



Analytical Resources, LLC
Analytical Chemists and Consultants

21 June 2023

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

RE: Gasco Hydrocarbon Investigation

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)
23D0457

Associated SDG ID(s)
N/A

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.



2300457



ANCHOR
QEA

Received By:	Company:
Signature/Printed Name	Date/Time



Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Anchob QEA
COC No(s): _____ (NA)
Assigned ARI Job No: 23D0457

Project Name: Gasco Hydrocarbon Investigation
Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____
Tracking No: 0201 7718 4273 2277 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 10:56 3.8
If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 1009728

Cooler Accepted by: PIB Date: 4/18/23 Time: 10:56

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: cardboard
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? NA 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: PIB Date: 4/19/23 Time: 10:14 Labels checked by: PIB

**** 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: _____



Anchor QEA, LLC

1201 3rd Ave, Suite 2600

Seattle, WA 98101

Project: Gasco Hydrocarbon Investigation

Project Number: 000029-02.78 T12A

Project Manager: Delaney Peterson

Reported:

06/21/2023 15:10

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
23D0457-01	MW2112-041723	Oil	04/17/23 09:30	04/18/23 10:56



Anchor QEA, LLC

1201 3rd Ave, Suite 2600

Seattle WA, 98101

Project: Gasco Hydrocarbon Investigation

Project Number: 000029-02.78 T12A

Project Manager: Delaney Peterson

Reported:

21-Jun-2023 15:10

Case Narrative

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Work Order: 23D0457

Sample receipt

Samples as listed on the preceding page were received 18-Apr-2023 10:56 under ARI work order 23D0457. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Alkyl PAH - EPA Method SW8270E-SIM

The sample(s) were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank(s) were clean at the reporting limits, except for response of C2-decalins and C3-decalins, attributed to high concentrations in the associated sample. Associated results in the sample have been "B"-flagged.

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



QUALIFIERS AND NOTES

Qualifier	Definition
U	This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20% RSD, <20% drift or minimum RRF)
M	Estimated value for a GC/MS analyte detected and confirmed by an analyst but with low spectral match parameters.
J	Estimated concentration value detected below the reporting limit.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL)
D1	Surrogate was not detected due to sample extract dilution
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



Form I
ORGANIC ANALYSIS DATA SHEET
EPA 8270E-SIM
Alkyl PAH Parents

Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Matrix: Oil

Laboratory ID: 23D0457-01 A

SDG: 23D0457

Sampled: 04/17/23 09:30

Prepared: 04/26/23 12:22

File ID: NT1405272322.D

% Solids:

Preparation: EPA 3580A (Waste Dilution)

Analyzed: 05/28/23 03:09

Batch: BLD0616

Sequence: SLE0443

Initial/Final: 1 g / 100 mL

Instrument: NT14

Column: ZB-5MS

Calibration: GE00024

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	(ug/kg)	Q	DL	RL
493-02-7	trans-Decalin	1	336000			10000
493-01-6	cis-Decalin	1	10000	U		10000
91-20-3	Naphthalene	1	10000	U		10000
90-12-0	1-Methylnaphthalene	1	41300			10000
91-57-6	2-Methylnaphthalene	1	10000	U		10000
92-52-4	Biphenyl	1	10000	U		10000
581-42-0	2,6-Dimethylnaphthalene	1	470000			10000
208-96-8	Acenaphthylene	1	10000	U		10000
83-32-9	Acenaphthene	1	188000			10000
132-64-9	Dibenzofuran	1	13600			10000
2245-38-7	2,3,5-Trimethylnaphthalene	1	343000			10000
86-73-7	Fluorene	1	147000			10000
95-15-8	Benzo(b)thiophene	1	10000	U		10000
85-01-8	Phenanthrene	1	13700			10000
120-12-7	Anthracene	1	11500	M		10000
86-74-8	Carbazole	1	10000	U		10000
832-69-9	1-Methylphenanthrene	1	73300			10000
206-44-0	Fluoranthene	1	13700			10000
132-65-0	Dibenzothiophene	1	10000	U		10000
129-00-0	Pyrene	1	27300			10000
56-55-3	Benzo(a)anthracene	1	8520	J		10000
218-01-9	Chrysene	1	13900			10000
205-99-2	Benzo(b)fluoranthene	1	10000	U		10000
205-82-3	Benzo(j)fluoranthene	1	10000	U		10000
207-08-9	Benzo(k)fluoranthene	1	10000	U		10000
	Benzofluoranthenes, Total	1	20000	U		20000
197-97-2	Benzo(e)pyrene	1	3070	J		10000
50-32-8	Benzo(a)pyrene	1	2970	J		10000
193-39-5	Indeno(1,2,3-cd)pyrene	1	10000	U		10000
53-70-3	Dibenzo(a,h)anthracene	1	10000	U		10000
191-24-2	Benzo(g,h,i)perylene	1	10000	U		10000



Form I
ORGANIC ANALYSIS DATA SHEET
EPA 8270E-SIM
Alkyl PAH Parents

Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Matrix: Oil

Laboratory ID: 23D0457-01 A

SDG: 23D0457

Sampled: 04/17/23 09:30

Prepared: 04/26/23 12:22

File ID: NT1405272322.D

% Solids:

Preparation: EPA 3580A (Waste Dilution)

Analyzed: 05/28/23 03:09

Batch: BLD0616

Sequence: SLE0443

Initial/Final: 1 g / 100 mL

Instrument: NT14

Column: ZB-5MS

Calibration: GE00024

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	(ug/kg)	Q	DL	RL
198-55-0	Perylene	1	10000	U		10000
239-35-0	Benzo(b)naphtho(2,1-d)thiophene	1	3770	J		10000

SURROGATES	ADDED:(ug/kg)	(ug/kg)	% REC	QC LIMITS	Q
Naphthalene-d8	300000	175000	58.3	30 - 160	
Acenaphthene-d10	300000	209000	69.6	30 - 160	
Phenanthrene-d10	300000	223000	74.4	30 - 160	
Chrysene-d12	300000	253000	84.3	30 - 160	
Perylene-d12	300000	170000	56.7	30 - 160	

Data File: \\target\share\chem3\nt14,i\20230527,b\NT1405272322.D

Date : 28-May-2023 03:09

Client ID:

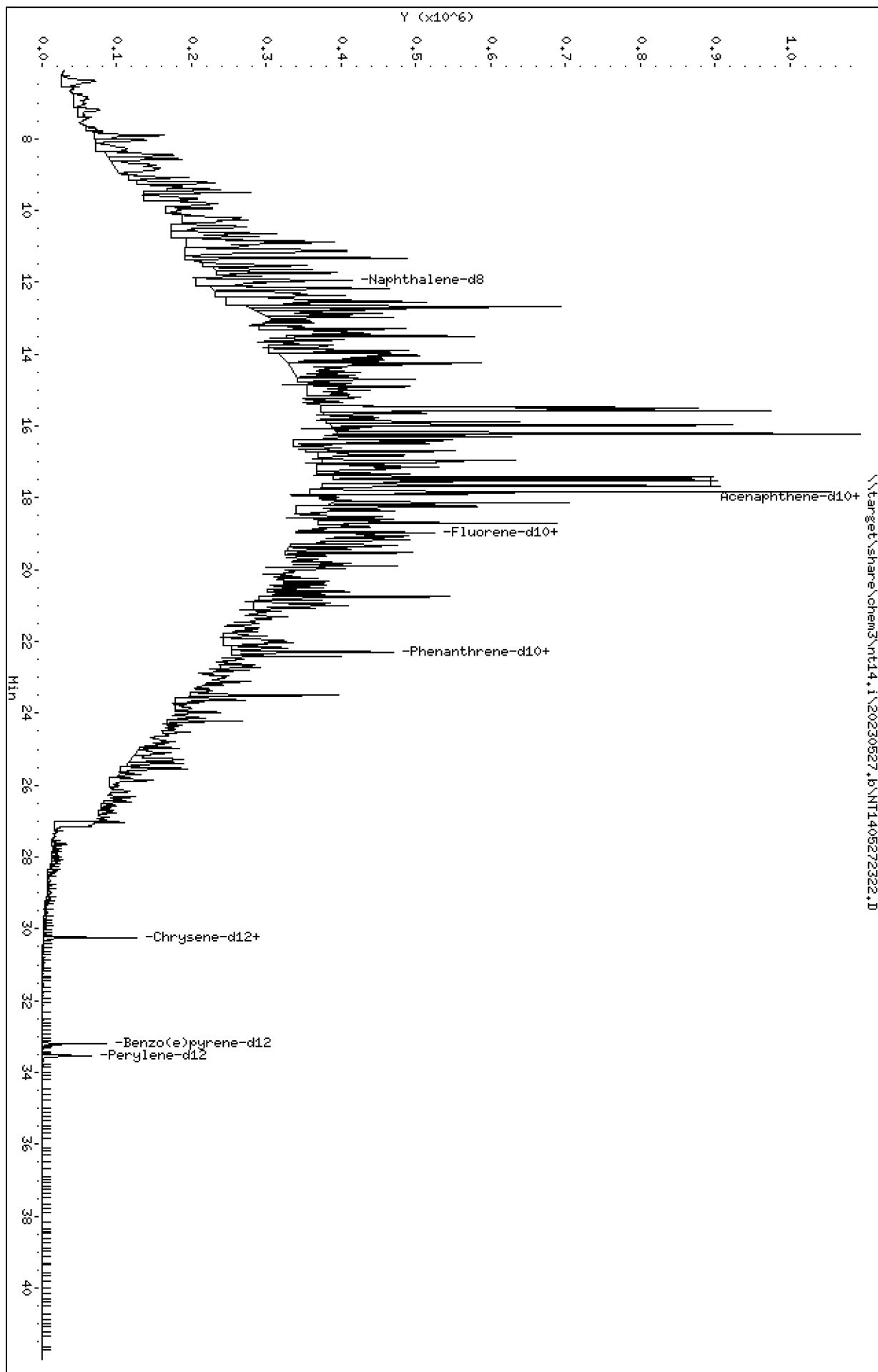
Sample Info: 23D0457-01

Column phase: Rxi-17S11 MS

Instrument: nt14,i

Operator: VTS

Column diameter: 0.25



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

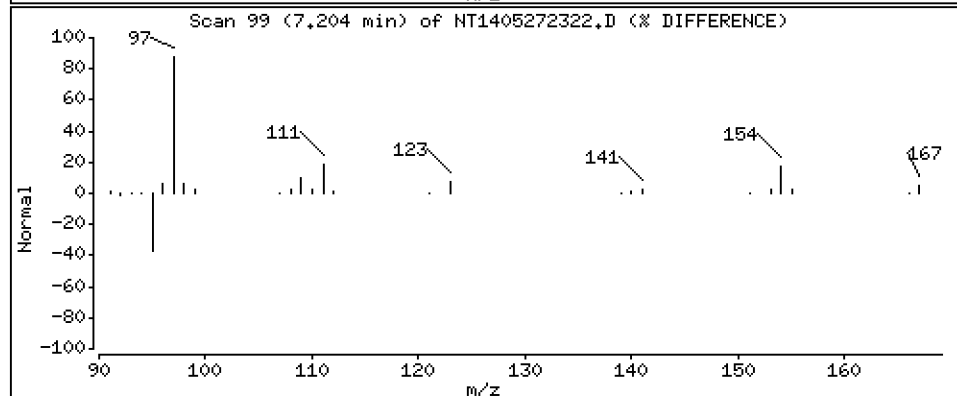
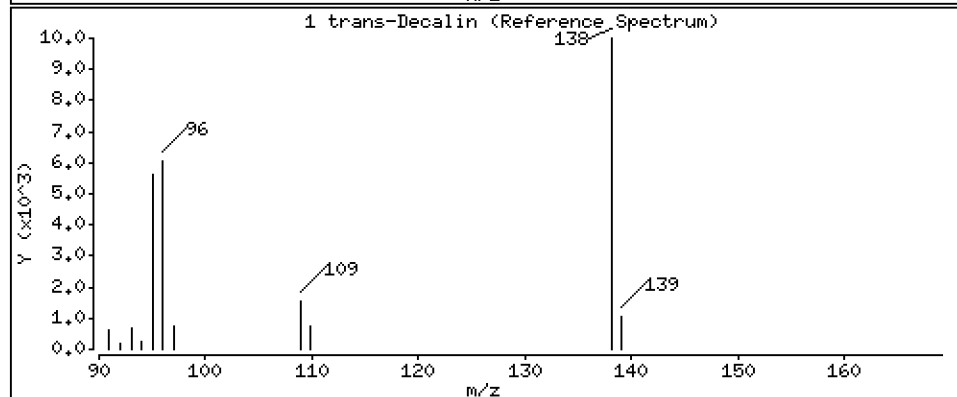
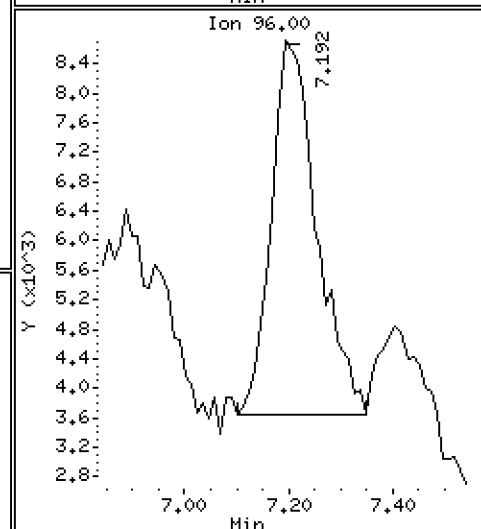
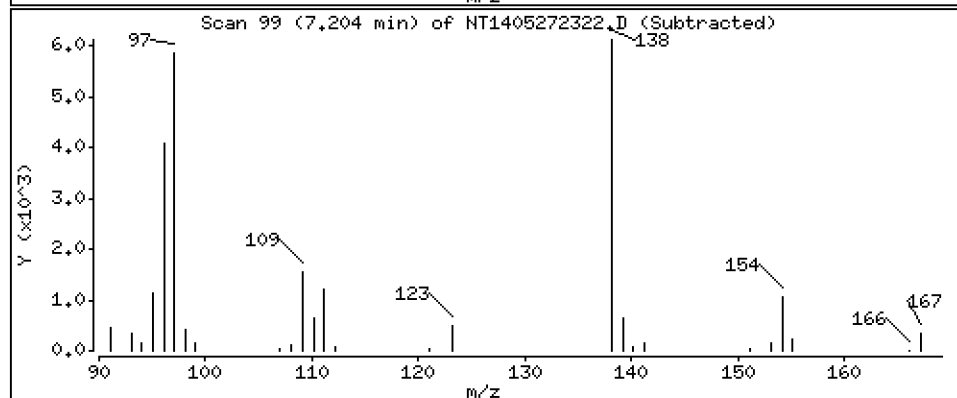
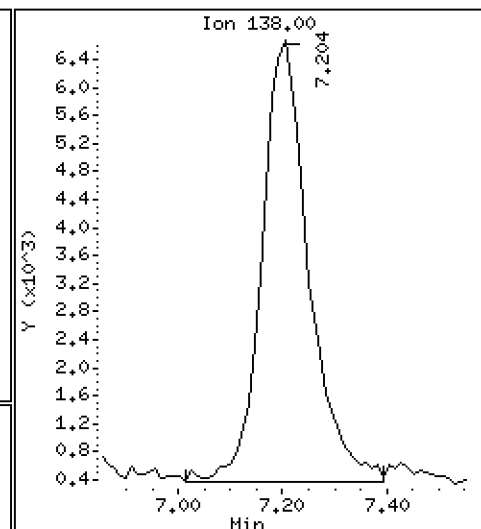
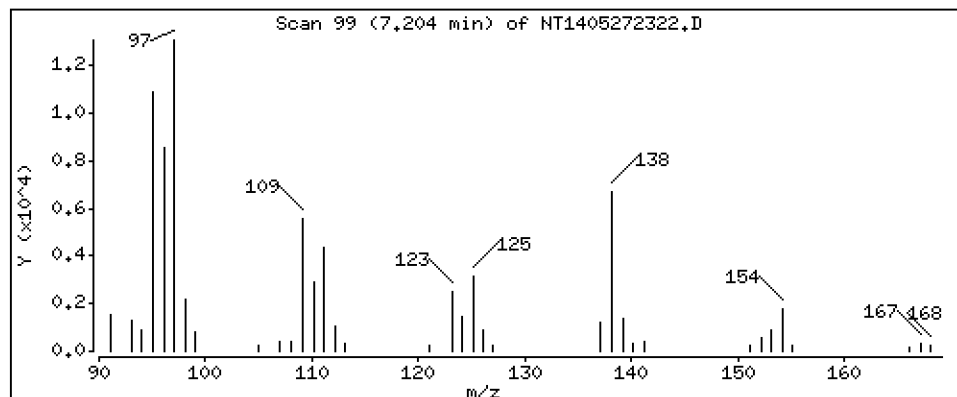
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

1 trans-Decalin

Concentration: 3.361 ug/mL



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

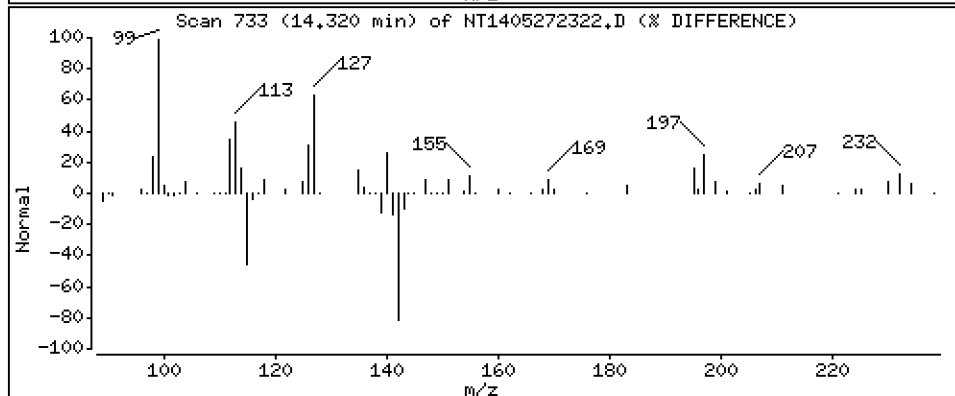
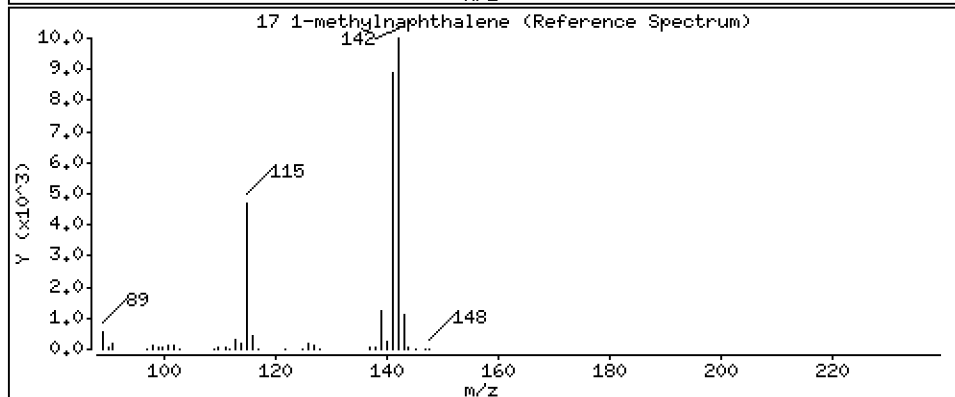
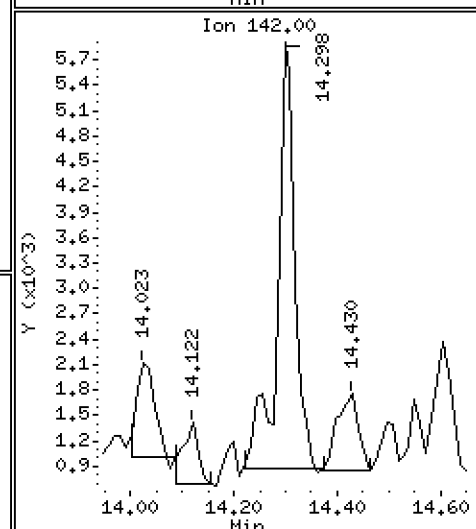
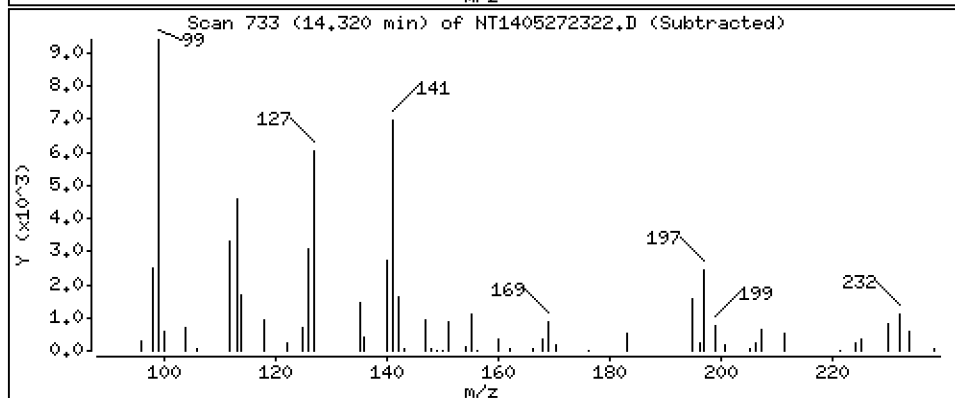
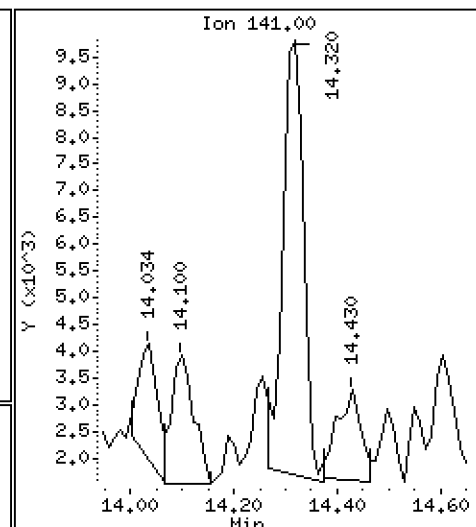
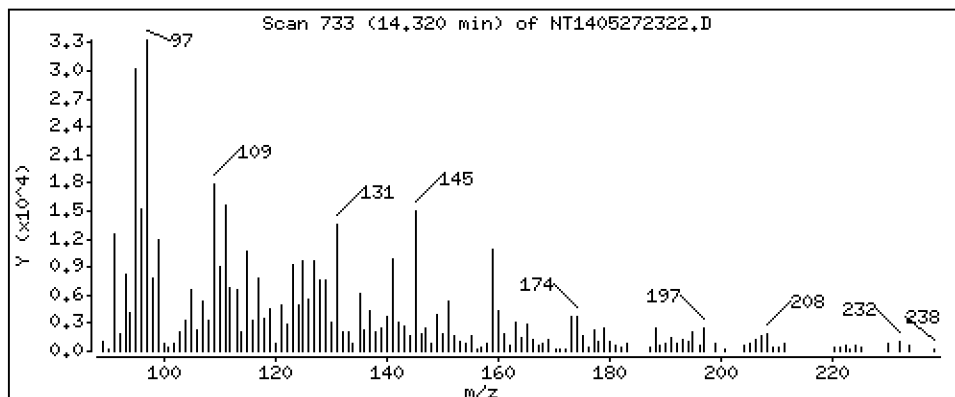
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 1-methylnaphthalene

Concentration: 0.4130 ug/mL



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

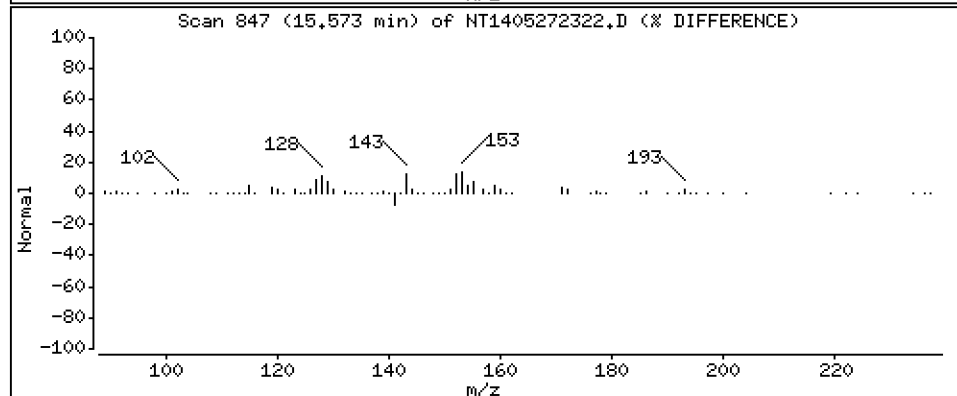
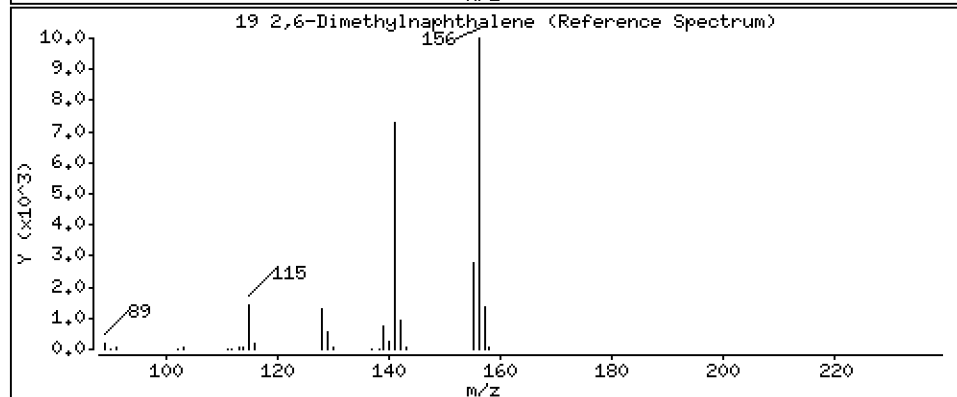
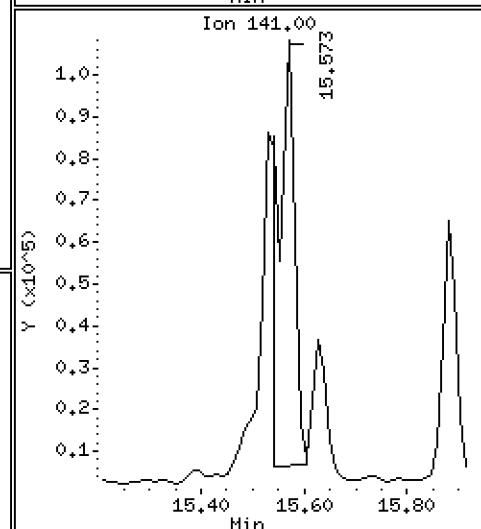
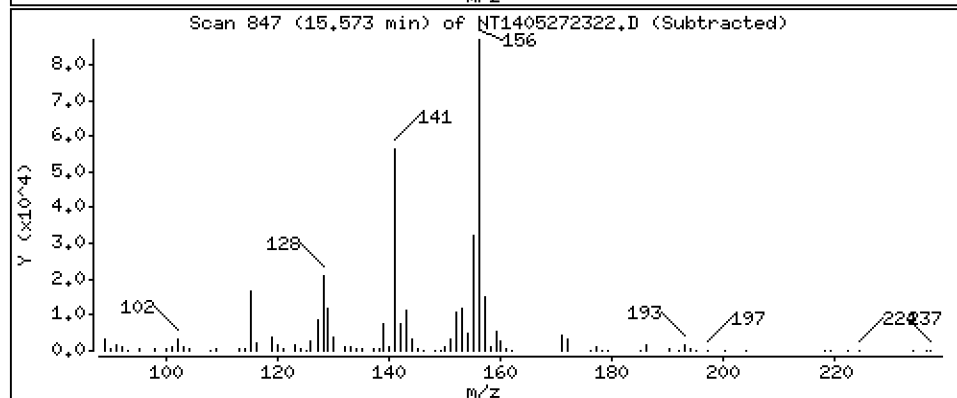
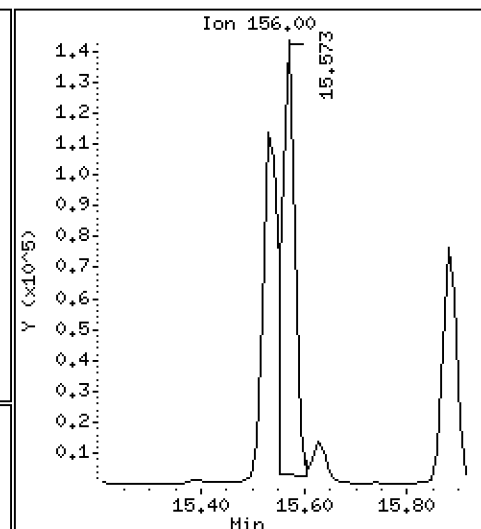
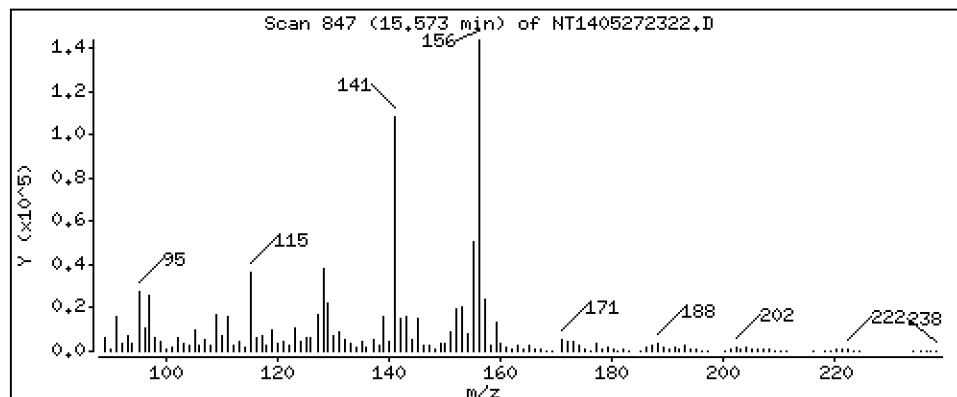
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

19 2,6-Dimethylnaphthalene

Concentration: 4.696 ug/mL



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

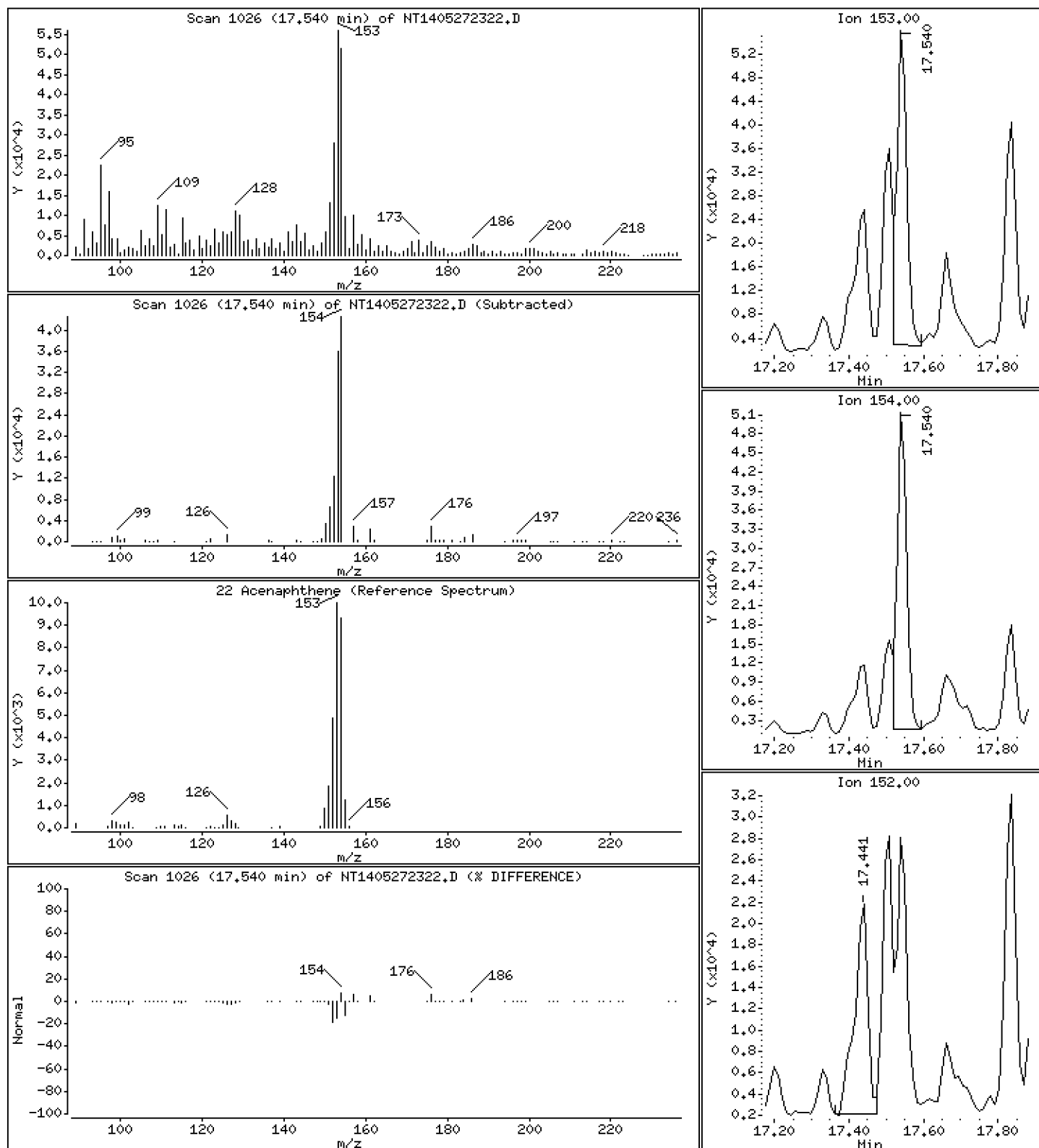
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

22 Acenaphthene

Concentration: 1.877 ug/mL



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

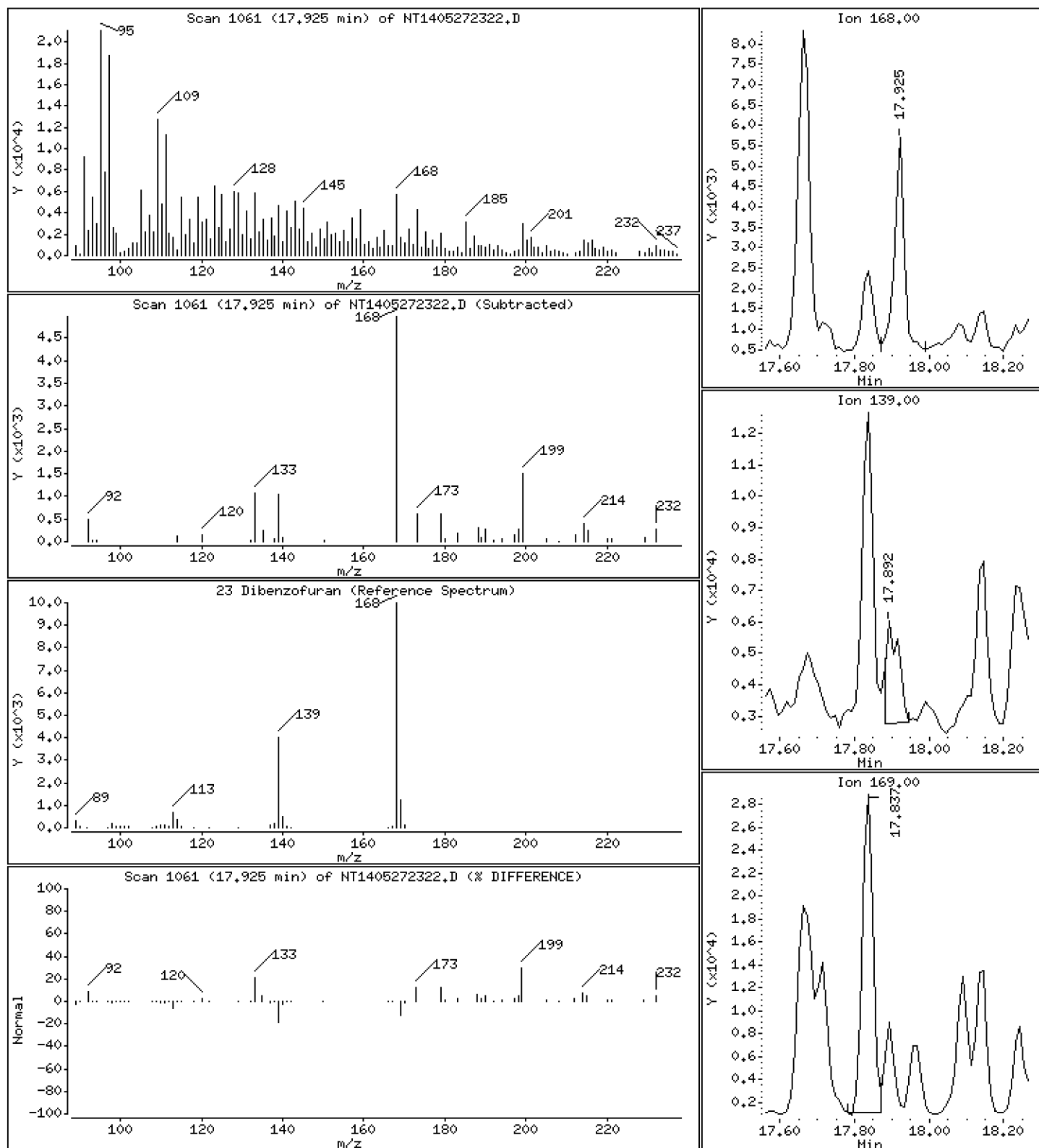
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

23 Dibenzofuran

Concentration: 0.1363 ug/mL



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

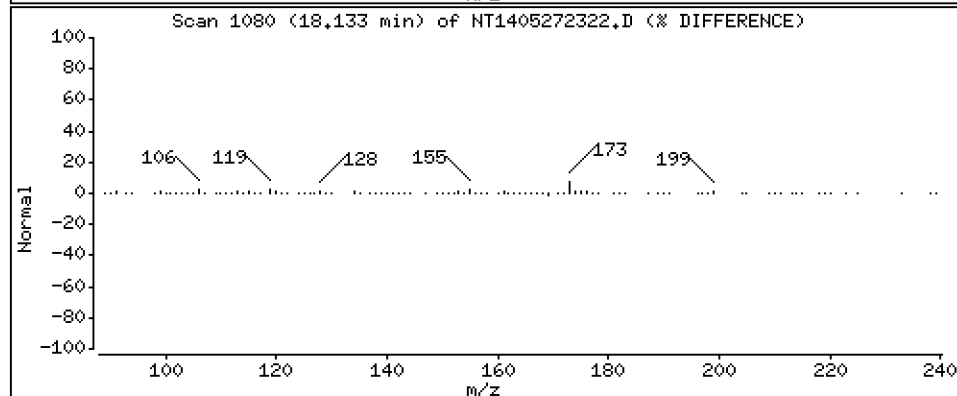
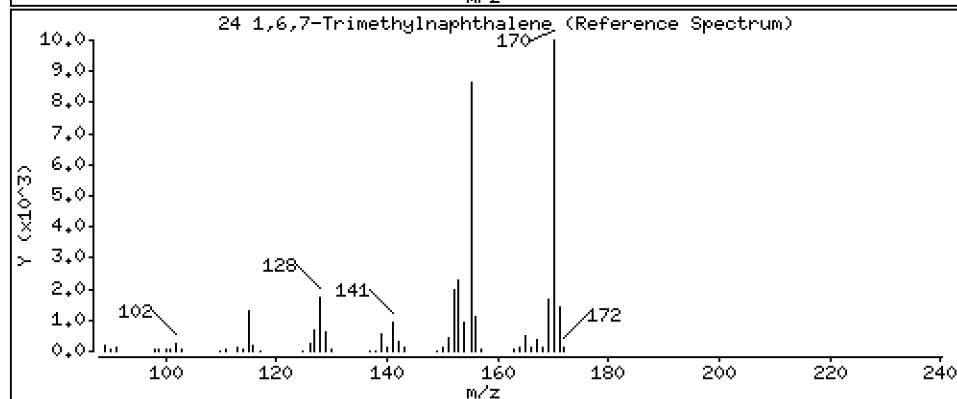
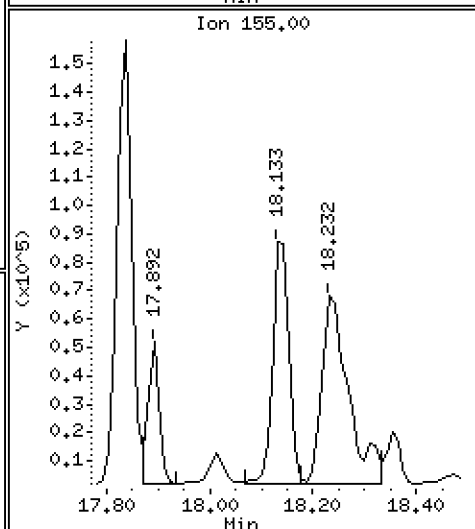
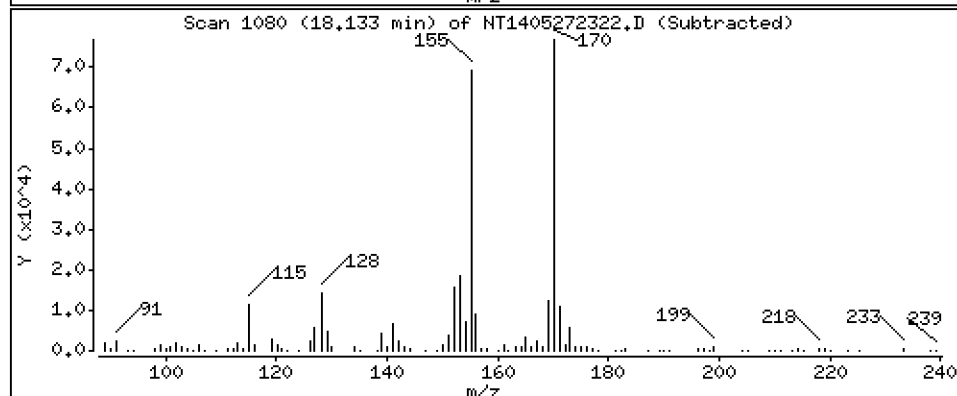
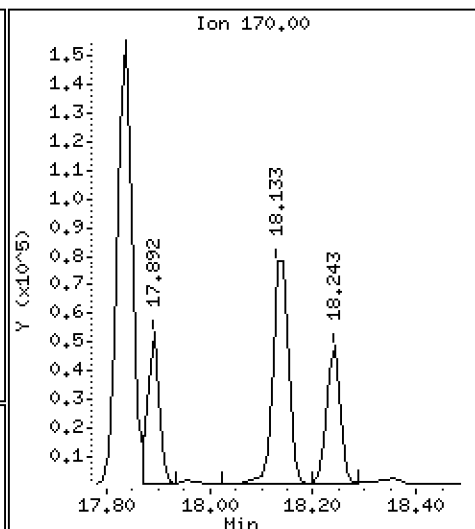
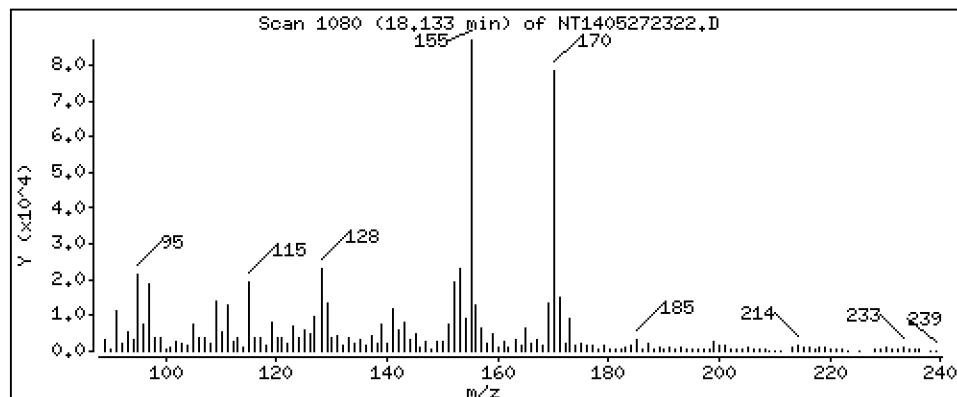
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

24 1,6,7-Trimethylnaphthalene

Concentration: 3.433 ug/mL



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

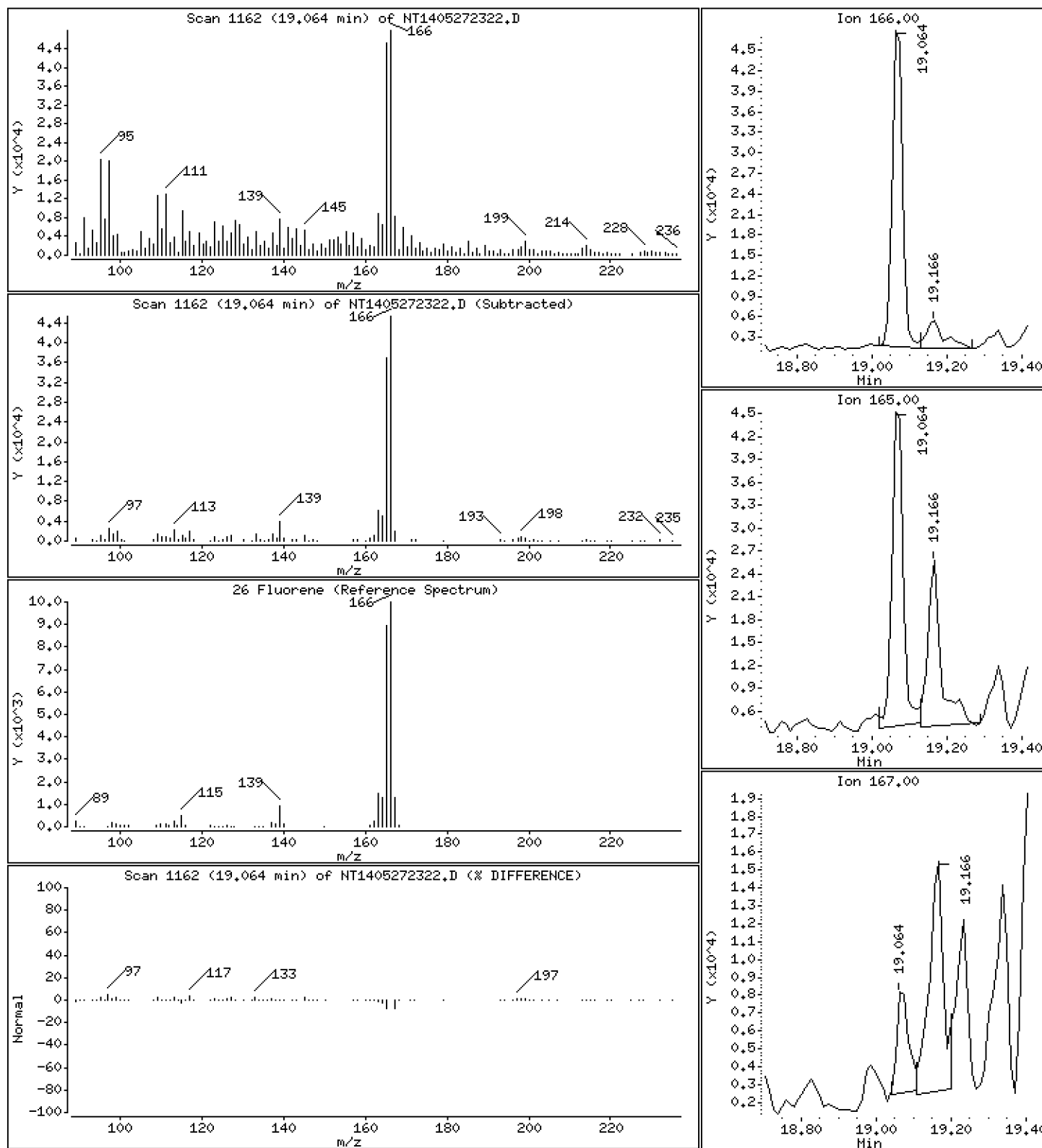
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

26 Fluorene

Concentration: 1.467 ug/mL



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

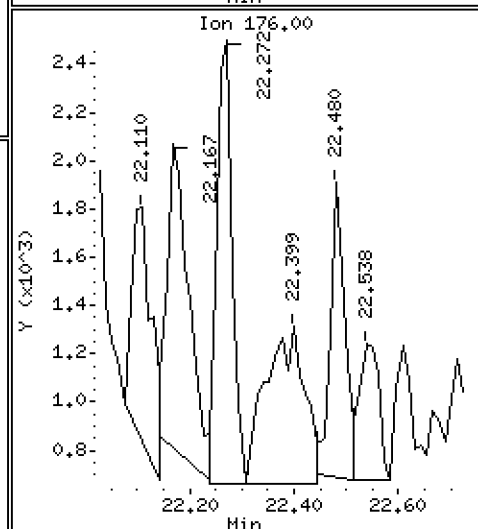
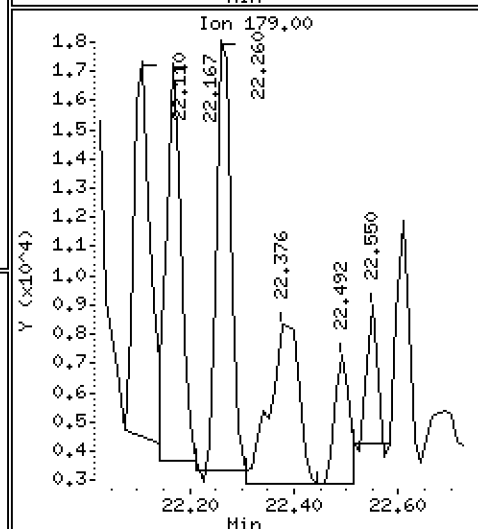
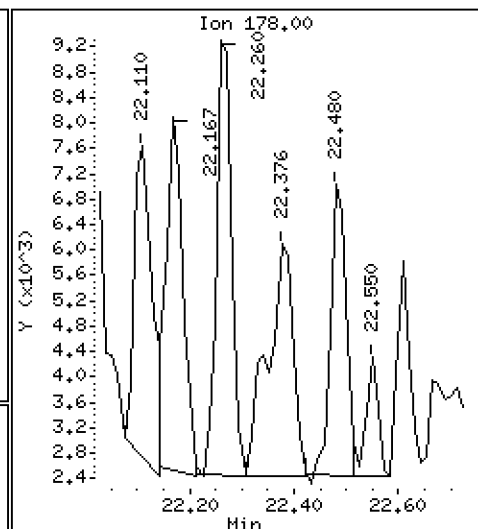
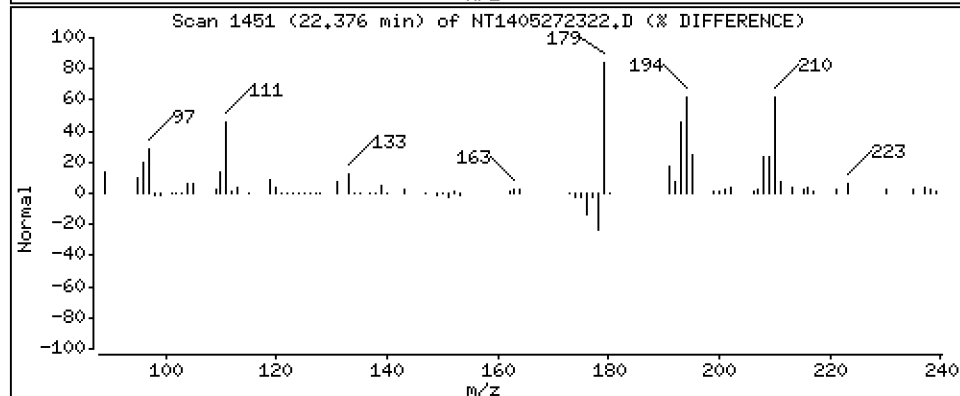
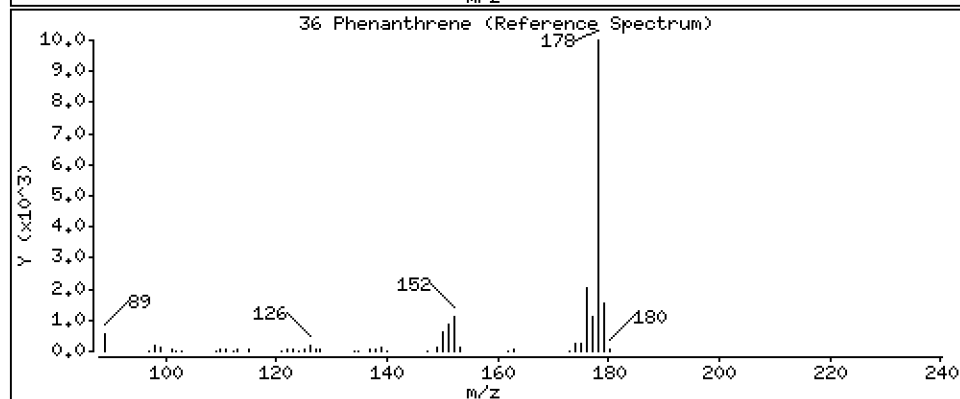
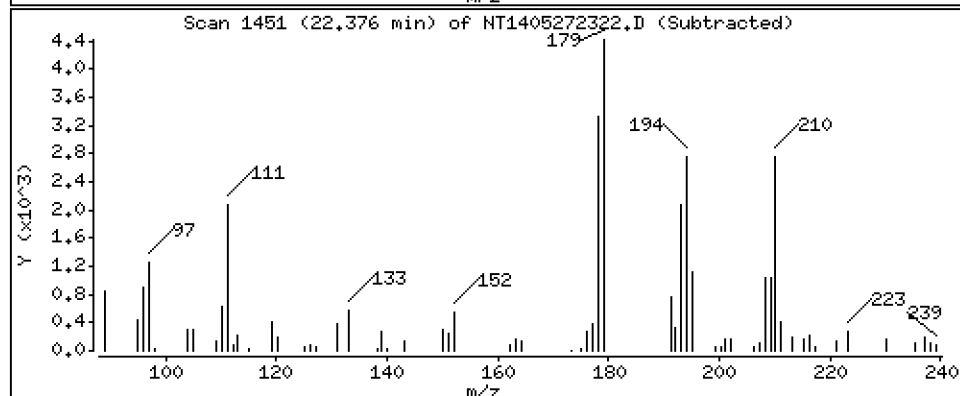
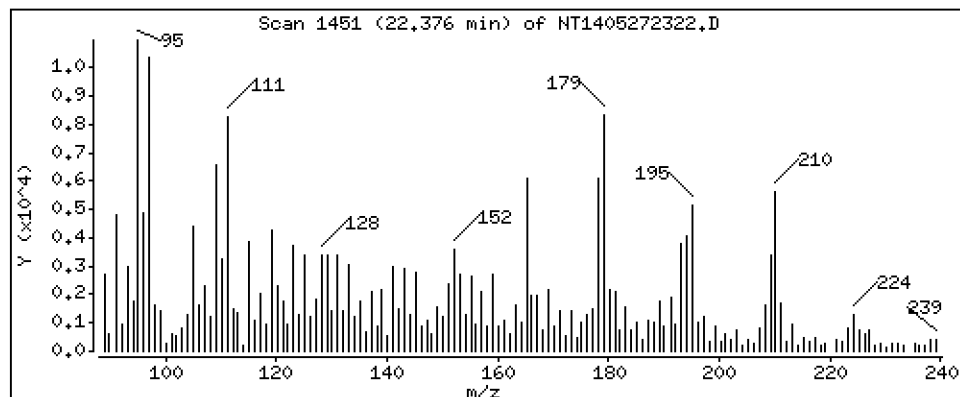
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

36 Phenanthrene

Concentration: 0.1366 ug/mL



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

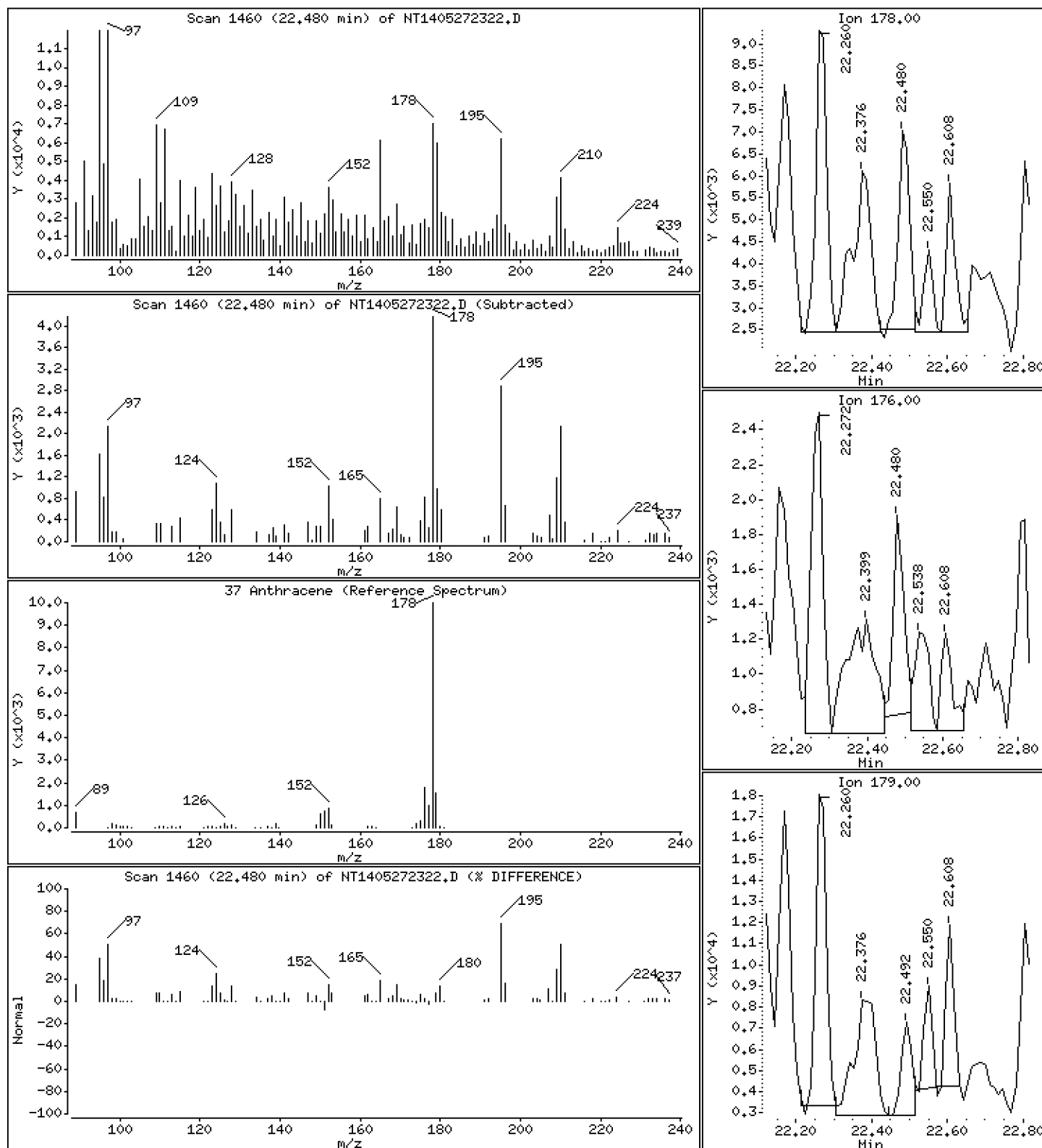
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

37 Anthracene

Concentration: 0.1148 ug/mL



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

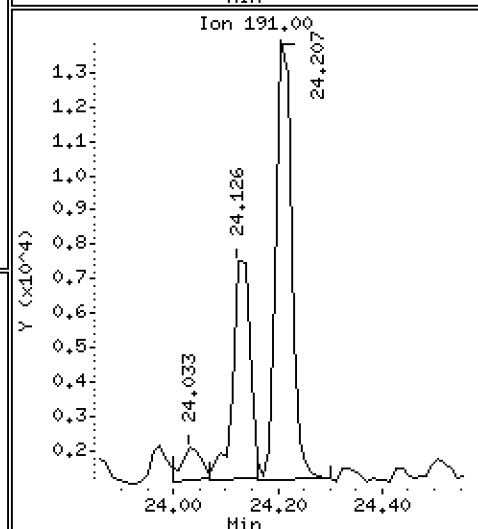
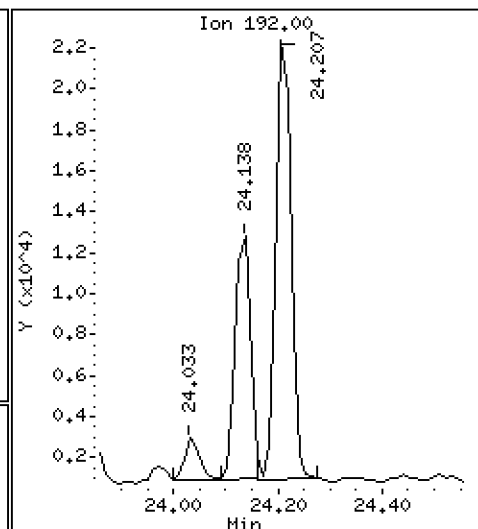
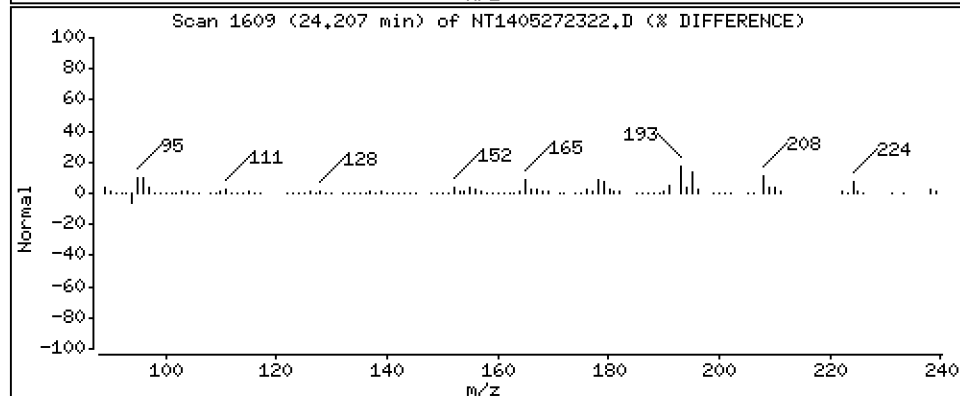
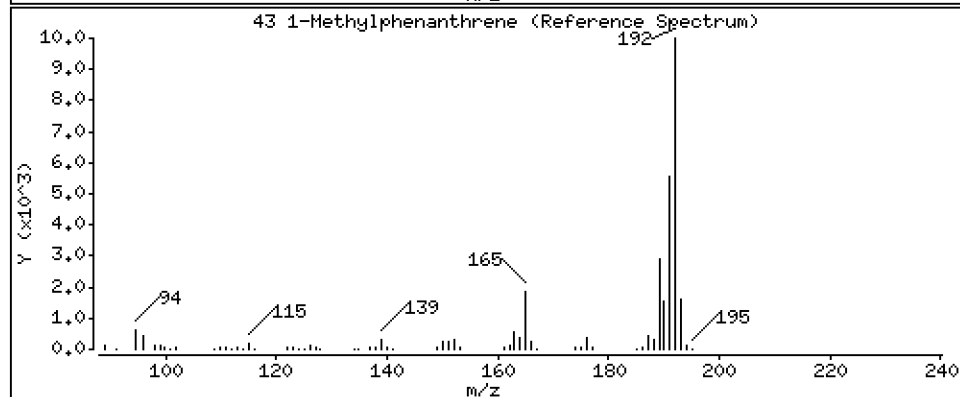
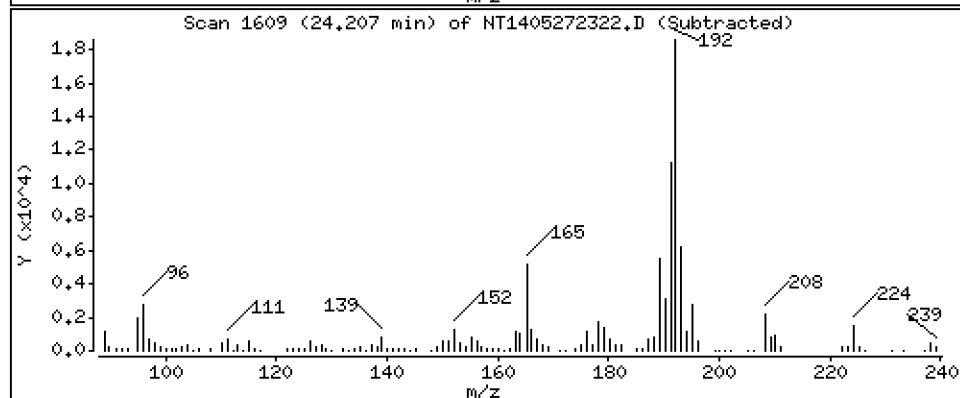
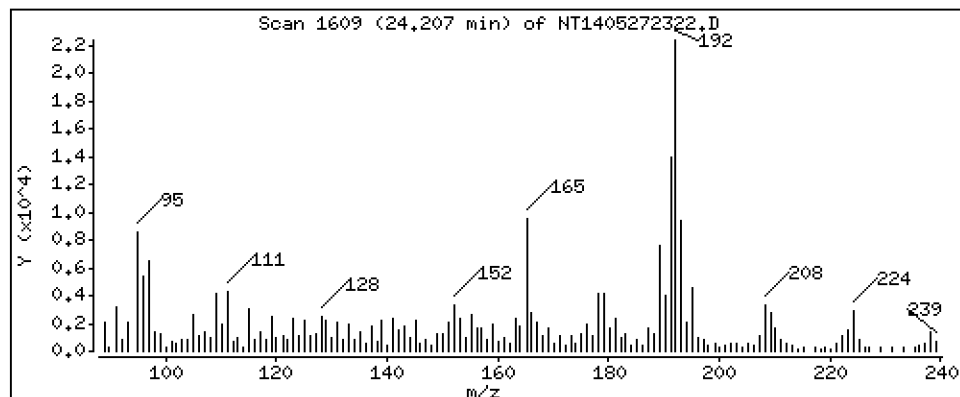
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

43 1-Methylphenanthrene

Concentration: 0.7329 ug/mL



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

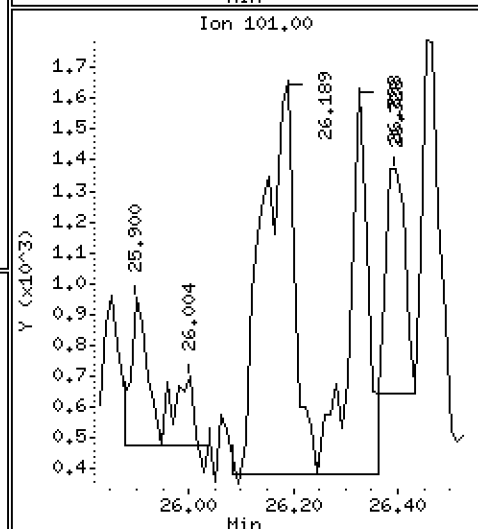
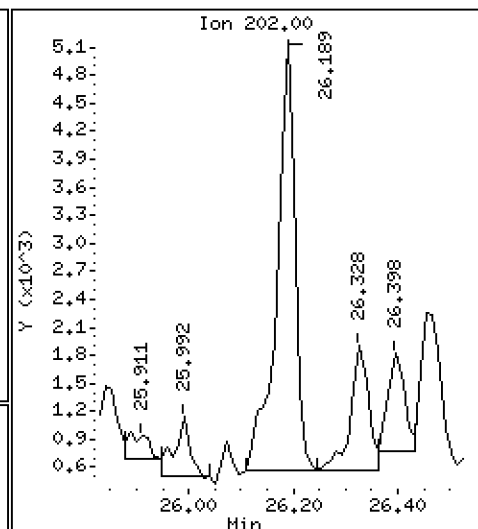
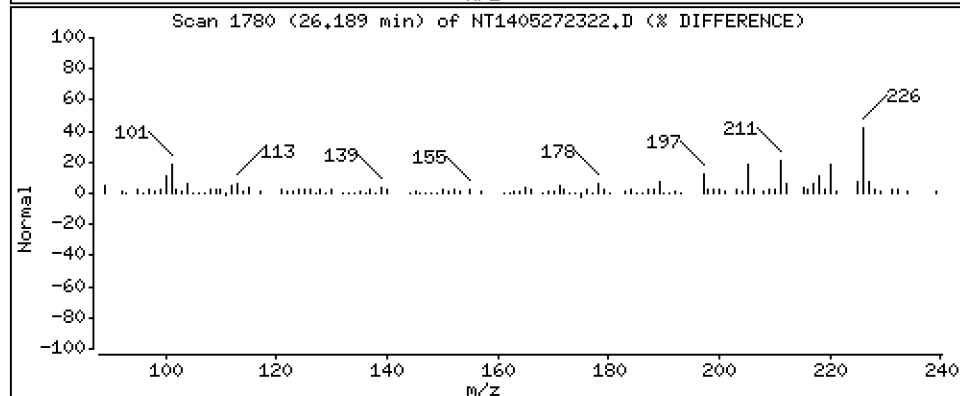
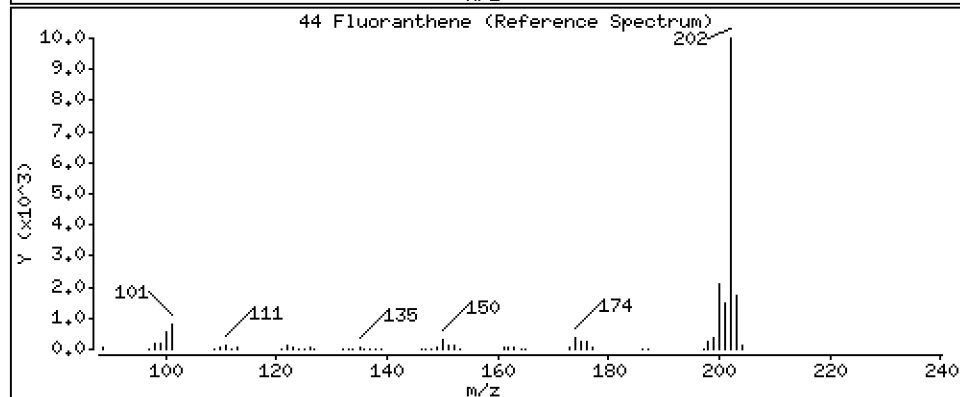
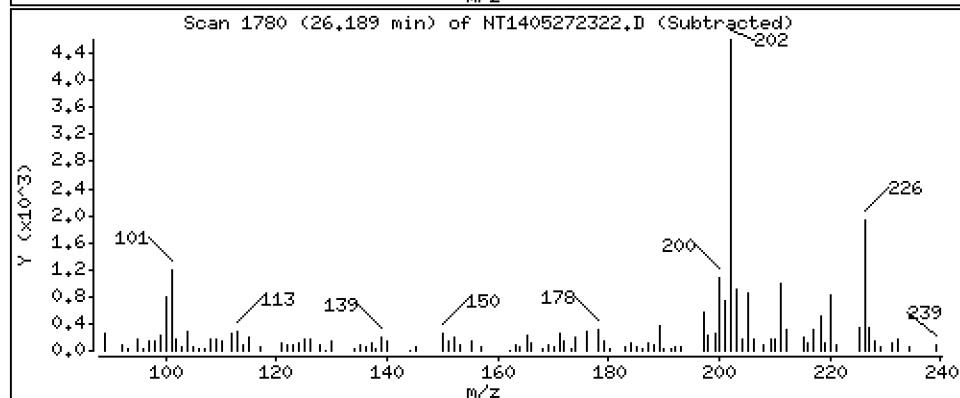
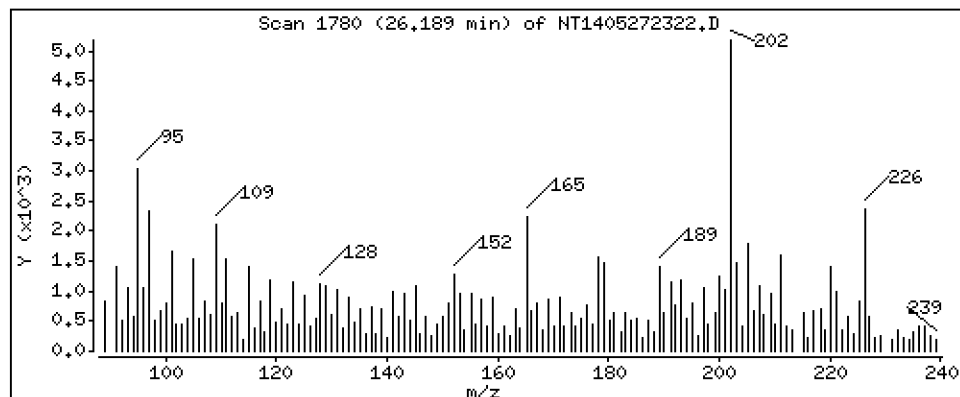
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

44 Fluoranthene

Concentration: 0.1365 ug/mL



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

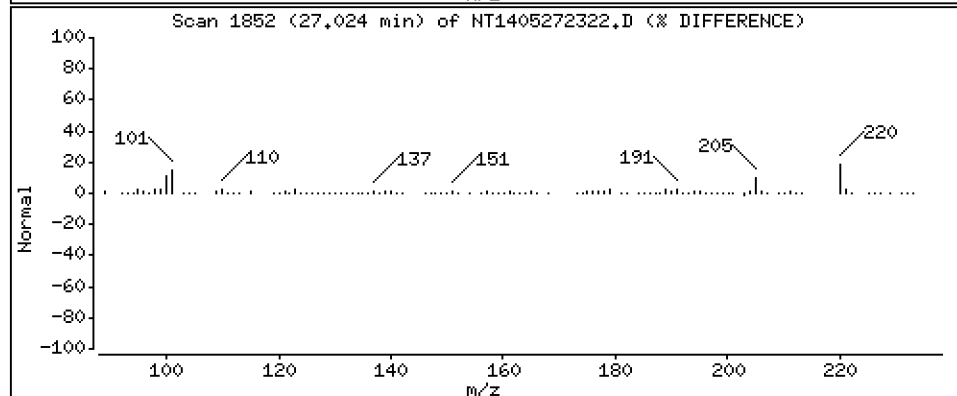
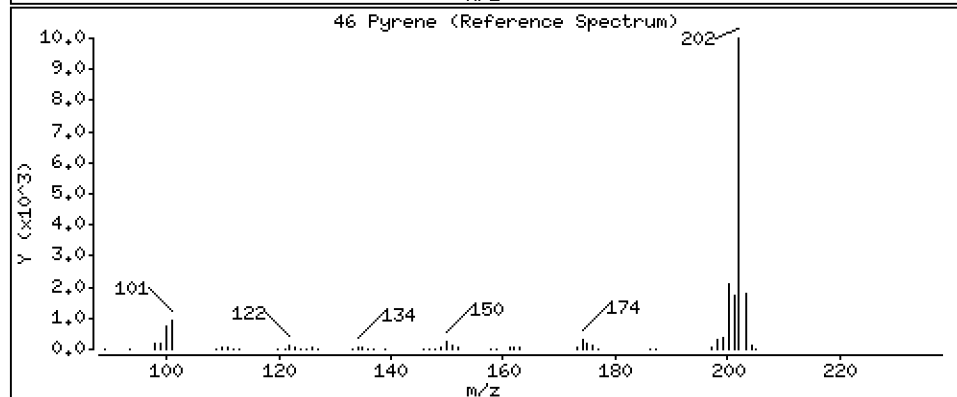
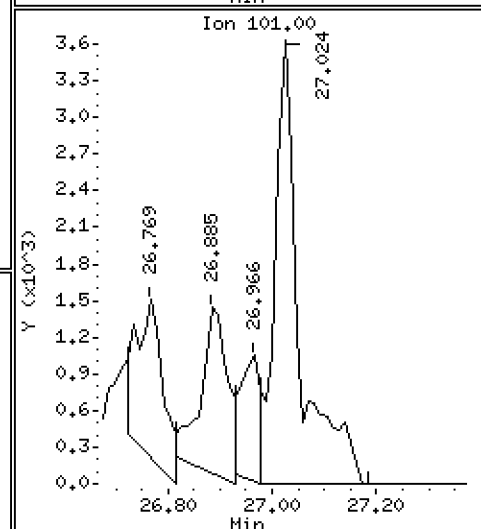
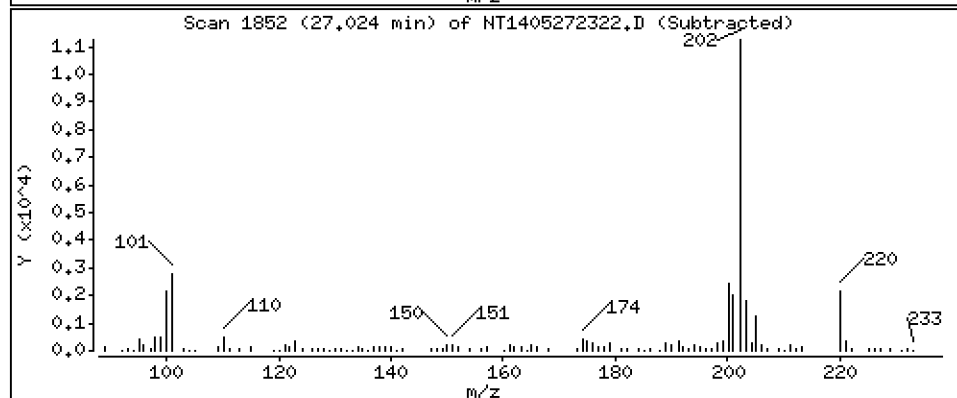
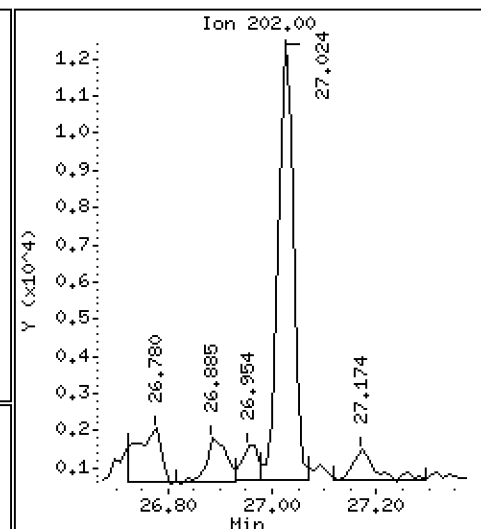
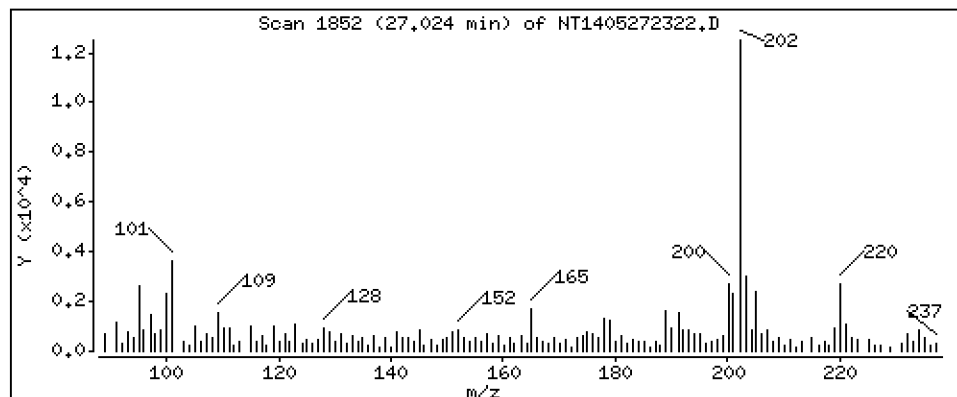
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

46 Pyrene

Concentration: 0.2728 ug/mL



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

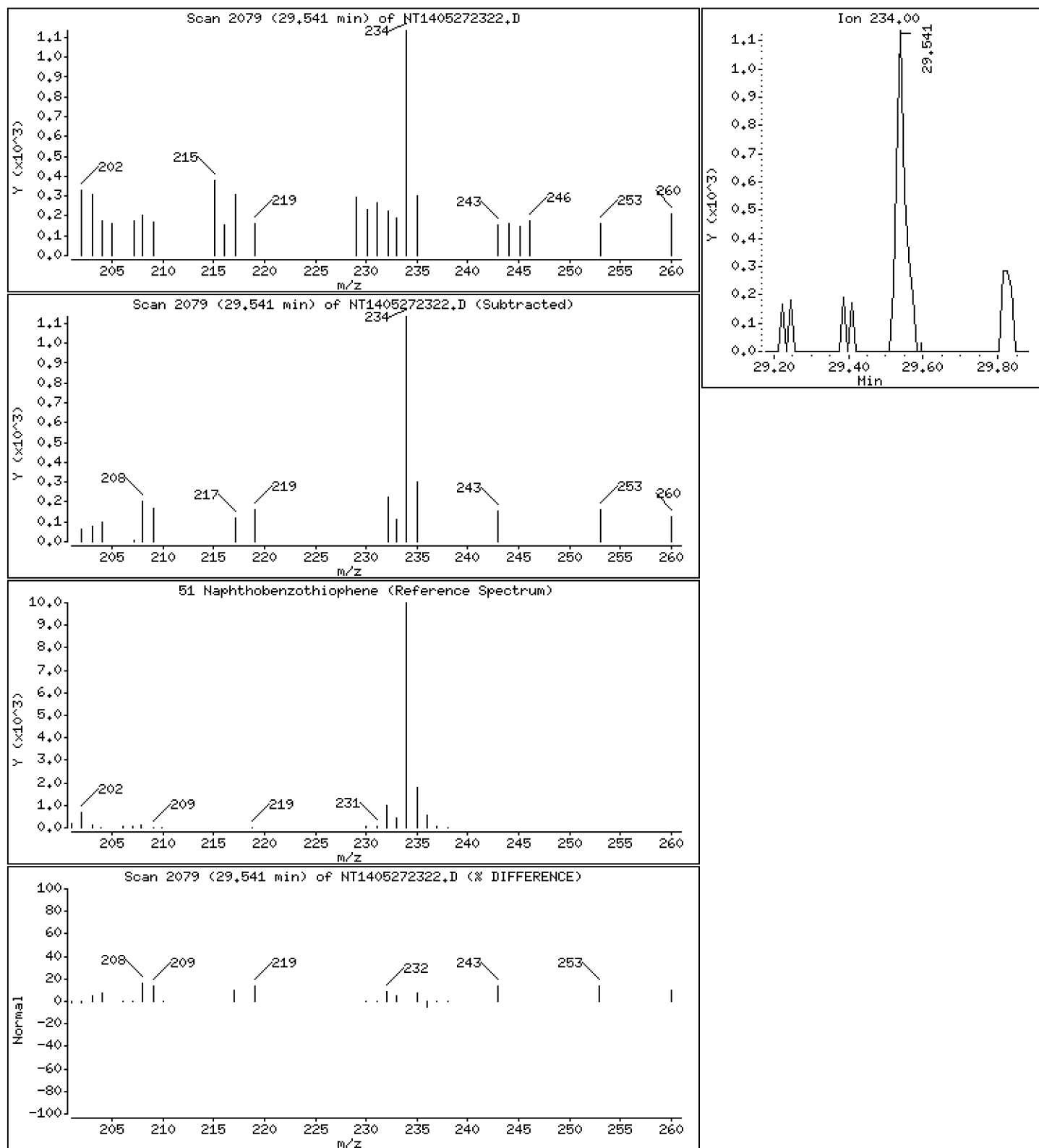
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

51 Naphthobenzothiophene

Concentration: 0.03771 ug/mL



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

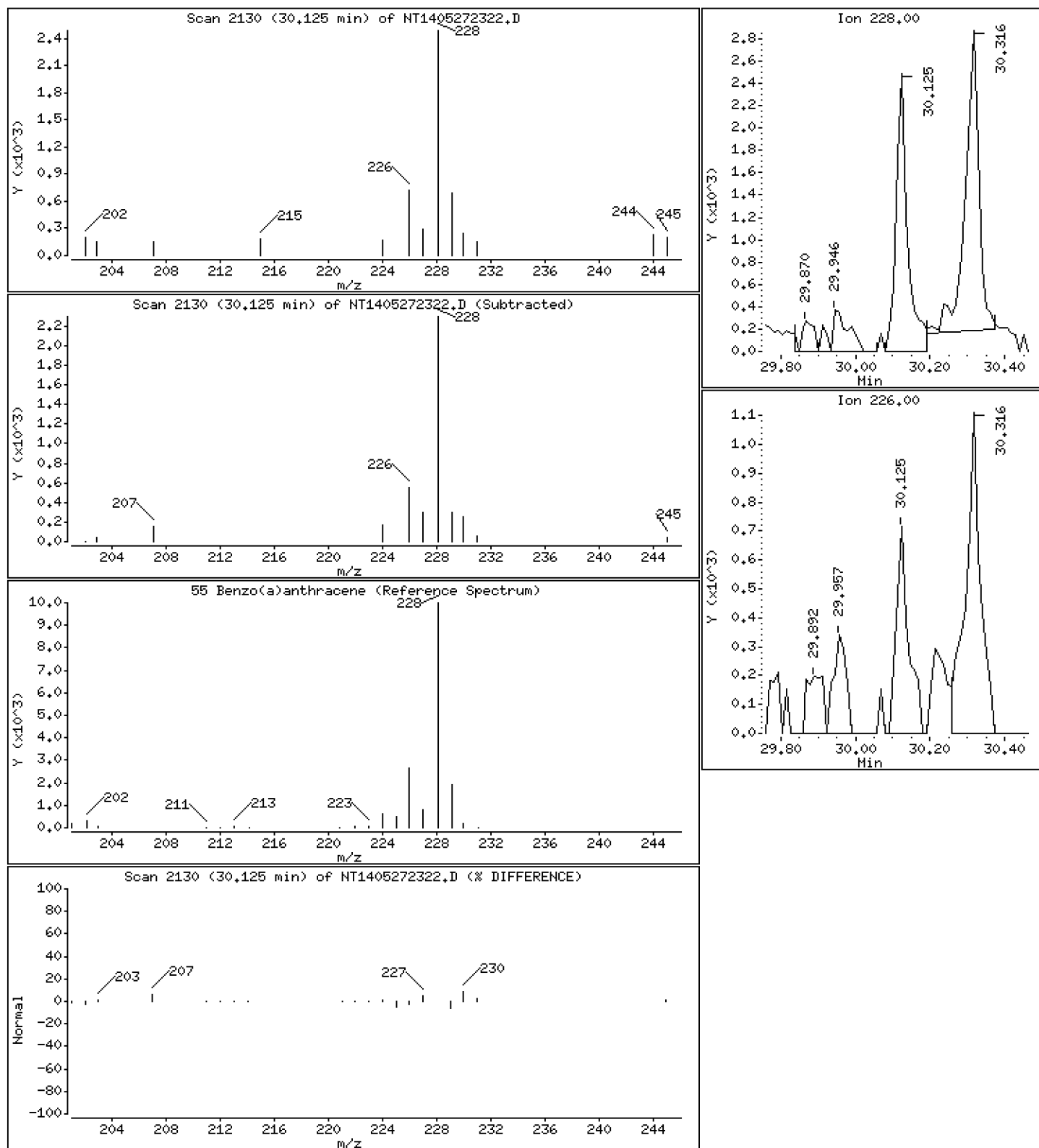
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

55 Benzo(a)anthracene

Concentration: 0.08524 ug/mL



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

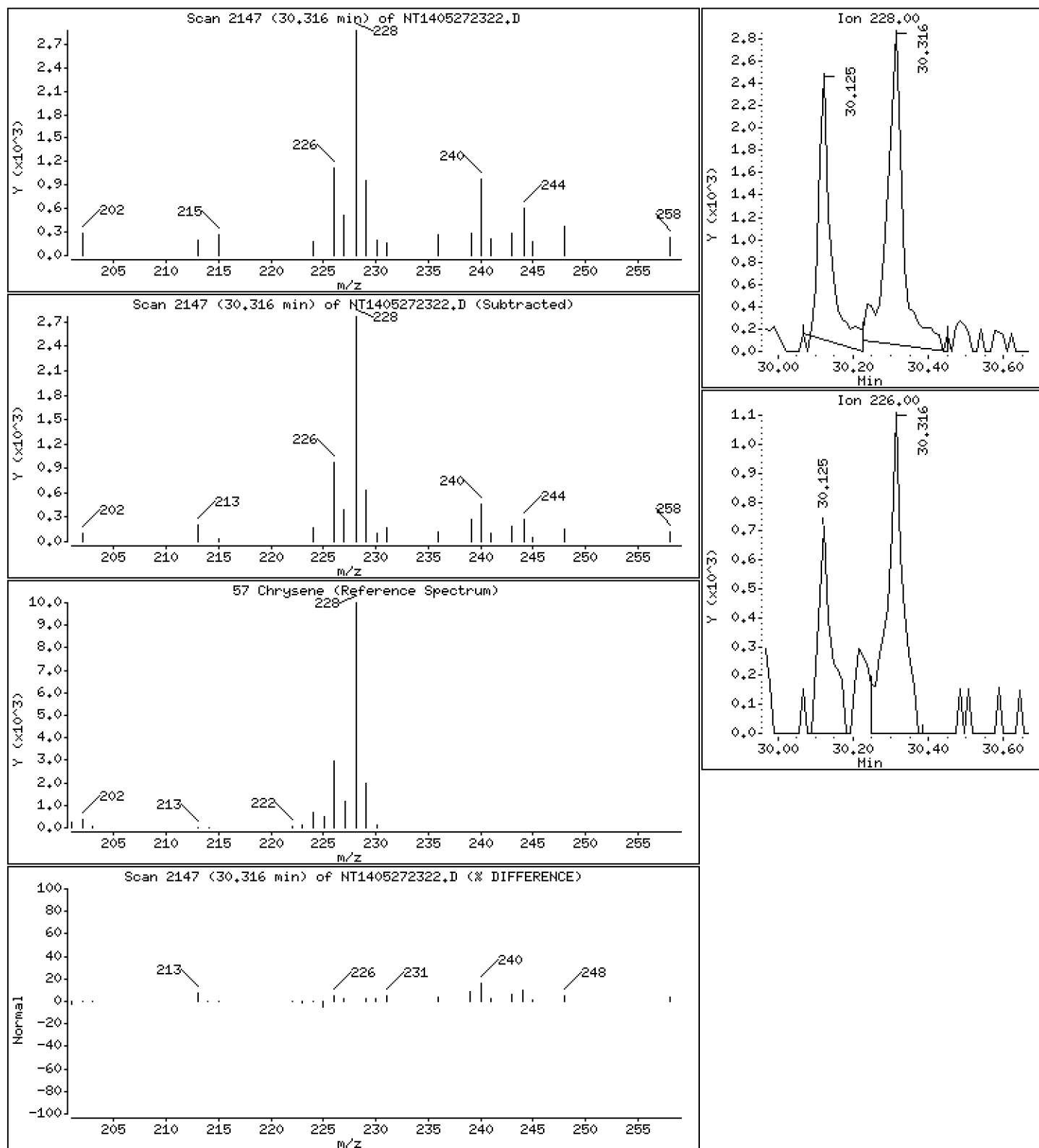
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

57 Chrysene

Concentration: 0.1392 ug/mL



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

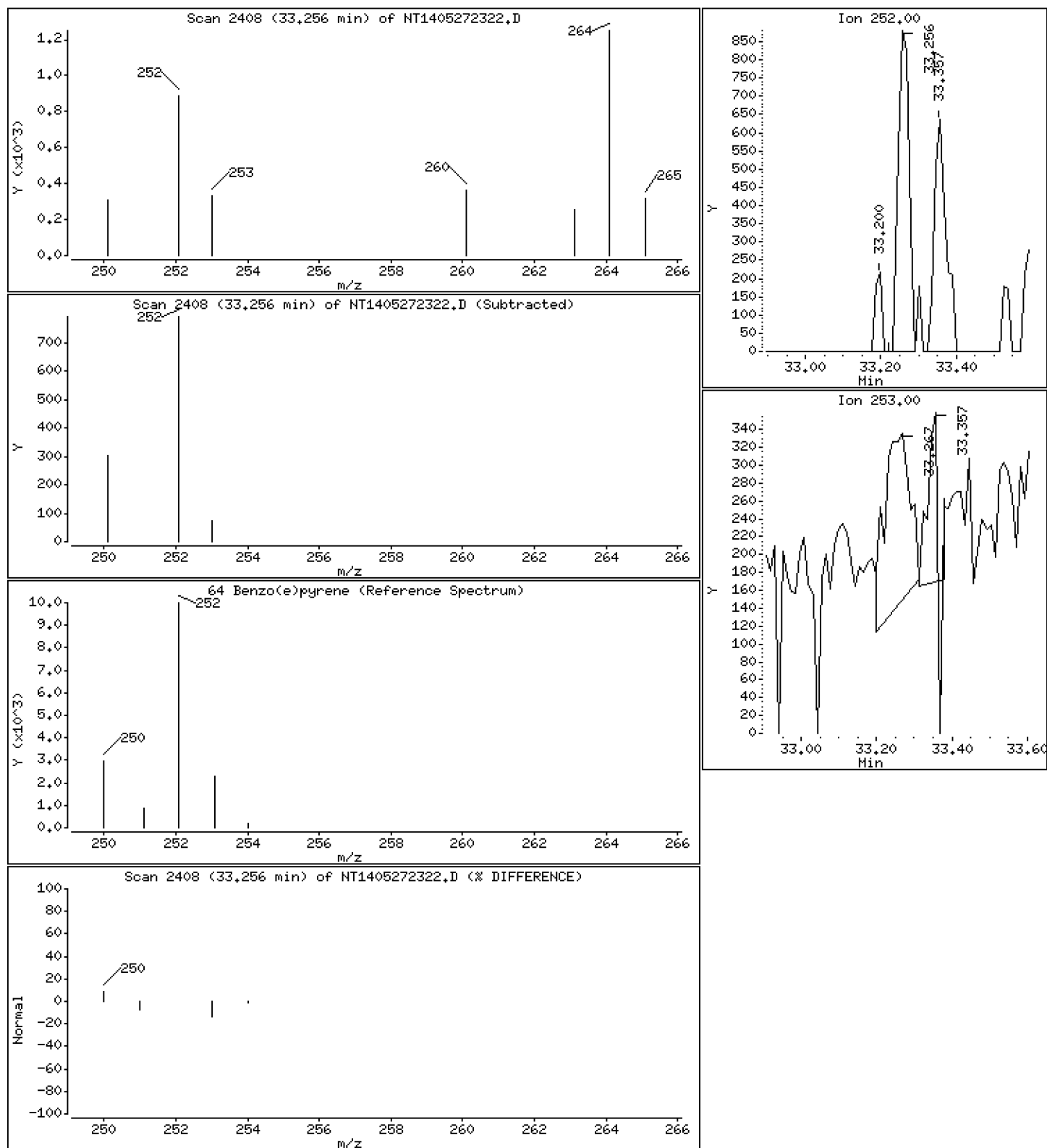
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

64 Benzo(e)pyrene

Concentration: 0.03072 ug/mL



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

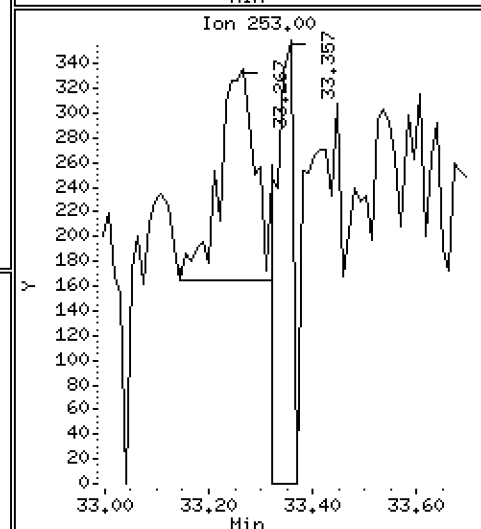
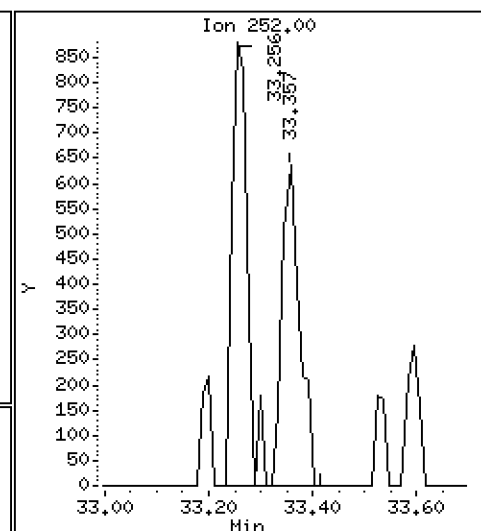
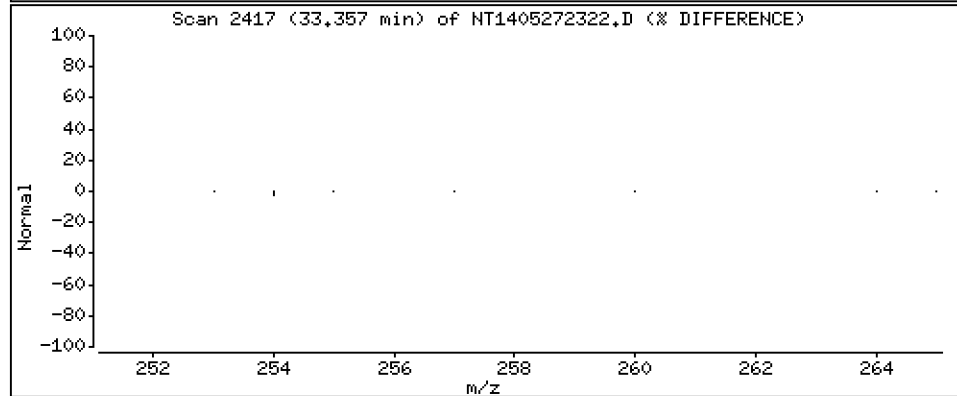
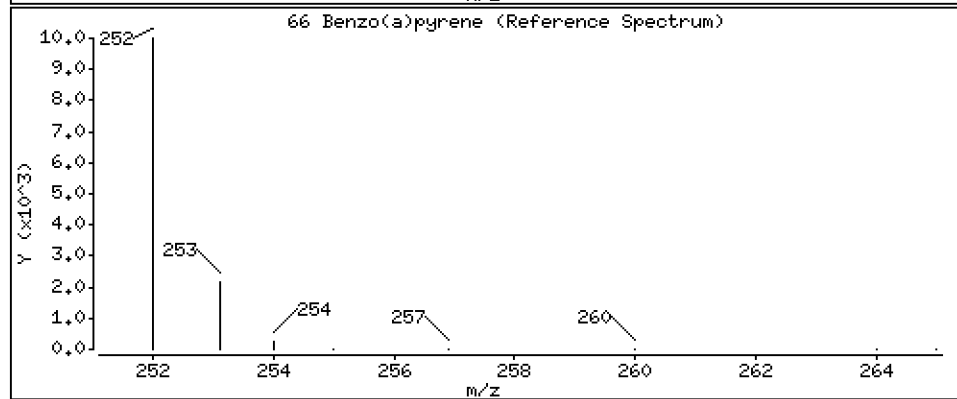
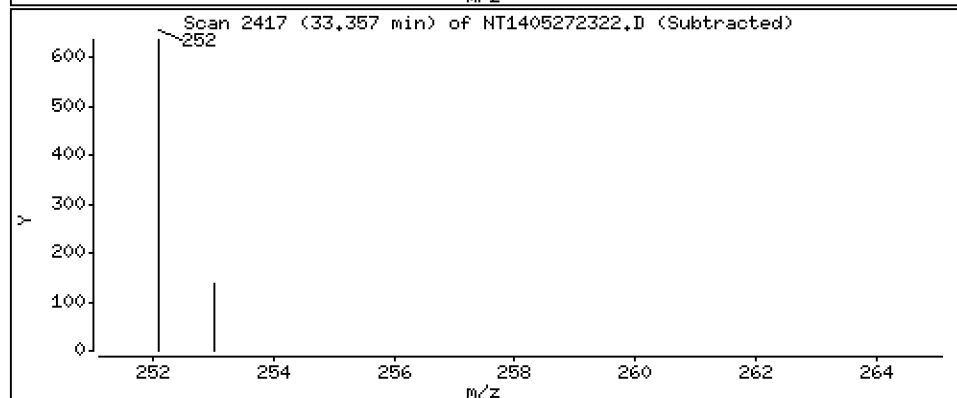
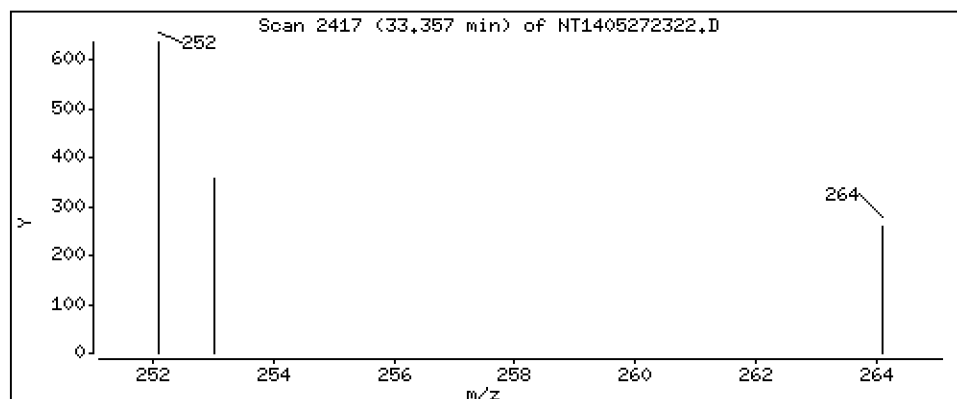
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

66 Benzo(a)pyrene

Concentration: 0.02966 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230527.b\NT1405272322.D
Lab Smp Id: 23D0457-01
Inj Date : 28-MAY-2023 03:09
Operator : VTS
Smp Info : 23D0457-01
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230527.b\ALKYLPNA.m
Meth Date : 30-May-2023 16:47 deenayd Quant Type: ISTD
Cal Date : 05-MAY-2023 15:12 Cal File: NT1423050507.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: DEENAY-201905

Inst ID: nt14.i

Compound Sublist: TARGETS.sub

						CONCENTRATIONS		
		QUANT	SIG				ON-COLUMN	FINAL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
=====		====	====	=====	=====	=====	=====	=====
1 trans-Decalin		138	7.203	7.203	(0.380)	39074	3.36115	3.361
2 cis-Decalin		138	Compound Not Detected.					
\$ 6 Naphthalene-d8		136	11.950	11.939	(0.630)	189489	1.74754	1.748 (R)
7 Naphthalene		128	Compound Not Detected.					
12 Benzo(b)thiophene		134	Compound Not Detected.					
16 2-Methylnaphthalene		141	Compound Not Detected.					
17 1-methylnaphthalene		141	14.320	14.297	(0.755)	24498	0.41301	0.4130
18 Biphenyl		154	Compound Not Detected.					
19 2,6-Dimethylnaphthalene		156	15.572	15.561	(0.821)	272394	4.69629	4.696 (M)
20 Acenaphthylene		152	Compound Not Detected.					
\$ 21 Acenaphthene-d10		164	17.430	17.419	(0.919)	100392	2.08915	2.089 (R)
22 Acenaphthene		153	17.540	17.528	(0.925)	112197	1.87692	1.877 (M)
23 Dibenzofuran		168	17.924	17.913	(0.945)	10664	0.13628	0.1363 (M)
24 1,6,7-Trimethylnaphthalene		170	18.133	18.133	(0.956)	177489	3.43317	3.433
* 25 Fluorene-d10		176	18.962	18.950	(1.000)	108523	2.00000	
26 Fluorene		166	19.064	19.064	(1.005)	91970	1.46686	1.467
30 Dibenzothiophene		184	Compound Not Detected.					
\$ 35 Phenanthrene-d10		188	22.294	22.294	(0.995)	172893	2.23085	2.231 (R)
36 Phenanthrene		178	22.376	22.375	(0.998)	12348	0.13662	0.1366
* 250 Anthracene-d10		188	22.410	22.410	(1.000)	135817	2.00000	
37 Anthracene		178	22.480	22.468	(1.003)	9526	0.11482	0.1148
42 Carbazole		167	Compound Not Detected.					
43 1-Methylphenanthrene		192	24.207	24.207	(1.080)	42718	0.73290	0.7329
44 Fluoranthene		202	26.189	26.177	(1.169)	11253	0.13655	0.1365
46 Pyrene		202	27.023	27.023	(1.206)	23528	0.27281	0.2728
51 Naphthobenzothiophene		234	29.540	29.529	(1.318)	2145	0.03771	0.03771
55 Benzo(a)anthracene		228	30.124	30.113	(0.907)	5384	0.08524	0.08524
\$ 56 Chrysene-d12		240	30.248	30.237	(0.911)	110600	2.53016	2.530 (R)
57 Chrysene		228	30.316	30.316	(0.913)	8602	0.13924	0.1392
62 Benzo(b)fluoranthene		252	Compound Not Detected.					
63 Benzo(k)fluoranthene		252	Compound Not Detected.					
293 Benzo(j)fluoranthene		252	Compound Not Detected.					
246 Total Benzofluoranthenes		252	Compound Not Detected.					

Compounds	QUANT SIG							CONCENTRATIONS	
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
=====	=====	=====	=====	=====	=====	=====	=====	=====	
* 251 Benzo(e)pyrene-d12	264	33.199	33.188	(1.000)		80570	2.00000		
64 Benzo(e)pyrene	252	33.255	33.244	(1.002)		1751	0.03072	0.03072	
66 Benzo(a)pyrene	252	33.357	33.345	(1.005)		1430	0.02966	0.02966	
\$ 67 Perylene-d12	264	33.537	33.526	(1.010)		71748	1.70140	1.701(R)	
68 Perylene	252	Compound Not Detected.							
69 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.							
70 Dibenzo(a,h)anthracene	278	Compound Not Detected.							
74 Benzo(g,h,i)perylene	276	Compound Not Detected.							

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
 M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 27-MAY-2023
 Lab File ID: NT1405272322.D Calibration Time: 13:31
 Lab Smp Id: 23D0457-01
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230527.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	136933	68467	273866	108523	-20.75
250 Anthracene-d10	167500	83750	335000	135817	-18.92
251 Benzo(e)pyrene-d1	94374	47187	188748	80570	-14.63

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	18.95	18.45	19.45	18.96	0.06
250 Anthracene-d10	22.41	21.91	22.91	22.41	0.00
251 Benzo(e)pyrene-d1	33.19	32.69	33.69	33.20	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 - NT1405272322.D

Lab ID: 23D0457-01

nt14.i, 20230527.b\ALKYLPNA.m, 28-MAY-2023 03:09

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1405272305.D

On Column LOD for nt14.i, 20230527.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

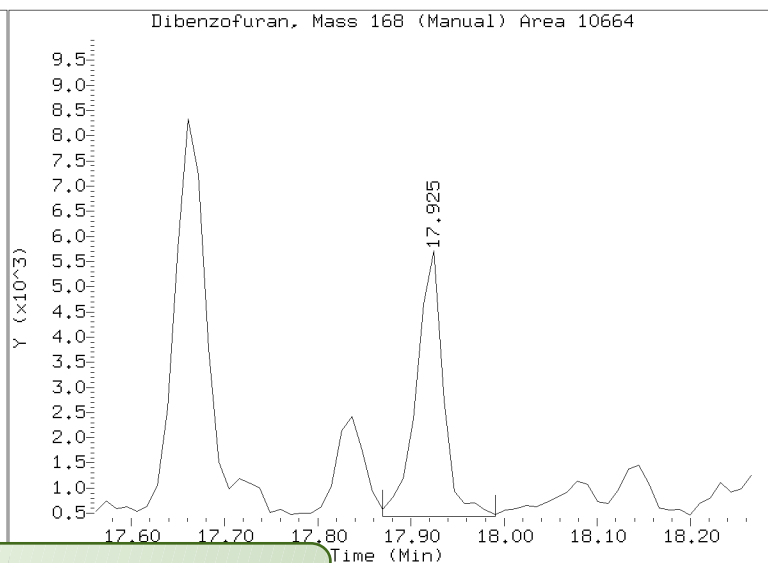
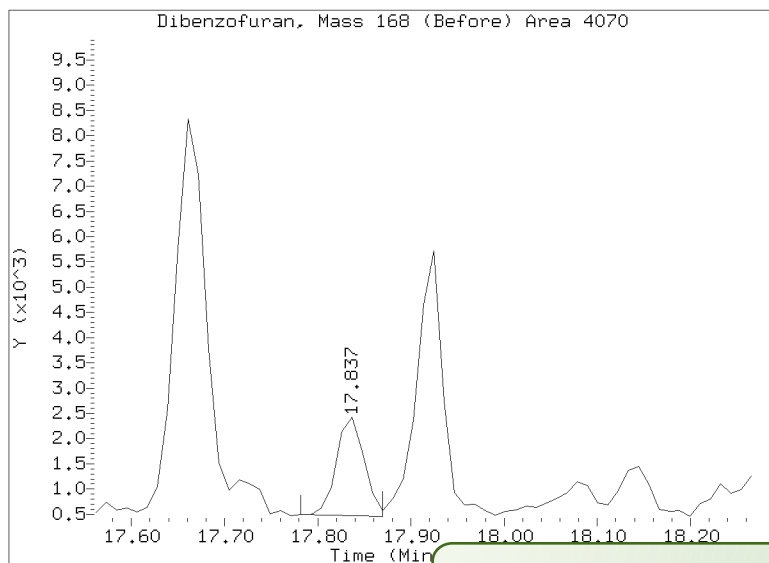
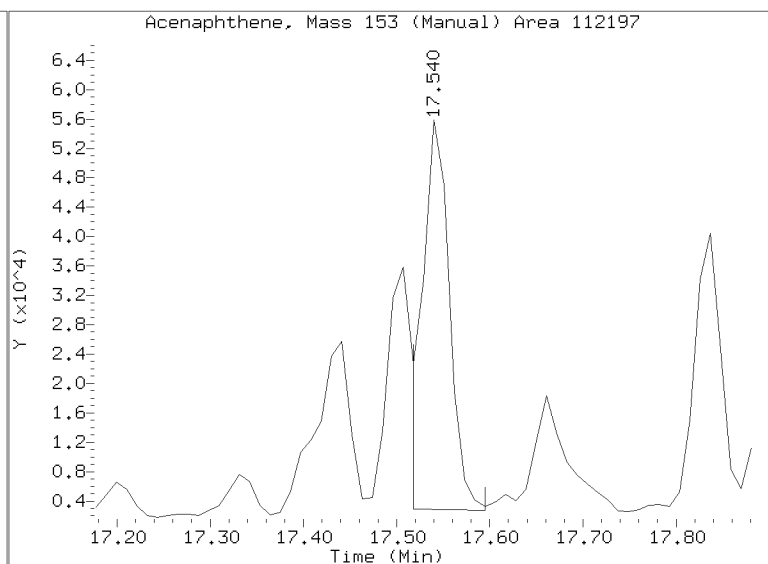
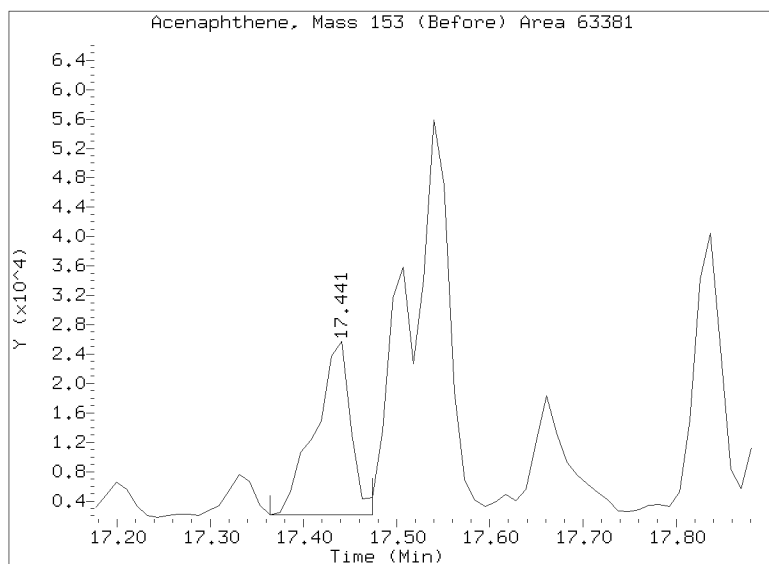
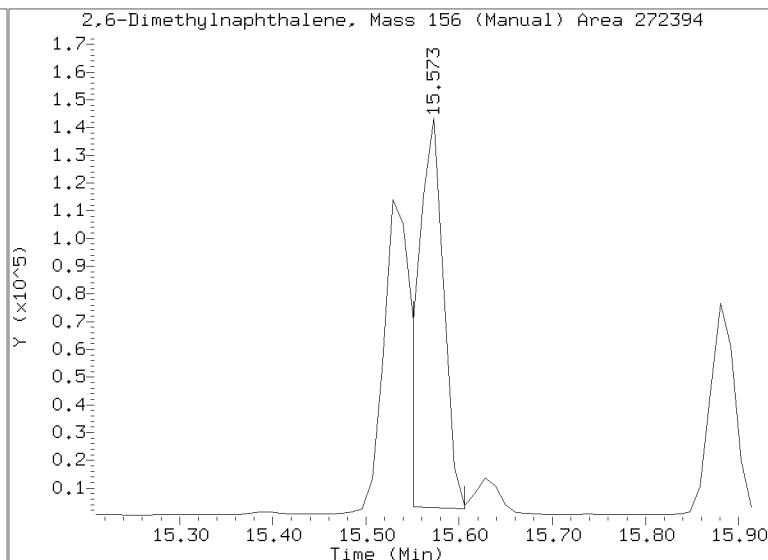
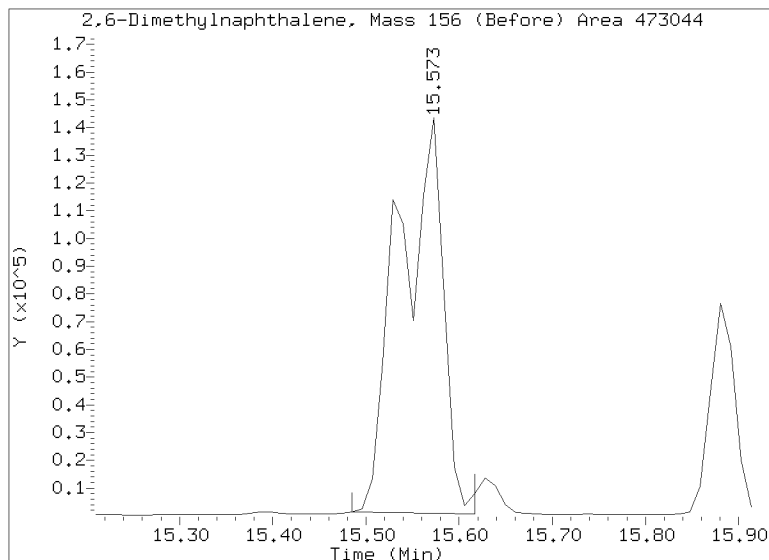
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230527.b/NT1405272322.D

Injection Date: 28-MAY-2023 03:09

Lab ID:23D0457-01 Client ID:

Report Date: 05/30/2023 16:49



APPROVED

By Deenay Dunmore at 5:02 pm, May 30, 2023



ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

Alkyl PAH Ranges

Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Matrix: Oil

Laboratory ID: 23D0457-01 A

SDG: 23D0457

Sampled: 04/17/23 09:30

Prepared: 04/26/23 12:22

File ID: NT1405272322S.D

% Solids:

Preparation: EPA 3580A (Waste Dilution)

Analyzed: 05/28/23 03:09

Batch: BLD0616

Sequence: SLF0314

Initial/Final: 1 g / 100 mL

Instrument: NT14

Column: ZB-5MS

Calibration: GE00043

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	(ug/kg)	Q	DL	RL
C1DEC	C1-Decalins	1	1010000			2000
C2DEC	C2-Decalins	1	2540000	B		2000
C3DEC	C3-Decalins	1	1540000	B		2000
C4DEC	C4-Decalins	1	1270000			2000
C1NAPH	C1-Naphthalenes	1	21200			2000
C2NAPH	C2-Naphthalenes	1	1090000			2000
C3NAPH	C3-Naphthalenes	1	1240000			2000
C4NAPH	C4-Naphthalenes	1	649000			2000
C1FLR	C1-Fluorenes	1	268000			2000
C2FLR	C2-Fluorenes	1	292000			2000
C3FLR	C3-Fluorenes	1	188000			2000
C1DBTPH	C1-Dibenzothiophenes	1	99200			2000
C2DBTPH	C2-Dibenzothiophenes	1	128000			2000
C3DBTPH	C3-Dibenzothiophenes	1	76900			2000
C4DBTPH	C4-Dibenzothiophenes	1	13400			2000
C1PHNANT	C1-Phenanthrenes/Anthracenes	1	163000			2000
C2PHNANT	C2-Phenanthrenes/Anthracenes	1	295000			2000
C3PHNANT	C3-Phenanthrenes/Anthracenes	1	5430			2000
C4PHNANT	C4-Phenanthrenes/Anthracenes	1	2330			2000
C1FLPYR	C1-Fluoranthenes/Pyrenes	1	4700			2000
C2FLPYR	C2-Fluoranthenes/Pyrenes	1	1330	J		2000
C3FLPYR	C3-Fluoranthenes/Pyrenes	1	1250	J		2000
C4FLPYR	C4-Fluoranthenes/Pyrenes	1	2220			2000
C1BAACYR	C1-Benzo(a)anthracenes/Chrysenes	1	2890			2000
C2BAACYR	C2-Benzo(a)anthracenes/Chrysenes	1	5570			2000
C3BAACYR	C3-Benzo(a)anthracenes/Chrysenes	1	1200	J		2000
C4BAACYR	C4-Benzo(a)anthracenes/Chrysenes	1	2000	U		2000
C1BZTPH	C1-Benzothiophenes	1	89900			2000
C2BZTPH	C2-Benzothiophenes	1	52900			2000
C3BZTPH	C3-Benzothiophenes	1	128000			2000
C1NPBTP	C1-Naphthobenzothiophenes	1	7970			2000



Form I
ORGANIC ANALYSIS DATA SHEET
EPA 8270E-SIM
Alkyl PAH Ranges

Laboratory: Analytical Resources, LLC

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Matrix: Oil

Laboratory ID: 23D0457-01 A

SDG: 23D0457

Sampled: 04/17/23 09:30

Prepared: 04/26/23 12:22

File ID: NT1405272322S.D

% Solids:

Preparation: EPA 3580A (Waste Dilution)

Analyzed: 05/28/23 03:09

Batch: BLD0616

Sequence: SLF0314

Initial/Final: 1 g / 100 mL

Instrument: NT14

Column: ZB-5MS

Calibration: GE00043

Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	(ug/kg)	Q	DL	RL
C2NPBTP	C2-Naphthobenzothiophenes	1	6540			2000
C3NPBTP	C3-Naphthobenzothiophenes	1	4310			2000
C4NPBTP	C4-Naphthobenzothiophenes	1	2000	U		2000
C1DBA	C1-Dibenzo(a,h)anthracenes	1	80.0	J		2000
C2DBA	C2-Dibenzo(a,h)anthracenes	1	30.0	J		2000
C3DBA	C3-Dibenzo(a,h)anthracenes	1	2000	U		2000

Data File: \\target\share\chem3\nt14.i\20230527.b\20230527.b\NT14052723225.D

Page 1

Date : 28-May-2023 03:09

Client ID:

Instrument: nt14.i

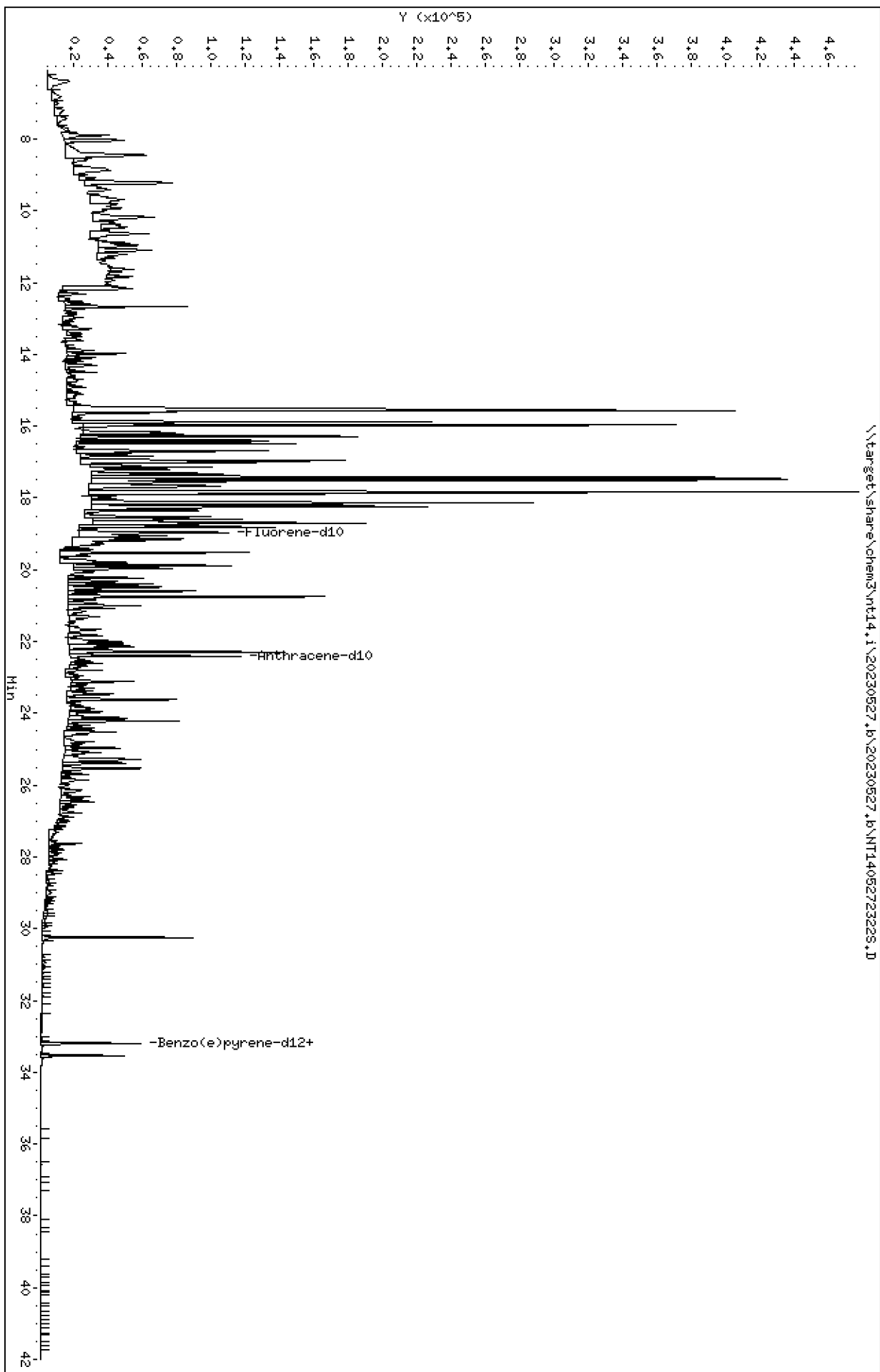
Sample Info: 23D0457-01

Volume Injected (uL): 1.0

Operator: VTS

Column Phase: Rxi-17S11 MS

Column diameter: 0.25



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

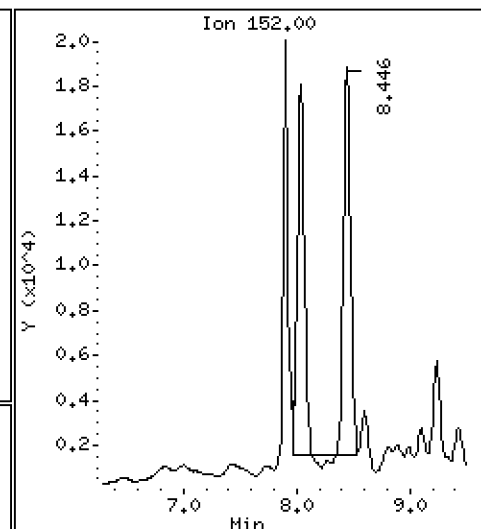
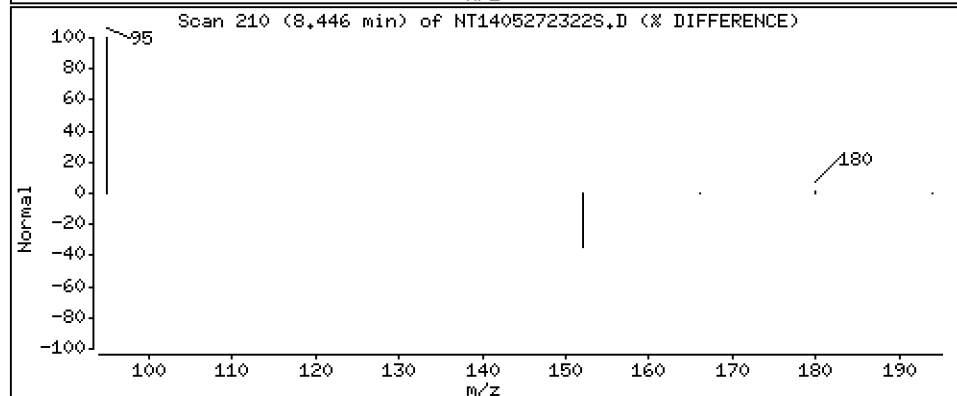
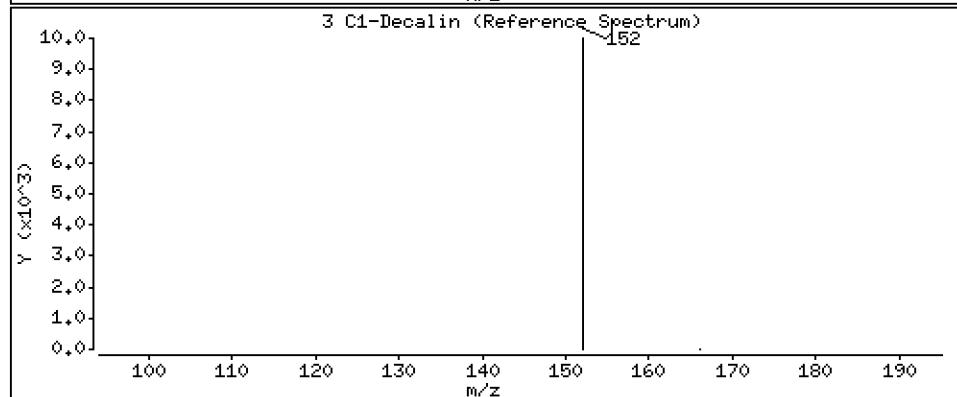
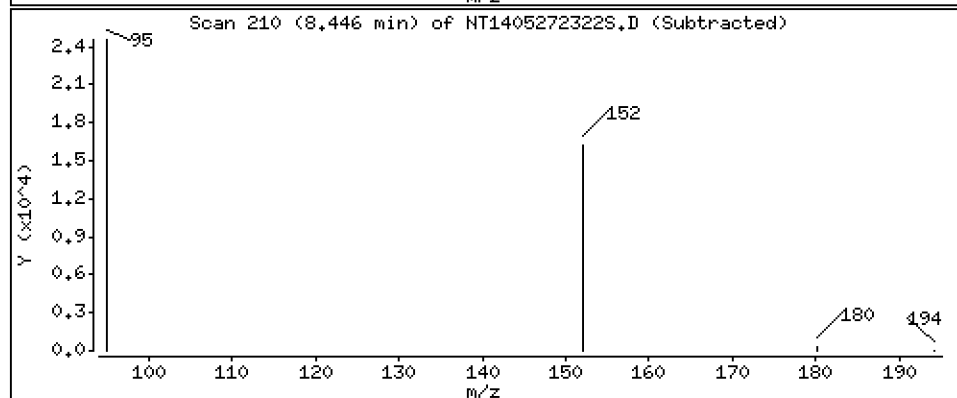
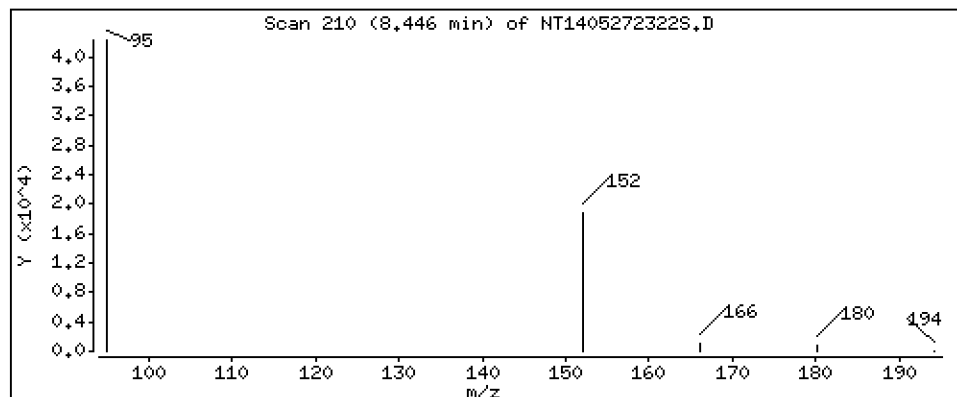
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

3 C1-Decalin

Concentration: 10.12 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

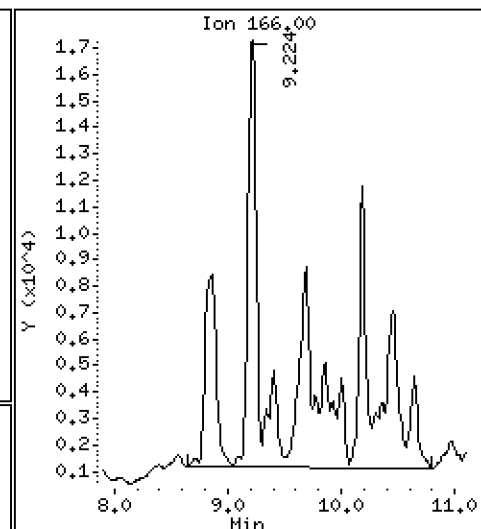
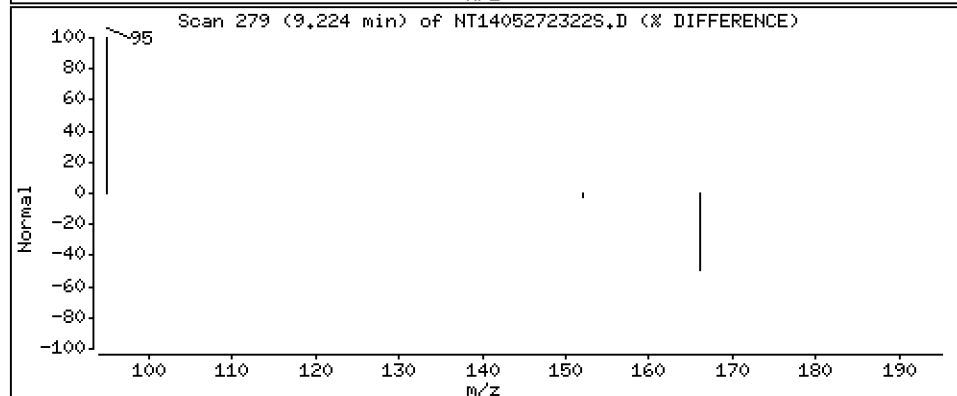
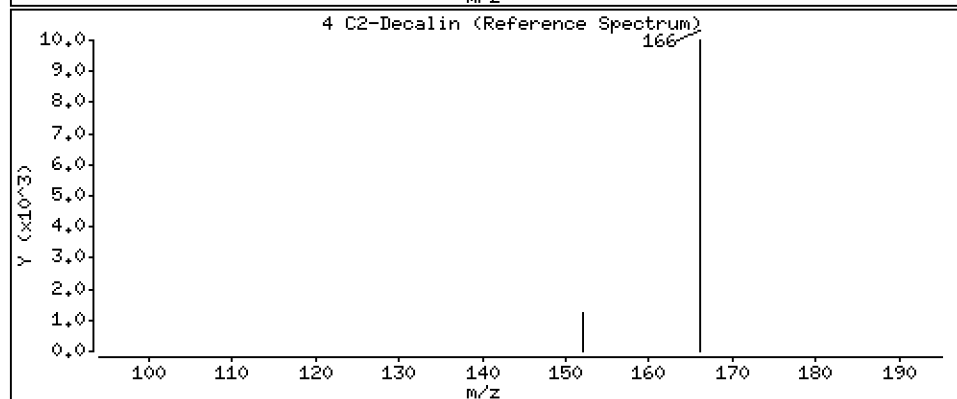
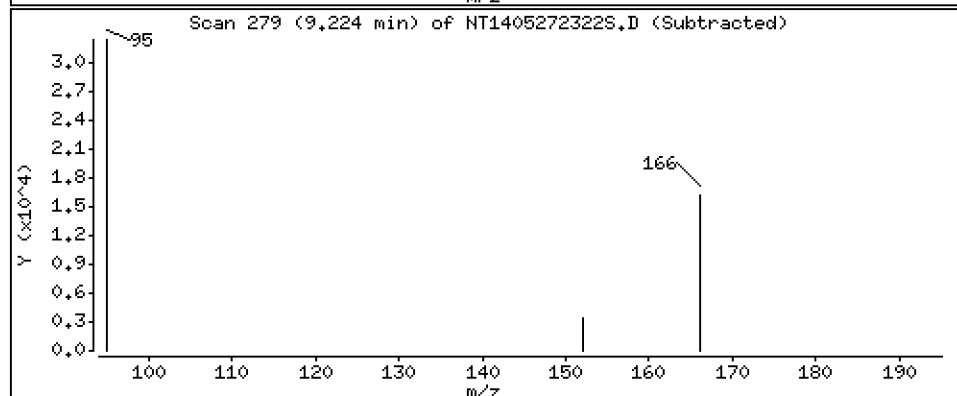
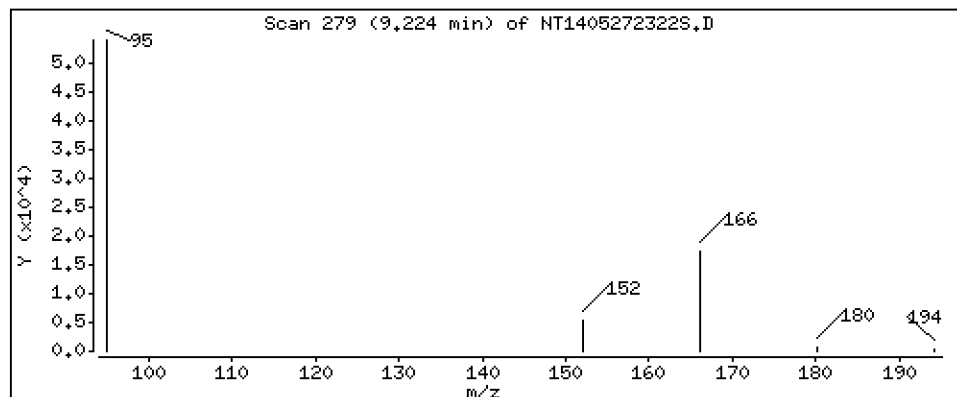
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

4 C2-Decalin

Concentration: 25.44 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

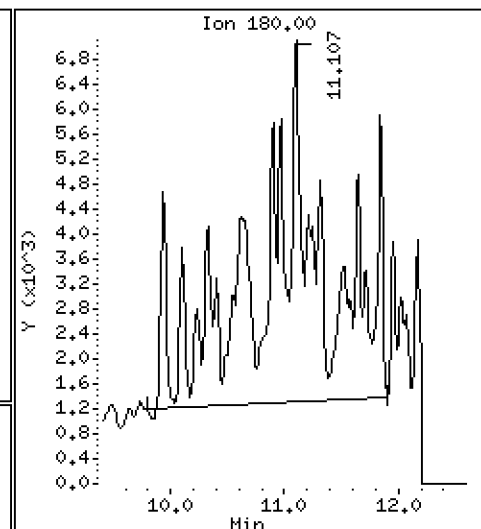
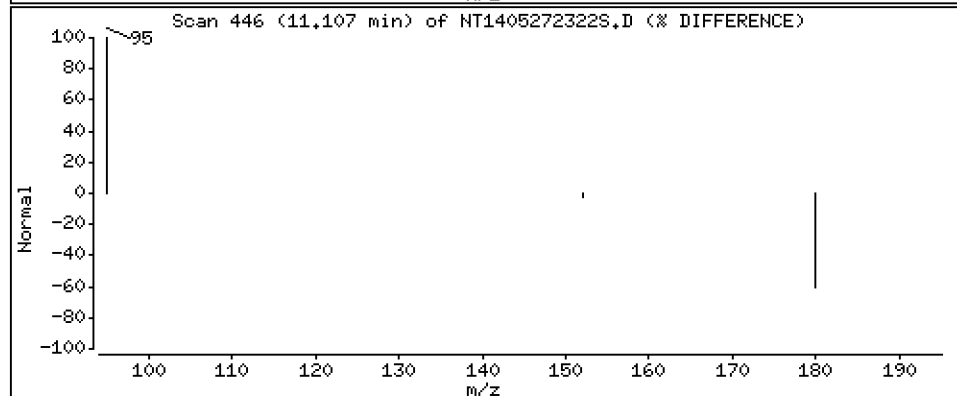
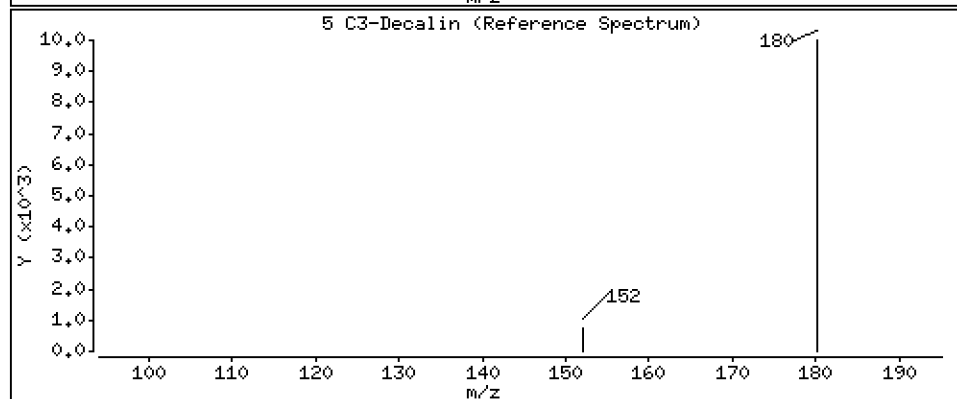
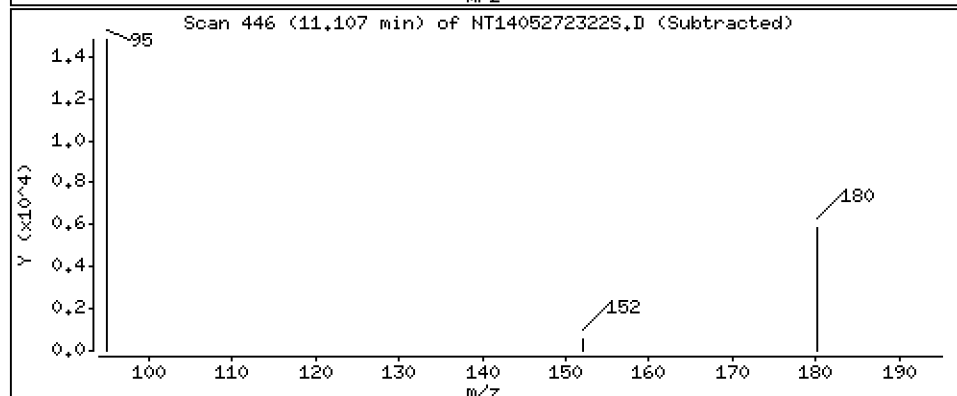
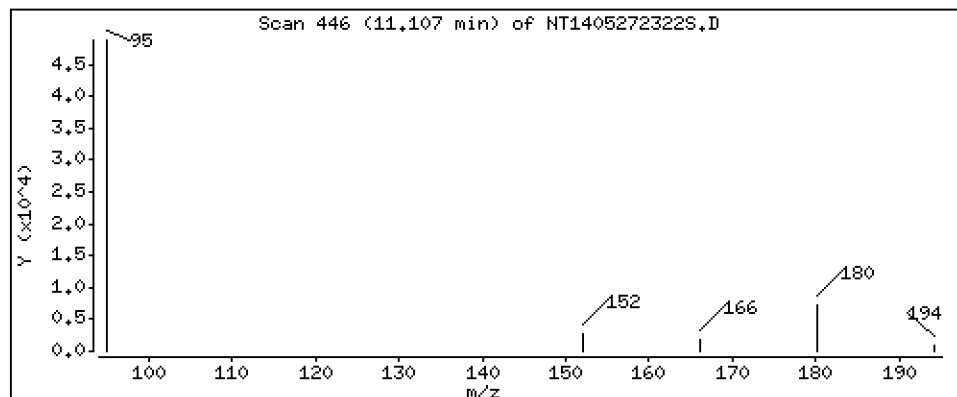
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

5 C3-Decalin

Concentration: 15.43 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

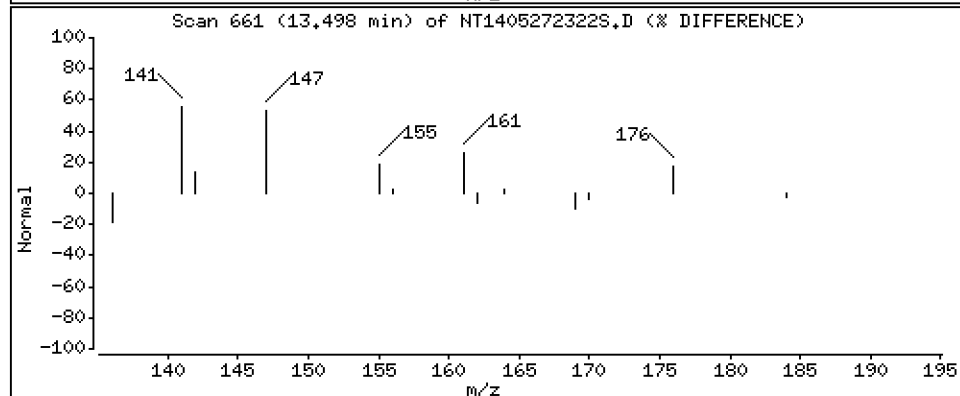
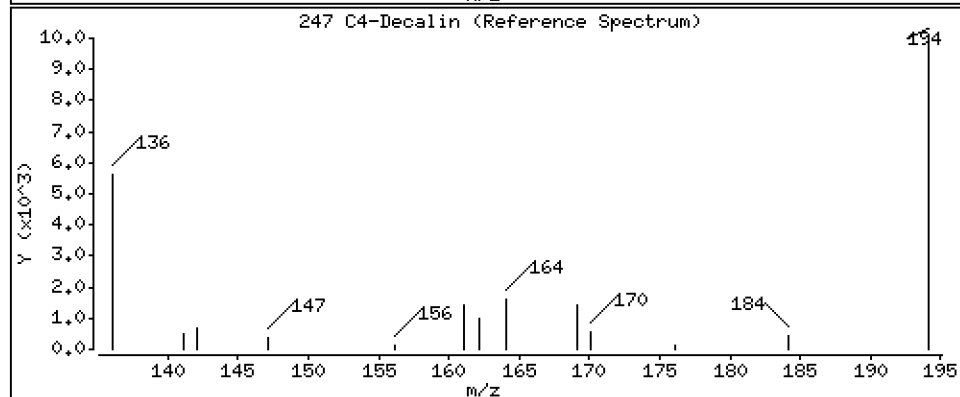
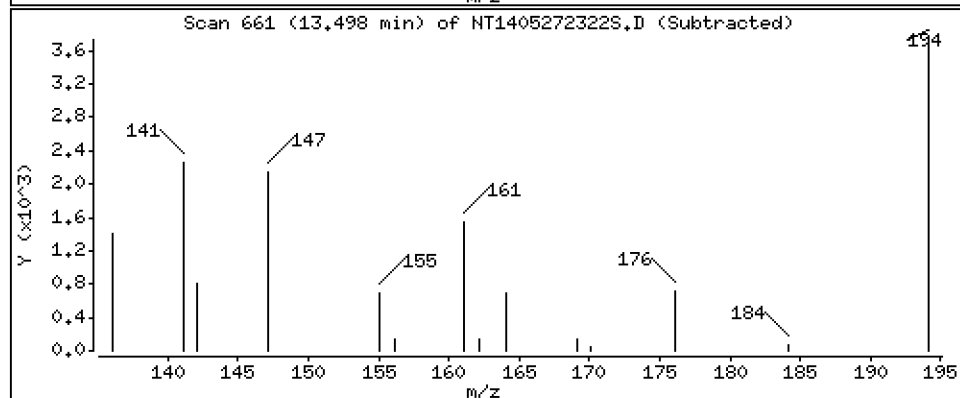
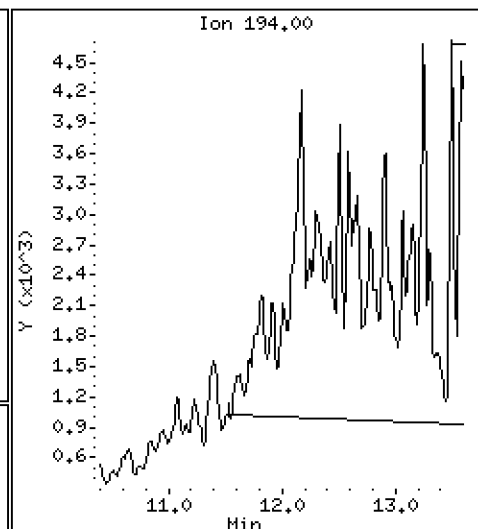
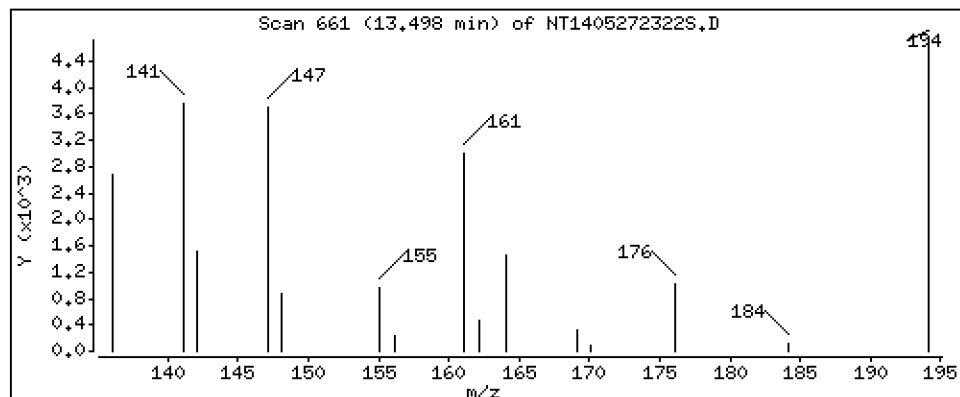
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

247 C4-Decalin

Concentration: 12.68 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

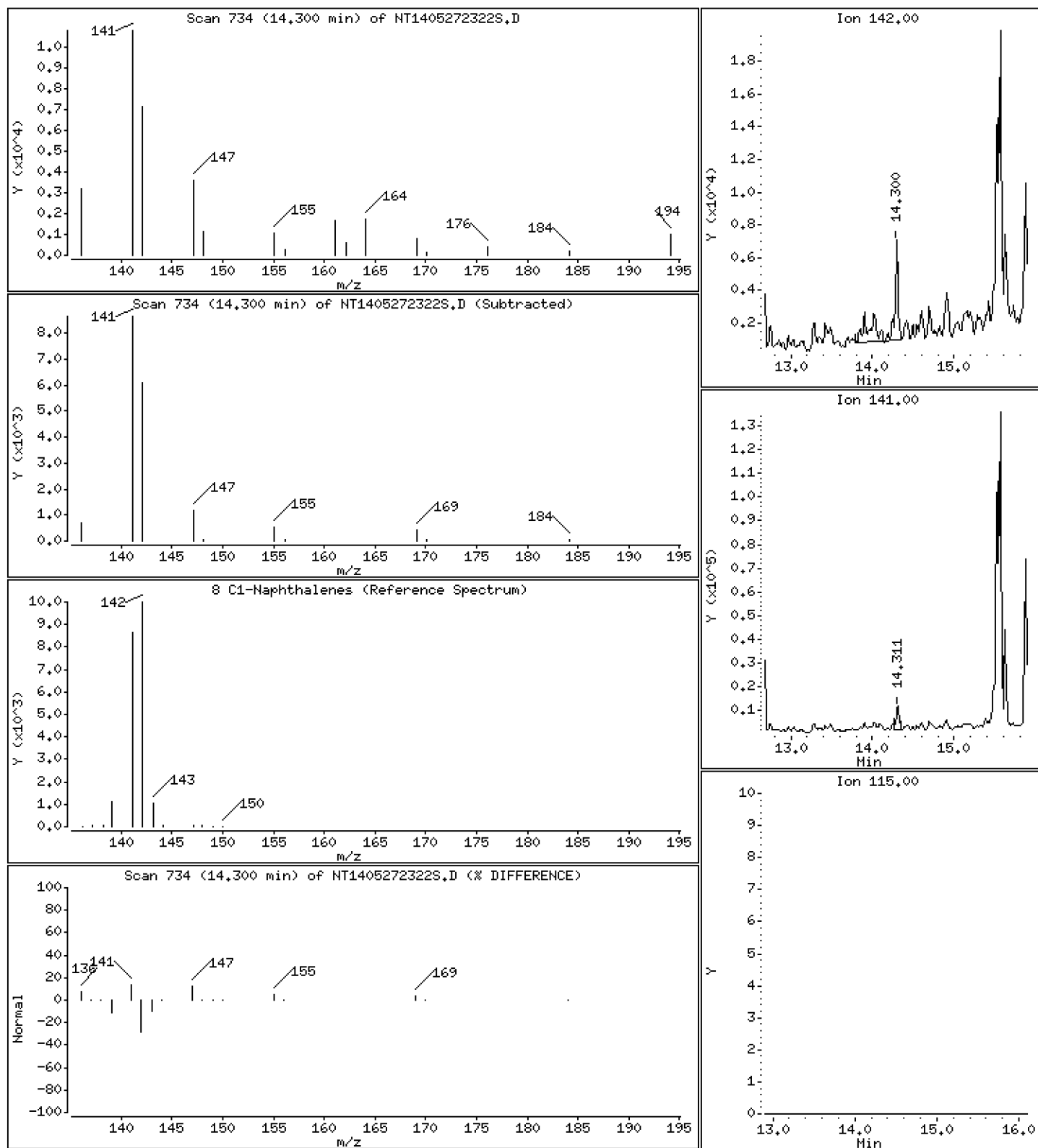
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

8 C1-Naphthalenes

Concentration: 0.2124 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

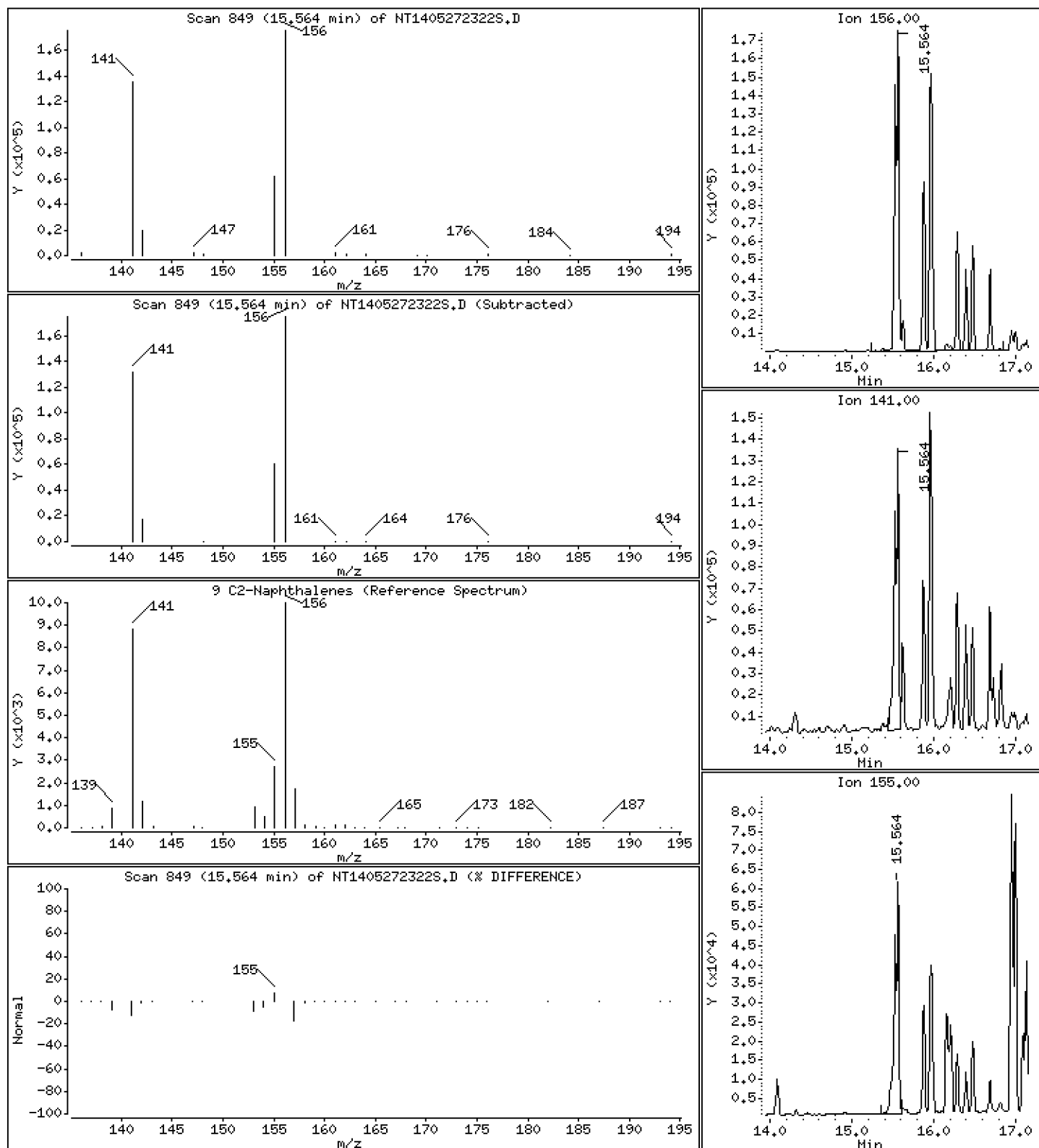
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

9 C2-Naphthalenes

Concentration: 10.87 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

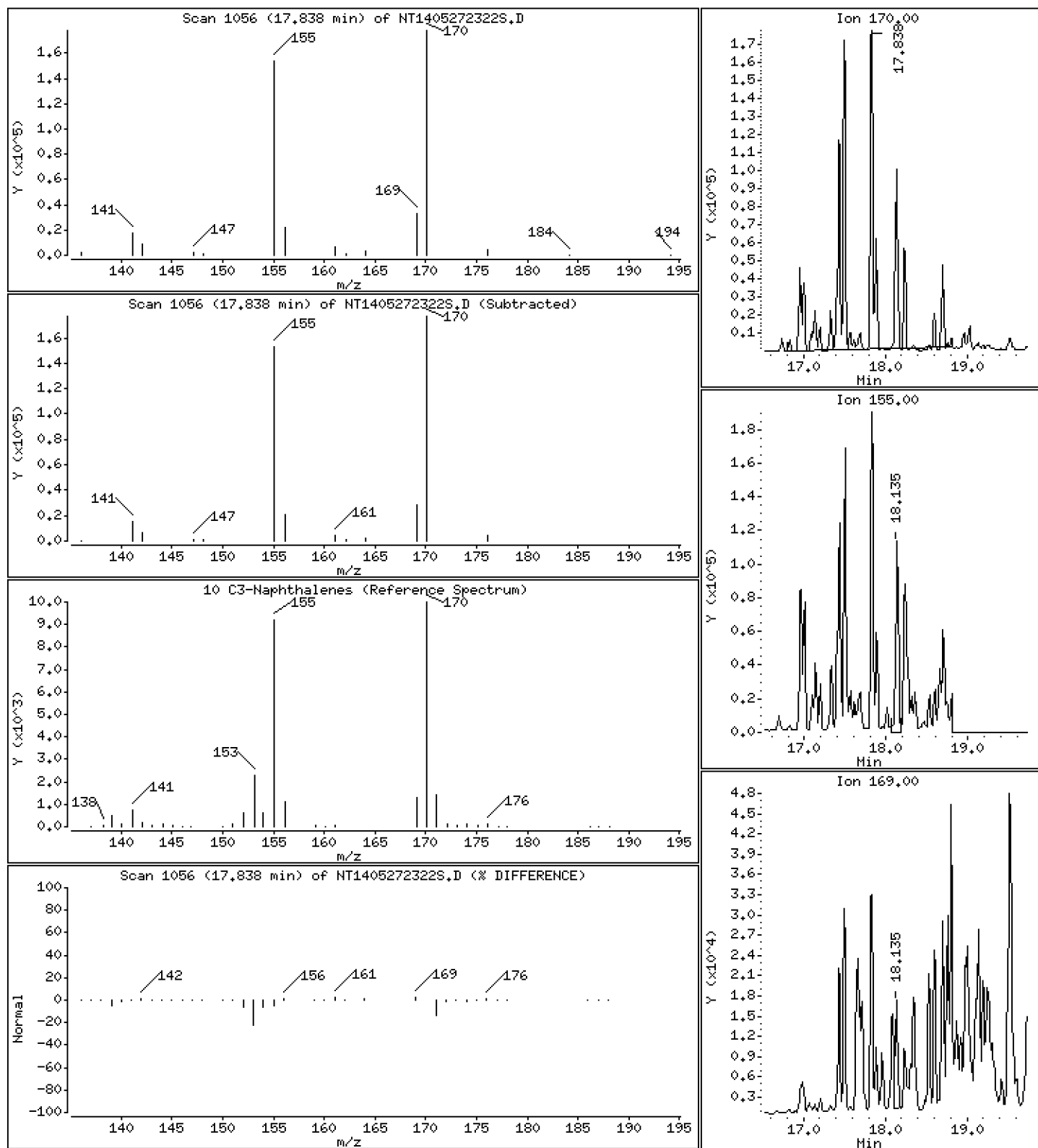
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

10 C3-Naphthalenes

Concentration: 12.38 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

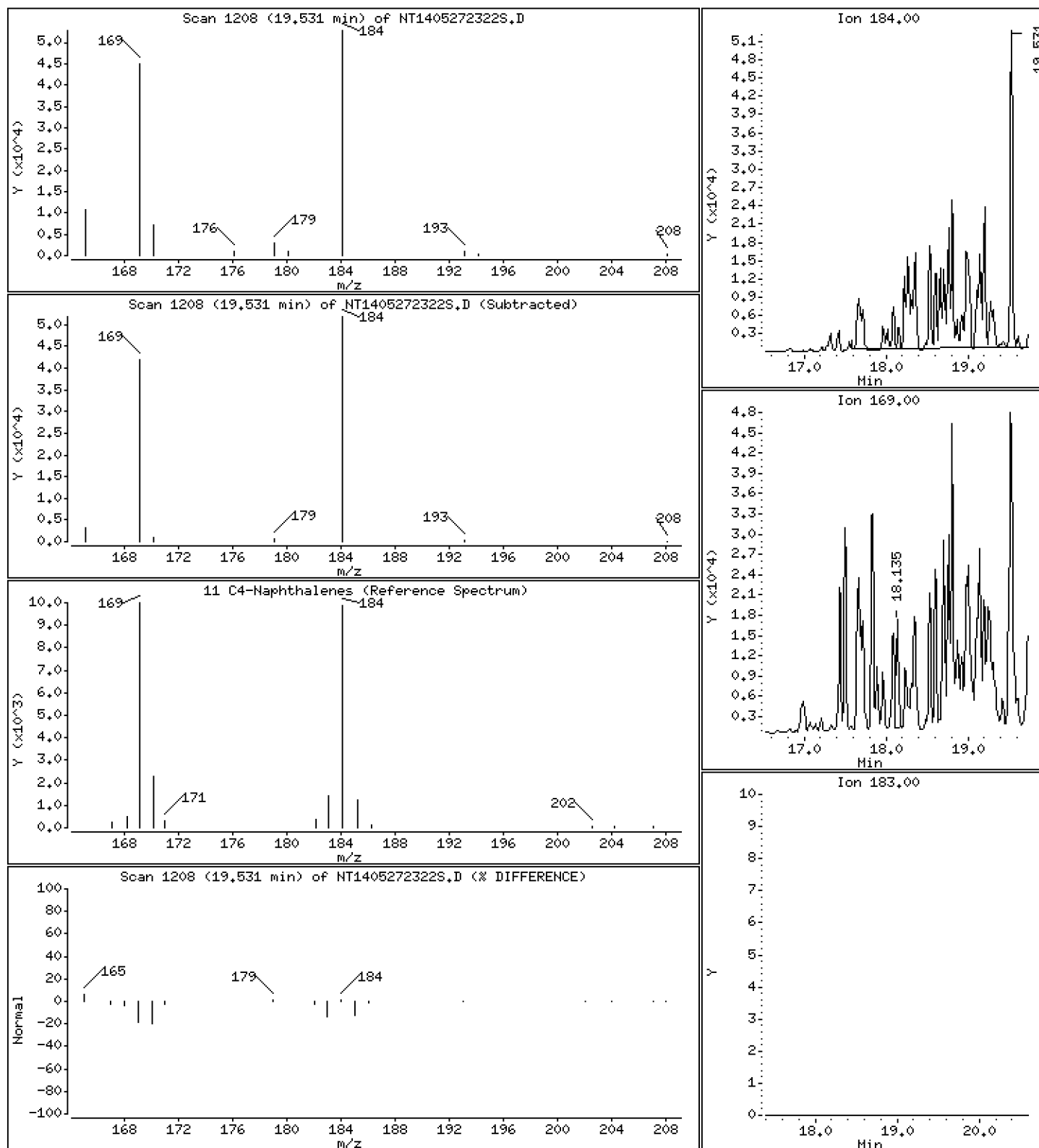
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

11 C4-Naphthalenes

Concentration: 6.485 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

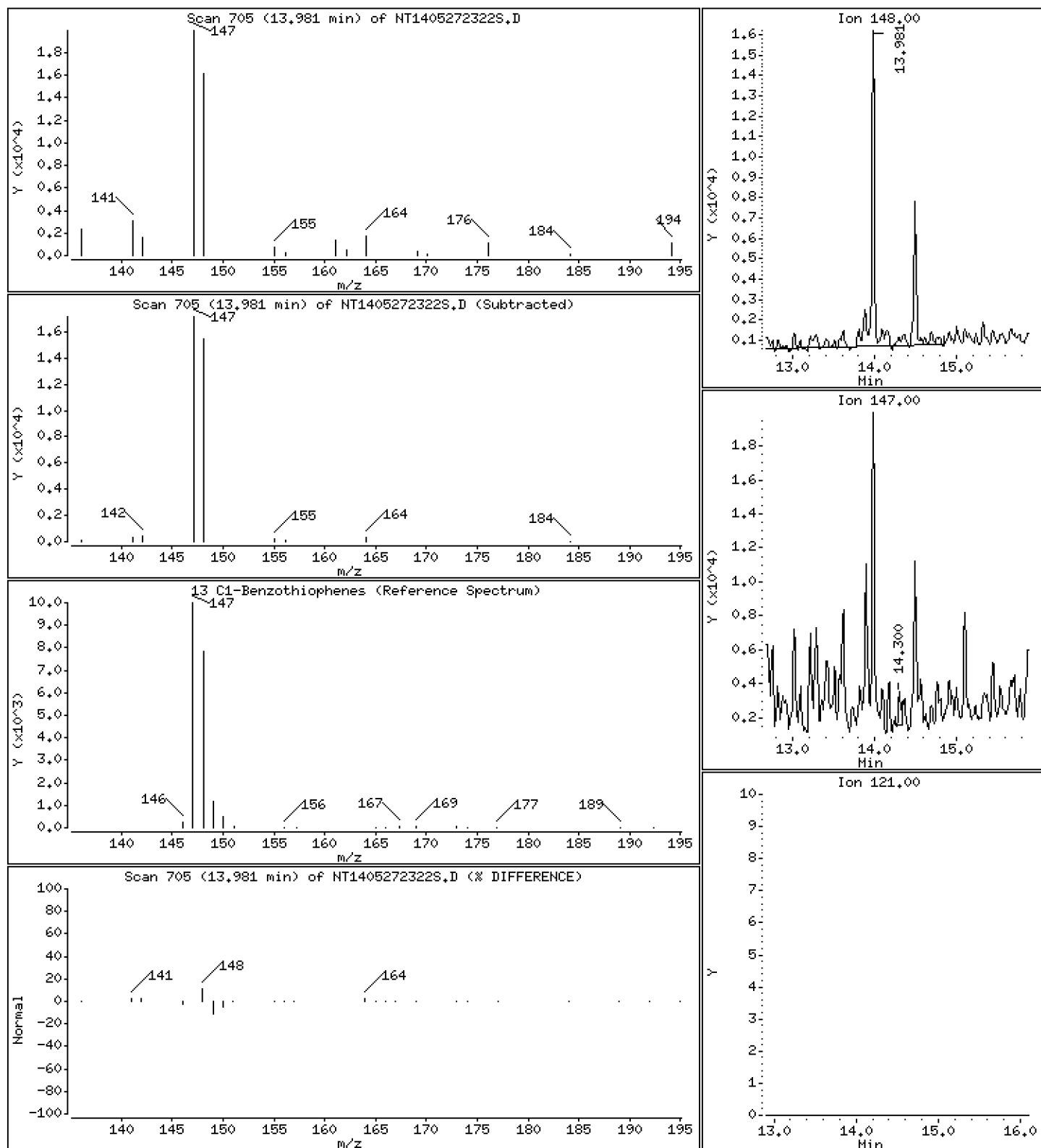
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

13 C1-Benzothiophenes

Concentration: 0.8990 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

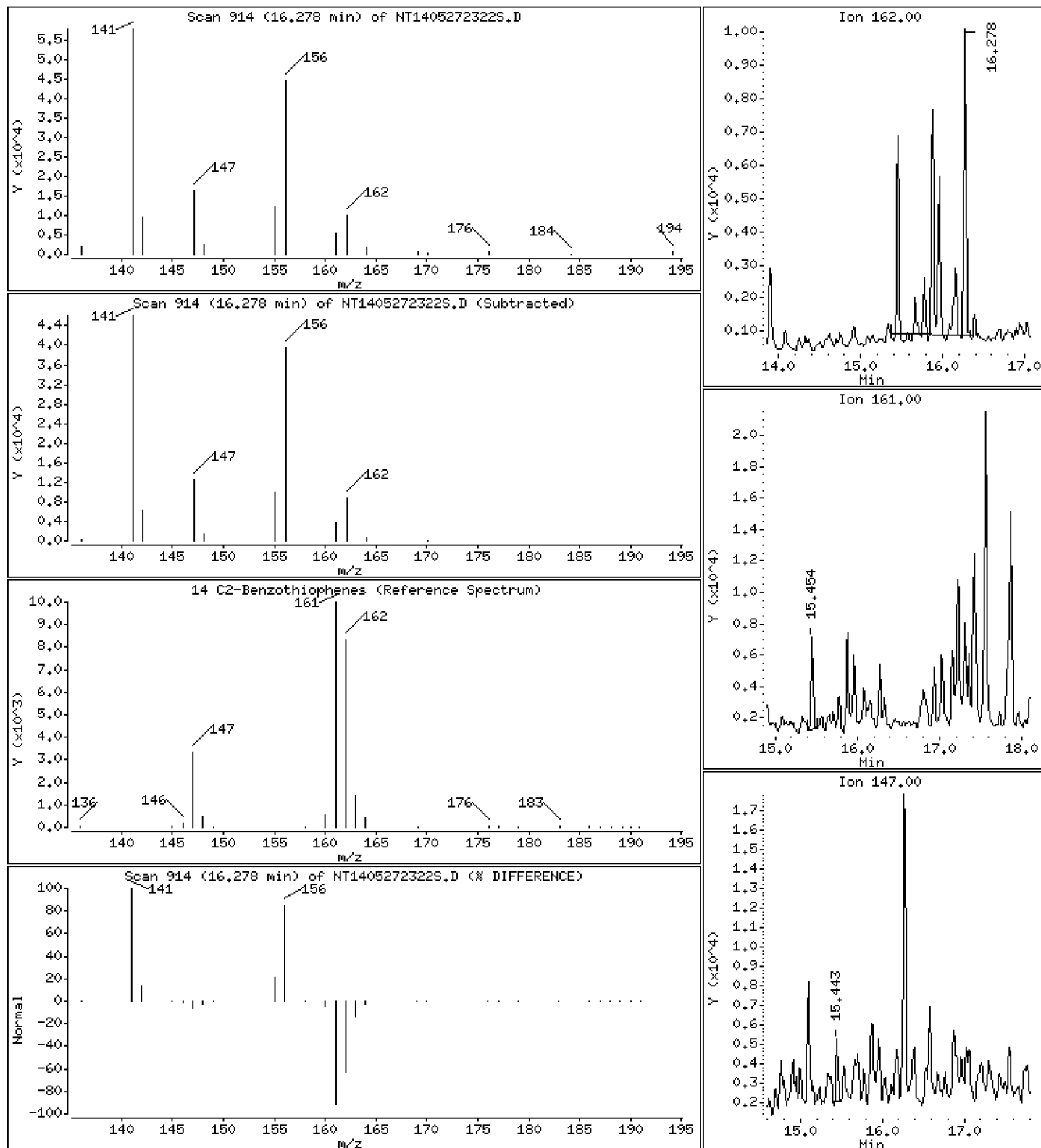
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

14 C2-Benzothiophenes

Concentration: 0.5292 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

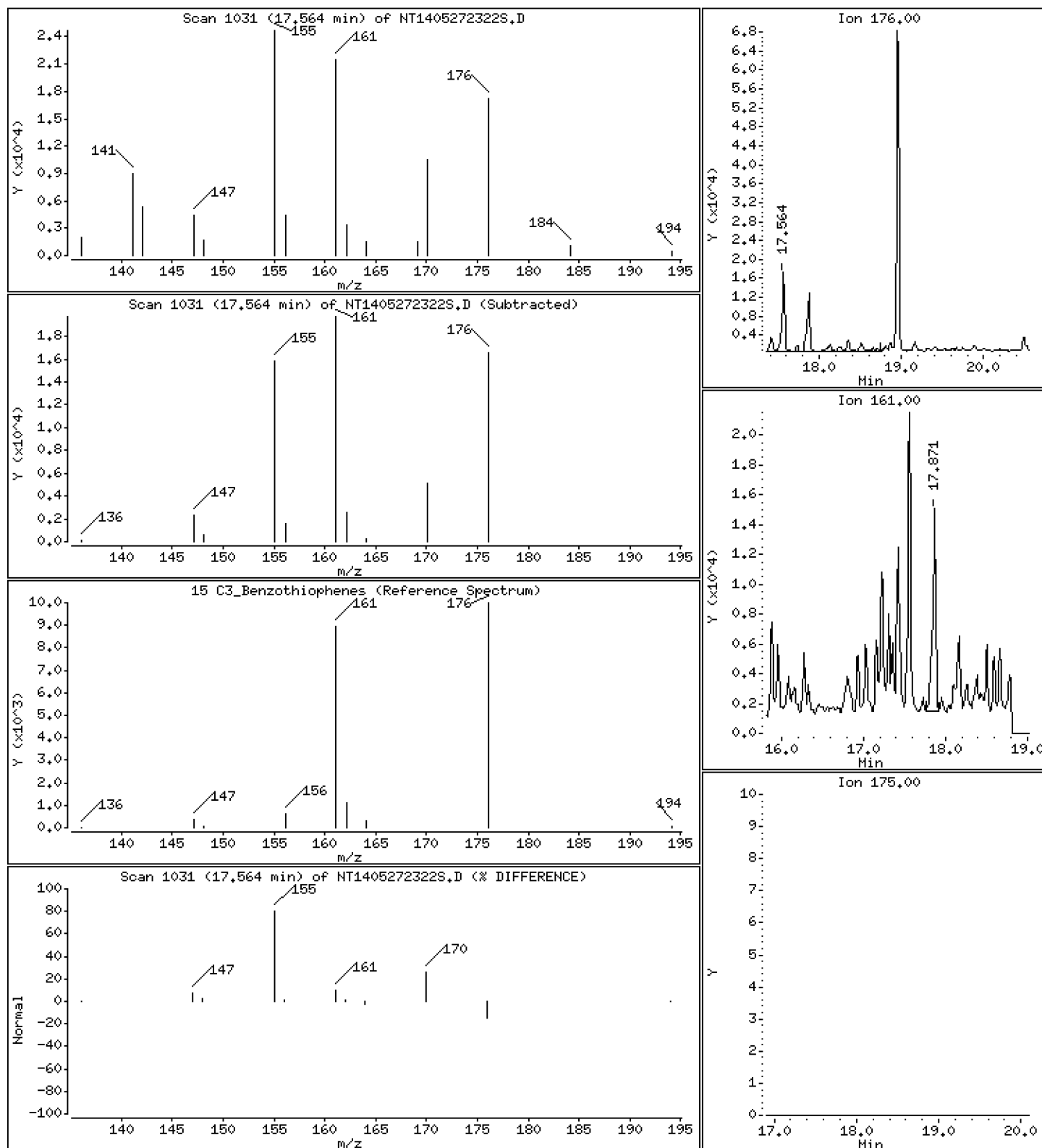
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

15 C3-Benzothiophenes

Concentration: 1.280 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

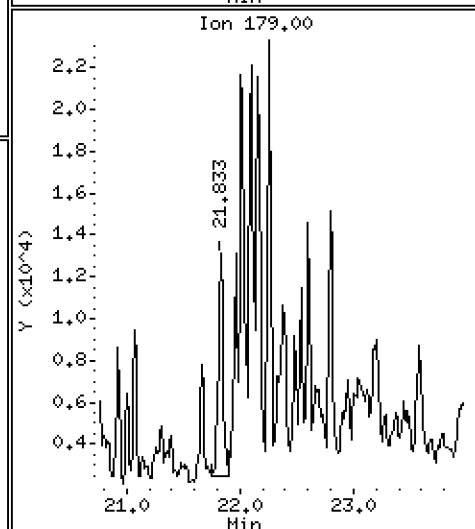
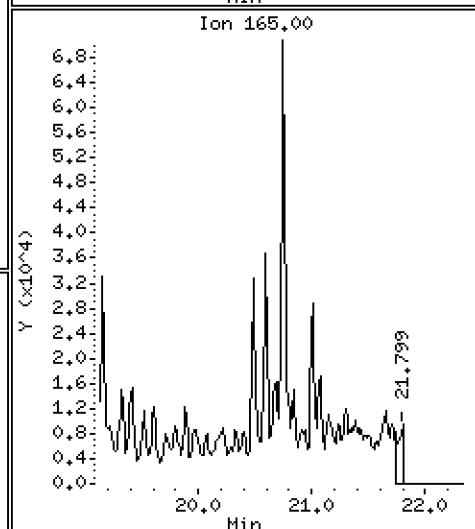
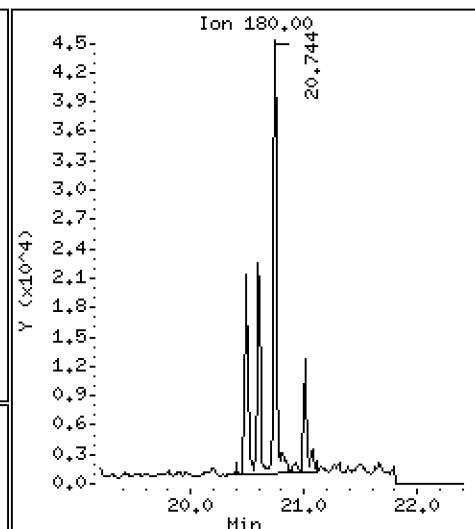
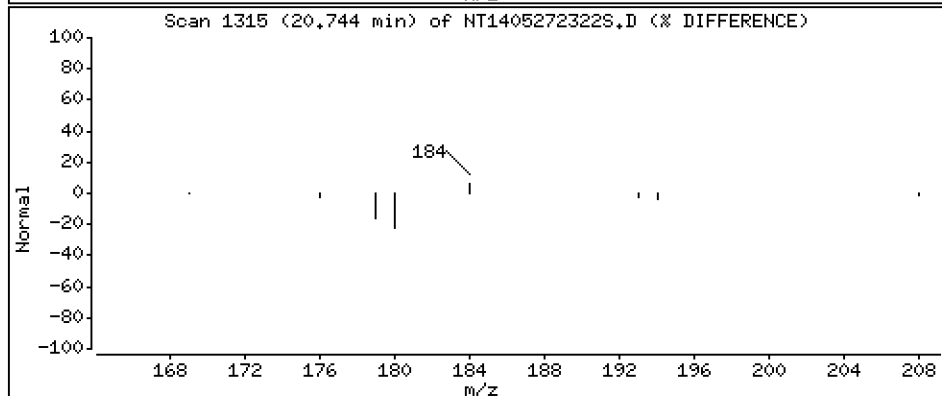
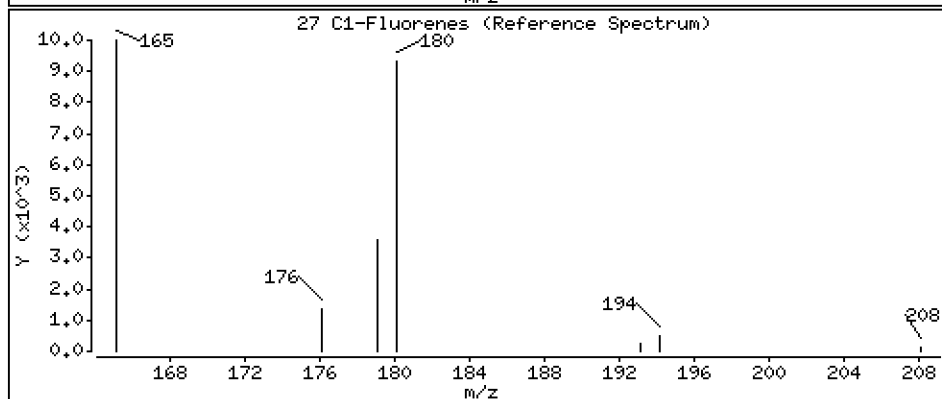
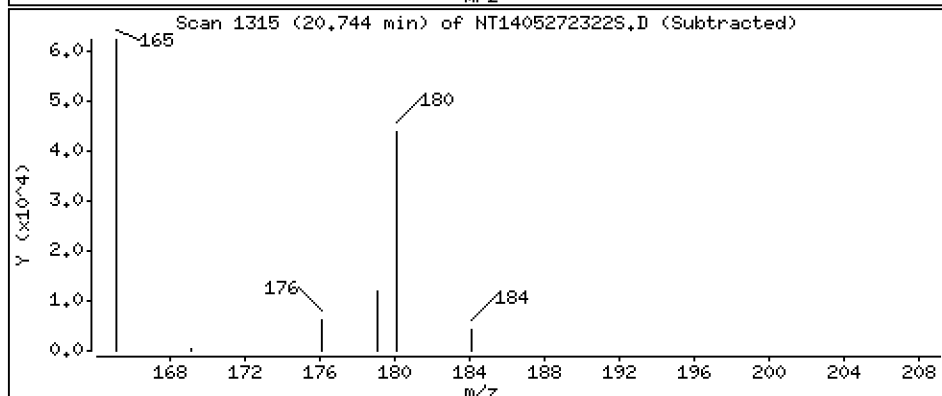
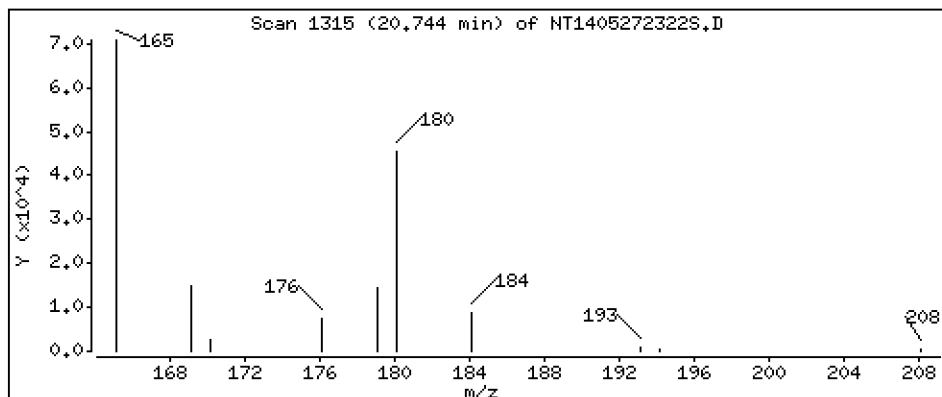
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

27 C1-Fluorenes

Concentration: 2.679 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

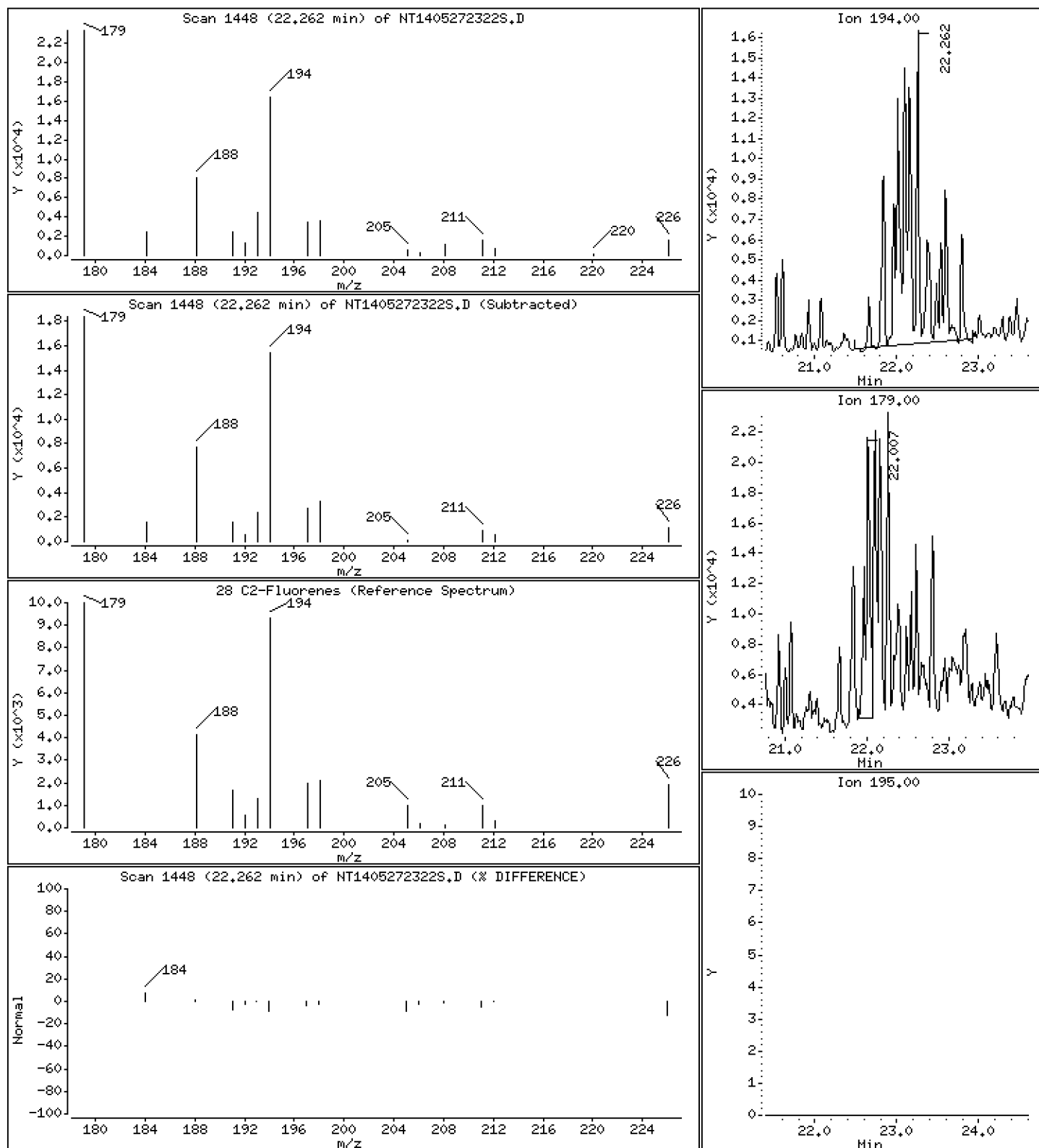
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

28 C2-Fluorenes

Concentration: 2.920 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

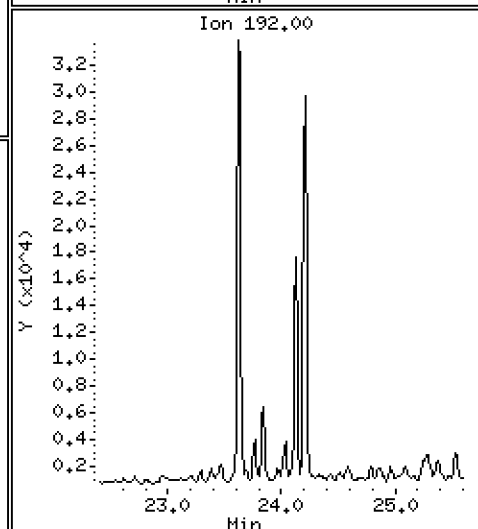
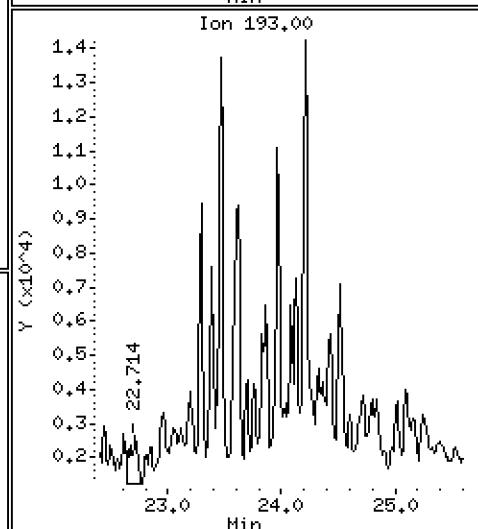
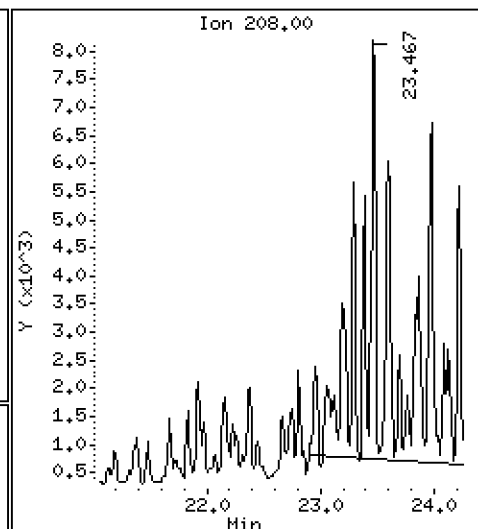
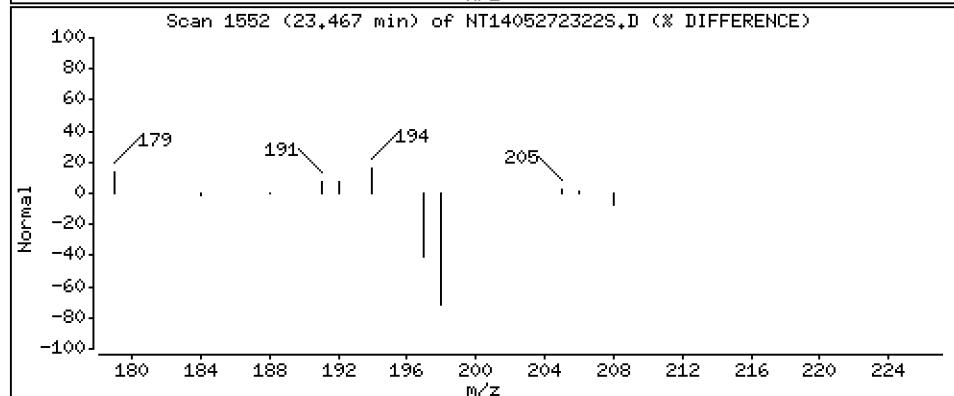
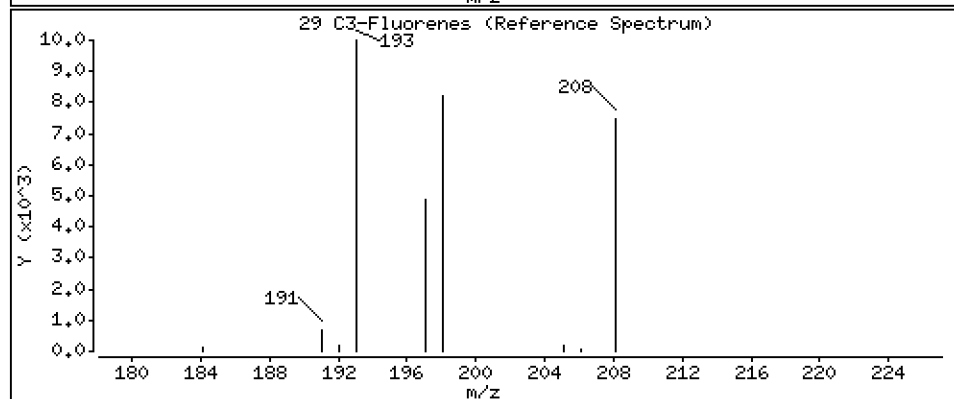
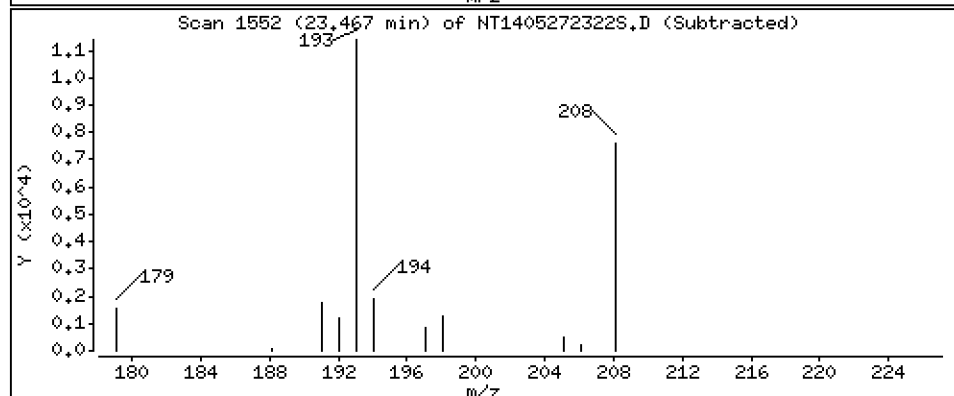
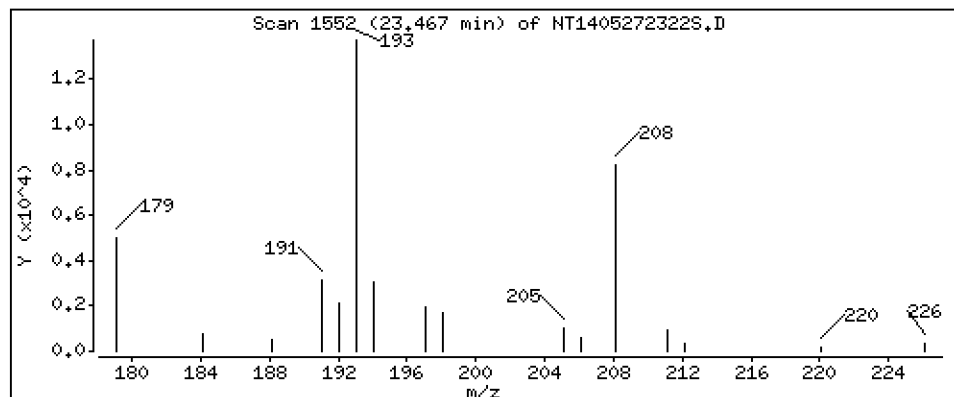
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

29 C3-Fluorenes

Concentration: 1.875 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

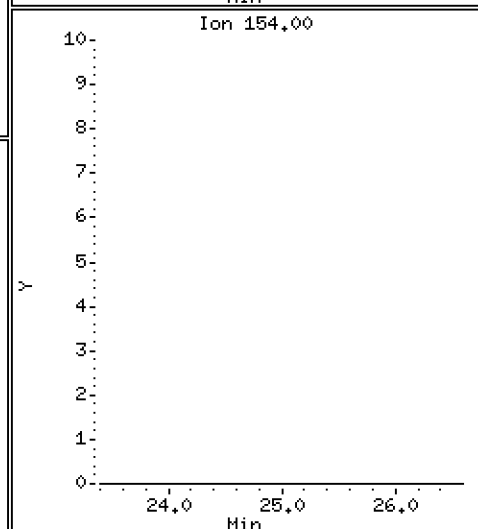
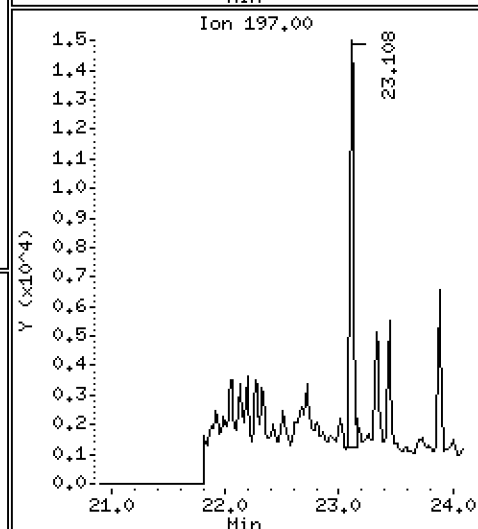
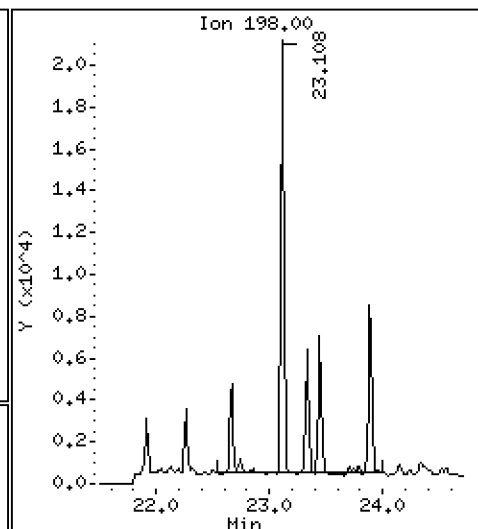
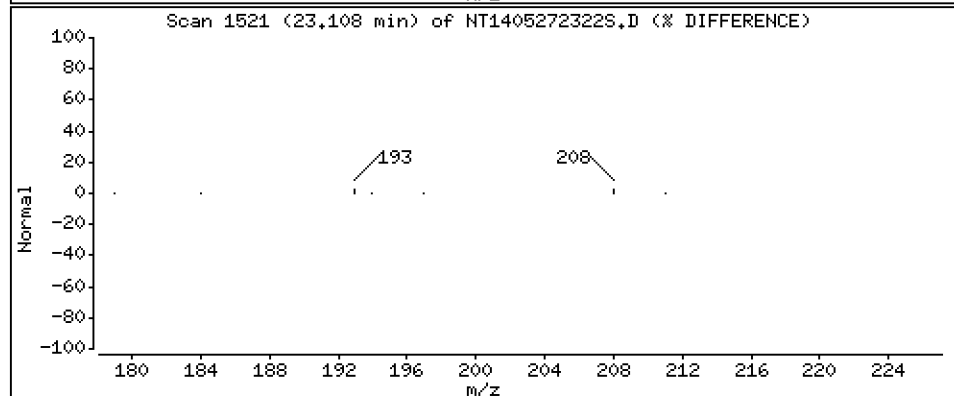
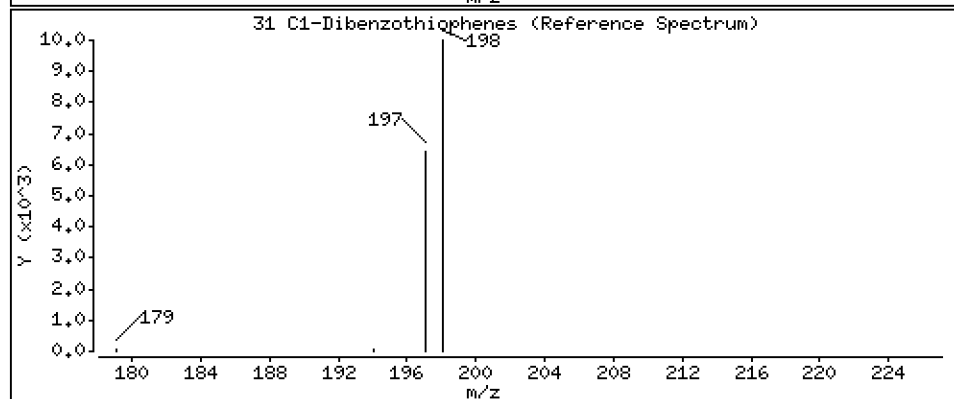
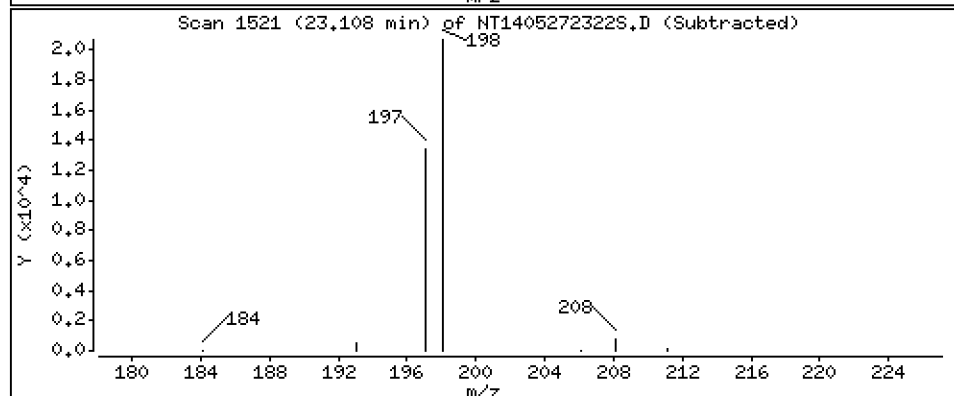
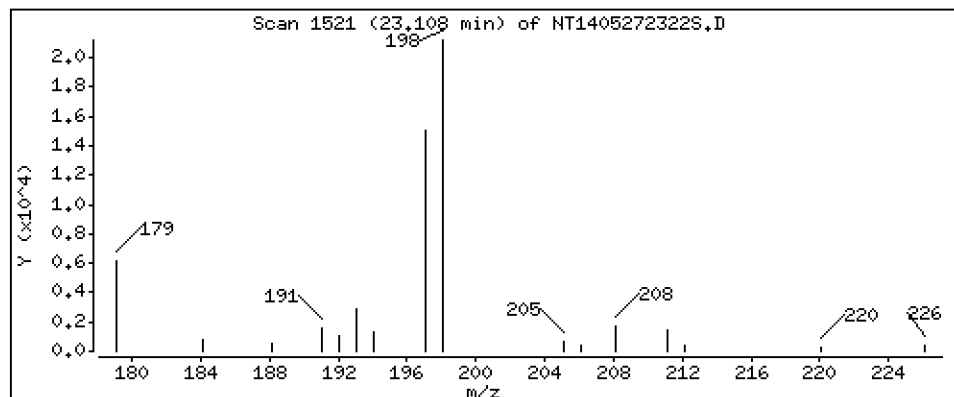
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

31 C1-Dibenzothiophenes

Concentration: 0.9920 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

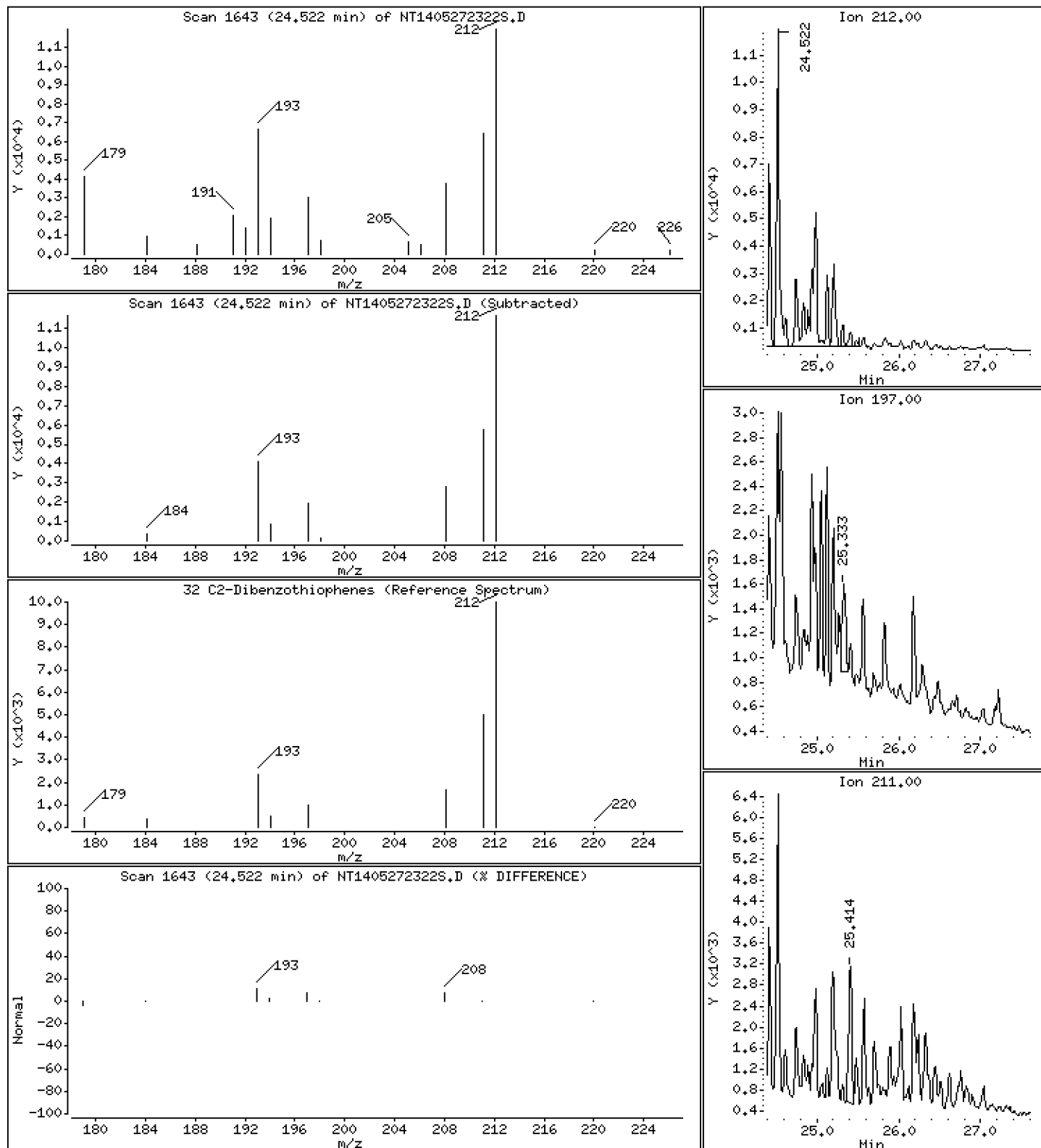
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

32 C2-Dibenzothiophenes

Concentration: 1.276 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

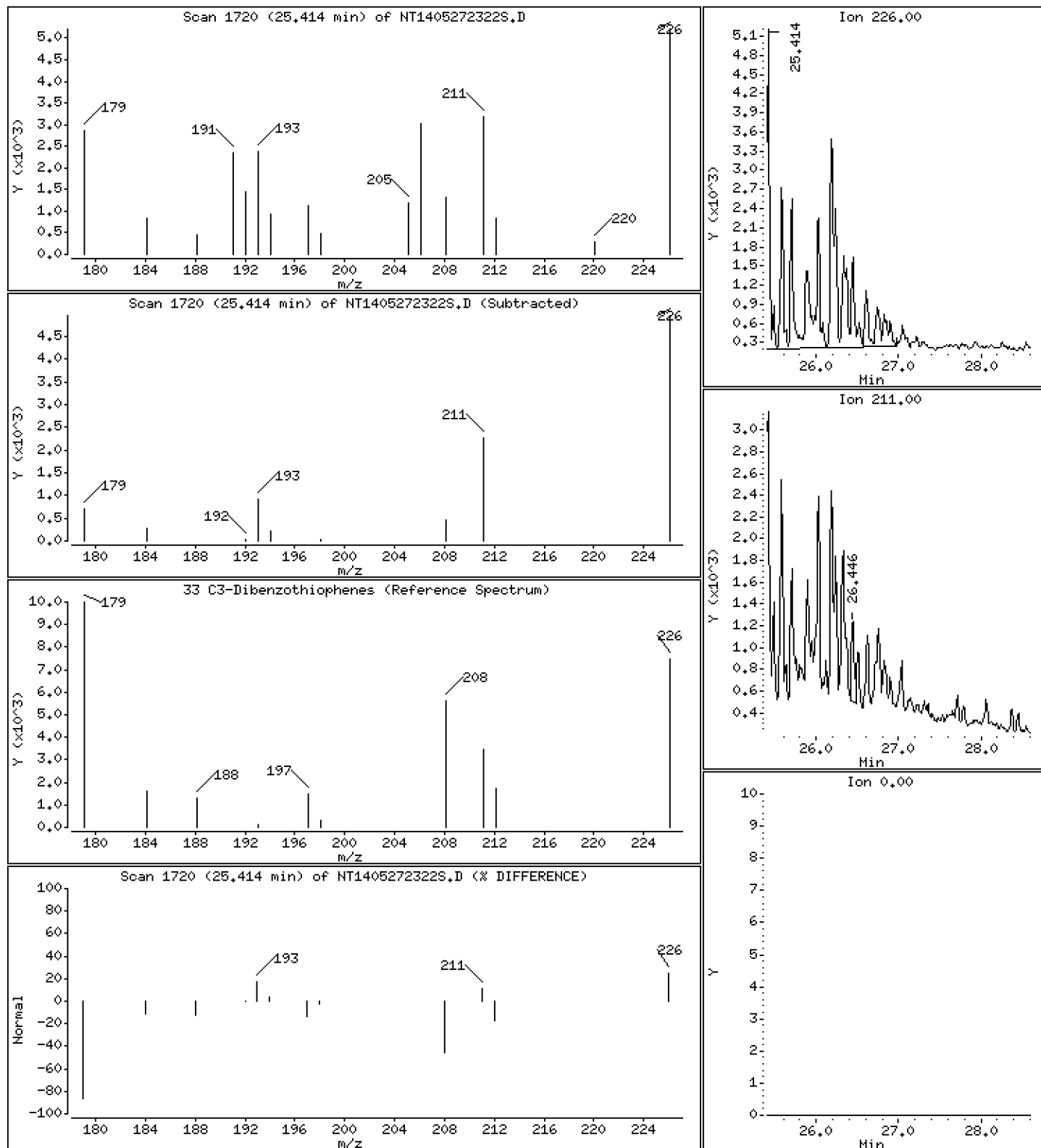
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

33 C3-Dibenzothiophenes

Concentration: 0.7691 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

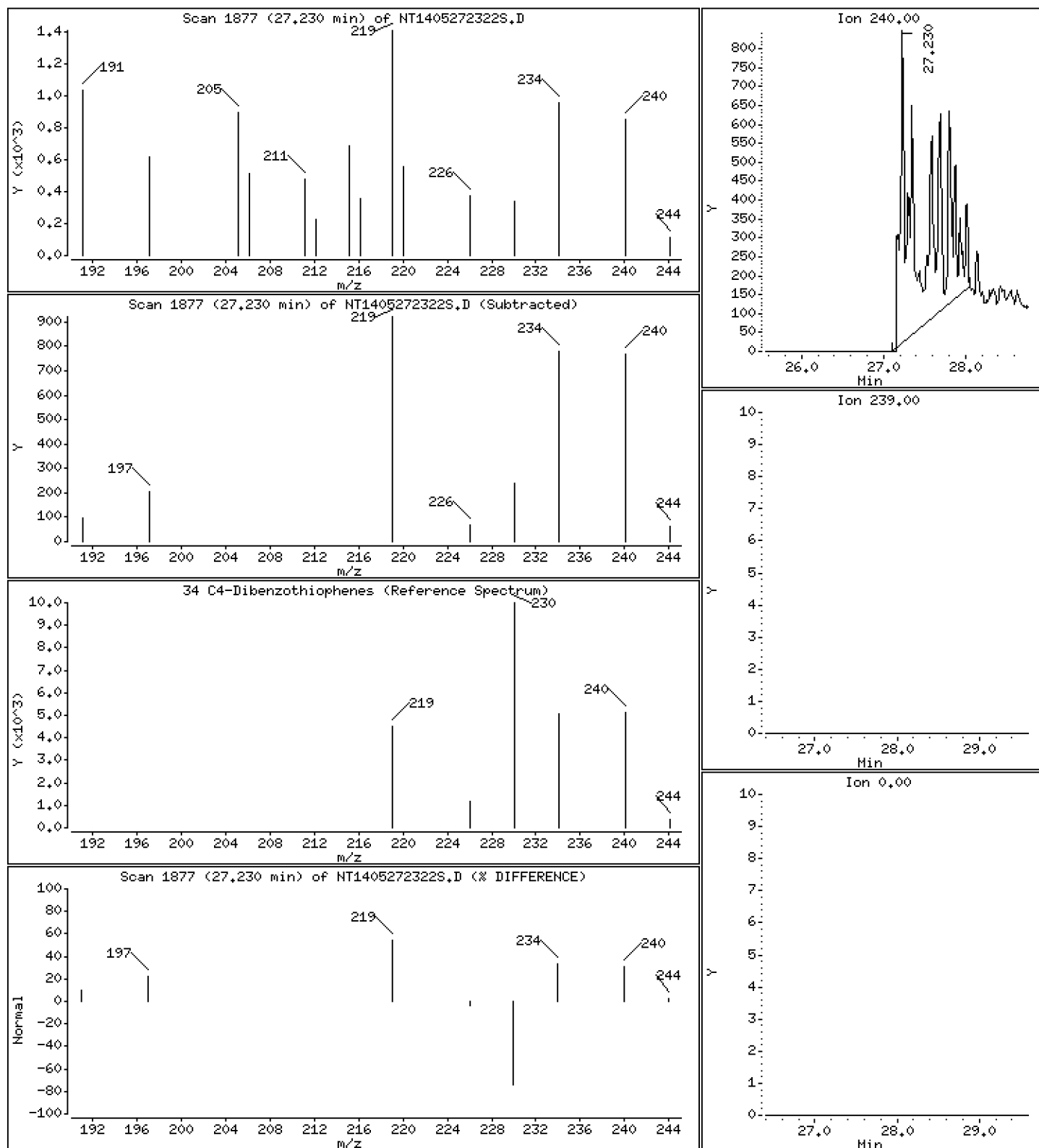
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

34 C4-Dibenzothiophenes

Concentration: 0.1341 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

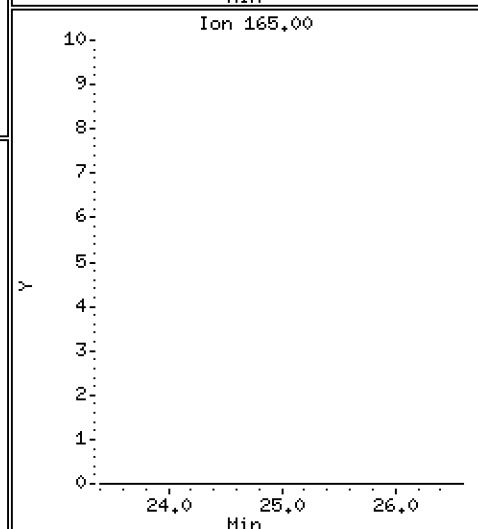
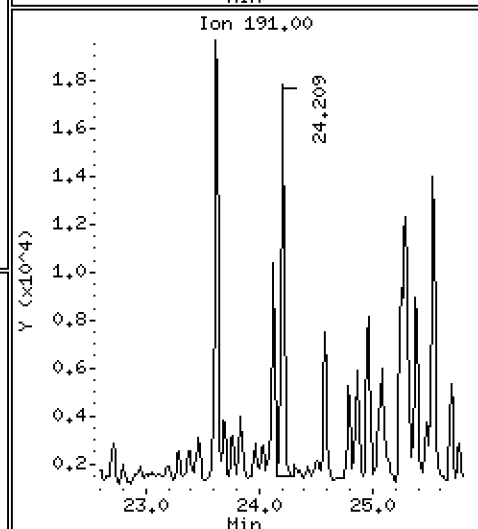
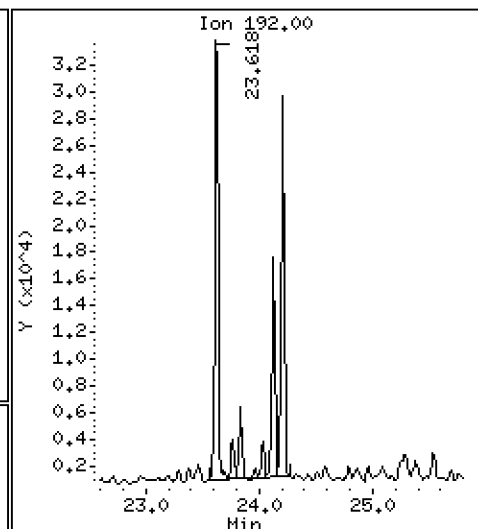
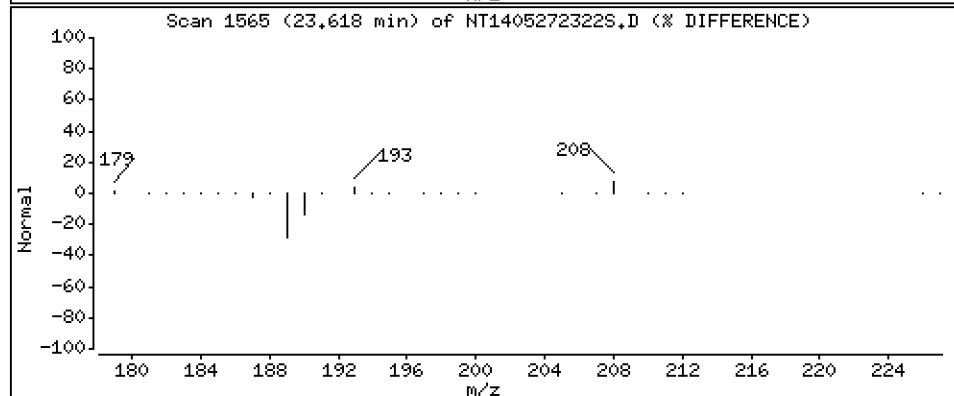
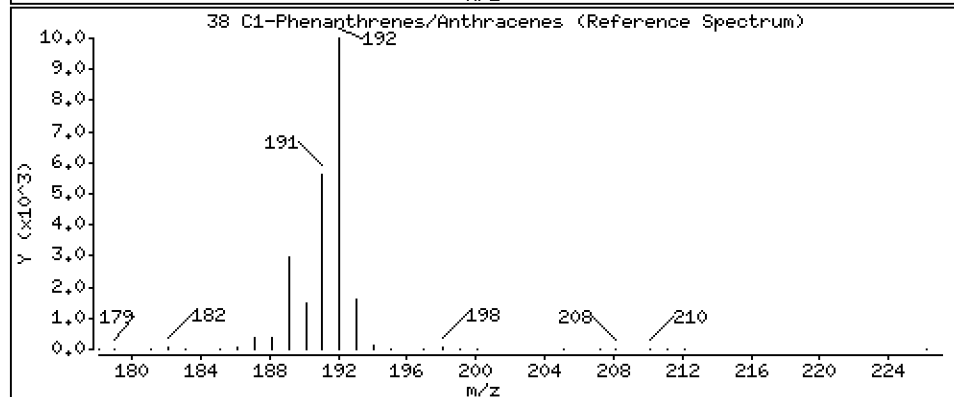
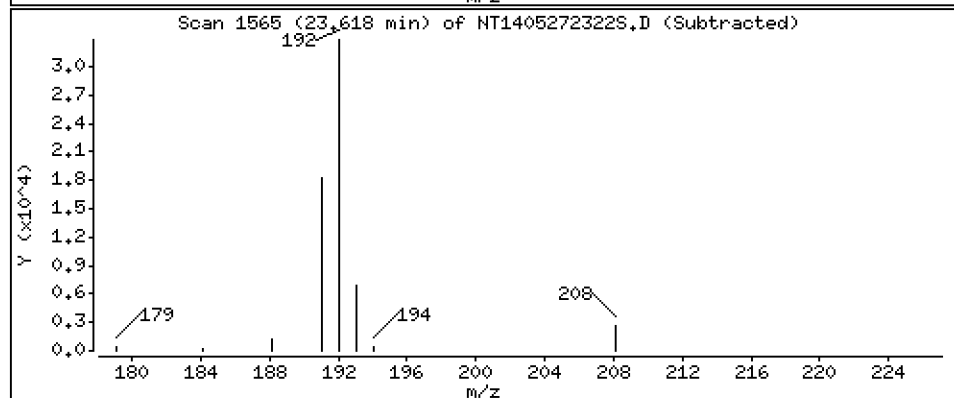
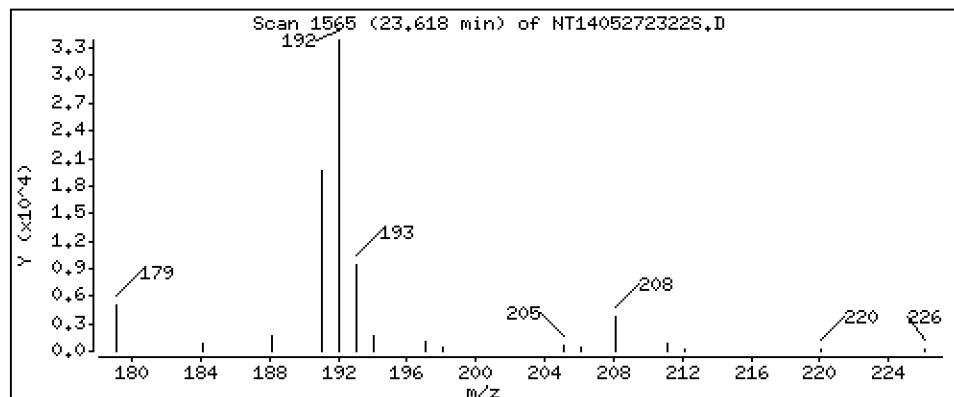
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

38 C1-Phenanthrenes/Anthracenes

Concentration: 1.629 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

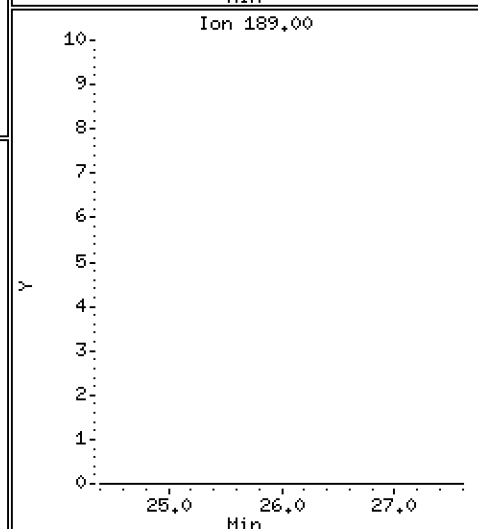
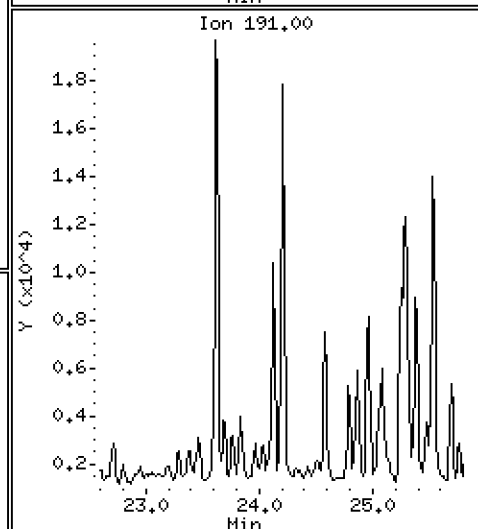
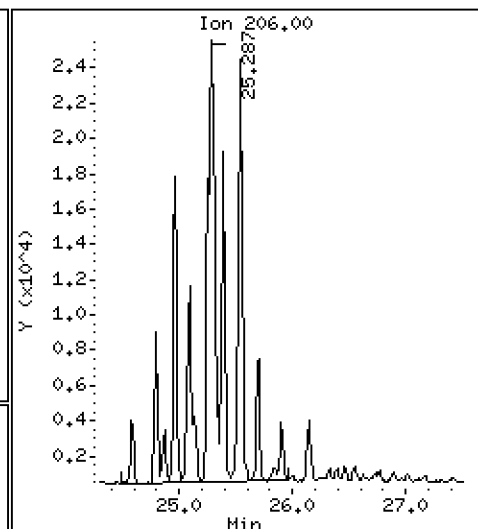
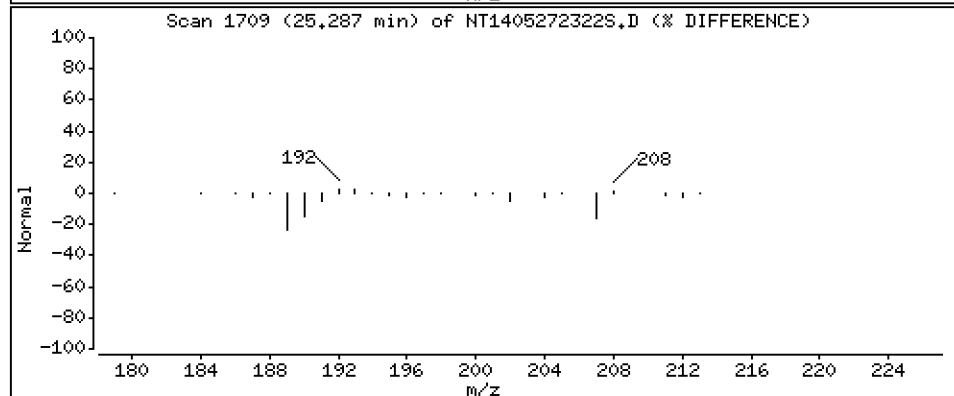
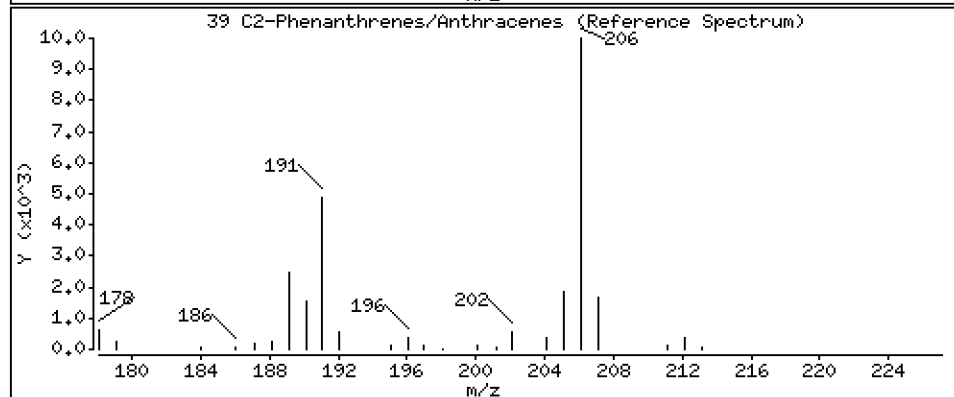
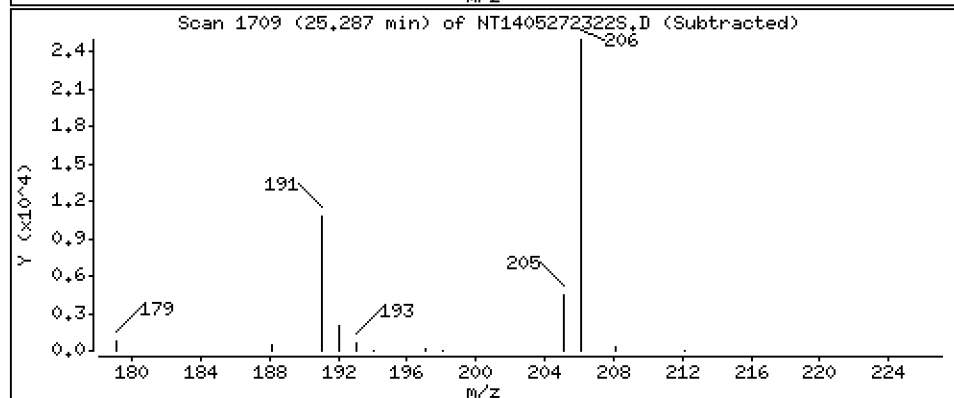
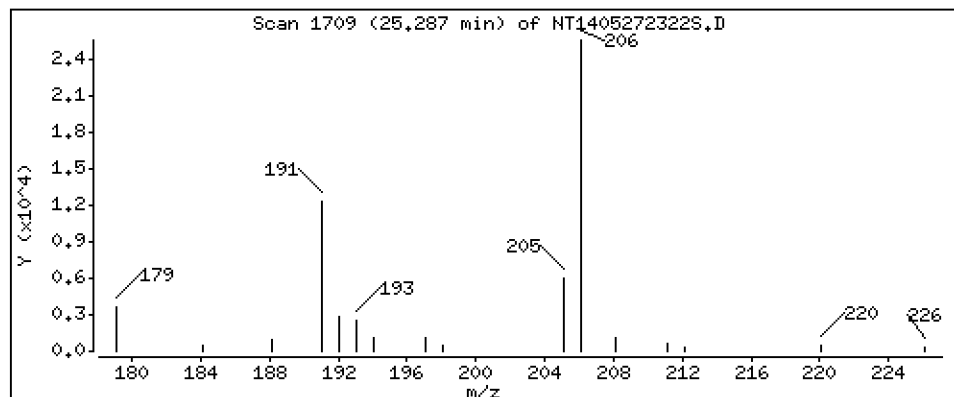
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

39 C2-Phenanthrenes/Anthracenes

Concentration: 2.954 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

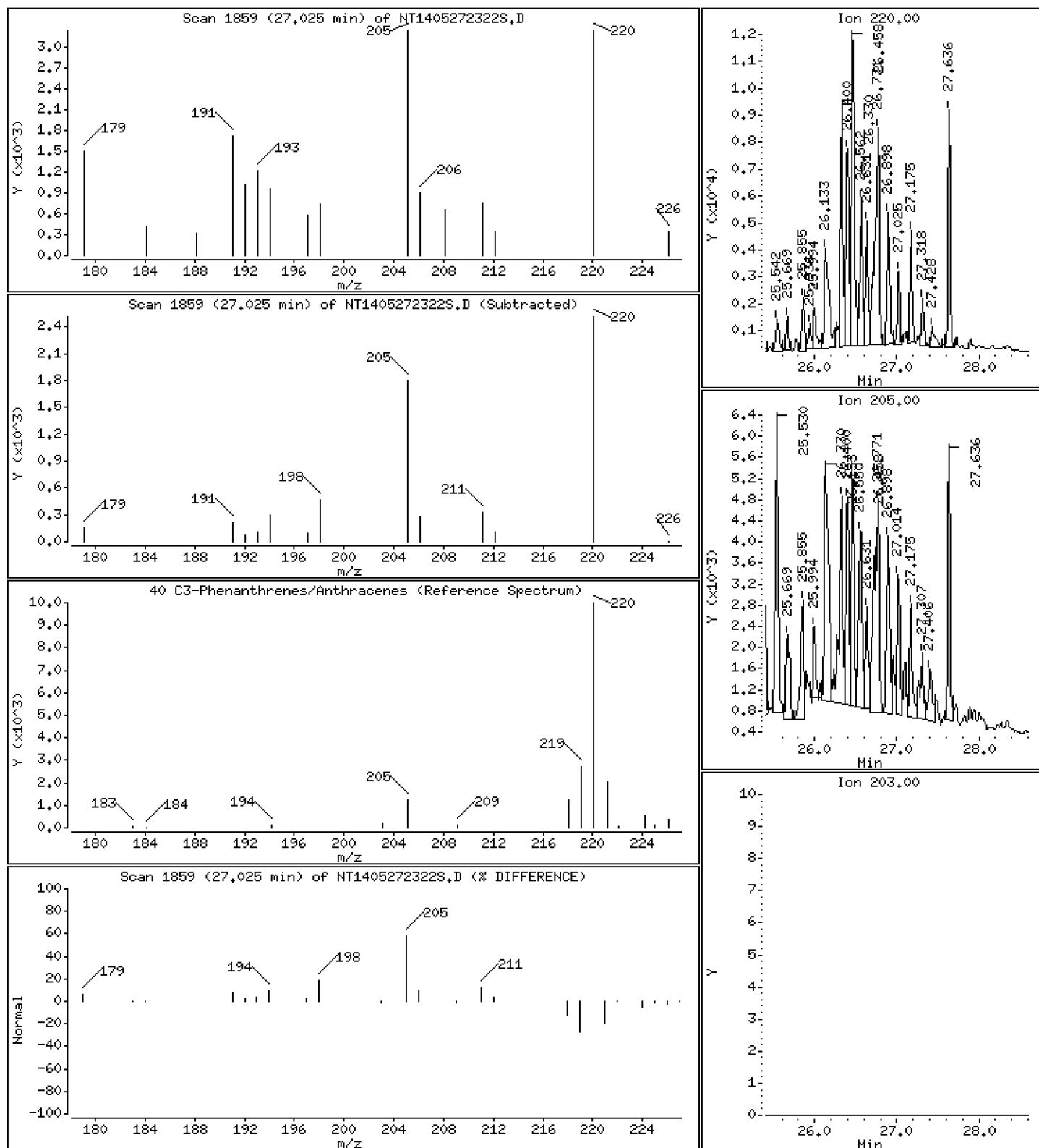
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

40 C3-Phenanthrenes/Anthracenes

Concentration: 0.05433 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

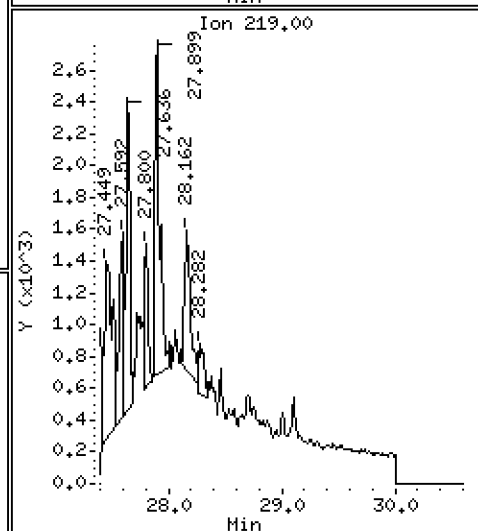
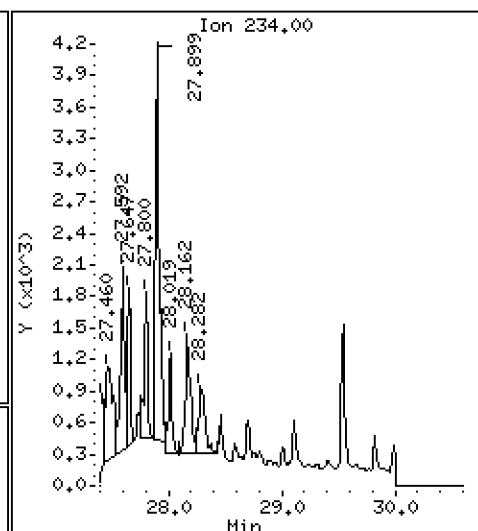
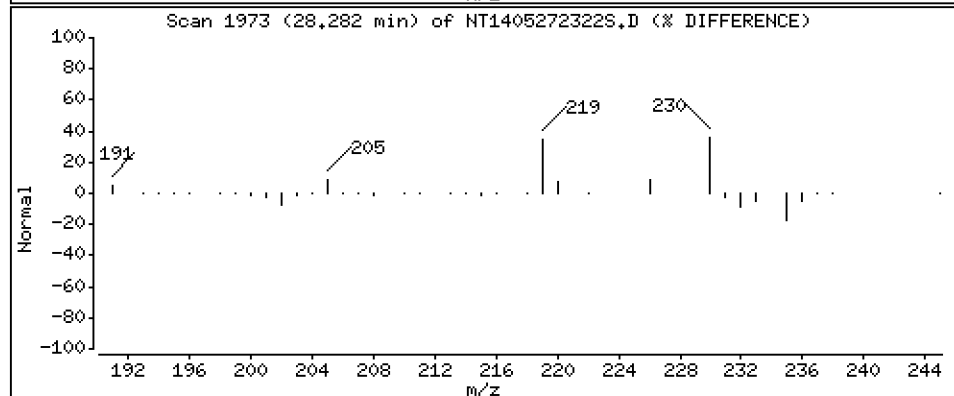
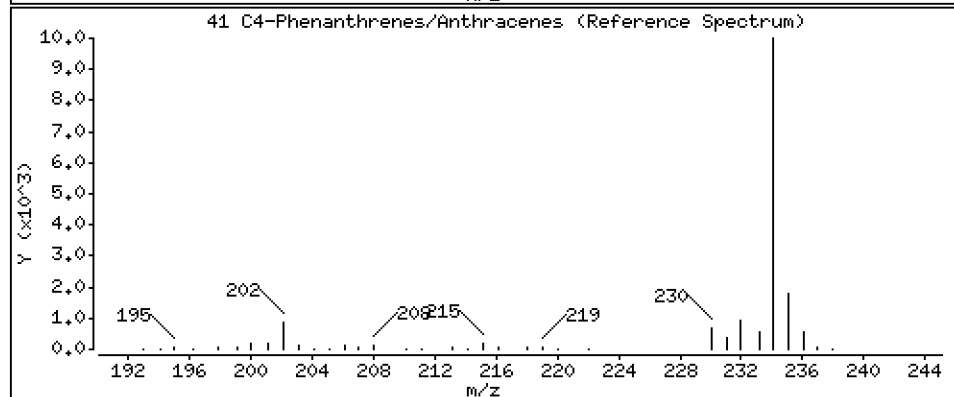
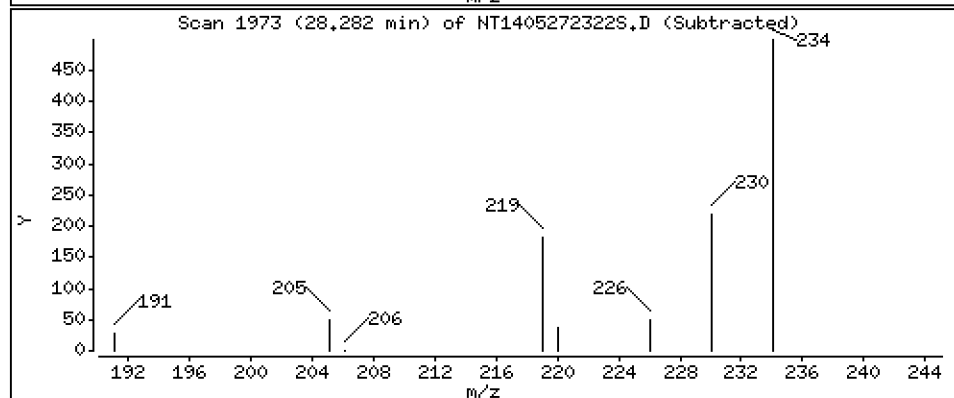
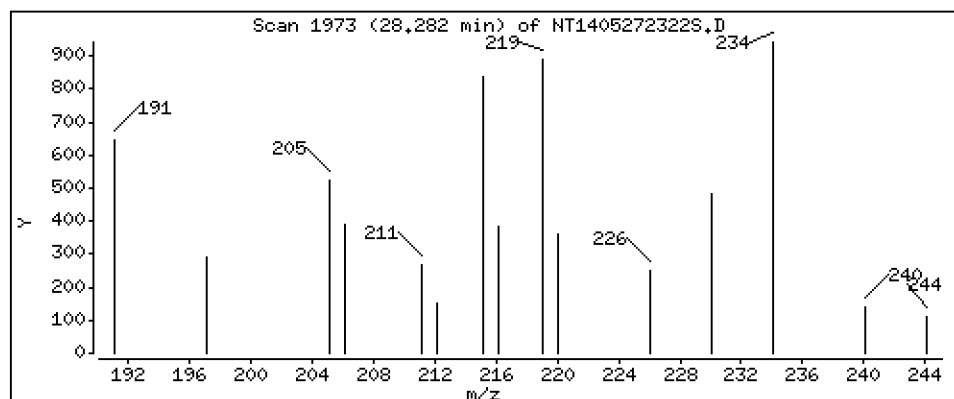
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

41 C4-Phenanthrenes/Anthracenes

Concentration: 0.02334 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

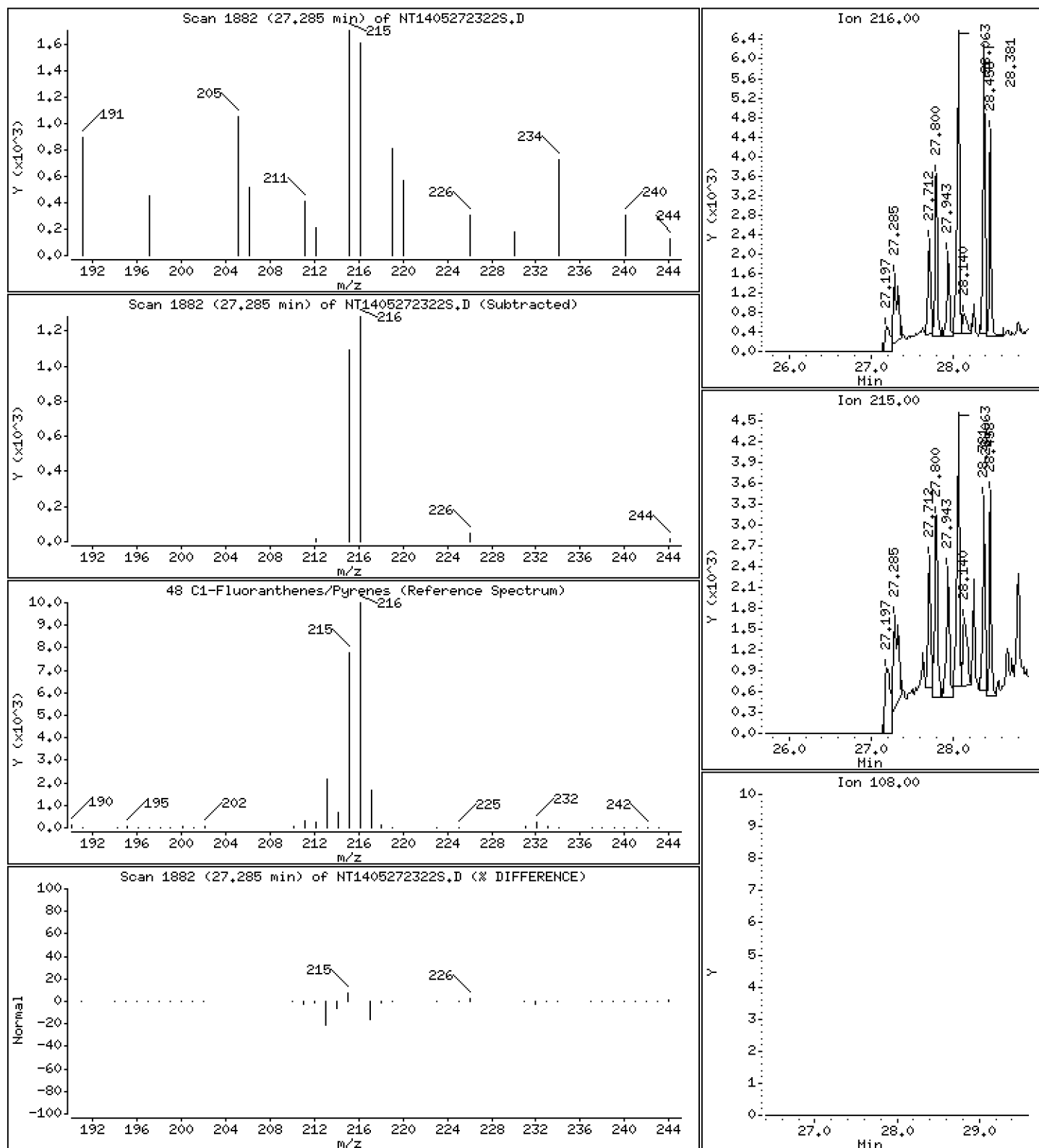
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

48 C1-Fluoranthenes/Pyrenes

Concentration: 0.04700 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

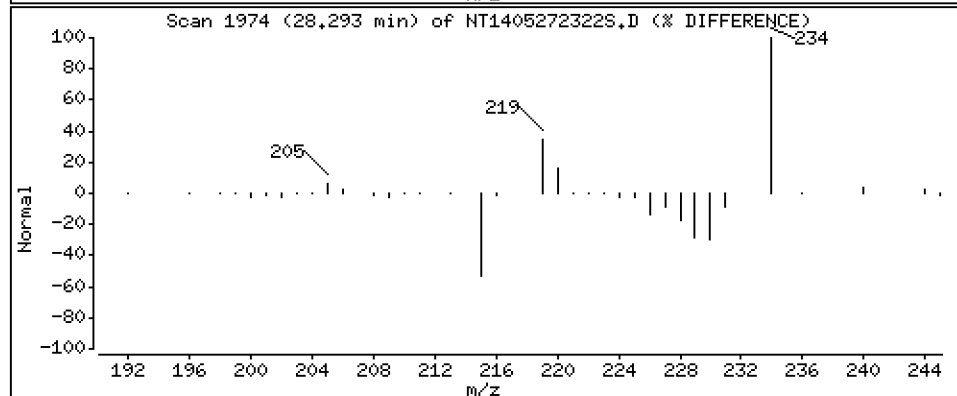
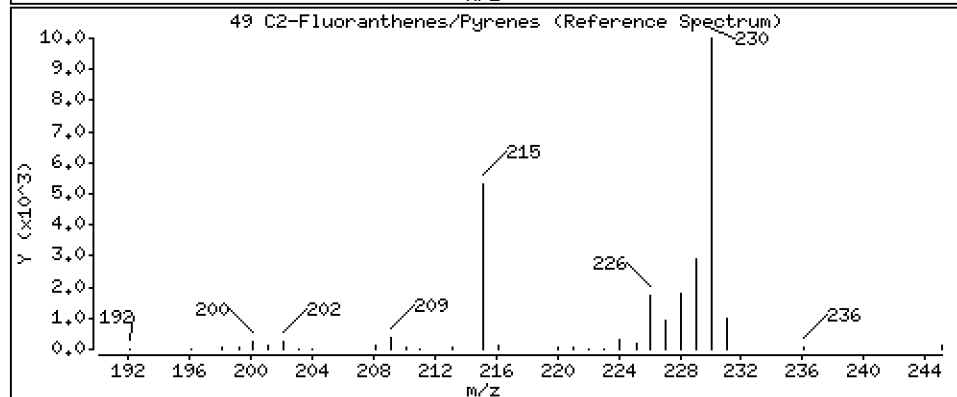
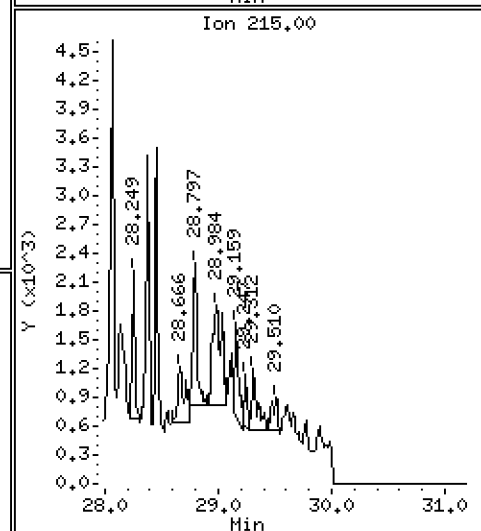
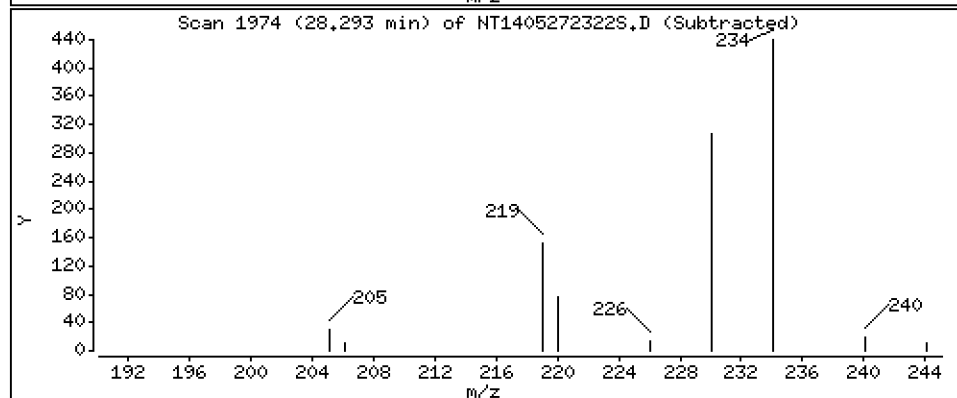
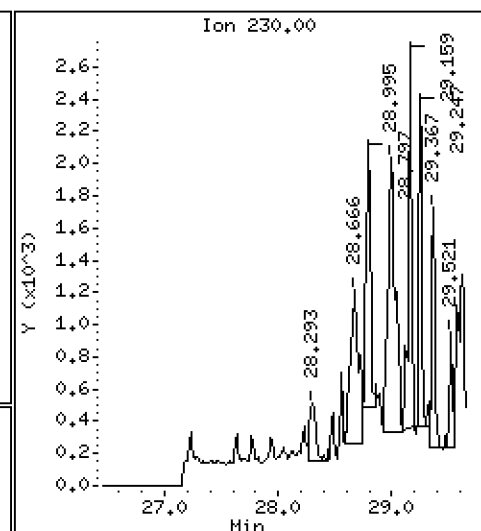
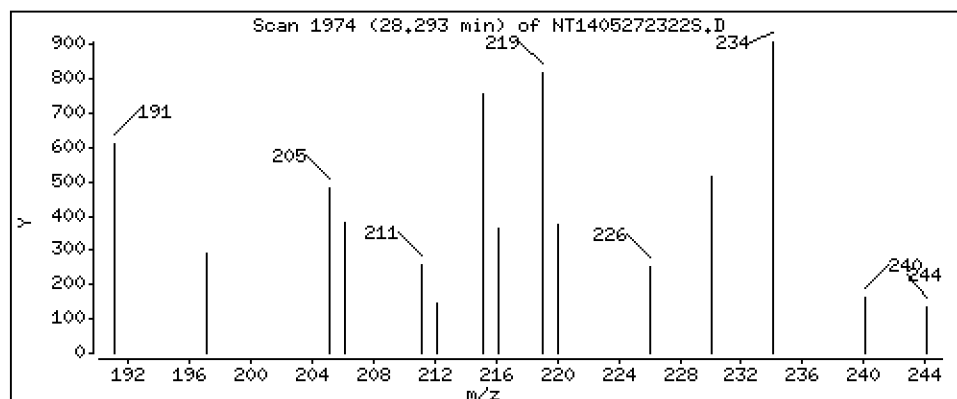
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

49 C2-Fluoranthenes/Pyrenes

Concentration: 0.01327 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

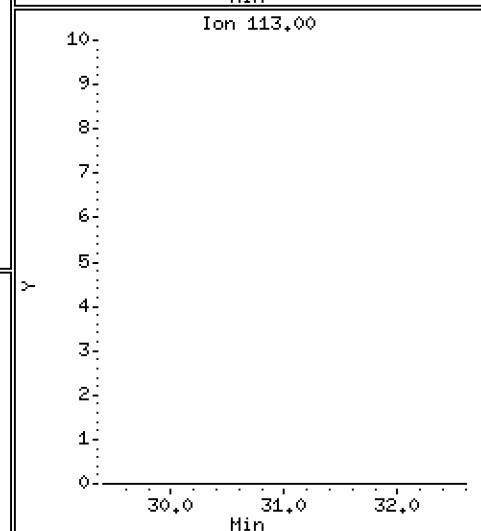
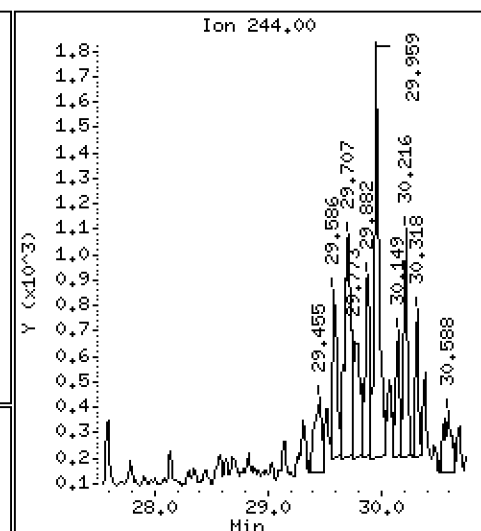
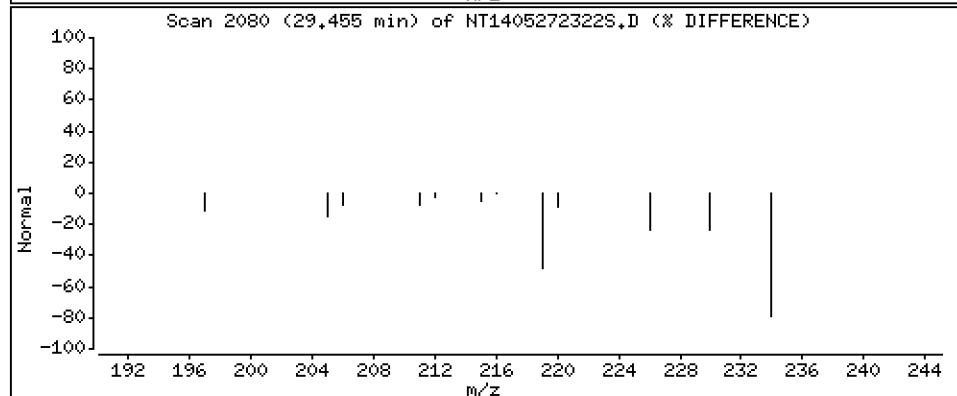
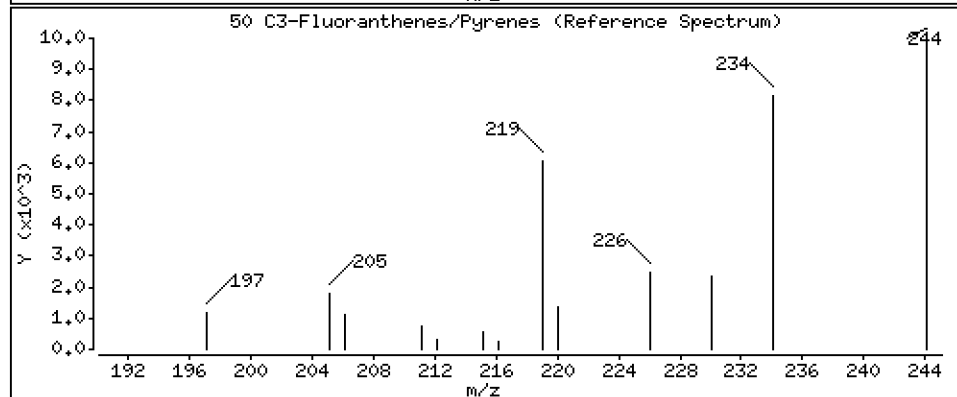
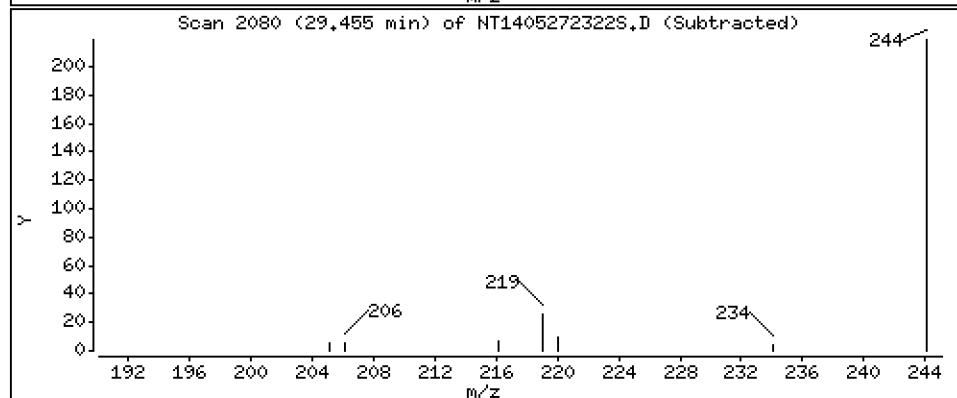
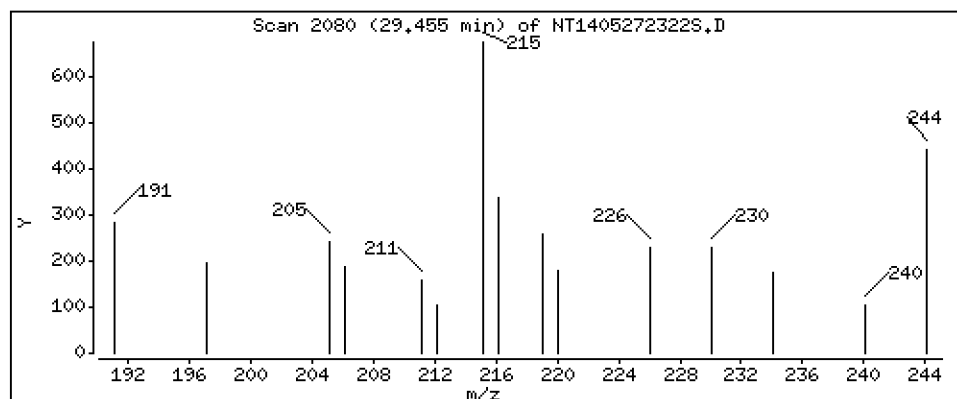
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

50 C3-Fluoranthenes/Pyrenes

Concentration: 0.01248 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

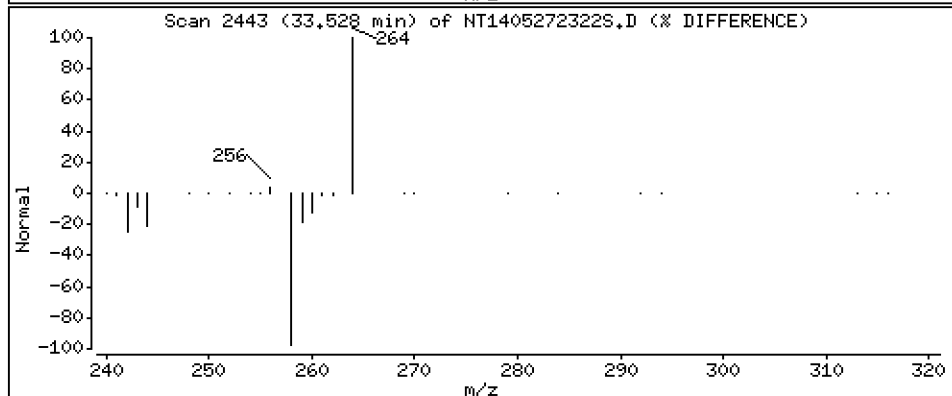
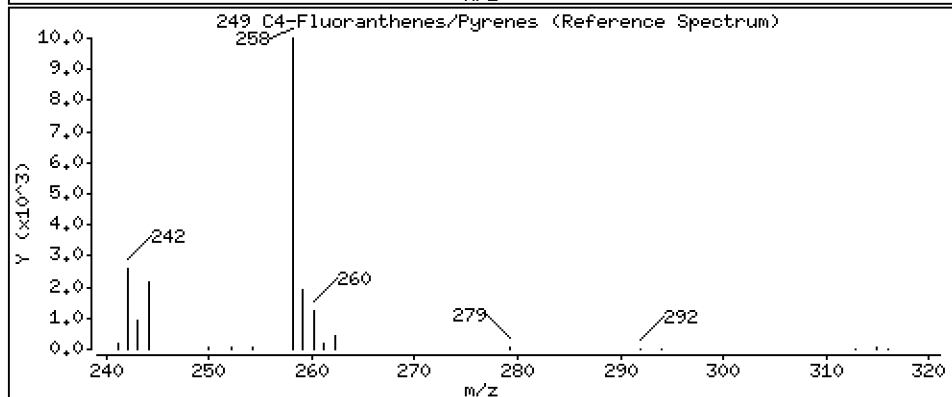
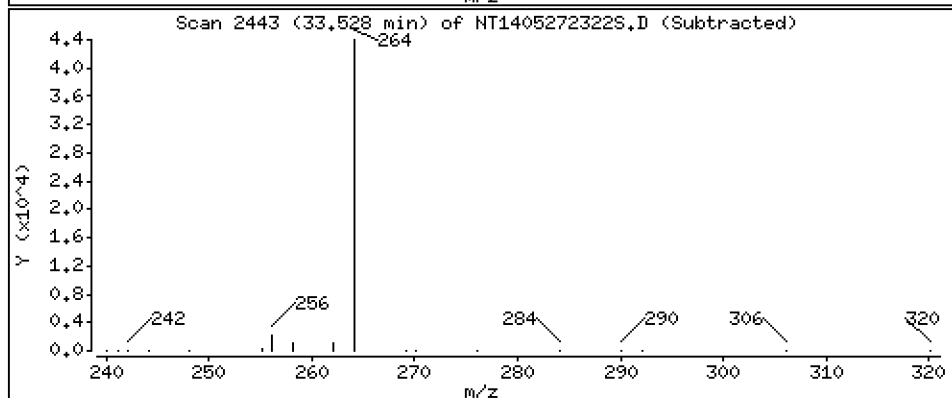
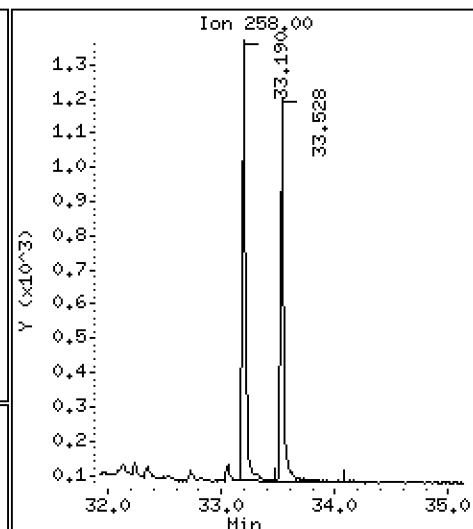
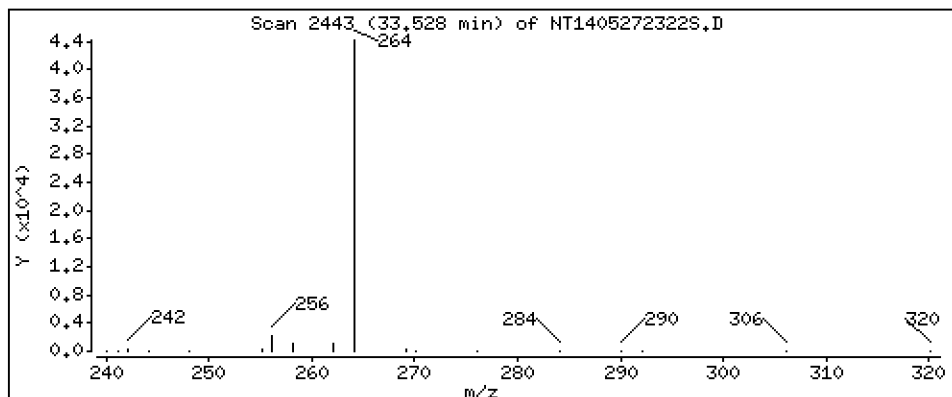
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

249 C4-Fluoranthenes/Pyrenes

Concentration: 0.02221 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

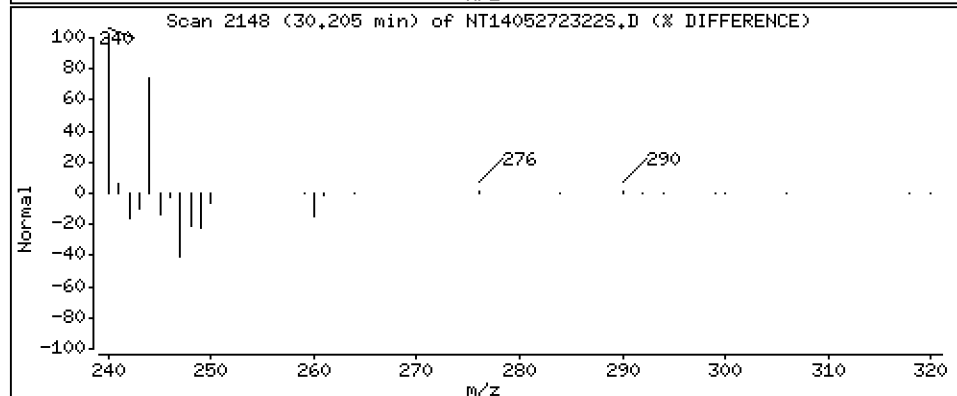
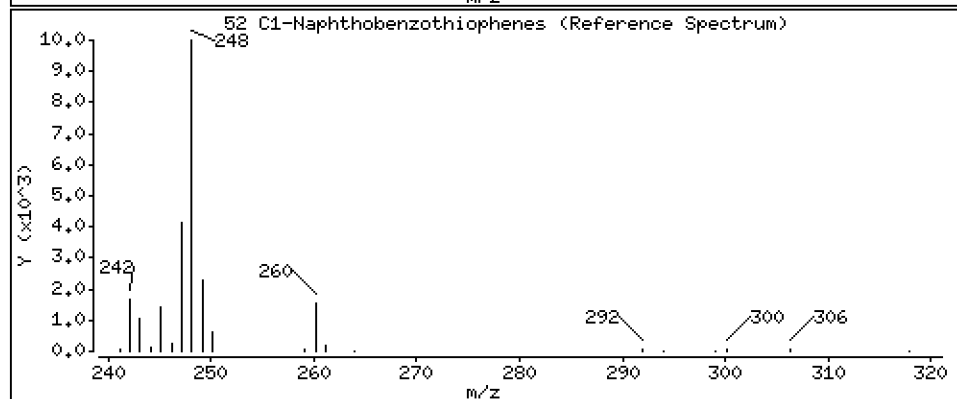
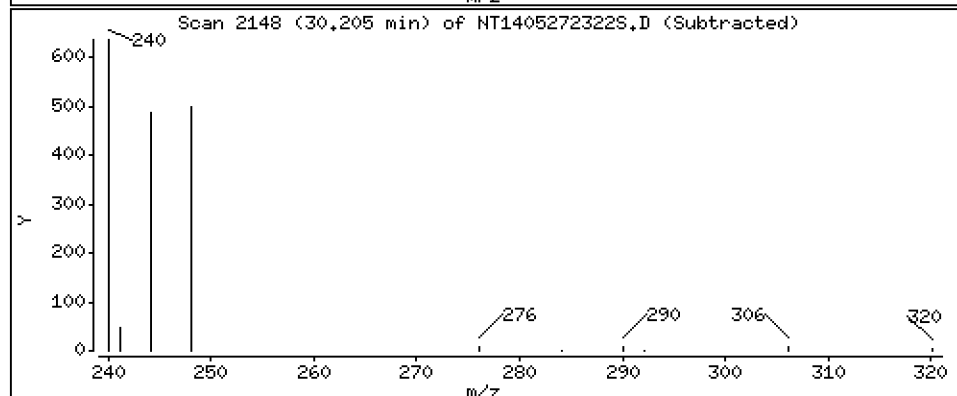
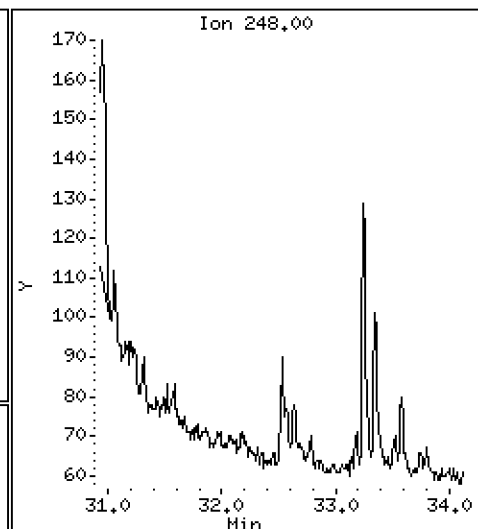
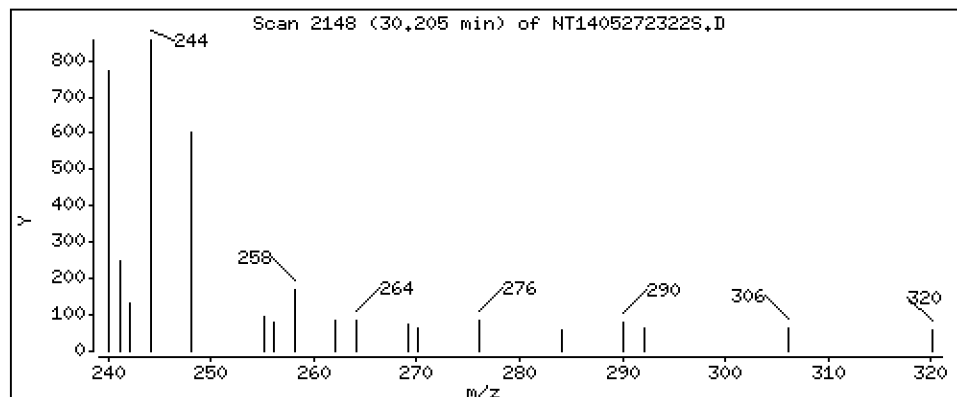
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

52 C1-Naphthobenzothiophenes

Concentration: 0.07968 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

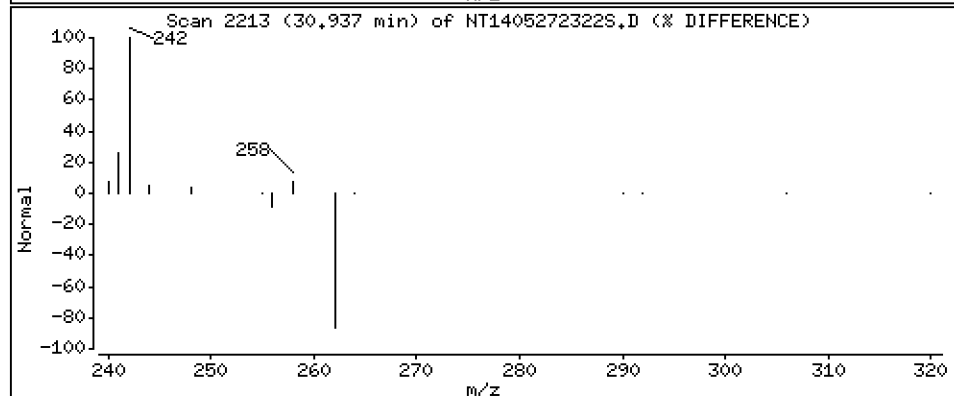
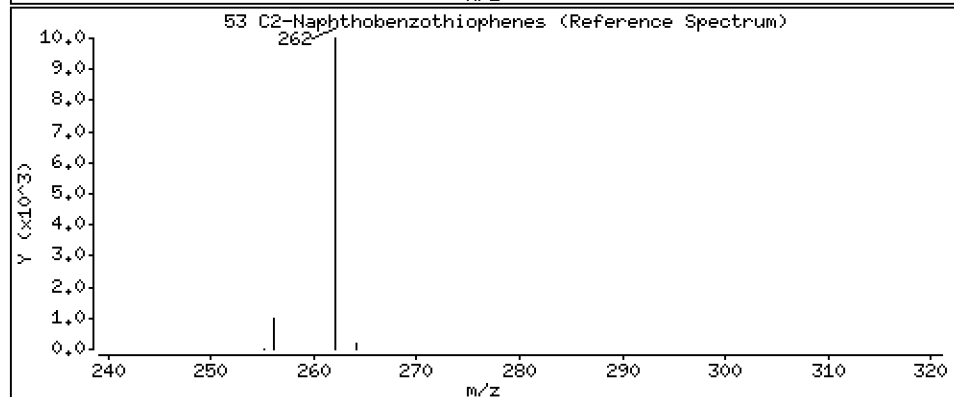
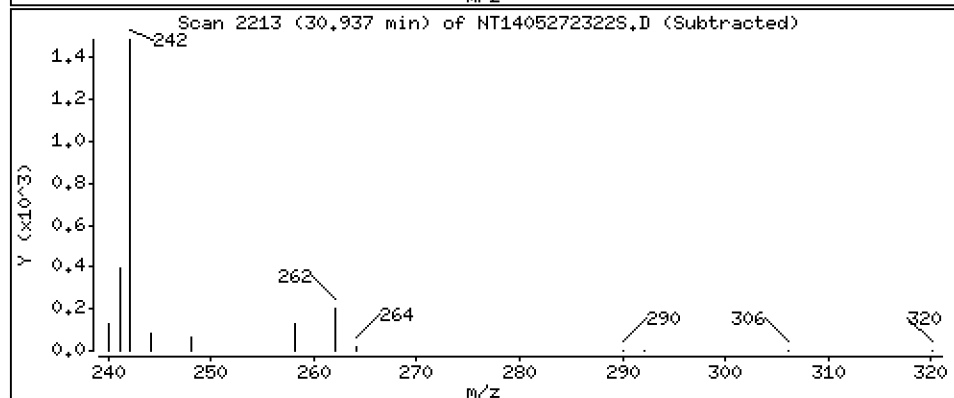
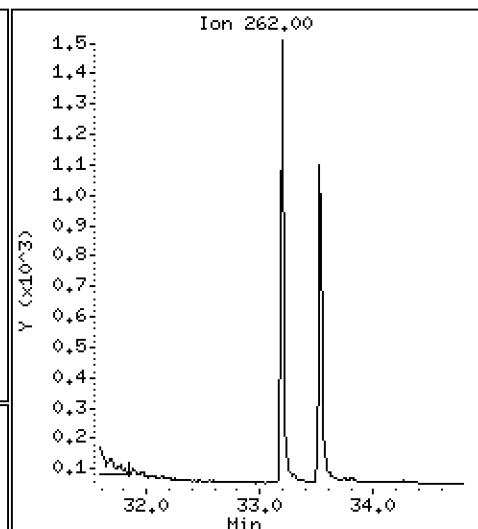
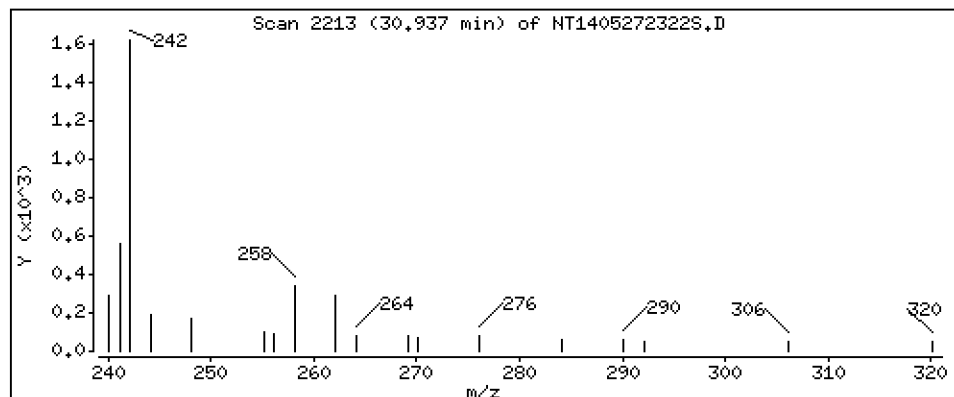
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

53 C2-Naphthobenzothiophenes

Concentration: 0.06543 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

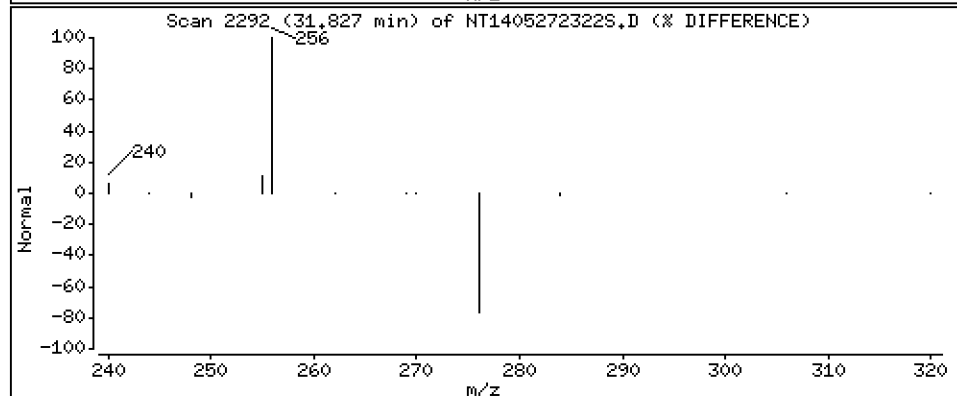
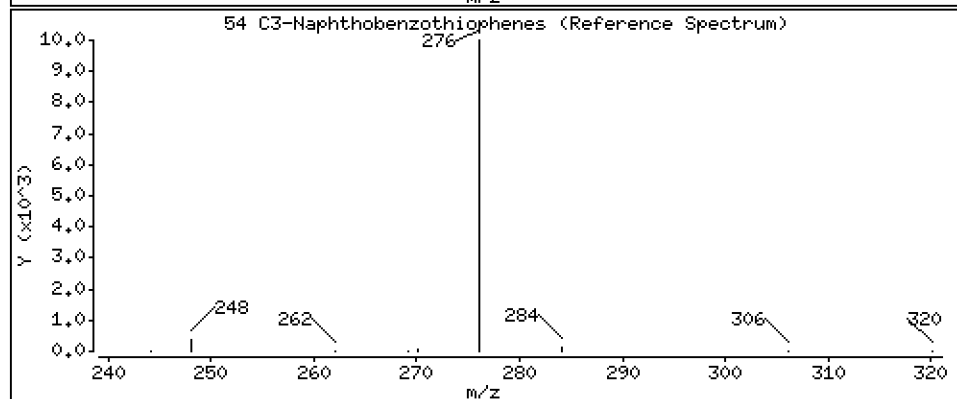
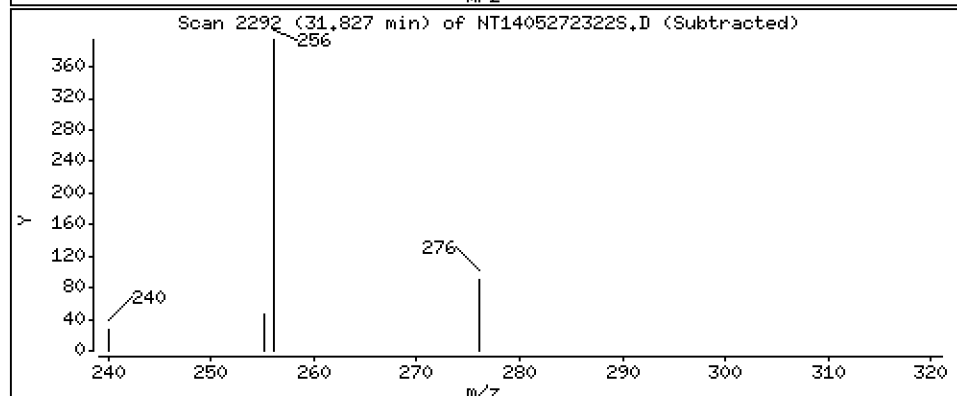
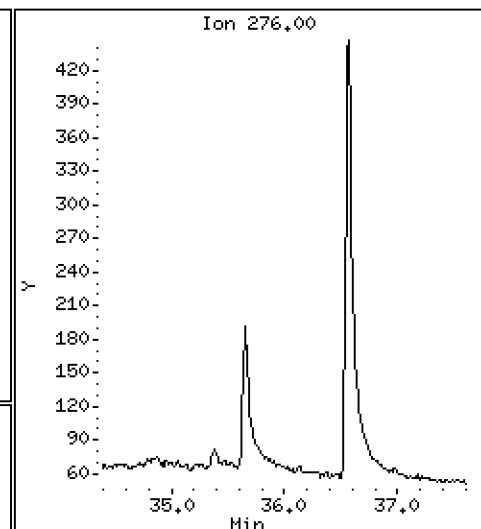
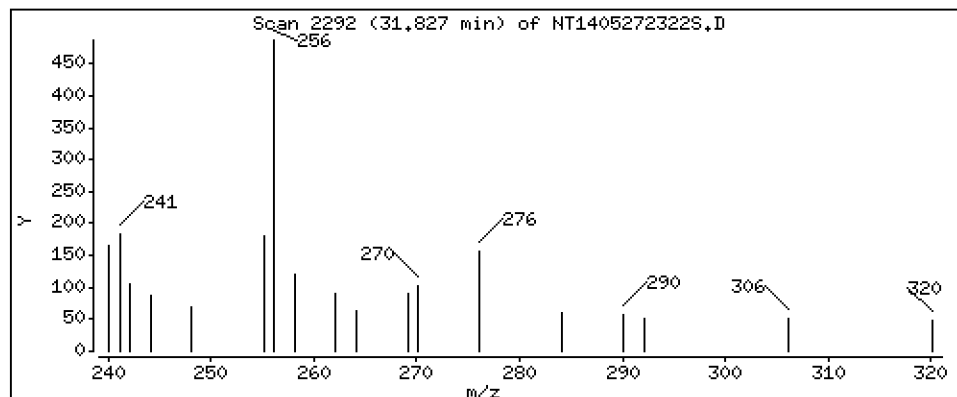
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

54 C3-Naphthobenzothiophenes

Concentration: 0.04307 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

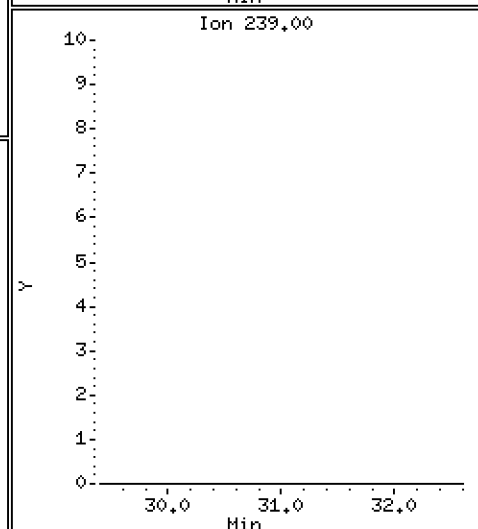
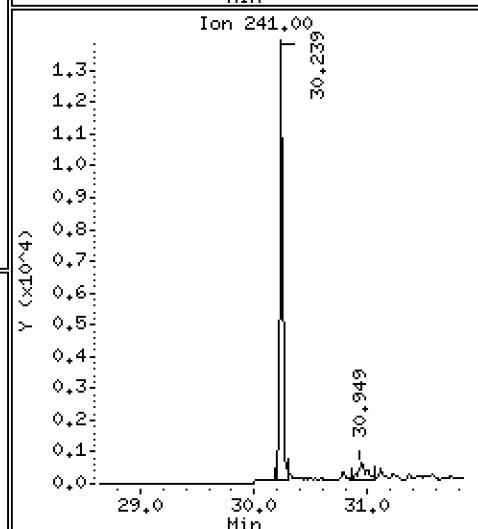
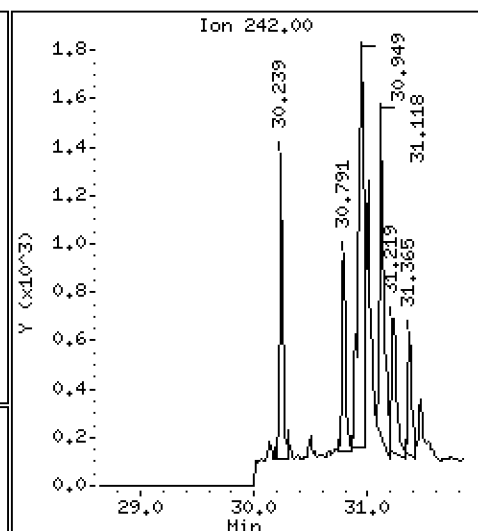
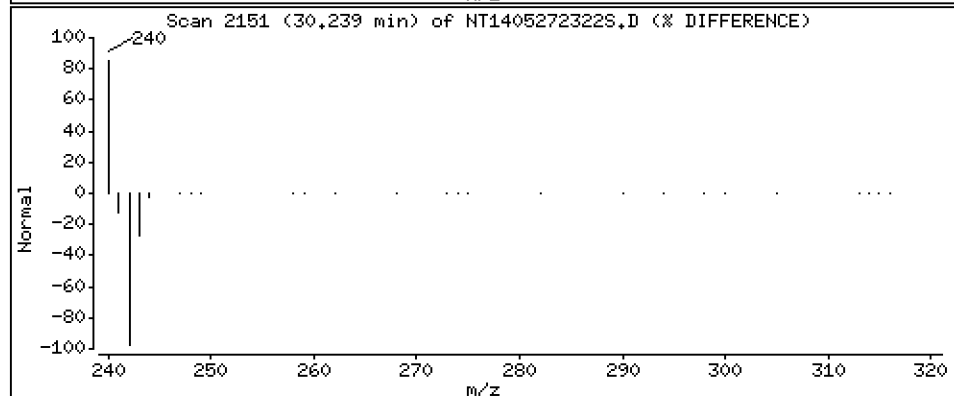
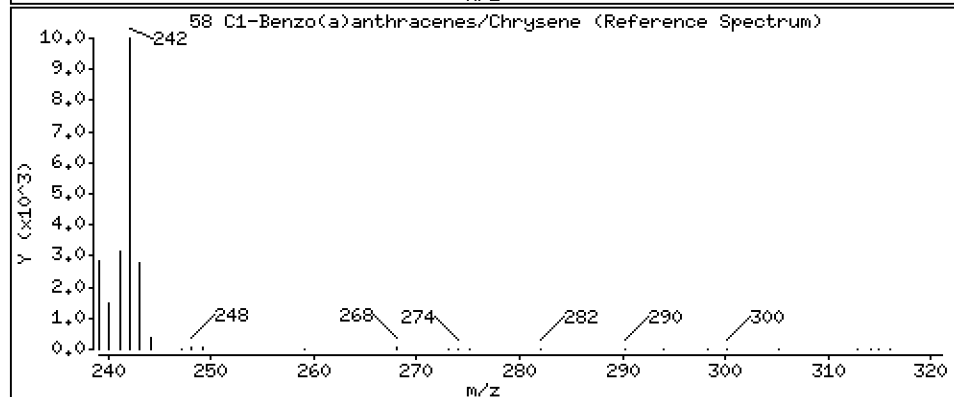
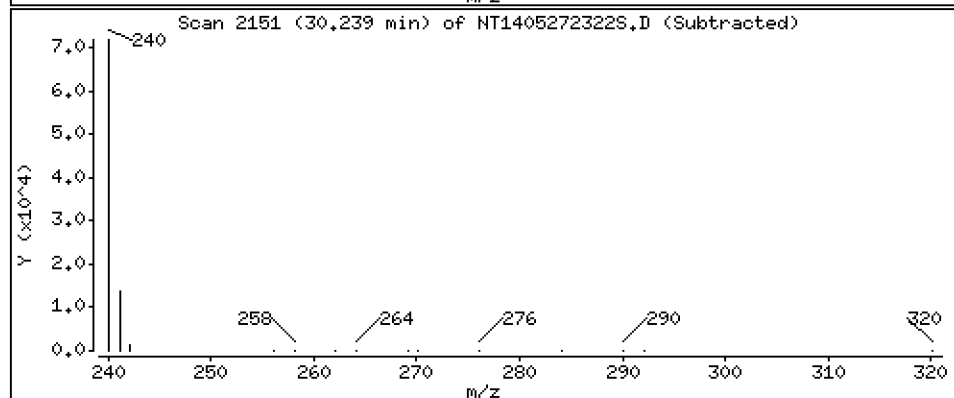
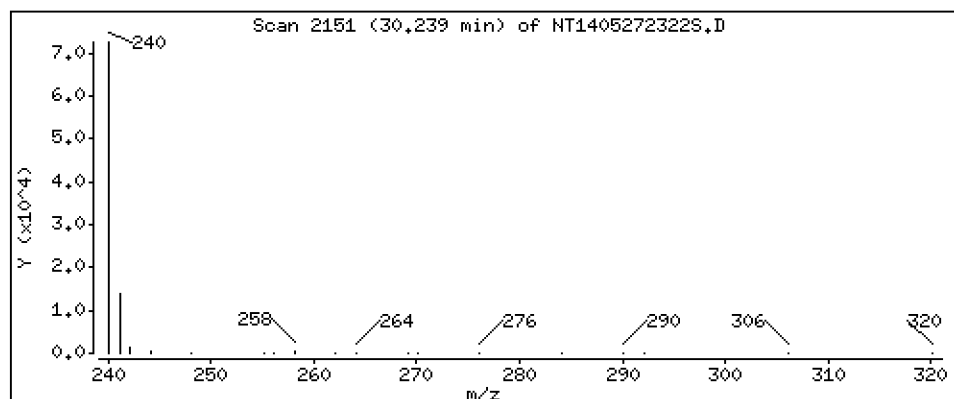
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

58 C1-Benzo(a)anthracenes/Chrysene

Concentration: 0.02893 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

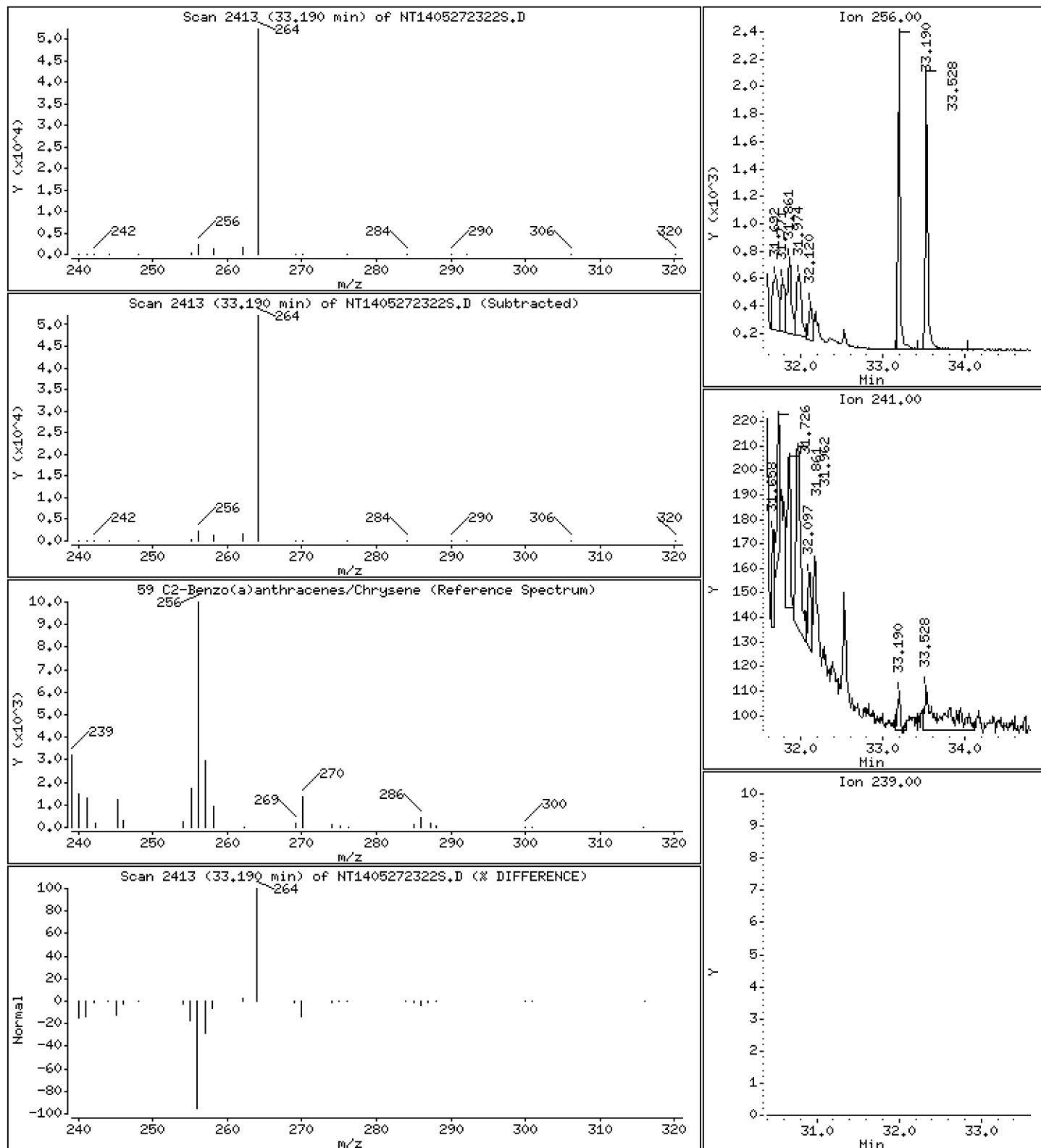
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

59 C2-Benzo(a)anthracenes/Chrysene

Concentration: 0.05568 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

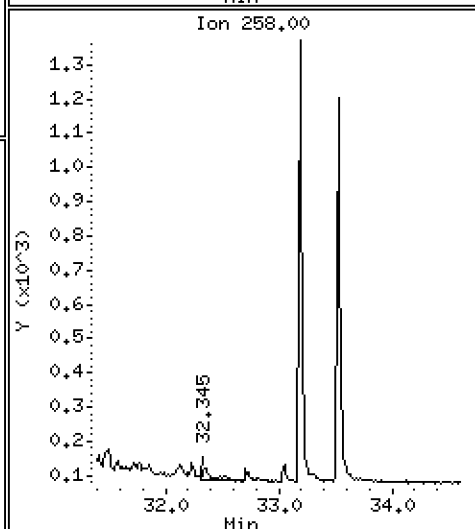
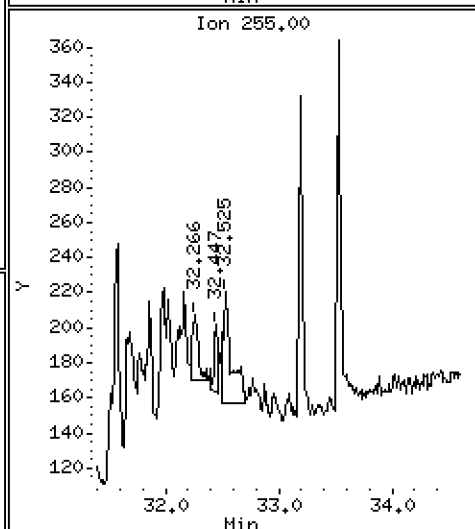
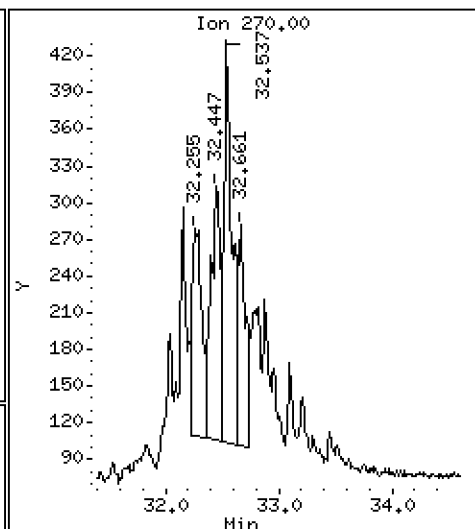
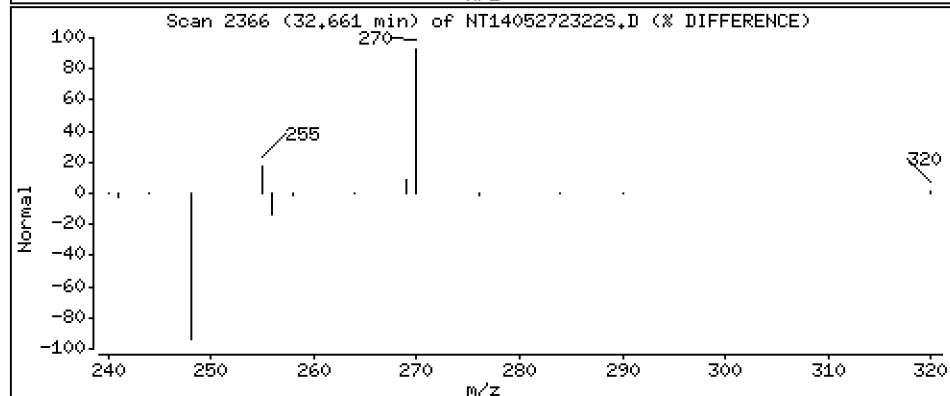
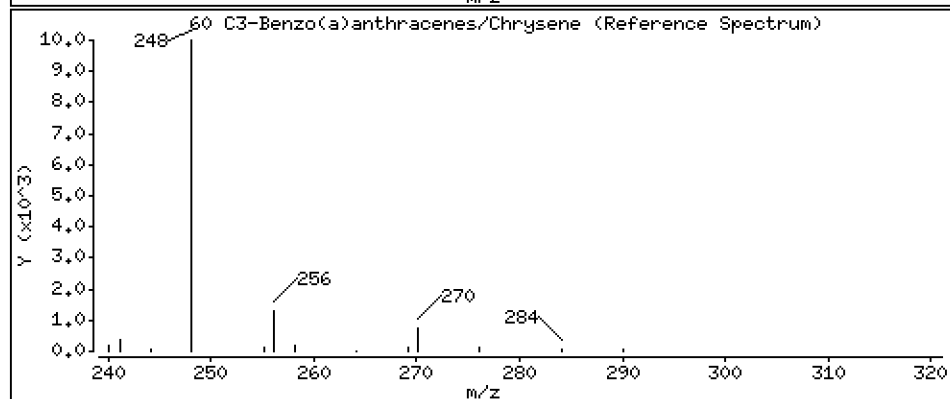
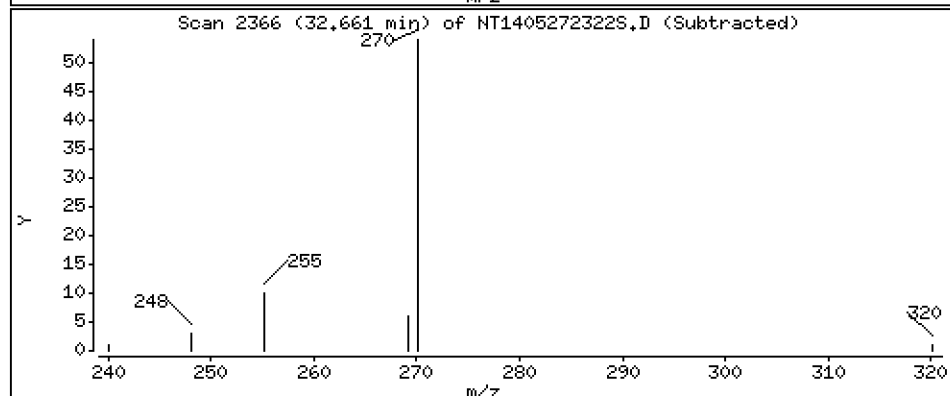
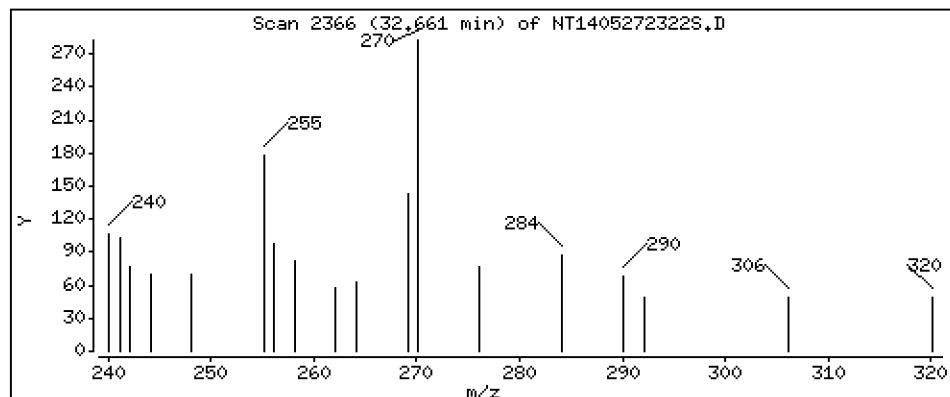
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

60 C3-Benzo(a)anthracenes/Chrysene

Concentration: 0.01201 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

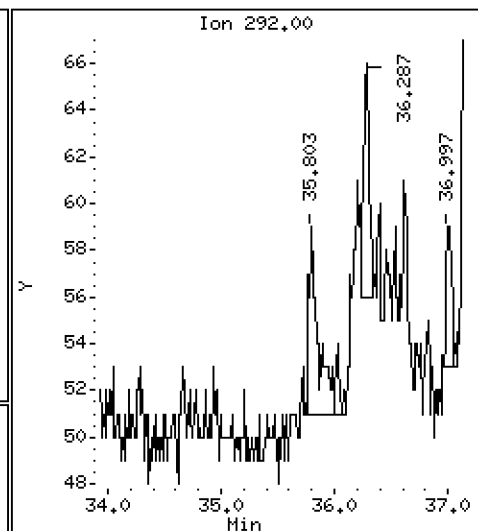
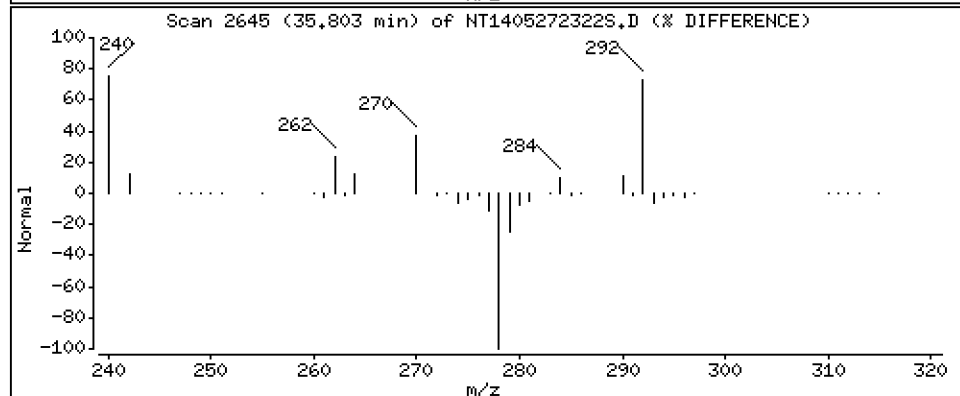
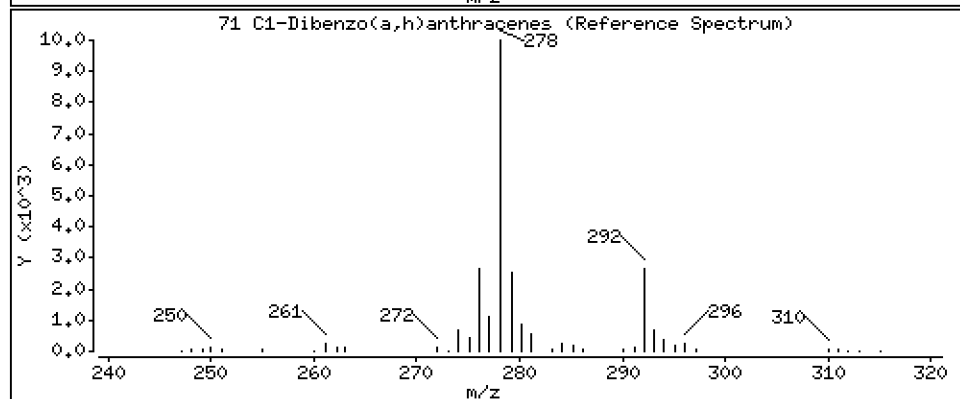
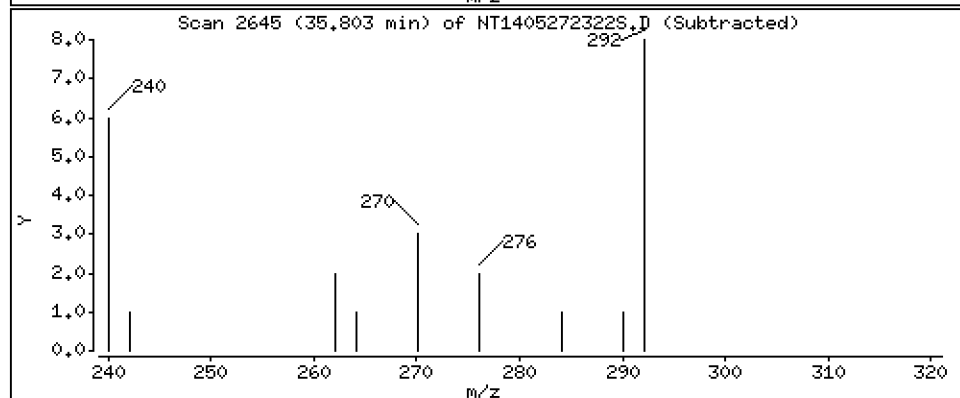
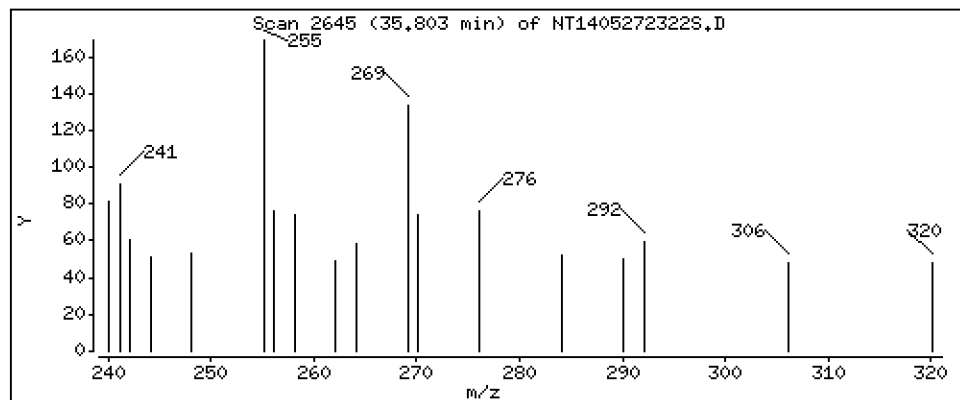
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

71 C1-Dibenzo(a,h)anthracenes

Concentration: 0.0007998 ug/L



Date : 28-MAY-2023 03:09

Client ID:

Instrument: nt14.i

Sample Info: 23D0457-01

Volume Injected (uL): 1.0

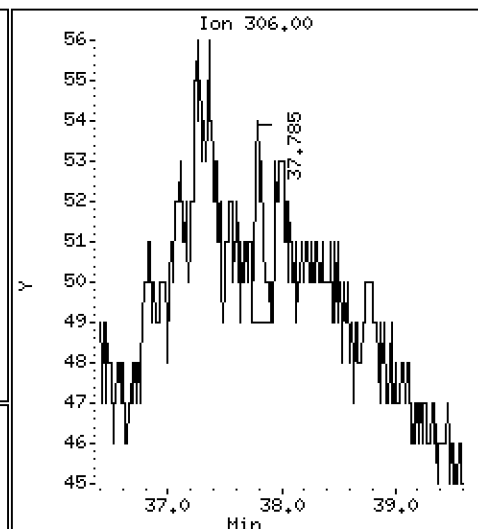
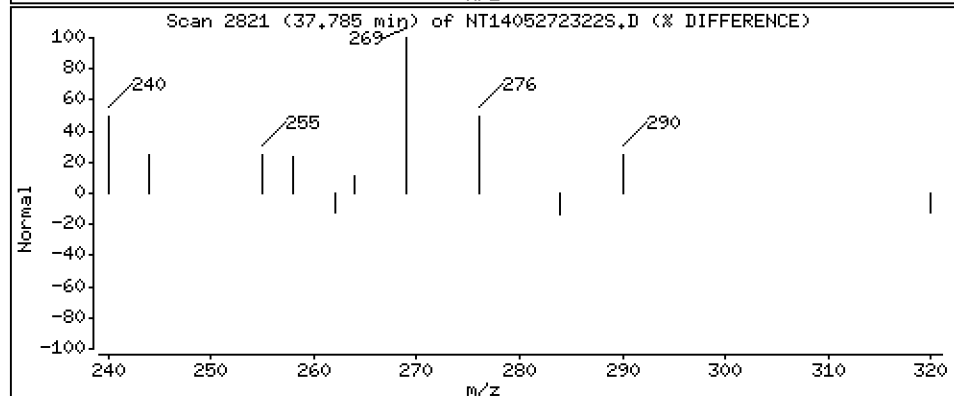
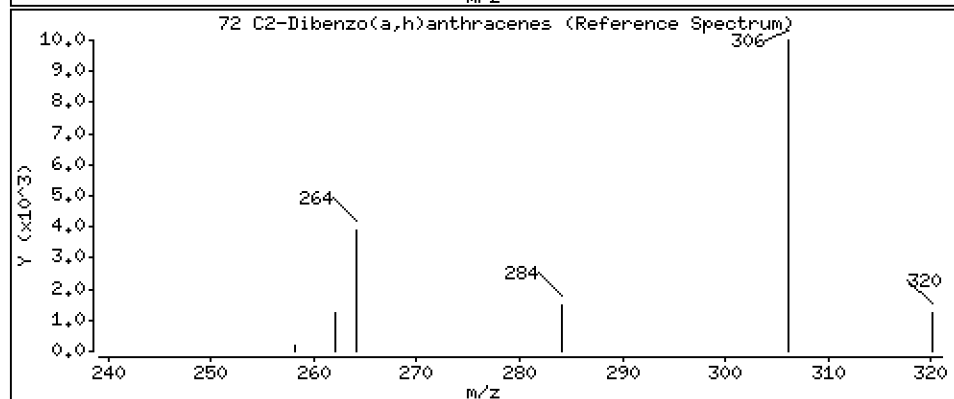
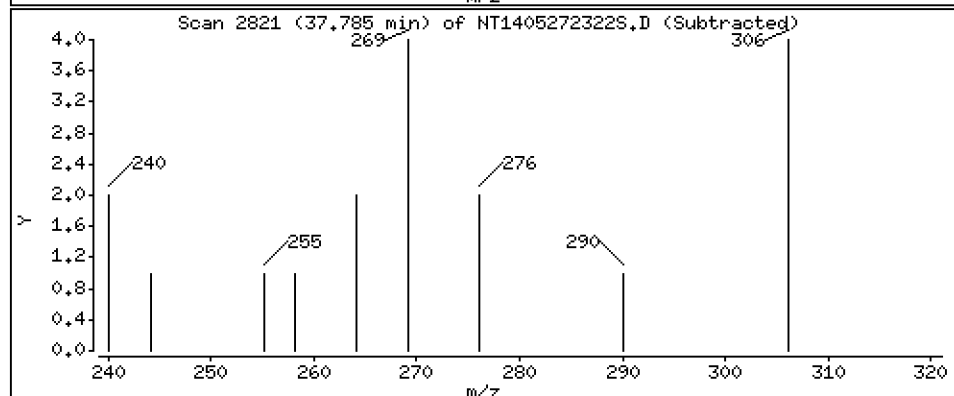
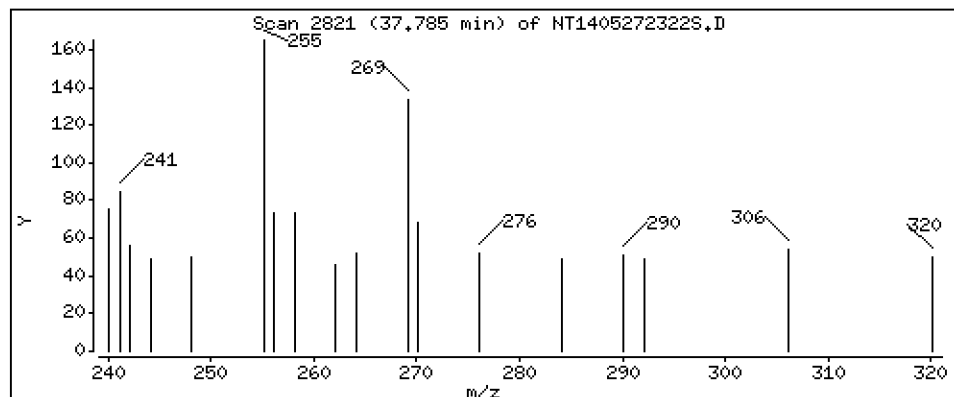
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

72 C2-Dibenzo(a,h)anthracenes

Concentration: 0.0003384 ug/L



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230527.b\20230527.b\NT1405272322S.D
Lab Smp Id: 23D0457-01
Inj Date : 28-MAY-2023 03:09 MS Autotune Date: 11-MAR-2023 16:01
Operator : VTS Inst ID: nt14.i
Smp Info : 23D0457-01
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230527.b\20230527.b\ALKYLRANGES.m
Meth Date : 21-Jun-2023 11:49 van Quant Type: ISTD
Cal Date : 05-MAY-2023 15:12 Cal File: NT1423050507.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ALKYLRANGES.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: $\text{Amt} * \text{DF} * \text{Uf} * \text{Vt} / (\text{Vo} * \text{Vi}) * \text{CpndVariable}$

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/L)
3 C1-Decalin	152	8.445	7.893 (0.446)		143615	10.1209	10.12 (M)
4 C2-Decalin	166	9.223	9.500 (0.487)		360932	25.4357	25.44 (M)
5 C3-Decalin	180	11.106	11.000 (0.586)		218888	15.4255	15.43 (M)
247 C4-Decalin	194	13.497	12.000 (0.712)		179879	12.6765	12.68 (M)
8 C1-Naphthalenes	142	14.299	14.288 (0.755)		30875	0.21237	0.2124 (M)
9 C2-Naphthalenes	156	15.563	15.552 (0.821)		1580203	10.8694	10.87 (M)
10 C3-Naphthalenes	170	17.838	18.135 (0.941)		1799208	12.3758	12.38 (M)
11 C4-Naphthalenes	184	19.530	18.135 (1.031)		942845	6.48532	6.485 (M)
13 C1-Benzothiophenes	148	13.981	14.277 (0.738)		99321	0.89897	0.8990 (M)
14 C2-Benzothiophenes	162	16.277	15.464 (0.859)		58463	0.52916	0.5292 (M)
15 C3-Benzothiophenes	176	17.563	18.952 (0.927)		141451	1.28029	1.280 (M)
* 25 Fluorene-d10	176	18.952	18.952 (1.000)		132463	2.00000	(a)
27 C1-Fluorenes	180	20.744	20.800 (1.095)		205028	2.67906	2.679 (M)
28 C2-Fluorenes	194	22.261	22.006 (1.175)		223496	2.92038	2.920 (M)
29 C3-Fluorenes	208	23.467	22.655 (1.238)		143498	1.87506	1.875 (M)
31 C1-Dibenzothiophenes	198	23.107	23.108 (1.219)		93023	0.99196	0.9920 (M)
32 C2-Dibenzothiophenes	212	24.521	26.000 (1.294)		119677	1.27619	1.276 (M)
33 C3-Dibenzothiophenes	226	25.414	27.000 (1.341)		72121	0.76907	0.7691 (M)
34 C4-Dibenzothiophenes	240	27.230	27.164 (1.437)		12577	0.13412	0.1341 (M)
* 250 Anthracene-d10	188	22.412	22.400 (1.000)		165089	2.00000	(a)

Compounds	QUANT SIG							CONCENTRATIONS	
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
=====	=====	=====	=====	=====	=====	=====	(ug/mL)	(ug/L)	
38 C1-Phenanthrenes/Anthracenes	192	23.617	24.197	(1.054)	178948	1.62889	1.629 (M)		
39 C2-Phenanthrenes/Anthracenes	206	25.286	25.901	(1.128)	324489	2.95369	2.954 (M)		
40 C3-Phenanthrenes/Anthracenes	220	27.025	27.000	(1.206)	5969	0.05433	0.05433		
41 C4-Phenanthrenes/Anthracenes	234	28.282	29.000	(1.262)	2564	0.02334	0.02334		
48 C1-Fluoranthenes/Pyrenes	216	27.285	27.317	(1.217)	4927	0.04700	0.04700		
49 C2-Fluoranthenes/Pyrenes	230	28.293	28.052	(1.262)	1391	0.01327	0.01327		
50 C3-Fluoranthenes/Pyrenes	244	29.454	29.147	(1.314)	1308	0.01248	0.01248		
249 C4-Fluoranthenes/Pyrenes	258	33.527	33.527	(1.496)	2328	0.02221	0.02221 (a)		
52 C1-Naphthobenzothiophenes	248	30.205	32.525	(1.348)	5509	0.07968	0.07968 (M)		
53 C2-Naphthobenzothiophenes	262	30.937	33.189	(1.380)	4524	0.06543	0.06543 (M)		
54 C3-Naphthobenzothiophenes	276	31.827	36.000	(1.420)	2978	0.04307	0.04307 (M)		
248 C4-Naphthobenzothiophenes	290	Compound Not Detected.							
* 251 Benzo (e) pyrene-d12	264	33.189	33.189	(1.000)	101507	2.00000	(a)		
58 C1-Benzo (a) anthracenes/Chrysen	242	30.239	30.239	(0.911)	2302	0.02893	0.02893		
59 C2-Benzo (a) anthracenes/Chrysen	256	33.189	33.189	(1.000)	4431	0.05568	0.05568		
60 C3-Benzo (a) anthracenes/Chrysen	270	32.660	33.000	(0.984)	956	0.01201	0.01201		
61 C4-Benzo (a) anthracenes/Chrysen	284	Compound Not Detected.							
71 C1-Dibenzo (a,h) anthracenes	292	35.803	35.532	(1.079)	52	0.00080	0.0007998 (a)		
72 C2-Dibenzo (a,h) anthracenes	306	37.785	38.000	(1.138)	22	3e-004	0.0003384 (a)		
73 C3-Dibenzo (a,h) anthracenes	320	Compound Not Detected.							

QC Flag Legend

- a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 27-MAY-2023
Lab File ID: NT1405272322S.D Calibration Time: 23:57
Lab Smp Id: 23D0457-01
Analysis Type: SV Level: LOW
Quant Type: ISTD Sample Type: AIR
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20230527.b\20230527.b\ALKYLRANGES.m
Misc Info:

Test Mode:
Use Last Continuing Calibrator.

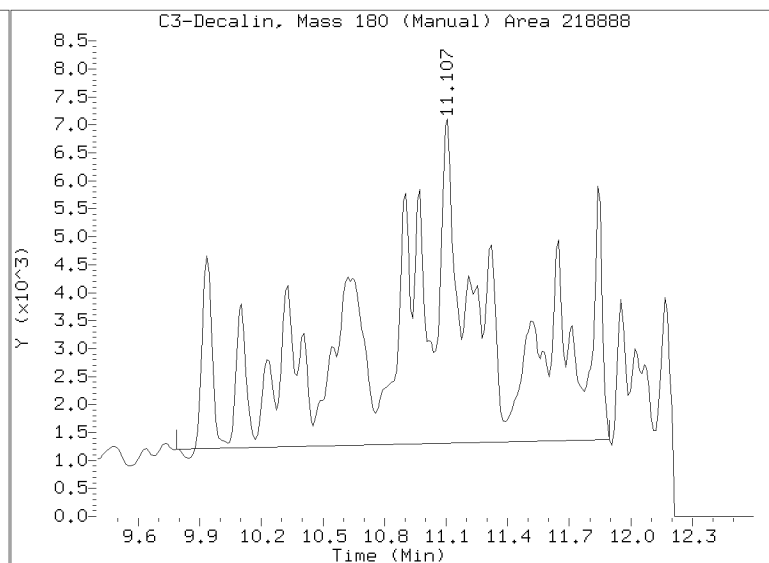
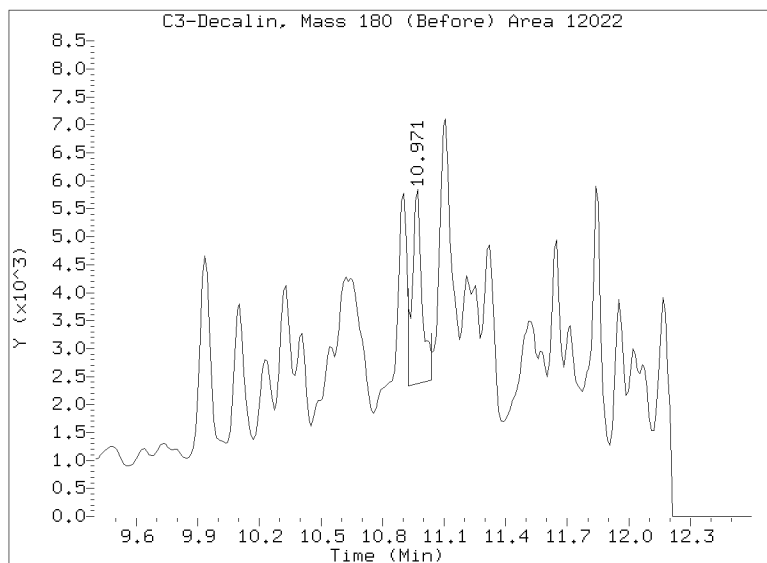
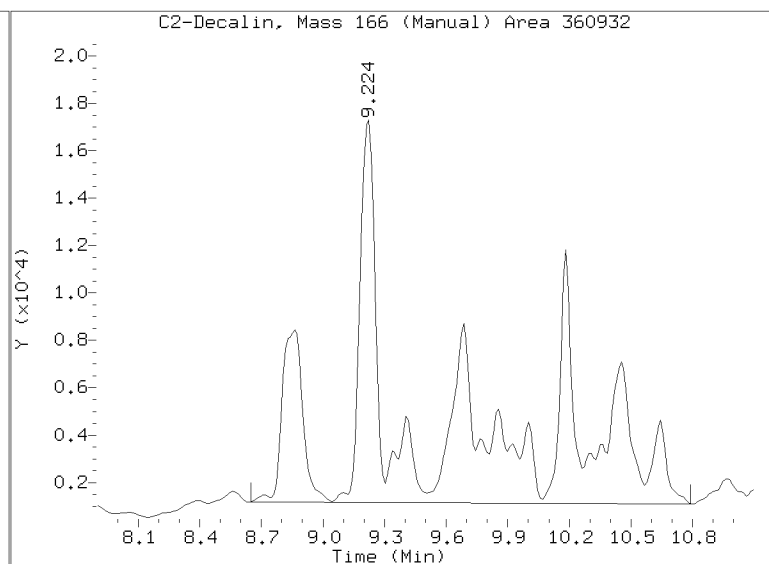
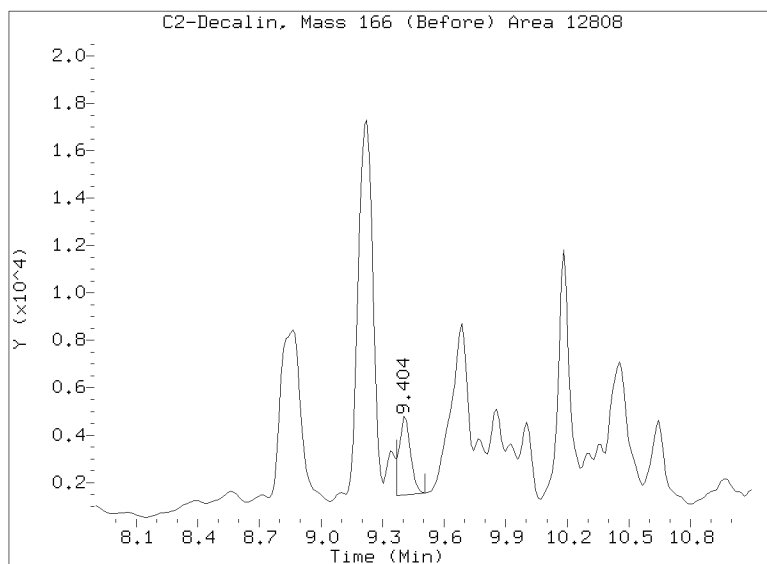
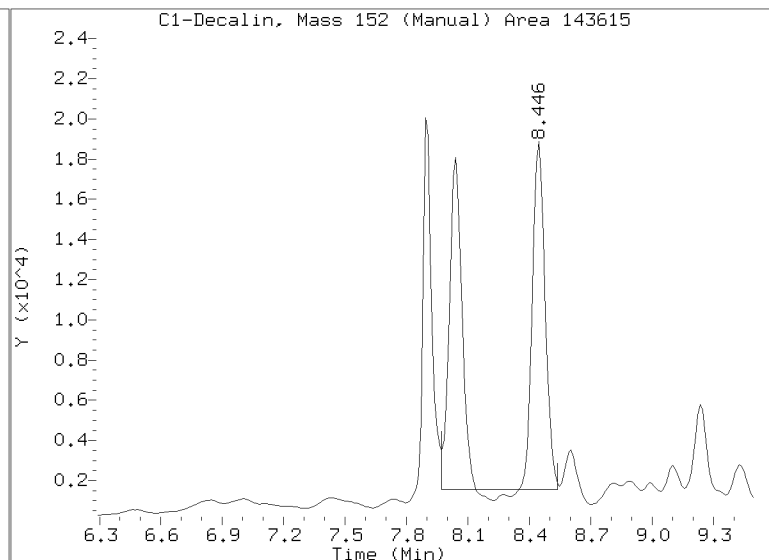
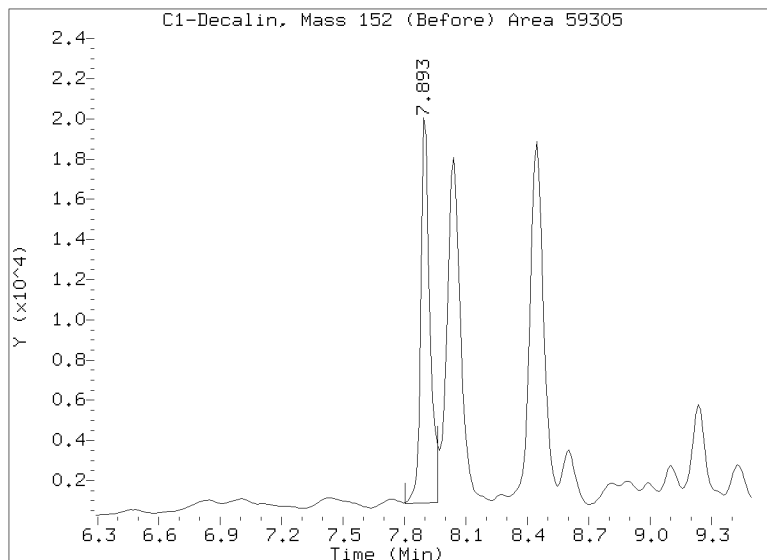
COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	157005	78503	314010	132463	-15.63
250 Anthracene-d10	197882	98941	395764	165089	-16.57
251 Benzo(e)pyrene-d1	118012	59006	236024	101507	-13.99

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	18.95	18.45	19.45	18.95	-0.00
250 Anthracene-d10	22.40	21.90	22.90	22.41	0.05
251 Benzo(e)pyrene-d1	33.19	32.69	33.69	33.19	-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.

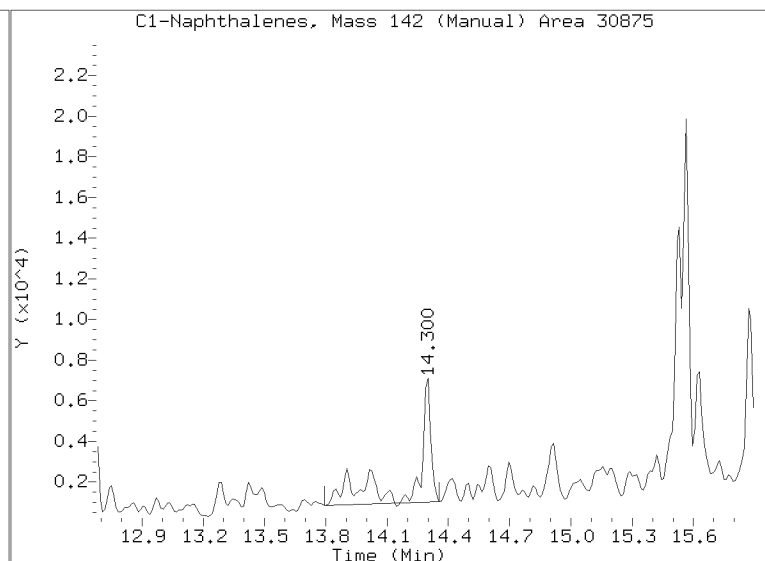
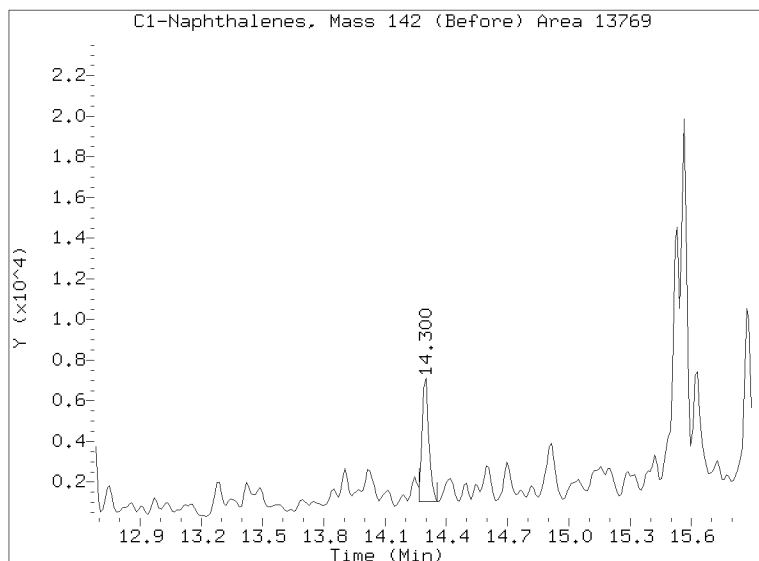
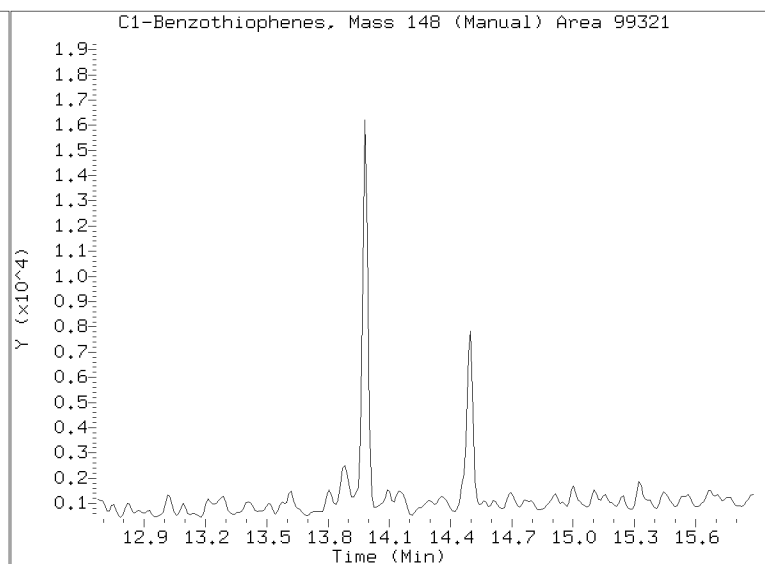
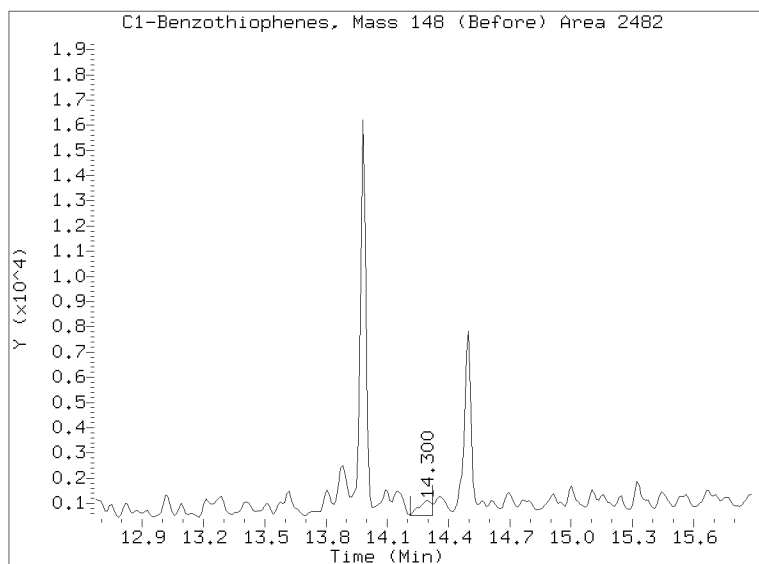
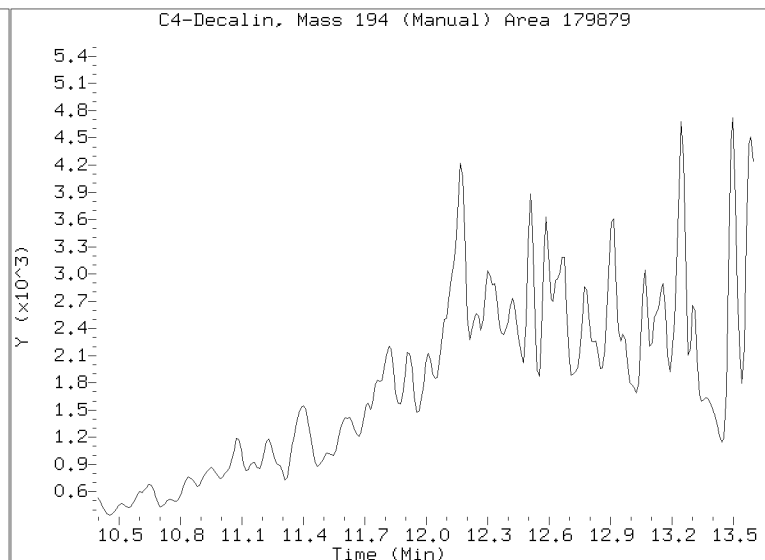
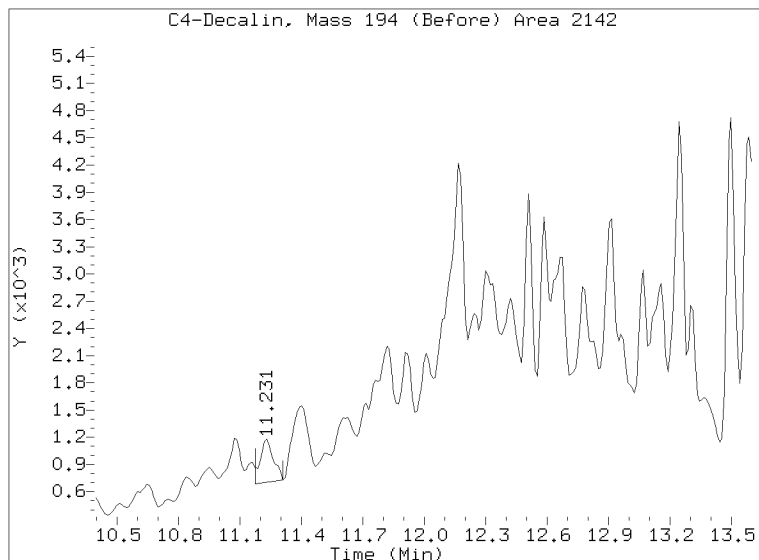
Quant Ion Manual Peak Adjustment Report

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Injection Date: 28-MAY-2023 03:09
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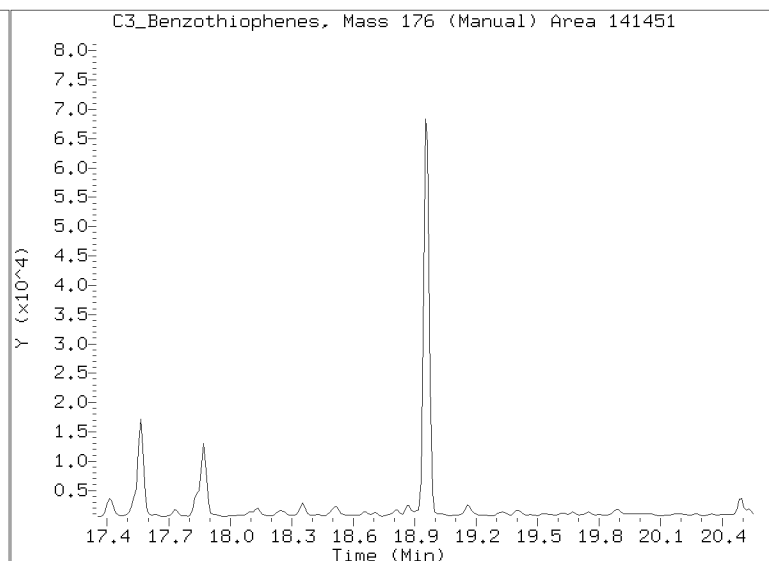
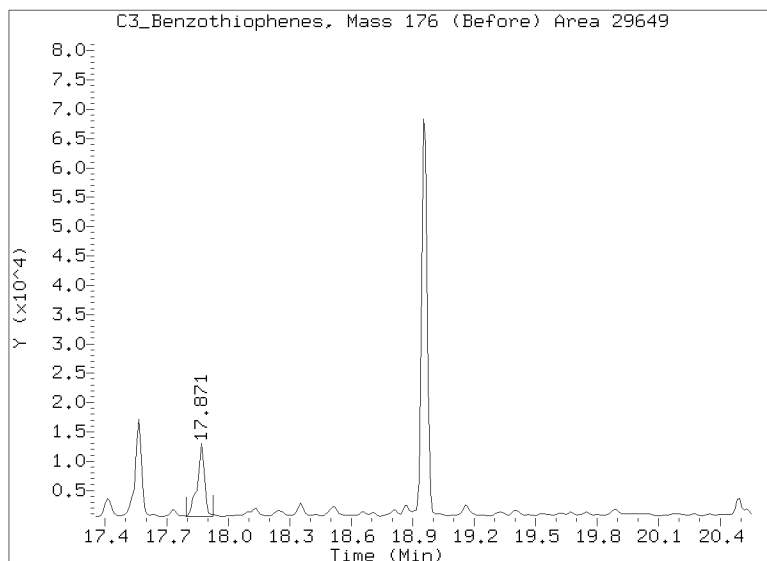
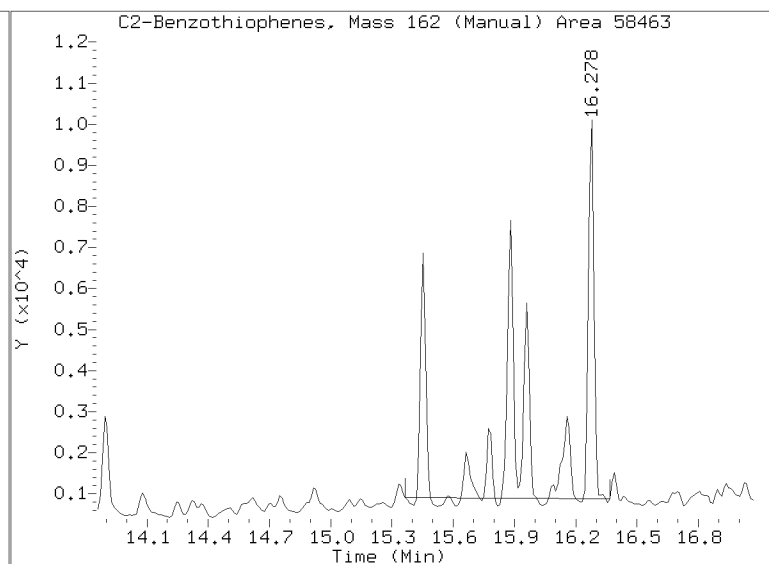
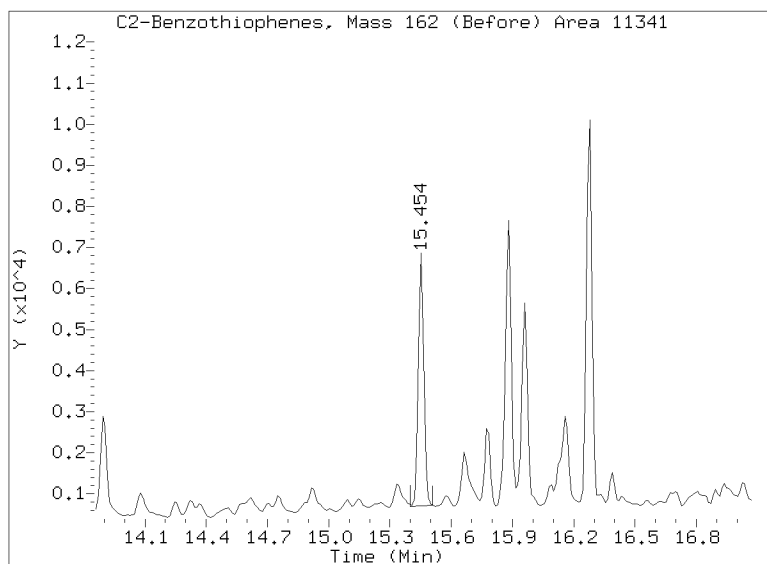
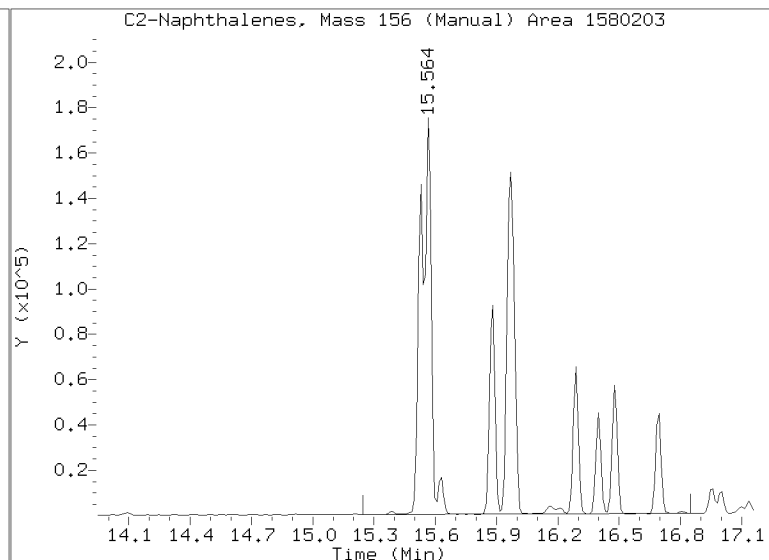
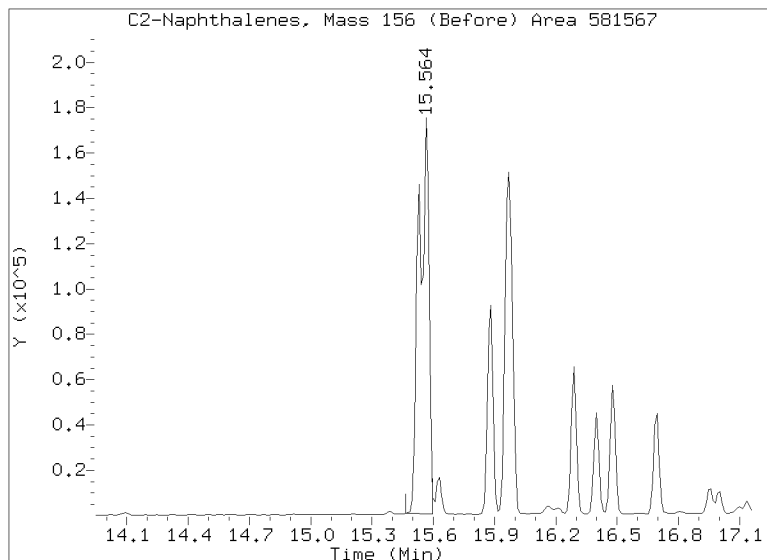
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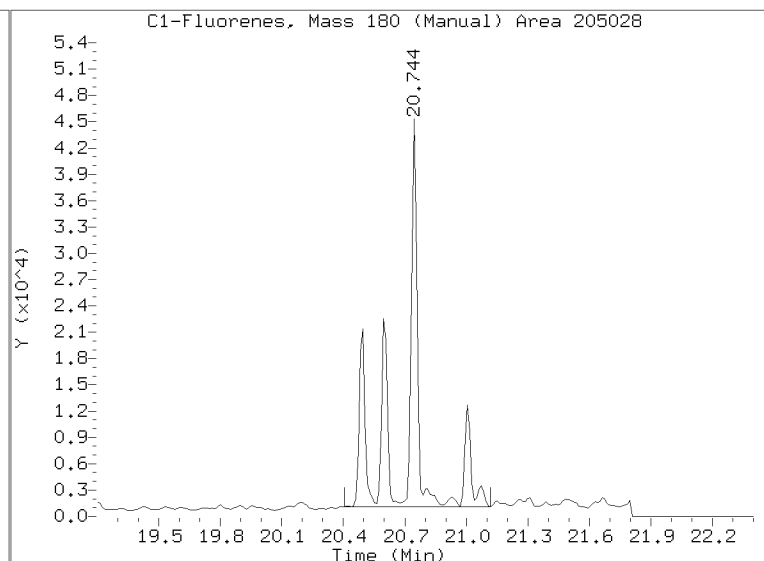
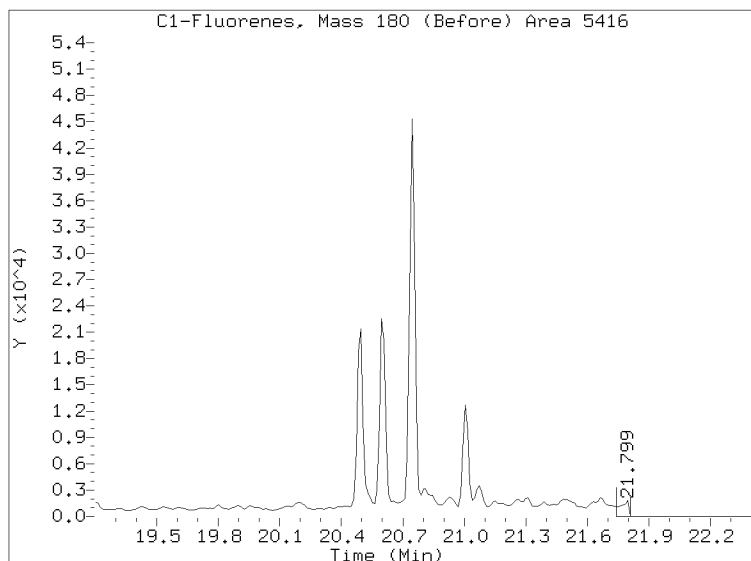
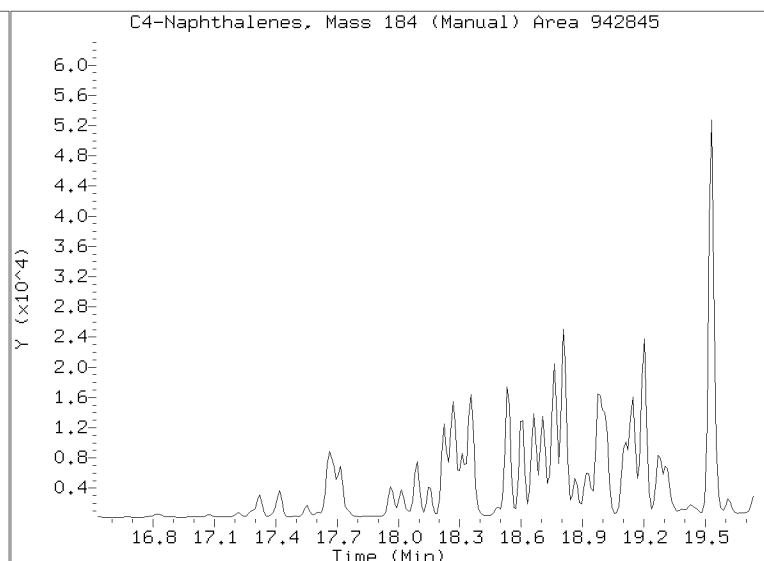
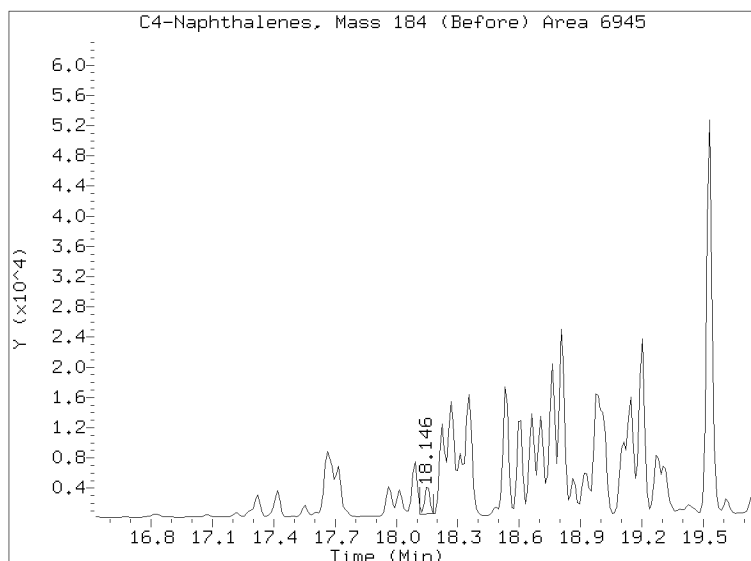
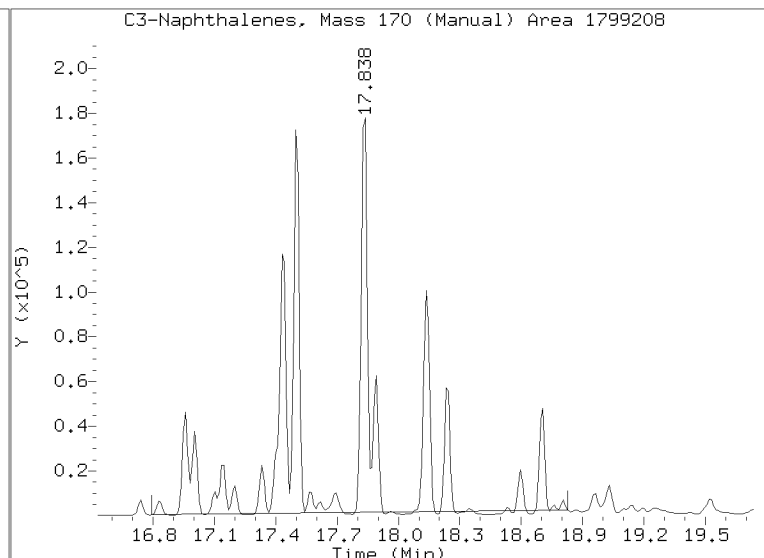
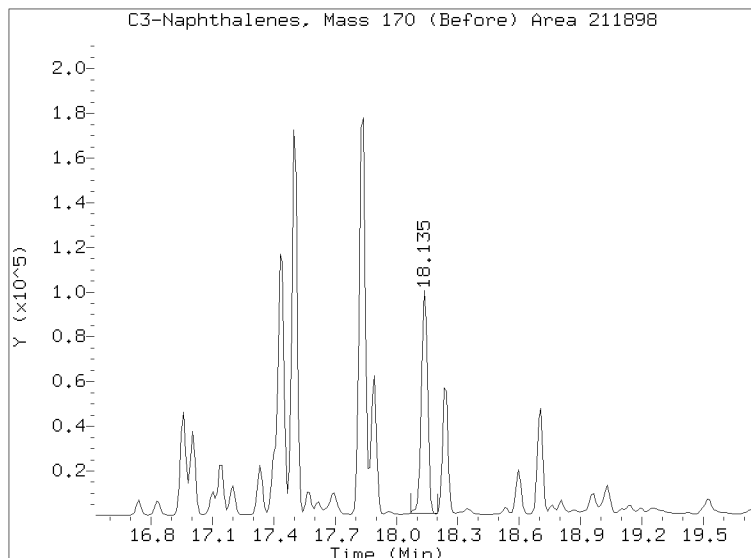
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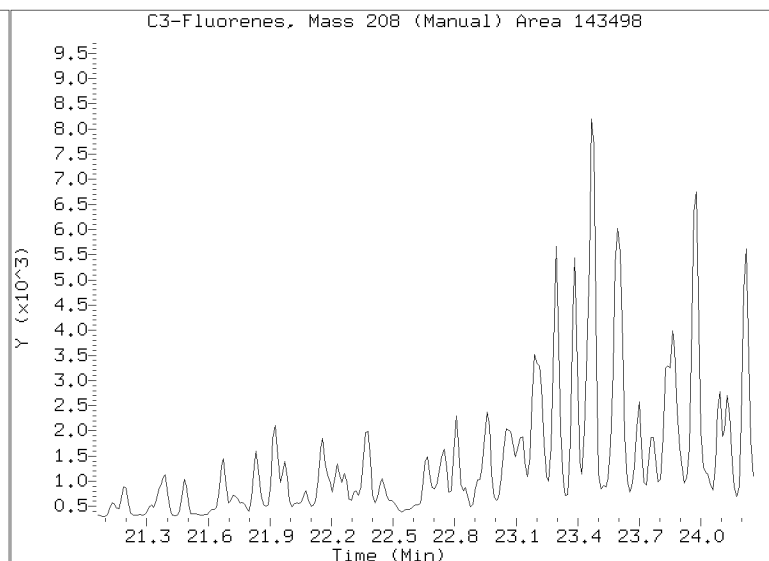
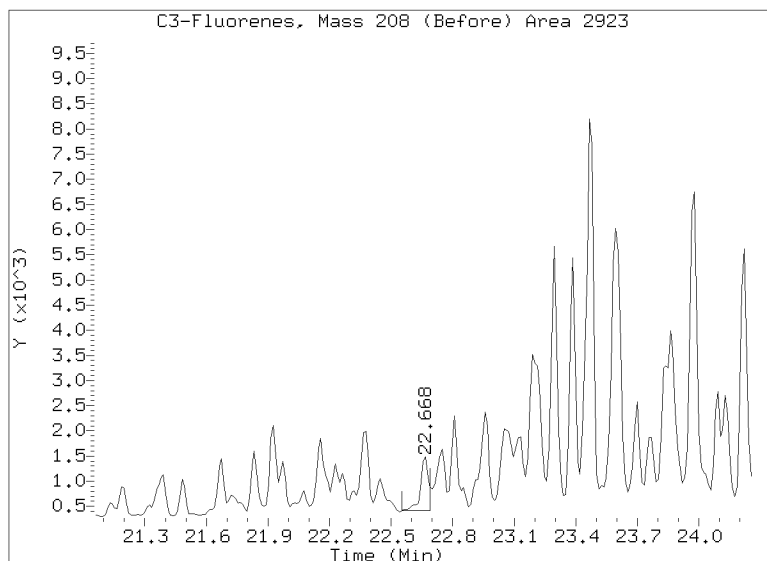
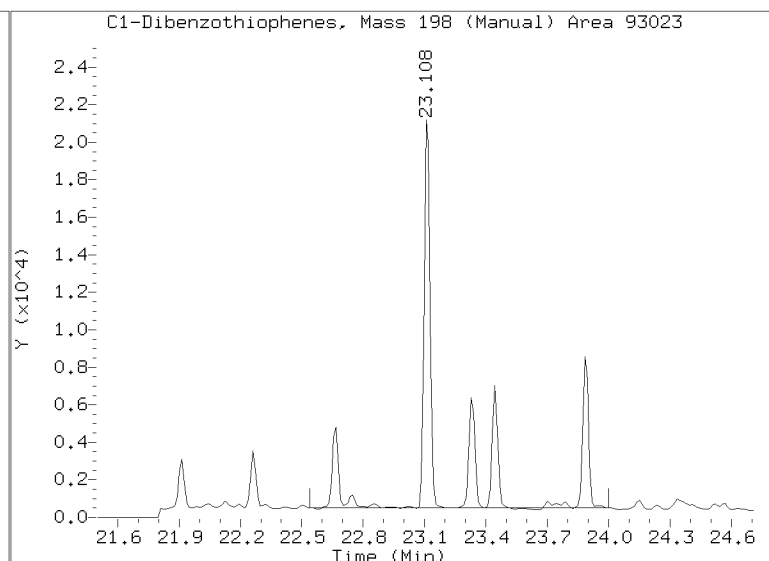
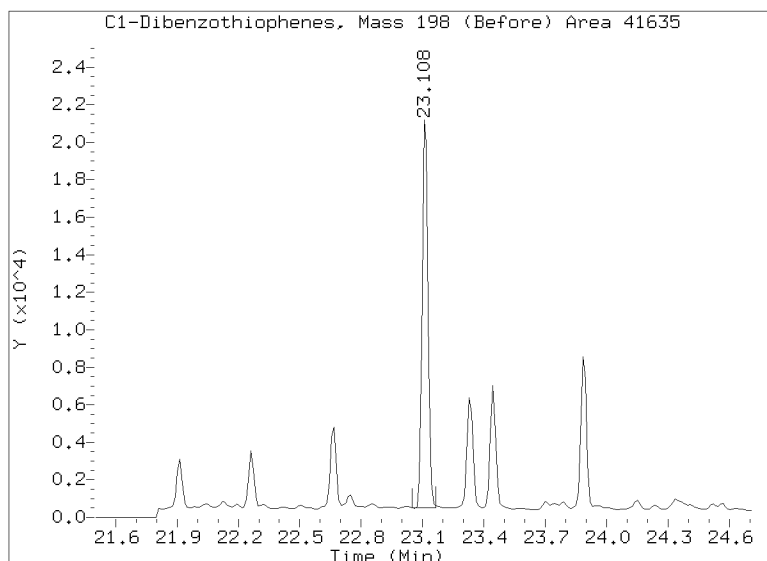
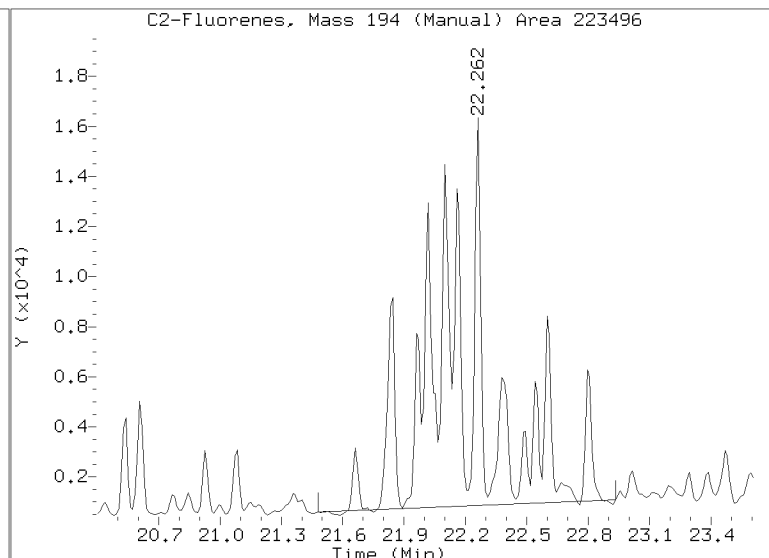
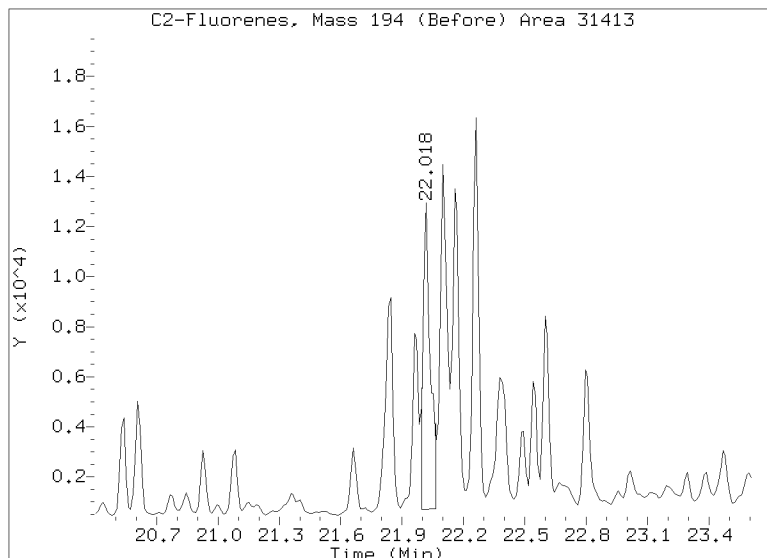
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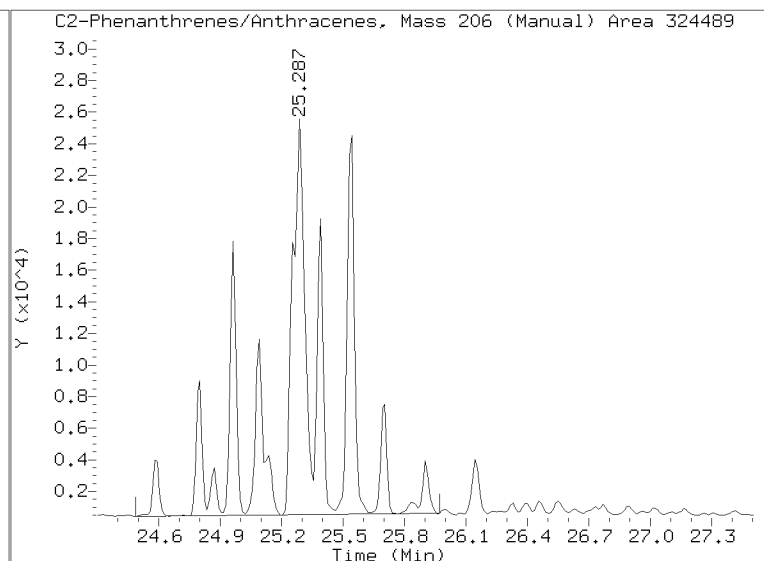
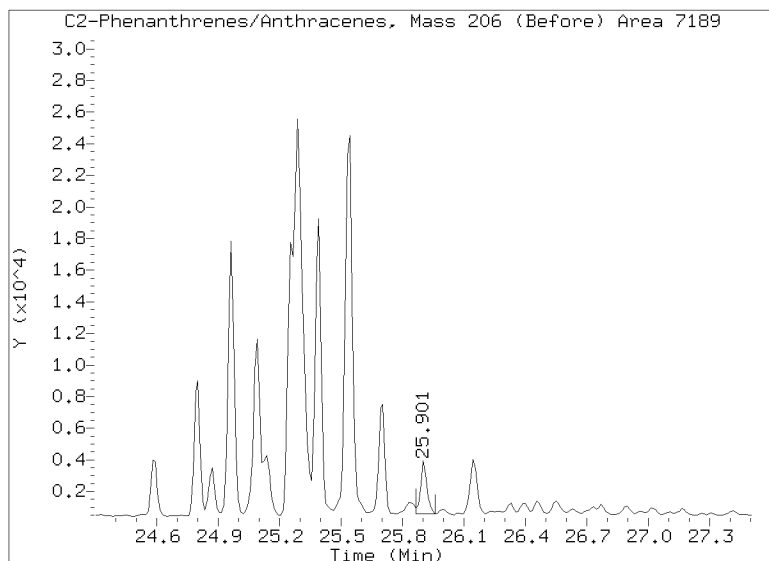
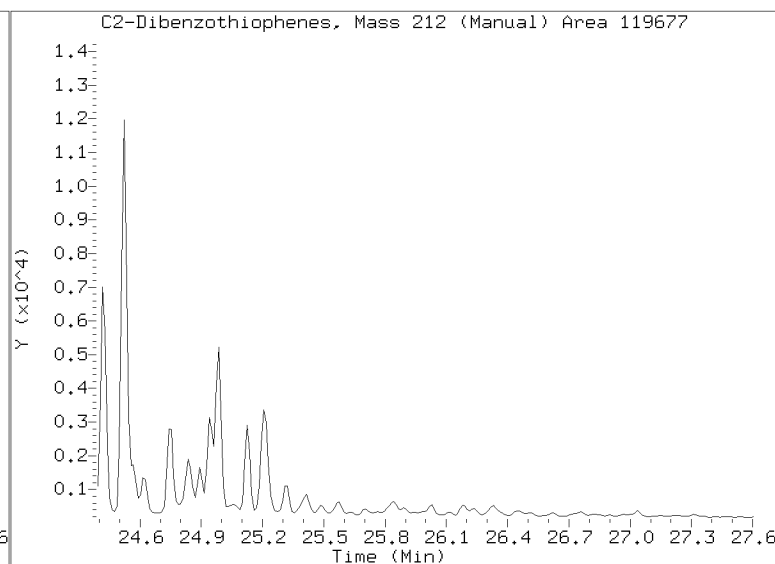
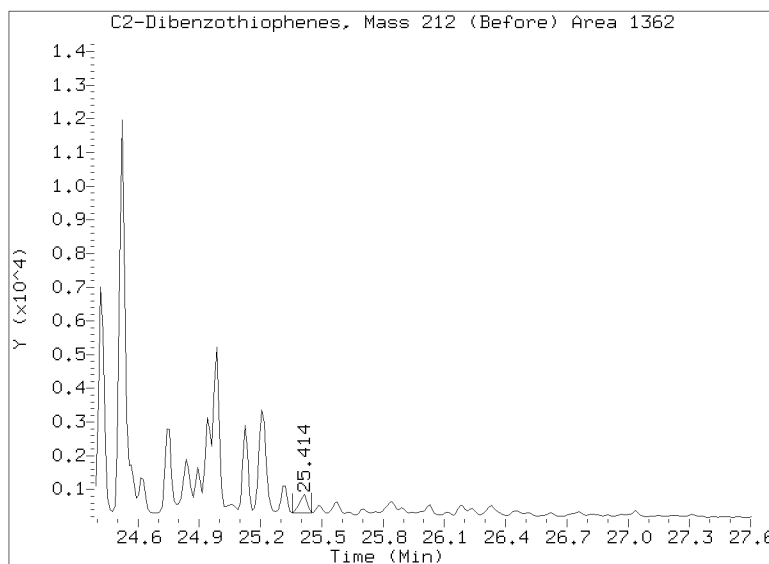
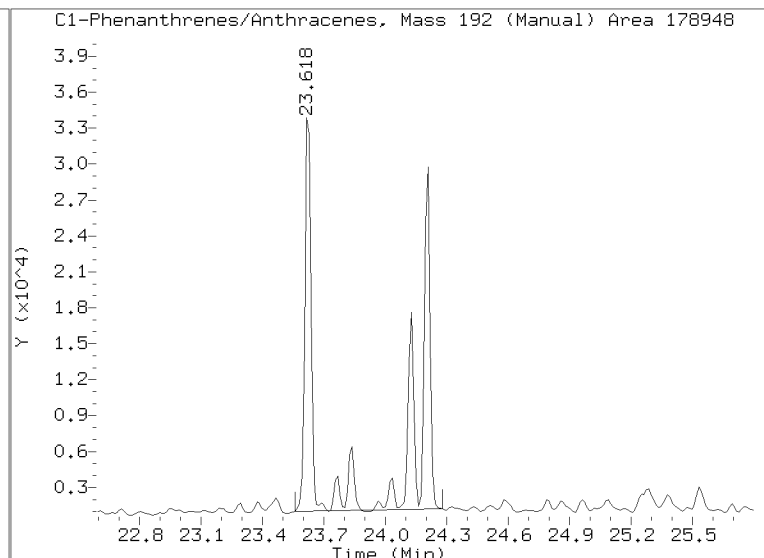
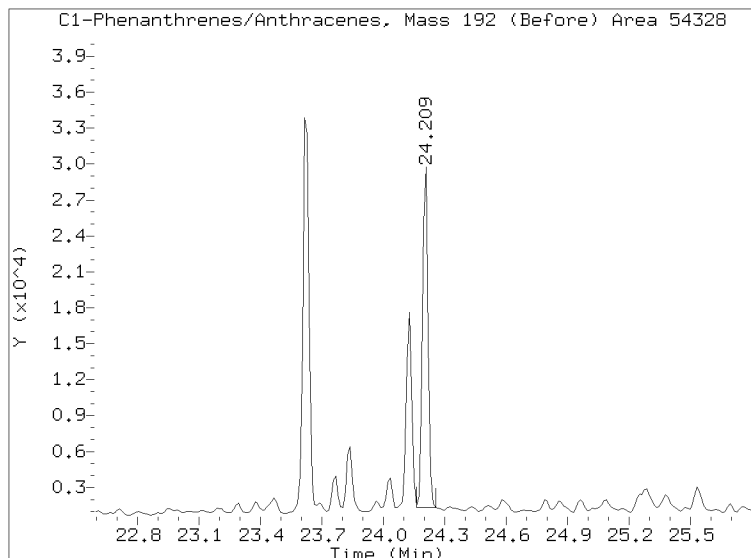
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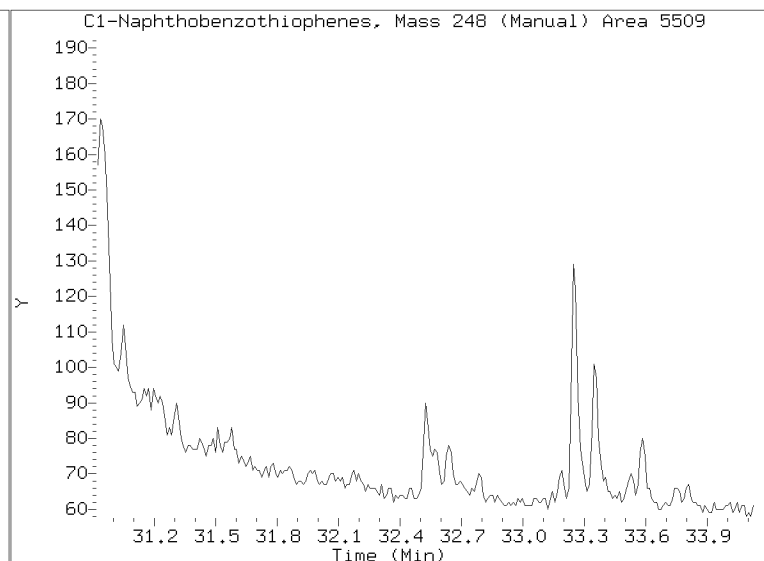
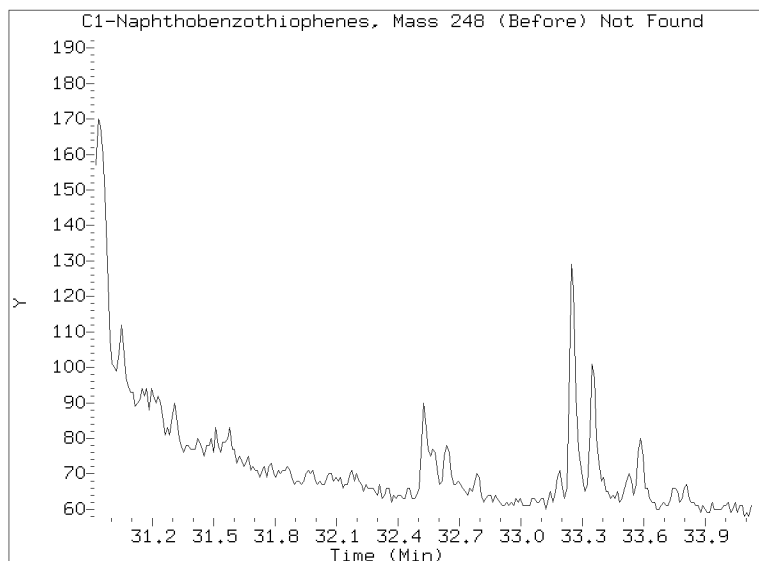
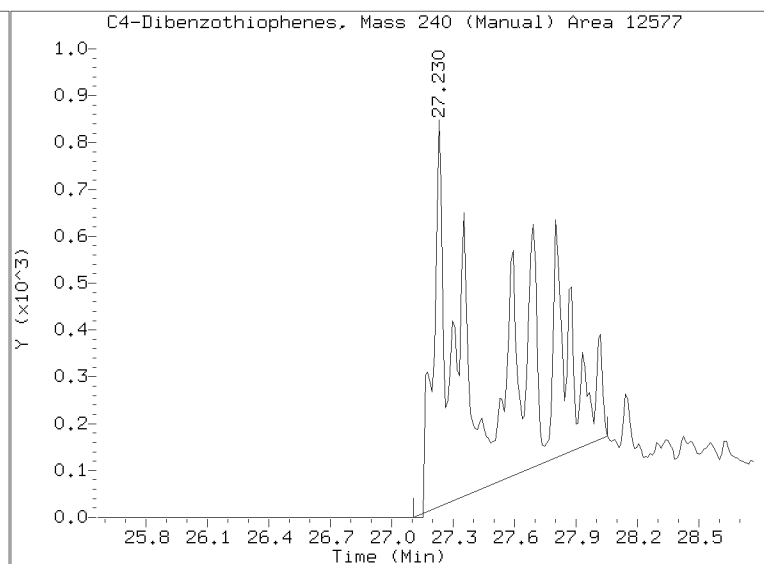
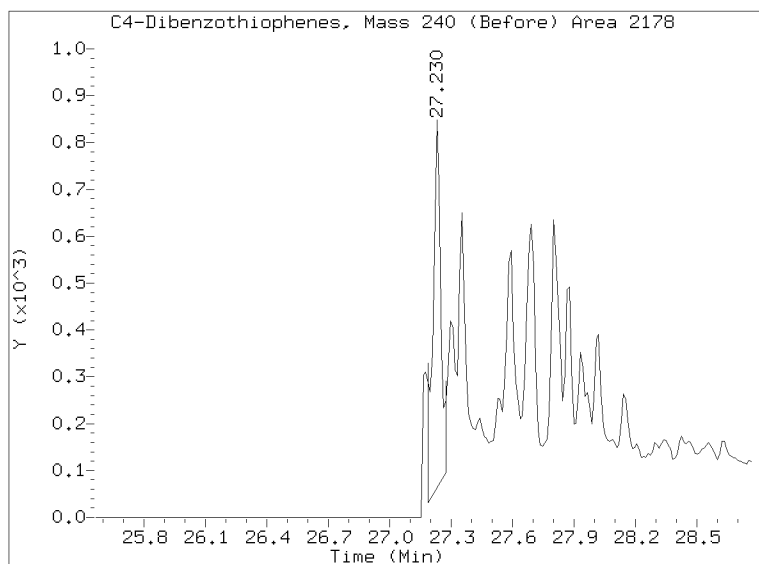
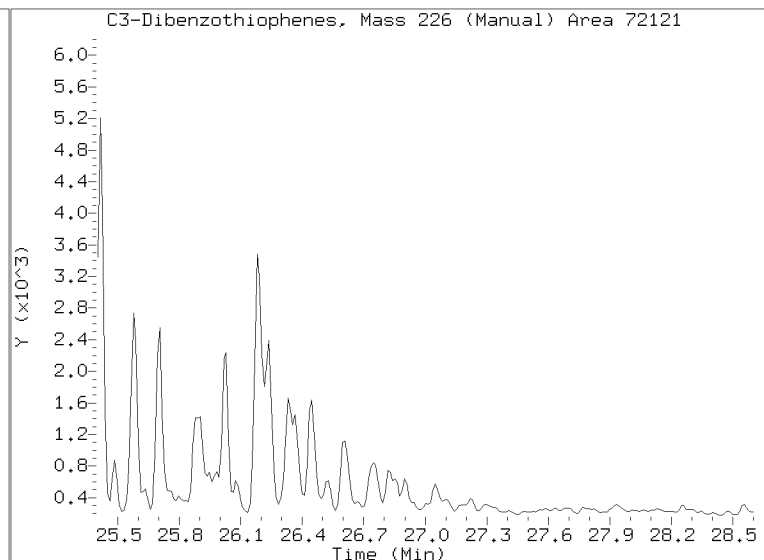
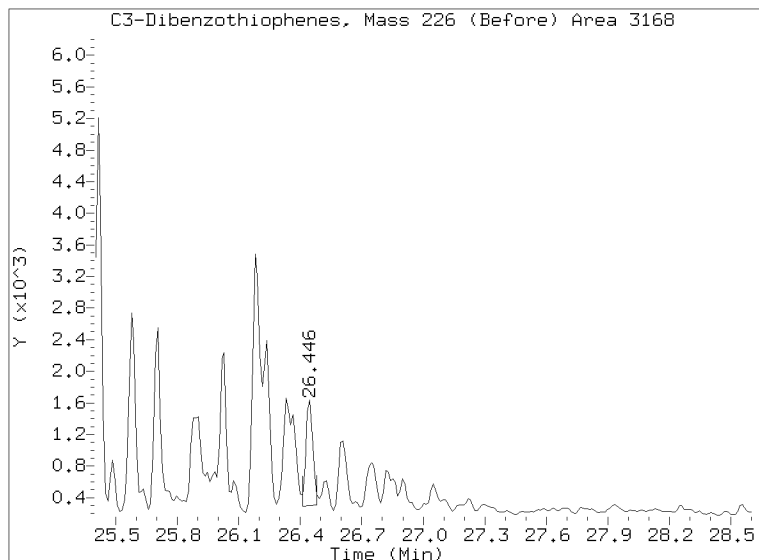
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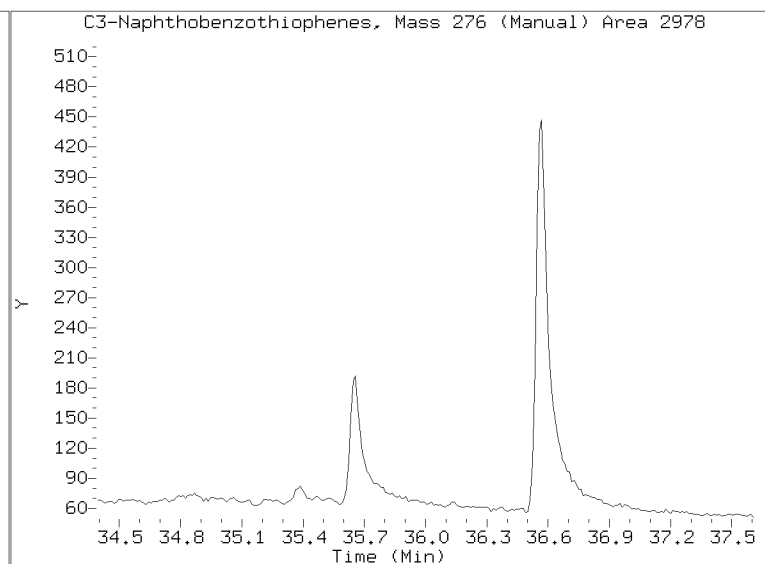
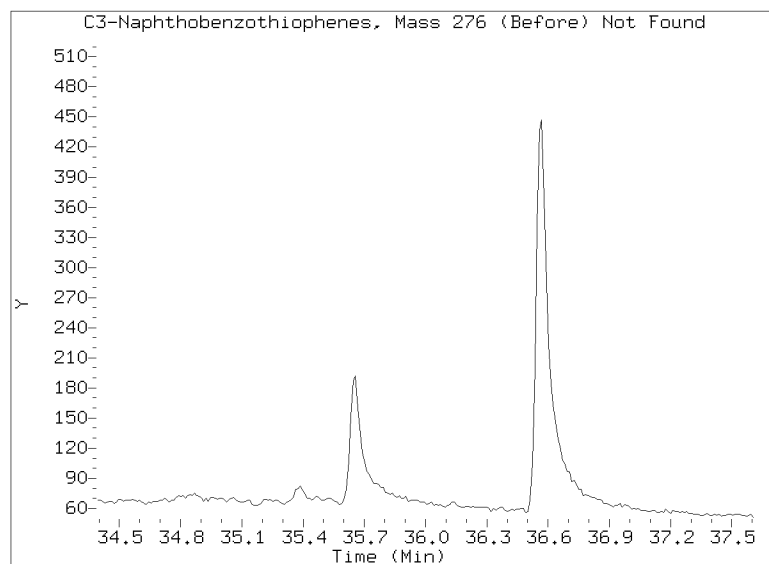
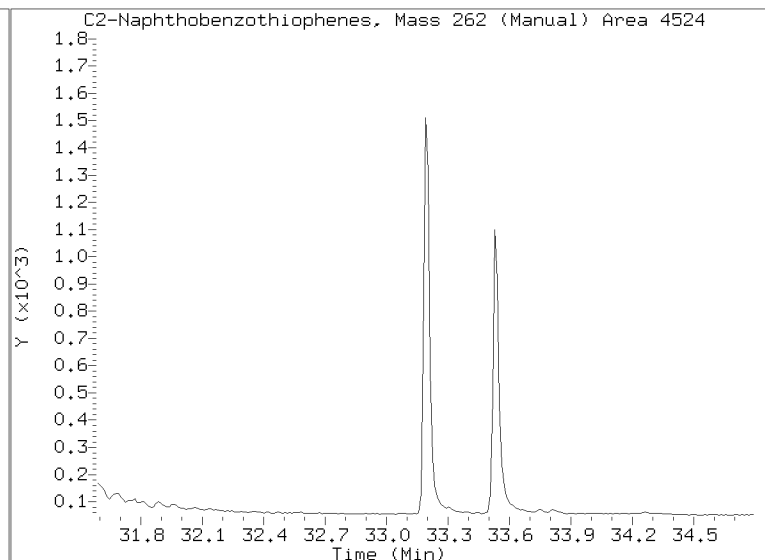
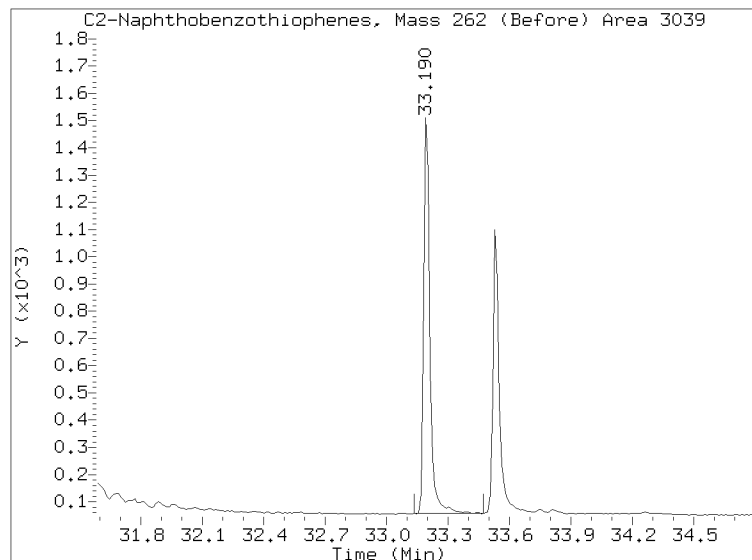
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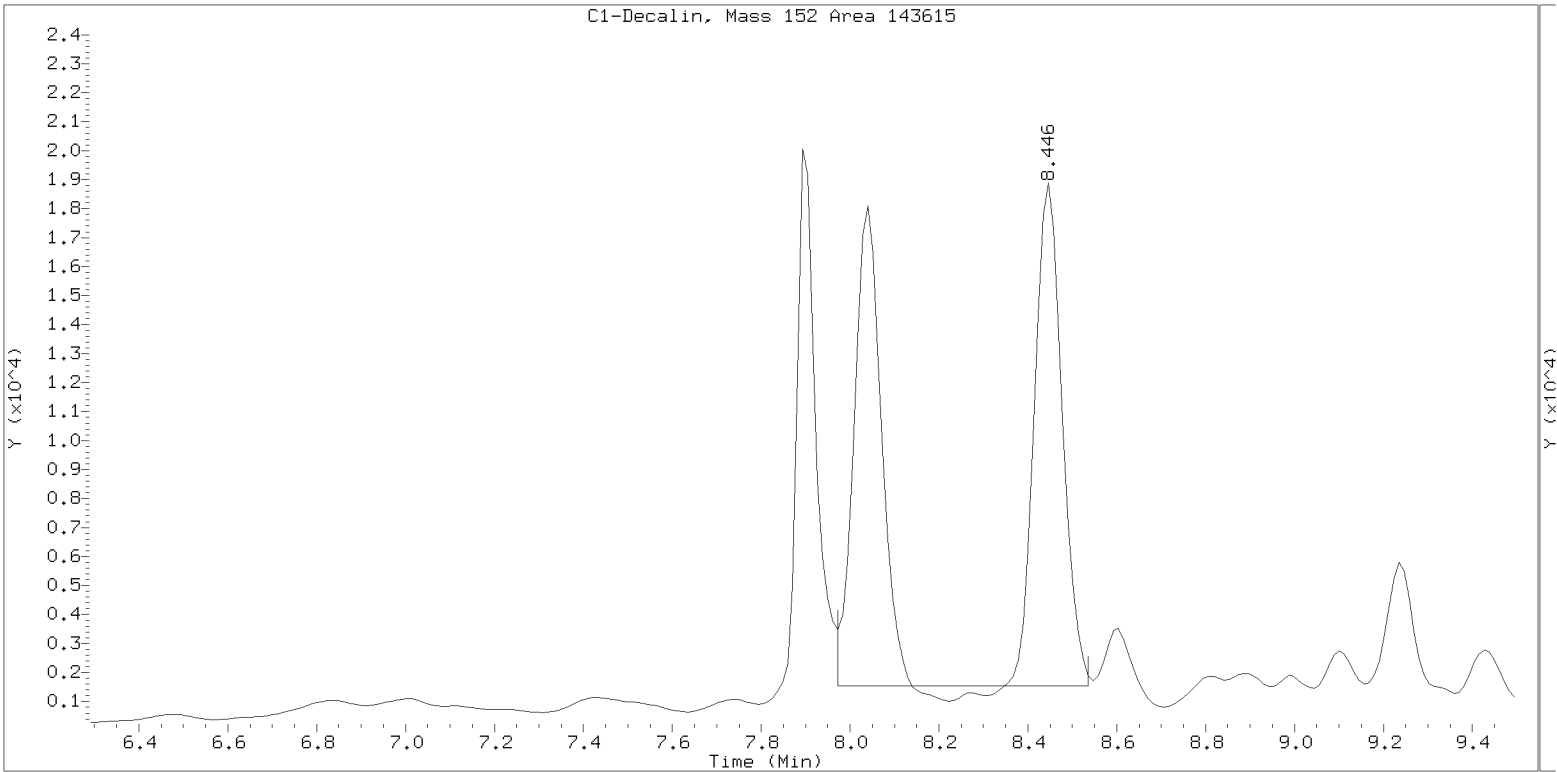


