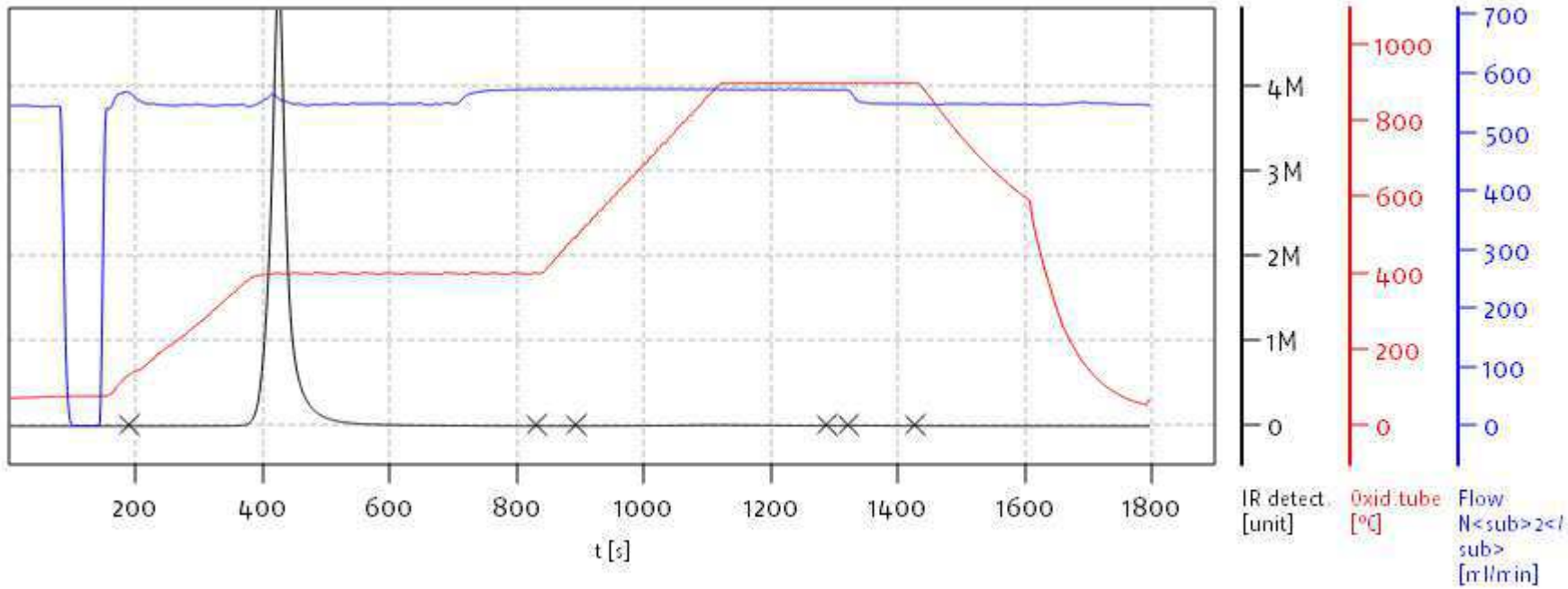
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
88	88	SLA0148-CCV7	20.30		CARBON	1/18/2023 5:31 AM	bl	45.456	6 092 914	46.004	0.000	18 355	98 462	45.456	0.549	0.9826	1.0000



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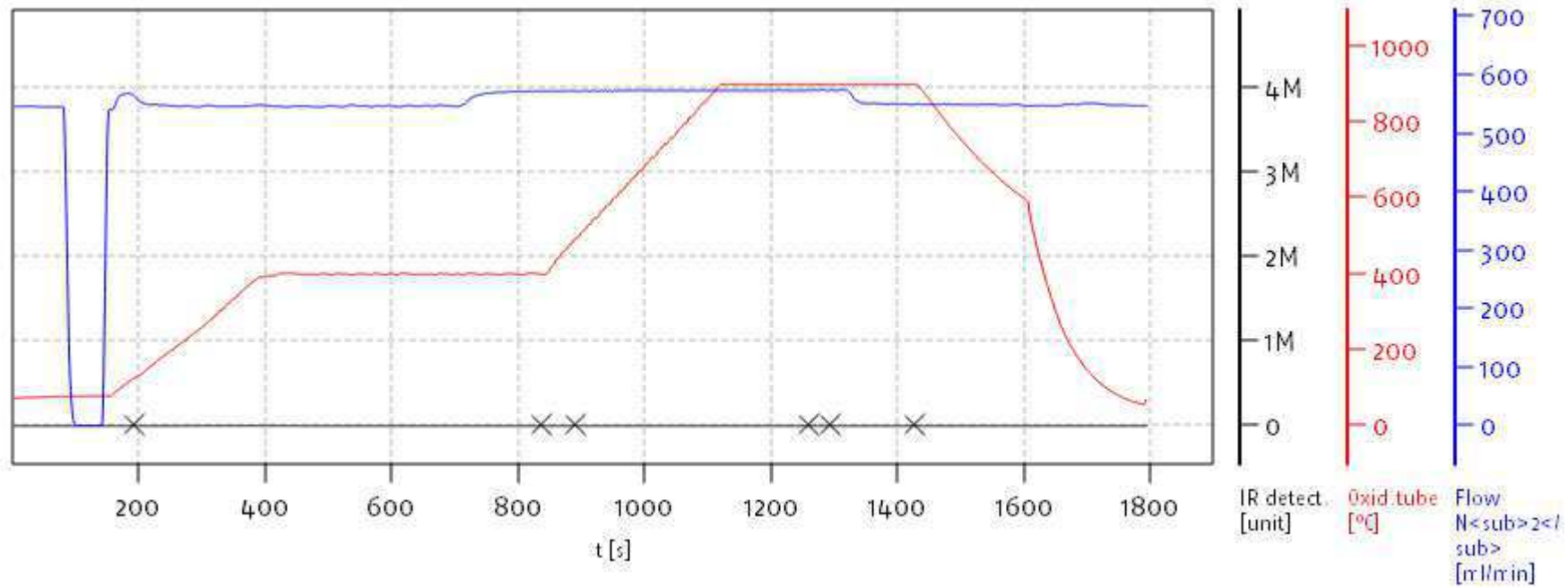
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
89	89	SLA0148-CCB7	508.10		CARBON	1/18/2023 6:02 AM	bl,C2u	0.000	12 368	0.000	0.000	577	3 053	0.000	0.000	0.9826	1.0000



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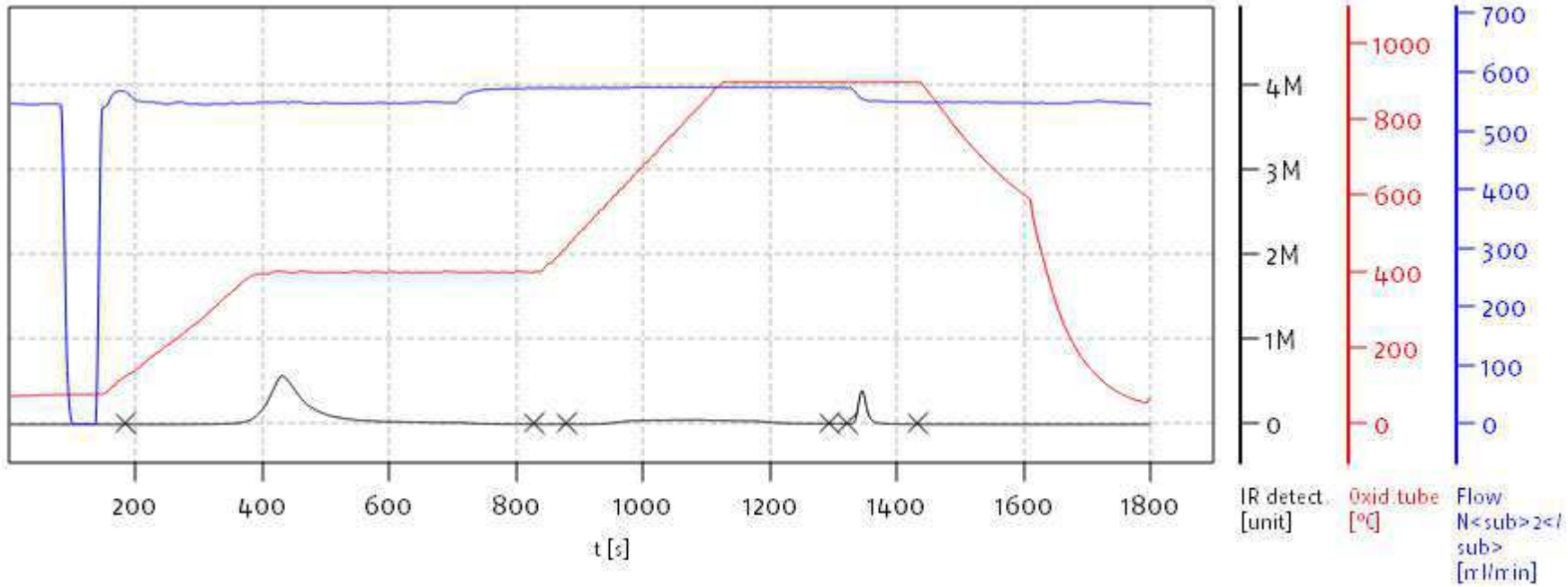
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
90	1	23A0249-07	530.80		CARBON	1/18/2023 6:32 AM	bl	0.547	1 712 352	0.675	0.064	244 419	465 390	0.483	0.128	0.9826	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
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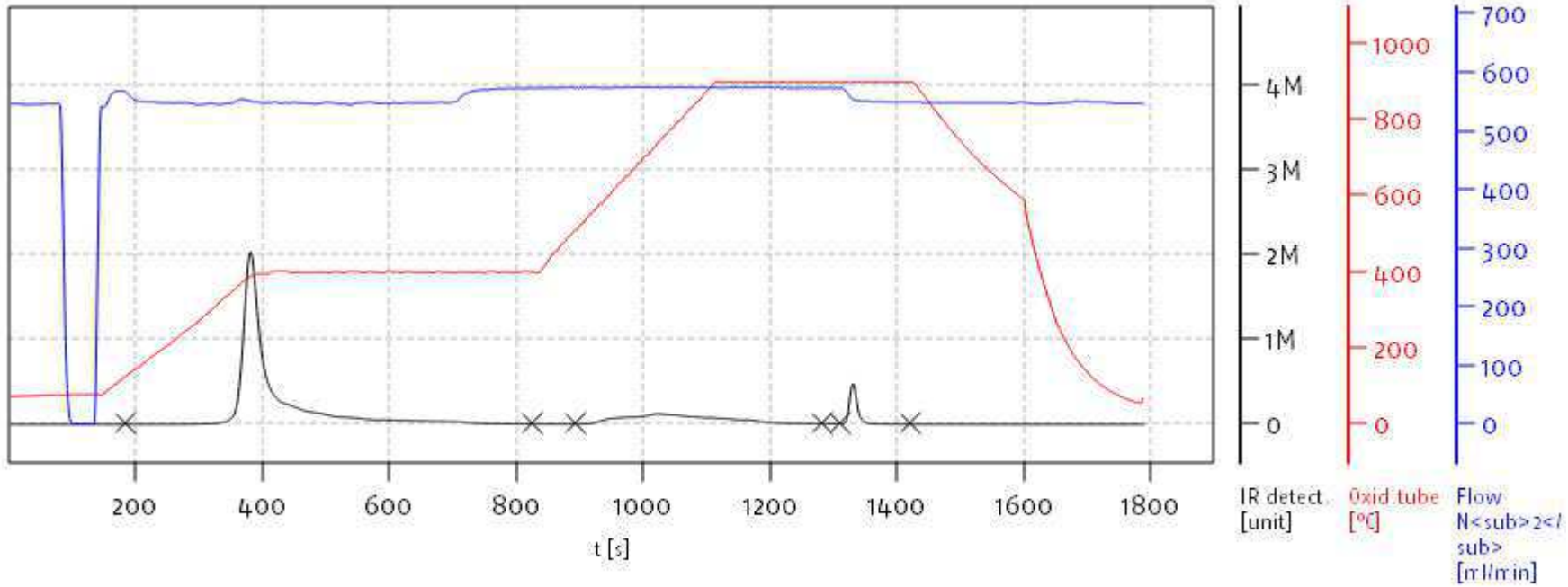
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
91	2	23A0249-08	503.80		CARBON	1/18/2023 7:02 AM	bl	1.111	3 461 887	1.364	0.073	265 564	852 300	1.037	0.254	0.9826	1.0000



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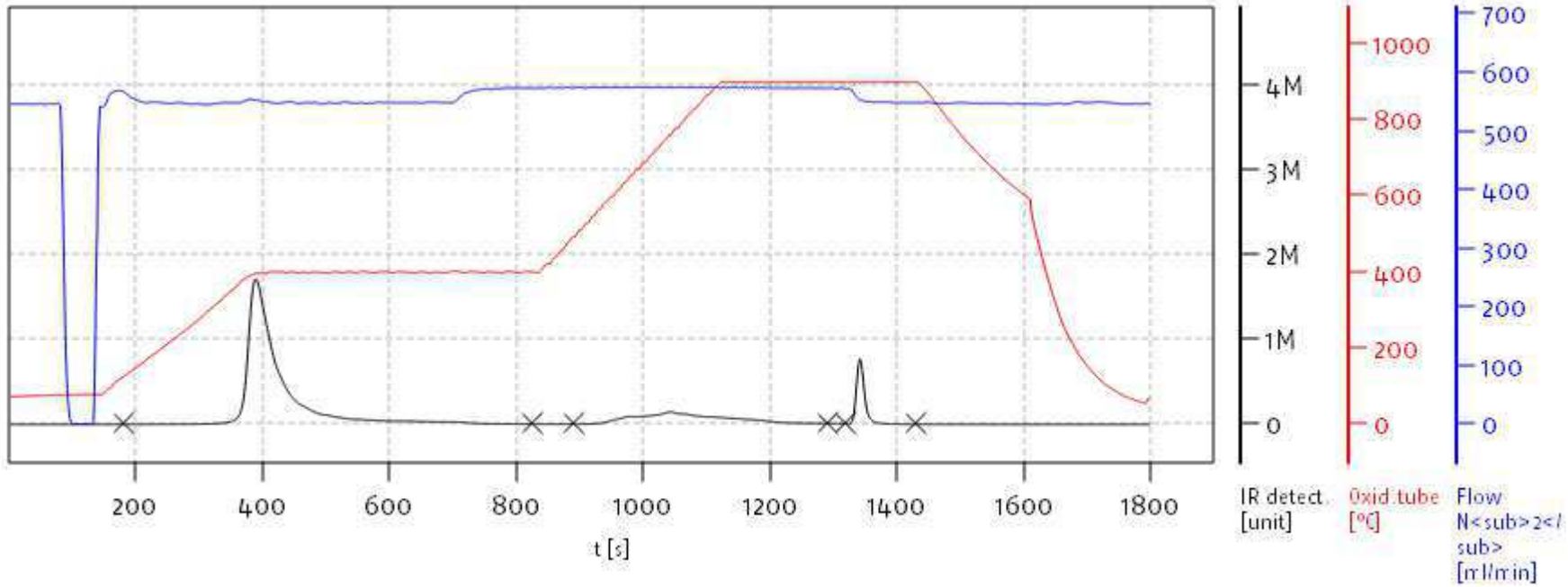
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
92	3	23A0249-09	531.10		CARBON	1/18/2023 7:33 AM	bl	1.154	3 638 181	1.415	0.120	436 539	922 718	1.034	0.261	0.9826	1.0000



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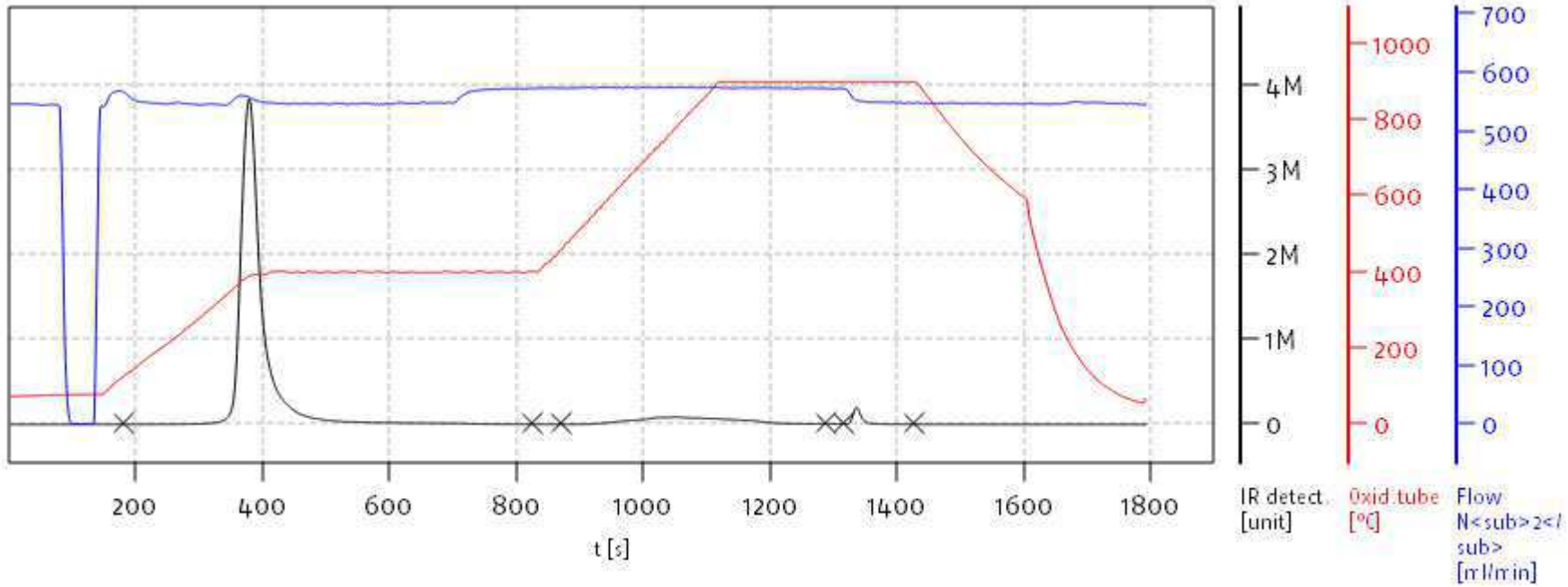
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
93	4	23A0249-10	583.00		CARBON	1/18/2023 8:03 AM	bl	1.448	5 478 862	1.604	0.025	120 951	615 614	1.423	0.156	0.9826	1.0000



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Balance: BAL3
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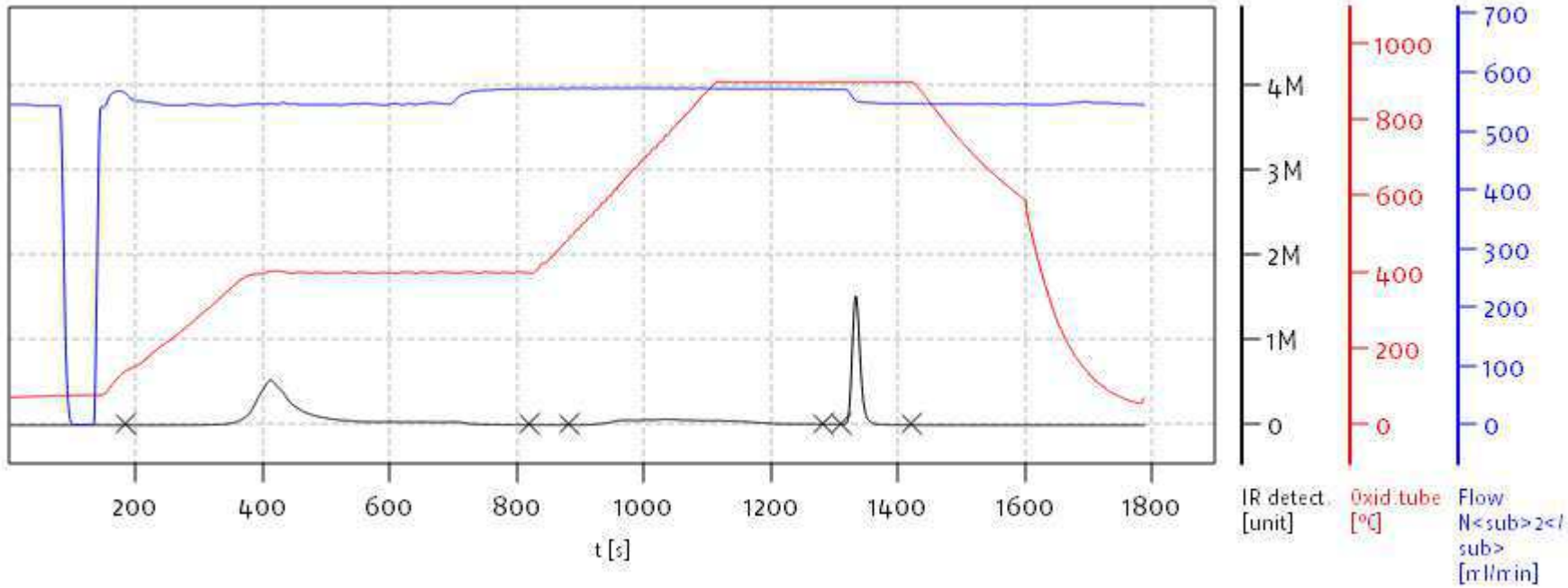
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
94	5	23A0249-11	524.00		CARBON	1/18/2023 8:33 AM	bl	0.731	1 699 797	0.888	0.246	857 558	556 790	0.486	0.157	0.9826	1.0000



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Balance: BAL3
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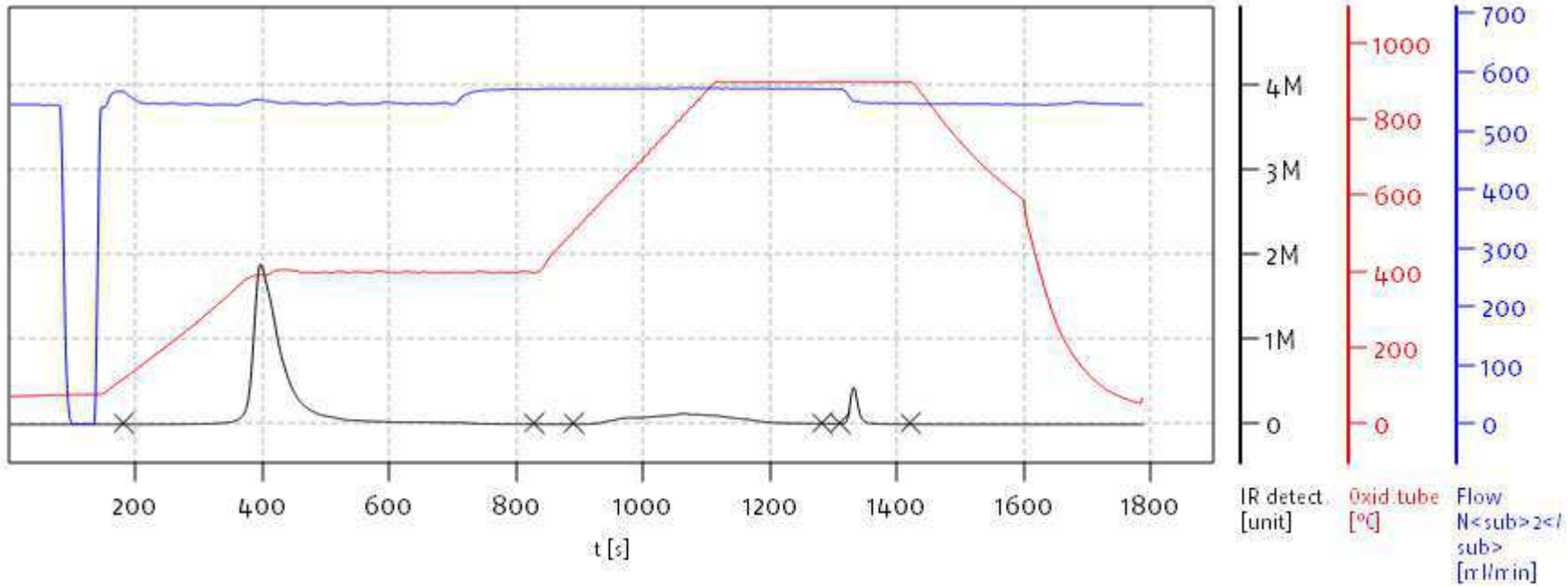
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
95	6	23A0295-01	524.00		CARBON	1/18/2023 9:04 AM	bl	1.161	3 797 129	1.411	0.067	252 003	872 036	1.095	0.250	0.9826	1.0000



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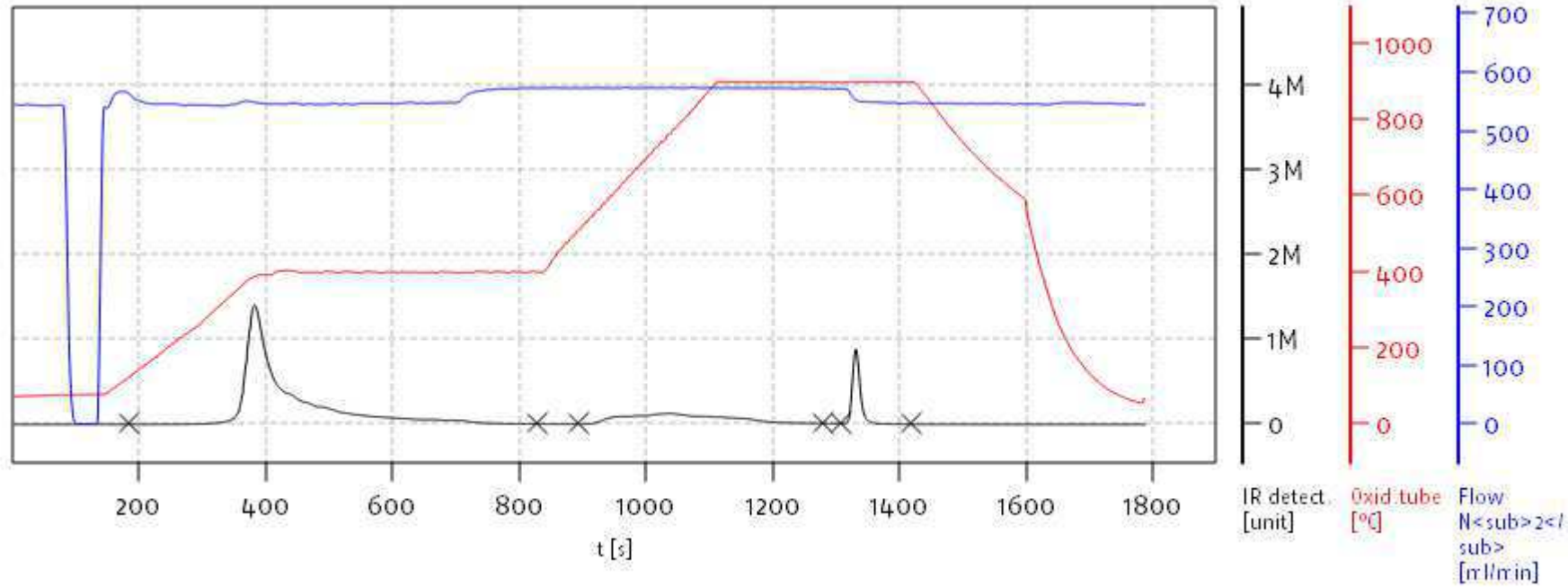
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
96	7	23A0295-02	501.00		CARBON	1/18/2023 9:34 AM	bl	1.237	3 629 491	1.527	0.143	488 245	965 817	1.094	0.290	0.9826	1.0000



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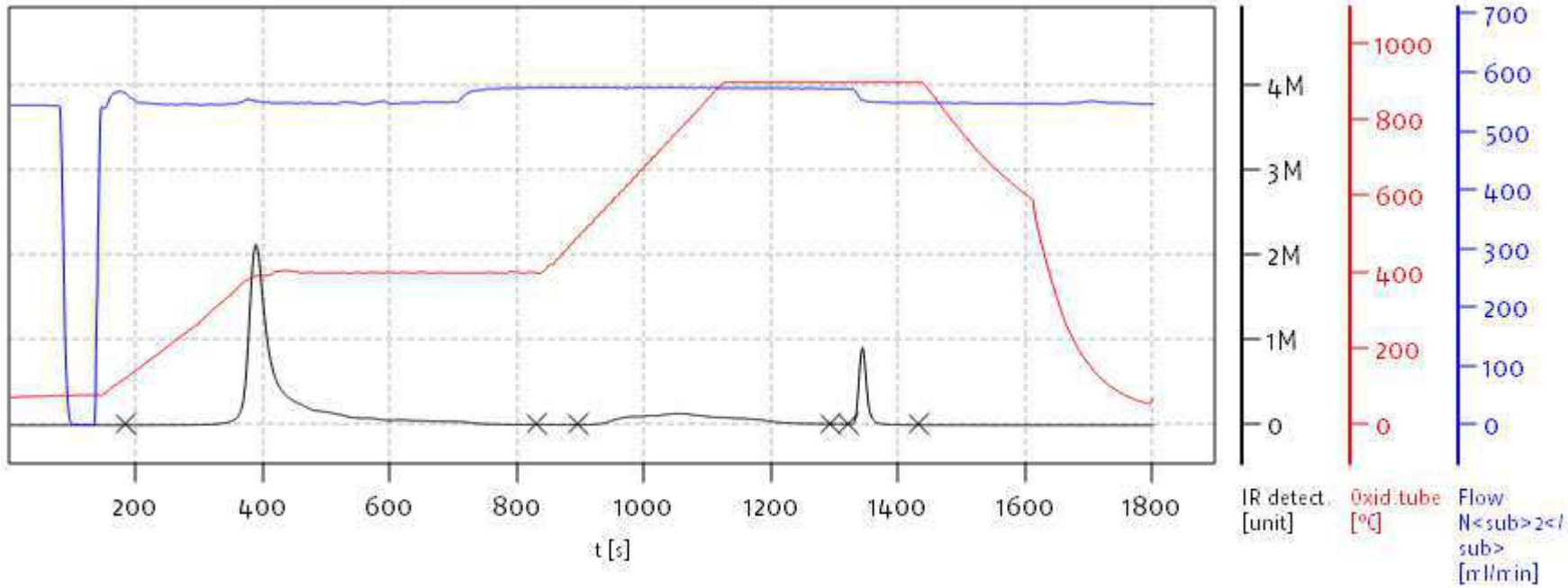
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
97	8	23A0295-03	576.30		CARBON	1/18/2023 10:04 AM	bl	1.163	3 947 697	1.431	0.128	502 821	1 026 471	1.035	0.269	0.9826	1.0000



