Analytical Resources, Incorporated
Analytical Chemists and Consultants

21 December 2020

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

RE: Gasco Siltronic

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

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

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

Associated Work Order(s)	Associated SDG ID(s)
20K0073	N/A

Amanda Volgardsen

Digitally signed by Amanda Volgardsen
Date: 2020.12.21 16:06:48 -08'00'

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose 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, Inc.

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.

Amanda Volgardsen Johnson, Project Manager

Cert# 100006-012

ARI Job #: 20K0073

ANCHOR QEA
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

COC ID: ARI-20201029-153609

POC: # Delaney Peterson (360-715-2707)
1605 Cornwall Avenue, Bellingham, WA 98225

Project: GascoSiltronic: US Moorings
Client: NW Natural

Sample Custodian: CO
Lab: Analytical Resources Inc.

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	# Containers	Lab QC*	Test Request	Method	TAT**	Preservative
001	USMPDI-046SC-A-00-01-201029	N	SE	10/29/2020	10:40	1	☐				
								PAHs and Alk. PAHs	SW8270ESIM	30	4°C
								TPH	NWTPHDx	30	
								Total solids (ARI)	SM2540G	30	
002	USMPDI-046SC-A-01-02-201029	N	SE	10/29/2020	10:40	1	☐				
								PAHs and Alk. PAHs	SW8270ESIM	30	4°C
								TPH	NWTPHDx	30	
								Total solids (ARI)	SM2540G	30	
003	USMPDI-046SC-B-11.8-13.8-201029	N	SE	10/29/2020	10:30	1	☐				
								EPH (QAPP C-4)	EPH	30	4°C
								TBT	SW8270ESIM	30	4°C
								Total solids (ARI)	SM2540G	30	
004	USMPDI-046SC-B-13.8-15.8-201029	N	SE	10/29/2020	10:30	1	☐				
								EPH (QAPP C-4)	EPH	30	4°C
								TBT	SW8270ESIM	30	4°C
								Total solids (ARI)	SM2540G	30	
005	USMPDI-046SC-B-15.8-17.8-201029	N	SE	10/29/2020	10:30	1	☐				
								EPH (QAPP C-4)	EPH	30	4°C
								TBT	SW8270ESIM	30	4°C
								Total solids (ARI)	SM2540G	30	
006	USMPDI-046SC-B-3.8-5.8-201029	N	SE	10/29/2020	10:30	1	☐				

Comment:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature [signature]	Signature [signature]	Signature	Signature	Signature	Signature
Print Name Sasha Norwood	Print Name Samantha Colon	Print Name	Print Name	Print Name	Print Name
Company Anchor QEA	Company ARI	Company	Company	Company	Company
Date/Time 30 Oct 20 @ ~~1545~~/1445	Date/Time 11/3/2020 1132	Date/Time	Date/Time	Date/Time	Date/Time

* Lab QC Requested for sample when box is checked ** TAT = Turn Around Time in DAYS # POC = Project Point of Contact

Date Printed: 10/29/2020

ARI Job #: 20K0073

ANCHOR QEA
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

COC ID: ARI-20201029-153609

POC: # Delaney Peterson (360-715-2707)
1605 Cornwall Avenue, Bellingham, WA 98225

Project: GascoSiltronic: US Moorings
Client: NW Natural

Sample Custodian: CO
Lab: Analytical Resources Inc.

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	# Containers	Lab QC*	Test Request	Method	TAT**	Preservative
006	USMPDI-046SC-B-3.8-5.8-201029	N	SE	10/29/2020	10:30	1	☐				
								EPH (QAPP C-4)	EPH	30	4°C
								TBT	SW8270ESIM	30	4°C
								Total solids (ARI)	SM2540G	30	
007	USMPDI-046SC-B-5.8-7.8-201029	N	SE	10/29/2020	10:30	1	☐				
								EPH (QAPP C-4)	EPH	30	4°C
								TBT	SW8270ESIM	30	4°C
								Total solids (ARI)	SM2540G	30	
008	USMPDI-046SC-B-7.8-9.8-201029	N	SE	10/29/2020	10:30	1	☐				
								EPH (QAPP C-4)	EPH	30	4°C
								TBT	SW8270ESIM	30	4°C
								Total solids (ARI)	SM2540G	30	
009	USMPDI-046SC-B-9.8-11.8-201029	N	SE	10/29/2020	10:30	1	☐				
								EPH (QAPP C-4)	EPH	30	4°C
								TBT	SW8270ESIM	30	4°C
								Total solids (ARI)	SM2540G	30	
010	USMPDI-1046SC-B-9.8-11.8-201029	FD	SE	10/29/2020		1	☐				
								EPH (QAPP C-4)	EPH	30	4°C
								TBT	SW8270ESIM	30	4°C
								Total solids (ARI)	SM2540G	30	
011	USMPDI-054SC-D-00-02-201029	N	SE	10/29/2020	14:00	1	☐				

Comment:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Print Name Sasha Norward	Print Name Samantha Colon	Print Name	Print Name	Print Name	Print Name
Company Anchor QEA	Company ARI	Company	Company	Company	Company
Date/Time 30 OCT 20 @ 1445/4/5	Date/Time 11/3/2020 1132	Date/Time	Date/Time	Date/Time	Date/Time

* Lab QC Requested for sample when box is checked ** TAT = Turn Around Time in DAYS # POC = Project Point of Contact

Date Printed: 10/29/2020

ARI Job #: 20K0073

ANCHOR QEA
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

COC ID: ARI-20201029-153609

POC: # Delaney Peterson (360-715-2707)
1605 Cornwall Avenue, Bellingham, WA 98225

Project: GascoSiltronic: US Moorings
Client: NW Natural

Sample Custodian: CO
Lab: Analytical Resources Inc.

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	# Containers	Lab QC*	Test Request	Method	TAT**	Preservative
011	USMPDI-054SC-D-00-02-201029	N	SE	10/29/2020	14:00	1	☐				
								EPH (QAPP C-4)	EPH	30	4°C
								TBT	SW8270ESIM	30	4°C
								Total solids (ARI)	SM2540G	30	
012	USMPDI-054SC-D-02-04-201029	N	SE	10/29/2020	14:00	1	☐				
								EPH (QAPP C-4)	EPH	30	4°C
								TBT	SW8270ESIM	30	4°C
								Total solids (ARI)	SM2540G	30	
013	USMPDI-054SC-D-04-06-201029	N	SE	10/29/2020	14:00	1	☐				
								EPH (QAPP C-4)	EPH	30	4°C
								TBT	SW8270ESIM	30	4°C
								Total solids (ARI)	SM2540G	30	
014	USMPDI-054SC-D-06-08-201029	N	SE	10/29/2020	14:00	1	☐				
								EPH (QAPP C-4)	EPH	30	4°C
								TBT	SW8270ESIM	30	4°C
								Total solids (ARI)	SM2540G	30	
015	USMPDI-054SC-D-08-10-201029	N	SE	10/29/2020	14:00	2	X				
								EPH (QAPP C-4)	EPH	30	4°C
								TBT	SW8270ESIM	30	4°C
								Total solids (ARI)	SM2540G	30	
016	USMPDI-054SC-D-10-12-201029	N	SE	10/29/2020	14:00	1	☐				

Comment:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature [signature]	Signature [signature]	Signature	Signature	Signature	Signature
Print Name Sasha Morrison	Print Name Samantha Colon	Print Name	Print Name	Print Name	Print Name
Company Anchor QEA	Company ARI	Company	Company	Company	Company
Date/Time 30 Oct 16 @ 1345	Date/Time 11/3/2020 1132	Date/Time	Date/Time	Date/Time	Date/Time

* Lab QC Requested for sample when box is checked ** TAT = Turn Around Time in DAYS # POC = Project Point of Contact

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POC: # Delaney Peterson (360-715-2707)
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Client: NW Natural

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Lab: Analytical Resources Inc.

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	# Containers	Lab QC*	Test Request	Method	TAT**	Preservative
016	USMPDI-054SC-D-10-12-201029	N	SE	10/29/2020	14:00	1	☐				
								EPH (QAPP C-4)	EPH	30	4°C
								TBT	SW8270ESIM	30	4°C
								Total solids (ARI)	SM2540G	30	
017	USMPDI-054SC-D-12-14-201029	N	SE	10/29/2020	14:00	1	☐				
								EPH (QAPP C-4)	EPH	30	4°C
								TBT	SW8270ESIM	30	4°C
								Total solids (ARI)	SM2540G	30	
018	USMPDI-054SC-D-14-16-201029	N	SE	10/29/2020	14:00	1	☐				
								EPH (QAPP C-4)	EPH	30	4°C
								TBT	SW8270ESIM	30	4°C
								Total solids (ARI)	SM2540G	30	

Comment:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Print Name Sasha Norwood	Print Name Samantha Colon	Print Name	Print Name	Print Name	Print Name
Company Anchor QEA	Company ARI	Company	Company	Company	Company
Date/Time 10/29/20 @1445	Date/Time 11/2/2020 1132	Date/Time	Date/Time	Date/Time	Date/Time

* Lab QC Requested for sample when box is checked ** TAT = Turn Around Time in DAYS # POC = Project Point of Contact

Date Printed: 10/29/2020

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Anchor

Project Name: Gasco Siltronic : US Moorings

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 20K0073

Tracking No: 7719 7016 6970 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 1132 5.4 3.8 ___ ___ ___ ___

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: D005206

Cooler Accepted by: SC Date: 11/3/2020 Time: 1132

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: Air packs

Was sufficient ice used (if appropriate)? ..... NA YES NO

How were bottles sealed in plastic bags? ..... Individually Grouped Not

Did all bottles arrive in good condition (unbroken)? ..... YES NO

Were all bottle labels complete and legible? ..... YES NO

Did the number of containers listed on COC match with the number of containers received? ..... YES NO

Did all bottle labels and tags agree with custody papers? ..... YES NO

Were all bottles used correct for the requested analyses? ..... YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ... NA YES NO

Were all VOC vials free of air bubbles? ..... NA YES NO

Was sufficient amount of sample sent in each bottle? ..... YES NO

Date VOC Trip Blank was made at ARI..... NA _____

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

Samples Logged by: SC Date: 11/5/2020 Time: 0731 Labels checked by: SC

*** 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:

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Anchor QEA, LLC	Project:	Gasco Siltronic	
1201 3rd Ave, Suite 2600	Project Number:	[none]	**Reported:**
Seattle, WA 98101	Project Manager:	Delaney Peterson	12/21/2020 14:37

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
20K0073-01	USMPDI-046SC-A-00-01-201029	Solid	10/29/20 10:40	11/03/20 11:32
20K0073-02	USMPDI-046SC-A-01-02-201029	Solid	10/29/20 10:40	11/03/20 11:32
20K0073-03	USMPDI-046SC-B-11.8-13.8-201029	Solid	10/29/20 10:30	11/03/20 11:32
20K0073-04	USMPDI-046SC-B-13.8-15.8-201029	Solid	10/29/20 10:30	11/03/20 11:32
20K0073-05	USMPDI-046SC-B-15.8-17.8-201029	Solid	10/29/20 10:30	11/03/20 11:32
20K0073-06	USMPDI-046SC-B-3.8-5.8-201029	Solid	10/29/20 10:30	11/03/20 11:32
20K0073-07	USMPDI-046SC-B-5.8-7.8-201029	Solid	10/29/20 10:30	11/03/20 11:32
20K0073-08	USMPDI-046SC-B-7.8-9.8-201029	Solid	10/29/20 10:30	11/03/20 11:32
20K0073-09	USMPDI-046SC-B-9.8-11.8-201029	Solid	10/29/20 10:30	11/03/20 11:32
20K0073-10	USMPDI-1046SC-B-9.8-11.8-201029	Solid	10/29/20 00:00	11/03/20 11:32
20K0073-11	USMPDI-054SC-D-00-02-201029	Solid	10/29/20 14:00	11/03/20 11:32
20K0073-12	USMPDI-054SC-D-02-04-201029	Solid	10/29/20 14:00	11/03/20 11:32
20K0073-13	USMPDI-054SC-D-04-06-201029	Solid	10/29/20 14:00	11/03/20 11:32
20K0073-14	USMPDI-054SC-D-06-08-201029	Solid	10/29/20 14:00	11/03/20 11:32
20K0073-15	USMPDI-054SC-D-08-10-201029	Solid	10/29/20 14:00	11/03/20 11:32
20K0073-16	USMPDI-054SC-D-10-12-201029	Solid	10/29/20 14:00	11/03/20 11:32
20K0073-17	USMPDI-054SC-D-12-14-201029	Solid	10/29/20 14:00	11/03/20 11:32
20K0073-18	USMPDI-054SC-D-14-16-201029	Solid	10/29/20 14:00	11/03/20 11:32

Anchor QEA, LLC	Project: Gasco Siltronic	
1201 3rd Ave, Suite 2600	Project Number: [none]	**Reported:**
Seattle WA, 98101	Project Manager: Delaney Peterson	21-Dec-2020 14:37

Case Narrative

Sample receipt

Samples as listed on the preceding page were received 03-Nov-2020 11:32 under ARI work order 20K0073. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Alkyl PAH - EPA Method SW8270E-SIM

The samples were extracted and analyzed within the recommended holding times.

Samples USMPDI-046SC-A-00-01-201029 was reanalyzed at a dilution due to "E" flagged concentrations exceeding the upper calibration limits. No further corrective action was taken.

Initial and continuing calibrations were within method requirements, with the exception of SIJ0085-SCV1 which is outside of control limits for Dibenzofuran. No corrective action was taken.

The initial calibration verification (ICV) is outside of control limits high for all LCS "Q" flagged compounds. Associated detected results have been flagged with "Q" qualifiers. No further corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits.

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

A matrix spike and matrix spike duplicate were prepared in conjunction with sample USMPDI-046SC-A-01-02-201029. The matrix spike/matrix spike duplicate percent recoveries and RPD were within QC limits.

Diesel/Heavy Oil Range Organics - WA-Ecology Method NW-TPHDx

The samples were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits.

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

A matrix spike and matrix spike duplicate were prepared in conjunction with sample USMPDI-046SC-A-00-01-201029. The matrix spike/matrix spike duplicate percent recoveries and RPD were within QC limits.

Extractable Organic Hydrocarbons - WA-Ecology

The samples were extracted and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

Anchor QEA, LLC	Project: Gasco Siltronic	
1201 3rd Ave, Suite 2600	Project Number: [none]	**Reported:**
Seattle WA, 98101	Project Manager: Delaney Peterson	21-Dec-2020 14:37

Case Narrative

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limits.

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

A matrix spike and matrix spike duplicate were prepared in conjunction with sample USMPDI-054SC-D-08-10-201029. The matrix spike/matrix spike duplicate percent recoveries and RPD were within QC limits.

Anchor QEA, LLC	Project: Gasco Siltronic	
1201 3rd Ave, Suite 2600	Project Number: [none]	**Reported:**
Seattle WA, 98101	Project Manager: Delaney Peterson	21-Dec-2020 14:37

Case Narrative

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)
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
*	Flagged value is not within established control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-A-00-01-201029

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

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-01 A	SDG:	20K0073
Sampled:	10/29/20 10:40	Prepared:	11/11/20 13:05	File ID:	NT1420121214.D
% Solids:	81.46	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/12/20 21:35
Batch:	BIK0323	Sequence:	SIL0184	Initial/Final:	12.29 g Wet / 0.5 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	DJ00029
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
493-02-7	trans-Decalin	1	5.0	U	0.03	5.0
493-01-6	cis-Decalin	1	5.0	U	0.5	5.0
91-20-3	Naphthalene	1	47.4		0.4	5.0
90-12-0	1-Methylnaphthalene	1	9.7		0.4	5.0
91-57-6	2-Methylnaphthalene	1	20.6		0.4	5.0
92-52-4	Biphenyl	1	7.7		0.3	5.0
581-42-0	2,6-Dimethylnaphthalene	1	18.6		0.4	5.0
208-96-8	Acenaphthylene	1	22.9		0.3	5.0
83-32-9	Acenaphthene	1	140		0.5	5.0
132-64-9	Dibenzofuran	1	11.9		0.4	5.0
2245-38-7	2,3,5-Trimethylnaphthalene	1	12.3		0.4	5.0
86-73-7	Fluorene	1	63.7		0.5	5.0
95-15-8	Benzo(b)thiophene	1	4.2	J	0.4	5.0
85-01-8	Phenanthrene	1	531	E	0.9	5.0
120-12-7	Anthracene	1	55.7		0.05	5.0
86-74-8	Carbazole	1	21.8		0.7	5.0
832-69-9	1-Methylphenanthrene	1	46.3		0.5	5.0
206-44-0	Fluoranthene	1	652	E	1.4	5.0
132-65-0	Dibenzothiophene	1	26.9		0.7	5.0
129-00-0	Pyrene	1	808	E	1.0	5.0
56-55-3	Benzo(a)anthracene	1	268		1.4	5.0
218-01-9	Chrysene	1	334		0.7	5.0
205-99-2	Benzo(b)fluoranthene	1	237		0.8	5.0
205-82-3	Benzo(j)fluoranthene	1	148		0.7	5.0
207-08-9	Benzo(k)fluoranthene	1	143		0.8	5.0
	Benzofluoranthenes, Total	1	523		3.0	10.0
197-97-2	Benzo(e)pyrene	1	318		0.6	5.0
50-32-8	Benzo(a)pyrene	1	416		1.0	5.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	238	Q	0.4	5.0
53-70-3	Dibenzo(a,h)anthracene	1	41.7	Q	0.7	5.0

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-A-00-01-201029

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

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-01 A	SDG:	20K0073
Sampled:	10/29/20 10:40	Prepared:	11/11/20 13:05	File ID:	NT1420121214.D
% Solids:	81.46	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/12/20 21:35
Batch:	BIK0323	Sequence:	SIL0184	Initial/Final:	12.29 g Wet / 0.5 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	DJ00029
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
191-24-2	Benzo(g,h,i)perylene	1	408		0.5	5.0
1985-5-0	Perylene	1	181		0.4	5.0
239-35-0	Benzo(b)naphtho(2,1-d)thiophene	1	50.3		5.0	5.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
Naphthalene-d8	149.83	104	69.3	30 - 160	Q
Acenaphthene-d10	149.83	110	73.3	30 - 160	
Phenanthrene-d10	149.83	121	80.8	30 - 160	
Chrysene-d12	149.83	119	79.5	30 - 160	
Perylene-d12	149.83	96.7	64.5	30 - 160	

Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

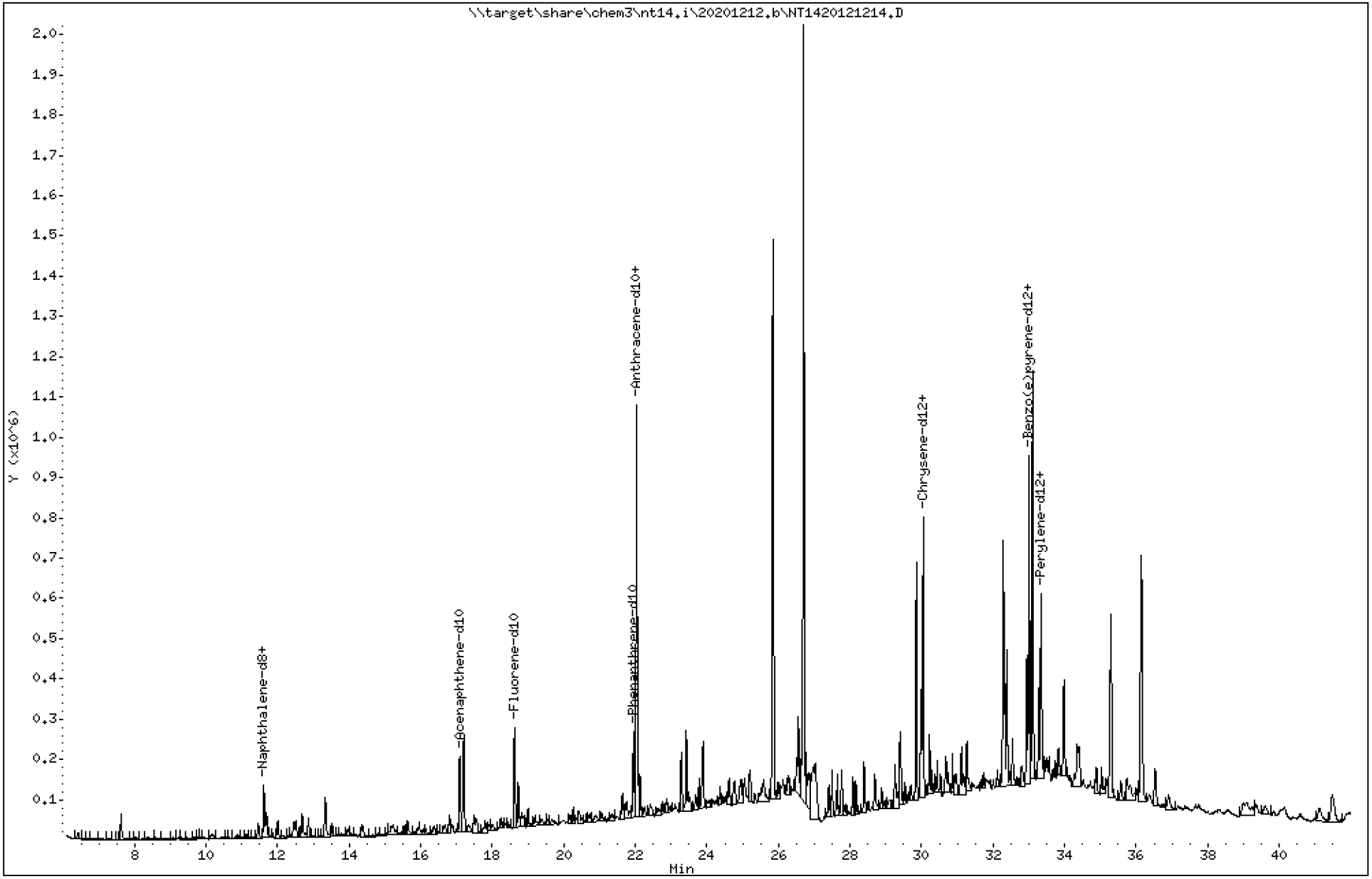
Instrument: nt14.i

Sample Info: 20K0073-01

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D

Date : 12-DEC-2020 21:35

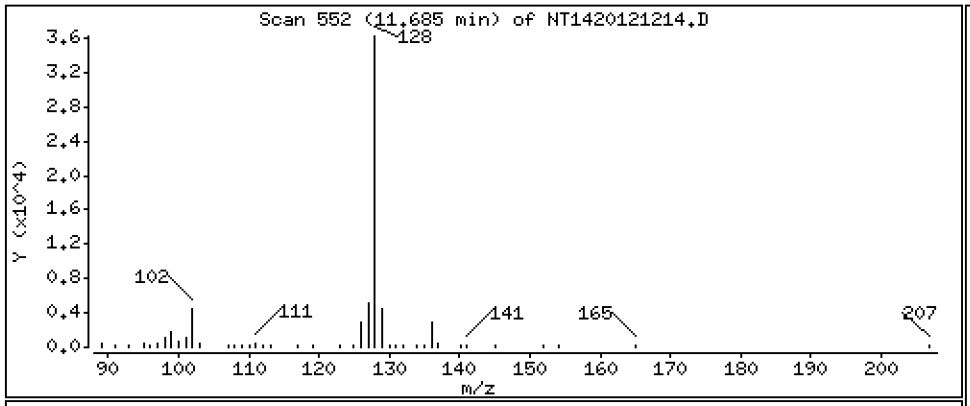
Client ID: Instrument: nt14.i

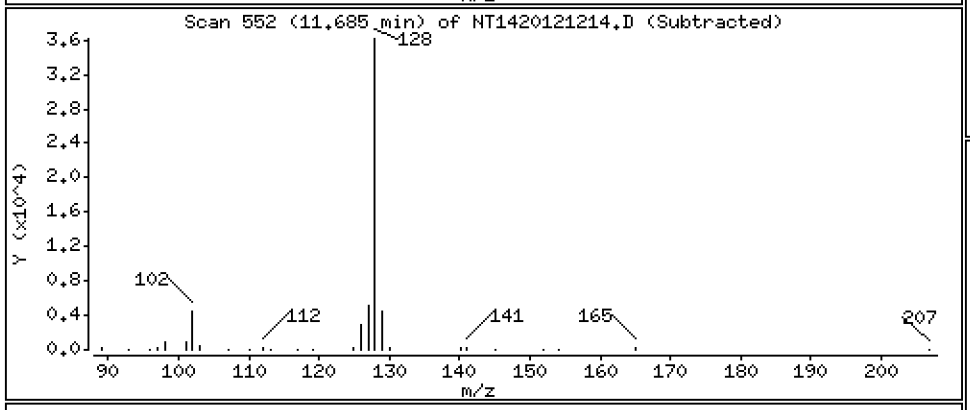
Sample Info: 20K0073-01

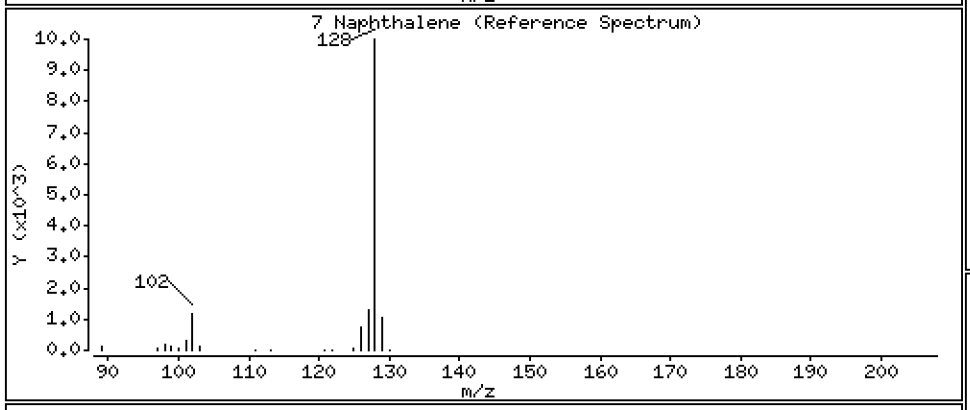
Operator: VTS

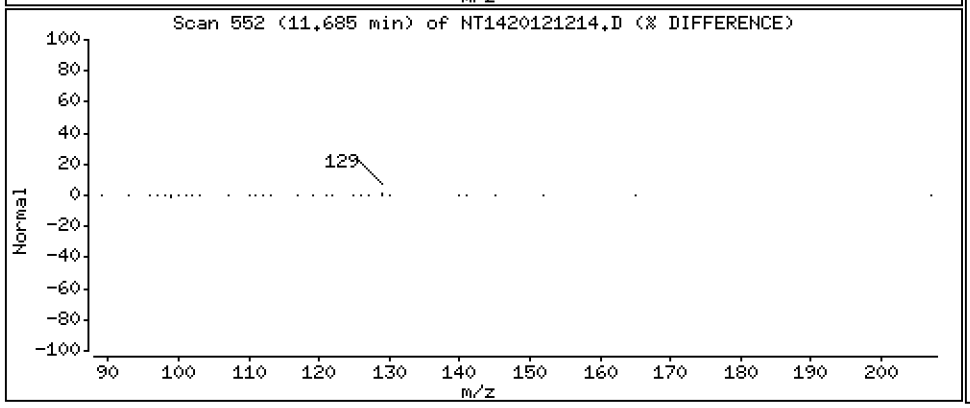
Column phase: Rxi-17Sil MS Column diameter: 0.25

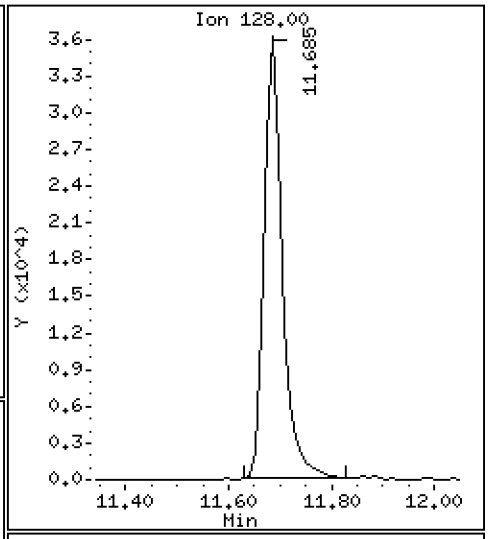
7 Naphthalene Concentration: 0.9493 ug/mL