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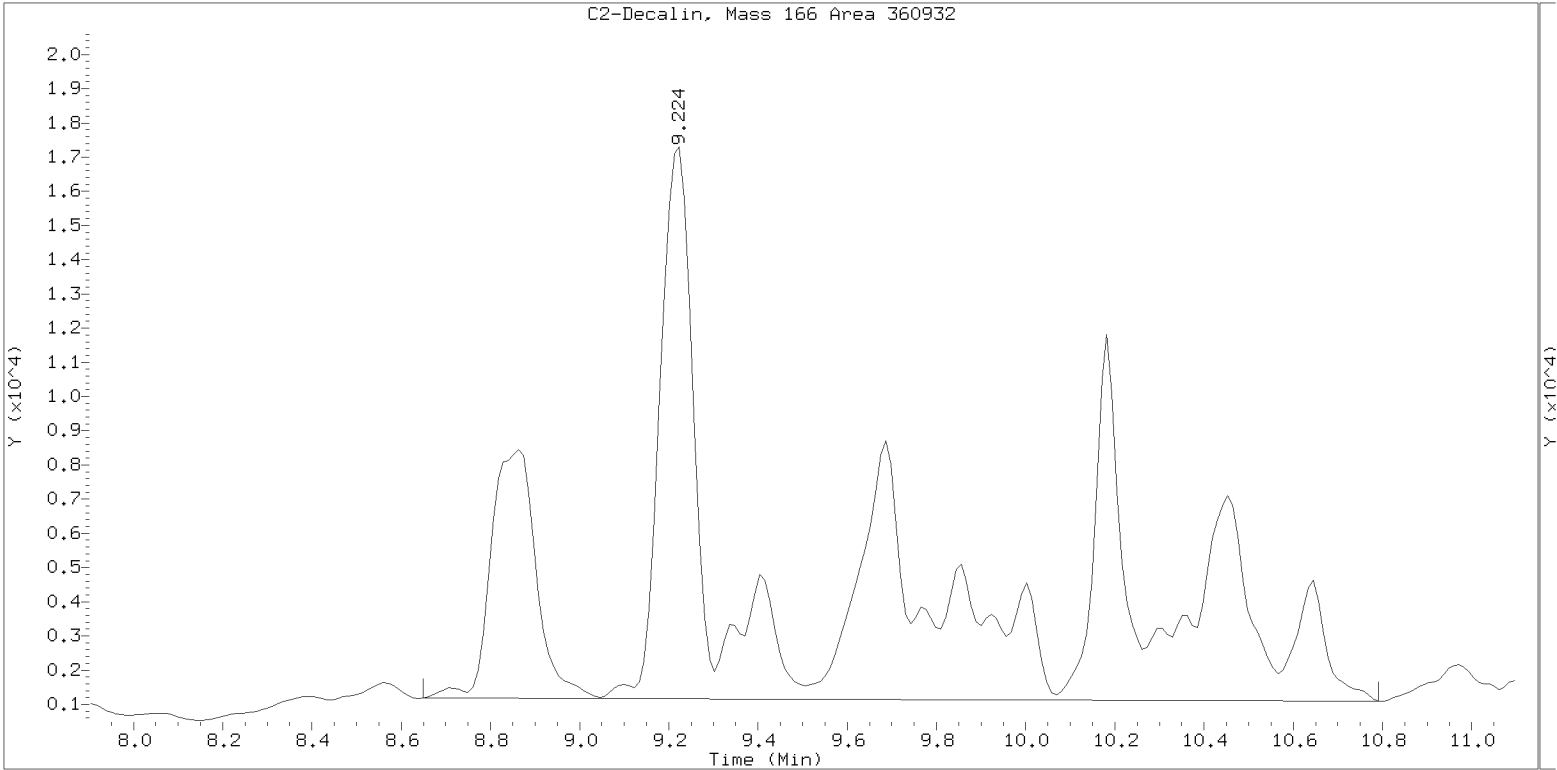
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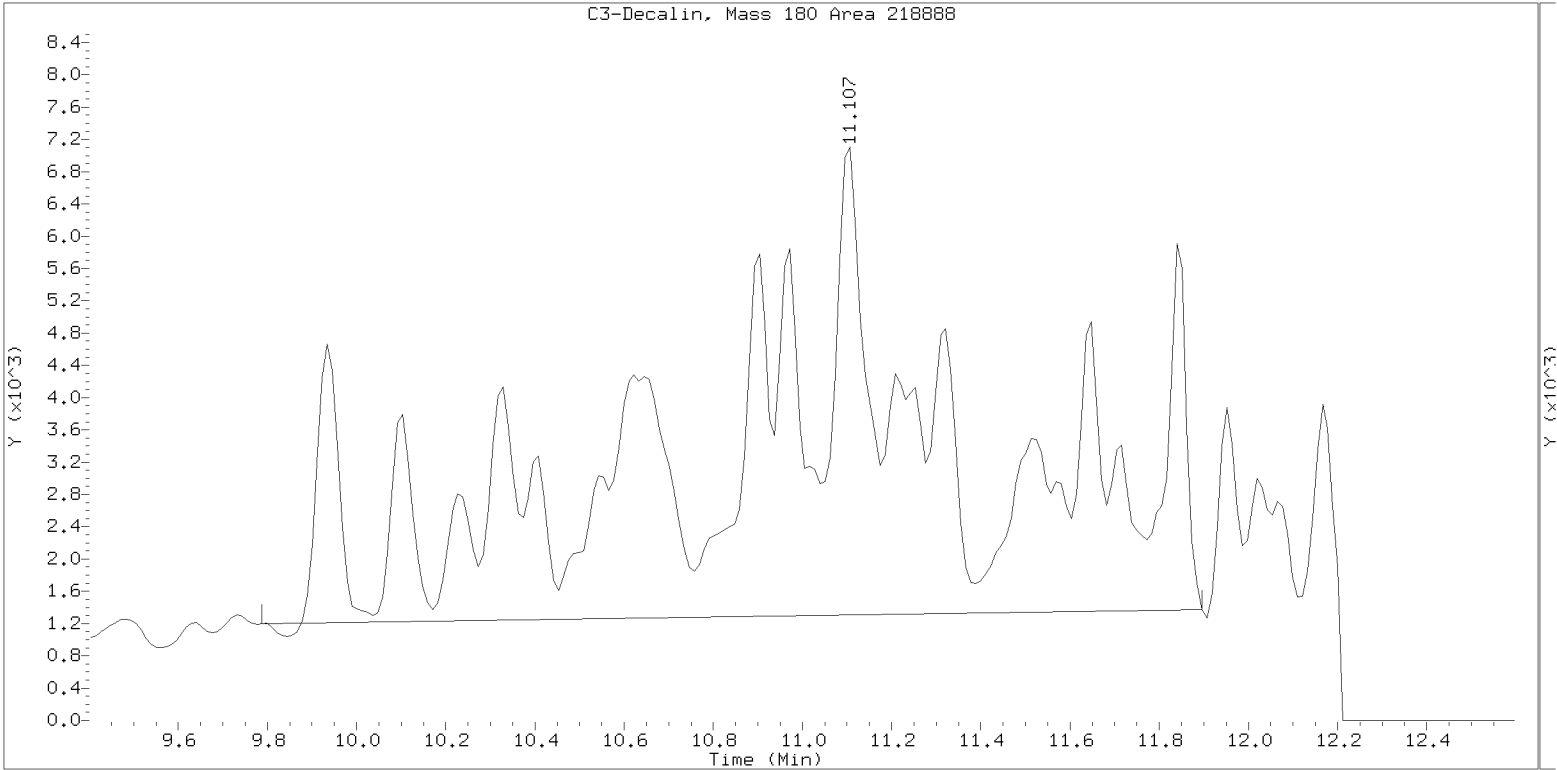
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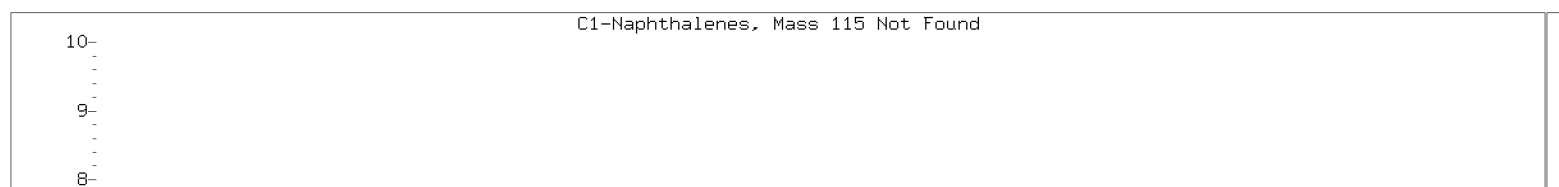
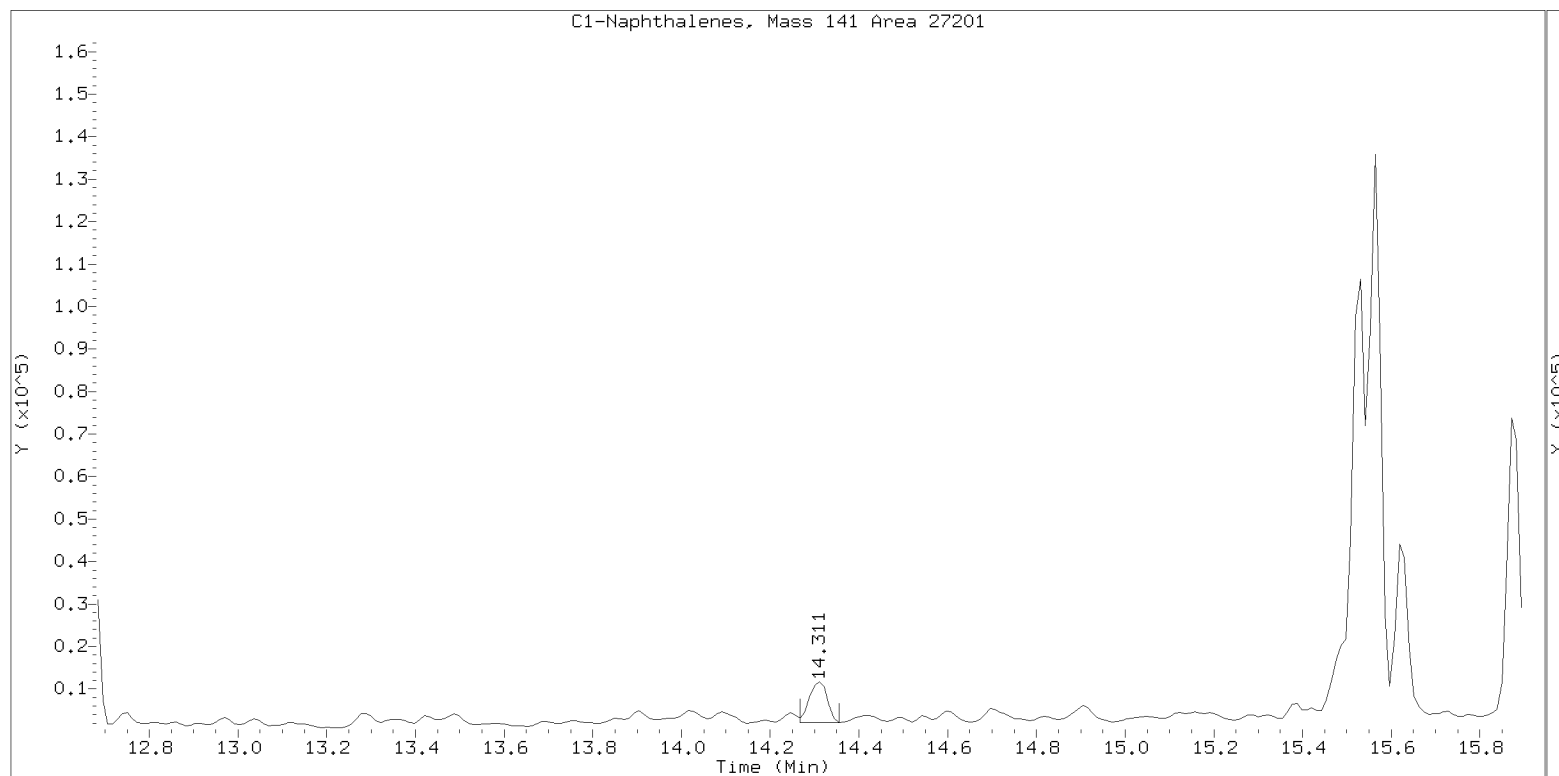
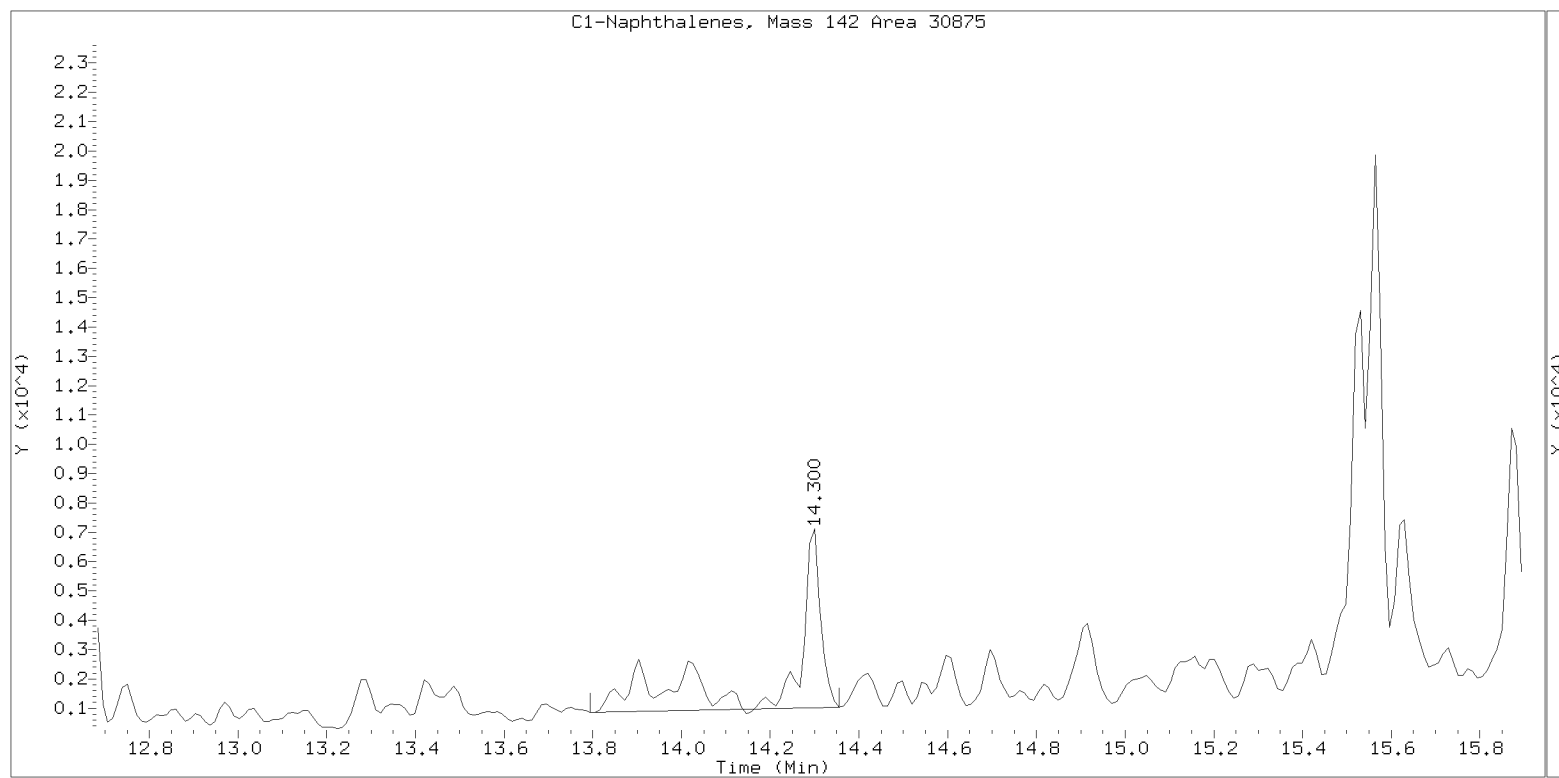


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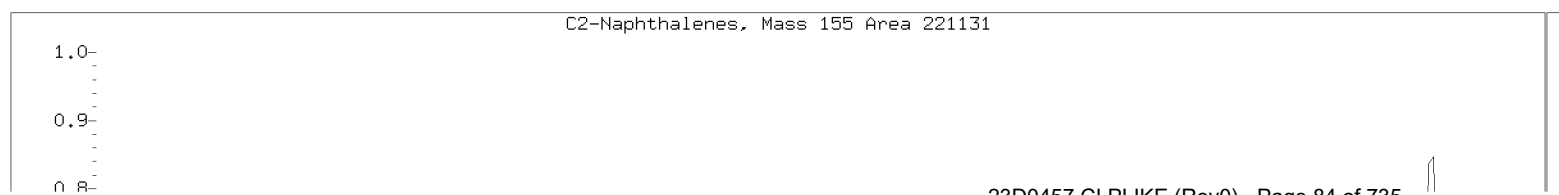
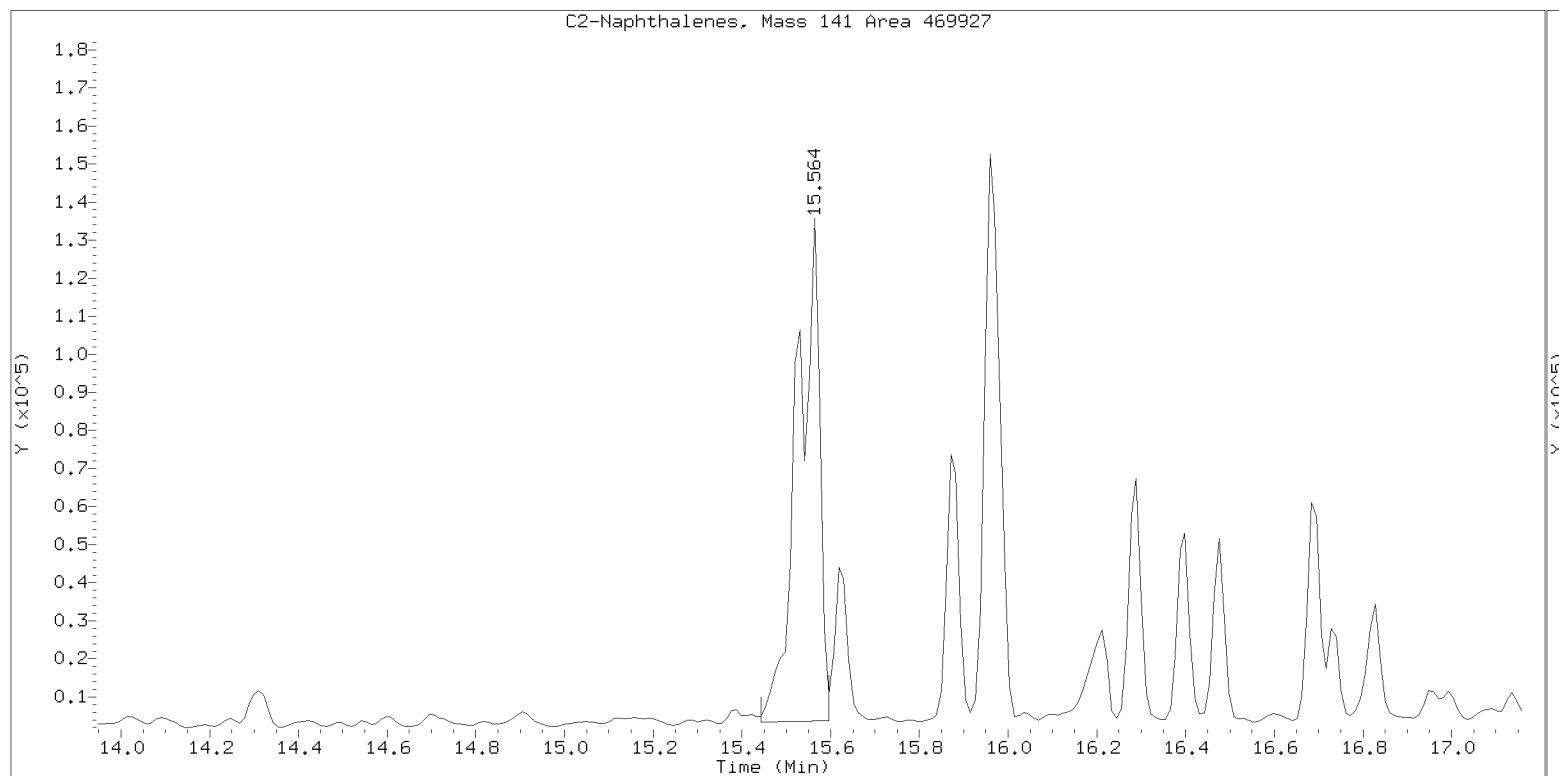
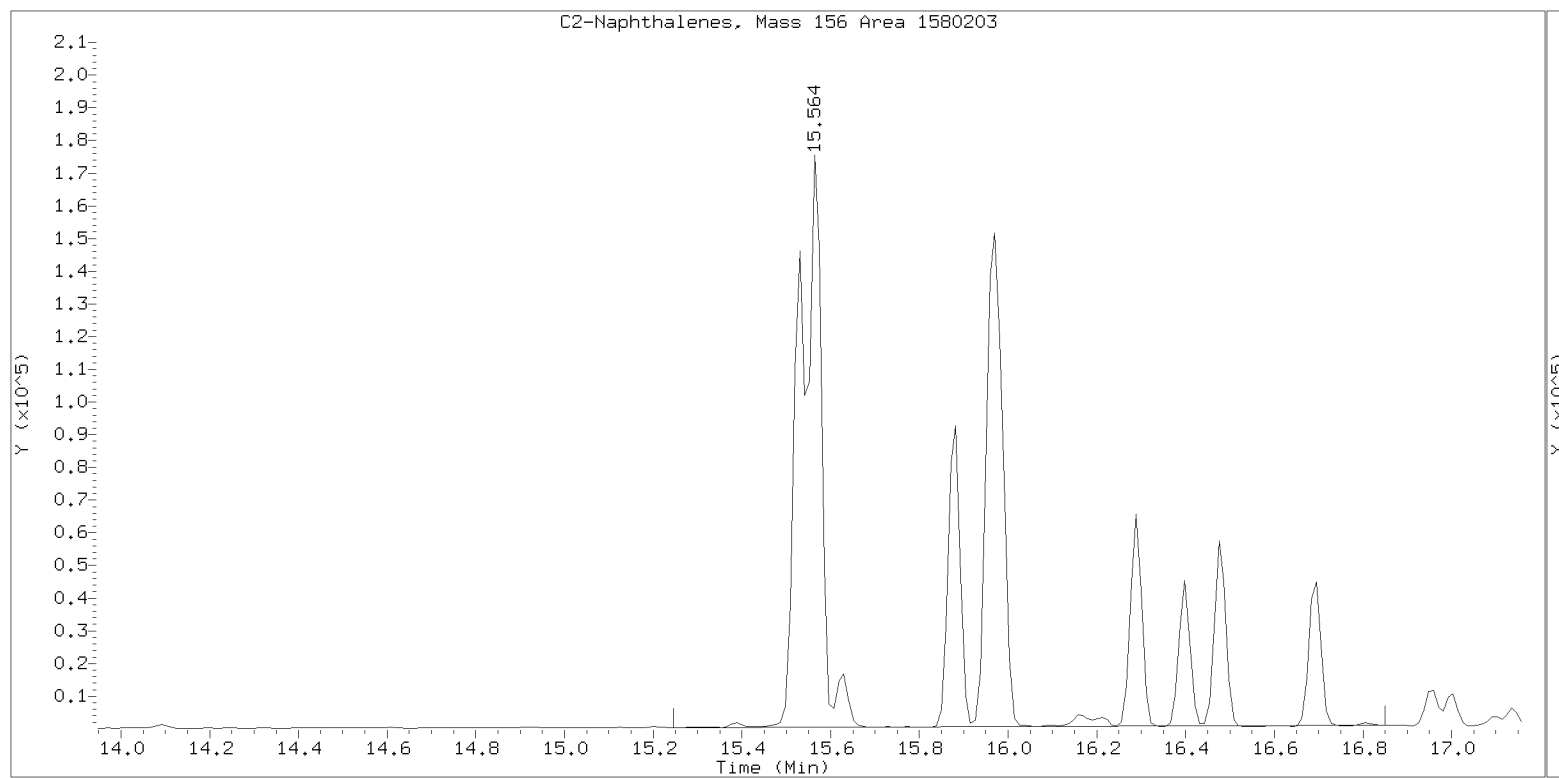
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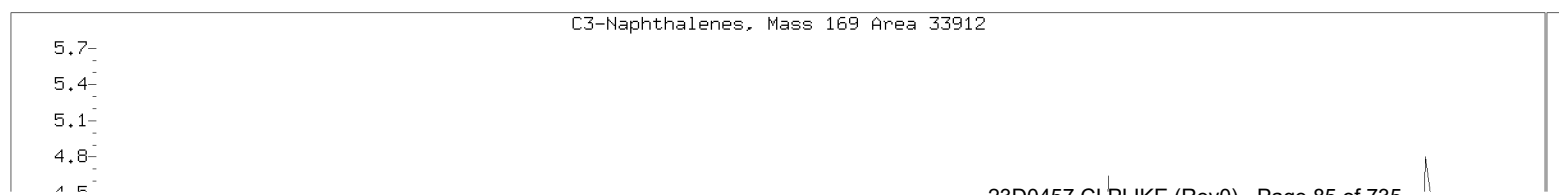
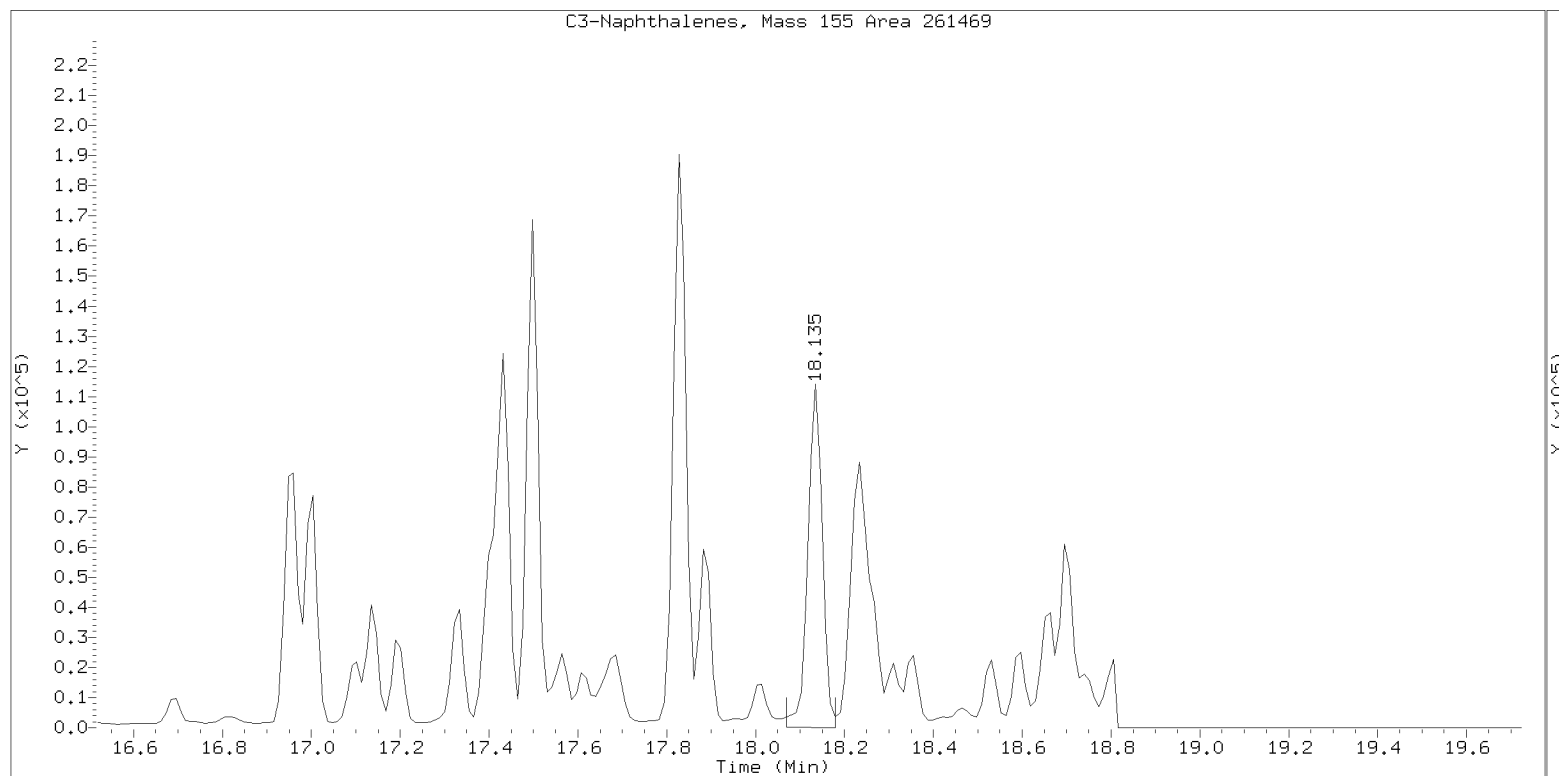
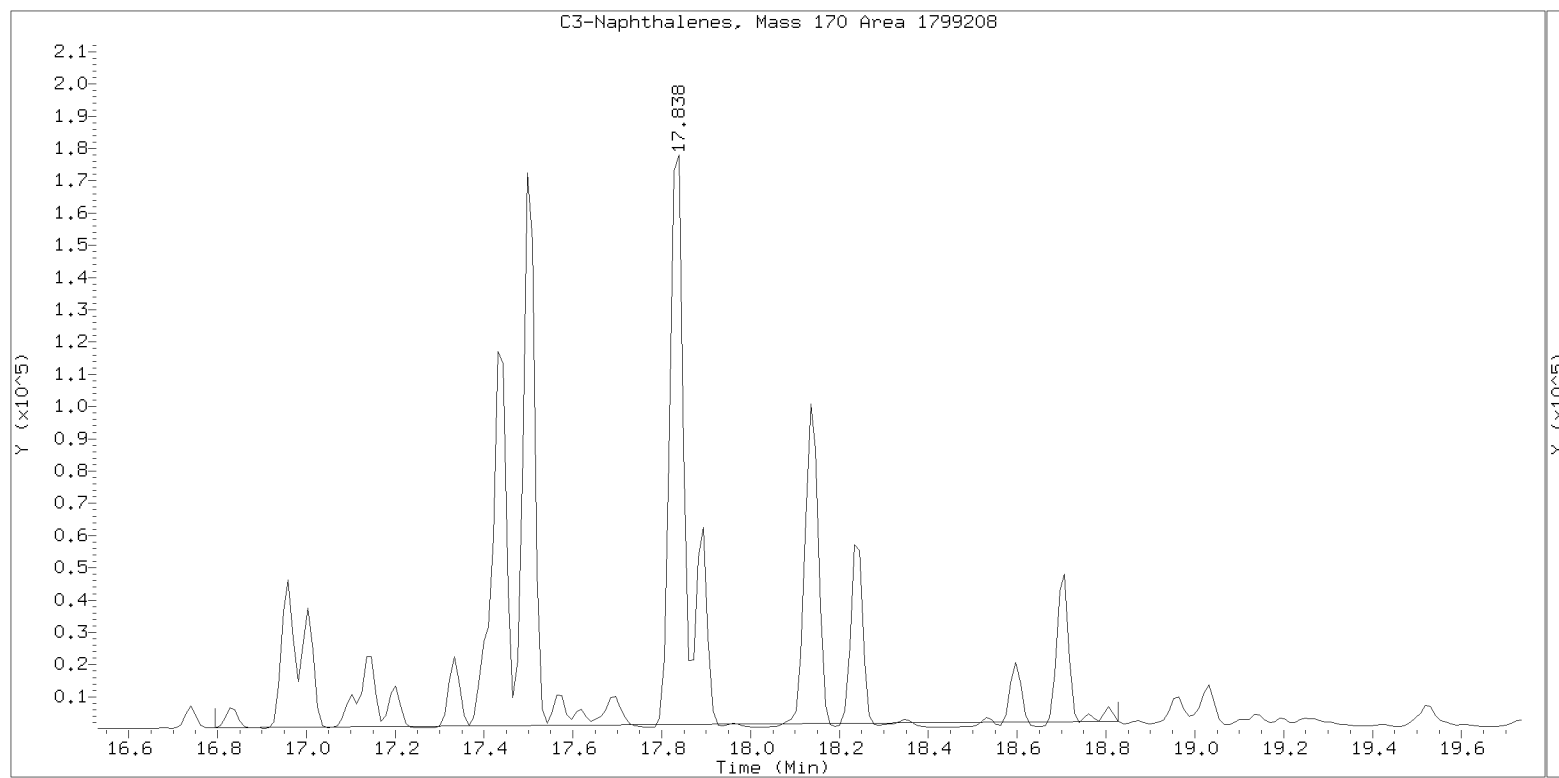
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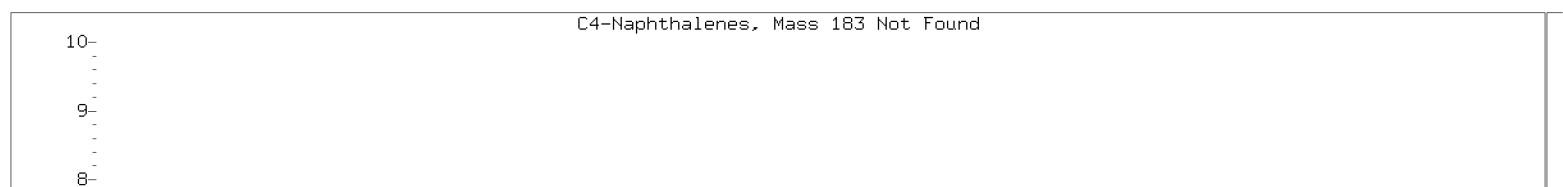
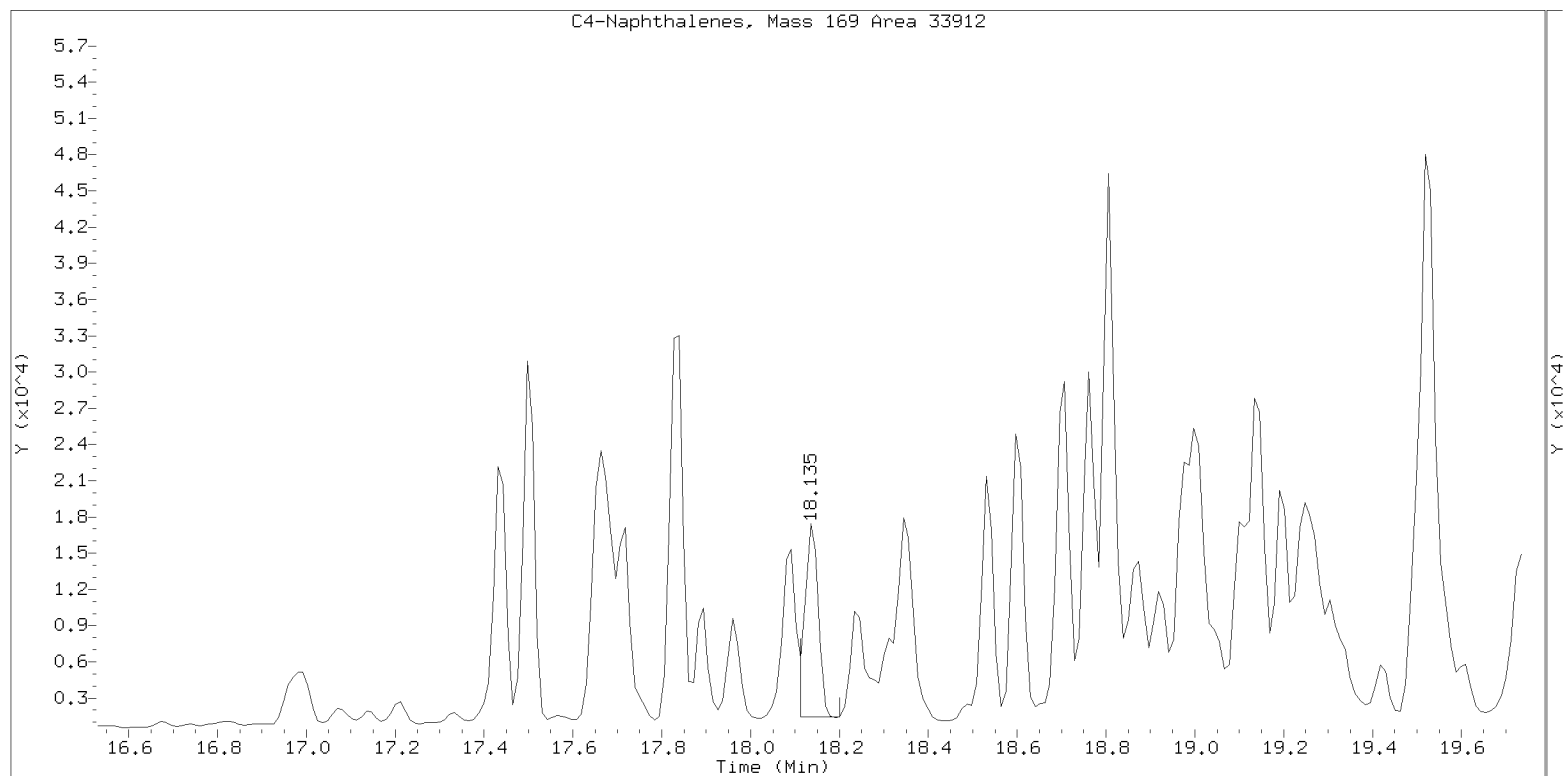
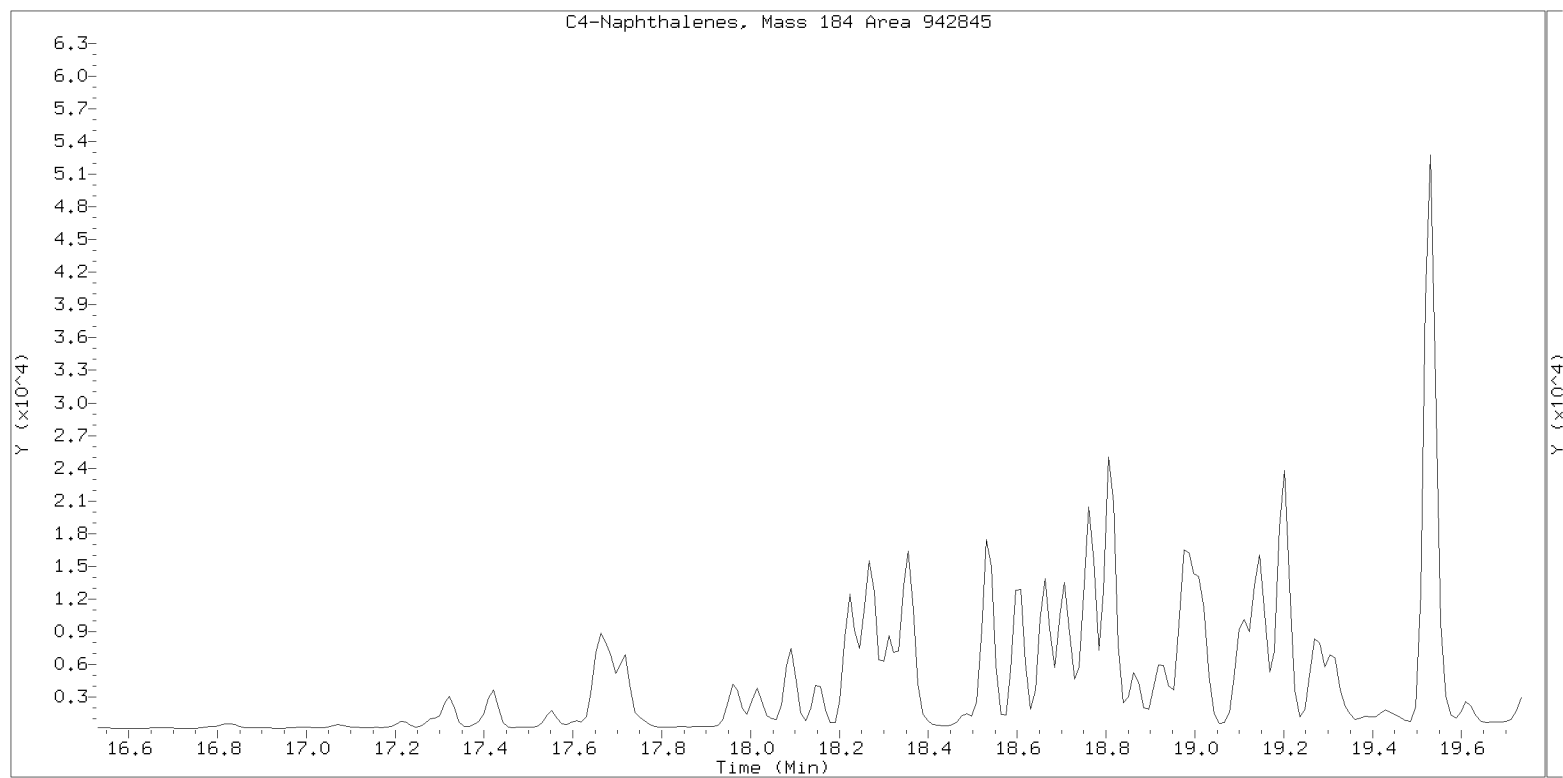
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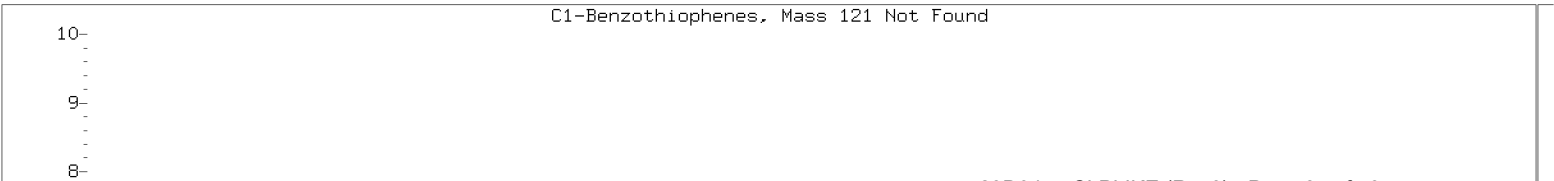
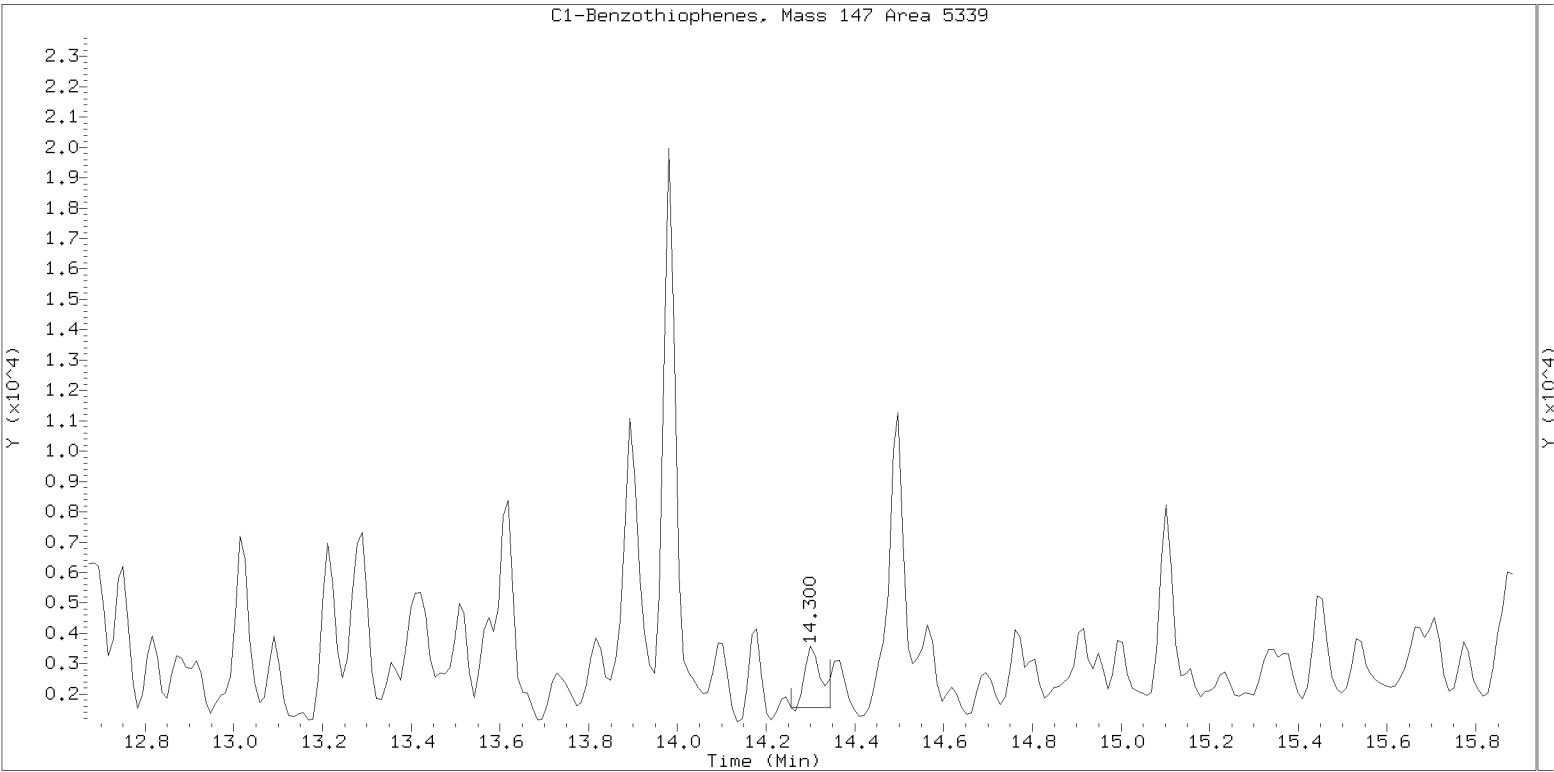
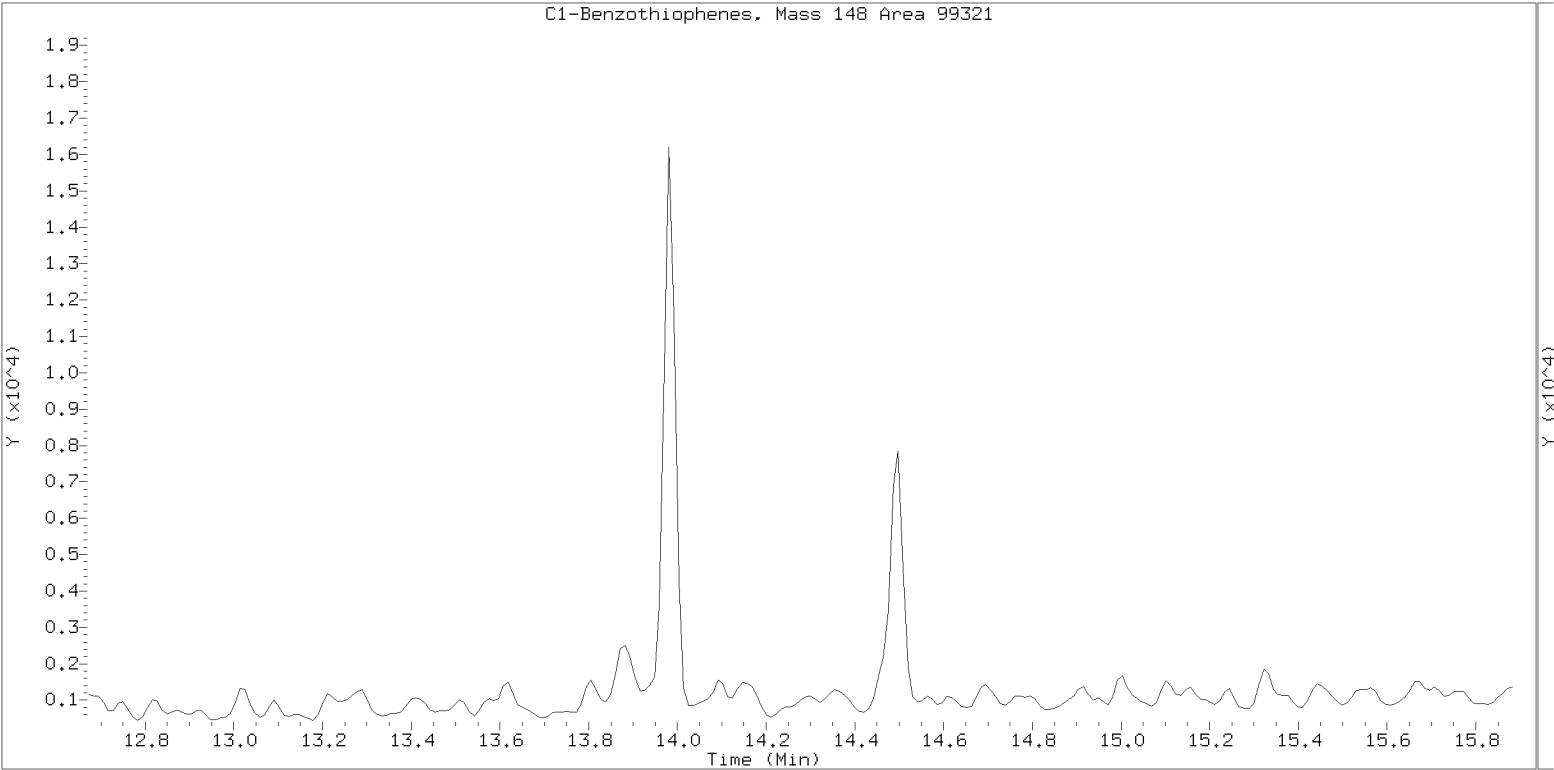


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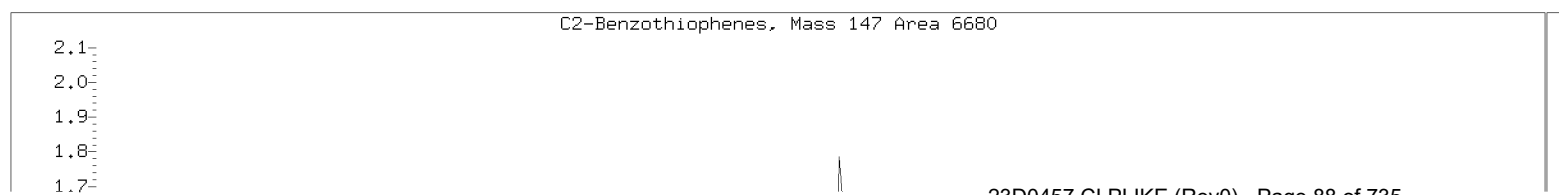
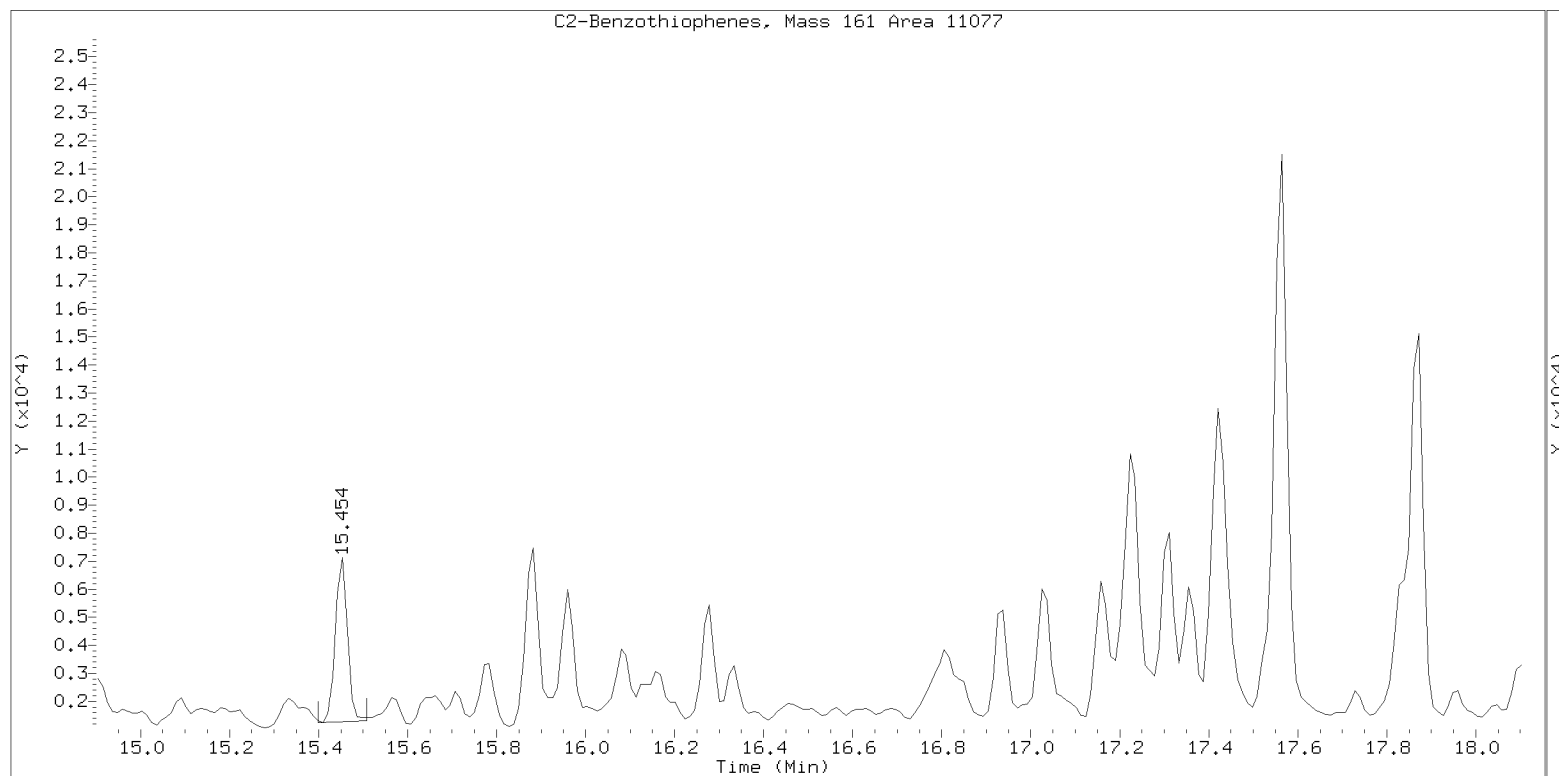
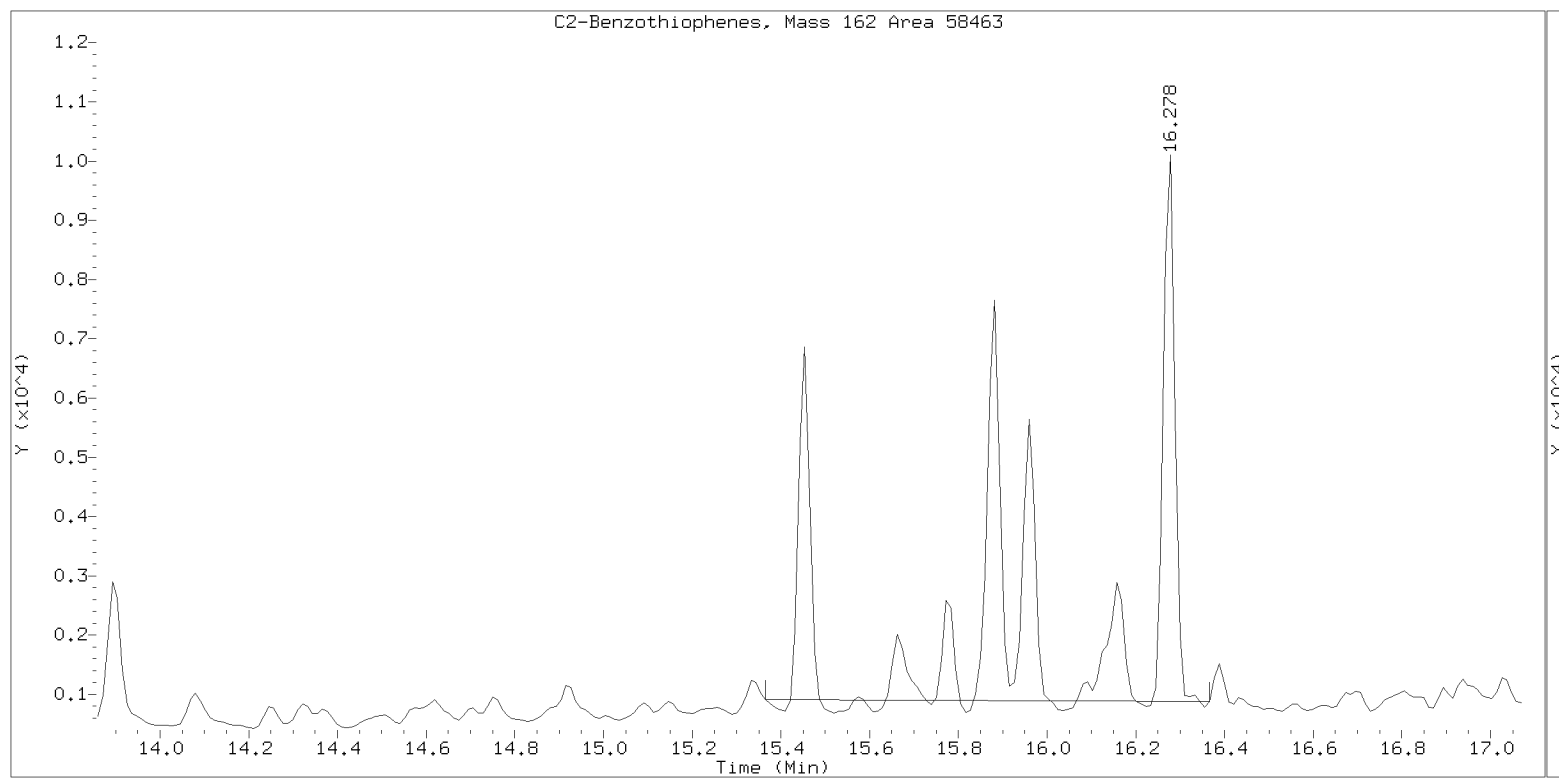


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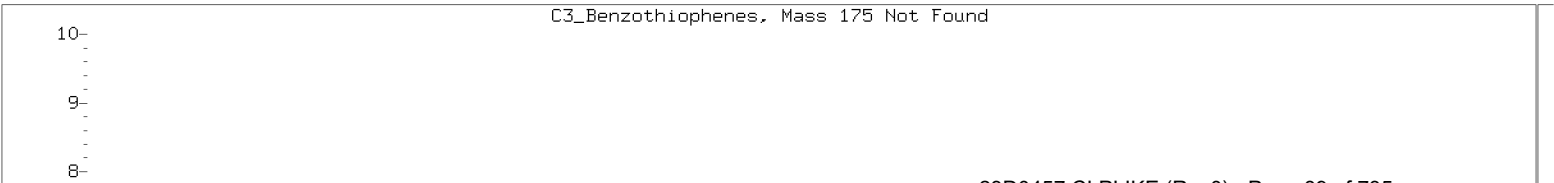
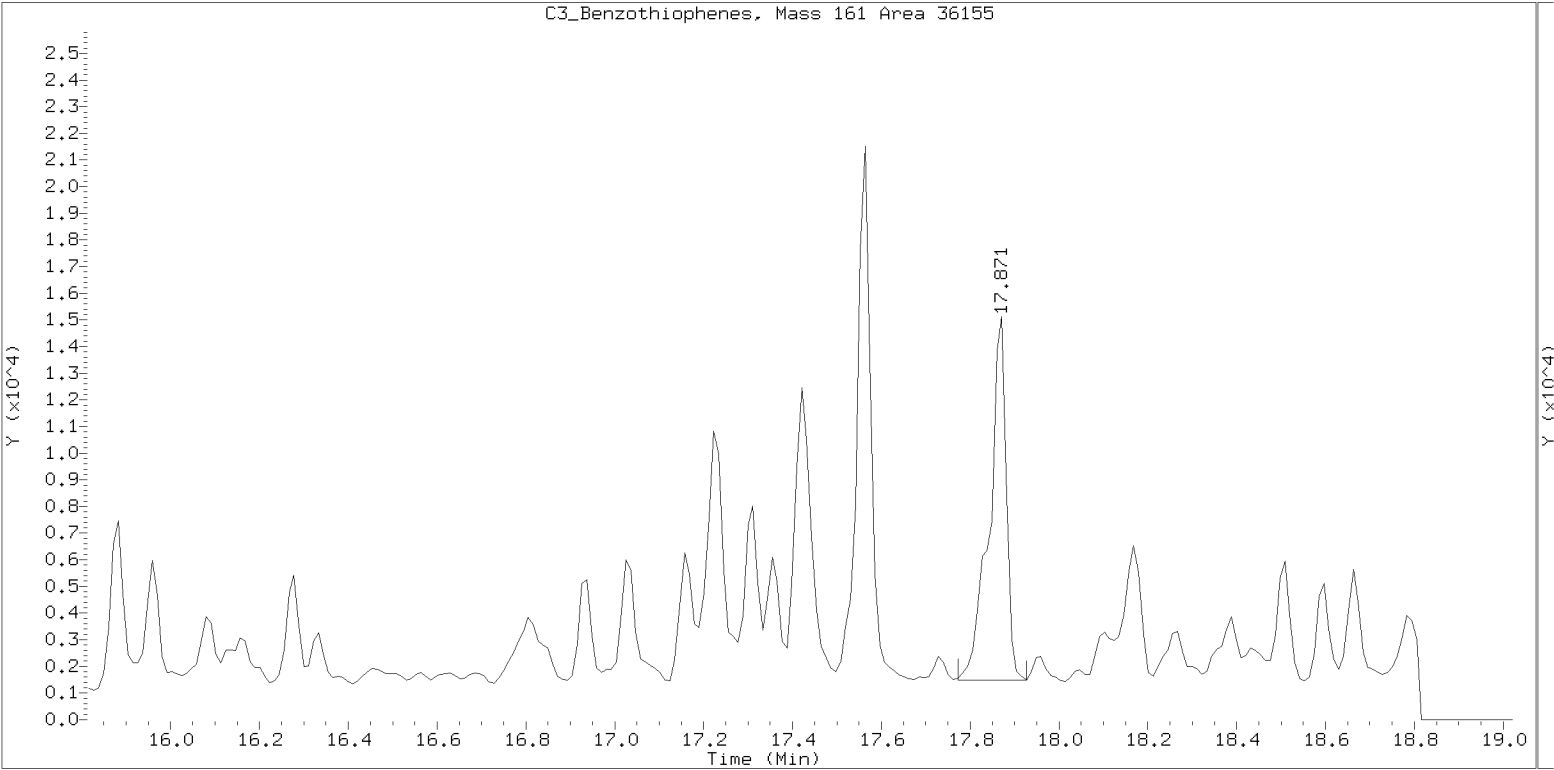
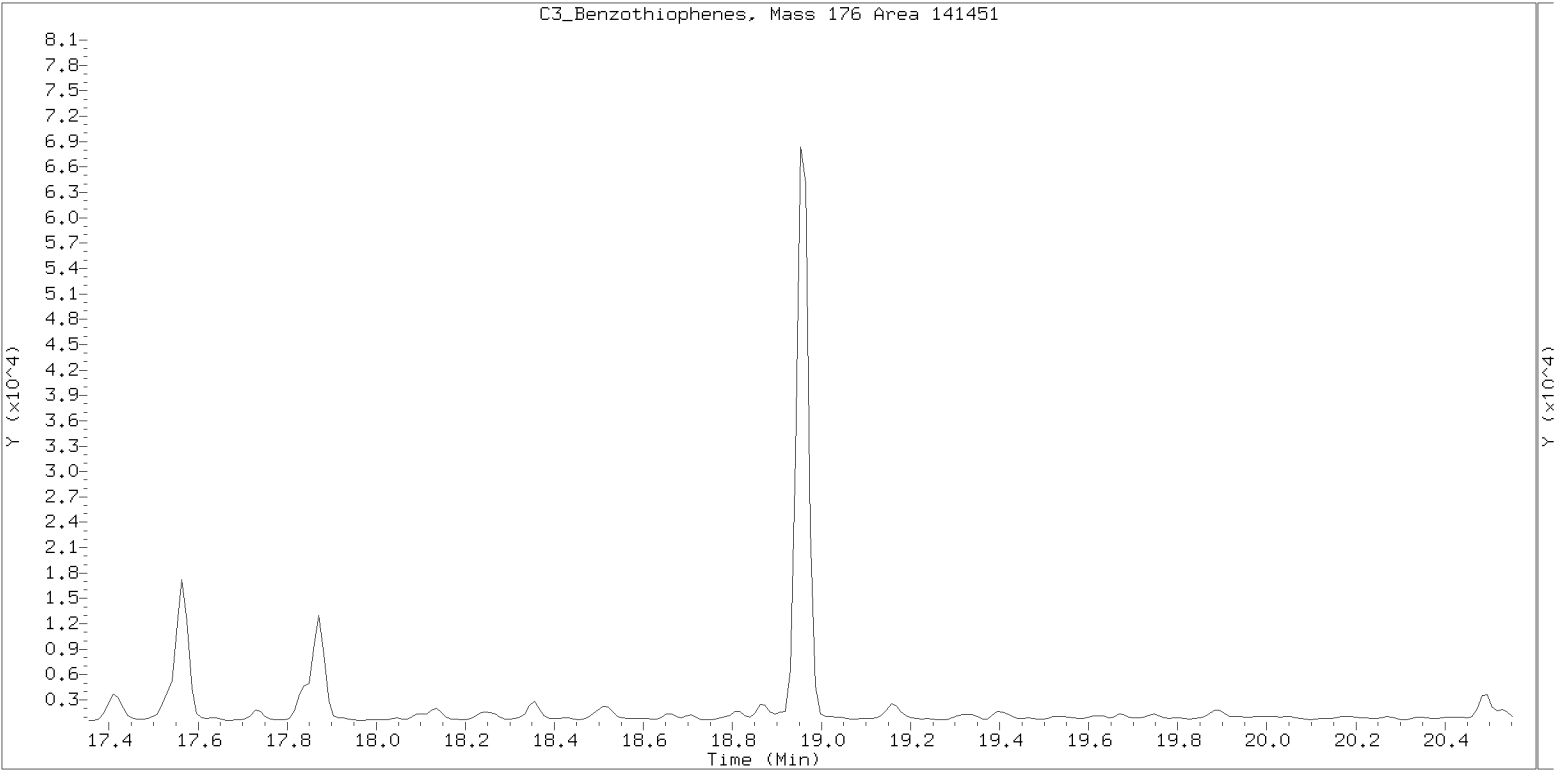


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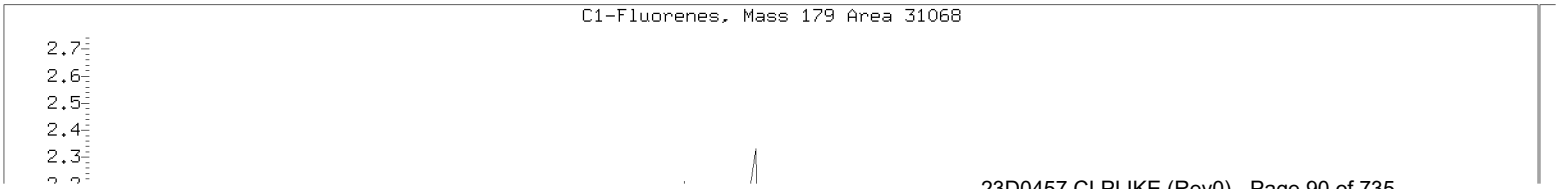
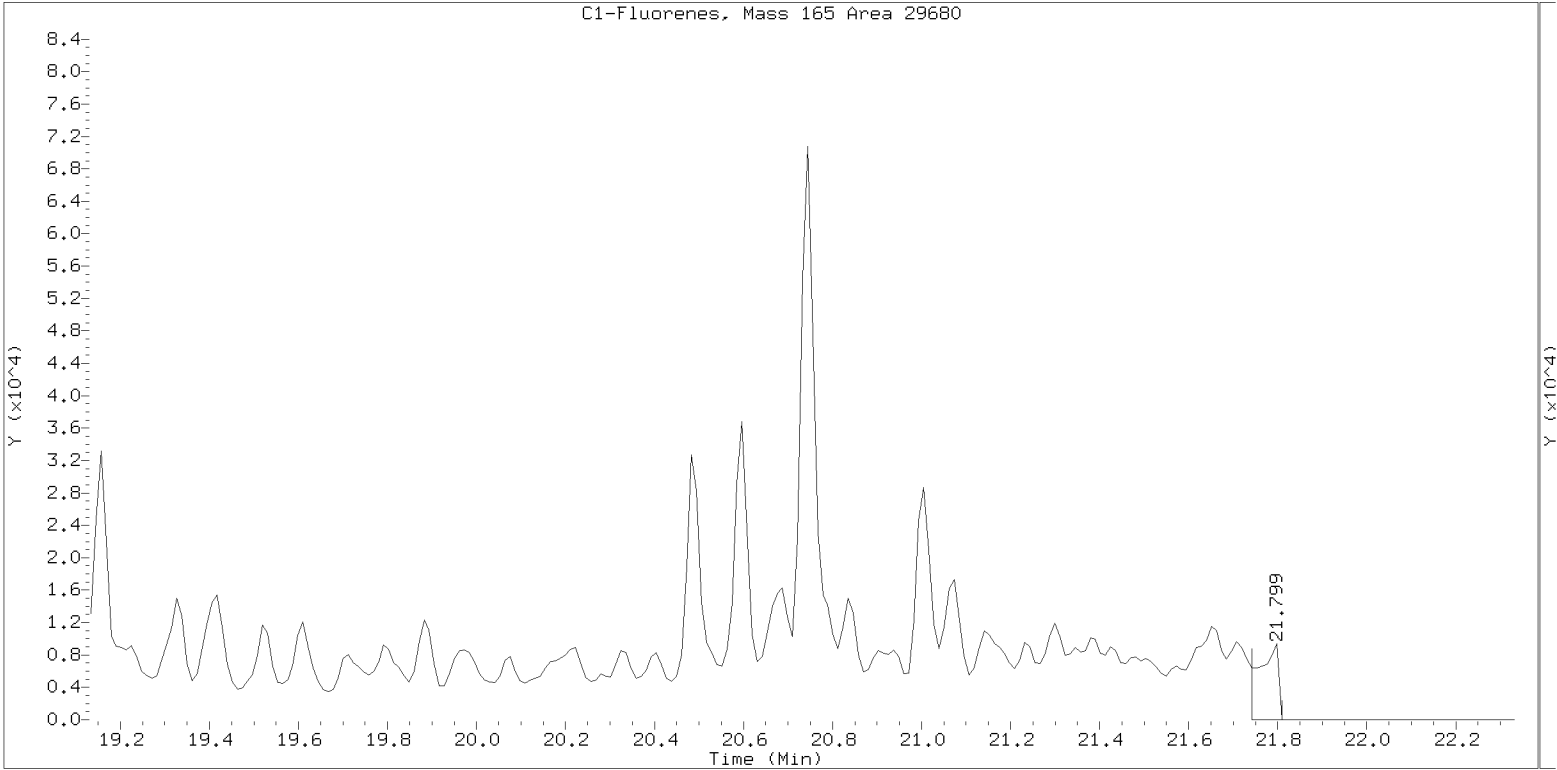
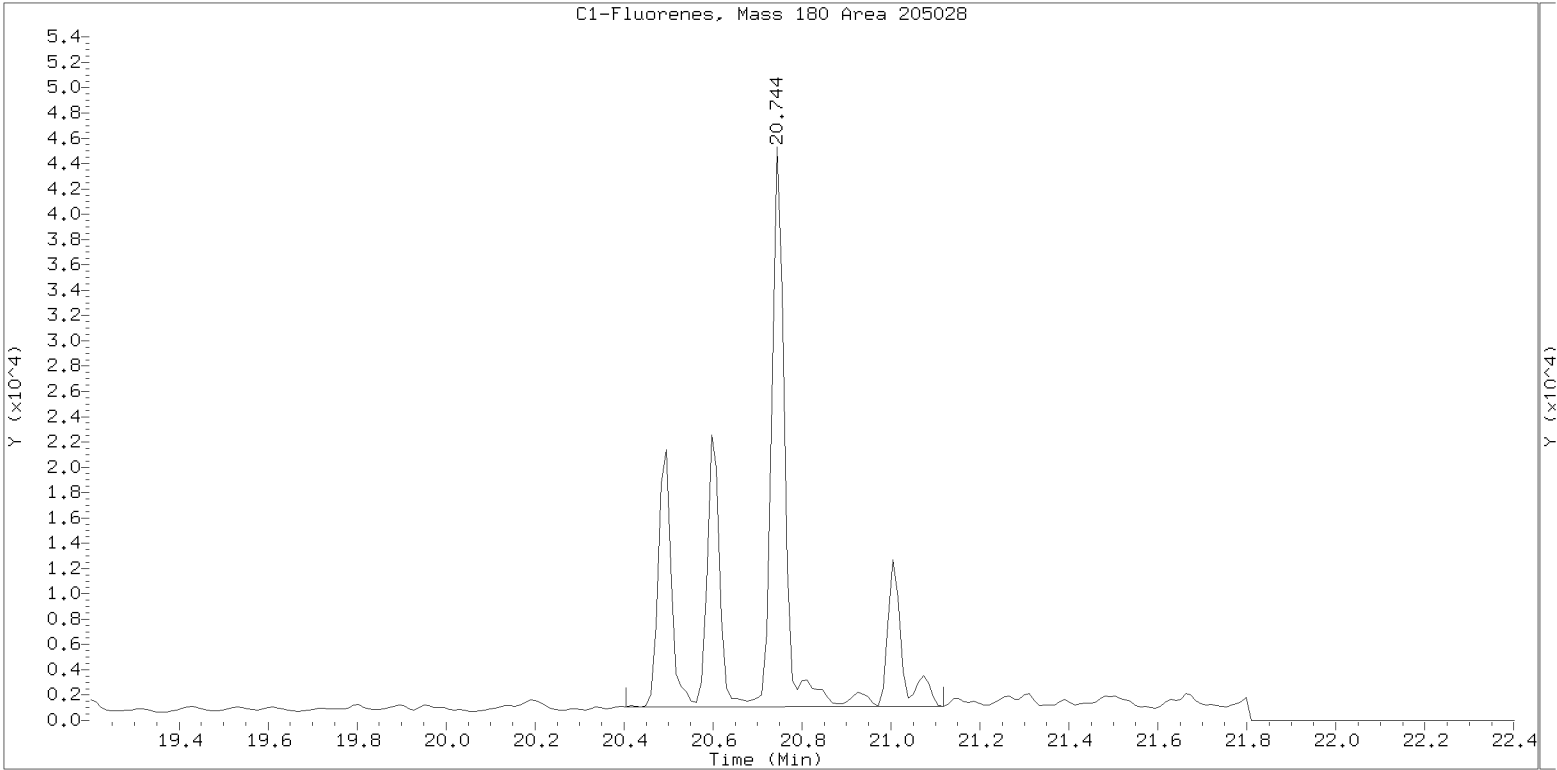
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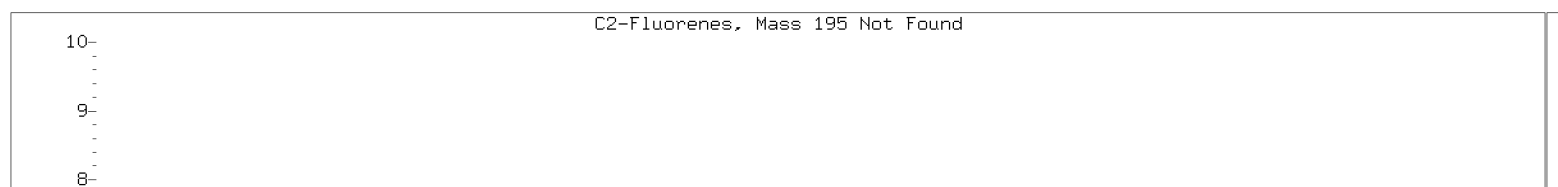
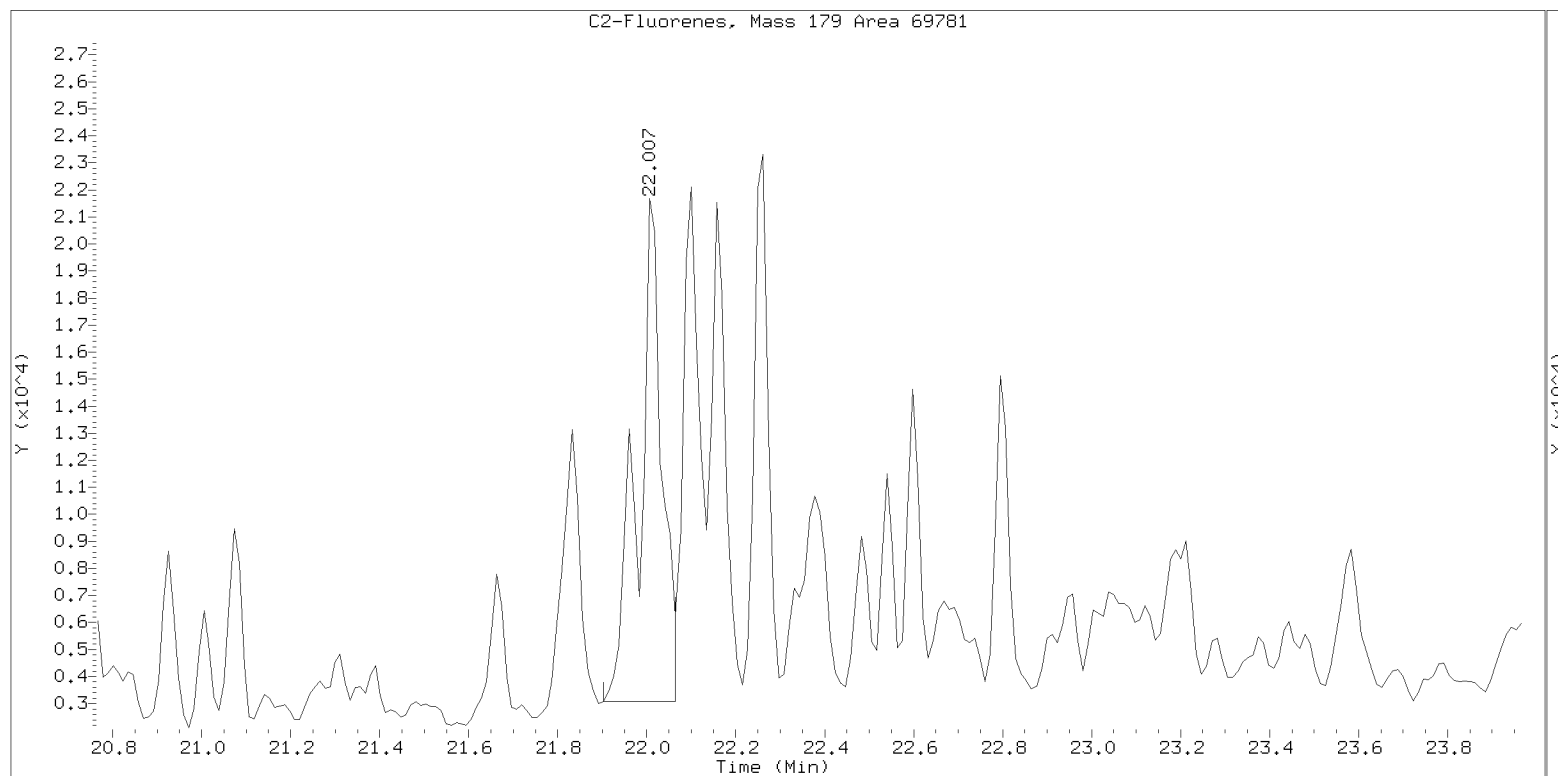
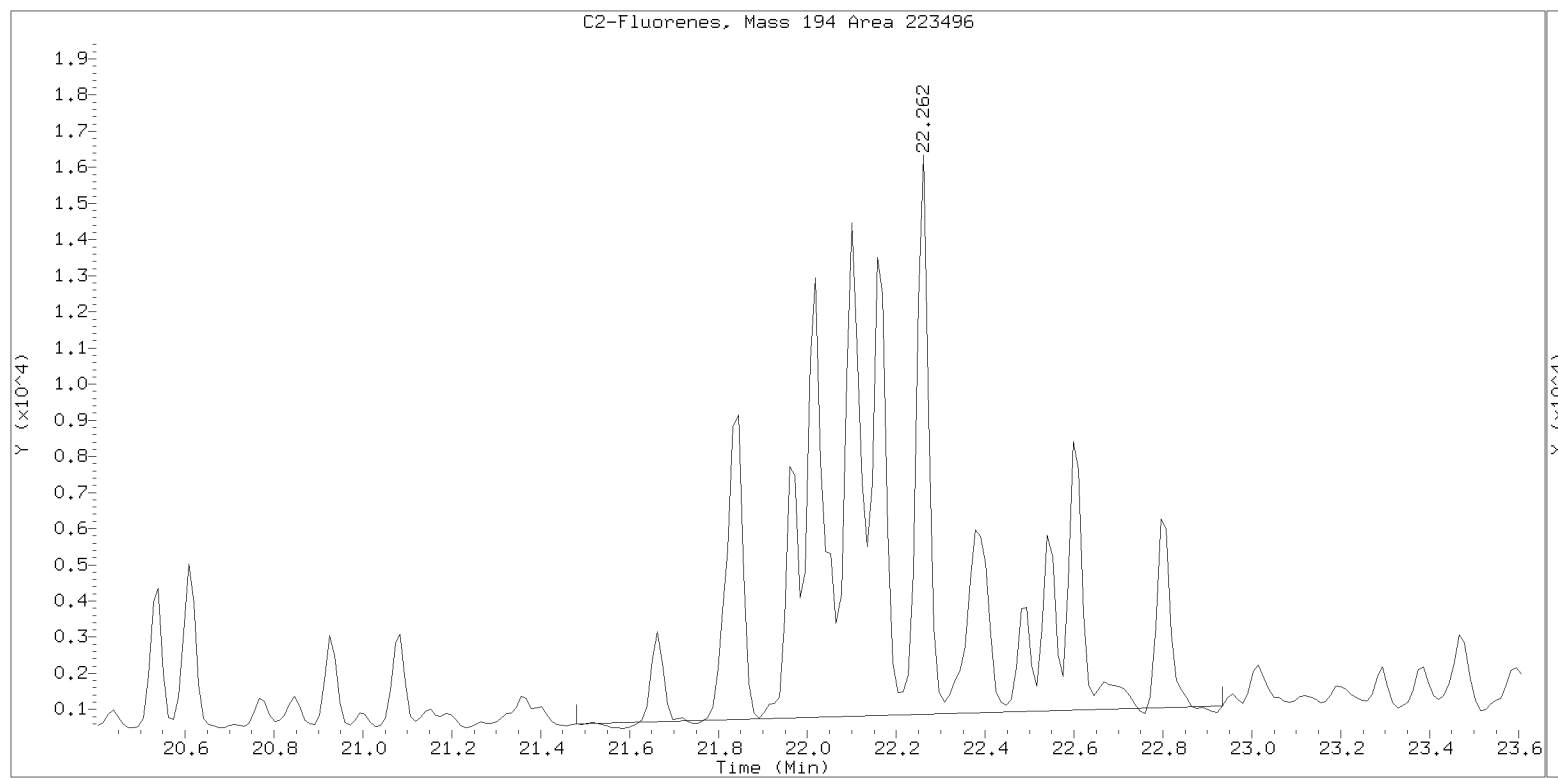


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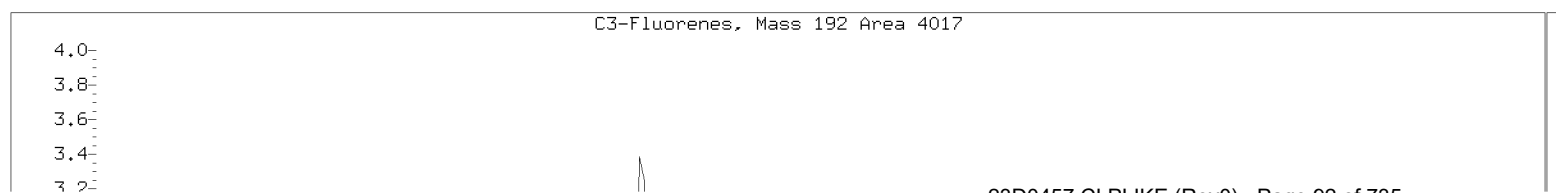
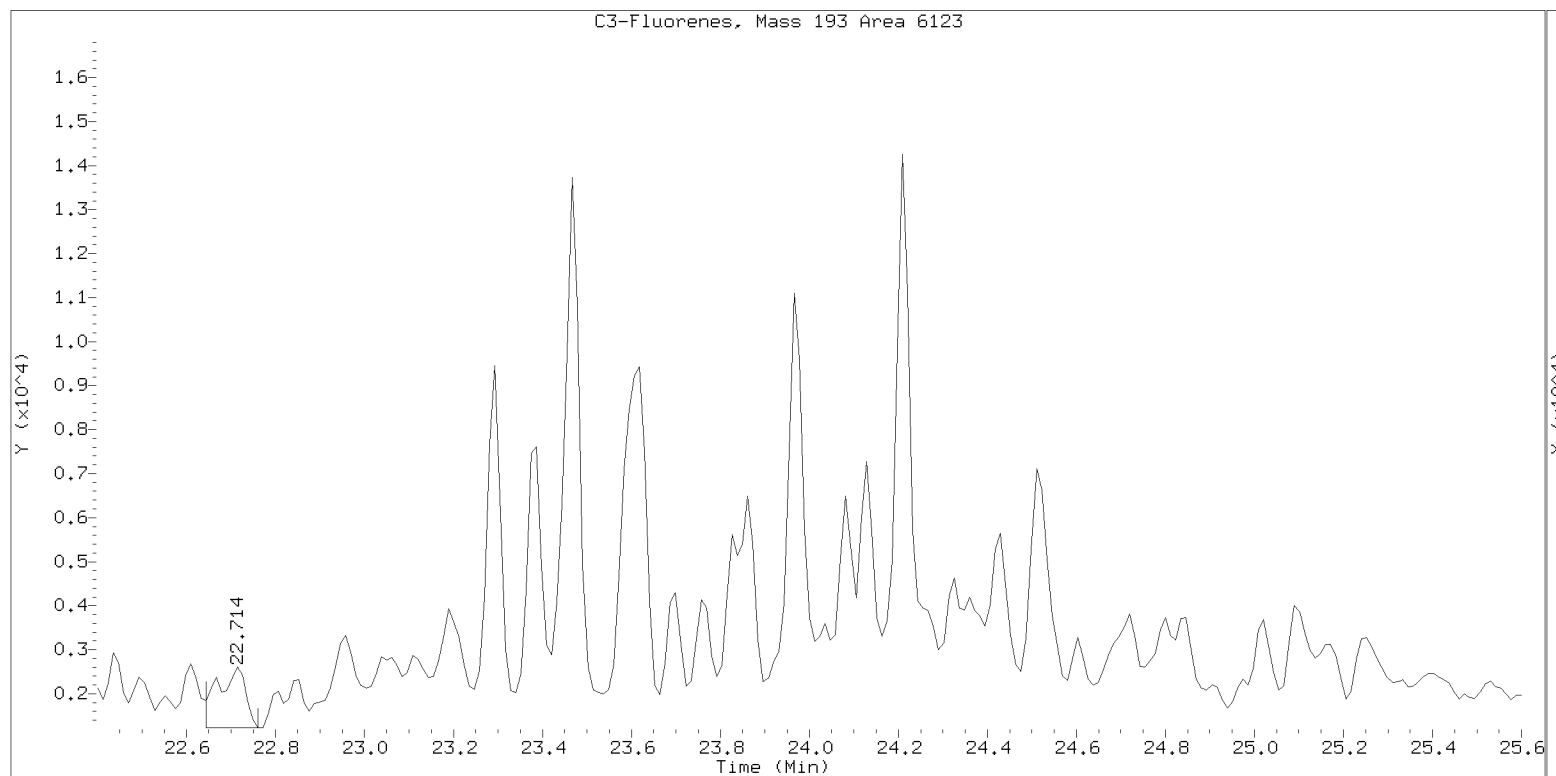
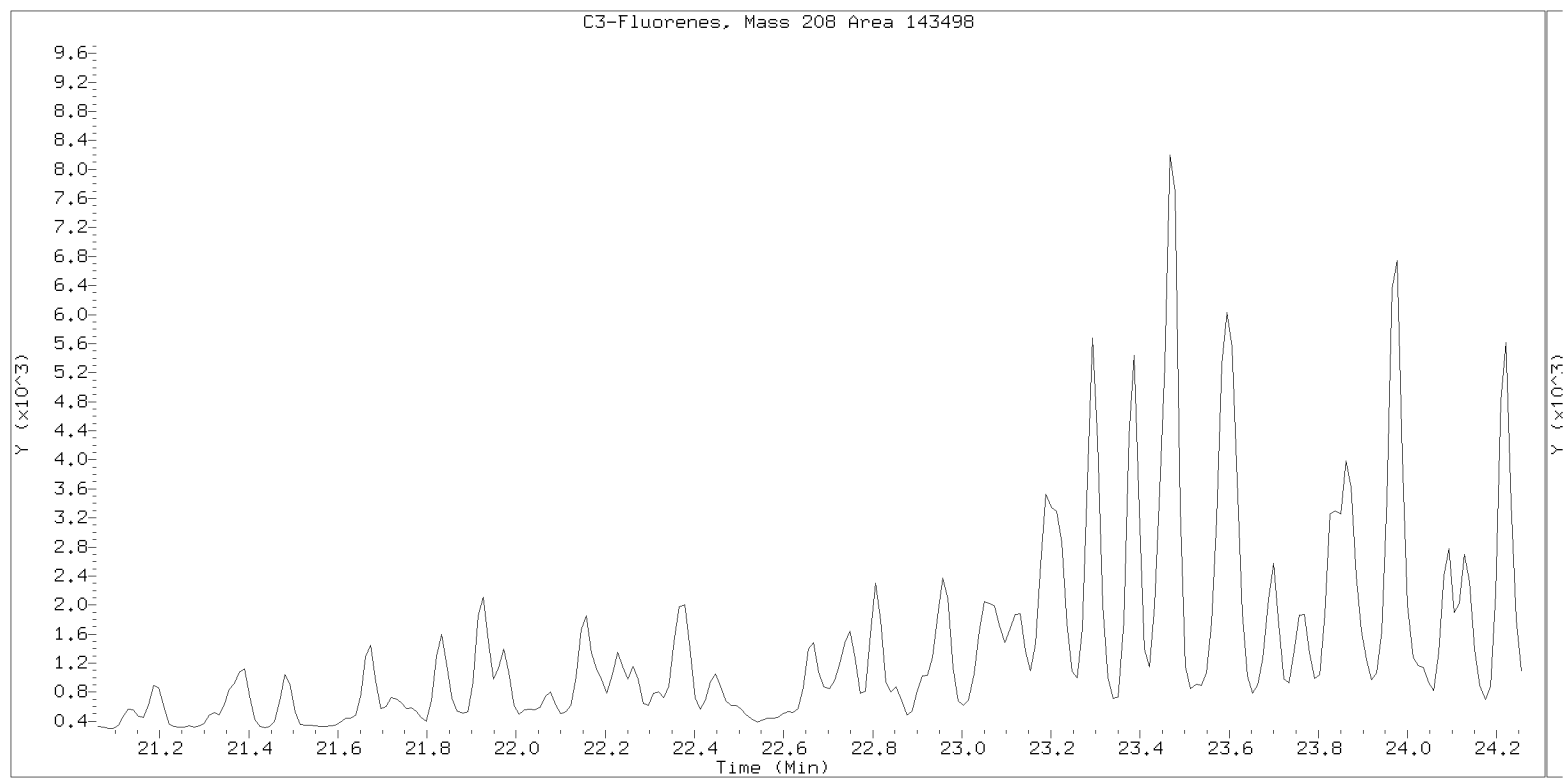
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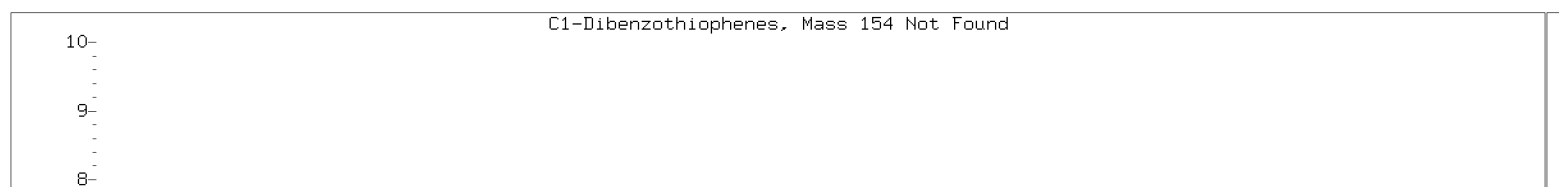
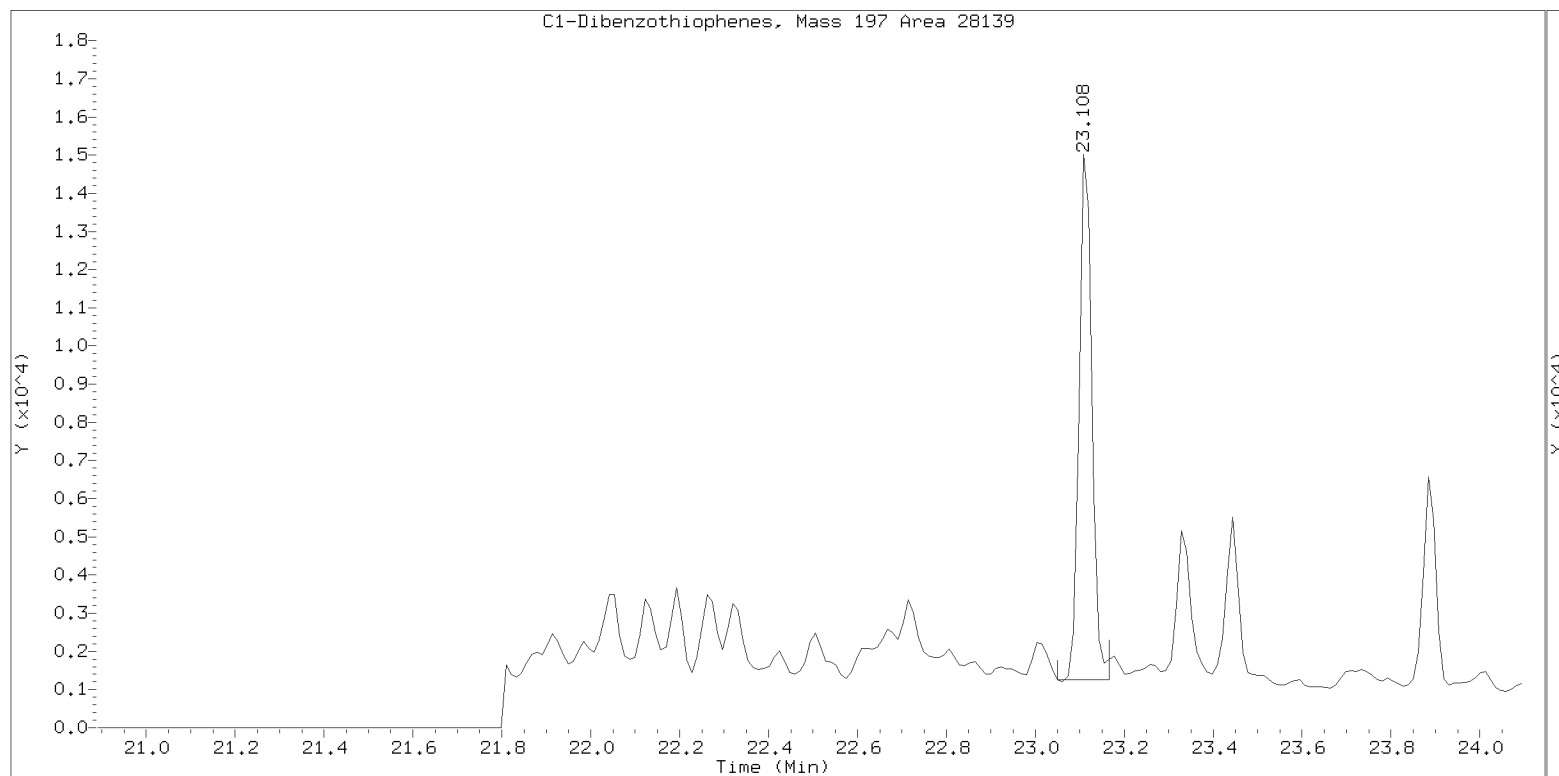
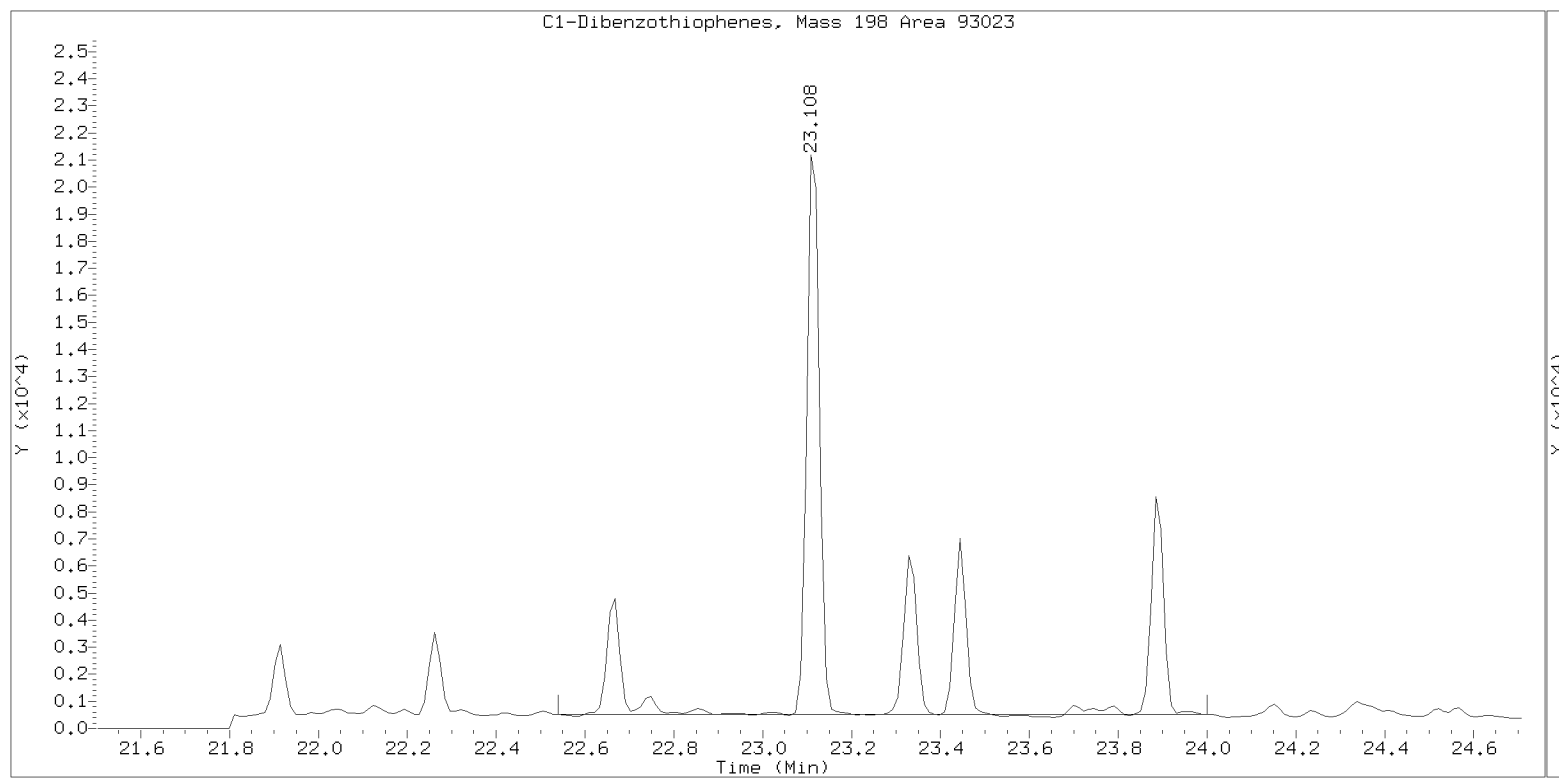
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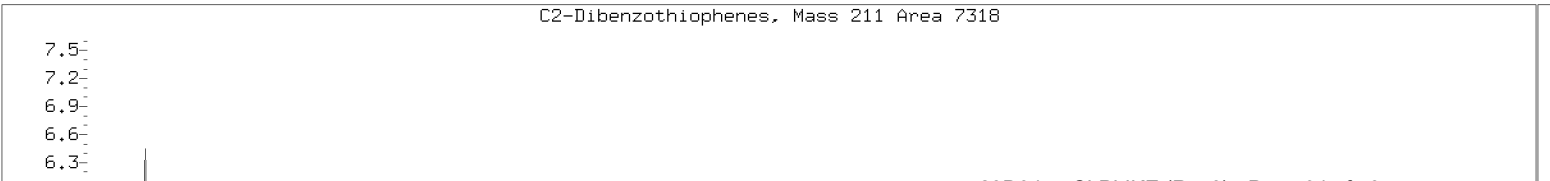
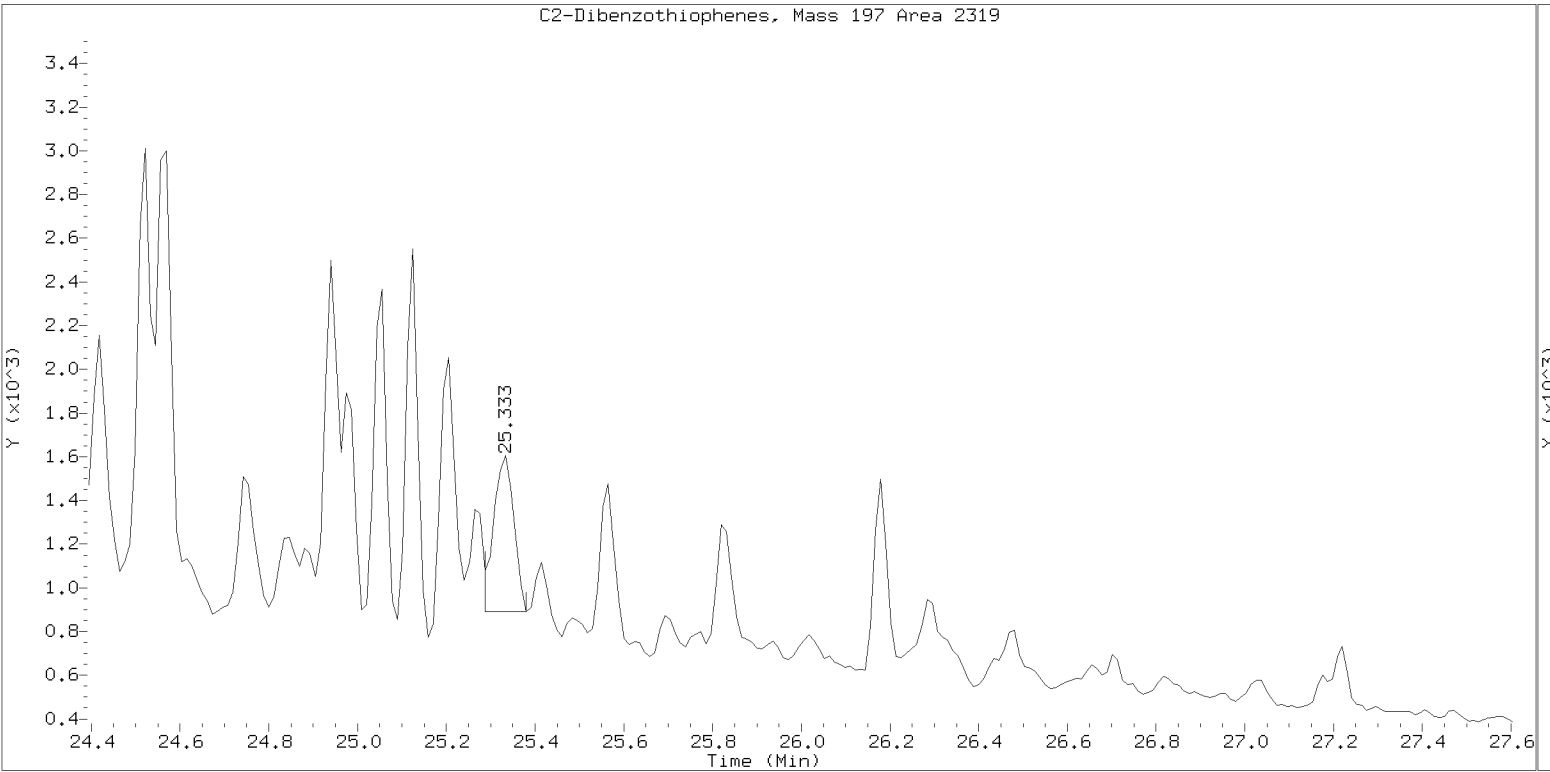
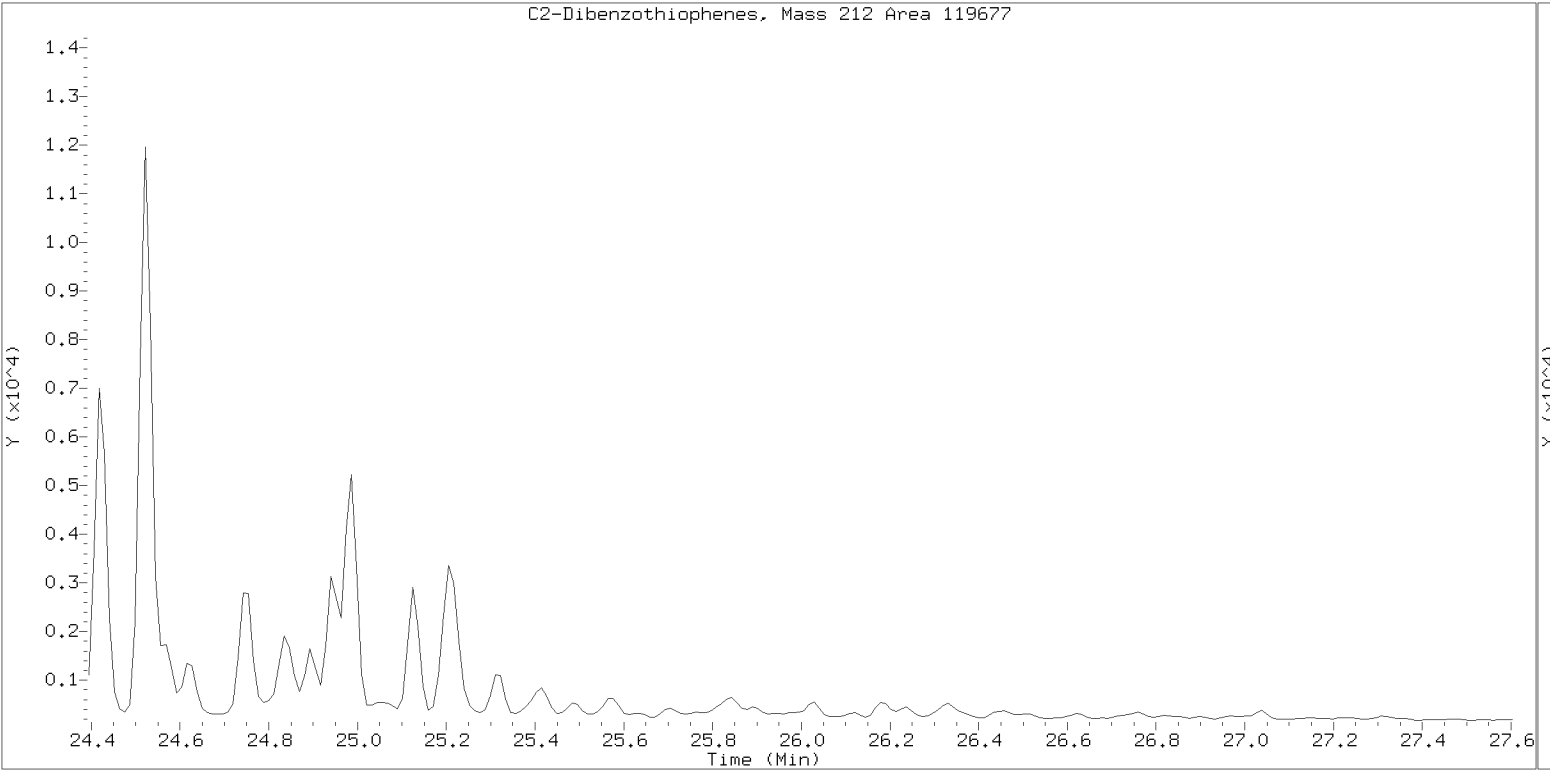


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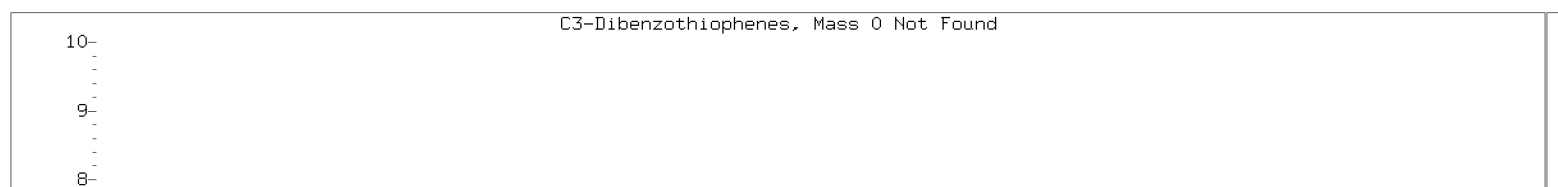
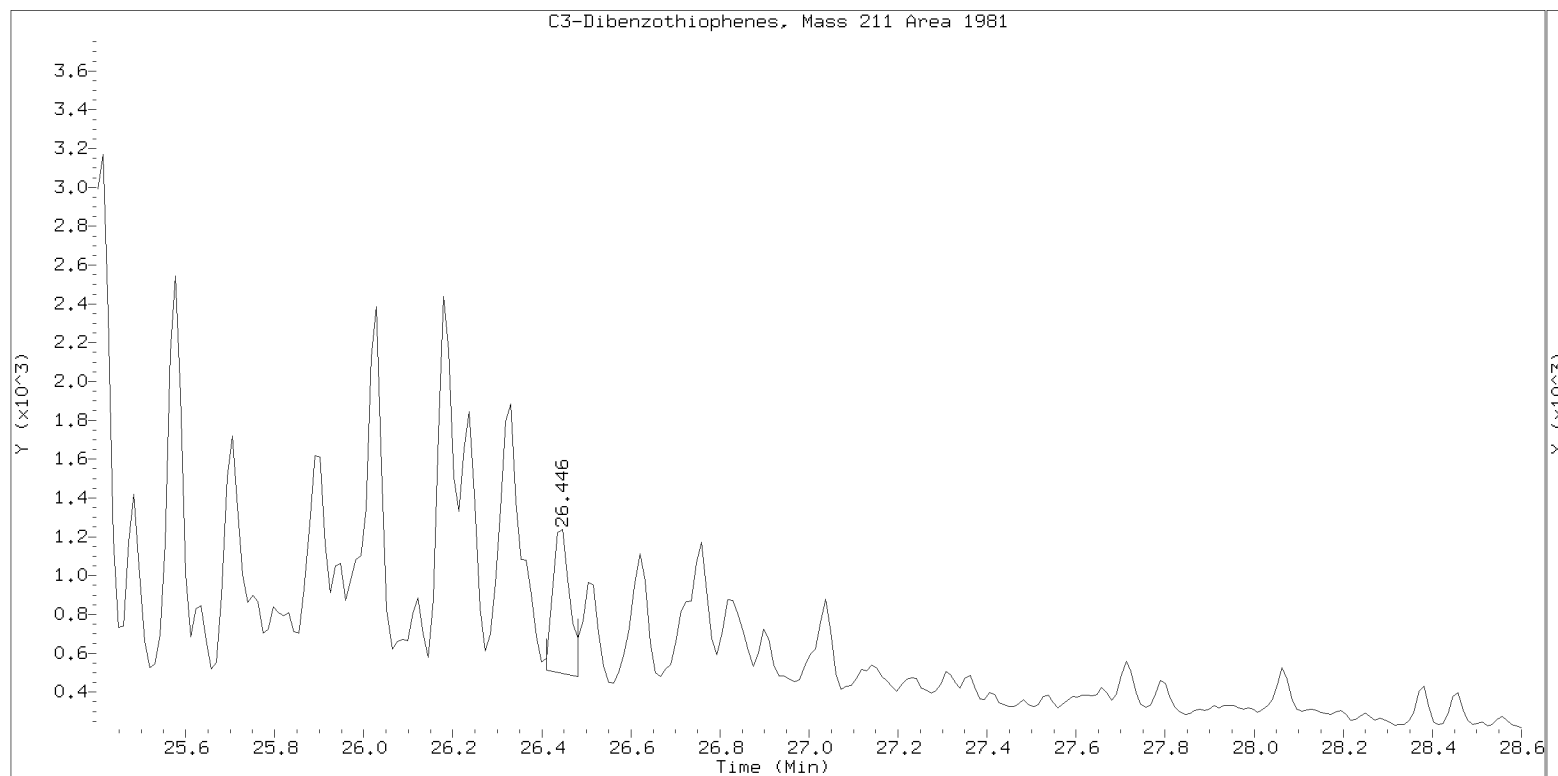
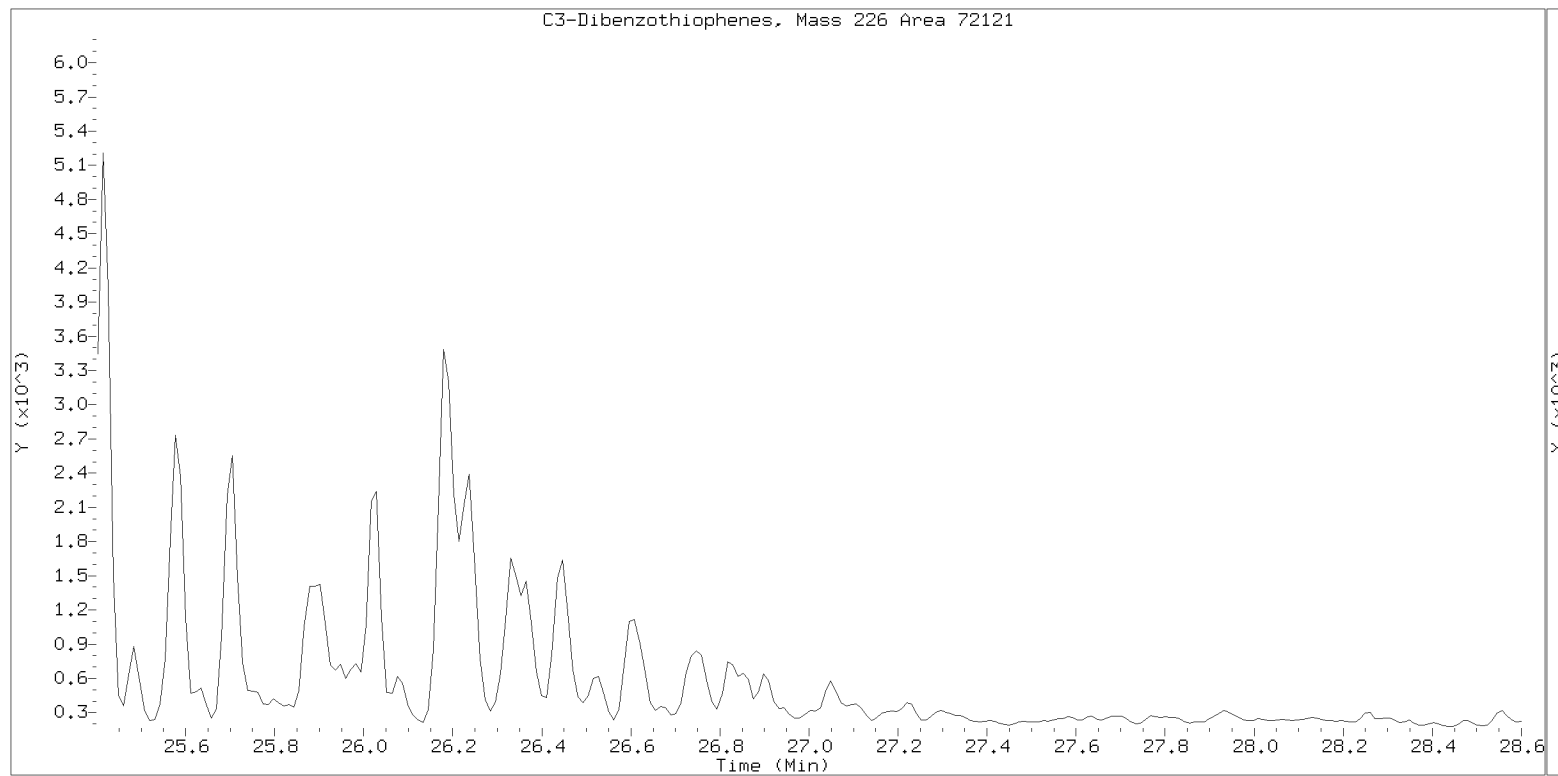


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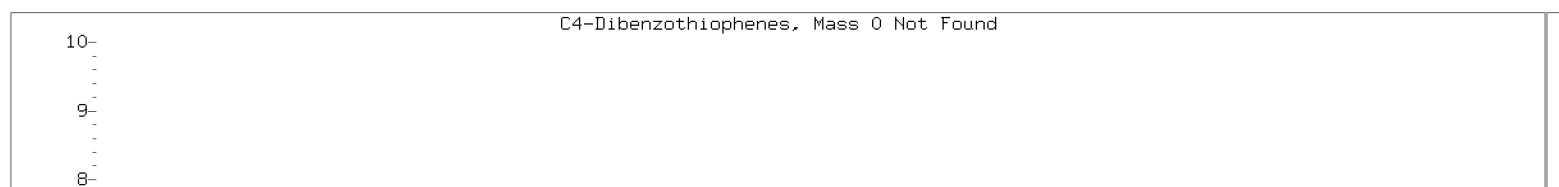
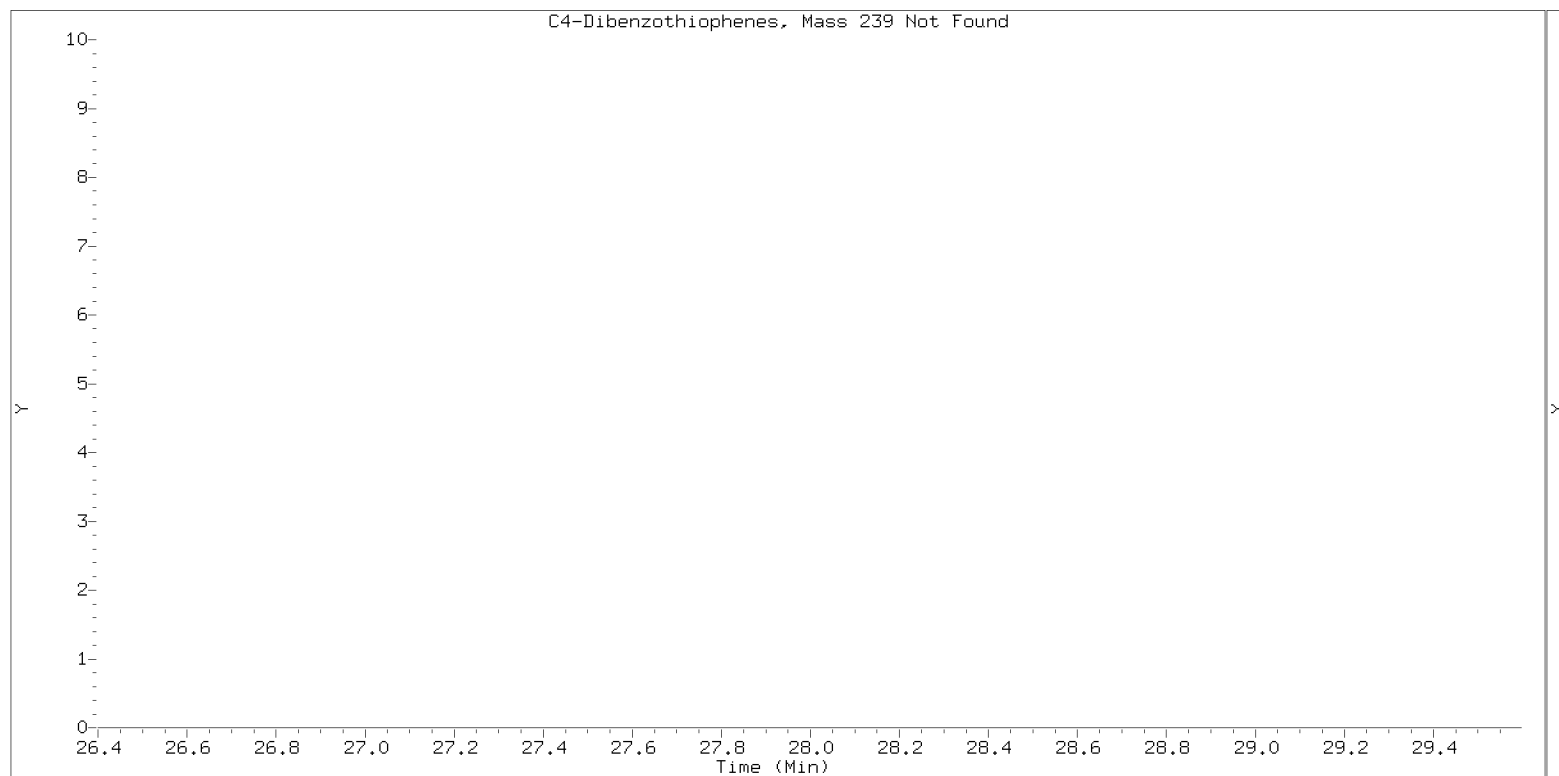
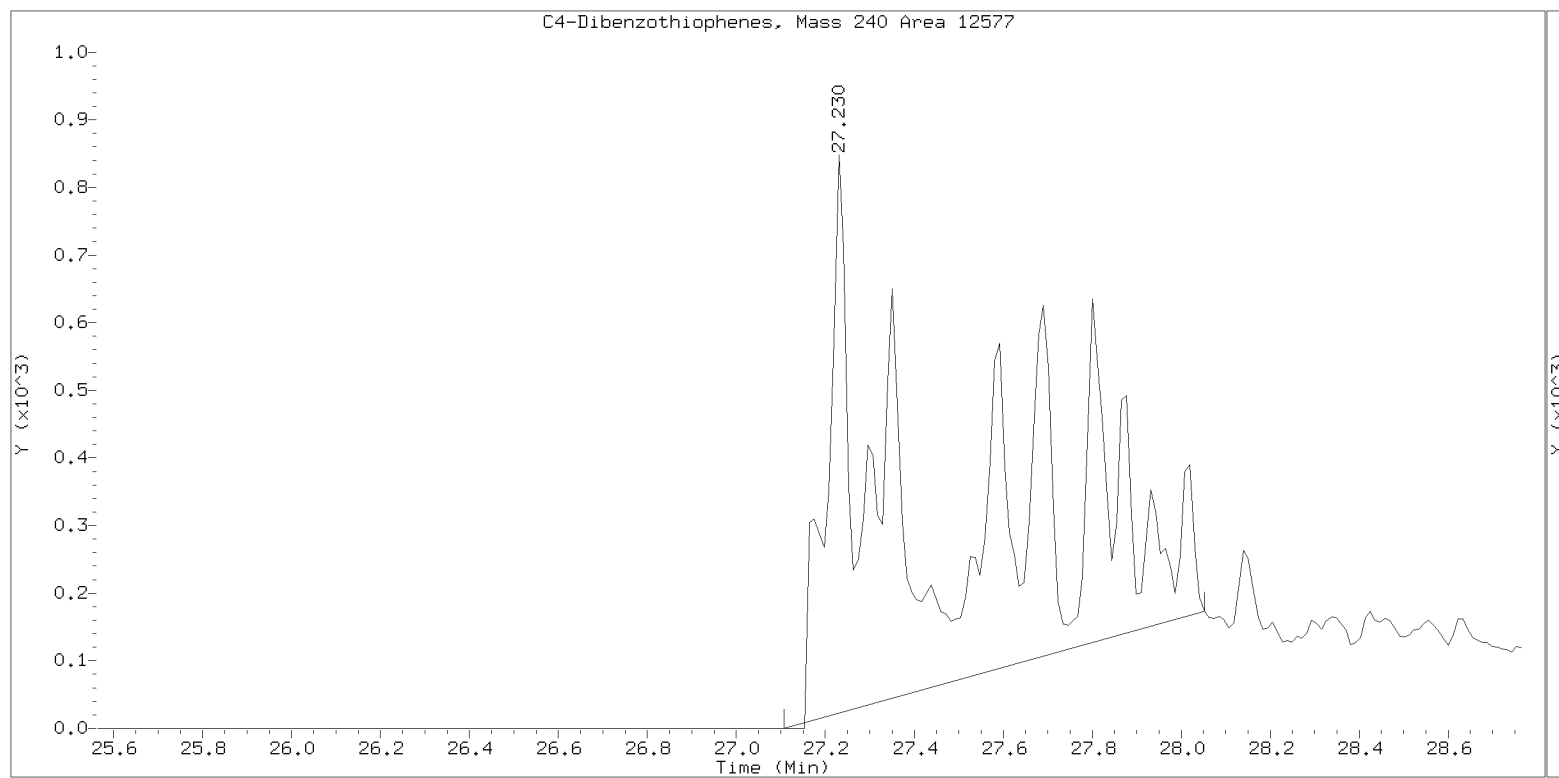
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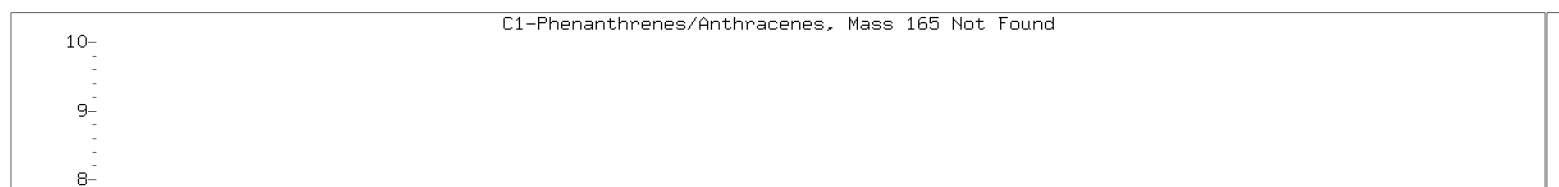
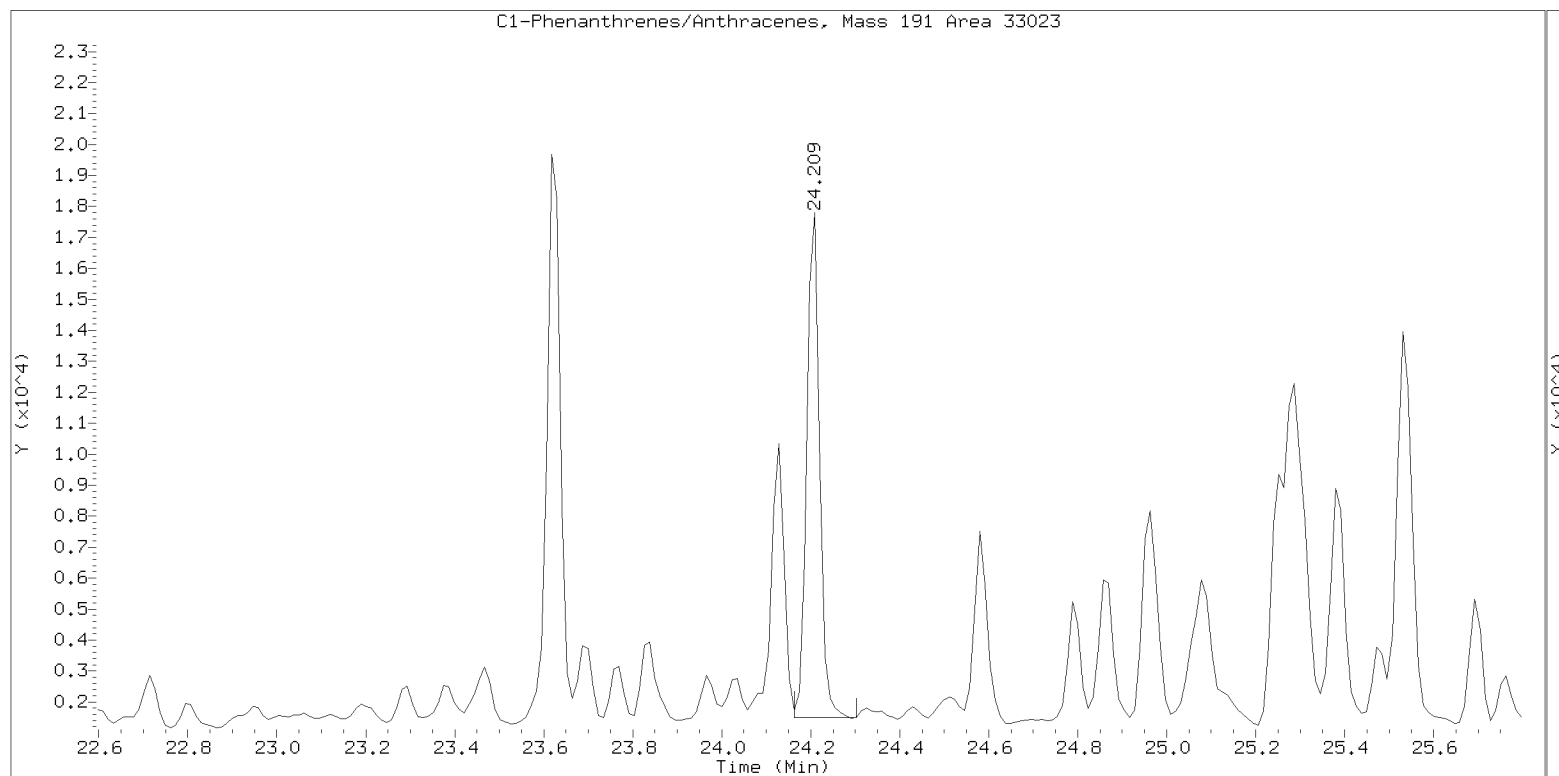
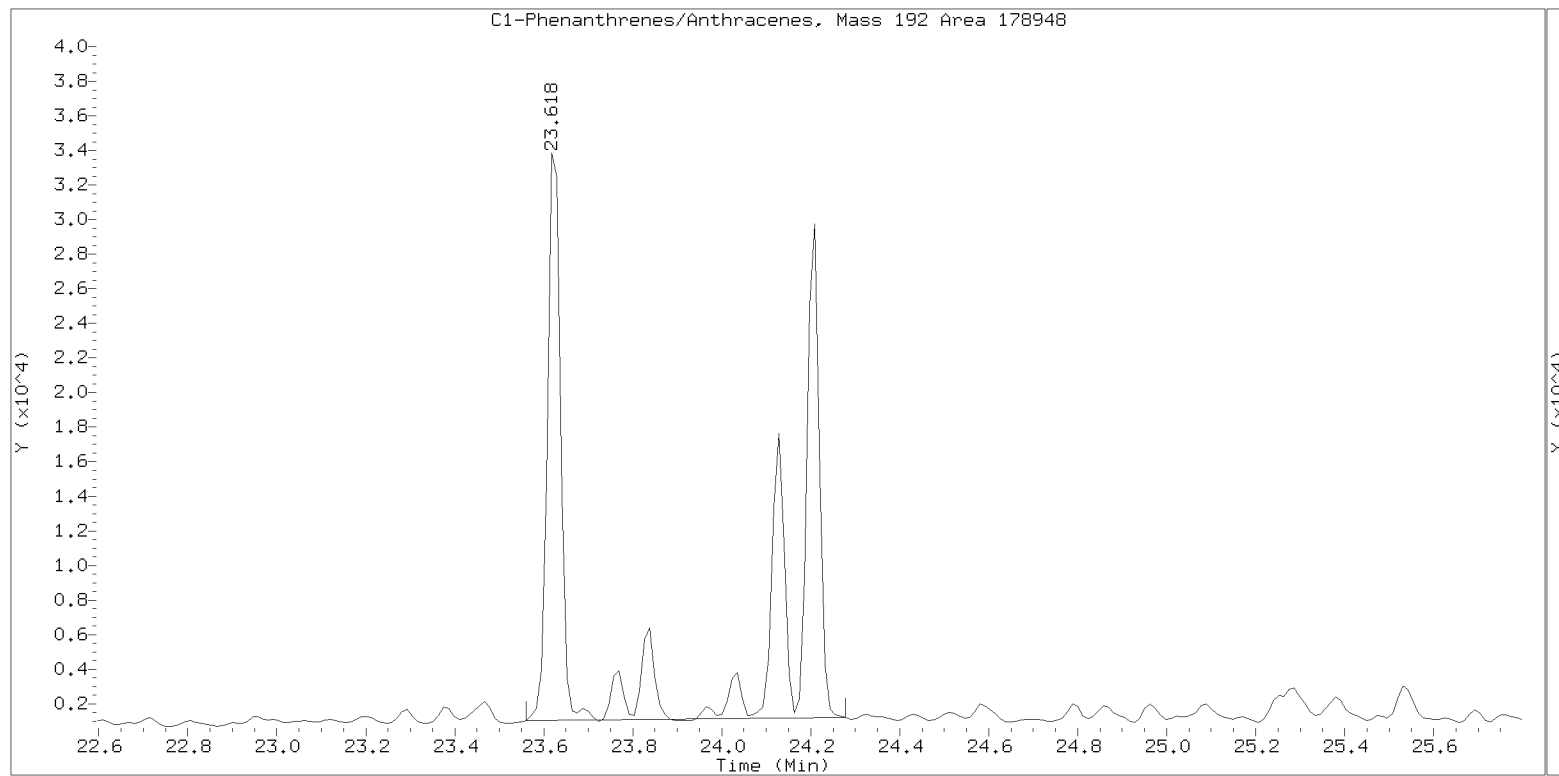
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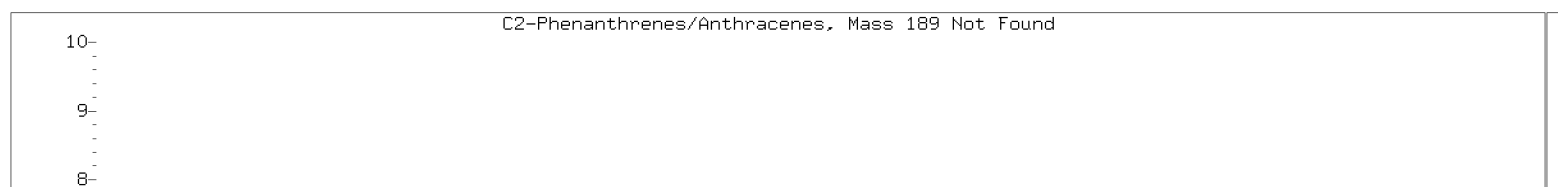
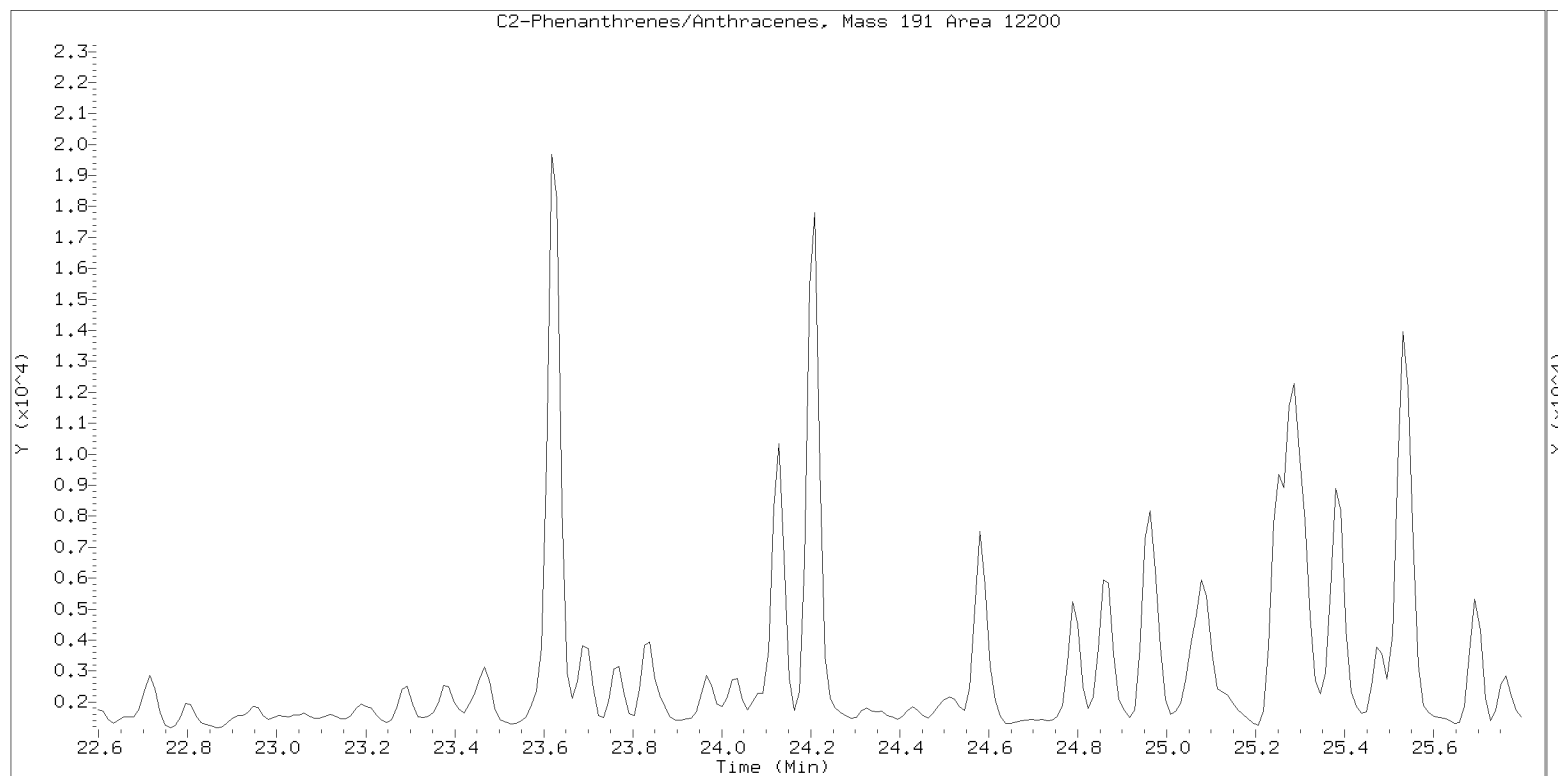
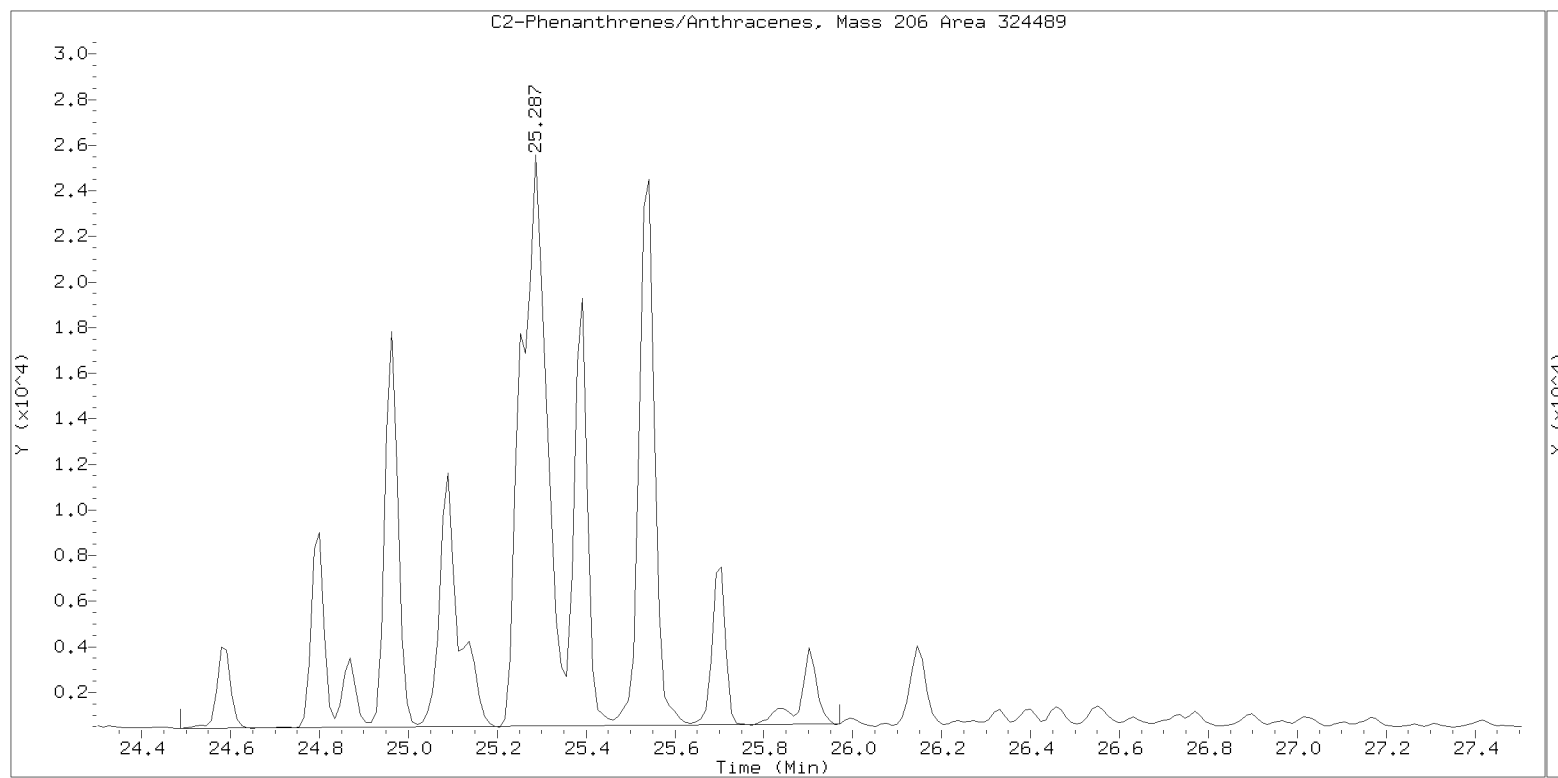
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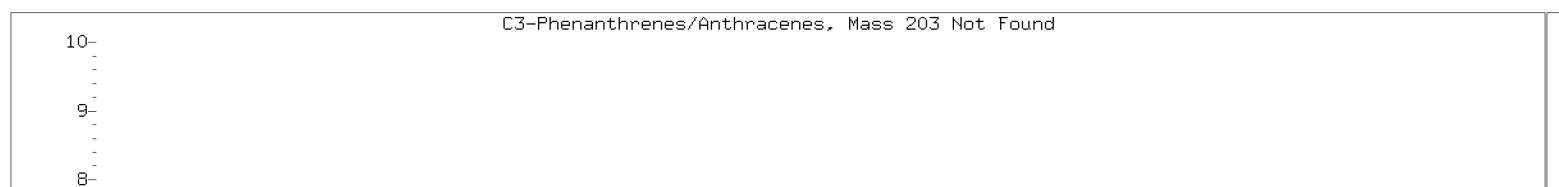
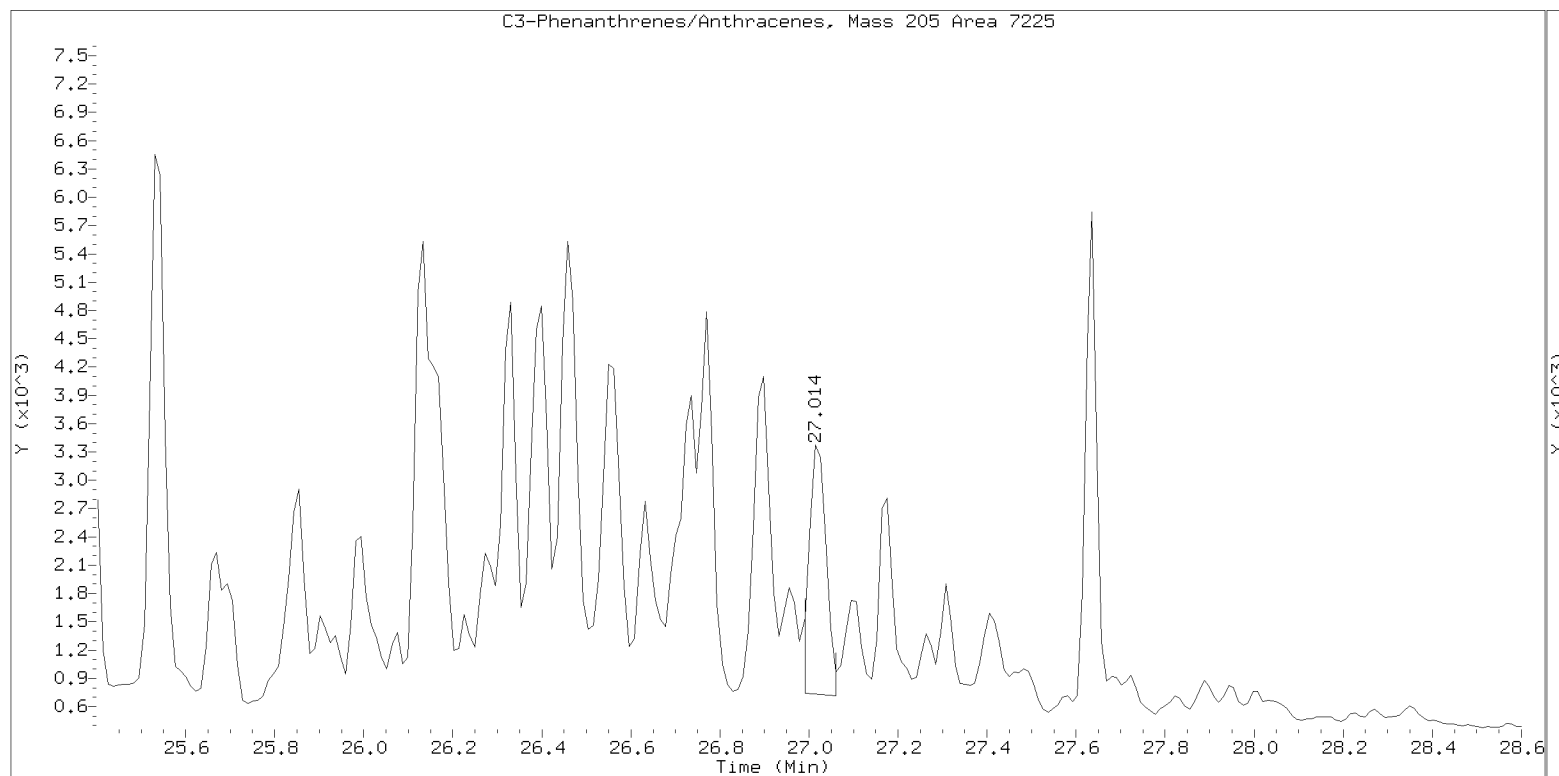
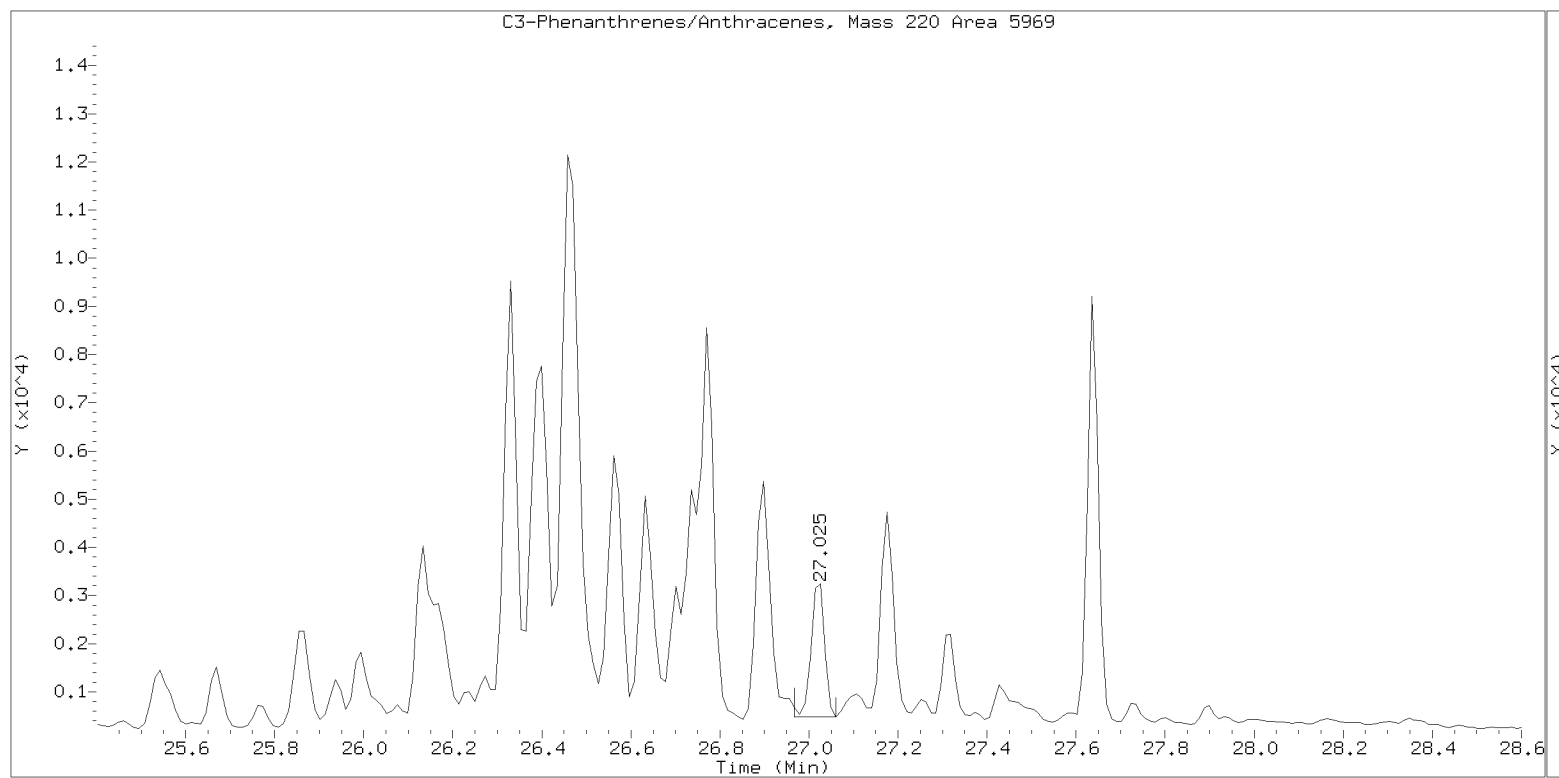
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SIM ALKYL PNA RANGE ION WINDOWS - NT1405272322S.D

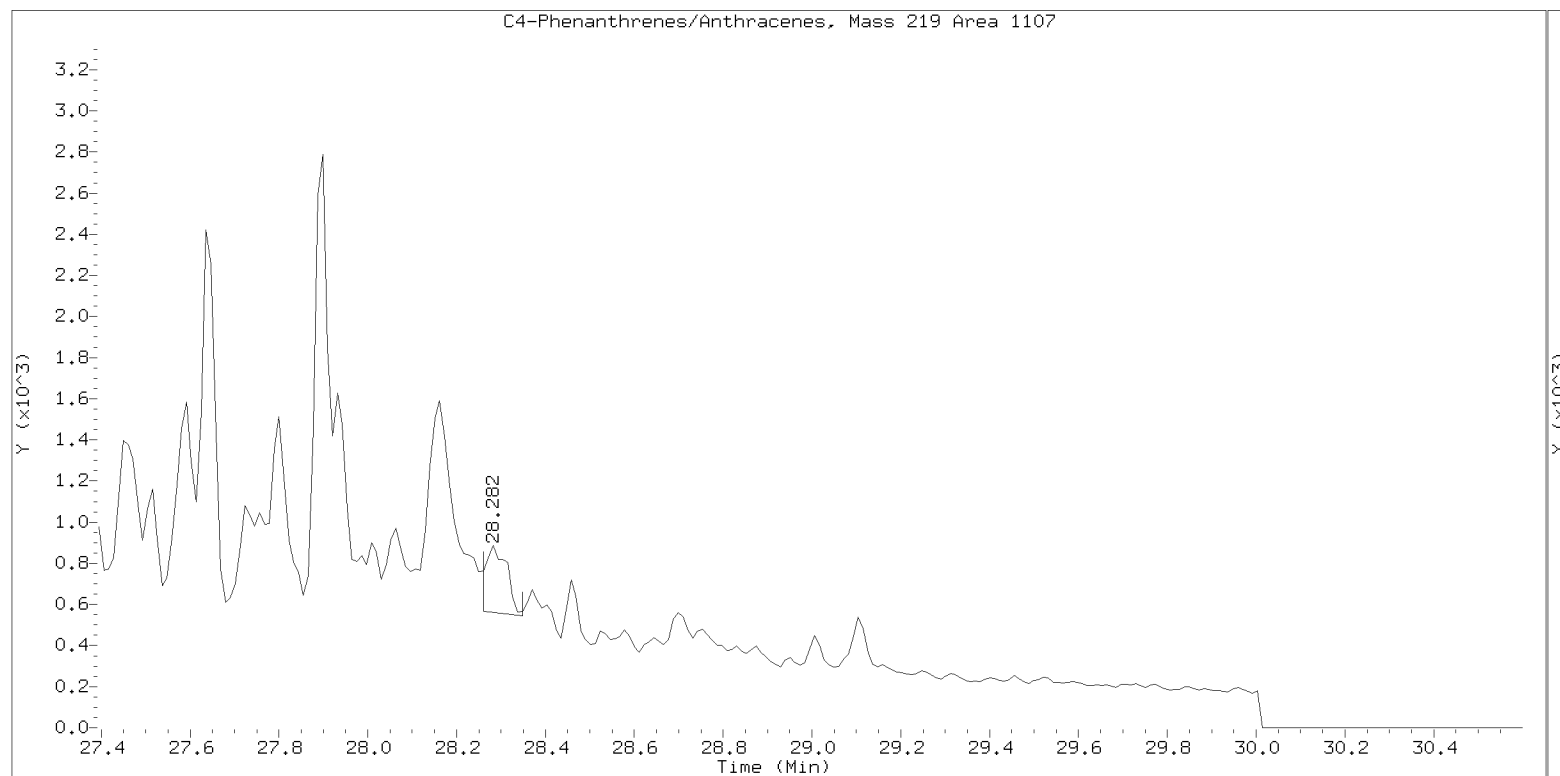
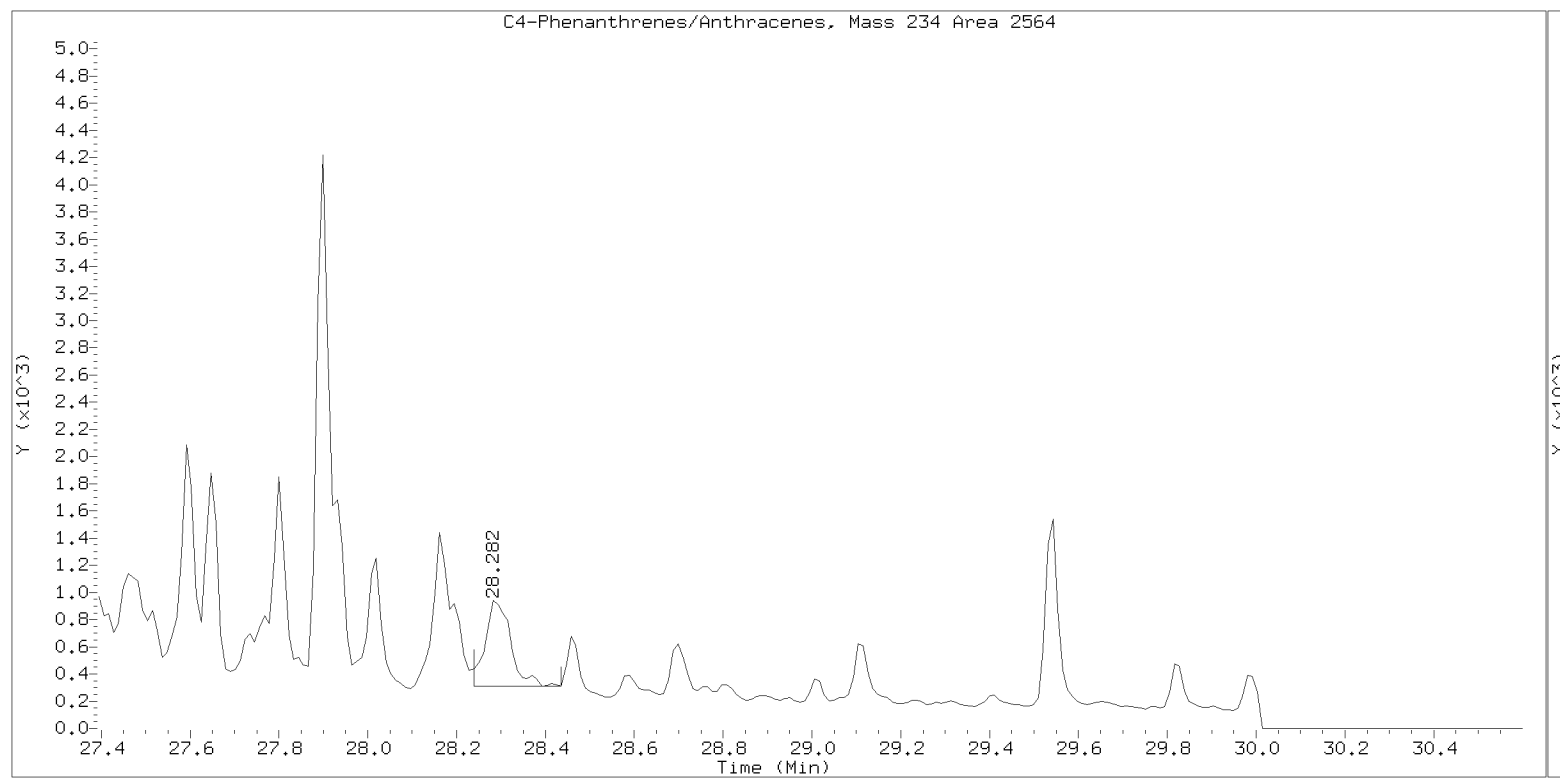
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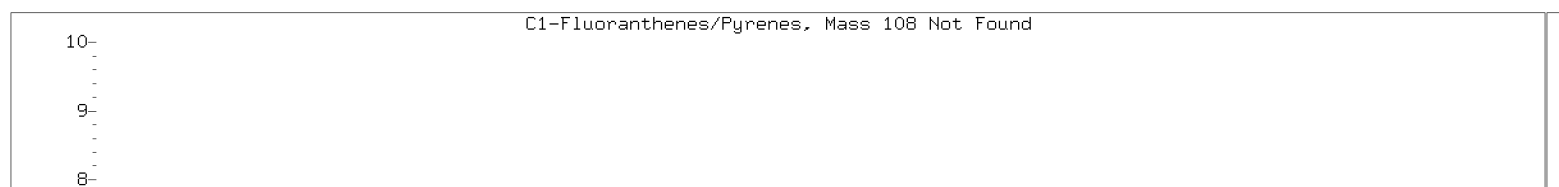
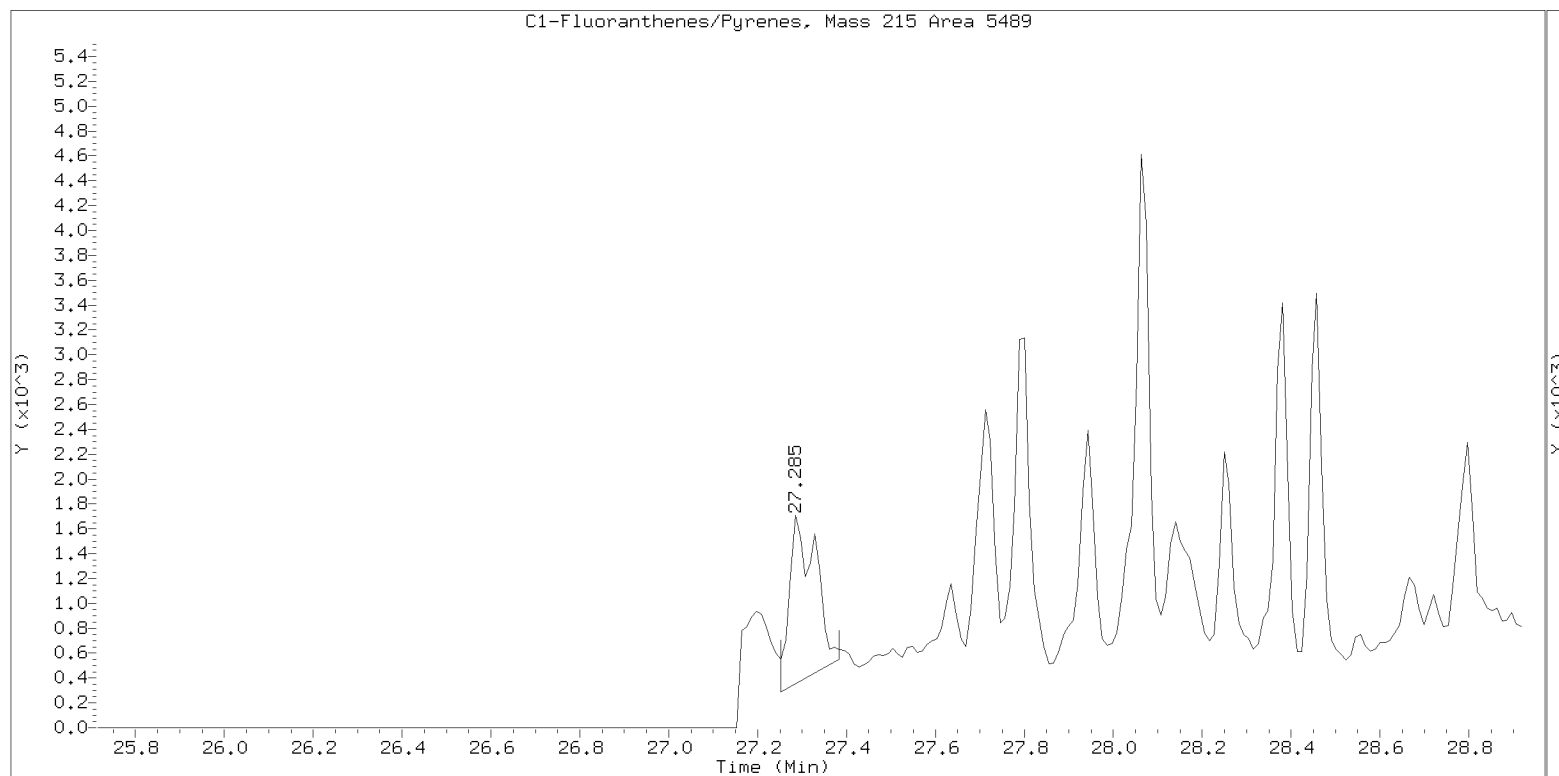
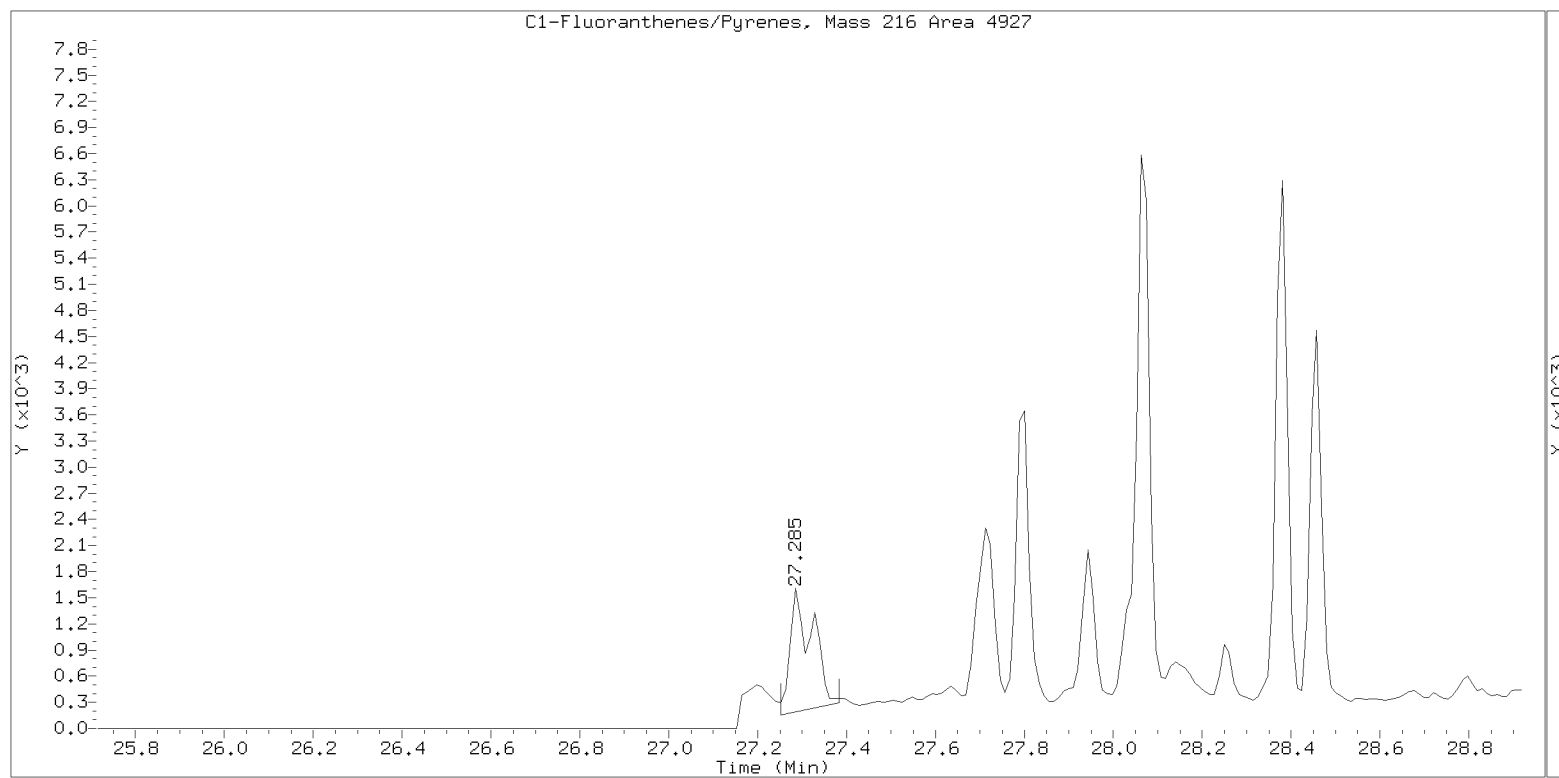
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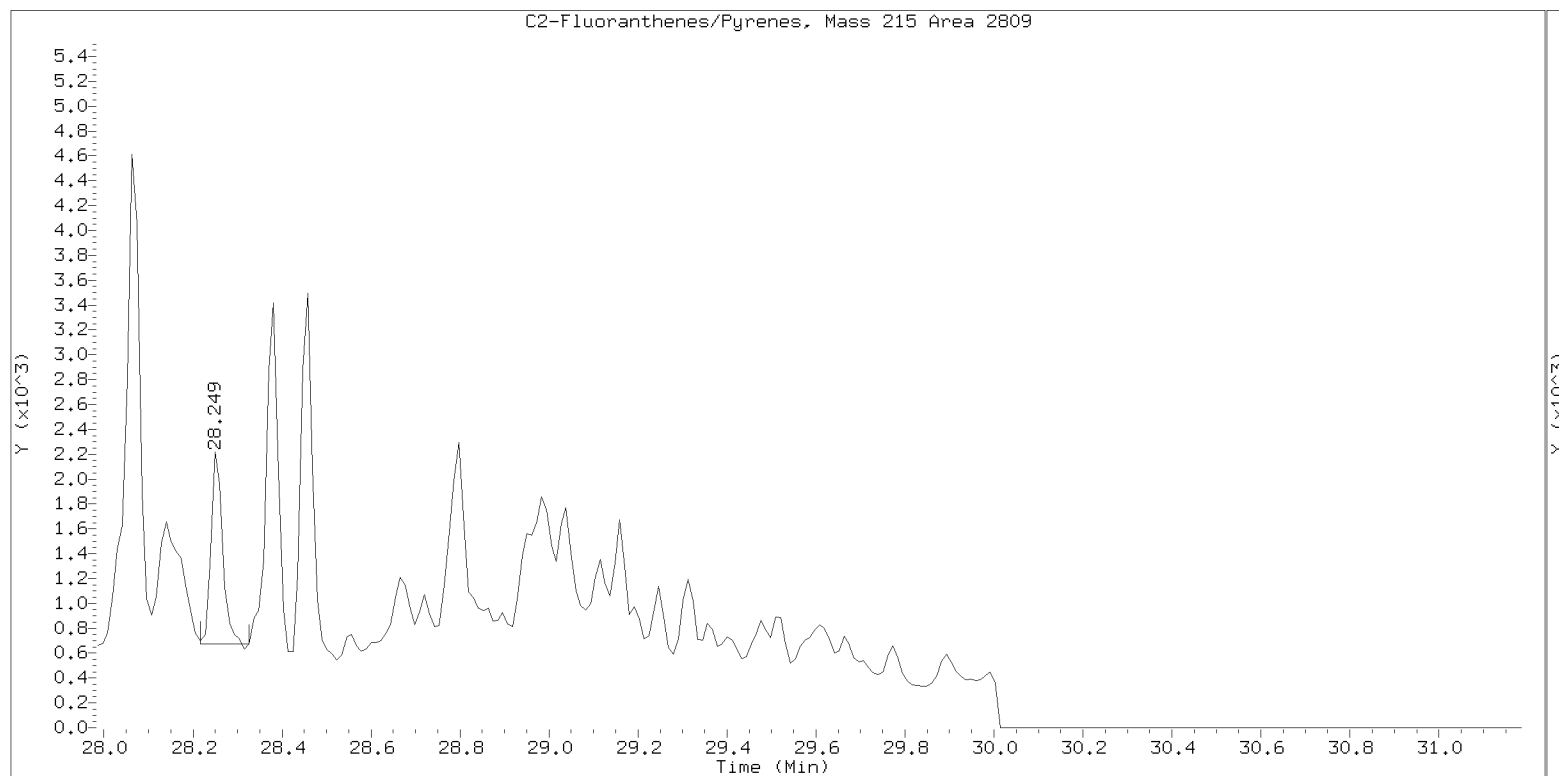
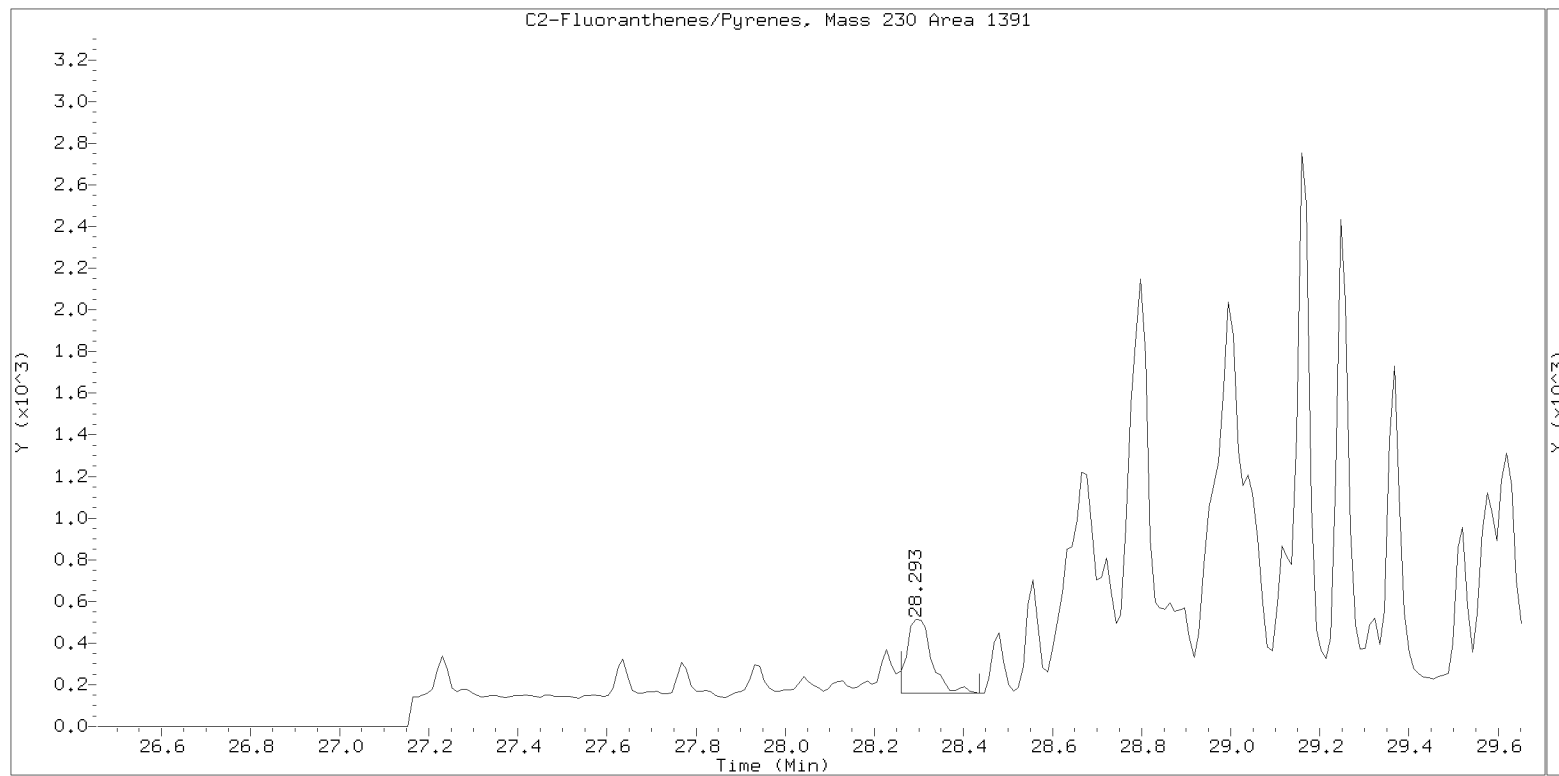
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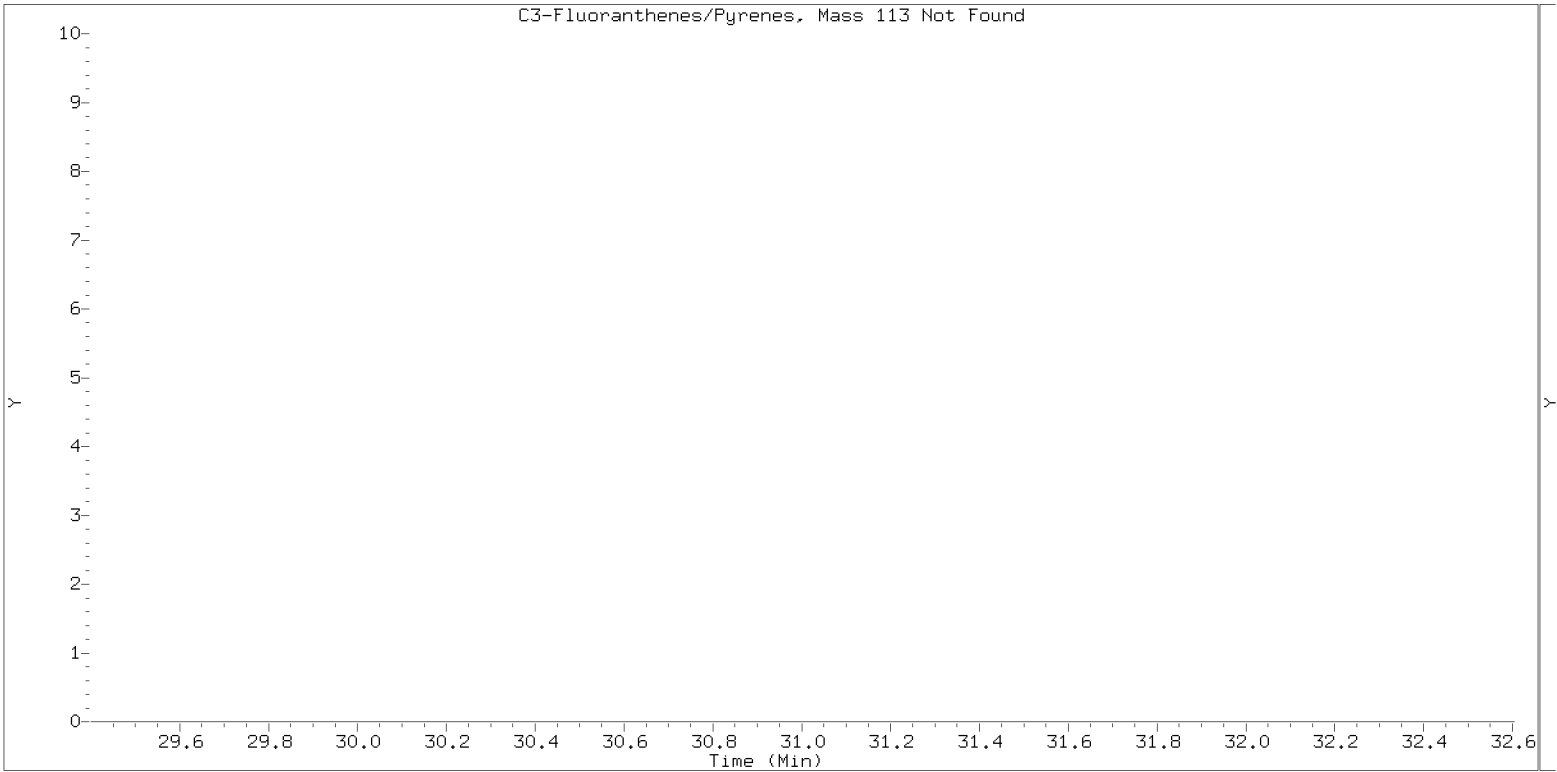
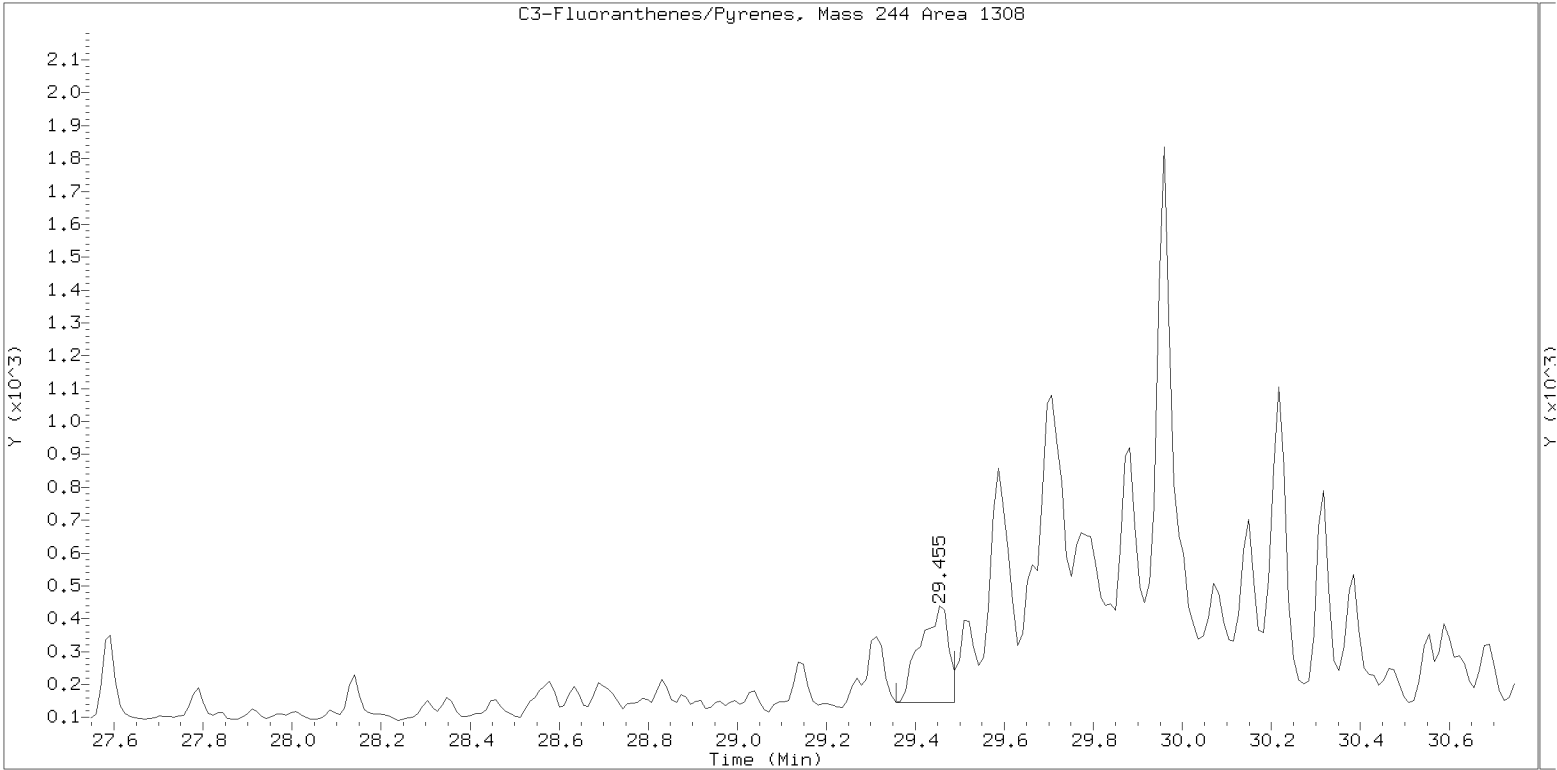


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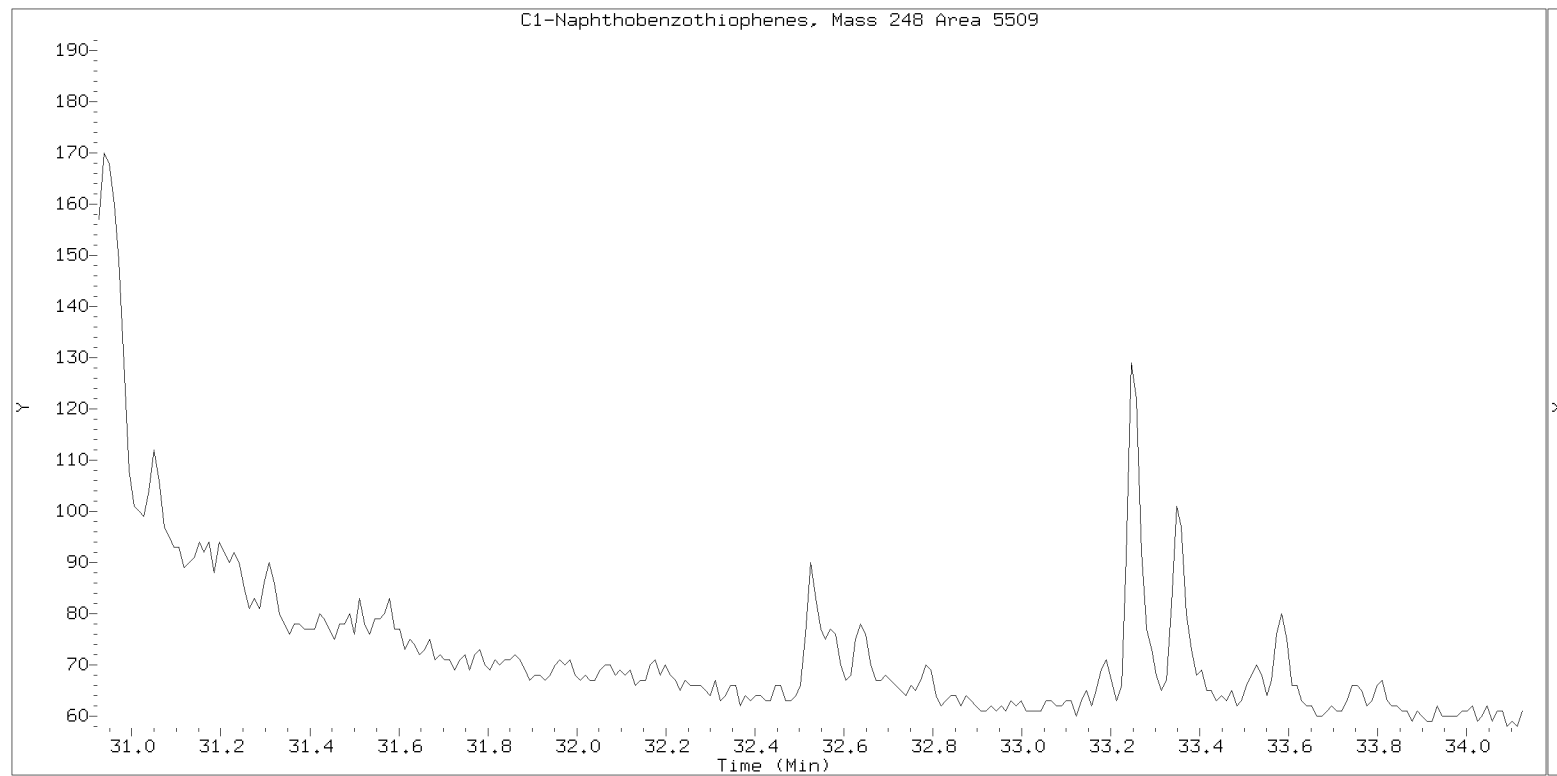


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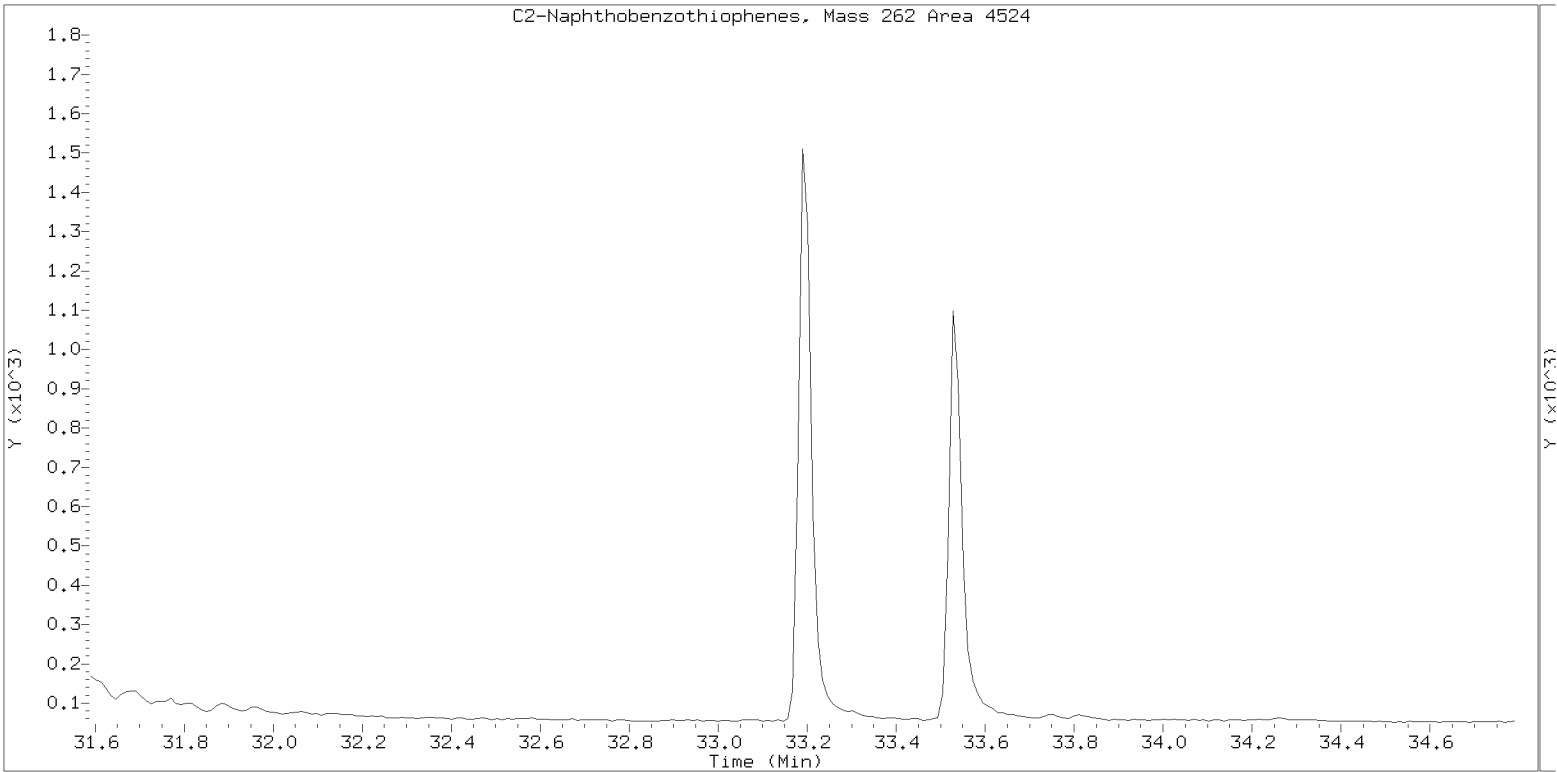


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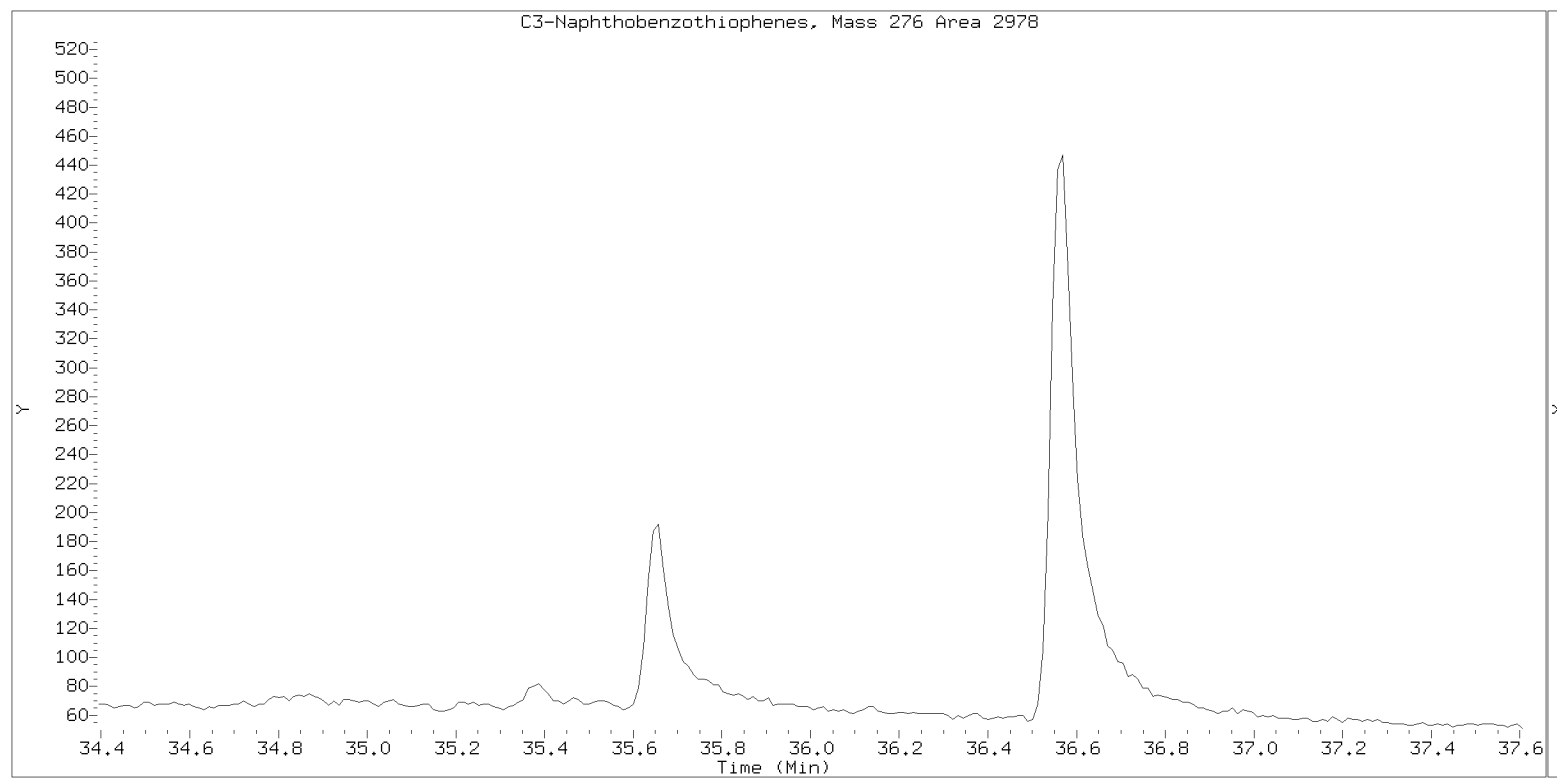


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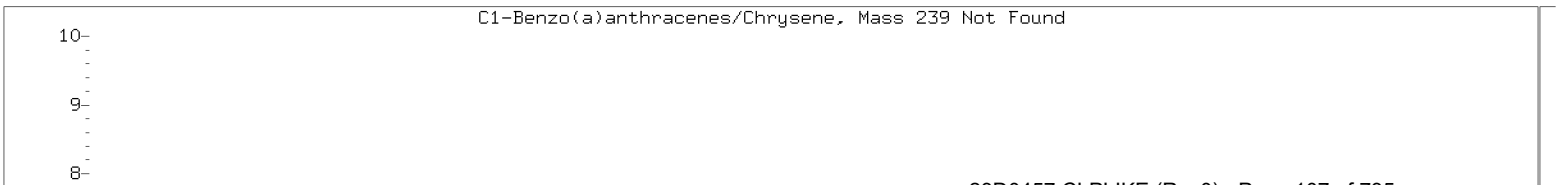
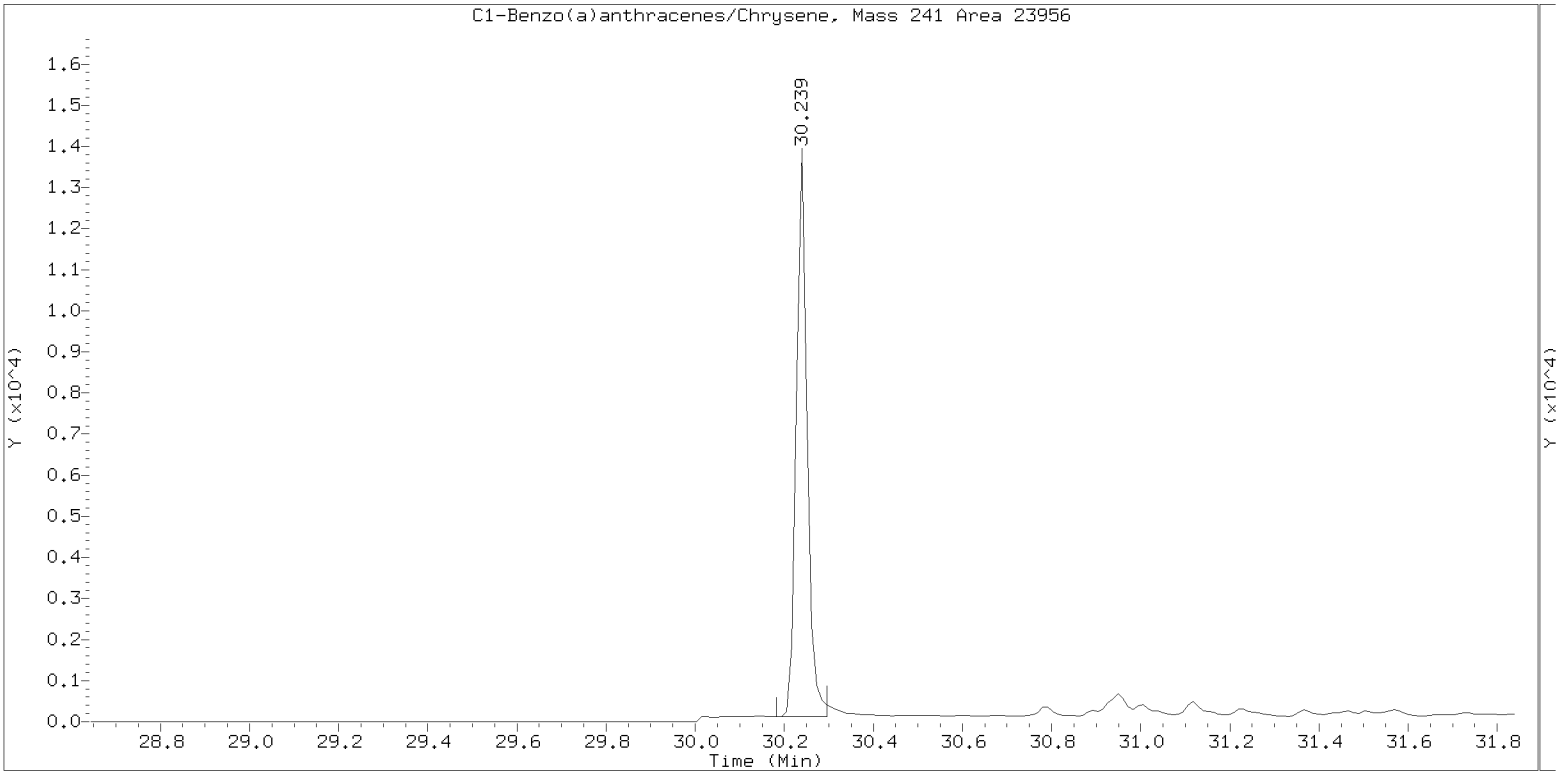
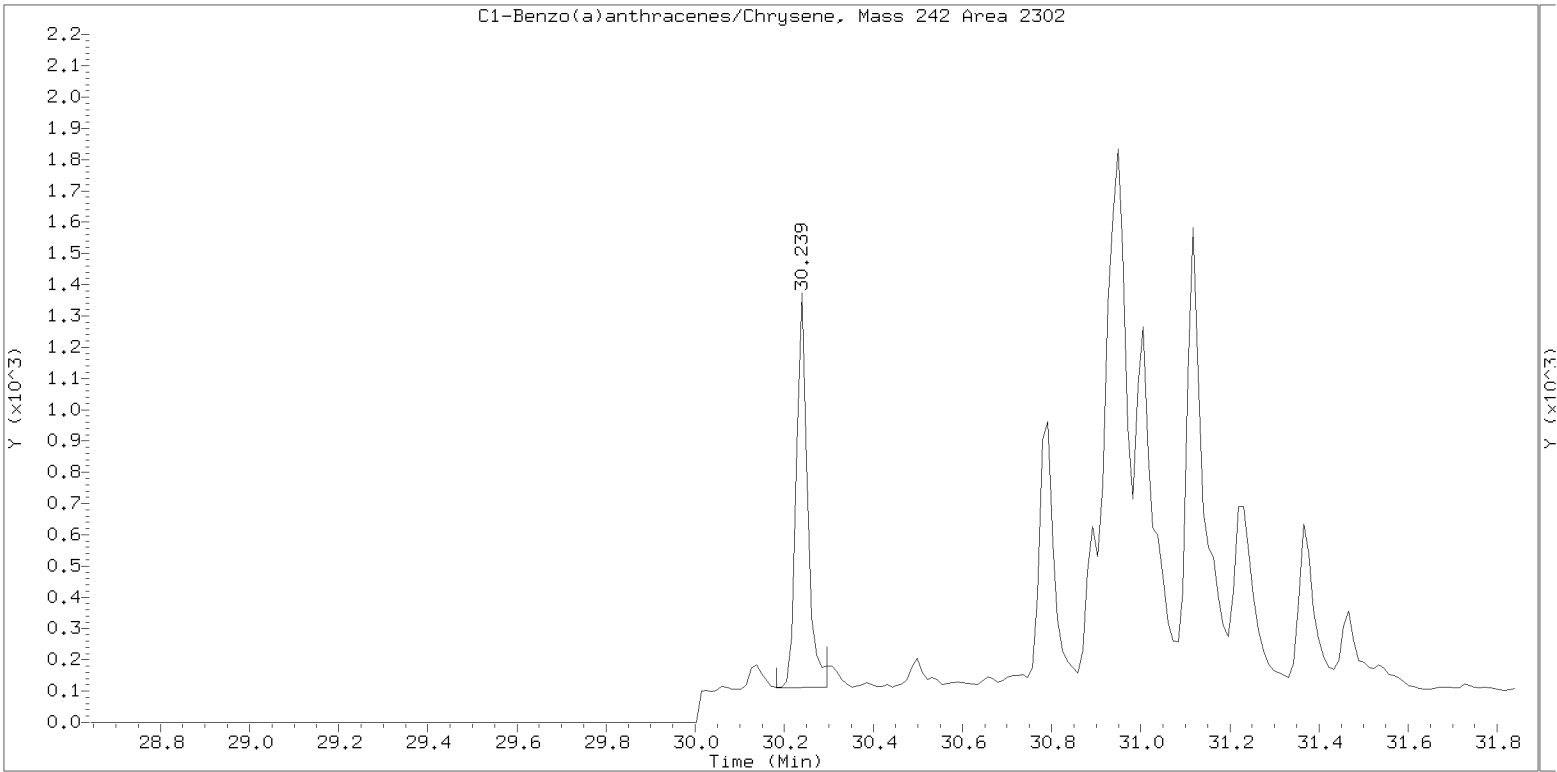


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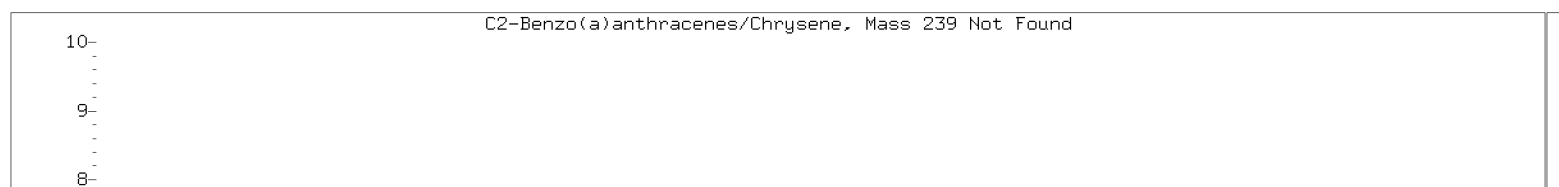
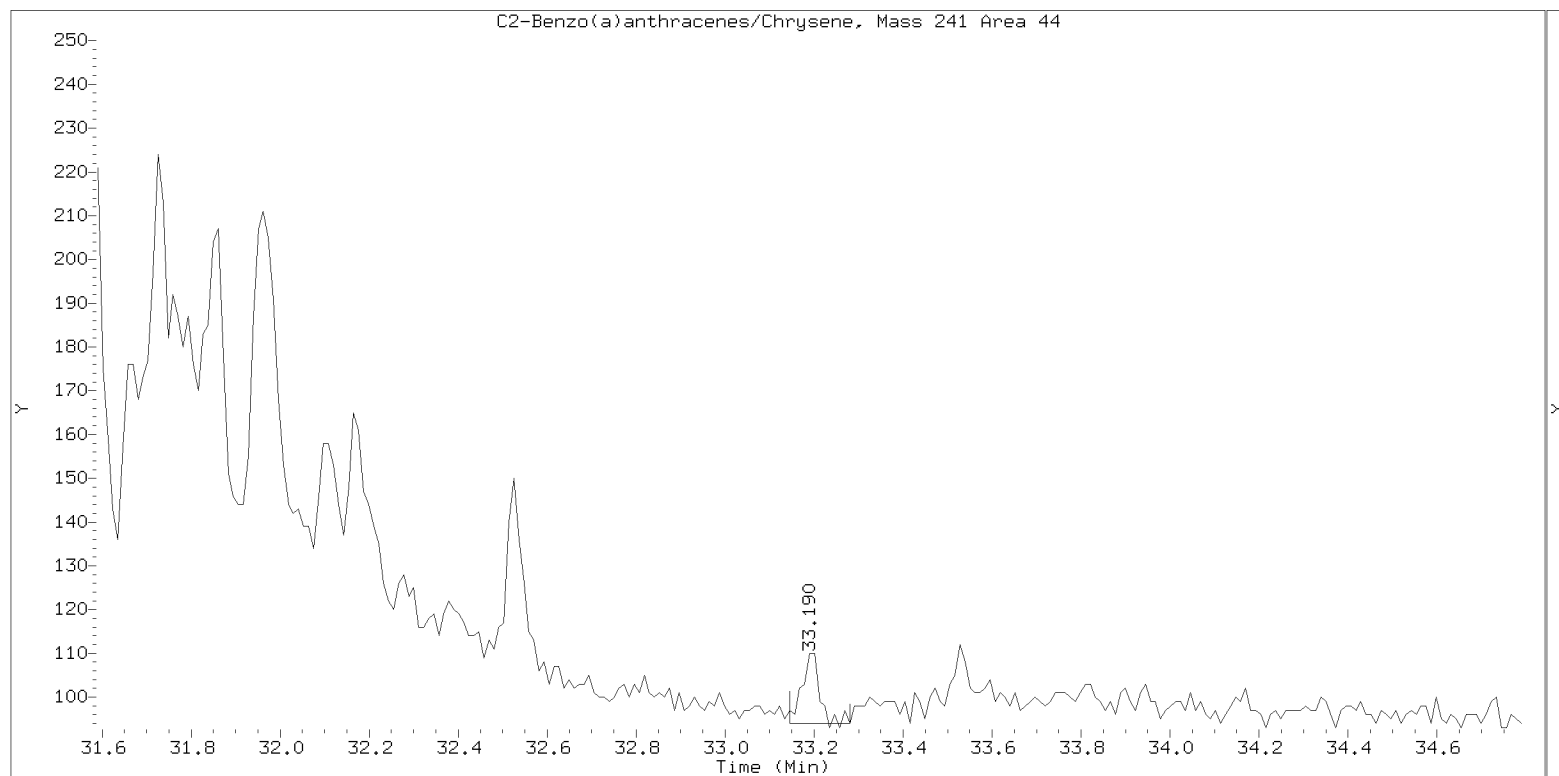
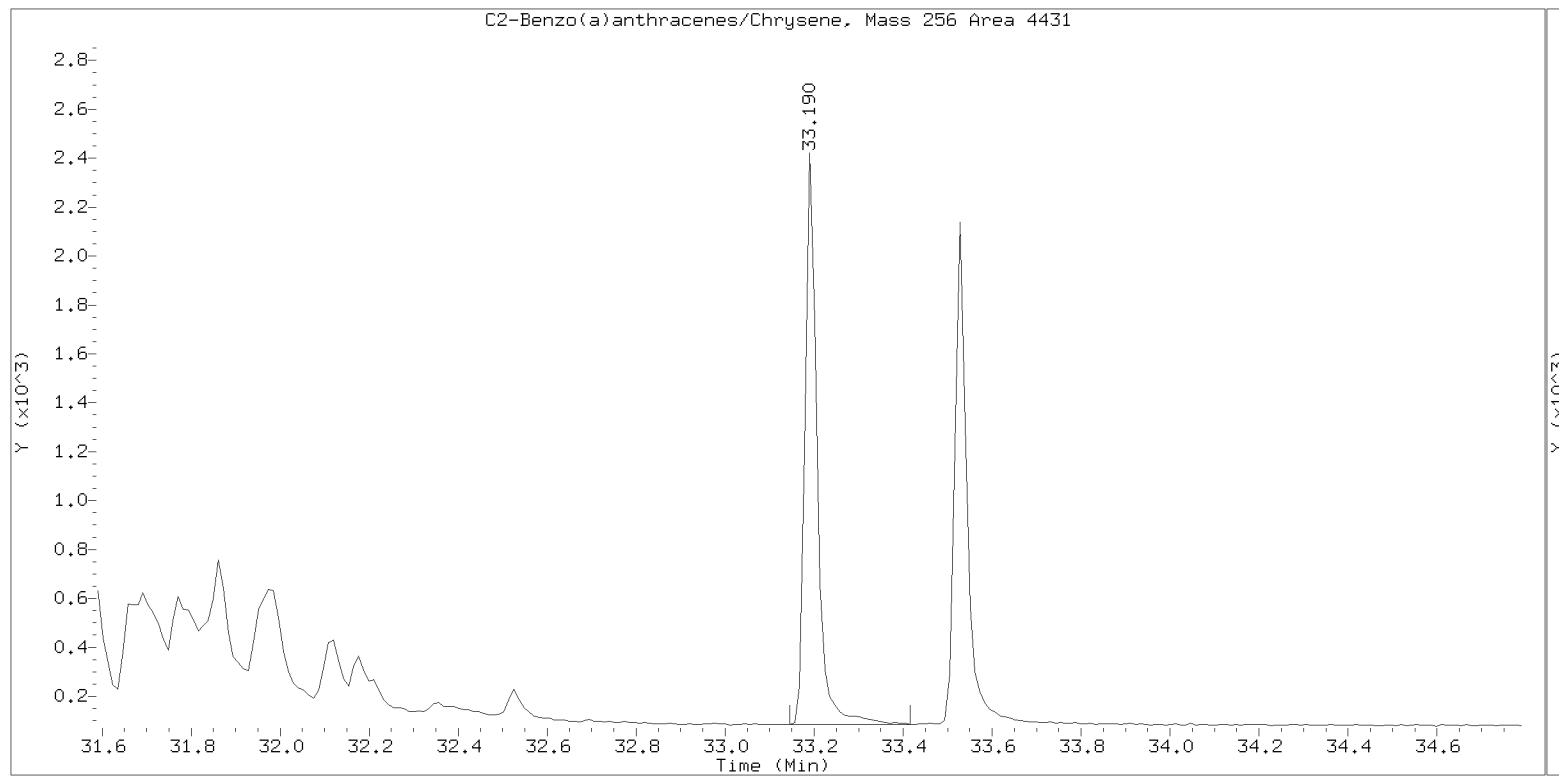


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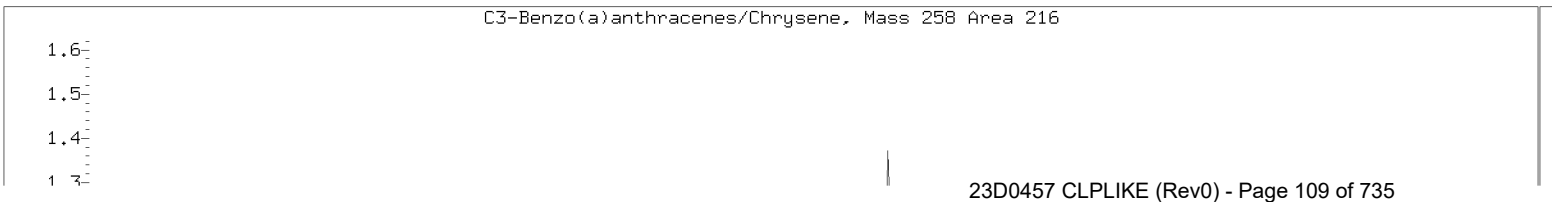
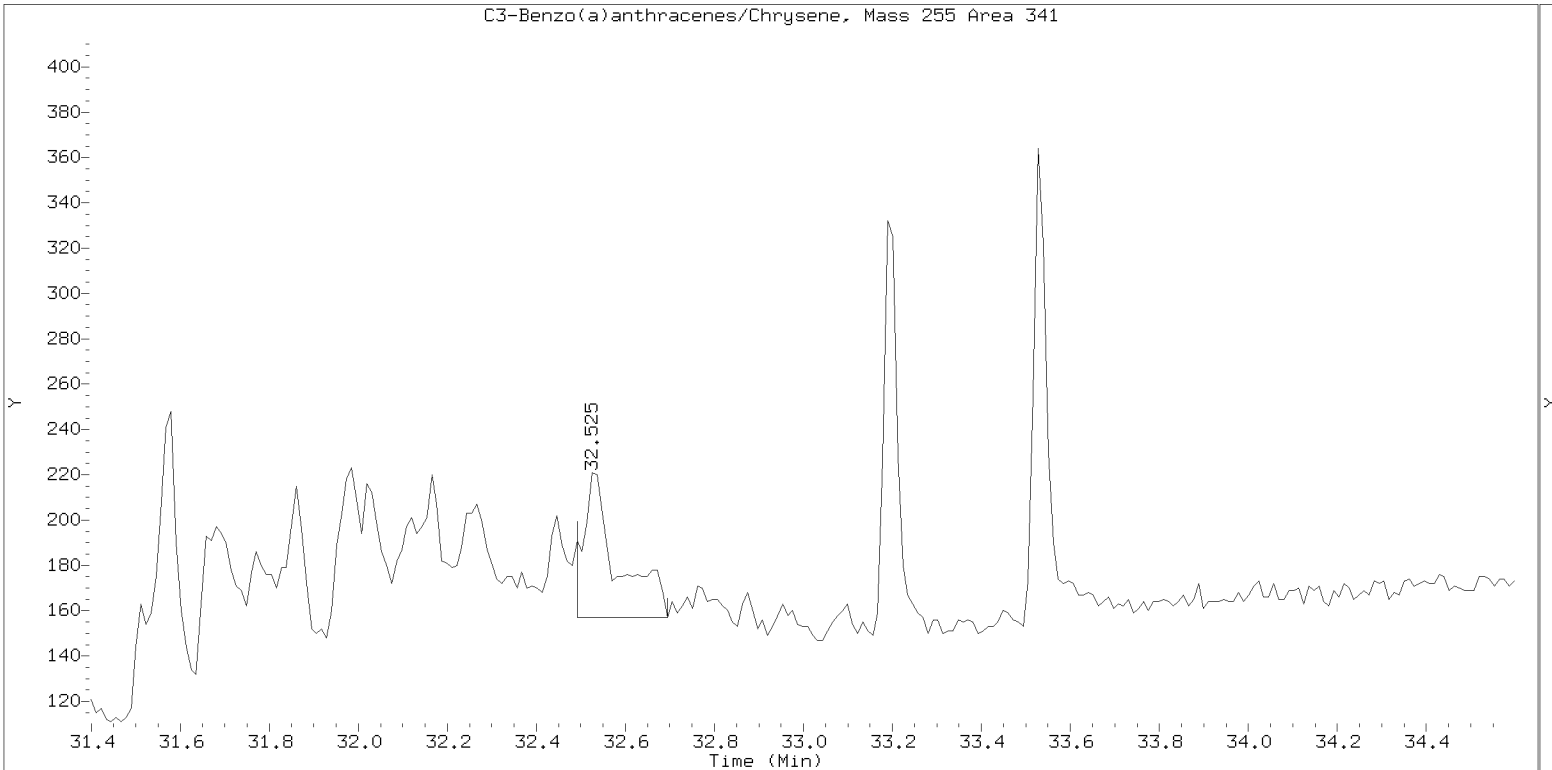
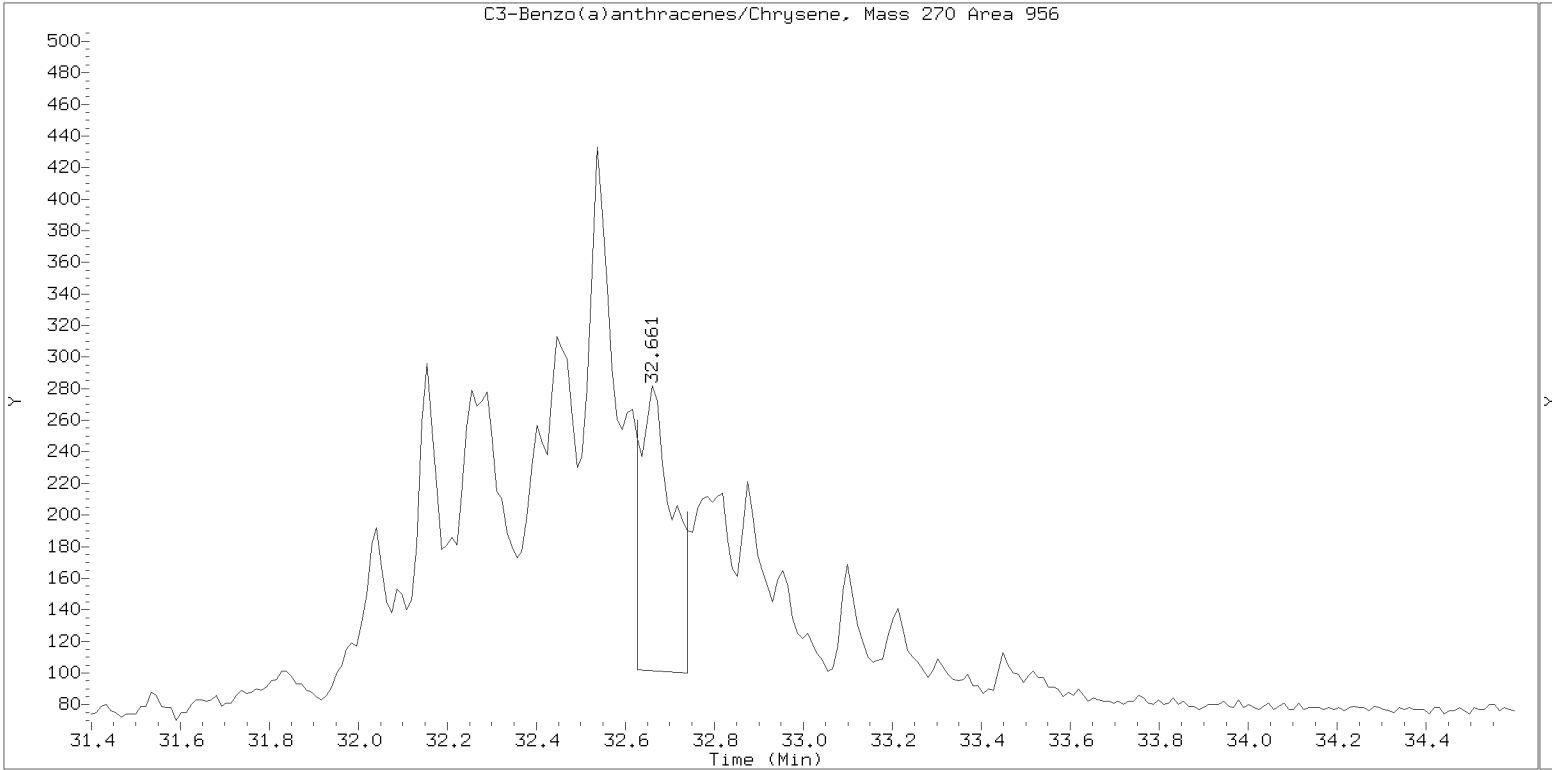


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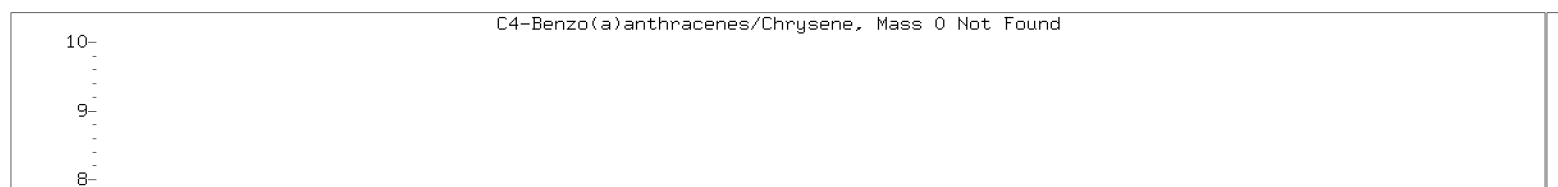
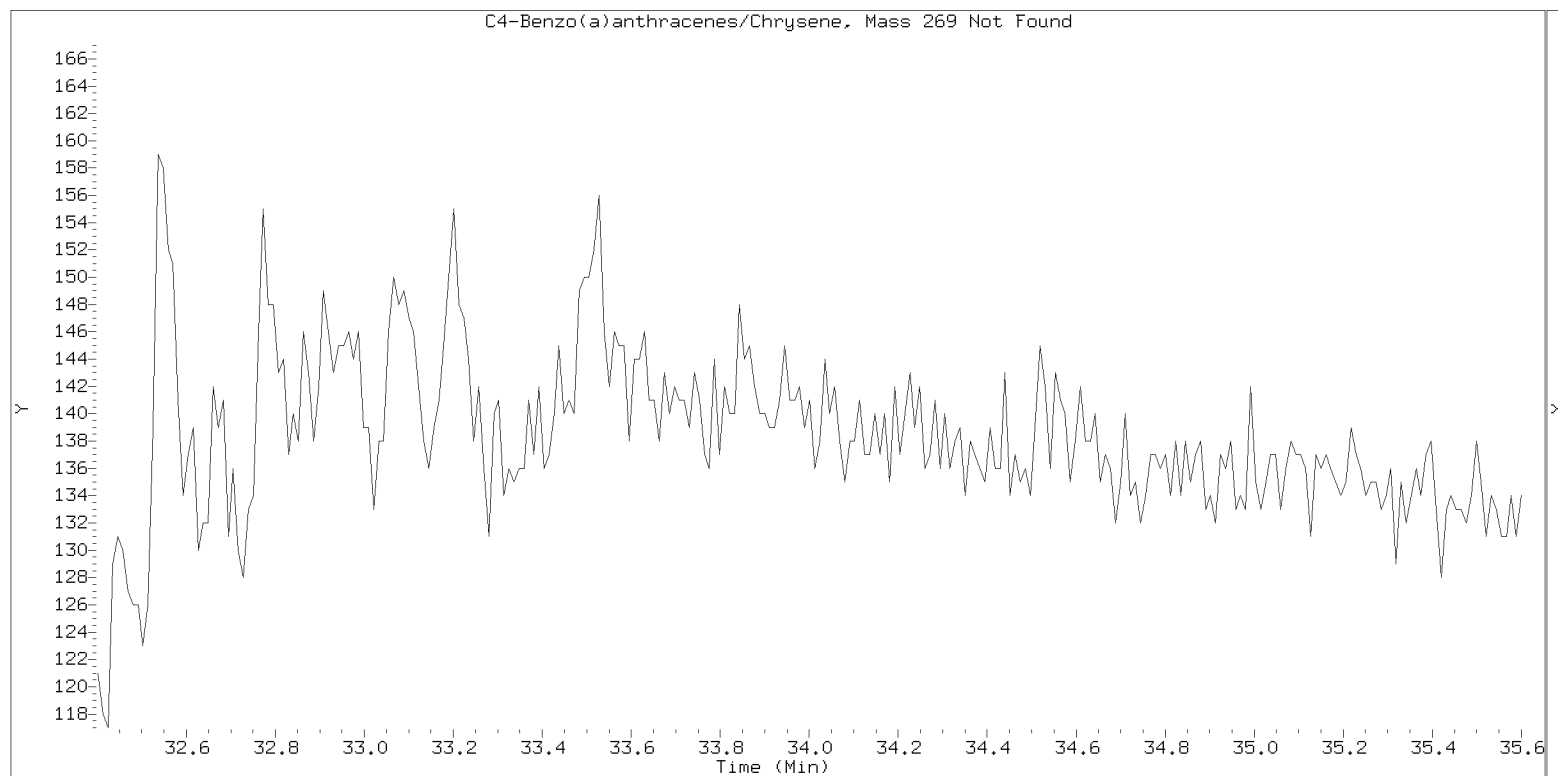
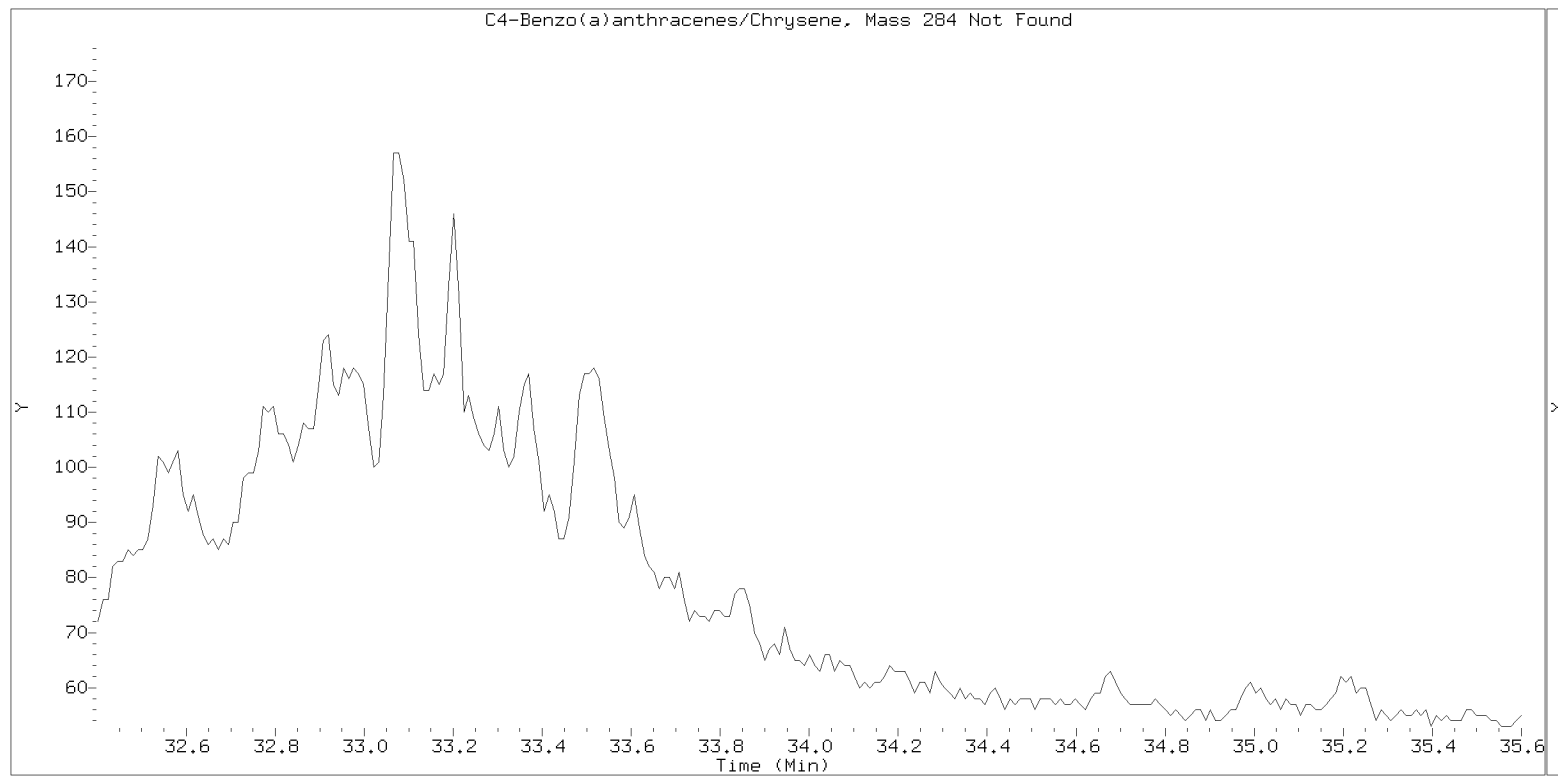


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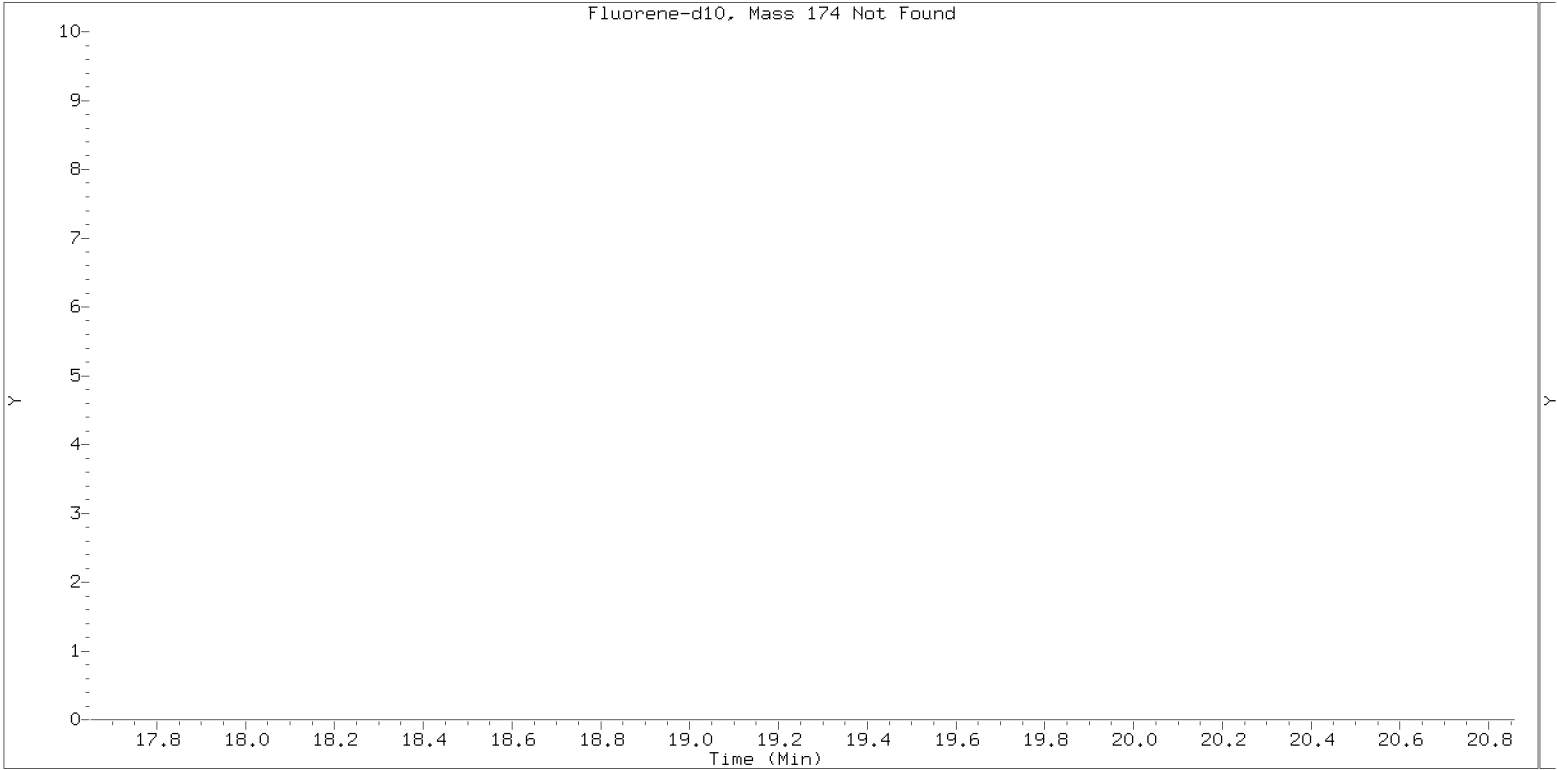
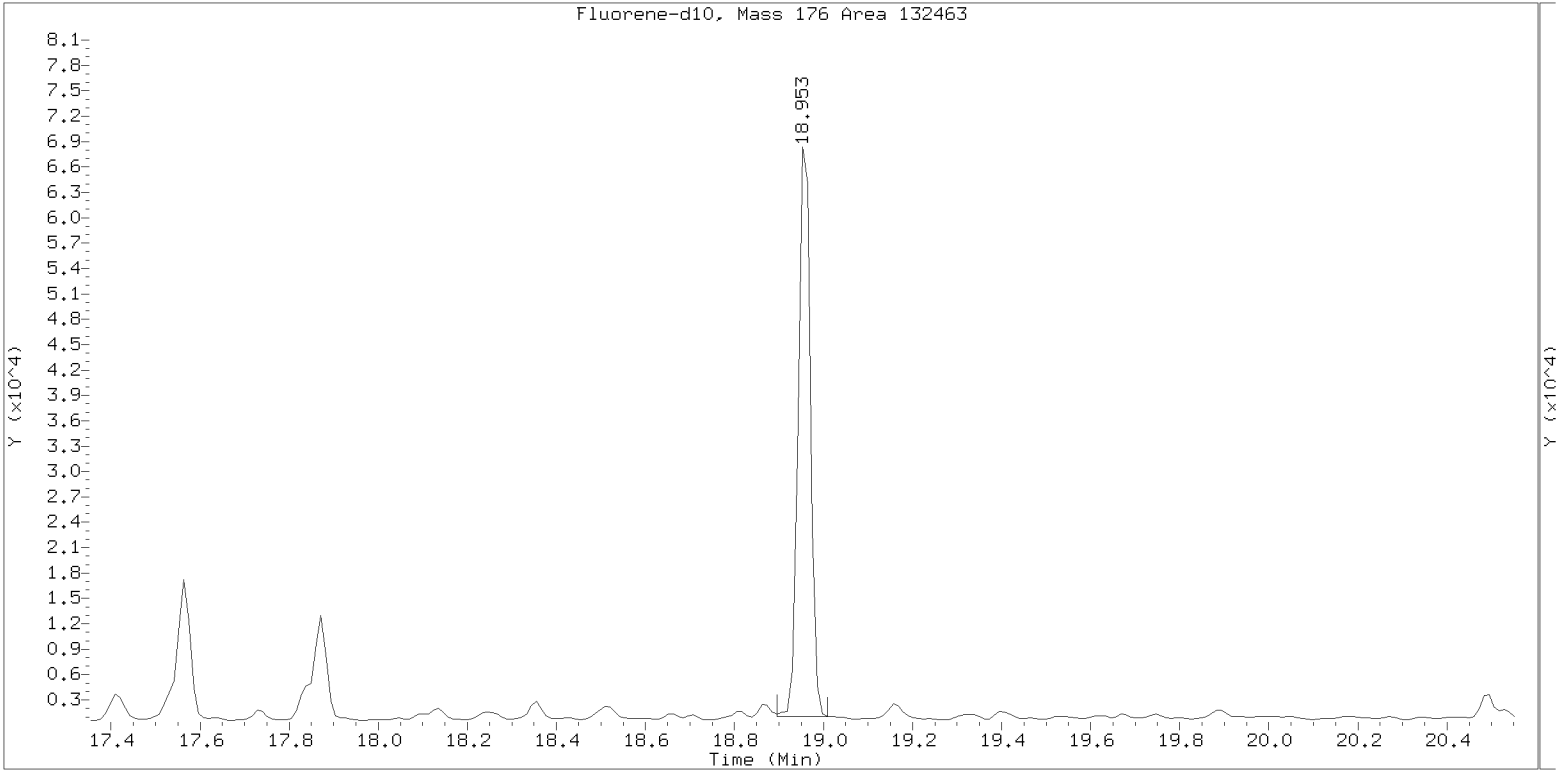


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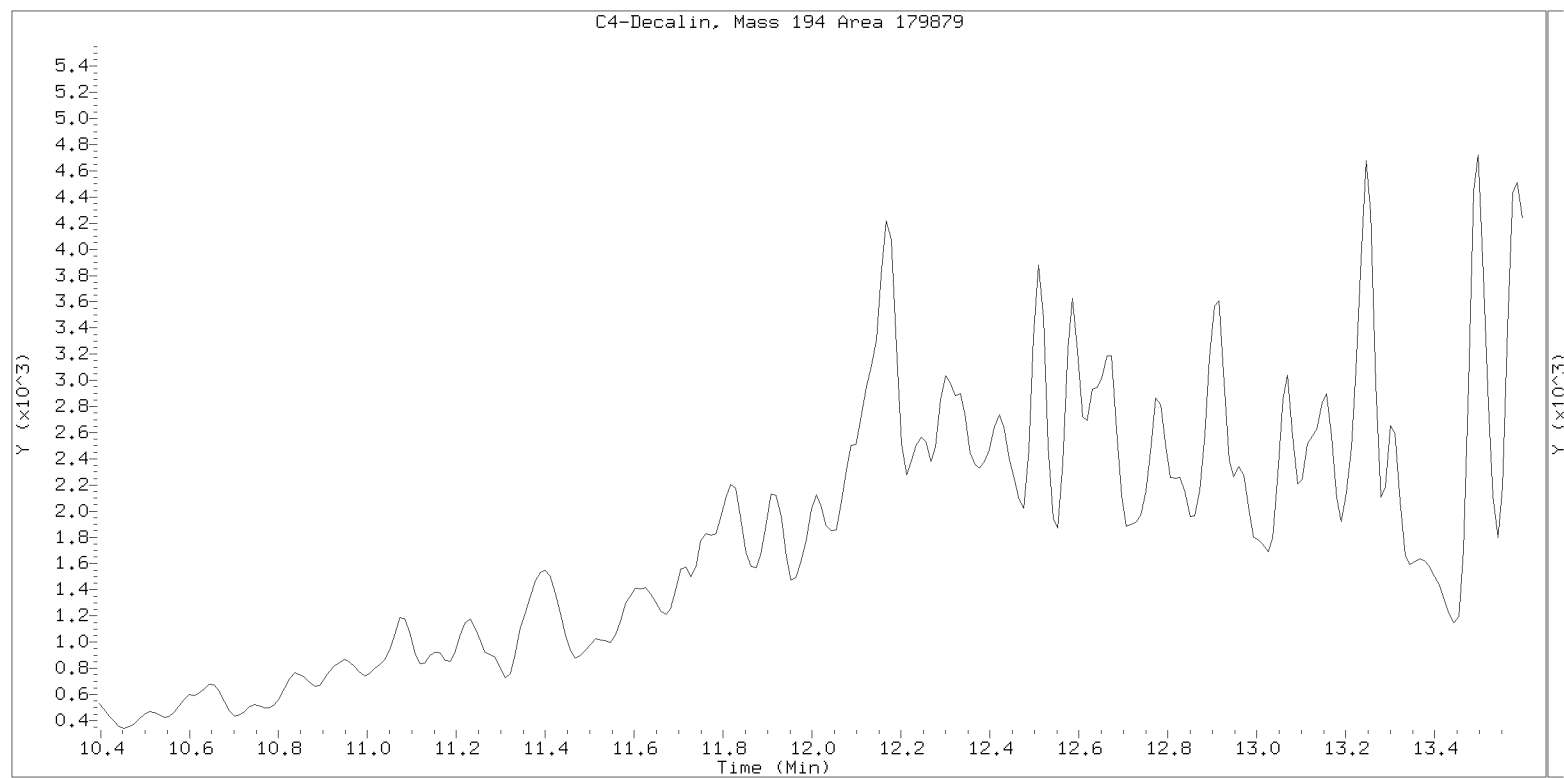


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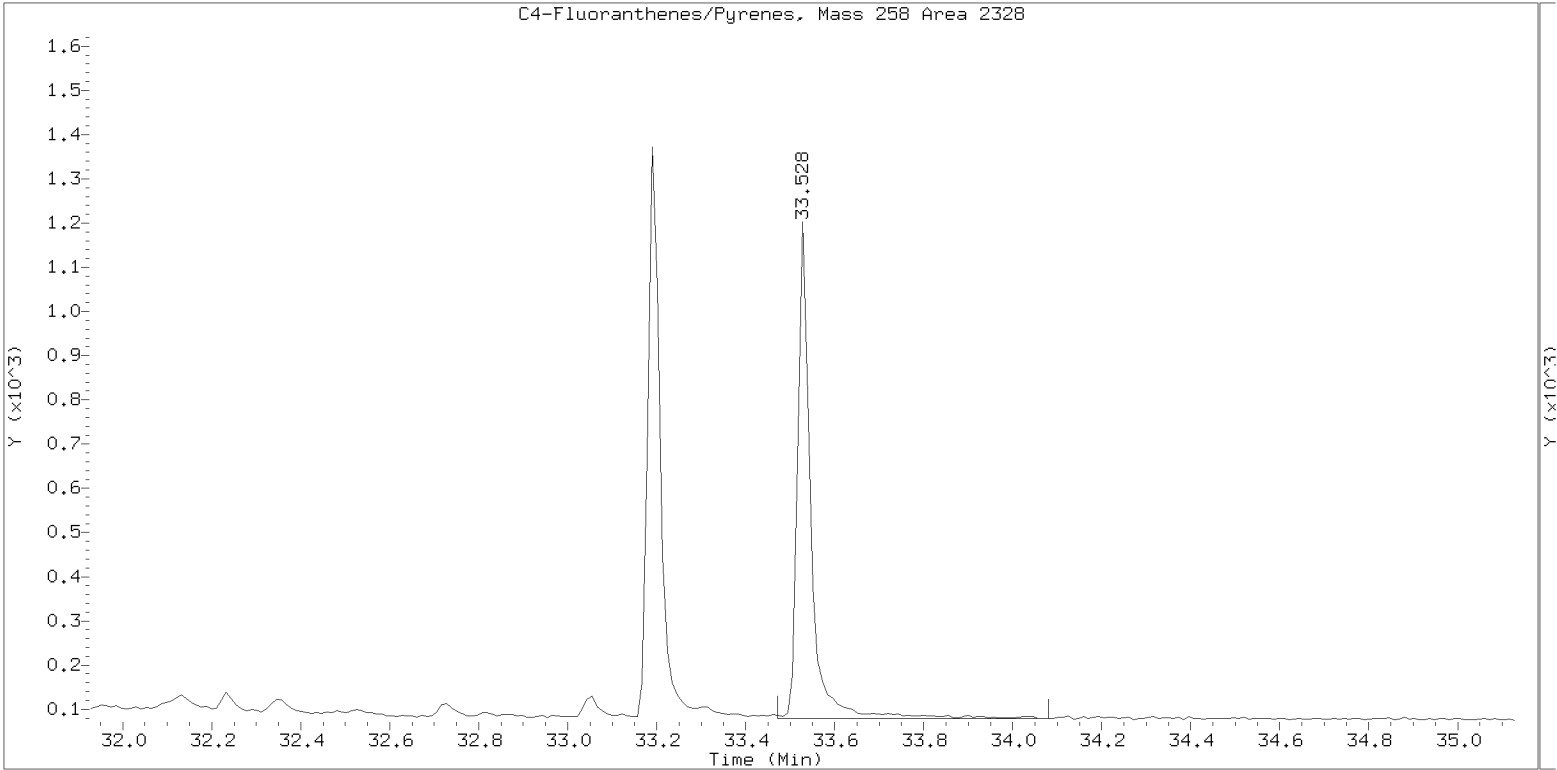


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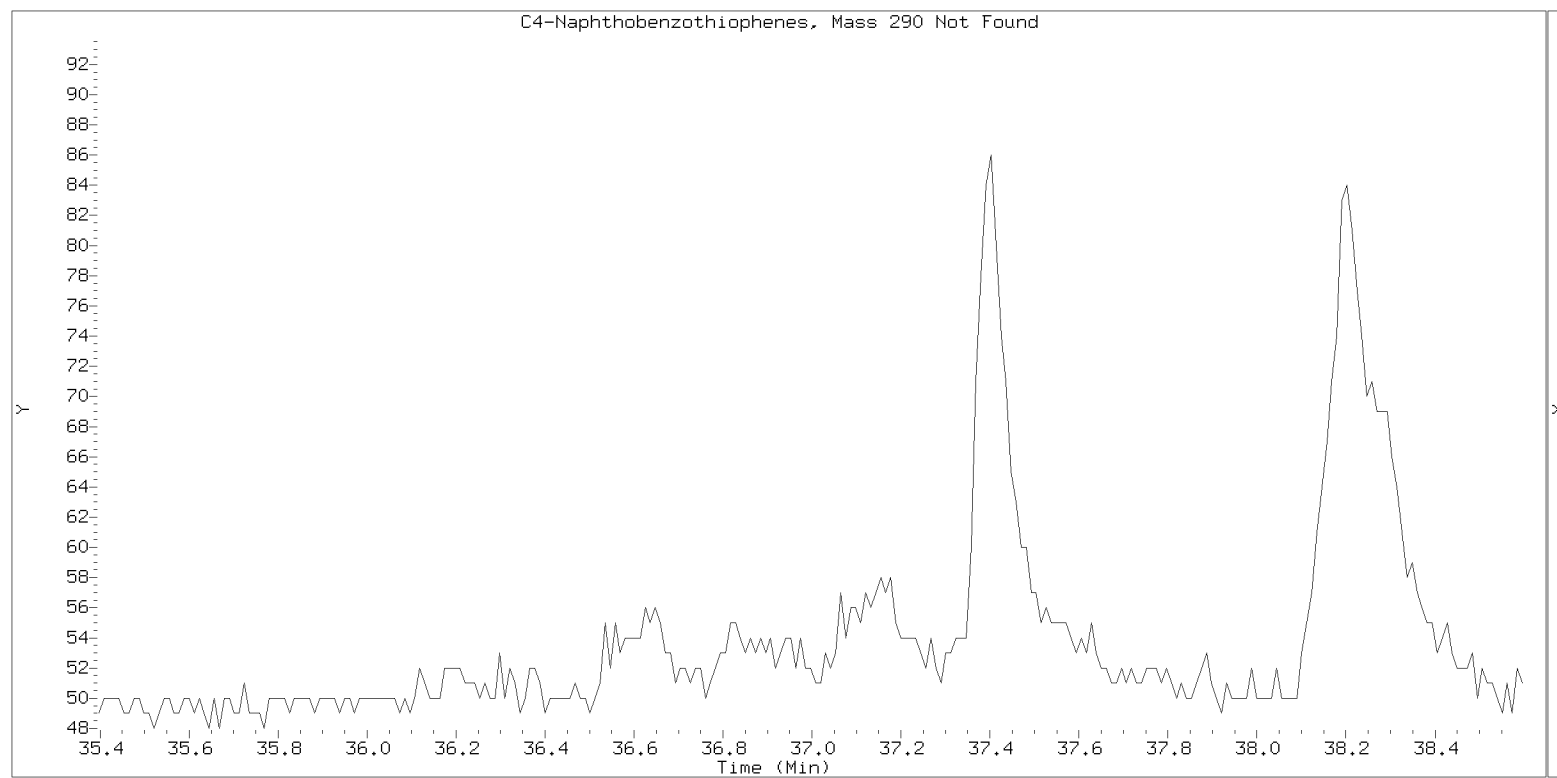


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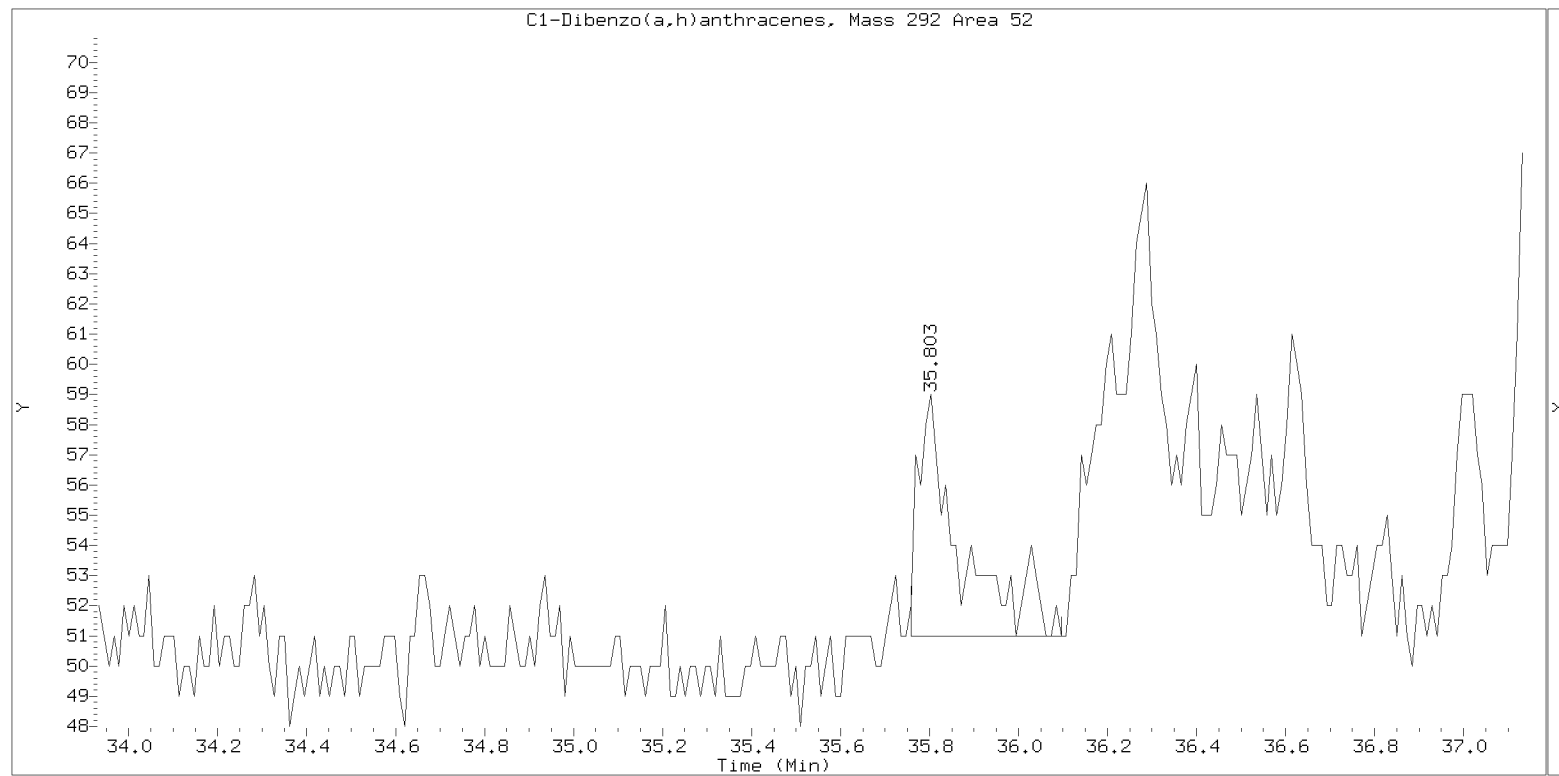
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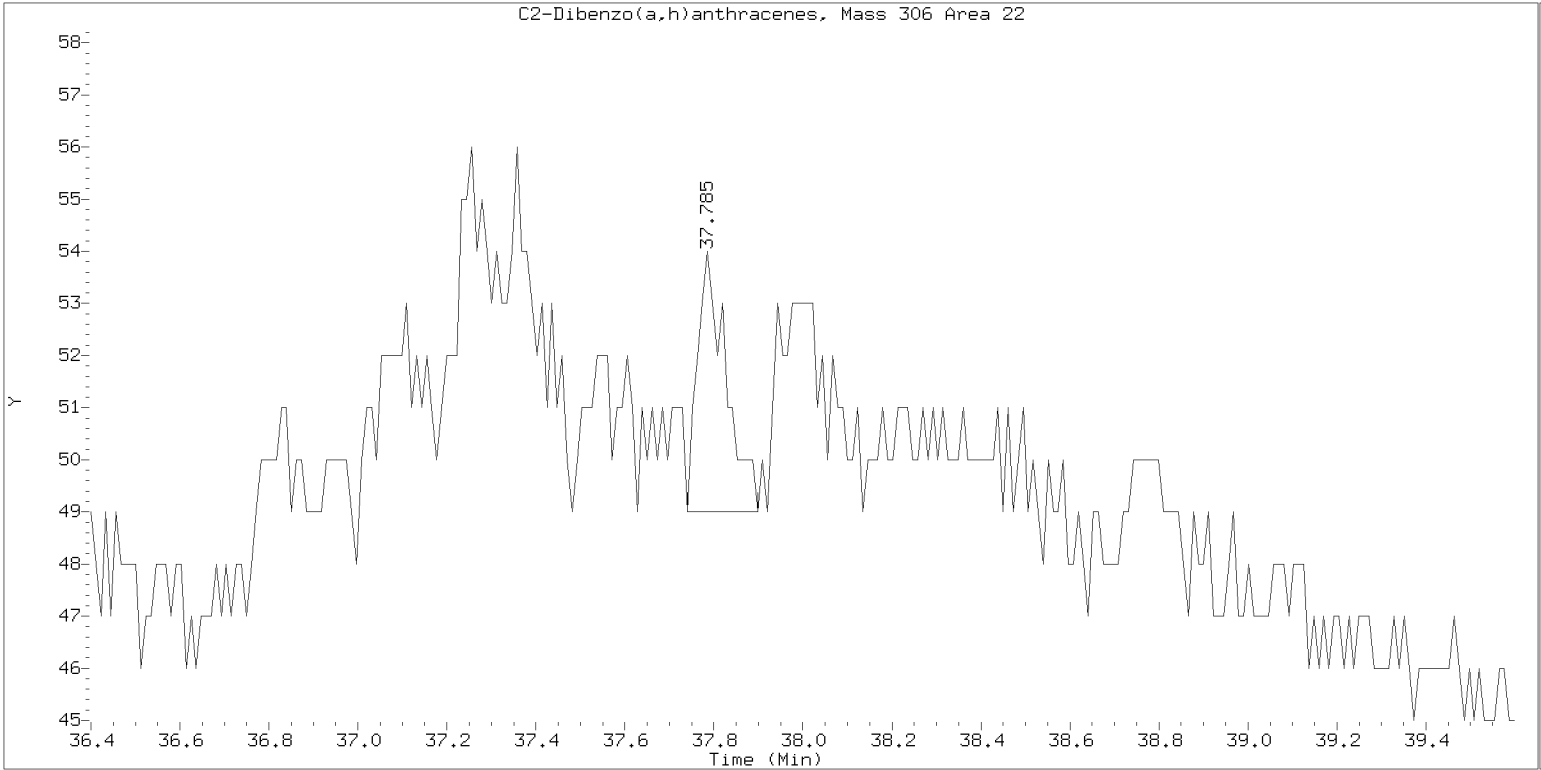


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Lab ID: 23D0457-01
nt14.i, 20230527.b\ALKYLRANGES.m, 28-MAY-2023 03:09





Analytical Resources, LLC
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY
EPA 8270E-SIM

Laboratory: Analytical Resources, LLC SDG: 23D0457
Client: Anchor QEA, LLC Project: Gasco Hydrocarbon Investigation
Batch: BLD0616 Batch Matrix: Oil Preparation: EPA 3580A (Waste Dilution)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
MW2112-041723	23D0457-01	NT1405272322S.D	04/26/23 12:22	
MW2112-041723	23D0457-01	NT1405272322.D	04/26/23 12:22	
Blank	BLD0616-BLK1	NT1405272320.D	04/06/23 12:22	
Blank	BLD0616-BLK2	NT1405272320S.D	04/06/23 12:22	
LCS	BLD0616-BS1	NT1405272321.D	04/06/23 12:22	



Organic Extractions Benchsheet

Analysis SM ALKAL PAH

Preparation Test Misc # 1

Lab Number(s) 23D0457

Batch ID BLO0616

Page ___ of ___

Batch set up by: CPD 4/24/23

Miscellaneous
Water/Soil/Sed/Tissue/Other Waste Dilute
Separatory Funnel (3510C)/Liq-Liq (3520C)
Sonication (3550C)/Microwave (3546)
TissueMize (Modified 3550C)

Bottle or JAR ID	Extraction Requirements	Weight Or Volume Extracted	Sonic Horn ID + Chk	(REQ/ Opt) GPC Y/N	(REQ/ Opt) Acid Clean Y/N	(REQ/ Opt) Sulfur Clean Y/N	(REQ/ Opt) SPE Clean Y/N	Final Effective Volume	Vol to Lab	Comments	Verify Client ID
BLO0616	BLK	1.00g	N/A		N/A	N/A	N/A	0.5mL	0.5mL		Analyst/Date <u>CPD 4/26/23</u>
BLO0616	BS	1.00g									Pre-GPC KD 1 2 3 4 5 6 -----°C
N/A	BS Dup	N/A									Exchange to Hex? Analyst/Date
N/A	MRL Check	N/A									TurboVap Pre-GPC 1 2 3 4 5
23D0457-01A		1.00g									Analyst/Date <u>CPD 5/8/23</u>
											Post GPC KD 1 2 3 4 5 6 -----°C
											Exchange to Hex? Analyst/Date <u>CPD 5/25/23</u>
											TurboVap Post-GPC 1 2 3 4 5
											Analyst/Date
											TurboVap Pre-Cleanups 1 2 3 4 5
											Analyst/Date
											TurboVap Post-Cleanups 1 2 3 4 5
											Analyst/Date
											Reviewed by/Date <u>SM 4/25/23</u>

Analyst/Date CPD 4/26/23

CPD 4/26/23 12:22

Analyst/Date

Standard Surrogate	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Spike	T (K004597)	15ng/mL	100 µL	10/18/2423	CPD	CPD
Spike	15 (K004081)	15ng/mL	100 µL	8/4/2423	CPD	CPD
Spike	42 (K004549)	15ng/mL	100 µL	10/18/2423	CPD	CPD
Spike	()		µL			
MRL Spike	()		µL			
Extraction Time:	Liq/Liq Start:	Liq/Liq Stop:				

Balance ID: B146462614

SPECIAL INSTRUCTIONS:
3057F

See attached prep instructions.
See Chris/Josh for questions.



Analytical Resources,
Incorporated
Analytical Chemists and Consultants

Organic Extractions Prep Sheet Notes

Extraction Parameter: SMALKYL Element Batch: BLD0616
WorkOrder(s) 23D0457 Matrix: OIL

1. Weigh 1g of sodium sulfate into ^{100 µL} 10 Scintillation Vials for BLK1 and BSL.
2. Homogenize sample, then pipette 1g into labeled Scintillation Vial
3. Bring all to 20mL with DCM (Blanks add 20mL, sample add 19mL)
4. Vortex for 1 minute.
5. Split 0.1mL/100µL into a new scintillation vial with 10mL of Hexane.
6. Add surr/spk to the scintillation vial with hexane (100µL of surr/spk).
7. Vortex for 1 minute, then deliver to vialing.
8. Filter and GPC full extracts.
9. Post GPC KD in DCM on 80°C baths.
10. Final vialing in DCM, FEV is ~~0.5~~ 100mL. Take extracts to 0.5mL/surr
in
HPLC

Prep Start Time: _____ Prep End Time: _____
Analyst/Date: _____ Balance ID: _____
Special Instructions: _____



Extraction Parameter: SIM ALKYL PAH

Extraction Batch BLD0616

Total Solids Batch: N/A

Work Order(s): 2300457

Screens: Soil/Sediment/Solid/Other:

☐ No Anomalies (standard soil/wet sediment/sand/gravel)=

Analyst/Date

☐ Standing Water Decanted (Not shared)=

☐ Standing Water Homogenized (Shared samples)=

☐ Clay/Cumps (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 =

☒ Other (Details)= oil = oil

4/26/23

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 N

☒ Multiple Jars Y/N N

4/26/23

☐ Sample Pre-Screens indicate analyte activity=

4/26/23

☐ Sample weights/volumes reduced based on Pre-Screen=

Organic Extractions Reagent and Solutions Identification

Analysis: _____

Method: _____

Lab Number(s) _____

Water/Soil/Sediment/Solid/Tissue/Other:	Analyst/Date
<u>Sep.Funnel/Liquid-Liquid/Sonication/Microwave/Tissuemize Station:</u> Neutral Sodium Sulfate: () Pre-deactivated Sodium Sulfate: () Neutral Glasswool: () Pre-deactivated Glasswool: () 1:1 Hexane/Acetone: () 80:20 Hexane/Acetone: () 1:1 DCM/Acetone: () 80:20 DCM/Acetone: () Hexane: () DCM: () Other: () Other: ()	SepFunnel/LiqLiq/ Sonication/Microwave/ Tissuemize <i>Vortex</i> <i>4/20/23</i> <i>4/20/23</i>
<u>Pre-GPC KD Station:</u> Hexane: () DCM: () Neutral Sodium Sulfate: () Pre-deactivated Sodium Sulfate: () Neutral Glasswool: () Pre-deactivated Glasswool: () Other: () Other: ()	Pre-GPC KD
<u>GPC Filter Prep:</u> DCM: () Other: () Other: ()	GPC Filter Prep <i>MRB 5/8/23</i>
<u>GPC Station:</u> Acetone: () DCM: () 1:1 DCM/Acetone: () Other: () Other: ()	GPC <i>2</i> <i>CG 5/9/23</i>
<u>Post GPC KD Station:</u> DCM: () Hexane: () Other: () Other: ()	Post GPC KD
<u>Vialing Station:</u> Hexane: () DCM: () Concentrated Sulfuric Acid: () Ethyl Acetate: () Tetrabutylammonium hydrogensulfate (TBAS): () Sodium Sulfite: () Copper: () Silica Gel (SPE) Darts: () 0% Silica Gel: () Alumina: () HexMgBr: () Other: () Other: ()	Vialing <i>SH 4/25/23</i>

3057F

Revision 09
01/27/16



Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Cleanup Batch: CLE0222

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
MW2112-041723	23D0457-01	NT1405272322.D	05/25/2023	
MW2112-041723	23D0457-01	NT1405272322S.D	05/25/2023	
Blank	BLD0616-BLK1	NT1405272320.D	05/25/2023	
Blank	BLD0616-BLK2	NT1405272320S.D	05/25/2023	
LCS	BLD0616-BS1	NT1405272321.D	05/25/2023	



CLEANUP BENCH SHEET

CLE0222

Matrix: Oil

Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1

Check Standard: CLB0132-GPC2

Printed: 5/25/2023 9:11:39PM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23D0457-01	A	MW2112-041723	A 02	100	100	70E-SIM Alkyl PAH (Range) Dual Sc	5/25/2023	SH	
23D0457-01	A	MW2112-041723	A 01	100	100	70E-SIM Alkyl PAH (Parents) Dual Sc	5/25/2023	SH	
BLD0616-BLK1	-	Blank	-	100	100	-	5/25/2023	SH	
BLD0616-BLK2	-	Blank	-	100	100	-	5/25/2023	SH	
BLD0616-BS1	-	LCS	-	100	100	-	5/25/2023	SH	
BLD0616-BS2	-	LCS	-	100	100	-	5/25/2023	SH	



Form I
METHOD BLANK DATA SHEET
EPA 8270E-SIM

Blank

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23D0457</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Gasco Hydrocarbon Investigation</u>
Matrix:	<u>Oil</u>	Laboratory ID:	<u>BLD0616-BLK1</u>
Sampled:	<u>N/A</u>	File ID:	<u>NT1405272320.D</u>
Solids:		Prepared:	<u>04/06/23 12:22</u>
Batch:	<u>BLD0616</u>	Analyzed:	<u>05/28/23 01:33</u>
Instrument:	<u>NT14</u>	Preparation:	<u>EPA 3580A (Waste Dilution)</u>
		Initial/Final:	<u>1 g / 100 mL</u>
		Calibration:	<u>GE00024</u>
		Cleanups:	<u>GPC</u>
		Sequence:	<u>SLE0443</u>
		Column:	<u>ZB-5MS</u>

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
493-02-7	trans-Decalin	1	10000	U		10000
493-01-6	cis-Decalin	1	10000	U		10000
91-20-3	Naphthalene	1	475	J		10000
90-12-0	1-Methylnaphthalene	1	10000	U		10000
91-57-6	2-Methylnaphthalene	1	10000	U		10000
92-52-4	Biphenyl	1	10000	U		10000
581-42-0	2,6-Dimethylnaphthalene	1	10000	U		10000
208-96-8	Acenaphthylene	1	10000	U		10000
83-32-9	Acenaphthene	1	10000	U		10000
132-64-9	Dibenzofuran	1	10000	U		10000
2245-38-7	2,3,5-Trimethylnaphthalene	1	10000	U		10000
86-73-7	Fluorene	1	10000	U		10000
95-15-8	Benzo(b)thiophene	1	10000	U		10000
85-01-8	Phenanthrene	1	10000	U		10000
120-12-7	Anthracene	1	10000	U		10000
86-74-8	Carbazole	1	10000	U		10000
832-69-9	1-Methylphenanthrene	1	10000	U		10000
206-44-0	Fluoranthene	1	10000	U		10000
132-65-0	Dibenzothiophene	1	10000	U		10000
129-00-0	Pyrene	1	10000	U		10000
56-55-3	Benzo(a)anthracene	1	10000	U		10000
218-01-9	Chrysene	1	10000	U		10000
205-99-2	Benzo(b)fluoranthene	1	10000	U		10000
205-82-3	Benzo(j)fluoranthene	1	10000	U		10000
207-08-9	Benzo(k)fluoranthene	1	10000	U		10000
	Benzo(a)fluoranthene, Total	1	20000	U		20000
197-97-2	Benzo(e)pyrene	1	10000	U		10000
50-32-8	Benzo(a)pyrene	1	10000	U		10000
193-39-5	Indeno(1,2,3-cd)pyrene	1	10000	U		10000
53-70-3	Dibenzo(a,h)anthracene	1	10000	U		10000
191-24-2	Benzo(g,h,i)perylene	1	10000	U		10000
198-55-0	Perylene	1	10000	U		10000
239-35-0	Benzo(b)naphtho(2,1-d)thiophene	1	10000	U		10000

SURROGATES	ADDED (ug/kg)	CONC. (ug/kg)	% REC	QC LIMITS	Q
Naphthalene-d8	300000	190000	63.5	30 - 160	



Form I
METHOD BLANK DATA SHEET
EPA 8270E-SIM

Blank

Laboratory: Analytical Resources, LLC SDG: 23D0457
Client: Anchor QEA, LLC Project: Gasco Hydrocarbon Investigation
Matrix: Oil Laboratory ID: BLD0616-BLK1 File ID: NT1405272320.D
Sampled: N/A Prepared: 04/06/23 12:22 Analyzed: 05/28/23 01:33
Solids: Preparation: EPA 3580A (Waste Dilution) Initial/Final: 1 g / 100 mL
Batch: BLD0616 Sequence: SLE0443 Calibration: GE00024
Instrument: NT14 Column: ZB-5MS Cleanups: GPC

SURROGATES	ADDED (ug/kg)	CONC. (ug/kg)	% REC	QC LIMITS	Q
Acenaphthene-d10	300000	208000	69.2	30 - 160	
Phenanthrene-d10	300000	251000	83.8	30 - 160	
Chrysene-d12	300000	259000	86.2	30 - 160	
Perylene-d12	300000	231000	77.0	30 - 160	

Data File: \\target\share\chem3\nt14,i\20230527,b\NT1405272320.D

Date : 28-May-2023 01:33

Client ID:

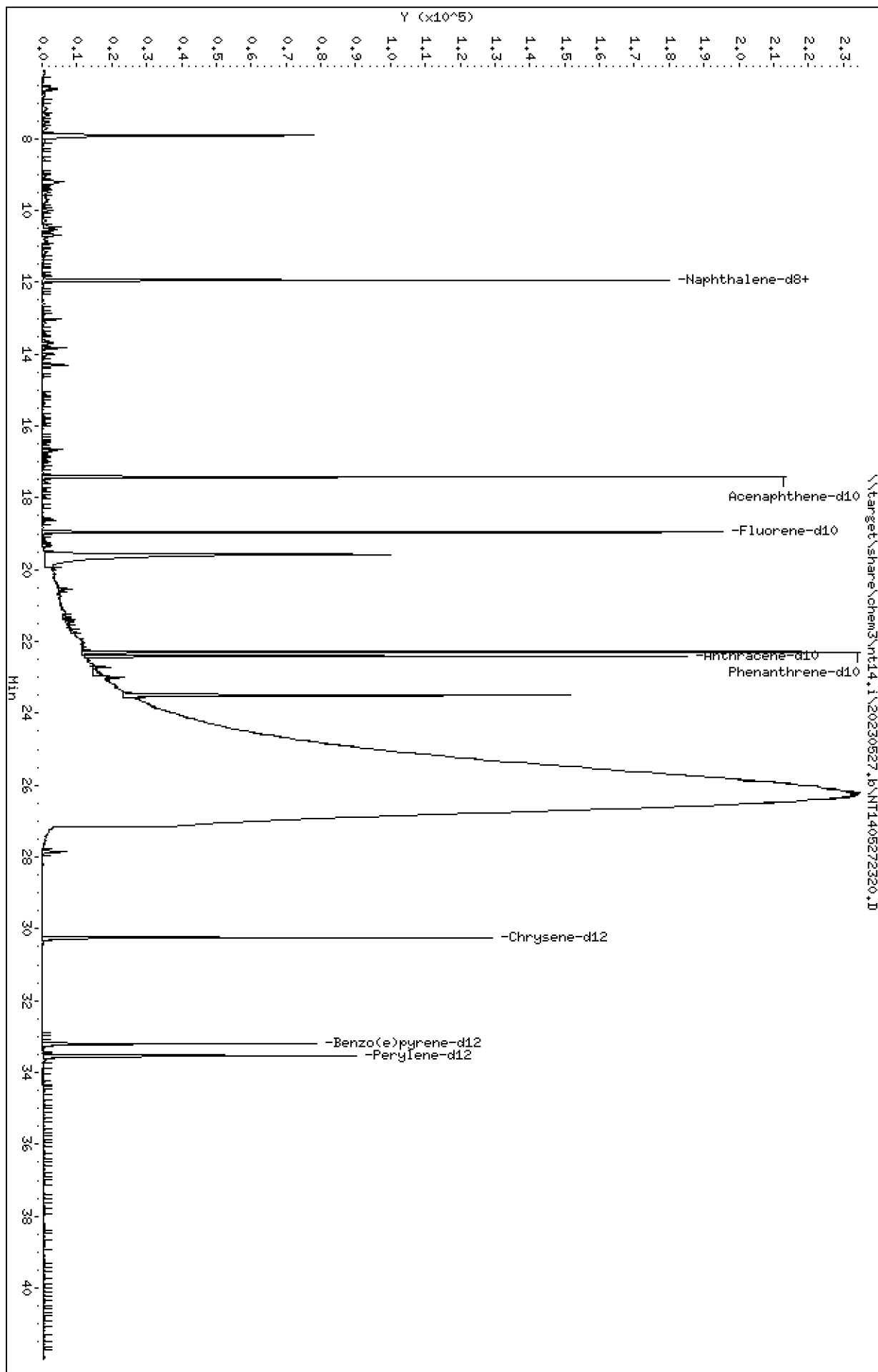
Sample Info: BLD0616-BLK1

Instrument: nt14,i

Operator: VTS

Column phase: Rxi-17S11 MS

Column diameter: 0.25



Date : 28-MAY-2023 01:33

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BLK1

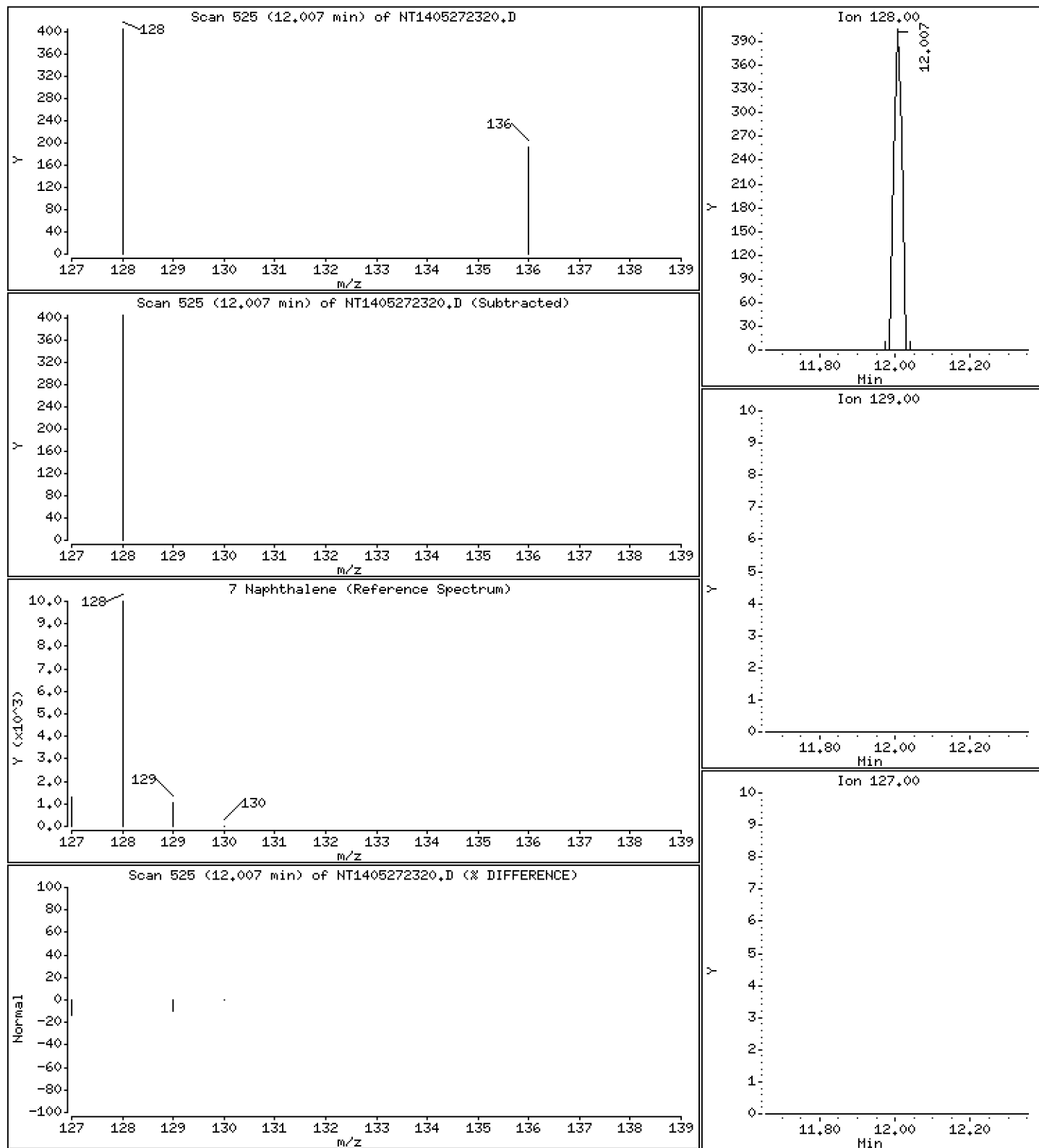
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

7 Naphthalene

Concentration: 0.004750 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230527.b\NT1405272320.D
Lab Smp Id: BLD0616-BLK1
Inj Date : 28-MAY-2023 01:33
Operator : VTS
Smp Info : BLD0616-BLK1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230527.b\ALKYLPNA.m
Meth Date : 30-May-2023 16:47 deenayd Quant Type: ISTD
Cal Date : 05-MAY-2023 15:12 Cal File: NT1423050507.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: DEENAY-201905

Inst ID: nt14.i

Compound Sublist: TARGETS.sub

						CONCENTRATIONS			
		QUANT	SIG			ON-COLUMN	FINAL		
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)	
=====		=====	=====	=====	=====	=====	=====	=====	
1	trans-Decalin	138	Compound Not Detected.						
2	cis-Decalin	138	Compound Not Detected.						
\$	6 Naphthalene-d8	136	11.939	11.939	(0.630)	225617	1.90487	1.905(R)	
	7 Naphthalene	128	12.007	12.006	(0.634)	618	0.00475	0.004750	
12	Benzo(b)thiophene	134	Compound Not Detected.						
16	2-Methylnaphthalene	141	Compound Not Detected.						
17	1-methylnaphthalene	141	Compound Not Detected.						
18	Biphenyl	154	Compound Not Detected.						
19	2,6-Dimethylnaphthalene	156	Compound Not Detected.						
20	Acenaphthylene	152	Compound Not Detected.						
\$	21 Acenaphthene-d10	164	17.419	17.419	(0.919)	108998	2.07653	2.077(R)	
	22 Acenaphthene	153	Compound Not Detected.						
	23 Dibenzofuran	168	Compound Not Detected.						
	24 1,6,7-Trimethylnaphthalene	170	Compound Not Detected.						
*	25 Fluorene-d10	176	18.950	18.950	(1.000)	118542	2.00000		
	26 Fluorene	166	Compound Not Detected.						
	30 Dibenzothiophene	184	Compound Not Detected.						
\$	35 Phenanthrene-d10	188	22.294	22.294	(0.995)	191751	2.51395	2.514(R)	
	36 Phenanthrene	178	Compound Not Detected.						
*	250 Anthracene-d10	188	22.410	22.410	(1.000)	133668	2.00000		
	37 Anthracene	178	Compound Not Detected.						
	42 Carbazole	167	Compound Not Detected.						
	43 1-Methylphenanthrene	192	Compound Not Detected.						
	44 Fluoranthene	202	Compound Not Detected.						
	46 Pyrene	202	Compound Not Detected.						
	51 Naphthobenzothiophene	234	Compound Not Detected.						
	55 Benzo(a)anthracene	228	Compound Not Detected.						
\$	56 Chrysene-d12	240	30.248	30.237	(0.911)	111929	2.58507	2.585(R)	
	57 Chrysene	228	Compound Not Detected.						
	62 Benzo(b)fluoranthene	252	Compound Not Detected.						
	63 Benzo(k)fluoranthene	252	Compound Not Detected.						
293	Benzo(j)fluoranthene	252	Compound Not Detected.						
246	Total Benzofluoranthenes	252	Compound Not Detected.						

Compounds	QUANT	SIG						CONCENTRATIONS	
			RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
							(ug/mL)	(ug/mL)	
=====	=====	=====	=====	=====	=====	=====	=====	=====	
* 251 Benzo(e)pyrene-d12	264		33.199	33.188	(1.000)	79806	2.00000		
64 Benzo(e)pyrene	252		Compound Not Detected.						
66 Benzo(a)pyrene	252		Compound Not Detected.						
\$ 67 Perylene-d12	264		33.537	33.526	(1.010)	96490	2.31003	2.310 (R)	
68 Perylene	252		Compound Not Detected.						
69 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.						
70 Dibenzo(a,h)anthracene	278		Compound Not Detected.						
74 Benzo(g,h,i)perylene	276		Compound Not Detected.						

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 27-MAY-2023
 Lab File ID: NT1405272320.D Calibration Time: 13:31
 Lab Smp Id: BLD0616-BLK1
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230527.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	136933	68467	273866	118542	-13.43
250 Anthracene-d10	167500	83750	335000	133668	-20.20
251 Benzo(e)pyrene-d1	94374	47187	188748	79806	-15.44

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	18.95	18.45	19.45	18.95	0.00
250 Anthracene-d10	22.41	21.91	22.91	22.41	0.00
251 Benzo(e)pyrene-d1	33.19	32.69	33.69	33.20	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 - NT1405272320.D

Lab ID: BLD0616-BLK1

nt14.i, 20230527.b\ALKYLPNA.m, 28-MAY-2023 01:33

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1405272305.D

On Column LOD for nt14.i, 20230527.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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



Form I
METHOD BLANK DATA SHEET
EPA 8270E-SIM

Blank

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23D0457</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Gasco Hydrocarbon Investigation</u>
Matrix:	<u>Oil</u>	Laboratory ID:	<u>BLD0616-BLK2</u>
Sampled:	<u>N/A</u>	File ID:	<u>NT1405272320S.D</u>
Solids:		Prepared:	<u>04/06/23 12:22</u>
		Analyzed:	<u>05/28/23 01:33</u>
Batch:	<u>BLD0616</u>	Preparation:	<u>EPA 3580A (Waste Dilution)</u>
		Initial/Final:	<u>1 g / 100 mL</u>
Instrument:	<u>NT14</u>	Sequence:	<u>SLF0314</u>
		Calibration:	<u>GE00043</u>
		Column:	<u>ZB-5MS</u>
		Cleanups:	<u>GPC</u>

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
C1DEC	C1-Decalins	1	2000	U		2000
C2DEC	C2-Decalins	1	8290			2000
C3DEC	C3-Decalins	1	2680			2000
C4DEC	C4-Decalins	1	2000	U		2000
C1NAPH	C1-Naphthalenes	1	2000	U		2000
C2NAPH	C2-Naphthalenes	1	2000	U		2000
C3NAPH	C3-Naphthalenes	1	2000	U		2000
C4NAPH	C4-Naphthalenes	1	2000	U		2000
C1FLR	C1-Fluorenes	1	2000	U		2000
C2FLR	C2-Fluorenes	1	2000	U		2000
C3FLR	C3-Fluorenes	1	2000	U		2000
C1DBTPH	C1-Dibenzothiophenes	1	2000	U		2000
C2DBTPH	C2-Dibenzothiophenes	1	2000	U		2000
C3DBTPH	C3-Dibenzothiophenes	1	2000	U		2000
C4DBTPH	C4-Dibenzothiophenes	1	2000	U		2000
C1PHNANT	C1-Phenanthrenes/Anthracenes	1	2000	U		2000
C2PHNANT	C2-Phenanthrenes/Anthracenes	1	2000	U		2000
C3PHNANT	C3-Phenanthrenes/Anthracenes	1	2000	U		2000
C4PHNANT	C4-Phenanthrenes/Anthracenes	1	2000	U		2000
C1FLPYR	C1-Fluoranthenes/Pyrenes	1	2000	U		2000
C2FLPYR	C2-Fluoranthenes/Pyrenes	1	2000	U		2000
C3FLPYR	C3-Fluoranthenes/Pyrenes	1	2000	U		2000
C4FLPYR	C4-Fluoranthenes/Pyrenes	1	2000	U		2000
C1BAACYR	C1-Benzo(a)anthracenes/Chrysenes	1	2000	U		2000
C2BAACYR	C2-Benzo(a)anthracenes/Chrysenes	1	2000	U		2000
C3BAACYR	C3-Benzo(a)anthracenes/Chrysenes	1	2000	U		2000
C4BAACYR	C4-Benzo(a)anthracenes/Chrysenes	1	2000	U		2000
C1BZTPH	C1-Benzothiophenes	1	2000	U		2000
C2BZTPH	C2-Benzothiophenes	1	2000	U		2000
C3BZTPH	C3-Benzothiophenes	1	2000	U		2000
C1NPBTP	C1-Naphthobenzothiophenes	1	2000	U		2000
C2NPBTP	C2-Naphthobenzothiophenes	1	2000	U		2000
C3NPBTP	C3-Naphthobenzothiophenes	1	2000	U		2000
C4NPBTP	C4-Naphthobenzothiophenes	1	2000	U		2000
C1DBA	C1-Dibenzo(a,h)anthracenes	1	2000	U		2000
C2DBA	C2-Dibenzo(a,h)anthracenes	1	2000	U		2000



Form I
METHOD BLANK DATA SHEET
EPA 8270E-SIM

Blank

Laboratory: Analytical Resources, LLC SDG: 23D0457
Client: Anchor QEA, LLC Project: Gasco Hydrocarbon Investigation
Matrix: Oil Laboratory ID: BLD0616-BLK2 File ID: NT1405272320S.D
Sampled: N/A Prepared: 04/06/23 12:22 Analyzed: 05/28/23 01:33
Solids: Preparation: EPA 3580A (Waste Dilution) Initial/Final: 1 g / 100 mL
Batch: BLD0616 Sequence: SLF0314 Calibration: GE00043
Instrument: NT14 Column: ZB-5MS Cleanups: GPC

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
C3DBA	C3-Dibenzo(a,h)anthracenes	1	2000	U		2000

Data File: \\target\share\chem3\nt14.i\20230527.b\20230527.b\NT14052723205.D

Page 1

Date : 28-May-2023 01:33

Client ID:

Instrument: nt14.i

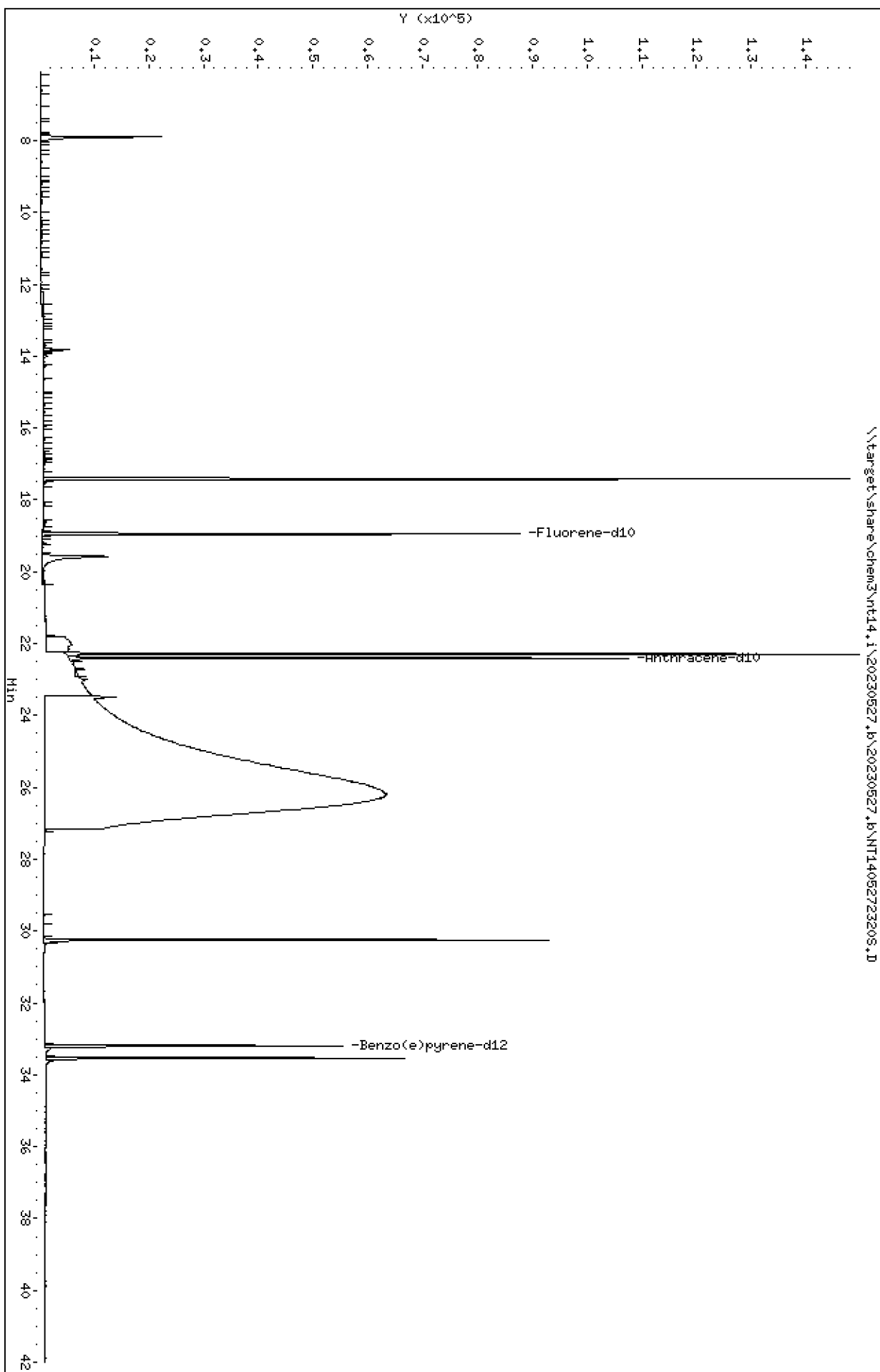
Sample Info: BLD0616-BLK2

Volume Injected (uL): 1.0

Operator: VTS

Column Phase: Rxi-17S11 MS

Column diameter: 0.25



Date : 28-MAY-2023 01:33

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BLK2

Volume Injected (uL): 1.0

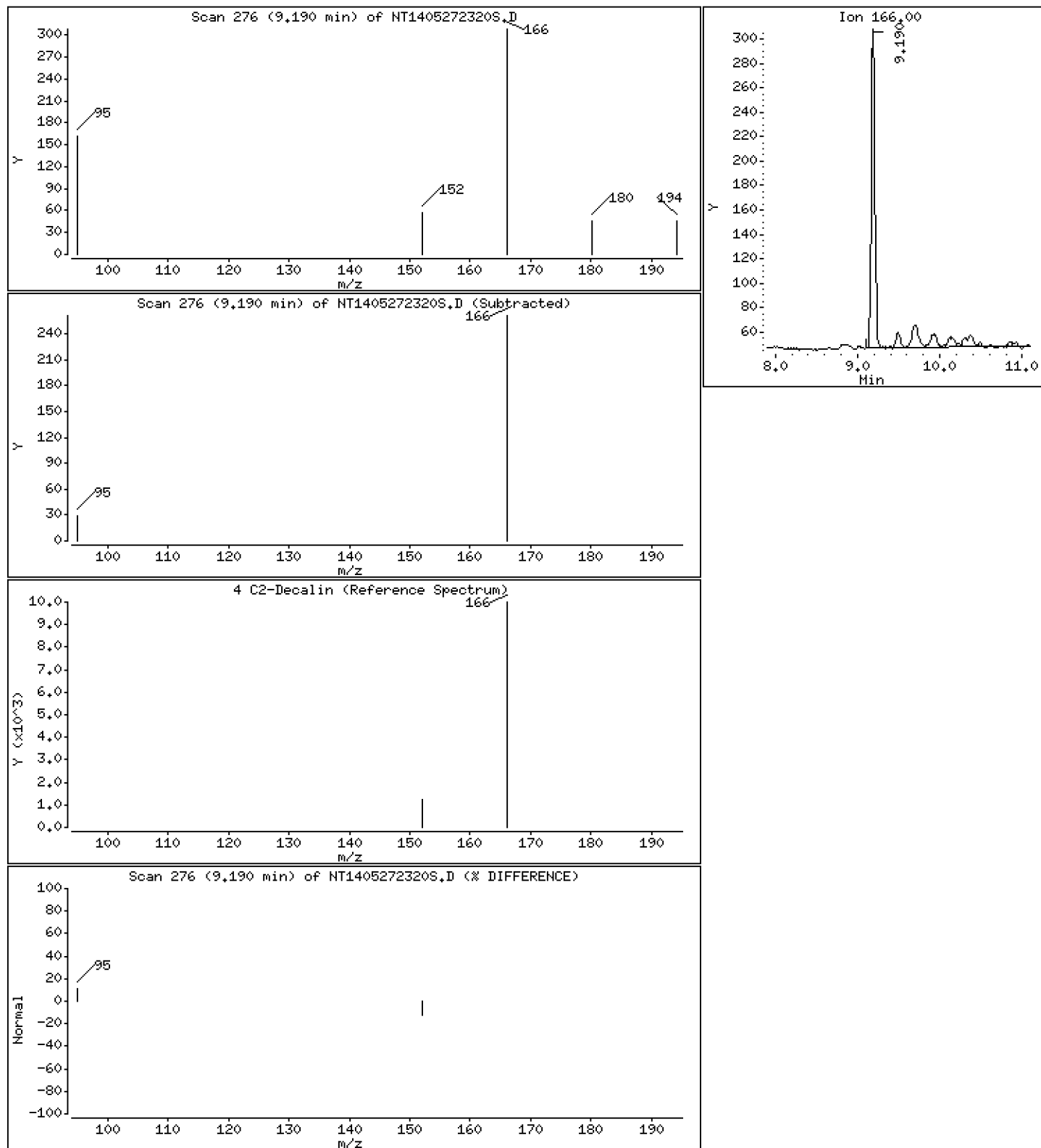
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

4 C2-Decalin

Concentration: 0.08292 ug/L



Date : 28-MAY-2023 01:33

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BLK2

Volume Injected (uL): 1.0

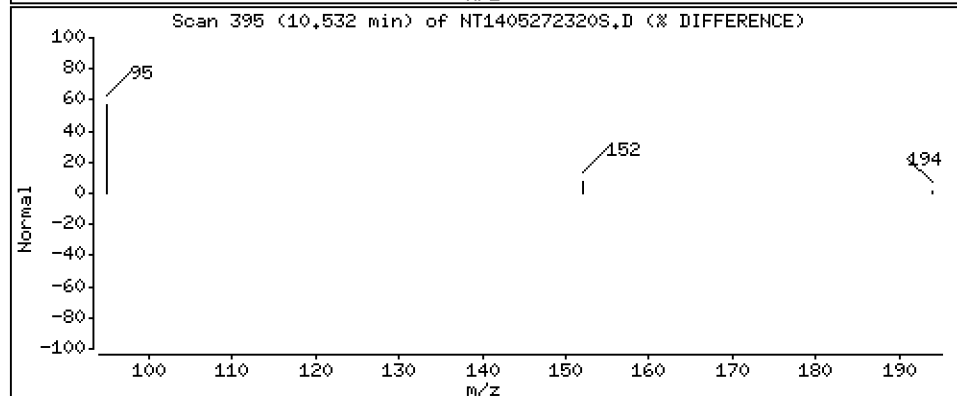
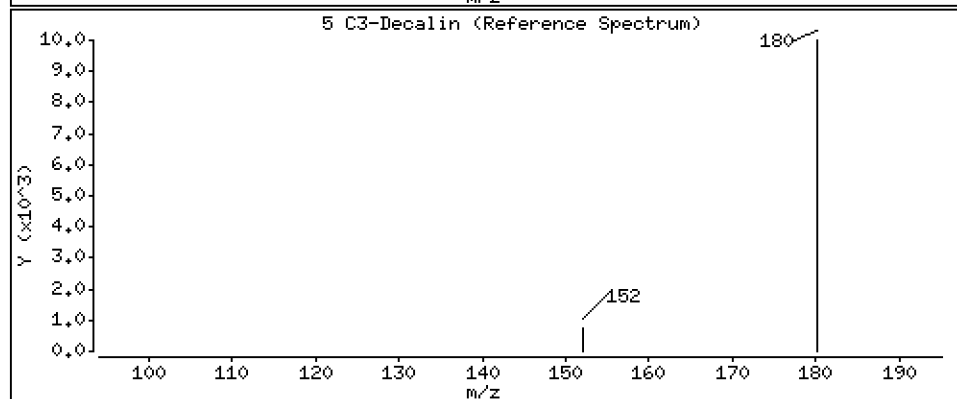
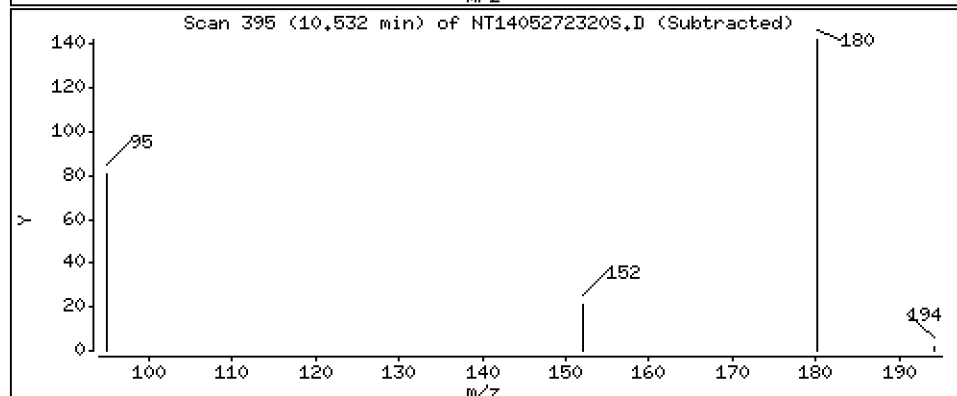
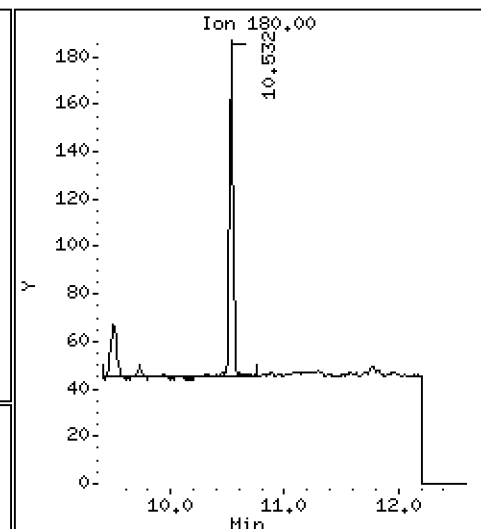
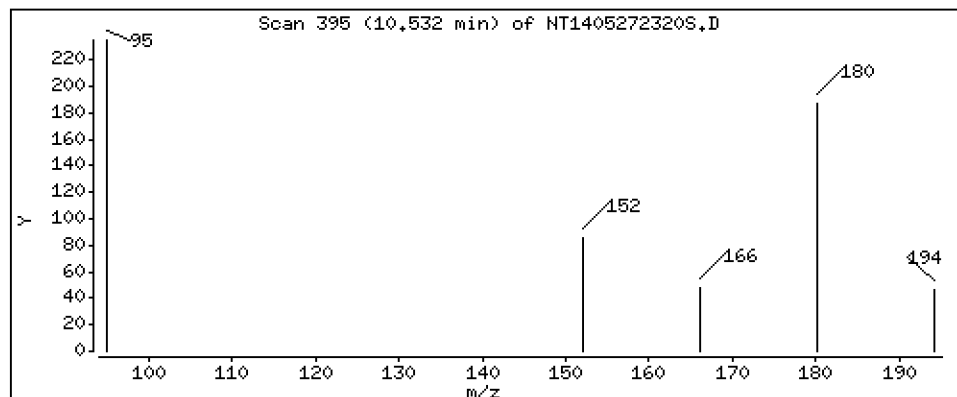
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

5 C3-Decalin

Concentration: 0.02679 ug/L



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230527.b\20230527.b\NT1405272320S.D
Lab Smp Id: BLD0616-BLK2
Inj Date : 28-MAY-2023 01:33 MS Autotune Date: 11-MAR-2023 16:01
Operator : VTS Inst ID: nt14.i
Smp Info : BLD0616-BLK2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230527.b\20230527.b\ALKYLRANGES.m
Meth Date : 21-Jun-2023 11:49 van Quant Type: ISTD
Cal Date : 05-MAY-2023 15:12 Cal File: NT1423050507.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ALKYLRANGES.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: $\text{Amt} * \text{DF} * \text{Uf} * \text{Vt} / (\text{Vo} * \text{Vi}) * \text{CpndVariable}$

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

Compounds	QUANT	SIG						CONCENTRATIONS	
			RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
	MASS						(ug/mL)	(ug/L)	
=====	=====		=====	=====	=====	=====	=====	=====	
3 C1-Decalin	152		Compound Not Detected.						
4 C2-Decalin	166		9.189	9.500	(0.485)	1266	0.08292	0.08292 (M)	
5 C3-Decalin	180		10.531	11.000	(0.556)	409	0.02679	0.02679 (M)	
247 C4-Decalin	194		Compound Not Detected.						
8 C1-Naphthalenes	142		Compound Not Detected.						
9 C2-Naphthalenes	156		Compound Not Detected.						
10 C3-Naphthalenes	170		Compound Not Detected.						
11 C4-Naphthalenes	184		Compound Not Detected.						
13 C1-Benzothiophenes	148		Compound Not Detected.						
14 C2-Benzothiophenes	162		Compound Not Detected.						
15 C3-Benzothiophenes	176		Compound Not Detected.						
* 25 Fluorene-d10	176		18.952	18.952	(1.000)	142518	2.00000	(a)	
27 C1-Fluorenes	180		Compound Not Detected.						
28 C2-Fluorenes	194		Compound Not Detected.						
29 C3-Fluorenes	208		Compound Not Detected.						
31 C1-Dibenzothiophenes	198		Compound Not Detected.						
32 C2-Dibenzothiophenes	212		Compound Not Detected.						
33 C3-Dibenzothiophenes	226		Compound Not Detected.						
34 C4-Dibenzothiophenes	240		Compound Not Detected.						
* 250 Anthracene-d10	188		22.400	22.400	(1.000)	165143	2.00000	(a)	
38 C1-Phenanthrenes/Anthracenes	192		Compound Not Detected.						

Compounds	QUANT SIG MASS					CONCENTRATIONS	
		RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/L)
=====	=====	=====	=====	=====	=====	=====	=====
39 C2-Phenanthrenes/Anthracenes	206	Compound	Not	Detected.			
40 C3-Phenanthrenes/Anthracenes	220	Compound	Not	Detected.			
41 C4-Phenanthrenes/Anthracenes	234	Compound	Not	Detected.			
48 C1-Fluoranthenes/Pyrenes	216	Compound	Not	Detected.			
49 C2-Fluoranthenes/Pyrenes	230	Compound	Not	Detected.			
50 C3-Fluoranthenes/Pyrenes	244	Compound	Not	Detected.			
249 C4-Fluoranthenes/Pyrenes	258	Compound	Not	Detected.			
52 C1-Naphthobenzothiophenes	248	Compound	Not	Detected.			
53 C2-Naphthobenzothiophenes	262	Compound	Not	Detected.			
54 C3-Naphthobenzothiophenes	276	Compound	Not	Detected.			
248 C4-Naphthobenzothiophenes	290	Compound	Not	Detected.			
* 251 Benzo(e)pyrene-d12	264	33.189	33.189	(1.000)	96868	2.00000	(a)
58 C1-Benzo(a)anthracenes/Chrysen	242	Compound	Not	Detected.			
59 C2-Benzo(a)anthracenes/Chrysen	256	Compound	Not	Detected.			
60 C3-Benzo(a)anthracenes/Chrysen	270	Compound	Not	Detected.			
61 C4-Benzo(a)anthracenes/Chrysen	284	Compound	Not	Detected.			
71 C1-Dibenzo(a,h)anthracenes	292	Compound	Not	Detected.			
72 C2-Dibenzo(a,h)anthracenes	306	Compound	Not	Detected.			
73 C3-Dibenzo(a,h)anthracenes	320	Compound	Not	Detected.			

QC Flag Legend

- a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1405272320S.D
Lab Smp Id: BLD0616-BLK2
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20230527.b\20230527.b\ALKYLRANGES.m
Misc Info:

Calibration Date: 27-MAY-2023
Calibration Time: 23:57
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

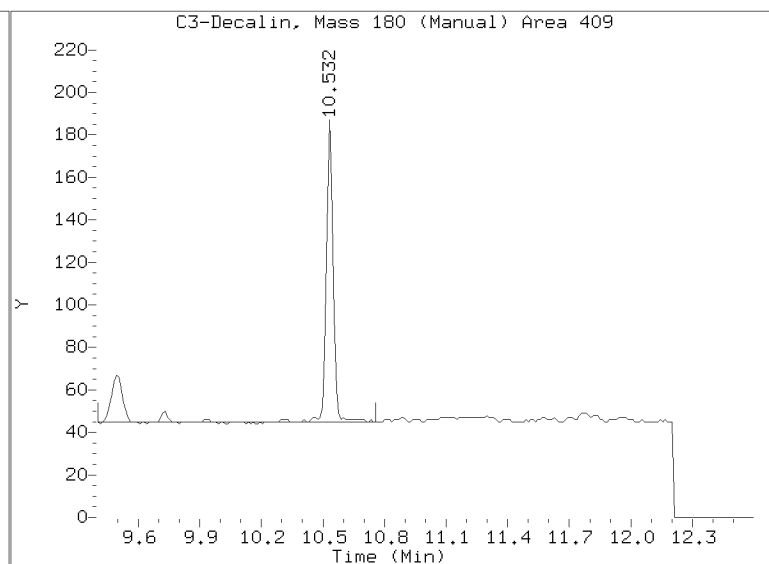
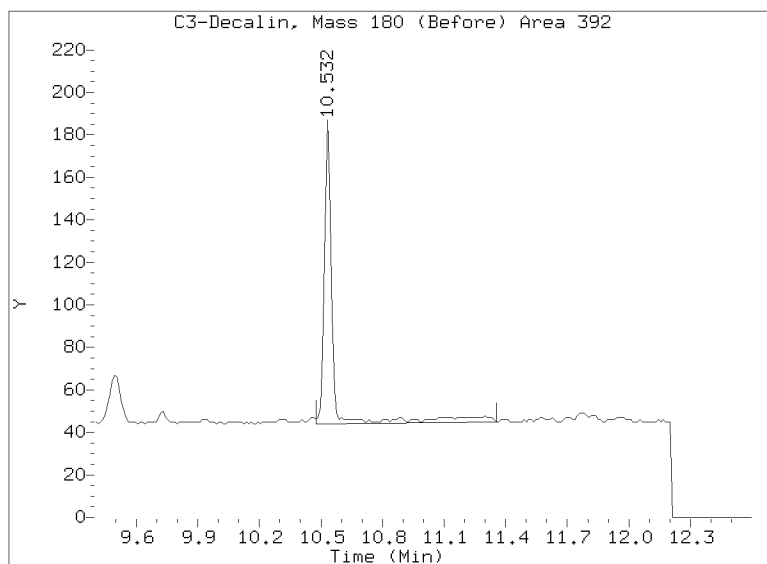
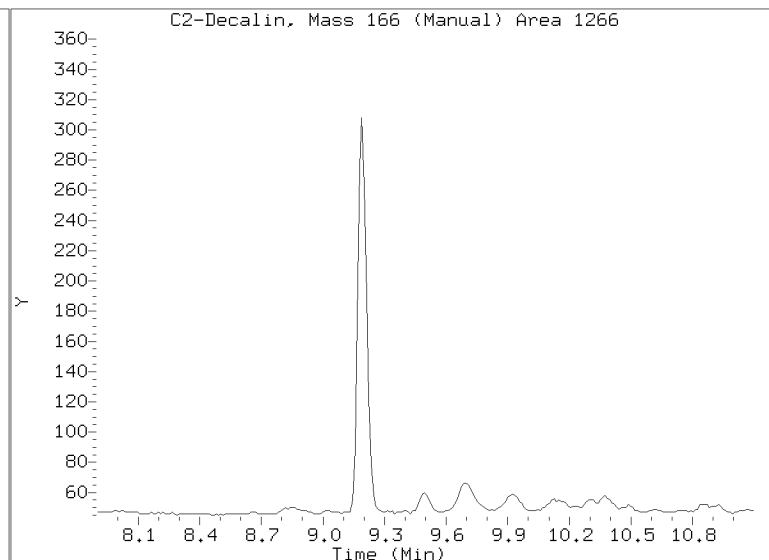
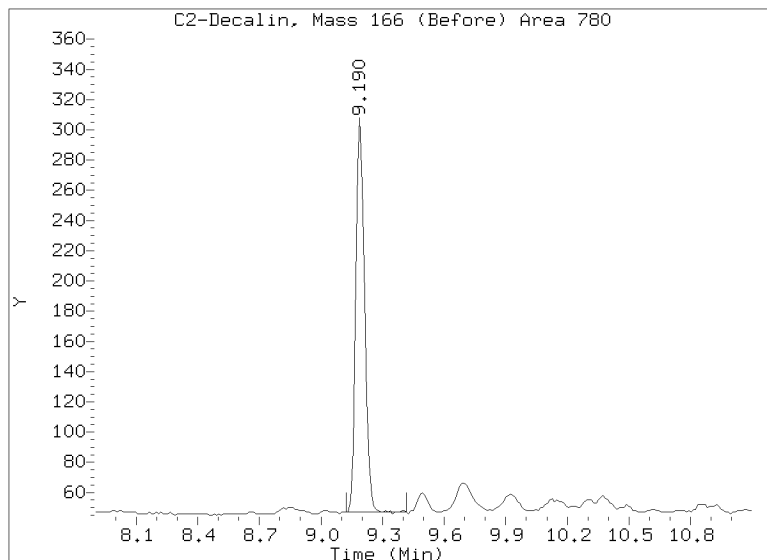
COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	157005	78503	314010	142518	-9.23
250 Anthracene-d10	197882	98941	395764	165143	-16.54
251 Benzo(e)pyrene-d1	118012	59006	236024	96868	-17.92

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	18.95	18.45	19.45	18.95	-0.00
250 Anthracene-d10	22.40	21.90	22.90	22.40	-0.00
251 Benzo(e)pyrene-d1	33.19	32.69	33.69	33.19	-0.00

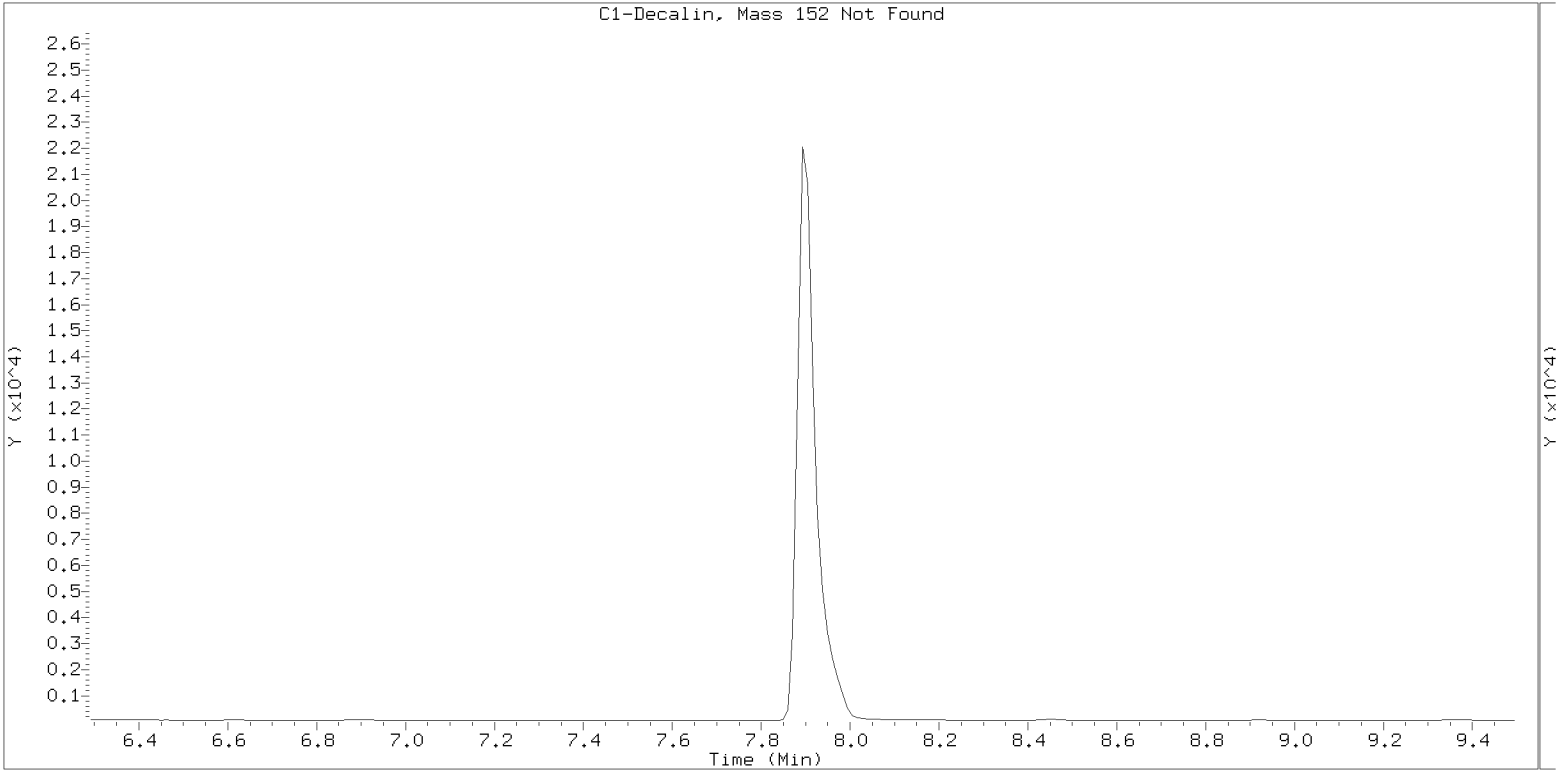
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230527.b/20230527.b/NT1405272320S.D
Injection Date: 28-MAY-2023 01:33
Lab ID:BLD0616-BLK2 Client ID:
Report Date: 06/21/2023 11:49

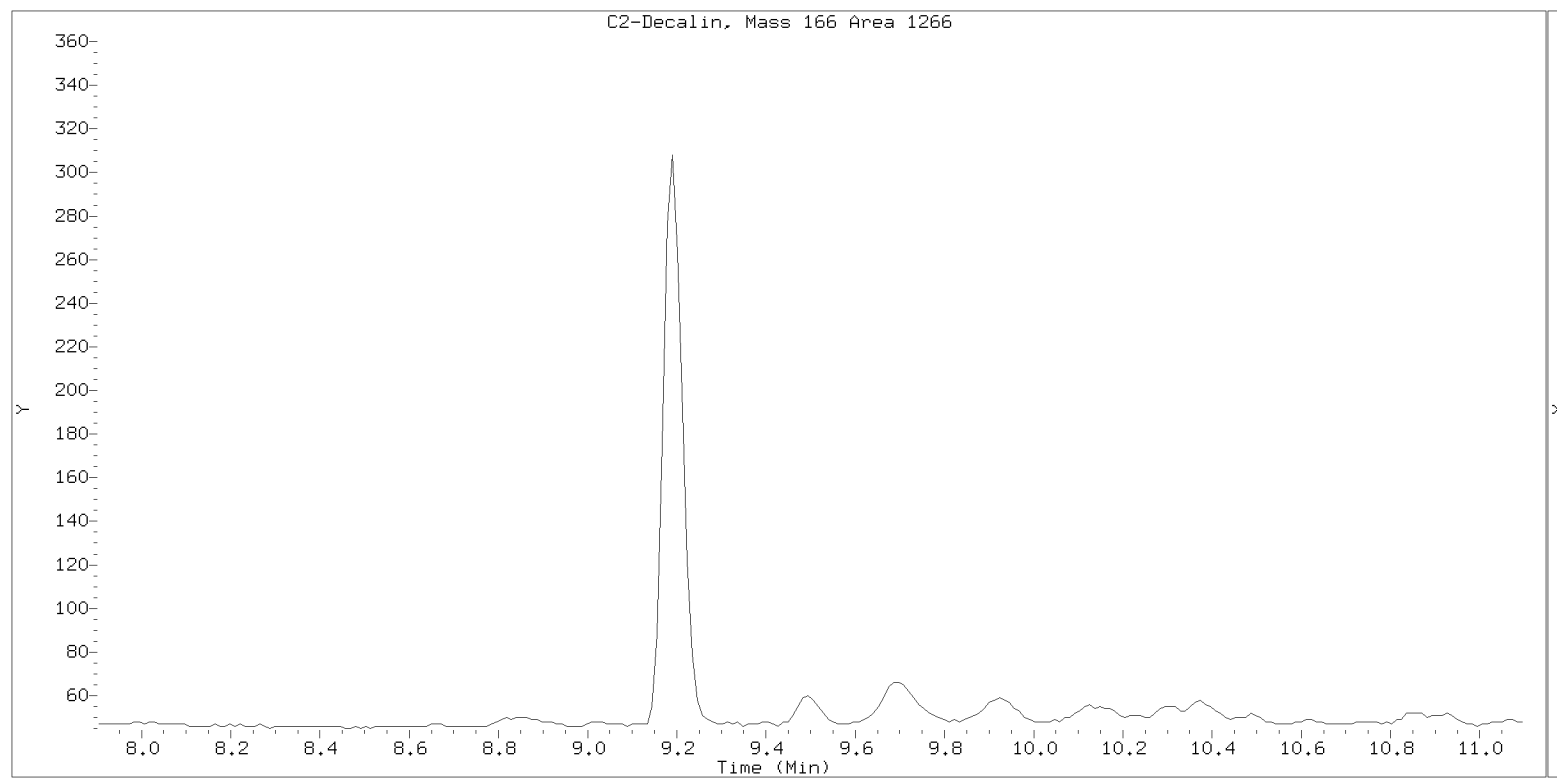


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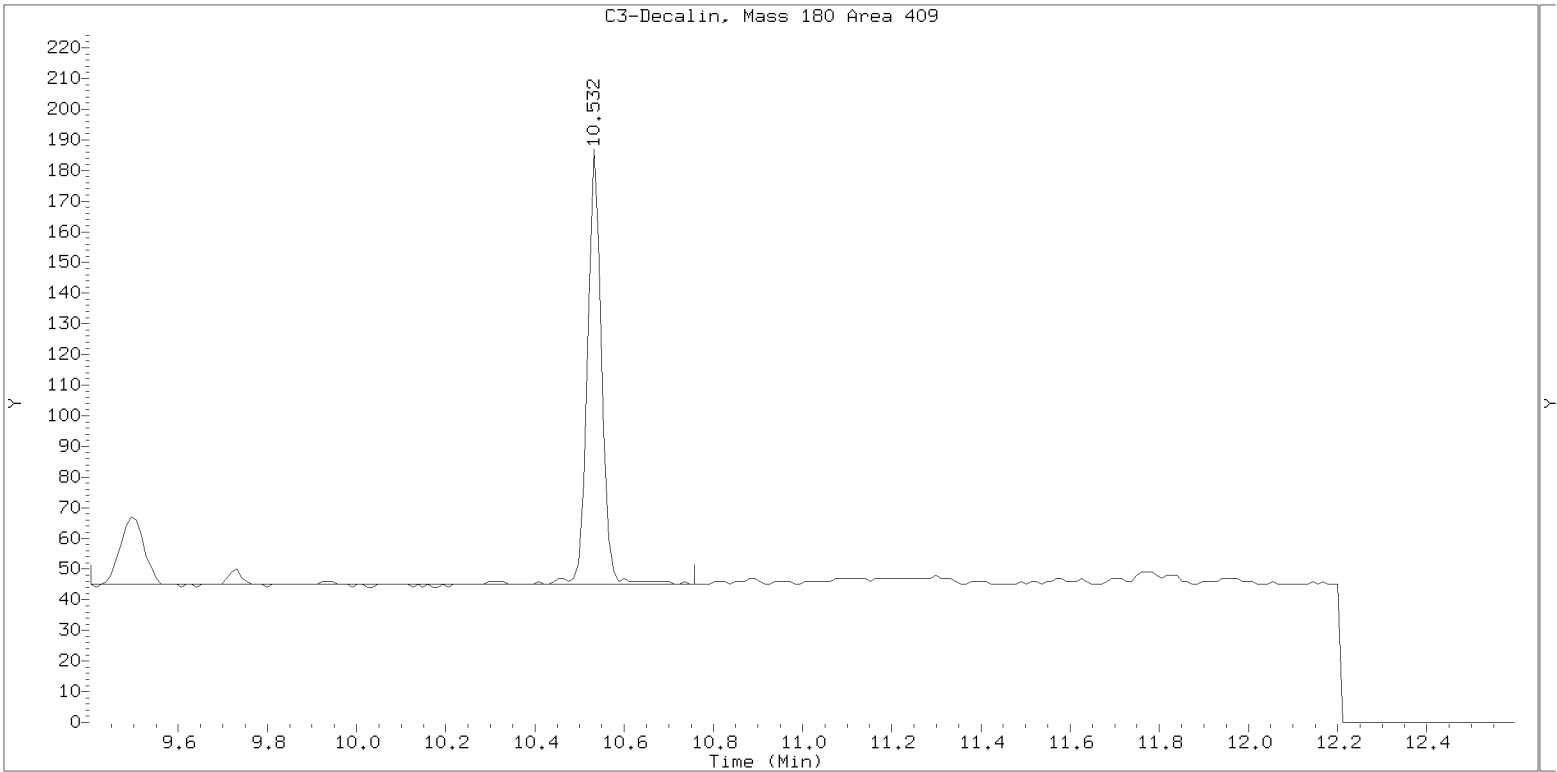


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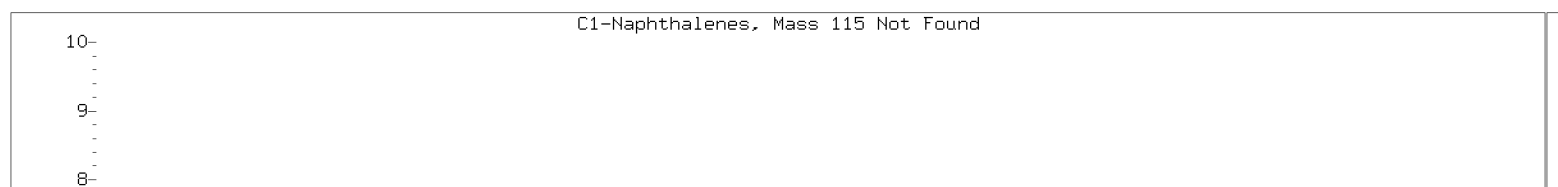
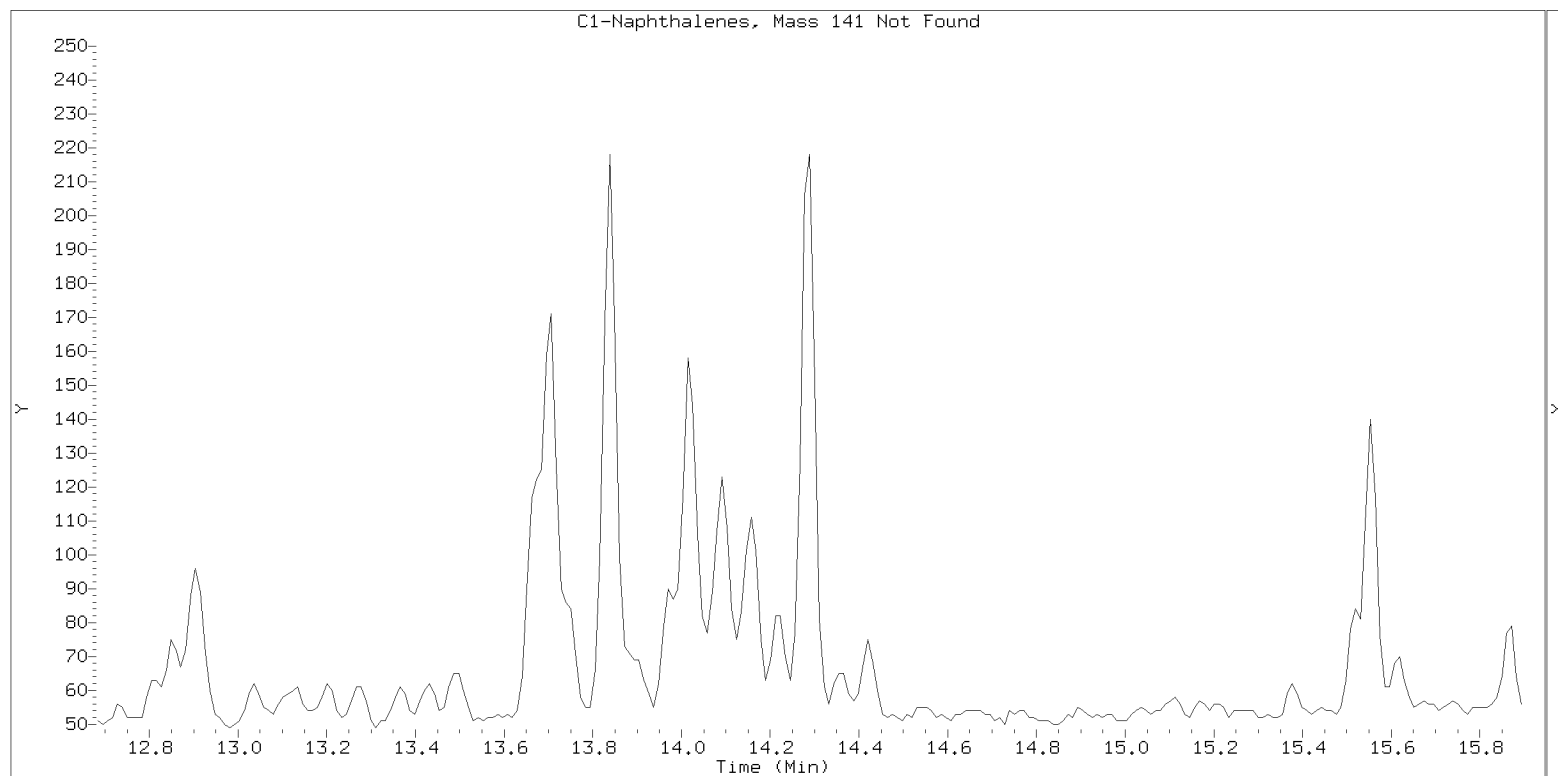
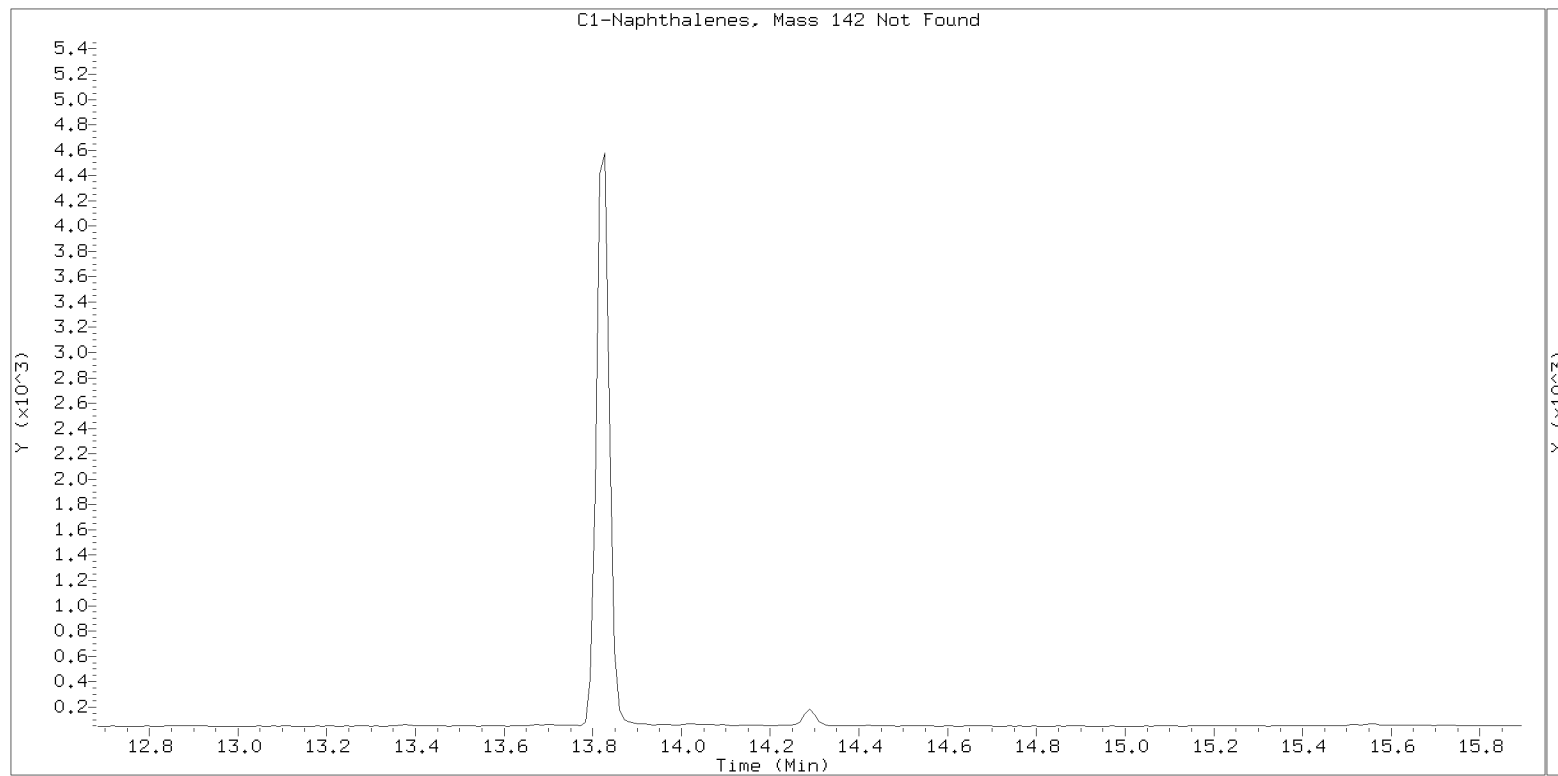


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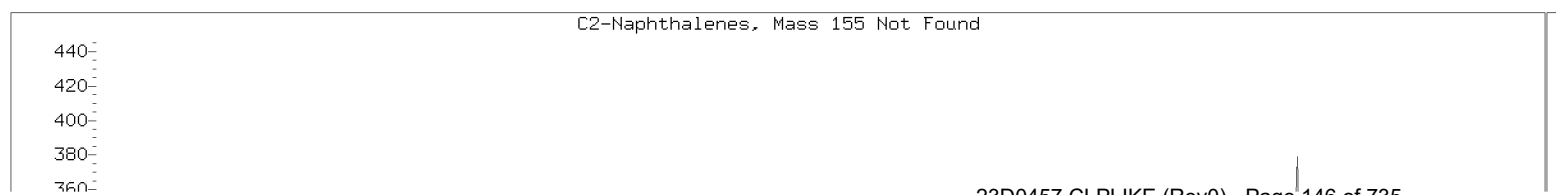
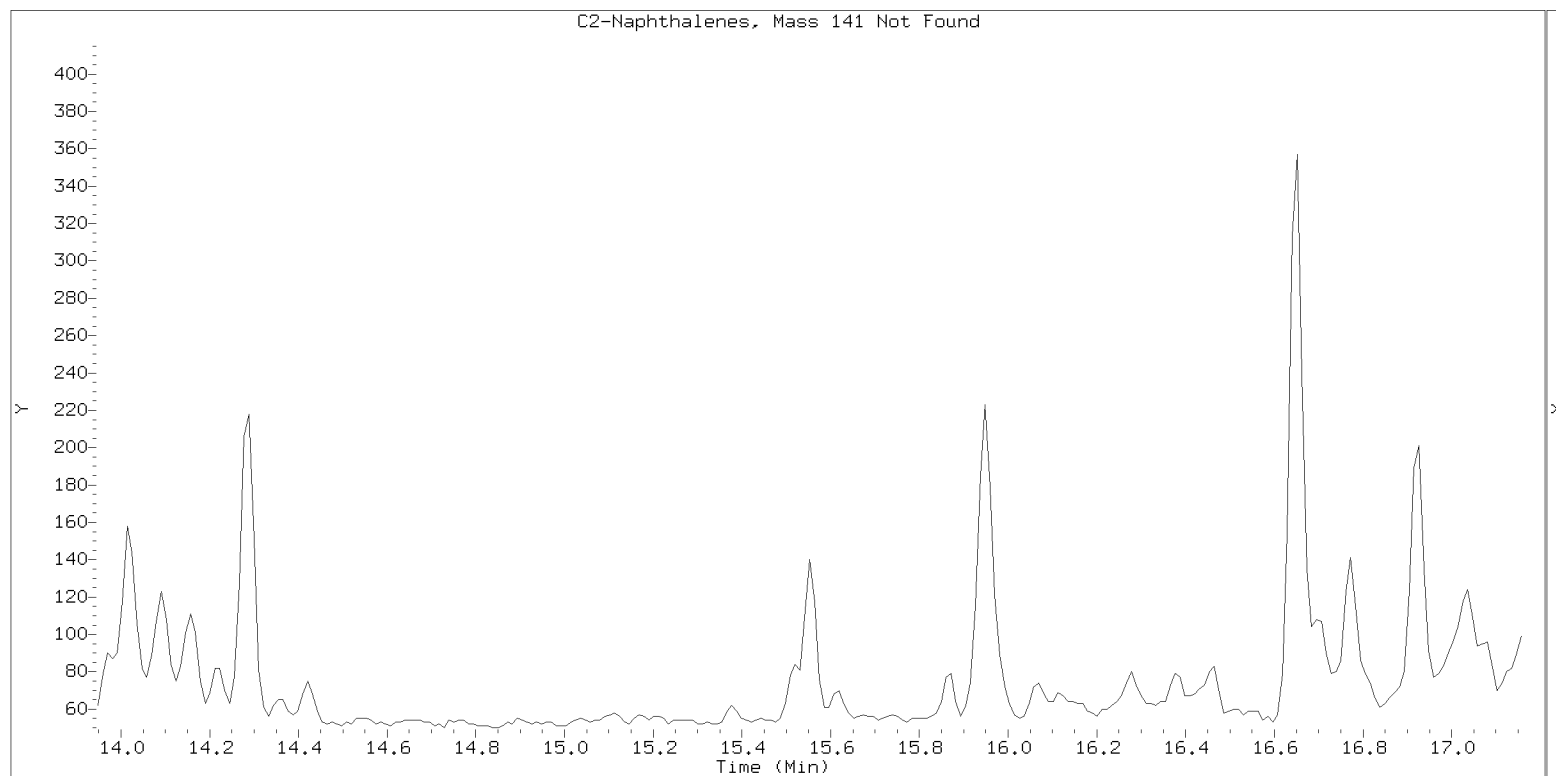
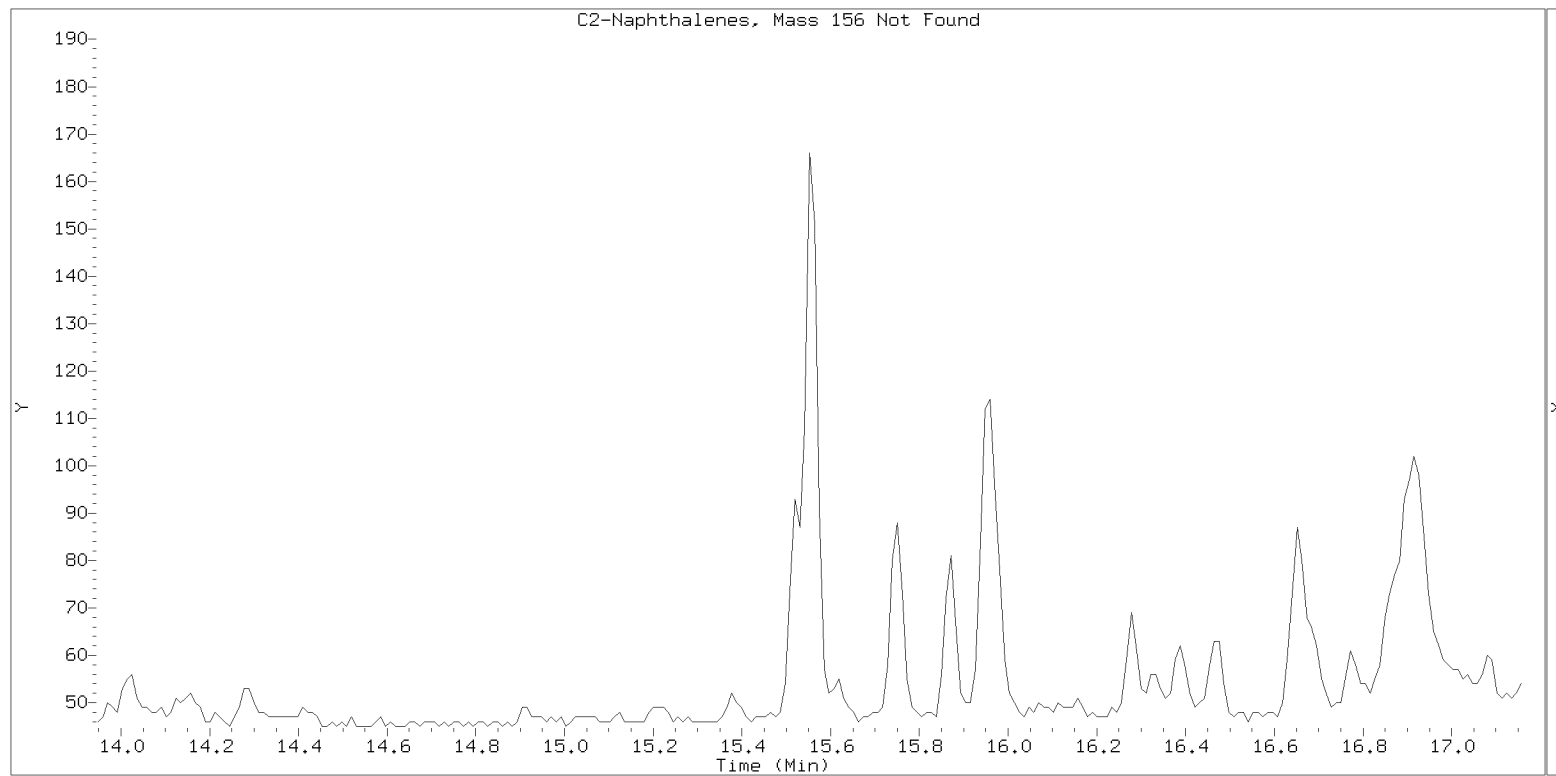
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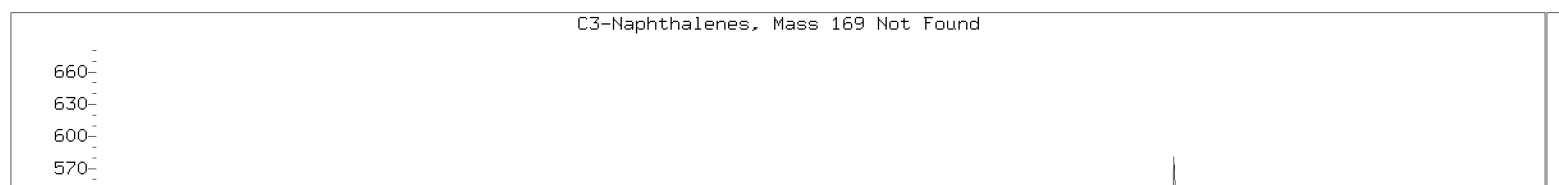
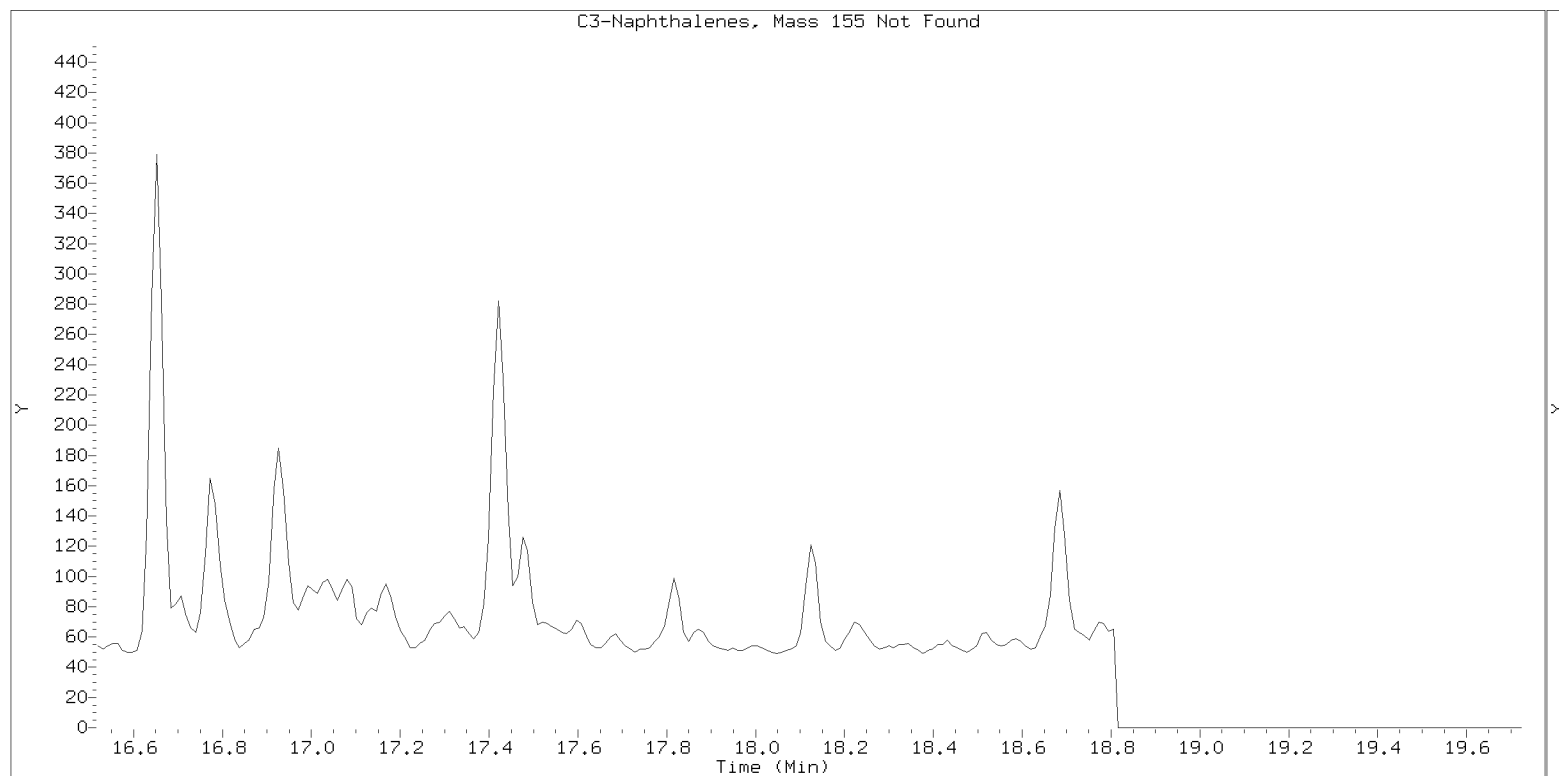
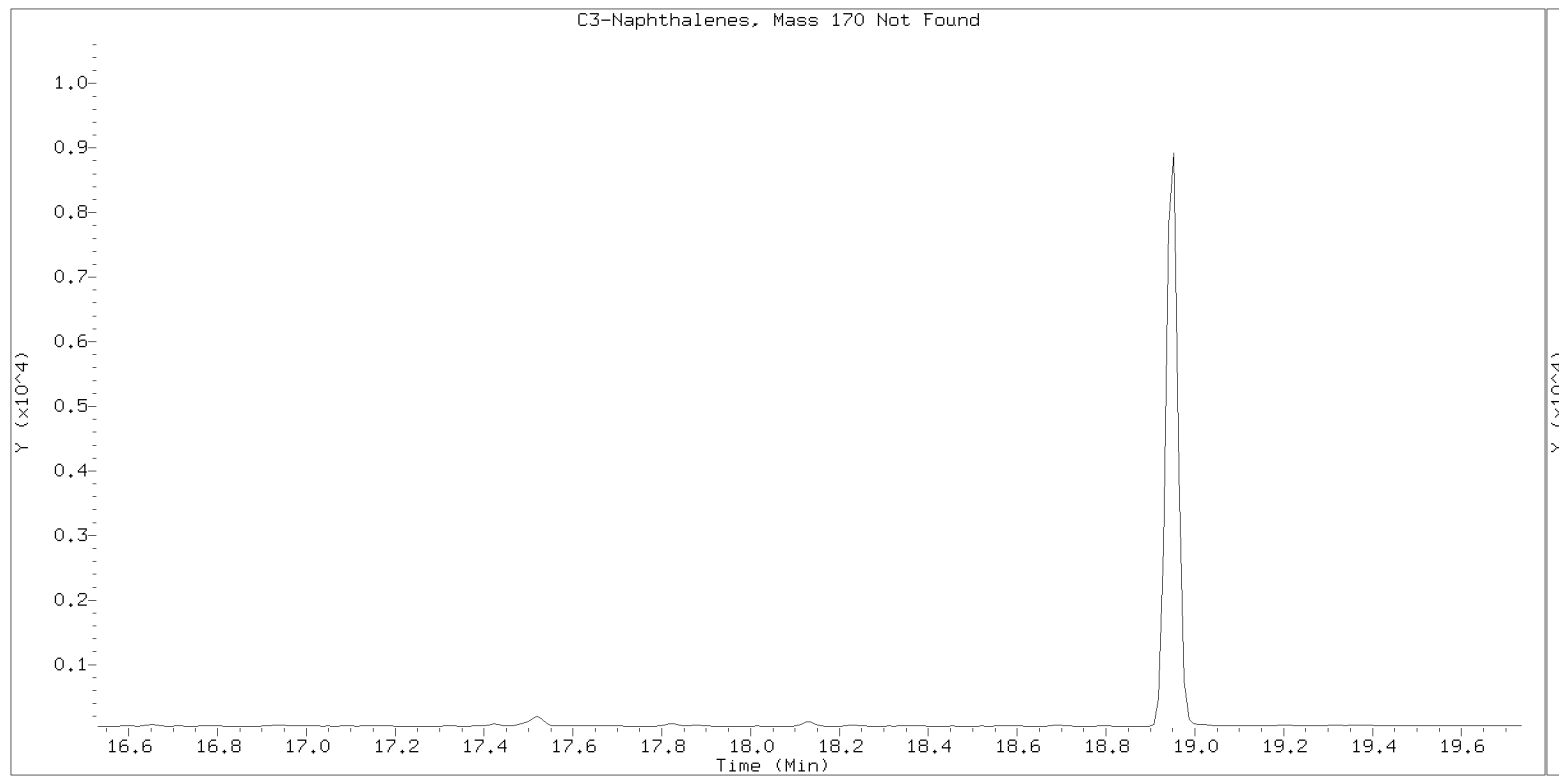
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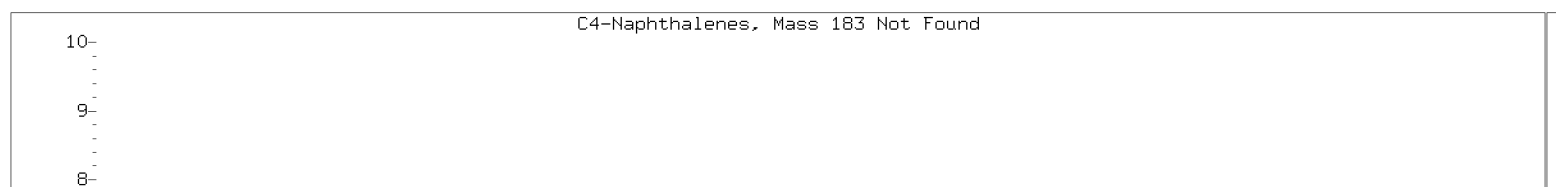
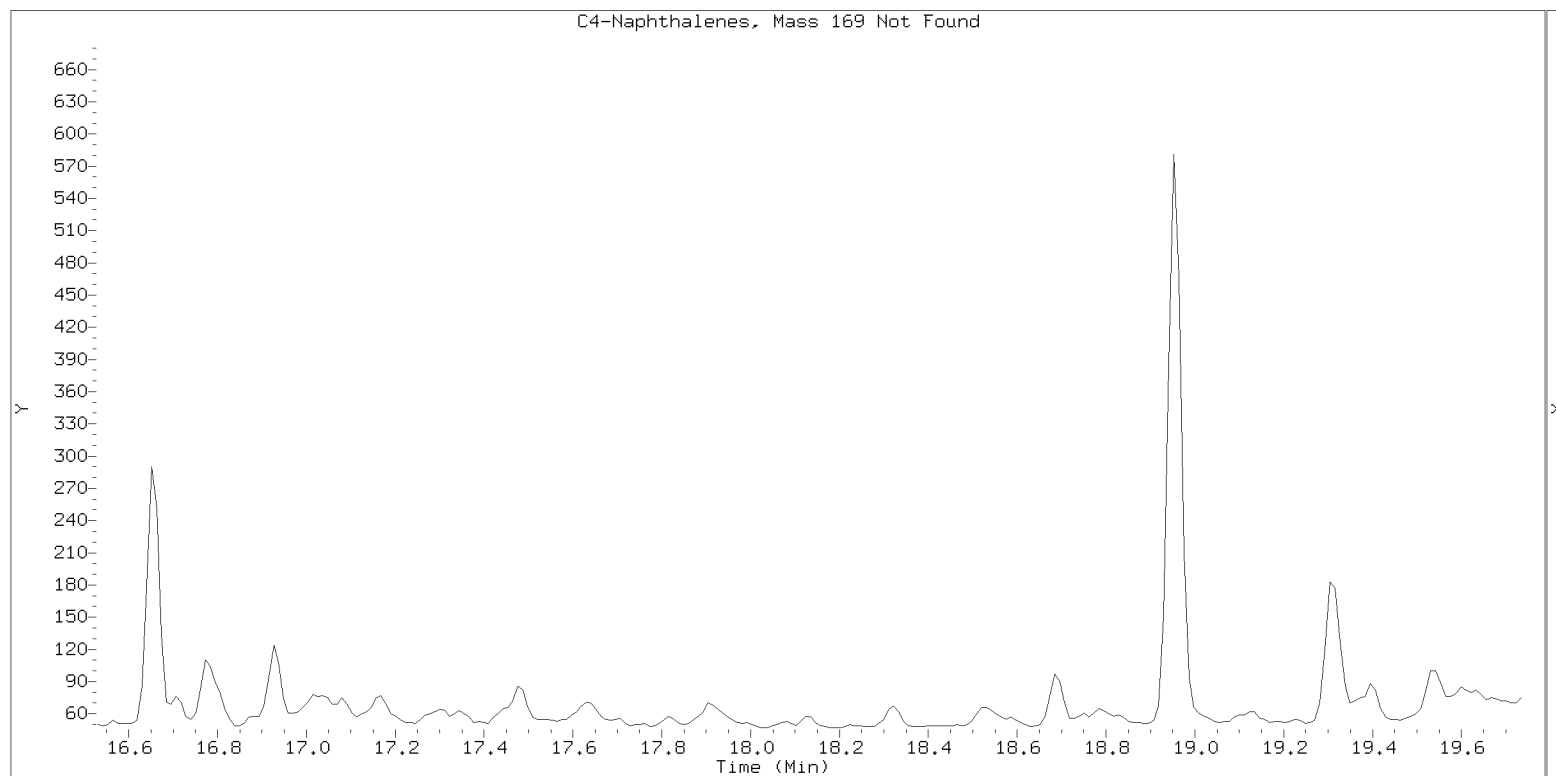
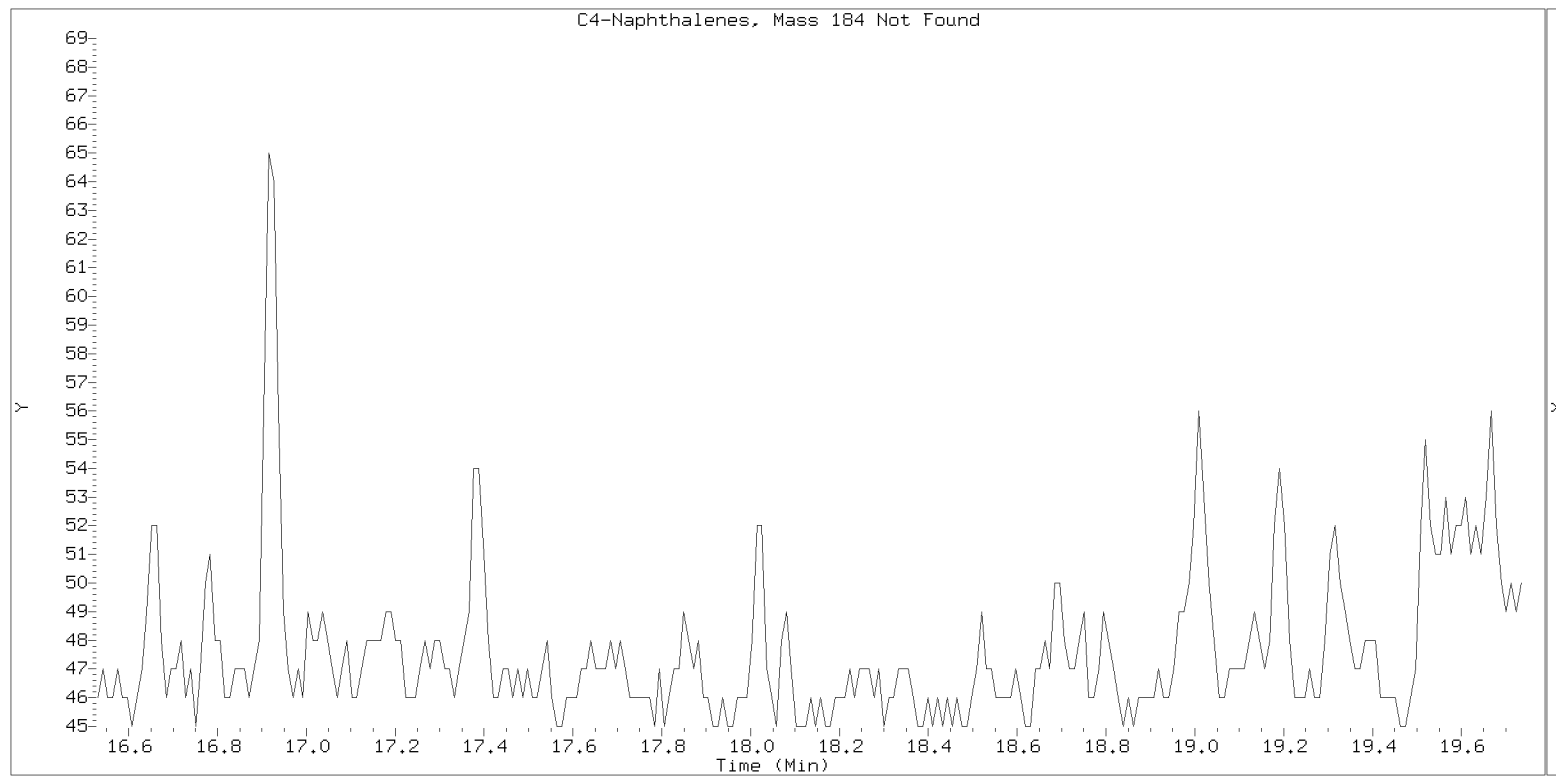
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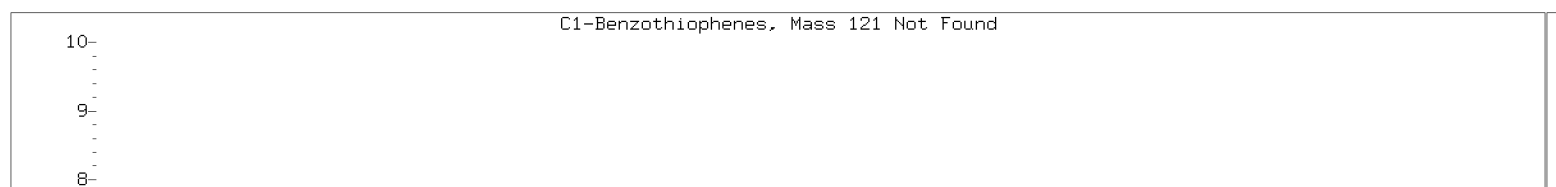
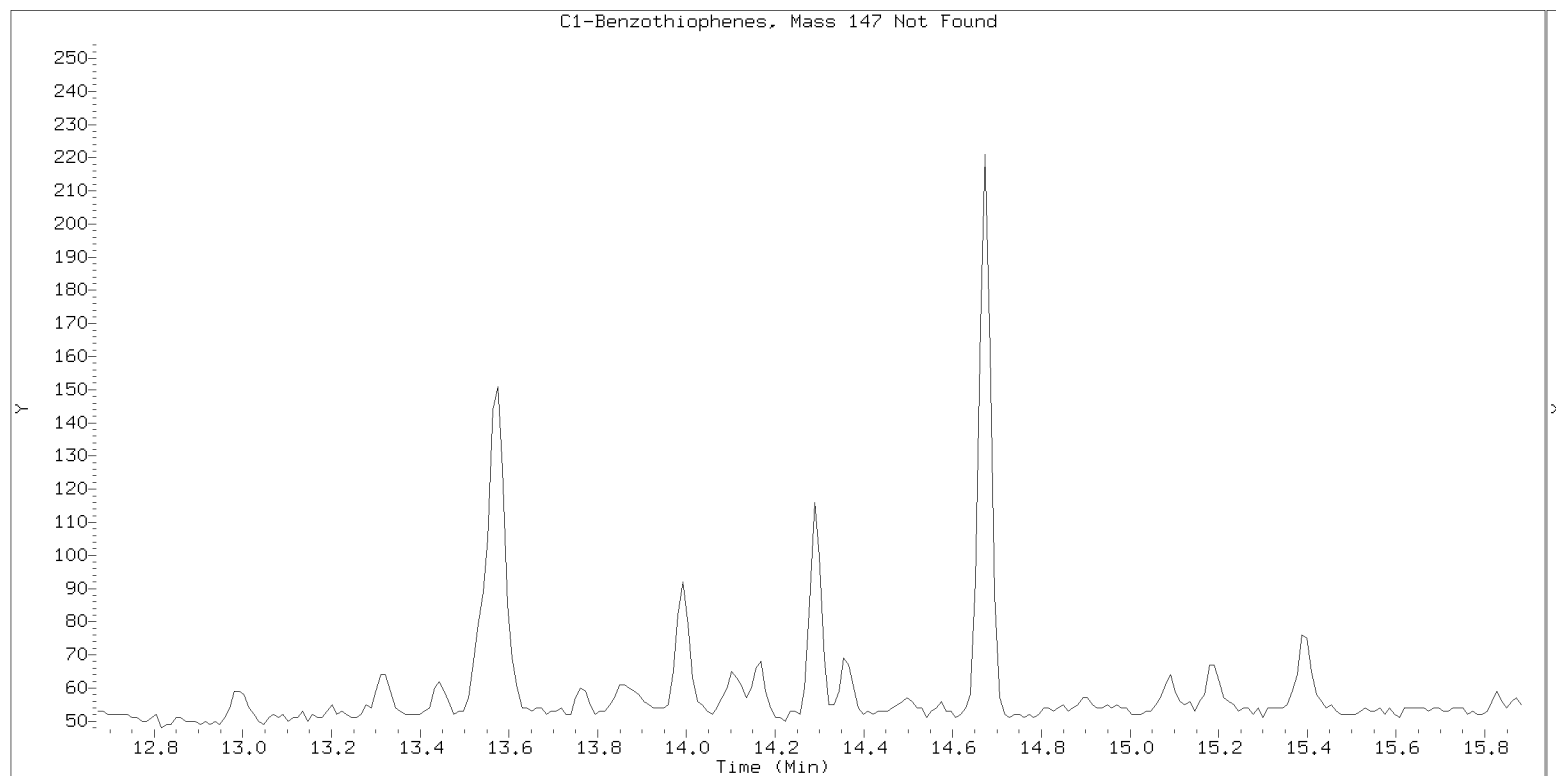
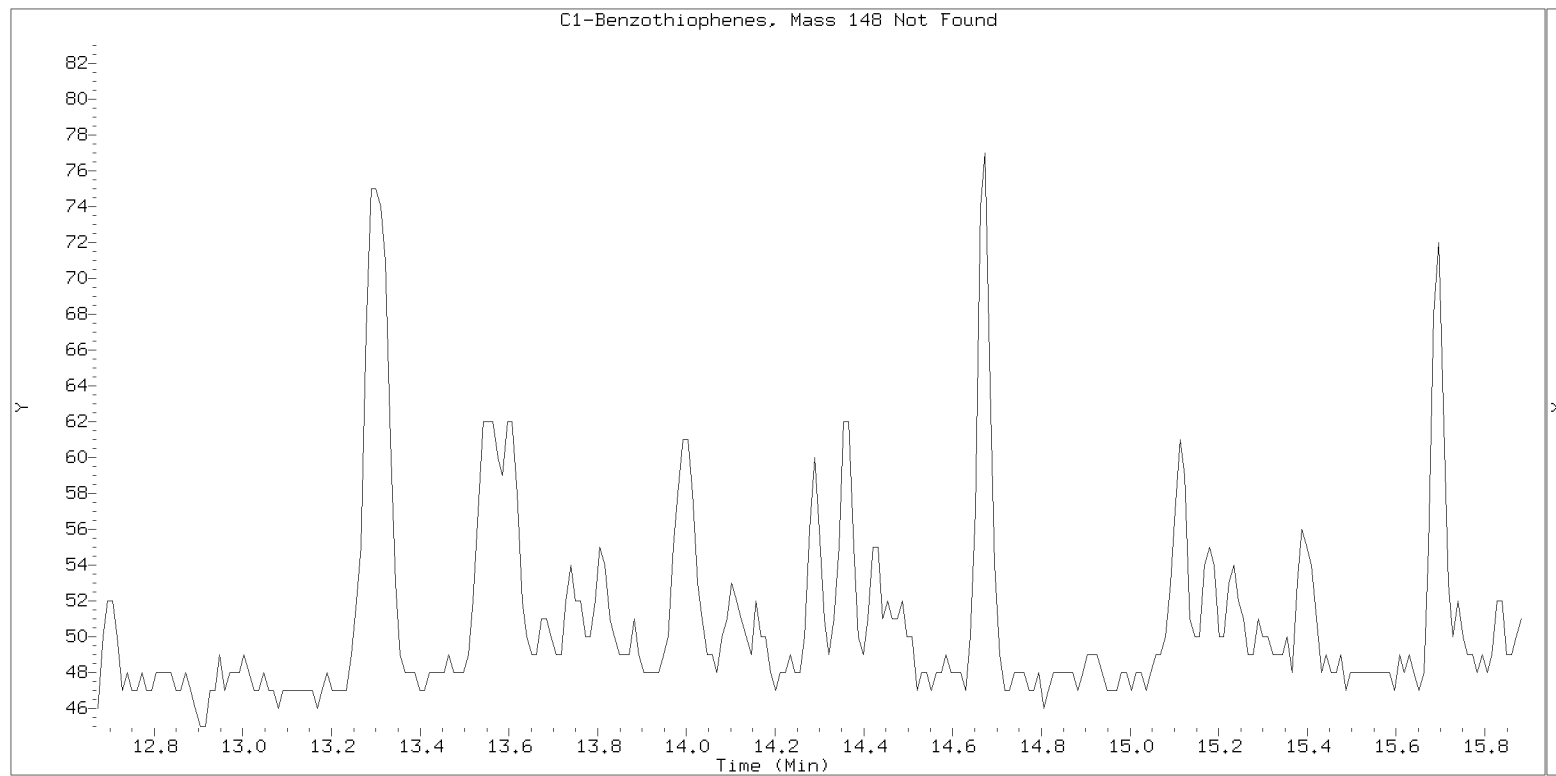
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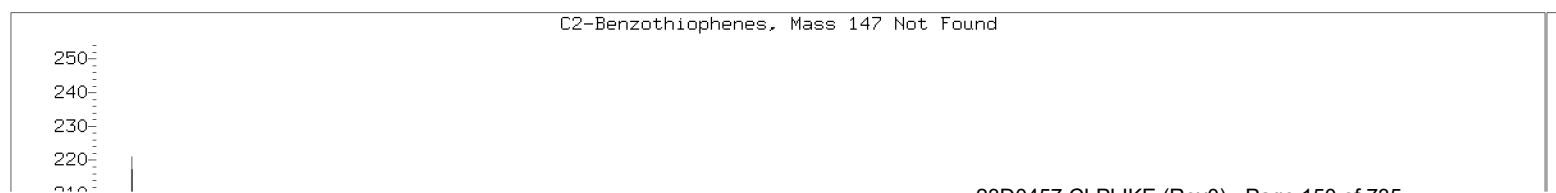
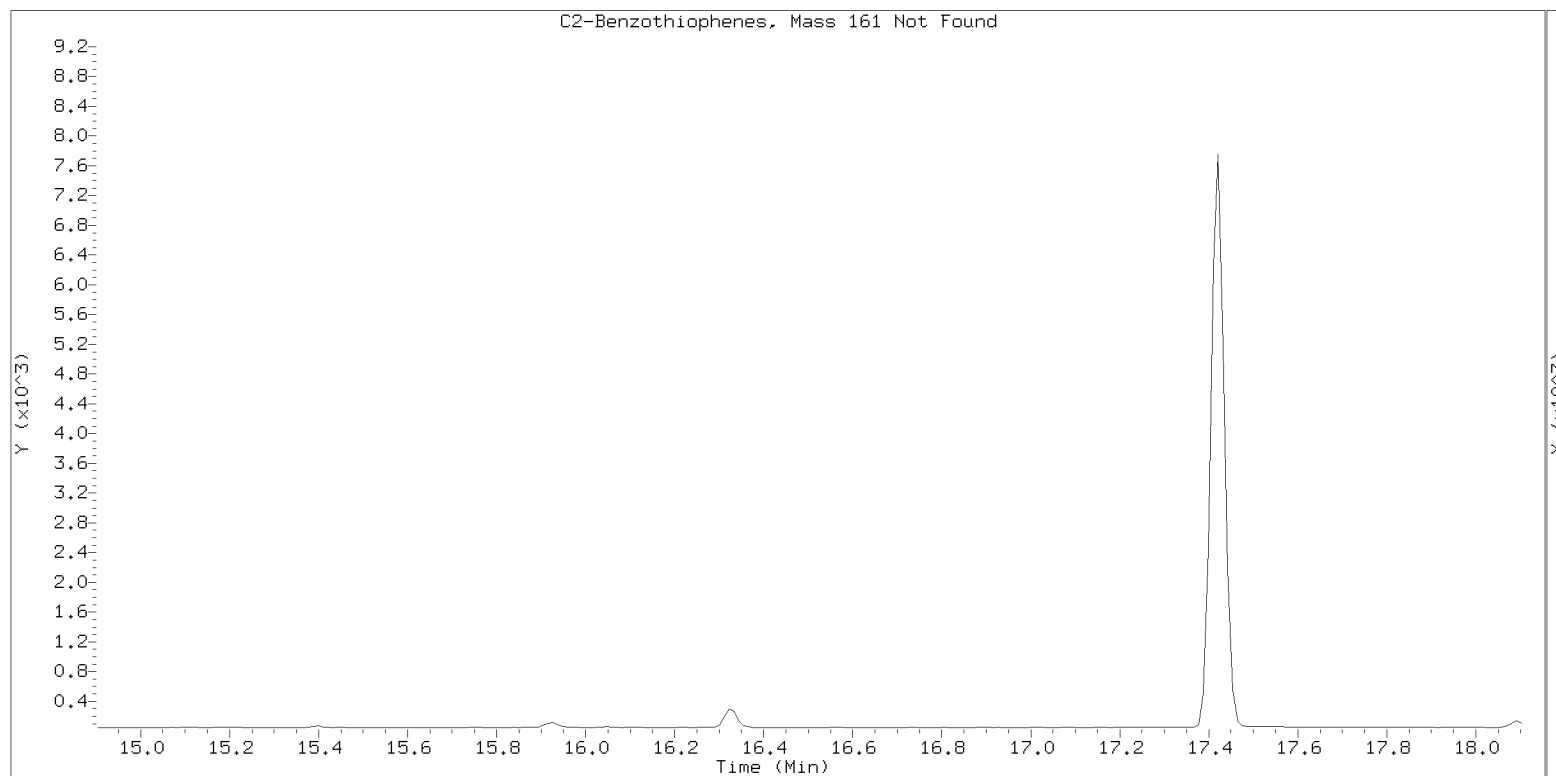
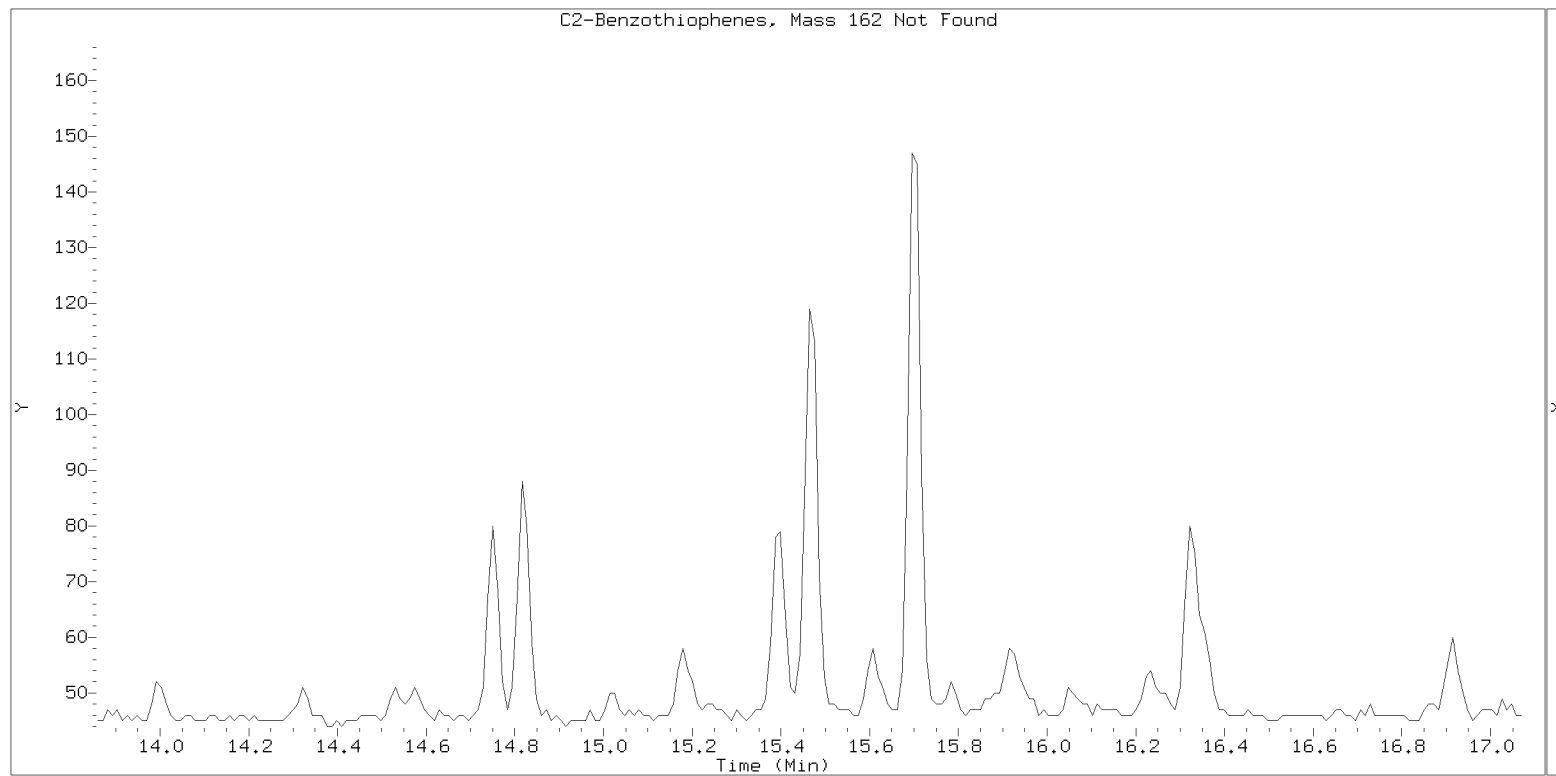
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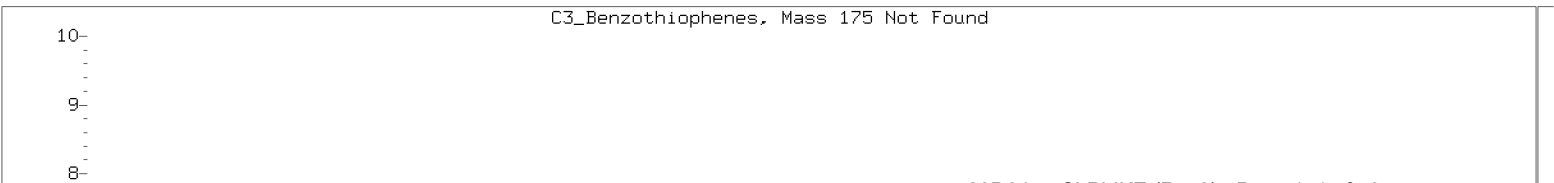
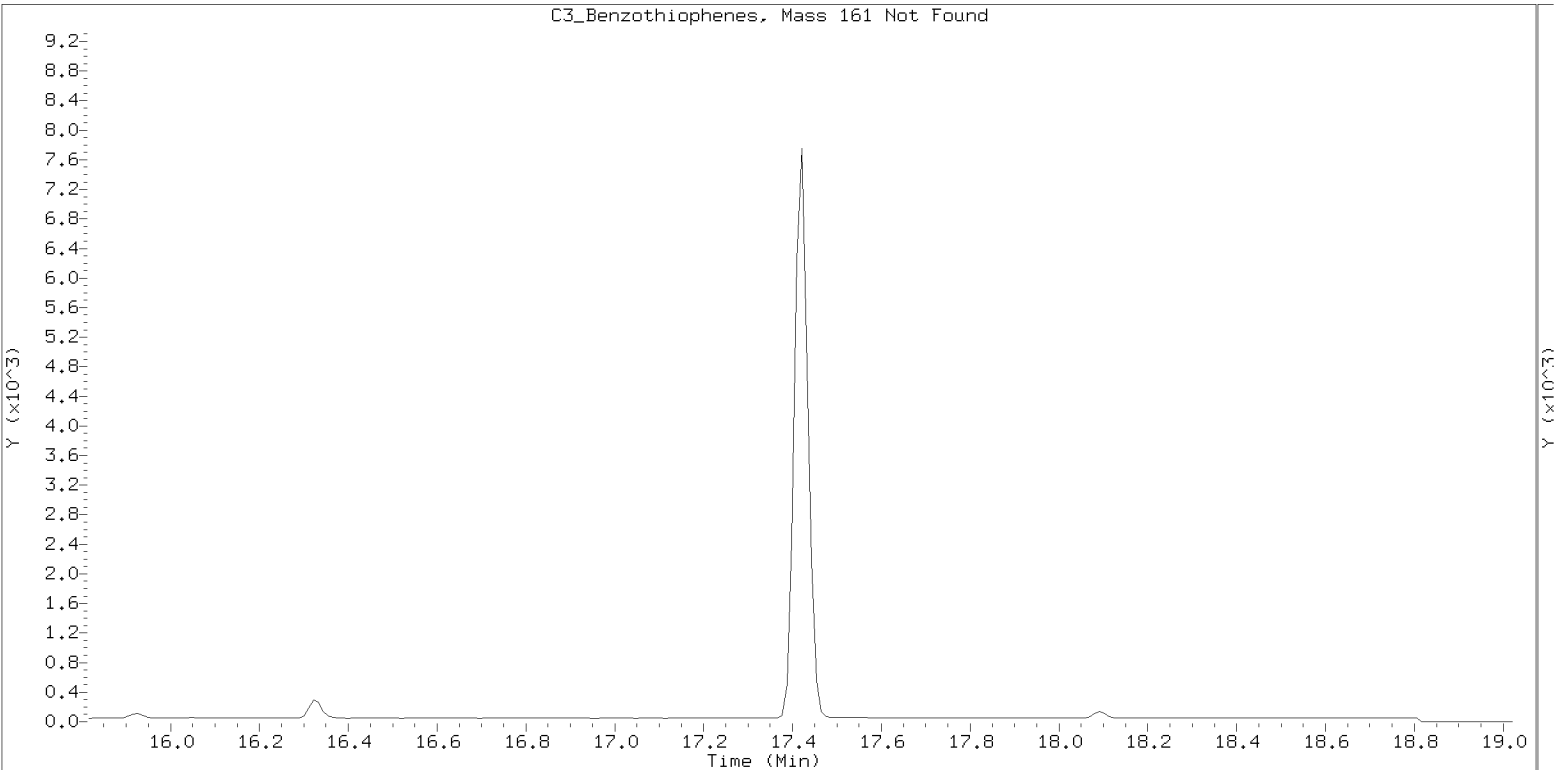
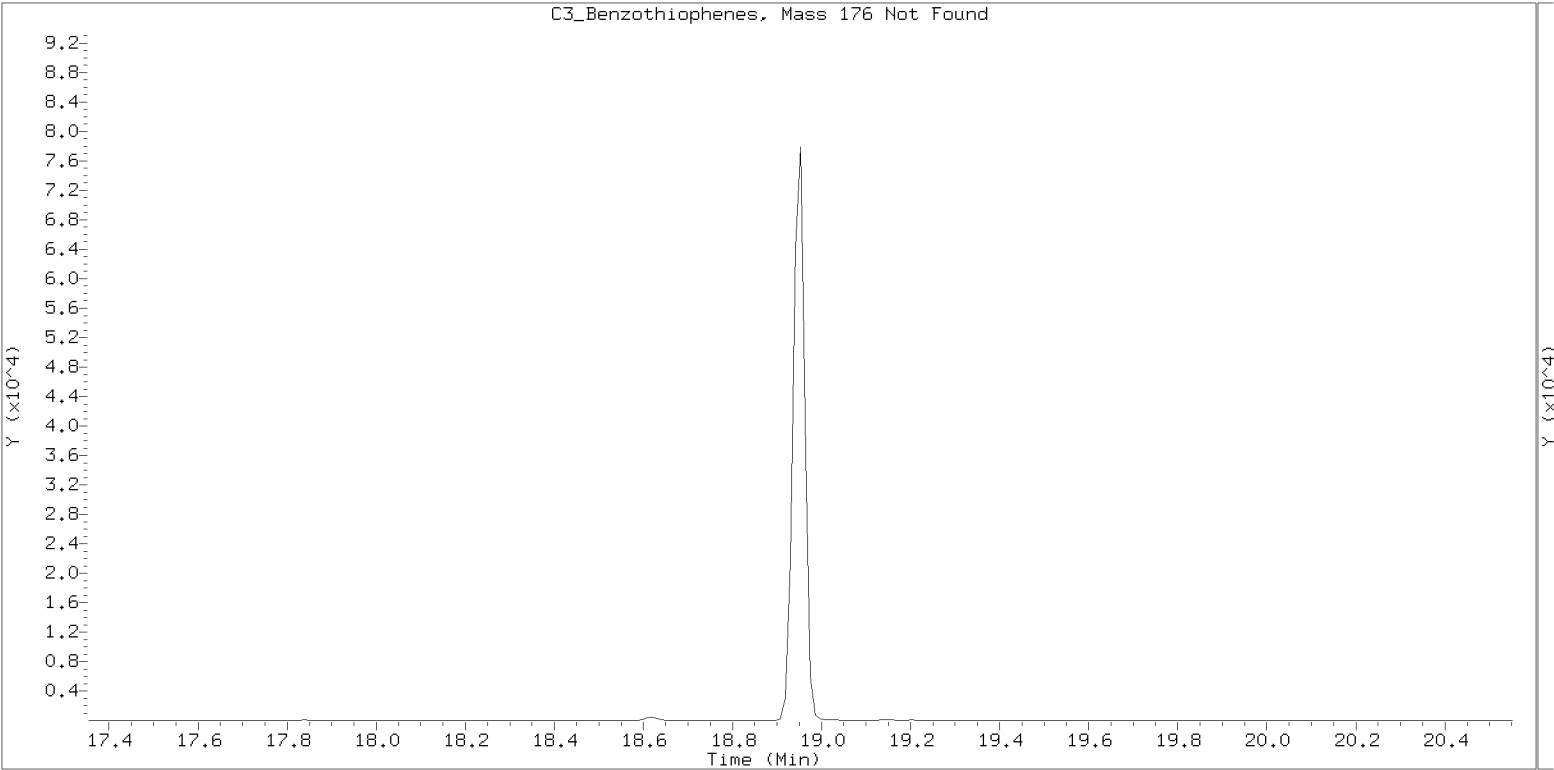


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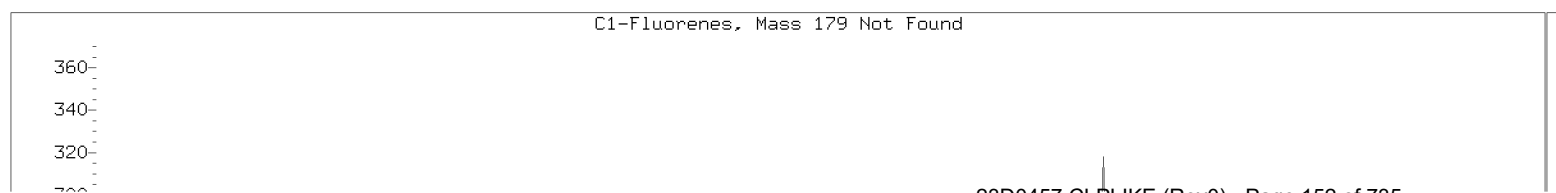
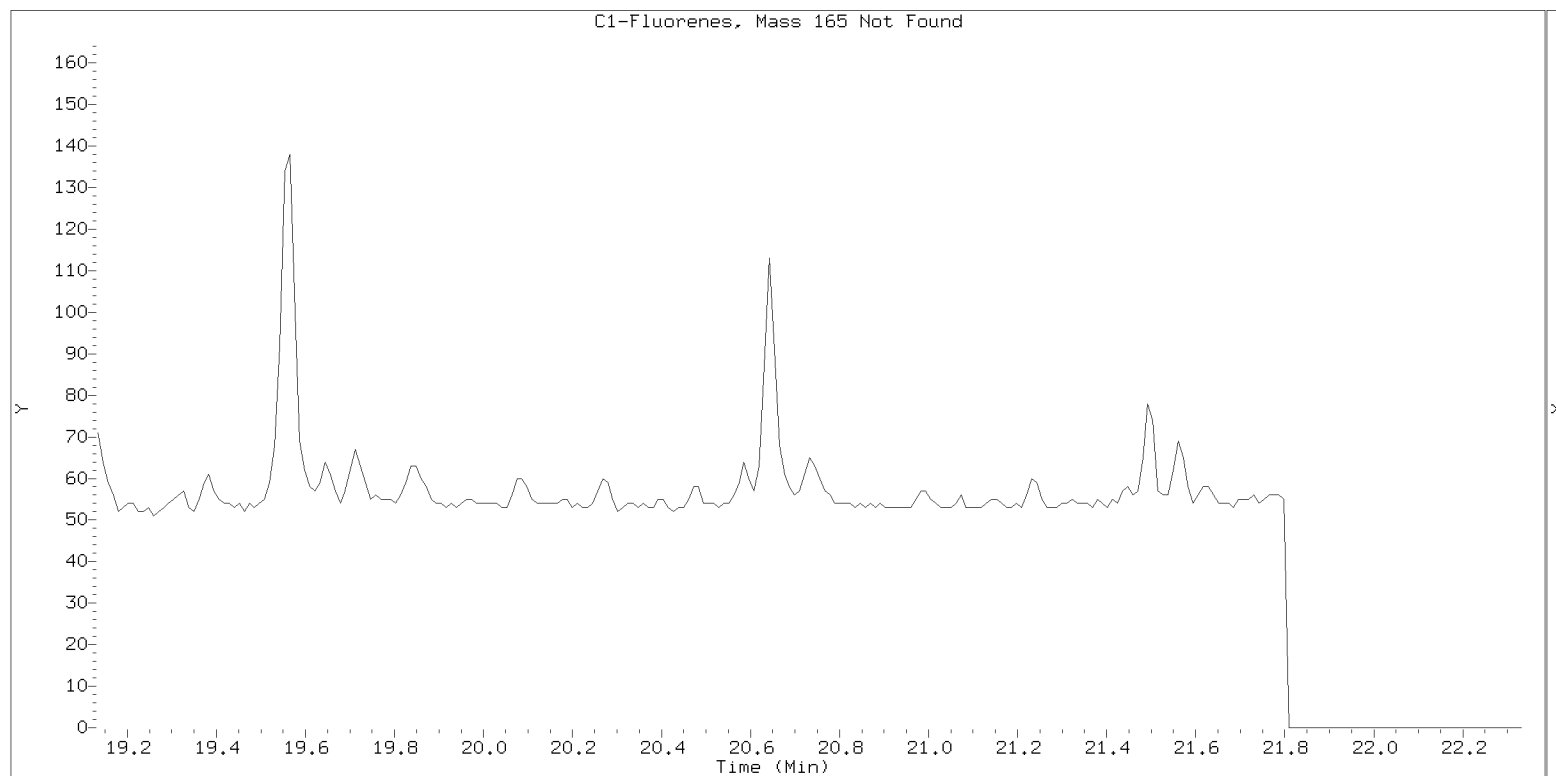
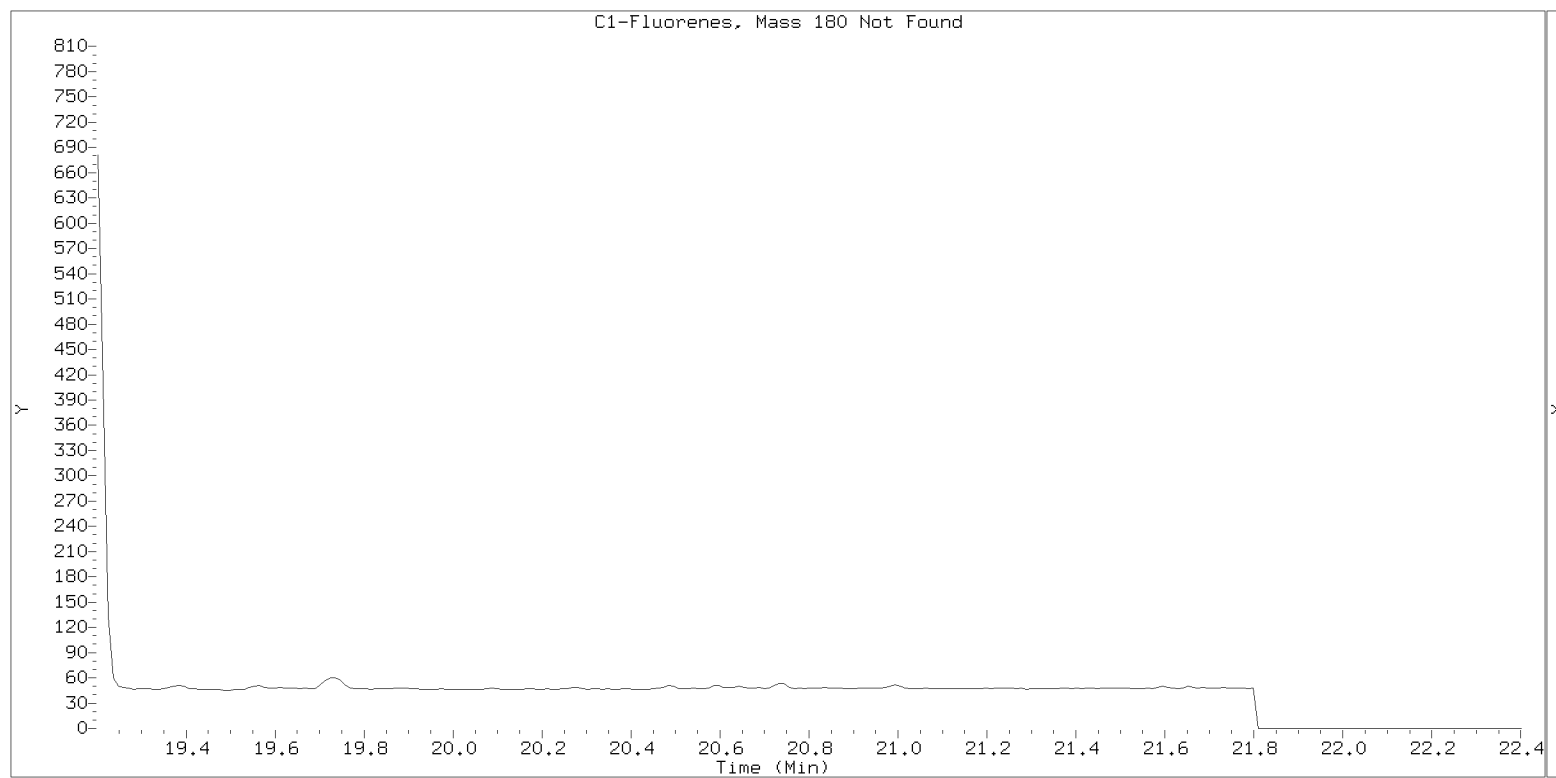