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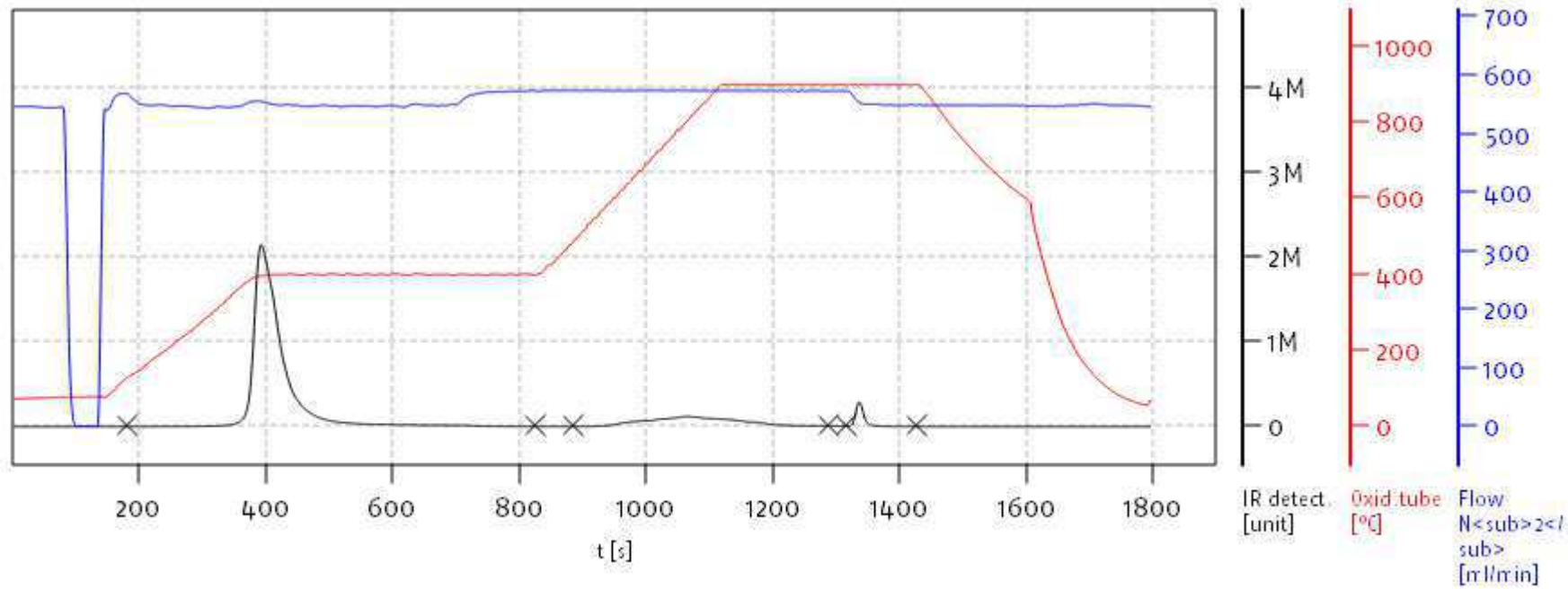
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
98	9	23A0295-04	541.70		CARBON	1/18/2023 10:35 AM	bl	1.170	4 048 563	1.382	0.040	167 018	770 100	1.129	0.212	0.9826	1.0000



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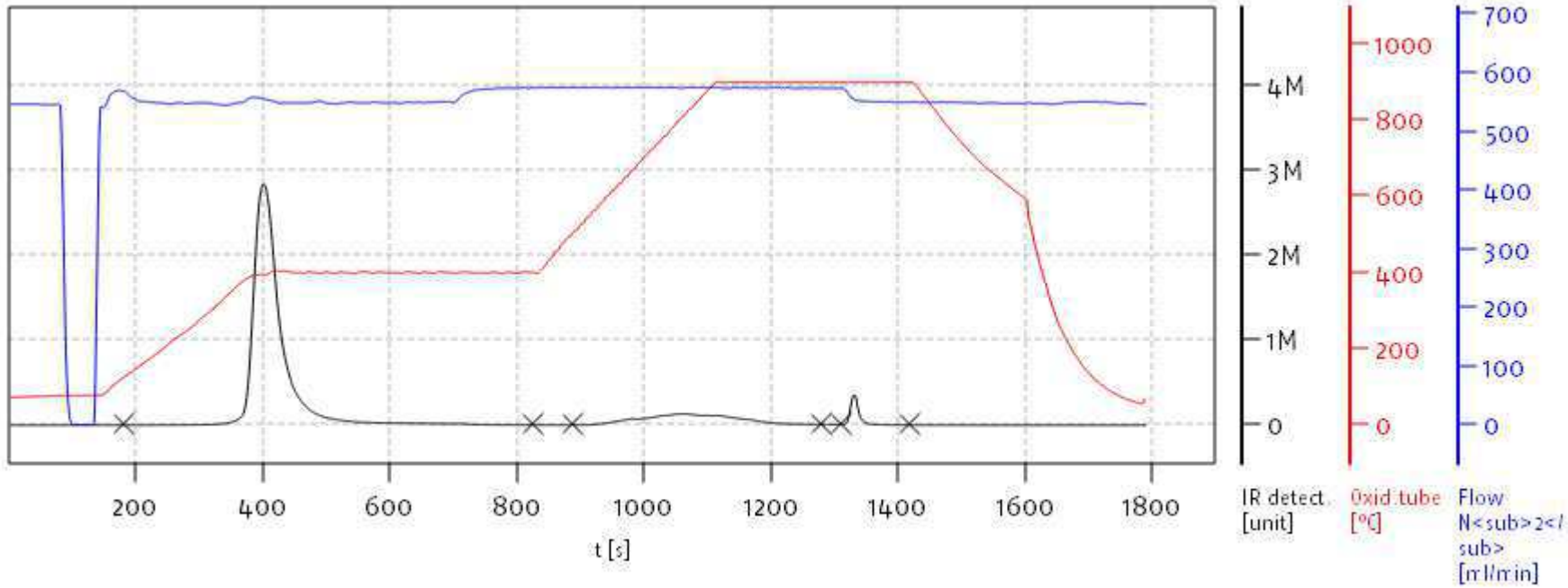
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
99	10	23A0295-05	621.70		CARBON	1/18/2023 11:05 AM	bl	1.319	5 229 677	1.538	0.046	212 594	904 753	1.273	0.219	0.9826	1.0000



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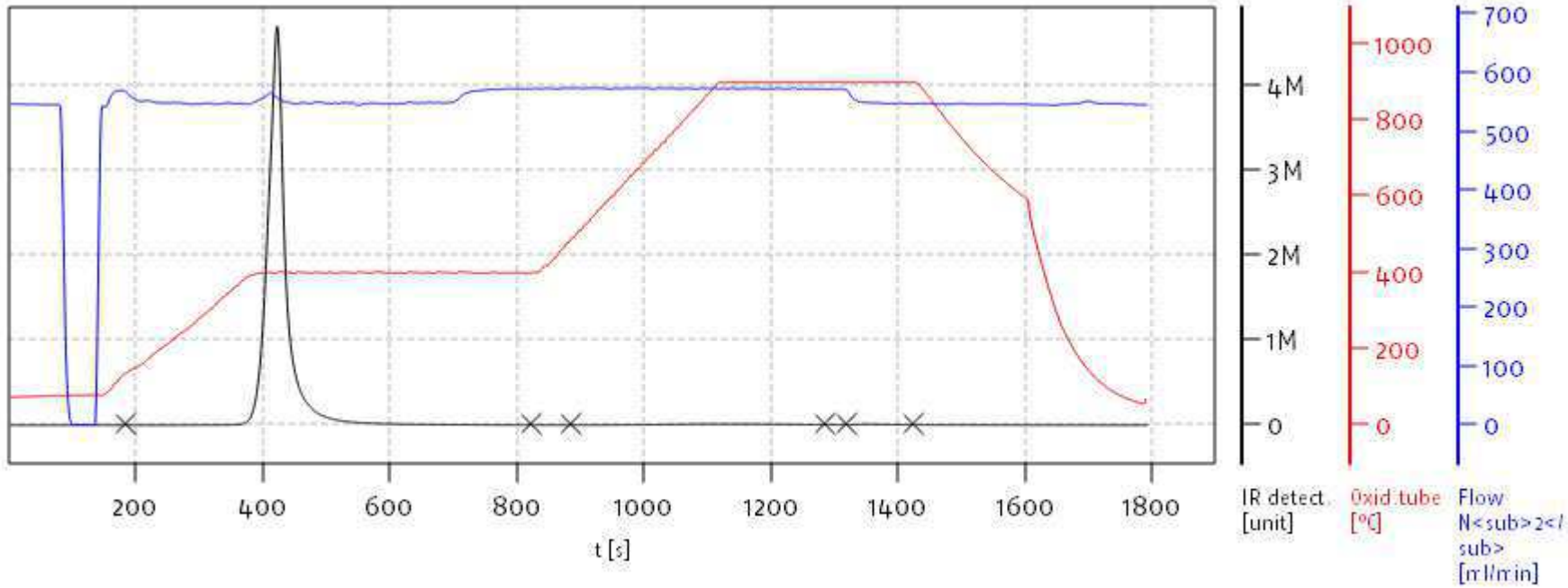
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
100	11	SLA0148-CCV8	20.10		CARBON	1/18/2023 11:35 AM	bl	44.008	5 840 196	44.686	0.013	28 194	114 551	43.995	0.678	0.9826	1.0000



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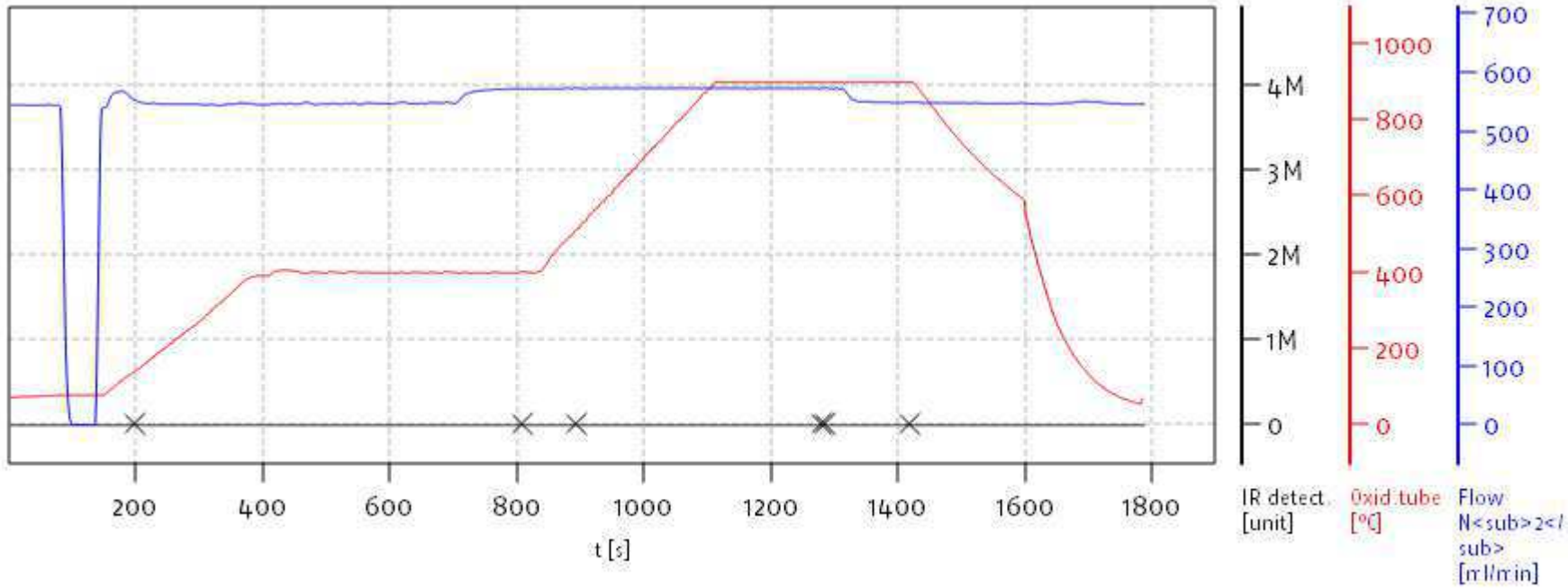
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
101	12	SLA0148-CCB8	505.00		CARBON	1/18/2023 12:05 PM	bl,C3u,C2u	0.000	5 004	0.000	0.000	633	30	0.000	0.000	0.9826	1.0000



Name:

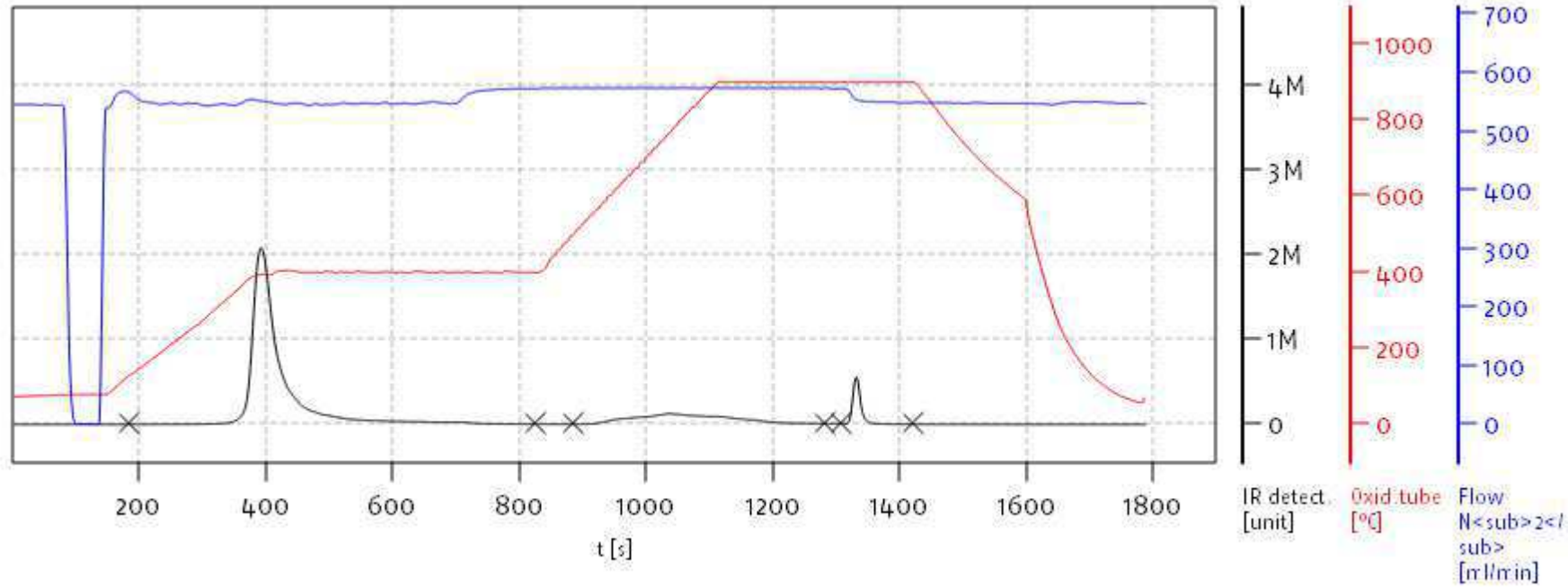
Access: soliTOC superuser

Date: Wed Jan 18 13:37:19 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
102	13	23A0295-06	555.40		CARBON	1/18/2023 12:36 PM	bl	1.136	3 888 213	1.373	0.079	309 500	875 917	1.058	0.237	0.9826	1.0000



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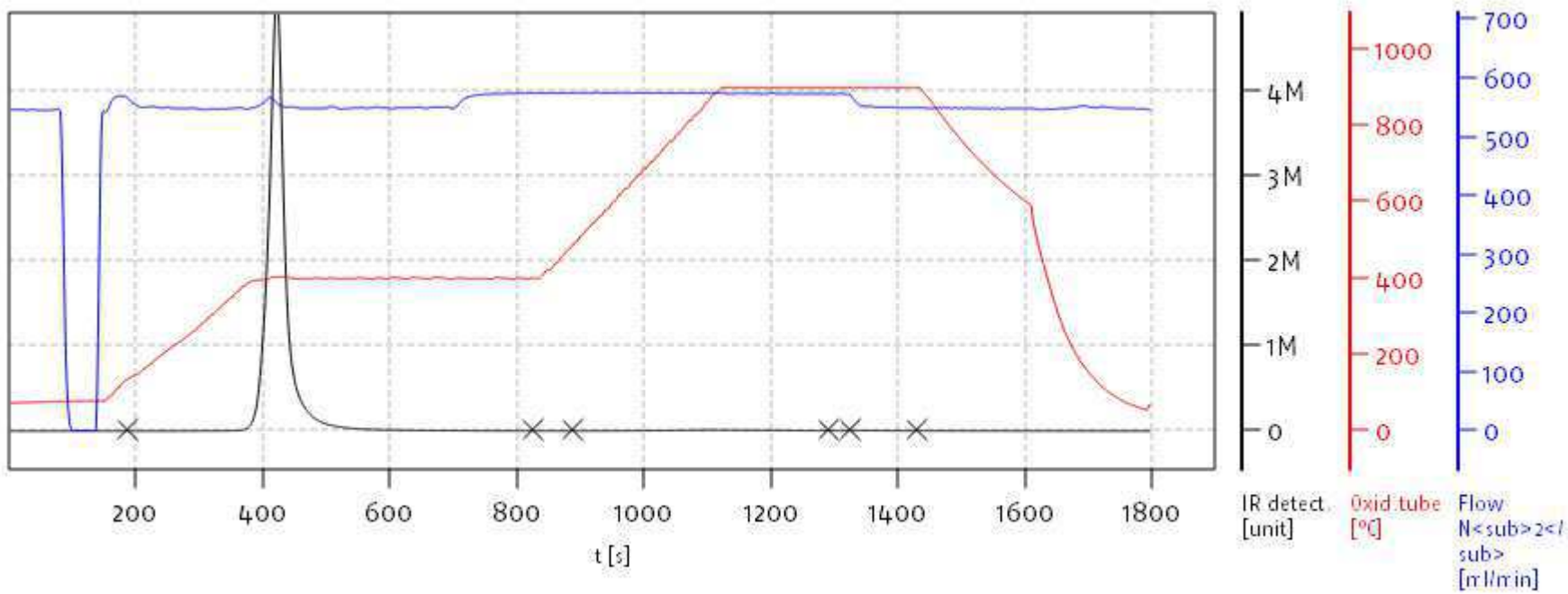
Date: Wed Jan 18 13:37:19 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
103	14	SLA0148-CCV9	20.00		CARBON	1/18/2023 1:06 PM	bl	45.115	5 958 512	45.683	0.000	17 179	99 849	45.115	0.567	0.9826	1.0000



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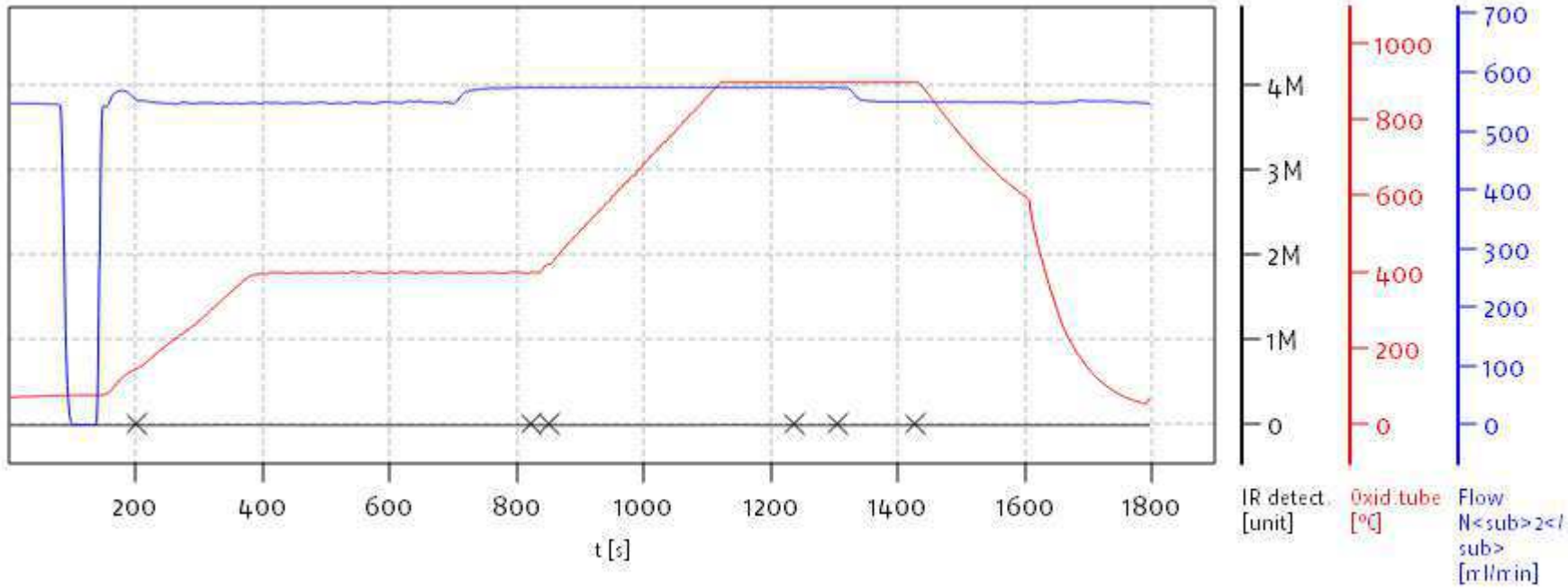
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
104	15	SLA0148-CCB9	519.50		CARBON	1/18/2023 1:36 PM	bl,C2u	0.000	9 182	0.000	0.000	690	5 961	0.000	0.000	0.9826	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FD00070	Instrument:	TOC Cube
Calibration Date:	04/26/2022 11:29		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
Total Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
Total Inorganic Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
% Soot	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
Total Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
Total Inorganic Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
% Soot	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
Total Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
Total Inorganic Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
% Soot	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
Total Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
Total Inorganic Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
% Soot	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408

INITIAL CALIBRATION DATA

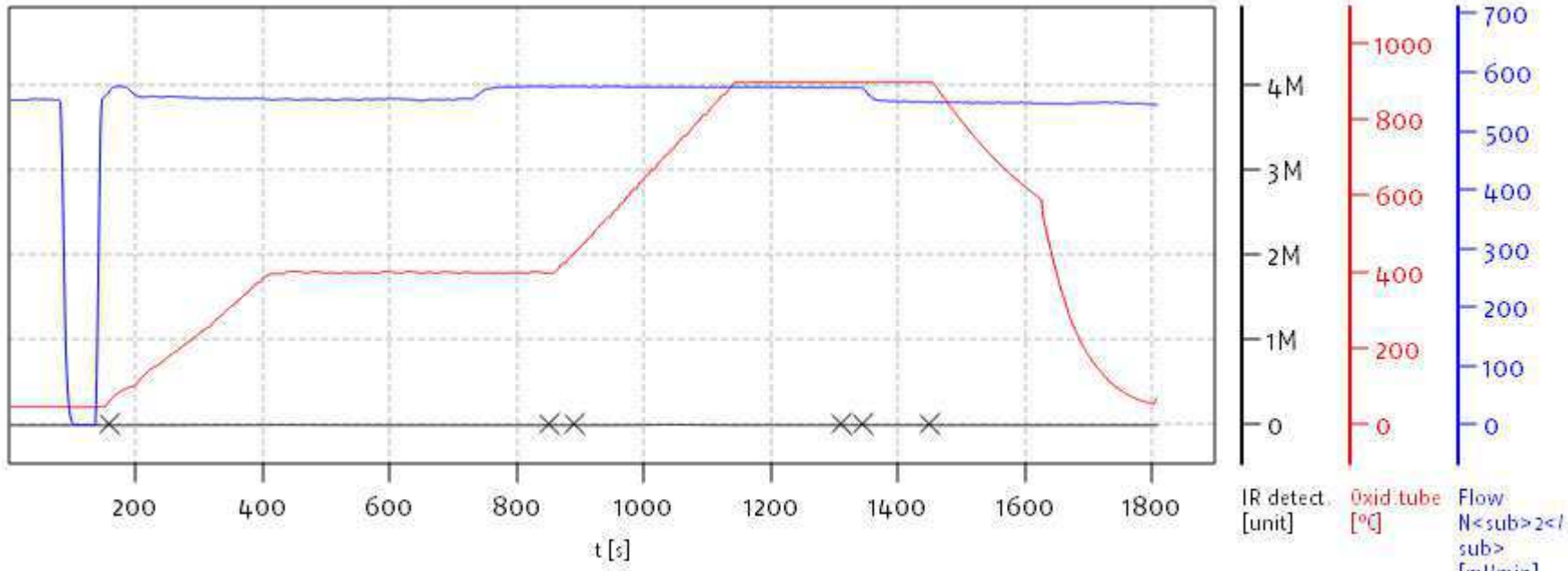
EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0207
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FD00070	Instrument:	TOC Cube
Calibration Date:	04/26/2022 11:29		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Total Organic Carbon	1424064	15.9	0.9988			
Total Carbon	1424064	15.9	0.9988			
Total Inorganic Carbon	1424064	15.9	0.9988			
% Soot	1424064	15.9	0.9988			

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		1.00	CARBON	4/26/2022 11:29 AM	0.000	0.000	0.000	bl	29 049	30 612	3 899	1.0000	1.0000



Name:

Access: soliTOC superuser

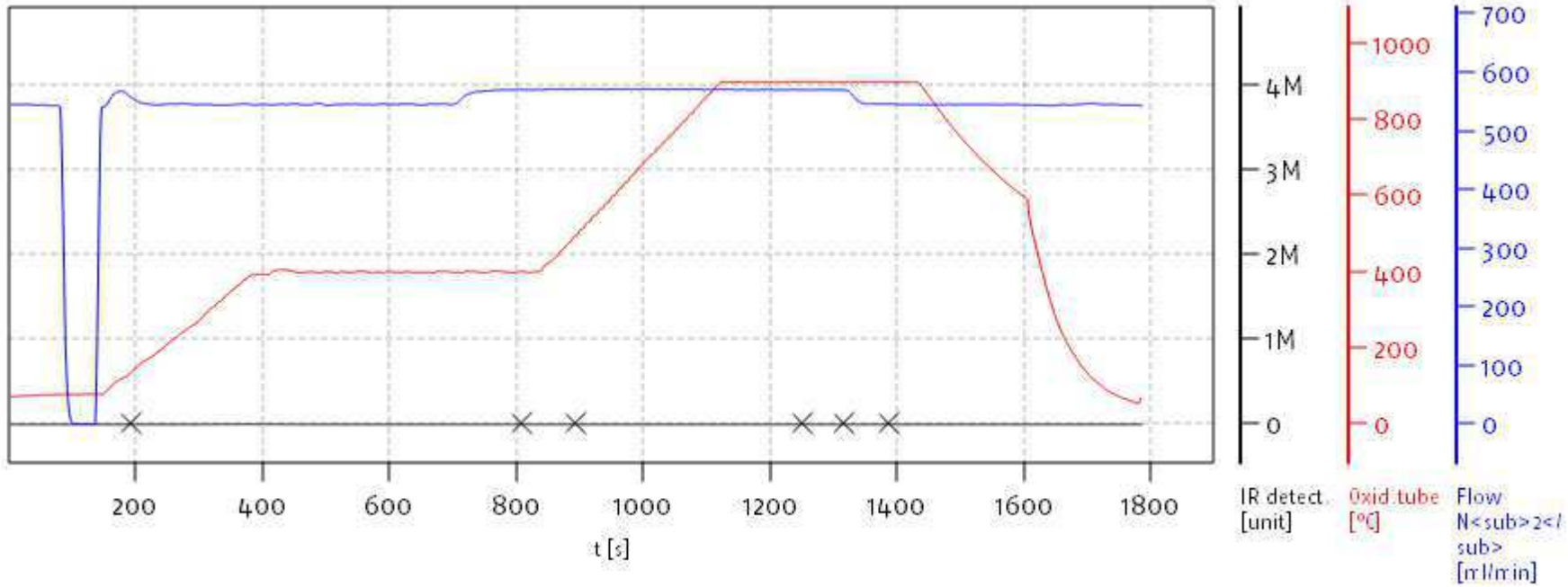
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
2	2	BLANK	1.00		1.00	CARBON	4/26/2022 12:00 PM	0.000	0.000	0.000	bl	11 115	60	8	1.0000	1.0000