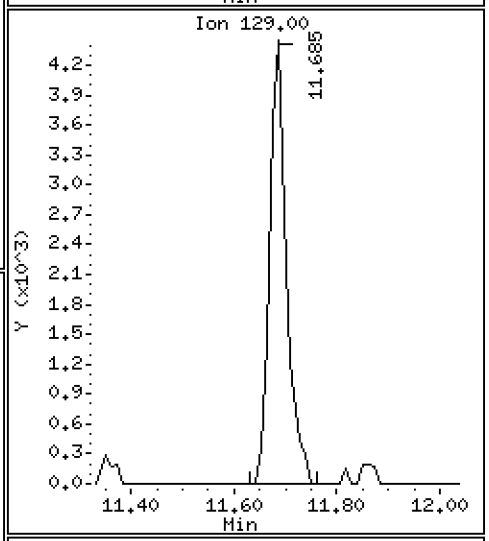


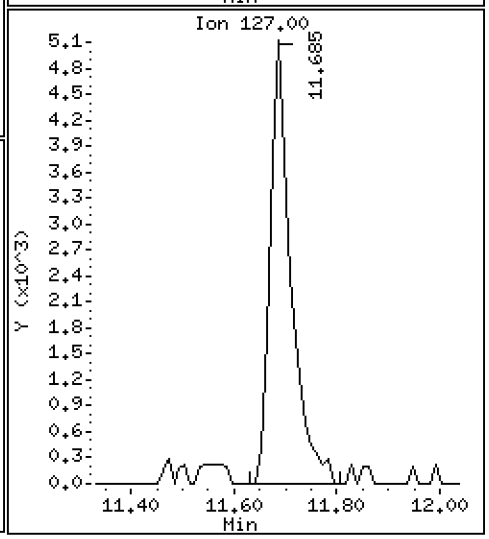












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

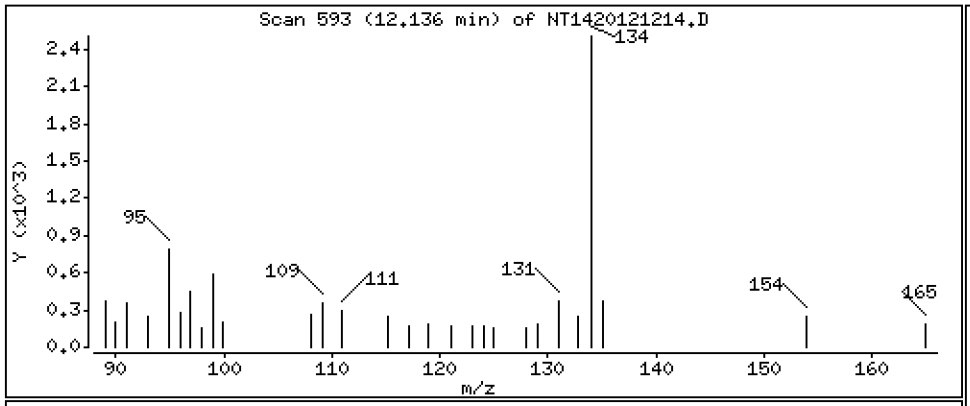
Operator: VTS

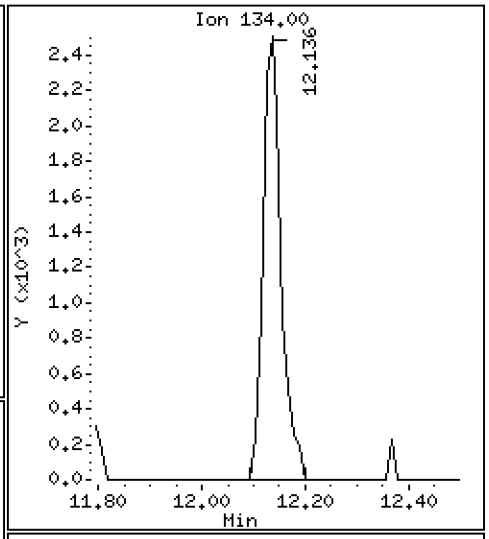
Column phase: Rxi-17Sil MS

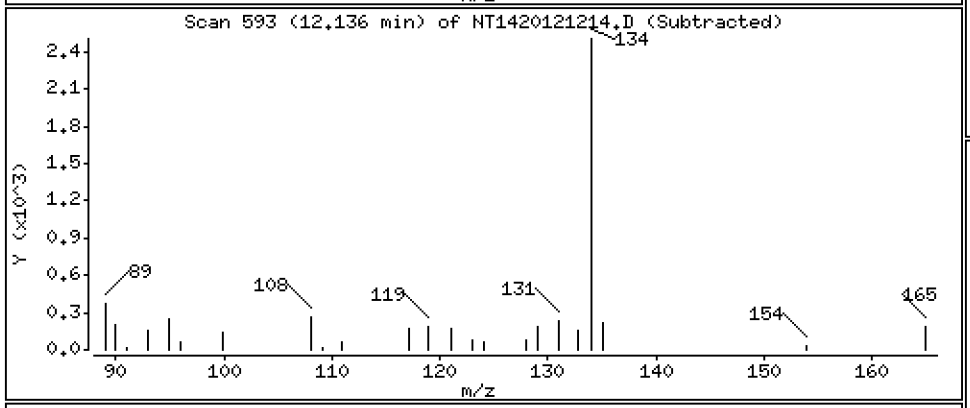
Column diameter: 0.25

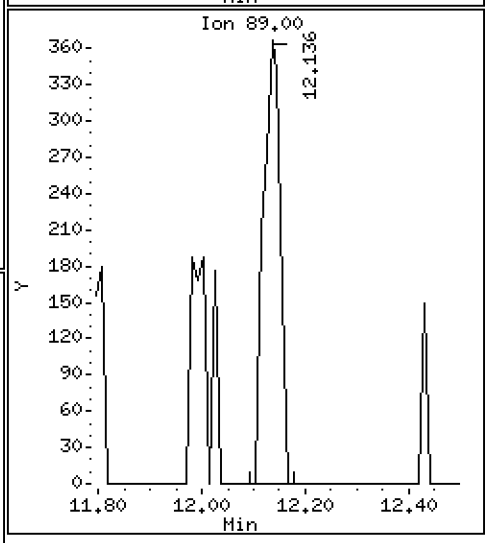
12 Benzo(b)thiophene

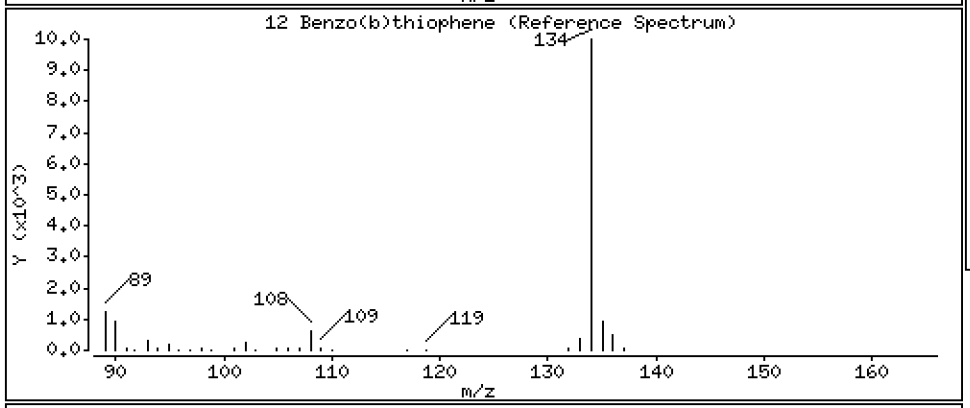
Concentration: 0.08433 ug/mL

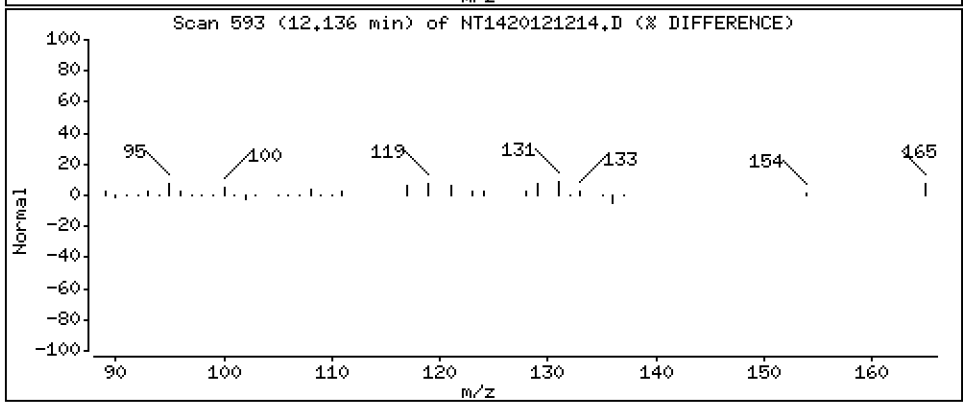












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

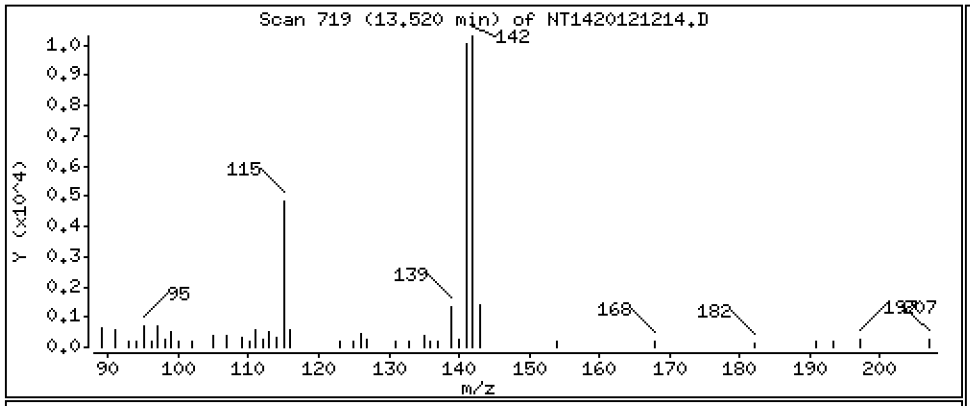
Operator: VTS

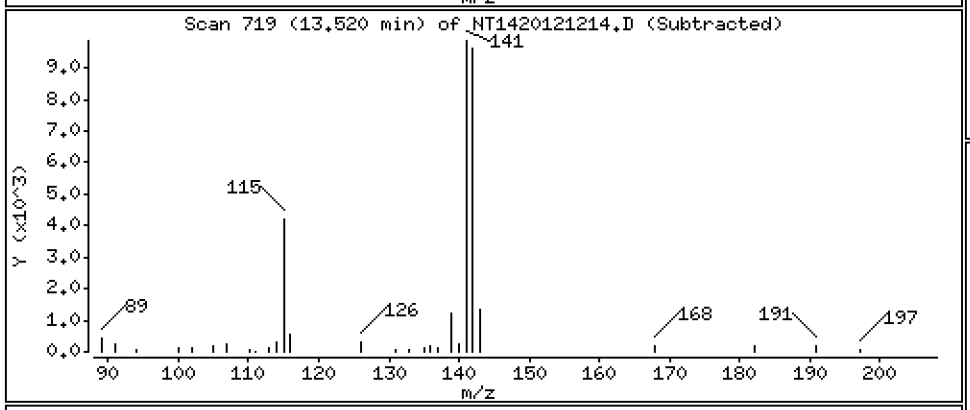
Column phase: Rxi-17Sil MS

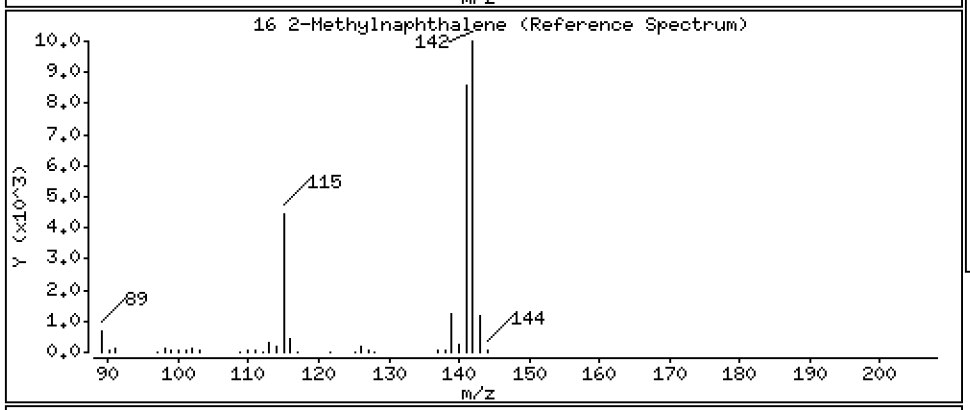
Column diameter: 0.25

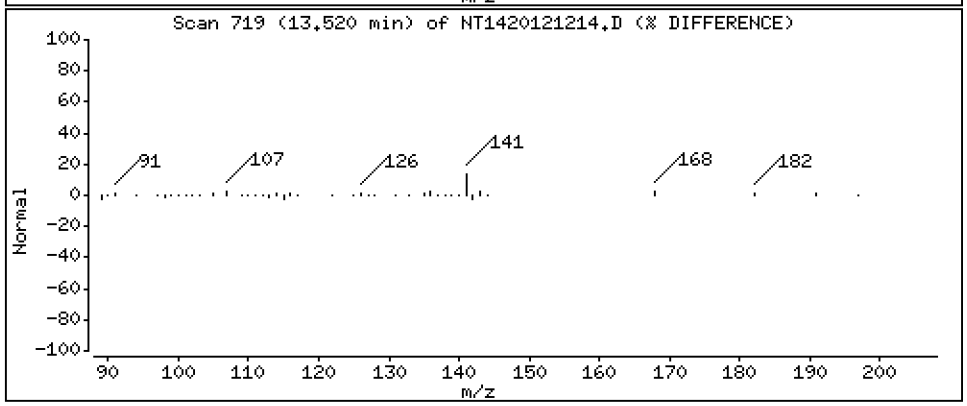
16 2-Methylnaphthalene

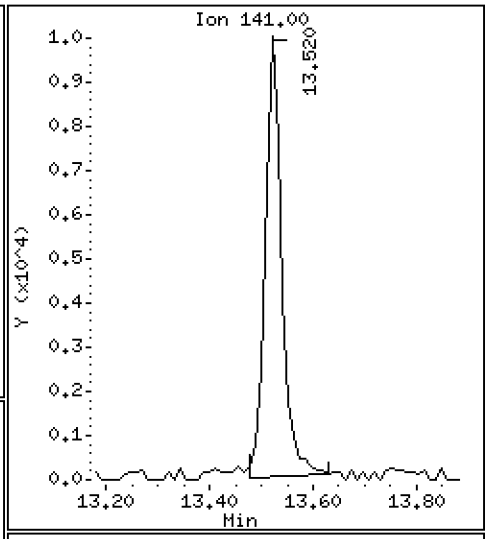
Concentration: 0.4124 ug/mL

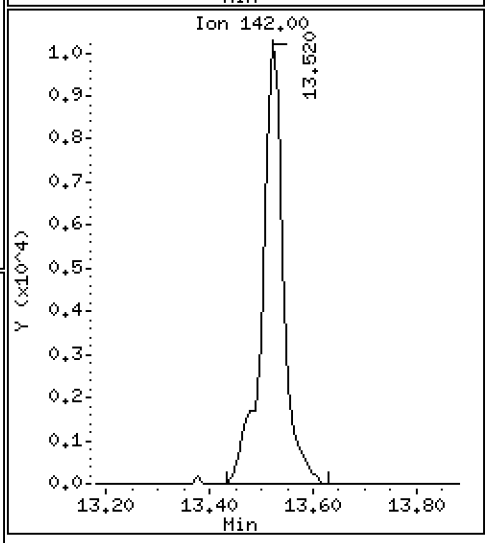












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D

Date : 12-DEC-2020 21:35

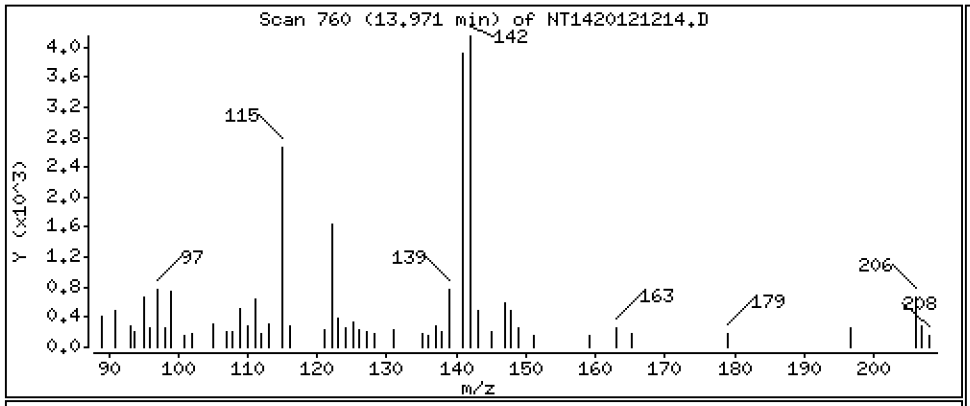
Client ID: Instrument: nt14.i

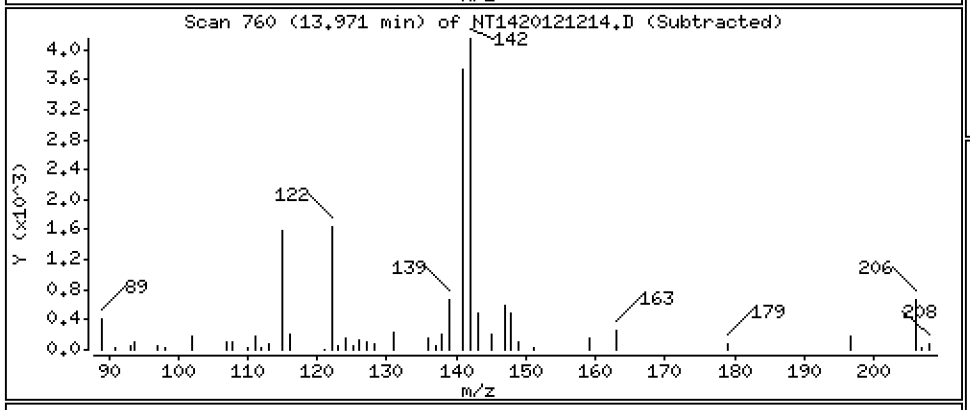
Sample Info: 20K0073-01

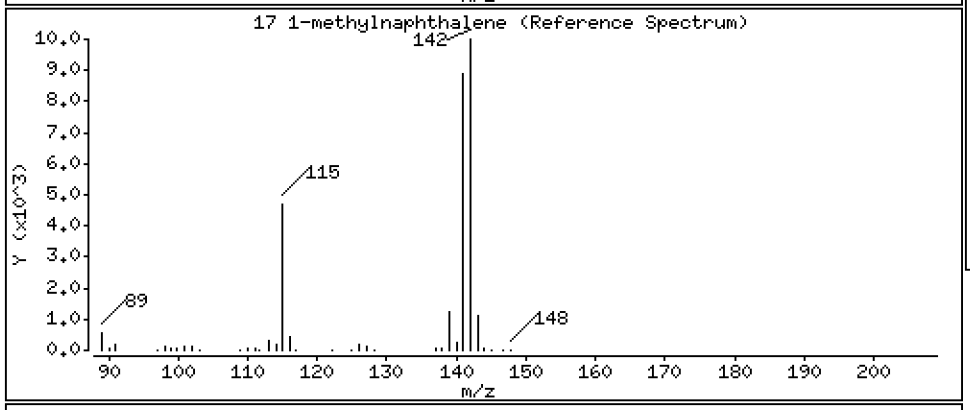
Operator: VTS

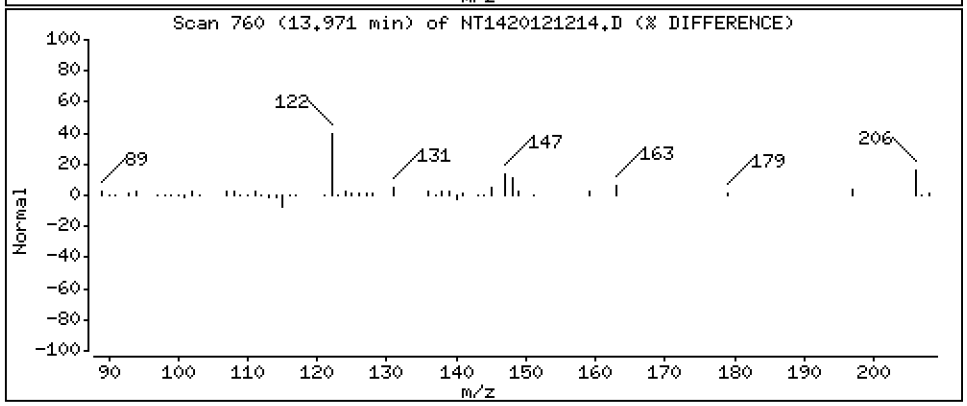
Column phase: Rxi-17Sil MS Column diameter: 0.25

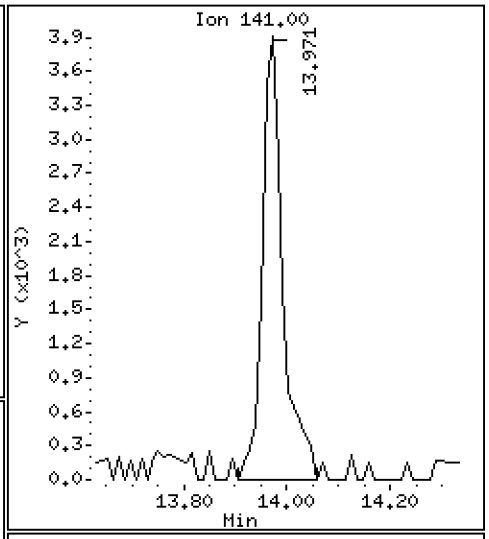
17 1-methylnaphthalene Concentration: 0.1944 ug/mL