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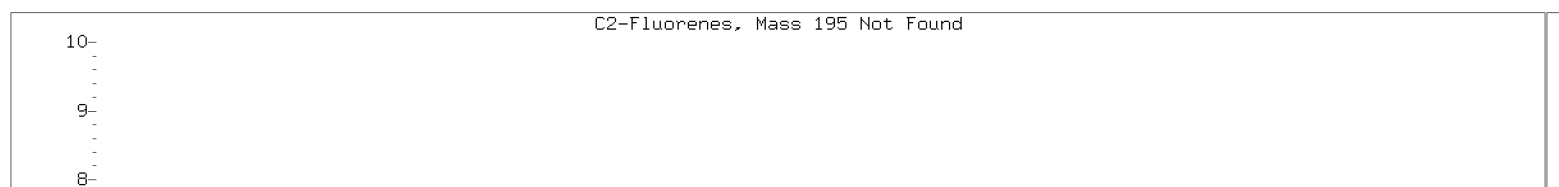
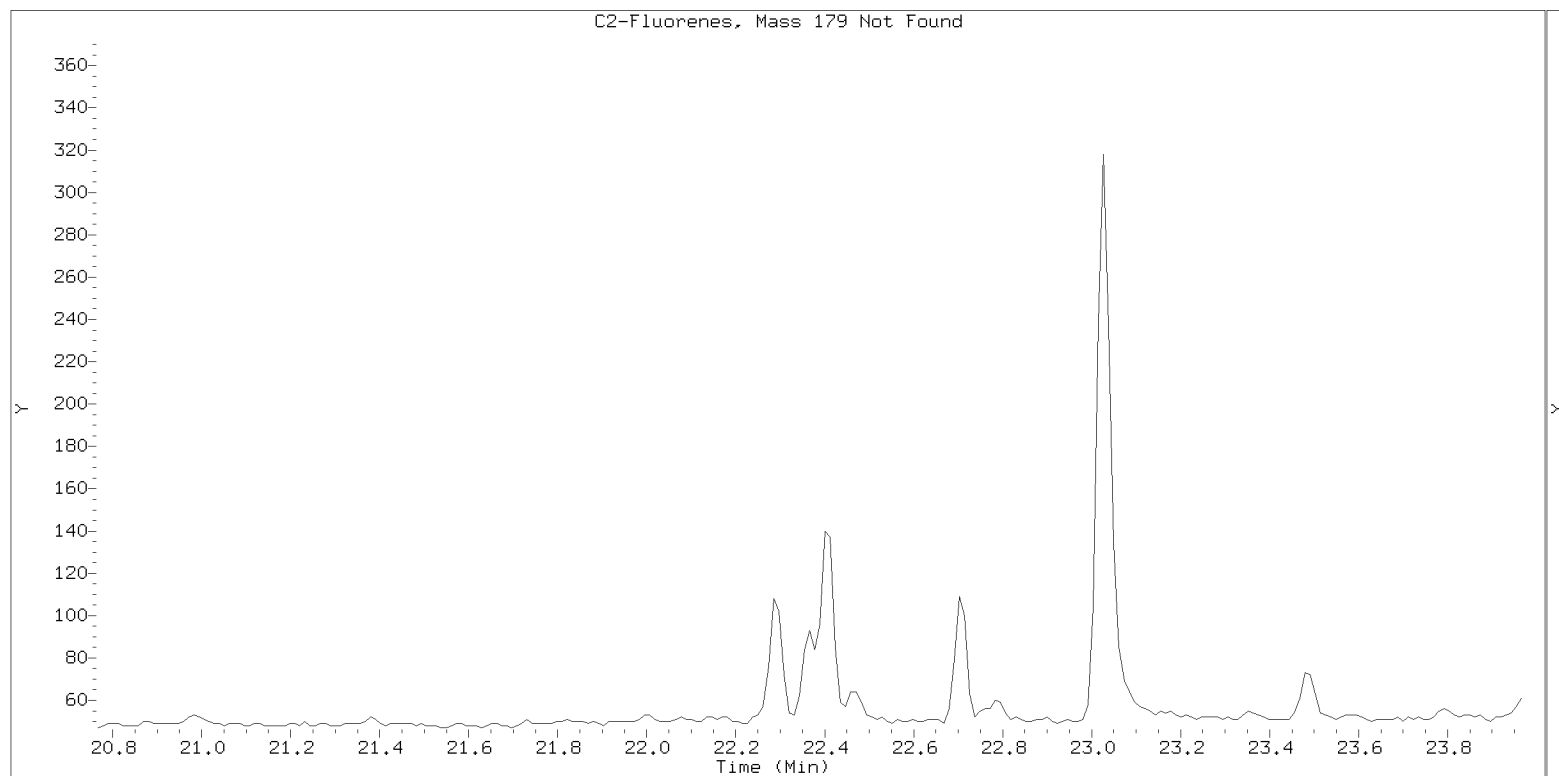
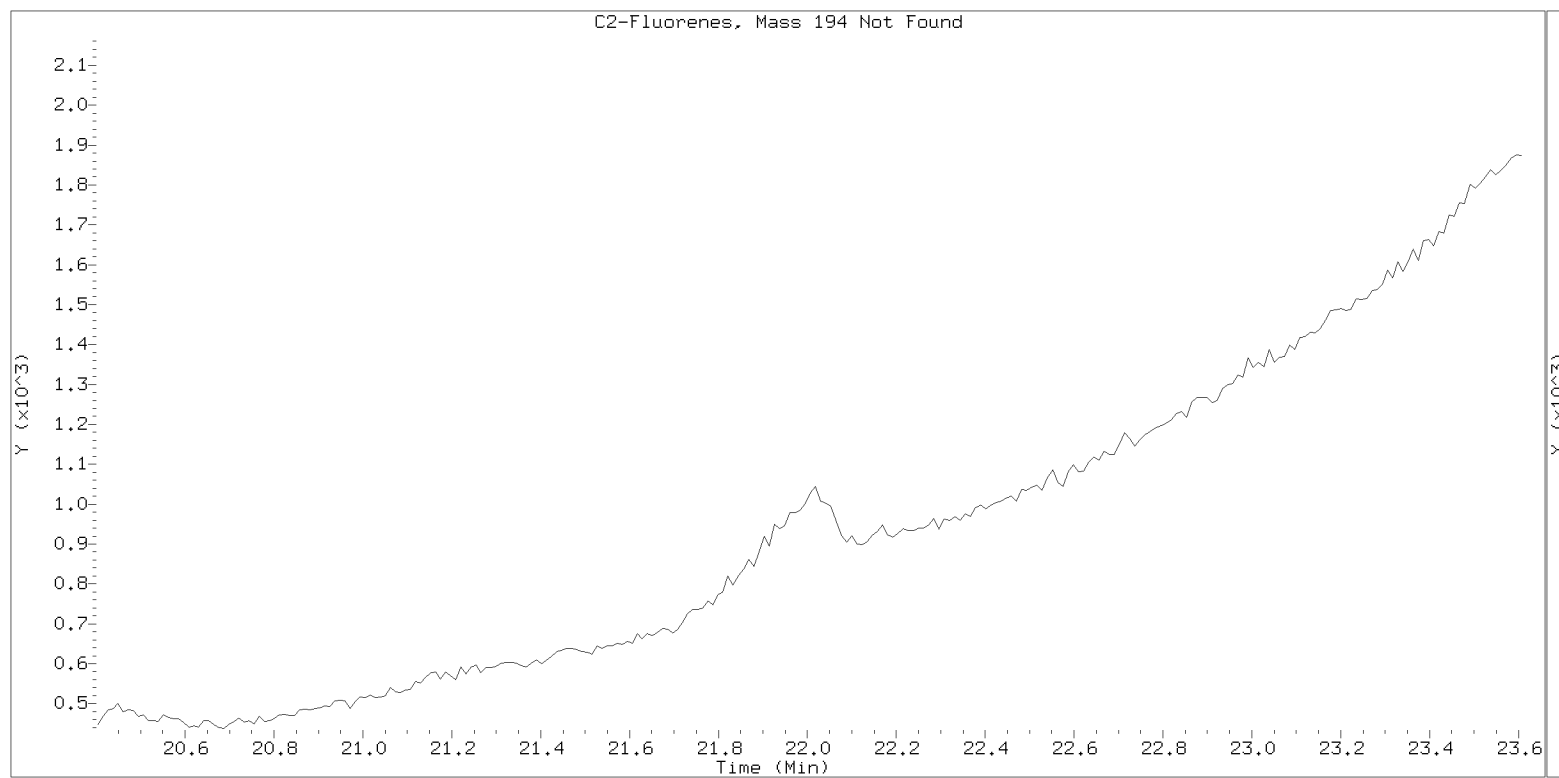
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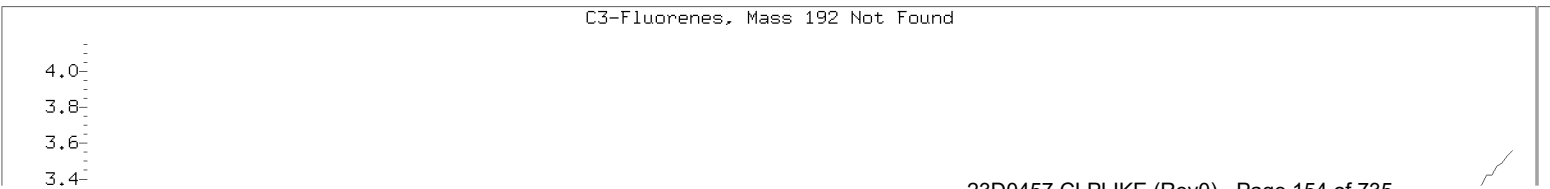
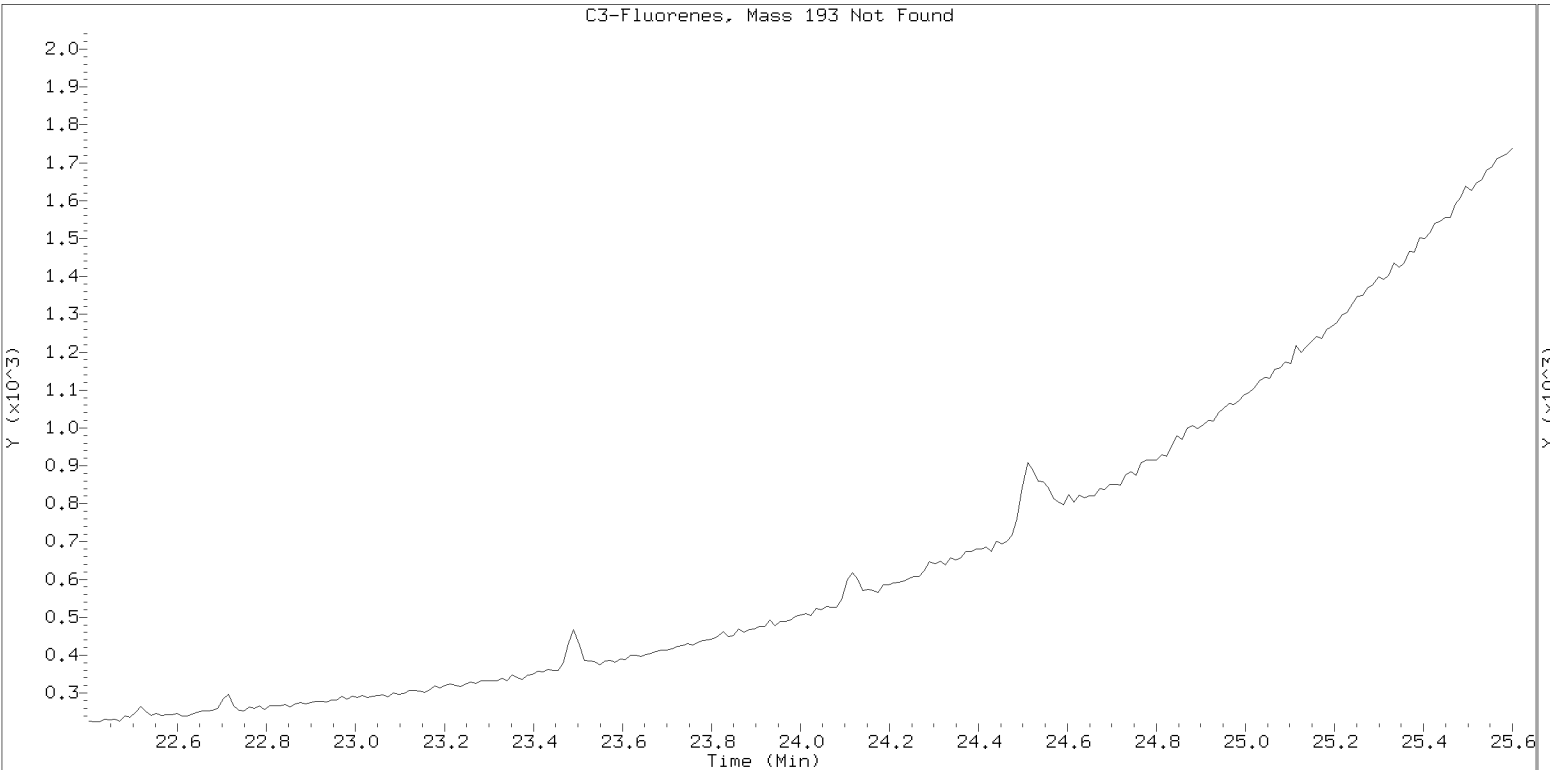
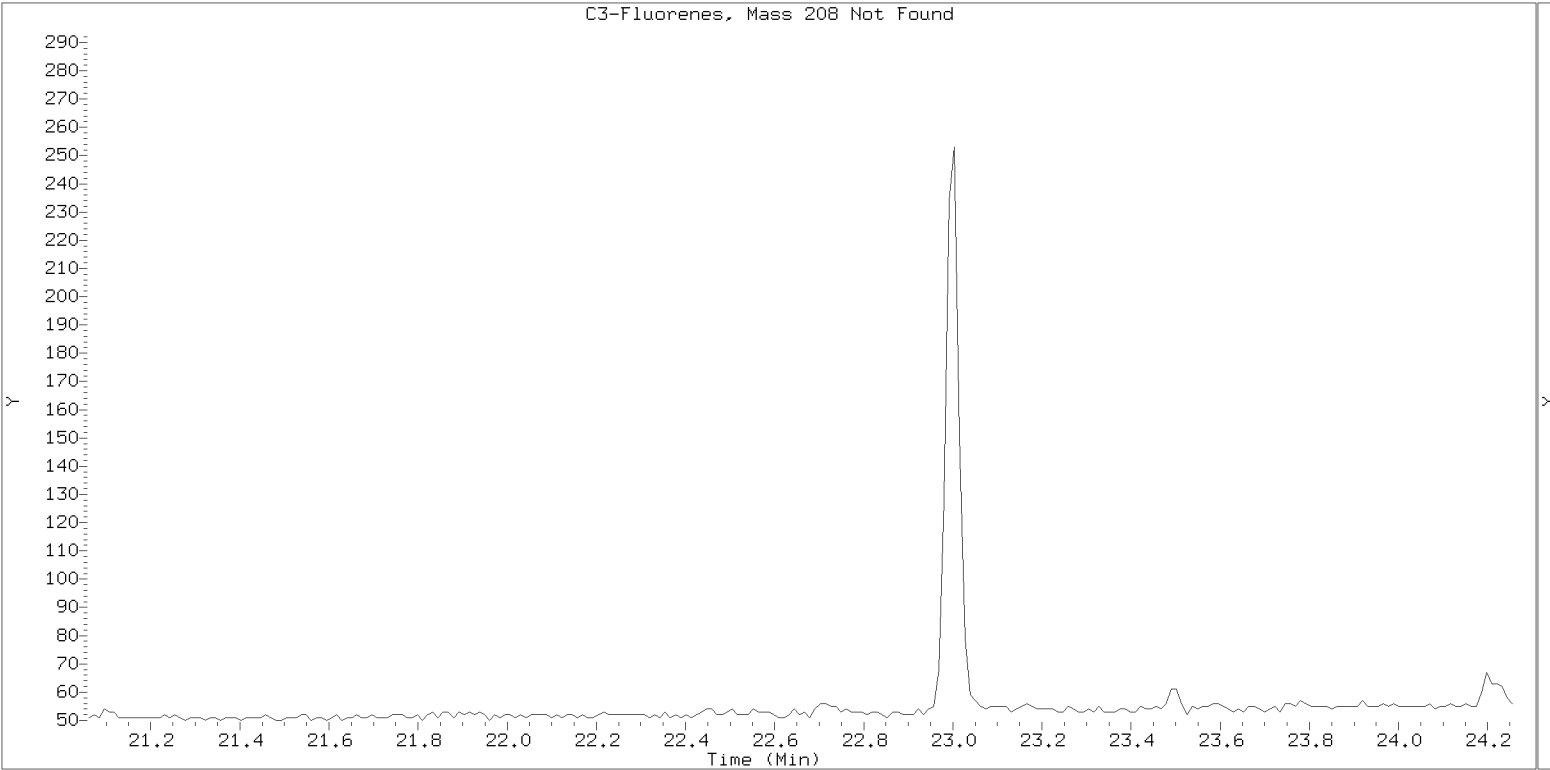


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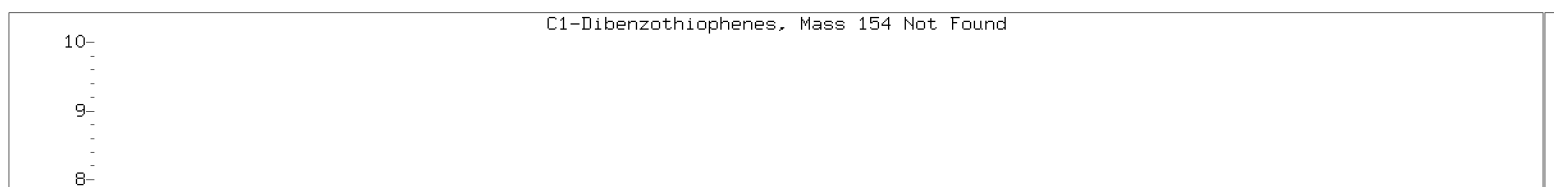
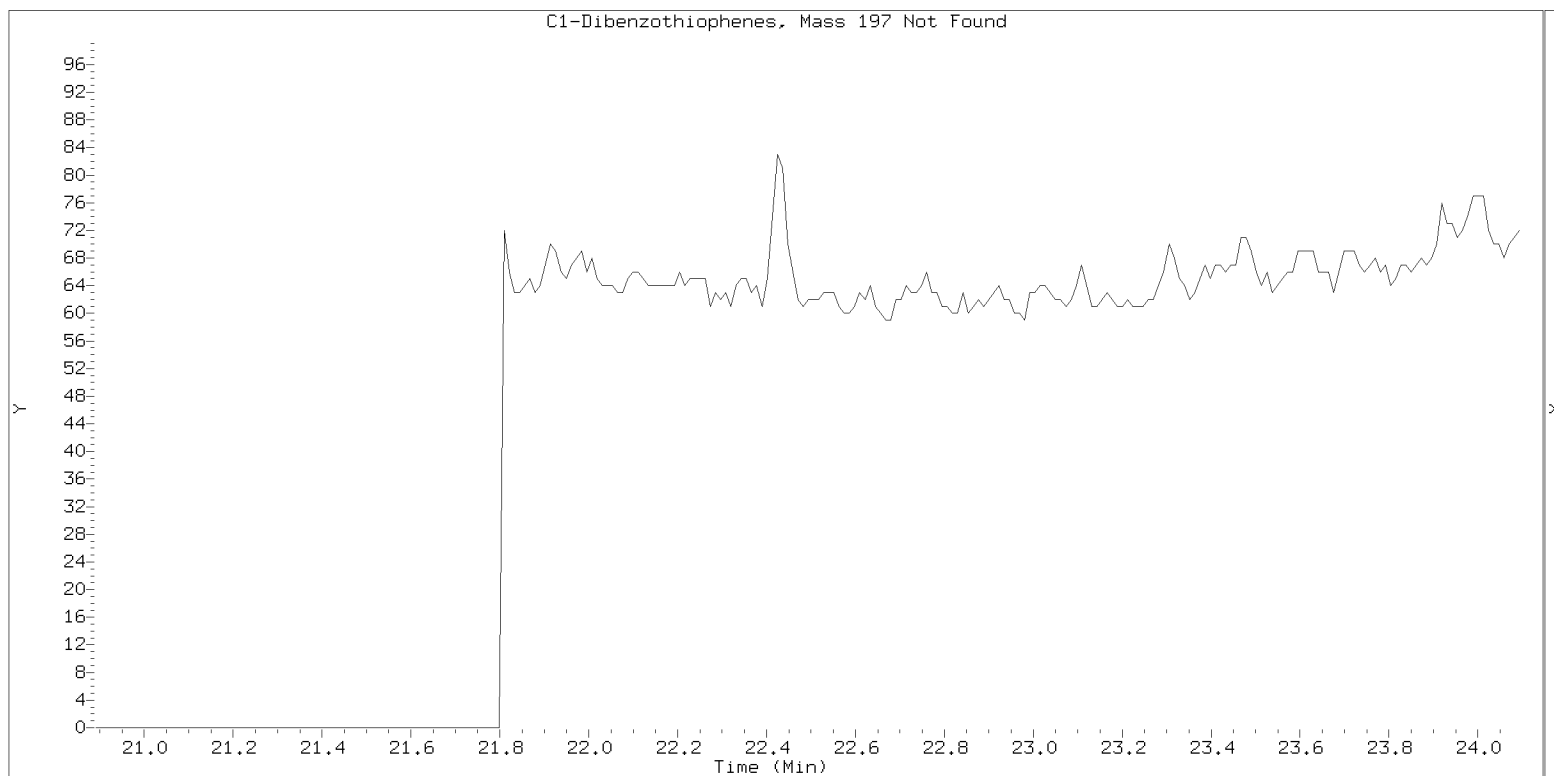
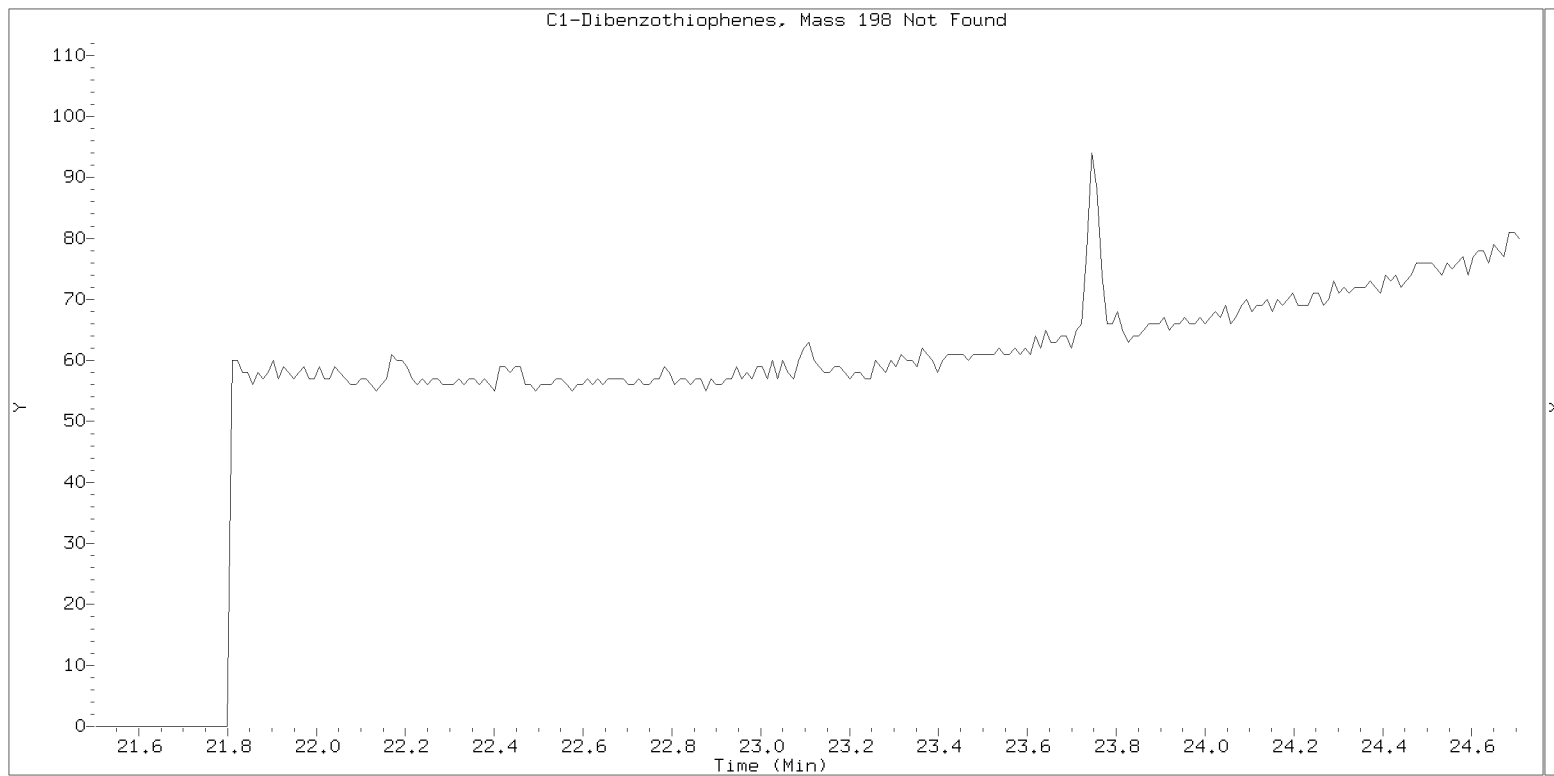
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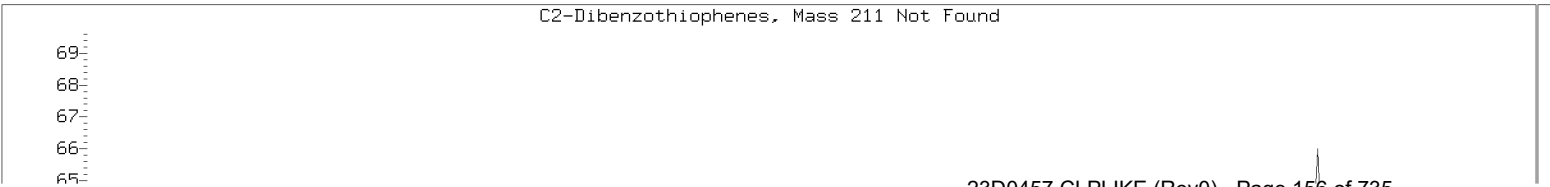
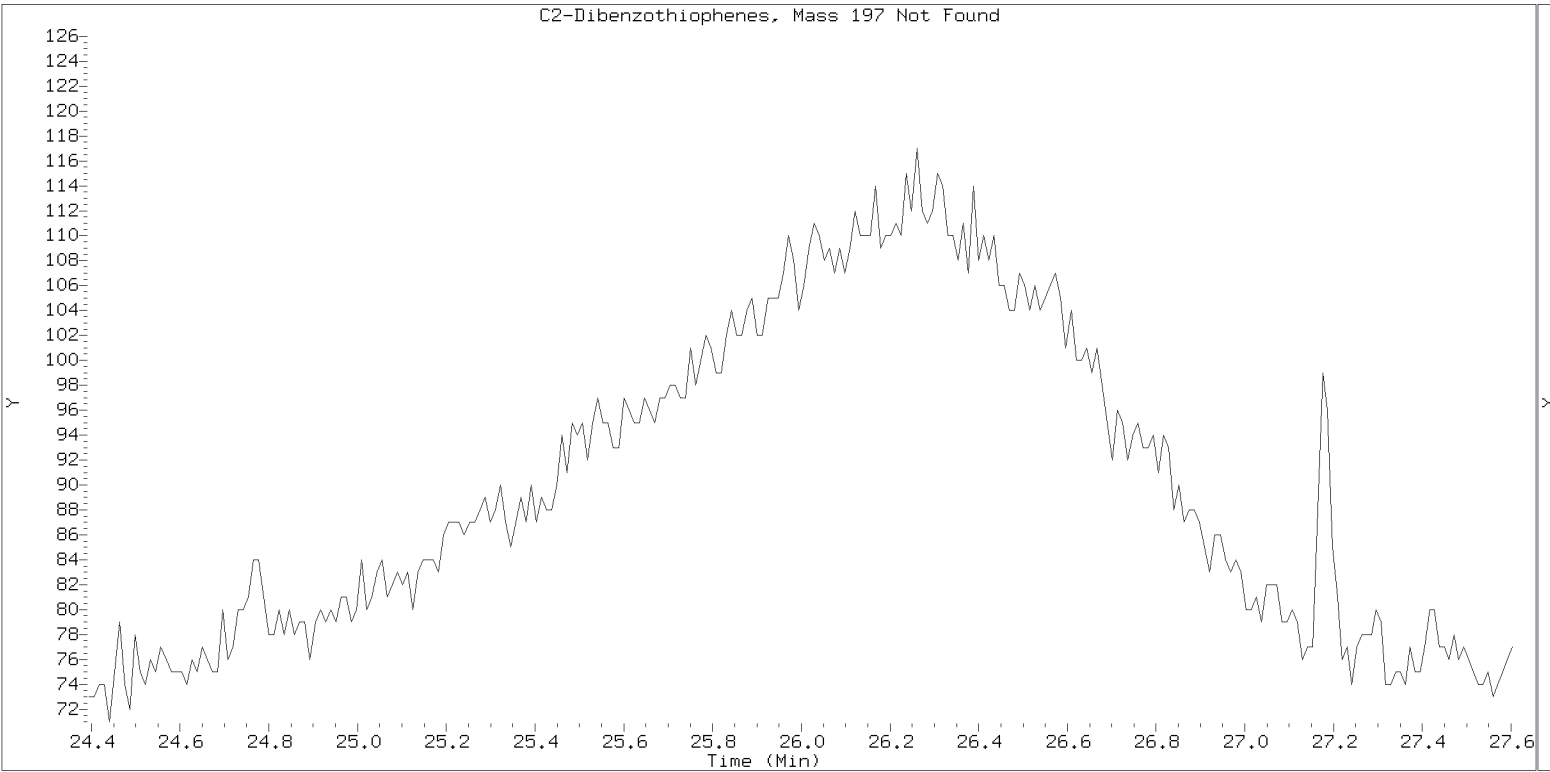
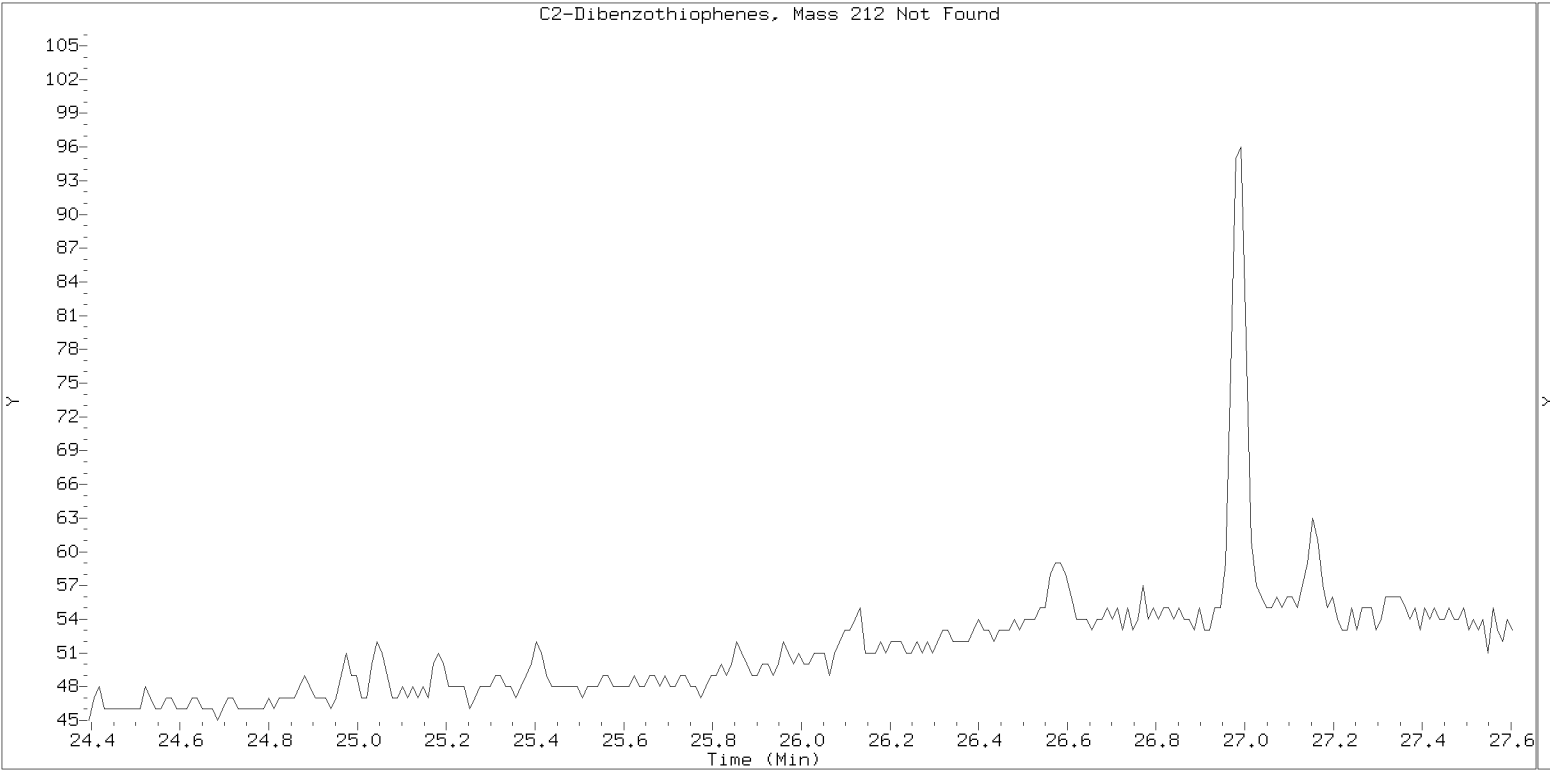
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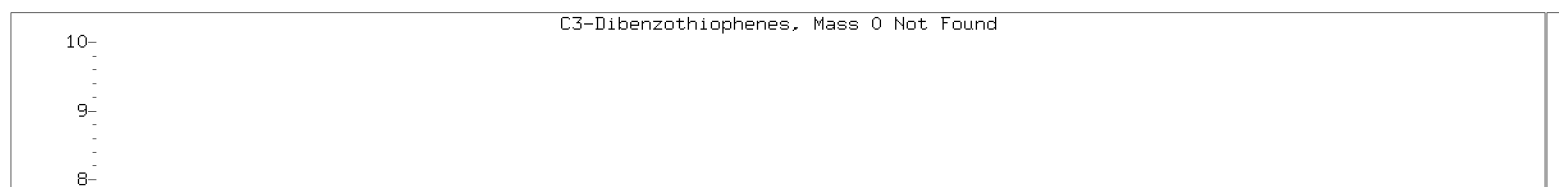
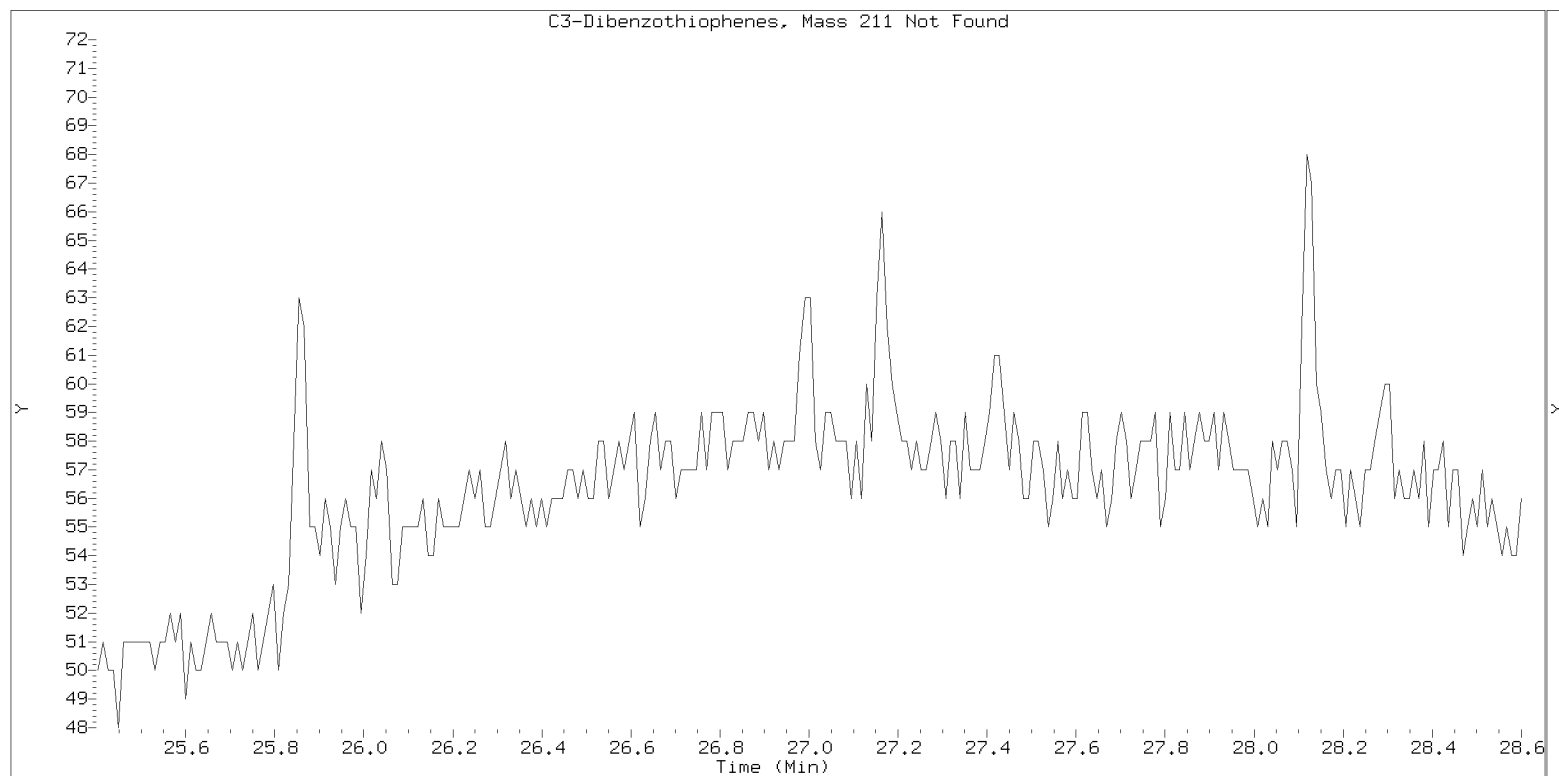
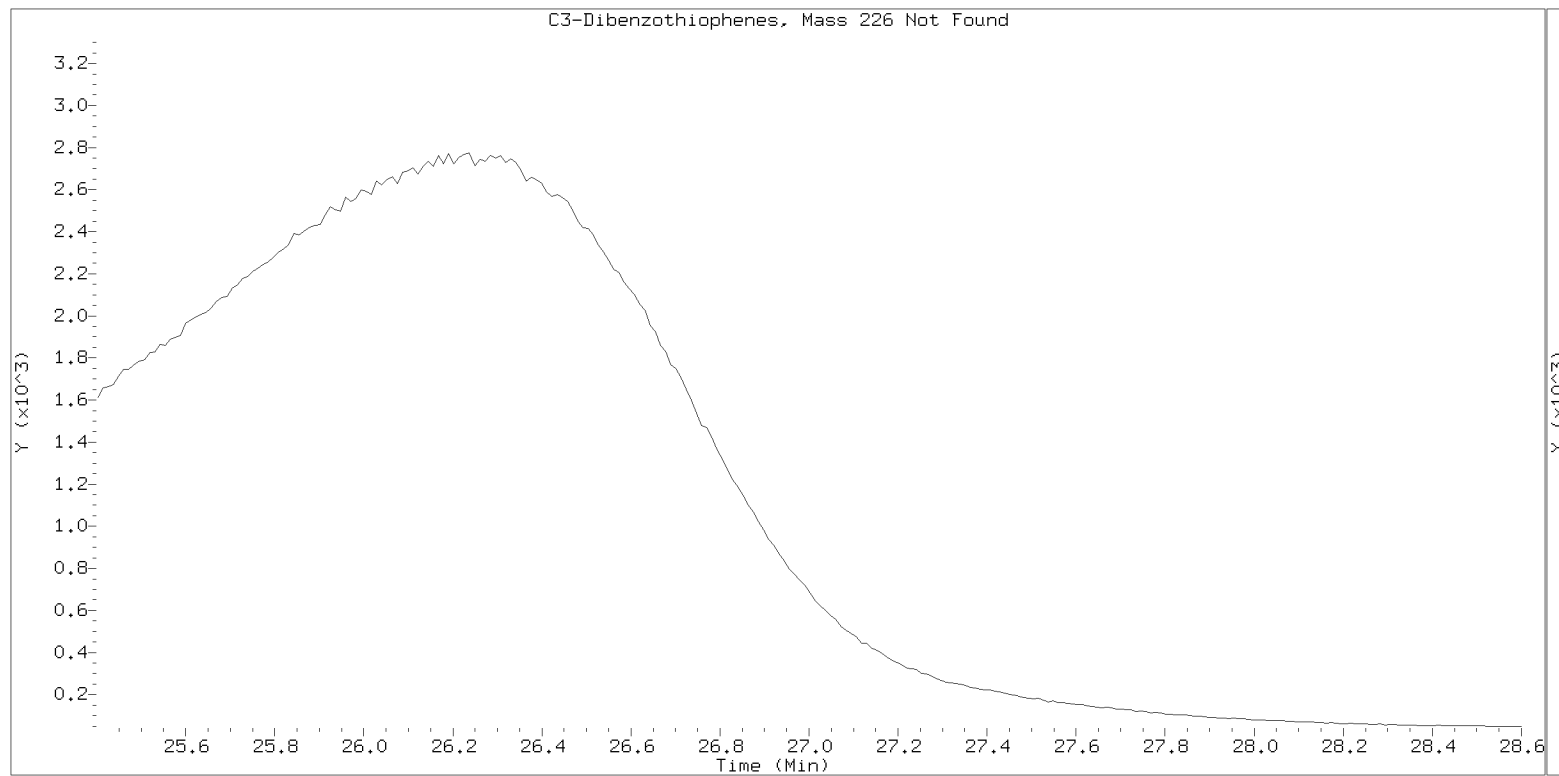
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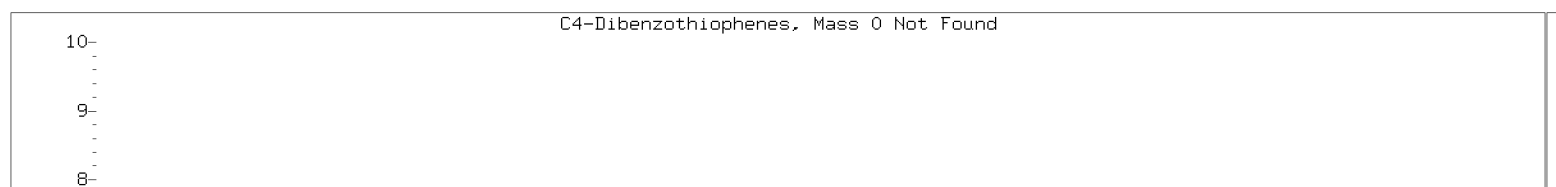
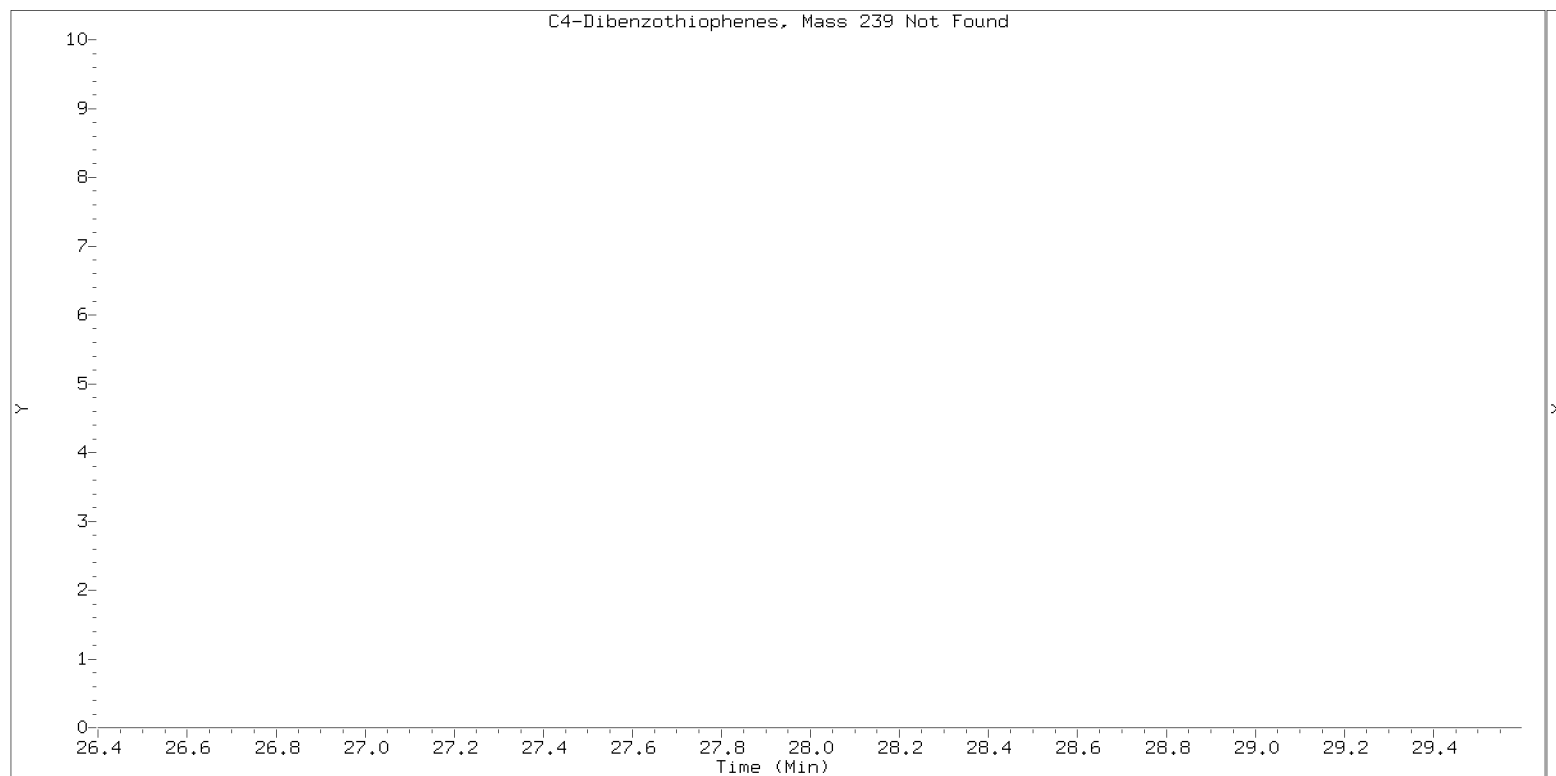
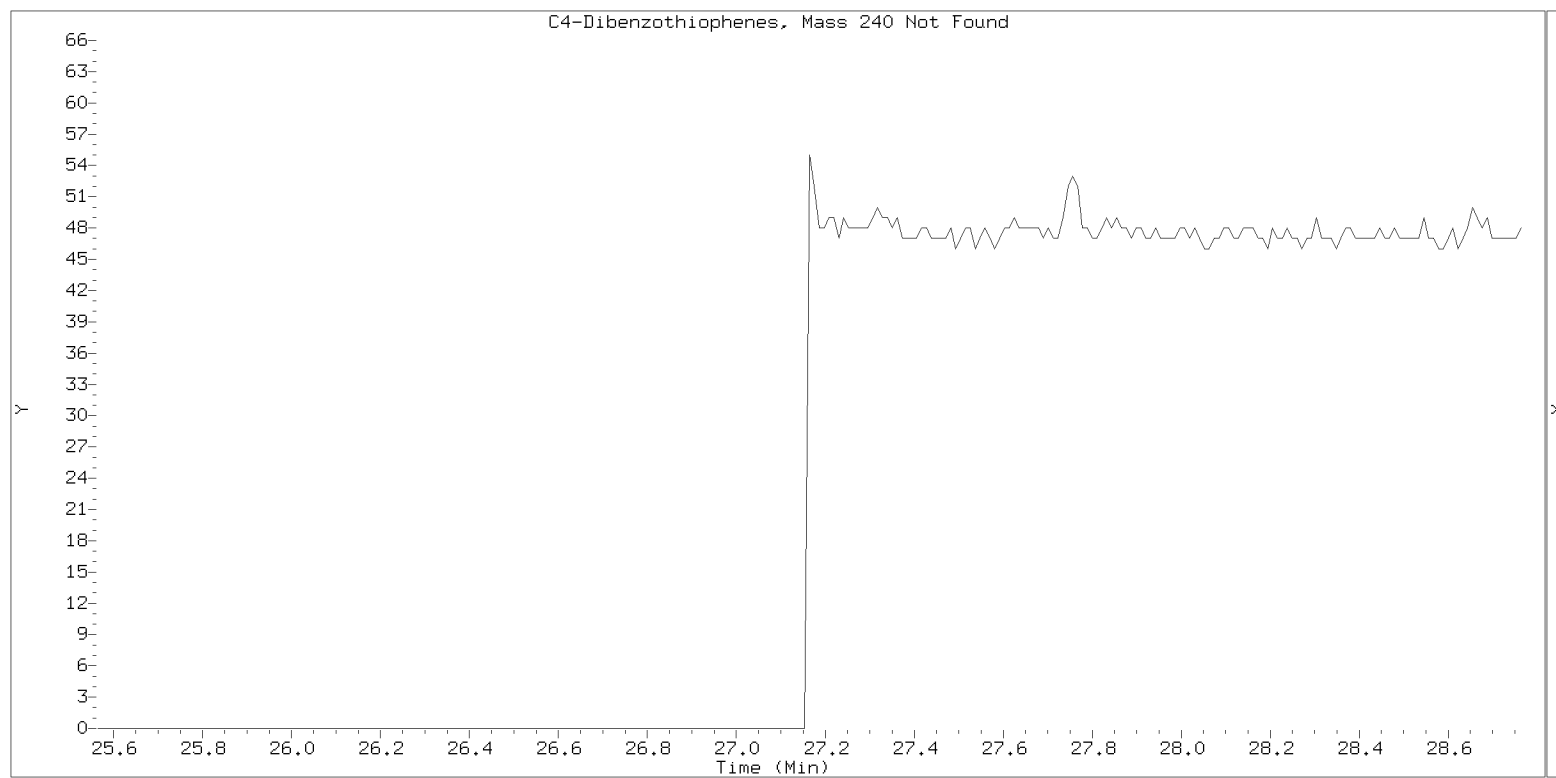
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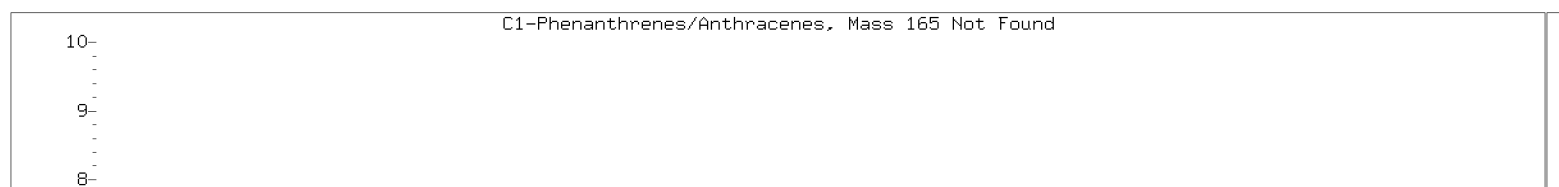
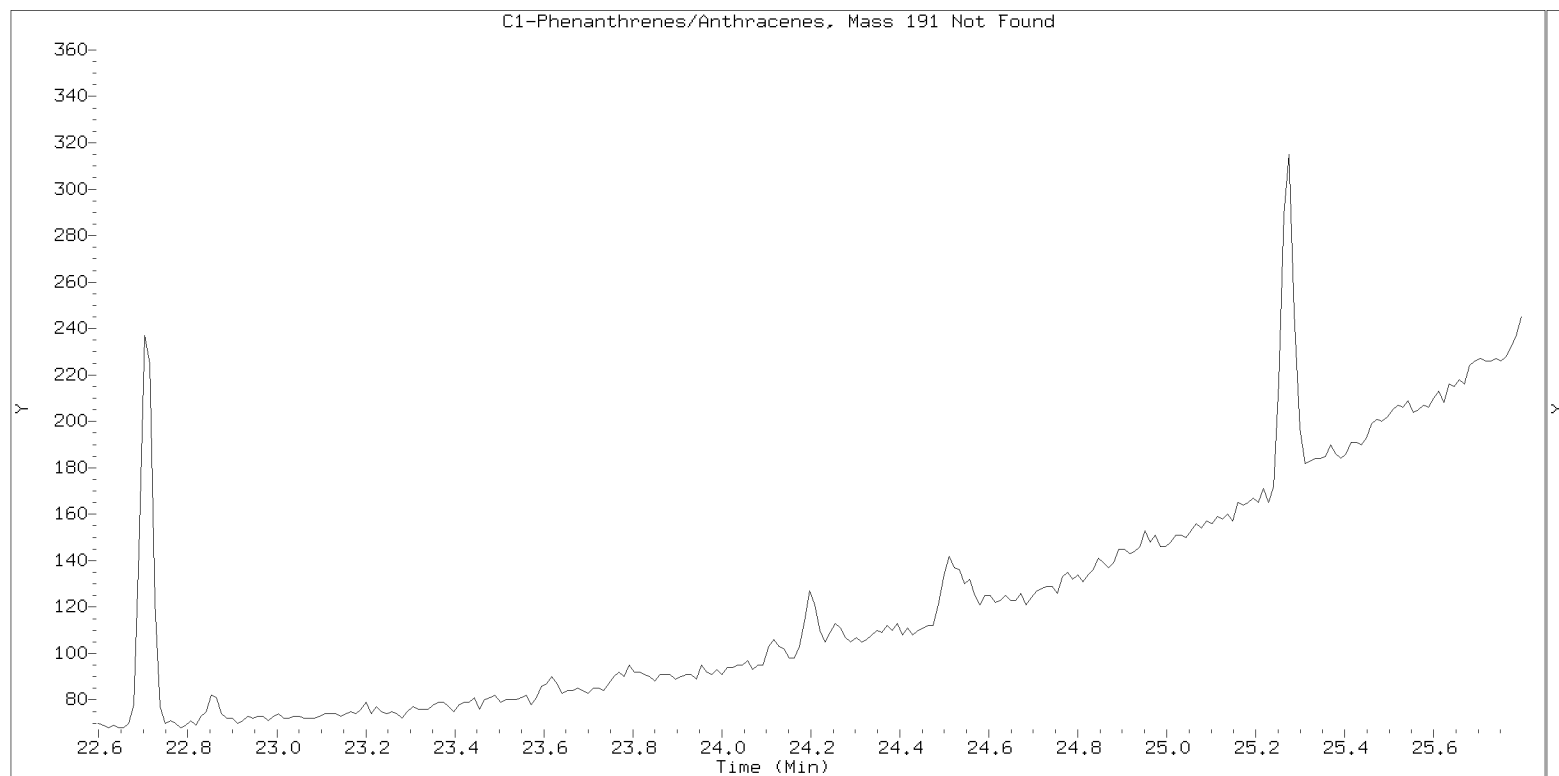
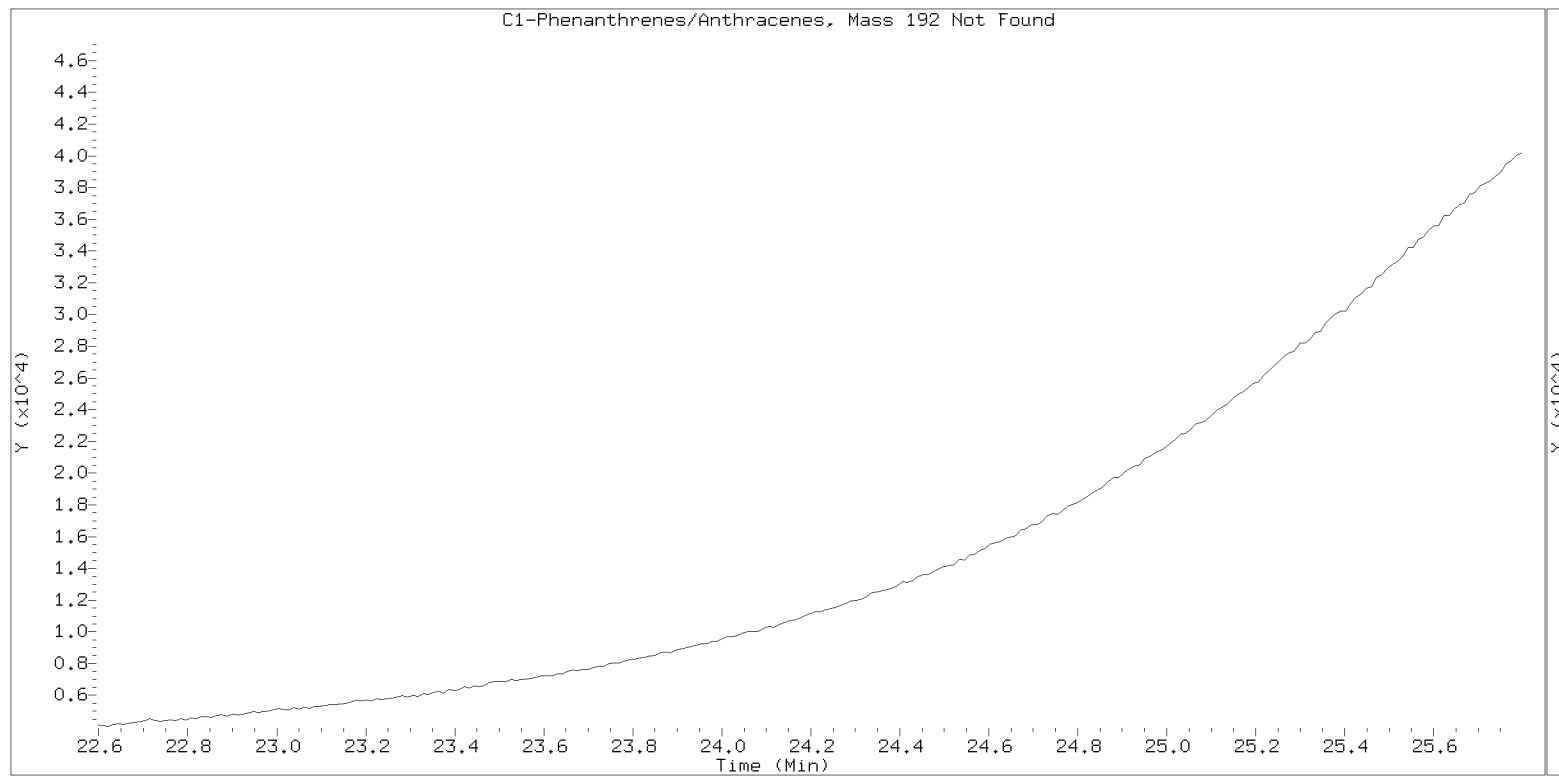
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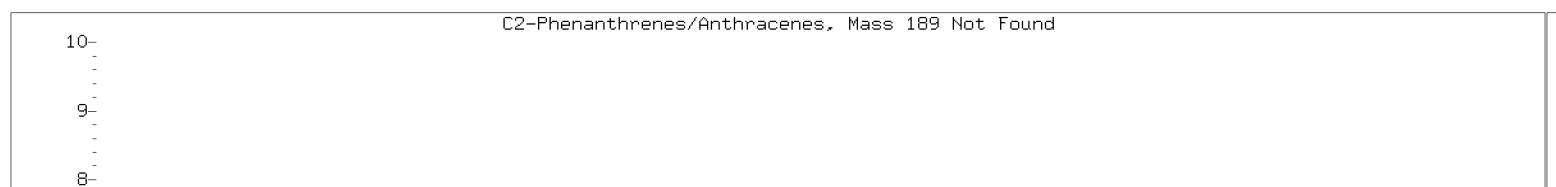
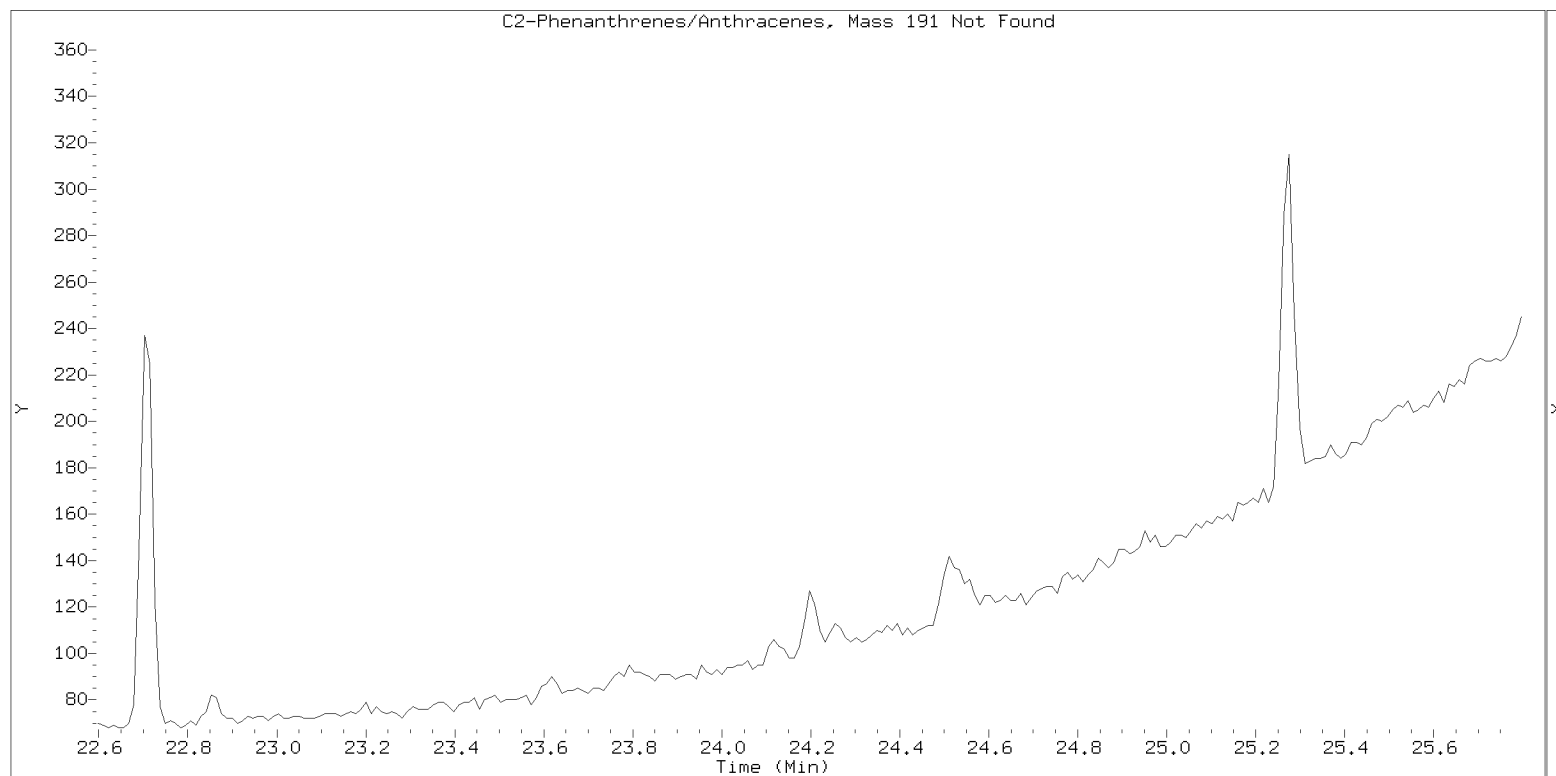
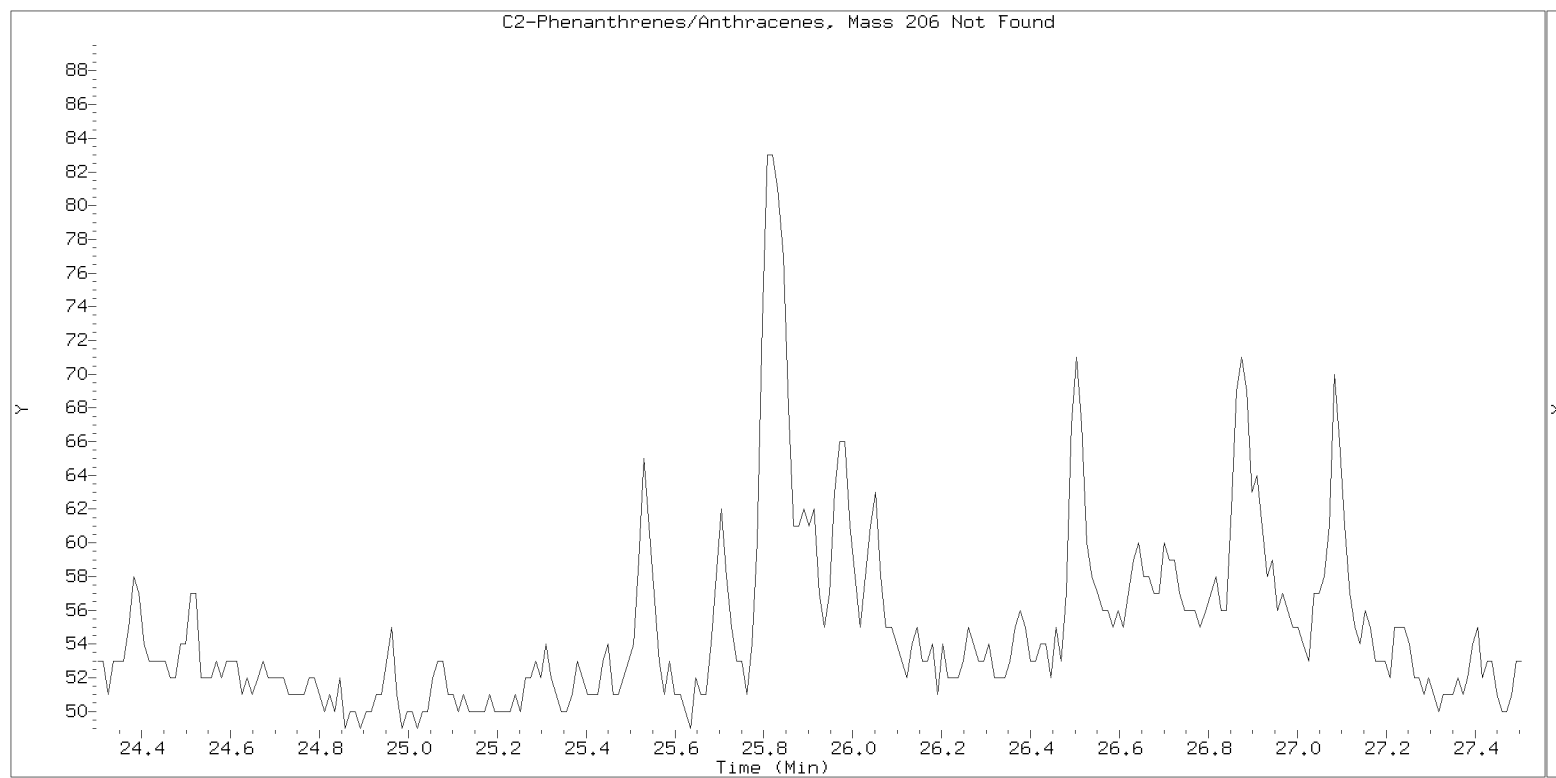
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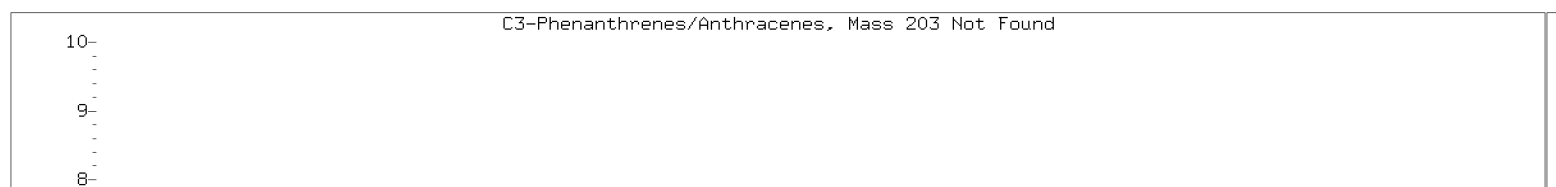
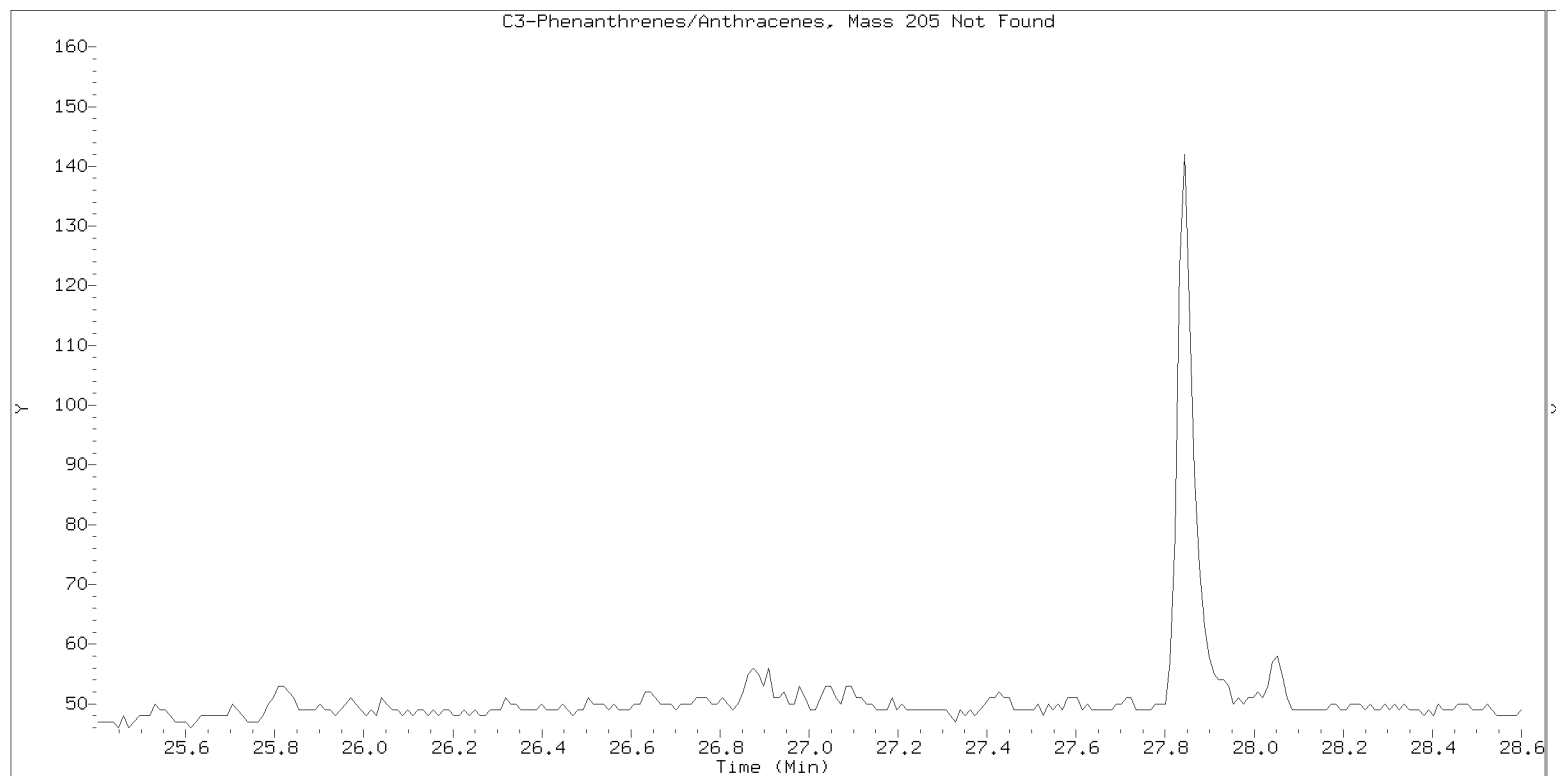
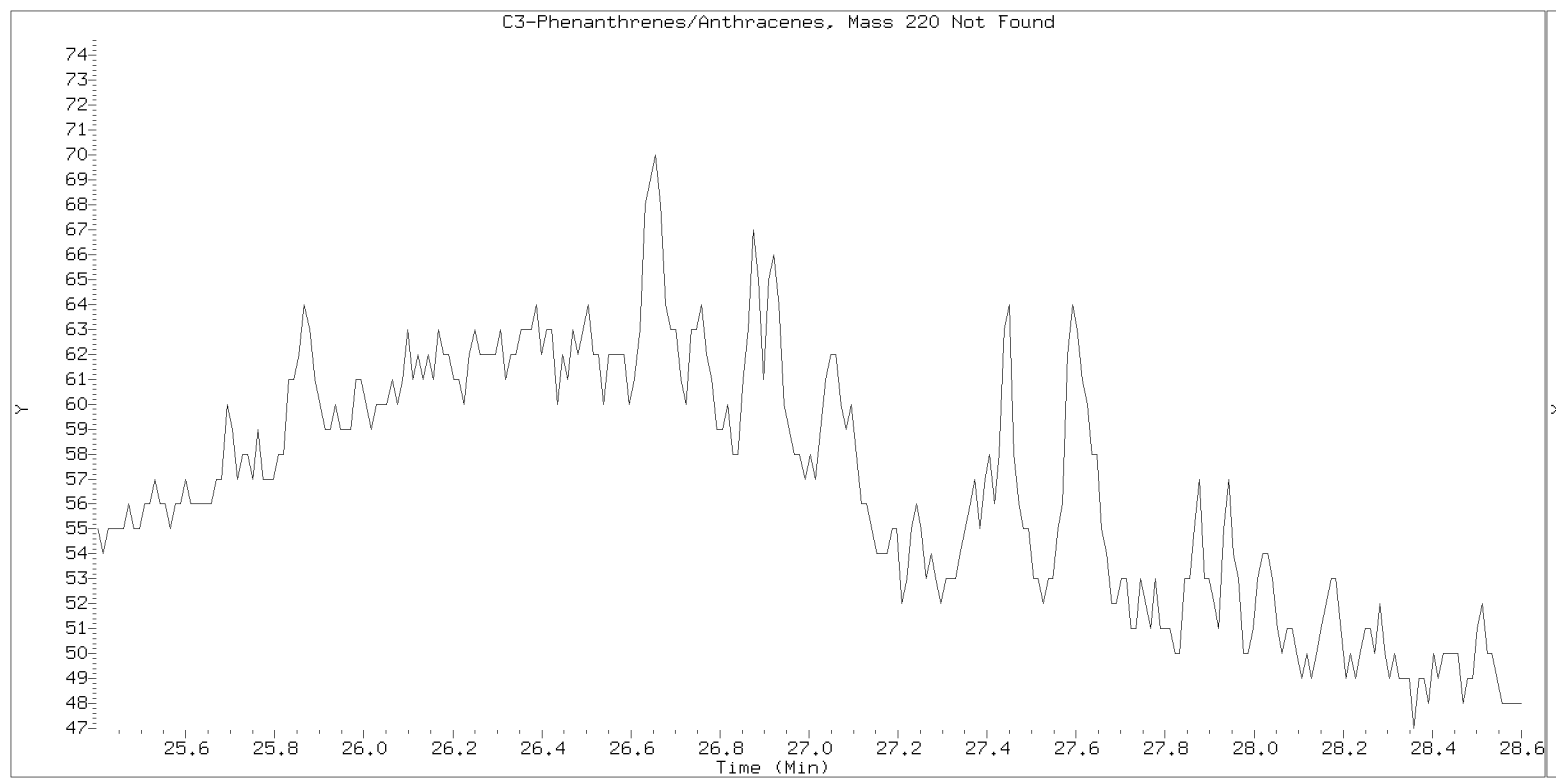
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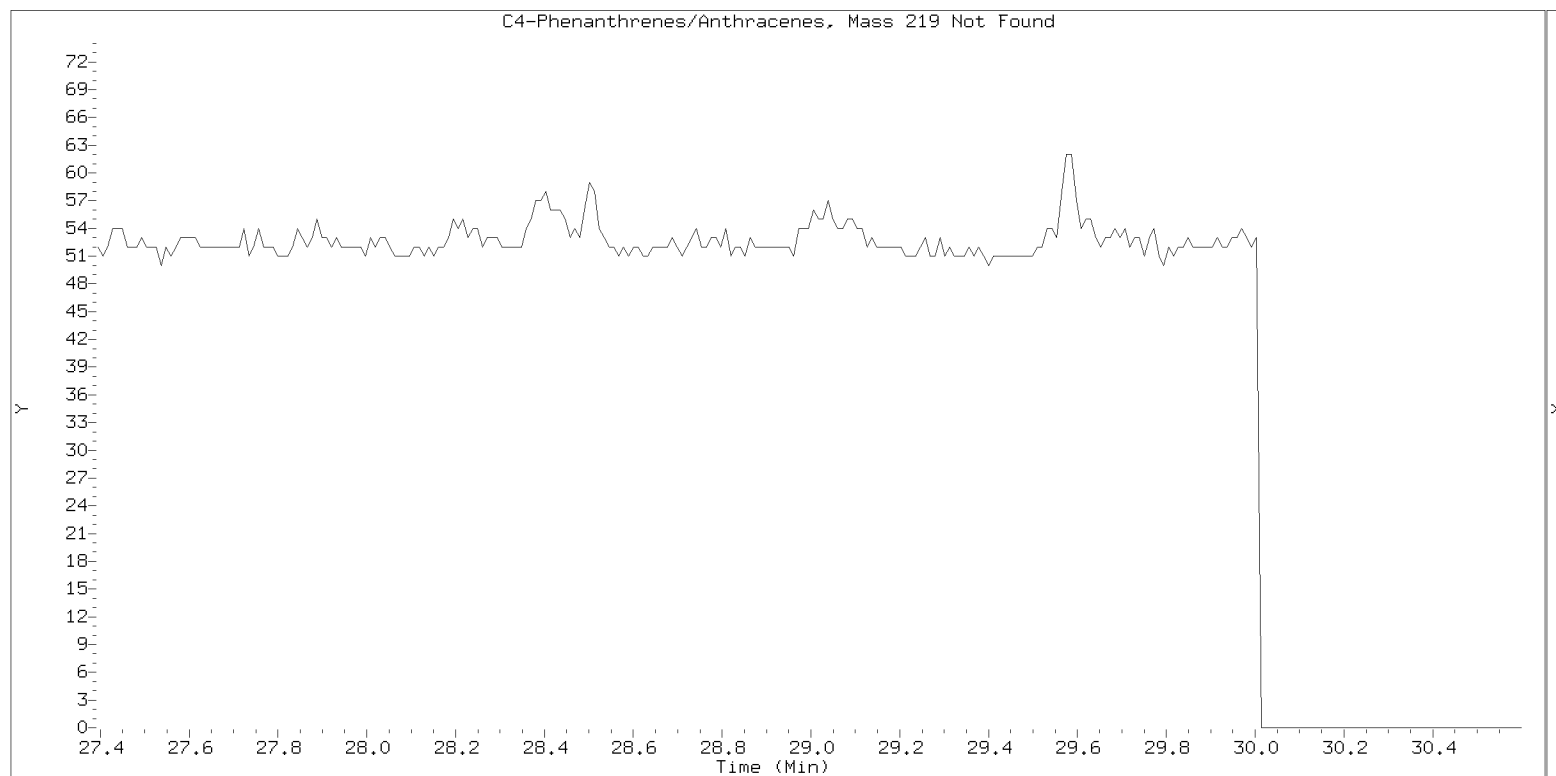
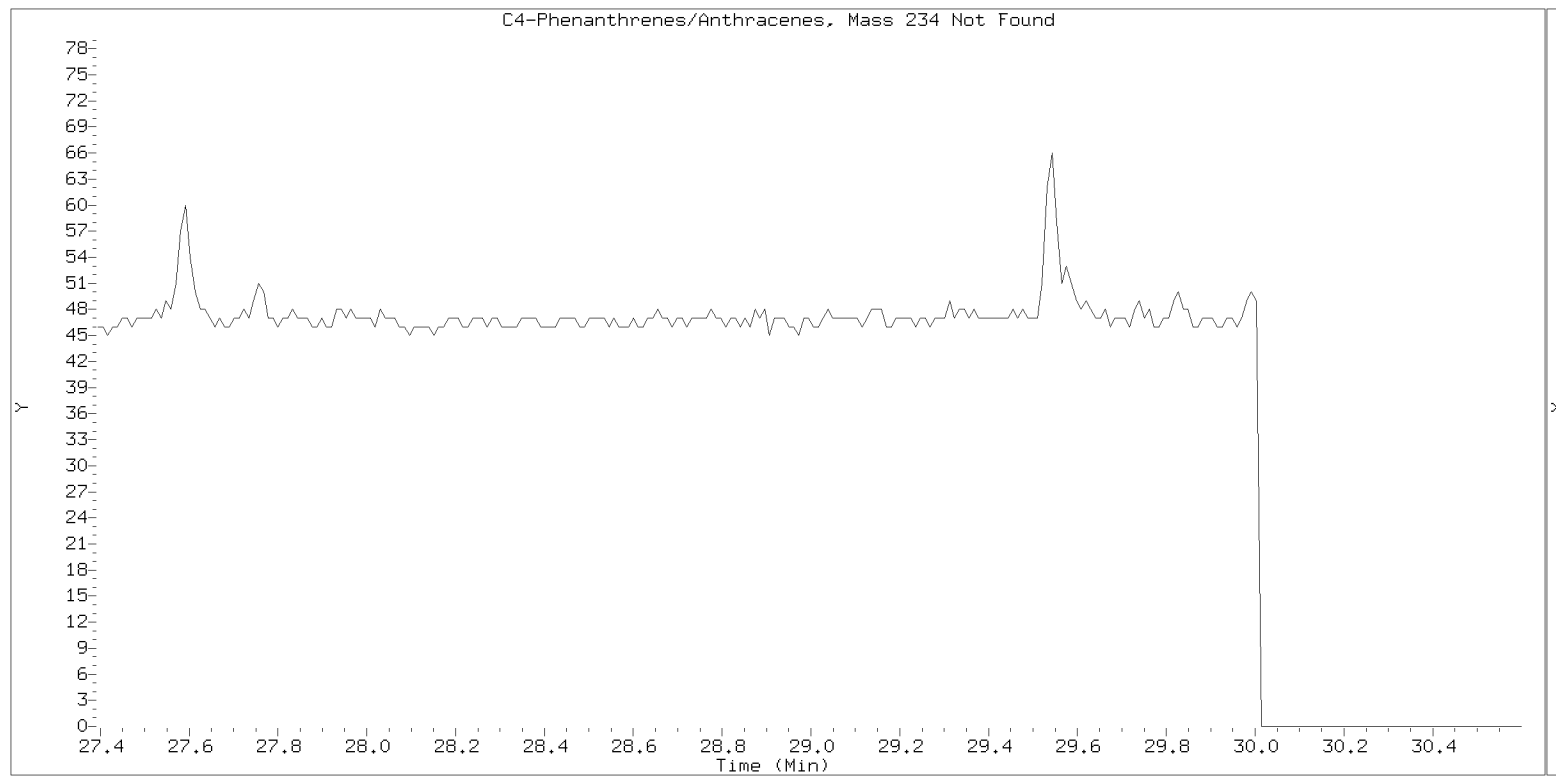
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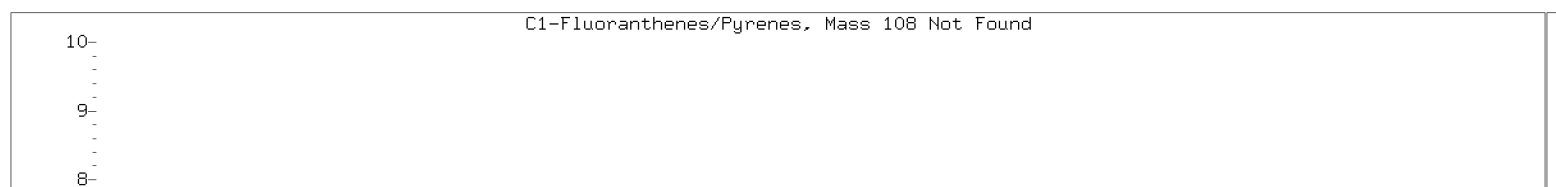
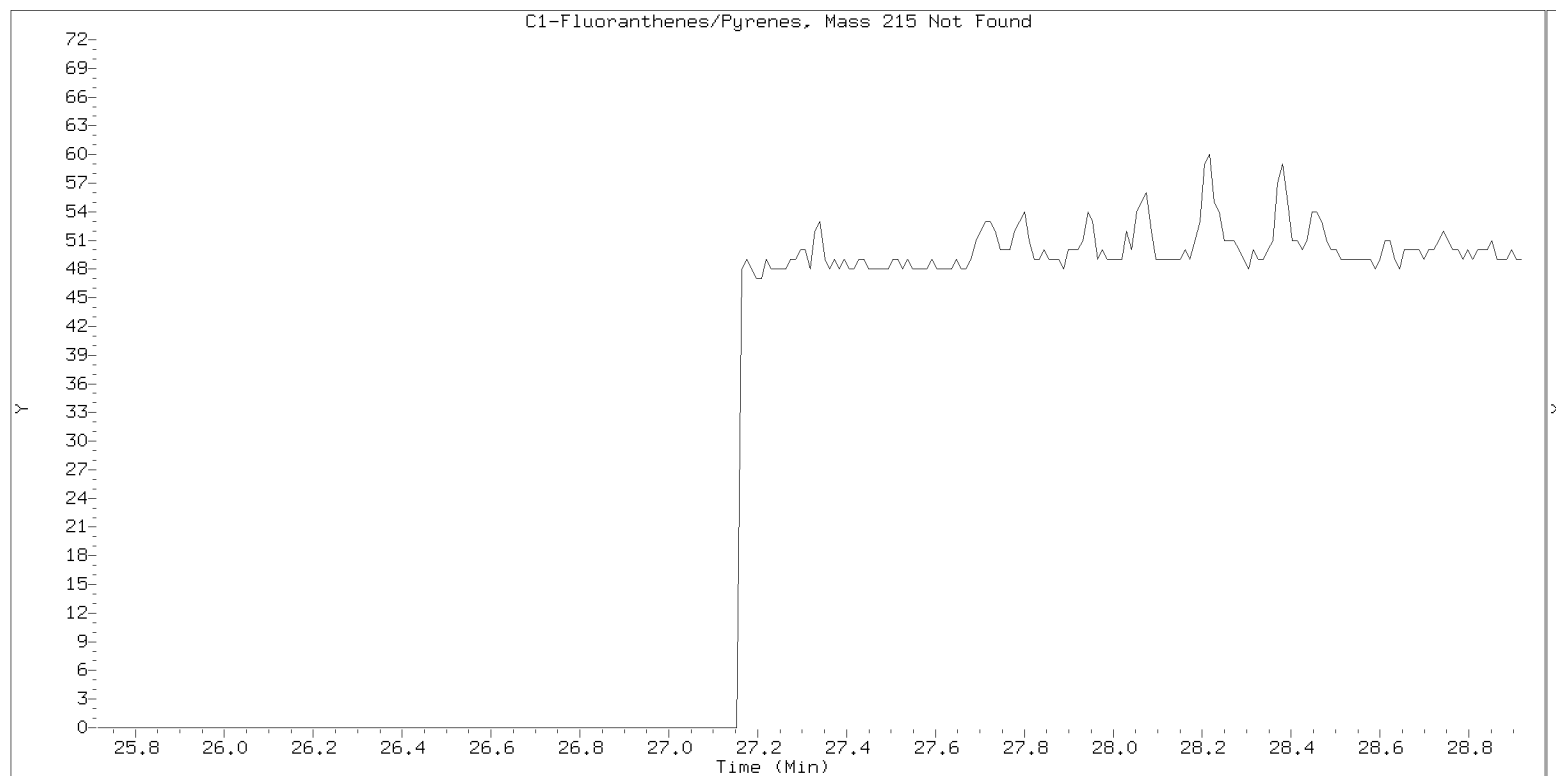
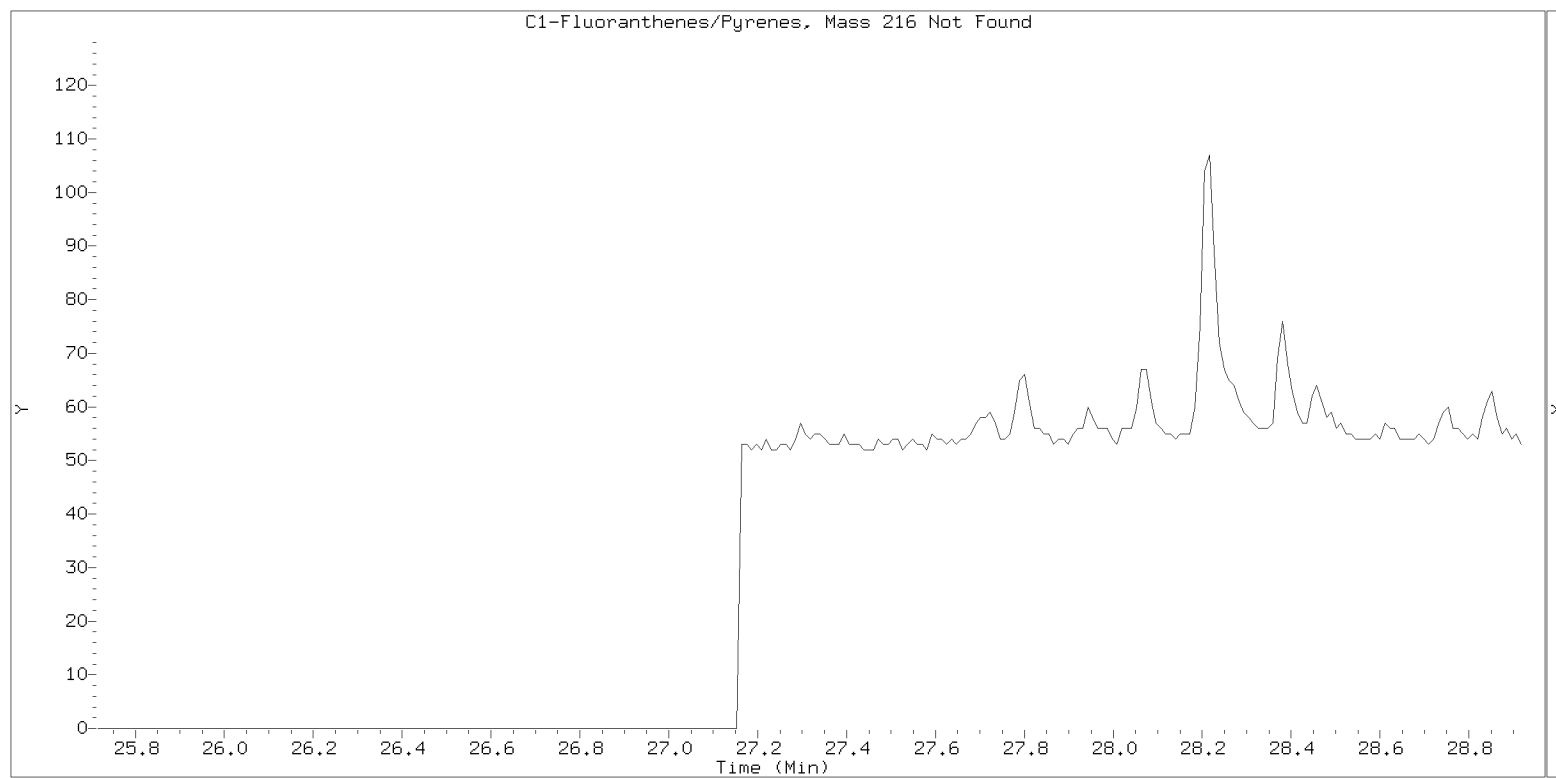
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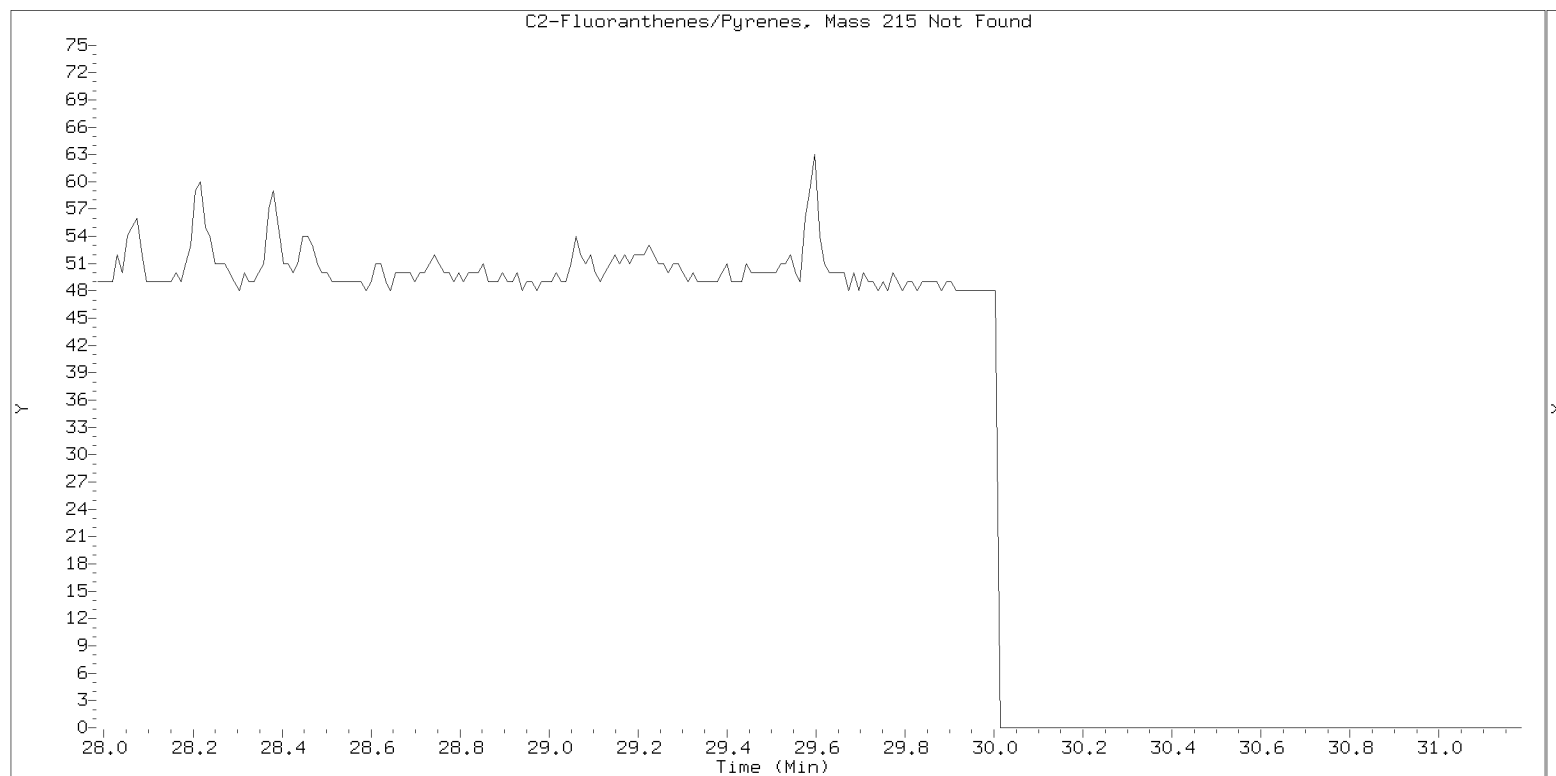
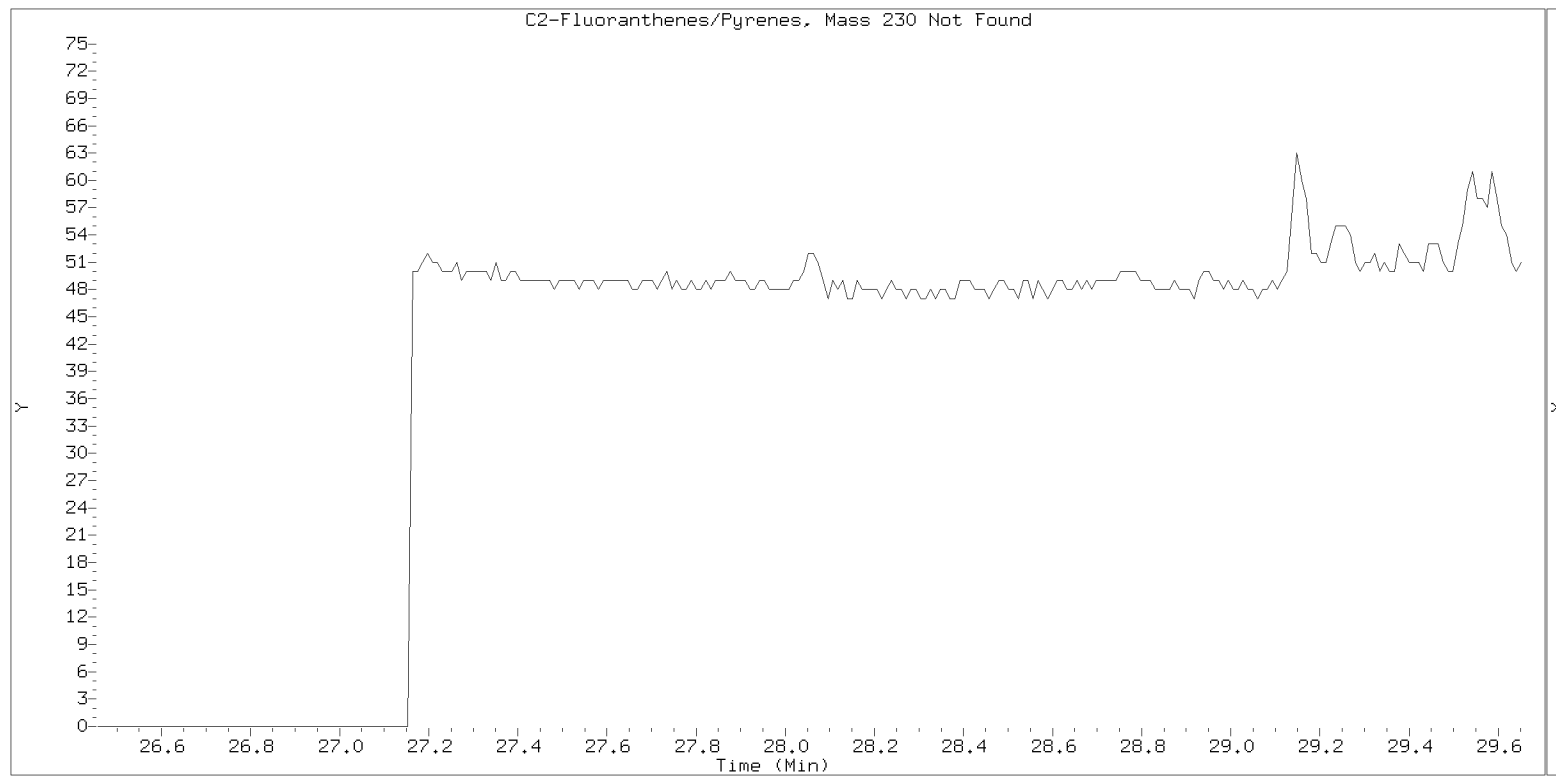
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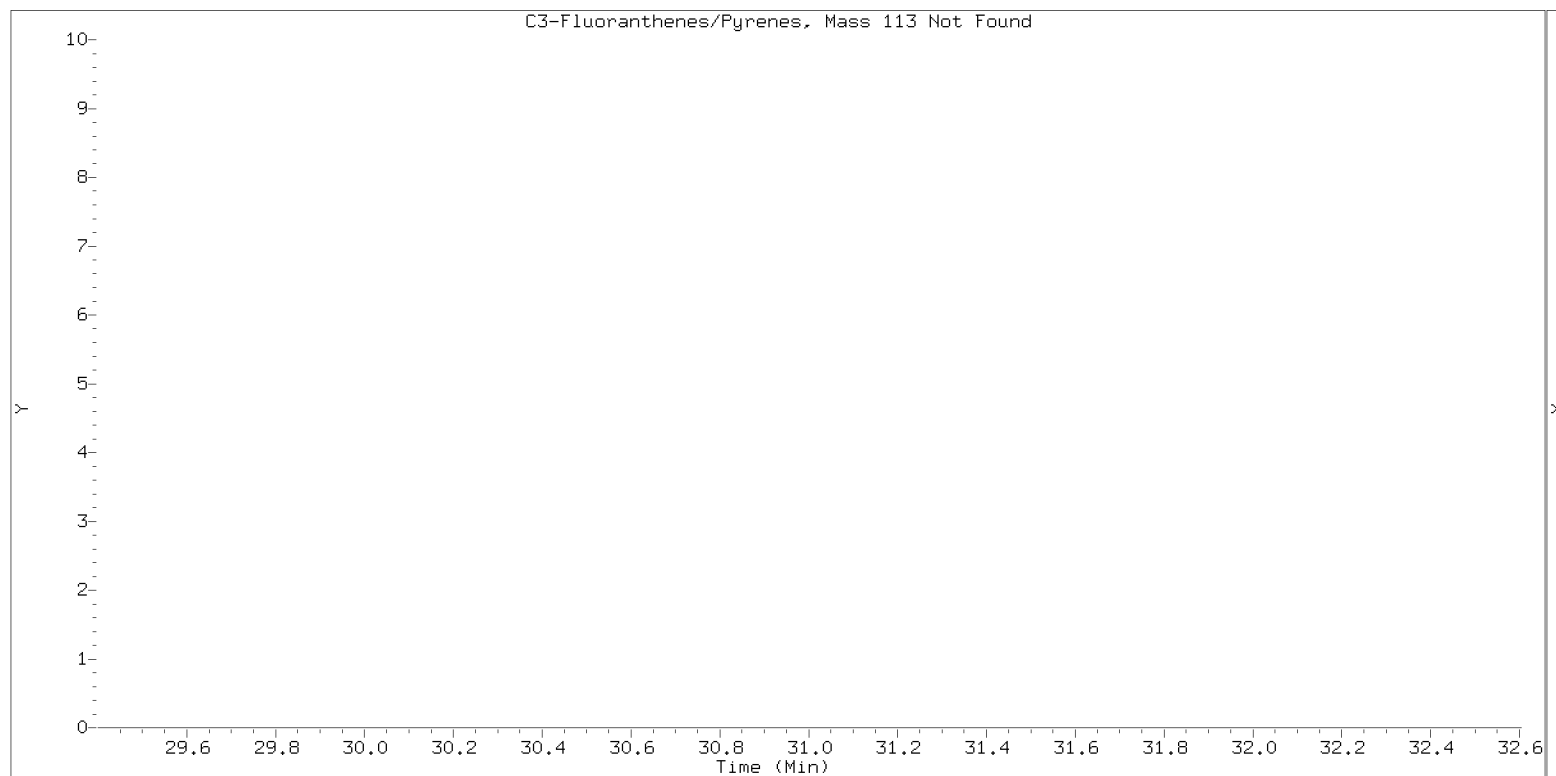
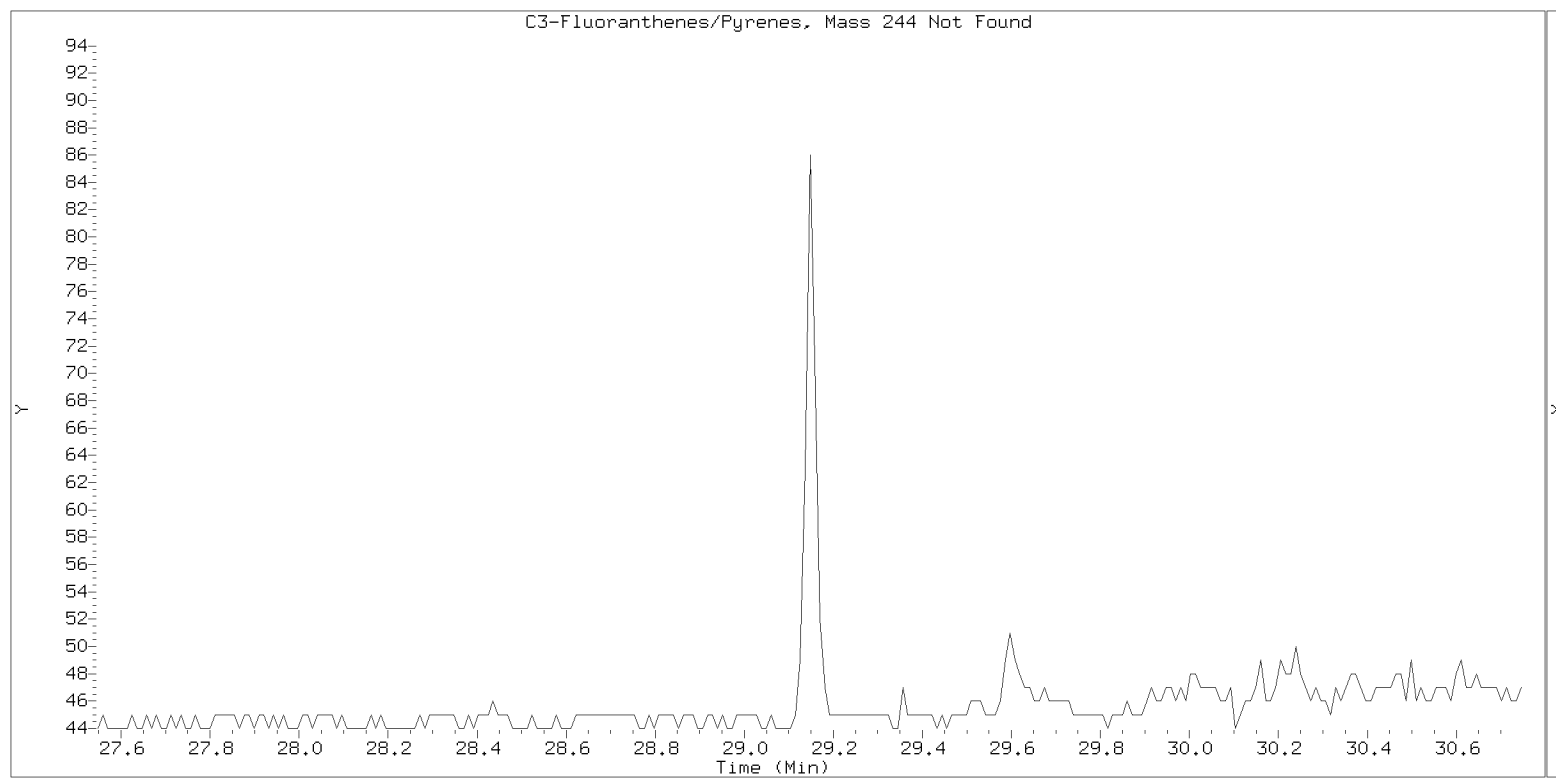
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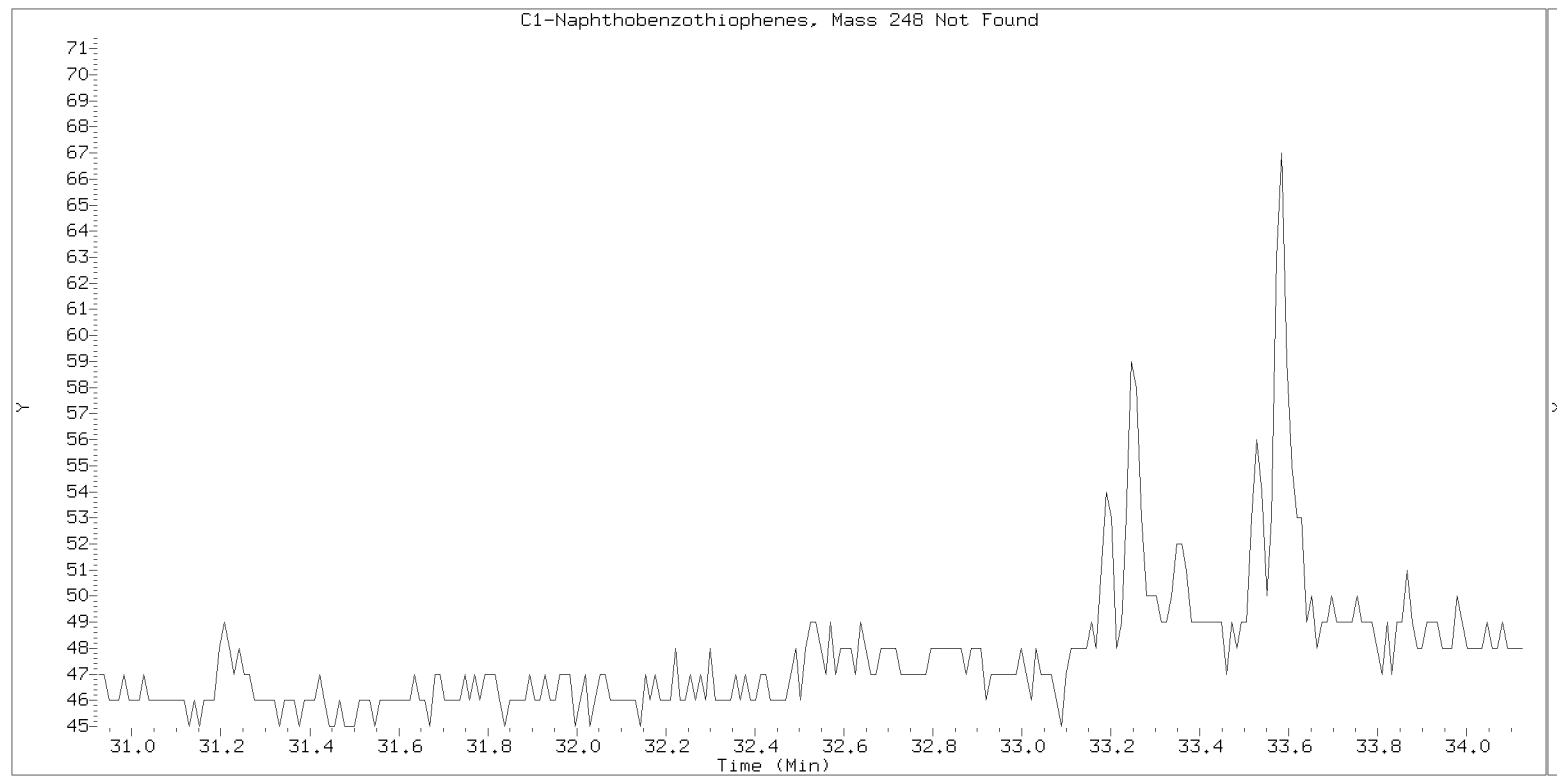
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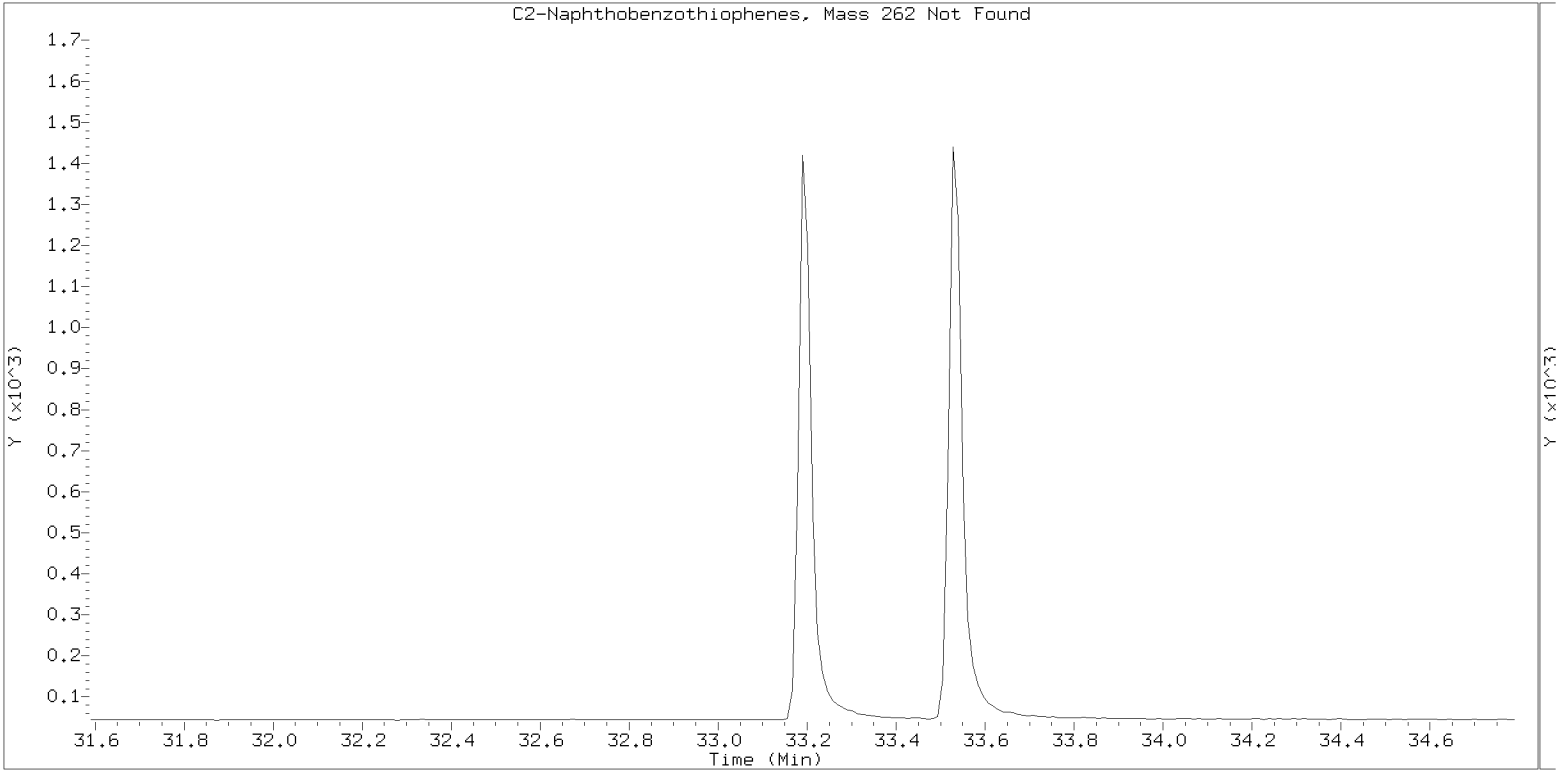


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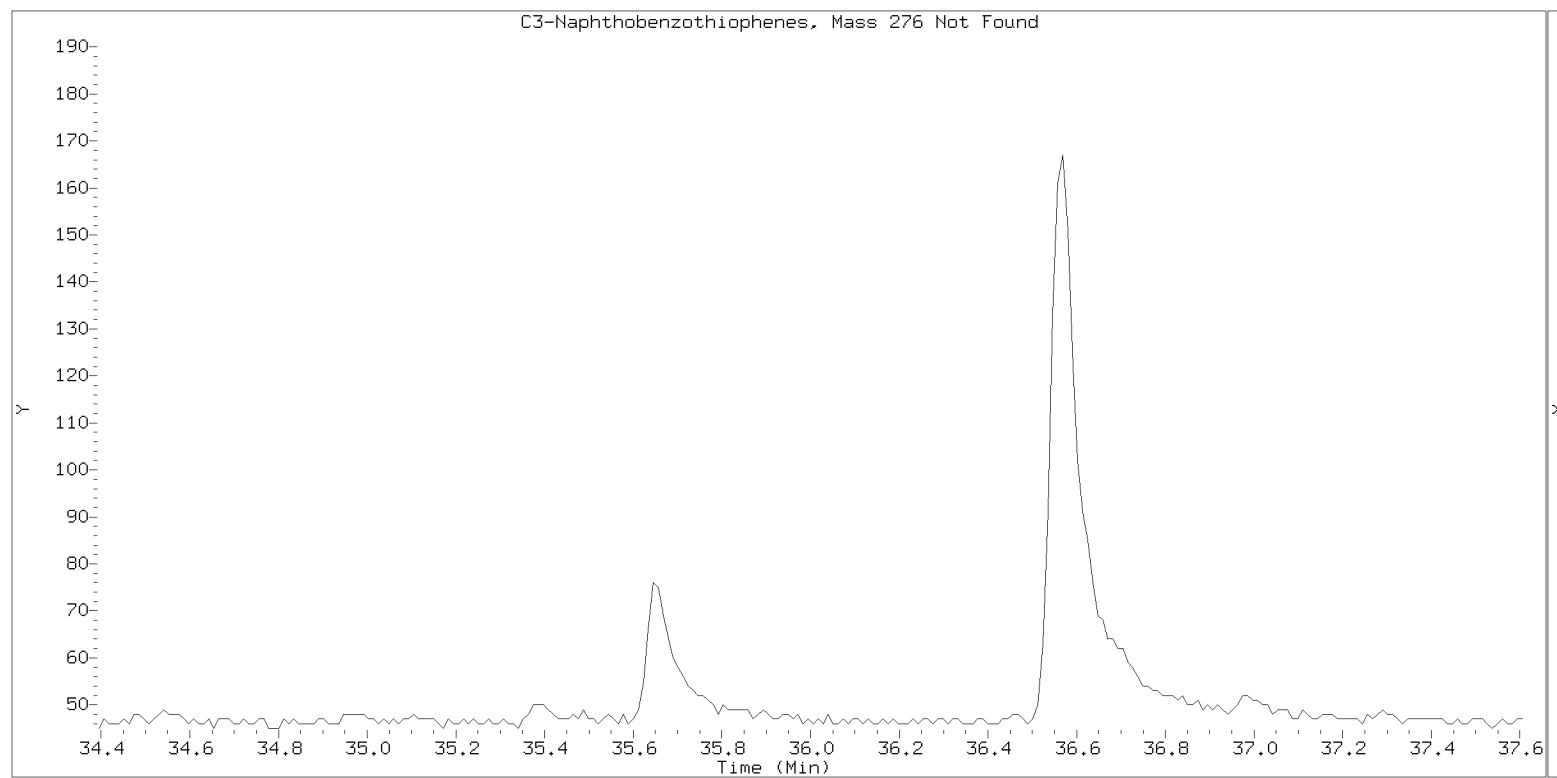


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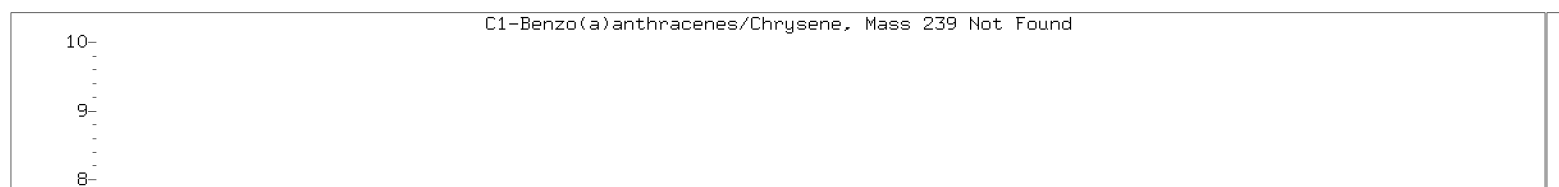
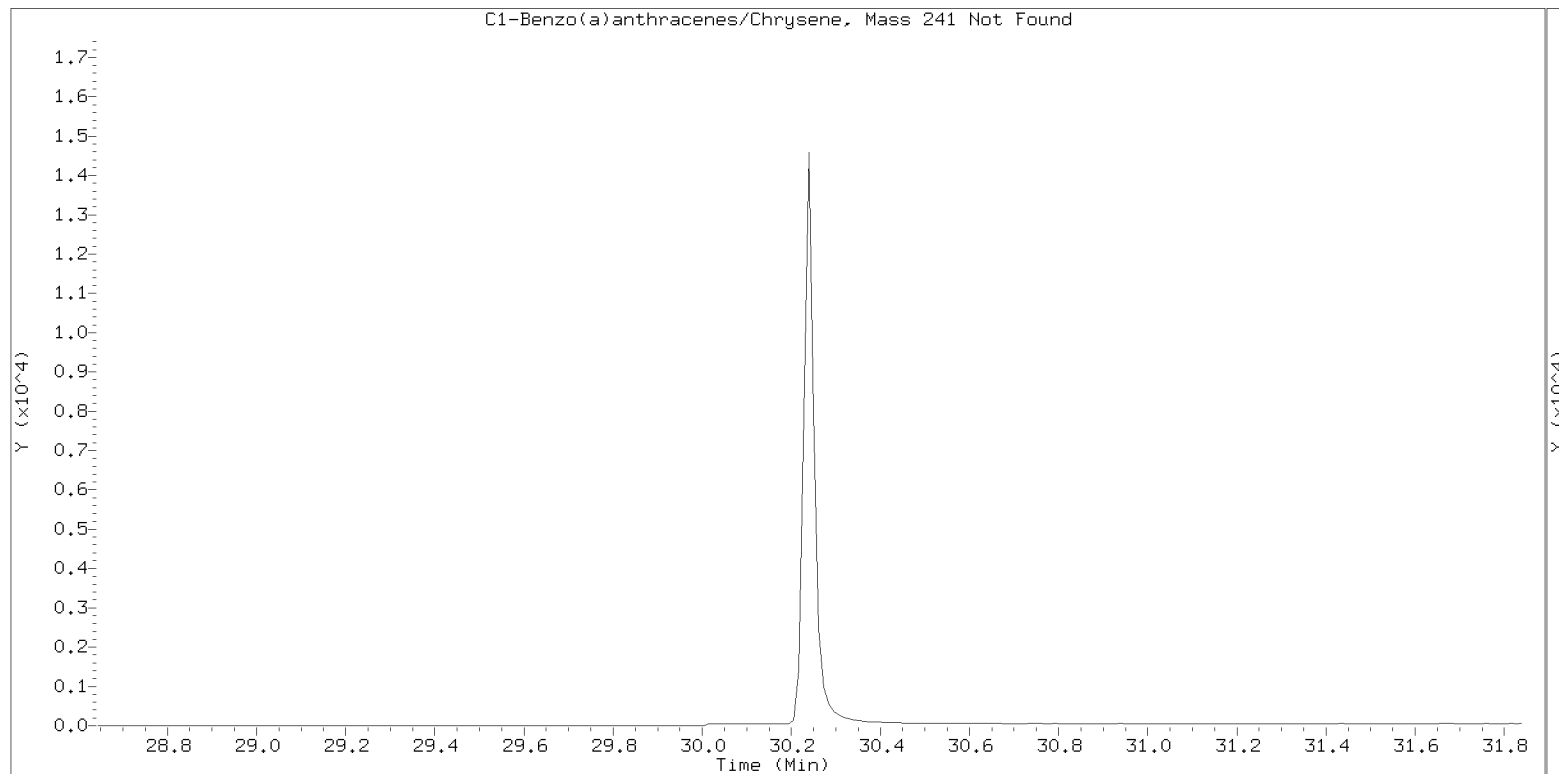
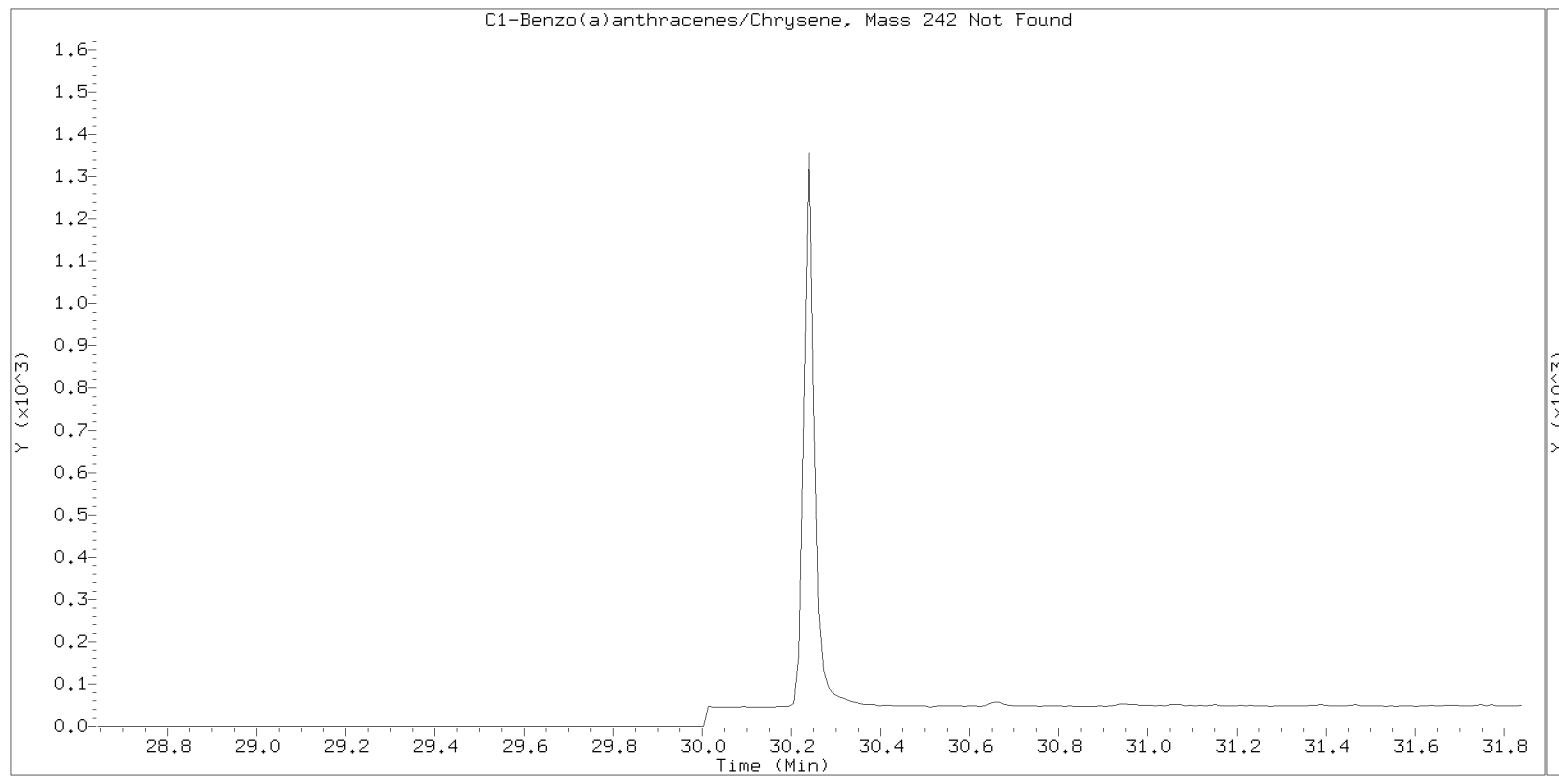
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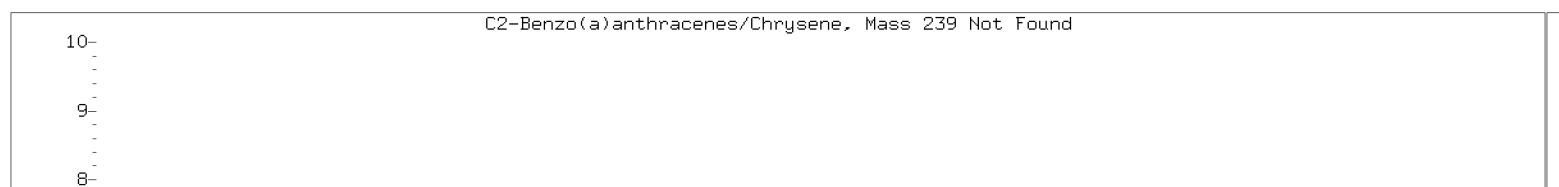
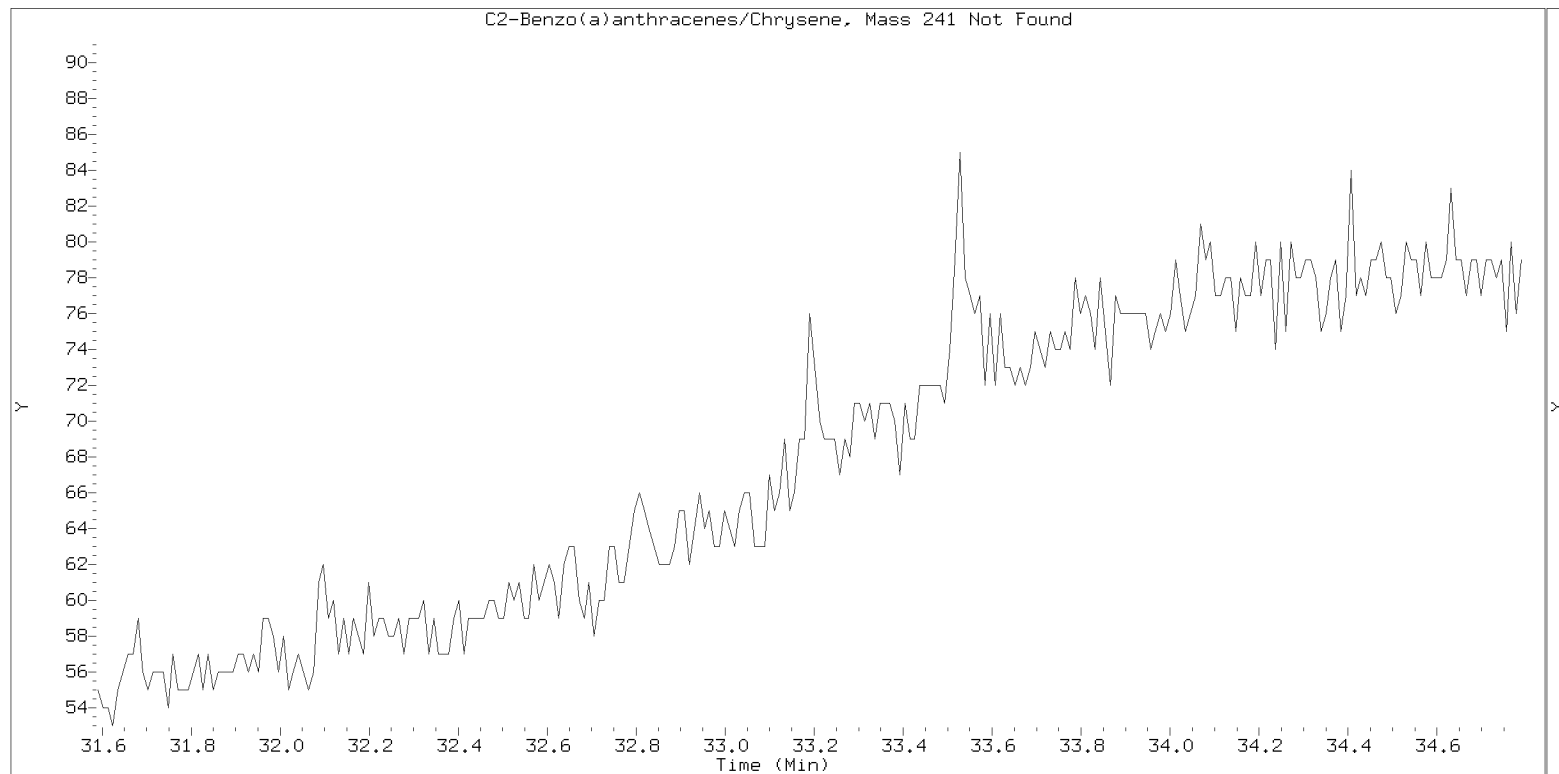
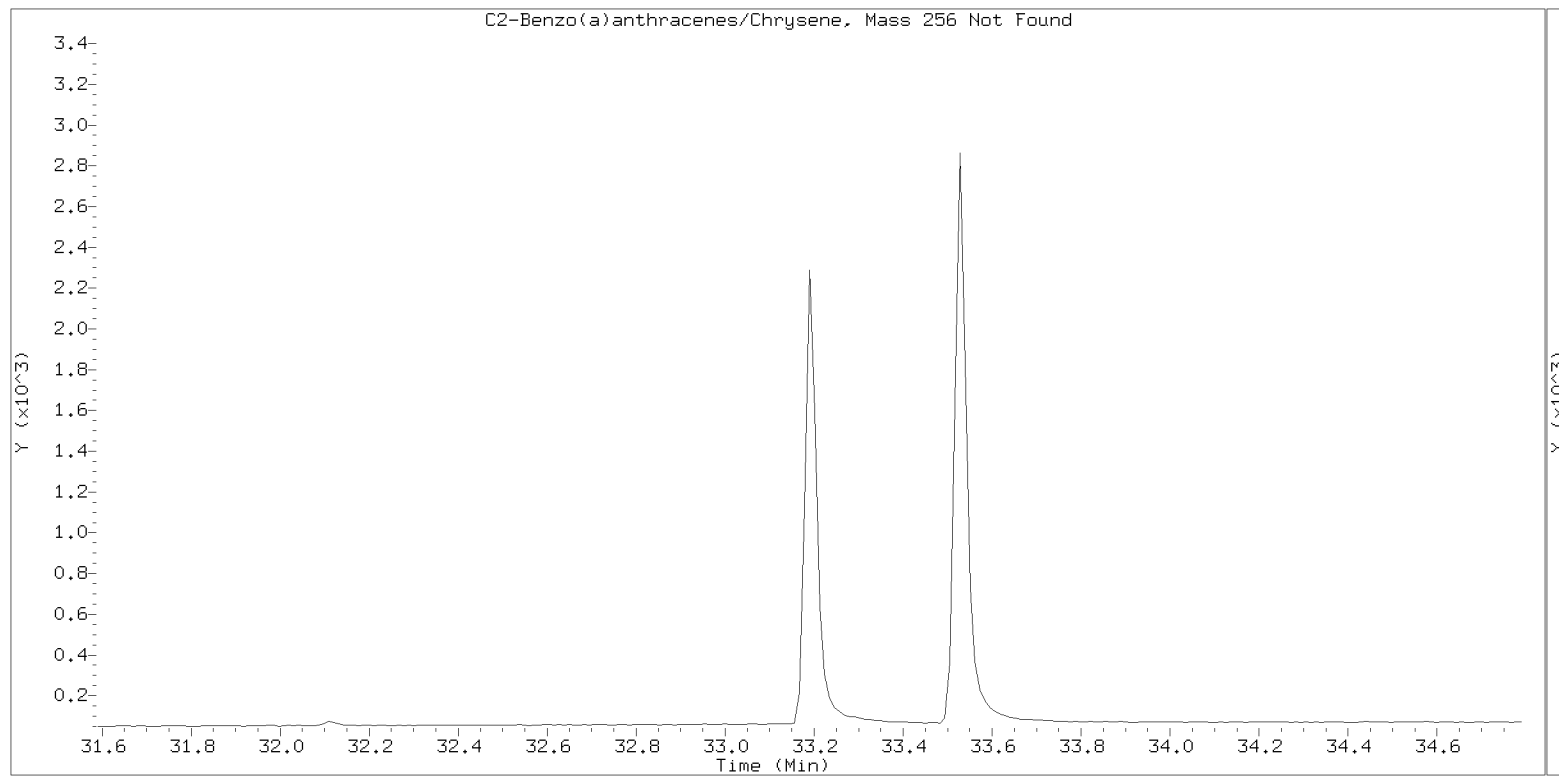
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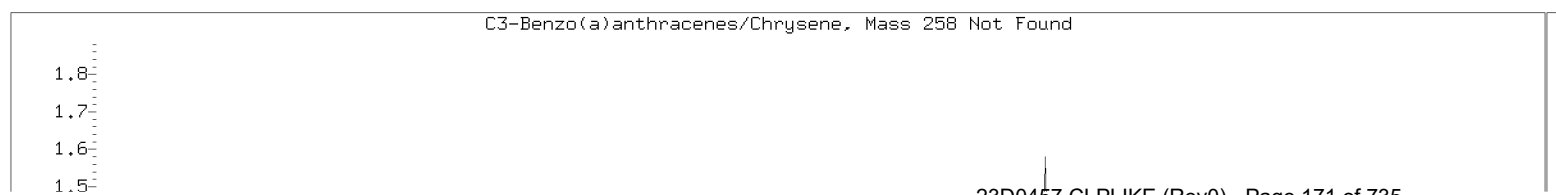
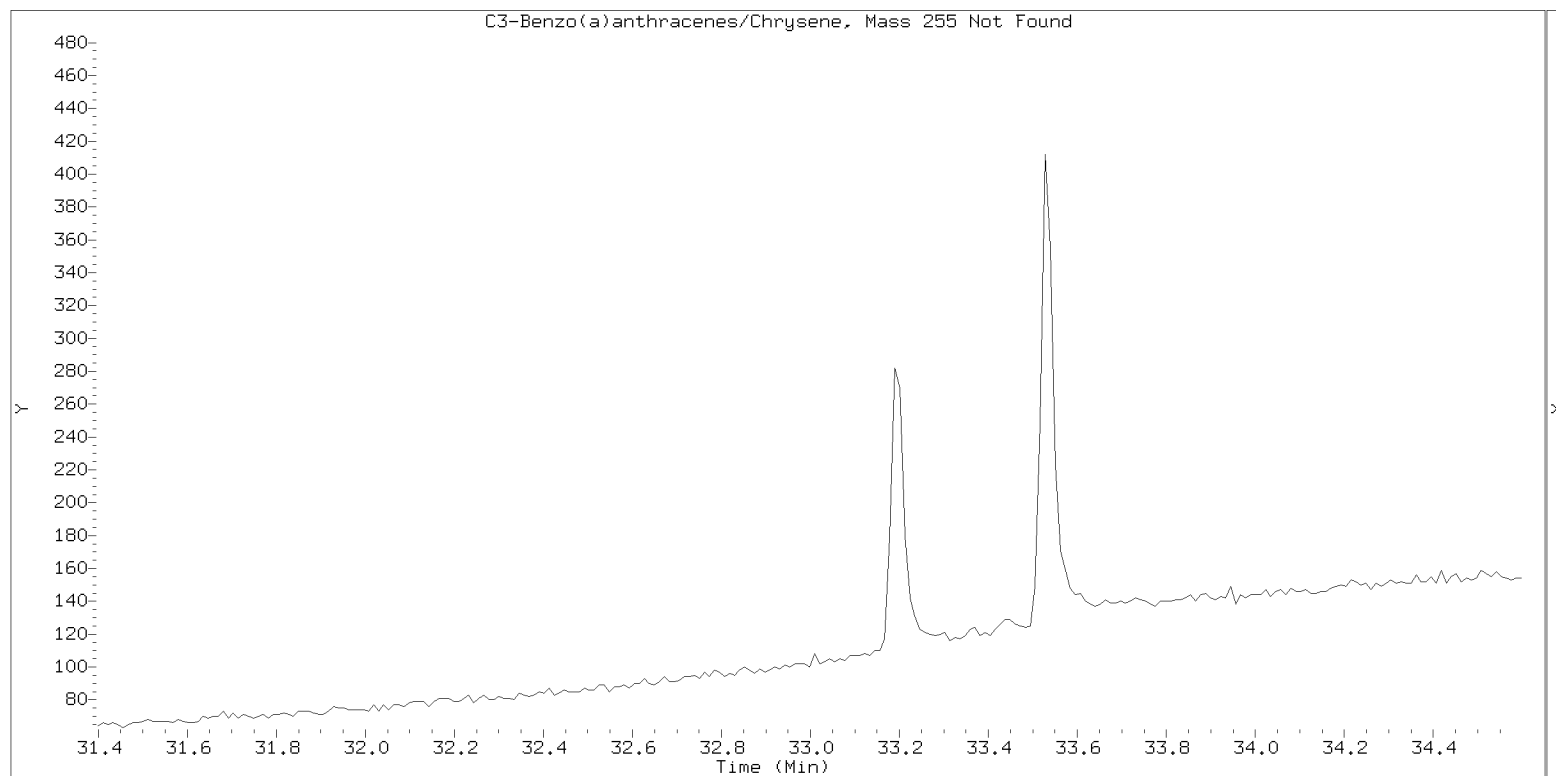
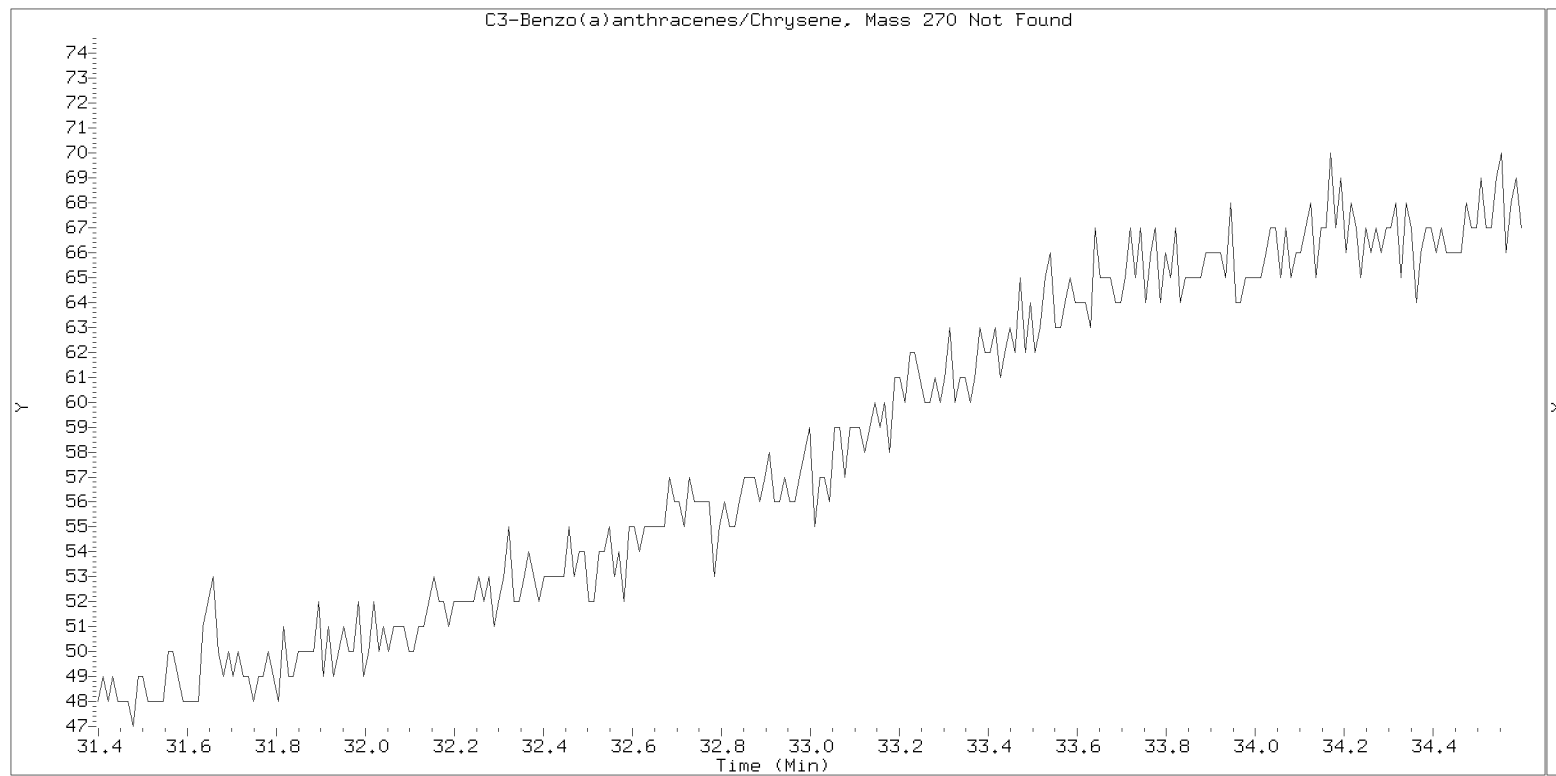
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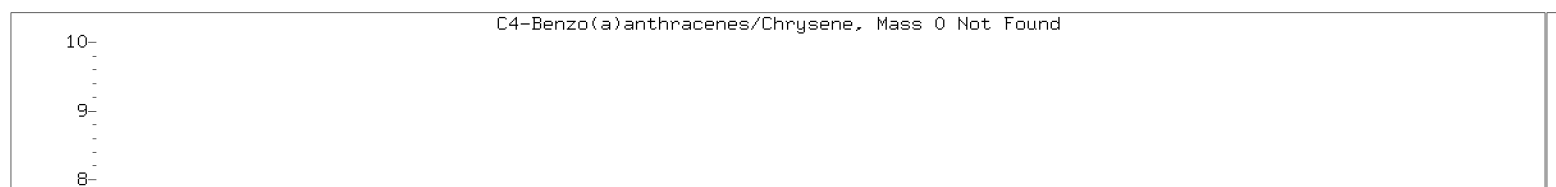
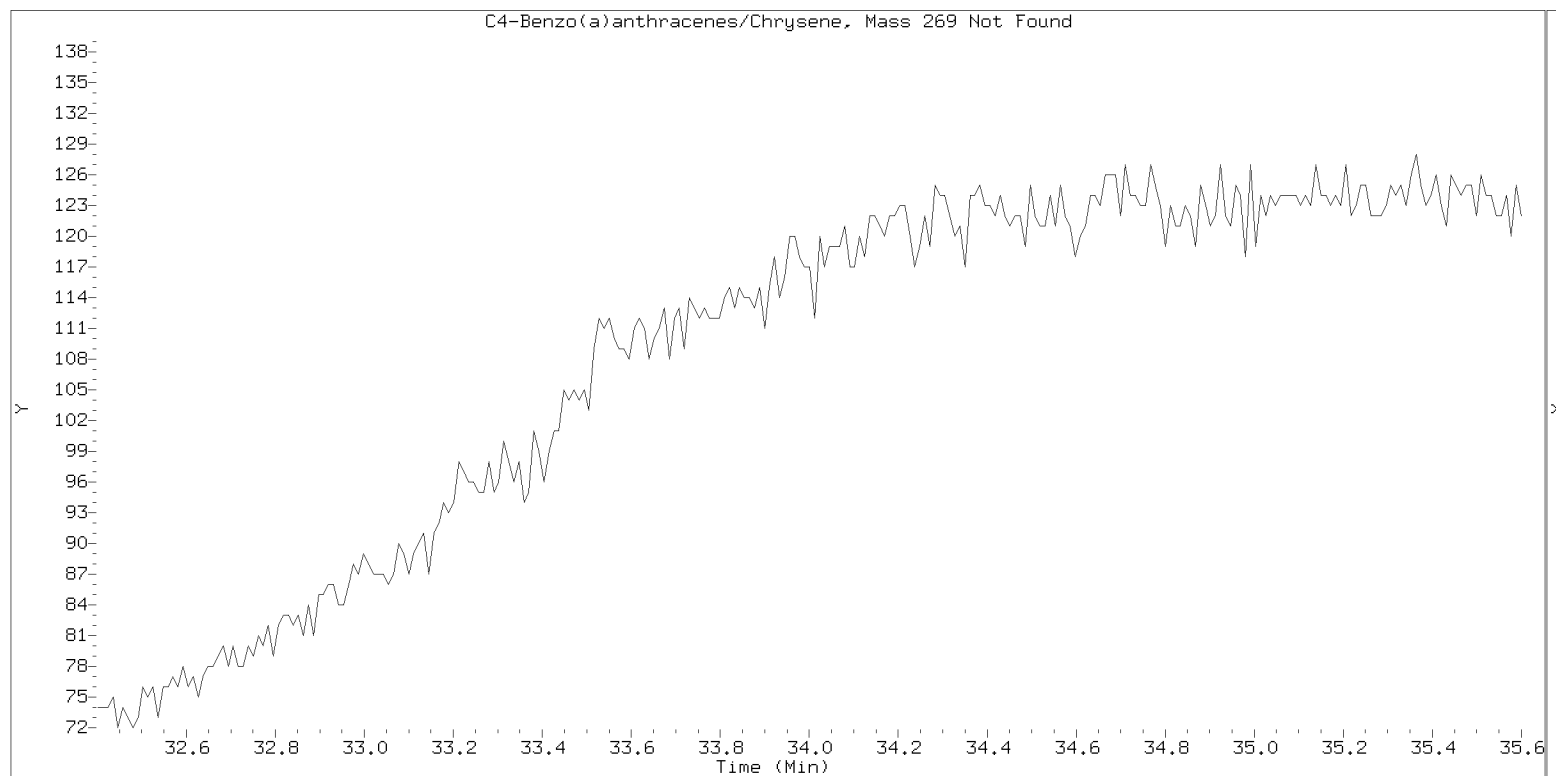
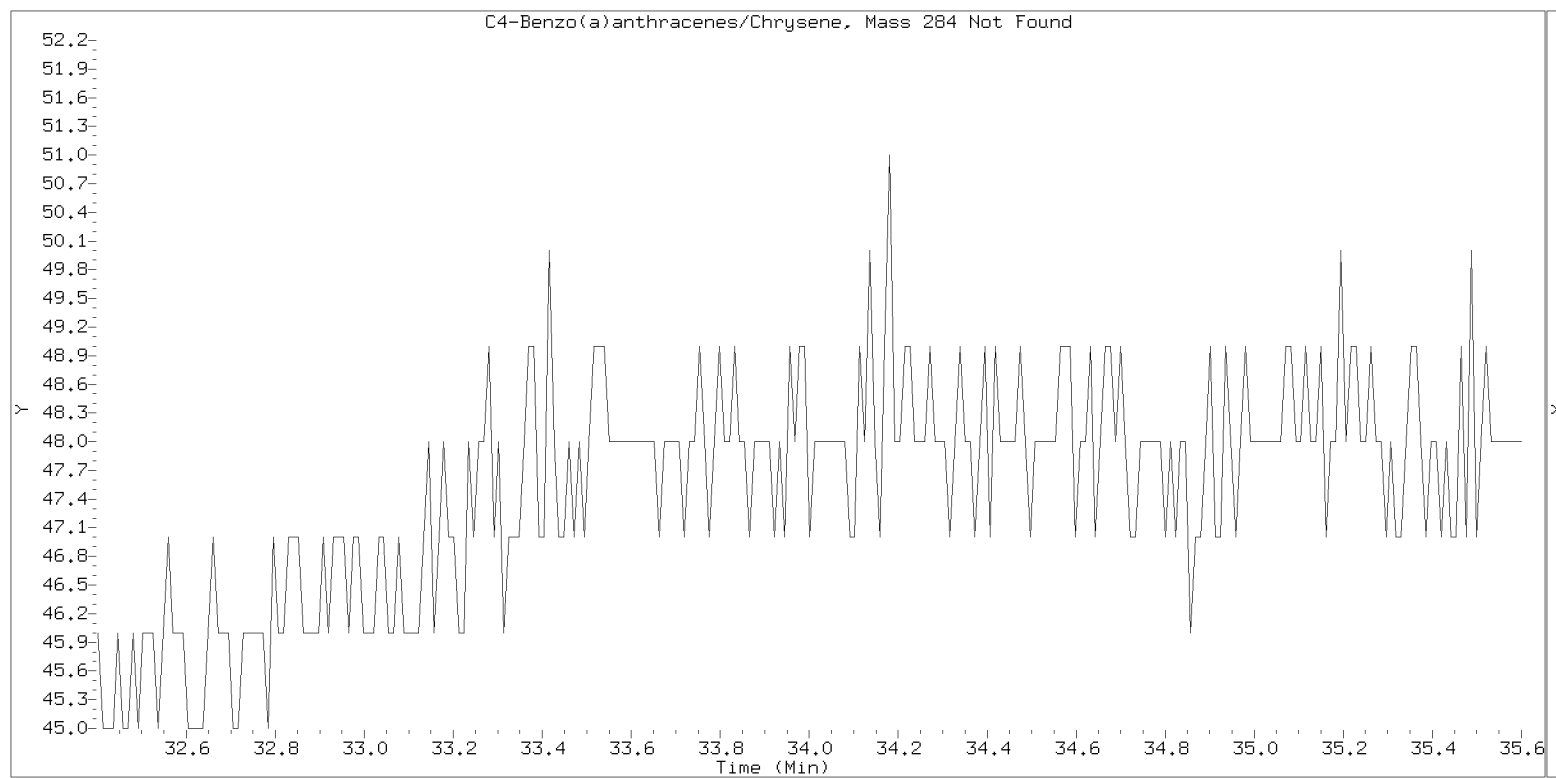
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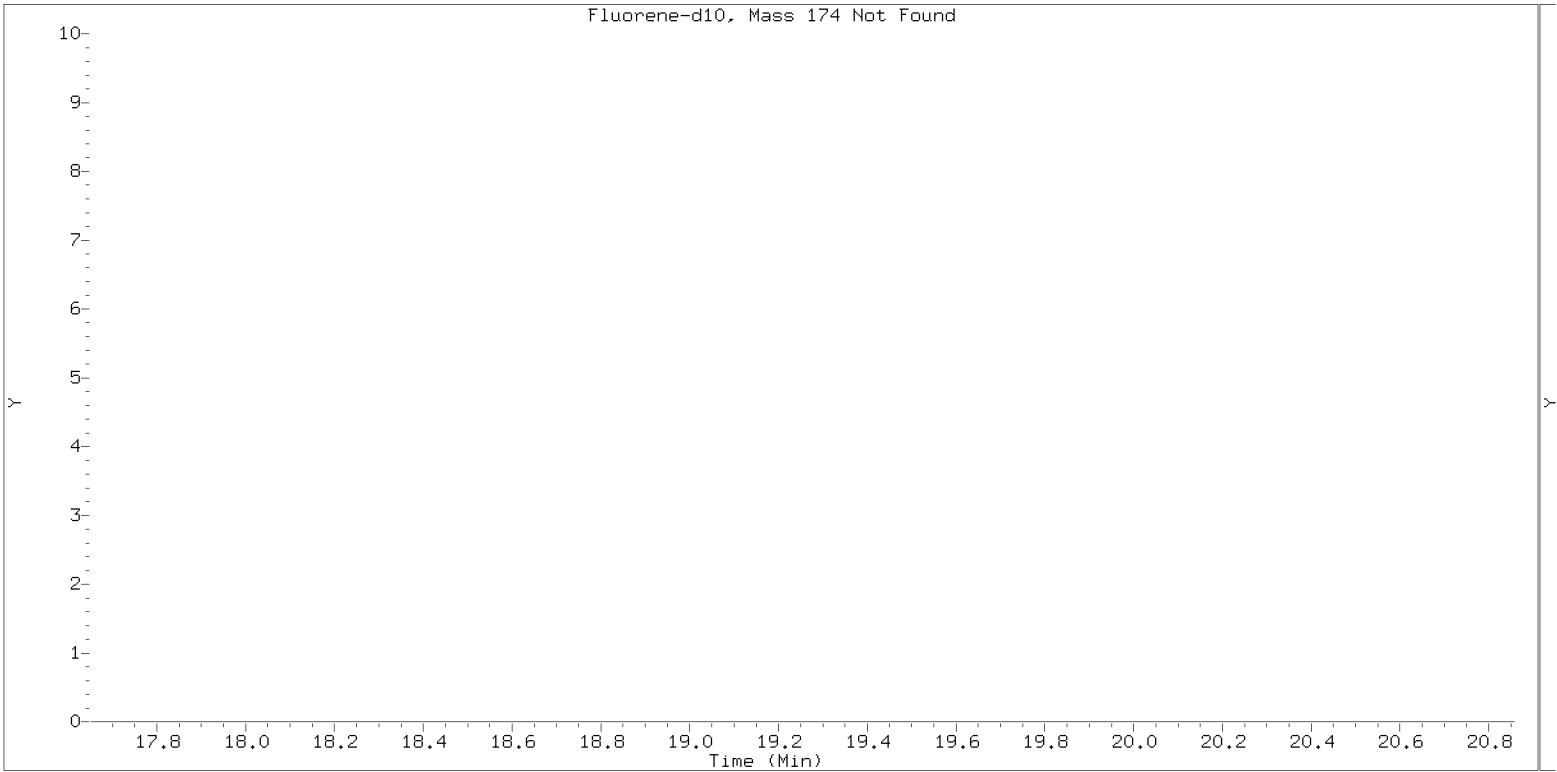
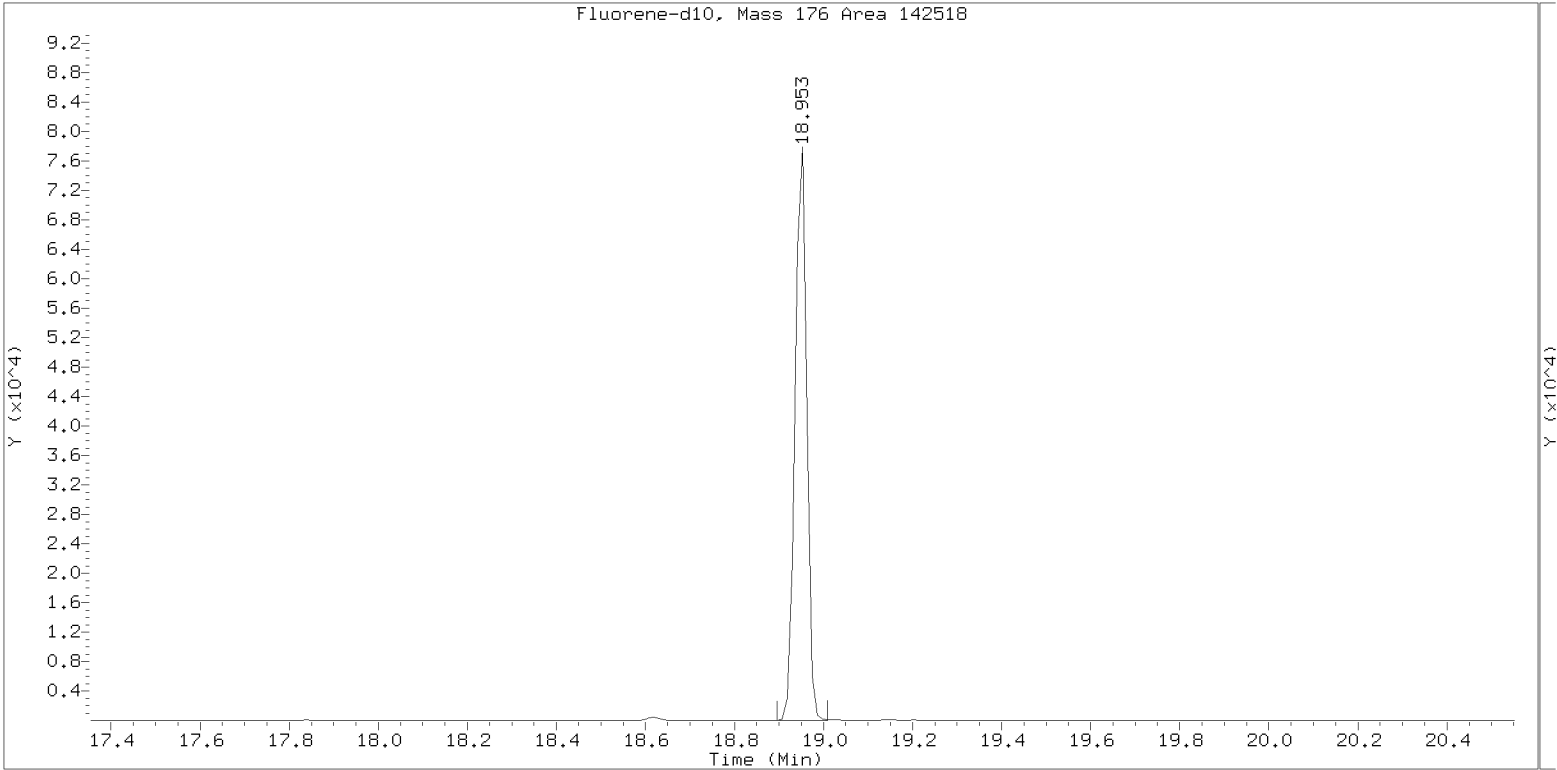


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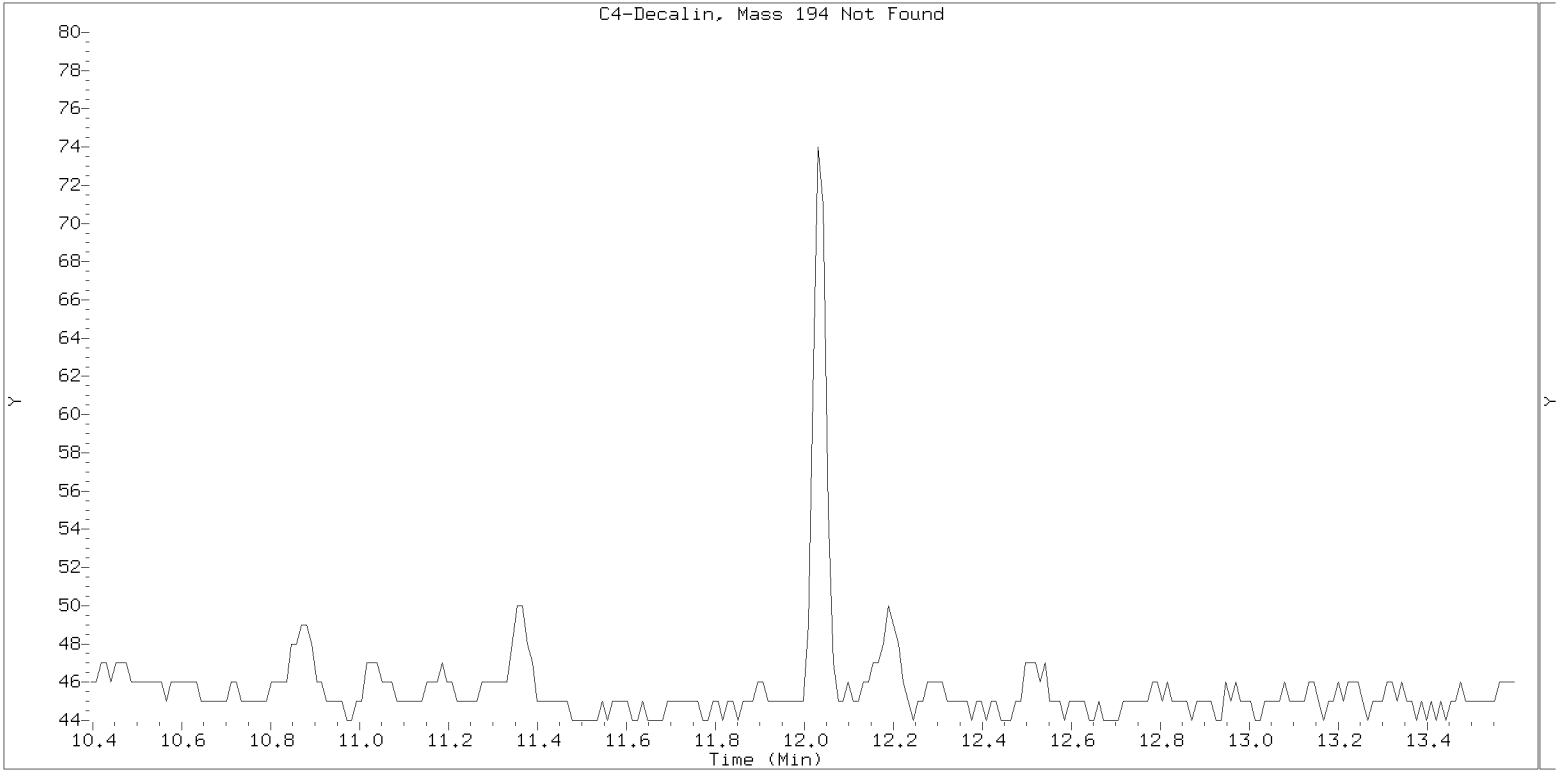
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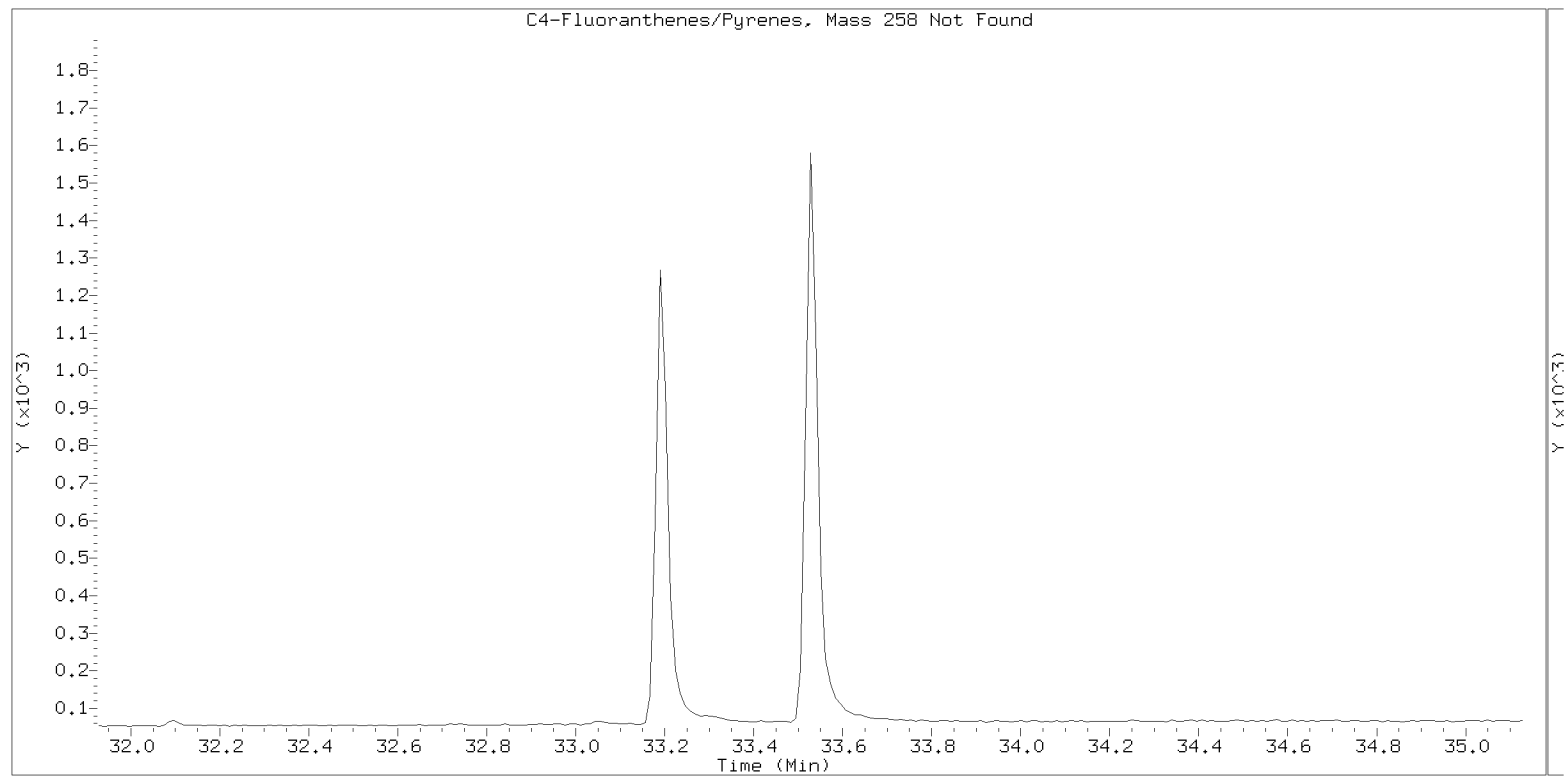


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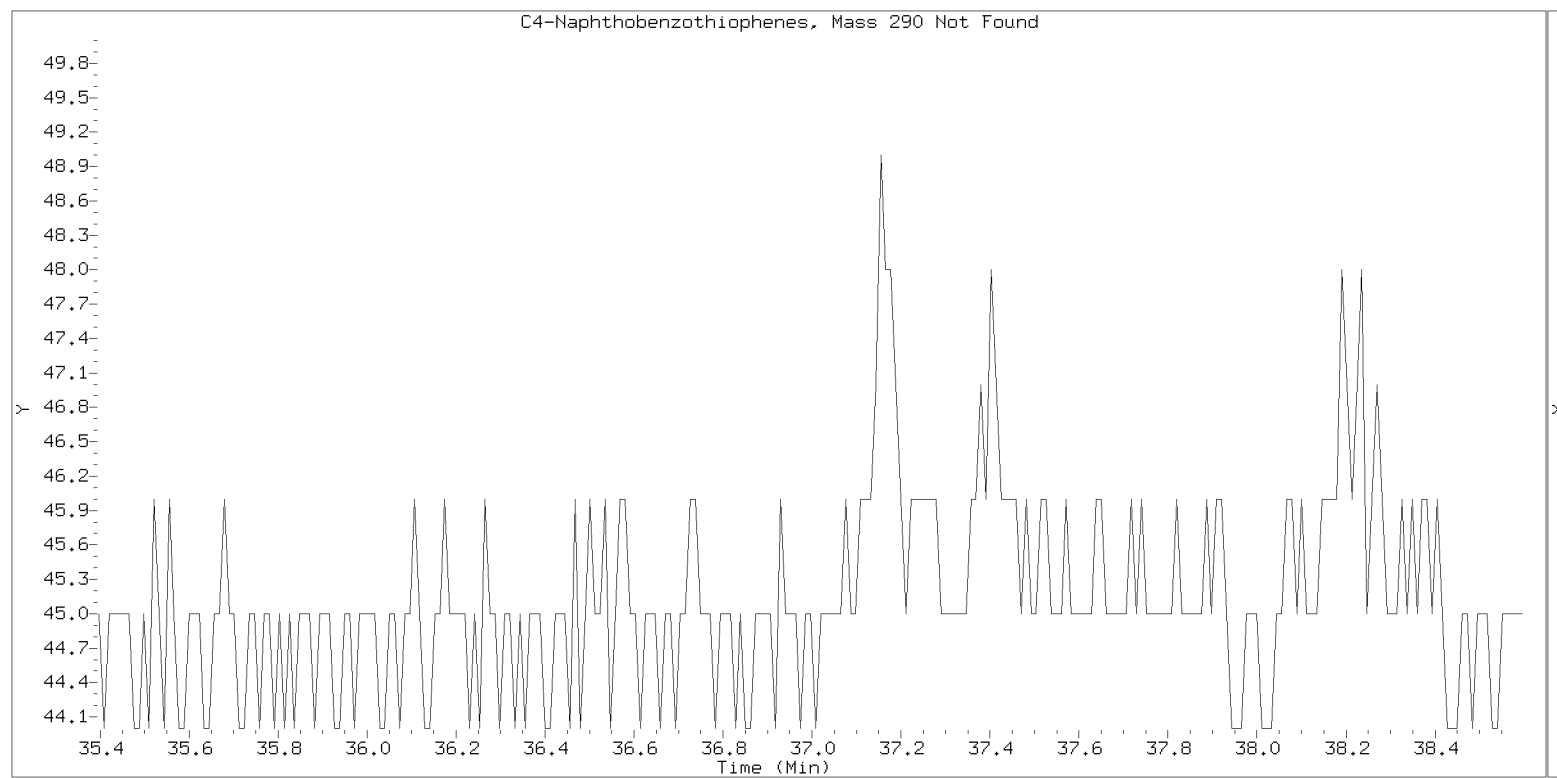
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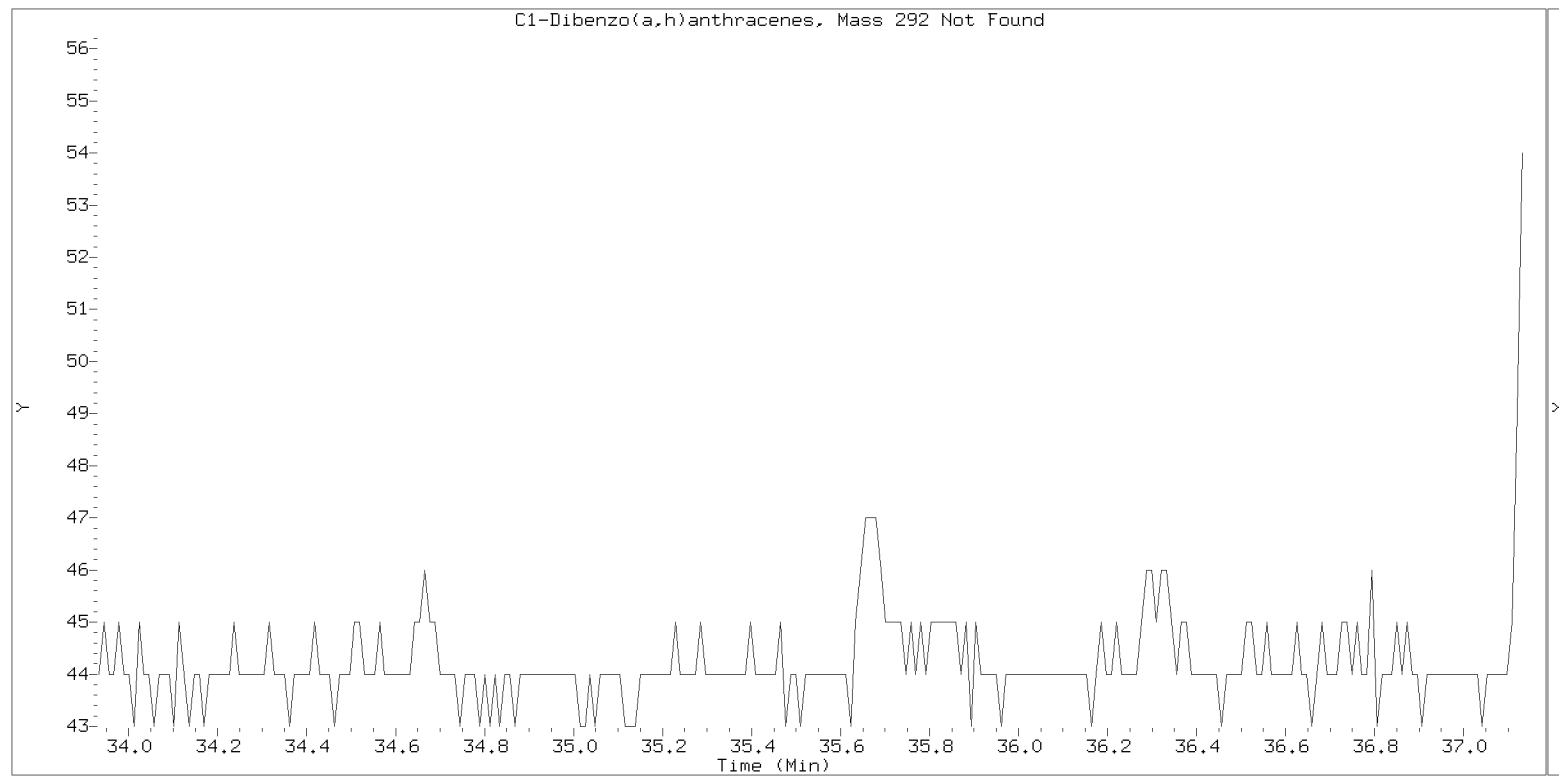
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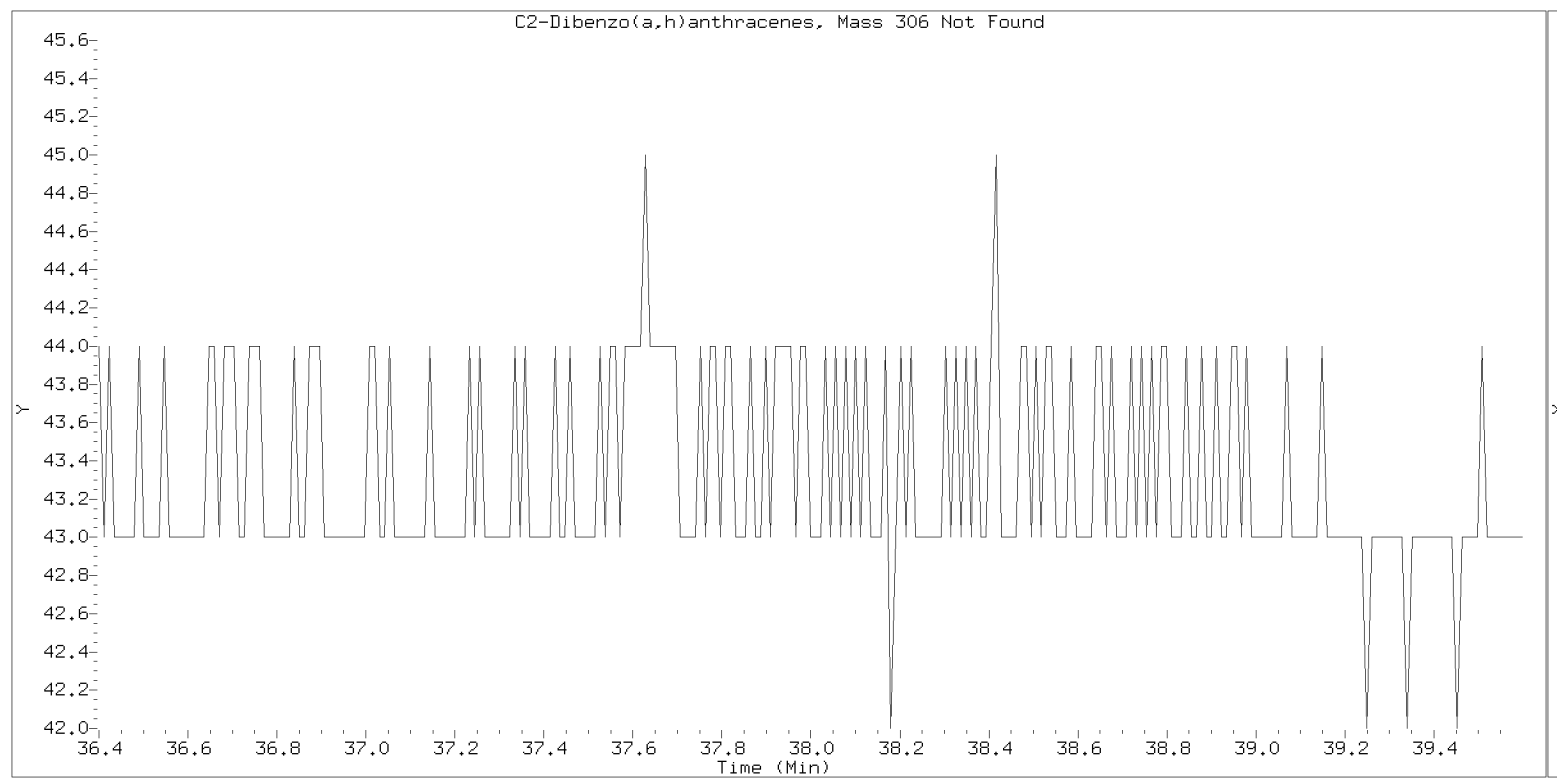
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Lab ID: BLD0616-BLK2

nt14.i, 20230527.b\ALKYLRANGES.m, 28-MAY-2023 01:33





LCS / LCS DUPLICATE RECOVERY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Matrix: Oil

Analyzed: 05/28/23 02:21

Batch: BLD0616

Laboratory ID: BLD0616-BS1

Preparation: EPA 3580A (Waste Dilution)

Sequence Name: LCS

Initial/Final: 1 g / 100 mL

COMPOUND	SPIKE ADDED (ug/kg)	LCS CONCENTRATION (ug/kg)	Q	LCS % REC. #	QC LIMITS REC.
trans-Decalin	300000	241000		80.4	30 - 160
cis-Decalin	300000	244000		81.3	30 - 160
Naphthalene	300000	240000		80.1	37 - 120
1-Methylnaphthalene	300000	247000		82.2	30 - 160
2-Methylnaphthalene	300000	246000		82.0	37 - 120
Biphenyl	300000	251000		83.5	30 - 160
2,6-Dimethylnaphthalene	300000	254000		84.6	30 - 160
Acenaphthylene	300000	243000		81.1	35 - 120
Acenaphthene	300000	259000		86.2	39 - 120
Dibenzofuran	300000	271000		90.2	39 - 120
2,3,5-Trimethylnaphthalene	300000	274000		91.3	30 - 160
Fluorene	300000	268000		89.3	42 - 120
Benzo(b)thiophene	300000	243000		81.0	30 - 160
Phenanthrene	300000	294000		97.8	47 - 120
Anthracene	300000	272000		90.5	41 - 120
Carbazole	300000	304000		101	30 - 160
1-Methylphenanthrene	300000	308000		103	30 - 160
Fluoranthene	300000	318000		106	52 - 120
Dibenzothiophene	300000	288000		96.1	30 - 160
Pyrene	300000	317000		106	47 - 120
Benzo(a)anthracene	300000	301000		100	47 - 120
Chrysene	300000	319000		106	51 - 120
Benzo(b)fluoranthene	300000	304000		101	35 - 127
Benzo(j)fluoranthene	300000	350000		117	49 - 120
Benzo(k)fluoranthene	300000	270000		89.9	37 - 129
Benzo(a)fluoranthene, Total	900000	916000		102	46 - 120
Benzo(e)pyrene	300000	283000		94.4	30 - 160
Benzo(a)pyrene	300000	250000		83.2	44 - 120
Indeno(1,2,3-cd)pyrene	300000	231000		76.9	41 - 120
Dibenzo(a,h)anthracene	300000	226000		75.4	42 - 120
Benzo(g,h,i)perylene	300000	273000		91.0	37 - 120
Perylene	300000	245000		81.6	30 - 160
Benzo(b)naphtho(2,1-d)thiophene	300000	272000		90.5	30 - 160

* Indicates values outside of QC limits



LCS / LCS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23D0457</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Gasco Hydrocarbon Investigation</u>
Matrix:	<u>Oil</u>	Analyzed:	<u>05/28/23 02:21</u>
Batch:	<u>BLD0616</u>	Laboratory ID:	<u>BLD0616-BS1</u>
Preparation:	<u>EPA 3580A (Waste Dilution)</u>	Sequence Name:	<u>LCS</u>
Initial/Final:	<u>1 g / 100 mL</u>		

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt14,i\20230527,b\NT1405272321.D

Date : 28-May-2023 02:21

Client ID:

Sample Info: BLD0616-BS1

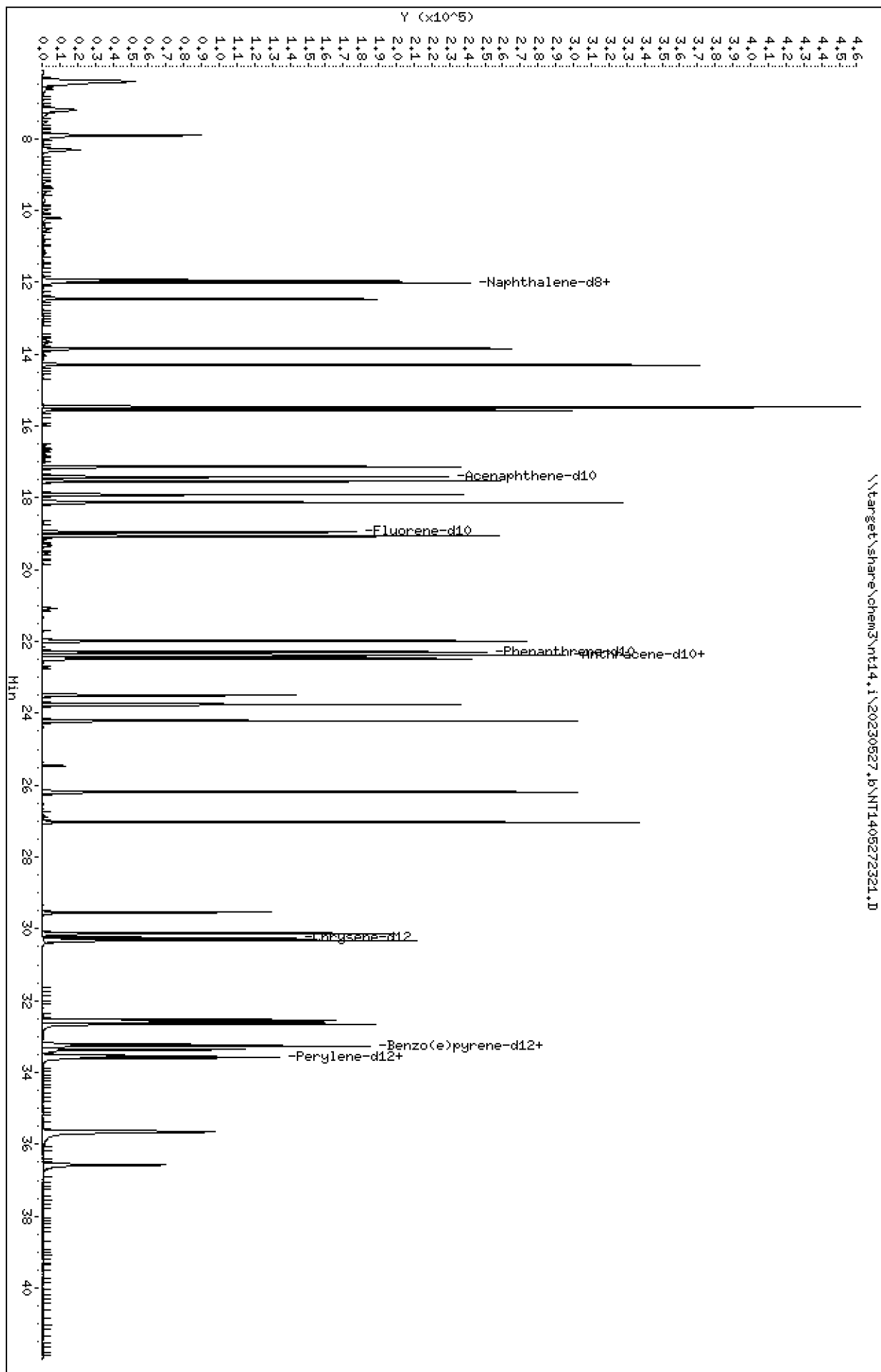
Page 1

Instrument: nt14,i

Operator: VTS

Column diameter: 0.25

Column phase: Rxi-17S11 MS



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

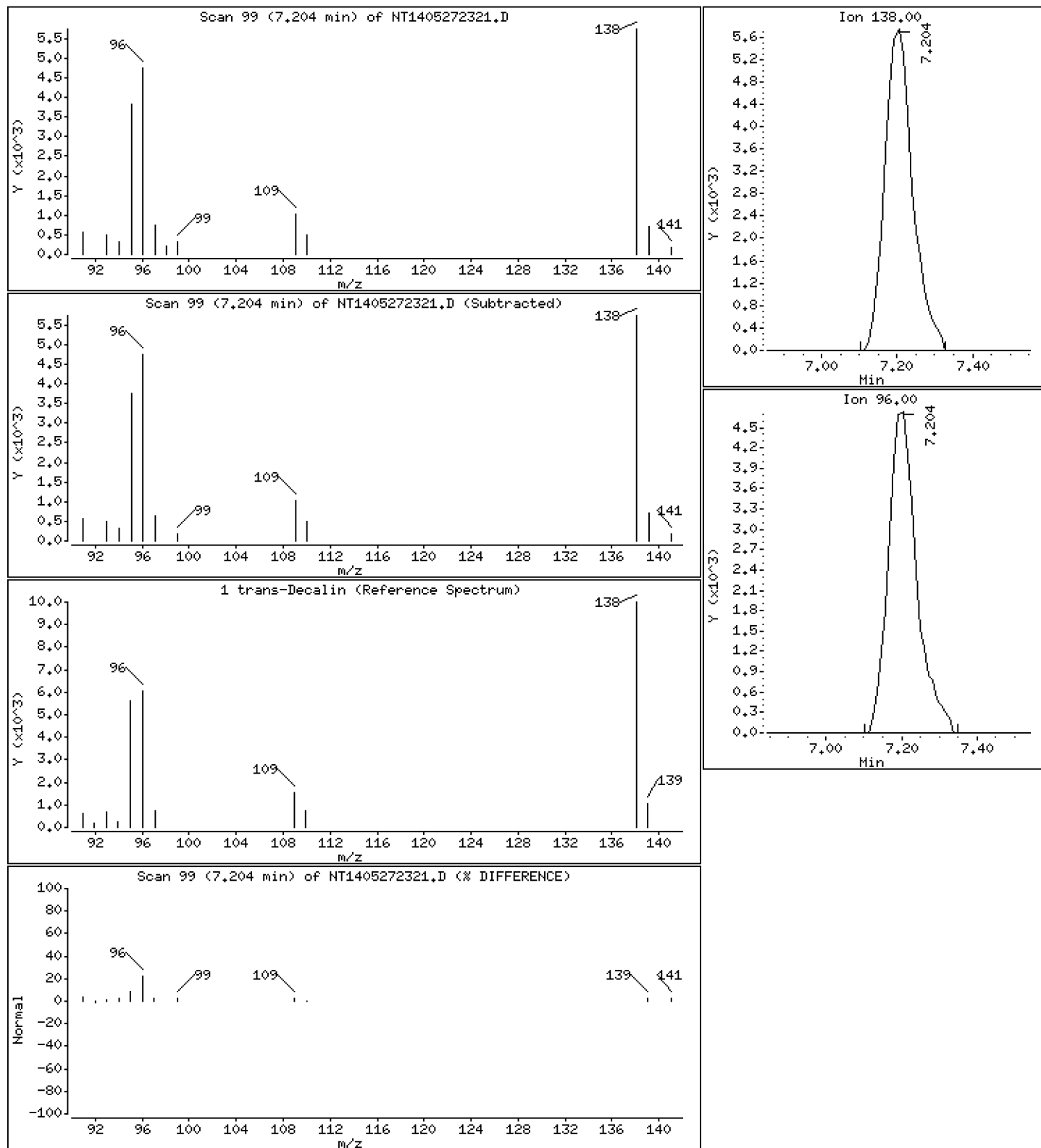
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

1 trans-Decalin

Concentration: 2.413 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

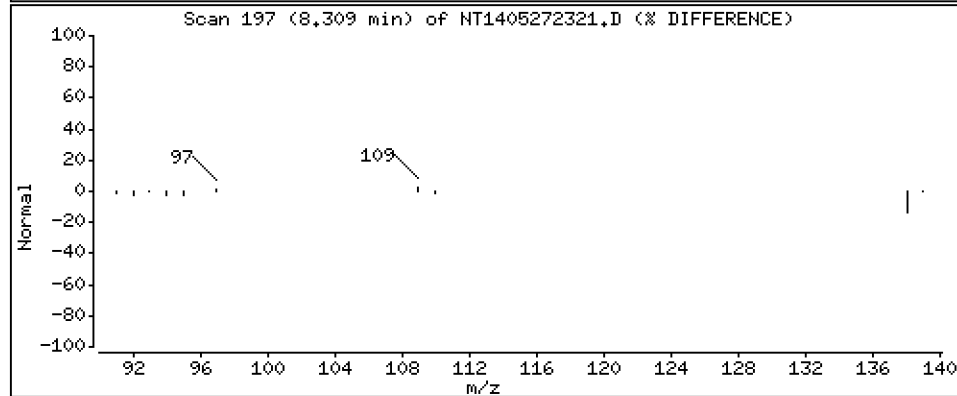
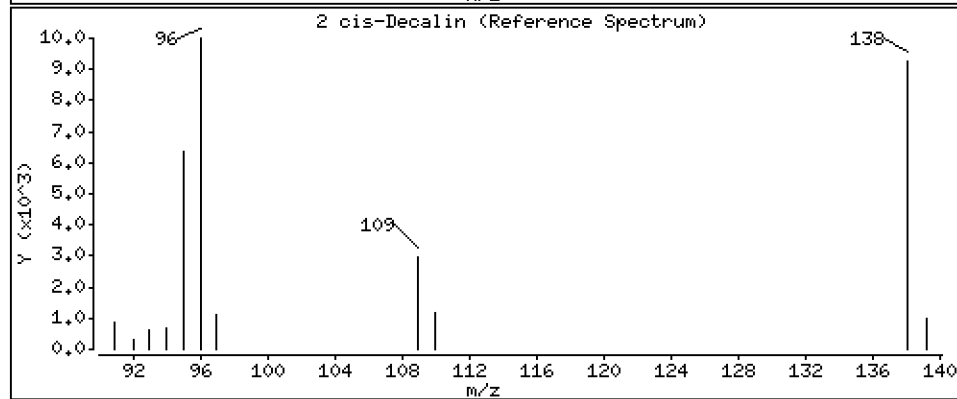
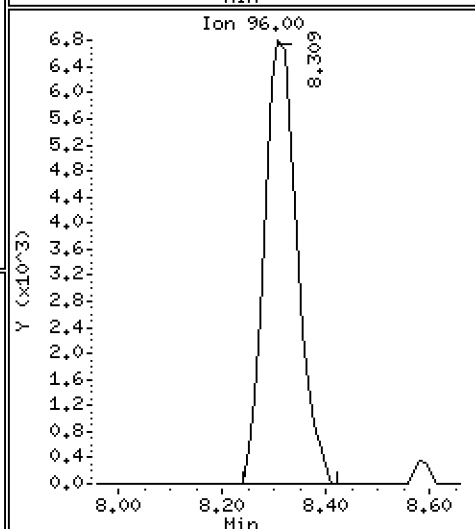
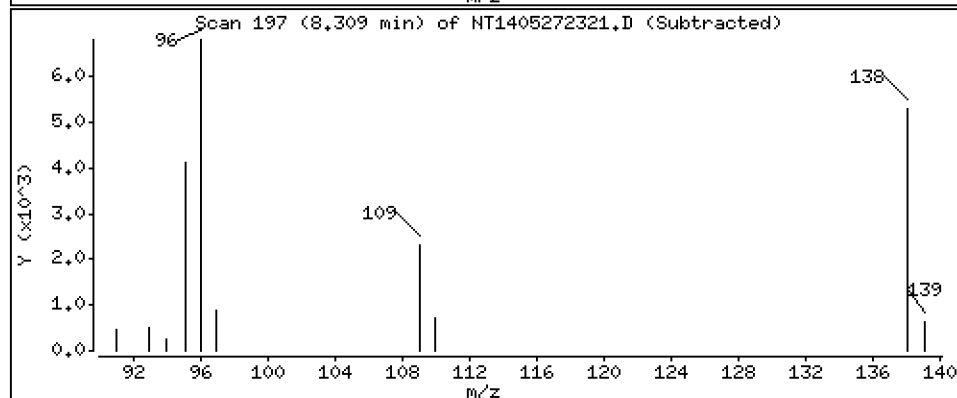
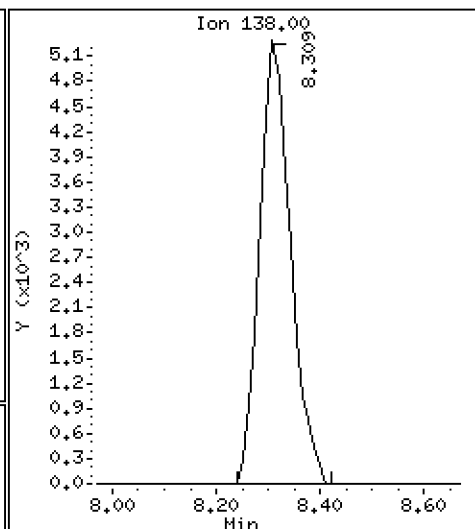
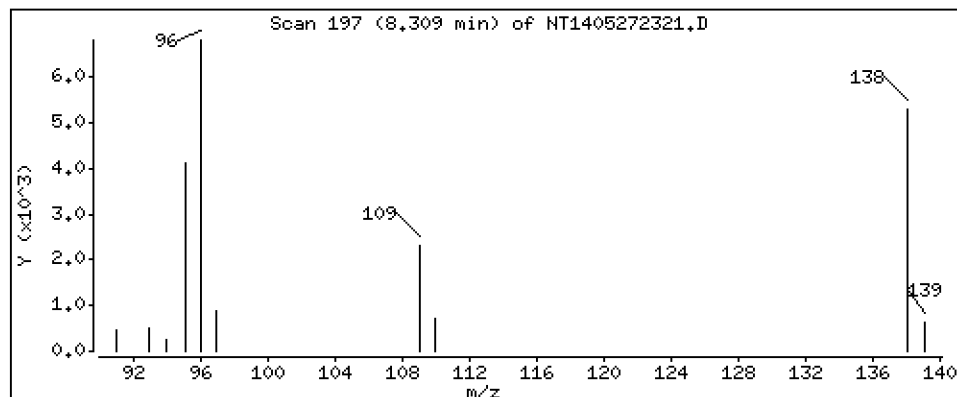
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

2 cis-Decalin

Concentration: 2.439 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

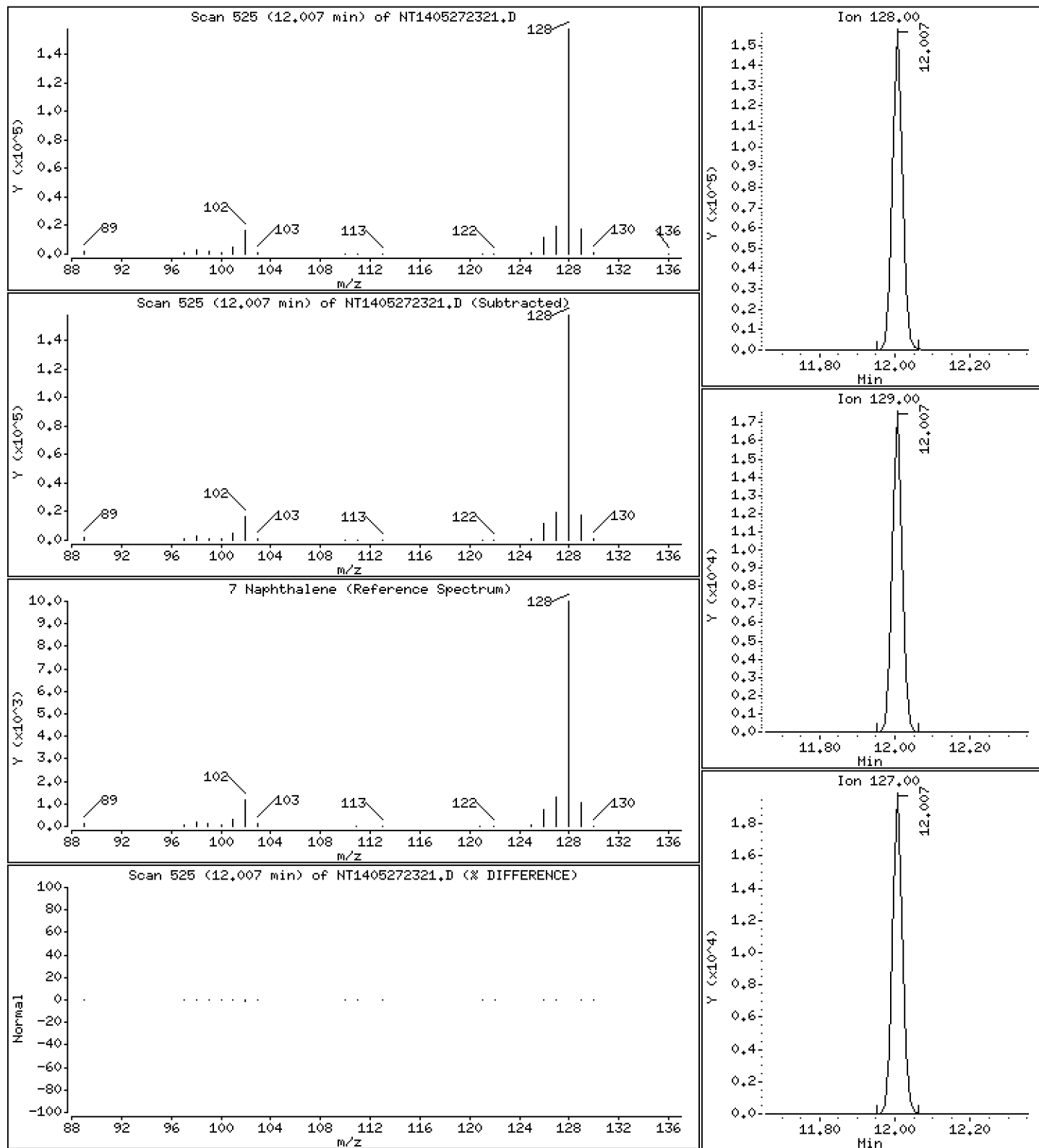
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

7 Naphthalene

Concentration: 2.404 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

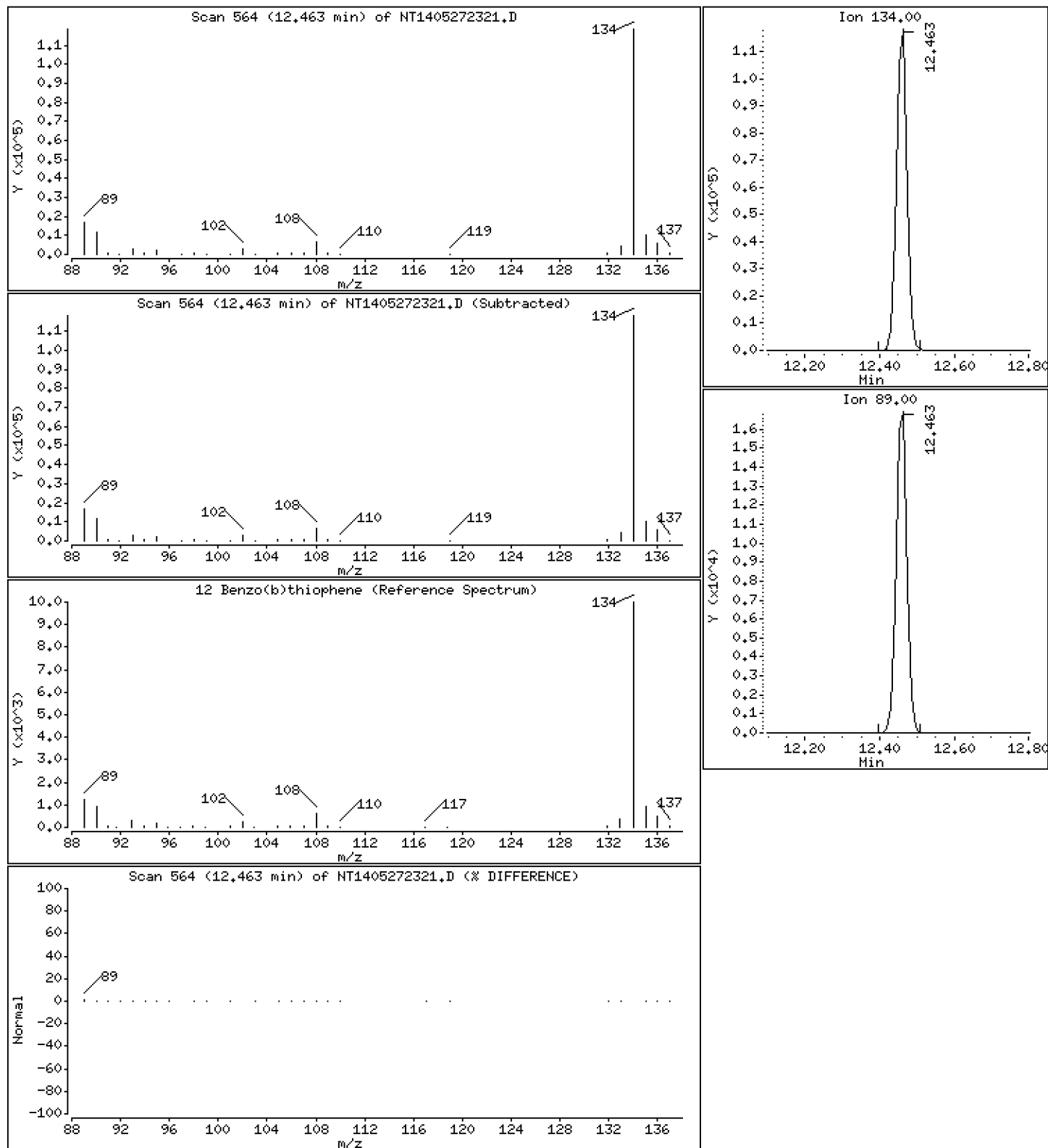
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

12 Benzo(b)thiophene

Concentration: 2.431 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

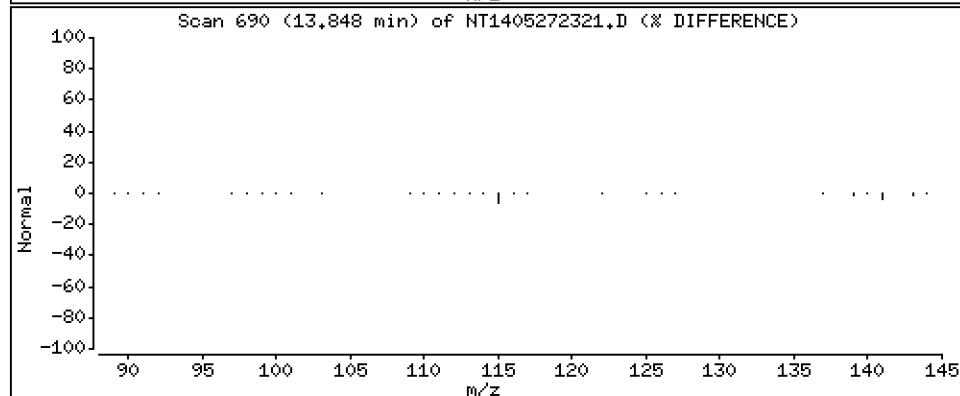
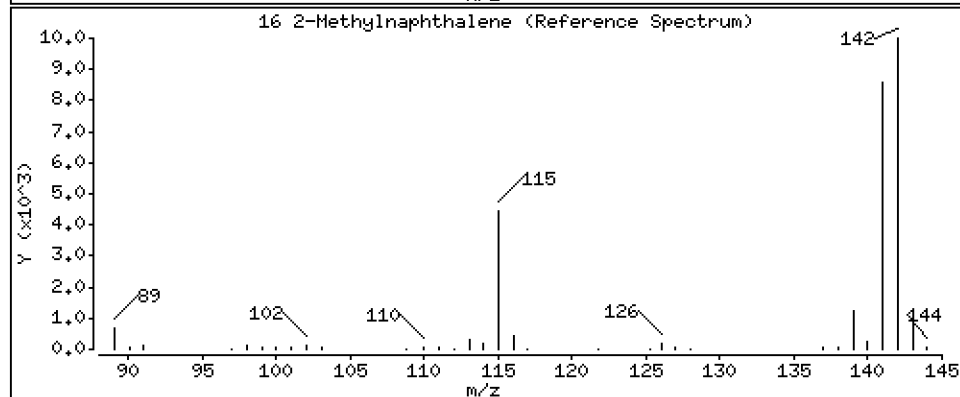
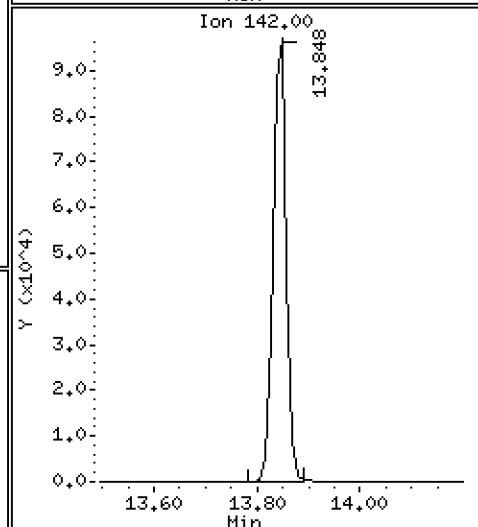
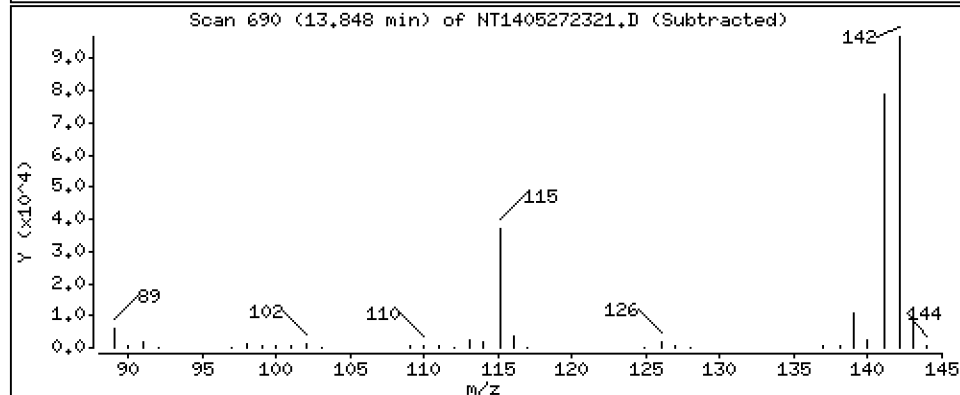
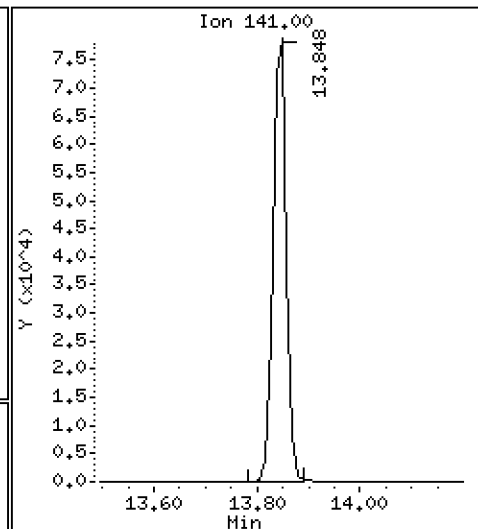
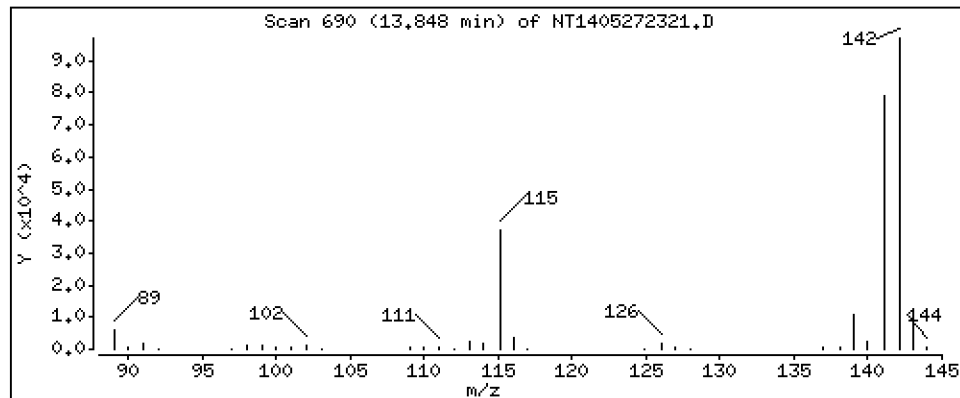
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

16 2-Methylnaphthalene

Concentration: 2.461 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

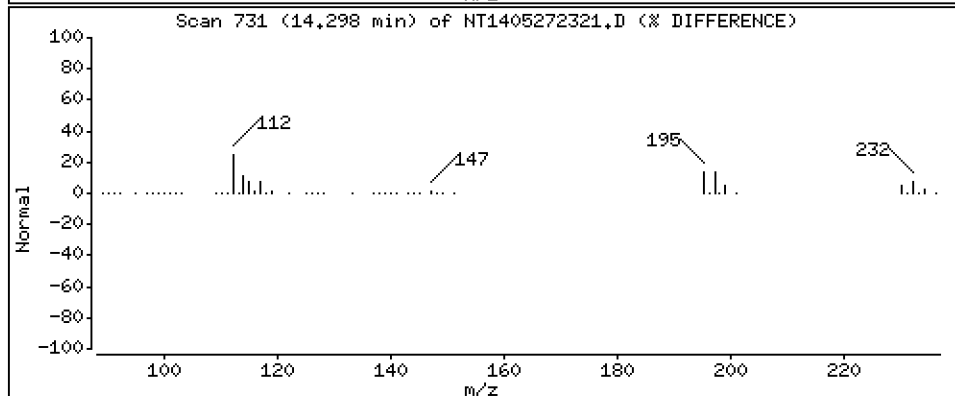
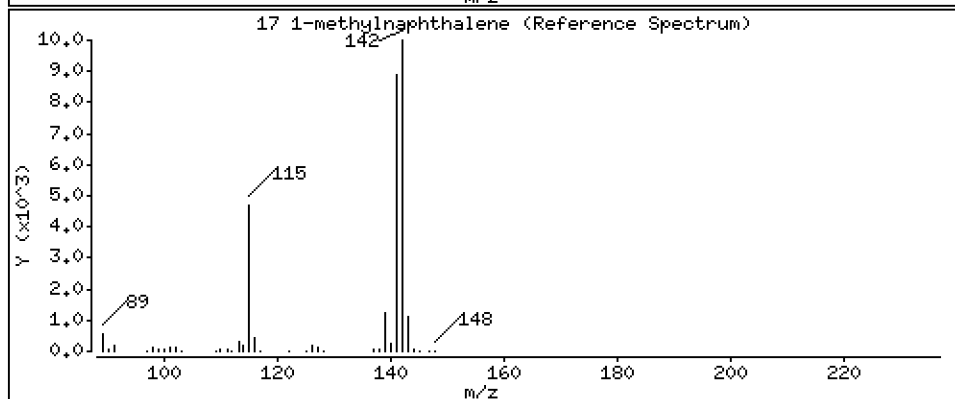
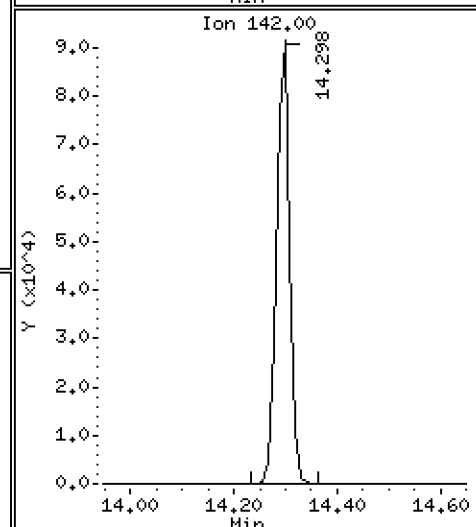
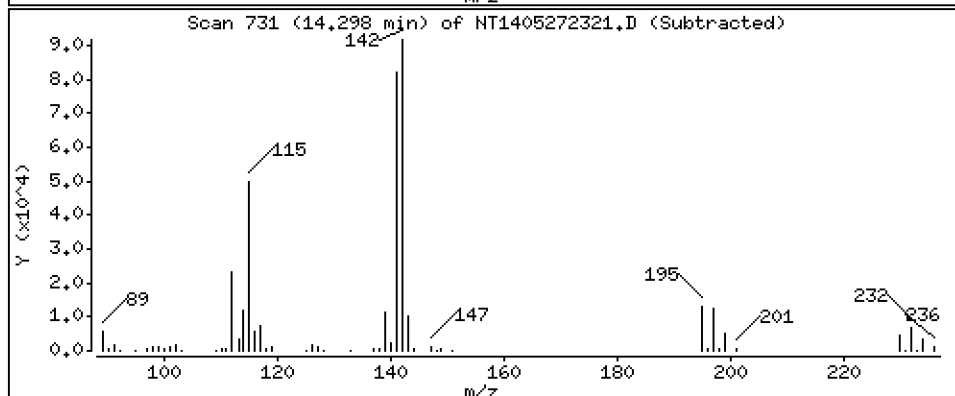
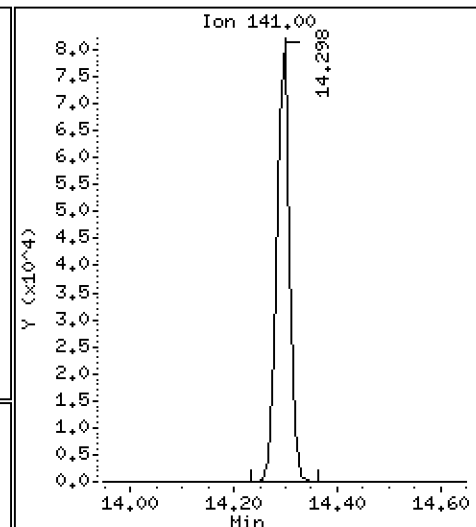
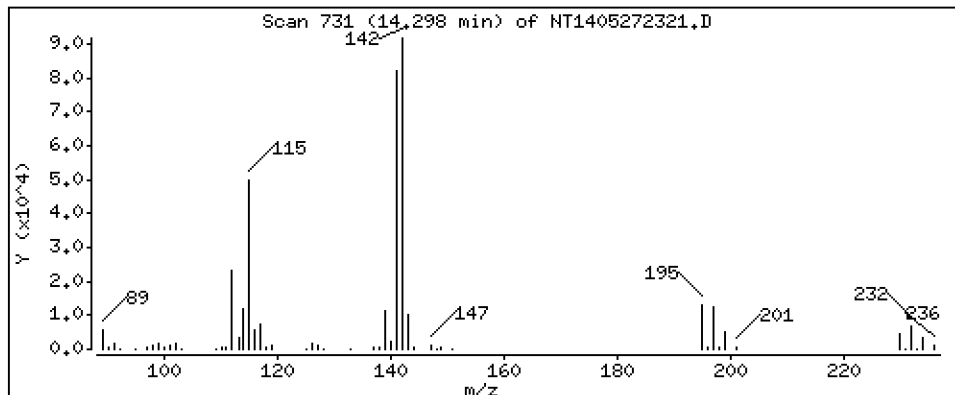
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 1-methylnaphthalene

Concentration: 2.465 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

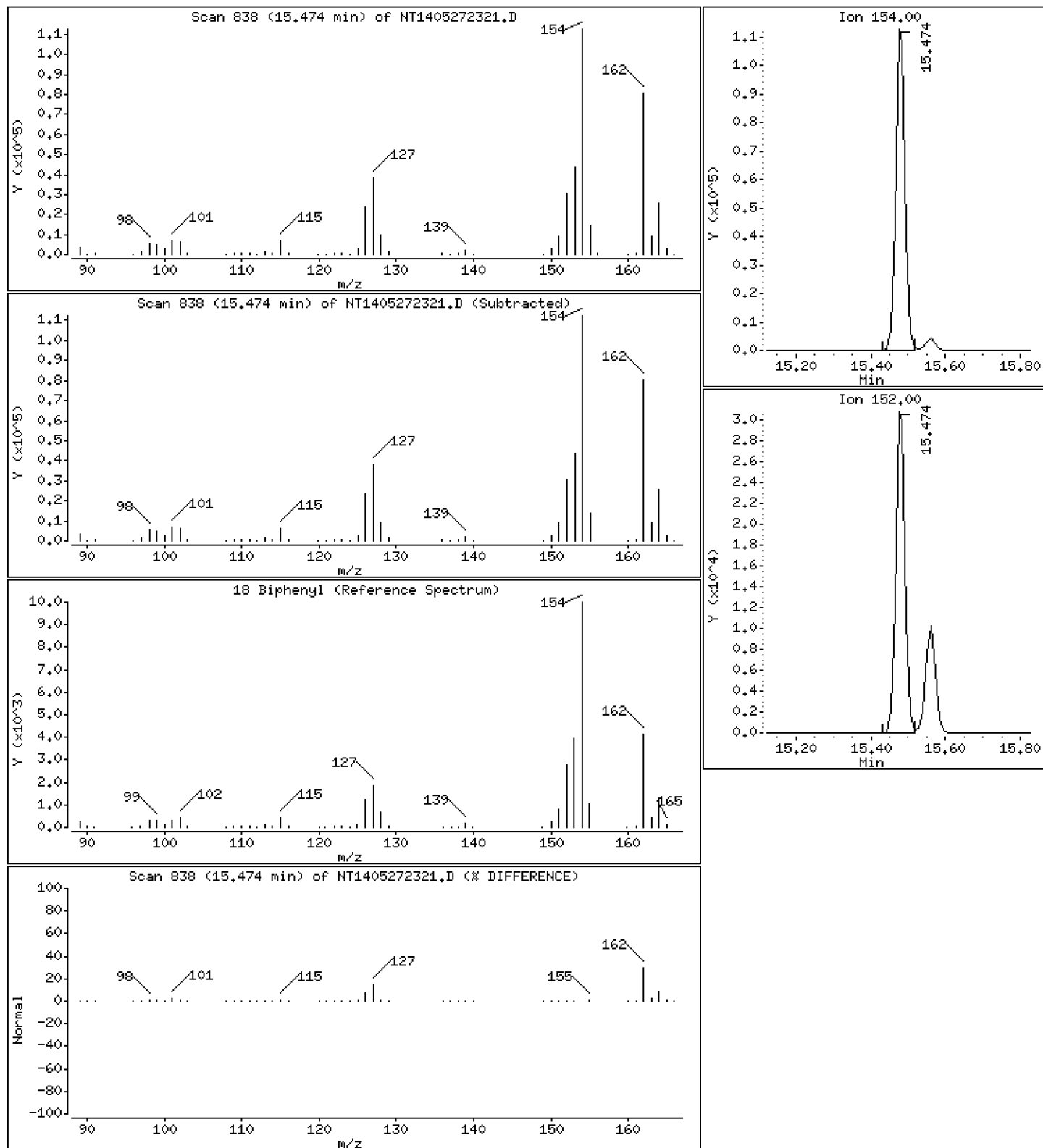
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

18 Biphenyl

Concentration: 2.505 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

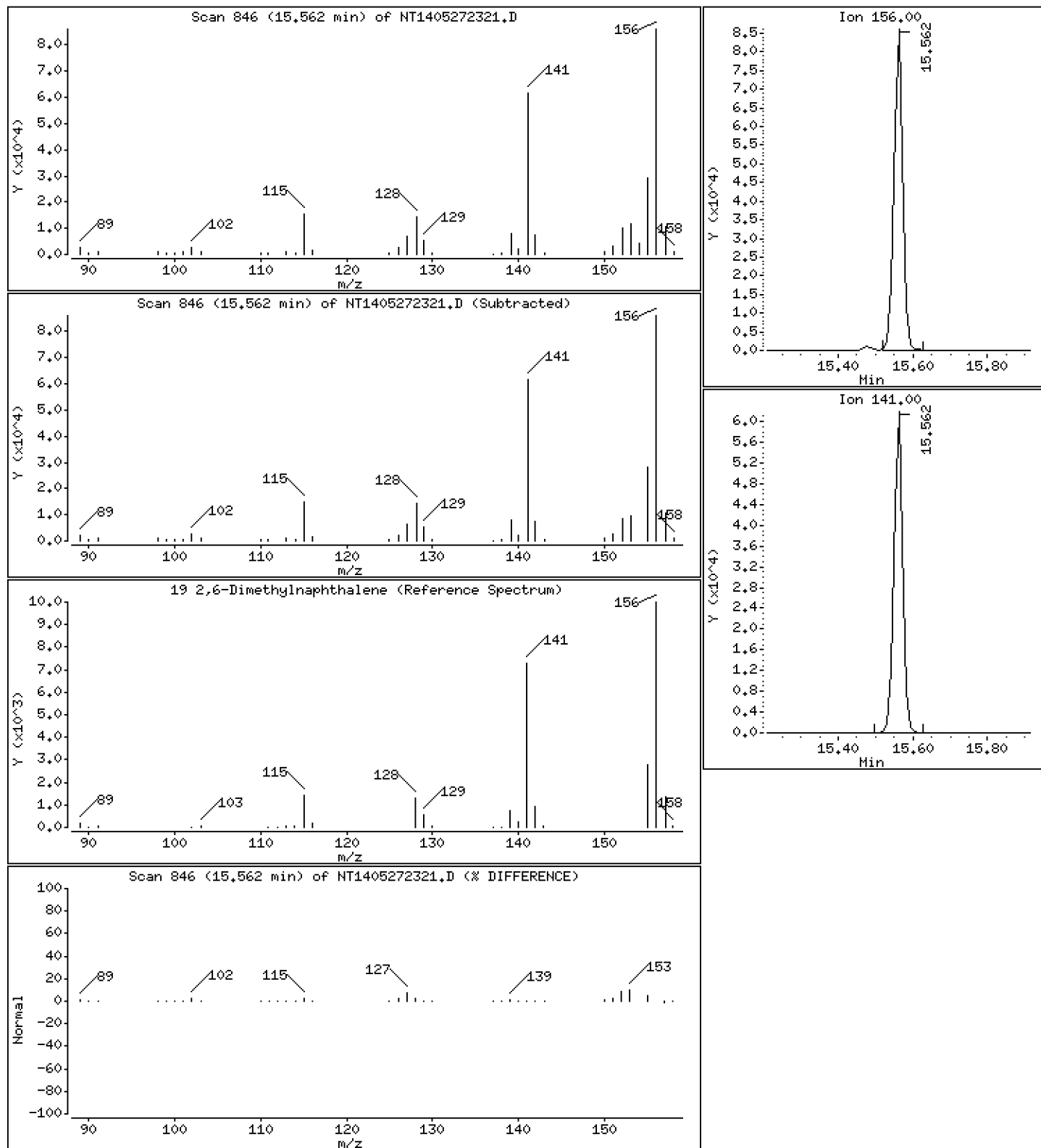
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

19 2,6-Dimethylnaphthalene

Concentration: 2.539 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

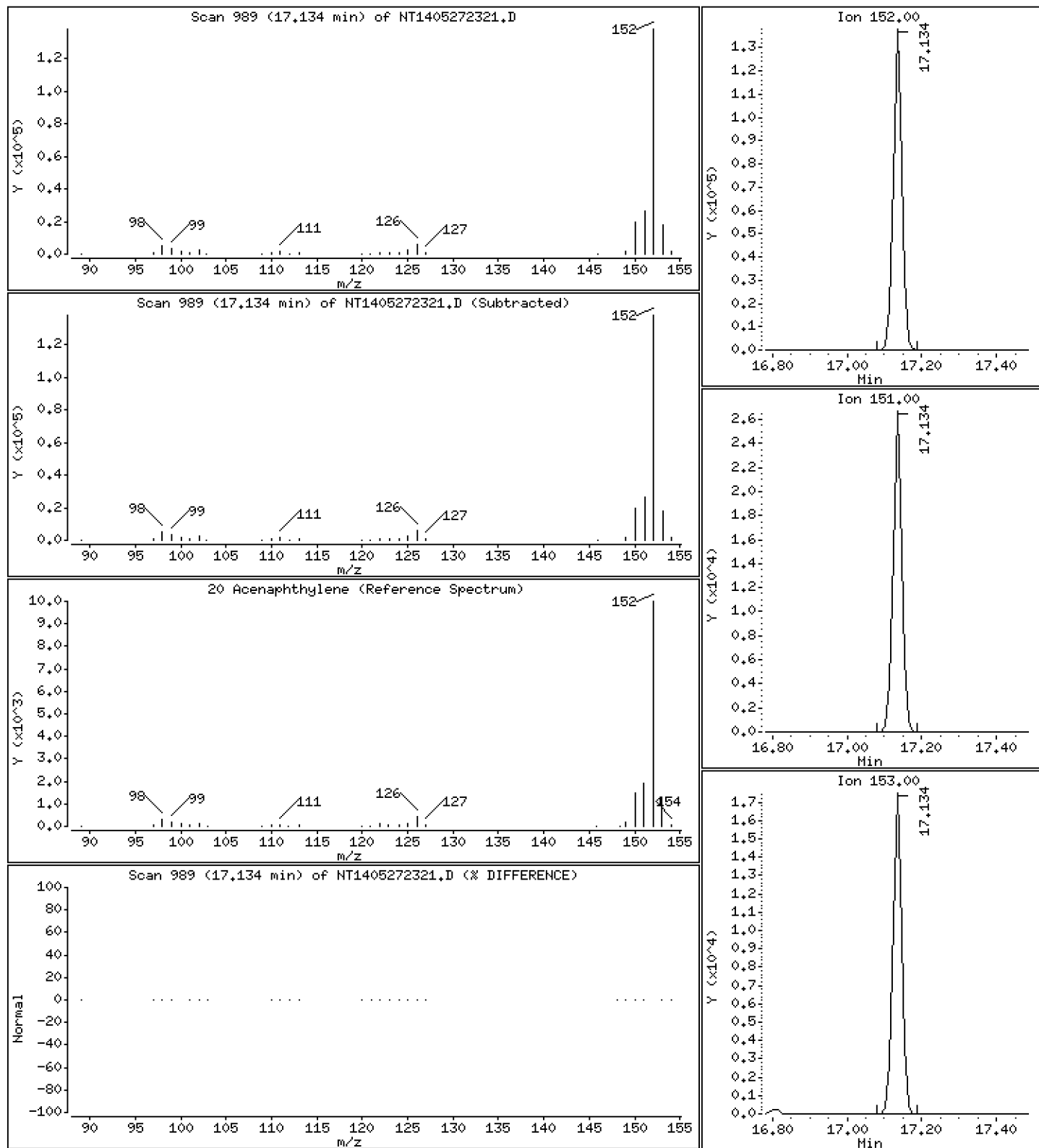
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

20 Acenaphthylene

Concentration: 2.432 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

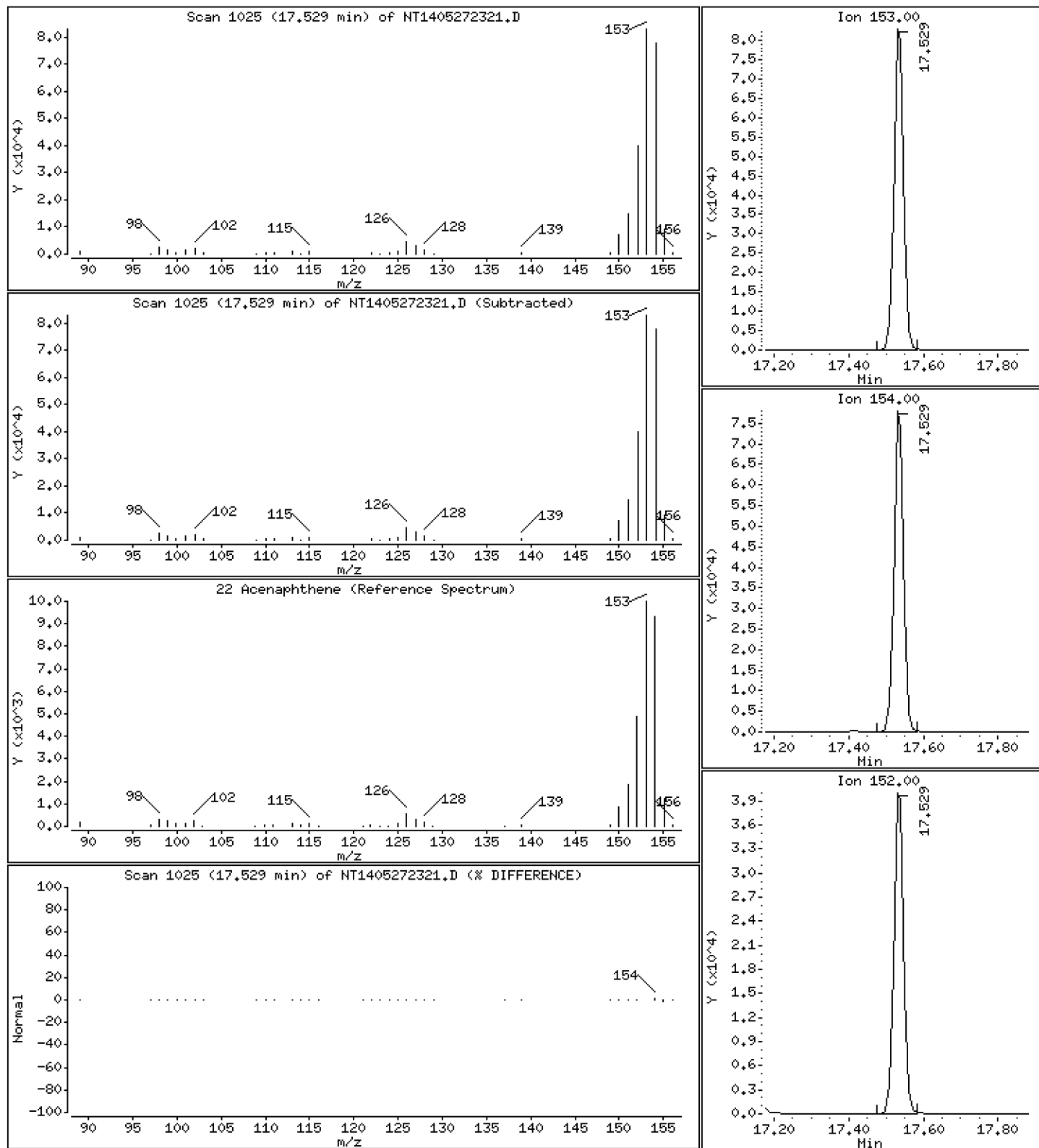
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

22 Acenaphthene

Concentration: 2.587 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

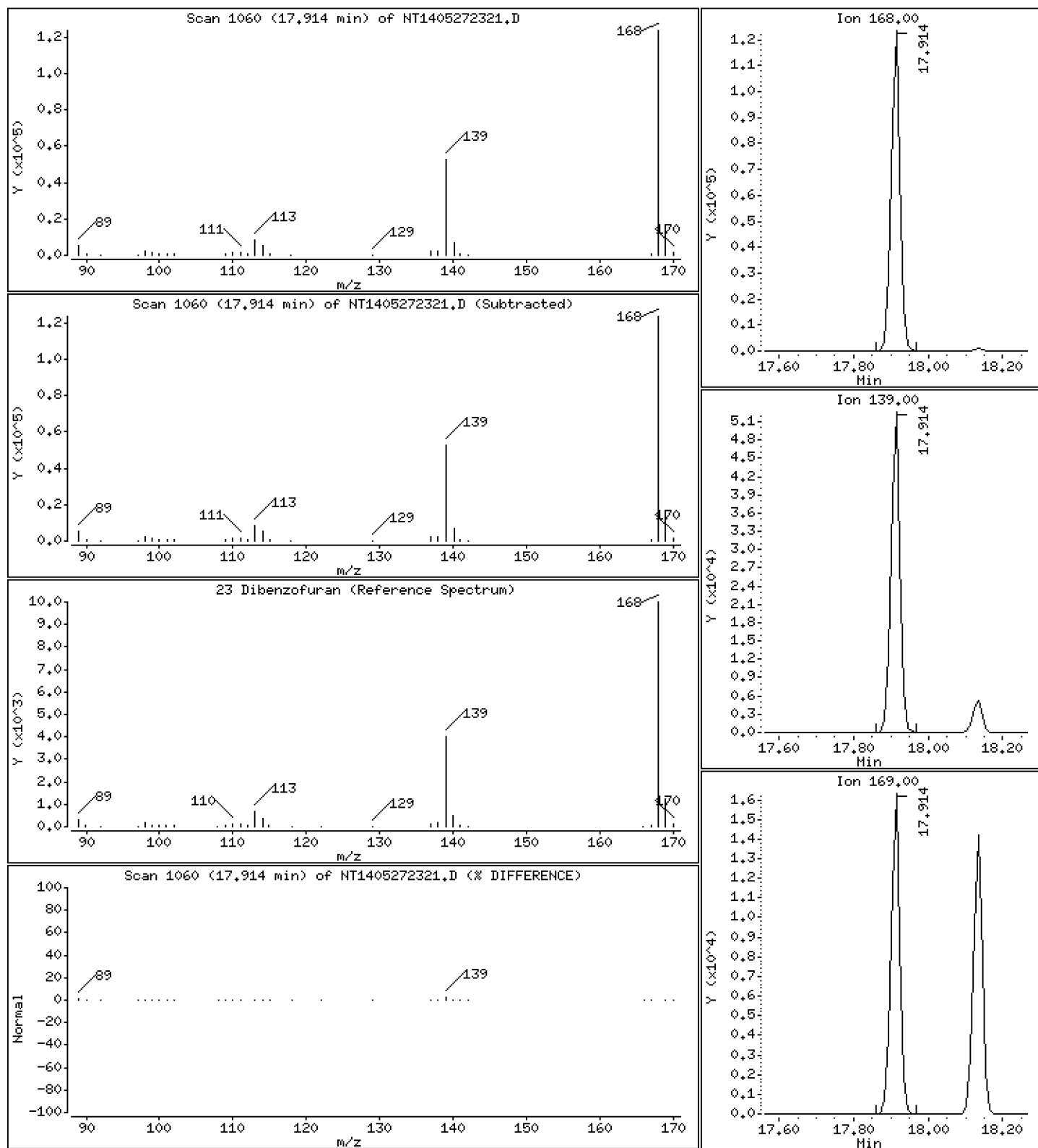
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

23 Dibenzofuran

Concentration: 2.707 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

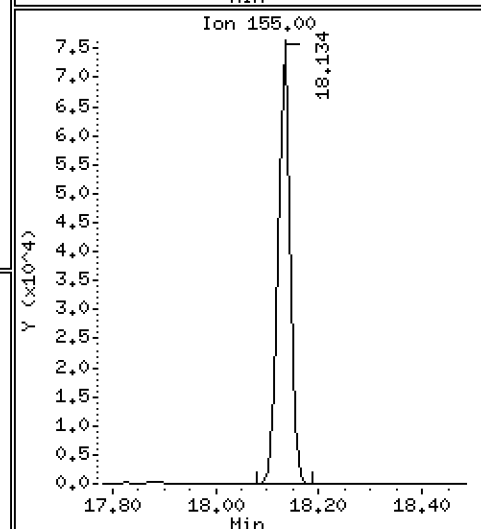
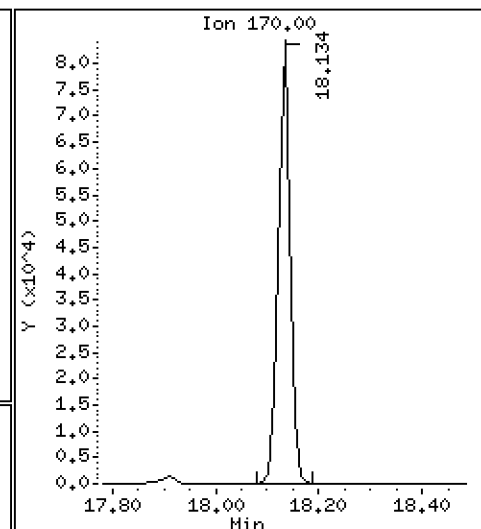
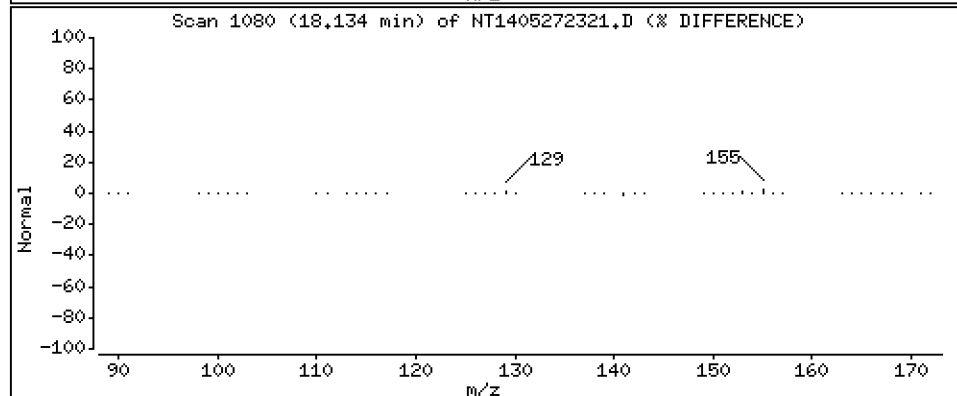
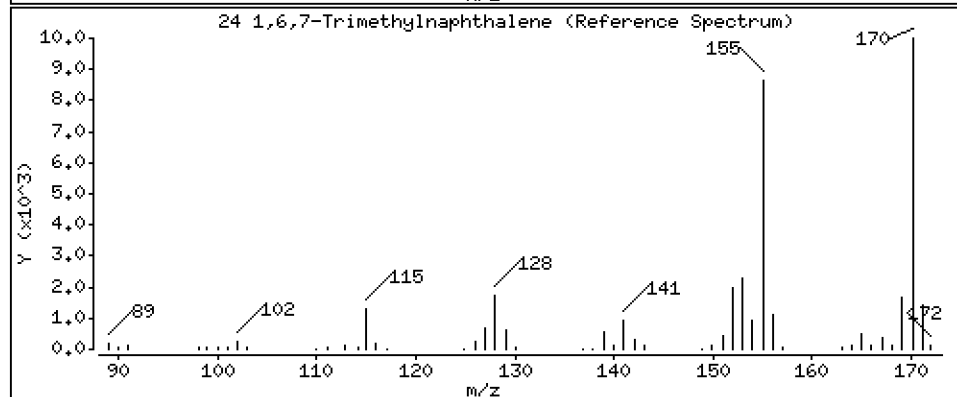
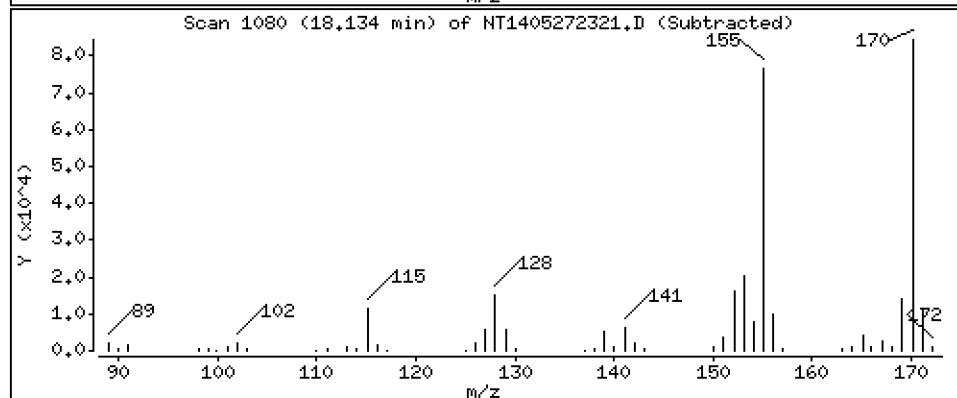
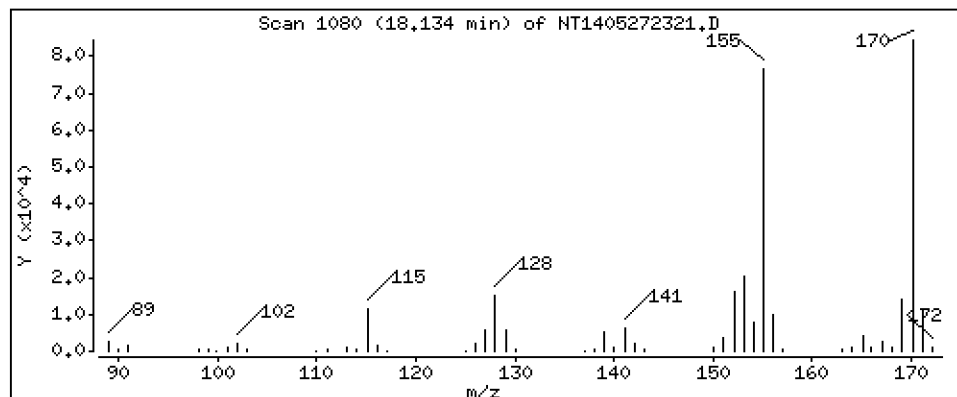
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

24 1,6,7-Trimethylnaphthalene

Concentration: 2.739 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

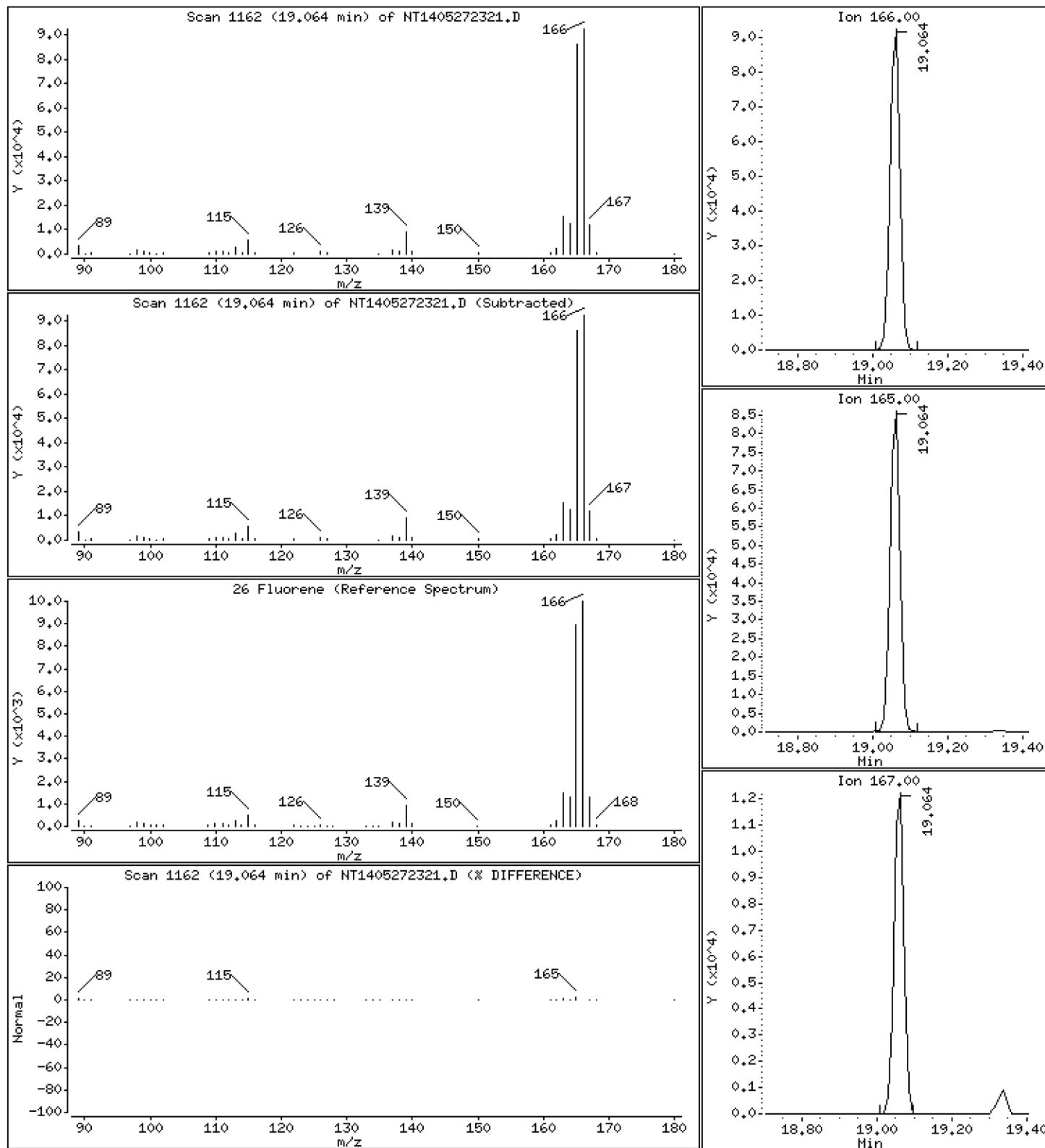
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

26 Fluorene

Concentration: 2.678 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

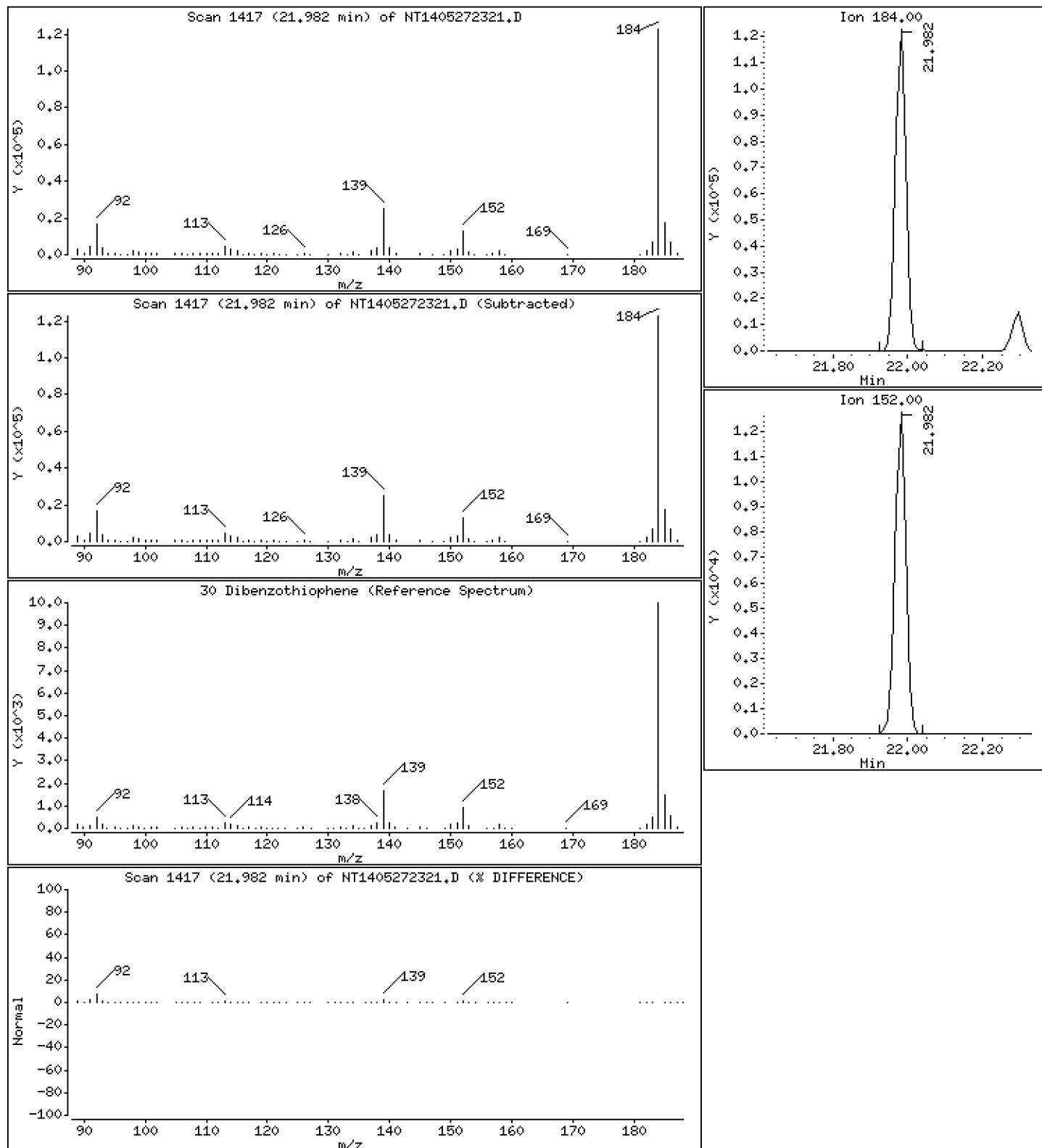
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

30 Dibenzothiophene

Concentration: 2.882 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

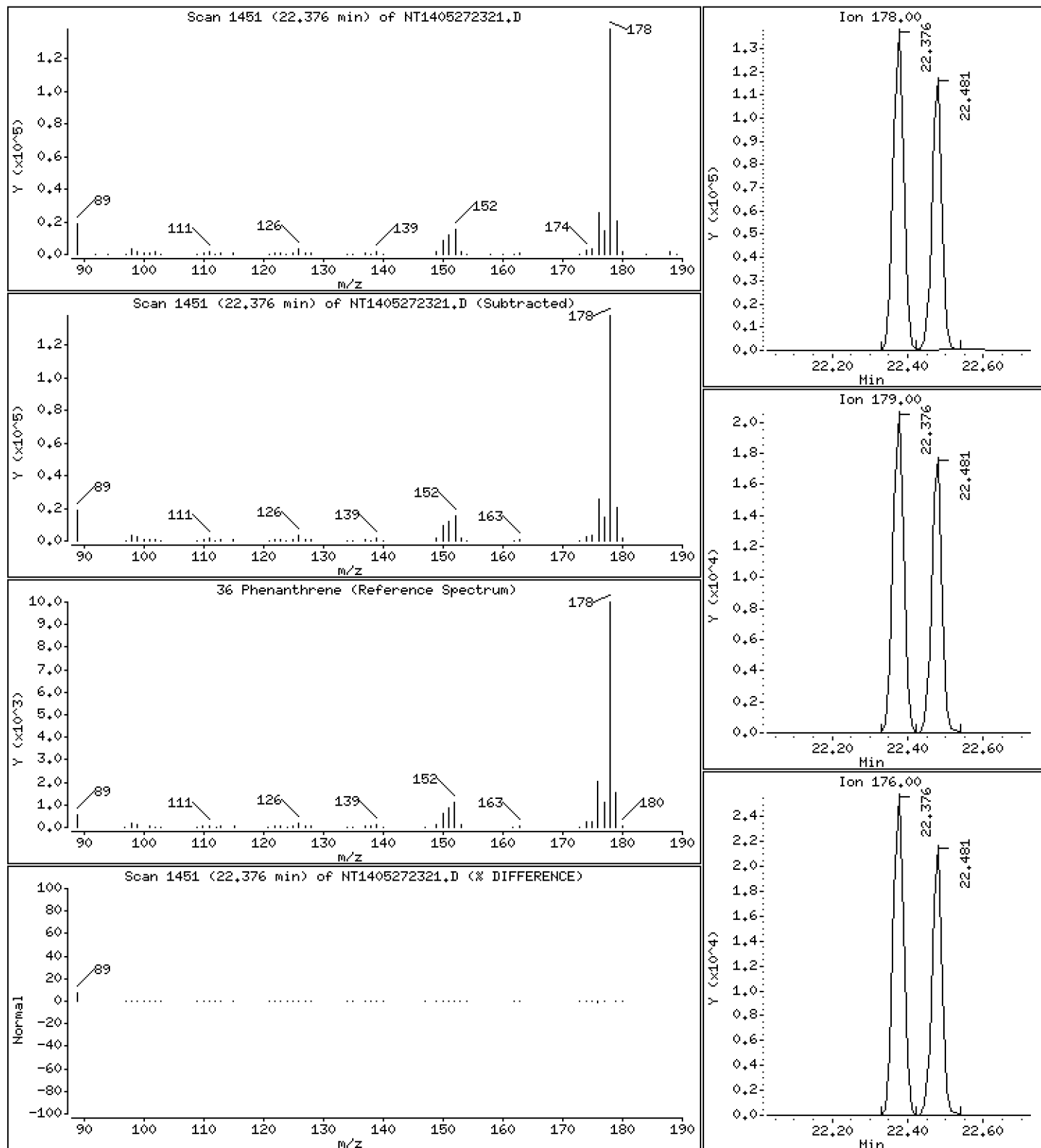
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

36 Phenanthrene

Concentration: 2.935 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

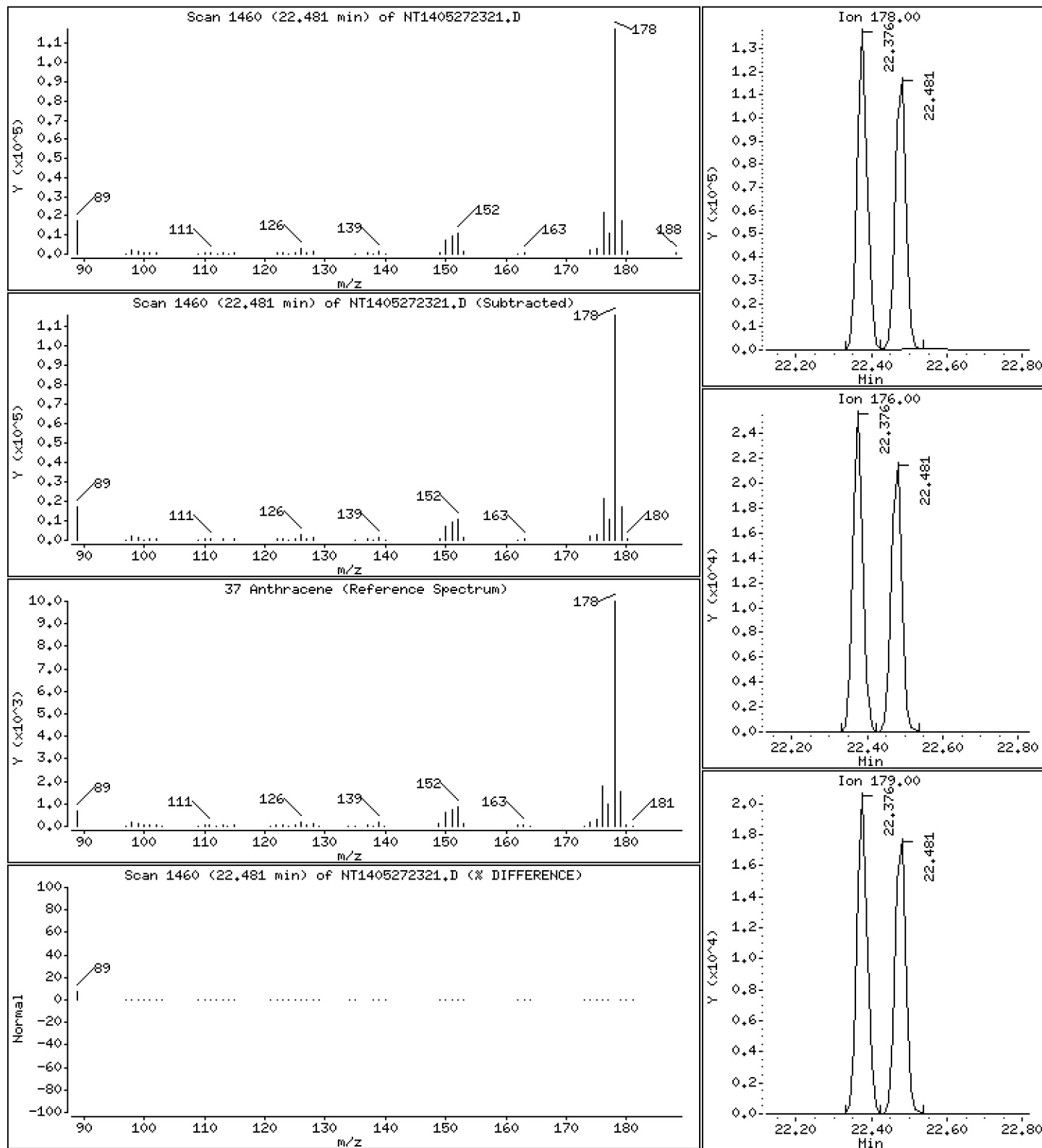
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

37 Anthracene

Concentration: 2.716 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

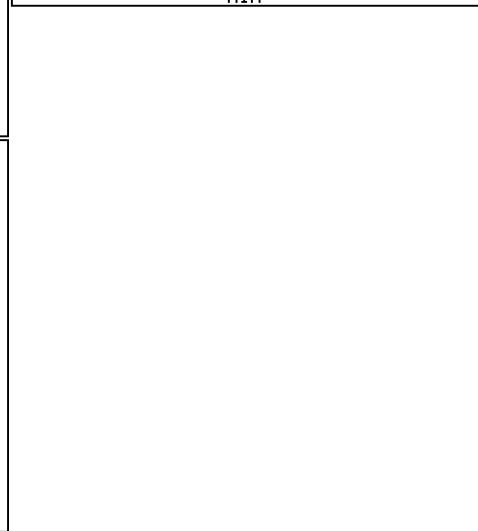
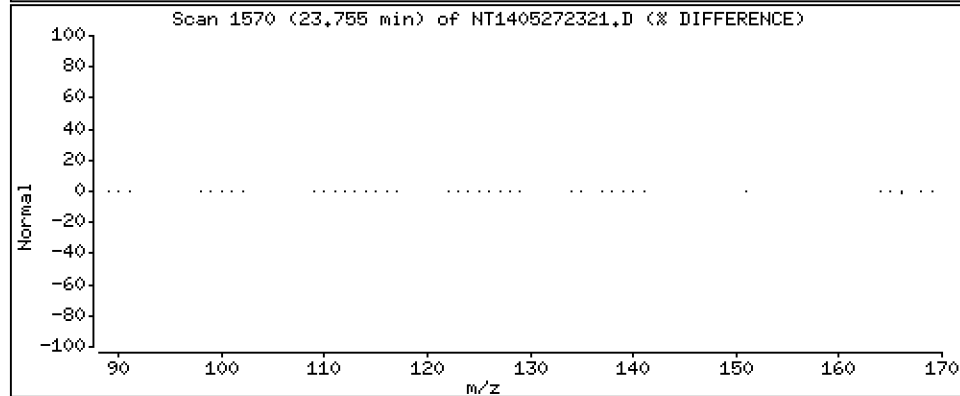
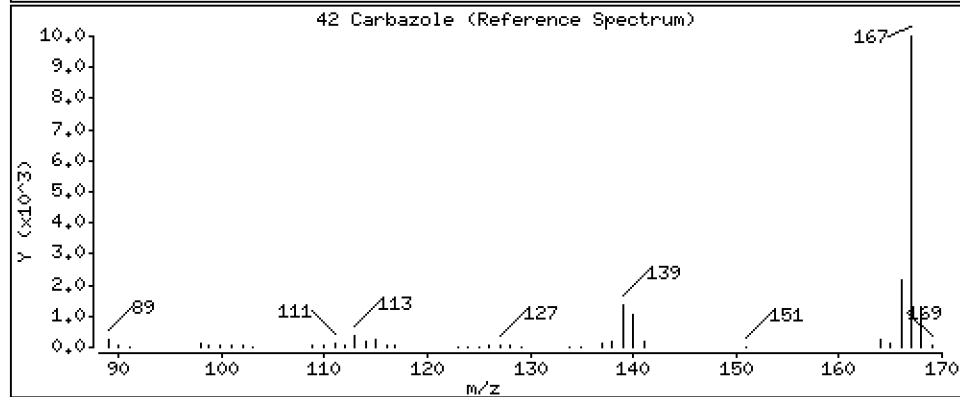
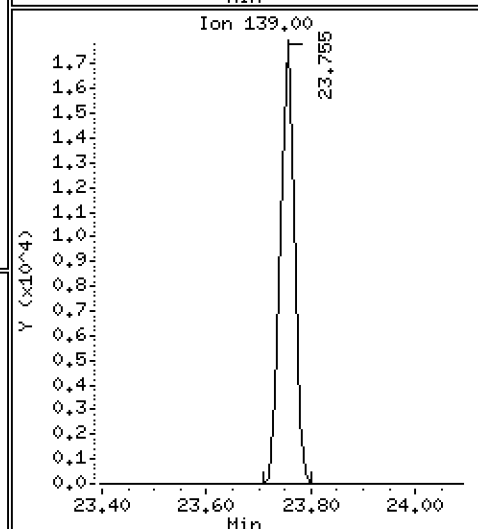
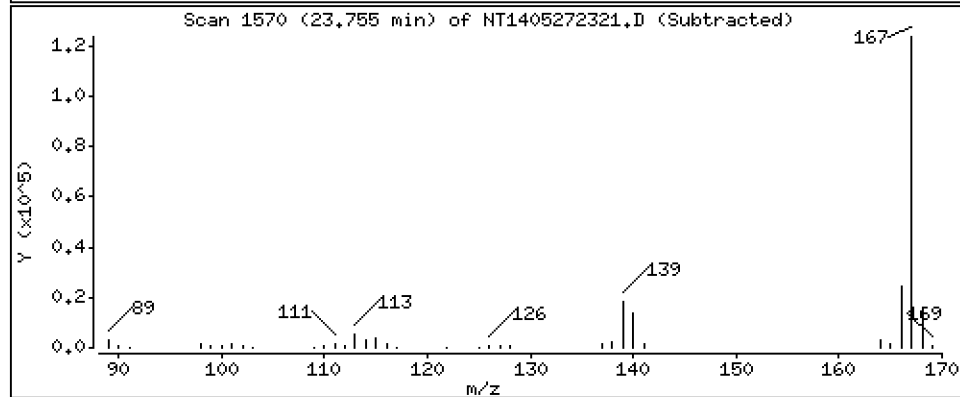
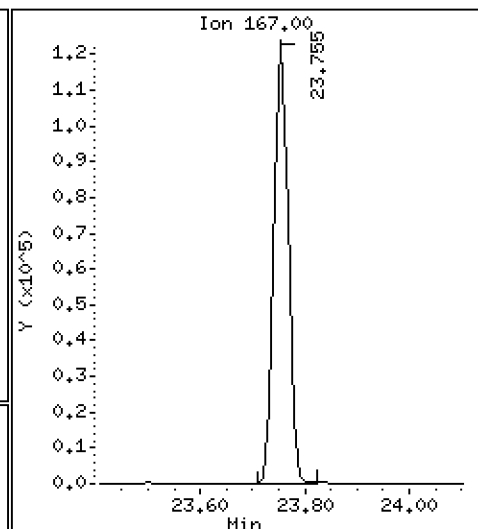
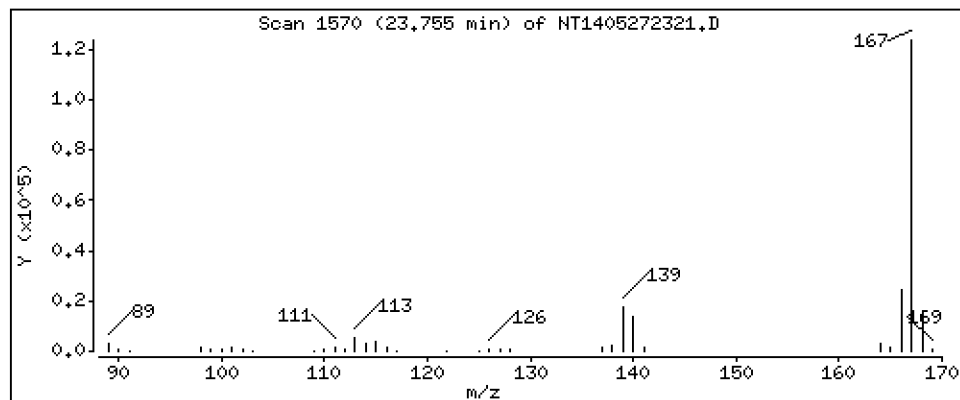
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

42 Carbazole

Concentration: 3.037 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

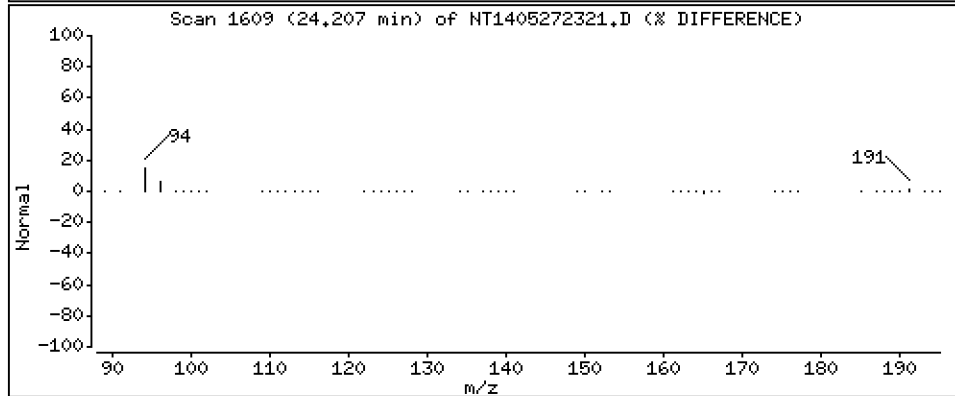
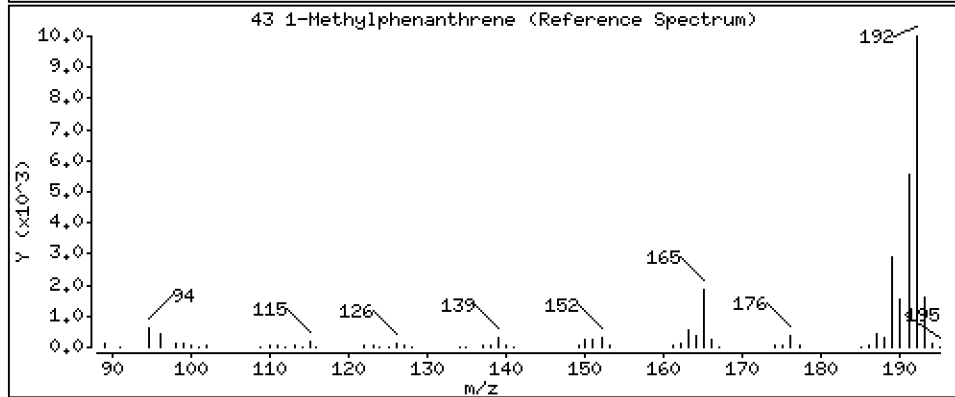
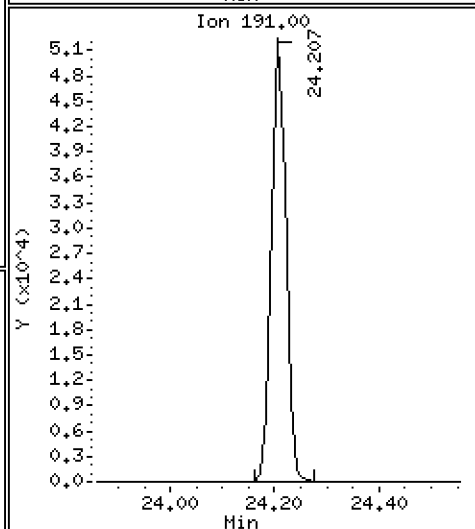
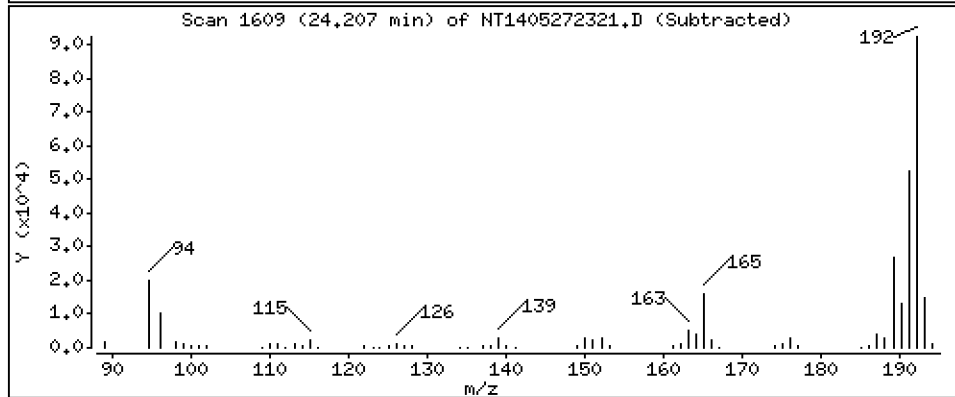
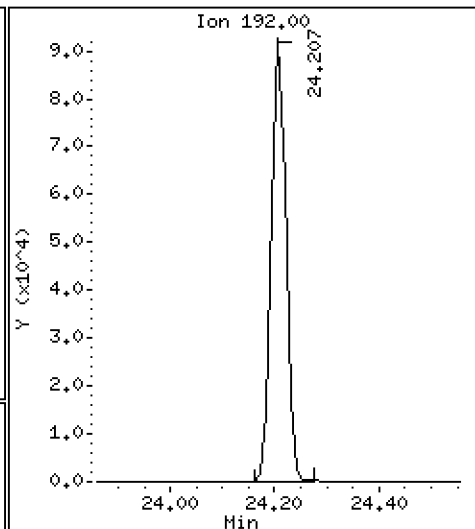
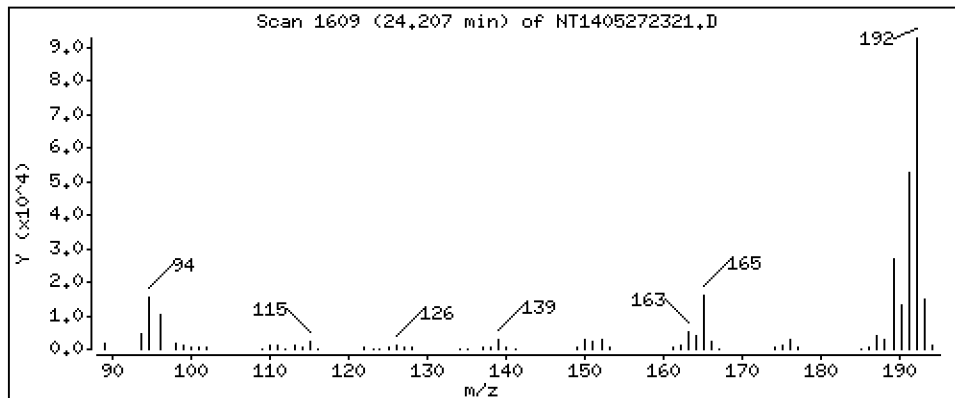
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

43 1-Methylphenanthrene

Concentration: 3.079 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

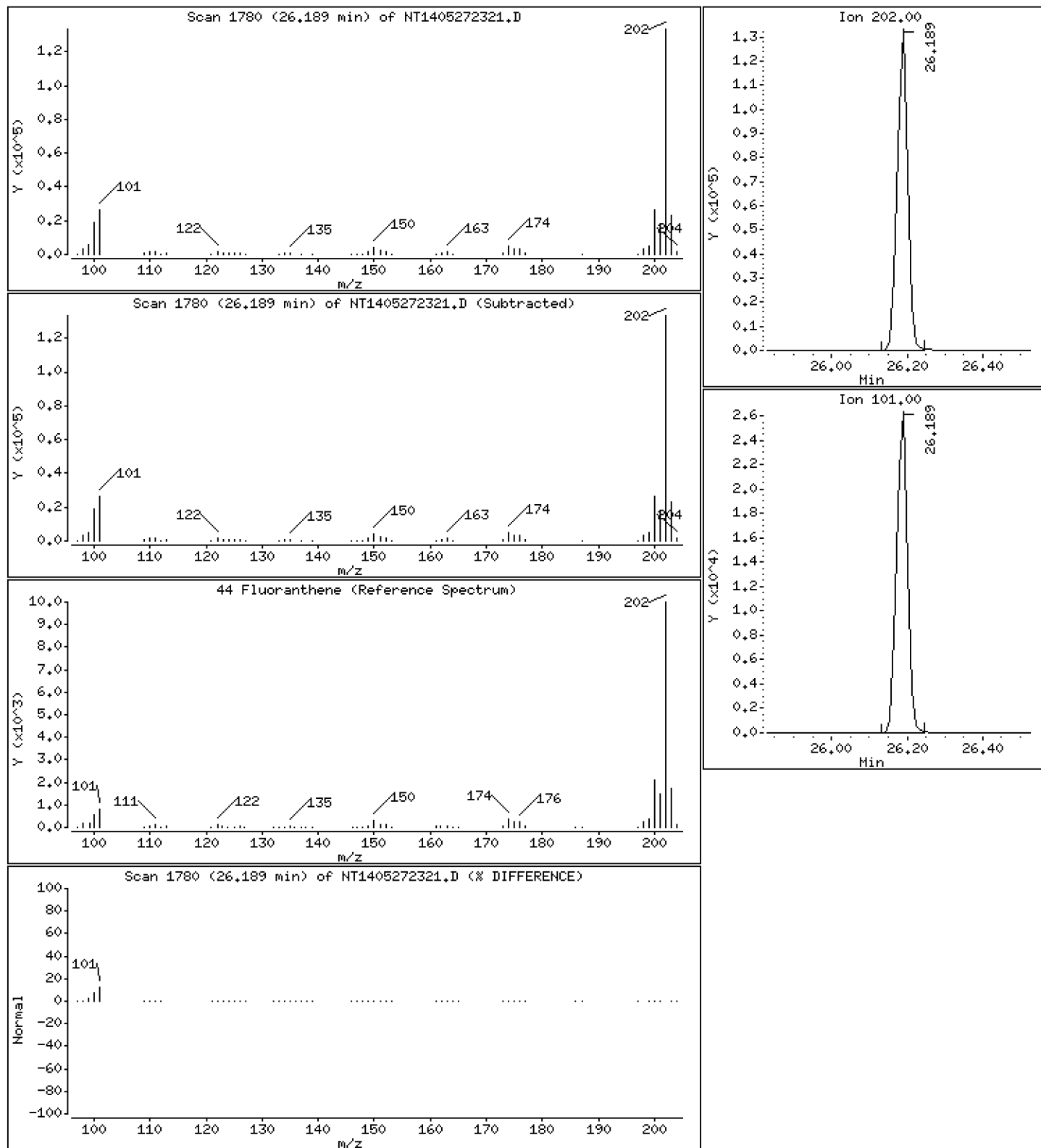
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

44 Fluoranthene

Concentration: 3.182 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

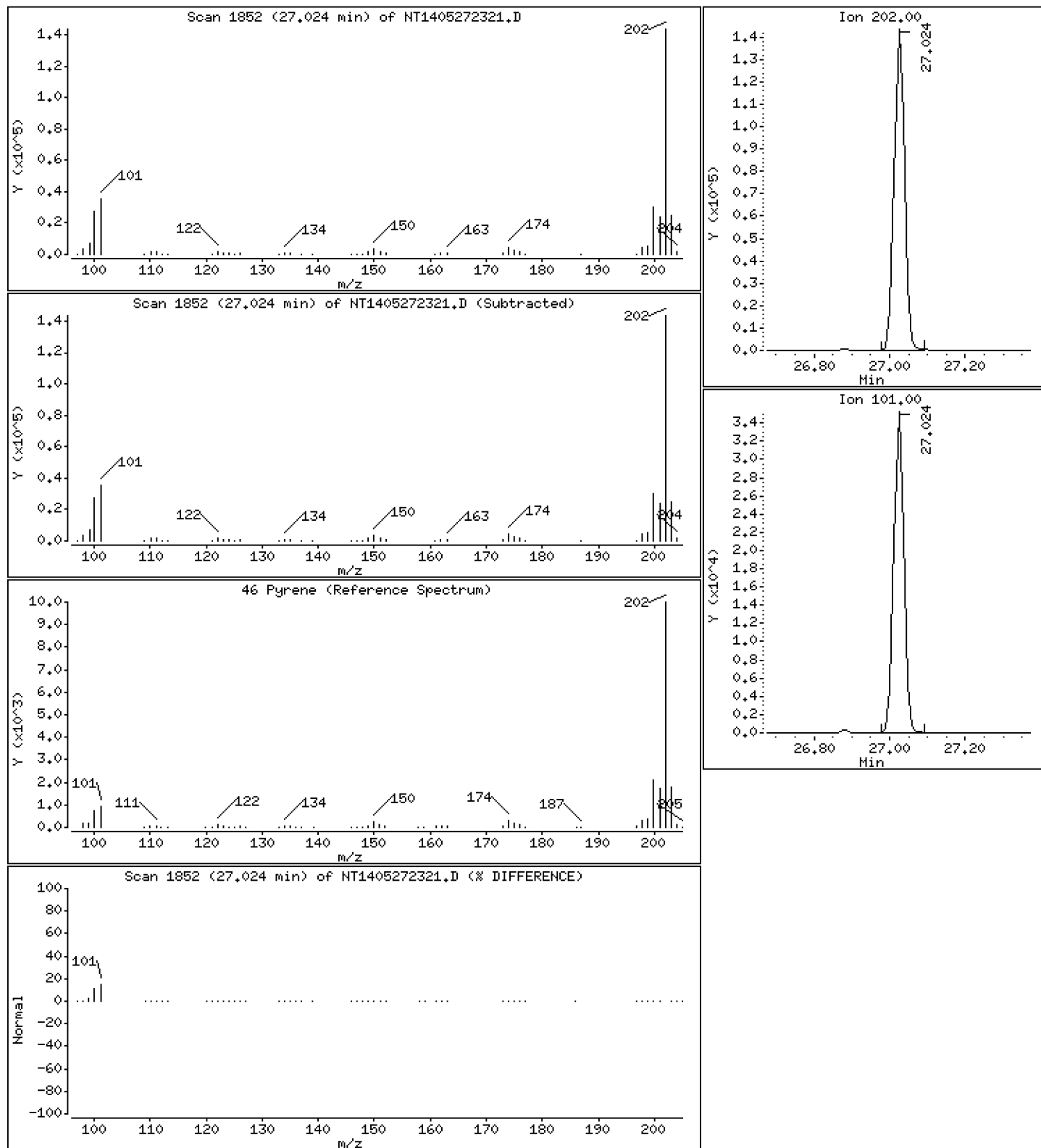
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

46 Pyrene

Concentration: 3.171 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

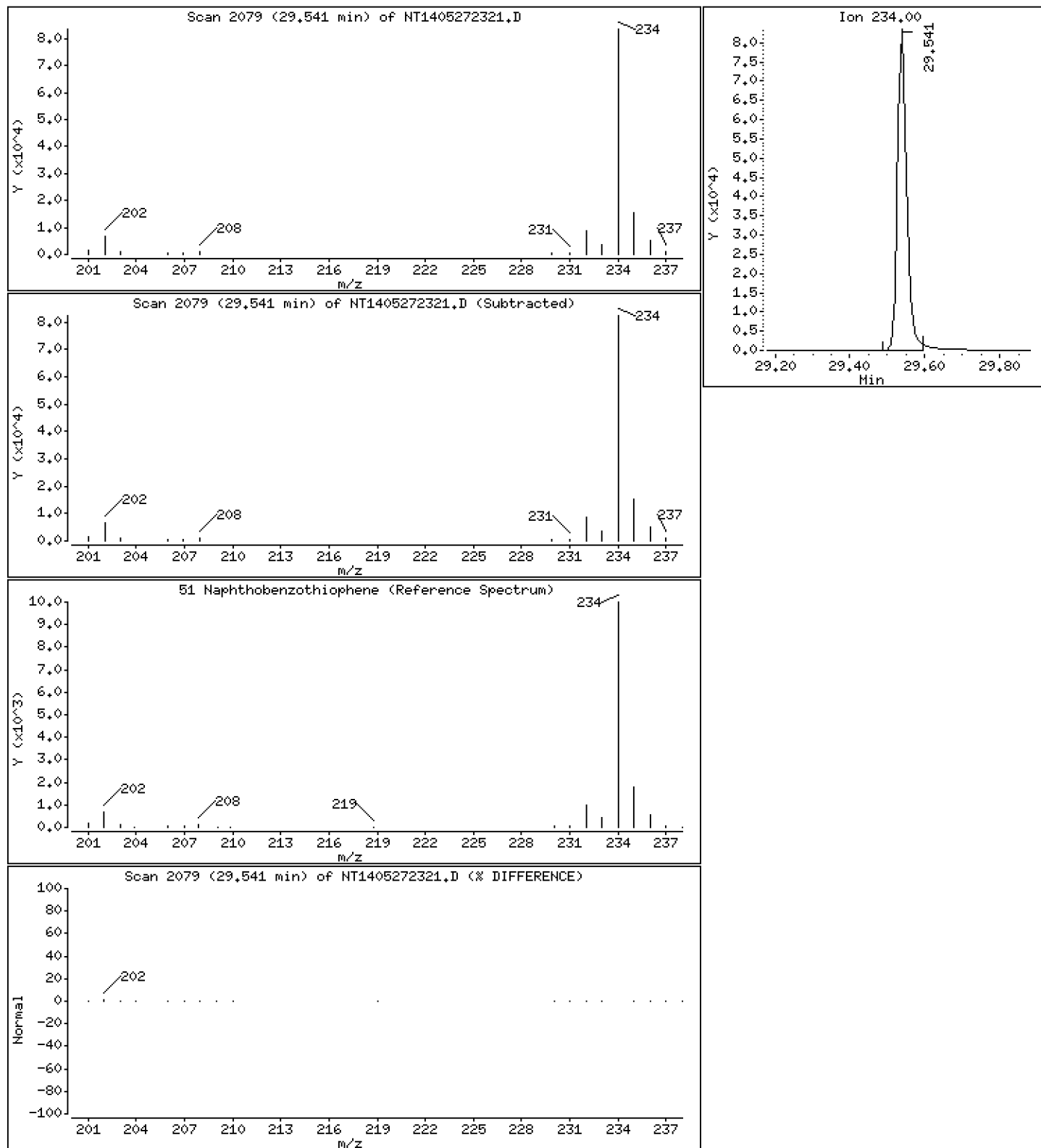
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

51 Naphthobenzothiophene

Concentration: 2,715 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

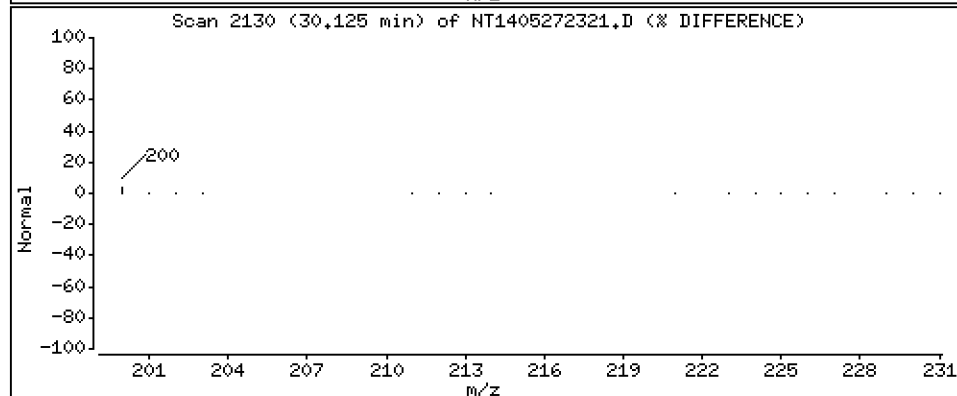
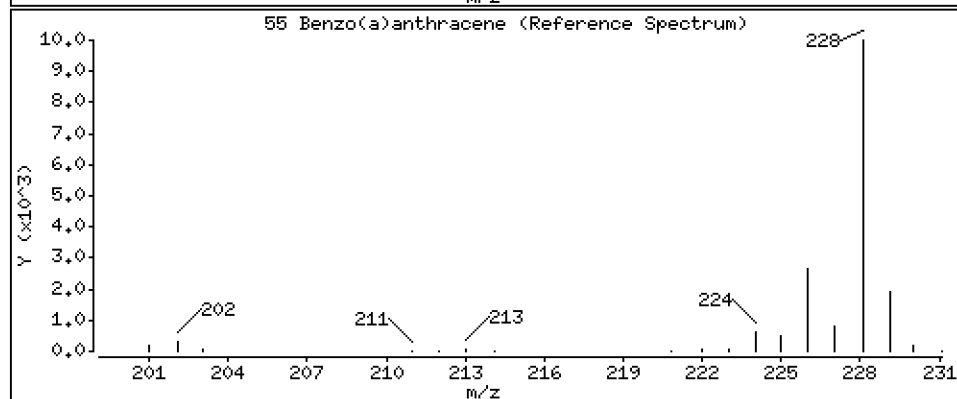
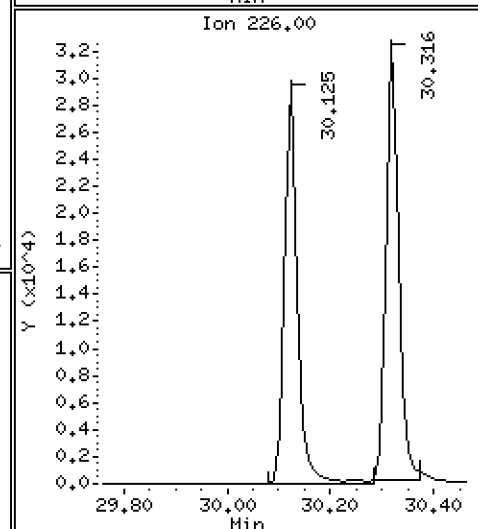
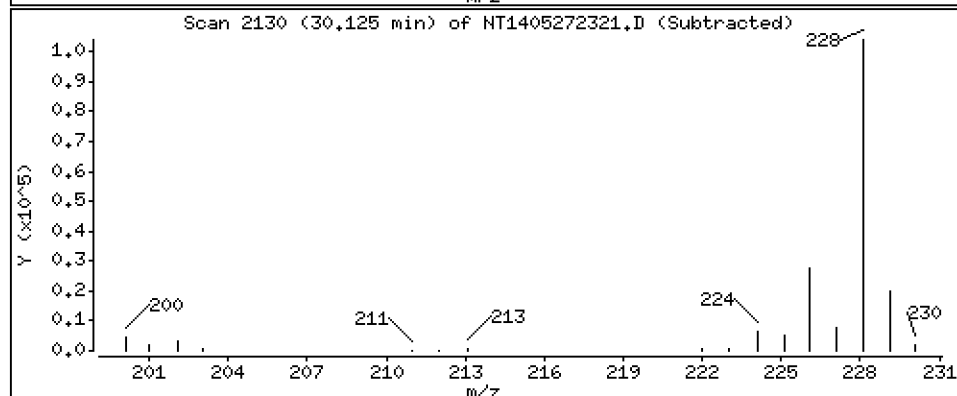
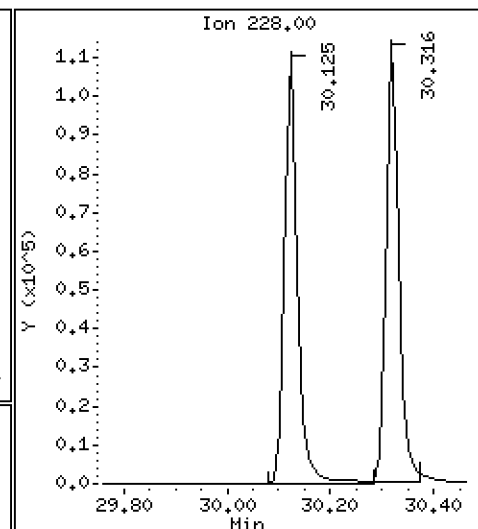
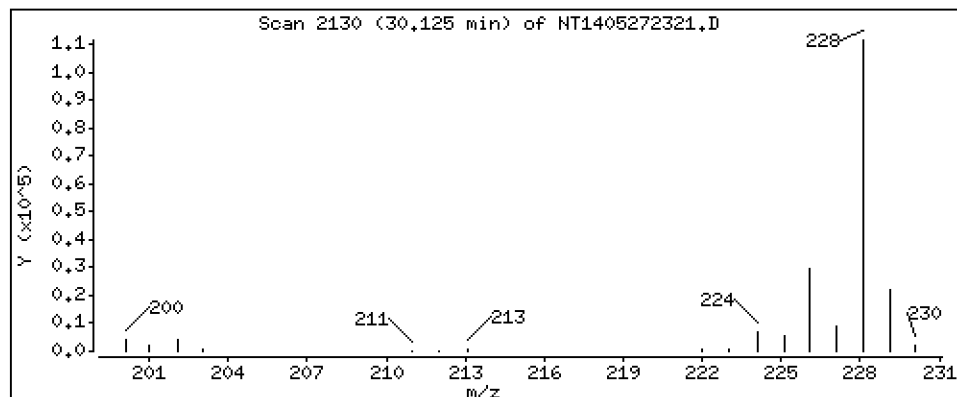
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

55 Benzo(a)anthracene

Concentration: 3.008 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

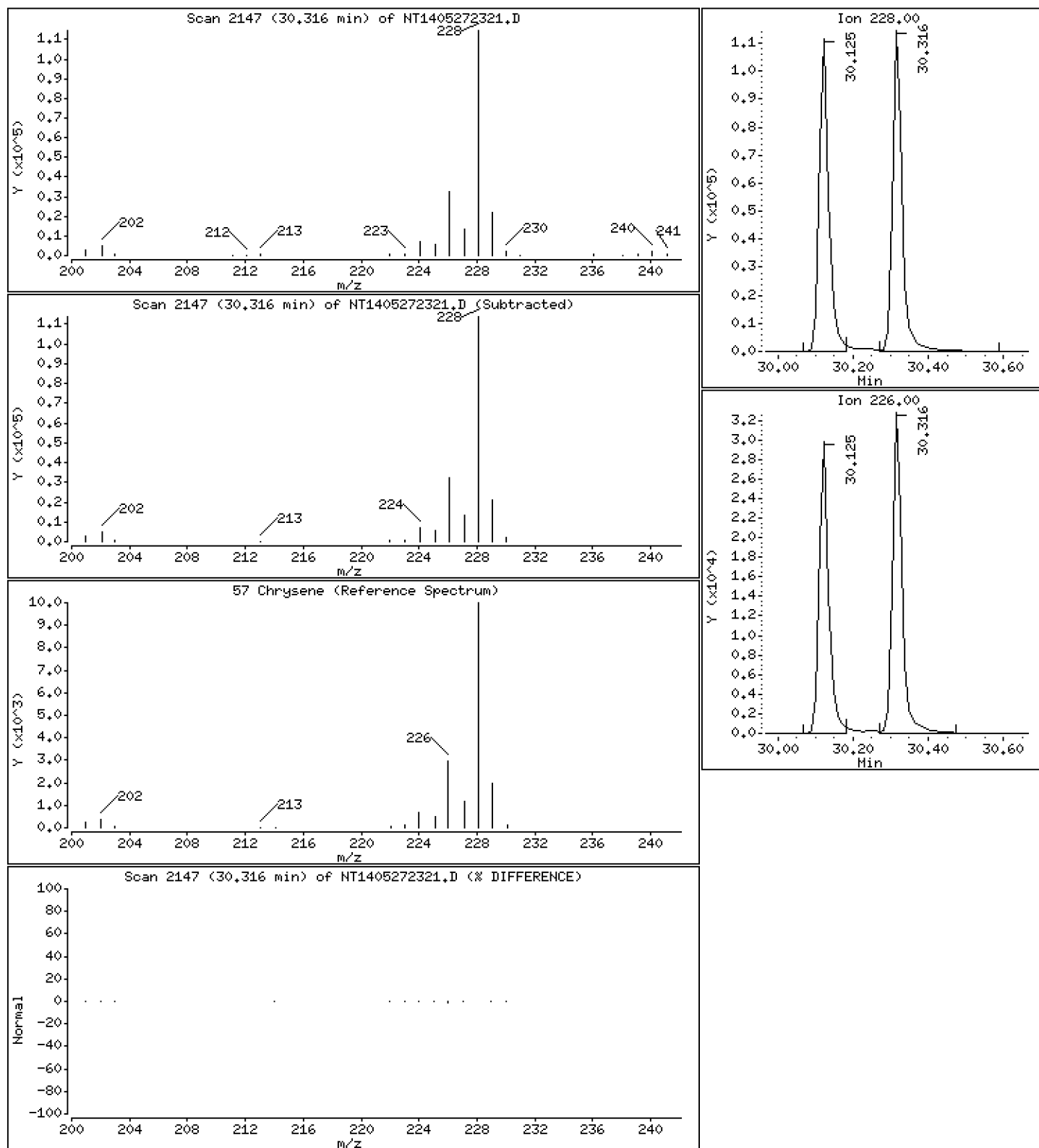
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

57 Chrysene

Concentration: 3.191 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

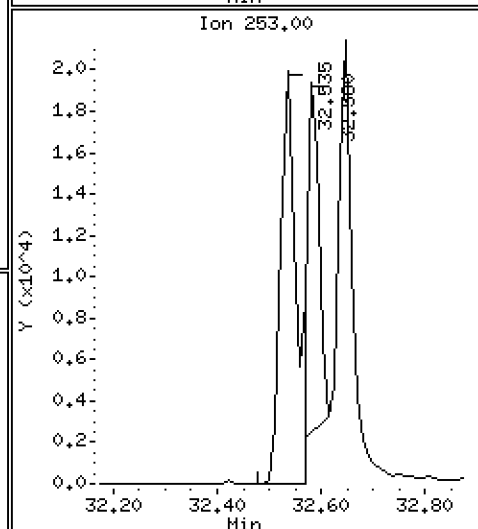
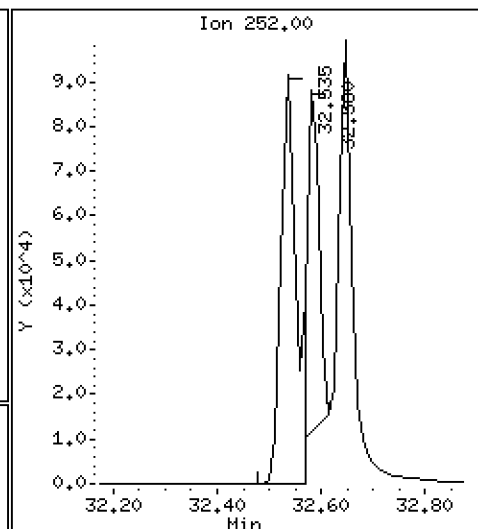
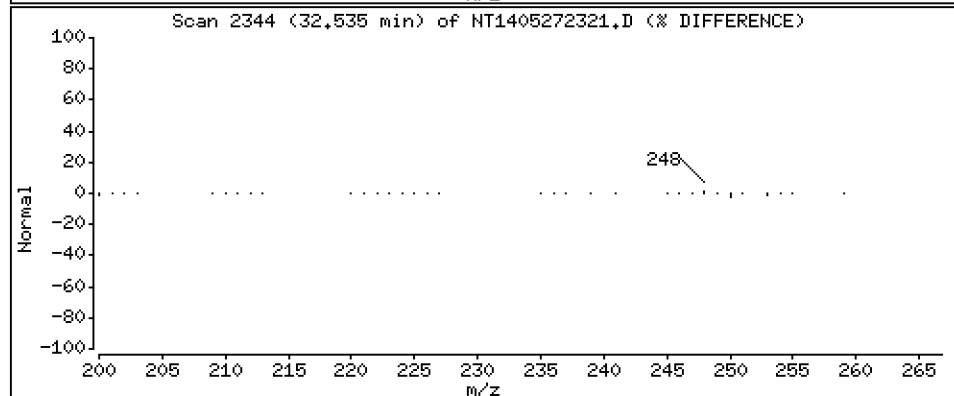
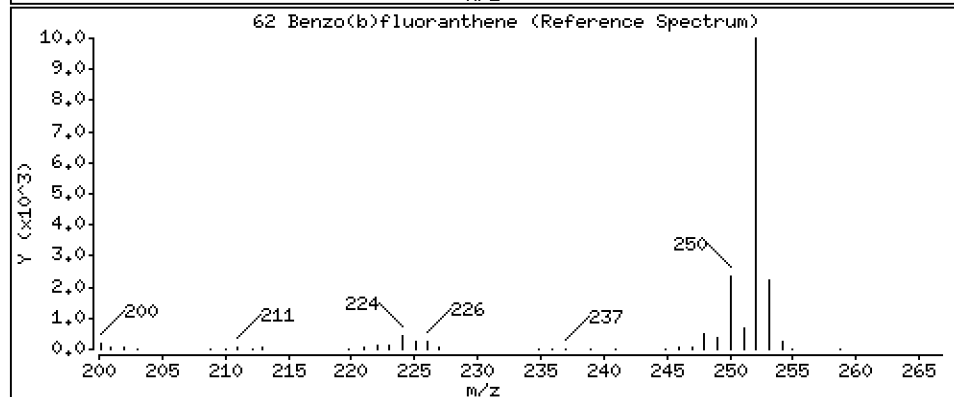
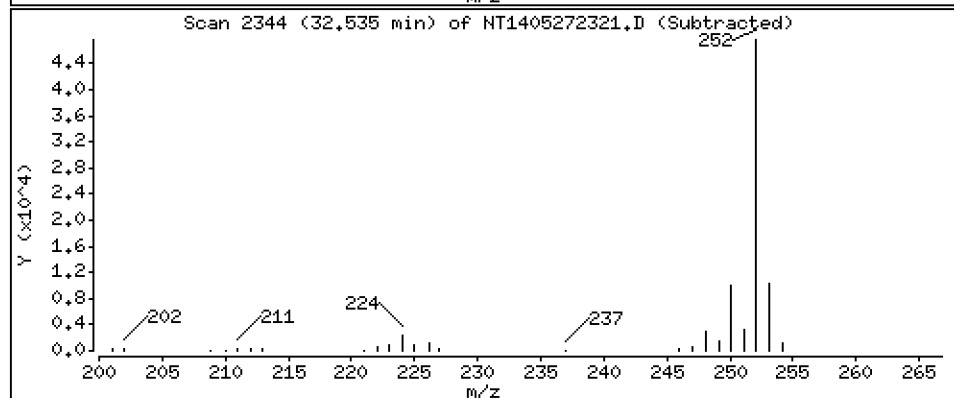
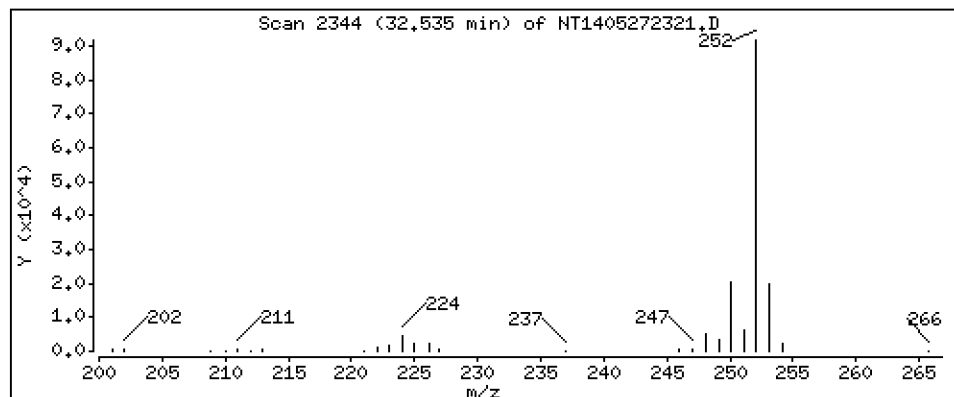
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

62 Benzo(b)fluoranthene

Concentration: 3.045 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

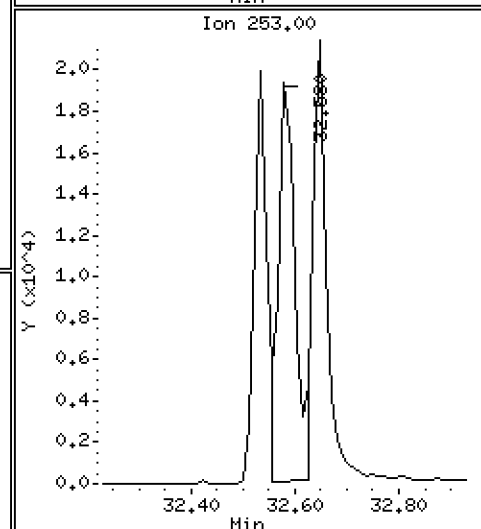
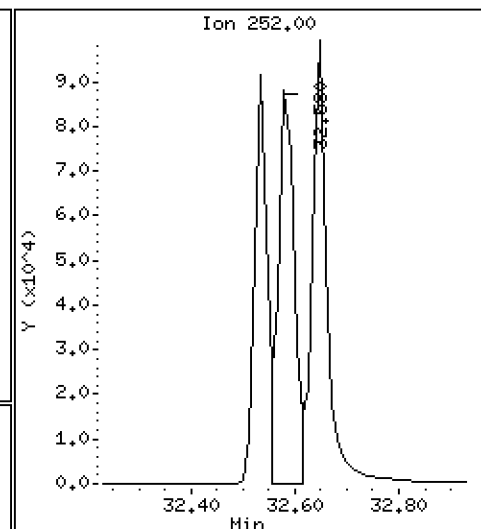
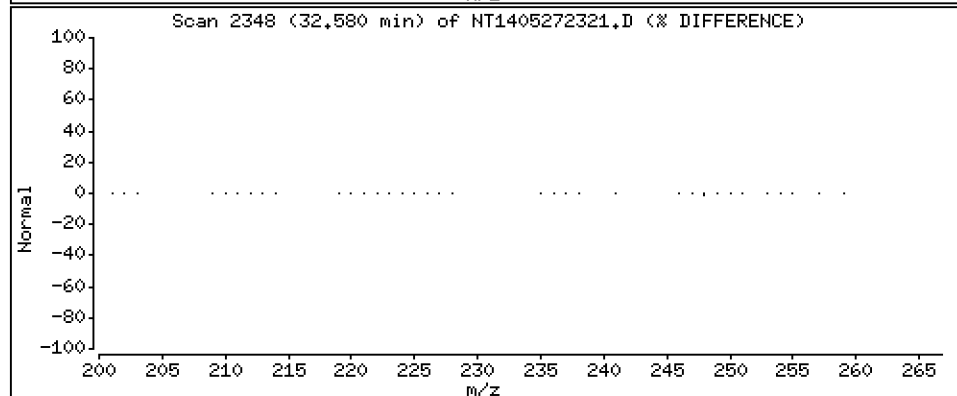
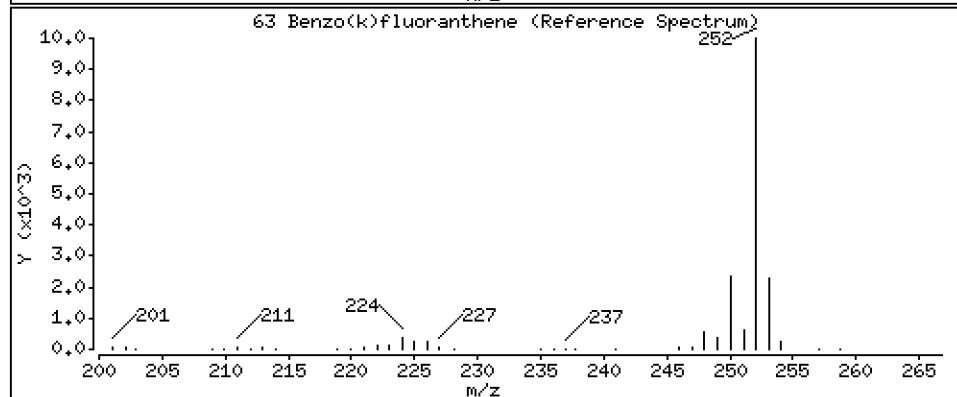
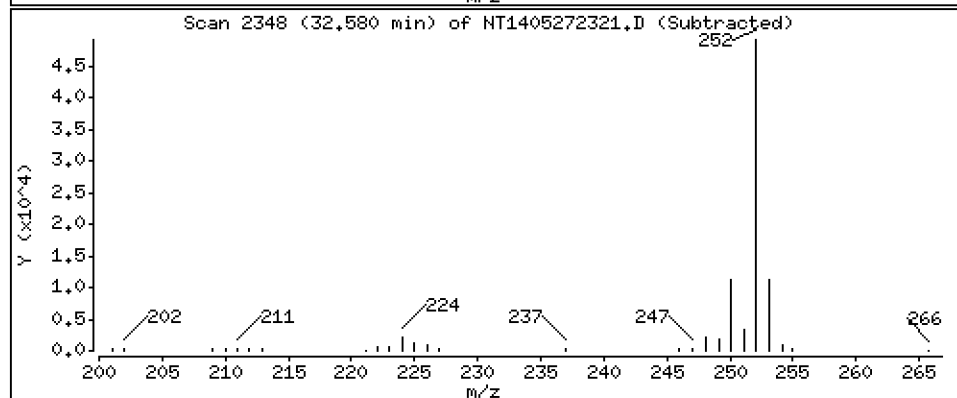
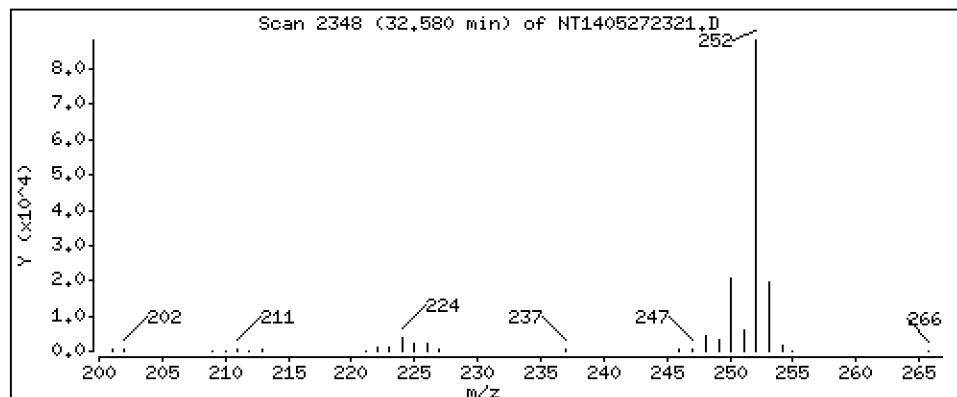
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

63 Benzo(k)fluoranthene

Concentration: 2,697 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

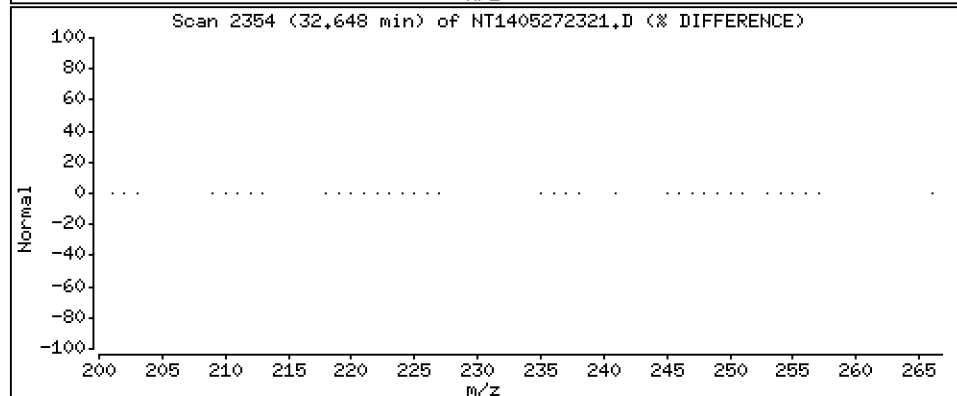
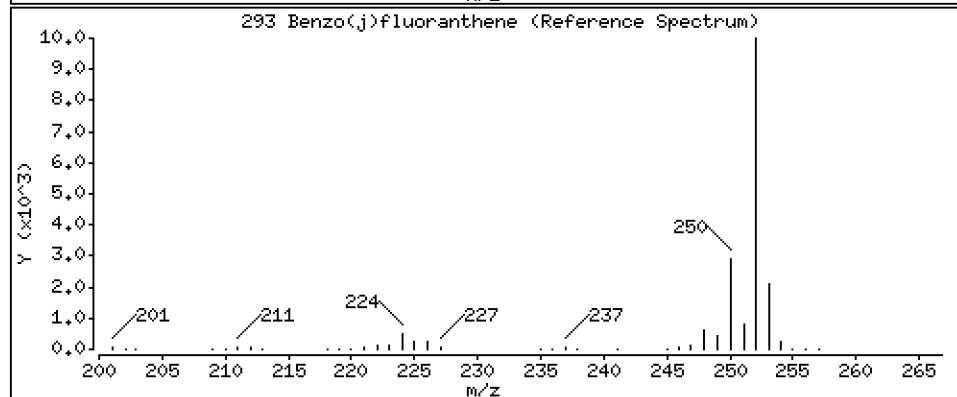
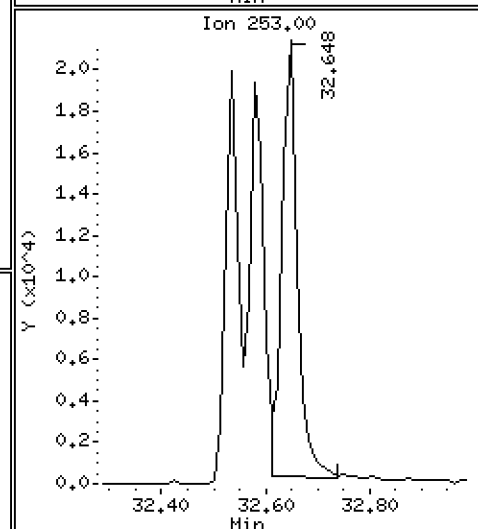
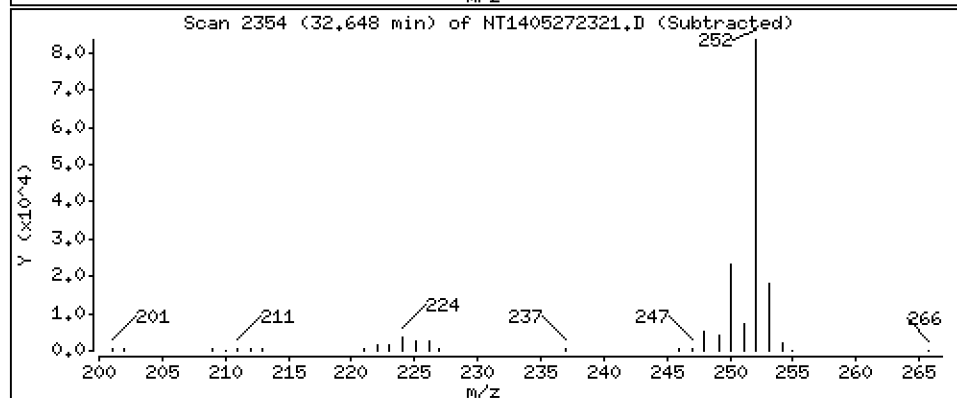
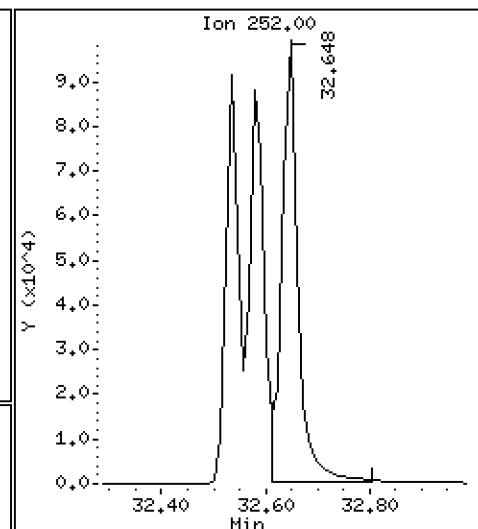
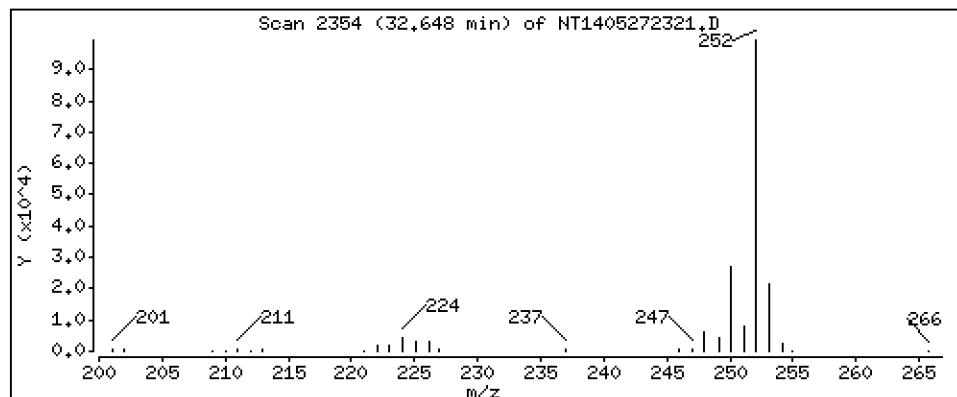
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

293 Benzo(j)fluoranthene

Concentration: 3,496 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

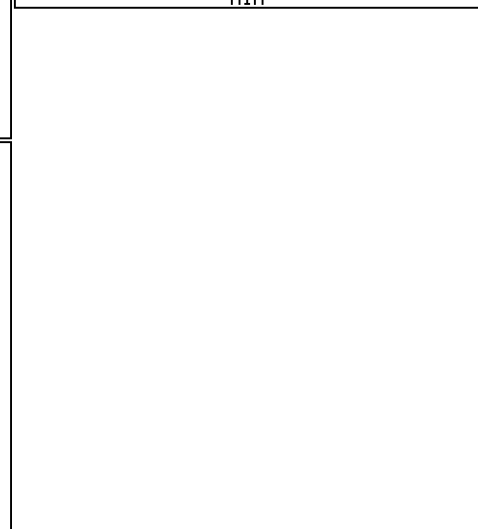
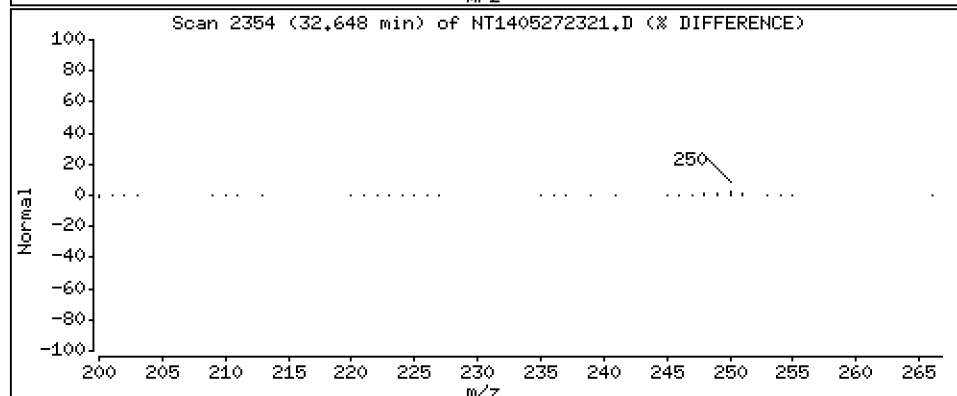
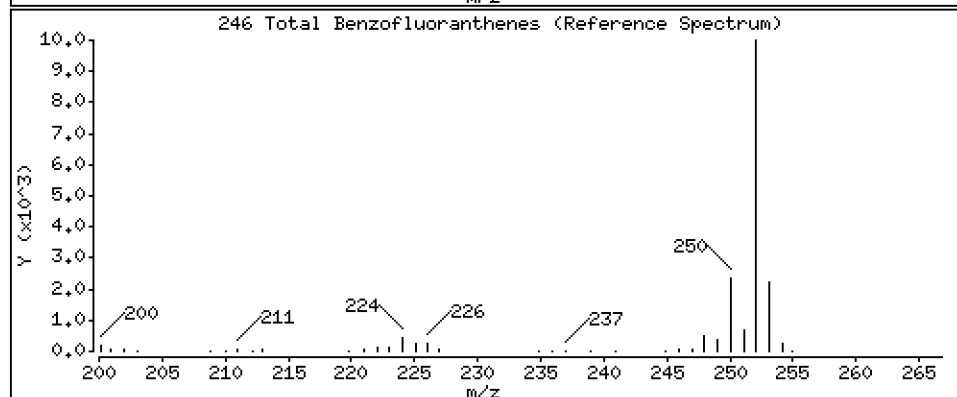
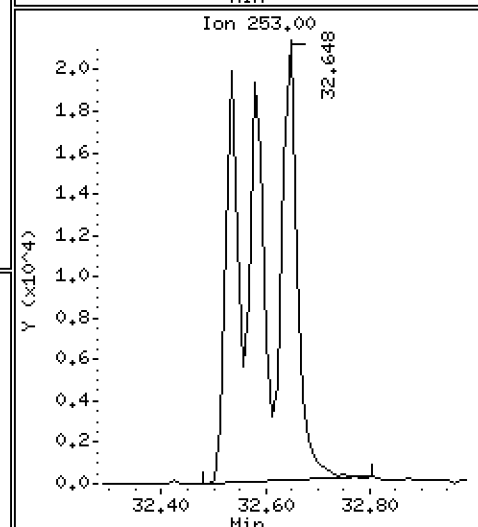
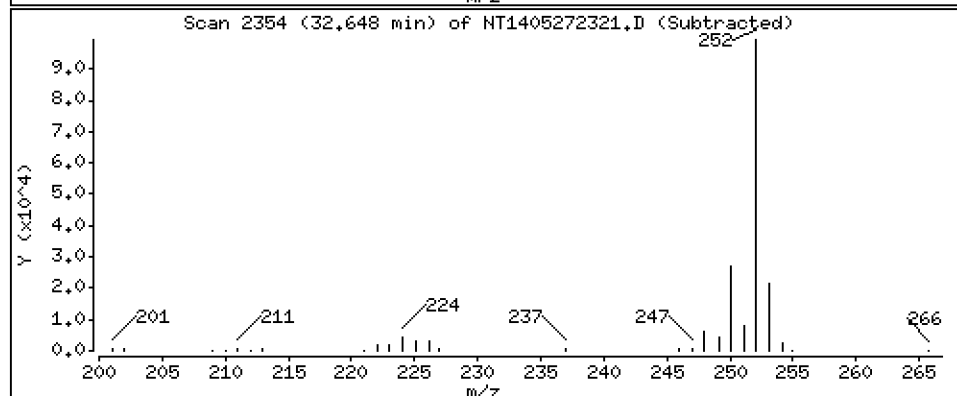
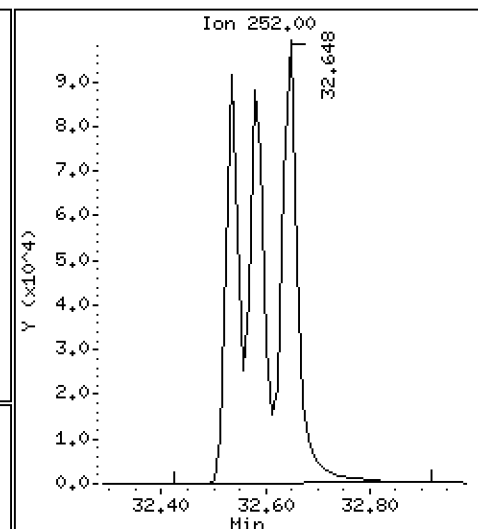
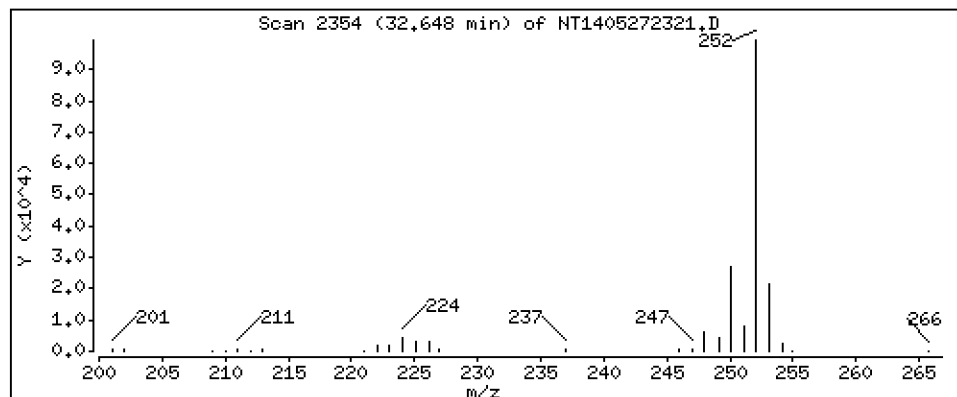
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

246 Total Benzo[fluoranthenes

Concentration: 9.157 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

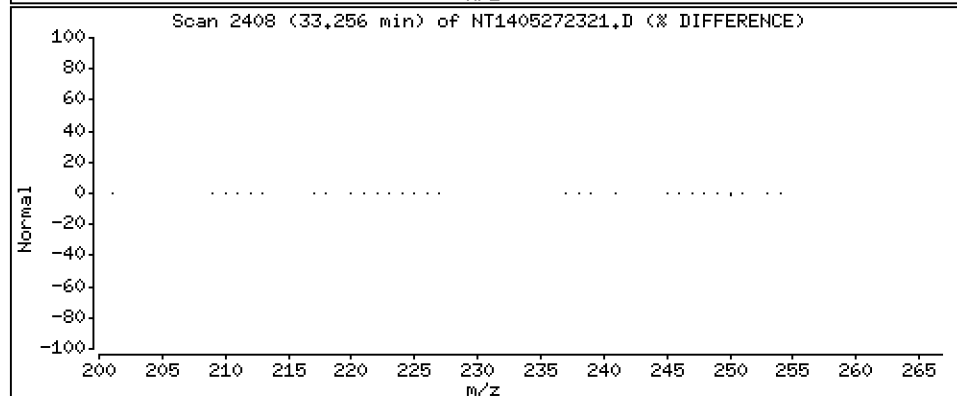
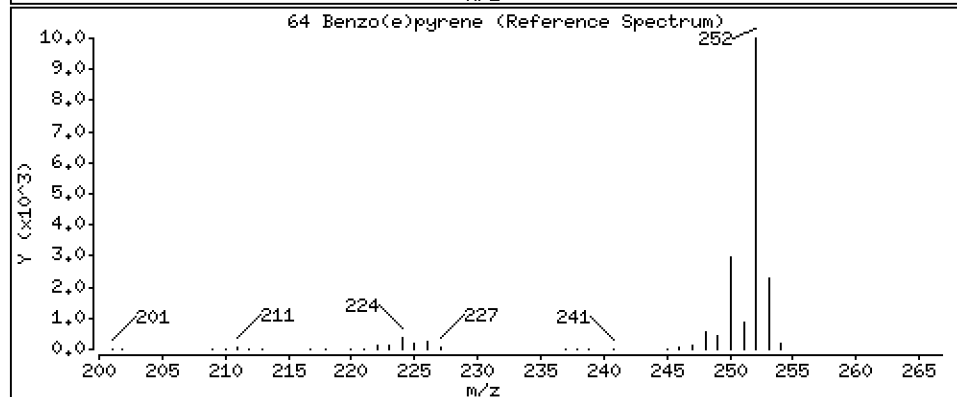
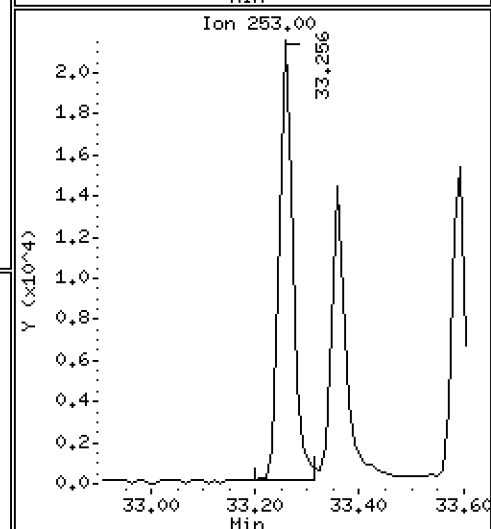
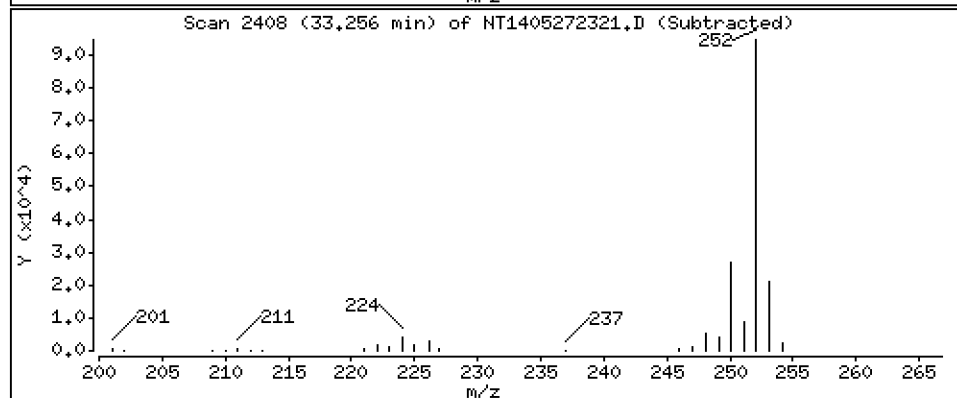
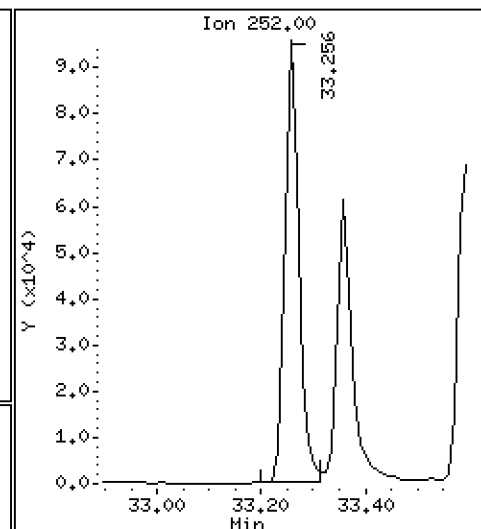
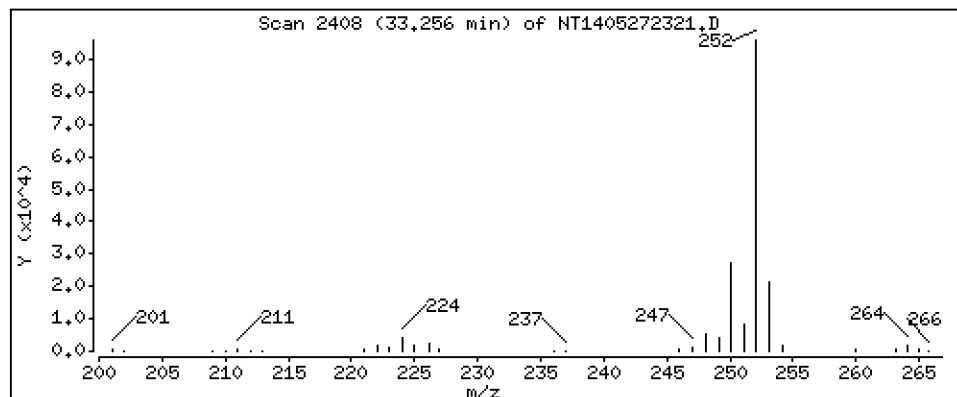
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

64 Benzo(e)pyrene

Concentration: 2.832 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

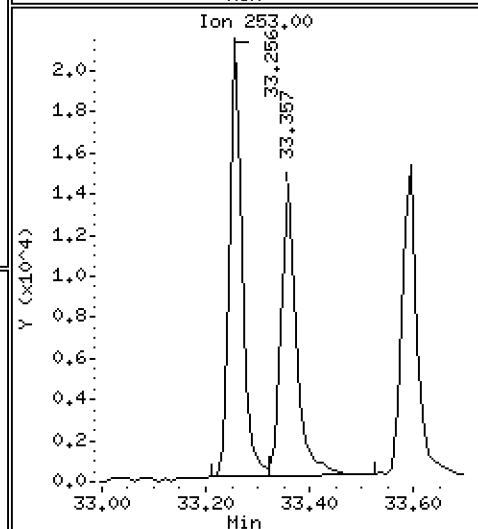
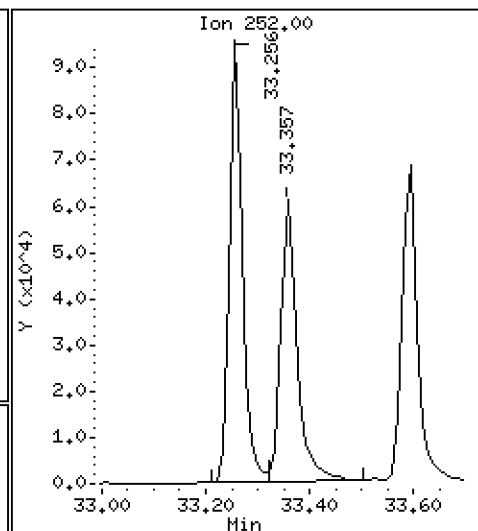
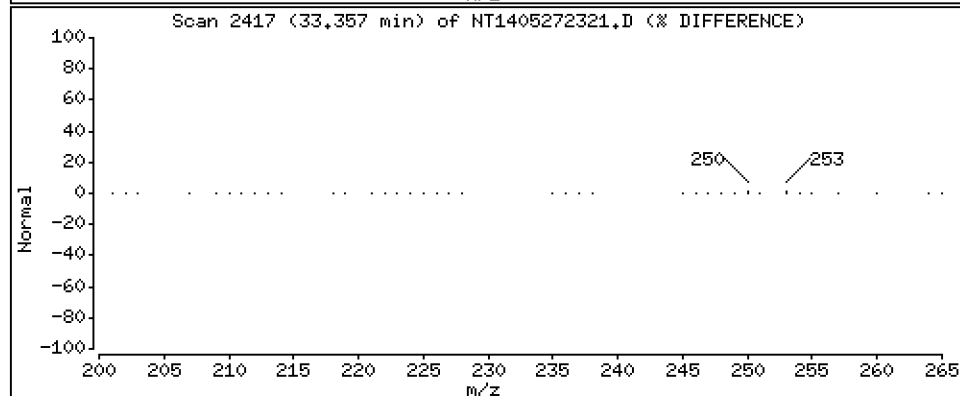
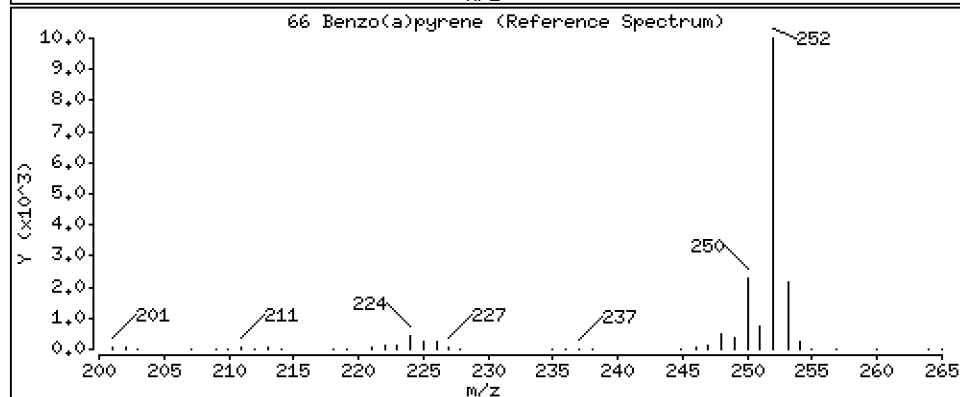
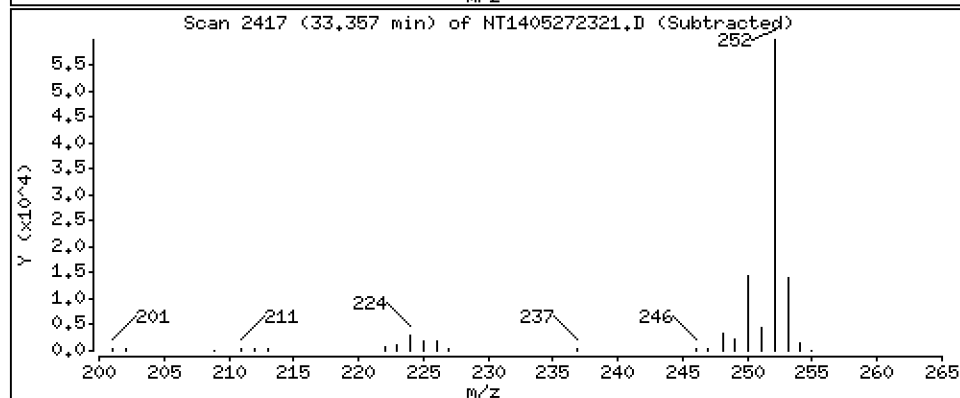
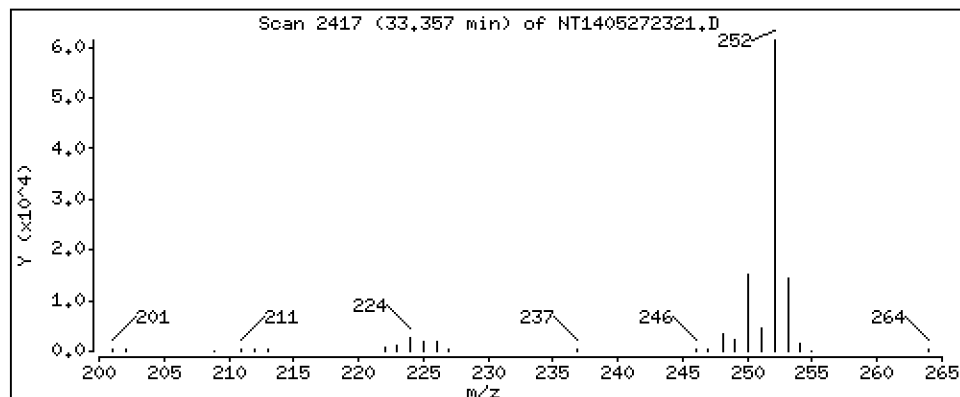
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

66 Benzo(a)pyrene

Concentration: 2.497 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

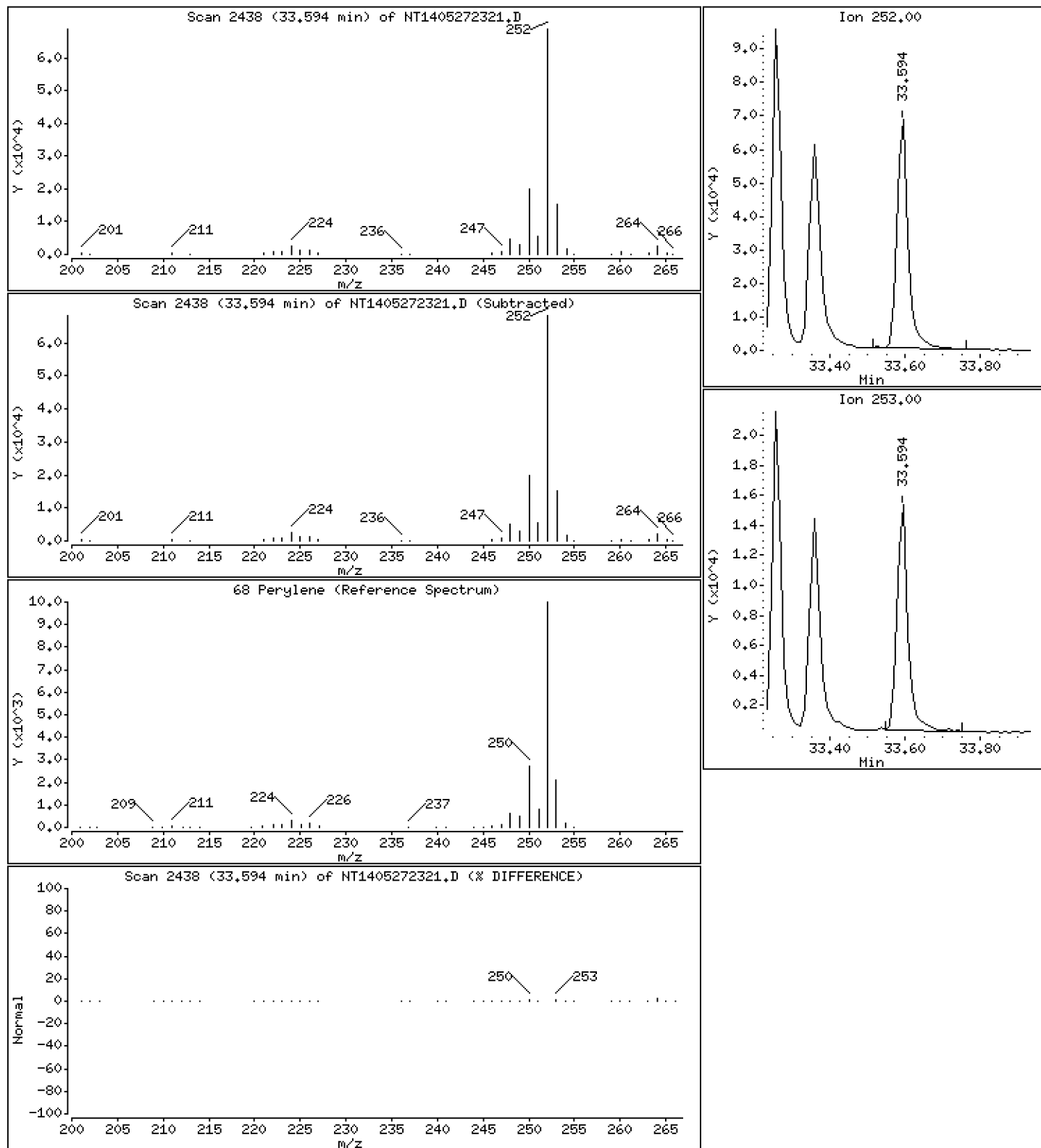
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

68 Perylene

Concentration: 2.447 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

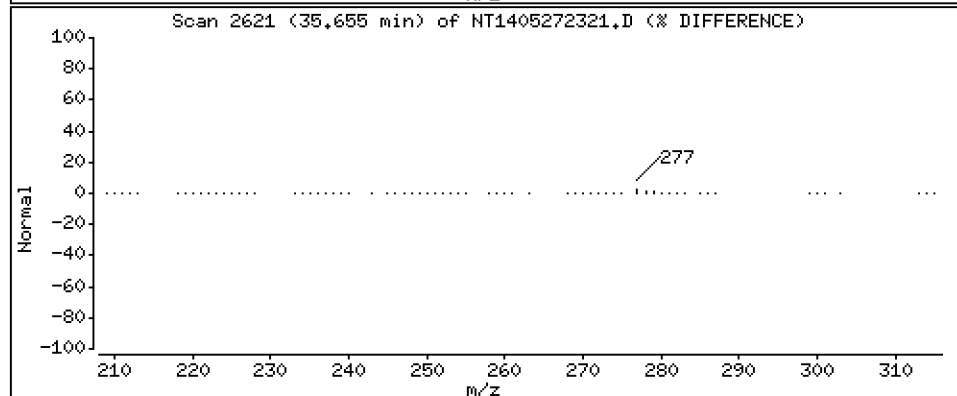
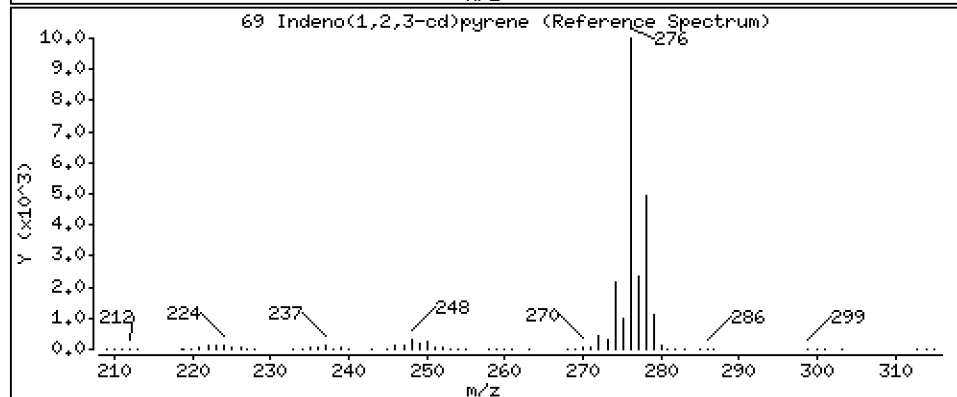
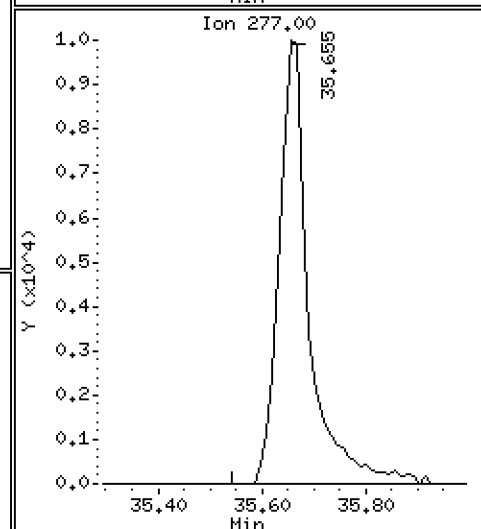
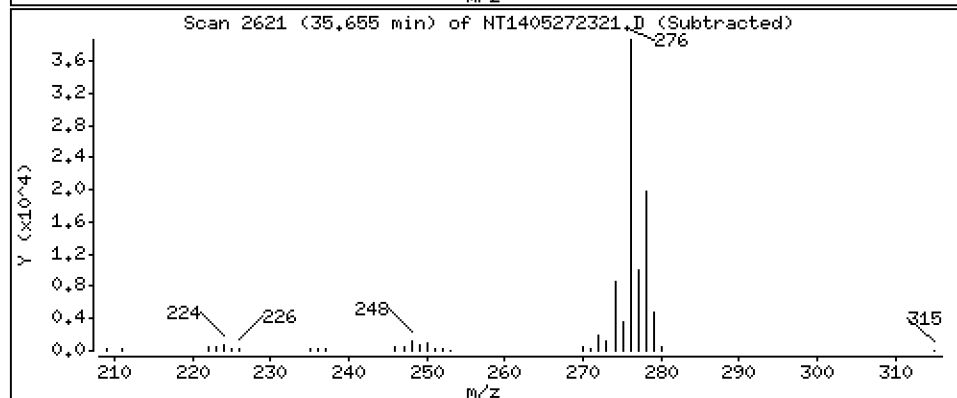
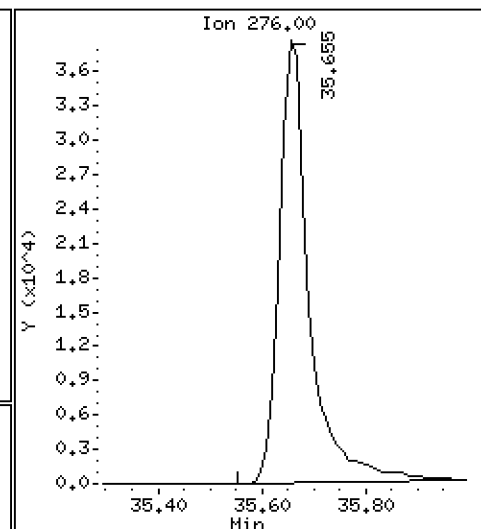
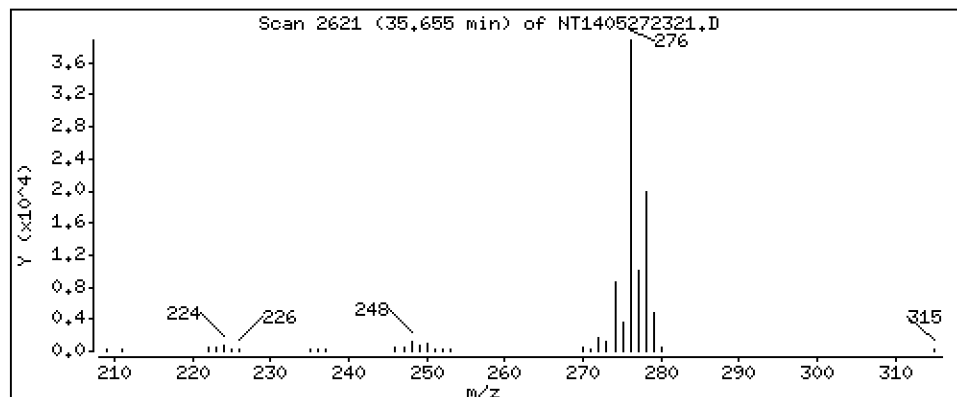
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

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

Concentration: 2.306 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

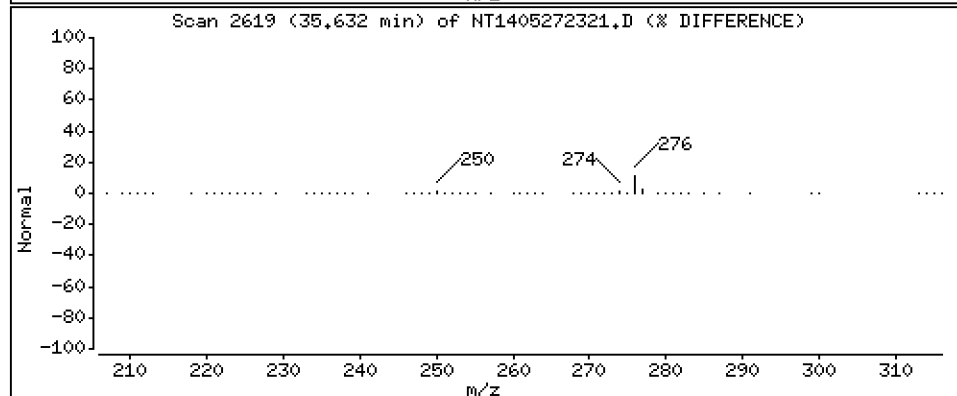
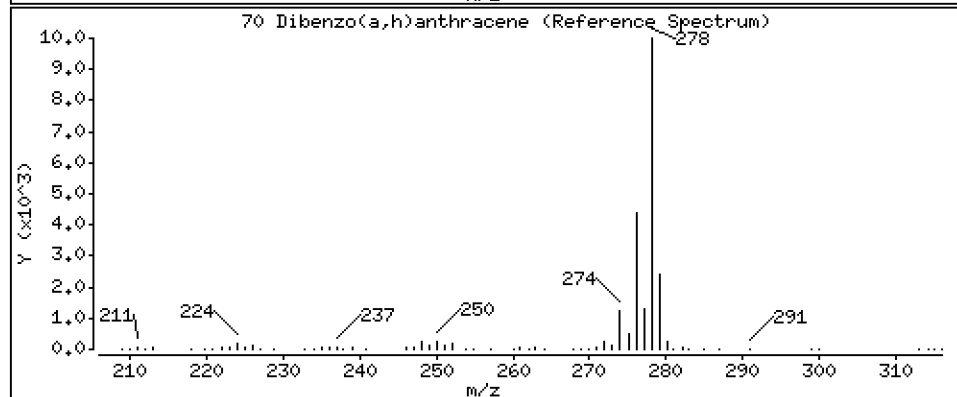
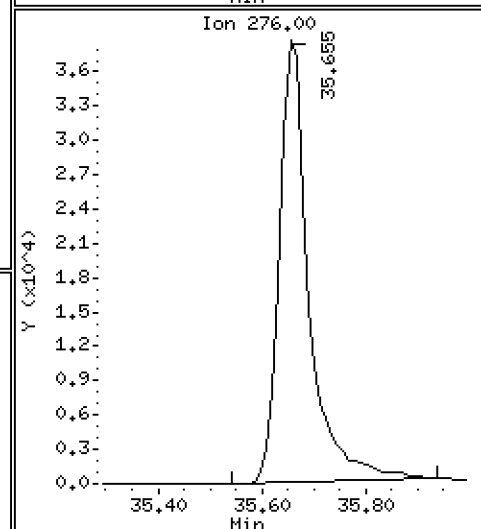
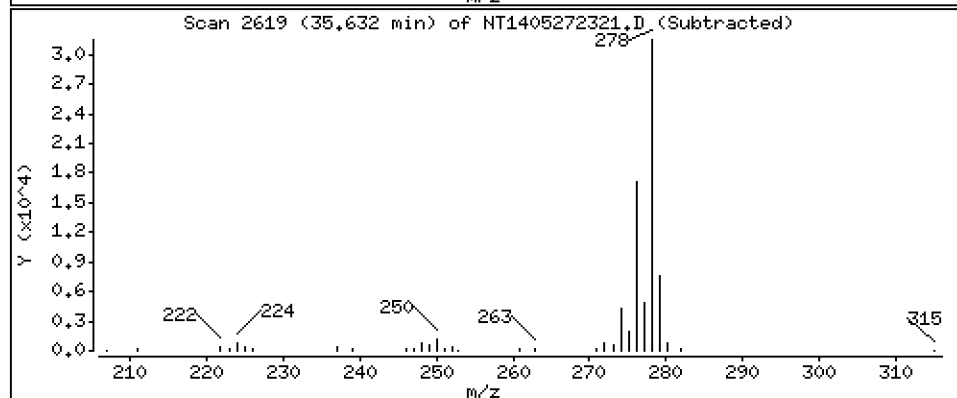
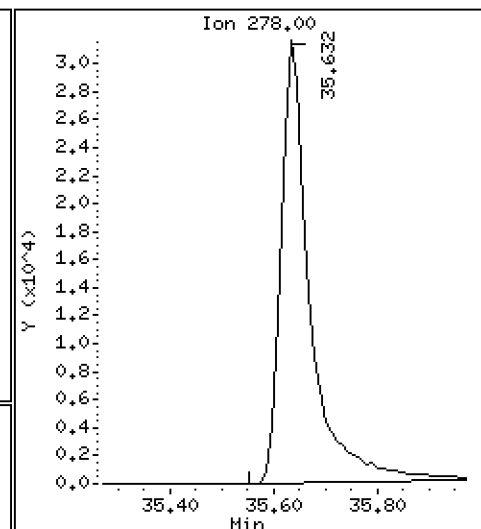
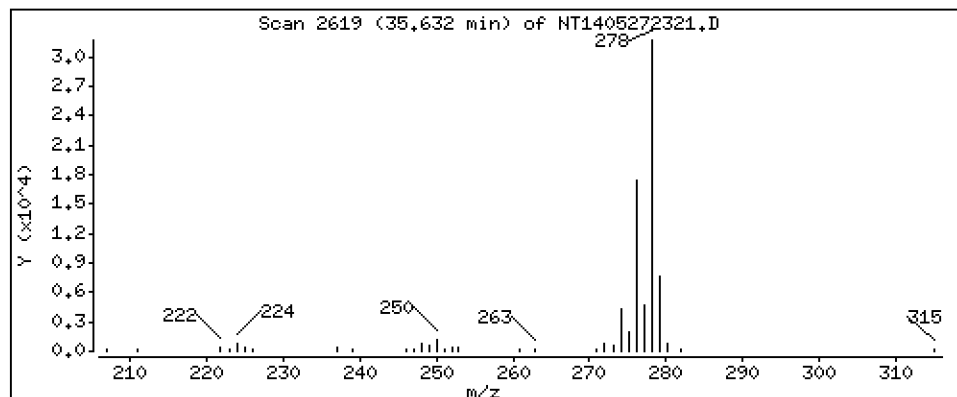
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

70 Dibenzo(a,h)anthracene

Concentration: 2.261 ug/mL



Date : 28-MAY-2023 02:21

Client ID:

Instrument: nt14.i

Sample Info: BLD0616-BS1

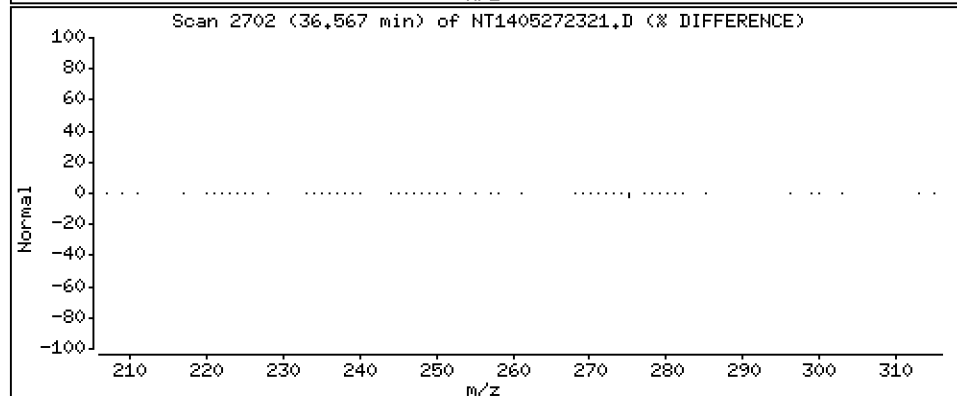
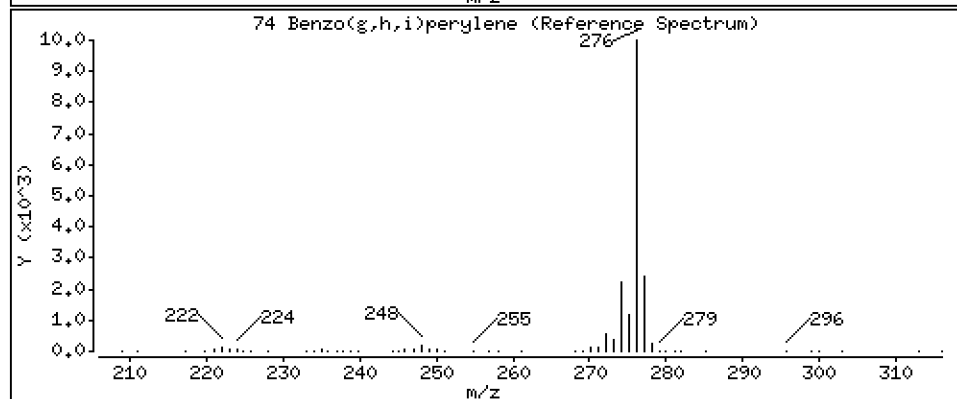
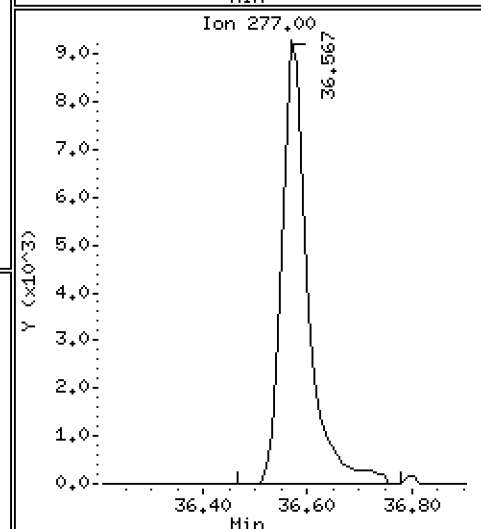
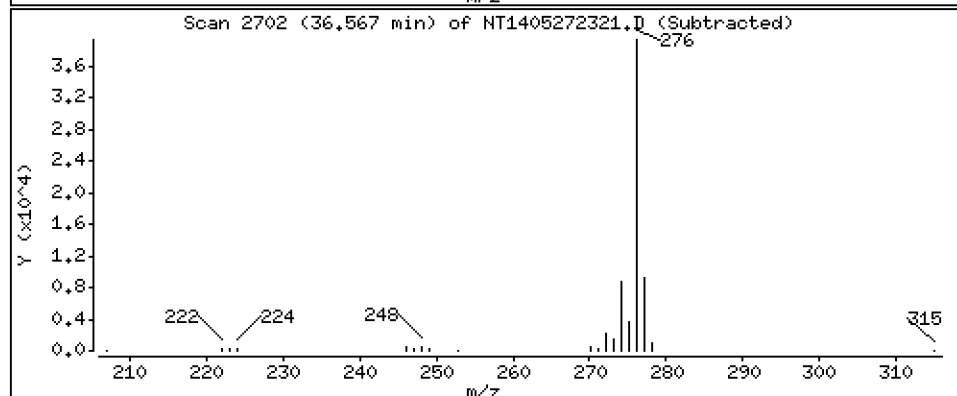
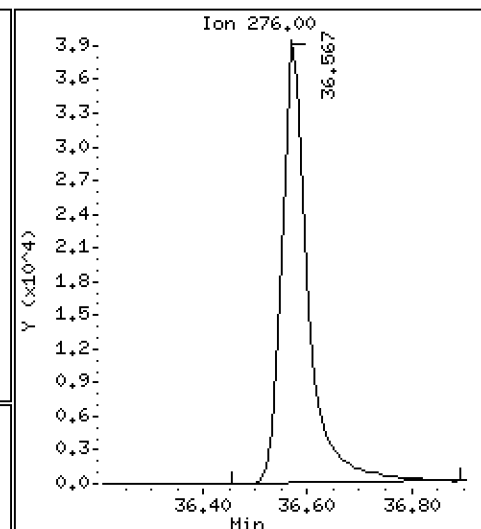
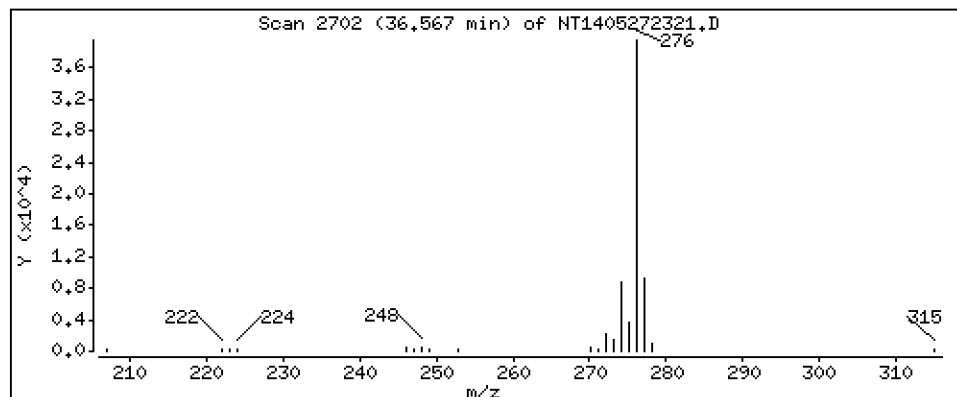
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

74 Benzo(g,h,i)perylene

Concentration: 2.729 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230527.b\NT1405272321.D
Lab Smp Id: BLD0616-BS1
Inj Date : 28-MAY-2023 02:21
Operator : VTS
Smp Info : BLD0616-BS1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230527.b\ALKYLPNA.m
Meth Date : 30-May-2023 16:47 deenayd Quant Type: ISTD
Cal Date : 05-MAY-2023 15:12 Cal File: NT1423050507.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: DEENAY-201905

Inst ID: nt14.i

Compound Sublist: TARGETS.sub

Compounds	QUANT SIG							CONCENTRATIONS	
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
							(ug/mL)	(ug/mL)	
=====	=====	=====	=====	=====	=====	=====	=====	=====	
1 trans-Decalin	138	7.203	7.203	(0.380)	29017	2.41254	2.413		
2 cis-Decalin	138	8.308	8.319	(0.438)	21263	2.43867	2.439		
\$ 6 Naphthalene-d8	136	11.939	11.939	(0.630)	256262	2.28429	2.284 (R)		
7 Naphthalene	128	12.007	12.006	(0.634)	296222	2.40383	2.404		
12 Benzo(b)thiophene	134	12.462	12.451	(0.658)	227658	2.43097	2.431		
16 2-Methylnaphthalene	141	13.847	13.847	(0.731)	150013	2.46146	2.461		
17 1-methylnaphthalene	141	14.298	14.297	(0.754)	151281	2.46512	2.465		
18 Biphenyl	154	15.474	15.473	(0.817)	211219	2.50523	2.505		
19 2,6-Dimethylnaphthalene	156	15.561	15.561	(0.821)	152375	2.53918	2.539		
20 Acenaphthylene	152	17.133	17.133	(0.904)	243763	2.43229	2.432		
\$ 21 Acenaphthene-d10	164	17.419	17.419	(0.919)	120147	2.41661	2.417 (R)		
22 Acenaphthene	153	17.529	17.528	(0.925)	159980	2.58675	2.587		
23 Dibenzofuran	168	17.913	17.913	(0.945)	219164	2.70711	2.707		
24 1,6,7-Trimethylnaphthalene	170	18.133	18.133	(0.957)	146478	2.73855	2.739		
* 25 Fluorene-d10	176	18.950	18.950	(1.000)	112279	2.00000			
26 Fluorene	166	19.064	19.064	(1.006)	173702	2.67776	2.678		
30 Dibenzothiophene	184	21.982	21.981	(1.160)	229079	2.88195	2.882		
\$ 35 Phenanthrene-d10	188	22.295	22.294	(0.995)	208864	2.78759	2.788 (R)		
36 Phenanthrene	178	22.376	22.375	(0.998)	256475	2.93525	2.935		
* 250 Anthracene-d10	188	22.410	22.410	(1.000)	131305	2.00000			
37 Anthracene	178	22.480	22.468	(1.003)	217868	2.71626	2.716		
42 Carbazole	167	23.755	23.755	(1.060)	228962	3.03658	3.037		
43 1-Methylphenanthrene	192	24.207	24.207	(1.080)	173528	3.07947	3.079		
44 Fluoranthene	202	26.189	26.177	(1.169)	253517	3.18196	3.182		
46 Pyrene	202	27.023	27.023	(1.206)	264400	3.17106	3.171		
51 Naphthobenzothiophene	234	29.540	29.529	(1.318)	149320	2.71532	2.715		
55 Benzo(a)anthracene	228	30.124	30.113	(0.907)	197824	3.00819	3.008		
\$ 56 Chrysene-d12	240	30.248	30.237	(0.911)	131004	2.87836	2.878 (R)		
57 Chrysene	228	30.316	30.316	(0.913)	205255	3.19089	3.191		
62 Benzo(b)fluoranthene	252	32.535	32.523	(0.980)	186806	3.04486	3.045		
63 Benzo(k)fluoranthene	252	32.580	32.579	(0.981)	185897	2.69727	2.697 (M)		
293 Benzo(j)fluoranthene	252	32.647	32.636	(0.983)	201277	3.49576	3.496 (M)		
246 Total Benzofluoranthenes	252	32.647	32.636	(0.983)	522793	9.15748	9.157 (M)		

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN	FINAL
	MASS					(ug/mL)	(ug/mL)
=====	=====	=====	=====	=====	=====	=====	=====
* 251 Benzo(e)pyrene-d12	264	33.199	33.188	(1.000)	83889	2.00000	
64 Benzo(e)pyrene	252	33.255	33.244	(1.002)	168032	2.83173	2.832
66 Benzo(a)pyrene	252	33.357	33.345	(1.005)	125350	2.49745	2.497
\$ 67 Perylene-d12	264	33.537	33.526	(1.010)	101451	2.31058	2.311 (R)
68 Perylene	252	33.593	33.582	(1.012)	134830	2.44736	2.447 (M)
69 Indeno(1,2,3-cd)pyrene	276	35.655	35.643	(1.074)	150811	2.30636	2.306 (M)
70 Dibenzo(a,h)anthracene	278	35.632	35.621	(1.073)	121461	2.26058	2.261 (M)
74 Benzo(g,h,i)perylene	276	36.567	36.555	(1.101)	134950	2.72852	2.729 (M)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
 M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 27-MAY-2023
 Lab File ID: NT1405272321.D Calibration Time: 13:31
 Lab Smp Id: BLD0616-BS1
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230527.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	136933	68467	273866	112279	-18.00
250 Anthracene-d10	167500	83750	335000	131305	-21.61
251 Benzo(e)pyrene-d1	94374	47187	188748	83889	-11.11

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	18.95	18.45	19.45	18.95	0.00
250 Anthracene-d10	22.41	21.91	22.91	22.41	0.00
251 Benzo(e)pyrene-d1	33.19	32.69	33.69	33.20	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 - NT1405272321.D

Lab ID: BLD0616-BS1

nt14.i, 20230527.b\ALKYLPNA.m, 28-MAY-2023 02:21

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

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

NONE

RRT check based on Ccal File: NT1405272305.D

On Column LOD for nt14.i, 20230527.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

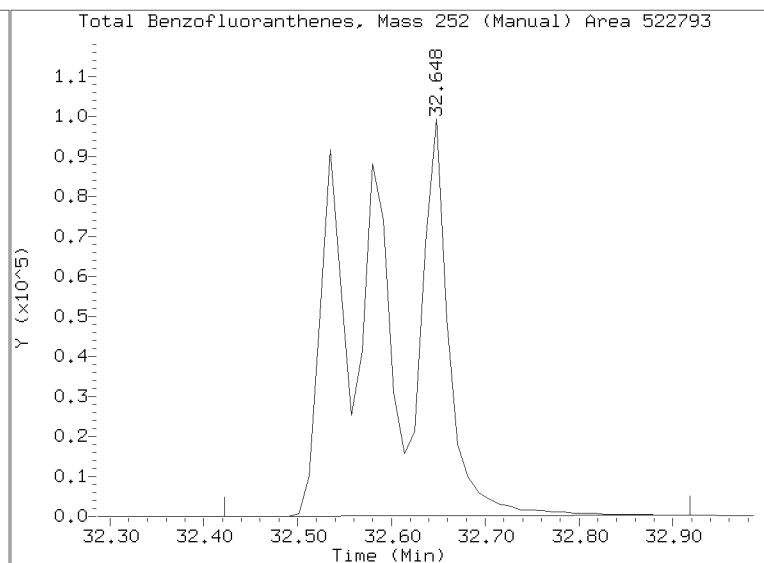
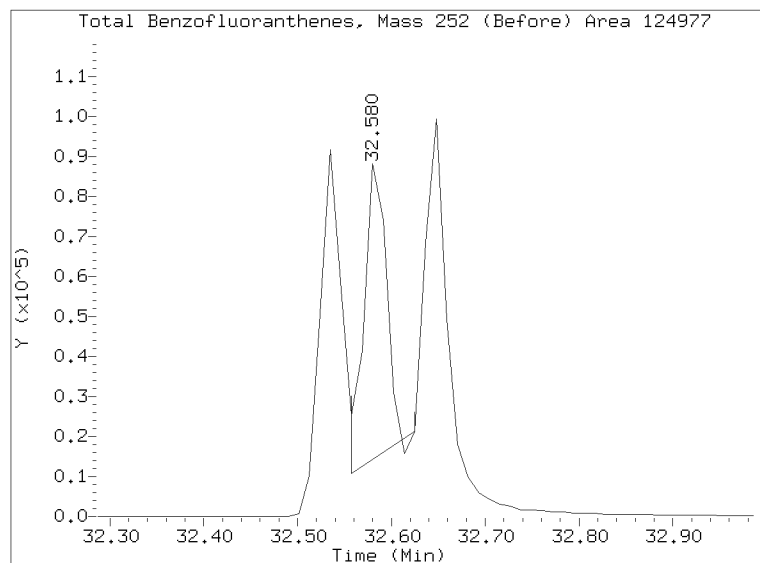
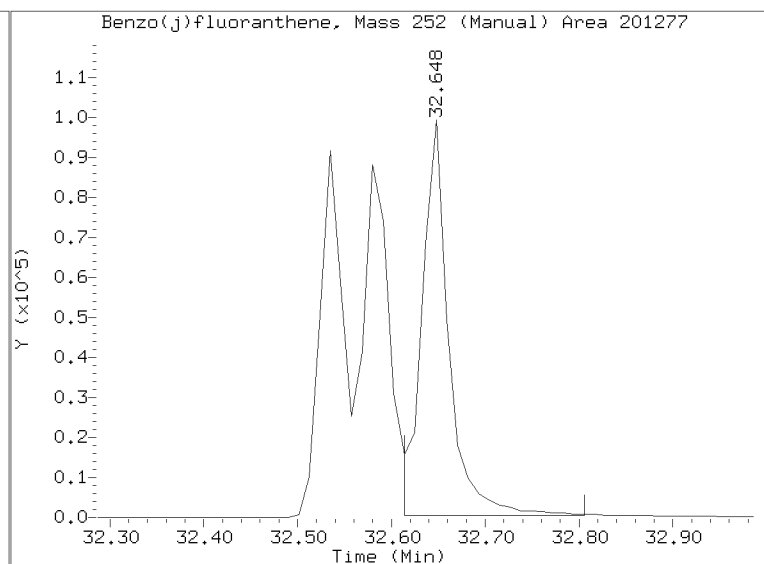
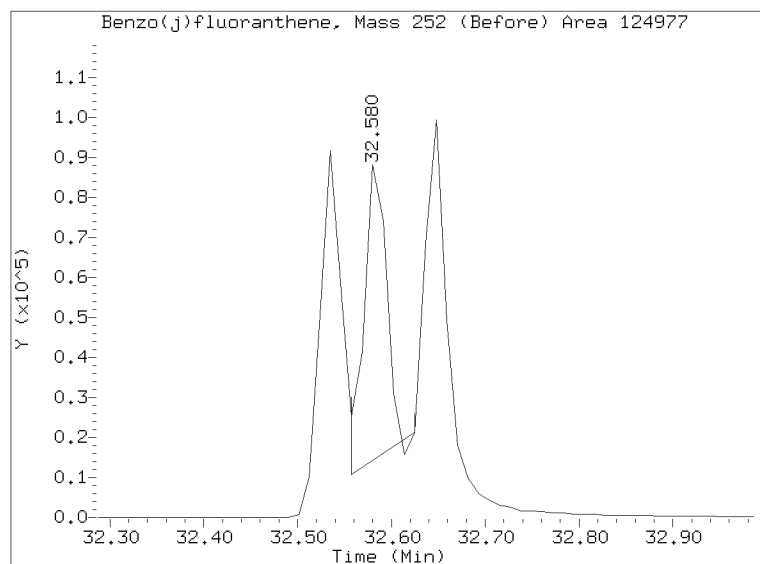
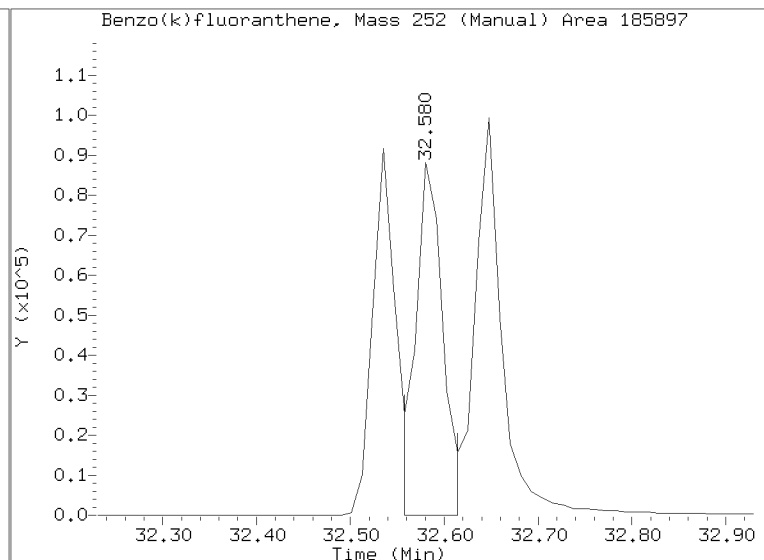
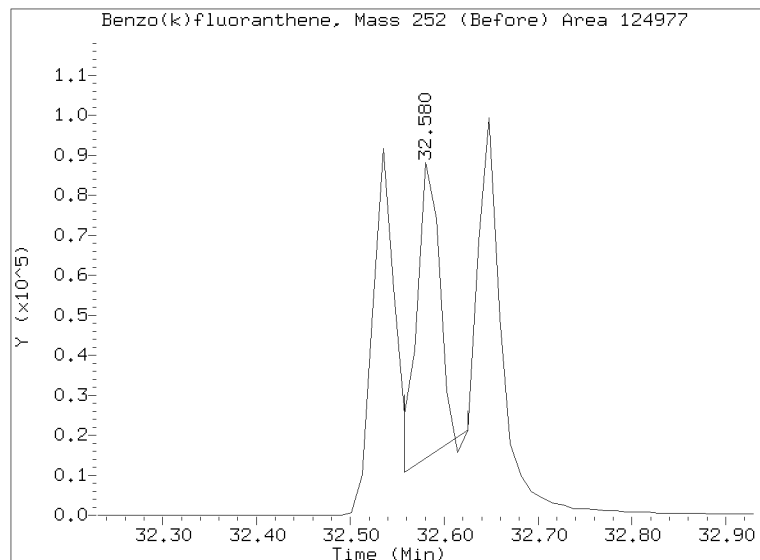
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230527.b/NT1405272321.D

Injection Date: 28-MAY-2023 02:21

Lab ID:BLD0616-BS1 Client ID:

Report Date: 05/30/2023 16:49



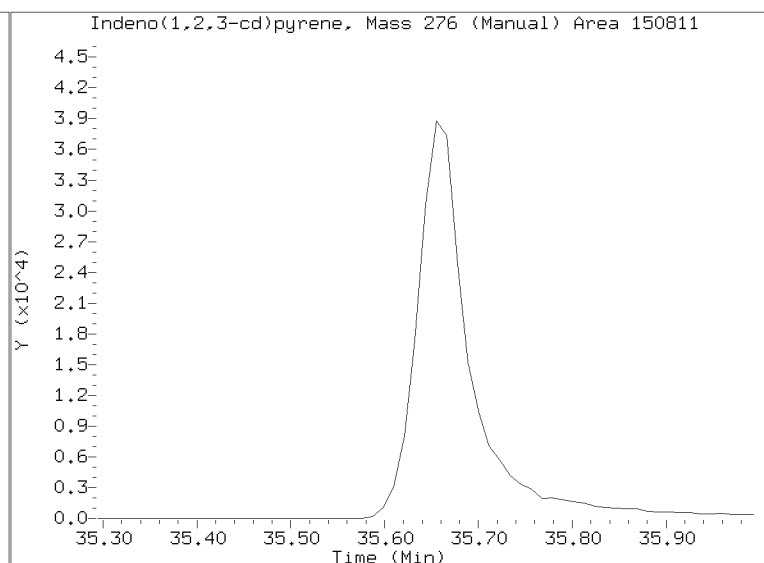
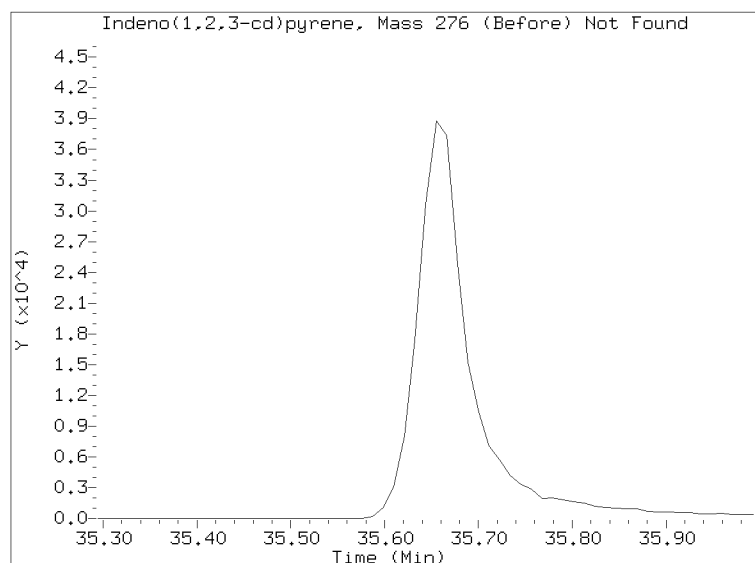
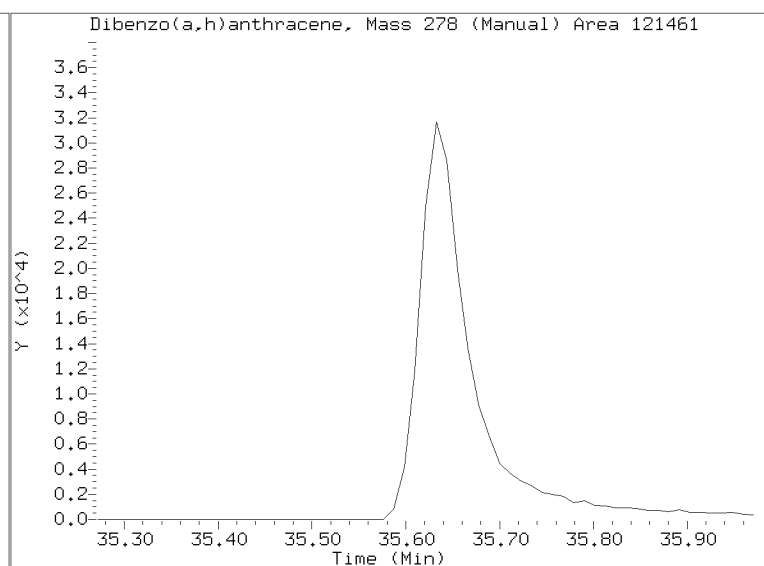
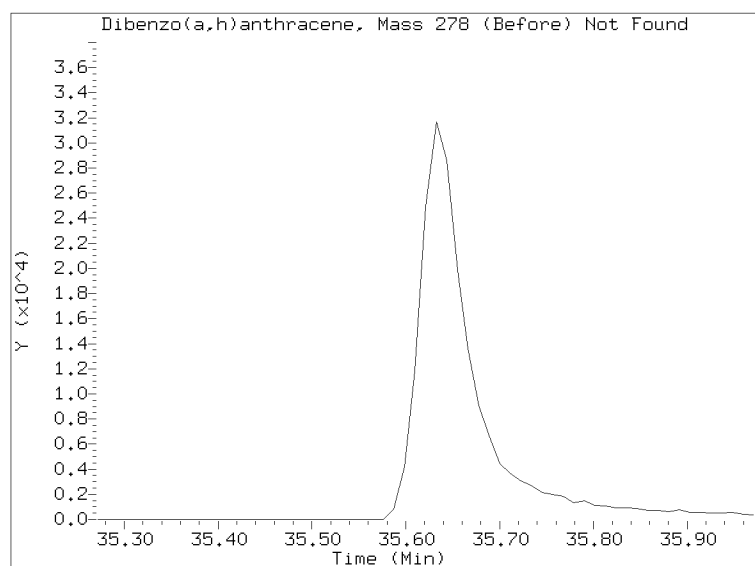
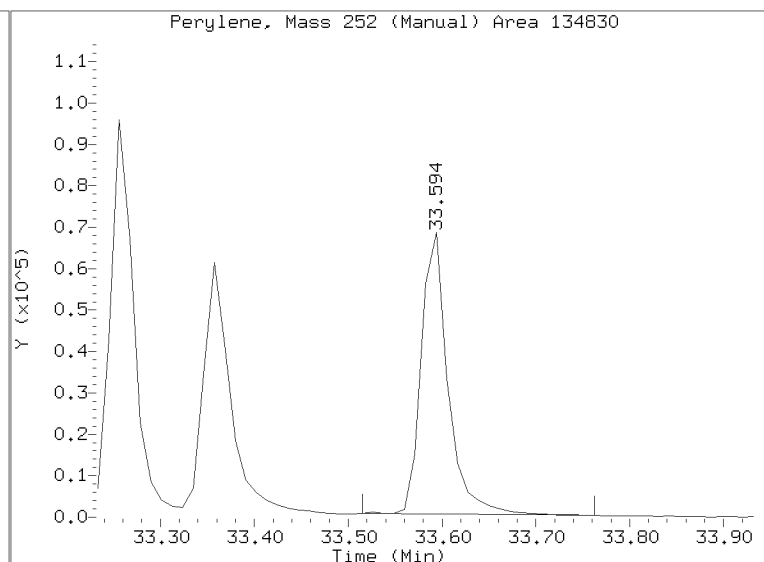
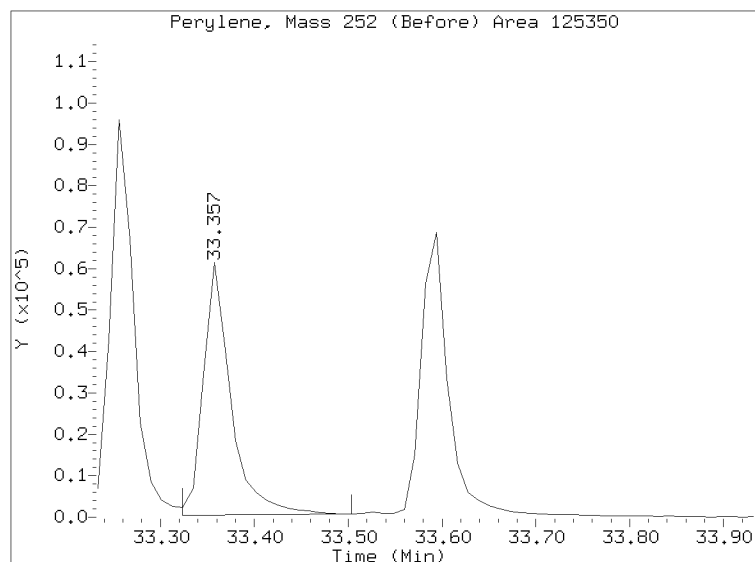
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230527.b/NT1405272321.D

Injection Date: 28-MAY-2023 02:21

Lab ID:BLD0616-BS1 Client ID:

Report Date: 05/30/2023 16:49



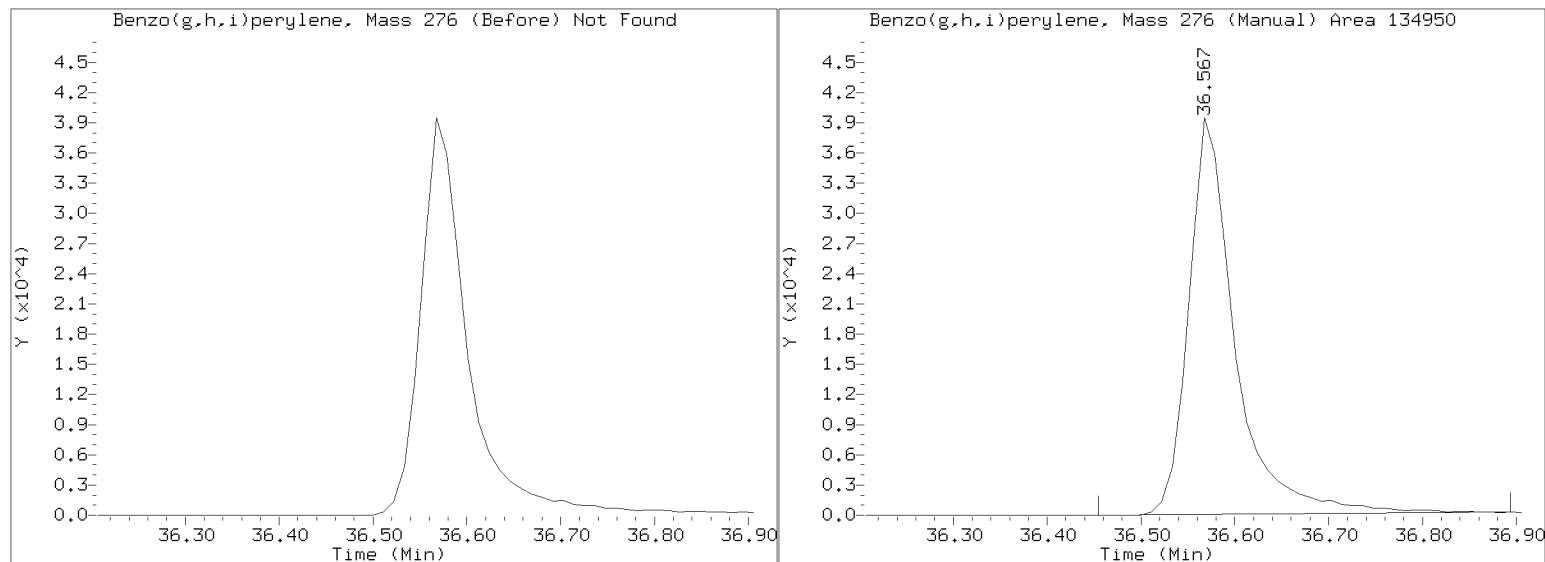
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230527.b/NT1405272321.D

Injection Date: 28-MAY-2023 02:21

Lab ID:BLD0616-BS1 Client ID:

Report Date: 05/30/2023 16:49



APPROVED

By Deenay Dunmore at 5:02 pm, May 30, 2023



MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270E-SIM

Laboratory: Analytical Resources, LLC SDG: 23D0457
Client: Anchor QEA, LLC Project: Gasco Hydrocarbon Investigation
Lab File ID: NT1423050501.D Injection Date: 05/05/23
Instrument ID: NT14 Injection Time: 10:56
Sequence: SLE0096 Lab Sample ID: SLE0096-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
68	Less than 2% of 69	1.5	PASS
69	Less than 100% of 198	73	PASS
70	Less than 2% of 69	0	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.83	PASS
365	1 - 100% of 198	2.34	PASS
441	Less than 150% of 443	75.8	PASS
442	1 - 200% of 198	39.9	PASS
443	15 - 24% of 442	19.8	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		



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

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23D0457</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Gasco Hydrocarbon Investigation</u>
Lab File ID:	<u>NT1423050501.D</u>	Injection Date:	<u>05/05/23</u>
Instrument ID:	<u>NT14</u>	Injection Time:	<u>10:56</u>
Sequence:	<u>SLE0096</u>	Lab Sample ID:	<u>SLE0096-TUN1</u>

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
68	Less than 2% of 69	1.5	PASS
69	Less than 100% of 198	73	PASS
70	Less than 2% of 69	0	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.83	PASS
365	1 - 100% of 198	2.34	PASS
441	Less than 150% of 443	75.8	PASS
442	1 - 200% of 198	39.9	PASS
443	15 - 24% of 442	19.8	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	SLE0096-TUN1	NT1423050501.D	05/05/2023	10:56
Cal Standard	SLE0096-CAL1	NT1423050502.D	05/05/2023	11:11
Cal Standard	SLE0096-CAL2	NT1423050503.D	05/05/2023	11:59
Cal Standard	SLE0096-CAL3	NT1423050504.D	05/05/2023	12:47
Cal Standard	SLE0096-CAL4	NT1423050505.D	05/05/2023	13:36
Cal Standard	SLE0096-CAL5	NT1423050506.D	05/05/2023	14:24
Cal Standard	SLE0096-CAL6	NT1423050507.D	05/05/2023	15:12
Secondary Cal Check	SLE0096-SCV1	NT1423050508.D	05/05/2023	16:01
Initial Cal Blank	SLE0096-ICB1	NT1423050509.D	05/05/2023	16:49
Blank	BLD0142-BLK1	NT1423050510.D	05/05/2023	17:38
LCS	BLD0142-BS1	NT1423050511.D	05/05/2023	18:26
LCS Dup	BLD0142-BSD1	NT1423050512.D	05/05/2023	19:14
ZZZZZ	23D0042-41	NT1423050513.D	05/05/2023	20:03
ZZZZZ	23D0042-42	NT1423050514.D	05/05/2023	20:51
Initial Cal Check	SLE0096-ICV1	NT1423050515.D	05/05/2023	21:39
Blank	BLD0142-BLK3	NT1423050517.D	05/05/2023	23:16
ZZZZZ	23D0042-43	NT1423050518.D	05/06/2023	0:04
ZZZZZ	23D0042-44	NT1423050519.D	05/06/2023	0:52
ZZZZZ	23D0042-45	NT1423050520.D	05/06/2023	1:40
ZZZZZ	23D0042-46	NT1423050521.D	05/06/2023	2:28
ZZZZZ	23D0042-47	NT1423050522.D	05/06/2023	3:16
Matrix Spike	BLD0142-MS1	NT1423050523.D	05/06/2023	4:05
Matrix Spike Dup	BLD0142-MSD1	NT1423050524.D	05/06/2023	4:53
ZZZZZ	23D0042-48	NT1423050525.D	05/06/2023	5:41
ZZZZZ	23D0042-49	NT1423050526.D	05/06/2023	6:29
ZZZZZ	23D0042-50	NT1423050527.D	05/06/2023	7:17



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

Laboratory:	<u>Analytical Resources, LLC</u>	SDG:	<u>23D0457</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Gasco Hydrocarbon Investigation</u>
Lab File ID:	<u>NT1423050501.D</u>	Injection Date:	<u>05/05/23</u>
Instrument ID:	<u>NT14</u>	Injection Time:	<u>10:56</u>
Sequence:	<u>SLE0096</u>	Lab Sample ID:	<u>SLE0096-TUN1</u>

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
68	Less than 2% of 69	1.5	PASS
69	Less than 100% of 198	73	PASS
70	Less than 2% of 69	0	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.83	PASS
365	1 - 100% of 198	2.34	PASS
441	Less than 150% of 443	75.8	PASS
442	1 - 200% of 198	39.9	PASS
443	15 - 24% of 442	19.8	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		

ZZZZZ	23D0042-51	NT1423050528.D	05/06/2023	8:05
Initial Cal Check	SLE0096-ICV2	NT1423050529.D	05/06/2023	8:53
Instrument Blank	SLE0096-IBL1	NT1423050531.D	05/06/2023	10:35
ZZZZZ	23D0042-41RE1	NT1423050532.D	05/06/2023	11:23
ZZZZZ	23D0042-43RE1	NT1423050533.D	05/06/2023	12:23
ZZZZZ	23D0042-44RE1	NT1423050534.D	05/06/2023	13:12
ZZZZZ	23D0042-45RE1	NT1423050535.D	05/06/2023	14:00
ZZZZZ	23D0042-46RE1	NT1423050536.D	05/06/2023	14:49
ZZZZZ	23D0042-47RE1	NT1423050537.D	05/06/2023	15:38
ZZZZZ	23D0042-48RE1	NT1423050538.D	05/06/2023	16:26
ZZZZZ	23D0042-49RE1	NT1423050539.D	05/06/2023	17:15
ZZZZZ	23D0042-50RE1	NT1423050540.D	05/06/2023	18:03
ZZZZZ	23D0042-51RE1	NT1423050541.D	05/06/2023	18:51
Blank	BLD0411-BLK1	NT1423050544.D	05/06/2023	21:16
LCS	BLD0411-BS1	NT1423050545.D	05/06/2023	22:04
LCS Dup	BLD0411-BSD1	NT1423050546.D	05/06/2023	22:52
ZZZZZ	23D0247-02	NT1423050547.D	05/06/2023	23:40
ZZZZZ	23D0247-03	NT1423050548.D	05/07/2023	0:28
ZZZZZ	23D0247-04	NT1423050549.D	05/07/2023	1:16
Matrix Spike	BLD0411-MS1	NT1423050550.D	05/07/2023	2:04
Matrix Spike Dup	BLD0411-MSD1	NT1423050551.D	05/07/2023	2:52
ZZZZZ	23D0247-05	NT1423050552.D	05/07/2023	3:40
ZZZZZ	23D0247-07	NT1423050554.D	05/07/2023	5:17
ZZZZZ	23D0247-08	NT1423050555.D	05/07/2023	6:05
Initial Cal Check	SLE0096-ICV4	NT1423050556.D	05/07/2023	6:53
Instrument Blank	SLE0096-IBL2	NT1423050558.D	05/07/2023	8:29
ZZZZZ	23D0247-09	NT1423050559.D	05/07/2023	9:17
ZZZZZ	23D0247-10	NT1423050560.D	05/07/2023	10:05



MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270E-SIM

Laboratory: Analytical Resources, LLC SDG: 23D0457
Client: Anchor QEA, LLC Project: Gasco Hydrocarbon Investigation
Lab File ID: NT1423050501.D Injection Date: 05/05/23
Instrument ID: NT14 Injection Time: 10:56
Sequence: SLE0096 Lab Sample ID: SLE0096-TUN1

m/z	ION ABUNDANCE CRITERIA			% RELATIVE ABUNDANCE		
68	Less than 2% of 69			1.5		PASS
69	Less than 100% of 198			73		PASS
70	Less than 2% of 69			0		PASS
197	Less than 2% of 198			0		PASS
198	Base peak, 100% relative abundance			100		PASS
199	5 - 9% of 198			6.83		PASS
365	1 - 100% of 198			2.34		PASS
441	Less than 150% of 443			75.8		PASS
442	1 - 200% of 198			39.9		PASS
443	15 - 24% of 442			19.8		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					
	ZZZZZ	23D0247-11	NT1423050561.D	05/07/2023	10:53	
	ZZZZZ	23D0247-12	NT1423050562.D	05/07/2023	11:42	
	ZZZZZ	23D0247-13	NT1423050563.D	05/07/2023	12:30	
	ZZZZZ	23D0247-14	NT1423050564.D	05/07/2023	13:19	
	Calibration Check	SLE0096-CCV1	NT1423050565.D	05/07/2023	14:07	

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

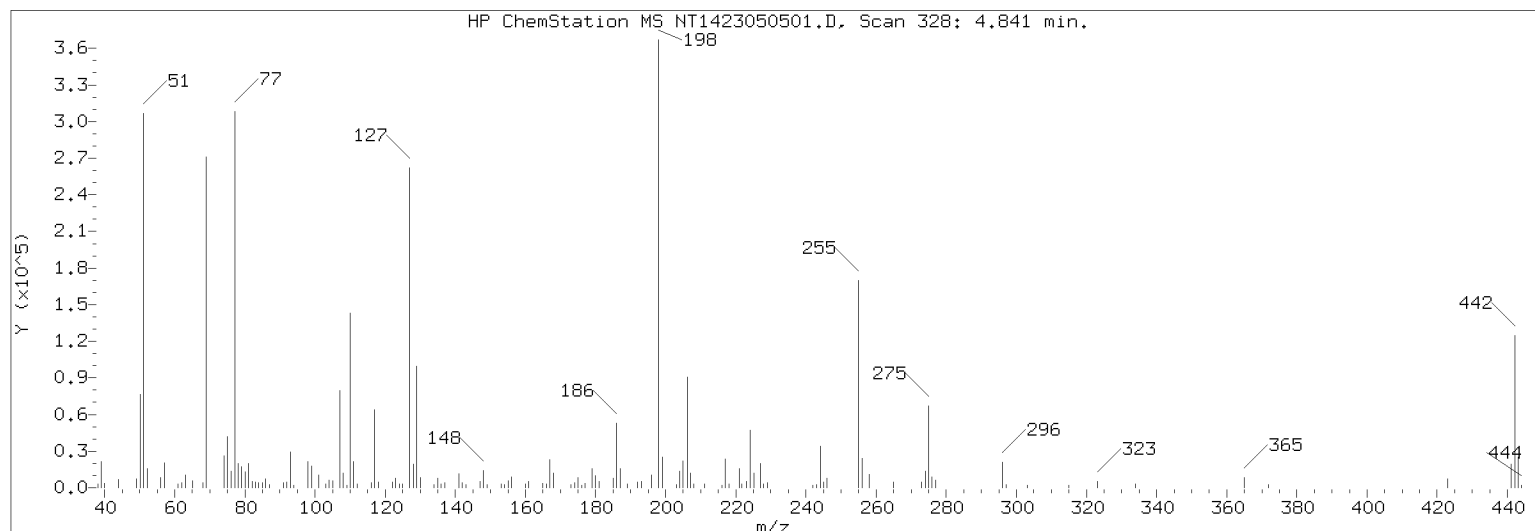
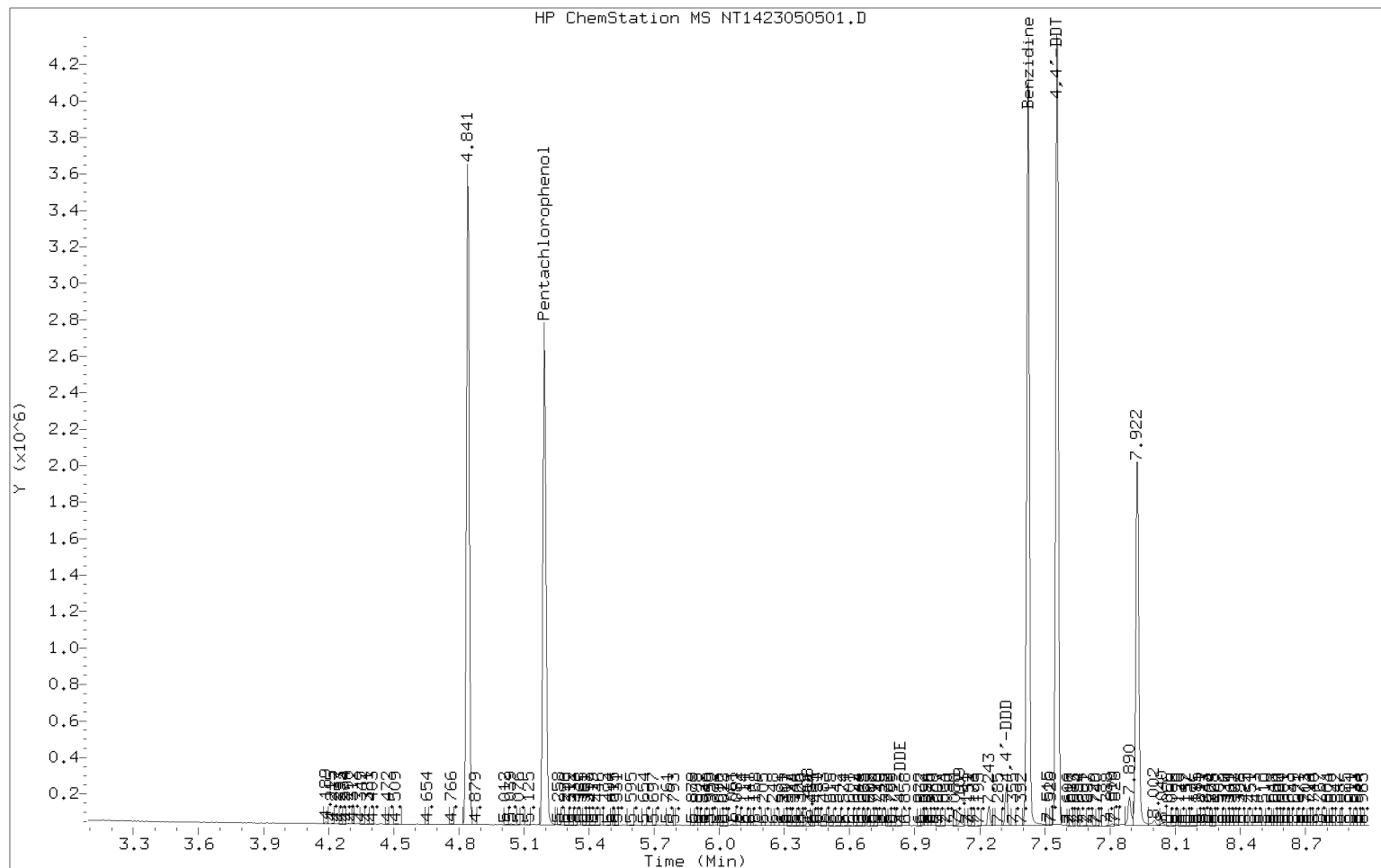
Datafile Analyzed: /20230505.b/NT1423050501.D/NT1423050501.D

Method Used: \20230505.b\DFTPP8270E.m Inst: nt14

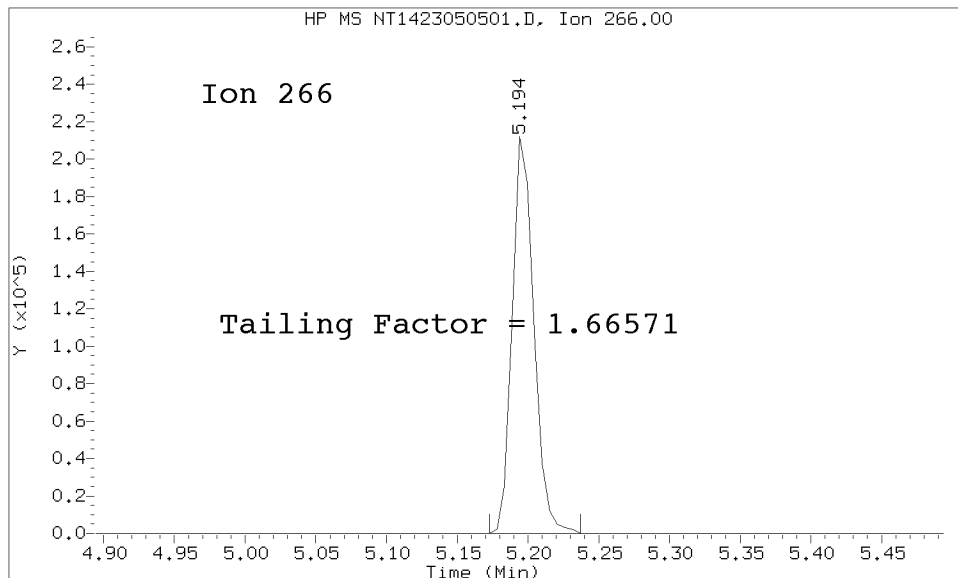
Injection Date: 05-MAY-2023 10:56 Operator: VTS

Sample Info: SLE0096-TUN1 SLE0096-TUN1

Report Date: 05/06/2023 07:53



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Method Used: \20230505.b\DFTPP8270E.m\sw846ddt.m Inst: nt14
Injection Date: 05-MAY-2023 10:56 Operator: VTS
Sample Info: SLE0096-TUN1
Report Date: 05/06/2023 07:53

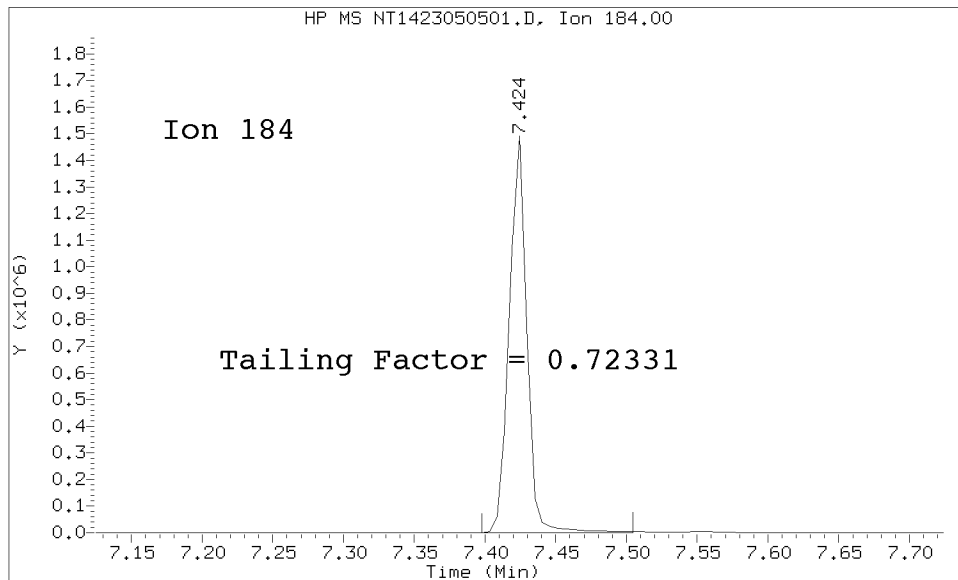


Pentachlorophenol

=====

Exp. RT = 5.194
Found RT = 5.194

Tail Factor = 1.666 Maximum Allowed = 2.0



Benzidine

=====

Exp. RT = 7.424
Found RT = 7.424

Tail Factor = 0.723 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.6657143	2.000	PASS
Benzidine	0.7233065	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	589237			N/A
4,4-DDE	808	0.1	20.0	PASS
4,4-DDD	31548	5.1	20.0	PASS
4,4-DDD + DDE	32356	5.2	20.0	PASS

Tuning Sample, nt14.i/20230505.b/NT1423050501.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	1.10 (1.50)
69	Mass 69 relative abundance	73.00
70	Less than 2.00% of mass 69	0.00 (0.00)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.83
365	1.00 - 100.00% of mass 198	2.34
441	Less than 150.00% of mass 443	5.99 (75.80)
442	Less than 200.00% of mass 198	39.90
443	15.00 - 24.00% of mass 442	7.91 (19.82)

Data File: NT1423050501.D
Spectrum: Avg. Scans 327-329 (4.84), Background Scan 322
Location of Maximum: 198.00
Number of points: 139

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	2734	104.00	5003	165.00	2979	225.00	9841
39.00	18248	105.00	4812	166.00	1916	227.00	16664
50.00	63168	107.00	63464	167.00	18488	228.00	1952
51.00	252096	108.00	9377	168.00	9670	229.00	3331
52.00	12945	109.00	675	173.00	1637	242.00	1659
56.00	7052	110.00	111208	174.00	3435	243.00	1675
57.00	16800	111.00	17040	175.00	6727	244.00	27736
61.00	2631	112.00	1721	176.00	704	245.00	3773
62.00	3103	116.00	3151	177.00	3033	246.00	6084
63.00	8740	117.00	51112	179.00	12812	255.00	139072
65.00	4509	118.00	3844	180.00	8104	256.00	19824
68.00	3214	122.00	3739	181.00	3901	258.00	8992
69.00	214272	123.00	6166	185.00	5891	265.00	3733
74.00	20536	124.00	2626	186.00	43408	273.00	3947
75.00	32424	125.00	1896	187.00	12484	274.00	10865
76.00	11281	127.00	207040	189.00	2081	275.00	54816
77.00	241664	128.00	14996	192.00	3980	276.00	7316
78.00	16013	129.00	78456	193.00	4373	277.00	5365
79.00	13764	130.00	6664	196.00	8317	296.00	17568
80.00	10630	134.00	1651	198.00	293504	297.00	1922
81.00	16076	135.00	6304	199.00	20040	303.00	1521
82.00	4081	136.00	1783	203.00	1693	315.00	1549
83.00	3903	137.00	3346	204.00	10939	323.00	4732
84.00	245	141.00	9312	205.00	18048	334.00	2449
85.00	3027	142.00	3214	206.00	72736	354.00	693
86.00	4028	143.00	1564	207.00	9387	365.00	6871
87.00	1491	147.00	4524	208.00	1911	372.00	1974
91.00	3437	148.00	11615	211.00	2160	403.00	667
92.00	3635	149.00	1727	216.00	672	423.00	6708
93.00	23528	153.00	2830	217.00	19456	424.00	736
94.00	683	154.00	1751	218.00	2006	441.00	17592
98.00	17576	155.00	5061	221.00	12529	442.00	117104
99.00	14285	156.00	7305	222.00	1091	443.00	23208
101.00	8222	160.00	2765	223.00	4349	444.00	1845
103.00	1819	161.00	4146	224.00	38616		



INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23D0457
Client:	Anchor QEA, LLC	Project:	Gasco Hydrocarbon Investigation
Calibration:	GE00024	Instrument:	NT14
Calibration Date:	05/05/2023	Column (1):	ZB-5MS

Calibration Comments: Alkyl PAH targets ICAL

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
trans-Decalin	0.1	0.1720091	0.5	0.2316515	1	0.2241916	2.5	0.2148351	5	0.2230907	10	0.2196863
cis-Decalin	0.1	0.1271739	0.5	0.1671915	1	0.1671353	2.5	0.1586224	5	0.156252	10	0.155491
Naphthalene	0.1	2.214405	0.5	2.248294	1	2.230639	2.5	2.100924	5	2.190653	10	2.18539
1-Methylnaphthalene	0.1	1.119892	0.5	1.146802	1	1.131125	2.5	1.047685	5	1.06465	10	1.048728
2-Methylnaphthalene	0.1	1.048127	0.5	1.123776	1	1.116759	2.5	1.062407	5	1.096554	10	1.06595
Biphenyl	0.1	1.449529	0.5	1.559808	1	1.540865	2.5	1.437751	5	1.49387	10	1.529078
2,6-Dimethylnaphthalene	0.1	1.001318	0.5	1.108445	1	1.111046	2.5	1.042004	5	1.067488	10	1.083304
Acenaphthylene	0.1	1.688509	0.5	1.761766	1	1.748202	2.5	1.754143	5	1.864855	10	1.893647
Acenaphthene	0.1	1.033041	0.5	1.129419	1	1.117059	2.5	1.072678	5	1.117787	10	1.139902
Dibenzofuran	0.1	1.368882	0.5	1.470271	1	1.438239	2.5	1.398419	5	1.473949	10	1.502843
2,3,5-Trimethylnaphthalene	0.1	0.8967029	0.5	0.9689241	1	0.9624748	2.5	0.9301069	5	0.9689808	10	0.9893734
Fluorene	0.1	1.086054	0.5	1.156149	1	1.172976	2.5	1.127087	5	1.194393	10	1.19626
Benzo(b)thiophene	0.1	1.586431	0.5	1.753017	1	1.69371	2.5	1.612111	5	1.6814	10	1.682207
Phenanthrene	0.1	1.277708	0.5	1.345048	1	1.354158	2.5	1.294388	5	1.348547	10	1.365597
Anthracene	0.1	1.140962	0.5	1.195457	1	1.210343	2.5	1.194744	5	1.290173	10	1.298622
Carbazole	0.1	0.7580505	0.5	0.8849055	1	0.9416187	2.5	0.9932784	5	1.118398	10	1.166164
1-Methylphenanthrene	0.1	0.7844338	0.5	0.8320132	1	0.8513662	2.5	0.8546193	5	0.912157	10	0.9152451
Fluoranthene	0.1	1.055217	0.5	1.196752	1	1.169684	2.5	1.189043	5	1.318216	10	1.352447
Dibenzothiophene	0.1	1.313331	0.5	1.404614	1	1.421714	2.5	1.395279	5	1.464967	10	1.495462
Pyrene	0.1	1.135662	0.5	1.222292	1	1.228213	2.5	1.249587	5	1.357985	10	1.426286
Benzo(a)anthracene	0.1	1.508184	0.5	1.418802	1	1.476115	2.5	1.515144	5	1.713108	10	1.775634
Chrysene	0.1	1.293093	0.5	1.51644	1	1.494378	2.5	1.526708	5	1.673504	10	1.697358
Benzo(b)fluoranthene	0.1	1.279627	0.5	1.416873	1	1.443046	2.5	1.462548	5	1.562807	10	1.61116
Benzo(j)fluoranthene	0.1	1.1608	0.5	1.28674	1	1.312985	2.5	1.378945	5	1.543829	10	1.552933
Benzo(k)fluoranthene	0.1	1.121312	0.5	1.217351	1	1.242996	2.5	1.316711	5	1.476408	10	1.698892
Benzo(a)fluoranthene, Total	0.3	1.117248	1.5	1.27578	3	1.307111	7.5	1.347053	15	1.51801	30	1.601182
Benzo(e)pyrene	0.1	1.327304	0.5	1.380133	1	1.357878	2.5	1.363424	5	1.495124	10	1.564363



INITIAL CALIBRATION DATA
EPA 8270E-SIM

Laboratory: Analytical Resources, LLC SDG: 23D0457
Client: Anchor QEA, LLC Project: Gasco Hydrocarbon Investigation
Calibration: GE00024 Instrument: NT14
Calibration Date: 05/05/2023 Column (1): ZB-5MS

Calibration Comments: Alkyl PAH targets ICAL

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
Benzo(a)pyrene	0.1	0.962814	0.5	1.119713	1	1.136127	2.5	1.184652	5	1.344665	10	1.431692
Indeno(1,2,3-cd)pyrene	0.1	0.9722766	0.5	1.223487	1	1.235127	2.5	1.341091	5	1.50614	10	1.586196
Dibenzo(a,h)anthracene	0.1	0.8115953	0.5	0.9915097	1	0.994699	2.5	1.066051	5	1.222502	10	1.308338
Benzo(g,h,i)perylene	0.1	0.9575368	0.5	1.131715	1	1.153459	2.5	1.174677	5	1.293175	10	1.364352
Perylene	0.1	1.093834	0.5	1.239889	1	1.247158	2.5	1.300428	5	1.466437	10	1.532943
Benzo(b)naphtho(2,1-d)thiophene	0.1	0.7834916	0.5	0.8211381	1	0.8082796	2.5	0.8066658	5	0.8897981	10	0.9163391
Naphthalene-d8	0.1	1.973451	0.5	2.049841	1	2.033889	2.5	1.937334	5	2.007636	10	1.987742
Acenaphthene-d10	0.1	0.8500349	0.5	0.8940342	1	0.9056134	2.5	0.8509147	5	0.9012605	10	0.9117448
Phenanthrene-d10	0.1	1.15227	0.5	1.140893	1	1.160687	2.5	1.097862	5	1.148632	10	1.14719
Chrysene-d12	0.1	0.8998517	0.5	1.057734	1	1.046466	2.5	1.088939	5	1.193588	10	1.223939
Perylene-d12	0.1	0.8630933	0.5	0.9978774	1	0.9918208	2.5	1.045805	5	1.167591	10	1.214558



INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23D0457
Client:	Anchor QEA, LLC	Project:	Gasco Hydrocarbon Investigation
Calibration:	GE00024	Instrument:	NT14
Calibration Date:	05/05/2023	Column (1):	ZB-5MS

Calibration Comments: Alkyl PAH targets ICAL

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
trans-Decalin	0.2142441	10.0			RSD (15)	
cis-Decalin	0.155311	9.5			RSD (15)	
Naphthalene	2.195051	2.4			RSD (15)	
1-Methylnaphthalene	1.093147	4.1			RSD (15)	
2-Methylnaphthalene	1.085596	2.9			RSD (15)	
Biphenyl	1.501817	3.3			RSD (15)	
2,6-Dimethylnaphthalene	1.068934	3.9			RSD (15)	
Acenaphthylene	1.785187	4.4			RSD (15)	
Acenaphthene	1.101648	3.7			RSD (15)	
Dibenzofuran	1.4421	3.5			RSD (15)	
2,3,5-Trimethylnaphthalene	0.9527605	3.5			RSD (15)	
Fluorene	1.155487	3.7			RSD (15)	
Benzo(b)thiophene	1.668146	3.6			RSD (15)	
Phenanthrene	1.330908	2.7			RSD (15)	
Anthracene	1.221717	5.0			RSD (15)	
Carbazole	0.9770692	15.4	0.9972		LCOD (0.99)	
1-Methylphenanthrene	0.8583058	5.8			RSD (15)	
Fluoranthene	1.21356	8.9			RSD (15)	
Dibenzothiophene	1.415894	4.4			RSD (15)	
Pyrene	1.270004	8.2			RSD (15)	
Benzo(a)anthracene	1.567831	9.1			RSD (15)	
Chrysene	1.53358	9.5			RSD (15)	
Benzo(b)fluoranthene	1.462677	8.0			RSD (15)	
Benzo(j)fluoranthene	1.372705	11.2			RSD (15)	
Benzo(k)fluoranthene	1.345612	15.6	0.9903		LCOD (0.99)	
Benzo(a)fluoranthene, Total	1.361064	12.8			RSD (15)	
Benzo(e)pyrene	1.414704	6.6			RSD (15)	
Benzo(a)pyrene	1.19661	14.1			RSD (15)	
Indeno(1,2,3-cd)pyrene	1.31072	16.8	0.9967		LCOD (0.99)	
Dibenzo(a,h)anthracene	1.065783	16.7	0.9953		LCOD (0.99)	



INITIAL CALIBRATION DATA
EPA 8270E-SIM

Laboratory: Analytical Resources, LLC SDG: 23D0457
Client: Anchor QEA, LLC Project: Gasco Hydrocarbon Investigation
Calibration: GE00024 Instrument: NT14
Calibration Date: 05/05/2023 Column (1): ZB-5MS

Calibration Comments: Alkyl PAH targets ICAL

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Benzo(g,h,i)perylene	1.179152	12.0			RSD (15)	
Perylene	1.313448	12.3			RSD (15)	
Benzo(b)naphtho(2,1-d)thiophene	0.8376187	6.3			RSD (15)	
Naphthalene-d8	1.998315	2.1			RSD (15)	
Acenaphthene-d10	0.8856004	3.1			RSD (15)	
Phenanthrene-d10	1.141256	1.9			RSD (15)	
Chrysene-d12	1.085086	10.7			RSD (15)	
Perylene-d12	1.046791	12.2			RSD (15)	



ANALYSIS SEQUENCE

SLE0096

Printed: 5/6/2023 11:41:51AM

Instrument ID: NT14

GCMS Description: Agilent 7890A/5975C XL

Calibration ID: GE00024

GCMS Column ID: L004289

MS EM Level: 1800 EV

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLE0096-TUN1	MS Tune	QC		1	L005045		05/05/2023 10:56	NT1423050501.D	VTS	
SLE0096-CAL1	PAH 0.1	QC		2	K010902	L005048	05/05/2023 11:11	NT1423050502.D	VTS	
SLE0096-CAL2	PAH 0.5	QC		3	K010903	L005048	05/05/2023 11:59	NT1423050503.D	VTS	
SLE0096-CAL3	PAH 1.0	QC		4	K010904	L005048	05/05/2023 12:47	NT1423050504.D	VTS	
SLE0096-CAL4	PAH 2.5	QC		5	K010905	L005048	05/05/2023 13:36	NT1423050505.D	VTS	
SLE0096-CAL5	PAH 5.0	QC		6	K010906	L005048	05/05/2023 14:24	NT1423050506.D	VTS	
SLE0096-CAL6	PAH 10.0	QC		7	K010907	L005048	05/05/2023 15:12	NT1423050507.D	VTS	
SLE0096-SCV1	Secondary Cal Check	QC		8	L004239	L005048	05/05/2023 16:01	NT1423050508.D	VTS	
SLE0096-ICB1	Initial Cal Blank	QC		9	L004240	L005048	05/05/2023 16:49	NT1423050509.D	VTS	
BLD0142-BLK1	Blank	QC		10		L005048	05/05/2023 17:38	NT1423050510.D	VTS	
BLD0142-BS1	LCS	QC		11		L005048	05/05/2023 18:26	NT1423050511.D	VTS	
BLD0142-BSD1	LCS Dup	QC		12		L005048	05/05/2023 19:14	NT1423050512.D	VTS	
23D0042-41	DI-203SB-26-27-23033	IM Alkyl PAH (Parents) D	A 01	13		L005048	05/05/2023 20:03	NT1423050513.D	VTS	
23D0042-42	DI-203SB-33-34.1-23033	IM Alkyl PAH (Parents) D	A 01	14		L005048	05/05/2023 20:51	NT1423050514.D	VTS	
SLE0096-ICV1	PAH 2.5	QC		15	K010905	L005048	05/05/2023 21:39	NT1423050515.D	VTS	
BLD0142-BLK3	Blank	QC		16		L005048	05/05/2023 23:16	NT1423050517.D	VTS	
23D0042-43	DI-1211SC-13-14-23033	IM Alkyl PAH (Parents) D	A 01	17		L005048	05/06/2023 00:04	NT1423050518.D	VTS	
23D0042-44	DI-211SC-12-13-23033	IM Alkyl PAH (Parents) D	A 01	18		L005048	05/06/2023 00:52	NT1423050519.D	VTS	
23D0042-45	DI-211SC-13-14-23033	IM Alkyl PAH (Parents) D	A 01	19		L005048	05/06/2023 01:40	NT1423050520.D	VTS	
23D0042-46	DI-211SC-14-14.9-23033	IM Alkyl PAH (Parents) D	A 01	20		L005048	05/06/2023 02:28	NT1423050521.D	VTS	
23D0042-47	DI-211SC-15-16-23033	IM Alkyl PAH (Parents) D	A 01	21		L005048	05/06/2023 03:16	NT1423050522.D	VTS	
BLD0142-MS1	Matrix Spike	QC		22		L005048	05/06/2023 04:05	NT1423050523.D	VTS	



ANALYSIS SEQUENCE

Printed: 5/6/2023 11:41:51AM

SLE0096

Instrument ID: NT14 GCMS Description: Agilent 7890A/5975C XL
Calibration ID: GE00024 GCMS Column ID: L004289
MS EM Level: 1800 EV

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
BLD0142-MSD1	Matrix Spike Dup	QC		23		L005048	05/06/2023 04:53	NT1423050524.D	VTS	
23D0042-48	DI-215SB-24-24.9-23032	IM Alkyl PAH (Parents) D	A 01	24		L005048	05/06/2023 05:41	NT1423050525.D	VTS	
23D0042-49	DI-215SB-25-26-23032	IM Alkyl PAH (Parents) D	A 01	25		L005048	05/06/2023 06:29	NT1423050526.D	VTS	
23D0042-50	DI-215SB-26-27-23032	IM Alkyl PAH (Parents) D	A 01	26		L005048	05/06/2023 07:17	NT1423050527.D	VTS	
23D0042-51	DI-215SB-27-28-23032	IM Alkyl PAH (Parents) D	A 01	27		L005048	05/06/2023 08:05	NT1423050528.D	VTS	
SLE0096-ICV2	PAH 2.5	QC		28	K010905	L005048				

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230505.b

	Time	Filename	LabID	ClientId	DF				
1	1056	NT1423050501.D	SLE0096-TUN1		1	NO	ISTDS	FOUND	
2	1111	NT1423050502.D	SLE0096-CAL1		1	19.26	141653	22.73	169804
3	1159	NT1423050503.D	SLE0096-CAL2		1	19.26	140366	22.73	169930
4	1247	NT1423050504.D	SLE0096-CAL3		1	19.26	133377	22.73	162278
5	1336	NT1423050505.D	SLE0096-CAL4		1	19.26	137662	22.73	168263
6	1424	NT1423050506.D	SLE0096-CAL5		1	19.26	132486	22.73	161010
7	1512	NT1423050507.D	SLE0096-CAL6		1	19.26	126626	22.73	157579
8	1601	NT1423050508.D	SLE0096-SCV1		1	19.26	130753	22.73	158011
9	1649	NT1423050509.D	SLE0096-ICB1		1	19.26	125595	22.73	144183
10	1738	NT1423050510.D	BLD0142-BLK1		1	19.26	120628	22.73	142296
11	1826	NT1423050511.D	BLD0142-BS1		1	19.26	142795	22.73	147036
12	1914	NT1423050512.D	BLD0142-BSD1		1	19.26	141662	22.73	147143
13	2003	NT1423050513.D	23D0042-41		1	19.26	126271	22.74	167866
14	2051	NT1423050514.D	23D0042-42		1	19.26	150144	22.73	152650
15	2139	NT1423050515.D	SLE0096-ICV1		1	19.26	137405	22.73	167657
16	2227	NT1423050516.D	SLE0096-LCV1		1	19.26	124604	22.73	146049
17	2316	NT1423050517.D	BLD0142-BLK3		1	19.26	137672	22.73	137197
18	0004	NT1423050518.D	23D0042-43		1	19.26	134786	22.74	148990
19	0052	NT1423050519.D	23D0042-44		1	19.26	147959	22.77	177213
20	0140	NT1423050520.D	23D0042-45		1	19.26	156085	22.76	164981

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230505.b

Time	Filename	LabID	ClientId	DF						
21	0228	NT1423050521.D	23D0042-46	1	19.26	134244	22.76	180257	33.50	130488
22	0316	NT1423050522.D	23D0042-47	1	19.26	157153	22.73	164926	33.48	108870
23	0405	NT1423050523.D	BLD0142-MS1	1	19.26	151823	22.73	160995	33.49	104778
24	0453	NT1423050524.D	BLD0142-MSD1	1	19.26	125197	22.73	156288	33.49	98368
25	0541	NT1423050525.D	23D0042-48	1	19.26	149894	22.73	166553	33.49	112923
26	0629	NT1423050526.D	23D0042-49	1	19.26	130847	22.77	173399	33.49	116499
27	0717	NT1423050527.D	23D0042-50	1	19.26	131676	22.79	186038	33.49	115893
28	0805	NT1423050528.D	23D0042-51	1	19.26	129785	22.76	173000	33.49	113501

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230505.b

Instrument: nt14.i Date: 05-MAY-2023

Time	Filename	LabID	DF	Manually Integrated Compounds					
1056	NT1423050501.D	SLE0096-TUN1	1	NO MANUAL INTEGRATION					
1111	NT1423050502.D	SLE0096-CAL1	1	Carbazole,	Total Benzo	fluoranthenes,			
1159	NT1423050503.D	SLE0096-CAL2	1	Total Benzo					
1247	NT1423050504.D	SLE0096-CAL3	1	Total Benzo					
1336	NT1423050505.D	SLE0096-CAL4	1	Indeno(1,2,3-cd)pyrene,	Total Benzo	fluoranthenes,			
1424	NT1423050506.D	SLE0096-CAL5	1	Indeno(1,2,3-cd)pyrene,	Dibenzo(a,h)anthracene,	Benzo(g,h,i)perylene,	Total Benzo	fluoranthenes,	
1512	NT1423050507.D	SLE0096-CAL6	1	Indeno(1,2,3-cd)pyrene,	Dibenzo(a,h)anthracene,	Benzo(g,h,i)perylene,	Total Benzo	fluoranthenes,	
1601	NT1423050508.D	SLE0096-SCV1	1	Indeno(1,2,3-cd)pyrene,	Dibenzo(a,h)anthracene,	Total Benzo	fluoranthenes,		
1649	NT1423050509.D	SLE0096-ICB1	1	NO MANUAL INTEGRATION					
1738	NT1423050510.D	BLD0142-BLK1	1	Anthracene,	Benzo(a)anthracene,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	Benzo(g,h,
				Total Benzo					
1826	NT1423050511.D	BLD0142-BS1	1	Indeno(1,2,3-cd)pyrene,	Dibenzo(a,h)anthracene,	Total Benzo	fluoranthenes,		
1914	NT1423050512.D	BLD0142-BSD1	1	Total Benzo					
2003	NT1423050513.D	23D0042-41	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzo	fluoranthenes,	Perylene-d12,
2051	NT1423050514.D	23D0042-42	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	Total Benzo	fluoranthene
2139	NT1423050515.D	SLE0096-ICV1	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Total Benzo	fluoranthenes,		
2227	NT1423050516.D	SLE0096-LCV1	1	NO MANUAL INTEGRATION					
2316	NT1423050517.D	BLD0142-BLK3	1	Anthracene,	Benzo(a)anthracene,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	Total Benz

Instrument: nt14.i Date: 06-MAY-2023

Time	Filename	LabID	DF	Manually Integrated Compounds					
0004	NT1423050518.D	23D0042-43	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,	Chrysene-d12,	P
0052	NT1423050519.D	23D0042-44	1	Chrysene,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Dibenzo(a,h)anthracene,	2,6-Dimethylnaphthalene,	Total B
				Benzo(j)fluoranthene,					
0140	NT1423050520.D	23D0042-45	1	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,	Benzo(j)fluoranthene,	Perylene-d12,	
0228	NT1423050521.D	23D0042-46	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,		
0316	NT1423050522.D	23D0042-47	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthene	
0405	NT1423050523.D	BLD0142-MS1	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,		
0453	NT1423050524.D	BLD0142-MSD1	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Dibenzo(a,h)anthracene,	Total Benzofluoranthenes,		
0541	NT1423050525.D	23D0042-48	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,		
0629	NT1423050526.D	23D0042-49	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Dibenzo(a,h)anthracene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthene	
0717	NT1423050527.D	23D0042-50	1	Anthracene,	Chrysene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,	Benzo(j)fluoran
				Perylene-d12,					
0805	NT1423050528.D	23D0042-51	1	Acenaphthylene,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,	

Security Status Report

Date: 06-May-2023 11:42

NT1423050501.D	Data Locked	van, 06-May-2023 11:42
NT1423050502.D	Data Locked	van, 06-May-2023 11:42
NT1423050503.D	Data Locked	van, 06-May-2023 11:42
NT1423050504.D	Data Locked	van, 06-May-2023 11:42
NT1423050505.D	Data Locked	van, 06-May-2023 11:42
NT1423050506.D	Data Locked	van, 06-May-2023 11:42
NT1423050507.D	Data Locked	van, 06-May-2023 11:42
NT1423050508.D	Data Locked	van, 06-May-2023 11:42
NT1423050509.D	Data Locked	van, 06-May-2023 11:42
NT1423050510.D	Data Locked	van, 06-May-2023 11:42
NT1423050511.D	Data Locked	van, 06-May-2023 11:42
NT1423050512.D	Data Locked	van, 06-May-2023 11:42
NT1423050513.D	Data Locked	van, 06-May-2023 11:42
NT1423050514.D	Data Locked	van, 06-May-2023 11:42
NT1423050515.D	Data Locked	van, 06-May-2023 11:42
NT1423050516.D	Data Locked	van, 06-May-2023 11:42
NT1423050517.D	Data Locked	van, 06-May-2023 11:42
NT1423050518.D	Data Locked	van, 06-May-2023 11:42
NT1423050519.D	Data Locked	van, 06-May-2023 11:42
NT1423050520.D	Data Locked	van, 06-May-2023 11:42
NT1423050521.D	Data Locked	van, 06-May-2023 11:42
NT1423050522.D	Data Locked	van, 06-May-2023 11:42
NT1423050523.D	Data Locked	van, 06-May-2023 11:42
NT1423050524.D	Data Locked	van, 06-May-2023 11:42
NT1423050525.D	Data Locked	van, 06-May-2023 11:42
NT1423050526.D	Data Locked	van, 06-May-2023 11:42
NT1423050527.D	Data Locked	van, 06-May-2023 11:42
NT1423050528.D	Data Locked	van, 06-May-2023 11:42

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-MAY-2023 11:11
 End Cal Date : 05-MAY-2023 15:12
 Quant Method : ISTD
 Target Version : 4.14
 Integrator : HP RTE
 Method file : \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
 Last Edit : 06-May-2023 07:18 van

Calibration File Names:

Level 1: \\target\share\chem3\nt14.i\20230505.b\NT1423050502.D
 Level 2: \\target\share\chem3\nt14.i\20230505.b\NT1423050503.D
 Level 3: \\target\share\chem3\nt14.i\20230505.b\NT1423050504.D
 Level 4: \\target\share\chem3\nt14.i\20230505.b\NT1423050505.D
 Level 5: \\target\share\chem3\nt14.i\20230505.b\NT1423050506.D
 Level 6: \\target\share\chem3\nt14.i\20230505.b\NT1423050507.D

Compound	0.1000000	0.5000000	1.0000	2.5000	5.0000	10.0000			Coefficients		%RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	m1	m2	or R^2
1 trans-Decalin	0.17201	0.23165	0.22419	0.21484	0.22309	0.21969	AVRG		0.21424		9.99777
2 cis-Decalin	0.12717	0.16719	0.16714	0.15862	0.15625	0.15549	AVRG		0.15531		9.48277
3 C1-Decalin	++++	++++	++++	++++	++++	++++	AVRG		0.000e+000		0.000e+000 <-
4 C2-Decalin	++++	++++	++++	++++	++++	++++	AVRG		0.000e+000		0.000e+000 <-
5 C3-Decalin	++++	++++	++++	++++	++++	++++	AVRG		0.000e+000		0.000e+000 <-
247 C4-Decalin	++++	++++	++++	++++	++++	++++	AVRG		0.000e+000		0.000e+000 <-
7 Naphthalene	2.21441	2.24829	2.23064	2.10092	2.19065	2.18539	AVRG		2.19505		2.36269
8 C1-Naphthalenes	++++	++++	++++	++++	++++	++++	AVRG		0.000e+000		0.000e+000 <-
9 C2-Naphthalenes	++++	++++	++++	++++	++++	++++	AVRG		0.000e+000		0.000e+000 <-
10 C3-Naphthalenes	++++	++++	++++	++++	++++	++++	AVRG		0.000e+000		0.000e+000 <-
11 C4-Naphthalenes	++++	++++	++++	++++	++++	++++	AVRG		0.000e+000		0.000e+000 <-
12 Benzo(b)thiophene	1.58643	1.75302	1.69371	1.61211	1.68140	1.68221	AVRG		1.66815		3.60153
13 C1-Benzothiophenes	++++	++++	++++	++++	++++	++++	AVRG		0.000e+000		0.000e+000 <-
14 C2-Benzothiophenes	++++	++++	++++	++++	++++	++++	AVRG		0.000e+000		0.000e+000 <-

ARI Labs, Inc.