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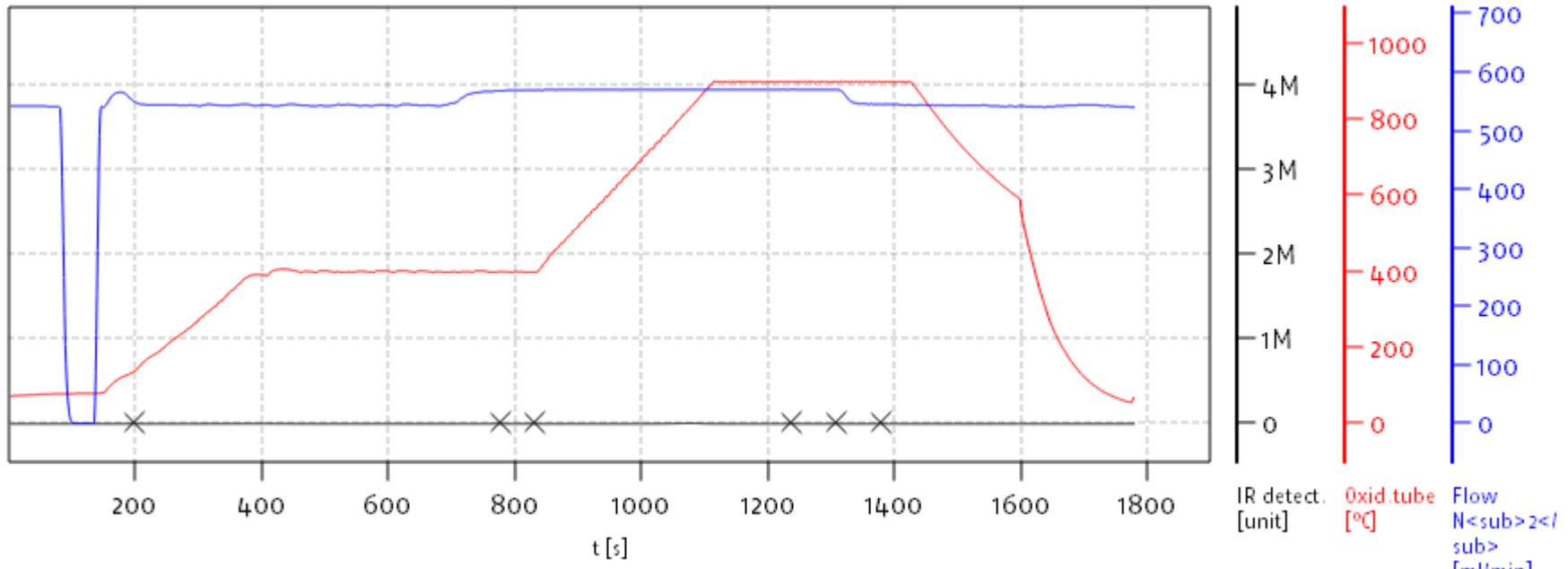
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
3	3	SEQ-CAL1	200.00	0.0027	1.00	CARBON	4/26/2022 12:30 PM	0.010	0.008	0.018	bl,C1u,C2u	7 294	11 739	22	1.0000	0.7425



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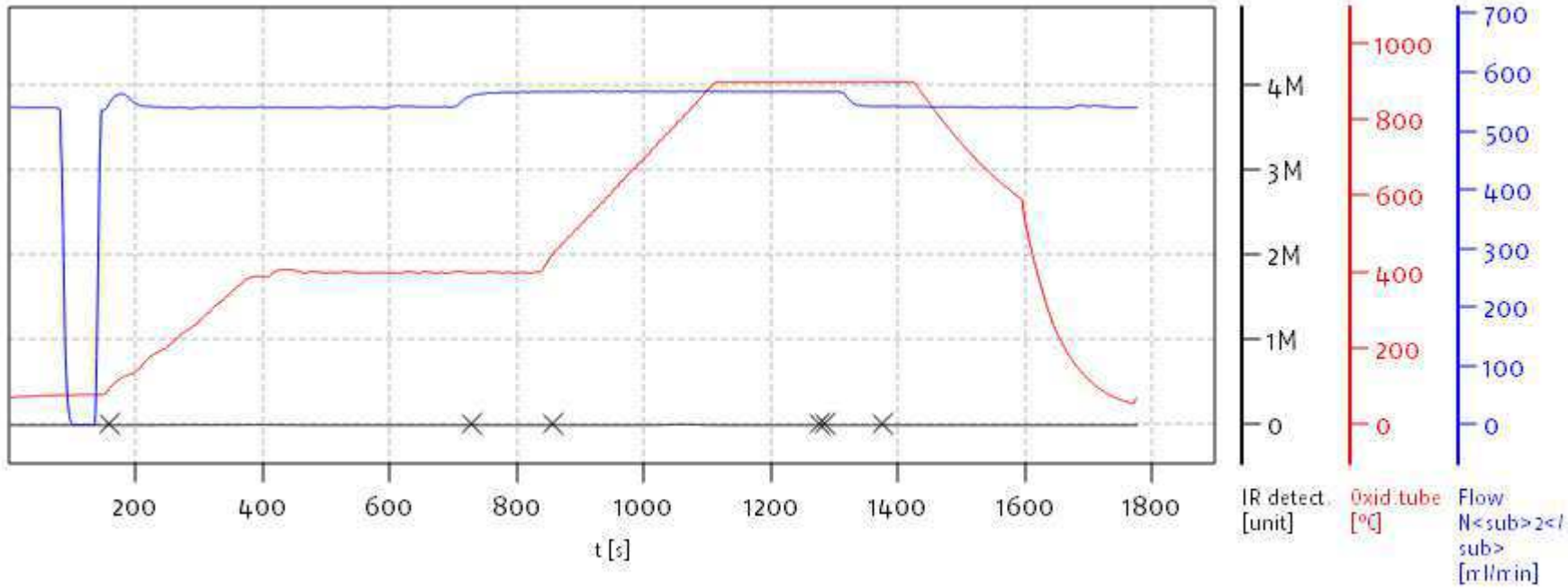
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
4	4	SEQ-CAL2	200.00	0.0049	1.00	CARBON	4/26/2022 1:00 PM	0.023	0.015	0.038	bl,C2u	23 296	19 107	47	1.0000	0.8936



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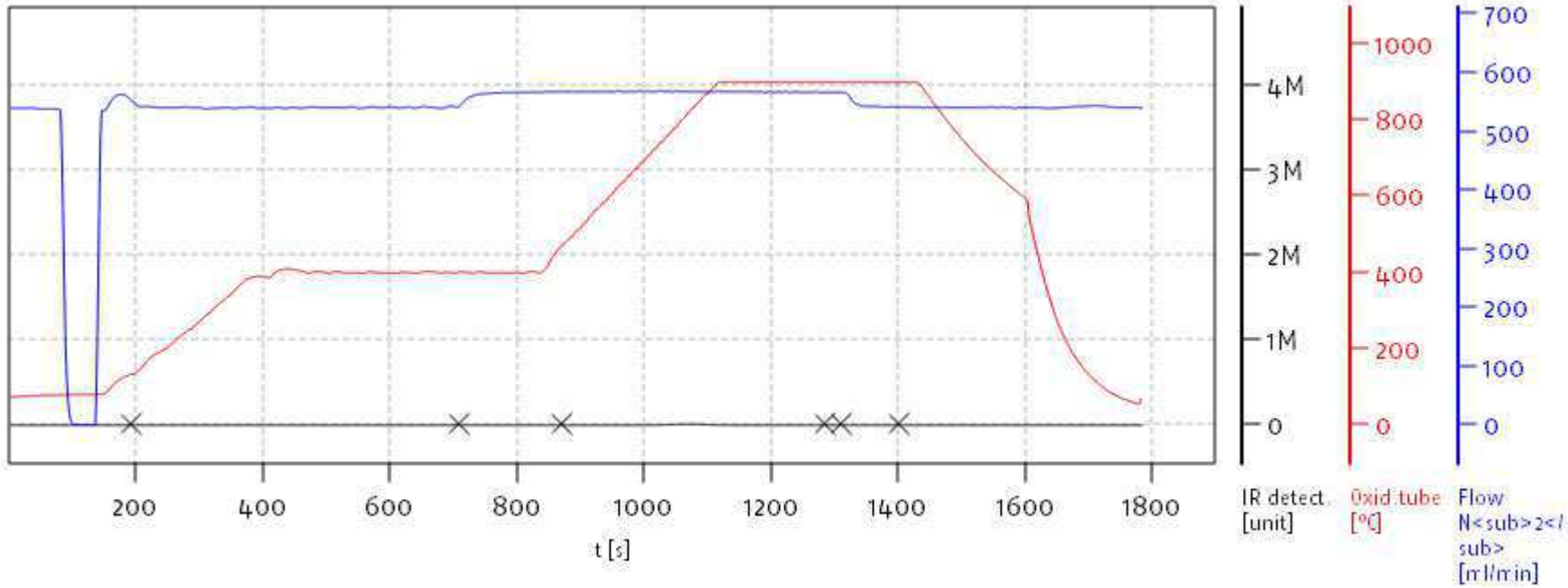
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
5	5	SEQ-CAL3	200.00	0.0071	1.00	CARBON	4/26/2022 1:30 PM	0.006	0.022	0.028	bl,C1u,C2u	2 319	27 530	170	1.0000	0.9343



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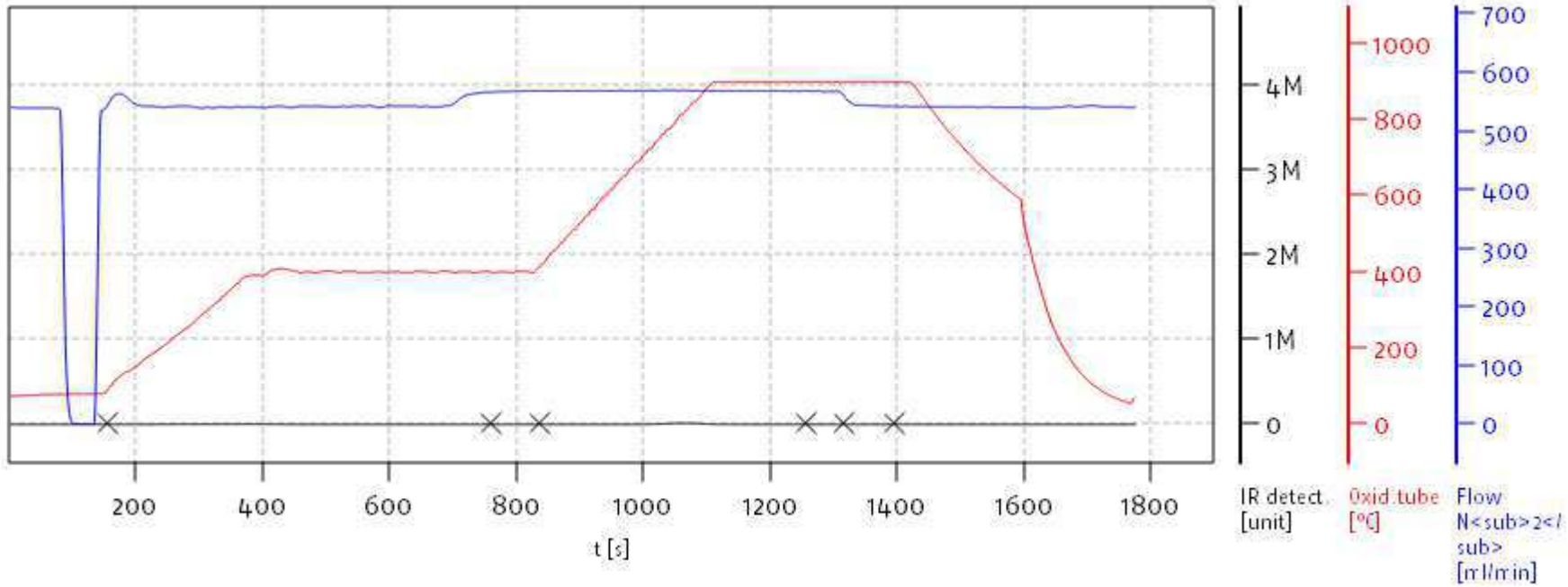
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
6	6	SEQ-CAL4	200.00	0.0098	1.00	CARBON	4/26/2022 2:00 PM	0.020	0.030	0.050	bl,C2u	19 746	38 017	109	1.0000	0.9461



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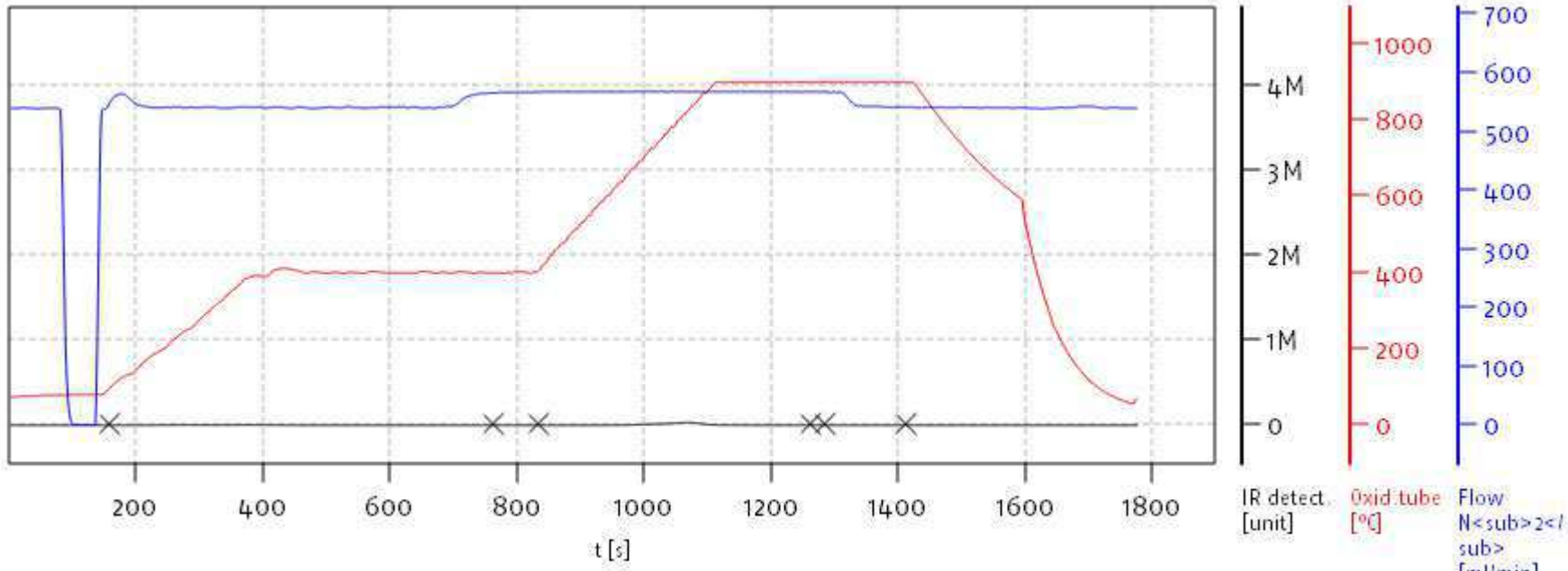
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
7	7	SEQ-CAL5	200.00	0.0148	1.00	CARBON	4/26/2022 2:30 PM	0.021	0.045	0.066	bl,C2u	20 951	92 945	236	1.0000	0.5975



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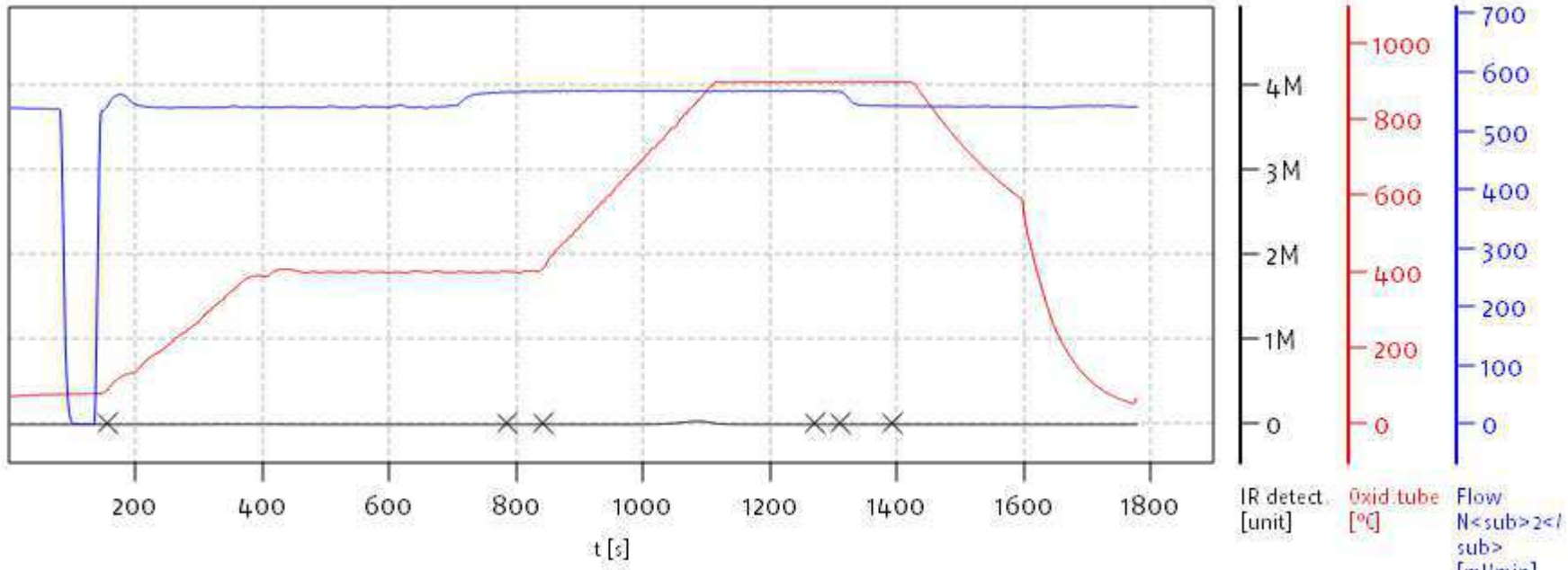
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
8	8	SEQ-CAL6	200.00	0.0196	1.00	CARBON	4/26/2022 3:00 PM	0.012	0.061	0.073	bl,C2u	10 118	82 297	59	1.0000	0.9144



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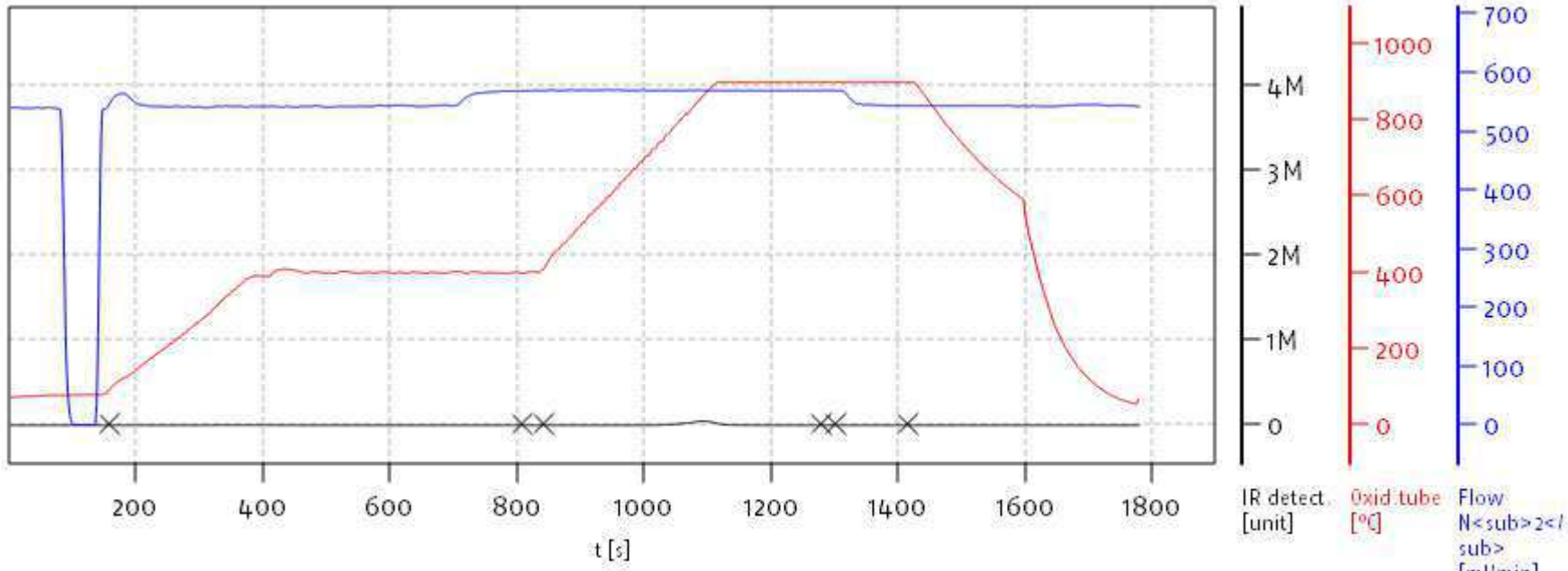
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
9	9	SEQ-CAL7	200.00	0.0247	1.00	CARBON	4/26/2022 3:30 PM	0.013	0.075	0.088	bl,C2u	10 555	101 530	292	1.0000	0.9173



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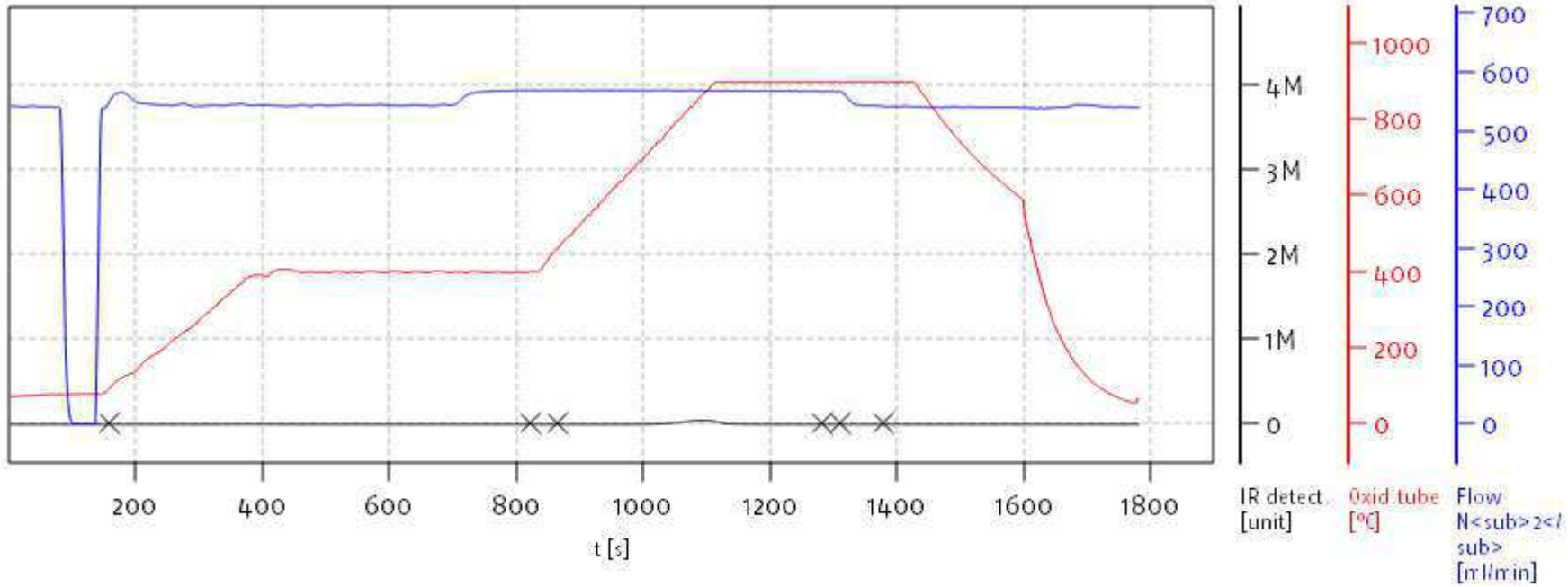
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
10	10	SEQ-CAL8	200.00	0.0298	1.00	CARBON	4/26/2022 4:00 PM	0.009	0.091	0.100	bl,C1u,C2u	6 668	120 822	116	1.0000	0.9312



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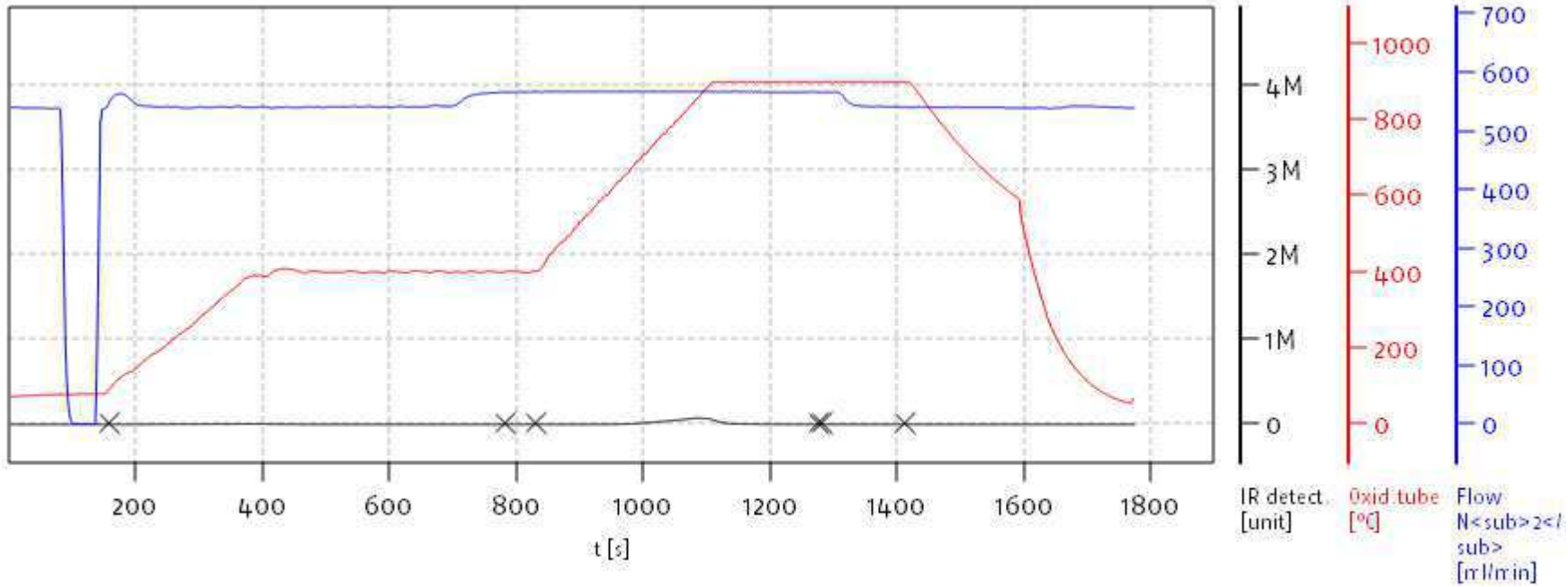
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
11	11	SEQ-CAL9	200.00	0.0402	1.00	CARBON	4/26/2022 4:30 PM	0.031	0.120	0.151	bl,C2u	32 999	260 234	1 044	1.0000	0.5792



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

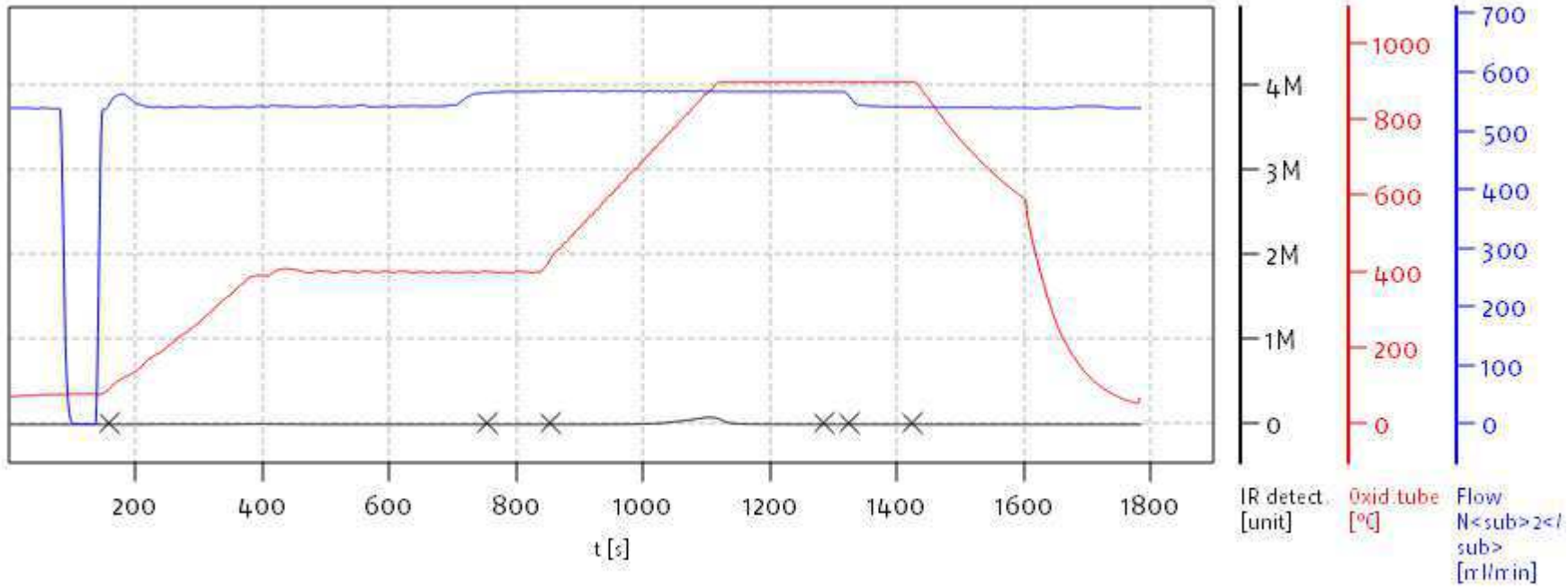
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
12	12	SEQ-CALA	200.00	0.0500	1.00	CARBON	4/26/2022 5:00 PM	0.021	0.151	0.172	bl,C2u	20 147	233 779	913	1.0000	0.8099