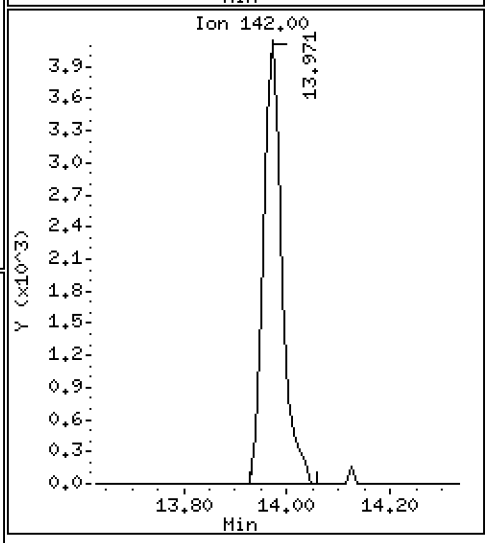












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

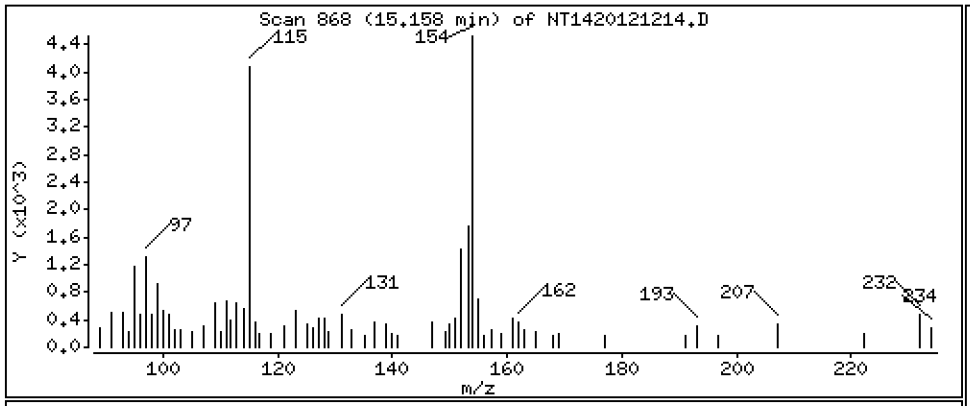
Operator: VTS

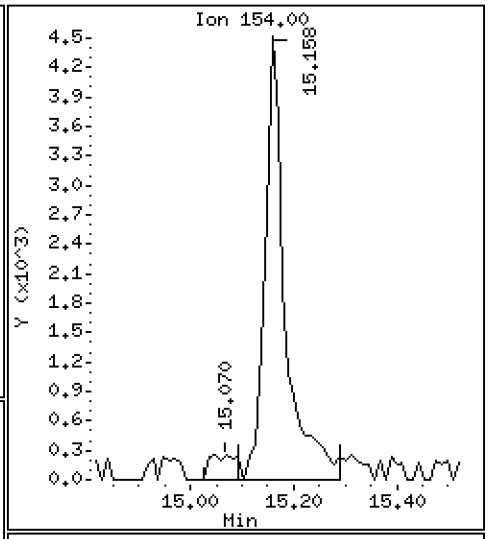
Column phase: Rxi-17Sil MS

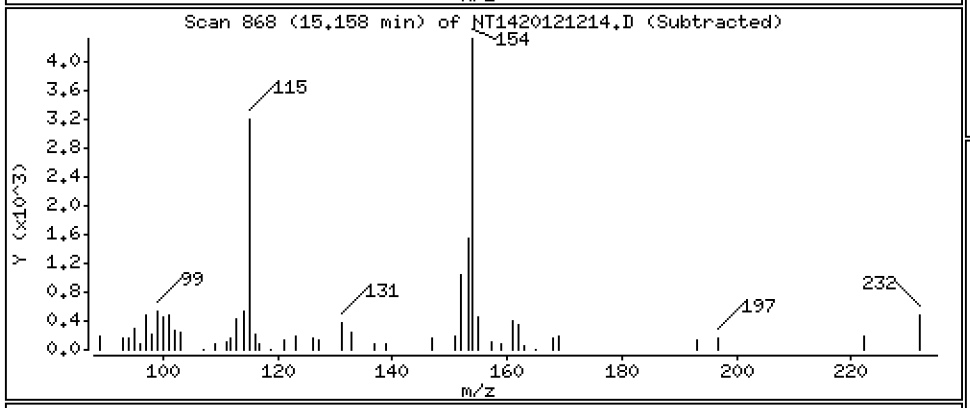
Column diameter: 0.25

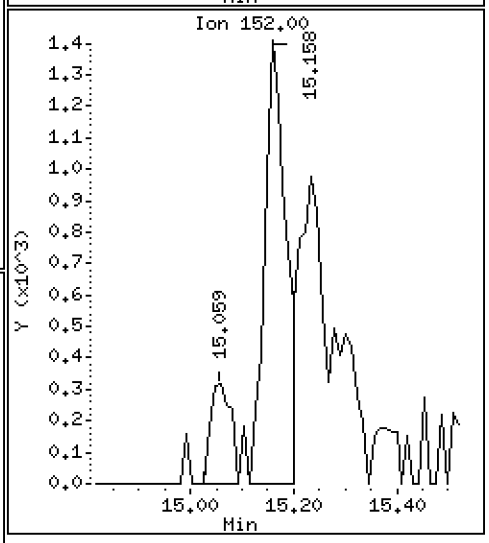
18 Biphenyl

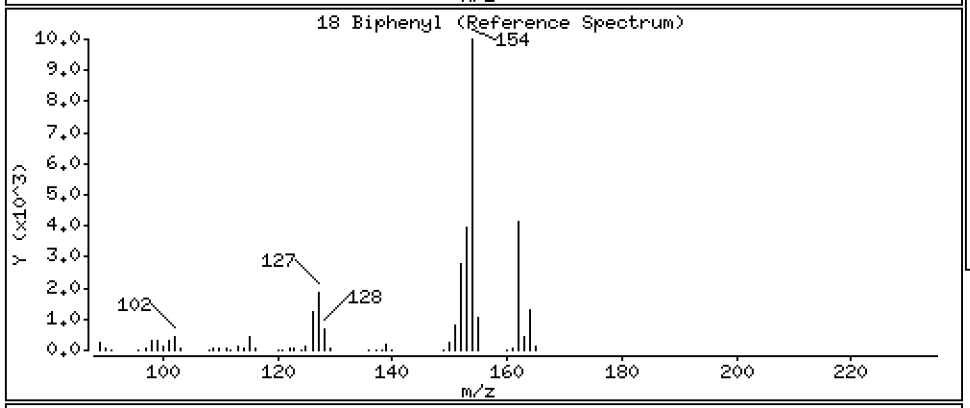
Concentration: 0.1548 ug/mL

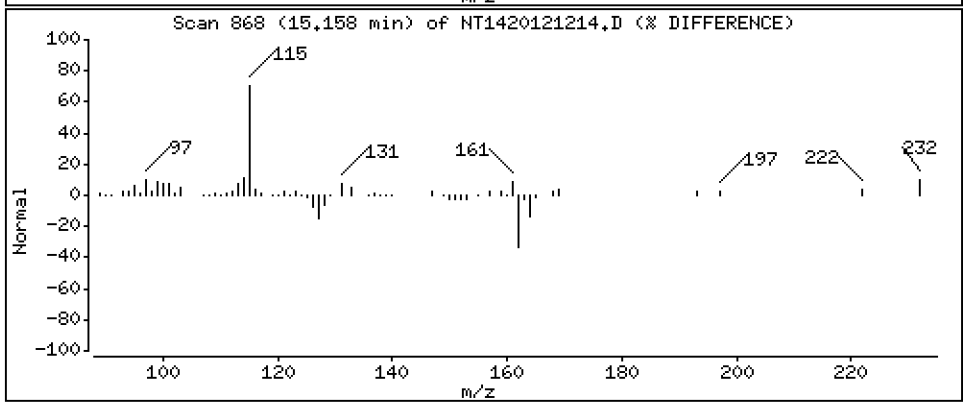












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

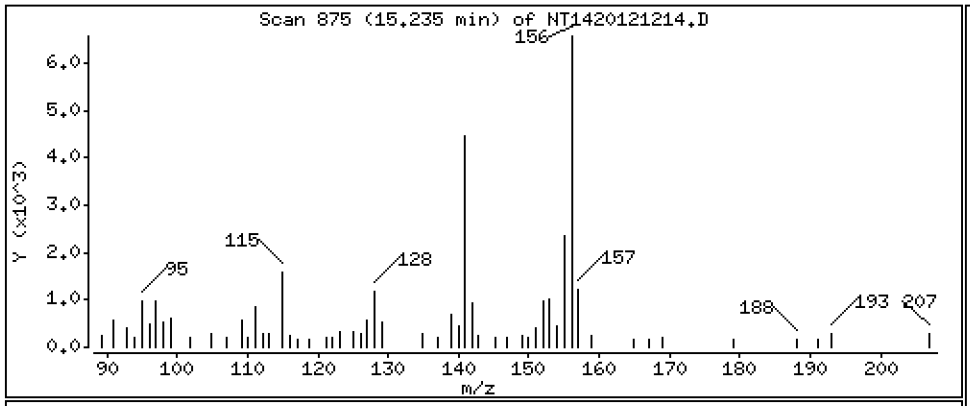
Operator: VTS

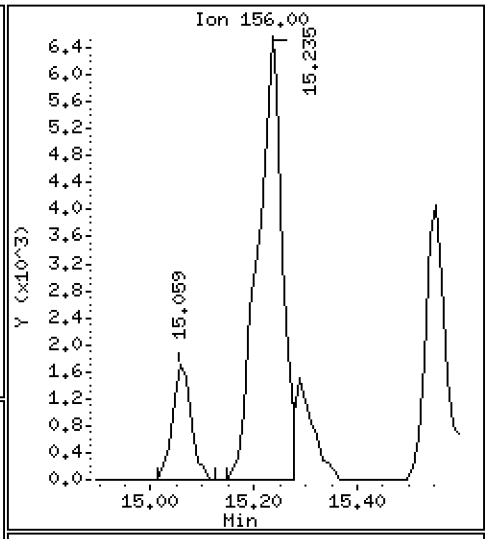
Column phase: Rxi-17Sil MS

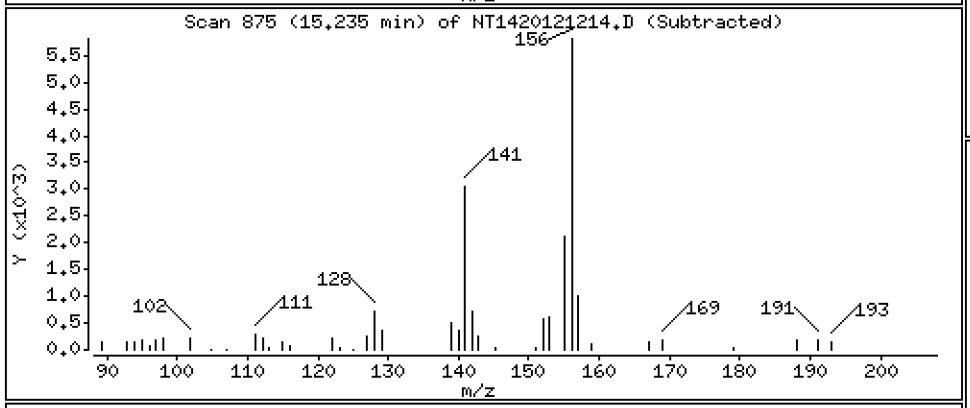
Column diameter: 0.25

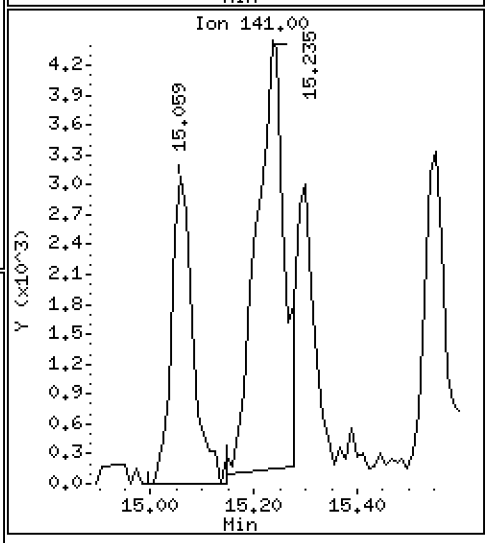
19 2,6-Dimethylnaphthalene

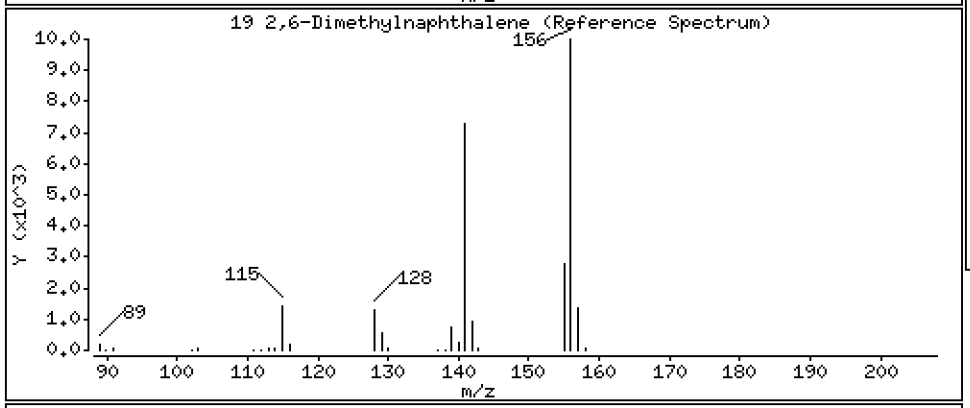
Concentration: 0.3714 ug/mL

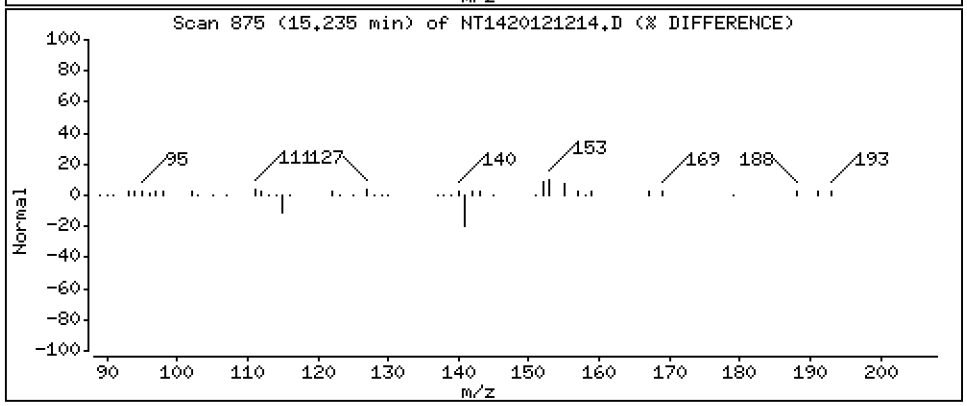












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

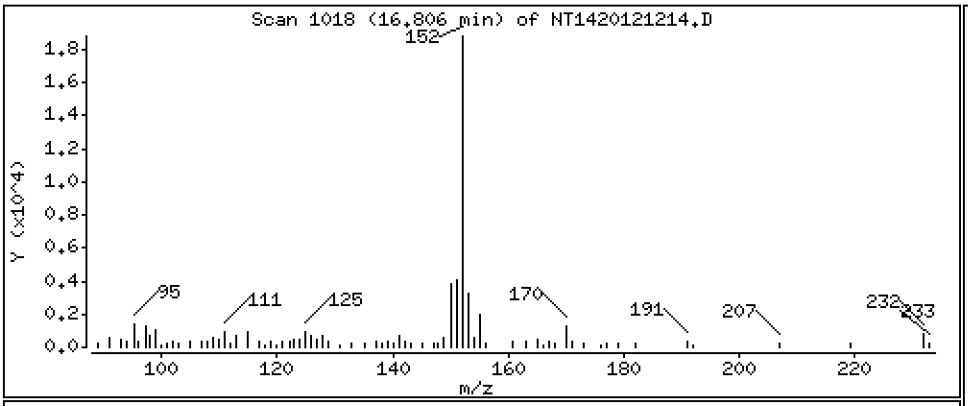
Operator: VTS

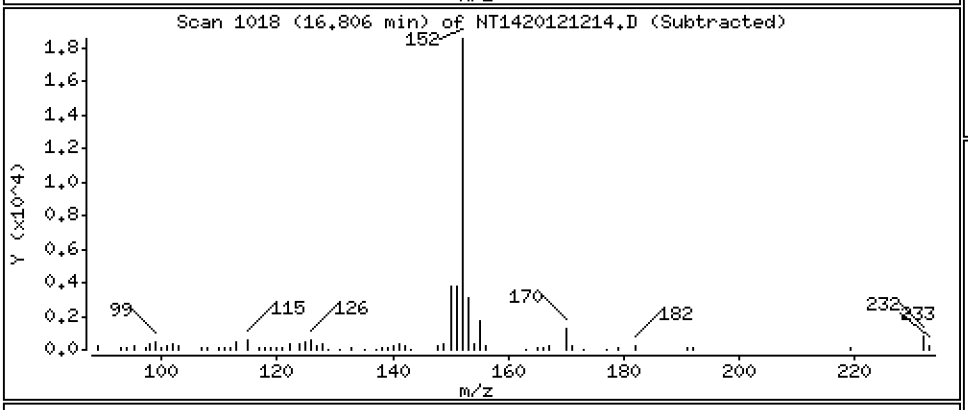
Column phase: Rxi-17Sil MS

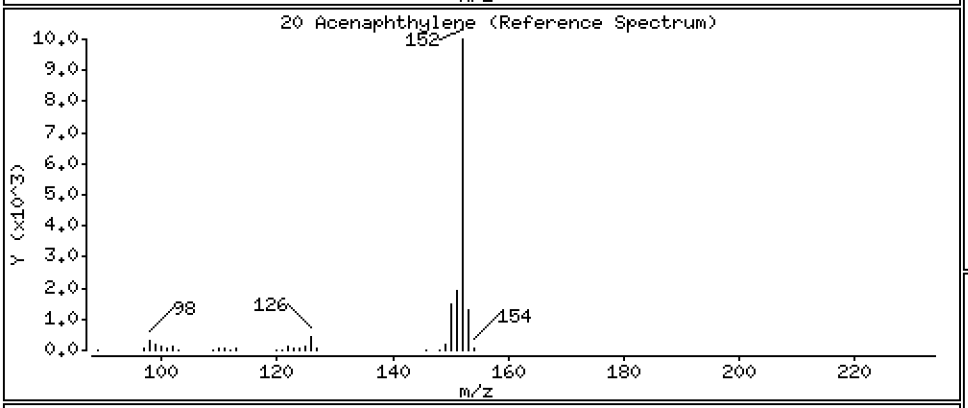
Column diameter: 0.25

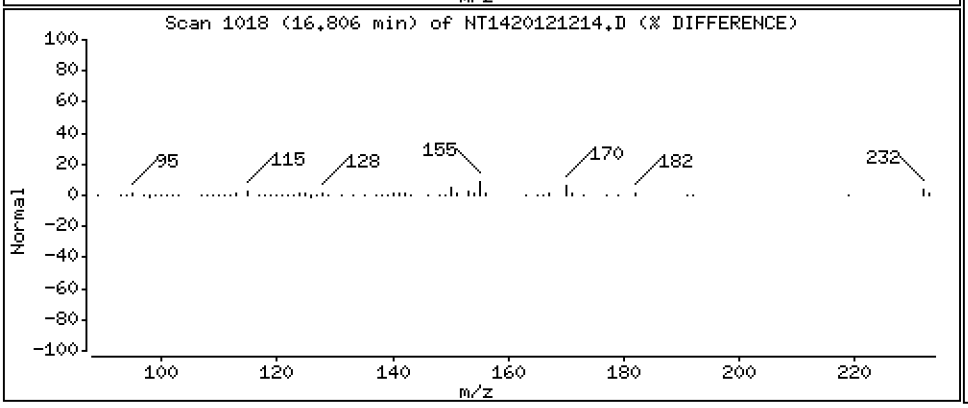
20 Acenaphthylene

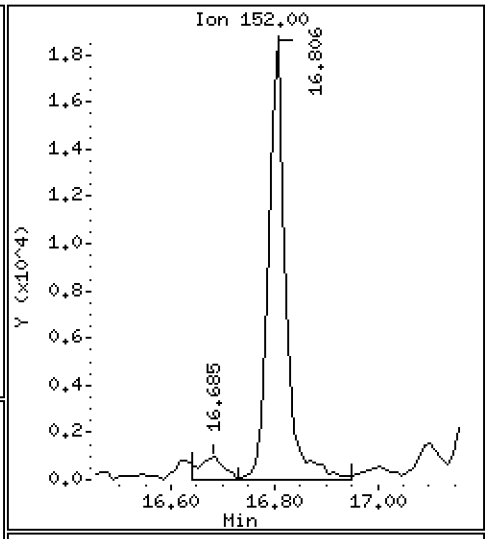
Concentration: 0.4586 ug/mL

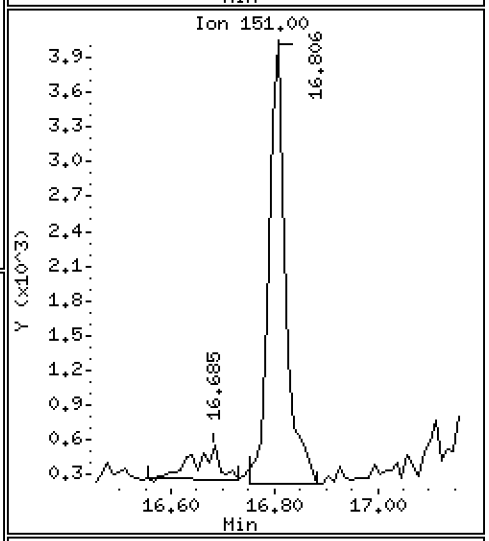


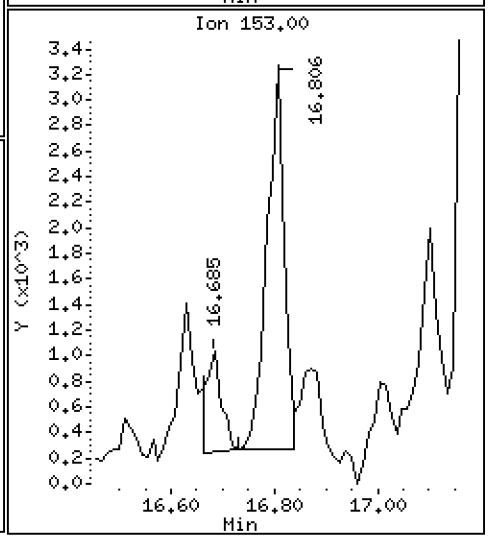












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

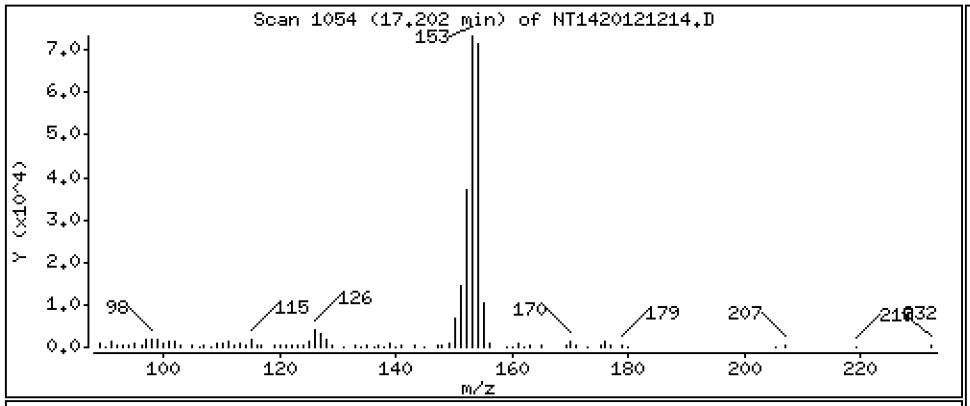
Operator: VTS

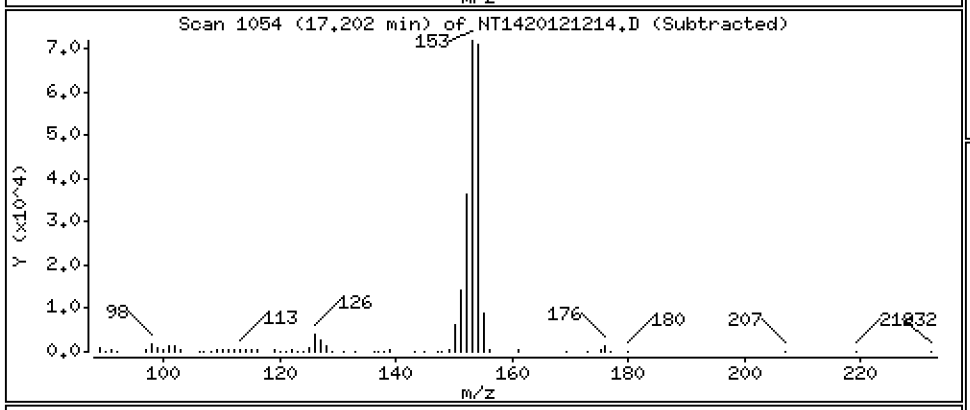
Column phase: Rxi-17Sil MS

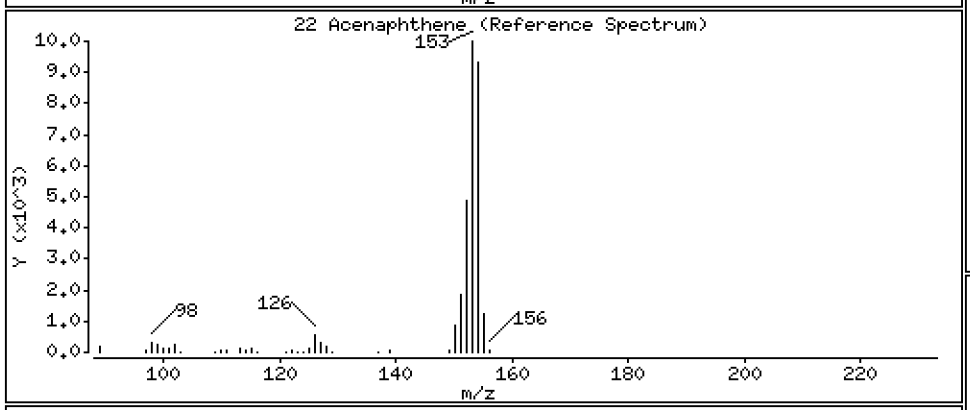
Column diameter: 0.25

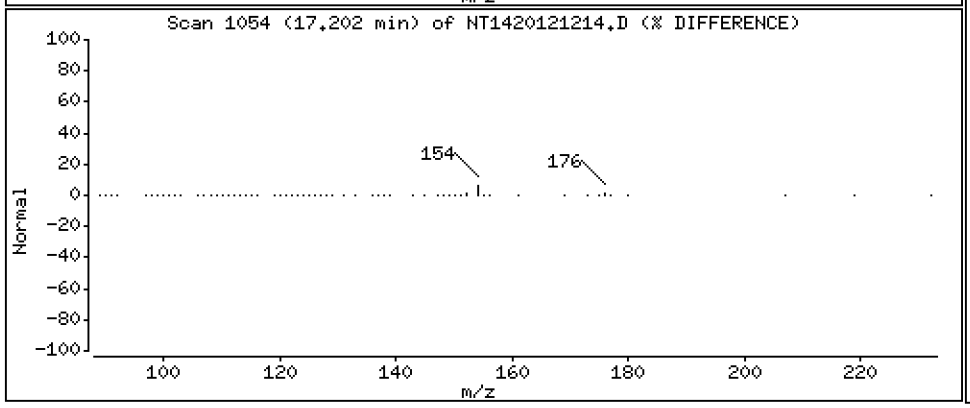
22 Acenaphthene

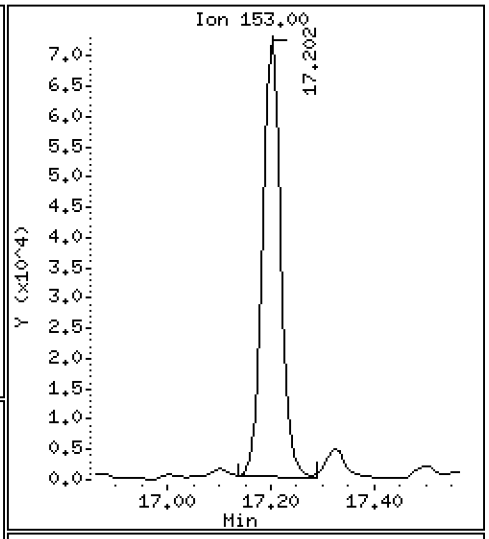
Concentration: 2.799 ug/mL

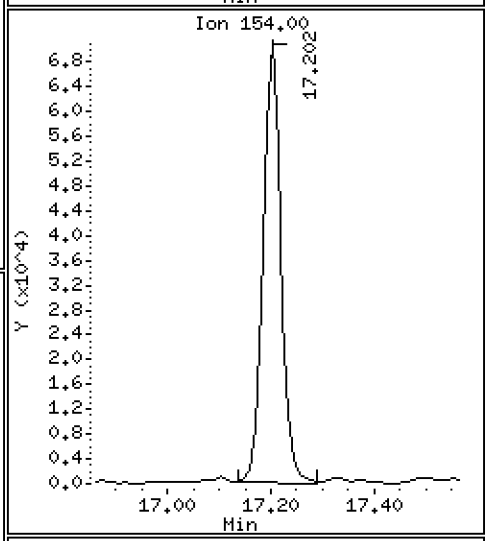


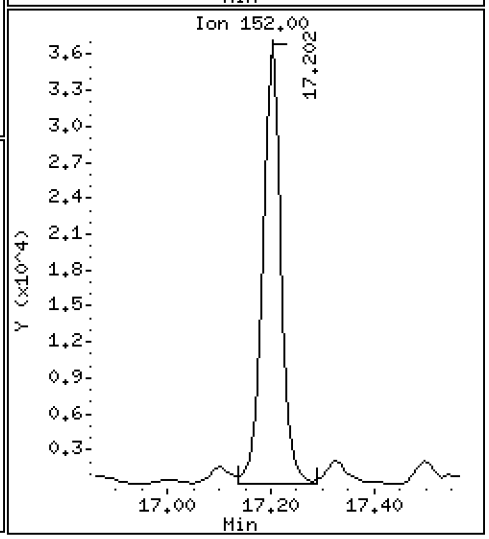












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

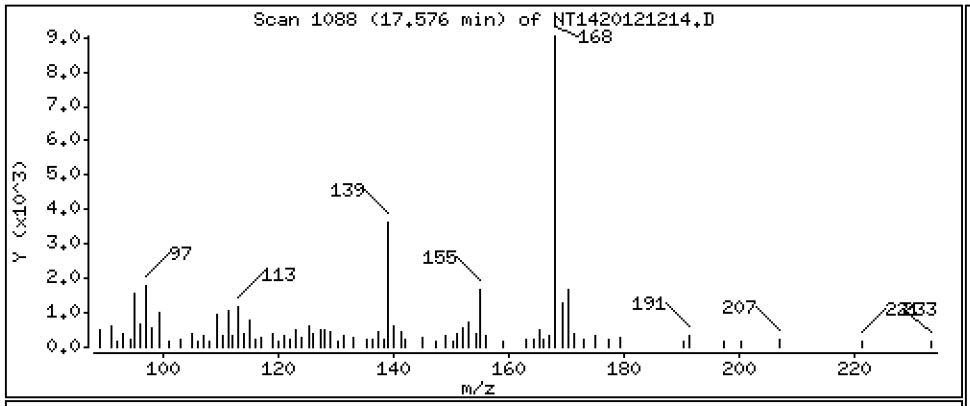