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 Last Edit : 06-May-2023 07:18 van

	0.1000000	0.5000000	1.0000	2.5000	5.0000	10.0000			Coefficients		%RSD
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	m1	m2	or R^2
15 C3-Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
16 2-Methylnaphthalene	1.04813	1.12378	1.11676	1.06241	1.09655	1.06595	AVRG		1.08560		2.87675
17 1-methylnaphthalene	1.11989	1.14680	1.13112	1.04769	1.06465	1.04873	AVRG		1.09315		4.06816
18 Biphenyl	1.44953	1.55981	1.54087	1.43775	1.49387	1.52908	AVRG		1.50182		3.33364
19 2,6-Dimethylnaphthalene	1.00132	1.10845	1.11105	1.04200	1.06749	1.08330	AVRG		1.06893		3.93365
20 Acenaphthylene	1.68851	1.76177	1.74820	1.75414	1.86486	1.89365	AVRG		1.78519		4.36337
22 Acenaphthene	1.03304	1.12942	1.11706	1.07268	1.11779	1.13990	AVRG		1.10165		3.69362
23 Dibenzofuran	1.36888	1.47027	1.43824	1.39842	1.47395	1.50284	AVRG		1.44210		3.50599
24 1,6,7-Trimethylnaphthalene	0.89670	0.96892	0.96247	0.93011	0.96898	0.98937	AVRG		0.95276		3.51723
26 Fluorene	1.08605	1.15615	1.17298	1.12709	1.19439	1.19626	AVRG		1.15549		3.69410
27 C1-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
28 C2-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
29 C3-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
30 Dibenzothiophene	1.31333	1.40461	1.42171	1.39528	1.46497	1.49546	AVRG		1.41589		4.44942
31 C1-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
32 C2-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
33 C3-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
34 C4-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
36 Phenanthrene	1.27771	1.34505	1.35416	1.29439	1.34855	1.36560	AVRG		1.33091		2.69213
37 Anthracene	1.14096	1.19546	1.21034	1.19474	1.29017	1.29862	AVRG		1.22172		5.00148
38 C1-Phenanthrenes/Anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
39 C2-Phenanthrenes/Anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-

ARI Labs, Inc.

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 Last Edit : 06-May-2023 07:18 van

	0.1000000	0.5000000	1.0000	2.5000	5.0000	10.0000			Coefficients		%RSD
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	m1	m2	or R^2
40 C3-Phenanthrenes/Anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
41 C4-Phenanthrenes/Anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
42 Carbazole	6436	37593	76402	208915	450183	918815	LINR	0.000e+000	1.14849		0.99719
43 1-Methylphenanthrene	0.78443	0.83201	0.85137	0.85462	0.91216	0.91525	AVRG		0.85831		5.79088
44 Fluoranthene	1.05522	1.19675	1.16968	1.18904	1.31822	1.35245	AVRG		1.21356		8.88445
45 Pyrene-d10	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
46 Pyrene	1.13566	1.22229	1.22821	1.24959	1.35799	1.42629	AVRG		1.27000		8.23217
47 Retene	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
48 C1-Fluoranthenes/Pyrenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
49 C2-Fluoranthenes/Pyrenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
50 C3-Fluoranthenes/Pyrenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
249 C4-Fluoranthenes/Pyrenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
51 Naphthobenzothiophene	0.78349	0.82114	0.80828	0.80667	0.88980	0.91634	AVRG		0.83762		6.30372
52 C1-Naphthobenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
53 C2-Naphthobenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
54 C3-Naphthobenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
248 C4-Naphthobenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
55 Benzo(a)anthracene	1.50818	1.41880	1.47611	1.51514	1.71311	1.77563	AVRG		1.56783		9.07607
57 Chrysene	1.29309	1.51644	1.49438	1.52671	1.67350	1.69736	AVRG		1.53358		9.49935
58 C1-Benzo(a)anthracenes/Chryse	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
59 C2-Benzo(a)anthracenes/Chryse	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
60 C3-Benzo(a)anthracenes/Chryse	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-

ARI Labs, Inc.

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	0.1000000	0.5000000	1.0000	2.5000	5.0000	10.0000			Coefficients			%RSD
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	m1	m2	or R^2	
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====			=====
61 C4-Benzo(a)anthracenes/Chryse	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
62 Benzo(b)fluoranthene	1.27963	1.41687	1.44305	1.46255	1.56281	1.61116	AVRG		1.46268		7.97673	
293 Benzo(j)fluoranthene	1.16080	1.28674	1.31299	1.37894	1.54383	1.55293	AVRG		1.37271		11.17536	
63 Benzo(k)fluoranthene	6162	31544	60028	164077	344719	775476	LINR	0.000e+000	1.64313		0.99029	
64 Benzo(e)pyrene	1.32730	1.38013	1.35788	1.36342	1.49512	1.56436	AVRG		1.41470		6.59755	
246 Total Benzofluoranthenes	1.11725	1.27578	1.30711	1.34705	1.51801	1.60118	AVRG		1.36106		12.81514	
65 Benzo(a)pyrene-d12	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
66 Benzo(a)pyrene	0.96281	1.11971	1.13613	1.18465	1.34466	1.43169	AVRG		1.19661		14.06145	
68 Perylene	1.09383	1.23989	1.24716	1.30043	1.46644	1.53294	AVRG		1.31345		12.26649	
69 Indeno(1,2,3-cd)pyrene	5343	31703	59648	167115	351661	724035	LINR	0.000e+000	1.55894		0.99669	
70 Dibenzo(a,h)anthracene	4460	25692	48037	132842	285436	597204	LINR	0.000e+000	1.28098		0.99529	
71 C1-Dibenzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
72 C2-Dibenzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
73 C3-Dibenzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
74 Benzo(g,h,i)perylene	0.95754	1.13172	1.15346	1.17468	1.29318	1.36435	AVRG		1.17915		11.95407	
253 n-Octane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
254 n-Nonane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
262 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
255 n-Undecane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
256 n-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
257 n-Tridecane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
258 n-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-

ARI Labs, Inc.

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Method file : \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
Last Edit : 06-May-2023 07:18 van

	0.1000000	0.5000000	1.0000	2.5000	5.0000	10.0000			Coefficients		%RSD
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	m1	m2	or R^2
259 n-Pentadecane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
263 n-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
264 n-Heptadecane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
265 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
266 Pristane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
288 n-Nonadecane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
289 Phytane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
267 n-Eicosane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
268 n-Heneicosane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
270 n-Docosane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
271 n-Tricosane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
272 n-Tetracosane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
273 n-Pentacosane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
274 n-Hexacosane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
275 n-Heptacosane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
276 n-Octacosane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
291 n-Nonacosane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
278 n-Triacontane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
279 n-Hentriacontane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
280 n-Dotriacontane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
281 n-Tritriacontane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=
282 n-Tetratriacontane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <=

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	0.1000000	0.5000000	1.0000	2.5000	5.0000	10.0000			Coefficients		%RSD
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	m1	m2	or R^2
283 n-Pentatriacontane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
284 n-Hexatriacontane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
285 n-Heptatriacontane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
286 n-Octatriacontane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
292 n-Nonatriacontane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
287 n-Tetracontane	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000 <-
=====											
\$ 6 Naphthalene-d8	1.97345	2.04984	2.03389	1.93733	2.00764	1.98774	AVRG		1.99832		2.05794
\$ 21 Acenaphthene-d10	0.85003	0.89403	0.90561	0.85091	0.90126	0.91174	AVRG		0.88560		3.14083
\$ 35 Phenanthrene-d10	1.15227	1.14089	1.16069	1.09786	1.14863	1.14719	AVRG		1.14126		1.94816
\$ 56 Chrysene-d12	0.89985	1.05773	1.04647	1.08894	1.19359	1.22394	AVRG		1.08509		10.71730
\$ 67 Perylene-d12	0.86309	0.99788	0.99182	1.04580	1.16759	1.21456	AVRG		1.04679		12.22624
=====											

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Curve	Formula	Units
Averaged	$\text{Amt} = \text{Rsp/ml}$	Response
Linear	$\text{Amt} = b + \text{Rsp/ml}$	Response

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
Batch File: \\target\share\chem3\nt14.i\20230505.b
Inst ID: nt14.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	NT1423050502	NT1423050503	NT1423050504	NT1423050505	NT1423050506	NT1423050507
INJ. DATE:	05-MAY-2023	05-MAY-2023	05-MAY-2023	05-MAY-2023	05-MAY-2023	05-MAY-2023
INJ. TIME:	11:11	11:59	12:47	13:36	14:24	15:12

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 trans-Decalin	7.449	7.449	7.449	7.449	7.449	7.449	7.449	4.449-10.449	7.449	0.000
2 cis-Decalin	8.569	8.569	8.579	8.579	8.569	8.579	8.579	5.579-11.579	8.574	0.006
3 C1-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	8.922	5.922-11.922	+++++	+++++
4 C2-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	9.200	6.200-12.200	+++++	+++++
5 C3-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	10.000	7.000-13.000	+++++	+++++
247 C4-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	10.100	7.100-13.100	+++++	+++++
\$ 6 Naphthalene-d8	12.220	12.220	12.220	12.220	12.220	12.220	12.220	9.220-15.220	12.220	0.000
7 Naphthalene	12.291	12.290	12.291	12.290	12.291	12.291	12.291	9.291-15.291	12.291	0.000
8 C1-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	14.329	11.329-17.329	+++++	+++++
9 C2-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	16.353	13.353-19.353	+++++	+++++
10 C3-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	18.639	15.639-21.639	+++++	+++++
11 C4-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	18.500	15.500-21.500	+++++	+++++
12 Benzo(b)thiophene	12.745	12.745	12.745	12.745	12.745	12.745	12.745	9.745-15.745	12.745	0.000
13 C1-Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	14.770	11.770-17.770	+++++	+++++
14 C2-Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	15.800	12.800-18.800	+++++	+++++
15 C3-Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	17.200	14.200-20.200	+++++	+++++
16 2-Methylnaphthalene	14.130	14.130	14.130	14.130	14.130	14.130	14.130	11.130-17.130	14.130	0.000

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m

Batch File: \\target\share\chem3\nt14.i\20230505.b

Inst ID: nt14.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 1-methylnaphthalene	14.581	14.580	14.580	14.580	14.591	14.592	14.592	11.592-17.592	14.584	0.006
18 Biphenyl	15.767	15.767	15.767	15.767	15.767	15.778	15.778	12.778-18.778	15.769	0.005
19 2,6-Dimethylnaphthalen	15.855	15.855	15.855	15.855	15.855	15.855	15.855	12.855-18.855	15.855	0.000
20 Acenaphthylene	17.438	17.438	17.438	17.438	17.438	17.438	17.438	14.438-20.438	17.438	0.000
21 Acenaphthene-d10	17.724	17.723	17.723	17.723	17.723	17.724	17.724	14.724-20.724	17.723	0.000
22 Acenaphthene	17.833	17.833	17.833	17.844	17.844	17.845	17.845	14.845-20.845	17.839	0.006
23 Dibenzofuran	18.218	18.218	18.218	18.218	18.218	18.218	18.218	15.218-21.218	18.218	0.000
24 1,6,7-Trimethylnaphtha	18.438	18.438	18.438	18.438	18.438	18.438	18.438	15.438-21.438	18.438	0.000
25 Fluorene-d10	19.264	19.264	19.264	19.264	19.264	19.264	19.264	16.264-22.264	19.264	0.000
26 Fluorene	19.366	19.366	19.366	19.366	19.366	19.377	19.377	16.377-22.377	19.368	0.005
27 C1-Fluorenes	++++	++++	++++	++++	++++	++++	21.000	18.000-24.000	++++	++++
28 C2-Fluorenes	++++	++++	++++	++++	++++	++++	21.840	18.840-24.840	++++	++++
29 C3-Fluorenes	++++	++++	++++	++++	++++	++++	23.000	20.000-26.000	++++	++++
30 Dibenzothiophene	22.305	22.304	22.304	22.304	22.304	22.305	22.305	19.305-25.305	22.305	0.000
31 C1-Dibenzothiophenes	++++	++++	++++	++++	++++	++++	23.500	20.500-26.500	++++	++++
32 C2-Dibenzothiophenes	++++	++++	++++	++++	++++	++++	24.500	21.500-27.500	++++	++++
33 C3-Dibenzothiophenes	++++	++++	++++	++++	++++	++++	25.600	22.600-28.600	++++	++++
34 C4-Dibenzothiophenes	++++	++++	++++	++++	++++	++++	27.000	24.000-30.000	++++	++++
35 Phenanthrene-d10	22.617	22.617	22.617	22.617	22.617	22.618	22.618	19.618-25.618	22.617	0.000
250 Anthracene-d10	22.733	22.733	22.733	22.733	22.733	22.733	22.733	19.733-25.733	22.733	0.000
36 Phenanthrene	22.699	22.699	22.699	22.698	22.699	22.699	22.699	19.699-25.699	22.699	0.000
37 Anthracene	22.803	22.803	22.803	22.803	22.803	22.803	22.803	19.803-25.803	22.803	0.000

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m

Batch File: \\target\share\chem3\nt14.i\20230505.b

Inst ID: nt14.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
38 C1-Phenanthrenes/Anthr	+++++	+++++	+++++	+++++	+++++	+++++	23.800	20.800-26.800	+++++	+++++
39 C2-Phenanthrenes/Anthr	+++++	+++++	+++++	+++++	+++++	+++++	25.579	22.579-28.579	+++++	+++++
40 C3-Phenanthrenes/Anthr	+++++	+++++	+++++	+++++	+++++	+++++	27.000	24.000-30.000	+++++	+++++
41 C4-Phenanthrenes/Anthr	+++++	+++++	+++++	+++++	+++++	+++++	28.000	25.000-31.000	+++++	+++++
42 Carbazole	24.078	24.078	24.078	24.078	24.078	24.078	24.078	21.078-27.078	24.078	0.000
43 1-Methylphenanthrene	24.541	24.530	24.530	24.541	24.541	24.542	24.542	21.542-27.542	24.538	0.006
44 Fluoranthene	26.512	26.512	26.512	26.512	26.512	26.523	26.523	23.523-29.523	26.514	0.005
45 Pyrene-d10	+++++	+++++	+++++	+++++	+++++	+++++	18.628	15.628-21.628	+++++	+++++
46 Pyrene	27.335	27.335	27.346	27.346	27.346	27.346	27.346	24.346-30.346	27.342	0.006
47 Retene	+++++	+++++	+++++	+++++	+++++	+++++	17.769	14.769-20.769	+++++	+++++
48 C1-Fluoranthenes/Pyren	+++++	+++++	+++++	+++++	+++++	+++++	27.900	24.900-30.900	+++++	+++++
49 C2-Fluoranthenes/Pyren	+++++	+++++	+++++	+++++	+++++	+++++	30.006	27.006-33.006	+++++	+++++
50 C3-Fluoranthenes/Pyren	+++++	+++++	+++++	+++++	+++++	+++++	30.000	27.000-33.000	+++++	+++++
249 C4-Fluoranthenes/Pyren	+++++	+++++	+++++	+++++	+++++	+++++	34.014	31.014-37.014	+++++	+++++
51 Naphthobenzothiophene	29.832	29.832	29.832	29.832	29.832	29.832	29.832	26.832-32.832	29.832	0.000
52 C1-Naphthobenzothiophe	+++++	+++++	+++++	+++++	+++++	+++++	32.500	29.500-35.500	+++++	+++++
53 C2-Naphthobenzothiophe	+++++	+++++	+++++	+++++	+++++	+++++	34.274	31.274-37.274	+++++	+++++
54 C3-Naphthobenzothiophe	+++++	+++++	+++++	+++++	+++++	+++++	35.000	32.000-38.000	+++++	+++++
248 C4-Naphthobenzothiophe	+++++	+++++	+++++	+++++	+++++	+++++	36.000	33.000-39.000	+++++	+++++
55 Benzo(a)anthracene	30.404	30.404	30.404	30.404	30.415	30.415	30.415	27.415-33.415	30.408	0.006
\$ 56 Chrysene-d12	30.528	30.528	30.528	30.528	30.539	30.539	30.539	27.539-33.539	30.532	0.006
57 Chrysene	30.607	30.607	30.607	30.607	30.607	30.607	30.607	27.607-33.607	30.607	0.000
58 C1-Benzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	31.000	28.000-34.000	+++++	+++++
59 C2-Benzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	31.800	28.800-34.800	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m

Batch File: \\target\share\chem3\nt14.i\20230505.b

Inst ID: nt14.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----										
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----										
60 C3-Benzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	33.803	30.803-36.803	+++++	+++++
61 C4-Benzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	33.200	30.200-36.200	+++++	+++++
62 Benzo(b)fluoranthene	32.814	32.814	32.814	32.814	32.814	32.826	32.826	29.826-35.826	32.816	0.005
293 Benzo(j)fluoranthene	32.927	32.927	32.927	32.927	32.927	32.938	32.938	29.938-35.938	32.929	0.005
63 Benzo(k)fluoranthene	32.871	32.859	32.871	32.871	32.871	32.871	32.871	29.871-35.871	32.869	0.005
* 251 Benzo(e)pyrene-d12	33.479	33.479	33.479	33.479	33.479	33.479	33.479	30.479-36.479	33.479	0.000
64 Benzo(e)pyrene	33.546	33.546	33.546	33.546	33.546	33.547	33.547	30.547-36.547	33.546	0.000
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----										
246 Total Benzofluoranthene	32.927	32.814	32.814	32.927	32.871	32.938	32.938	29.938-35.938	32.882	0.057
65 Benzo(a)pyrene-d12	+++++	+++++	+++++	+++++	+++++	+++++	25.348	22.348-28.348	+++++	+++++
66 Benzo(a)pyrene	33.648	33.648	33.648	33.648	33.648	33.648	33.648	30.648-36.648	33.648	0.000
\$ 67 Perylene-d12	33.828	33.828	33.828	33.828	33.828	33.839	33.839	30.839-36.839	33.830	0.005
68 Perylene	33.884	33.884	33.884	33.884	33.896	33.896	33.896	30.896-36.896	33.888	0.006
69 Indeno(1,2,3-cd)pyrene	36.081	36.081	36.081	36.092	36.092	36.103	36.103	33.103-39.103	36.088	0.009
70 Dibenzo(a,h)anthracene	36.058	36.058	36.058	36.058	36.058	36.069	36.069	33.069-39.069	36.060	0.005
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----										
71 C1-Dibenzo(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++	36.000	33.000-39.000	+++++	+++++
72 C2-Dibenzo(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++	37.000	34.000-40.000	+++++	+++++
73 C3-Dibenzo(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++	38.000	35.000-41.000	+++++	+++++
74 Benzo(g,h,i)perylene	37.072	37.060	37.061	37.072	37.072	37.083	37.083	34.083-40.083	37.070	0.009
253 n-Octane	+++++	+++++	+++++	+++++	+++++	+++++	5.322	2.322-8.322	+++++	+++++
254 n-Nonane	+++++	+++++	+++++	+++++	+++++	+++++	6.986	3.986-9.986	+++++	+++++
262 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	8.446	5.446-11.446	+++++	+++++
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----										
255 n-Undecane	+++++	+++++	+++++	+++++	+++++	+++++	9.869	6.869-12.869	+++++	+++++
256 n-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	11.131	8.131-14.131	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m

Batch File: \\target\share\chem3\nt14.i\20230505.b

Inst ID: nt14.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
257 n-Tridecane	+++++	+++++	+++++	+++++	+++++	+++++	12.527	9.527-15.527	+++++	+++++
258 n-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	13.495	10.495-16.495	+++++	+++++
259 n-Pentadecane	+++++	+++++	+++++	+++++	+++++	+++++	14.559	11.559-17.559	+++++	+++++
263 n-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	15.570	12.570-18.570	+++++	+++++
264 n-Heptadecane	+++++	+++++	+++++	+++++	+++++	+++++	16.533	13.533-19.533	+++++	+++++
265 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	17.453	14.453-20.453	+++++	+++++
266 Pristane	+++++	+++++	+++++	+++++	+++++	+++++	16.608	13.608-19.608	+++++	+++++
288 n-Nonadecane	+++++	+++++	+++++	+++++	+++++	+++++	18.282	15.282-21.282	+++++	+++++
289 Phytane	+++++	+++++	+++++	+++++	+++++	+++++	17.517	14.517-20.517	+++++	+++++
267 n-Eicosane	+++++	+++++	+++++	+++++	+++++	+++++	19.090	16.090-22.090	+++++	+++++
268 n-Heneicosane	+++++	+++++	+++++	+++++	+++++	+++++	19.962	16.962-22.962	+++++	+++++
270 n-Docosane	+++++	+++++	+++++	+++++	+++++	+++++	20.529	17.529-23.529	+++++	+++++
271 n-Tricosane	+++++	+++++	+++++	+++++	+++++	+++++	21.133	18.133-24.133	+++++	+++++
272 n-Tetracosane	+++++	+++++	+++++	+++++	+++++	+++++	21.839	18.839-24.839	+++++	+++++
273 n-Pentacosane	+++++	+++++	+++++	+++++	+++++	+++++	22.245	19.245-25.245	+++++	+++++
274 n-Hexacosane	+++++	+++++	+++++	+++++	+++++	+++++	23.251	20.251-26.251	+++++	+++++
275 n-Heptacosane	+++++	+++++	+++++	+++++	+++++	+++++	23.764	20.764-26.764	+++++	+++++
276 n-Octacosane	+++++	+++++	+++++	+++++	+++++	+++++	24.128	21.128-27.128	+++++	+++++
291 n-Nonacosane	+++++	+++++	+++++	+++++	+++++	+++++	24.626	21.626-27.626	+++++	+++++
278 n-Triacontane	+++++	+++++	+++++	+++++	+++++	+++++	25.075	22.075-28.075	+++++	+++++
279 n-Hentriacontane	+++++	+++++	+++++	+++++	+++++	+++++	25.519	22.519-28.519	+++++	+++++
280 n-Dotriacontane	+++++	+++++	+++++	+++++	+++++	+++++	25.952	22.952-28.952	+++++	+++++
281 n-Tritriacontane	+++++	+++++	+++++	+++++	+++++	+++++	26.364	23.364-29.364	+++++	+++++
282 n-Tetratriacontane	+++++	+++++	+++++	+++++	+++++	+++++	26.829	23.829-29.829	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m

Batch File: \\target\share\chem3\nt14.i\20230505.b

Inst ID: nt14.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
283 n-Pentatriacontane	+++++	+++++	+++++	+++++	+++++	+++++	27.370	24.370-30.370	+++++	+++++
284 n-Hexatriacontane	+++++	+++++	+++++	+++++	+++++	+++++	27.936	24.936-30.936	+++++	+++++
285 n-Heptatriacontane	+++++	+++++	+++++	+++++	+++++	+++++	28.578	25.578-31.578	+++++	+++++
286 n-Octatriacontane	+++++	+++++	+++++	+++++	+++++	+++++	29.295	26.295-32.295	+++++	+++++
292 n-Nonatriacontane	+++++	+++++	+++++	+++++	+++++	+++++	30.135	27.135-33.135	+++++	+++++
287 n-Tetracontane	+++++	+++++	+++++	+++++	+++++	+++++	31.103	28.103-34.103	+++++	+++++

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

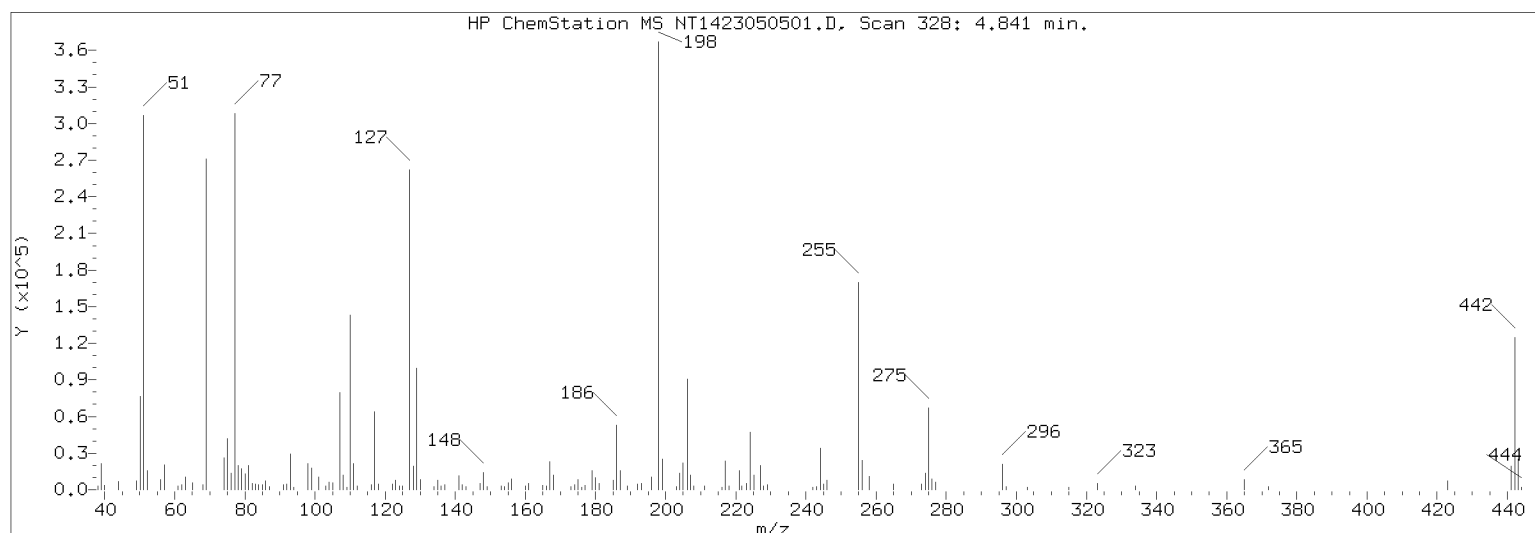
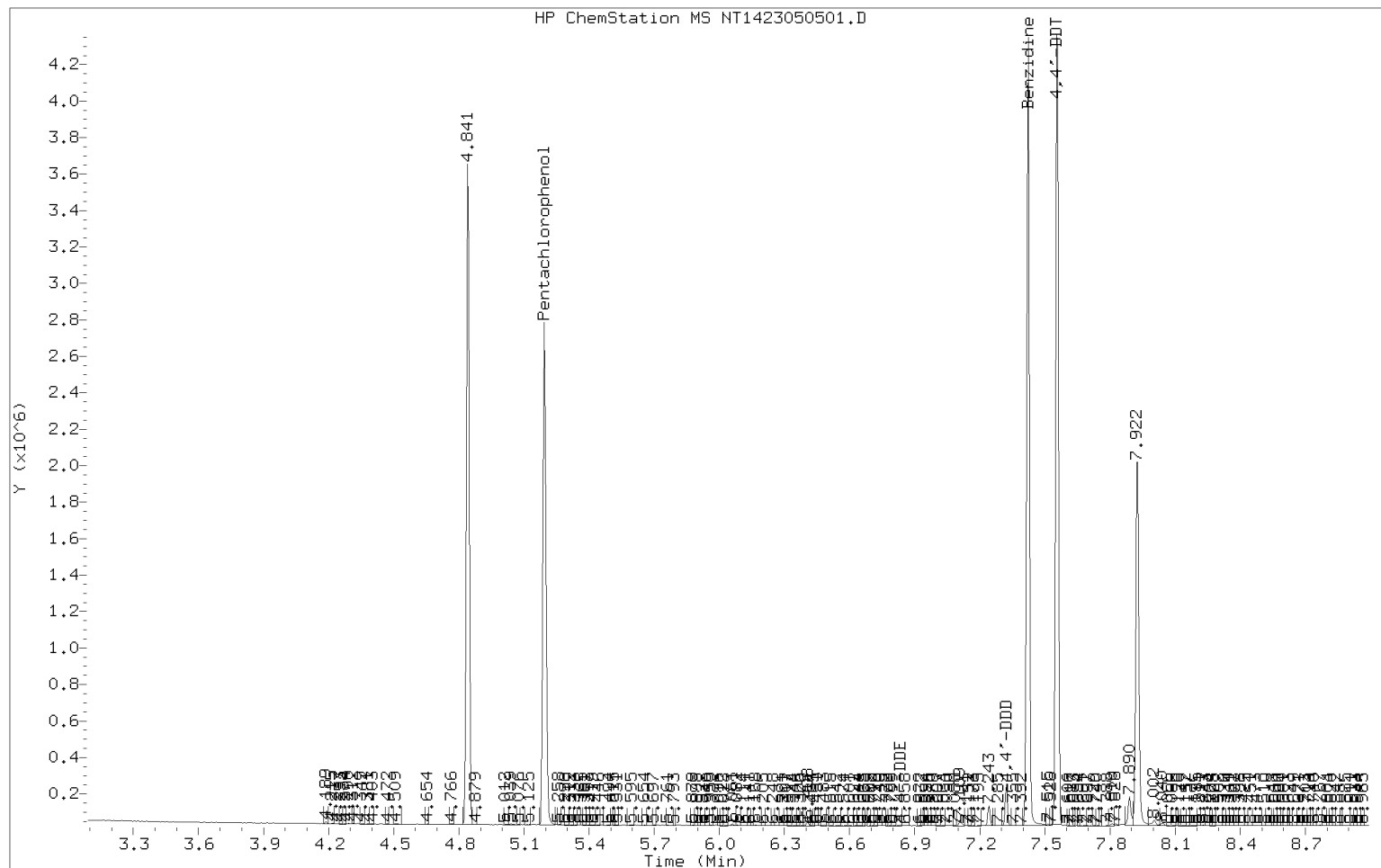
Datafile Analyzed: /20230505.b/NT1423050501.D/NT1423050501.D

Method Used: \20230505.b\DFTPP8270E.m Inst: nt14

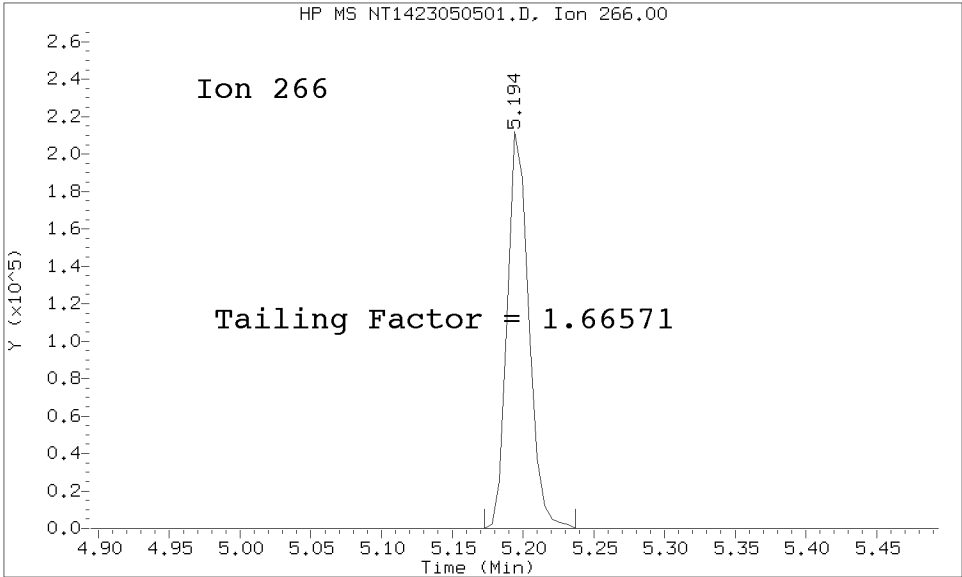
Injection Date: 05-MAY-2023 10:56 Operator: VTS

Sample Info: SLE0096-TUN1 SLE0096-TUN1

Report Date: 05/06/2023 07:53



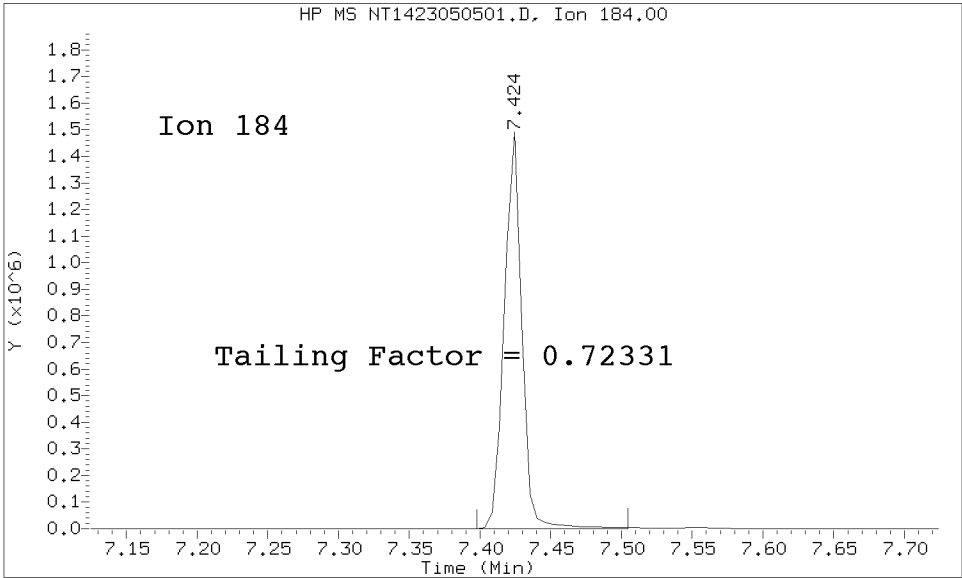
Datafile Analyzed: /20230505.b/NT1423050501.D/NT1423050501.D
Method Used: \20230505.b\DFTPP8270E.m\sw846ddt.m Inst: nt14
Injection Date: 05-MAY-2023 10:56 Operator: VTS
Sample Info: SLE0096-TUN1
Report Date: 05/06/2023 07:53



Pentachlorophenol
=====

Exp. RT = 5.194
Found RT = 5.194

Tail Factor = 1.666 Maximum Allowed = 2.0



Benzidine
=====

Exp. RT = 7.424
Found RT = 7.424

Tail Factor = 0.723 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.6657143	2.000	PASS
Benzidine	0.7233065	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	589237			N/A
4,4-DDE	808	0.1	20.0	PASS
4,4-DDD	31548	5.1	20.0	PASS
4,4-DDD + DDE	32356	5.2	20.0	PASS

Tuning Sample, nt14.i/20230505.b/NT1423050501.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	1.10 (1.50)
69	Mass 69 relative abundance	73.00
70	Less than 2.00% of mass 69	0.00 (0.00)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.83
365	1.00 - 100.00% of mass 198	2.34
441	Less than 150.00% of mass 443	5.99 (75.80)
442	Less than 200.00% of mass 198	39.90
443	15.00 - 24.00% of mass 442	7.91 (19.82)

Data File: NT1423050501.D
Spectrum: Avg. Scans 327-329 (4.84), Background Scan 322
Location of Maximum: 198.00
Number of points: 139

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	2734	104.00	5003	165.00	2979	225.00	9841
39.00	18248	105.00	4812	166.00	1916	227.00	16664
50.00	63168	107.00	63464	167.00	18488	228.00	1952
51.00	252096	108.00	9377	168.00	9670	229.00	3331
52.00	12945	109.00	675	173.00	1637	242.00	1659
56.00	7052	110.00	111208	174.00	3435	243.00	1675
57.00	16800	111.00	17040	175.00	6727	244.00	27736
61.00	2631	112.00	1721	176.00	704	245.00	3773
62.00	3103	116.00	3151	177.00	3033	246.00	6084
63.00	8740	117.00	51112	179.00	12812	255.00	139072
65.00	4509	118.00	3844	180.00	8104	256.00	19824
68.00	3214	122.00	3739	181.00	3901	258.00	8992
69.00	214272	123.00	6166	185.00	5891	265.00	3733
74.00	20536	124.00	2626	186.00	43408	273.00	3947
75.00	32424	125.00	1896	187.00	12484	274.00	10865
76.00	11281	127.00	207040	189.00	2081	275.00	54816
77.00	241664	128.00	14996	192.00	3980	276.00	7316
78.00	16013	129.00	78456	193.00	4373	277.00	5365
79.00	13764	130.00	6664	196.00	8317	296.00	17568
80.00	10630	134.00	1651	198.00	293504	297.00	1922
81.00	16076	135.00	6304	199.00	20040	303.00	1521
82.00	4081	136.00	1783	203.00	1693	315.00	1549
83.00	3903	137.00	3346	204.00	10939	323.00	4732
84.00	245	141.00	9312	205.00	18048	334.00	2449
85.00	3027	142.00	3214	206.00	72736	354.00	693
86.00	4028	143.00	1564	207.00	9387	365.00	6871
87.00	1491	147.00	4524	208.00	1911	372.00	1974
91.00	3437	148.00	11615	211.00	2160	403.00	667
92.00	3635	149.00	1727	216.00	672	423.00	6708
93.00	23528	153.00	2830	217.00	19456	424.00	736
94.00	683	154.00	1751	218.00	2006	441.00	17592
98.00	17576	155.00	5061	221.00	12529	442.00	117104
99.00	14285	156.00	7305	222.00	1091	443.00	23208
101.00	8222	160.00	2765	223.00	4349	444.00	1845
103.00	1819	161.00	4146	224.00	38616		

Data File: \\target\share\chem3\nt14.i\20230505.b\NT1423050502.D

Date : 05-May-2023 11:11

Client ID:

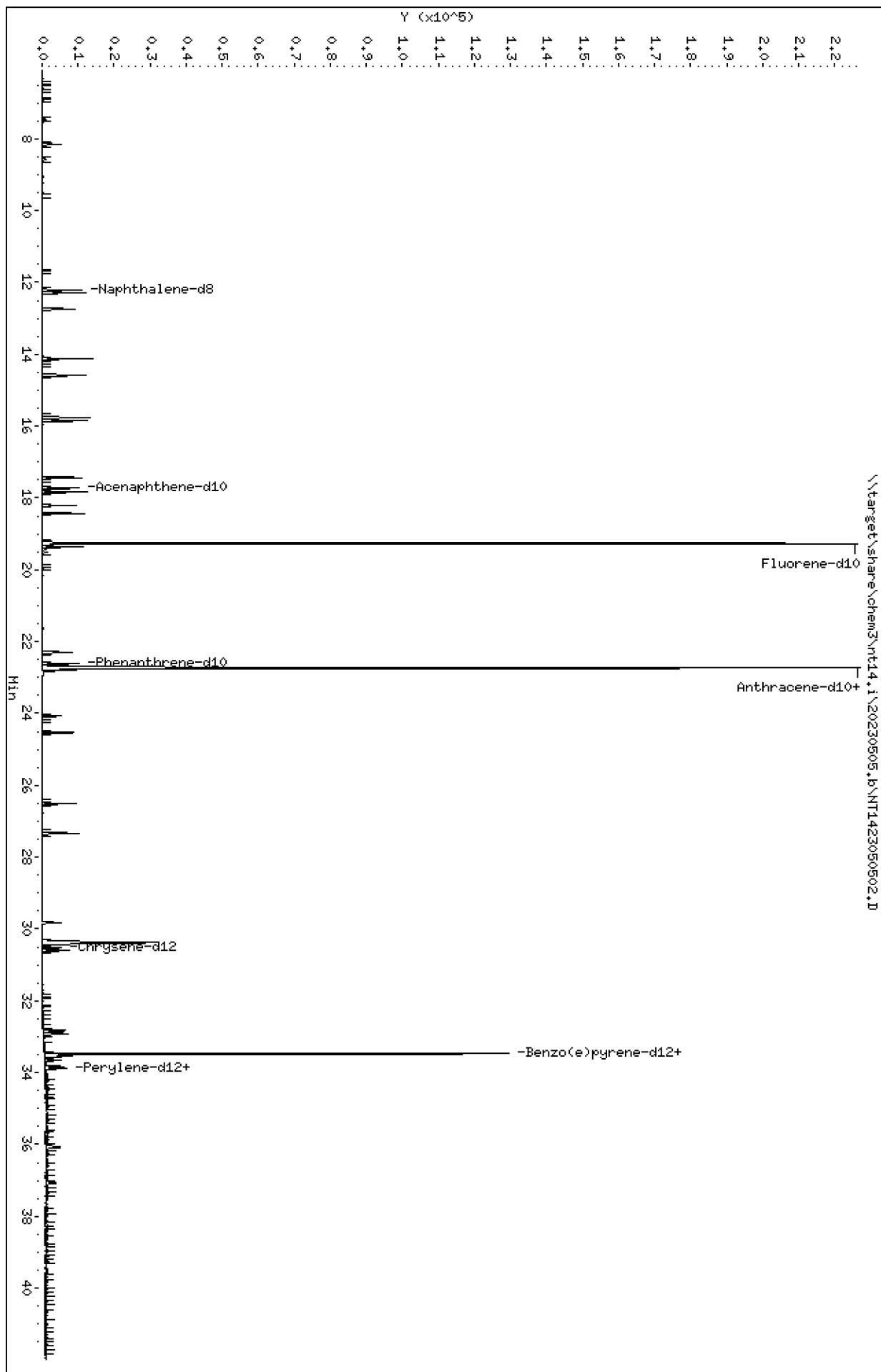
Sample Info: SLE0096-CAL1

Column phase: Rxi-17S11 MS

Instrument: nt14.i

Operator: VTS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230505.b\NT1423050502.D
Lab Smp Id: SLE0096-CAL1
Inj Date : 05-MAY-2023 11:11
Operator : VTS
Smp Info : SLE0096-CAL1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
Meth Date : 06-May-2023 07:22 van
Cal Date : 05-MAY-2023 15:12
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: VANS-201906

Inst ID: nt14.i
Quant Type: ISTD
Cal File: NT1423050507.D
Calibration Sample, Level: 1
Compound Sublist: TARGETS.sub

Compounds	QUANT	SIG						AMOUNTS	
			MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====			====	=====	=====	=====	=====	=====
1 trans-Decalin	138			7.449	7.449	(0.387)	1220	0.10000	0.08029
2 cis-Decalin	138			8.568	8.578	(0.445)	902	0.10000	0.08188
\$ 6 Naphthalene-d8	136			12.219	12.220	(0.634)	13997	0.10000	0.09876
7 Naphthalene	128			12.290	12.290	(0.638)	15706	0.10000	0.1009
12 Benzo(b)thiophene	134			12.745	12.745	(0.662)	11252	0.10000	0.09510
16 2-Methylnaphthalene	141			14.129	14.130	(0.733)	7434	0.10000	0.09655
17 1-methylnaphthalene	141			14.580	14.591	(0.757)	7943	0.10000	0.1024
18 Biphenyl	154			15.767	15.778	(0.818)	10281	0.10000	0.09652
19 2,6-Dimethylnaphthalene	156			15.855	15.855	(0.823)	7102	0.10000	0.09367
20 Acenaphthylene	152			17.437	17.437	(0.905)	11976	0.10000	0.09458
\$ 21 Acenaphthene-d10	164			17.723	17.723	(0.920)	6029	0.10000	0.09598
22 Acenaphthene	153			17.833	17.844	(0.926)	7327	0.10000	0.09377
23 Dibenzofuran	168			18.218	18.218	(0.946)	9709	0.10000	0.09492
24 1,6,7-Trimethylnaphthalene	170			18.437	18.437	(0.957)	6360	0.10000	0.09412
* 25 Fluorene-d10	176			19.263	19.263	(1.000)	141853	2.00000	
26 Fluorene	166			19.365	19.377	(1.005)	7703	0.10000	0.09399
30 Dibenzothiophene	184			22.304	22.304	(1.158)	9315	0.10000	0.09276
\$ 35 Phenanthrene-d10	188			22.617	22.617	(0.995)	9783	0.10000	0.1010
36 Phenanthrene	178			22.698	22.698	(0.998)	10848	0.10000	0.09600
* 250 Anthracene-d10	188			22.733	22.733	(1.000)	169804	2.00000	
37 Anthracene	178			22.802	22.803	(1.003)	9687	0.10000	0.09339
42 Carbazole	167			24.077	24.078	(1.059)	6436	0.10000	0.06600 (M)
43 1-Methylphenanthrene	192			24.541	24.541	(1.080)	6660	0.10000	0.09139
44 Fluoranthene	202			26.511	26.523	(1.166)	8959	0.10000	0.08695
46 Pyrene	202			27.334	27.346	(1.202)	9642	0.10000	0.08942
51 Naphthobenzothiophene	234			29.831	29.831	(1.312)	6652	0.10000	0.09354
55 Benzo(a)anthracene	228			30.404	30.415	(0.908)	8288	0.10000	0.09620
\$ 56 Chrysene-d12	240			30.527	30.539	(0.912)	4945	0.10000	0.08293
57 Chrysene	228			30.606	30.606	(0.914)	7106	0.10000	0.08432
62 Benzo(b)fluoranthene	252			32.814	32.825	(0.980)	7032	0.10000	0.08749
63 Benzo(k)fluoranthene	252			32.870	32.871	(0.982)	6162	0.10000	0.06824
293 Benzo(j)fluoranthene	252			32.926	32.938	(0.984)	6379	0.10000	0.08456
246 Total Benzofluoranthenes	252			32.926	32.938	(0.984)	18419	0.30000	0.2463 (M)

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE		CAL-AMT	ON-COL
=====	=====	=====	=====	=====	=====		=====	=====
* 251 Benzo(e)pyrene-d12	264	33.478	33.478	(1.000)	109907		2.00000	
64 Benzo(e)pyrene	252	33.546	33.546	(1.002)	7294		0.10000	0.09382
66 Benzo(a)pyrene	252	33.647	33.647	(1.005)	5291		0.10000	0.08046
\$ 67 Perylene-d12	264	33.828	33.839	(1.010)	4743		0.10000	0.08245
68 Perylene	252	33.884	33.895	(1.012)	6011		0.10000	0.08328
69 Indeno(1,2,3-cd)pyrene	276	36.080	36.103	(1.078)	5343		0.10000	0.06237
70 Dibenzo(a,h)anthracene	278	36.058	36.069	(1.077)	4460		0.10000	0.06336
74 Benzo(g,h,i)perylene	276	37.071	37.083	(1.107)	5262		0.10000	0.08121

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 05-MAY-2023
 Lab File ID: NT1423050502.D Calibration Time: 13:36
 Lab Smp Id: SLE0096-CAL1
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	137862	68931	275724	141853	2.89
250 Anthracene-d10	168263	84132	336526	169804	0.92
251 Benzo(e)pyrene-d1	99689	49845	199378	109907	10.25

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	19.26	18.76	19.76	19.26	0.00
250 Anthracene-d10	22.73	22.23	23.23	22.73	0.00
251 Benzo(e)pyrene-d1	33.48	32.98	33.98	33.48	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 - NT1423050502.D

Lab ID: SLE0096-CAL1

nt14.i, 20230505.b\ALKYLPNA.m, 05-MAY-2023 11:11

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1423050507.D

On Column LOD for nt14.i, 20230505.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

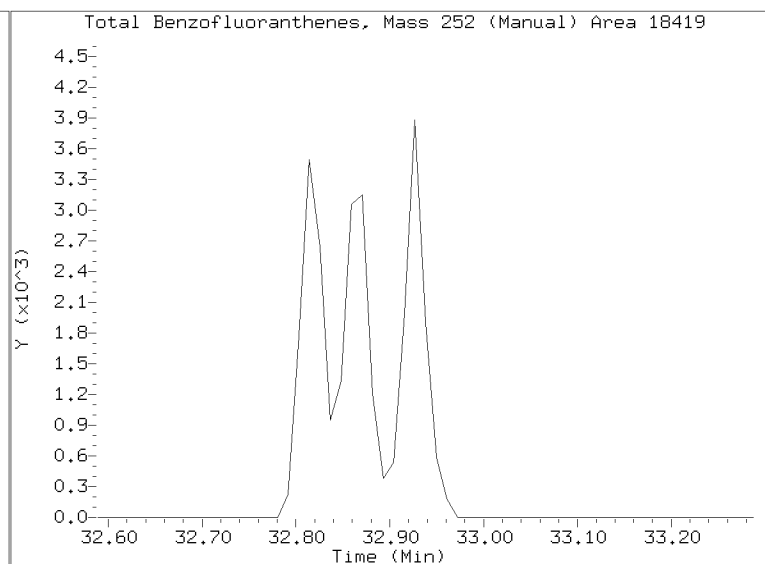
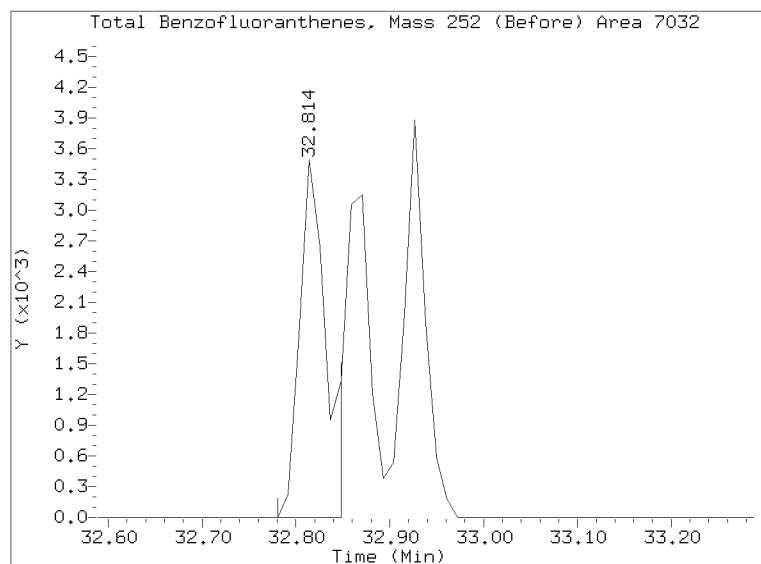
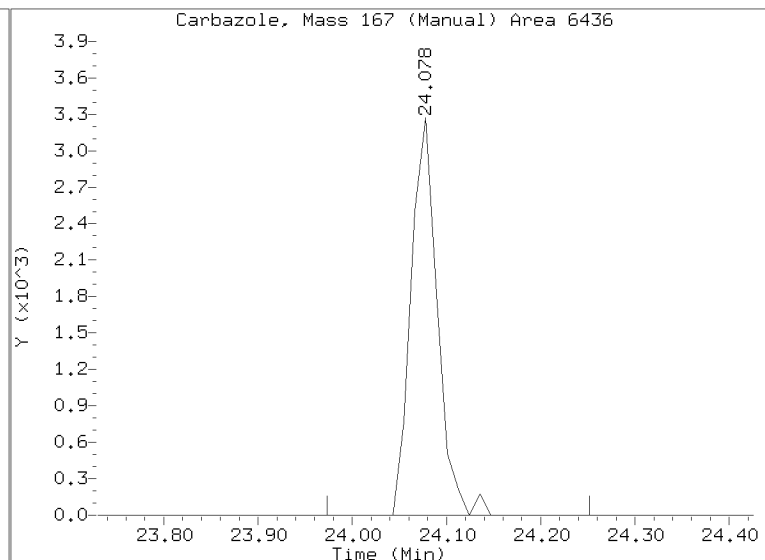
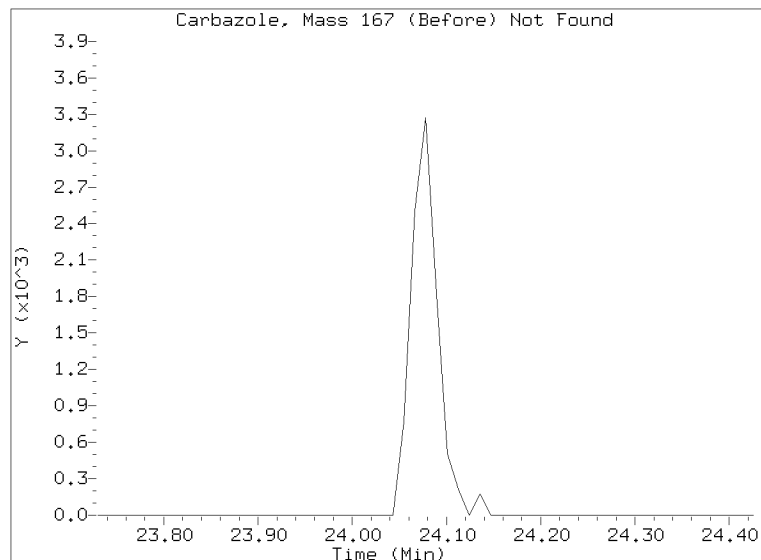
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230505.b/NT1423050502.D

Injection Date: 05-MAY-2023 11:11

Lab ID: SLE0096-CAL1 Client ID:

Report Date: 05/06/2023 07:52



Data File: \\target\share\chem3\nt14,i\20230505,b\NT1423050503.D

Date : 05-May-2023 11:59

Client ID:

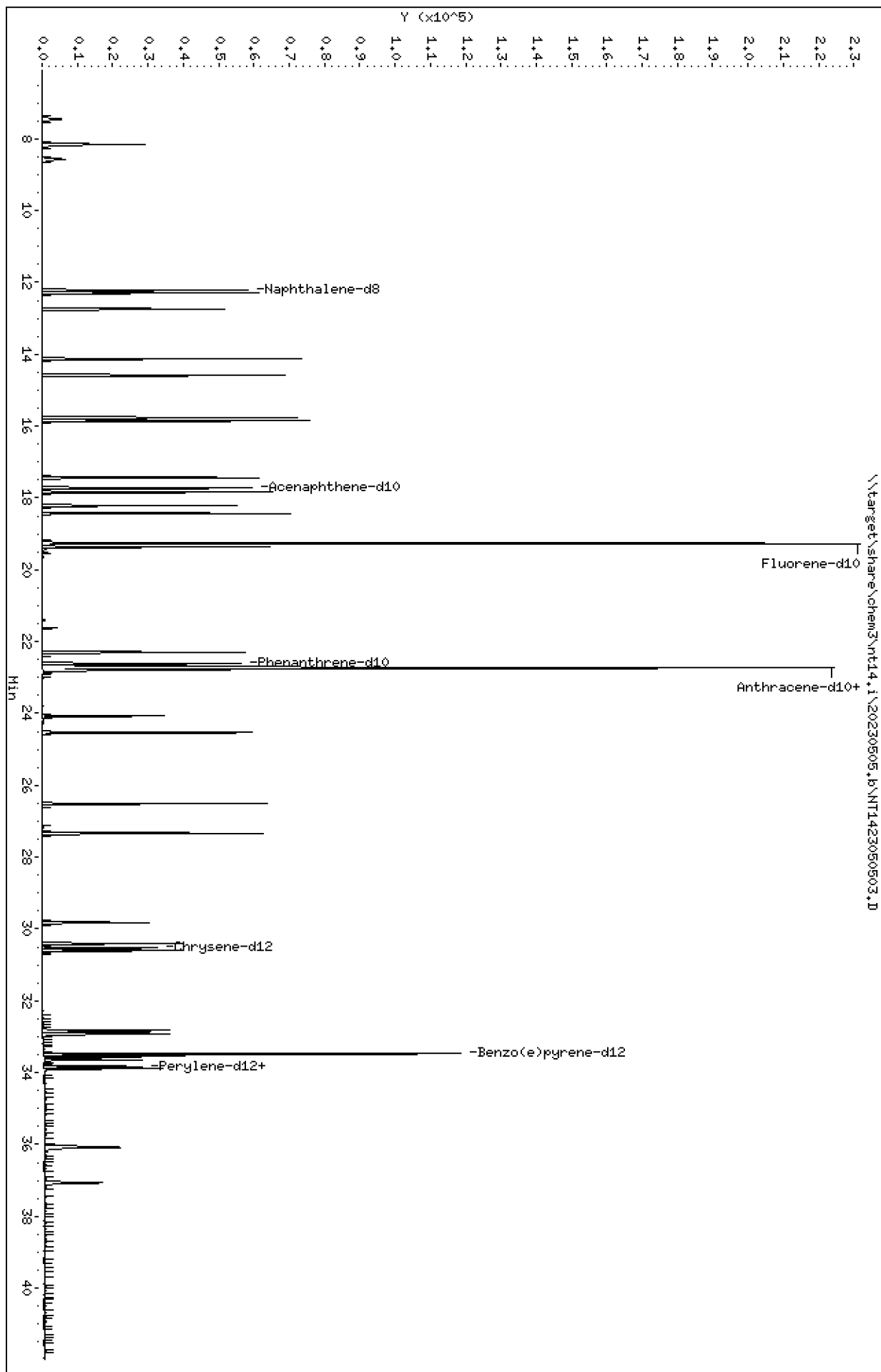
Sample Info: SLE0096-CAL2

Column phase: Rxi-17S11 MS

Instrument: nt14,i

Operator: VTS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230505.b\NT1423050503.D
Lab Smp Id: SLE0096-CAL2
Inj Date : 05-MAY-2023 11:59
Operator : VTS
Smp Info : SLE0096-CAL2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
Meth Date : 06-May-2023 07:22 van
Cal Date : 05-MAY-2023 15:12
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: VANS-201906

Inst ID: nt14.i
Quant Type: ISTD
Cal File: NT1423050507.D
Calibration Sample, Level: 2
Compound Sublist: TARGETS.sub

Compounds	QUANT	SIG						AMOUNTS	
			MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====			====	=====	=====	=====	=====	=====
1 trans-Decalin	138			7.449	7.449	(0.387)	8129	0.50000	0.5406
2 cis-Decalin	138			8.568	8.578	(0.445)	5867	0.50000	0.5382
\$ 6 Naphthalene-d8	136			12.219	12.220	(0.634)	71932	0.50000	0.5129
7 Naphthalene	128			12.290	12.290	(0.638)	78896	0.50000	0.5121
12 Benzo(b)thiophene	134			12.745	12.745	(0.662)	61516	0.50000	0.5254
16 2-Methylnaphthalene	141			14.129	14.130	(0.733)	39435	0.50000	0.5176
17 1-methylnaphthalene	141			14.580	14.591	(0.757)	40243	0.50000	0.5245
18 Biphenyl	154			15.767	15.778	(0.818)	54736	0.50000	0.5193
19 2,6-Dimethylnaphthalene	156			15.855	15.855	(0.823)	38897	0.50000	0.5185
20 Acenaphthylene	152			17.437	17.437	(0.905)	61823	0.50000	0.4934
\$ 21 Acenaphthene-d10	164			17.723	17.723	(0.920)	31373	0.50000	0.5048
22 Acenaphthene	153			17.833	17.844	(0.926)	39633	0.50000	0.5126
23 Dibenzofuran	168			18.217	18.218	(0.946)	51594	0.50000	0.5098
24 1,6,7-Trimethylnaphthalene	170			18.437	18.437	(0.957)	34001	0.50000	0.5085
* 25 Fluorene-d10	176			19.263	19.263	(1.000)	140366	2.00000	
26 Fluorene	166			19.365	19.377	(1.005)	40571	0.50000	0.5003
30 Dibenzothiophene	184			22.304	22.304	(1.158)	49290	0.50000	0.4960
\$ 35 Phenanthrene-d10	188			22.617	22.617	(0.995)	48468	0.50000	0.4998
36 Phenanthrene	178			22.698	22.698	(0.998)	57141	0.50000	0.5053
* 250 Anthracene-d10	188			22.733	22.733	(1.000)	169930	2.00000	
37 Anthracene	178			22.802	22.803	(1.003)	50786	0.50000	0.4893
42 Carbazole	167			24.077	24.078	(1.059)	37593	0.50000	0.3852
43 1-Methylphenanthrene	192			24.529	24.541	(1.079)	35346	0.50000	0.4847
44 Fluoranthene	202			26.511	26.523	(1.166)	50841	0.50000	0.4931
46 Pyrene	202			27.334	27.346	(1.202)	51926	0.50000	0.4812
51 Naphthobenzothiophene	234			29.831	29.831	(1.312)	34884	0.50000	0.4902
55 Benzo(a)anthracene	228			30.403	30.415	(0.908)	36764	0.50000	0.4525
\$ 56 Chrysene-d12	240			30.527	30.539	(0.912)	27408	0.50000	0.4874
57 Chrysene	228			30.606	30.606	(0.914)	39294	0.50000	0.4944
62 Benzo(b)fluoranthene	252			32.814	32.825	(0.980)	36714	0.50000	0.4843
63 Benzo(k)fluoranthene	252			32.859	32.871	(0.981)	31544	0.50000	0.3704
293 Benzo(j)fluoranthene	252			32.926	32.938	(0.984)	33342	0.50000	0.4687
246 Total Benzofluoranthenes	252			32.814	32.938	(0.980)	99174	1.50000	1.406 (M)

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE		CAL-AMT	ON-COL
=====	=====	=====	=====	=====	=====		=====	=====
* 251 Benzo(e)pyrene-d12	264	33.478	33.478	(1.000)	103648		2.00000	
64 Benzo(e)pyrene	252	33.546	33.546	(1.002)	35762		0.50000	0.4878
66 Benzo(a)pyrene	252	33.647	33.647	(1.005)	29014		0.50000	0.4679
\$ 67 Perylene-d12	264	33.827	33.839	(1.010)	25857		0.50000	0.4766
68 Perylene	252	33.884	33.895	(1.012)	32128		0.50000	0.4720
69 Indeno(1,2,3-cd)pyrene	276	36.080	36.103	(1.078)	31703		0.50000	0.3924
70 Dibenzo(a,h)anthracene	278	36.058	36.069	(1.077)	25692		0.50000	0.3870
74 Benzo(g,h,i)perylene	276	37.060	37.083	(1.107)	29325		0.50000	0.4799

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 05-MAY-2023
 Lab File ID: NT1423050503.D Calibration Time: 13:36
 Lab Smp Id: SLE0096-CAL2
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	137862	68931	275724	140366	1.82
250 Anthracene-d10	168263	84132	336526	169930	0.99
251 Benzo(e)pyrene-d1	99689	49845	199378	103648	3.97

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	19.26	18.76	19.76	19.26	0.00
250 Anthracene-d10	22.73	22.23	23.23	22.73	0.00
251 Benzo(e)pyrene-d1	33.48	32.98	33.98	33.48	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 - NT1423050503.D

Lab ID: SLE0096-CAL2

nt14.i, 20230505.b\ALKYLPNA.m, 05-MAY-2023 11:59

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1423050507.D

On Column LOD for nt14.i, 20230505.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

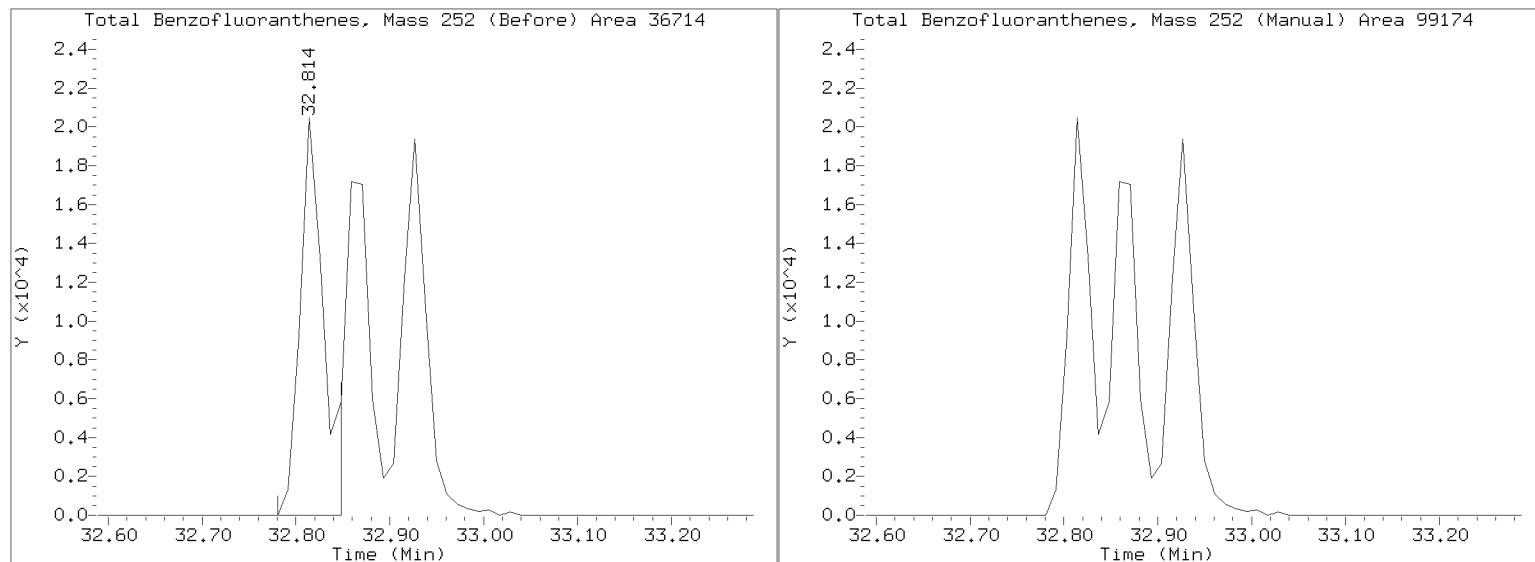
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230505.b/NT1423050503.D

Injection Date: 05-MAY-2023 11:59

Lab ID: SLE0096-CAL2 Client ID:

Report Date: 05/06/2023 07:52



Data File: \\target\share\chem3\nt14,i\20230505,b\NT1423050504.D

Date : 05-May-2023 12:47

Client ID:

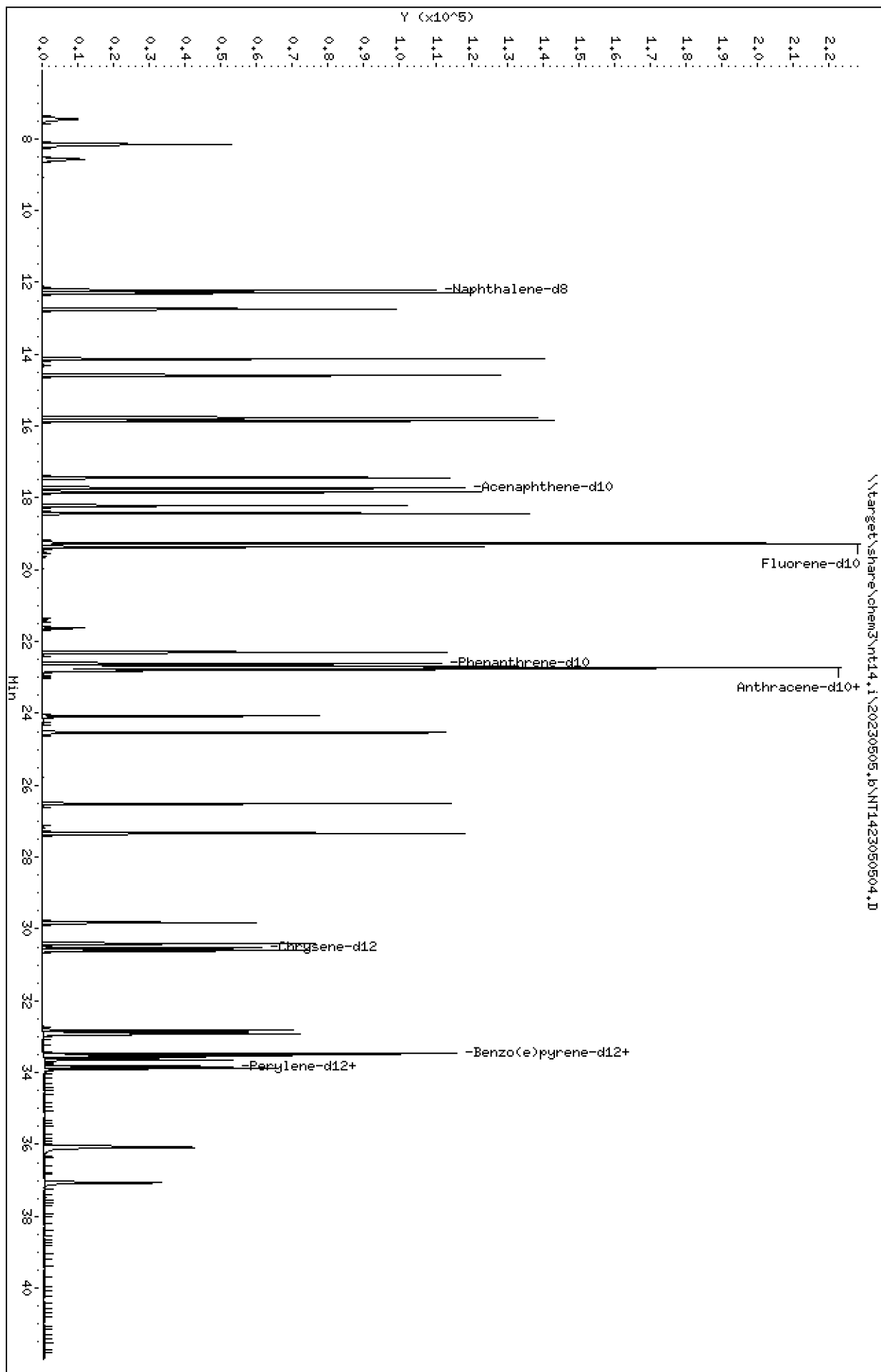
Sample Info: SLE0096-CAL3

Column phase: Rxi-17S11 MS

Instrument: nt14,i

Operator: VTS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230505.b\NT1423050504.D
Lab Smp Id: SLE0096-CAL3
Inj Date : 05-MAY-2023 12:47
Operator : VTS
Smp Info : SLE0096-CAL3
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
Meth Date : 06-May-2023 07:22 van
Cal Date : 05-MAY-2023 15:12
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: VANS-201906

Inst ID: nt14.i
Quant Type: ISTD
Cal File: NT1423050507.D
Calibration Sample, Level: 3
Compound Sublist: TARGETS.sub

Compounds	QUANT	SIG						AMOUNTS	
			MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====			====	=====	=====	=====	=====	=====
1 trans-Decalin	138			7.449	7.449	(0.387)	14951	1.00000	1.046
2 cis-Decalin	138			8.578	8.578	(0.445)	11146	1.00000	1.076
\$ 6 Naphthalene-d8	136			12.219	12.220	(0.634)	135637	1.00000	1.018
7 Naphthalene	128			12.290	12.290	(0.638)	148758	1.00000	1.016
12 Benzo(b)thiophene	134			12.745	12.745	(0.662)	112951	1.00000	1.015
16 2-Methylnaphthalene	141			14.129	14.130	(0.733)	74475	1.00000	1.029
17 1-methylnaphthalene	141			14.580	14.591	(0.757)	75433	1.00000	1.035
18 Biphenyl	154			15.767	15.778	(0.818)	102758	1.00000	1.026
19 2,6-Dimethylnaphthalene	156			15.855	15.855	(0.823)	74094	1.00000	1.039
20 Acenaphthylene	152			17.437	17.437	(0.905)	116585	1.00000	0.9793
\$ 21 Acenaphthene-d10	164			17.723	17.723	(0.920)	60394	1.00000	1.023
22 Acenaphthene	153			17.833	17.844	(0.926)	74495	1.00000	1.014
23 Dibenzofuran	168			18.218	18.218	(0.946)	95914	1.00000	0.9973
24 1,6,7-Trimethylnaphthalene	170			18.437	18.437	(0.957)	64186	1.00000	1.010
* 25 Fluorene-d10	176			19.263	19.263	(1.000)	133377	2.00000	
26 Fluorene	166			19.365	19.377	(1.005)	78224	1.00000	1.015
30 Dibenzothiophene	184			22.304	22.304	(1.158)	94812	1.00000	1.004
\$ 35 Phenanthrene-d10	188			22.617	22.617	(0.995)	94177	1.00000	1.017
36 Phenanthrene	178			22.698	22.698	(0.998)	109875	1.00000	1.017
* 250 Anthracene-d10	188			22.733	22.733	(1.000)	162278	2.00000	
37 Anthracene	178			22.802	22.803	(1.003)	98206	1.00000	0.9907
42 Carbazole	167			24.077	24.078	(1.059)	76402	1.00000	0.8199
43 1-Methylphenanthrene	192			24.529	24.541	(1.079)	69079	1.00000	0.9919
44 Fluoranthene	202			26.511	26.523	(1.166)	94907	1.00000	0.9638
46 Pyrene	202			27.346	27.346	(1.203)	99656	1.00000	0.9671
51 Naphthobenzothiophene	234			29.831	29.831	(1.312)	65583	1.00000	0.9650
55 Benzo(a)anthracene	228			30.403	30.415	(0.908)	71286	1.00000	0.9415
\$ 56 Chrysene-d12	240			30.527	30.539	(0.912)	50537	1.00000	0.9644
57 Chrysene	228			30.606	30.606	(0.914)	72168	1.00000	0.9744
62 Benzo(b)fluoranthene	252			32.814	32.825	(0.980)	69689	1.00000	0.9866
63 Benzo(k)fluoranthene	252			32.870	32.871	(0.982)	60028	1.00000	0.7565
293 Benzo(j)fluoranthene	252			32.926	32.938	(0.984)	63408	1.00000	0.9565
246 Total Benzofluoranthenes	252			32.814	32.938	(0.980)	189373	3.00000	2.881 (M)

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE		CAL-AMT	ON-COL
=====	=====	=====	=====	=====	=====		=====	=====
* 251 Benzo(e)pyrene-d12	264	33.478	33.478	(1.000)	96586		2.00000	
64 Benzo(e)pyrene	252	33.546	33.546	(1.002)	65576		1.00000	0.9598
66 Benzo(a)pyrene	252	33.647	33.647	(1.005)	54867		1.00000	0.9495
\$ 67 Perylene-d12	264	33.827	33.839	(1.010)	47898		1.00000	0.9475
68 Perylene	252	33.884	33.895	(1.012)	60229		1.00000	0.9495
69 Indeno(1,2,3-cd)pyrene	276	36.080	36.103	(1.078)	59648		1.00000	0.7923
70 Dibenzo(a,h)anthracene	278	36.058	36.069	(1.077)	48037		1.00000	0.7765
74 Benzo(g,h,i)perylene	276	37.060	37.083	(1.107)	55704		1.00000	0.9782

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 05-MAY-2023
 Lab File ID: NT1423050504.D Calibration Time: 13:36
 Lab Smp Id: SLE0096-CAL3
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	137862	68931	275724	133377	-3.25
250 Anthracene-d10	168263	84132	336526	162278	-3.56
251 Benzo(e)pyrene-d1	99689	49845	199378	96586	-3.11

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	19.26	18.76	19.76	19.26	0.00
250 Anthracene-d10	22.73	22.23	23.23	22.73	0.00
251 Benzo(e)pyrene-d1	33.48	32.98	33.98	33.48	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 - NT1423050504.D

Lab ID: SLE0096-CAL3

nt14.i, 20230505.b\ALKYLPNA.m, 05-MAY-2023 12:47

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

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

NONE

RRT check based on Ccal File: NT1423050507.D

On Column LOD for nt14.i, 20230505.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

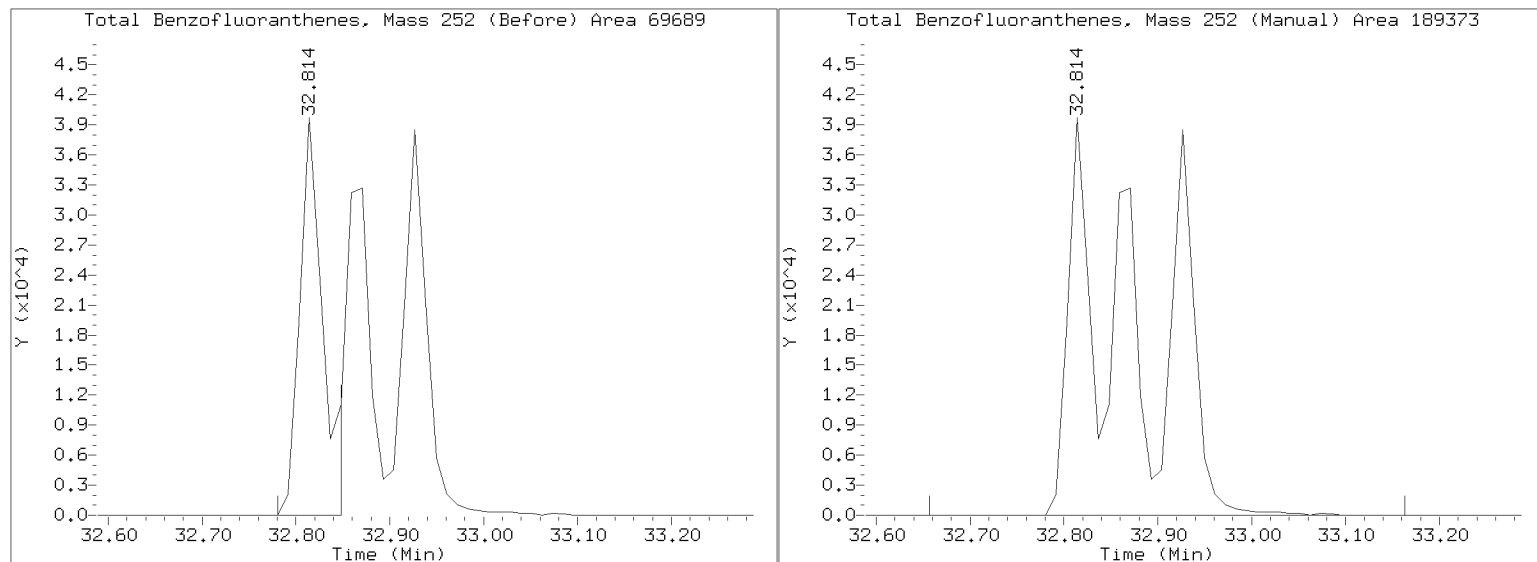
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230505.b/NT1423050504.D

Injection Date: 05-MAY-2023 12:47

Lab ID: SLE0096-CAL3 Client ID:

Report Date: 05/06/2023 07:52



Data File: \\target\share\chem3\nt14,i\20230505,b\NT1423050505.D

Date : 05-May-2023 13:36

Client ID:

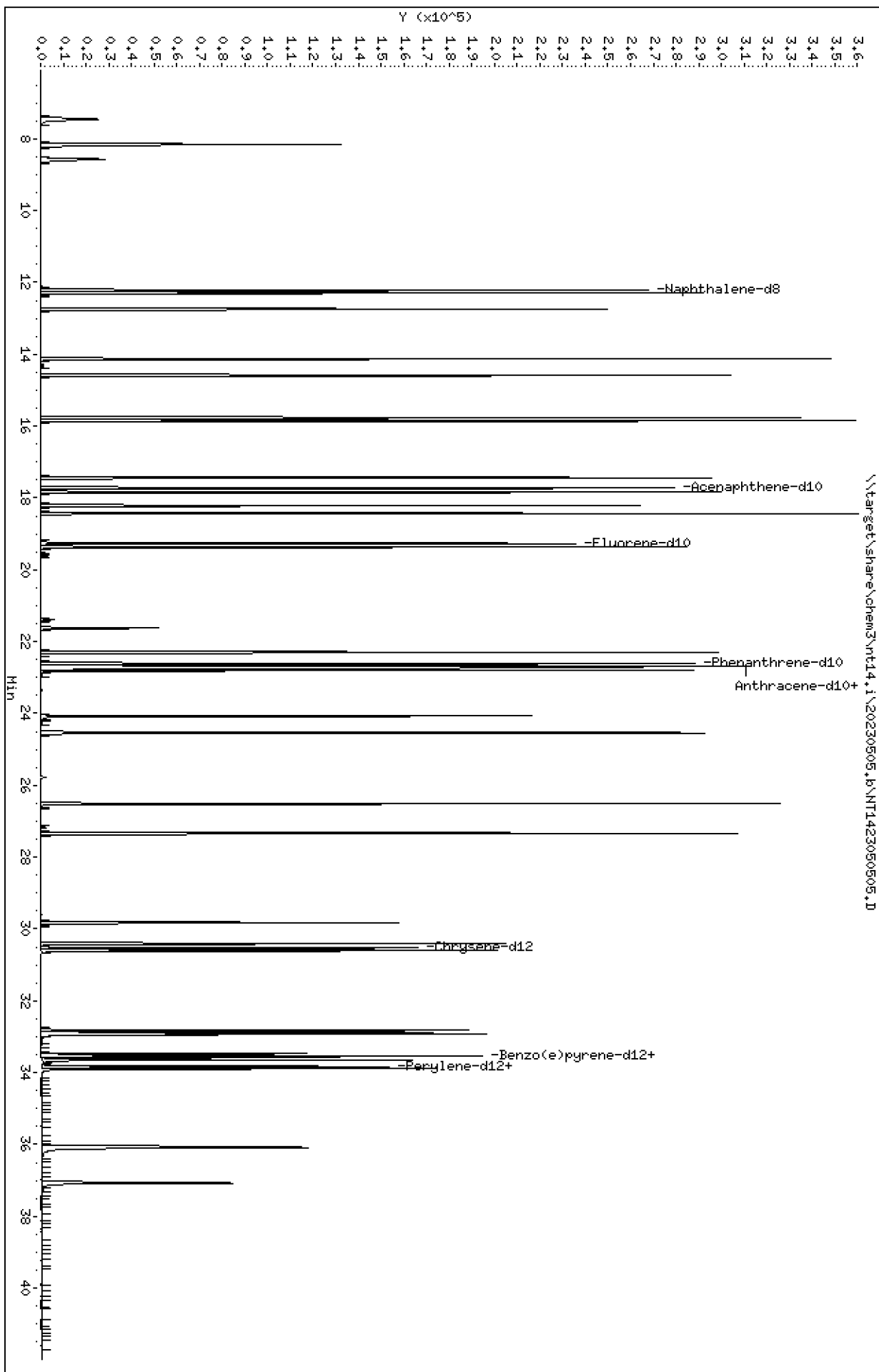
Sample Info: SLE0096-CAL4

Column phase: Rxi-17S11 MS

Instrument: nt14,i

Operator: VTS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230505.b\NT1423050505.D
Lab Smp Id: SLE0096-CAL4
Inj Date : 05-MAY-2023 13:36
Operator : VTS
Smp Info : SLE0096-CAL4
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
Meth Date : 06-May-2023 07:22 van
Cal Date : 05-MAY-2023 15:12
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: VANS-201906

Inst ID: nt14.i
Quant Type: ISTD
Cal File: NT1423050507.D
Calibration Sample, Level: 4
Compound Sublist: TARGETS.sub

						AMOUNTS			
		QUANT	SIG			CAL-AMT	ON-COL		
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)	
=====		=====	=====	=====	=====	=====	=====	=====	
1	trans-Decalin	138	7.449	7.449	(0.387)	37022	2.50000	2.507	
2	cis-Decalin	138	8.578	8.578	(0.445)	27335	2.50000	2.553	
\$	6	Naphthalene-d8	136	12.219	12.220	(0.634)	333856	2.50000	2.424
	7	Naphthalene	128	12.290	12.290	(0.638)	362047	2.50000	2.393
	12	Benzo(b)thiophene	134	12.745	12.745	(0.662)	277811	2.50000	2.416
	16	2-Methylnaphthalene	141	14.129	14.130	(0.733)	183082	2.50000	2.447
	17	1-methylnaphthalene	141	14.580	14.591	(0.757)	180545	2.50000	2.396
	18	Biphenyl	154	15.767	15.778	(0.818)	247764	2.50000	2.393
	19	2,6-Dimethylnaphthalene	156	15.855	15.855	(0.823)	179566	2.50000	2.437
	20	Acenaphthylene	152	17.437	17.437	(0.905)	302287	2.50000	2.457
\$	21	Acenaphthene-d10	164	17.723	17.723	(0.920)	146636	2.50000	2.402
	22	Acenaphthene	153	17.844	17.844	(0.926)	184852	2.50000	2.434
	23	Dibenzofuran	168	18.217	18.218	(0.946)	240986	2.50000	2.424
	24	1,6,7-Trimethylnaphthalene	170	18.437	18.437	(0.957)	160283	2.50000	2.441
*	25	Fluorene-d10	176	19.263	19.263	(1.000)	137862	2.00000	
	26	Fluorene	166	19.365	19.377	(1.005)	194228	2.50000	2.439
	30	Dibenzothiophene	184	22.304	22.304	(1.158)	240445	2.50000	2.464
\$	35	Phenanthrene-d10	188	22.617	22.617	(0.995)	230912	2.50000	2.405
	36	Phenanthrene	178	22.698	22.698	(0.998)	272247	2.50000	2.431
*	250	Anthracene-d10	188	22.733	22.733	(1.000)	168263	2.00000	
	37	Anthracene	178	22.802	22.803	(1.003)	251289	2.50000	2.445
	42	Carbazole	167	24.077	24.078	(1.059)	208915	2.50000	2.162
	43	1-Methylphenanthrene	192	24.541	24.541	(1.080)	179751	2.50000	2.489
	44	Fluoranthene	202	26.511	26.523	(1.166)	250090	2.50000	2.449
	46	Pyrene	202	27.346	27.346	(1.203)	262824	2.50000	2.460
	51	Naphthobenzothiophene	234	29.831	29.831	(1.312)	169665	2.50000	2.408
	55	Benzo(a)anthracene	228	30.403	30.415	(0.908)	188804	2.50000	2.416
\$	56	Chrysene-d12	240	30.527	30.539	(0.912)	135694	2.50000	2.509
	57	Chrysene	228	30.606	30.606	(0.914)	190245	2.50000	2.489
	62	Benzo(b)fluoranthene	252	32.814	32.825	(0.980)	182250	2.50000	2.500
	63	Benzo(k)fluoranthene	252	32.870	32.871	(0.982)	164077	2.50000	2.003
	293	Benzo(j)fluoranthene	252	32.926	32.938	(0.984)	171832	2.50000	2.511
	246	Total Benzofluoranthenes	252	32.926	32.938	(0.984)	503574	7.50000	7.423 (M)

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE		CAL-AMT	ON-COL
=====	=====	=====	=====	=====	=====		=====	=====
* 251 Benzo(e)pyrene-d12	264	33.478	33.478	(1.000)	99689		2.00000	
64 Benzo(e)pyrene	252	33.546	33.546	(1.002)	169898		2.50000	2.409
66 Benzo(a)pyrene	252	33.647	33.647	(1.005)	147621		2.50000	2.475
\$ 67 Perylene-d12	264	33.827	33.839	(1.010)	130319		2.50000	2.498
68 Perylene	252	33.884	33.895	(1.012)	162048		2.50000	2.475
69 Indeno(1,2,3-cd)pyrene	276	36.091	36.103	(1.078)	167115		2.50000	2.151 (M)
70 Dibenzo(a,h)anthracene	278	36.058	36.069	(1.077)	132842		2.50000	2.081
74 Benzo(g,h,i)perylene	276	37.071	37.083	(1.107)	146378		2.50000	2.491

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 05-MAY-2023
 Lab File ID: NT1423050505.D Calibration Time: 13:36
 Lab Smp Id: SLE0096-CAL4
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	137862	68931	275724	137862	0.00
250 Anthracene-d10	168263	84132	336526	168263	0.00
251 Benzo(e)pyrene-d1	99689	49845	199378	99689	0.00

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	19.26	18.76	19.76	19.26	0.00
250 Anthracene-d10	22.73	22.23	23.23	22.73	0.00
251 Benzo(e)pyrene-d1	33.48	32.98	33.98	33.48	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 - NT1423050505.D

Lab ID: SLE0096-CAL4

nt14.i, 20230505.b\ALKYLPNA.m, 05-MAY-2023 13:36

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1423050507.D

On Column LOD for nt14.i, 20230505.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

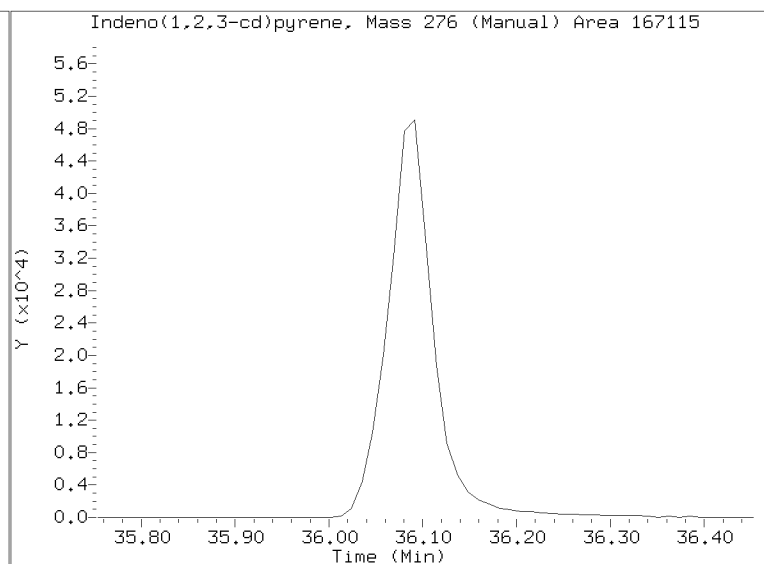
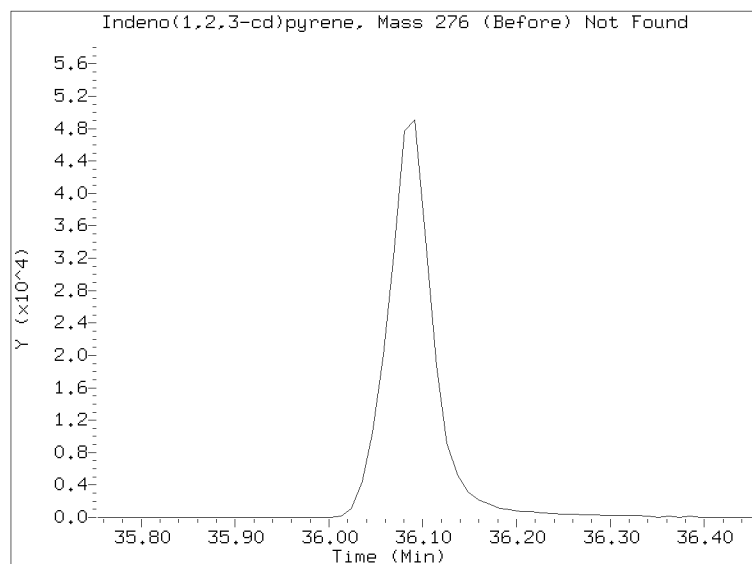
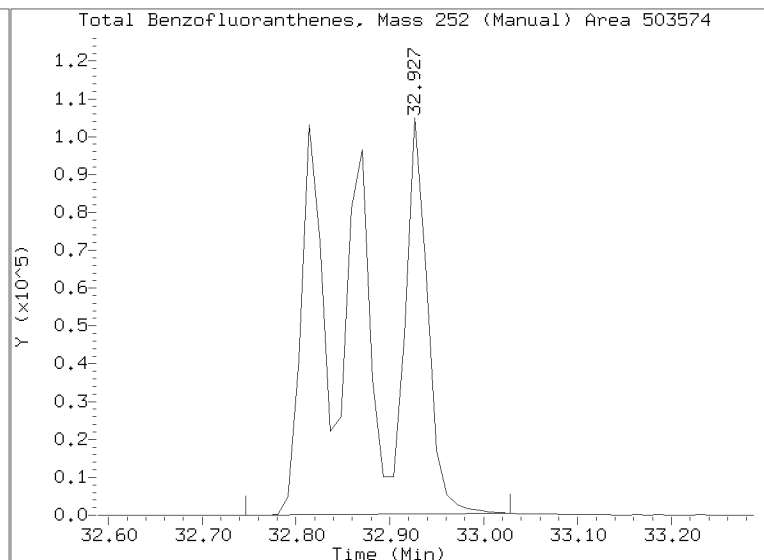
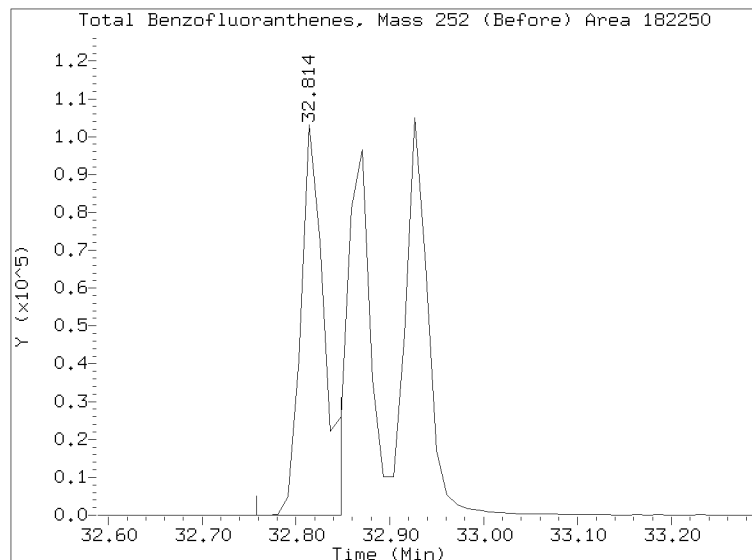
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230505.b/NT1423050505.D

Injection Date: 05-MAY-2023 13:36

Lab ID: SLE0096-CAL4 Client ID:

Report Date: 05/06/2023 07:52



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Date : 05-May-2023 14:24

Client ID:

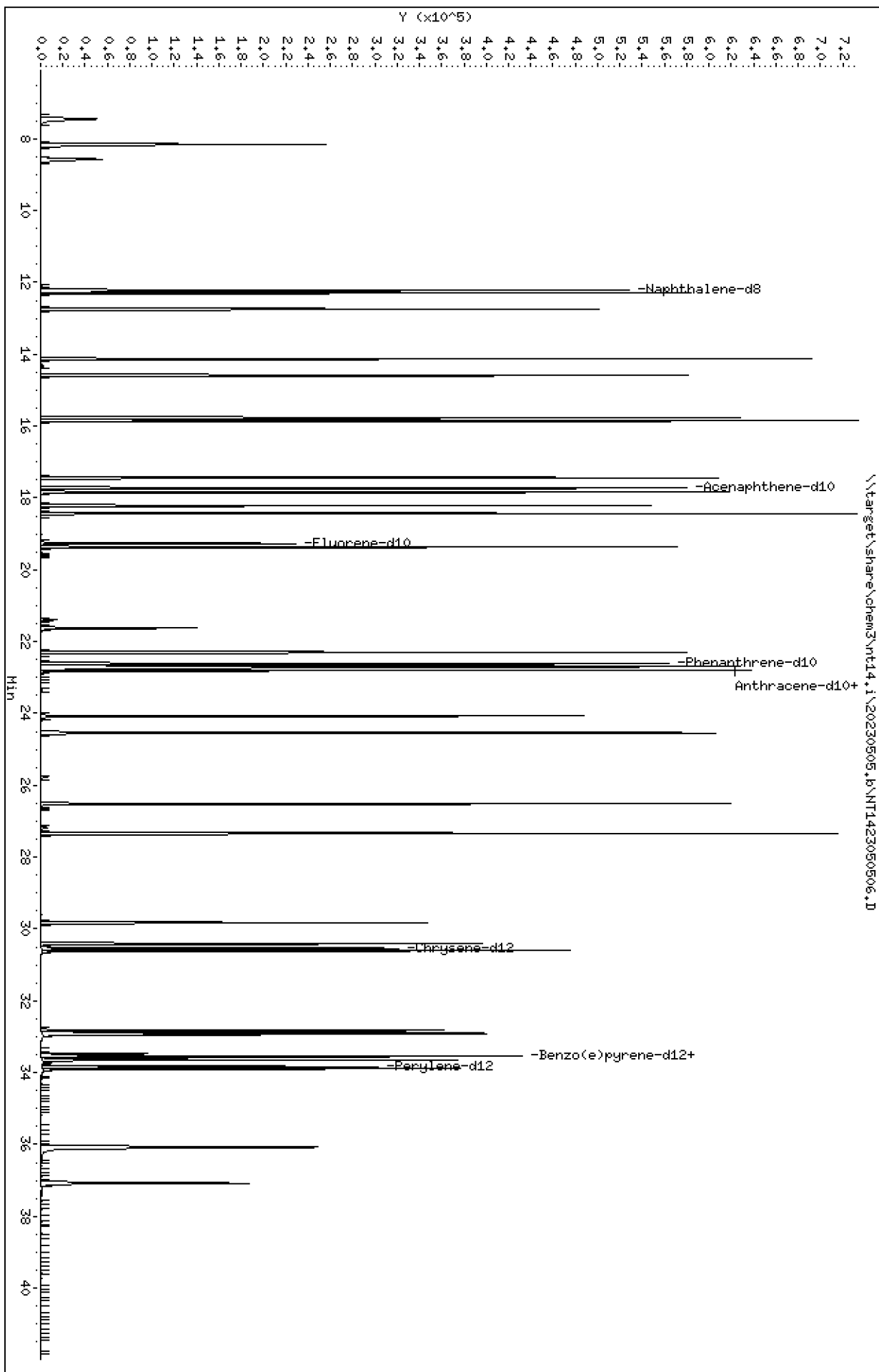
Sample Info: SLE0096-CAL5

Column phase: Rxi-17S11 MS

Instrument: nt14,i

Operator: VTS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230505.b\NT1423050506.D
Lab Smp Id: SLE0096-CAL5
Inj Date : 05-MAY-2023 14:24
Operator : VTS
Smp Info : SLE0096-CAL5
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
Meth Date : 06-May-2023 07:22 van
Cal Date : 05-MAY-2023 15:12
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: VANS-201906

Inst ID: nt14.i
Quant Type: ISTD
Cal File: NT1423050507.D
Calibration Sample, Level: 5
Compound Sublist: TARGETS.sub

Compounds	QUANT	SIG						AMOUNTS	
			MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====			====	=====	=====	=====	=====	=====
1 trans-Decalin	138			7.449	7.449	(0.387)	73891	5.00000	5.206
2 cis-Decalin	138			8.568	8.578	(0.445)	51753	5.00000	5.030
\$ 6 Naphthalene-d8	136			12.219	12.220	(0.634)	664959	5.00000	5.023
7 Naphthalene	128			12.290	12.290	(0.638)	725577	5.00000	4.990
12 Benzo(b)thiophene	134			12.745	12.745	(0.662)	556905	5.00000	5.040
16 2-Methylnaphthalene	141			14.129	14.130	(0.733)	363195	5.00000	5.050
17 1-methylnaphthalene	141			14.591	14.591	(0.757)	352628	5.00000	4.870
18 Biphenyl	154			15.767	15.778	(0.818)	494792	5.00000	4.974
19 2,6-Dimethylnaphthalene	156			15.855	15.855	(0.823)	353568	5.00000	4.993
20 Acenaphthylene	152			17.437	17.437	(0.905)	617668	5.00000	5.223
\$ 21 Acenaphthene-d10	164			17.723	17.723	(0.920)	298511	5.00000	5.088
22 Acenaphthene	153			17.844	17.844	(0.926)	370228	5.00000	5.073
23 Dibenzofuran	168			18.218	18.218	(0.946)	488194	5.00000	5.110
24 1,6,7-Trimethylnaphthalene	170			18.437	18.437	(0.957)	320941	5.00000	5.085
* 25 Fluorene-d10	176			19.263	19.263	(1.000)	132486	2.00000	
26 Fluorene	166			19.365	19.377	(1.005)	395601	5.00000	5.168
30 Dibenzothiophene	184			22.304	22.304	(1.158)	485219	5.00000	5.173
\$ 35 Phenanthrene-d10	188			22.617	22.617	(0.995)	462353	5.00000	5.032
36 Phenanthrene	178			22.698	22.698	(0.998)	542824	5.00000	5.066
* 250 Anthracene-d10	188			22.733	22.733	(1.000)	161010	2.00000	
37 Anthracene	178			22.802	22.803	(1.003)	519327	5.00000	5.280
42 Carbazole	167			24.077	24.078	(1.059)	450183	5.00000	4.869
43 1-Methylphenanthrene	192			24.541	24.541	(1.080)	367166	5.00000	5.314
44 Fluoranthene	202			26.511	26.523	(1.166)	530615	5.00000	5.431
46 Pyrene	202			27.346	27.346	(1.203)	546623	5.00000	5.346
51 Naphthobenzothiophene	234			29.831	29.831	(1.312)	358166	5.00000	5.311
55 Benzo(a)anthracene	228			30.415	30.415	(0.908)	399985	5.00000	5.463
\$ 56 Chrysene-d12	240			30.539	30.539	(0.912)	278685	5.00000	5.500
57 Chrysene	228			30.606	30.606	(0.914)	390738	5.00000	5.456
62 Benzo(b)fluoranthene	252			32.814	32.825	(0.980)	364892	5.00000	5.342
63 Benzo(k)fluoranthene	252			32.870	32.871	(0.982)	344719	5.00000	4.493
293 Benzo(j)fluoranthene	252			32.926	32.938	(0.984)	360461	5.00000	5.623
246 Total Benzofluoranthenes	252			32.870	32.938	(0.982)	1063298	15.0000	16.73 (M)

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE		CAL-AMT	ON-COL
=====	=====	=====	=====	=====	=====		(ug/mL)	(ug/mL)
* 251 Benzo(e)pyrene-d12	264	33.478	33.478	(1.000)	93394		2.00000	
64 Benzo(e)pyrene	252	33.546	33.546	(1.002)	349089		5.00000	5.284
66 Benzo(a)pyrene	252	33.647	33.647	(1.005)	313959		5.00000	5.619
\$ 67 Perylene-d12	264	33.827	33.839	(1.010)	272615		5.00000	5.577
68 Perylene	252	33.895	33.895	(1.012)	342391		5.00000	5.582
69 Indeno(1,2,3-cd)pyrene	276	36.091	36.103	(1.078)	351661		5.00000	4.831 (M)
70 Dibenzo(a,h)anthracene	278	36.058	36.069	(1.077)	285436		5.00000	4.772 (M)
74 Benzo(g,h,i)perylene	276	37.071	37.083	(1.107)	301937		5.00000	5.483 (M)

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 05-MAY-2023
 Lab File ID: NT1423050506.D Calibration Time: 13:36
 Lab Smp Id: SLE0096-CAL5
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	137862	68931	275724	132486	-3.90
250 Anthracene-d10	168263	84132	336526	161010	-4.31
251 Benzo(e)pyrene-d1	99689	49845	199378	93394	-6.31

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	19.26	18.76	19.76	19.26	0.00
250 Anthracene-d10	22.73	22.23	23.23	22.73	0.00
251 Benzo(e)pyrene-d1	33.48	32.98	33.98	33.48	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 - NT1423050506.D

Lab ID: SLE0096-CAL5

nt14.i, 20230505.b\ALKYLPNA.m, 05-MAY-2023 14:24

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1423050507.D

On Column LOD for nt14.i, 20230505.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

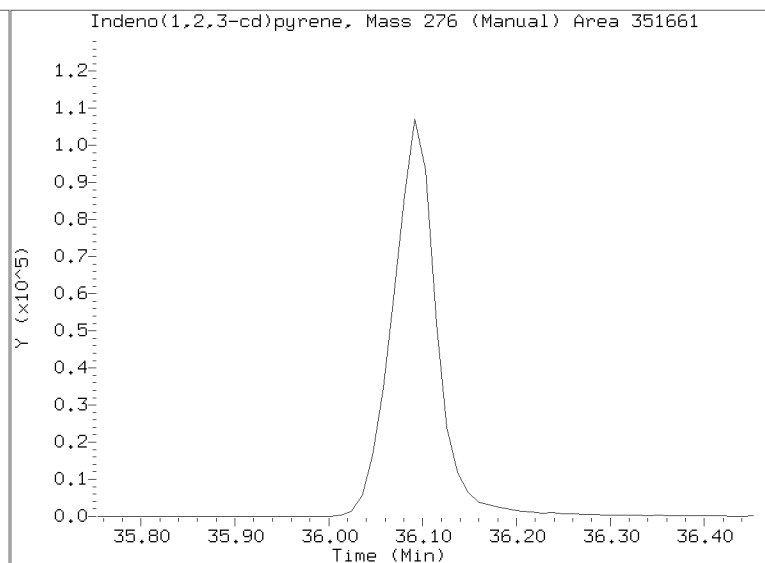
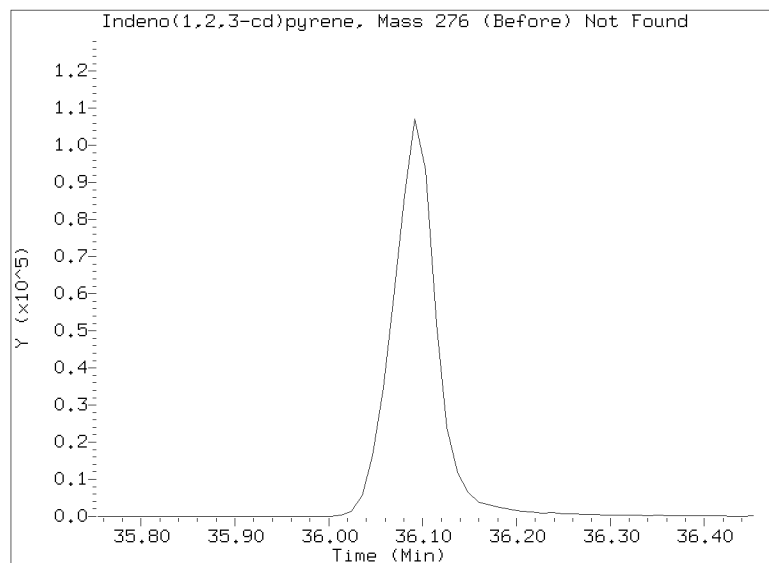
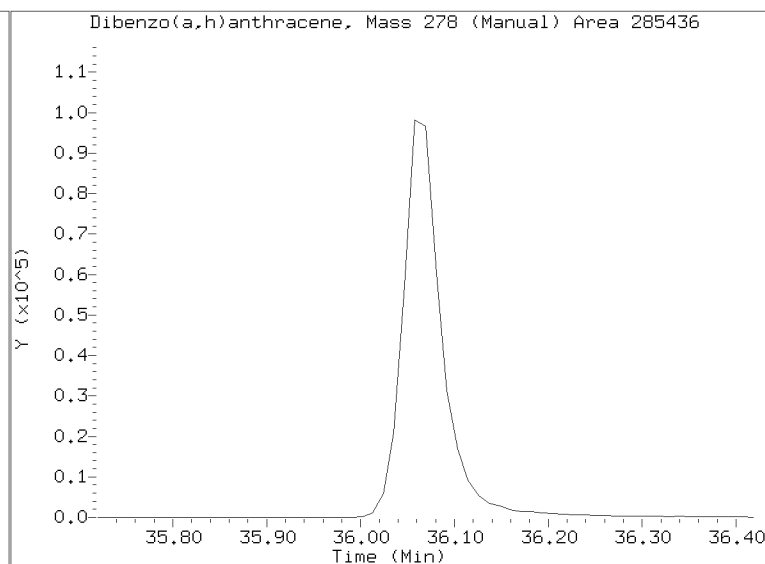
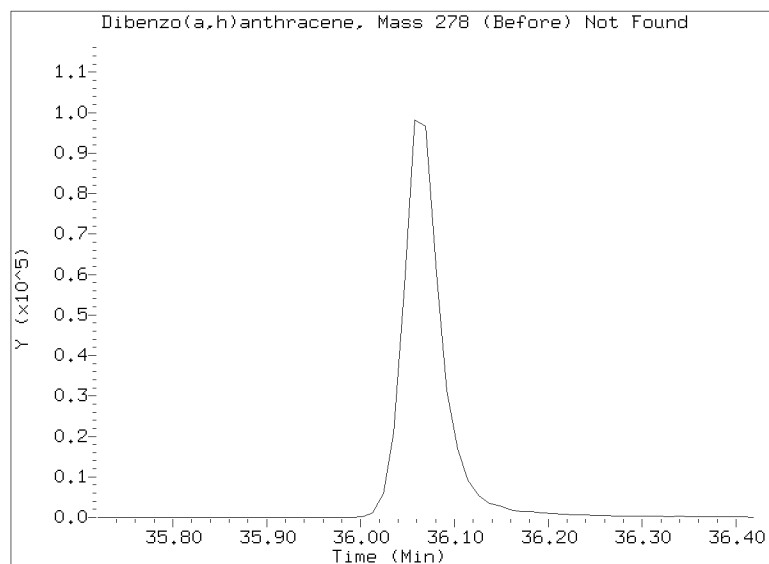
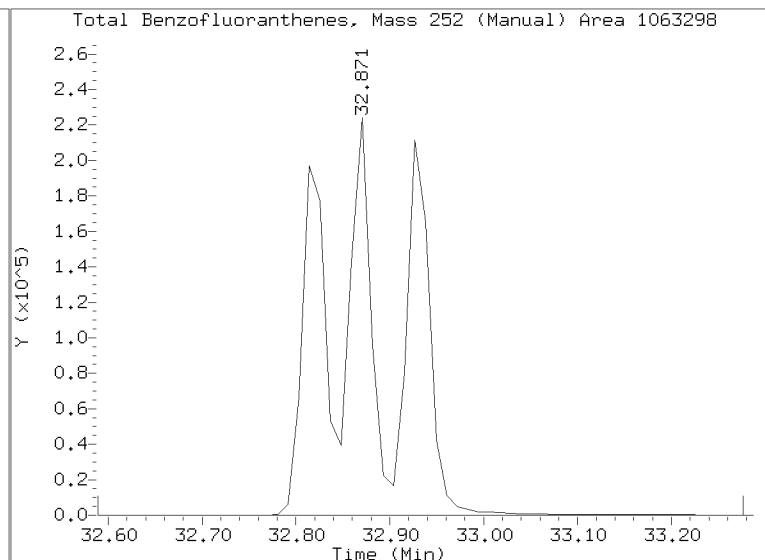
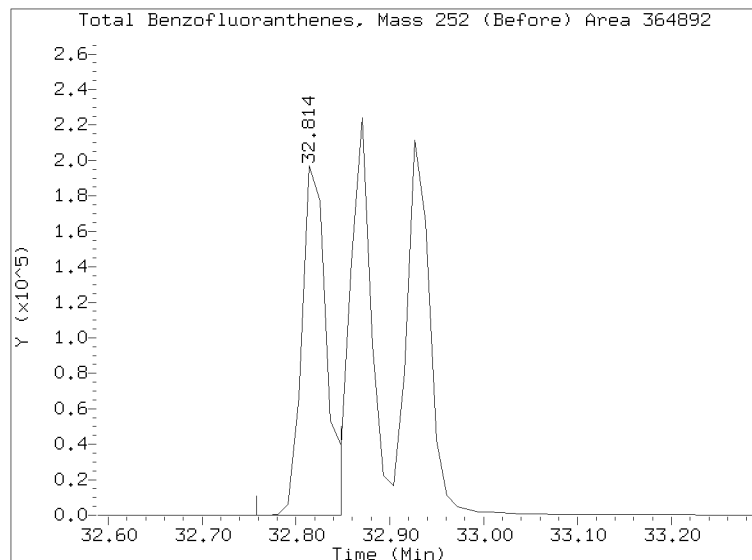
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230505.b/NT1423050506.D

Injection Date: 05-MAY-2023 14:24

Lab ID: SLE0096-CAL5 Client ID:

Report Date: 05/06/2023 07:52



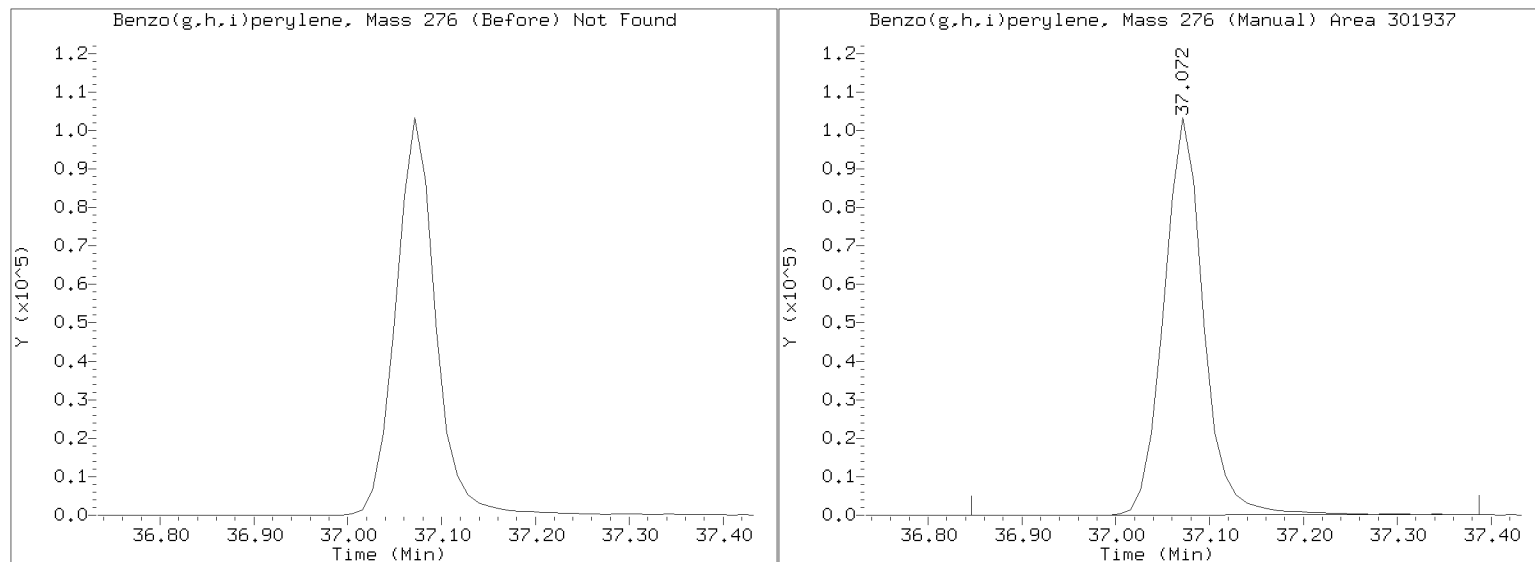
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230505.b/NT1423050506.D

Injection Date: 05-MAY-2023 14:24

Lab ID: SLE0096-CAL5 Client ID:

Report Date: 05/06/2023 07:52



Data File: \\target\share\chem3\nt14,i\20230505.b\NT1423050507.D

Date : 05-May-2023 15:12

Client ID:

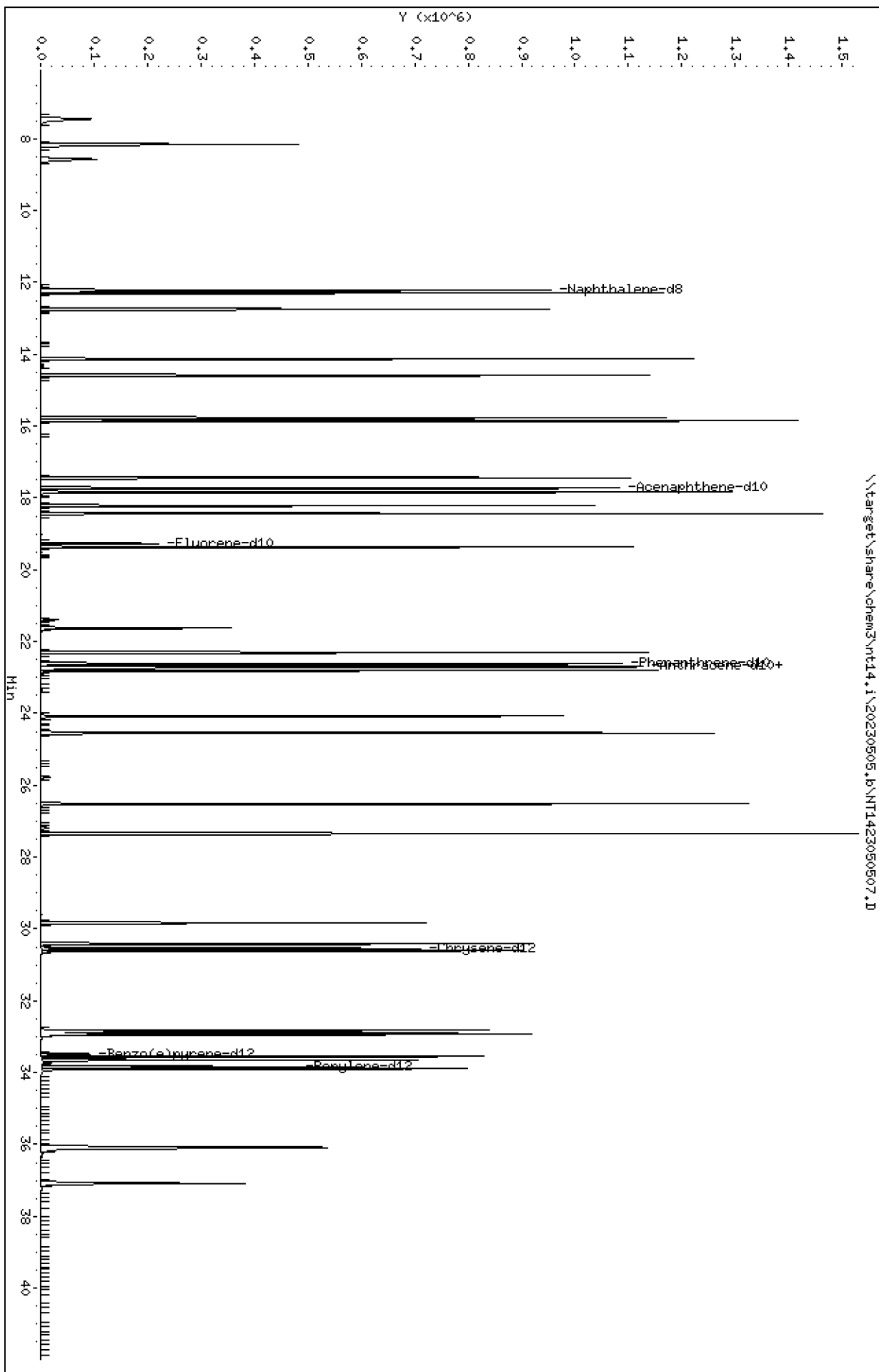
Sample Info: SLE0096-CAL6

Column phase: Rxi-17S11 MS

Instrument: nt14,i

Operator: VTS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230505.b\NT1423050507.D
Lab Smp Id: SLE0096-CAL6
Inj Date : 05-MAY-2023 15:12
Operator : VTS
Smp Info : SLE0096-CAL6
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
Meth Date : 06-May-2023 07:22 van
Cal Date : 05-MAY-2023 15:12
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: VANS-201906

Inst ID: nt14.i
Quant Type: ISTD
Cal File: NT1423050507.D
Calibration Sample, Level: 6
Compound Sublist: TARGETS.sub

Compounds	QUANT	SIG						AMOUNTS	
			RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL	
	MASS						(ug/mL)	(ug/mL)	
=====	=====		=====	=====	=====	=====	=====	=====	
1 trans-Decalin	138		7.449	7.449	(0.387)	139090	10.0000	10.25	
2 cis-Decalin	138		8.578	8.578	(0.445)	98446	10.0000	10.01	
\$ 6 Naphthalene-d8	136		12.220	12.220	(0.634)	1258499	10.0000	9.947	
7 Naphthalene	128		12.290	12.290	(0.638)	1383636	10.0000	9.956	
12 Benzo(b)thiophene	134		12.745	12.745	(0.662)	1065056	10.0000	10.08	
16 2-Methylnaphthalene	141		14.130	14.130	(0.733)	674885	10.0000	9.819	
17 1-methylnaphthalene	141		14.591	14.591	(0.757)	663981	10.0000	9.594	
18 Biphenyl	154		15.778	15.778	(0.819)	968105	10.0000	10.18	
19 2,6-Dimethylnaphthalene	156		15.855	15.855	(0.823)	685872	10.0000	10.13	
20 Acenaphthylene	152		17.437	17.437	(0.905)	1198925	10.0000	10.61	
\$ 21 Acenaphthene-d10	164		17.723	17.723	(0.920)	577253	10.0000	10.30	
22 Acenaphthene	153		17.844	17.844	(0.926)	721706	10.0000	10.35	
23 Dibenzofuran	168		18.218	18.218	(0.946)	951495	10.0000	10.42	
24 1,6,7-Trimethylnaphthalene	170		18.437	18.437	(0.957)	626402	10.0000	10.38	
* 25 Fluorene-d10	176		19.263	19.263	(1.000)	126626	2.00000		
26 Fluorene	166		19.377	19.377	(1.006)	757388	10.0000	10.35	
30 Dibenzothiophene	184		22.304	22.304	(1.158)	946822	10.0000	10.56	
\$ 35 Phenanthrene-d10	188		22.617	22.617	(0.995)	903865	10.0000	10.05	
36 Phenanthrene	178		22.698	22.698	(0.998)	1075947	10.0000	10.26	
* 250 Anthracene-d10	188		22.733	22.733	(1.000)	157579	2.00000		
37 Anthracene	178		22.803	22.803	(1.003)	1023178	10.0000	10.63	
42 Carbazole	167		24.077	24.078	(1.059)	918815	10.0000	10.15	
43 1-Methylphenanthrene	192		24.541	24.541	(1.080)	721117	10.0000	10.66	
44 Fluoranthene	202		26.523	26.523	(1.167)	1065586	10.0000	11.14	
46 Pyrene	202		27.346	27.346	(1.203)	1123764	10.0000	11.23	
51 Naphthobenzothiophene	234		29.831	29.831	(1.312)	721979	10.0000	10.94	
55 Benzo(a)anthracene	228		30.415	30.415	(0.908)	810506	10.0000	11.33	
\$ 56 Chrysene-d12	240		30.539	30.539	(0.912)	558679	10.0000	11.28	
57 Chrysene	228		30.606	30.606	(0.914)	774776	10.0000	11.07	
62 Benzo(b)fluoranthene	252		32.825	32.825	(0.980)	735430	10.0000	11.02	
63 Benzo(k)fluoranthene	252		32.870	32.871	(0.982)	775476	10.0000	10.34	
293 Benzo(j)fluoranthene	252		32.938	32.938	(0.984)	708852	10.0000	11.31	
246 Total Benzofluoranthenes	252		32.938	32.938	(0.984)	2192626	30.0000	35.29 (M)	

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE		CAL-AMT	ON-COL
=====	=====	=====	=====	=====	=====		(ug/mL)	(ug/mL)
							=====	=====
* 251 Benzo(e)pyrene-d12	264	33.478	33.478	(1.000)	91292		2.00000	
64 Benzo(e)pyrene	252	33.546	33.546	(1.002)	714069		10.0000	11.06
66 Benzo(a)pyrene	252	33.647	33.647	(1.005)	653510		10.0000	11.96
\$ 67 Perylene-d12	264	33.839	33.839	(1.011)	554397		10.0000	11.60
68 Perylene	252	33.895	33.895	(1.012)	699727		10.0000	11.67
69 Indeno(1,2,3-cd)pyrene	276	36.103	36.103	(1.078)	724035		10.0000	10.17 (M)
70 Dibenzo(a,h)anthracene	278	36.069	36.069	(1.077)	597204		10.0000	10.21 (M)
74 Benzo(g,h,i)perylene	276	37.083	37.083	(1.108)	622772		10.0000	11.57 (M)

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 05-MAY-2023
 Lab File ID: NT1423050507.D Calibration Time: 13:36
 Lab Smp Id: SLE0096-CAL6
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	137862	68931	275724	126626	-8.15
250 Anthracene-d10	168263	84132	336526	157579	-6.35
251 Benzo(e)pyrene-d1	99689	49845	199378	91292	-8.42

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	19.26	18.76	19.76	19.26	0.00
250 Anthracene-d10	22.73	22.23	23.23	22.73	0.00
251 Benzo(e)pyrene-d1	33.48	32.98	33.98	33.48	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 - NT1423050507.D

Lab ID: SLE0096-CAL6

nt14.i, 20230505.b\ALKYLPNA.m, 05-MAY-2023 15:12

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1423050507.D

On Column LOD for nt14.i, 20230505.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

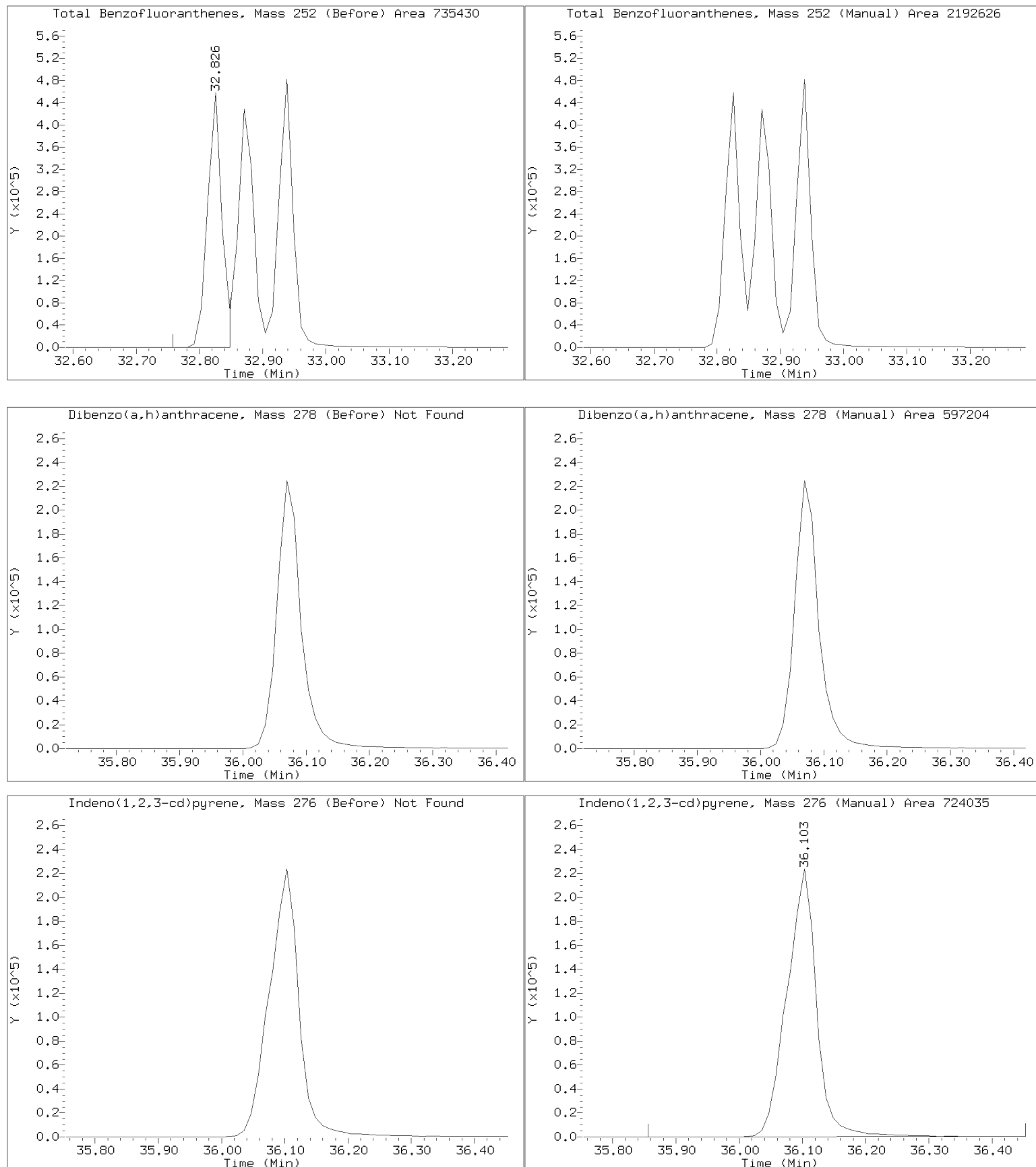
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230505.b/NT1423050507.D

Injection Date: 05-MAY-2023 15:12

Lab ID: SLE0096-CAL6 Client ID:

Report Date: 05/06/2023 07:52



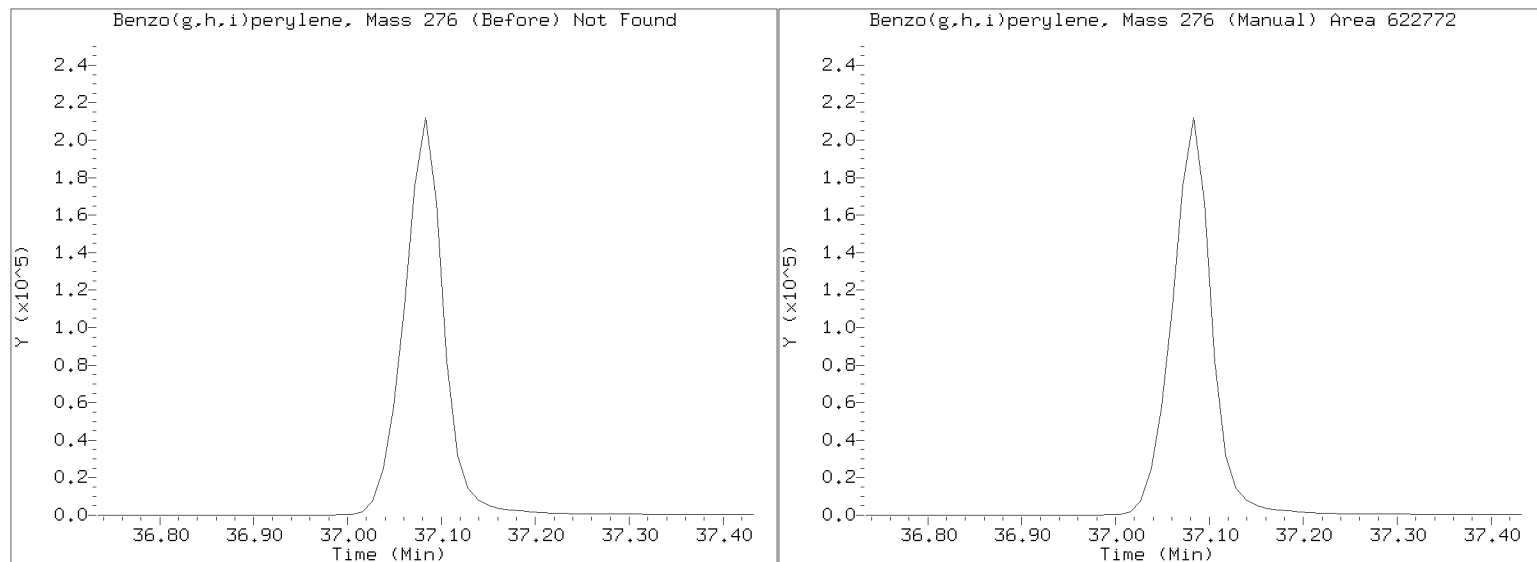
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230505.b/NT1423050507.D

Injection Date: 05-MAY-2023 15:12

Lab ID: SLE0096-CAL6 Client ID:

Report Date: 05/06/2023 07:52



Data File: \\target\share\chem3\nt14,i\20230505,b\NT1423050508.D

Date : 05-May-2023 16:01

Client ID:

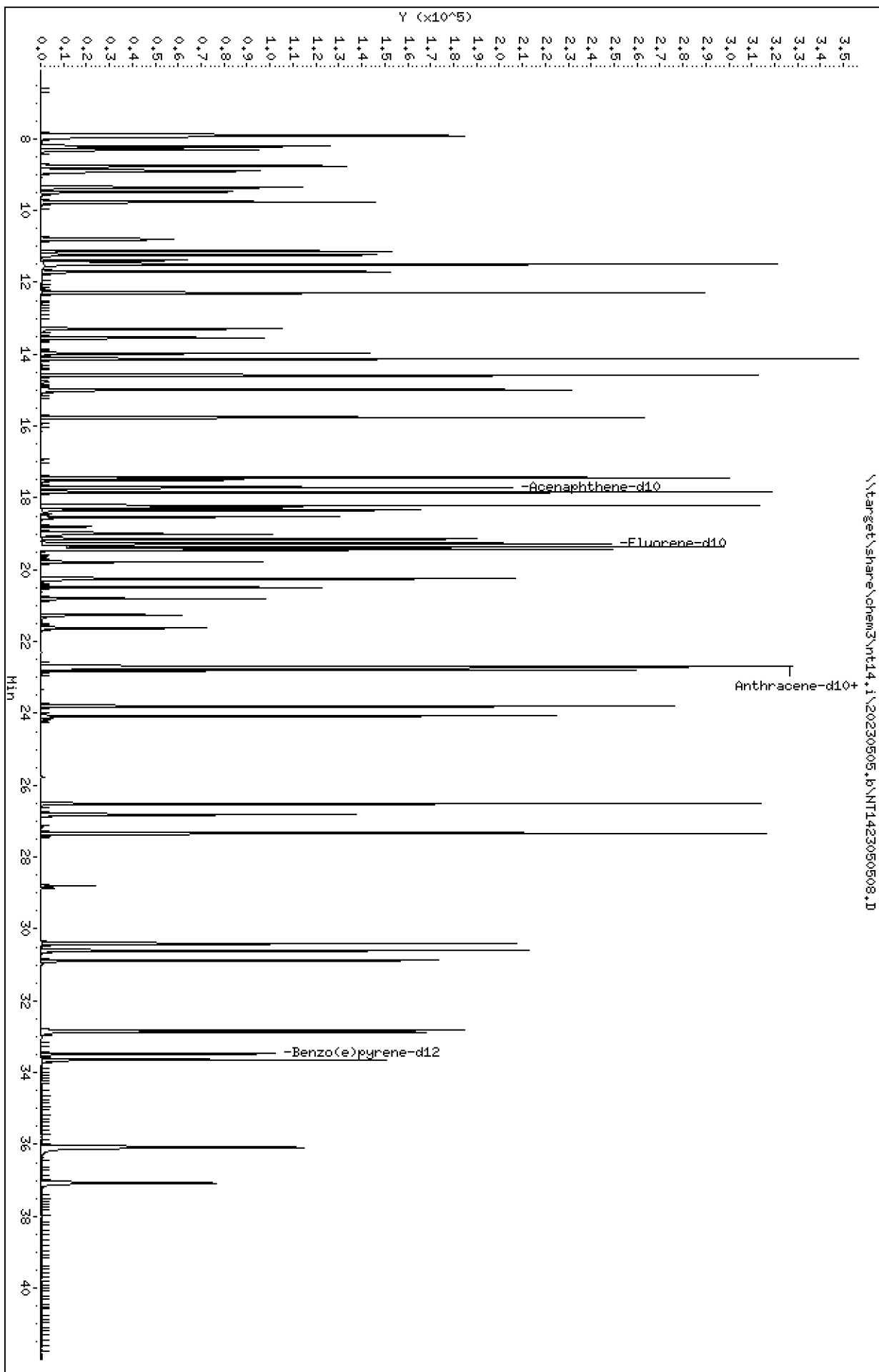
Sample Info: SLE0096-SCV1

Column phase: Rxi-17S11 MS

Instrument: nt14,i

Operator: VTS

Column diameter: 0.25



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

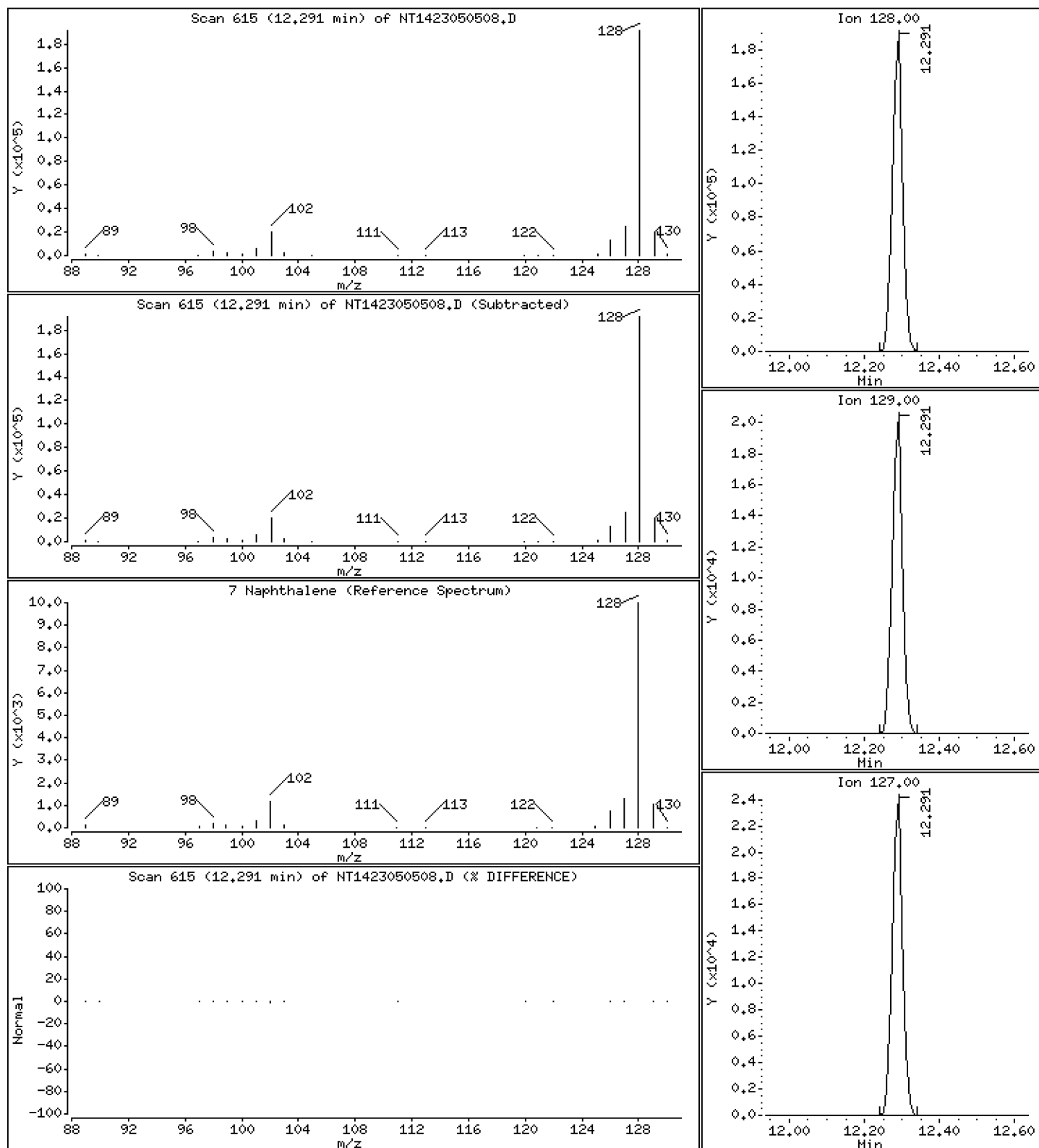
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

7 Naphthalene

Concentration: 2.485 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

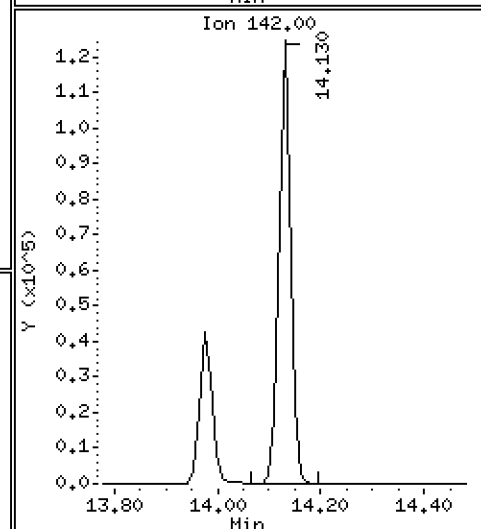
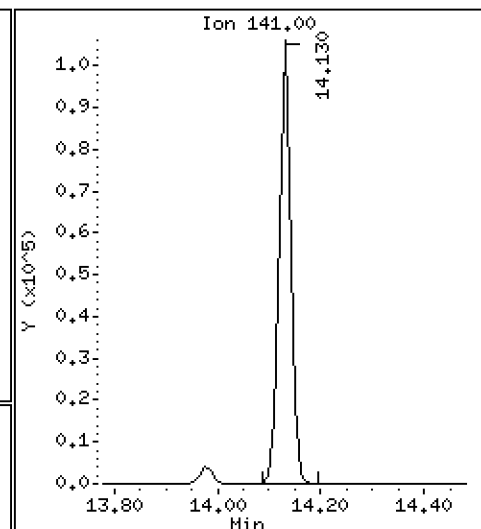
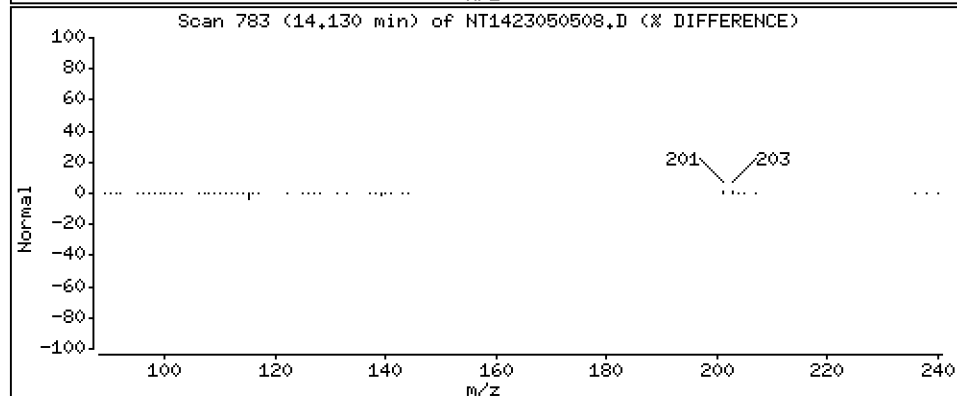
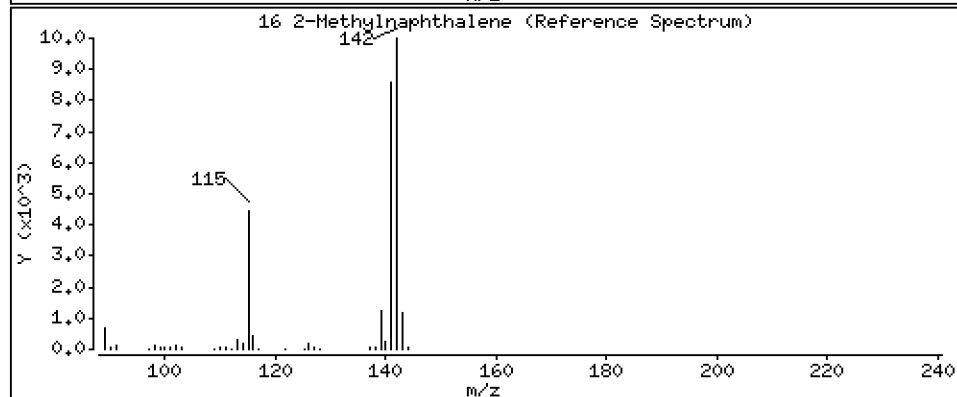
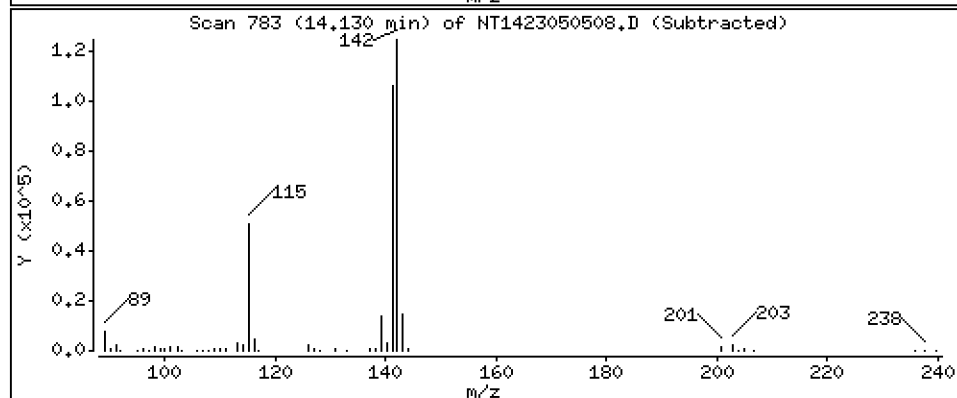
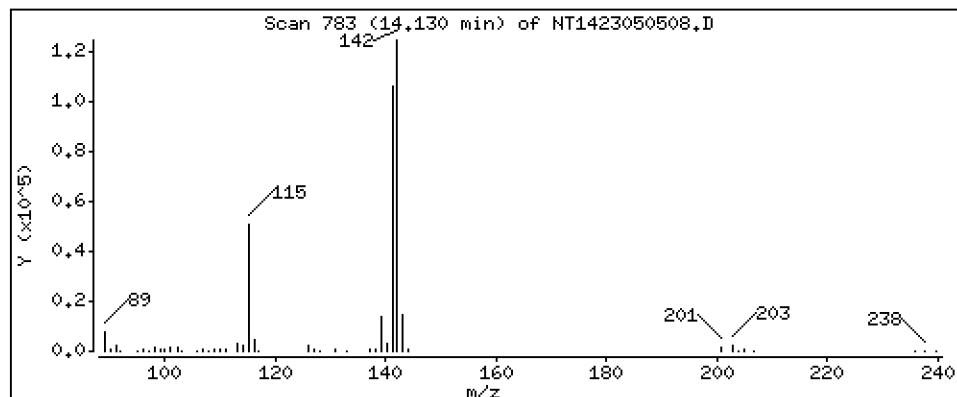
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

16 2-Methylnaphthalene

Concentration: 2.589 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

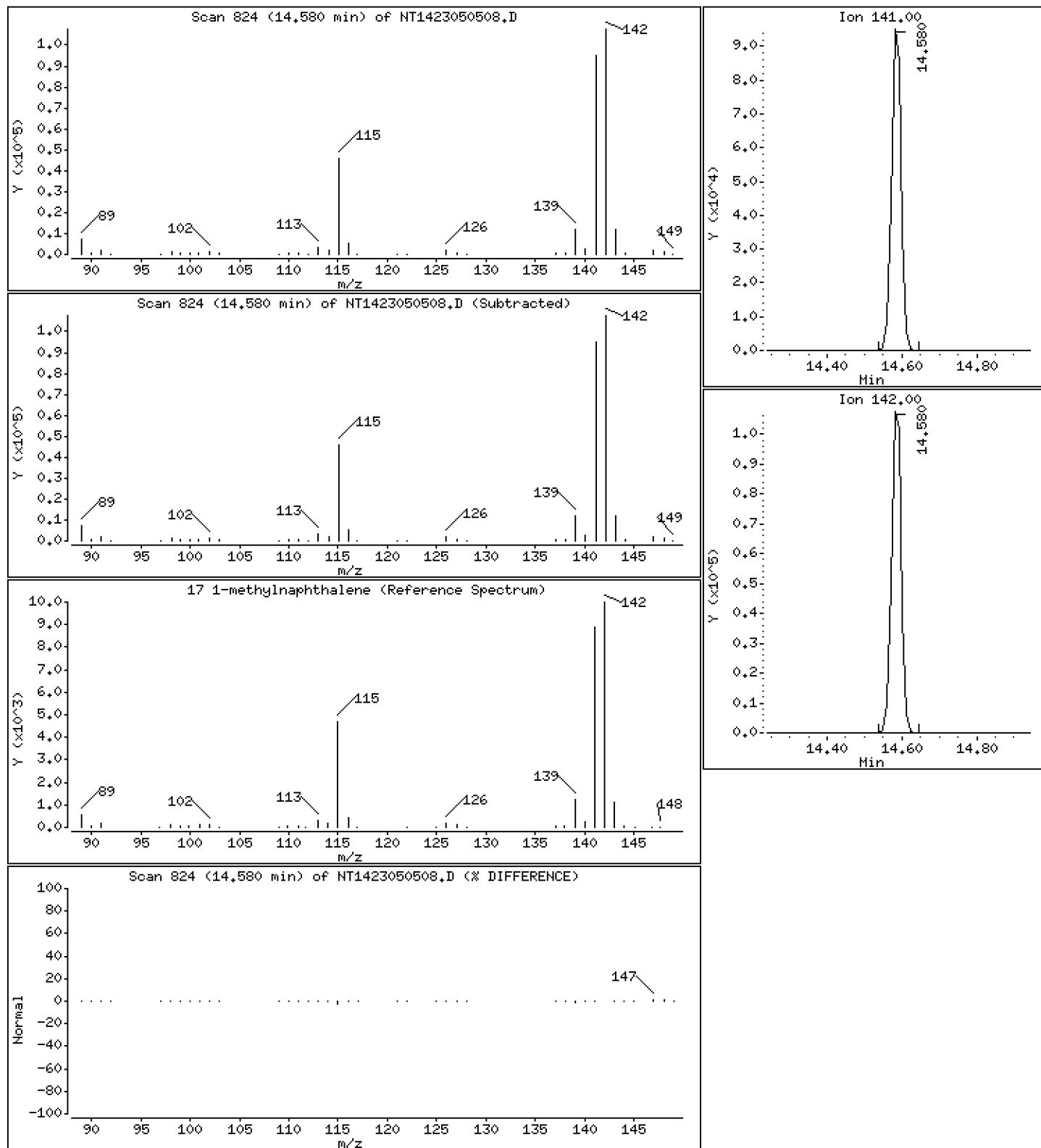
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 1-methylnaphthalene

Concentration: 2.525 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

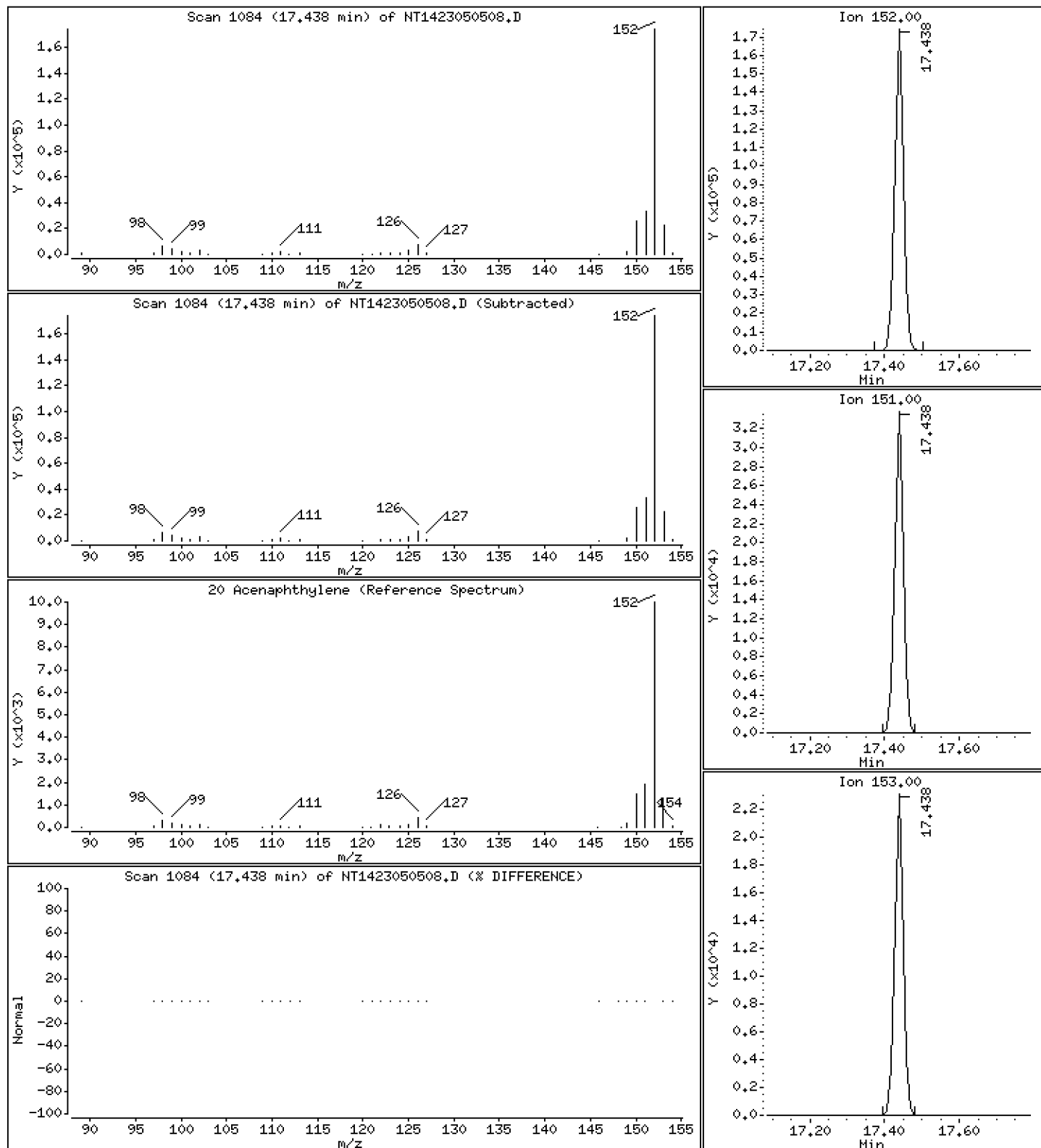
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

20 Acenaphthylene

Concentration: 2.665 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

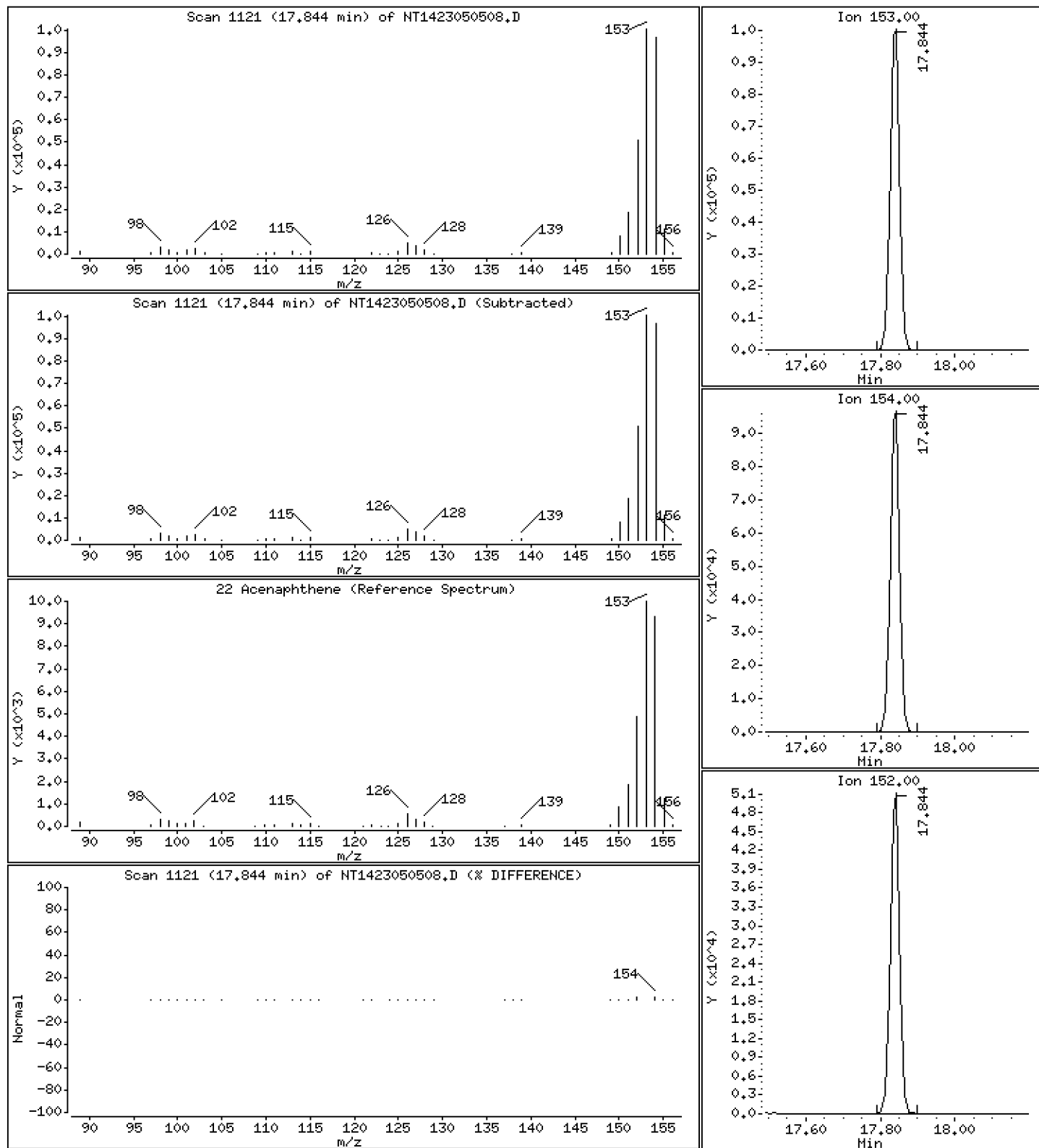
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

22 Acenaphthene

Concentration: 2.694 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

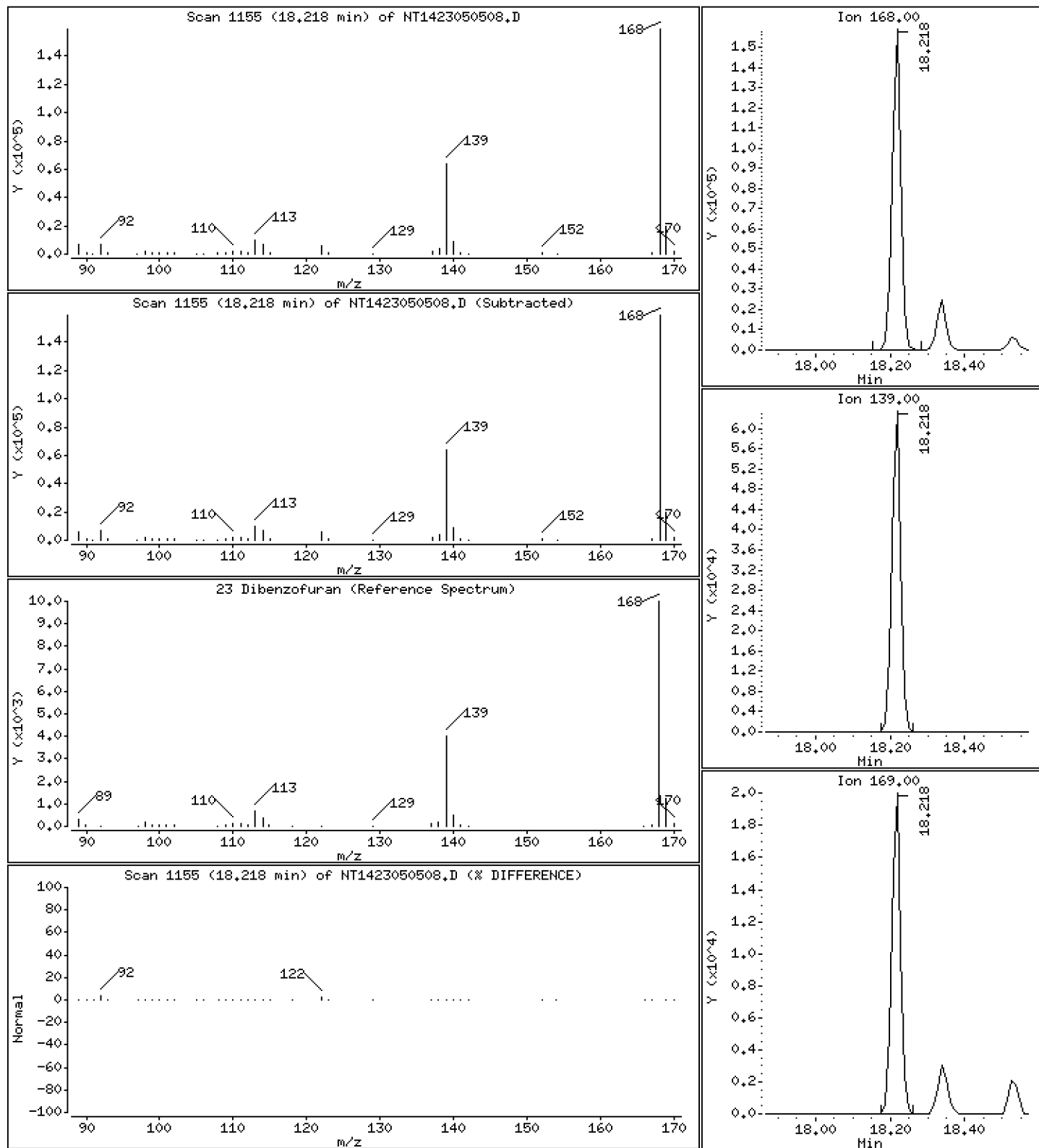
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

23 Dibenzofuran

Concentration: 2.957 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

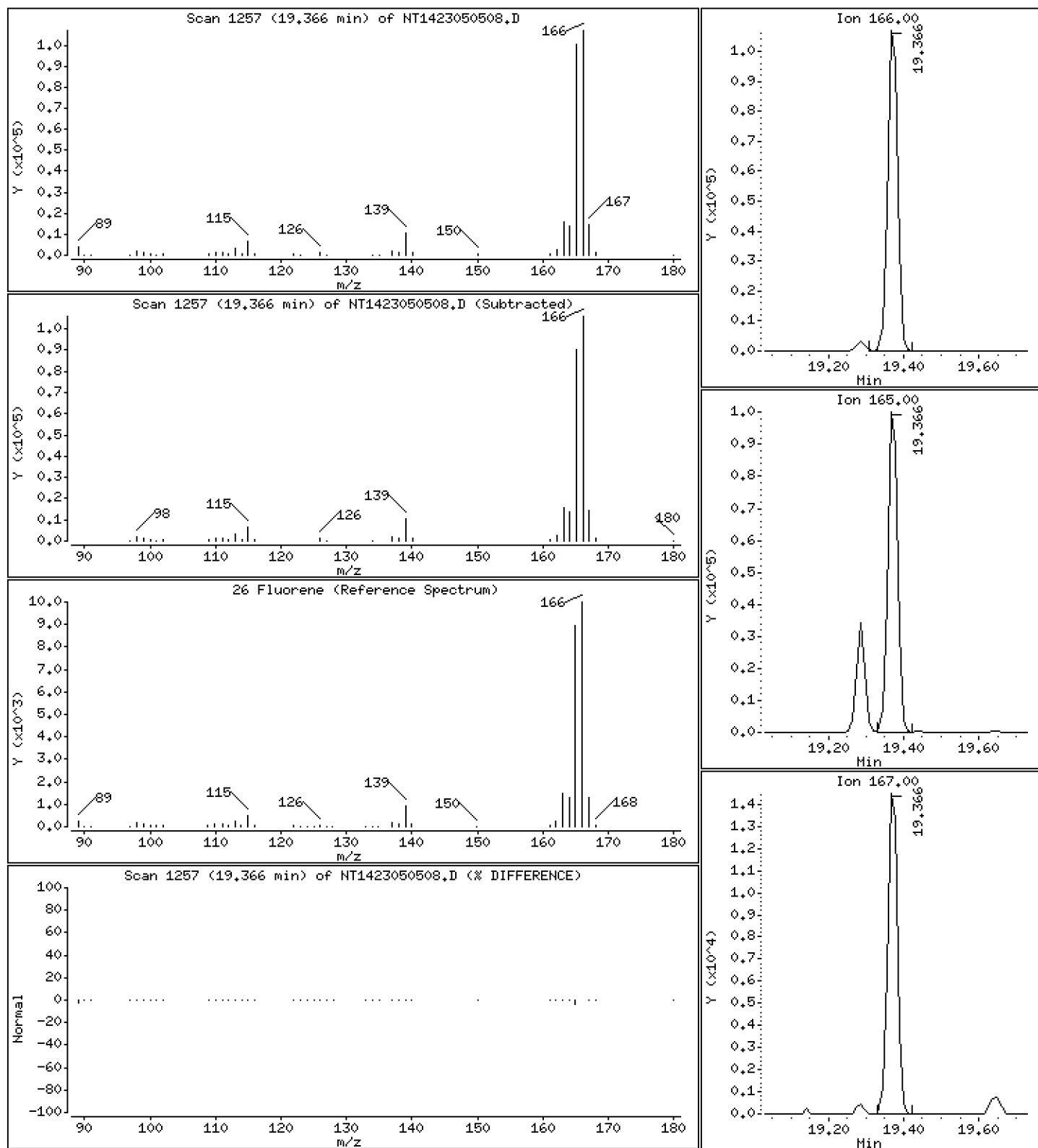
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

26 Fluorene

Concentration: 2.682 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

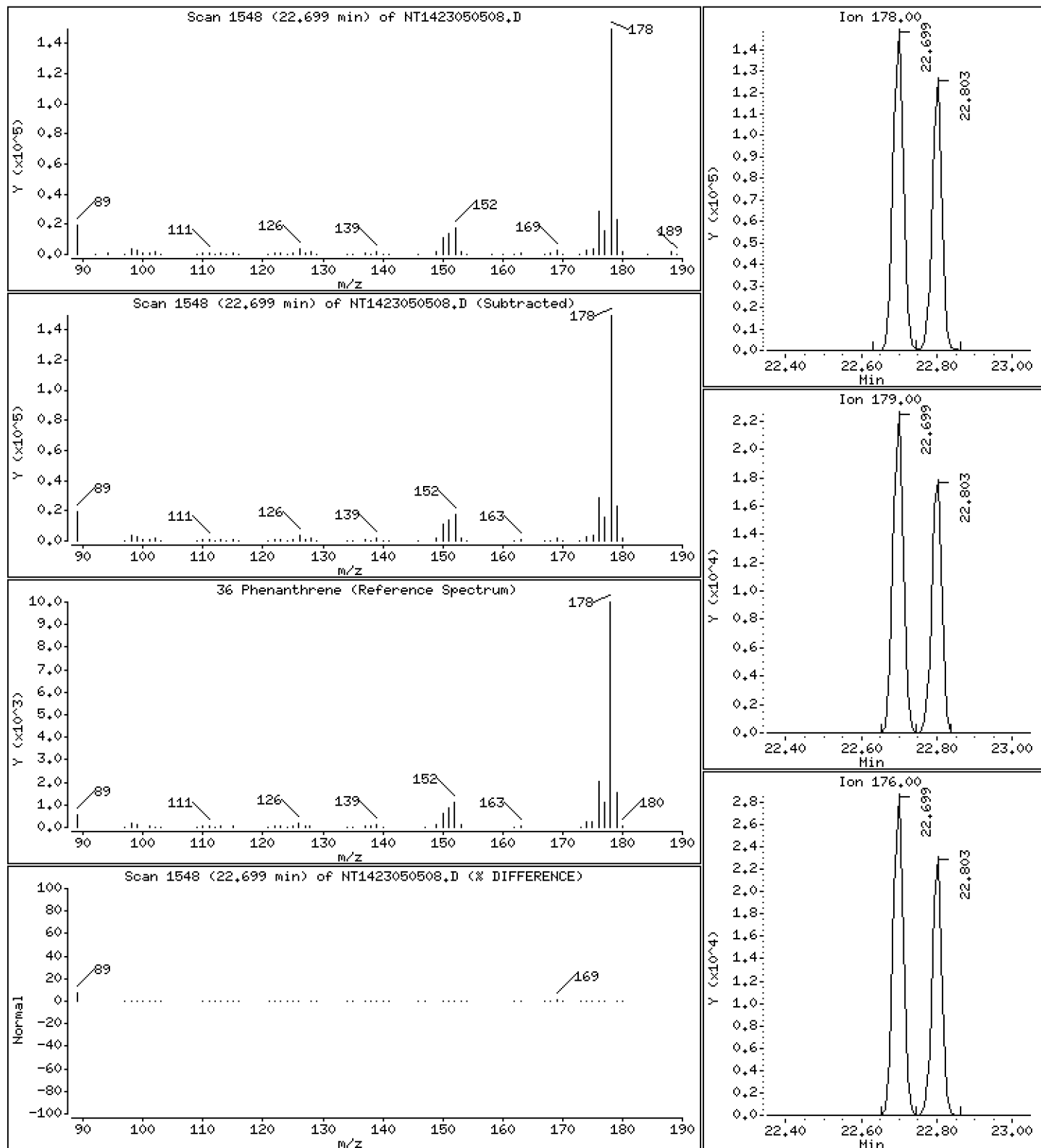
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

36 Phenanthrene

Concentration: 2.587 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

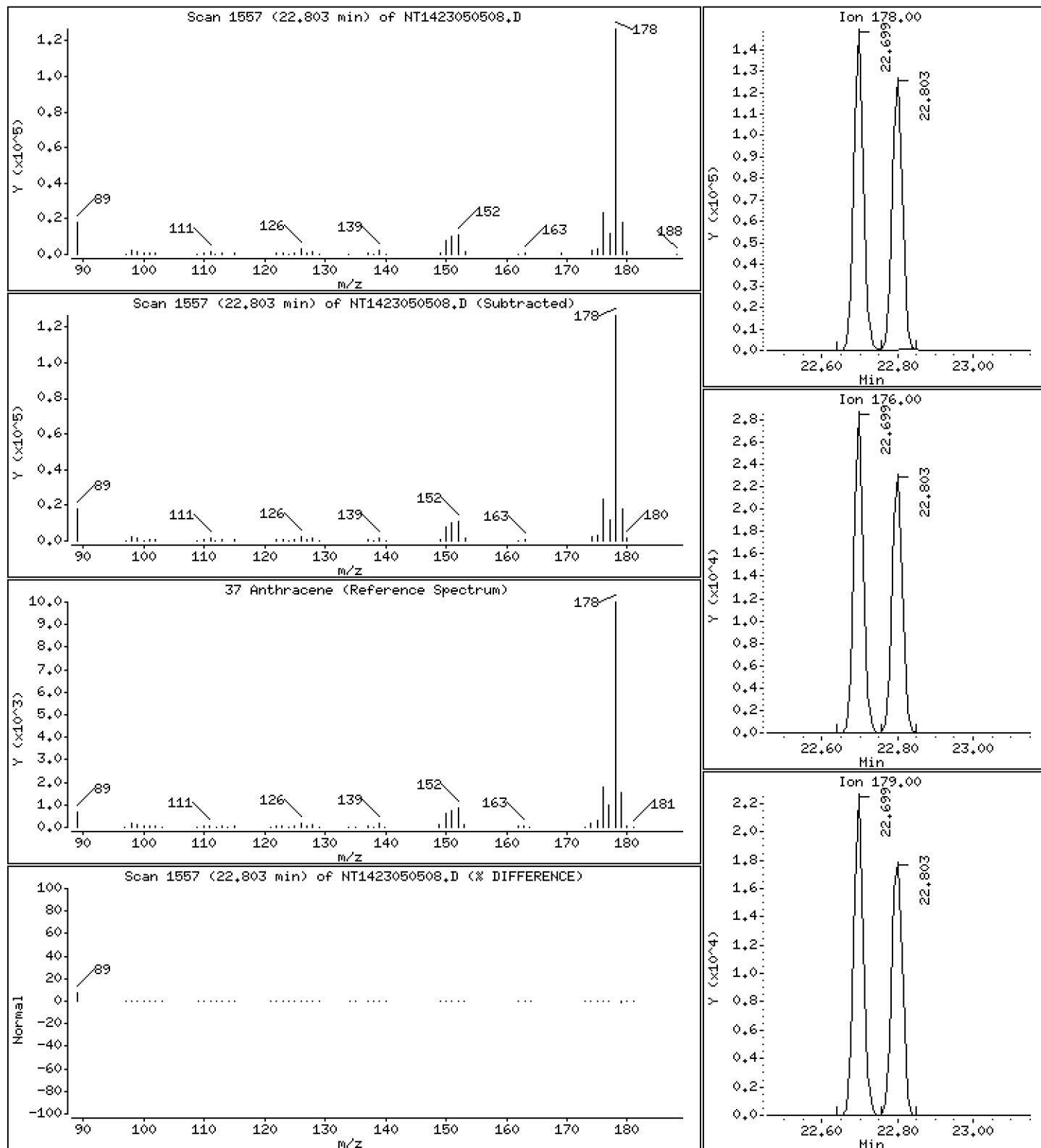
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

37 Anthracene

Concentration: 2.382 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

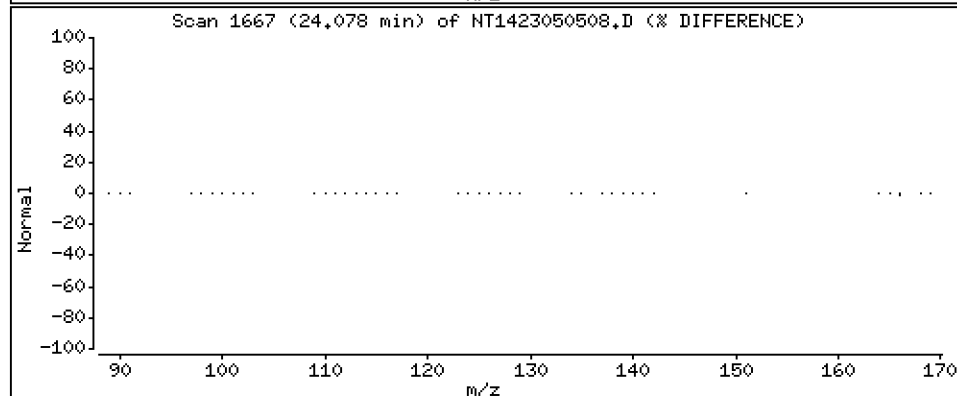
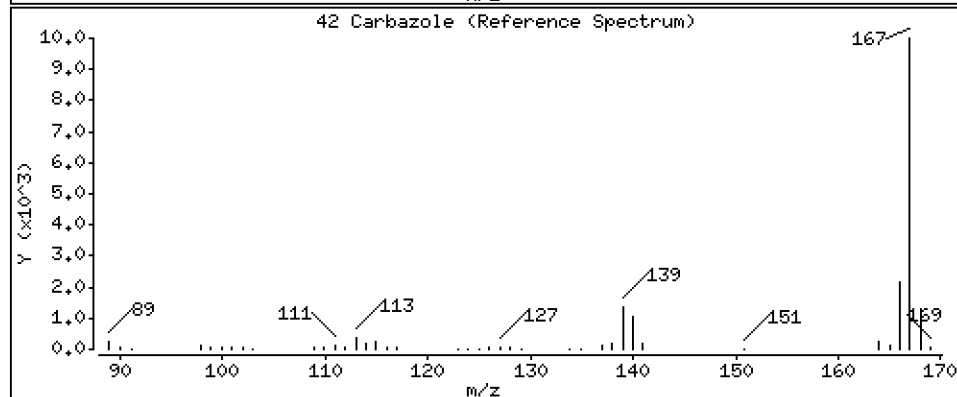
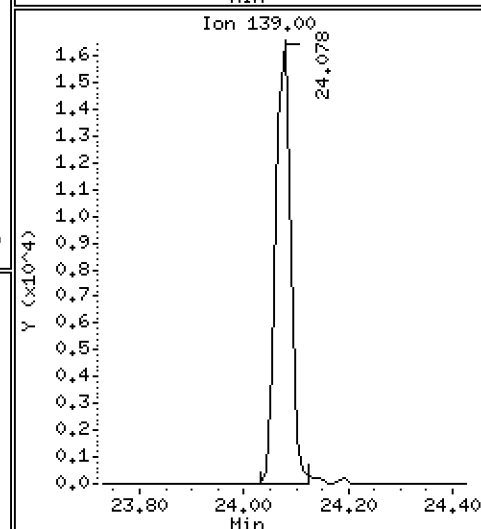
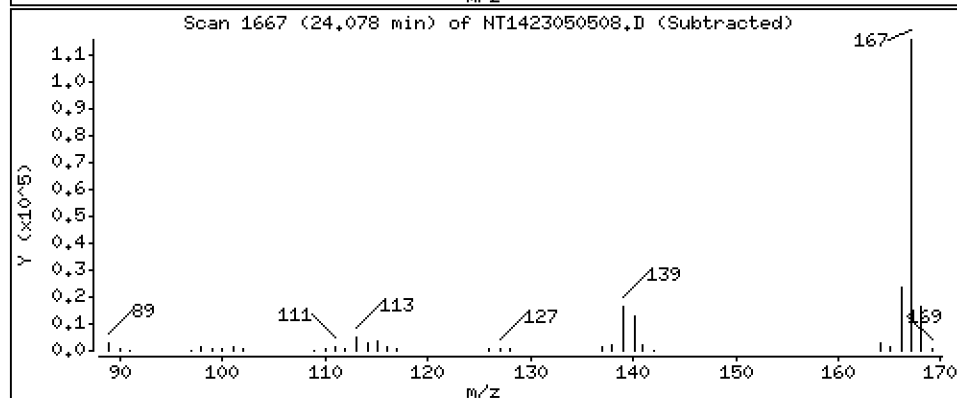
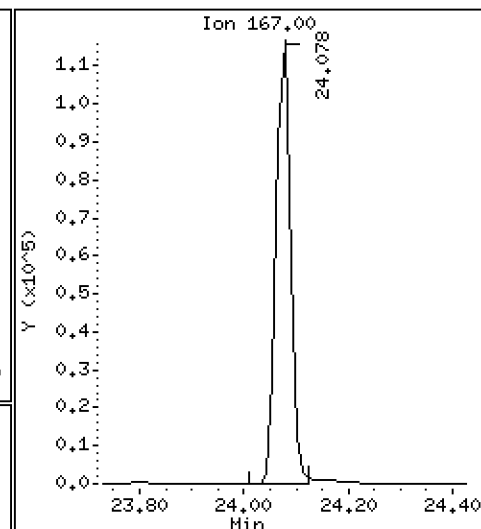
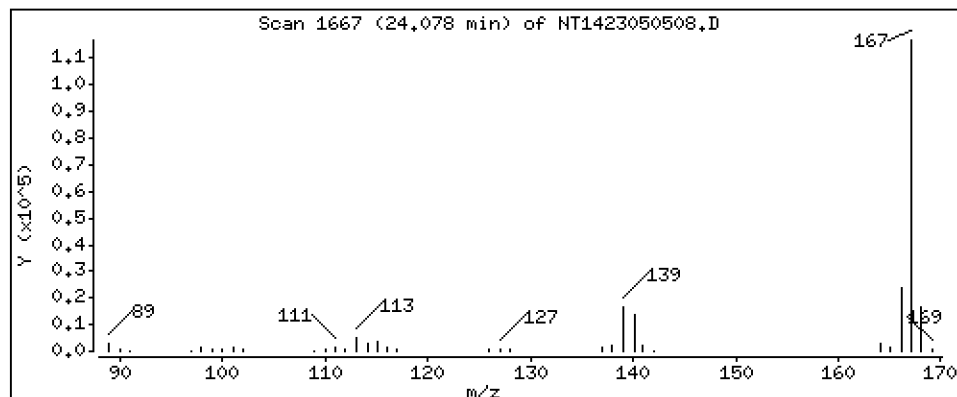
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

42 Carbazole

Concentration: 2.396 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

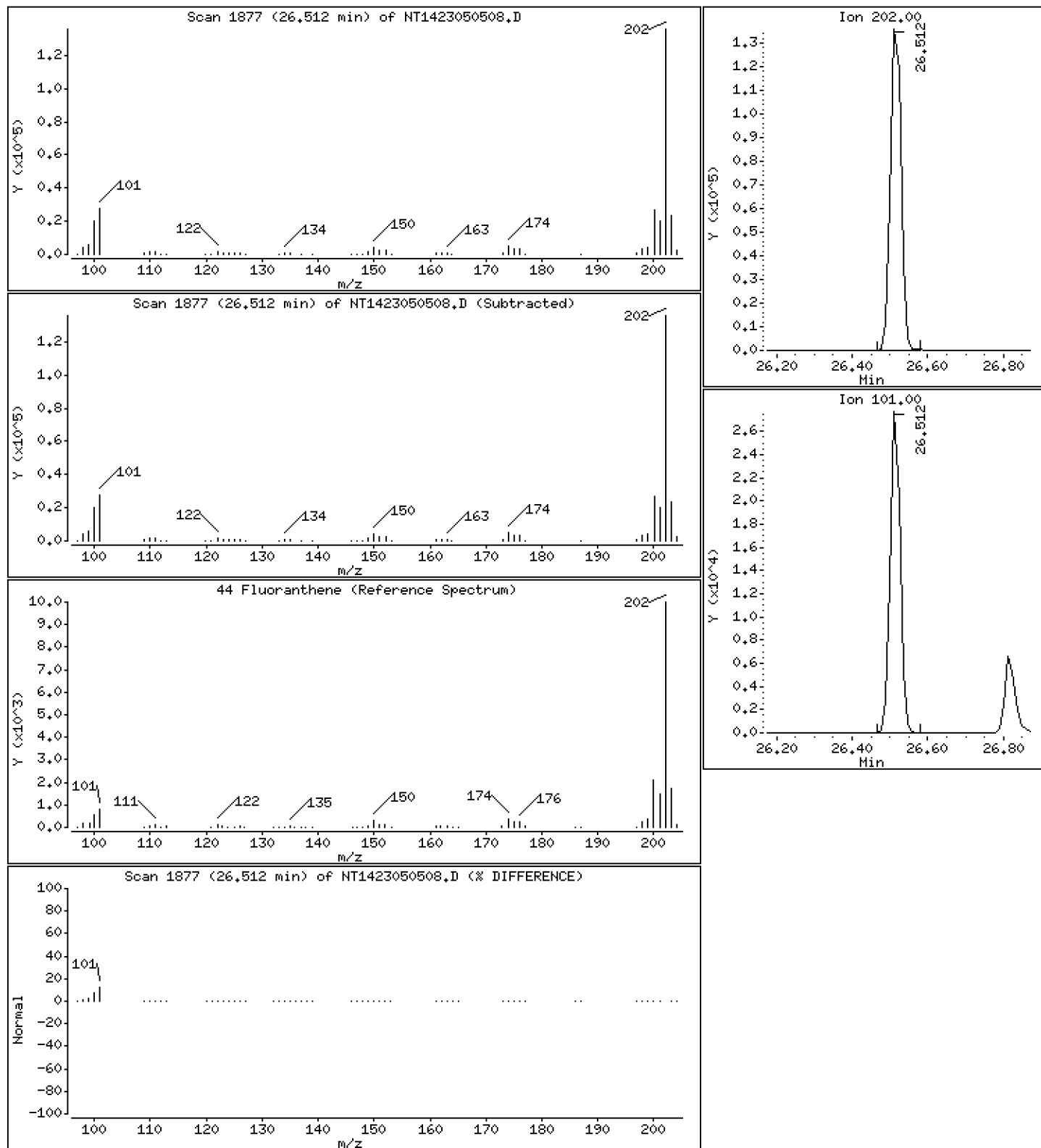
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

44 Fluoranthene

Concentration: 2.707 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

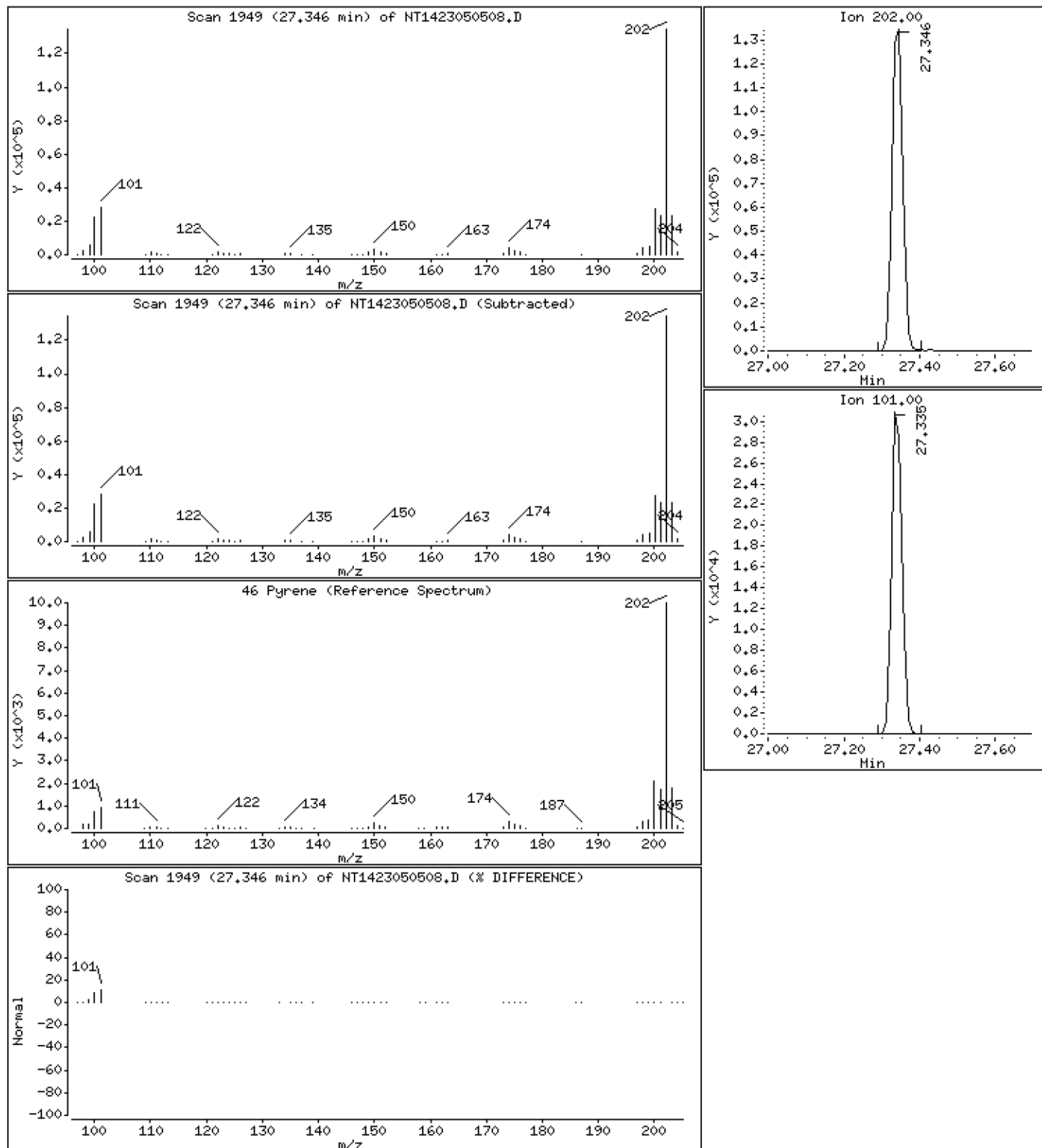
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

46 Pyrene

Concentration: 2.585 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

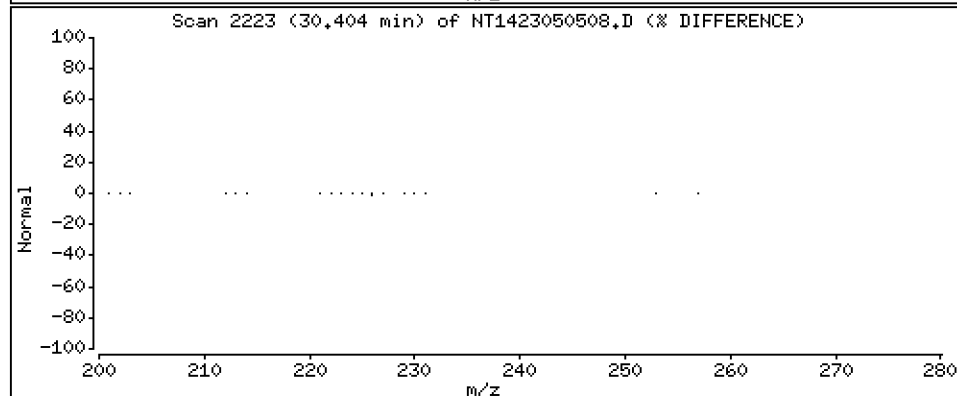
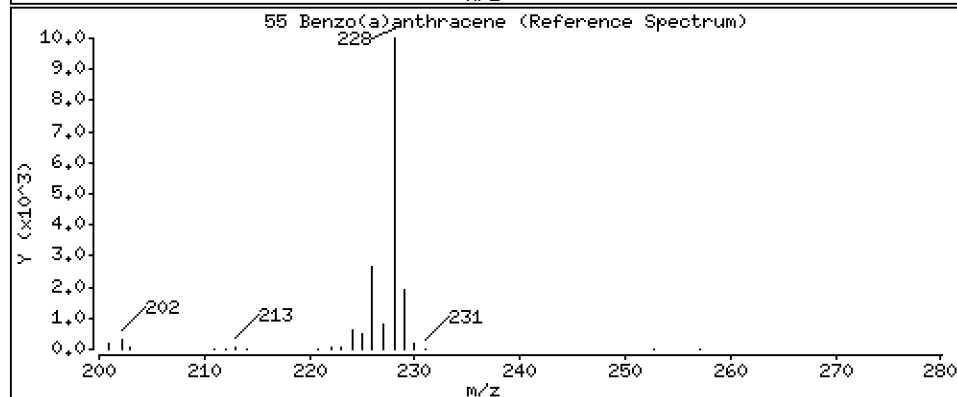
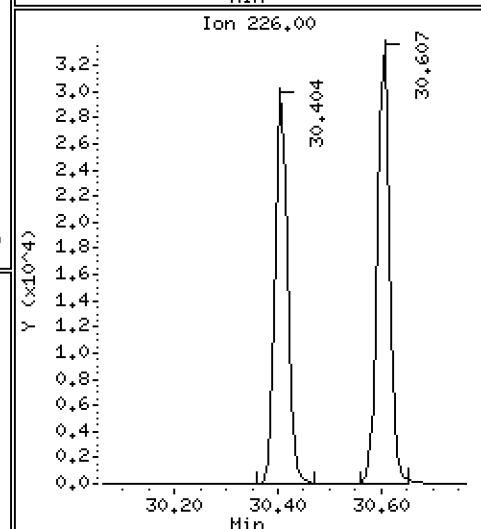
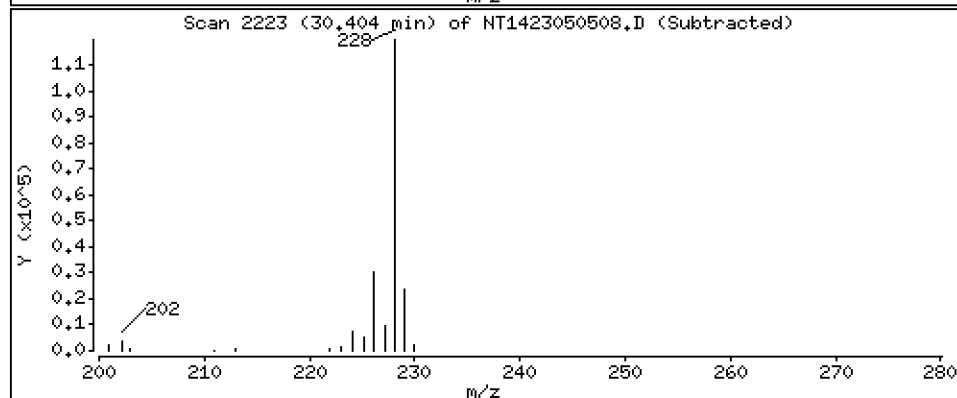
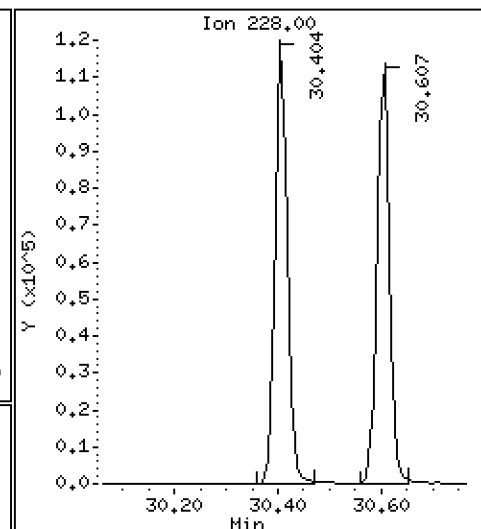
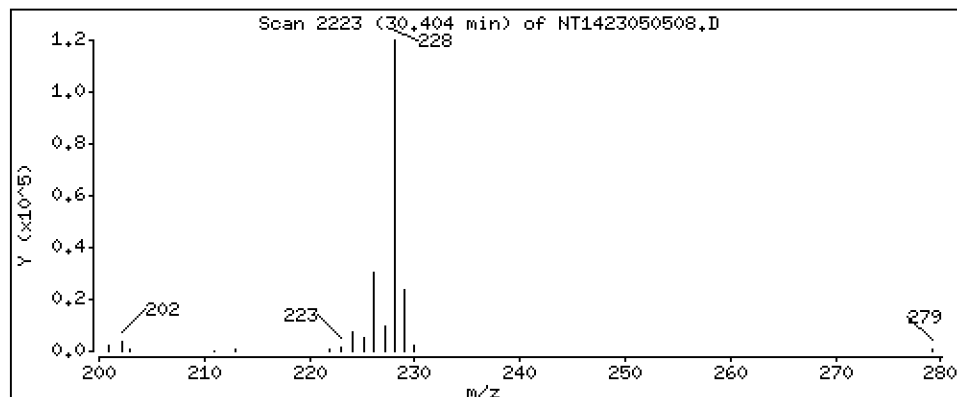
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

55 Benzo(a)anthracene

Concentration: 2,799 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

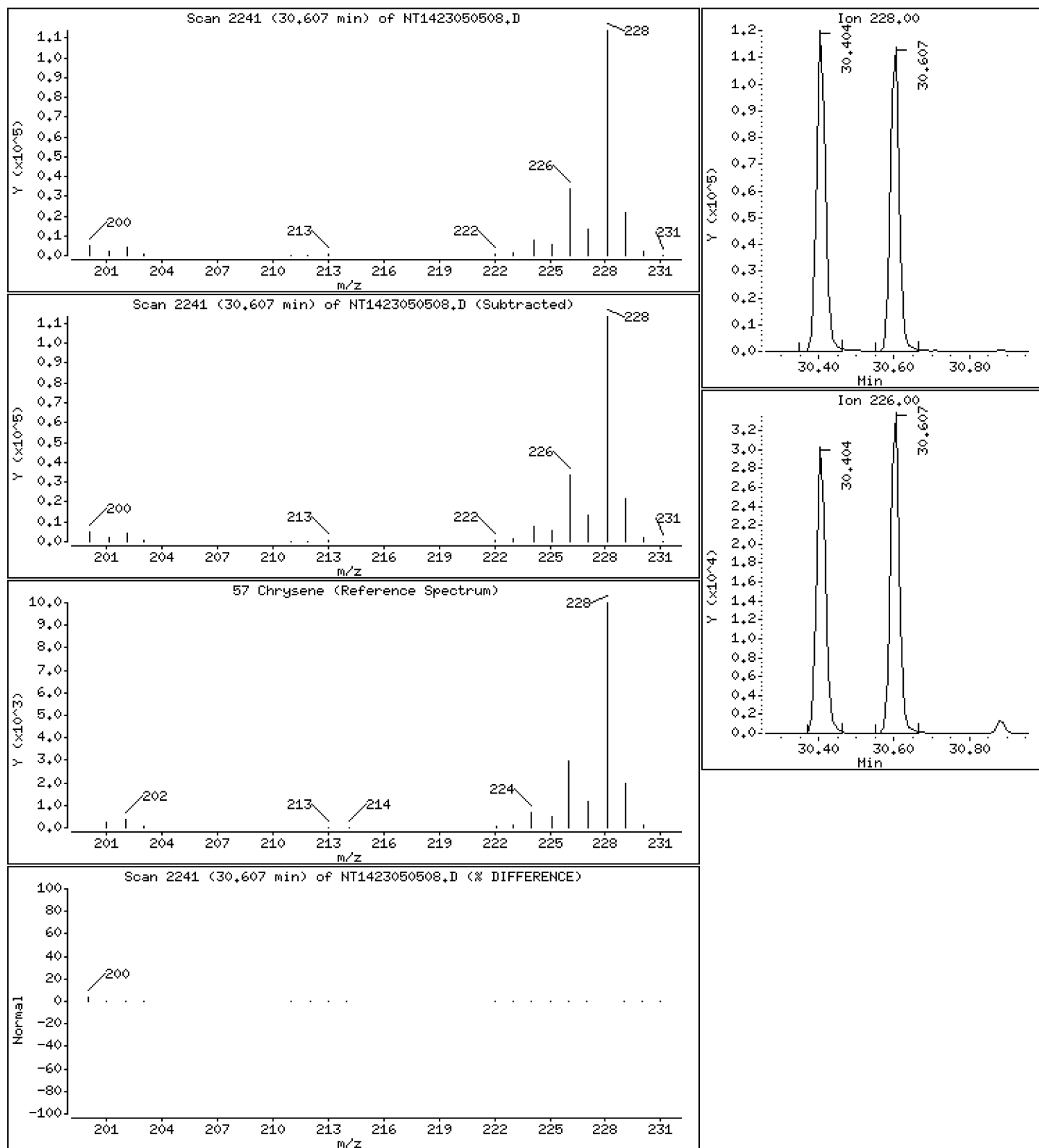
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

57 Chrysene

Concentration: 2,749 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

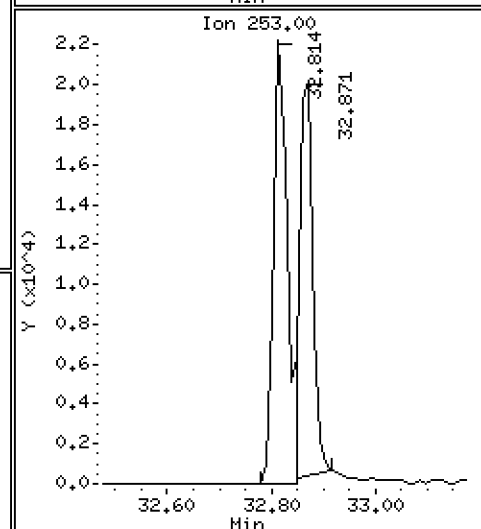
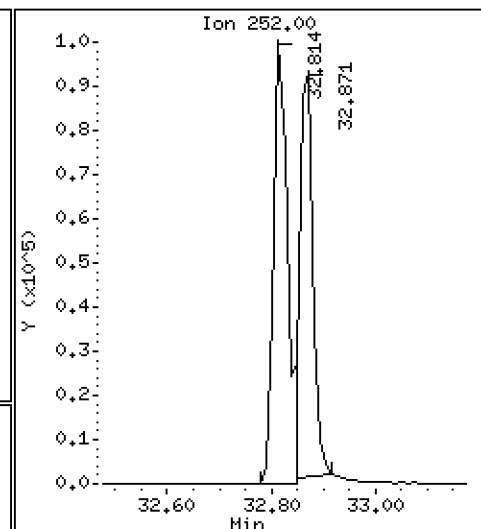
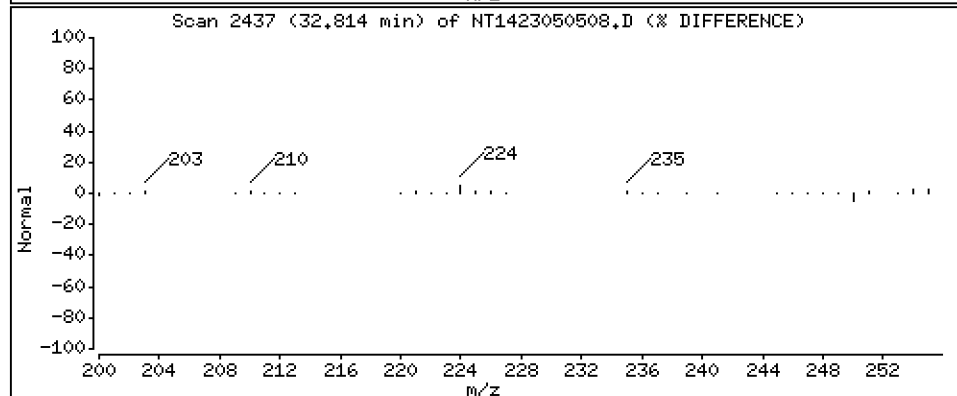
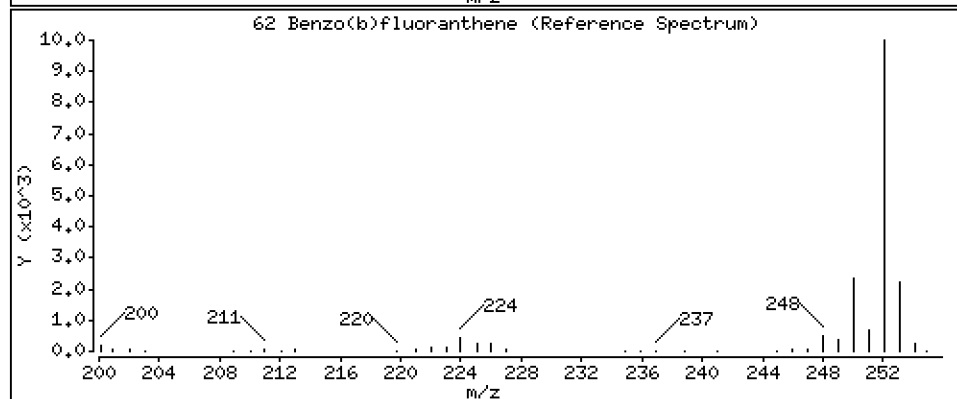
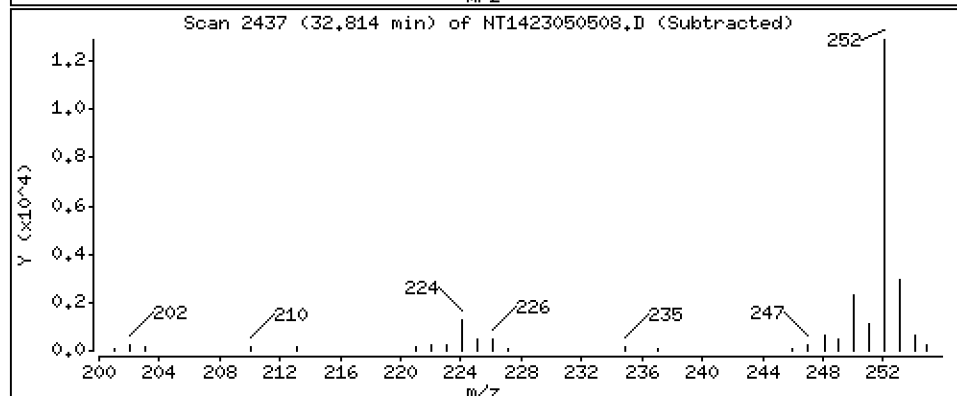
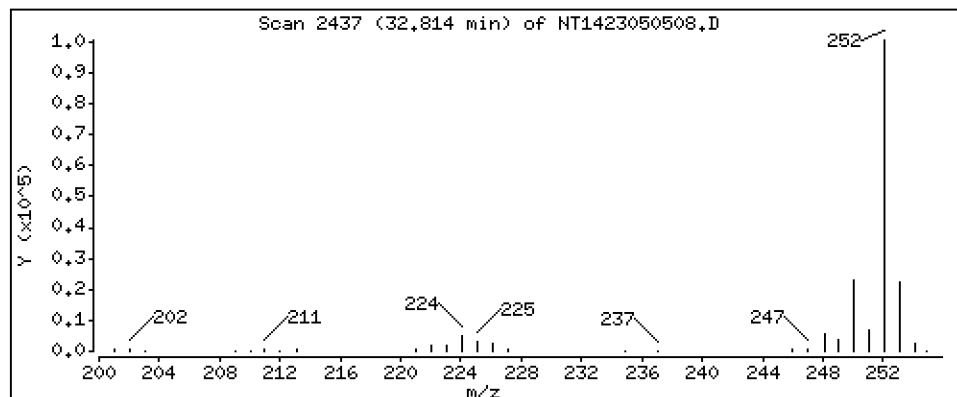
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

62 Benzo(b)fluoranthene

Concentration: 2.733 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

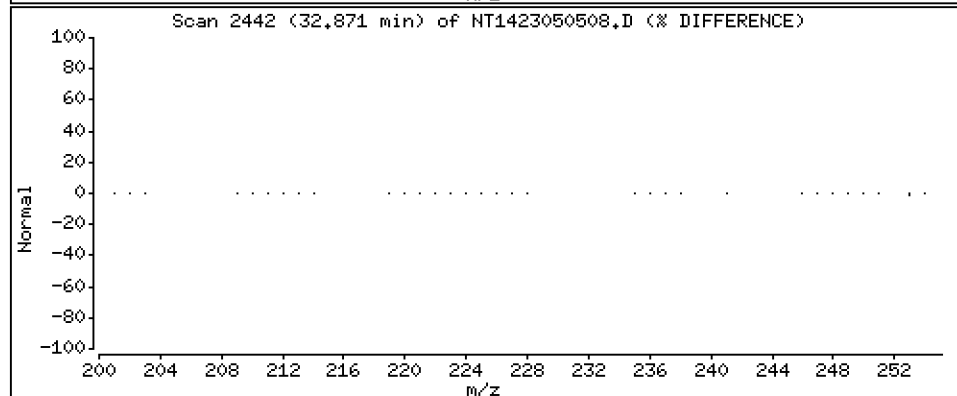
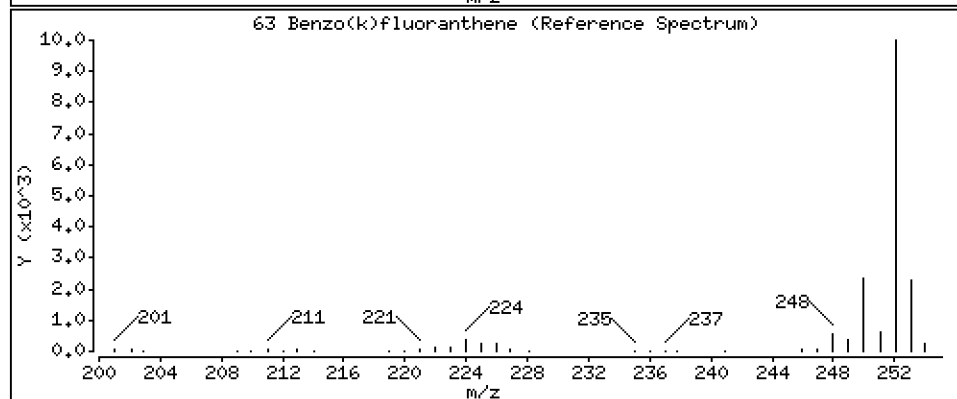
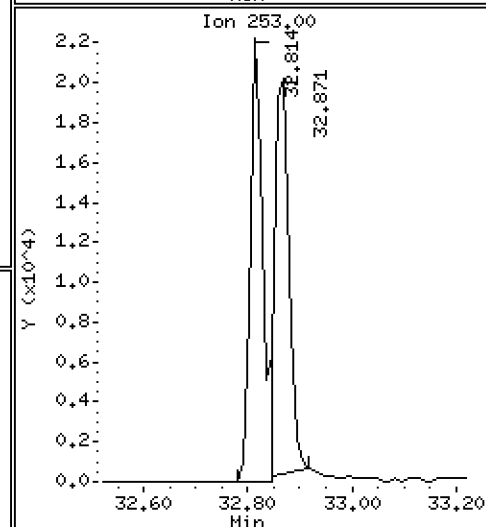
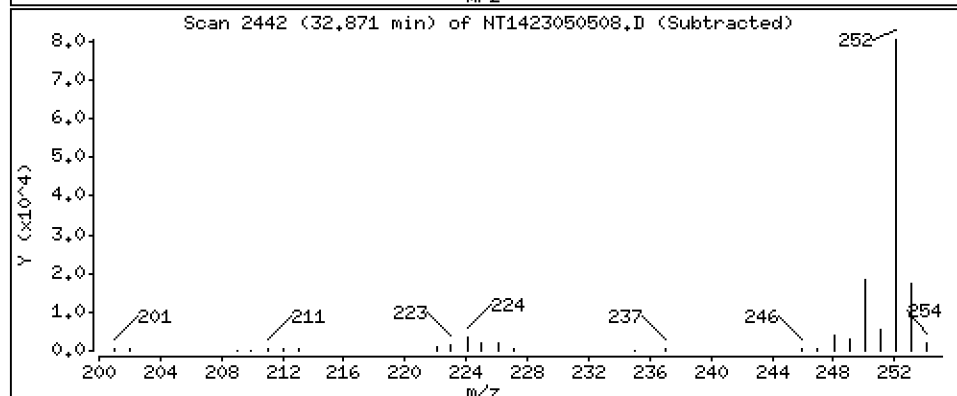
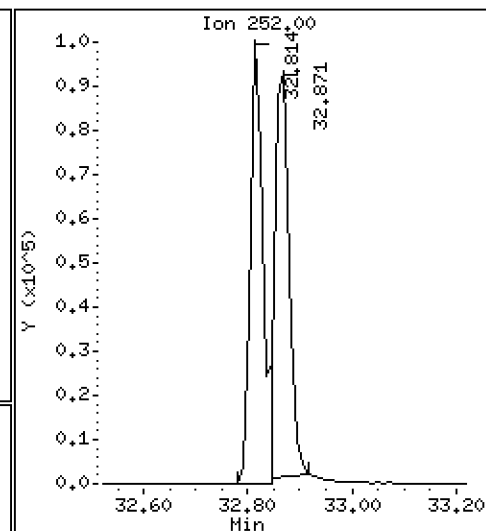
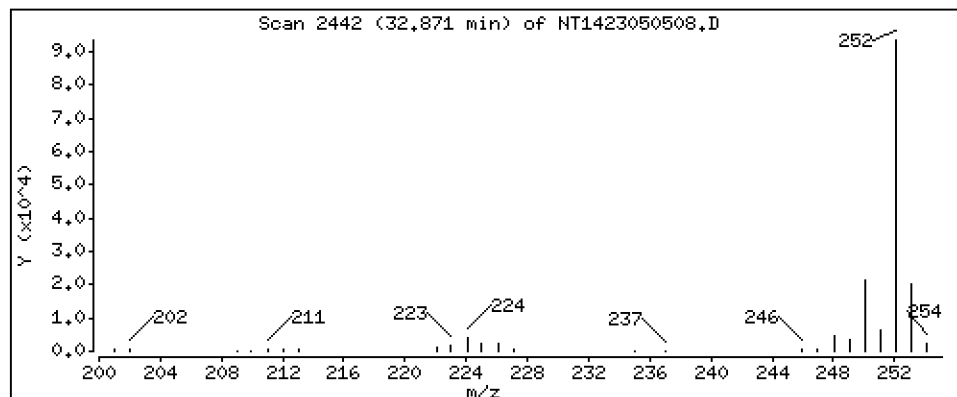
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

63 Benzo(k)fluoranthene

Concentration: 2.239 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

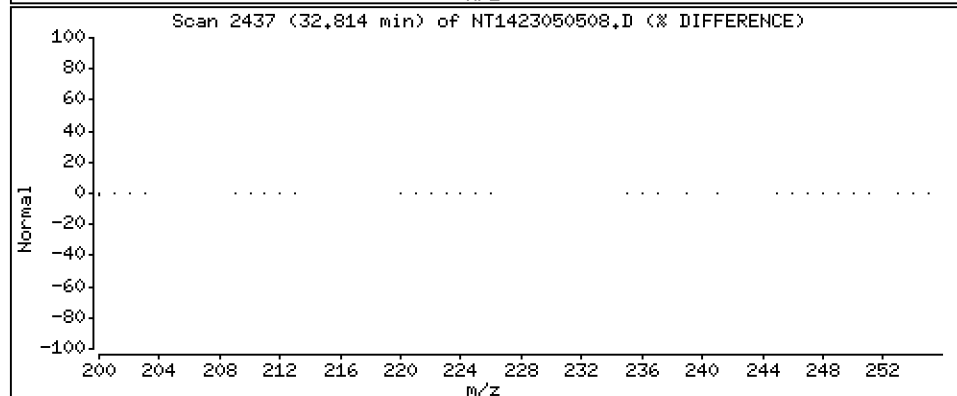
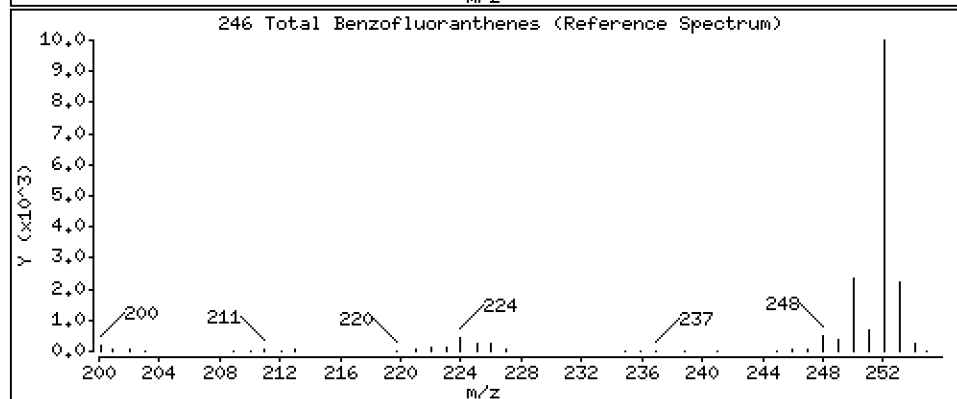
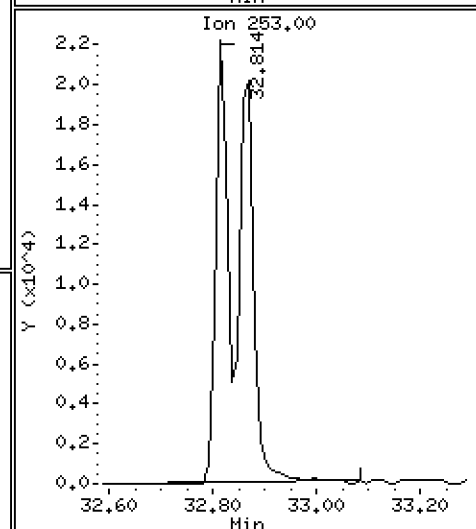
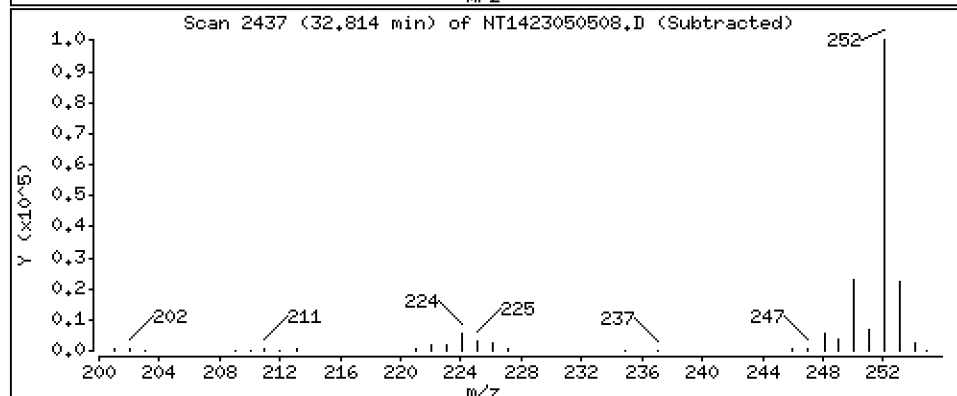
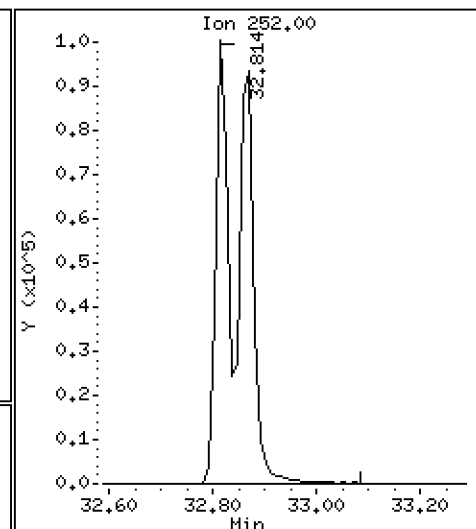
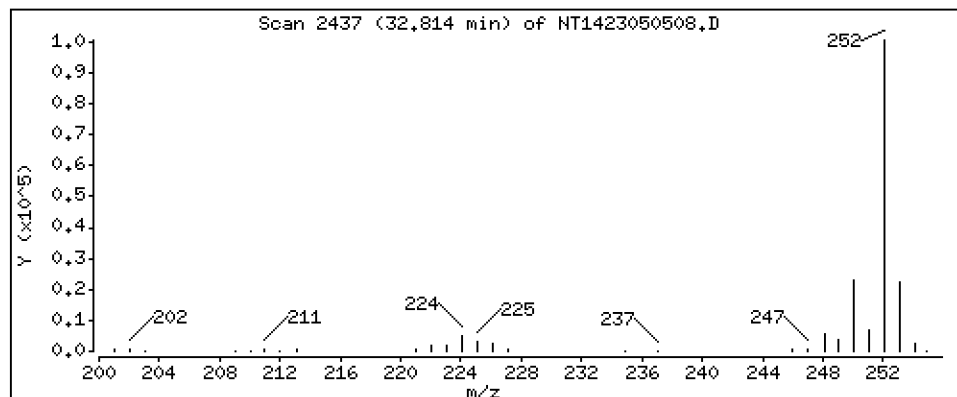
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

246 Total Benzo[fluoranthenes

Concentration: 5.557 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

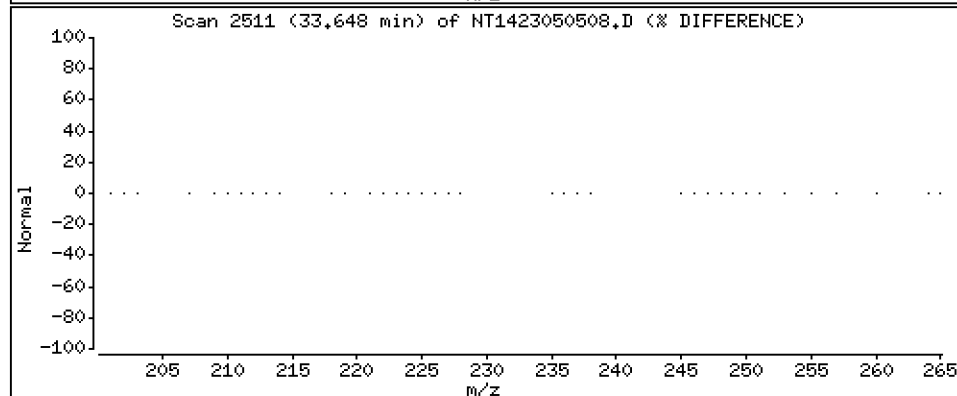
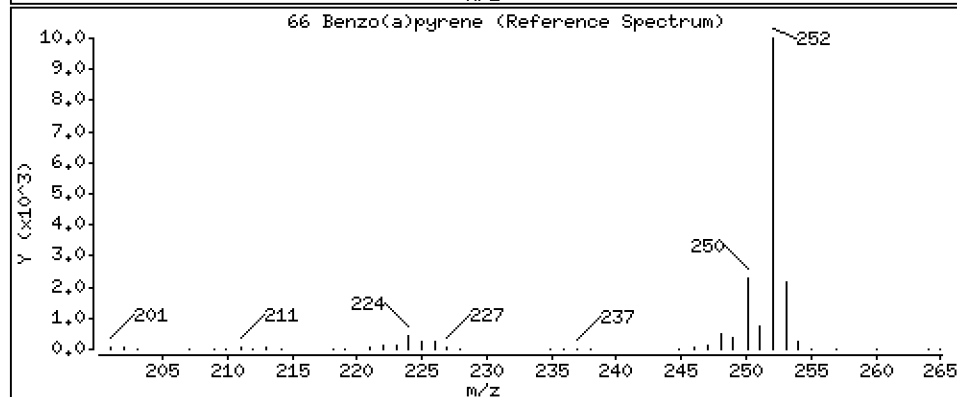
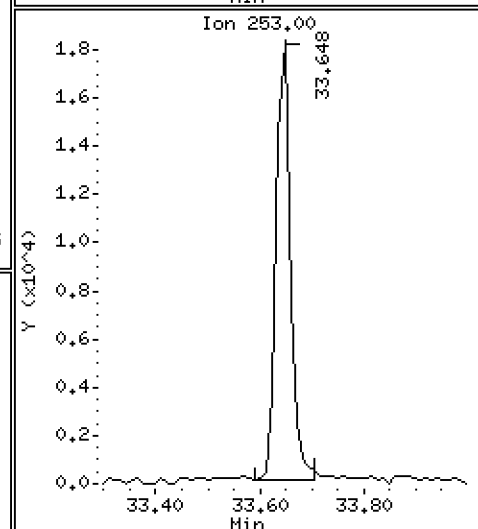
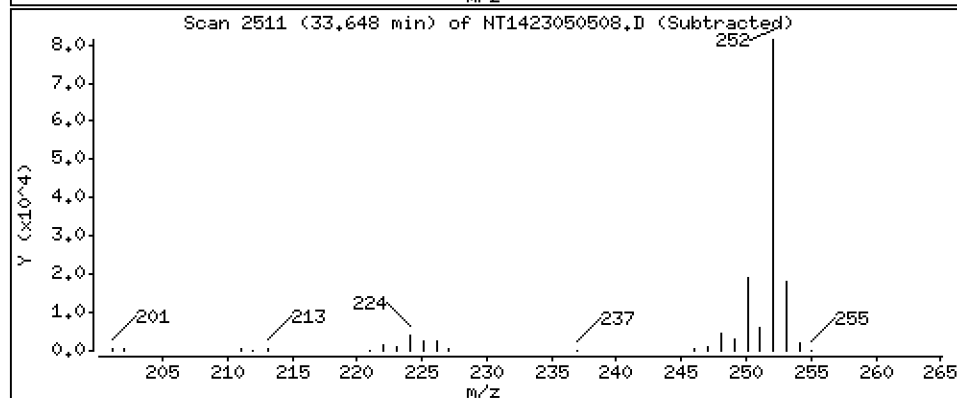
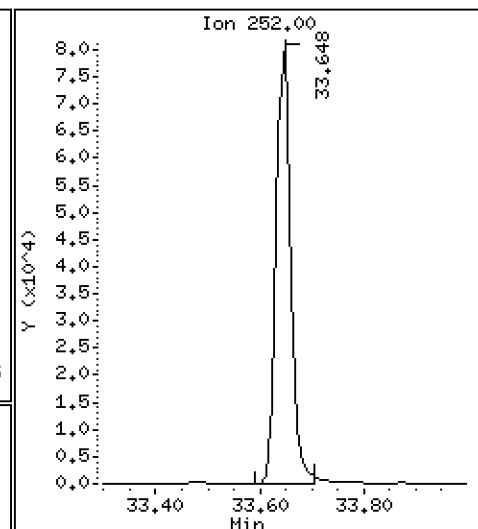
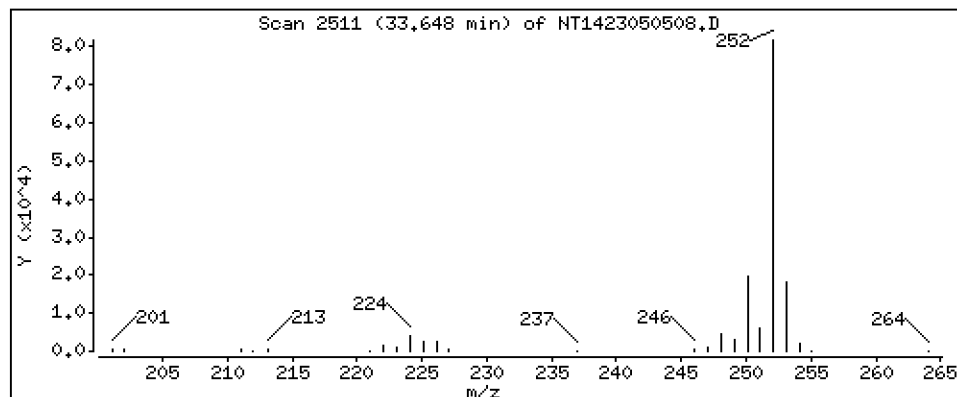
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

66 Benzo(a)pyrene

Concentration: 2.689 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

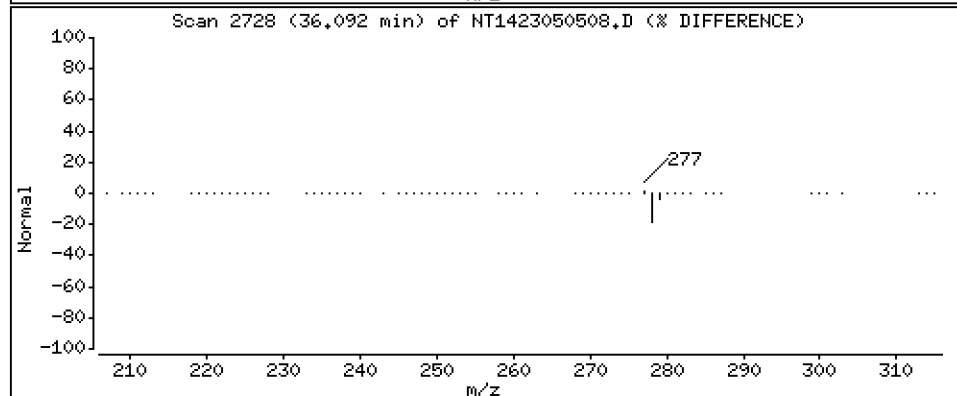
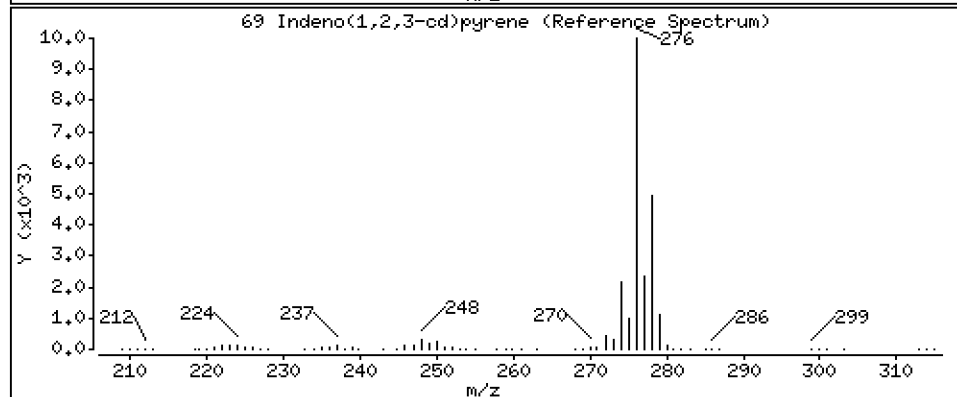
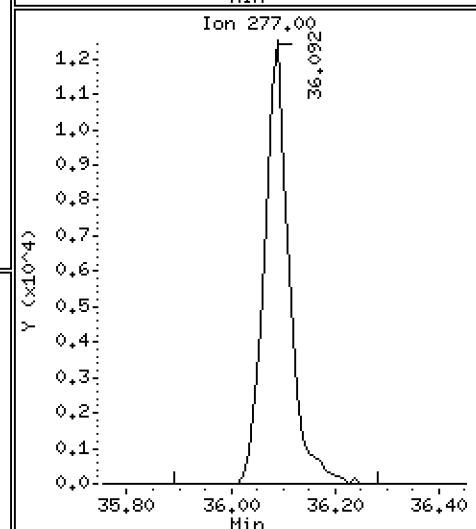
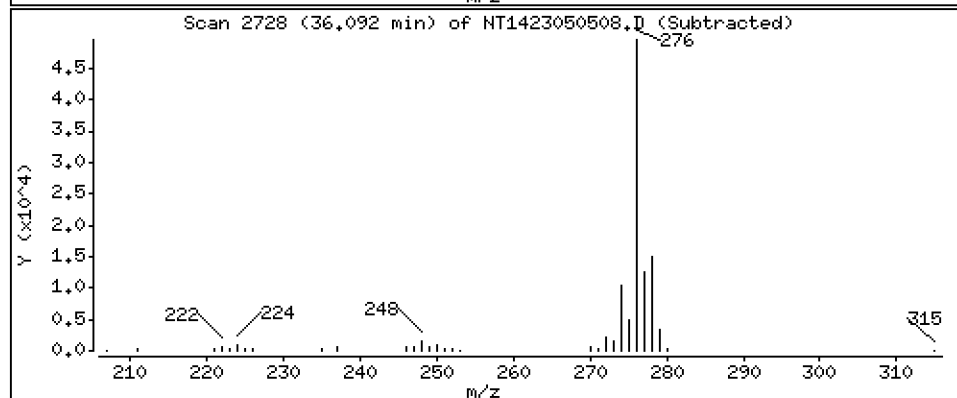
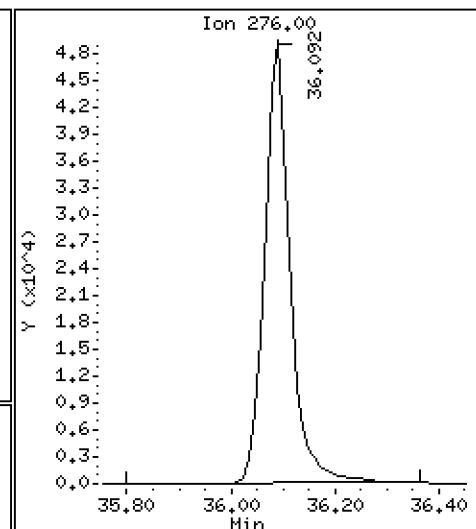
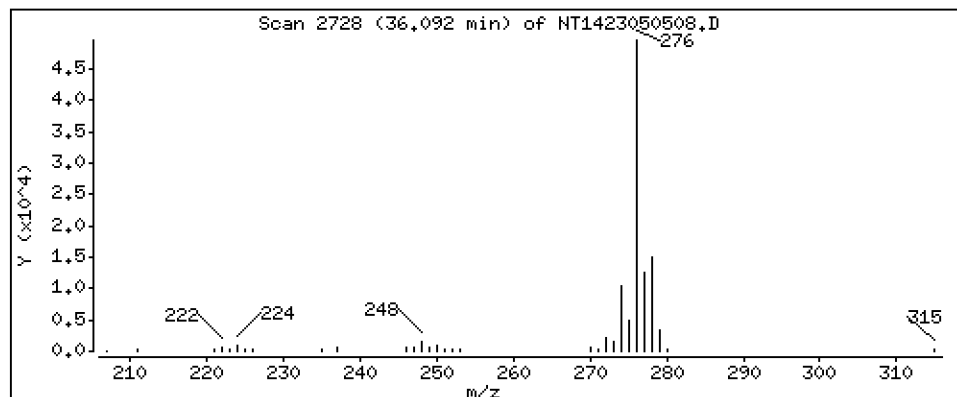
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

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

Concentration: 2.297 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

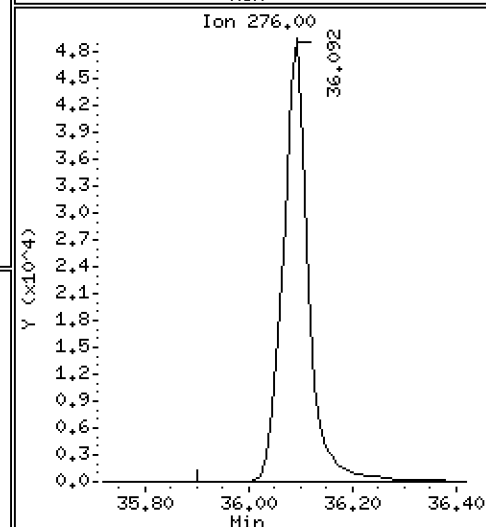
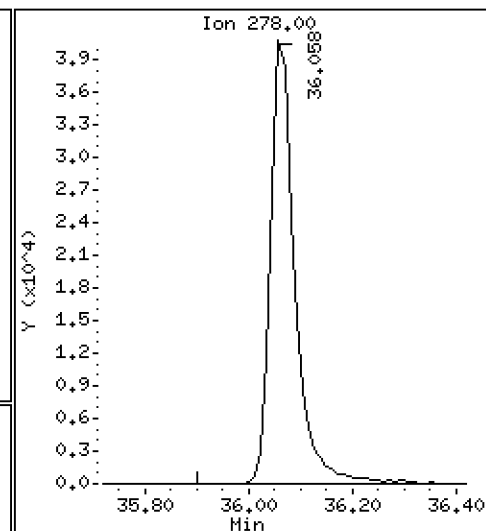
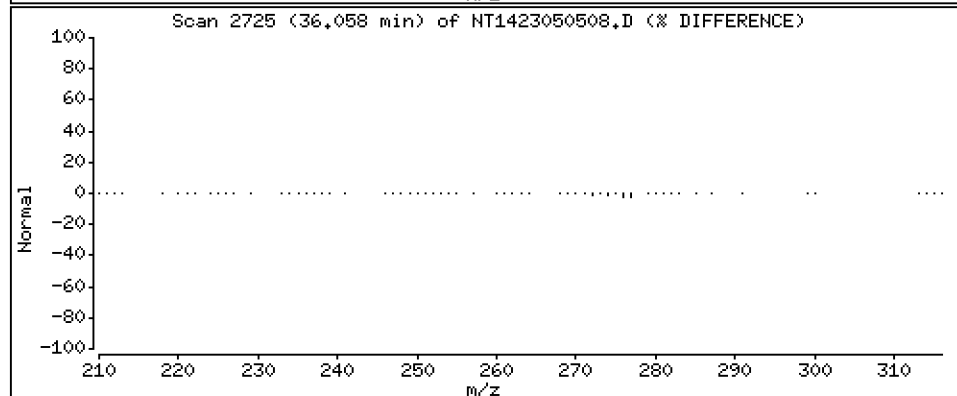
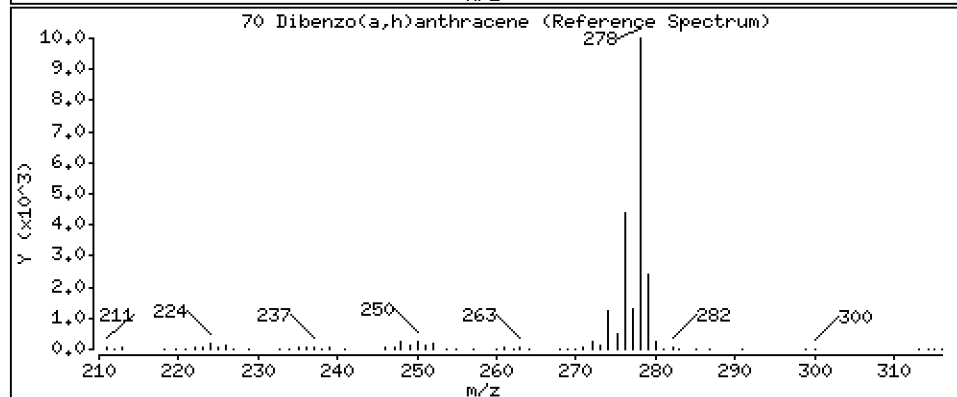
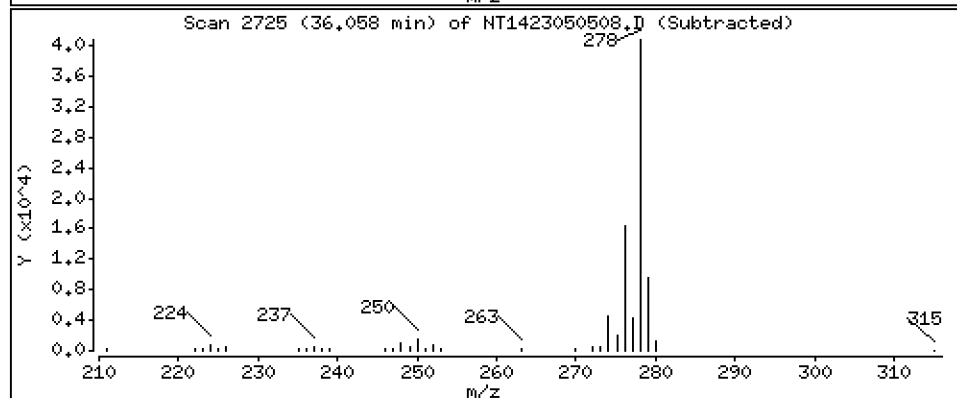
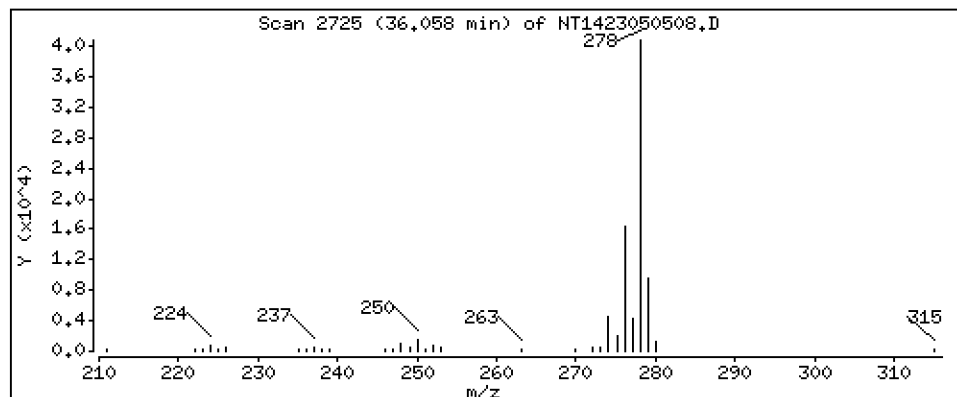
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

70 Dibenzo(a,h)anthracene

Concentration: 2.202 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

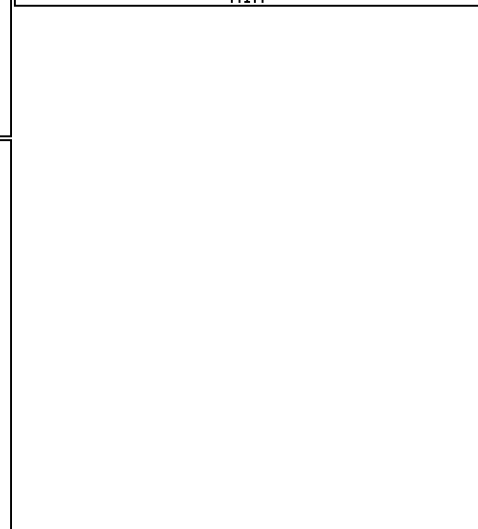
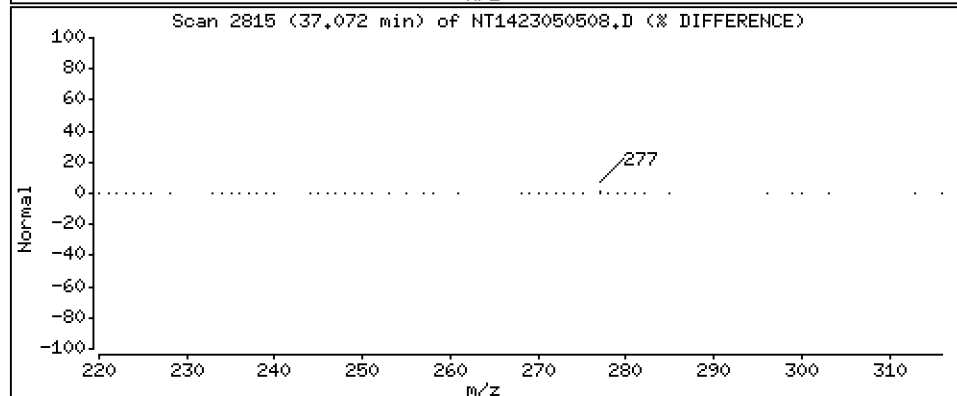
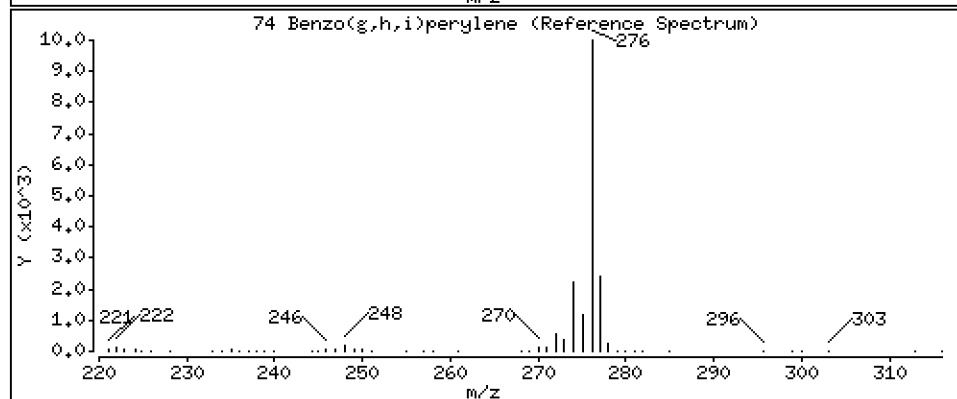
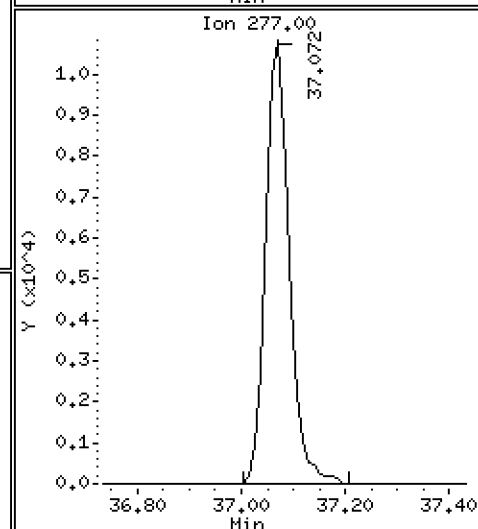
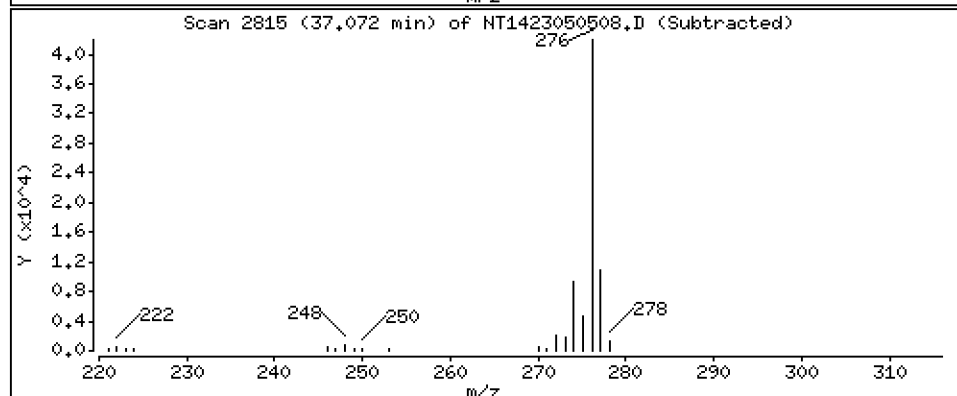
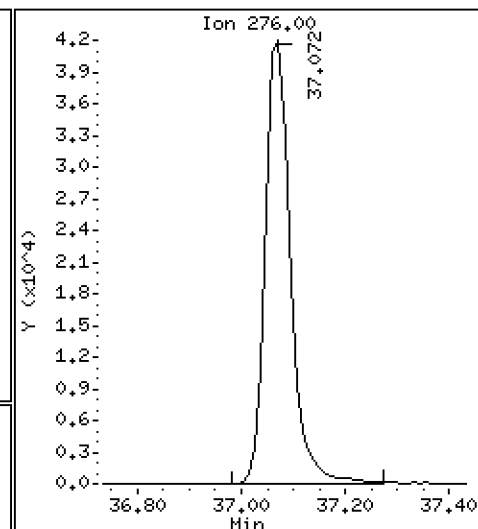
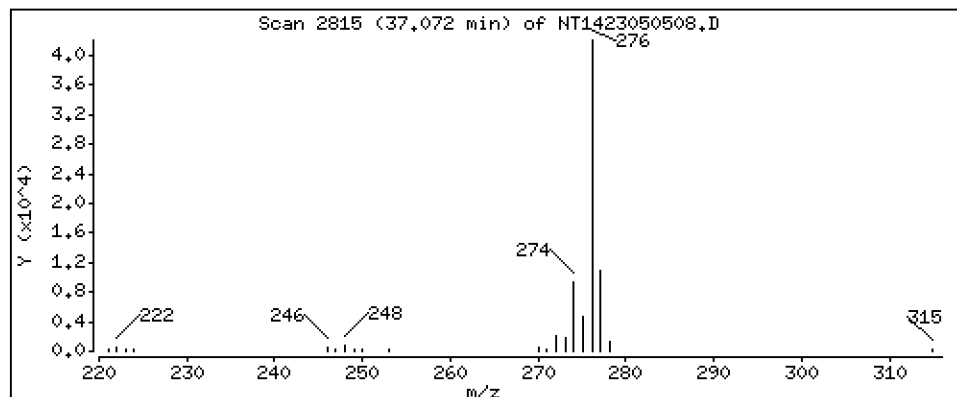
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

74 Benzo(g,h,i)perylene

Concentration: 2.550 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230505.b\NT1423050508.D
Lab Smp Id: SLE0096-SCV1
Inj Date : 05-MAY-2023 16:01
Operator : VTS
Smp Info : SLE0096-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
Meth Date : 06-May-2023 07:22 van
Cal Date : 05-MAY-2023 15:12
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: VANS-201906

Inst ID: nt14.i

Quant Type: ISTD
Cal File: NT1423050507.D

Compound Sublist: TARGETS.sub

Compounds	QUANT	SIG						CONCENTRATIONS	
			RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
	MASS						(ug/mL)	(ug/mL)	
=====	=====		=====	=====	=====	=====	=====	=====	
1 trans-Decalin	138		Compound Not Detected.						
2 cis-Decalin	138		Compound Not Detected.						
\$ 6 Naphthalene-d8	136		Compound Not Detected.						
7 Naphthalene	128		12.290	12.290	(0.638)	356640	2.48521	2.485	
12 Benzo(b)thiophene	134		Compound Not Detected.						
16 2-Methylnaphthalene	141		14.129	14.130	(0.733)	183761	2.58919	2.589	
17 1-methylnaphthalene	141		14.580	14.591	(0.757)	180422	2.52458	2.525	
18 Biphenyl	154		Compound Not Detected.						
19 2,6-Dimethylnaphthalene	156		Compound Not Detected.						
20 Acenaphthylene	152		17.437	17.437	(0.905)	310990	2.66466	2.665	
\$ 21 Acenaphthene-d10	164		17.712	17.723	(0.919)	21202	0.36620	0.3662 (R)	
22 Acenaphthene	153		17.844	17.844	(0.926)	193998	2.69360	2.694	
23 Dibenzofuran	168		18.218	18.218	(0.946)	278763	2.95677	2.957	
24 1,6,7-Trimethylnaphthalene	170		Compound Not Detected.						
* 25 Fluorene-d10	176		19.263	19.263	(1.000)	130753	2.00000		
26 Fluorene	166		19.365	19.377	(1.005)	202636	2.68244	2.682	
30 Dibenzothiophene	184		Compound Not Detected.						
\$ 35 Phenanthrene-d10	188		Compound Not Detected.						
36 Phenanthrene	178		22.698	22.698	(0.998)	272043	2.58721	2.587	
* 250 Anthracene-d10	188		22.733	22.733	(1.000)	158011	2.00000		
37 Anthracene	178		22.802	22.803	(1.003)	229943	2.38228	2.382	
42 Carbazole	167		24.077	24.078	(1.059)	217409	2.39603	2.396	
43 1-Methylphenanthrene	192		Compound Not Detected.						
44 Fluoranthene	202		26.511	26.523	(1.166)	259569	2.70729	2.707	
46 Pyrene	202		27.346	27.346	(1.203)	259384	2.58512	2.585	
51 Naphthobenzothiophene	234		Compound Not Detected.						
55 Benzo(a)anthracene	228		30.403	30.415	(0.908)	199700	2.79914	2.799	
\$ 56 Chrysene-d12	240		Compound Not Detected.						
57 Chrysene	228		30.606	30.606	(0.914)	191804	2.74851	2.749	
62 Benzo(b)fluoranthene	252		32.814	32.825	(0.980)	181931	2.73341	2.733	
63 Benzo(k)fluoranthene	252		32.870	32.871	(0.982)	167403	2.23891	2.239	
293 Benzo(j)fluoranthene	252		Compound Not Detected.						
246 Total Benzofluoranthenes	252		32.814	32.938	(0.980)	344190	5.55732	5.557 (M)	

Compounds	QUANT SIG							CONCENTRATIONS	
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
=====	=====	=====	=====	=====	=====	=====	(ug/mL)	(ug/mL)	=====
* 251 Benzo(e)pyrene-d12	264	33.478	33.478	(1.000)		91009	2.00000		
64 Benzo(e)pyrene	252	Compound Not Detected.							
66 Benzo(a)pyrene	252	33.647	33.647	(1.005)		146395	2.68856	2.689	
\$ 67 Perylene-d12	264	Compound Not Detected.							
68 Perylene	252	Compound Not Detected.							
69 Indeno(1,2,3-cd)pyrene	276	36.091	36.103	(1.078)		162972	2.29735	2.297 (M)	
70 Dibenzo(a,h)anthracene	278	36.058	36.069	(1.077)		128362	2.20212	2.202 (M)	
74 Benzo(g,h,i)perylene	276	37.071	37.083	(1.107)		136826	2.55002	2.550	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
 M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 05-MAY-2023
 Lab File ID: NT1423050508.D Calibration Time: 13:36
 Lab Smp Id: SLE0096-SCV1
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	137862	68931	275724	130753	-5.16
250 Anthracene-d10	168263	84132	336526	158011	-6.09
251 Benzo(e)pyrene-d1	99689	49845	199378	91009	-8.71

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	19.26	18.76	19.76	19.26	0.00
250 Anthracene-d10	22.73	22.23	23.23	22.73	0.00
251 Benzo(e)pyrene-d1	33.48	32.98	33.98	33.48	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 - NT1423050508.D

Lab ID: SLE0096-SCV1

nt14.i, 20230505.b\ALKYLPNA.m, 05-MAY-2023 16:01

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1423050507.D

On Column LOD for nt14.i, 20230505.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

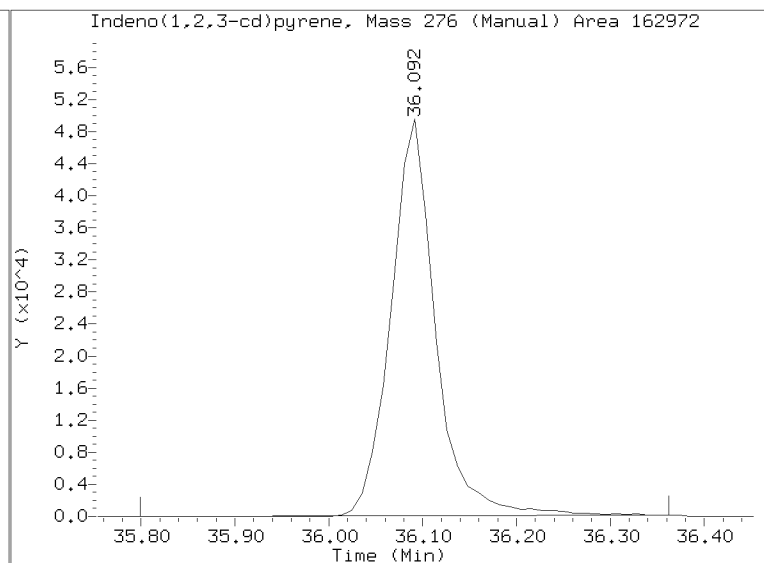
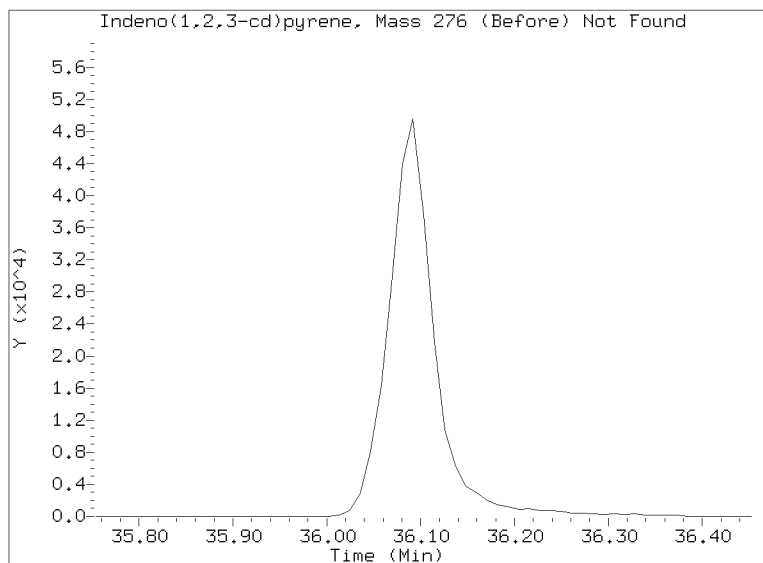
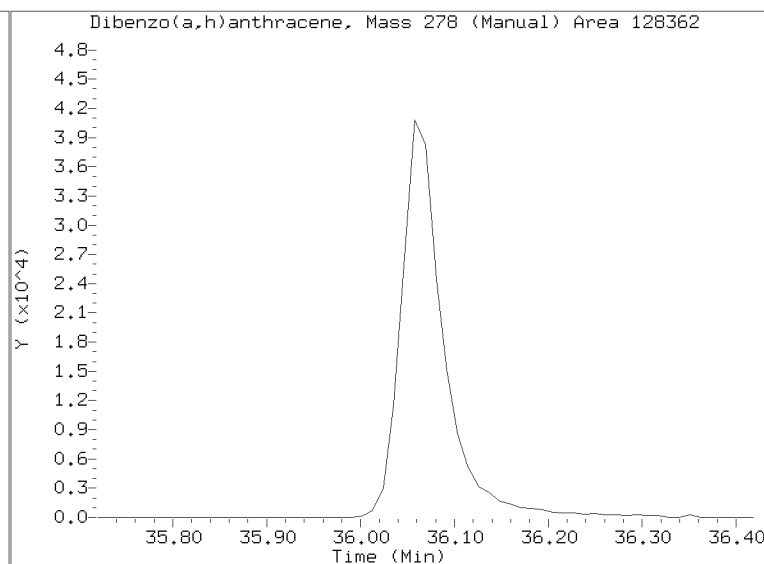
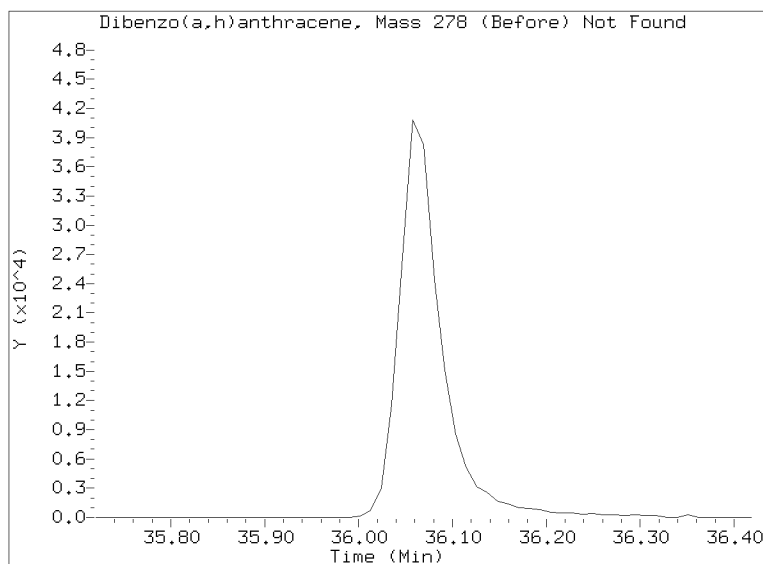
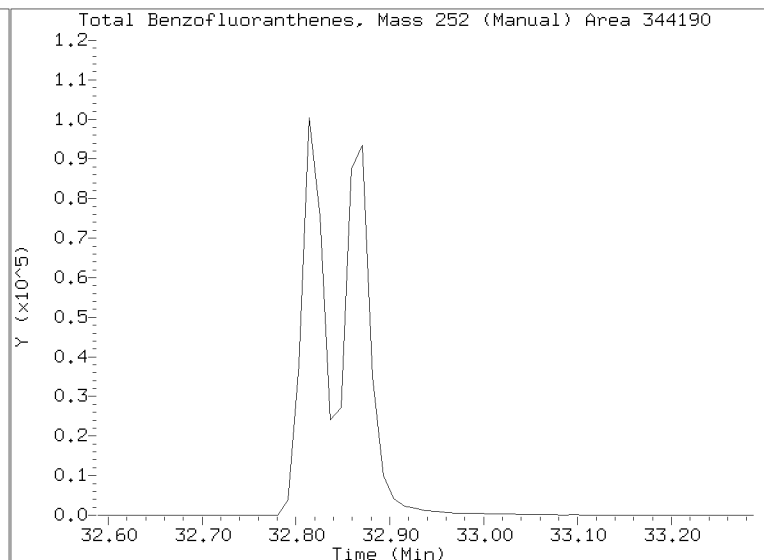
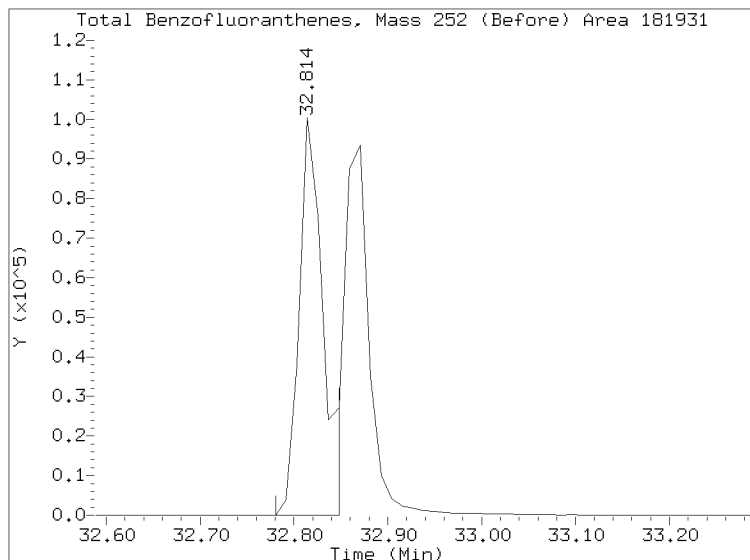
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230505.b/NT1423050508.D

Injection Date: 05-MAY-2023 16:01

Lab ID: SLE0096-SCV1 Client ID:

Report Date: 05/06/2023 07:52



Data File: \\target\share\chem3\nt14,i\20230505,b\NT1423050509.D

Page 1

Date : 05-May-2023 16:49

Client ID:

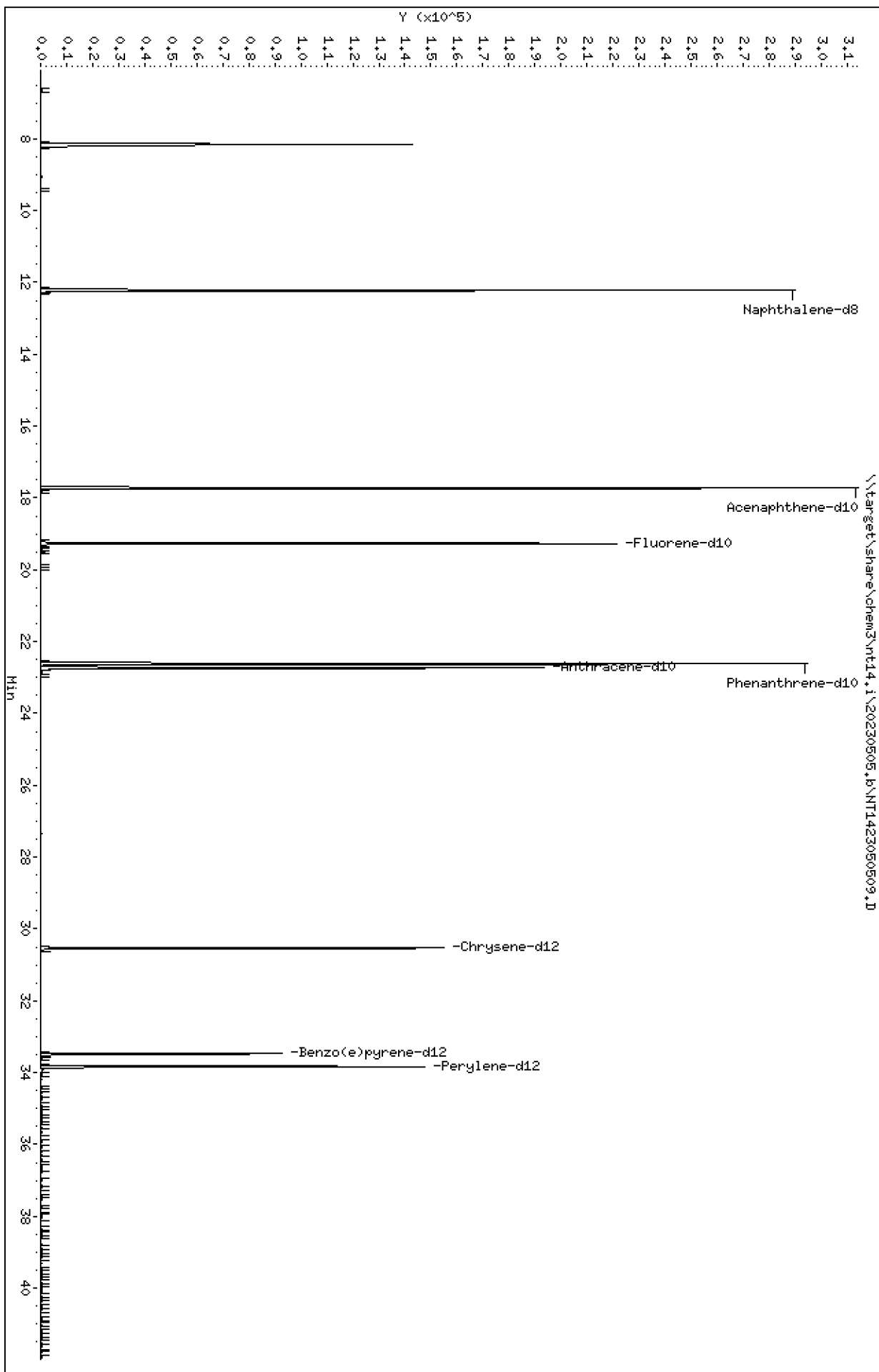
Instrument: nt14,i

Sample Info: SLE0096-ICB1

Operator: VTS

Column phase: Rxi-17S11 MS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230505.b\NT1423050509.D
Lab Smp Id: SLE0096-ICB1
Inj Date : 05-MAY-2023 16:49
Operator : VTS
Smp Info : SLE0096-ICB1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
Meth Date : 06-May-2023 07:22 van
Cal Date : 05-MAY-2023 15:12
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: VANS-201906

Inst ID: nt14.i
Quant Type: ISTD
Cal File: NT1423050507.D
Compound Sublist: TARGETS.sub

						CONCENTRATIONS		
		QUANT	SIG			ON-COLUMN	FINAL	
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
=====		=====	=====	=====	=====	=====	=====	=====
1	trans-Decalin	138	Compound Not Detected.					
2	cis-Decalin	138	Compound Not Detected.					
\$	6 Naphthalene-d8	136	12.219	12.220	(0.634)	358981	2.86065	2.861(R)
	7 Naphthalene	128	Compound Not Detected.					
	12 Benzo(b)thiophene	134	Compound Not Detected.					
	16 2-Methylnaphthalene	141	Compound Not Detected.					
	17 1-methylnaphthalene	141	Compound Not Detected.					
	18 Biphenyl	154	Compound Not Detected.					
	19 2,6-Dimethylnaphthalene	156	Compound Not Detected.					
	20 Acenaphthylene	152	Compound Not Detected.					
\$	21 Acenaphthene-d10	164	17.723	17.723	(0.920)	161171	2.89806	2.898(R)
	22 Acenaphthene	153	Compound Not Detected.					
	23 Dibenzofuran	168	Compound Not Detected.					
	24 1,6,7-Trimethylnaphthalene	170	Compound Not Detected.					
*	25 Fluorene-d10	176	19.263	19.263	(1.000)	125595	2.00000	
	26 Fluorene	166	Compound Not Detected.					
	30 Dibenzothiophene	184	Compound Not Detected.					
\$	35 Phenanthrene-d10	188	22.617	22.617	(0.995)	240000	2.91705	2.917(R)
	36 Phenanthrene	178	Compound Not Detected.					
*	250 Anthracene-d10	188	22.733	22.733	(1.000)	144183	2.00000	
	37 Anthracene	178	Compound Not Detected.					
	42 Carbazole	167	Compound Not Detected.					
	43 1-Methylphenanthrene	192	Compound Not Detected.					
	44 Fluoranthene	202	Compound Not Detected.					
	46 Pyrene	202	Compound Not Detected.					
	51 Naphthobenzothiophene	234	Compound Not Detected.					
	55 Benzo(a)anthracene	228	Compound Not Detected.					
\$	56 Chrysene-d12	240	30.527	30.539	(0.912)	134918	3.11692	3.117(R)
	57 Chrysene	228	Compound Not Detected.					
	62 Benzo(b)fluoranthene	252	Compound Not Detected.					
	63 Benzo(k)fluoranthene	252	Compound Not Detected.					
	293 Benzo(j)fluoranthene	252	Compound Not Detected.					
	246 Total Benzofluoranthenes	252	Compound Not Detected.					

Compounds	QUANT	SIG						CONCENTRATIONS	
			RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
							(ug/mL)	(ug/mL)	
=====	MASS		=====	=====	=====	=====	=====	=====	
* 251 Benzo(e)pyrene-d12	264		33.478	33.478	(1.000)	79783	2.00000		
64 Benzo(e)pyrene	252		Compound Not Detected.						
66 Benzo(a)pyrene	252		Compound Not Detected.						
\$ 67 Perylene-d12	264		33.827	33.839	(1.010)	124953	2.99231	2.992 (R)	
68 Perylene	252		Compound Not Detected.						
69 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.						
70 Dibenzo(a,h)anthracene	278		Compound Not Detected.						
74 Benzo(g,h,i)perylene	276		Compound Not Detected.						

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 05-MAY-2023
 Lab File ID: NT1423050509.D Calibration Time: 13:36
 Lab Smp Id: SLE0096-ICB1
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	137862	68931	275724	125595	-8.90
250 Anthracene-d10	168263	84132	336526	144183	-14.31
251 Benzo(e)pyrene-d1	99689	49845	199378	79783	-19.97

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	19.26	18.76	19.76	19.26	-0.00
250 Anthracene-d10	22.73	22.23	23.23	22.73	-0.00
251 Benzo(e)pyrene-d1	33.48	32.98	33.98	33.48	-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 - NT1423050509.D

Lab ID: SLE0096-ICB1

nt14.i, 20230505.b\ALKYLPNA.m, 05-MAY-2023 16:49

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

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

NONE

RRT check based on Ccal File: NT1423050507.D

On Column LOD for nt14.i, 20230505.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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



EPA 8270E-SIM

SDG: 23D0457

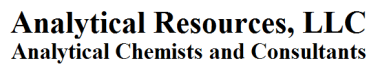
Project: Gasco Hydrocarbon Investigation

Instrument: NT14

Column (1): ZB-5MS

Calibration Comments: alkyl range

[illegible]



INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23D0457
Client:	Anchor QEA, LLC	Project:	Gasco Hydrocarbon Investigation
Calibration:	GE00043	Instrument:	NT14
Calibration Date:	05/13/2023	Column (1):	ZB-5MS
Calibration Comments:	alkyl range		

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Fluorene-d10		0.0			RSD (15)	
Anthracene-d10		0.0			RSD (15)	
Benzo(e)pyrene-d12		0.0			RSD (15)	



SECOND-SOURCE CALIBRATION VERIFICATION
EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Calibration: GE00024

Laboratory ID: SLE0096-SCV1

Sequence: SLE0096

Sequence Name: Secondary Cal Check

Standard ID: L004239

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Naphthalene	2.5000	2.5	-0.6	20.00
1-Methylnaphthalene	2.5000	2.5	1.0	20.00
2-Methylnaphthalene	2.5000	2.6	3.6	20.00
Acenaphthylene	2.5000	2.7	6.6	20.00
Acenaphthene	2.5000	2.7	7.7	20.00
Dibenzofuran	2.5000	3.0	18.3	20.00
Fluorene	2.5000	2.7	7.3	20.00
Phenanthrene	2.5000	2.6	3.5	20.00
Anthracene	2.5000	2.4	-4.7	20.00
Carbazole	2.5000	2.4	-4.2	20.00
Fluoranthene	2.5000	2.7	8.3	20.00
Pyrene	2.5000	2.6	3.4	20.00
Benzo(a)anthracene	2.5000	2.8	12.0	20.00
Chrysene	2.5000	2.7	9.9	20.00
Benzo(b)fluoranthene	2.5000	2.7	9.3	
Benzo(k)fluoranthene	2.5000	2.2	-10.4	
Benzo(a)fluoranthene, Total	5.0000	5.6	11.1	
Benzo(a)pyrene	2.5000	2.7	7.5	20.00
Indeno(1,2,3-cd)pyrene	2.5000	2.3	-8.1	20.00
Dibenzo(a,h)anthracene	2.5000	2.2	-11.9	20.00
Benzo(g,h,i)perylene	2.5000	2.6	2.0	20.00

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230505.b\NT1423050508.D

Date : 05-May-2023 16:01

Client ID:

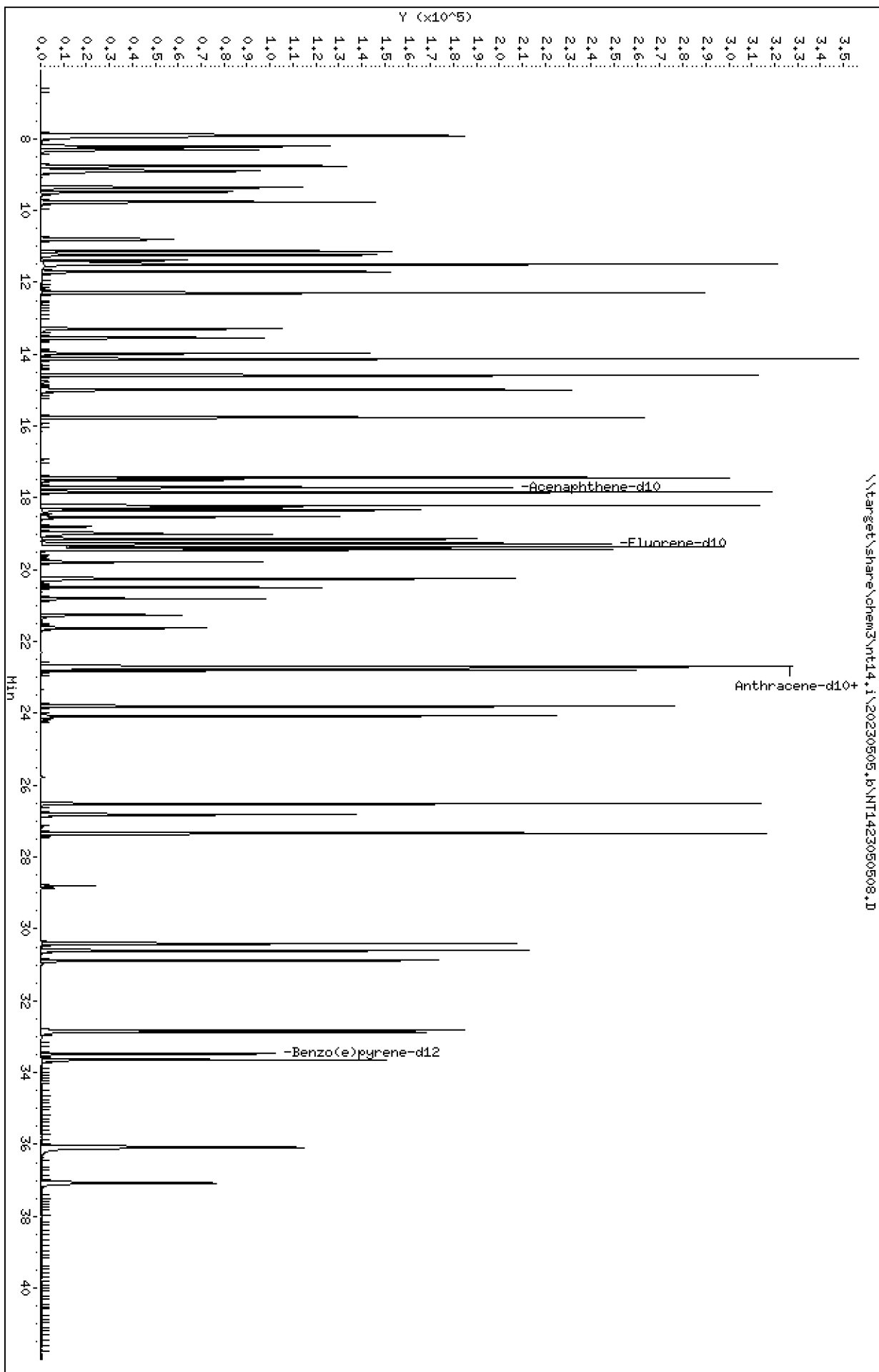
Sample Info: SLE0096-SCV1

Column phase: Rxi-17S11 MS

Instrument: nt14.i

Operator: VTS

Column diameter: 0.25



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

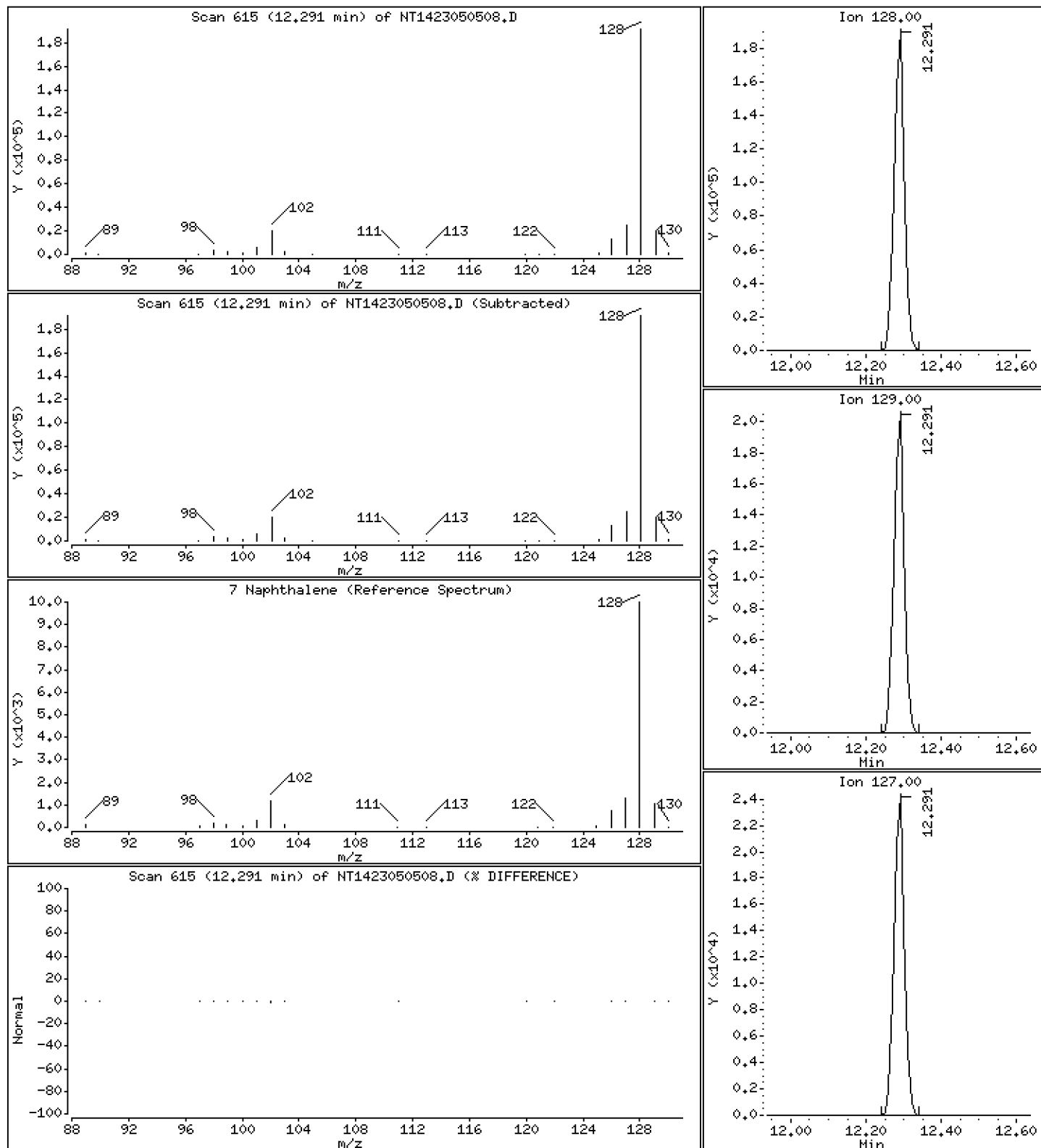
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

7 Naphthalene

Concentration: 2.485 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

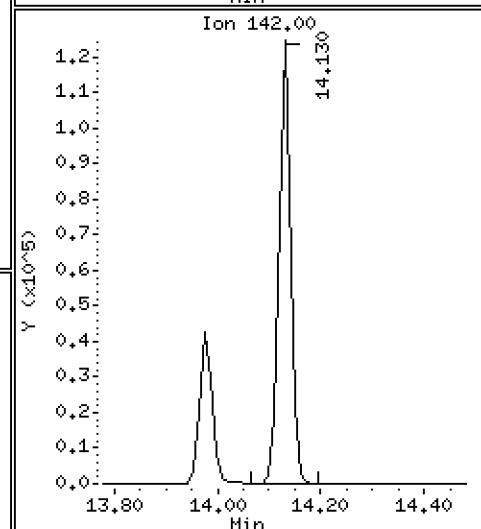
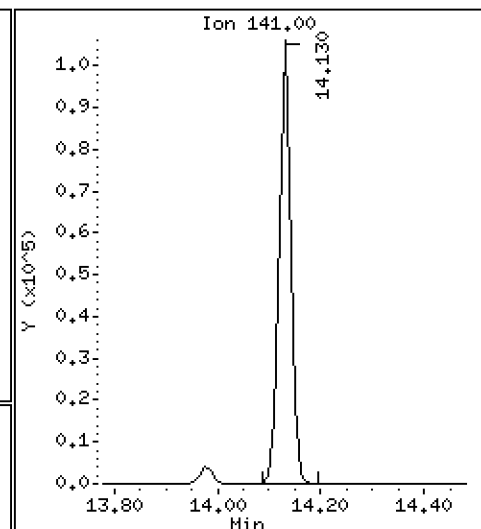
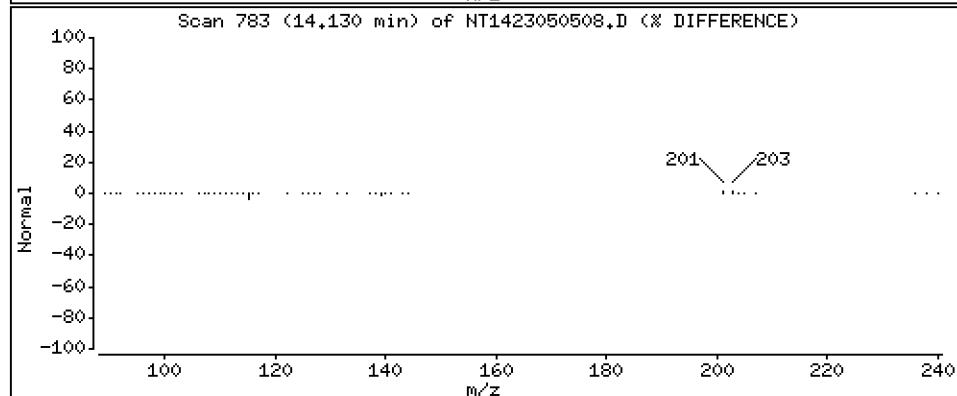
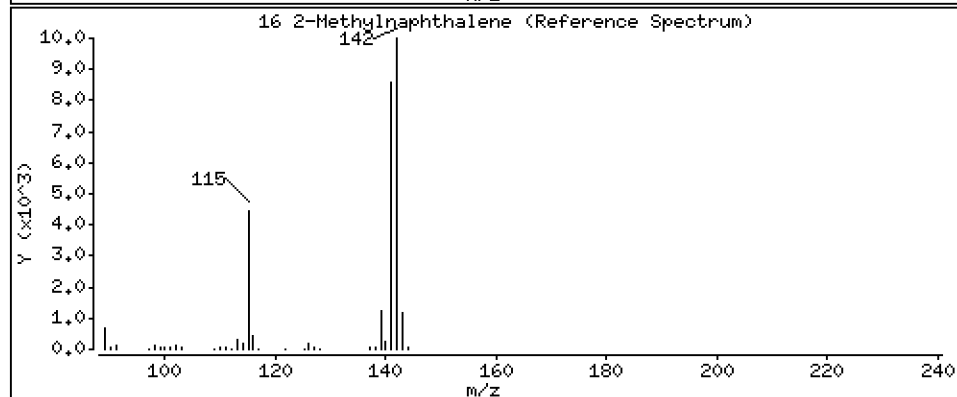
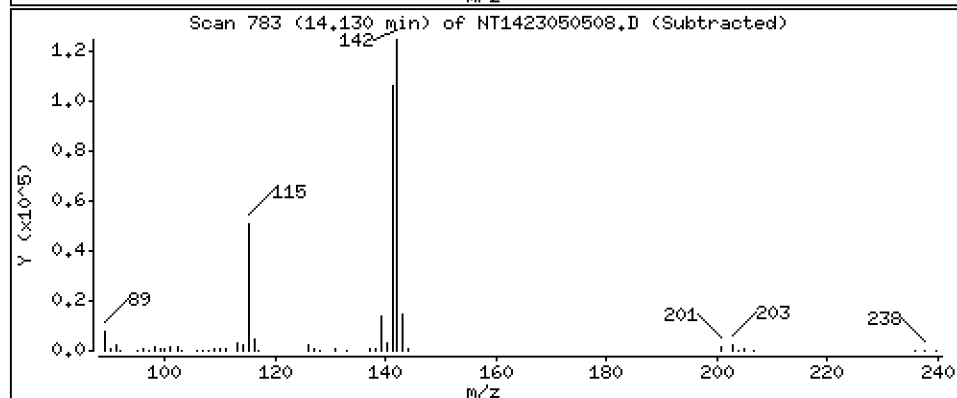
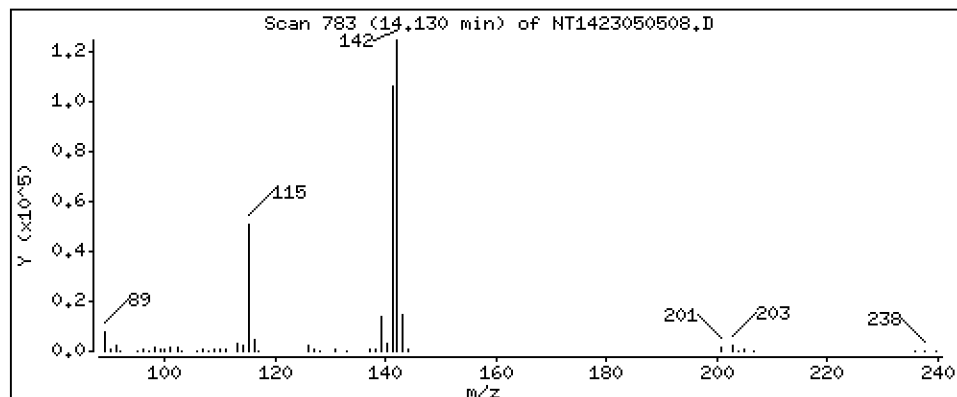
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

16 2-Methylnaphthalene

Concentration: 2.589 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

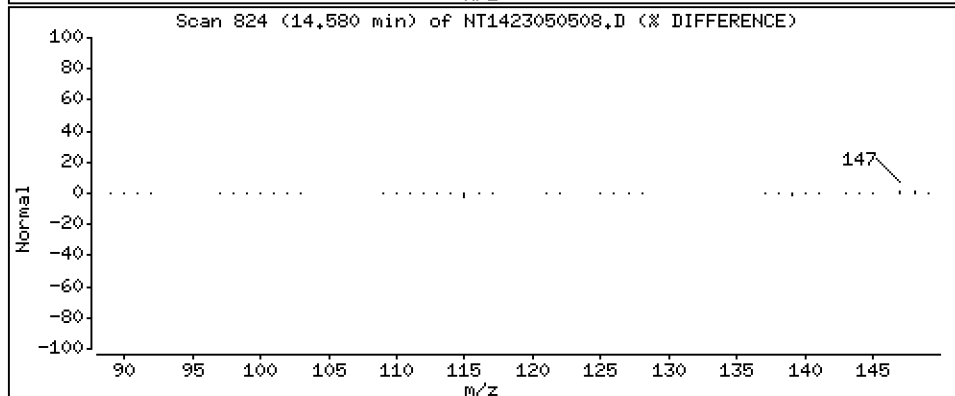
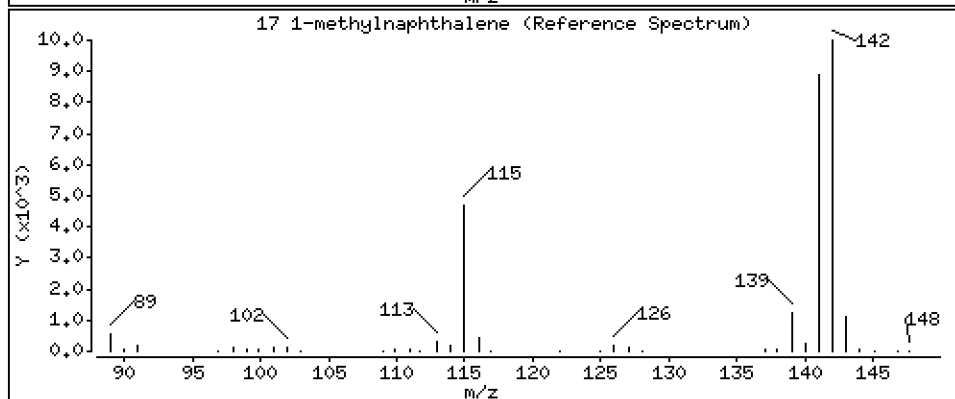
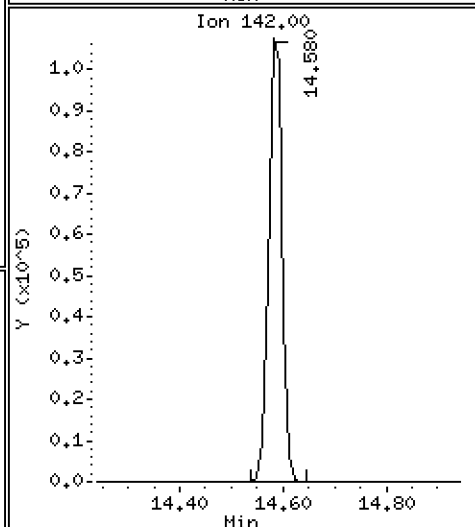
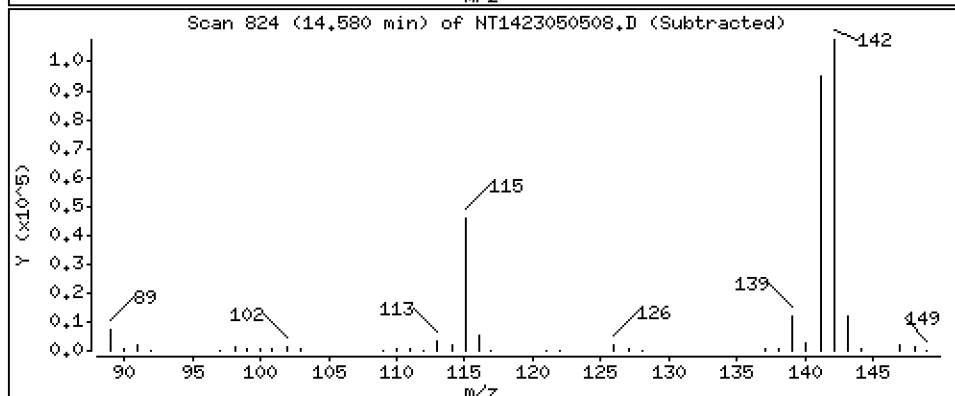
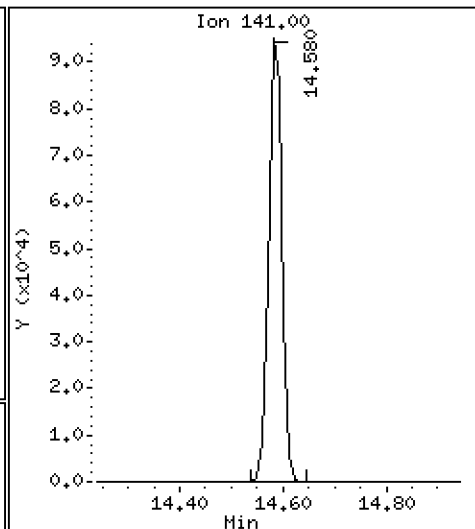
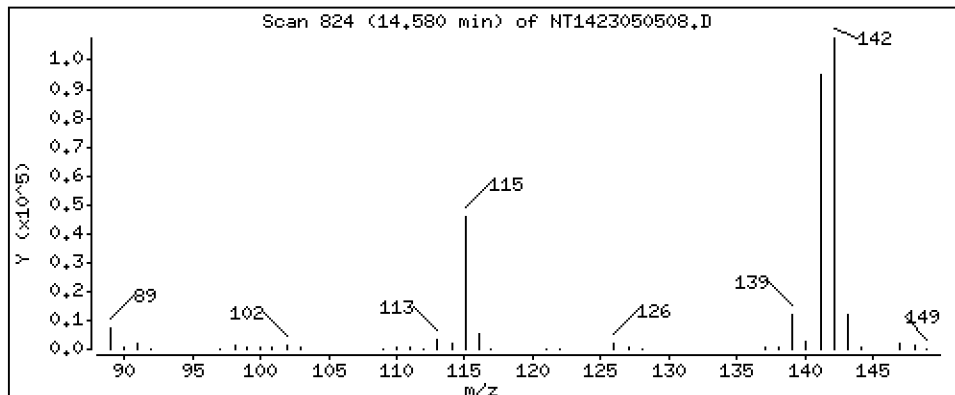
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 1-methylnaphthalene

Concentration: 2.525 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

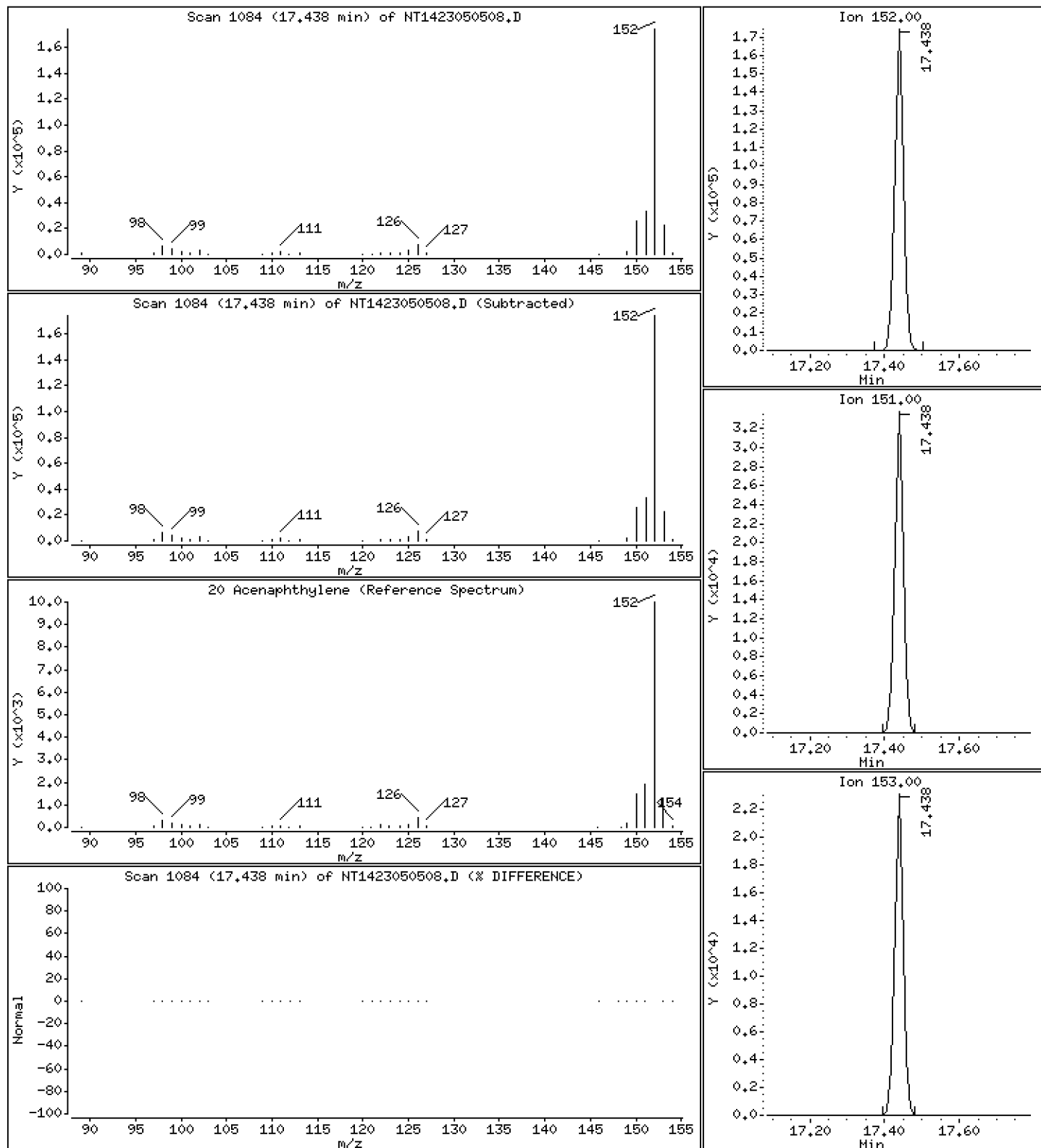
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

20 Acenaphthylene

Concentration: 2.665 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

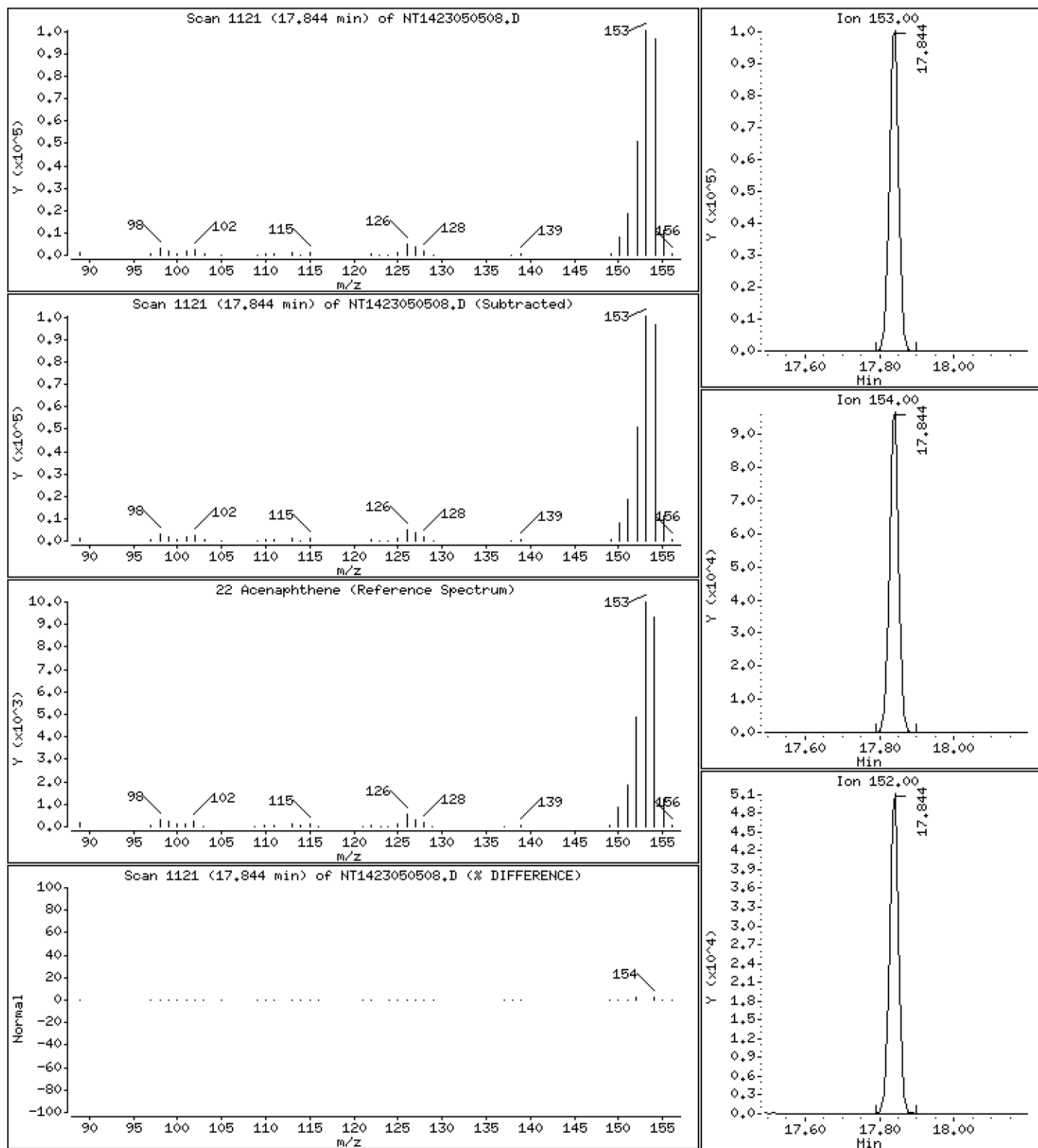
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

22 Acenaphthene

Concentration: 2.694 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

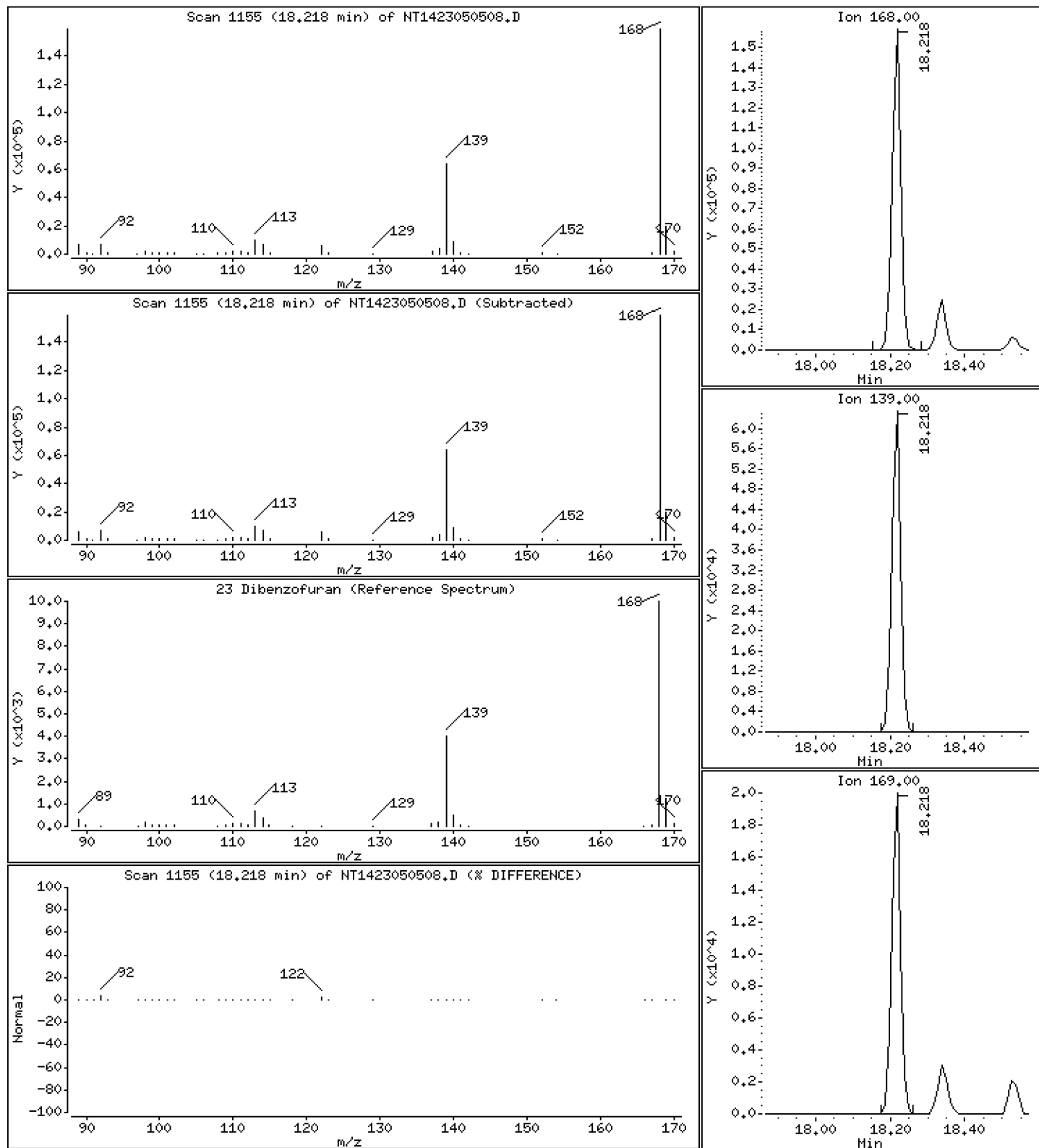
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

23 Dibenzofuran

Concentration: 2.957 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

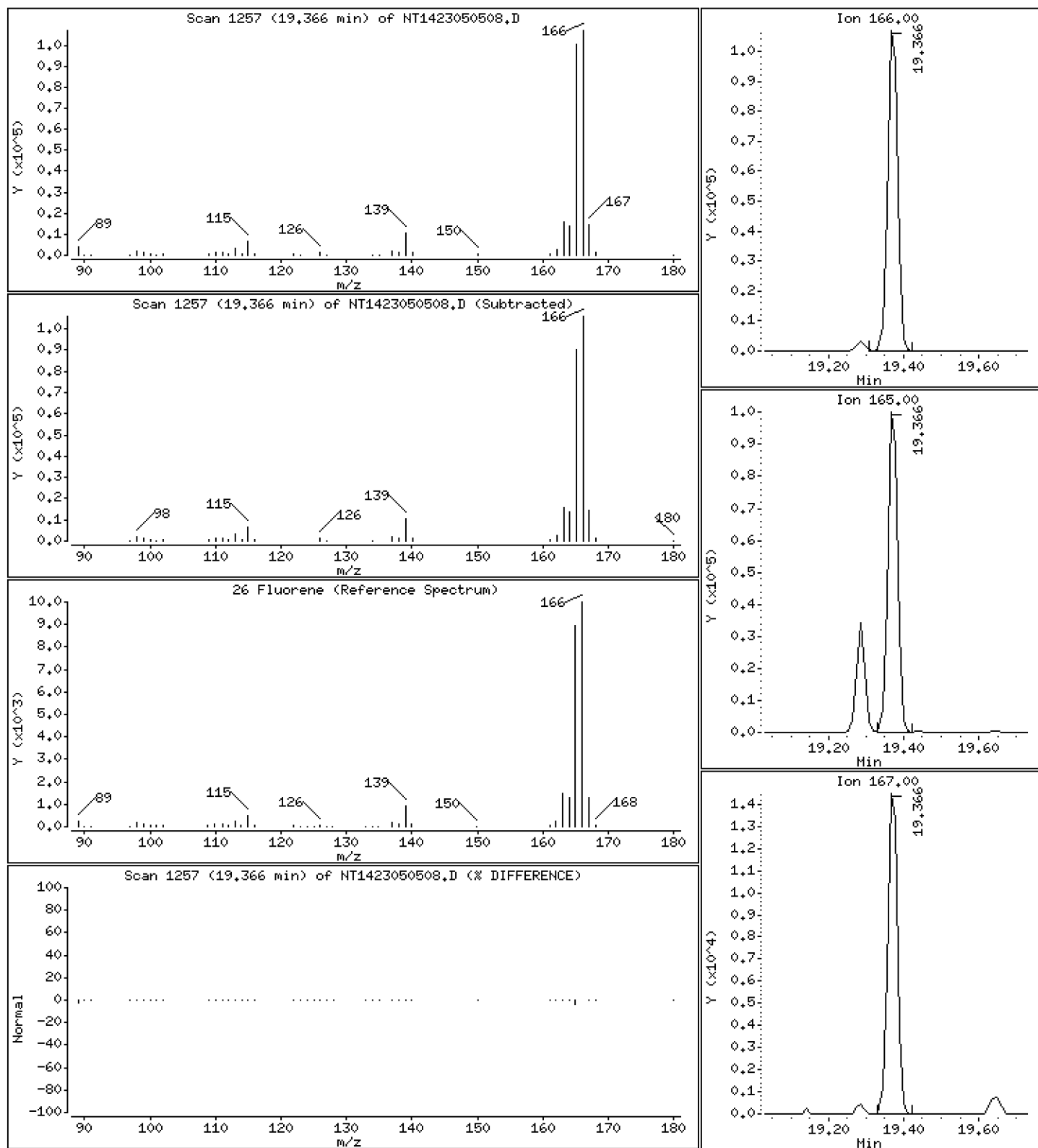
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

26 Fluorene

Concentration: 2.682 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

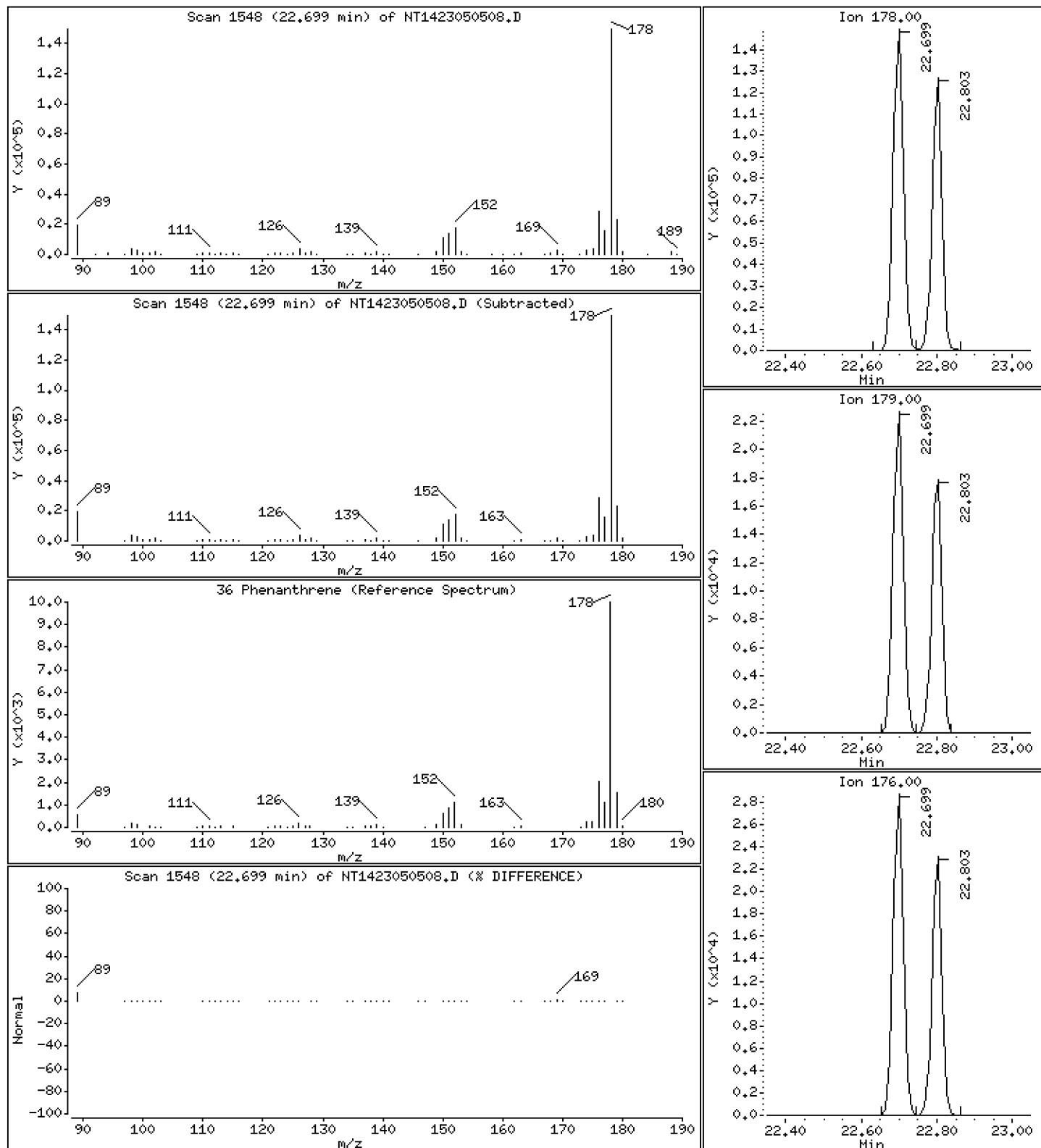
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

36 Phenanthrene

Concentration: 2.587 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

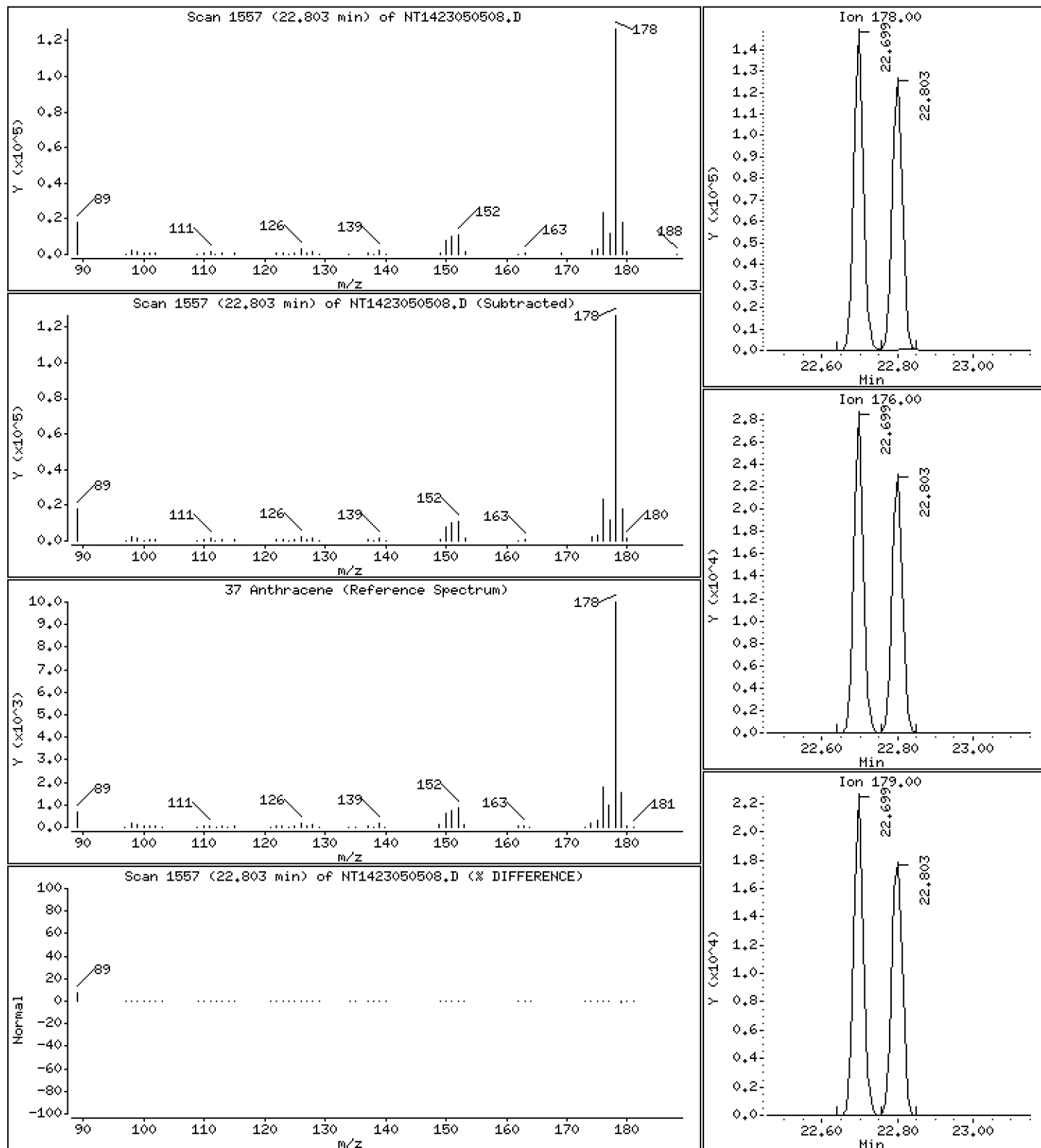
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

37 Anthracene

Concentration: 2.382 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

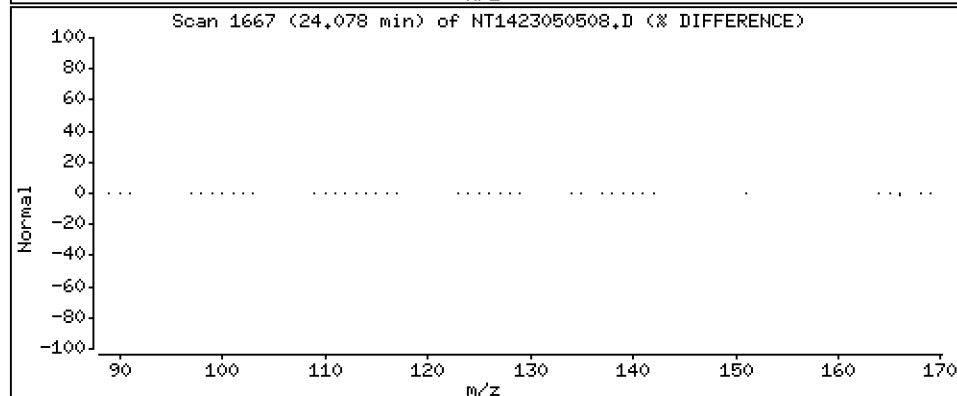
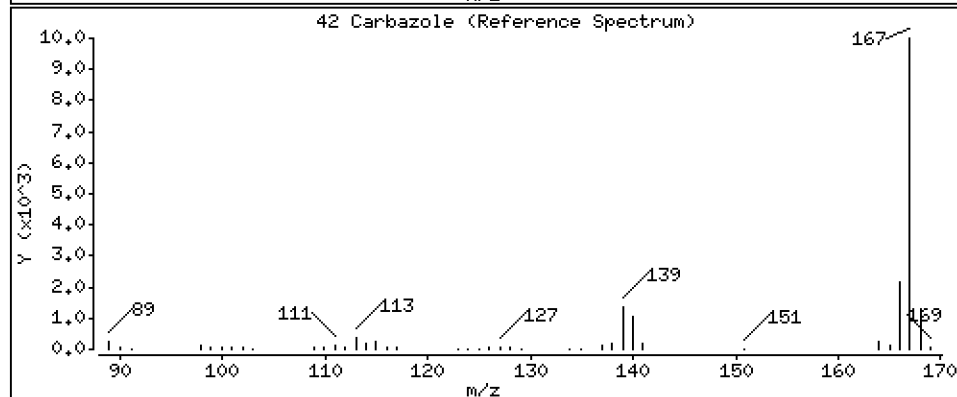
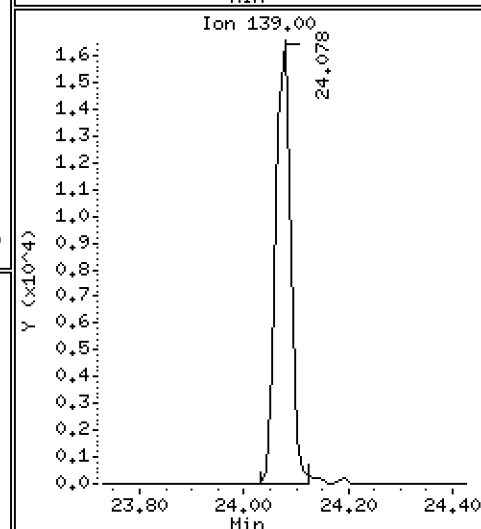
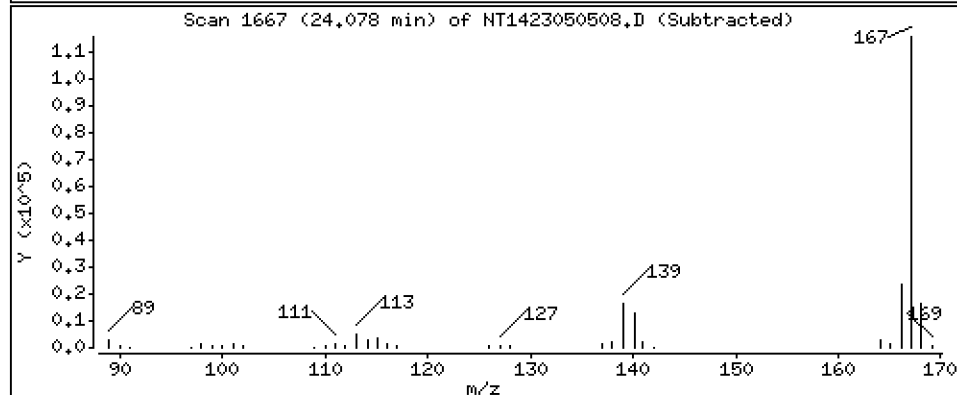
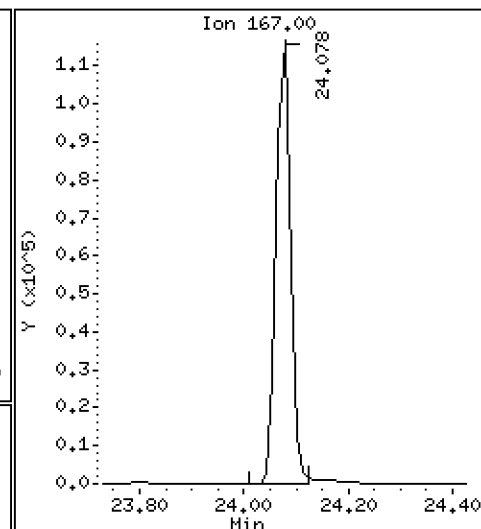
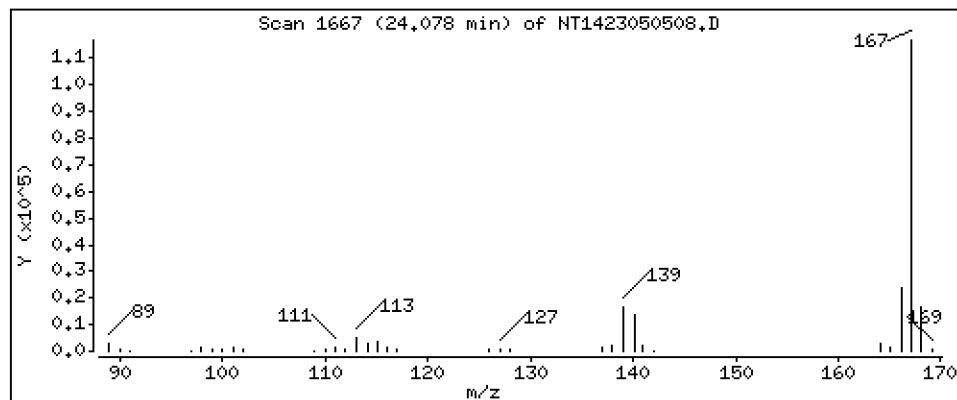
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

42 Carbazole

Concentration: 2.396 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

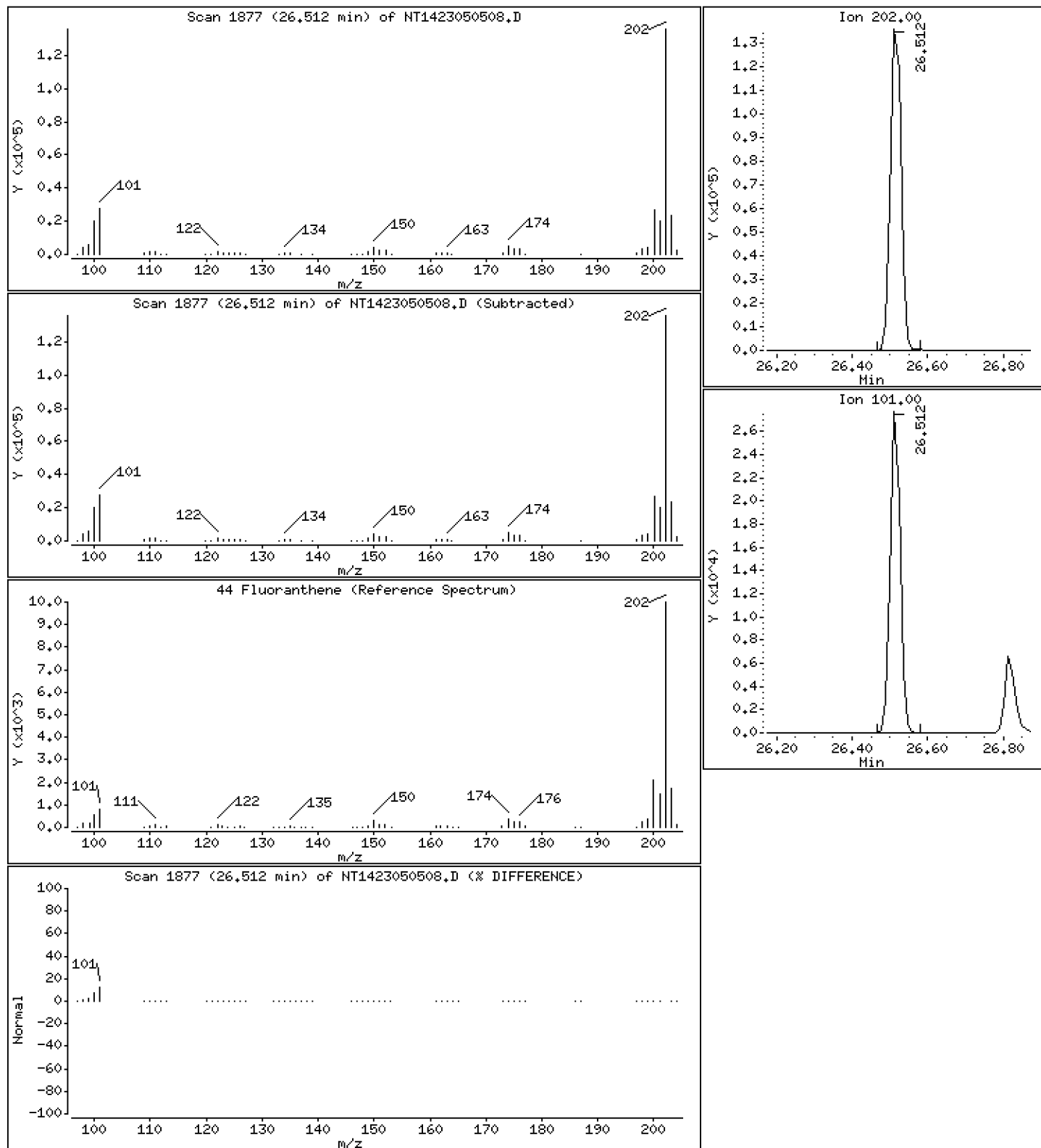
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

44 Fluoranthene

Concentration: 2.707 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

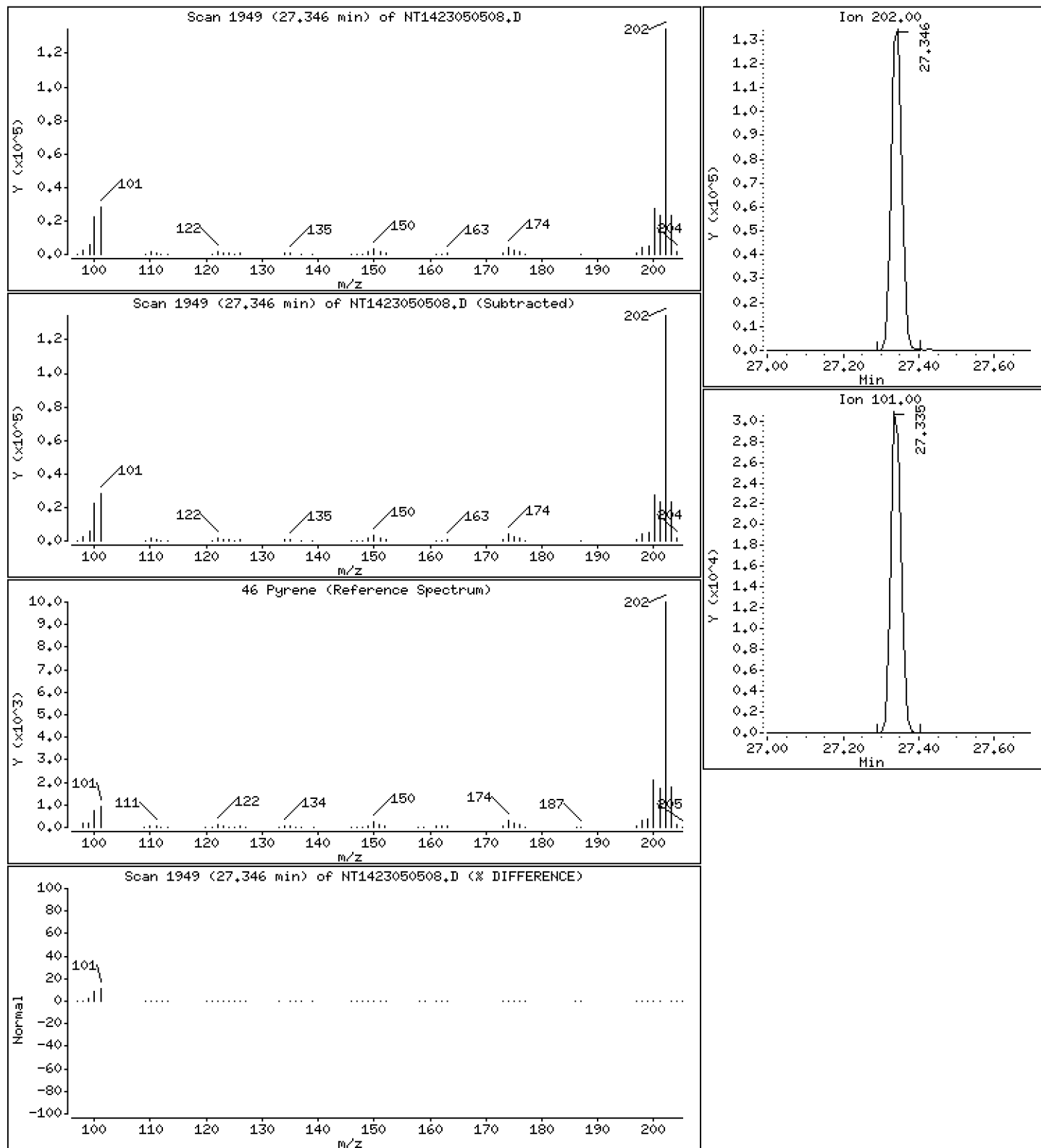
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