Name:

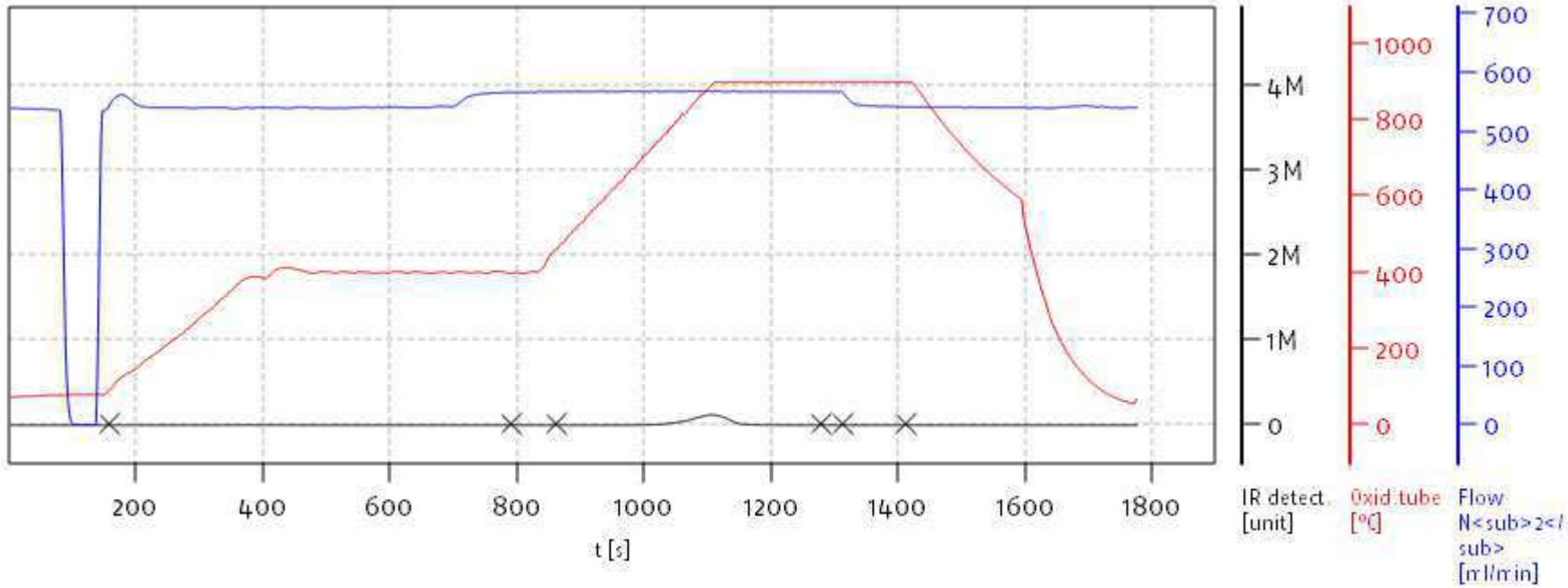
Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
13	13	SEQ-CALB	200.00	0.0040	1.00	CARBON	4/26/2022 5:30 PM	0.010	0.258	0.268	bl,C1u,C2u	7 070	323 151	663	1.0000	1.0048



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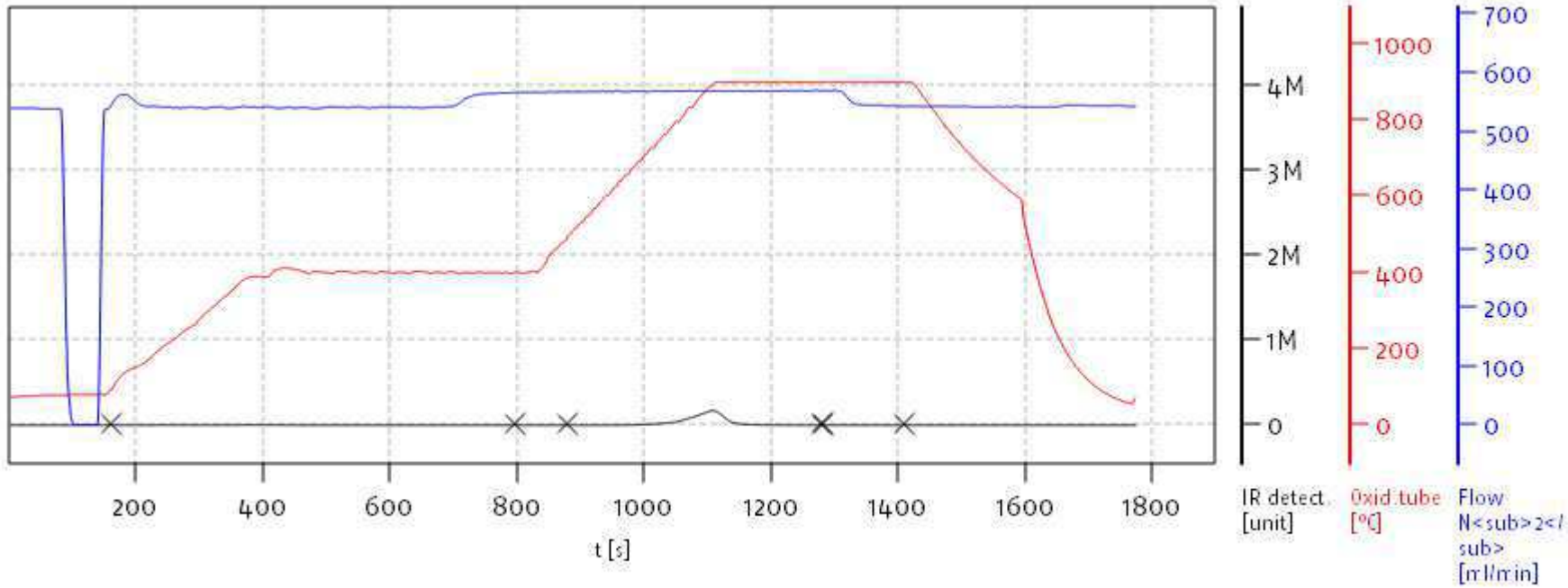
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
14	14	SEQ-CALC	200.00	0.0048	1.00	CARBON	4/26/2022 6:00 PM	0.015	0.324	0.339	bl,C2u	13 785	411 879	575	1.0000	0.9917



Name:

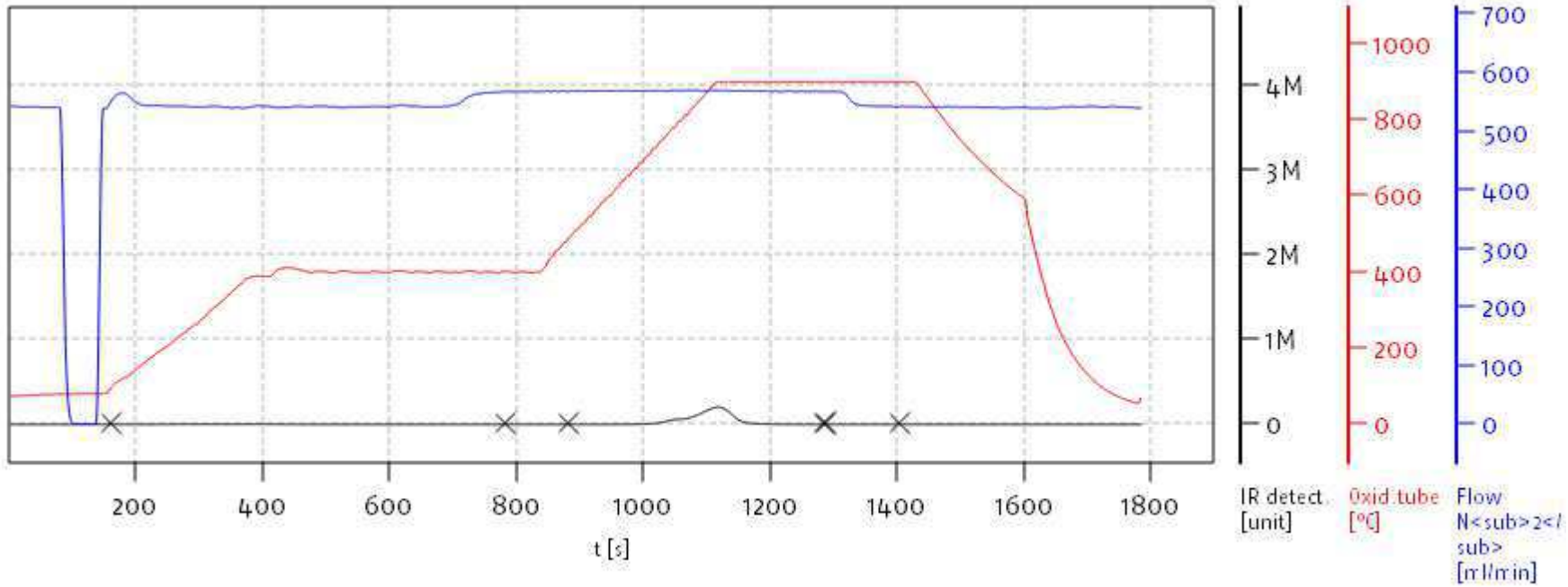
Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
15	15	SEQ-CALD	200.00	0.0069	1.00	CARBON	4/26/2022 6:30 PM	0.019	0.444	0.463	bl,C2u	18 465	553 540	263	1.0000	1.0129



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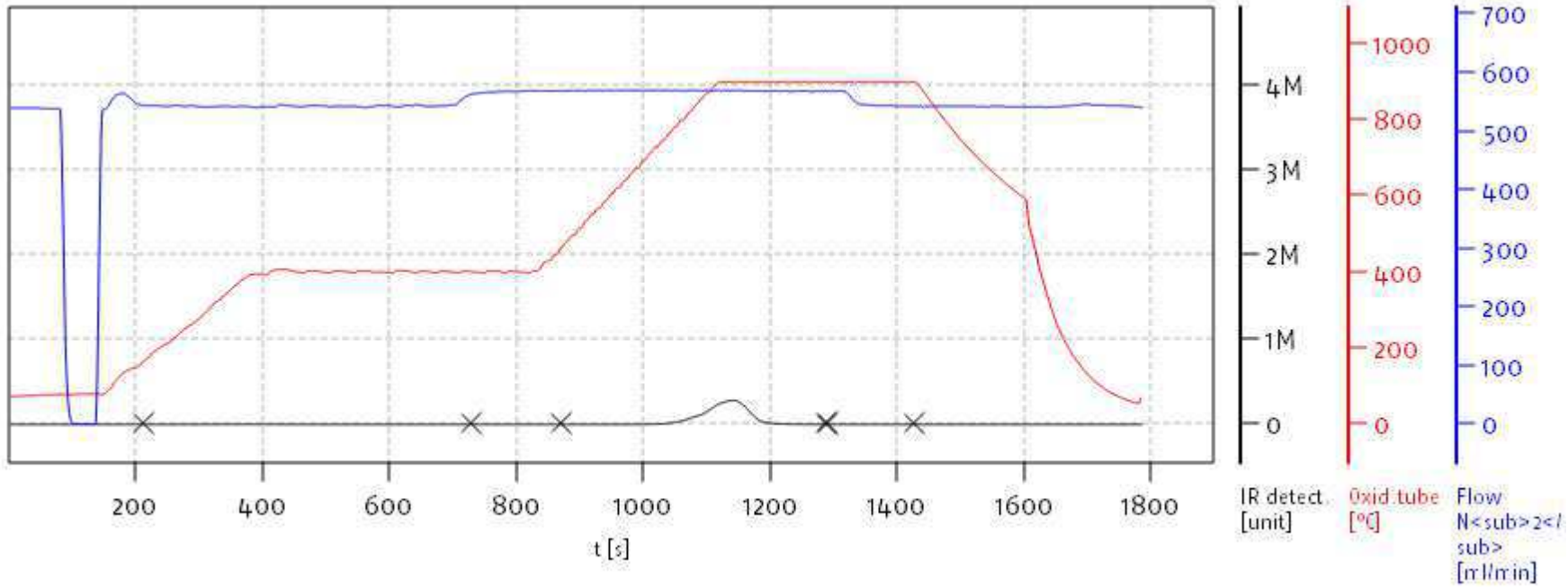
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
16	16	SEQ-CALE	200.00	0.0101	1.00	CARBON	4/26/2022 7:00 PM	0.009	0.600	0.609	bl,C1u,C2u	5 485	839 878	536	1.0000	0.9036



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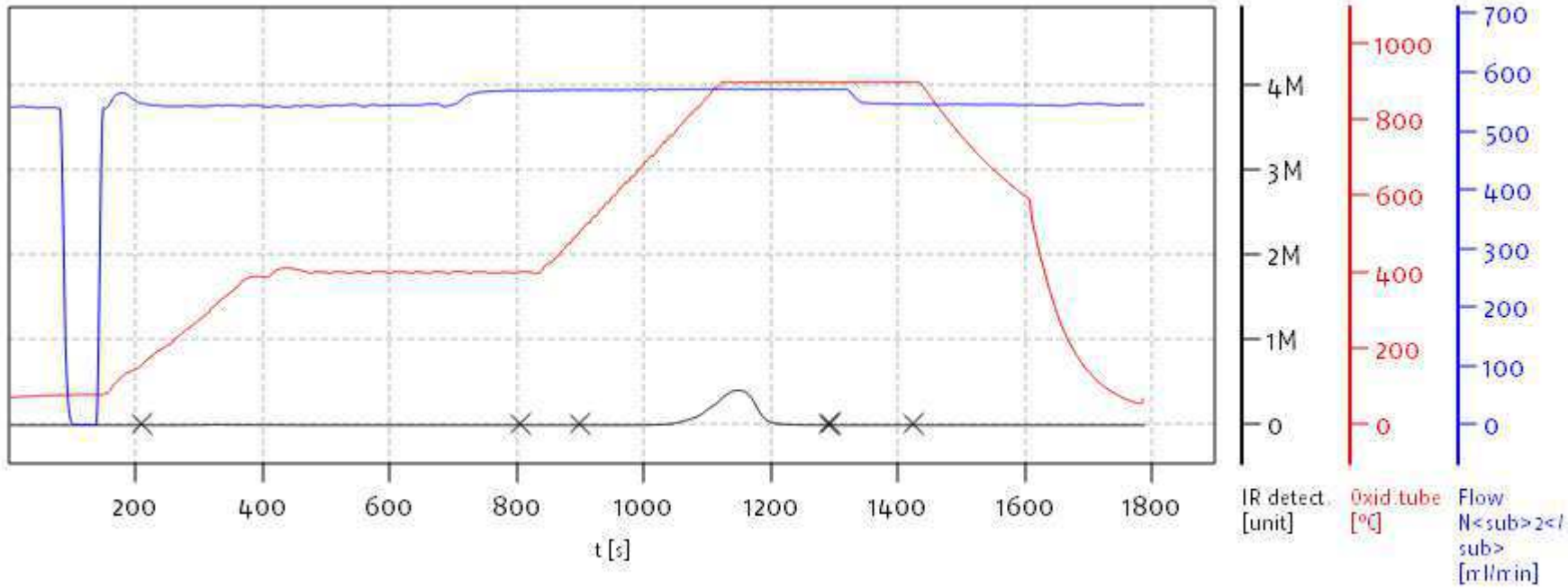
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
17	17	SEQ-CALF	200.00	0.0149	1.00	CARBON	4/26/2022 7:31 PM	0.019	0.906	0.925	bl,C2u	17 439	1 236 200	814	1.0000	0.9279



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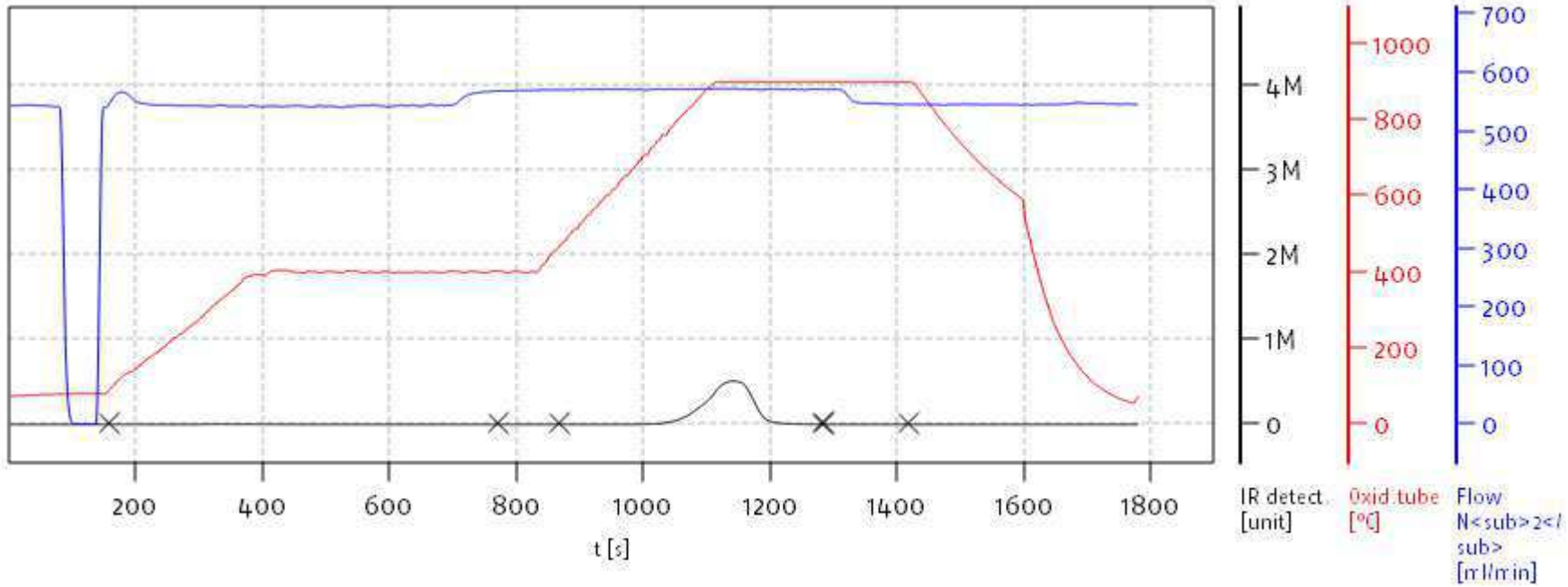
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
18	18	SEQ-CALG	200.00	0.0198	1.00	CARBON	4/26/2022 8:01 PM	0.015	1.206	1.221	bl,C2u	12 557	1 639 190	1 295	1.0000	0.9320



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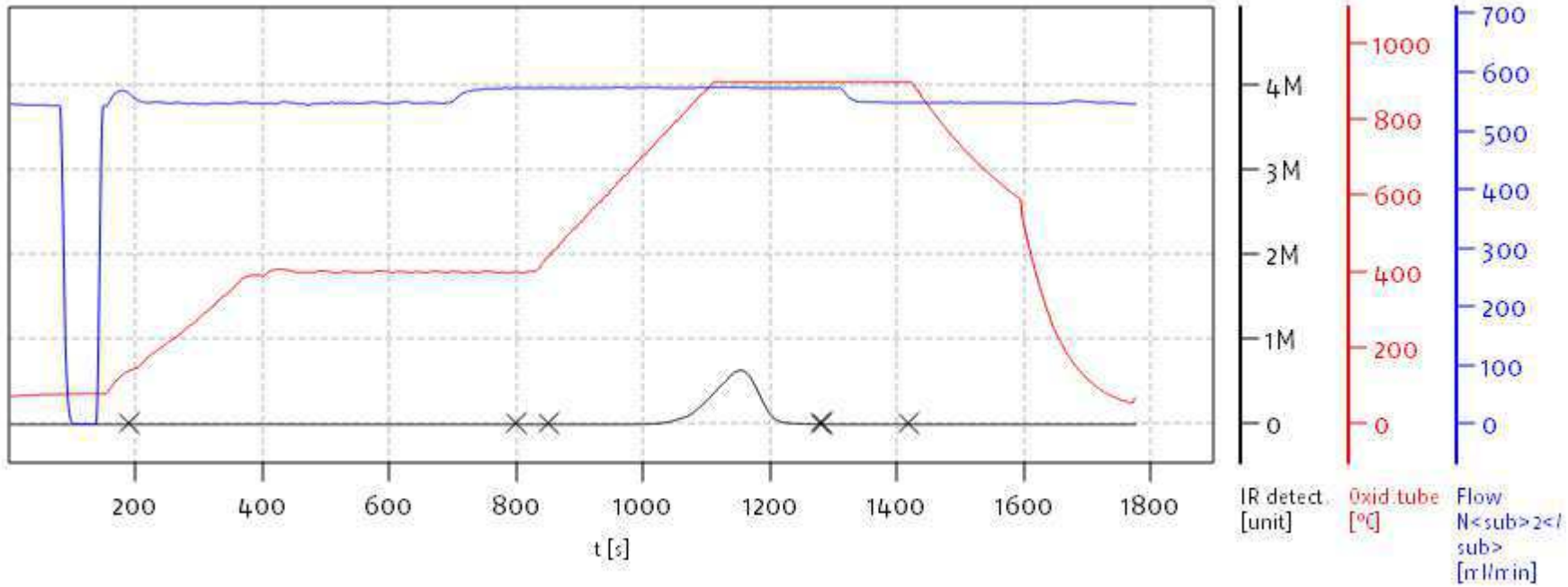
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
19	19	SEQ-CALH	200.00	0.0250	1.00	CARBON	4/26/2022 8:31 PM	0.009	1.524	1.533	bl,C1u,C2u	4 029	2 063 890	2 225	1.0000	0.9357



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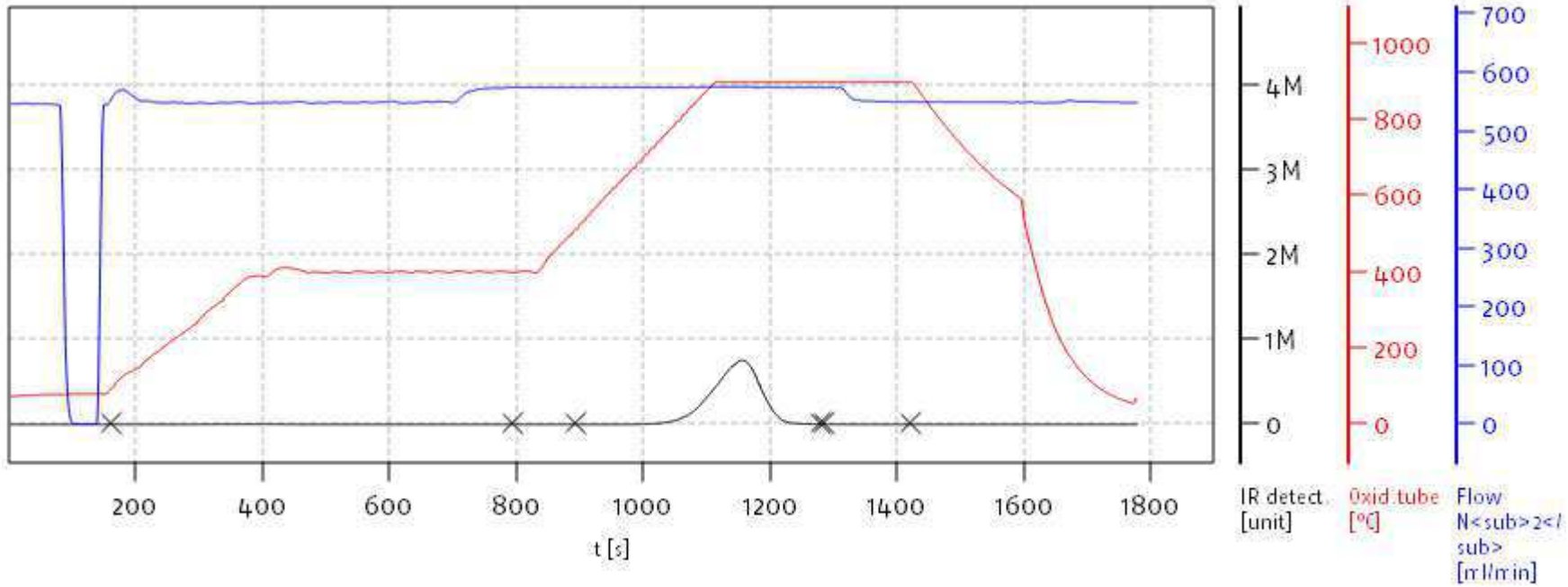
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
20	20	SEQ-CALI	200.00	0.0303	1.00	CARBON	4/26/2022 9:01 PM	0.017	1.800	1.817	bl,C2u	13 926	2 495 900	2 903	1.0000	0.9140



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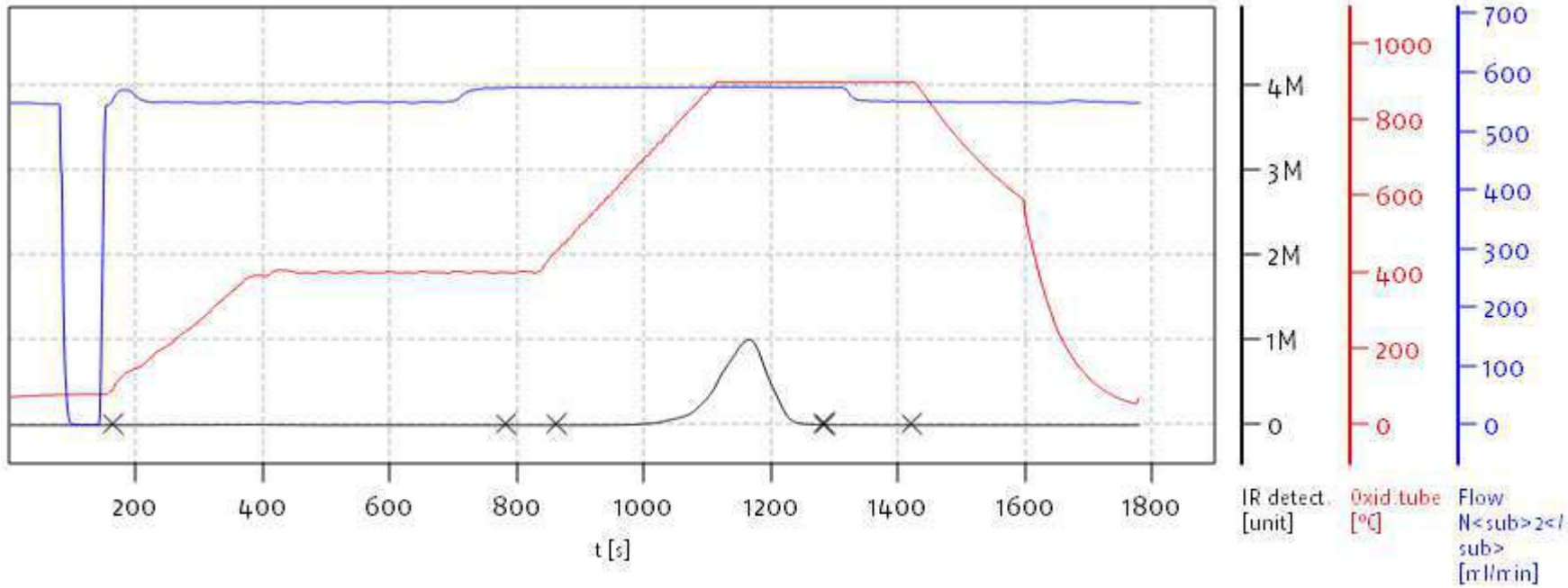
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
21	21	SEQ-CALJ	200.00	0.0415	1.00	CARBON	4/26/2022 9:31 PM	0.031	2.400	2.431	bl,C2u	28 786	3 482 530	5 351	1.0000	0.8737