Operator: VTS

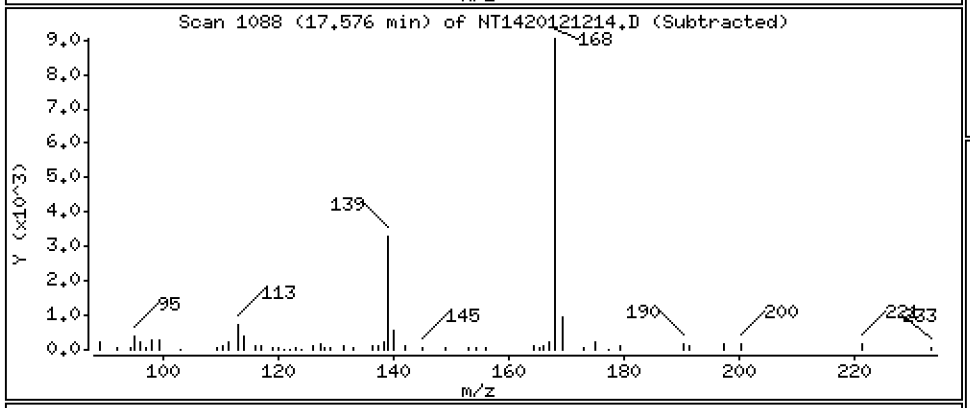
Column phase: Rxi-17Sil MS

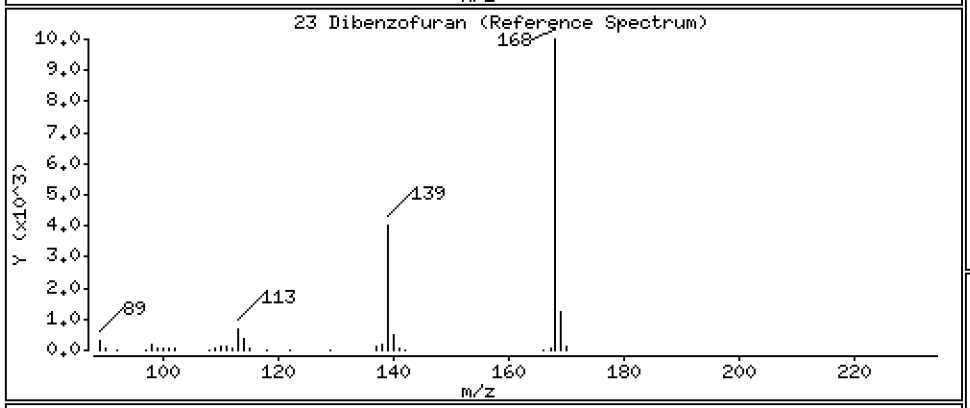
Column diameter: 0.25

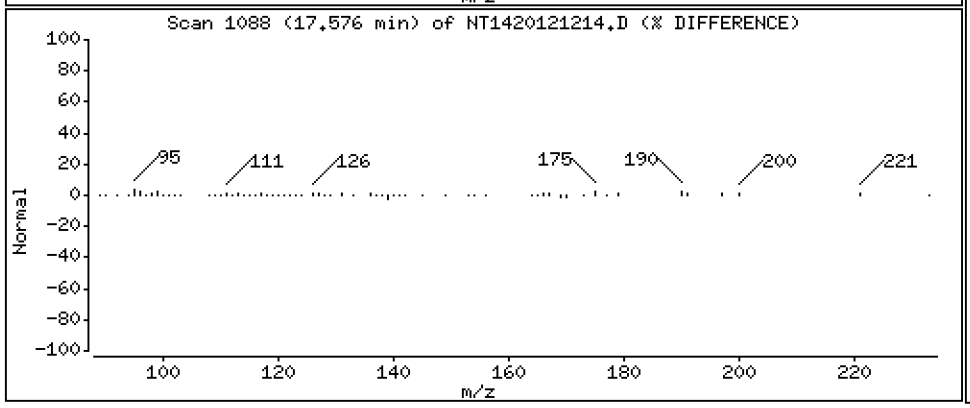
23 Dibenzofuran

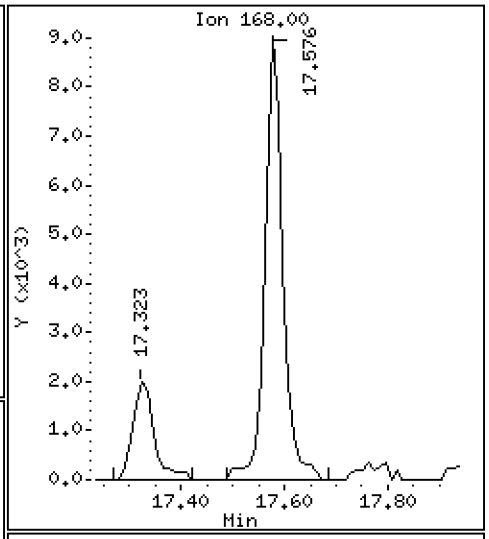
Concentration: 0.2374 ug/mL

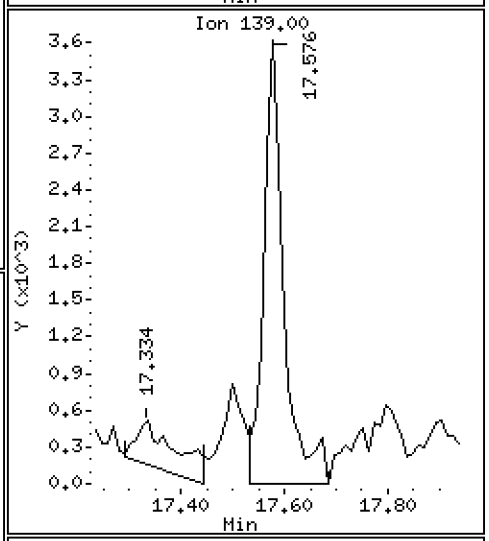


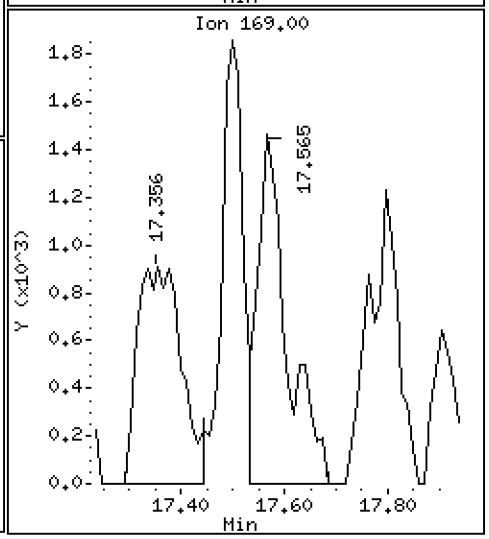












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

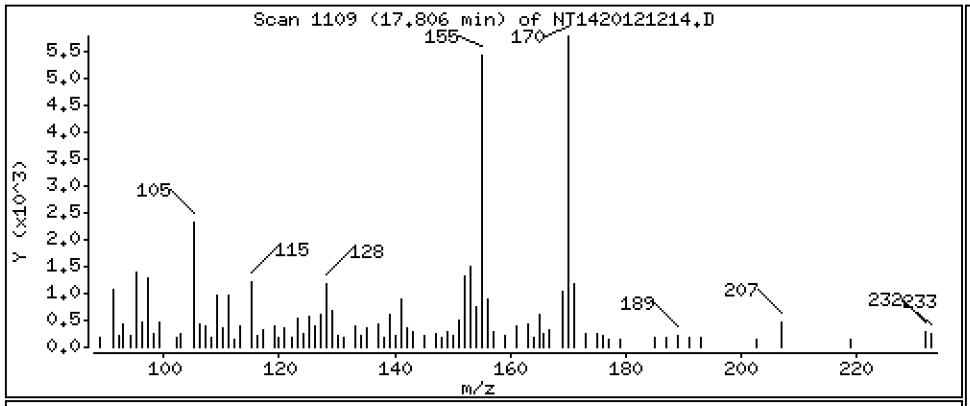
Operator: VTS

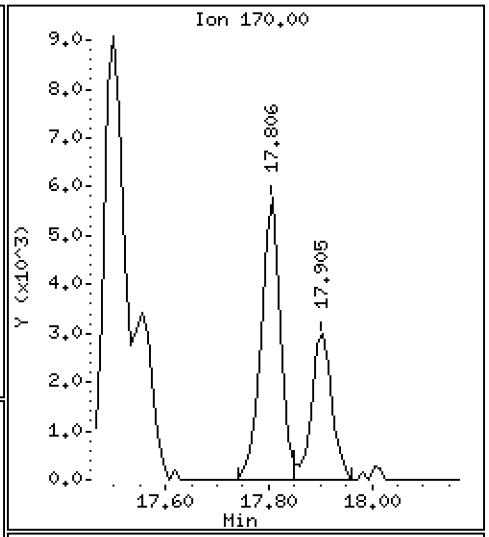
Column phase: Rxi-17Sil MS

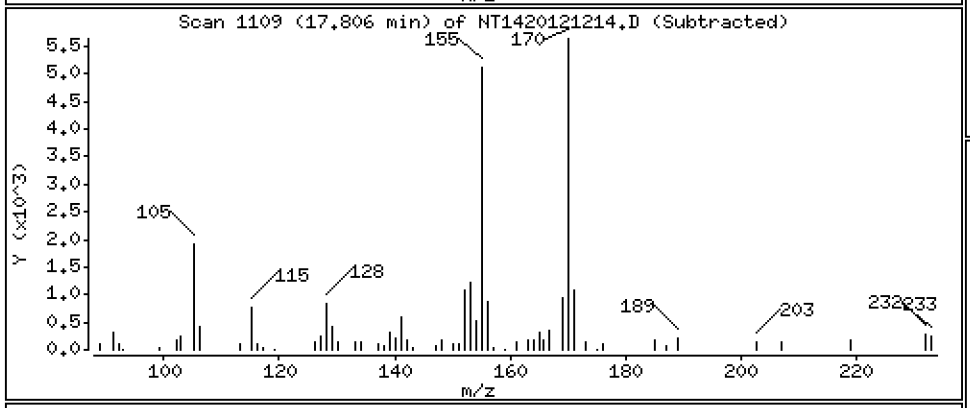
Column diameter: 0.25

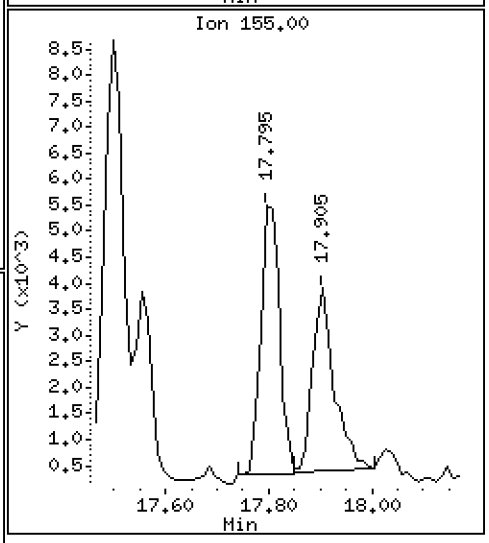
24 1,6,7-Trimethylnaphthalene

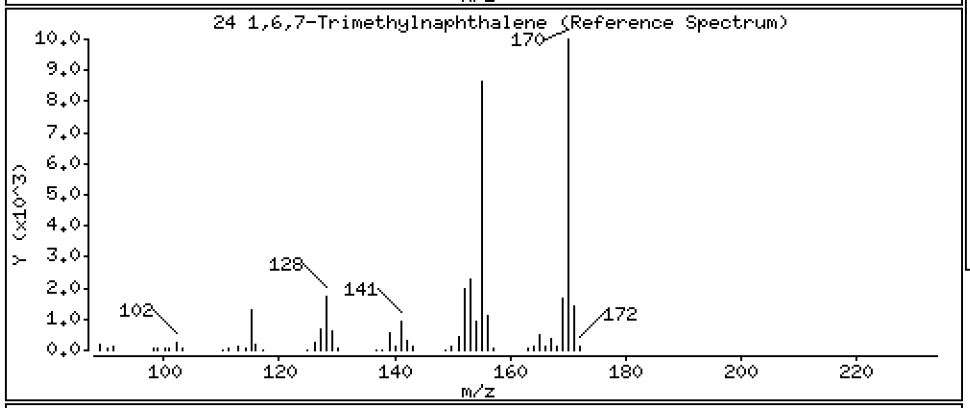
Concentration: 0.2473 ug/mL

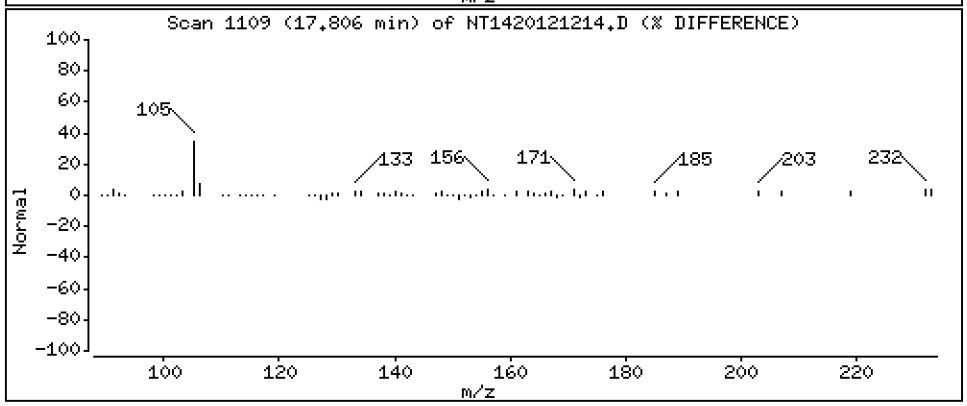












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

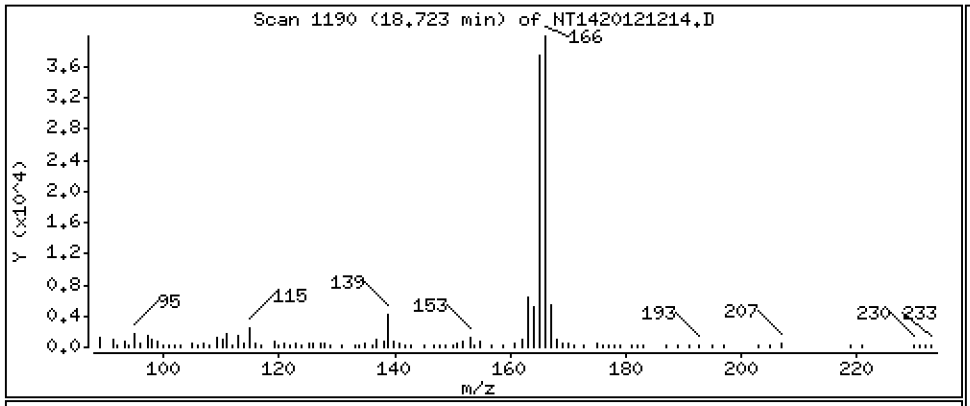
Operator: VTS

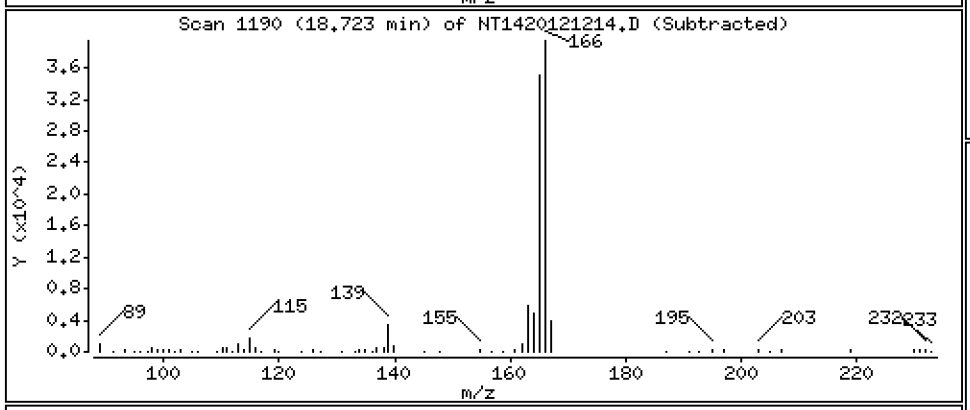
Column phase: Rxi-17Sil MS

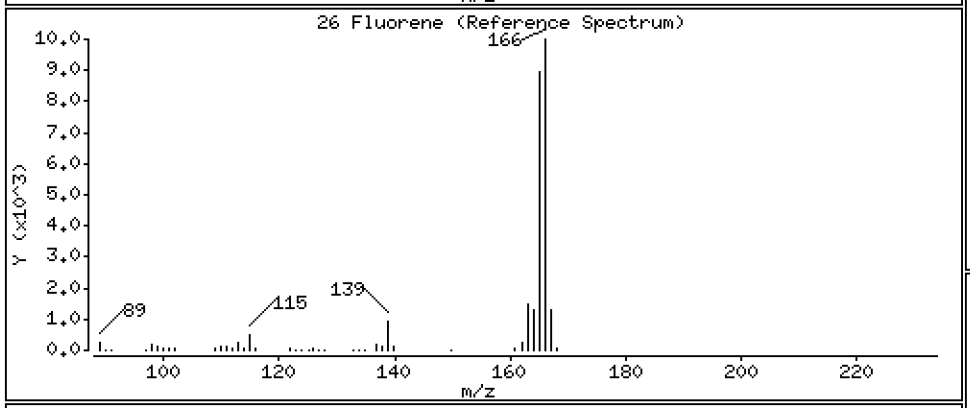
Column diameter: 0.25

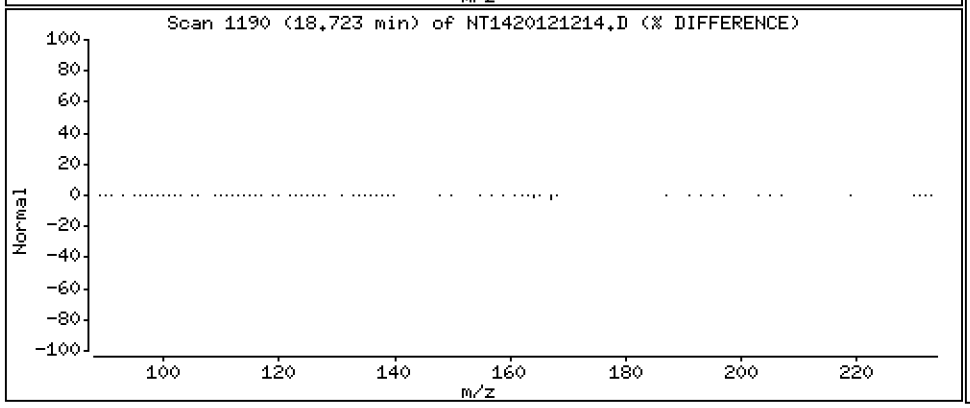
26 Fluorene

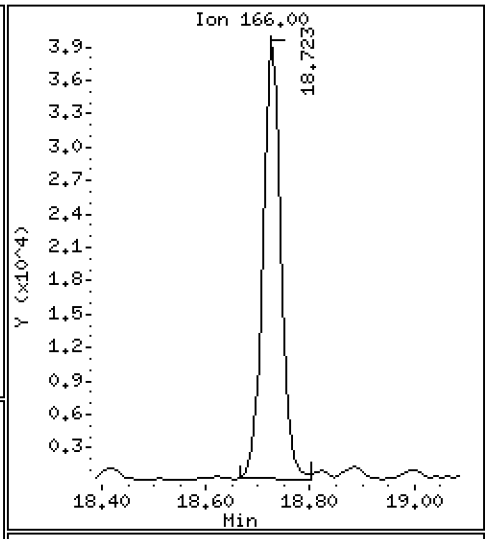
Concentration: 1.276 ug/mL

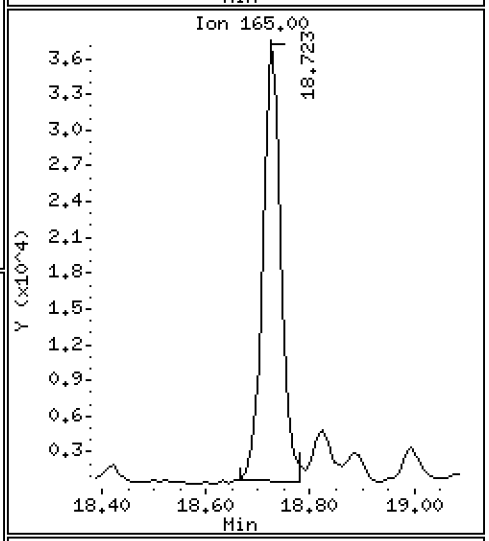


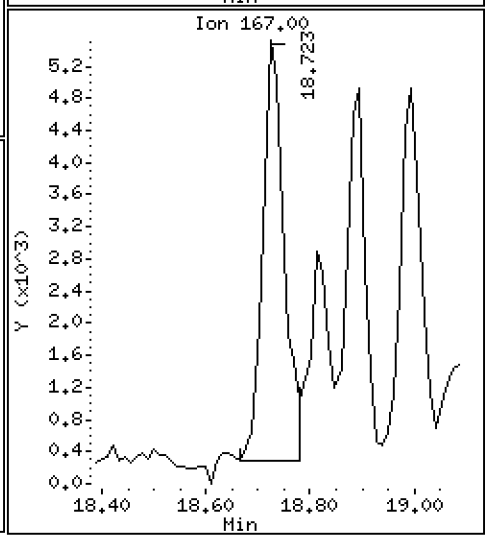












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

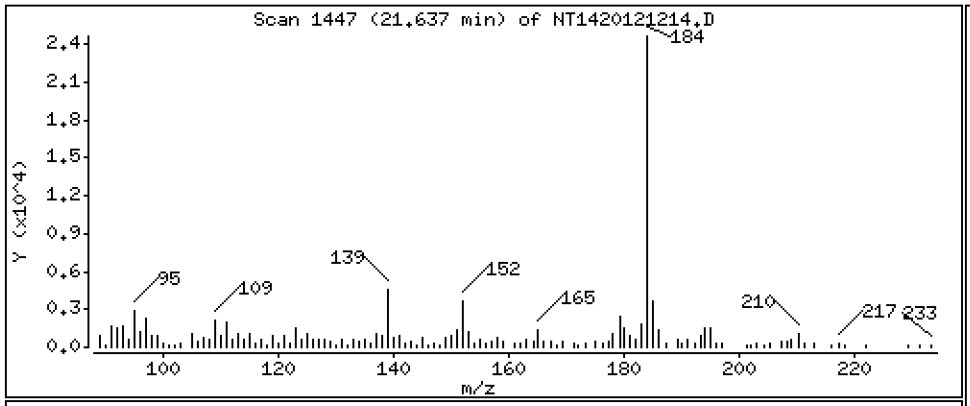
Operator: VTS

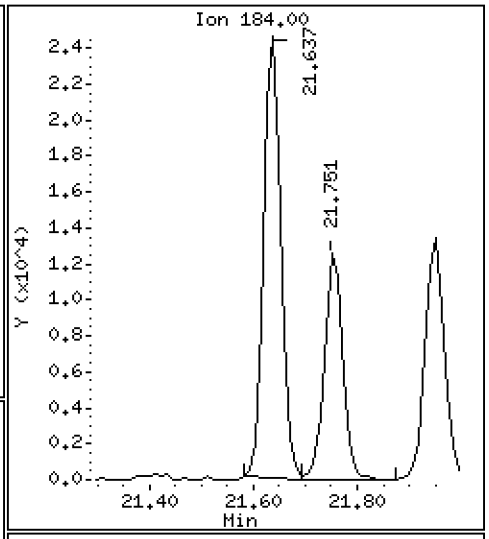
Column phase: Rxi-17Sil MS

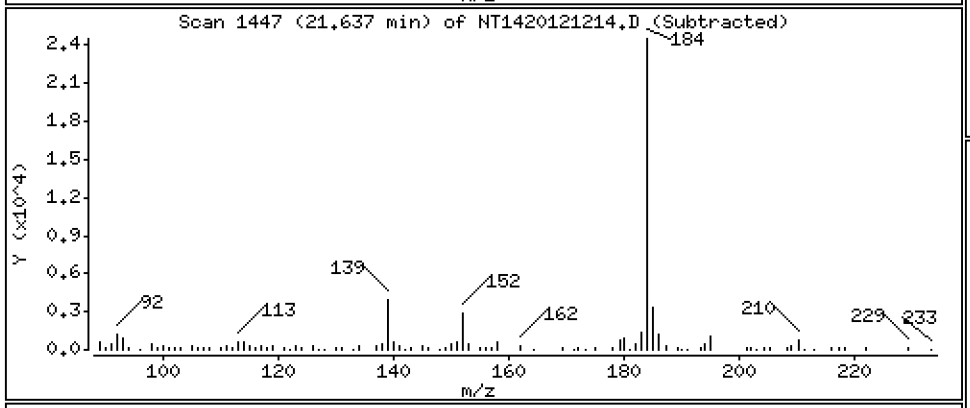
Column diameter: 0.25

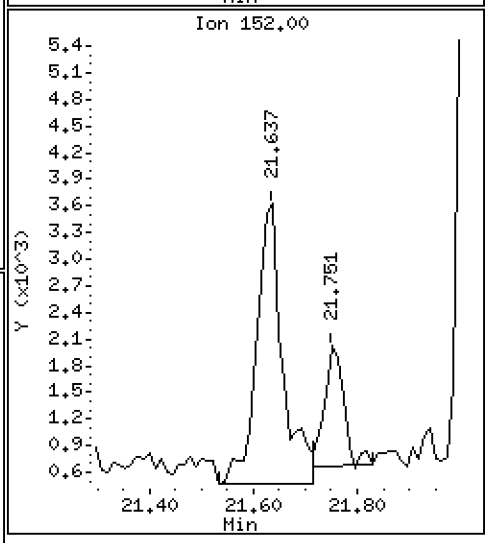
30 Dibenzothiophene

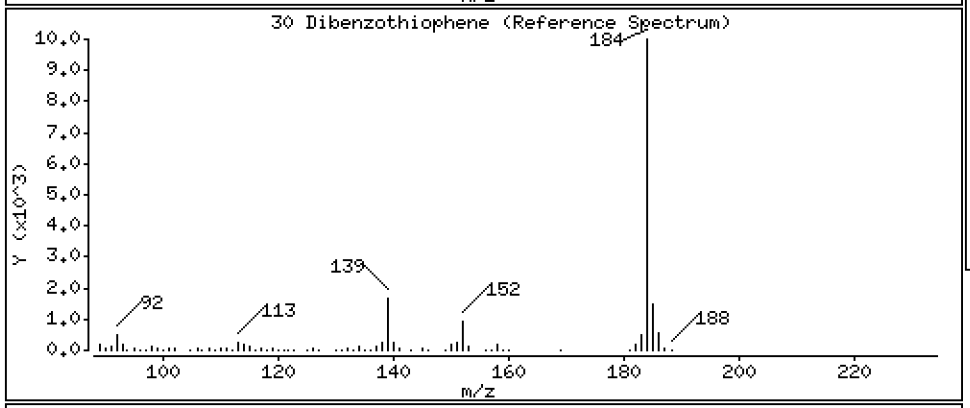
Concentration: 0.5389 ug/mL

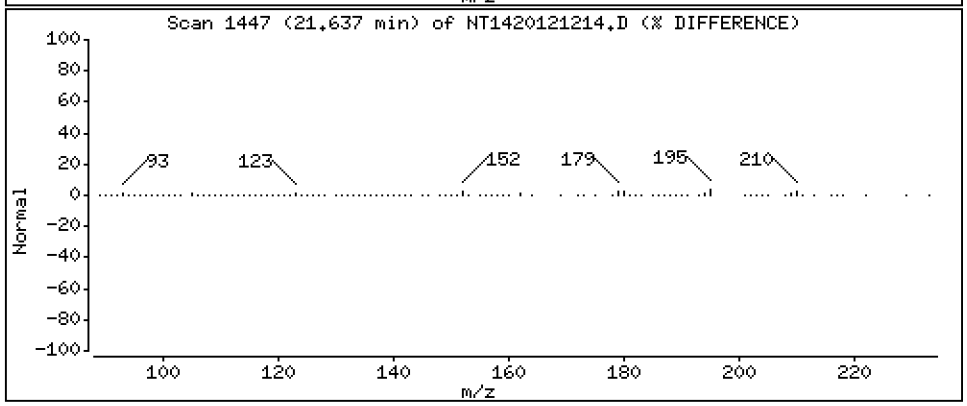












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

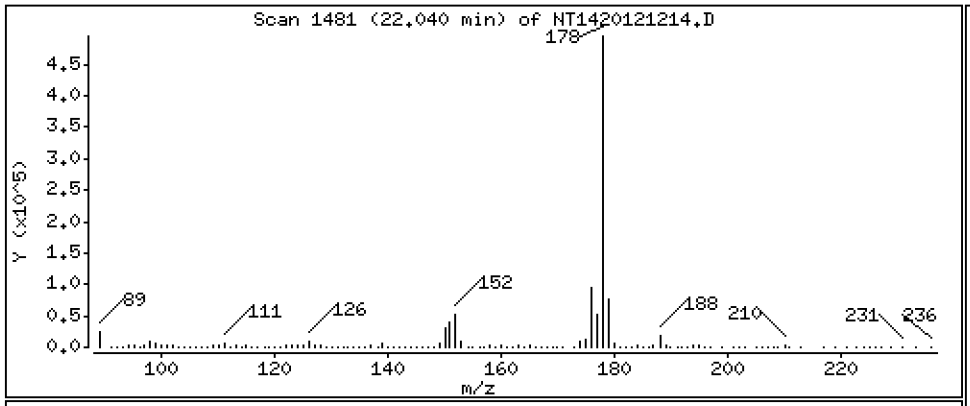
Operator: VTS

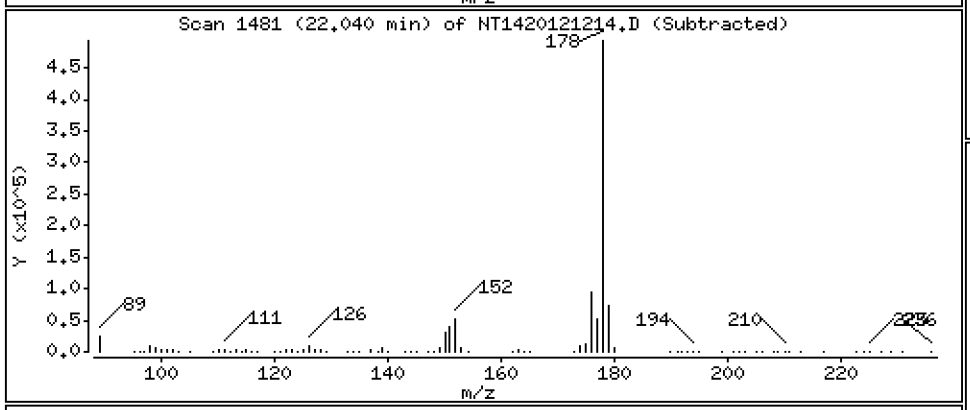
Column phase: Rxi-17Sil MS

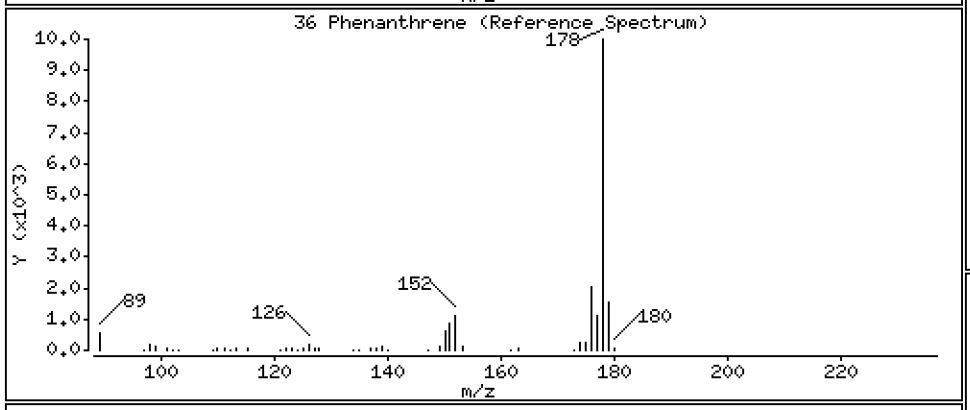