46 Pyrene

Concentration: 2.585 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

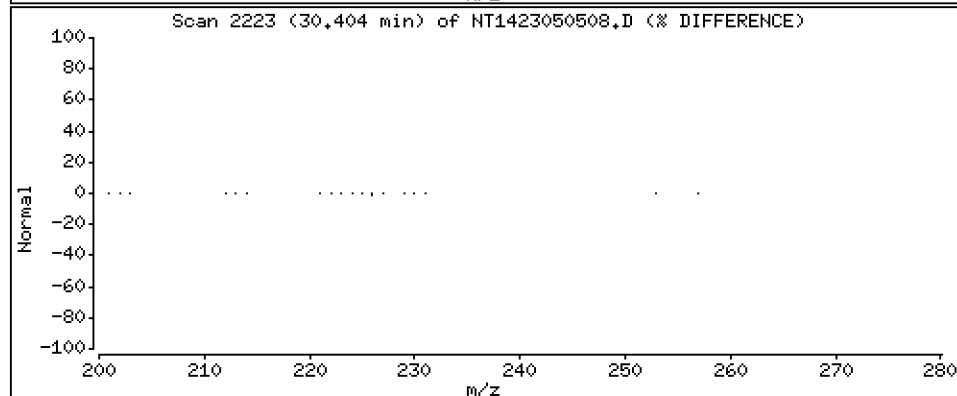
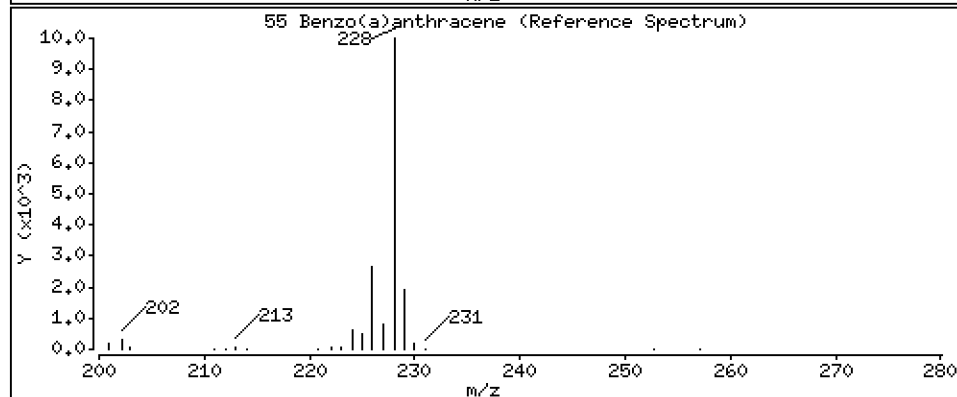
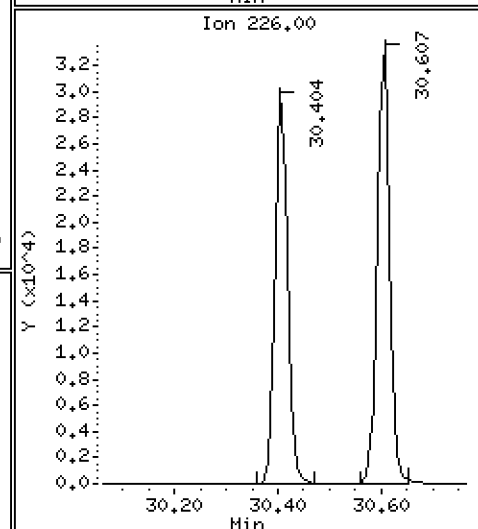
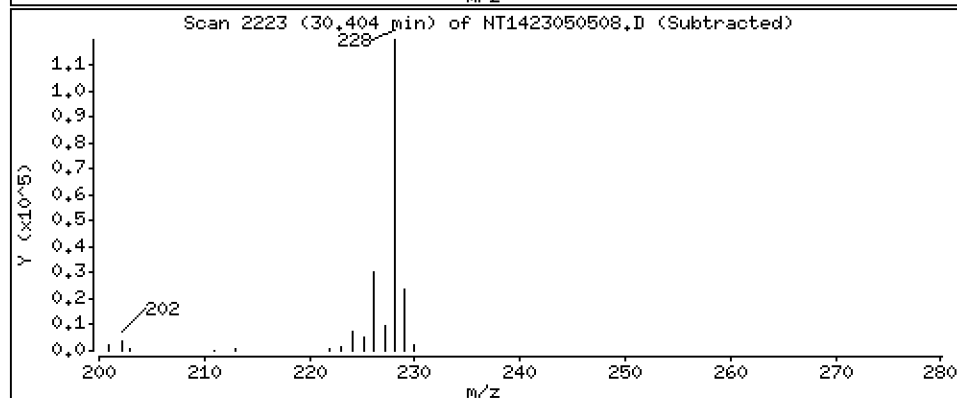
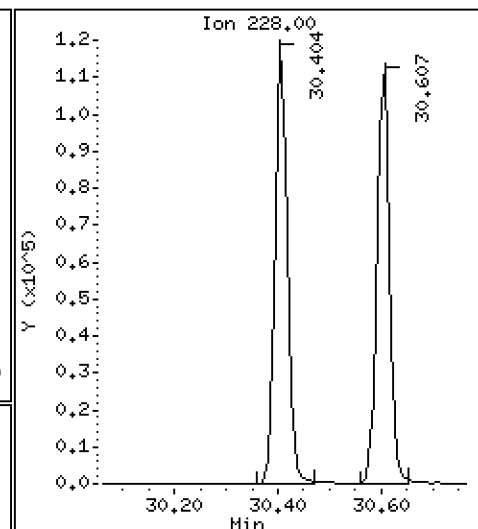
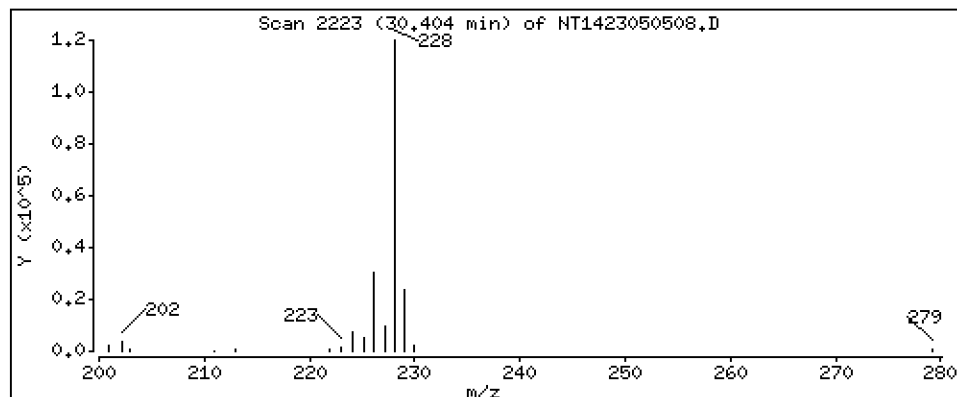
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

55 Benzo(a)anthracene

Concentration: 2,799 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

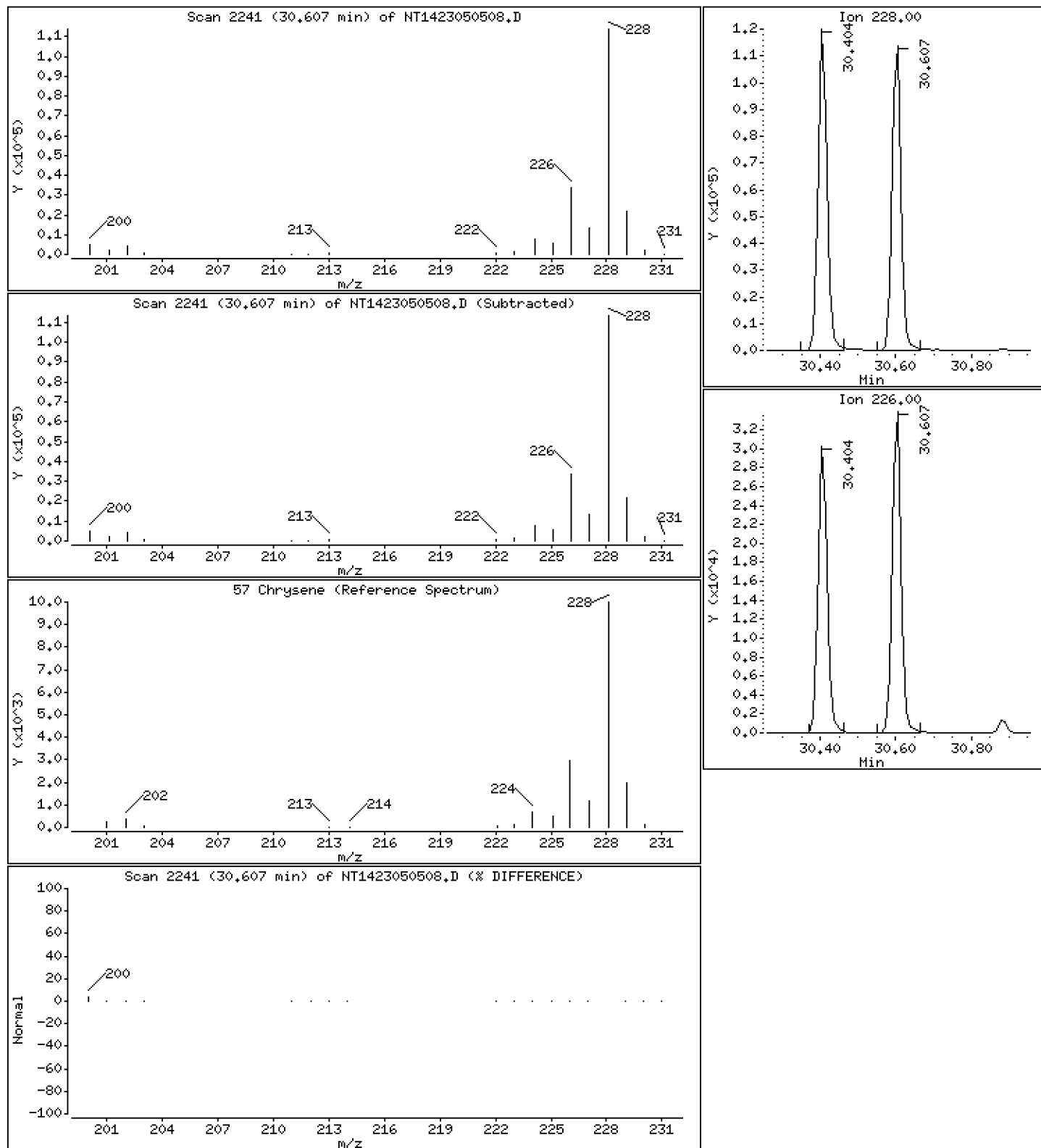
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

57 Chrysene

Concentration: 2,749 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

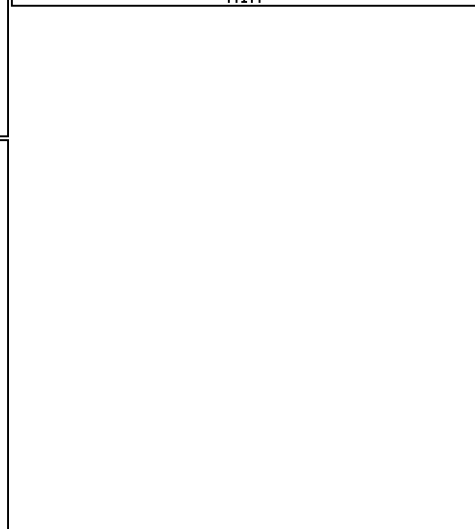
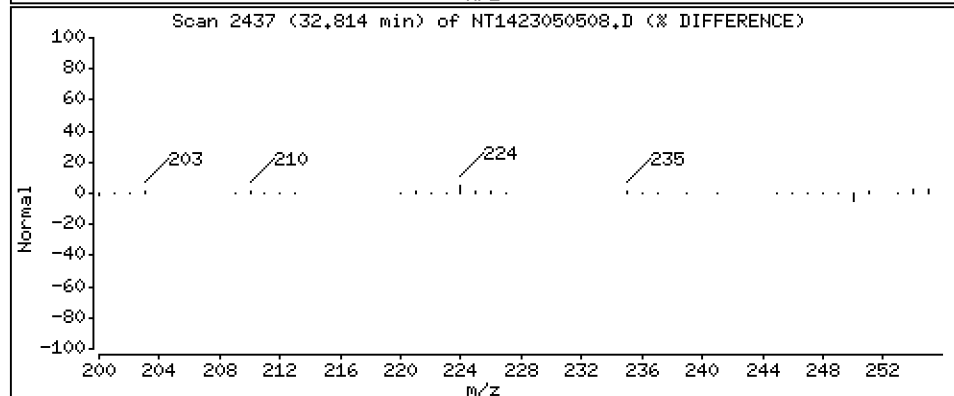
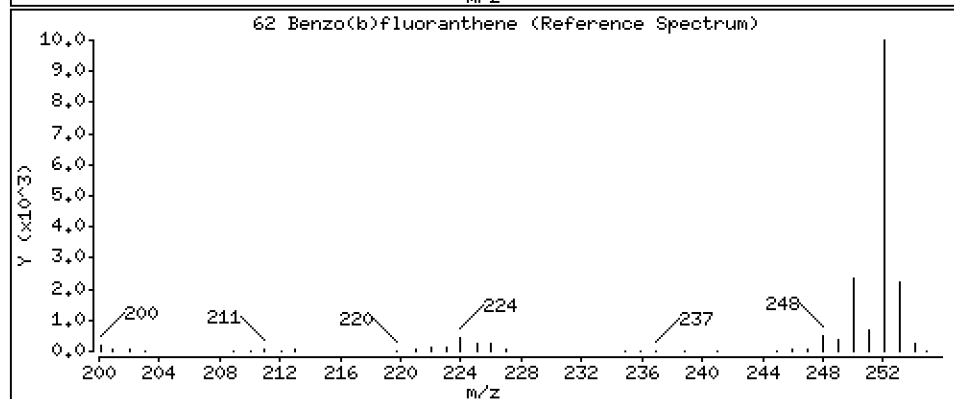
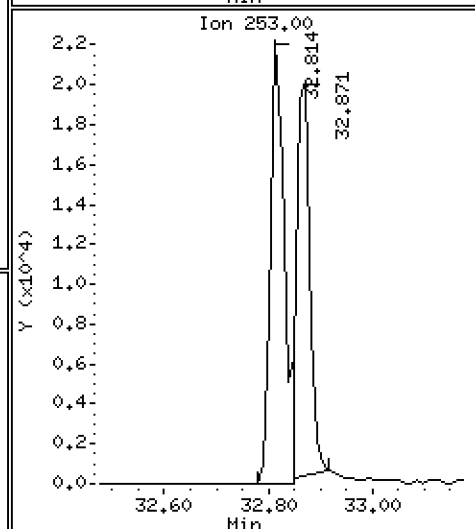
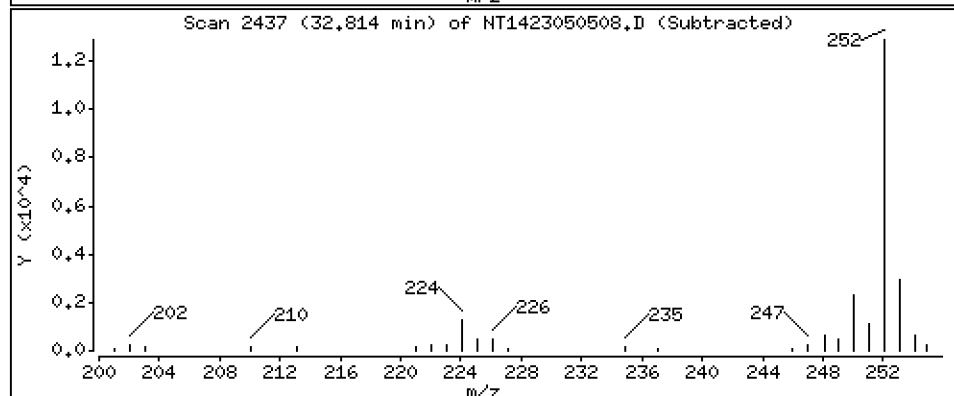
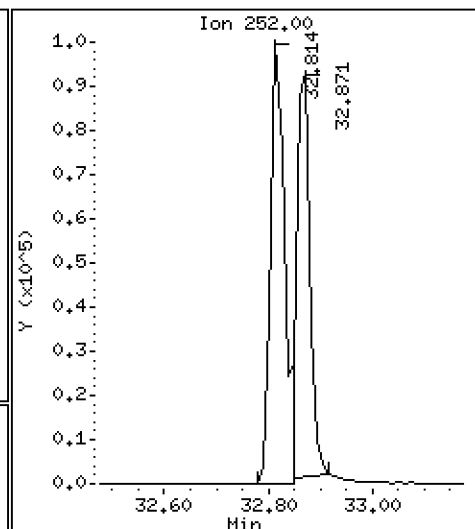
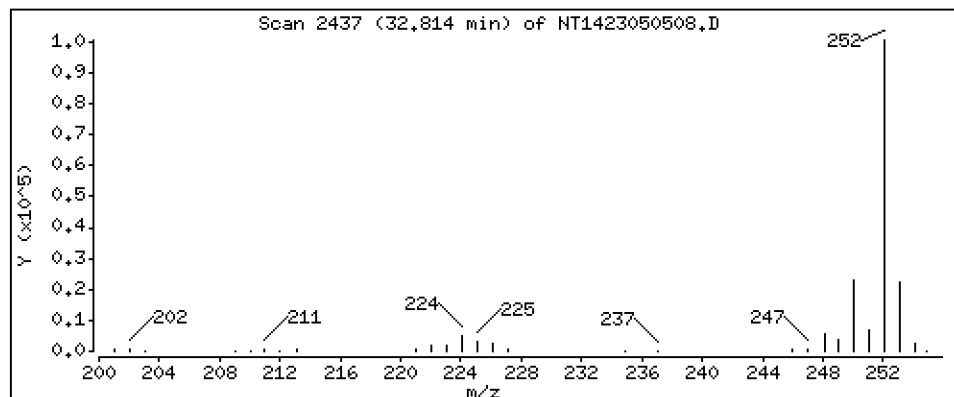
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

62 Benzo(b)fluoranthene

Concentration: 2,733 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

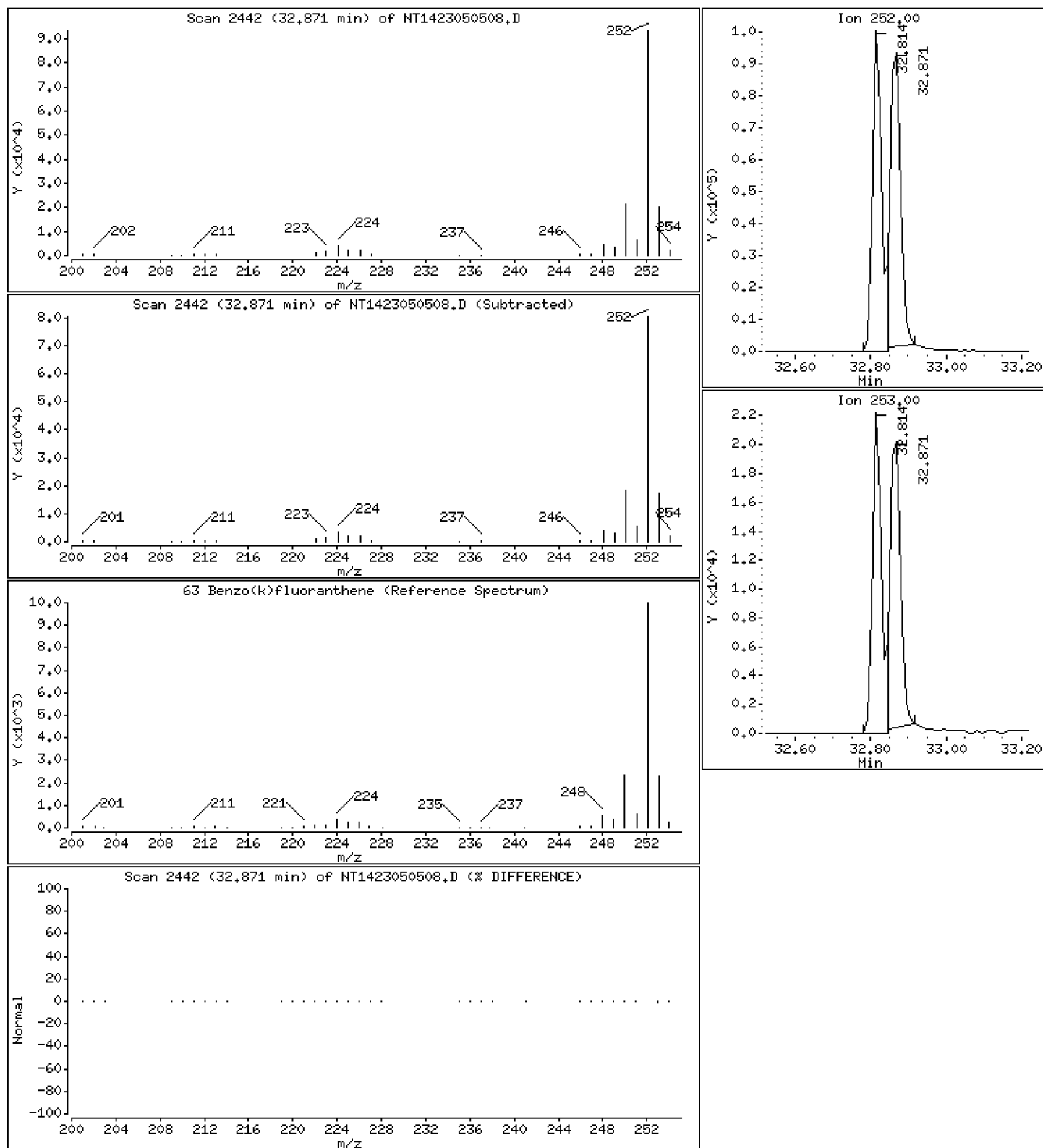
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

63 Benzo(k)fluoranthene

Concentration: 2.239 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

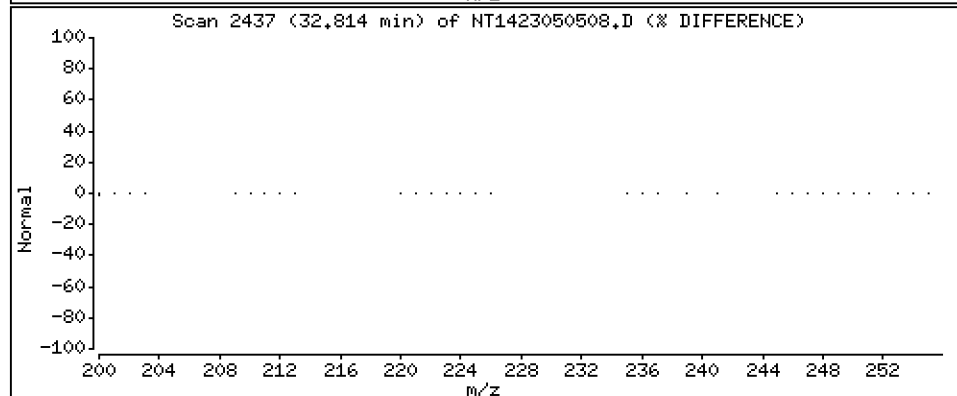
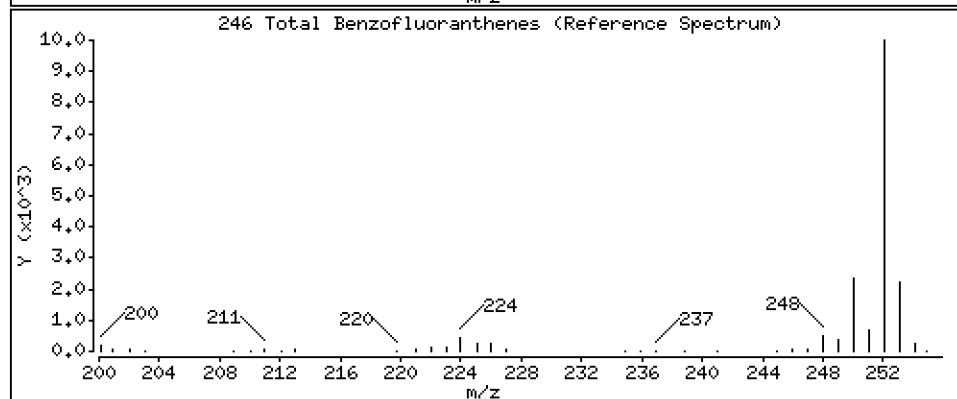
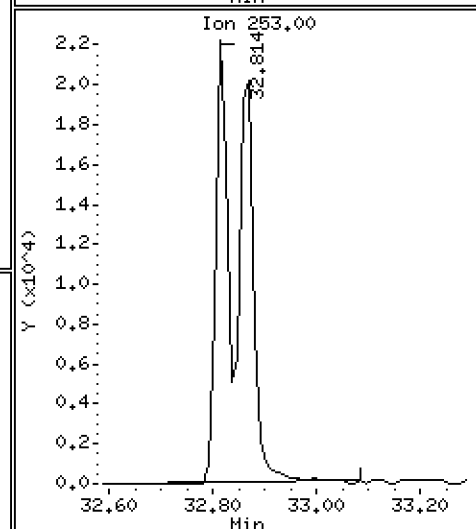
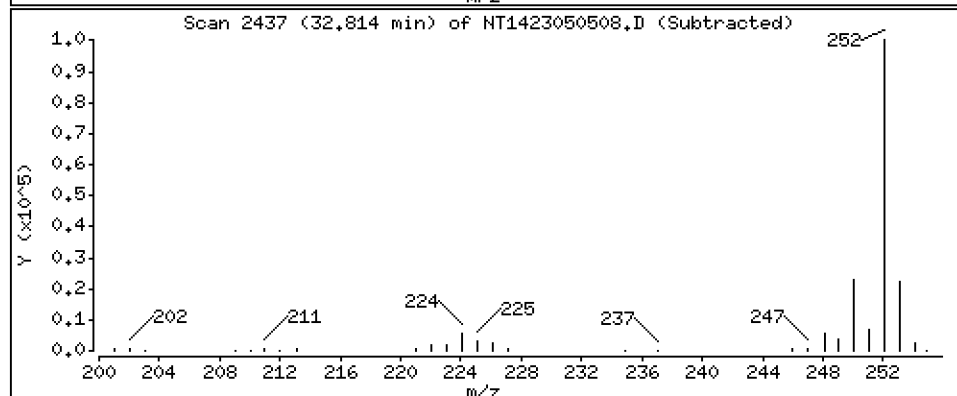
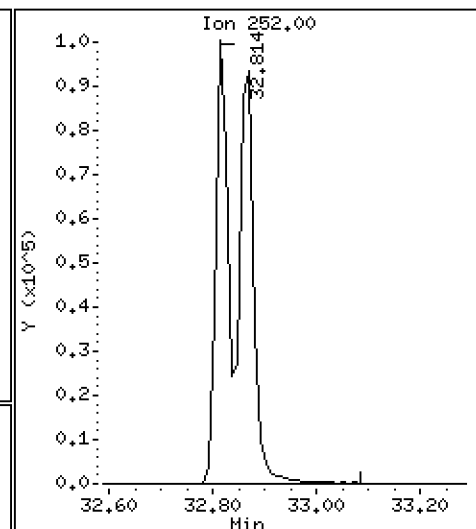
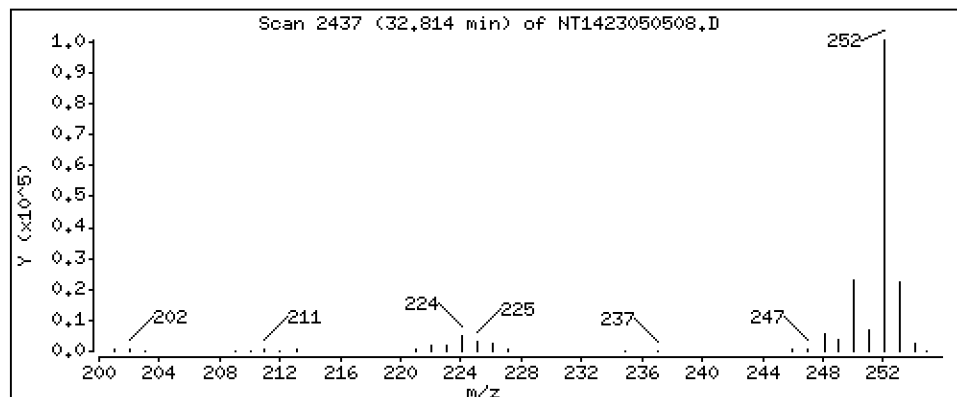
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

246 Total Benzo[fluoranthenes

Concentration: 5.557 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

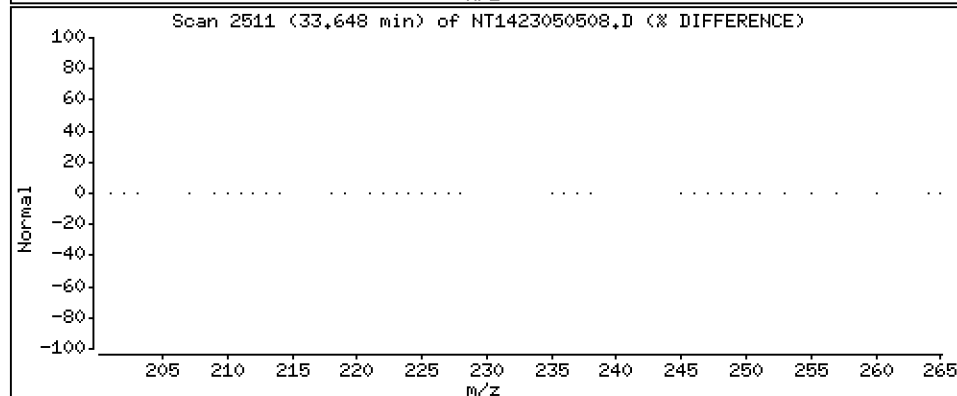
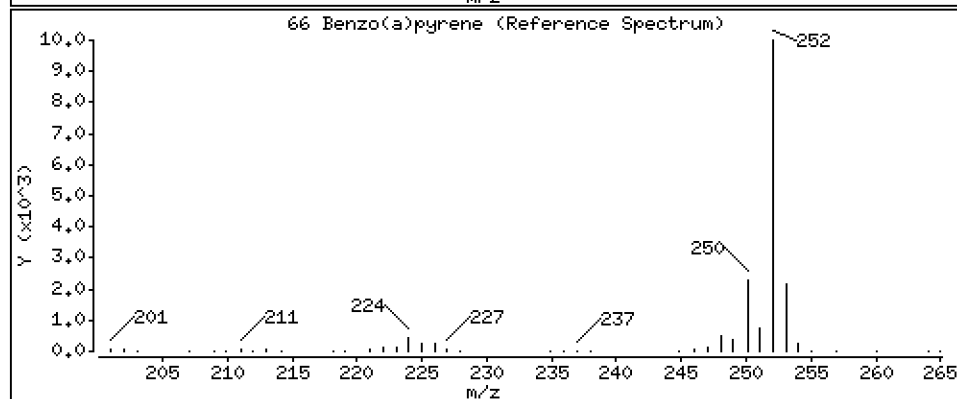
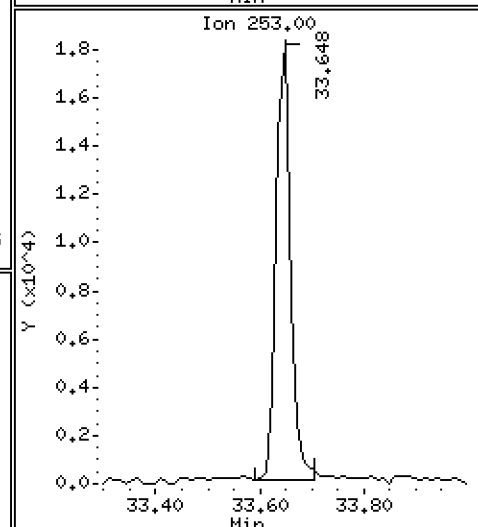
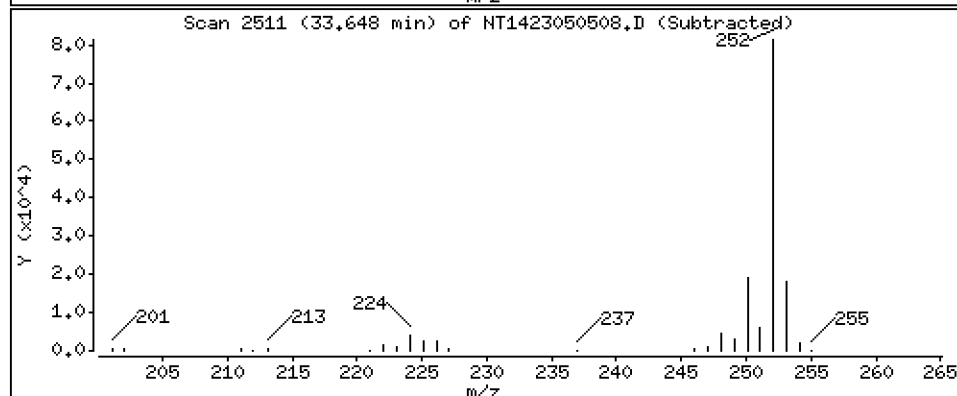
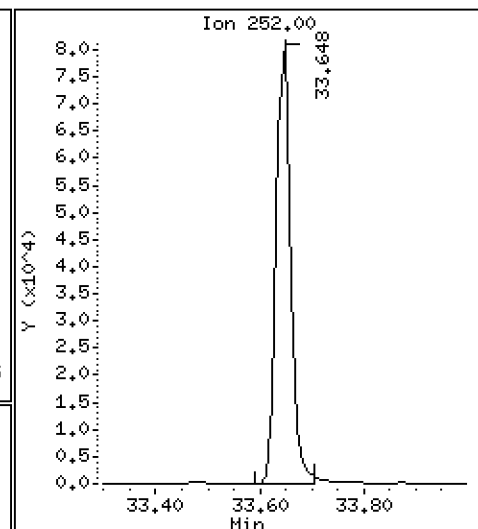
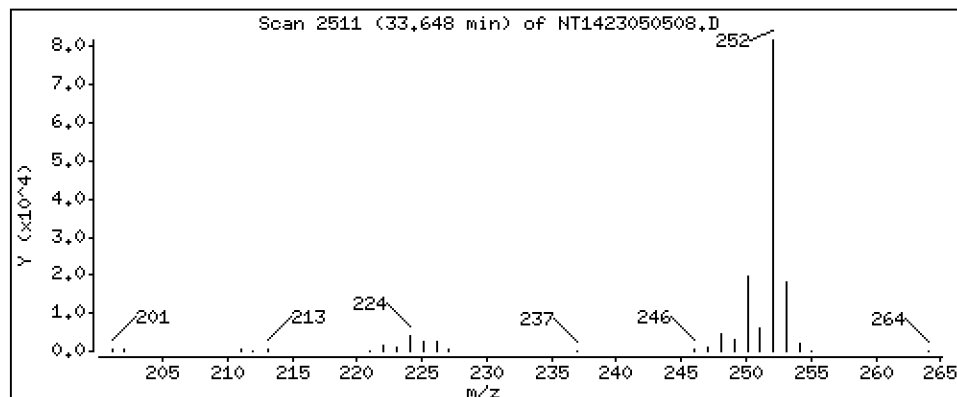
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

66 Benzo(a)pyrene

Concentration: 2.689 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

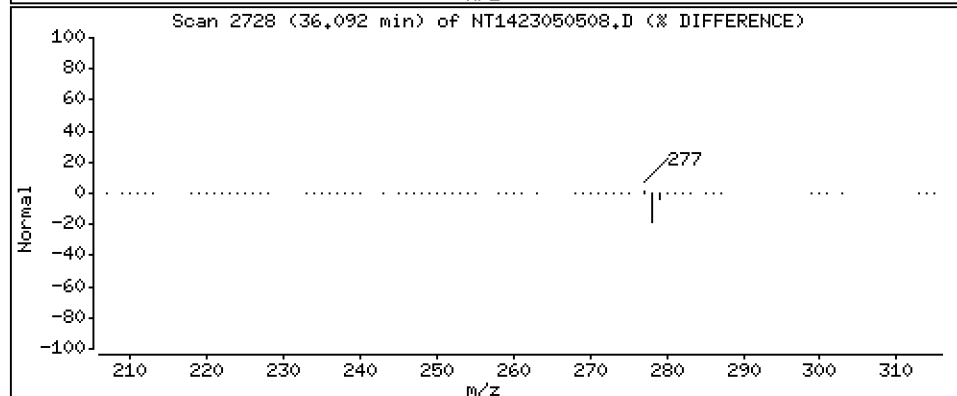
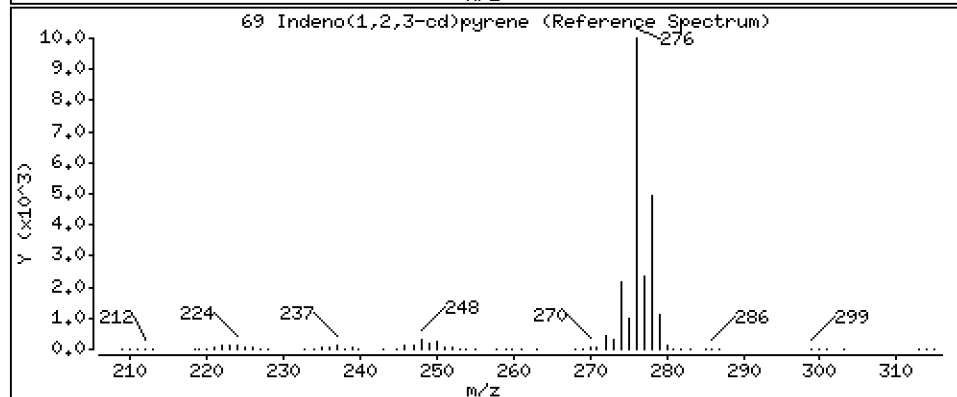
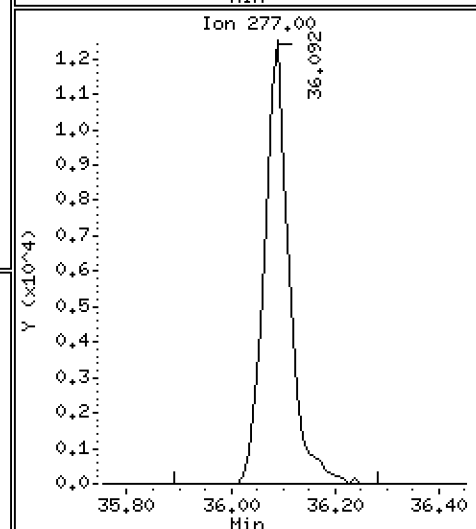
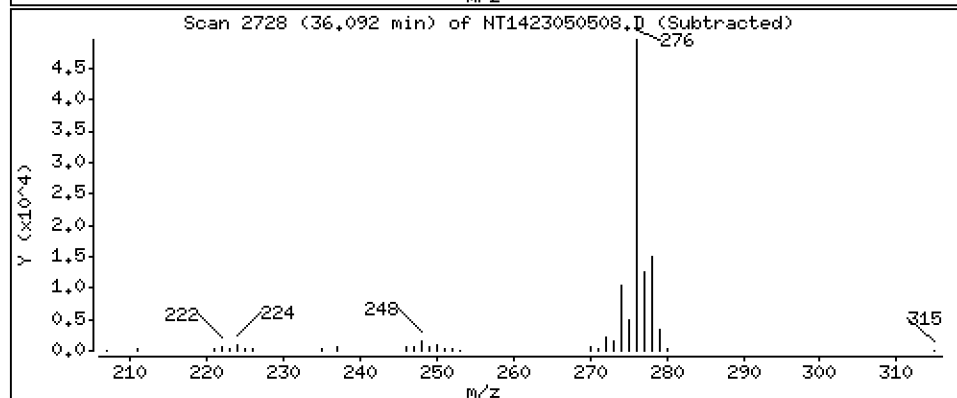
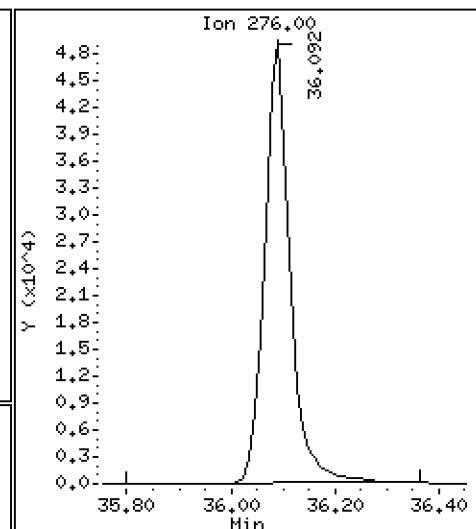
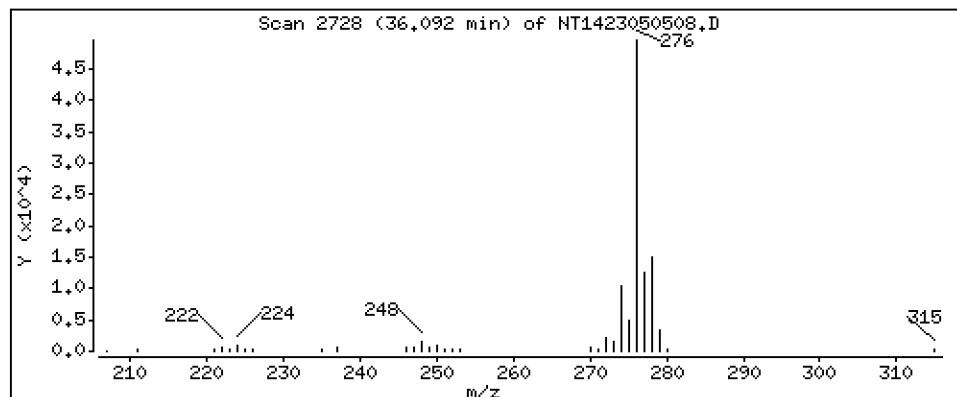
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

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

Concentration: 2.297 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

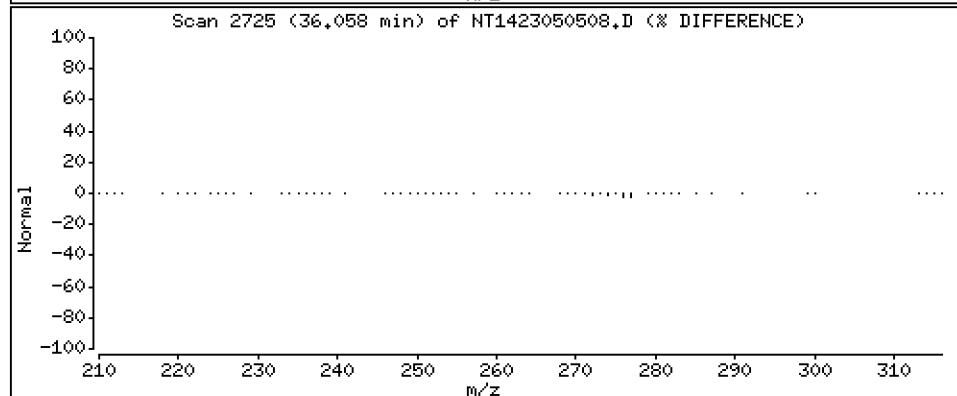
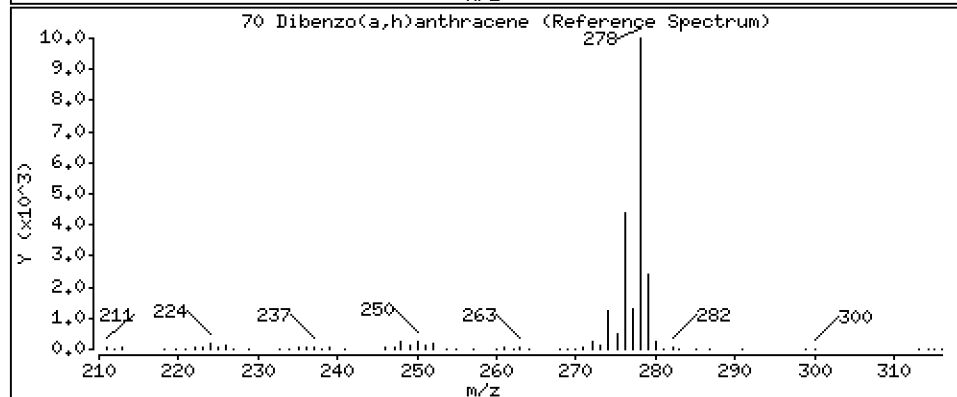
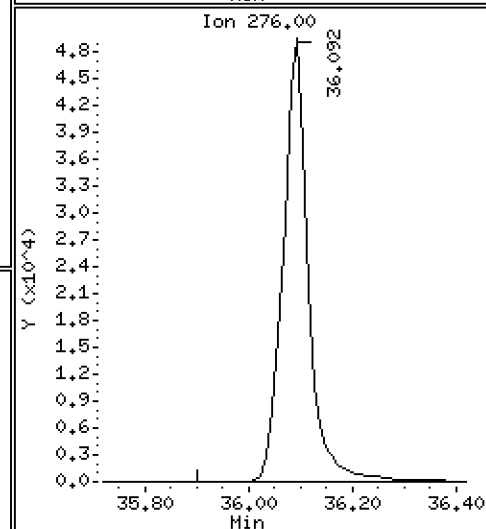
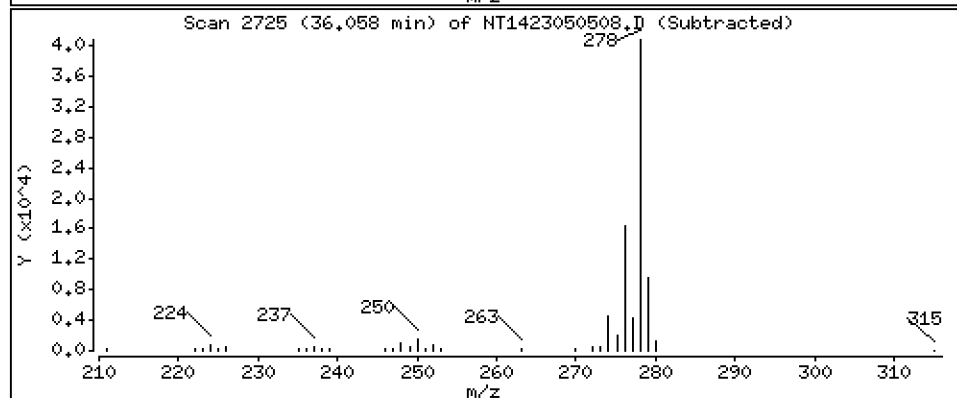
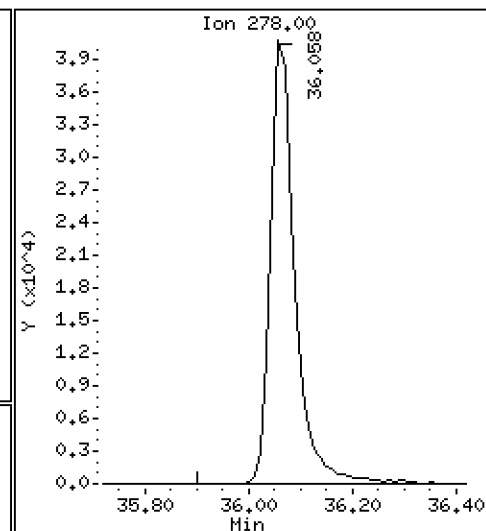
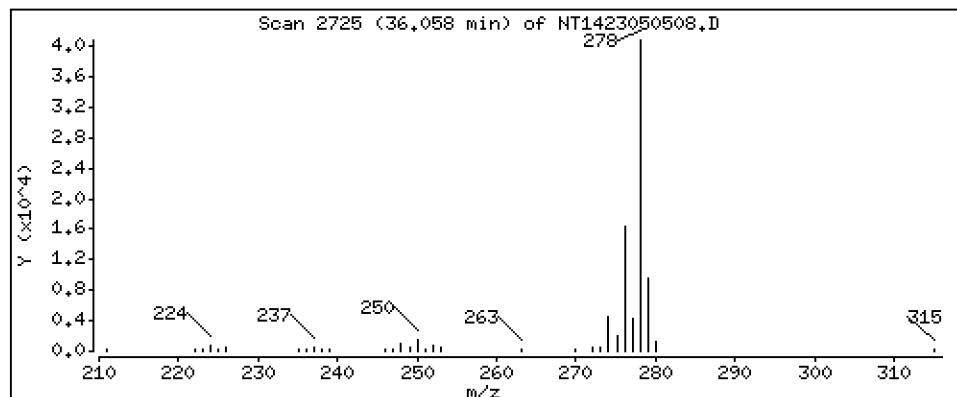
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

70 Dibenzo(a,h)anthracene

Concentration: 2.202 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

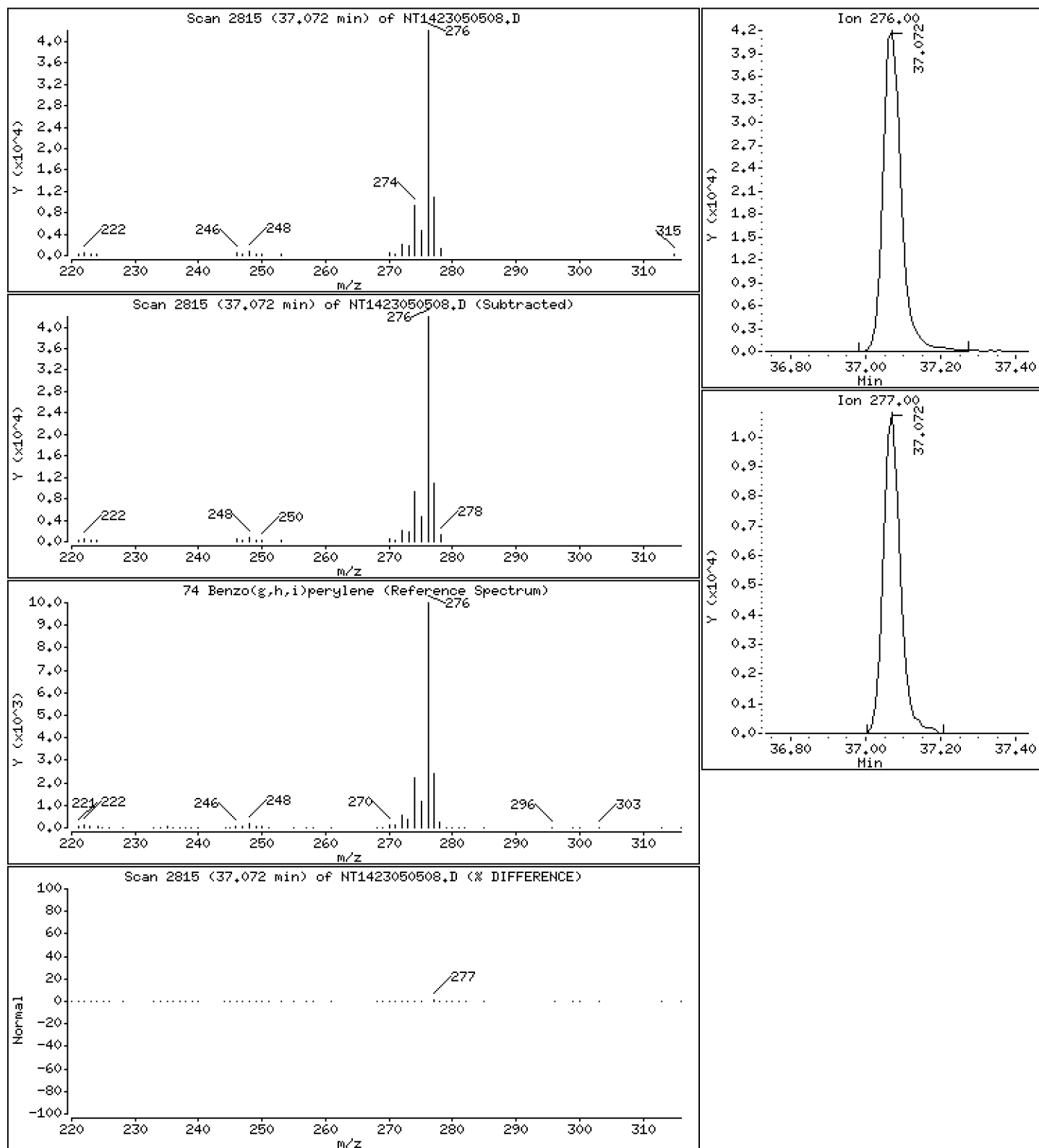
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

74 Benzo(g,h,i)perylene

Concentration: 2.550 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230505.b\NT1423050508.D
Lab Smp Id: SLE0096-SCV1
Inj Date : 05-MAY-2023 16:01
Operator : VTS
Smp Info : SLE0096-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
Meth Date : 06-May-2023 07:22 van
Cal Date : 05-MAY-2023 15:12
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: VANS-201906

Inst ID: nt14.i

Quant Type: ISTD
Cal File: NT1423050507.D

Compound Sublist: TARGETS.sub

Compounds	QUANT	SIG						CONCENTRATIONS	
			RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
	MASS						(ug/mL)	(ug/mL)	
=====	=====		=====	=====	=====	=====	=====	=====	
1 trans-Decalin	138		Compound Not Detected.						
2 cis-Decalin	138		Compound Not Detected.						
\$ 6 Naphthalene-d8	136		Compound Not Detected.						
7 Naphthalene	128		12.290	12.290	(0.638)	356640	2.48521	2.485	
12 Benzo(b)thiophene	134		Compound Not Detected.						
16 2-Methylnaphthalene	141		14.129	14.130	(0.733)	183761	2.58919	2.589	
17 1-methylnaphthalene	141		14.580	14.591	(0.757)	180422	2.52458	2.525	
18 Biphenyl	154		Compound Not Detected.						
19 2,6-Dimethylnaphthalene	156		Compound Not Detected.						
20 Acenaphthylene	152		17.437	17.437	(0.905)	310990	2.66466	2.665	
\$ 21 Acenaphthene-d10	164		17.712	17.723	(0.919)	21202	0.36620	0.3662 (R)	
22 Acenaphthene	153		17.844	17.844	(0.926)	193998	2.69360	2.694	
23 Dibenzofuran	168		18.218	18.218	(0.946)	278763	2.95677	2.957	
24 1,6,7-Trimethylnaphthalene	170		Compound Not Detected.						
* 25 Fluorene-d10	176		19.263	19.263	(1.000)	130753	2.00000		
26 Fluorene	166		19.365	19.377	(1.005)	202636	2.68244	2.682	
30 Dibenzothiophene	184		Compound Not Detected.						
\$ 35 Phenanthrene-d10	188		Compound Not Detected.						
36 Phenanthrene	178		22.698	22.698	(0.998)	272043	2.58721	2.587	
* 250 Anthracene-d10	188		22.733	22.733	(1.000)	158011	2.00000		
37 Anthracene	178		22.802	22.803	(1.003)	229943	2.38228	2.382	
42 Carbazole	167		24.077	24.078	(1.059)	217409	2.39603	2.396	
43 1-Methylphenanthrene	192		Compound Not Detected.						
44 Fluoranthene	202		26.511	26.523	(1.166)	259569	2.70729	2.707	
46 Pyrene	202		27.346	27.346	(1.203)	259384	2.58512	2.585	
51 Naphthobenzothiophene	234		Compound Not Detected.						
55 Benzo(a)anthracene	228		30.403	30.415	(0.908)	199700	2.79914	2.799	
\$ 56 Chrysene-d12	240		Compound Not Detected.						
57 Chrysene	228		30.606	30.606	(0.914)	191804	2.74851	2.749	
62 Benzo(b)fluoranthene	252		32.814	32.825	(0.980)	181931	2.73341	2.733	
63 Benzo(k)fluoranthene	252		32.870	32.871	(0.982)	167403	2.23891	2.239	
293 Benzo(j)fluoranthene	252		Compound Not Detected.						
246 Total Benzofluoranthenes	252		32.814	32.938	(0.980)	344190	5.55732	5.557 (M)	

Compounds	QUANT SIG							CONCENTRATIONS	
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
=====	=====	=====	=====	=====	=====	=====	(ug/mL)	(ug/mL)	=====
* 251 Benzo(e)pyrene-d12	264	33.478	33.478	(1.000)		91009	2.00000		
64 Benzo(e)pyrene	252	Compound Not Detected.							
66 Benzo(a)pyrene	252	33.647	33.647	(1.005)		146395	2.68856	2.689	
\$ 67 Perylene-d12	264	Compound Not Detected.							
68 Perylene	252	Compound Not Detected.							
69 Indeno(1,2,3-cd)pyrene	276	36.091	36.103	(1.078)		162972	2.29735	2.297 (M)	
70 Dibenzo(a,h)anthracene	278	36.058	36.069	(1.077)		128362	2.20212	2.202 (M)	
74 Benzo(g,h,i)perylene	276	37.071	37.083	(1.107)		136826	2.55002	2.550	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
 M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 05-MAY-2023
 Lab File ID: NT1423050508.D Calibration Time: 13:36
 Lab Smp Id: SLE0096-SCV1
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	137862	68931	275724	130753	-5.16
250 Anthracene-d10	168263	84132	336526	158011	-6.09
251 Benzo(e)pyrene-d1	99689	49845	199378	91009	-8.71

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	19.26	18.76	19.76	19.26	0.00
250 Anthracene-d10	22.73	22.23	23.23	22.73	0.00
251 Benzo(e)pyrene-d1	33.48	32.98	33.98	33.48	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 - NT1423050508.D

Lab ID: SLE0096-SCV1

nt14.i, 20230505.b\ALKYLPNA.m, 05-MAY-2023 16:01

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1423050507.D

On Column LOD for nt14.i, 20230505.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

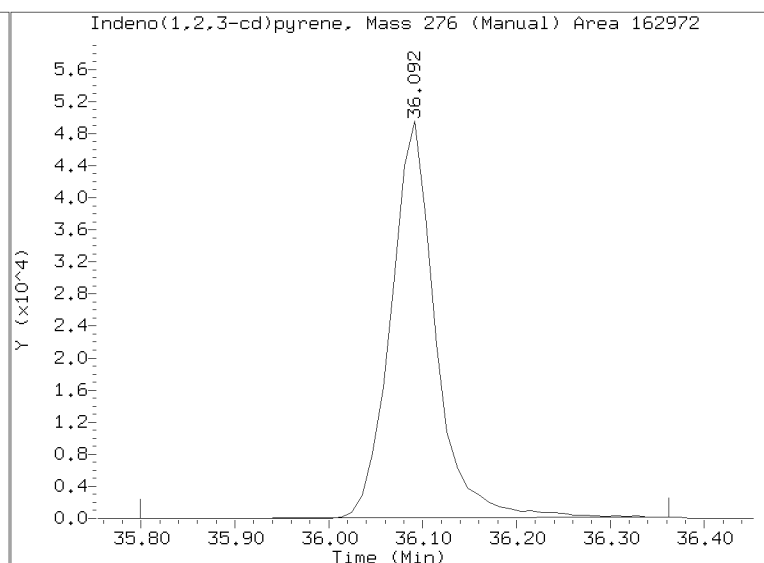
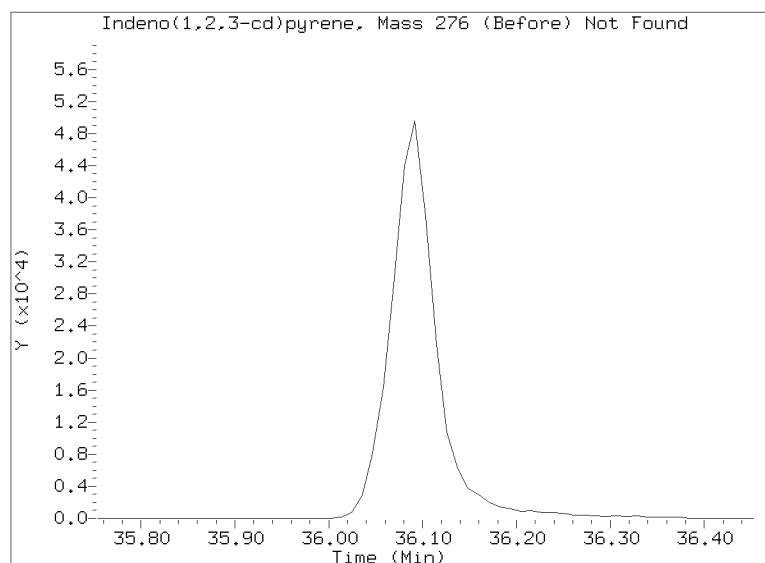
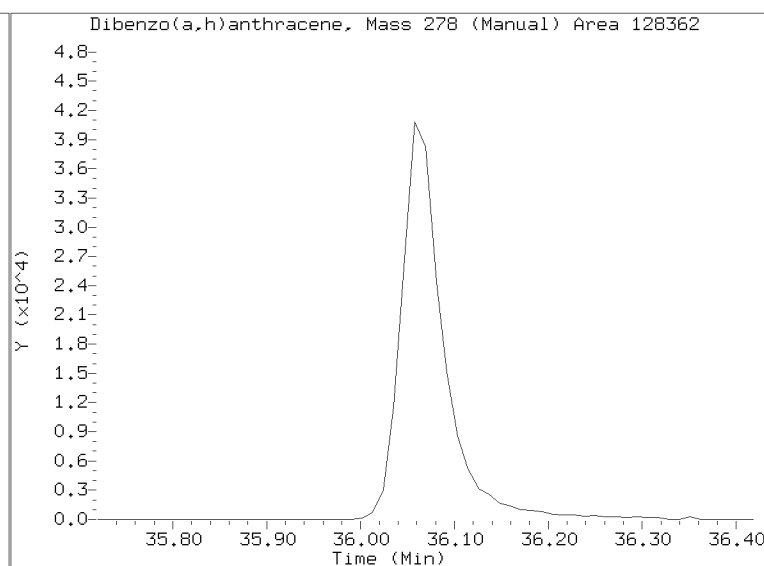
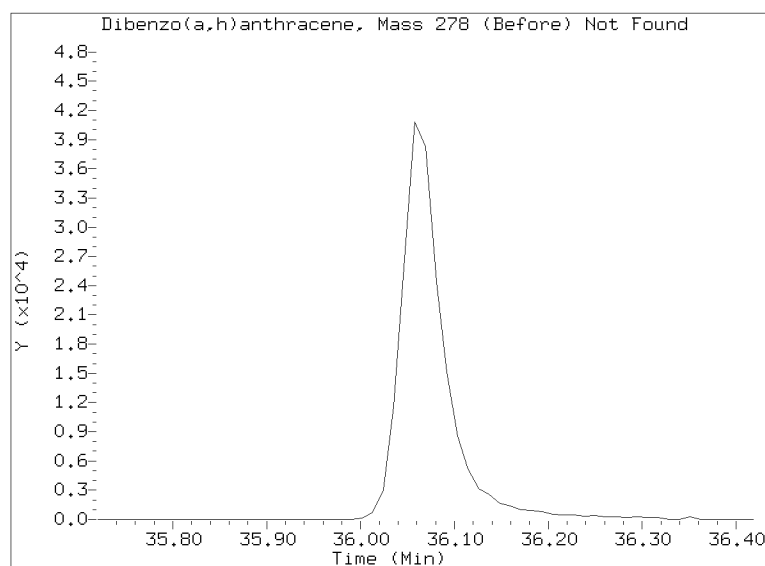
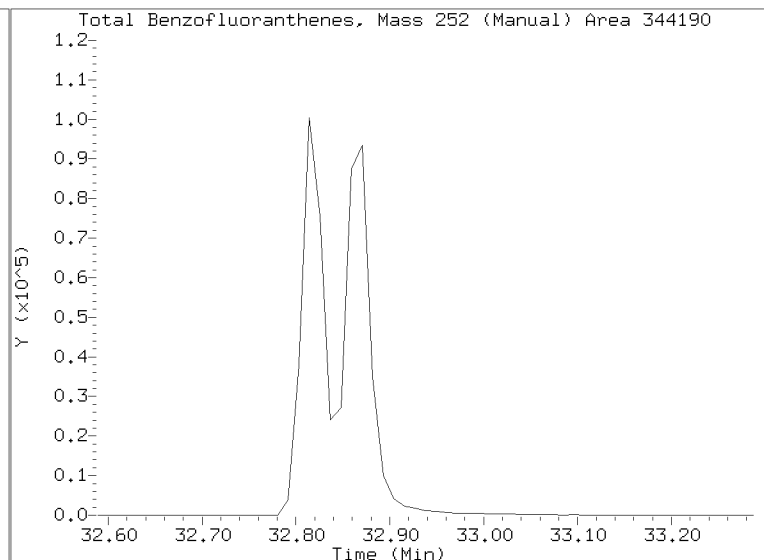
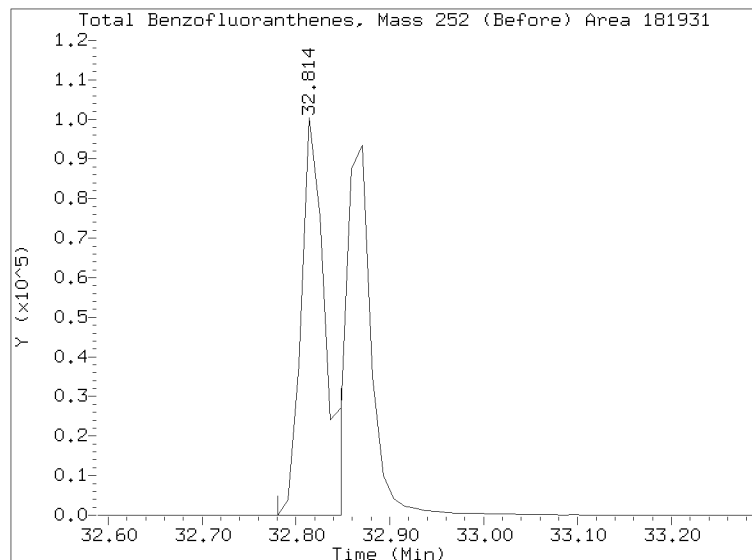
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230505.b/NT1423050508.D

Injection Date: 05-MAY-2023 16:01

Lab ID: SLE0096-SCV1 Client ID:

Report Date: 05/06/2023 07:52





SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Calibration: GE00024

Laboratory ID: SLE0096-SCV1

Sequence: SLE0096

Standard ID: L004239

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Naphthalene	2.5000	2.5	-0.6	20.00
1-Methylnaphthalene	2.5000	2.5	1.0	20.00
2-Methylnaphthalene	2.5000	2.6	3.6	20.00
Acenaphthylene	2.5000	2.7	6.6	20.00
Acenaphthene	2.5000	2.7	7.7	20.00
Dibenzofuran	2.5000	3.0	18.3	20.00
Fluorene	2.5000	2.7	7.3	20.00
Phenanthrene	2.5000	2.6	3.5	20.00
Anthracene	2.5000	2.4	-4.7	20.00
Carbazole	2.5000	2.4	-4.2	20.00
Fluoranthene	2.5000	2.7	8.3	20.00
Pyrene	2.5000	2.6	3.4	20.00
Benzo(a)anthracene	2.5000	2.8	12.0	20.00
Chrysene	2.5000	2.7	9.9	20.00
Benzo(b)fluoranthene	2.5000	2.7	9.3	
Benzo(k)fluoranthene	2.5000	2.2	-10.4	
Benzo(a)fluoranthene, Total	5.0000	5.6	11.1	
Benzo(a)pyrene	2.5000	2.7	7.5	20.00
Indeno(1,2,3-cd)pyrene	2.5000	2.3	-8.1	20.00
Dibenzo(a,h)anthracene	2.5000	2.2	-11.9	20.00
Benzo(g,h,i)perylene	2.5000	2.6	2.0	20.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230505.b\NT1423050508.D

Date : 05-May-2023 16:01

Client ID:

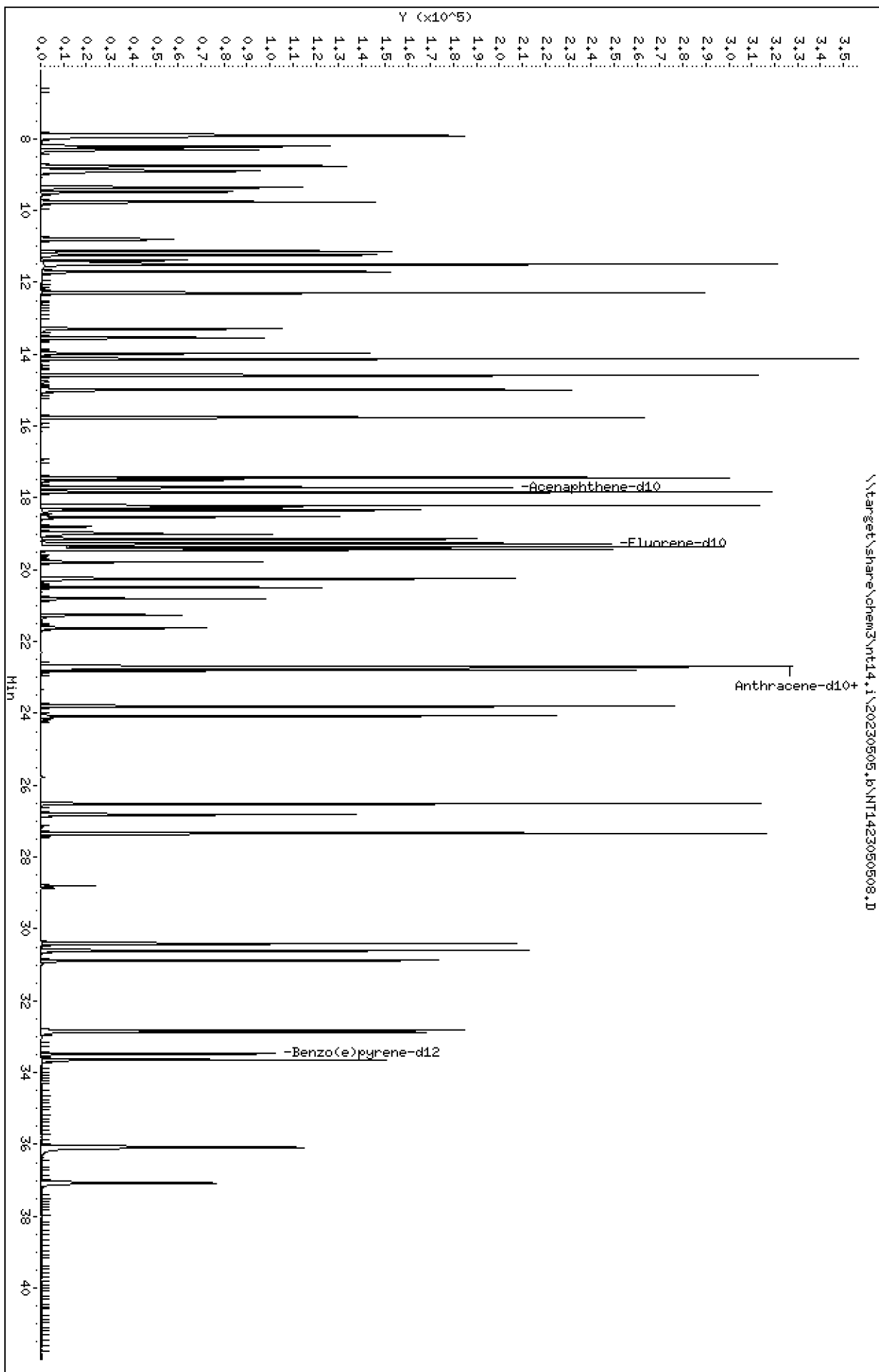
Sample Info: SLE0096-SCV1

Column phase: Rxi-17S11 MS

Instrument: nt14.i

Operator: VTS

Column diameter: 0.25



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

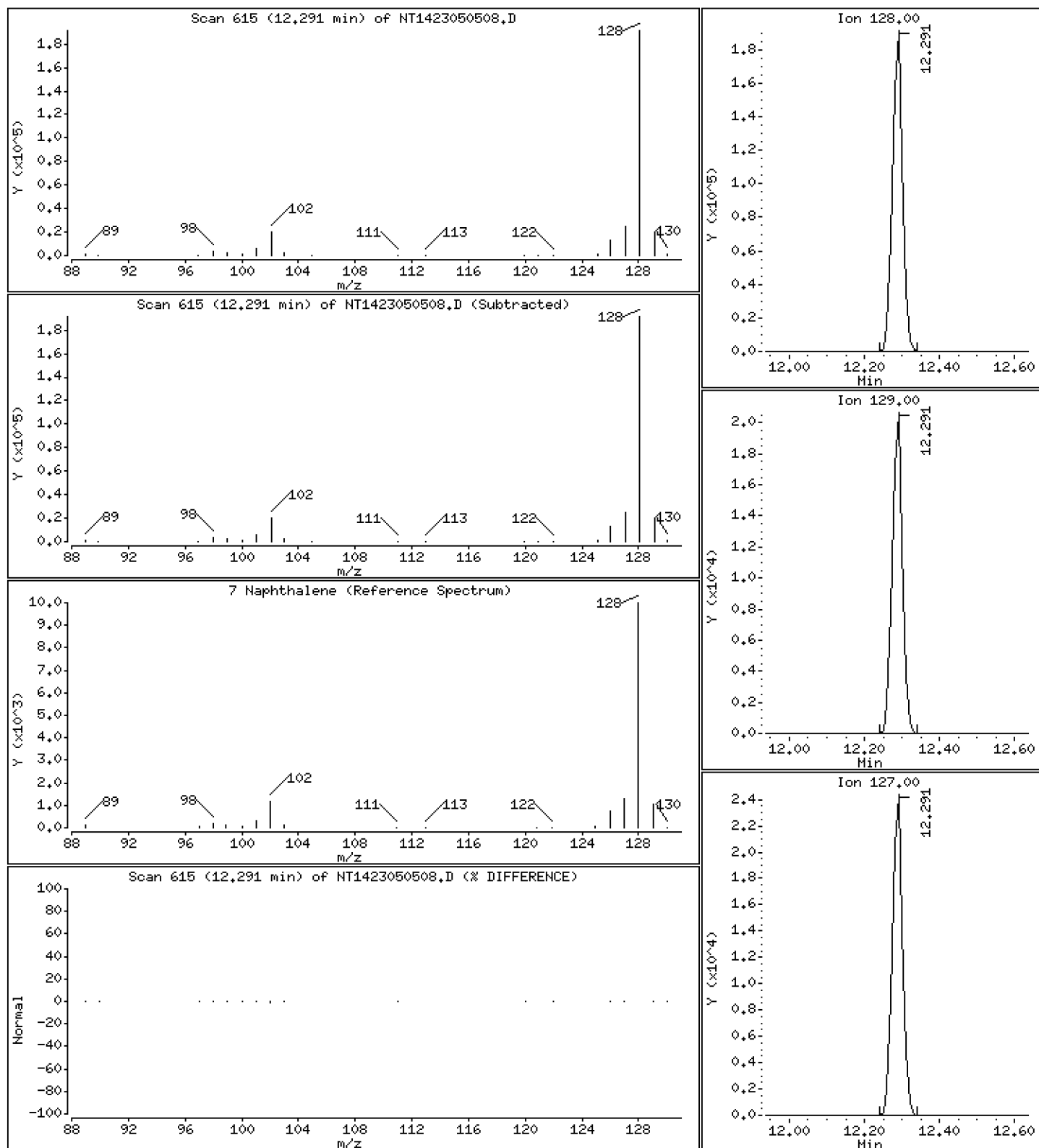
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

7 Naphthalene

Concentration: 2.485 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

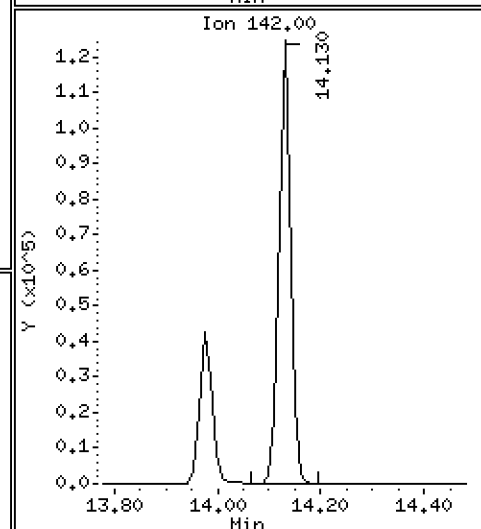
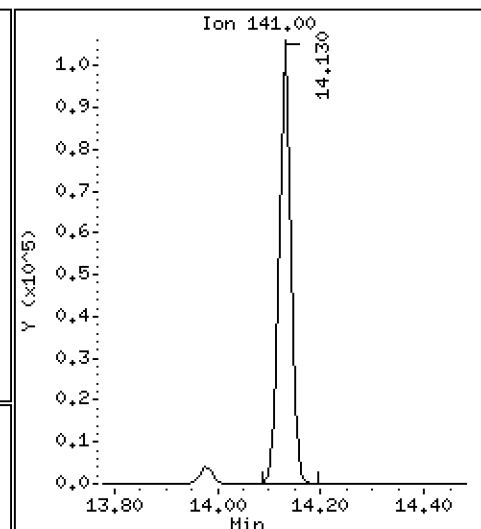
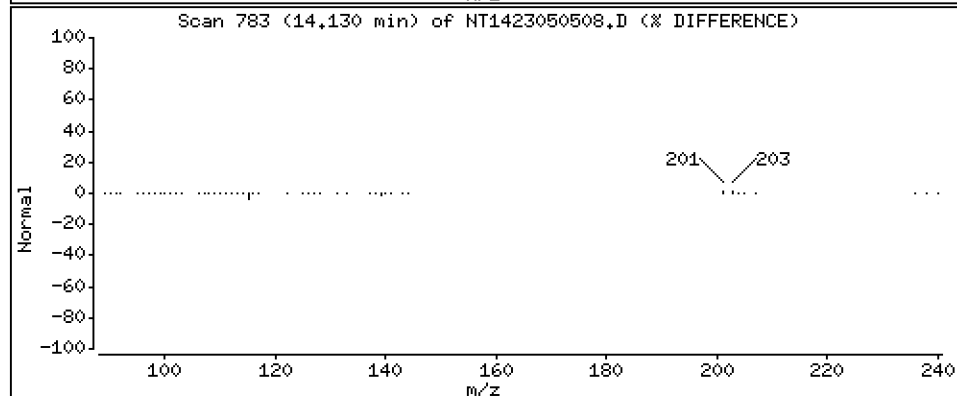
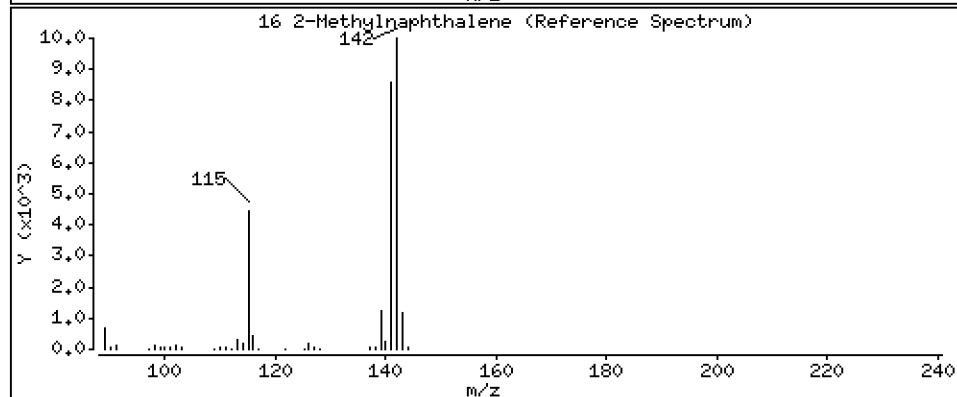
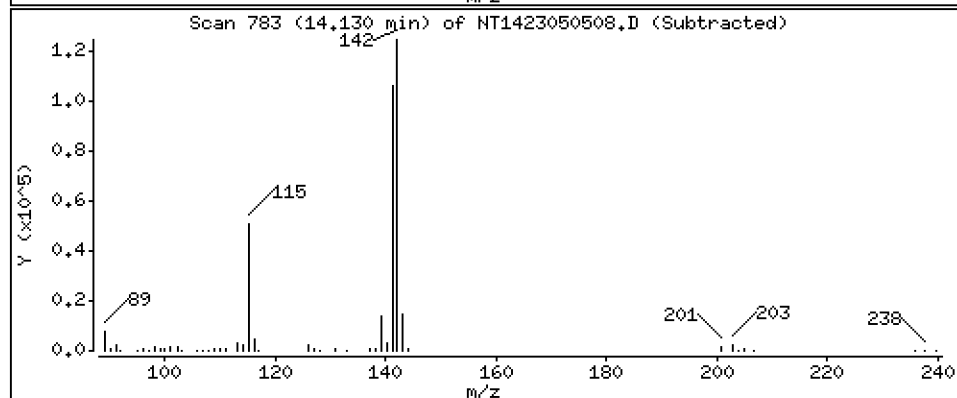
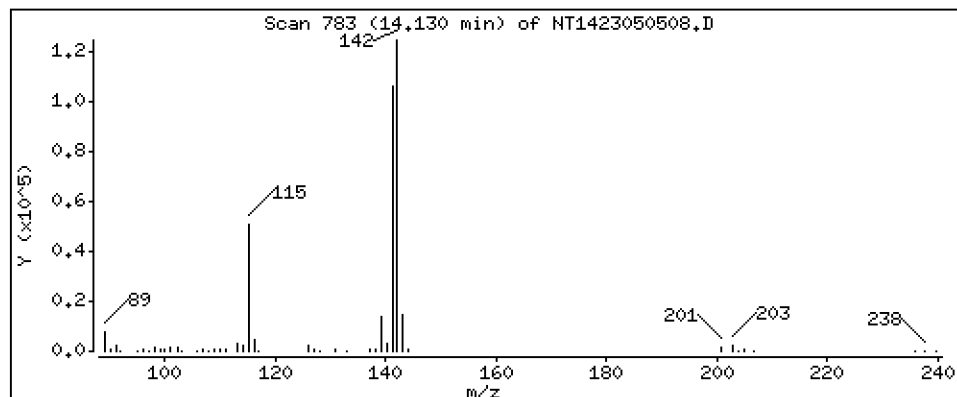
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

16 2-Methylnaphthalene

Concentration: 2.589 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

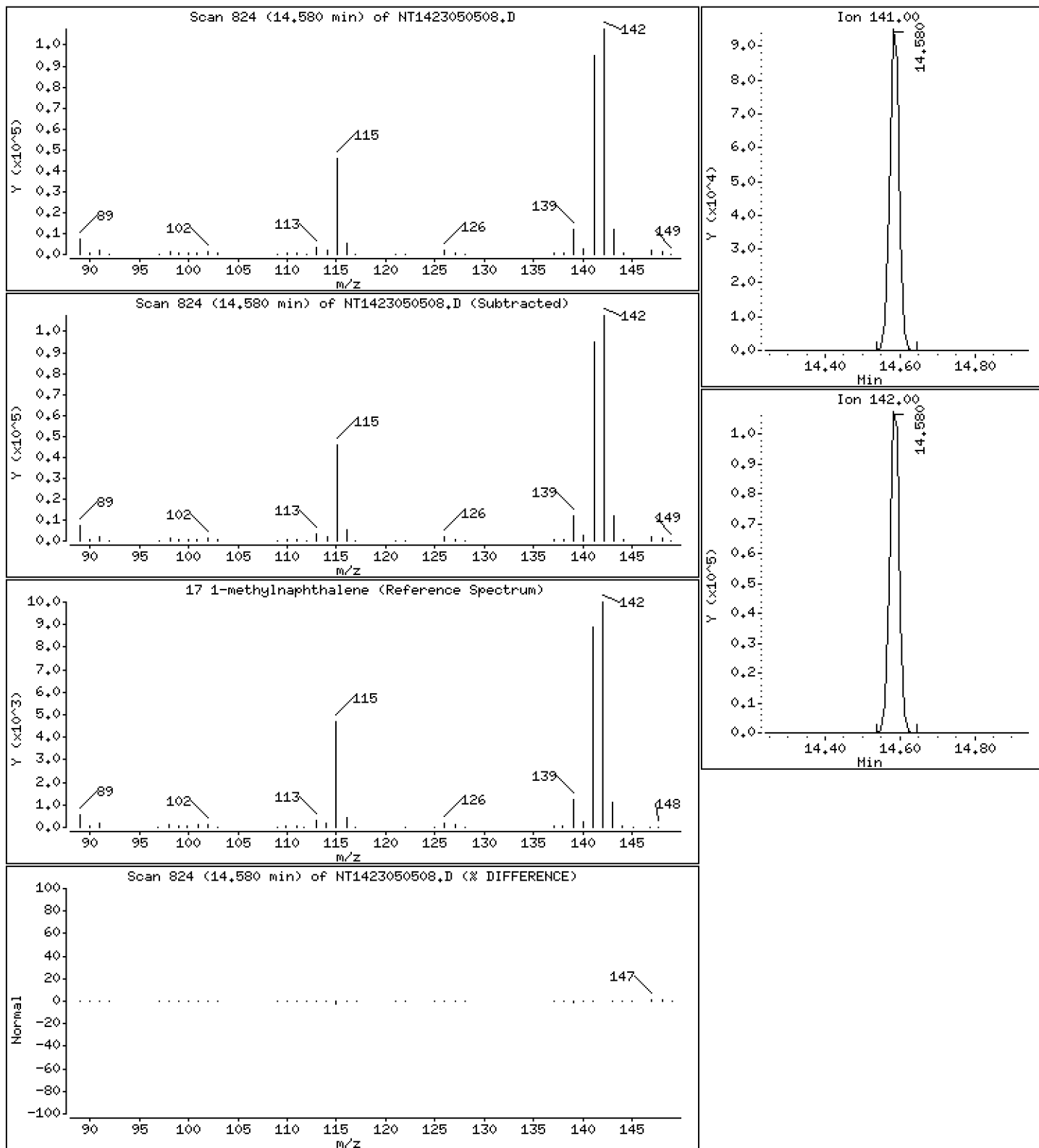
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 1-methylnaphthalene

Concentration: 2.525 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

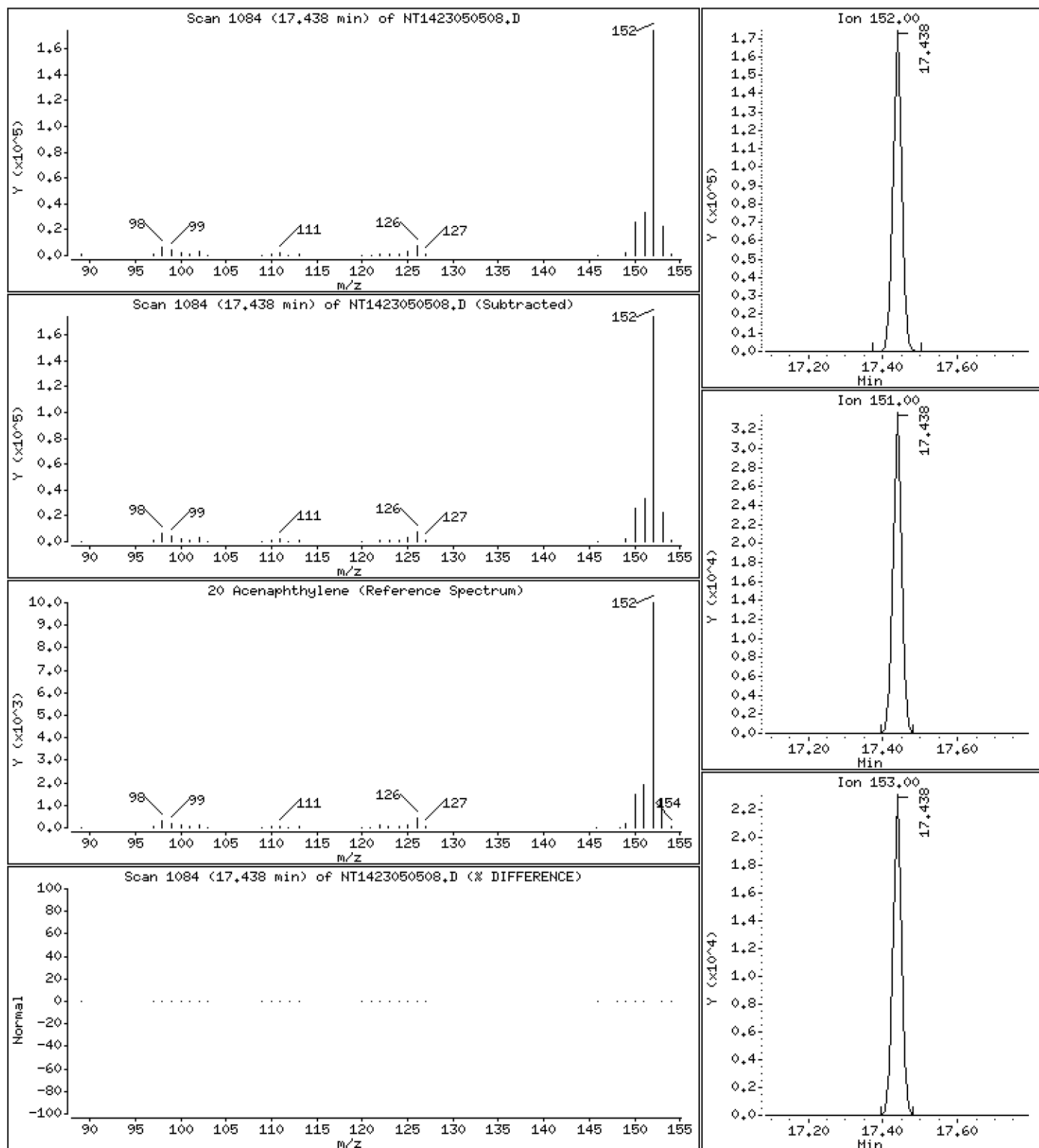
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

20 Acenaphthylene

Concentration: 2.665 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

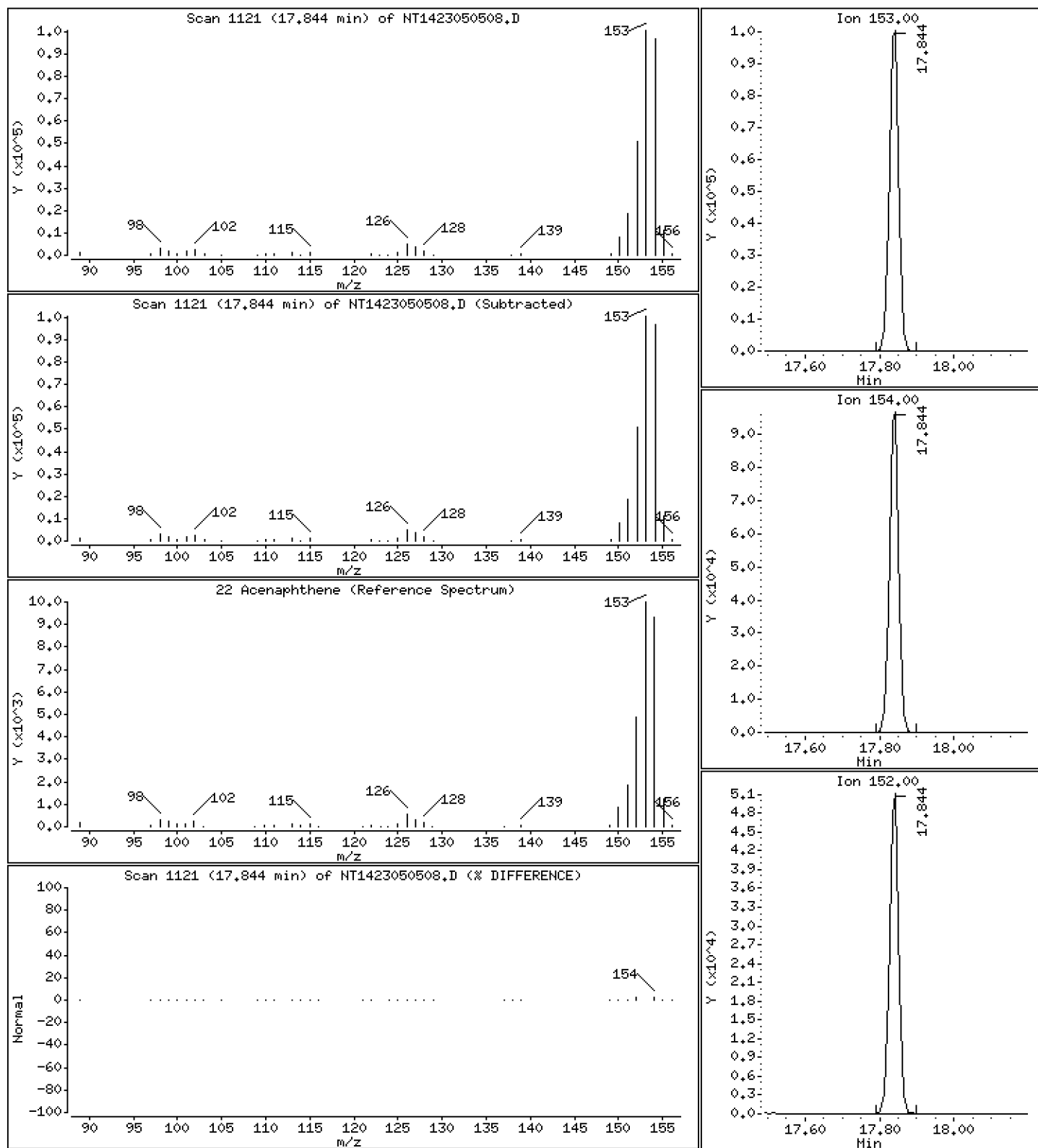
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

22 Acenaphthene

Concentration: 2.694 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

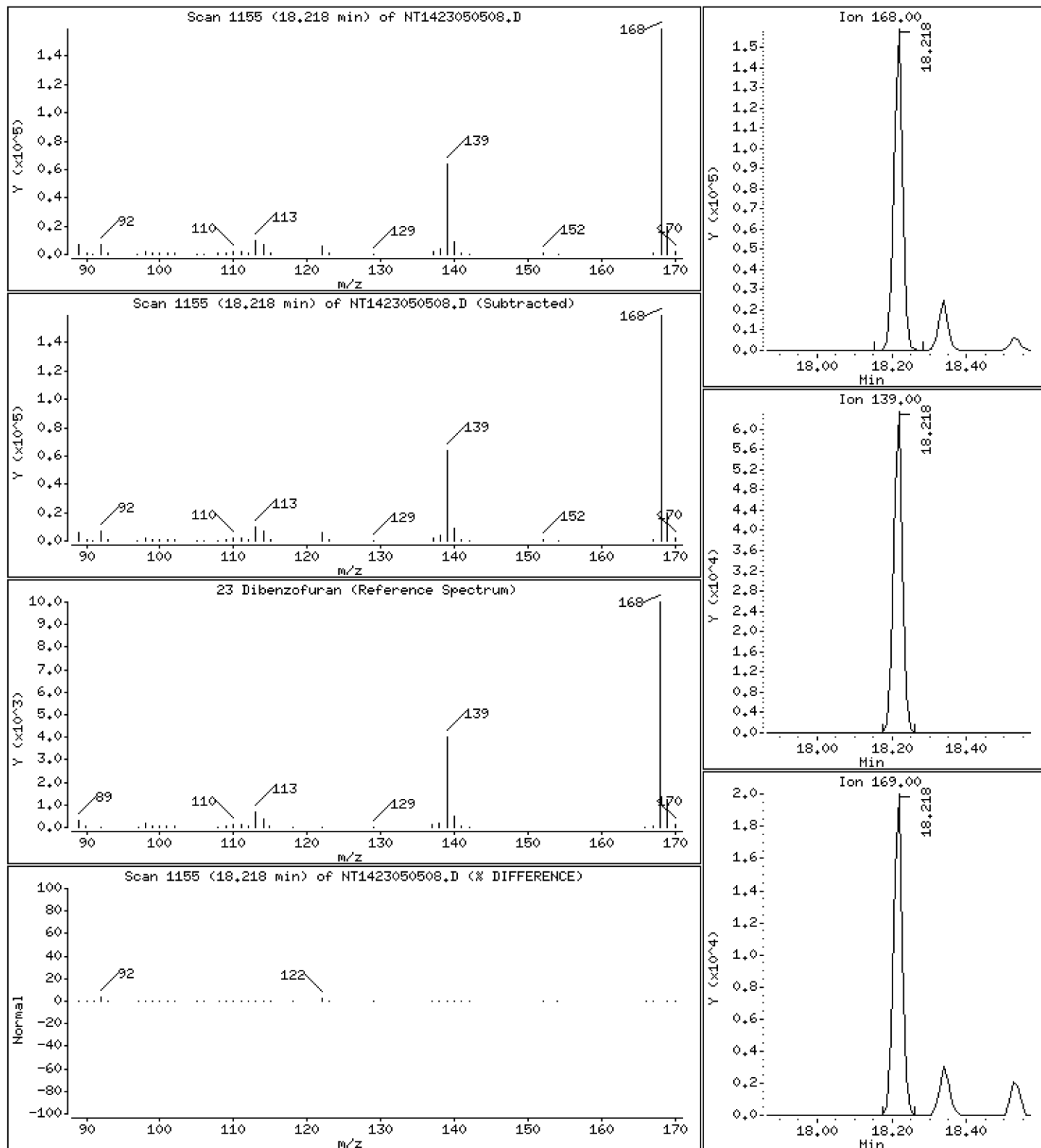
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

23 Dibenzofuran

Concentration: 2.957 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

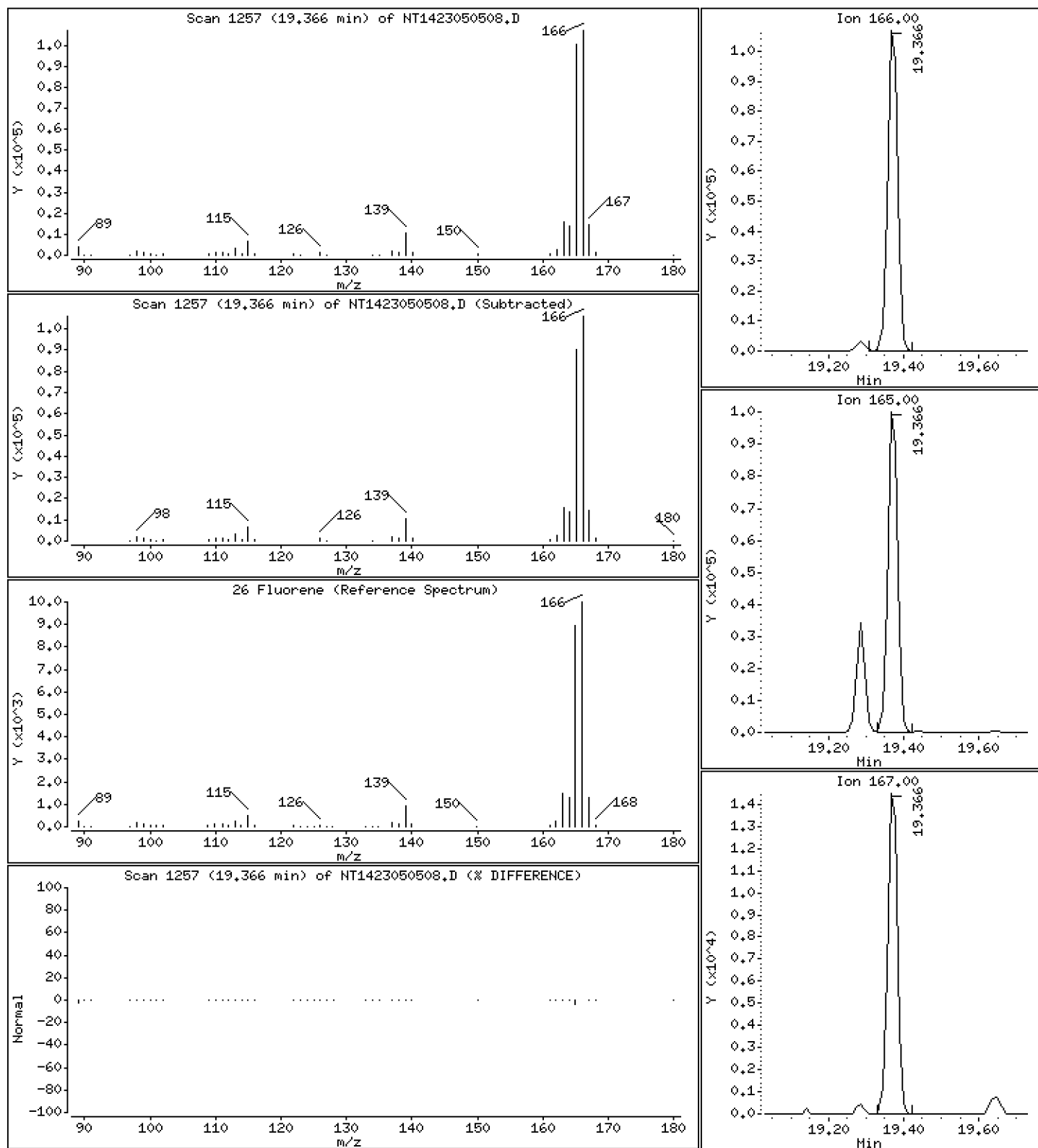
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

26 Fluorene

Concentration: 2.682 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

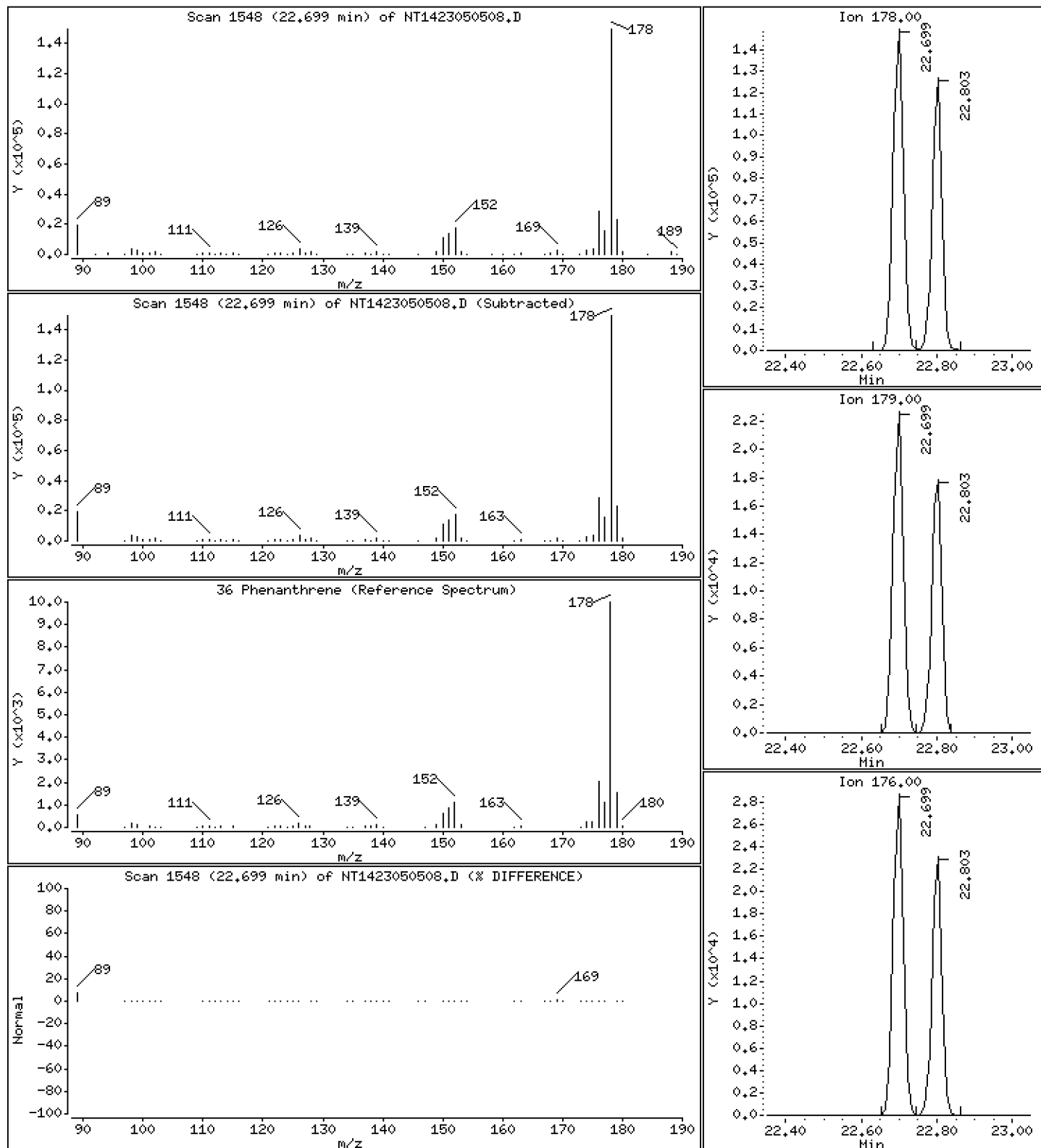
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

36 Phenanthrene

Concentration: 2.587 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

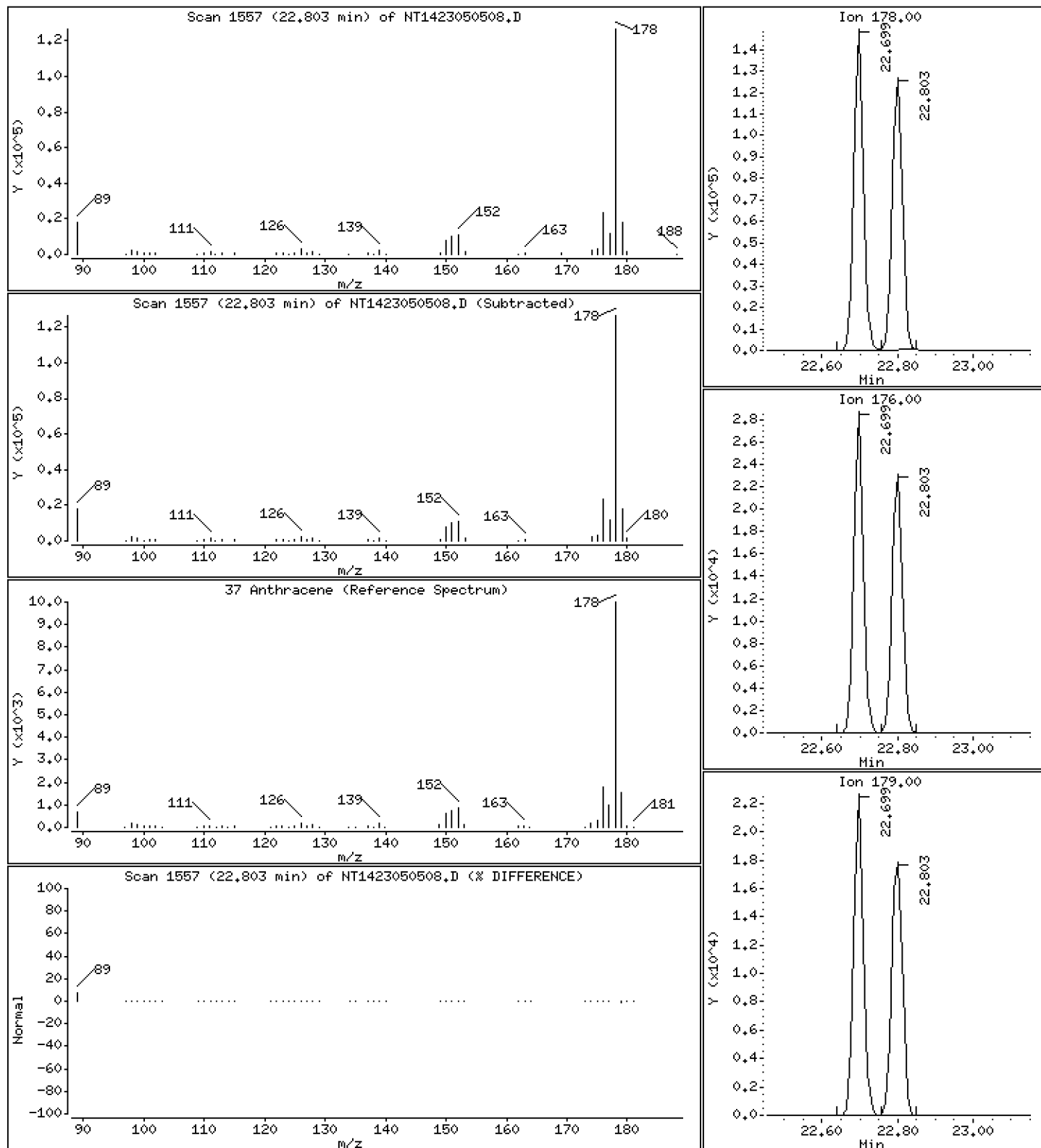
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

37 Anthracene

Concentration: 2.382 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

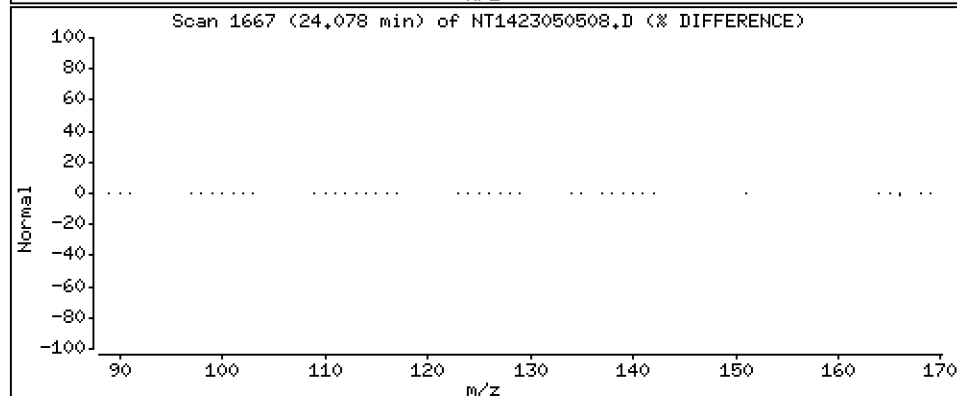
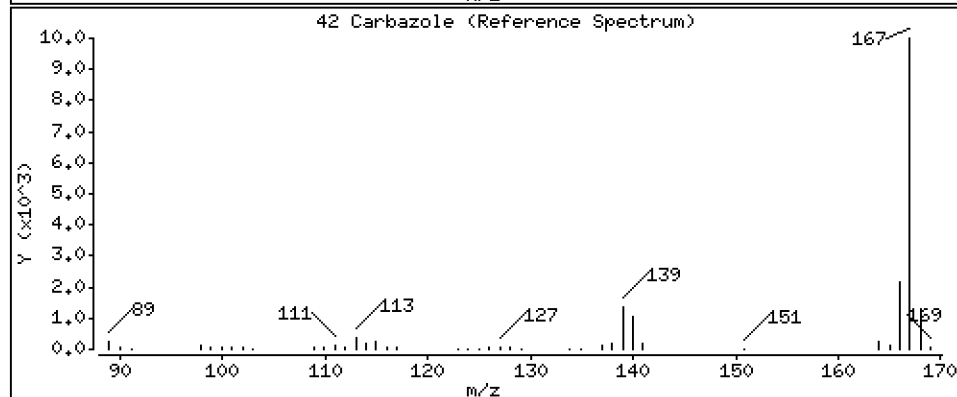
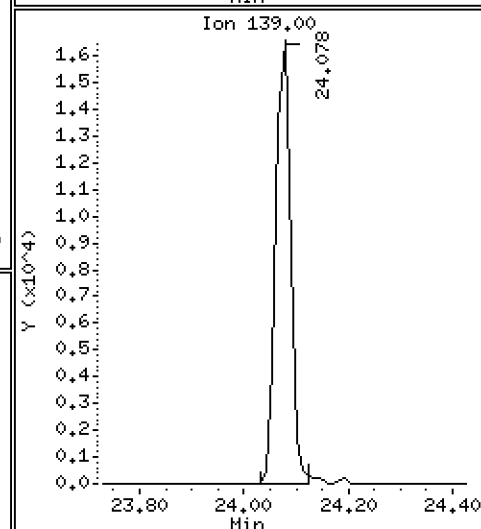
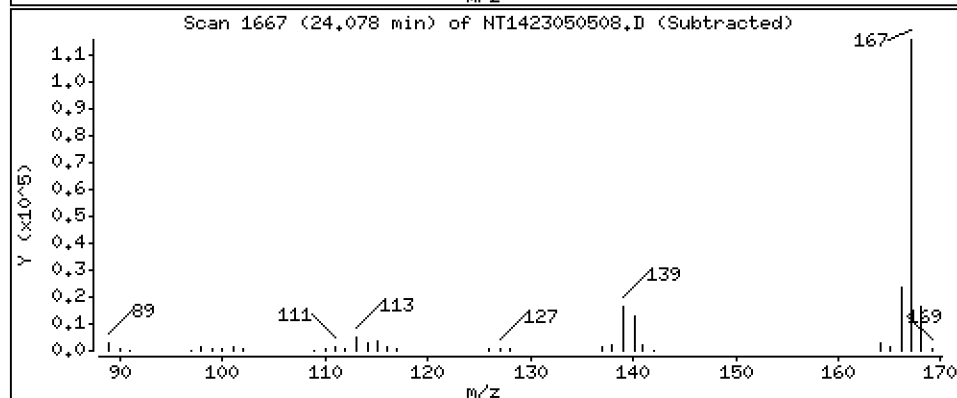
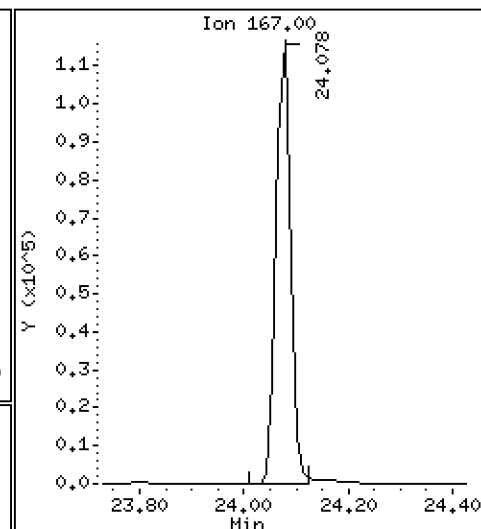
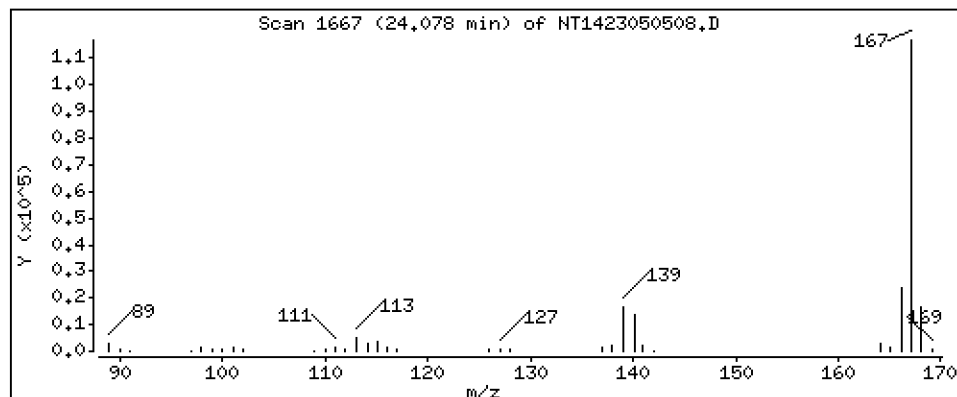
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

42 Carbazole

Concentration: 2.396 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

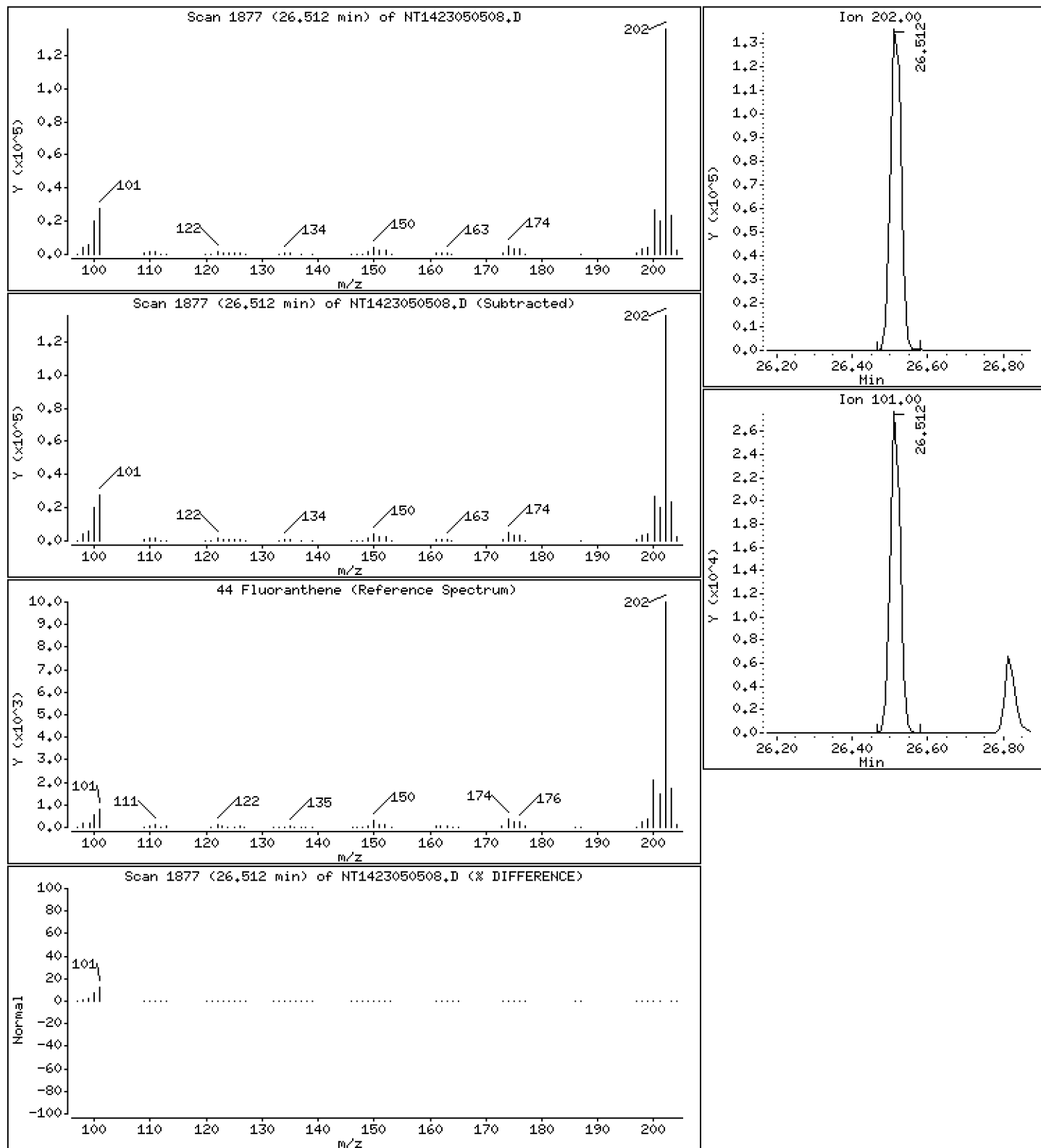
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

44 Fluoranthene

Concentration: 2.707 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

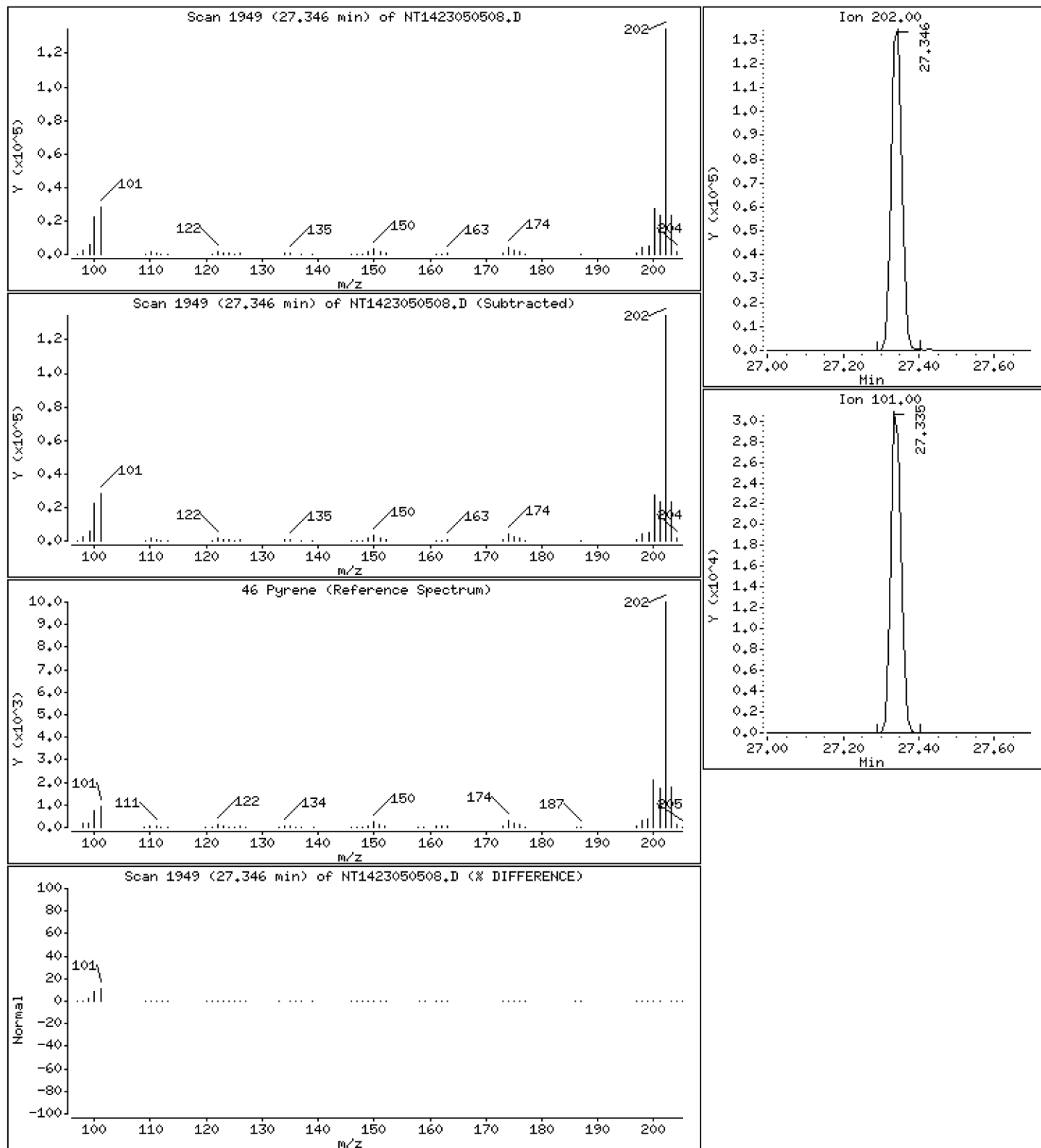
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

46 Pyrene

Concentration: 2.585 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

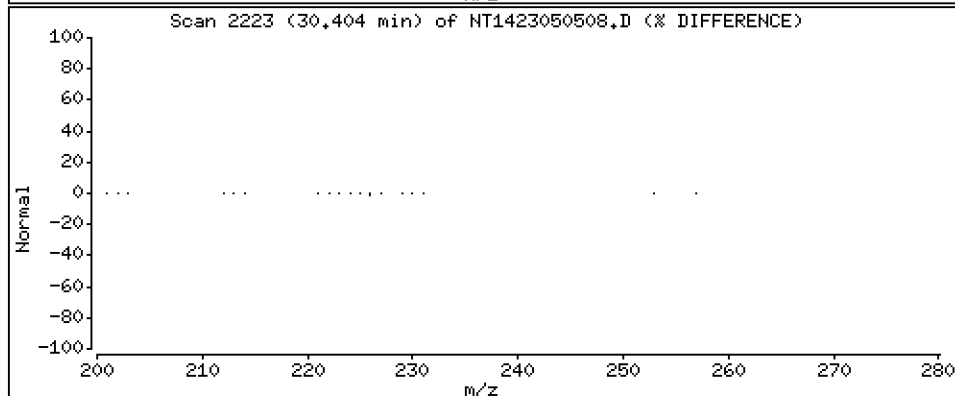
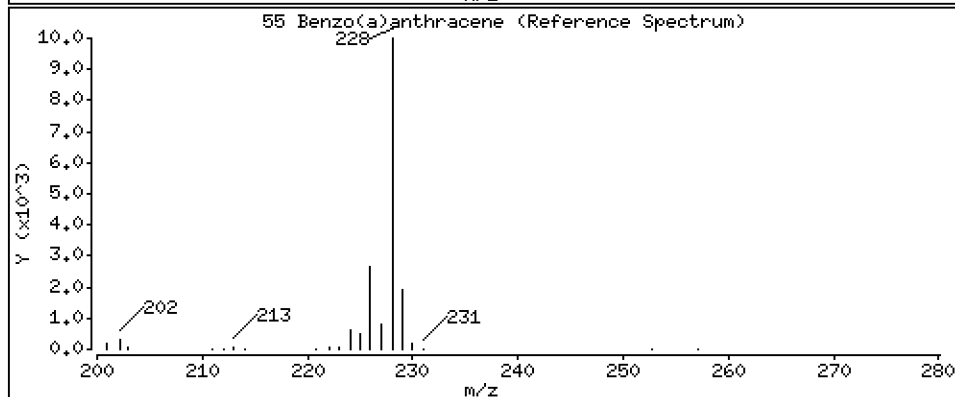
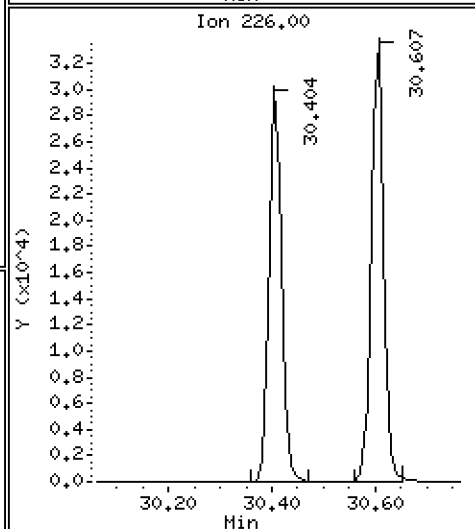
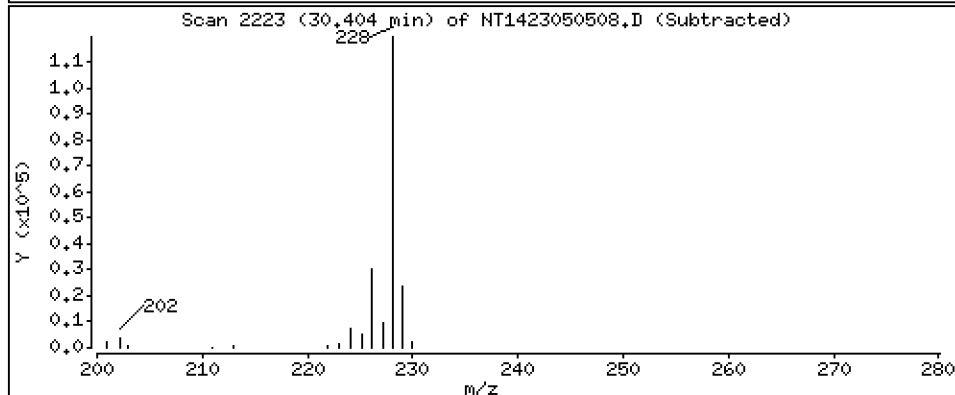
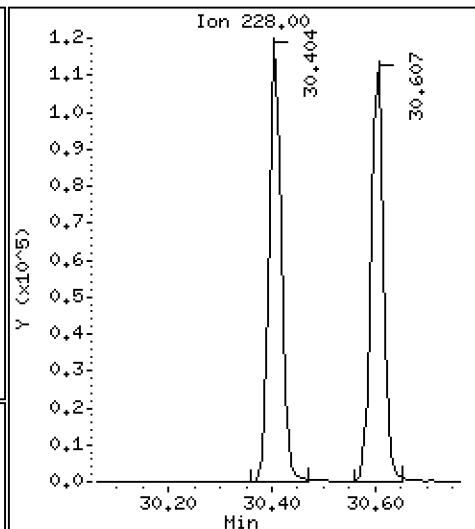
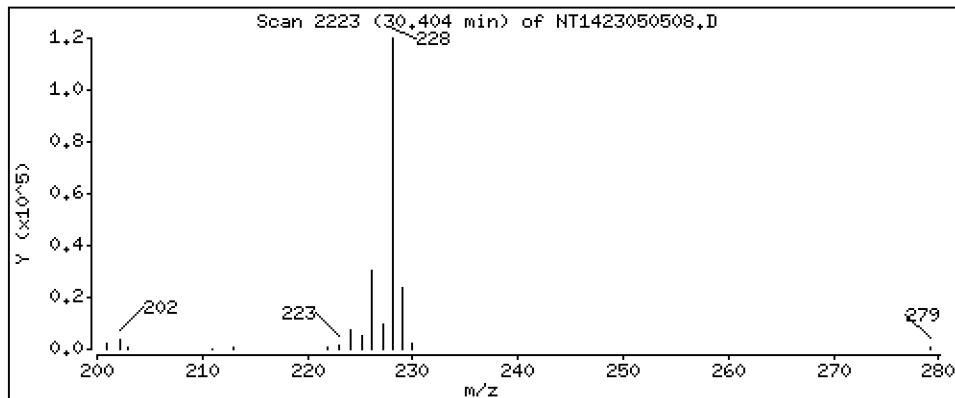
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

55 Benzo(a)anthracene

Concentration: 2,799 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

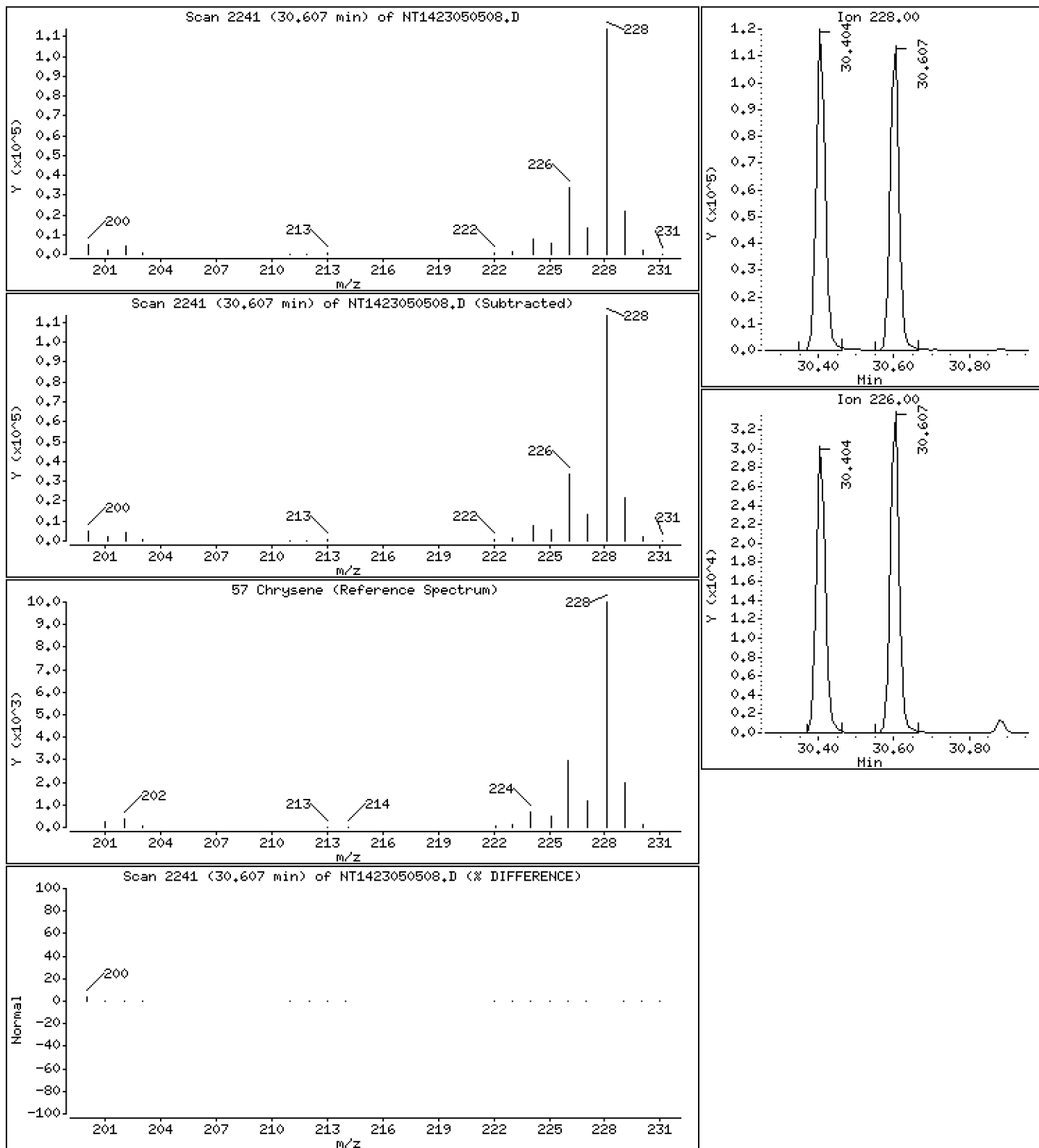
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

57 Chrysene

Concentration: 2,749 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

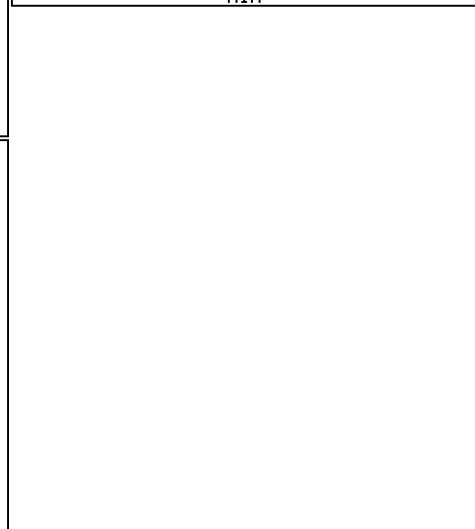
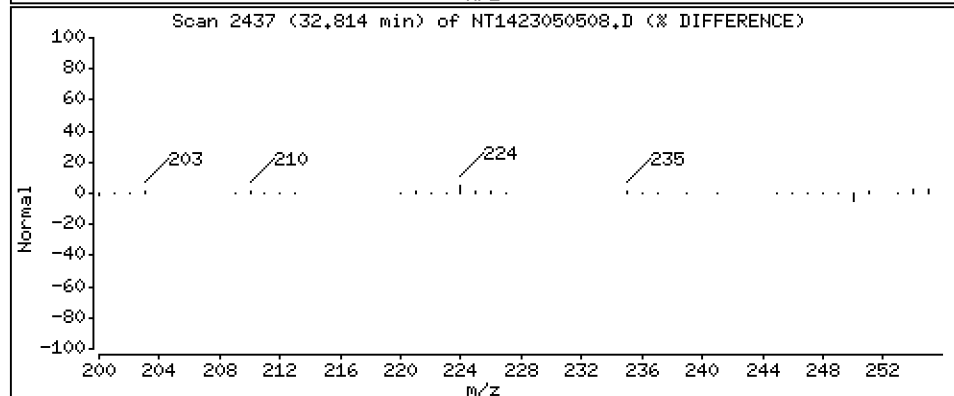
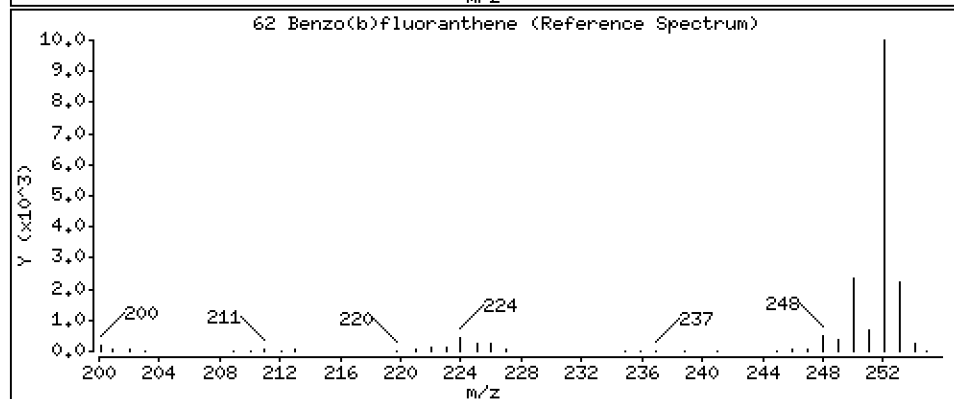
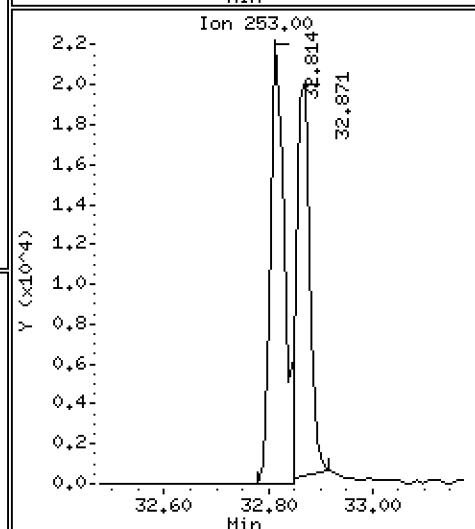
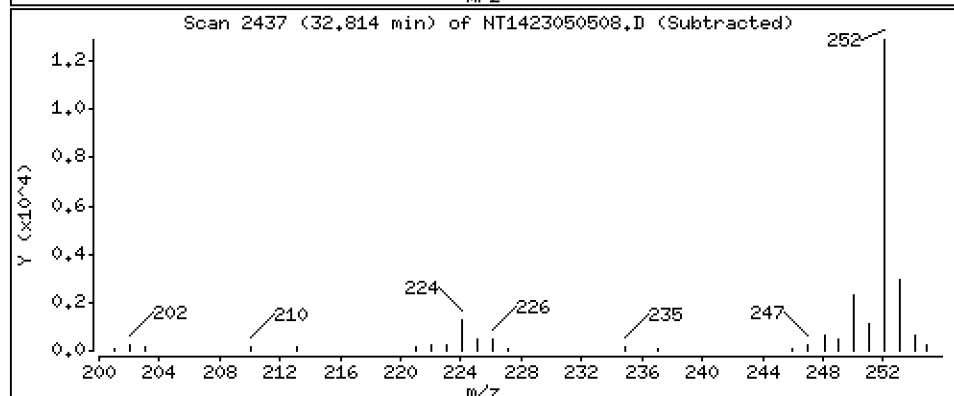
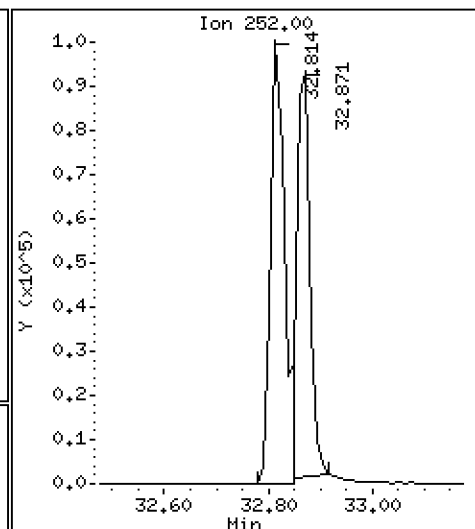
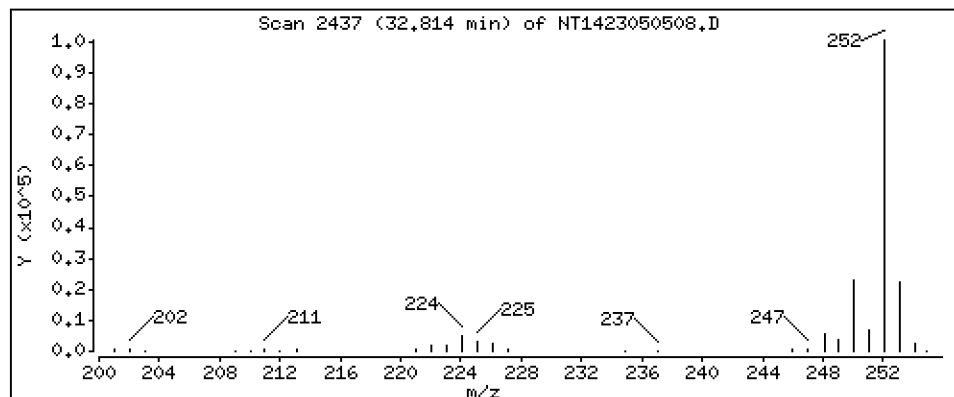
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

62 Benzo(b)fluoranthene

Concentration: 2.733 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

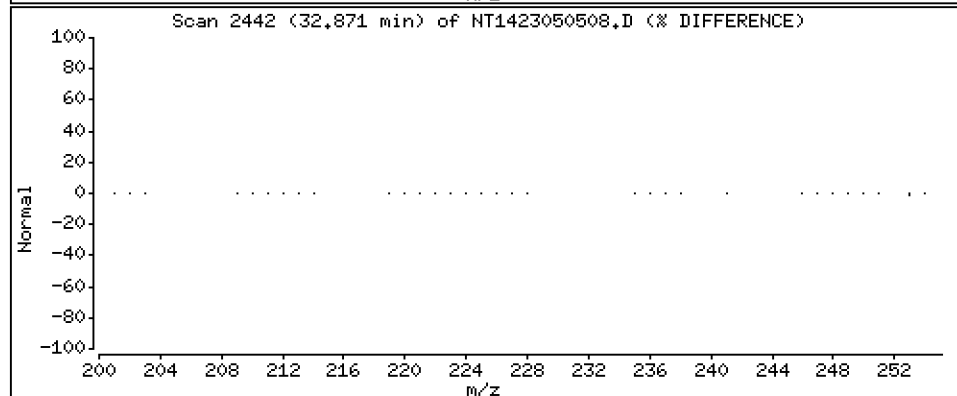
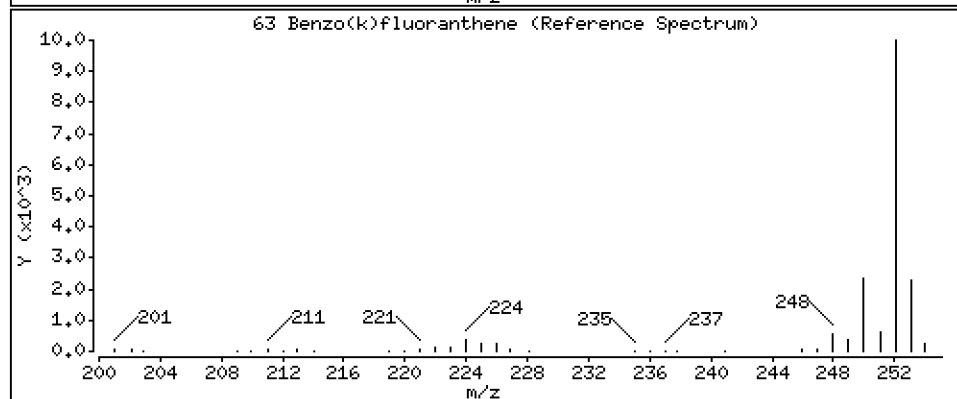
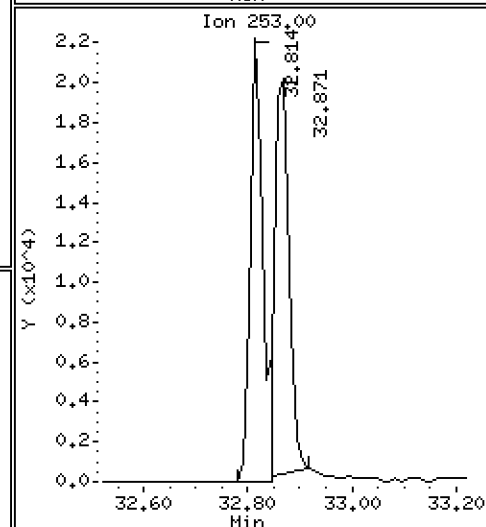
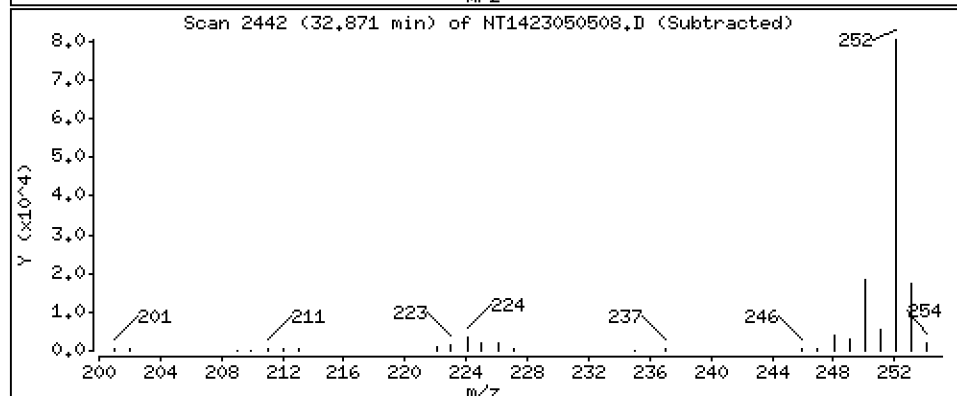
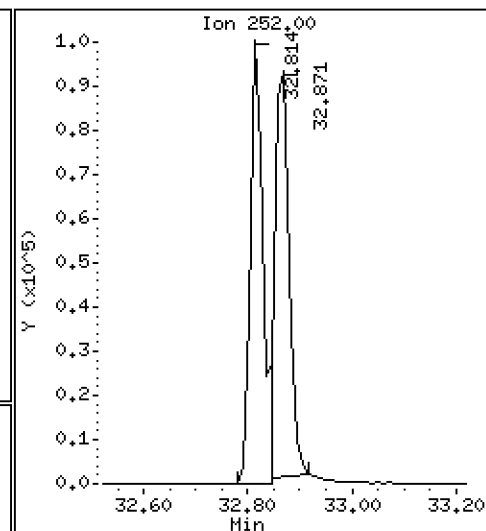
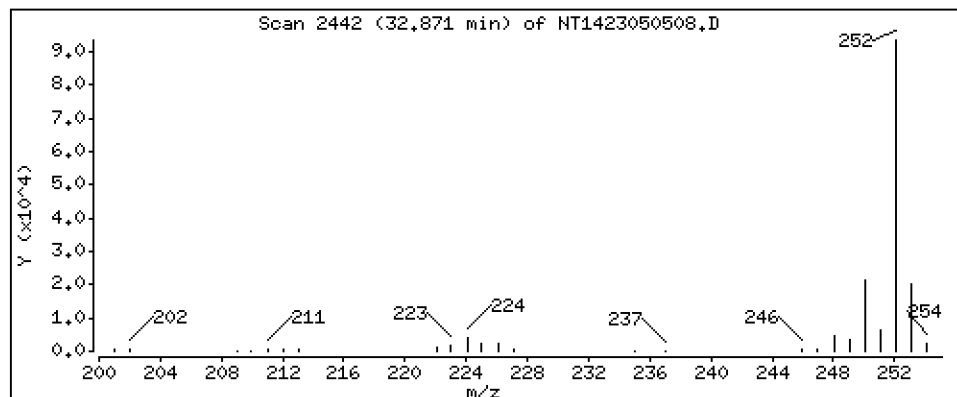
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

63 Benzo(k)fluoranthene

Concentration: 2.239 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

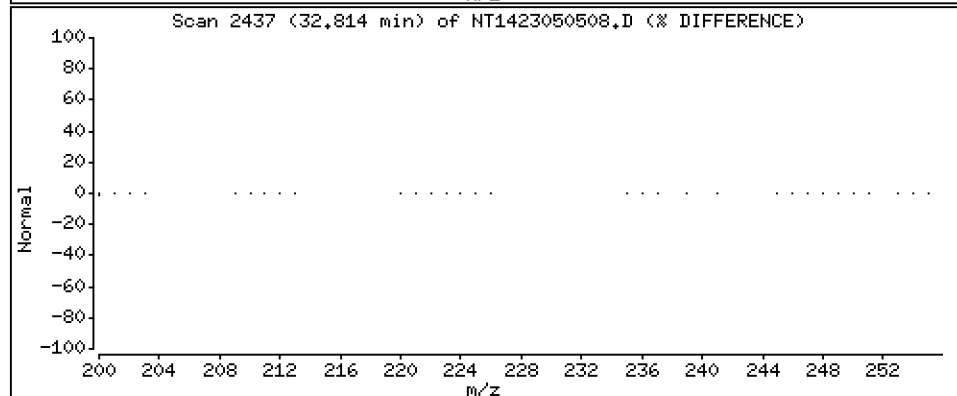
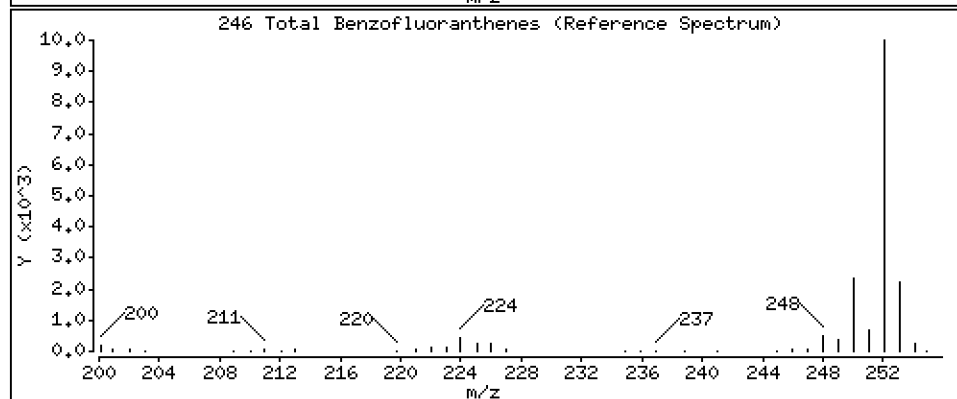
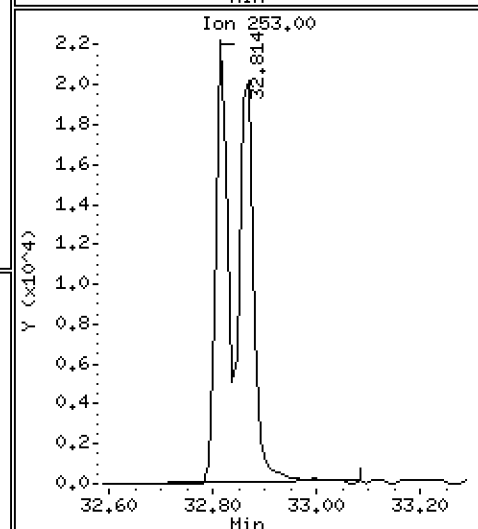
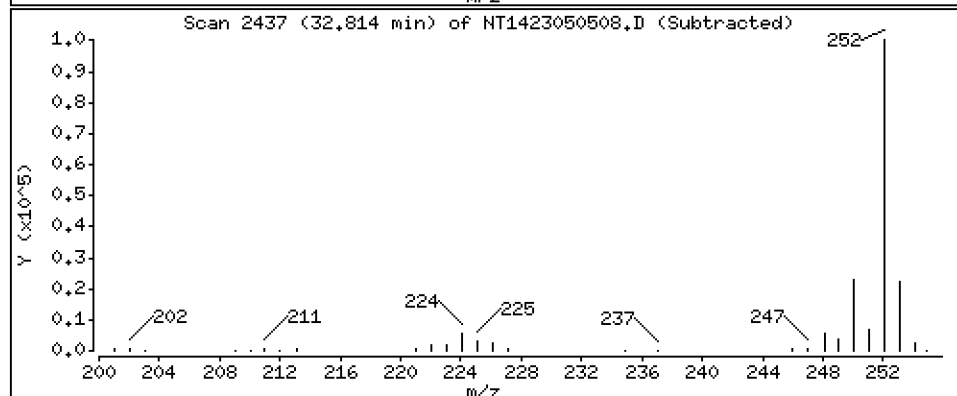
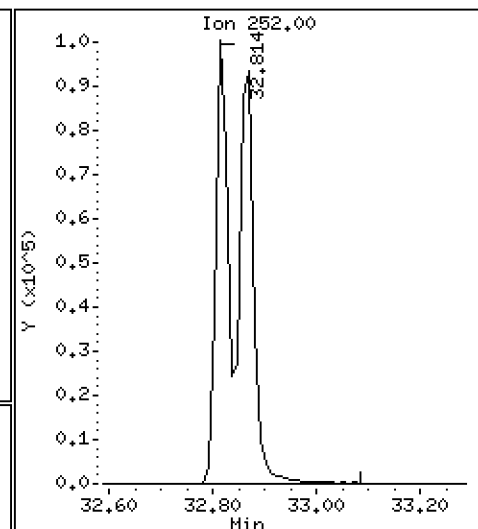
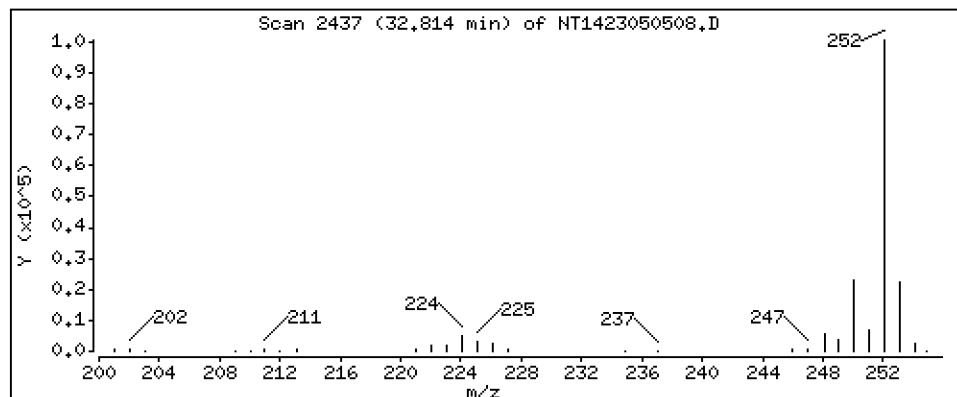
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

246 Total Benzo[fluoranthenes

Concentration: 5.557 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

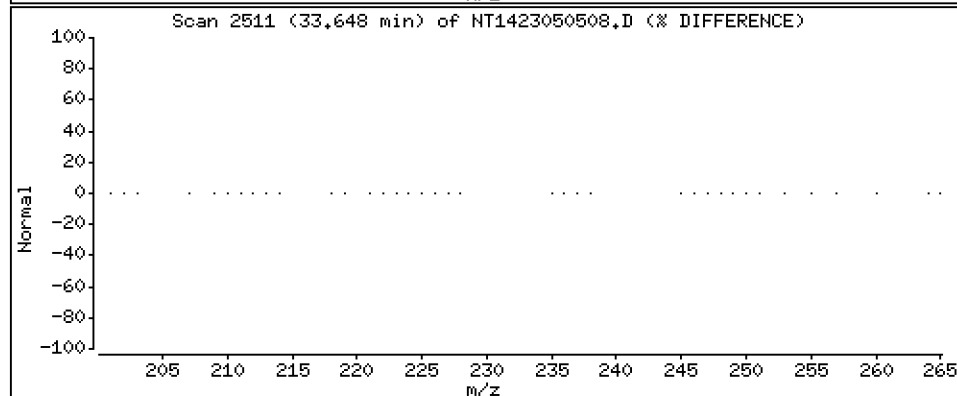
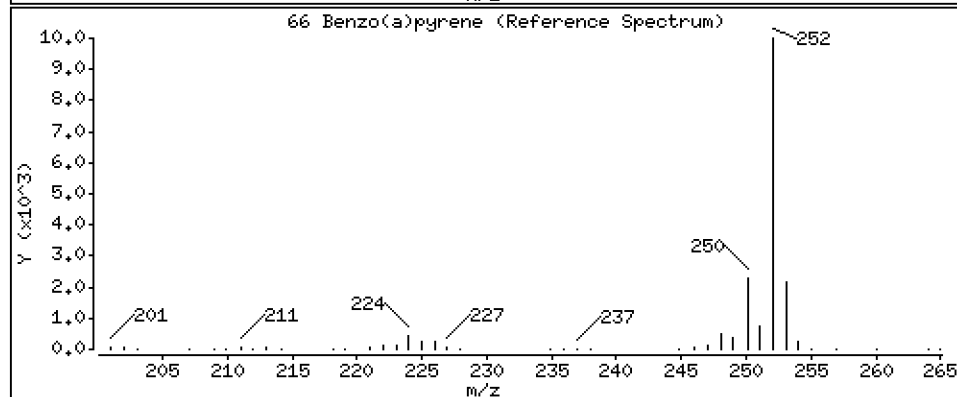
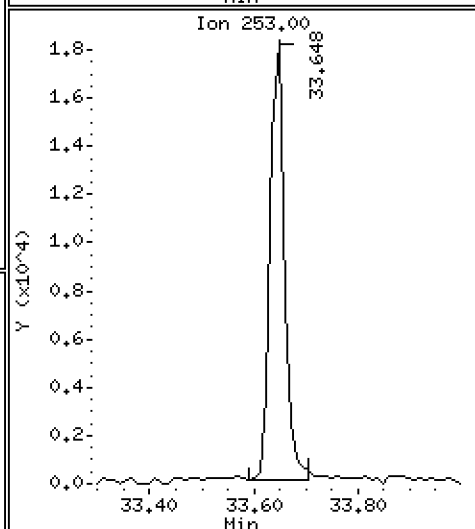
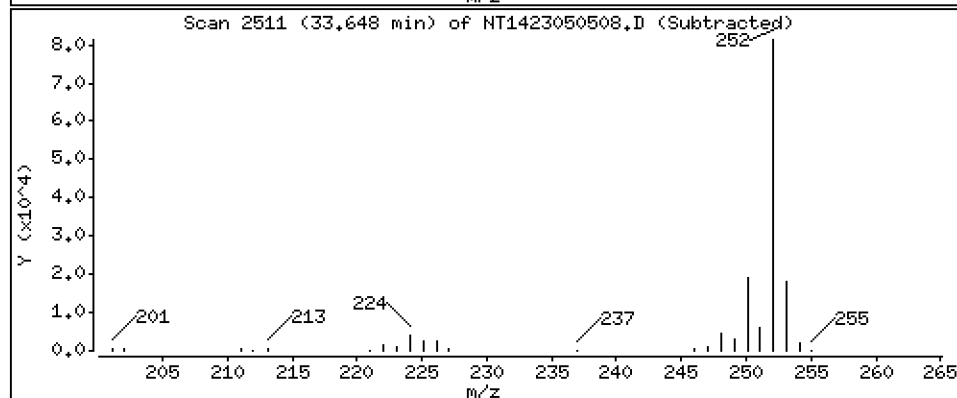
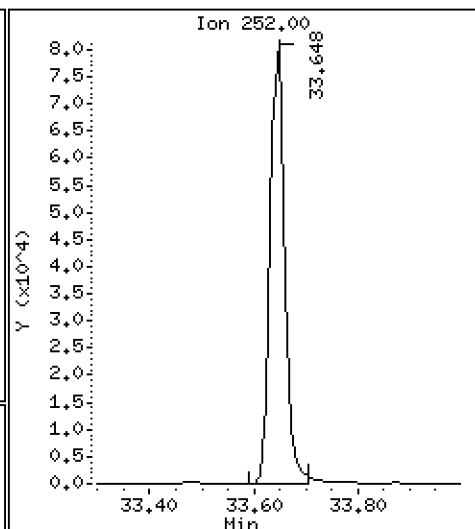
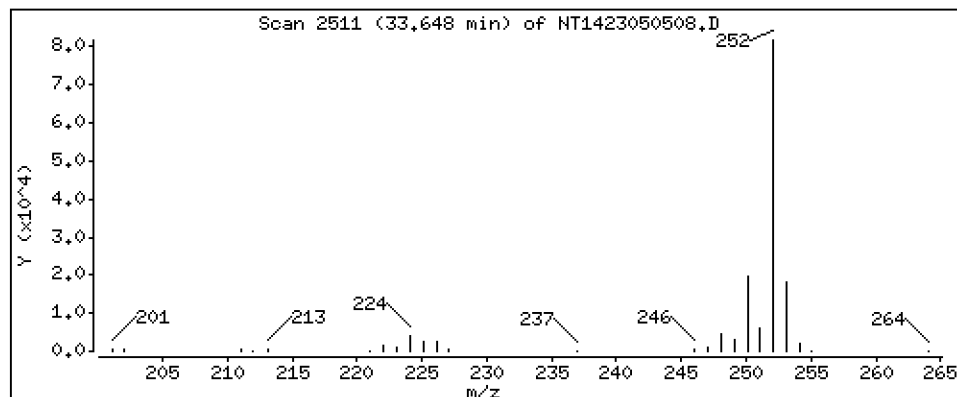
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

66 Benzo(a)pyrene

Concentration: 2.689 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

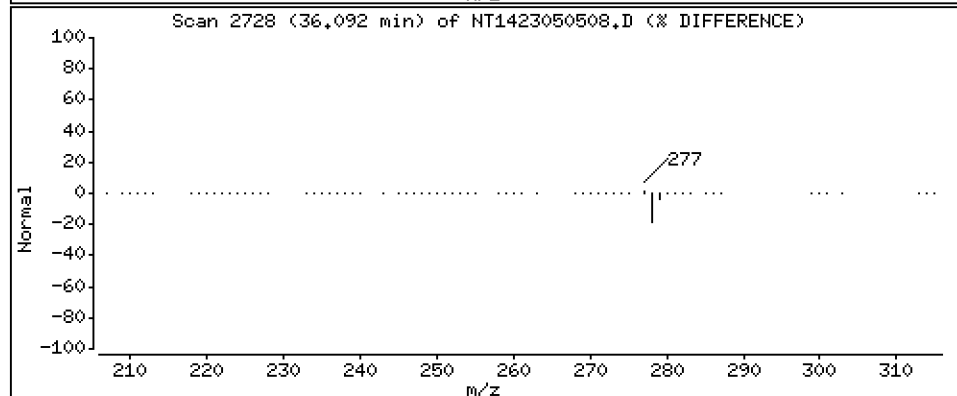
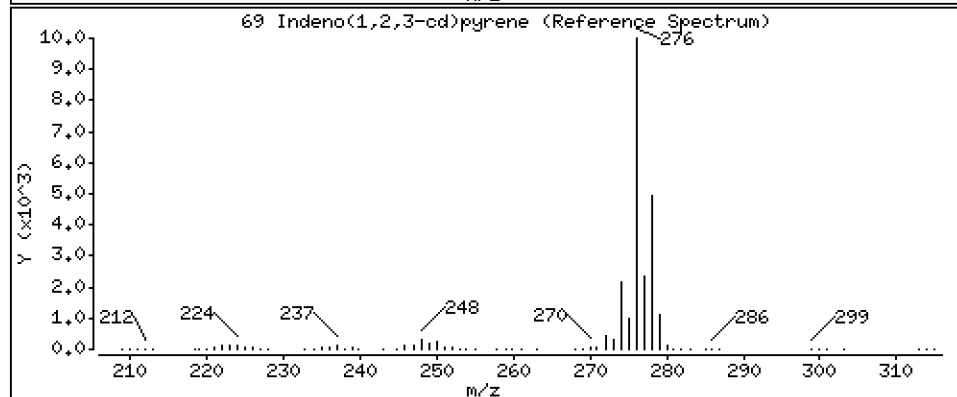
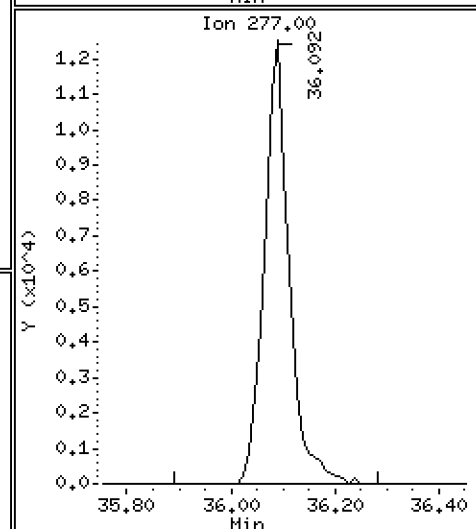
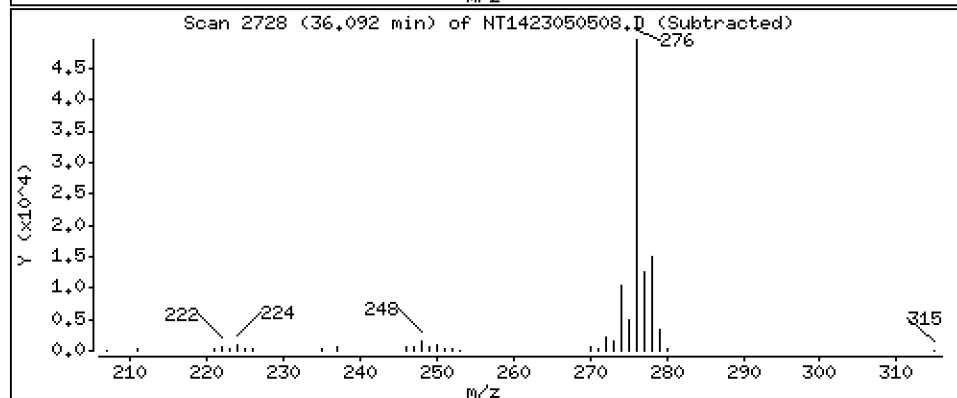
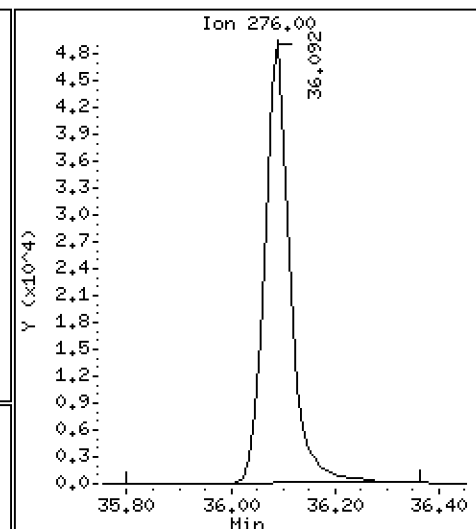
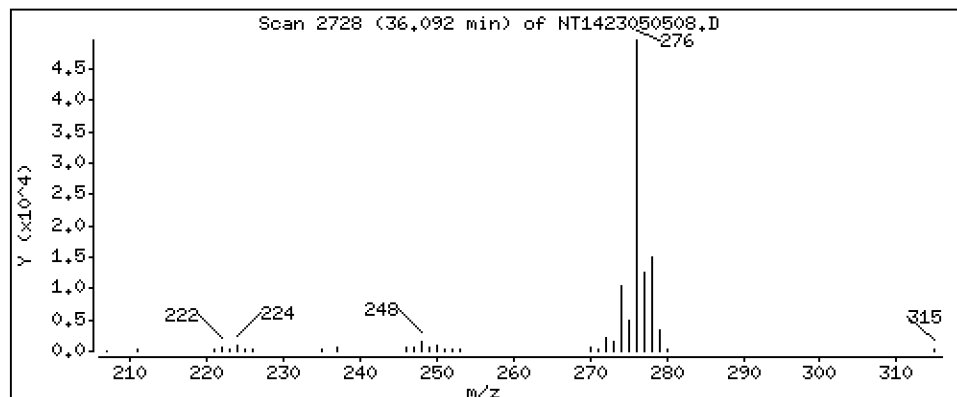
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

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

Concentration: 2.297 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

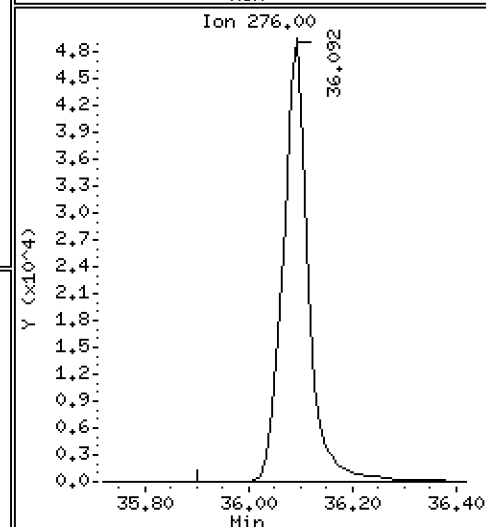
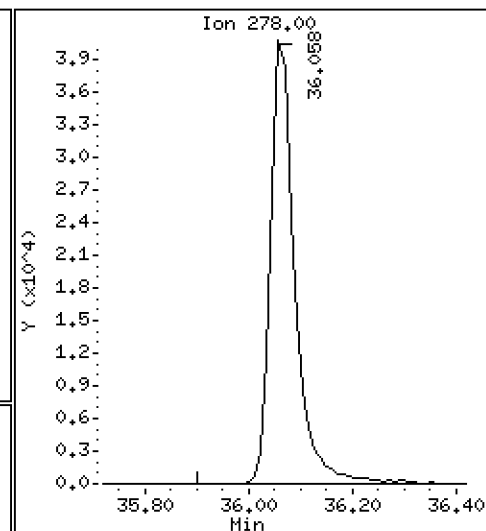
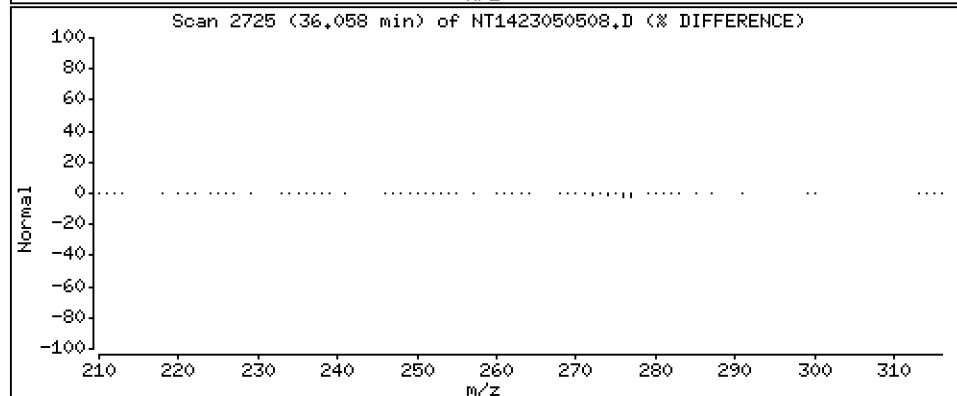
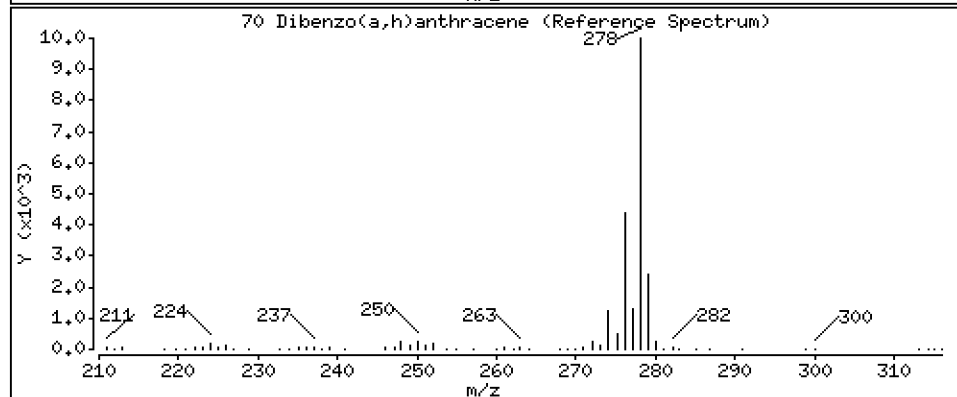
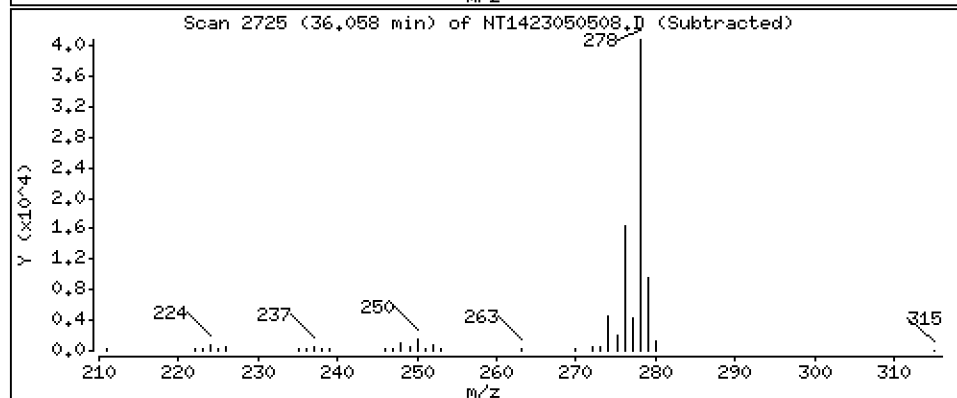
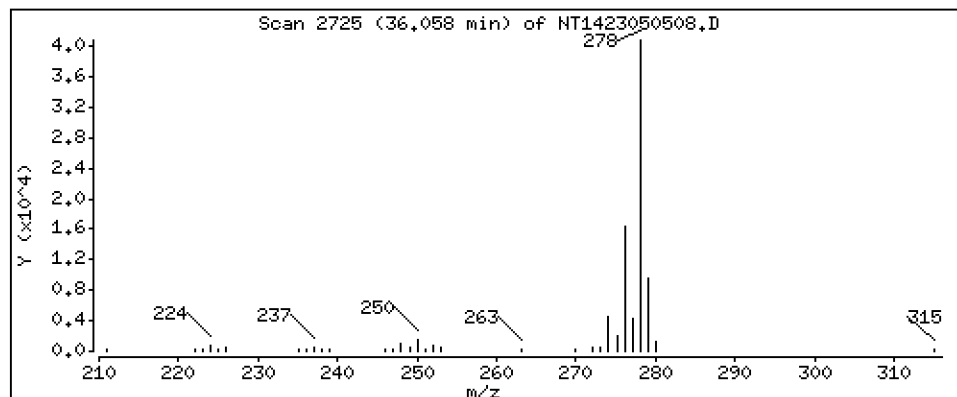
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

70 Dibenzo(a,h)anthracene

Concentration: 2.202 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

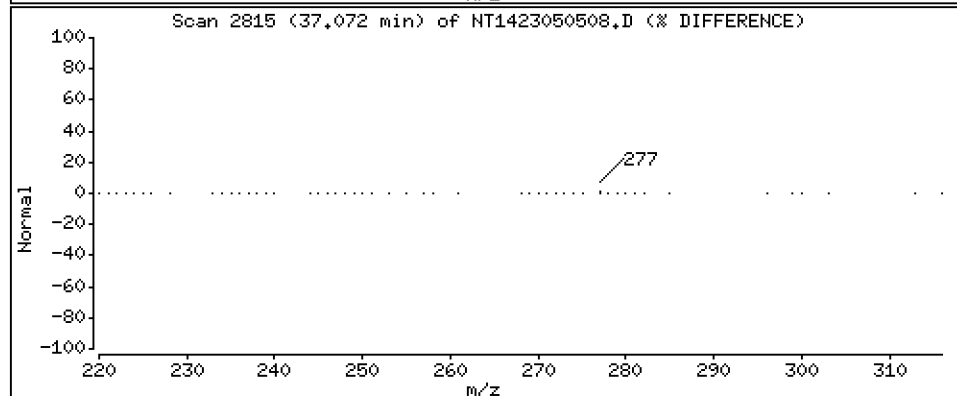
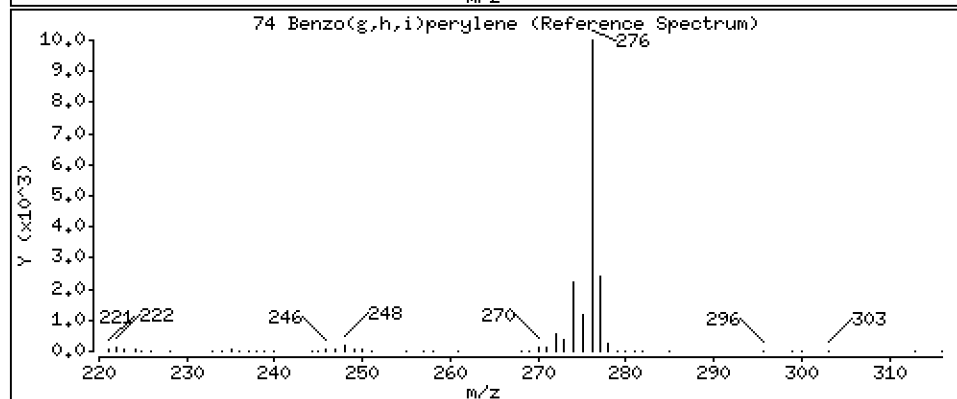
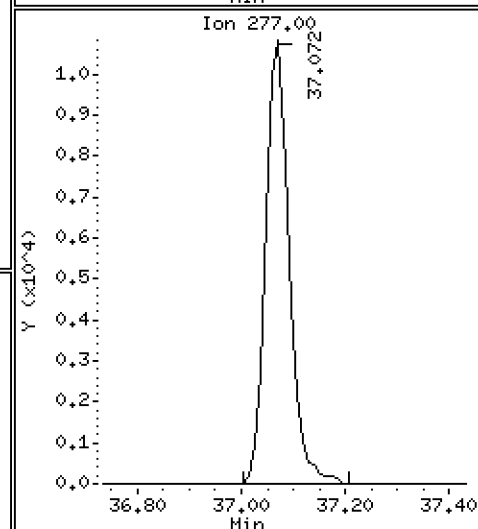
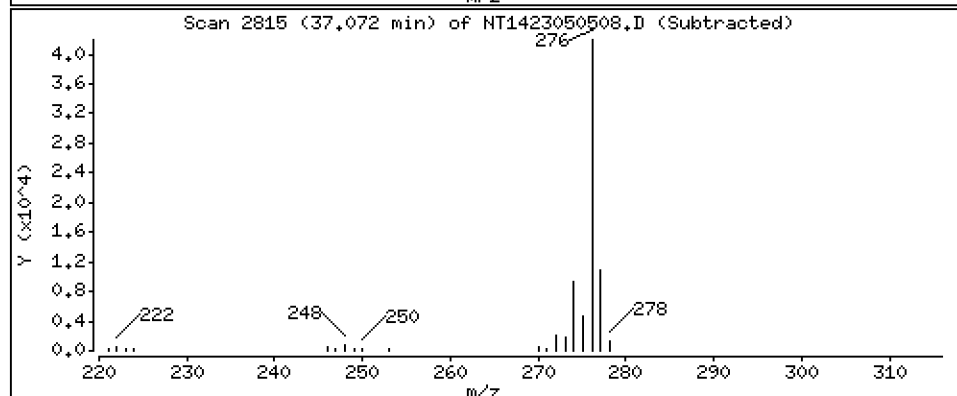
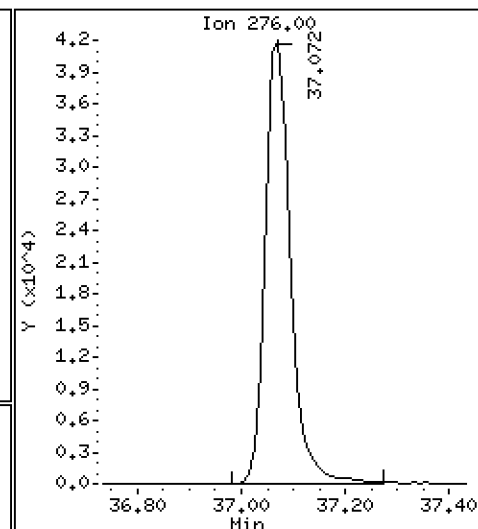
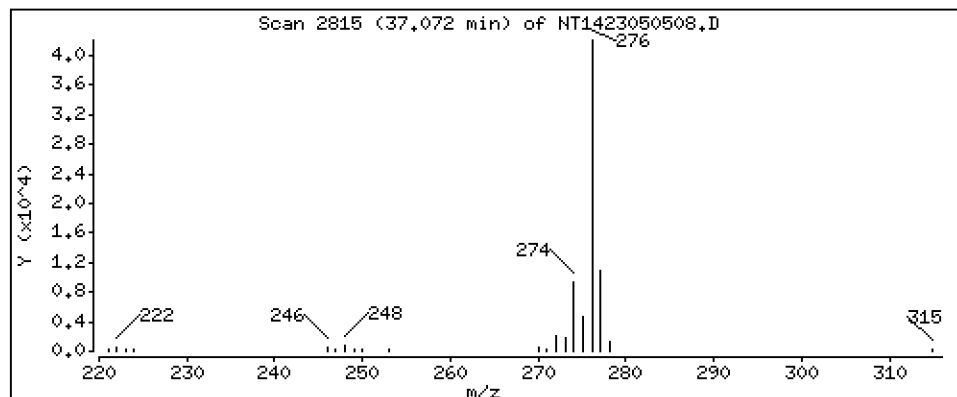
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

74 Benzo(g,h,i)perylene

Concentration: 2.550 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230505.b\NT1423050508.D
Lab Smp Id: SLE0096-SCV1
Inj Date : 05-MAY-2023 16:01
Operator : VTS
Smp Info : SLE0096-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
Meth Date : 06-May-2023 07:22 van
Cal Date : 05-MAY-2023 15:12
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: VANS-201906

Inst ID: nt14.i
Quant Type: ISTD
Cal File: NT1423050507.D
Compound Sublist: TARGETS.sub

Compounds	QUANT	SIG						CONCENTRATIONS	
			RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
	MASS						(ug/mL)	(ug/mL)	
=====	=====		=====	=====	=====	=====	=====	=====	
1 trans-Decalin	138		Compound Not Detected.						
2 cis-Decalin	138		Compound Not Detected.						
\$ 6 Naphthalene-d8	136		Compound Not Detected.						
7 Naphthalene	128		12.290	12.290	(0.638)	356640	2.48521	2.485	
12 Benzo(b)thiophene	134		Compound Not Detected.						
16 2-Methylnaphthalene	141		14.129	14.130	(0.733)	183761	2.58919	2.589	
17 1-methylnaphthalene	141		14.580	14.591	(0.757)	180422	2.52458	2.525	
18 Biphenyl	154		Compound Not Detected.						
19 2,6-Dimethylnaphthalene	156		Compound Not Detected.						
20 Acenaphthylene	152		17.437	17.437	(0.905)	310990	2.66466	2.665	
\$ 21 Acenaphthene-d10	164		17.712	17.723	(0.919)	21202	0.36620	0.3662 (R)	
22 Acenaphthene	153		17.844	17.844	(0.926)	193998	2.69360	2.694	
23 Dibenzofuran	168		18.218	18.218	(0.946)	278763	2.95677	2.957	
24 1,6,7-Trimethylnaphthalene	170		Compound Not Detected.						
* 25 Fluorene-d10	176		19.263	19.263	(1.000)	130753	2.00000		
26 Fluorene	166		19.365	19.377	(1.005)	202636	2.68244	2.682	
30 Dibenzothiophene	184		Compound Not Detected.						
\$ 35 Phenanthrene-d10	188		Compound Not Detected.						
36 Phenanthrene	178		22.698	22.698	(0.998)	272043	2.58721	2.587	
* 250 Anthracene-d10	188		22.733	22.733	(1.000)	158011	2.00000		
37 Anthracene	178		22.802	22.803	(1.003)	229943	2.38228	2.382	
42 Carbazole	167		24.077	24.078	(1.059)	217409	2.39603	2.396	
43 1-Methylphenanthrene	192		Compound Not Detected.						
44 Fluoranthene	202		26.511	26.523	(1.166)	259569	2.70729	2.707	
46 Pyrene	202		27.346	27.346	(1.203)	259384	2.58512	2.585	
51 Naphthobenzothiophene	234		Compound Not Detected.						
55 Benzo(a)anthracene	228		30.403	30.415	(0.908)	199700	2.79914	2.799	
\$ 56 Chrysene-d12	240		Compound Not Detected.						
57 Chrysene	228		30.606	30.606	(0.914)	191804	2.74851	2.749	
62 Benzo(b)fluoranthene	252		32.814	32.825	(0.980)	181931	2.73341	2.733	
63 Benzo(k)fluoranthene	252		32.870	32.871	(0.982)	167403	2.23891	2.239	
293 Benzo(j)fluoranthene	252		Compound Not Detected.						
246 Total Benzofluoranthenes	252		32.814	32.938	(0.980)	344190	5.55732	5.557 (M)	

Compounds	QUANT	SIG	CONCENTRATIONS					
			RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL
							(ug/mL)	(ug/mL)
=====	MASS		=====	=====	=====	=====	=====	
* 251 Benzo(e)pyrene-d12	264		33.478	33.478	(1.000)	91009	2.00000	
64 Benzo(e)pyrene	252		Compound Not Detected.					
66 Benzo(a)pyrene	252		33.647	33.647	(1.005)	146395	2.68856	2.689
\$ 67 Perylene-d12	264		Compound Not Detected.					
68 Perylene	252		Compound Not Detected.					
69 Indeno(1,2,3-cd)pyrene	276		36.091	36.103	(1.078)	162972	2.29735	2.297 (M)
70 Dibenzo(a,h)anthracene	278		36.058	36.069	(1.077)	128362	2.20212	2.202 (M)
74 Benzo(g,h,i)perylene	276		37.071	37.083	(1.107)	136826	2.55002	2.550

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 05-MAY-2023
 Lab File ID: NT1423050508.D Calibration Time: 13:36
 Lab Smp Id: SLE0096-SCV1
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	137862	68931	275724	130753	-5.16
250 Anthracene-d10	168263	84132	336526	158011	-6.09
251 Benzo(e)pyrene-d1	99689	49845	199378	91009	-8.71

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	19.26	18.76	19.76	19.26	0.00
250 Anthracene-d10	22.73	22.23	23.23	22.73	0.00
251 Benzo(e)pyrene-d1	33.48	32.98	33.98	33.48	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 - NT1423050508.D

Lab ID: SLE0096-SCV1

nt14.i, 20230505.b\ALKYLPNA.m, 05-MAY-2023 16:01

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

RRT CHECK

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

NONE

RRT check based on Ccal File: NT1423050507.D

On Column LOD for nt14.i, 20230505.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

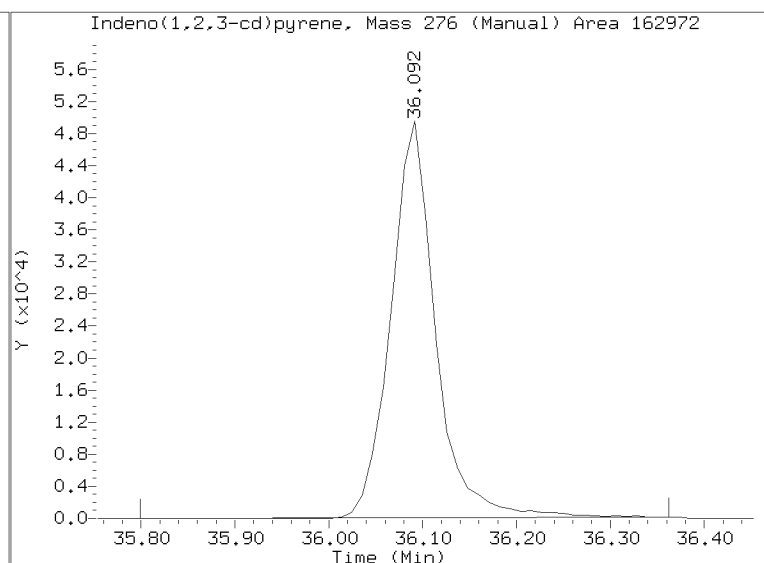
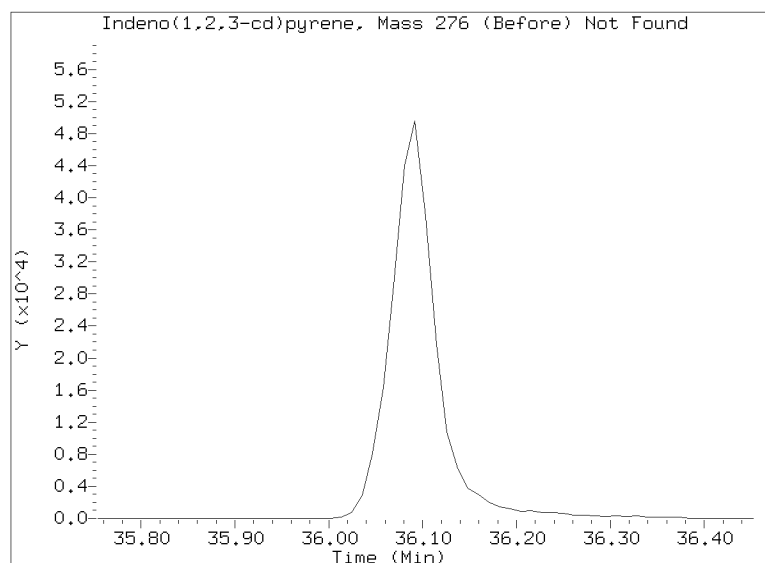
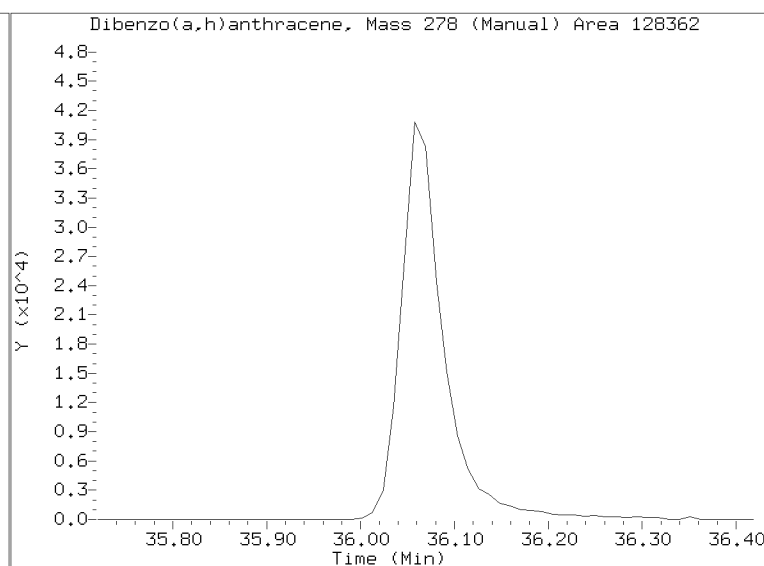
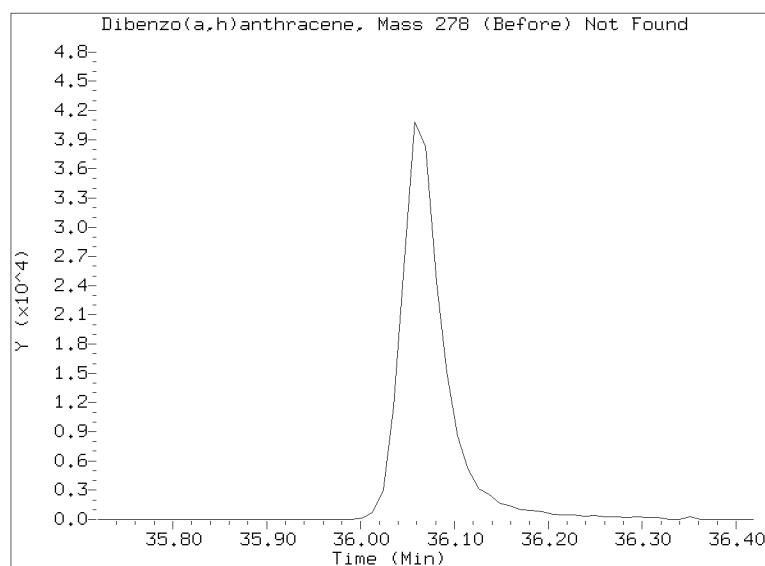
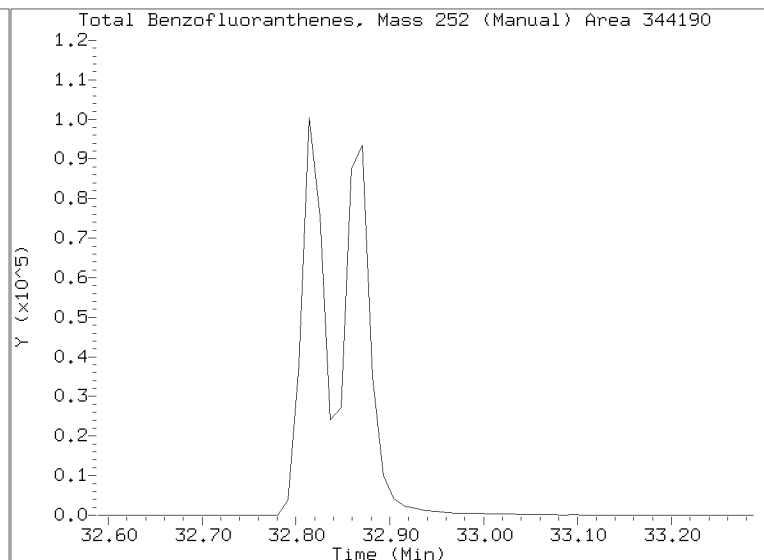
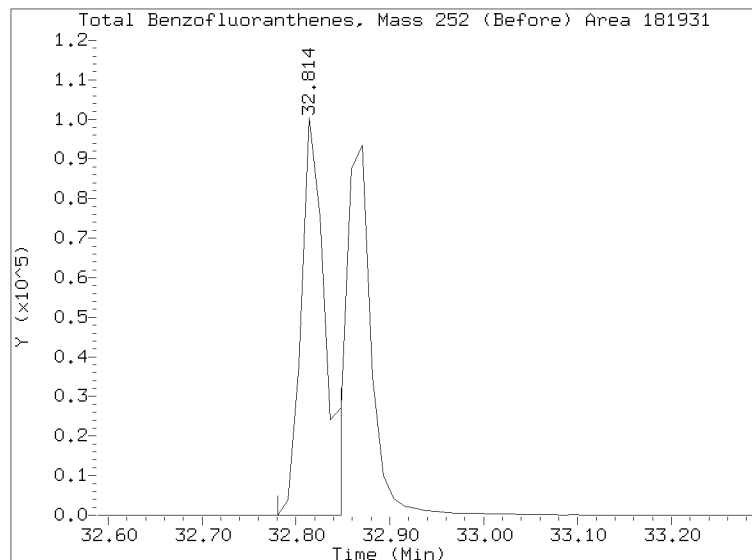
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230505.b/NT1423050508.D

Injection Date: 05-MAY-2023 16:01

Lab ID: SLE0096-SCV1 Client ID:

Report Date: 05/06/2023 07:52





INITIAL CALIBRATION CHECK

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Instrument ID: NT14

Calibration: GE00024

Lab File ID: NT1423050515.D

Calibration Date: 05/05/2023

Sequence: SLE0096

Injection Date: 05/05/23

Lab Sample ID: SLE0096-ICV1

Injection Time: 21:39

Sequence Name: PAH 2.5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
trans-Decalin	A	2.5000	2.4	0.2142441	0.2092675		-2.3	+/-20
cis-Decalin	A	2.5000	2.4	0.1553110	0.1506961		-3.0	+/-20
Naphthalene	A	2.5000	2.4	2.1950510	2.0893270		-4.8	+/-20
1-Methylnaphthalene	A	2.5000	2.4	1.0931470	1.0487830		-4.0	+/-20
2-Methylnaphthalene	A	2.5000	2.5	1.0855960	1.0720020		-1.2	+/-20
Biphenyl	A	2.5000	2.4	1.5018170	1.4279710		-4.9	+/-20
2,6-Dimethylnaphthalene	A	2.5000	2.5	1.0689340	1.0527190		-1.5	+/-20
Acenaphthylene	A	2.5000	2.5	1.7851870	1.7758950		-0.5	+/-20
Acenaphthene	A	2.5000	2.5	1.1016480	1.0817420		-1.8	+/-20
Dibenzofuran	A	2.5000	2.4	1.4421	1.3987440		-3.0	+/-20
2,3,5-Trimethylnaphthalene	A	2.5000	2.5	0.9527605	0.9460616		-0.7	+/-20
Fluorene	A	2.5000	2.5	1.1554870	1.1435160		-1.0	+/-20
Benzo(b)thiophene	A	2.5000	2.4	1.6681460	1.5863		-4.9	+/-20
Phenanthrene	A	2.5000	2.4	1.3309080	1.3013240		-2.2	+/-20
Anthracene	A	2.5000	2.5	1.2217170	1.2130150		-0.7	+/-20
Carbazole	A	2.5000	2.3	0.9770692	1.0510840		-8.5	+/-20
1-Methylphenanthrene	A	2.5000	2.5	0.8583058	0.8479885		-1.2	+/-20
Fluoranthene	A	2.5000	2.5	1.2135600	1.2133060		-0.04	+/-20
Dibenzothiophene	A	2.5000	2.5	1.4158940	1.4070350		-0.6	+/-20
Pyrene	A	2.5000	2.5	1.2700040	1.2685420		-0.1	+/-20
Benzo(a)anthracene	A	2.5000	2.4	1.5678310	1.5268690		-2.6	+/-20
Chrysene	A	2.5000	2.4	1.5335800	1.4952340		-2.5	+/-20
Benzo(b)fluoranthene	A	2.5000	2.3	1.4626770	1.3546790		-7.4	+/-20
Benzo(j)fluoranthene	A	2.5000	2.5	1.3727050	1.3502280		-1.6	+/-20
Benzo(k)fluoranthene	A	2.5000	2.1	1.3456120	1.3768200		-16.2	+/-20
Benzo(a)fluoranthene, Total	A	7.5000	7.3	1.3610640	1.3304550		-2.3	+/-20
Benzo(e)pyrene	A	2.5000	2.4	1.4147040	1.3516410		-4.4	+/-20
Benzo(a)pyrene	A	2.5000	2.5	1.1966100	1.2057310		0.8	+/-20
Indeno(1,2,3-cd)pyrene	A	2.5000	2.2	1.3107200	1.3584490		-12.9	+/-20
Dibenzo(a,h)anthracene	A	2.5000	2.2	1.0657830	1.1164770		-12.8	+/-20

* Values outside of QC limits



INITIAL CALIBRATION CHECK EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Instrument ID: NT14

Calibration: GE00024

Lab File ID: NT1423050515.D

Calibration Date: 05/05/2023

Sequence: SLE0096

Injection Date: 05/05/23

Lab Sample ID: SLE0096-ICV1

Injection Time: 21:39

Sequence Name: PAH 2.5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Benzo(g,h,i)perylene	A	2.5000	2.6	1.1791520	1.2061290		2.3	+/-20
Perylene	A	2.5000	2.5	1.3134480	1.2971		-1.2	+/-20
Benzo(b)naphtho(2,1-d)thiophene	A	2.5000	2.5	0.8376187	0.8368133		-0.08	+/-20
Naphthalene-d8	A	2.5000	2.35	1.9983150	1.8766360		-6.1	+/-20
Acenaphthene-d10	A	2.5000	2.42	0.8856004	0.8579775		-3.1	+/-20
Phenanthrene-d10	A	2.5000	2.45	1.1412560	1.1179920		-2.0	+/-20
Chrysene-d12	A	2.5000	2.45	1.0850860	1.0624270		-2.1	+/-20
Perylene-d12	A	2.5000	2.48	1.0467910	1.0362260		-1.0	+/-20
Fluorene-d10	A	2.0000	2.0	67714.1700	1.0000		0.0	
Anthracene-d10	A	2.0000	2.0	82405.3300	1.0000		0.0	
Benzo(e)pyrene-d12	A	2.0000	2.0	49543.0000	1.0000		0.0	

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt14,i\20230505.b\NT1423050515.D

Date : 05-May-2023 21:39

Client ID:

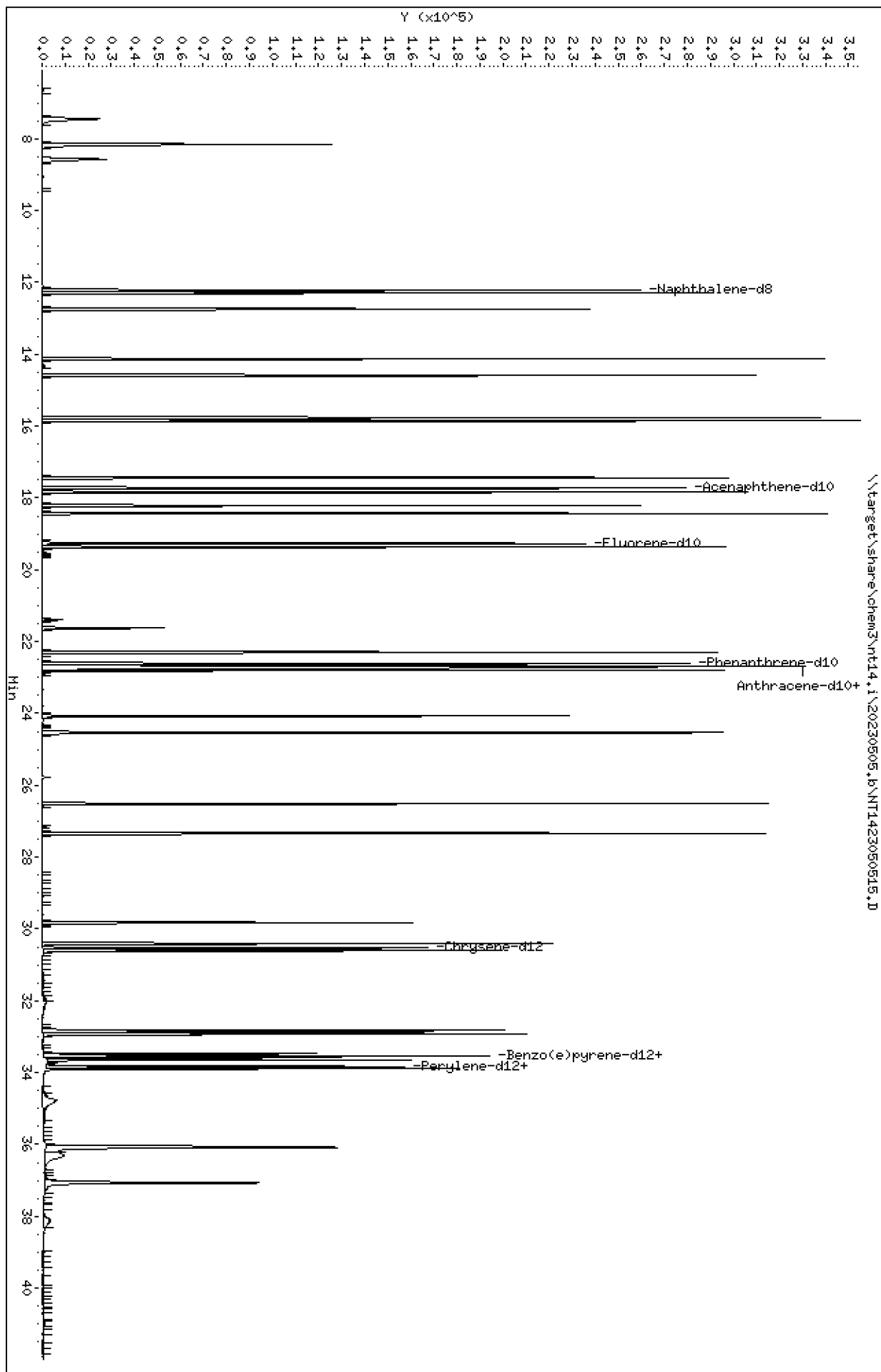
Sample Info: SLE0096-ICW1

Column phase: Rxi-17S11 MS

Instrument: nt14,i

Operator: VTS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230505.b\NT1423050515.D
Lab Smp Id: SLE0096-ICV1
Inj Date : 05-MAY-2023 21:39
Operator : VTS
Smp Info : SLE0096-ICV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
Meth Date : 06-May-2023 07:57 van
Cal Date : 05-MAY-2023 15:12
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: VANS-201906

Inst ID: nt14.i

Quant Type: ISTD
Cal File: NT1423050507.D
Continuing Calibration Sample
Compound Sublist: TARGETS.sub

Compounds	QUANT	SIG						AMOUNTS	
			RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL	
	MASS						(ug/mL)	(ug/mL)	
=====	=====		=====	=====	=====	=====	=====	=====	
1 trans-Decalin	138		7.449	7.449	(0.387)	35943	2.50000	2.442	
2 cis-Decalin	138		8.578	8.578	(0.445)	25883	2.50000	2.426	
\$ 6 Naphthalene-d8	136		12.219	12.219	(0.634)	322324	2.50000	2.348	
7 Naphthalene	128		12.290	12.290	(0.638)	358855	2.50000	2.380	
12 Benzo(b)thiophene	134		12.745	12.745	(0.662)	272457	2.50000	2.377	
16 2-Methylnaphthalene	141		14.129	14.129	(0.733)	184123	2.50000	2.469	
17 1-methylnaphthalene	141		14.580	14.580	(0.757)	180135	2.50000	2.399	
18 Biphenyl	154		15.767	15.767	(0.818)	245263	2.50000	2.377	
19 2,6-Dimethylnaphthalene	156		15.855	15.855	(0.823)	180811	2.50000	2.462	
20 Acenaphthylene	152		17.437	17.437	(0.905)	305021	2.50000	2.487	
\$ 21 Acenaphthene-d10	164		17.723	17.723	(0.920)	147363	2.50000	2.422	
22 Acenaphthene	153		17.833	17.833	(0.926)	185796	2.50000	2.455	
23 Dibenzofuran	168		18.217	18.217	(0.946)	240243	2.50000	2.425	
24 1,6,7-Trimethylnaphthalene	170		18.437	18.437	(0.957)	162492	2.50000	2.482	
* 25 Fluorene-d10	176		19.263	19.263	(1.000)	137405	2.00000		
26 Fluorene	166		19.365	19.365	(1.005)	196406	2.50000	2.474	
30 Dibenzothiophene	184		22.304	22.304	(1.158)	241667	2.50000	2.484	
\$ 35 Phenanthrene-d10	188		22.617	22.617	(0.995)	234299	2.50000	2.449	
36 Phenanthrene	178		22.698	22.698	(0.998)	272720	2.50000	2.444	
* 250 Anthracene-d10	188		22.733	22.733	(1.000)	167657	2.00000		
37 Anthracene	178		22.802	22.802	(1.003)	254213	2.50000	2.482	
42 Carbazole	167		24.077	24.077	(1.059)	220277	2.50000	2.288	
43 1-Methylphenanthrene	192		24.529	24.529	(1.079)	177714	2.50000	2.470	
44 Fluoranthene	202		26.511	26.511	(1.166)	254274	2.50000	2.499	
46 Pyrene	202		27.334	27.334	(1.202)	265850	2.50000	2.497	
51 Naphthobenzothiophene	234		29.831	29.831	(1.312)	175372	2.50000	2.498	
55 Benzo(a)anthracene	228		30.403	30.403	(0.908)	195569	2.50000	2.435	
\$ 56 Chrysene-d12	240		30.527	30.527	(0.912)	136081	2.50000	2.448	
57 Chrysene	228		30.595	30.595	(0.914)	191517	2.50000	2.437	
62 Benzo(b)fluoranthene	252		32.814	32.814	(0.980)	173514	2.50000	2.315 (M)	
63 Benzo(k)fluoranthene	252		32.859	32.859	(0.981)	176350	2.50000	2.095 (M)	
293 Benzo(j)fluoranthene	252		32.926	32.926	(0.984)	172944	2.50000	2.459	
246 Total Benzofluoranthenes	252		32.926	32.926	(0.984)	511234	7.50000	7.331 (M)	

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE		CAL-AMT	ON-COL
=====	=====	=====	=====	=====	=====		(ug/mL)	(ug/mL)
							=====	=====
* 251 Benzo(e)pyrene-d12	264	33.478	33.478	(1.000)	102468		2.00000	
64 Benzo(e)pyrene	252	33.546	33.546	(1.002)	173125		2.50000	2.389
66 Benzo(a)pyrene	252	33.647	33.647	(1.005)	154436		2.50000	2.519
\$ 67 Perylene-d12	264	33.827	33.827	(1.010)	132725		2.50000	2.475
68 Perylene	252	33.884	33.884	(1.012)	166139		2.50000	2.469
69 Indeno(1,2,3-cd)pyrene	276	36.080	36.080	(1.078)	173997		2.50000	2.178
70 Dibenzo(a,h)anthracene	278	36.058	36.058	(1.077)	143004		2.50000	2.179
74 Benzo(g,h,i)perylene	276	37.060	37.060	(1.107)	154487		2.50000	2.557

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i	Calibration Date: 05-MAY-2023
Lab File ID: NT1423050515.D	Calibration Time: 13:36
Lab Smp Id: SLE0096-ICV1	
Analysis Type: SV	Level:
Quant Type: ISTD	Sample Type:
Operator: VTS	
Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m	
Misc Info:	

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
25 Fluorene-d10	137862	68931	275724	137405	-0.33
250 Anthracene-d10	168263	84132	336526	167657	-0.36
251 Benzo(e)pyrene-d1	99689	49845	199378	102468	2.79

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
25 Fluorene-d10	19.26	18.76	19.76	19.26	-0.00
250 Anthracene-d10	22.73	22.23	23.23	22.73	-0.00
251 Benzo(e)pyrene-d1	33.48	32.98	33.98	33.48	-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 - NT1423050515.D

Lab ID: SLE0096-ICV1

nt14.i, 20230505.b\ALKYLPNA.m, 05-MAY-2023 21:39

RT	CO-ELUTION COMPOUNDS
----	----------------------

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

On Column LOD for nt14.i, 20230505.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

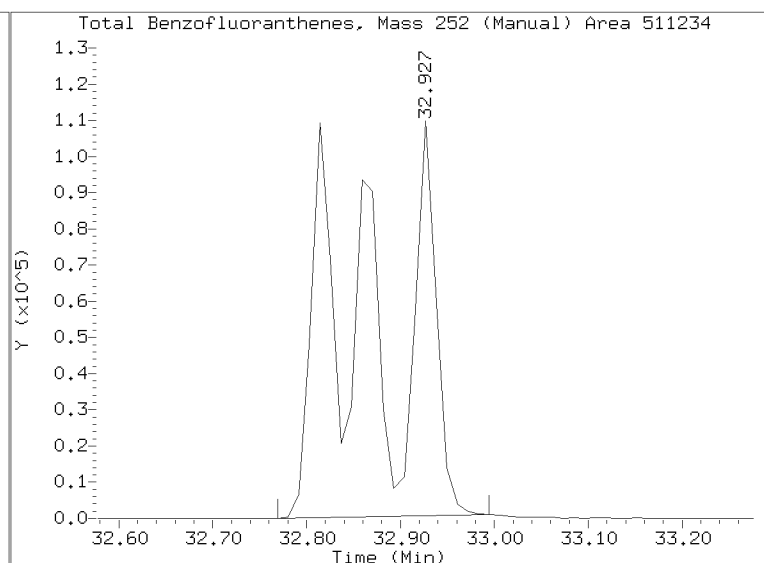
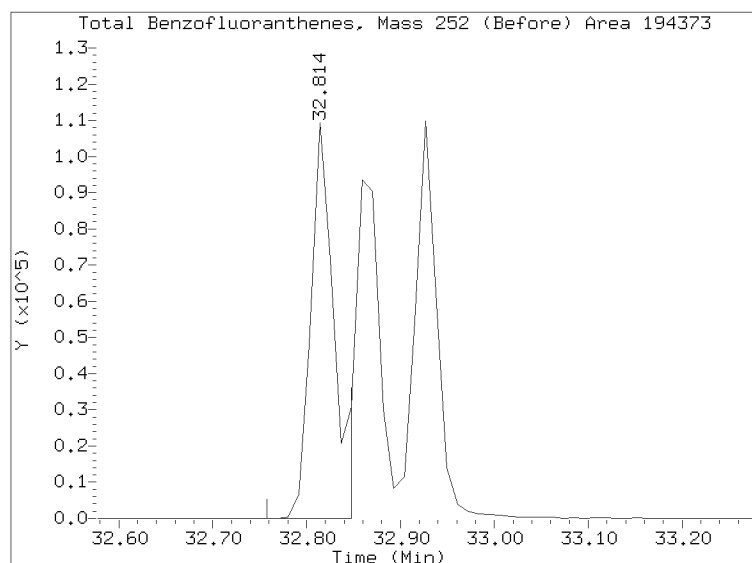
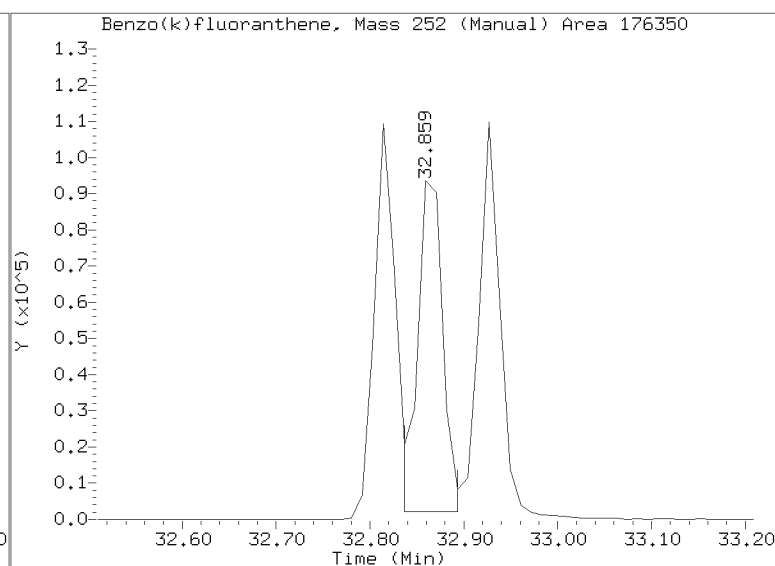
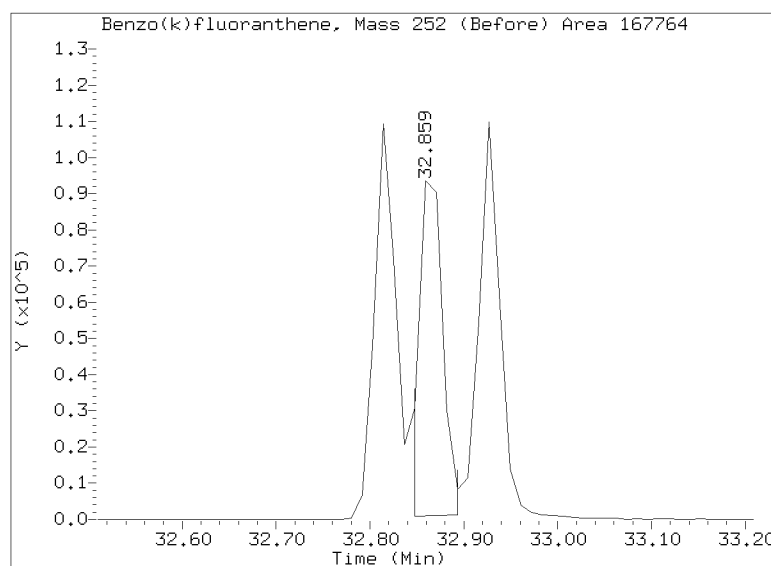
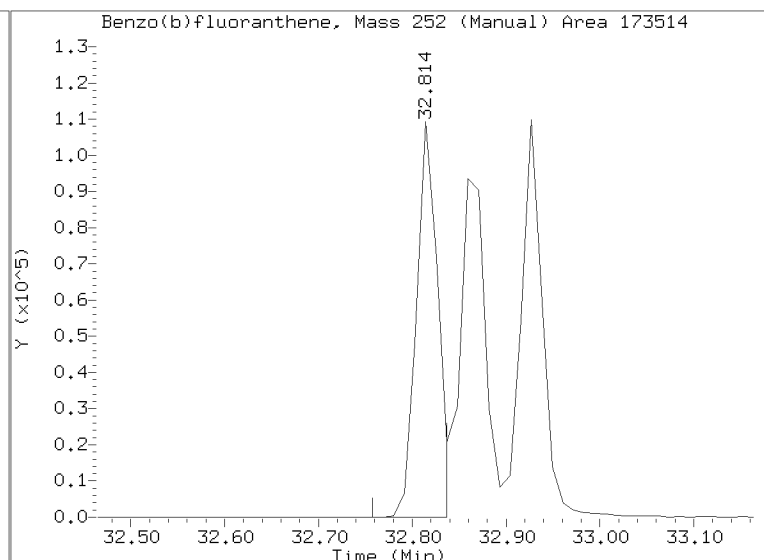
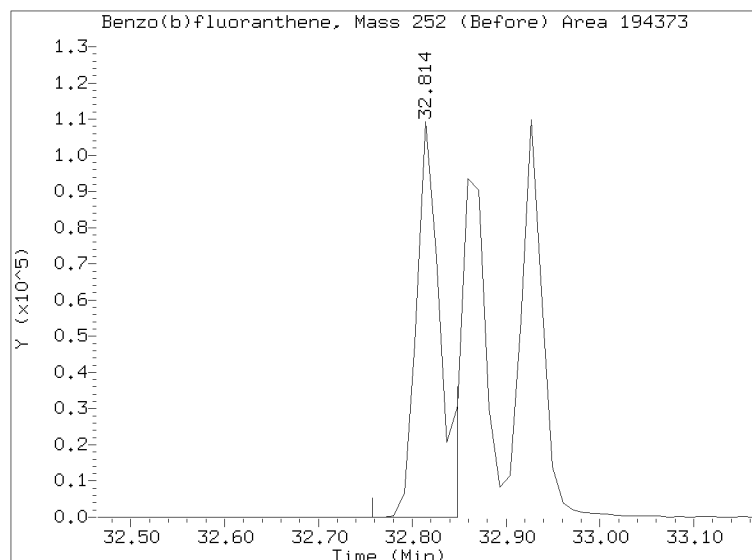
Quant Ion Manual Peak Adjustment Report

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Injection Date: 05-MAY-2023 21:39

Lab ID: SLE0096-ICV1 Client ID:

Report Date: 05/06/2023 08:27



Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230505.b

Instrument: nt14.i Date: 05-MAY-2023 Method: 20230505.b\ALKYLPNA.m

INITIAL CAL: 05-MAY-2023

Compound	%RSD or R^2

NO Q-FLAGS	

ICV CAL: NT1423050515.D 05-MAY-2023 21:39

Compound	%D

NO Q-FLAGS	



INITIAL CALIBRATION CHECK

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Instrument ID: NT14

Calibration: GE00024

Lab File ID: NT1423050529.D

Calibration Date: 05/05/2023

Sequence: SLE0096

Injection Date: 05/06/23

Lab Sample ID: SLE0096-ICV2

Injection Time: 08:53

Sequence Name: PAH 2.5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
trans-Decalin	A	2.5000	2.4	0.2142441	0.2072268		-3.3	+/-20
cis-Decalin	A	2.5000	2.4	0.1553110	0.1487029		-4.2	+/-20
Naphthalene	A	2.5000	2.4	2.1950510	2.0981420		-4.4	+/-20
1-Methylnaphthalene	A	2.5000	2.4	1.0931470	1.0335650		-5.4	+/-20
2-Methylnaphthalene	A	2.5000	2.4	1.0855960	1.0473100		-3.5	+/-20
Biphenyl	A	2.5000	2.4	1.5018170	1.4337860		-4.5	+/-20
2,6-Dimethylnaphthalene	A	2.5000	2.4	1.0689340	1.0435310		-2.4	+/-20
Acenaphthylene	A	2.5000	2.5	1.7851870	1.7842860		-0.04	+/-20
Acenaphthene	A	2.5000	2.4	1.1016480	1.0622640		-3.6	+/-20
Dibenzofuran	A	2.5000	2.4	1.4421	1.3934650		-3.4	+/-20
2,3,5-Trimethylnaphthalene	A	2.5000	2.4	0.9527605	0.9329141		-2.1	+/-20
Fluorene	A	2.5000	2.4	1.1554870	1.1228030		-2.8	+/-20
Benzo(b)thiophene	A	2.5000	2.4	1.6681460	1.5805580		-5.2	+/-20
Phenanthrene	A	2.5000	2.4	1.3309080	1.2978080		-2.5	+/-20
Anthracene	A	2.5000	2.5	1.2217170	1.2323700		0.9	+/-20
Carbazole	A	2.5000	2.3	0.9770692	1.0582610		-7.8	+/-20
1-Methylphenanthrene	A	2.5000	2.5	0.8583058	0.8511958		-0.8	+/-20
Fluoranthene	A	2.5000	2.5	1.2135600	1.2059140		-0.6	+/-20
Dibenzothiophene	A	2.5000	2.4	1.4158940	1.3841430		-2.2	+/-20
Pyrene	A	2.5000	2.5	1.2700040	1.2640730		-0.5	+/-20
Benzo(a)anthracene	A	2.5000	2.5	1.5678310	1.5435130		-1.6	+/-20
Chrysene	A	2.5000	2.5	1.5335800	1.5161430		-1.1	+/-20
Benzo(b)fluoranthene	A	2.5000	2.4	1.4626770	1.3946350		-4.6	+/-20
Benzo(j)fluoranthene	A	2.5000	2.5	1.3727050	1.3493280		-1.7	+/-20
Benzo(k)fluoranthene	A	2.5000	2.2	1.3456120	1.4347660		-12.7	+/-20
Benzofluoranthenes, Total	A	7.5000	7.5	1.3610640	1.3540140		-0.5	+/-20
Benzo(e)pyrene	A	2.5000	2.3	1.4147040	1.3203860		-6.7	+/-20
Benzo(a)pyrene	A	2.5000	2.7	1.1966100	1.2875240		7.6	+/-20
Indeno(1,2,3-cd)pyrene	A	2.5000	2.2	1.3107200	1.3926200		-10.7	+/-20
Dibenzo(a,h)anthracene	A	2.5000	2.3	1.0657830	1.1855170		-7.4	+/-20

* Values outside of QC limits



INITIAL CALIBRATION CHECK EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Instrument ID: NT14

Calibration: GE00024

Lab File ID: NT1423050529.D

Calibration Date: 05/05/2023

Sequence: SLE0096

Injection Date: 05/06/23

Lab Sample ID: SLE0096-ICV2

Injection Time: 08:53

Sequence Name: PAH 2.5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Benzo(g,h,i)perylene	A	2.5000	2.5	1.1791520	1.1851140		0.5	+/-20
Perylene	A	2.5000	2.5	1.3134480	1.3087550		-0.4	+/-20
Benzo(b)naphtho(2,1-d)thiophene	A	2.5000	2.5	0.8376187	0.8412736		0.4	+/-20
Naphthalene-d8	A	2.5000	2.35	1.9983150	1.8780710		-6.0	+/-20
Acenaphthene-d10	A	2.5000	2.41	0.8856004	0.8519974		-3.8	+/-20
Phenanthrene-d10	A	2.5000	2.36	1.1412560	1.0786370		-5.5	+/-20
Chrysene-d12	A	2.5000	2.45	1.0850860	1.0623660		-2.1	+/-20
Perylene-d12	A	2.5000	2.56	1.0467910	1.0709310		2.3	+/-20
Fluorene-d10	A	2.0000	2.0	67714.1700	1.0000		0.0	
Anthracene-d10	A	2.0000	2.0	82405.3300	1.0000		0.0	
Benzo(e)pyrene-d12	A	2.0000	2.0	49543.0000	1.0000		0.0	

* Values outside of QC limits

Data File: \\target\share\chem3\nt14,i\20230505.b\NT1423050529.D

Date : 06-May-2023 08:53

Client ID:

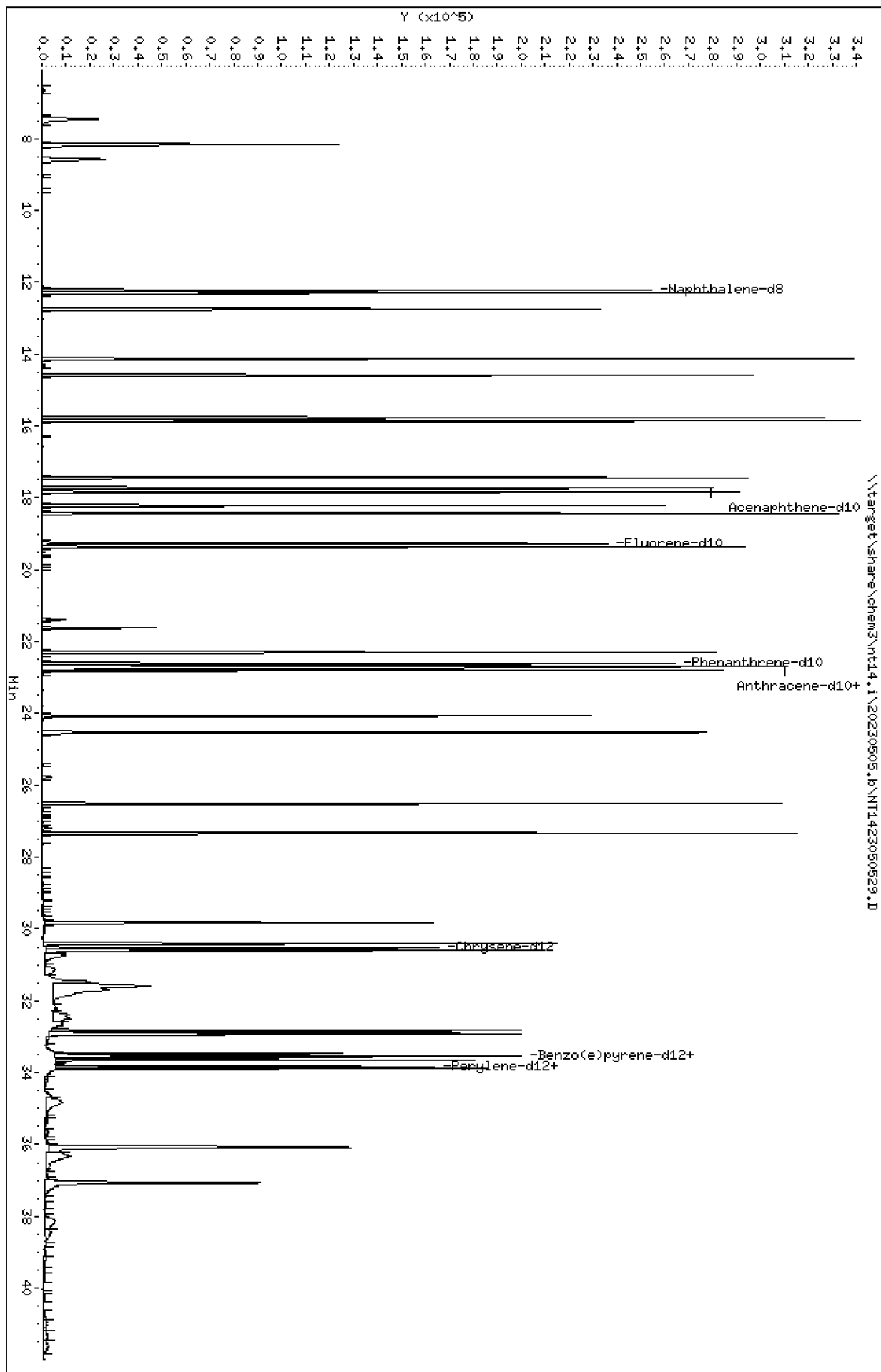
Sample Info: SLE0096-ICW2

Column phase: Rxi-17S11 MS

Instrument: nt14,i

Operator: VTS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230505.b\NT1423050529.D
Lab Smp Id: SLE0096-ICV2
Inj Date : 06-MAY-2023 08:53
Operator : VTS
Smp Info : SLE0096-ICV2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
Meth Date : 09-May-2023 10:50 van
Cal Date : 05-MAY-2023 15:12
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: VANS-201906

Inst ID: nt14.i
Quant Type: ISTD
Cal File: NT1423050507.D
Continuing Calibration Sample
Compound Sublist: TARGETS.sub

Compounds	QUANT	SIG						AMOUNTS	
			RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL	
	MASS						(ug/mL)	(ug/mL)	
=====	=====		=====	=====	=====	=====	=====	=====	
1 trans-Decalin	138		7.449	7.449	(0.387)	34768	2.50000	2.418	
2 cis-Decalin	138		8.578	8.578	(0.445)	24949	2.50000	2.394	
\$ 6 Naphthalene-d8	136		12.220	12.220	(0.634)	315098	2.50000	2.350	
7 Naphthalene	128		12.290	12.290	(0.638)	352021	2.50000	2.390	
12 Benzo(b)thiophene	134		12.745	12.745	(0.662)	265182	2.50000	2.369	
16 2-Methylnaphthalene	141		14.129	14.129	(0.733)	175715	2.50000	2.412	
17 1-methylnaphthalene	141		14.580	14.580	(0.757)	173409	2.50000	2.364	
18 Biphenyl	154		15.767	15.767	(0.818)	240557	2.50000	2.387	
19 2,6-Dimethylnaphthalene	156		15.855	15.855	(0.823)	175081	2.50000	2.441	
20 Acenaphthylene	152		17.437	17.437	(0.905)	299363	2.50000	2.499	
\$ 21 Acenaphthene-d10	164		17.723	17.723	(0.920)	142946	2.50000	2.405	
22 Acenaphthene	153		17.833	17.833	(0.926)	178224	2.50000	2.411	
23 Dibenzofuran	168		18.218	18.218	(0.946)	233792	2.50000	2.416	
24 1,6,7-Trimethylnaphthalene	170		18.437	18.437	(0.957)	156522	2.50000	2.448	
* 25 Fluorene-d10	176		19.263	19.263	(1.000)	134222	2.00000		
26 Fluorene	166		19.365	19.365	(1.005)	188381	2.50000	2.429	
30 Dibenzothiophene	184		22.304	22.304	(1.158)	232228	2.50000	2.444	
\$ 35 Phenanthrene-d10	188		22.617	22.617	(0.995)	221223	2.50000	2.363	
36 Phenanthrene	178		22.698	22.698	(0.998)	266174	2.50000	2.438	
* 250 Anthracene-d10	188		22.733	22.733	(1.000)	164076	2.00000		
37 Anthracene	178		22.802	22.802	(1.003)	252753	2.50000	2.522	
42 Carbazole	167		24.077	24.077	(1.059)	217044	2.50000	2.304	
43 1-Methylphenanthrene	192		24.541	24.541	(1.080)	174576	2.50000	2.479	
44 Fluoranthene	202		26.511	26.511	(1.166)	247327	2.50000	2.484	
46 Pyrene	202		27.346	27.346	(1.203)	259255	2.50000	2.488	
51 Naphthobenzothiophene	234		29.831	29.831	(1.312)	172541	2.50000	2.511	
55 Benzo(a)anthracene	228		30.404	30.404	(0.908)	195347	2.50000	2.461	
\$ 56 Chrysene-d12	240		30.527	30.527	(0.912)	134453	2.50000	2.448	
57 Chrysene	228		30.606	30.606	(0.914)	191883	2.50000	2.472	
62 Benzo(b)fluoranthene	252		32.814	32.814	(0.980)	176505	2.50000	2.384 (M)	
63 Benzo(k)fluoranthene	252		32.870	32.870	(0.982)	181584	2.50000	2.183 (M)	
293 Benzo(j)fluoranthene	252		32.927	32.927	(0.984)	170771	2.50000	2.457	
246 Total Benzofluoranthenes	252		32.814	32.814	(0.980)	514092	7.50000	7.461 (M)	

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE		CAL-AMT	ON-COL
=====	=====	=====	=====	=====	=====		(ug/mL)	(ug/mL)
* 251 Benzo(e)pyrene-d12	264	33.478	33.478	(1.000)	101248		2.00000	
64 Benzo(e)pyrene	252	33.546	33.546	(1.002)	167108		2.50000	2.333
66 Benzo(a)pyrene	252	33.647	33.647	(1.005)	162949		2.50000	2.690
\$ 67 Perylene-d12	264	33.828	33.828	(1.010)	135537		2.50000	2.558
68 Perylene	252	33.884	33.884	(1.012)	165636		2.50000	2.491
69 Indeno(1,2,3-cd)pyrene	276	36.091	36.091	(1.078)	176250		2.50000	2.233 (M)
70 Dibenzo(a,h)anthracene	278	36.058	36.058	(1.077)	150039		2.50000	2.314
74 Benzo(g,h,i)perylene	276	37.060	37.060	(1.107)	149988		2.50000	2.513

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 05-MAY-2023
 Lab File ID: NT1423050529.D Calibration Time: 21:39
 Lab Smp Id: SLE0096-ICV2
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	134222	67111	268444	134222	0.00
250 Anthracene-d10	164076	82038	328152	164076	0.00
251 Benzo(e)pyrene-d1	101248	50624	202496	101248	0.00

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	19.26	18.76	19.76	19.26	0.00
250 Anthracene-d10	22.73	22.23	23.23	22.73	0.00
251 Benzo(e)pyrene-d1	33.48	32.98	33.98	33.48	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 - NT1423050529.D

Lab ID: SLE0096-ICV2

nt14.i, 20230505.b\ALKYLPNA.m, 06-MAY-2023 08:53

RT	CO-ELUTION COMPOUNDS
----	----------------------

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

On Column LOD for nt14.i, 20230505.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

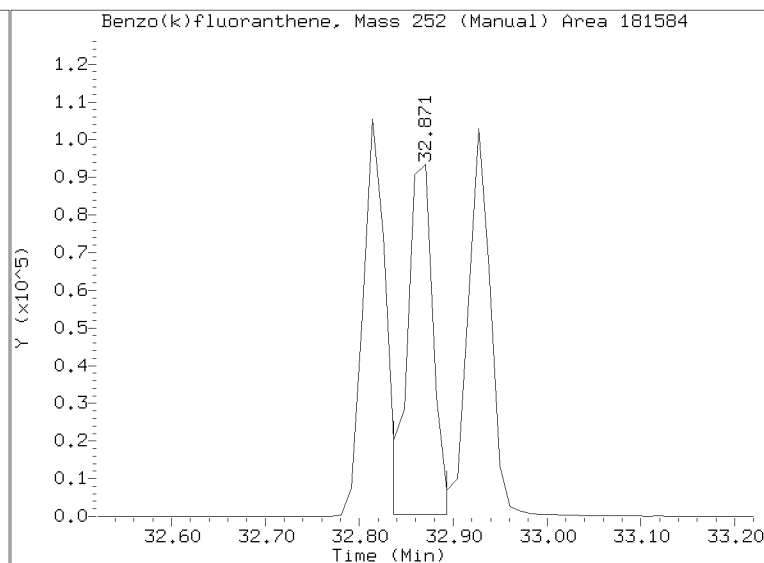
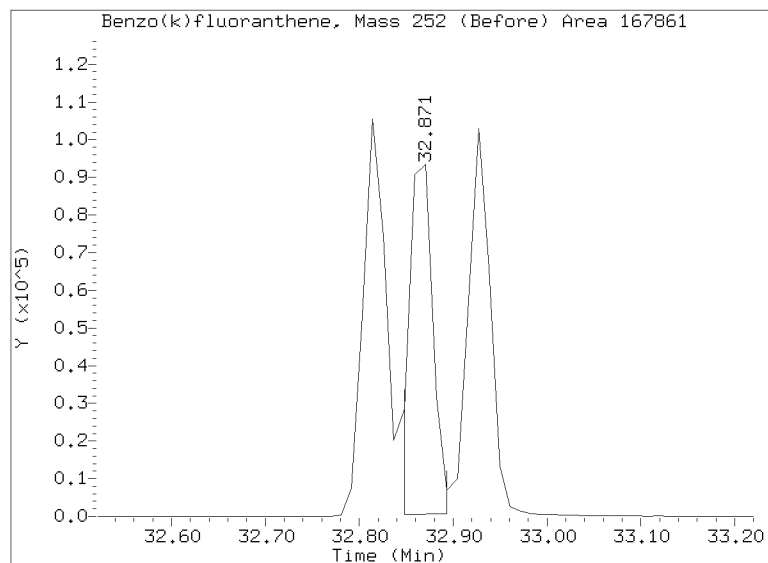
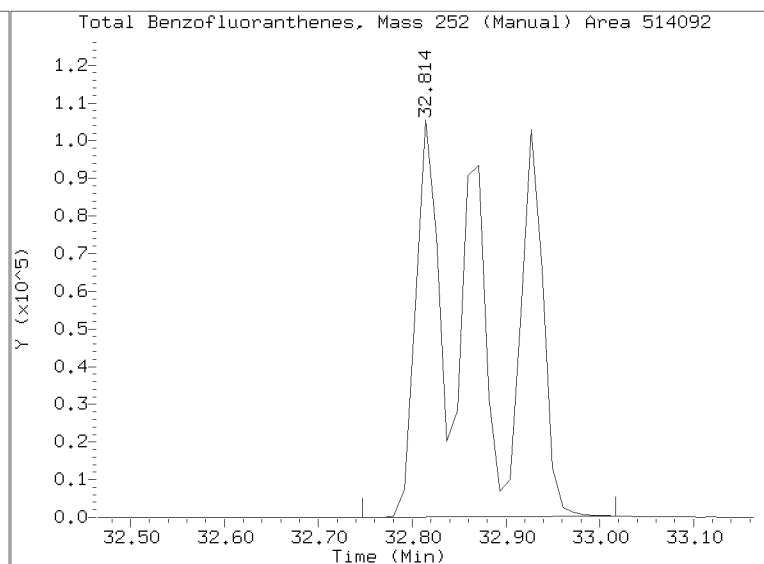
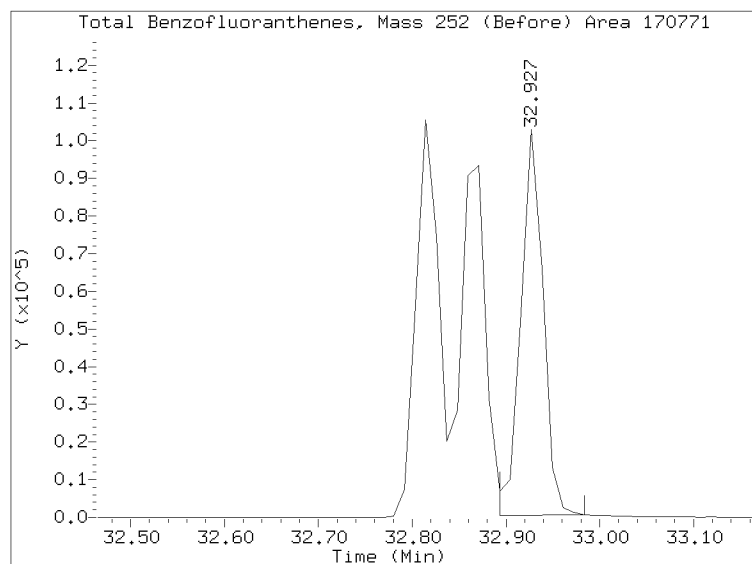
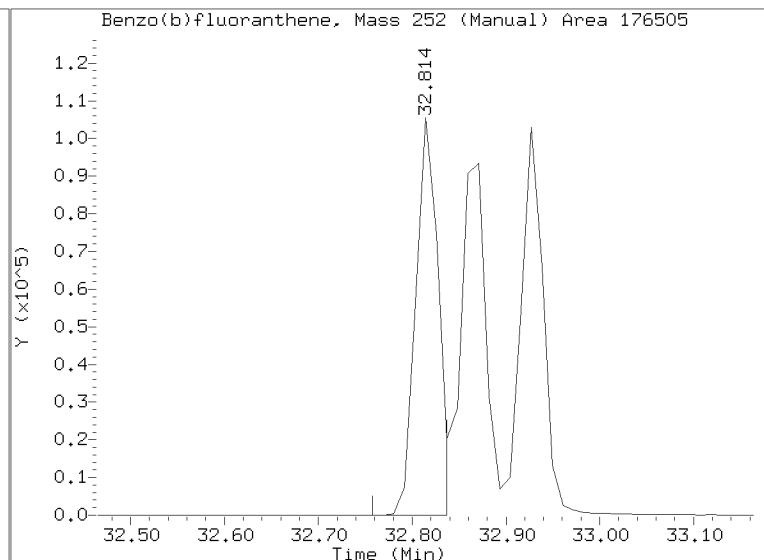
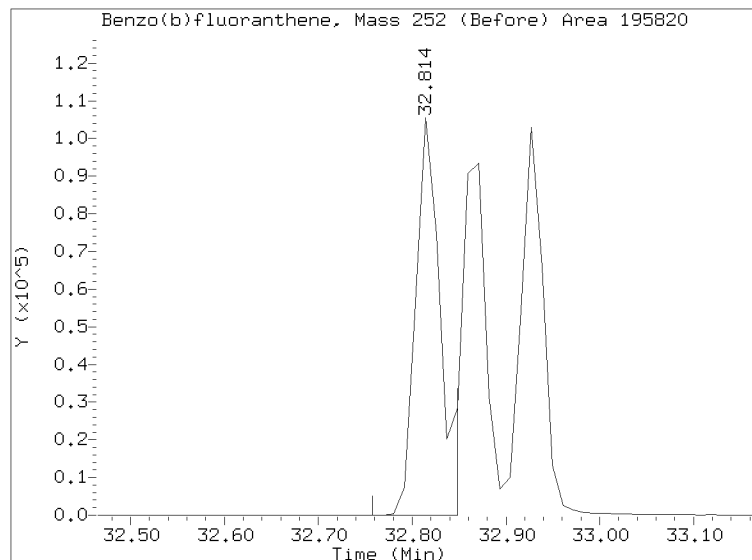
Quant Ion Manual Peak Adjustment Report

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Injection Date: 06-MAY-2023 08:53

Lab ID: SLE0096-ICV2 Client ID:

Report Date: 05/09/2023 10:50



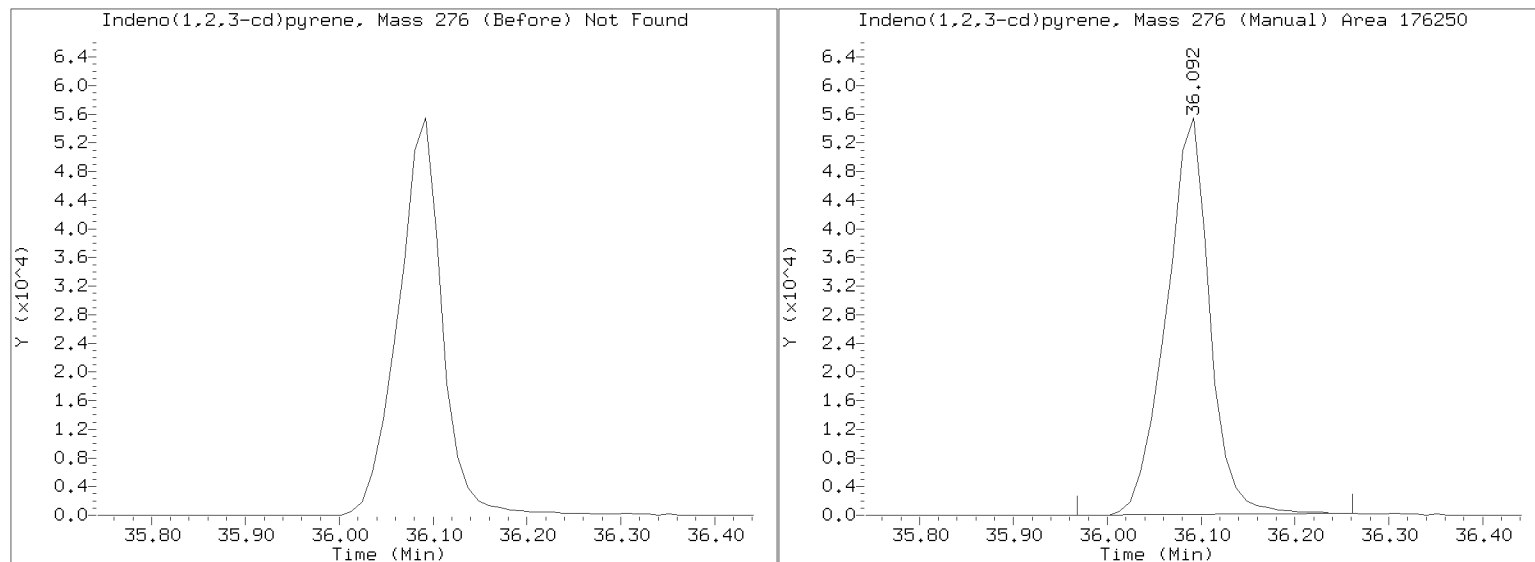
Quant Ion Manual Peak Adjustment Report

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Injection Date: 06-MAY-2023 08:53

Lab ID: SLE0096-ICV2 Client ID:

Report Date: 05/09/2023 10:50



Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230505.b

Instrument: nt14.i Date: 06-MAY-2023 Method: 20230505.b\ALKYLPNA.m

INITIAL CAL: 05-MAY-2023

Compound	%RSD or R^2

NO Q-FLAGS	

ICV CAL: NT1423050529.D 06-MAY-2023 08:53

Compound	%D

NO Q-FLAGS	



INITIAL CALIBRATION CHECK

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Instrument ID: NT14

Calibration: GE00024

Lab File ID: NT1423050556.D

Calibration Date: 05/05/2023

Sequence: SLE0096

Injection Date: 05/07/23

Lab Sample ID: SLE0096-ICV4

Injection Time: 06:53

Sequence Name: Initial Cal Check

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
trans-Decalin	A	2.5000	2.4	0.2142441	0.2039954		-4.8	+/-20
cis-Decalin	A	2.5000	2.4	0.1553110	0.1482916		-4.5	+/-20
Naphthalene	A	2.5000	2.3	2.1950510	2.0021020		-8.8	+/-20
1-Methylnaphthalene	A	2.5000	2.3	1.0931470	1.0177690		-6.9	+/-20
2-Methylnaphthalene	A	2.5000	2.3	1.0855960	1.0124970		-6.7	+/-20
Biphenyl	A	2.5000	2.3	1.5018170	1.4057660		-6.4	+/-20
2,6-Dimethylnaphthalene	A	2.5000	2.4	1.0689340	1.0277620		-3.8	+/-20
Acenaphthylene	A	2.5000	2.5	1.7851870	1.7969660		0.6	+/-20
Acenaphthene	A	2.5000	2.4	1.1016480	1.0613570		-3.6	+/-20
Dibenzofuran	A	2.5000	2.4	1.4421	1.4112300		-2.2	+/-20
2,3,5-Trimethylnaphthalene	A	2.5000	2.4	0.9527605	0.9220378		-3.2	+/-20
Fluorene	A	2.5000	2.5	1.1554870	1.1448400		-0.9	+/-20
Benzo(b)thiophene	A	2.5000	2.3	1.6681460	1.5198590		-8.9	+/-20
Phenanthrene	A	2.5000	2.4	1.3309080	1.2807710		-3.8	+/-20
Anthracene	A	2.5000	2.5	1.2217170	1.2402150		1.5	+/-20
Carbazole	A	2.5000	2.4	0.9770692	1.1188060		-2.6	+/-20
1-Methylphenanthrene	A	2.5000	2.5	0.8583058	0.8577891		-0.08	+/-20
Fluoranthene	A	2.5000	2.5	1.2135600	1.2373050		2.0	+/-20
Dibenzothiophene	A	2.5000	2.5	1.4158940	1.4128150		-0.2	+/-20
Pyrene	A	2.5000	2.5	1.2700040	1.2854240		1.2	+/-20
Benzo(a)anthracene	A	2.5000	2.6	1.5678310	1.6006080		2.1	+/-20
Chrysene	A	2.5000	2.5	1.5335800	1.5481440		1.0	+/-20
Benzo(b)fluoranthene	A	2.5000	2.7	1.4626770	1.5534120		6.2	+/-20
Benzo(j)fluoranthene	A	2.5000	2.4	1.3727050	1.3034290		-5.0	+/-20
Benzo(k)fluoranthene	A	2.5000	2.1	1.3456120	1.3751080		-16.3	+/-20
Benzofluoranthenes, Total	A	7.5000	7.7	1.3610640	1.3949720		2.5	+/-20
Benzo(e)pyrene	A	2.5000	2.4	1.4147040	1.3385		-5.4	+/-20
Benzo(a)pyrene	A	2.5000	2.7	1.1966100	1.3016900		8.8	+/-20
Indeno(1,2,3-cd)pyrene	A	2.5000	2.2	1.3107200	1.3714860		-12.0	+/-20
Dibenzo(a,h)anthracene	A	2.5000	2.2	1.0657830	1.1400770		-11.0	+/-20

* Values outside of QC limits



INITIAL CALIBRATION CHECK EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Instrument ID: NT14

Calibration: GE00024

Lab File ID: NT1423050556.D

Calibration Date: 05/05/2023

Sequence: SLE0096

Injection Date: 05/07/23

Lab Sample ID: SLE0096-ICV4

Injection Time: 06:53

Sequence Name: Initial Cal Check

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Benzo(g,h,i)perylene	A	2.5000	2.4	1.1791520	1.1425		-3.1	+/-20
Perylene	A	2.5000	2.5	1.3134480	1.3340760		1.6	+/-20
Benzo(b)naphtho(2,1-d)thiophene	A	2.5000	2.6	0.8376187	0.8741192		4.4	+/-20
Naphthalene-d8	A	2.5000	2.28	1.9983150	1.8233660		-8.8	+/-20
Acenaphthene-d10	A	2.5000	2.41	0.8856004	0.8522555		-3.8	+/-20
Phenanthrene-d10	A	2.5000	2.37	1.1412560	1.0824070		-5.2	+/-20
Chrysene-d12	A	2.5000	2.53	1.0850860	1.0965290		1.0	+/-20
Perylene-d12	A	2.5000	2.57	1.0467910	1.0748820		2.7	+/-20
Fluorene-d10	A	2.0000	2.0	67714.1700	1.0000		0.0	
Anthracene-d10	A	2.0000	2.0	82405.3300	1.0000		0.0	
Benzo(e)pyrene-d12	A	2.0000	2.0	49543.0000	1.0000		0.0	

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230505.b\NT1423050556.D

Date : 07-May-2023 06:53

Client ID:

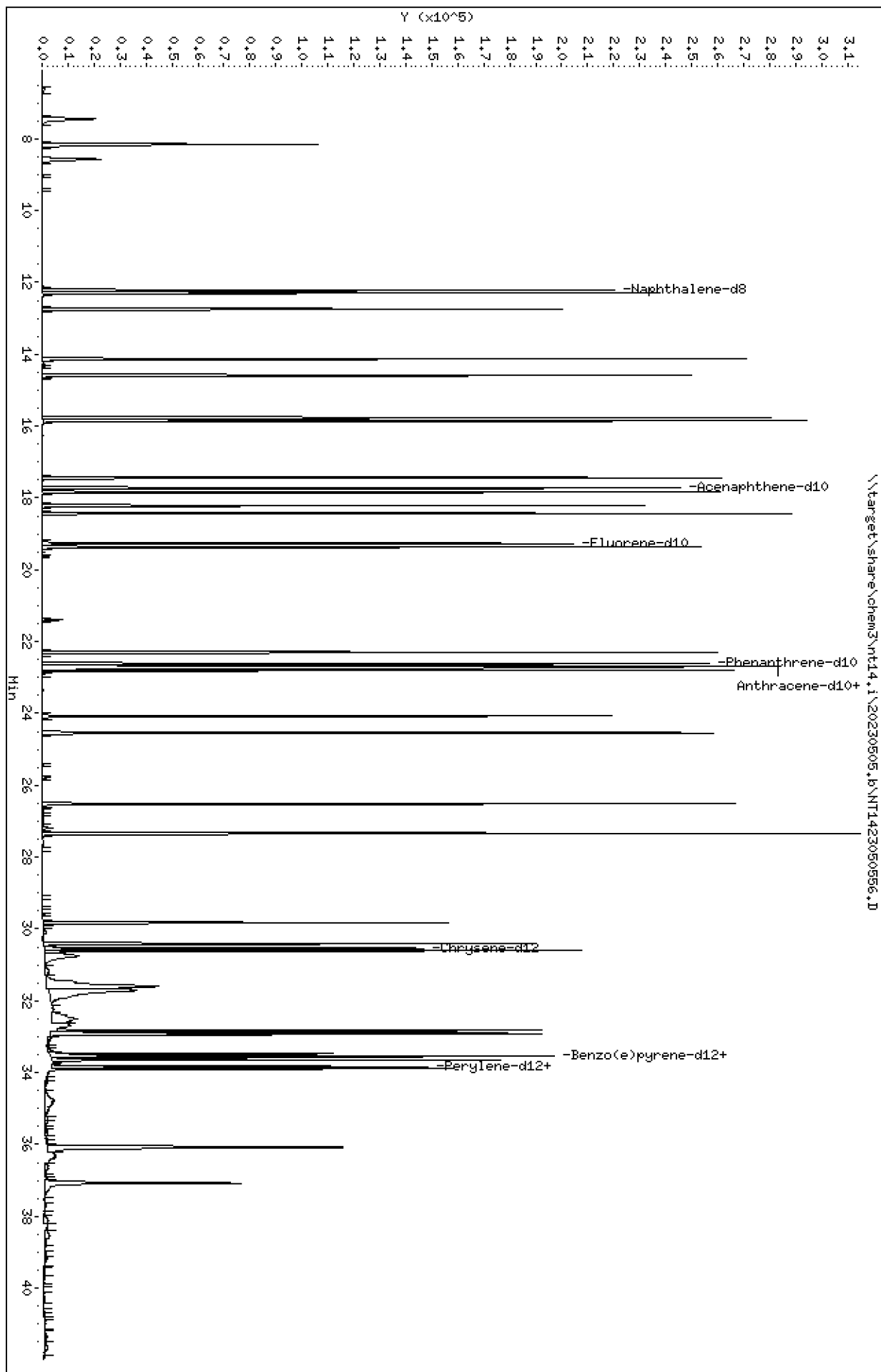
Sample Info: SLE0096-ICV4

Column phase: Rxi-17S11 MS

Instrument: nt14.i

Operator: VTS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230505.b\NT1423050556.D
Lab Smp Id: SLE0096-ICV4
Inj Date : 07-MAY-2023 06:53
Operator : VTS
Smp Info : SLE0096-ICV4
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
Meth Date : 09-May-2023 14:29 van
Cal Date : 05-MAY-2023 15:12
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: VANS-201906

Inst ID: nt14.i

Quant Type: ISTD
Cal File: NT1423050507.D
Continuing Calibration Sample
Compound Sublist: TARGETS.sub

Compounds	QUANT	SIG						AMOUNTS	
			RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL	
	MASS						(ug/mL)	(ug/mL)	
=====	=====		=====	=====	=====	=====	=====	=====	
1 trans-Decalin	138		7.449	7.449	(0.387)	30762	2.50000	2.380	
2 cis-Decalin	138		8.578	8.578	(0.445)	22362	2.50000	2.387	
\$ 6 Naphthalene-d8	136		12.219	12.219	(0.634)	274959	2.50000	2.281	
7 Naphthalene	128		12.290	12.290	(0.638)	301912	2.50000	2.280	
12 Benzo(b)thiophene	134		12.745	12.745	(0.662)	229191	2.50000	2.278	
16 2-Methylnaphthalene	141		14.129	14.129	(0.733)	152682	2.50000	2.332	
17 1-methylnaphthalene	141		14.580	14.580	(0.757)	153477	2.50000	2.328	
18 Biphenyl	154		15.767	15.767	(0.818)	211986	2.50000	2.340	
19 2,6-Dimethylnaphthalene	156		15.855	15.855	(0.823)	154984	2.50000	2.404	
20 Acenaphthylene	152		17.437	17.437	(0.905)	270978	2.50000	2.516	
\$ 21 Acenaphthene-d10	164		17.723	17.723	(0.920)	128518	2.50000	2.406	
22 Acenaphthene	153		17.833	17.833	(0.926)	160050	2.50000	2.409	
23 Dibenzofuran	168		18.217	18.217	(0.946)	212810	2.50000	2.446	
24 1,6,7-Trimethylnaphthalene	170		18.437	18.437	(0.957)	139041	2.50000	2.419	
* 25 Fluorene-d10	176		19.263	19.263	(1.000)	120638	2.00000		
26 Fluorene	166		19.365	19.365	(1.005)	172639	2.50000	2.477	
30 Dibenzothiophene	184		22.304	22.304	(1.158)	213049	2.50000	2.495	
\$ 35 Phenanthrene-d10	188		22.617	22.617	(0.995)	204947	2.50000	2.371	
36 Phenanthrene	178		22.698	22.698	(0.998)	242506	2.50000	2.406	
* 250 Anthracene-d10	188		22.733	22.733	(1.000)	151475	2.00000		
37 Anthracene	178		22.802	22.802	(1.003)	234827	2.50000	2.538	
42 Carbazole	167		24.077	24.077	(1.059)	211839	2.50000	2.435	
43 1-Methylphenanthrene	192		24.541	24.541	(1.080)	162417	2.50000	2.498	
44 Fluoranthene	202		26.511	26.511	(1.166)	234276	2.50000	2.549	
46 Pyrene	202		27.346	27.346	(1.203)	243387	2.50000	2.530	
51 Naphthobenzothiophene	234		29.831	29.831	(1.312)	165509	2.50000	2.609	
55 Benzo(a)anthracene	228		30.403	30.403	(0.908)	189582	2.50000	2.552	
\$ 56 Chrysene-d12	240		30.539	30.539	(0.912)	129877	2.50000	2.526	
57 Chrysene	228		30.606	30.606	(0.914)	183368	2.50000	2.524	
62 Benzo(b)fluoranthene	252		32.814	32.814	(0.980)	183992	2.50000	2.655	
63 Benzo(k)fluoranthene	252		32.870	32.870	(0.982)	162873	2.50000	2.092	
293 Benzo(j)fluoranthene	252		32.926	32.926	(0.984)	154383	2.50000	2.374 (M)	
246 Total Benzofluoranthenes	252		32.814	32.814	(0.980)	495677	7.50000	7.687 (M)	

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE		CAL-AMT	ON-COL
=====	=====	=====	=====	=====	=====		=====	=====
* 251 Benzo(e)pyrene-d12	264	33.478	33.478	(1.000)	94755		2.00000	
64 Benzo(e)pyrene	252	33.546	33.546	(1.002)	158537		2.50000	2.365
66 Benzo(a)pyrene	252	33.647	33.647	(1.005)	154177		2.50000	2.720
\$ 67 Perylene-d12	264	33.827	33.827	(1.010)	127313		2.50000	2.567
68 Perylene	252	33.895	33.895	(1.012)	158013		2.50000	2.539
69 Indeno(1,2,3-cd)pyrene	276	36.091	36.091	(1.078)	162444		2.50000	2.199
70 Dibenzo(a,h)anthracene	278	36.058	36.058	(1.077)	135035		2.50000	2.225 (M)
74 Benzo(g,h,i)perylene	276	37.071	37.071	(1.107)	135322		2.50000	2.422

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 06-MAY-2023
 Lab File ID: NT1423050556.D Calibration Time: 19:40
 Lab Smp Id: SLE0096-ICV4
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	115460	57730	230920	120638	4.48
250 Anthracene-d10	141885	70943	283770	151475	6.76
251 Benzo(e)pyrene-d1	79251	39626	158502	94755	19.56

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	19.26	18.76	19.76	19.26	-0.00
250 Anthracene-d10	22.73	22.23	23.23	22.73	-0.00
251 Benzo(e)pyrene-d1	33.48	32.98	33.98	33.48	-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 - NT1423050556.D

Lab ID: SLE0096-ICV4

nt14.i, 20230505.b\ALKYLPNA.m, 07-MAY-2023 06:53

RT	CO-ELUTION COMPOUNDS
----	----------------------

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

On Column LOD for nt14.i, 20230505.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

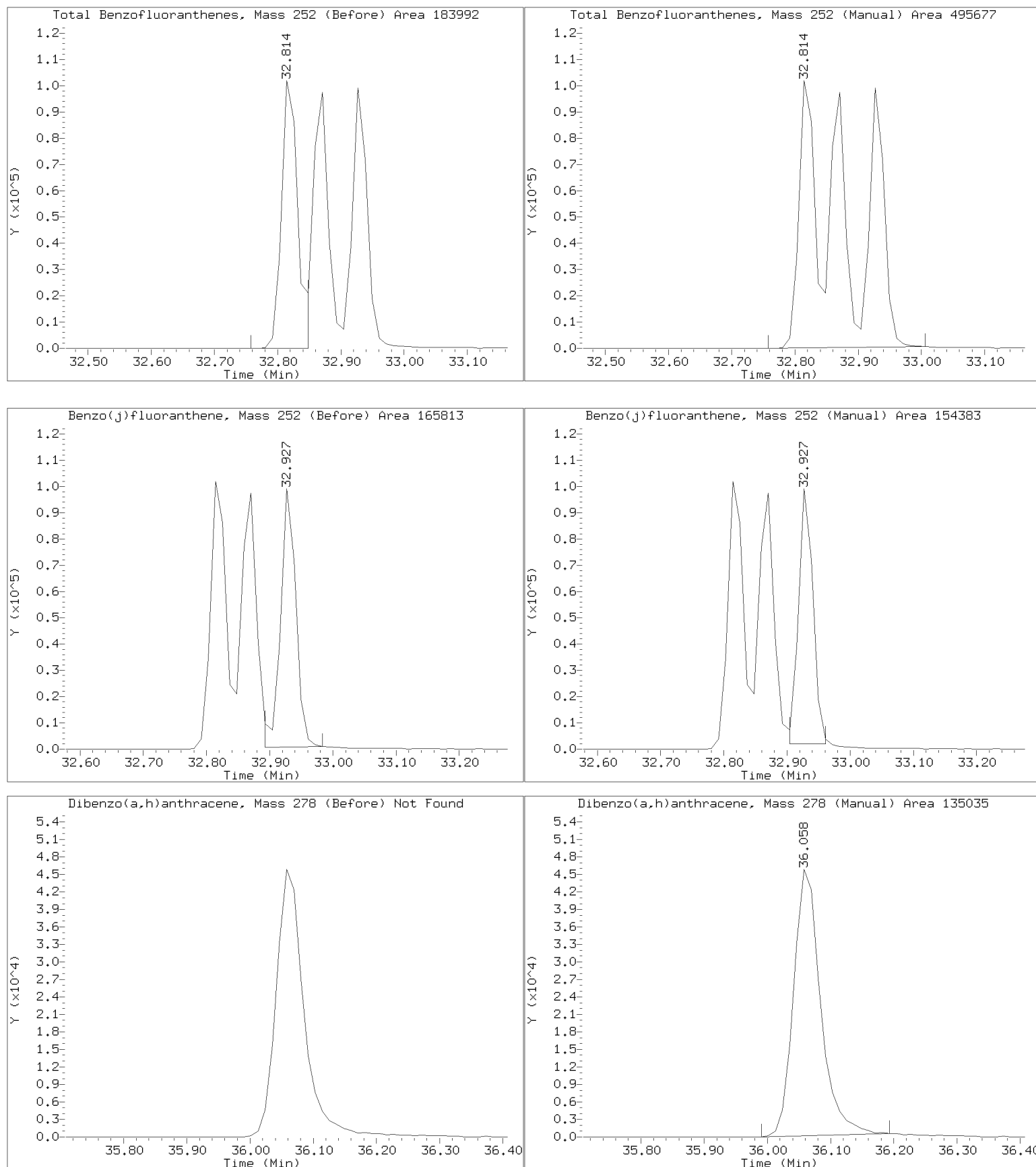
Quant Ion Manual Peak Adjustment Report

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Injection Date: 07-MAY-2023 06:53

Lab ID: SLE0096-ICV4 Client ID:

Report Date: 05/09/2023 14:29



Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230505.b

Instrument: nt14.i Date: 07-MAY-2023 Method: 20230505.b\ALKYLPNA.m

INITIAL CAL: 05-MAY-2023

Compound	%RSD or R^2

NO Q-FLAGS	

ICV CAL: NT1423050556.D 07-MAY-2023 06:53

Compound	%D

NO Q-FLAGS	



INITIAL CALIBRATION CHECK

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor OEA, LLC

Project: Gasco Hydrocarbon Investigation

Instrument ID: NT14

Calibration: GE00024

Lab File ID: NT1405272305.D

Calibration Date: 05/05/2023

Sequence: SLE0443

Injection Date: 05/27/23

Lab Sample ID: SLE0443-ICV1

Injection Time: 13:31

Sequence Name: PAH 2.5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
trans-Decalin	A	2.5000	2.56	0.2142441	0.2197279		2.6	+/-20
cis-Decalin	A	2.5000	2.56	0.1553110	0.1590150		2.4	+/-20
Naphthalene	A	2.5000	2.44	2.1950510	2.1400420		-2.5	+/-20
1-Methylnaphthalene	A	2.5000	2.36	1.0931470	1.0302850		-5.8	+/-20
2-Methylnaphthalene	A	2.5000	2.42	1.0855960	1.0491900		-3.4	+/-20
Biphenyl	A	2.5000	2.40	1.5018170	1.4386830		-4.2	+/-20
2,6-Dimethylnaphthalene	A	2.5000	2.39	1.0689340	1.0224740		-4.4	+/-20
Acenaphthylene	A	2.5000	2.45	1.7851870	1.7495450		-2.0	+/-20
Acenaphthene	A	2.5000	2.42	1.1016480	1.0677400		-3.1	+/-20
Dibenzofuran	A	2.5000	2.50	1.4421	1.4396350		-0.2	+/-20
2,3,5-Trimethylnaphthalene	A	2.5000	2.46	0.9527605	0.9357569		-1.8	+/-20
Fluorene	A	2.5000	2.43	1.1554870	1.1238200		-2.8	+/-20
Benzo(b)thiophene	A	2.5000	2.44	1.6681460	1.6252970		-2.6	+/-20
Phenanthrene	A	2.5000	2.43	1.3309080	1.2950110		-2.7	+/-20
Anthracene	A	2.5000	2.49	1.2217170	1.2188990		-0.2	+/-20
Carbazole	A	2.5000	2.39	0.9770692	1.0970650		-4.5	+/-20
1-Methylphenanthrene	A	2.5000	2.43	0.8583058	0.8337481		-2.9	+/-20
Fluoranthene	A	2.5000	2.41	1.2135600	1.1685250		-3.7	+/-20
Dibenzothiophene	A	2.5000	2.46	1.4158940	1.3913370		-1.7	+/-20
Pyrene	A	2.5000	2.41	1.2700040	1.2228300		-3.7	+/-20
Benzo(a)anthracene	A	2.5000	2.50	1.5678310	1.5646090		-0.2	+/-20
Chrysene	A	2.5000	2.52	1.5335800	1.5460190		0.8	+/-20
Benzo(b)fluoranthene	A	2.5000	2.20	1.4626770	1.2884480		-11.9	+/-20
Benzo(j)fluoranthene	A	2.5000	2.87	1.3727050	1.5762560		14.8	+/-20
Benzo(k)fluoranthene	A	2.5000	2.29	1.3456120	1.5022360		-8.6	+/-20
Benzo(a)fluoranthene, Total	A	7.5000	7.45	1.3610640	1.3524320		-0.6	+/-20
Benzo(e)pyrene	A	2.5000	2.33	1.4147040	1.3155230		-7.0	+/-20
Benzo(a)pyrene	A	2.5000	2.48	1.1966100	1.1878100		-0.7	+/-20
Indeno(1,2,3-cd)pyrene	A	2.5000	1.88	1.3107200	1.1718140		-24.8	+/-20 *
Dibenzo(a,h)anthracene	A	2.5000	1.75	1.0657830	0.8978914		-29.9	+/-20 *

* Values outside of QC limits



INITIAL CALIBRATION CHECK EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Instrument ID: NT14

Calibration: GE00024

Lab File ID: NT1405272305.D

Calibration Date: 05/05/2023

Sequence: SLE0443

Injection Date: 05/27/23

Lab Sample ID: SLE0443-ICV1

Injection Time: 13:31

Sequence Name: PAH 2.5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Benzo(g,h,i)perylene	A	2.5000	2.32	1.1791520	1.0951660		-7.1	+/-20
Perylene	A	2.5000	2.44	1.3134480	1.2822680		-2.4	+/-20
Benzo(b)naphtho(2,1-d)thiophene	A	2.5000	2.37	0.8376187	0.7941493		-5.2	+/-20
Naphthalene-d8	A	2.5000	2.44	1.9983150	1.9515590		-2.3	
Acenaphthene-d10	A	2.5000	2.46	0.8856004	0.8701190		-1.8	
Phenanthrene-d10	A	2.5000	2.44	1.1412560	1.1133040		-2.4	
Chrysene-d12	A	2.5000	2.55	1.0850860	1.1086360		2.2	
Perylene-d12	A	2.5000	2.56	1.0467910	1.0709900		2.3	
Fluorene-d10	A	2.0000	2.00	67714.1700	1.0000		0.0	
Anthracene-d10	A	2.0000	2.00	82405.3300	1.0000		0.0	
Benzo(e)pyrene-d12	A	2.0000	2.00	49543.0000	1.0000		0.0	

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt14,i\20230527,b\NT1405272305.D

Date : 27-May-2023 13:31

Client ID:

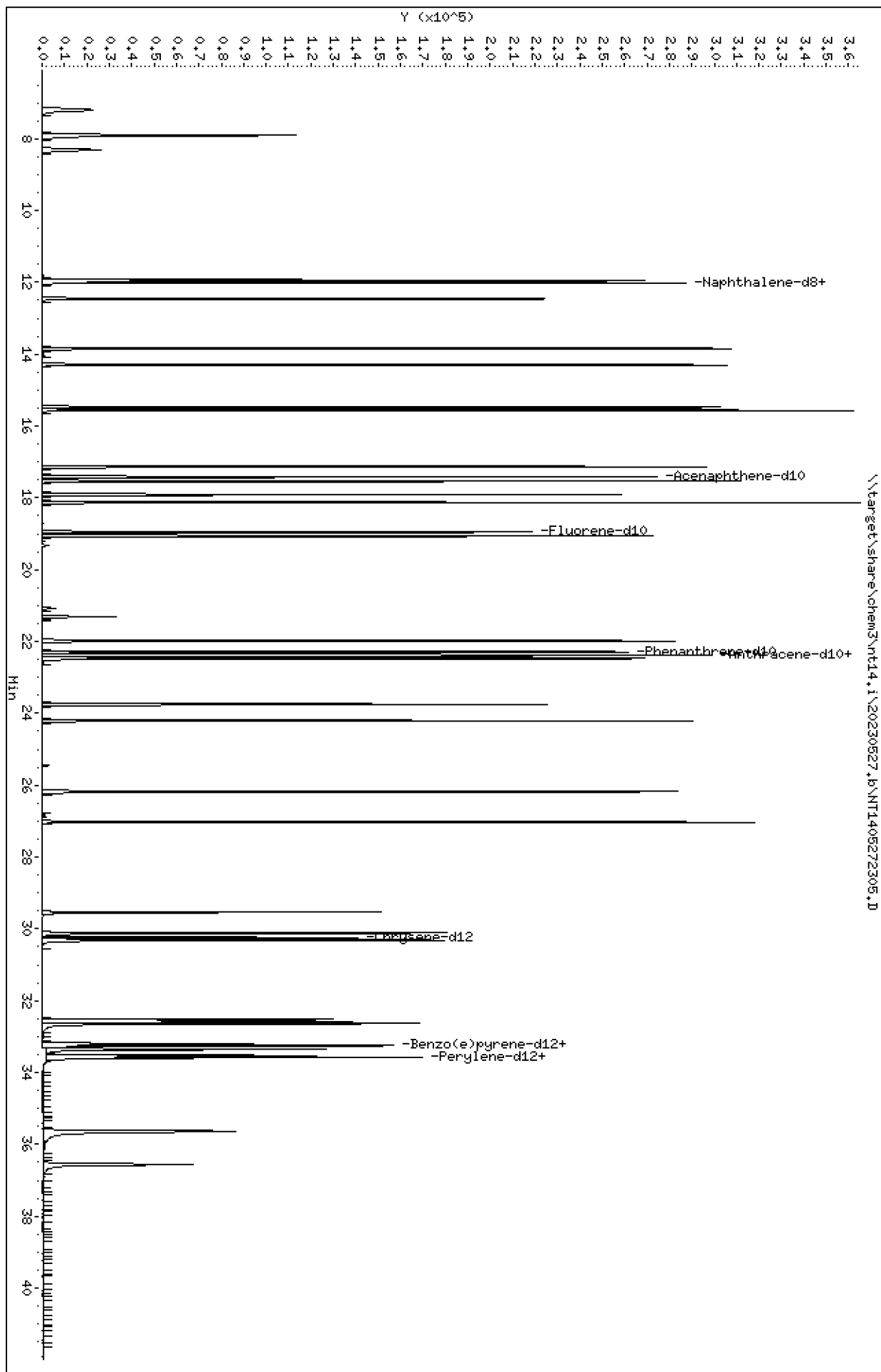
Sample Info: SLE0443-ICW1

Column phase: Rxi-17S11 MS

Instrument: nt14,i

Operator: VTS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230527.b\NT1405272305.D
Lab Smp Id: SLE0443-ICV1
Inj Date : 27-MAY-2023 13:31
Operator : VTS
Smp Info : SLE0443-ICV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230527.b\ALKYLPNA.m
Meth Date : 30-May-2023 16:47 deenayd Quant Type: ISTD
Cal Date : 05-MAY-2023 15:12 Cal File: NT1423050507.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: DEENAY-201905

Compounds	QUANT	SIG						AMOUNTS	
			MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT	ON-COL
								(ug/mL)	(ug/mL)
1 trans-Decalin	138		7.203	7.203	(0.380)		37610	2.50000	2.564
2 cis-Decalin	138		8.319	8.319	(0.439)		27218	2.50000	2.560
\$ 6 Naphthalene-d8	136		11.939	11.939	(0.630)		334041	2.50000	2.442
7 Naphthalene	128		12.006	12.006	(0.634)		366303	2.50000	2.437
12 Benzo(b)thiophene	134		12.451	12.451	(0.657)		278196	2.50000	2.436
16 2-Methylnaphthalene	141		13.847	13.847	(0.731)		179586	2.50000	2.416
17 1-methylnaphthalene	141		14.297	14.297	(0.754)		176350	2.50000	2.356
18 Biphenyl	154		15.473	15.473	(0.817)		246254	2.50000	2.395
19 2,6-Dimethylnaphthalene	156		15.561	15.561	(0.821)		175013	2.50000	2.391
20 Acenaphthylene	152		17.133	17.133	(0.904)		299463	2.50000	2.450
\$ 21 Acenaphthene-d10	164		17.419	17.419	(0.919)		148935	2.50000	2.456
22 Acenaphthene	153		17.528	17.528	(0.925)		182761	2.50000	2.423
23 Dibenzofuran	168		17.913	17.913	(0.945)		246417	2.50000	2.496
24 1,6,7-Trimethylnaphthalene	170		18.133	18.133	(0.957)		160170	2.50000	2.455
* 25 Fluorene-d10	176		18.950	18.950	(1.000)		136933	2.00000	
26 Fluorene	166		19.064	19.064	(1.006)		192360	2.50000	2.431
30 Dibenzothiophene	184		21.981	21.981	(1.160)		238150	2.50000	2.457
\$ 35 Phenanthrene-d10	188		22.294	22.294	(0.995)		233098	2.50000	2.439
36 Phenanthrene	178		22.375	22.375	(0.998)		271143	2.50000	2.433
* 250 Anthracene-d10	188		22.410	22.410	(1.000)		167500	2.00000	
37 Anthracene	178		22.468	22.468	(1.003)		255207	2.50000	2.494
42 Carbazole	167		23.755	23.755	(1.060)		229698	2.50000	2.388
43 1-Methylphenanthrene	192		24.207	24.207	(1.080)		174566	2.50000	2.428
44 Fluoranthene	202		26.177	26.177	(1.168)		244660	2.50000	2.407
46 Pyrene	202		27.023	27.023	(1.206)		256030	2.50000	2.407
51 Naphthobenzothiophene	234		29.529	29.529	(1.318)		166275	2.50000	2.370
55 Benzo(a)anthracene	228		30.113	30.113	(0.907)		184573	2.50000	2.495
\$ 56 Chrysene-d12	240		30.237	30.237	(0.911)		130783	2.50000	2.554
57 Chrysene	228		30.316	30.316	(0.913)		182380	2.50000	2.520
62 Benzo(b)fluoranthene	252		32.523	32.523	(0.980)		151995	2.50000	2.202
63 Benzo(k)fluoranthene	252		32.579	32.579	(0.982)		177215	2.50000	2.286 (M)
293 Benzo(j)fluoranthene	252		32.636	32.636	(0.983)		185947	2.50000	2.871 (M)
246 Total Benzofluoranthenes	252		32.636	32.636	(0.983)		478629	7.50000	7.452 (M)

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE		CAL-AMT	ON-COL
=====	=====	=====	=====	=====	=====		=====	=====
* 251 Benzo(e)pyrene-d12	264	33.188	33.188	(1.000)	94374		2.00000	
64 Benzo(e)pyrene	252	33.244	33.244	(1.002)	155189		2.50000	2.325
66 Benzo(a)pyrene	252	33.345	33.345	(1.005)	140123		2.50000	2.482
\$ 67 Perylene-d12	264	33.526	33.526	(1.010)	126342		2.50000	2.558 (M)
68 Perylene	252	33.582	33.582	(1.012)	151266		2.50000	2.441 (M)
69 Indeno(1,2,3-cd)pyrene	276	35.643	35.643	(1.074)	138236		2.50000	1.879 (M)
70 Dibenzo(a,h)anthracene	278	35.621	35.621	(1.073)	105922		2.50000	1.752
74 Benzo(g,h,i)perylene	276	36.555	36.555	(1.101)	129194		2.50000	2.322 (M)

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1405272305.D
Lab Smp Id: SLE0443-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20230527.b\ALKYLPNA.m
Misc Info:

Calibration Date: 27-MAY-2023
Calibration Time: 12:30

Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
25 Fluorene-d10	136933	68467	273866	136933	0.00
250 Anthracene-d10	167500	83750	335000	167500	0.00
251 Benzo(e)pyrene-d1	94374	47187	188748	94374	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
25 Fluorene-d10	18.95	18.45	19.45	18.95	0.00
250 Anthracene-d10	22.41	21.91	22.91	22.41	0.00
251 Benzo(e)pyrene-d1	33.19	32.69	33.69	33.19	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 - NT1405272305.D

Lab ID: SLE0443-ICV1

nt14.i, 20230527.b\ALKYLPNA.m, 27-MAY-2023 13:31

RT	CO-ELUTION COMPOUNDS
----	----------------------

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

On Column LOD for nt14.i, 20230527.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

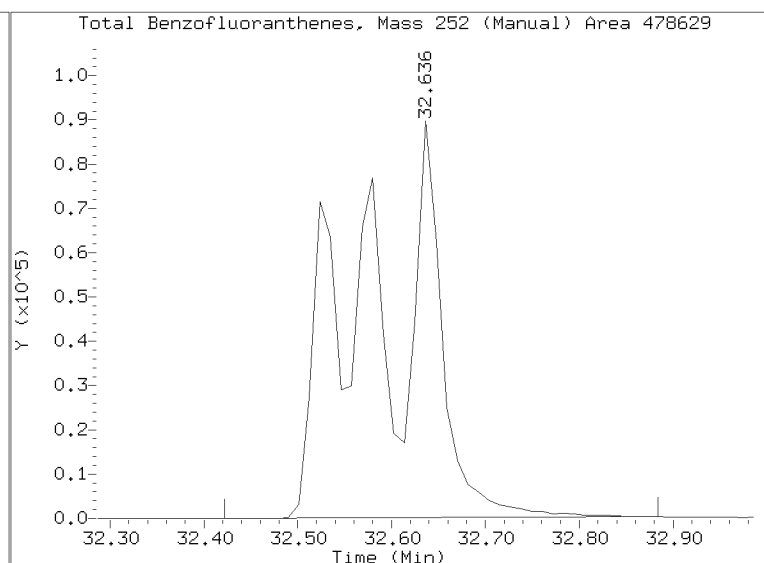
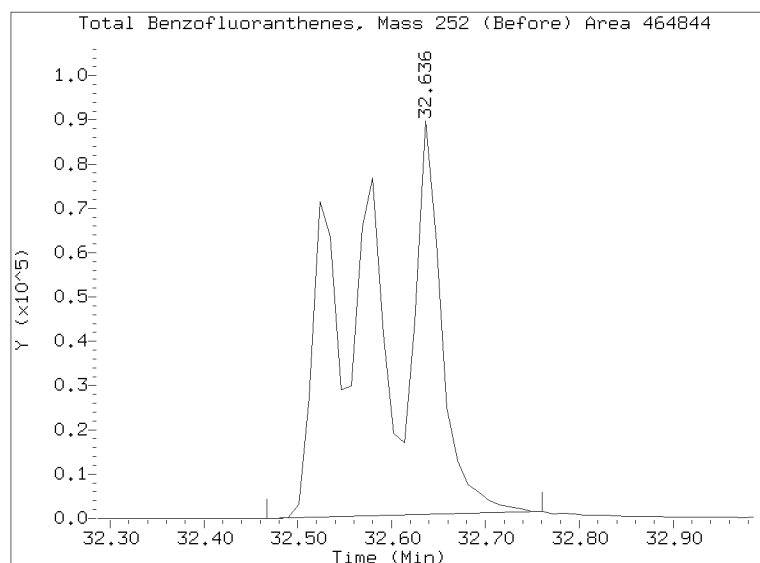
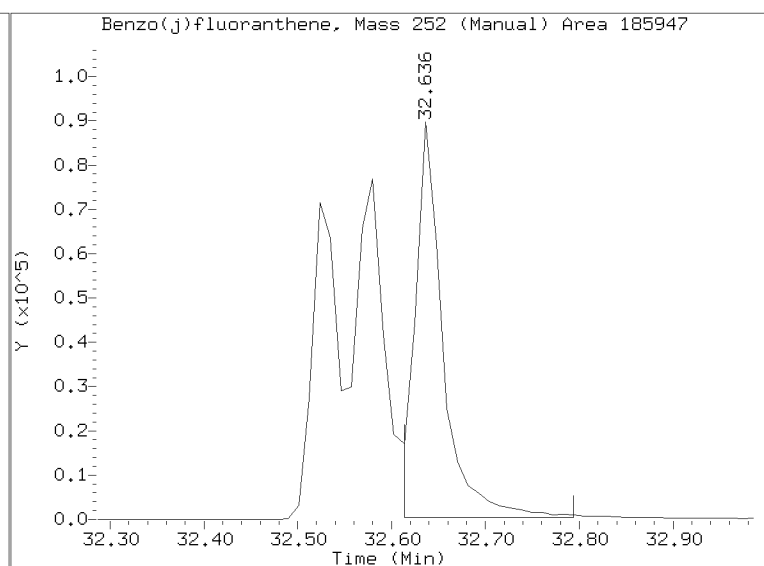
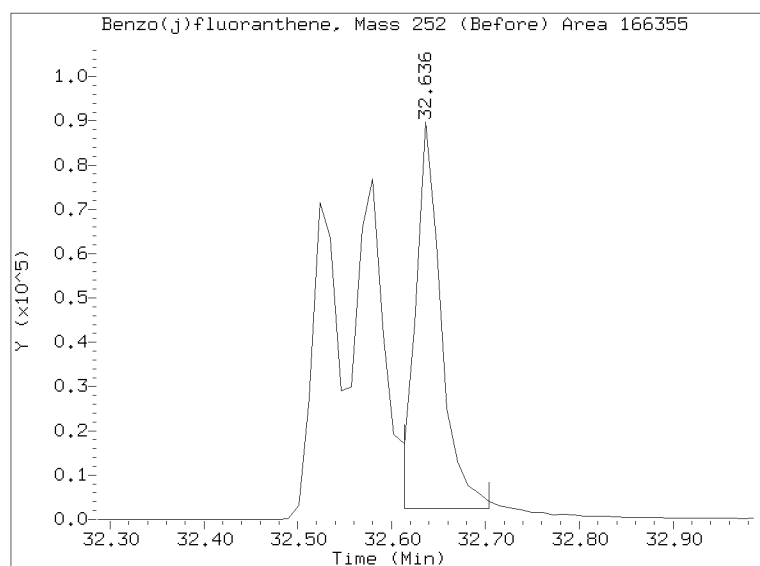
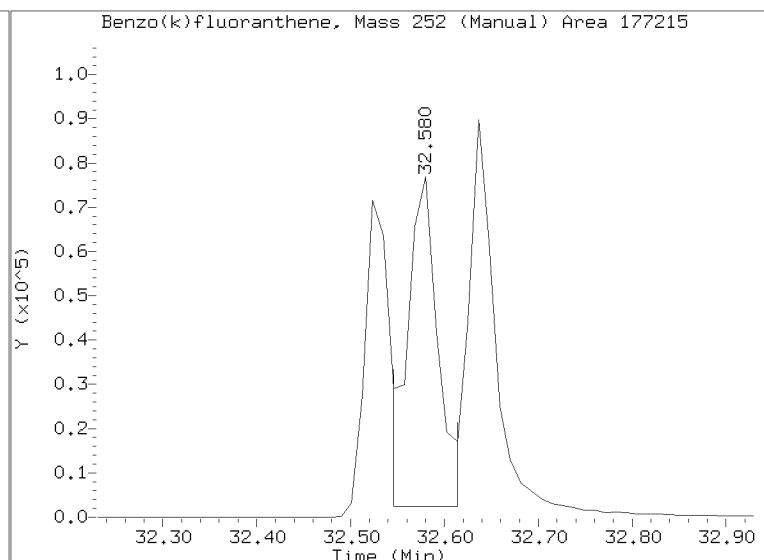
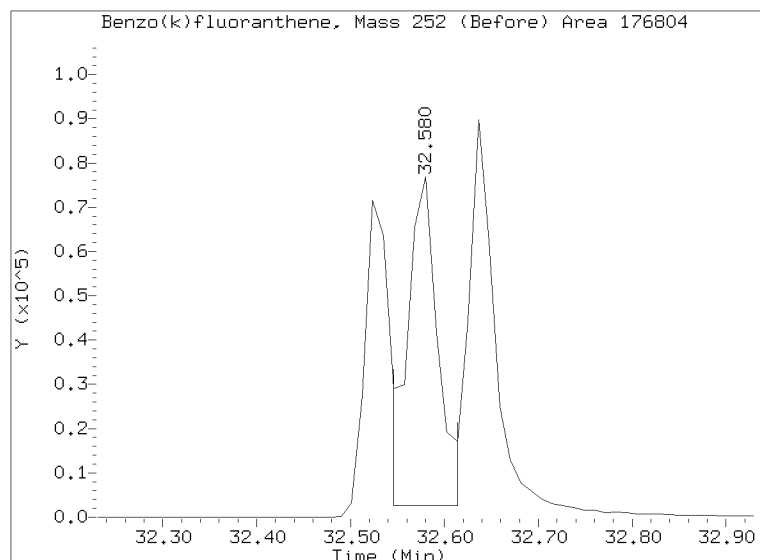
Quant Ion Manual Peak Adjustment Report

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Injection Date: 27-MAY-2023 13:31

Lab ID: SLE0443-ICV1 Client ID:

Report Date: 05/30/2023 16:47



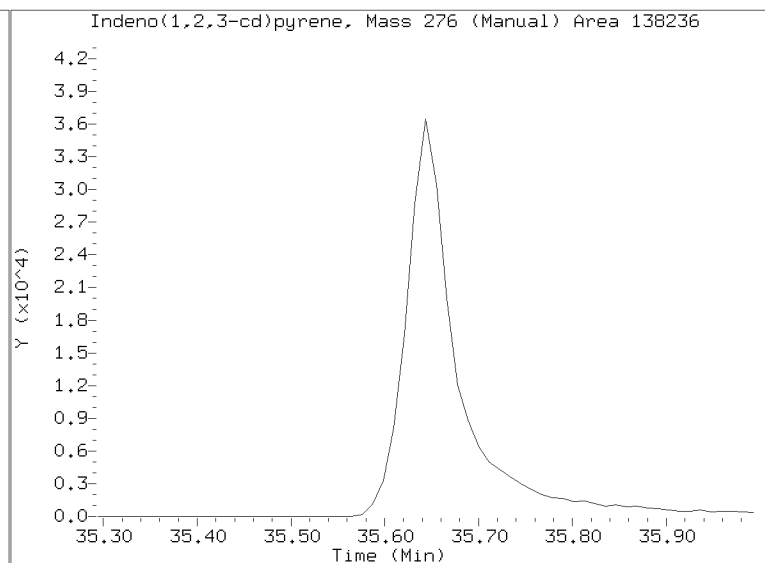
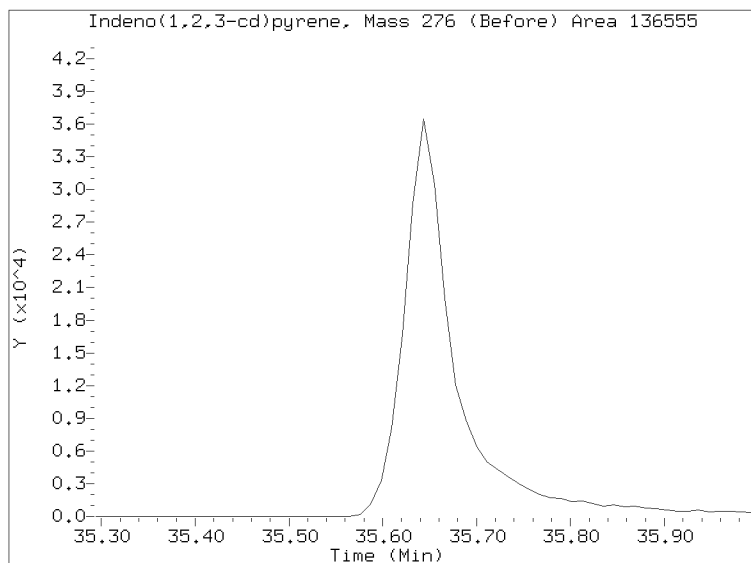
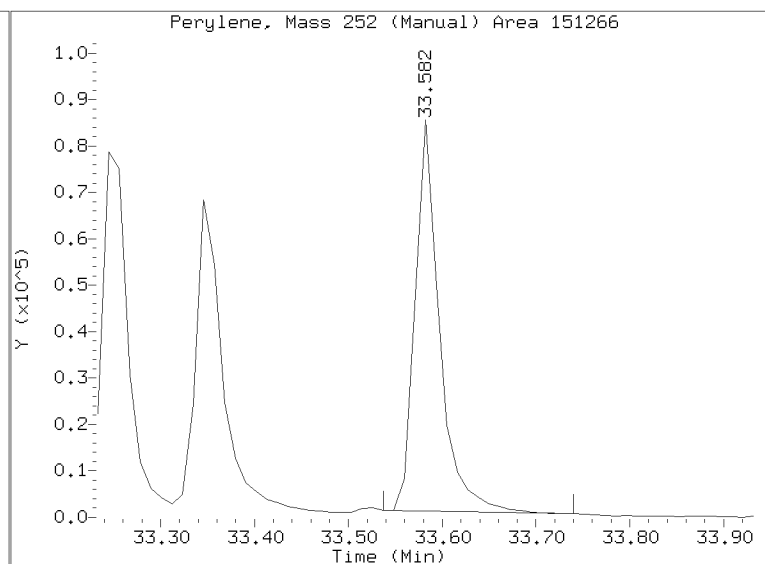
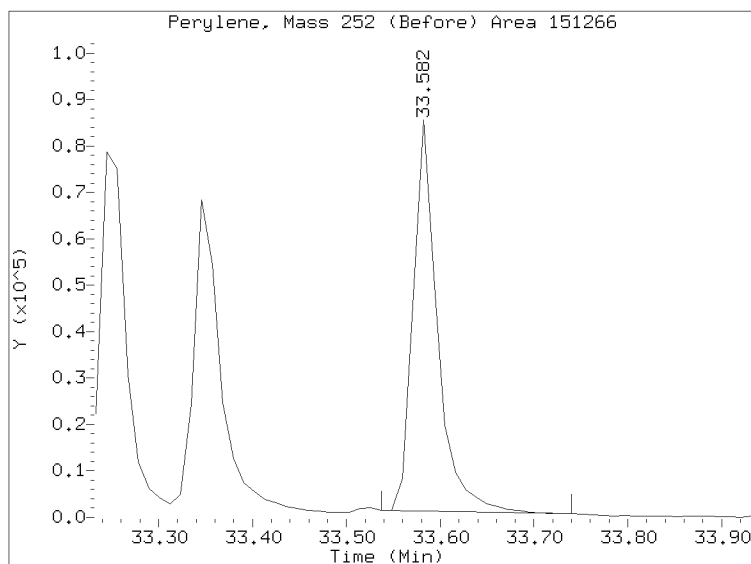
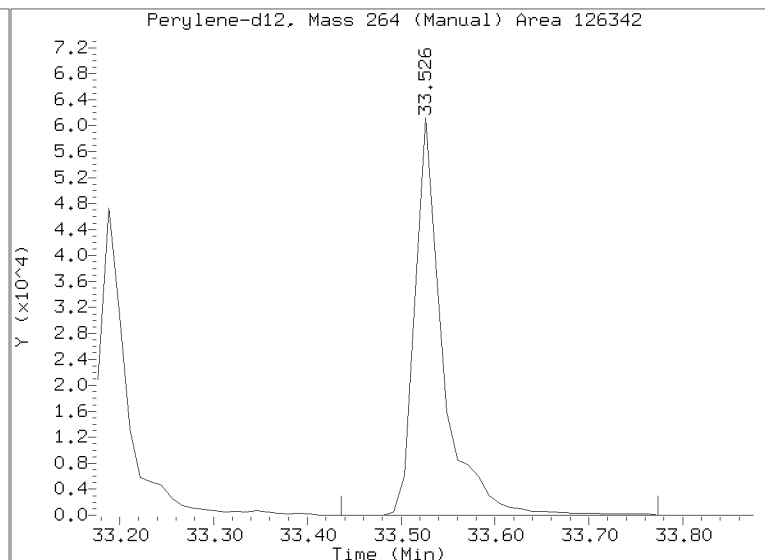
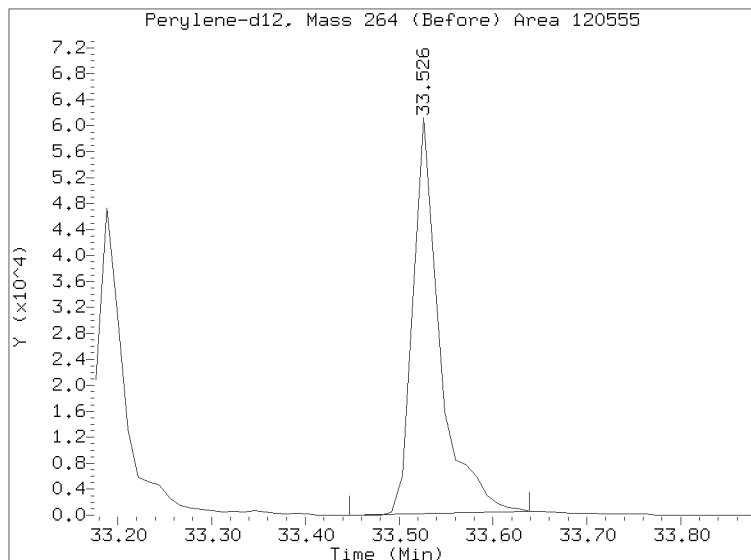
Quant Ion Manual Peak Adjustment Report

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Injection Date: 27-MAY-2023 13:31

Lab ID: SLE0443-ICV1 Client ID:

Report Date: 05/30/2023 16:47



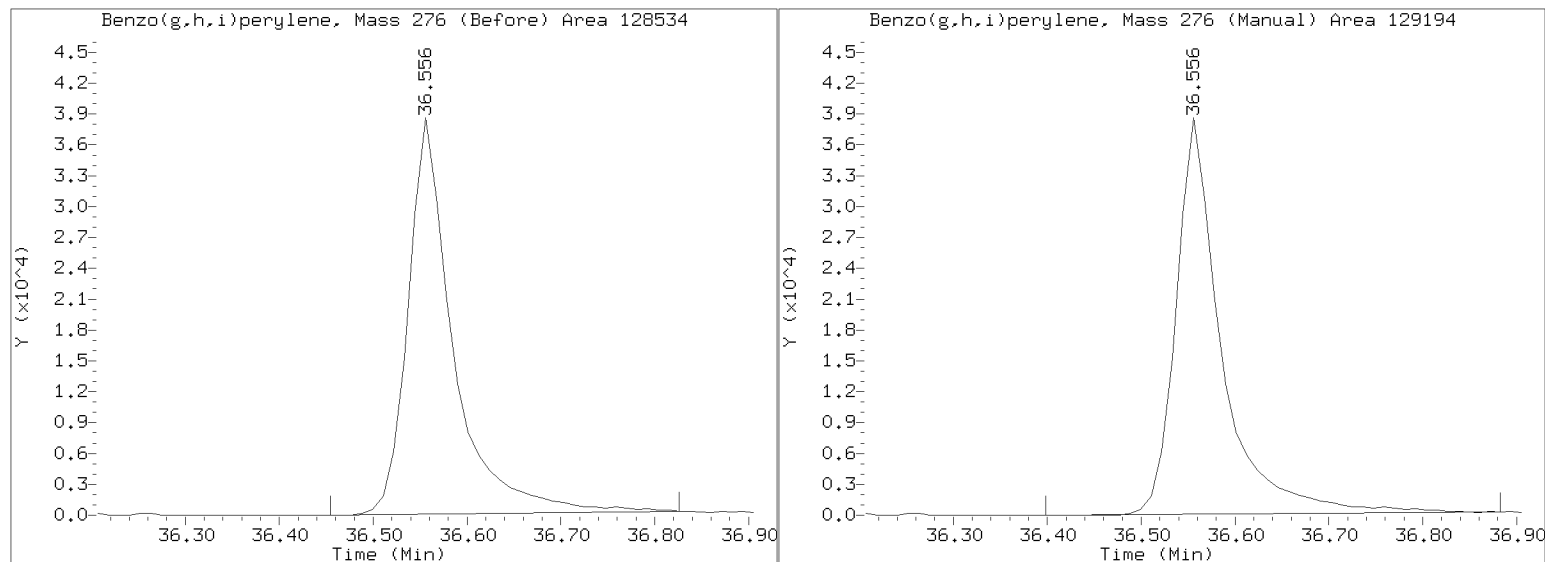
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230527.b/NT1405272305.D

Injection Date: 27-MAY-2023 13:31

Lab ID: SLE0443-ICV1 Client ID:

Report Date: 05/30/2023 16:47



APPROVED

By Deenay Dunmore at 4:59 pm, May 30, 2023

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230527.b

Instrument: nt14.i Date: 27-MAY-2023 Method: 20230527.b\ALKYLPNA.m

INITIAL CAL: 05-MAY-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1405272305.D 27-MAY-2023 13:31

Compound	%D
Indeno(1,2,3-cd)pyrene	-24.8
Dibenzo(a,h)anthracene	-29.9



INITIAL CALIBRATION CHECK

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Instrument ID: NT14

Calibration: GE00024

Lab File ID: NT1405272318.D

Calibration Date: 05/05/2023

Sequence: SLE0443

Injection Date: 05/27/23

Lab Sample ID: SLE0443-ICV2

Injection Time: 23:57

Sequence Name: PAH 2.5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
trans-Decalin	A	2.5000	2.49	0.2142441	0.2132741		-0.5	+/-20
cis-Decalin	A	2.5000	2.44	0.1553110	0.1517352		-2.3	+/-20
Naphthalene	A	2.5000	2.39	2.1950510	2.1002140		-4.3	+/-20
1-Methylnaphthalene	A	2.5000	2.36	1.0931470	1.0304080		-5.7	+/-20
2-Methylnaphthalene	A	2.5000	2.42	1.0855960	1.0490570		-3.4	+/-20
Biphenyl	A	2.5000	2.41	1.5018170	1.4477680		-3.6	+/-20
2,6-Dimethylnaphthalene	A	2.5000	2.43	1.0689340	1.0374520		-2.9	+/-20
Acenaphthylene	A	2.5000	2.48	1.7851870	1.7740250		-0.6	+/-20
Acenaphthene	A	2.5000	2.41	1.1016480	1.0640160		-3.4	+/-20
Dibenzofuran	A	2.5000	2.53	1.4421	1.4605650		1.3	+/-20
2,3,5-Trimethylnaphthalene	A	2.5000	2.48	0.9527605	0.9438394		-0.9	+/-20
Fluorene	A	2.5000	2.45	1.1554870	1.1344700		-1.8	+/-20
Benzo(b)thiophene	A	2.5000	2.41	1.6681460	1.6092810		-3.5	+/-20
Phenanthrene	A	2.5000	2.41	1.3309080	1.2831510		-3.6	+/-20
Anthracene	A	2.5000	2.49	1.2217170	1.2180150		-0.3	+/-20
Carbazole	A	2.5000	2.46	0.9770692	1.1284940		-1.7	+/-20
1-Methylphenanthrene	A	2.5000	2.41	0.8583058	0.8288475		-3.4	+/-20
Fluoranthene	A	2.5000	2.47	1.2135600	1.2002790		-1.1	+/-20
Dibenzothiophene	A	2.5000	2.53	1.4158940	1.4352070		1.4	+/-20
Pyrene	A	2.5000	2.47	1.2700040	1.2550550		-1.2	+/-20
Benzo(a)anthracene	A	2.5000	2.38	1.5678310	1.4926430		-4.8	+/-20
Chrysene	A	2.5000	2.54	1.5335800	1.5601830		1.7	+/-20
Benzo(b)fluoranthene	A	2.5000	2.26	1.4626770	1.3233710		-9.5	+/-20
Benzo(j)fluoranthene	A	2.5000	2.75	1.3727050	1.5086850		9.9	+/-20
Benzo(k)fluoranthene	A	2.5000	2.17	1.3456120	1.4250050		-13.3	+/-20
Benzofluoranthenes, Total	A	7.5000	7.46	1.3610640	1.3542010		-0.5	+/-20
Benzo(e)pyrene	A	2.5000	2.34	1.4147040	1.3236710		-6.4	+/-20
Benzo(a)pyrene	A	2.5000	2.59	1.1966100	1.2378510		3.4	+/-20
Indeno(1,2,3-cd)pyrene	A	2.5000	2.05	1.3107200	1.2797760		-17.9	+/-20
Dibenzo(a,h)anthracene	A	2.5000	1.98	1.0657830	1.0155980		-20.7	+/-20 *

* Values outside of QC limits



INITIAL CALIBRATION CHECK EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Instrument ID: NT14

Calibration: GE00024

Lab File ID: NT1405272318.D

Calibration Date: 05/05/2023

Sequence: SLE0443

Injection Date: 05/27/23

Lab Sample ID: SLE0443-ICV2

Injection Time: 23:57

Sequence Name: PAH 2.5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Benzo(g,h,i)perylene	A	2.5000	2.36	1.1791520	1.1131390		-5.6	+/-20
Perylene	A	2.5000	2.43	1.3134480	1.2768180		-2.8	+/-20
Benzo(b)naphtho(2,1-d)thiophene	A	2.5000	2.51	0.8376187	0.8400687		0.3	+/-20
Naphthalene-d8	A	2.5000	2.40	1.9983150	1.9212870		-3.9	
Acenaphthene-d10	A	2.5000	2.44	0.8856004	0.8631976		-2.5	
Phenanthrene-d10	A	2.5000	2.45	1.1412560	1.1205900		-1.8	
Chrysene-d12	A	2.5000	2.43	1.0850860	1.0558370		-2.7	
Perylene-d12	A	2.5000	2.53	1.0467910	1.0590470		1.2	
Fluorene-d10	A	2.0000	2.00	67714.1700	1.0000		0.0	
Anthracene-d10	A	2.0000	2.00	82405.3300	1.0000		0.0	
Benzo(e)pyrene-d12	A	2.0000	2.00	49543.0000	1.0000		0.0	

* Values outside of QC limits

Data File: \\target\share\chem3\nt14,i\20230527,b\NT1405272318.D

Date : 27-May-2023 23:57

Client ID:

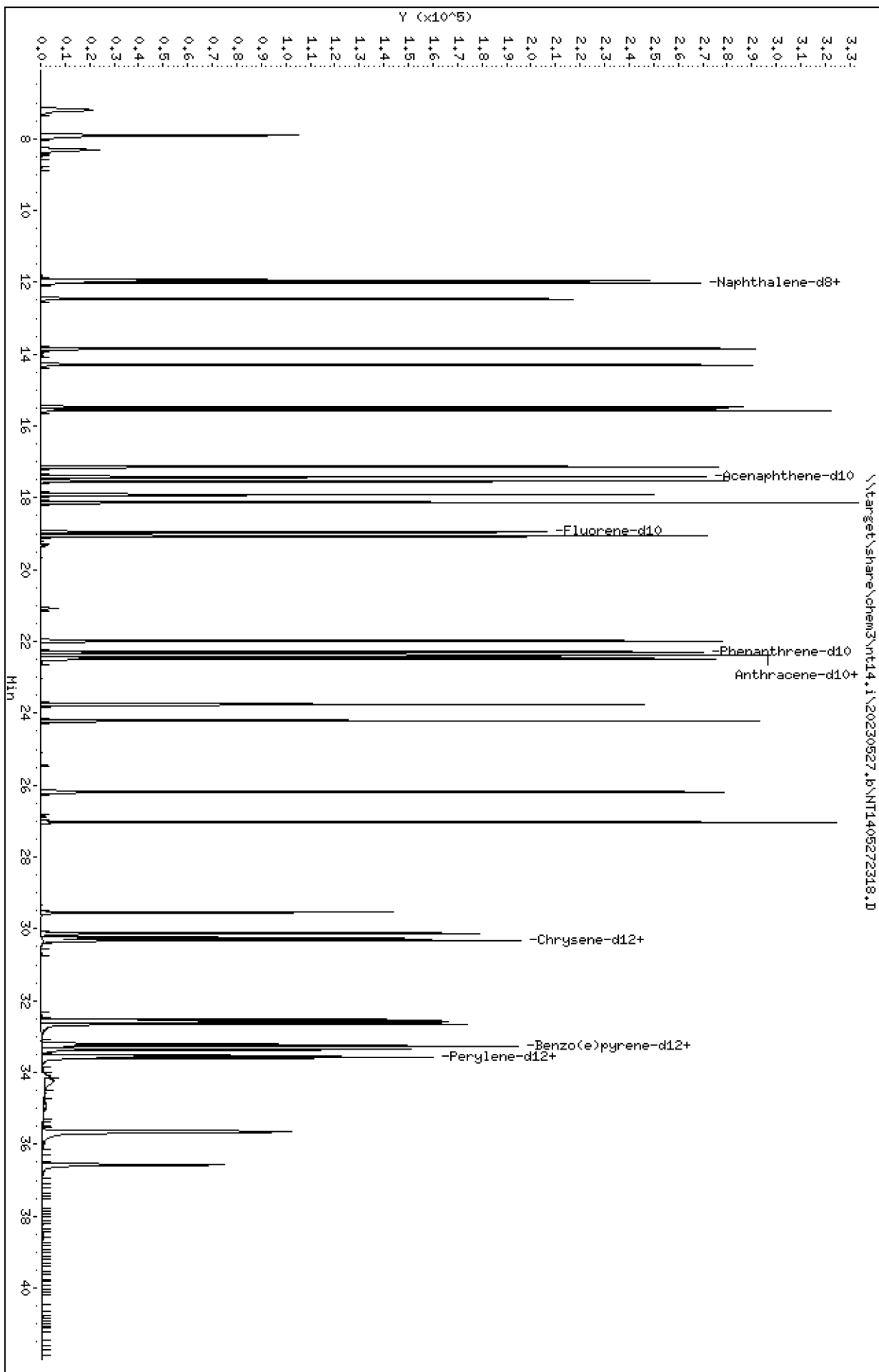
Sample Info: SLE0443-ICW2

Column phase: Rxi-17S11 MS

Instrument: nt14,i

Operator: VTS

Column diameter: 0.25



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

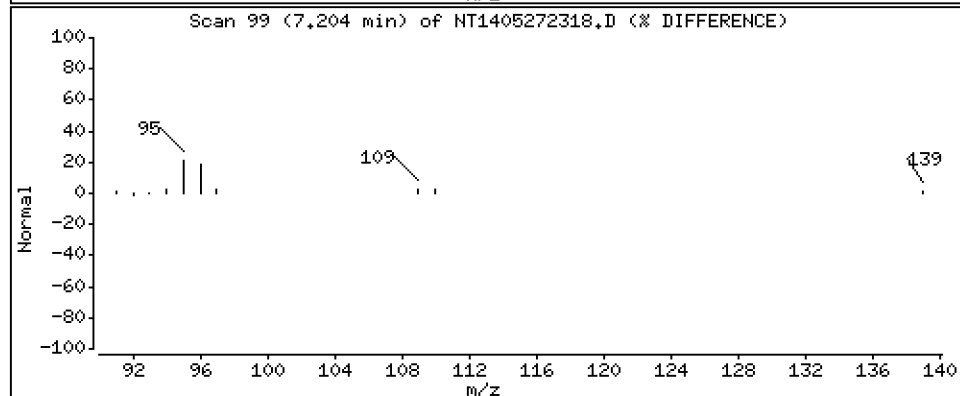
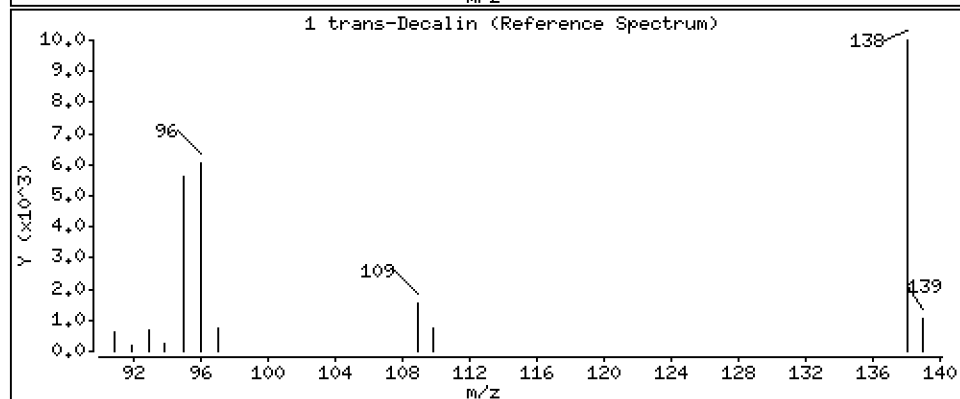
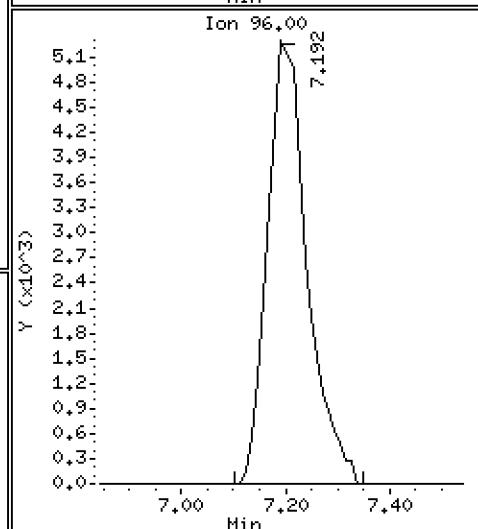
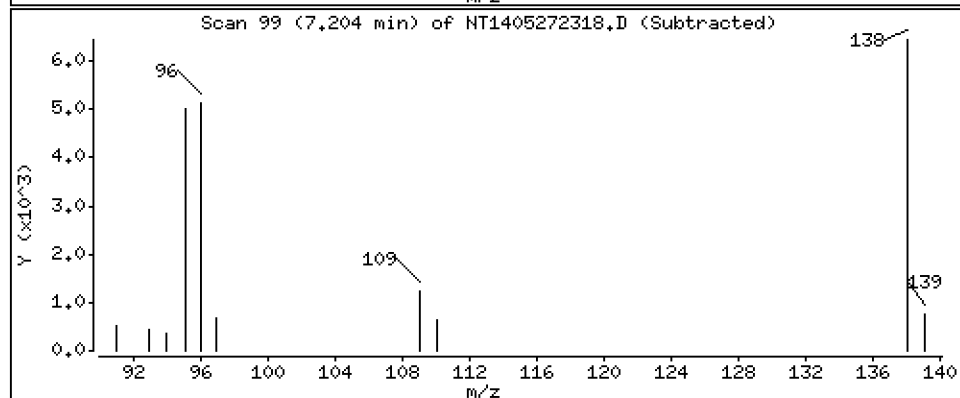
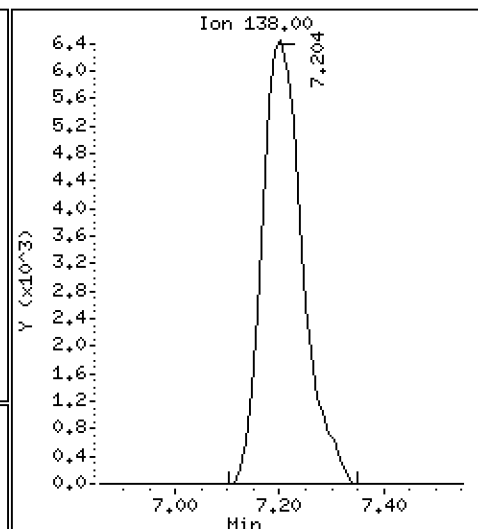
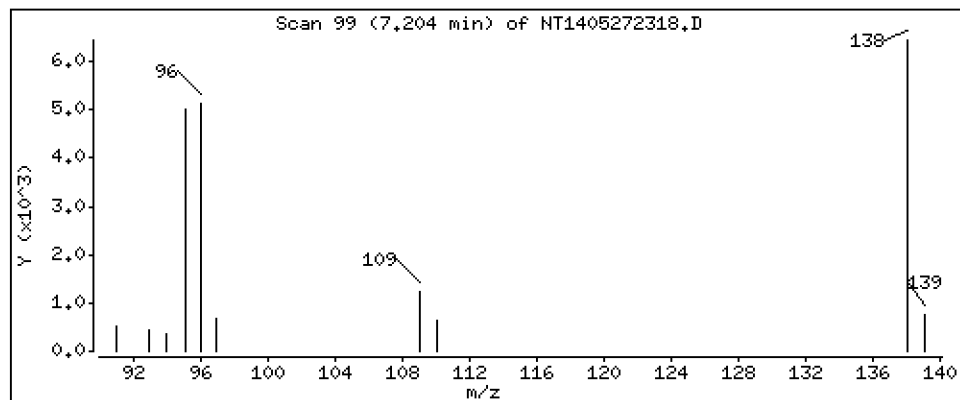
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

1 trans-Decalin

Concentration: 2.489 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

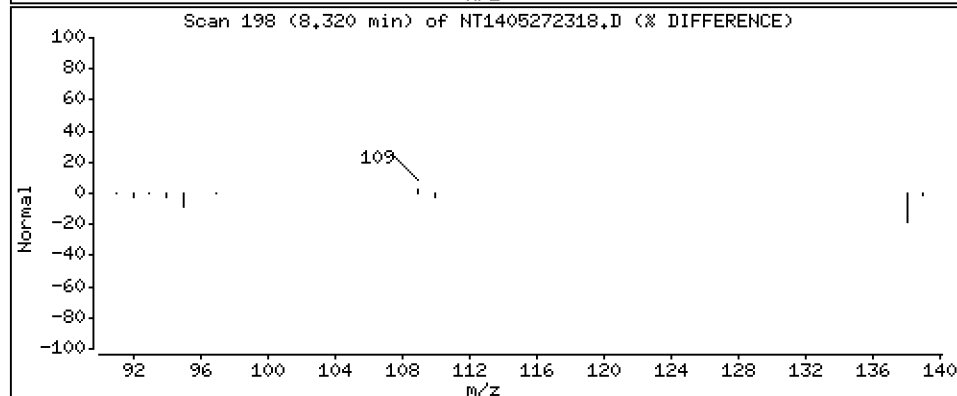
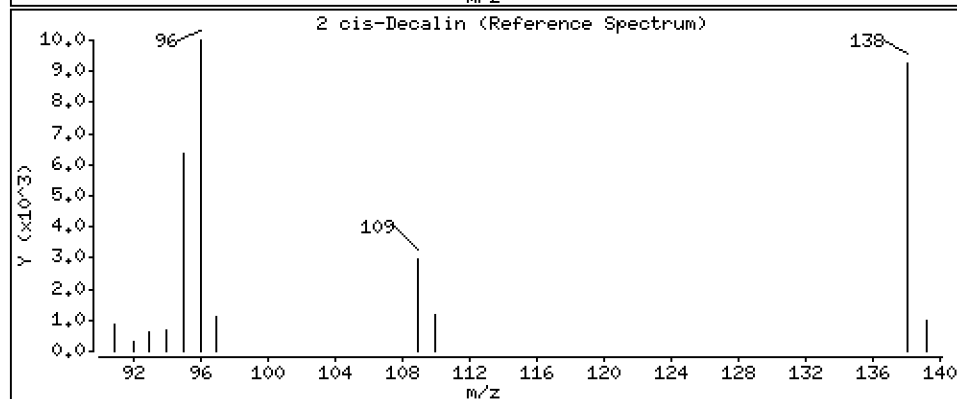
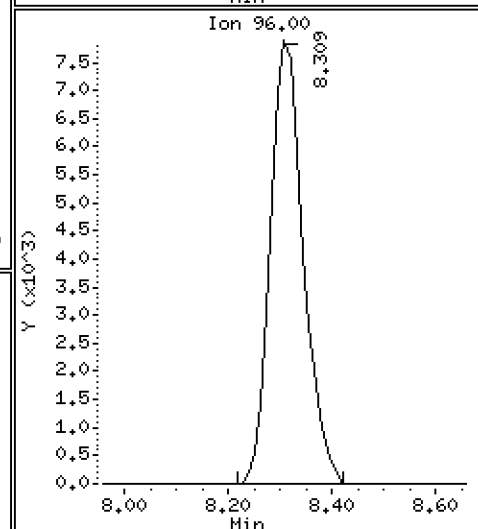
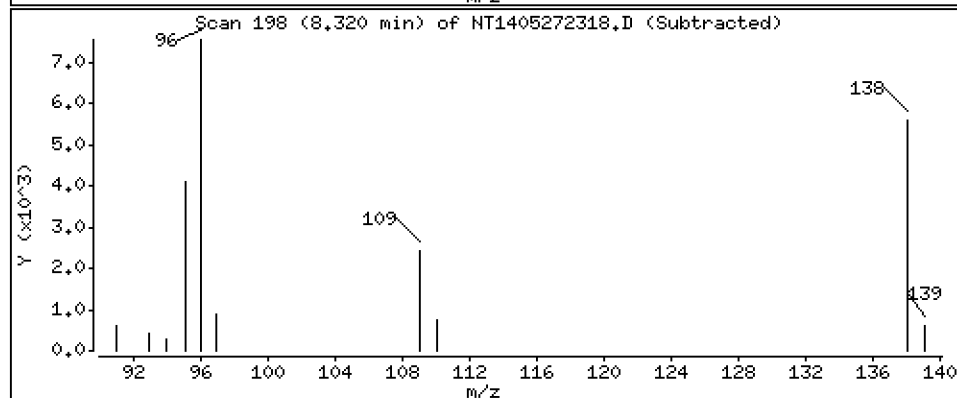
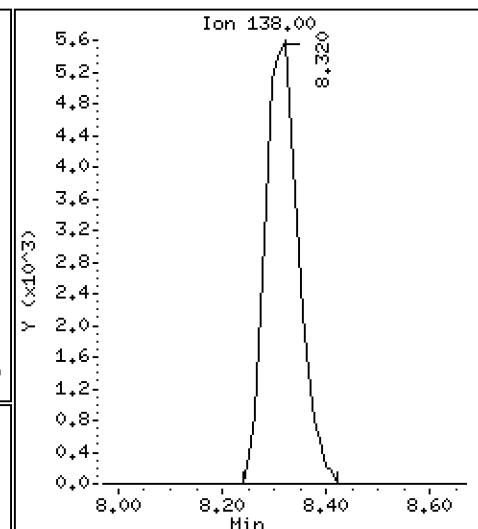
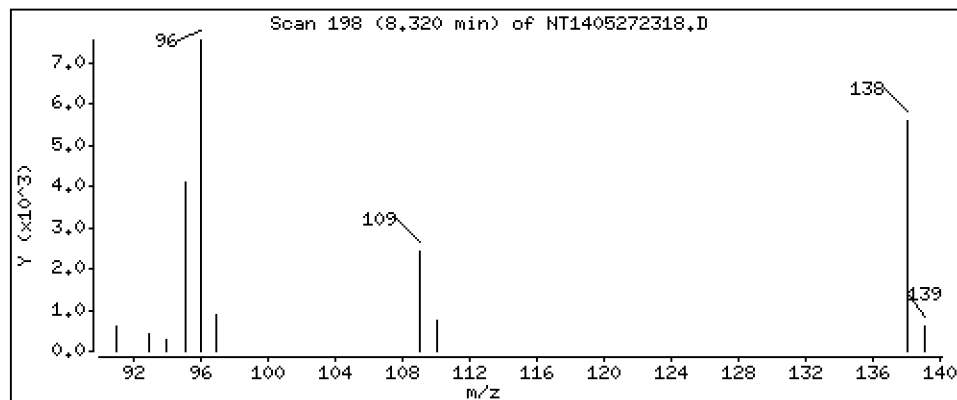
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

2 cis-Decalin

Concentration: 2.442 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

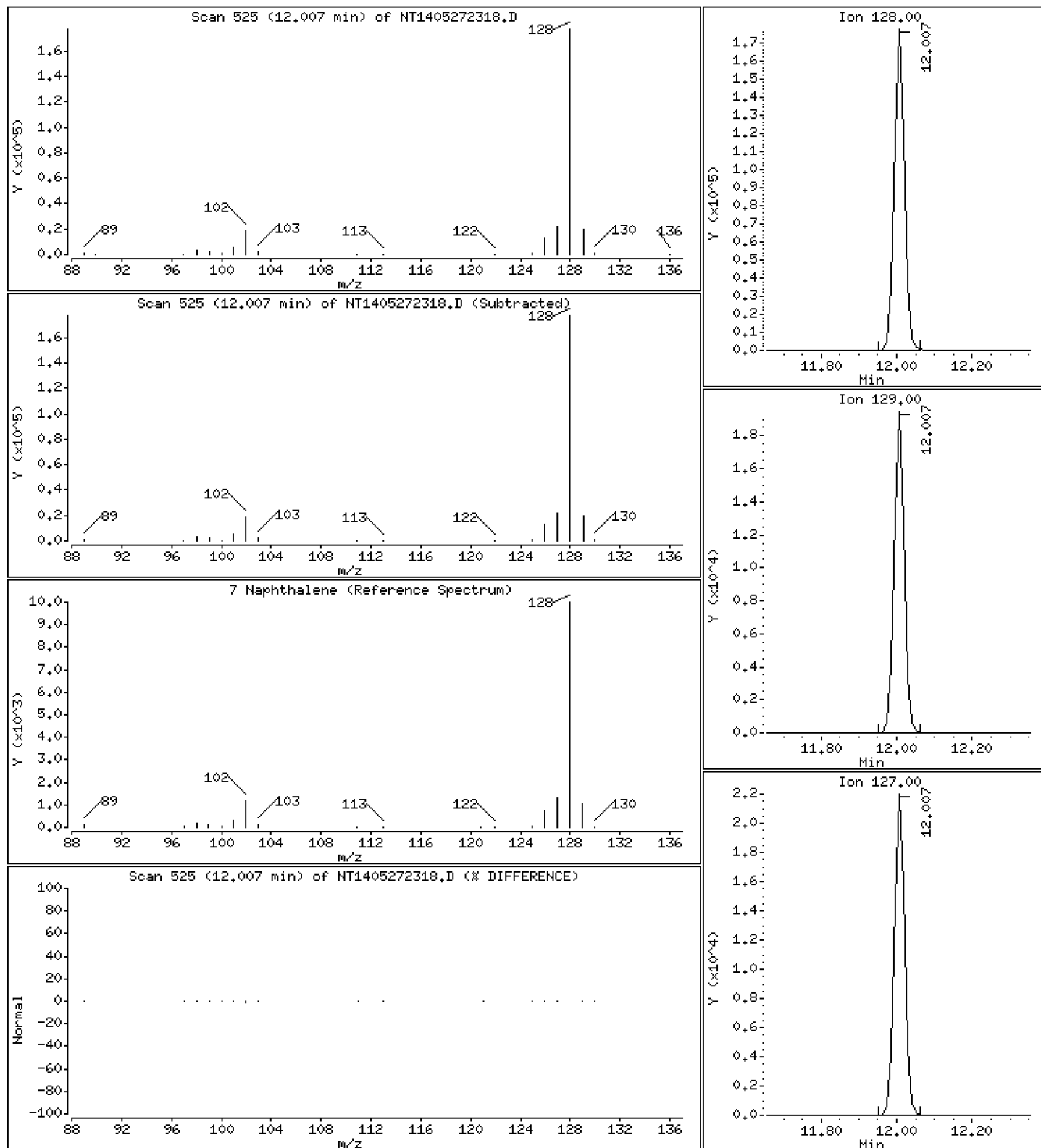
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

7 Naphthalene

Concentration: 2.392 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

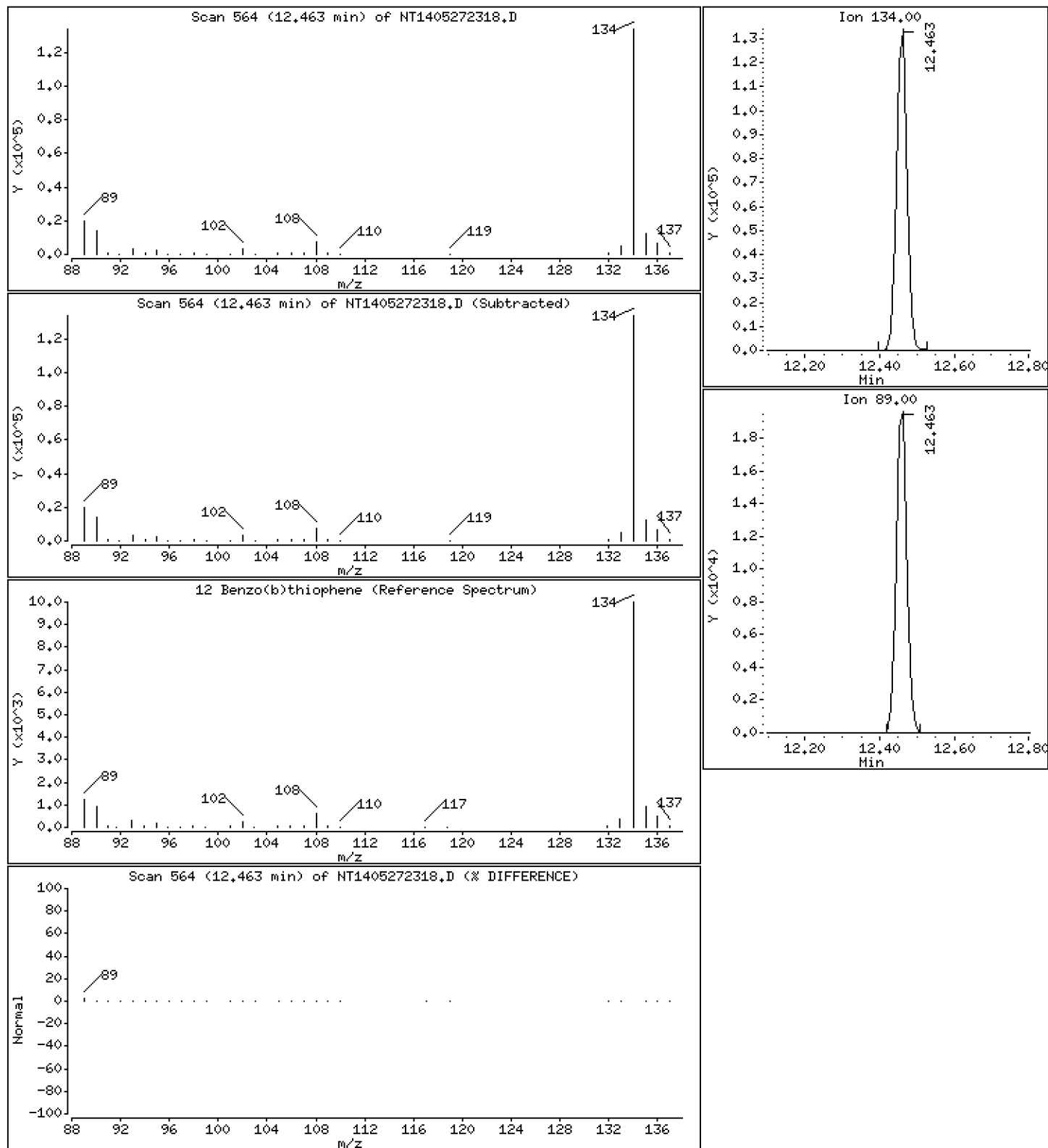
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

12 Benzo(b)thiophene

Concentration: 2,412 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

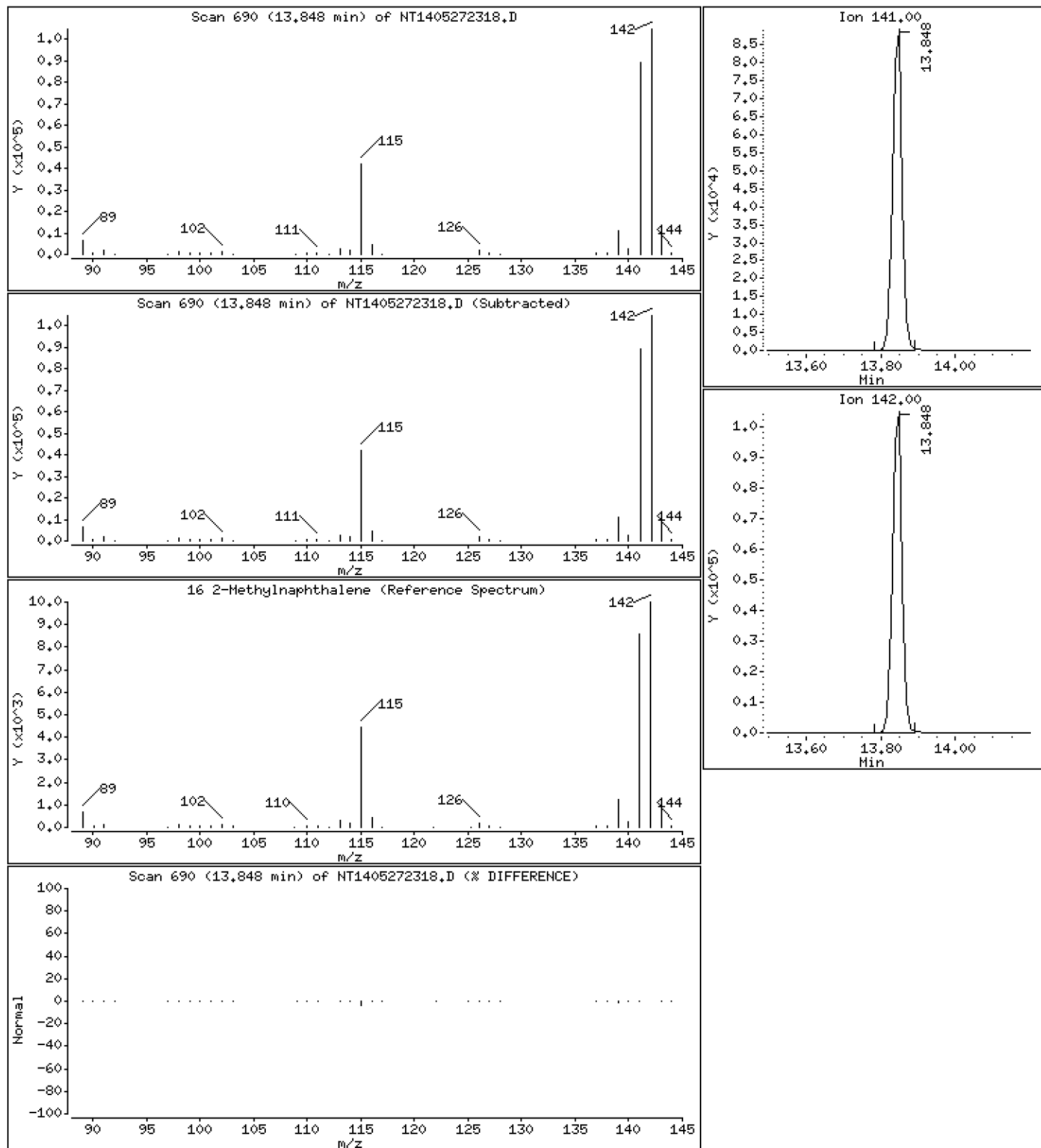
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

16 2-Methylnaphthalene

Concentration: 2.416 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

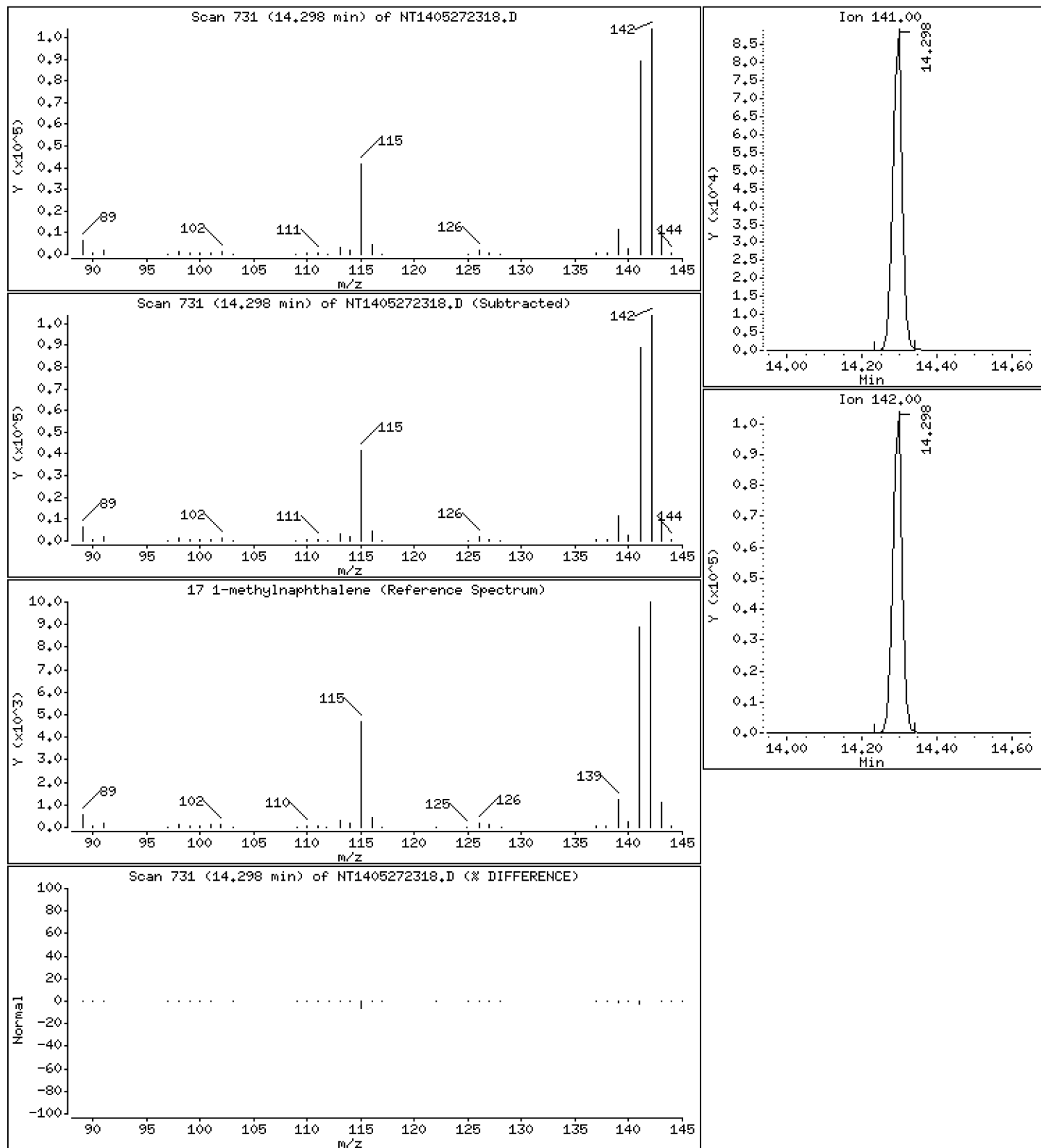
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 1-methylnaphthalene

Concentration: 2.357 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

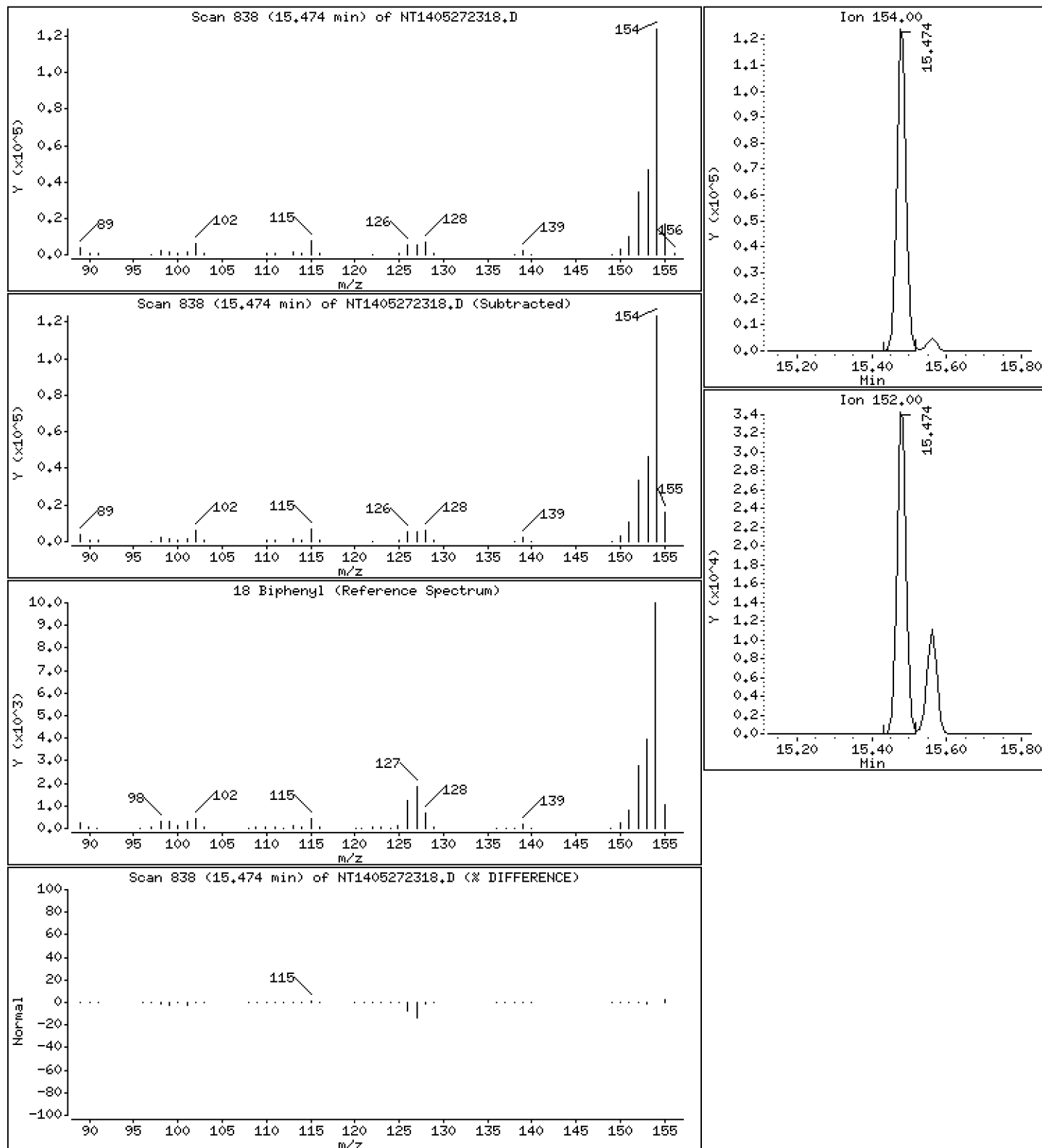
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

18 Biphenyl

Concentration: 2.410 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

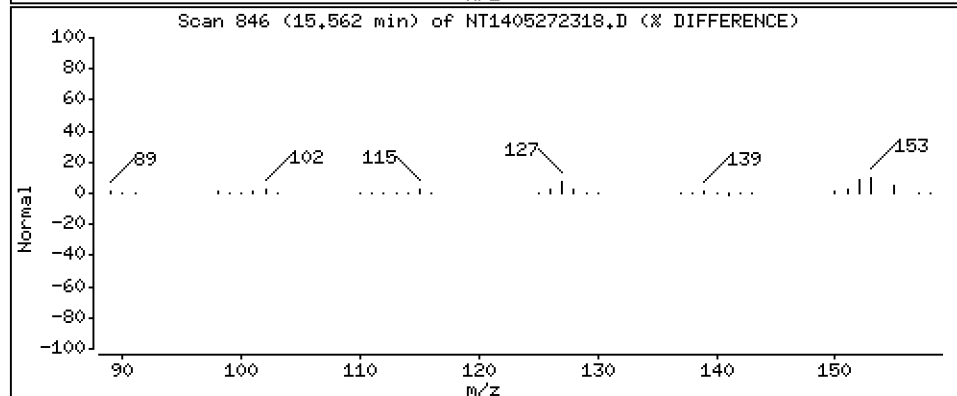
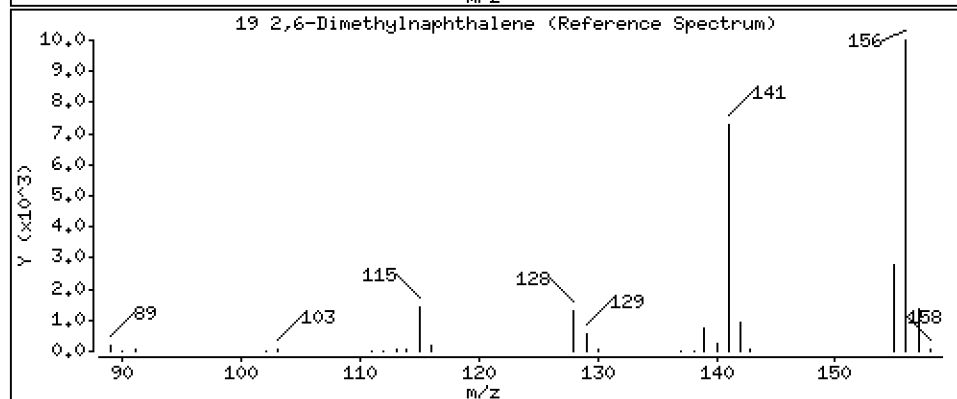
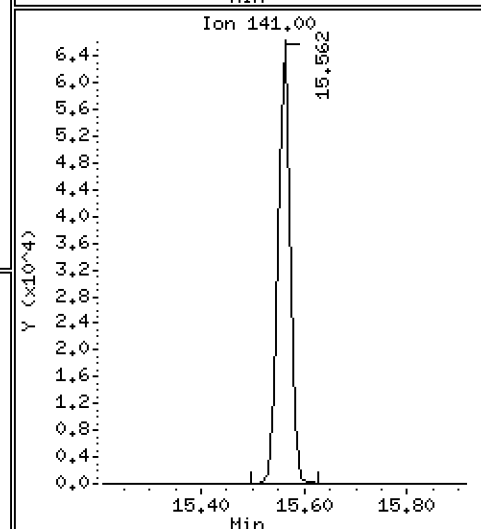
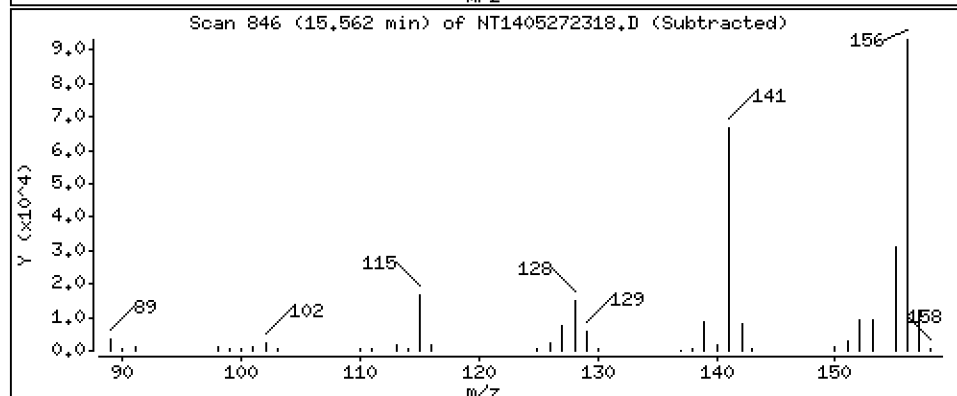
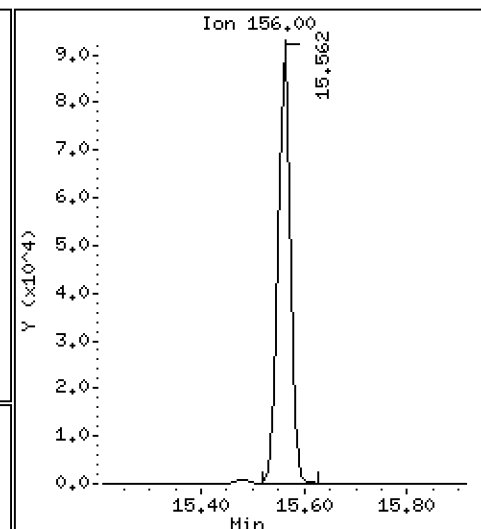
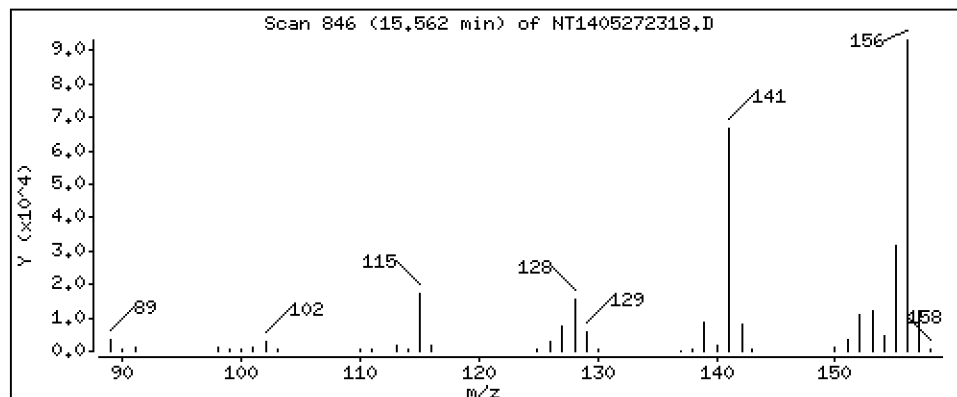
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

19 2,6-Dimethylnaphthalene

Concentration: 2.426 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

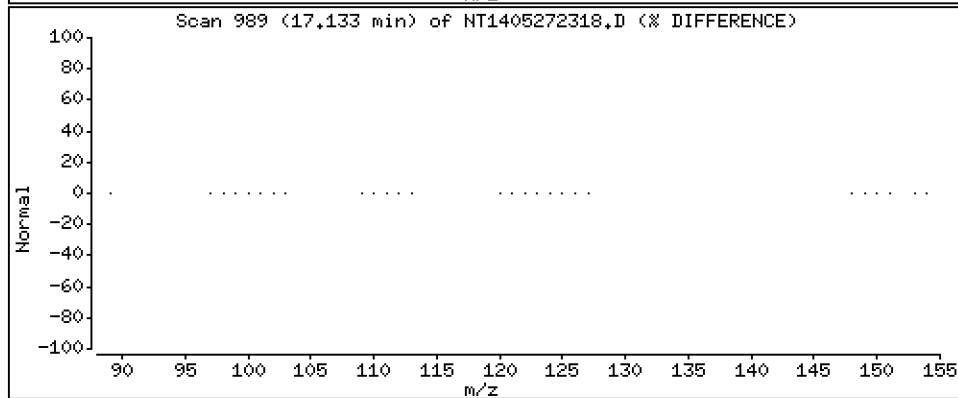
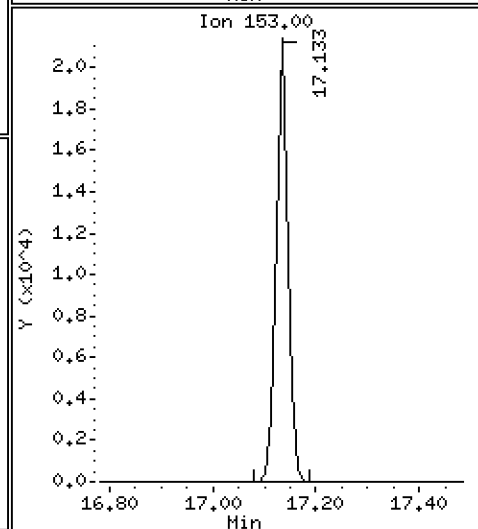
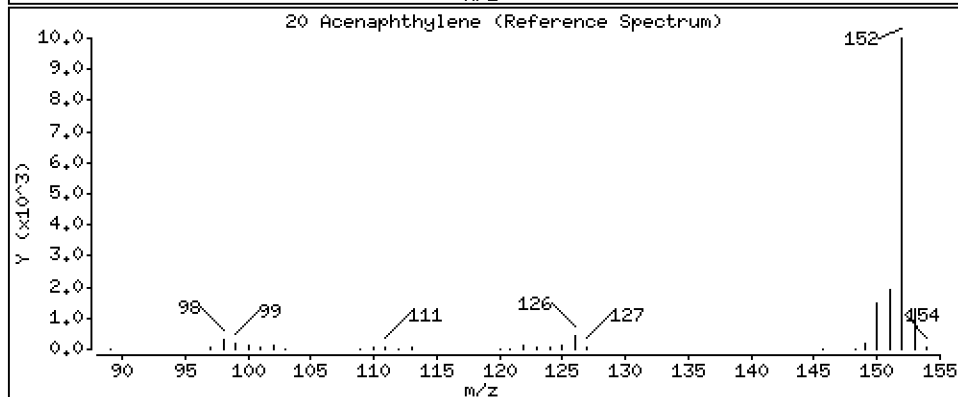
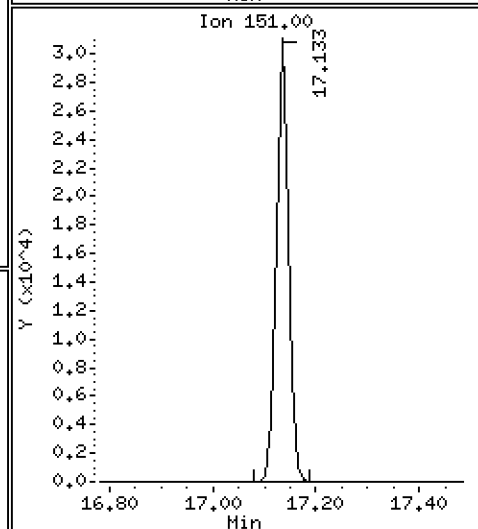
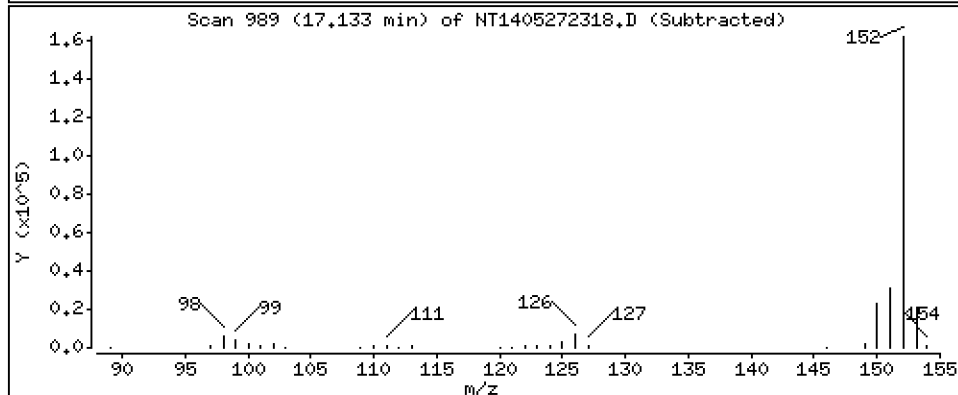
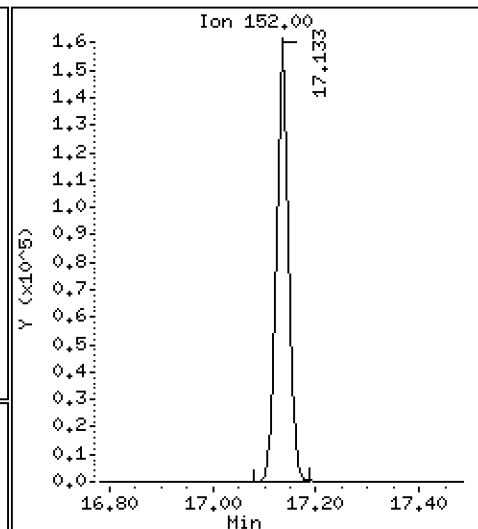
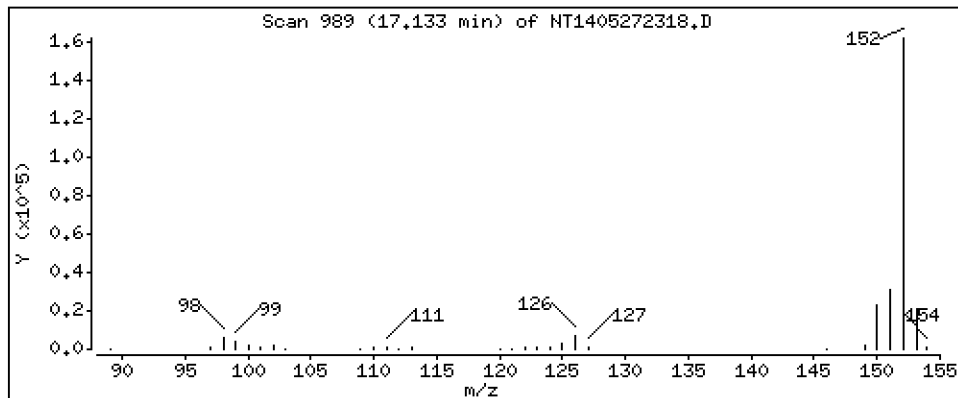
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

20 Acenaphthylene

Concentration: 2.484 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

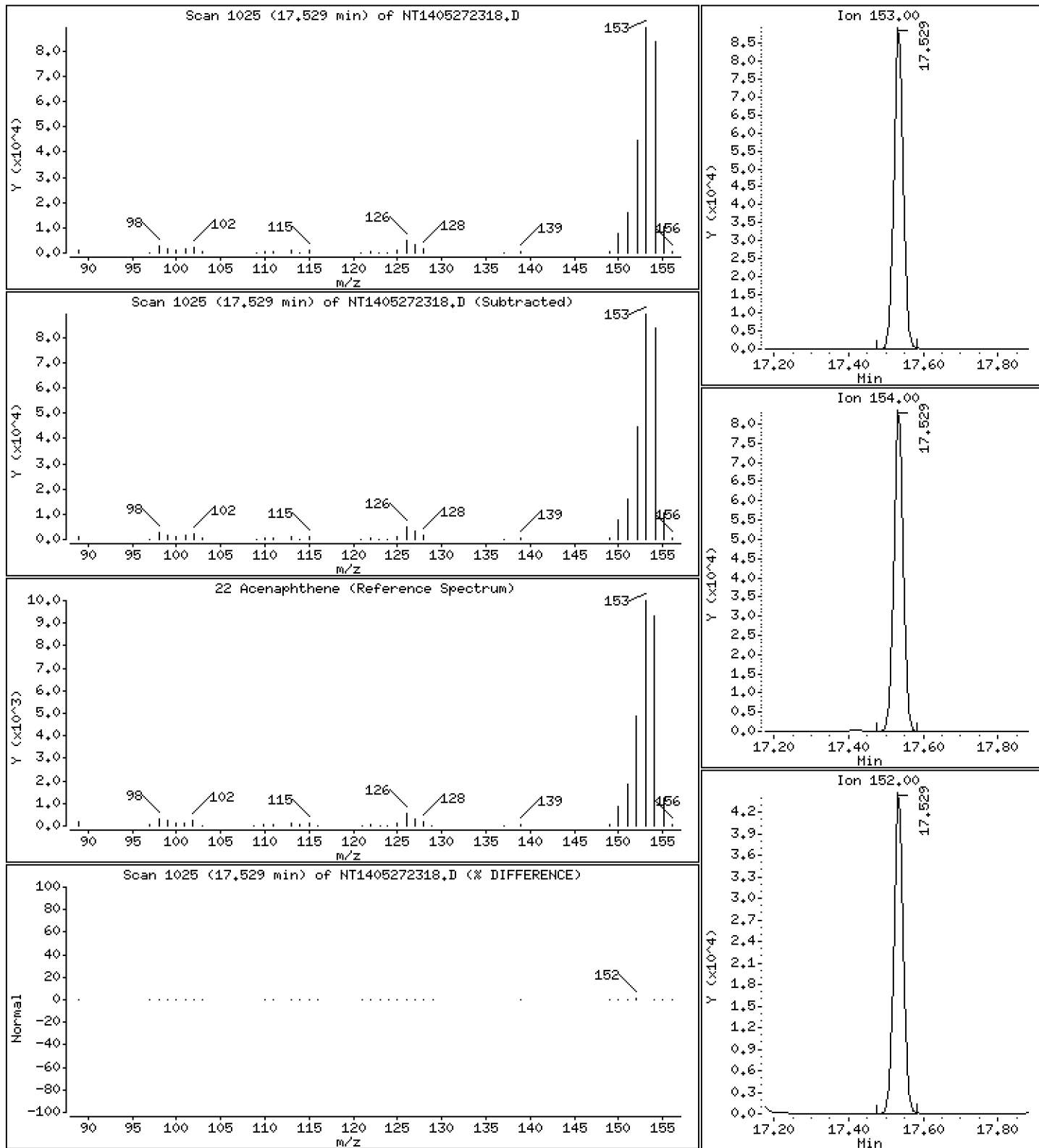
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

22 Acenaphthene

Concentration: 2.415 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

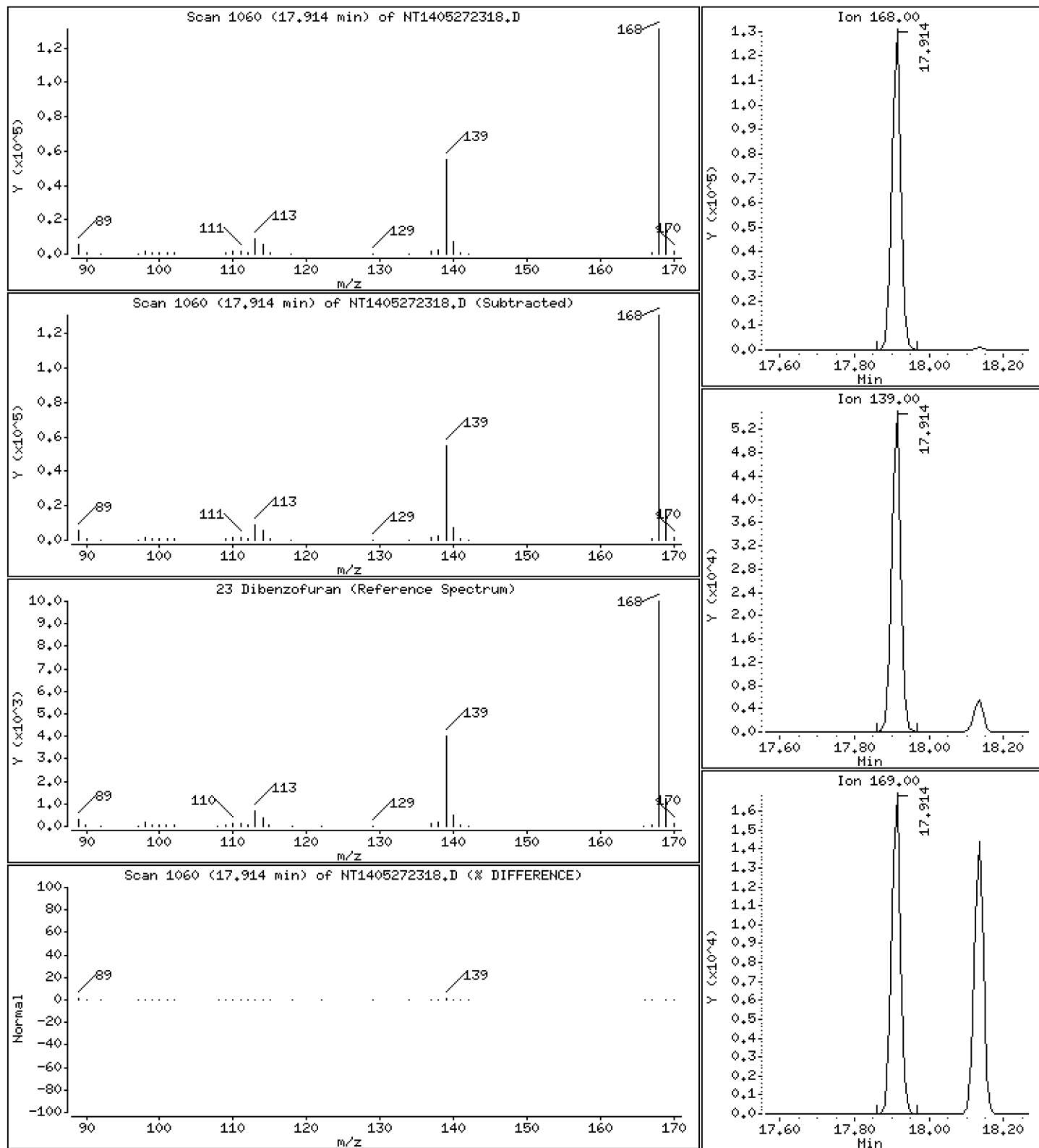
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

23 Dibenzofuran

Concentration: 2.532 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

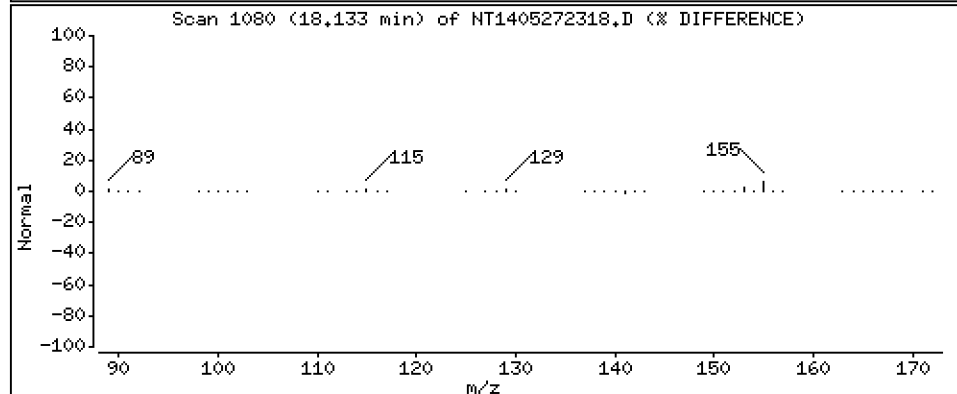
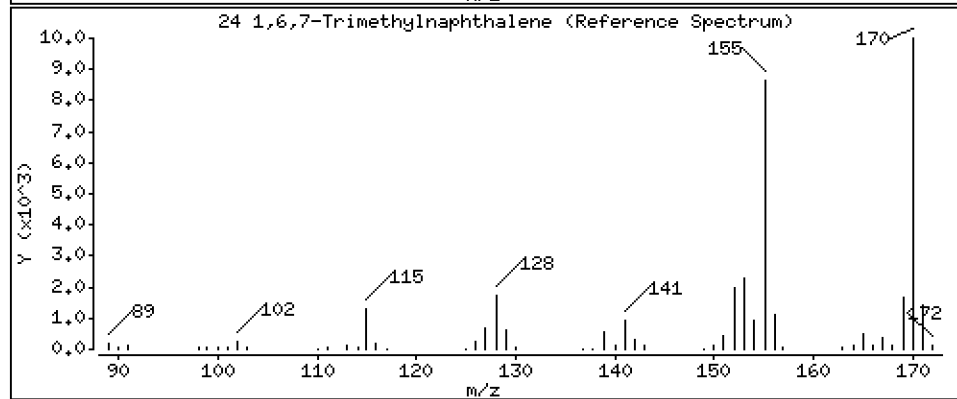
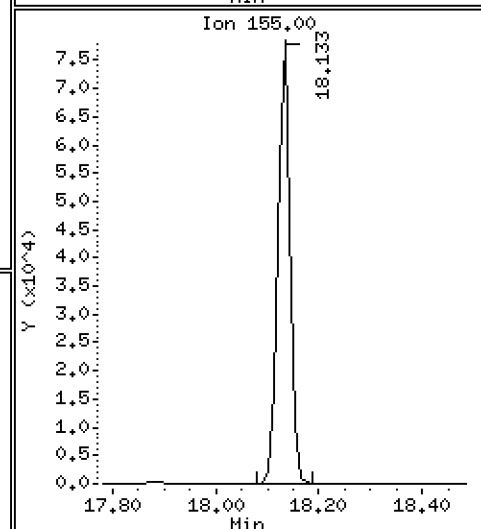
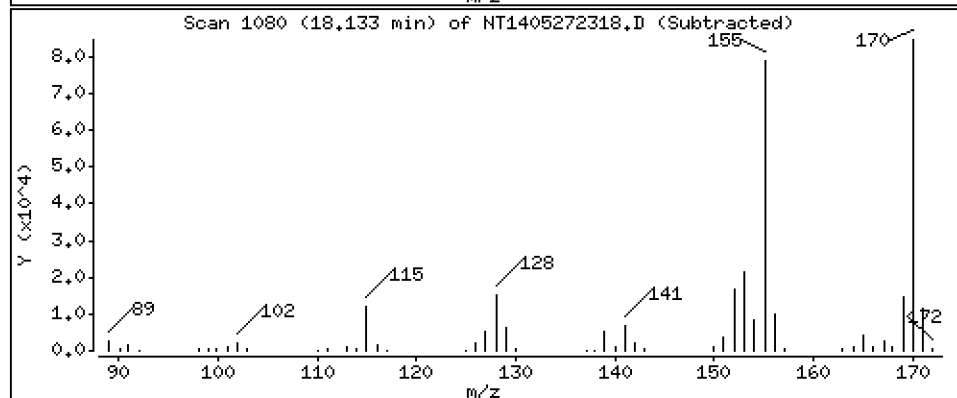
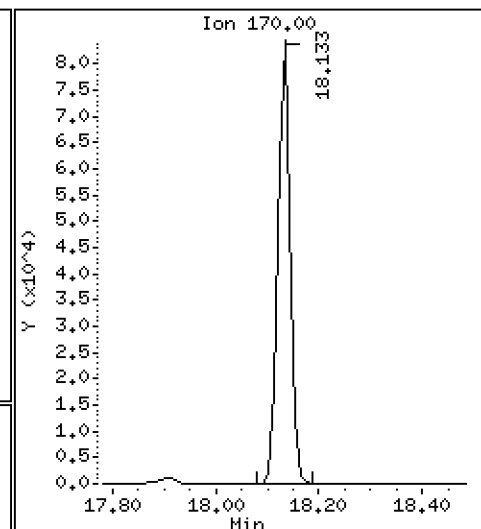
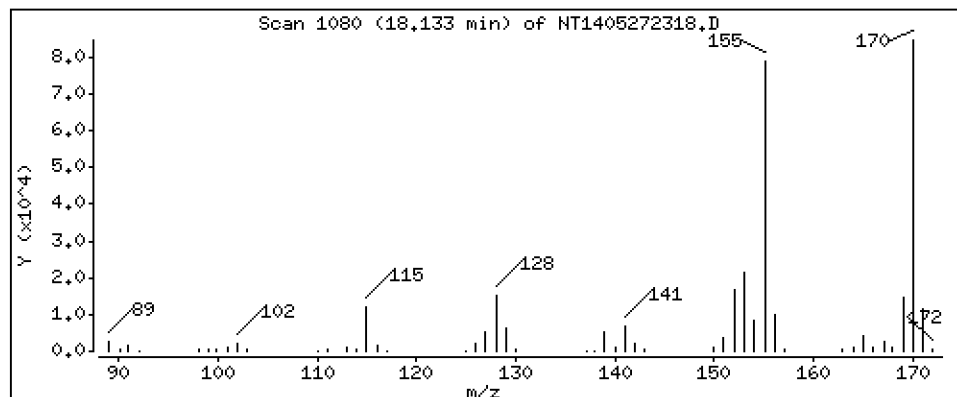
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

24 1,6,7-Trimethylnaphthalene

Concentration: 2.477 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

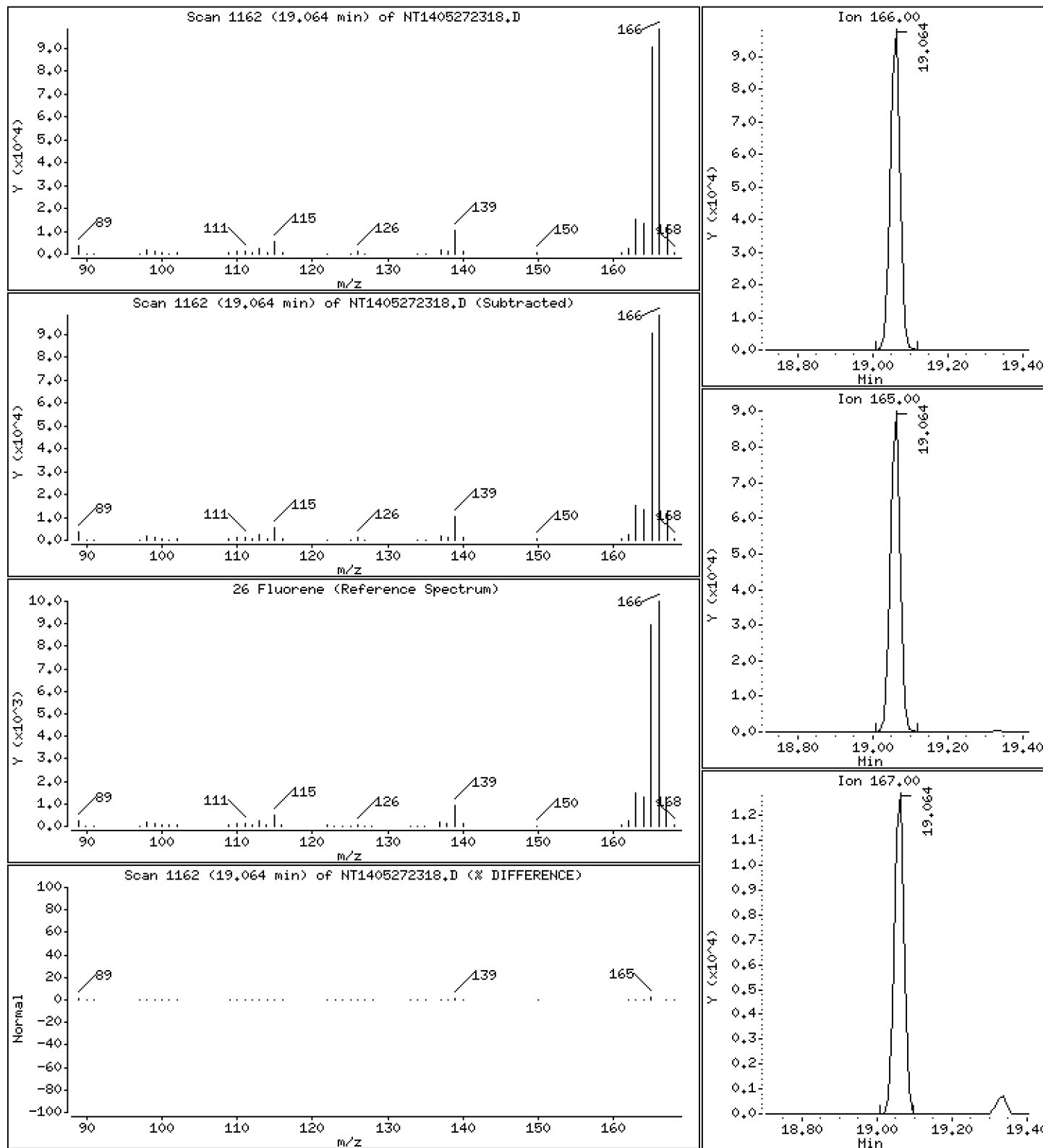
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

26 Fluorene

Concentration: 2.455 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

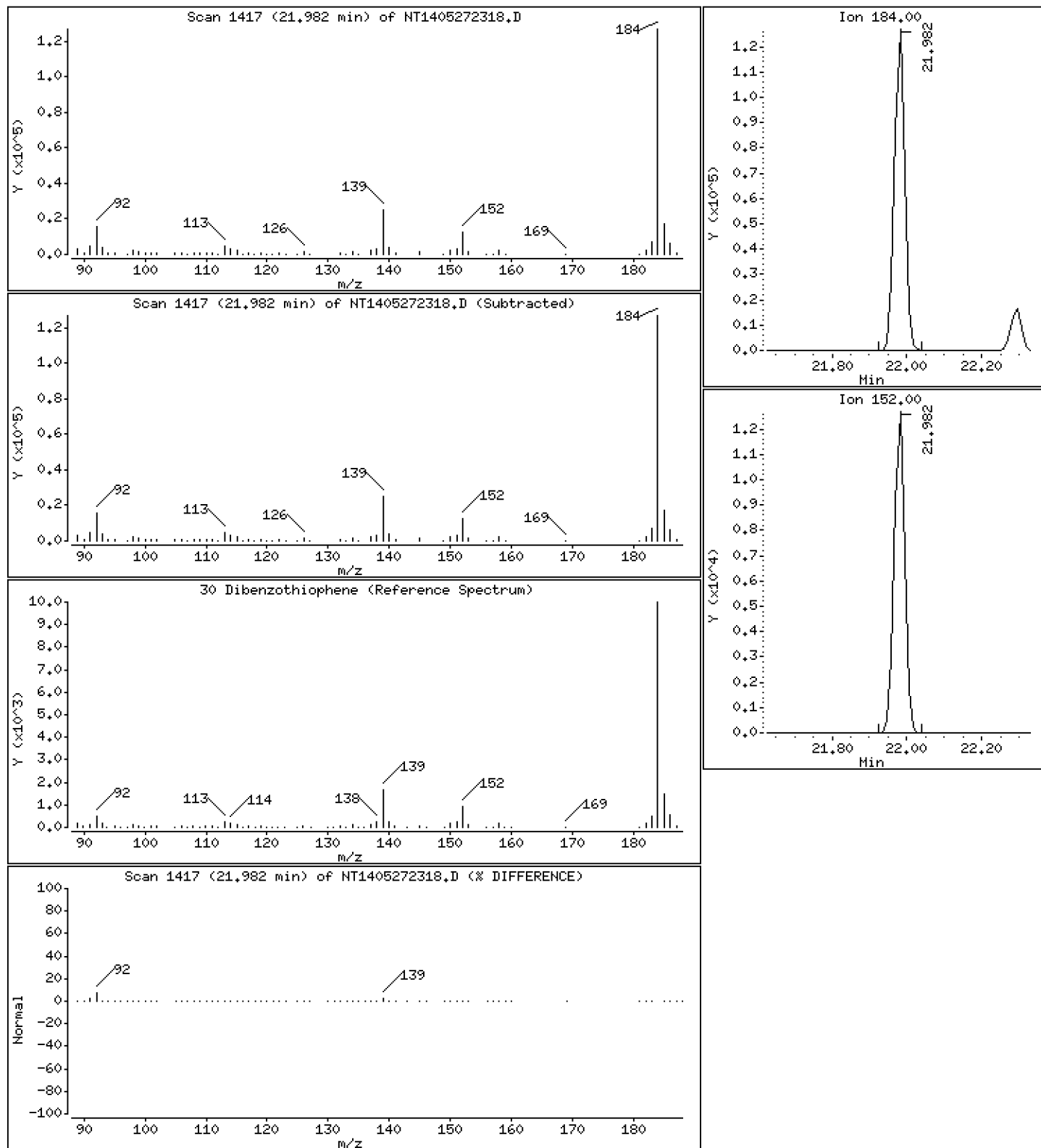
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

30 Dibenzothiophene

Concentration: 2.534 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

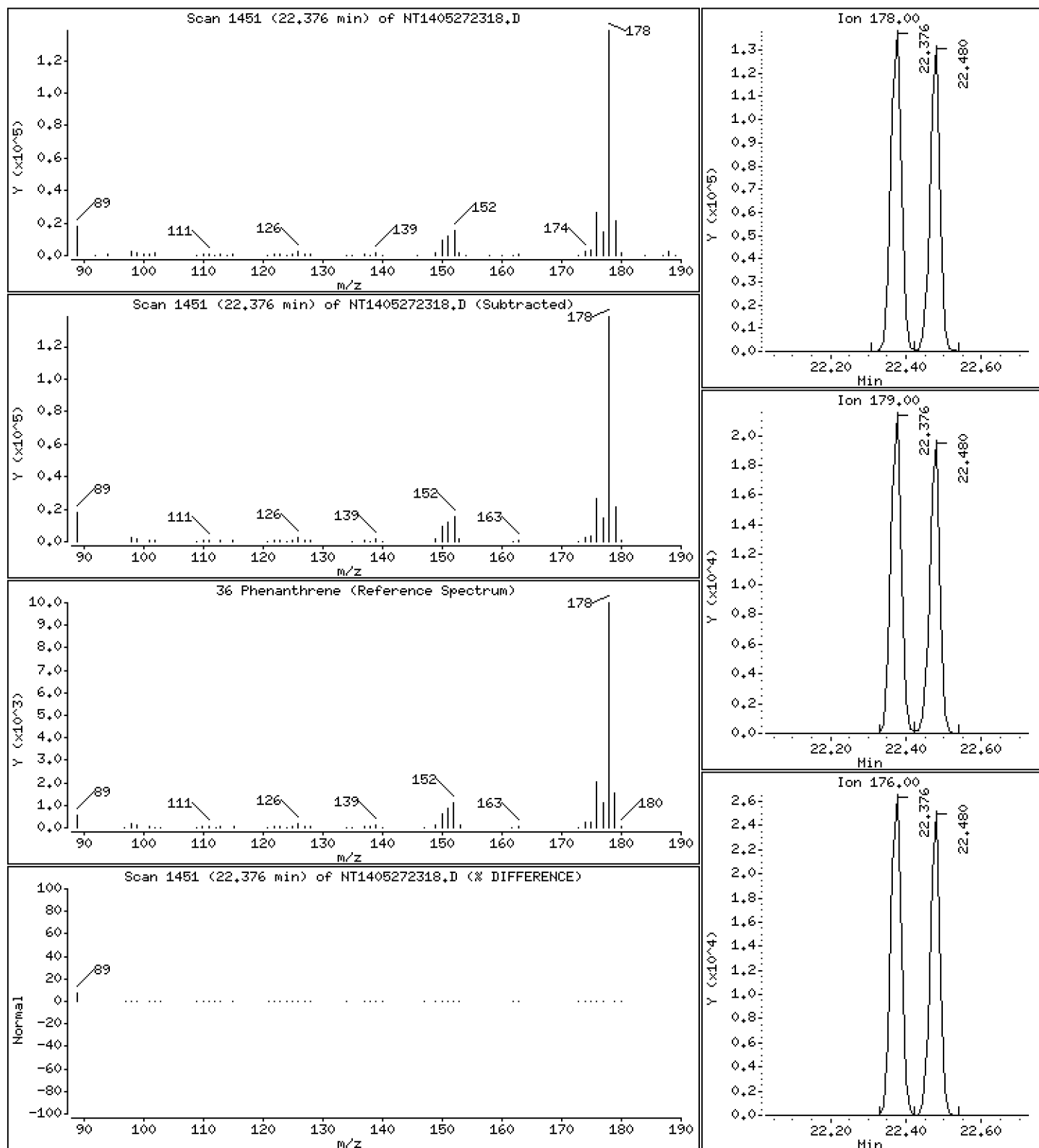
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

36 Phenanthrene

Concentration: 2.410 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

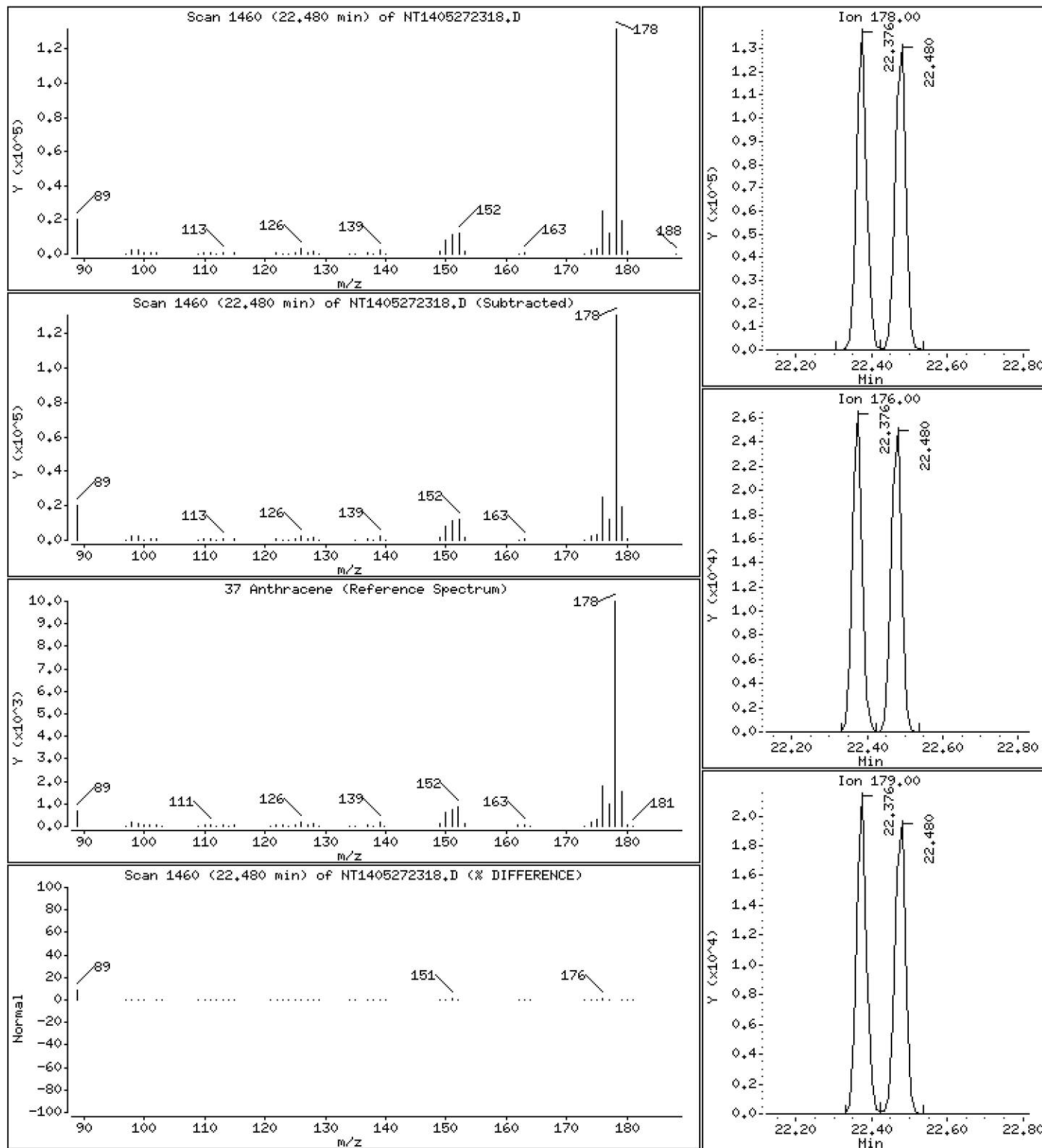
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