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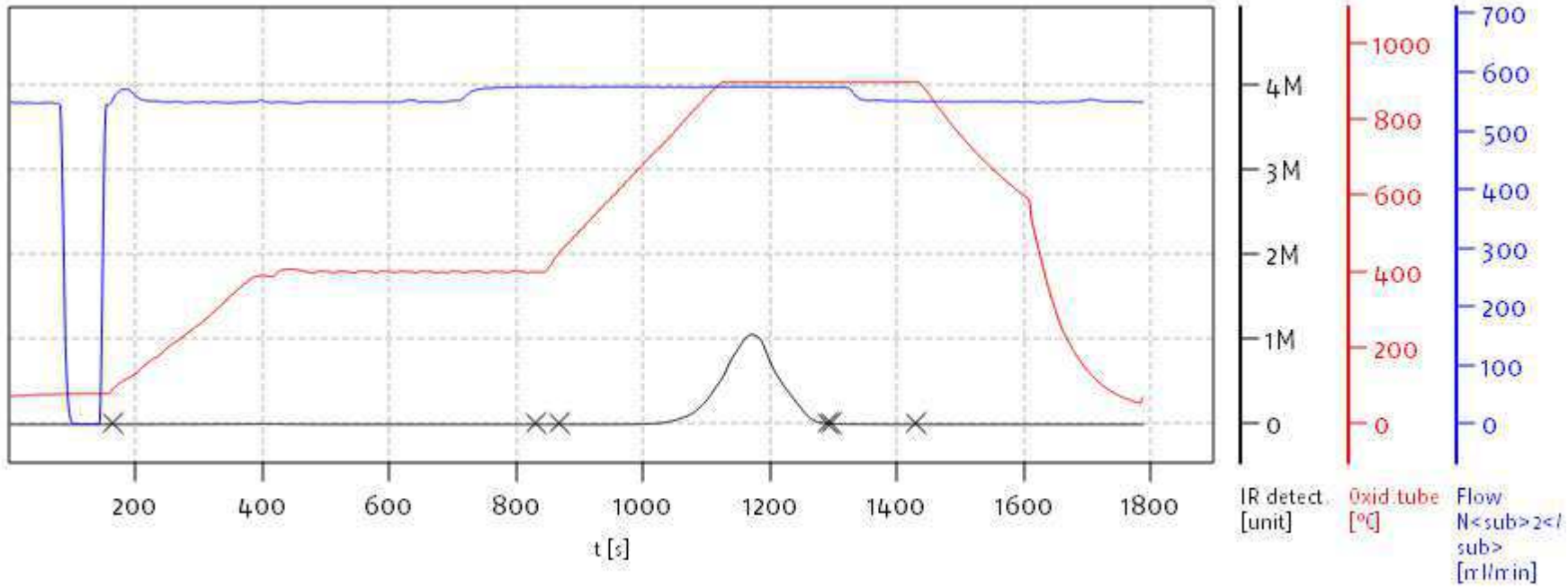
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
22	22	SEQ-CALK	200.00	0.0497	1.00	CARBON	4/26/2022 10:01 PM	0.031	3.012	3.043	bl	23 732	4 105 830	9 736	1.0000	0.9301



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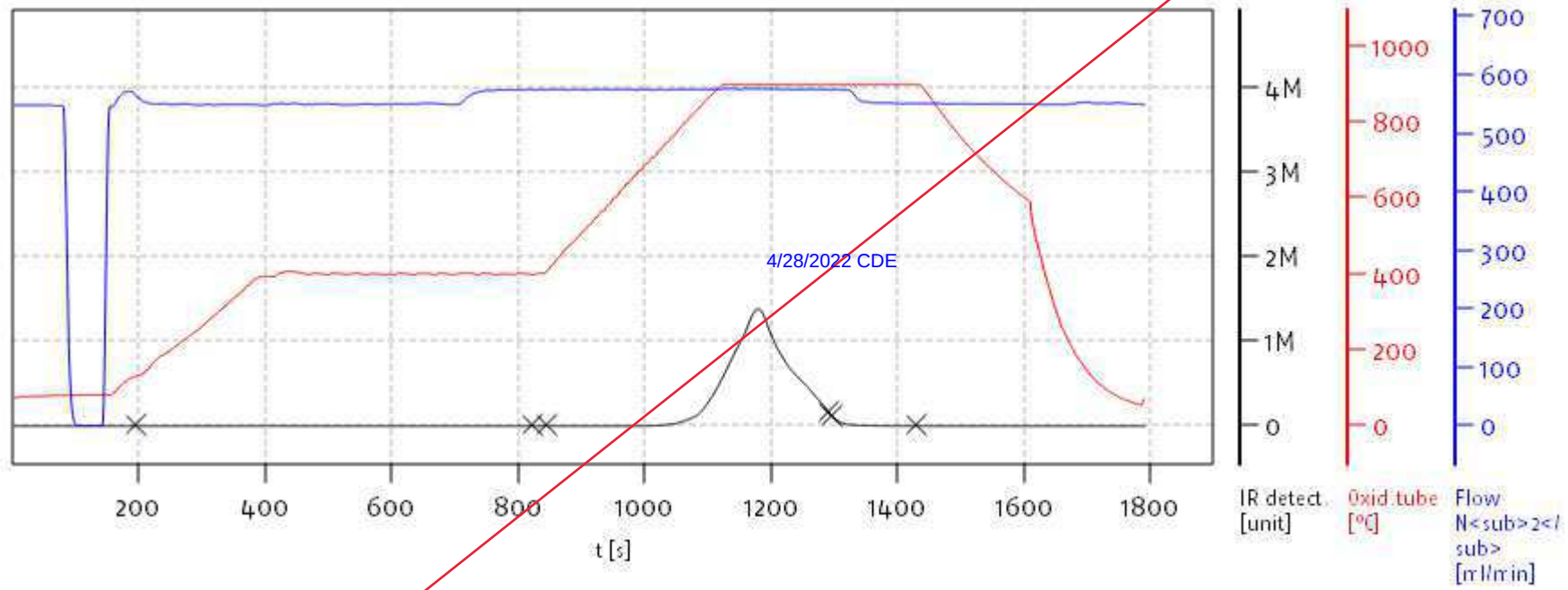
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
23	23	SEQ-CALL	200.00	0.0698	1.00	CARBON	4/26/2022 10:31 PM	0.005	3.805	3.810	bl,C1u	3 605	5 648 620	71 970	1.0000	0.9443



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Balance: BAL3
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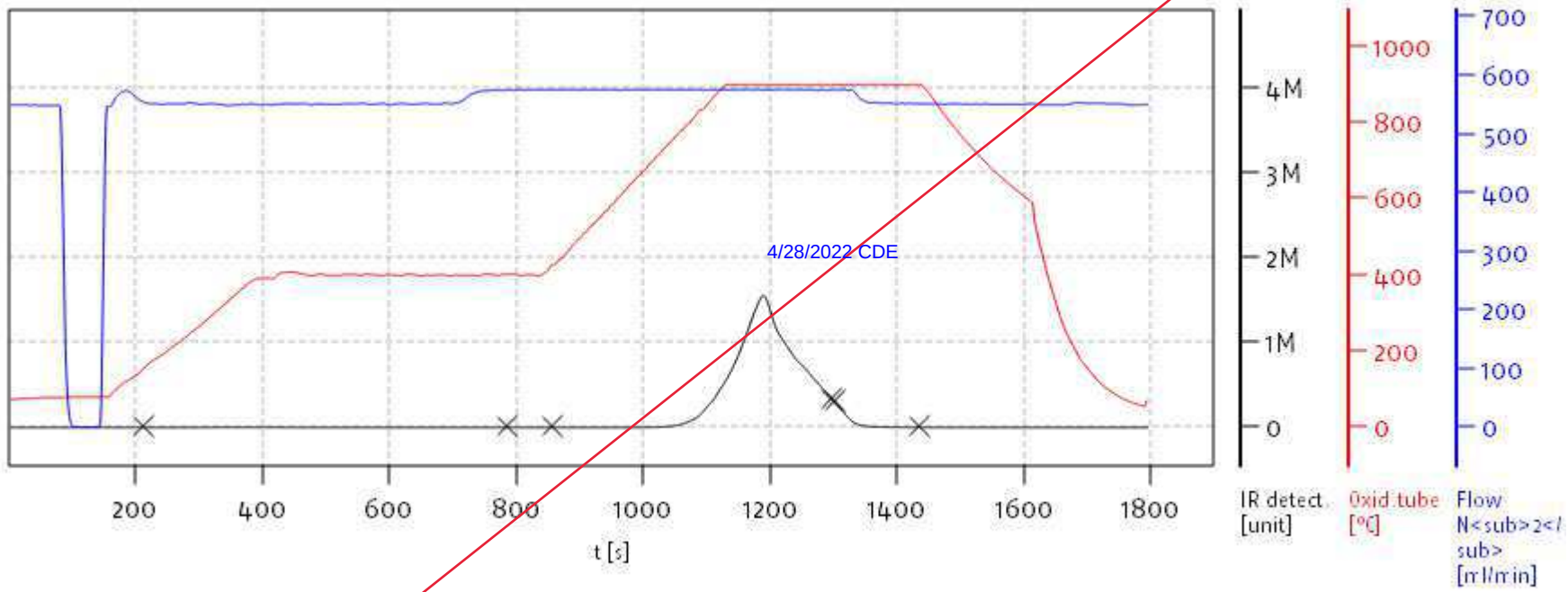
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	24	SEQ-CALM	200.00	0.0803	1.00	CARBON	4/26/2022 11:02 PM	0.010	4.637	4.647	bl	10 023	6 397 530	228 171	1.0000	0.9539



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Balance: BAL3
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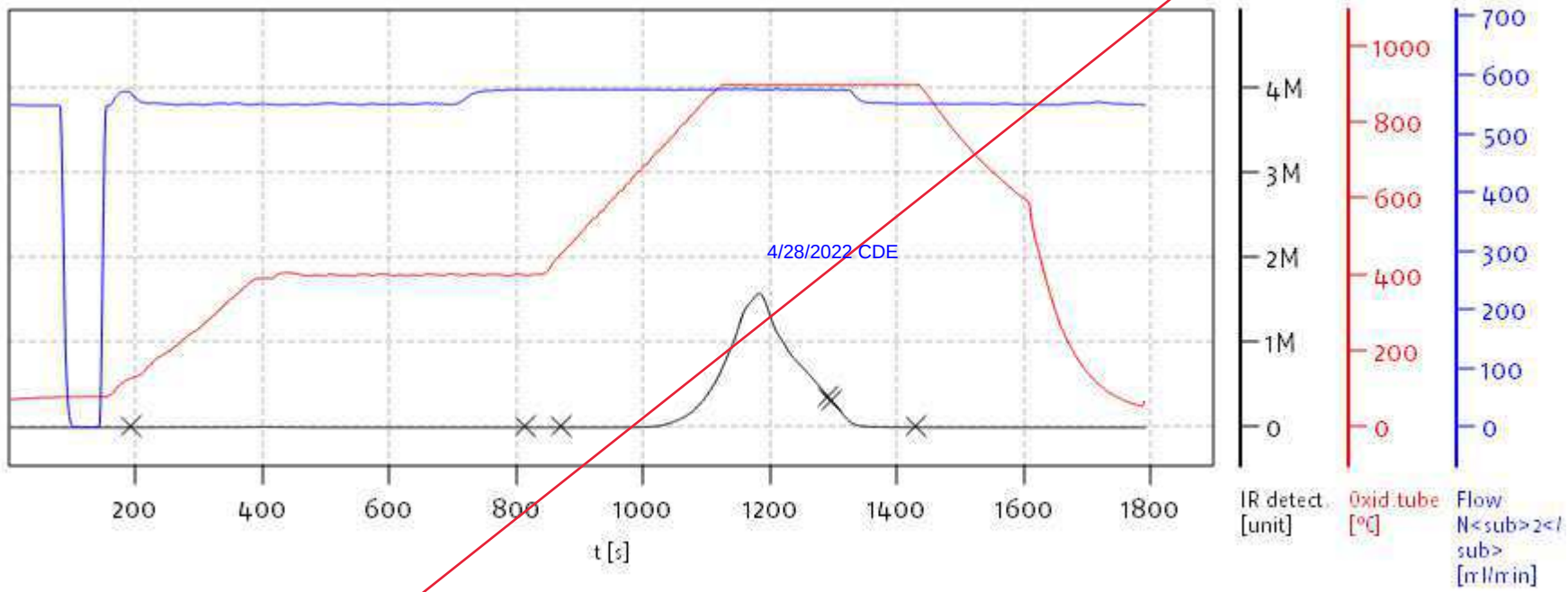
	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
25	25	SEQ-CALN	200.00	0.0901	1.00	CARBON	4/26/2022 11:32 PM	0.020	5.219	5.239	bl	23 354	7 186 580	239 986	1.0000	0.9540



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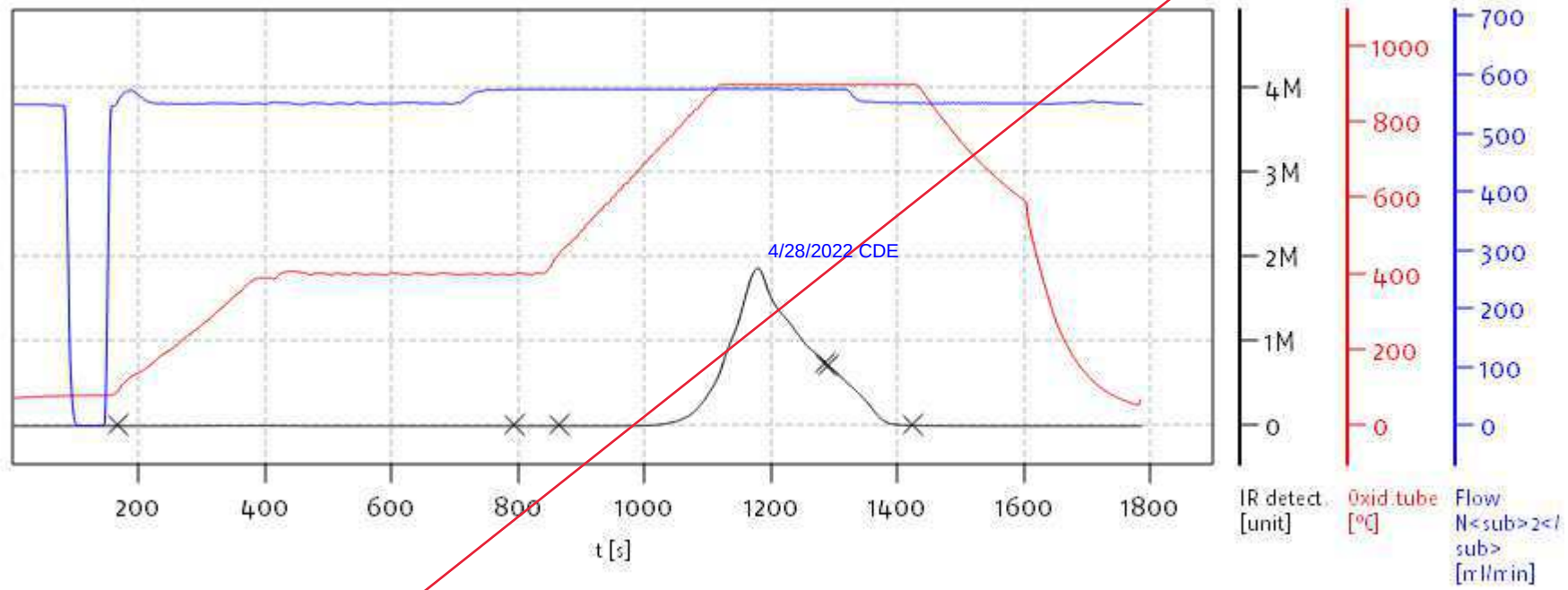
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
26	26	SEQ-CALO	200.00	0.1200	1.00	CARBON	4/27/2022 12:02 AM	0.019	7.915	7.934	bl,C3o	21 248	8 544 610	1 334 580	1.0000	1.0714



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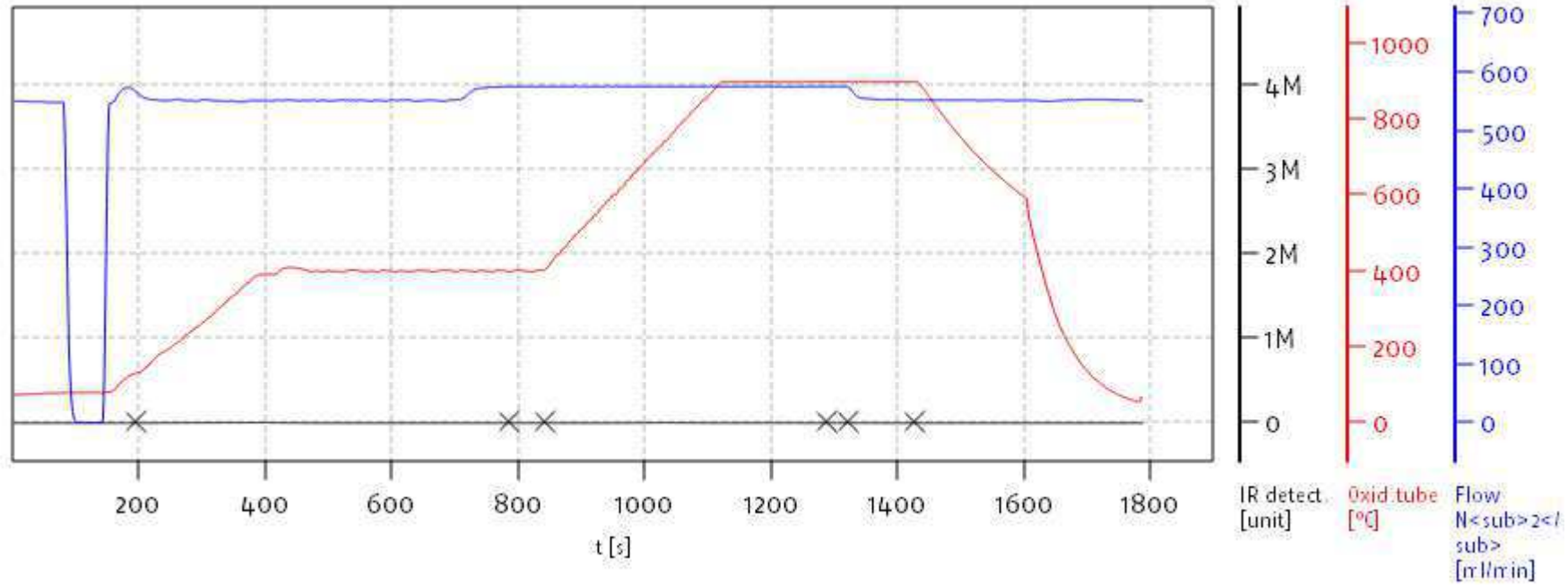
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
27	27	BLANK	1.00		1.00	CARBON	4/27/2022 12:32 AM	0.000	0.000	0.000	bl	29 766	19 596	1 205	1.0000	0.9007



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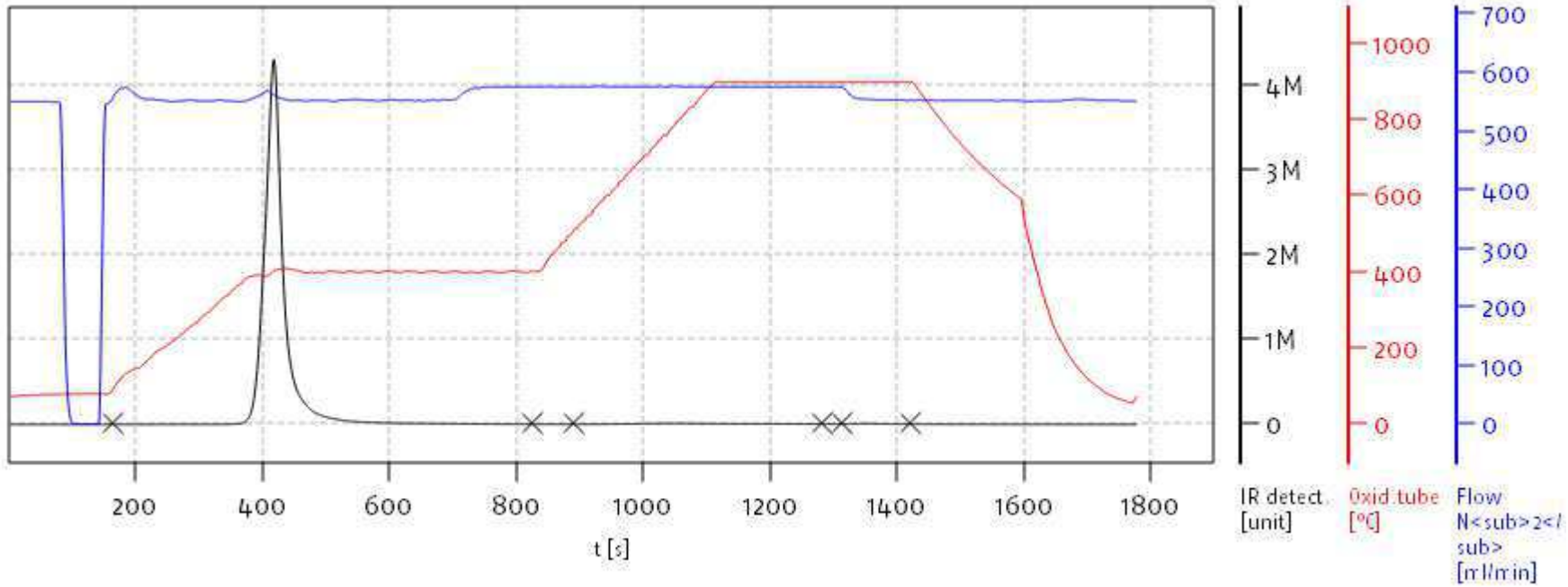
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
28	28	Dfactor	19.00		1.00	CARBON	4/27/2022 1:02 AM	44.678	0.893	45.571	bl	5 588 680	104 999	25 384	0.9581	1.0000



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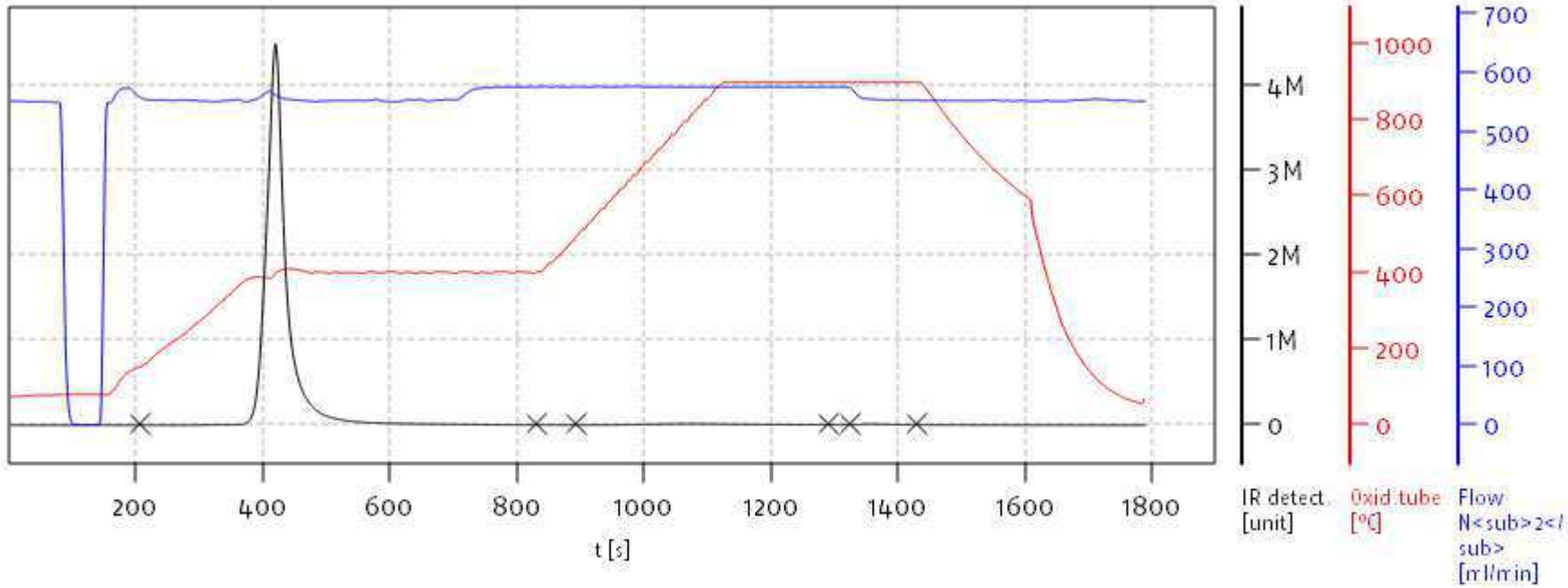
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
29	29	Dfactor	20.80		1.00	CARBON	4/27/2022 1:32 AM	44.694	0.937	45.631	bl	6 076 750	120 961	30 224	0.9647	1.0000



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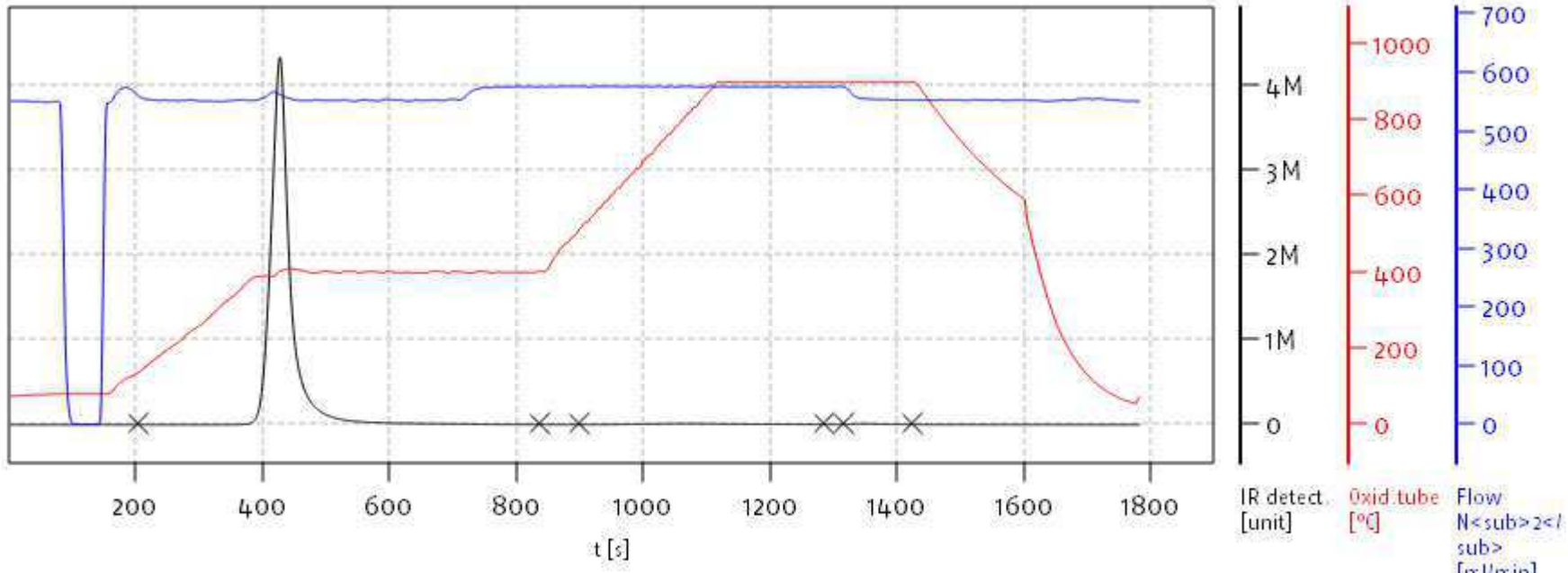
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
30	30	SEQ-ICV1	19.40		1.00	CARBON	4/27/2022 2:03 AM	44.964	0.742	45.706	bl	5 722 450	98 735	27 054	0.9614	0.9007



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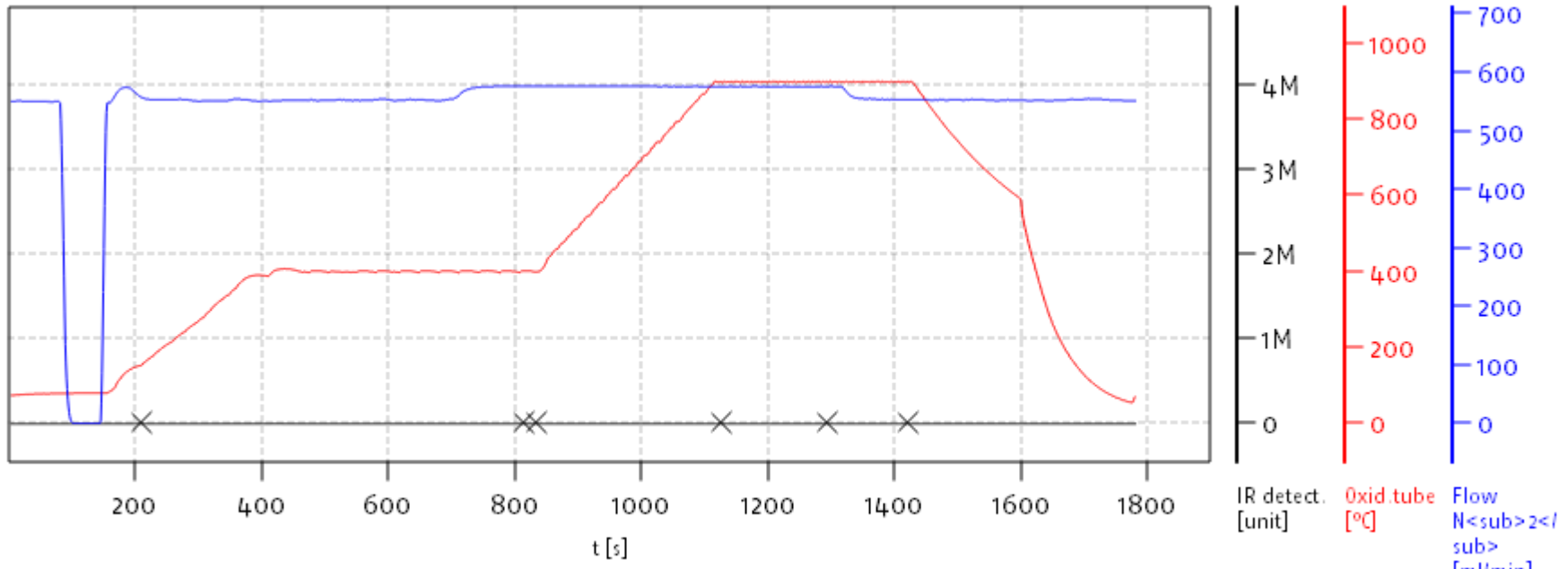
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
31	31	SEQ-ICB1	501.10		1.00	CARBON	4/27/2022 2:33 AM	0.002	0.001	0.003	bl,C1u,C3u,C2u	2 158	225	165	0.9614	0.9007