Column diameter: 0.25

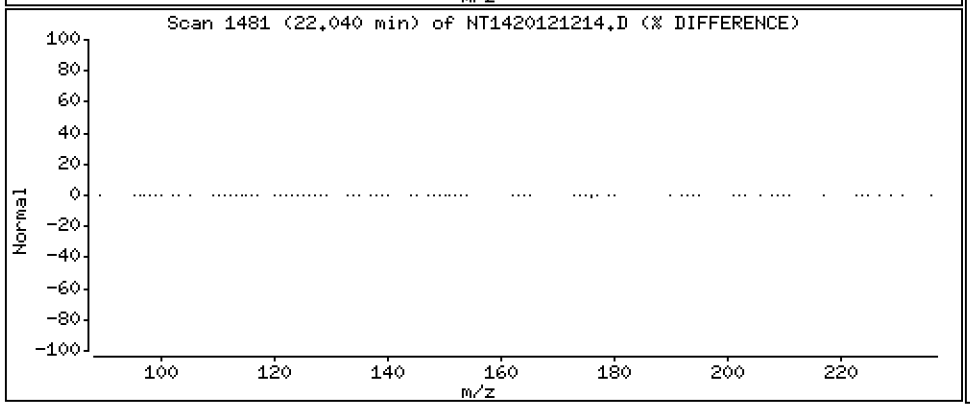
36 Phenanthrene

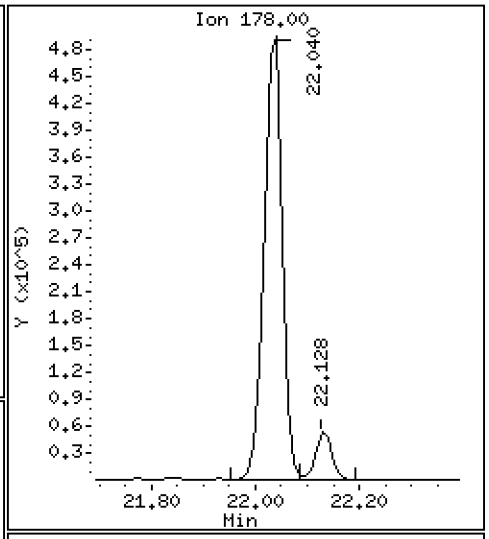
Concentration: 10.63 ug/mL

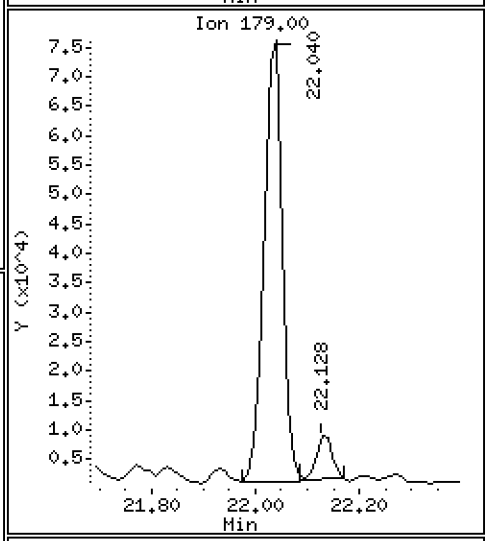


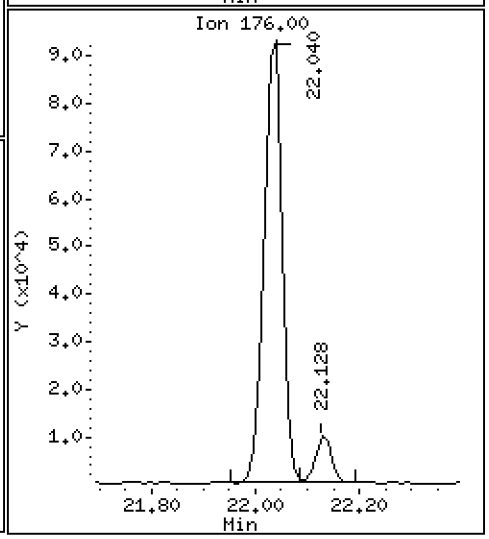












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

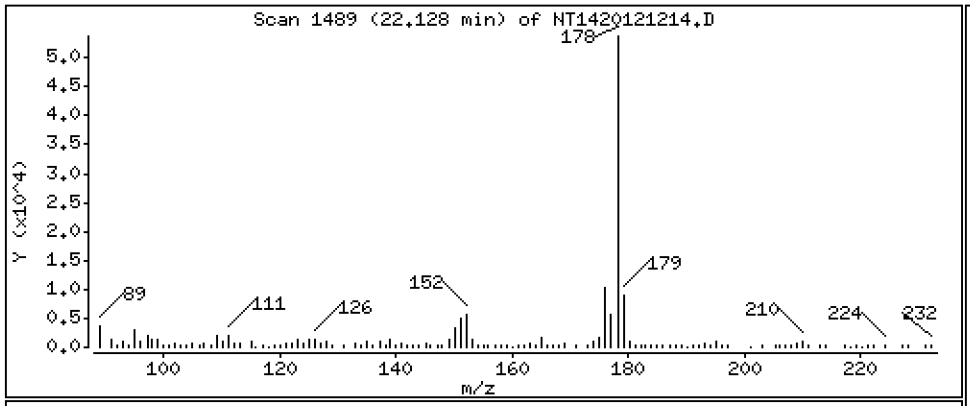
Operator: VTS

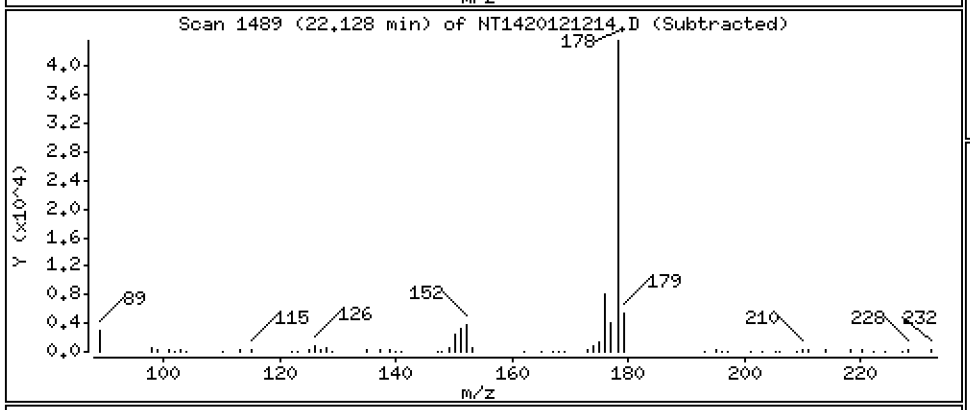
Column phase: Rxi-17Sil MS

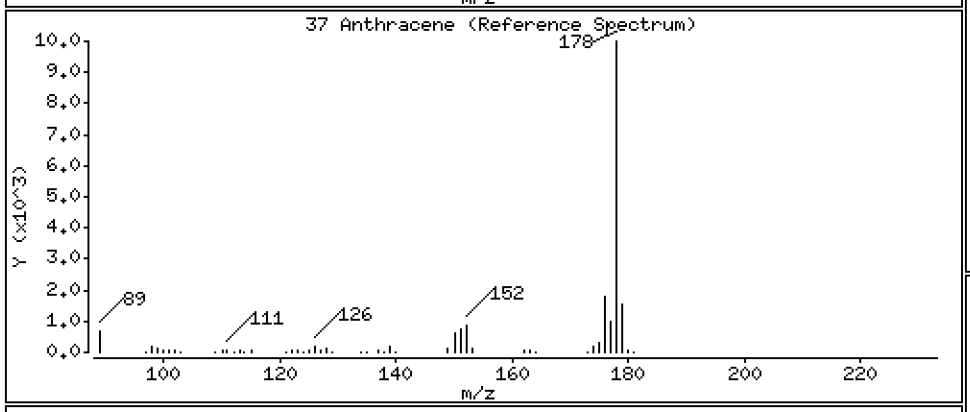
Column diameter: 0.25

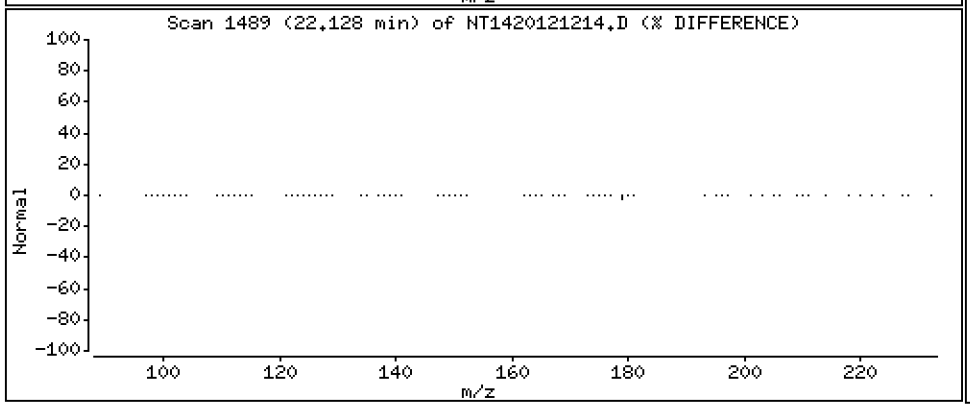
37 Anthracene

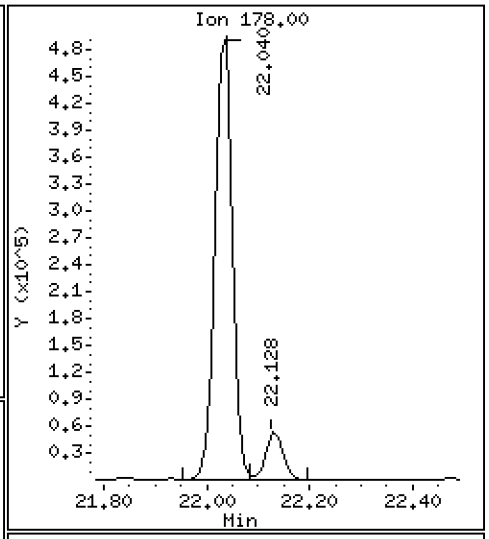
Concentration: 1.115 ug/mL

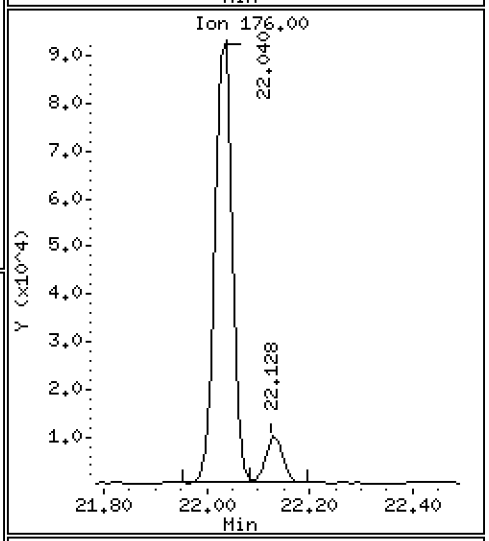


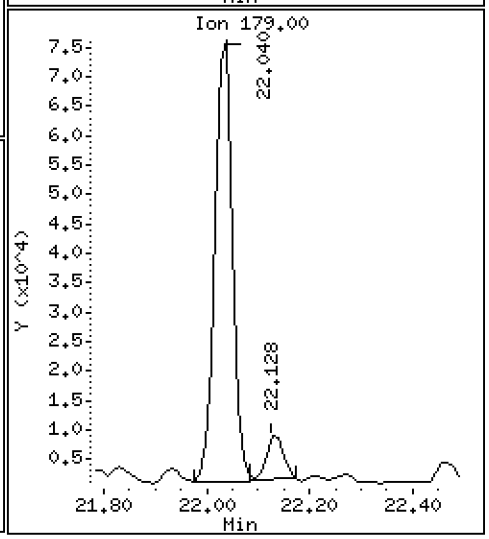












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

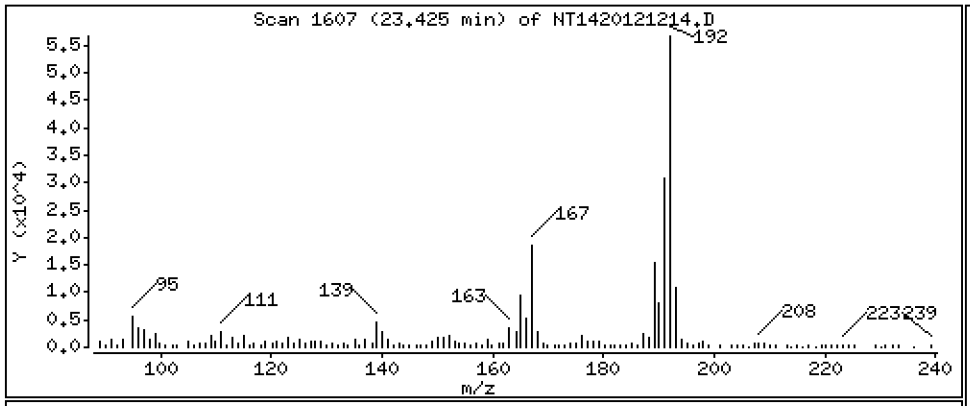
Operator: VTS

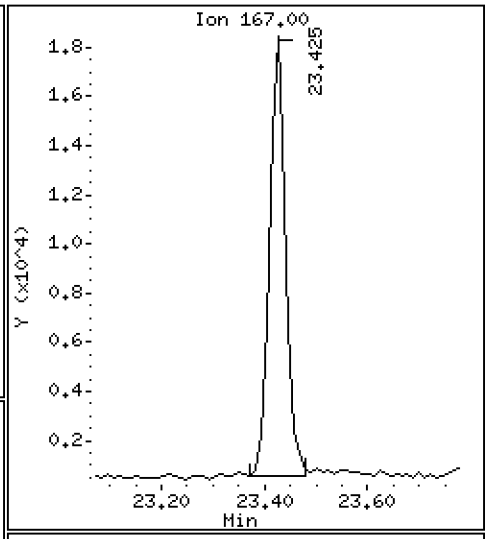
Column phase: Rxi-17Sil MS

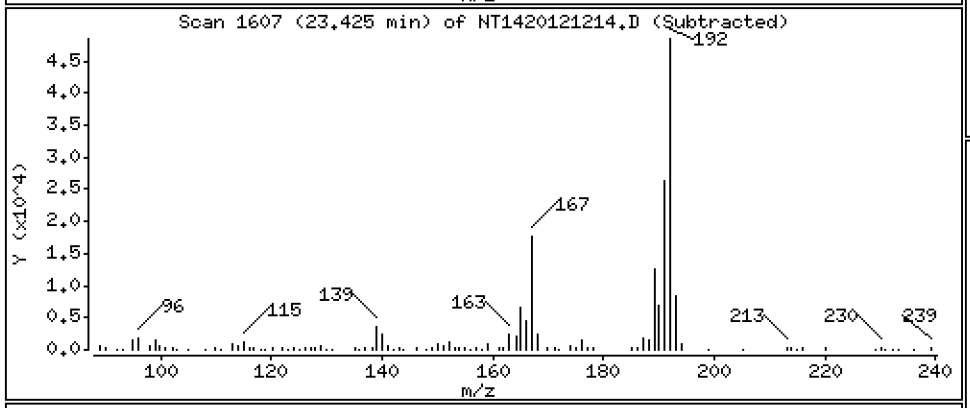
Column diameter: 0.25

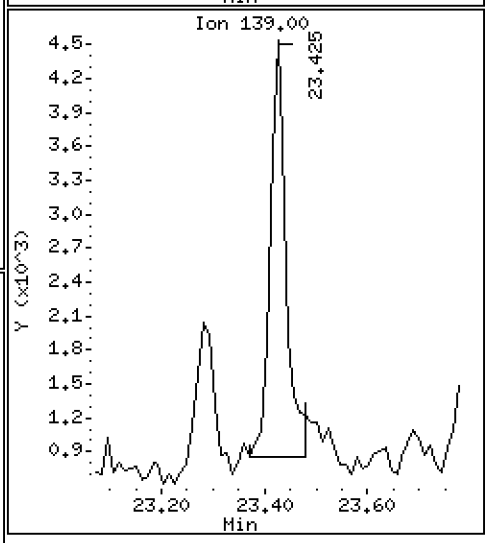
42 Carbazole

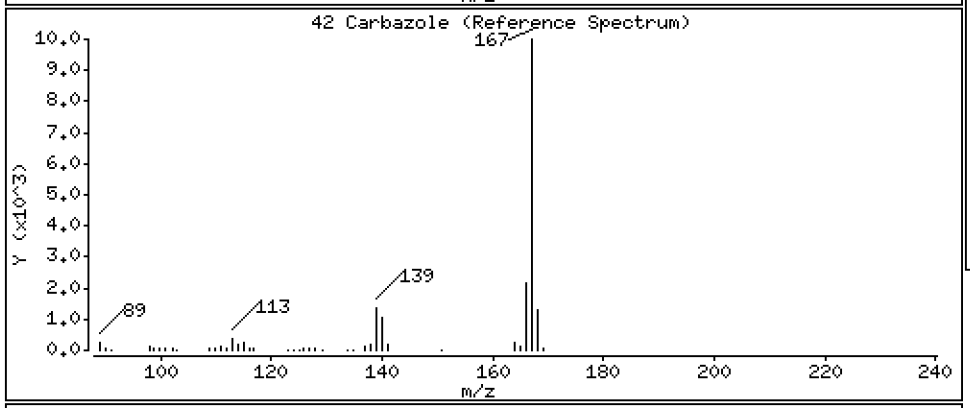
Concentration: 0.4361 ug/mL

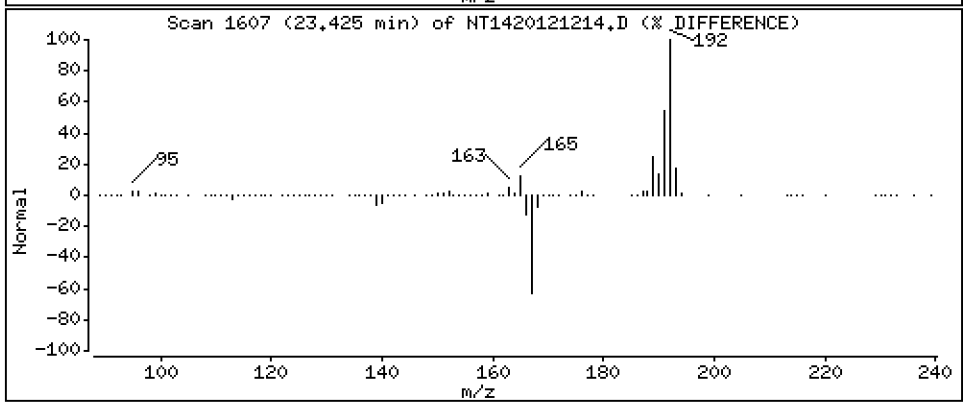












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

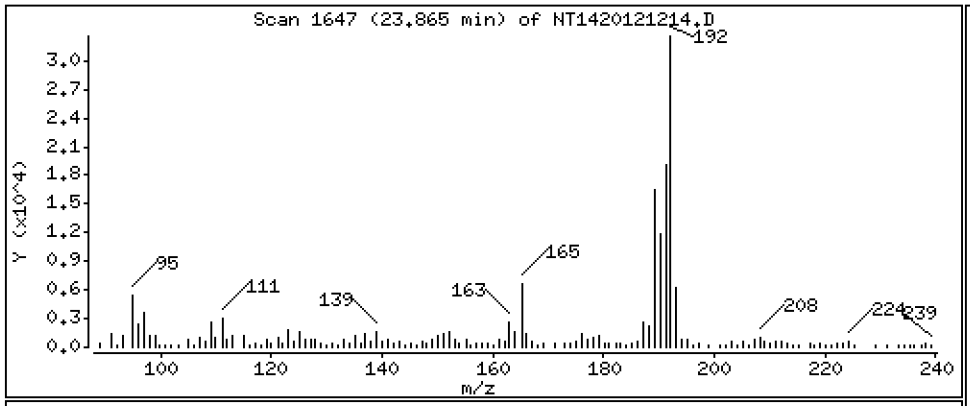
Operator: VTS

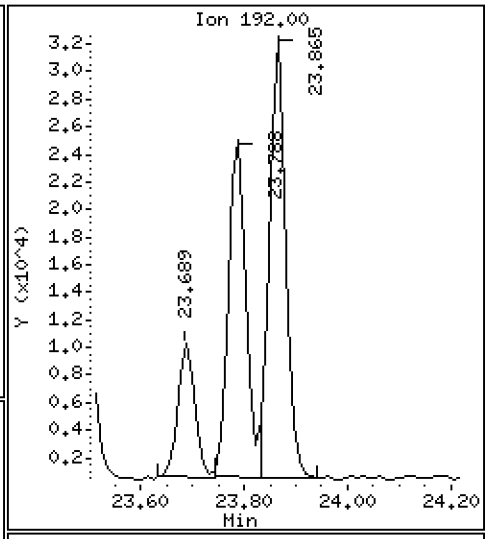
Column phase: Rxi-17Sil MS

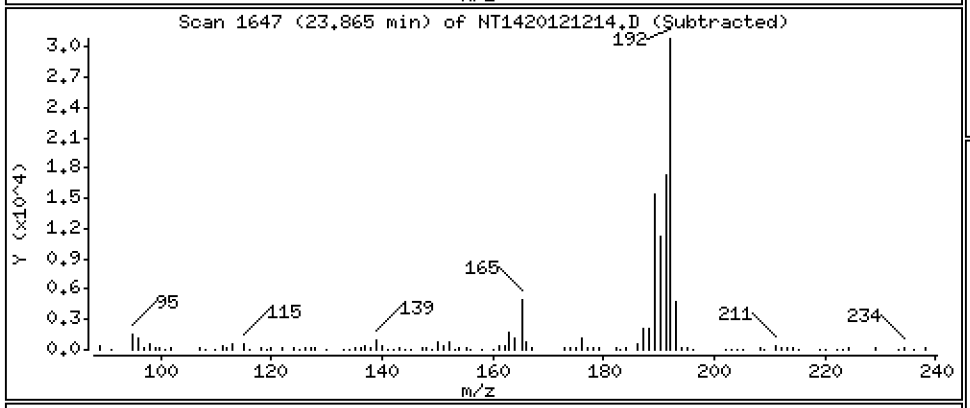
Column diameter: 0.25

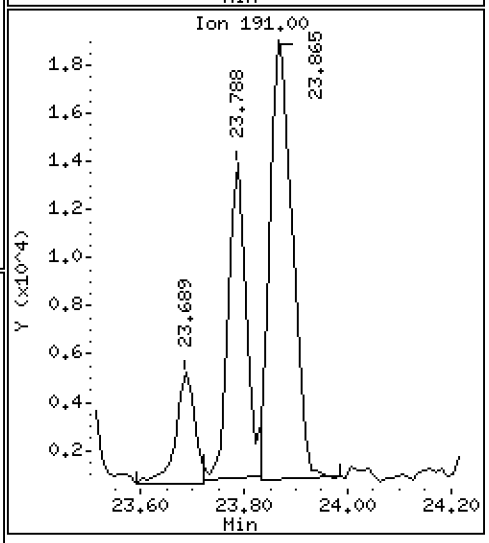
43 1-Methylphenanthrene

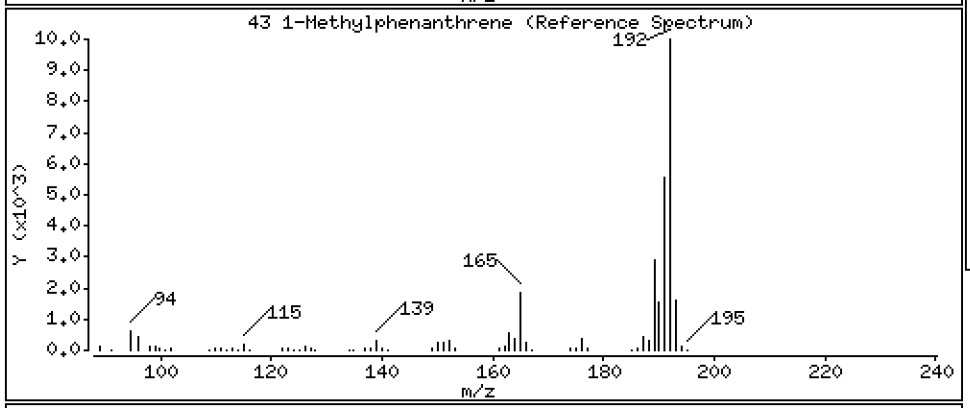
Concentration: 0.9265 ug/mL

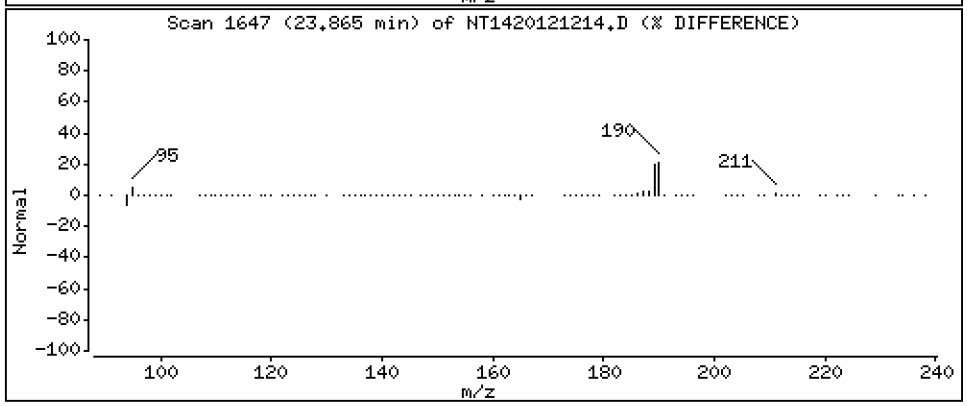












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D

Date : 12-DEC-2020 21:35

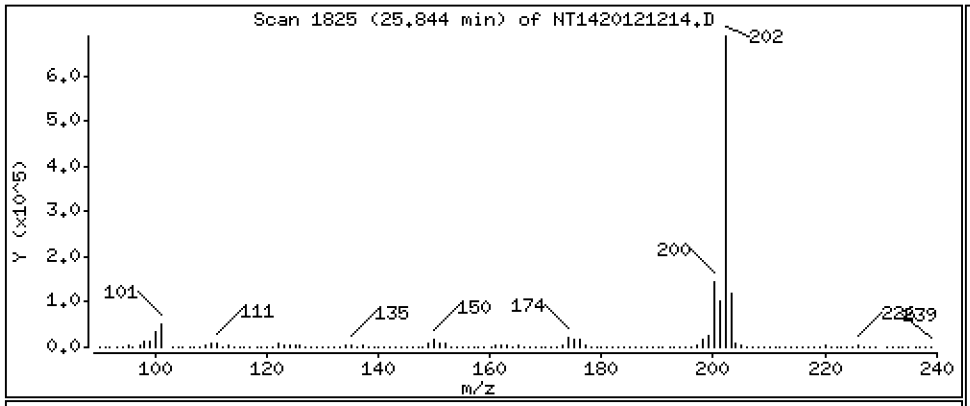
Client ID: Instrument: nt14.i

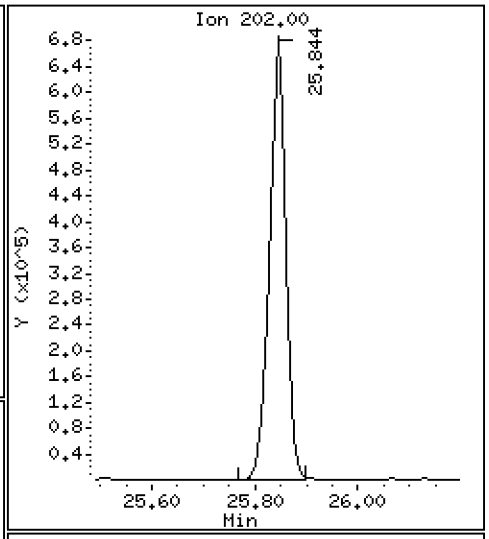
Sample Info: 20K0073-01

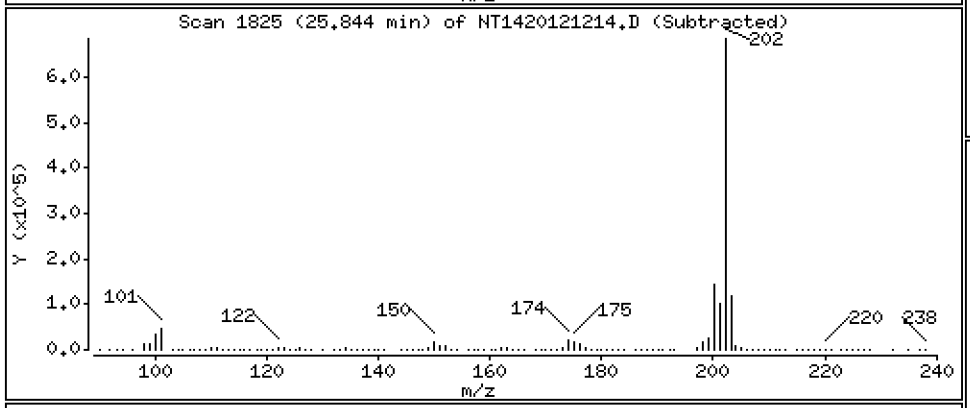
Operator: VTS

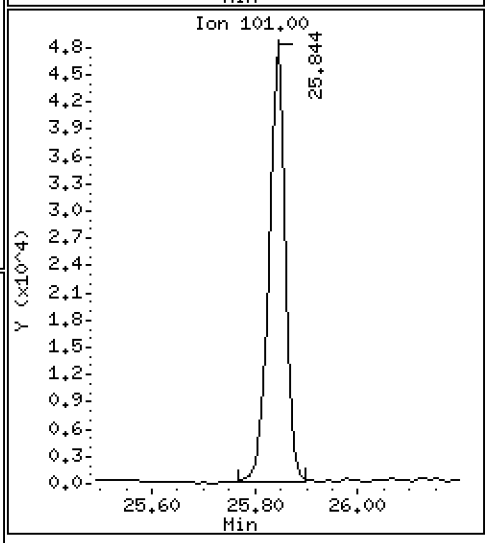
Column phase: Rxi-17Sil MS Column diameter: 0.25