37 Anthracene

Concentration: 2.492 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

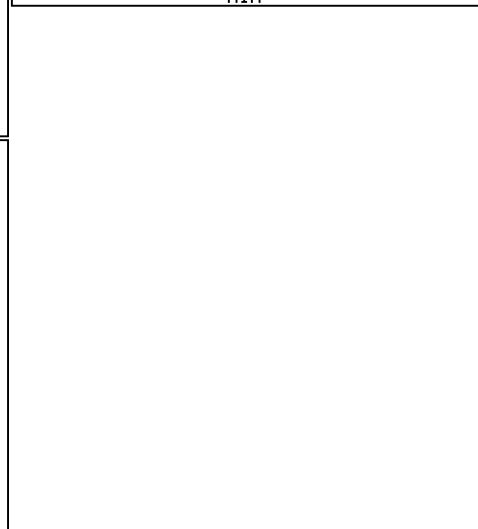
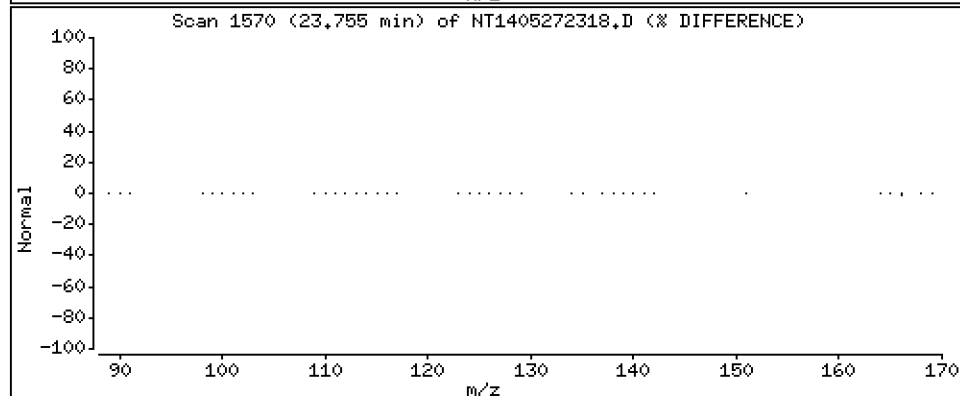
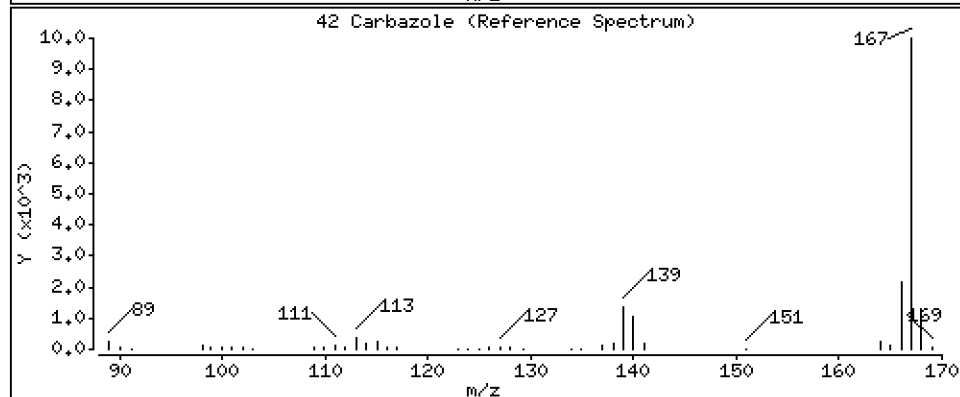
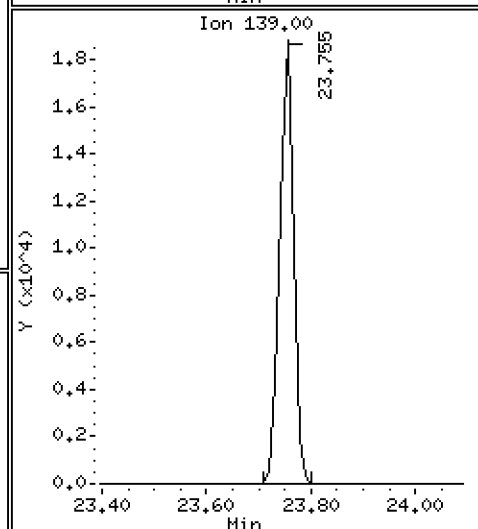
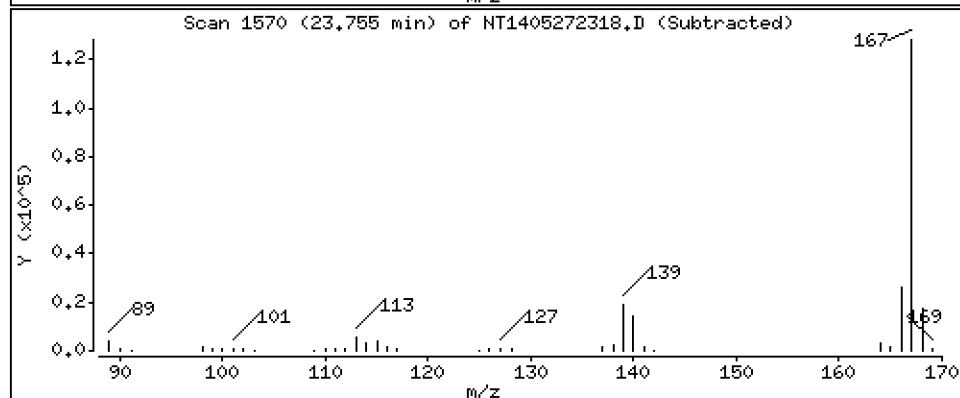
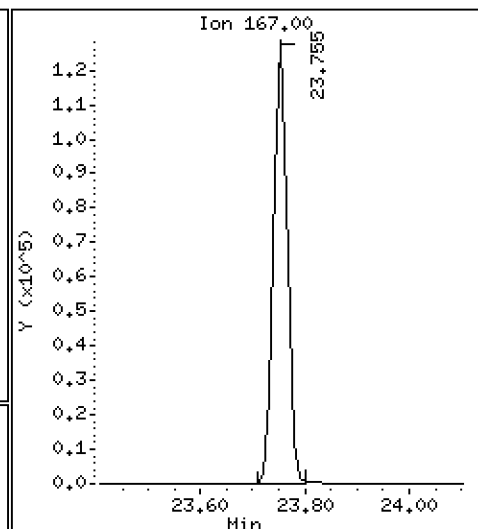
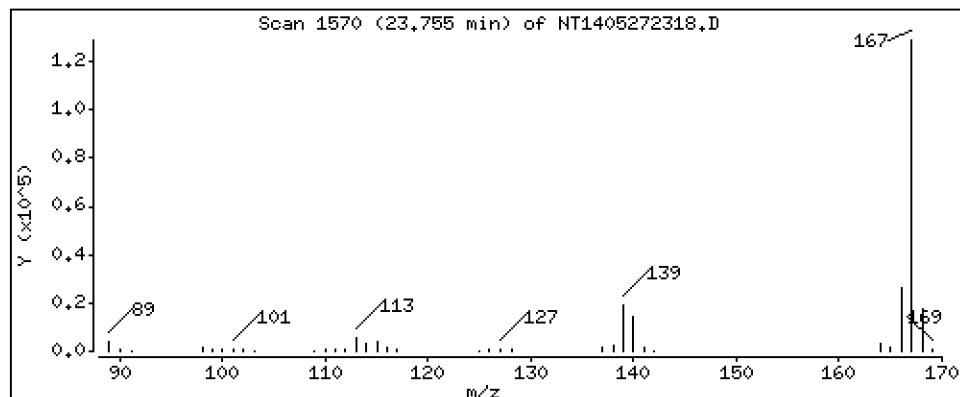
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

42 Carbazole

Concentration: 2.456 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

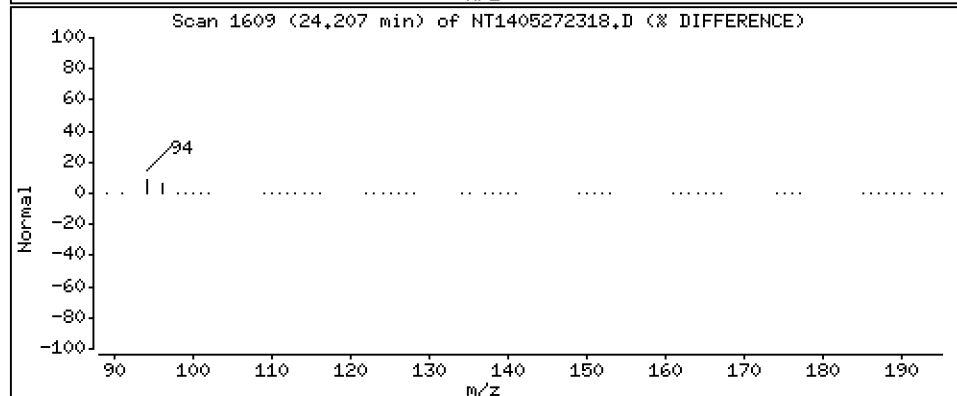
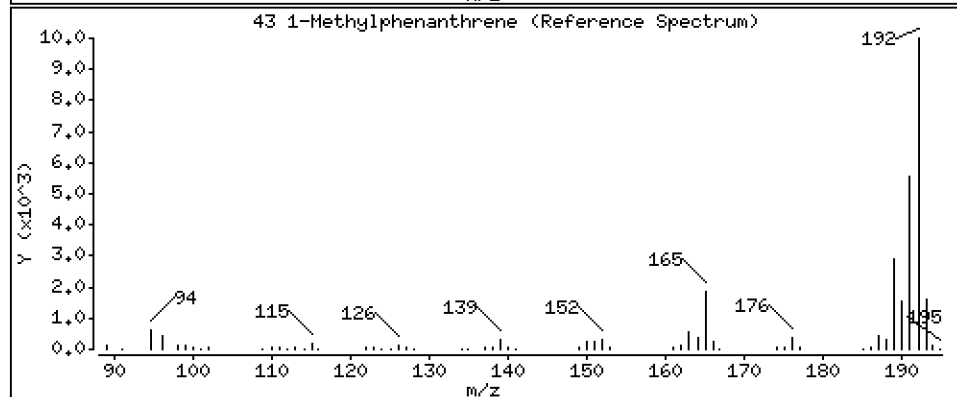
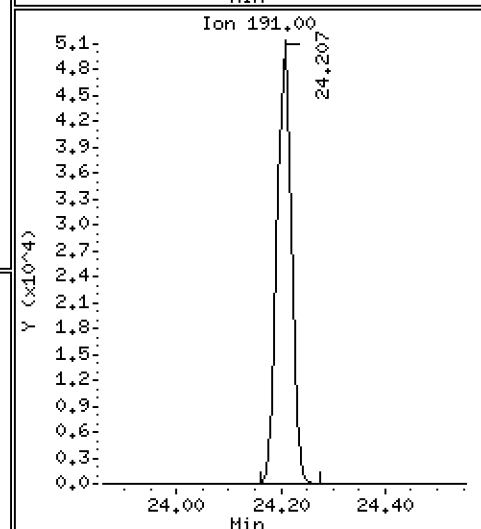
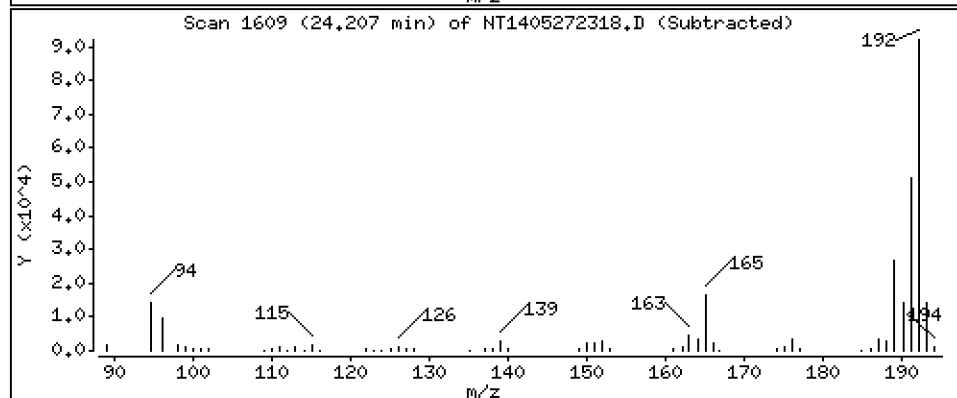
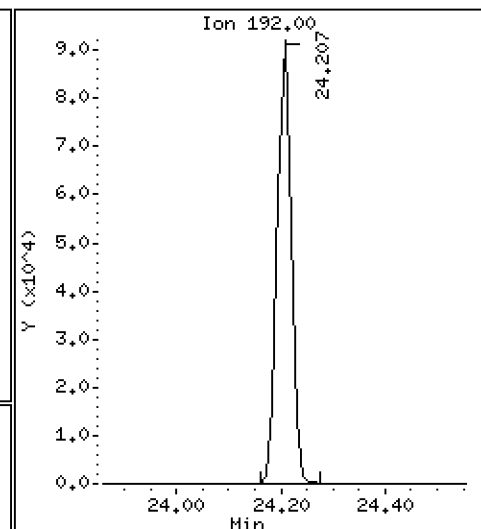
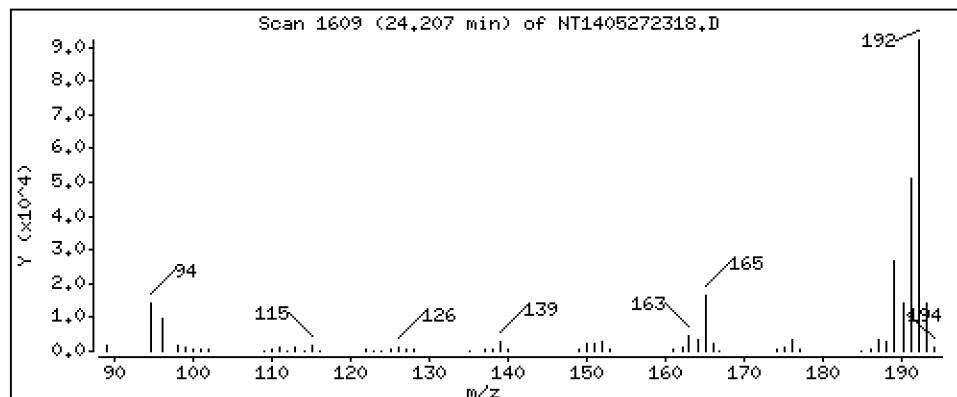
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

43 1-Methylphenanthrene

Concentration: 2.414 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

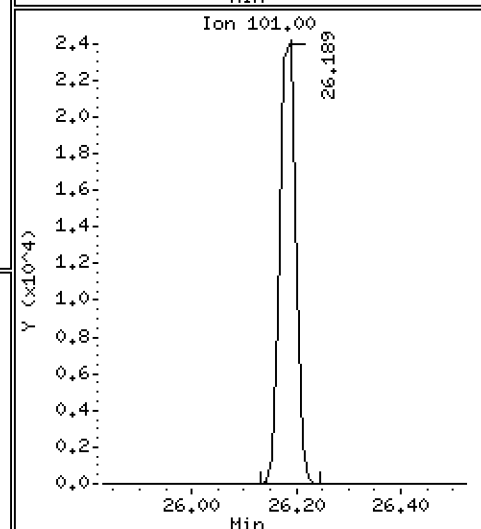
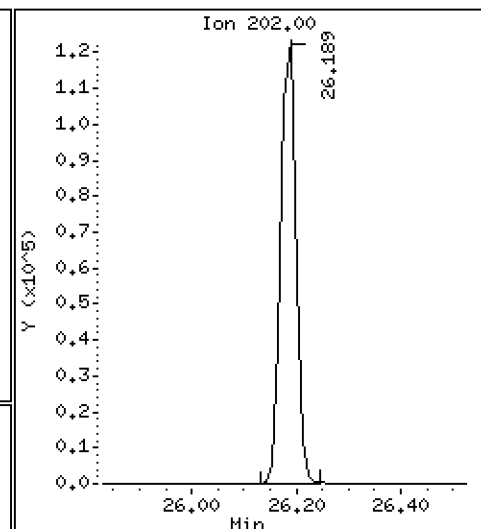
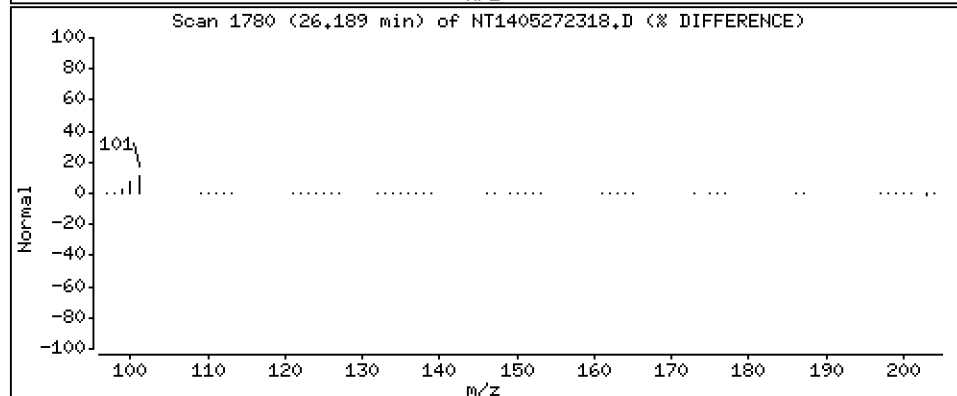
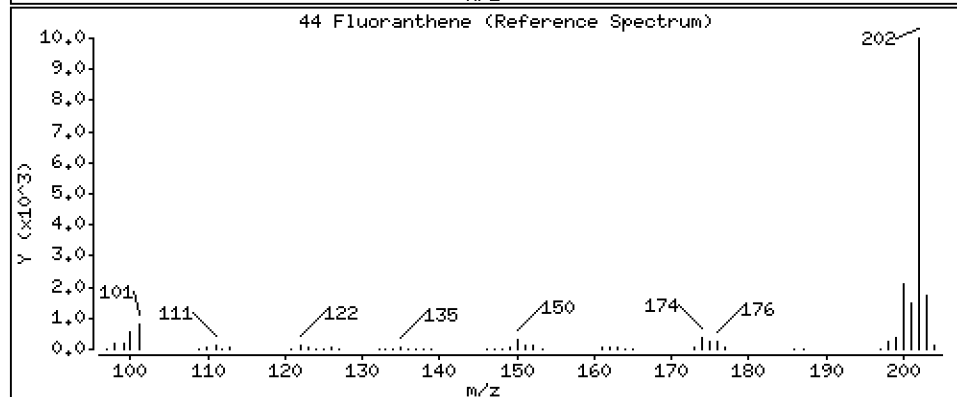
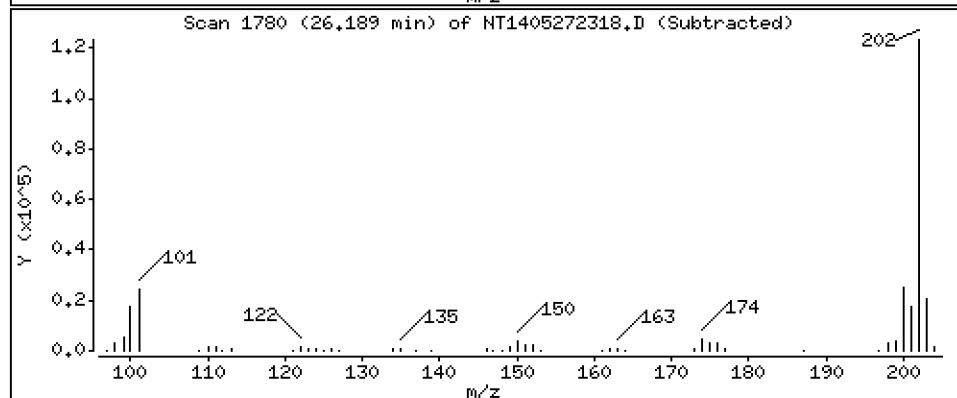
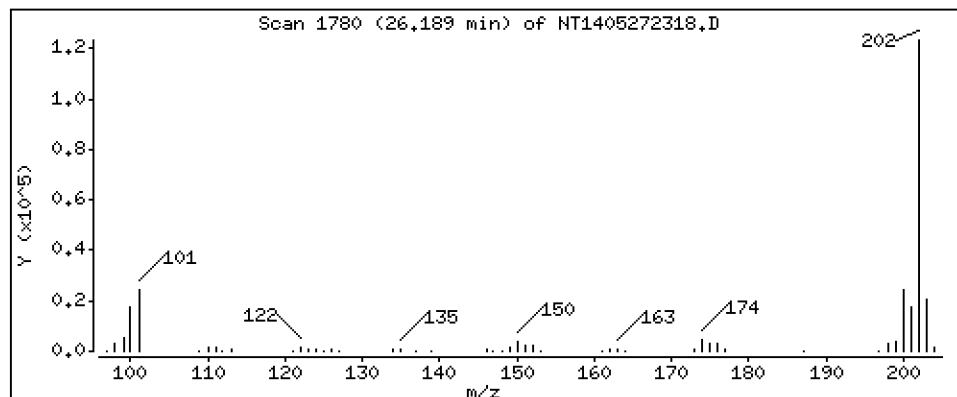
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

44 Fluoranthene

Concentration: 2.473 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

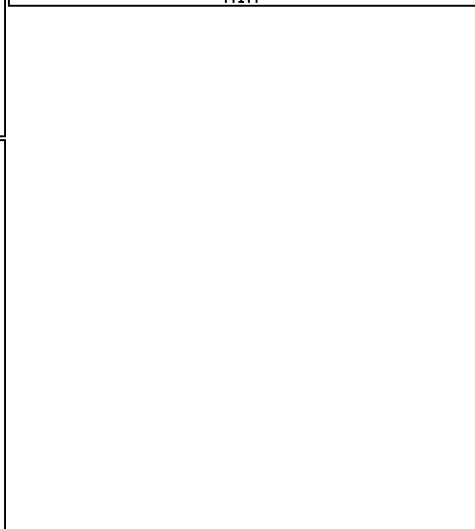
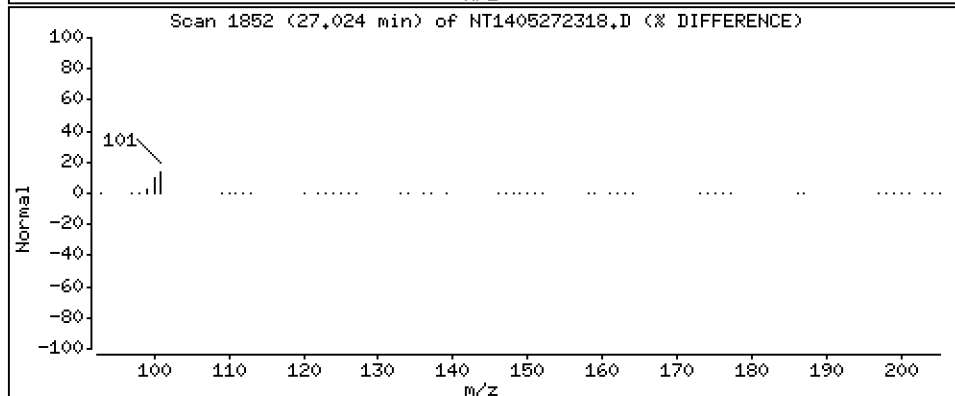
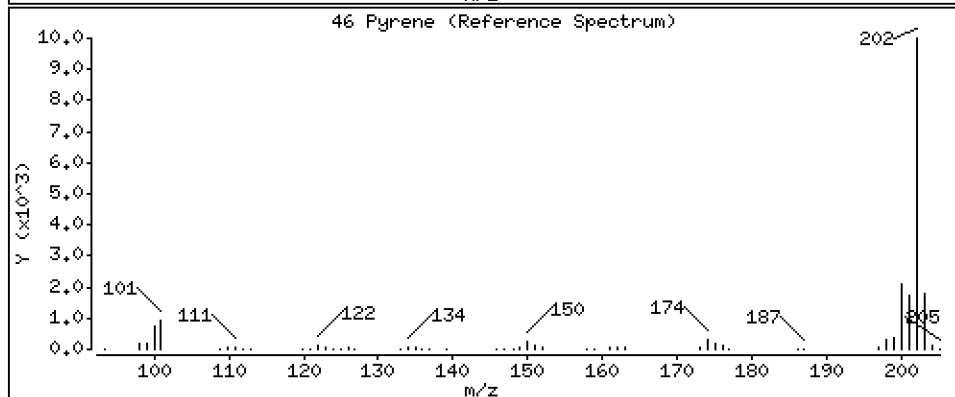
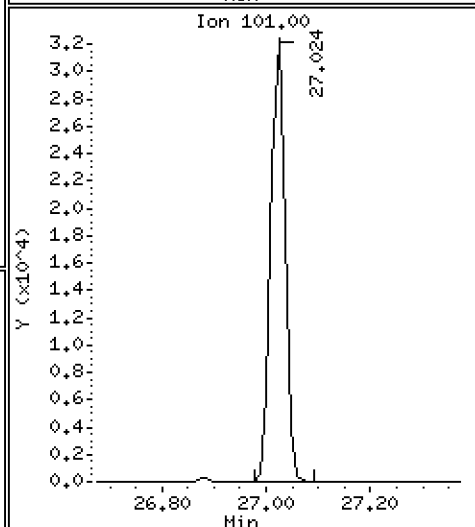
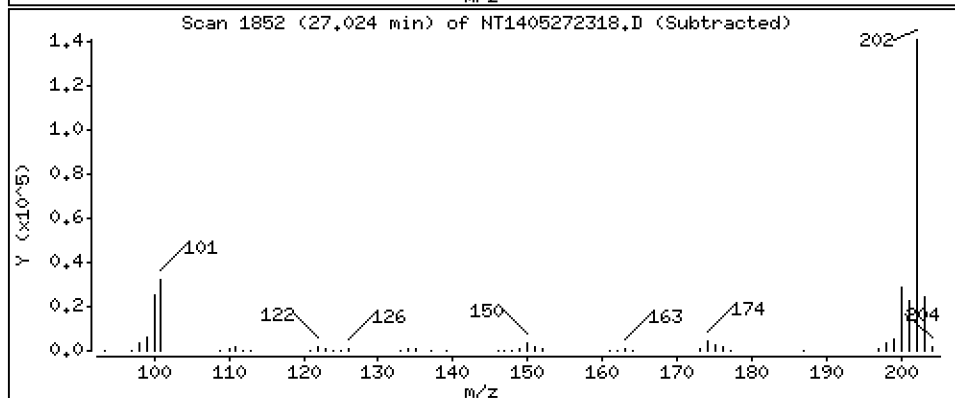
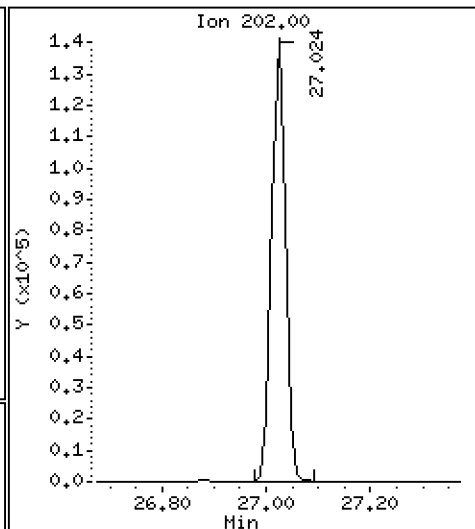
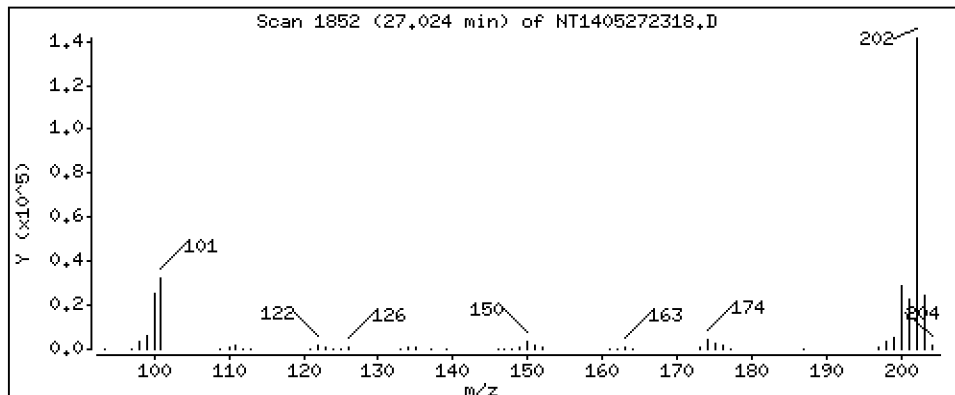
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

46 Pyrene

Concentration: 2.471 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

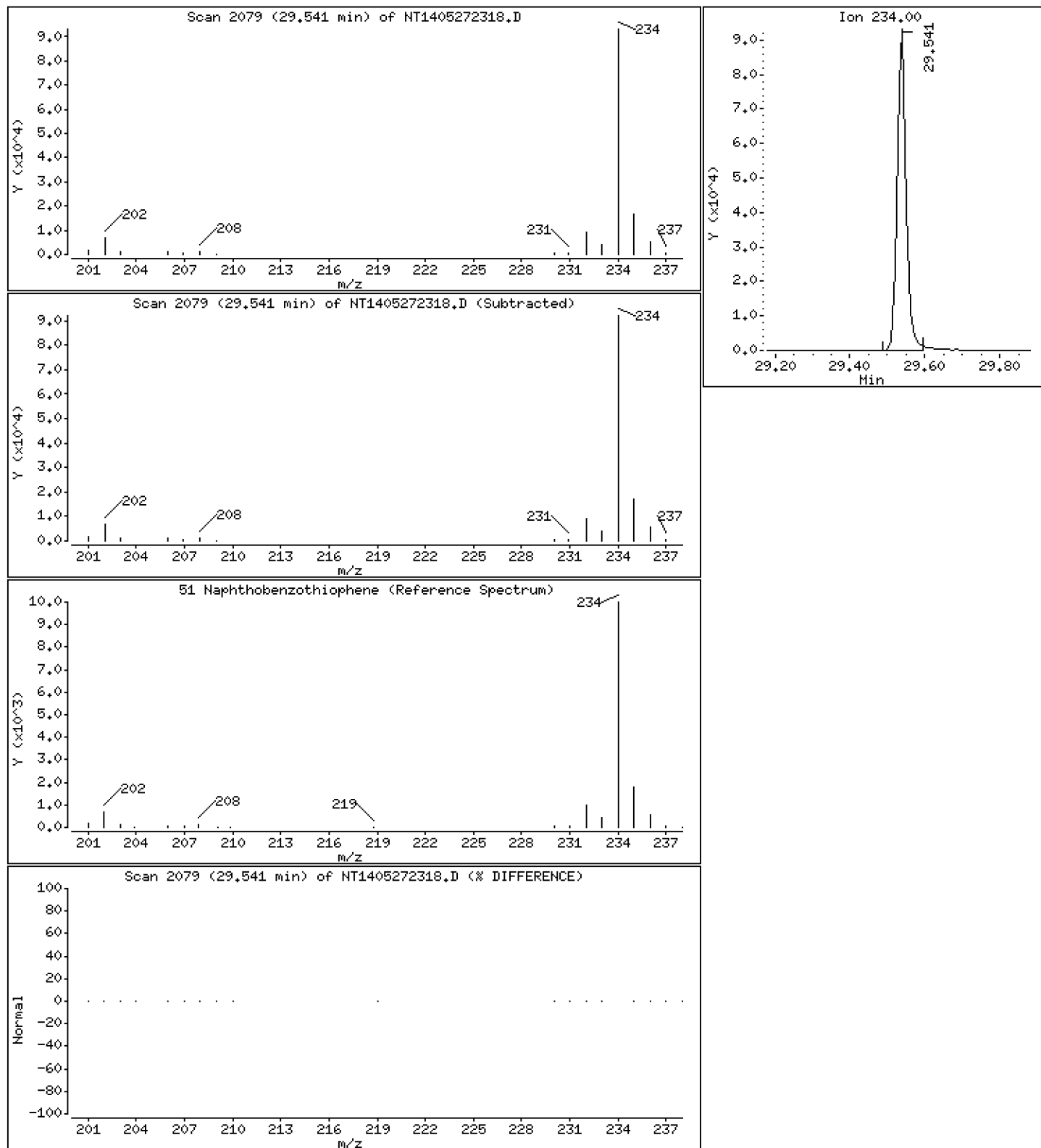
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

51 Naphthobenzothiophene

Concentration: 2,507 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

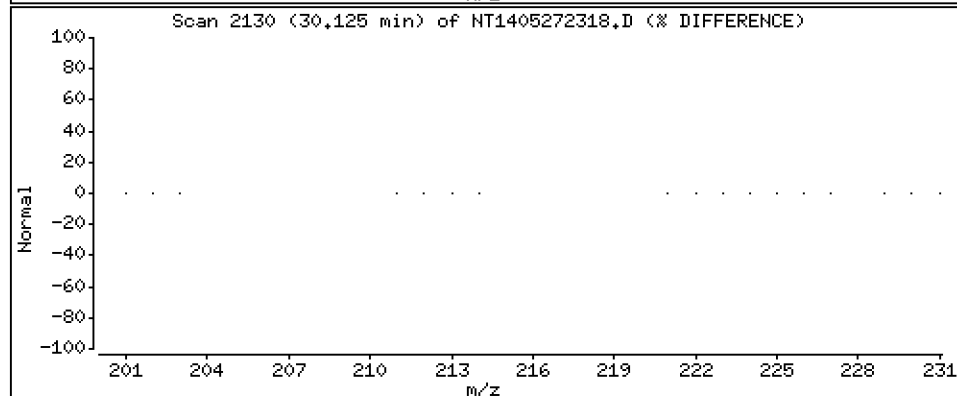
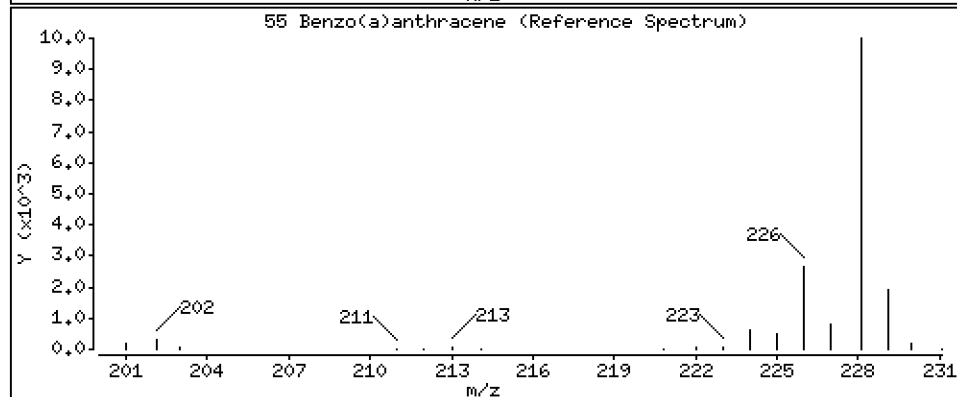
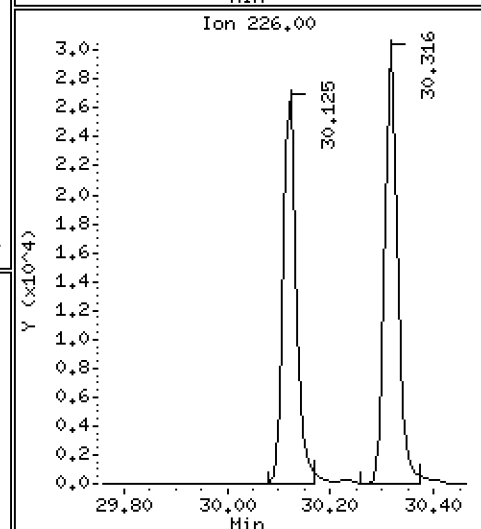
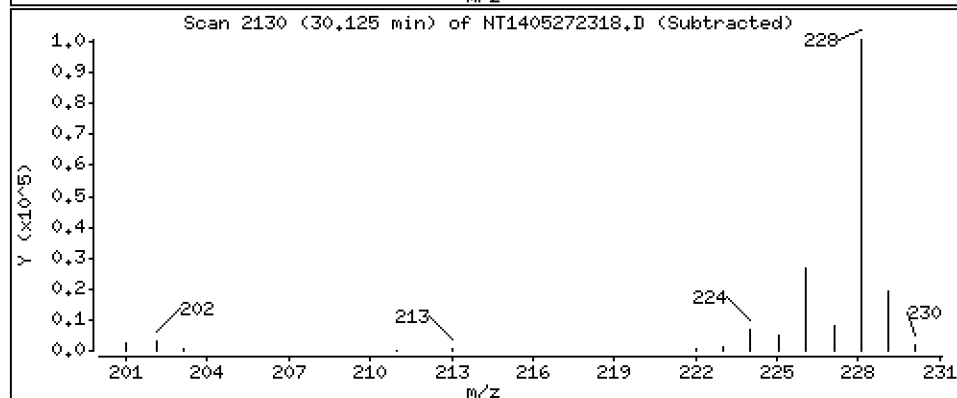
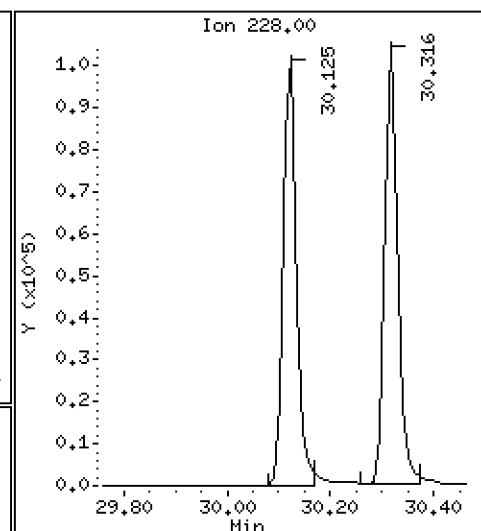
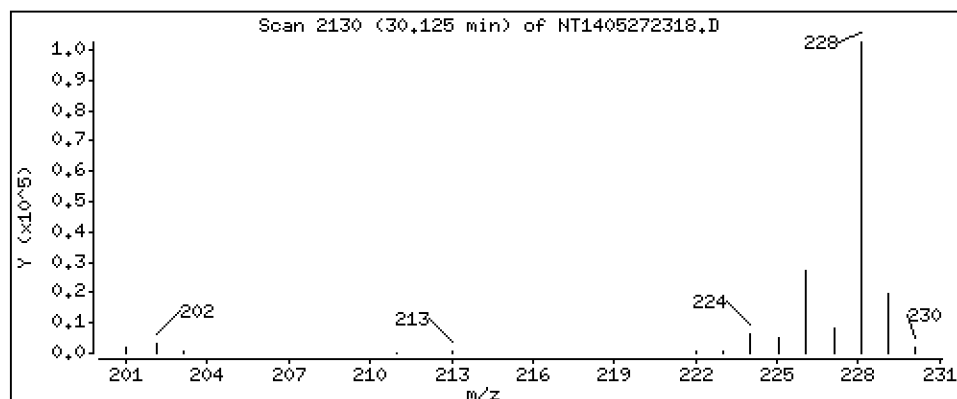
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

55 Benzo(a)anthracene

Concentration: 2.380 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

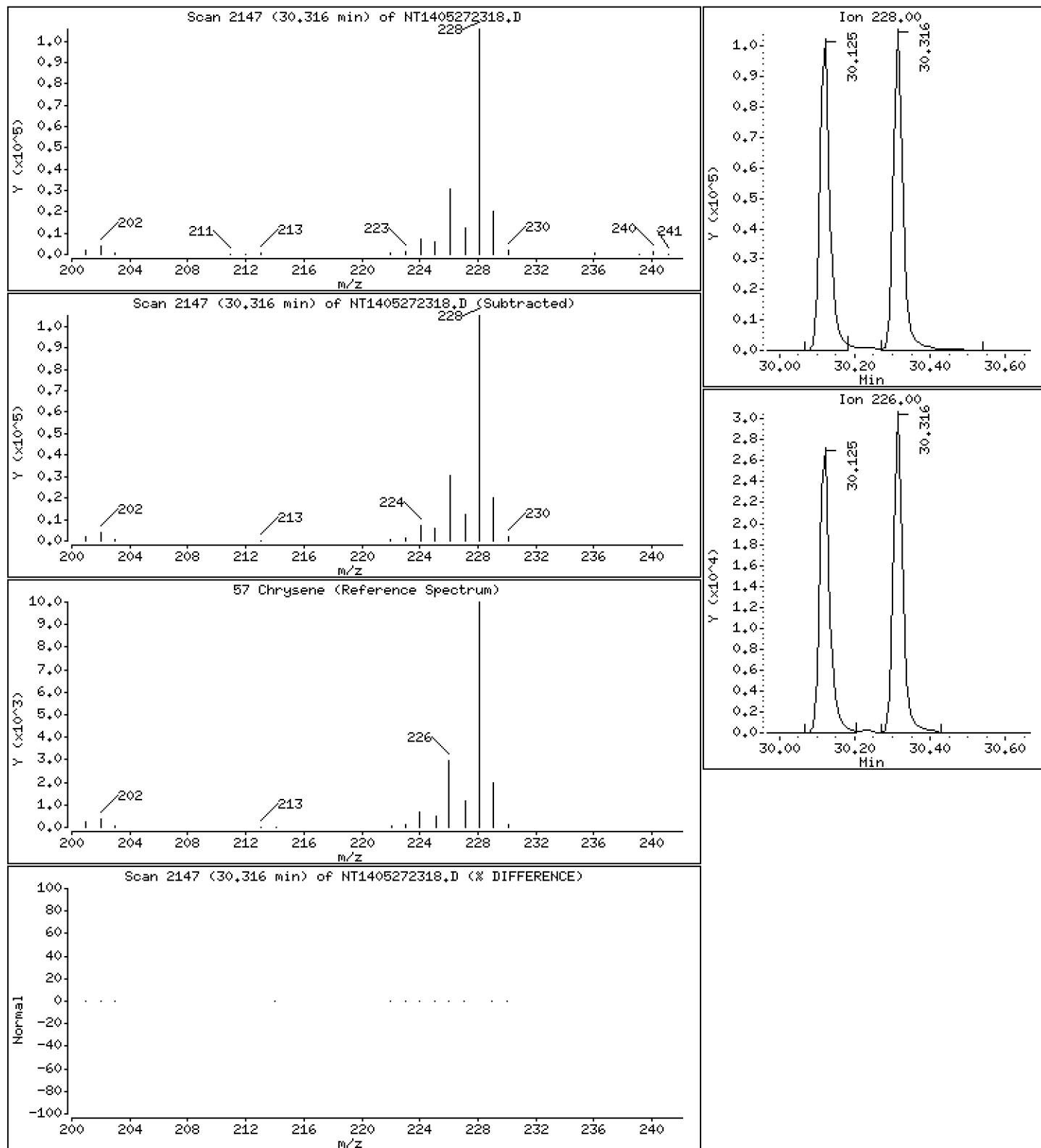
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

57 Chrysene

Concentration: 2.543 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

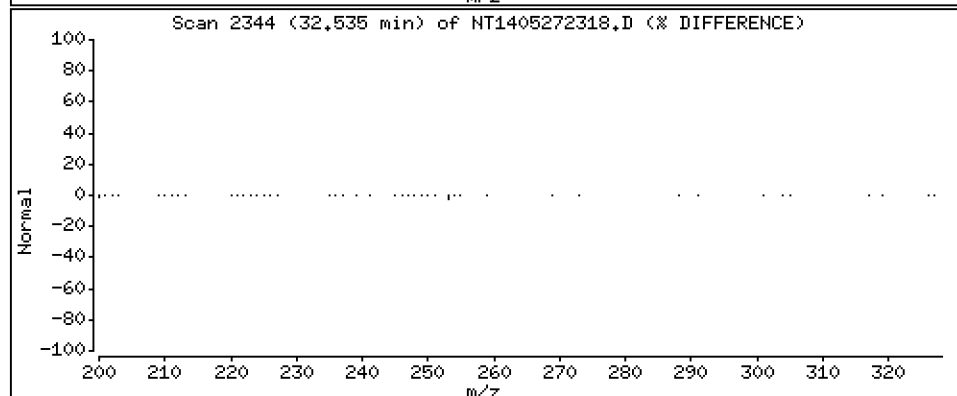
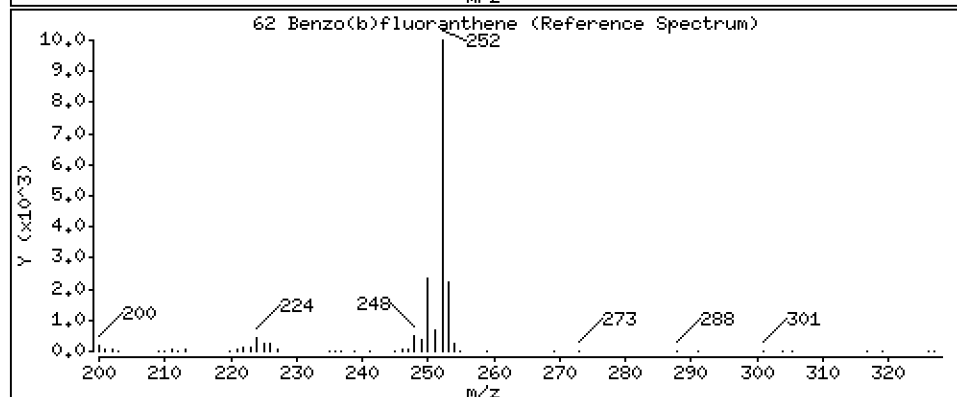
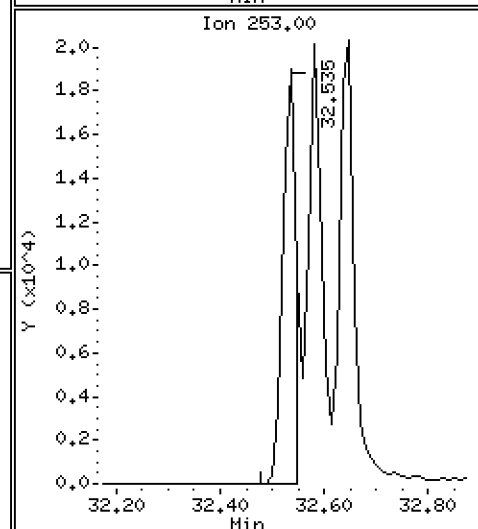
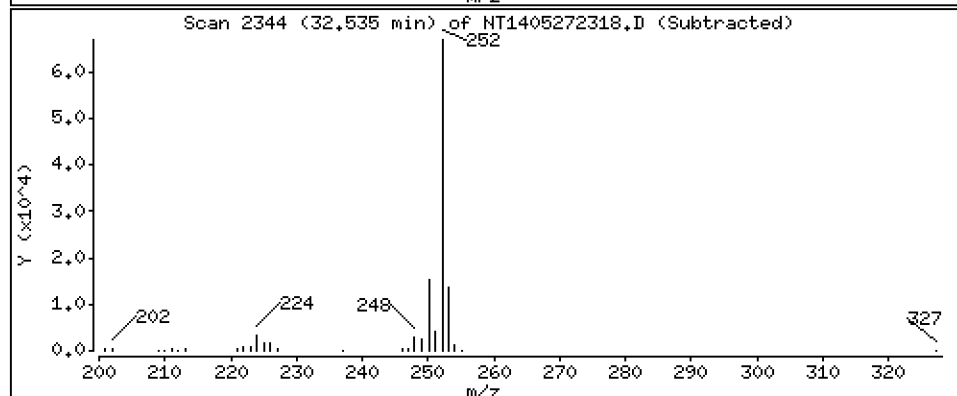
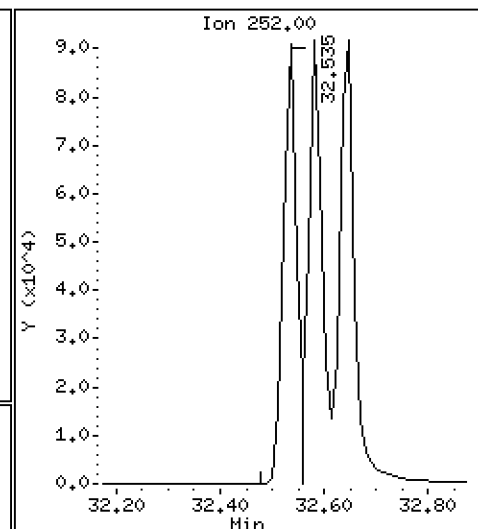
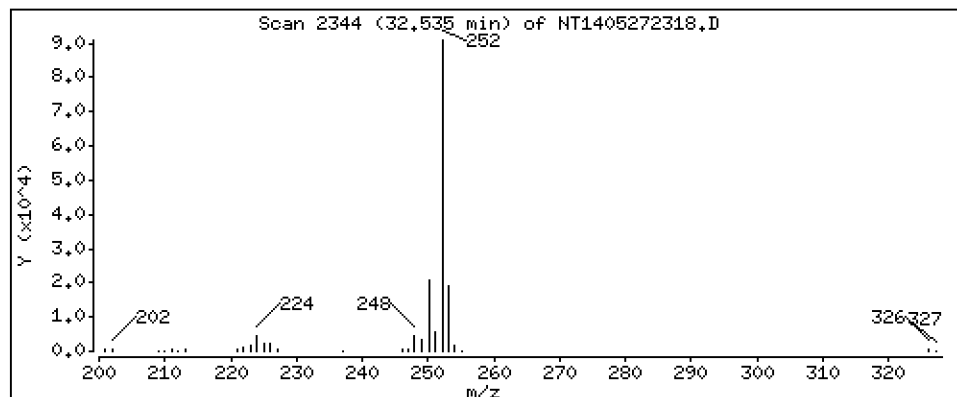
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

62 Benzo(b)fluoranthene

Concentration: 2.262 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

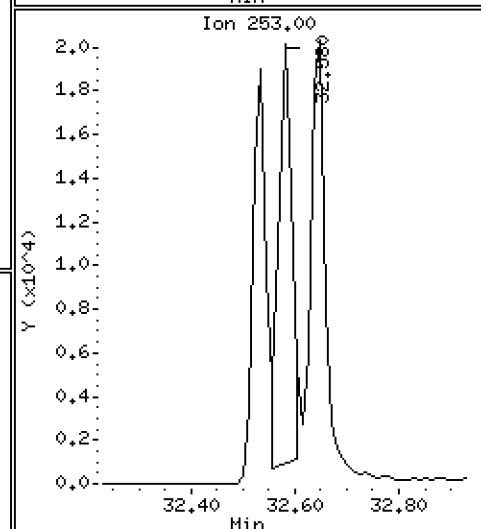
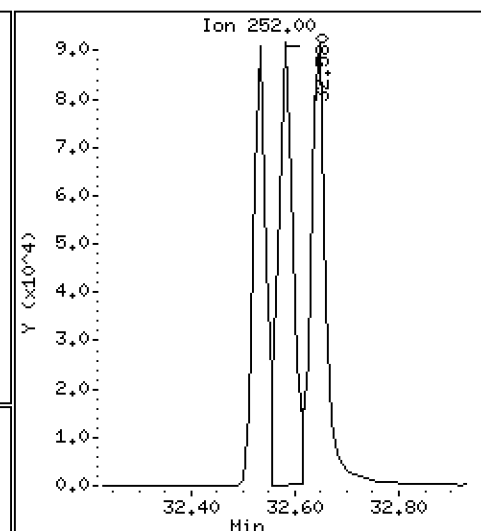
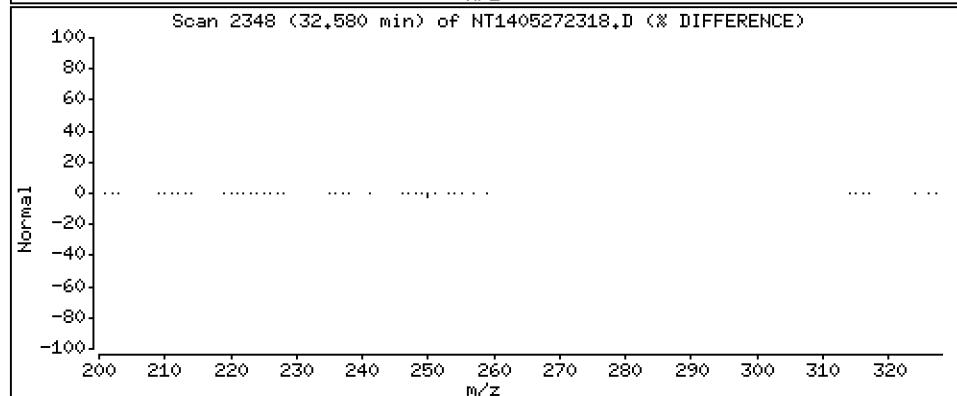
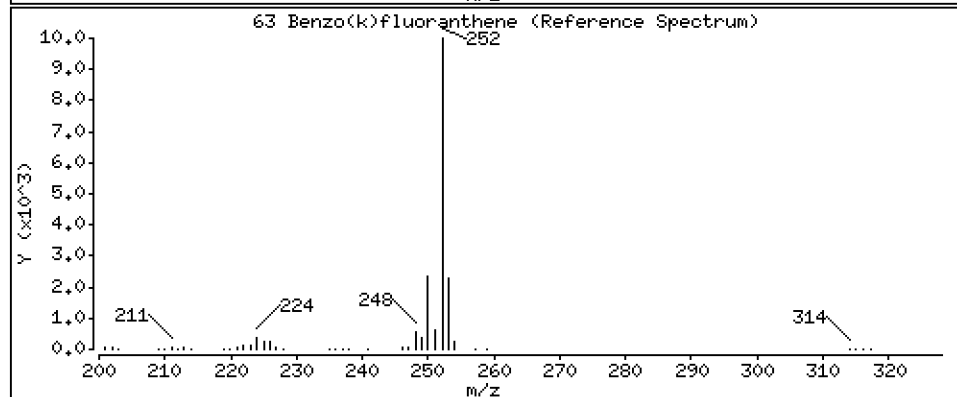
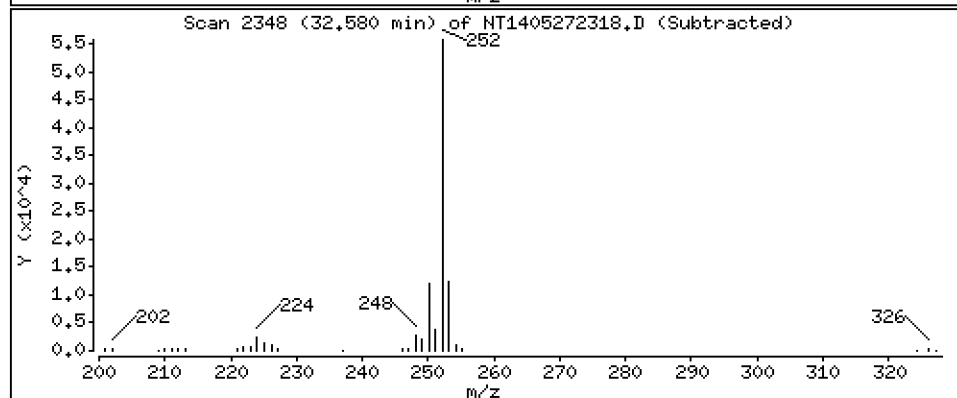
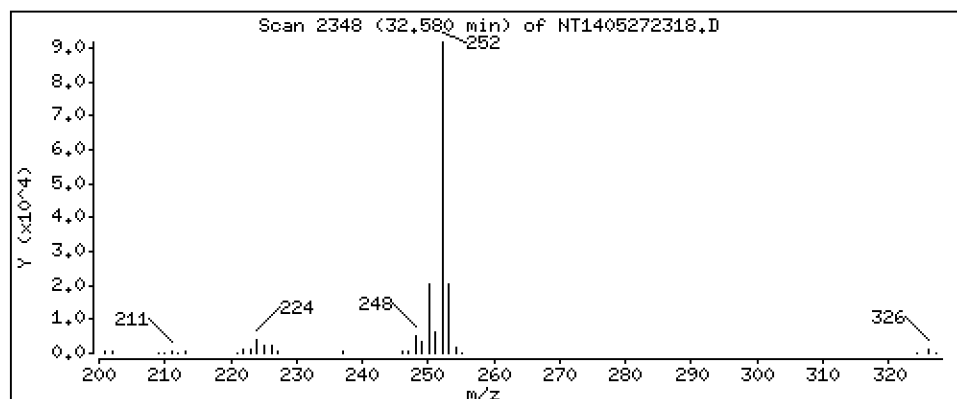
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

63 Benzo(k)fluoranthene

Concentration: 2.168 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

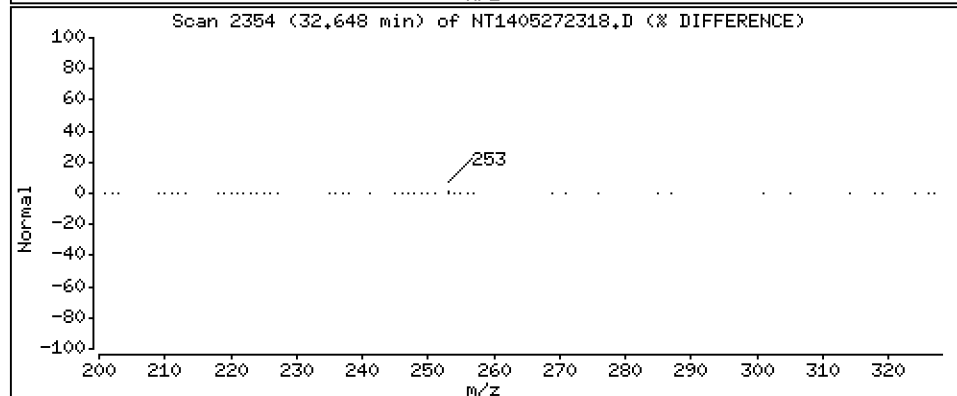
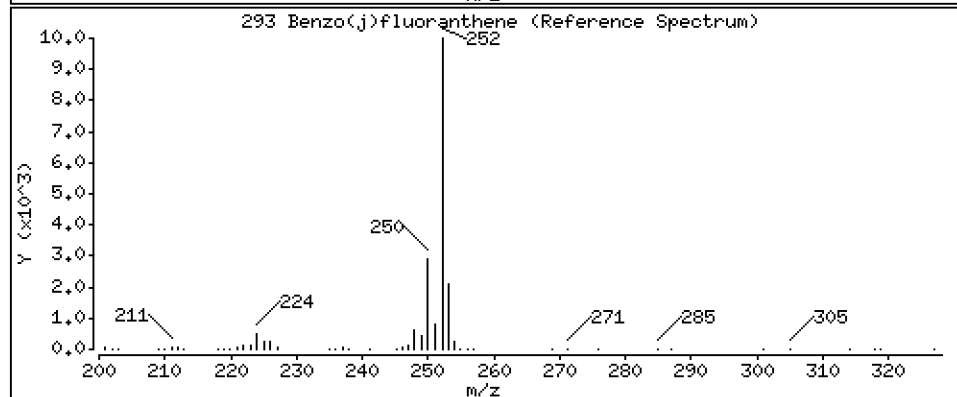
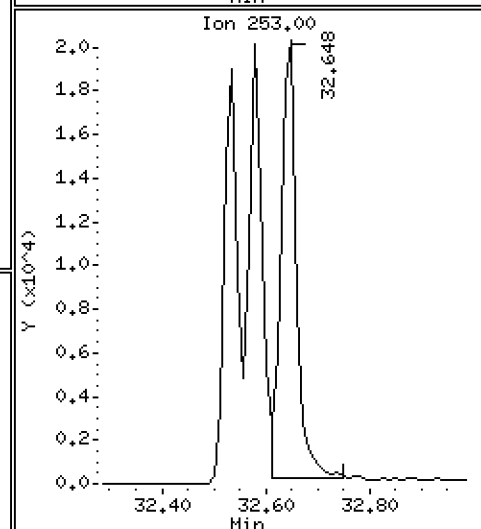
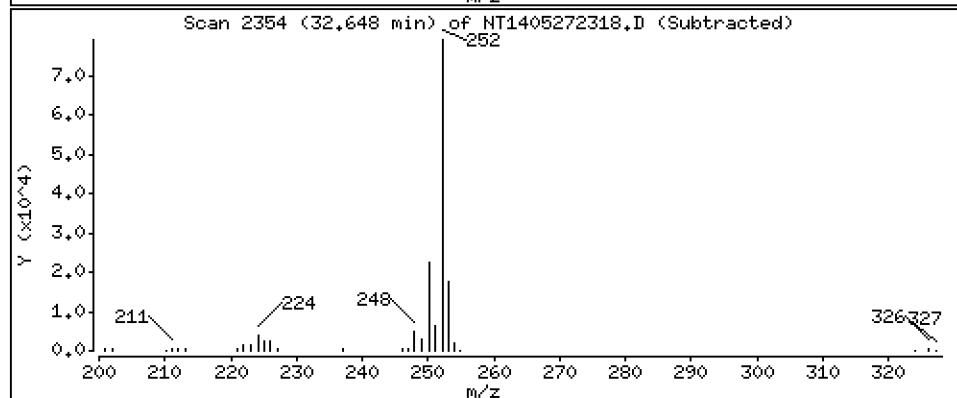
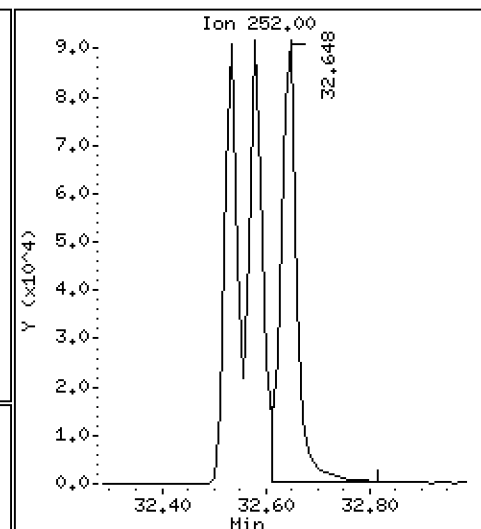
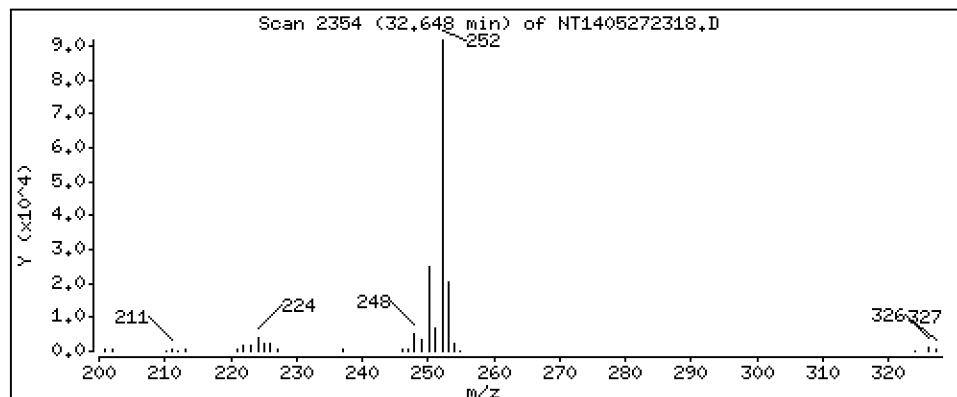
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

293 Benzo(j)fluoranthene

Concentration: 2,748 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

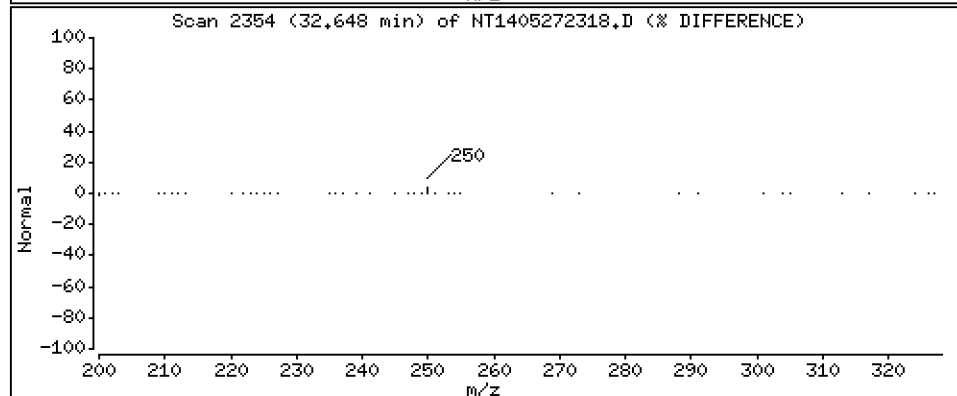
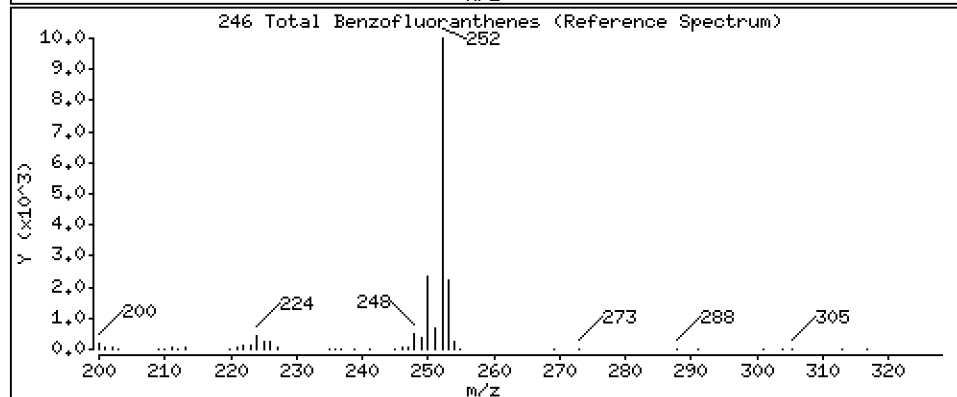
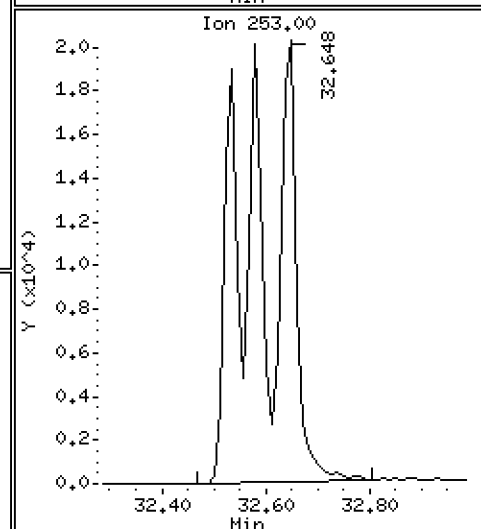
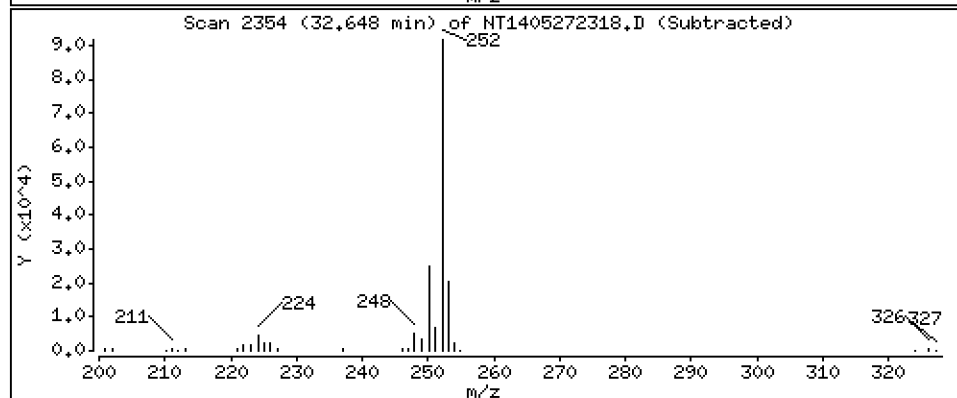
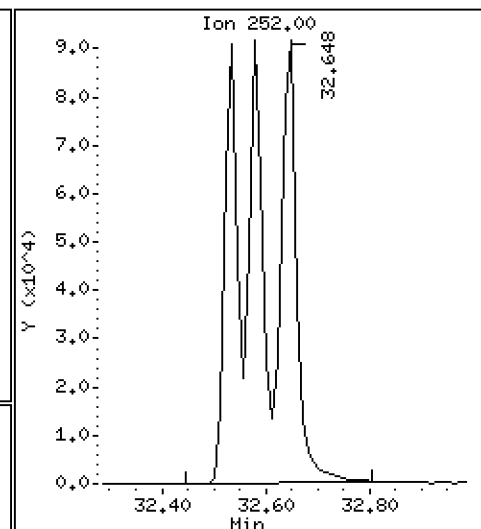
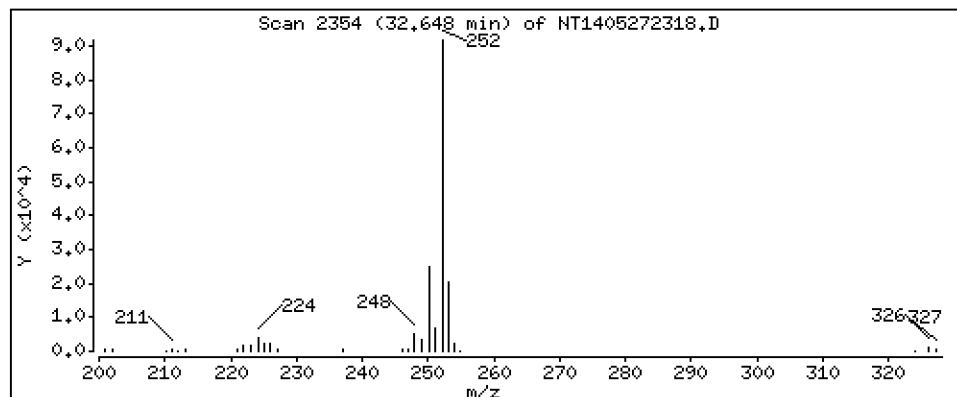
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

246 Total Benzo[fluoranthenes

Concentration: 7,462 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

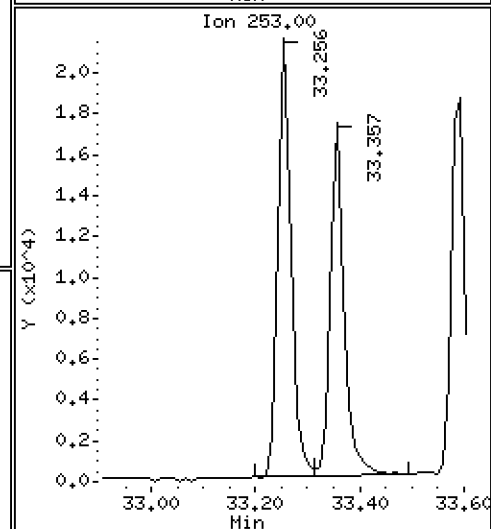
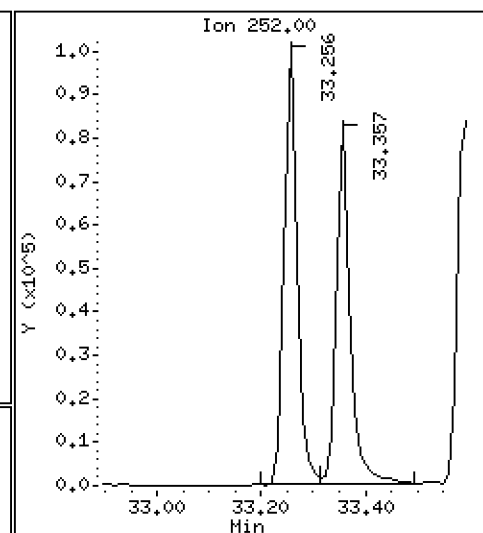
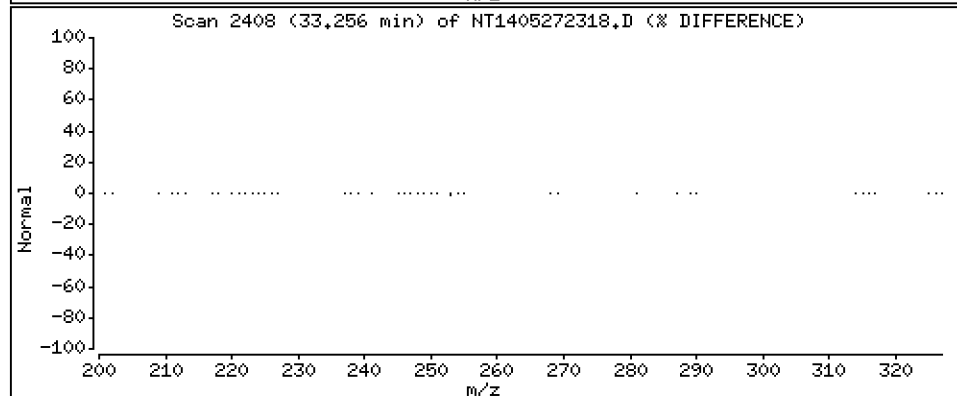
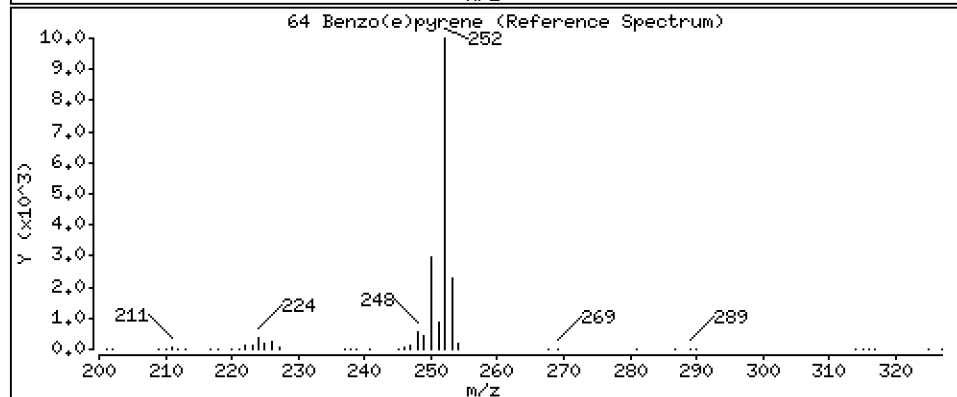
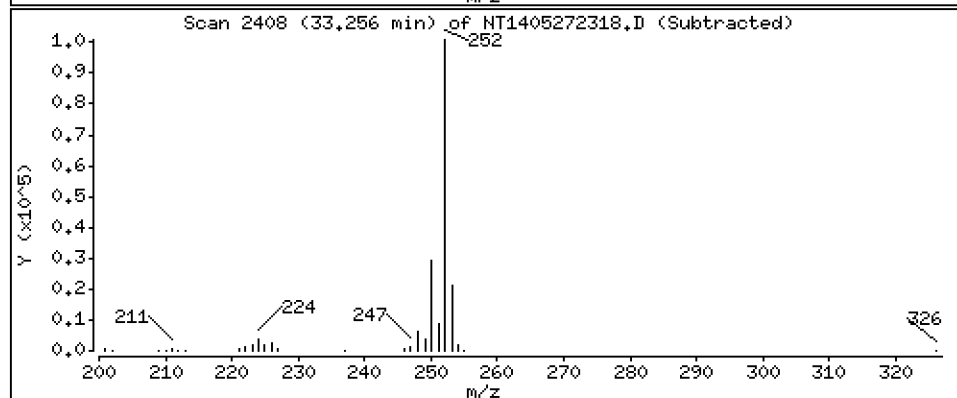
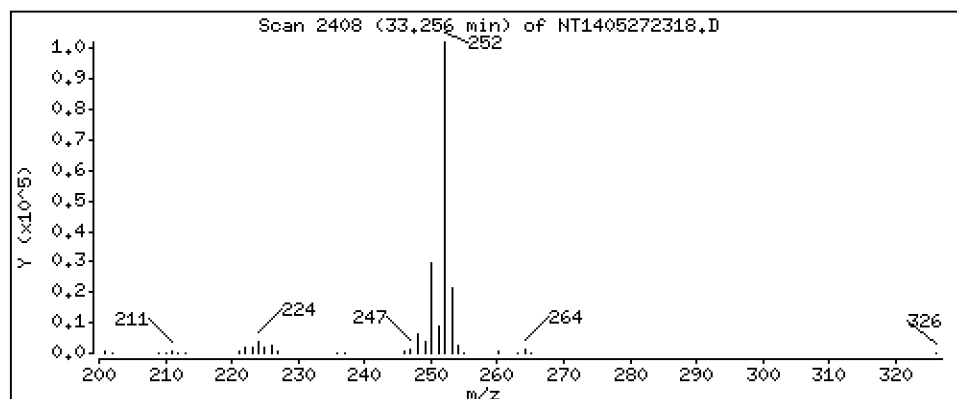
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

64 Benzo(e)pyrene

Concentration: 2.339 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

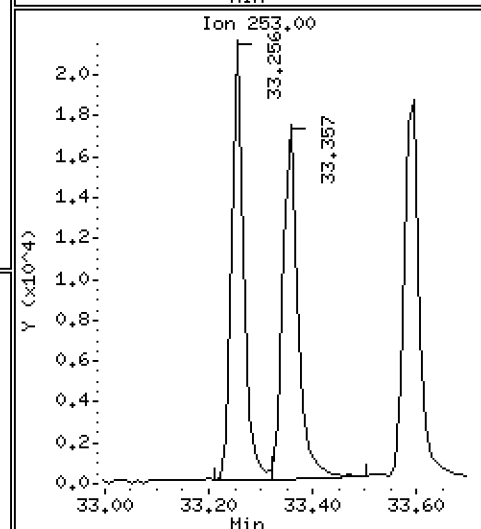
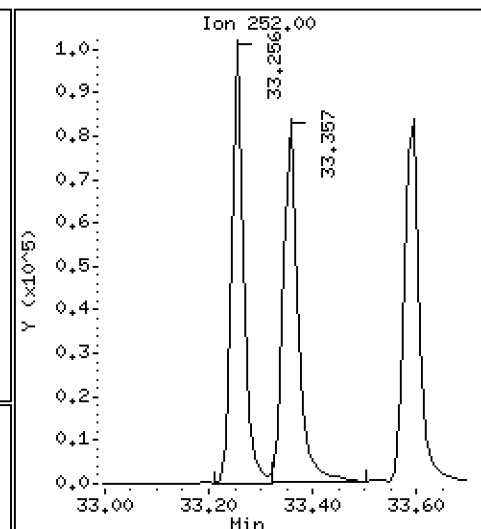
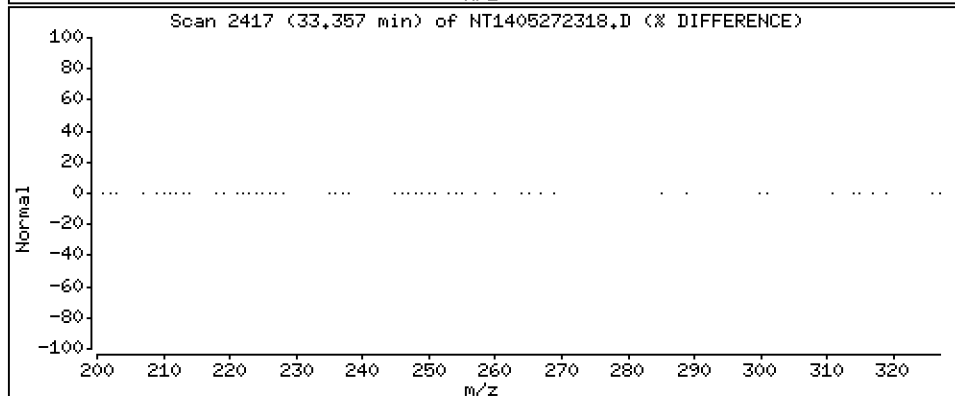
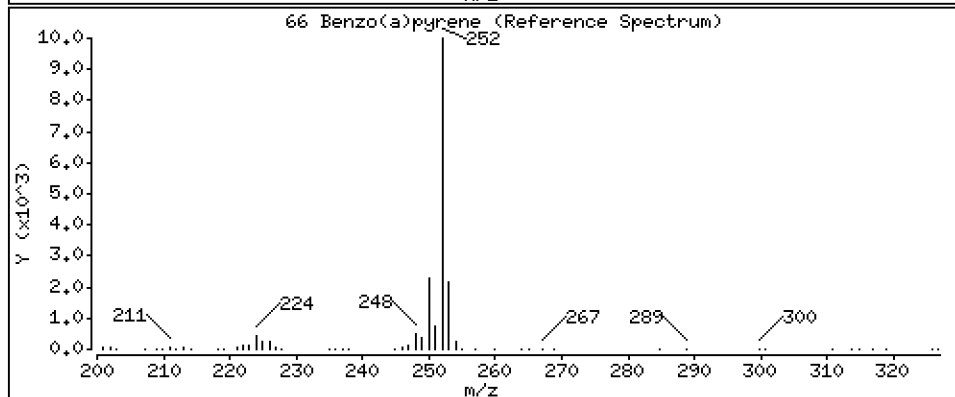
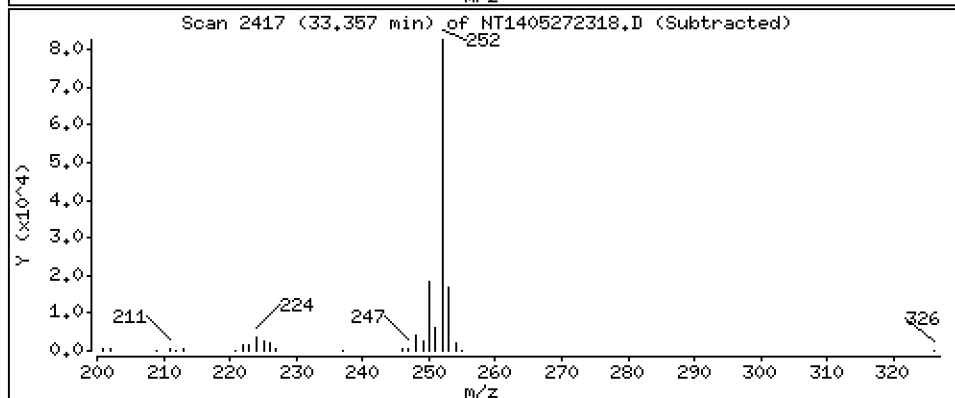
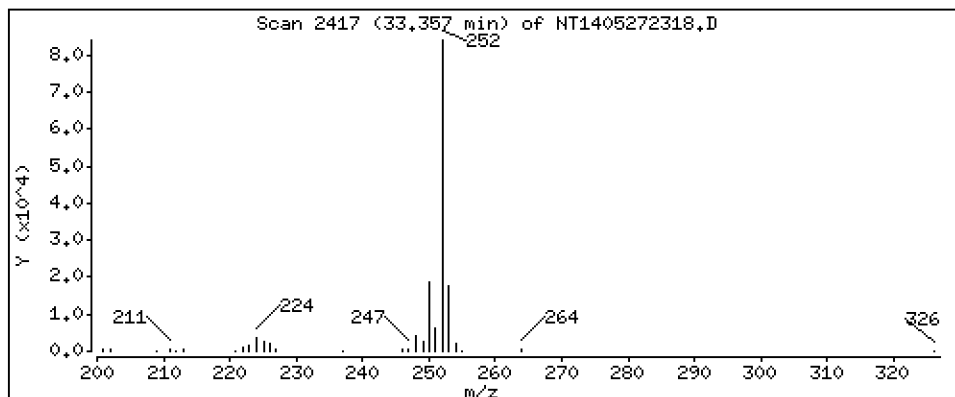
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

66 Benzo(a)pyrene

Concentration: 2.586 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

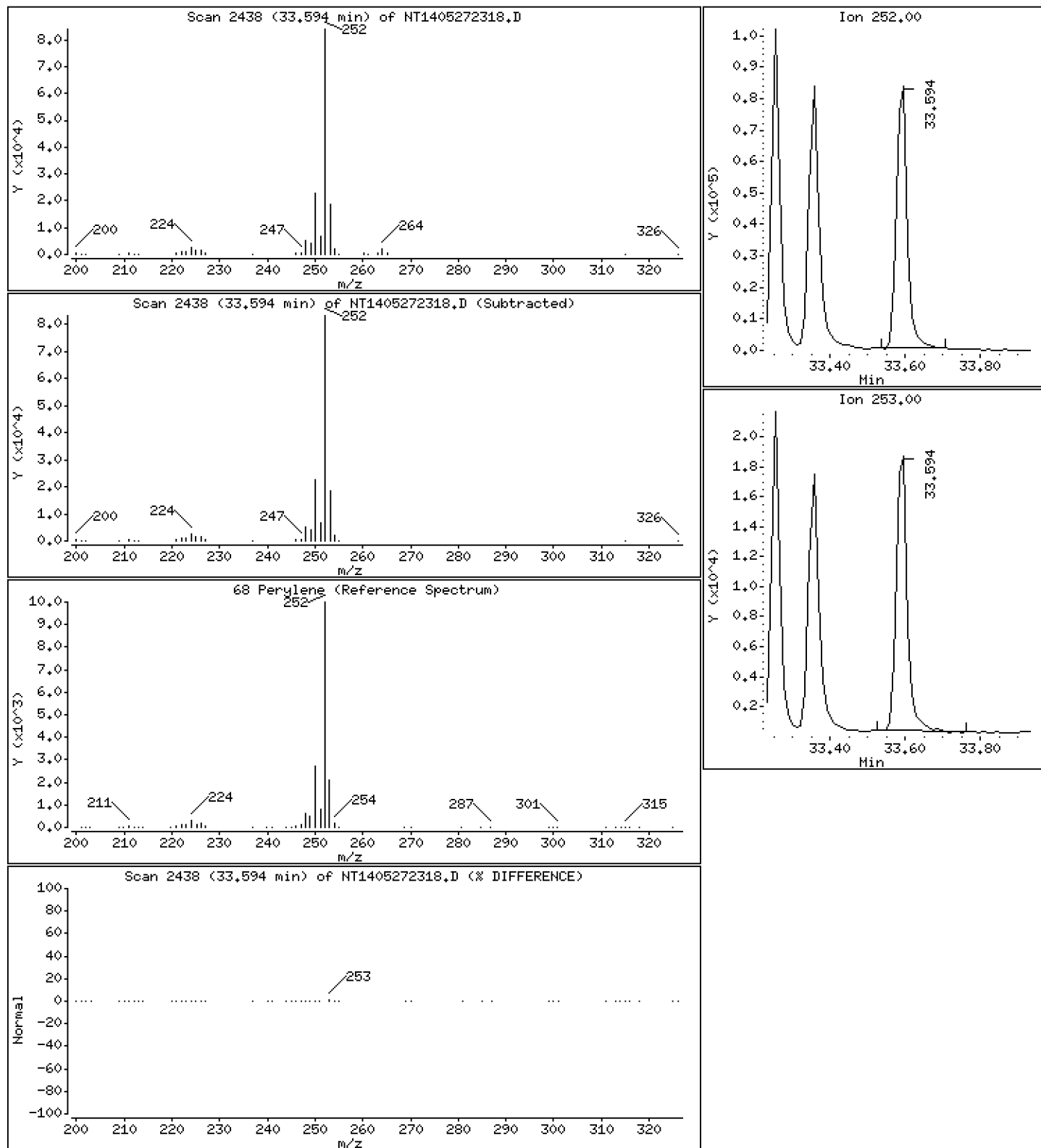
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

68 Perylene

Concentration: 2.430 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

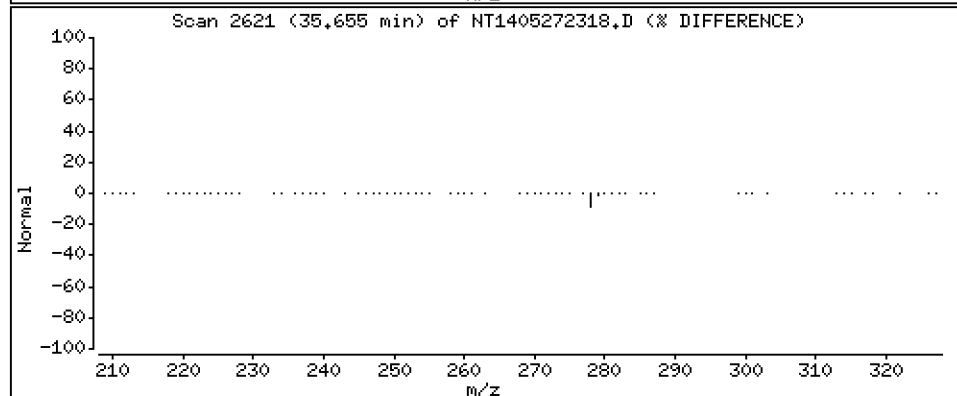
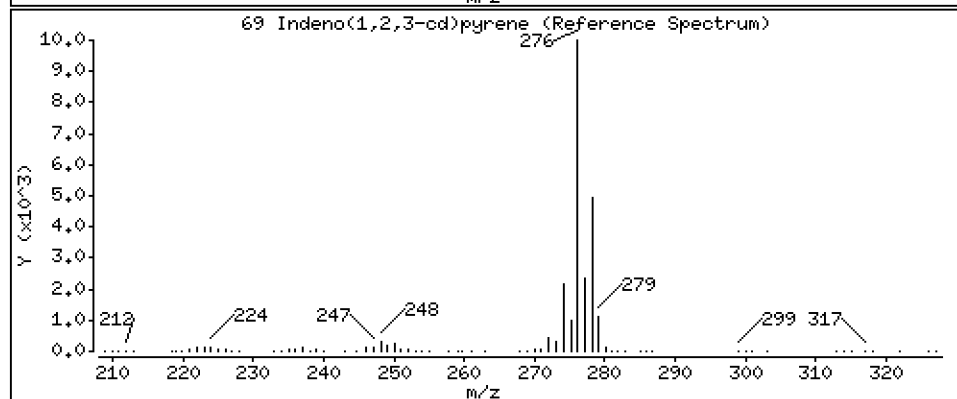
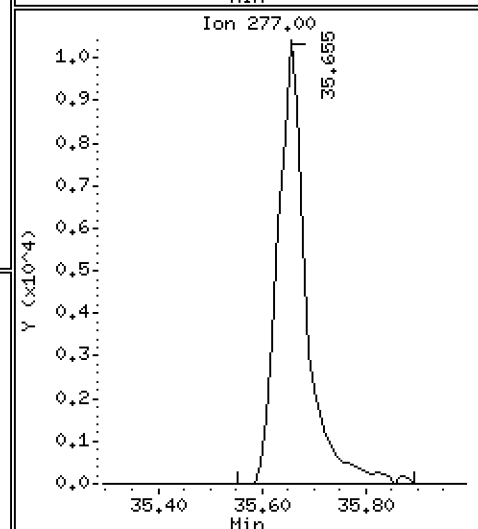
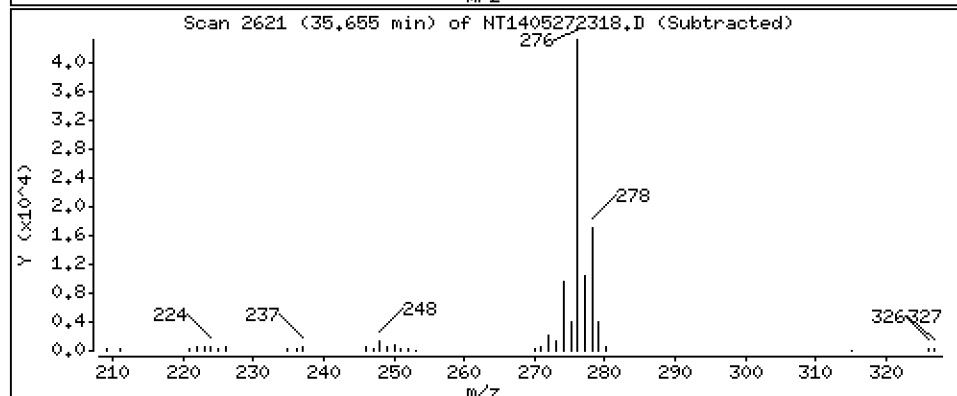
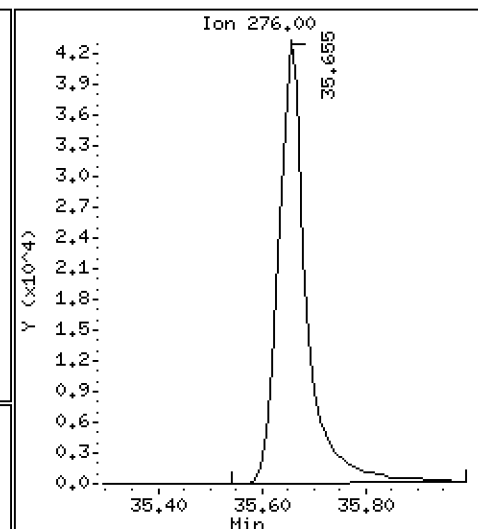
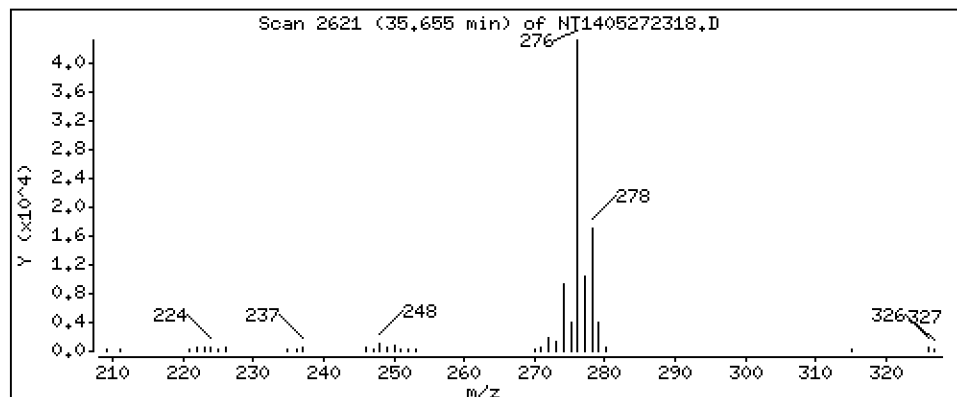
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

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

Concentration: 2.052 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

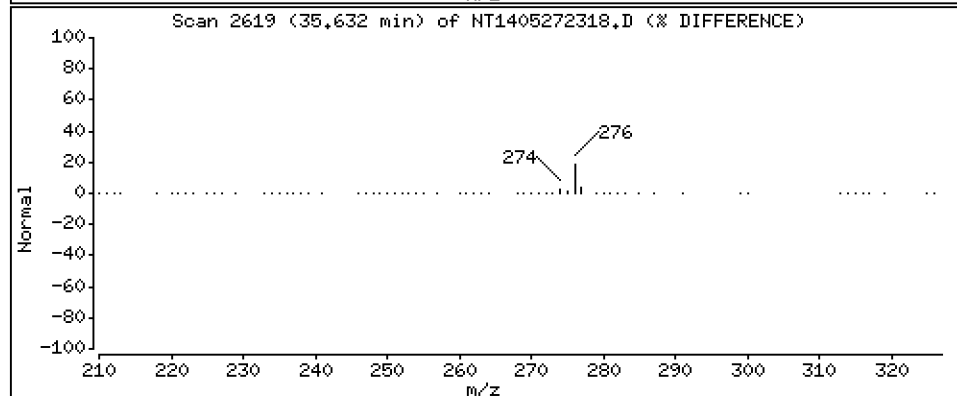
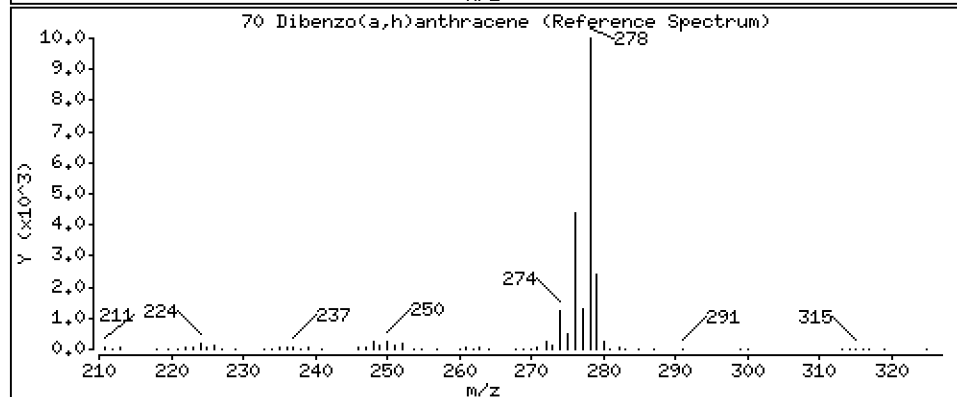
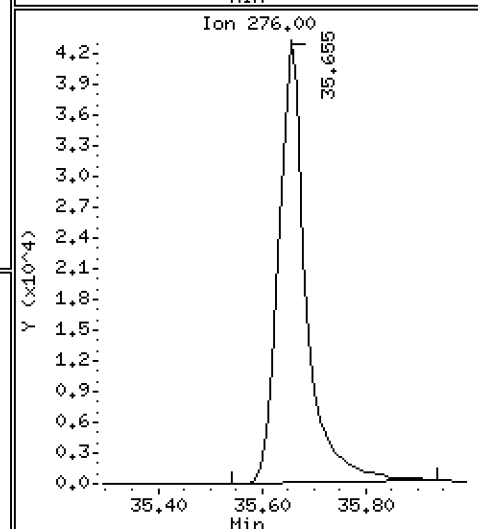
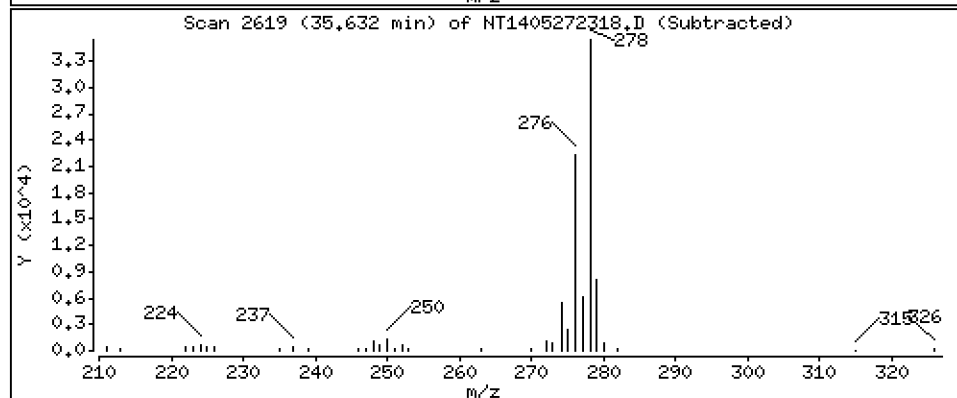
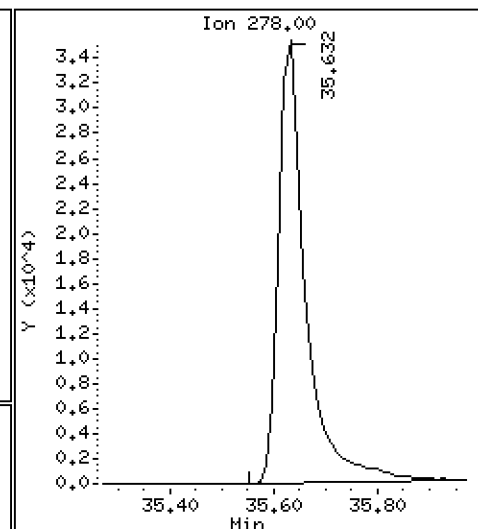
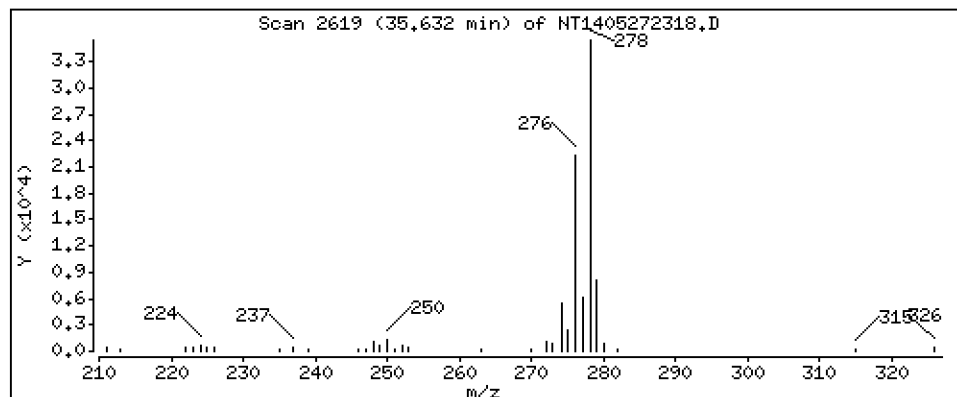
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

70 Dibenzo(a,h)anthracene

Concentration: 1.982 ug/mL



Date : 27-MAY-2023 23:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-ICV2

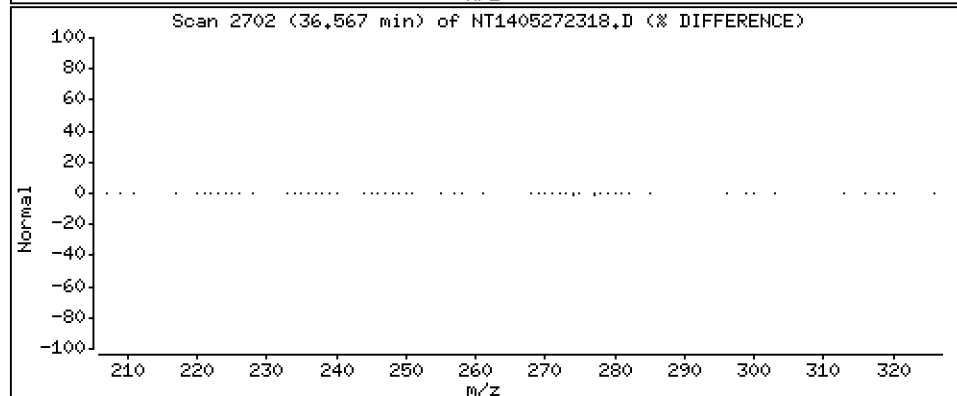
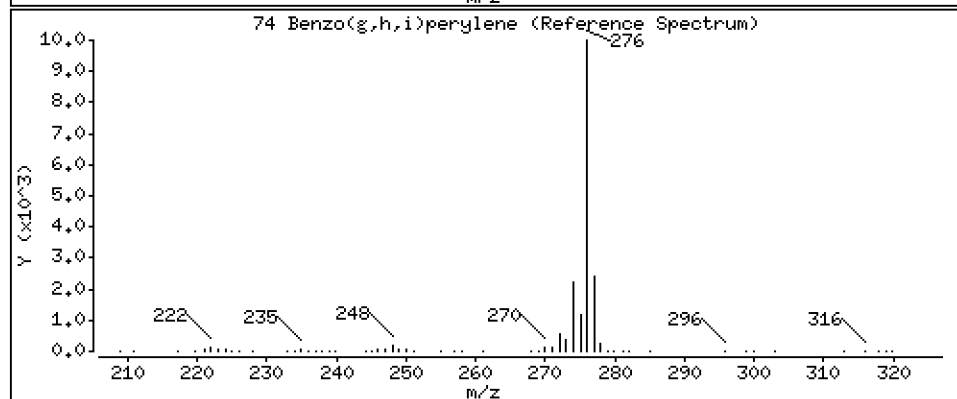
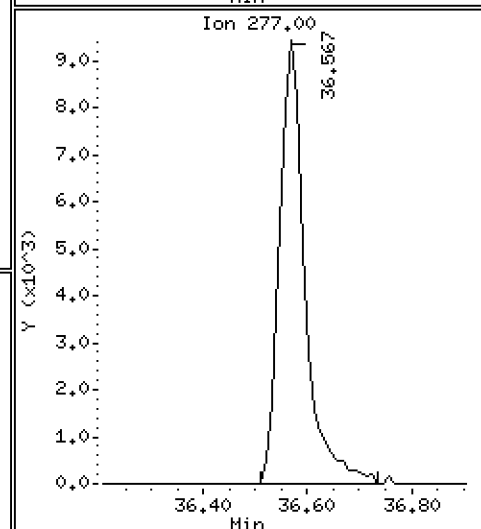
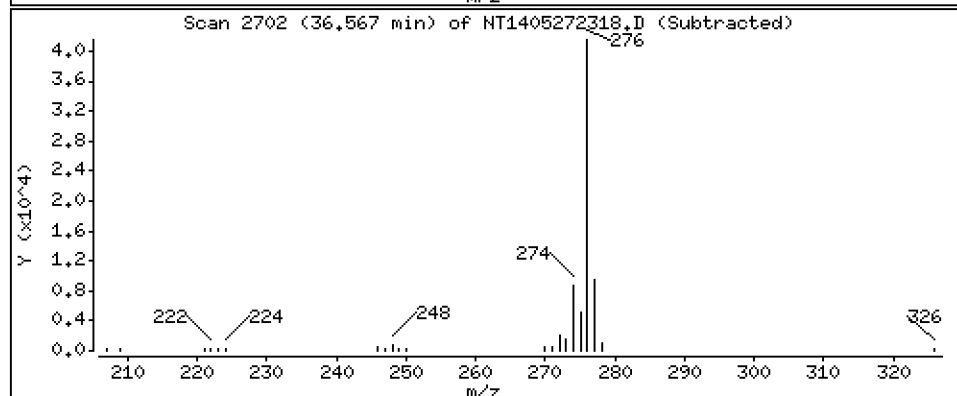
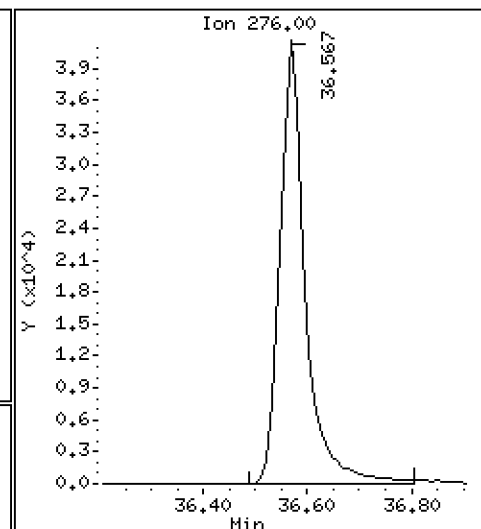
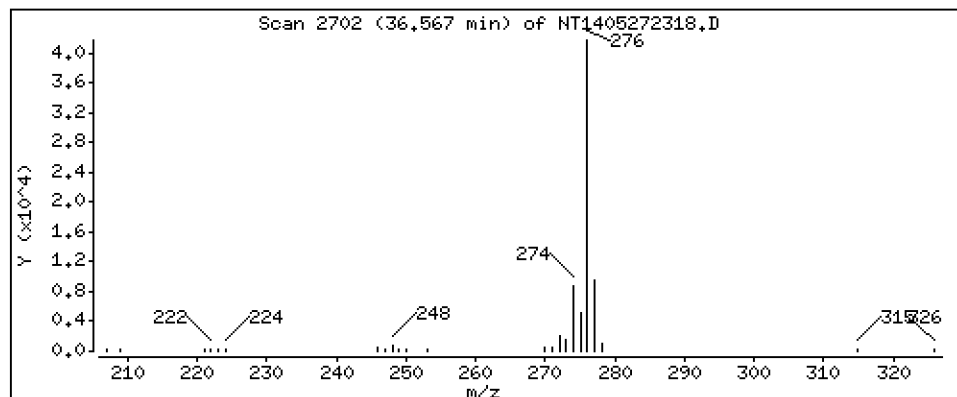
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

74 Benzo(g,h,i)perylene

Concentration: 2,360 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230527.b\NT1405272318.D
Lab Smp Id: SLE0443-ICV2
Inj Date : 27-MAY-2023 23:57
Operator : VTS
Smp Info : SLE0443-ICV2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230527.b\ALKYLPNA.m
Meth Date : 30-May-2023 16:47 deenayd Quant Type: ISTD
Cal Date : 05-MAY-2023 15:12 Cal File: NT1423050507.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: DEENAY-201905

Inst ID: nt14.i

Compound Sublist: TARGETS.sub

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL
								(ug/mL)	(ug/mL)
1 trans-Decalin	138		7.203	7.203	(0.380)		34331	2.48868	2.489
2 cis-Decalin	138		8.320	8.319	(0.439)		24425	2.44244	2.442
\$ 6 Naphthalene-d8	136		11.939	11.939	(0.630)		309272	2.40363	2.404 (R)
7 Naphthalene	128		12.007	12.006	(0.634)		338074	2.39199	2.392
12 Benzo(b)thiophene	134		12.462	12.451	(0.658)		259048	2.41178	2.412
16 2-Methylnaphthalene	141		13.847	13.847	(0.731)		168868	2.41586	2.416
17 1-methylnaphthalene	141		14.298	14.297	(0.754)		165866	2.35652	2.357
18 Biphenyl	154		15.473	15.473	(0.817)		233049	2.41003	2.410
19 2,6-Dimethylnaphthalene	156		15.561	15.561	(0.821)		167000	2.42637	2.426
20 Acenaphthylene	152		17.133	17.133	(0.904)		285567	2.48437	2.484
\$ 21 Acenaphthene-d10	164		17.419	17.419	(0.919)		138950	2.43676	2.437 (R)
22 Acenaphthene	153		17.529	17.528	(0.925)		171276	2.41460	2.415
23 Dibenzofuran	168		17.913	17.913	(0.945)		235109	2.53201	2.532
24 1,6,7-Trimethylnaphthalene	170		18.133	18.133	(0.957)		151931	2.47659	2.477
* 25 Fluorene-d10	176		18.950	18.950	(1.000)		128777	2.00000	
26 Fluorene	166		19.064	19.064	(1.006)		182617	2.45453	2.455
30 Dibenzothiophene	184		21.982	21.981	(1.160)		231027	2.53410	2.534
\$ 35 Phenanthrene-d10	188		22.294	22.294	(0.995)		224992	2.45473	2.455 (R)
36 Phenanthrene	178		22.376	22.375	(0.998)		257631	2.41029	2.410
* 250 Anthracene-d10	188		22.410	22.410	(1.000)		160624	2.00000	
37 Anthracene	178		22.480	22.468	(1.003)		244553	2.49242	2.492
42 Carbazole	167		23.755	23.755	(1.060)		226579	2.45647	2.456
43 1-Methylphenanthrene	192		24.207	24.207	(1.080)		166416	2.41420	2.414
44 Fluoranthene	202		26.189	26.177	(1.169)		240992	2.47264	2.473
46 Pyrene	202		27.023	27.023	(1.206)		251990	2.47057	2.471
51 Naphthobenzothiophene	234		29.540	29.529	(1.318)		168669	2.50731	2.507
55 Benzo(a)anthracene	228		30.124	30.113	(0.907)		184138	2.38011	2.380
\$ 56 Chrysene-d12	240		30.248	30.237	(0.911)		130252	2.43261	2.433 (R)
57 Chrysene	228		30.316	30.316	(0.913)		192470	2.54337	2.543
62 Benzo(b)fluoranthene	252		32.535	32.523	(0.980)		163256	2.26190	2.262 (M)
63 Benzo(k)fluoranthene	252		32.580	32.579	(0.981)		175794	2.16812	2.168 (M)
293 Benzo(j)fluoranthene	252		32.647	32.636	(0.983)		186117	2.74765	2.748 (M)
246 Total Benzofluoranthenes	252		32.647	32.636	(0.983)		501178	7.46218	7.462 (M)

Compounds	QUANT SIG						CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
=====	=====	=====	=====	=====	=====	=====	=====	
* 251 Benzo(e)pyrene-d12	264	33.199	33.188	(1.000)	98691	2.00000		
64 Benzo(e)pyrene	252	33.255	33.244	(1.002)	163293	2.33913	2.339	
66 Benzo(a)pyrene	252	33.357	33.345	(1.005)	152706	2.58616	2.586	
\$ 67 Perylene-d12	264	33.526	33.526	(1.010)	130648	2.52927	2.529 (R)	
68 Perylene	252	33.593	33.582	(1.012)	157513	2.43028	2.430 (M)	
69 Indeno(1,2,3-cd)pyrene	276	35.654	35.643	(1.074)	157878	2.05231	2.052 (M)	
70 Dibenzo(a,h)anthracene	278	35.632	35.621	(1.073)	125288	1.98207	1.982 (M)	
74 Benzo(g,h,i)perylene	276	36.567	36.555	(1.101)	137321	2.36004	2.360	

QC Flag Legend

- R - Spike/Surrogate failed recovery limits.
- M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 27-MAY-2023
 Lab File ID: NT1405272318.D Calibration Time: 13:31
 Lab Smp Id: SLE0443-ICV2
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230527.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	136933	68467	273866	128777	-5.96
250 Anthracene-d10	167500	83750	335000	160624	-4.11
251 Benzo(e)pyrene-d1	94374	47187	188748	98691	4.57

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	18.95	18.45	19.45	18.95	0.00
250 Anthracene-d10	22.41	21.91	22.91	22.41	0.00
251 Benzo(e)pyrene-d1	33.19	32.69	33.69	33.20	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 - NT1405272318.D

Lab ID: SLE0443-ICV2

nt14.i, 20230527.b\ALKYLPNA.m, 27-MAY-2023 23:57

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

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

NONE

RRT check based on Ccal File: NT1405272305.D

On Column LOD for nt14.i, 20230527.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

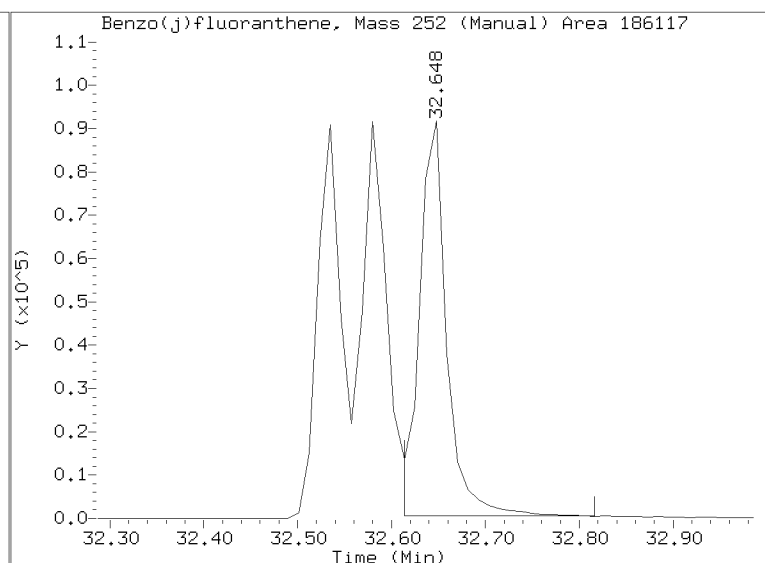
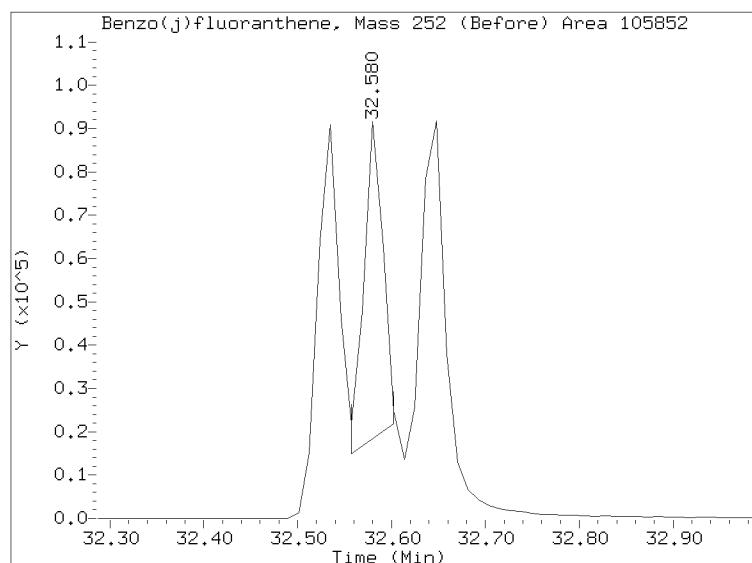
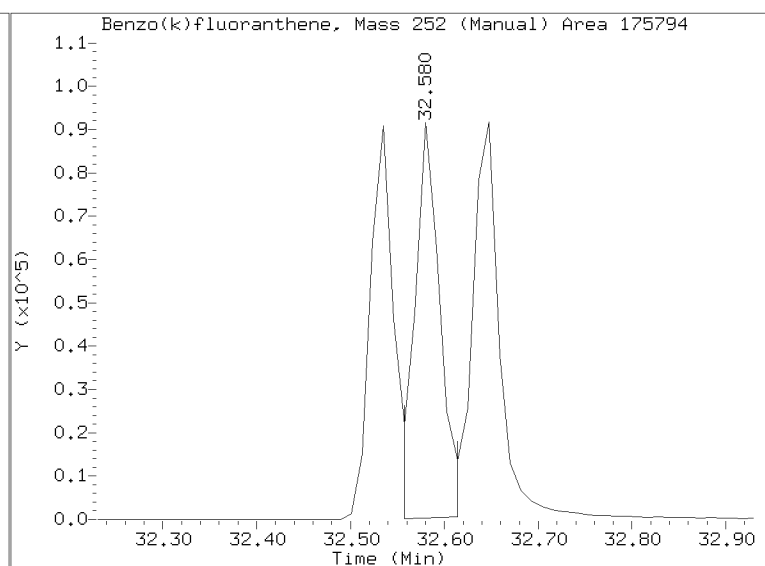
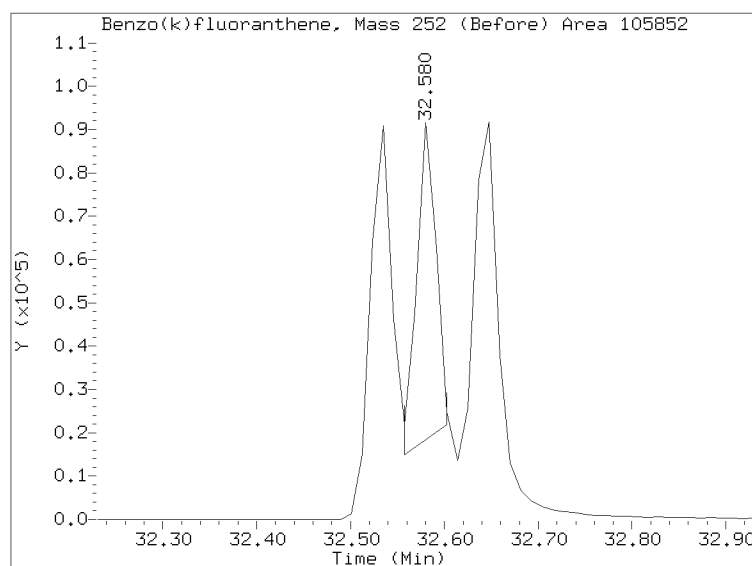
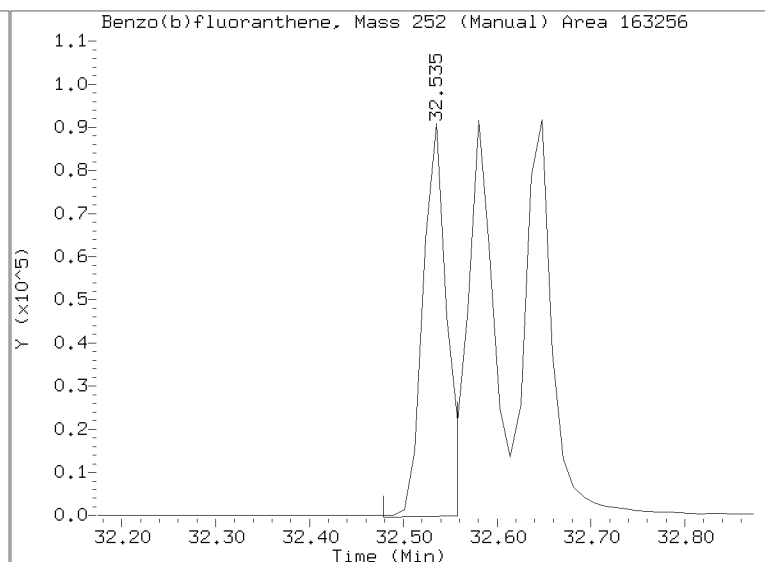
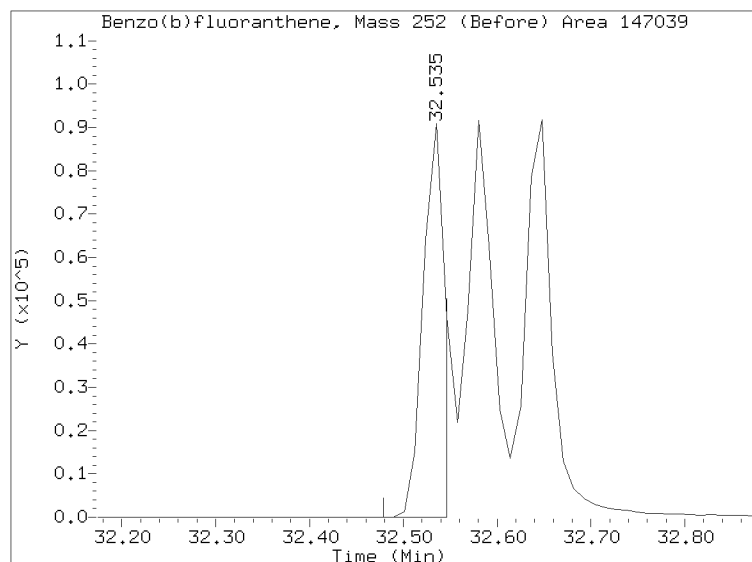
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230527.b/NT1405272318.D

Injection Date: 27-MAY-2023 23:57

Lab ID: SLE0443-ICV2 Client ID:

Report Date: 05/30/2023 16:48



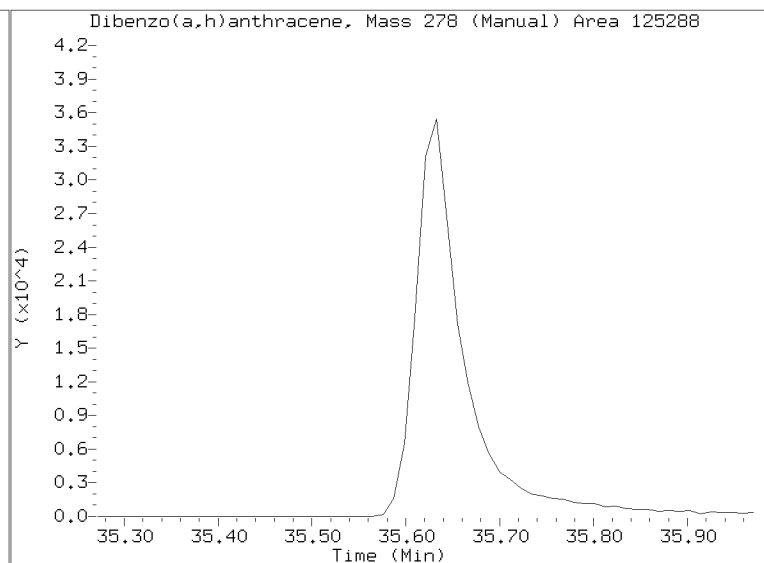
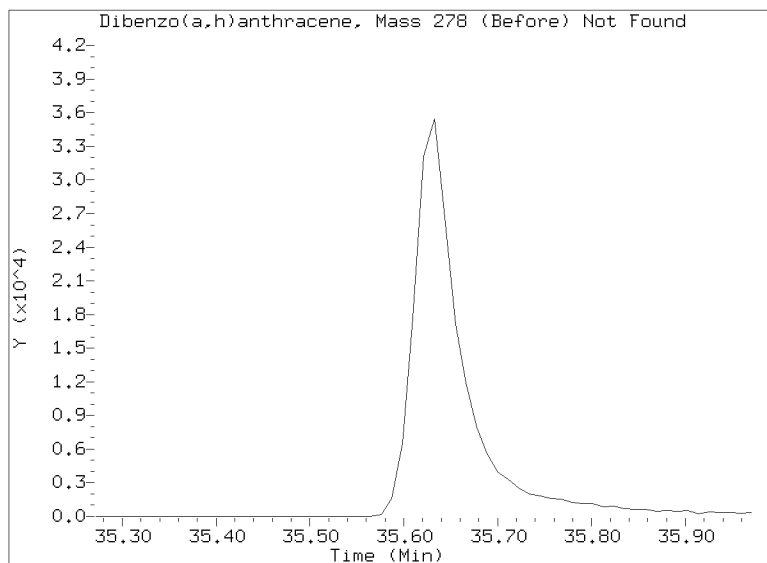
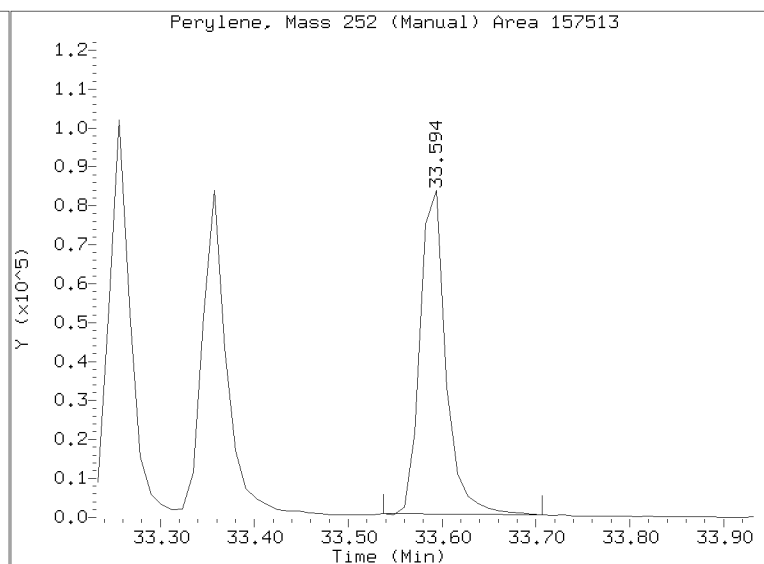
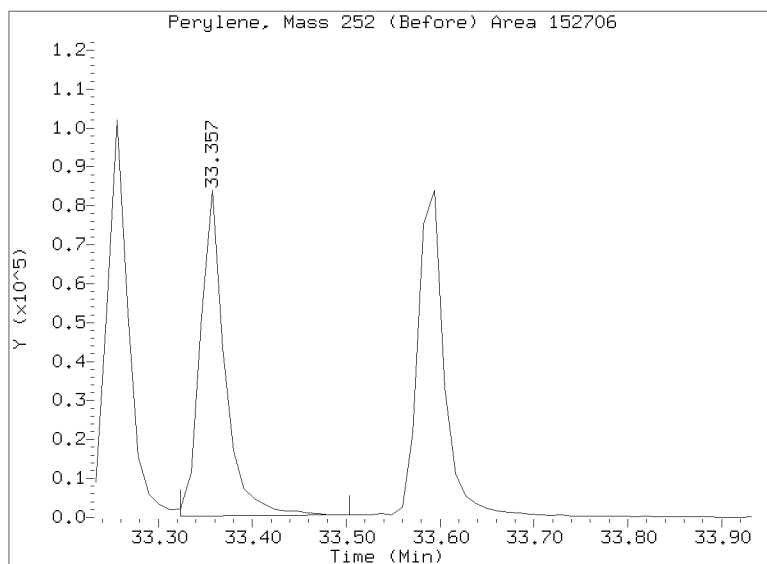
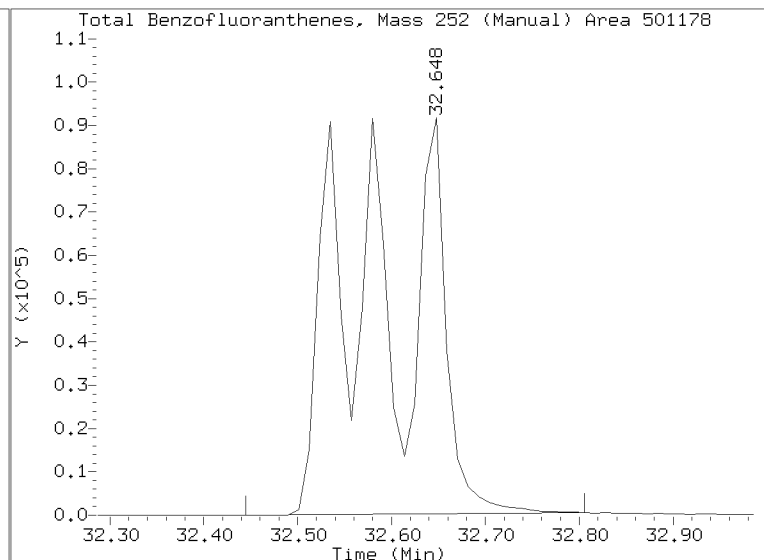
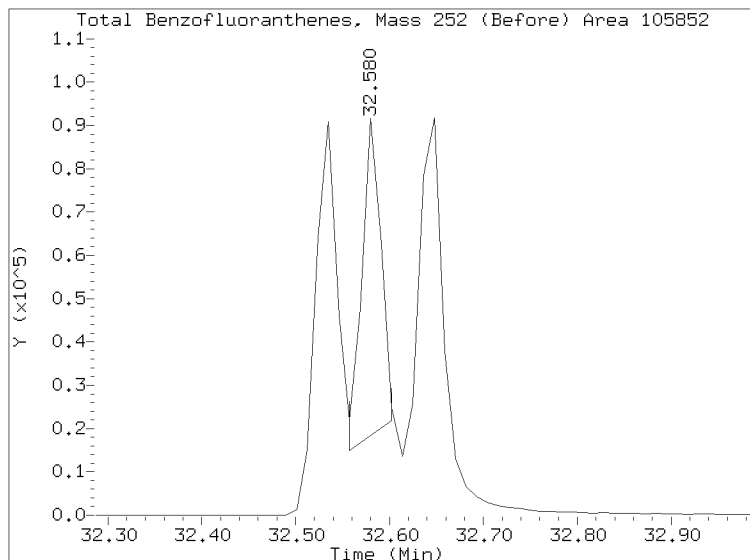
Quant Ion Manual Peak Adjustment Report

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Injection Date: 27-MAY-2023 23:57

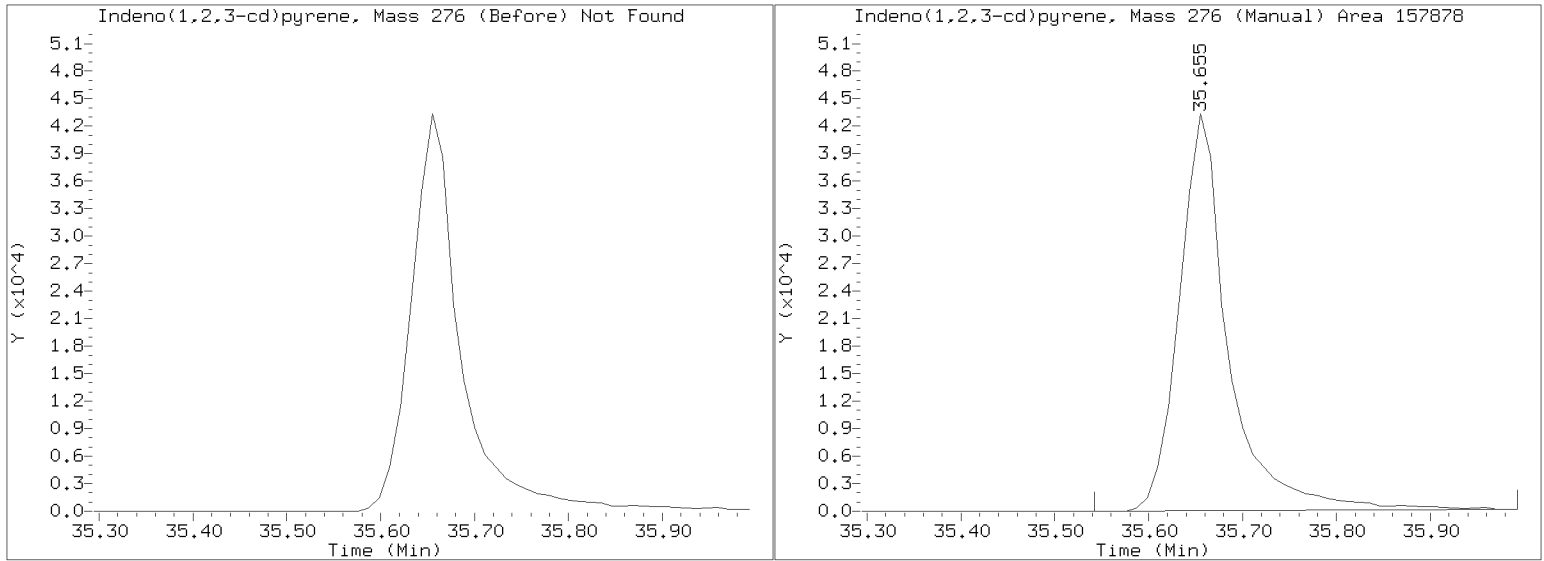
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Report Date: 05/30/2023 16:48



Quant Ion Manual Peak Adjustment Report

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Injection Date: 27-MAY-2023 23:57
Lab ID: SLE0443-ICV2 Client ID:
Report Date: 05/30/2023 16:48



APPROVED

By Deenay Dunmore at 5:03 pm, May 30, 2023



CONTINUING CALIBRATION CHECK

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Instrument ID: NT14

Calibration: GE00024

Lab File ID: NT1423050565.D

Calibration Date: 05/05/2023

Sequence: SLE0096

Injection Date: 05/07/23

Lab Sample ID: SLE0096-CCV1

Injection Time: 14:07

Sequence Name: PAH 2.5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
trans-Decalin	A	2.5000	2.4	0.2142441	0.2065991		-3.6	+/-50
cis-Decalin	A	2.5000	2.4	0.1553110	0.1483799		-4.5	+/-50
Naphthalene	A	2.5000	2.3	2.1950510	2.0099140		-8.4	+/-50
1-Methylnaphthalene	A	2.5000	2.3	1.0931470	1.0092830		-7.7	+/-50
2-Methylnaphthalene	A	2.5000	2.3	1.0855960	1.0203870		-6.0	+/-50
Biphenyl	A	2.5000	2.3	1.5018170	1.3943350		-7.2	+/-50
2,6-Dimethylnaphthalene	A	2.5000	2.4	1.0689340	1.0143080		-5.1	+/-50
Acenaphthylene	A	2.5000	2.4	1.7851870	1.7393290		-2.6	+/-50
Acenaphthene	A	2.5000	2.4	1.1016480	1.0690880		-3.0	+/-50
Dibenzofuran	A	2.5000	2.4	1.4421000	1.3886490		-3.7	+/-50
2,3,5-Trimethylnaphthalene	A	2.5000	2.4	0.9527605	0.9008052		-5.5	+/-50
Fluorene	A	2.5000	2.5	1.1554870	1.1355950		-1.7	+/-50
Benzo(b)thiophene	A	2.5000	2.3	1.6681460	1.5577920		-6.6	+/-50
Phenanthrene	A	2.5000	2.4	1.3309080	1.2945850		-2.7	+/-50
Anthracene	A	2.5000	2.5	1.2217170	1.2069510		-1.2	+/-50
Carbazole	A	2.5000	2.4	0.9770692	1.0933390		-4.8	+/-50
1-Methylphenanthrene	A	2.5000	2.5	0.8583058	0.8503898		-0.9	+/-50
Fluoranthene	A	2.5000	2.5	1.2135600	1.2136320		0.006	+/-50
Dibenzothiophene	A	2.5000	2.5	1.4158940	1.4212280		0.4	+/-50
Pyrene	A	2.5000	2.6	1.2700040	1.3113540		3.3	+/-50
Benzo(a)anthracene	A	2.5000	2.6	1.5678310	1.6191510		3.3	+/-50
Chrysene	A	2.5000	2.6	1.5335800	1.5824610		3.2	+/-50
Benzo(b)fluoranthene	A	2.5000	2.6	1.4626770	1.4997020		2.5	+/-50
Benzo(j)fluoranthene	A	2.5000	2.5	1.3727050	1.3624000		-0.8	+/-50
Benzo(k)fluoranthene	A	2.5000	2.2	1.3456120	1.4480170		-11.9	+/-50
Benzo(a)fluoranthene, Total	A	7.5000	7.9	1.3610640	1.4358780		5.5	+/-50
Benzo(e)pyrene	A	2.5000	2.4	1.4147040	1.3798380		-2.5	+/-50
Benzo(a)pyrene	A	2.5000	2.7	1.1966100	1.3012560		8.7	+/-50
Indeno(1,2,3-cd)pyrene	A	2.5000	2.1	1.3107200	1.2811210		-17.8	+/-50
Dibenzo(a,h)anthracene	A	2.5000	2.1	1.0657830	1.0713910		-16.4	+/-50
Benzo(g,h,i)perylene	A	2.5000	2.3	1.1791520	1.0737940		-8.9	+/-50
Perylene	A	2.5000	2.5	1.3134480	1.3074710		-0.5	+/-50
Benzo(b)naphtho(2,1-d)thiophene	A	2.5000	2.6	0.8376187	0.8616249		2.9	+/-50

* Values outside of QC limits



CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory: Analytical Resources, LLC SDG: 23D0457
Client: Anchor QEA, LLC Project: Gasco Hydrocarbon Investigation
Instrument ID: NT14 Calibration: GE00024
Lab File ID: NT1423050565.D Calibration Date: 05/05/2023
Sequence: SLE0096 Injection Date: 05/07/23
Lab Sample ID: SLE0096-CCV1 Injection Time: 14:07
Sequence Name: PAH 2.5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Naphthalene-d8	A	2.5000	2.30	1.9983150	1.8346190		-8.2	+/-50
Acenaphthene-d10	A	2.5000	2.37	0.8856004	0.8390797		-5.3	+/-50
Phenanthrene-d10	A	2.5000	2.44	1.1412560	1.1118010		-2.6	+/-50
Chrysene-d12	A	2.5000	2.63	1.0850860	1.1393480		5.0	+/-50
Perylene-d12	A	2.5000	2.58	1.0467910	1.0821480		3.4	+/-50

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230505.b\NT1423050565.D

Date : 07-May-2023 14:07

Client ID:

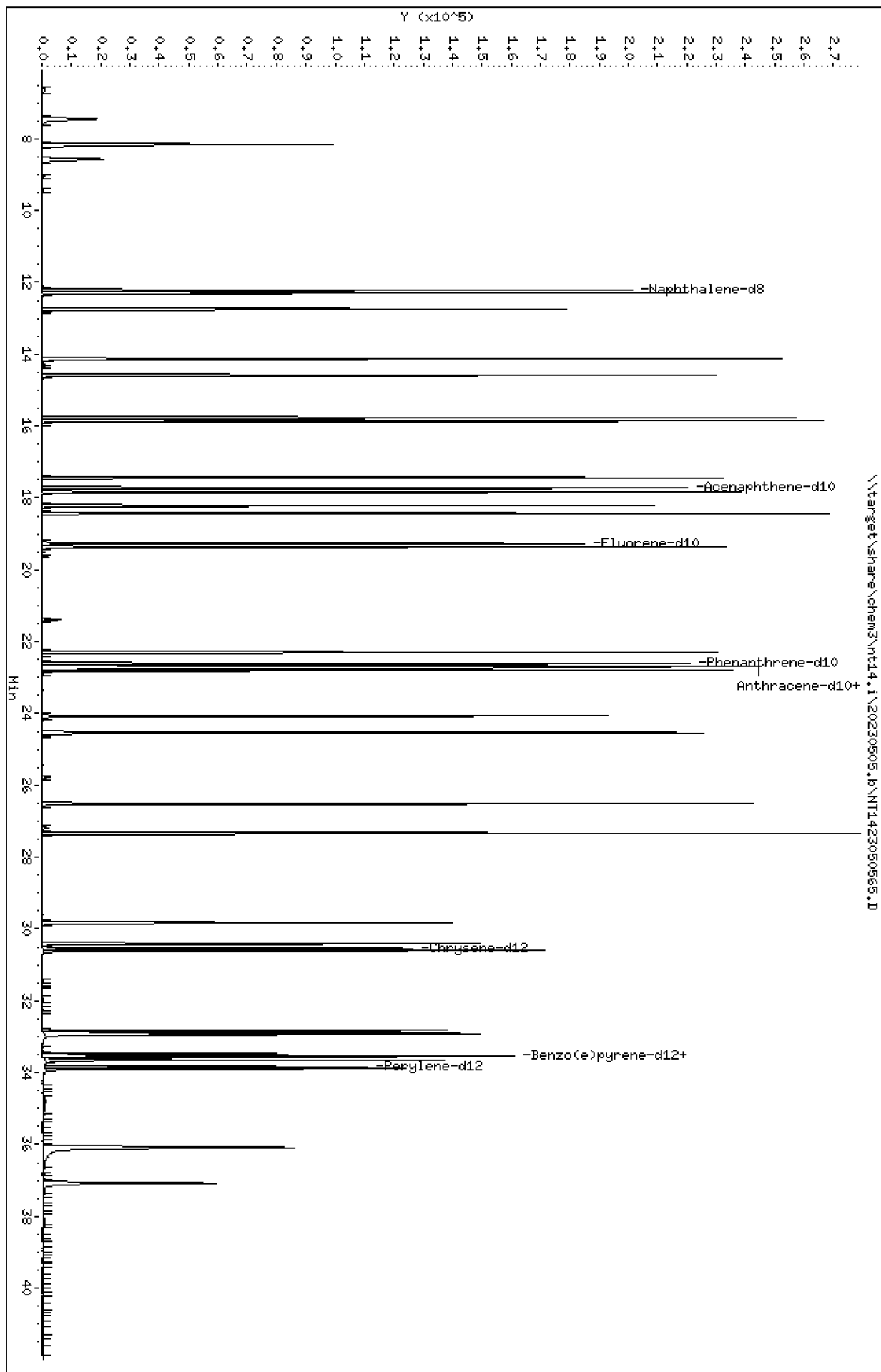
Sample Info: SLE0096-CCW1

Column phase: Rxi-17S11 MS

Instrument: nt14.i

Operator: VTS

Column diameter: 0.25



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

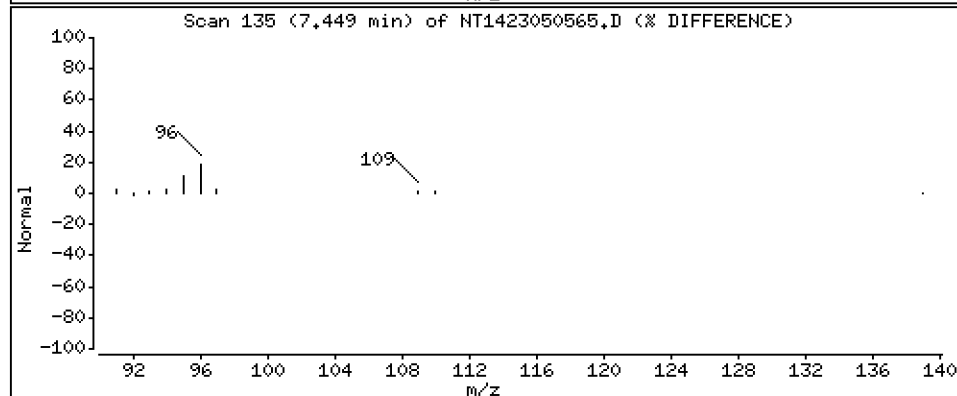
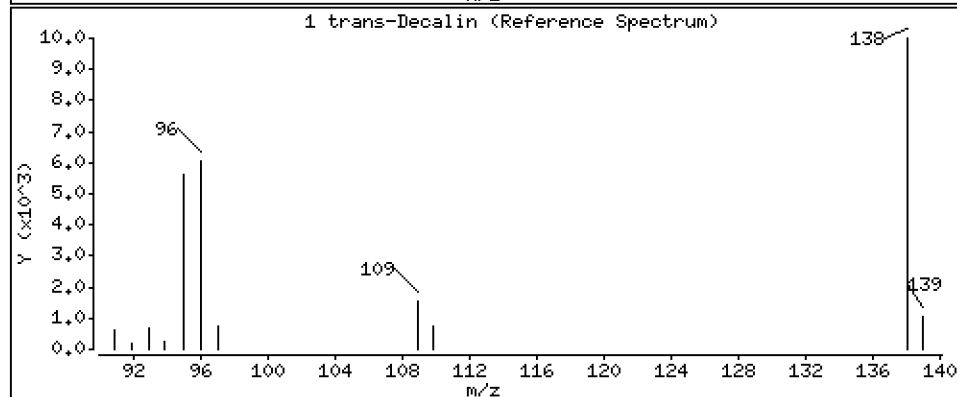
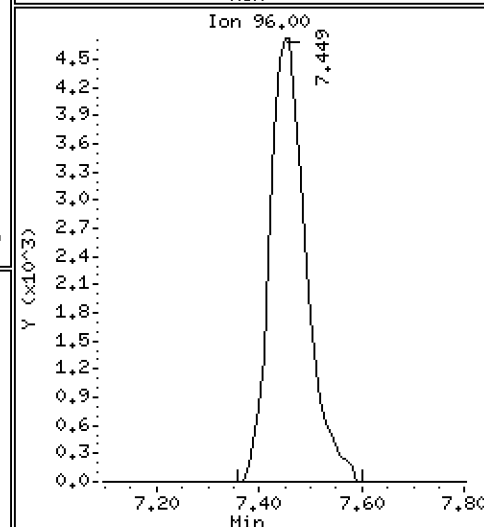
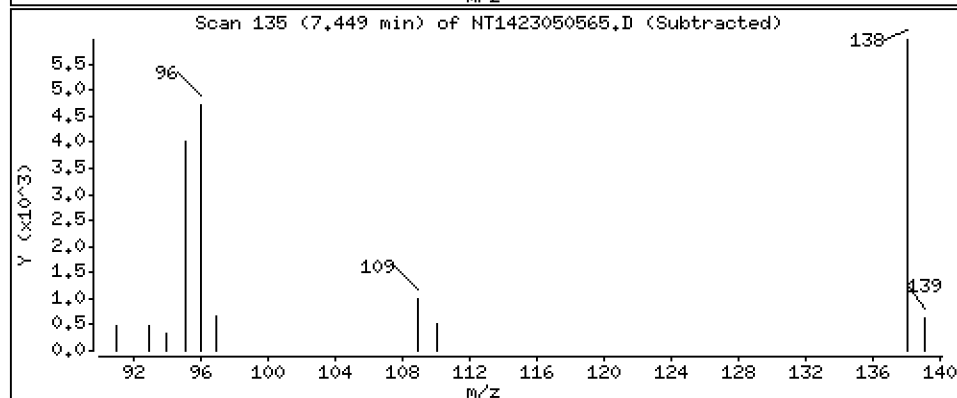
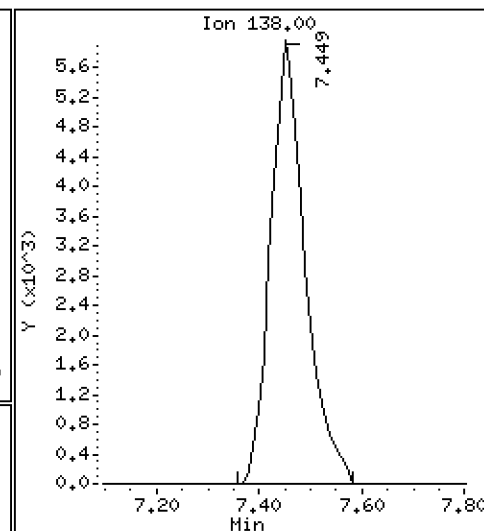
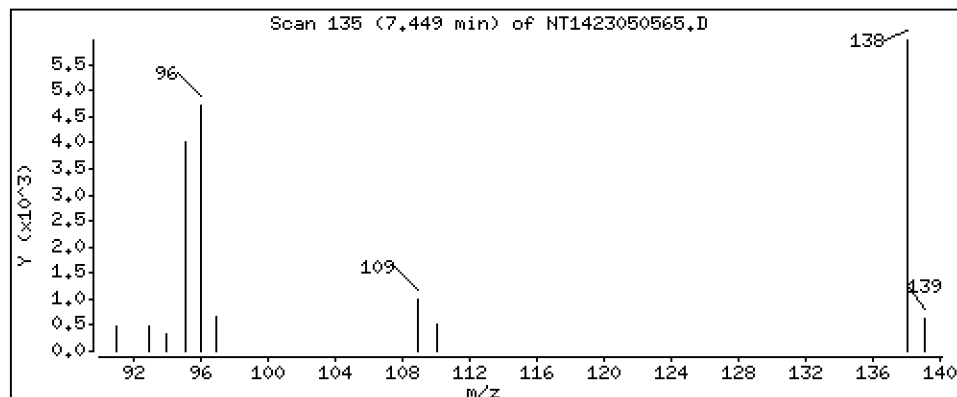
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

1 trans-Decalin

Concentration: 2.411 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

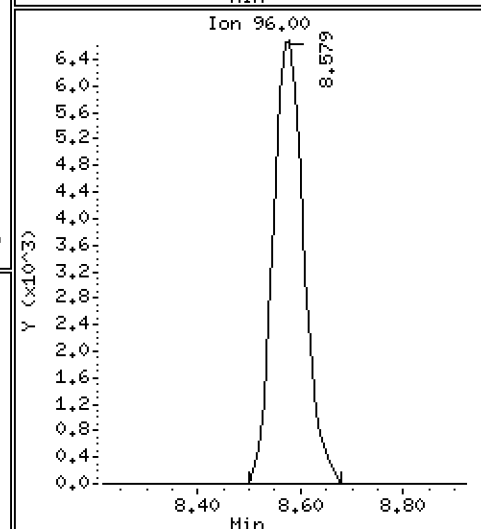
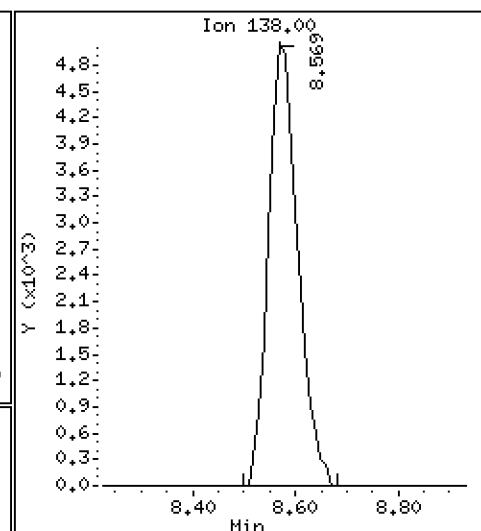
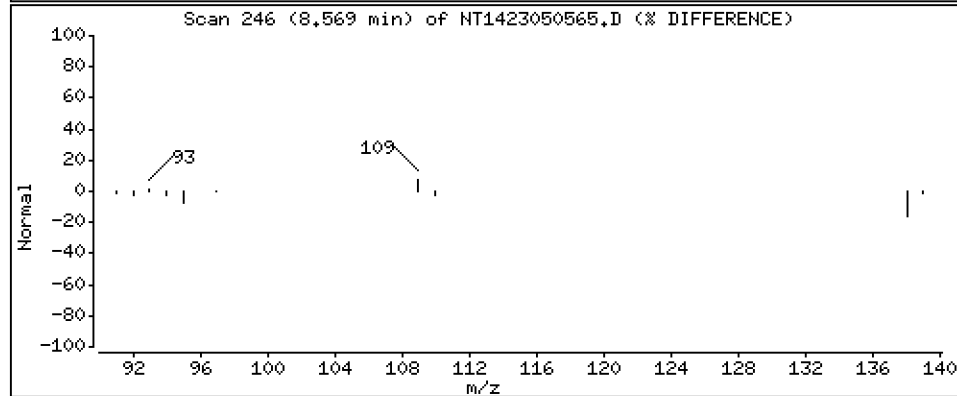
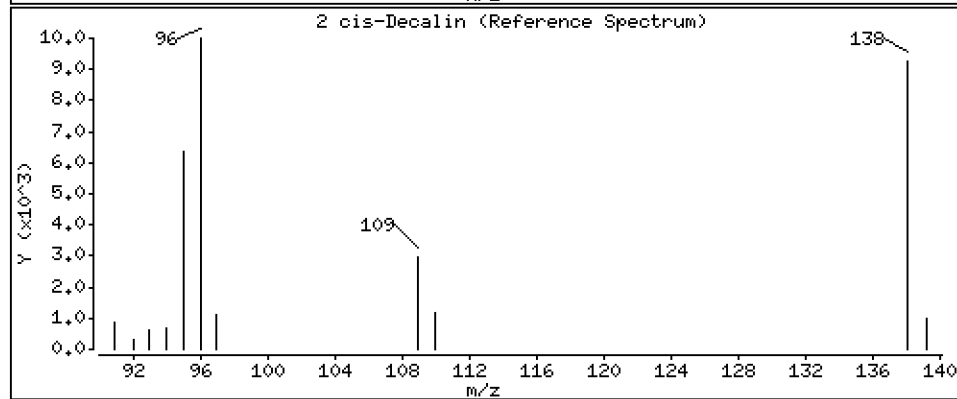
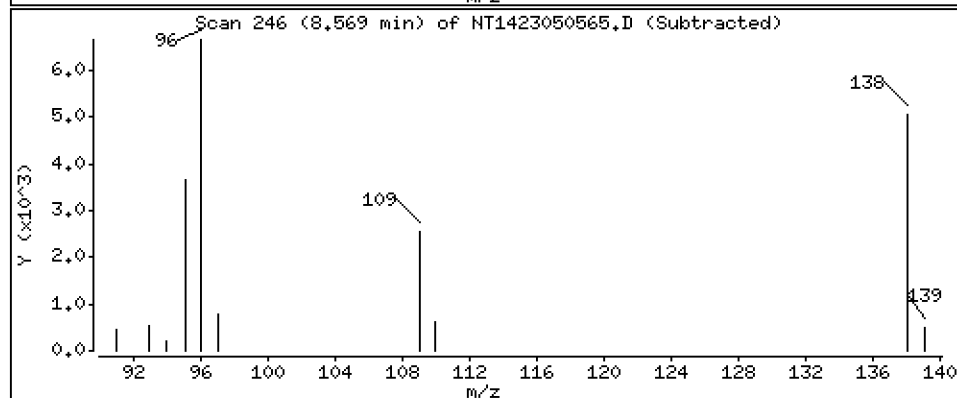
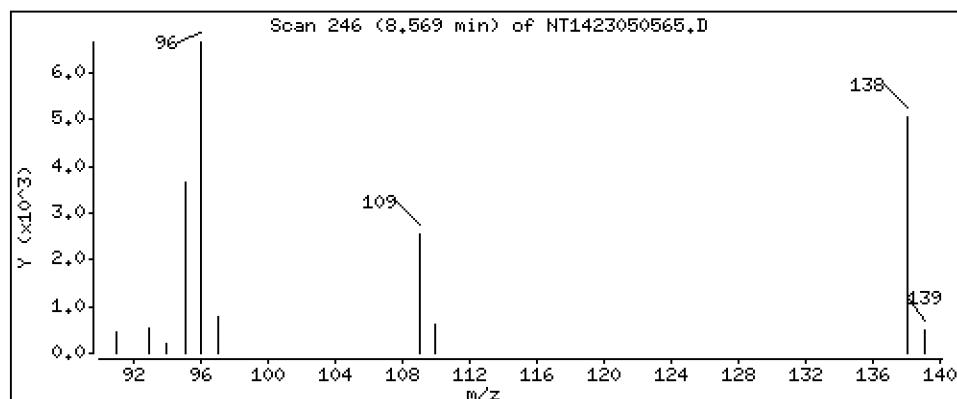
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

2 cis-Decalin

Concentration: 2,388 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

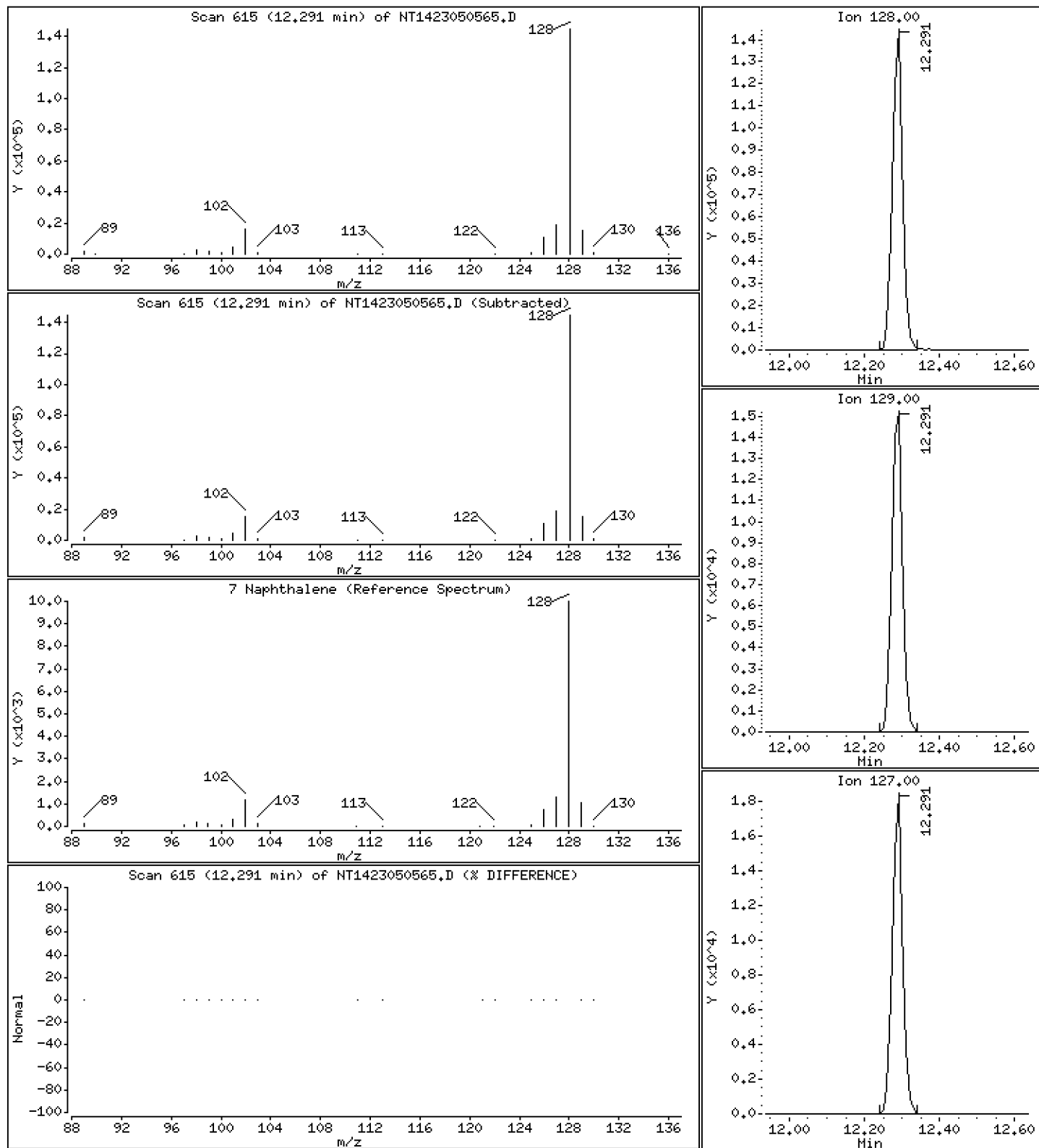
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

7 Naphthalene

Concentration: 2.289 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

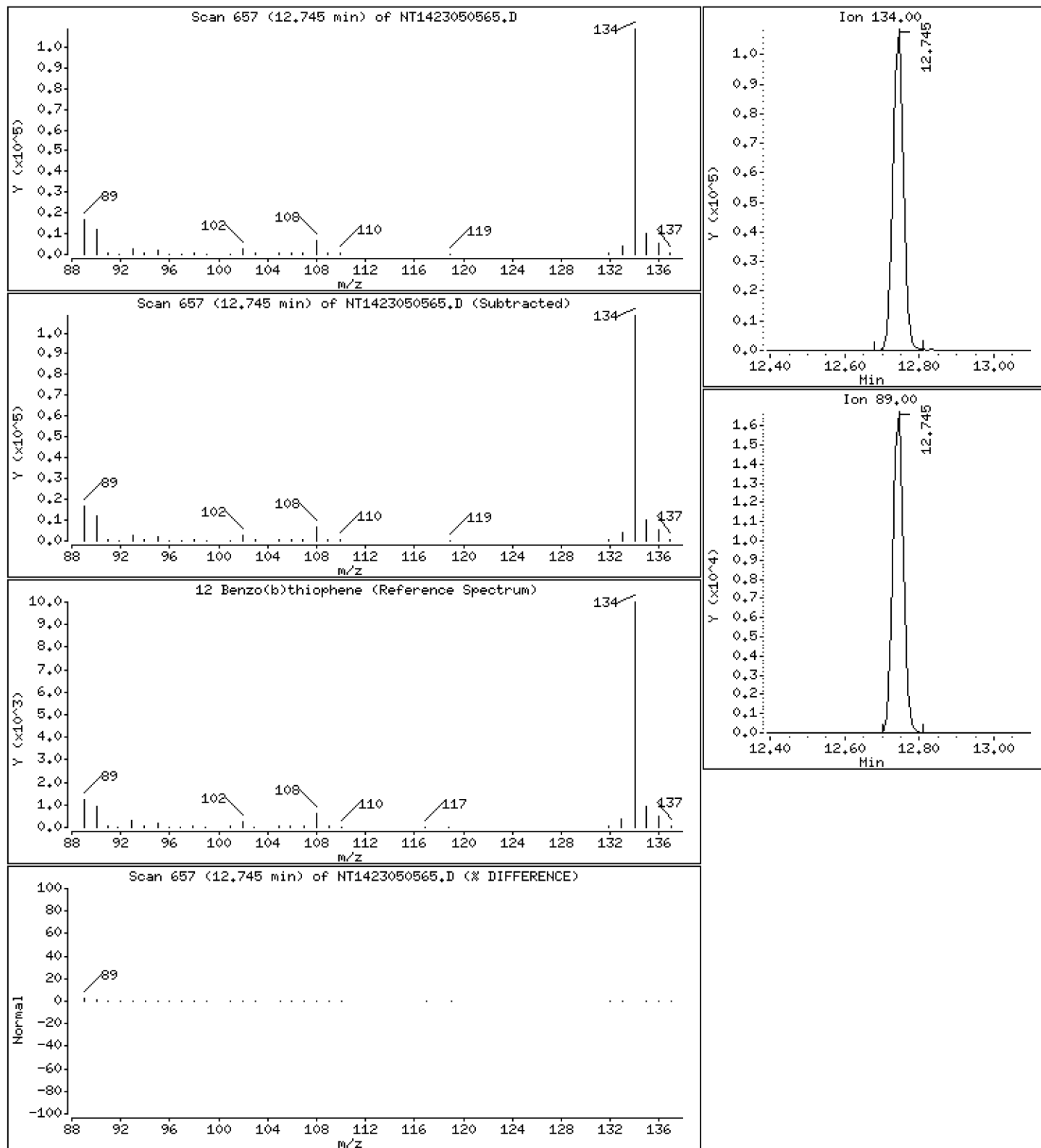
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

12 Benzo(b)thiophene

Concentration: 2.335 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

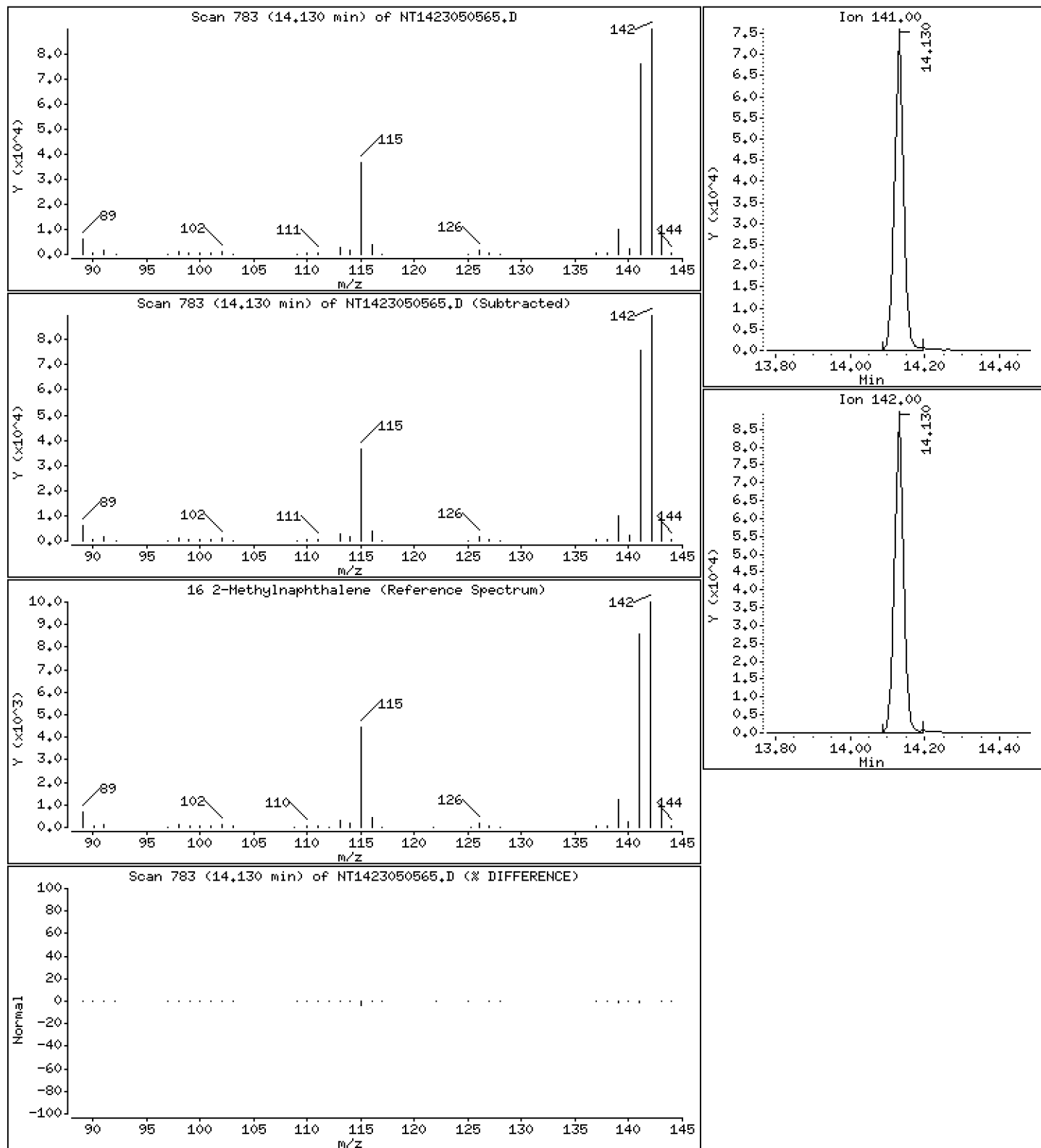
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

16 2-Methylnaphthalene

Concentration: 2.350 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

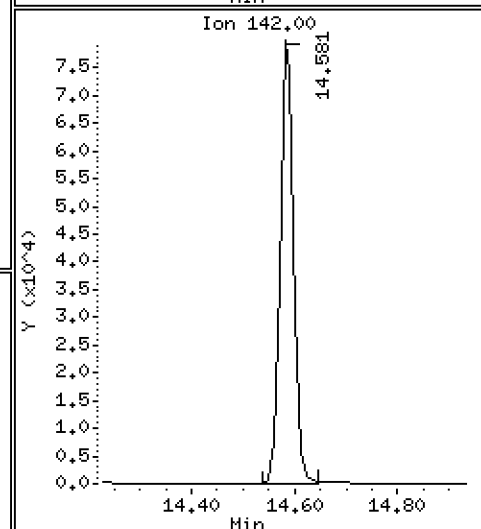
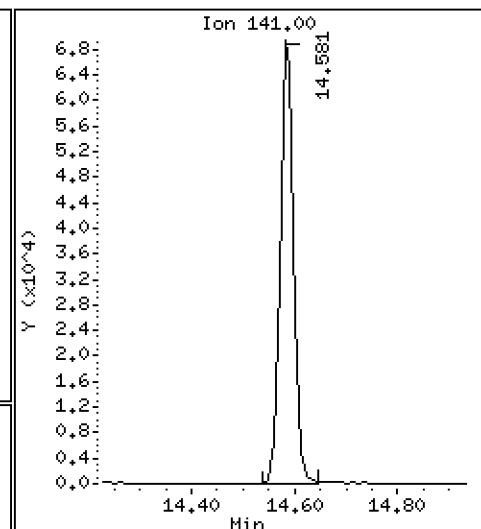
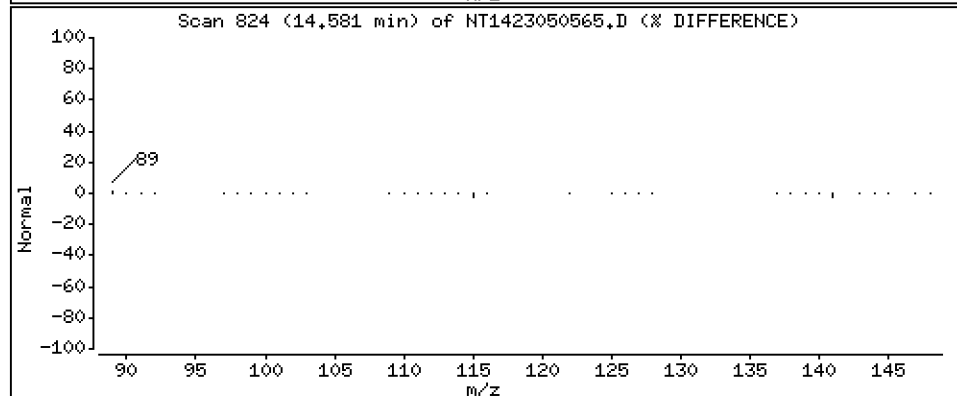
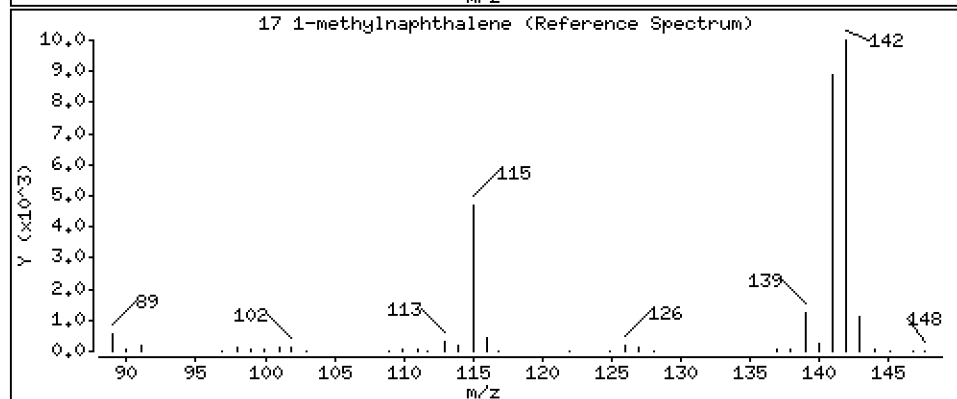
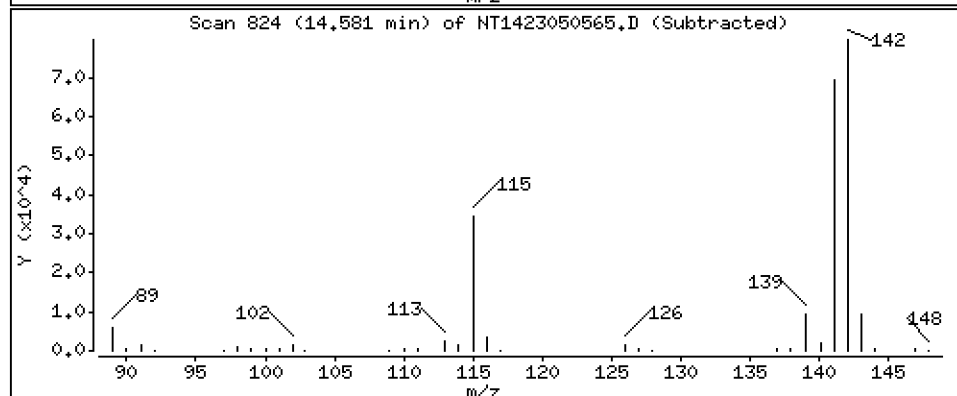
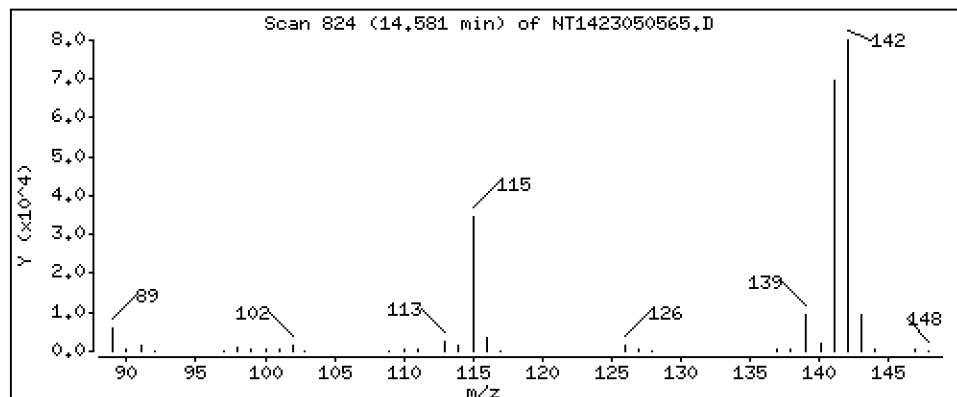
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 1-methylnaphthalene

Concentration: 2.308 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

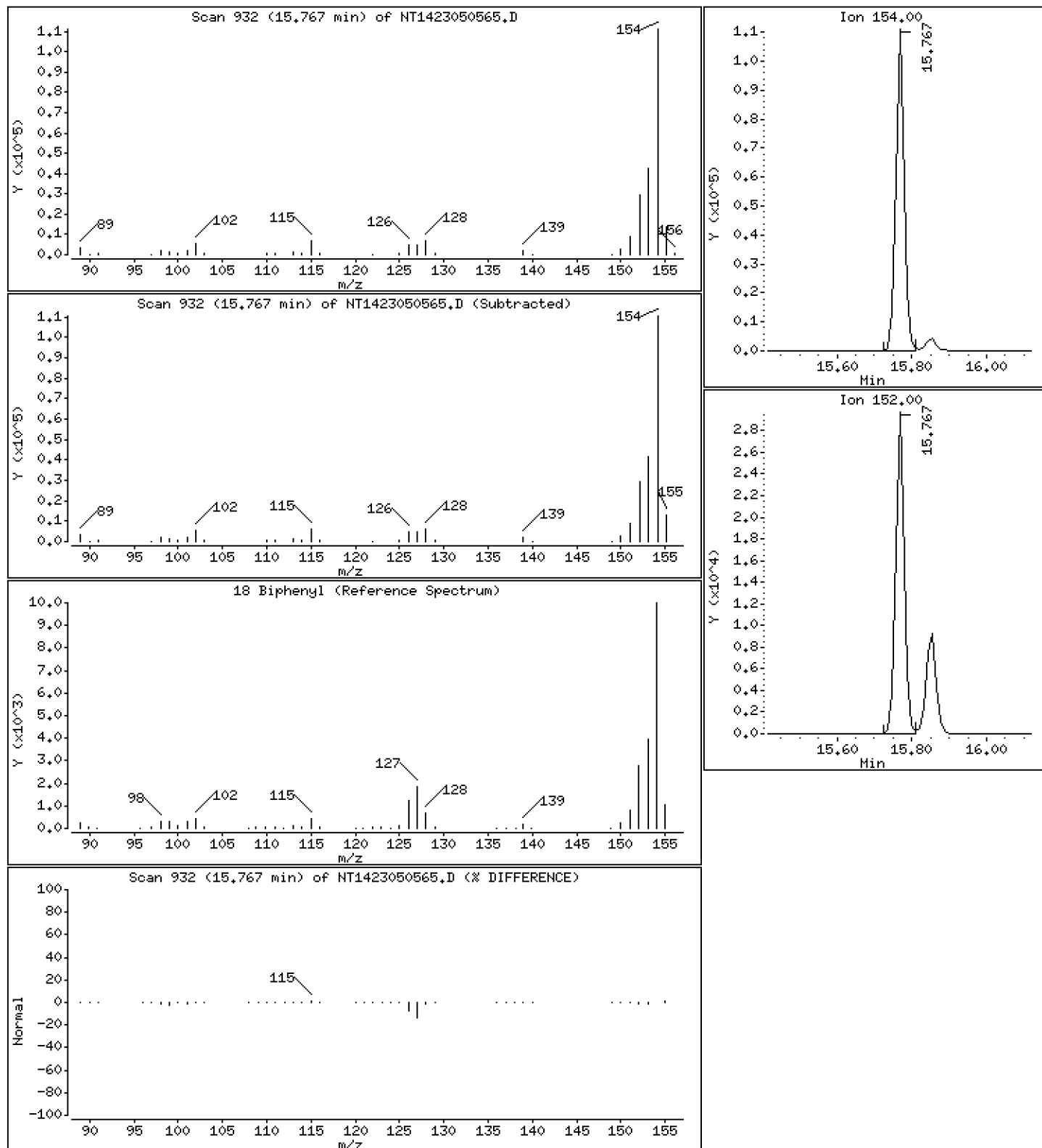
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

18 Biphenyl

Concentration: 2.321 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

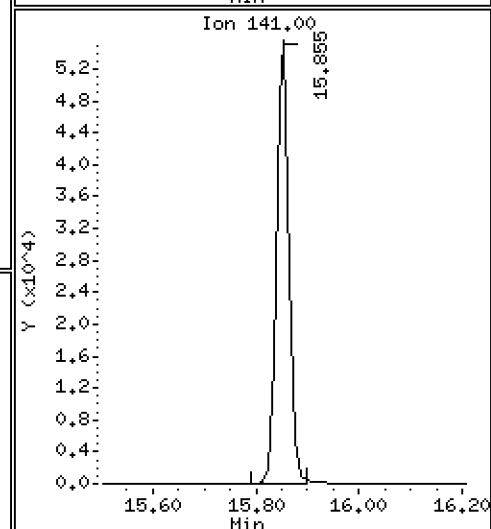
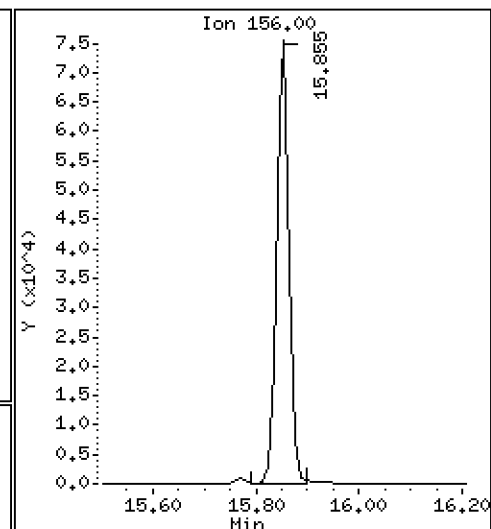
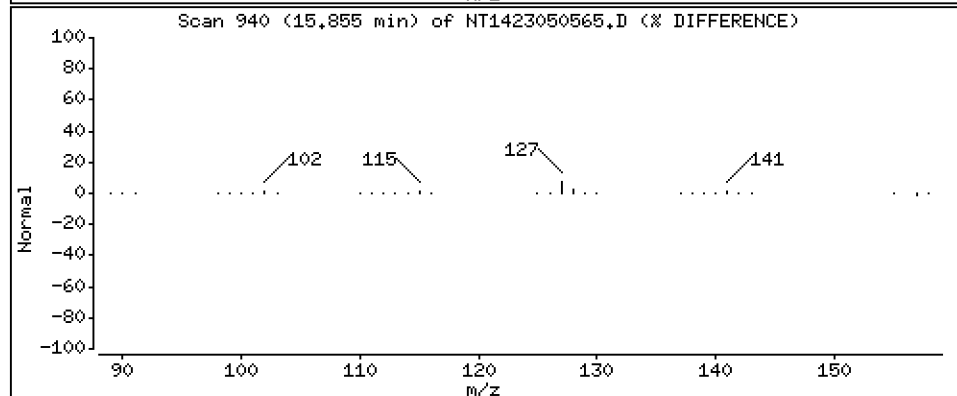
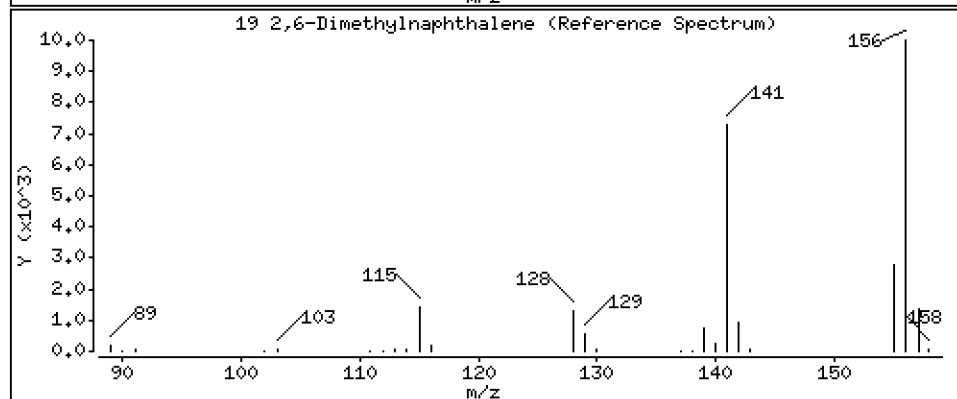
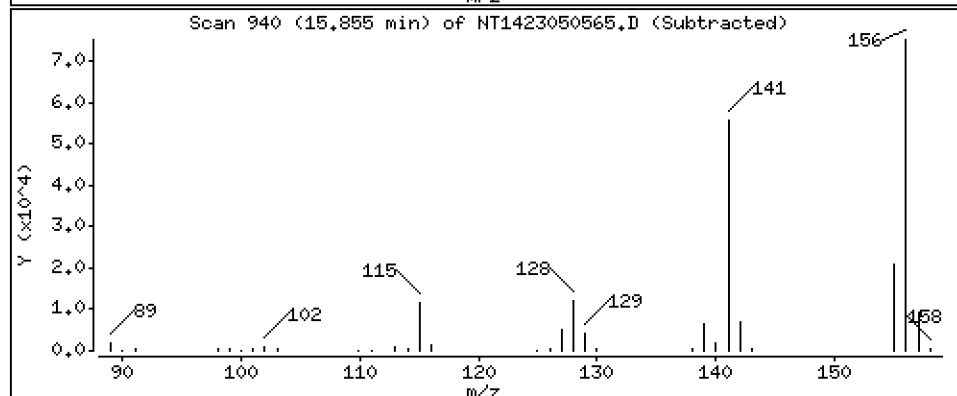
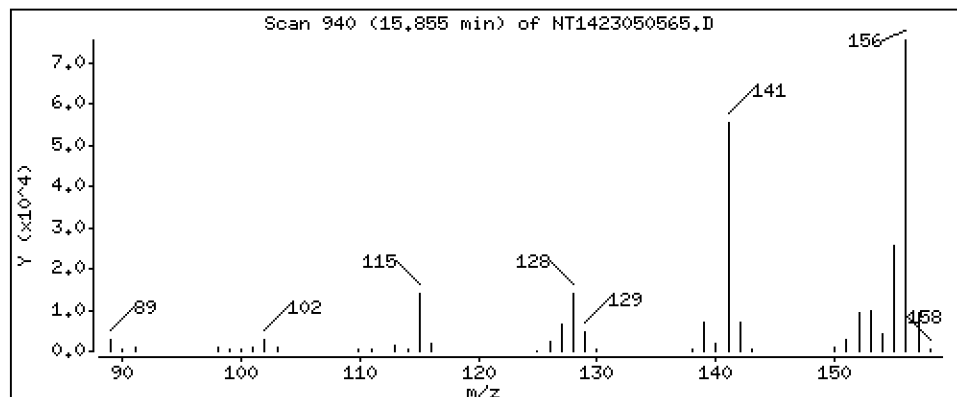
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

19 2,6-Dimethylnaphthalene

Concentration: 2.372 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

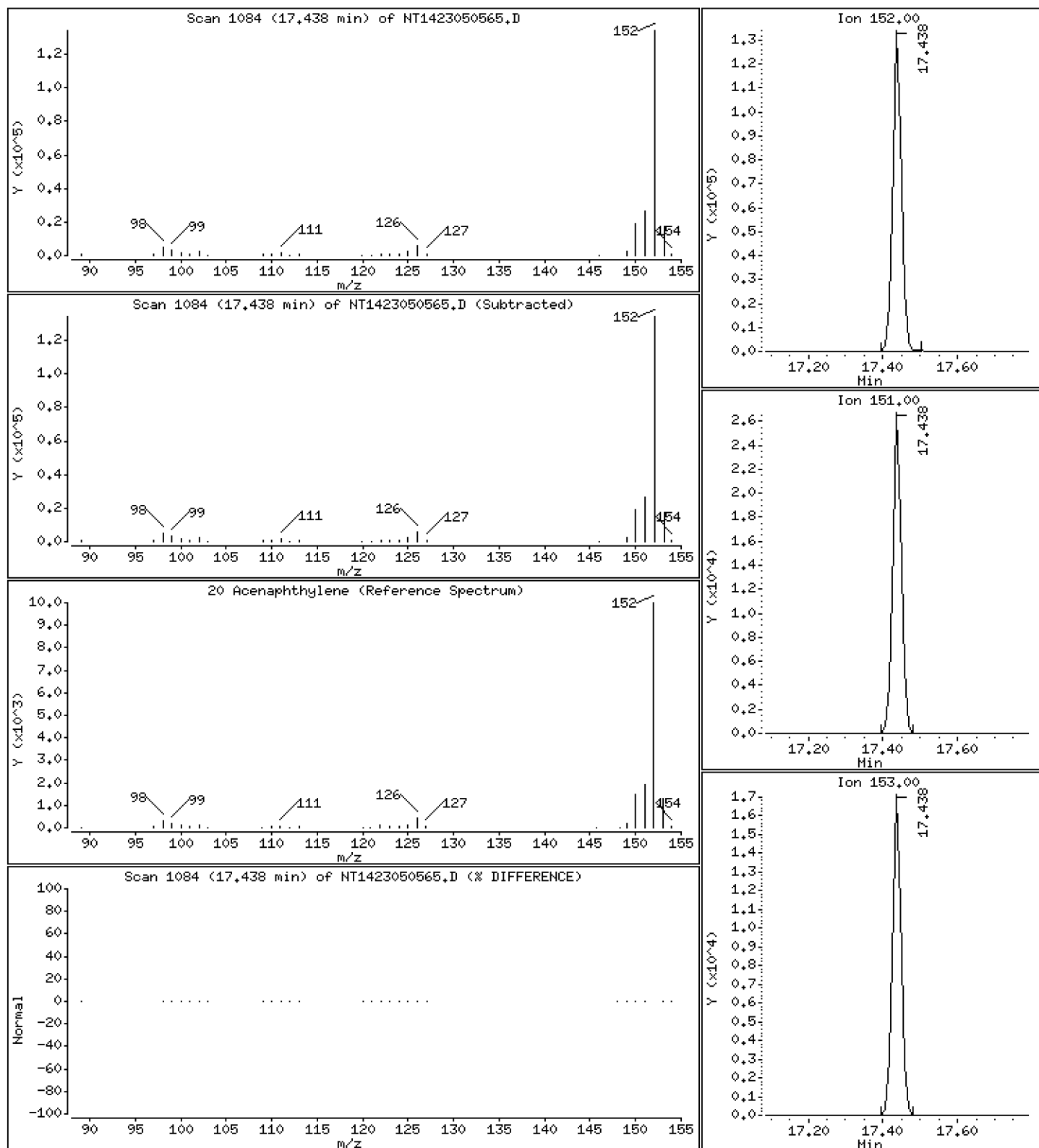
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

20 Acenaphthylene

Concentration: 2.436 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

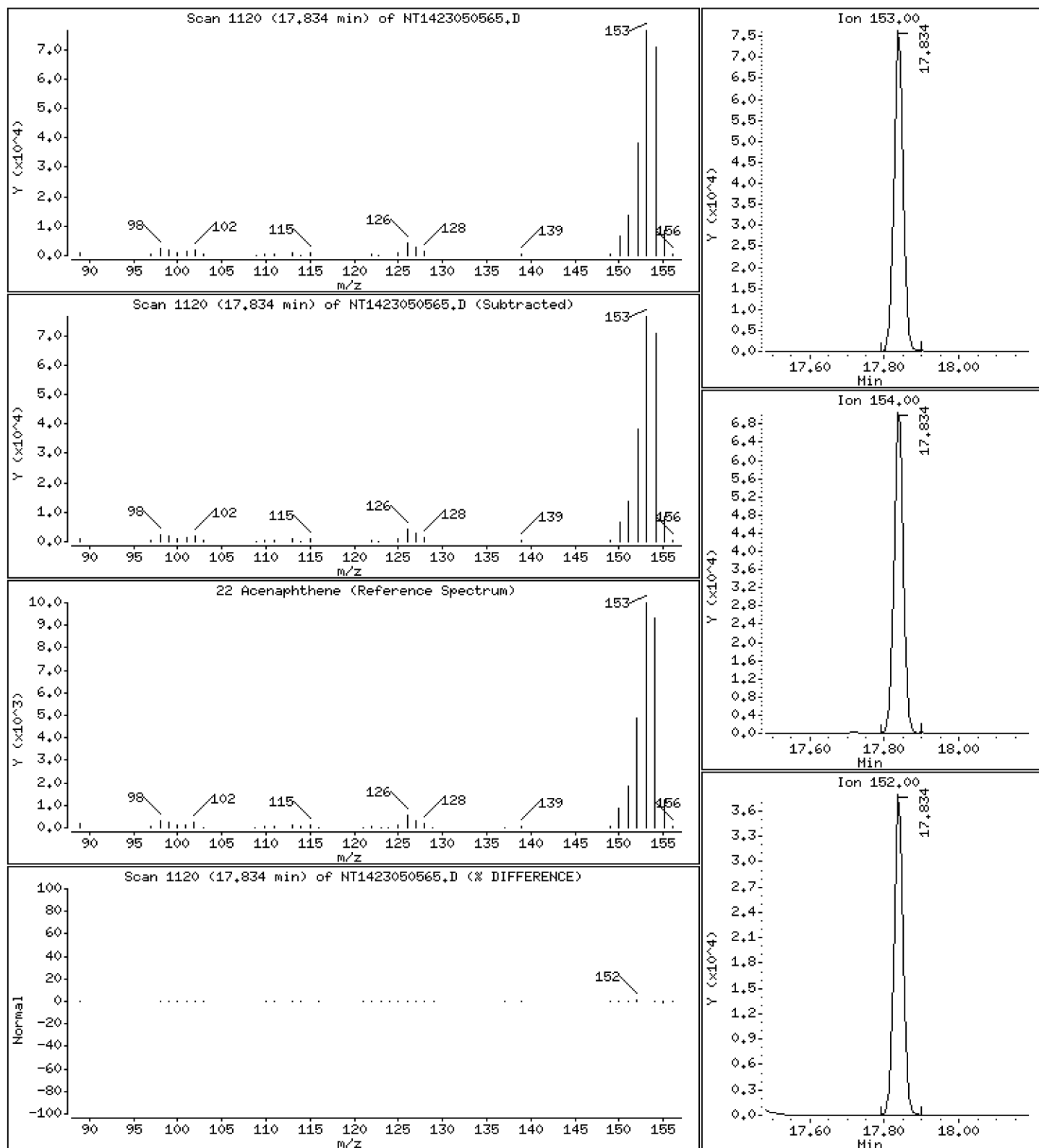
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

22 Acenaphthene

Concentration: 2.426 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

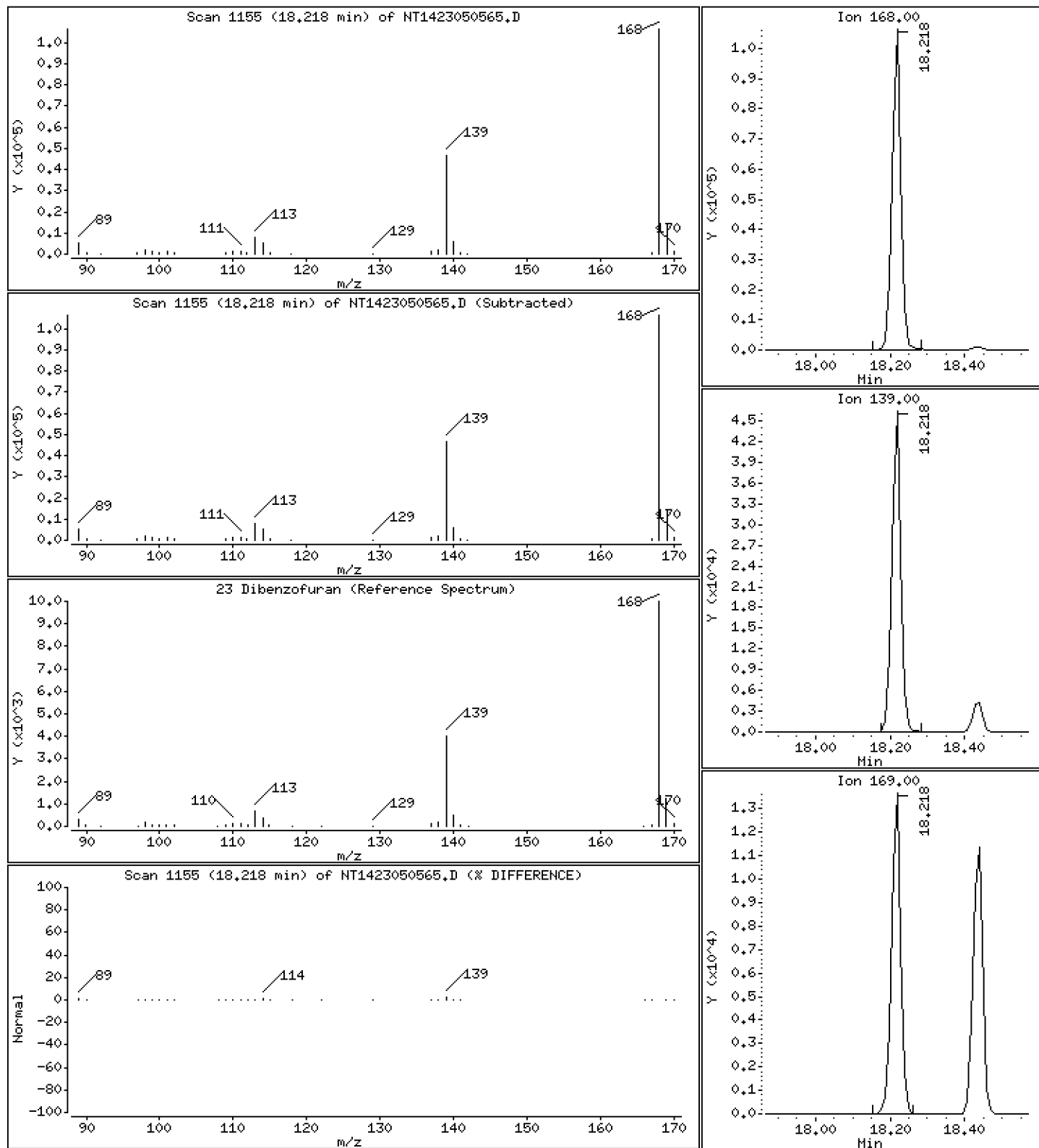
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

23 Dibenzofuran

Concentration: 2.407 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

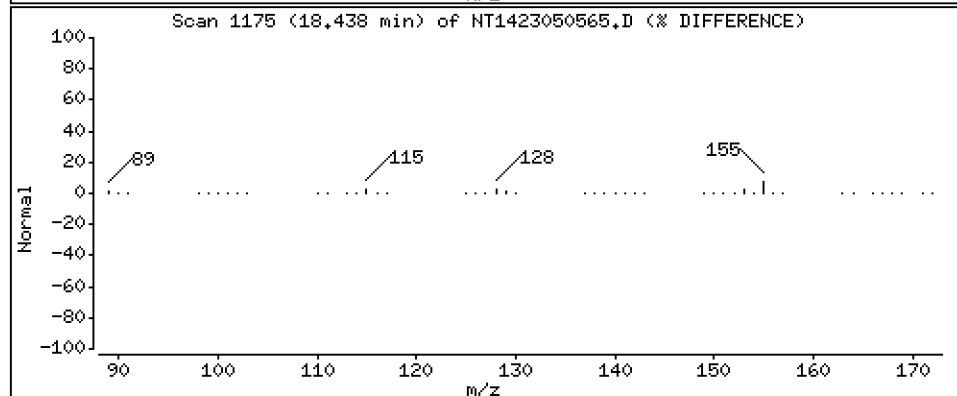
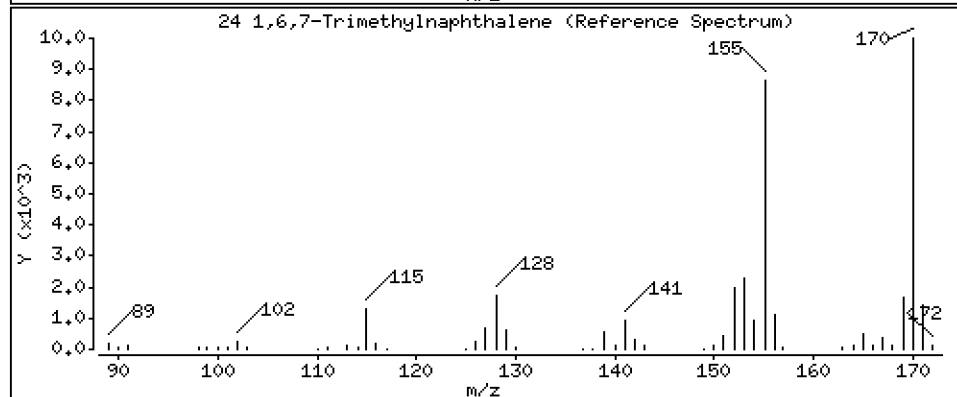
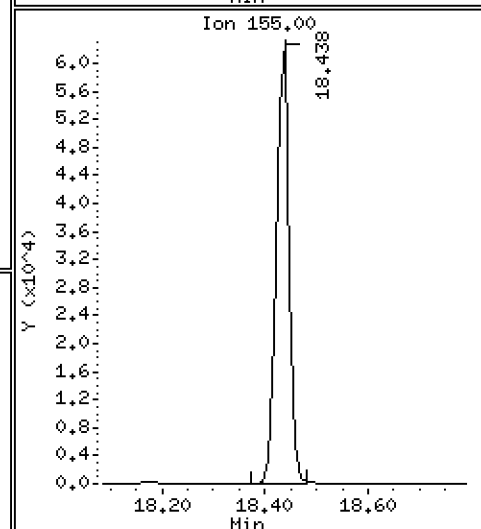
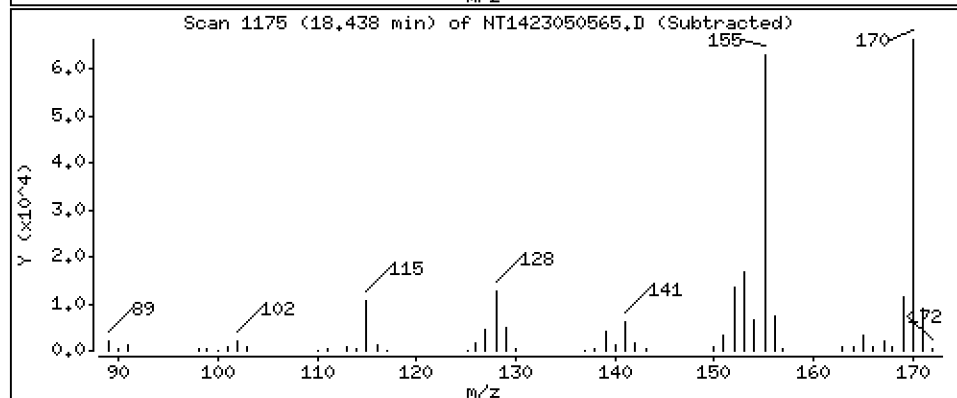
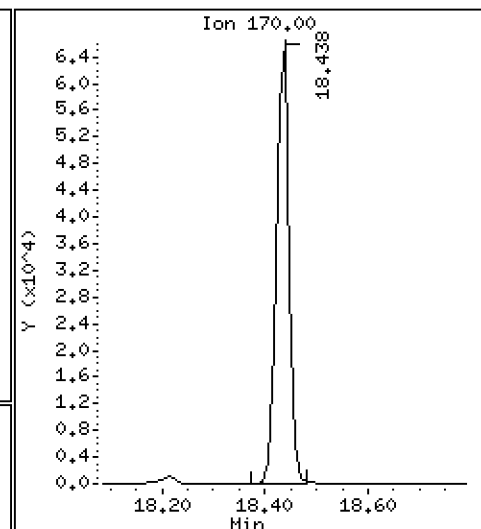
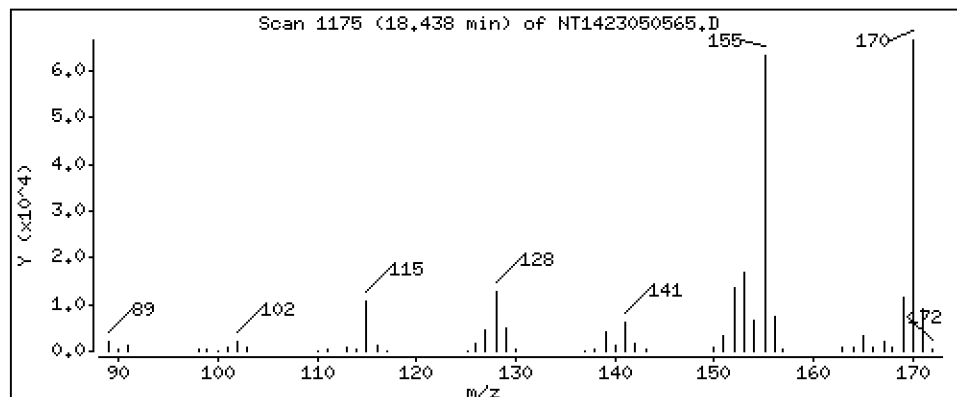
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

24 1,6,7-Trimethylnaphthalene

Concentration: 2.364 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

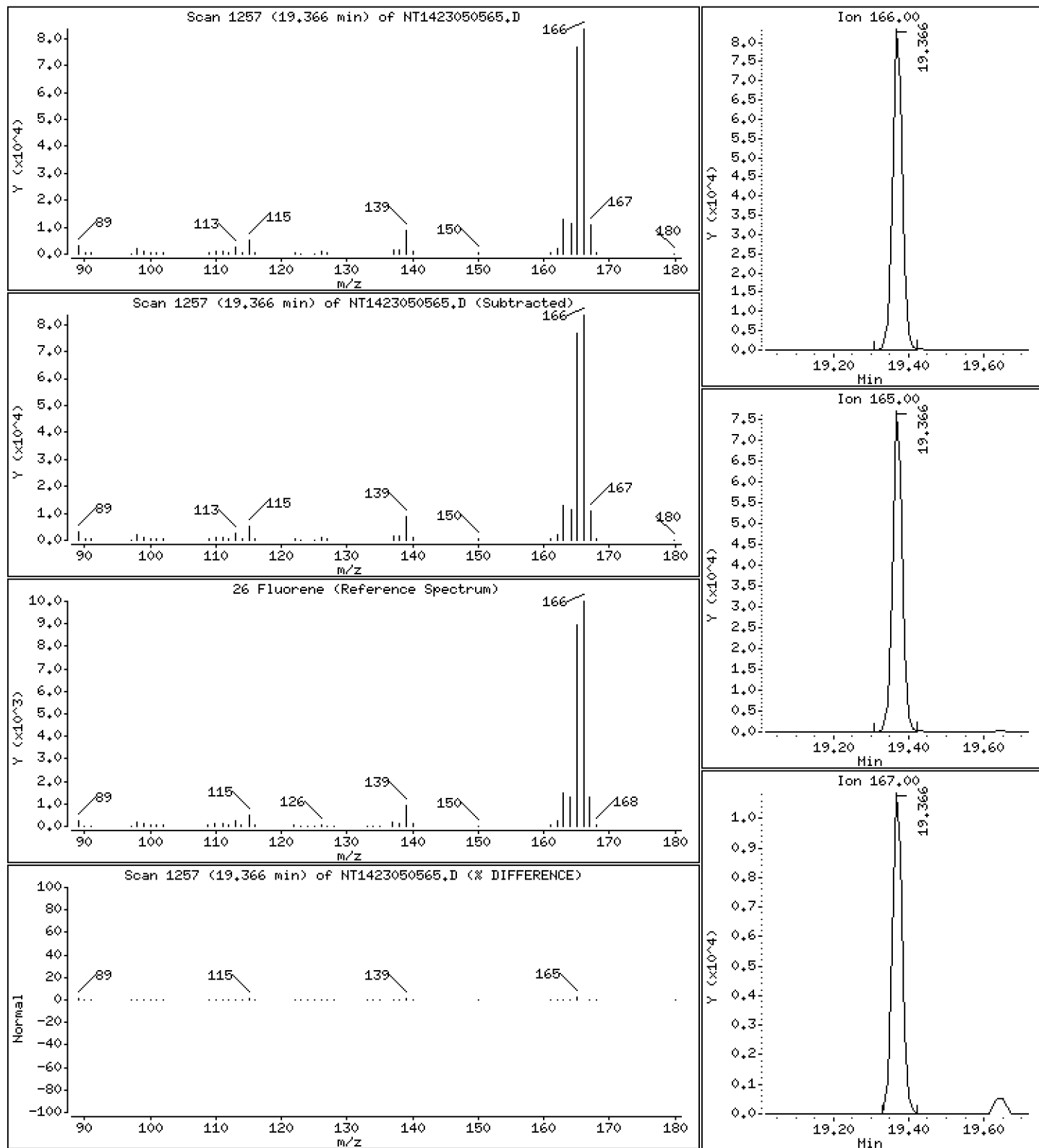
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

26 Fluorene

Concentration: 2.457 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

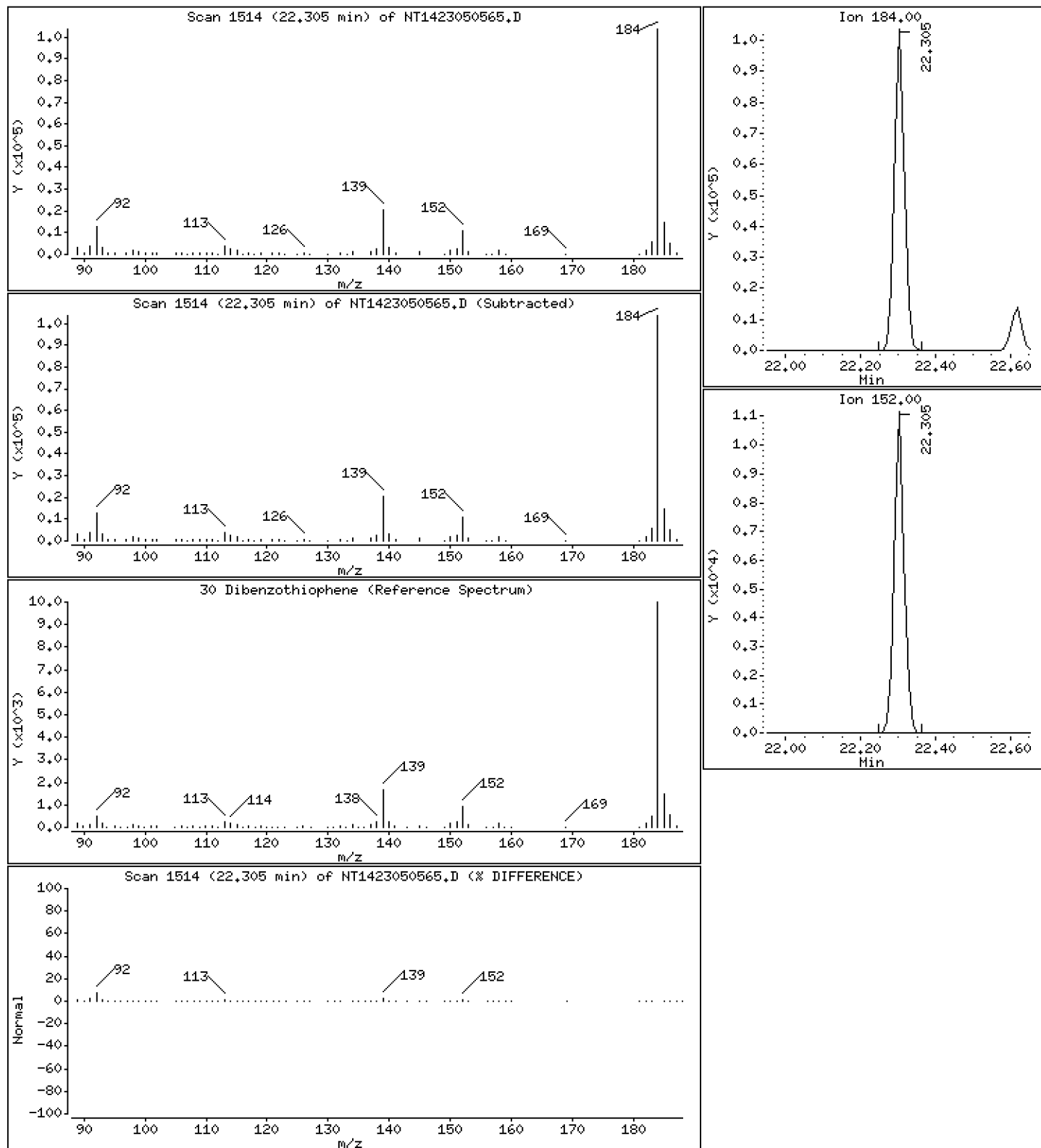
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

30 Dibenzothiophene

Concentration: 2.509 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

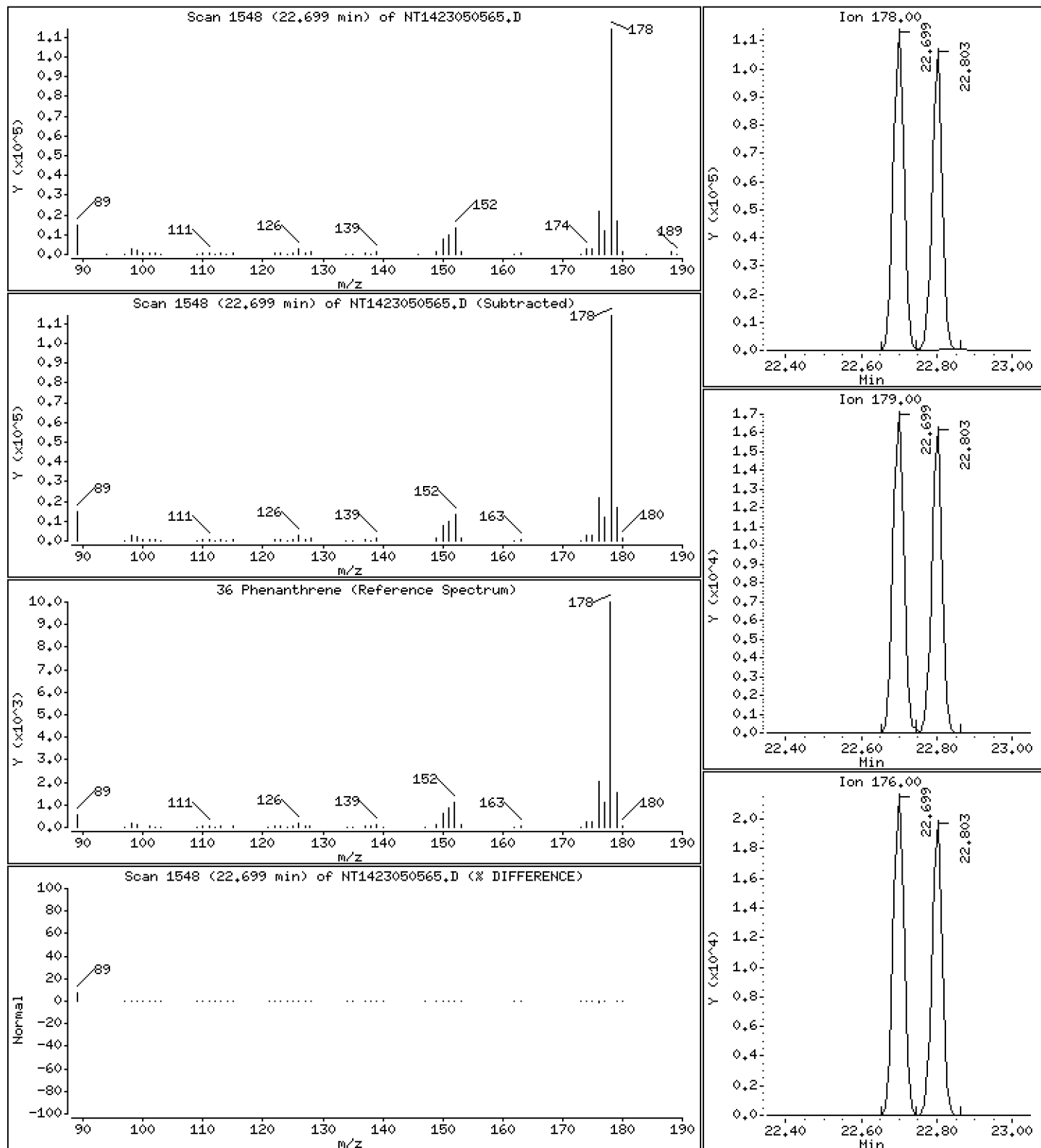
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

36 Phenanthrene

Concentration: 2.432 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

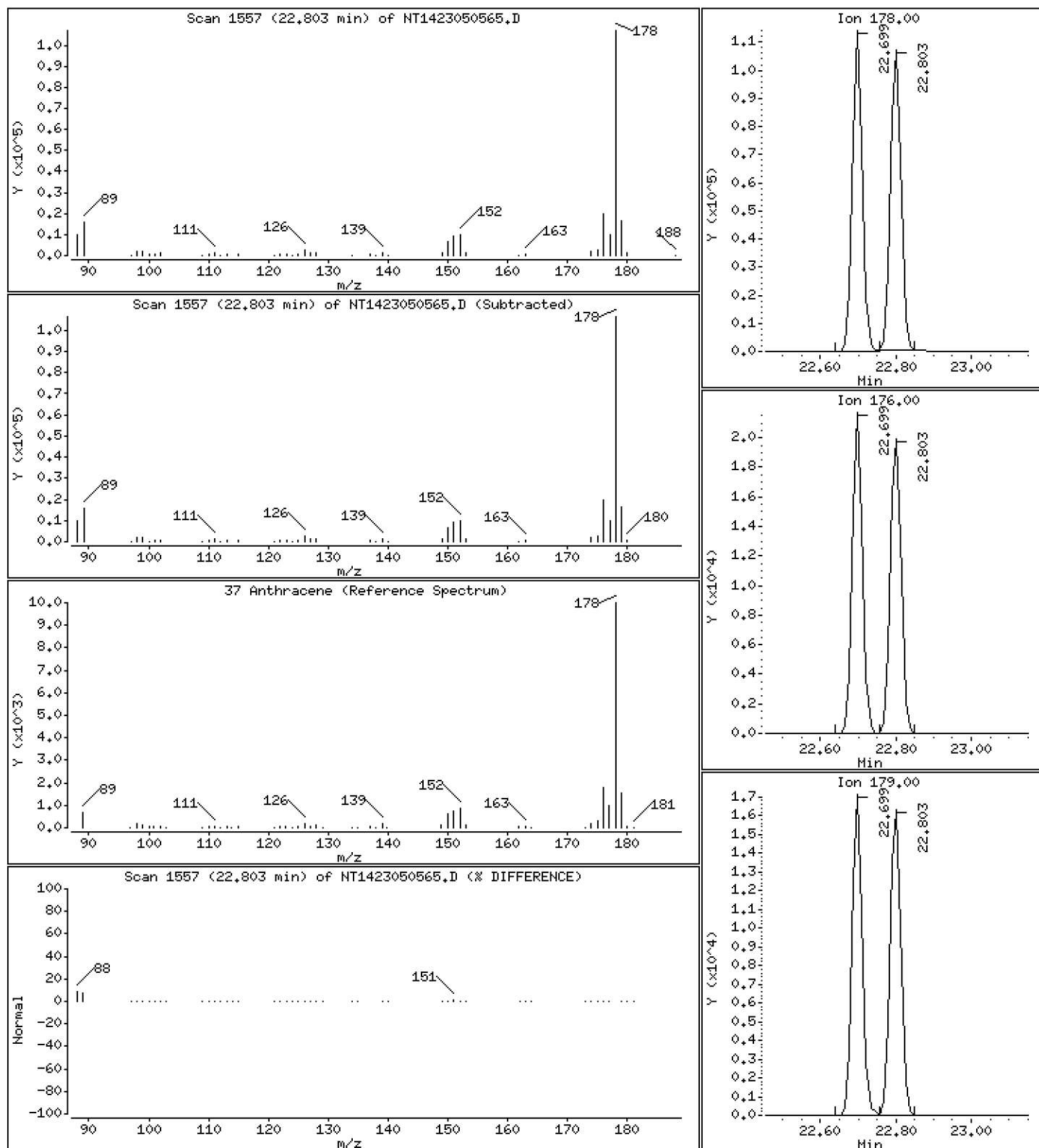
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

37 Anthracene

Concentration: 2.470 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

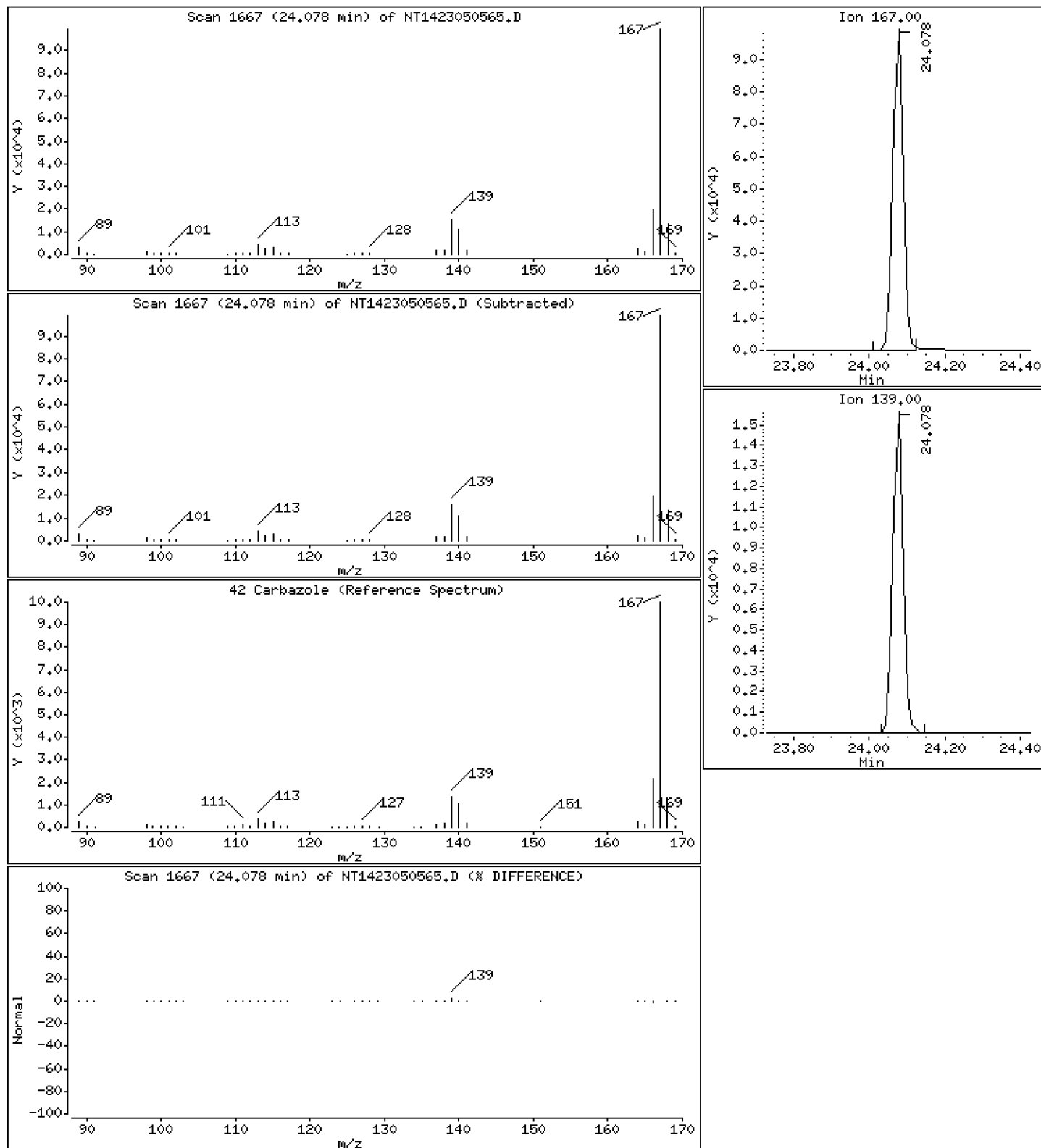
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

42 Carbazole

Concentration: 2.380 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

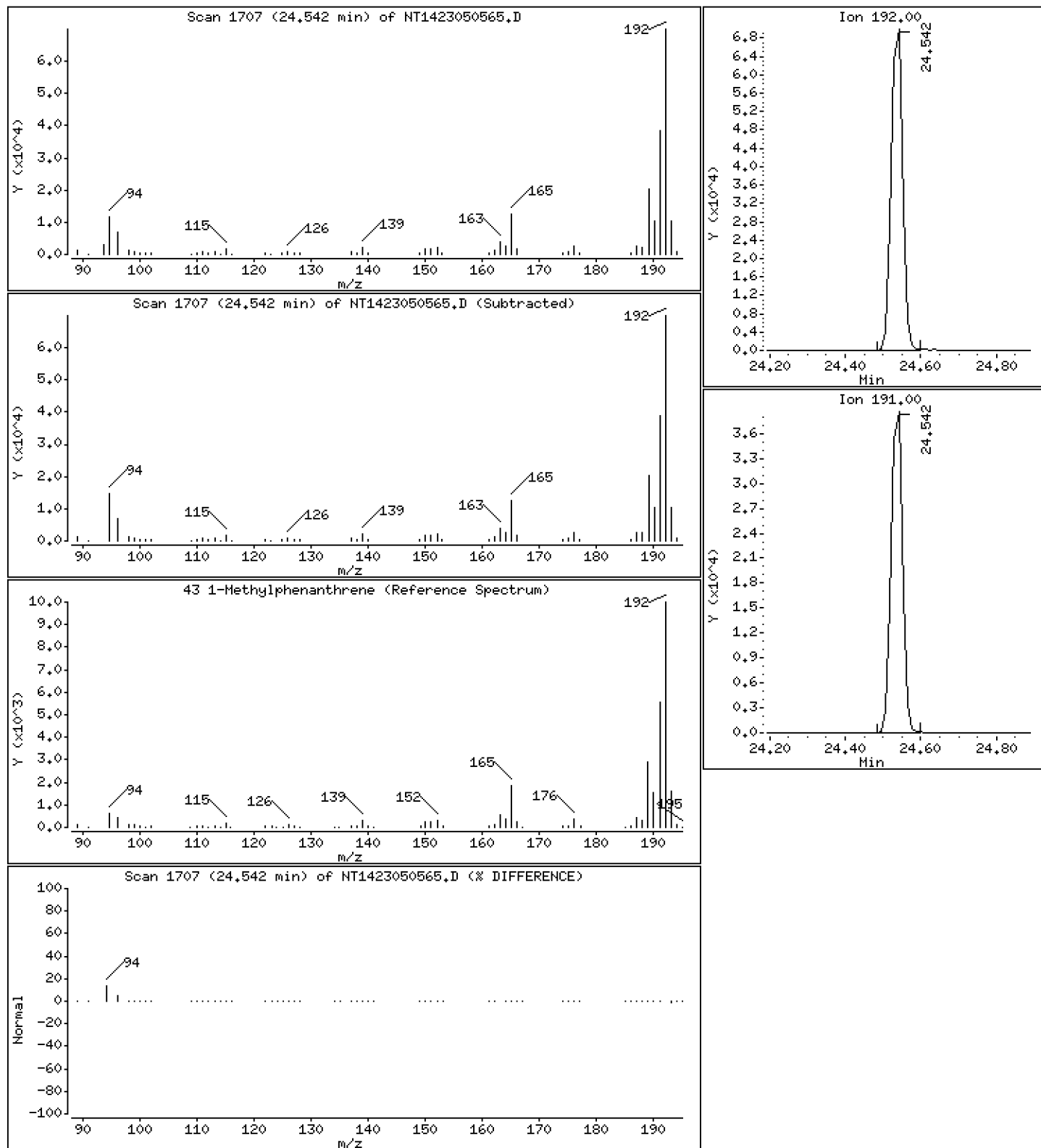
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

43 1-Methylphenanthrene

Concentration: 2.477 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

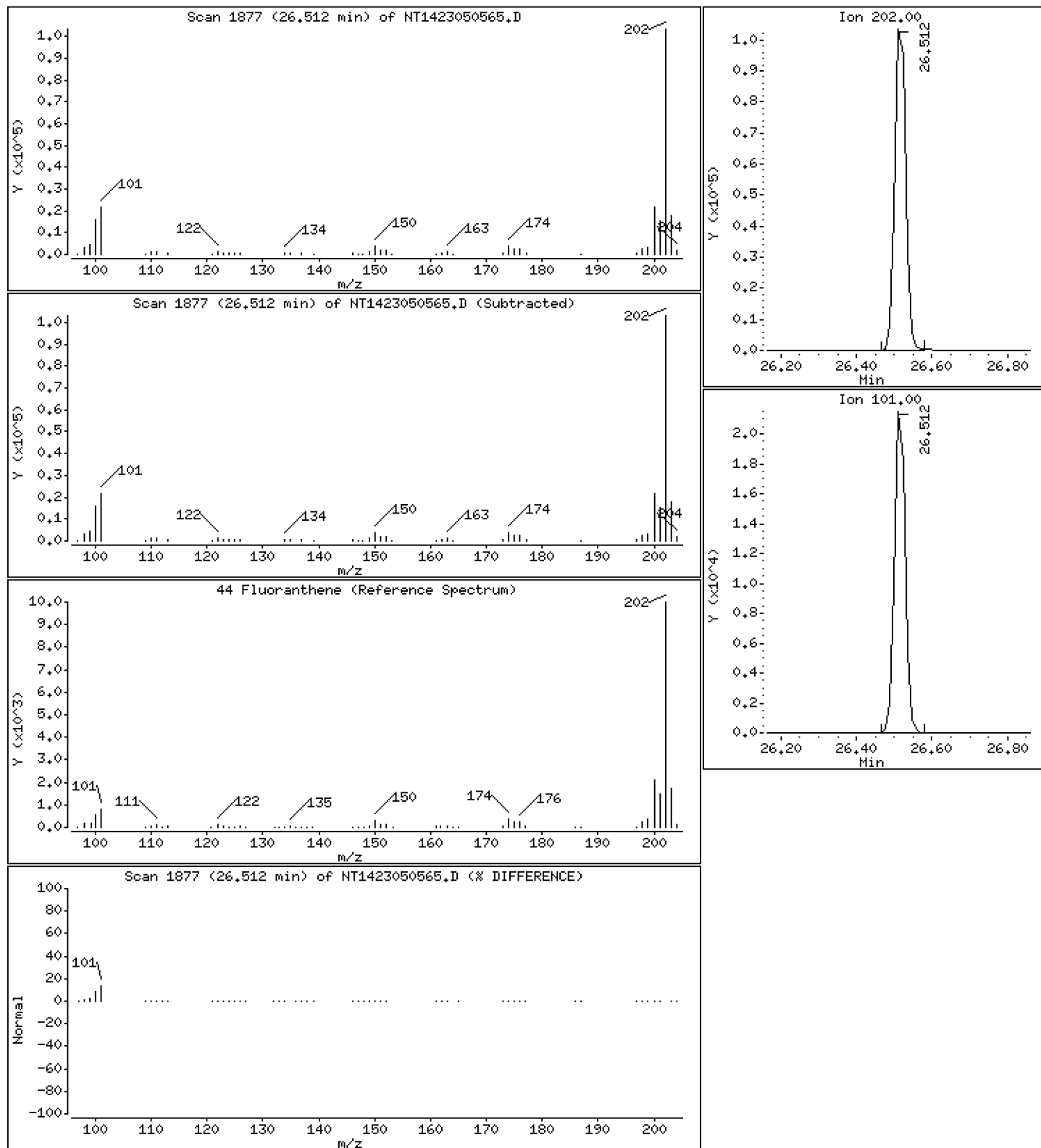
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

44 Fluoranthene

Concentration: 2,500 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

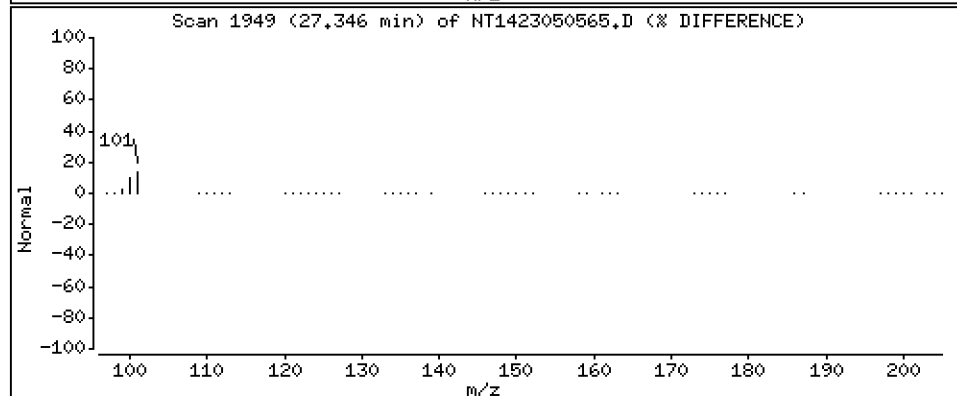
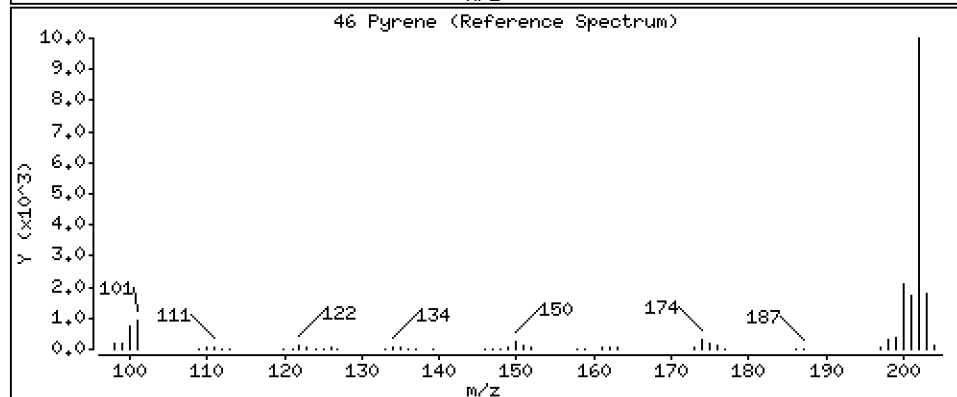
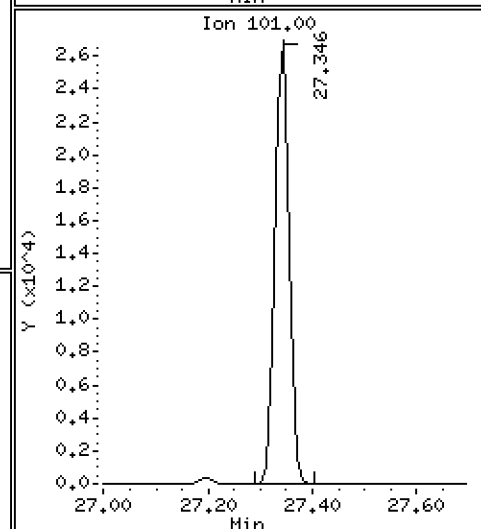
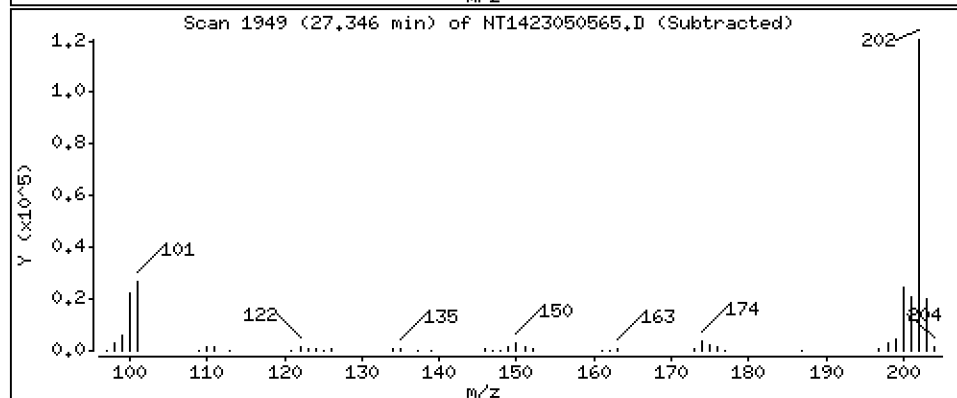
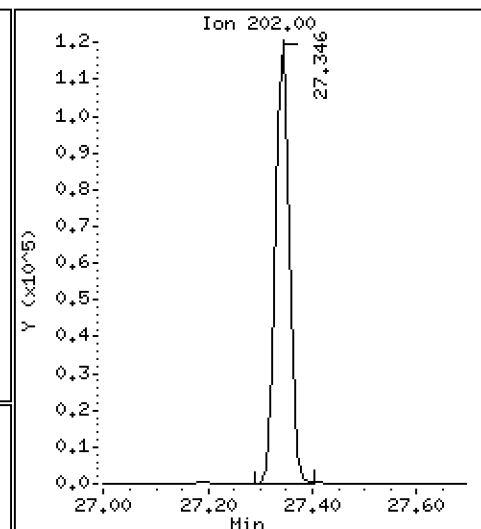
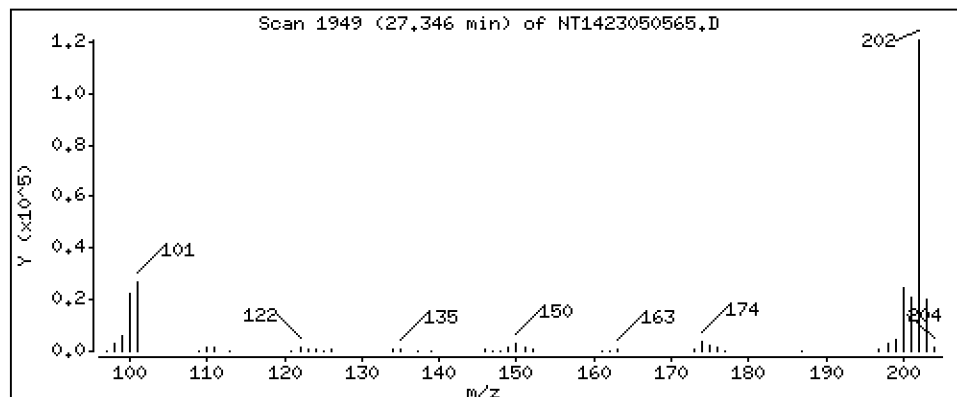
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

46 Pyrene

Concentration: 2.581 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

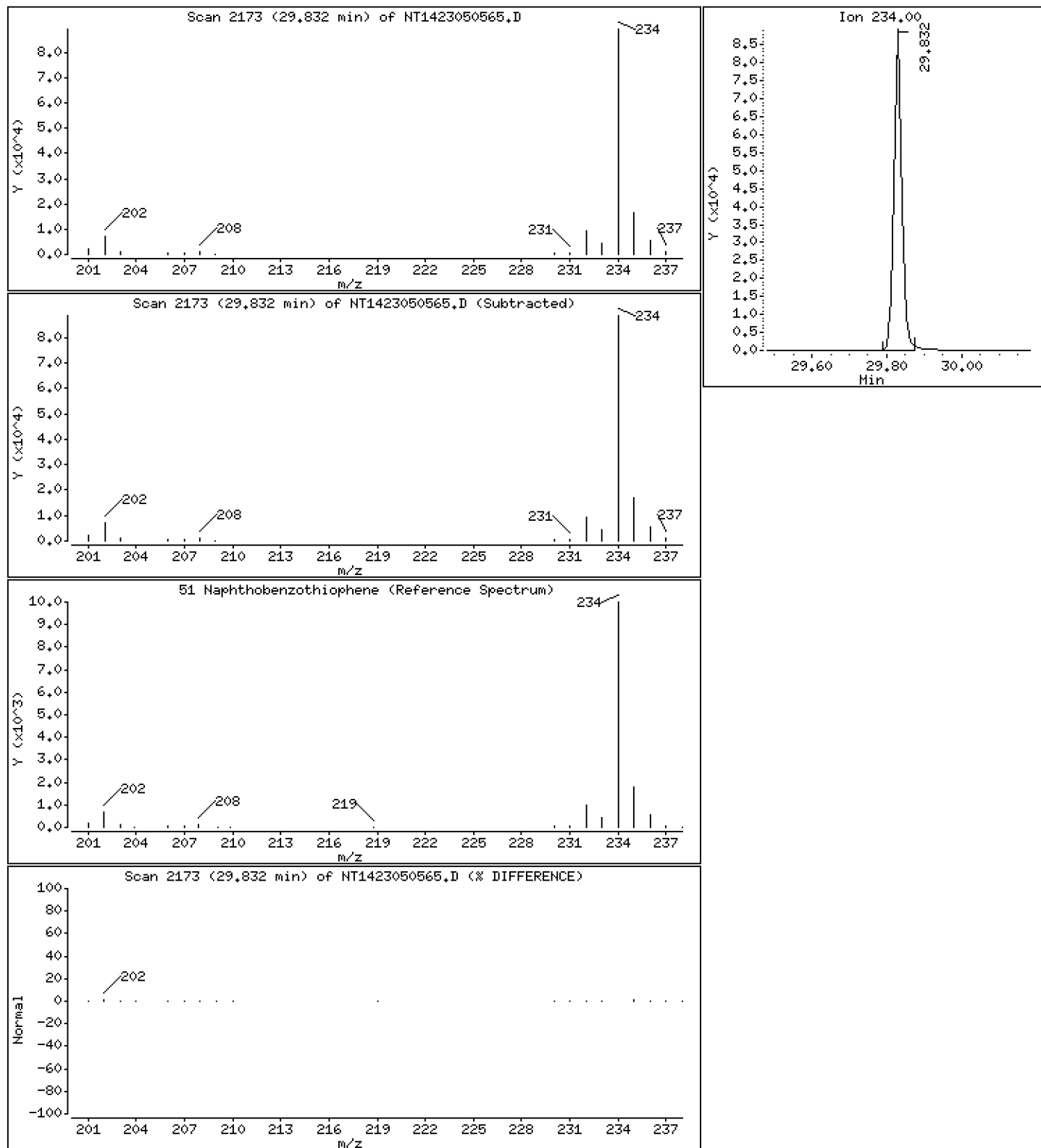
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

51 Naphthobenzothiophene

Concentration: 2.572 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

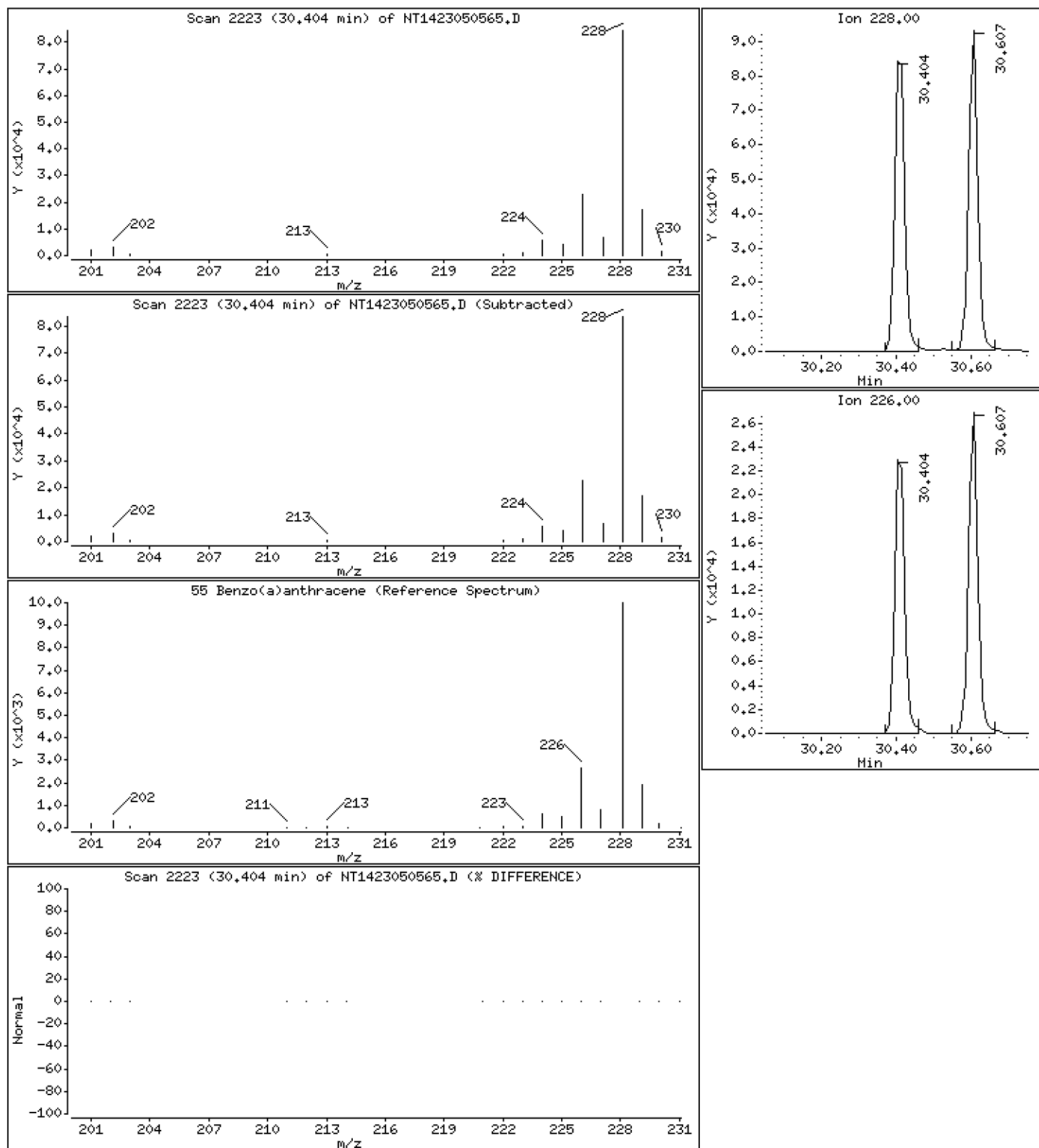
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

55 Benzo(a)anthracene

Concentration: 2,582 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

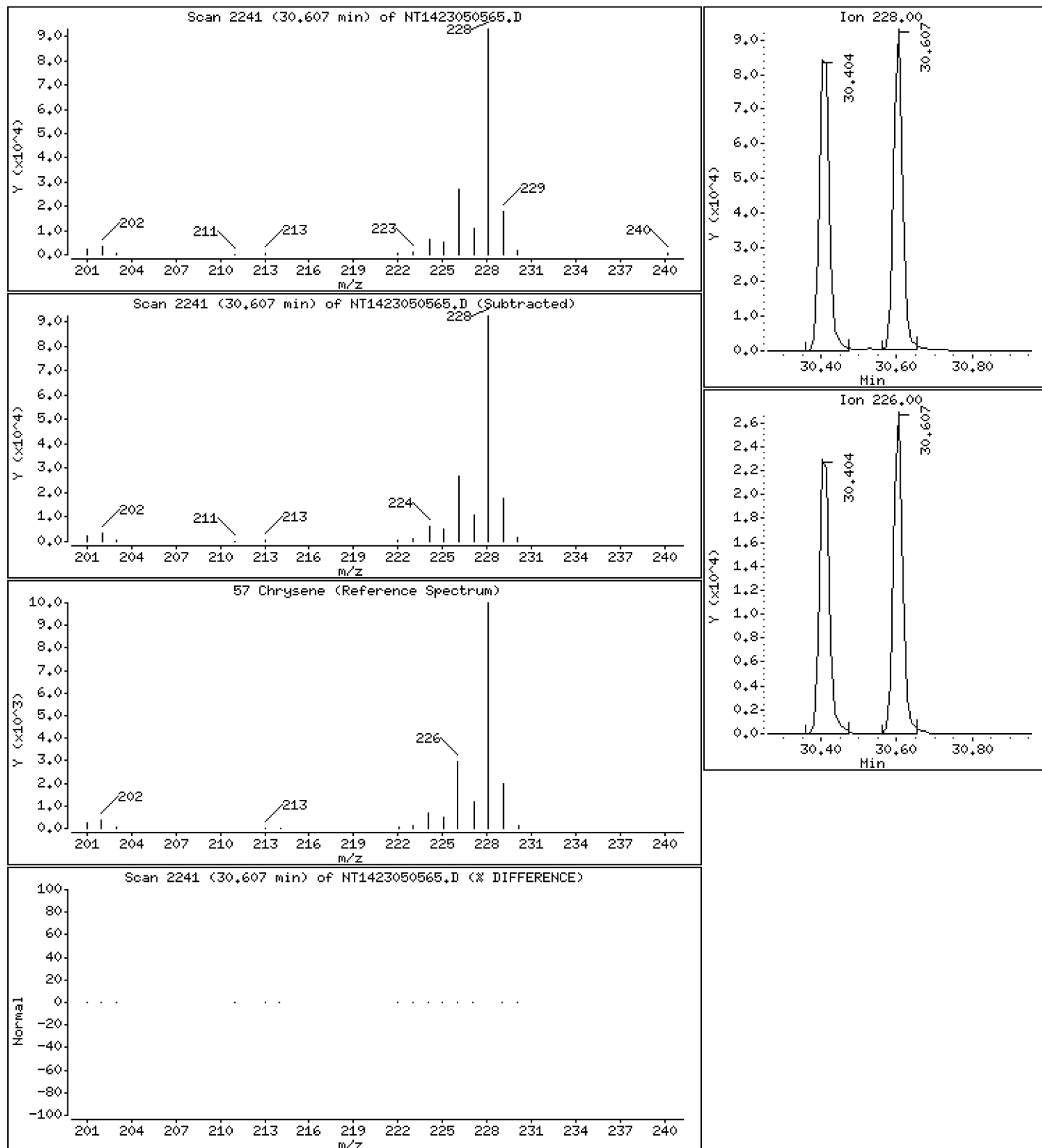
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

57 Chrysene

Concentration: 2,580 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

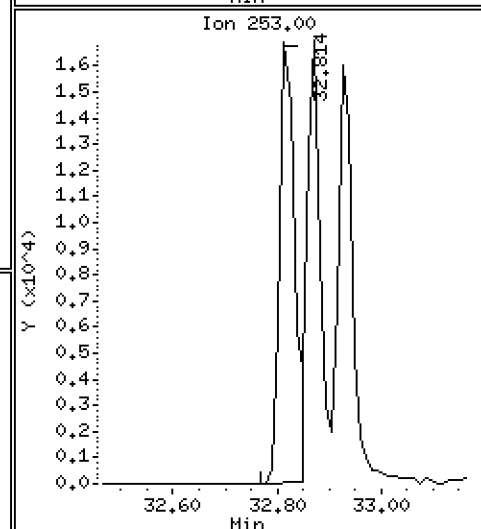
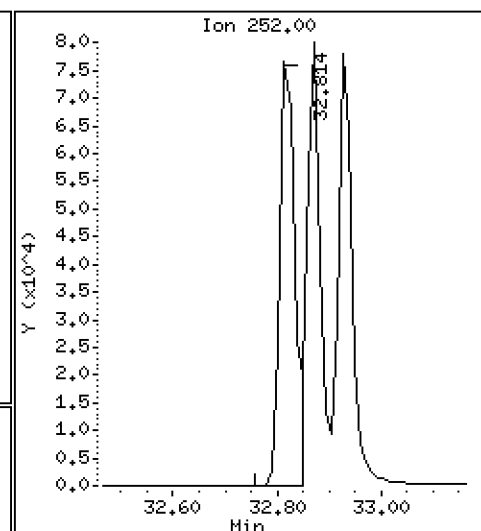
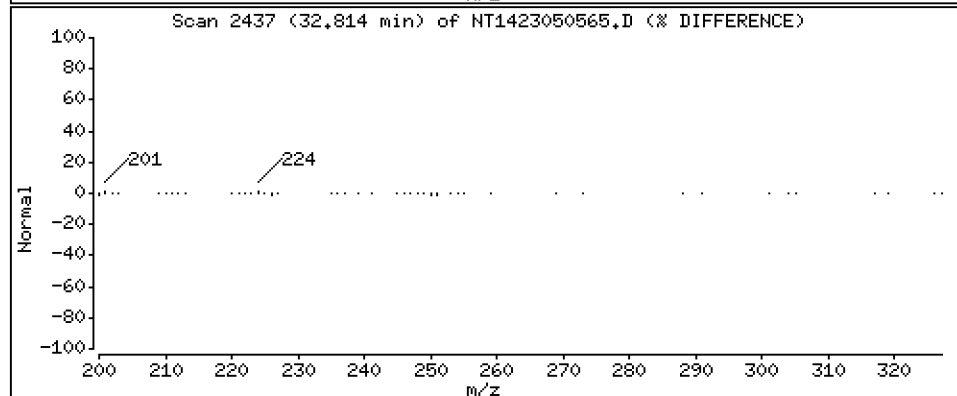
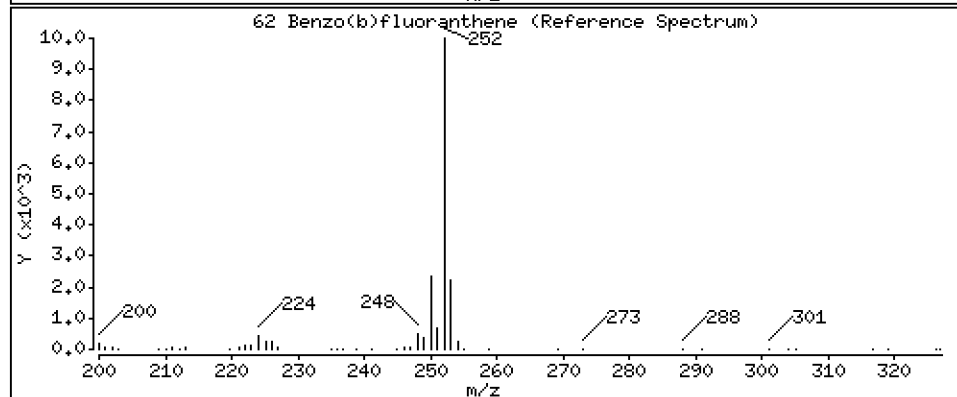
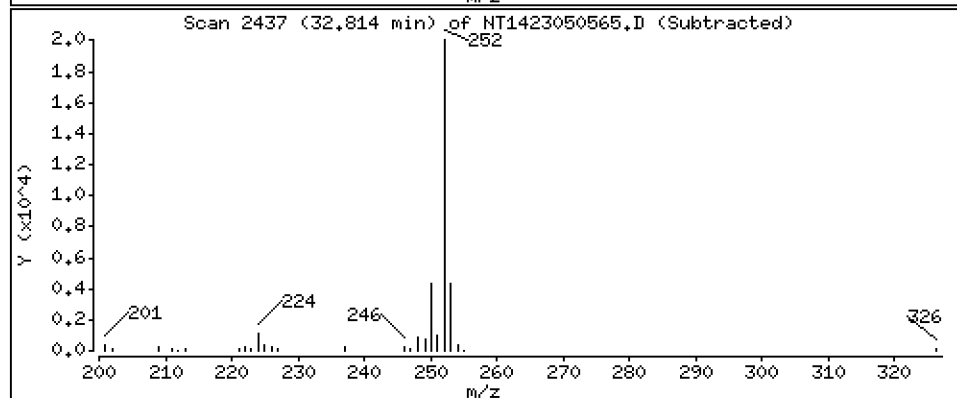
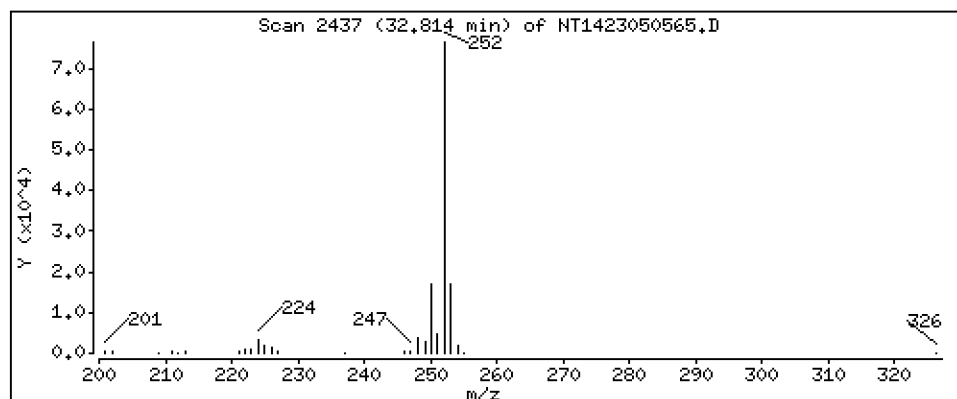
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

62 Benzo(b)fluoranthene

Concentration: 2.563 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

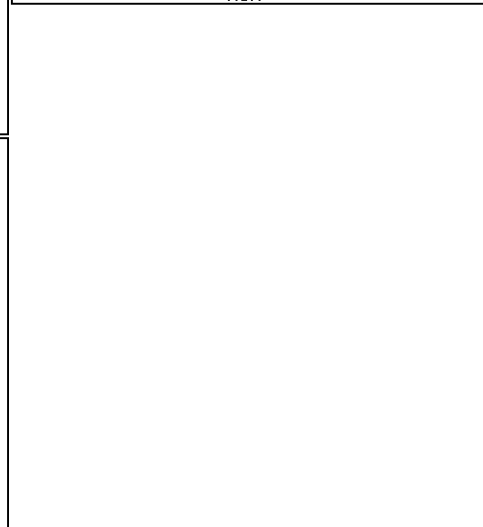
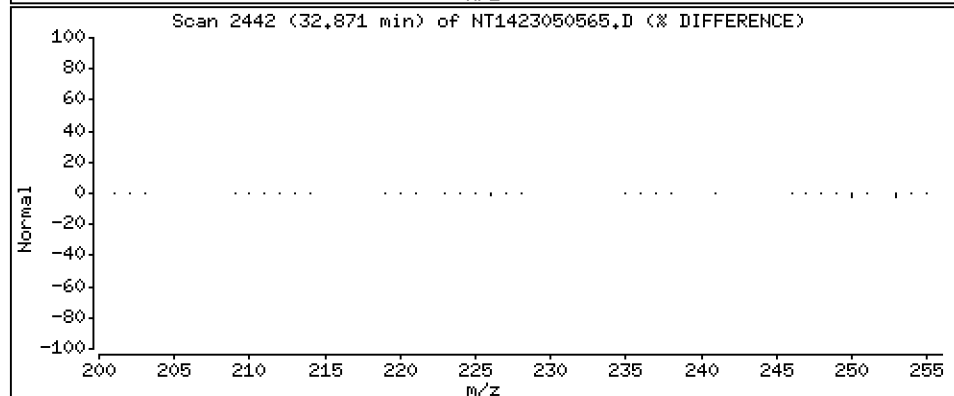
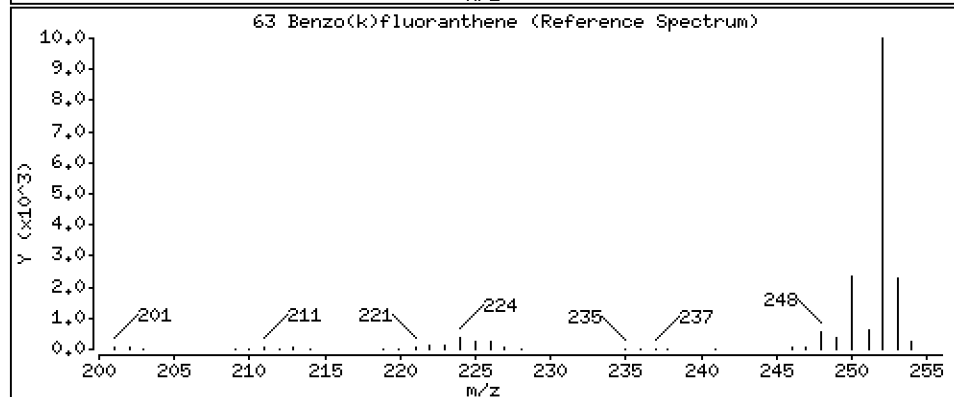
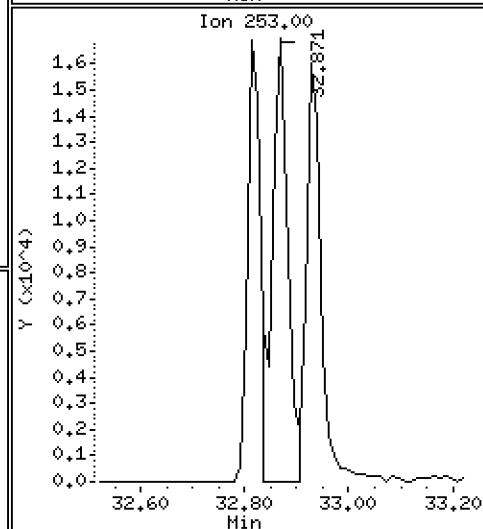
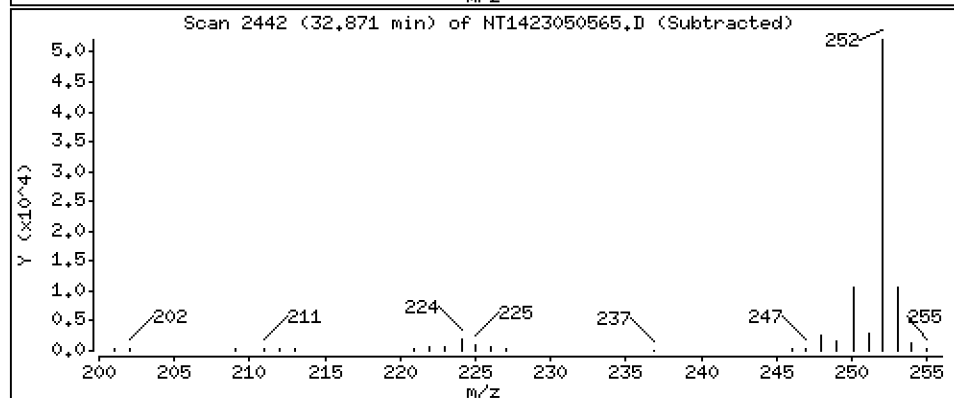
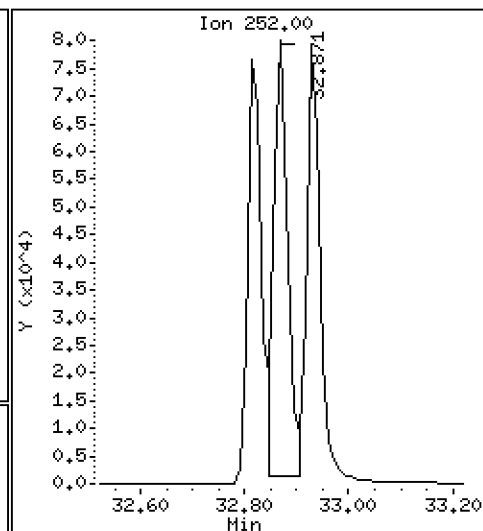
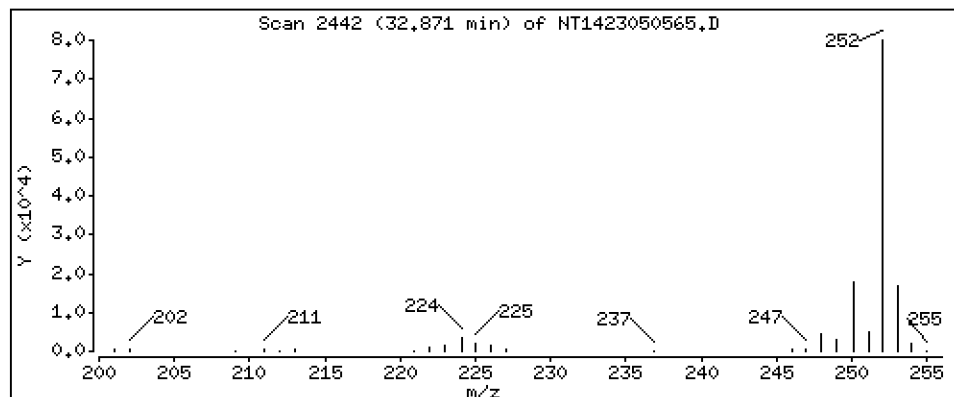
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

63 Benzo(k)fluoranthene

Concentration: 2.203 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

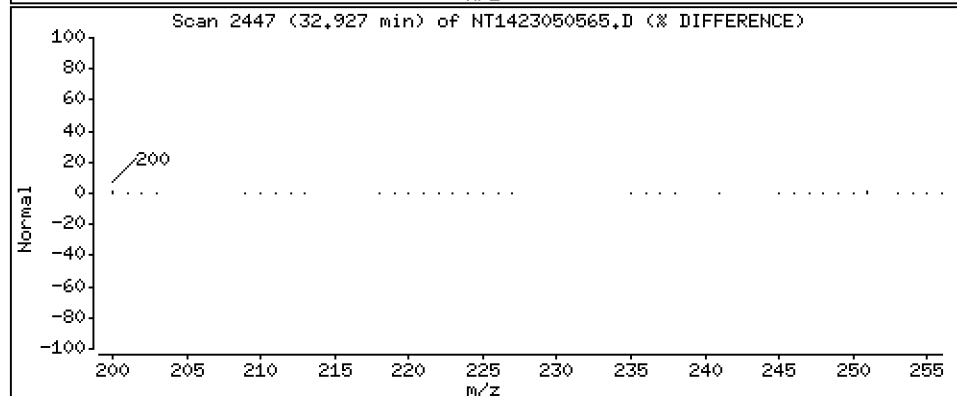
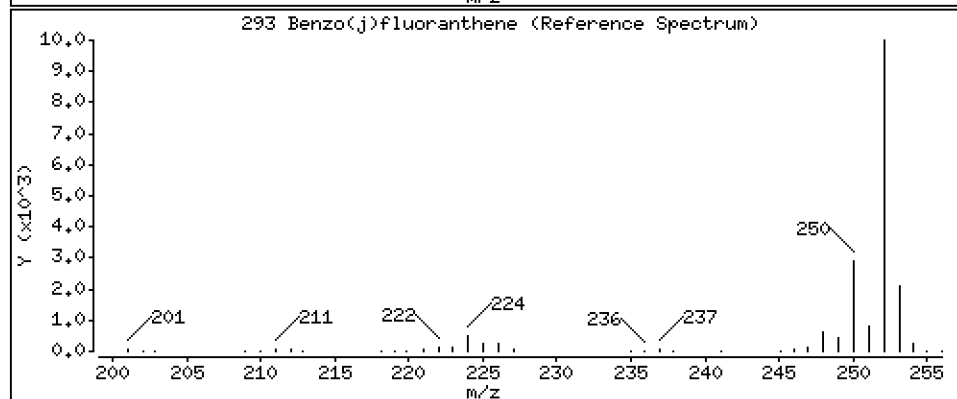
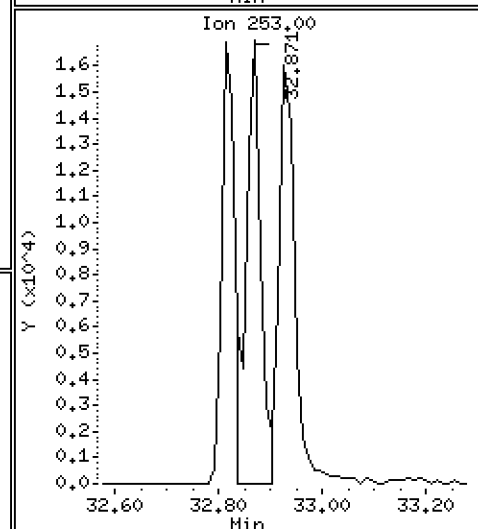
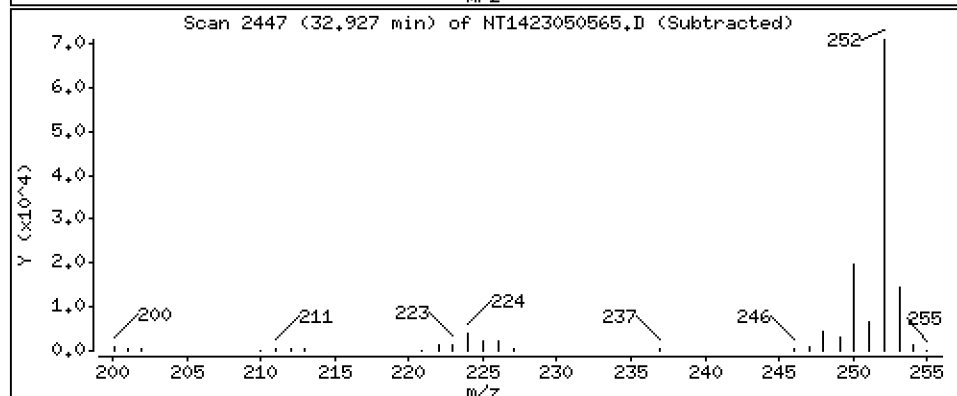
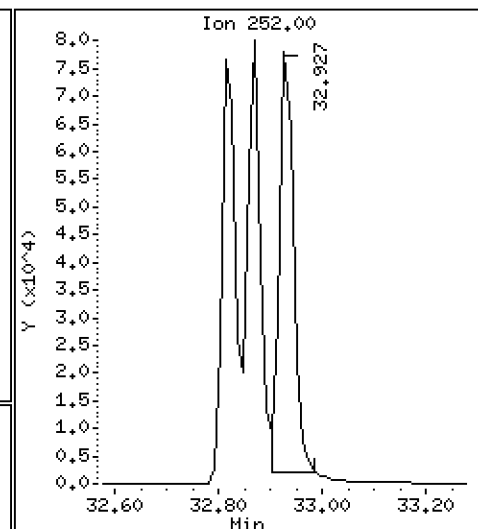
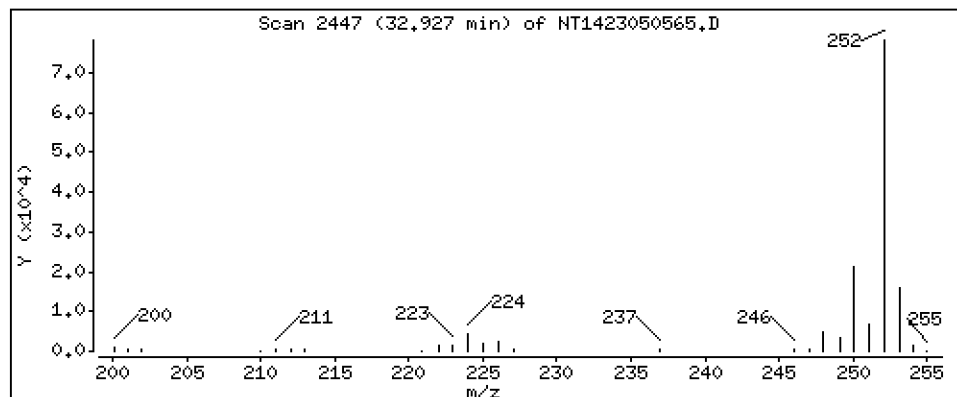
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

293 Benzo(j)fluoranthene

Concentration: 2.481 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

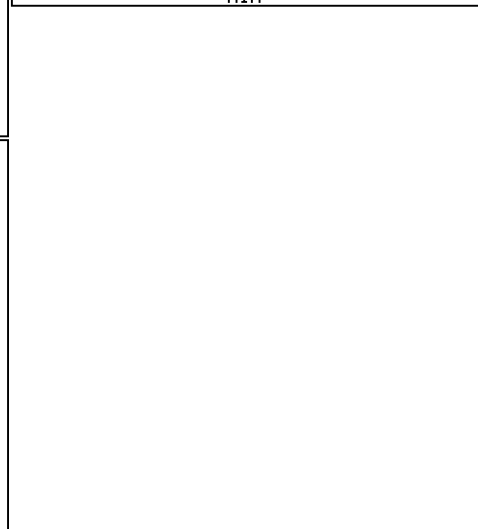
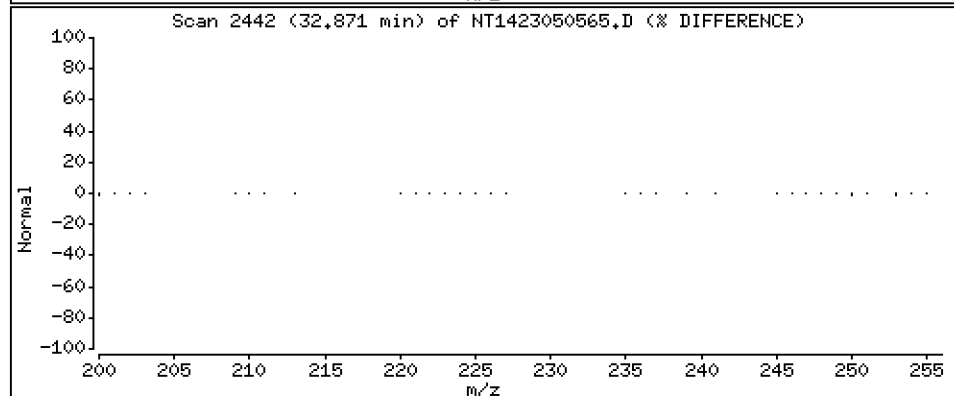
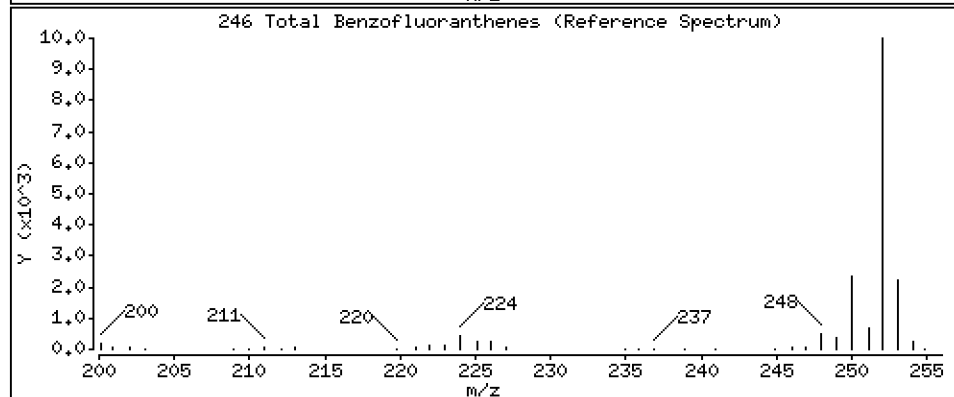
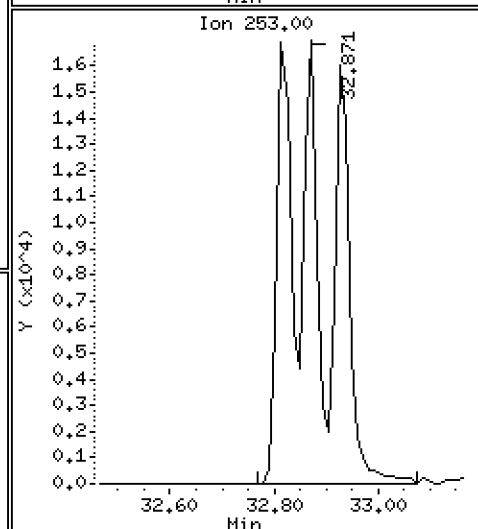
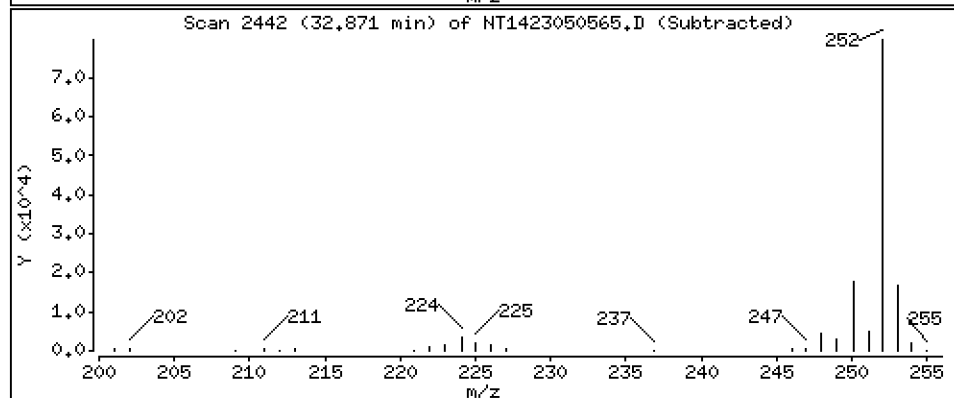
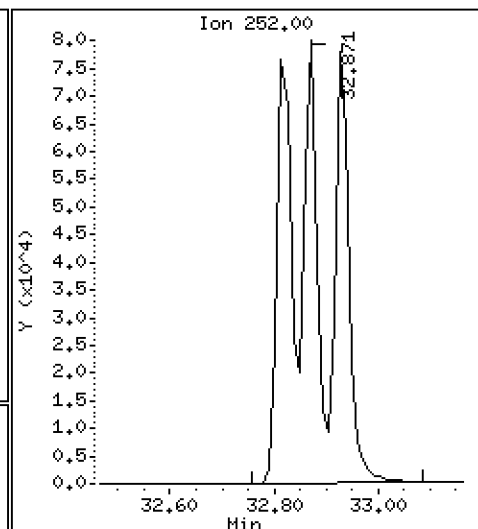
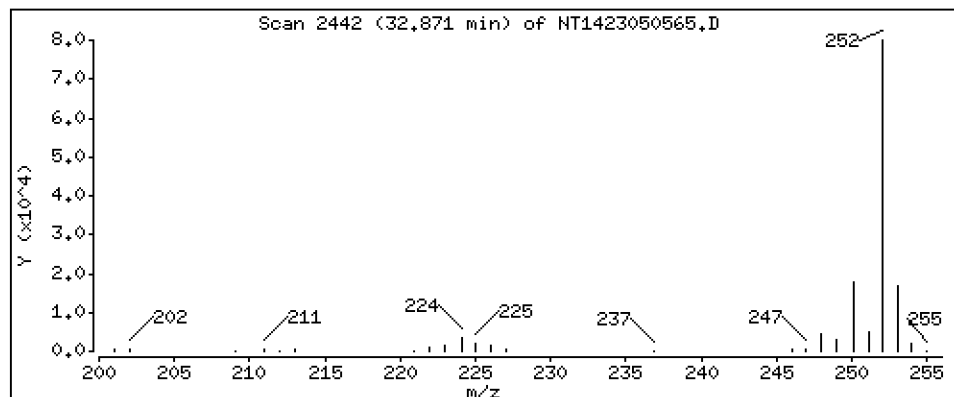
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

246 Total Benzo[fluoranthenes

Concentration: 7.912 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

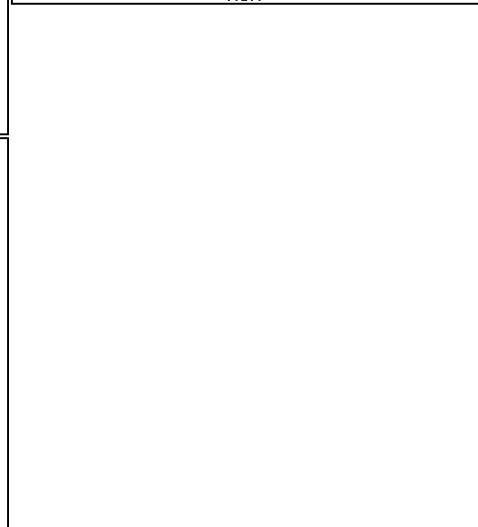
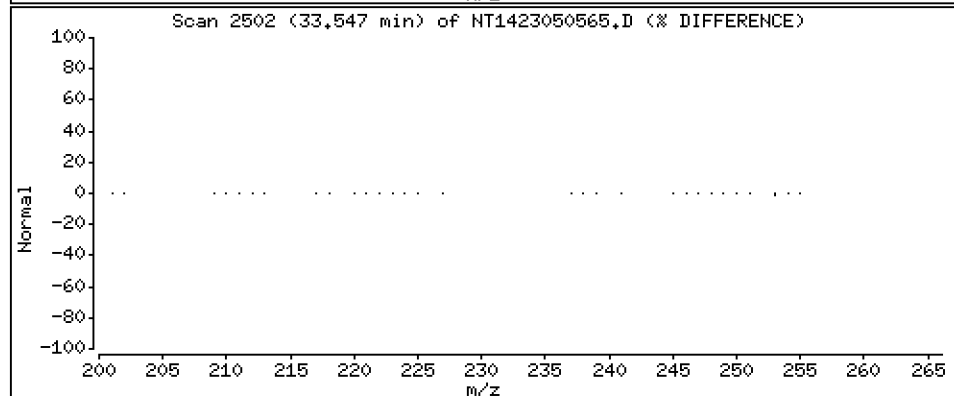
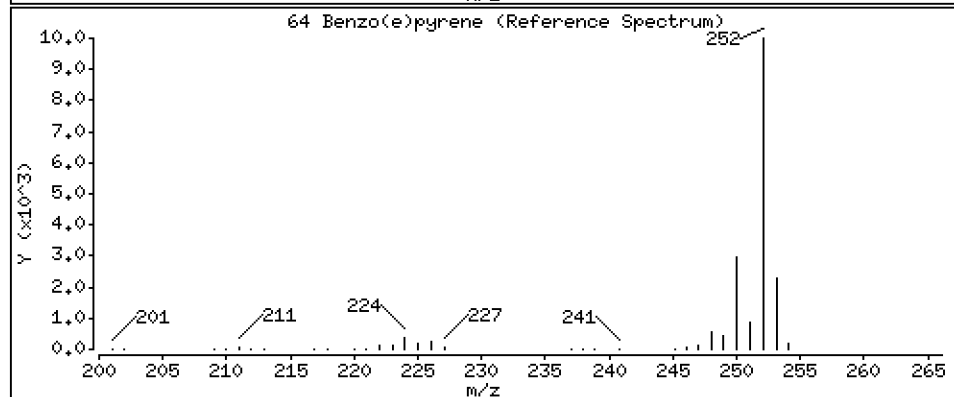
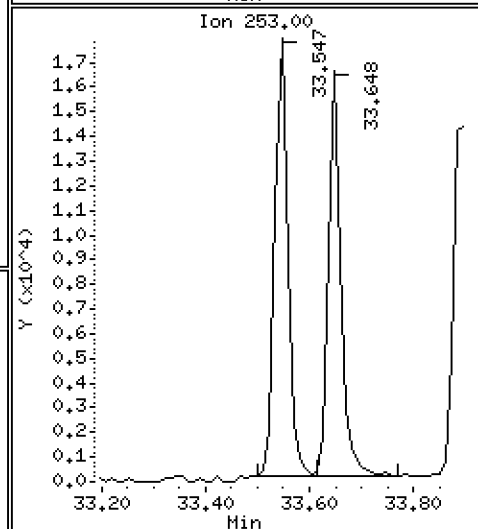
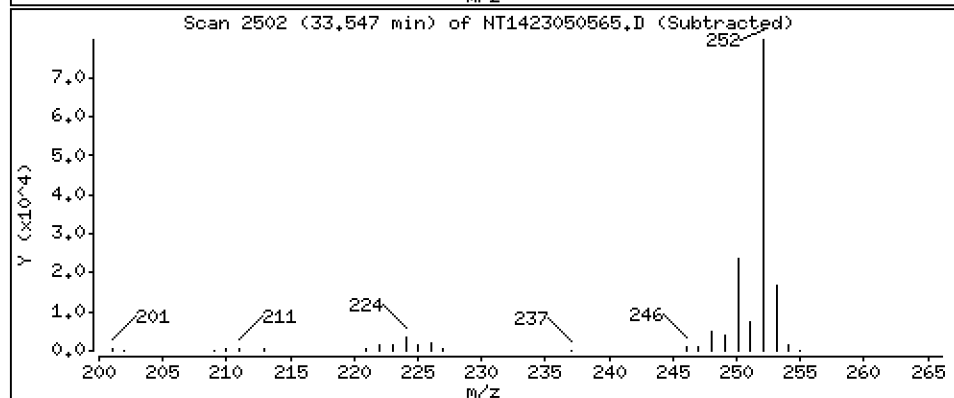
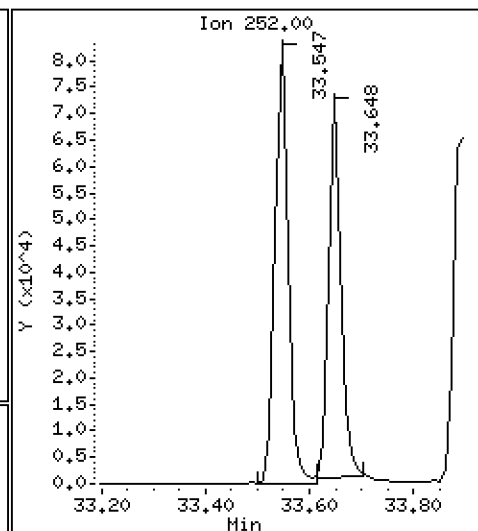
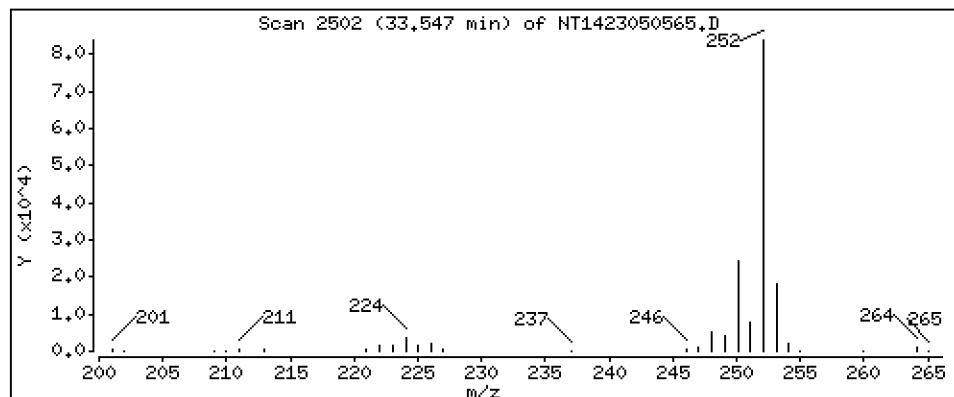
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

64 Benzo(e)pyrene

Concentration: 2.438 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

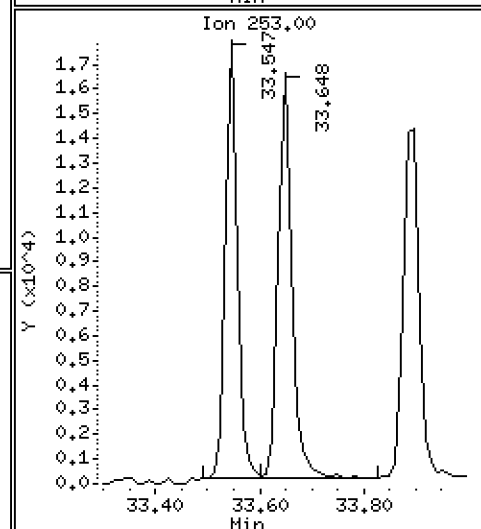
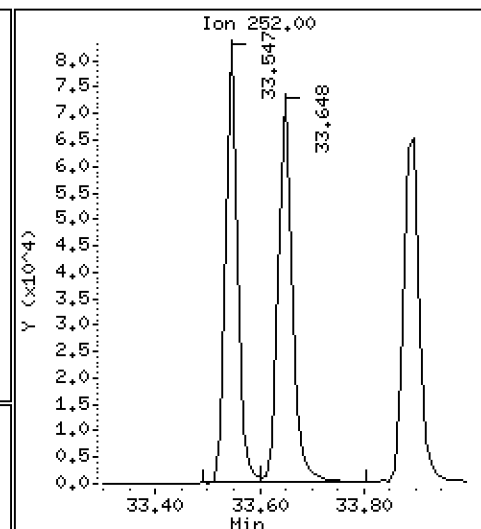
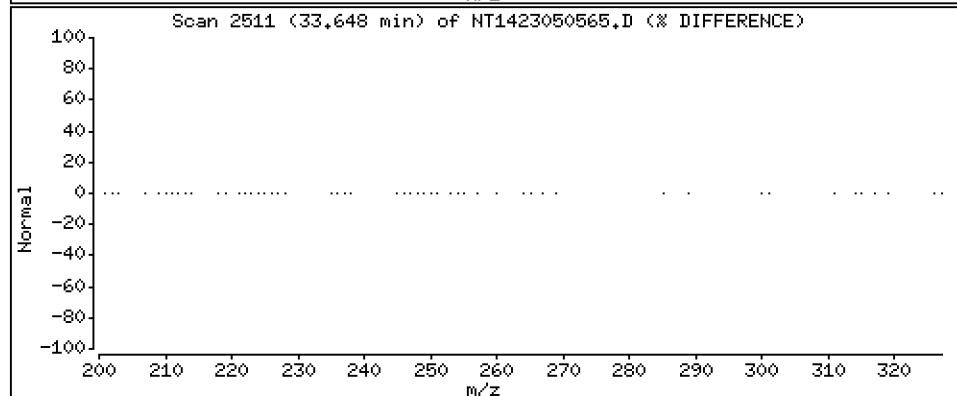
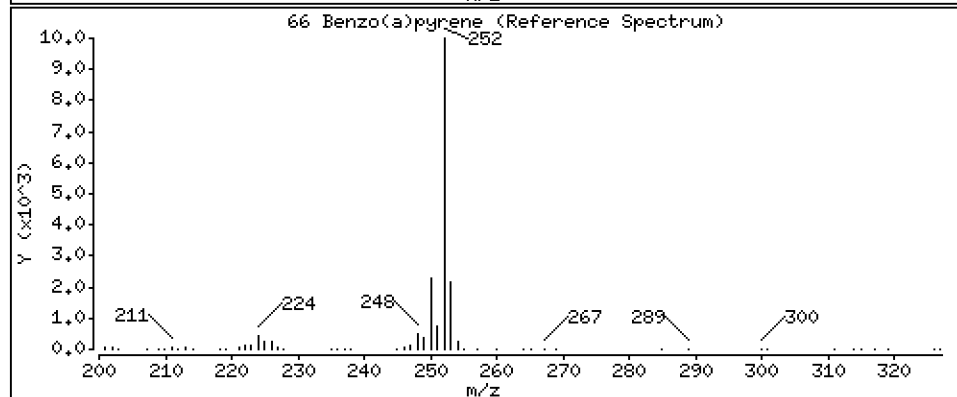
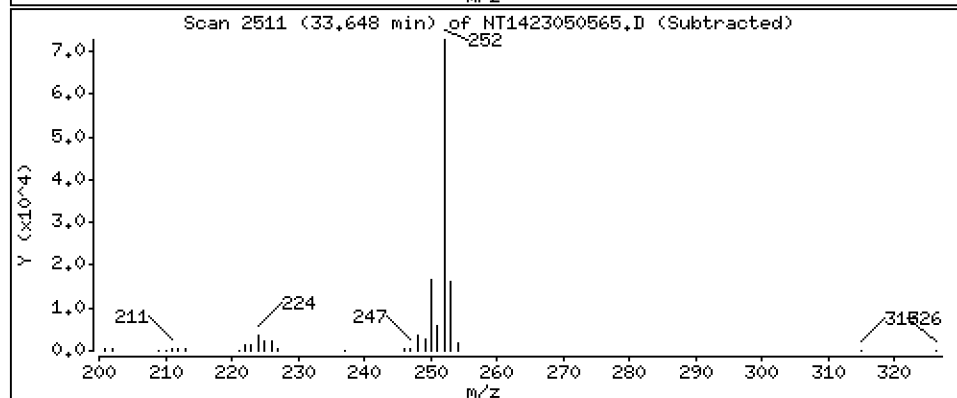
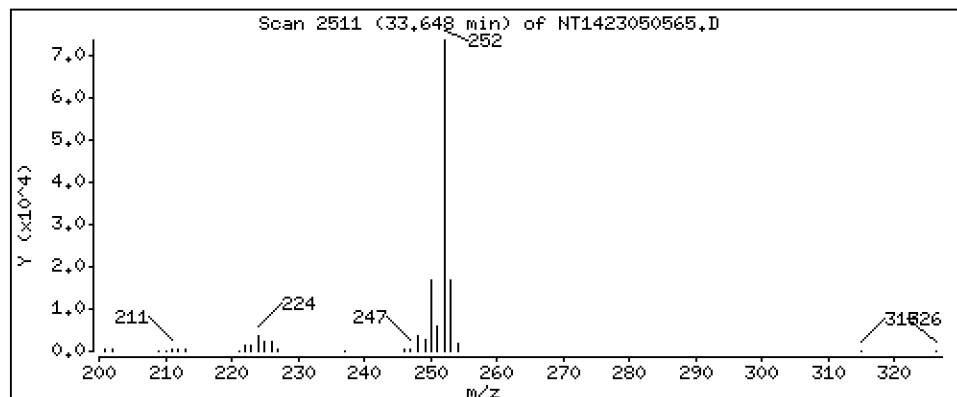
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

66 Benzo(a)pyrene

Concentration: 2.719 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

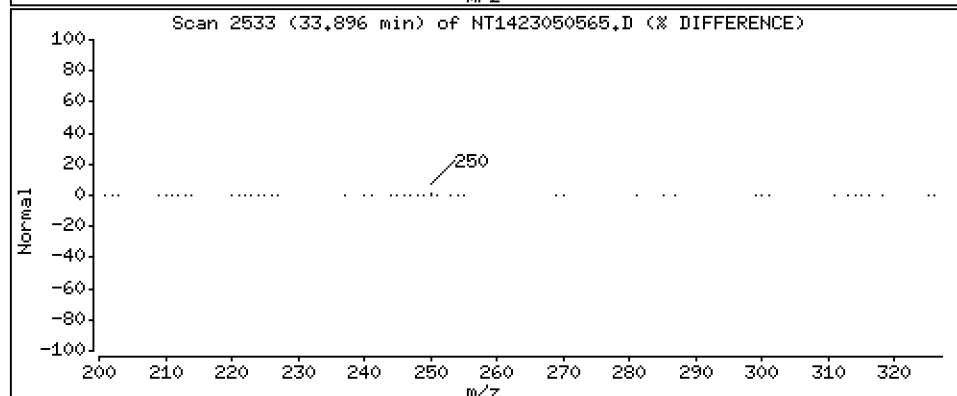
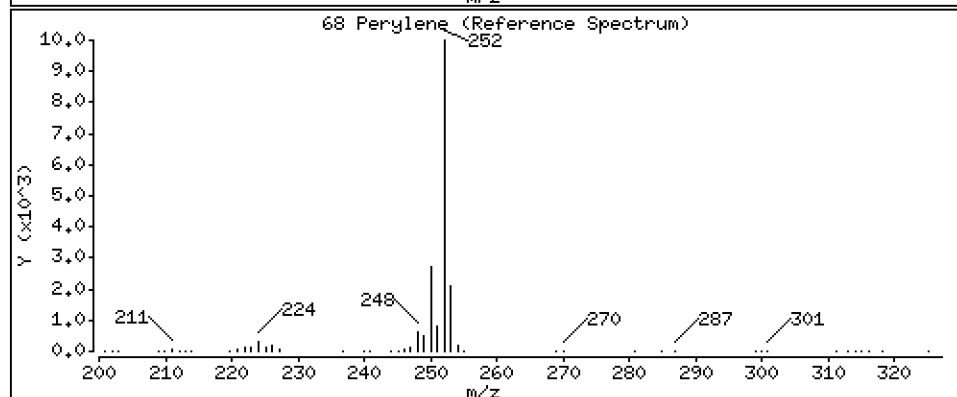
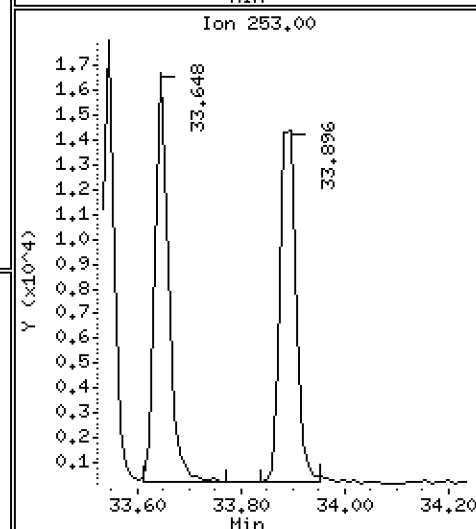
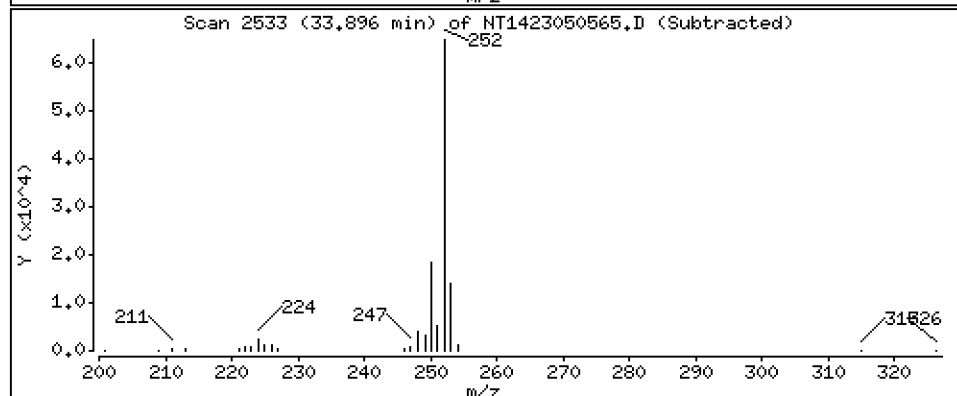
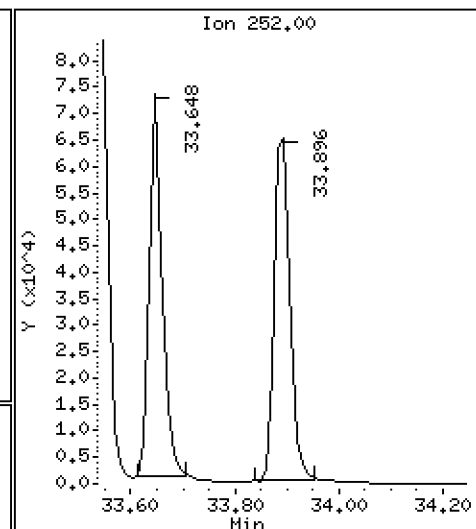
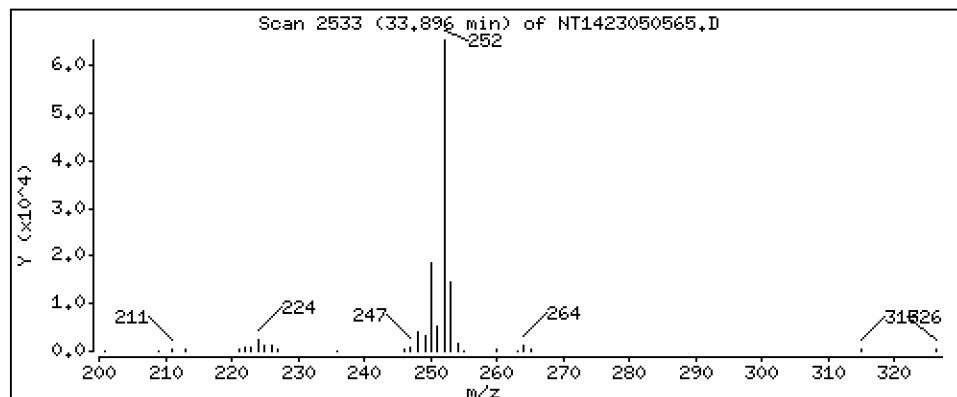
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

68 Perylene

Concentration: 2.489 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

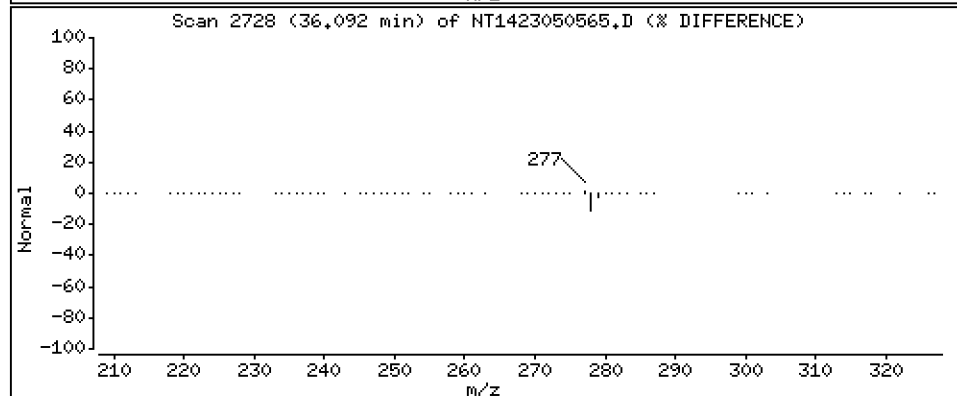
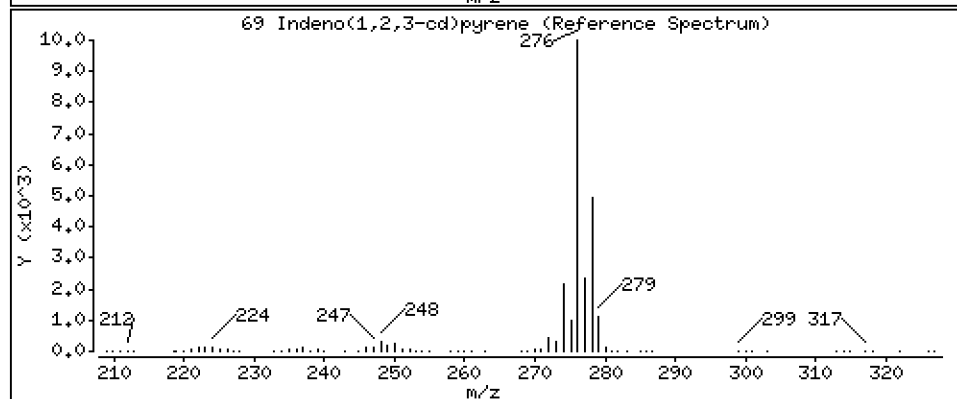
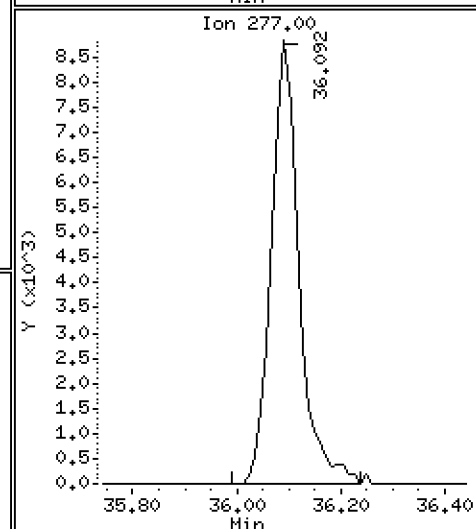
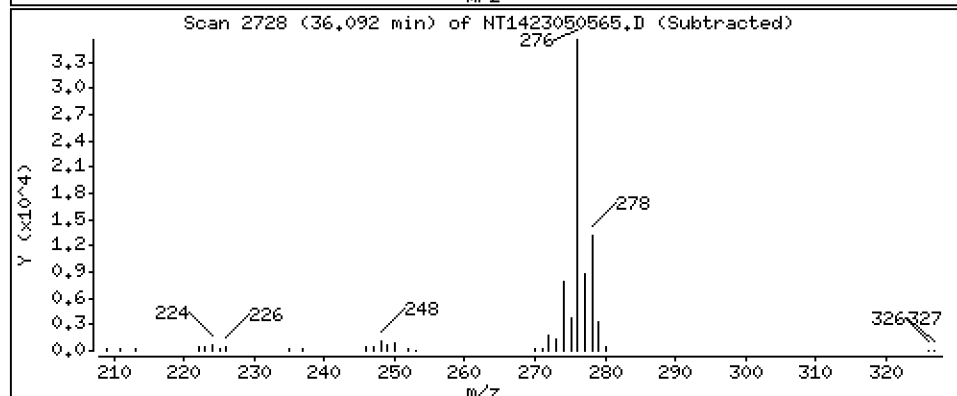
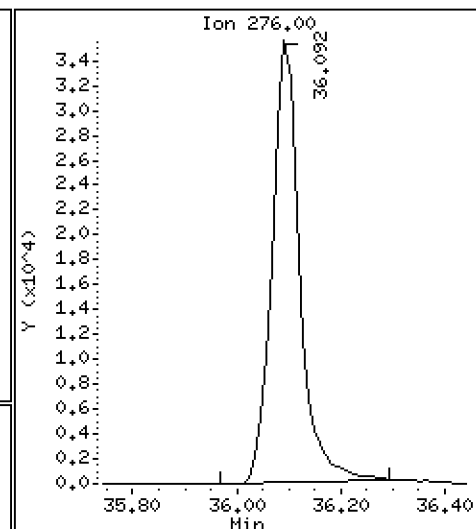
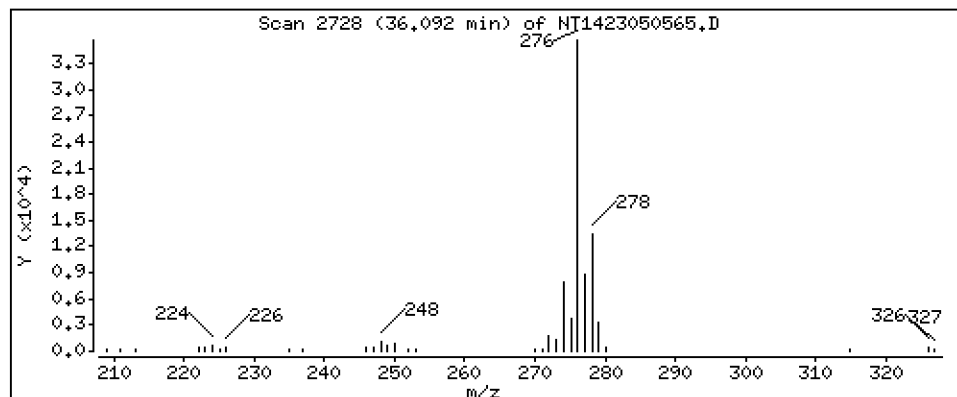
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

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

Concentration: 2.054 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

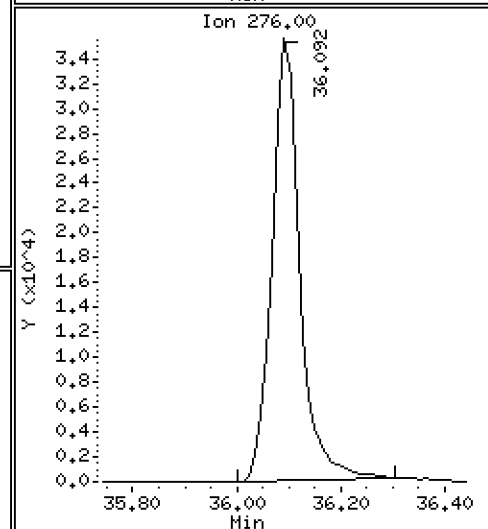
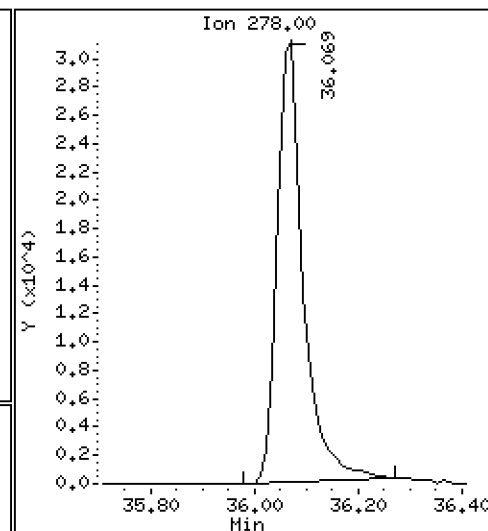
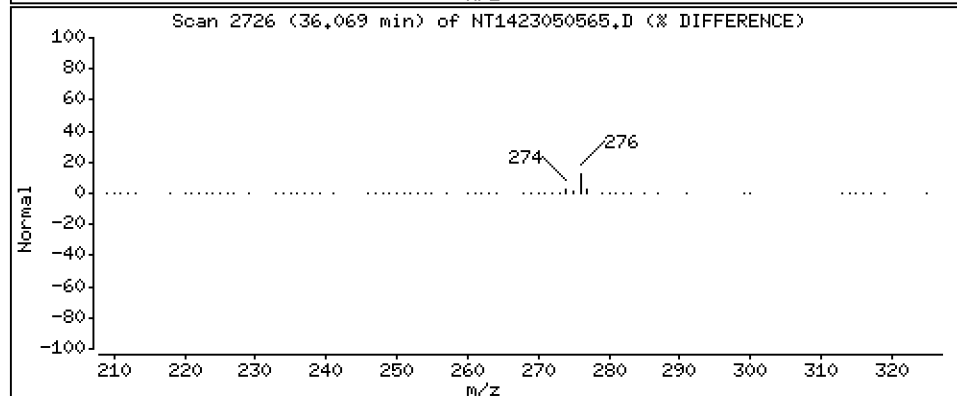
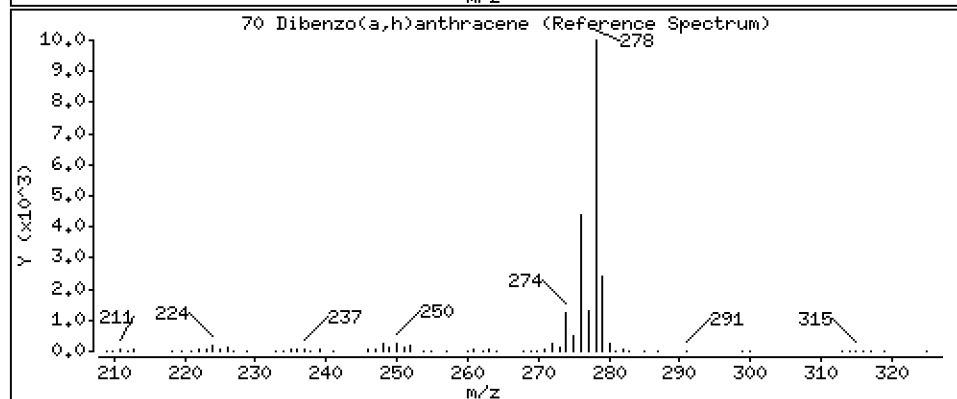
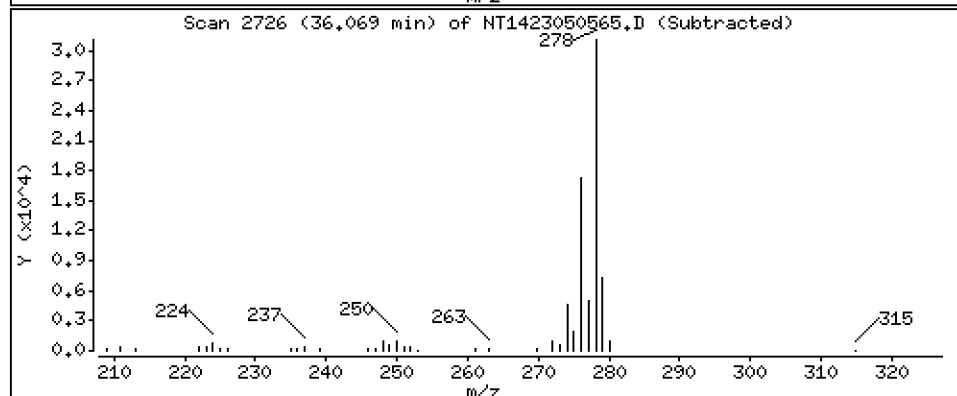
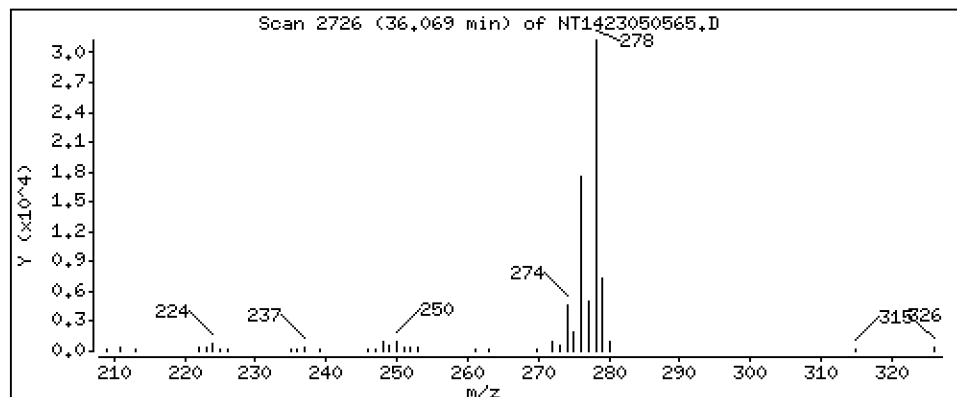
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

70 Dibenzo(a,h)anthracene

Concentration: 2.091 ug/mL



Date : 07-MAY-2023 14:07

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-CCV1

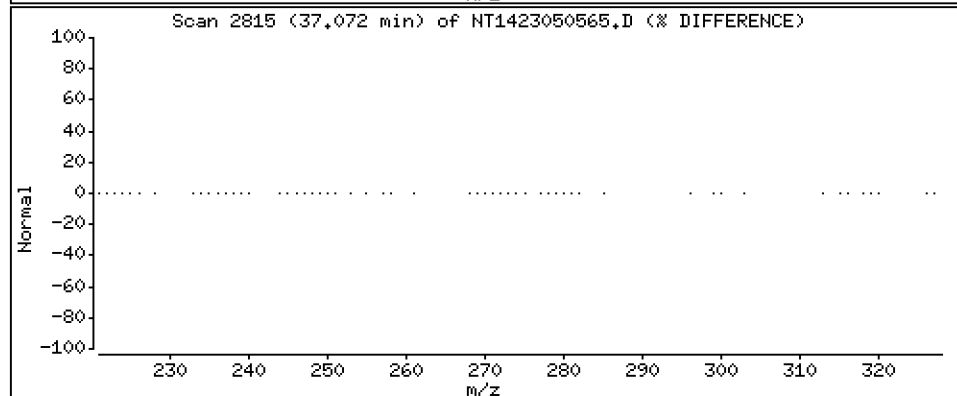
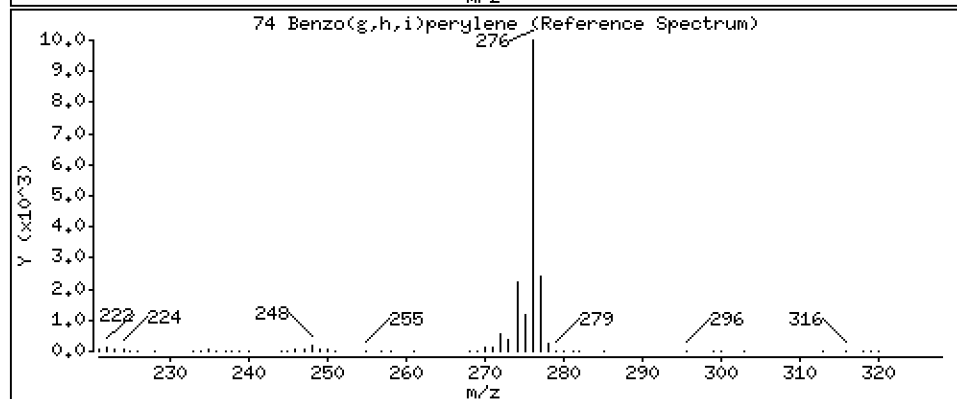
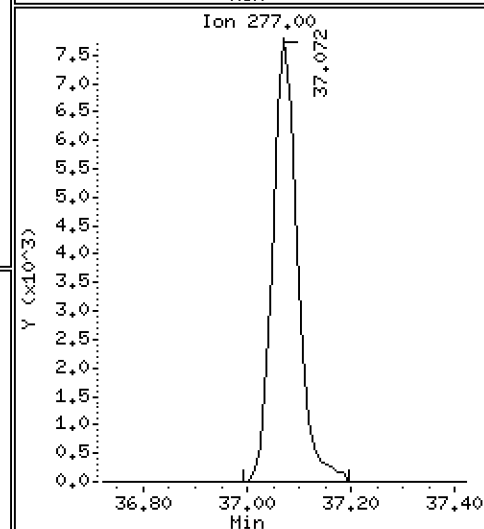
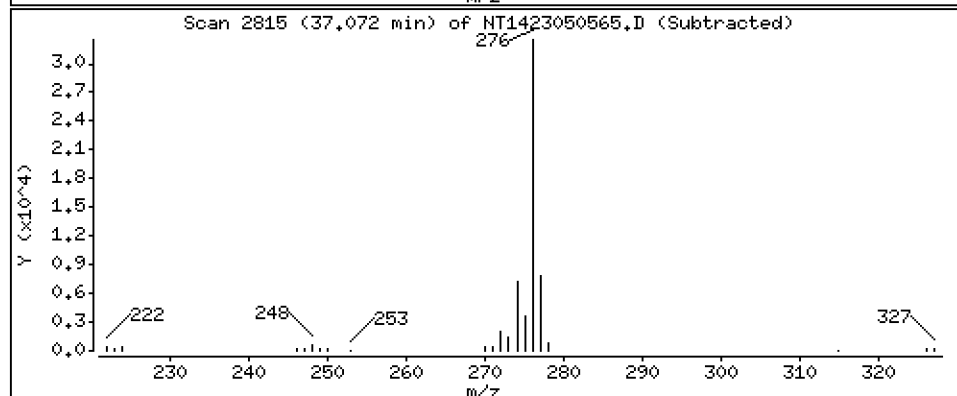
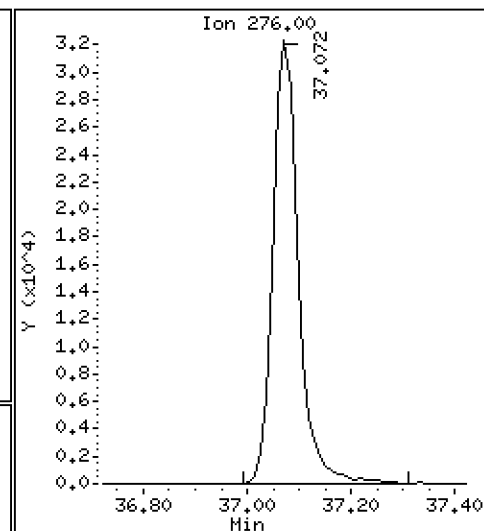
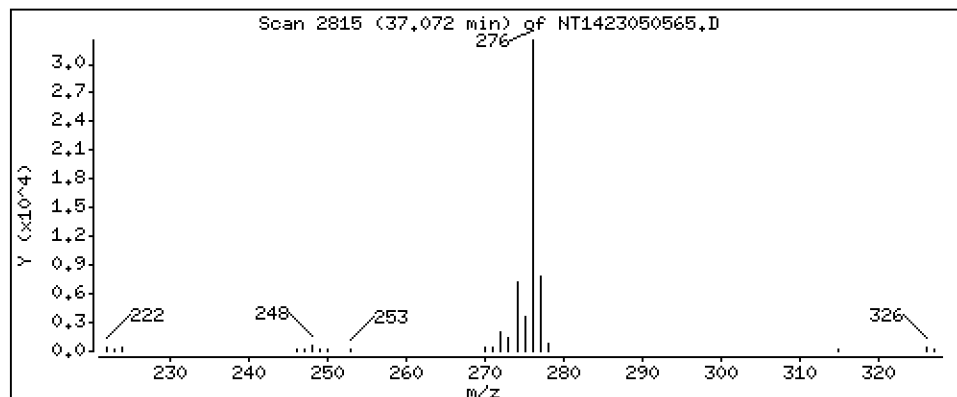
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

74 Benzo(g,h,i)perylene

Concentration: 2.277 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230505.b\NT1423050565.D
Lab Smp Id: SLE0096-CCV1
Inj Date : 07-MAY-2023 14:07
Operator : VTS
Smp Info : SLE0096-CCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
Meth Date : 09-May-2023 14:29 van
Cal Date : 05-MAY-2023 15:12
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: VANS-201906

Inst ID: nt14.i
Quant Type: ISTD
Cal File: NT1423050507.D
Compound Sublist: TARGETS.sub

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL
								(ug/mL)	(ug/mL)
1 trans-Decalin	138		7.449	7.449	(0.387)		27871	2.41079	2.411
2 cis-Decalin	138		8.568	8.578	(0.445)		20017	2.38843	2.388
\$ 6 Naphthalene-d8	136		12.220	12.219	(0.634)		247497	2.29521	2.295 (R)
7 Naphthalene	128		12.290	12.290	(0.638)		271145	2.28914	2.289
12 Benzo(b)thiophene	134		12.745	12.745	(0.662)		210152	2.33462	2.335
16 2-Methylnaphthalene	141		14.129	14.129	(0.733)		137654	2.34983	2.350
17 1-methylnaphthalene	141		14.580	14.580	(0.757)		136156	2.30820	2.308
18 Biphenyl	154		15.767	15.767	(0.818)		188101	2.32108	2.321
19 2,6-Dimethylnaphthalene	156		15.855	15.855	(0.823)		136834	2.37224	2.372
20 Acenaphthylene	152		17.437	17.437	(0.905)		234642	2.43578	2.436
\$ 21 Acenaphthene-d10	164		17.723	17.723	(0.920)		113195	2.36867	2.369 (R)
22 Acenaphthene	153		17.833	17.833	(0.926)		144224	2.42611	2.426
23 Dibenzofuran	168		18.218	18.217	(0.946)		187334	2.40734	2.407
24 1,6,7-Trimethylnaphthalene	170		18.437	18.437	(0.957)		121522	2.36367	2.364
* 25 Fluorene-d10	176		19.263	19.263	(1.000)		107923	2.00000	
26 Fluorene	166		19.365	19.365	(1.005)		153196	2.45696	2.457
30 Dibenzothiophene	184		22.304	22.304	(1.158)		191729	2.50942	2.509
\$ 35 Phenanthrene-d10	188		22.617	22.617	(0.995)		185051	2.43548	2.435 (R)
36 Phenanthrene	178		22.698	22.698	(0.998)		215474	2.43177	2.432
* 250 Anthracene-d10	188		22.733	22.733	(1.000)		133154	2.00000	
37 Anthracene	178		22.802	22.802	(1.003)		200888	2.46979	2.470
42 Carbazole	167		24.077	24.077	(1.059)		181978	2.37995	2.380
43 1-Methylphenanthrene	192		24.541	24.541	(1.080)		141541	2.47694	2.477
44 Fluoranthene	202		26.511	26.511	(1.166)		202000	2.50015	2.500
46 Pyrene	202		27.346	27.346	(1.203)		218265	2.58140	2.581
51 Naphthobenzothiophene	234		29.831	29.831	(1.312)		143411	2.57165	2.572
55 Benzo(a)anthracene	228		30.404	30.403	(0.908)		159707	2.58183	2.582
\$ 56 Chrysene-d12	240		30.539	30.539	(0.912)		112381	2.62502	2.625 (R)
57 Chrysene	228		30.606	30.606	(0.914)		156088	2.57968	2.580
62 Benzo(b)fluoranthene	252		32.814	32.814	(0.980)		147925	2.56328	2.563 (M)
63 Benzo(k)fluoranthene	252		32.870	32.870	(0.982)		142827	2.20314	2.203 (M)
293 Benzo(j)fluoranthene	252		32.927	32.926	(0.983)		134382	2.48123	2.481 (M)
246 Total Benzofluoranthenes	252		32.870	32.814	(0.982)		424889	7.91226	7.912 (M)

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN	FINAL
	MASS					(ug/mL)	(ug/mL)
=====	=====	=====	=====	=====	=====	=====	=====
* 251 Benzo(e)pyrene-d12	264	33.490	33.478	(1.000)	78909	2.00000	
64 Benzo(e)pyrene	252	33.546	33.546	(1.002)	136102	2.43839	2.438
66 Benzo(a)pyrene	252	33.647	33.647	(1.005)	128351	2.71863	2.719
\$ 67 Perylene-d12	264	33.828	33.827	(1.010)	106739	2.58444	2.584 (R)
68 Perylene	252	33.895	33.895	(1.012)	128964	2.48862	2.489
69 Indeno(1,2,3-cd)pyrene	276	36.092	36.091	(1.078)	126365	2.05447	2.054 (M)
70 Dibenzo(a,h)anthracene	278	36.069	36.058	(1.077)	105678	2.09096	2.091 (M)
74 Benzo(g,h,i)perylene	276	37.071	37.071	(1.107)	105915	2.27662	2.277

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
 M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 07-MAY-2023
 Lab File ID: NT1423050565.D Calibration Time: 06:53
 Lab Smp Id: SLE0096-CCV1
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	120638	60319	241276	107923	-10.54
250 Anthracene-d10	151475	75738	302950	133154	-12.10
251 Benzo(e)pyrene-d1	94755	47378	189510	78909	-16.72

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	19.26	18.76	19.76	19.26	0.00
250 Anthracene-d10	22.73	22.23	23.23	22.73	0.00
251 Benzo(e)pyrene-d1	33.48	32.98	33.98	33.49	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 - NT1423050565.D

Lab ID: SLE0096-CCV1

nt14.i, 20230505.b\ALKYLPNA.m, 07-MAY-2023 14:07

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1423050556.D

On Column LOD for nt14.i, 20230505.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

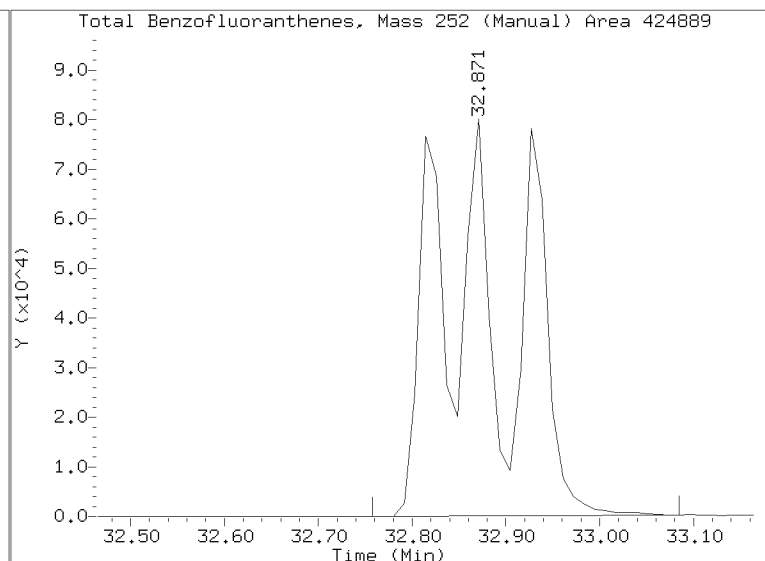
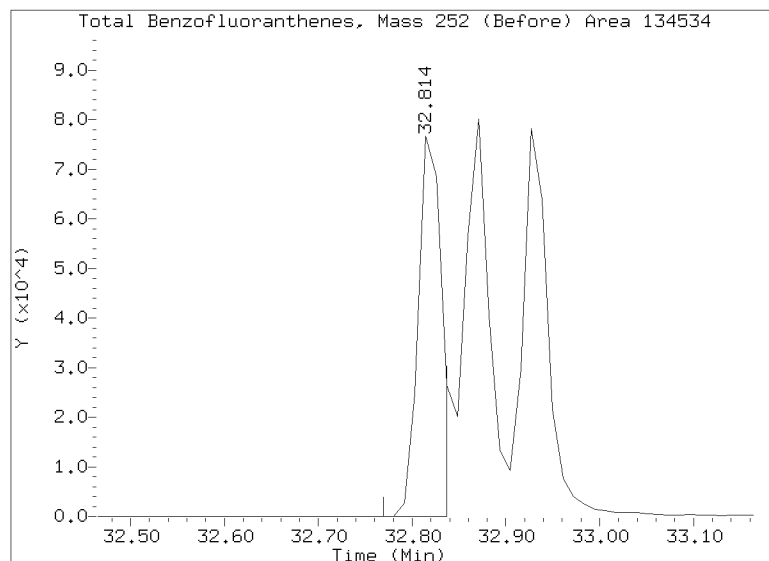
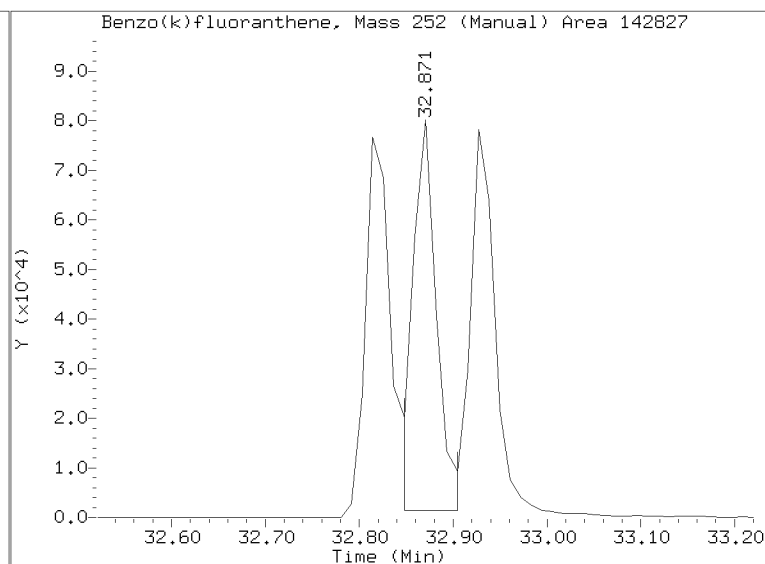
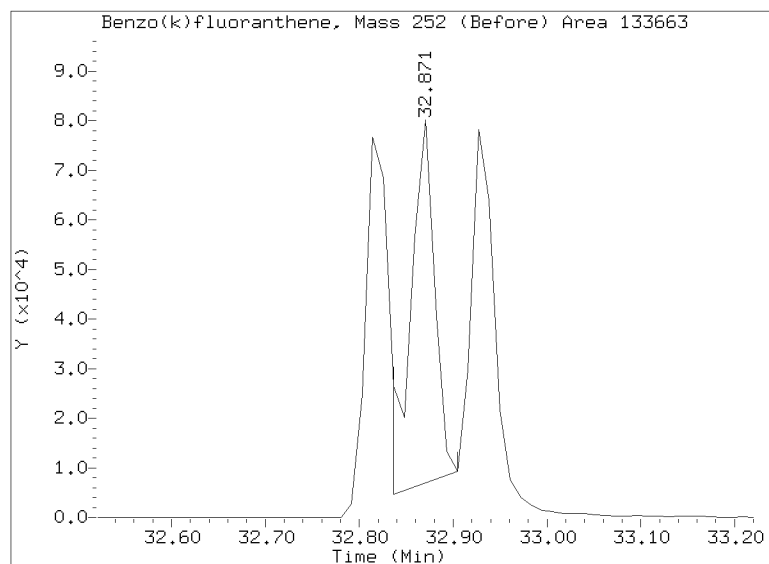
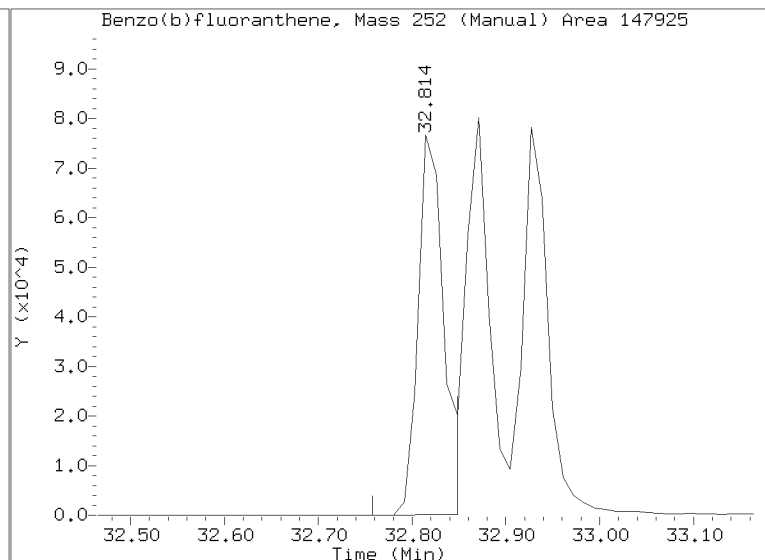
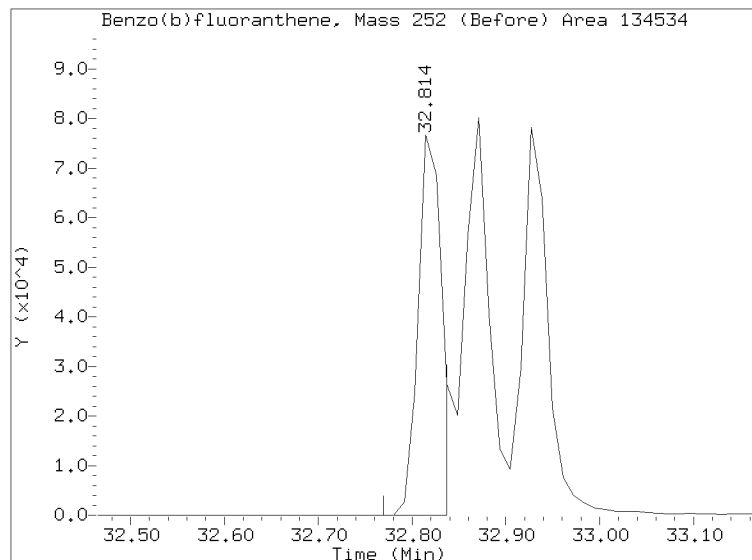
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230505.b/NT1423050565.D

Injection Date: 07-MAY-2023 14:07

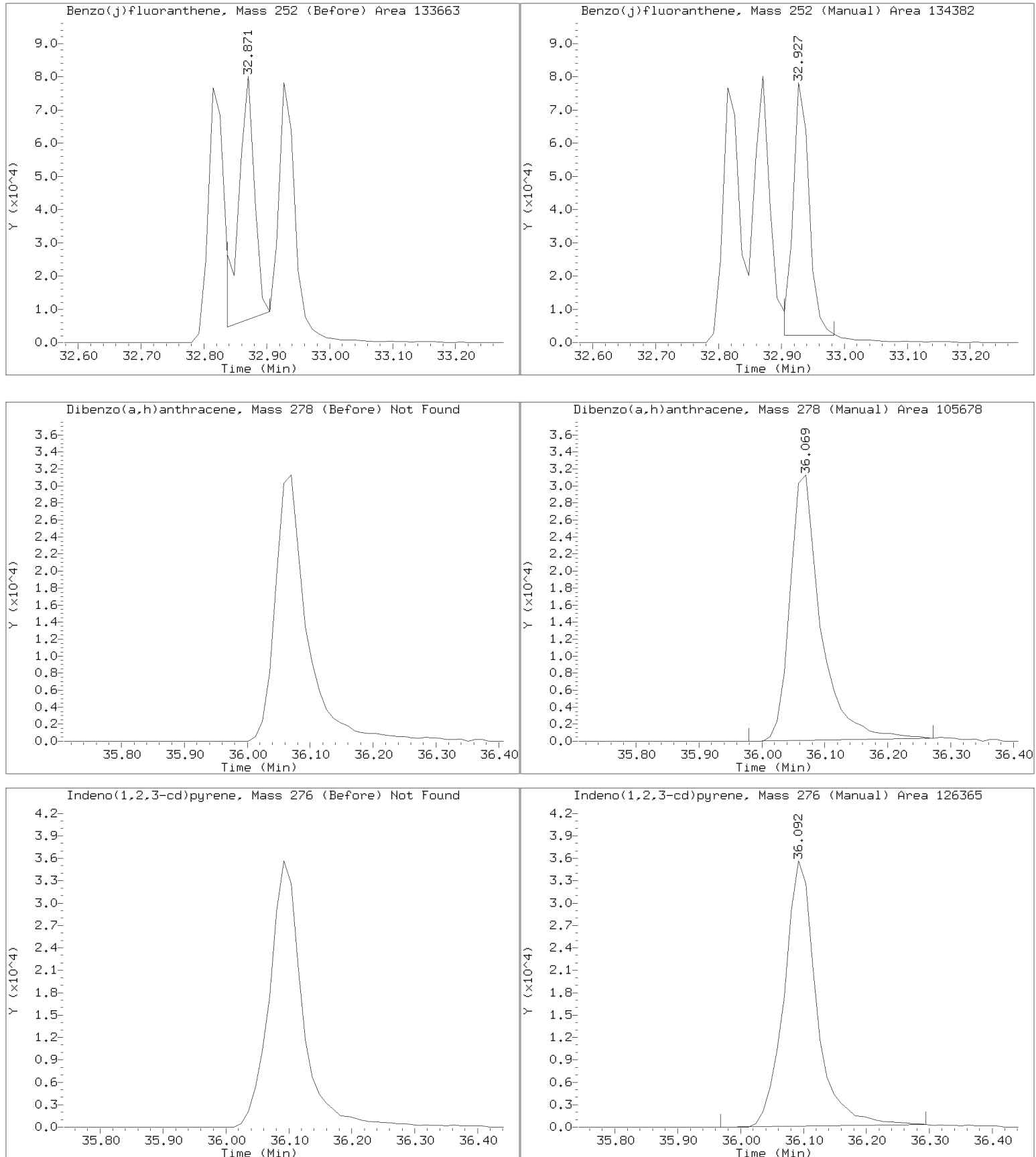
Lab ID: SLE0096-CCV1 Client ID:

Report Date: 05/09/2023 14:30



Quant Ion Manual Peak Adjustment Report

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Injection Date: 07-MAY-2023 14:07
Lab ID: SLE0096-CCV1 Client ID:
Report Date: 05/09/2023 14:30





**SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Instrument ID: NT14

Calibration: GE00024

Lab File ID: NT1423050508.D

Calibration Date: 05/05/2023

Sequence: SLE0096

Injection Date: 05/05/23

Lab Sample ID: SLE0096-SCV1

Injection Time: 16:01

Sequence Name: Secondary Cal Check

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Naphthalene	A	2.5000	2.5	2.1950510	2.1820680		-0.6	+/-20
1-Methylnaphthalene	A	2.5000	2.5	1.0931470	1.1038950		1.0	+/-20
2-Methylnaphthalene	A	2.5000	2.6	1.0855960	1.1243240		3.6	+/-20
Acenaphthylene	A	2.5000	2.7	1.7851870	1.9027630		6.6	+/-20
Acenaphthene	A	2.5000	2.7	1.1016480	1.1869590		7.7	+/-20
Dibenzofuran	A	2.5000	3.0	1.4421000	1.7055850		18.3	+/-20
Fluorene	A	2.5000	2.7	1.1554870	1.2398090		7.3	+/-20
Phenanthrene	A	2.5000	2.6	1.3309080	1.3773370		3.5	+/-20
Anthracene	A	2.5000	2.4	1.2217170	1.1641870		-4.7	+/-20
Carbazole	A	2.5000	2.4	0.9770692	1.1007280		-4.2	+/-20
Fluoranthene	A	2.5000	2.7	1.2135600	1.3141820		8.3	+/-20
Pyrene	A	2.5000	2.6	1.2700040	1.3132450		3.4	+/-20
Benzo(a)anthracene	A	2.5000	2.8	1.5678310	1.7554310		12.0	+/-20
Chrysene	A	2.5000	2.7	1.5335800	1.6860220		9.9	+/-20
Benzo(b)fluoranthene	A	2.5000	2.7	1.4626770	1.5992350		9.3	
Benzo(k)fluoranthene	A	2.5000	2.2	1.3456120	1.4715290		-10.4	
Benzofluoranthenes, Total	A	5.0000	5.6	1.3610640	1.5127730		11.1	
Benzo(a)pyrene	A	2.5000	2.7	1.1966100	1.2868620		7.5	+/-20
Indeno(1,2,3-cd)pyrene	A	2.5000	2.3	1.3107200	1.4325790		-8.1	+/-20
Dibenzo(a,h)anthracene	A	2.5000	2.2	1.0657830	1.1283460		-11.9	+/-20
Benzo(g,h,i)perylene	A	2.5000	2.6	1.1791520	1.2027470		2.0	+/-20

* Values outside of QC limits

Data File: \\target\share\chem3\nt14,i\20230505,b\NT1423050508.D

Date : 05-May-2023 16:01

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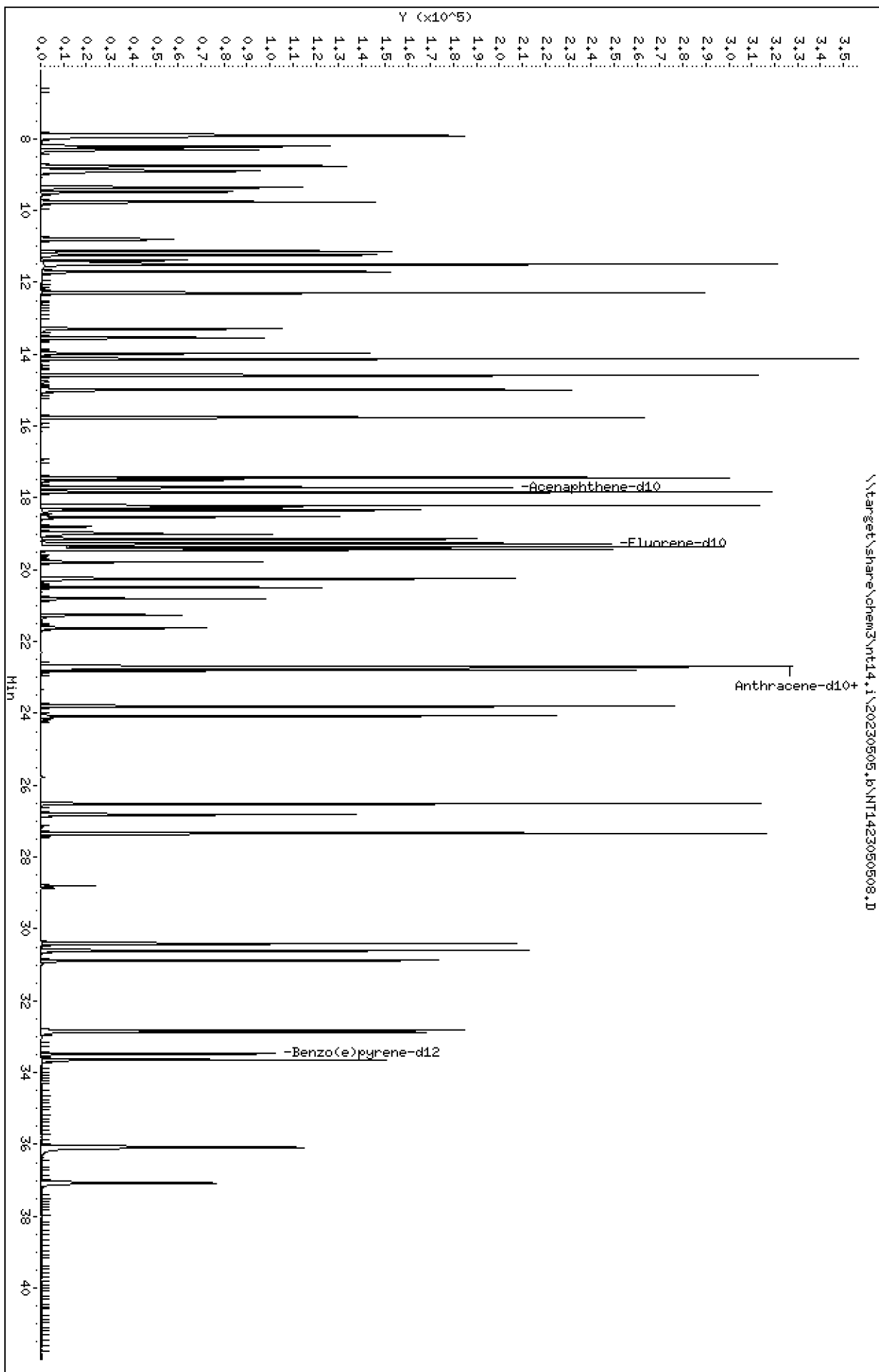
Sample Info: SLE0096-SCV1

Column phase: Rxi-17S11 MS

Instrument: nt14,i

Operator: VTS

Column diameter: 0.25



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

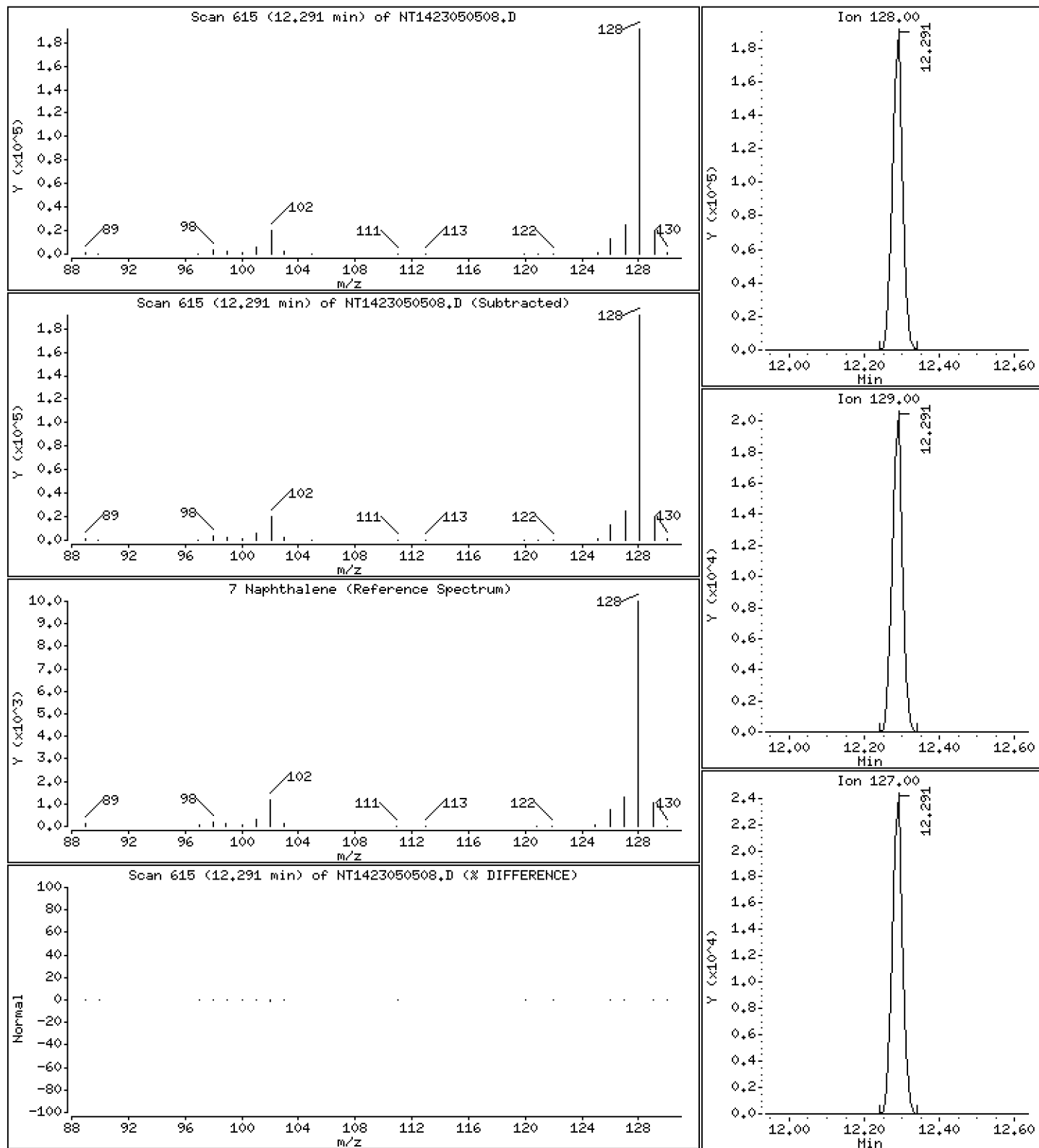
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

7 Naphthalene

Concentration: 2.485 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

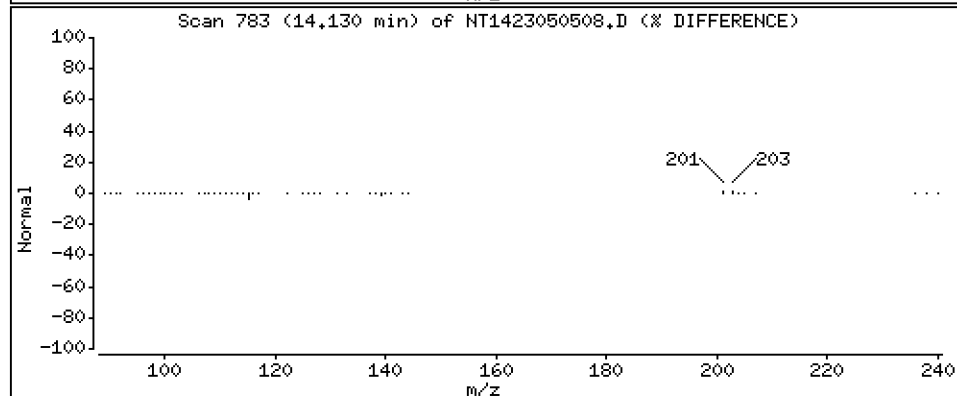
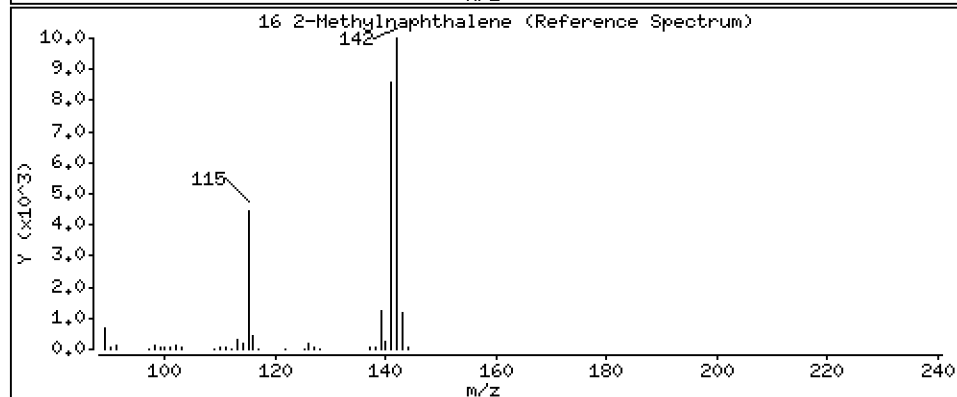
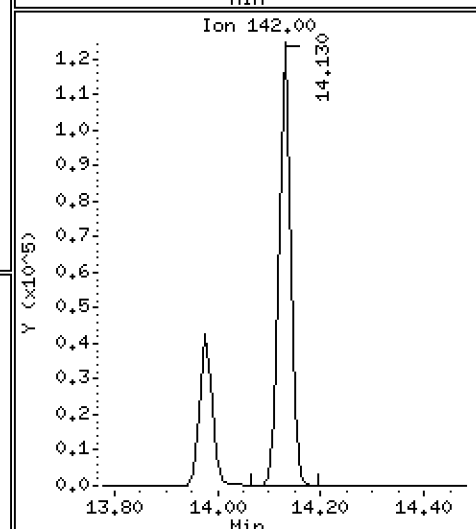
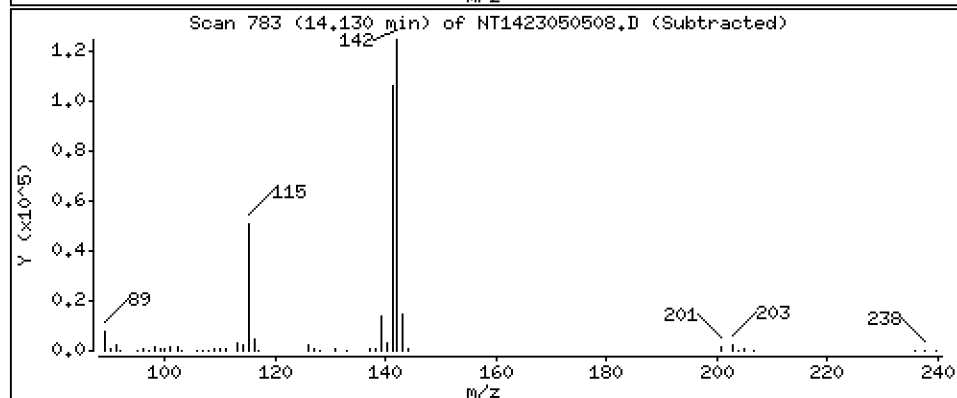
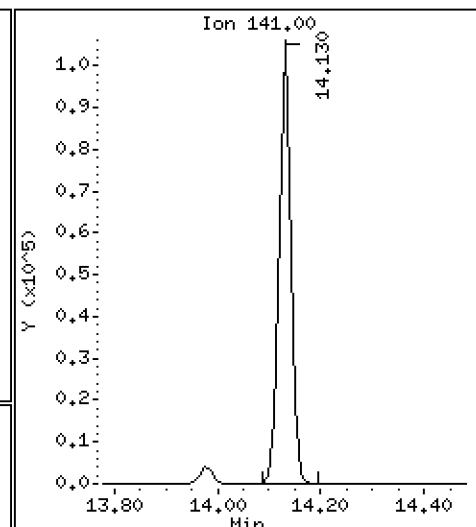
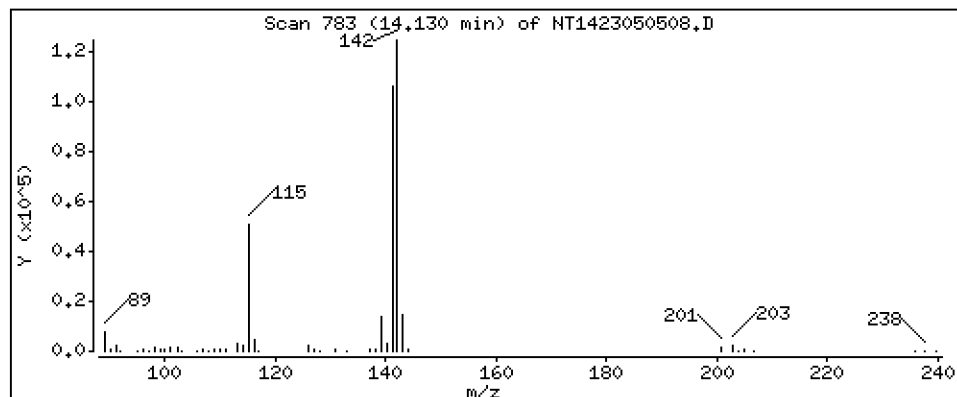
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

16 2-Methylnaphthalene

Concentration: 2.589 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

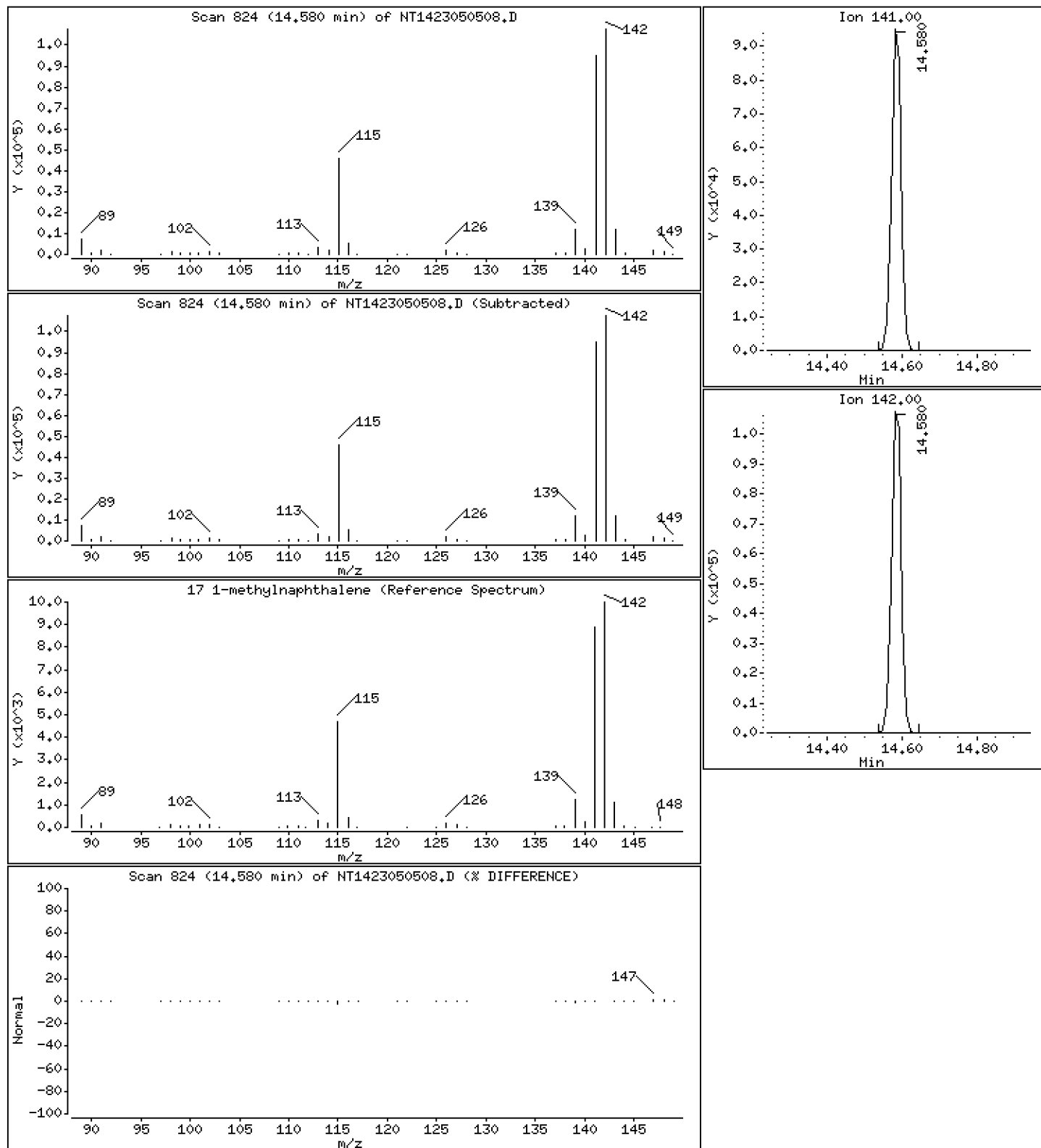
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 1-methylnaphthalene

Concentration: 2.525 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

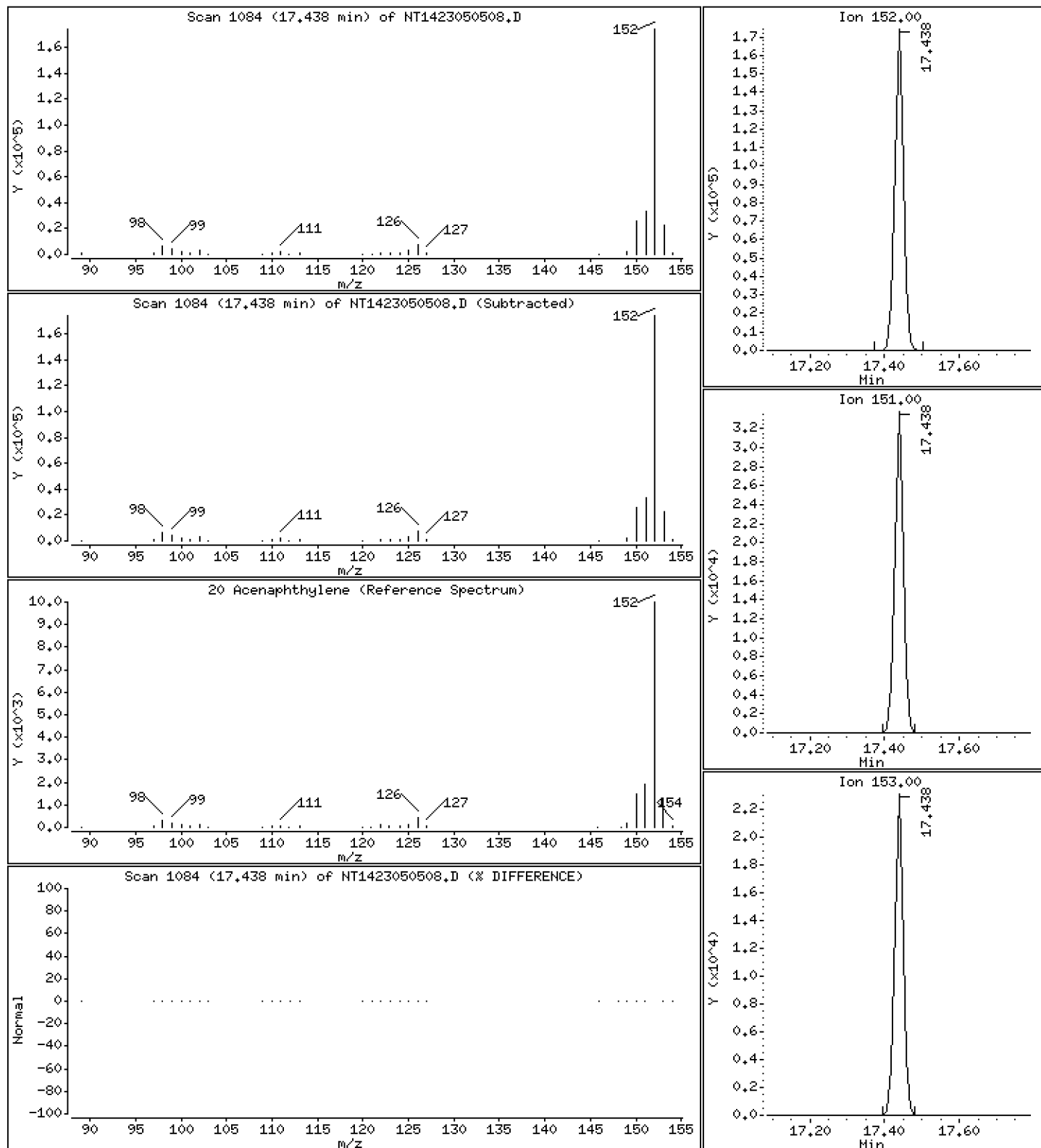
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

20 Acenaphthylene

Concentration: 2.665 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

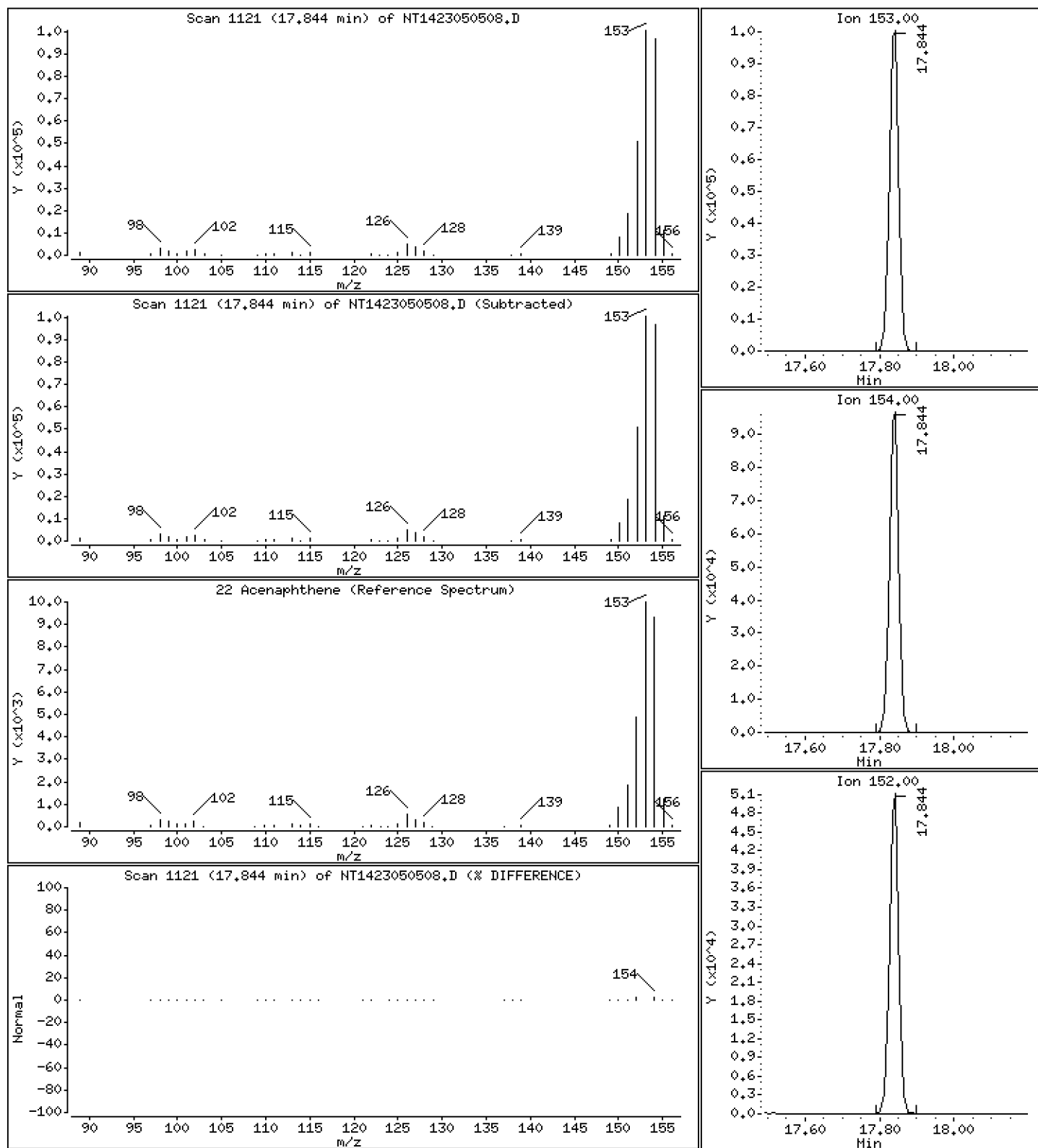
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

22 Acenaphthene

Concentration: 2.694 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

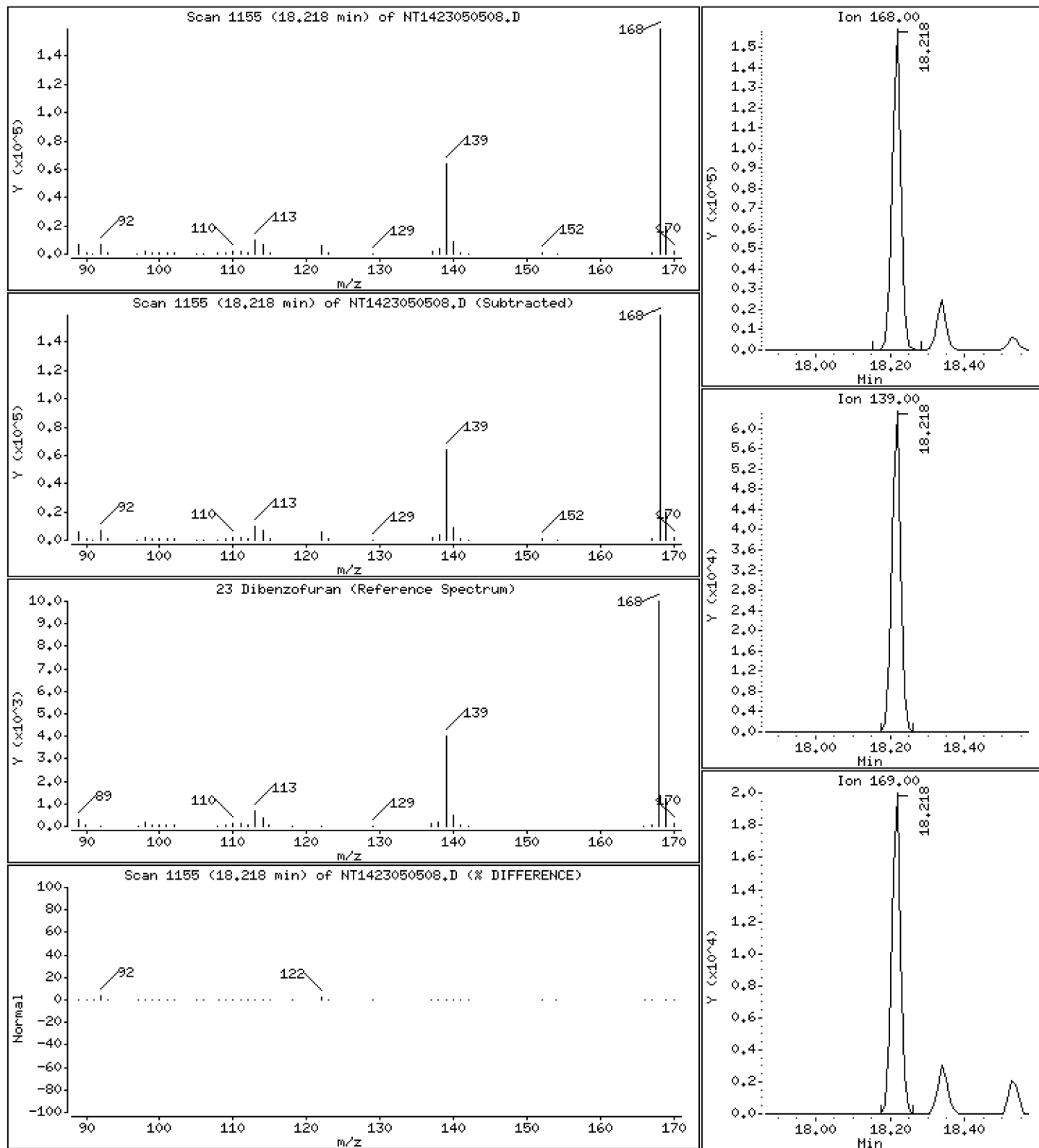
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

23 Dibenzofuran

Concentration: 2.957 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

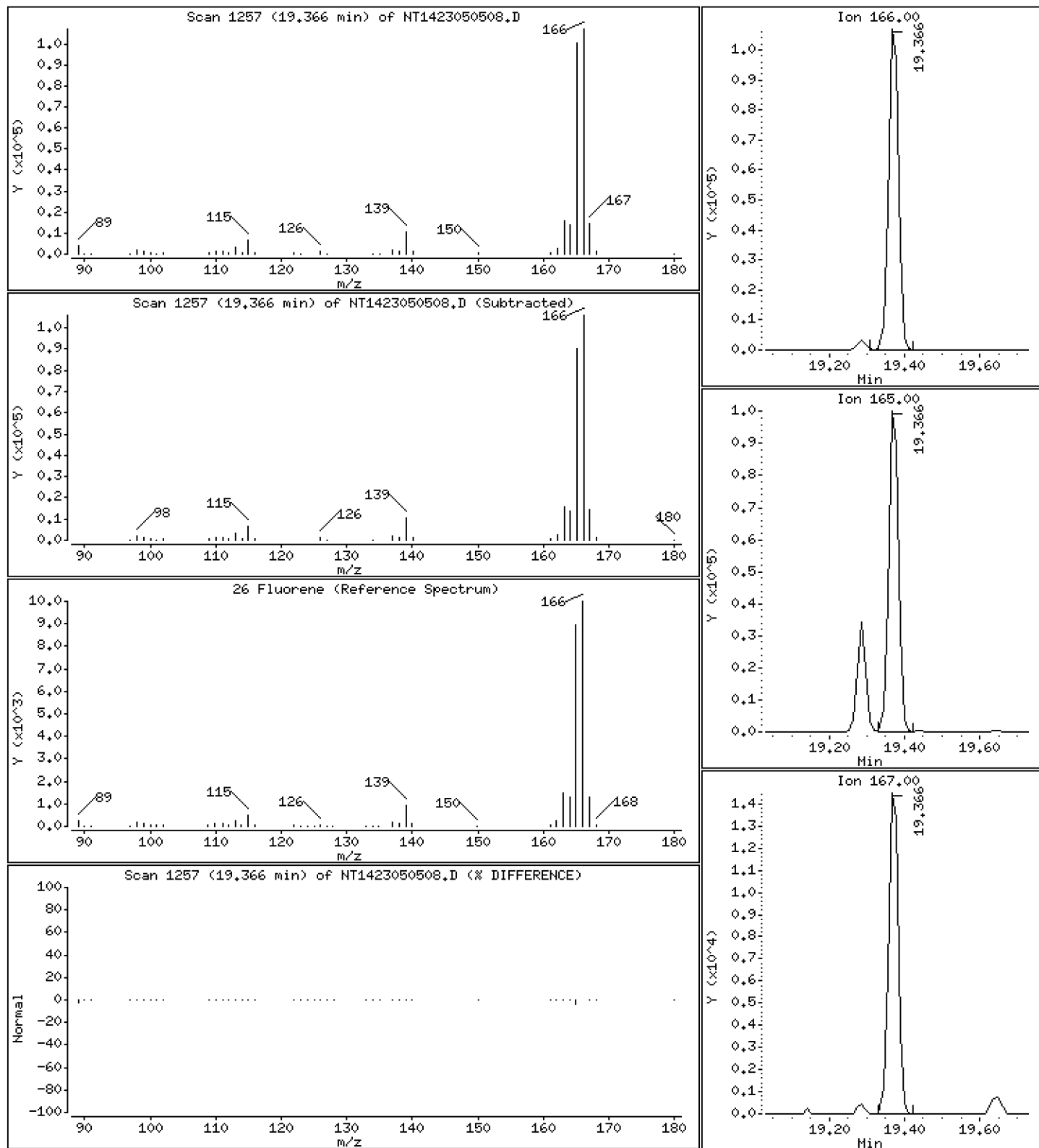
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

26 Fluorene

Concentration: 2.682 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

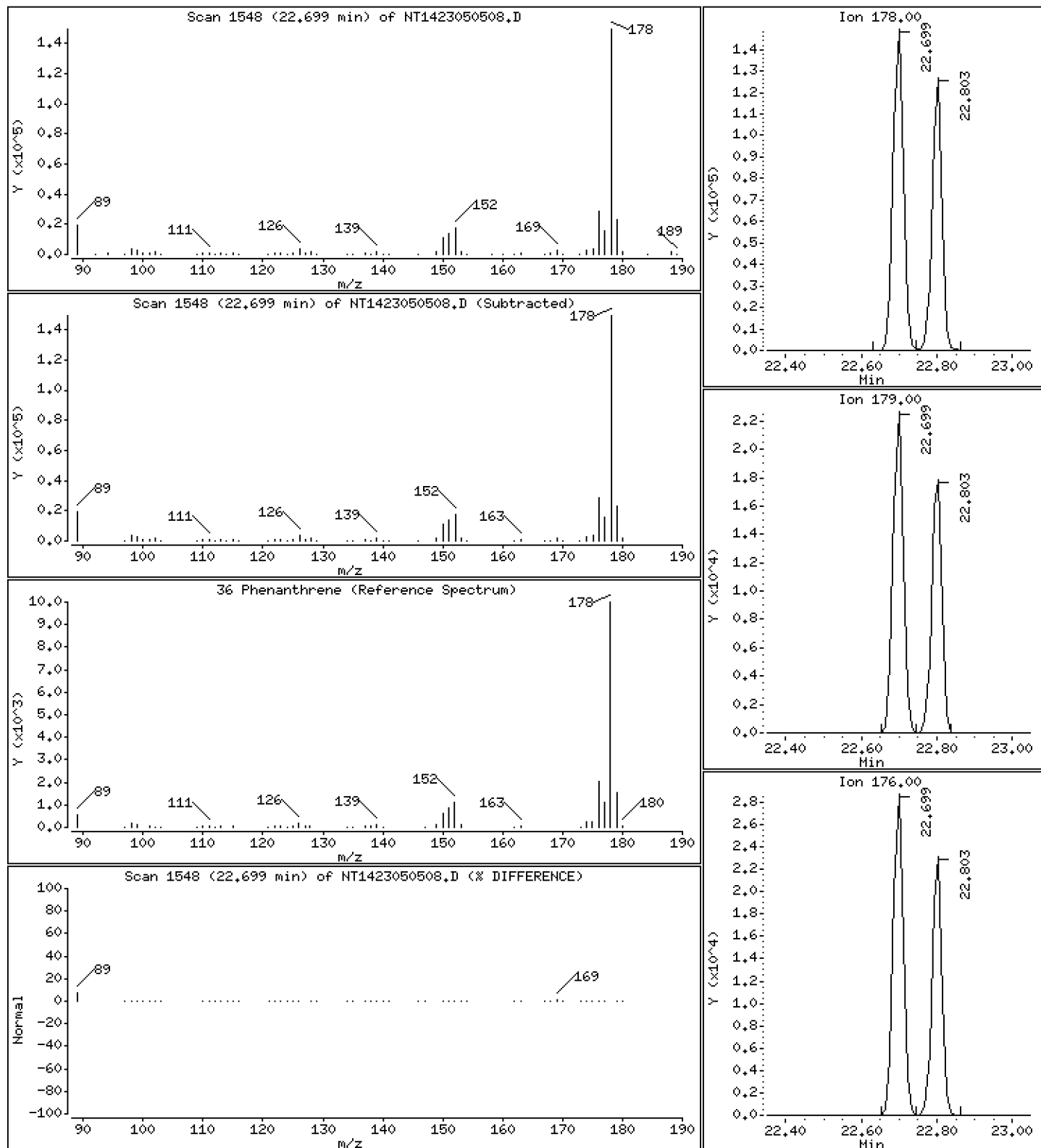
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

36 Phenanthrene

Concentration: 2.587 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

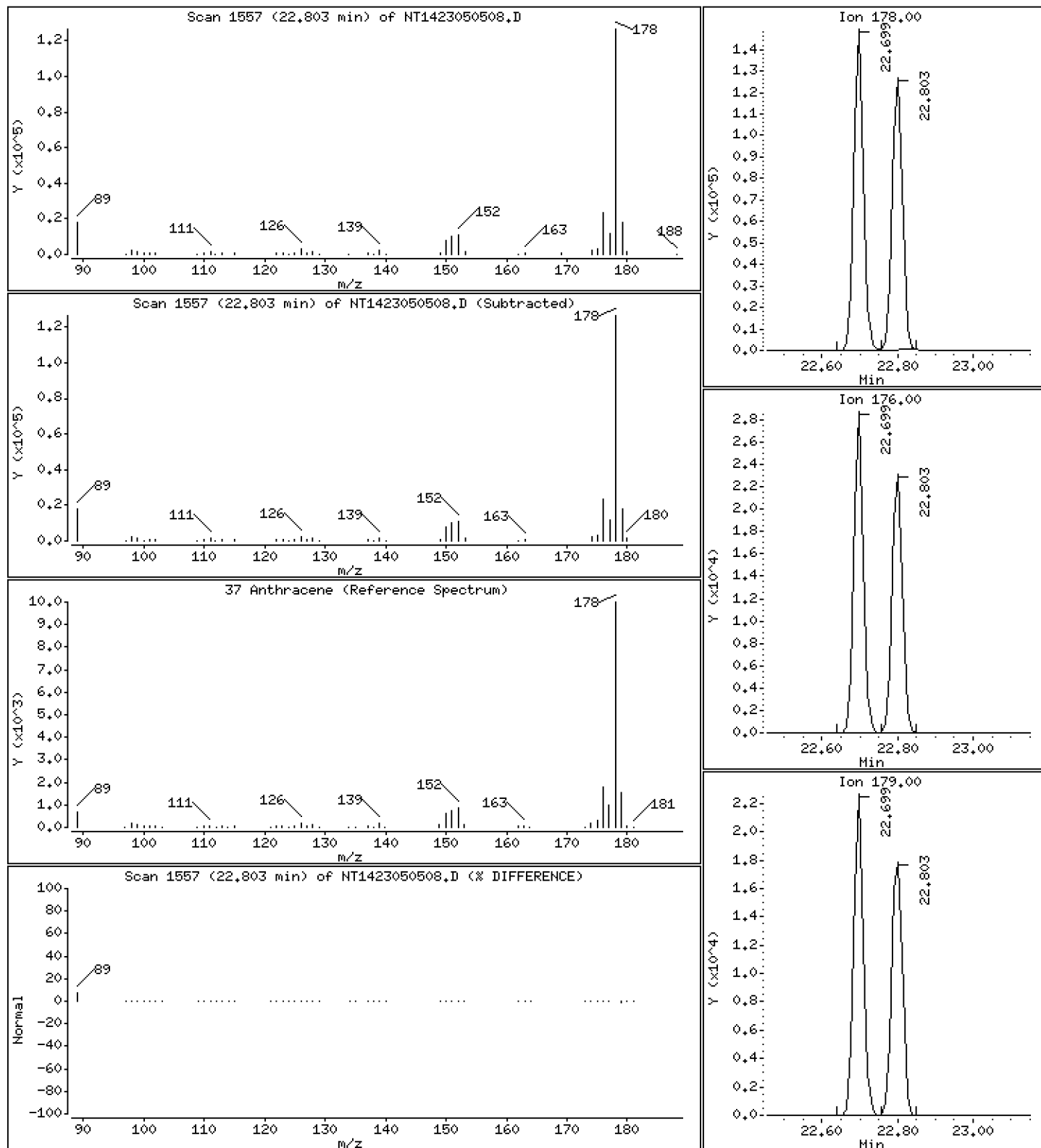
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

37 Anthracene

Concentration: 2.382 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

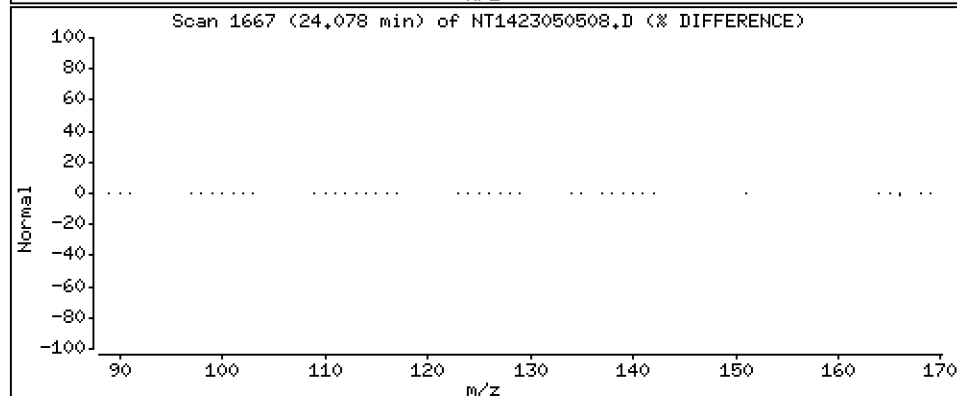
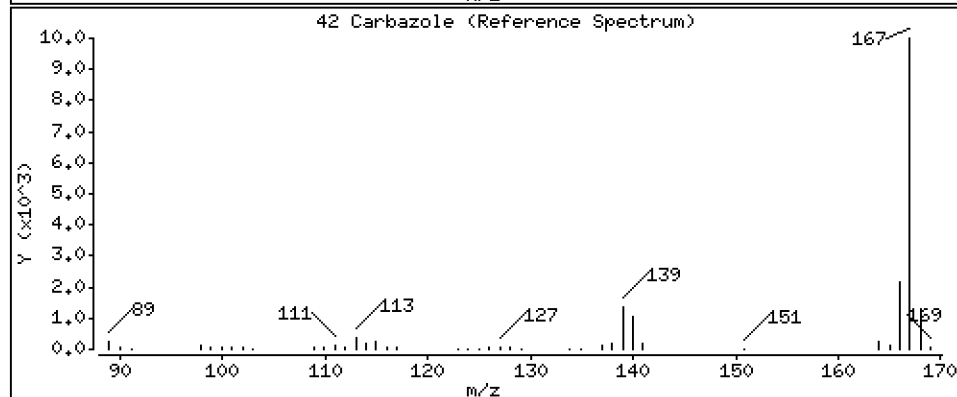
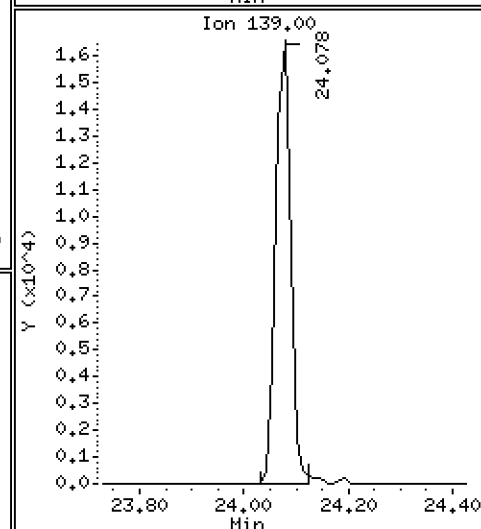
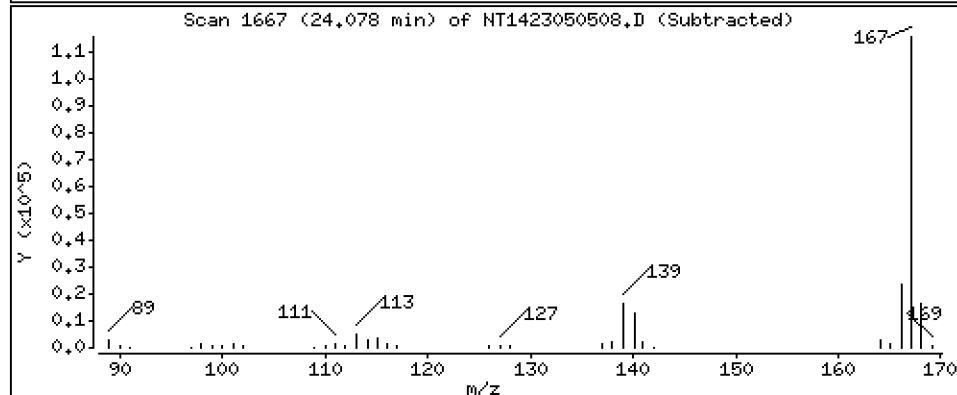
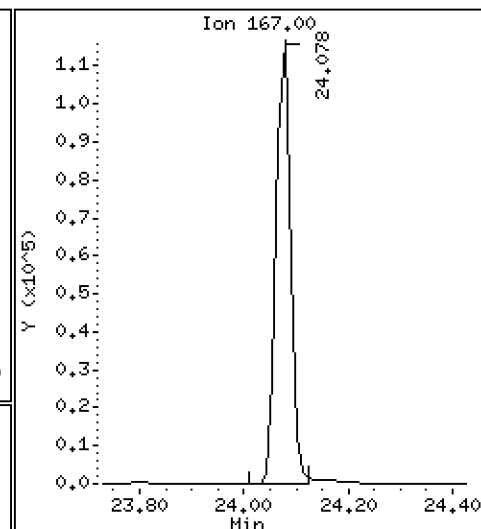
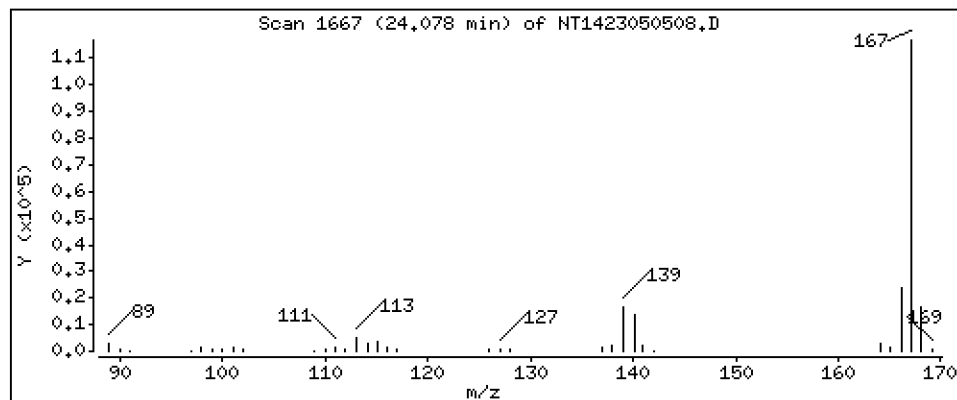
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