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Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

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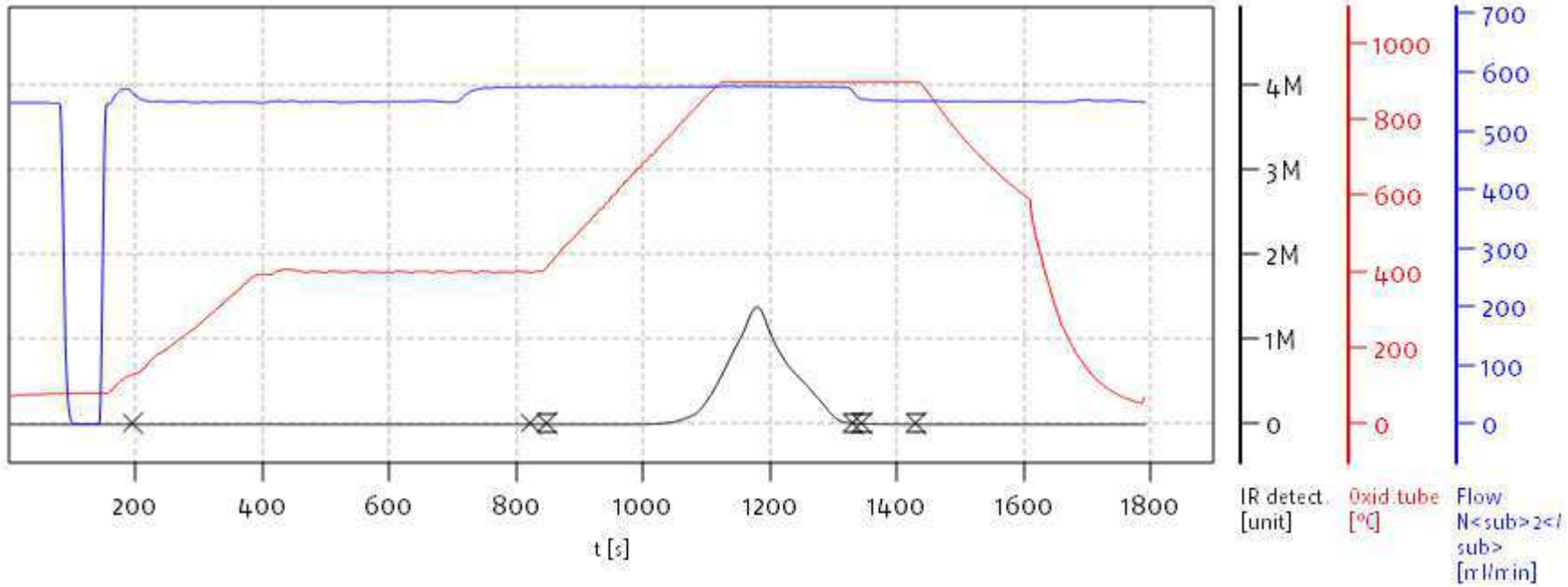
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
23	23	SEQ-CALL	200.00	0.0698	1.00	CARBON	4/27/2022 11:08 AM	0.005	3.917	3.922	bl,C1u	3 605	**5 260 365**	**0**	1.0000	0.9443



Name:

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Date: Wed Apr 27 11:10:16 2022

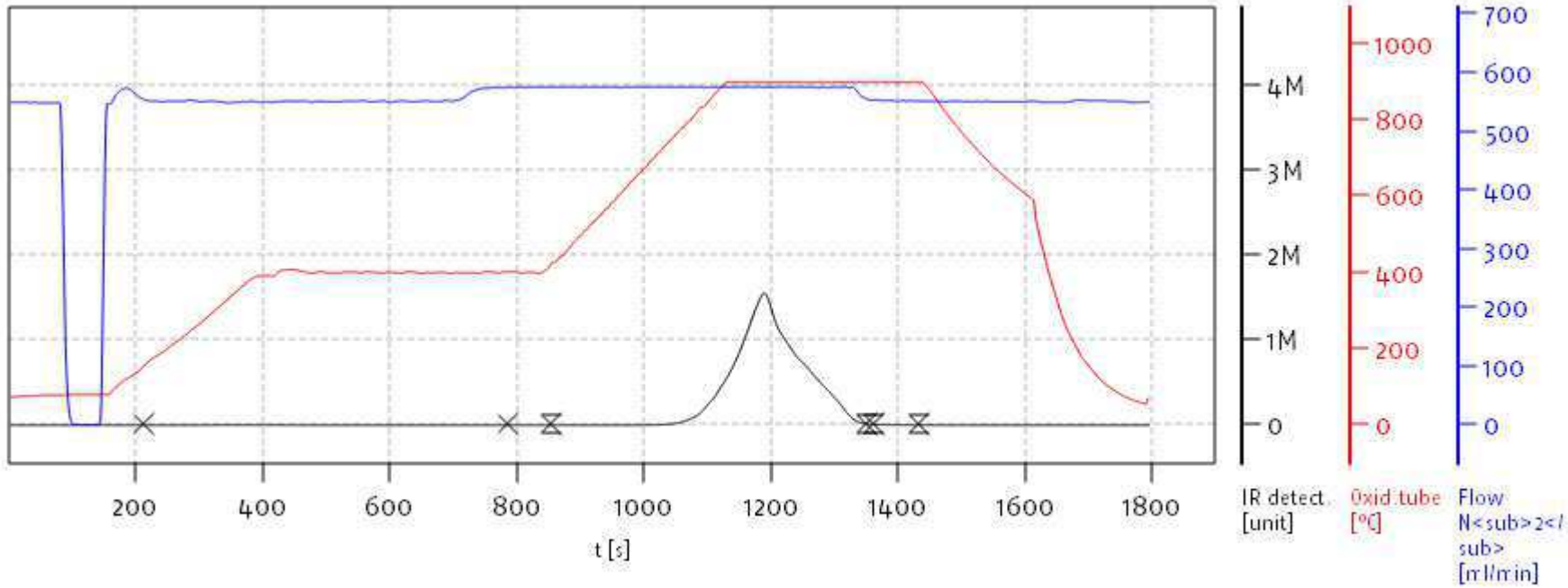
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	24	SEQ-CALM	200.00	0.0803	1.00	CARBON	4/27/2022 11:08 AM	0.010	4.637	4.647	bl	10 023	**6 164 833**	**0**	1.0000	0.9539



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Access: soliTOC superuser

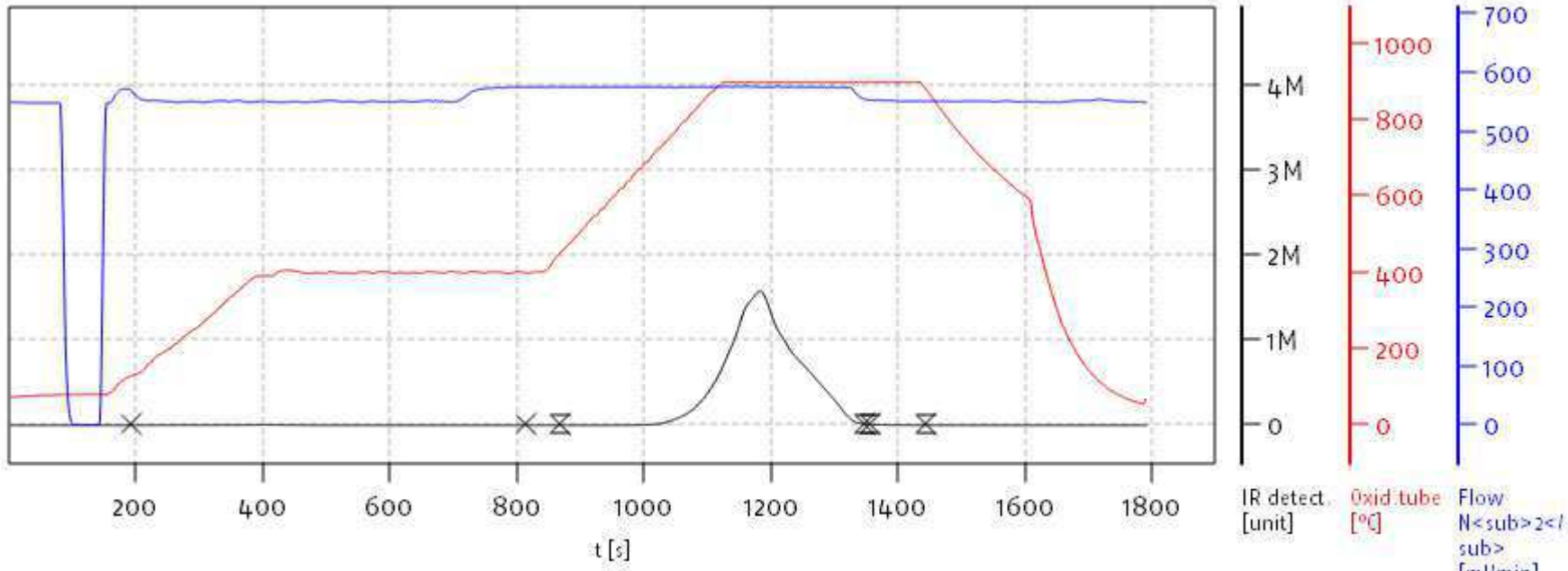
Date: Wed Apr 27 11:10:16 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
25	25	SEQ-CALN	200.00	0.0901	1.00	CARBON	4/27/2022 11:09 AM	0.020	5.219	5.239	bl	23 354	**6 937 833**	**0**	1.0000	0.9540



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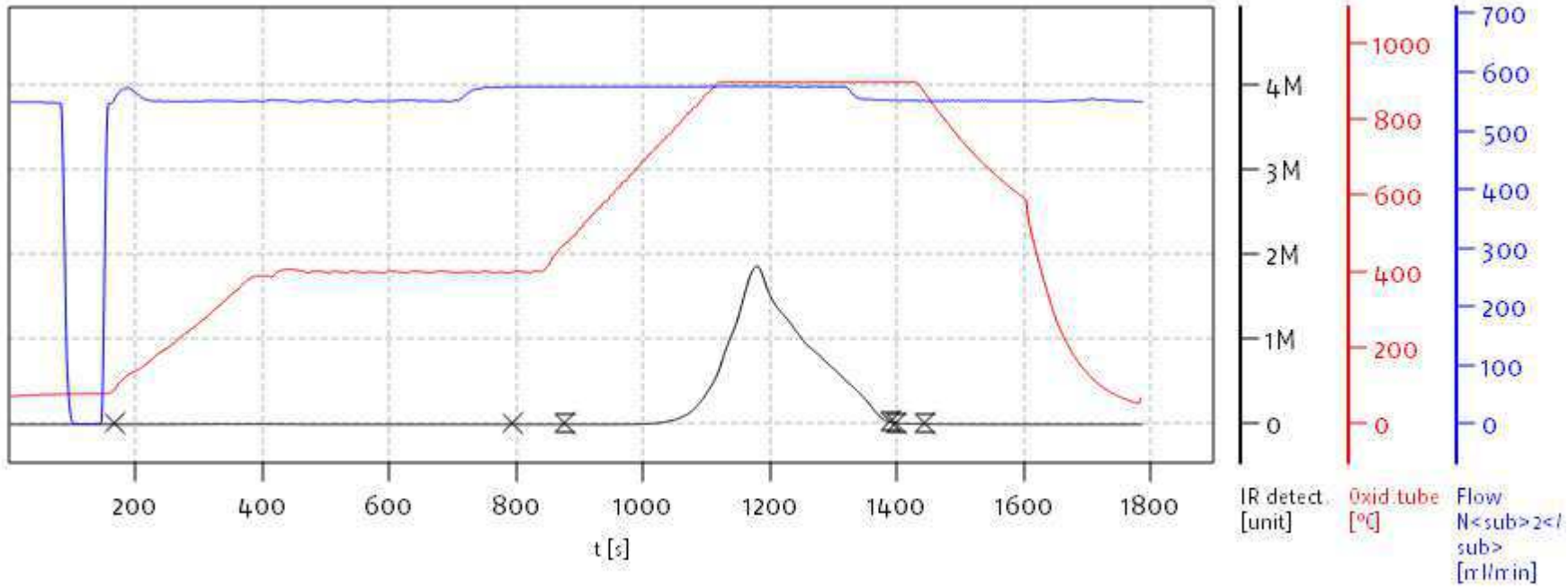
Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
26	26	SEQ-CALO	200.00	0.1200	1.00	CARBON	4/27/2022 11:09 AM	0.019	7.915	7.934	bl,C3o	21 248	9 370 139	0	1.0000	1.0714



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

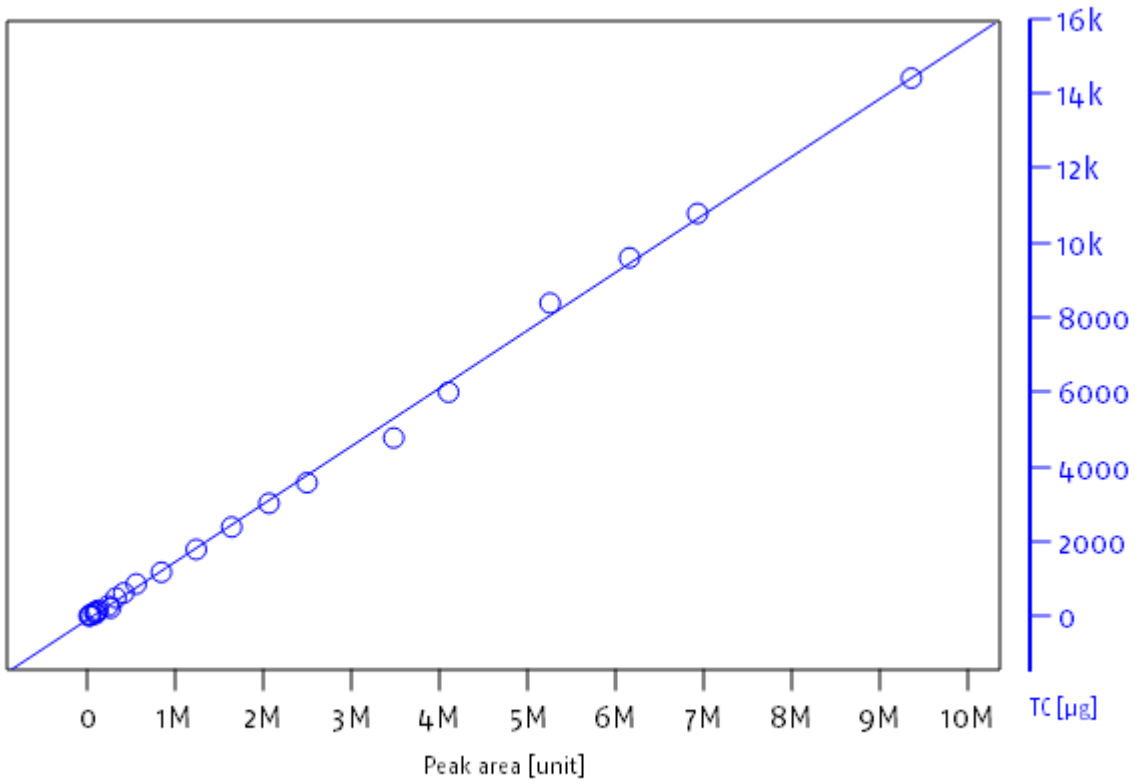
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Calibration parameters TC, Whole range

a	-4.107546e-02
b	+1.548032e-06
c	+0.000000e+00
d	+0.000000e+00
e	+0.000000e+00
r	0.998372
r_old	0.998372
Proc.-SD	166.070255 µg

Calibration graph TC, Whole range



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:19:56 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: FD00070
Sequence: SKD0371
Date Analyzed: 04/27/22 02:33

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SKD0371-ICB1	Total Organic Carbon	0.00	0.02	0.02	%	

INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: TOC Cube
Sequence: SLA0148

SDG: 23A0207
Project: AOC5 MR Phase 1
Calibration: FD00070
Date Analyzed: 01/16/23 11:32

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLA0148-ICB1	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0148-CCB1	Total Organic Carbon	0.001	0.02	0.02	%	
SLA0148-CCB2	Total Organic Carbon	0.001	0.02	0.02	%	
SLA0148-CCB3	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0148-CCB4	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0148-CCB5	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0148-CCB6	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0148-CCB7	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0148-CCB8	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0148-CCB9	Total Organic Carbon	0.00	0.02	0.02	%	

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: FD00070
Control Limt: +/- 10.00%
Sequence: SKD0371

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SKD0371-ICV1	Total Organic Carbon	44.446	43.7	98.3	%	EPA 9060A m
	Total Carbon	44.446	44.1	99.2	%	EPA 9060A m
	Total Inorganic Carbon	0.0000	0.40		%	EPA 9060A m
	% Soot	0.0000	0.004		%	EPA 9060A m

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: FD00070
Control Limt: +/- 10.00%
Sequence: SLA0148

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLA0148-ICV1	Total Organic Carbon	44.446	44.1	99.2	%	EPA 9060A m
SLA0148-CCV1	Total Organic Carbon	44.446	44.5	100	%	EPA 9060A m
SLA0148-CCV2	Total Organic Carbon	44.446	44.5	100	%	EPA 9060A m
SLA0148-CCV3	Total Organic Carbon	44.446	44.3	99.8	%	EPA 9060A m
SLA0148-CCV4	Total Organic Carbon	44.446	44.6	100	%	EPA 9060A m
SLA0148-CCV5	Total Organic Carbon	44.446	44.6	100	%	EPA 9060A m
SLA0148-CCV6	Total Organic Carbon	44.446	44.7	101	%	EPA 9060A m
SLA0148-CCV7	Total Organic Carbon	44.446	45.5	102	%	EPA 9060A m
SLA0148-CCV8	Total Organic Carbon	44.446	44.0	99.0	%	EPA 9060A m
SLA0148-CCV9	Total Organic Carbon	44.446	45.1	102	%	EPA 9060A m

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0321-SRM1
Batch: BLA0321
Initial/Final: 0.294 g / 0.294 g
Preparation: Plumb 1981
Analyzed: 01/17/2023 4:44
Standard ID: L000299
Expires: 01/11/2024
Standard Lot#: NA
Description: 1941B - Organics in Marine Sediment (Conv

ANALYTE	TRUE (% wet)	FOUND (% wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Total Organic Carbon	2.9900	2.90	0.02	0.02		96.9	80 - 120

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0360-SRM1
Batch: BLA0360
Initial/Final: 0.2716 g / 0.2716 g
Preparation: Plumb 1981
Analyzed: 01/17/2023 22:26
Standard ID: L000299
Expires: 01/11/2024
Standard Lot#: NA
Description: 1941B - Organics in Marine Sediment (Conv

ANALYTE	TRUE (% wet)	FOUND (% wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Total Organic Carbon	2.9900	2.93	0.02	0.02		98.0	80 - 120

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-IT1088 23A0207-01	01/11/23 08:22	01/11/23 16:45	01/13/23 09:35	2	180	01/17/23 12:50			
LDW23-IT1089 23A0207-02	01/11/23 08:42	01/11/23 16:45	01/13/23 09:35	2	180	01/17/23 13:20			
LDW23-IT1079 23A0207-03	01/11/23 09:04	01/11/23 16:45	01/13/23 09:35	2	180	01/17/23 13:51			
LDW23-IT1080 23A0207-04	01/11/23 09:24	01/11/23 16:45	01/13/23 09:35	2	180	01/17/23 14:21			
LDW23-IT1080-FD 23A0207-05	01/11/23 09:24	01/11/23 16:45	01/13/23 09:35	2	180	01/17/23 14:51			
LDW23-IT1072 23A0207-06	01/11/23 09:41	01/11/23 16:45	01/13/23 09:35	1	180	01/17/23 15:21			
LDW23-IT1081 23A0207-07	01/11/23 10:15	01/11/23 16:45	01/13/23 09:35	1	180	01/17/23 15:52			
LDW23-IT1068 23A0207-08	01/11/23 10:45	01/11/23 16:45	01/13/23 09:35	1	180	01/17/23 16:22			
LDW23-IT1062 23A0207-09	01/11/23 11:03	01/11/23 16:45	01/13/23 09:35	1	180	01/17/23 16:52			
LDW23-IT1097 23A0207-10	01/11/23 11:32	01/11/23 16:45	01/13/23 09:35	1	180	01/17/23 18:23			
LDW23-SC1085 23A0207-11	01/11/23 12:34	01/11/23 16:45	01/13/23 09:35	1	180	01/17/23 18:53			
LDW23-SC1069 23A0207-12	01/11/23 13:22	01/11/23 16:45	01/13/23 09:35	1	180	01/17/23 19:23			
LDW23-SC1058 23A0207-13	01/11/23 13:09	01/11/23 16:45	01/13/23 09:35	1	180	01/17/23 19:54			
LDW23-SC1073 23A0207-14	01/11/23 13:37	01/11/23 16:45	01/13/23 09:35	1	180	01/17/23 20:24			
LDW23-IT1078 23A0207-15	01/11/23 14:13	01/11/23 16:45	01/16/23 10:35	4	180	01/17/23 22:56			
LDW23-IT1201 23A0207-16	01/11/23 14:54	01/11/23 16:45	01/16/23 10:35	4	180	01/18/23 01:28			
LDW23-IT1209 23A0207-17	01/11/23 15:21	01/11/23 16:45	01/16/23 10:35	4	180	01/18/23 01:58			
Duplicate BLA0360-DUP1	01/11/23 14:13	01/11/23 16:45	01/16/23 10:35	4	180	01/18/23 00:27			
Matrix Spike BLA0360-MS1	01/11/23 14:13	01/11/23 16:45	01/16/23 10:35	4	180	01/18/23 00:58			

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: TOC Cube

Analyte	MDL	RL	Units
Total Organic Carbon	0.02	0.02	%

National Institute of Standards & Technology

Certificate of Analysis

Standard Reference Material® 1941b

Organics in Marine Sediment

This Standard Reference Material (SRM) is marine sediment collected at the mouth of the Baltimore (MD) Harbor. SRM 1941b is intended for use in evaluating analytical methods for the determination of selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and chlorinated pesticides in marine sediment and similar matrices. Information values are also provided for total organic carbon (TOC), total carbon, hydrogen, and nitrogen. All of the constituents for which certified, reference, and information values are provided in SRM 1941b were naturally present in the sediment before processing. A unit of SRM 1941b consists of a bottle containing 50 g of radiation-sterilized, freeze-dried sediment.

Certified Mass Fraction Values: Certified mass fraction values for PAHs, PCB congeners, and chlorinated pesticides are provided in Table 1 through Table 3. The certified values for the PAHs, PCB congeners, and chlorinated pesticides are based on the agreement of results obtained at NIST from two or more chemically independent analytical techniques along with results from an interlaboratory comparison study [1]. A NIST certified value is a value for which NIST has the highest confidence in its accuracy in that all known or suspected sources of bias have been investigated or taken into account [1].

Reference Mass Fraction Values: Reference mass fraction values for additional PAHs (some in combination), additional PCB congeners, and additional chlorinated pesticides are provided in Table 4 through Table 7. Reference values for alkylated PAH groups are provided in Table 8 and for selected hopanes and steranes in Table 9. A reference value for total organic carbon is provided in Table 10. Reference values are noncertified values that are the best estimate of the true value; however, the values do not meet the NIST criteria for certification and are provided with associated uncertainties that may reflect only measurement precision, may not include all sources of uncertainty, or may reflect a lack of sufficient statistical agreement among multiple analytical methods [1].

Information Mass Fraction Values: Information mass fraction values are provided in Table 11 for carbon, hydrogen, and nitrogen. An information value is considered to be a value that will be of use to the SRM user, but insufficient information is available to assess the uncertainty associated with the value [1]. Information values cannot be used to establish metrological traceability.

Expiration of Certification: The certification of **SRM 1941b** is valid, within the measurement uncertainty specified, until **01 October 2020**, provided the SRM is handled and stored in accordance with the instructions given in this certificate (see "Instructions for Handling, Storage, and Use"). This certification is nullified if the SRM is damaged, contaminated, or otherwise modified.

Maintenance of SRM Certification: NIST will monitor this SRM over the period of its certification. If substantive technical changes occur that affect the certification before the expiration of this certificate, NIST will notify the purchaser. Registration (see attached sheet or register online) will facilitate notification.

Coordination of the technical measurements leading to the certification of this material was under the leadership of M.M. Schantz and S.A. Wise of the NIST Chemical Sciences Division.

Analytical measurements for the certification of SRM 1941b were performed at NIST by J.R. Kucklick, B.J. Porter, D.L. Poster, M.M. Schantz, P. Schubert, S. Tutschku, and L.L. Yu of the NIST Chemical Sciences Division.

Carlos A. Gonzalez, Chief
Chemical Sciences Division

Gaithersburg, MD 20899
Certificate Issue Date: 16 January 2015

Robert L. Watters, Jr., Director
Office of Reference Materials

Measurements for TOC were provided by a commercial laboratory and T.L. Wade of the Geochemical and Environmental Research Group, Texas A&M University (College Station, TX). The carbon, hydrogen, and nitrogen data were provided by a commercial laboratory. Results for the PAHs, PCBs, and chlorinated pesticides from 38 laboratories (see Appendix A) that participated in an interlaboratory comparison exercise coordinated by NIST were used. Results for the alkylated PAH groups, hopanes, and steranes from 33 laboratories (see Appendix B) that participated in another interlaboratory comparison exercise coordinated by NIST were also used.

Collection and preparation of SRM 1941b were performed by M.P. Cronise and C.N. Fales of the NIST Office of Reference Materials and B.J. Porter and M.M. Schantz of the NIST Chemical Sciences Division. The sediment material was collected with the assistance of G.G. Lauenstein, J. Collier, and J. Lewis (National Oceanic and Atmospheric Administration, Silver Spring, MD).

Consultation on the statistical design of the experimental work and evaluation of the data were provided by S.D. Leigh and J.H. Yen of the NIST Statistical Engineering Division.

Support aspects involved in the issuance of this SRM were coordinated through the NIST Office of Reference Materials.

INSTRUCTIONS FOR HANDLING, STORAGE, AND USE

Handling: This material is naturally occurring marine sediment from an urban area and may contain constituents of unknown toxicities; therefore, caution and care should be exercised during its handling and use.

Storage: SRM 1941b must be stored in its original bottle at temperatures less than 30 °C and away from direct sunlight.

Use: Prior to removal of subsamples for analysis, the contents of the bottle should be mixed. The mass fractions of constituents in SRM 1941b are reported on a dry-mass basis. The SRM, as received, contains a mass fraction of approximately 2.4 % moisture (see "Conversion to Dry-Mass Basis"). The sediment sample should be dried to a constant mass before weighing for analysis; or a separate subsample of the sediment should be removed from the bottle at the time of analysis and dried to determine the mass fraction on a dry-mass basis. If the constituents of interest are volatile, then the moisture must be determined with a separate subsample.

PREPARATION AND ANALYSIS[1]

Sample Collection and Preparation: The sediment used to prepare this SRM was collected from the Chesapeake Bay at the mouth of the Baltimore (MD) Harbor near the Francis Scott Key Bridge (39°12.3'N and 76°31.4'W). This location is very near the site where SRM 1941 and SRM 1941a were collected. The sediment was collected using a Kynar-coated modified Van Veen-type grab sampler. A total of approximately 3300 kg of wet sediment was collected from the site. The sediment was freeze-dried, sieved at 150 μm (100 % passing), homogenized in a cone blender, radiation sterilized (^{60}Co), and then packaged in screw-capped amber glass bottles each containing approximately 50 g.

Conversion to Dry-Mass Basis: The results for the constituents in SRM 1941b are reported on a dry-mass basis; however, the material "as received" contains residual moisture. The amount of moisture in SRM 1941b was determined by measuring the mass loss after freeze-drying subsamples of 1.1 g to 1.3 g for four days at 1 Pa with a –10 °C shelf temperature and a –50 °C condenser temperature. The moisture content in SRM 1941b at the time of the certification analyses was 2.39 % ± 0.08 % (95 % confidence level). Analytical results for the organic constituents were determined on an as-received basis and then converted to a dry-mass basis by dividing by the conversion factor of 0.9761 (gram dry mass per gram as-received mass).