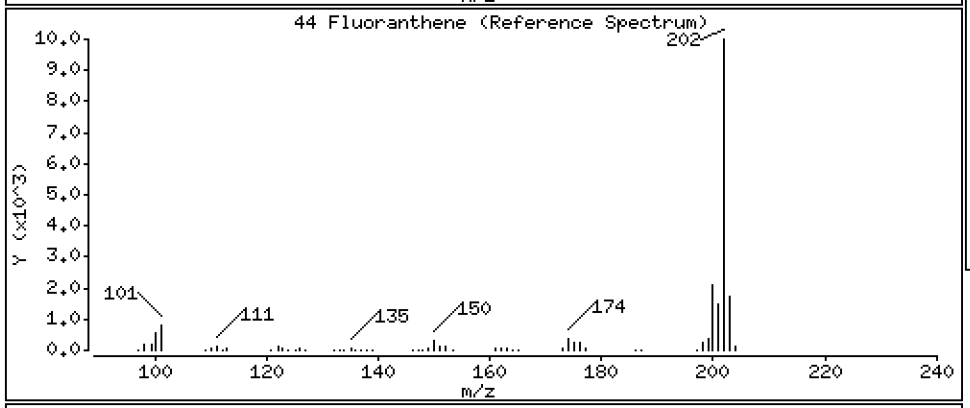
44 Fluoranthene Concentration: 13.05 ug/mL