42 Carbazole

Concentration: 2.396 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

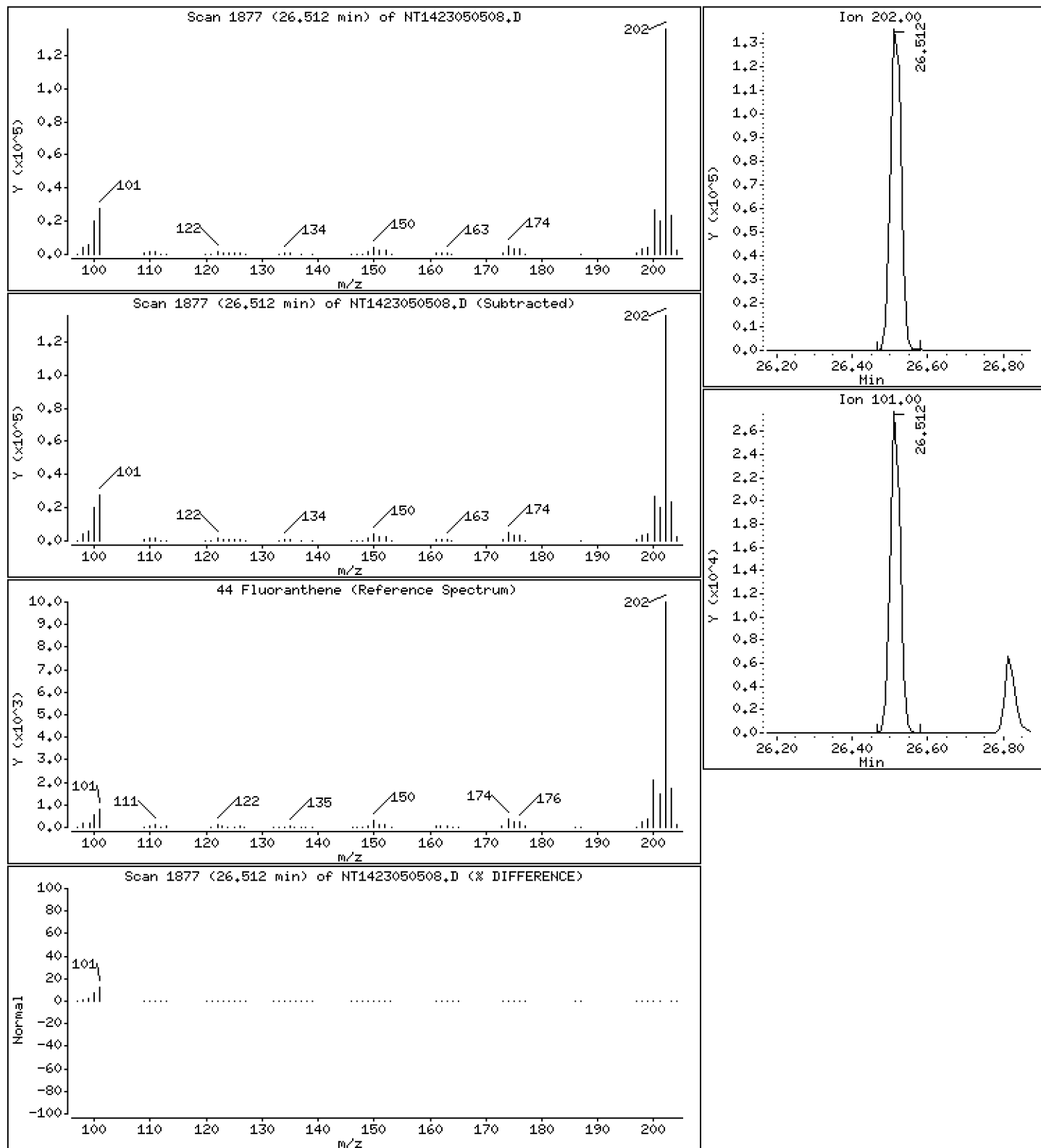
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

44 Fluoranthene

Concentration: 2.707 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

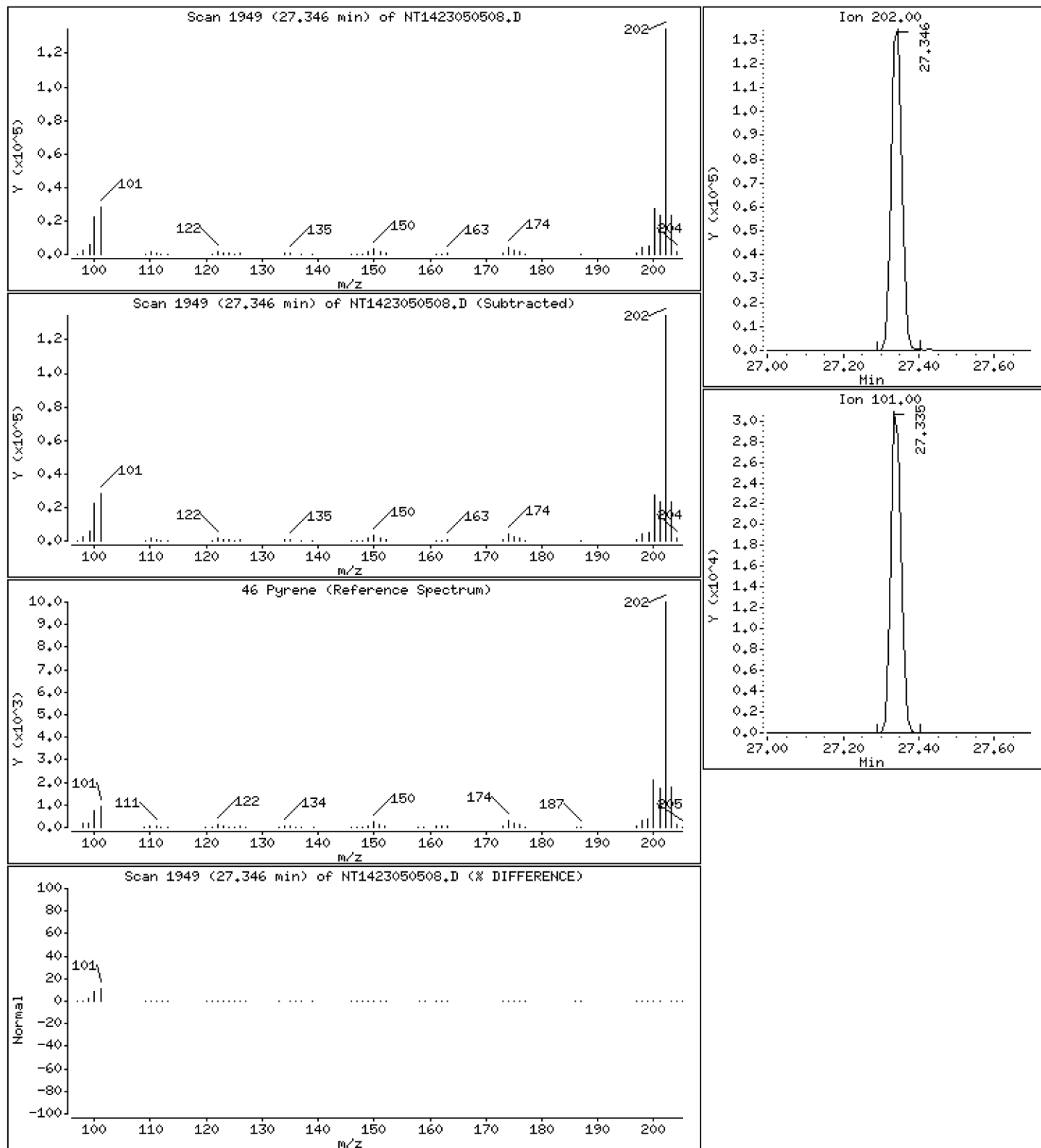
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

46 Pyrene

Concentration: 2.585 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

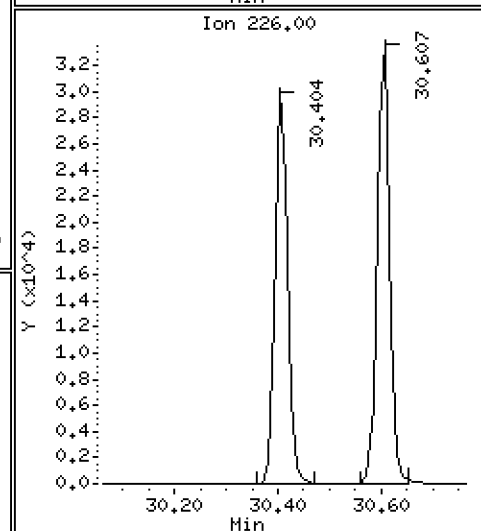
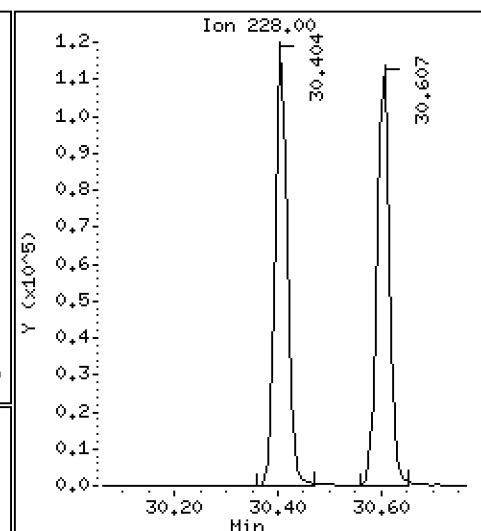
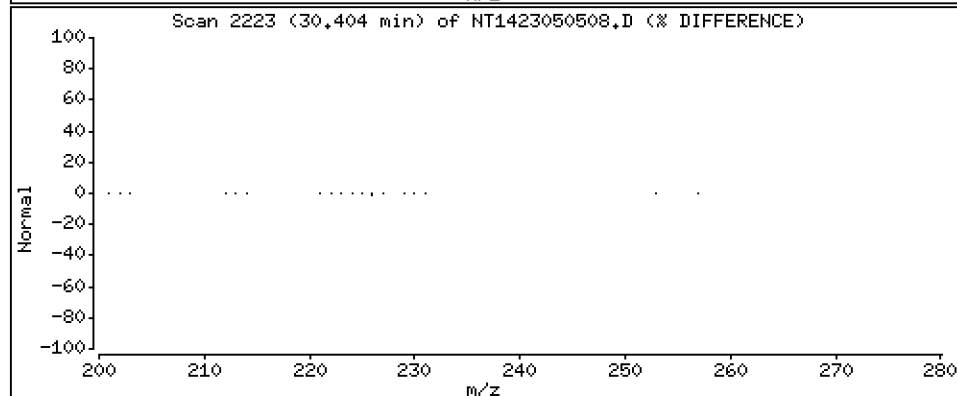
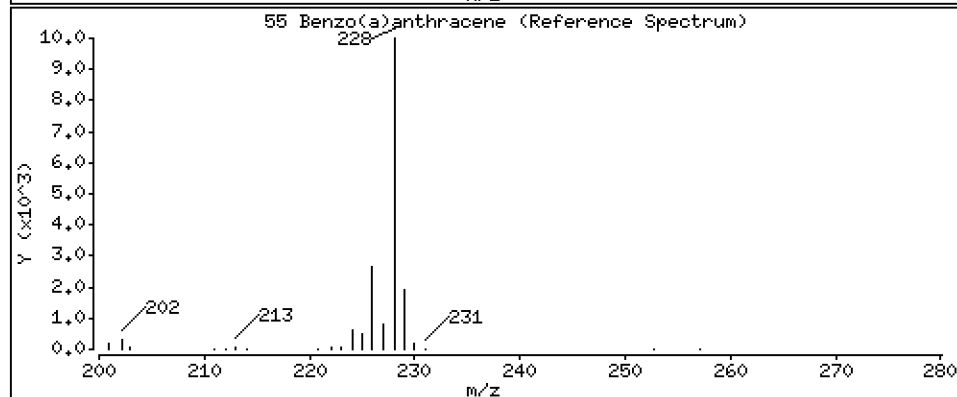
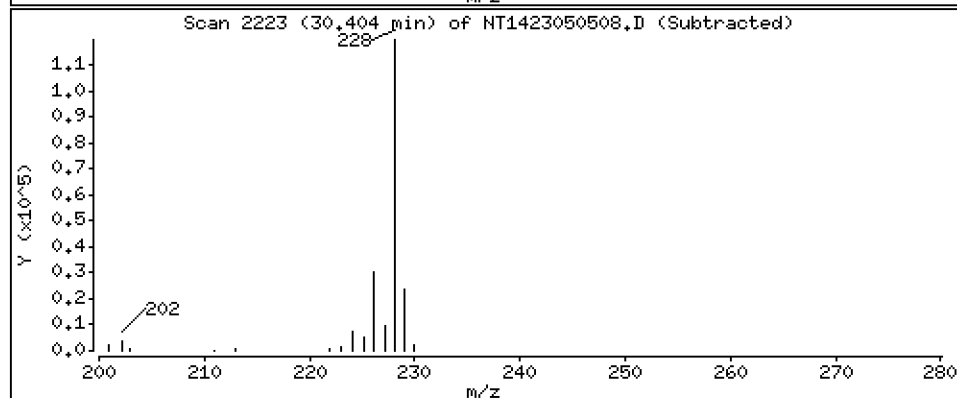
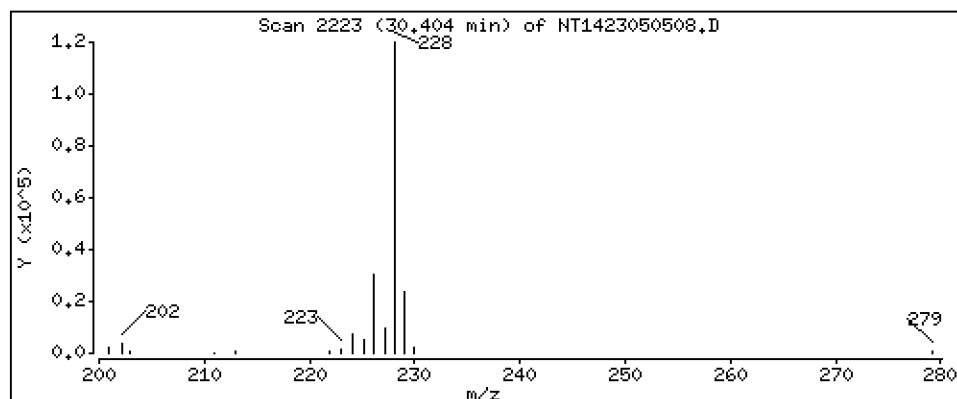
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

55 Benzo(a)anthracene

Concentration: 2,799 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

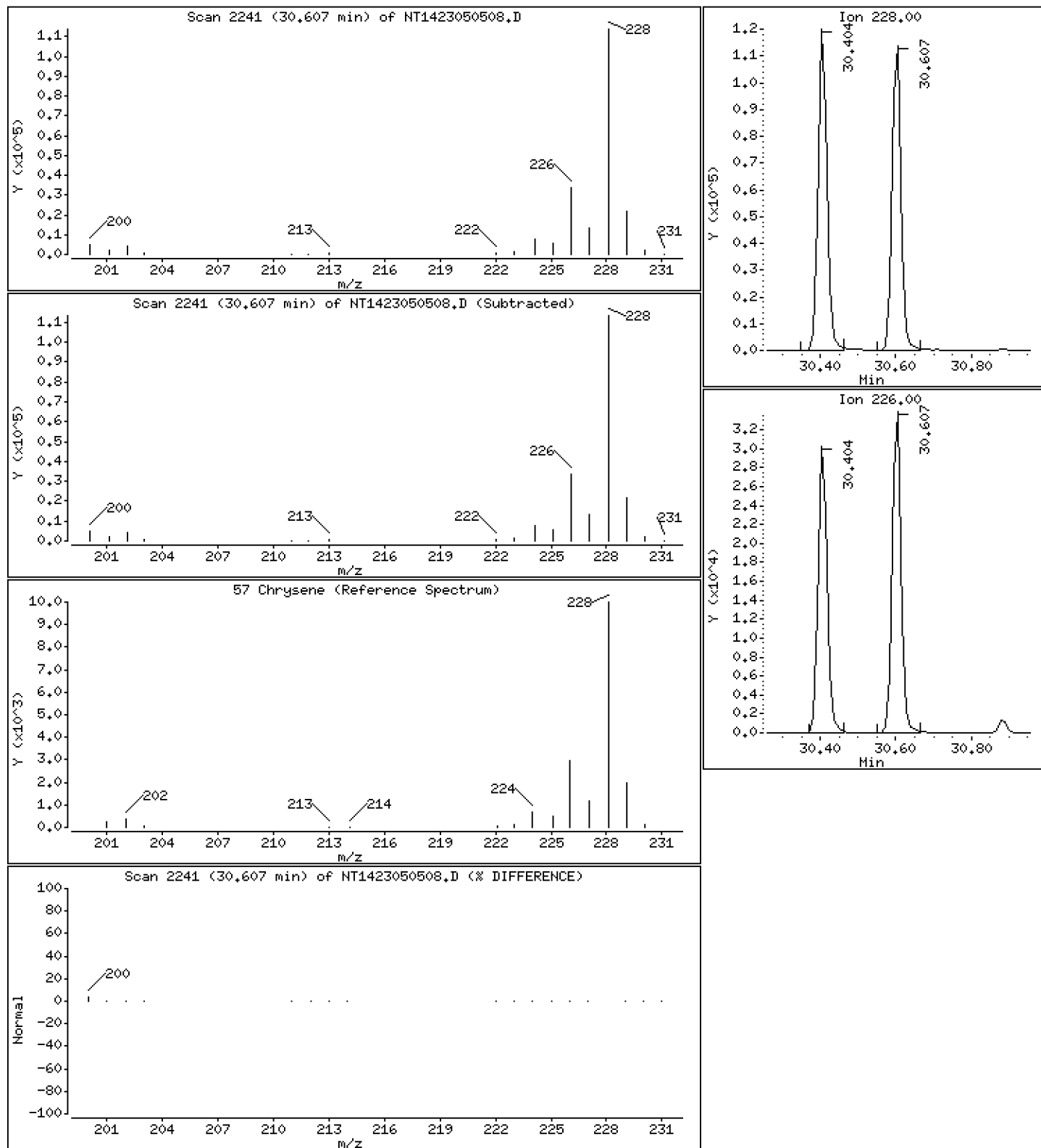
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

57 Chrysene

Concentration: 2,749 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

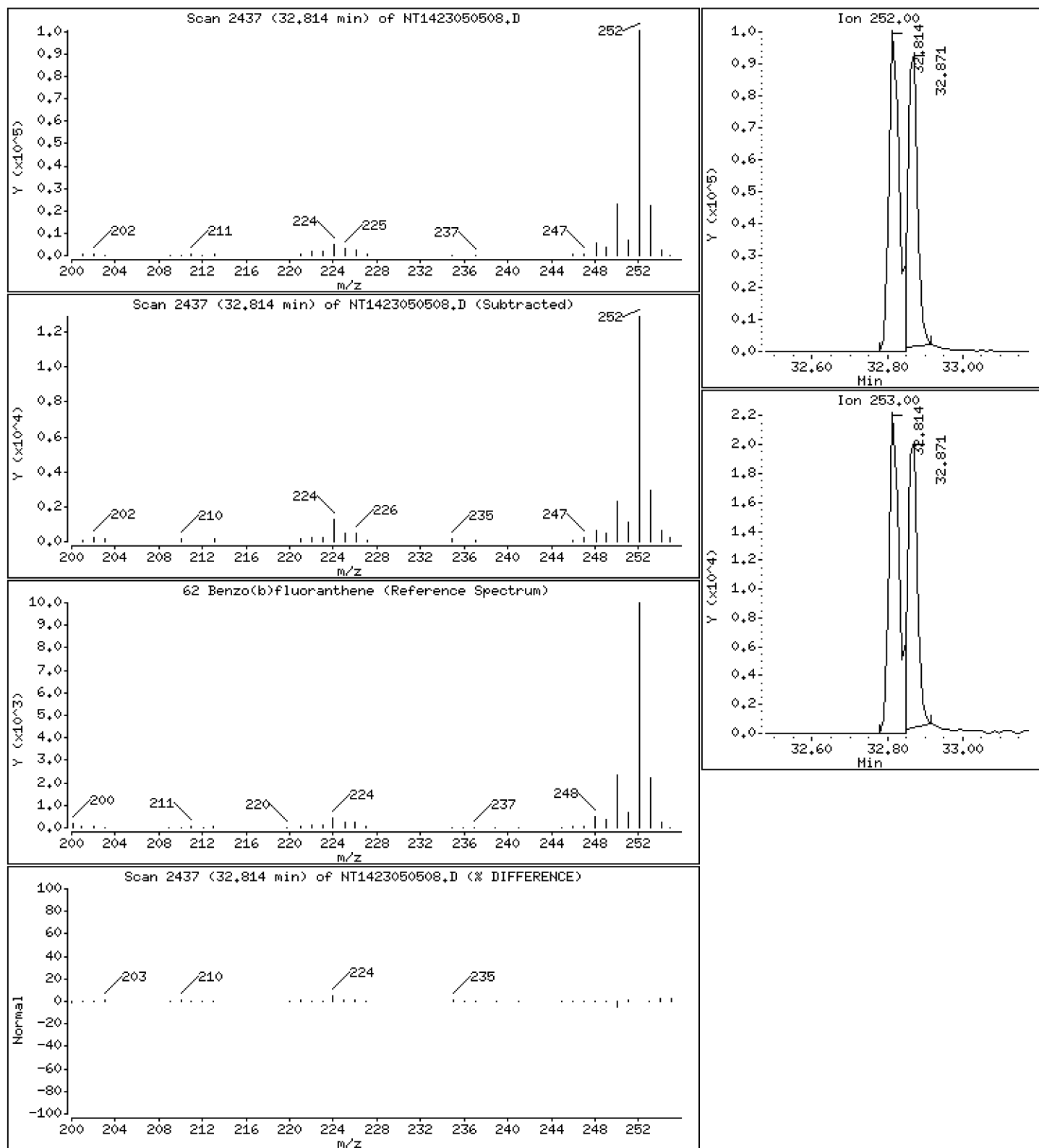
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

62 Benzo(b)fluoranthene

Concentration: 2,733 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

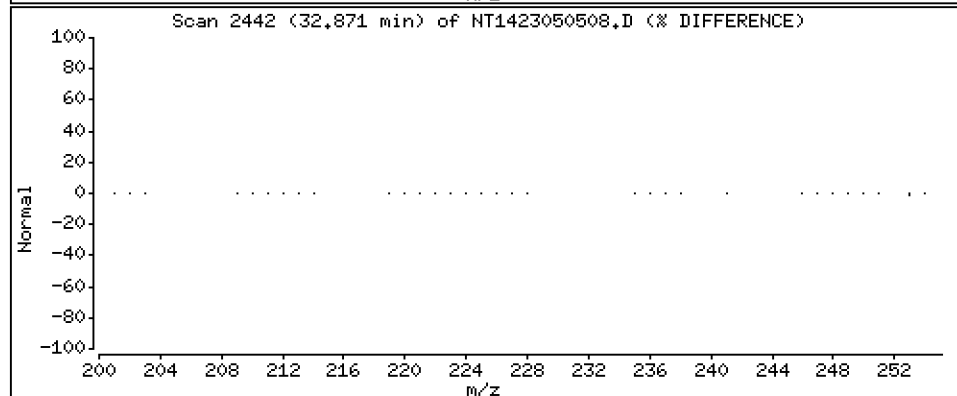
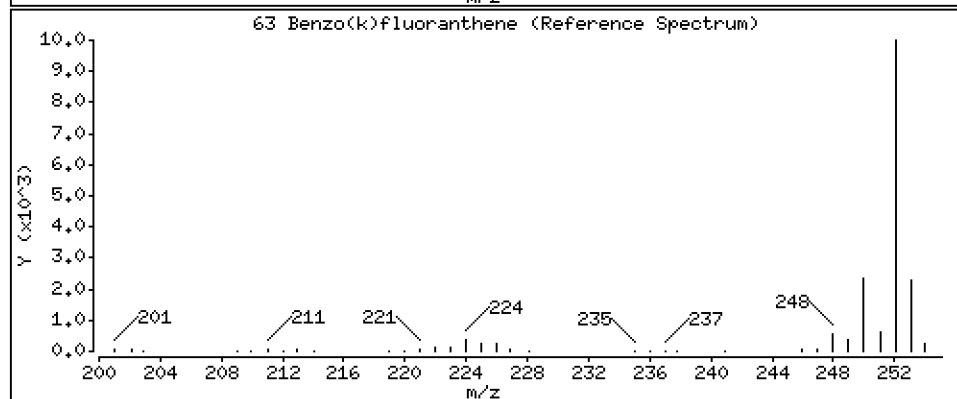
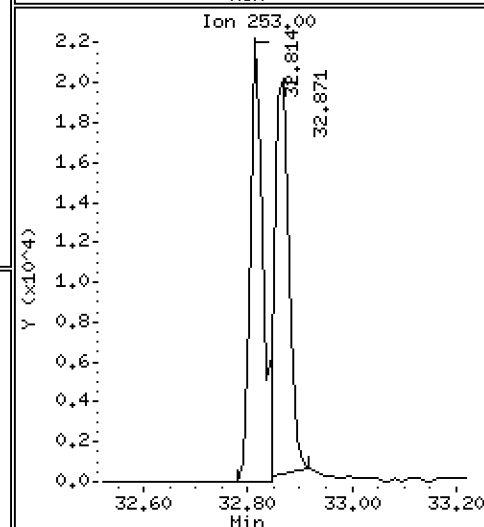
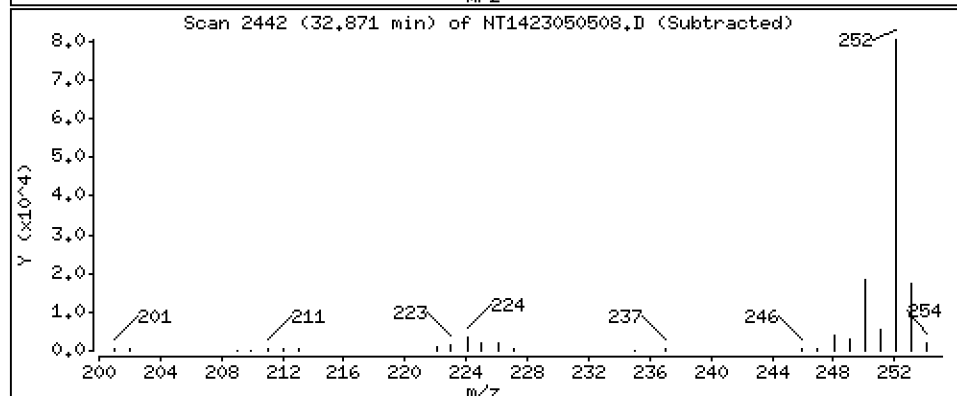
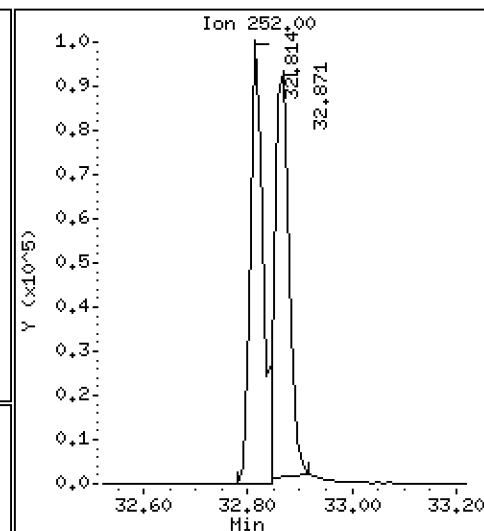
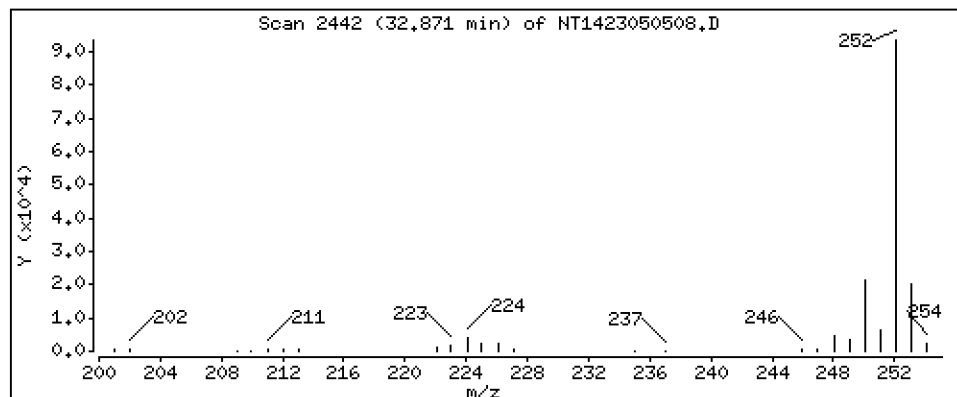
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

63 Benzo(k)fluoranthene

Concentration: 2.239 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

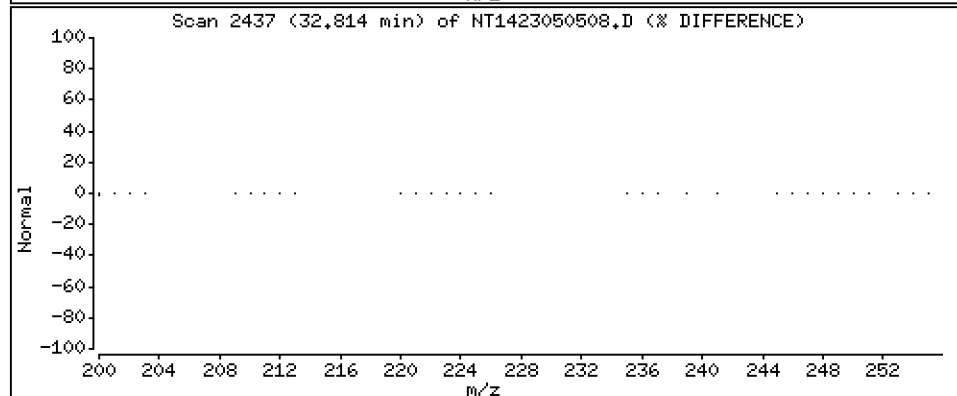
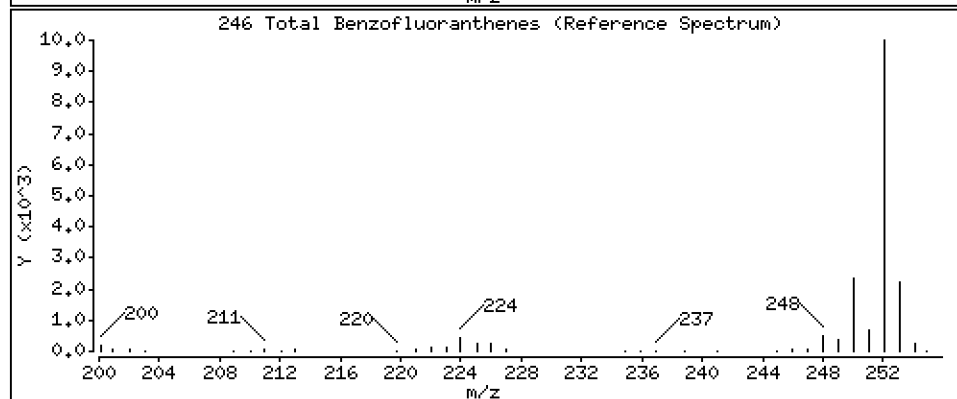
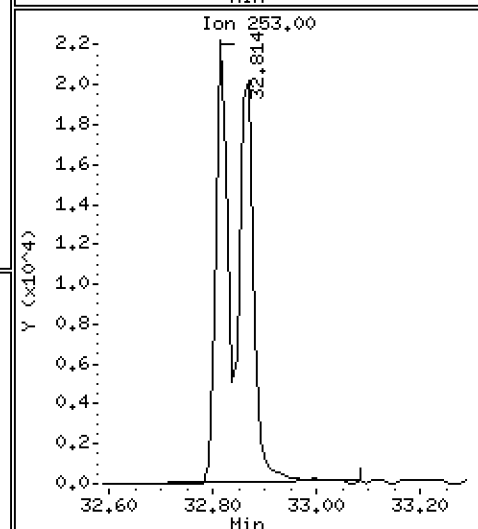
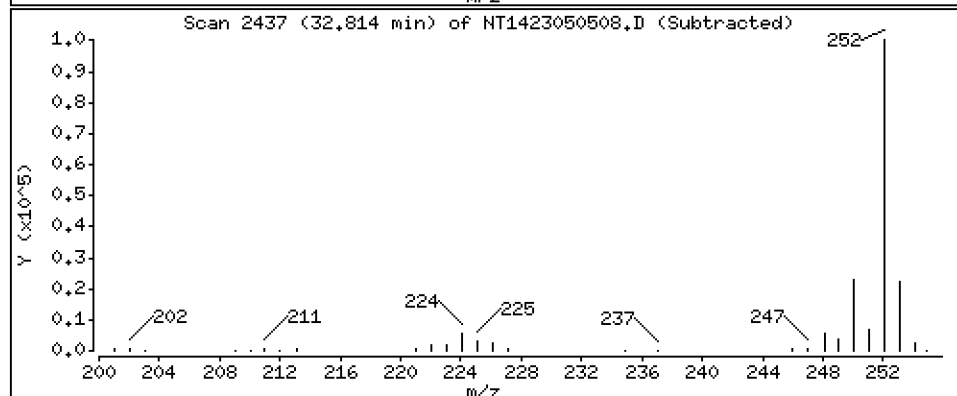
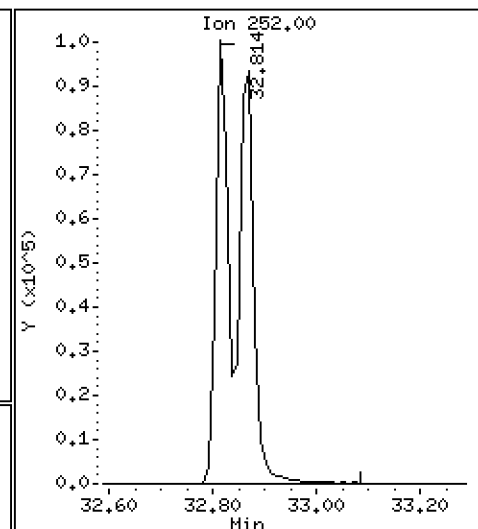
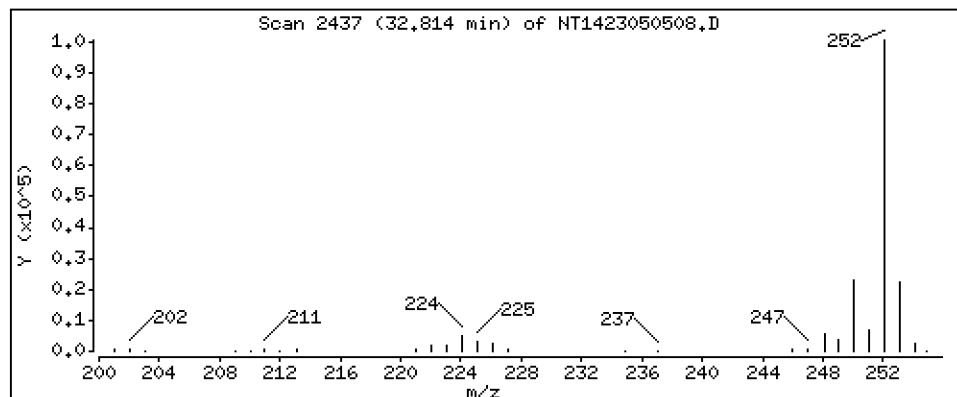
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

246 Total Benzo[fluoranthenes

Concentration: 5.557 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

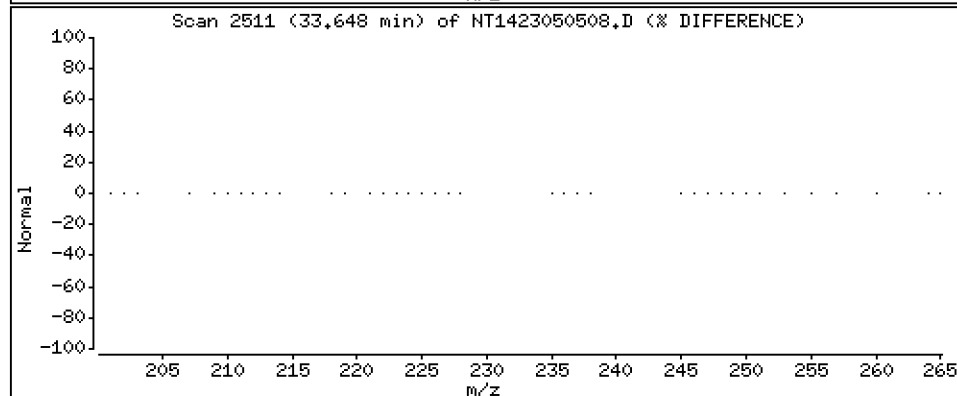
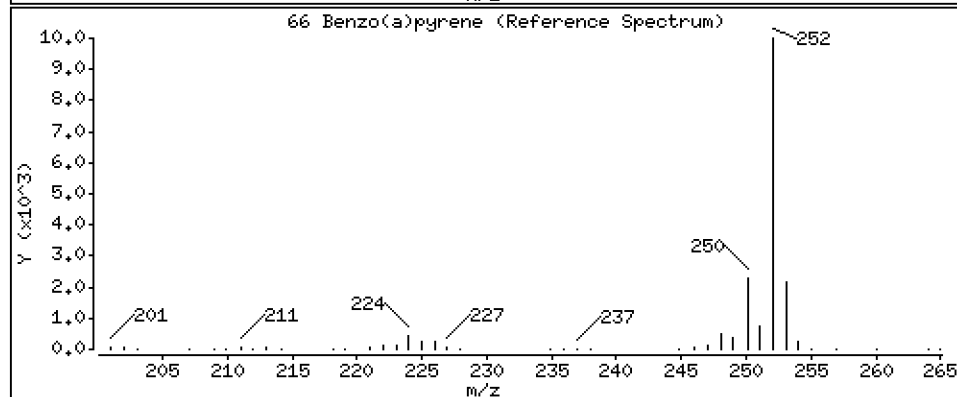
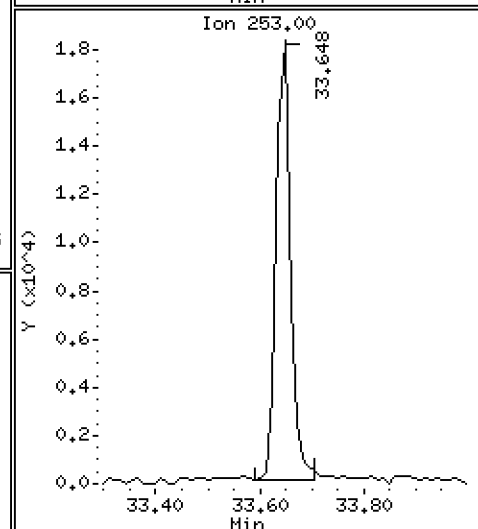
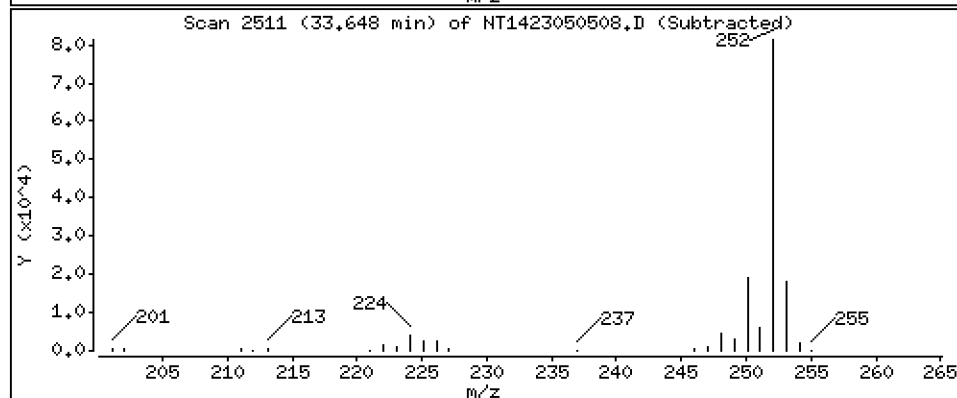
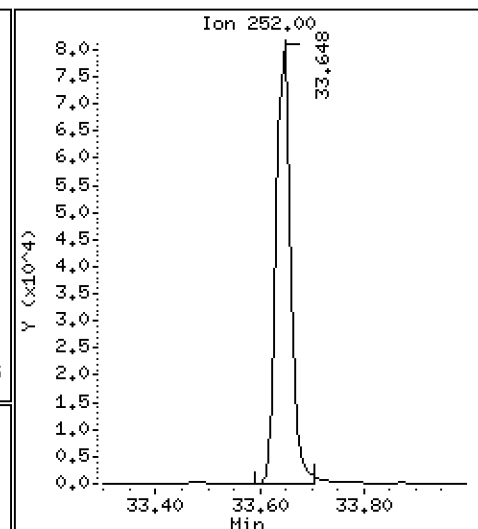
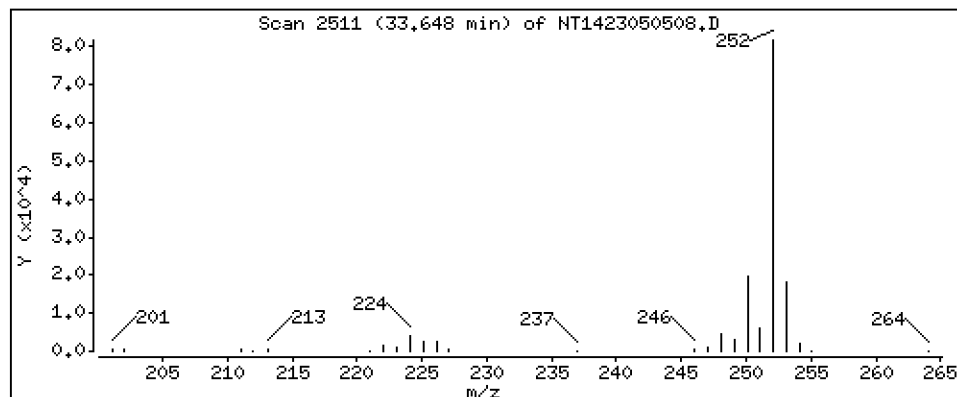
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

66 Benzo(a)pyrene

Concentration: 2.689 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

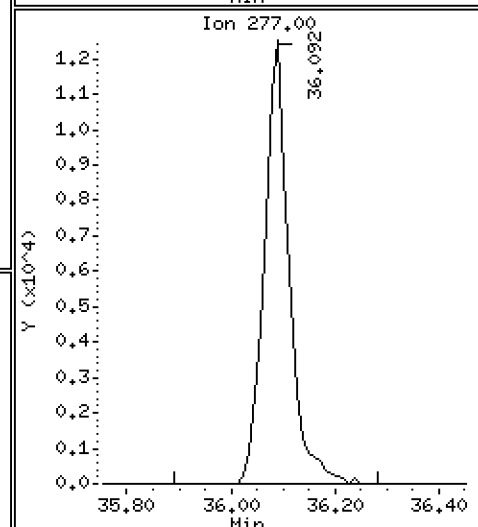
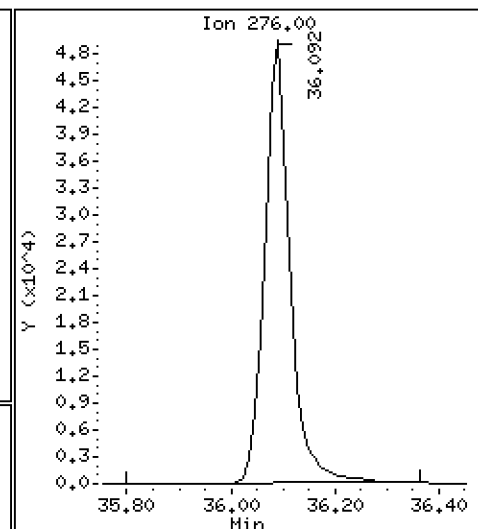
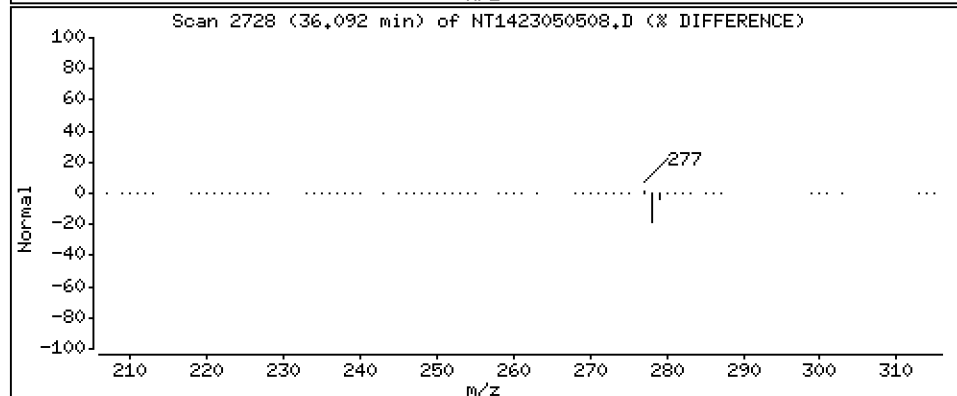
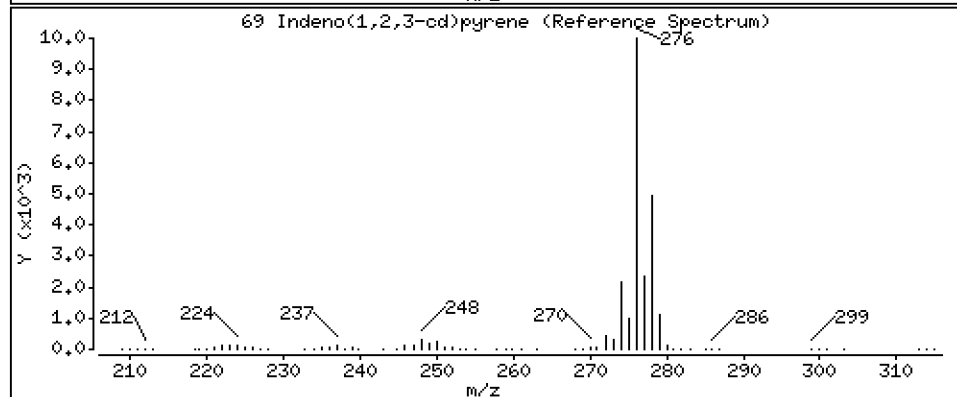
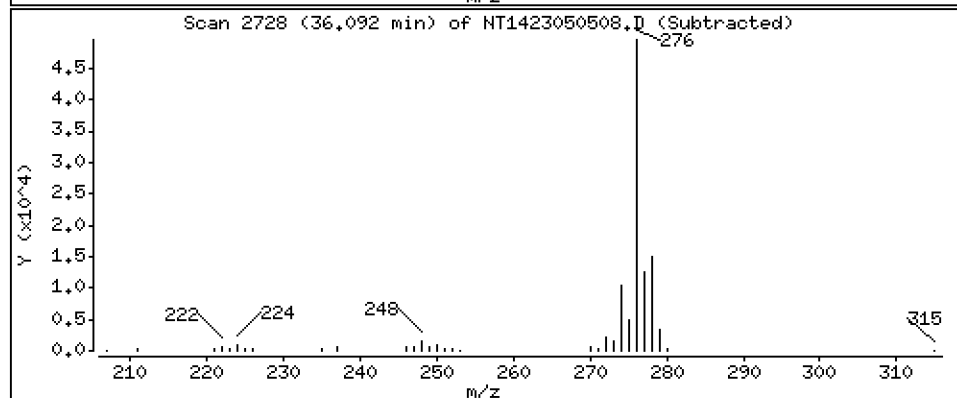
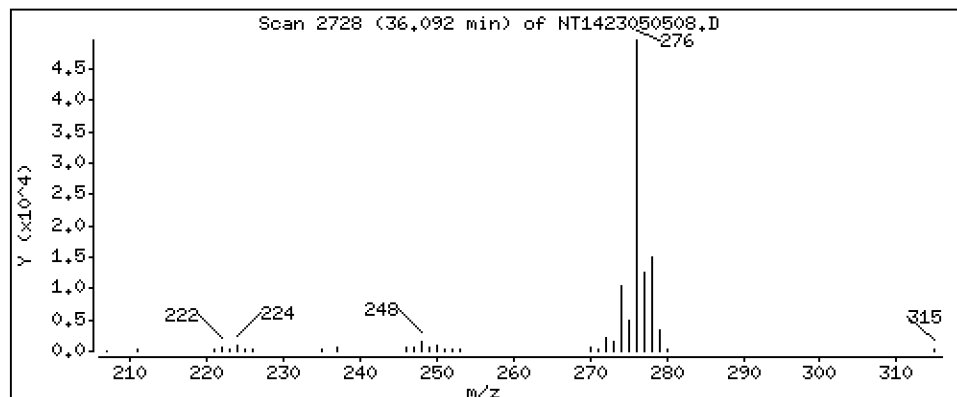
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

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

Concentration: 2.297 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

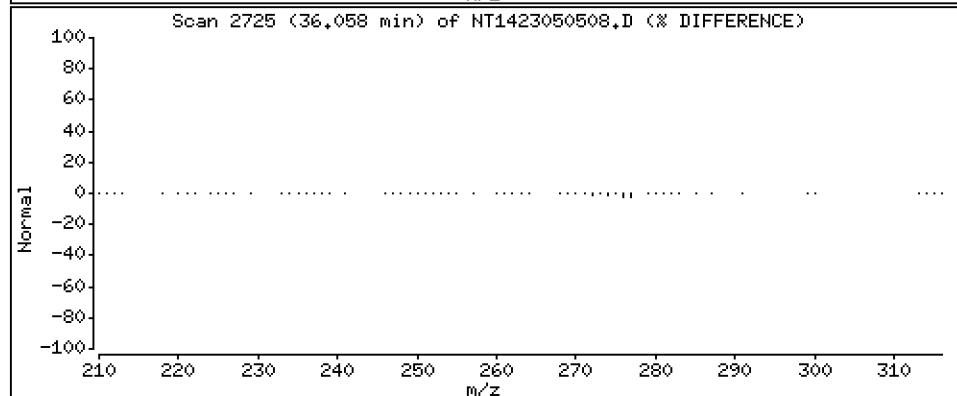
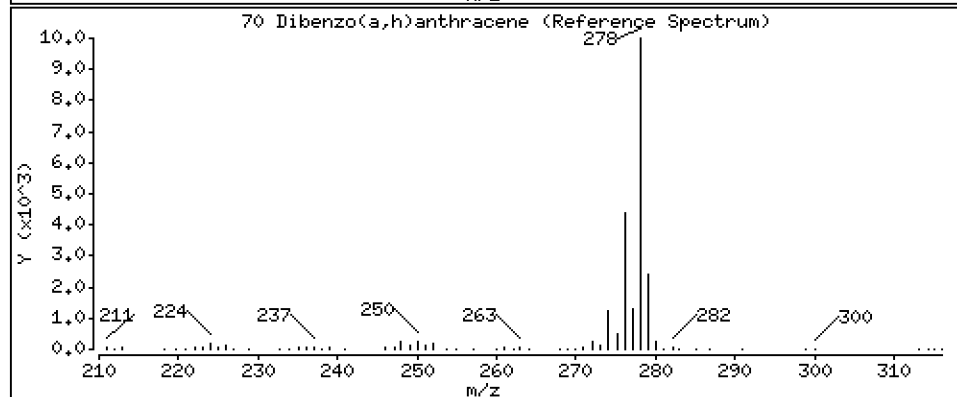
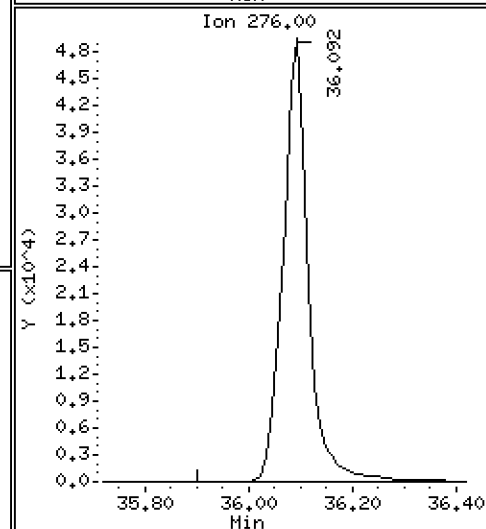
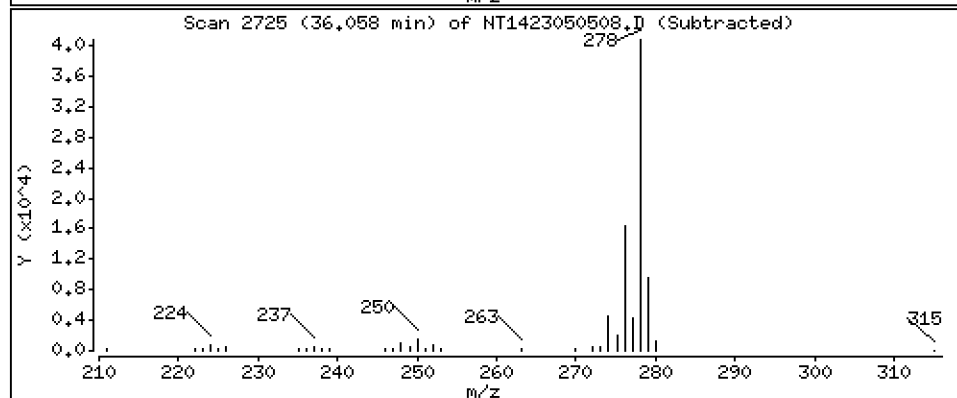
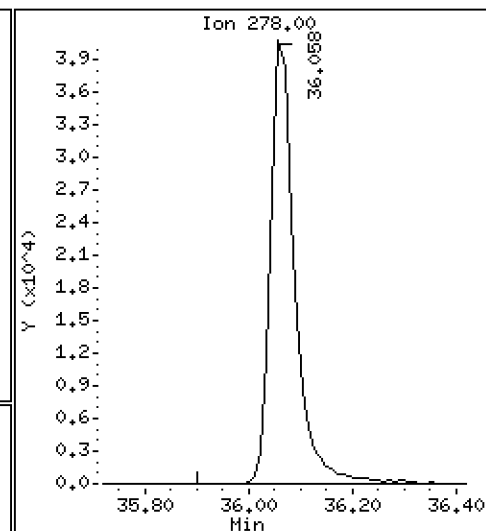
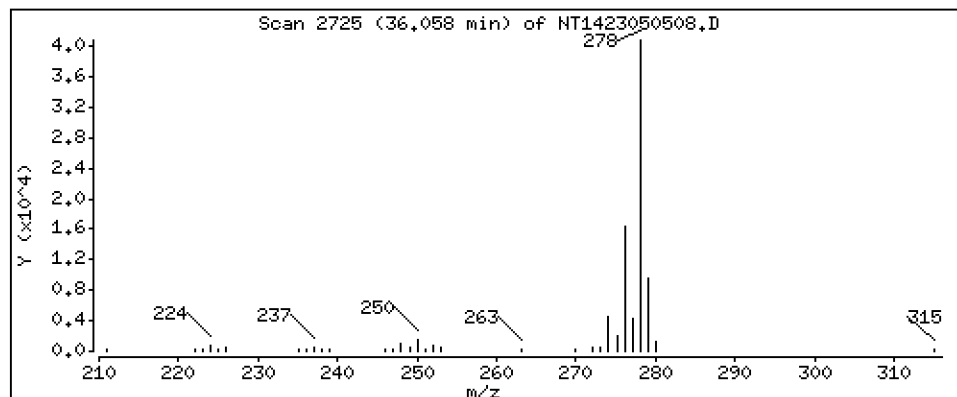
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

70 Dibenzo(a,h)anthracene

Concentration: 2.202 ug/mL



Date : 05-MAY-2023 16:01

Client ID:

Instrument: nt14.i

Sample Info: SLE0096-SCV1

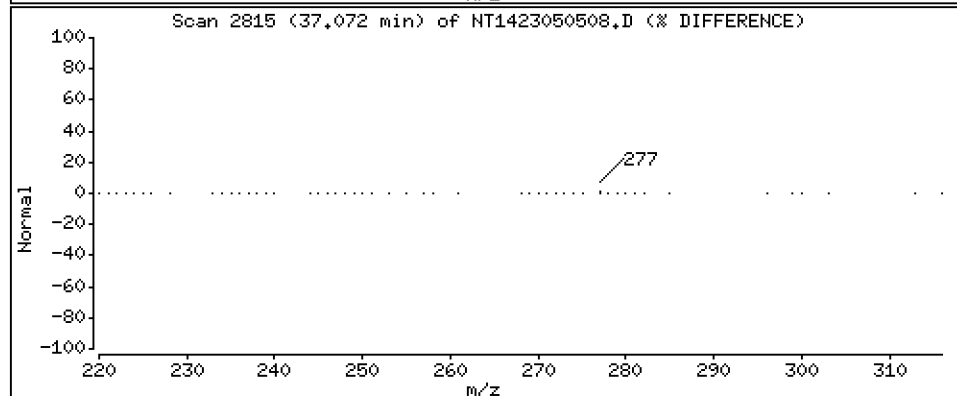
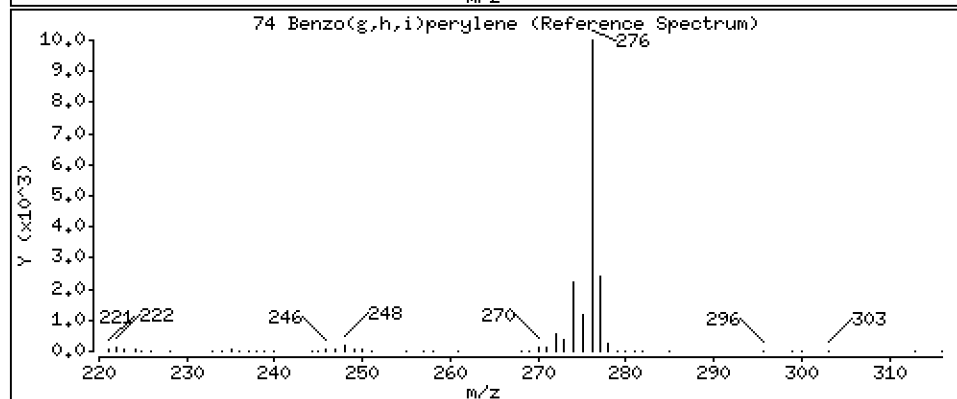
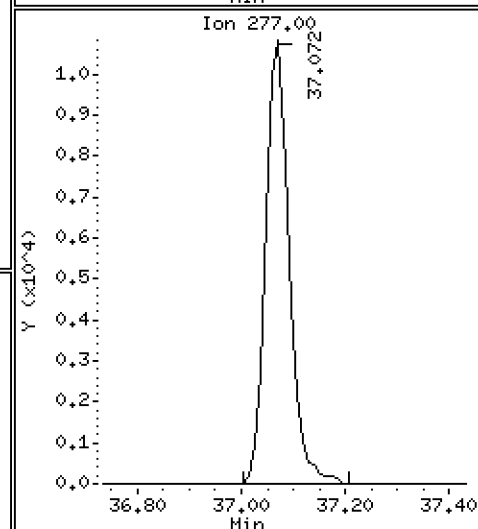
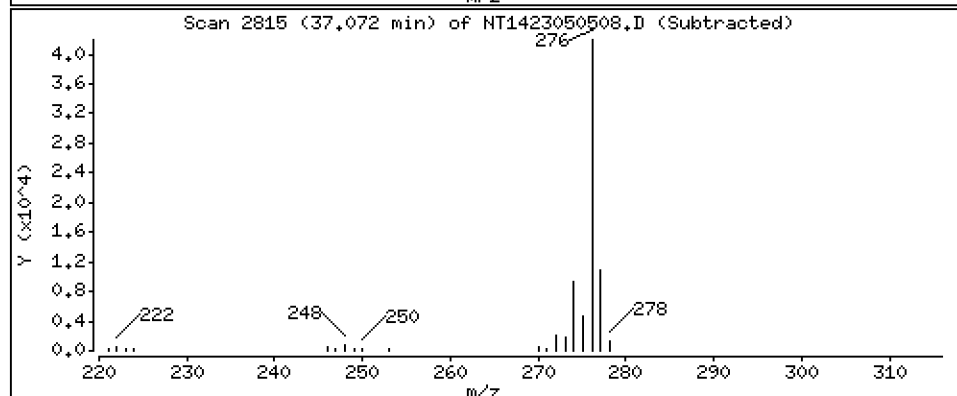
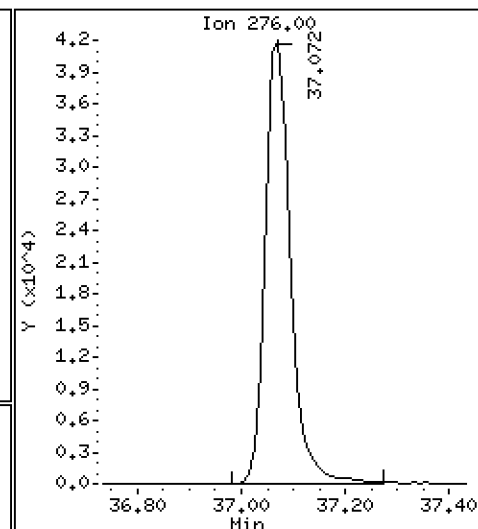
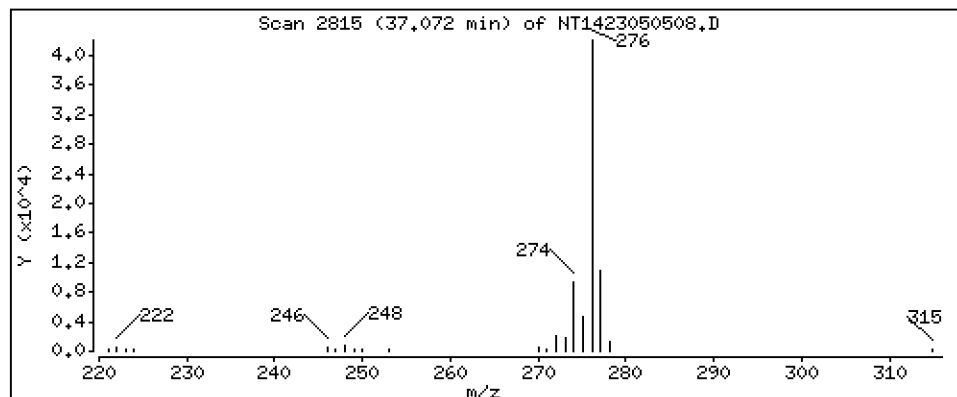
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

74 Benzo(g,h,i)perylene

Concentration: 2.550 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230505.b\NT1423050508.D
Lab Smp Id: SLE0096-SCV1
Inj Date : 05-MAY-2023 16:01
Operator : VTS
Smp Info : SLE0096-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m
Meth Date : 06-May-2023 07:22 van
Cal Date : 05-MAY-2023 15:12
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: VANS-201906

Inst ID: nt14.i

Quant Type: ISTD
Cal File: NT1423050507.D

Compound Sublist: TARGETS.sub

Compounds	QUANT	SIG						CONCENTRATIONS	
			RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
	MASS						(ug/mL)	(ug/mL)	
=====	=====		=====	=====	=====	=====	=====	=====	
1 trans-Decalin	138		Compound Not Detected.						
2 cis-Decalin	138		Compound Not Detected.						
\$ 6 Naphthalene-d8	136		Compound Not Detected.						
7 Naphthalene	128		12.290	12.290	(0.638)	356640	2.48521	2.485	
12 Benzo(b)thiophene	134		Compound Not Detected.						
16 2-Methylnaphthalene	141		14.129	14.130	(0.733)	183761	2.58919	2.589	
17 1-methylnaphthalene	141		14.580	14.591	(0.757)	180422	2.52458	2.525	
18 Biphenyl	154		Compound Not Detected.						
19 2,6-Dimethylnaphthalene	156		Compound Not Detected.						
20 Acenaphthylene	152		17.437	17.437	(0.905)	310990	2.66466	2.665	
\$ 21 Acenaphthene-d10	164		17.712	17.723	(0.919)	21202	0.36620	0.3662 (R)	
22 Acenaphthene	153		17.844	17.844	(0.926)	193998	2.69360	2.694	
23 Dibenzofuran	168		18.218	18.218	(0.946)	278763	2.95677	2.957	
24 1,6,7-Trimethylnaphthalene	170		Compound Not Detected.						
* 25 Fluorene-d10	176		19.263	19.263	(1.000)	130753	2.00000		
26 Fluorene	166		19.365	19.377	(1.005)	202636	2.68244	2.682	
30 Dibenzothiophene	184		Compound Not Detected.						
\$ 35 Phenanthrene-d10	188		Compound Not Detected.						
36 Phenanthrene	178		22.698	22.698	(0.998)	272043	2.58721	2.587	
* 250 Anthracene-d10	188		22.733	22.733	(1.000)	158011	2.00000		
37 Anthracene	178		22.802	22.803	(1.003)	229943	2.38228	2.382	
42 Carbazole	167		24.077	24.078	(1.059)	217409	2.39603	2.396	
43 1-Methylphenanthrene	192		Compound Not Detected.						
44 Fluoranthene	202		26.511	26.523	(1.166)	259569	2.70729	2.707	
46 Pyrene	202		27.346	27.346	(1.203)	259384	2.58512	2.585	
51 Naphthobenzothiophene	234		Compound Not Detected.						
55 Benzo(a)anthracene	228		30.403	30.415	(0.908)	199700	2.79914	2.799	
\$ 56 Chrysene-d12	240		Compound Not Detected.						
57 Chrysene	228		30.606	30.606	(0.914)	191804	2.74851	2.749	
62 Benzo(b)fluoranthene	252		32.814	32.825	(0.980)	181931	2.73341	2.733	
63 Benzo(k)fluoranthene	252		32.870	32.871	(0.982)	167403	2.23891	2.239	
293 Benzo(j)fluoranthene	252		Compound Not Detected.						
246 Total Benzofluoranthenes	252		32.814	32.938	(0.980)	344190	5.55732	5.557 (M)	

Compounds	QUANT SIG							CONCENTRATIONS	
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL	
=====	=====	=====	=====	=====	=====	=====	(ug/mL)	(ug/mL)	=====
* 251 Benzo(e)pyrene-d12	264	33.478	33.478	(1.000)		91009	2.00000		
64 Benzo(e)pyrene	252	Compound Not Detected.							
66 Benzo(a)pyrene	252	33.647	33.647	(1.005)		146395	2.68856	2.689	
\$ 67 Perylene-d12	264	Compound Not Detected.							
68 Perylene	252	Compound Not Detected.							
69 Indeno(1,2,3-cd)pyrene	276	36.091	36.103	(1.078)		162972	2.29735	2.297 (M)	
70 Dibenzo(a,h)anthracene	278	36.058	36.069	(1.077)		128362	2.20212	2.202 (M)	
74 Benzo(g,h,i)perylene	276	37.071	37.083	(1.107)		136826	2.55002	2.550	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
 M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i	Calibration Date: 05-MAY-2023
Lab File ID: NT1423050508.D	Calibration Time: 13:36
Lab Smp Id: SLE0096-SCV1	
Analysis Type: SV	Level:
Quant Type: ISTD	Sample Type:
Operator: VTS	
Method File: \\target\share\chem3\nt14.i\20230505.b\ALKYLPNA.m	
Misc Info:	

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
25 Fluorene-d10	137862	68931	275724	130753	-5.16
250 Anthracene-d10	168263	84132	336526	158011	-6.09
251 Benzo(e)pyrene-d1	99689	49845	199378	91009	-8.71

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
25 Fluorene-d10	19.26	18.76	19.76	19.26	0.00
250 Anthracene-d10	22.73	22.23	23.23	22.73	0.00
251 Benzo(e)pyrene-d1	33.48	32.98	33.98	33.48	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 - NT1423050508.D

Lab ID: SLE0096-SCV1

nt14.i, 20230505.b\ALKYLPNA.m, 05-MAY-2023 16:01

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1423050507.D

On Column LOD for nt14.i, 20230505.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

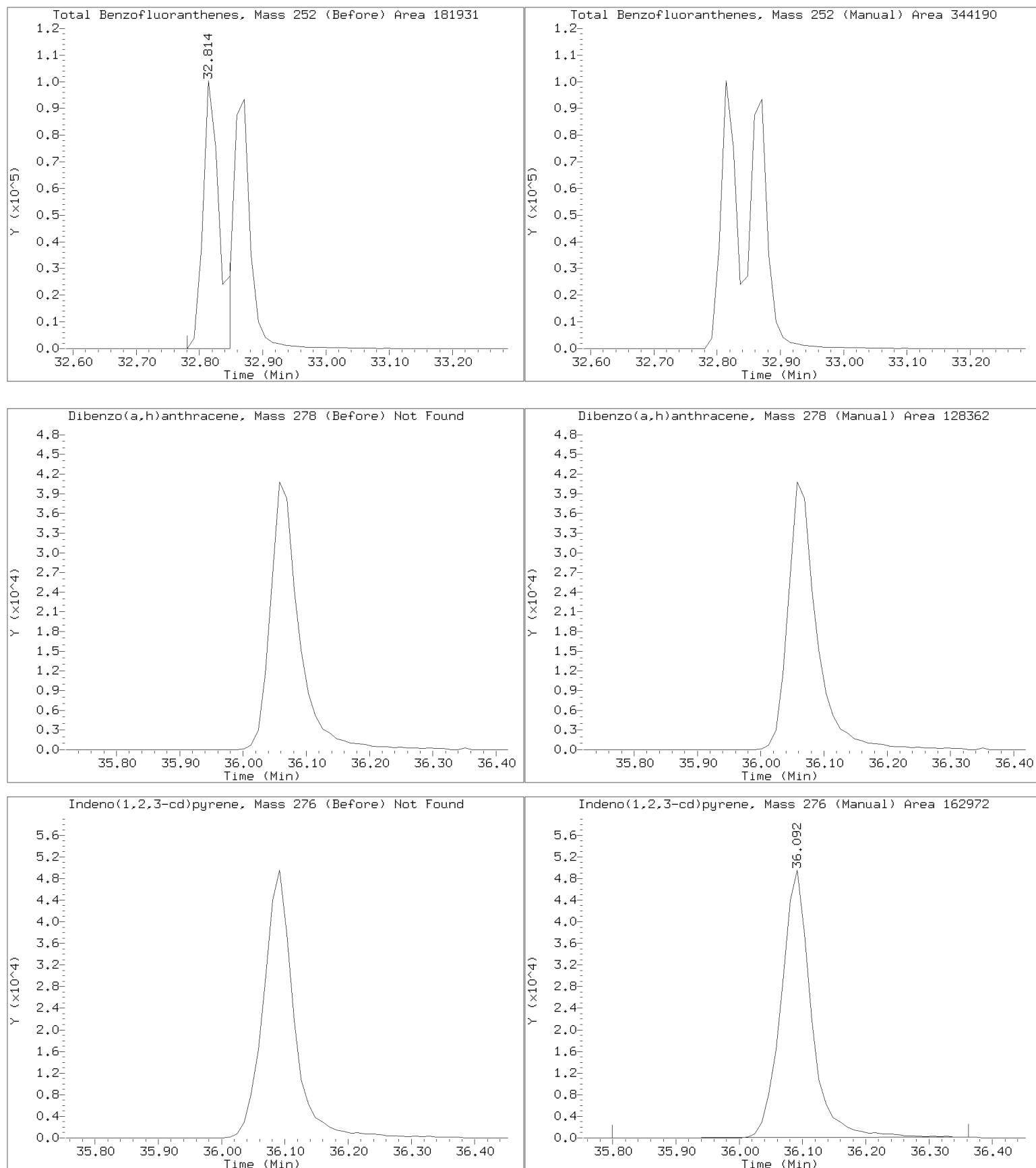
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230505.b/NT1423050508.D

Injection Date: 05-MAY-2023 16:01

Lab ID: SLE0096-SCV1 Client ID:

Report Date: 05/06/2023 07:52





CONTINUING CALIBRATION CHECK

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Instrument ID: NT14

Calibration: GE00024

Lab File ID: NT1405272323.D

Calibration Date: 05/05/2023

Sequence: SLE0443

Injection Date: 05/28/23

Lab Sample ID: SLE0443-CCV1

Injection Time: 03:57

Sequence Name: PAH 2.5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
trans-Decalin	A	2.5000	2.50	0.2142441	0.2146134		0.2	+/-50
cis-Decalin	A	2.5000	2.52	0.1553110	0.1568097		1.0	+/-50
Naphthalene	A	2.5000	2.38	2.1950510	2.0899450		-4.8	+/-50
1-Methylnaphthalene	A	2.5000	2.33	1.0931470	1.0177070		-6.9	+/-50
2-Methylnaphthalene	A	2.5000	2.39	1.0855960	1.0397330		-4.2	+/-50
Biphenyl	A	2.5000	2.36	1.5018170	1.4169320		-5.7	+/-50
2,6-Dimethylnaphthalene	A	2.5000	2.42	1.0689340	1.0353460		-3.1	+/-50
Acenaphthylene	A	2.5000	2.47	1.7851870	1.7667470		-1.0	+/-50
Acenaphthene	A	2.5000	2.42	1.1016480	1.0649300		-3.3	+/-50
Dibenzofuran	A	2.5000	2.50	1.4421000	1.4417060		-0.03	+/-50
2,3,5-Trimethylnaphthalene	A	2.5000	2.46	0.9527605	0.9388194		-1.5	+/-50
Fluorene	A	2.5000	2.47	1.1554870	1.1411110		-1.2	+/-50
Benzo(b)thiophene	A	2.5000	2.40	1.6681460	1.5989810		-4.1	+/-50
Phenanthrene	A	2.5000	2.43	1.3309080	1.2954660		-2.7	+/-50
Anthracene	A	2.5000	2.49	1.2217170	1.2186930		-0.2	+/-50
Carbazole	A	2.5000	2.42	0.9770692	1.1108010		-3.3	+/-50
1-Methylphenanthrene	A	2.5000	2.45	0.8583058	0.8402416		-2.1	+/-50
Fluoranthene	A	2.5000	2.46	1.2135600	1.1928690		-1.7	+/-50
Dibenzothiophene	A	2.5000	2.51	1.4158940	1.4233040		0.5	+/-50
Pyrene	A	2.5000	2.46	1.2700040	1.2499960		-1.6	+/-50
Benzo(a)anthracene	A	2.5000	2.59	1.5678310	1.6224780		3.5	+/-50
Chrysene	A	2.5000	2.70	1.5335800	1.6552210		7.9	+/-50
Benzo(b)fluoranthene	A	2.5000	2.45	1.4626770	1.4316430		-2.1	+/-50
Benzo(j)fluoranthene	A	2.5000	2.93	1.3727050	1.6080730		17.1	
Benzo(k)fluoranthene	A	2.5000	2.34	1.3456120	1.5390600		-6.3	+/-50
Benzo(a)fluoranthene, Total	A	7.5000	7.64	1.3610640	1.3863590		1.9	
Benzo(e)pyrene	A	2.5000	2.39	1.4147040	1.3530520		-4.4	+/-50
Benzo(a)pyrene	A	2.5000	2.60	1.1966100	1.2468160		4.2	+/-50
Indeno(1,2,3-cd)pyrene	A	2.5000	1.92	1.3107200	1.1990820		-23.1	+/-50
Dibenzo(a,h)anthracene	A	2.5000	1.81	1.0657830	0.9297669		-27.4	+/-50
Benzo(g,h,i)perylene	A	2.5000	2.31	1.1791520	1.0904330		-7.5	+/-50
Perylene	A	2.5000	2.65	1.3134480	1.3899760		5.8	+/-50
Benzo(b)naphtho(2,1-d)thiophene	A	2.5000	2.46	0.8376187	0.8253750		-1.5	+/-50

* Values outside of QC limits



CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory: Analytical Resources, LLC SDG: 23D0457
Client: Anchor QEA, LLC Project: Gasco Hydrocarbon Investigation
Instrument ID: NT14 Calibration: GE00024
Lab File ID: NT1405272323.D Calibration Date: 05/05/2023
Sequence: SLE0443 Injection Date: 05/28/23
Lab Sample ID: SLE0443-CCV1 Injection Time: 03:57
Sequence Name: PAH 2.5

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Naphthalene-d8	A	2.5000	2.40	1.9983150	1.9162780		-4.1	
Acenaphthene-d10	A	2.5000	2.42	0.8856004	0.8555385		-3.4	
Phenanthrene-d10	A	2.5000	2.42	1.1412560	1.1026160		-3.4	
Chrysene-d12	A	2.5000	2.67	1.0850860	1.1607380		7.0	
Perylene-d12	A	2.5000	2.60	1.0467910	1.0886490		4.0	

* Values outside of QC limits

Data File: \\target\share\chem3\nt14,i\20230527,b\NT1405272323.D

Date : 28-May-2023 03:57

Client ID:

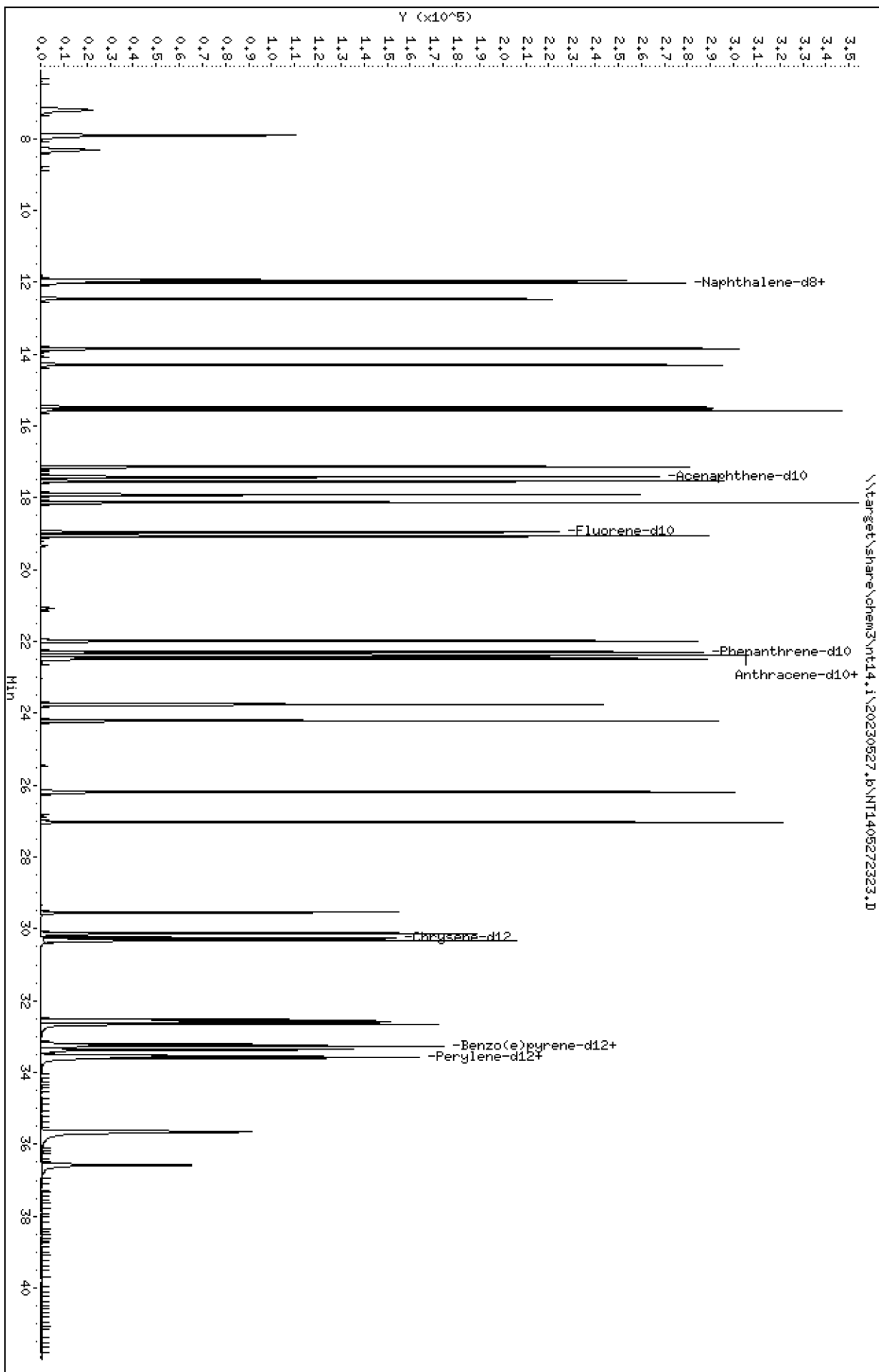
Sample Info: SLE0443-CCW1

Column phase: Rxi-17S11 MS

Instrument: nt14,i

Operator: VTS

Column diameter: 0.25



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

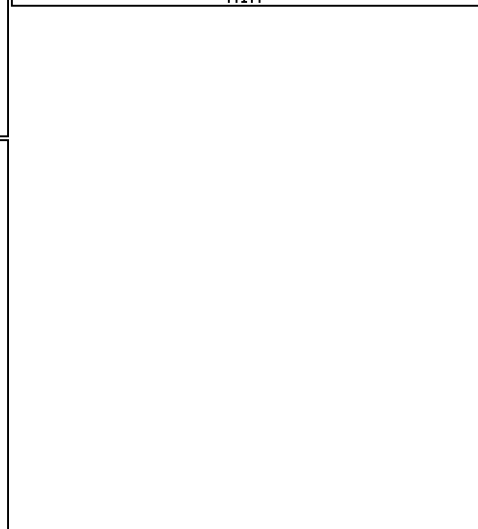
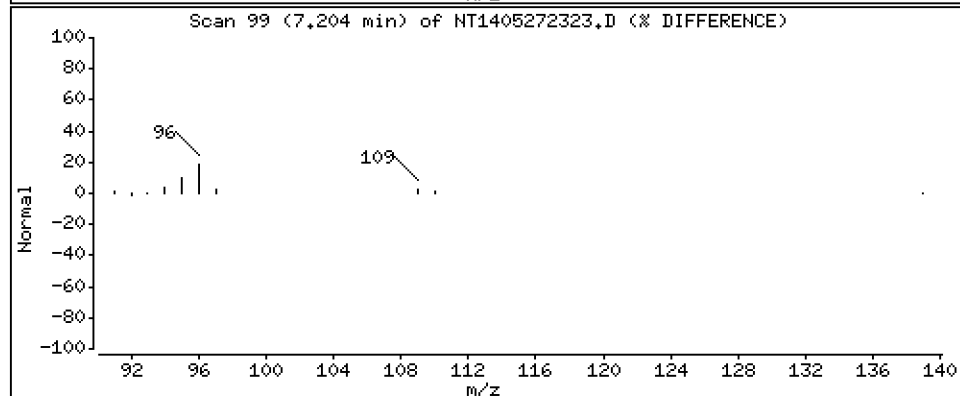
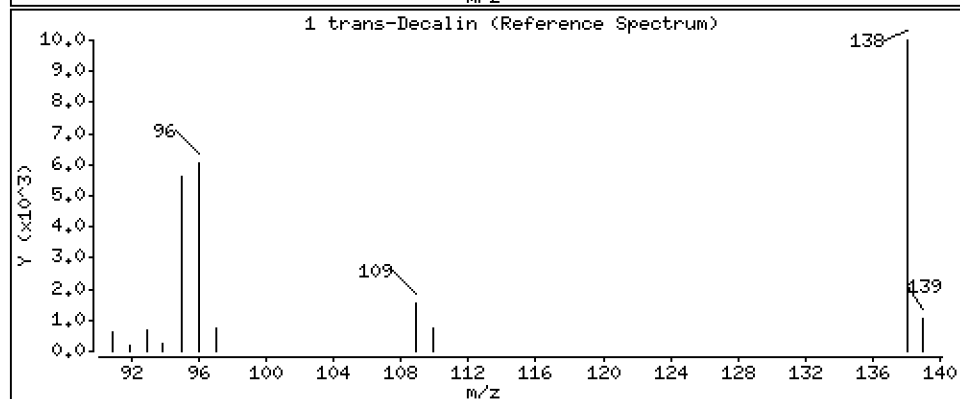
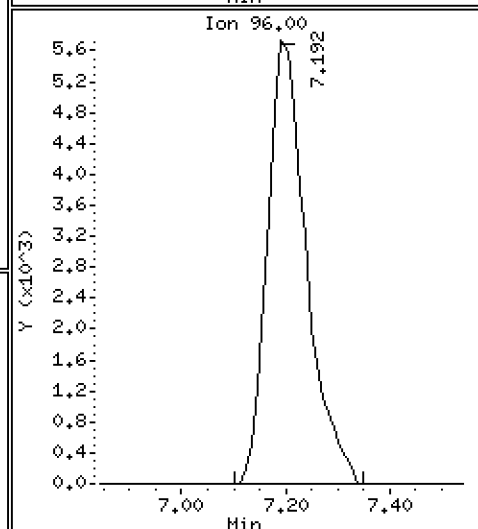
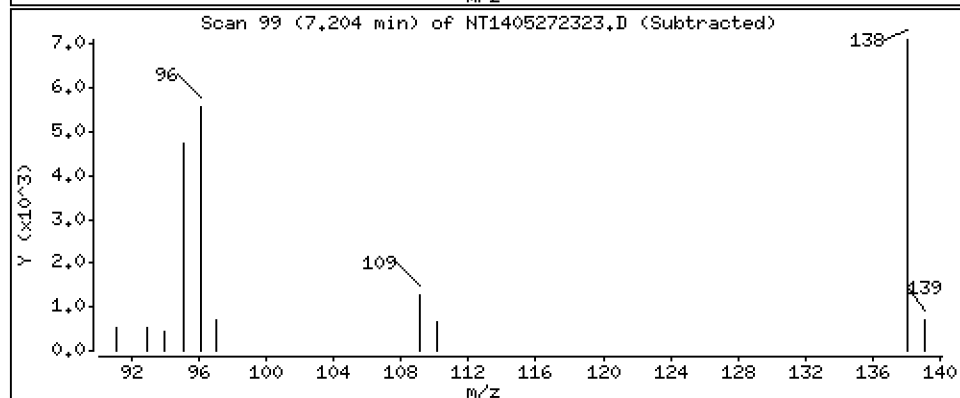
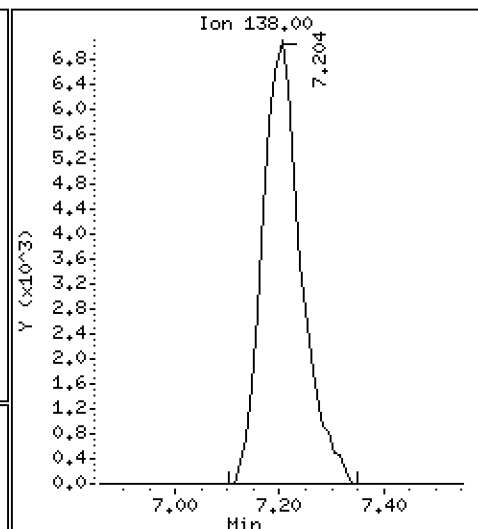
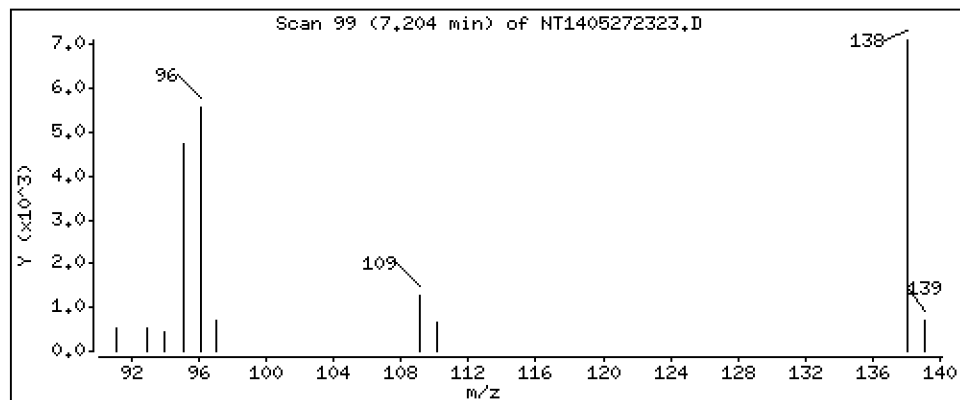
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

1 trans-Decalin

Concentration: 2.504 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

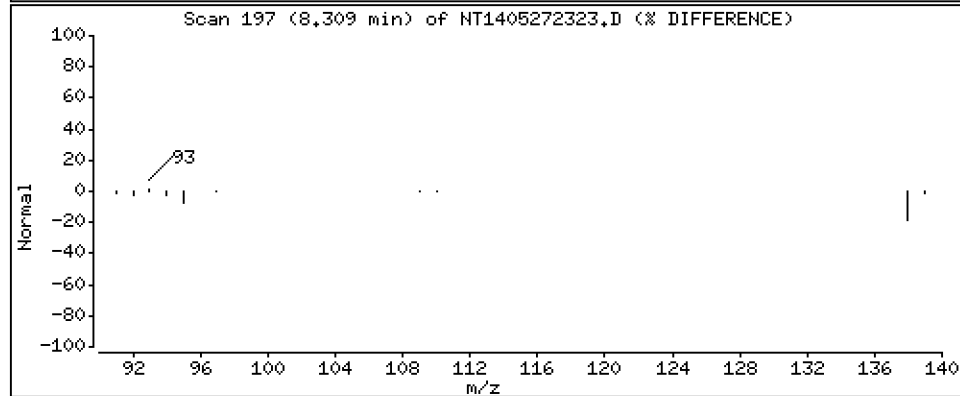
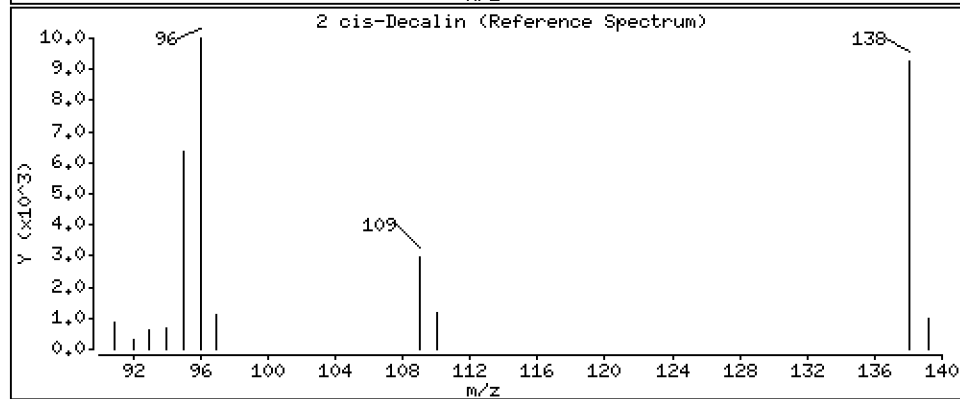
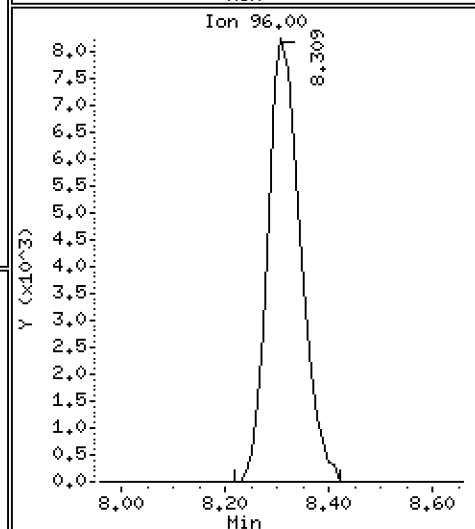
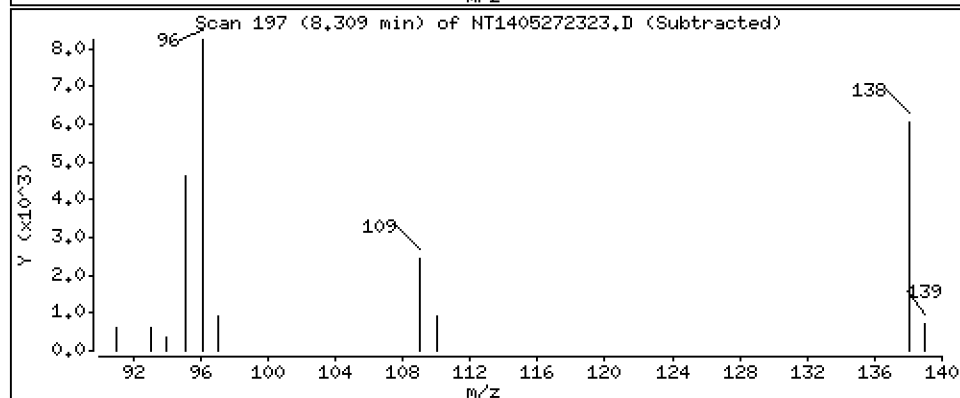
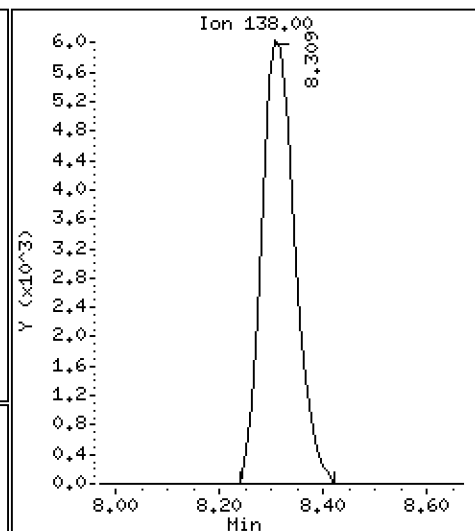
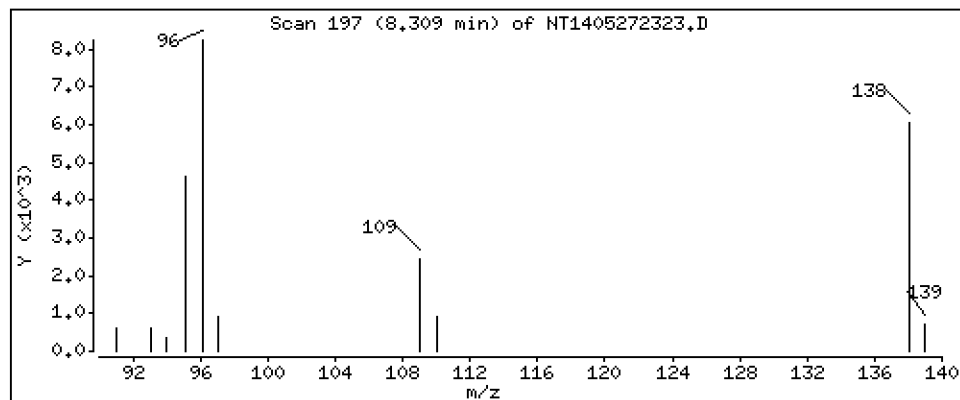
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

2 cis-Decalin

Concentration: 2.524 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

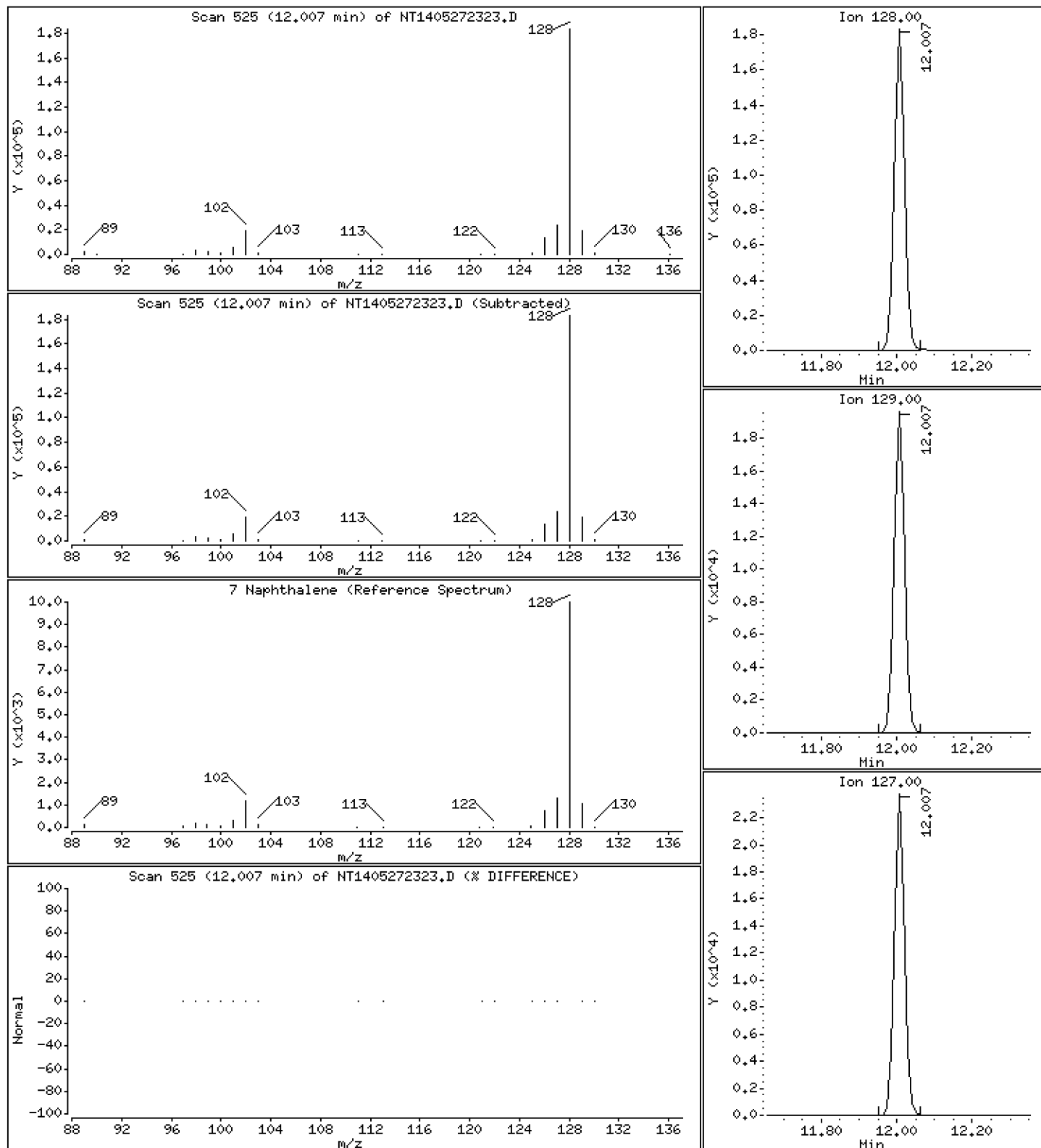
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

7 Naphthalene

Concentration: 2,380 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

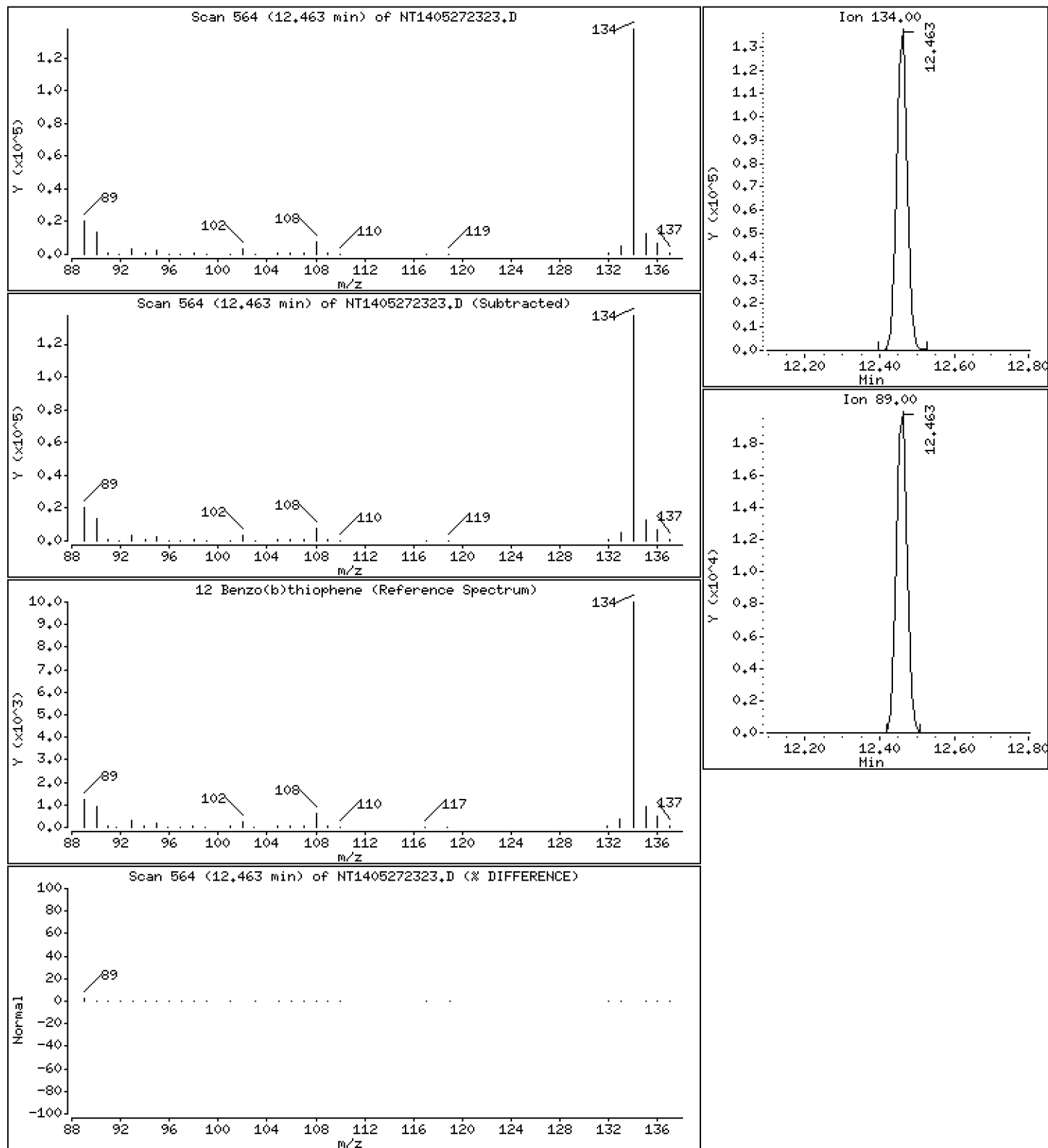
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

12 Benzo(b)thiophene

Concentration: 2.396 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

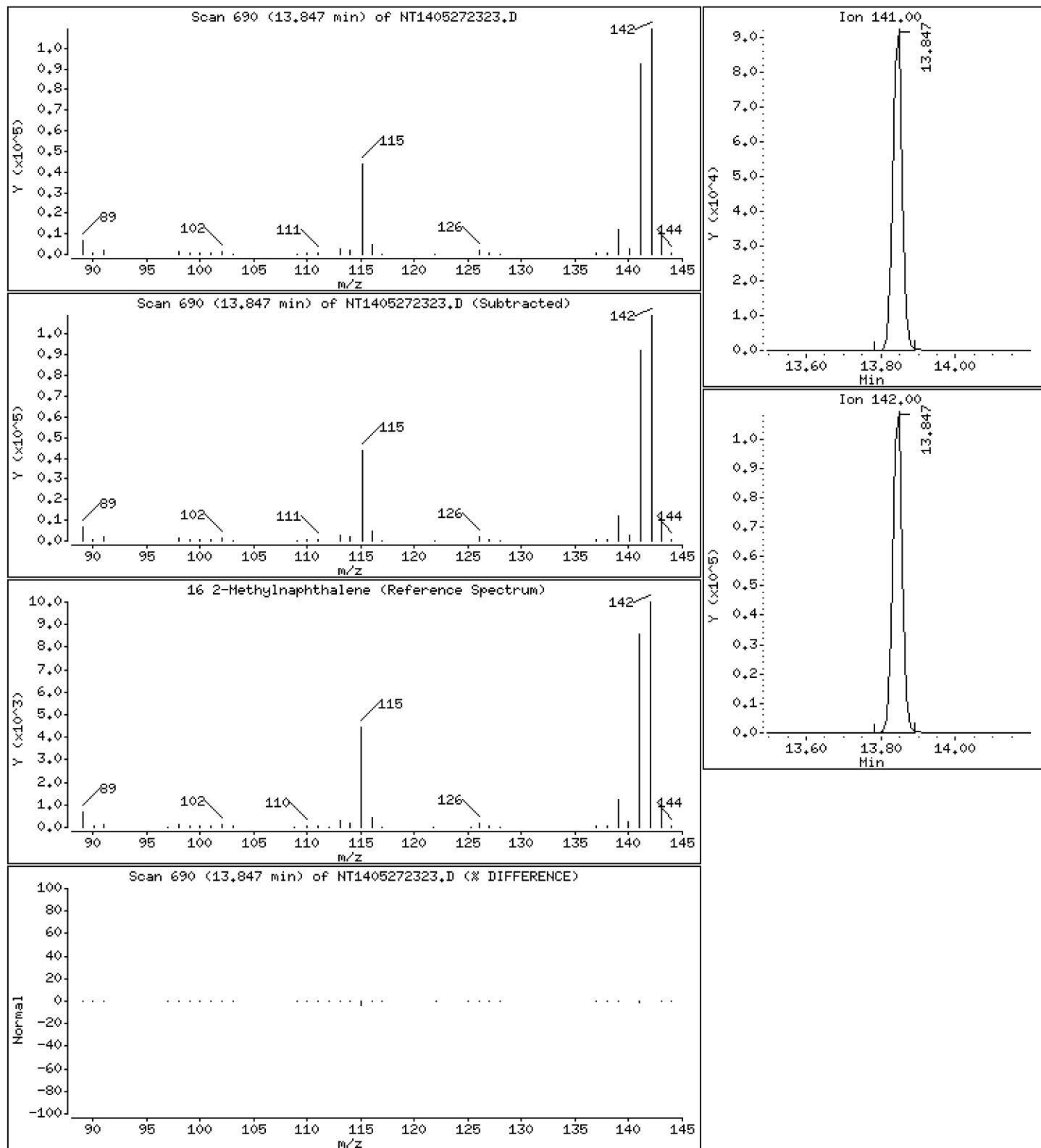
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

16 2-Methylnaphthalene

Concentration: 2.394 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

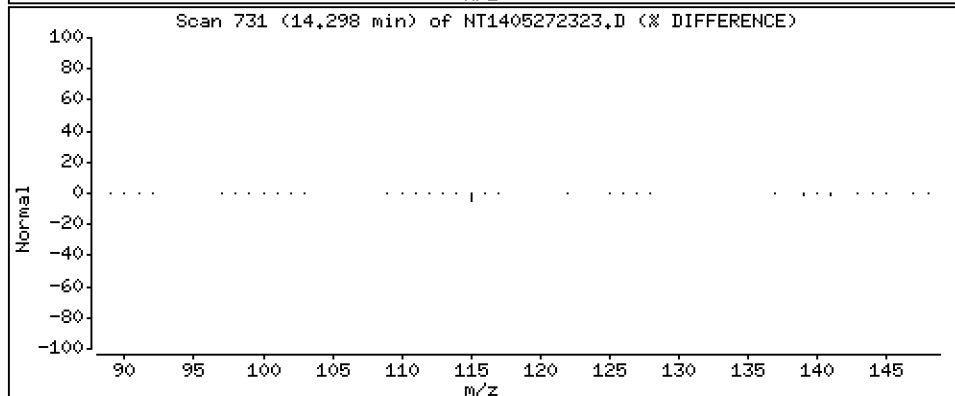
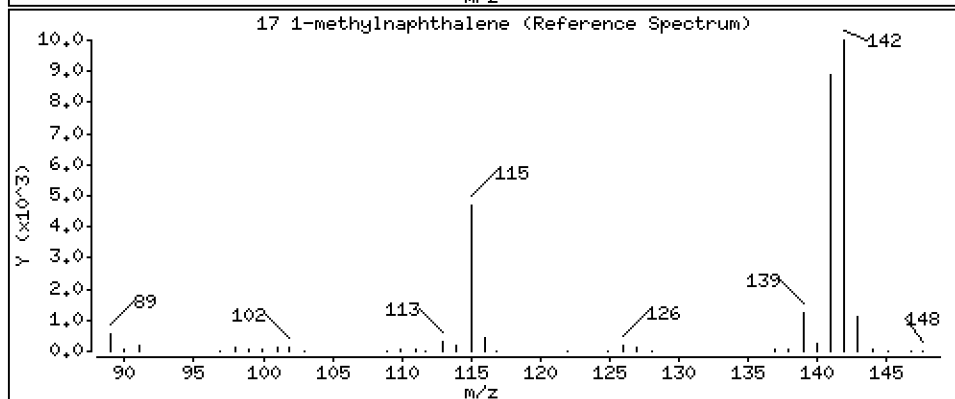
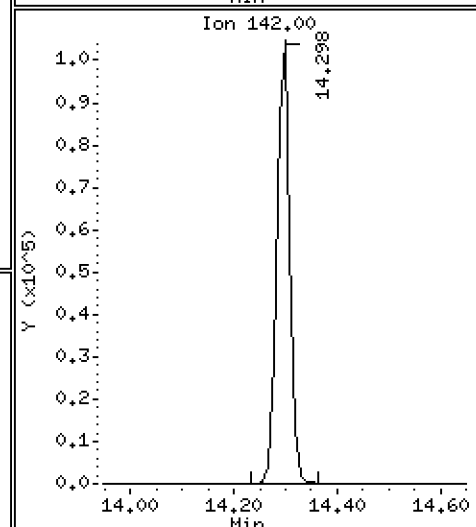
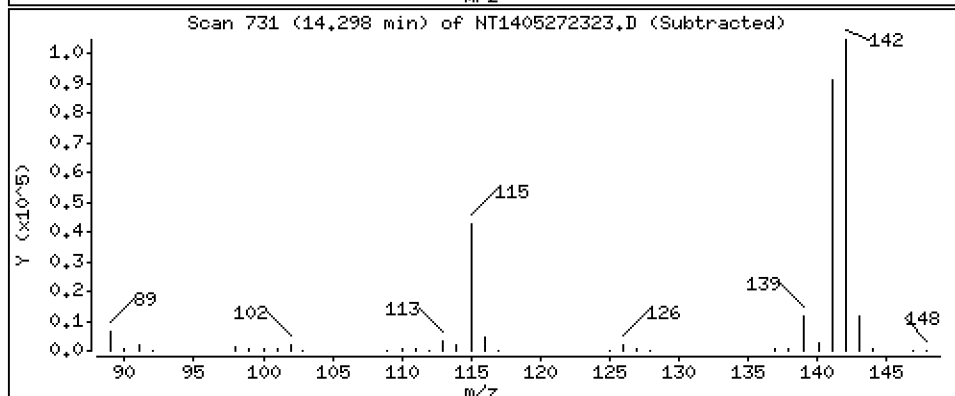
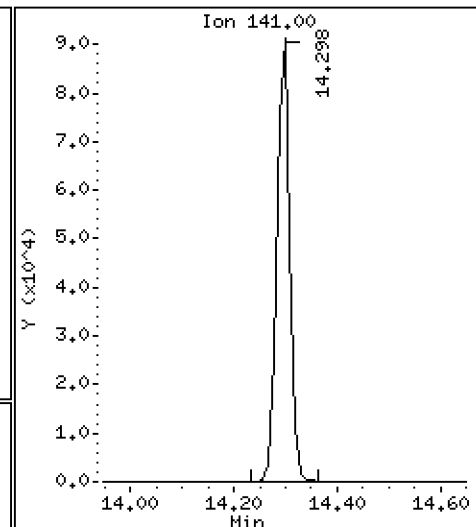
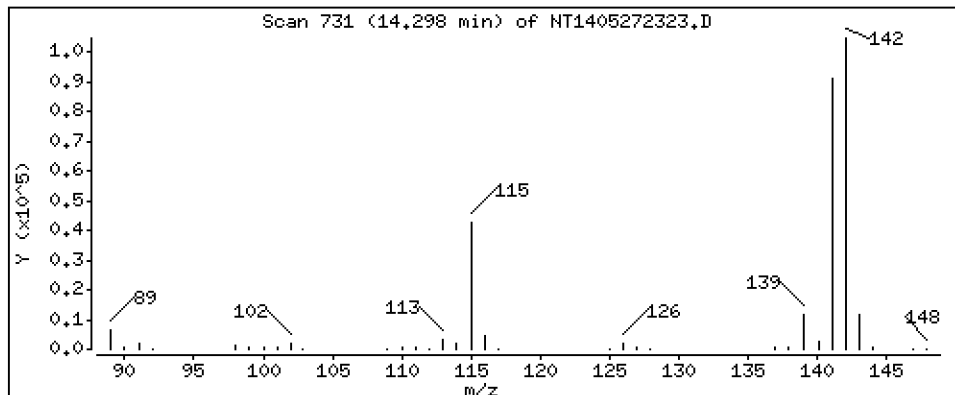
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 1-methylnaphthalene

Concentration: 2.327 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

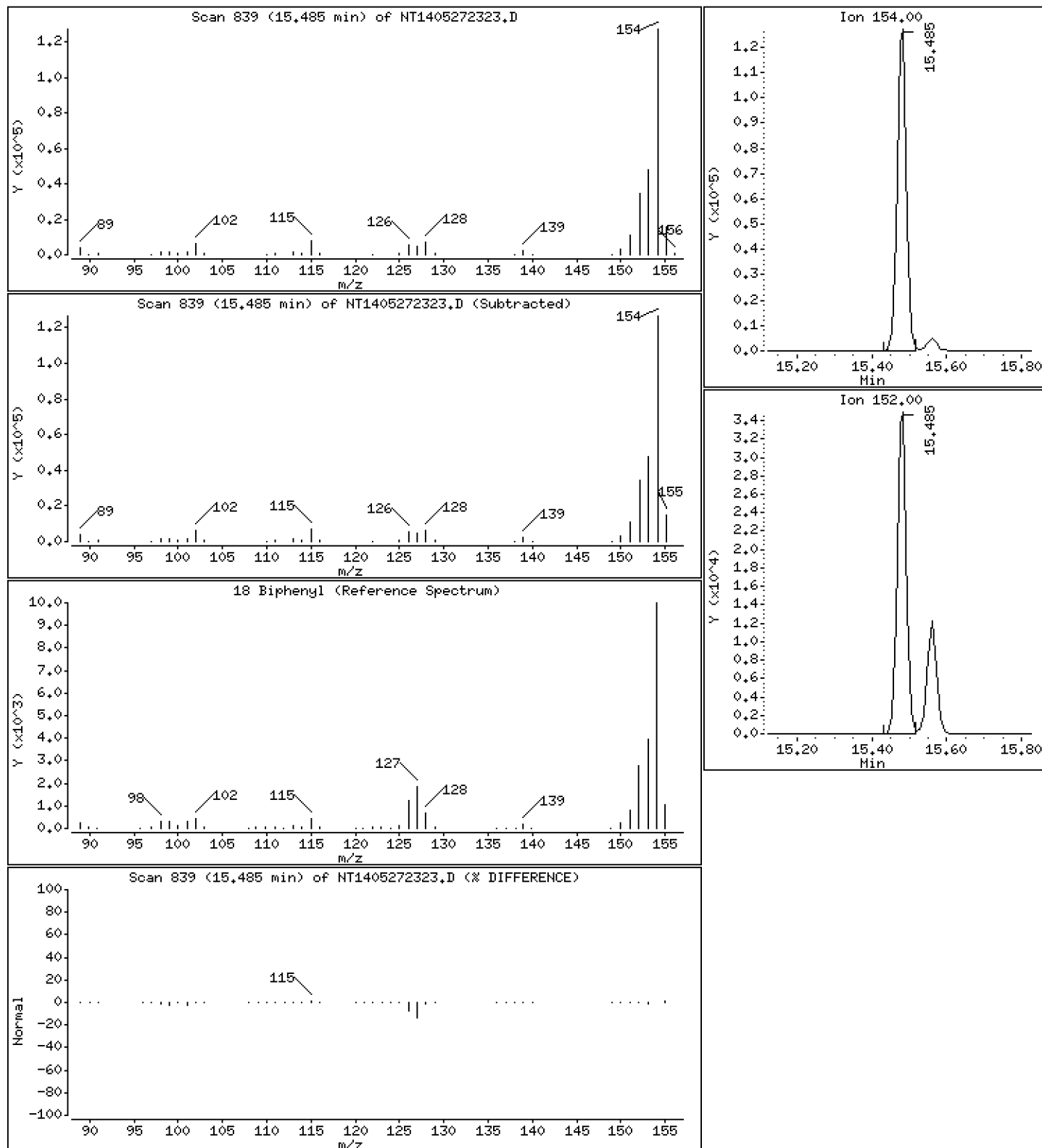
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

18 Biphenyl

Concentration: 2.359 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

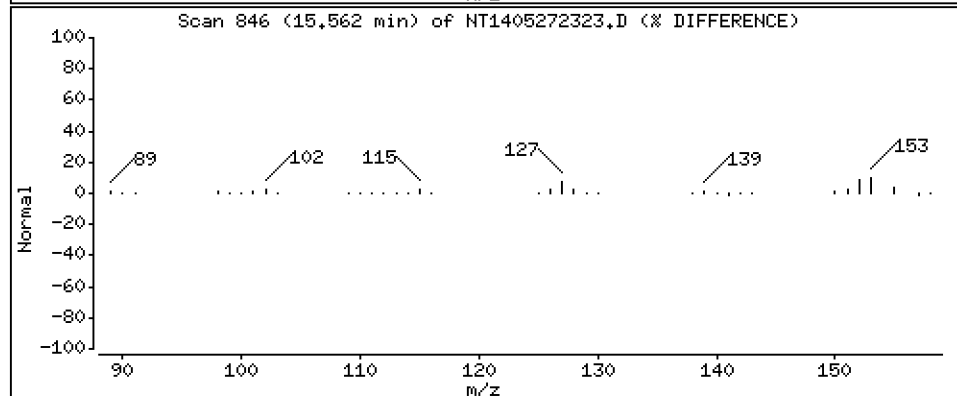
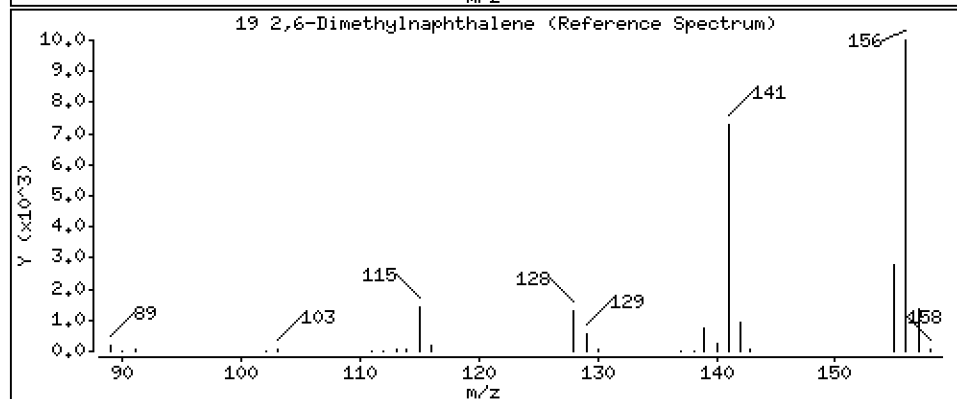
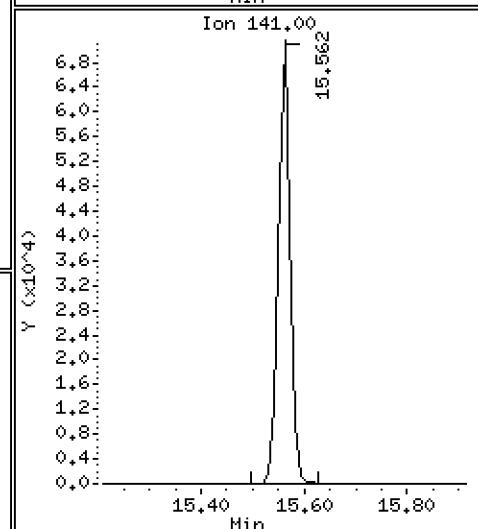
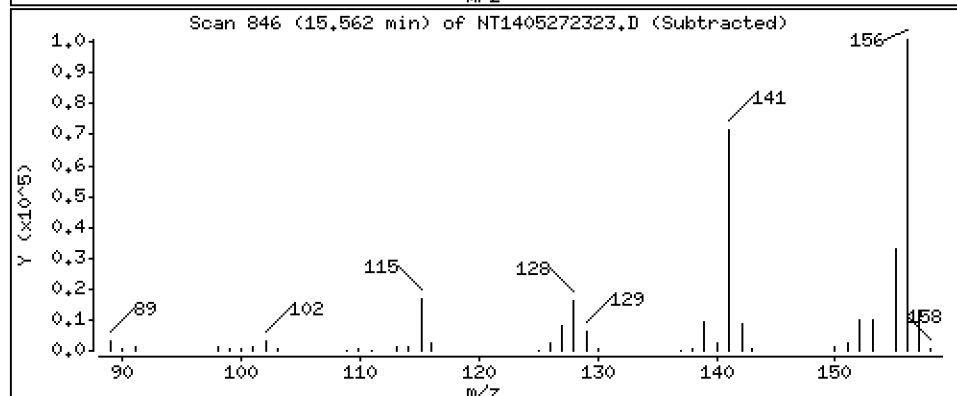
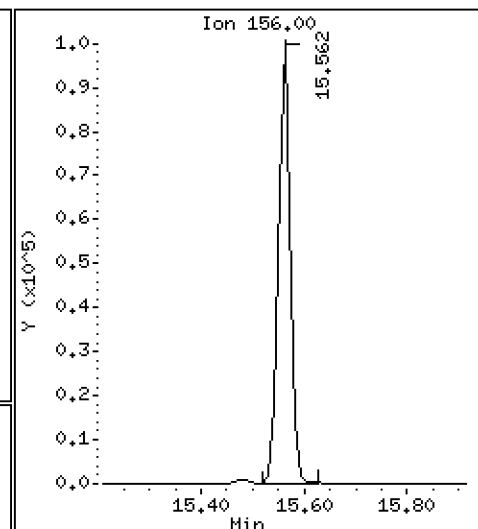
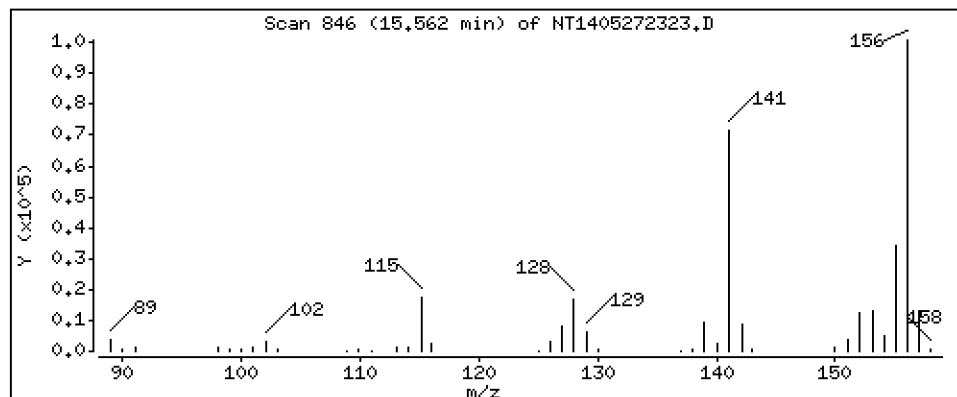
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

19 2,6-Dimethylnaphthalene

Concentration: 2.421 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

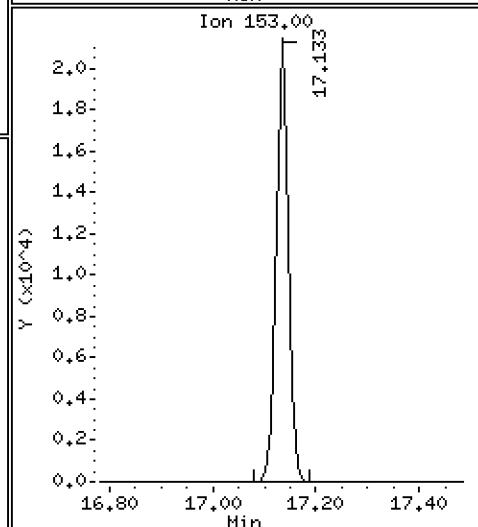
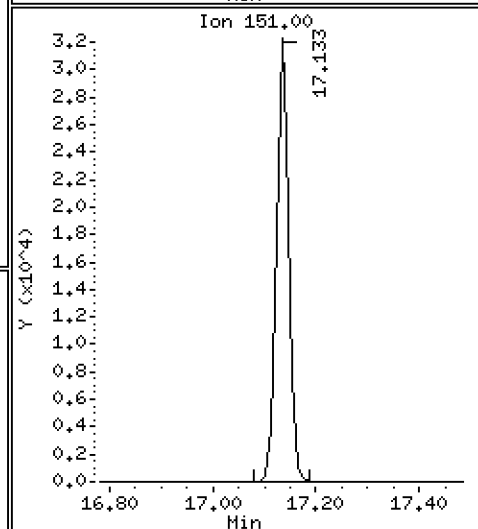
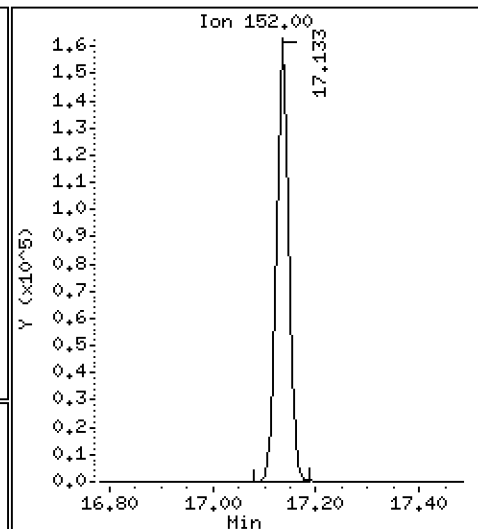
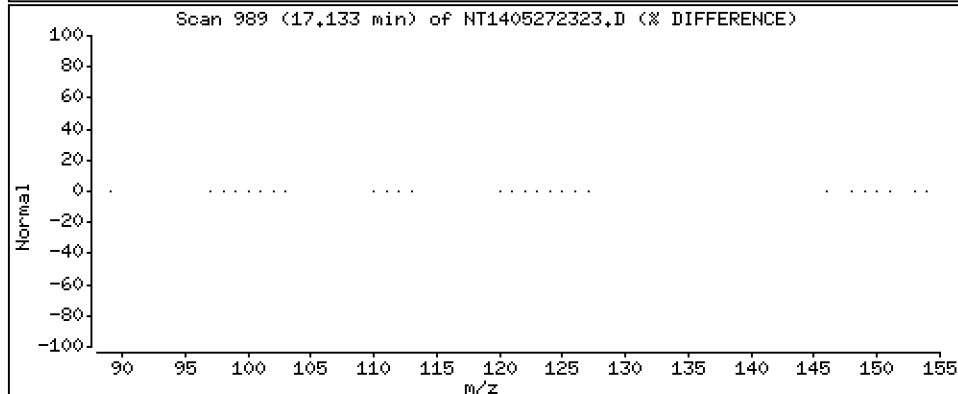
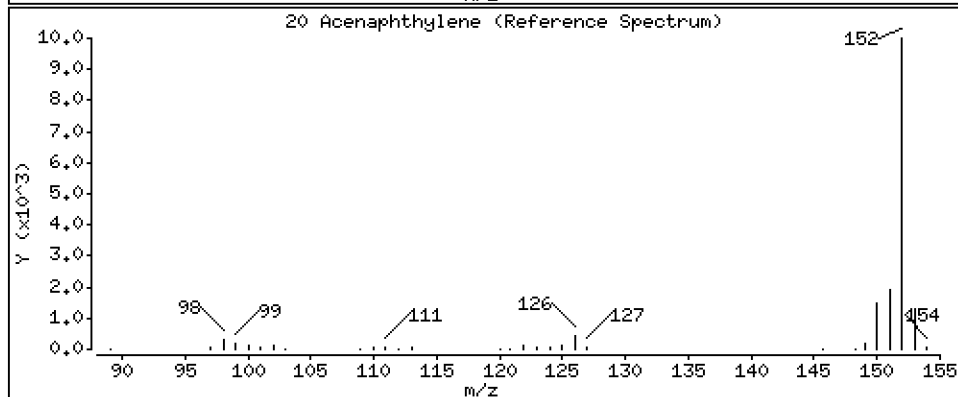
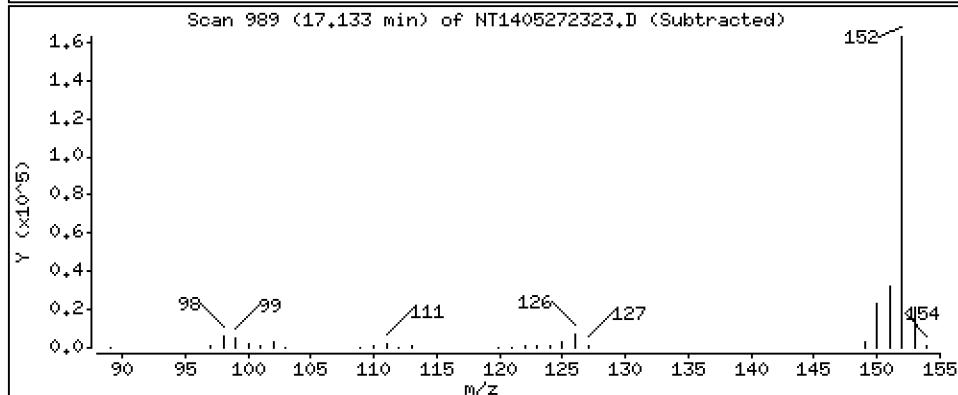
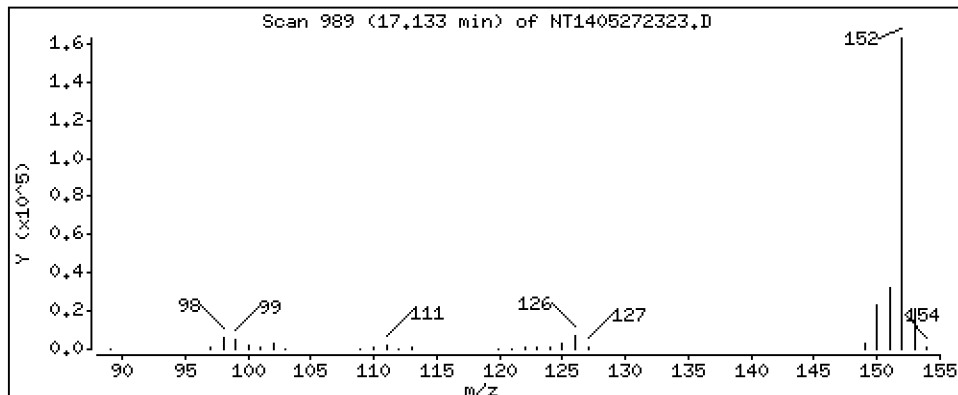
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

20 Acenaphthylene

Concentration: 2.474 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

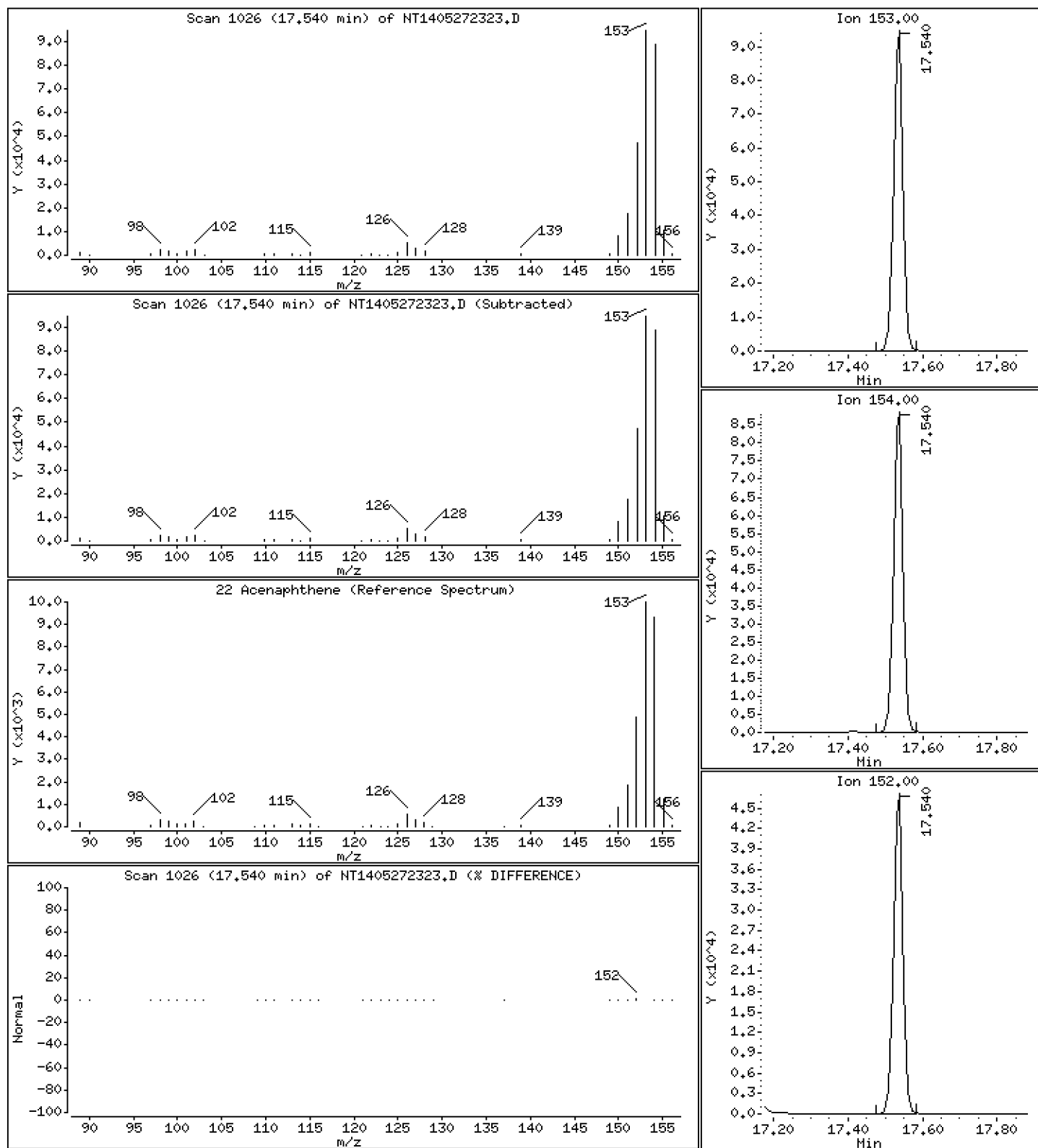
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

22 Acenaphthene

Concentration: 2.417 ug/mL



Instrument: nt14.i

Operator: VTS

Column diameter: 0.25

Concentration: 2.499 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

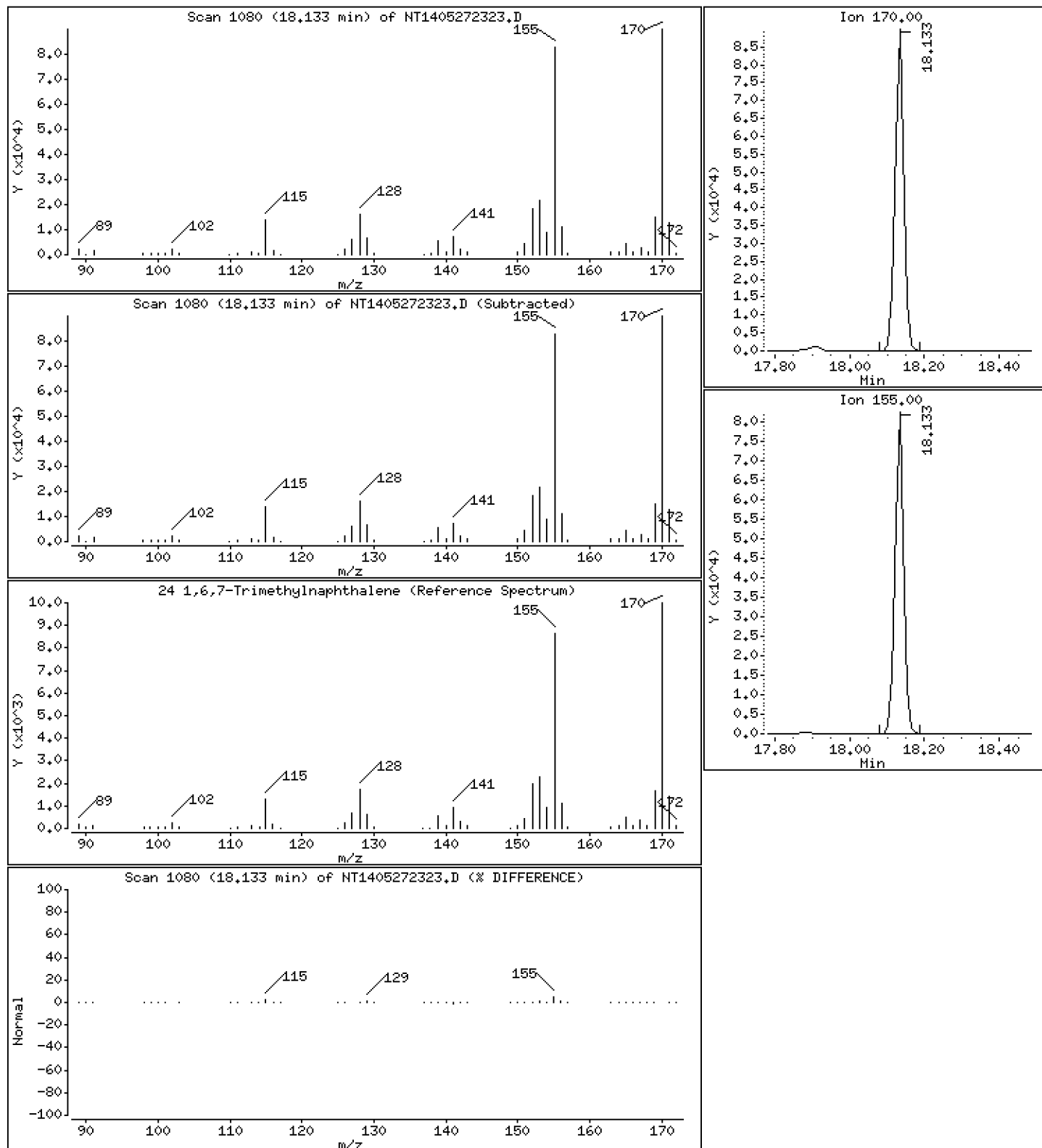
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

24 1,6,7-Trimethylnaphthalene

Concentration: 2.463 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

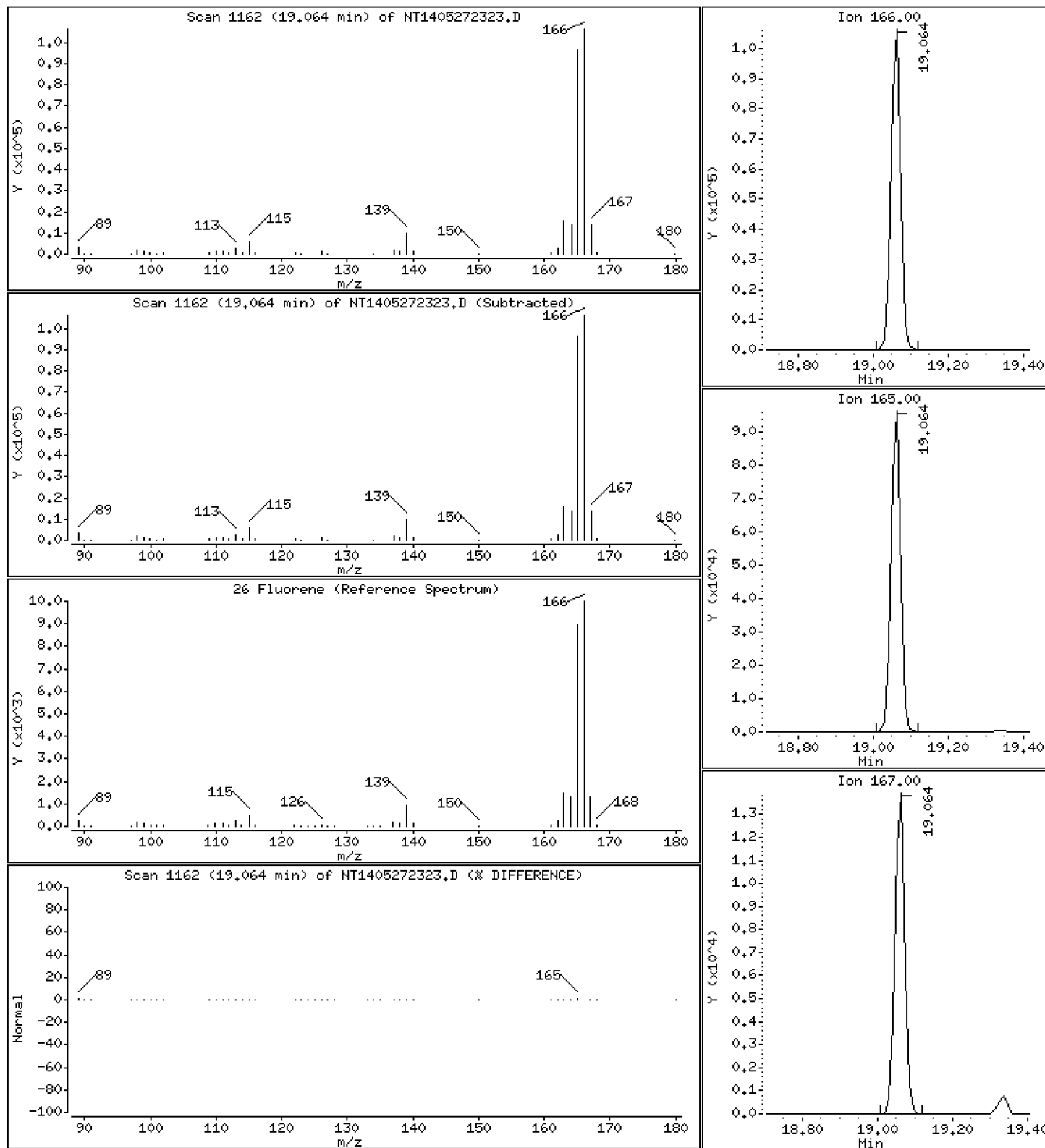
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

26 Fluorene

Concentration: 2.469 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

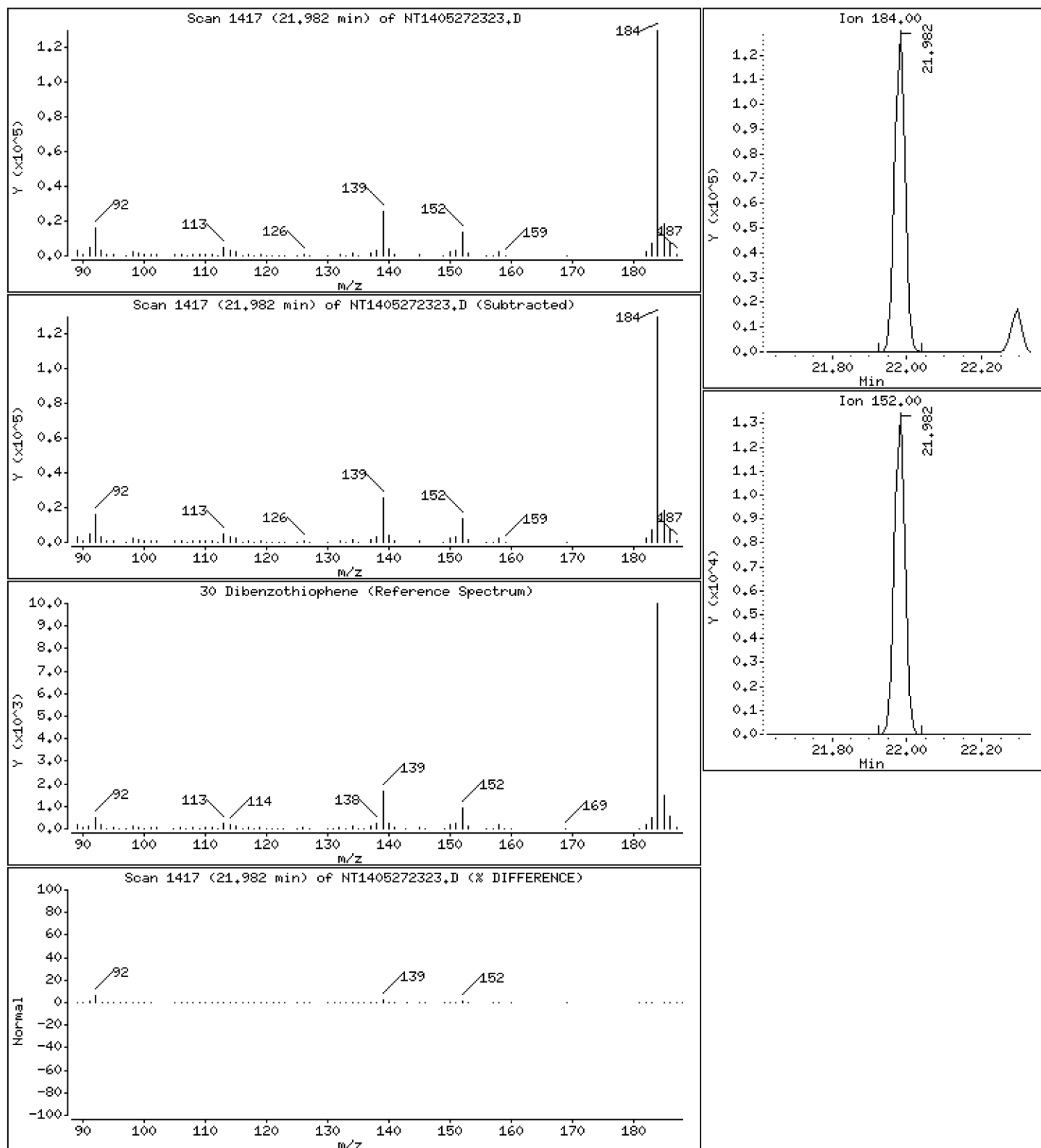
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

30 Dibenzothiophene

Concentration: 2.513 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

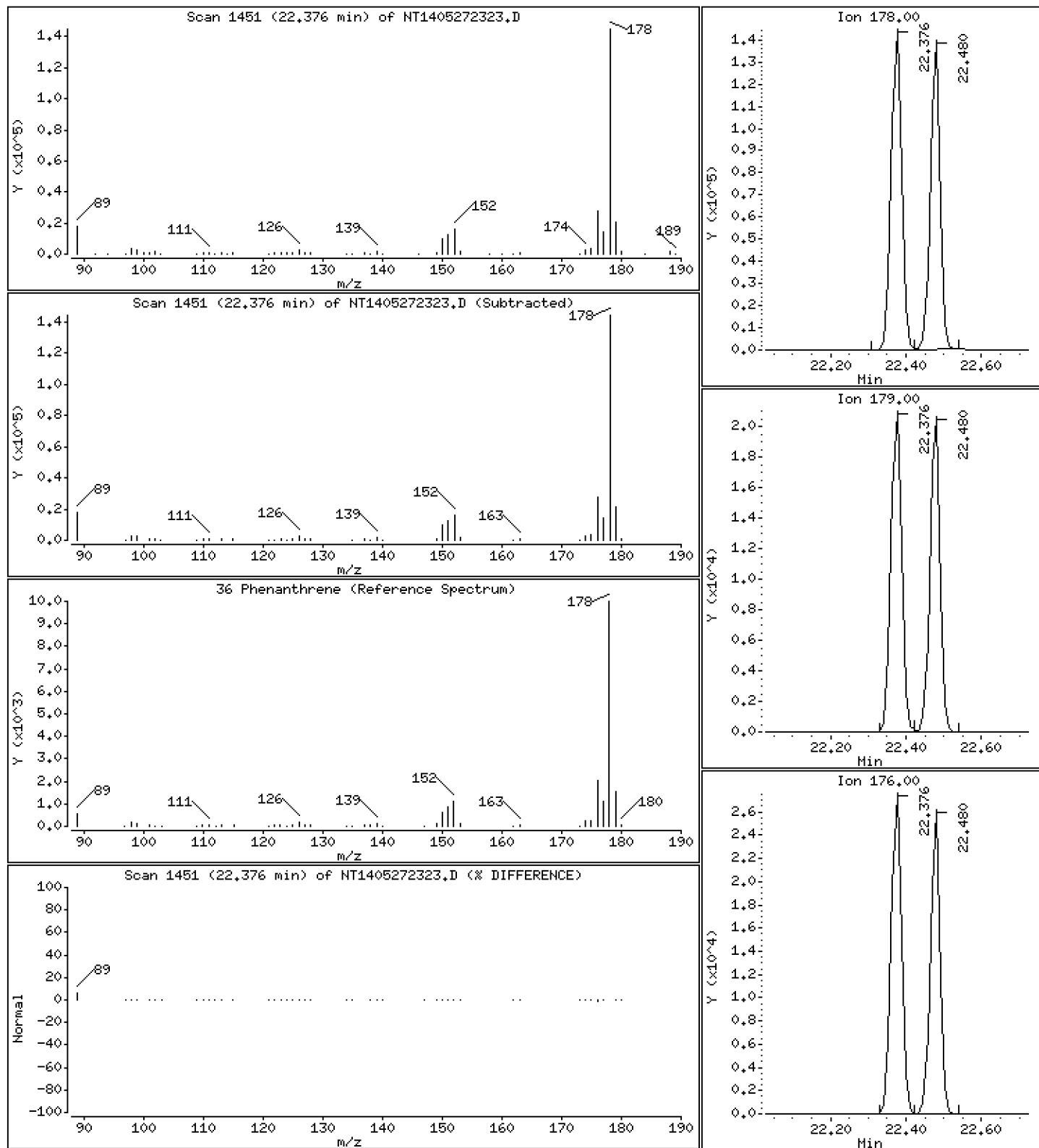
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

36 Phenanthrene

Concentration: 2.433 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

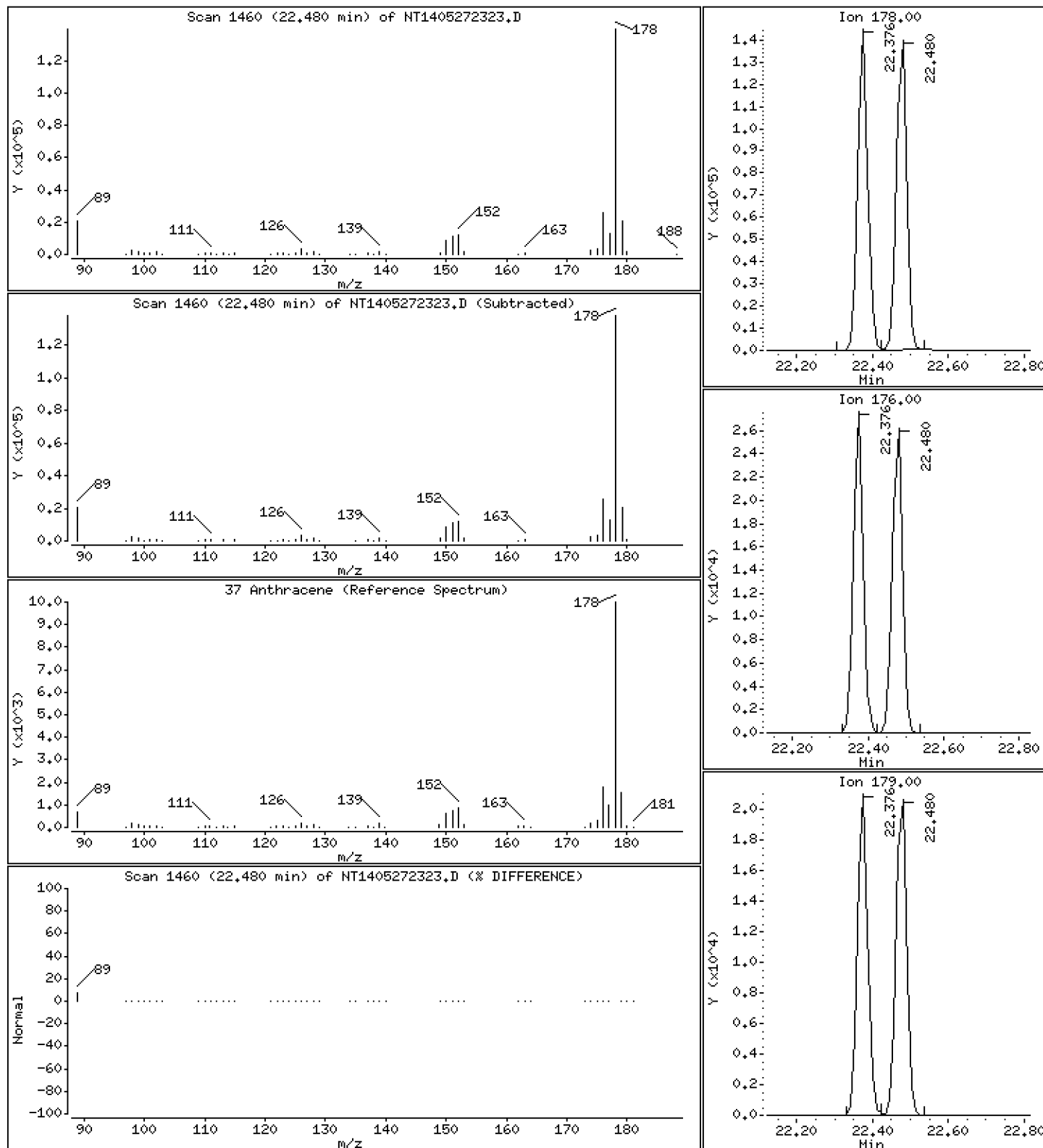
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

37 Anthracene

Concentration: 2.494 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

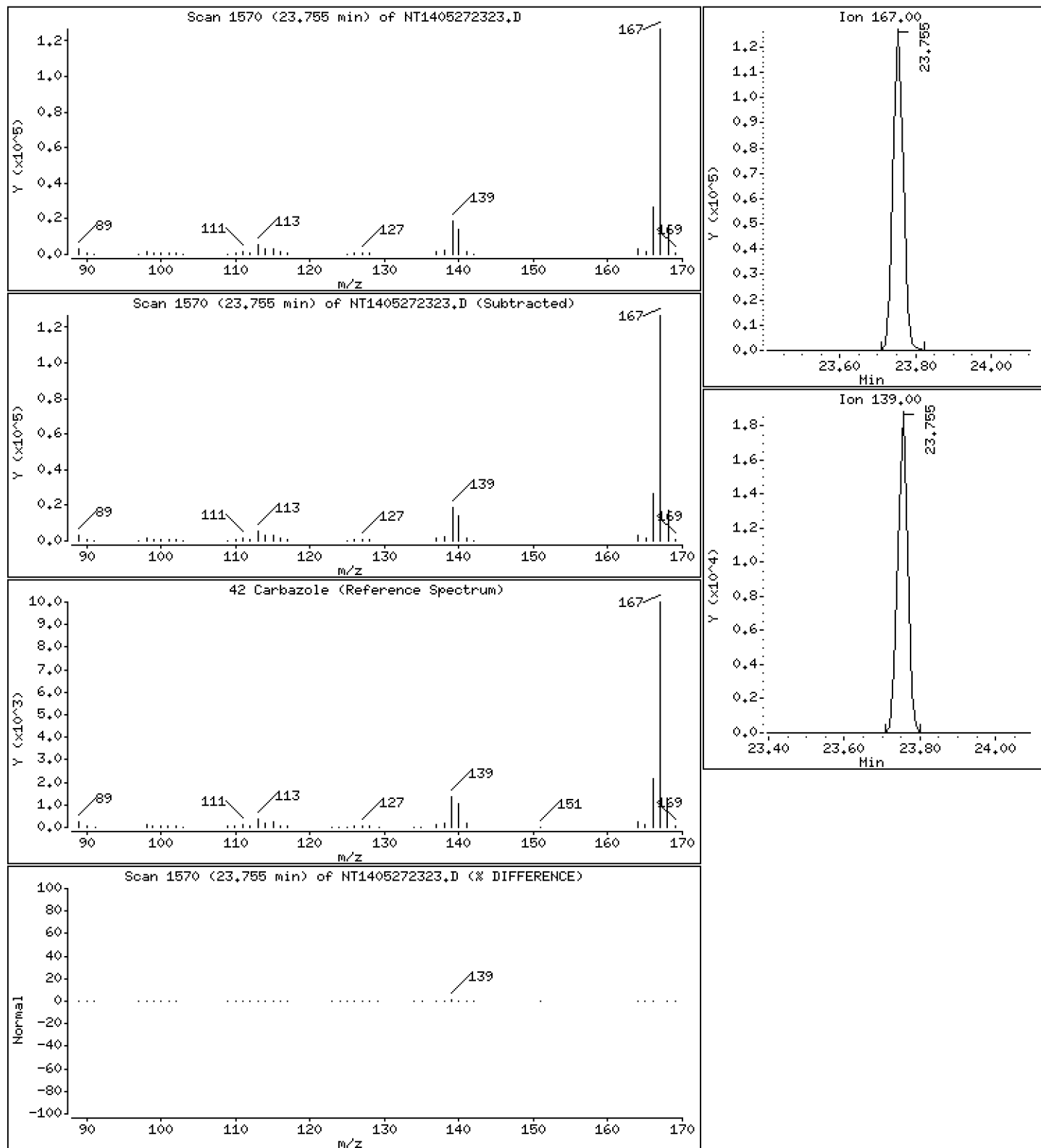
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

42 Carbazole

Concentration: 2.418 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

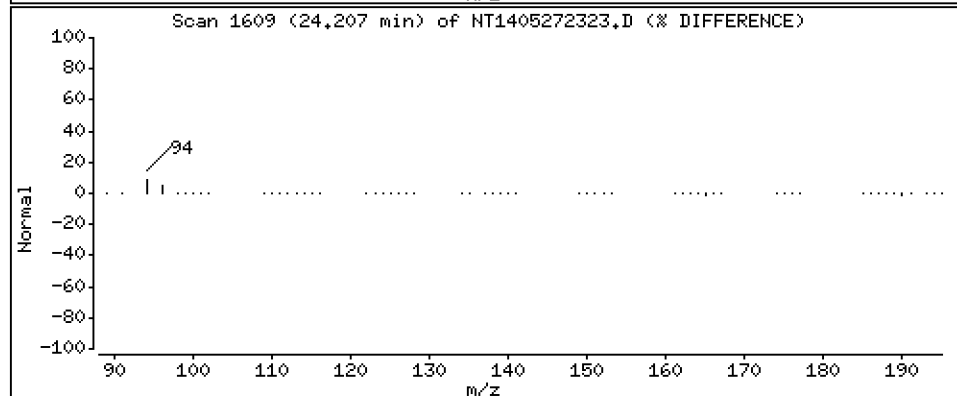
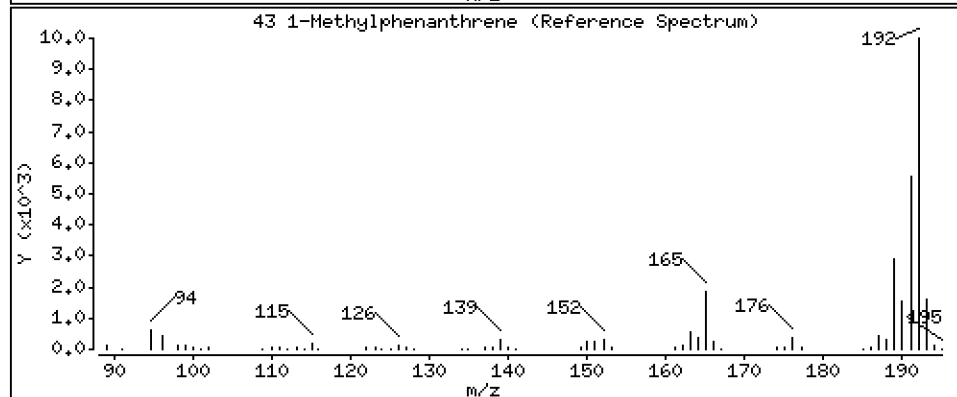
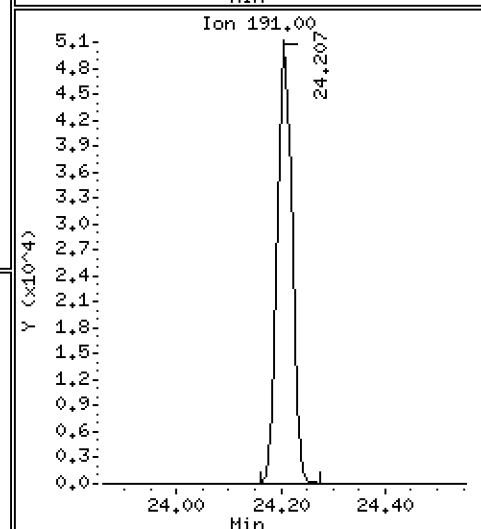
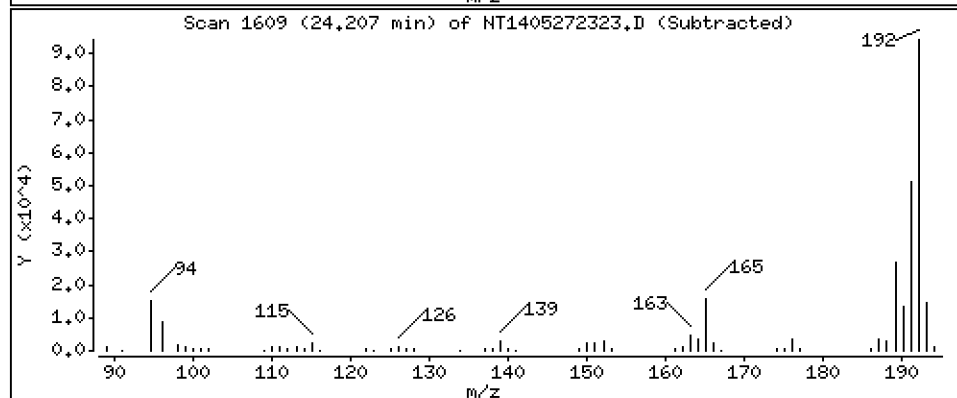
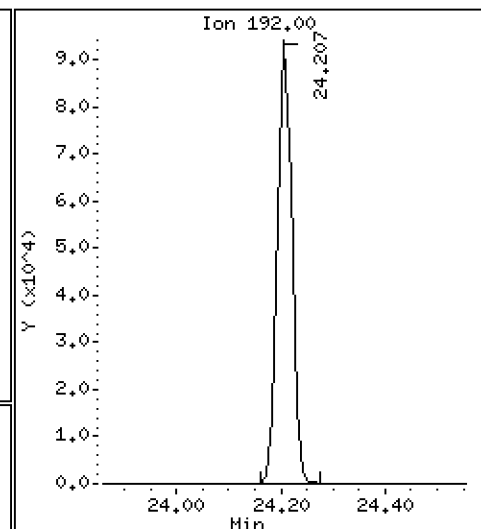
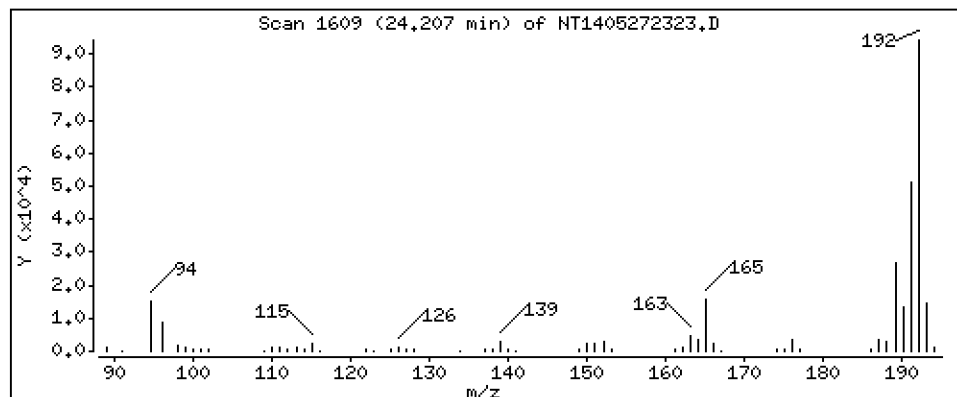
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

43 1-Methylphenanthrene

Concentration: 2.447 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

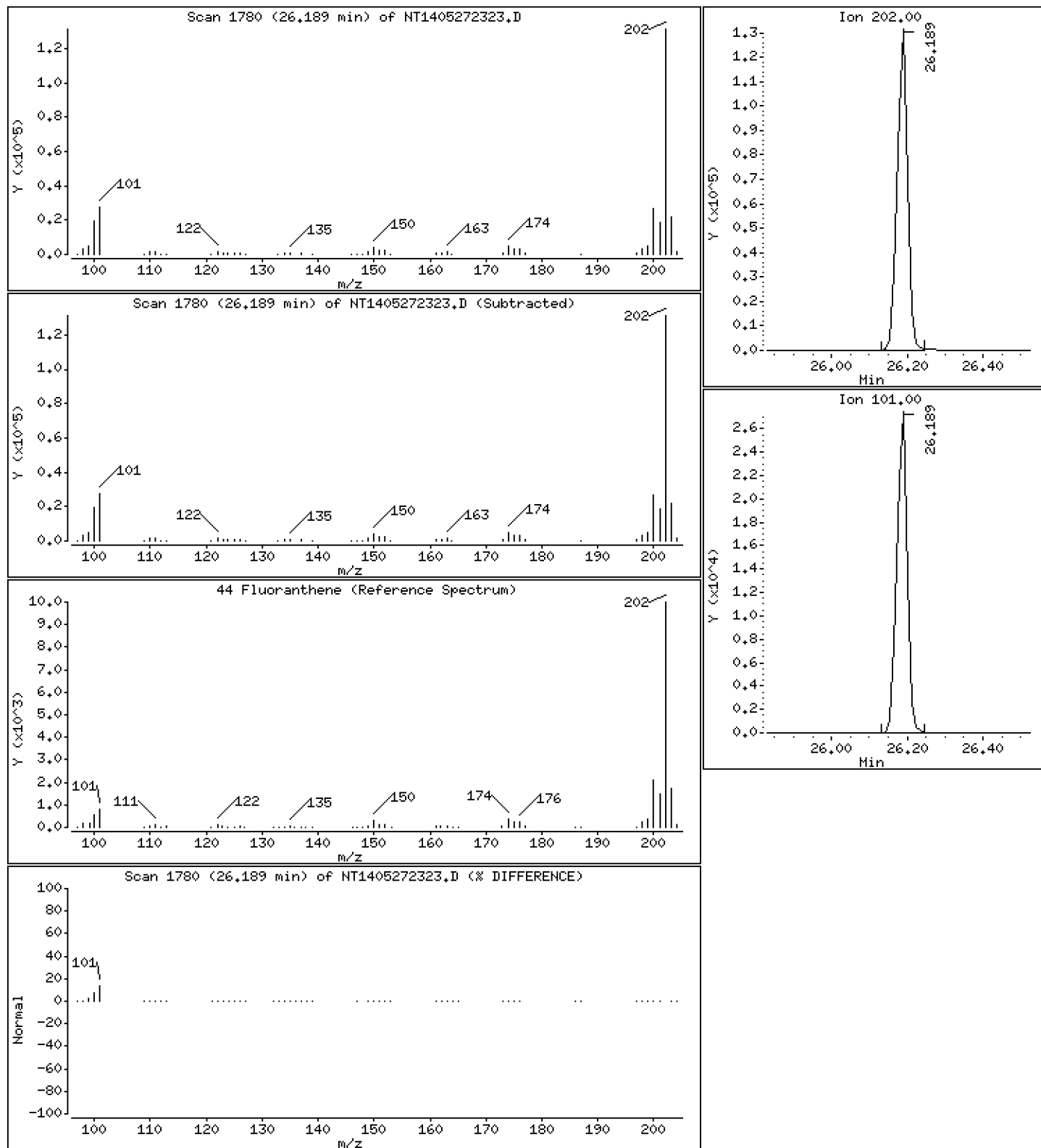
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

44 Fluoranthene

Concentration: 2.457 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

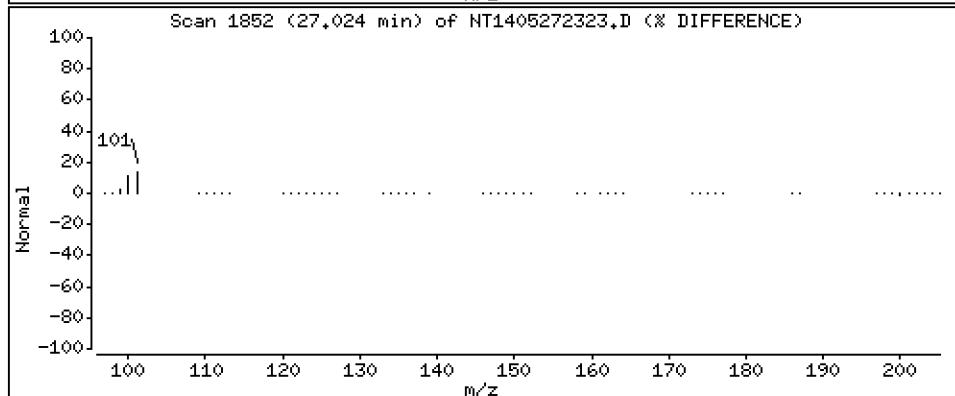
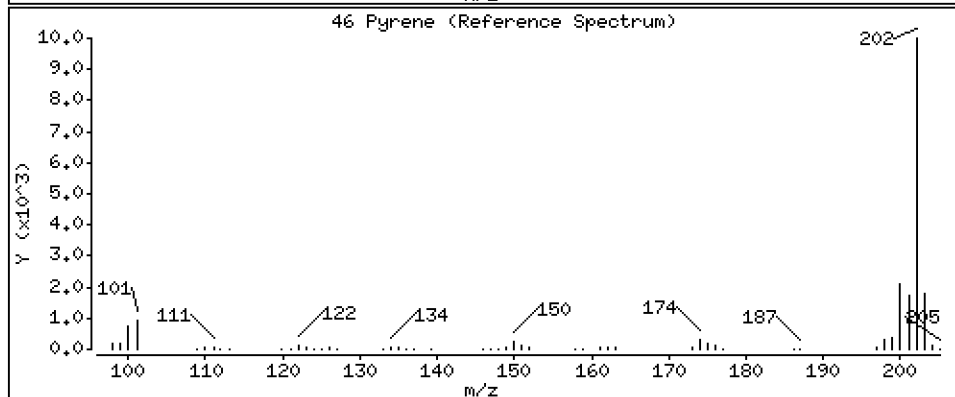
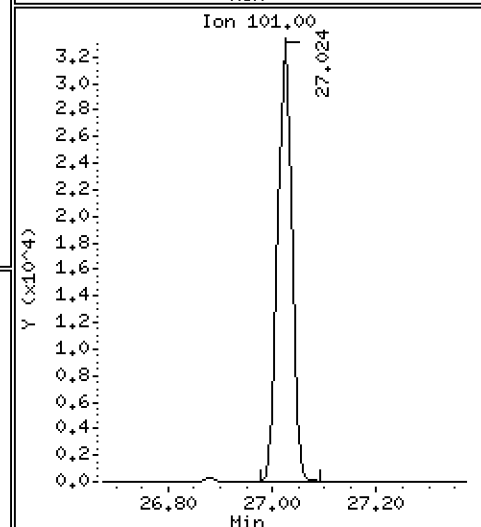
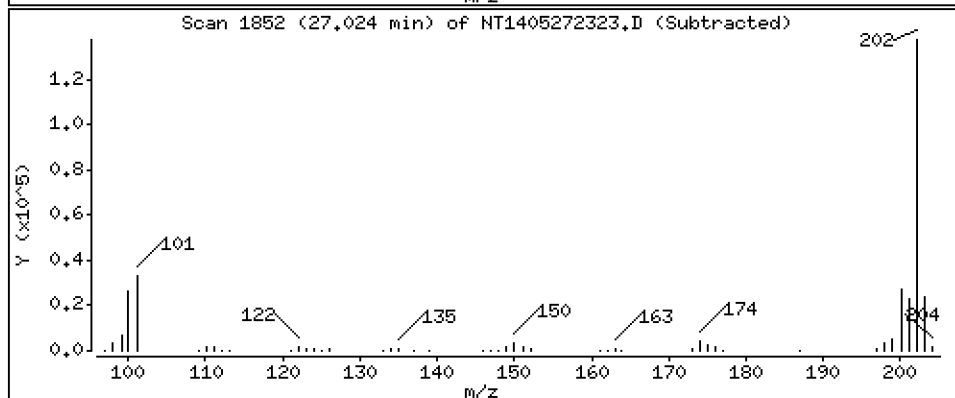
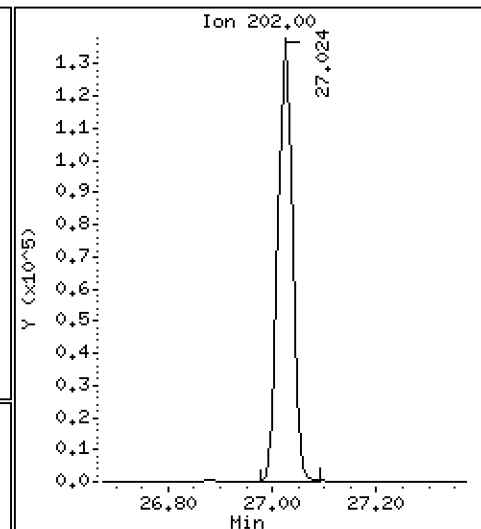
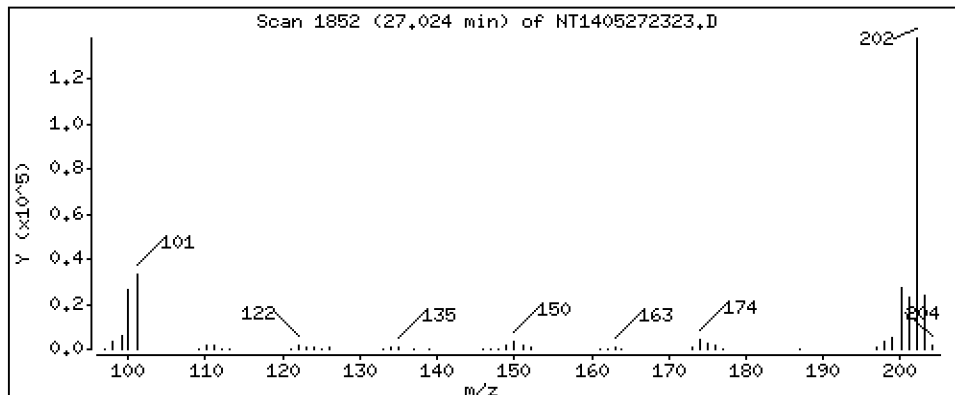
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

46 Pyrene

Concentration: 2.461 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

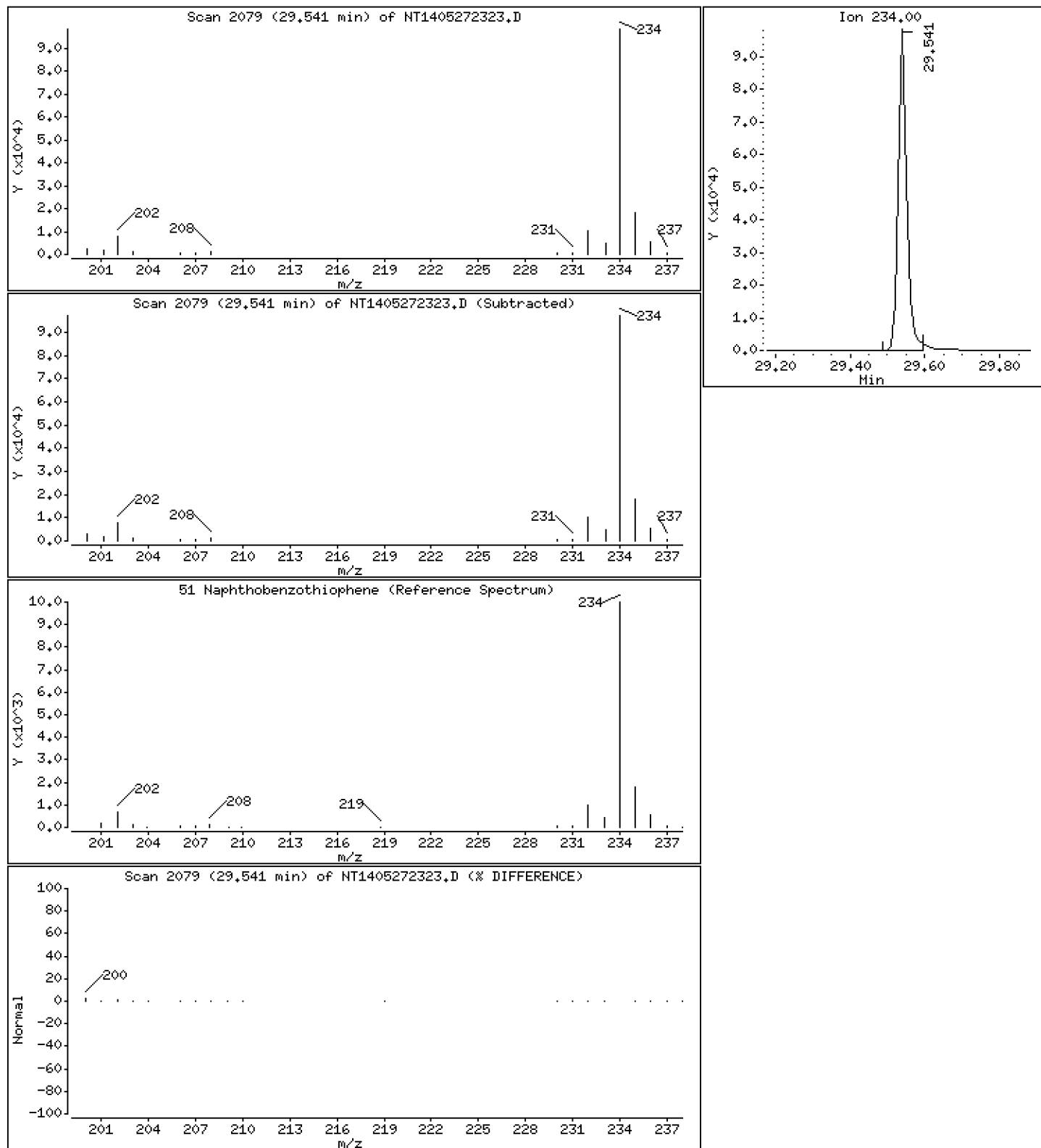
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

51 Naphthobenzothiophene

Concentration: 2.463 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

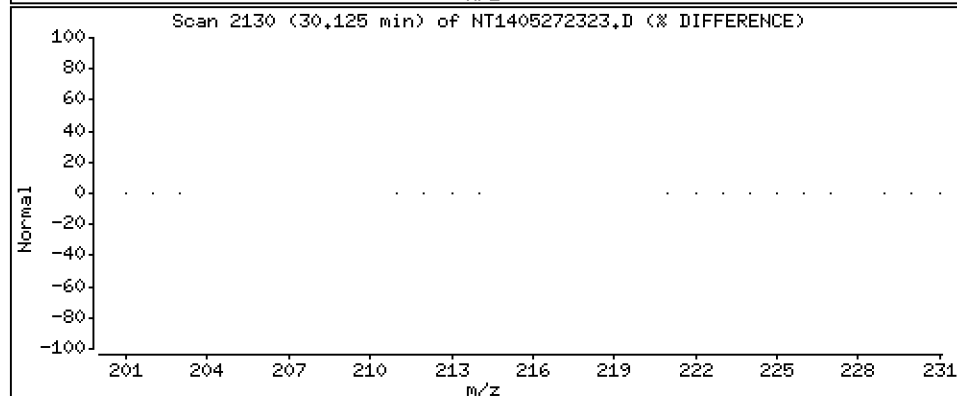
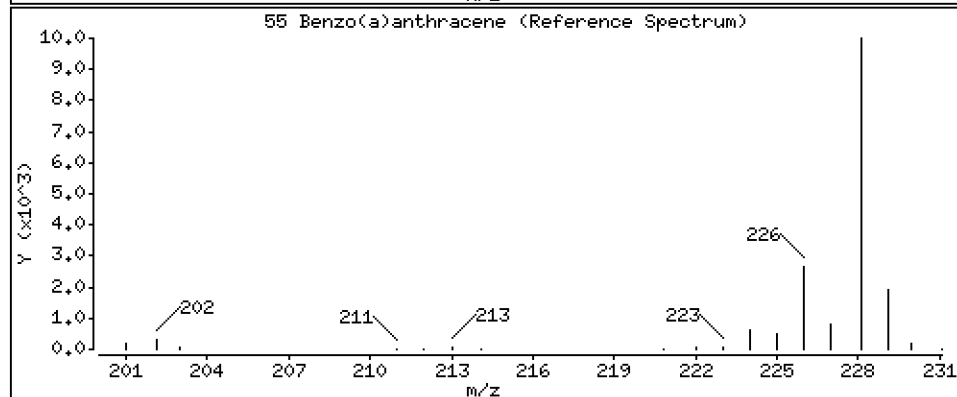
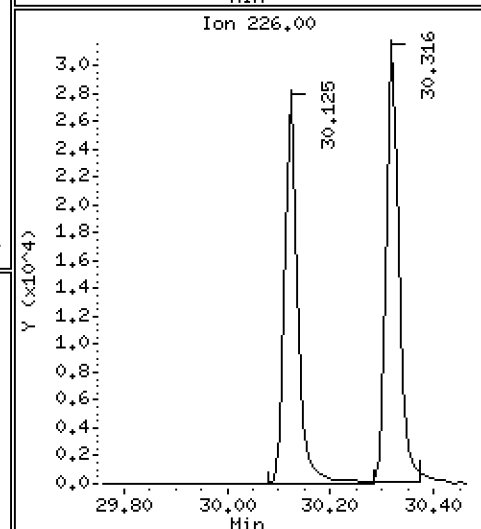
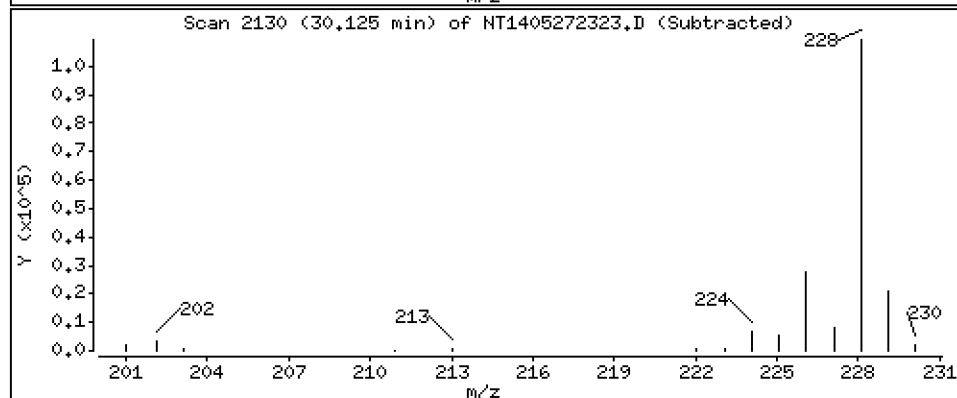
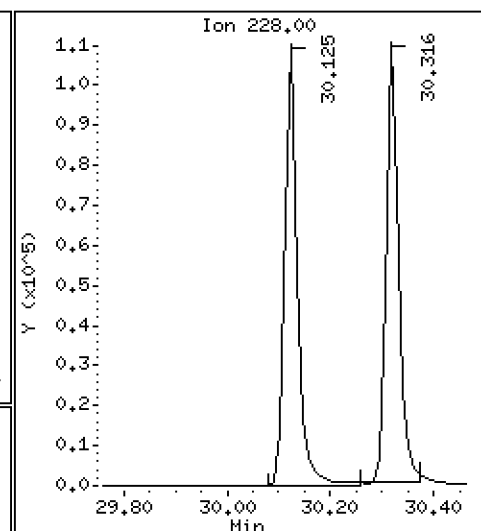
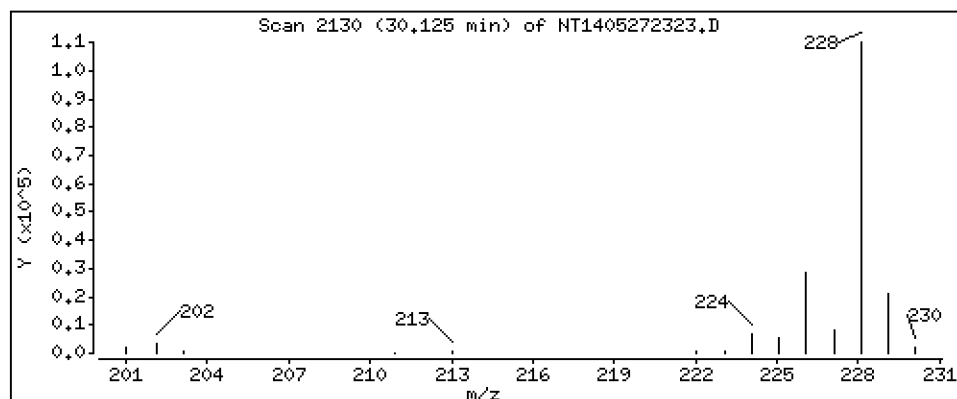
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

55 Benzo(a)anthracene

Concentration: 2.587 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

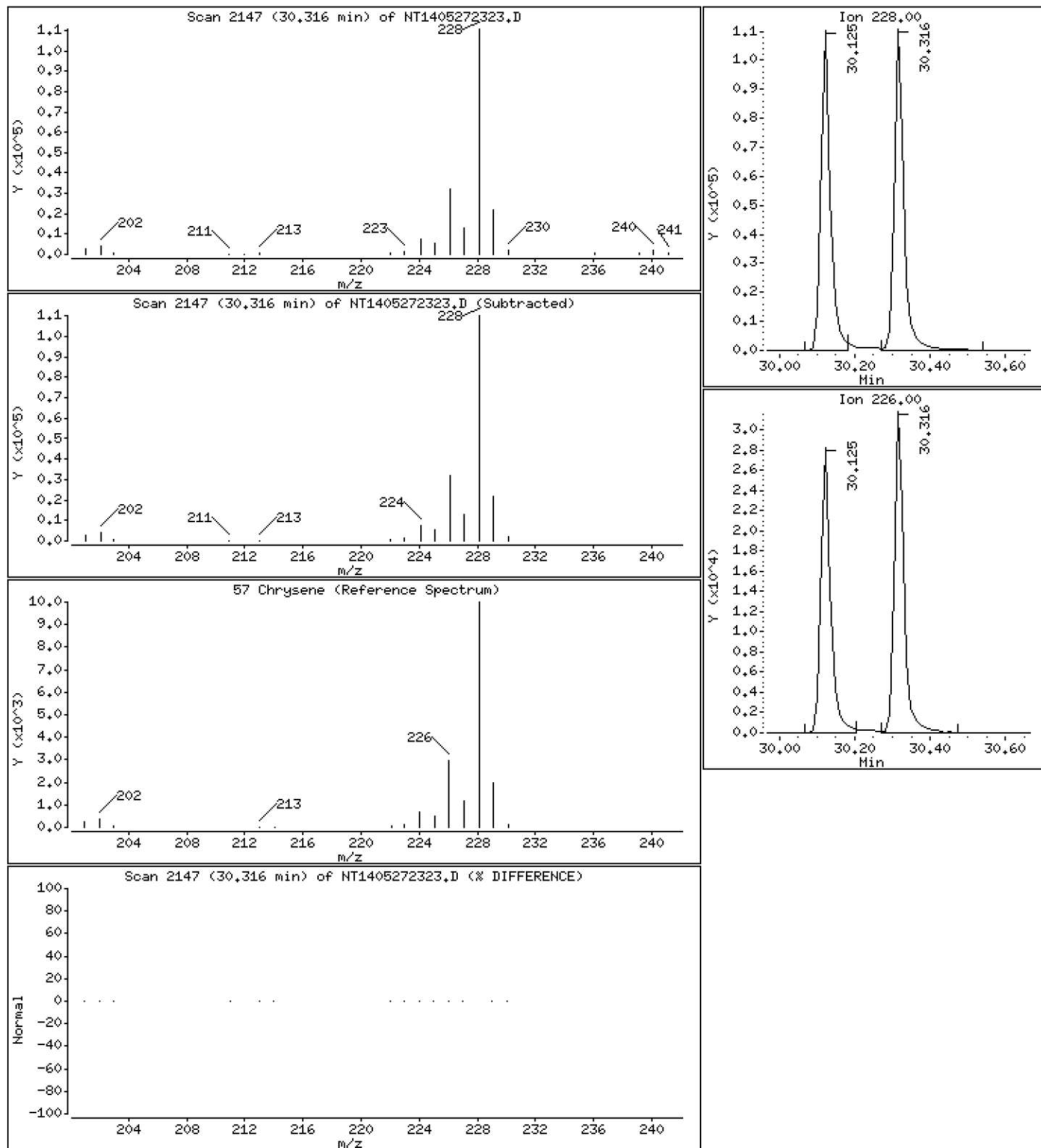
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

57 Chrysene

Concentration: 2.698 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

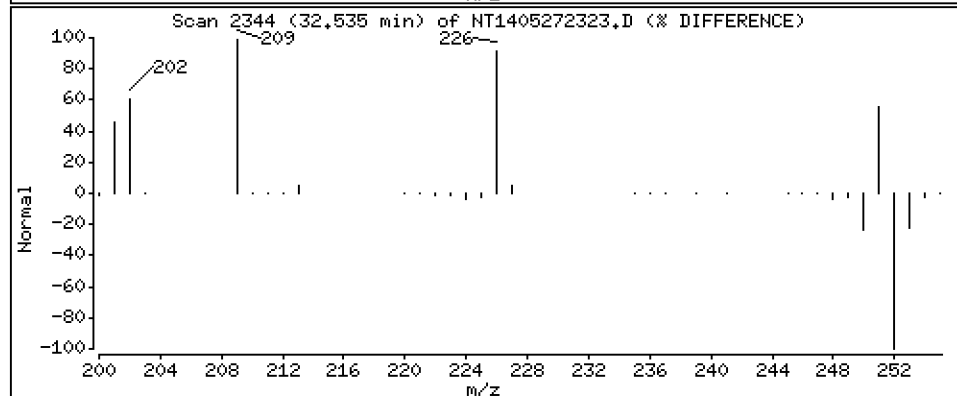
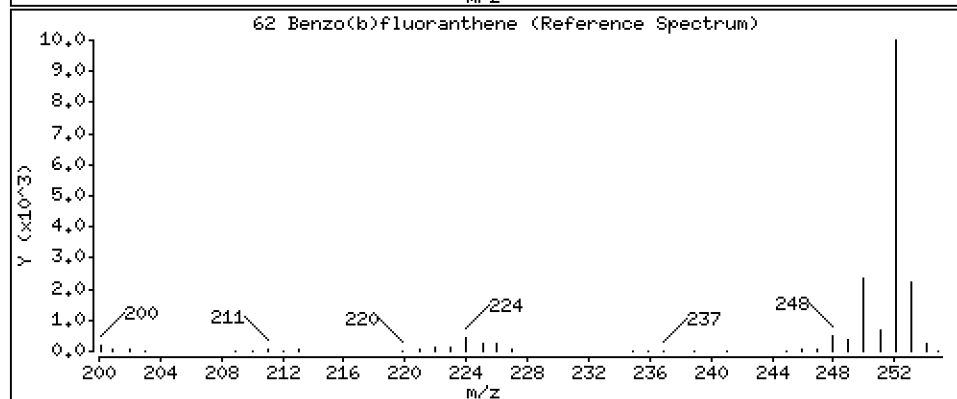
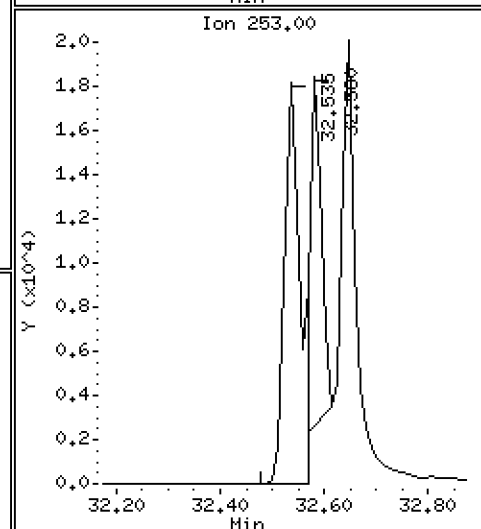
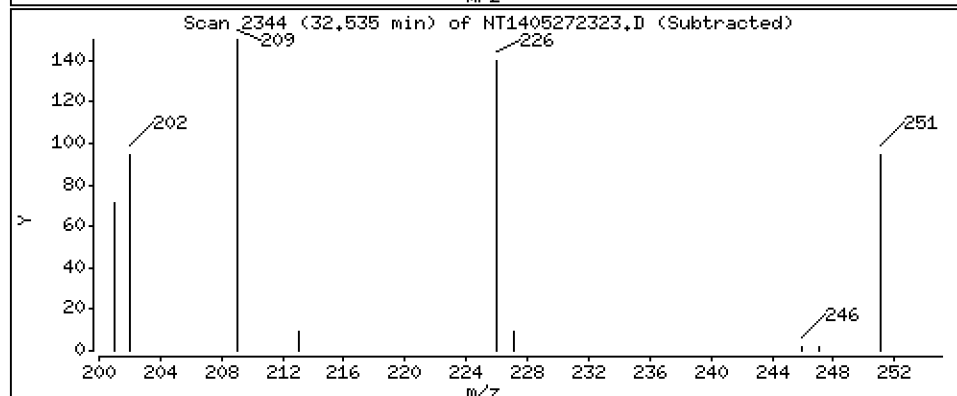
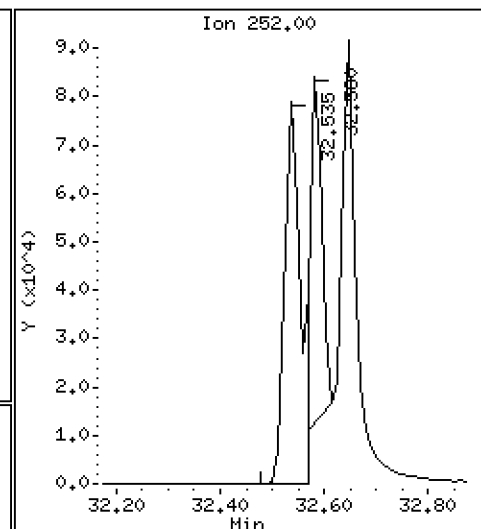
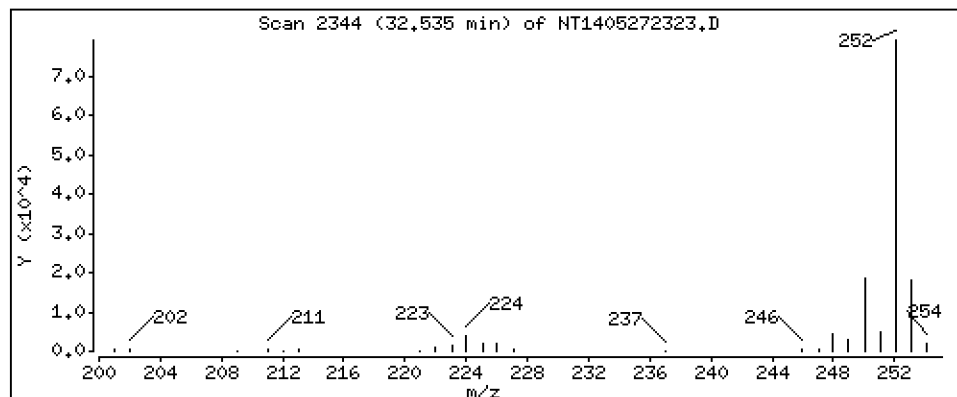
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

62 Benzo(b)fluoranthene

Concentration: 2.447 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

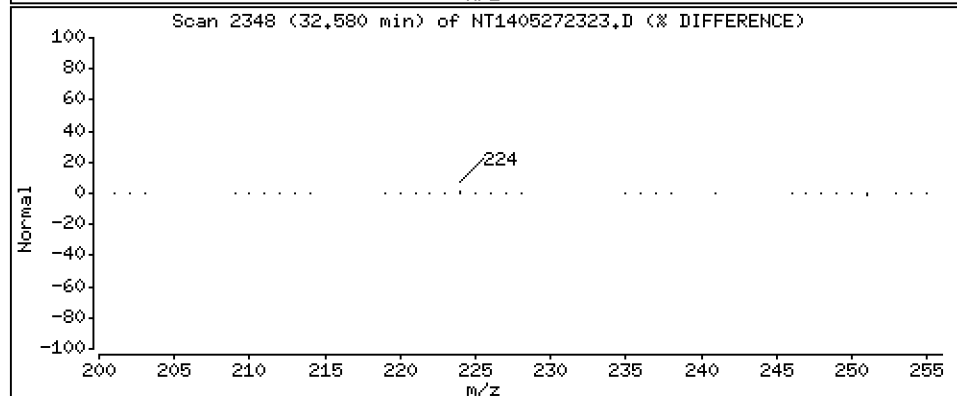
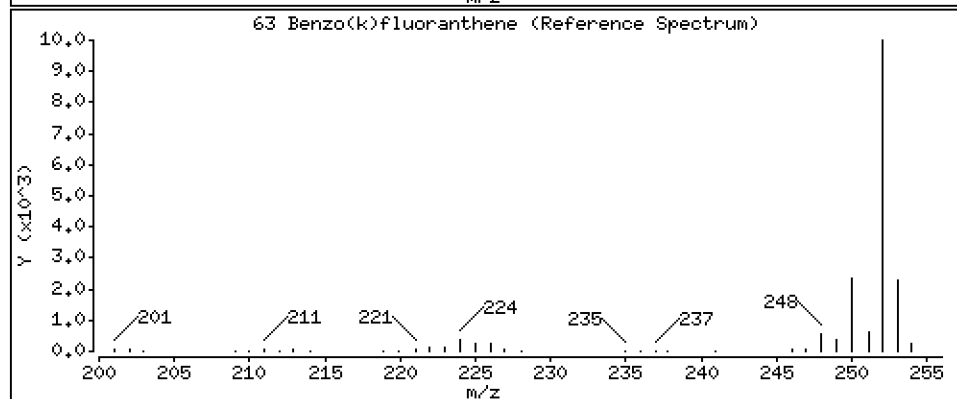
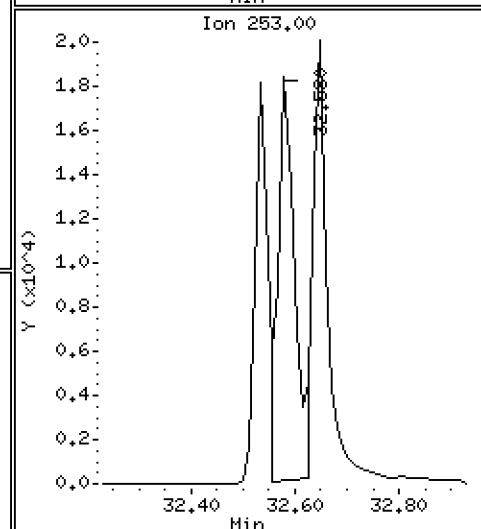
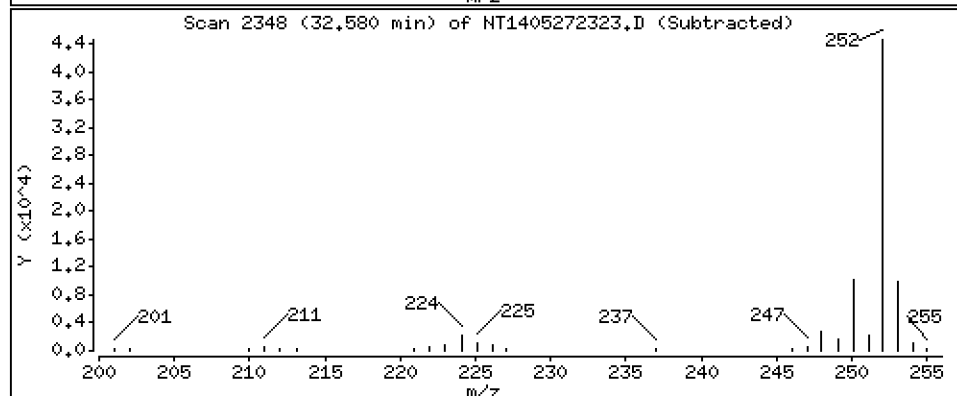
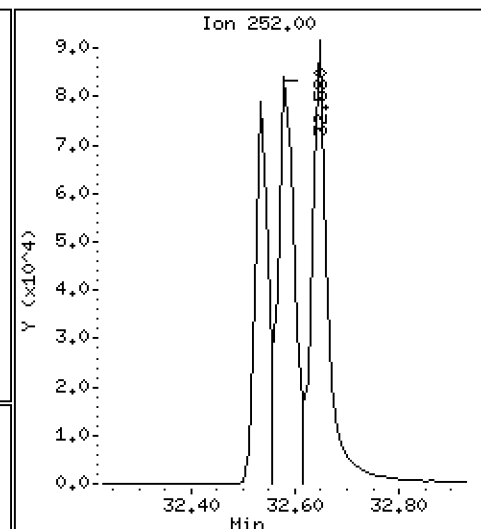
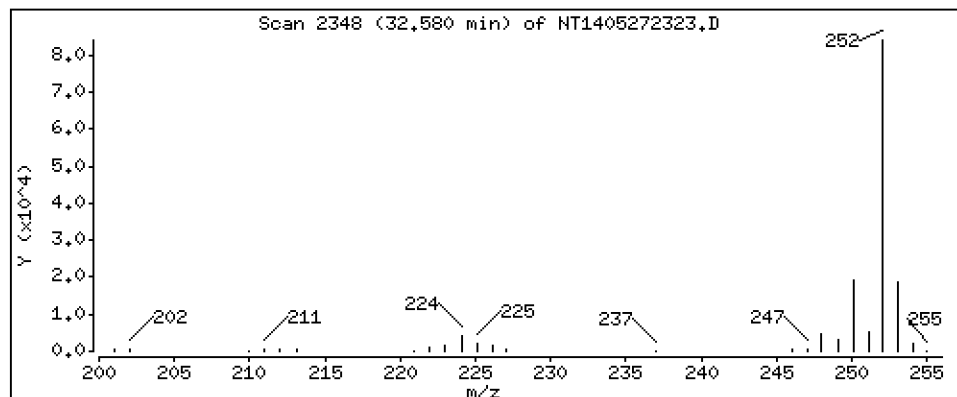
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

63 Benzo(k)fluoranthene

Concentration: 2,342 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

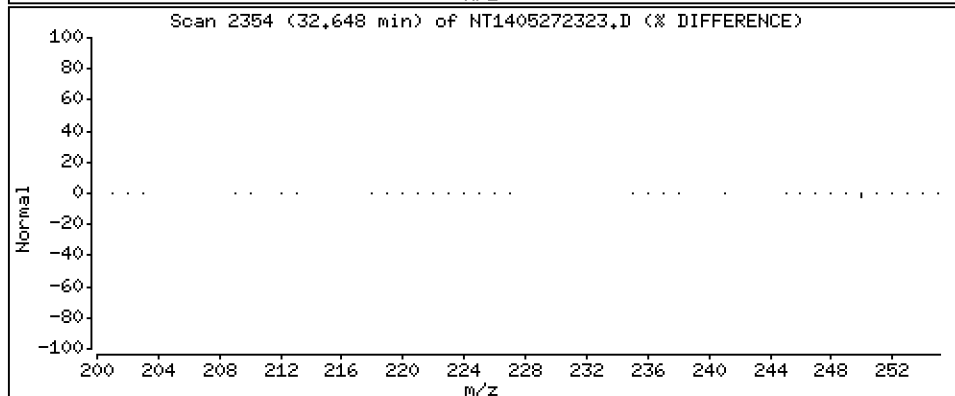
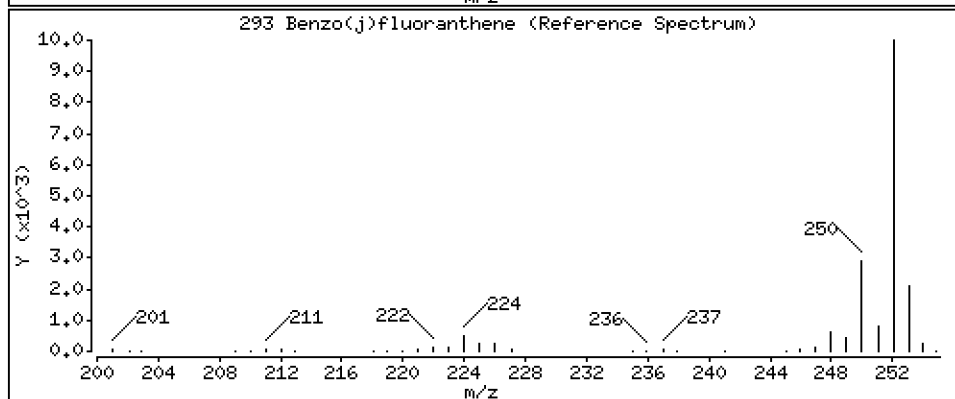
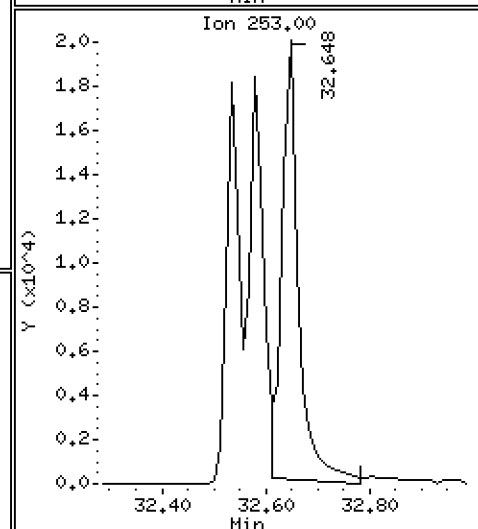
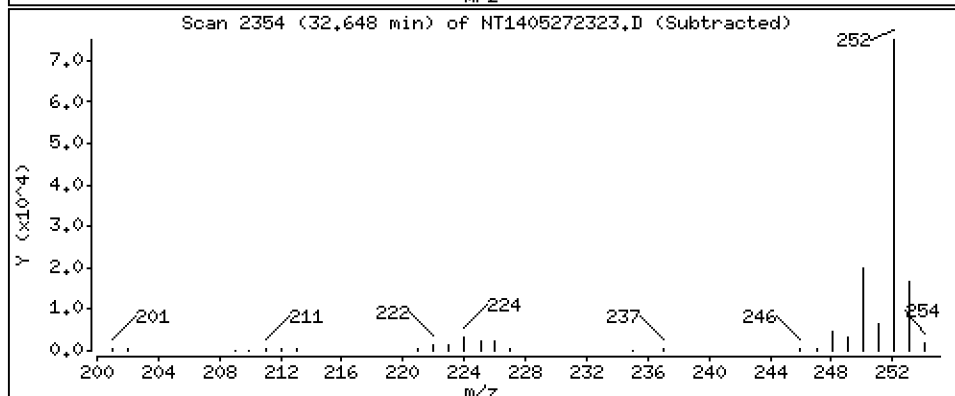
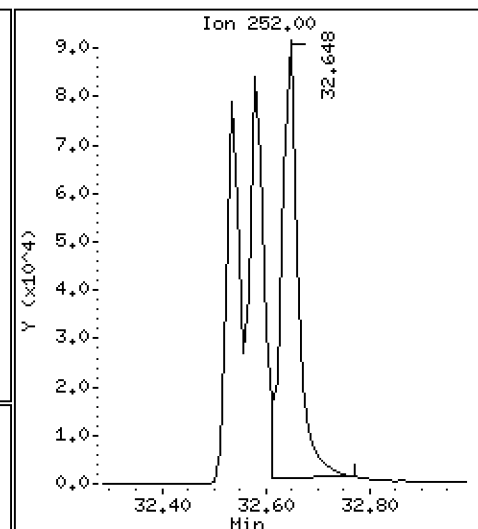
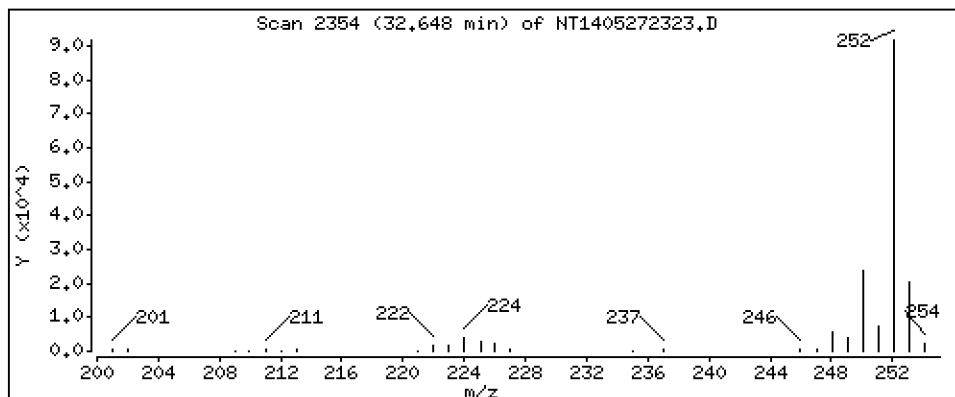
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

293 Benzo(j)fluoranthene

Concentration: 2.929 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

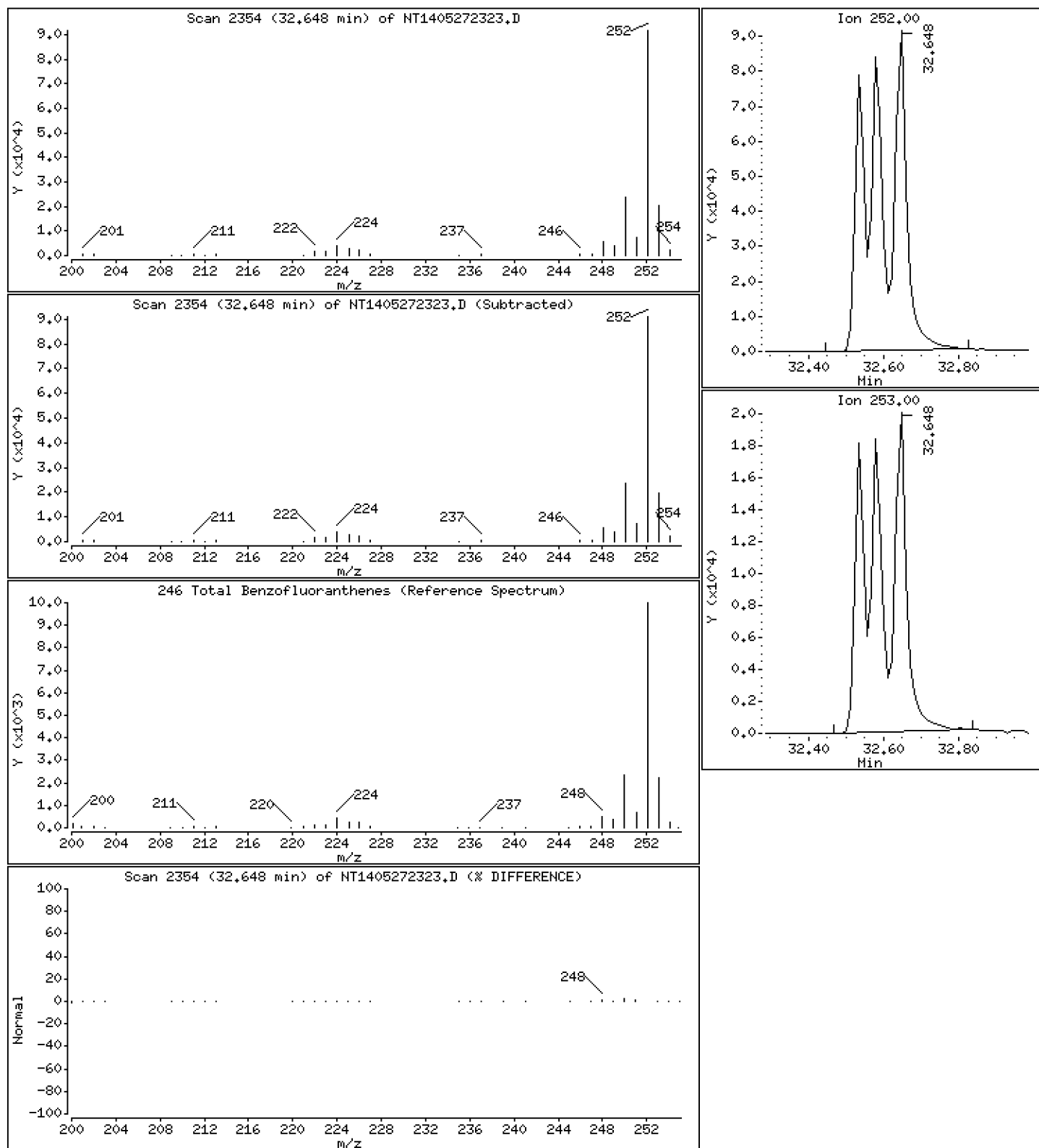
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

246 Total Benzo[fluoranthenes

Concentration: 7,639 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

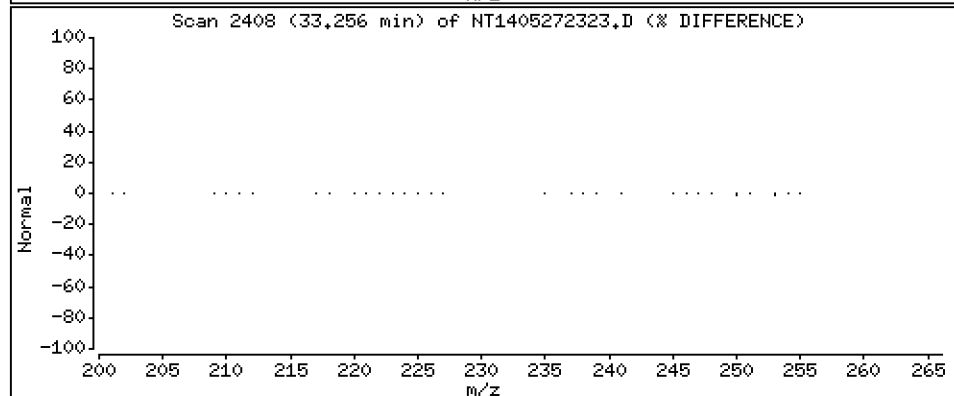
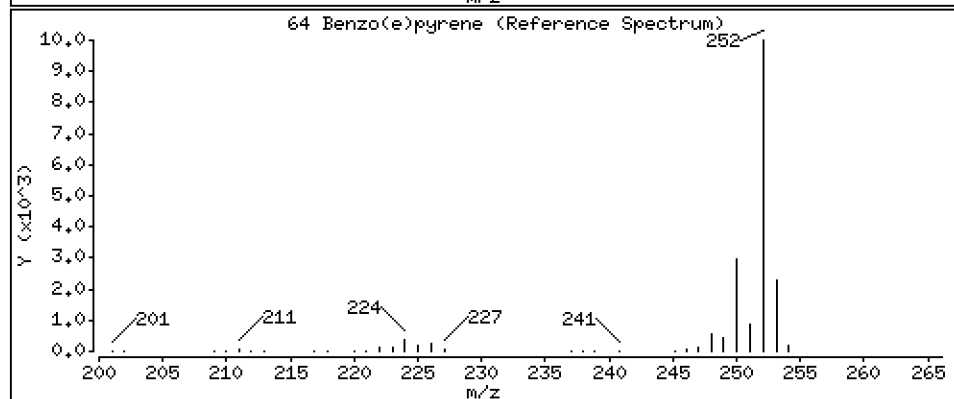
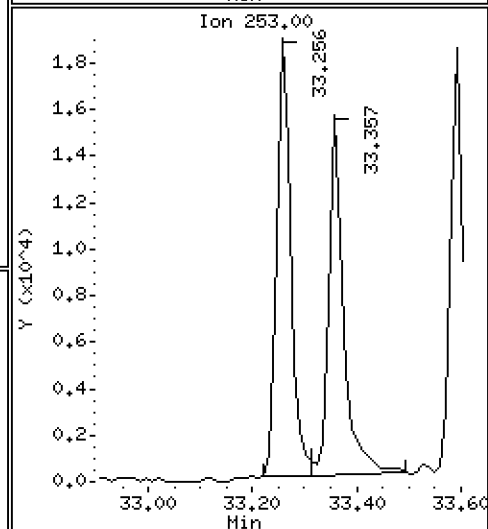
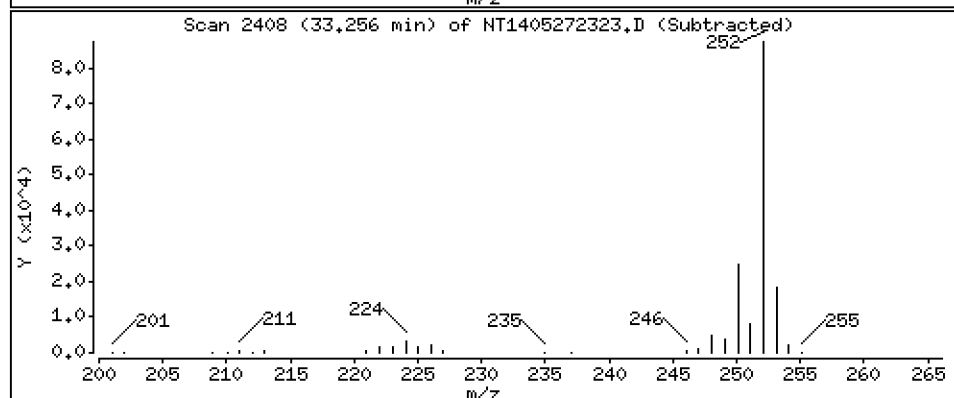
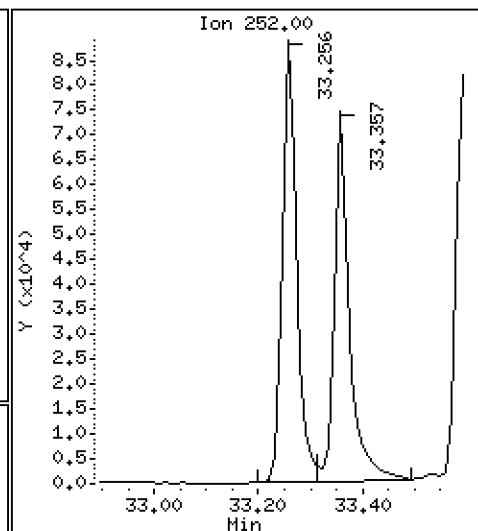
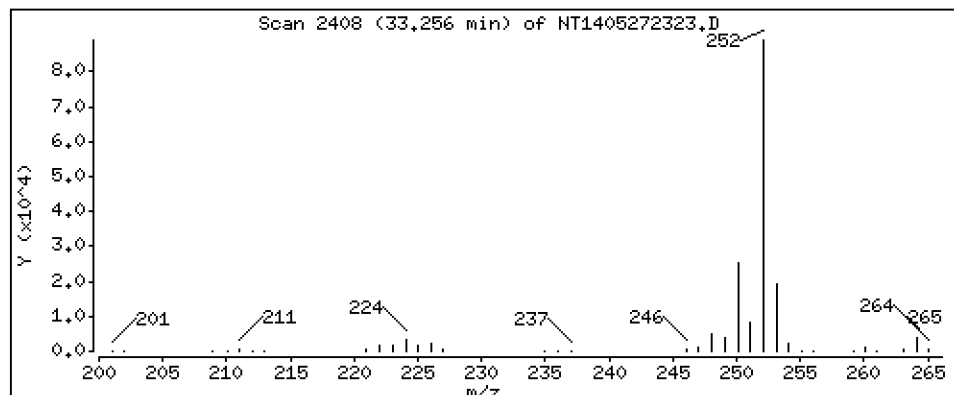
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

64 Benzo(e)pyrene

Concentration: 2.391 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

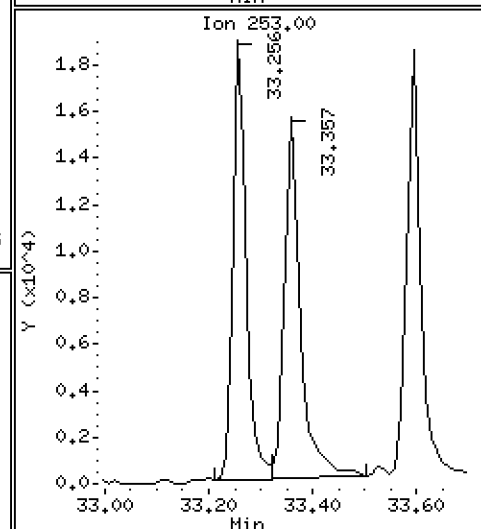
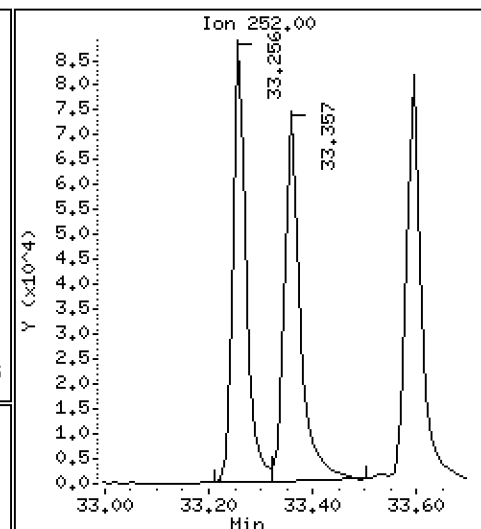
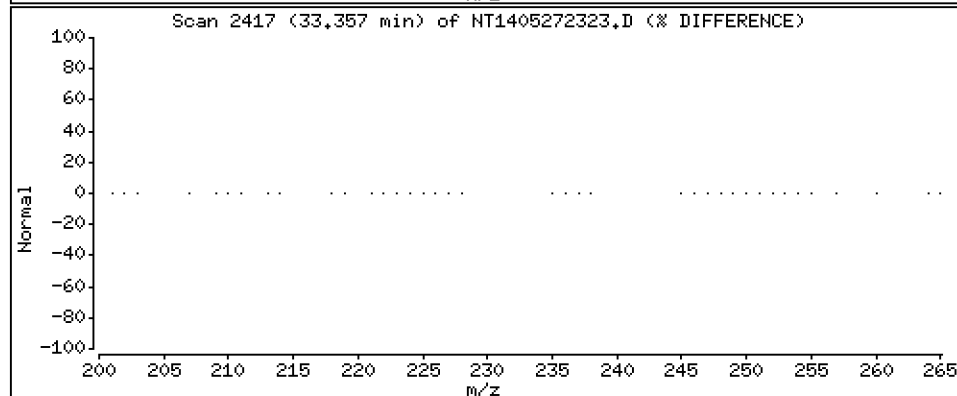
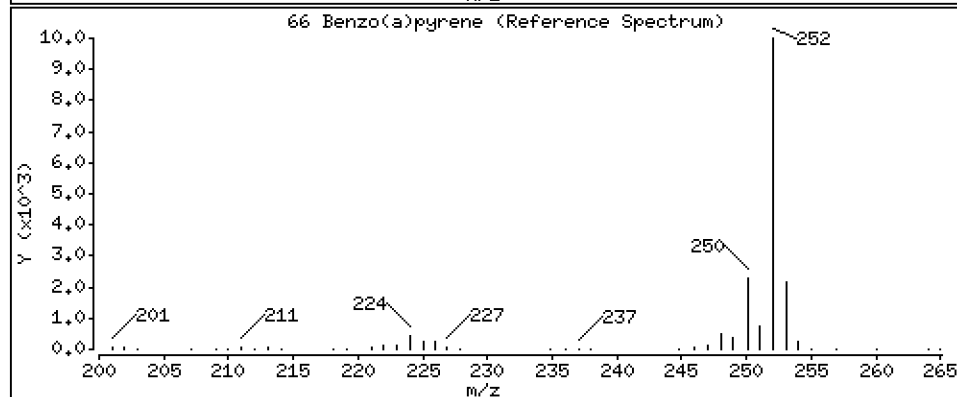
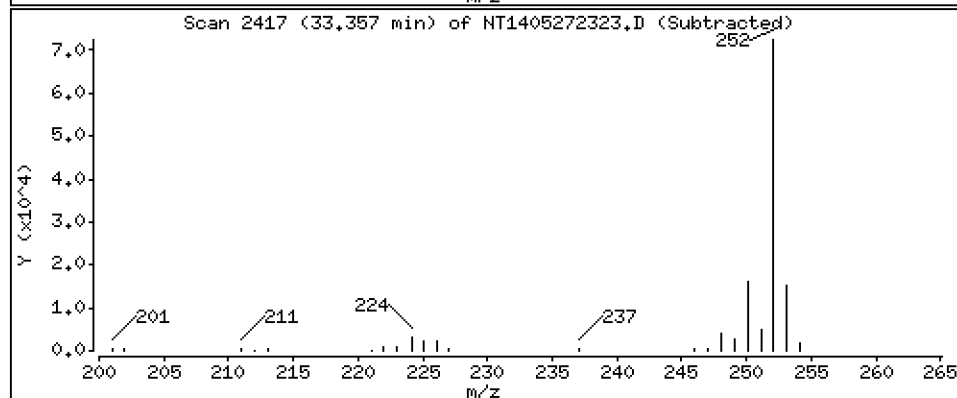
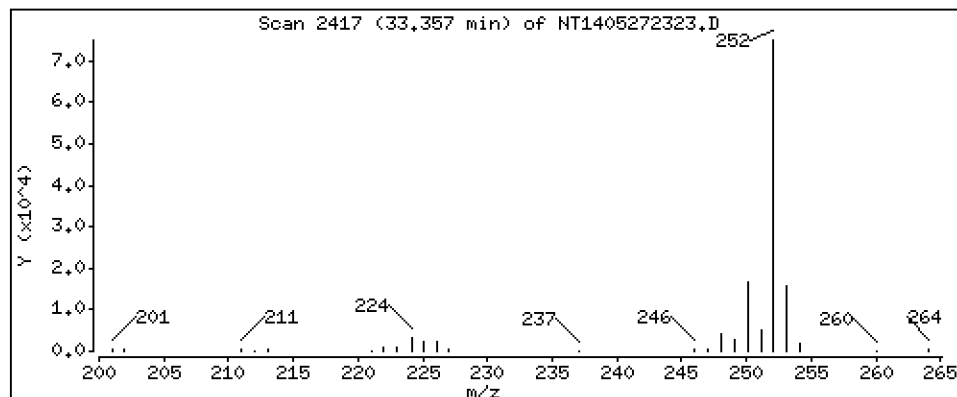
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

66 Benzo(a)pyrene

Concentration: 2.605 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

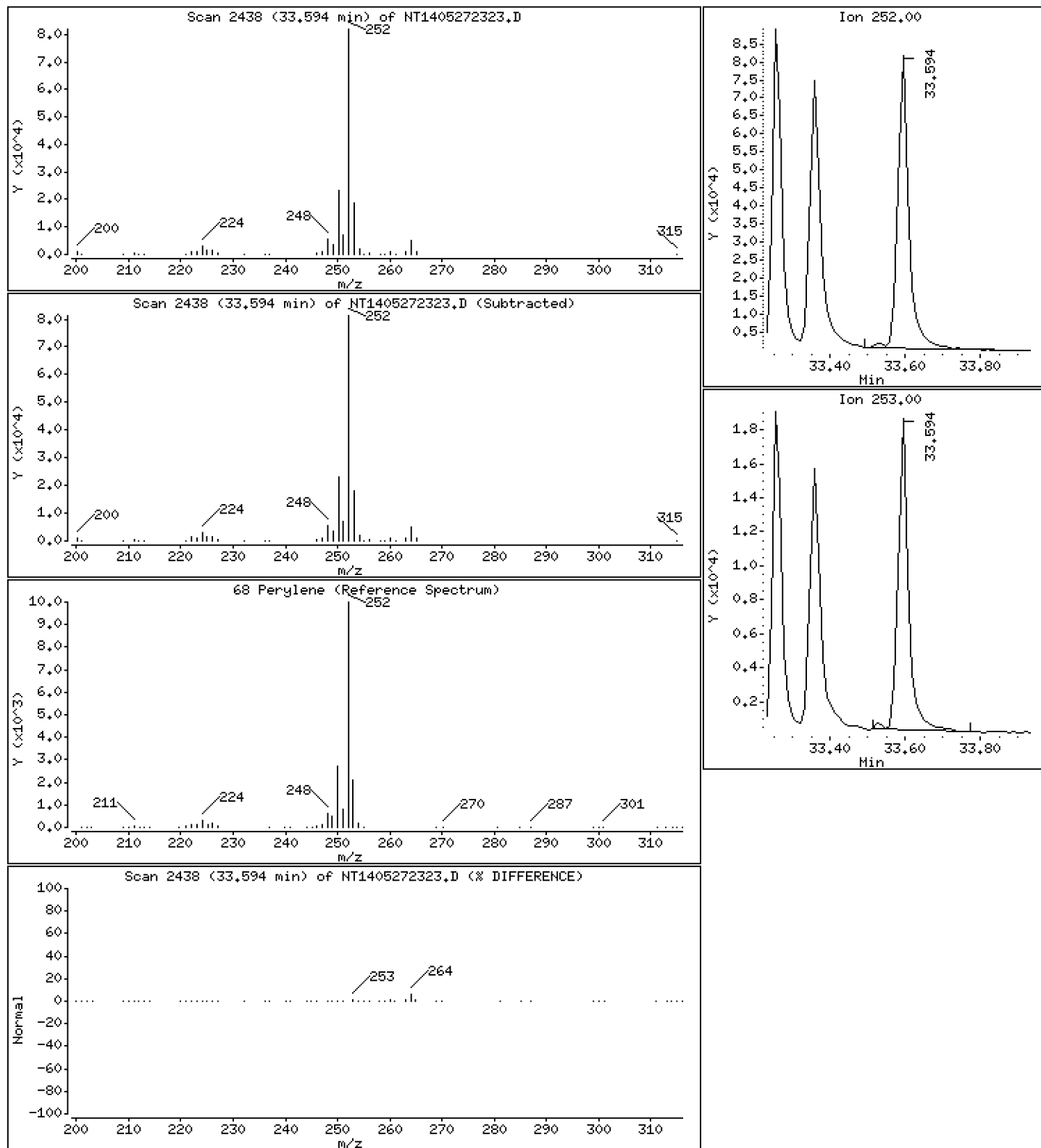
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

68 Perylene

Concentration: 2.646 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

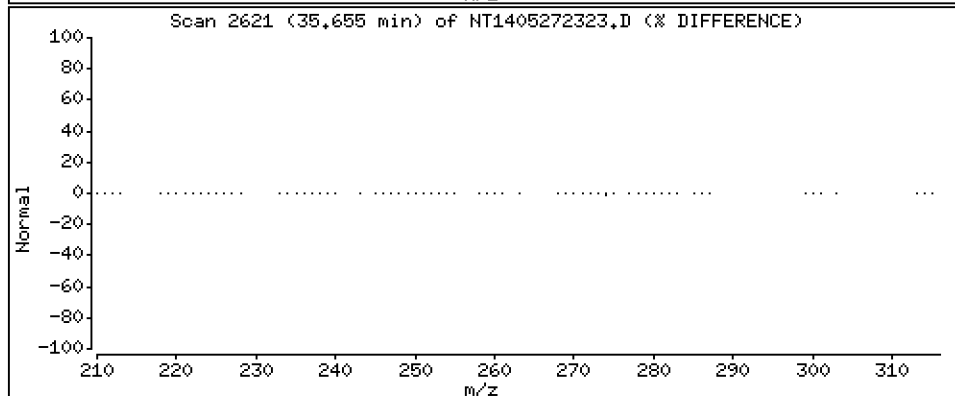
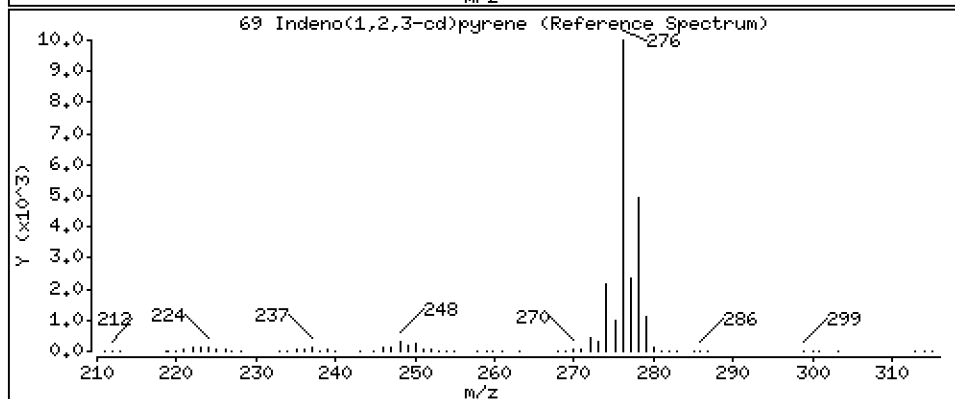
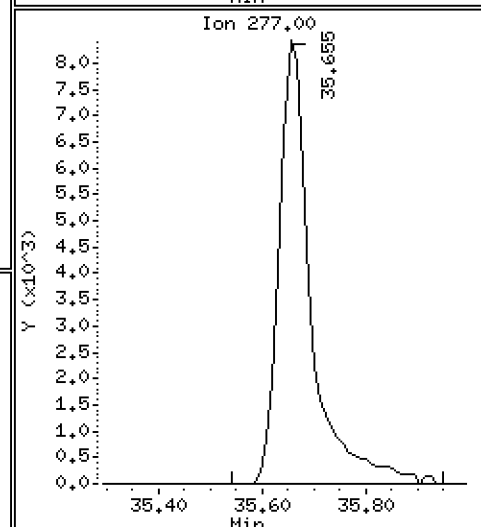
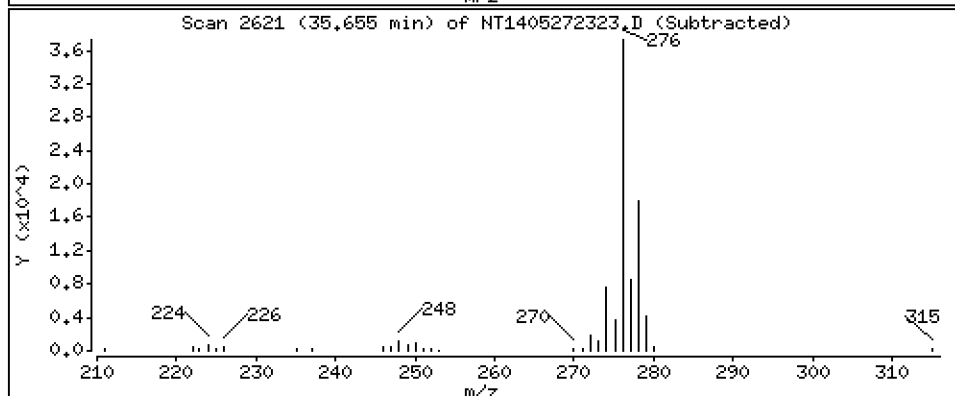
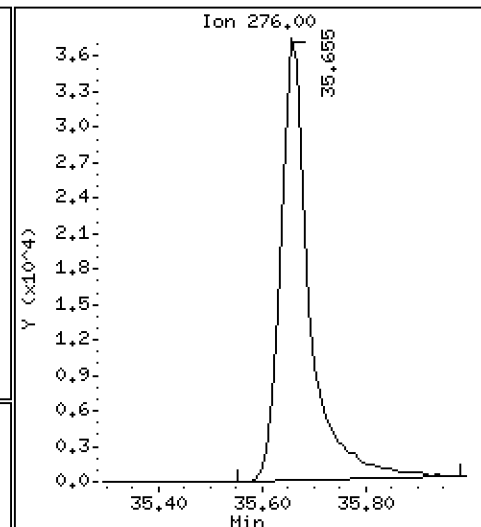
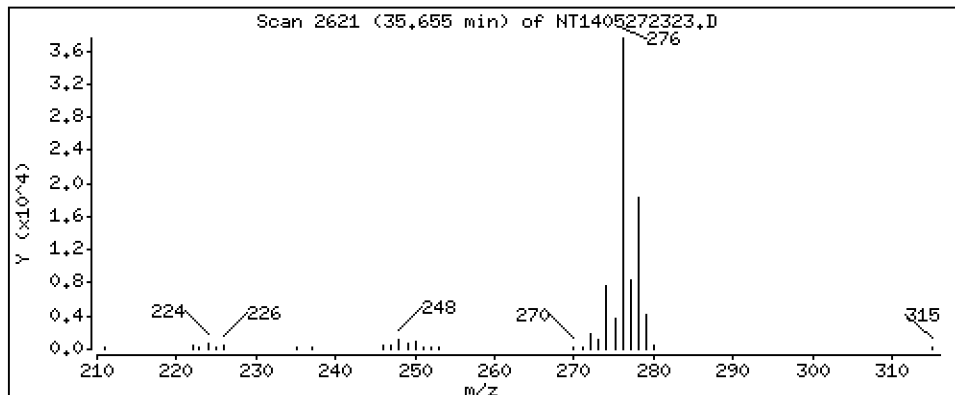
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

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

Concentration: 1.923 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

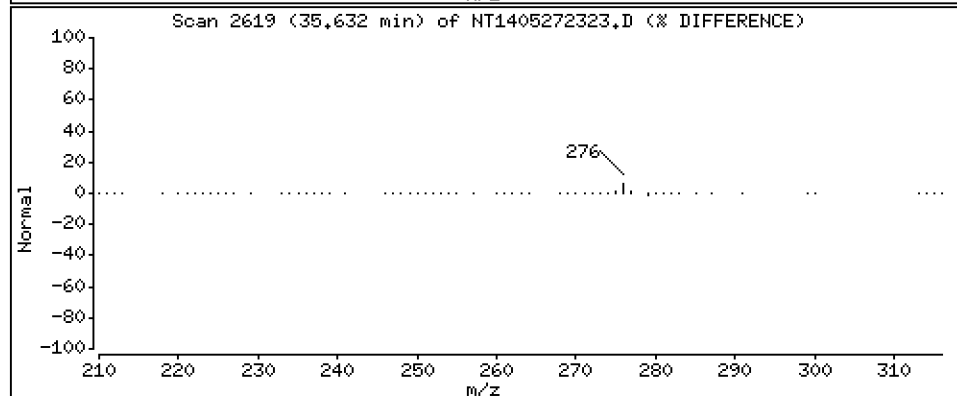
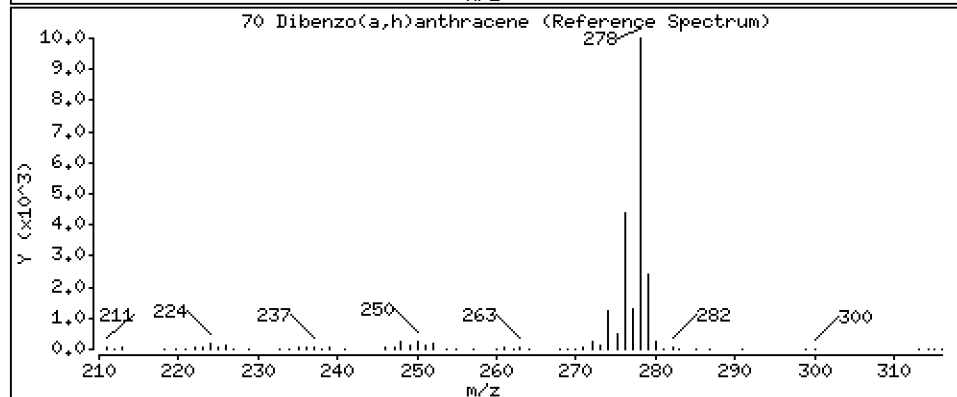
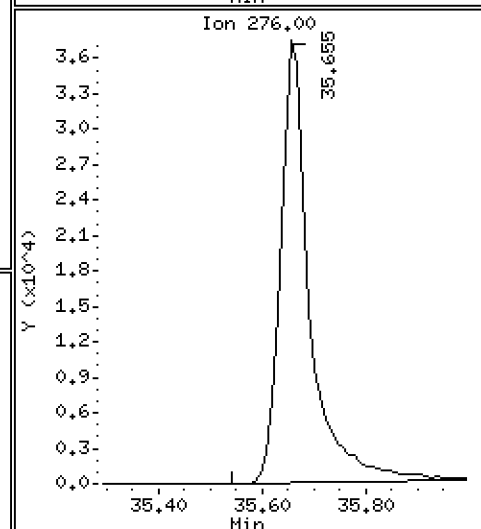
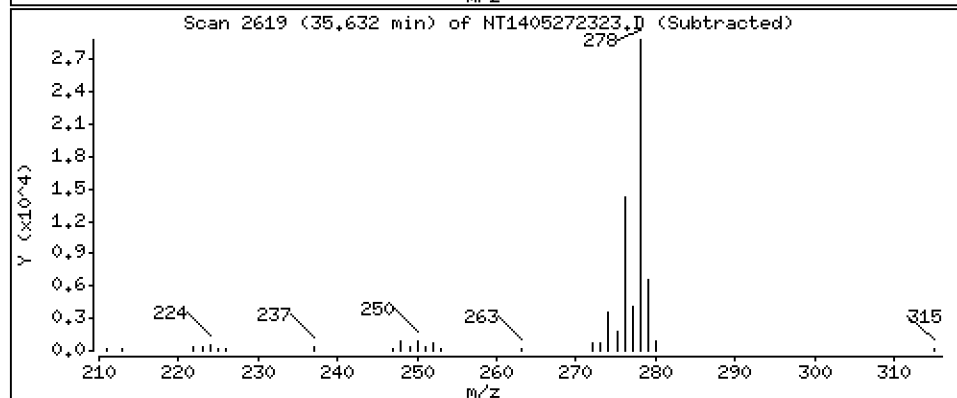
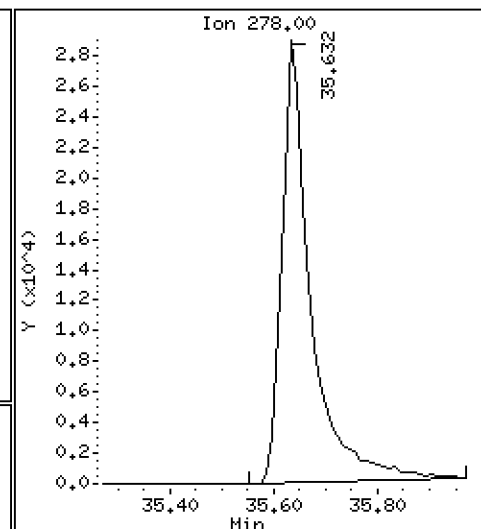
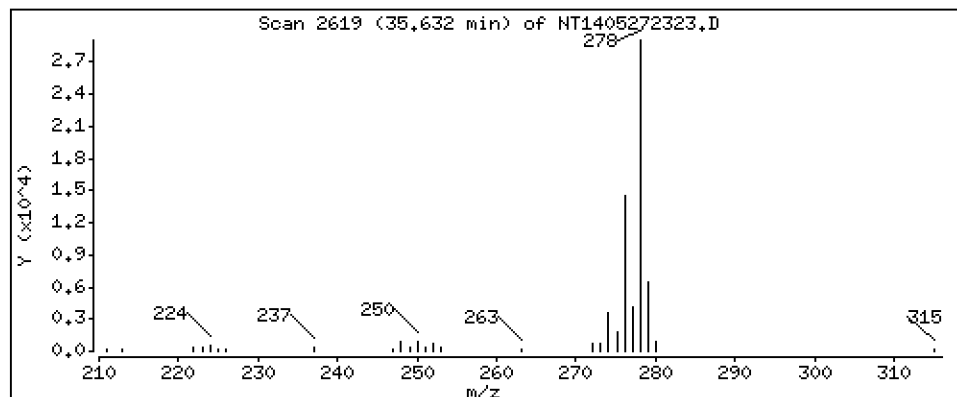
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

70 Dibenzo(a,h)anthracene

Concentration: 1.815 ug/mL



Date : 28-MAY-2023 03:57

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-CCV1

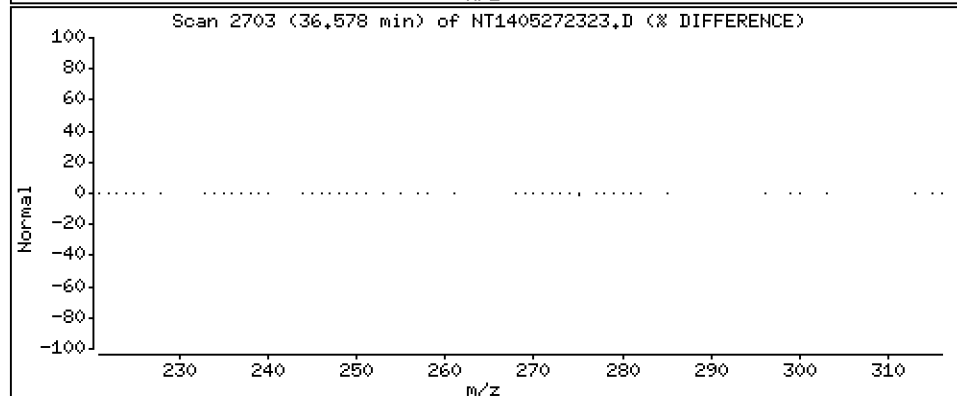
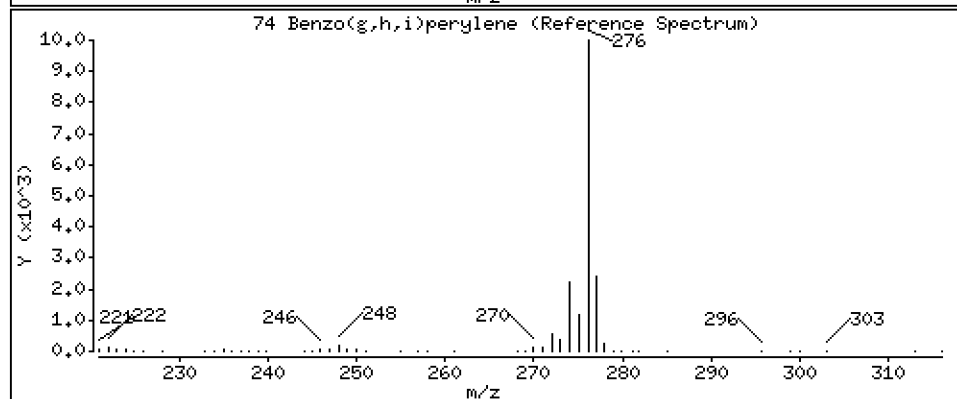
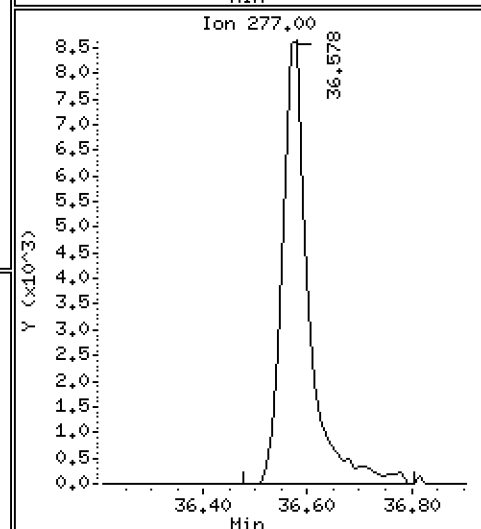
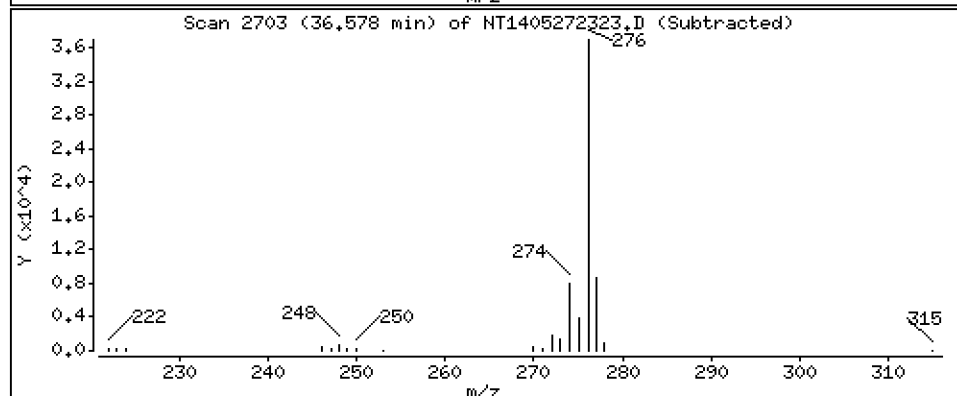
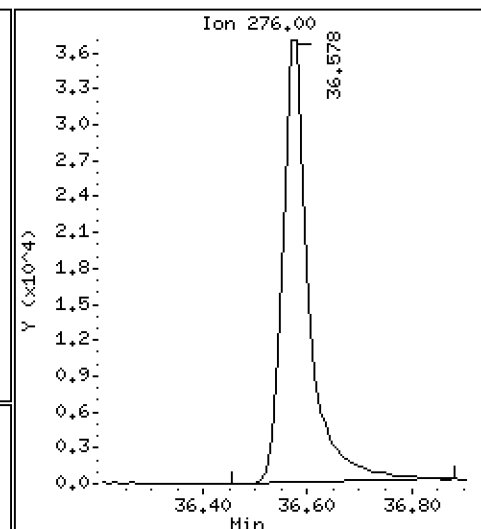
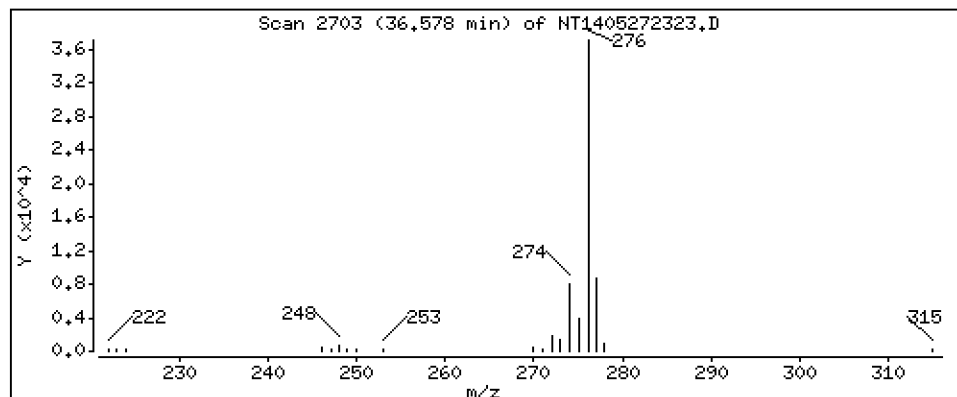
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

74 Benzo(g,h,i)perylene

Concentration: 2.312 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230527.b\NT1405272323.D
Lab Smp Id: SLE0443-CCV1
Inj Date : 28-MAY-2023 03:57
Operator : VTS
Smp Info : SLE0443-CCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230527.b\ALKYLPNA.m
Meth Date : 30-May-2023 16:47 deenayd Quant Type: ISTD
Cal Date : 05-MAY-2023 15:12 Cal File: NT1423050507.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: DEENAY-201905

Inst ID: nt14.i

Compound Sublist: TARGETS.sub

Compounds	QUANT SIG							CONCENTRATIONS	
		MASS	RT	EXP RT	REL RT	RESPONSE		ON-COLUMN	FINAL
								(ug/mL)	(ug/mL)
1 trans-Decalin	138		7.203	7.203	(0.380)	36003		2.50431	2.504
2 cis-Decalin	138		8.308	8.319	(0.438)	26306		2.52412	2.524
\$ 6 Naphthalene-d8	136		11.939	11.939	(0.630)	321470		2.39737	2.397 (R)
7 Naphthalene	128		12.007	12.006	(0.634)	350604		2.38029	2.380
12 Benzo(b)thiophene	134		12.462	12.451	(0.658)	268241		2.39634	2.396
16 2-Methylnaphthalene	141		13.847	13.847	(0.731)	174423		2.39438	2.394
17 1-methylnaphthalene	141		14.298	14.297	(0.754)	170728		2.32747	2.327
18 Biphenyl	154		15.484	15.473	(0.817)	237701		2.35870	2.359
19 2,6-Dimethylnaphthalene	156		15.561	15.561	(0.821)	173687		2.42144	2.421
20 Acenaphthylene	152		17.133	17.133	(0.904)	296385		2.47418	2.474
\$ 21 Acenaphthene-d10	164		17.419	17.419	(0.919)	143523		2.41514	2.415 (R)
22 Acenaphthene	153		17.539	17.528	(0.926)	178650		2.41668	2.417
23 Dibenzofuran	168		17.913	17.913	(0.945)	241857		2.49932	2.499
24 1,6,7-Trimethylnaphthalene	170		18.133	18.133	(0.957)	157494		2.46342	2.463
* 25 Fluorene-d10	176		18.950	18.950	(1.000)	134206		2.00000	
26 Fluorene	166		19.064	19.064	(1.006)	191430		2.46890	2.469
30 Dibenzothiophene	184		21.981	21.981	(1.160)	238770		2.51308	2.513
\$ 35 Phenanthrene-d10	188		22.294	22.294	(0.995)	228214		2.41536	2.415 (R)
36 Phenanthrene	178		22.376	22.375	(0.998)	268129		2.43343	2.433
* 250 Anthracene-d10	188		22.410	22.410	(1.000)	165580		2.00000	
37 Anthracene	178		22.480	22.468	(1.003)	252239		2.49381	2.494
42 Carbazole	167		23.755	23.755	(1.060)	229908		2.41796	2.418
43 1-Methylphenanthrene	192		24.207	24.207	(1.080)	173909		2.44738	2.447
44 Fluoranthene	202		26.189	26.177	(1.169)	246894		2.45738	2.457
46 Pyrene	202		27.023	27.023	(1.206)	258718		2.46061	2.461
51 Naphthobenzothiophene	234		29.540	29.529	(1.318)	170832		2.46346	2.463
55 Benzo(a)anthracene	228		30.124	30.113	(0.907)	190921		2.58714	2.587
\$ 56 Chrysene-d12	240		30.248	30.237	(0.911)	136587		2.67430	2.674 (R)
57 Chrysene	228		30.316	30.316	(0.913)	194774		2.69830	2.698
62 Benzo(b)fluoranthene	252		32.534	32.523	(0.980)	168465		2.44696	2.447
63 Benzo(k)fluoranthene	252		32.580	32.579	(0.981)	181105		2.34166	2.342 (M)
293 Benzo(j)fluoranthene	252		32.647	32.636	(0.983)	189226		2.92866	2.929 (M)
246 Total Benzofluoranthenes	252		32.647	32.636	(0.983)	489409		7.63939	7.639 (M)

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN	FINAL
	MASS					(ug/mL)	(ug/mL)
=====	=====	=====	=====	=====	=====	=====	=====
* 251 Benzo(e)pyrene-d12	264	33.199	33.188	(1.000)	94138	2.00000	
64 Benzo(e)pyrene	252	33.255	33.244	(1.002)	159217	2.39105	2.391
66 Benzo(a)pyrene	252	33.357	33.345	(1.005)	146716	2.60489	2.605
\$ 67 Perylene-d12	264	33.537	33.526	(1.010)	128104	2.59997	2.600 (RM)
68 Perylene	252	33.593	33.582	(1.012)	163562	2.64566	2.646 (M)
69 Indeno(1,2,3-cd)pyrene	276	35.654	35.643	(1.074)	141099	1.92291	1.923 (M)
70 Dibenzo(a,h)anthracene	278	35.632	35.621	(1.073)	109408	1.81456	1.815 (M)
74 Benzo(g,h,i)perylene	276	36.578	36.555	(1.102)	128314	2.31190	2.312 (M)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
 M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i	Calibration Date: 27-MAY-2023
Lab File ID: NT1405272323.D	Calibration Time: 13:31
Lab Smp Id: SLE0443-CCV1	
Analysis Type: SV	Level:
Quant Type: ISTD	Sample Type:
Operator: VTS	
Method File: \\target\share\chem3\nt14.i\20230527.b\ALKYLPNA.m	
Misc Info:	

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
25 Fluorene-d10	136933	68467	273866	134206	-1.99
250 Anthracene-d10	167500	83750	335000	165580	-1.15
251 Benzo(e)pyrene-d1	94374	47187	188748	94138	-0.25

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
25 Fluorene-d10	18.95	18.45	19.45	18.95	0.00
250 Anthracene-d10	22.41	21.91	22.91	22.41	0.00
251 Benzo(e)pyrene-d1	33.19	32.69	33.69	33.20	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 - NT1405272323.D

Lab ID: SLE0443-CCV1

nt14.i, 20230527.b\ALKYLPNA.m, 28-MAY-2023 03:57

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1405272305.D

On Column LOD for nt14.i, 20230527.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

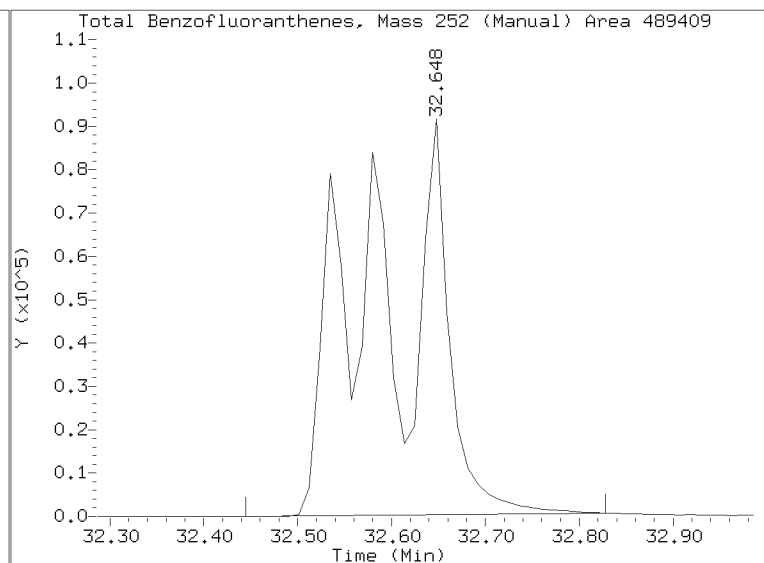
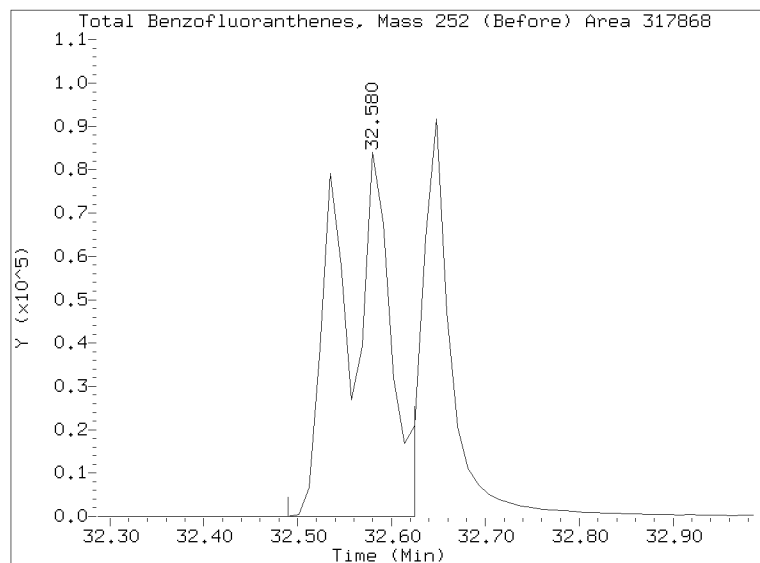
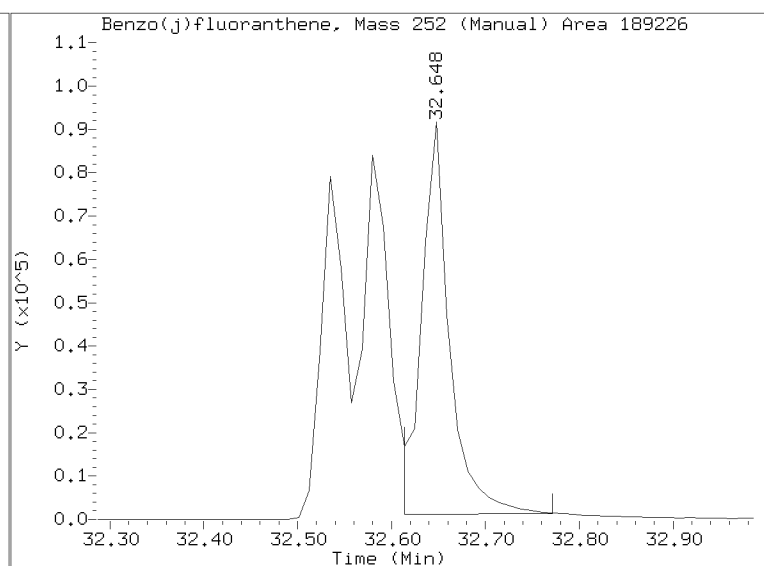
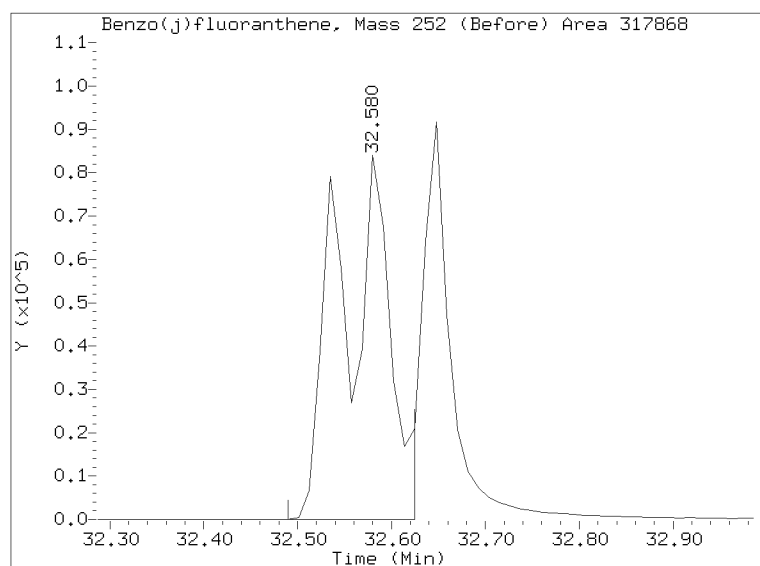
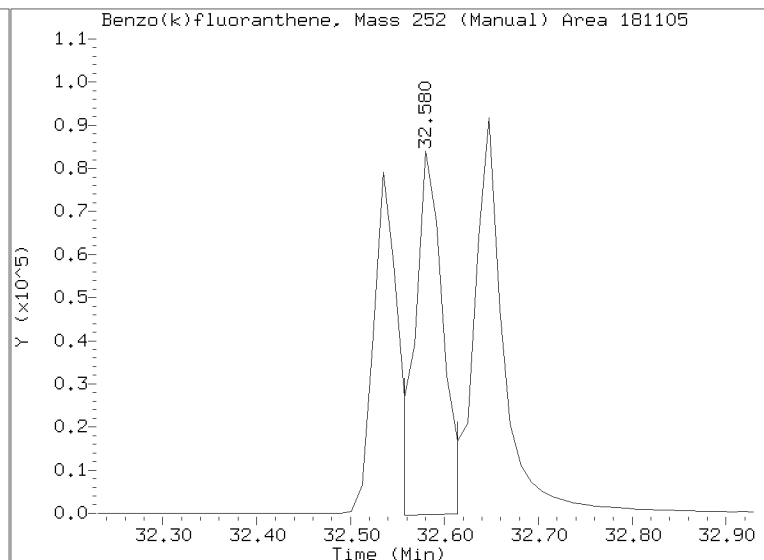
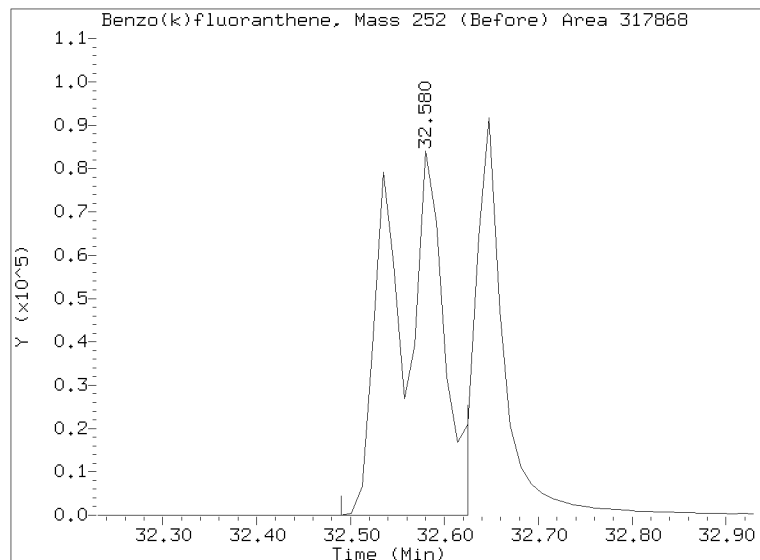
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230527.b/NT1405272323.D

Injection Date: 28-MAY-2023 03:57

Lab ID: SLE0443-CCV1 Client ID:

Report Date: 05/30/2023 16:49



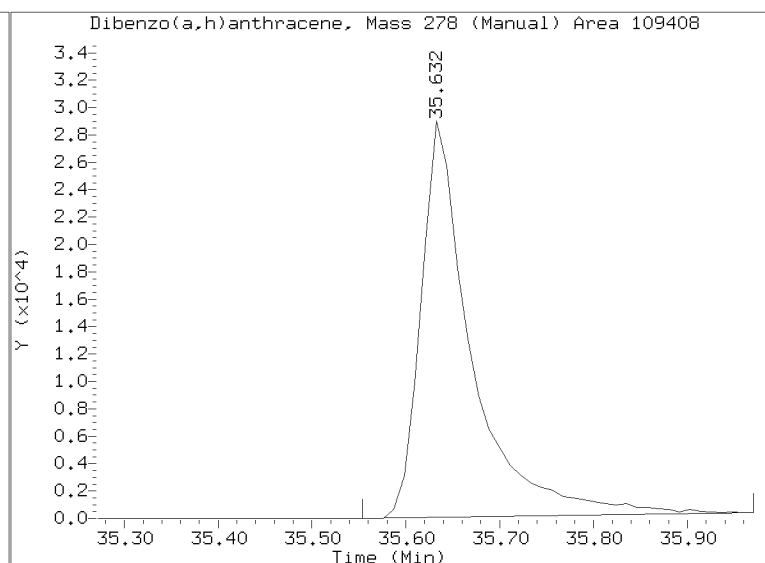
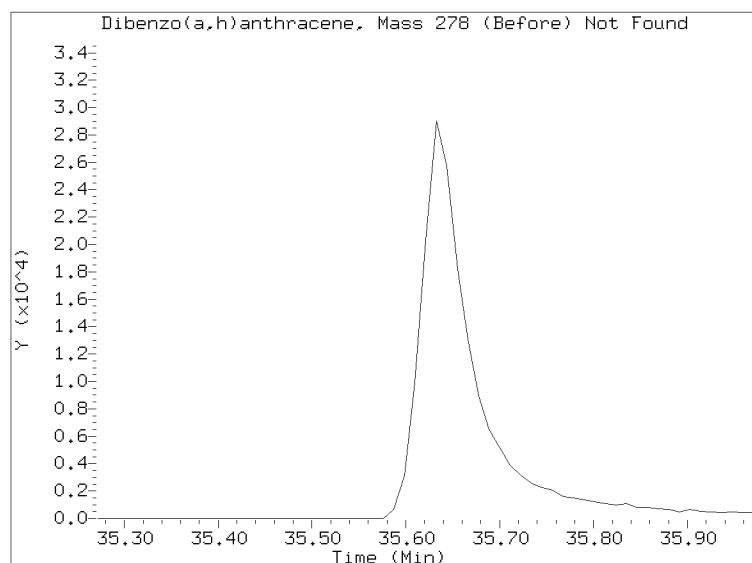
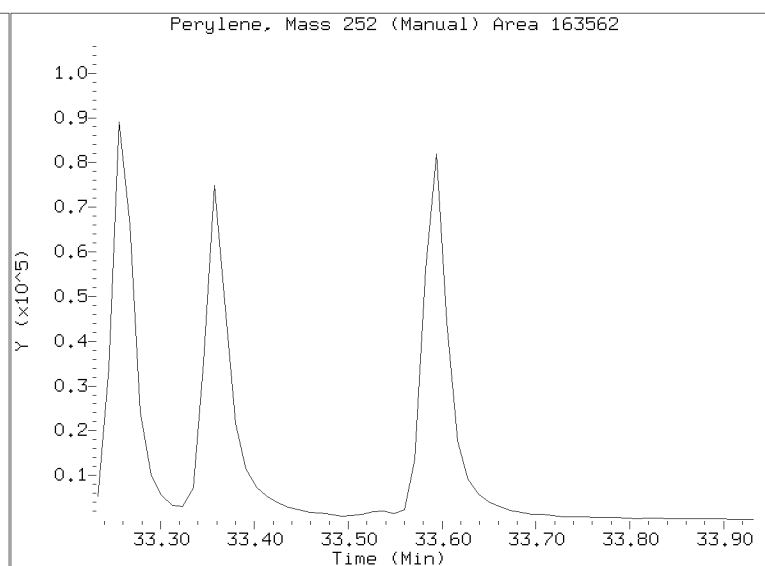
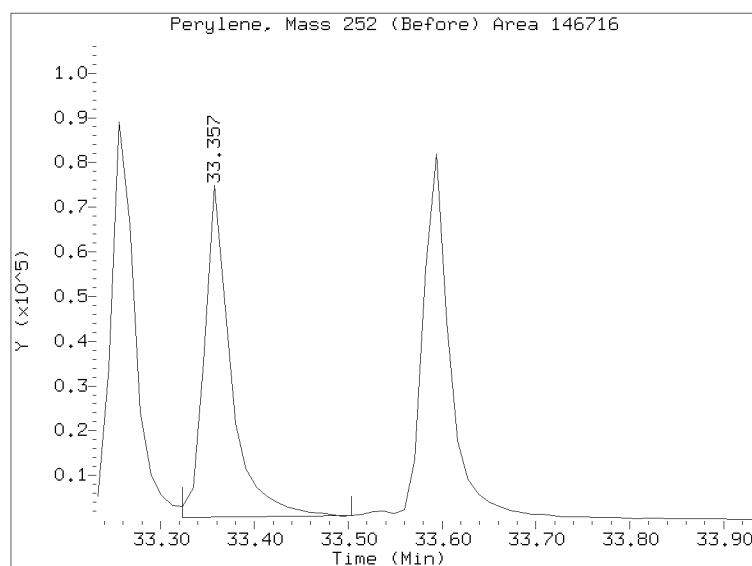
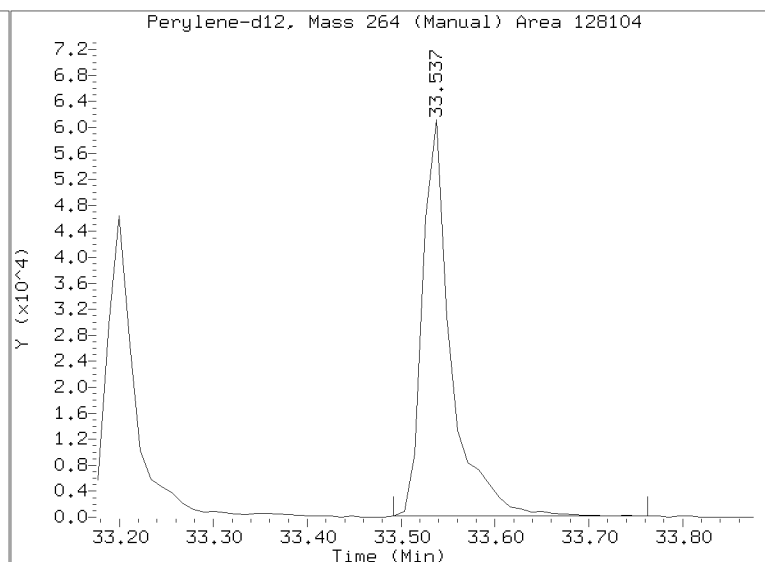
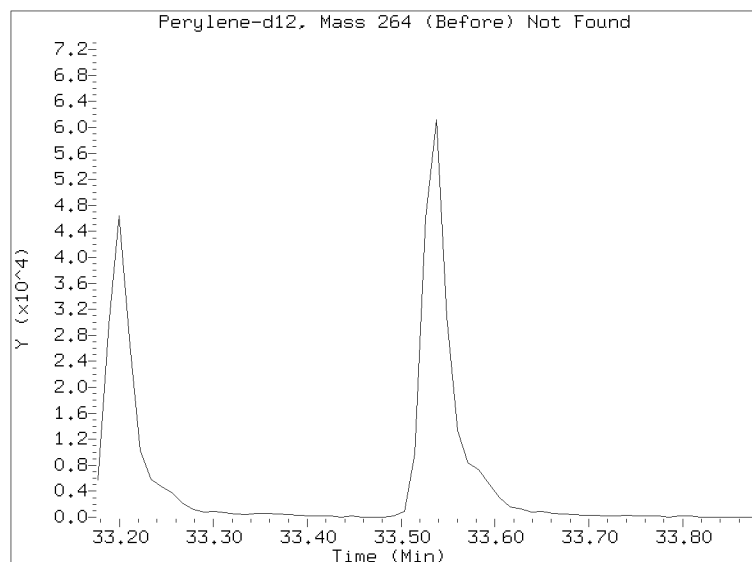
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230527.b/NT1405272323.D

Injection Date: 28-MAY-2023 03:57

Lab ID: SLE0443-CCV1 Client ID:

Report Date: 05/30/2023 16:49



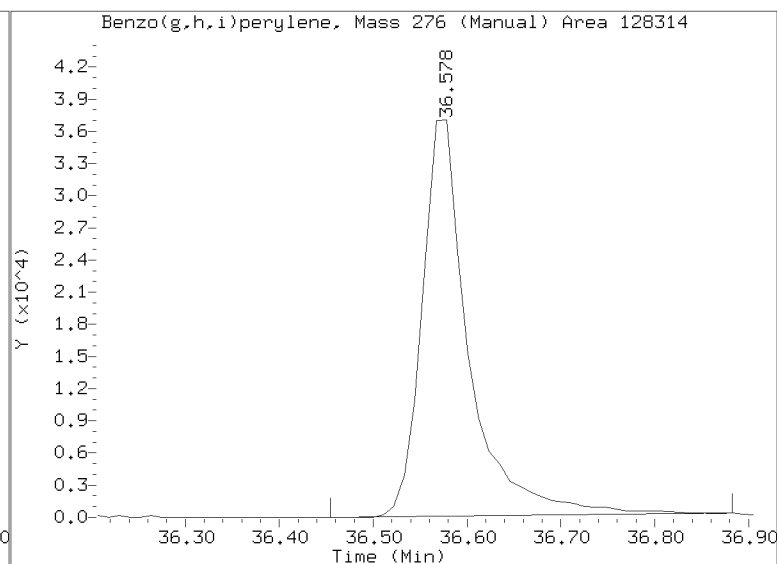
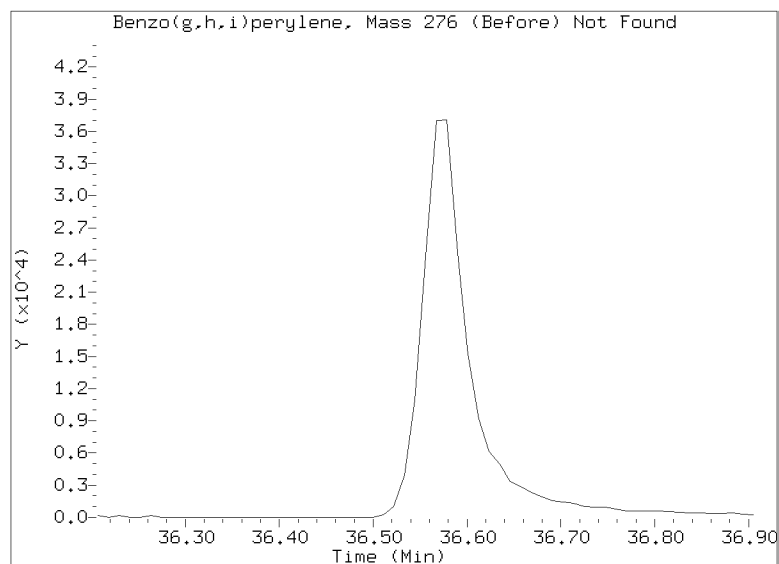
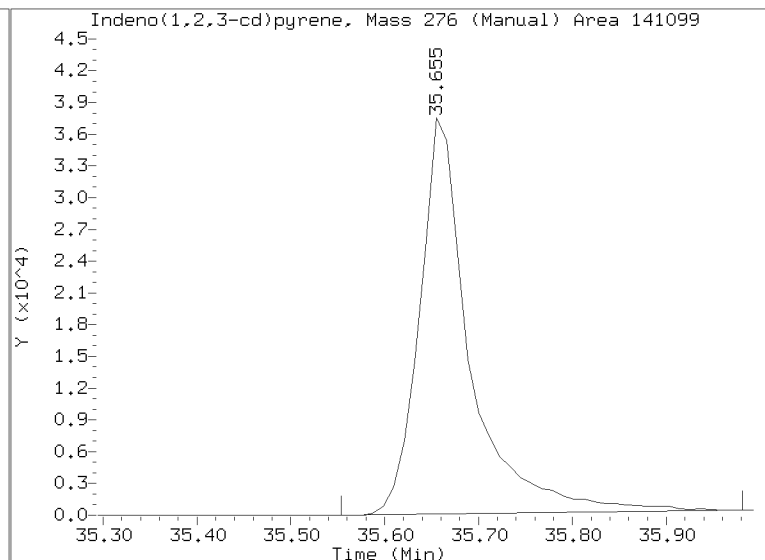
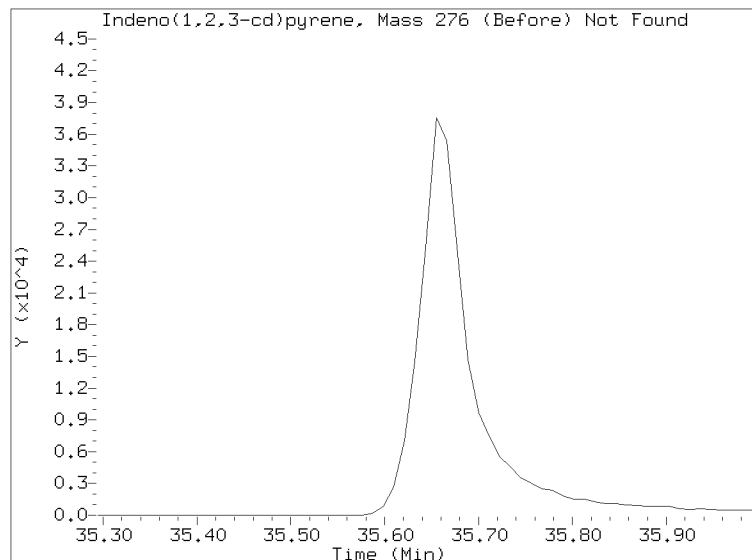
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230527.b/NT1405272323.D

Injection Date: 28-MAY-2023 03:57

Lab ID: SLE0443-CCV1 Client ID:

Report Date: 05/30/2023 16:49



APPROVED

By Deenay Dunmore at 5:03 pm, May 30, 2023



**LOW-CONCENTRATION
CONTINUING CALIBRATION CHECK
EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Instrument ID: NT14

Calibration: GE00024

Lab File ID: NT1405272306.D

Calibration Date: 05/05/2023

Sequence: SLE0443

Injection Date: 05/27/23

Lab Sample ID: SLE0443-LCV1

Injection Time: 14:19

Sequence Name: PAH 0.1

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
trans-Decalin	A	0.10000	0.060	0.2142441	0.1292958		-39.7	
cis-Decalin	A	0.10000	0.059	0.1553110	0.0908711		-41.5	
Naphthalene	A	0.10000	0.087	2.1950510	1.9173260		-12.7	
1-Methylnaphthalene	A	0.10000	0.083	1.0931470	0.9046662		-17.2	
2-Methylnaphthalene	A	0.10000	0.085	1.0855960	0.9277211		-14.5	
Biphenyl	A	0.10000	0.088	1.5018170	1.3258550		-11.7	
2,6-Dimethylnaphthalene	A	0.10000	0.081	1.0689340	0.8630058		-19.3	
Acenaphthylene	A	0.10000	0.078	1.7851870	1.3978510		-21.7	
Acenaphthene	A	0.10000	0.080	1.1016480	0.8781060		-20.3	
Dibenzofuran	A	0.10000	0.085	1.4421000	1.2298610		-14.7	
2,3,5-Trimethylnaphthalene	A	0.10000	0.072	0.9527605	0.6830163		-28.3	
Fluorene	A	0.10000	0.087	1.1554870	1.0030870		-13.2	
Benzo(b)thiophene	A	0.10000	0.091	1.6681460	1.5189220		-9.0	
Phenanthrene	A	0.10000	0.088	1.3309080	1.1741800		-11.8	
Anthracene	A	0.10000	0.080	1.2217170	0.9775316		-20.0	
Carbazole	A	0.10000	0.060	0.9770692	0.6892968		-40.0	
1-Methylphenanthrene	A	0.10000	0.073	0.8583058	0.6268307		-27.0	
Fluoranthene	A	0.10000	0.067	1.2135600	0.8070346		-33.5	
Dibenzothiophene	A	0.10000	0.084	1.4158940	1.1877960		-16.1	
Pyrene	A	0.10000	0.063	1.2700040	0.7997259		-37.0	
Benzo(a)anthracene	A	0.10000	0.054	1.5678310	0.8500997		-45.8	
Chrysene	A	0.10000	0.068	1.5335800	1.0374610		-32.4	
Benzo(b)fluoranthene	A	0.10000	0.041	1.4626770	0.6030435		-58.8	
Benzo(j)fluoranthene	A	0.10000	0.079	1.3727050	1.0795090		-21.4	
Benzo(k)fluoranthene	A	0.10000	0.047	1.3456120	0.7747192		-52.9	
Benzofluoranthenes, Total	A	0.30000	0.162	1.3610640	0.7334706		-46.1	
Benzo(e)pyrene	A	0.10000	0.074	1.4147040	1.0507510		-25.7	
Benzo(a)pyrene	A	0.10000	0.062	1.1966100	0.7411684		-38.1	
Indeno(1,2,3-cd)pyrene	A	0.10000	0.00	1.3107200				
Dibenzo(a,h)anthracene	A	0.10000	0.013	1.0657830	0.1612183		-87.4	
Benzo(g,h,i)perylene	A	0.10000	0.00	1.1791520				
Perylene	A	0.10000	0.056	1.3134480	0.7337611		-44.1	
Benzo(b)naphtho(2,1-d)thiophene	A	0.10000	0.061	0.8376187	0.5146887		-38.6	
Naphthalene-d8	A	0.10000	0.0901	1.9983150	1.7997600		-9.9	

* Values outside of QC limits



**LOW-CONCENTRATION
CONTINUING CALIBRATION CHECK
EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Instrument ID: NT14

Calibration: GE00024

Lab File ID: NT1405272306.D

Calibration Date: 05/05/2023

Sequence: SLE0443

Injection Date: 05/27/23

Lab Sample ID: SLE0443-LCV1

Injection Time: 14:19

Sequence Name: PAH 0.1

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Acenaphthene-d10	A	0.10000	0.0833	0.8856004	0.7380243		-16.7	
Phenanthrene-d10	A	0.10000	0.0883	1.1412560	1.0072230		-11.7	
Chrysene-d12	A	0.10000	0.0609	1.0850860	0.6607771		-39.1	
Perylene-d12	A	0.10000	0.0366	1.0467910	0.3825666		-63.5	

* Values outside of QC limits

Data File: \\target\share\chem3\nt14,i\20230527,b\NT1405272306.D

Date : 27-May-2023 14:19

Client ID:

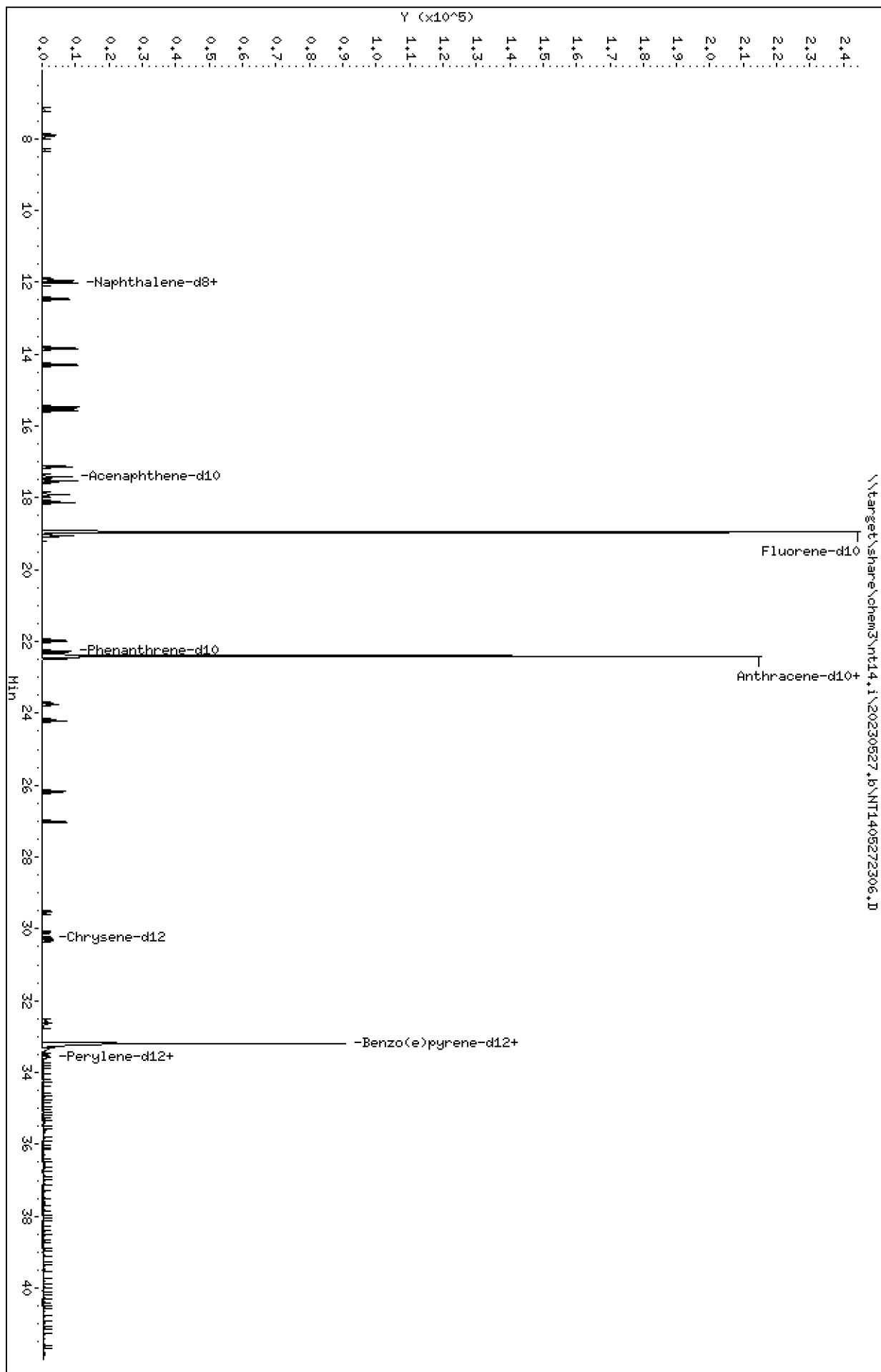
Sample Info: SLE0443-LCV1

Column phase: Rxi-17S11 MS

Instrument: nt14,i

Operator: VTS

Column diameter: 0.25



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

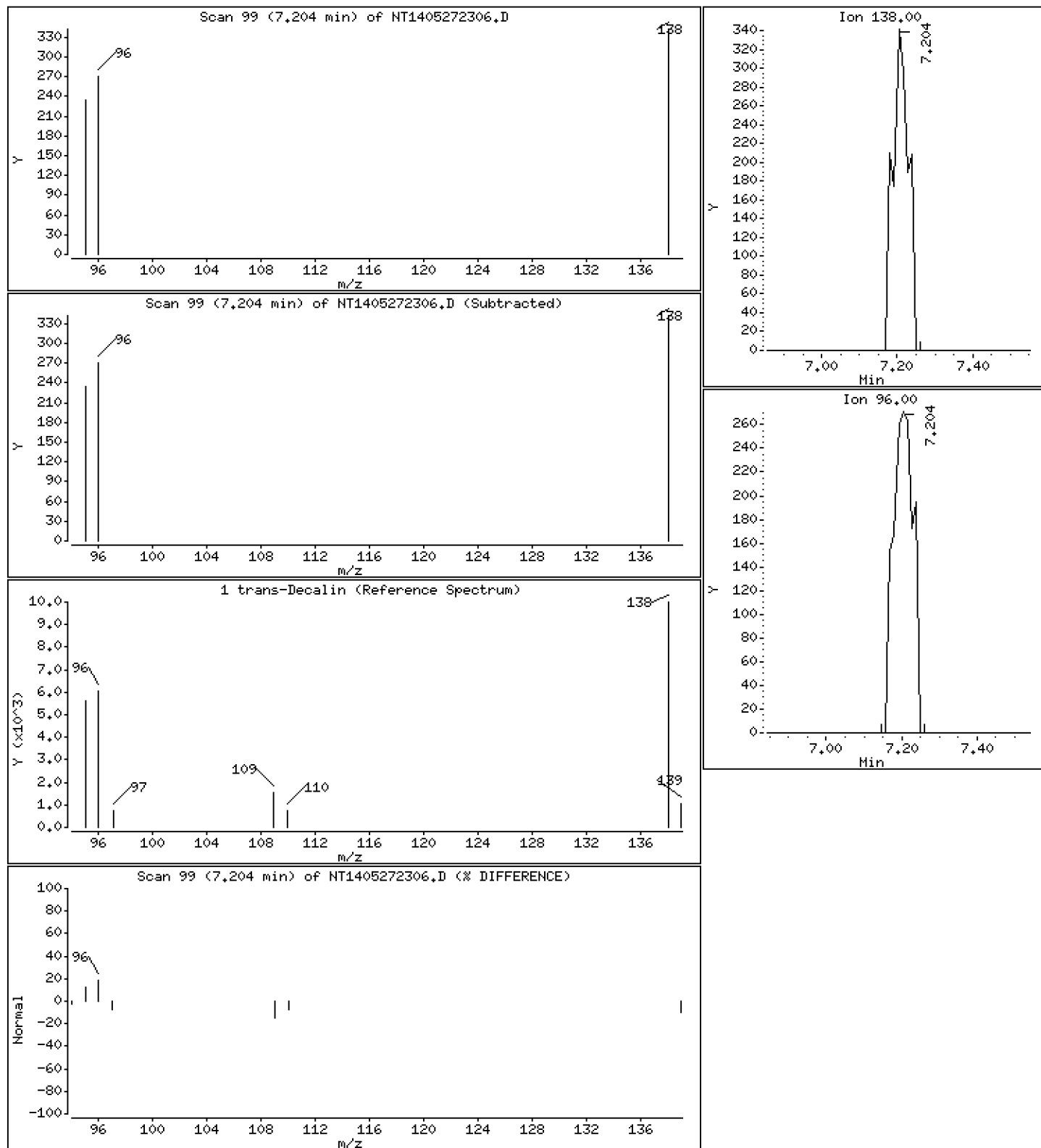
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

1 trans-Decalin

Concentration: 0.06035 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

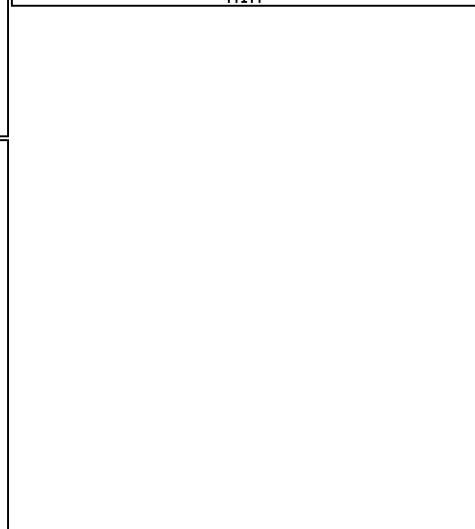
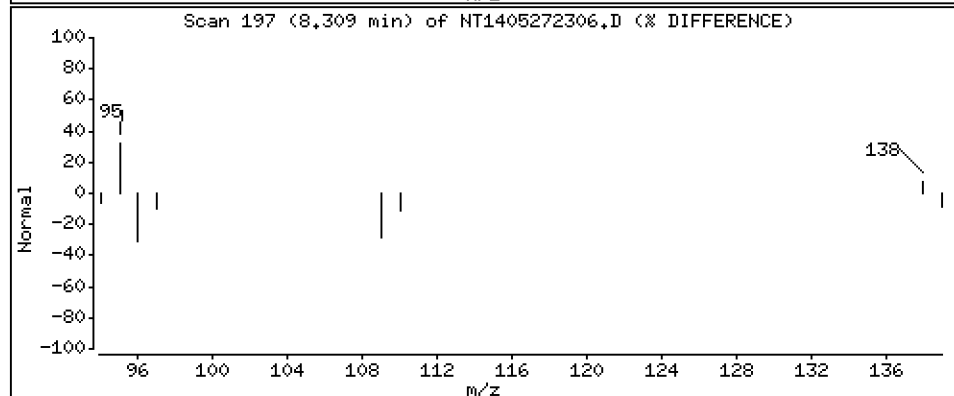
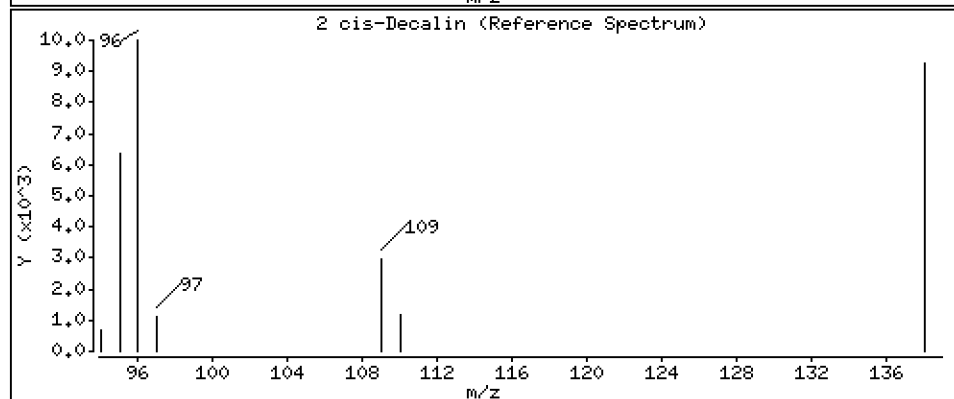
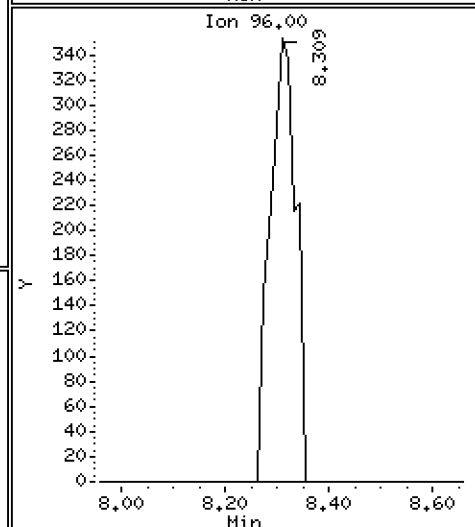
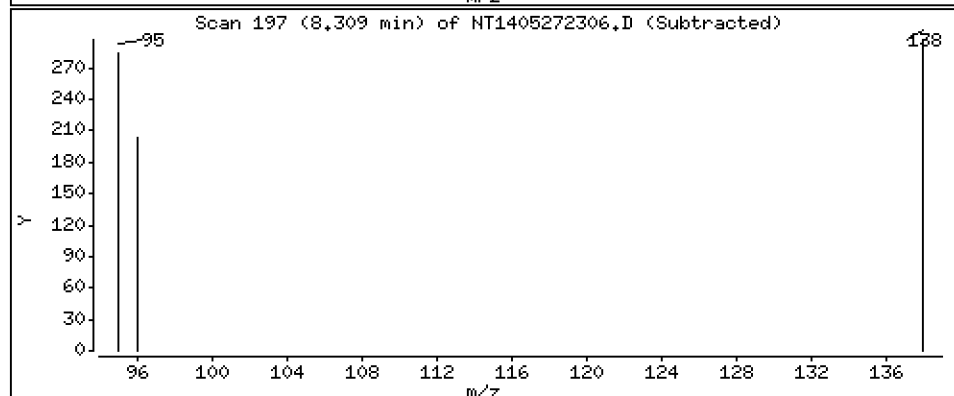
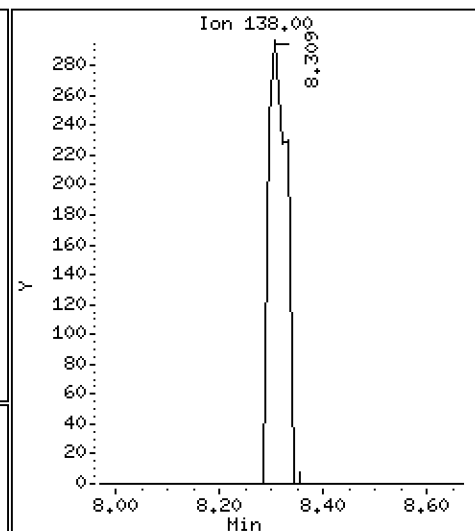
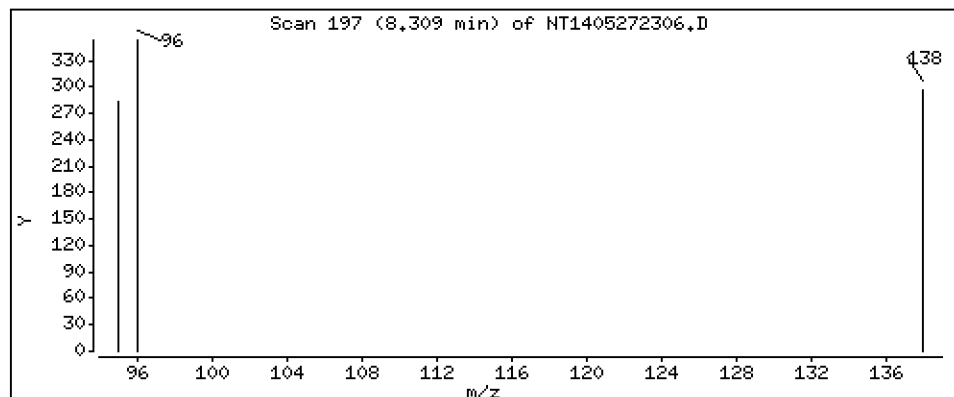
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

2 cis-Decalin

Concentration: 0.05851 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

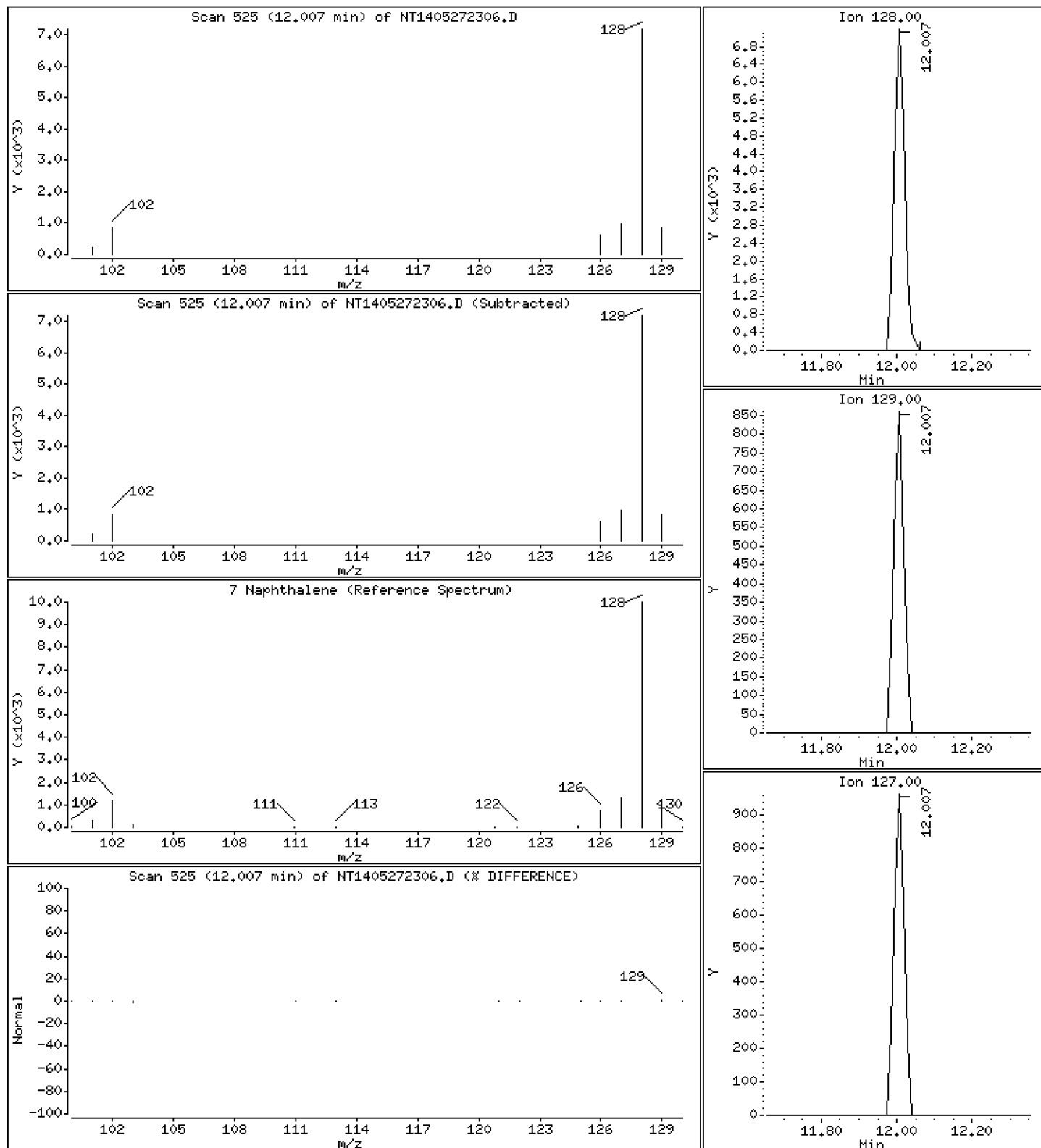
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

7 Naphthalene

Concentration: 0.08735 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

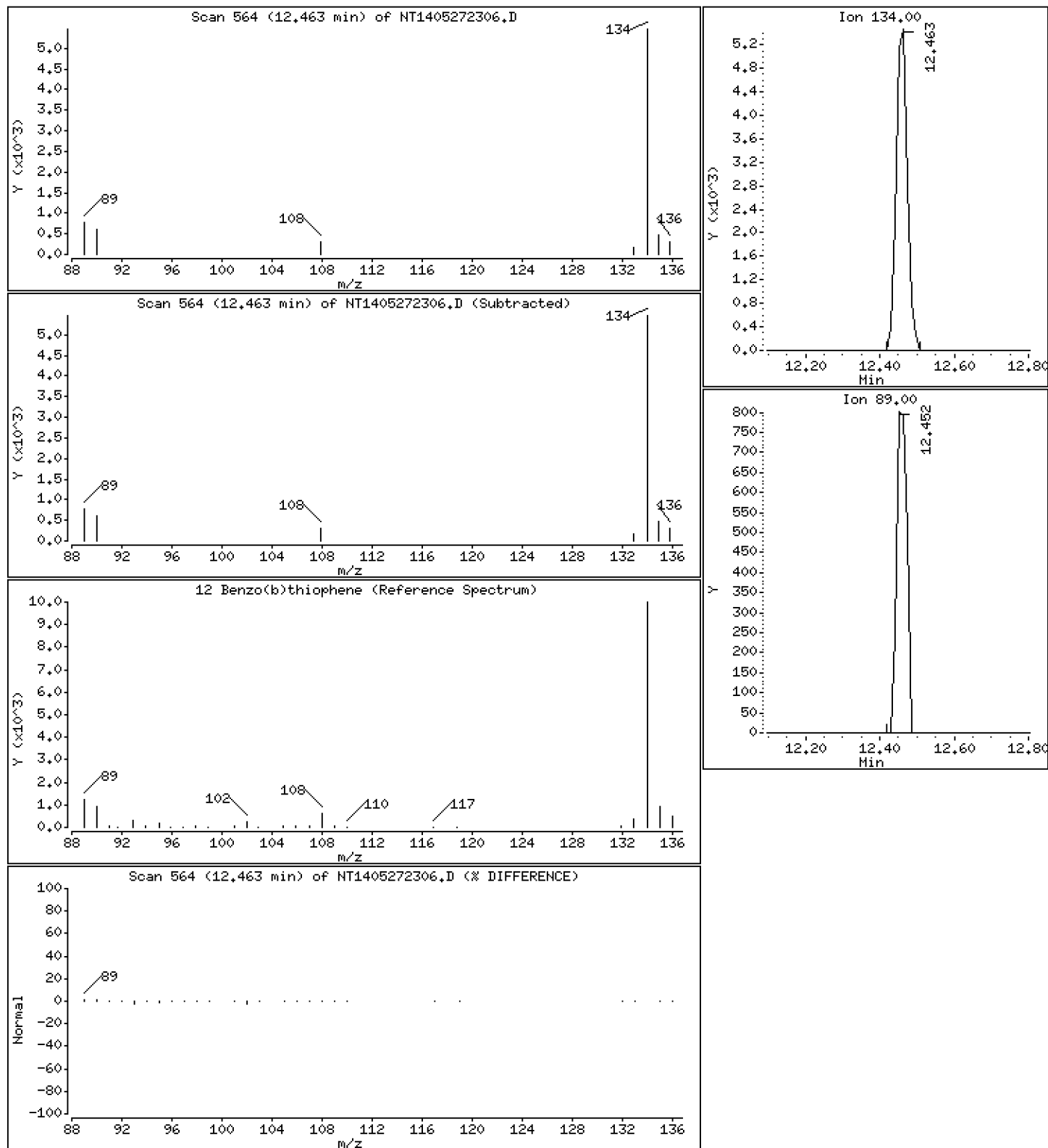
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

12 Benzo(b)thiophene

Concentration: 0.09105 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

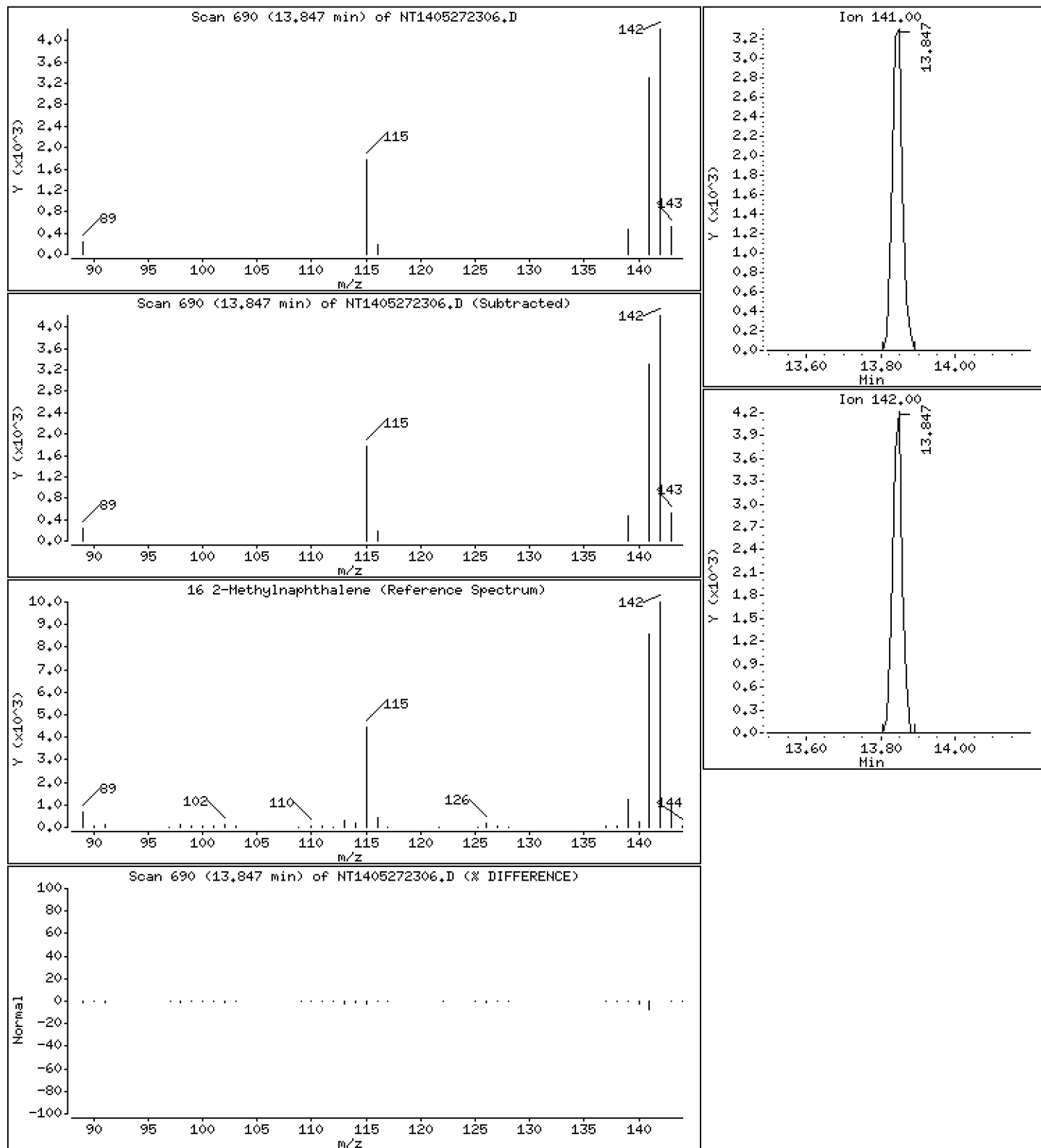
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

16 2-Methylnaphthalene

Concentration: 0.08546 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

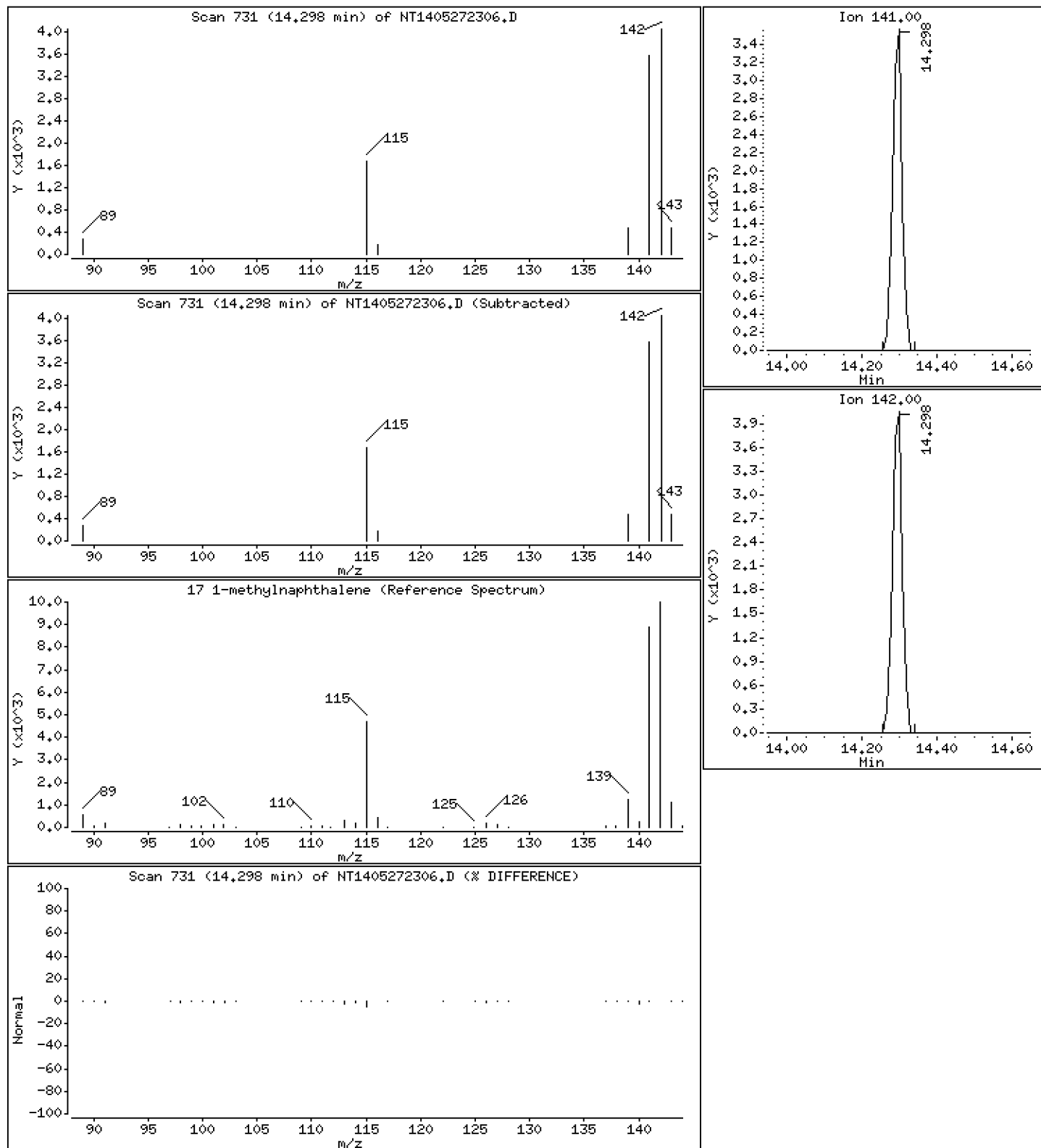
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 1-methylnaphthalene

Concentration: 0.08276 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

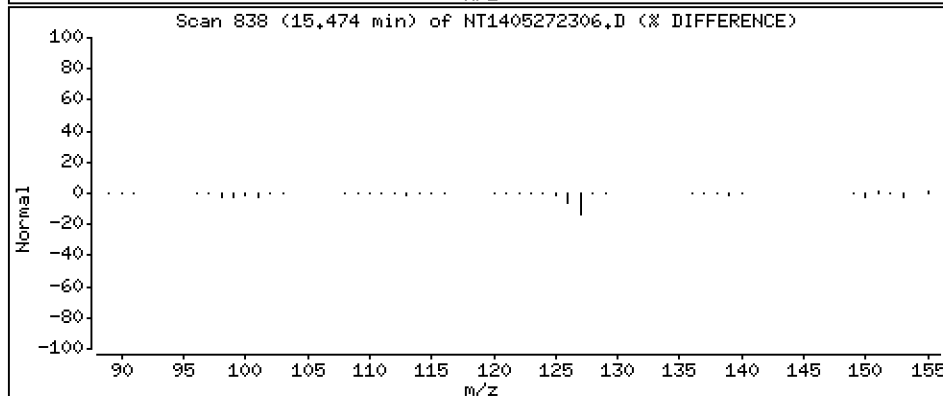
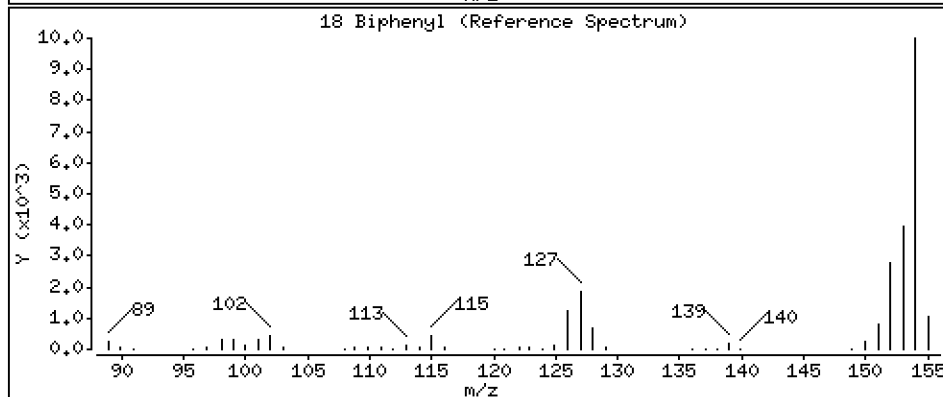
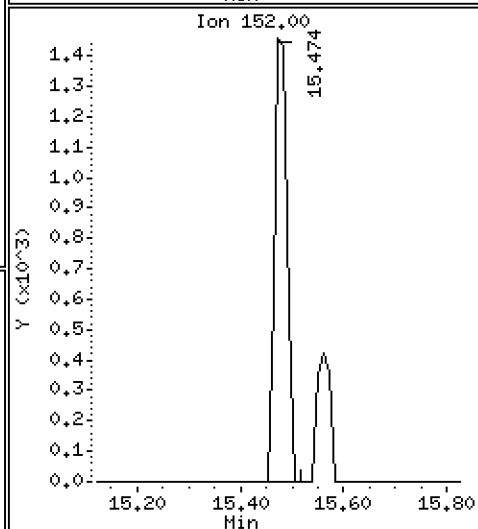
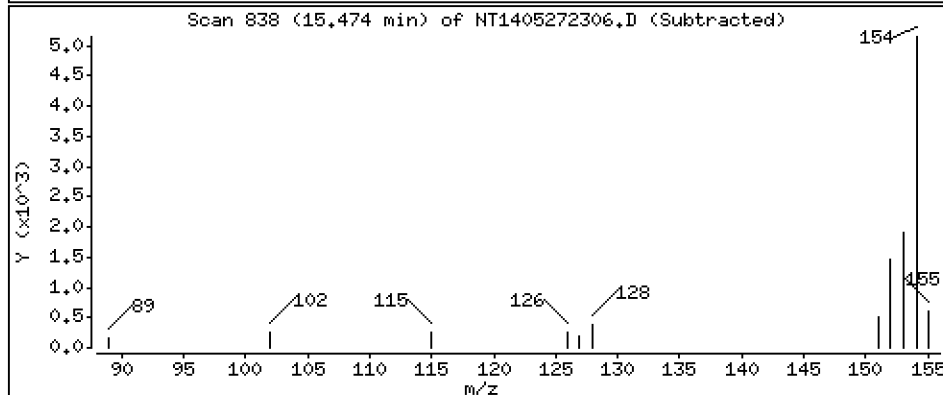
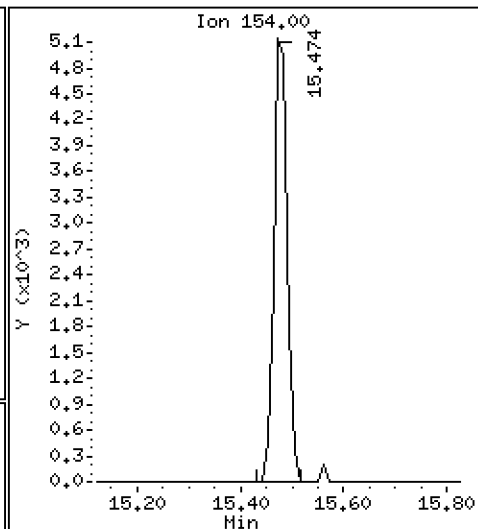
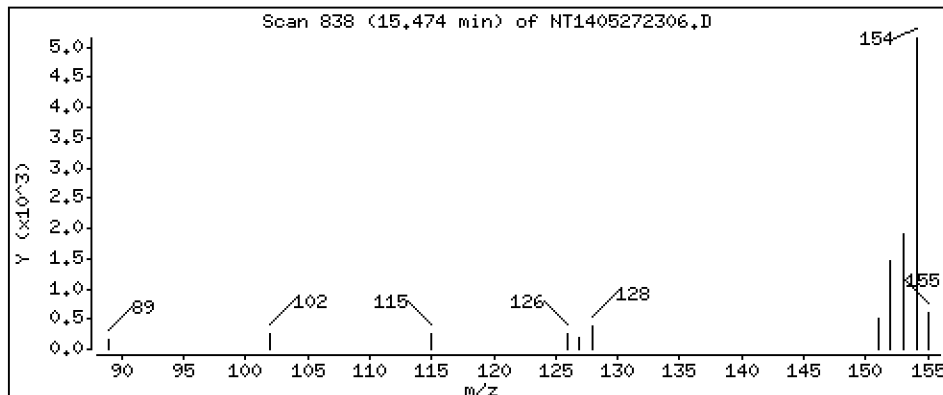
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

18 Biphenyl

Concentration: 0.08828 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

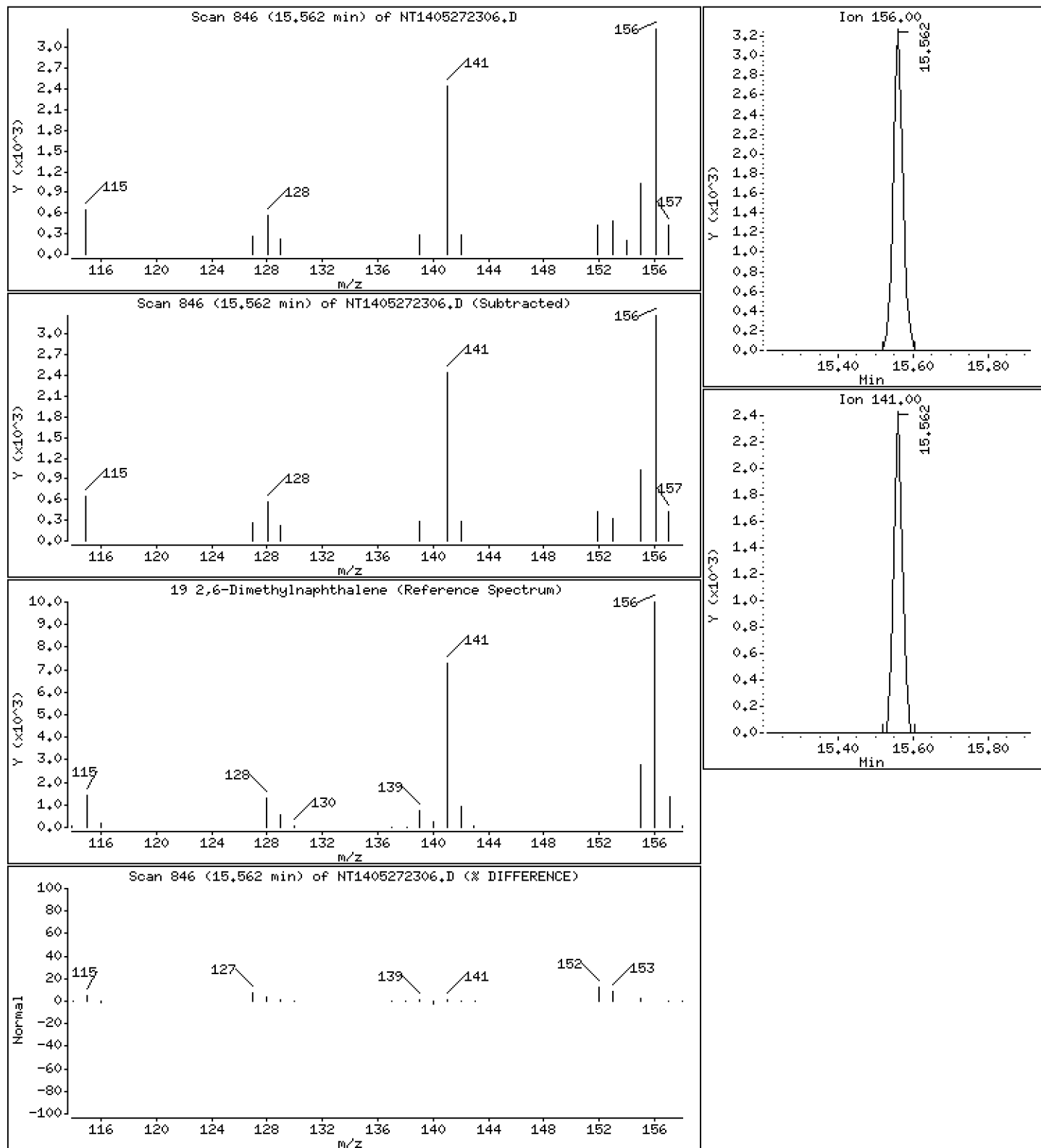
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

19 2,6-Dimethylnaphthalene

Concentration: 0.08074 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

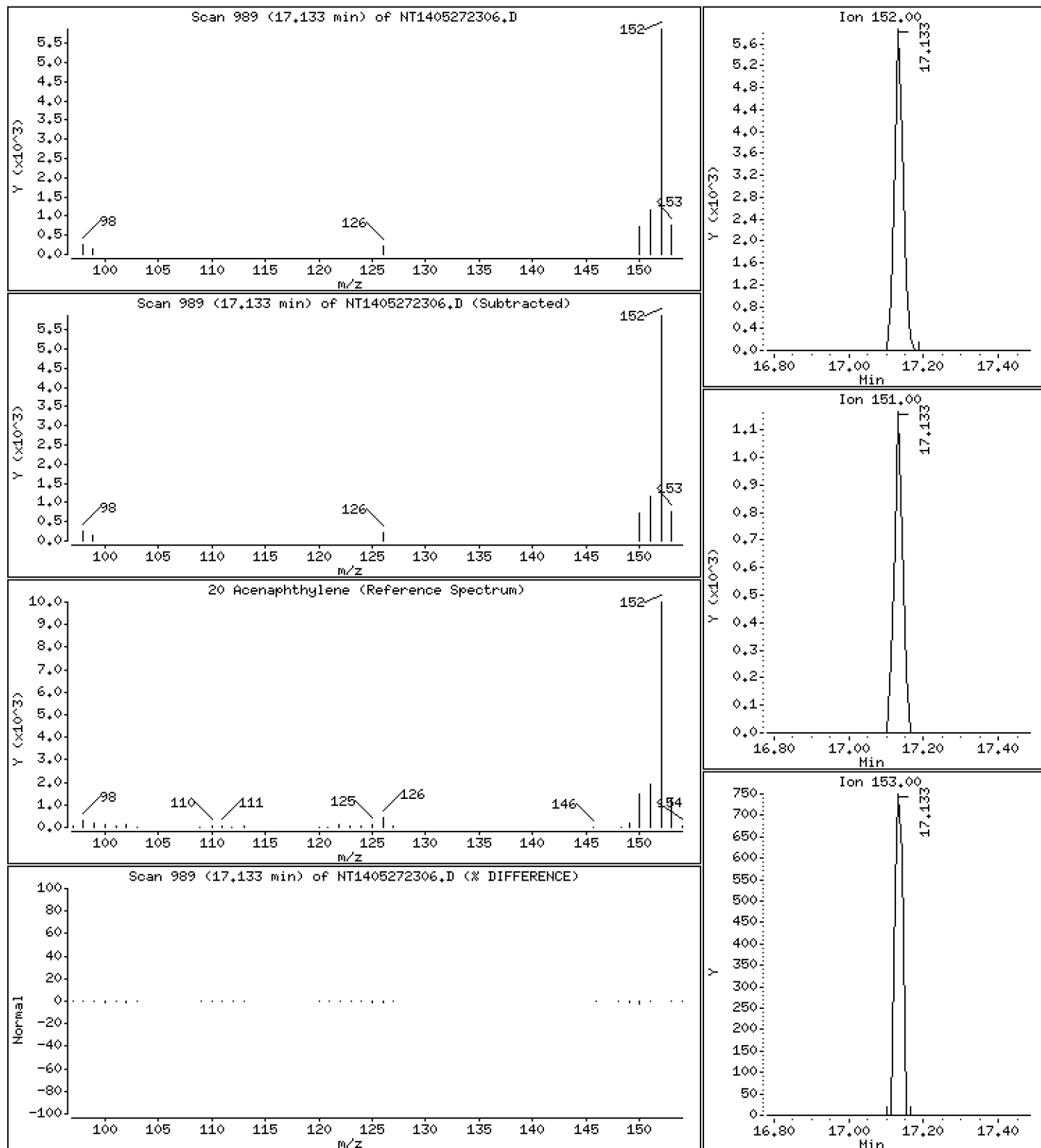
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

20 Acenaphthylene

Concentration: 0.07830 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

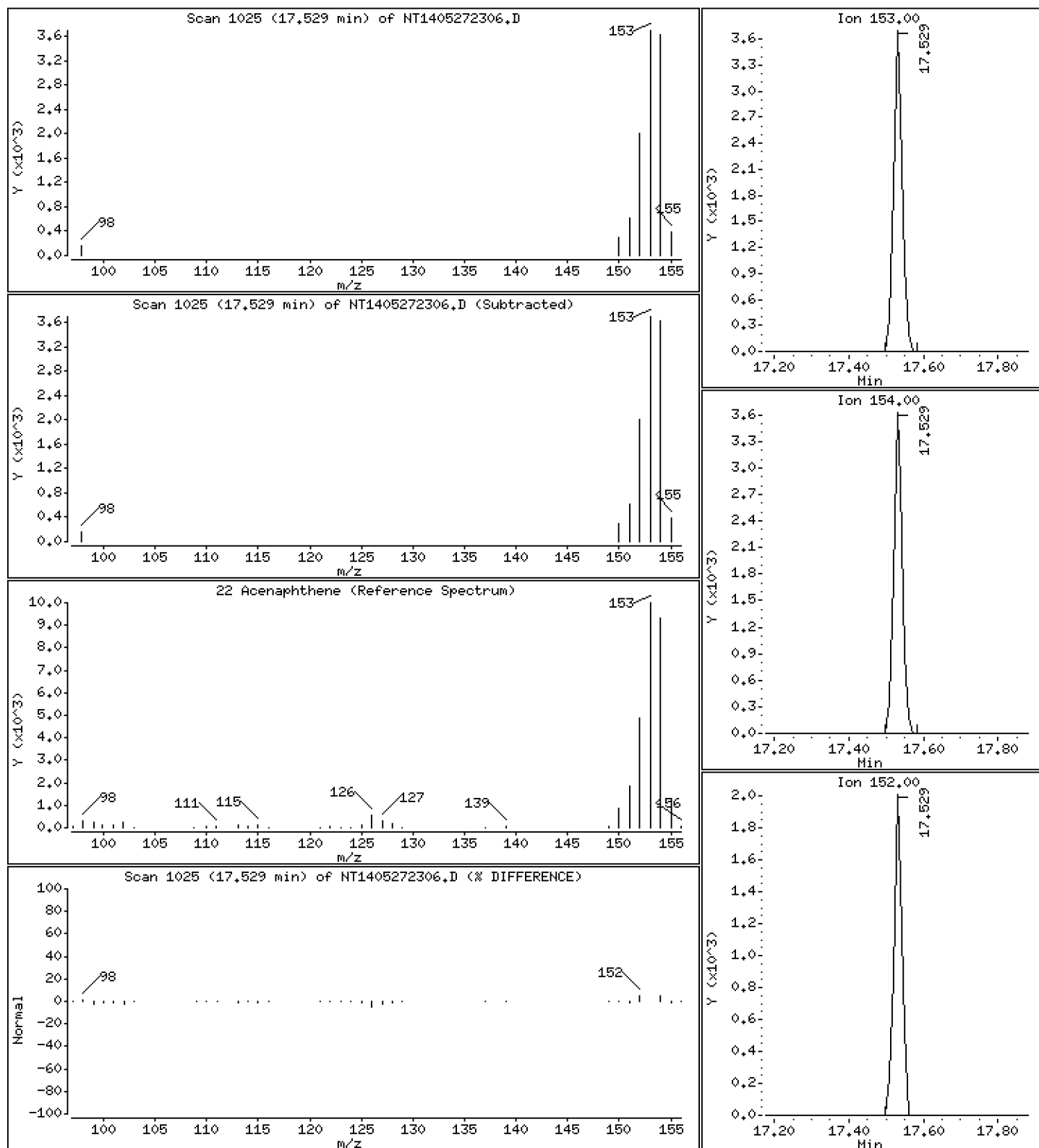
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

22 Acenaphthene

Concentration: 0.07971 ug/mL



Instrument: nt14.i

Operator: VTS

Column diameter: 0.25

Concentration: 0.08528 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

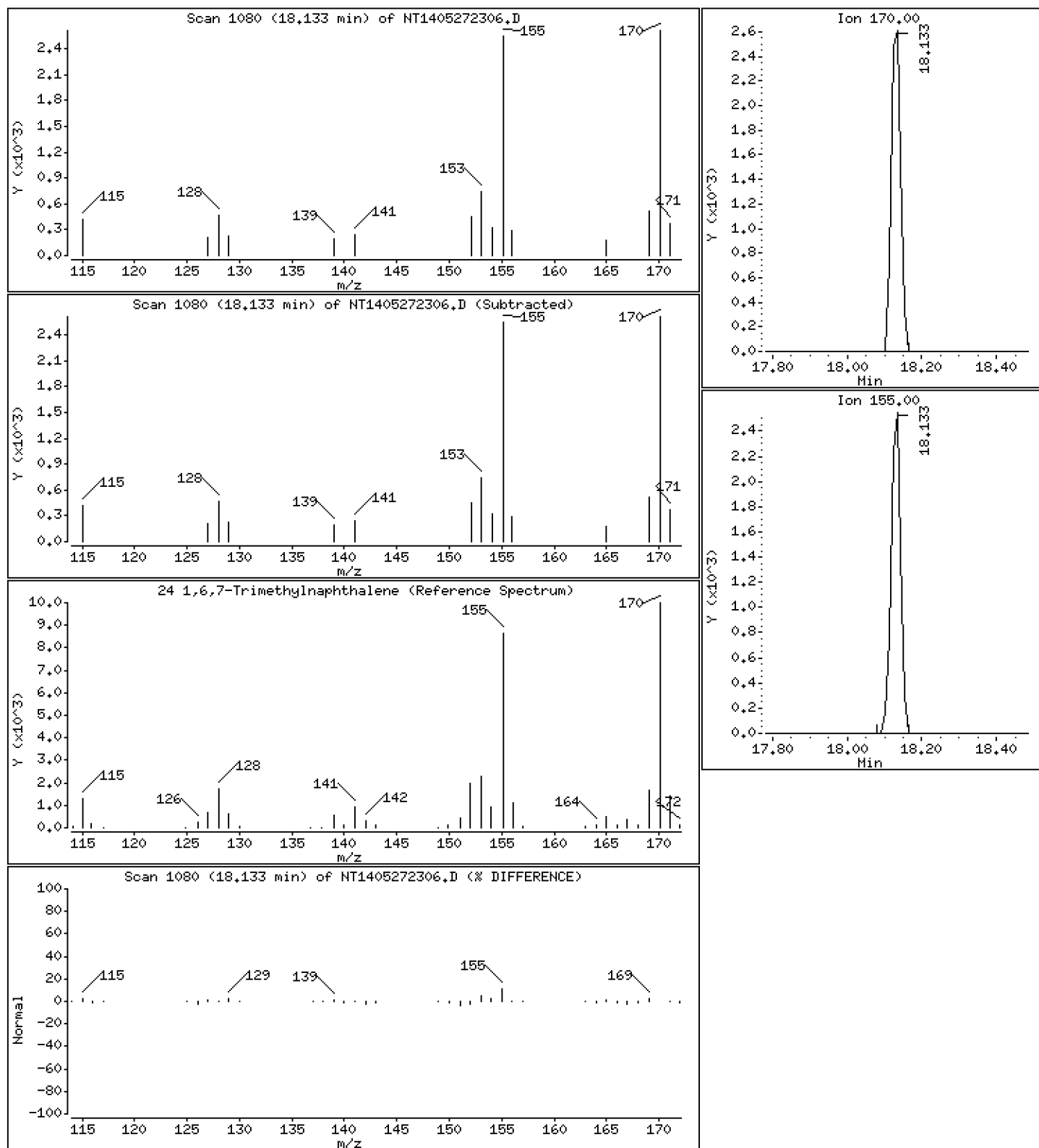
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

24 1,6,7-Trimethylnaphthalene

Concentration: 0.07169 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

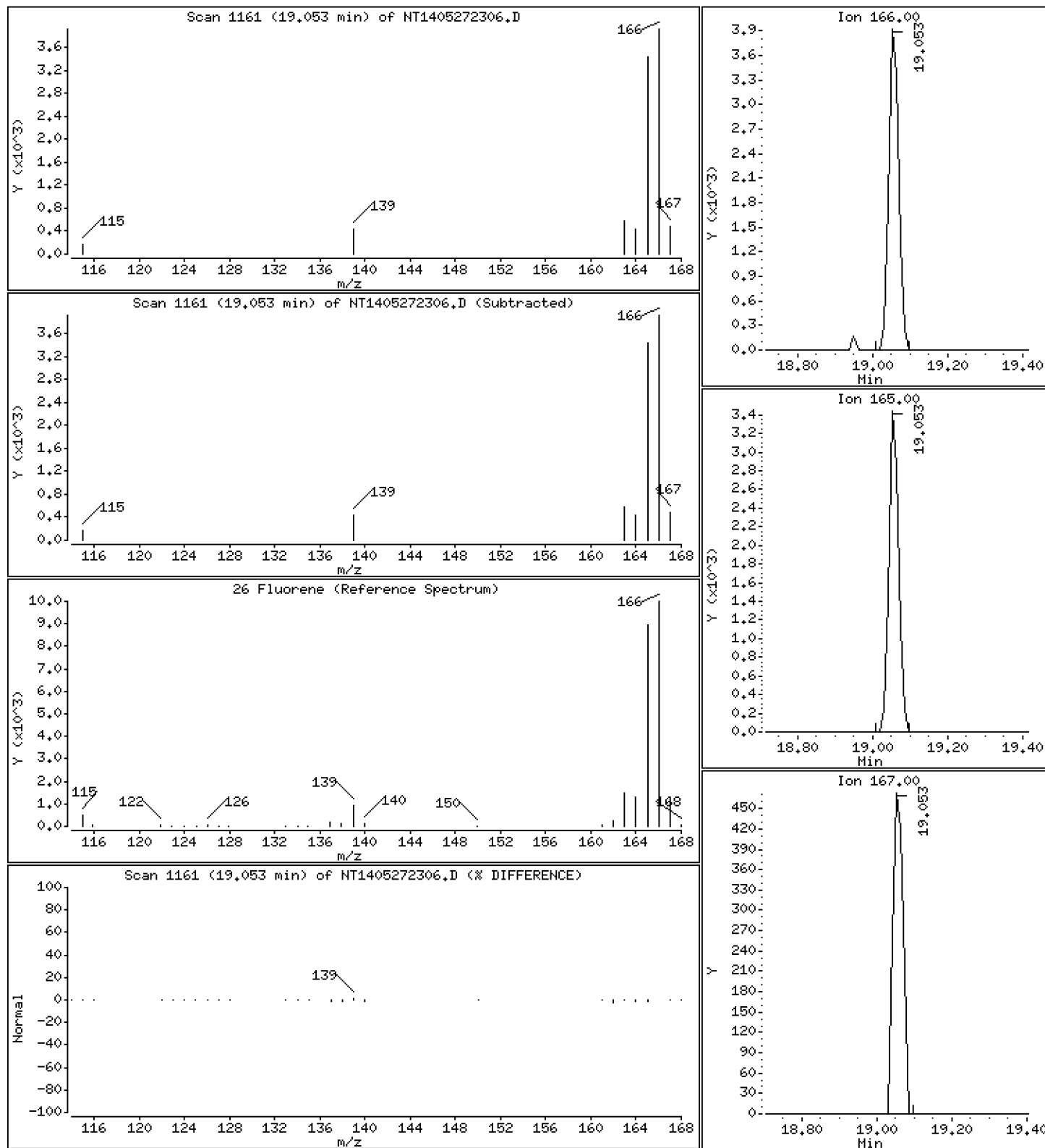
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

26 Fluorene

Concentration: 0.08681 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

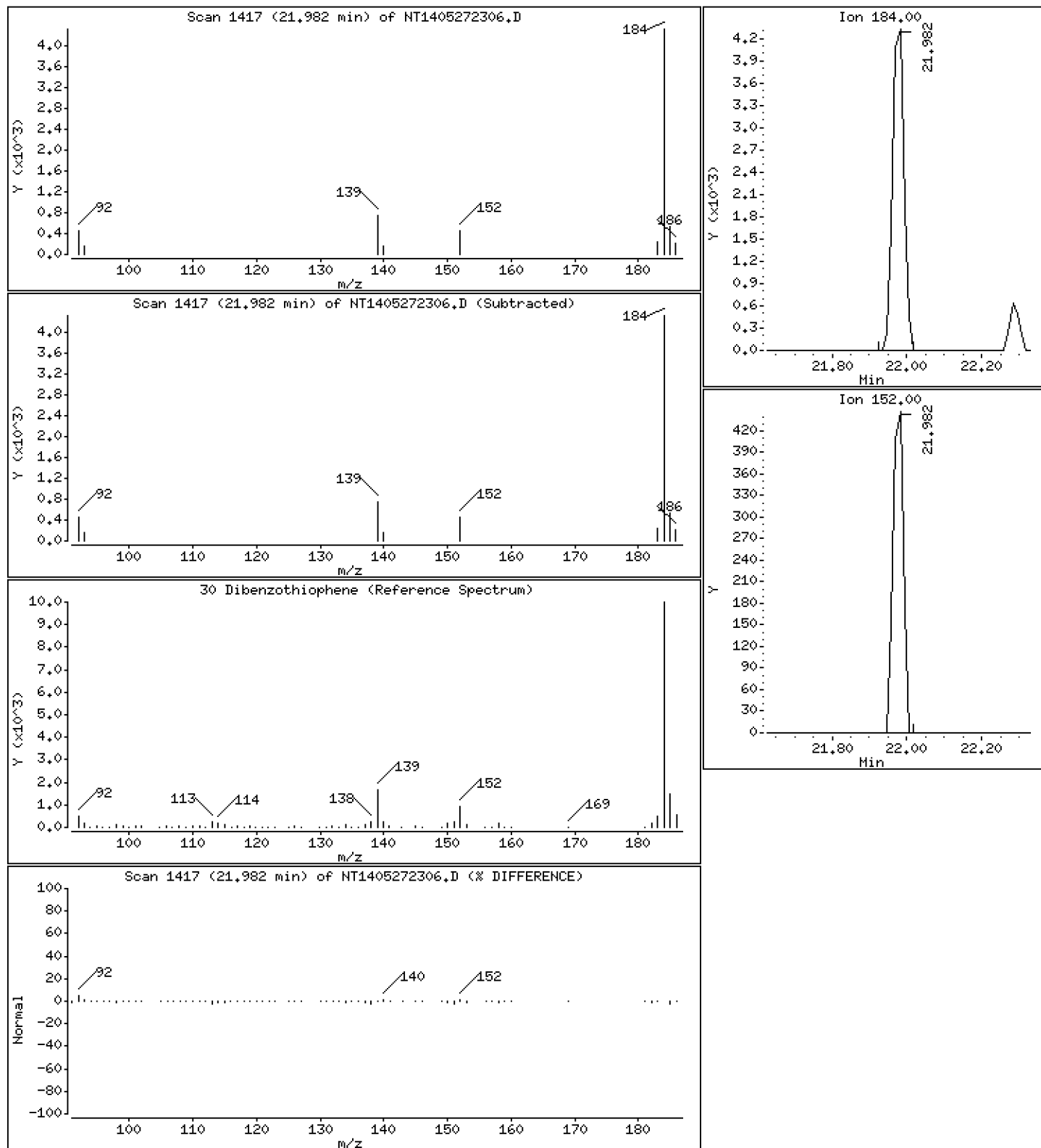
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

30 Dibenzothiophene

Concentration: 0.08389 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

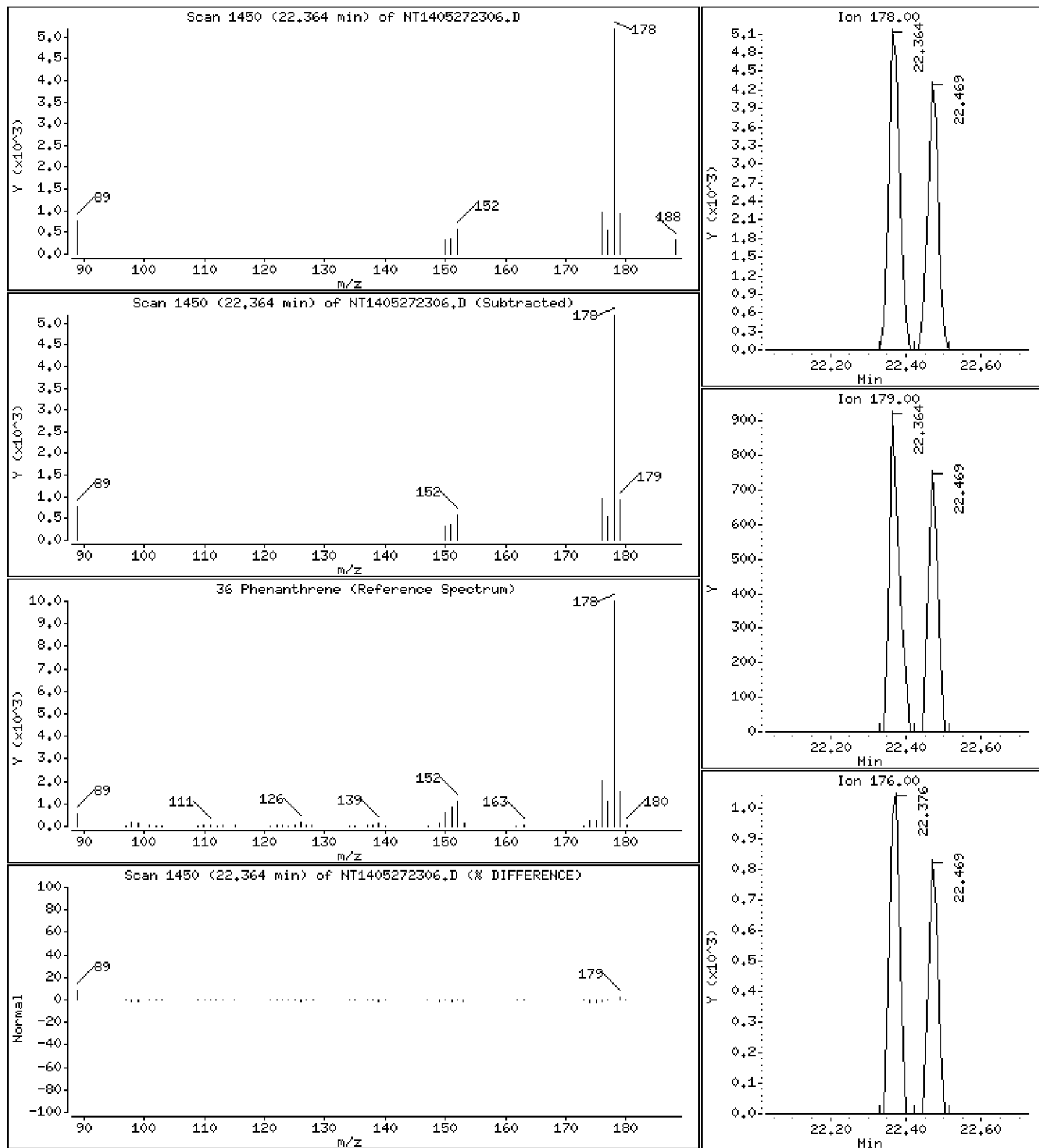
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

36 Phenanthrene

Concentration: 0.08822 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

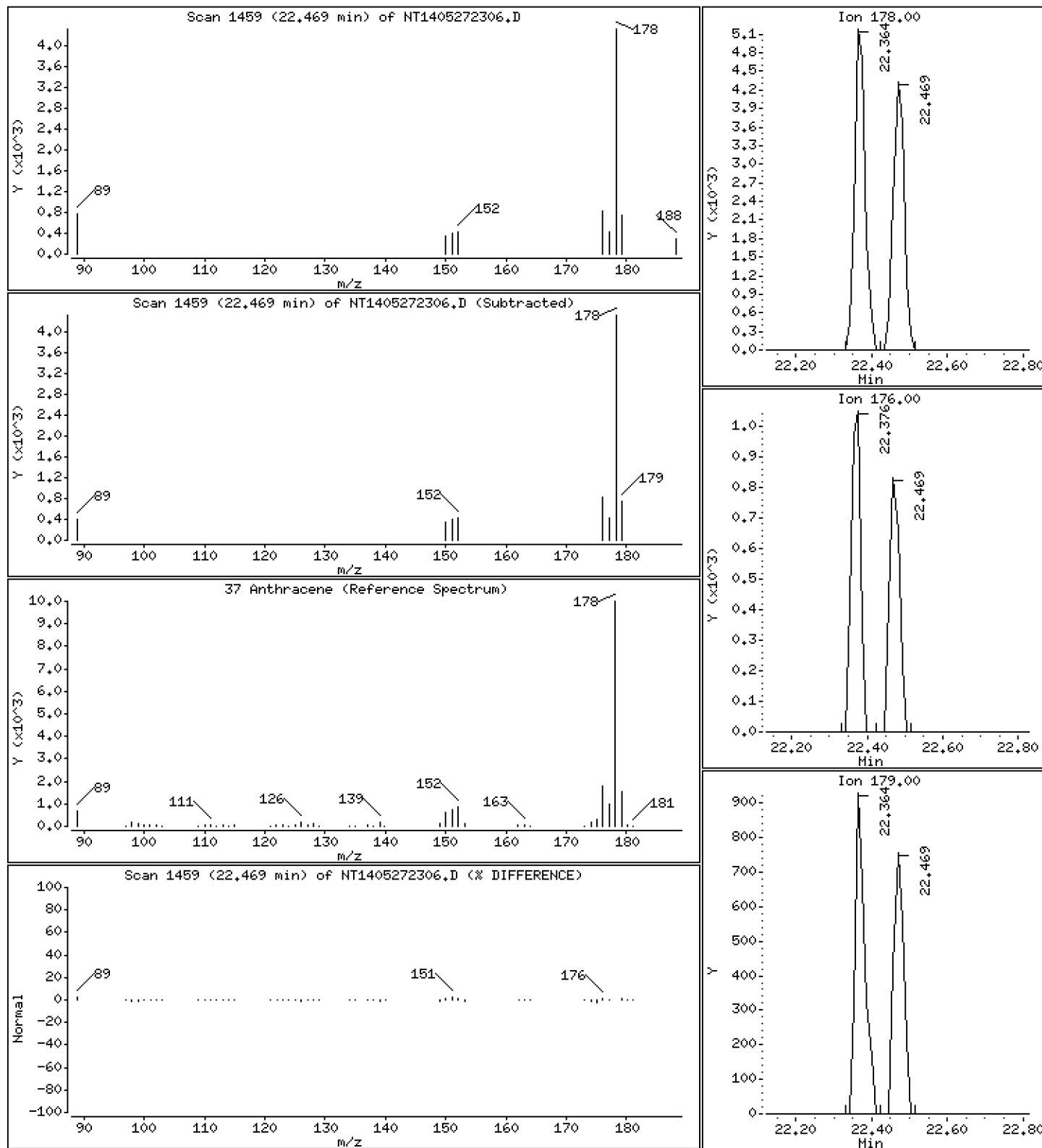
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

37 Anthracene

Concentration: 0.08001 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

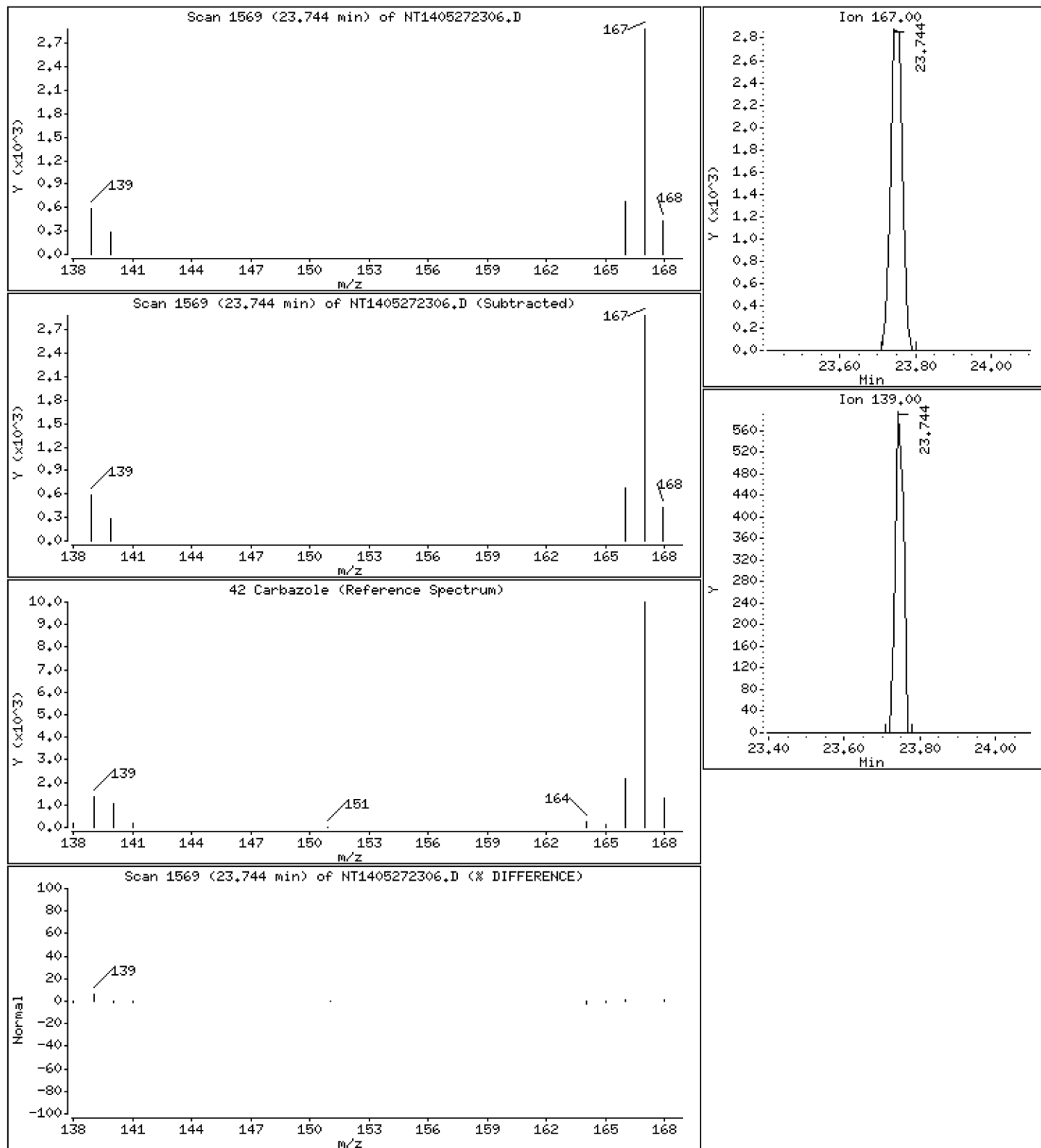
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

42 Carbazole

Concentration: 0.06002 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

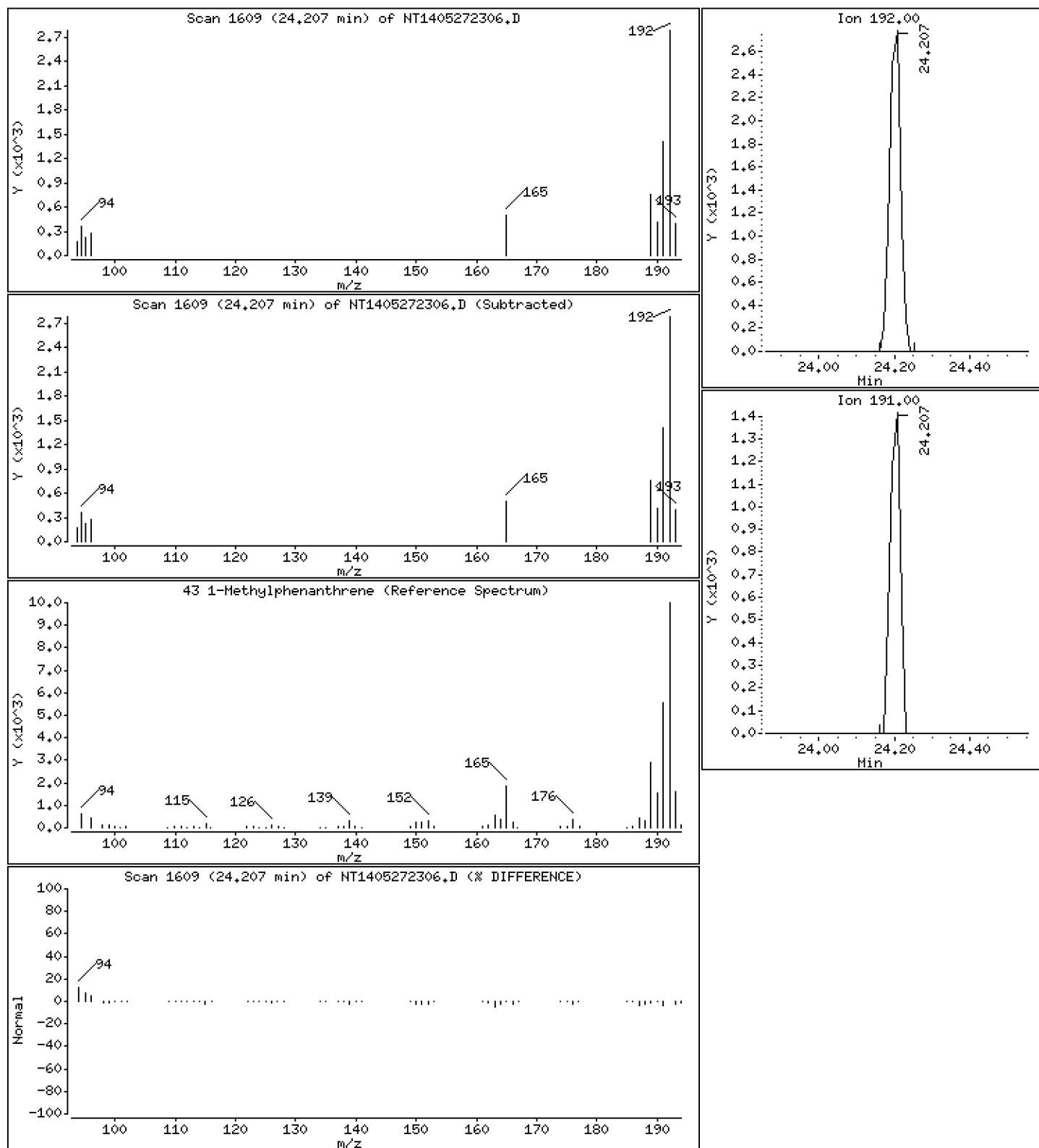
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

43 1-Methylphenanthrene

Concentration: 0.07303 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

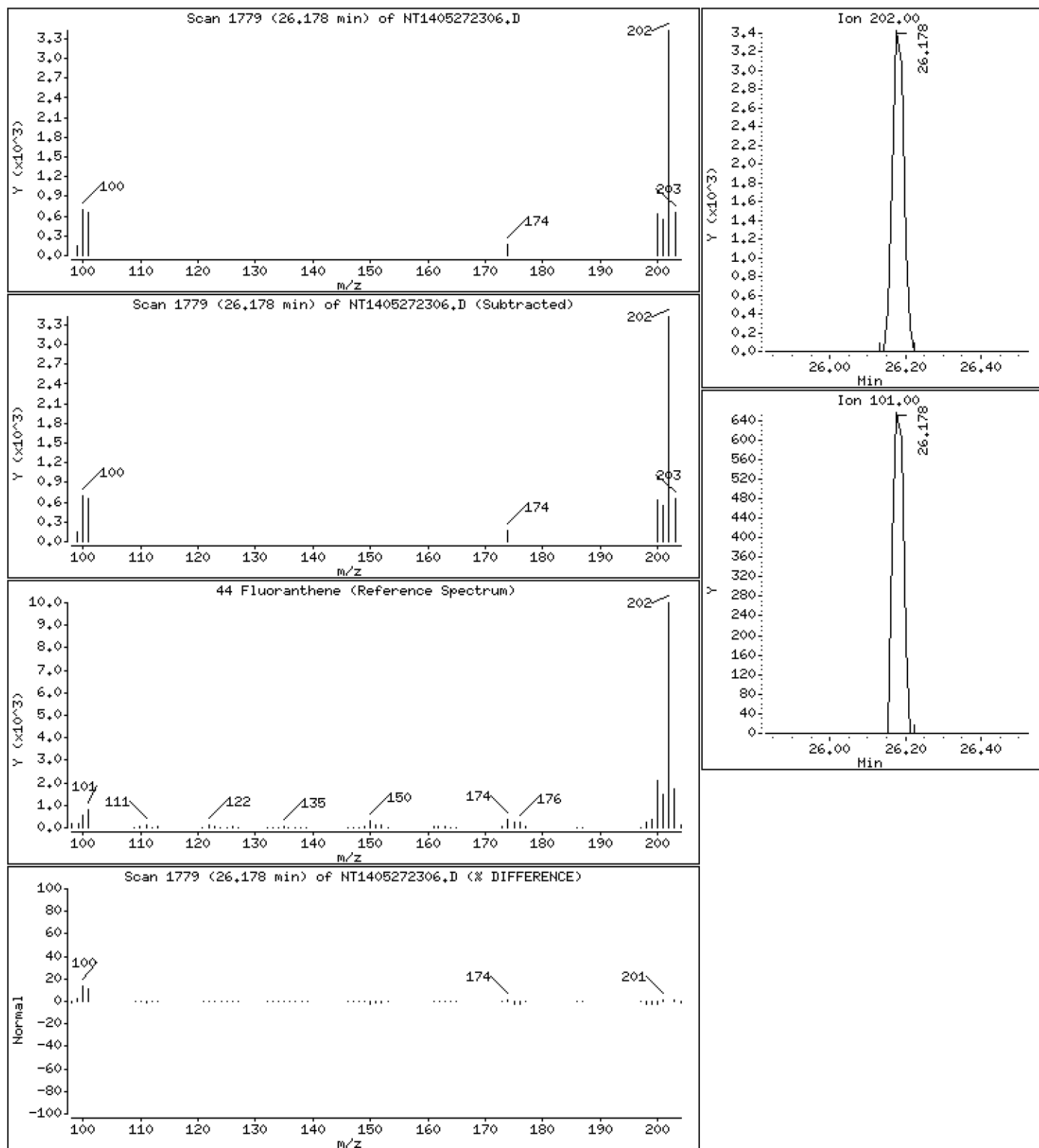
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

44 Fluoranthene

Concentration: 0.06650 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

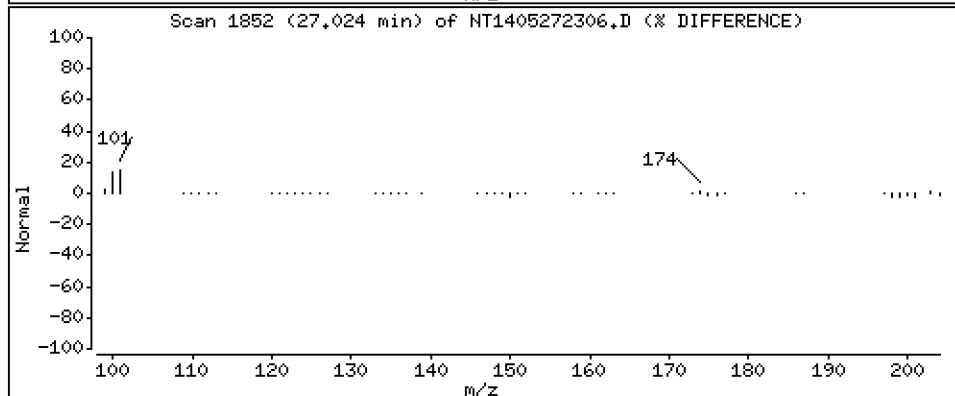
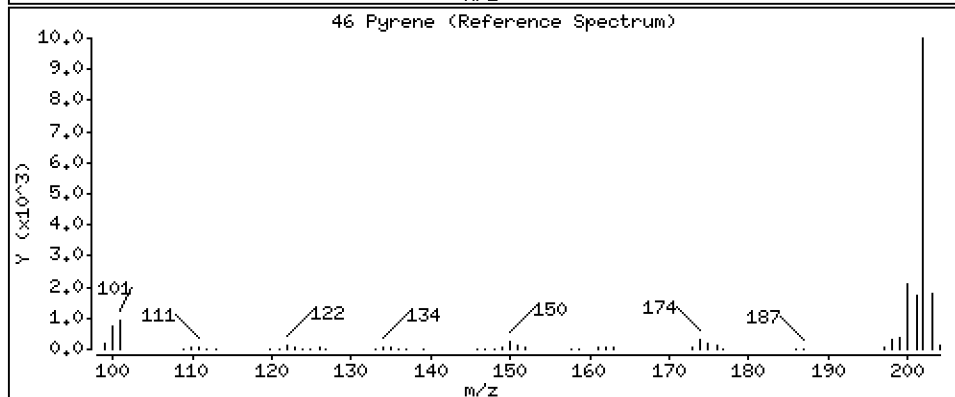
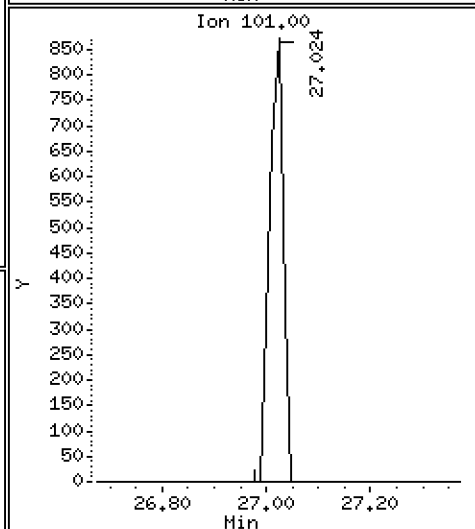
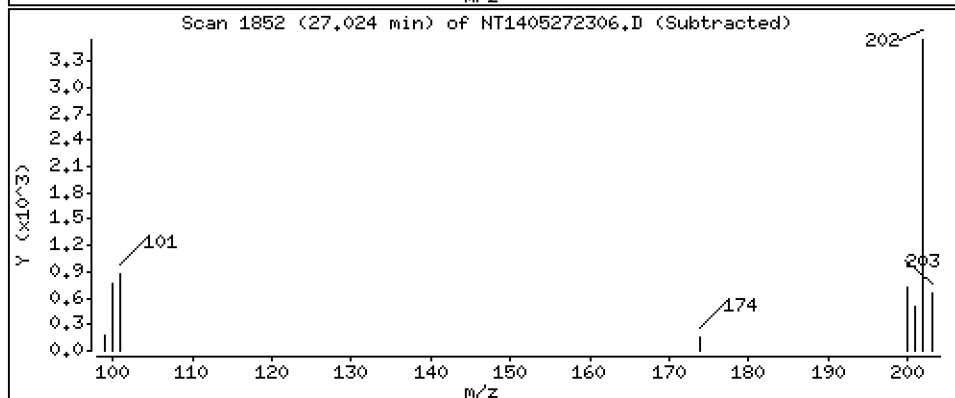
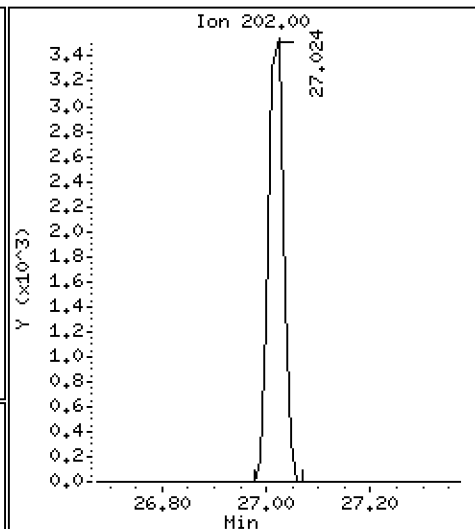
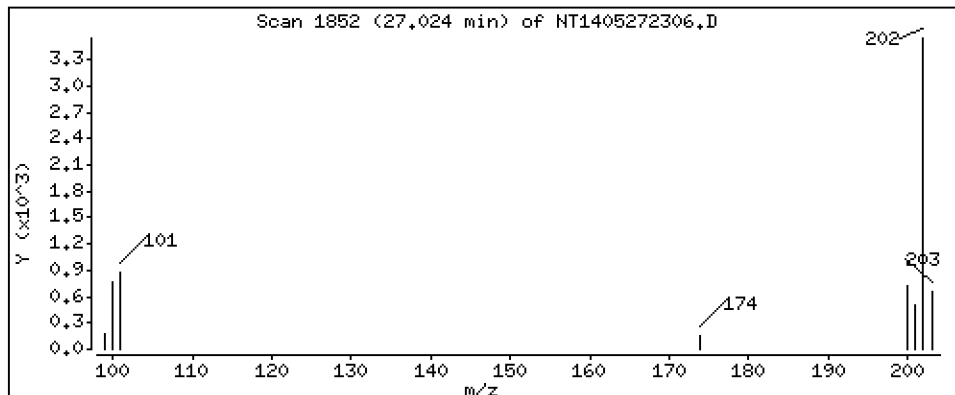
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

46 Pyrene

Concentration: 0.06297 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

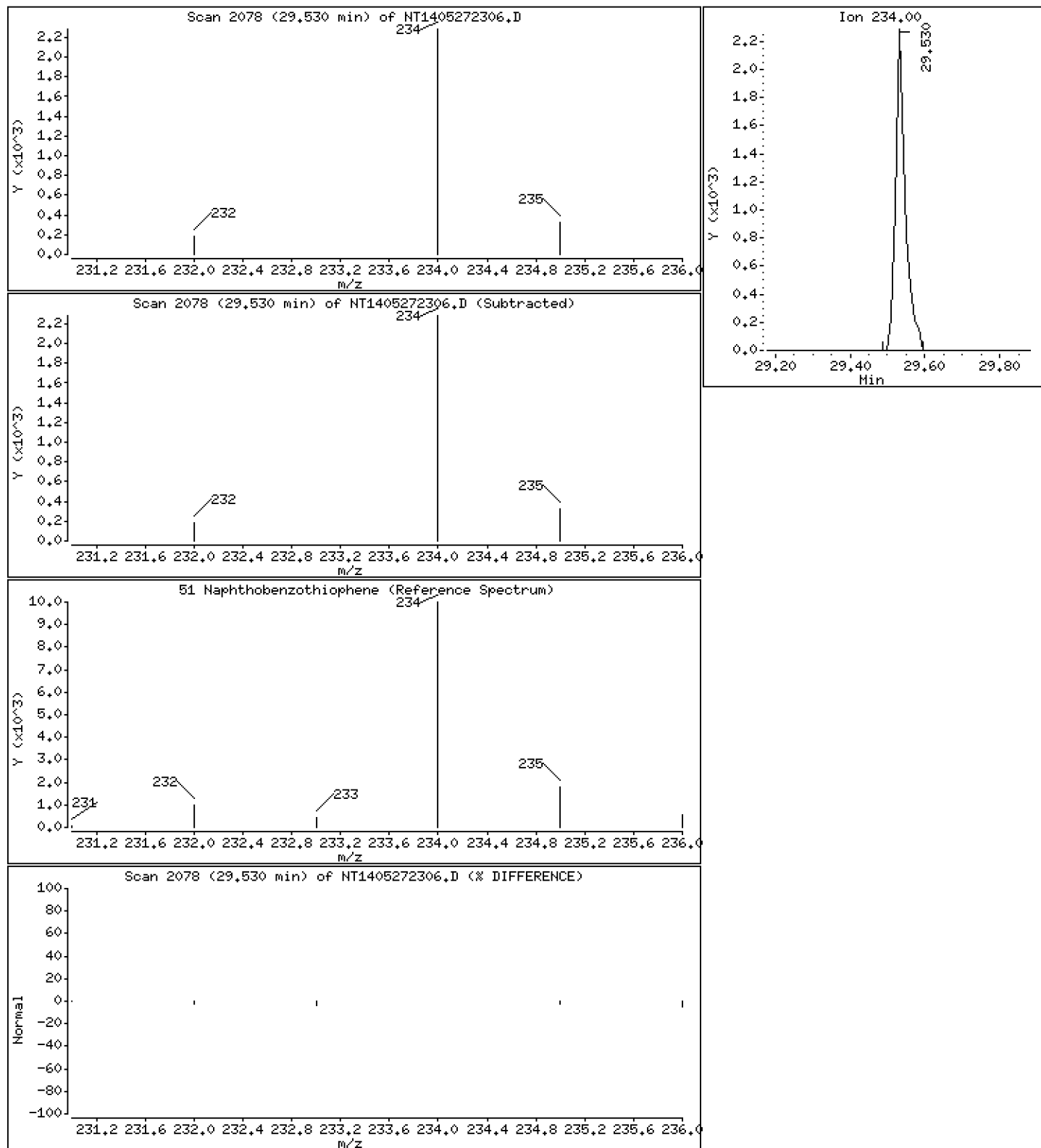
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

51 Naphthobenzothiophene

Concentration: 0.06145 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

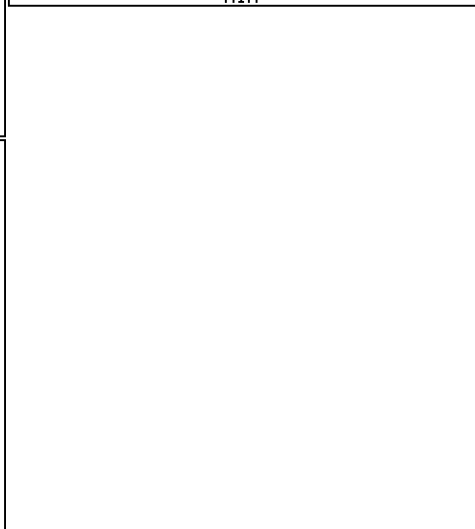
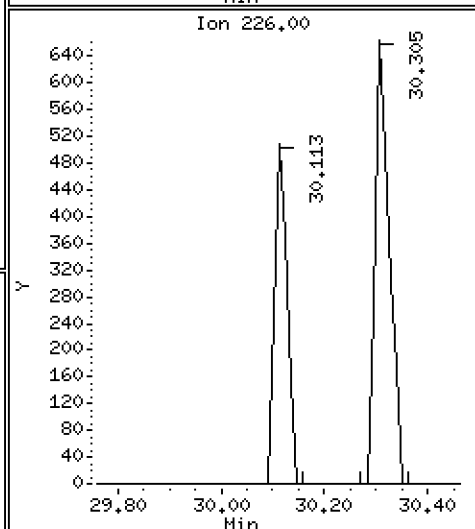
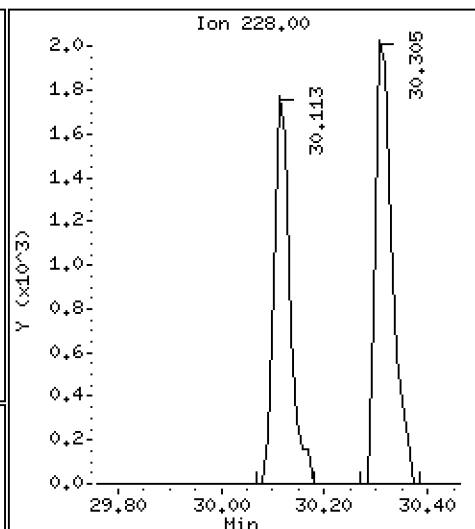
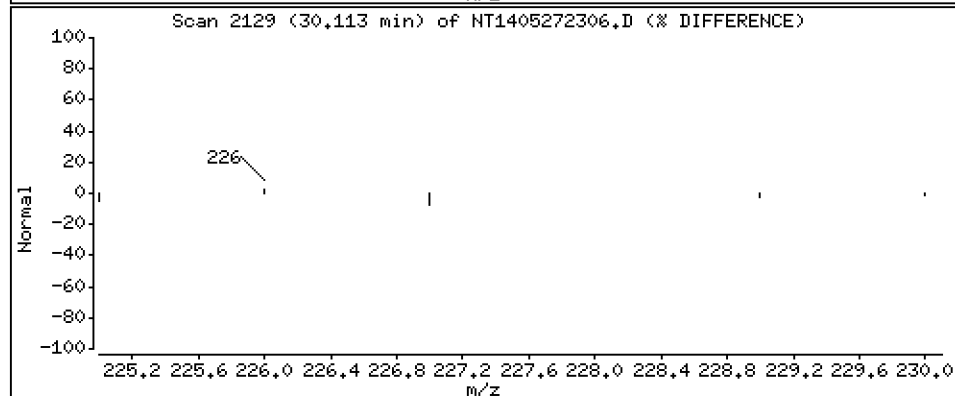
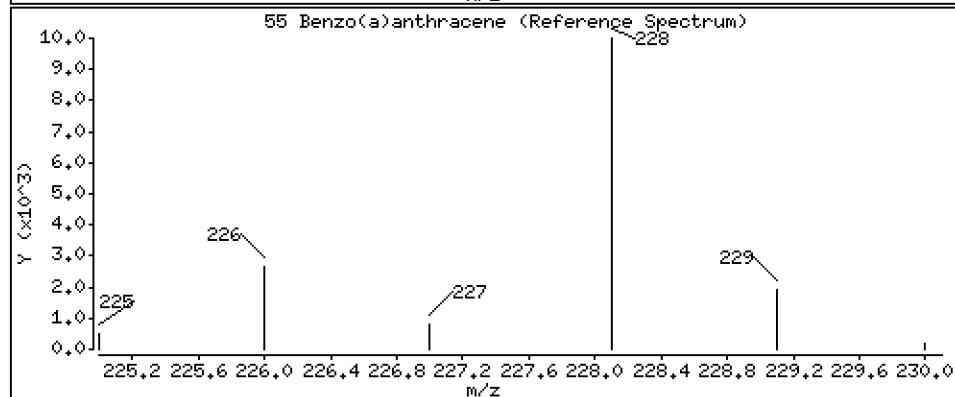
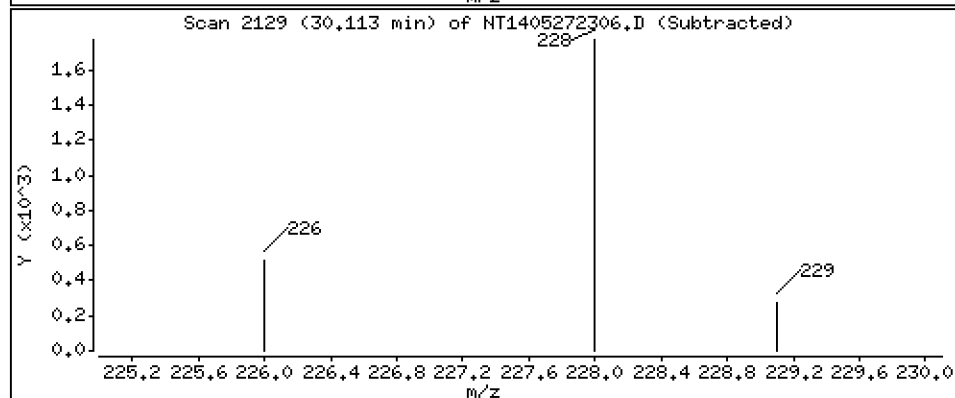
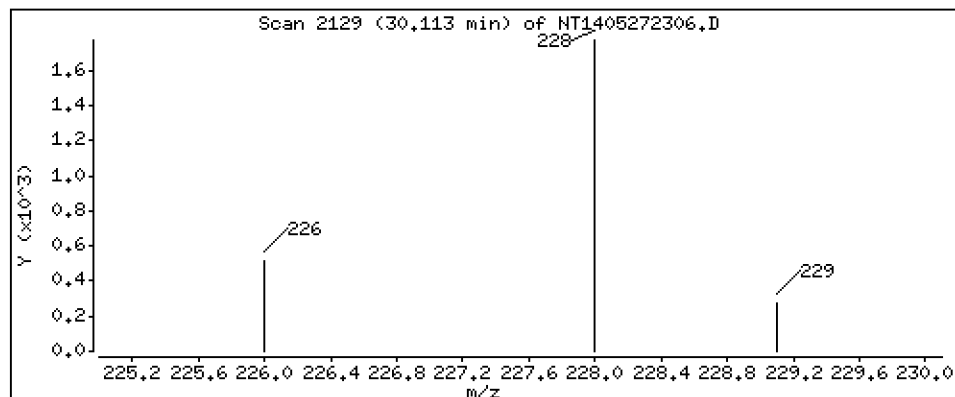
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