Polycyclic Aromatic Hydrocarbons: The general approach used for the value assignment of the PAHs in SRM 1941b was similar to that reported in detail elsewhere [2]. The approach consisted of combining results from analyses using various combinations of different extraction techniques and solvents, clean-up/isolation procedures, and chromatographic separation and detection techniques: Soxhlet extraction and pressurized-fluid extraction (PFE) using dichloromethane (DCM) or a hexane/acetone mixture, cleanup of the extracts using solid-phase extraction (SPE) or normal-phase liquid chromatography (LC), followed by analysis using the following techniques: (1) reversed-phase liquid chromatography with fluorescence detection (LC-FL) analysis of the total PAH fraction, (2) reversed-phase

[1] Certain commercial equipment, instruments or materials are identified in this certificate to adequately specify the experimental procedure. Such identification does not imply recommendation or endorsement by the National Institute of Standards

LC-FL analysis of isomeric PAH fractions isolated by normal-phase LC (i.e., multidimensional LC), (3) gas chromatography/mass spectrometry (GC/MS) analysis of the PAH fraction on three stationary phases of different selectivity, i.e., a 5 % (all column compositions are given as mole fractions in %) phenyl-substituted methylpolysiloxane phase, a 50 % phenyl-substituted methylpolysiloxane phase, and a relatively non-polar proprietary phase.

Three sets of GC/MS results, designated as GC/MS (I), GC/MS (II), and GC/MS (III), were obtained using three columns with different selectivities for the separation of PAHs. For GC/MS (I) analyses, duplicate subsamples of approximately 1 g from ten bottles of SRM 1941b were extracted using PFE with DCM. Copper powder was added to the extract to remove elemental sulfur. The concentrated extract was passed through an aminopropyl SPE cartridge and eluted with 2 % DCM in hexane (all solvent concentrations are given as volume fractions in %). The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5 MS, J&W Scientific, Folsom, CA). The GC/MS (II) analyses were performed using 5 g subsamples from six bottles of SRM 1941b. These samples were extracted using PFE with DCM. The high molecular mass compounds were removed from the extracts using size exclusion chromatography (SEC) with a preparative-scale divinylbenzene-polystyrene column (10 μm particle size with 10 nm diameter pores), and the sulfur was removed from the extracts by adding copper powder. The concentrated extract was passed through an aminopropyl SPE cartridge and eluted with 10 % DCM in hexane. The analysis was by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-17 MS, J&W Scientific). For the GC/MS (III), 9 g subsamples from six bottles of SRM 1941b were Soxhlet-extracted for 18 h with 250 mL of a mixture of 50 % hexane/50 % acetone. Copper powder was added to the extract to remove elemental sulfur, and the concentrated extract was passed through a silica SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a relatively non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific).

Two sets of LC-FL results, designated as LC-FL (total) and LC-FL (isomer), were used in the certification process. For the LC-FL (total), subsamples of approximately 1 g from six bottles of SRM 1941b were extracted using PFE with a mixture of 50 % hexane/50 % acetone. The extracts were concentrated and then processed through an aminopropylsilane SPE cartridge using 2 % DCM in hexane to obtain the total PAH fraction. For the LC-FL (isomer), a 5 g subsample from the six bottles was extracted using PFE with DCM and processed through an aminopropylsilane SPE cartridge using 10 % DCM in hexane; the PAH fraction was then fractionated further on a semi-preparative aminopropylsilane column (μBondapak NH_2, 9 mm i.d. × 30 cm, Waters Associates, Milford, MA) to isolate isomeric PAH fractions as described previously [3–6]. The total PAH fraction and the isomeric PAH fractions were analyzed using a 5 μm particle-size polymeric octadecylsilane (C_{18}) column (4.6 mm i.d. × 25 cm, Hypersil-PAH, Keystone Scientific, Inc., Bellefonte, PA) with wavelength-programmed fluorescence detection [4,5].

For the GC/MS and LC-FL measurements described above, selected perdeuterated PAHs were added to the sediment prior to solvent extraction for use as internal standards for quantification purposes.

In addition to the analyses performed at NIST, SRM 1941b was used in an interlaboratory comparison exercise in 1999 as part of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment [7]. Results from 38 laboratories that participated in this exercise were used as the sixth data set in the determination of the certified values for PAHs in SRM 1941b. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest.

Homogeneity Assessment for PAHs: The homogeneity of SRM 1941b was assessed by analyzing duplicate samples of approximately 1 g from ten bottles selected by stratified random sampling. Samples were extracted, processed, and analyzed as described above for GC/MS (I). No statistically significant differences among bottles were observed for the PAHs at this sample size.

PAH Isomers of Molecular Mass 300 and 302: For the determination of the molecular mass 300 and 302 isomers, three subsamples of approximately 5 g each were extracted using PFE with DCM. The extracts were then concentrated with a solvent change to hexane and passed through an aminopropyl SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-17MS, J&W Scientific). Perdeuterated dibenzo[*a,i*]pyrene was added to the sediment prior to extraction for use as an internal standard [8].

PCBs and Chlorinated Pesticides: The general approach used for the determination of PCBs and chlorinated pesticides in SRM 1941b consisted of combining results from analyses using various combinations of different extraction techniques and solvents, cleanup/isolation procedures, and chromatographic separation and detection techniques. Techniques and solvents included Soxhlet extraction and PFE using DCM or a hexane/acetone mixture,

clean-up/isolation using SPE or LC, followed by analysis using GC/MS and gas chromatography with electron capture detection (GC-ECD) on two columns with different selectivity for the separation of PCBs and chlorinated pesticides. The analytical methods are described in detail elsewhere [2].

Six sets of results were obtained and designated as GC-ECD (I) A and B, GC/MS (I) A and B, GC/MS (II), and Interlaboratory Comparison Exercise. For the GC-ECD (I) analyses, approximately 10 g subsamples from six bottles of SRM 1941b were extracted using PFE with DCM. Copper powder was added to the extract to remove elemental sulfur, and SEC, as described above, was used to remove the high molecular mass compounds. The concentrated extract was then fractionated on a semi-preparative aminopropylsilane column to isolate two fractions containing: (1) the PCBs and lower-polarity pesticides and (2) the more polar pesticides. GC-ECD analyses of the two fractions were performed on two columns of different selectivities for PCB separations: 0.25 mm × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5, J&W Scientific), and a 0.25 mm × 60 m fused silica capillary column with a non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific). The results from the 5 % phenyl phase are designated as GC-ECD (IA) and the results from the proprietary phase are designated as GC-ECD (IB). For the GC-ECD analyses, two PCB congeners that are not significantly present in the sediment extract (PCB 103 and PCB 198 [9,10]) and endosulfan I-d_4, 4,4'-DDE-d_8, 4,4'-DD-d_8, and 4,4'-DDT-d_8 were added to the sediment prior to extraction for use as internal standards for quantification purposes.

Two sets of results were obtained by GC/MS. For GC/MS (I), approximately 9 g subsamples from six bottles were Soxhlet- extracted with a mixture of 50 % hexane/50 % acetone for approximately 18 h. Copper powder was added to the extract to remove elemental sulfur, and the concentrated extract was passed through a silica SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS with two ionization modes, electron impact (EI) and negative ion chemical ionization (NICI). The GC/MS EI method, GC/MS (IA), used a 0.25 mm i.d. × 60 m fused silica capillary column with a relatively non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific). The GC/MS NICI method, GC/MS (IB), used a 0.25 mm i.d. × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5MS, J&W Scientific). The GC/MS (II) results were obtained in the same manner as the GC/MS (IA) analyses except that three subsamples were Soxhlet-extracted with DCM for approximately 18 h. For the GC/MS analyses, selected carbon-13 labeled PCB congeners and chlorinated pesticides were added to the sediment prior to extraction for use as internal standards for quantification purposes.

In addition to the analyses performed at NIST, SRM 1941b was used in an interlaboratory comparison exercise in 1999 as part of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment [7]. Results from 38 laboratories that participated in this exercise were used as the sixth data set in the determination of the certified values for PCB congeners and chlorinated pesticides in SRM 1941b. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest.

The reference value for PCB 77 was determined from a separate fraction. The samples were extracted and processed as for GC-ECD (I) above. The first (PCB and lower-polarity pesticide) fraction from the semi-preparative aminopropylsilane column was further fractionated using a Cosmosil PYE (pyrenylethyl group bonded) column (5 μm particle size, 4.6 mm i.d. × 25 cm ; Phenomenex, Torrance, CA) [11]. Three fractions were collected: the first fraction contained the pesticides and multi-*ortho* PCBs, the second fraction contained the polychlorinated naphthalenes, non-*ortho* PCB congeners, and some mono-*ortho* PCB congeners, and the third fraction removed the residual planar compounds from the column. The second fraction was analyzed by GC/MS NICI using the same column as GC/MS (IB) above. Carbon-13 labeled PCB 77 was used as an internal standard for quantification purposes.

Alkylated PAH Groups, Hopanes, and Steranes: SRM 1941b was used in an interlaboratory comparison exercise in 2011 [12]. Results from 33 laboratories that participated in this exercise were used in the determination of the reference values for alkylated PAH groups, hopanes, and steranes in SRM 1941b. Note that not all laboratories returned data for each analyte. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest. For the alkylated PAHs, the majority of the laboratories (>90 %) used the parent PAH for determination of the response factor for the corresponding alkylated group.

Total Organic Carbon (TOC): Two laboratories provided results for TOC using similar procedures. Briefly, subsamples of approximately 200 mg were reacted with 6 mol/L hydrochloric acid and rinsed with deionized water prior to combustion in a gas fusion furnace. The carbon monoxide and carbon dioxide produced were measured and compared to a blank for calculation of the percent TOC. Each laboratory analyzed subsamples from three bottles of SRM 1941b. One of the laboratories also analyzed three subsamples from three bottles of SRM 1941b for carbon, hydrogen, and nitrogen.

Table 1. Certified Mass Fraction Values for PAHs in SRM 1941b

PAHs	Mass Fractions[a] (µg/kg)		
Naphthalene[b,c,d,e,f,g]	848	±	95[h]
Fluorene[b,c,d,e,f,g]	85	±	15[h]
Phenanthrene[b,c,d,e,f,g]	406	±	44[h]
Anthracene[b,c,d,e,f,g]	184	±	18[h]
3-Methylphenanthrene[b,c,d]	105	±	13[h]
2-Methylphenathrene[b,c,d]	128	±	14[h]
1-Methylphenanthrene[b,c,d,g]	73.2	±	5.9[h]
Fluoranthene[b,c,d,e,f,g]	651	±	50[h]
Pyrene[b,c,d,e,f,g]	581	±	39[h]
Benz[*a*]anthracene[b,c,d,e,f,g]	335	±	25[h]
Chrysene[d,f]	291	±	31[h]
Triphenylene[d,f]	108	±	5[i]
Benzo[*b*]fluoranthene[c,e]	453	±	21[h]
Benzo[*k*]fluoranthene[b,c,d,e]	225	±	18[h]
Benzo[*e*]pyrene[b,c,d,g]	325	±	25[h]
Benzo[*a*]pyrene[b,c,d,f,g]	358	±	17[h]
Perylene[b,c,d,f,g]	397	±	45[h]
Benzo[*ghi*]perylene[b,c,d,f,g]	307	±	45[h]
Indeno[1,2,3-*cd*]pyrene[b,c,d,f,g]	341	±	57[h]
Dibenz[*a,j*]anthracene[b,c,d,f]	48.9	±	4.6[h]
Dibenz[*a,c*]anthracene[c,f]	36.7	±	5.2[h]
Dibenz[*a,h*]anthracene[c,f]	53	±	10[h]
Benzo[*b*]chrysene[b,c,d,f]	53	±	12[h]
Picene[b,c,d]	46.6	±	4.7[h]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (I) on 5 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[c] GC/MS (II) on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[d] GC/MS (III) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[e] LC-FL (total) of total PAH fraction after PFE with DCM.
[f] LC-FL (isomer) of isomeric PAH fractions after PFE with DCM.
[g] 1999 Interlaboratory Comparison Study [7] with 21 to 29 laboratories submitting data for each PAH.
[h] Certified values are weighted means of the results from two to six analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[i] The certified value is an unweighted mean of the results from two analytical methods. The uncertainty listed with the value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the value is metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 2. Certified Mass Fraction Values for PCB Congeners[a] in SRM 1941b

PCB Congeners			Mass Fractions[b] (µg/kg)		
PCB	8	(2,4'-Dichlorobiphenyl)[c,d,e,f,g]	1.65	±	0.19[h]
PCB	18	(2,2',5-Trichlorobiphenyl)[c,d,e,f,g]	2.39	±	0.29[h]
PCB	28	(2,4,4'-Trichlorobiphenyl)[c,d,e,f,g]	4.52	±	0.57[h]
PCB	31	(2,4',5-Trichlorobiphenyl)[c,e,f]	3.18	±	0.41[h]
PCB	44	(2,2'3,5'-Tetrachlorobiphenyl)[c,d,e,f,g]	3.85	±	0.20[i]
PCB	49	(2,2'4,5'-Tetrachlorobiphenyl)[c,d,e,f]	4.34	±	0.28[i]
PCB	52	(2,2',5,5'-Tetrachlorobiphenyl)[c,d,e,f,g]	5.24	±	0.28[i]
PCB	66	(2,3',4,4'-Tetrachlorobiphenyl)[c,e,f,g,j]	4.96	±	0.53[i]
PCB	87	(2,2',3,4,5'-Pentachlorobiphenyl)[c,d,f,j]	1.14	±	0.16[h]
PCB	95	(2,2',3,5',6-Pentachlorobiphenyl)[c,e,f,g]	3.93	±	0.62[i]
PCB	99	(2,2',4,4',5-Pentachlorobiphenyl)[c,d,e,f,g]	2.90	±	0.36[i]
PCB	101	(2,2',4,5,5'-Pentachlorobiphenyl)[c,e,f,g,j]	5.11	±	0.34[i]
PCB	105	(2,3,3',4,4'-Pentachlorobiphenyl)[c,d,e,f,g,j]	1.43	±	0.10[i]
PCB	110	(2,3,3',4',6-Pentachlorobiphenyl)[c,e,f,j]	4.62	±	0.36[i]
PCB	118	(2,3',4,4',5-Pentachlorobiphenyl)[c,d,e,f,g,j]	4.23	±	0.19[i]
PCB	128	(2,2',3,3',4,4'-Hexachlorobiphenyl)[c,d,e,f,g,j]	0.696	±	0.044[i]
PCB	138	(2,2',3,4,4',5'-Hexachlorobiphenyl)[c,e,f,j]	3.60	±	0.28[i]
PCB	149	(2,2',3,4',5',6-Hexachlorobiphenyl)[c,d,e,j]	4.35	±	0.26[h]
PCB	153	(2,2',4,4',5,5'-Hexachlorobiphenyl)[c,d,e,f,g,j]	5.47	±	0.32[i]
PCB	156	(2,3,3',4,4',5-Hexachlorobiphenyl)[c,d,e,f,j]	0.507	±	0.090[h]
PCB	170	(2,2',3,3',4,4',5-Heptachlorobiphenyl)[c,d,e,f,g,j]	1.35	±	0.09[i]
PCB	180	(2,2',3,4,4',5,5'-Heptachlorobiphenyl)[c,d,e,f,g,j]	3.24	±	0.51[i]
PCB	183	(2,2',3,4,4',5',6-Heptachlorobiphenyl)[c,d,e,j]	0.979	±	0.087[h]
PCB	187	(2,2',3,4',5,5',6-Heptachlorobiphenyl)[c,d,e,f,g,j]	2.17	±	0.22[i]
PCB	194	(2,2',3,3',4,4',5,5'-Octachlorobiphenyl)[c,d,e,j]	1.04	±	0.06[h]
PCB	195	(2,2',3,3',4,4',5,6-Octachlorbiphenyl)[c,e,g,j]	0.645	±	0.060[i]
PCB	201	(2,2',3,3',4,5',6,6'-Octachlorobiphenyl)[c,e,j]	0.777	±	0.034[h]
PCB	206	(2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)[c,e,f,g,j]	2.42	±	0.19[i]
PCB	209	Decachlorobiphenyl[c,d,e,f,g,j]	4.86	±	0.45[i]

[a] PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [9] and later revised by Schulte and Malisch [10] to conform to IUPAC rules, except PCB 201. Under the Ballschmiter and Zell numbering system, the IUPAC PCB 201 is listed as PCB 200.

[b] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[c] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

[d] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.

[e] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

[f] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.

[g] 1999 Interlaboratory Comparison Study [7] with 13 to 31 laboratories submitting data for each PCB congener.

[h] Certified values are unweighted means of the results from three to five analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[i] Certified values are weighted means of the results from three to six analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[j] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

Table 3. Certified Mass Fraction Values for Chlorinated Pesticides in SRM 1941b

Chlorinated Pesticides	Mass Fractions[a] (µg/kg)
Hexachlorobenzene[b,c,d,e]	5.83 ± 0.38[f]
cis-Chlordane[b,c,d,e,g]	0.85 ± 0.11[h]
trans-Chlordane[b,c,e]	0.566 ± 0.093[f]
cis-Nonachlor[b,e,g]	0.378 ± 0.053[h]
trans-Nonachlor[b,c,d,e,g]	0.438 ± 0.073[f]
4,4'-DDE[b,d,e,g]	3.22 ± 0.28[h]
4,4'-DDD[b,d,e,g]	4.66 ± 0.46[h]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[c] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).
[d] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.
[e] 1999 Interlaboratory Comparison Study [7] with 13 to 31 laboratories submitting data for each pesticide.
[f] Certified values are unweighted means of the results from three to five analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[g] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.
[h] Certified values are weighted means of the results from three to five analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the chlorinated pesticides listed and the values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 4. Reference Mass Fraction Values for PAHs in SRM 1941b

PAHs	Mass Fractions[a] (µg/kg)		
1-Methylnaphthalene[b,c,d,e]	127	±	14[f]
2-Methylnaphthalene[b,c,d,e]	276	±	53[f]
2,6-Dimethylnaphthalene[b,c,d,e]	75.9	±	4.5[f]
2,3,5-Trimethylnaphthalene[b,c,d,e]	25.5	±	5.1[f]
Biphenyl[b,c,d,e]	74.0	±	8.0[f]
Acenaphthylene[b,c,d,e]	53.3	±	6.4[f]
Acenaphthene[b,c,d,e]	38.4	±	5.2[f]
9-Methylphenanthrene[c]	63.5	±	2.5[g]
4-Methylphenanthrene and 9-Methylphenanthrene[b,d]	80.1	±	4.8[f]
2-Methylanthracene[c,d]	36	±	15[f]
8-Methylfluoranthene[b]	49.5	±	2.7[g]
7-Methylfluoranthene[b]	45.4	±	1.5[g]
1-Methylfluoranthene[b]	42.4	±	2.1[g]
3-Methylfluoranthene[b]	28.8	±	1.3[g]
2-Methylpyrene[b]	78.7	±	4.0[g]
4-Methylpyrene[b]	66.4	±	2.6[g]
1-Methylpyrene[b]	52.5	±	2.3[g]
Acephenanthrene[d]	30.5	±	1.9[g]
Benzo[*c*]phenanthrene[b,c,d]	58	±	15[f]
Benzo[*a*]fluoranthene[b,c,d]	73	±	18[f]
Benzo[*j*]fluoranthene[c]	217	±	5[g]
Indeno[1,2,3-*cd*]fluoranthene[d]	9.63	±	0.34[g]
Pentaphene[d]	25.3	±	1.0[g]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[b] GC/MS (I) on 5 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.

[c] GC/MS (II) on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.

[d] GC/MS (III) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

[e] 1999 Interlaboratory Comparison Study [7] with 14 to 26 laboratories submitting data for each PAH.

[f] Reference values are weighted means of the results from two to four analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of PAHs listed as determined by the methods indicted. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[g] Reference values are the means of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution for the associated degrees of freedom (19 for footnote b and 5 for footnotes c and d) and 95 % confidence level for each analyte. The measurand is the total mass fraction of the PAHs listed as determined by the method indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 5. Reference Mass Fraction Values for PAHs of Molecular Mass 300 and 302 in SRM 1941b

PAHs of Molecular Mass 300 and 302	Mass Fractions[a,b,c] (µg/kg)		
Coronene	72.6	±	4.7
Dibenzo[*b,e*]fluoranthene	10.3	±	0.3
Naphtho[1,2-*b*]fluoranthene	91.0	±	3.1
Naphtho[1,2-*k*]fluoranthene and Naphtho[2,3-*j*]fluoranthene	79.8	±	2.5
Naphtho[2,3-*b*]fluoranthene	23.5	±	0.3
Dibenzo[*b,k*]fluoranthene	95.6	±	3.1
Dibenzo[*a,k*]fluoranthene	26.6	±	0.4
Dibenzo[*j,l*]fluoranthene	63.8	±	1.8
Dibenzo[*a,l*]pyrene	11.1	±	1.0
Naphtho[2,3-*k*]fluoranthene	10.7	±	0.6
Naphtho[1,2-*a*]pyrene	16.7	±	1.4
Naphtho[2,3-*e*]pyrene	33.2	±	2.3
Dibenzo[*a,e*]pyrene	76.1	±	3.6
Naphtho[2,1-*a*]pyrene	59.2	±	1.8
Dibenzo[*e,i*]pyrene	35.0	±	2.4
Naphtho[2,3-*a*]pyrene	16.5	±	0.6
Benzo[*b*]perylene	38.2	±	1.2
Dibenzo[*a,i*]pyrene	25.5	±	1.0
Dibenzo[*a,h*]pyrene	6.94	±	0.29

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[b] Reference values are the means of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution for two degrees of freedom and 95 % confidence level for each analyte. The measurand is the total mass fraction of the constituent listed as determined by the method indicted. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[c] GC/MS on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM [8].

Table 6. Reference Mass Fraction Values for PCB Congeners[a] in SRM 1941b

PCB Congeners			Mass Fractions[b,c] (µg/kg)		
PCB	45	(2,2',3,6-Tetrachlorobiphenyl)[d,e]	0.73	±	0.12
PCB	56	(2,3,3',4'-Tetrachlorobiphenyl)[d,f,g]	1.21	±	0.11
PCB	63	(2,3,4',5-Tetrachlorobiphenyl)[e,f,g]	0.213	±	0.040
PCB	70	(2,3',4',5-Tetrachlorobiphenyl)[e,f,g]	4.99	±	0.29
PCB	74	(2,4,4',5-Tetrachlorobiphenyl)[e,f,g]	2.04	±	0.15
PCB	77	(3,3',4,4'-Tetrachlorobiphenyl)[h]	0.31	±	0.03
PCB	107	(2,3,3',4',5-Pentachlorobiphenyl)[d,e,f,g]	0.628	±	0.028
PCB	132	(2,2',3,3',4,6'-Hexachlorobiphenyl)[d,f,g]	1.28	±	0.27
PCB	146	(2,2',3,4',5,5'-Hexachlorobiphenyl)[e,f,g]	1.22	±	0.12
PCB	158	(2,3,3',4,4',6-Hexachlorobiphenyl)[d,e,f,g]	0.65	±	0.15
PCB	163	(2,3,3',4',5,6-Hexachlorobiphenyl)[e,f,g]	1.28	±	0.06
PCB	174	(2,2',3,3',4,5,6'-Heptachlorobiphenyl)[d,e,f,g]	1.51	±	0.39
PCB	193	(2,3,3',4',5,5',6-Heptachlorobiphenyl)[d,e,f,g]	0.292	±	0.075

[a] PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [9] and later revised by Schulte and Malisch [10] to conform with IUPAC rules, except PCB 107. Under the Ballschmiter and Zell numbering system, the IUPAC PCB 107 is listed as PCB 108.

[b] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[c] For these PCB congeners except PCB 77, the reference values are unweighted means of the results from two to four analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled within-method variance following the ISO/JCGM Guide [14,15]. For PCB 77, the reference value is the mean of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution corresponding to two degrees of freedom and 95 % confidence level for PCB 77. The measurand is the total mass fraction of the PCB Congeners listed as determined by the method or methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as microgram per kilogram on a dry-mass basis.

[d] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.

[e] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

[f] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

[g] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

[h] GC/MS NICI on a 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC-ECD (I) fractionated using a PYE column.

Table 7. Reference Mass Fraction Values for Selected Chlorinated Pesticides in SRM 1941b

Chlorinated Pesticides	Mass Fractions[a,b] (µg/kg)		
2,4'-DDE[c,d]	0.38	±	0.12
4,4'-DDT[e,f]	1.12	±	0.42

[a] Mass Fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] The reference values are unweighted means of the results from two analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the chlorinated pesticides listed as determined by the methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[c] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).
[d] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).
[e] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.
[f] 1999 Interlaboratory Comparison Study [7] with 10 laboratories submitting data for 4,4'-DDT.

Table 8. Reference Mass Fraction Values for Alkylated PAH Groups in SRM 1941b

Alkylated PAH Group	Mass Fraction[a,b] (µg/kg)		
C2-decalins	18	±	5
C4-decalins	41	±	4
C2-naphthalenes	187	±	53
C3-naphthalenes	158	±	42
C1-benzothiophenes	25	±	14
C2-benzothiophenes	20	±	11
C3-benzothiophenes	22	±	13
C4-benzothiophenes	18	±	5
C1-fluorenes	57	±	18
C2-fluorenes	122	±	43
C3-fluorenes	128	±	31
C1-phenanthrenes/anthracenes	313	±	99
C2-phenanthrenes/anthracenes	247	±	62
C3-phenanthrenes/anthracenes	165	±	46
C4-phenanthrenes/anthracenes	87	±	36
C1-dibenzothiophenes	54	±	13
C2-dibenzothiophenes	91	±	18
C3-dibenzothiophenes	84	±	15
C4-dibenzothiophenes	57	±	13
C1-fluoranthenes/pyrenes	252	±	48
C2-fluoranthenes/pyrenes	205	±	38
C3-fluoranthenes/pyrenes	102	±	22
C4-fluoranthenes/pyrenes	121	±	59
C1-benzanthraces/chrysenes/triphenylenes	208	±	43
C2-benzanthraces/chrysenes/triphenylenes	120	±	24
C3-benzanthraces/chrysenes/triphenylenes	73	±	31
C4-benzanthraces/chrysenes/triphenylenes	41	±	11

[a] The reference mass fraction value reported on a dry-mass basis is the median of results using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the median, and the coverage factor, $k = 2$. The measurand is the total mass fraction of the alkylated PAH groups listed as determined by the interlaboratory study methods. The values listed are metrologically traceable to the SI unit of mass fraction, expressed as micrograms per kilogram on a dry-mass basis.
[b] Data from the interlaboratory study [12].

Table 9. Reference Mass Fraction Values for Hopanes and Steranes in SRM 1941b

Hopane or Sterane	Mass Fraction[a,b] (µg/kg)
17α(H)-22,29,30-Trisnorhopane	54 ± 18
17α(H)-21β(H)-30-Norhopane	137 ± 21
17α(H)-21β(H)-30-Hopane	215 ± 44
17α(H)-21β(H)-22R-Homohopane	44 ± 10
17α(H)-21β(H)-22S-Homohopane	48 ± 13
5α(H)-14α(H),17α(H)-Cholestane 20R	41 ± 11
5α(H)-14β(H),17β(H)-Cholestane 20R	27 ± 6
5α(H)-14β(H),17β(H)-24-Methylcholestane 20R	21 ± 8
5α(H)-14α(H),17α(H)-24-Ethylcholestane 20R	19 ± 5
5α(H)-14β(H),17β(H)-24-Ethylcholestane 20R	41 ± 9

[a] The reference mass fraction value reported on a dry-mass basis is the median of results using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the median, and the coverage factor, $k = 2$. The measurand is the total mass fraction of the constituent listed as determined by the methods used during the interlaboratory study. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[b] Data from the interlaboratory study [12].

Table 10. Reference Mass Fraction Value for Total Organic Carbon in SRM 1941b

Total Organic Carbon (TOC)	2.99 % ± 0.24 %[a,b]

[a] Mass fraction is reported on a dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] The reference value for total organic carbon is a weighted mean value from routine measurements made by two laboratories [21]. The uncertainty listed is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance. The reporting follows the ISO/JCGM Guides [2]. The measurand is the total mass fraction of TOC listed as determined by the methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as a percent on a dry-mass basis.

Table 11. Information Mass Fraction Values for Carbon, Hydrogen, and Nitrogen in SRM 1941b

Elements	Mass Fractions[a] (%)
Carbon	3.3
Hydrogen	1.2
Nitrogen	<0.5

[a] Mass fraction is reported on a dry-mass basis; material as received contains approximately 2.4 % moisture.

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Certificate Revision History: 16 January 2015 (Corrected IUPAC name for PCB-56 and PCB-107; editorial changes); 10 June 2014 (Units corrected from mg/kg to µg/kg in Tables 8 and 9; editorial changes); 10 April 2012 (Reference value added for alkylated PAH groups, hopanes, and steranes; extension of certification period; editorial changes); 16 August 2004 (Reference values for the butyl tins removed; editorial changes); 15 July 2002 (Original certificate date).

Users of this SRM should ensure that the Certificate of Analysis in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; fax (301) 948-3730; e-mail srminfo@nist.gov; or via the Internet at http://www.nist.gov/srm.

APPENDIX A

The laboratories listed below performed measurements that contributed to the certification of PAHs, PCBs, and chlorinated pesticides in SRM 1941b Organics in Marine Sediment.