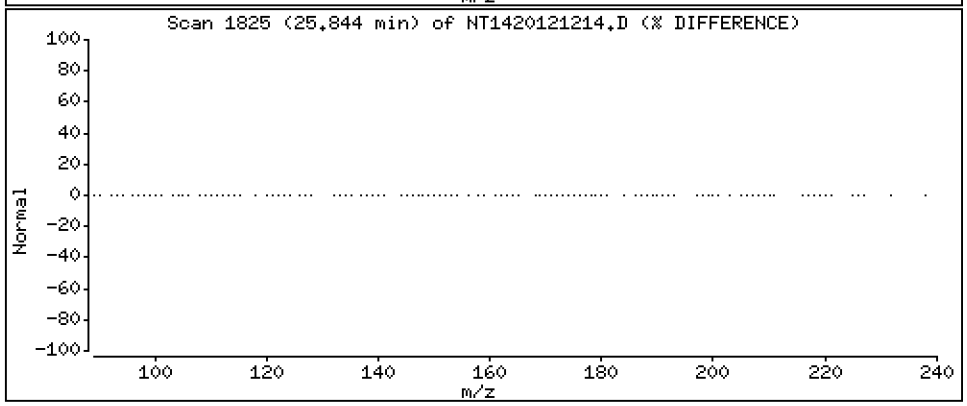












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

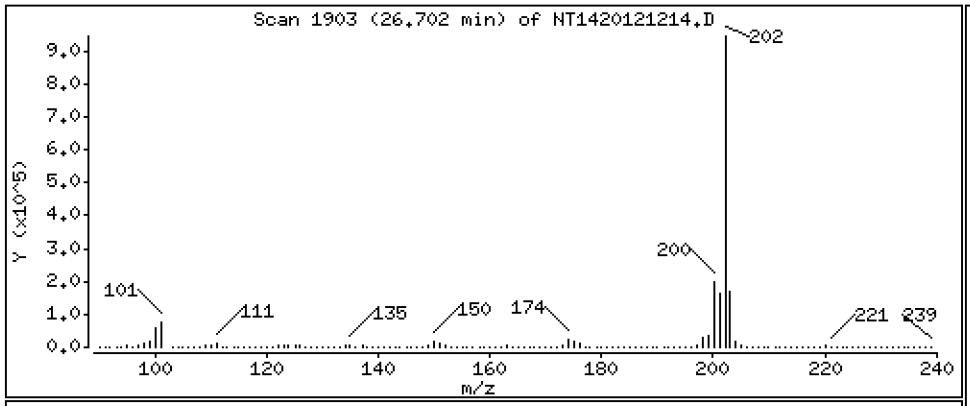
Operator: VTS

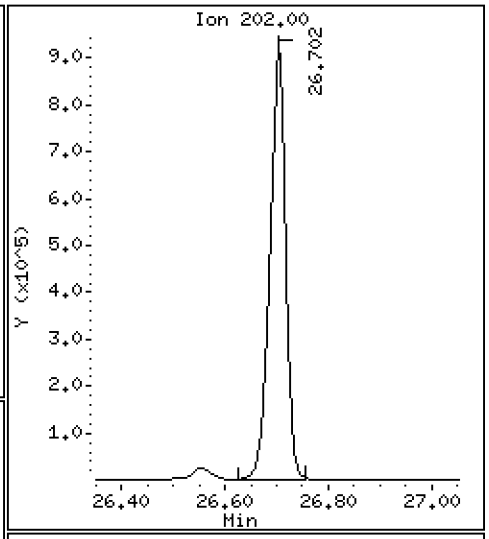
Column phase: Rxi-17Sil MS

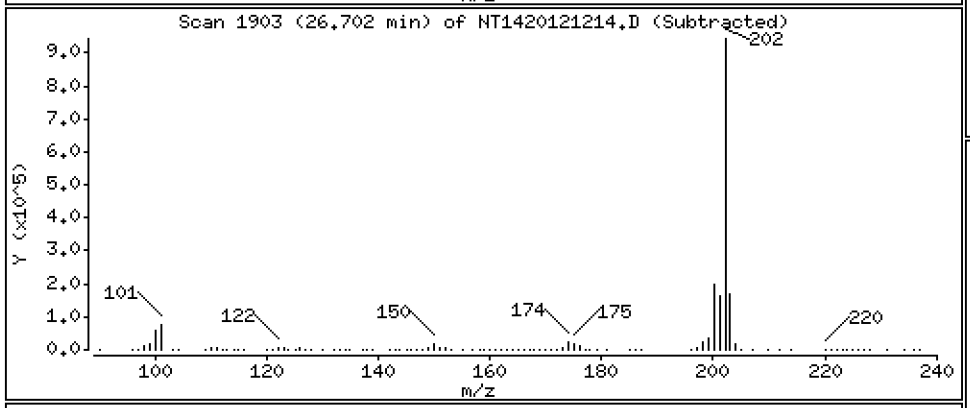
Column diameter: 0.25

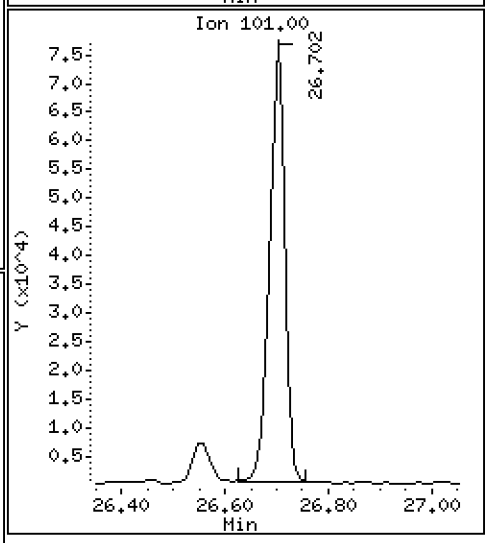
46 Pyrene

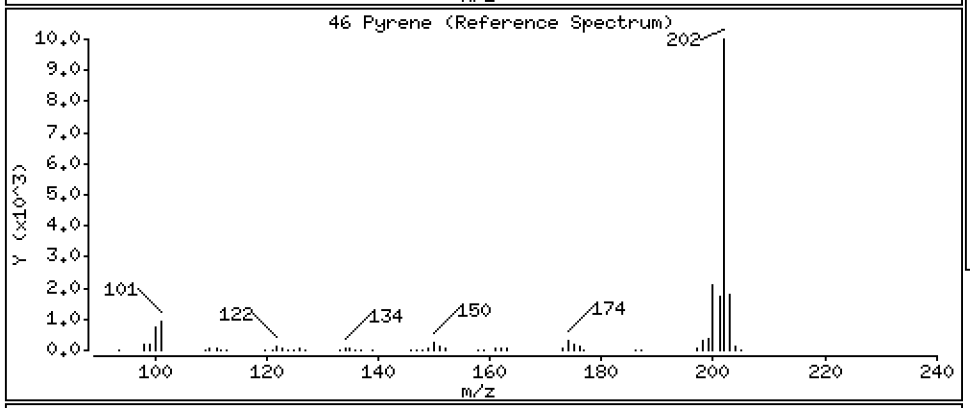
Concentration: 16.19 ug/mL

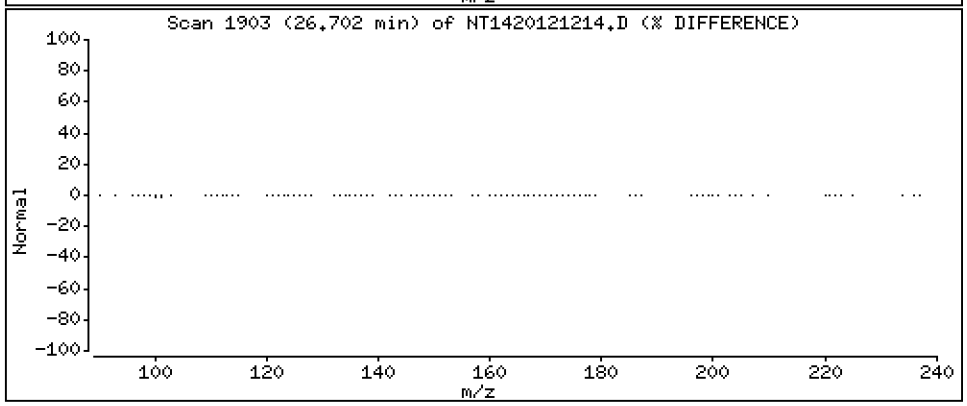












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

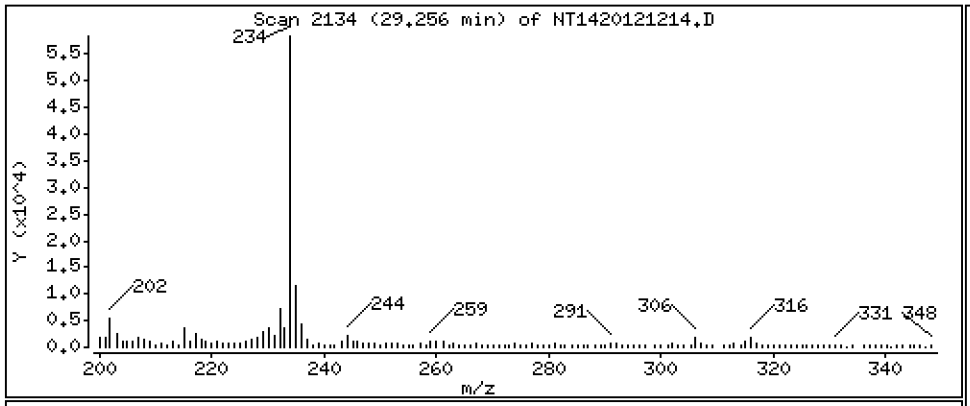
Operator: VTS

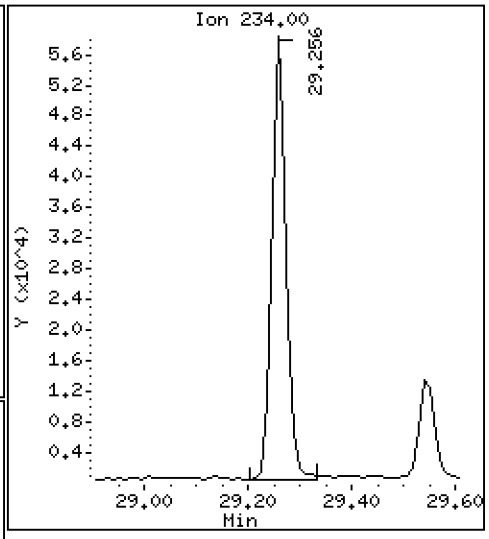
Column phase: Rxi-17Sil MS

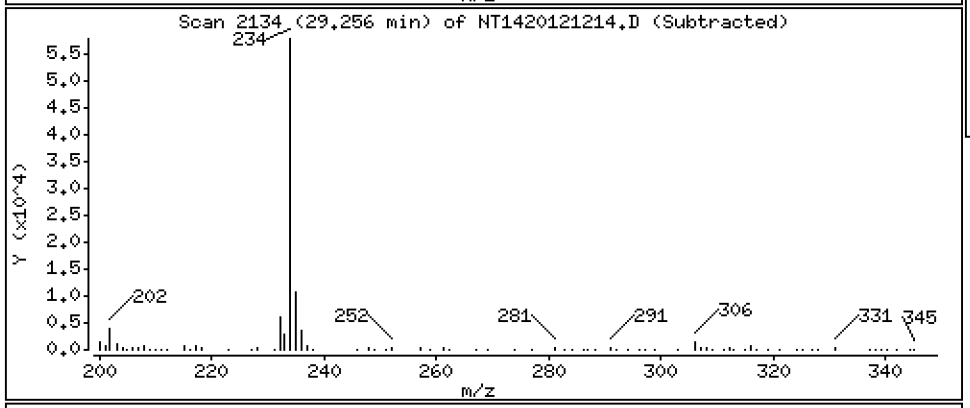
Column diameter: 0.25

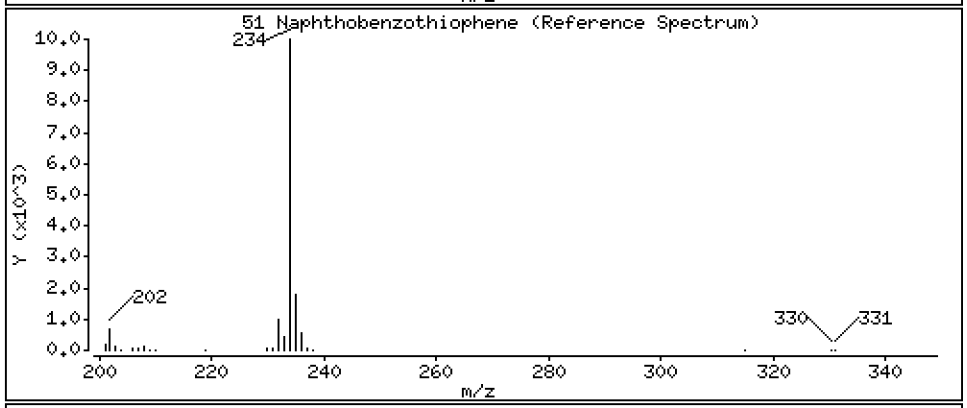
51 Naphthobenzothiophene

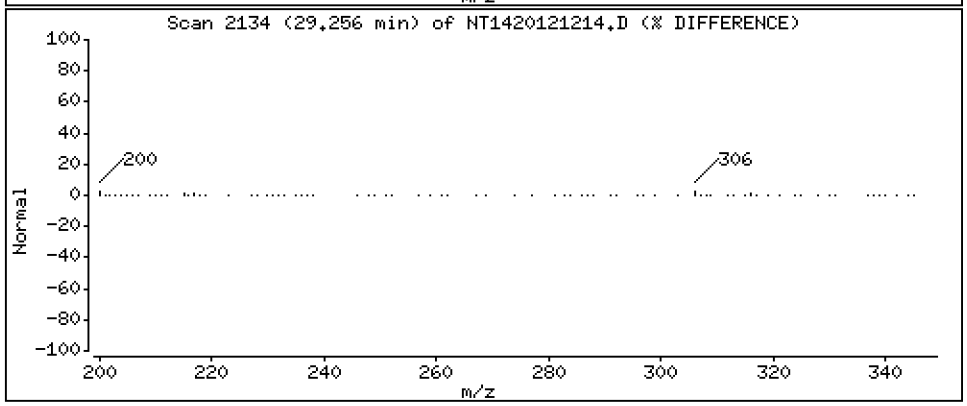
Concentration: 1.006 ug/mL











Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

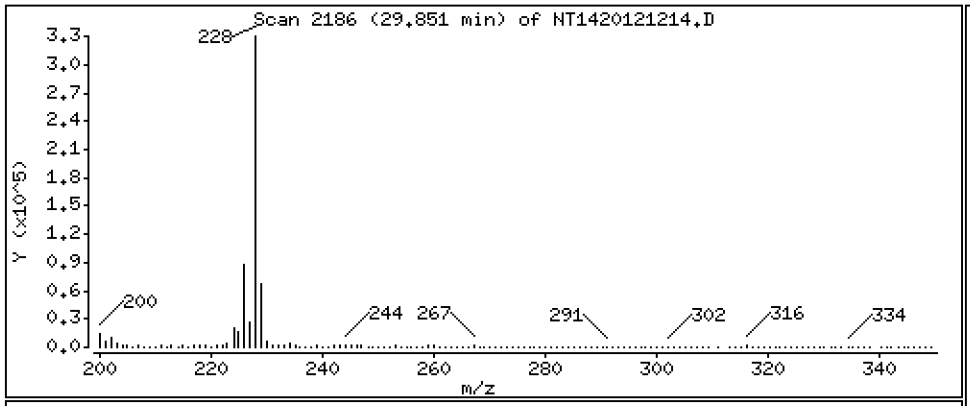
Operator: VTS

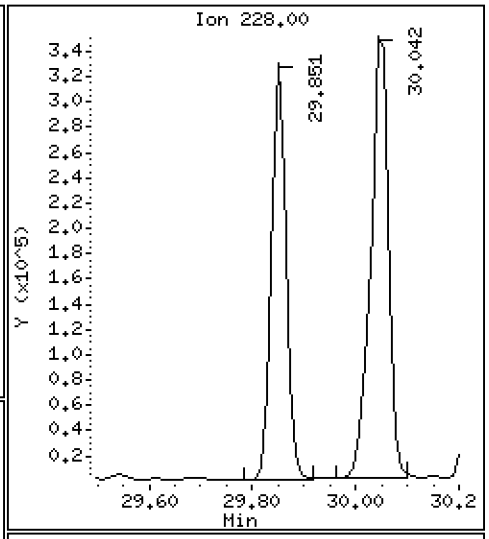
Column phase: Rxi-17Sil MS

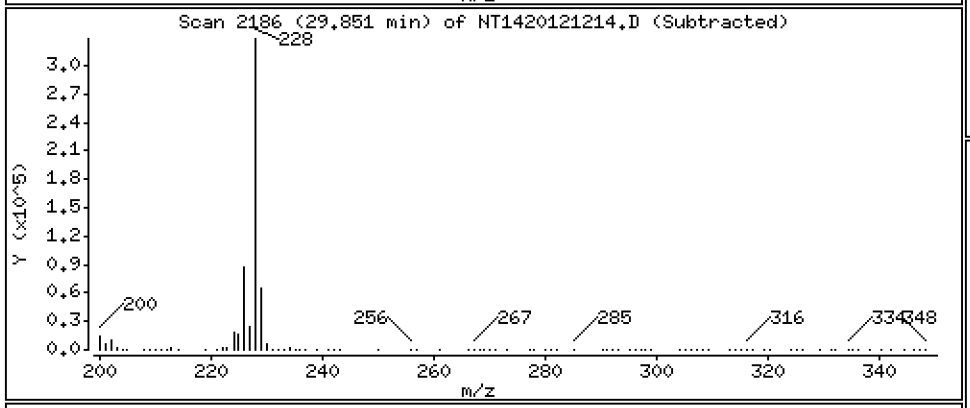
Column diameter: 0.25

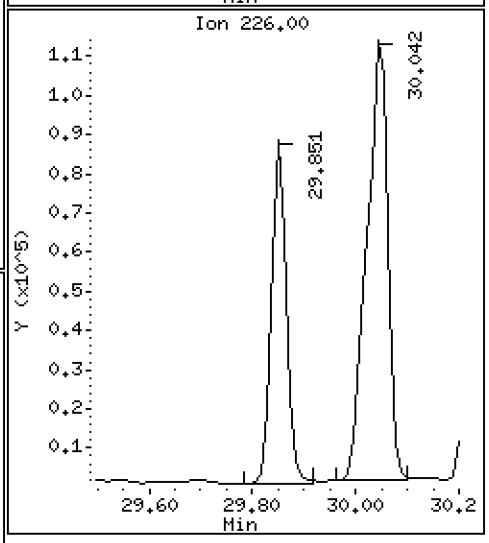
55 Benzo(a)anthracene

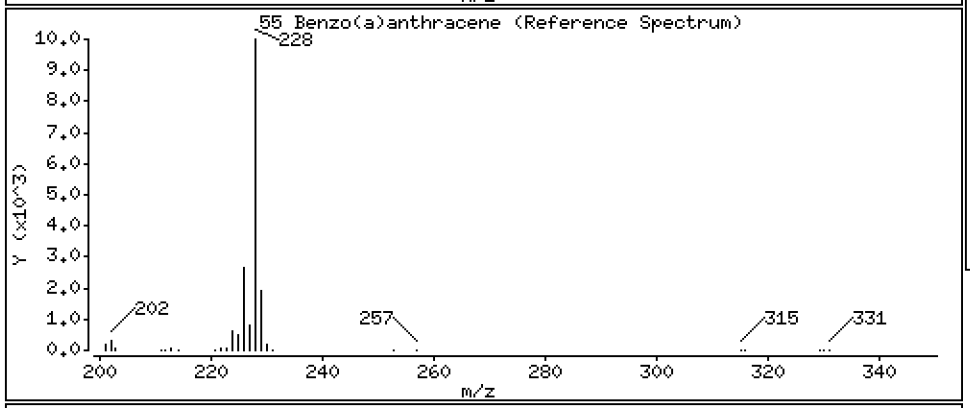
Concentration: 5.370 ug/mL

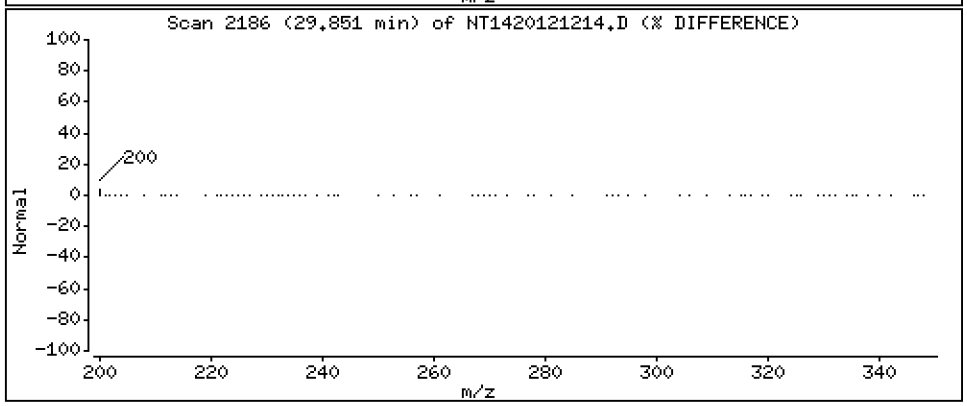












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

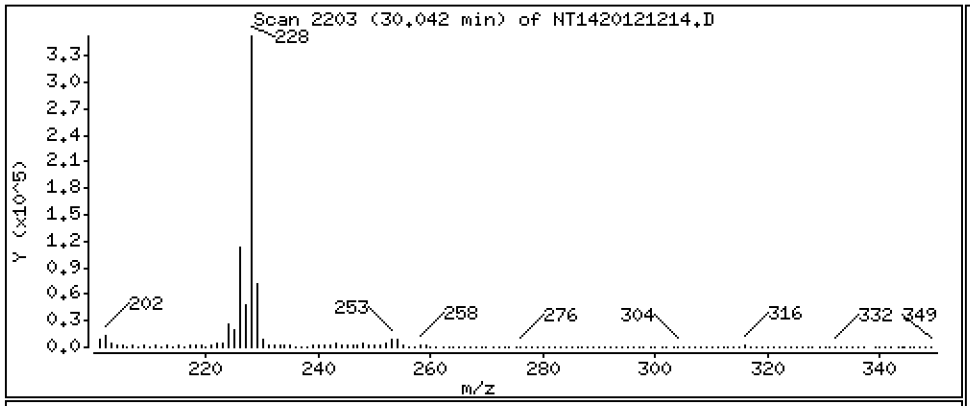
Operator: VTS

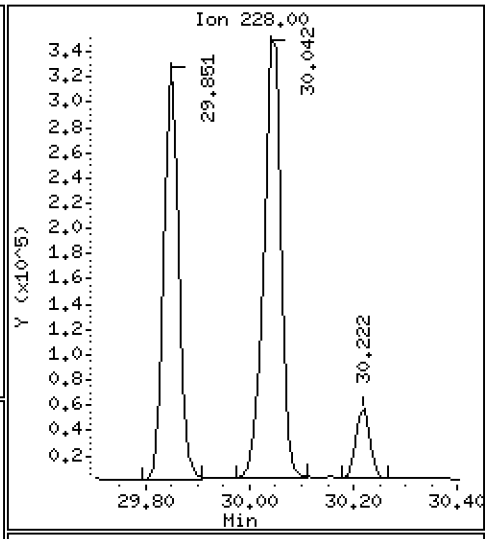
Column phase: Rxi-17Sil MS

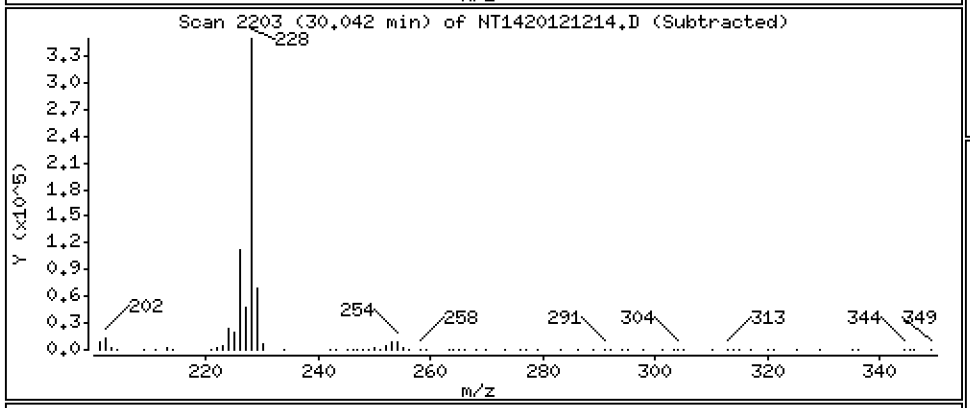
Column diameter: 0.25

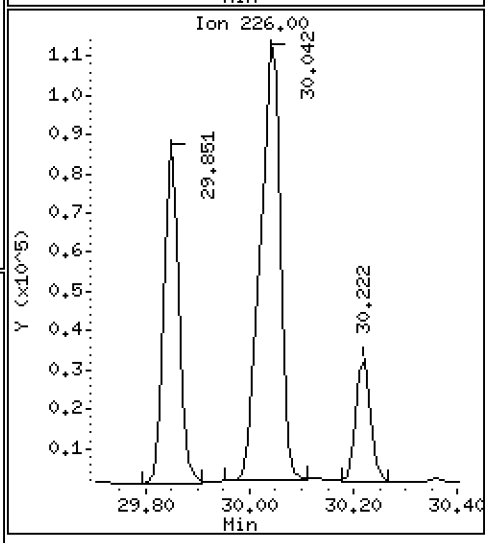
57 Chrysene

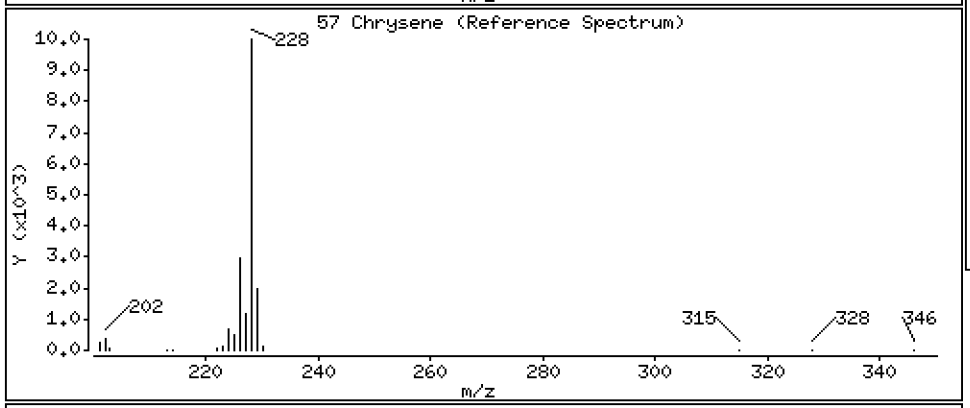
Concentration: 6.692 ug/mL

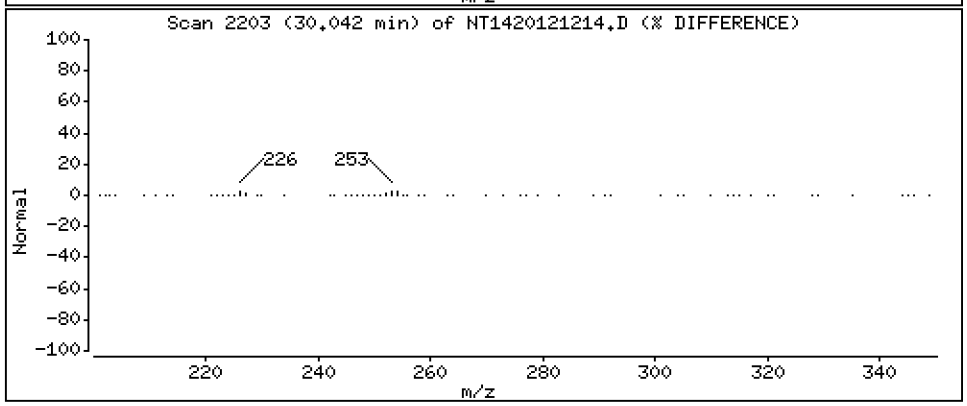












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

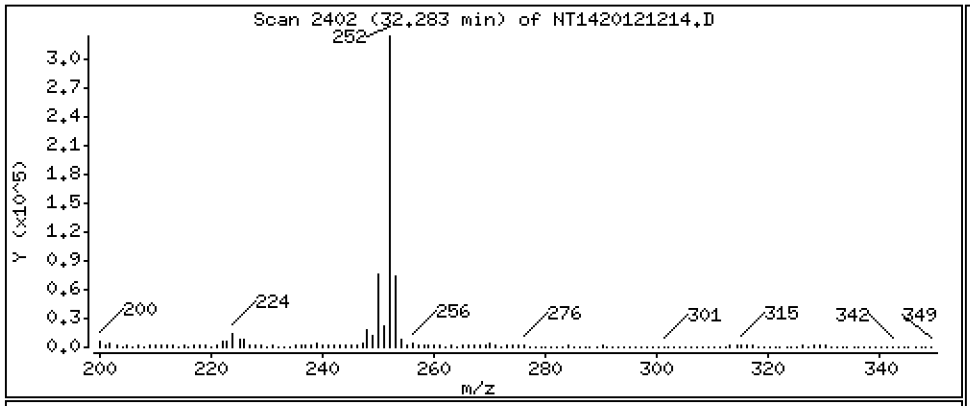
Operator: VTS

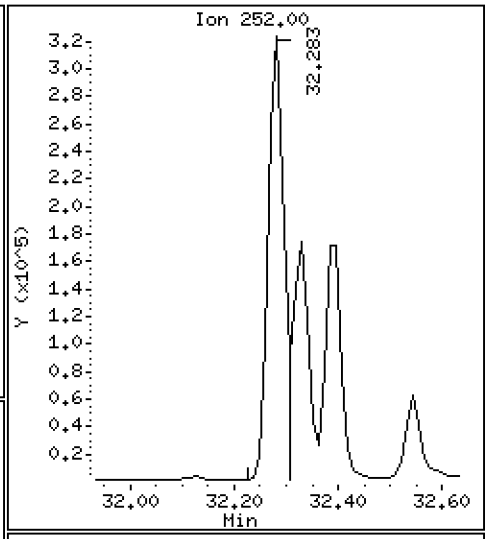
Column phase: Rxi-17Sil MS

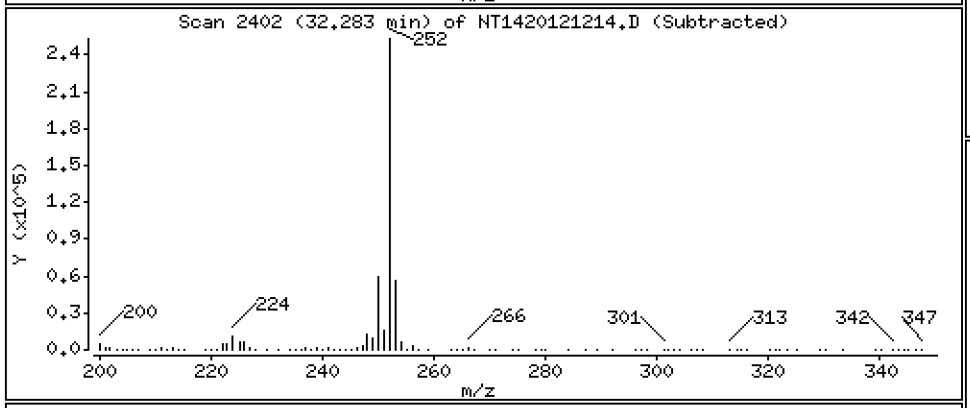
Column diameter: 0.25

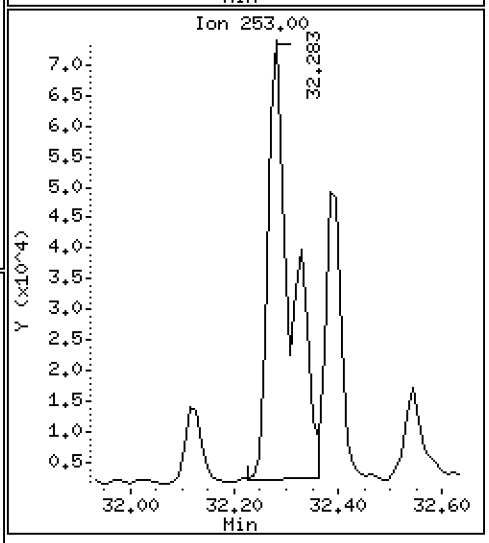
62 Benzo(b)fluoranthene

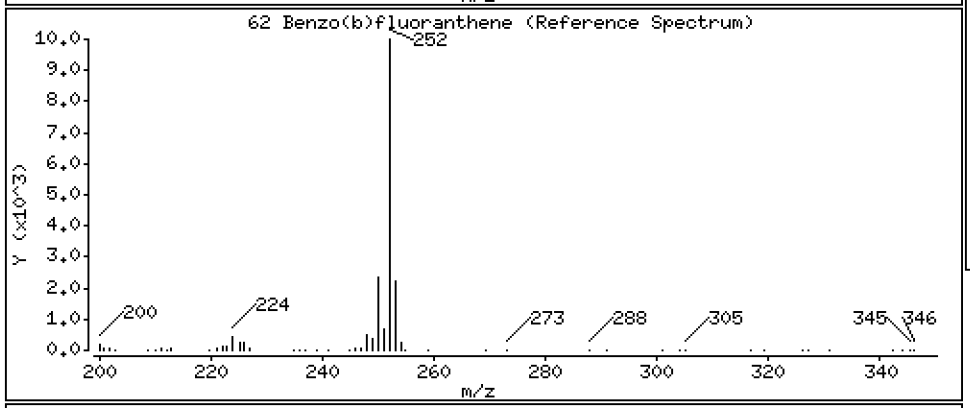
Concentration: 4.750 ug/mL

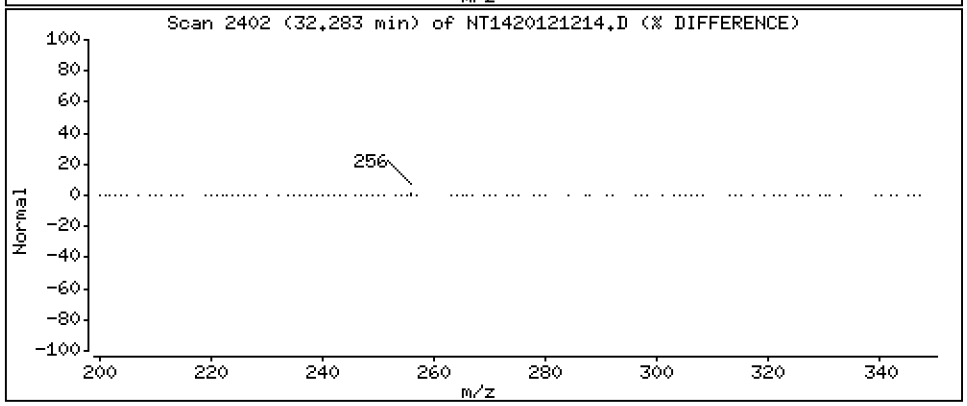












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

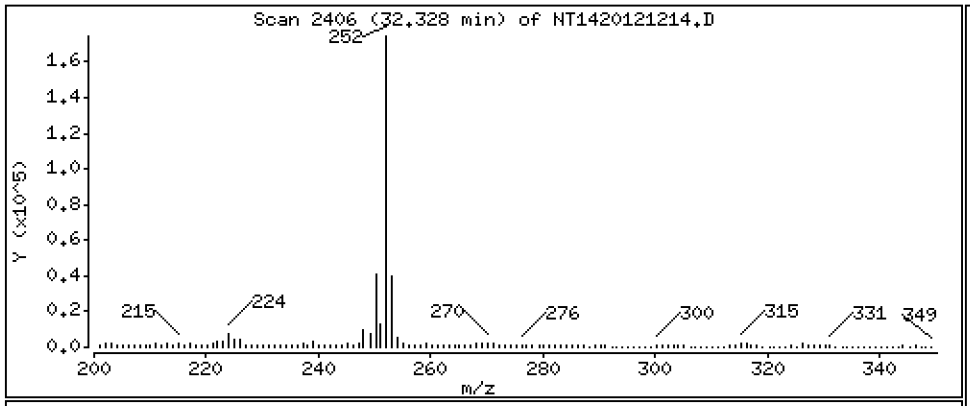
Operator: VTS

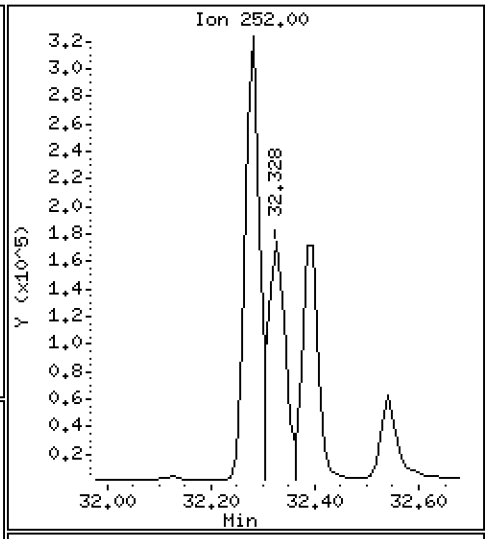
Column phase: Rxi-17Sil MS

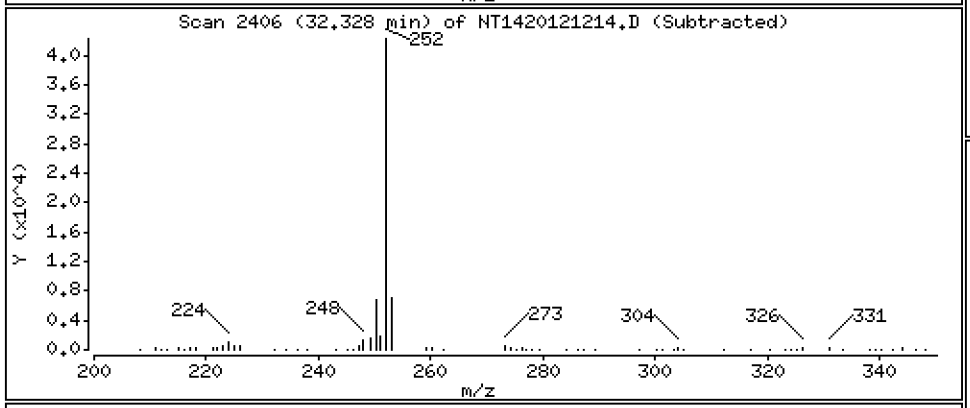
Column diameter: 0.25

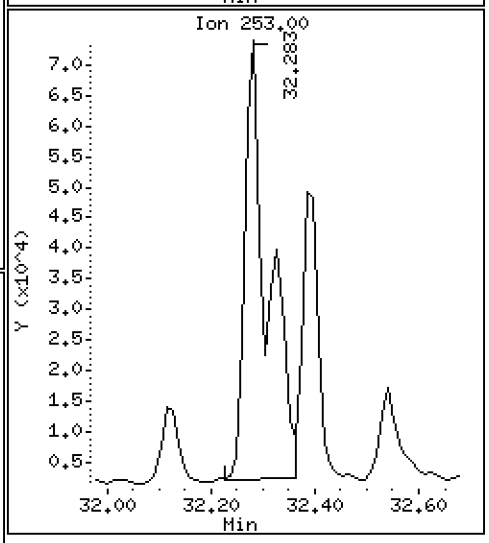
63 Benzo(k)fluoranthene

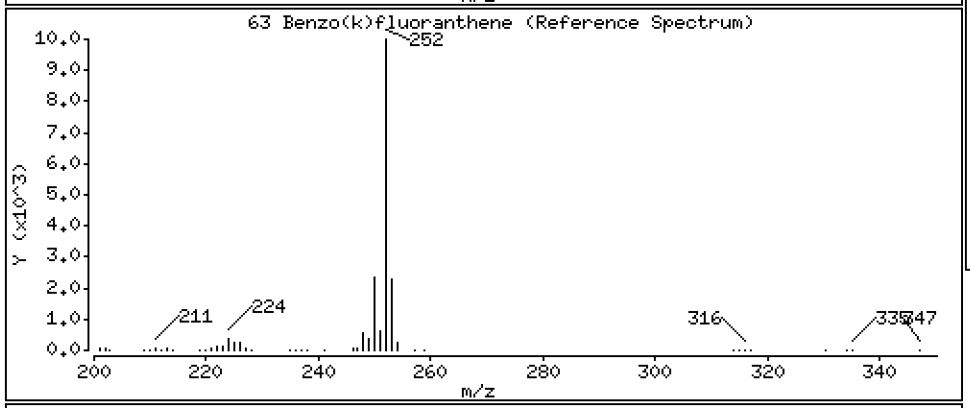
Concentration: 2.864 ug/mL

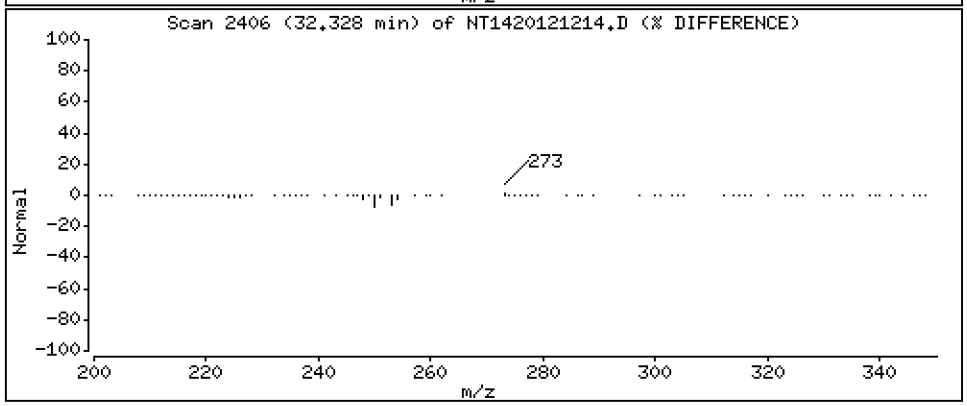












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

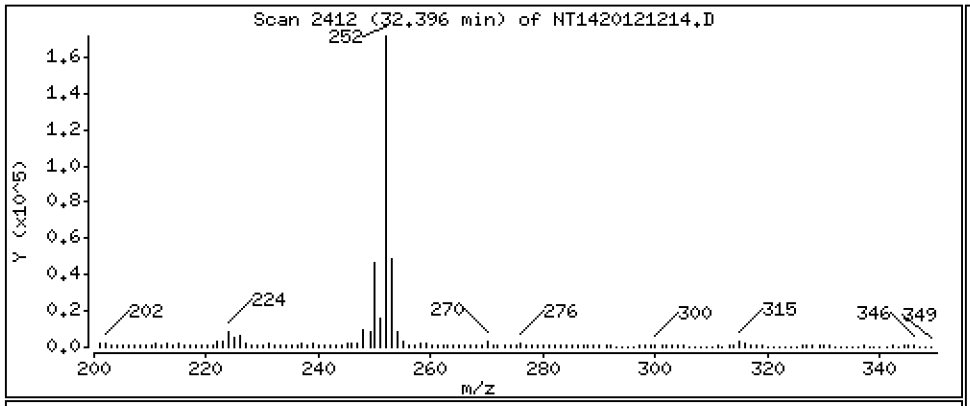
Operator: VTS

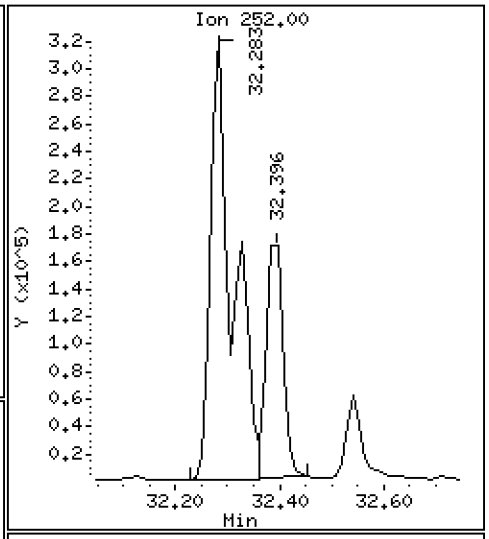
Column phase: Rxi-17Sil MS

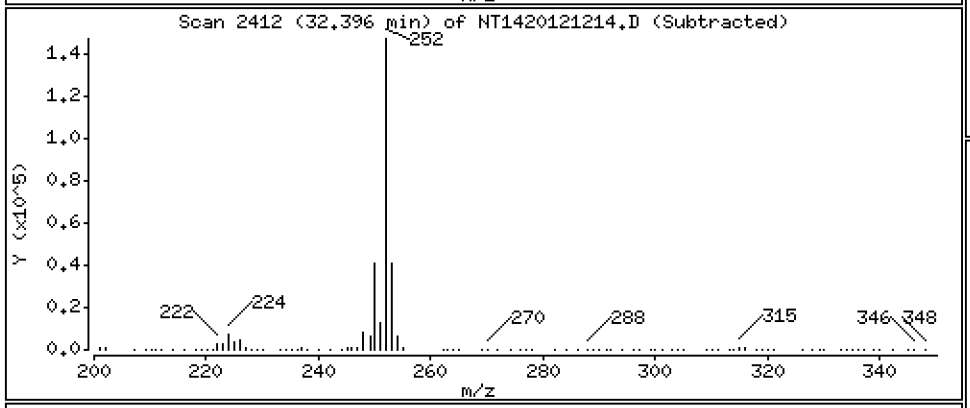
Column diameter: 0.25

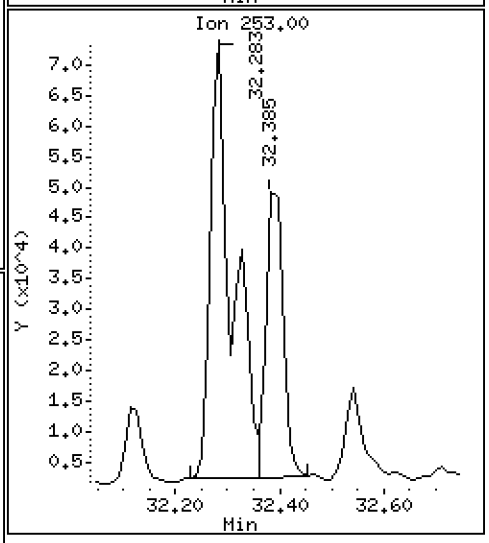
293 Benzo(j)fluoranthene

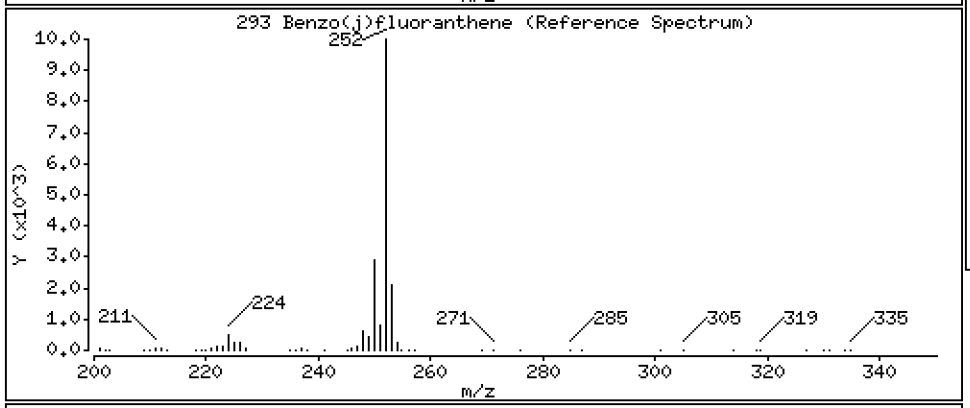
Concentration: 2.968 ug/mL

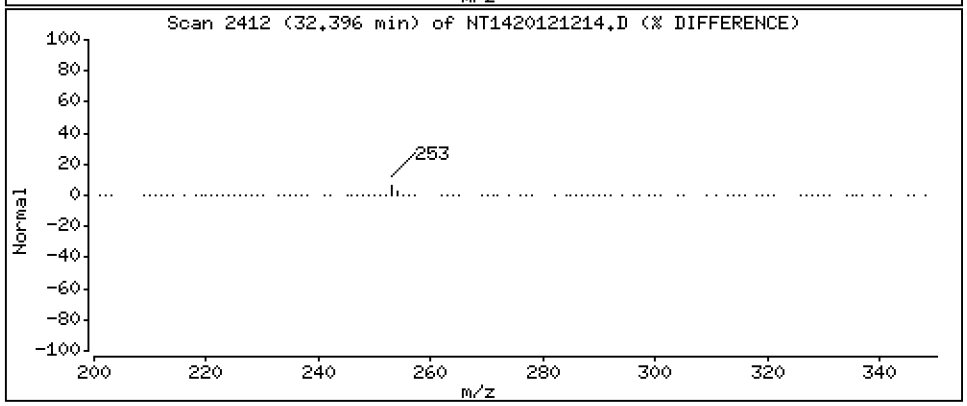












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D

Date : 12-DEC-2020 21:35

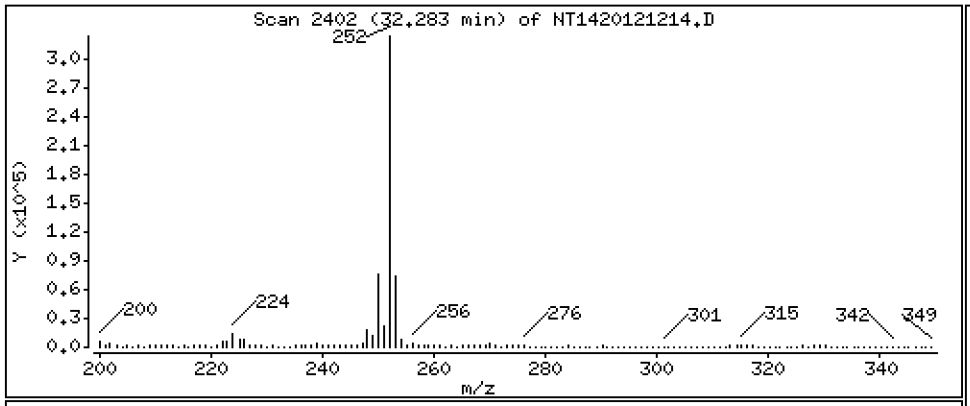
Client ID: Instrument: nt14.i

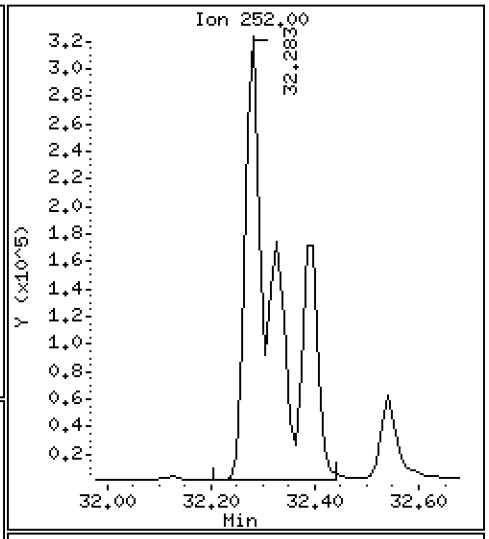
Sample Info: 20K0073-01

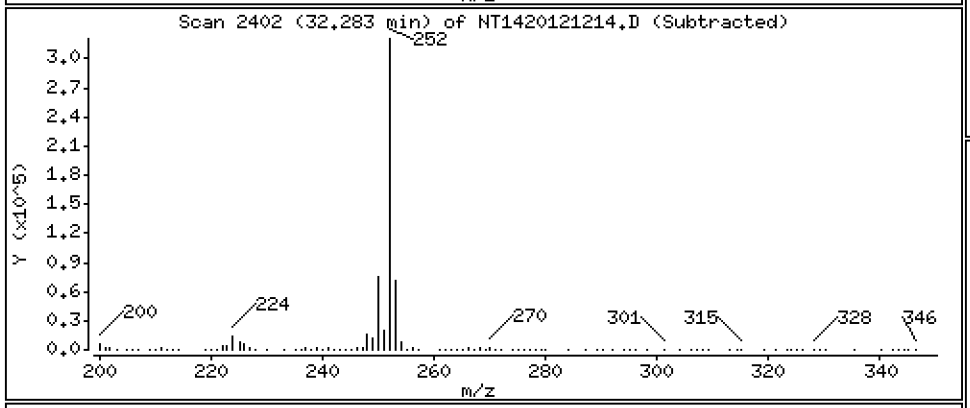
Operator: VTS

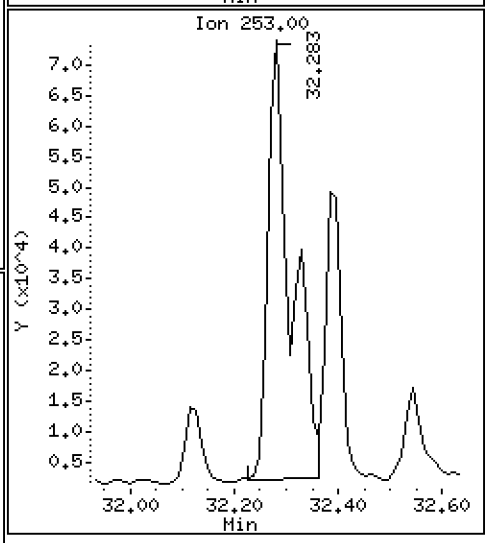
Column phase: Rxi-17Sil MS Column diameter: 0.25