55 Benzo(a)anthracene

Concentration: 0,05422 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

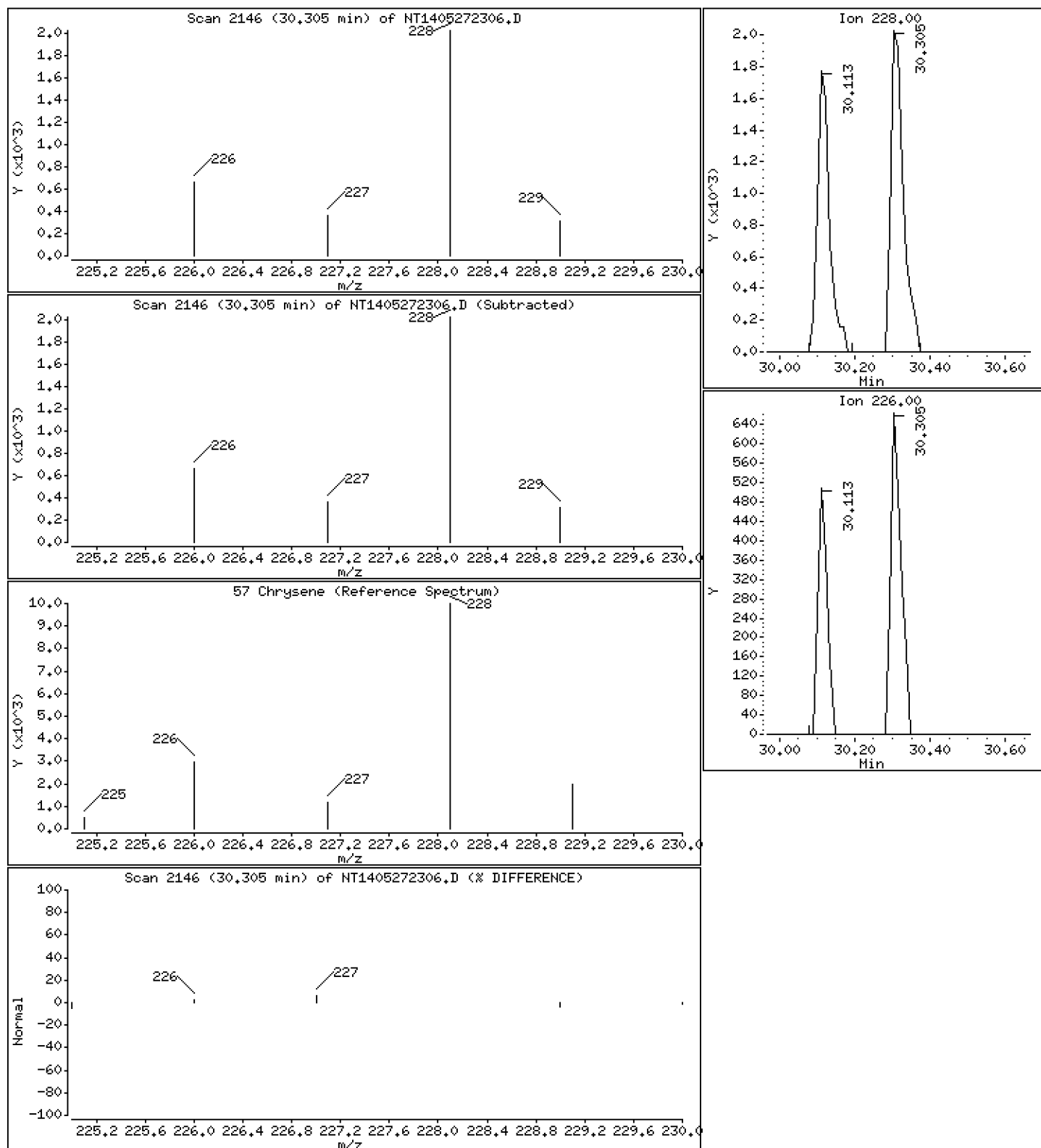
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

57 Chrysene

Concentration: 0,06765 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

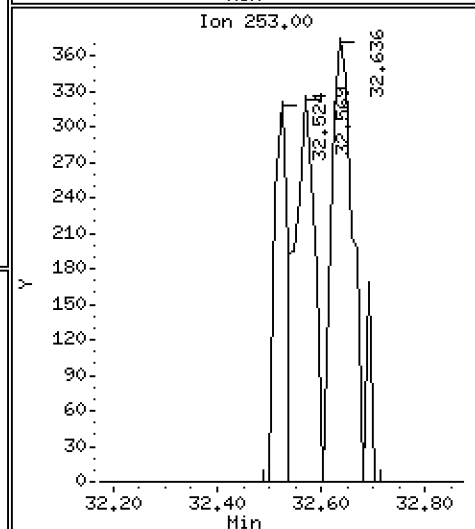
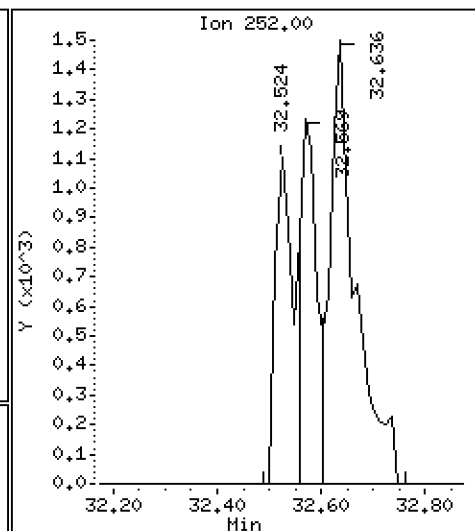
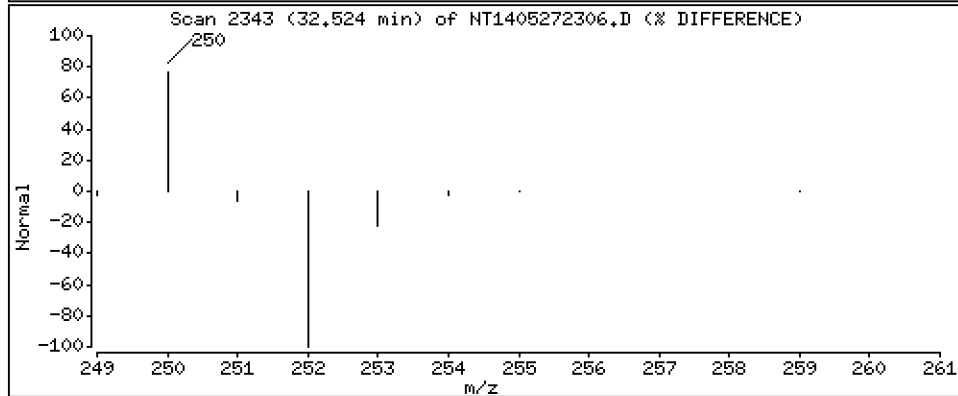
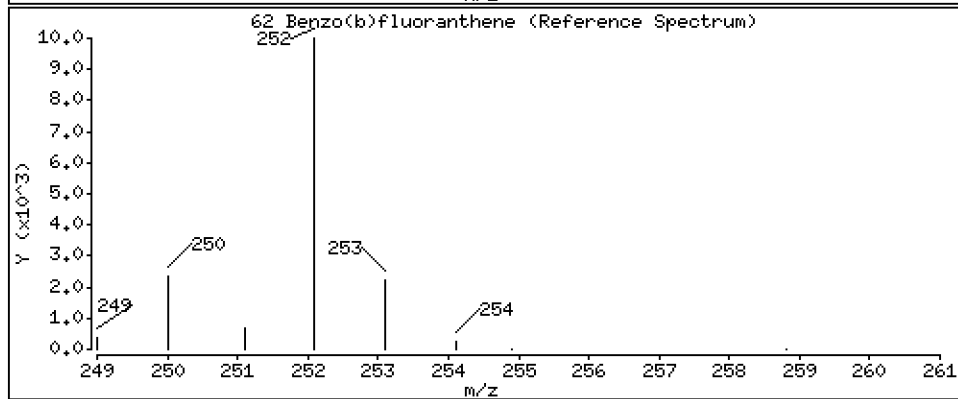
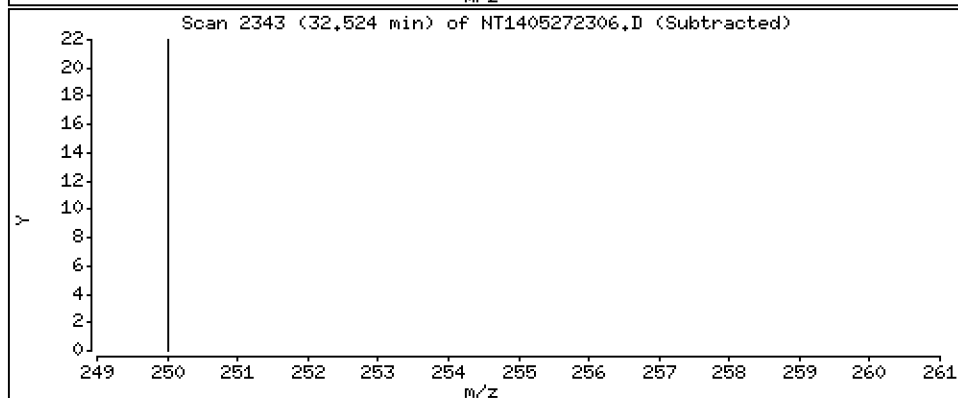
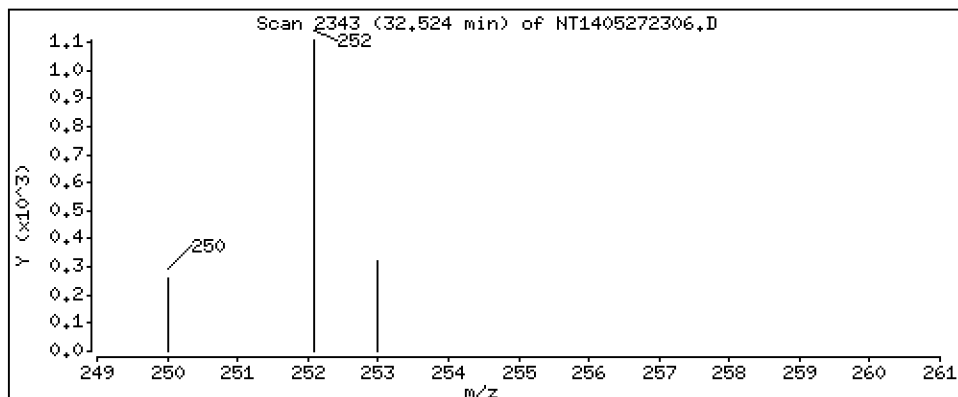
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

62 Benzo(b)fluoranthene

Concentration: 0.04123 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

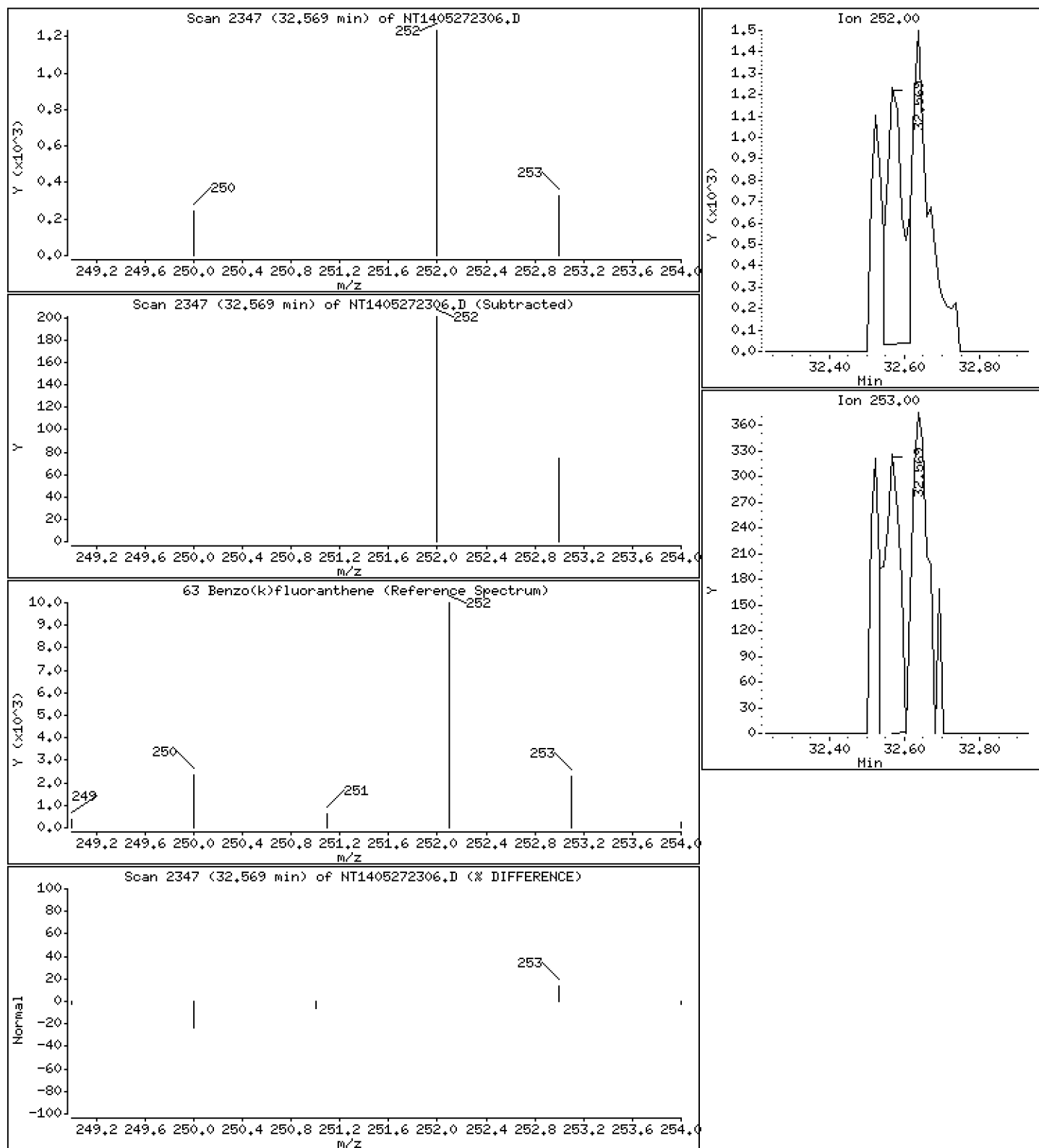
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

63 Benzo(k)fluoranthene

Concentration: 0,04715 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

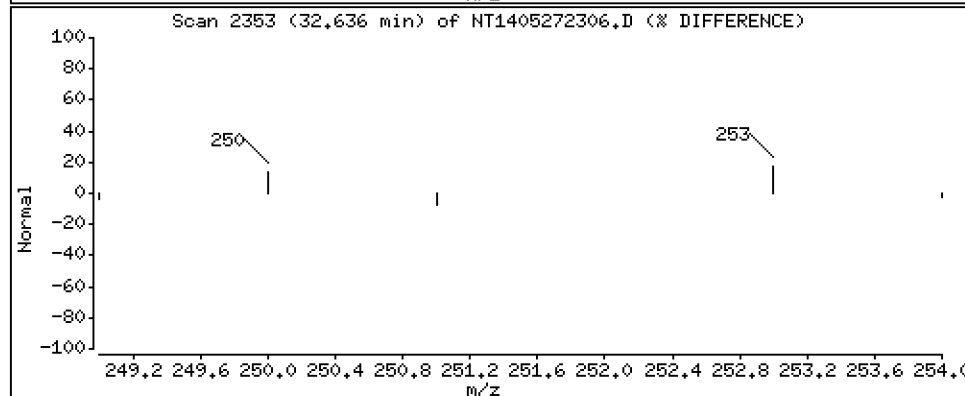
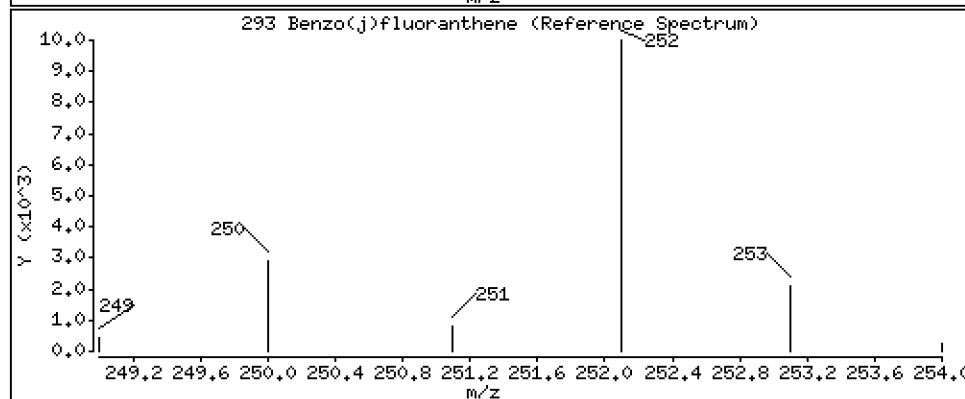
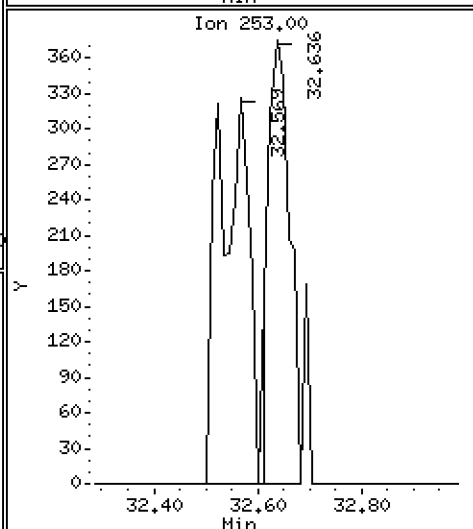
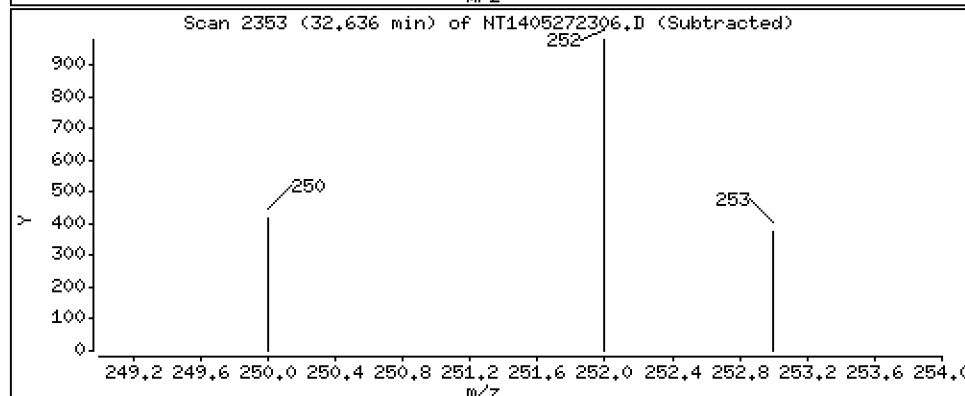
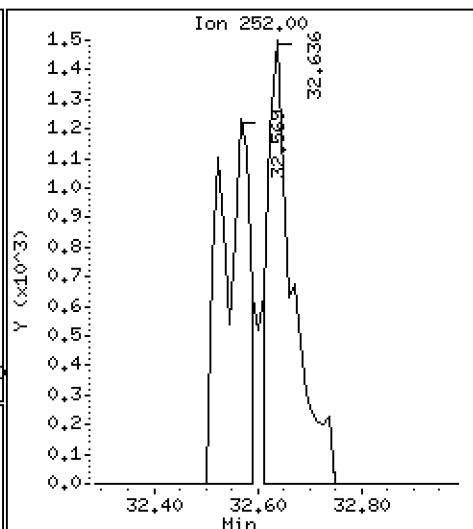
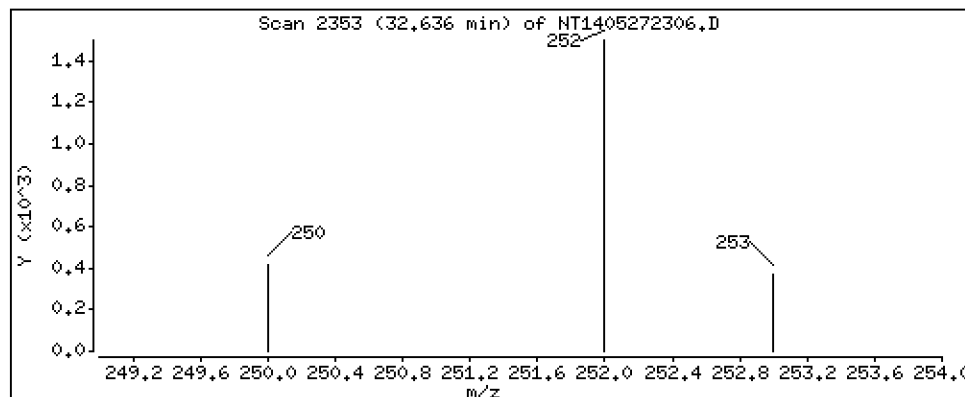
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

293 Benzo(j)fluoranthene

Concentration: 0.07864 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

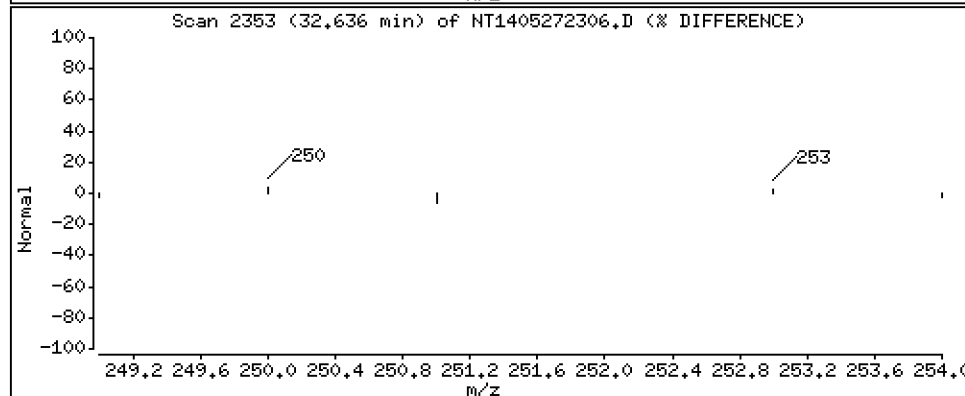
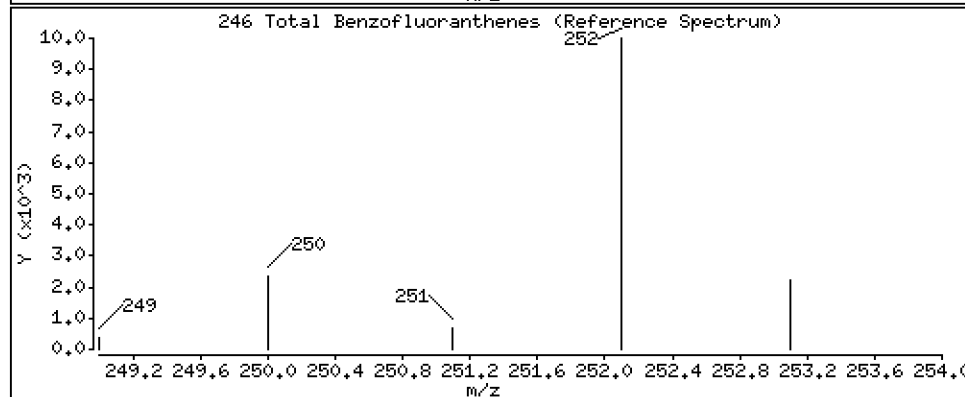
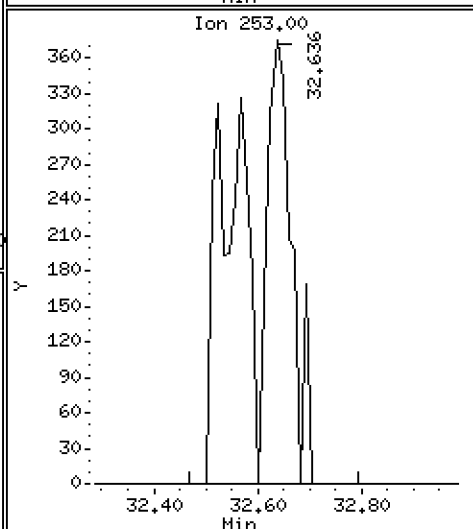
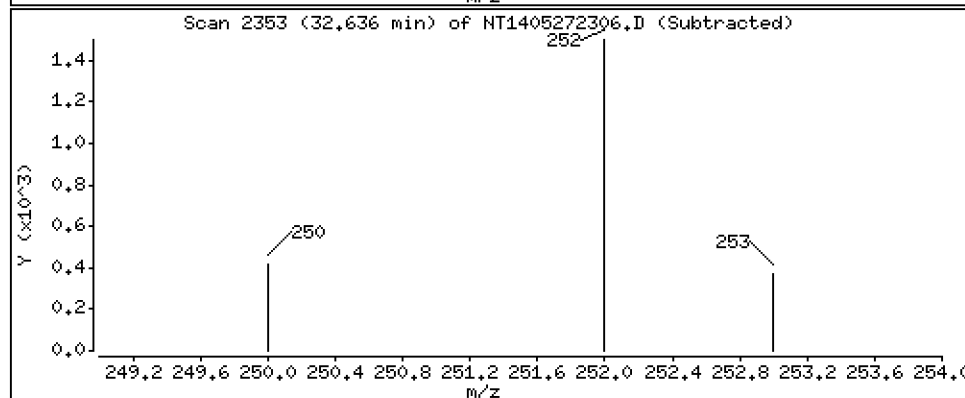
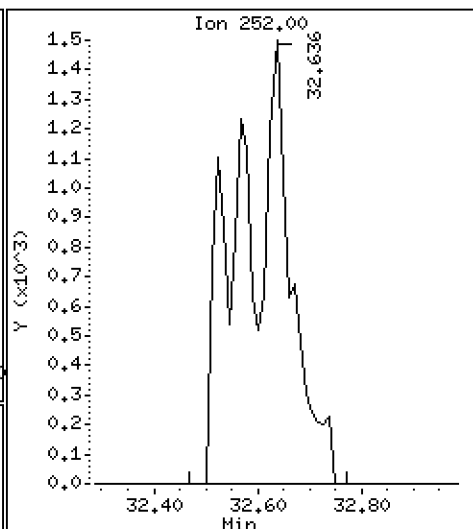
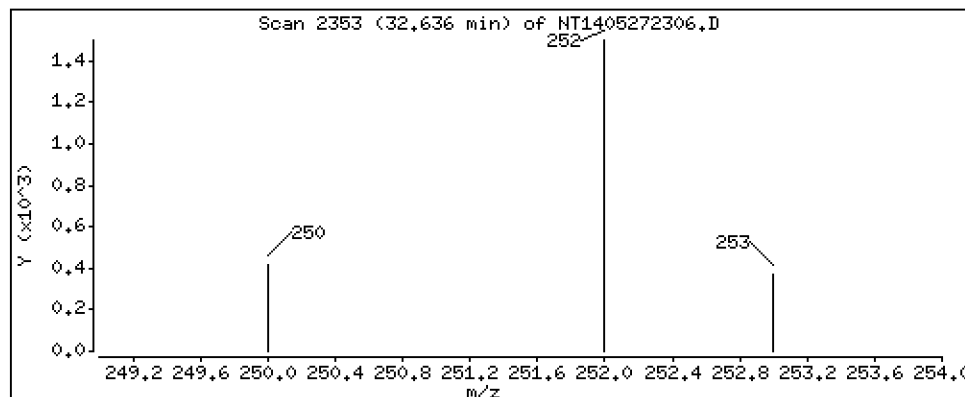
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

246 Total Benzo[fluoranthenes

Concentration: 0,1617 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

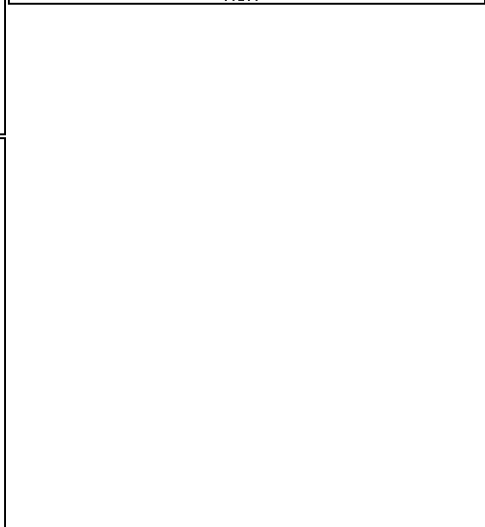
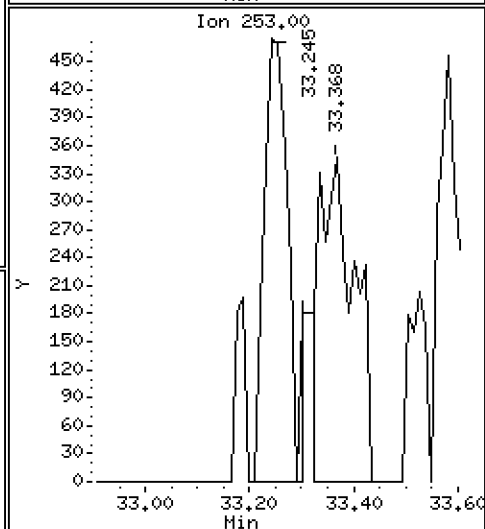
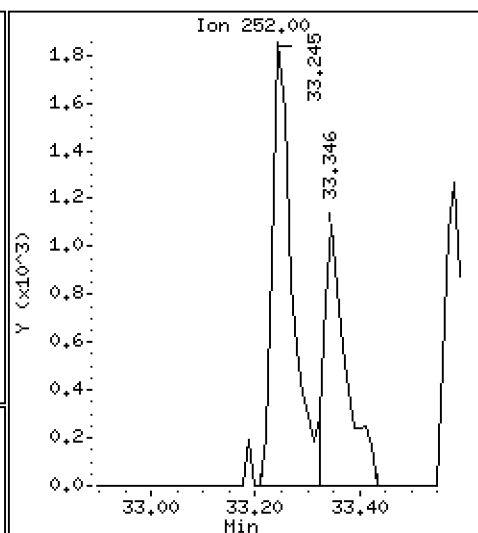
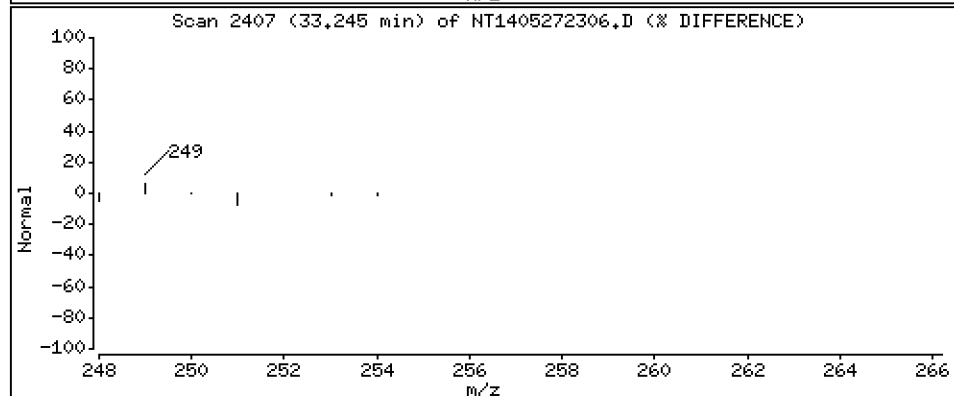
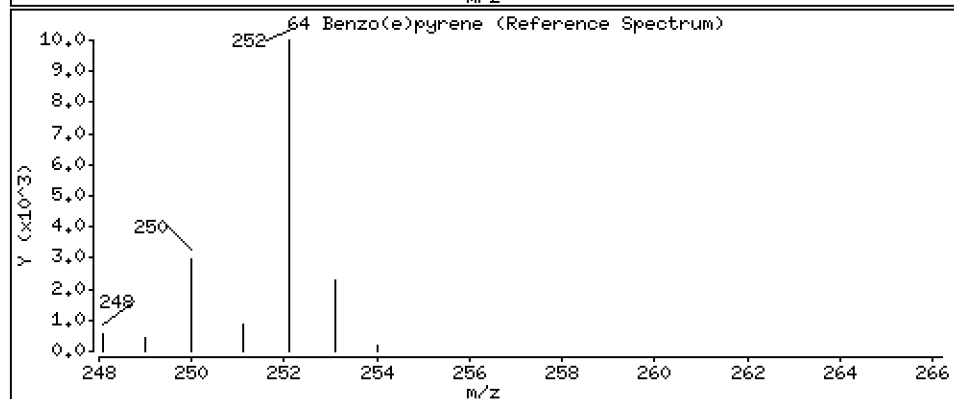
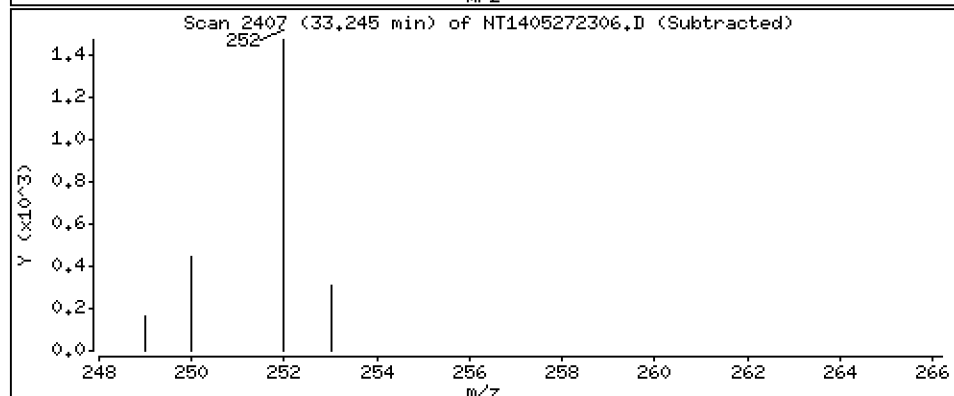
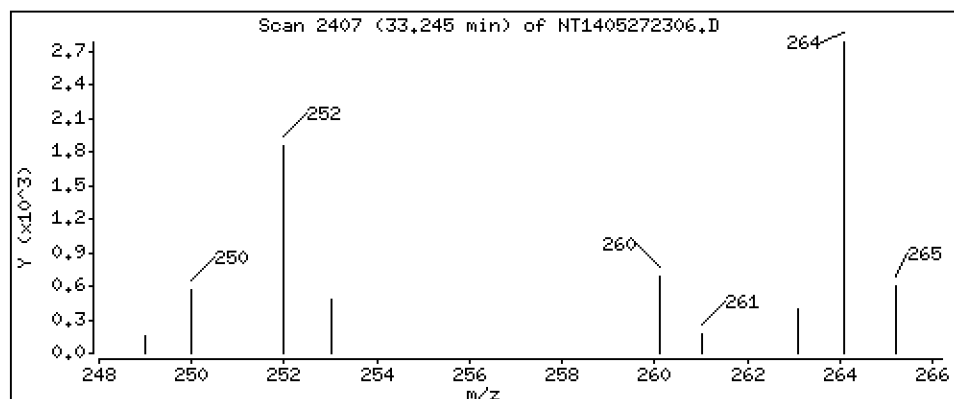
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

64 Benzo(e)pyrene

Concentration: 0.07427 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

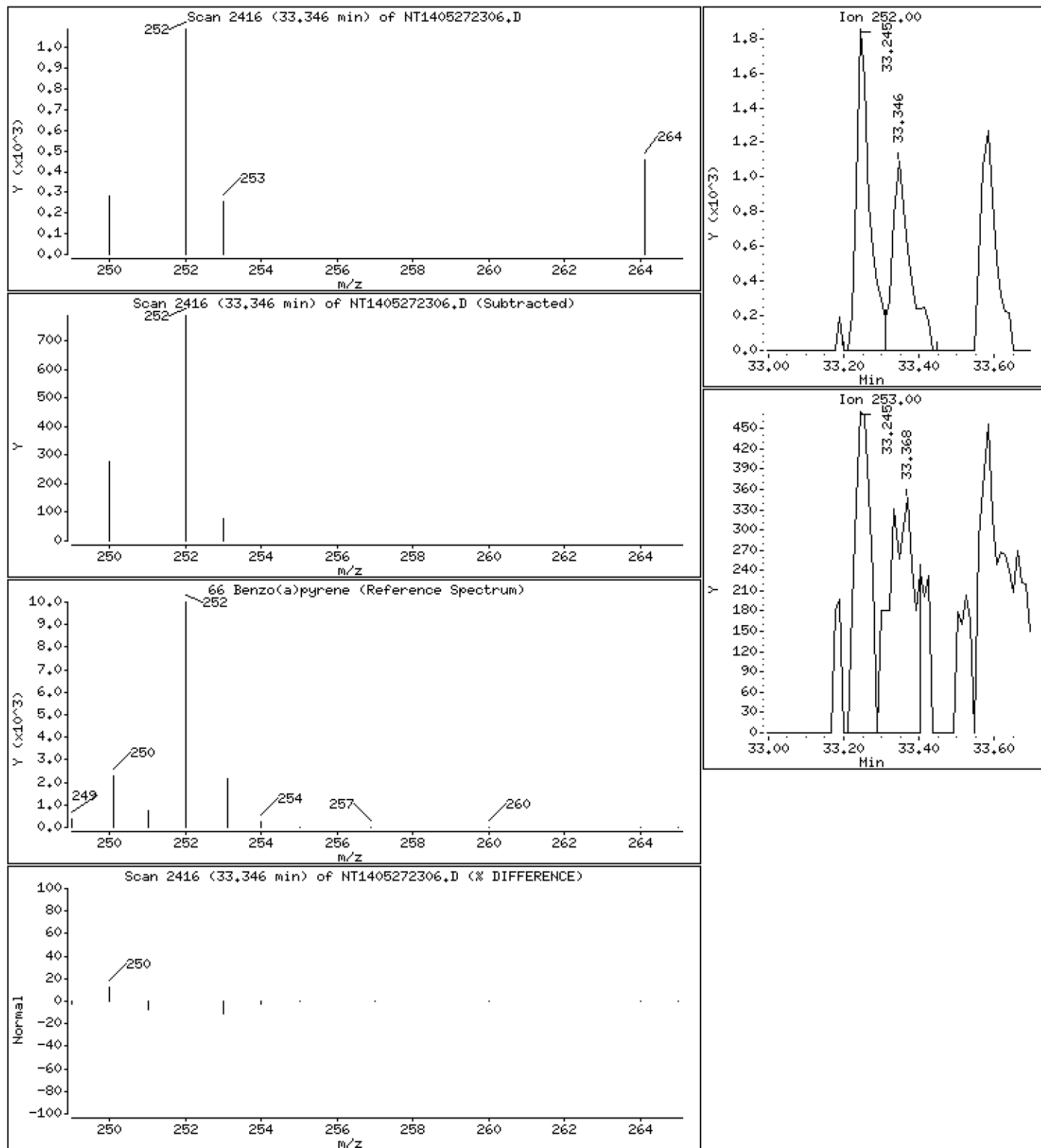
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

66 Benzo(a)pyrene

Concentration: 0.06194 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

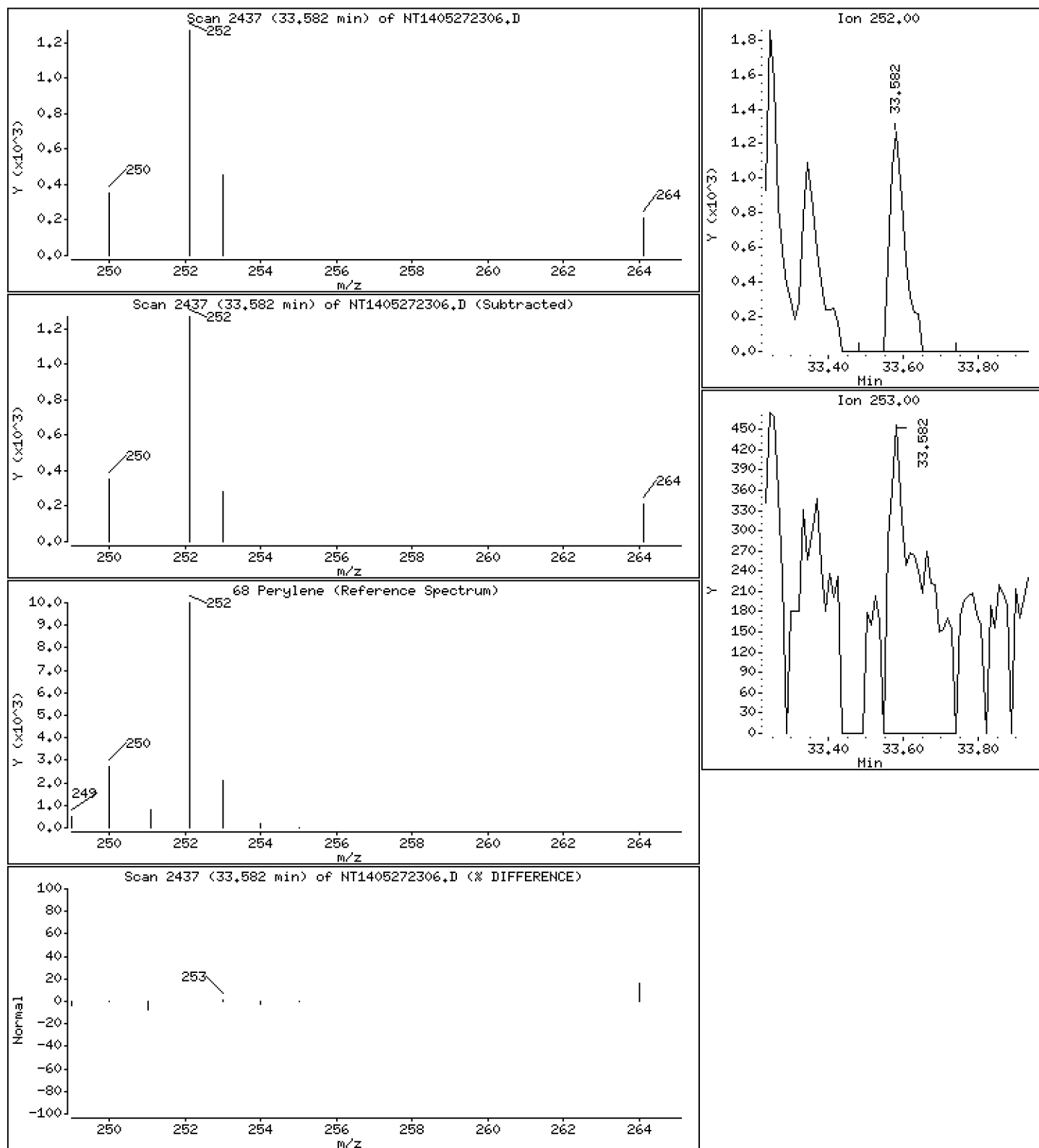
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

68 Perylene

Concentration: 0.05587 ug/mL



Date : 27-MAY-2023 14:19

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV1

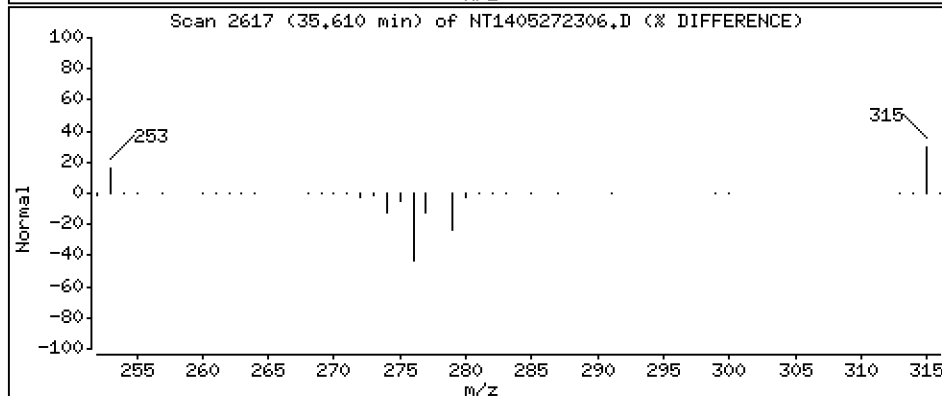
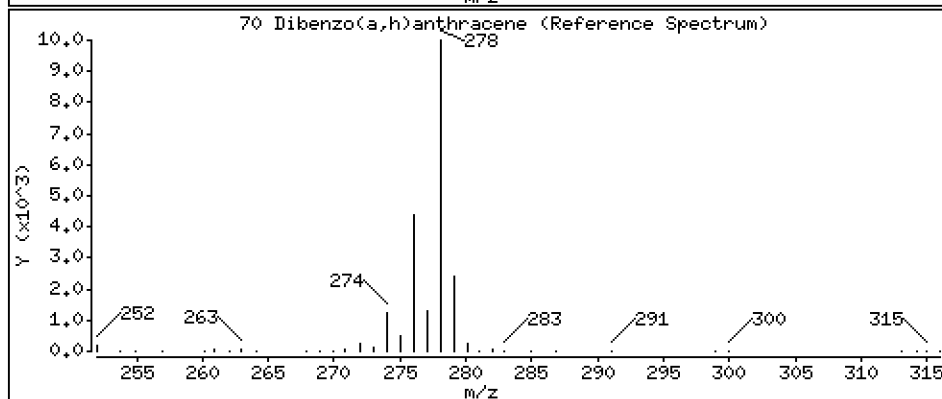
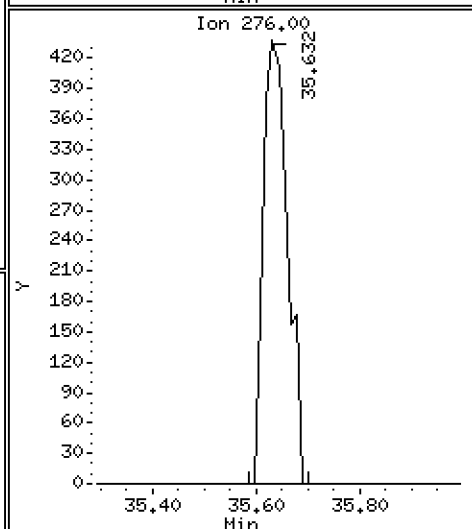
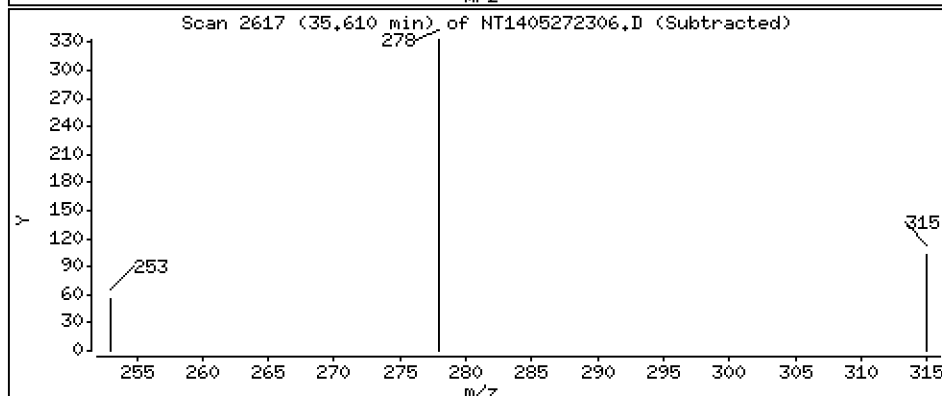
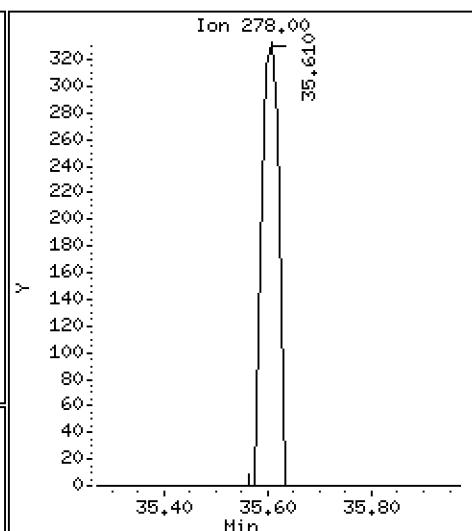
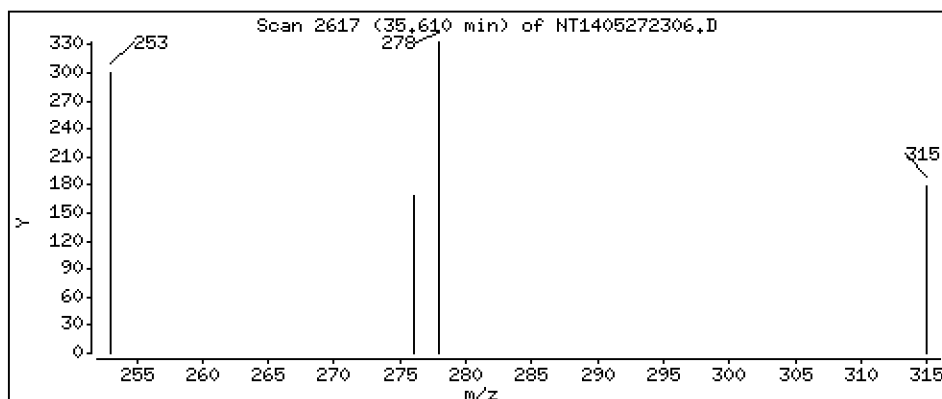
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

70 Dibenzo(a,h)anthracene

Concentration: 0,01259 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230527.b\NT1405272306.D
Lab Smp Id: SLE0443-LCV1
Inj Date : 27-MAY-2023 14:19
Operator : VTS
Smp Info : SLE0443-LCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230527.b\ALKYLPNA.m
Meth Date : 30-May-2023 16:47 deenayd Quant Type: ISTD
Cal Date : 05-MAY-2023 15:12 Cal File: NT1423050507.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: DEENAY-201905

Compounds	QUANT SIG	CONCENTRATIONS					
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)
							FINAL (ug/mL)
1 trans-Decalin	138	7.203	7.203	(0.380)	959	0.06035	0.06035
2 cis-Decalin	138	8.308	8.319	(0.438)	674	0.05851	0.05851
\$ 6 Naphthalene-d8	136	11.939	11.939	(0.630)	13349	0.09006	0.09006 (R)
7 Naphthalene	128	12.007	12.006	(0.634)	14221	0.08735	0.08735
12 Benzo(b)thiophene	134	12.462	12.451	(0.658)	11266	0.09105	0.09105
16 2-Methylnaphthalene	141	13.847	13.847	(0.731)	6881	0.08546	0.08546
17 1-methylnaphthalene	141	14.298	14.297	(0.754)	6710	0.08276	0.08276
18 Biphenyl	154	15.473	15.473	(0.817)	9834	0.08828	0.08828
19 2,6-Dimethylnaphthalene	156	15.561	15.561	(0.821)	6401	0.08074	0.08074
20 Acenaphthylene	152	17.133	17.133	(0.904)	10368	0.07830	0.07830
\$ 21 Acenaphthene-d10	164	17.419	17.419	(0.919)	5474	0.08334	0.08334 (R)
22 Acenaphthene	153	17.528	17.528	(0.925)	6513	0.07971	0.07971
23 Dibenzofuran	168	17.913	17.913	(0.945)	9122	0.08528	0.08528
24 1,6,7-Trimethylnaphthalene	170	18.133	18.133	(0.957)	5066	0.07169	0.07169
* 25 Fluorene-d10	176	18.950	18.950	(1.000)	148342	2.00000	
26 Fluorene	166	19.052	19.064	(1.005)	7440	0.08681	0.08681
30 Dibenzothiophene	184	21.981	21.981	(1.160)	8810	0.08389	0.08389
\$ 35 Phenanthrene-d10	188	22.283	22.294	(0.994)	8820	0.08826	0.08826 (R)
36 Phenanthrene	178	22.364	22.375	(0.998)	10282	0.08822	0.08822
* 250 Anthracene-d10	188	22.410	22.410	(1.000)	175135	2.00000	
37 Anthracene	178	22.468	22.468	(1.003)	8560	0.08001	0.08001
42 Carbazole	167	23.743	23.755	(1.059)	6036	0.06002	0.06002
43 1-Methylphenanthrene	192	24.207	24.207	(1.080)	5489	0.07303	0.07303
44 Fluoranthene	202	26.177	26.177	(1.168)	7067	0.06650	0.06650
46 Pyrene	202	27.023	27.023	(1.206)	7003	0.06297	0.06297
51 Naphthobenzothiophene	234	29.529	29.529	(1.318)	4507	0.06145	0.06145
55 Benzo(a)anthracene	228	30.113	30.113	(0.907)	3902	0.05422	0.05422
\$ 56 Chrysene-d12	240	30.237	30.237	(0.911)	3033	0.06090	0.06090 (R)
57 Chrysene	228	30.304	30.316	(0.913)	4762	0.06765	0.06765
62 Benzo(b)fluoranthene	252	32.523	32.523	(0.980)	2768	0.04123	0.04123
63 Benzo(k)fluoranthene	252	32.568	32.579	(0.981)	3556	0.04715	0.04715 (M)
293 Benzo(j)fluoranthene	252	32.636	32.636	(0.983)	4955	0.07864	0.07864 (H)
246 Total Benzofluoranthenes	252	32.636	32.636	(0.983)	10100	0.16167	0.1617 (M)

Compounds	QUANT	SIG					CONCENTRATIONS	
			RT	EXP RT	REL RT	RESPONSE	ON-COLUMN	FINAL
	MASS						(ug/mL)	(ug/mL)
=====	=====		=====	=====	=====	=====	=====	=====
* 251 Benzo(e)pyrene-d12	264		33.188	33.188	(1.000)	91801	2.00000	
64 Benzo(e)pyrene	252		33.244	33.244	(1.002)	4823	0.07427	0.07427
66 Benzo(a)pyrene	252		33.345	33.345	(1.005)	3402	0.06194	0.06194
\$ 67 Perylene-d12	264		33.526	33.526	(1.010)	1756	0.03655	0.03655 (RM)
68 Perylene	252		33.582	33.582	(1.012)	3368	0.05587	0.05587 (M)
69 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.					
70 Dibenzo(a,h)anthracene	278		35.609	35.621	(1.073)	740	0.01259	0.01259
74 Benzo(g,h,i)perylene	276		Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
 M - Compound response manually integrated.
 H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 27-MAY-2023
 Lab File ID: NT1405272306.D Calibration Time: 13:31
 Lab Smp Id: SLE0443-LCV1
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230527.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	136933	68467	273866	148342	8.33
250 Anthracene-d10	167500	83750	335000	175135	4.56
251 Benzo(e)pyrene-d1	94374	47187	188748	91801	-2.73

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	18.95	18.45	19.45	18.95	0.00
250 Anthracene-d10	22.41	21.91	22.91	22.41	0.00
251 Benzo(e)pyrene-d1	33.19	32.69	33.69	33.19	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 - NT1405272306.D

Lab ID: SLE0443-LCV1

nt14.i, 20230527.b\ALKYLPNA.m, 27-MAY-2023 14:19

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1405272305.D

On Column LOD for nt14.i, 20230527.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

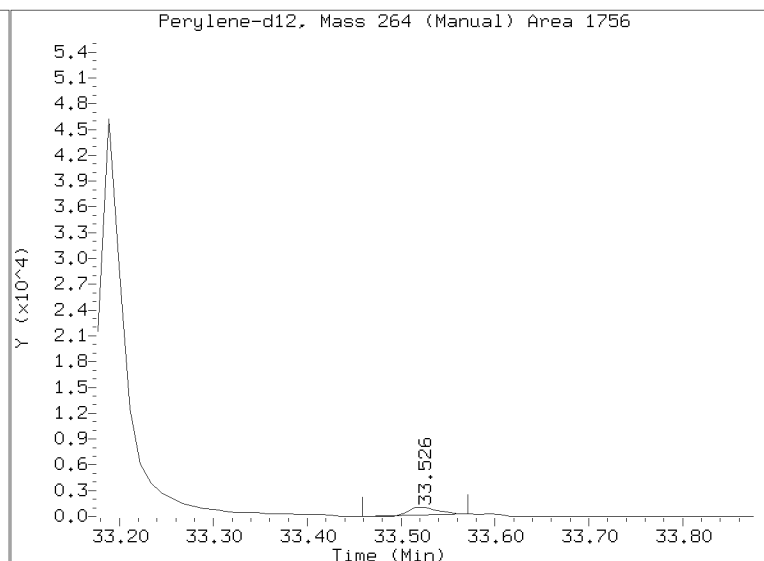
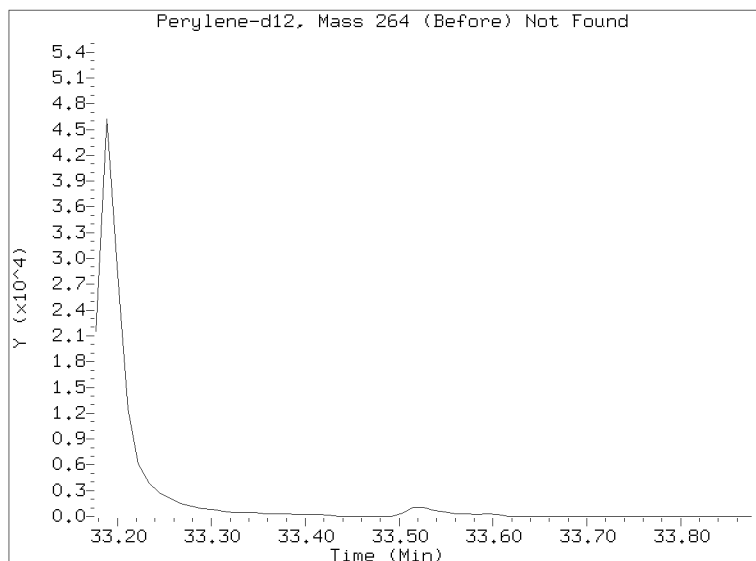
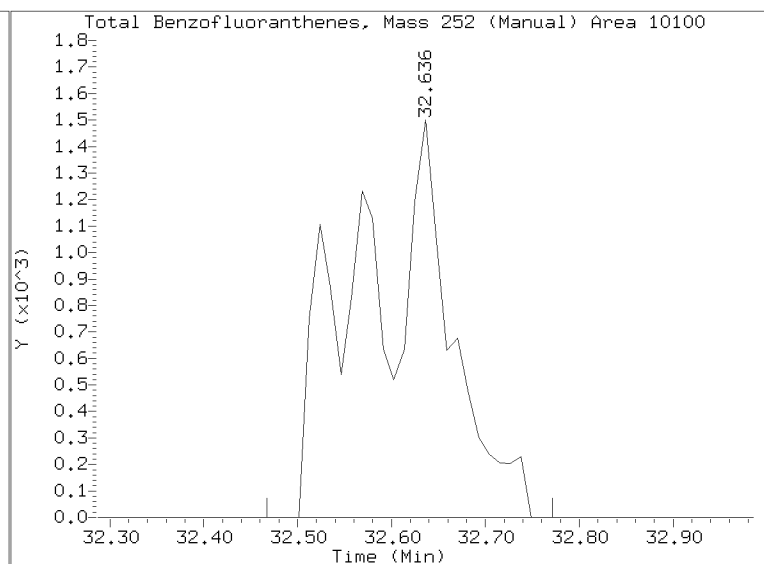
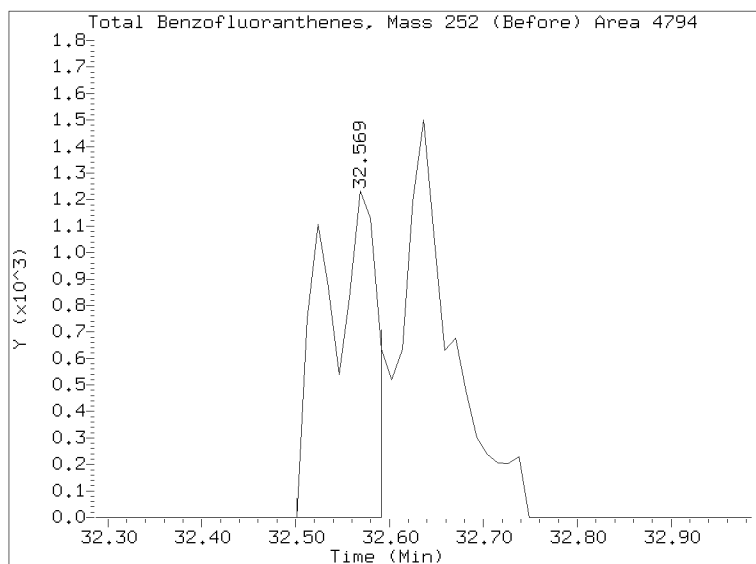
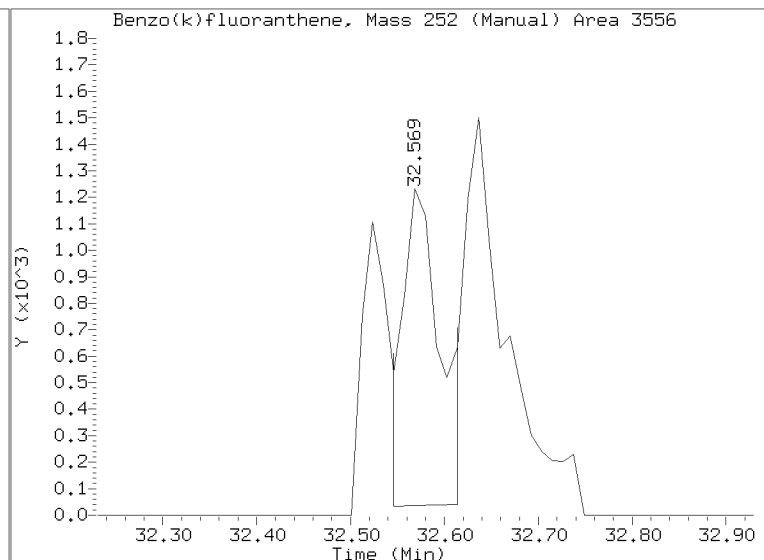
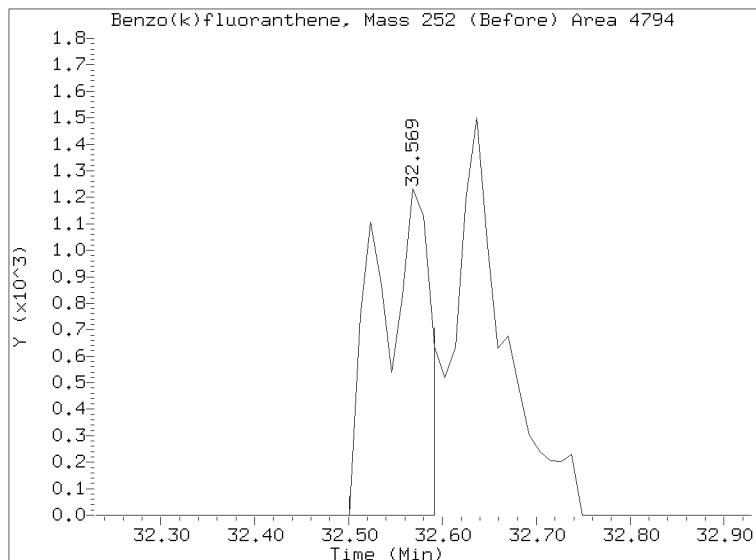
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230527.b/NT1405272306.D

Injection Date: 27-MAY-2023 14:19

Lab ID: SLE0443-LCV1 Client ID:

Report Date: 05/30/2023 16:47



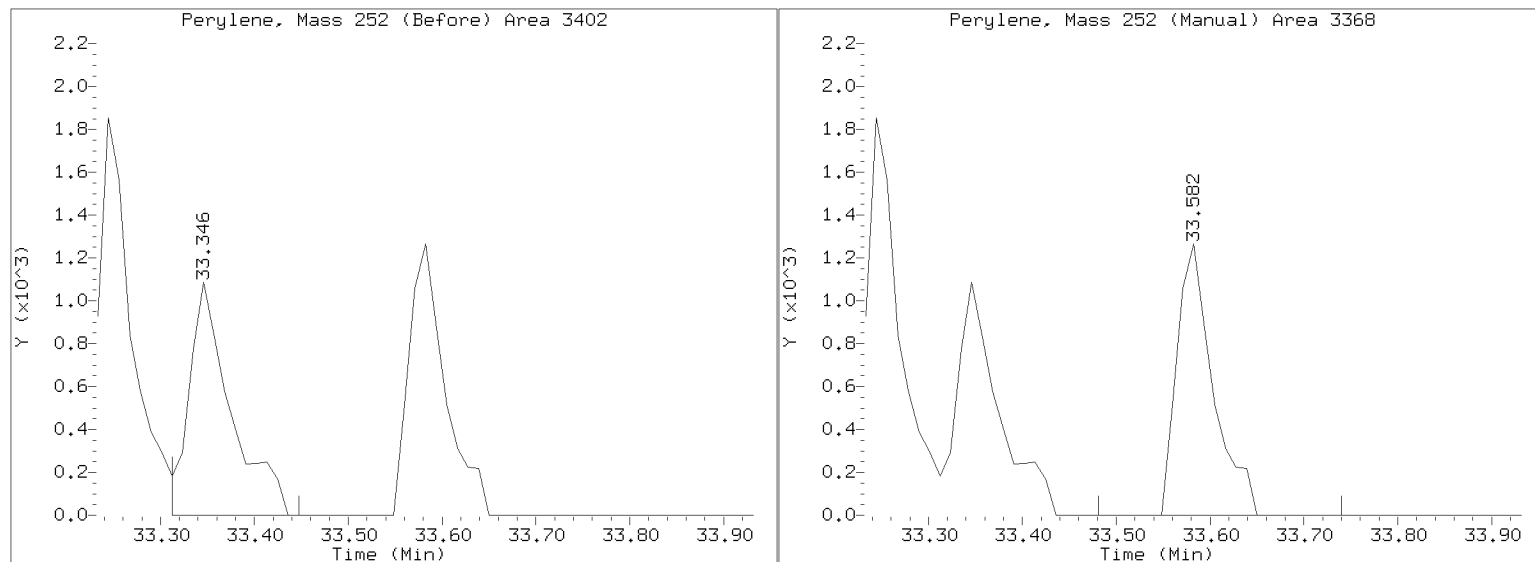
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230527.b/NT1405272306.D

Injection Date: 27-MAY-2023 14:19

Lab ID: SLE0443-LCV1 Client ID:

Report Date: 05/30/2023 16:47



APPROVED

By Deenay Dunmore at 5:00 pm, May 30, 2023



**LOW-CONCENTRATION
CONTINUING CALIBRATION CHECK
EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Instrument ID: NT14

Calibration: GE00024

Lab File ID: NT1405272319.D

Calibration Date: 05/05/2023

Sequence: SLE0443

Injection Date: 05/28/23

Lab Sample ID: SLE0443-LCV2

Injection Time: 00:45

Sequence Name: PAH 0.1

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
trans-Decalin	A	0.10000	0.067	0.2142441	0.1431203		-33.2	
cis-Decalin	A	0.10000	0.068	0.1553110	0.1061292		-31.7	
Naphthalene	A	0.10000	0.088	2.1950510	1.9289680		-12.1	
1-Methylnaphthalene	A	0.10000	0.085	1.0931470	0.9269793		-15.2	
2-Methylnaphthalene	A	0.10000	0.083	1.0855960	0.9036397		-16.8	
Biphenyl	A	0.10000	0.085	1.5018170	1.2794220		-14.8	
2,6-Dimethylnaphthalene	A	0.10000	0.082	1.0689340	0.8729605		-18.3	
Acenaphthylene	A	0.10000	0.084	1.7851870	1.4947630		-16.3	
Acenaphthene	A	0.10000	0.084	1.1016480	0.9299151		-15.6	
Dibenzofuran	A	0.10000	0.093	1.4421000	1.3356430		-7.4	
2,3,5-Trimethylnaphthalene	A	0.10000	0.076	0.9527605	0.7273448		-23.7	
Fluorene	A	0.10000	0.087	1.1554870	1.0081540		-12.8	
Benzo(b)thiophene	A	0.10000	0.091	1.6681460	1.5104700		-9.5	
Phenanthrene	A	0.10000	0.086	1.3309080	1.1435010		-14.1	
Anthracene	A	0.10000	0.086	1.2217170	1.0507650		-14.0	
Carbazole	A	0.10000	0.00	0.9770692				
1-Methylphenanthrene	A	0.10000	0.068	0.8583058	0.5850497		-31.8	
Fluoranthene	A	0.10000	0.068	1.2135600	0.8310269		-31.5	
Dibenzothiophene	A	0.10000	0.085	1.4158940	1.2064680		-14.8	
Pyrene	A	0.10000	0.065	1.2700040	0.8311467		-34.6	
Benzo(a)anthracene	A	0.10000	0.056	1.5678310	0.8794274		-43.9	
Chrysene	A	0.10000	0.070	1.5335800	1.0770660		-29.8	
Benzo(b)fluoranthene	A	0.10000	0.040	1.4626770	0.5862129		-59.9	
Benzo(j)fluoranthene	A	0.10000	0.093	1.3727050	1.2727590		-7.3	
Benzo(k)fluoranthene	A	0.10000	0.054	1.3456120	0.8837521		-46.2	
Benzofluoranthenes, Total	A	0.30000	0.187	1.3610640	0.8478571		-37.7	
Benzo(e)pyrene	A	0.10000	0.082	1.4147040	1.1624790		-17.8	
Benzo(a)pyrene	A	0.10000	0.070	1.1966100	0.8435324		-29.5	
Indeno(1,2,3-cd)pyrene	A	0.10000	0.041	1.3107200	0.6370281		-59.1	
Dibenzo(a,h)anthracene	A	0.10000	0.029	1.0657830	0.3704104		-71.1	
Benzo(g,h,i)perylene	A	0.10000	0.074	1.1791520	0.8714267		-26.1	
Perylene	A	0.10000	0.067	1.3134480	0.8820222		-32.9	
Benzo(b)naphtho(2,1-d)thiophene	A	0.10000	0.067	0.8376187	0.5594096		-33.2	
Naphthalene-d8	A	0.10000	0.0883	1.9983150	1.7644170		-11.7	

* Values outside of QC limits



**LOW-CONCENTRATION
CONTINUING CALIBRATION CHECK
EPA 8270E-SIM**

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Instrument ID: NT14

Calibration: GE00024

Lab File ID: NT1405272319.D

Calibration Date: 05/05/2023

Sequence: SLE0443

Injection Date: 05/28/23

Lab Sample ID: SLE0443-LCV2

Injection Time: 00:45

Sequence Name: PAH 0.1

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Acenaphthene-d10	A	0.10000	0.0800	0.8856004	0.7084089		-20.0	
Phenanthrene-d10	A	0.10000	0.0848	1.1412560	0.9674946		-15.2	
Chrysene-d12	A	0.10000	0.0704	1.0850860	0.7641742		-29.6	
Perylene-d12	A	0.10000	0.0764	1.0467910	0.7998530		-23.6	

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230527.b\NT1405272319.D

Date : 28-May-2023 00:45

Client ID:

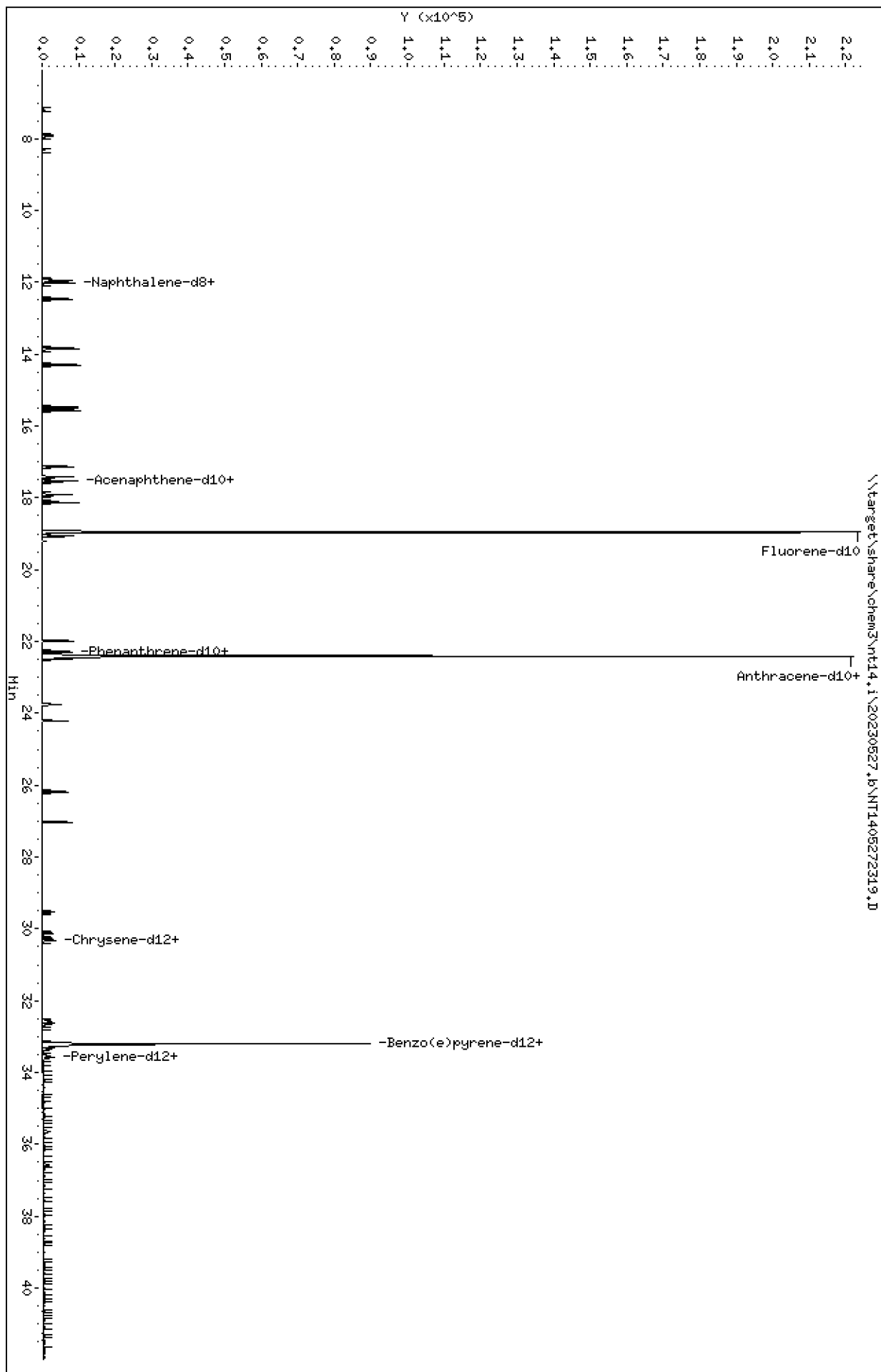
Sample Info: SLE0443-LCW2

Column phase: Rxi-17S11 MS

Instrument: nt14.i

Operator: VTS

Column diameter: 0.25



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

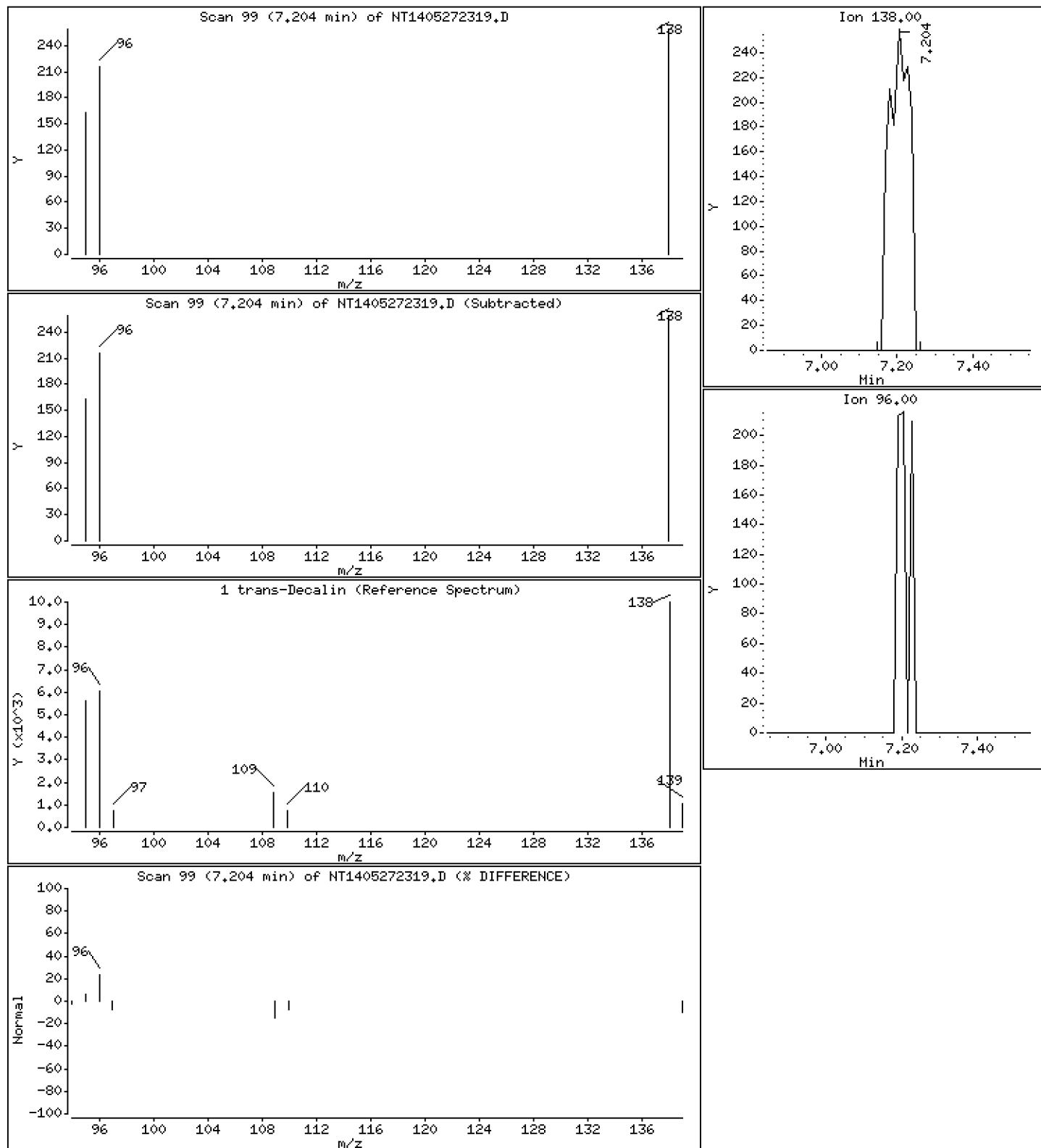
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

1 trans-Decalin

Concentration: 0.06680 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

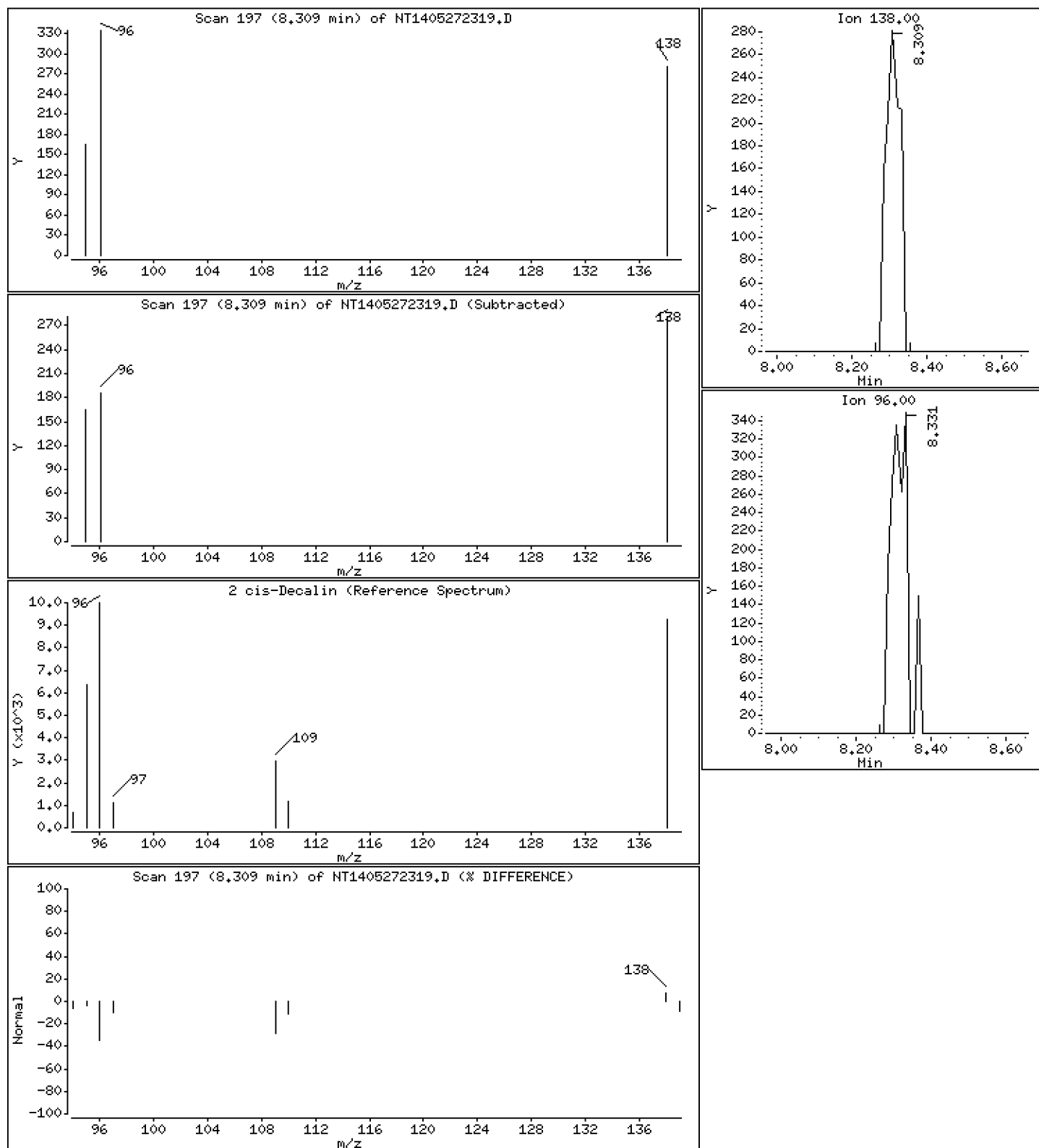
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

2 cis-Decalin

Concentration: 0.06833 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

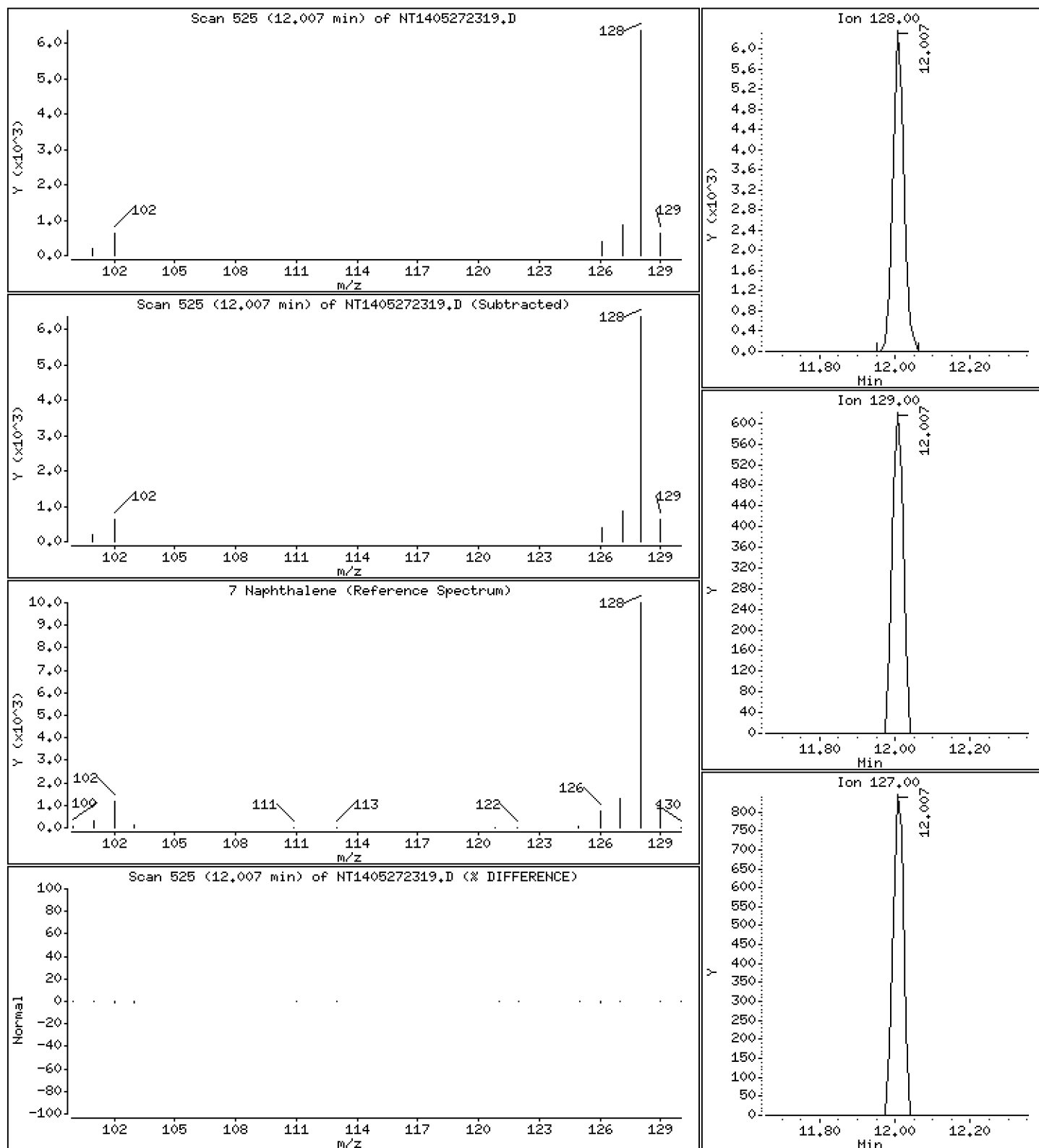
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

7 Naphthalene

Concentration: 0.08788 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

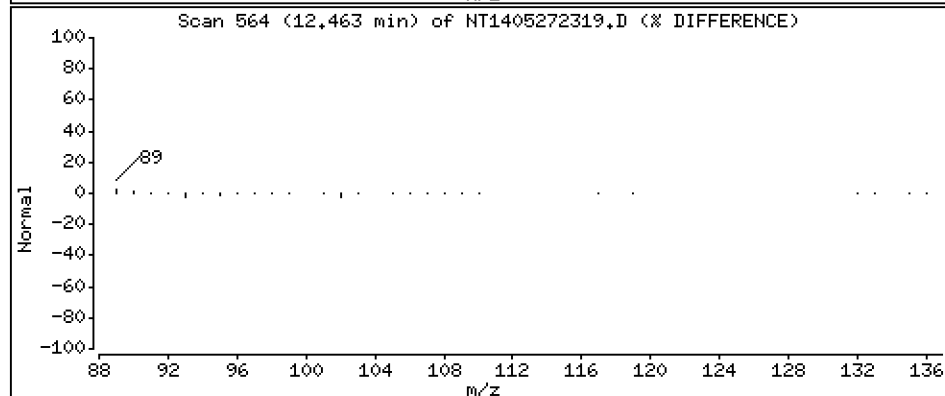
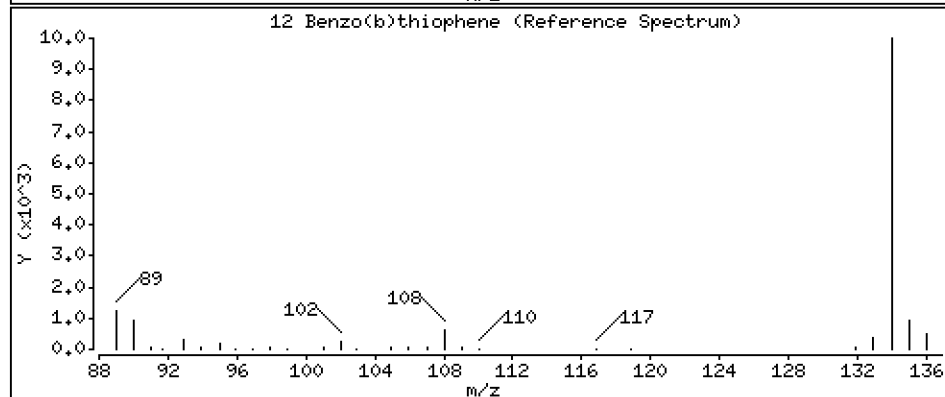
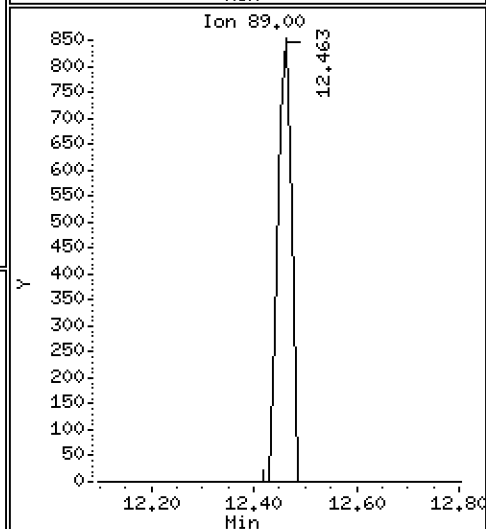
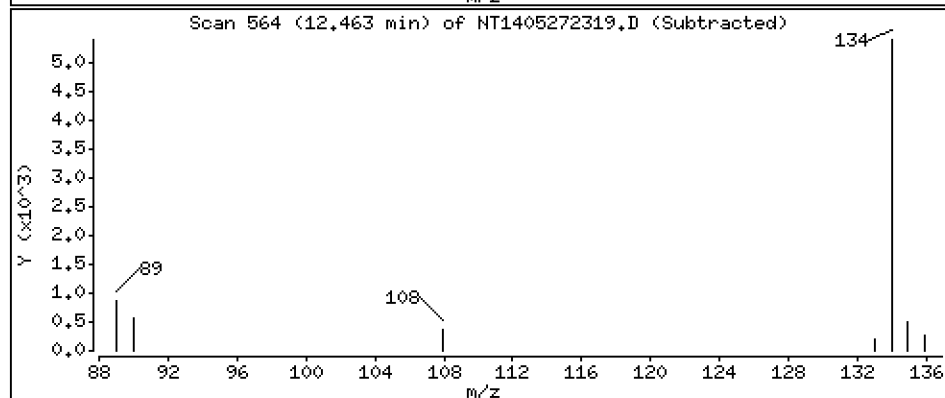
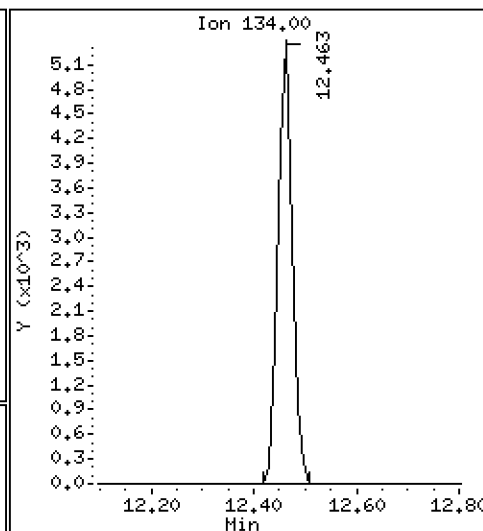
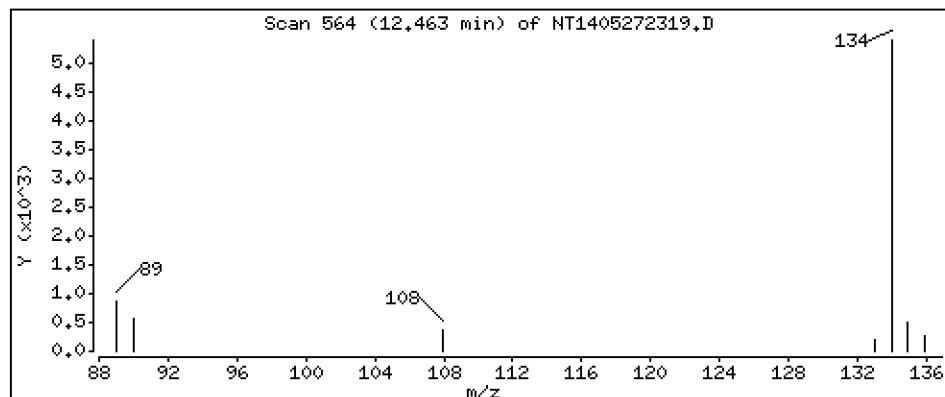
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

12 Benzo(b)thiophene

Concentration: 0.09055 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

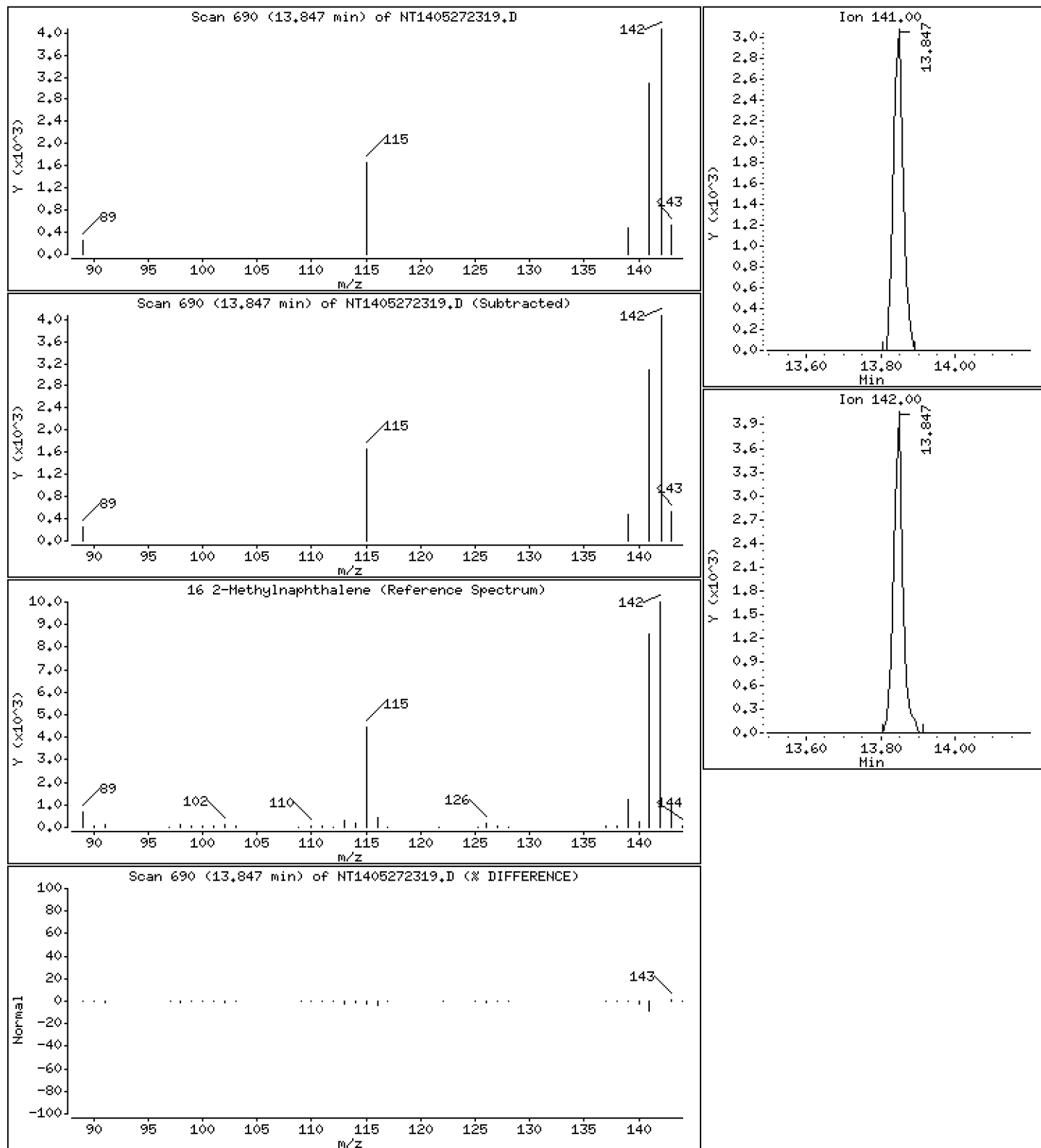
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

16 2-Methylnaphthalene

Concentration: 0.08324 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

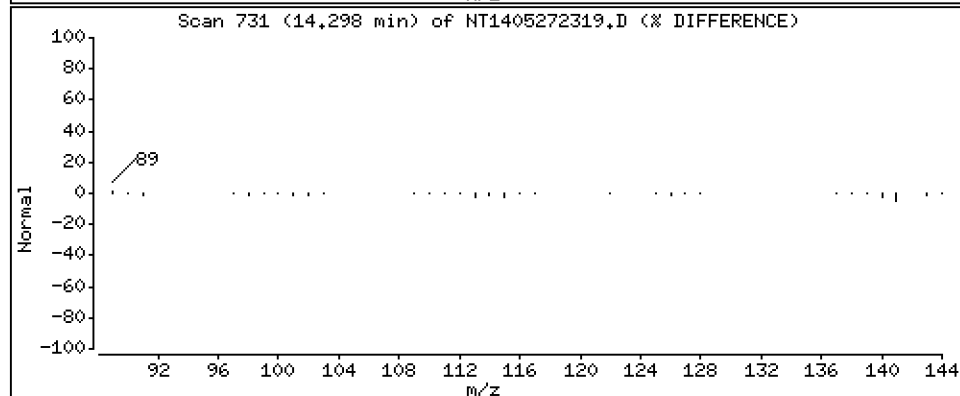
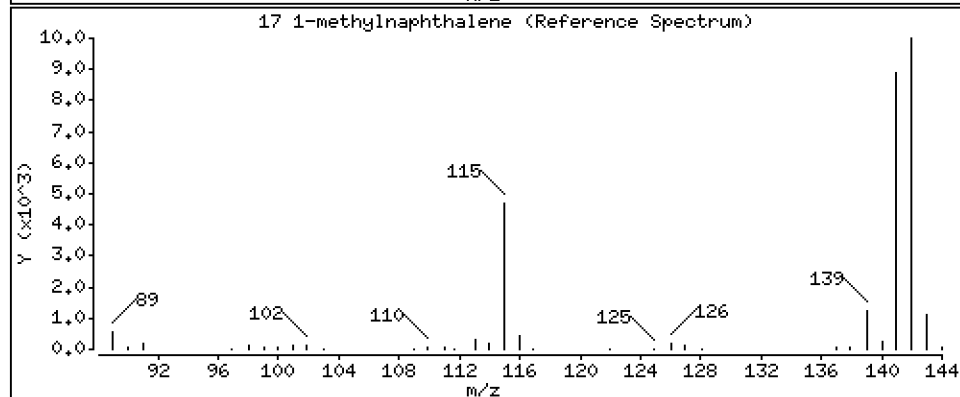
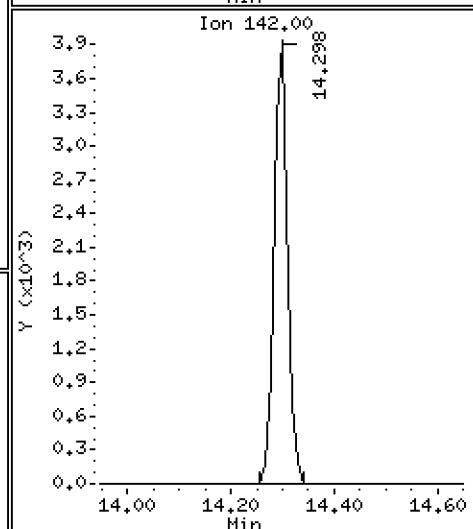
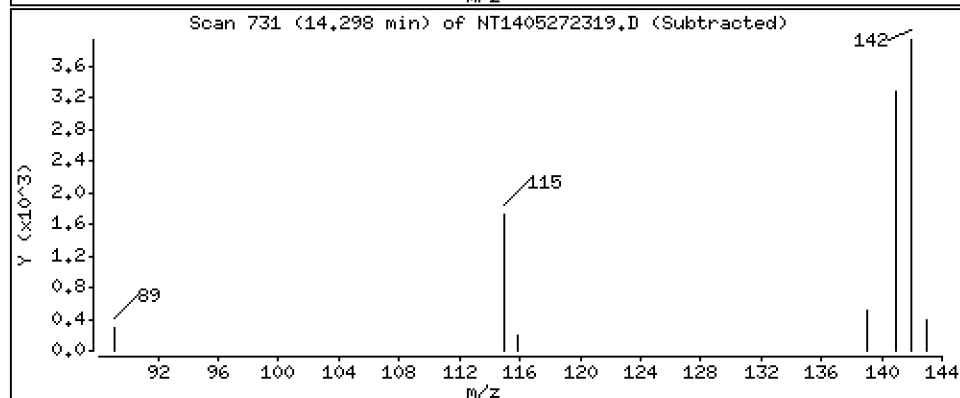
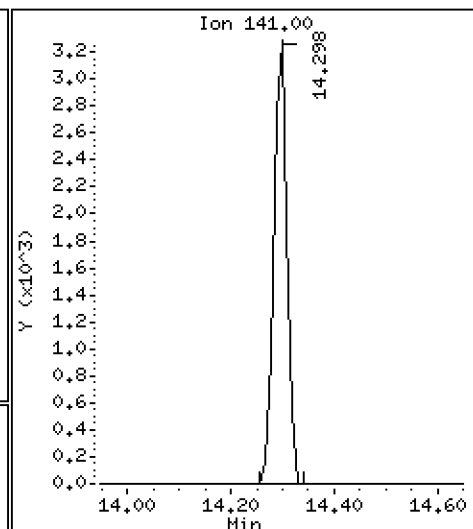
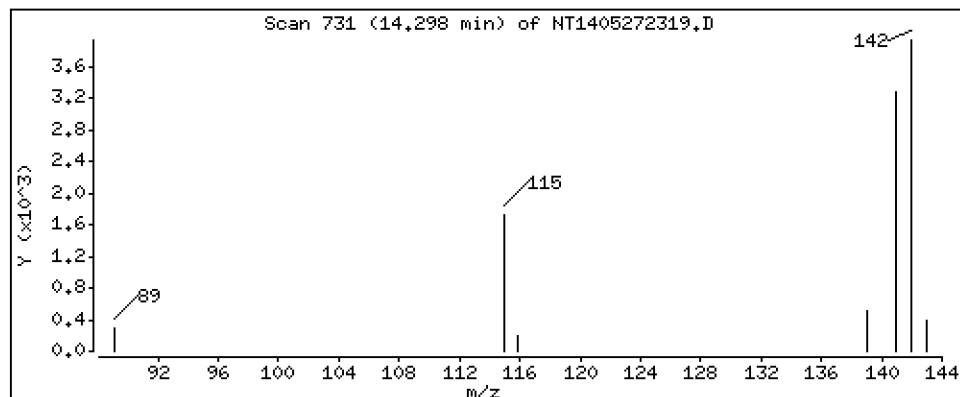
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 1-methylnaphthalene

Concentration: 0.08480 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

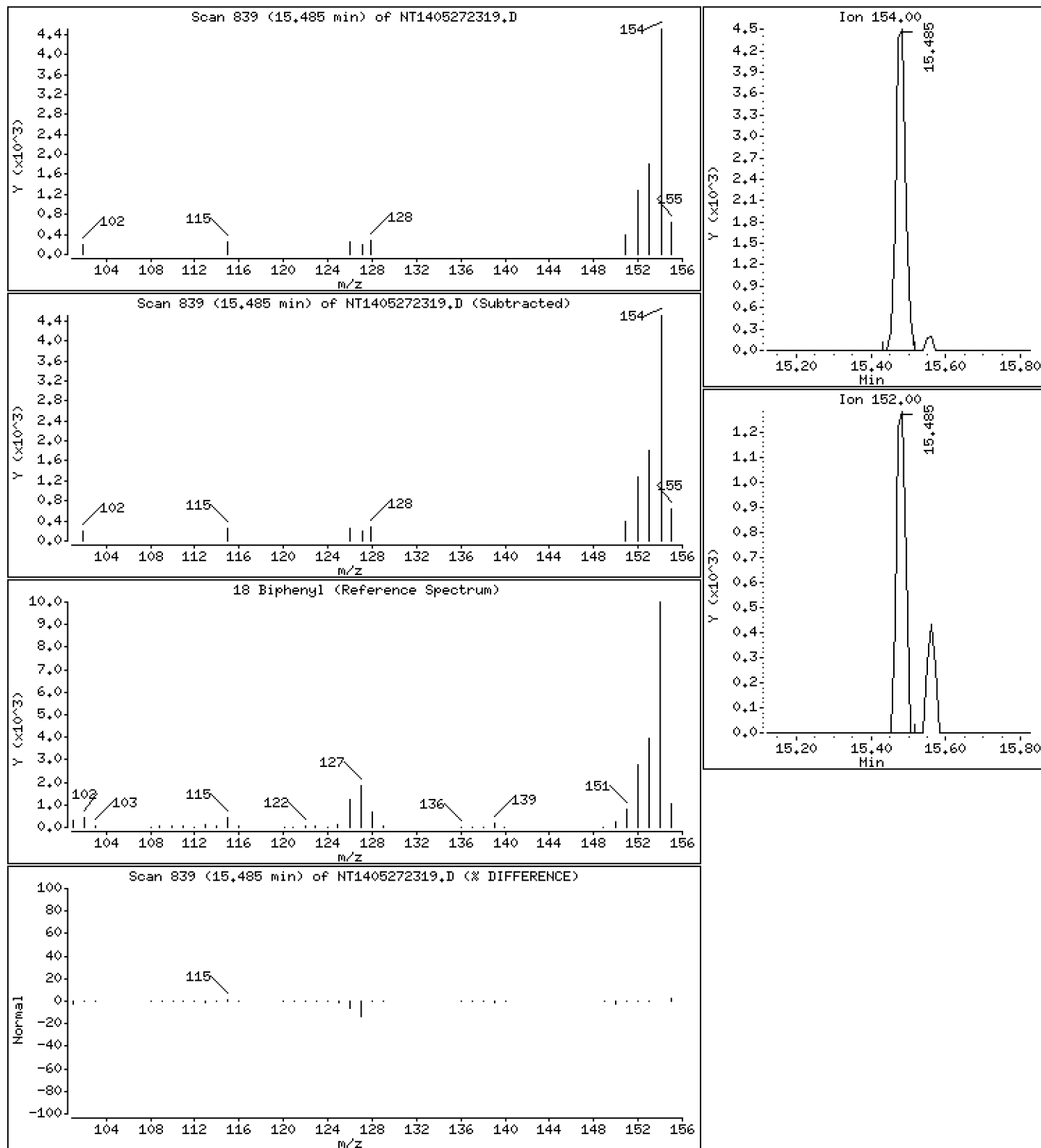
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

18 Biphenyl

Concentration: 0.08519 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

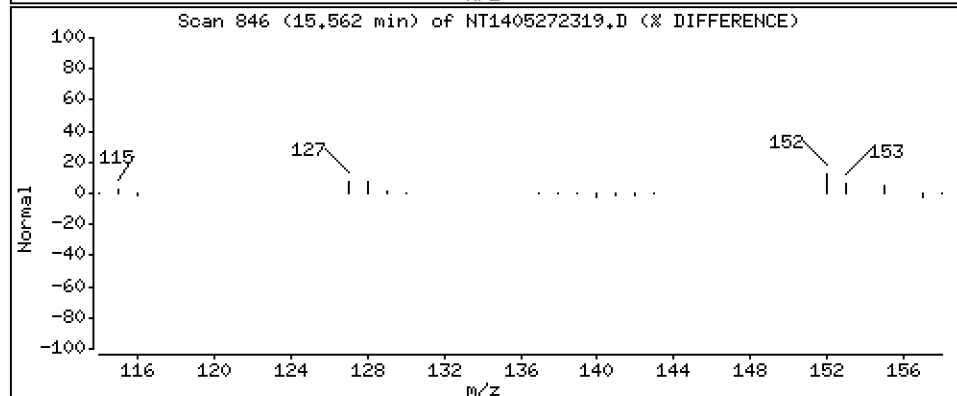
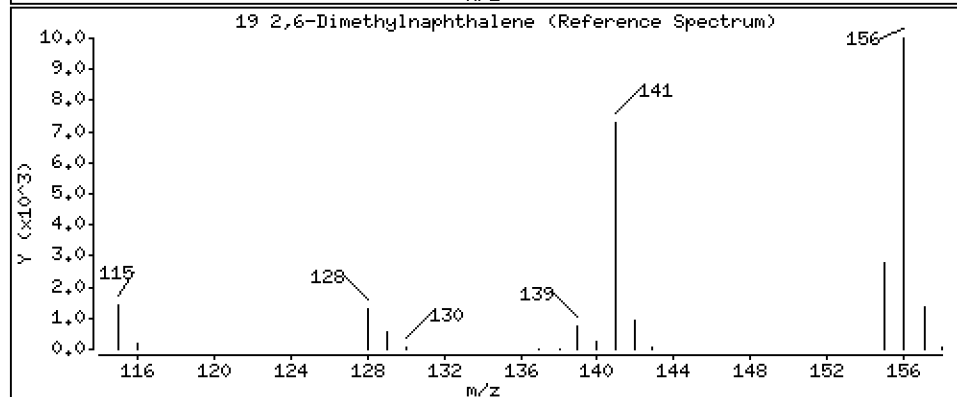
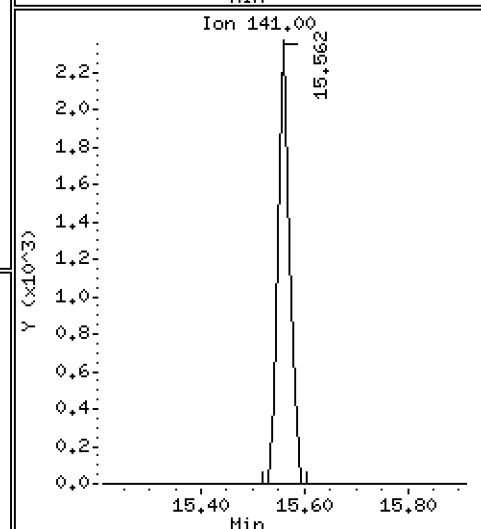
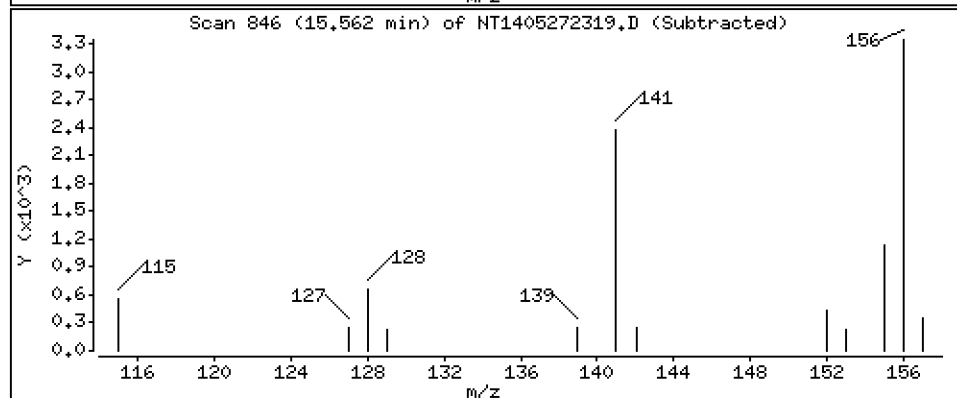
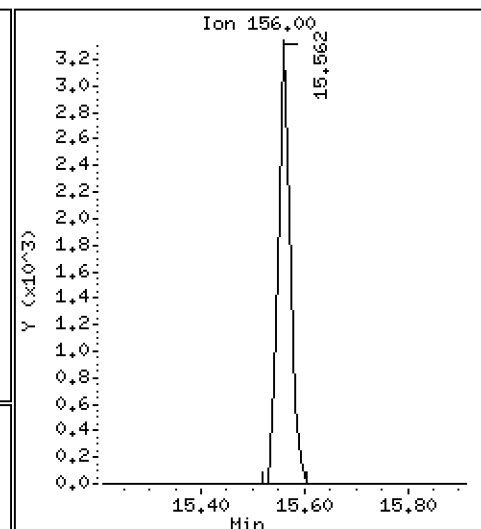
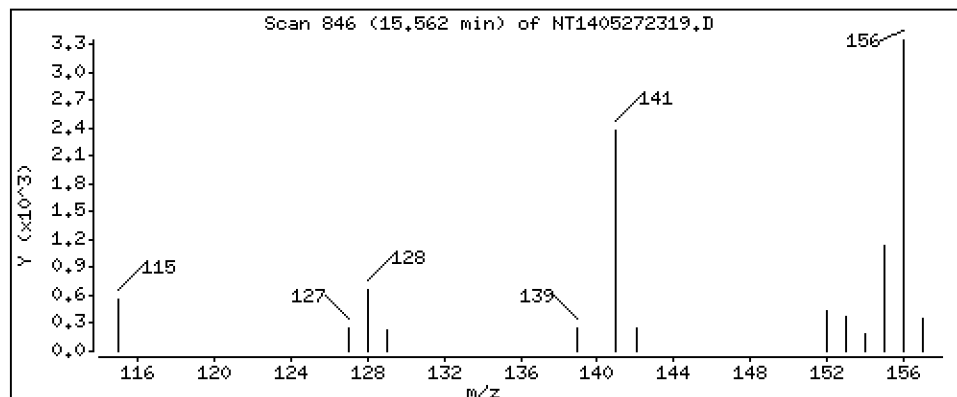
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

19 2,6-Dimethylnaphthalene

Concentration: 0.08167 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

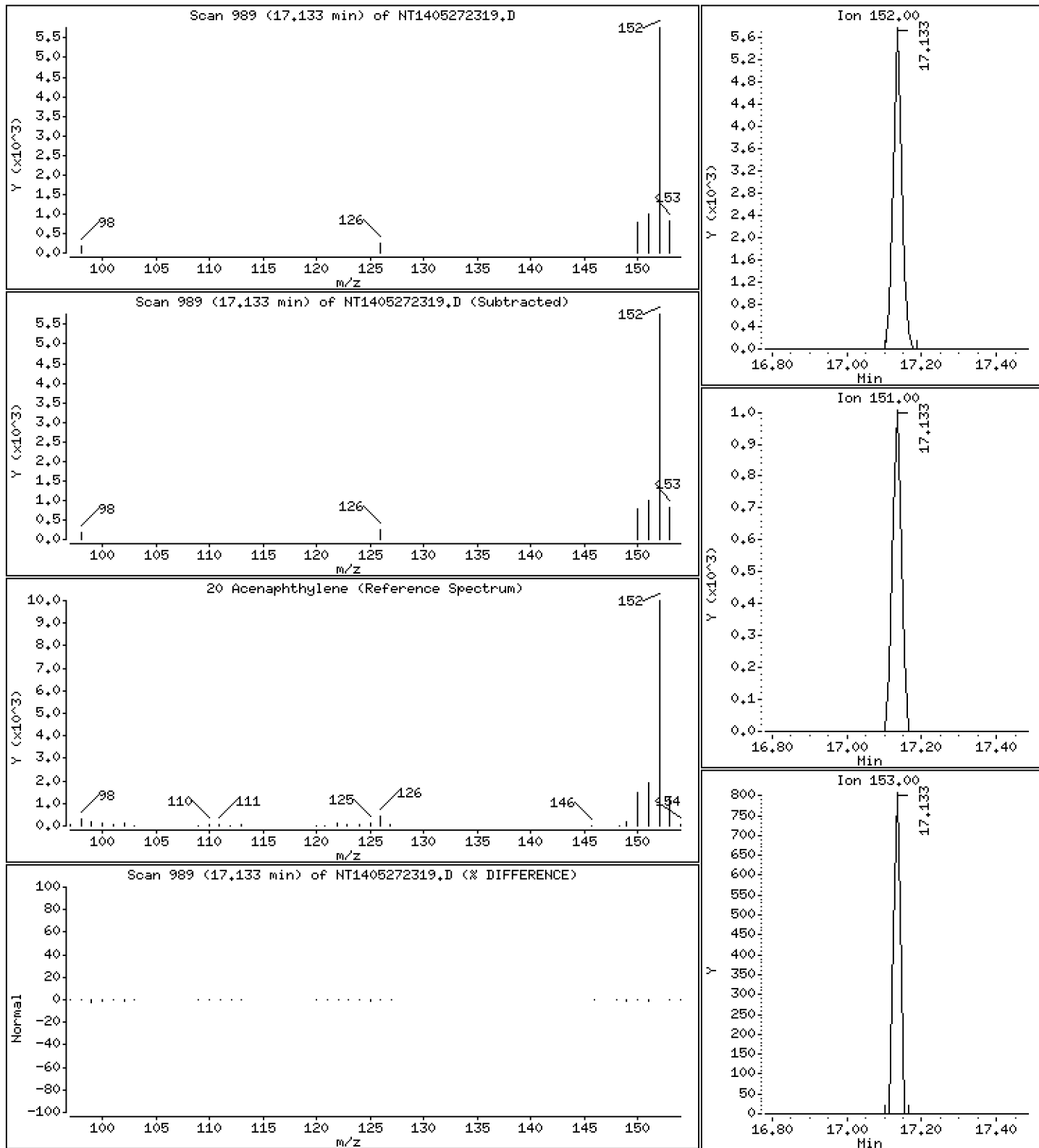
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

20 Acenaphthylene

Concentration: 0.08373 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

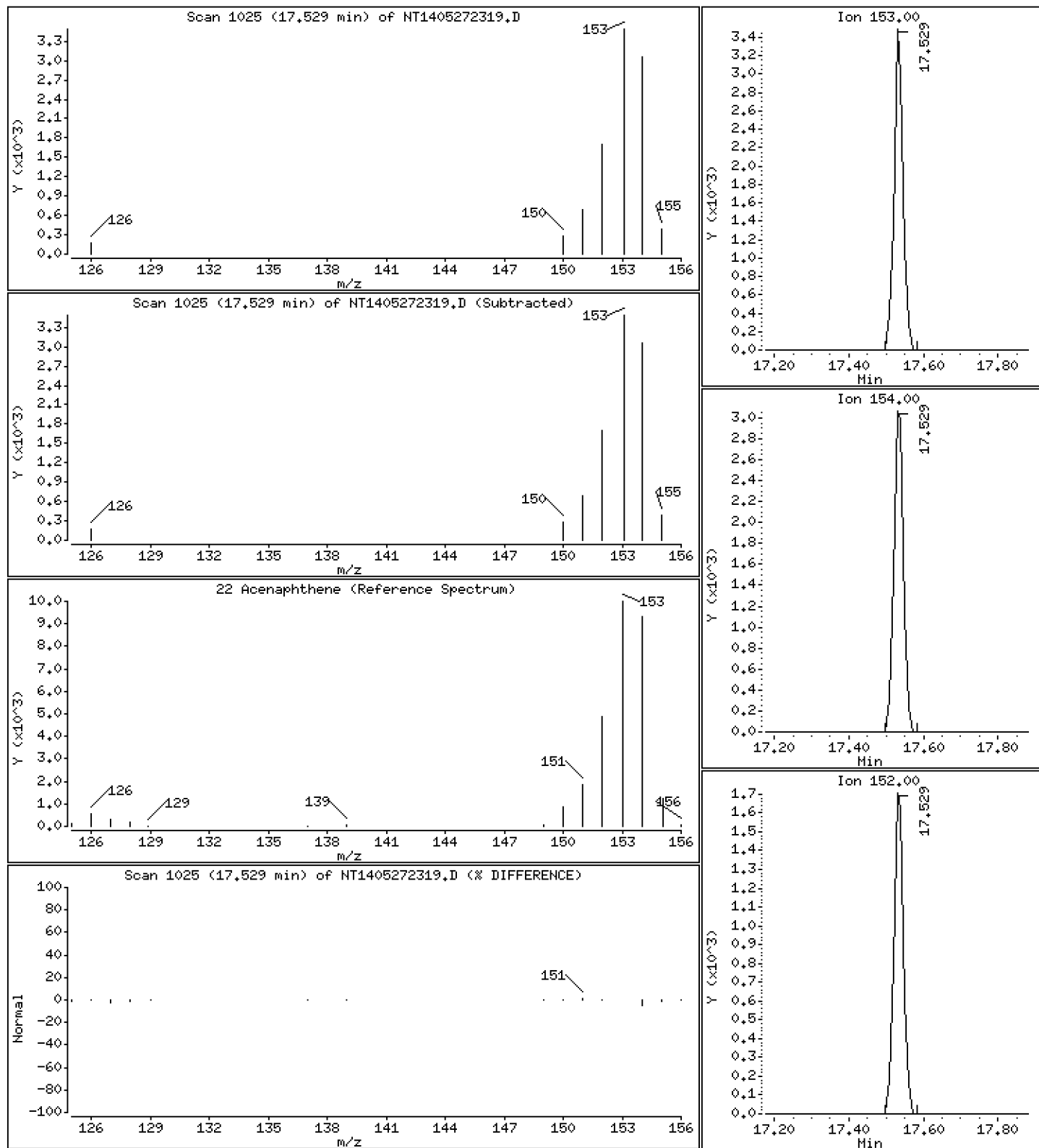
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

22 Acenaphthene

Concentration: 0.08441 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

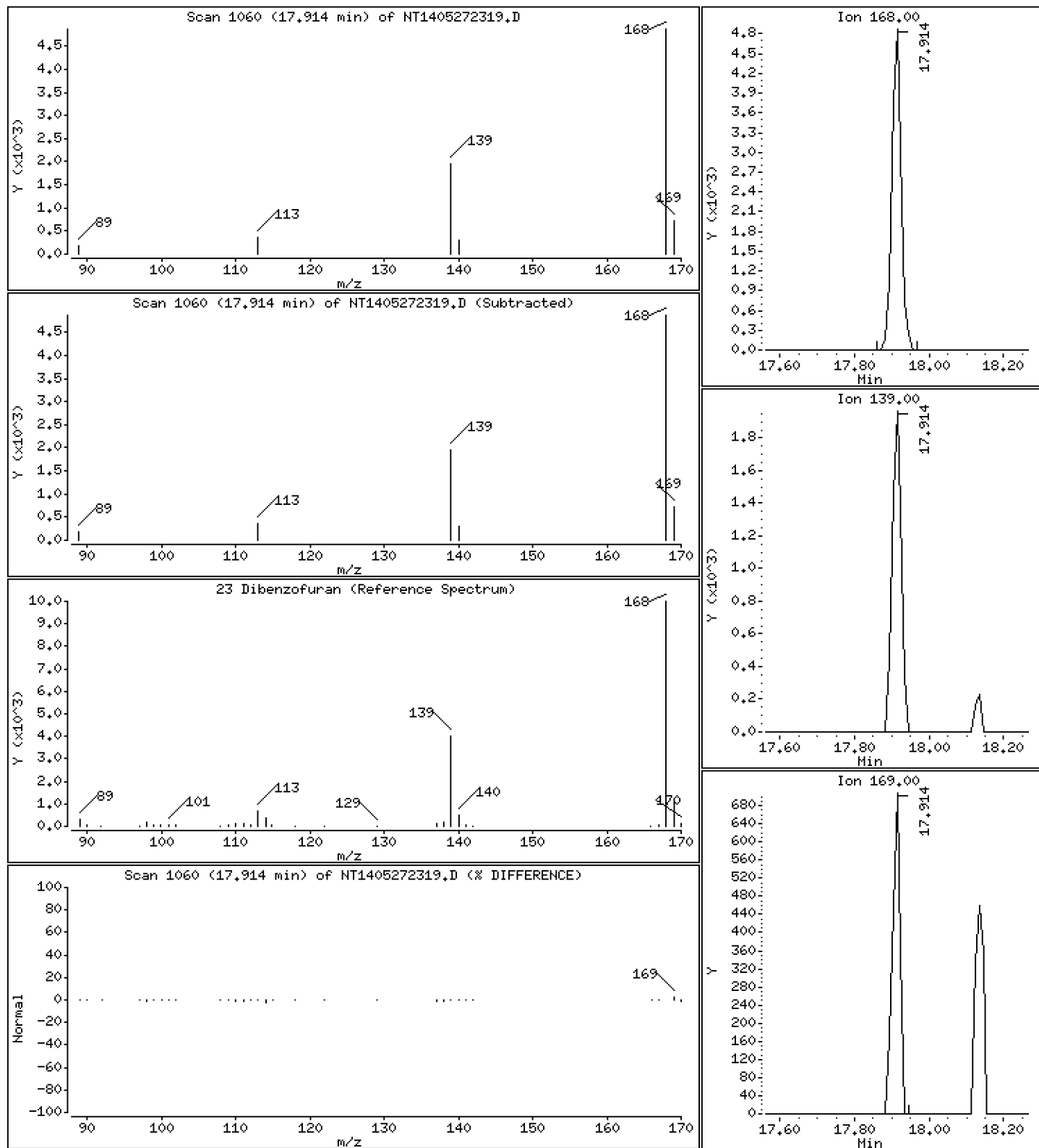
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

23 Dibenzofuran

Concentration: 0.09262 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

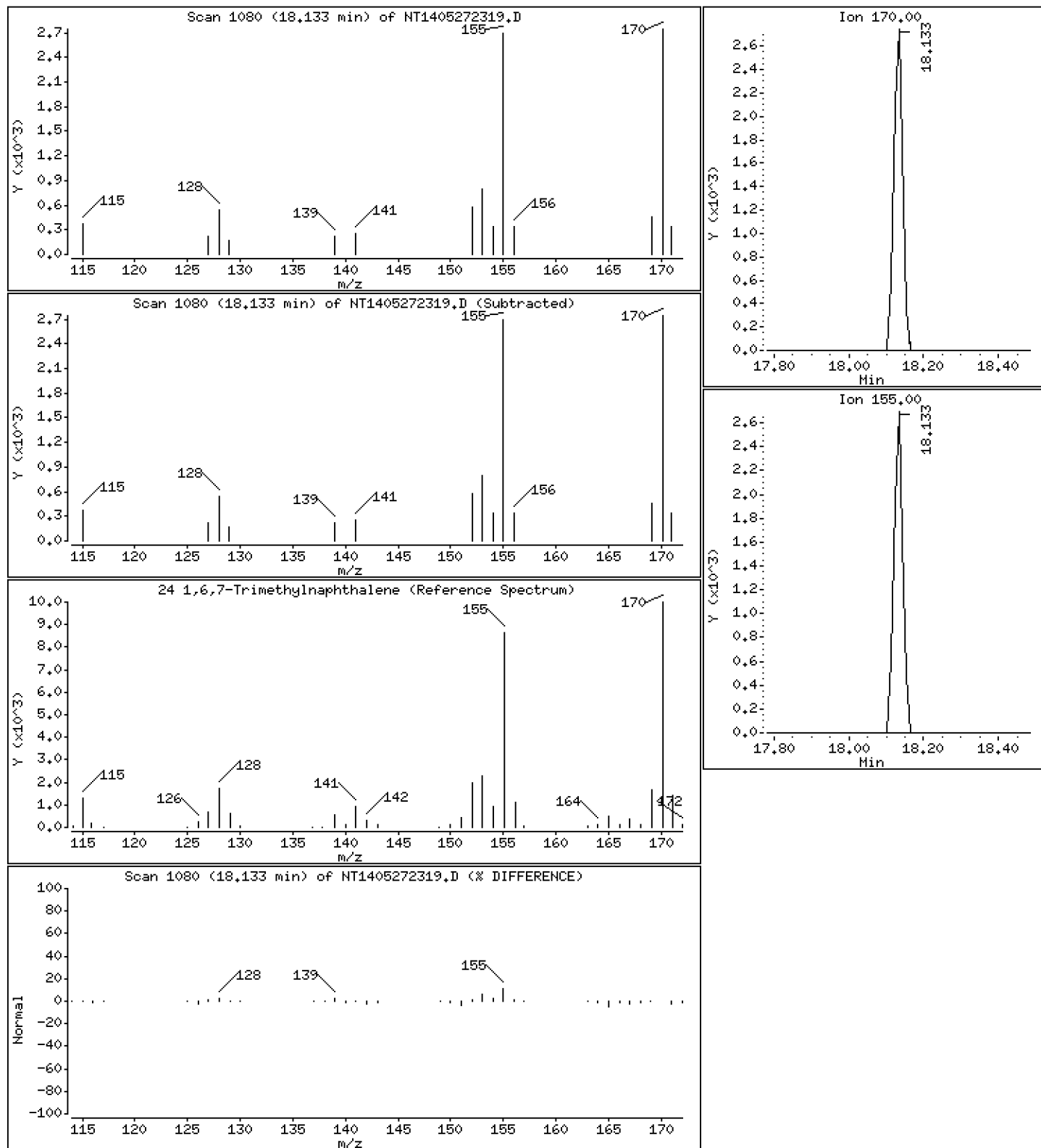
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

24 1,6,7-Trimethylnaphthalene

Concentration: 0.07634 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

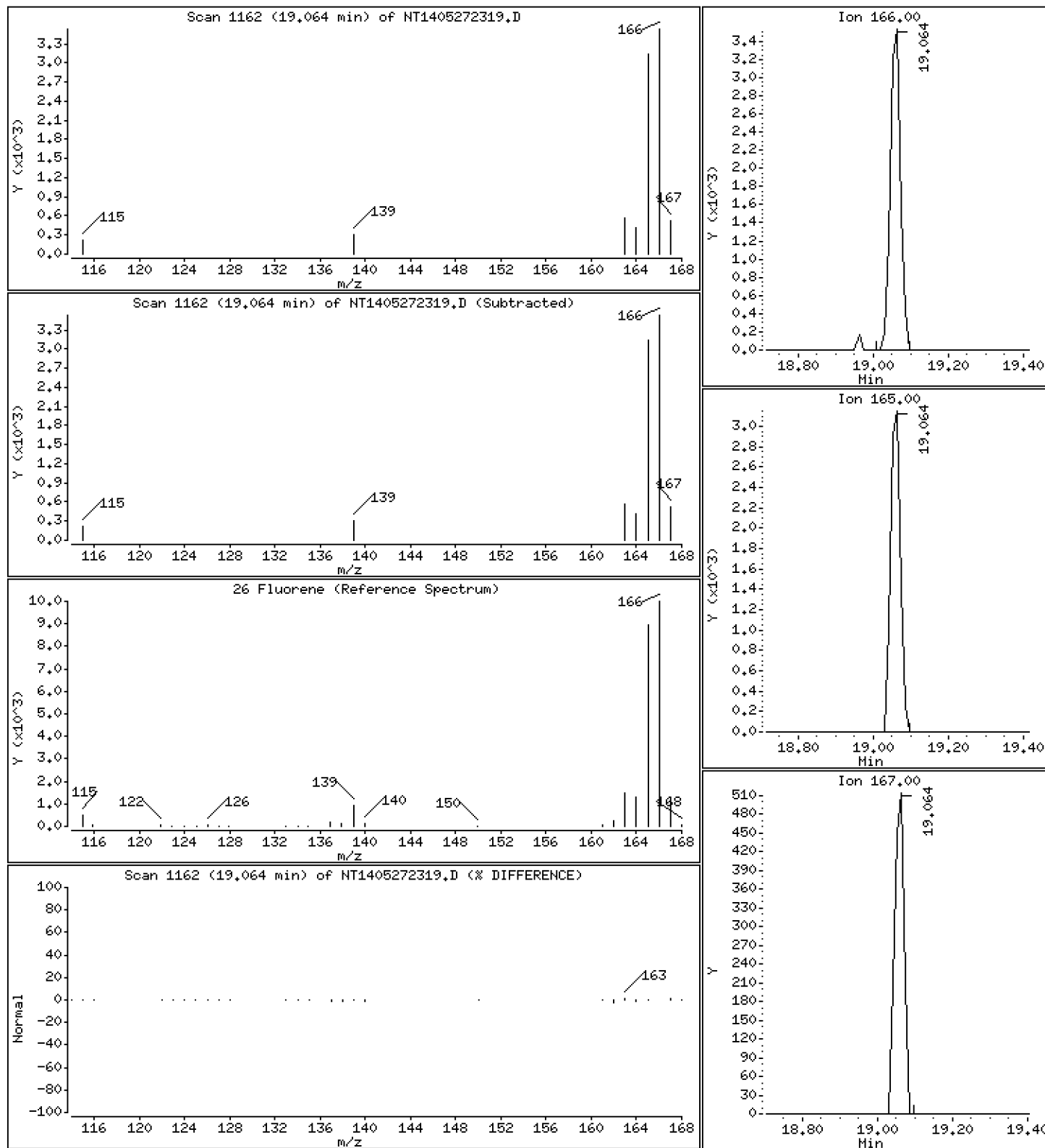
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

26 Fluorene

Concentration: 0.08725 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

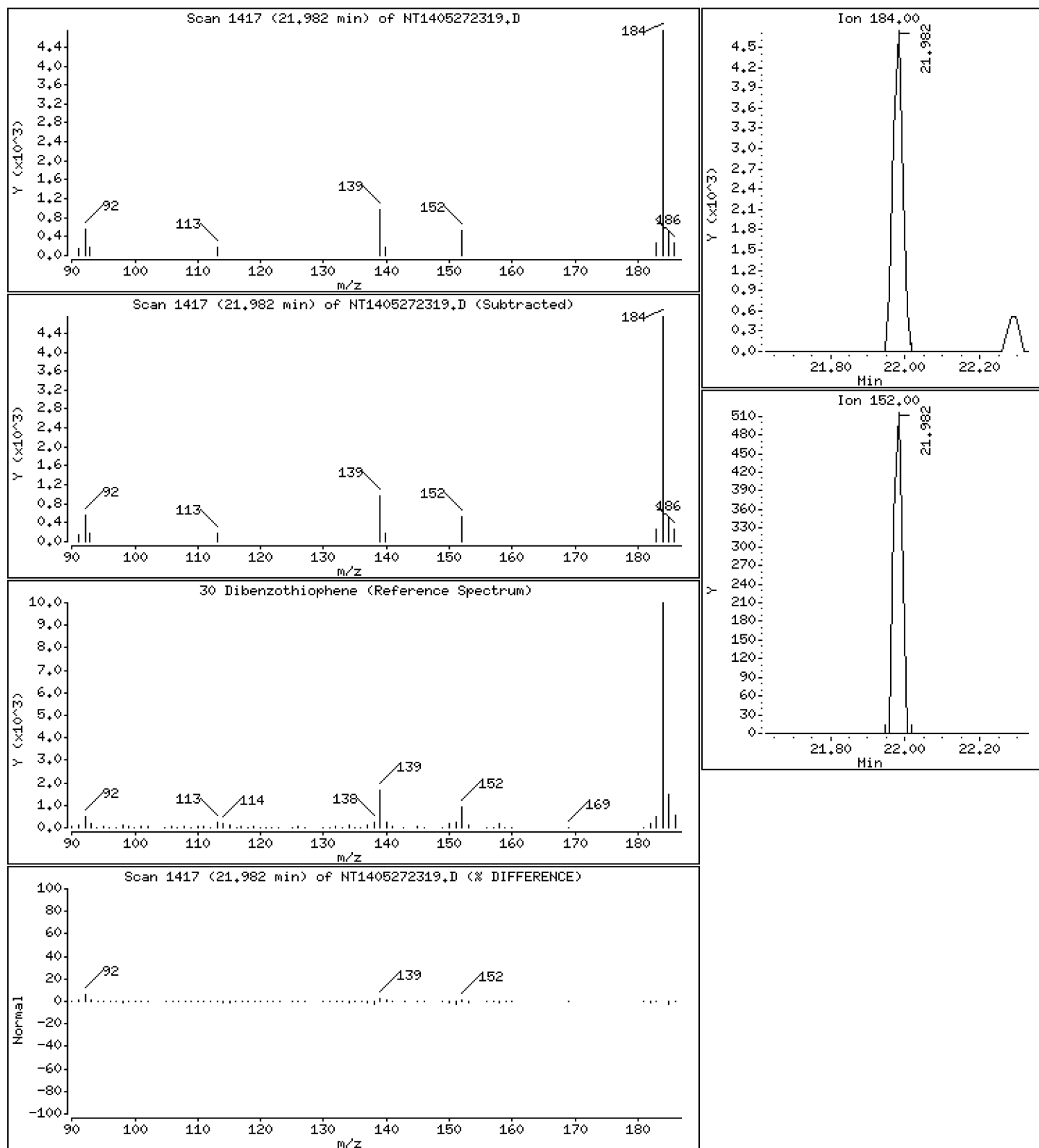
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

30 Dibenzothiophene

Concentration: 0.08521 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

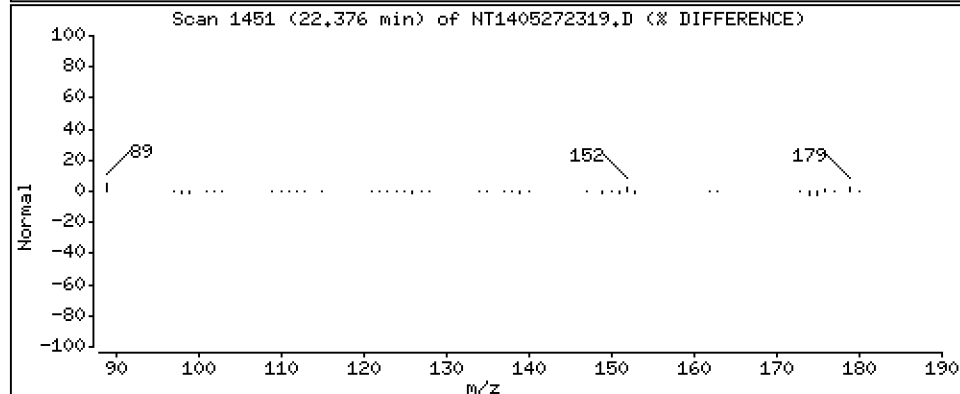
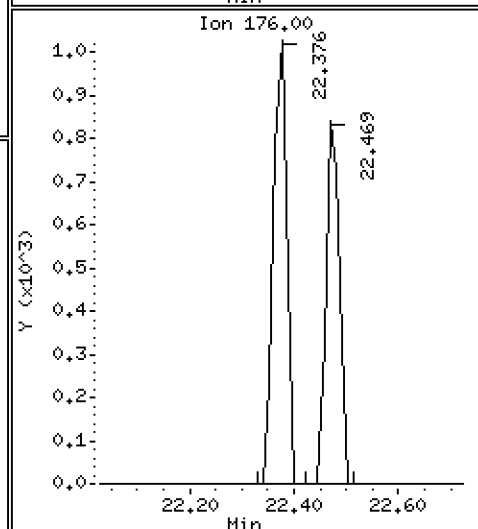
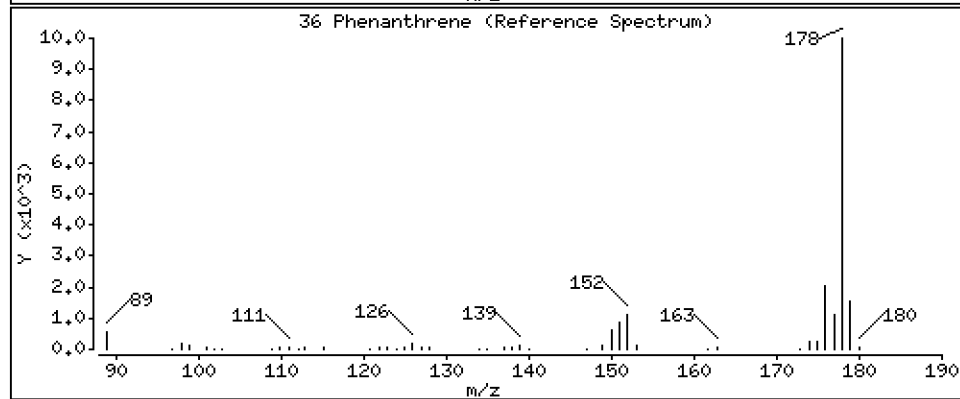
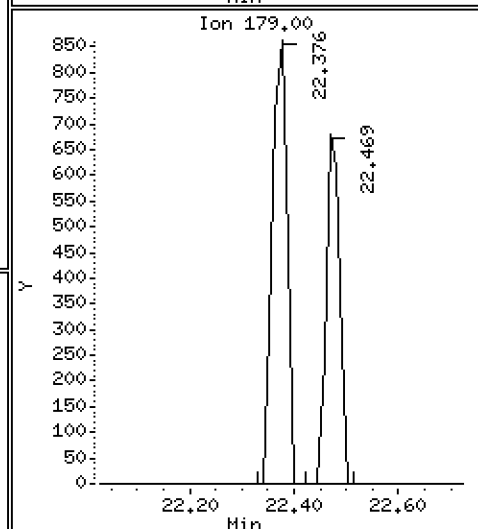
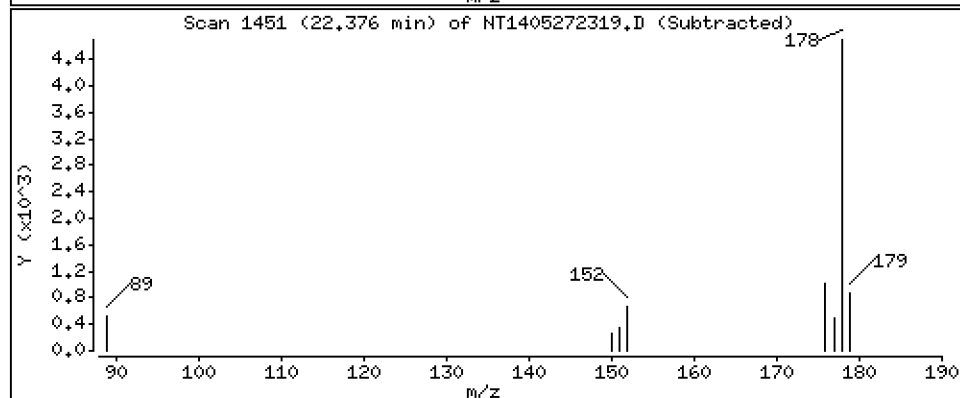
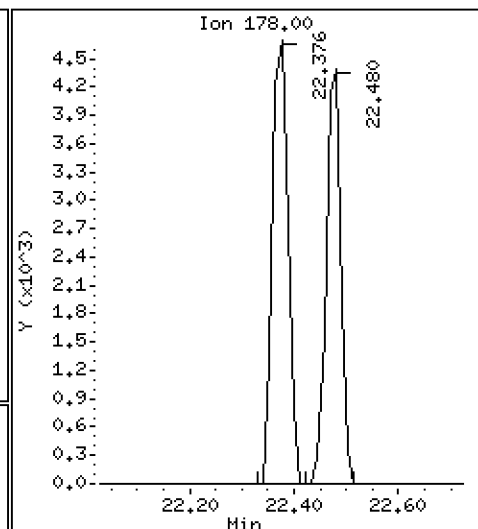
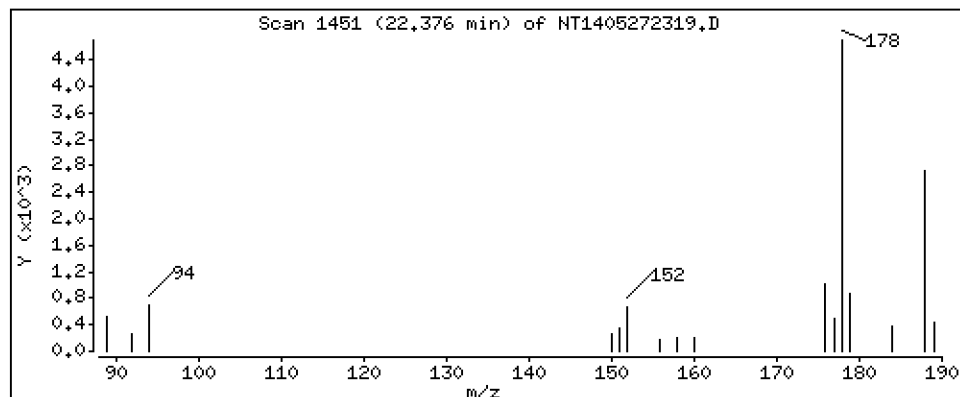
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

36 Phenanthrene

Concentration: 0.08592 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

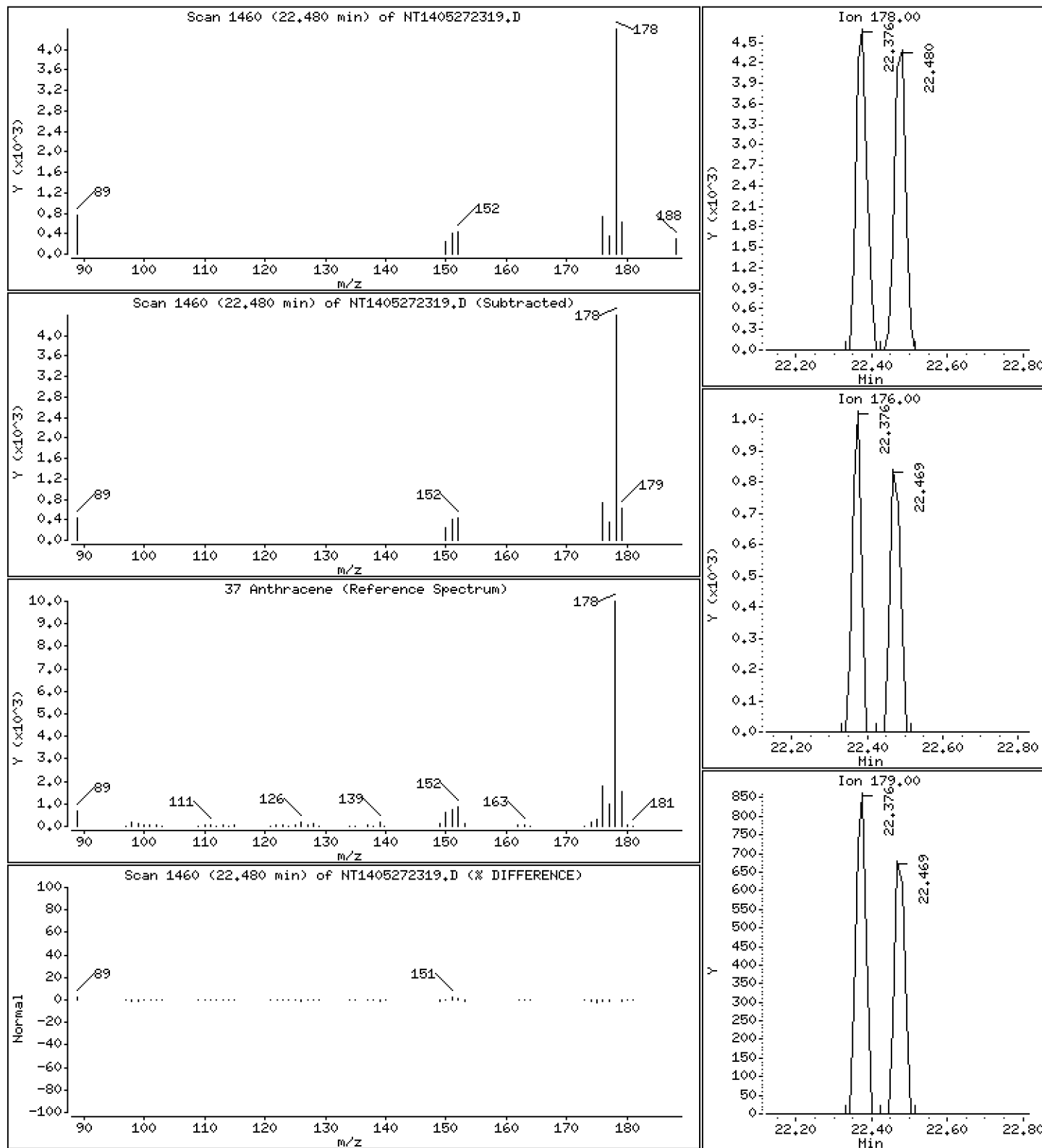
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

37 Anthracene

Concentration: 0.08601 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

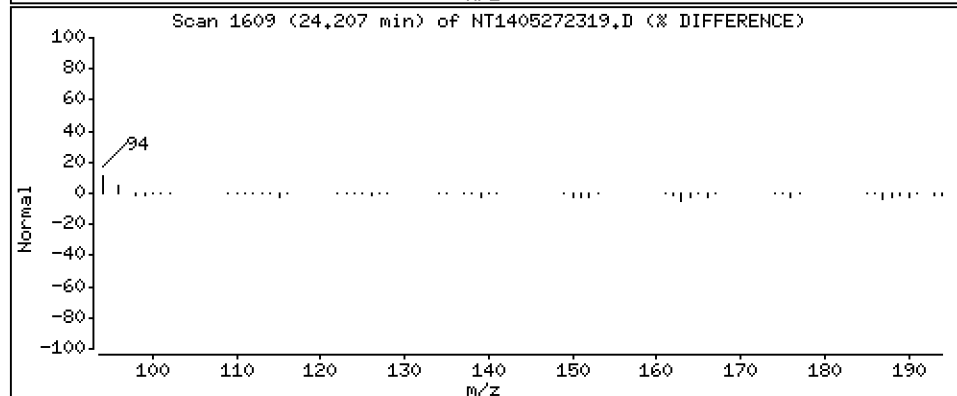
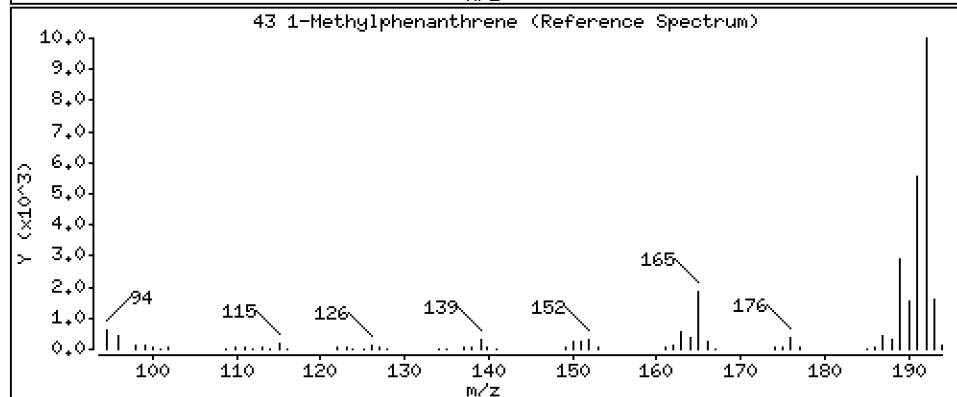
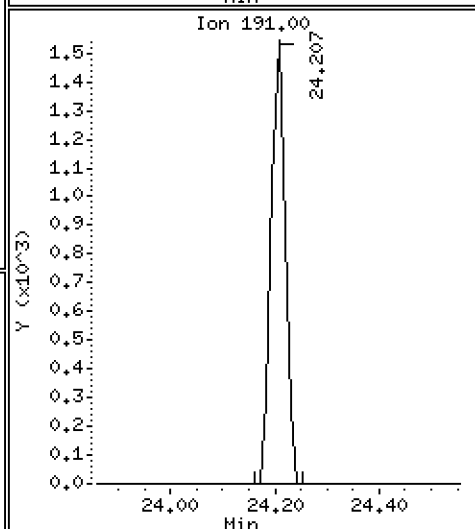
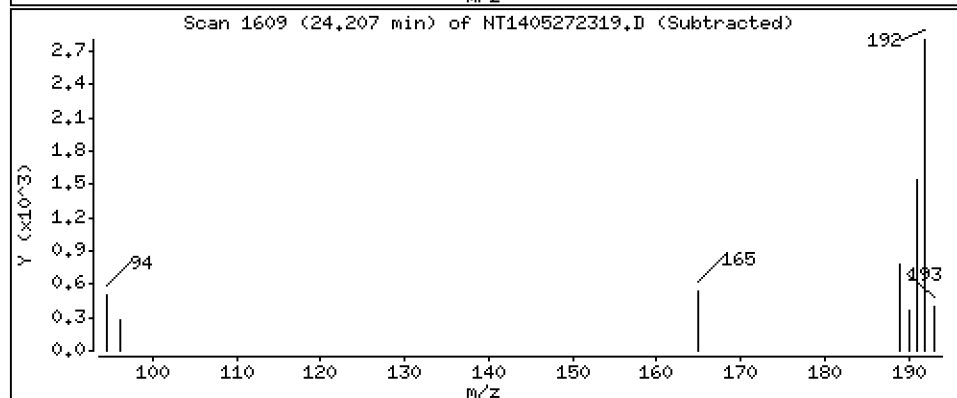
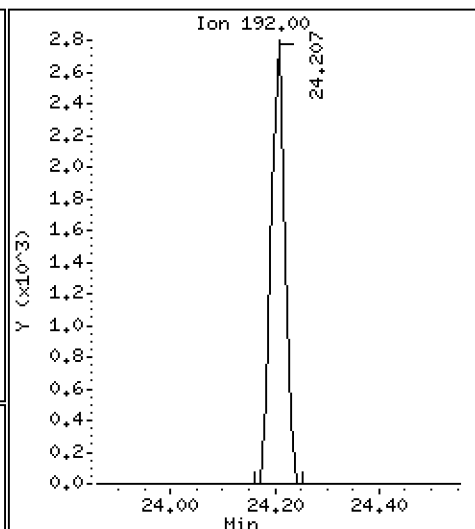
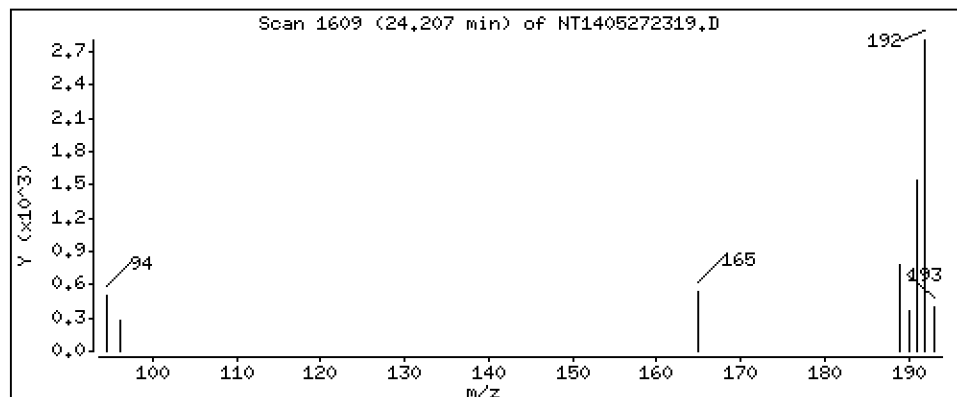
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

43 1-Methylphenanthrene

Concentration: 0.06816 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

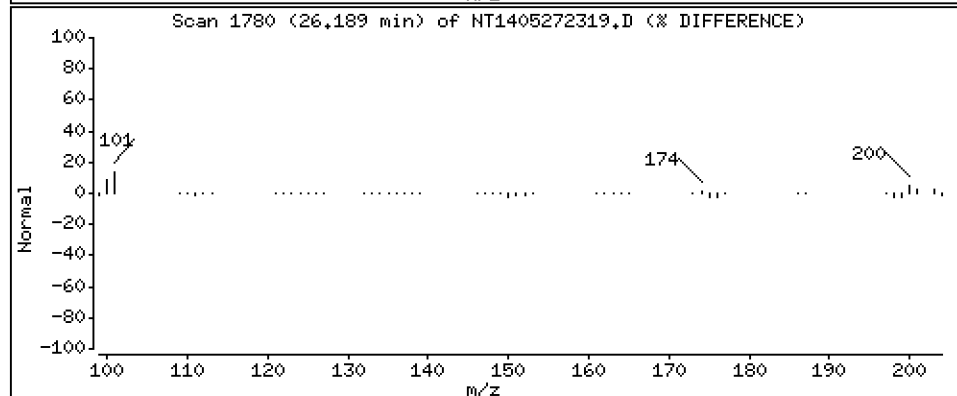
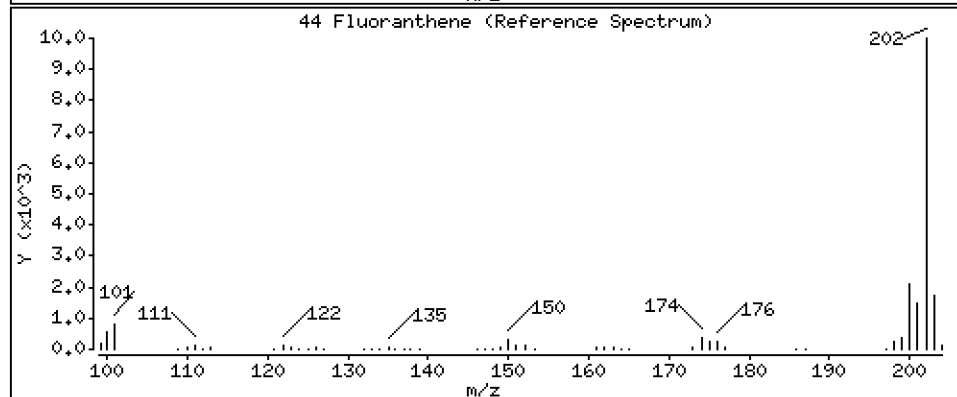
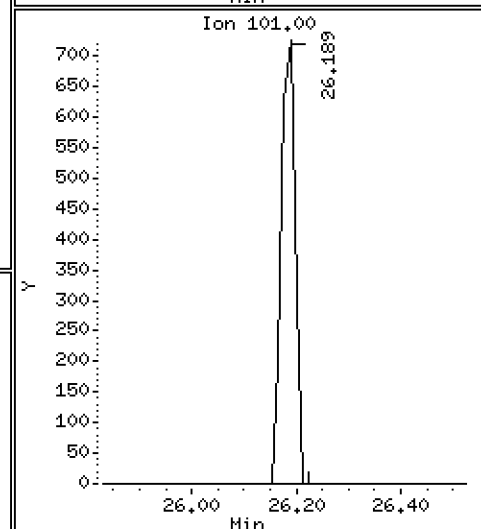
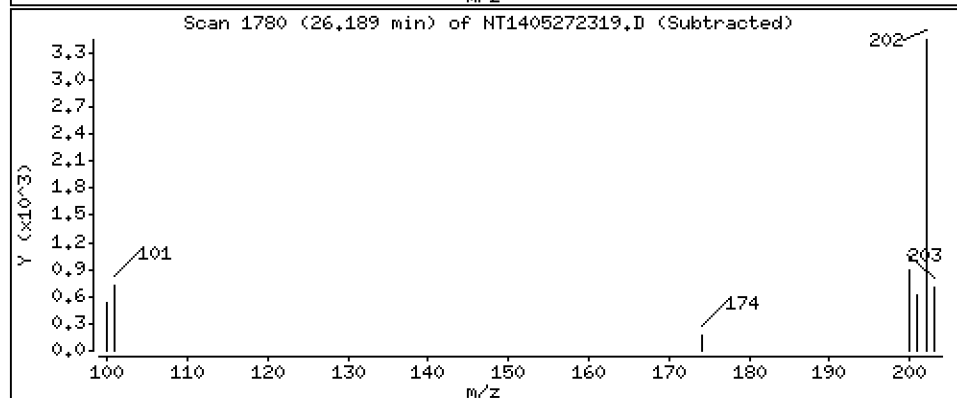
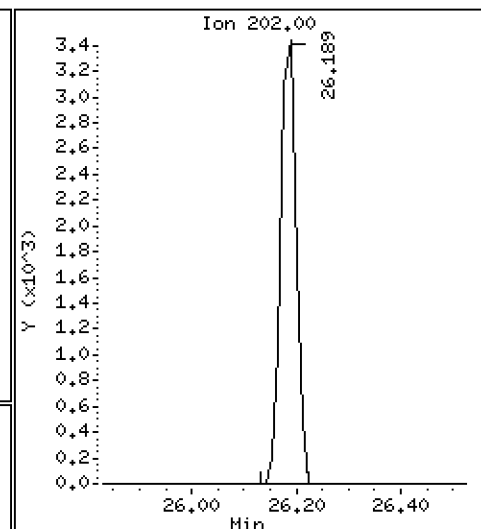
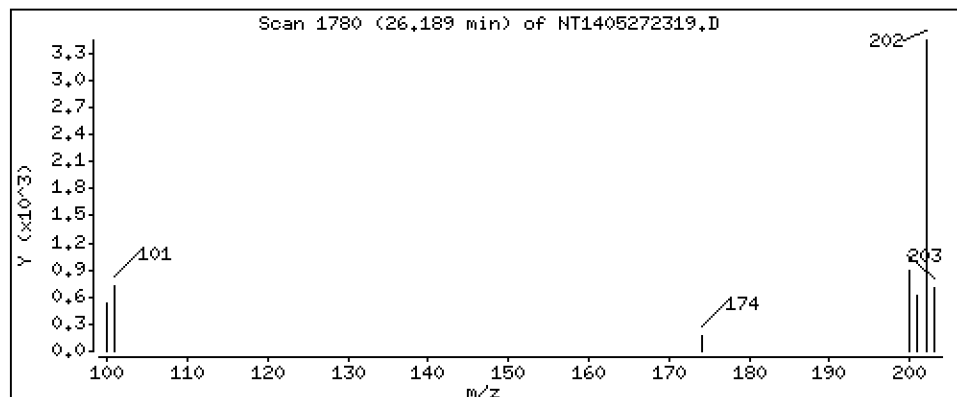
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

44 Fluoranthene

Concentration: 0.06848 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

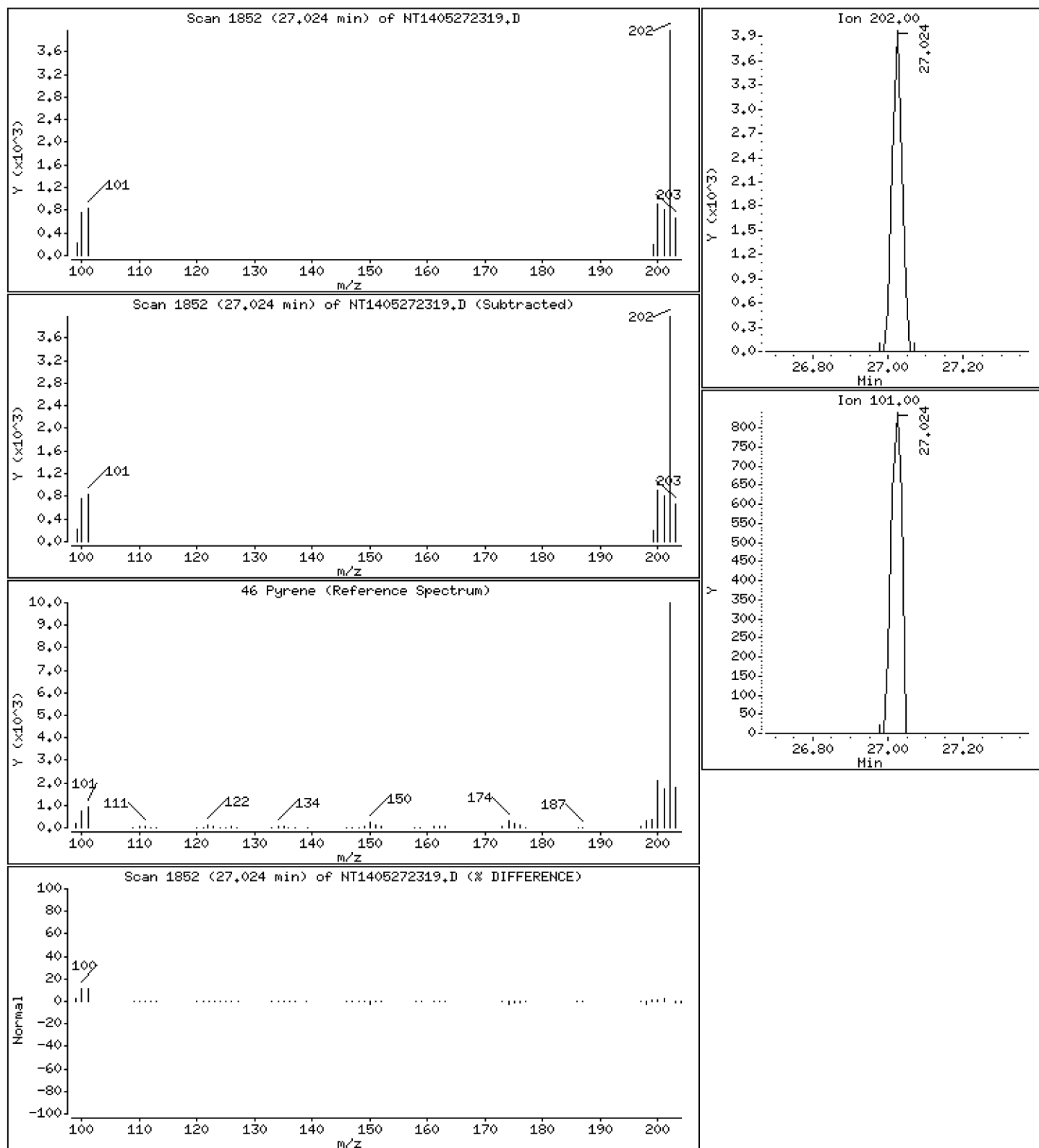
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

46 Pyrene

Concentration: 0.06544 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

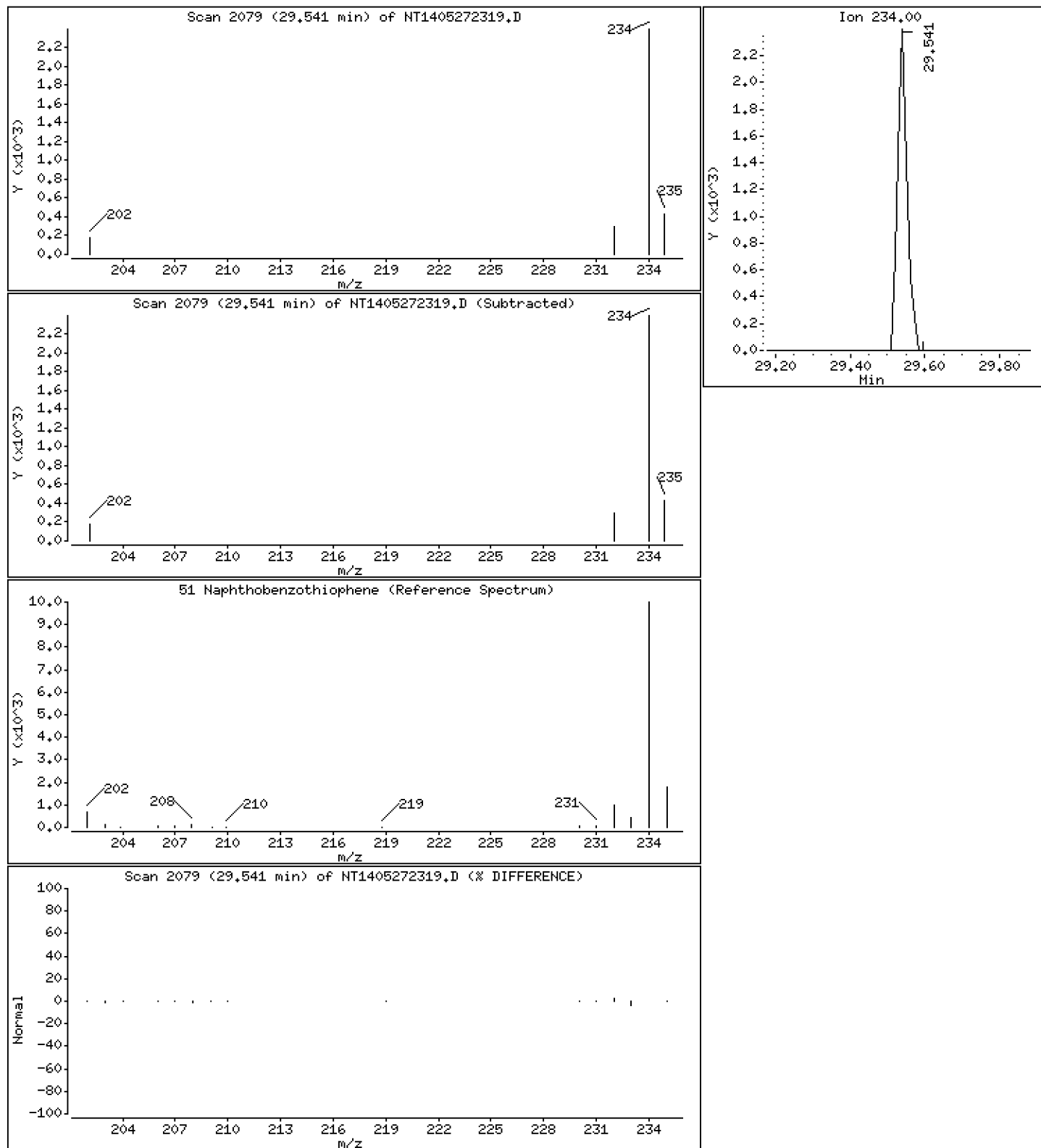
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

51 Naphthobenzothiophene

Concentration: 0.06679 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

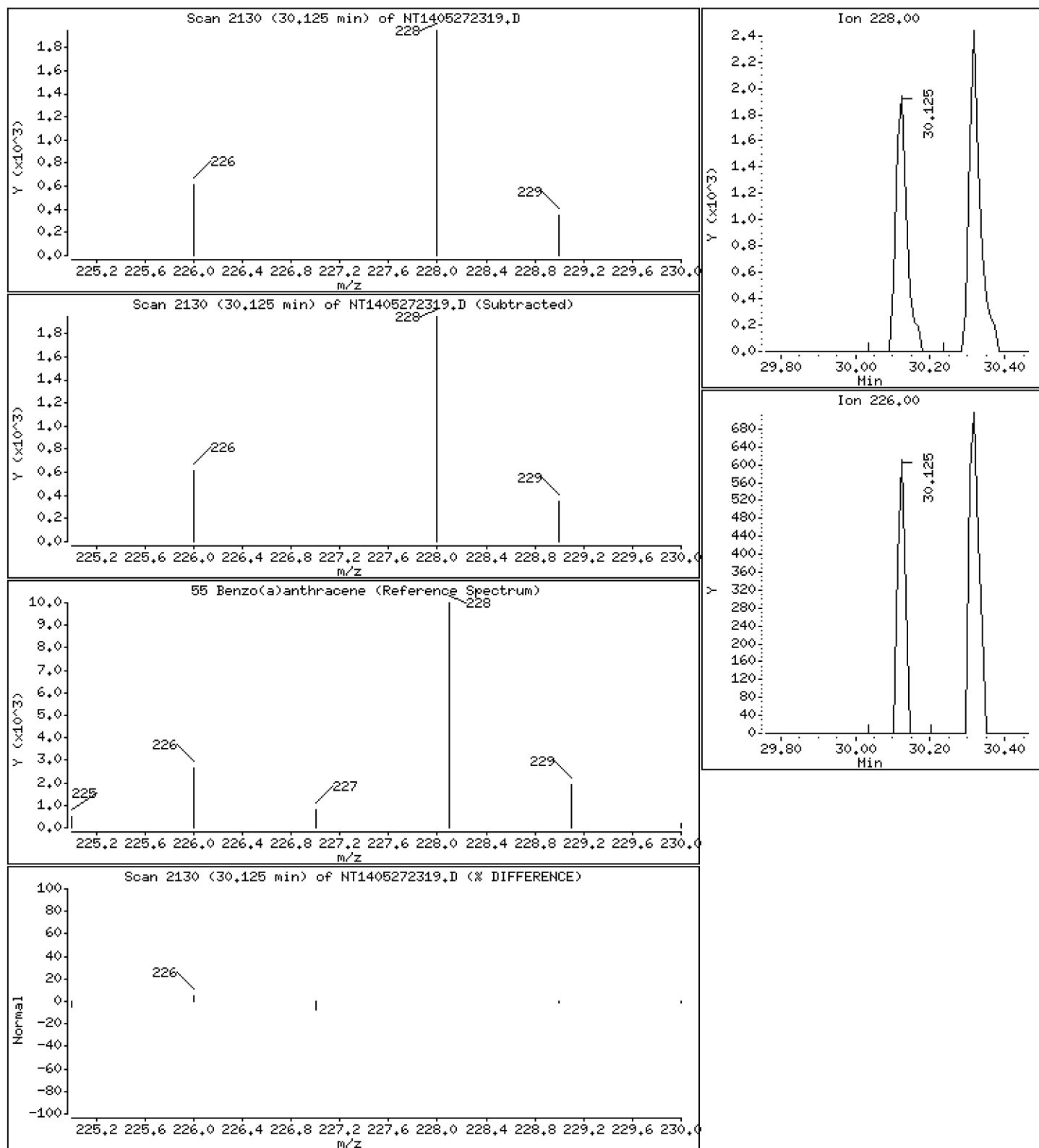
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

55 Benzo(a)anthracene

Concentration: 0,05609 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

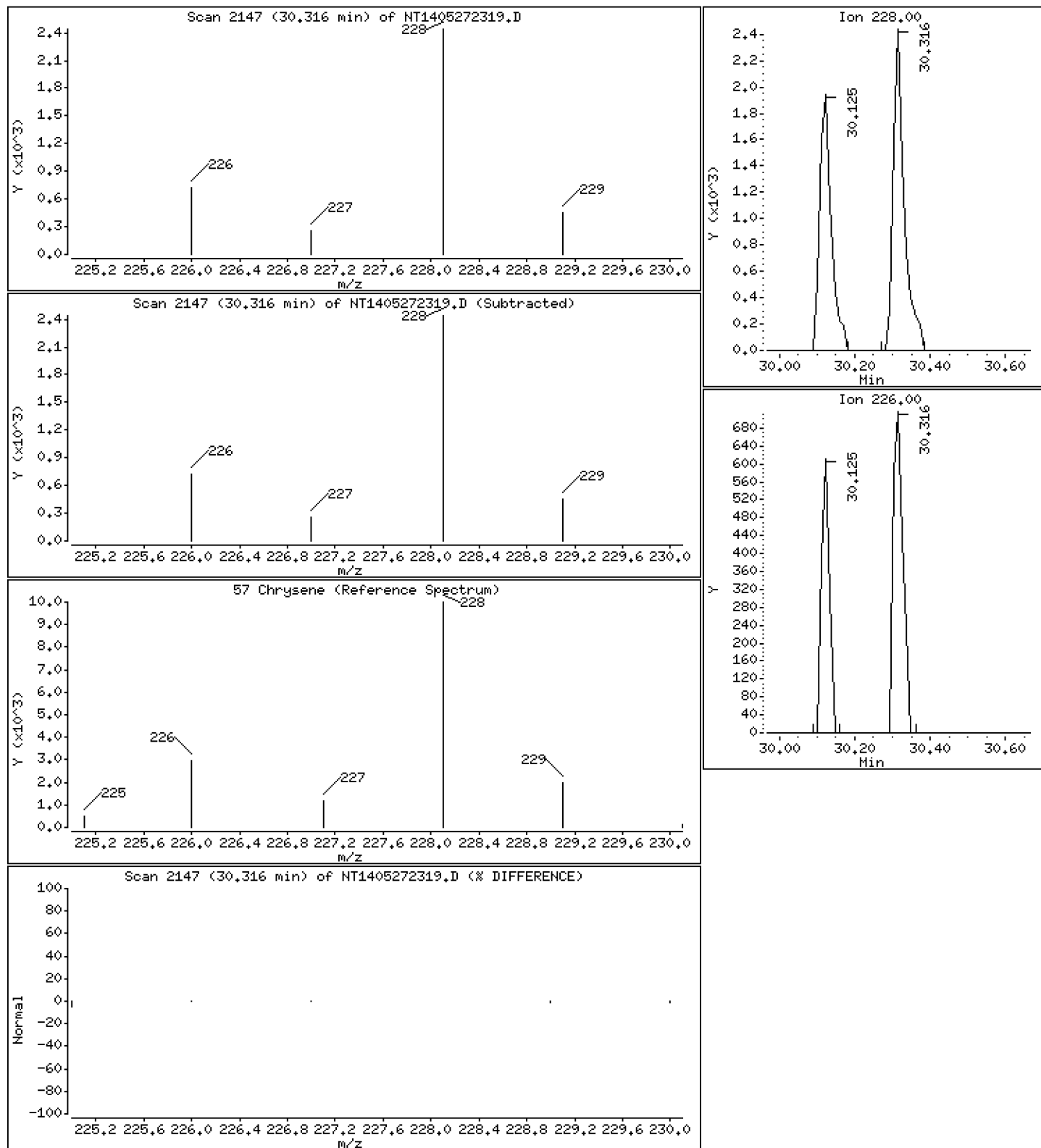
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

57 Chrysene

Concentration: 0,07023 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

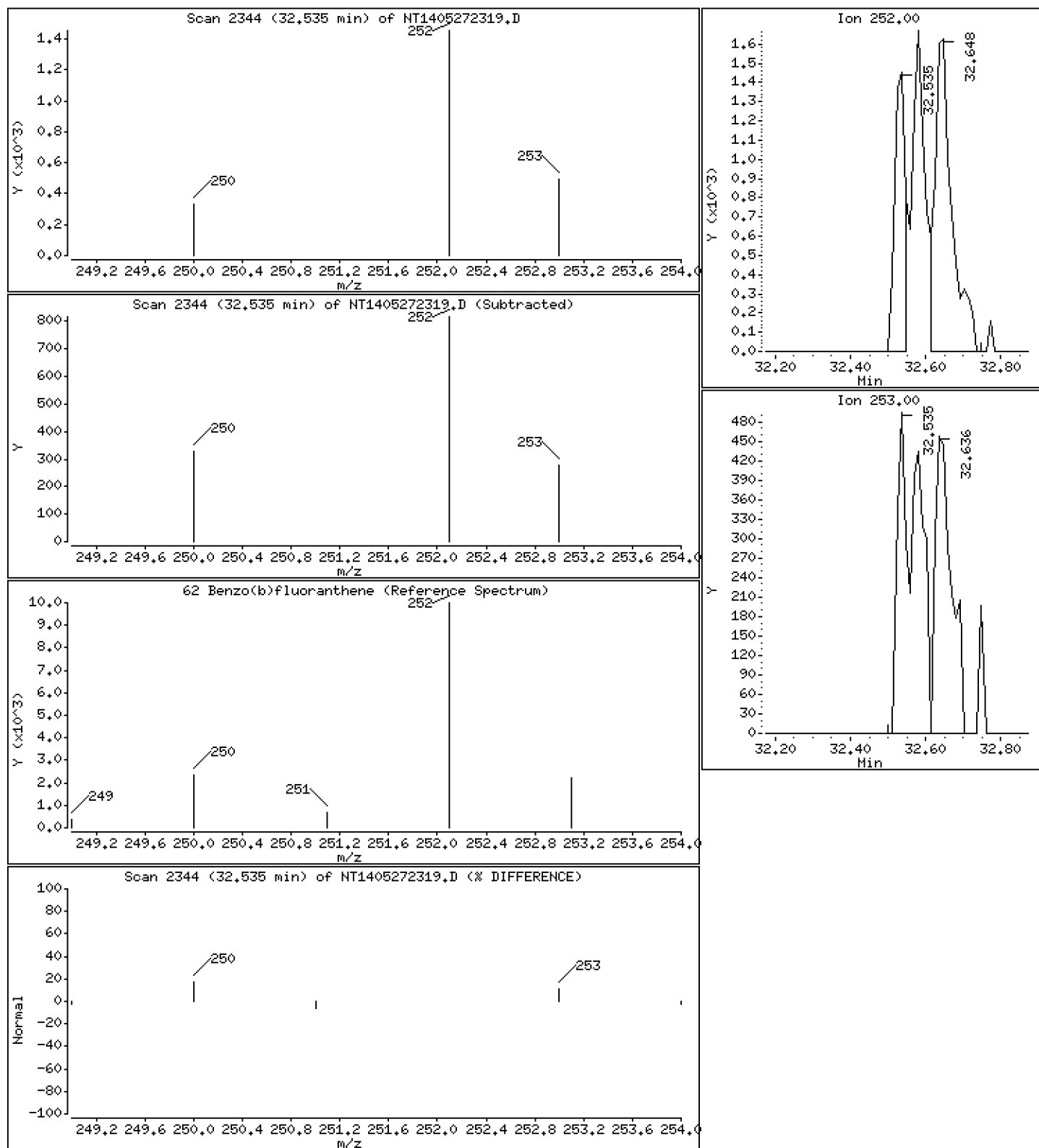
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

62 Benzo(b)fluoranthene

Concentration: 0,04008 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

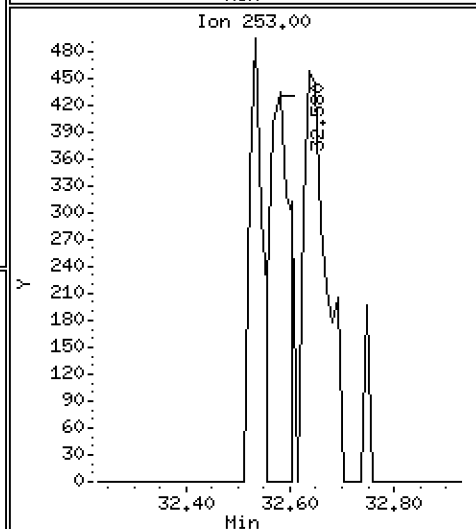
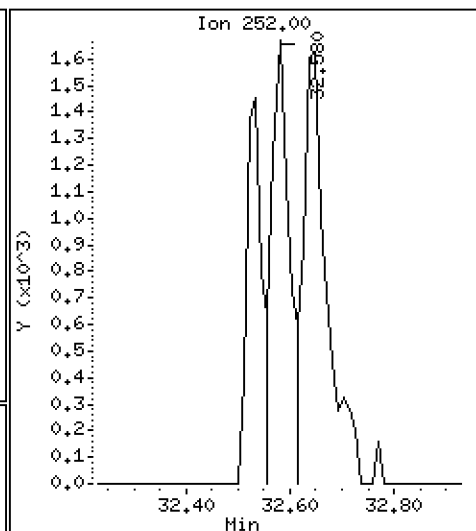
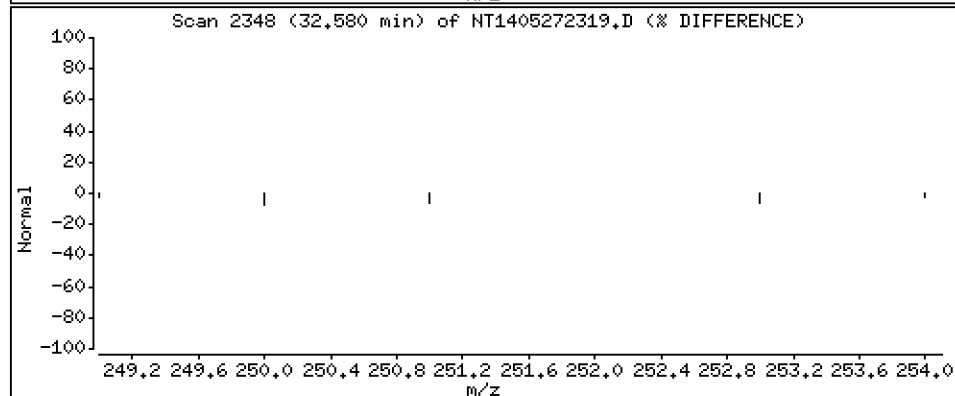
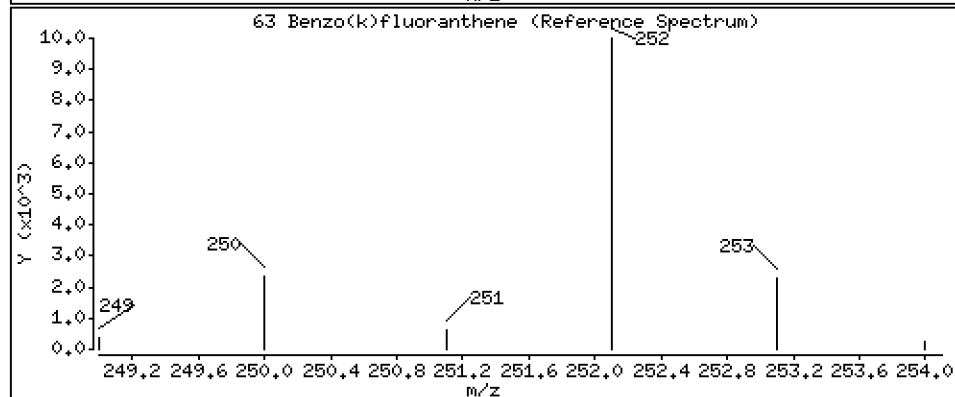
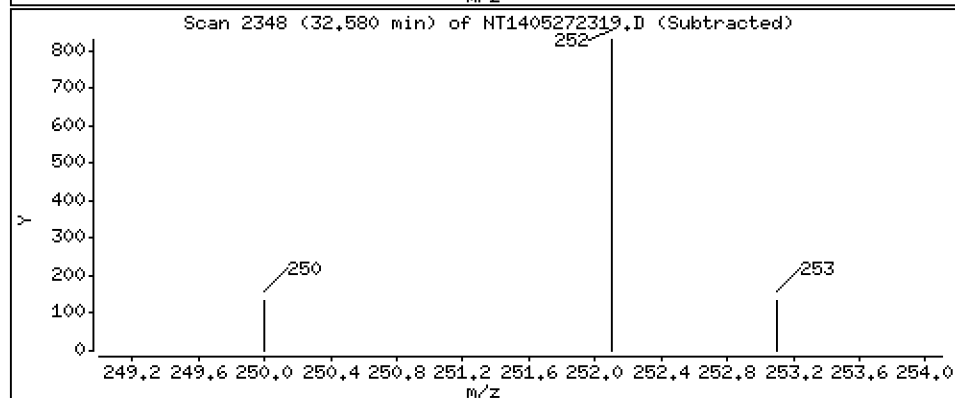
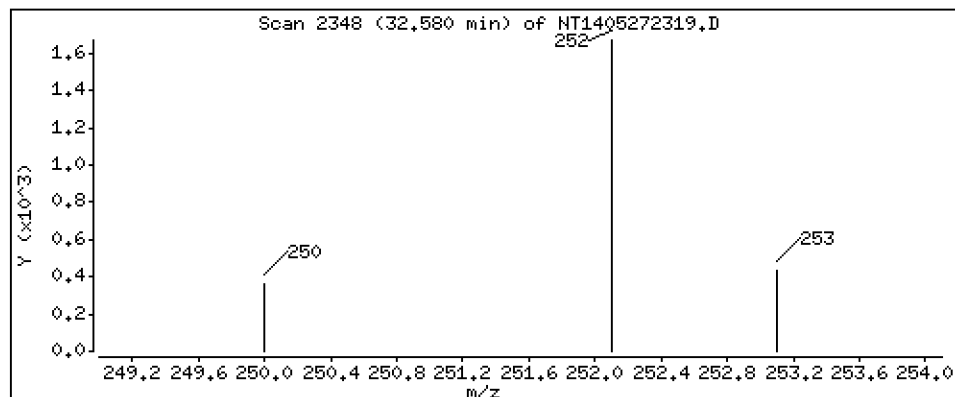
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

63 Benzo(k)fluoranthene

Concentration: 0,05378 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

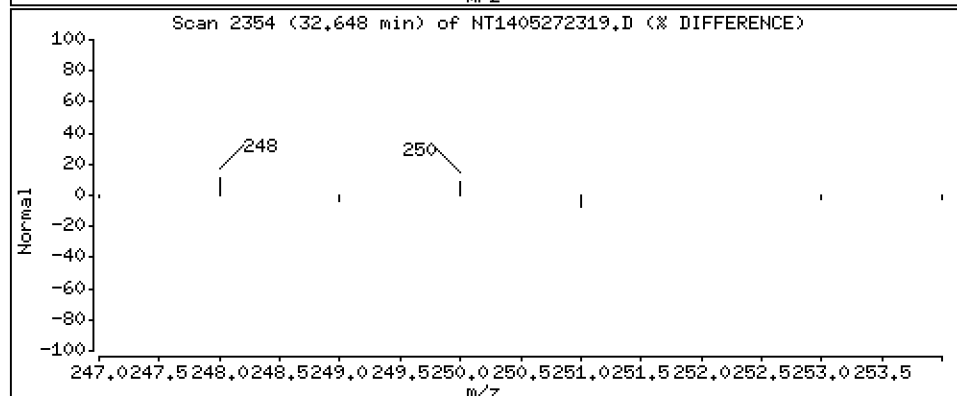
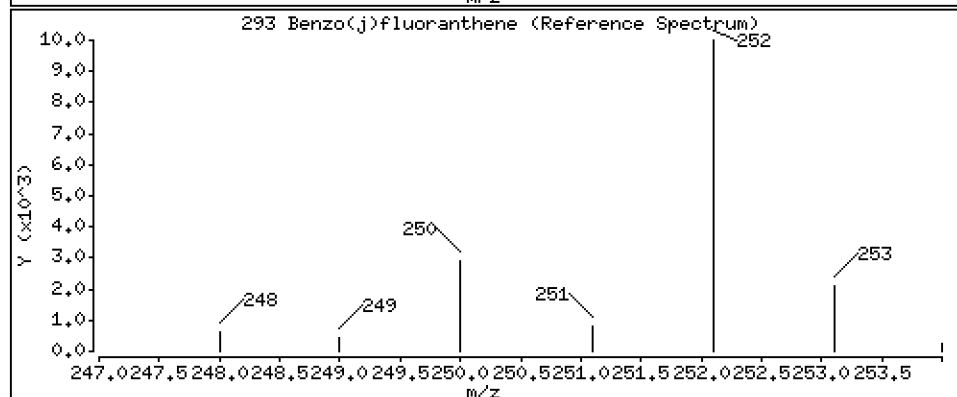
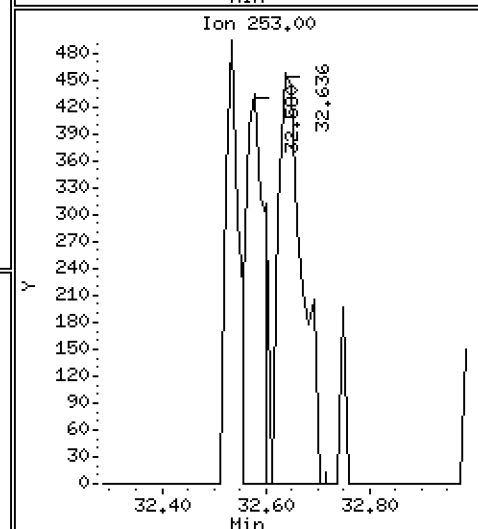
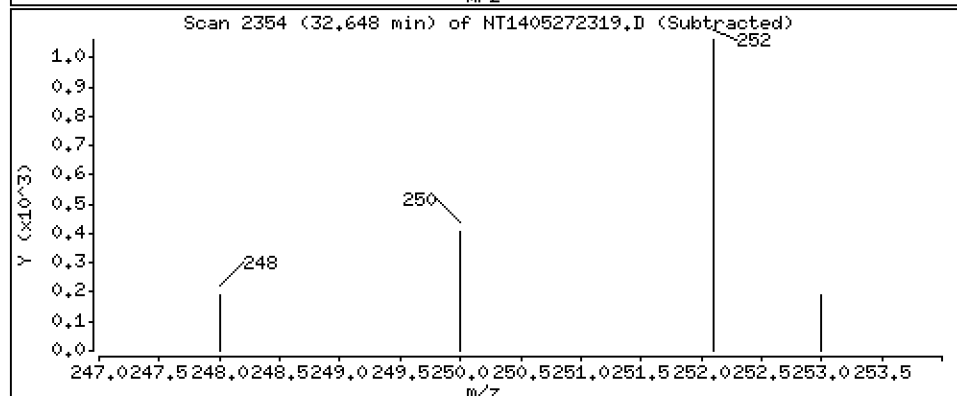
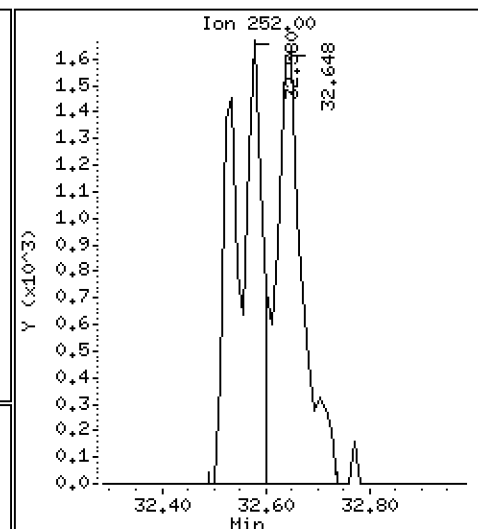
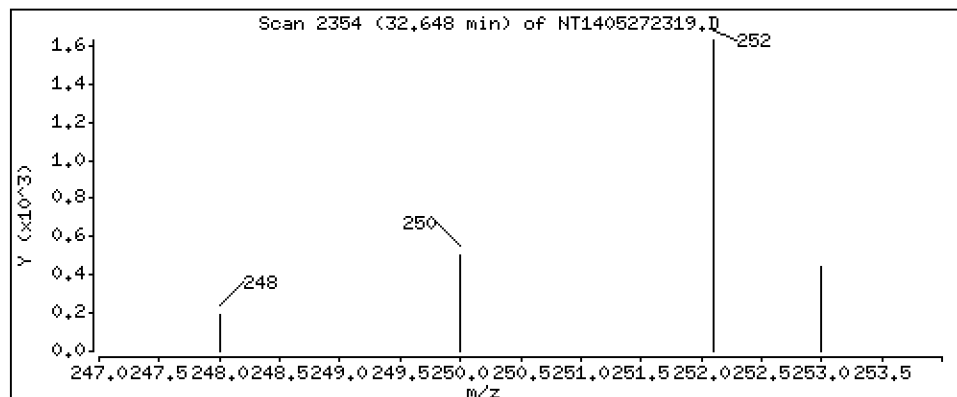
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

293 Benzo(j)fluoranthene

Concentration: 0,09272 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

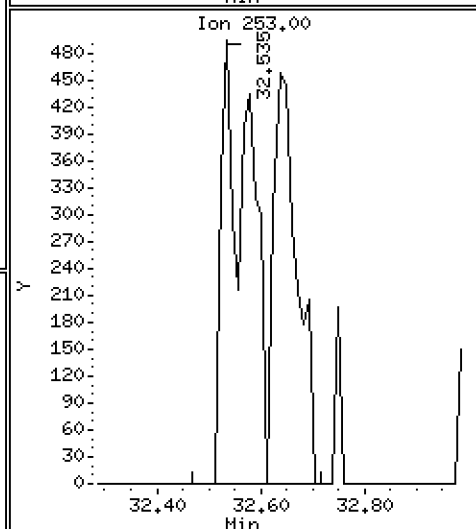
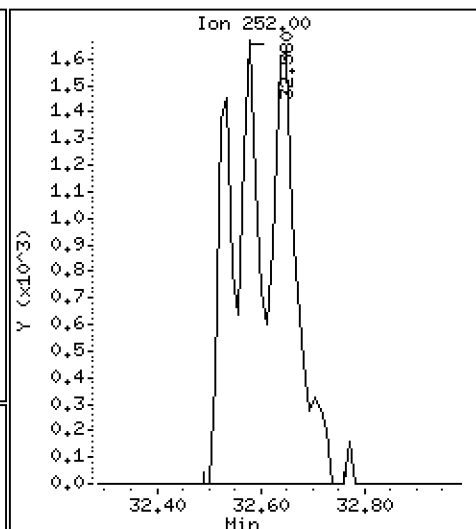
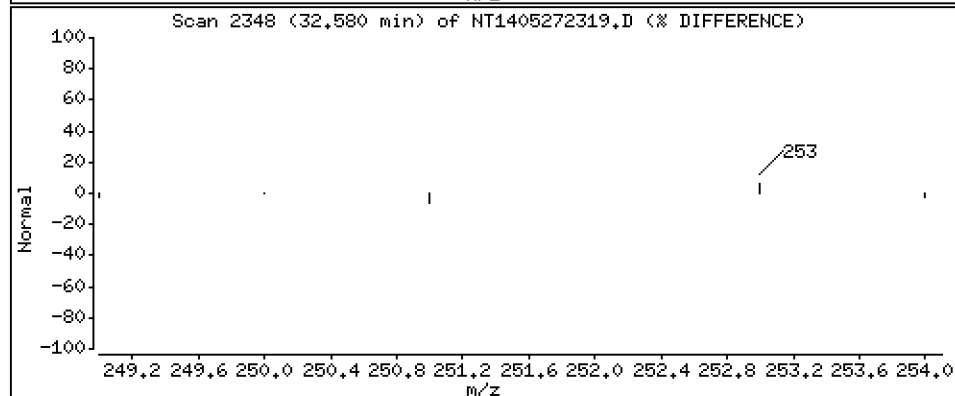
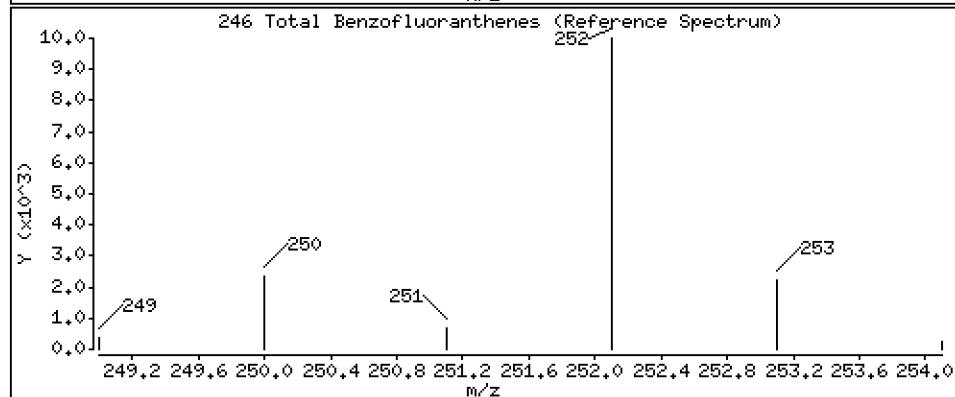
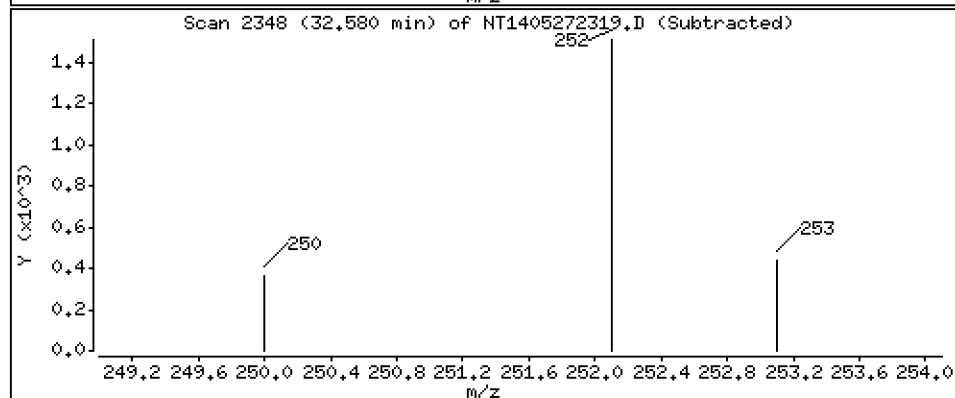
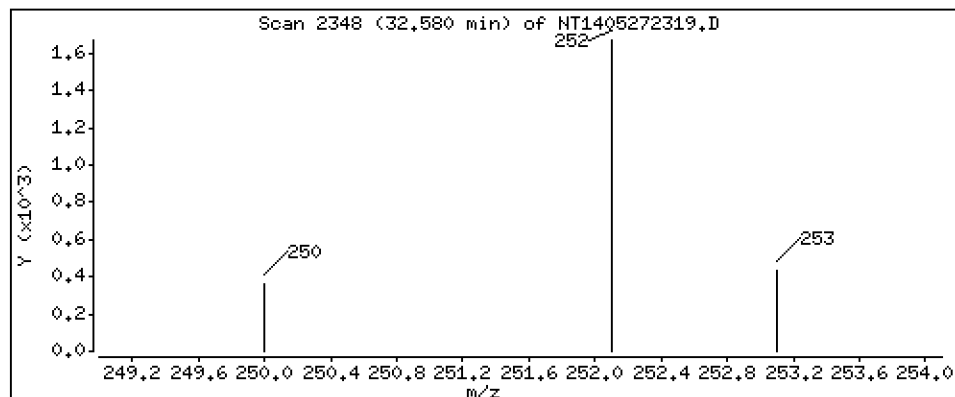
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

246 Total Benzo(a)fluoranthenes

Concentration: 0,1869 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

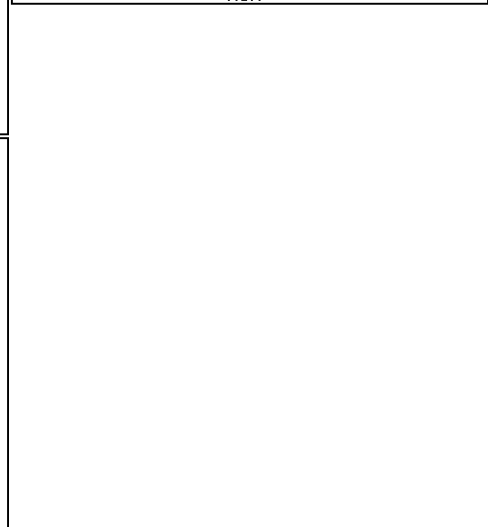
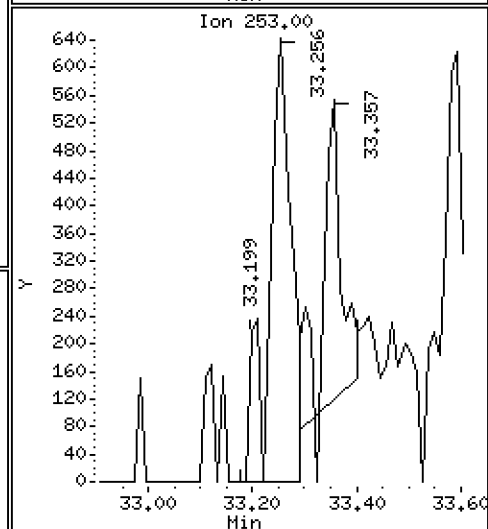
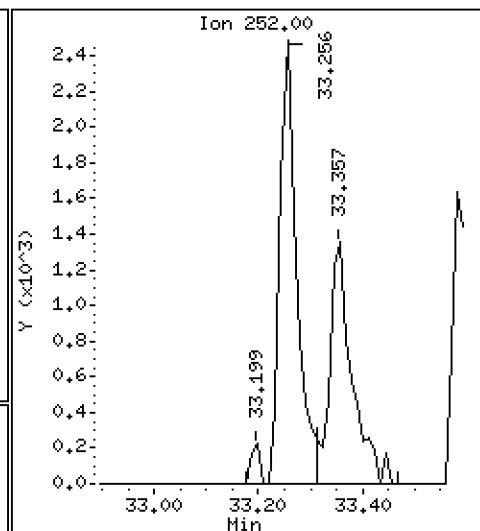
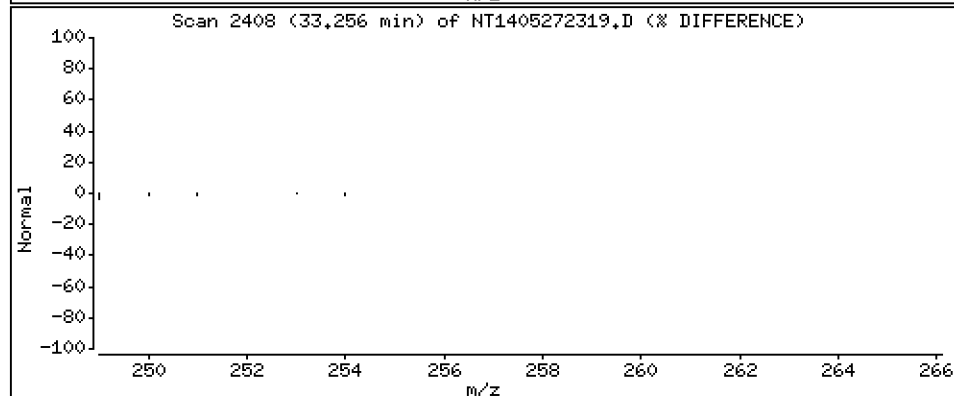
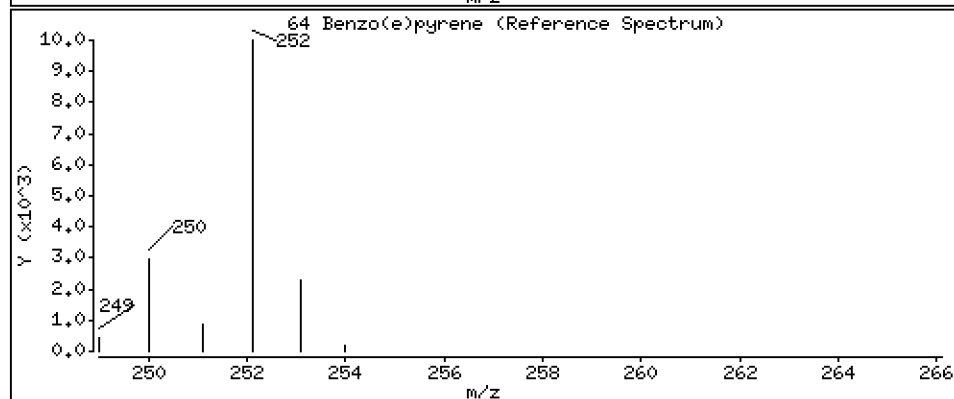
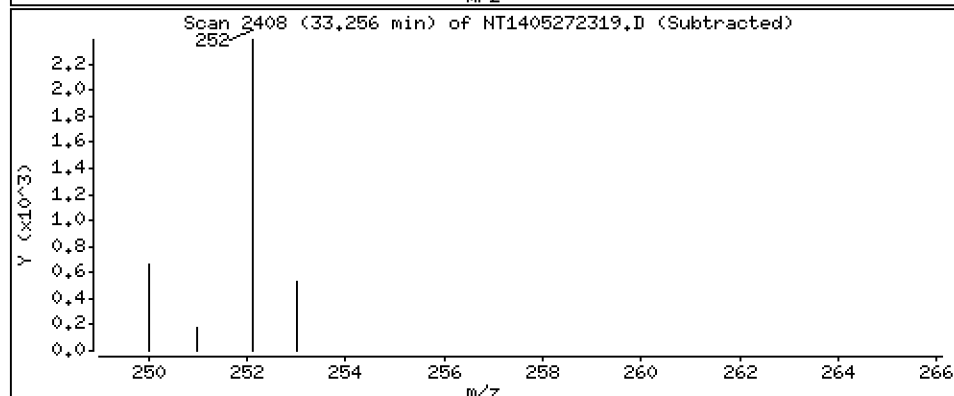
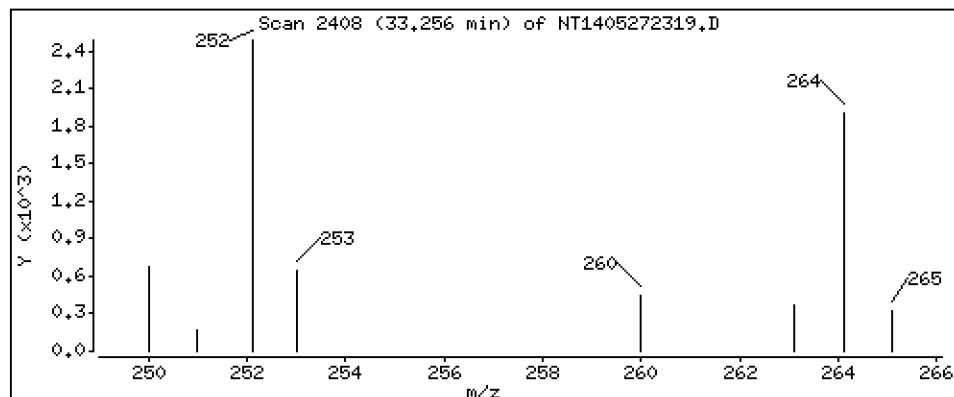
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

64 Benzo(e)pyrene

Concentration: 0.08217 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

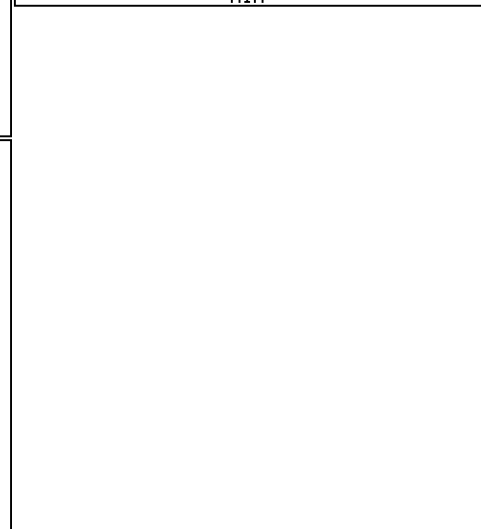
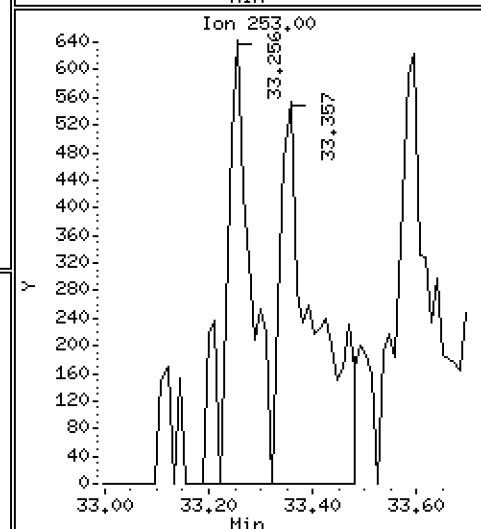
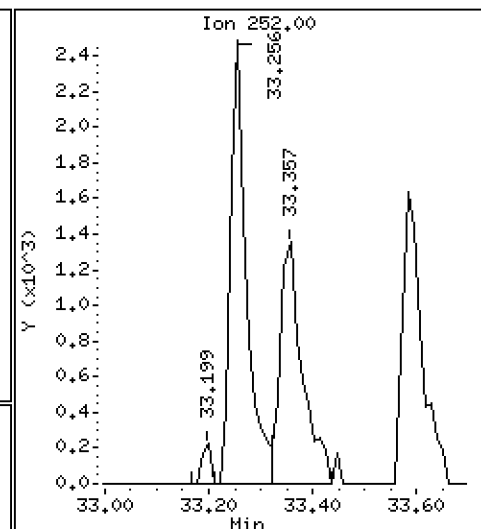
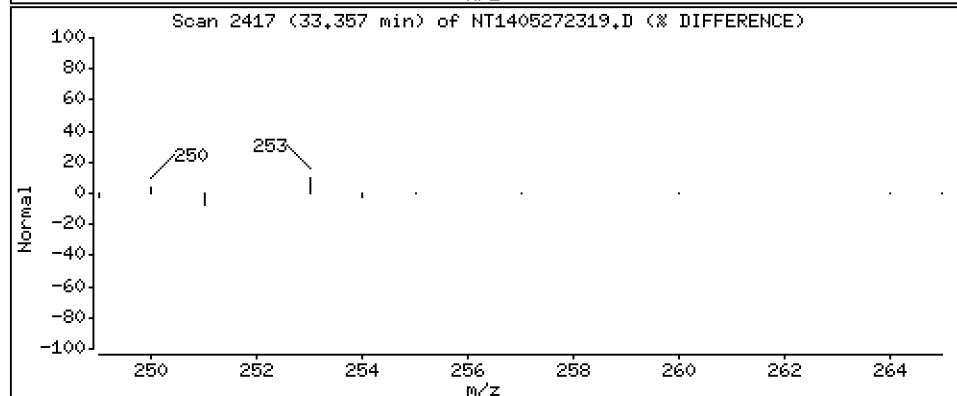
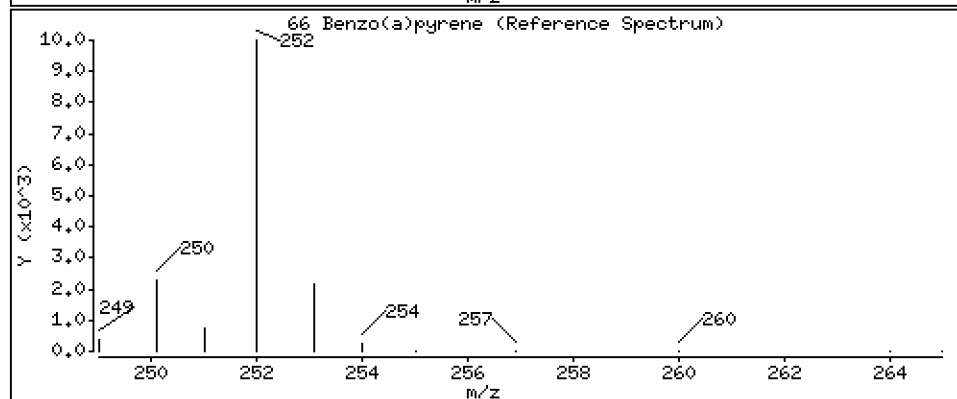
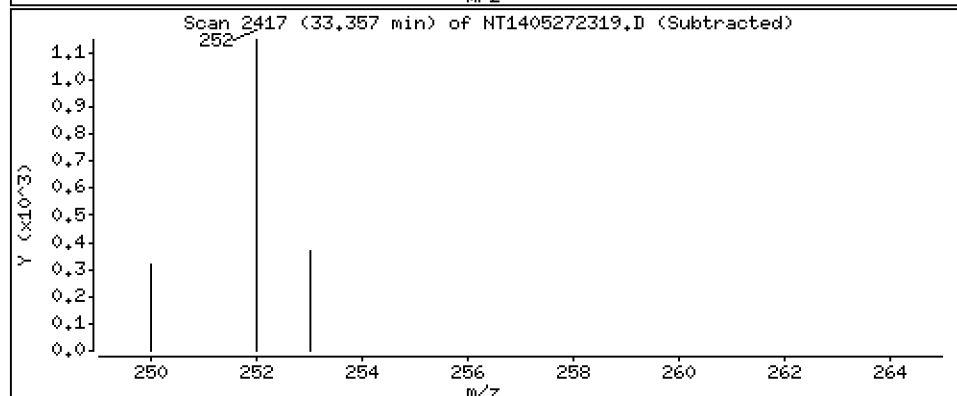
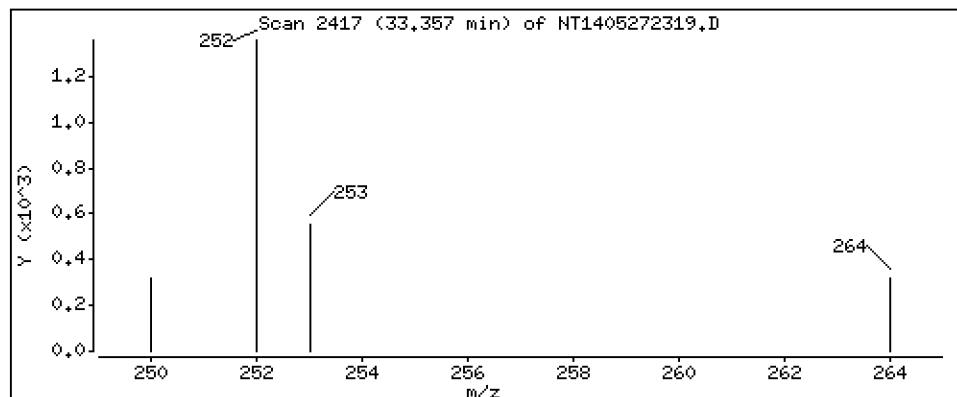
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

66 Benzo(a)pyrene

Concentration: 0.07049 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

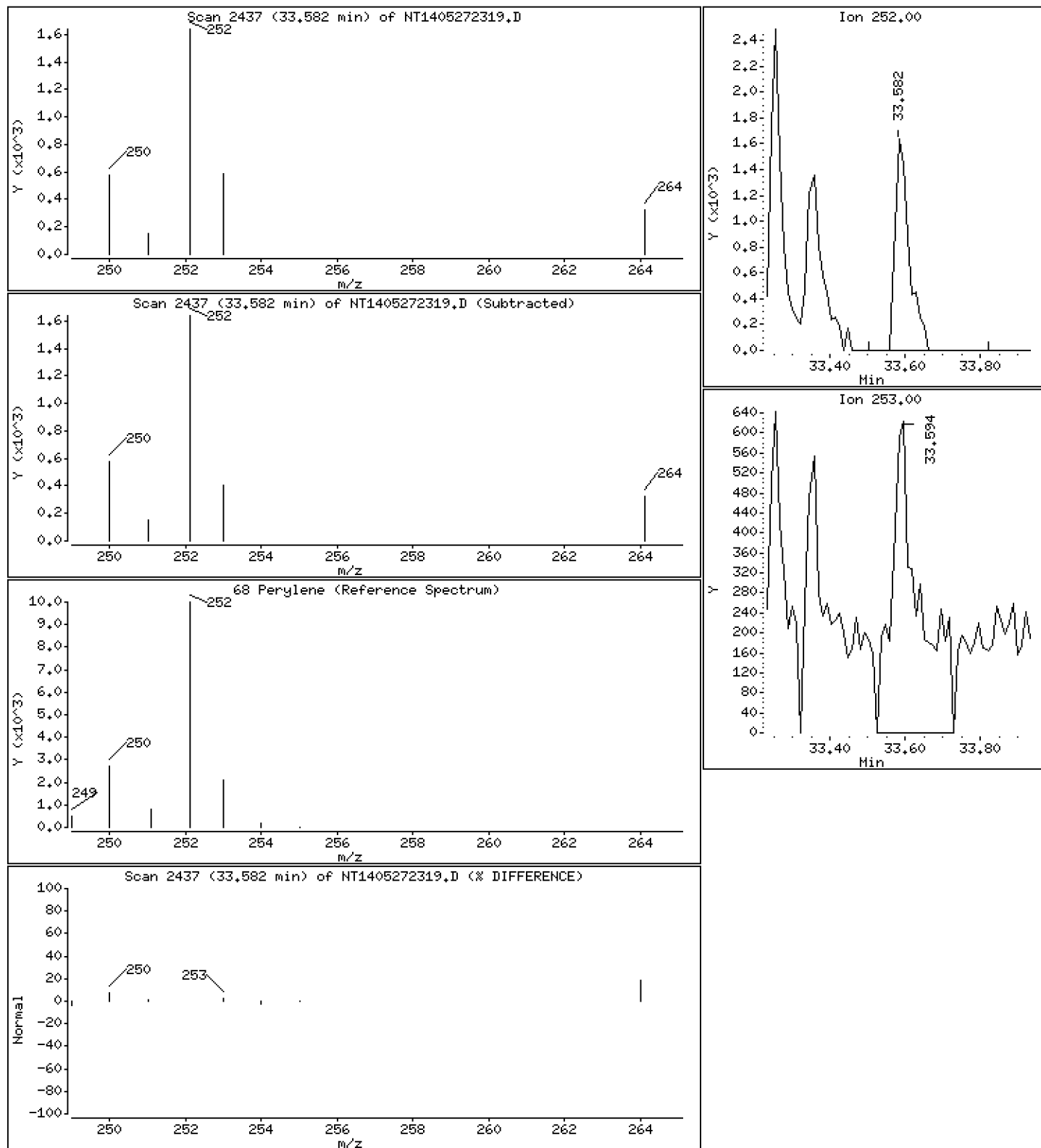
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

68 Perylene

Concentration: 0.06715 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

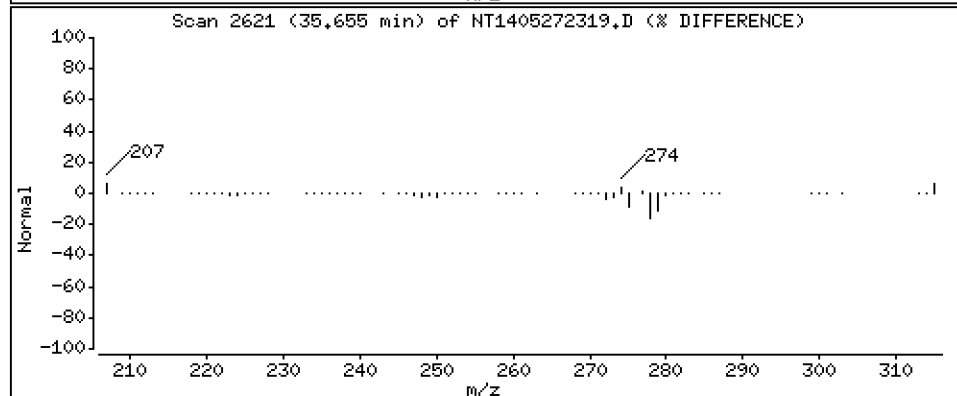
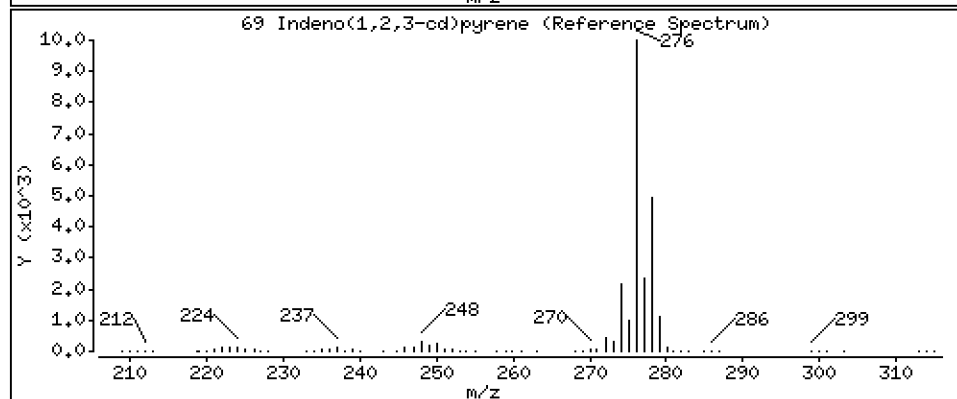
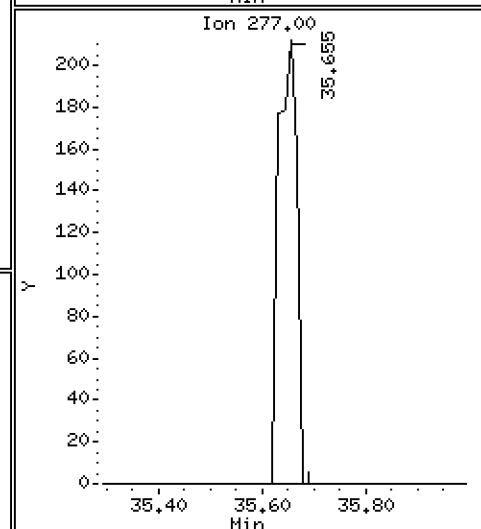
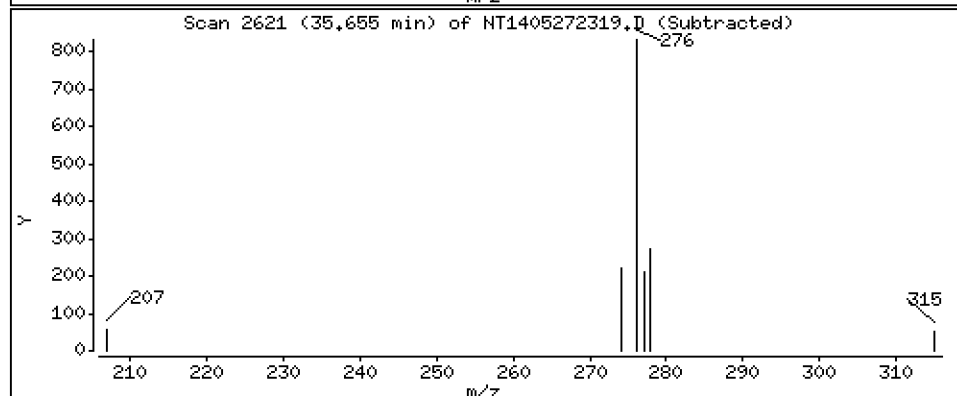
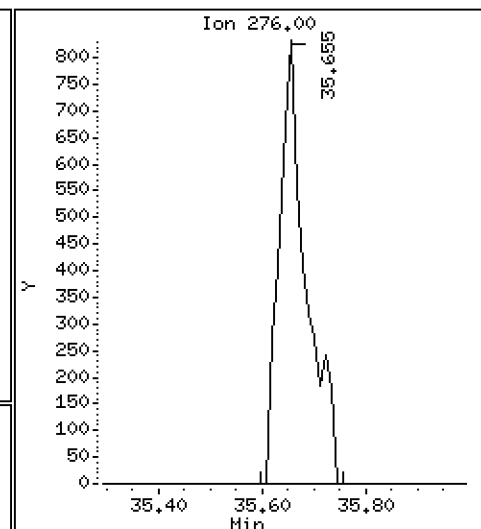
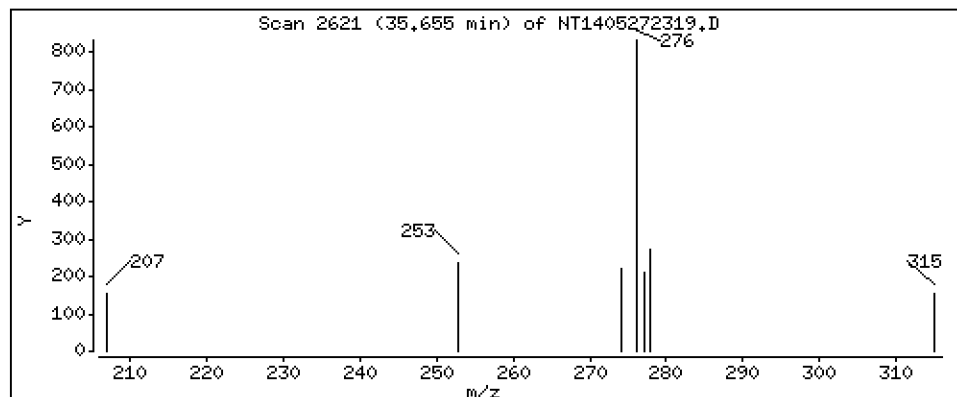
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

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

Concentration: 0,04086 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

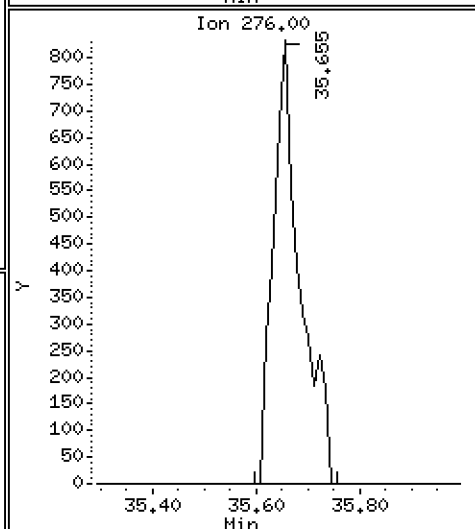
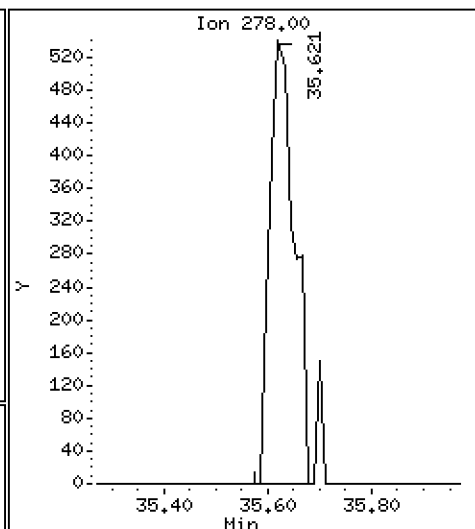
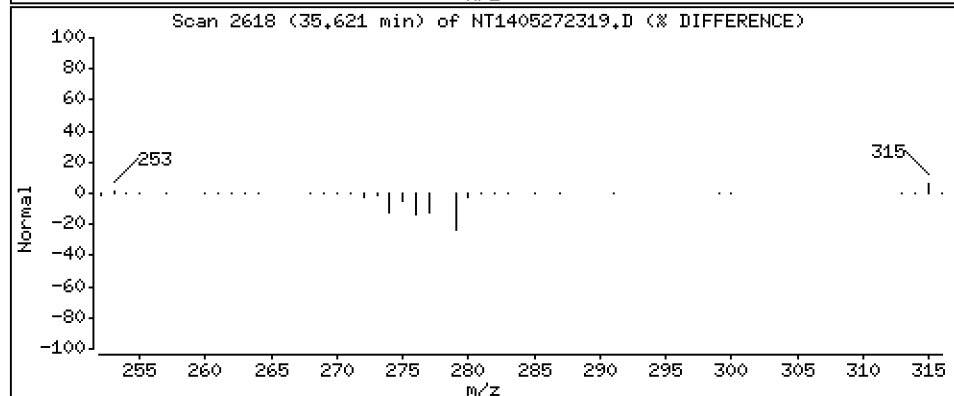
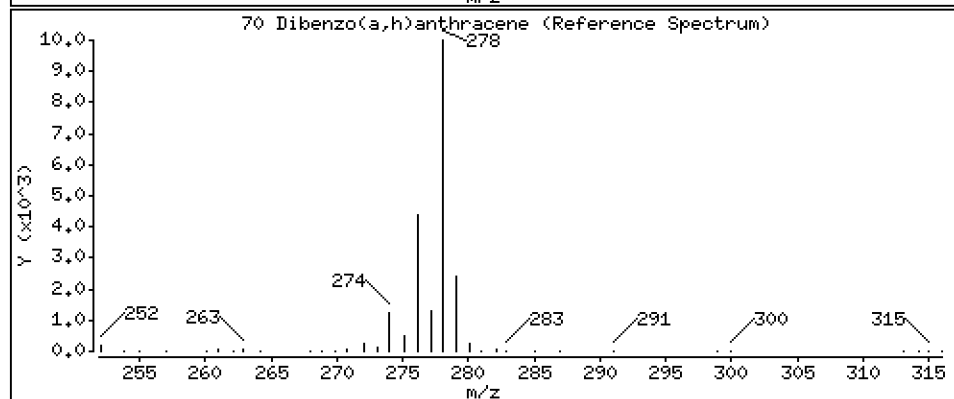
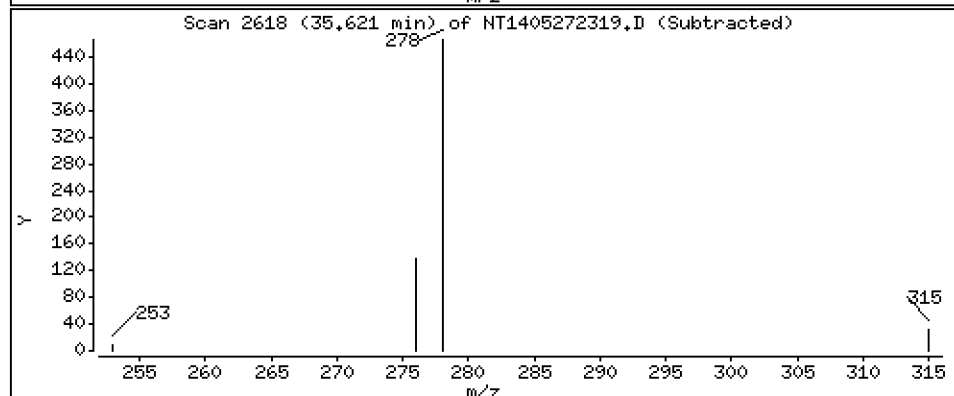
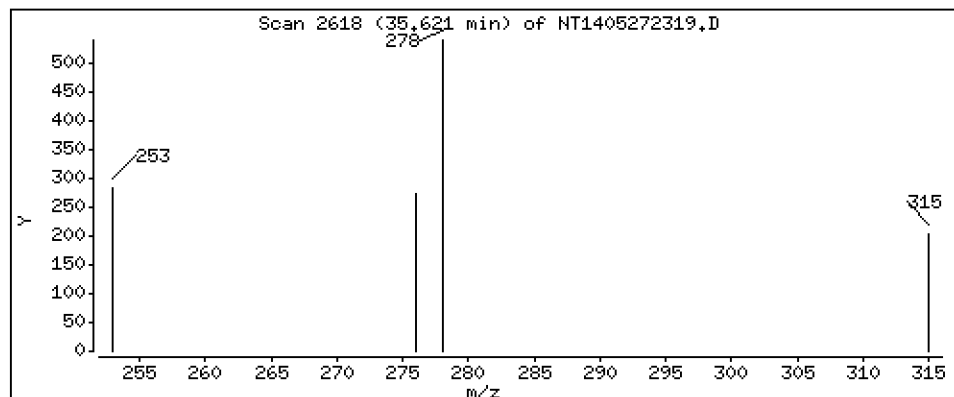
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0,25

70 Dibenzo(a,h)anthracene

Concentration: 0,02892 ug/mL



Date : 28-MAY-2023 00:45

Client ID:

Instrument: nt14.i

Sample Info: SLE0443-LCV2

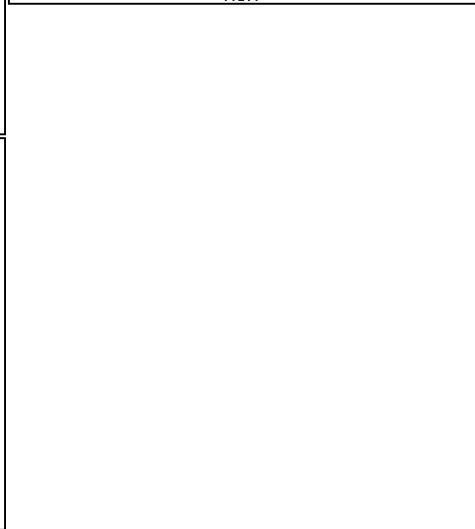
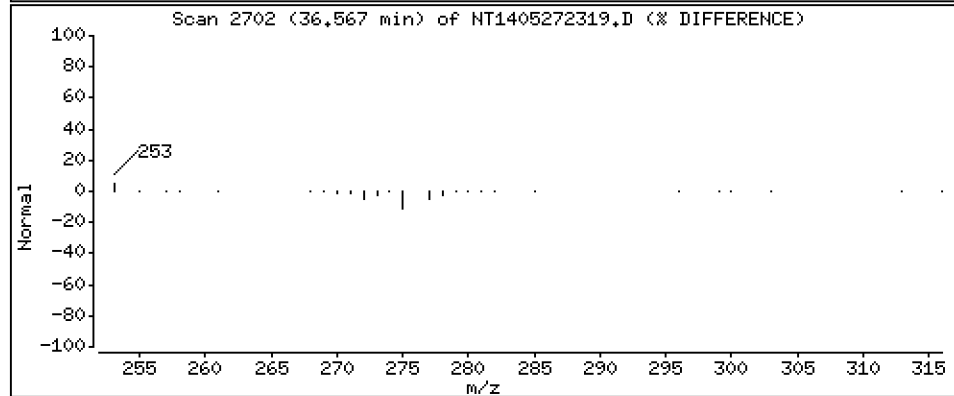
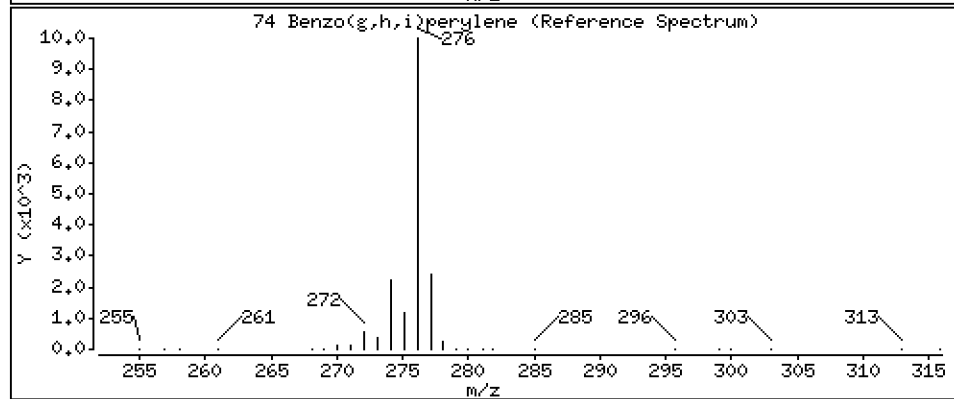
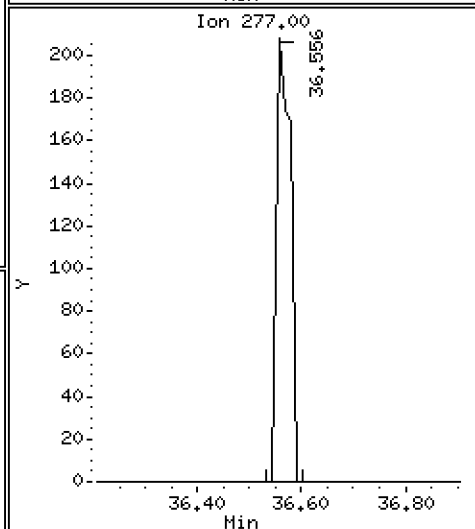
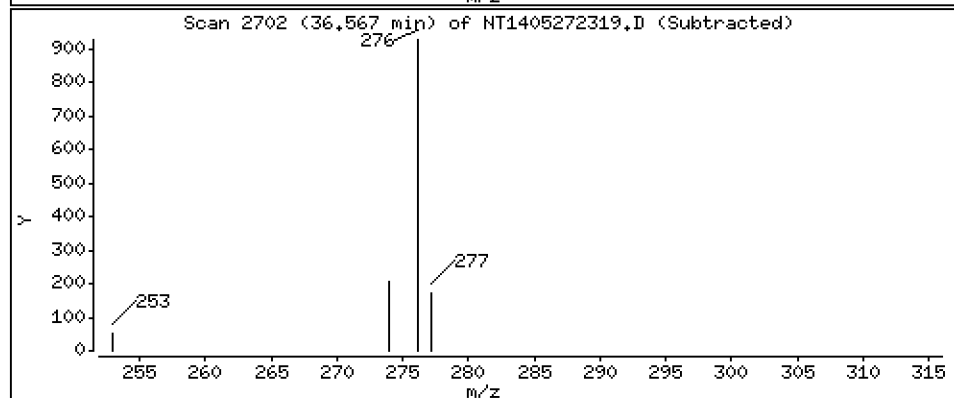
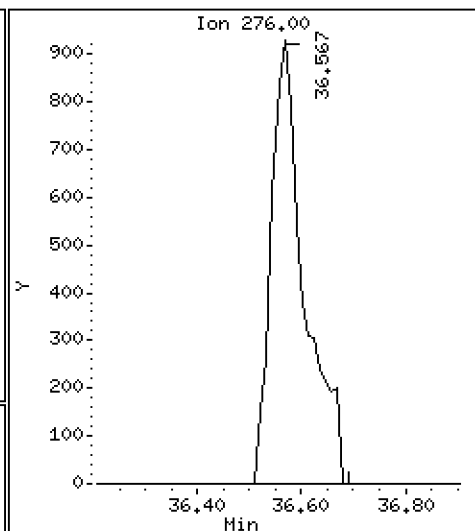
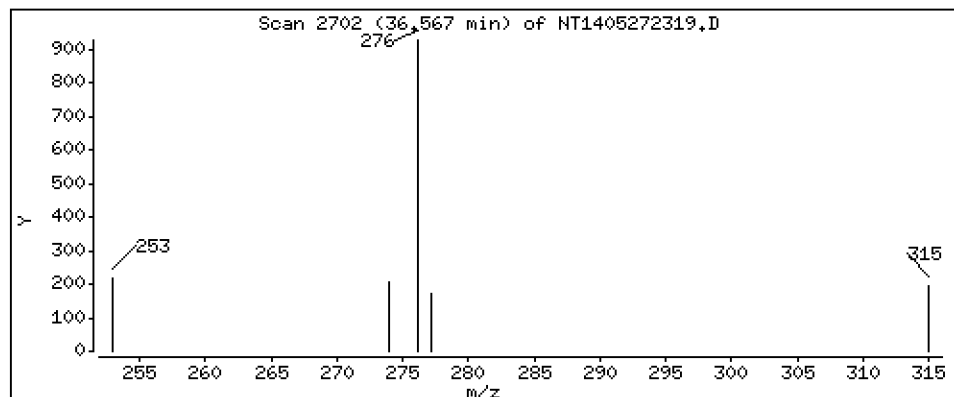
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

74 Benzo(g,h,i)perylene

Concentration: 0.07390 ug/mL



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230527.b\NT1405272319.D
Lab Smp Id: SLE0443-LCV2
Inj Date : 28-MAY-2023 00:45
Operator : VTS
Smp Info : SLE0443-LCV2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230527.b\ALKYLPNA.m
Meth Date : 30-May-2023 16:47 deenayd Quant Type: ISTD
Cal Date : 05-MAY-2023 15:12 Cal File: NT1423050507.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: DEENAY-201905

Inst ID: nt14.i

Compound Sublist: TARGETS.sub

Compounds	QUANT SIG							CONCENTRATIONS	
		MASS	RT	EXP RT	REL RT	RESPONSE		ON-COLUMN	FINAL
								(ug/mL)	(ug/mL)
1 trans-Decalin	138		7.203	7.203	(0.380)	975		0.06680	0.06680
2 cis-Decalin	138		8.308	8.319	(0.438)	723		0.06833	0.06833
\$ 6 Naphthalene-d8	136		11.939	11.939	(0.630)	12020		0.08830	0.08830 (R)
7 Naphthalene	128		12.007	12.006	(0.634)	13141		0.08788	0.08788
12 Benzo(b)thiophene	134		12.462	12.451	(0.658)	10290		0.09055	0.09055
16 2-Methylnaphthalene	141		13.847	13.847	(0.731)	6156		0.08324	0.08324
17 1-methylnaphthalene	141		14.298	14.297	(0.754)	6315		0.08480	0.08480
18 Biphenyl	154		15.484	15.473	(0.817)	8716		0.08519	0.08519
19 2,6-Dimethylnaphthalene	156		15.561	15.561	(0.821)	5947		0.08167	0.08167
20 Acenaphthylene	152		17.133	17.133	(0.904)	10183		0.08373	0.08373
\$ 21 Acenaphthene-d10	164		17.419	17.419	(0.919)	4826		0.07999	0.07999 (R)
22 Acenaphthene	153		17.528	17.528	(0.925)	6335		0.08441	0.08441
23 Dibenzofuran	168		17.913	17.913	(0.945)	9099		0.09262	0.09262
24 1,6,7-Trimethylnaphthalene	170		18.133	18.133	(0.957)	4955		0.07634	0.07634
* 25 Fluorene-d10	176		18.950	18.950	(1.000)	136249		2.00000	
26 Fluorene	166		19.064	19.064	(1.006)	6868		0.08725	0.08725
30 Dibenzothiophene	184		21.981	21.981	(1.160)	8219		0.08521	0.08521
\$ 35 Phenanthrene-d10	188		22.294	22.294	(0.995)	8075		0.08477	0.08477 (RM)
36 Phenanthrene	178		22.376	22.375	(0.998)	9544		0.08592	0.08592
* 250 Anthracene-d10	188		22.410	22.410	(1.000)	166926		2.00000	
37 Anthracene	178		22.480	22.468	(1.003)	8770		0.08601	0.08601
42 Carbazole	167		Compound Not Detected.						
43 1-Methylphenanthrene	192		24.207	24.207	(1.080)	4883		0.06816	0.06816
44 Fluoranthene	202		26.189	26.177	(1.169)	6936		0.06848	0.06848
46 Pyrene	202		27.023	27.023	(1.206)	6937		0.06544	0.06544
51 Naphthobenzothiophene	234		29.540	29.529	(1.318)	4669		0.06679	0.06679
55 Benzo(a)anthracene	228		30.124	30.113	(0.907)	4067		0.05609	0.05609 (M)
\$ 56 Chrysene-d12	240		30.248	30.237	(0.911)	3534		0.07043	0.07043 (R)
57 Chrysene	228		30.316	30.316	(0.913)	4981		0.07023	0.07023
62 Benzo(b)fluoranthene	252		32.534	32.523	(0.980)	2711		0.04008	0.04008
63 Benzo(k)fluoranthene	252		32.580	32.579	(0.981)	4087		0.05378	0.05378 (M)
293 Benzo(j)fluoranthene	252		32.647	32.636	(0.983)	5886		0.09272	0.09272 (H)
246 Total Benzofluoranthenes	252		32.580	32.636	(0.981)	11763		0.18688	0.1869 (M)

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN	FINAL
	MASS					(ug/mL)	(ug/mL)
=====	=====	=====	=====	=====	=====	=====	=====
* 251 Benzo(e)pyrene-d12	264	33.199	33.188	(1.000)	92492	2.00000	
64 Benzo(e)pyrene	252	33.255	33.244	(1.002)	5376	0.08217	0.08217
66 Benzo(a)pyrene	252	33.357	33.345	(1.005)	3901	0.07049	0.07049
\$ 67 Perylene-d12	264	33.526	33.526	(1.010)	3699	0.07641	0.07641 (RM)
68 Perylene	252	33.582	33.582	(1.012)	4079	0.06715	0.06715 (M)
69 Indeno(1,2,3-cd)pyrene	276	35.654	35.643	(1.074)	2946	0.04086	0.04086
70 Dibenzo(a,h)anthracene	278	35.621	35.621	(1.073)	1713	0.02892	0.02892
74 Benzo(g,h,i)perylene	276	36.567	36.555	(1.101)	4030	0.07390	0.07390

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
 M - Compound response manually integrated.
 H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt14.i Calibration Date: 27-MAY-2023
 Lab File ID: NT1405272319.D Calibration Time: 13:31
 Lab Smp Id: SLE0443-LCV2
 Analysis Type: SV Level:
 Quant Type: ISTD Sample Type:
 Operator: VTS
 Method File: \\target\share\chem3\nt14.i\20230527.b\ALKYLPNA.m
 Misc Info:

Test Mode:
 Use Last Continuing Calibrator.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	136933	68467	273866	136249	-0.50
250 Anthracene-d10	167500	83750	335000	166926	-0.34
251 Benzo(e)pyrene-d1	94374	47187	188748	92492	-1.99

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER =====	UPPER =====		
25 Fluorene-d10	18.95	18.45	19.45	18.95	0.00
250 Anthracene-d10	22.41	21.91	22.91	22.41	0.00
251 Benzo(e)pyrene-d1	33.19	32.69	33.69	33.20	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 - NT1405272319.D

Lab ID: SLE0443-LCV2

nt14.i, 20230527.b\ALKYLPNA.m, 28-MAY-2023 00:45

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

RRT check based on Ccal File: NT1405272305.D

On Column LOD for nt14.i, 20230527.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

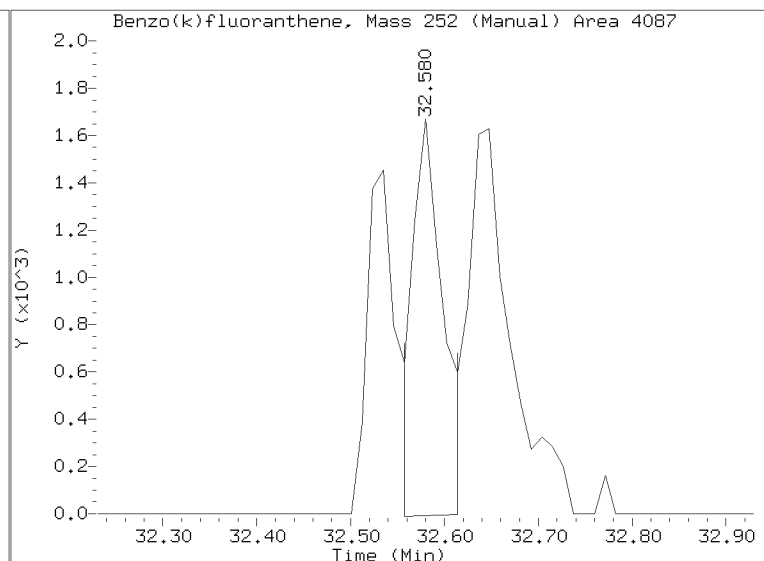
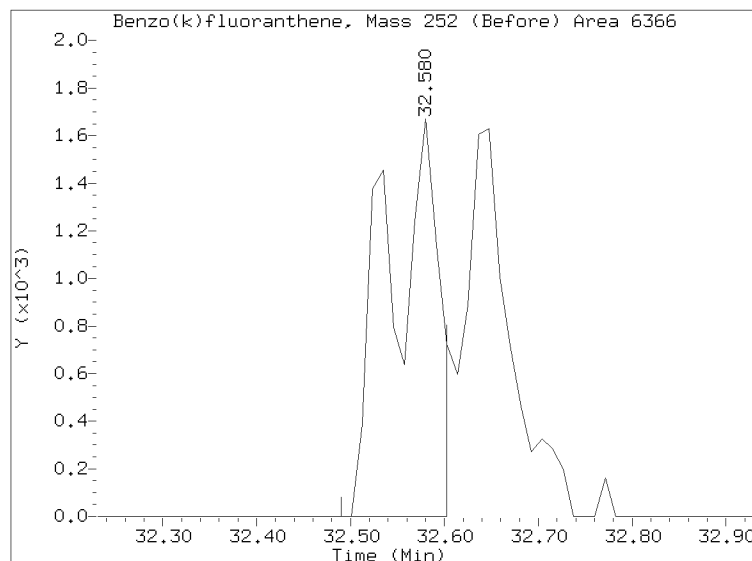
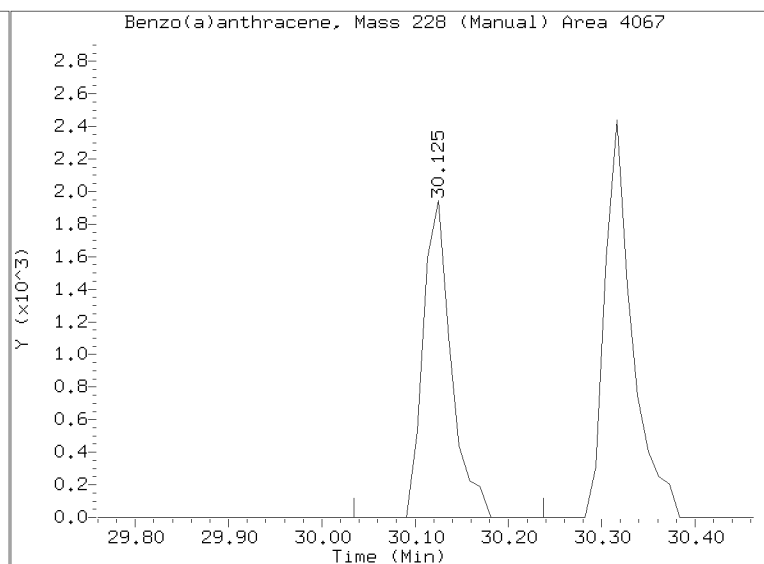
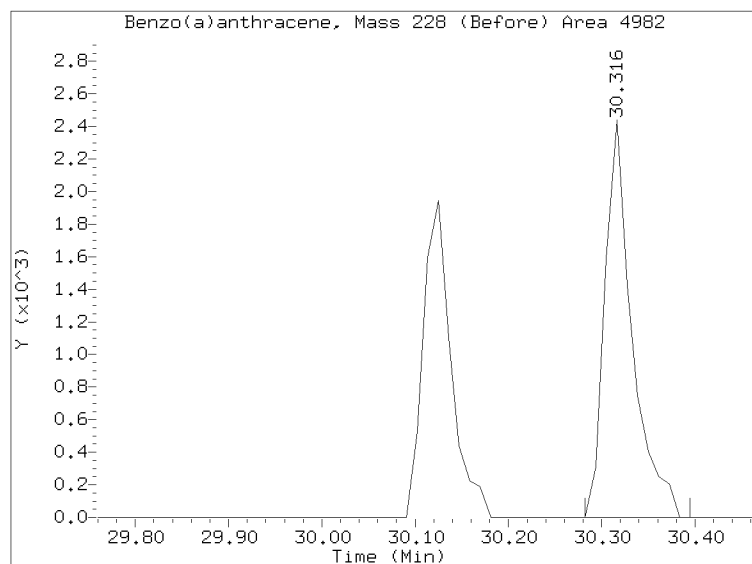
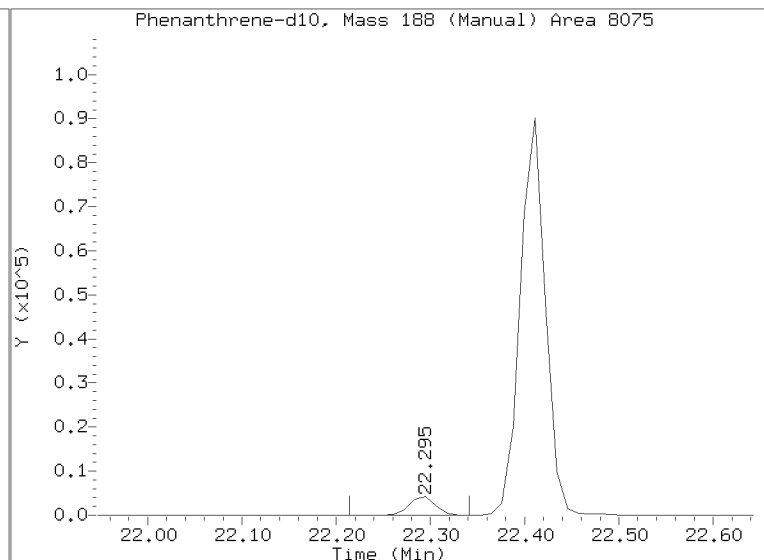
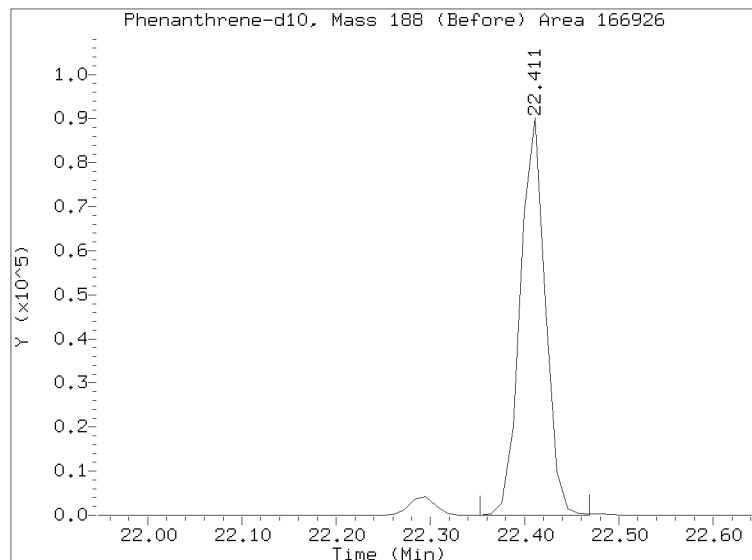
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230527.b/NT1405272319.D

Injection Date: 28-MAY-2023 00:45

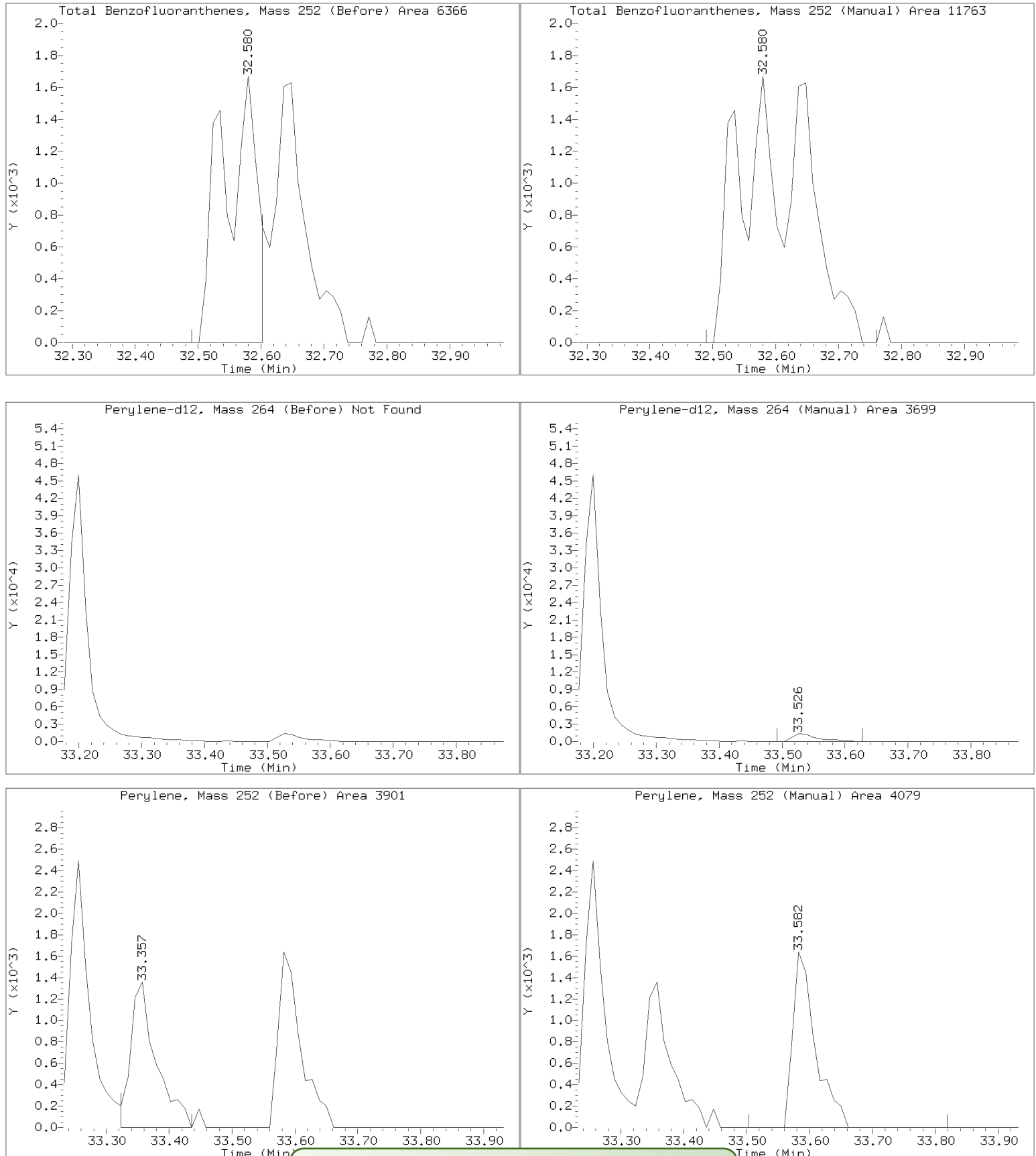
Lab ID: SLE0443-LCV2 Client ID:

Report Date: 05/30/2023 16:48



Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230527.b/NT1405272319.D
Injection Date: 28-MAY-2023 00:45
Lab ID: SLE0443-LCV2 Client ID:
Report Date: 05/30/2023 16:48



APPROVED

By Deenay Dunmore at 5:02 pm, May 30, 2023



ANALYSIS BATCH (SEQUENCE) SUMMARY
EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Sequence: SLE0096

Instrument: NT14

Calibration: GE00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLE0096-TUN1	NT1423050501.D	NA	05/05/23 10:56
PAH 0.1	SLE0096-CAL1	NT1423050502.D	NA	05/05/23 11:11
PAH 0.5	SLE0096-CAL2	NT1423050503.D	NA	05/05/23 11:59
PAH 1.0	SLE0096-CAL3	NT1423050504.D	NA	05/05/23 12:47
PAH 2.5	SLE0096-CAL4	NT1423050505.D	NA	05/05/23 13:36
PAH 5.0	SLE0096-CAL5	NT1423050506.D	NA	05/05/23 14:24
PAH 10.0	SLE0096-CAL6	NT1423050507.D	NA	05/05/23 15:12
Secondary Cal Check	SLE0096-SCV1	NT1423050508.D	NA	05/05/23 16:01
Initial Cal Blank	SLE0096-ICB1	NT1423050509.D	NA	05/05/23 16:49
ZZZZZ	BLD0142-BLK1	NT1423050510.D	Solid	05/05/23 17:38
ZZZZZ	BLD0142-BS1	NT1423050511.D	Solid	05/05/23 18:26
ZZZZZ	BLD0142-BSD1	NT1423050512.D	Solid	05/05/23 19:14
ZZZZZ	23D0042-41	NT1423050513.D	Solid	05/05/23 20:03
ZZZZZ	23D0042-42	NT1423050514.D	Solid	05/05/23 20:51
PAH 2.5	SLE0096-ICV1	NT1423050515.D	NA	05/05/23 21:39
ZZZZZ	BLD0142-BLK3	NT1423050517.D	Solid	05/05/23 23:16
ZZZZZ	23D0042-43	NT1423050518.D	Solid	05/06/23 00:04
ZZZZZ	23D0042-44	NT1423050519.D	Solid	05/06/23 00:52
ZZZZZ	23D0042-45	NT1423050520.D	Solid	05/06/23 01:40
ZZZZZ	23D0042-46	NT1423050521.D	Solid	05/06/23 02:28
ZZZZZ	23D0042-47	NT1423050522.D	Solid	05/06/23 03:16
ZZZZZ	BLD0142-MS1	NT1423050523.D	Solid	05/06/23 04:05
ZZZZZ	BLD0142-MSD1	NT1423050524.D	Solid	05/06/23 04:53
ZZZZZ	23D0042-48	NT1423050525.D	Solid	05/06/23 05:41
ZZZZZ	23D0042-49	NT1423050526.D	Solid	05/06/23 06:29
ZZZZZ	23D0042-50	NT1423050527.D	Solid	05/06/23 07:17
ZZZZZ	23D0042-51	NT1423050528.D	Solid	05/06/23 08:05
PAH 2.5	SLE0096-ICV2	NT1423050529.D	NA	05/06/23 08:53
Instrument Blank	SLE0096-IBL1	NT1423050531.D	NA	05/06/23 10:35



ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Sequence: SLE0096

Instrument: NT14

Calibration: GE00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0042-41RE1	NT1423050532.D	Solid	05/06/23 11:23
ZZZZZ	23D0042-43RE1	NT1423050533.D	Solid	05/06/23 12:23
ZZZZZ	23D0042-44RE1	NT1423050534.D	Solid	05/06/23 13:12
ZZZZZ	23D0042-45RE1	NT1423050535.D	Solid	05/06/23 14:00
ZZZZZ	23D0042-46RE1	NT1423050536.D	Solid	05/06/23 14:49
ZZZZZ	23D0042-47RE1	NT1423050537.D	Solid	05/06/23 15:38
ZZZZZ	23D0042-48RE1	NT1423050538.D	Solid	05/06/23 16:26
ZZZZZ	23D0042-49RE1	NT1423050539.D	Solid	05/06/23 17:15
ZZZZZ	23D0042-50RE1	NT1423050540.D	Solid	05/06/23 18:03
ZZZZZ	23D0042-51RE1	NT1423050541.D	Solid	05/06/23 18:51
ZZZZZ	BLD0411-BLK1	NT1423050544.D	Solid	05/06/23 21:16
ZZZZZ	BLD0411-BS1	NT1423050545.D	Solid	05/06/23 22:04
ZZZZZ	BLD0411-BSD1	NT1423050546.D	Solid	05/06/23 22:52
ZZZZZ	23D0247-02	NT1423050547.D	Solid	05/06/23 23:40
ZZZZZ	23D0247-03	NT1423050548.D	Solid	05/07/23 00:28
ZZZZZ	23D0247-04	NT1423050549.D	Solid	05/07/23 01:16
ZZZZZ	BLD0411-MS1	NT1423050550.D	Solid	05/07/23 02:04
ZZZZZ	BLD0411-MSD1	NT1423050551.D	Solid	05/07/23 02:52
ZZZZZ	23D0247-05	NT1423050552.D	Solid	05/07/23 03:40
ZZZZZ	23D0247-07	NT1423050554.D	Solid	05/07/23 05:17
ZZZZZ	23D0247-08	NT1423050555.D	Solid	05/07/23 06:05
Initial Cal Check	SLE0096-ICV4	NT1423050556.D	NA	05/07/23 06:53
Instrument Blank	SLE0096-IBL2	NT1423050558.D	NA	05/07/23 08:29
ZZZZZ	23D0247-09	NT1423050559.D	Solid	05/07/23 09:17
ZZZZZ	23D0247-10	NT1423050560.D	Solid	05/07/23 10:05
ZZZZZ	23D0247-11	NT1423050561.D	Solid	05/07/23 10:53
ZZZZZ	23D0247-12	NT1423050562.D	Solid	05/07/23 11:42
ZZZZZ	23D0247-13	NT1423050563.D	Solid	05/07/23 12:30
ZZZZZ	23D0247-14	NT1423050564.D	Solid	05/07/23 13:19



Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Sequence: SLE0096

Instrument: NT14

Calibration: GE00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
PAH 2.5	SLE0096-CCV1	NT1423050565.D	NA	05/07/23 14:07



ANALYSIS SEQUENCE

SLE0096

Printed: 5/6/2023 11:41:51AM

Instrument ID: NT14

GCMS Description: Agilent 7890A/5975C XL

Calibration ID: GE00024

GCMS Column ID: L004289

MS EM Level: 1800 EV

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLE0096-TUN1	MS Tune	QC		1	L005045		05/05/2023 10:56	NT1423050501.D	VTS	
SLE0096-CAL1	PAH 0.1	QC		2	K010902	L005048	05/05/2023 11:11	NT1423050502.D	VTS	
SLE0096-CAL2	PAH 0.5	QC		3	K010903	L005048	05/05/2023 11:59	NT1423050503.D	VTS	
SLE0096-CAL3	PAH 1.0	QC		4	K010904	L005048	05/05/2023 12:47	NT1423050504.D	VTS	
SLE0096-CAL4	PAH 2.5	QC		5	K010905	L005048	05/05/2023 13:36	NT1423050505.D	VTS	
SLE0096-CAL5	PAH 5.0	QC		6	K010906	L005048	05/05/2023 14:24	NT1423050506.D	VTS	
SLE0096-CAL6	PAH 10.0	QC		7	K010907	L005048	05/05/2023 15:12	NT1423050507.D	VTS	
SLE0096-SCV1	Secondary Cal Check	QC		8	L004239	L005048	05/05/2023 16:01	NT1423050508.D	VTS	
SLE0096-ICB1	Initial Cal Blank	QC		9	L004240	L005048	05/05/2023 16:49	NT1423050509.D	VTS	
BLD0142-BLK1	Blank	QC		10		L005048	05/05/2023 17:38	NT1423050510.D	VTS	
BLD0142-BS1	LCS	QC		11		L005048	05/05/2023 18:26	NT1423050511.D	VTS	
BLD0142-BSD1	LCS Dup	QC		12		L005048	05/05/2023 19:14	NT1423050512.D	VTS	
23D0042-41	DI-203SB-26-27-23033	IM Alkyl PAH (Parents) D	A 01	13		L005048	05/05/2023 20:03	NT1423050513.D	VTS	
23D0042-42	DI-203SB-33-34.1-23033	IM Alkyl PAH (Parents) D	A 01	14		L005048	05/05/2023 20:51	NT1423050514.D	VTS	
SLE0096-ICV1	PAH 2.5	QC		15	K010905	L005048	05/05/2023 21:39	NT1423050515.D	VTS	
BLD0142-BLK3	Blank	QC		16		L005048	05/05/2023 23:16	NT1423050517.D	VTS	
23D0042-43	DI-1211SC-13-14-23033	IM Alkyl PAH (Parents) D	A 01	17		L005048	05/06/2023 00:04	NT1423050518.D	VTS	
23D0042-44	DI-211SC-12-13-23033	IM Alkyl PAH (Parents) D	A 01	18		L005048	05/06/2023 00:52	NT1423050519.D	VTS	
23D0042-45	DI-211SC-13-14-23033	IM Alkyl PAH (Parents) D	A 01	19		L005048	05/06/2023 01:40	NT1423050520.D	VTS	
23D0042-46	DI-211SC-14-14.9-23033	IM Alkyl PAH (Parents) D	A 01	20		L005048	05/06/2023 02:28	NT1423050521.D	VTS	
23D0042-47	DI-211SC-15-16-23033	IM Alkyl PAH (Parents) D	A 01	21		L005048	05/06/2023 03:16	NT1423050522.D	VTS	
BLD0142-MS1	Matrix Spike	QC		22		L005048	05/06/2023 04:05	NT1423050523.D	VTS	



ANALYSIS SEQUENCE

Printed: 5/6/2023 11:41:51AM

SLE0096

Instrument ID: NT14

GCMS Description: Agilent 7890A/5975C XL

Calibration ID: GE00024

GCMS Column ID: L004289

MS EM Level: 1800 EV

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
BLD0142-MSD1	Matrix Spike Dup	QC		23		L005048	05/06/2023 04:53	NT1423050524.D	VTS	
23D0042-48	DI-215SB-24-24.9-23032	IM Alkyl PAH (Parents) D	A 01	24		L005048	05/06/2023 05:41	NT1423050525.D	VTS	
23D0042-49	DI-215SB-25-26-23032	IM Alkyl PAH (Parents) D	A 01	25		L005048	05/06/2023 06:29	NT1423050526.D	VTS	
23D0042-50	DI-215SB-26-27-23032	IM Alkyl PAH (Parents) D	A 01	26		L005048	05/06/2023 07:17	NT1423050527.D	VTS	
23D0042-51	DI-215SB-27-28-23032	IM Alkyl PAH (Parents) D	A 01	27		L005048	05/06/2023 08:05	NT1423050528.D	VTS	
SLE0096-ICV2	PAH 2.5	QC		28	K010905	L005048				

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230505.b

	Time	Filename	LabID	ClientId	DF				
1	1056	NT1423050501.D	SLE0096-TUN1		1	NO	ISTDS	FOUND	
2	1111	NT1423050502.D	SLE0096-CAL1		1	19.26	141653	22.73	169804
3	1159	NT1423050503.D	SLE0096-CAL2		1	19.26	140366	22.73	169930
4	1247	NT1423050504.D	SLE0096-CAL3		1	19.26	133377	22.73	162278
5	1336	NT1423050505.D	SLE0096-CAL4		1	19.26	137662	22.73	168263
6	1424	NT1423050506.D	SLE0096-CAL5		1	19.26	132486	22.73	161010
7	1512	NT1423050507.D	SLE0096-CAL6		1	19.26	126626	22.73	157579
8	1601	NT1423050508.D	SLE0096-SCV1		1	19.26	130753	22.73	158011
9	1649	NT1423050509.D	SLE0096-ICB1		1	19.26	125595	22.73	144183
10	1738	NT1423050510.D	BLD0142-BLK1		1	19.26	120628	22.73	142296
11	1826	NT1423050511.D	BLD0142-BS1		1	19.26	142795	22.73	147036
12	1914	NT1423050512.D	BLD0142-BSD1		1	19.26	141662	22.73	147143
13	2003	NT1423050513.D	23D0042-41		1	19.26	126271	22.74	167866
14	2051	NT1423050514.D	23D0042-42		1	19.26	150144	22.73	152650
15	2139	NT1423050515.D	SLE0096-ICV1		1	19.26	137405	22.73	167657
16	2227	NT1423050516.D	SLE0096-LCV1		1	19.26	124604	22.73	146049
17	2316	NT1423050517.D	BLD0142-BLK3		1	19.26	137672	22.73	137197
18	0004	NT1423050518.D	23D0042-43		1	19.26	134786	22.74	148990
19	0052	NT1423050519.D	23D0042-44		1	19.26	147959	22.77	177213
20	0140	NT1423050520.D	23D0042-45		1	19.26	156085	22.76	164981

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230505.b

Time	Filename	LabID	ClientID	DF							
21	0228	NT1423050521.D	23D0042-46		1	19.26	134244	22.76	180257	33.50	130488
22	0316	NT1423050522.D	23D0042-47		1	19.26	157153	22.73	164926	33.48	108870
23	0405	NT1423050523.D	BLD0142-MS1		1	19.26	151823	22.73	160995	33.49	104778
24	0453	NT1423050524.D	BLD0142-MSD1		1	19.26	125197	22.73	156288	33.49	98368
25	0541	NT1423050525.D	23D0042-48		1	19.26	149894	22.73	166553	33.49	112923
26	0629	NT1423050526.D	23D0042-49		1	19.26	130847	22.77	173399	33.49	116499
27	0717	NT1423050527.D	23D0042-50		1	19.26	131676	22.79	186038	33.49	115893
28	0805	NT1423050528.D	23D0042-51		1	19.26	129785	22.76	173000	33.49	113501

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230505.b

Instrument: nt14.i Date: 05-MAY-2023

Time	Filename	LabID	DF	Manually Integrated Compounds					
1056	NT1423050501.D	SLE0096-TUN1	1	NO MANUAL INTEGRATION					
1111	NT1423050502.D	SLE0096-CAL1	1	Carbazole,	Total Benzo	fluoranthenes,			
1159	NT1423050503.D	SLE0096-CAL2	1	Total Benzo					
1247	NT1423050504.D	SLE0096-CAL3	1	Total Benzo					
1336	NT1423050505.D	SLE0096-CAL4	1	Indeno(1,2,3-cd)pyrene,	Total Benzo	fluoranthenes,			
1424	NT1423050506.D	SLE0096-CAL5	1	Indeno(1,2,3-cd)pyrene,	Dibenzo(a,h)anthracene,	Benzo(g,h,i)perylene,	Total Benzo	fluoranthenes,	
1512	NT1423050507.D	SLE0096-CAL6	1	Indeno(1,2,3-cd)pyrene,	Dibenzo(a,h)anthracene,	Benzo(g,h,i)perylene,	Total Benzo	fluoranthenes,	
1601	NT1423050508.D	SLE0096-SCV1	1	Indeno(1,2,3-cd)pyrene,	Dibenzo(a,h)anthracene,	Total Benzo	fluoranthenes,		
1649	NT1423050509.D	SLE0096-ICB1	1	NO MANUAL INTEGRATION					
1738	NT1423050510.D	BLD0142-BLK1	1	Anthracene,	Benzo(a)anthracene,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	Benzo(g,h,
				Total Benzo					
1826	NT1423050511.D	BLD0142-BS1	1	Indeno(1,2,3-cd)pyrene,	Dibenzo(a,h)anthracene,	Total Benzo	fluoranthenes,		
1914	NT1423050512.D	BLD0142-BSD1	1	Total Benzo					
2003	NT1423050513.D	23D0042-41	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzo	fluoranthenes,	Perylene-d12,
2051	NT1423050514.D	23D0042-42	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	Total Benzo	fluoranthene
2139	NT1423050515.D	SLE0096-ICV1	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Total Benzo	fluoranthenes,		
2227	NT1423050516.D	SLE0096-LCV1	1	NO MANUAL INTEGRATION					
2316	NT1423050517.D	BLD0142-BLK3	1	Anthracene,	Benzo(a)anthracene,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	Total Benz

Instrument: nt14.i Date: 06-MAY-2023

Time	Filename	LabID	DF	Manually Integrated Compounds					
0004	NT1423050518.D	23D0042-43	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,	Chrysene-d12,	P
0052	NT1423050519.D	23D0042-44	1	Chrysene,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Dibenzo(a,h)anthracene,	2,6-Dimethylnaphthalene,	Total B
				Benzo(j)fluoranthene,					
0140	NT1423050520.D	23D0042-45	1	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,	Benzo(j)fluoranthene,	Perylene-d12,	
0228	NT1423050521.D	23D0042-46	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,		
0316	NT1423050522.D	23D0042-47	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthene	
0405	NT1423050523.D	BLD0142-MS1	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,		
0453	NT1423050524.D	BLD0142-MSD1	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Dibenzo(a,h)anthracene,	Total Benzofluoranthenes,		
0541	NT1423050525.D	23D0042-48	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,		
0629	NT1423050526.D	23D0042-49	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Dibenzo(a,h)anthracene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthene	
0717	NT1423050527.D	23D0042-50	1	Anthracene,	Chrysene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,	Benzo(j)fluoran
				Perylene-d12,					
0805	NT1423050528.D	23D0042-51	1	Acenaphthylene,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,	

Security Status Report

Date: 06-May-2023 11:42

NT1423050501.D	Data Locked	van, 06-May-2023 11:42
NT1423050502.D	Data Locked	van, 06-May-2023 11:42
NT1423050503.D	Data Locked	van, 06-May-2023 11:42
NT1423050504.D	Data Locked	van, 06-May-2023 11:42
NT1423050505.D	Data Locked	van, 06-May-2023 11:42
NT1423050506.D	Data Locked	van, 06-May-2023 11:42
NT1423050507.D	Data Locked	van, 06-May-2023 11:42
NT1423050508.D	Data Locked	van, 06-May-2023 11:42
NT1423050509.D	Data Locked	van, 06-May-2023 11:42
NT1423050510.D	Data Locked	van, 06-May-2023 11:42
NT1423050511.D	Data Locked	van, 06-May-2023 11:42
NT1423050512.D	Data Locked	van, 06-May-2023 11:42
NT1423050513.D	Data Locked	van, 06-May-2023 11:42
NT1423050514.D	Data Locked	van, 06-May-2023 11:42
NT1423050515.D	Data Locked	van, 06-May-2023 11:42
NT1423050516.D	Data Locked	van, 06-May-2023 11:42
NT1423050517.D	Data Locked	van, 06-May-2023 11:42
NT1423050518.D	Data Locked	van, 06-May-2023 11:42
NT1423050519.D	Data Locked	van, 06-May-2023 11:42
NT1423050520.D	Data Locked	van, 06-May-2023 11:42
NT1423050521.D	Data Locked	van, 06-May-2023 11:42
NT1423050522.D	Data Locked	van, 06-May-2023 11:42
NT1423050523.D	Data Locked	van, 06-May-2023 11:42
NT1423050524.D	Data Locked	van, 06-May-2023 11:42
NT1423050525.D	Data Locked	van, 06-May-2023 11:42
NT1423050526.D	Data Locked	van, 06-May-2023 11:42
NT1423050527.D	Data Locked	van, 06-May-2023 11:42
NT1423050528.D	Data Locked	van, 06-May-2023 11:42



ANALYSIS SEQUENCE

SLE0096

Printed: 5/9/2023 2:44:35PM

Instrument ID: NT14

GCMS Description: Agilent 7890A/5975C XL

Calibration ID: GE00024

GCMS Column ID: L004289

MS EM Level: 1800 EV

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLE0096-TUN1	MS Tune	QC		1	L005045		05/05/2023 10:56	NT1423050501.D	VTS	
SLE0096-CAL1	PAH 0.1	QC		2	K010902	L005048	05/05/2023 11:11	NT1423050502.D	VTS	
SLE0096-CAL2	PAH 0.5	QC		3	K010903	L005048	05/05/2023 11:59	NT1423050503.D	VTS	
SLE0096-CAL3	PAH 1.0	QC		4	K010904	L005048	05/05/2023 12:47	NT1423050504.D	VTS	
SLE0096-CAL4	PAH 2.5	QC		5	K010905	L005048	05/05/2023 13:36	NT1423050505.D	VTS	
SLE0096-CAL5	PAH 5.0	QC		6	K010906	L005048	05/05/2023 14:24	NT1423050506.D	VTS	
SLE0096-CAL6	PAH 10.0	QC		7	K010907	L005048	05/05/2023 15:12	NT1423050507.D	VTS	
SLE0096-SCV1	Secondary Cal Check	QC		8	L004239	L005048	05/05/2023 16:01	NT1423050508.D	VTS	
SLE0096-ICB1	Initial Cal Blank	QC		9	L004240	L005048	05/05/2023 16:49	NT1423050509.D	VTS	
BLD0142-BLK1	Blank	QC		10		L005048	05/05/2023 17:38	NT1423050510.D	VTS	
BLD0142-BS1	LCS	QC		11		L005048	05/05/2023 18:26	NT1423050511.D	VTS	
BLD0142-BSD1	LCS Dup	QC		12		L005048	05/05/2023 19:14	NT1423050512.D	VTS	
23D0042-41	DI-203SB-26-27-23033	IM Alkyl PAH (Parents) D	A 01	13		L005048	05/05/2023 20:03	NT1423050513.D	VTS	
23D0042-42	DI-203SB-33-34.1-23033	IM Alkyl PAH (Parents) D	A 01	14		L005048	05/05/2023 20:51	NT1423050514.D	VTS	
SLE0096-ICV1	PAH 2.5	QC		15	K010905	L005048	05/05/2023 21:39	NT1423050515.D	VTS	
BLD0142-BLK3	Blank	QC		16		L005048	05/05/2023 23:16	NT1423050517.D	VTS	
23D0042-43	DI-1211SC-13-14-23033	IM Alkyl PAH (Parents) D	A 01	17		L005048	05/06/2023 00:04	NT1423050518.D	VTS	
23D0042-44	DI-211SC-12-13-23033	IM Alkyl PAH (Parents) D	A 01	18		L005048	05/06/2023 00:52	NT1423050519.D	VTS	
23D0042-45	DI-211SC-13-14-23033	IM Alkyl PAH (Parents) D	A 01	19		L005048	05/06/2023 01:40	NT1423050520.D	VTS	
23D0042-46	DI-211SC-14-14.9-23033	IM Alkyl PAH (Parents) D	A 01	20		L005048	05/06/2023 02:28	NT1423050521.D	VTS	
23D0042-47	DI-211SC-15-16-23033	IM Alkyl PAH (Parents) D	A 01	21		L005048	05/06/2023 03:16	NT1423050522.D	VTS	
BLD0142-MS1	Matrix Spike	QC		22		L005048	05/06/2023 04:05	NT1423050523.D	VTS	



ANALYSIS SEQUENCE

SLE0096

Printed: 5/9/2023 2:44:35PM

Instrument ID: NT14

GCMS Description: Agilent 7890A/5975C XL

Calibration ID: GE00024

GCMS Column ID: L004289

MS EM Level: 1800 EV

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
BLD0142-MSD1	Matrix Spike Dup	QC		23		L005048	05/06/2023 04:53	NT1423050524.D	VTs	
23D0042-48	DI-215SB-24-24.9-23032	IM Alkyl PAH (Parents) D	A 01	24		L005048	05/06/2023 05:41	NT1423050525.D	VTs	
23D0042-49	DI-215SB-25-26-23032	IM Alkyl PAH (Parents) D	A 01	25		L005048	05/06/2023 06:29	NT1423050526.D	VTs	
23D0042-50	DI-215SB-26-27-23032	IM Alkyl PAH (Parents) D	A 01	26		L005048	05/06/2023 07:17	NT1423050527.D	VTs	
23D0042-51	DI-215SB-27-28-23032	IM Alkyl PAH (Parents) D	A 01	27		L005048	05/06/2023 08:05	NT1423050528.D	VTs	
SLE0096-ICV2	PAH 2.5	QC		28	K010905	L005048	05/06/2023 08:53	NT1423050529.D	VTs	
SLE0096-IBL1	Instrument Blank	QC		29	K010911	L005048	05/06/2023 10:35	NT1423050531.D	VTs	
23D0042-41RE1	DI-203SB-26-27-23033	IM Alkyl PAH (Parents) D	A 01	30		L005048	05/06/2023 11:23	NT1423050532.D	VTs	Added 5/6/2023 by VTs
23D0042-43RE1	DI-1211SC-13-14-23033	IM Alkyl PAH (Parents) D	A 01	31		L005048	05/06/2023 12:23	NT1423050533.D	VTs	Added 5/6/2023 by VTs
23D0042-44RE1	DI-211SC-12-13-23033	IM Alkyl PAH (Parents) D	A 01	32		L005048	05/06/2023 13:12	NT1423050534.D	VTs	Added 5/6/2023 by VTs
23D0042-45RE1	DI-211SC-13-14-23033	IM Alkyl PAH (Parents) D	A 01	33		L005048	05/06/2023 14:00	NT1423050535.D	VTs	Added 5/6/2023 by VTs
23D0042-46RE1	DI-211SC-14-14.9-23033	IM Alkyl PAH (Parents) D	A 01	34		L005048	05/06/2023 14:49	NT1423050536.D	VTs	Added 5/6/2023 by VTs
23D0042-47RE1	DI-211SC-15-16-23033	IM Alkyl PAH (Parents) D	A 01	35		L005048	05/06/2023 15:38	NT1423050537.D	VTs	Added 5/6/2023 by VTs
23D0042-48RE1	DI-215SB-24-24.9-23032	IM Alkyl PAH (Parents) D	A 01	36		L005048	05/06/2023 16:26	NT1423050538.D	VTs	Added 5/6/2023 by VTs
23D0042-49RE1	DI-215SB-25-26-23032	IM Alkyl PAH (Parents) D	A 01	37		L005048	05/06/2023 17:15	NT1423050539.D	VTs	Added 5/6/2023 by VTs
23D0042-50RE1	DI-215SB-26-27-23032	IM Alkyl PAH (Parents) D	A 01	38		L005048	05/06/2023 18:03	NT1423050540.D	VTs	Added 5/6/2023 by VTs
23D0042-51RE1	DI-215SB-27-28-23032	IM Alkyl PAH (Parents) D	A 01	39		L005048	05/06/2023 18:51	NT1423050541.D	VTs	Added 5/6/2023 by VTs
SLE0096-ICV3	Initial Cal Check	QC		40	K010905	L005048	05/06/2023 19:40	NT1423050542.D	VTs	
BLD0411-BLK1	Blank	QC		41		L005048	05/06/2023 21:16	NT1423050544.D	VTs	
BLD0411-BS1	LCS	QC		42		L005048	05/06/2023 22:04	NT1423050545.D	VTs	
BLD0411-BSD1	LCS Dup	QC		43		L005048	05/06/2023 22:52	NT1423050546.D	VTs	
23D0247-02	DI-221RAB-13-14-23040	IM Alkyl PAH (Parents) D	A 01	44		L005048	05/06/2023 23:40	NT1423050547.D	VTs	



ANALYSIS SEQUENCE

SLE0096

Printed: 5/9/2023 2:44:35PM

Instrument ID: NT14

GCMS Description: Agilent 7890A/5975C XL

Calibration ID: GE00024

GCMS Column ID: L004289

MS EM Level: 1800 EV

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
23D0247-03	DI-221RAB-15-16-23040	IM Alkyl PAH (Parents) D	A 01	45		L005048	05/07/2023 00:28	NT1423050548.D	VTs	
23D0247-04	DI-221RAB-16-17-23040	IM Alkyl PAH (Parents) D	A 01	46		L005048	05/07/2023 01:16	NT1423050549.D	VTs	
BLD0411-MS1	Matrix Spike	QC		47		L005048	05/07/2023 02:04	NT1423050550.D	VTs	
BLD0411-MSD1	Matrix Spike Dup	QC		48		L005048	05/07/2023 02:52	NT1423050551.D	VTs	
23D0247-05	DI-221RAB-17-18-23040	IM Alkyl PAH (Parents) D	A 01	49		L005048	05/07/2023 03:40	NT1423050552.D	VTs	
23D0247-07	DI-222RAB-25-26-23040	IM Alkyl PAH (Parents) D	A 01	50		L005048	05/07/2023 05:17	NT1423050554.D	VTs	
23D0247-08	DI-222RAB-26-27-23040	IM Alkyl PAH (Parents) D	A 01	51		L005048	05/07/2023 06:05	NT1423050555.D	VTs	
SLE0096-ICV4	Initial Cal Check	QC		52	K010905	L005048	05/07/2023 06:53	NT1423050556.D	VTs	
SLE0096-IBL2	Instrument Blank	QC		53	K010911	L005048	05/07/2023 08:29	NT1423050558.D	VTs	
23D0247-09	DI-222RAB-27-28-23040	IM Alkyl PAH (Parents) D	A 01	54		L005048	05/07/2023 09:17	NT1423050559.D	VTs	
23D0247-10	DI-1223RAB-24-25-23040	IM Alkyl PAH (Parents) D	A 01	55		L005048	05/07/2023 10:05	NT1423050560.D	VTs	
23D0247-11	DI-223RAB-21-22-23040	IM Alkyl PAH (Parents) D	A 01	56		L005048	05/07/2023 10:53	NT1423050561.D	VTs	
23D0247-12	DI-223RAB-22-23-23040	IM Alkyl PAH (Parents) D	A 01	57		L005048	05/07/2023 11:42	NT1423050562.D	VTs	
23D0247-13	DI-223RAB-23-24-23040	IM Alkyl PAH (Parents) D	A 01	58		L005048	05/07/2023 12:30	NT1423050563.D	VTs	
23D0247-14	DI-223RAB-24-25-23040	IM Alkyl PAH (Parents) D	A 01	59		L005048	05/07/2023 13:19	NT1423050564.D	VTs	
SLE0096-CCV1	PAH 2.5	QC		60	K010905	L005048	05/07/2023 14:07	NT1423050565.D	VTs	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230505.b

	Time	Filename	LabID	ClientId	DF				
1	1056	NT1423050501.D	SLE0096-TUN1		1	NO	ISTDS	FOUND	
2	1111	NT1423050502.D	SLE0096-CAL1		1	19.26	141653	22.73	169804
3	1159	NT1423050503.D	SLE0096-CAL2		1	19.26	140366	22.73	169930
4	1247	NT1423050504.D	SLE0096-CAL3		1	19.26	133377	22.73	162278
5	1336	NT1423050505.D	SLE0096-CAL4		1	19.26	137662	22.73	168263
6	1424	NT1423050506.D	SLE0096-CAL5		1	19.26	132486	22.73	161010
7	1512	NT1423050507.D	SLE0096-CAL6		1	19.26	126626	22.73	157579
8	1601	NT1423050508.D	SLE0096-SCV1		1	19.26	130753	22.73	158011
9	1649	NT1423050509.D	SLE0096-ICB1		1	19.26	125595	22.73	144183
10	1738	NT1423050510.D	BLD0142-BLK1		1	19.26	120628	22.73	142296
11	1826	NT1423050511.D	BLD0142-BS1		1	19.26	142795	22.73	147036
12	1914	NT1423050512.D	BLD0142-BSD1		1	19.26	141662	22.73	147143
13	2003	NT1423050513.D	23D0042-41		1	19.26	126271	22.74	167866
14	2051	NT1423050514.D	23D0042-42		1	19.26	150144	22.73	152650
15	2139	NT1423050515.D	SLE0096-ICV1		1	19.26	137405	22.73	167657
16	2227	NT1423050516.D	SLE0096-LCV1		1	19.26	124604	22.73	146049
17	2316	NT1423050517.D	BLD0142-BLK3		1	19.26	137672	22.73	137197
18	0004	NT1423050518.D	23D0042-43		1	19.26	134786	22.74	148990
19	0052	NT1423050519.D	23D0042-44		1	19.26	147959	22.77	177213
20	0140	NT1423050520.D	23D0042-45		1	19.26	156085	22.76	164981

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230505.b

	Time	Filename	LabID	ClientID	DF					
21	0228	NT1423050521.D	23D0042-46		1	19.26	134244	22.76	180257	33.50 130488
22	0316	NT1423050522.D	23D0042-47		1	19.26	157153	22.73	164926	33.48 108870
23	0405	NT1423050523.D	BLD0142-MS1		1	19.26	151823	22.73	160995	33.49 104778
24	0453	NT1423050524.D	BLD0142-MSD1		1	19.26	125197	22.73	156288	33.49 98368
25	0541	NT1423050525.D	23D0042-48		1	19.26	149894	22.73	166553	33.49 112923
26	0629	NT1423050526.D	23D0042-49		1	19.26	130847	22.77	173399	33.49 116499
27	0717	NT1423050527.D	23D0042-50		1	19.26	131676	22.79	186038	33.49 115893
28	0805	NT1423050528.D	23D0042-51		1	19.26	129785	22.76	173000	33.49 113501
29	0853	NT1423050529.D	SLE0096-ICV2		1	19.26	134222	22.73	164076	33.48 101248
30	0941	NT1423050530.D	K010804		1	19.31	712105	23.06	610780	33.57 612770
31	1035	NT1423050531.D	SLE0096-IBL1		1	19.26	132909	22.73	164140	33.48 104928
32	1123	NT1423050532.D	23D0042-41RE1		10	19.26	125115	22.73	160634	33.48 113222
33	1223	NT1423050533.D	23D0042-43RE1		20	19.26	123099	22.73	154433	33.48 101059
34	1312	NT1423050534.D	23D0042-44RE1		40	19.26	125623	22.73	159284	33.48 102365
35	1400	NT1423050535.D	23D0042-45RE1		20	19.26	121917	22.73	155307	33.48 101951
36	1449	NT1423050536.D	23D0042-46RE1		20	19.26	122168	22.73	156687	33.48 100500
37	1538	NT1423050537.D	23D0042-47RE1		3	19.26	146283	22.73	157239	33.48 102752
38	1626	NT1423050538.D	23D0042-48RE1		10	19.26	127416	22.73	160278	33.48 98443
39	1715	NT1423050539.D	23D0042-49RE1		20	19.26	141328	22.73	149201	33.48 86734
40	1803	NT1423050540.D	23D0042-50RE1		20	19.26	141916	22.73	151639	33.48 88434
41	1851	NT1423050541.D	23D0042-51RE1		10	19.26	115426	22.73	146342	33.48 87332

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230505.b

	Time	Filename	LabID	ClientId	DF						
42	1940	NT1423050542.D	SLE0096-ICV3		1	19.26	115460	22.73	141885	33.48	79251
43	2028	NT1423050543.D	SLE0096-LCV1		1	19.26	107315	22.73	129398	33.48	68488
44	2116	NT1423050544.D	BLD0411-BLK1		1	19.26	100805	22.73	122674	33.48	71292
45	2204	NT1423050545.D	BLD0411-BS1		1	19.26	102424	22.73	125693	33.48	75798
46	2252	NT1423050546.D	BLD0411-BSD1		1	19.26	123512	22.73	129473	33.48	81135
47	2340	NT1423050547.D	23D0247-02		5	19.28	113102	22.80	134502	33.50	108403
48	0028	NT1423050548.D	23D0247-03		1	19.26	112472	22.74	149524	33.49	95421
49	0116	NT1423050549.D	23D0247-04		1	19.26	111950	22.74	148367	33.49	103548
50	0204	NT1423050550.D	BLD0411-MS1		1	19.26	114580	22.74	152139	33.49	107008
51	0252	NT1423050551.D	BLD0411-MSD1		1	19.26	116099	22.75	155963	33.49	103152
52	0340	NT1423050552.D	23D0247-05		1	19.26	116466	22.73	147781	33.49	98979
53	0428	NT1423050553.D	23D0247-06		5	19.30	124546	23.01	26777	33.45	10530
54	0517	NT1423050554.D	23D0247-07		1	19.26	117512	22.79	124380	33.49	102077
55	0605	NT1423050555.D	23D0427-08		1	19.26	118727	22.81	100060	33.50	100556
56	0653	NT1423050556.D	SLE0096-ICV4		1	19.26	120638	22.73	151475	33.48	94755
57	0741	NT1423050557.D	SLE0096-LCV2		1	19.26	110116	22.73	132498	33.48	81053
58	0829	NT1423050558.D	SLE0096-IBL2		1	19.26	128685	22.73	152043	33.48	90884
59	0917	NT1423050559.D	23D0247-09		1	19.26	122514	22.73	131760	33.48	84412
60	1005	NT1423050560.D	23D0247-10		1	19.26	103581	22.73	128380	33.48	78895
61	1053	NT1423050561.D	23D0247-11		5	19.26	107387	22.80	127839	33.50	89859
62	1142	NT1423050562.D	23D0247-12		1	19.26	103534	22.73	134612	33.49	85035

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230505.b

Time	Filename	LabID	ClientId	DF					
63	1230	NT1423050563.D	23D0247-13		1	19.26	105282 22.74	135609 33.49	88698
64	1319	NT1423050564.D	23D0247-14		1	19.26	100672 22.73	125564 33.48	76408
65	1407	NT1423050565.D	SLE0096-CCV1		1	19.26	107923 22.73	133154 33.49	78909

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230505.b

Instrument: nt14.i Date: 05-MAY-2023

Time	Filename	LabID	DF	Manually Integrated Compounds					
1056	NT1423050501.D	SLE0096-TUN1	1	NO MANUAL INTEGRATION					
1111	NT1423050502.D	SLE0096-CAL1	1	Carbazole,	Total Benzo	fluoranthenes,			
1159	NT1423050503.D	SLE0096-CAL2	1	Total Benzo					
1247	NT1423050504.D	SLE0096-CAL3	1	Total Benzo					
1336	NT1423050505.D	SLE0096-CAL4	1	Indeno(1,2,3-cd)pyrene,	Total Benzo	fluoranthenes,			
1424	NT1423050506.D	SLE0096-CAL5	1	Indeno(1,2,3-cd)pyrene,	Dibenzo(a,h)anthracene,	Benzo(g,h,i)perylene,	Total Benzo	fluoranthenes,	
1512	NT1423050507.D	SLE0096-CAL6	1	Indeno(1,2,3-cd)pyrene,	Dibenzo(a,h)anthracene,	Benzo(g,h,i)perylene,	Total Benzo	fluoranthenes,	
1601	NT1423050508.D	SLE0096-SCV1	1	Indeno(1,2,3-cd)pyrene,	Dibenzo(a,h)anthracene,	Total Benzo	fluoranthenes,		
1649	NT1423050509.D	SLE0096-ICB1	1	NO MANUAL INTEGRATION					
1738	NT1423050510.D	BLD0142-BLK1	1	Anthracene,	Benzo(a)anthracene,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	Benzo(g,h,
				Total Benzo					
1826	NT1423050511.D	BLD0142-BS1	1	Indeno(1,2,3-cd)pyrene,	Dibenzo(a,h)anthracene,	Total Benzo	fluoranthenes,		
1914	NT1423050512.D	BLD0142-BSD1	1	Total Benzo					
2003	NT1423050513.D	23D0042-41	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzo	fluoranthenes,	Perylene-d12,
2051	NT1423050514.D	23D0042-42	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	Total Benzo	fluoranthene
2139	NT1423050515.D	SLE0096-ICV1	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Total Benzo	fluoranthenes,		
2227	NT1423050516.D	SLE0096-LCV1	1	NO MANUAL INTEGRATION					
2316	NT1423050517.D	BLD0142-BLK3	1	Anthracene,	Benzo(a)anthracene,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	Total Benz

Instrument: nt14.i Date: 06-MAY-2023

Time	Filename	LabID	DF	Manually Integrated Compounds					
0004	NT1423050518.D	23D0042-43	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,	Chrysene-d12,	P
0052	NT1423050519.D	23D0042-44	1	Chrysene,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Dibenzo(a,h)anthracene,	2,6-Dimethylnaphthalene,	Total B
				Benzo(j)fluoranthene,					
0140	NT1423050520.D	23D0042-45	1	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,	Benzo(j)fluoranthene,	Perylene-d12,	
0228	NT1423050521.D	23D0042-46	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,		
0316	NT1423050522.D	23D0042-47	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthene	
0405	NT1423050523.D	BLD0142-MS1	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,		
0453	NT1423050524.D	BLD0142-MSD1	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Dibenzo(a,h)anthracene,	Total Benzofluoranthenes,		
0541	NT1423050525.D	23D0042-48	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,		
0629	NT1423050526.D	23D0042-49	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Dibenzo(a,h)anthracene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthene	
0717	NT1423050527.D	23D0042-50	1	Anthracene,	Chrysene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,	Benzo(j)fluoran
				Perylene-d12,					
0805	NT1423050528.D	23D0042-51	1	Acenaphthylene,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,	
0853	NT1423050529.D	SLE0096-ICV2	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	Total Benzofluoranthenes,		
0941	NT1423050530.D	K010804	1	NO MANUAL INTEGRATION					
1035	NT1423050531.D	SLE0096-IBL1	1	Anthracene,	Benzo(a)anthracene,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Perylene,	Total Benzofluoranthenes
1123	NT1423050532.D	23D0042-41RE1	10	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthene	
				Perylene-d12,					
1223	NT1423050533.D	23D0042-43RE1	20	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	1-Methylphenanthrene,	Total Benzofluoranthenes,	Acenaphthene-d10,	
				Chrysene-d12,	Perylene-d12,				
1312	NT1423050534.D	23D0042-44RE1	40	Dibenzofuran,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	Total
				Benzo(j)fluoranthene,	Phenanthrene-d10,	Perylene-d12,			
1400	NT1423050535.D	23D0042-45RE1	20	Dibenzofuran,	Carbazole,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	1-Methylphenanthr
				Total Benzofluoranthenes,	Naphthalene-d8,	Acenaphthene-d10,	Phenanthrene-d10,	Chrysene-d12,	Perylene-d

Instrument: nt14.i Date: 06-MAY-2023

Time	Filename	LabID	DF	Manually Integrated Compounds					
1449	NT1423050536.D	23D0042-46RE1	20	Benzo(b)fluoranthene, Benzo(j)fluoranthene,	Benzo(k)fluoranthene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	Benzo(b)thiophene,	
1538	NT1423050537.D	23D0042-47RE1	3	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	
1626	NT1423050538.D	23D0042-48RE1	10	Dibenzofuran, Acenaphthene-d10,	Benzo(b)fluoranthene, Phenanthrene-d10,	Benzo(k)fluoranthene, Perylene-d12,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	Total
1715	NT1423050539.D	23D0042-49RE1	20	Acenaphthylene, Acenaphthene-d10,	Benzo(b)fluoranthene, Phenanthrene-d10,	Benzo(k)fluoranthene, Chrysene-d12,	1-Methylphenanthrene, Perylene-d12,	2,6-Dimethylnaphthalene,	Tot
1803	NT1423050540.D	23D0042-50RE1	20	Acenaphthylene, Benzo(j)fluoranthene,	Benzo(b)fluoranthene, Acenaphthene-d10,	Benzo(k)fluoranthene, Phenanthrene-d10,	1-Methylphenanthrene, Chrysene-d12,	2,6-Dimethylnaphthalene, Perylene-d12,	Tot
1851	NT1423050541.D	23D0042-51RE1	10	Acenaphthylene, Benzo(j)fluoranthene,	Benzo(b)fluoranthene, Acenaphthene-d10,	Benzo(k)fluoranthene, Phenanthrene-d10,	1-Methylphenanthrene, Perylene-d12,	2,6-Dimethylnaphthalene,	Tot
1940	NT1423050542.D	SLE0096-ICV3	1	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	Benzo(g,h,i)perylene,	Total Benzoofluoranthenes,	Benzo(j)fluoranthene	
2028	NT1423050543.D	SLE0096-LCV1	1	NO MANUAL INTEGRATION					
2116	NT1423050544.D	BLD0411-BLK1	1	Anthracene,	2,6-Dimethylnaphthalene,				
2204	NT1423050545.D	BLD0411-BS1	1	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	Dibenzo(a,h)anthracene,	Benzo(g,h,i)perylene,	Total Benzoofluoranthene	
2252	NT1423050546.D	BLD0411-BSD1	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	Total Benzoofluoranthenes,	Benzo(j)fluoranthene	
2340	NT1423050547.D	23D0247-02	5	Anthracene, Phenanthrene-d10,	Benzo(b)fluoranthene, Perylene-d12,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzoofluoranthenes,	Ace
0028	NT1423050548.D	23D0247-03	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzoofluoranthenes,		
0116	NT1423050549.D	23D0247-04	1	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	Total Benzoofluoranthene	
0204	NT1423050550.D	BLD0411-MS1	1	Benzo(k)fluoranthene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	Total Benzoofluoranthenes,	Benzo(j)fluoranthene	
0252	NT1423050551.D	BLD0411-MSD1	1	Benzo(k)fluoranthene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	Total Benzoofluoranthenes,	Benzo(j)fluoranthene	
0340	NT1423050552.D	23D0247-05	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	Dibenzo(a,h)anthracene,	2,6-Dimethylnaphthalene	
0428	NT1423050553.D	23D0247-06	5	Naphthalene,	Acenaphthene,	Phenanthrene,	Anthracene,	Pyrene,	Dibenzothiophene,

2,6-Dimethylnaphthalene,

Fluorene-d10,

Anthracene-d10,

Acenaphthene-d10,

Instrument: nt14.i Date: 07-MAY-2023

Time	Filename	LabID	DF	Manually Integrated Compounds					
0517	NT1423050554.D	23D0247-07	1	Anthracene,	Benzo(k)fluoranthene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,	Ben
0605	NT1423050555.D	23D0427-08	1	Phenanthrene,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthenes,	
0653	NT1423050556.D	SLE0096-ICV4	1	Dibenzo(a,h)anthracene,	Total Benzofluoranthenes,	Benzo(j)fluoranthene,			
0741	NT1423050557.D	SLE0096-LCV2	1	NO MANUAL INTEGRATION					
0829	NT1423050558.D	SLE0096-IBL2	1	NO MANUAL INTEGRATION					
0917	NT1423050559.D	23D0247-09	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	
				Benzo(j)fluoranthene,					
1005	NT1423050560.D	23D0247-10	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	Total Benzofluoranthene	
1053	NT1423050561.D	23D0247-11	5	Anthracene,	Chrysene,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalen
				Total Benzofluoranthenes,	Phenanthrene-d10,	Chrysene-d12,	Perylene-d12,		
1142	NT1423050562.D	23D0247-12	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	Dibenzo(a,h)anthracene,	1-Methylphenanthrene,	
				Total Benzofluoranthenes,	Perylene-d12,				
1230	NT1423050563.D	23D0247-13	1	Chrysene,	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	2,6-Dimethylnaphthalene,	Total B
1319	NT1423050564.D	23D0247-14	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Dibenzo(a,h)anthracene,	1-Methylphenanthrene,	2,6-Dimethylnaphthalene,	
1407	NT1423050565.D	SLE0096-CCV1	1	Benzo(b)fluoranthene,	Benzo(k)fluoranthene,	Indeno(1,2,3-cd)pyrene,	Dibenzo(a,h)anthracene,	Total Benzofluoranthene	

Security Status Report

Date: 06-May-2023 11:42

NT1423050501.D	Data Locked	van, 06-May-2023 11:42
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NT1423050525.D	Data Locked	van, 06-May-2023 11:42
NT1423050526.D	Data Locked	van, 06-May-2023 11:42
NT1423050527.D	Data Locked	van, 06-May-2023 11:42
NT1423050528.D	Data Locked	van, 06-May-2023 11:42



ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Sequence: SLE0443

Instrument: NT14

Calibration: GE00024

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
DFTPP	SLE0443-TUN1	NT1405272303.D	NA	05/27/23 12:15
PAH 2.5	SLE0443-ICV1	NT1405272305.D	NA	05/27/23 13:31
PAH 0.1	SLE0443-LCV1	NT1405272306.D	NA	05/27/23 14:19
ZZZZZ	BLE0618-BLK1	NT1405272307.D	Solid	05/27/23 15:07
ZZZZZ	BLE0618-BS1	NT1405272308.D	Solid	05/27/23 15:55
ZZZZZ	BLE0618-BSD1	NT1405272309.D	Solid	05/27/23 16:44
ZZZZZ	23D0042-38RE1	NT1405272310.D	Solid	05/27/23 17:32
ZZZZZ	23D0456-02	NT1405272311.D	Solid	05/27/23 18:20
ZZZZZ	23D0456-03	NT1405272312.D	Solid	05/27/23 19:09
ZZZZZ	BLD0610-BLK1	NT1405272313.D	Solid	05/27/23 19:57
ZZZZZ	BLD0610-BS1	NT1405272314.D	Solid	05/27/23 20:45
ZZZZZ	BLD0610-BSD1	NT1405272315.D	Solid	05/27/23 21:33
ZZZZZ	23D0456-01	NT1405272316.D	Solid	05/27/23 22:21
ZZZZZ	23D0456-04	NT1405272317.D	Solid	05/27/23 23:09
PAH 2.5	SLE0443-ICV2	NT1405272318.D	NA	05/27/23 23:57
PAH 0.1	SLE0443-LCV2	NT1405272319.D	NA	05/28/23 00:45
Blank	BLD0616-BLK1	NT1405272320.D	Oil	05/28/23 01:33
LCS	BLD0616-BS1	NT1405272321.D	Oil	05/28/23 02:21
MW2112-041723	23D0457-01	NT1405272322.D	Oil	05/28/23 03:09
PAH 2.5	SLE0443-CCV1	NT1405272323.D	NA	05/28/23 03:57



ANALYSIS SEQUENCE

SLE0443

Printed: 5/30/2023 12:10:47PM

Instrument ID: NT14

GCMS Description: Agilent 7890A/5975C XL

Calibration ID: GE00024

GCMS Column ID: L004744

MS EM Level: 1847 EV

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLE0443-TUN1	DFTTP	QC		1	L005045		05/27/2023 12:15	NT1405272303.D	VTS	
SLE0443-ICV1	PAH 2.5	QC		2	K010905	L005048	05/27/2023 13:31	NT1405272305.D	VTS	
SLE0443-LCV1	PAH 0.1	QC		3	K010902	L005048	05/27/2023 14:19	NT1405272306.D	VTS	
BLE0618-BLK1	Blank	QC		4		L005048	05/27/2023 15:07	NT1405272307.D	VTS	
BLE0618-BS1	LCS	QC		5		L005048	05/27/2023 15:55	NT1405272308.D	VTS	
BLE0618-BSD1	LCS Dup	QC		6		L005048	05/27/2023 16:44	NT1405272309.D	VTS	
23D0042-38RE1	DI-201SB-36-37-23032	IM Alkyl PAH (Parents) D	A 01	7		L005048	05/27/2023 17:32	NT1405272310.D	VTS	From BLD0136 by CTO on 22-May-2023
23D0456-02	DI-216RAB-26-27-2304	IM Alkyl PAH (Parents) D	A 01	8		L005048	05/27/2023 18:20	NT1405272311.D	VTS	
23D0456-03	DI-216RAB-27-28-2304	IM Alkyl PAH (Parents) D	A 01	9		L005048	05/27/2023 19:09	NT1405272312.D	VTS	
BLD0610-BLK1	Blank	QC		10		L005048	05/27/2023 19:57	NT1405272313.D	VTS	
BLD0610-BS1	LCS	QC		11		L005048	05/27/2023 20:45	NT1405272314.D	VTS	
BLD0610-BSD1	LCS Dup	QC		12		L005048	05/27/2023 21:33	NT1405272315.D	VTS	
23D0456-01	DI-216RAB-25-26-2304	IM Alkyl PAH (Parents) D	A 01	13		L005048	05/27/2023 22:21	NT1405272316.D	VTS	
23D0456-04	DI-216RAB-28-29-2304	IM Alkyl PAH (Parents) D	A 01	14		L005048	05/27/2023 23:09	NT1405272317.D	VTS	
SLE0443-ICV2	PAH 2.5	QC		15	K010905	L005048	05/27/2023 23:57	NT1405272318.D	VTS	
SLE0443-LCV2	PAH 0.1	QC		16	K010902	L005048	05/28/2023 00:45	NT1405272319.D	VTS	
BLD0616-BLK1	Blank	QC		17		L005048	05/28/2023 01:33	NT1405272320.D	VTS	
BLD0616-BS1	LCS	QC		18		L005048	05/28/2023 02:21	NT1405272321.D	VTS	
23D0457-01	MW2112-041723	IM Alkyl PAH (Parents) D	A 01	19		L005048	05/28/2023 03:09	NT1405272322.D	VTS	
SLE0443-CCV1	PAH 2.5	QC		20	K010905	L005048	05/28/2023 03:57	NT1405272323.D	VTS	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230527.b

Time	Filename	LabID	ClientId	DF					
1	1215	NT1405272303.D	SLE0443-TUN1	1	NO ISTDS FOUND				
2	1331	NT1405272305.D	SLE0443-ICV1	1	18.95	136933	22.41	167500	33.19 94374
3	1419	NT1405272306.D	SLE0443-LCV1	1	18.95	148342	22.41	175135	33.19 91801
4	1507	NT1405272307.D	BLE0618-BLK1	1	18.95	116986	22.40	141365	33.19 81312
5	1555	NT1405272308.D	BLE0618-BS1	1	18.95	121568	22.41	144655	33.19 84747
6	1644	NT1405272309.D	BLE0618-BSD1	1	18.95	121353	22.41	147608	33.19 87960
7	1732	NT1405272310.D	23D0042-38RE1	1	18.95	123509	22.41	152093	33.19 94314
8	1820	NT1405272311.D	23D0456-02	1	18.96	125282	22.42	151376	33.20 100639
9	1909	NT1405272312.D	23D0456-03	1	18.95	124590	22.41	156458	33.19 91833
10	1957	NT1405272313.D	BLD0610-BLK1	1	18.95	122339	22.41	145567	33.19 84603
11	2045	NT1405272314.D	BLD0610-BS1	1	18.95	119709	22.41	146424	33.19 87825
12	2133	NT1405272315.D	BLD0610-BSD1	1	18.95	121897	22.41	144955	33.19 89436
13	2221	NT1405272316.D	23D0456-01	1	18.96	123561	22.48	147010	33.21 96130
14	2309	NT1405272317.D	23D0456-04	1	18.96	115295	22.41	140643	33.20 83475
15	2357	NT1405272318.D	SLE0443-ICV2	1	18.95	128777	22.41	160624	33.20 98691
16	0045	NT1405272319.D	SLE0443-LCV2	1	18.95	136249	22.41	166926	33.20 92492
17	0133	NT1405272320.D	BLD0616-BLK1	1	18.95	118542	22.41	133668	33.20 79806
18	0221	NT1405272321.D	BLD0616-BS1	1	18.95	112279	22.41	131305	33.20 83889
19	0309	NT1405272322.D	23D0457-01	1	18.96	108523	22.41	135817	33.20 80570
20	0357	NT1405272323.D	SLE0443-CCV1	1	18.95	134206	22.41	165580	33.20 94138

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230527.b

ARI Job No.: SLE0 Method: DFTPP8270E.m Instrument: nt14.i Date: 27-MAY-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1215	NT1405272303.D	SLE0443-TUN1		1	NO MANUAL INTEGRATION
1331	NT1405272305.D	SLE0443-ICV1		1	Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene, Total Benzofluoranthenes, Benzo(j)fluoranthene, Perylene
1419	NT1405272306.D	SLE0443-LCV1		1	Benzo(k)fluoranthene, Total Benzofluoranthenes, Perylene-d12,
1507	NT1405272307.D	BLE0618-BLK1		1	NO MANUAL INTEGRATION
1555	NT1405272308.D	BLE0618-BS1		1	Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Total Benzofluoranthenes, Benzo(j)fluoranthene,
1644	NT1405272309.D	BLE0618-BSD1		1	Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Total Benzofluoranthenes, Benzo(j)fluoranthene,
1732	NT1405272310.D	23D0042-38RE1		1	Anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Total Benzofluoranthenes,
1820	NT1405272311.D	23D0456-02		1	Benzo(b)fluoranthene, Dibenzo(a,h)anthracene, 2,6-Dimethylnaphthalene, Total Benzofluoranthenes,
1909	NT1405272312.D	23D0456-03		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(j)fluoranthene,
1957	NT1405272313.D	BLD0610-BLK1		1	NO MANUAL INTEGRATION
2045	NT1405272314.D	BLD0610-BS1		1	Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Total Benzofluoranthenes, Benzo(j)fluoranthene,
2133	NT1405272315.D	BLD0610-BSD1		1	Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Total Benzofluoranthenes, Benzo(j)fluoranthene,
2221	NT1405272316.D	23D0456-01		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, 2,6-Dimethylnaphthalene, Total Benzofluoranthenes,
2309	NT1405272317.D	23D0456-04		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, 2,6-Dimethylnaphthalene, Total Benzofluoranthenes,
2357	NT1405272318.D	SLE0443-ICV2		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Total Benzofluoranthenes, Benzo(j)fluoranthene,
0045	NT1405272319.D	SLE0443-LCV2		1	Benzo(a)anthracene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Phenanthrene-d10, Perylene-d12,
0133	NT1405272320.D	BLD0616-BLK1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230527.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0221	NT1405272321.D	BLD0616-BS1		1	Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Total Benzo(k)fluoranthenes, Benzo(j)fluoranthene,
0309	NT1405272322.D	23D0457-01		1	Acenaphthene, Dibenzofuran, 2,6-Dimethylnaphthalene,
0357	NT1405272323.D	SLE0443-CCV1		1	Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Total Benzo(k)fluoranthenes, Benzo(j)fluoranthene, Perylene-d12,

Security Status Report

Date: 30-May-2023 11:30

NT1405272301.D	Data Locked	deenayd, 30-
NT1405272302.D	Data Locked	deenayd, 30-
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NT1405272308.D	Data Locked	deenayd, 30-
NT1405272309.D	Data Locked	deenayd, 30-
NT1405272310.D	Data Locked	deenayd, 30-
NT1405272311.D	Data Locked	deenayd, 30-
NT1405272312.D	Data Locked	deenayd, 30-
NT1405272313.D	Data Locked	deenayd, 30-
NT1405272314.D	Data Locked	deenayd, 30-
NT1405272315.D	Data Locked	deenayd, 30-
NT1405272316.D	Data Locked	deenayd, 30-
NT1405272317.D	Data Locked	deenayd, 30-
NT1405272318.D	Data Locked	deenayd, 30-
NT1405272319.D	Data Locked	deenayd, 30-
NT1405272320.D	Data Locked	deenayd, 30-
NT1405272321.D	Data Locked	deenayd, 30-
NT1405272322.D	Data Locked	deenayd, 30-
NT1405272323.D	Data Locked	deenayd, 30-



ANALYSIS SEQUENCE

SLE0443

Printed: 5/30/2023 4:56:02PM

Instrument ID: NT14

GCMS Description: Agilent 7890A/5975C XL

Calibration ID: GE00024

GCMS Column ID: L004744

MS EM Level: 1847 EV

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLE0443-TUN1	DFTTP	QC		1	L005045		05/27/2023 12:15	NT1405272303.D	VTS	
SLE0443-ICV1	PAH 2.5	QC		2	K010905	L005048	05/27/2023 13:31	NT1405272305.D	VTS	
SLE0443-LCV1	PAH 0.1	QC		3	K010902	L005048	05/27/2023 14:19	NT1405272306.D	VTS	
BLE0618-BLK1	Blank	QC		4		L005048	05/27/2023 15:07	NT1405272307.D	VTS	
BLE0618-BS1	LCS	QC		5		L005048	05/27/2023 15:55	NT1405272308.D	VTS	
BLE0618-BSD1	LCS Dup	QC		6		L005048	05/27/2023 16:44	NT1405272309.D	VTS	
23D0042-38RE1	DI-201SB-36-37-23032	IM Alkyl PAH (Parents) D	A 01	7		L005048	05/27/2023 17:32	NT1405272310.D	VTS	From BLD0136 by CTO on 22-May-2023
23D0456-02	DI-216RAB-26-27-2304	IM Alkyl PAH (Parents) D	A 01	8		L005048	05/27/2023 18:20	NT1405272311.D	VTS	
23D0456-03	DI-216RAB-27-28-2304	IM Alkyl PAH (Parents) D	A 01	9		L005048	05/27/2023 19:09	NT1405272312.D	VTS	
BLD0610-BLK1	Blank	QC		10		L005048	05/27/2023 19:57	NT1405272313.D	VTS	
BLD0610-BS1	LCS	QC		11		L005048	05/27/2023 20:45	NT1405272314.D	VTS	
BLD0610-BSD1	LCS Dup	QC		12		L005048	05/27/2023 21:33	NT1405272315.D	VTS	
23D0456-01	DI-216RAB-25-26-2304	IM Alkyl PAH (Parents) D	A 01	13		L005048	05/27/2023 22:21	NT1405272316.D	VTS	
23D0456-04	DI-216RAB-28-29-2304	IM Alkyl PAH (Parents) D	A 01	14		L005048	05/27/2023 23:09	NT1405272317.D	VTS	
SLE0443-ICV2	PAH 2.5	QC		15	K010905	L005048	05/27/2023 23:57	NT1405272318.D	VTS	
SLE0443-LCV2	PAH 0.1	QC		16	K010902	L005048	05/28/2023 00:45	NT1405272319.D	VTS	
BLD0616-BLK1	Blank	QC		17		L005048	05/28/2023 01:33	NT1405272320.D	VTS	
BLD0616-BS1	LCS	QC		18		L005048	05/28/2023 02:21	NT1405272321.D	VTS	
23D0457-01	MW2112-041723	IM Alkyl PAH (Parents) D	A 01	19		L005048	05/28/2023 03:09	NT1405272322.D	VTS	
SLE0443-CCV1	PAH 2.5	QC		20	K010905	L005048	05/28/2023 03:57	NT1405272323.D	VTS	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230527.b

Time	Filename	LabID	ClientId	DF					
1	1215	NT1405272303.D	SLE0443-TUN1	1	NO ISTDS FOUND				
2	1331	NT1405272305.D	SLE0443-ICV1	1	18.95	136933	22.41	167500	33.19 94374
3	1419	NT1405272306.D	SLE0443-LCV1	1	18.95	148342	22.41	175135	33.19 91801
4	1507	NT1405272307.D	BLE0618-BLK1	1	18.95	116986	22.40	141365	33.19 81312
5	1555	NT1405272308.D	BLE0618-BS1	1	18.95	121568	22.41	144655	33.19 84747
6	1644	NT1405272309.D	BLE0618-BSD1	1	18.95	121353	22.41	147608	33.19 87960
7	1732	NT1405272310.D	23D0042-38RE1	1	18.95	123509	22.41	152093	33.19 94314
8	1820	NT1405272311.D	23D0456-02	1	18.96	125282	22.42	151376	33.20 100639
9	1909	NT1405272312.D	23D0456-03	1	18.95	124590	22.41	156458	33.19 91833
10	1957	NT1405272313.D	BLD0610-BLK1	1	18.95	122339	22.41	145567	33.19 84603
11	2045	NT1405272314.D	BLD0610-BS1	1	18.95	119709	22.41	146424	33.19 87825
12	2133	NT1405272315.D	BLD0610-BSD1	1	18.95	121897	22.41	144955	33.19 89436
13	2221	NT1405272316.D	23D0456-01	1	18.96	123561	22.48	147010	33.21 96130
14	2309	NT1405272317.D	23D0456-04	1	18.96	115295	22.41	140643	33.20 83475
15	2357	NT1405272318.D	SLE0443-ICV2	1	18.95	128777	22.41	160624	33.20 98691
16	0045	NT1405272319.D	SLE0443-LCV2	1	18.95	136249	22.41	166926	33.20 92492
17	0133	NT1405272320.D	BLD0616-BLK1	1	18.95	118542	22.41	133668	33.20 79806
18	0221	NT1405272321.D	BLD0616-BS1	1	18.95	112279	22.41	131305	33.20 83889
19	0309	NT1405272322.D	23D0457-01	1	18.96	108523	22.41	135817	33.20 80570
20	0357	NT1405272323.D	SLE0443-CCV1	1	18.95	134206	22.41	165580	33.20 94138

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230527.b

ARI Job No.: SLE0 Method: DFTPP8270E.m Instrument: nt14.i Date: 27-MAY-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1018	NT1405272301.D	SLE0443-TUN1		1	NO MANUAL INTEGRATION
1033	NT1405272302.D	SLE0443-ICV1		1	NO MANUAL INTEGRATION
1215	NT1405272303.D	SLE0443-TUN1		1	NO MANUAL INTEGRATION
1230	NT1405272304.D	SLE0443-ICV1		1	NO MANUAL INTEGRATION
1331	NT1405272305.D	SLE0443-ICV1		1	Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene, Perylene, Total Benzofluoranthenes, Benzo(j)fluoranthene Perylene-d12,
1419	NT1405272306.D	SLE0443-LCV1		1	Benzo(k)fluoranthene, Perylene, Total Benzofluoranthenes, Perylene-d12,
1507	NT1405272307.D	BLE0618-BLK1		1	NO MANUAL INTEGRATION
1555	NT1405272308.D	BLE0618-BS1		1	Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Perylene, Total Benzofluoranthenes, Benzo(j)fluoranthene
1644	NT1405272309.D	BLE0618-BS1		1	Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Perylene, Total Benzofluoranthenes, Benzo(j)fluoranthene
1732	NT1405272310.D	23D0042-38RE1		1	Anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Perylene, Total Benzofluoranthenes,
1820	NT1405272311.D	23D0456-02		1	Benzo(b)fluoranthene, Dibenzo(a,h)anthracene, Perylene, 2,6-Dimethylnaphthalene, Total Benzofluoranthenes,
1909	NT1405272312.D	23D0456-03		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Perylene, Total Benzofluoranthenes, Benzo(j)fluoranthene,
1957	NT1405272313.D	BLD0610-BLK1		1	NO MANUAL INTEGRATION
2045	NT1405272314.D	BLD0610-BS1		1	Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Perylene, Total Benzofluoranthenes, Benzo(j)fluoranthene
2133	NT1405272315.D	BLD0610-BS1		1	Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Perylene, Total Benzofluoranthene Benzo(j)fluoranthene,
2221	NT1405272316.D	23D0456-01		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Perylene, 2,6-Dimethylnaphthalene, Total Benzofluoranthenes,
2309	NT1405272317.D	23D0456-04		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Perylene, 2,6-Dimethylnaphthalene, Total Benzofluoranthenes,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230527.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2357	NT1405272318.D	SLE0443-ICV2		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Perylene, Total Benzofluoranthene, Benzo(j)fluoranthene,
0045	NT1405272319.D	SLE0443-LCV2		1	Benzo(a)anthracene, Benzo(k)fluoranthene, Perylene, Total Benzofluoranthenes, Phenanthrene-d10, Perylene-d12,
0133	NT1405272320.D	BLD0616-BLK1		1	NO MANUAL INTEGRATION
0221	NT1405272321.D	BLD0616-BS1		1	Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Perylene, Total Benzofluoranthene, Benzo(j)fluoranthene,
0309	NT1405272322.D	23D0457-01		1	Acenaphthene, Dibenzofuran, 2,6-Dimethylnaphthalene,
0357	NT1405272323.D	SLE0443-CCV1		1	Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Perylene, Total Benzofluoranthene, Benzo(j)fluoranthene, Perylene-d12,

Security Status Report

Date: 30-May-2023 11:30

NT1405272301.D	Data Locked	deenayd, 30-
NT1405272302.D	Data Locked	deenayd, 30-
NT1405272303.D	Data Locked	deenayd, 30-
NT1405272304.D	Data Locked	deenayd, 30-
NT1405272305.D	Data Locked	deenayd, 30-
NT1405272306.D	Data Locked	deenayd, 30-
NT1405272307.D	Data Locked	deenayd, 30-
NT1405272308.D	Data Locked	deenayd, 30-
NT1405272309.D	Data Locked	deenayd, 30-
NT1405272310.D	Data Locked	deenayd, 30-
NT1405272311.D	Data Locked	deenayd, 30-
NT1405272312.D	Data Locked	deenayd, 30-
NT1405272313.D	Data Locked	deenayd, 30-
NT1405272314.D	Data Locked	deenayd, 30-
NT1405272315.D	Data Locked	deenayd, 30-
NT1405272316.D	Data Locked	deenayd, 30-
NT1405272317.D	Data Locked	deenayd, 30-
NT1405272318.D	Data Locked	deenayd, 30-
NT1405272319.D	Data Locked	deenayd, 30-
NT1405272320.D	Data Locked	deenayd, 30-
NT1405272321.D	Data Locked	deenayd, 30-
NT1405272322.D	Data Locked	deenayd, 30-
NT1405272323.D	Data Locked	deenayd, 30-



ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Sequence: SLF0314

Instrument: NT14

Calibration: GE00043

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	BLE0618-BLK3	NT1405272307S.D	Solid	05/27/23 15:07
ZZZZZ	23D0042-38RE1	NT1405272310S.D	Solid	05/27/23 17:32
ZZZZZ	23D0456-02	NT1405272311S.D	Solid	05/27/23 18:20
ZZZZZ	23D0456-03	NT1405272312S.D	Solid	05/27/23 19:09
ZZZZZ	BLD0610-BLK3	NT1405272313S.D	Solid	05/27/23 19:57
ZZZZZ	23D0456-01	NT1405272316S.D	Solid	05/27/23 22:21
ZZZZZ	23D0456-04	NT1405272317S.D	Solid	05/27/23 23:09
Blank	BLD0616-BLK2	NT1405272320S.D	Oil	05/28/23 01:33
MW2112-041723	23D0457-01	NT1405272322S.D	Oil	05/28/23 03:09



ANALYSIS SEQUENCE

SLF0314

Printed: 6/21/2023 11:55:21AM

Instrument ID: NT14

GCMS Description: Agilent 7890A/5975C XL

Calibration ID: GE00043

GCMS Column ID: L004744

MS EM Level: 1847 EV

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLF0314-ICV1	PAH 2.5	QC		1	L004240	L005048	05/27/2023 13:31	NT1405272305S.D	VTS	
BLE0618-BLK3	Blank	QC		2		L005048	05/27/2023 15:07	NT1405272307S.D	VTS	
23D0042-38RE1	DI-201SB-36-37-23032	SIM Alkyl PAH (Range) Du	A 04	3		L005048	05/27/2023 17:32	NT1405272310S.D	VTS	From BLD0136 by CTO on 16-Jun-2023
23D0456-02	DI-216RAB-26-27-2304	SIM Alkyl PAH (Range) Du	A 04	4		L005048	05/27/2023 18:20	NT1405272311S.D	VTS	
23D0456-03	DI-216RAB-27-28-2304	SIM Alkyl PAH (Range) Du	A 04	5		L005048	05/27/2023 19:09	NT1405272312S.D	VTS	
BLD0610-BLK3	Blank	QC		6		L005048	05/27/2023 19:57	NT1405272313S.D	VTS	
23D0456-01	DI-216RAB-25-26-2304	SIM Alkyl PAH (Range) Du	A 01	7		L005048	05/27/2023 22:21	NT1405272316S.D	VTS	
23D0456-04	DI-216RAB-28-29-2304	SIM Alkyl PAH (Range) Du	A 01	8		L005048	05/27/2023 23:09	NT1405272317S.D	VTS	
SLF0314-ICV2	PAH 2.5	QC		9	K010905	L005048	05/27/2023 23:57	NT1405272318S.D	VTS	
BLD0616-BLK2	Blank	QC		10		L005048	05/28/2023 01:33	NT1405272320S.D	VTS	
23D0457-01	MW2112-041723	SIM Alkyl PAH (Range) Du	A 01	11		L005048	05/28/2023 03:09	NT1405272322S.D	VTS	
SLF0314-CCV1	Calibration Check	QC		12	L004240	L005048	05/28/2023 03:57	NT1405272323S.D	VTS	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230527.b\20230527.b

Time	Filename	LabID	ClientId	DF					
1	1331	NT1405272305S.D	SLF0314-ICV1	1	18.95	169712 22.40	208372 33.19	116436	
2	1419	NT1405272306S.D	SLF0314-LCV1	1	18.94	184157 22.40	220528 33.19	113544	
3	1507	NT1405272307S.D	BLE0618-BLK3	1	18.94	144299 22.40	177834 33.19	101454	
4	1555	NT1405272308S.D	BLE0618-BS1	1	18.94	145580 22.40	177355 33.19	104661	
5	1644	NT1405272309S.D	BLE0618-BSD1	1	18.94	149500 22.40	182130 33.19	109037	
6	1732	NT1405272310S.D	23D0042-38RE1	1	18.94	153079 22.40	190183 33.19	113630	
7	1820	NT1405272311S.D	23D0456-02	1	18.95	155865 22.42	183072 33.19	122271	
8	1909	NT1405272312S.D	23D0456-03	1	18.95	153161 22.40	191805 33.19	113967	
9	1957	NT1405272313S.D	BLD0610-BLK1	1	18.95	149661 22.40	182180 33.19	102457	
10	2045	NT1405272314S.D	BLD0610-BS1	1	18.94	148961 22.40	180635 33.19	107462	
11	2133	NT1405272315S.D	BLD0610-BSD1	1	18.94	149475 22.40	180788 33.19	107390	
12	2221	NT1405272316S.D	23D0456-01	1	18.95	148159 22.47	173176 33.21	114161	
13	2309	NT1405272317S.D	23D0456-04	1	18.95	140451 22.40	172805 33.19	100901	
14	2357	NT1405272318S.D	SLF0314-ICV2	1	18.95	157005 22.40	197882 33.19	118012	
15	0045	NT1405272319S.D	SLF0314-LCV2	1	18.95	165893 22.40	204196 33.19	112319	
16	0133	NT1405272320S.D	BLD0616-BLK2	1	18.95	142518 22.40	165143 33.19	96868	
17	0221	NT1405272321S.D	BLD0616-BS1	1	18.95	137181 22.40	160425 33.19	101061	
18	0309	NT1405272322S.D	23D0457-01	1	18.95	132463 22.41	165089 33.19	101507	
19	0357	NT1405272323S.D	SLE0443-CCV1	1	18.95	162486 22.40	203979 33.19	117477	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230527.b\20230527.b

Instrument: nt14.i Date: 27-MAY-2023

Time	Filename	LabID	DF	Manually Integrated Compounds					
1331	NT1405272305S.D	SLF0314-ICV1	1	NO MANUAL INTEGRATION					
1419	NT1405272306S.D	SLF0314-LCV1	1	NO MANUAL INTEGRATION					
1507	NT1405272307S.D	BLE0618-BLK3	1	NO MANUAL INTEGRATION					
1555	NT1405272308S.D	BLE0618-BS1	1	NO MANUAL INTEGRATION					
1644	NT1405272309S.D	BLE0618-BSD1	1	NO MANUAL INTEGRATION					
1732	NT1405272310S.D	23D0042-38RE1	1	C1-Decalin, C4-Naphthalenes, C1-Dibenzothiophenes,	C2-Decalin, C1-Benzothiophenes, C2-Dibenzothiophenes,	C3-Decalin, C1-Benzothiophenes, C2-Dibenzothiophenes,	C1-Naphthalenes, C2-Benzothiophenes, C3-Dibenzothiophenes,	C2-Naphthalenes, C1-Fluorenes, C1-Phenanthrenes/Anthracenes,	C3-Naphthalenes, C2-Fluorenes, C3-Fluorenes, C2-Phenanthrenes/Anthracenes,
1820	NT1405272311S.D	23D0456-02	1	C1-Decalin, C4-Naphthalenes, C3-Fluorenes,	C2-Decalin, C1-Benzothiophenes, C1-Dibenzothiophenes,	C3-Decalin, C1-Benzothiophenes, C2-Dibenzothiophenes,	C1-Naphthalenes, C2-Benzothiophenes, C2-Dibenzothiophenes,	C2-Naphthalenes, C3-Benzothiophenes, C3-Dibenzothiophenes,	C3-Naphthalenes, C1-Fluorenes, C4-Dibenzothiophenes,
1909	NT1405272312S.D	23D0456-03	1	C1-Decalin, C4-Naphthalenes, C2-Dibenzothiophenes,	C2-Decalin, C1-Benzothiophenes, C1-Phenanthrenes/Anthracenes,	C3-Decalin, C1-Benzothiophenes, C1-Phenanthrenes/Anthracenes,	C1-Naphthalenes, C2-Benzothiophenes, C2-Phenanthrenes/Anthracenes,	C2-Naphthalenes, C3-Benzothiophenes, C2-Phenanthrenes/Anthracenes,	C3-Naphthalenes, C1-Fluorenes, C3-Phenanthrenes/Anthracenes,
1957	NT1405272313S.D	BLD0610-BLK1	1	NO MANUAL INTEGRATION					
2045	NT1405272314S.D	BLD0610-BS1	1	NO MANUAL INTEGRATION					
2133	NT1405272315S.D	BLD0610-BSD1	1	NO MANUAL INTEGRATION					
2221	NT1405272316S.D	23D0456-01	1	C1-Decalin, C4-Naphthalenes, C3-Fluorenes,	C2-Decalin, C1-Benzothiophenes, C1-Dibenzothiophenes,	C3-Decalin, C1-Benzothiophenes, C2-Dibenzothiophenes,	C1-Naphthalenes, C2-Benzothiophenes, C2-Dibenzothiophenes,	C2-Naphthalenes, C3-Benzothiophenes, C3-Dibenzothiophenes,	C3-Naphthalenes, C1-Fluorenes, C4-Dibenzothiophenes,
2309	NT1405272317S.D	23D0456-04	1	C1-Naphthobenzothiophenes,		C2-Naphthobenzothiophenes,		C3-Naphthobenzothiophenes,	
2357	NT1405272318S.D	SLF0314-ICV2	1	NO MANUAL INTEGRATION					
0045	NT1405272319S.D	SLF0314-LCV2	1	NO MANUAL INTEGRATION					
0133	NT1405272320S.D	BLD0616-BLK2	1	C2-Decalin,	C3-Decalin,				
0221	NT1405272321S.D	BLD0616-BS1	1	NO MANUAL INTEGRATION					

Instrument: nt14.i Date: 28-MAY-2023

Time	Filename	LabID	DF	Manually Integrated Compounds					
0309	NT1405272322S.D	23D0457-01	1	C1-Decalin,	C2-Decalin,	C3-Decalin,	C1-Naphthalenes,	C2-Naphthalenes,	C3-Naphthalenes,
				C4-Naphthalenes,	C1-Benzothiophenes,	C2-Benzothiophenes,	C3-Benzothiophenes,	C1-Fluorenes,	C2-Fluorene
				C3-Fluorenes,	C1-Dibenzothiophenes,	C2-Dibenzothiophenes,	C3-Dibenzothiophenes,	C4-Dibenzothiophenes,	
0357	NT1405272323S.D	SLE0443-CCV1	1	NO MANUAL INTEGRATION					

Security Status Report

Date: 21-Jun-2023 11:56

NT1405272305S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272306S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272307S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272308S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272309S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272310S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272311S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272312S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272313S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272314S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272315S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272316S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272317S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272318S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272319S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272320S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272321S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272322S.D	Data Locked	van, 21-Jun-2023 11:56
NT1405272323S.D	Data Locked	van, 21-Jun-2023 11:56



SURROGATE RECOVERY AND RT SUMMARY EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG/WO: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Sequence: SLE0096

Instrument: NT14

Calibration: GE00024

Calibration Date: 05/05/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLE0096-ICB1 (Solid) Lab File ID: NT1423050509.D Analyzed: 05/05/23 16:49								
Naphthalene-d8	2.5000	114	30 - 160	12.219	12.21917	-0.0002	N/A	
Acenaphthene-d10	2.5000	116	30 - 160	17.723	17.723	0.0000	N/A	
Phenanthrene-d10	2.5000	117	30 - 160	22.617	22.617	0.0000	N/A	
Chrysene-d12	2.5000	125	30 - 160	30.527	30.531	-0.0040	N/A	
Perylene-d12	2.5000	120	30 - 160	33.827	33.82917	-0.0022	N/A	
SLE0096-ICV1 (Solid) Lab File ID: NT1423050515.D Analyzed: 05/05/23 21:39								
Naphthalene-d8	2.5000	93.9	80 - 120	12.219	12.21917	-0.0002	N/A	
Acenaphthene-d10	2.5000	96.9	80 - 120	17.723	17.723	0.0000	N/A	
Phenanthrene-d10	2.5000	98.0	80 - 120	22.617	22.617	0.0000	N/A	
Chrysene-d12	2.5000	97.9	80 - 120	30.527	30.531	-0.0040	N/A	
Perylene-d12	2.5000	99.0	80 - 120	33.827	33.82917	-0.0022	N/A	
SLE0096-ICV2 (Solid) Lab File ID: NT1423050529.D Analyzed: 05/06/23 08:53								
Naphthalene-d8	2.5000	94.0	80 - 120	12.22	12.21917	0.0008	N/A	
Acenaphthene-d10	2.5000	96.2	80 - 120	17.723	17.723	0.0000	N/A	
Phenanthrene-d10	2.5000	94.5	80 - 120	22.617	22.617	0.0000	N/A	
Chrysene-d12	2.5000	97.9	80 - 120	30.527	30.531	-0.0040	N/A	
Perylene-d12	2.5000	102	80 - 120	33.828	33.82917	-0.0012	N/A	
SLE0096-ICV4 (Solid) Lab File ID: NT1423050556.D Analyzed: 05/07/23 06:53								
Naphthalene-d8	2.5000	91.2	80 - 120	12.219	12.21917	-0.0002	N/A	
Acenaphthene-d10	2.5000	96.2	80 - 120	17.723	17.723	0.0000	N/A	
Phenanthrene-d10	2.5000	94.8	80 - 120	22.617	22.617	0.0000	N/A	
Chrysene-d12	2.5000	101	80 - 120	30.539	30.531	0.0080	N/A	
Perylene-d12	2.5000	103	80 - 120	33.827	33.82917	-0.0022	N/A	
SLE0096-CCV1 (Solid) Lab File ID: NT1423050565.D Analyzed: 05/07/23 14:07								
Naphthalene-d8	2.5000	91.8	50 - 150	12.22	12.21917	0.0008	N/A	
Acenaphthene-d10	2.5000	94.7	50 - 150	17.723	17.723	0.0000	N/A	
Phenanthrene-d10	2.5000	97.4	50 - 150	22.617	22.617	0.0000	N/A	
Chrysene-d12	2.5000	105	50 - 150	30.539	30.531	0.0080	N/A	
Perylene-d12	2.5000	103	50 - 150	33.828	33.82917	-0.0012	N/A	



SURROGATE RECOVERY AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	<u>Analytical Resources, LLC</u>	SDG/WO:	<u>23D0457</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Gasco Hydrocarbon Investigation</u>
Sequence:	<u>SLE0443</u>	Instrument:	<u>NT14</u>
Calibration:	<u>GE00024</u>	Calibration Date:	<u>05/05/2023</u>

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLE0443-ICV1 (Water) Lab File ID: NT1405272305.D Analyzed: 05/27/23 13:31								
Naphthalene-d8	2.5000	97.7	0 - 200	11.939	12.21917	-0.2802	N/A	
Acenaphthene-d10	2.5000	98.2	0 - 200	17.419	17.723	-0.3040	N/A	
Phenanthrene-d10	2.5000	97.6	0 - 200	22.294	22.617	-0.3230	N/A	
Chrysene-d12	2.5000	102	0 - 200	30.237	30.531	-0.2940	N/A	
Perylene-d12	2.5000	102	0 - 200	33.526	33.82917	-0.3032	N/A	
SLE0443-LCV1 (Water) Lab File ID: NT1405272306.D Analyzed: 05/27/23 14:19								
Naphthalene-d8	0.10000	90.1	0 - 200	11.939	12.21917	-0.2802	N/A	
Acenaphthene-d10	0.10000	83.3	0 - 200	17.419	17.723	-0.3040	N/A	
Phenanthrene-d10	0.10000	88.3	0 - 200	22.283	22.617	-0.3340	N/A	
Chrysene-d12	0.10000	60.9	0 - 200	30.237	30.531	-0.2940	N/A	
Perylene-d12	0.10000	36.6	0 - 200	33.526	33.82917	-0.3032	N/A	
SLE0443-ICV2 (Water) Lab File ID: NT1405272318.D Analyzed: 05/27/23 23:57								
Naphthalene-d8	2.5000	96.1	0 - 200	11.939	12.21917	-0.2802	N/A	
Acenaphthene-d10	2.5000	97.5	0 - 200	17.419	17.723	-0.3040	N/A	
Phenanthrene-d10	2.5000	98.2	0 - 200	22.294	22.617	-0.3230	N/A	
Chrysene-d12	2.5000	97.3	0 - 200	30.248	30.531	-0.2830	N/A	
Perylene-d12	2.5000	101	0 - 200	33.526	33.82917	-0.3032	N/A	
SLE0443-LCV2 (Water) Lab File ID: NT1405272319.D Analyzed: 05/28/23 00:45								
Naphthalene-d8	0.10000	88.3	0 - 200	11.939	12.21917	-0.2802	N/A	
Acenaphthene-d10	0.10000	80.0	0 - 200	17.419	17.723	-0.3040	N/A	
Phenanthrene-d10	0.10000	84.8	0 - 200	22.294	22.617	-0.3230	N/A	
Chrysene-d12	0.10000	70.4	0 - 200	30.248	30.531	-0.2830	N/A	
Perylene-d12	0.10000	76.4	0 - 200	33.526	33.82917	-0.3032	N/A	
BLD0616-BLK1 (Oil) Lab File ID: NT1405272320.D Analyzed: 05/28/23 01:33								
Naphthalene-d8	300000	63.5	30 - 160	11.939	12.21917	-0.2802	N/A	
Acenaphthene-d10	300000	69.2	30 - 160	17.419	17.723	-0.3040	N/A	
Phenanthrene-d10	300000	83.8	30 - 160	22.294	22.617	-0.3230	N/A	
Chrysene-d12	300000	86.2	30 - 160	30.248	30.531	-0.2830	N/A	
Perylene-d12	300000	77.0	30 - 160	33.537	33.82917	-0.2922	N/A	



SURROGATE RECOVERY AND RT SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG/WO: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Sequence: SLE0443

Instrument: NT14

Calibration: GE00024

Calibration Date: 05/05/2023

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLD0616-BS1 (Oil) Lab File ID: NT1405272321.D Analyzed: 05/28/23 02:21								
Naphthalene-d8	300000	76.1	30 - 160	11.939	12.21917	-0.2802	N/A	
Acenaphthene-d10	300000	80.6	30 - 160	17.419	17.723	-0.3040	N/A	
Phenanthrene-d10	300000	92.9	30 - 160	22.295	22.617	-0.3220	N/A	
Chrysene-d12	300000	95.9	30 - 160	30.248	30.531	-0.2830	N/A	
Perylene-d12	300000	77.0	30 - 160	33.537	33.82917	-0.2922	N/A	
23D0457-01 (Oil) Lab File ID: NT1405272322.D Analyzed: 05/28/23 03:09								
Naphthalene-d8	300000	58.3	30 - 160	11.95	12.21917	-0.2692	N/A	
Acenaphthene-d10	300000	69.6	30 - 160	17.43	17.723	-0.2930	N/A	
Phenanthrene-d10	300000	74.4	30 - 160	22.294	22.617	-0.3230	N/A	
Chrysene-d12	300000	84.3	30 - 160	30.248	30.531	-0.2830	N/A	
Perylene-d12	300000	56.7	30 - 160	33.537	33.82917	-0.2922	N/A	
SLE0443-CCV1 (Water) Lab File ID: NT1405272323.D Analyzed: 05/28/23 03:57								
Naphthalene-d8	2.5000	95.9	0 - 200	11.939	12.21917	-0.2802	N/A	
Acenaphthene-d10	2.5000	96.6	0 - 200	17.419	17.723	-0.3040	N/A	
Phenanthrene-d10	2.5000	96.6	0 - 200	22.294	22.617	-0.3230	N/A	
Chrysene-d12	2.5000	107	0 - 200	30.248	30.531	-0.2830	N/A	
Perylene-d12	2.5000	104	0 - 200	33.537	33.82917	-0.2922	N/A	



INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Sequence: SLE0096

Instrument: NT14

Calibration: GE00024

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SLE0096-SCV1)		(Solid)	Lab File ID: NT1423050508.D				Analyzed: 05/05/23 16:01		
Fluorene-d10	130753	19.263	137862	19.263	95	50 - 200	0.000	+/-0.50	
Anthracene-d10	158011	22.733	168263	22.733	94	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	91009	33.478	99689	33.478	91	50 - 200	0.000	+/-0.50	
Initial Cal Blank (SLE0096-ICB1)		(Solid)	Lab File ID: NT1423050509.D				Analyzed: 05/05/23 16:49		
Fluorene-d10	125595	19.263	137862	19.263	91	50 - 200	0.000	+/-0.50	
Anthracene-d10	144183	22.733	168263	22.733	86	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	79783	33.478	99689	33.478	80	50 - 200	0.000	+/-0.50	
Initial Cal Check (SLE0096-ICV1)		(Solid)	Lab File ID: NT1423050515.D				Analyzed: 05/05/23 21:39		
Fluorene-d10	137405	19.263	137405	19.263	100	50 - 200	0.000	+/-0.50	
Anthracene-d10	167657	22.733	167657	22.733	100	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	102468	33.478	102468	33.478	100	50 - 200	0.000	+/-0.50	
Initial Cal Check (SLE0096-ICV2)		(Solid)	Lab File ID: NT1423050529.D				Analyzed: 05/06/23 08:53		
Fluorene-d10	134222	19.263	134222	19.263	100	50 - 200	0.000	+/-0.50	
Anthracene-d10	164076	22.733	164076	22.733	100	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	101248	33.478	101248	33.478	100	50 - 200	0.000	+/-0.50	
Initial Cal Check (SLE0096-ICV4)		(Solid)	Lab File ID: NT1423050556.D				Analyzed: 05/07/23 06:53		
Fluorene-d10	120638	19.263	120638	19.263	100	50 - 200	0.000	+/-0.50	
Anthracene-d10	151475	22.733	151475	22.733	100	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	94755	33.478	94755	33.478	100	50 - 200	0.000	+/-0.50	
Calibration Check (SLE0096-CCV1)		(Solid)	Lab File ID: NT1423050565.D				Analyzed: 05/07/23 14:07		
Fluorene-d10	107923	19.263	120638	19.263	89	50 - 200	0.000	+/-0.50	
Anthracene-d10	133154	22.733	151475	22.733	88	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	78909	33.49	94755	33.478	83	50 - 200	0.012	+/-0.50	



INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Sequence: SLE0443

Instrument: NT14

Calibration: GE00024

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLE0443-ICV1)		(Water)	Lab File ID: NT1405272305.D				Analyzed: 05/27/23 13:31		
Fluorene-d10	136933	18.95	136933	18.95	100	50 - 200	0.000	+/-0.50	
Anthracene-d10	167500	22.41	167500	22.41	100	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	94374	33.188	94374	33.188	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLE0443-LCV1)		(Water)	Lab File ID: NT1405272306.D				Analyzed: 05/27/23 14:19		
Fluorene-d10	148342	18.95	136933	18.95	108	50 - 200	0.000	+/-0.50	
Anthracene-d10	175135	22.41	167500	22.41	105	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	91801	33.188	94374	33.188	97	50 - 200	0.000	+/-0.50	
Initial Cal Check (SLE0443-ICV2)		(Water)	Lab File ID: NT1405272318.D				Analyzed: 05/27/23 23:57		
Fluorene-d10	128777	18.95	128777	18.95	100	50 - 200	0.000	+/-0.50	
Anthracene-d10	160624	22.41	160624	22.41	100	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	98691	33.199	98691	33.199	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLE0443-LCV2)		(Water)	Lab File ID: NT1405272319.D				Analyzed: 05/28/23 00:45		
Fluorene-d10	136249	18.95	128777	18.95	106	50 - 200	0.000	+/-0.50	
Anthracene-d10	166926	22.41	160624	22.41	104	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	92492	33.199	98691	33.199	94	50 - 200	0.000	+/-0.50	
Blank (BLD0616-BLK1)		(Oil)	Lab File ID: NT1405272320.D				Analyzed: 05/28/23 01:33		
Fluorene-d10	118542	18.95	128777	18.95	92	50 - 200	0.000	+/-0.50	
Anthracene-d10	133668	22.41	160624	22.41	83	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	79806	33.199	98691	33.199	81	50 - 200	0.000	+/-0.50	
LCS (BLD0616-BS1)		(Oil)	Lab File ID: NT1405272321.D				Analyzed: 05/28/23 02:21		
Fluorene-d10	112279	18.95	128777	18.95	87	50 - 200	0.000	+/-0.50	
Anthracene-d10	131305	22.41	160624	22.41	82	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	83889	33.199	98691	33.199	85	50 - 200	0.000	+/-0.50	
MW2112-041723 (23D0457-01)		(Oil)	Lab File ID: NT1405272322.D				Analyzed: 05/28/23 03:09		
Fluorene-d10	108523	18.962	128777	18.95	84	50 - 200	0.012	+/-0.50	
Anthracene-d10	135817	22.41	160624	22.41	85	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	80570	33.199	98691	33.199	82	50 - 200	0.000	+/-0.50	
Calibration Check (SLE0443-CCV1)		(Solid)	Lab File ID: NT1405272323.D				Analyzed: 05/28/23 03:57		
Fluorene-d10	134206	18.95	128777	18.95	104	50 - 200	0.000	+/-0.50	
Anthracene-d10	165580	22.41	160624	22.41	103	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	94138	33.199	98691	33.199	95	50 - 200	0.000	+/-0.50	



INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Sequence: SLF0314

Instrument: NT14

Calibration: GE00043

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (BLD0616-BLK2)		(Oil)	Lab File ID: NT1405272320S.D				Analyzed: 05/28/23 01:33		
Fluorene-d10	142518	18.952	157005	18.952	91	50 - 200		+/-0.50	
Anthracene-d10	165143	22.4	197882	22.4	83	50 - 200		+/-0.50	
Benzo(e)pyrene-d12	96868	33.189	118012	33.189	82	50 - 200		+/-0.50	
MW2112-041723 (23D0457-01)		(Oil)	Lab File ID: NT1405272322S.D				Analyzed: 05/28/23 03:09		
Fluorene-d10	132463	18.952	157005	18.952	84	50 - 200		+/-0.50	
Anthracene-d10	165089	22.412	197882	22.4	83	50 - 200		+/-0.50	
Benzo(e)pyrene-d12	101507	33.189	118012	33.189	86	50 - 200		+/-0.50	



HOLDING TIME SUMMARY

Analysis: EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

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
MW2112-041723 23D0457-01	04/17/23 09:30	04/18/23 10:56	04/26/23 12:22	9	14	05/28/23 03:09	32	40	
MW2112-041723 23D0457-01	04/17/23 09:30	04/18/23 10:56	04/26/23 12:22	9	14	05/28/23 03:09	32	40	

* Indicates hold time exceedance.



**METHOD DETECTION
AND REPORTING LIMITS**
EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Matrix: Oil

Instrument: NT14

Analyte	MDL	RL	Units
C1-Decalins		100	ug/kg
trans-Decalin		500	ug/kg
cis-Decalin		500	ug/kg
Naphthalene		500	ug/kg
1-Methylnaphthalene		500	ug/kg
2-Methylnaphthalene		500	ug/kg
Biphenyl		500	ug/kg
2,6-Dimethylnaphthalene		500	ug/kg
Acenaphthylene		500	ug/kg
Acenaphthene		500	ug/kg
Dibenzofuran		500	ug/kg
2,3,5-Trimethylnaphthalene		500	ug/kg
Fluorene		500	ug/kg
Benzo(b)thiophene		500	ug/kg
Phenanthrene		500	ug/kg
Anthracene		500	ug/kg
Carbazole		500	ug/kg
1-Methylphenanthrene		500	ug/kg
Fluoranthene		500	ug/kg
Dibenzothiophene		500	ug/kg
Pyrene		500	ug/kg
Benzo(a)anthracene		500	ug/kg
Chrysene		500	ug/kg
Benzo(b)fluoranthene		500	ug/kg
Benzo(j)fluoranthene		500	ug/kg
Benzo(k)fluoranthene		500	ug/kg
Benzo(a)fluoranthene, Total		1000	ug/kg
Benzo(e)pyrene		500	ug/kg
Benzo(a)pyrene		500	ug/kg
Indeno(1,2,3-cd)pyrene		500	ug/kg
Dibenzo(a,h)anthracene		500	ug/kg
Benzo(g,h,i)perylene		500	ug/kg
Perylene		500	ug/kg
Benzo(b)naphtho(2,1-d)thiophene		500	ug/kg
C2-Decalins		100	ug/kg
C3-Decalins		100	ug/kg



**METHOD DETECTION
AND REPORTING LIMITS**

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC

SDG: 23D0457

Client: Anchor QEA, LLC

Project: Gasco Hydrocarbon Investigation

Matrix: Oil

Instrument: NT14

Analyte	MDL	RL	Units
C4-Decalins		100	ug/kg
C1-Naphthalenes		100	ug/kg
C2-Naphthalenes		100	ug/kg
C3-Naphthalenes		100	ug/kg
C4-Naphthalenes		100	ug/kg
C1-Fluorenes		100	ug/kg
C2-Fluorenes		100	ug/kg
C3-Fluorenes		100	ug/kg
C1-Dibenzothiophenes		100	ug/kg
C2-Dibenzothiophenes		100	ug/kg
C3-Dibenzothiophenes		100	ug/kg
C4-Dibenzothiophenes		100	ug/kg
C1-Phenanthrenes/Anthracenes		100	ug/kg
C2-Phenanthrenes/Anthracenes		100	ug/kg
C3-Phenanthrenes/Anthracenes		100	ug/kg
C4-Phenanthrenes/Anthracenes		100	ug/kg
C1-Fluoranthenes/Pyrenes		100	ug/kg
C2-Fluoranthenes/Pyrenes		100	ug/kg
C3-Fluoranthenes/Pyrenes		100	ug/kg
C4-Fluoranthenes/Pyrenes		100	ug/kg
C1-Benzo(a)anthracenes/Chrysenes		100	ug/kg
C2-Benzo(a)anthracenes/Chrysenes		100	ug/kg
C3-Benzo(a)anthracenes/Chrysenes		100	ug/kg
C4-Benzo(a)anthracenes/Chrysenes		100	ug/kg
C1-Benzothiophenes		100	ug/kg
C2-Benzothiophenes		100	ug/kg
C3-Benzothiophenes		100	ug/kg
C1-Naphthobenzothiophenes		100	ug/kg
C2-Naphthobenzothiophenes		100	ug/kg
C3-Naphthobenzothiophenes		100	ug/kg
C4-Naphthobenzothiophenes		100	ug/kg
C1-Dibenzo(a,h)anthracenes		100	ug/kg
C2-Dibenzo(a,h)anthracenes		100	ug/kg
C3-Dibenzo(a,h)anthracenes		100	ug/kg

Certificate of Analysis

I 8227

SIGMA-ALDRICH

Product Name Pentachlorophenol,
97%
Product Number P2604
Product Brand ALDRICH
CAS Number 87-86-5
Molecular Formula C₆Cl₅OH
Molecular Weight 266.34

TEST**APPEARANCE****INFRARED SPECTRUM****TITRATION****GAS LIQUID
CHROMATOGRAPHY****SOLUBILITY****QUALITY CONTROL****ACCEPTANCE DATE****SPECIFICATION**WHITE TO OFF-WHITE OR LIGHT
BLUE POWDER

CONFORMS TO STRUCTURE.

97.5% - 102.5% (WITH AGNO₃
AFTER OXYGEN

97.5% (MINIMUM)

LOT 07119HO RESULTS

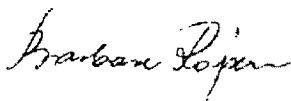
OFF-WHITE POWDER

CONFORMS TO STRUCTURE AND
STANDARD100.5 % (WITH AGNO₃ AFTER
OXYGEN COMBUSTION)

99.9 %

100 MG/ML, 95% ETOH: VERY
HAZY, FAINT YELLOW
SOLUTION

JUNE 2001



Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

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	C ₁₀ H ₇ Cl
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

Mary Beth O'Donnell
CSM/TC

Chem Service is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015



CERTIFICATE OF ANALYSIS

Gas Chromatography / Flame Ionization Detector (GC/FID)

Data file: C:\Chem32\11\Data\2018 Data\0518\2-Chloronaphthalene.D

Sample name: 2-Chloronaphthalene

Instrument: GC3

Location: 209

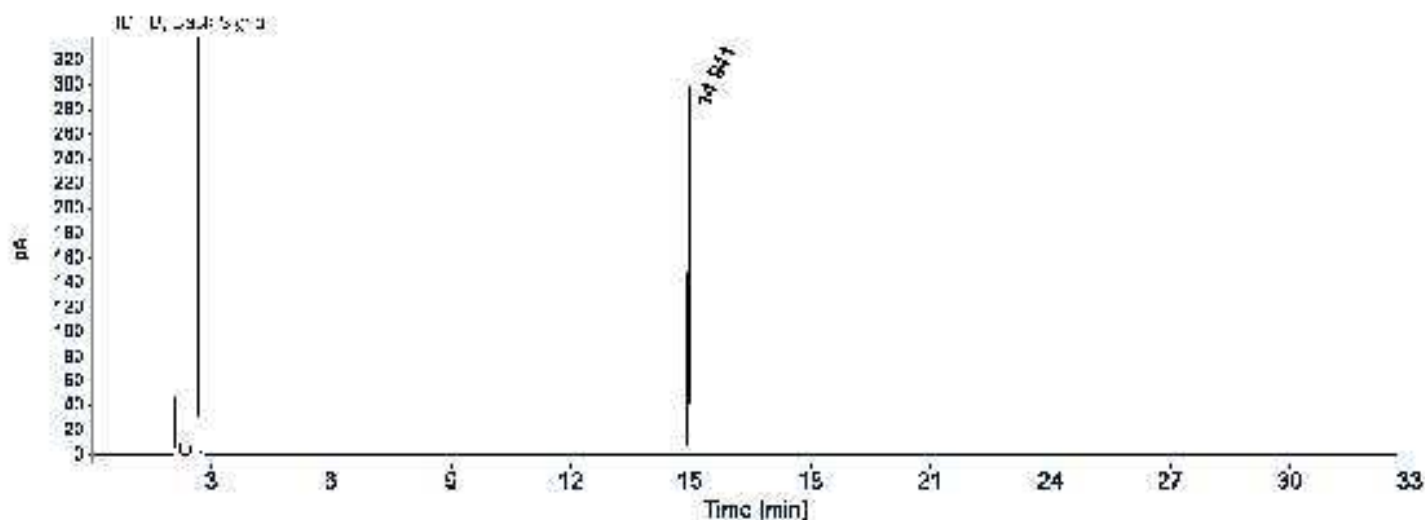
Injection date: 5/22/2018 1:12:52 PM

Injection volume: 1.0uL

Acq. method: REAR_SCREEN.M

Col Type: pn# 7HG-G008-17-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		

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.com

Email USA: techserv@sial.com

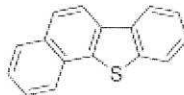
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:

1,2-Benzodiphenylene sulfide - 99%

Product Number: 255122
Batch Number: MKCM3057
Brand: ALDRICH
CAS Number: 239-35-0
MDL Number: MFCD00010043
Formula: C16H10S
Formula Weight: 234.32 g/mol
Quality Release Date: 14 APR 2020



Test	Specification	Result
Appearance (Color)	White to Off White	White
Appearance (Form)	Conforms to Requirements	Crystalline Powder
Crystalline Powder or Solid		
Infrared Spectrum	Conforms to Structure	Conforms
Carbon Content	80.8 - 83.2 %	82.0 %
Nitrogen Content	13.4 - 14.0 %	13.7 %
Purity (TLC)	≥ 99 %	> 99 %
Solubility (Turbidity)	Clear to Slightly Hazy	Clear
2.5% in CHCL3		
Solubility (Color)	Colorless to Faint Yellow	Colorless



Michael Grady, Manager
Quality Control
Milwaukee, WI US

I010206

Benzo(b)naphtho(2,1-d)thiophene

Solvent / Lot: MKCM3057

Prep: 10/31/2020 by VS

Exp: 4/29/2040

Location: R-19

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



CERTIFIED WEIGHT REPORT

Part Number: **70476**
 Lot Number: **092220**
 Description: **Benzo(j)fluoranthene**

Solvent(s):
 Methylene chloride
 Lot# 104929

Expiration Date: 092225
 Recommended Storage: Refrigerate (4 °C)
 Nominal Concentration (µg/mL): 1000
 NIST Test ID#: 23060

5E-05 Balance Uncertainty
 0.001 Flask Uncertainty

Weight(s) shown below were combined and diluted to (mL): 25.0

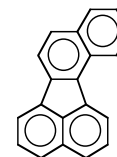
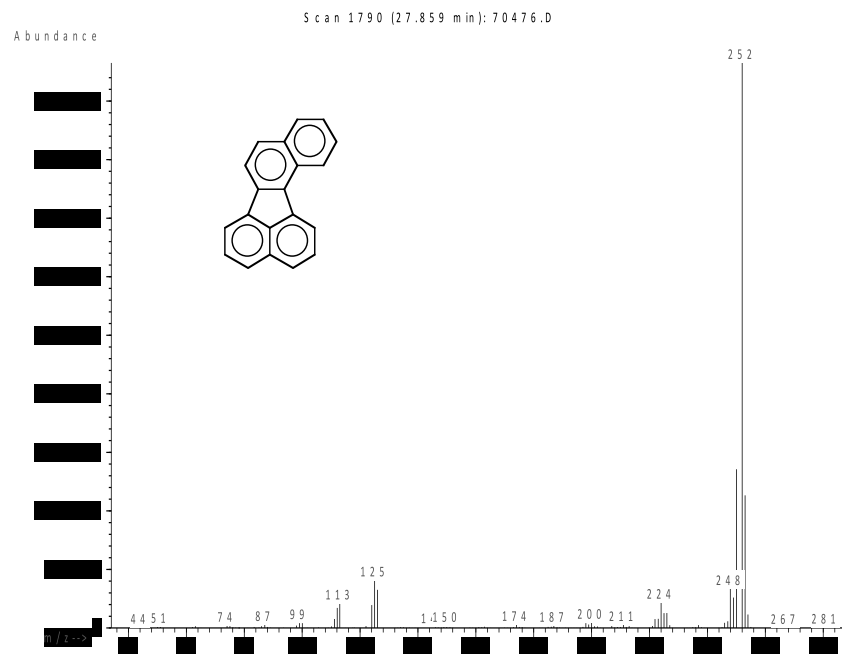
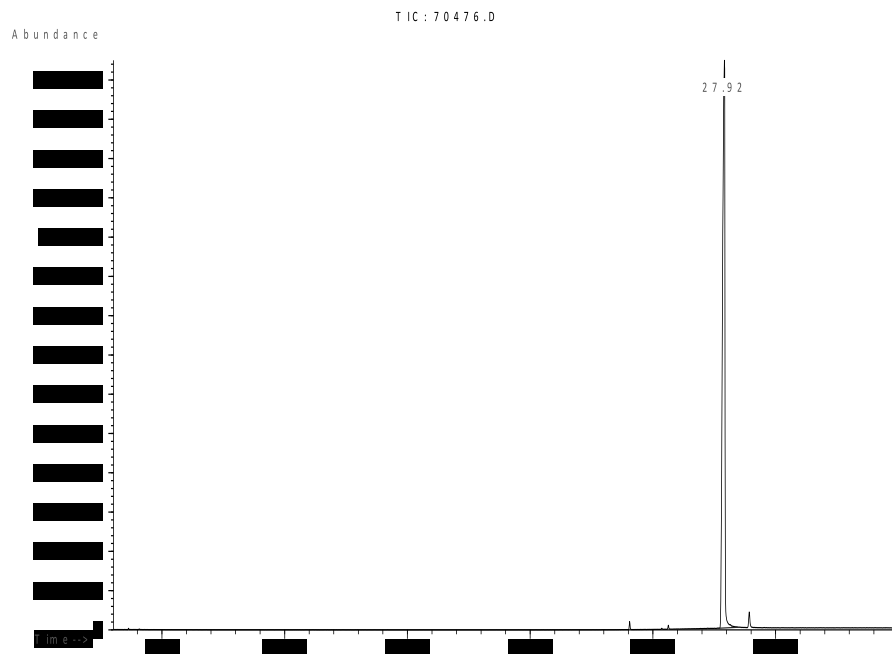
		092220
Formulated By:	Benson Chan	DATE
		092220
Reviewed By:	Pedro L. Rentas	DATE

SDS Information

(Solvent Safety Info. On Attached pg.)

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)	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 certified (+/-) 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 1.5µm Film Thickness.

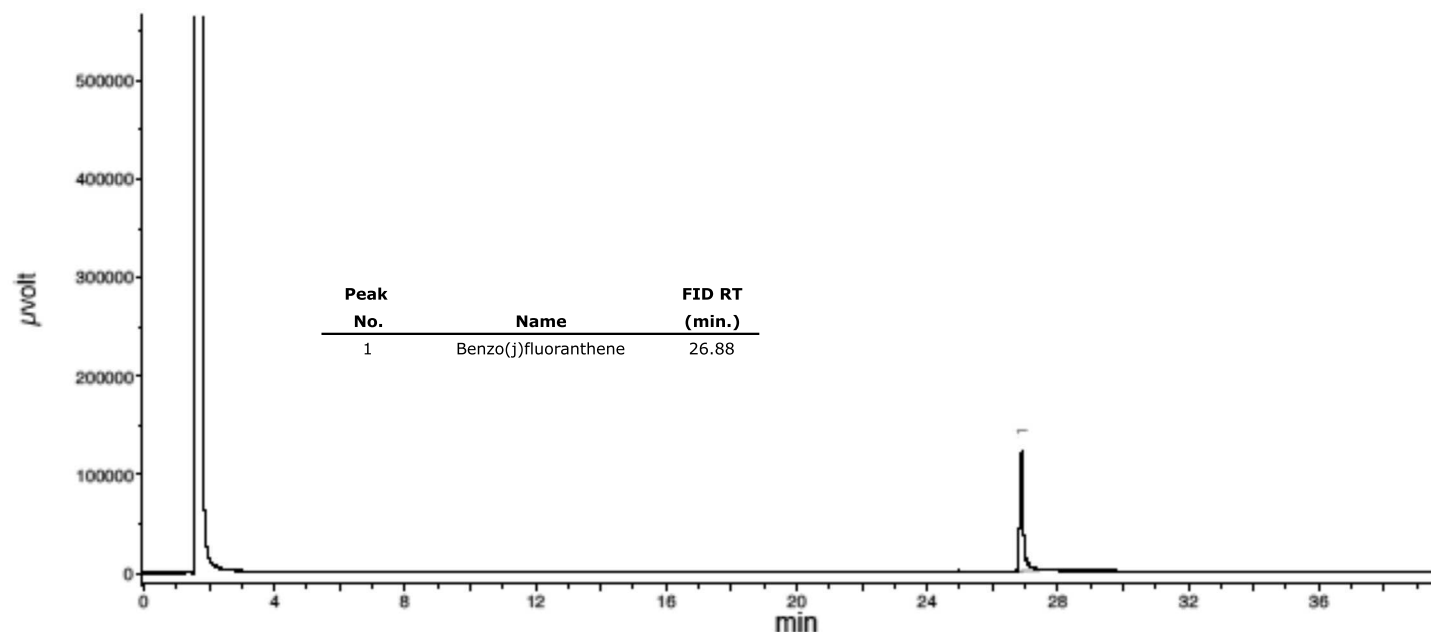
Flow rates: Total Flow = 300 mL/min, Helium (carrier) = 6.5 mL, Helium (make-up) = 25 mL.

Hydrogen (detector) = 30 mL, Air (detector) = 360 mL Oven 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 µL, Range = 3





CERTIFIED WEIGHT REPORT

Part Number: 93462
Lot Number: 081021
Description: PAH Standard
30 components

Solvent(s): Methylene chloride
Lot# 105345

Expiration Date: 081026
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 6UTB

Volume(s) shown below were combined and diluted to (mL): 20.0

Balance Uncertainty: 5E-05
Flask Uncertainty: 0.001

Formulated By: <i>P. Prashant Chauhan</i>	081021
Prashant Chauhan	DATE
Reviewed By: <i>Pedro L. Remias</i>	081021
Pedro L. Remias	DATE

Compound	Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	(Solvent Safety Info. On Attached pg.)	CAS#	OSHA PEL (TWA)	LD50
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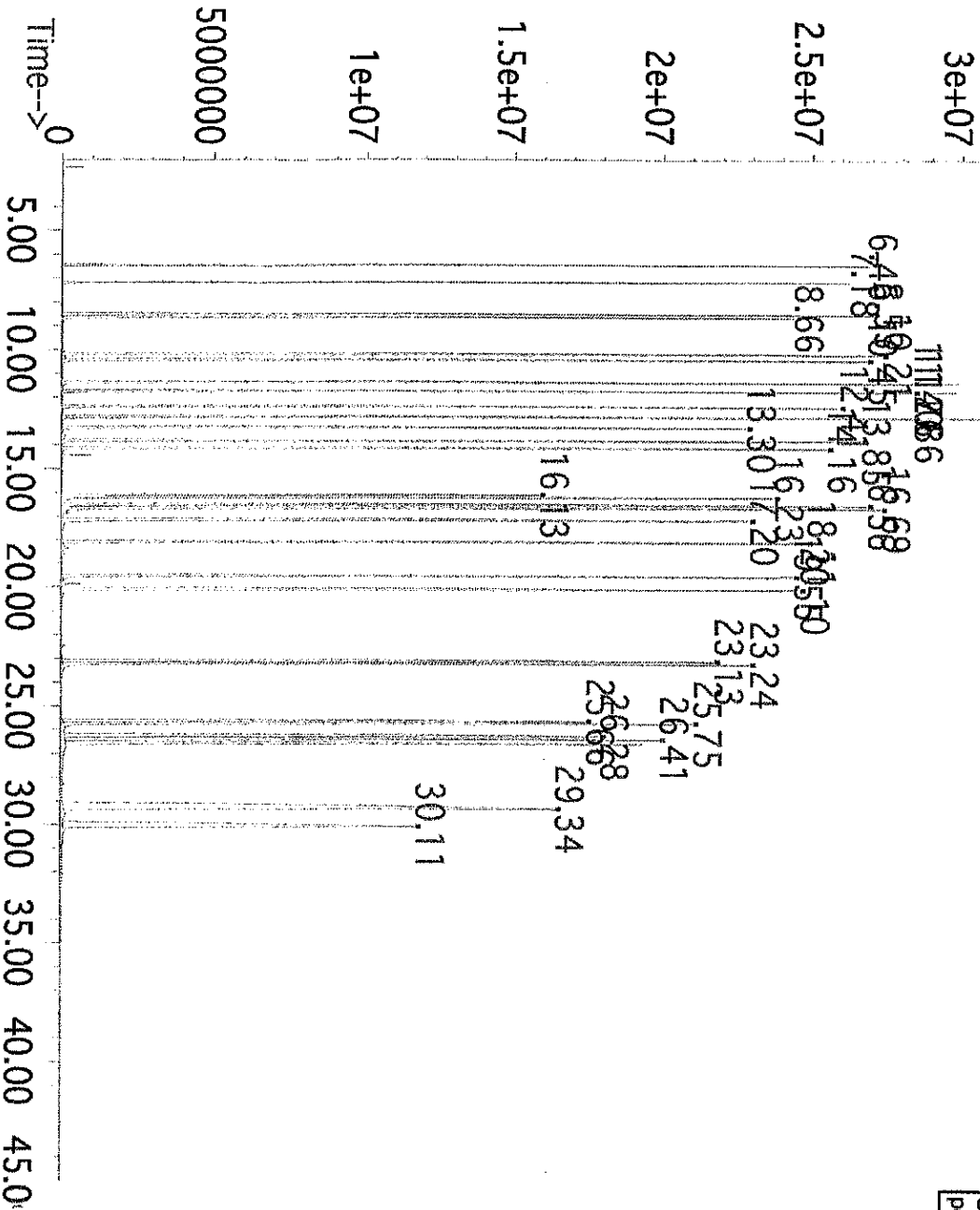
1. Acenaphthene	10007	042420	0.50	10.00	0.042	2001.2	1000.4	9.4	83-32-9	N/A		ip-rat 600mg/kg
2. Acenaphthylene	10007	042420	0.50	10.00	0.042	2000.2	999.9	9.4	208-96-8	N/A		N/A
3. Anthracene	10007	042420	0.50	10.00	0.042	2000.3	999.9	9.3	120-12-7	0.2mg/m3 (8h)		ip-r-mus 430mg/kg
4. Benzo(a)anthracene	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	191-24-2	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		ip-r-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		ip-r-mus 2000mg/kg
13. Fluorene	10007	042420	0.50	10.00	0.042	2000.9	1000.2	9.4	86-73-7	N/A		N/A
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)		ip-rat 480mg/kg
16. Phenanthrene	10007	042420	0.50	10.00	0.042	2000.9	1000.2	9.4	85-01-8	0.2mg/m3/8h		ip-r-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		ip-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)		ip-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		ip-r-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		N/A
25. 2-Methylnaphthalene	94851	081021	0.50	10.00	0.042	2000.6	1000.1	9.4	91-57-6	N/A		ip-rat 1840mg/kg
26. 1-Methylphenanthrene	94851	081021	0.50	10.00	0.042	2002.3	1000.9	9.4	832-69-9	N/A		ip-rat 1630mg/kg
27. Pentachlorophenol	94851	081021	0.50	10.00	0.042	3961.5	1980.3	18.6	87-86-5	0.5mg/m3/8h (skin)		ip-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).
* All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N., and Kuyel, 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).



Abundance

TIC: 93462.D



Method GC8MSD-2L0ng: 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	29.54
Benzo(g,h,i)perylene	30.11

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.: AL0-101246

Lot Number: CL17953

Description: Benzoic Acid

Certification Date: January 31, 2022

Storage: 4 °C

Expiration Date: January 31, 2032

Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride



Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzoic acid	65-85-0	2000	± 2.714%

K004603

Benzoic Acid @2000ug/ml

Solvent / Lot: N/A

Prep: 5/13/2022 by JZ

Exp: 1/31/2032

Location: GC

 5/13/22



Reference Material Producer
Certificate No. 2427.02



phenova
Certified Reference Materials

A Phenomenex
Company

Phenova is an accredited ISO/IEC 17034 Reference Material
Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.



Chemical Testing Laboratory
Certificate No. 2427.03

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Certified Reference Material

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Catalog No.: AL0-101244

Lot Number: CL17662

Description: Benzidines Standard

Certification Date: December 2, 2021

Storage: 4 °C

Expiration Date: November 30, 2031

Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride



Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 0.211%
3,3'-Dichlorobenzidine	91-94-1	2000	± 1.305%

K004604


Benzidines std @2000ug/ml

Solvent / Lot: Mecl2

Prep: 5/13/2022 by JZ

Exp: 11/30/2031

Location: GC

 5/13/22



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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)

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%



Reference Material Producer
Certificate No. 2427.02



Phenova is an accredited ISO/IEC 17034 Reference Material
Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.



Chemical Testing Laboratory
Certificate No. 2427.03

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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

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%

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.: AL0-101444

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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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

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-Chloroisopropyl) 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 31¹ and ISO Guide 35.²
2. **Quality Standards:** Phenova is accredited by A2LA to ISO 17034³ and ISO/IEC 17025⁴ 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 98⁵ 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).
$$u_{CRM} = k \sqrt{u_M^2 + u_H^2 + u_{LTS}^2}$$

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)



CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

Certificate of Analysis



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. : 31206 **Lot No.:** A0185732

Description : SV Internal Standard Mix 2mg/ml

SV Internal Standard Mix 2mg/ml 2000 µg/ml, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2028 **Storage:** 10°C or colder

Handling: Sonication required. Mix is photosensitive. **Ship:** Ambient

K009595
SVOA 8270 IS Mix-2mg/ml
Solvent / Lot: AO185732
Prep: 10/18/2022 by VS
Exp: 4/30/2028
Location: GC

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	1,4-Dichlorobenzene-d4 CAS # 3855-82-1 (Lot PR-30447) Purity 99%	2,016.5 µg/mL	+/- 11.7239 µg/mL Gravimetric +/- 90.8229 µg/mL Unstressed +/- 100.7792 µg/mL Stressed
2	Naphthalene-d8 CAS # 1146-65-2 (Lot M-2180) Purity 99%	2,014.7 µg/mL	+/- 11.7138 µg/mL Gravimetric +/- 90.7448 µg/mL Unstressed +/- 100.6926 µg/mL Stressed
3	Acenaphthene-d10 CAS # 15067-26-2 (Lot PR-31822) Purity 99%	2,011.9 µg/mL	+/- 11.6972 µg/mL Gravimetric +/- 90.6157 µg/mL Unstressed +/- 100.5493 µg/mL Stressed
4	Phenanthrene-d10 CAS # 1517-22-2 (Lot PR-32303) Purity 99%	2,015.5 µg/mL	+/- 11.7181 µg/mL Gravimetric +/- 90.7778 µg/mL Unstressed +/- 100.7292 µg/mL Stressed
5	Chrysene-d12 CAS # 1719-03-5 (Lot PR-32210) Purity 99%	2,019.3 µg/mL	+/- 11.7406 µg/mL Gravimetric +/- 90.9520 µg/mL Unstressed +/- 100.9225 µg/mL Stressed
6	Perylene-d12 CAS # 1520-96-3 (Lot PR-31716) Purity 99%	2,019.8 µg/mL	+/- 11.7433 µg/mL Gravimetric +/- 90.9730 µg/mL Unstressed +/- 100.9458 µg/mL Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

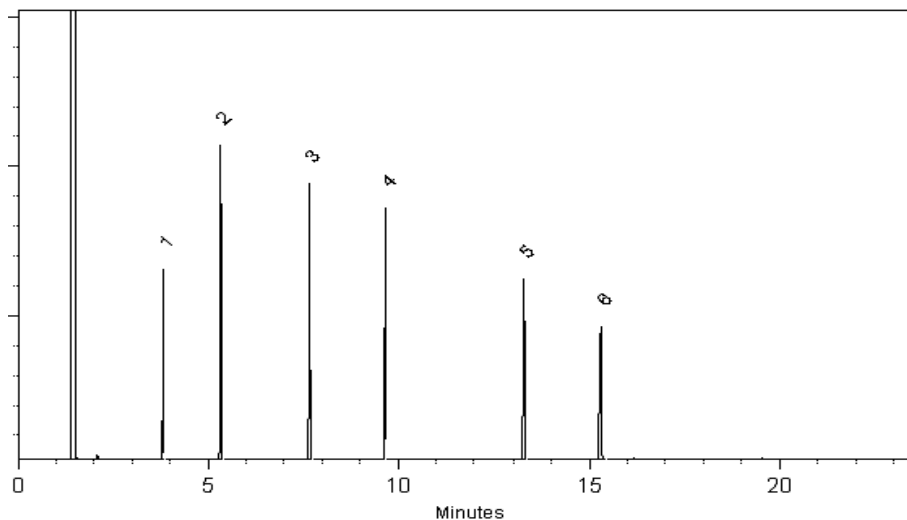
Carrier Gas:
hydrogen-constant pressure 10 psi.

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.


Morgan Craighead - Mix Technician

Date Mixed: 26-May-2022 **Balance:** B442140311


Marlina Cowan - Operations Tech I

Date Passed: 31-May-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:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

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



Phenova Certified Reference Materials are sold by Phenomenex.

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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

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 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%

L00 1648



Reference Material Producer
Certificate No. 2427.02



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.



Chemical Testing Laboratory
Certificate No. 2427.03



Certificate of Analysis



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Pentachlorophenol	87-86-5	1000	± 0.061%

L001648



Reference Material Producer
Certificate No. 2427.02



Manufactured by Phenova, Inc.

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Chemical Testing Laboratory
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1. **Quality Document:** This Certificate of Analysis has been created in accordance with ISO Guide 31¹ and ISO Guide 35.²
2. **Quality Standards:** Phenova is accredited by A2LA to ISO Guide 34³ and ISO/IEC 17025⁴ 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 98⁵ 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 (uLS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$u_{CRM} = k\sqrt{u_M^2 + u_H^2 + u_{LS}^2}$$

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)



Reference Material Producer
Certificate No. 2427.02



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.



Chemical Testing Laboratory
Certificate No. 2427.03