Arthur D. Little, Inc; Cambridge, MA
Axys Analytical Services; Sidney, BC, Canada
B & B Laboratories; College Station, TX
Battelle Ocean Sciences; Duxbury, MA
Bedford Institute of Oceanography; Dartmouth, NS, Canada
California Department of Fish and Game; Rancho Cordova, CA
Central Contra Costa Sanitary District; Martinez, CA
Chesapeake Biological Laboratory; Solomons, MD
Centro de Investigacionies Energeticas Medioambientales y Tecnologicas; Madrid, Spain
City of Los Angeles Environmental Monitoring Division; Playa del Rey, CA
City of San Jose Environmental Services Department; San Jose, CA
Columbia Analytical Services; Kelso, WA
East Bay Municipal Utility District; Oakland, CA
Florida Department of Environmental Protection; Tallahassee, FL
Manchester Environmental Laboratory; Port Orchard, WA
Murray State University; Murray, KY
Massachusetts Water Resources Authority Central Lab; Winthrop, MA
National Research Council of Canada; Ottawa, Ontario, Canada
National Oceanic and Atmospheric Association (NOAA), National Marine Fisheries Service (NMFS), Auke Bay Laboratory; Juneau, AK
NOAA, National Ocean Service/Center for Coastal Environmental Health and Biomolecular Research; Charleston, SC
NOAA, NMFS, Sandy Hook Marine Laboratory; Highlands, NJ
NOAA, NMFS, Northwest Fisheries Science Center; Seattle, WA
Orange County Sanitation District; Fountain Valley, CA
Philip Analytical Services; Burlington, Ontario, Canada
Serv de Hidrografia Naval; Buenos Aires, Argentina
Skidaway Institute of Technology; Savannah, GA
Southwest Laboratory of Oklahoma; Broken Arrow, OK
Severn Trent Knoxville Laboratory; Knoxville, TN
Texas A&M University, Geochemical and Environmental Research Group; College Station, TX
Texas Parks and Wildlife Department; San Marcos, TX
University of California at Los Angeles, Institute of Geophysics and Planetary Physics; Los Angeles, CA
University of Connecticut, Environmental Research Institute; Storrs, CT
University of Rhode Island, Graduate School of Oceanography; Narragansett, RI
US Department of Agriculture, Environmental Chemistry Laboratory; Beltsville, MD
US Environmental Protection Agency, Atlantic Ecology Division; Narragansett, RI
US Geological Survey, National Water Quality Laboratory; Denver, CO
Woods Hole Group Environmental Lab; Raynham, MA
Wright State University; Dayton, OH

APPENDIX B

The laboratories listed below performed measurements that contributed to the certification of alkylated PAH groups, hopanes, and steranes in SRM 1941b Organics in Marine Sediment.

Alpha Analytical, Inc.; Mansfield, MA
Analytical Resources, Inc.; Tukwila, WA
Axys Analytical Services; Sydney, BC, Canada
Battelle Analytical & Environmental Chemistry Laboratory; Duxbury, MA
Center for Laboratory Sciences; Pasco, WA
Columbia Analytical Services; Jacksonville, FL
Columbia Analytical Services; Rochester, NY
Columbia Analytical Services, Kelso, WA
Florida Department of Environmental Protection; Tallahassee, FL
Florida International University; North Miami, FL
Michigan Department of Natural Resources and Environment; Lansing, MI
Mississippi State Chemical Laboratory; Mississippi State, MS
NIST; Charleston, SC
NIST; Gaithersburg, MD
NOAA/NCCOS/NOS; Charleston, SC
NOAA/NMFS/Alaska Fisheries Science Center; Juneau, AK
NY State Department of Health; Albany, NY
Pace Analytical Services, Inc. Minneapolis; Minneapolis, MN
RJ Lee Group, Inc; Monroeville, PA
TDI/B&B Laboratories, Inc.; College Station, TX
TestAmerica Laboratories; Mobile, AL
TestAmerica Laboratories; West Sacramento, CA
TestAmerica Laboratories; University Park, IL
TestAmerica Laboratories; Schriever, LA
TestAmerica Laboratories; Edison, NJ
TestAmerica Laboratories; Knoxville, TN
TestAmerica Laboratories; Pittsburgh, PA
TestAmerica Laboratories; South Burlington, VT
TestAmerica Laboratories; Tacoma, WA
US Army Engineer Research and Development Center; Vicksburg, MS
USGS Columbia Environmental Research Center; Columbia, MO
University of Iowa, State Hygienic Laboratory; Iowa City, IO
Washington State Public Health Laboratories; Shoreline, WA

NIST

Date of Issue:
31 March 2014

SAFETY DATA SHEET

1. Substance and Source Identification

Product Identifier

SRM Number: 1941b
SRM Name: Organics in Marine Sediment
Other Means of Identification: Not applicable.

Recommended Use of This Material and Restrictions of Use

This Standard Reference Material (SRM) is marine sediment collected at the mouth of the Baltimore (MD) Harbor. SRM 1941b is intended for use in evaluating analytical methods for the determination of selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and chlorinated pesticides in marine sediment and similar matrices. All of the constituents for which certified, reference, and information values are provided in SRM 1941b were naturally present in the sediment before processing. A unit of SRM 1941b consists of a bottle containing 50 g of radiation-sterilized, freeze-dried sediment.

Company Information

National Institute of Standards and Technology
Standard Reference Materials Program
100 Bureau Drive, Stop 2300
Gaithersburg, Maryland 20899-2300

Telephone: 301-975-2200
FAX: 301-948-3730
E-mail: SRMMSDS@nist.gov
Website: http://www.nist.gov/srm

Emergency Telephone ChemTrec:
1-800-424-9300 (North America)
+1-703-527-3887 (International)

2. Hazards Identification

Classification

Physical Hazard: Not classified.
Health Hazard: Not classified.

Label Elements
Symbol
No Symbol/Pictogram

Signal Word
Not applicable.

Hazard Statement(s): Not applicable.

Precautionary Statement(s): Not applicable.

Hazards Not Otherwise Classified: Not applicable.

Ingredients(s) with Unknown Acute Toxicity: Not applicable.

3. Composition and Information on Hazardous Ingredients

Substance: Marine sediment

Other Designations: Sediment.

This material is naturally occurring marine sediment from an urban area. The material contains trace amounts of polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and should be handled with care. Components are listed in compliance with OSHA's 29 CFR 1910.1200; for the actual values see the Certificate of Analysis.

Hazardous Component(s)	CAS Number	EC Number (EINECS)	Nominal Mass Concentration (%)
Marine Sediment	Not available	Not available	100

4. First Aid Measures

Description of First Aid Measures:

Inhalation: If adverse effects occur, remove to uncontaminated area. If not breathing, give artificial respiration or oxygen by qualified personnel. Seek immediate medical attention.

Skin Contact: Wash skin with soap and water.

Eye Contact: Flush eyes with water for at least 15 minutes. If necessary, seek medical attention.

Ingestion: If adverse effects occur after ingestion, seek medical treatment.

Most Important Symptoms/Effects, Acute and Delayed: May cause irritation.

Indication of any immediate medical attention and special treatment needed, if necessary: If any of the above symptoms are present, seek medical attention if needed.

5. Fire Fighting Measures

Fire and Explosion Hazards: Negligible fire hazard. Avoid generating dust. See Section 9, "Physical and Chemical Properties" for flammability properties.

Extinguishing Media:
Suitable: Use extinguishing media appropriate for surrounding fire.
Unsuitable: None listed.

Specific Hazards Arising from the Chemical: None listed.

Special Protective Equipment and Precautions for Fire-Fighters: Avoid inhalation of material or combustion byproducts. Wear full protective clothing and NIOSH approved self-contained breathing apparatus (SCBA).

NFPA Ratings (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health = 1 Fire = 0 Reactivity = 0

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Any accumulated material on surfaces should be removed and properly disposed of. Use suitable protective equipment; see Section 8, "Exposure Controls and Personal Protection".

Methods and Materials for Containment and Clean up: Collect spilled material in appropriate container for disposal. Keep out of water supplies and sewers. Keep unnecessary people away, isolate hazard area and deny entry.

7. Handling and Storage

Safe Handling Precautions: Minimize dust generation and accumulation on surfaces. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. See Section 8, "Exposure Controls and Personal Protection".

Storage: Store and handling in accordance with all current regulations and standards.

8. Exposure Controls and Personal Protection

Exposure Limits: No occupational exposure limits have been established for marine sediment. This material is a particulate matter and adequate inhalation/respiratory protection should be used to minimize exposure. The exposure limits for Particulates Not Otherwise Regulated (PNOR) are applicable.

OSHA (PEL): 15 mg/m^3 (TWA, total particulates not otherwise regulated)
OSHA (PEL) 5 mg/m^3 (TWA, respirable particulates not otherwise regulated)

NIOSH (REL): 10 mg/m^3 (TWA, total particulates not otherwise regulated, 8 h)
NIOSH (REL): 5 mg/m^3 (TWA, respirable particulates not otherwise regulated)

Engineering Controls: Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Personal Protection: In accordance with OSHA 29 CFR 1910.132, subpart I, wear appropriate Personal Protective Equipment (PPE) to minimize exposure to this material.

Respiratory Protection: If workplace conditions warrant a respirator, a respiratory protection program that meets OSHA 29CFR 1910.134 must be followed. Refer to NIOSH 42 CFR 84 for applicable certified respirators.

Eye/Face Protection: Wear splash resistant safety goggles with a face shield. An eye wash station should be readily available near areas of use.

Skin and Body Protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Chemical-resistant gloves should be worn at all times when handling chemicals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Descriptive Properties:

Appearance (physical state, color, etc.):	amorphous powder
Molecular Formula:	not applicable
Molar Mass (g/mol):	not applicable
Odor:	not available
Odor threshold:	not available
pH:	not available
Evaporation rate:	not applicable
Melting point/freezing point (°C):	not available
Specific Gravity (water=1)	not available
Vapor Pressure (mmHg):	not applicable
Vapor Density (air = 1):	not applicable
Viscosity (cP):	not applicable
Solubility(ies):	not available
Partition coefficient (n-octanol/water):	not available
Particle Size:	<150 µm

Thermal Stability Properties:

Autoignition Temperature (°C):	not available
Thermal Decomposition (°C):	not available
Initial boiling point and boiling range (°C):	not available
Explosive Limits, LEL (Volume %):	not available
Explosive Limits, UEL (Volume %):	not available
Flash Point (°C):	not available
Flammability (solid, gas):	not available

10. STABILITY AND REACTIVITY

Reactivity: Stable at normal temperatures and pressure.

Stability: X Stable _____ Unstable

Possible Hazardous Reactions: None listed.

Conditions to Avoid: Avoid generating dust.

Incompatible Materials: None listed.

Fire/Explosion Information: See Section 5, "Fire Fighting Measures".

Hazardous Decomposition: Thermal decomposition will produce oxides of carbon.

Hazardous Polymerization: _____ Will Occur X Will Not Occur

11. TOXICOLOGICAL INFORMATION

Route of Exposure: __X__ Inhalation __X__ Skin _____ Ingestion

Symptoms Related to the Physical, Chemical and Toxicological Characteristics: Generated dust may cause irritation if inhaled.

Potential Health Effects (Acute, Chronic and Delayed):

Inhalation: Generated dust may cause irritation.

Skin Contact: May cause mechanical irritation.

Eye Contact: May cause mechanical irritation.

Ingestion: No data available.

Numerical Measures of Toxicity:

Acute Toxicity: Not classified; no data available.

Skin Corrosion/Irritation: Not classified; no data available.

Serious Eye damage/ Eye irritation: Not classified; no data available.

Respiratory Sensitization: Not classified; no data available.

Skin Sensitization: Not classified; no data available.

Germ Cell Mutagenicity: Not classified; no data available.

Carcinogenicity: Not classified.

Listed as a Carcinogen/Potential Carcinogen _____ Yes __X__ No
Marine sediment is not listed by NTP, IARC or OSHA as a carcinogen.

Reproductive Toxicity: Not classified; no data available.

Specific Target Organ Toxicity, Single Exposure: Not classified; no data available.

Specific Target Organ Toxicity, Repeated Exposure: Not classified; no data available.

Aspiration Hazard: Not classified; no data available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Data: No data available.

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

Other Adverse effects: No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of waste in accordance with all applicable federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

U.S. DOT and IATA: Not regulated by DOT or IATA.

15. REGULATORY INFORMATION

U.S. Regulations:

CERCLA Sections 102a/103 (40 CFR 302.4): Not regulated.

SARA Title III Section 302 (40 CFR 355.30): Not regulated.

SARA Title III Section 304 (40 CFR 355.40): Not regulated.

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21):

ACUTE HEALTH:	No.
CHRONIC HEALTH:	No.
FIRE:	No.
REACTIVE:	No.
PRESSURE:	No.

State Regulations:
California Proposition 65: Not listed.

U.S. TSCA Inventory: Not listed.

TSCA 12(b), Export Notification: Not listed.

Canadian Regulations:
WHMIS Information: Not provided for this material.

16. OTHER INFORMATION

Issue Date: 31 March 2014

Sources: 29 CFR Occupational Health and Safety Office (OSHA) 1910.1000, *Limits for Air Contaminants*, Table Z-1; available at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9992 (accessed Mar 2014).

Center for Disease Control (CDC) NIOSH Pocket Guide to Chemical Hazards, *Particulates not otherwise regulated*; available at http://www.cdc.gov/niosh/npg/npgd0480.html (accessed Mar 2014).

Key of Acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists	NRC	Nuclear Regulatory Commission
ALI	Annual Limit on Intake	NTP	National Toxicology Program
CAS	Chemical Abstracts Service	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
CFR	Code of Federal Regulations	RCRA	Resource Conservation and Recovery Act
DOT	Department of Transportation	REL	Recommended Exposure Limit
EC50	Effective Concentration, 50 %	RM	Reference Material
EINECS	European Inventory of Existing Commercial Chemical Substances	RQ	Reportable Quantity
EPCRA	Emergency Planning and Community Right-to-Know Act	RTECS	Registry of Toxic Effects of Chemical Substances
IARC	International Agency for Research on Cancer	SARA	Superfund Amendments and Reauthorization Act
IATA	International Air Transportation Agency	SCBA	Self-Contained Breathing Apparatus
IDLH	Immediately Dangerous to Life and Health	SRM	Standard Reference Material
LC50	Lethal Concentration, 50 %	STEL	Short Term Exposure Limit
LD50	Lethal Dose, 50 %	TLV	Threshold Limit Value
LEL	Lower Explosive Limit	TPQ	Threshold Planning Quantity
MSDS	Material Safety Data Sheet	TSCA	Toxic Substances Control Act
NFPA	National Fire Protection Association	TWA	Time Weighted Average
NIOSH	National Institute for Occupational Safety and Health	UEL	Upper Explosive Limit
NIST	National Institute of Standards and Technology	WHMIS	Workplace Hazardous Materials Information System

Disclaimer: Physical and chemical data contained in this SDS are provided only for use in assessing the hazardous nature of the material. The SDS was prepared carefully, using current references; however, NIST does not certify the data in the SDS. The certified values for this material are given in the NIST Certificate of Analysis.

Users of this SRM should ensure that the SDS in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; fax (301) 948-3730; e-mail: srm@nist.gov; or via the Internet at http://www.nist.gov/srm.

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Contact	DAVE MITCHELL	Pro#		Truck#	

Order discrepancies (other than back ordered items) must be reported to our Customer Relations Department at 301-975-6776 within 5 days of receipt of shipment or this order will be considered complete. NIST SRMs/RMs are generally not returnable - with the exception of defective goods or shipments made in error by NIST. To return a SRM/RM, please call for instructions and a Return SRM/RM Authorization Number before shipment. Returns WILL NOT BE ACCEPTED without prior authorization.

Order	UOM	Ship	UOM	B/O	UOM	Item	Description
1	EACH	1	EACH	0	EACH	1941B	Organics in Marine Sediment
						Total qty:	1 / EACH
							NOT FOR HUMAN CONSUMPTION, LABORATORY USE ONLY.

9/21/16
04:04 PM

1700101

Picked by	
Packed by	
# of pieces	
Weight	

MP Biomedicals, LLC

29525 Fountain Parkway
Solon, Ohio 44139

Telephone: 440/337-1200
Toll Free: 800/854-0530

Fax: 440/337-1180
web: www.mpbio.com

Certificate of Analysis

Product Description: Microcrystalline Cellulose Powder_
Catalog Number: 191499_
Lot: Q9483_

Formula: $(C_6H_{10}O_5)n$	**Formula Weight:** N/A
CAS #: 9004-34-6	**Storage:** 15 - 30°C
Physical Description: White Powder	

Test	Specification	Result
Identity Test	Passes	Passes
Purity	97.0 - 102.0%	97.0 - 102.0%
Moisture	<5.0%	3.4%
Particle Size/Mesh +60 mesh +200 mesh	Wt % <8% >45%	 <1% 55%
pH	5 - 7	6.73
Residue on Ignition	<0.05%	<0.05%
Water Soluble Substances	<12.0 mg/5 g	4.5 mg/5 g
Heavy Metals	<10 ppm	<10 ppm

H001822
Microcrystalline Cellulose Powder (TOC)
Expires 11/30/2022
Prepared By Casey English 2/22/2019

Identification A & B: Passes
Bulk Density: 0.29 g/ml
Bulk Density (graduated cylinder): 0.31 g/ml
Conductivity: 18 µS/cm
Starch: Negative
Ether Soluble Substances: 0.01%
Total Aerobic microbial Count: 100 cfu/g
Total Mold and Yeast Count: 20 cfu/g
Staphylococcus aureus: Absent/1 g
Pseudomonas aeruginosa: Absent/1 g
E. coli: Absent/1 g
Salmonella: Absent/10 g
Particle size:

- 450 mesh: 77%
- d10: 37 um
- d50: 139 um
- d90: 271 um

TUP: <9/600 cm^2
Degree of brightness: >88%
Powder flow-angle of repose: <42°
Recommended Retest Date: 11/30/2022

07/26/2018 - *John Huang, PhD*
MP Biomedicals, LLC.
Quality Control Manager

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Technical Service: 1-800-279-5490 (440-337-1200) Customer Service: 1-800-854-0530 (440-337-1200)

MP Biomedicals, LLC

29525 Fountain Parkway
Solon, Ohio 44139

Telephone: 440/337-1200
Toll Free: 800/854-0530

Fax: 440/337-1180
web: www.mpbio.com

Certificate of Analysis

Product Description: Microcrystalline Cellulose Powder_
Catalog Number: 191499_
Lot: Q9483_

Formula: $(C_6H_{10}O_5)n$	**Formula Weight:** N/A
CAS #: 9004-34-6	**Storage:** 15 - 30°C
Physical Description: White Powder	

Test	Specification	Result
Identity Test	Passes	Passes
Purity	97.0 - 102.0%	97.0 - 102.0%
Moisture	<5.0%	3.4%
Particle Size/Mesh +60 mesh +200 mesh	Wt % <8% >45%	 <1% 55%
pH	5 - 7	6.73
Residue on Ignition	<0.05%	<0.05%
Water Soluble Substances	<12.0 mg/5 g	4.5 mg/5 g
Heavy Metals	<10 ppm	<10 ppm

H001822
Microcrystalline Cellulose Powder (TOC)
Expires 11/30/2022
Prepared By Casey English 2/22/2019

Identification A & B: Passes
Bulk Density: 0.29 g/ml
Bulk Density (graduated cylinder): 0.31 g/ml
Conductivity: 18 µS/cm
Starch: Negative
Ether Soluble Substances: 0.01%
Total Aerobic microbial Count: 100 cfu/g
Total Mold and Yeast Count: 20 cfu/g
Staphylococcus aureus: Absent/1 g
Pseudomonas aeruginosa: Absent/1 g
E. coli: Absent/1 g
Salmonella: Absent/10 g
Particle size:

- 450 mesh: 77%
- d10: 37 um
- d50: 139 um
- d90: 271 um

TUP: <9/600 cm^2
Degree of brightness: >88%
Powder flow-angle of repose: <42°
Recommended Retest Date: 11/30/2022

07/26/2018 - *John Huang, PhD*
MP Biomedicals, LLC.
Quality Control Manager

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Online Ordering, MSDSs, certificates of analysis and data sheets now available on our web site
Technical Service: 1-800-279-5490 (440-337-1200) Customer Service: 1-800-854-0530 (440-337-1200)

MP Biomedicals, LLC

29525 Fountain Parkway
Solon, Ohio 44139

Telephone: 440/337-1200
Toll Free: 800/854-0530

Fax: 440/337-1180
web: www.mpbio.com

Certificate of Analysis

Product Description: Microcrystalline Cellulose Powder_
Catalog Number: 191499_
Lot: Q9483_

Formula: $(C_6H_{10}O_5)n$	**Formula Weight:** N/A
CAS #: 9004-34-6	**Storage:** 15 - 30°C
Physical Description: White Powder	

Test	Specification	Result
Identity Test	Passes	Passes
Purity	97.0 - 102.0%	97.0 - 102.0%
Moisture	<5.0%	3.4%
Particle Size/Mesh +60 mesh +200 mesh	Wt % <8% >45%	 <1% 55%
pH	5 - 7	6.73
Residue on Ignition	<0.05%	<0.05%
Water Soluble Substances	<12.0 mg/5 g	4.5 mg/5 g
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- d10: 37 um
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07/26/2018 - *John Huang, PhD*
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PREPARATION BATCH SUMMARY

ASTM D2216

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0257 Batch Matrix: Solid
Preparation: No Prep-Organics

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-IT1089	23A0207-02		01/16/23 13:20	
LDW23-IT1097	23A0207-10		01/16/23 13:20	
LDW23-IT1209	23A0207-17		01/16/23 13:20	

HOLDING TIME SUMMARY

Analysis: ASTM D2216

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-IT1089 23A0207-02	01/11/23 08:42	01/11/23 16:45	01/16/23 13:20	5	180	01/17/23 05:11	6	180	
LDW23-IT1097 23A0207-10	01/11/23 11:32	01/11/23 16:45	01/16/23 13:20	5	180	01/17/23 05:11	6	180	
LDW23-IT1209 23A0207-17	01/11/23 15:21	01/11/23 16:45	01/16/23 13:20	4	180	01/17/23 05:11	6	180	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

ASTM D2216

Laboratory: Analytical Resources, LLC
SDG: 23A0207
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument:

Analyte	MDL	RL	Units
Total Solids		0.01	%

TOTAL SOLIDS BENCHSHEET

Method: PSEP 1986

(dry at 103-105 C)

Instrumentation

Batch:	BLA0589
Date:	1/25/2023 9:19
Analyst:	DP
Drying Oven:	15
Analytical Balance:	B334705934

Batch drying time

Record times as mm/dd/yy hh:mm

Date/time in oven:	1/25/2023 16:11
Date/time out:	1/26/2023 9:25
Elapsed hrs:	17.2

Oven Temp, C 104

TS (%) calculated as:

Final dry wt (g) = (Dry Wt - Tare Wt)

103 TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)

Oven Temps, °C	
Start Temp:	104
End Temp:	103

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0207-01	0.8200	11.8000	9.4300	8.61	**78.42%**	Yes
23A0207-02	0.8000	11.9200	9.5400	8.74	**78.60%**	Yes
23A0207-03	0.8000	11.6400	9.4700	8.67	**79.98%**	Yes
23A0207-04	0.8100	11.4900	8.6700	7.86	**73.60%**	Yes
23A0207-05	0.8000	11.7900	8.6400	7.84	**71.34%**	Yes
23A0207-06	0.7900	11.7200	9.4200	8.63	**78.96%**	No
23A0207-07	0.8000	11.0200	8.8500	8.05	**78.77%**	No
23A0207-08	0.8000	11.0700	8.2800	7.48	**72.83%**	No
23A0207-09	0.8000	11.2800	8.4500	7.65	**73.00%**	Yes
23A0207-10	0.8000	11.7900	8.6600	7.86	**71.52%**	Yes
23A0207-11	0.7900	11.7400	6.0200	5.23	**47.76%**	Yes
23A0207-12	0.8100	11.6800	9.1800	8.37	**77.00%**	Yes
23A0207-13	0.8100	11.7200	6.3800	5.57	**51.05%**	Yes
23A0207-14	0.8000	11.7600	8.5200	7.72	**70.44%**	No
23A0207-15	0.8000	11.8100	9.3600	8.56	**77.75%**	Yes
23A0207-16	0.7900	11.5400	7.5300	6.74	**62.70%**	No
23A0207-17	0.8000	11.7300	7.7100	6.91	**63.22%**	Yes

TOTAL SOLIDS BENCHSHEET

Method: PSEP 1986

(dry at 103-105 C)

Instrumentation

Batch:	BLA0589
Date:	1/25/2023 9:19
Analyst:	DP
Drying Oven:	015
Analytical Balance:	B334705434

Batch drying time			Oven Temp, C	TS (%) calculated as:	Oven Temps, °C	
Record times as mm/dd/yy hh:mm						
Date/time in oven:	01/25/23	16:11	104	Final dry wt (g) = (Dry Wt - Tare Wt)	Start Temp:	104
Date/time out:	1/26/23	9:25	103	TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)	End Temp:	103
Elapsed hrs:	0.0					

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0207-01 A	0.82	11.30	9.43			~~No~~ yes
23A0207-02	0.80	11.92	9.54			No ~~yes~~
23A0207-03	0.80	11.64	9.47			~~No~~ yes
23A0207-04	0.81	11.49	8.67			~~No~~ yes
23A0207-05	0.80	11.79	8.64			~~No~~ yes
23A0207-06	0.79	11.72	9.42			No
23A0207-07	0.80	11.02	8.85			No
23A0207-08	0.80	11.07	8.28			No
23A0207-09	0.80	11.28	8.45			~~No~~ yes
23A0207-10	0.80	11.79	8.66			~~No~~ yes
23A0207-11	0.79	11.74	6.02			~~No~~ yes
23A0207-12	0.81	11.68	9.18			~~No~~ yes
23A0207-13	0.81	11.72	6.38			~~No~~ yes
23A0207-14	0.80	11.76	8.52			No
23A0207-15	0.80	11.81	9.36			~~No~~ yes
23A0207-16	0.79	11.54	7.53			No
23A0207-17 A	0.80	11.73	7.71			~~No~~ yes

T/S + Screens

1 copy

TOTAL SOLIDS BENCHSHEET

Method: PSEP 1986

(dry at 103-105 C)

Instrumentation

Batch:	BLA0589
Date:	1/25/2023 9:19
Analyst:	DP
Drying Oven:	15
Analytical Balance:	B334705934

Batch drying time					
Record times as mm/dd/yy hh:mm		Oven Temp, C	TS (%) calculated as:	Oven Temps, °C	
Date/time in oven:	1/25/2023 16:11	104	Final dry wt (g) = (Dry Wt - Tare Wt)	Start Temp:	104
Date/time out:	1/26/2023 9:25	103	TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)	End Temp:	103
Elapsed hrs:	17.2				

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0207-01	0.8200	11.8000	9.4300	8.61	**78.42%**	Yes
23A0207-02	0.8000	11.9200	9.5400	8.74	**78.60%**	Yes
23A0207-03	0.8000	11.6400	9.4700	8.67	**79.98%**	Yes
23A0207-04	0.8100	11.4900	8.6700	7.86	**73.60%**	Yes
23A0207-05	0.8000	11.7900	8.6400	7.84	**71.34%**	Yes
23A0207-06	0.7900	11.7200	9.4200	8.63	**78.96%**	No
23A0207-07	0.8000	11.0200	8.8500	8.05	**78.77%**	No
23A0207-08	0.8000	11.0700	8.2800	7.48	**72.83%**	No
23A0207-09	0.8000	11.2800	8.4500	7.65	**73.00%**	Yes
23A0207-10	0.8000	11.7900	8.6600	7.86	**71.52%**	Yes
23A0207-11	0.7900	11.7400	6.0200	5.23	**47.76%**	Yes
23A0207-12	0.8100	11.6800	9.1800	8.37	**77.00%**	Yes
23A0207-13	0.8100	11.7200	6.3800	5.57	**51.05%**	Yes
23A0207-14	0.8000	11.7600	8.5200	7.72	**70.44%**	No
23A0207-15	0.8000	11.8100	9.3600	8.56	**77.75%**	Yes
23A0207-16	0.7900	11.5400	7.5300	6.74	**62.70%**	No
23A0207-17	0.8000	11.7300	7.7100	6.91	**63.22%**	Yes

TOTAL SOLIDS BENCHSHEET

Method: PSEP 1986

(dry at 103-105 C)

Instrumentation

Batch:	BLA0589
Date:	1/25/2023 9:19
Analyst:	DP
Drying Oven:	015
Analytical Balance:	B33470594

Batch drying time			Oven Temp, C	TS (%) calculated as:	Oven Temps, °C	
Record times as mm/dd/yy hh:mm						
Date/time in oven:	01/25/23	16:11	104	Final dry wt (g) = (Dry Wt - Tare Wt)	Start Temp:	104
Date/time out:	1/26/23	9:25	103	TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)	End Temp:	103
Elapsed hrs:	0.0					

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0207-01 A	0.82	11.80	9.43			~~No~~ yes
23A0207-02	0.80	11.92	9.54			No ~~yes~~
23A0207-03	0.80	11.64	9.47			~~No~~ yes
23A0207-04	0.81	11.49	8.67			~~No~~ yes
23A0207-05	0.80	11.79	8.64			~~No~~ yes
23A0207-06	0.79	11.72	9.42			No
23A0207-07	0.80	11.02	8.85			No
23A0207-08	0.80	11.07	8.28			No
23A0207-09	0.80	11.28	8.45			~~No~~ yes
23A0207-10	0.80	11.79	8.66			~~No~~ yes
23A0207-11	0.79	11.74	6.02			~~No~~ yes
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23A0207-13	0.81	11.72	6.38			~~No~~ yes
23A0207-14	0.80	11.76	8.52			No
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23A0207-17 A	0.80	11.73	7.71			~~No~~ yes

T/S + Screens

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