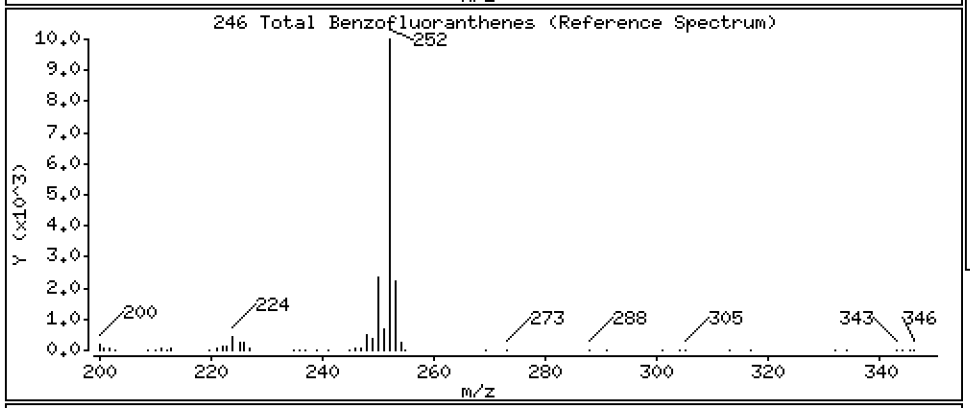
246 Total Benzofluoranthenes Concentration: 10.46 ug/mL

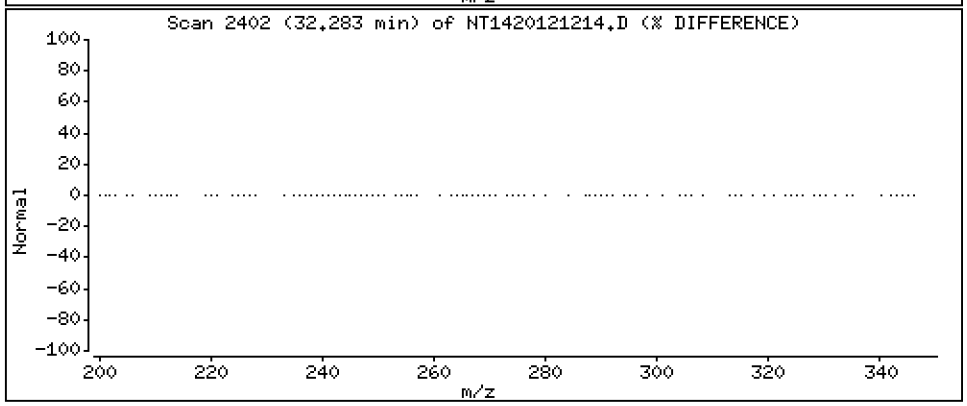












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

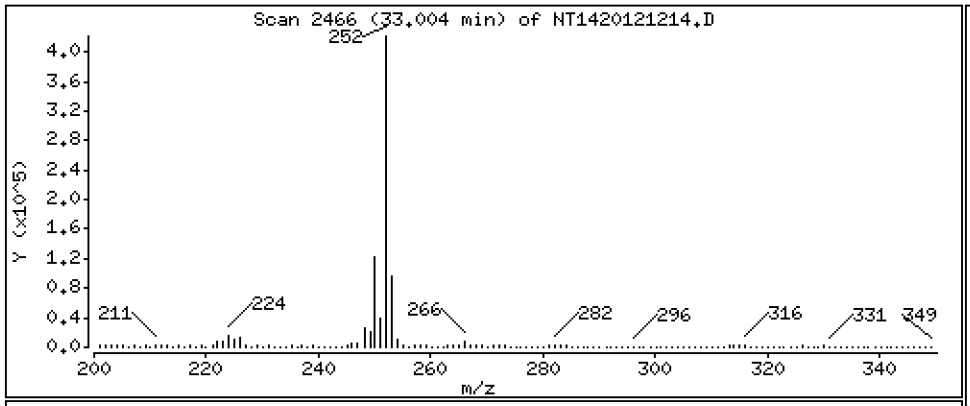
Operator: VTS

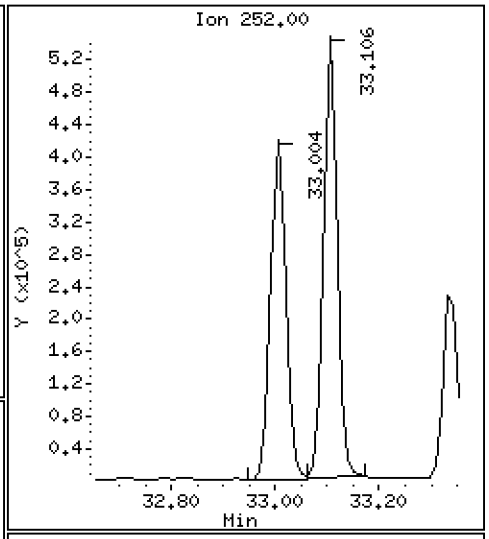
Column phase: Rxi-17Sil MS

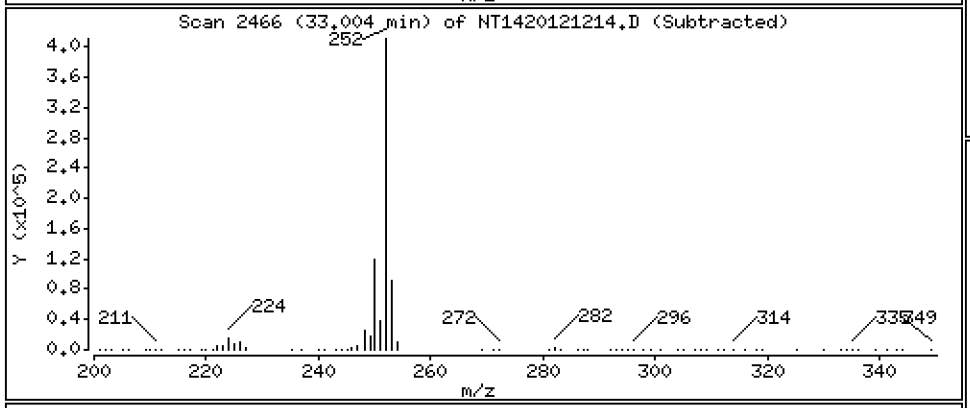
Column diameter: 0.25

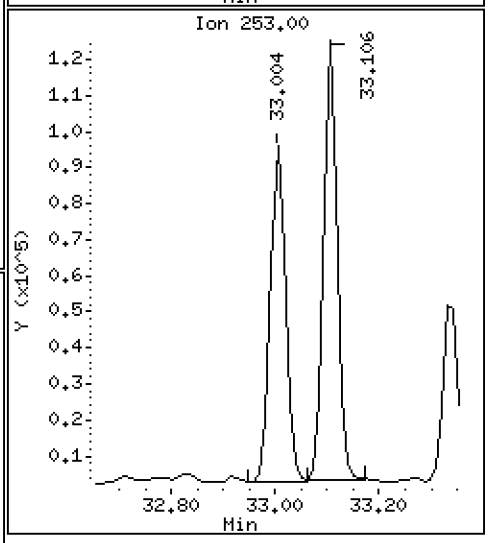
64 Benzo(e)pyrene

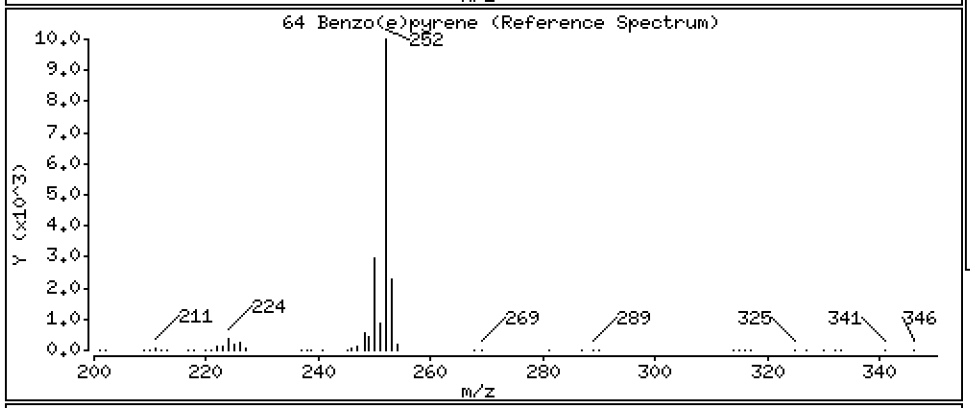
Concentration: 6.366 ug/mL

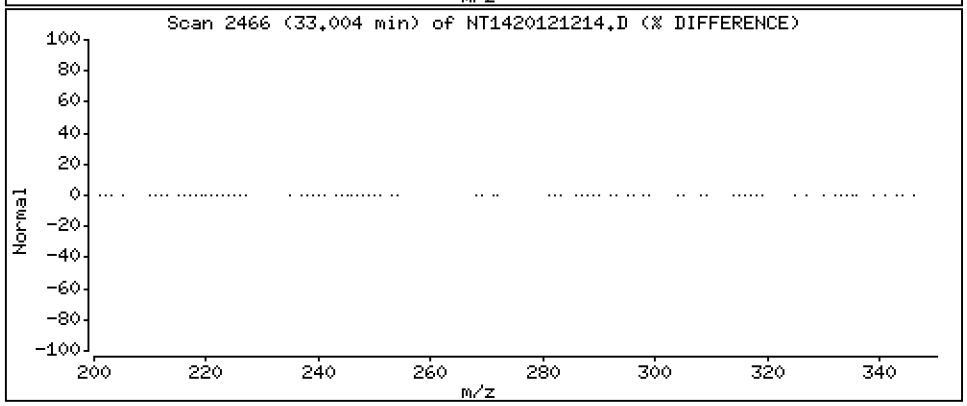












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

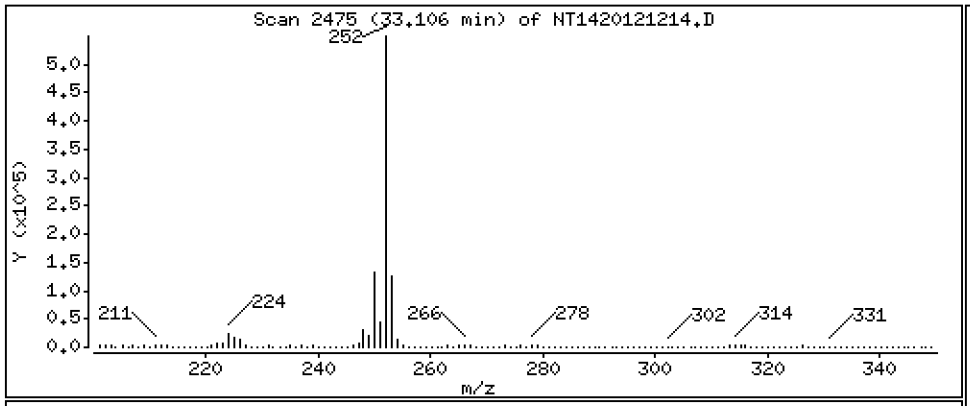
Operator: VTS

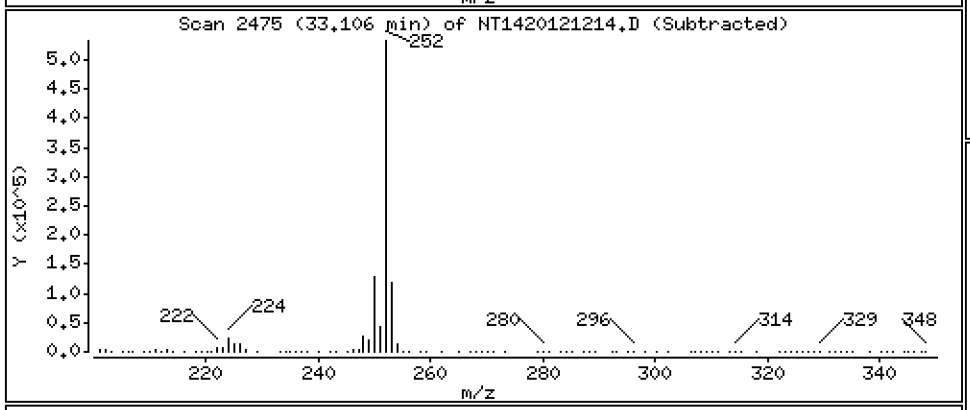
Column phase: Rxi-17Sil MS

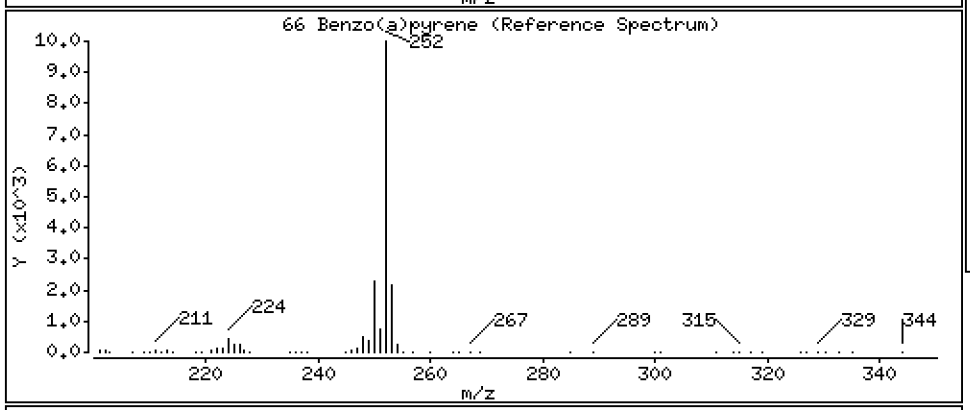
Column diameter: 0.25

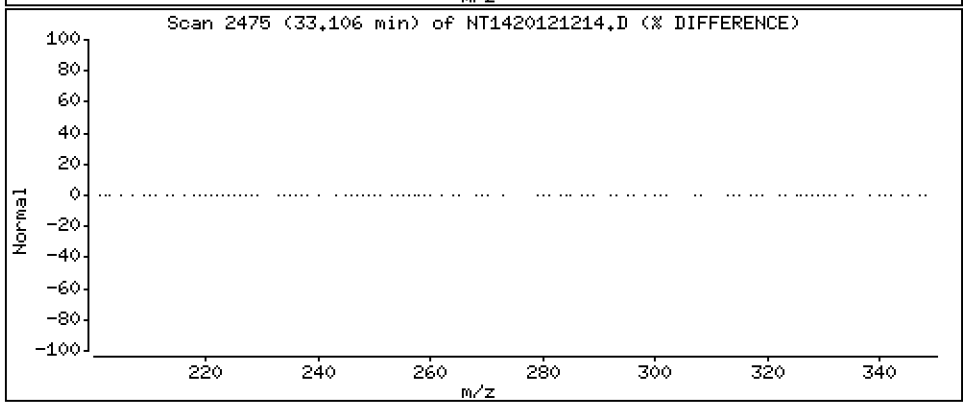
66 Benzo(a)pyrene

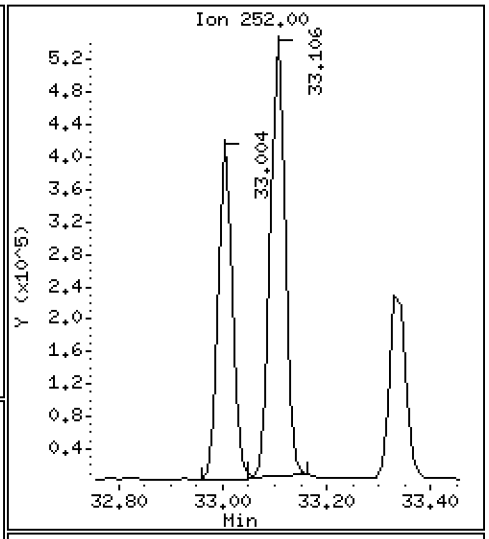
Concentration: 8.338 ug/mL

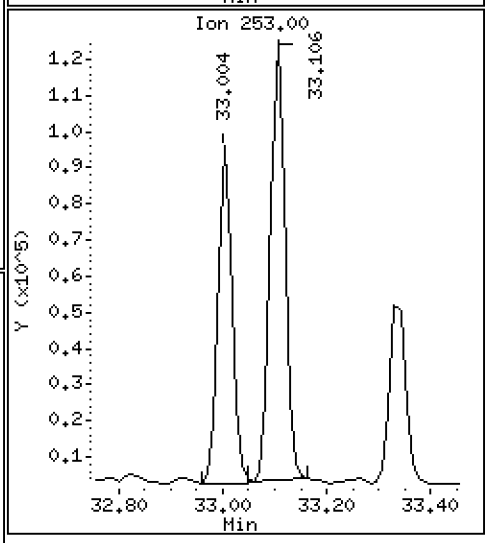












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

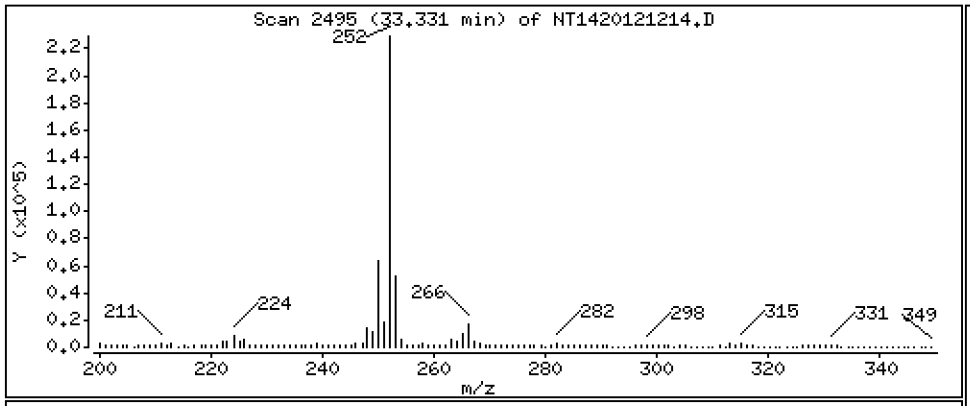
Operator: VTS

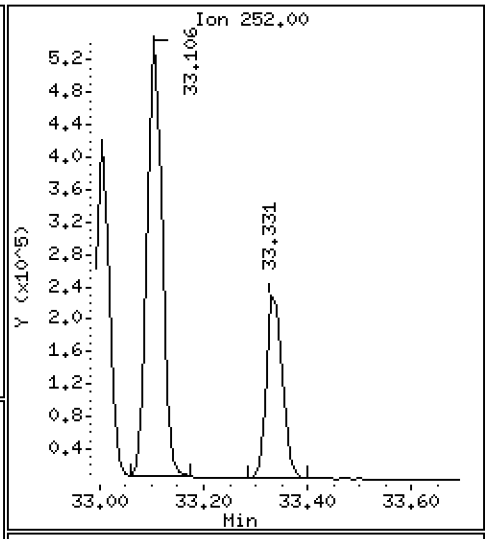
Column phase: Rxi-17Sil MS

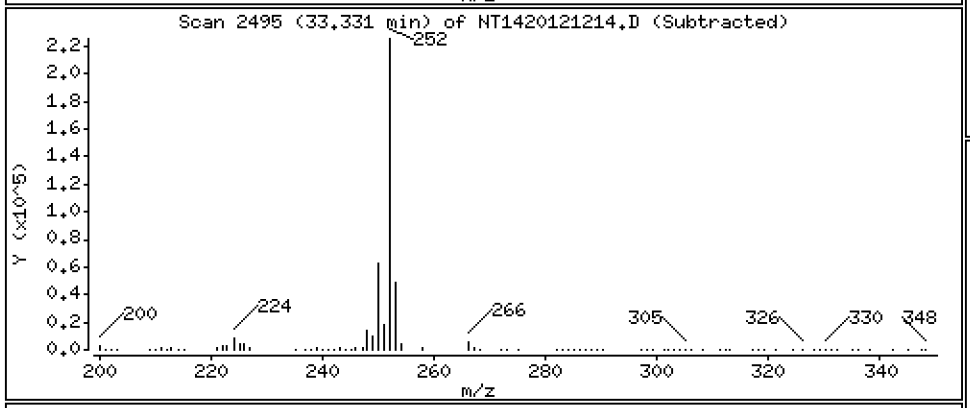
Column diameter: 0.25

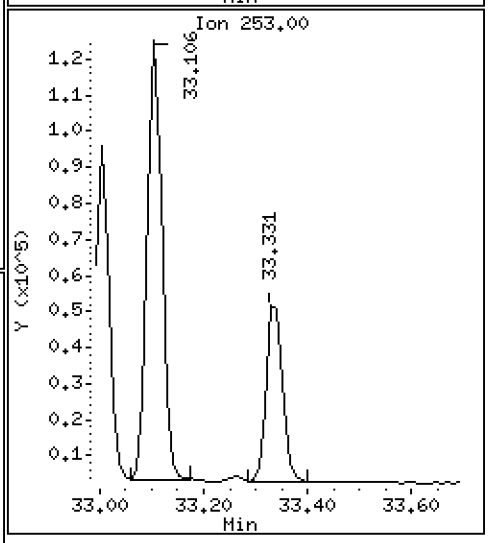
68 Perylene

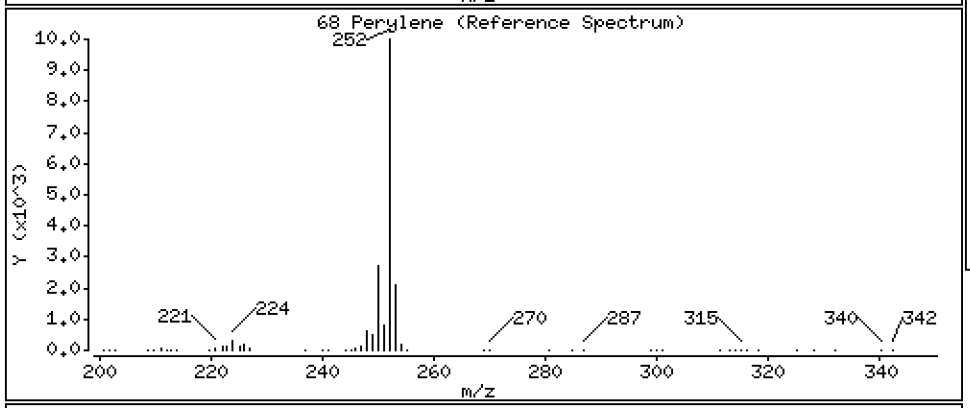
Concentration: 3.631 ug/mL

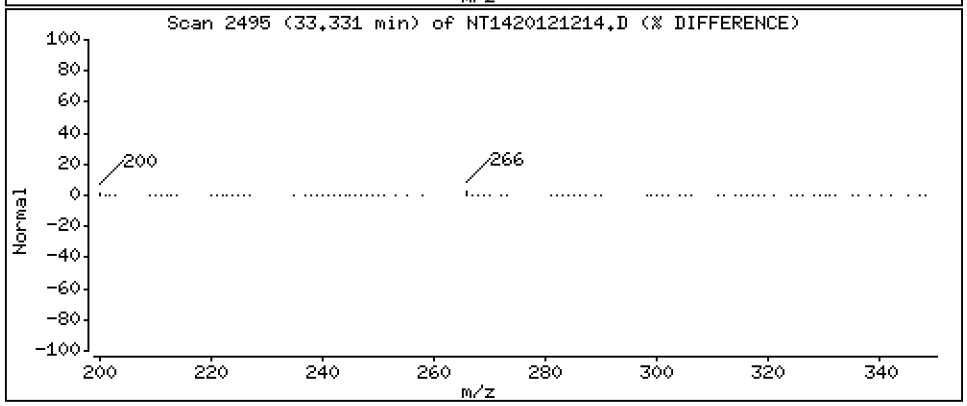












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

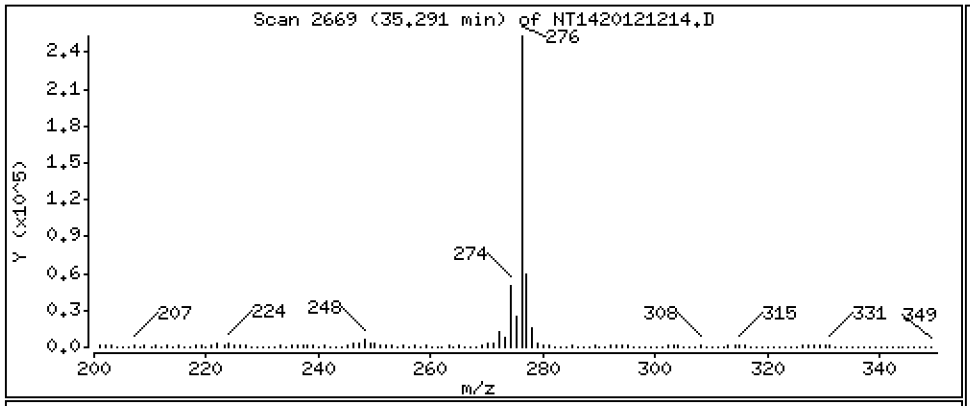
Operator: VTS

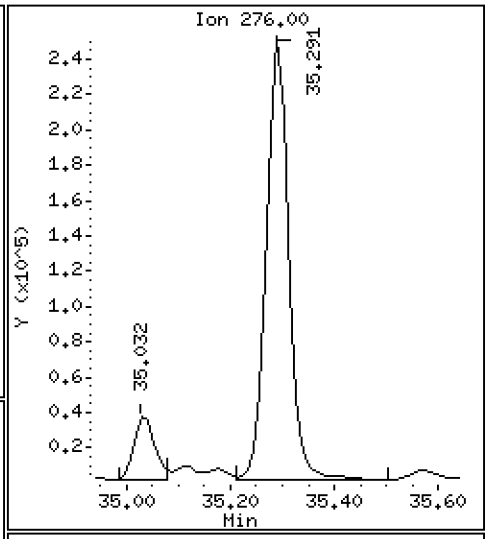
Column phase: Rxi-17Sil MS

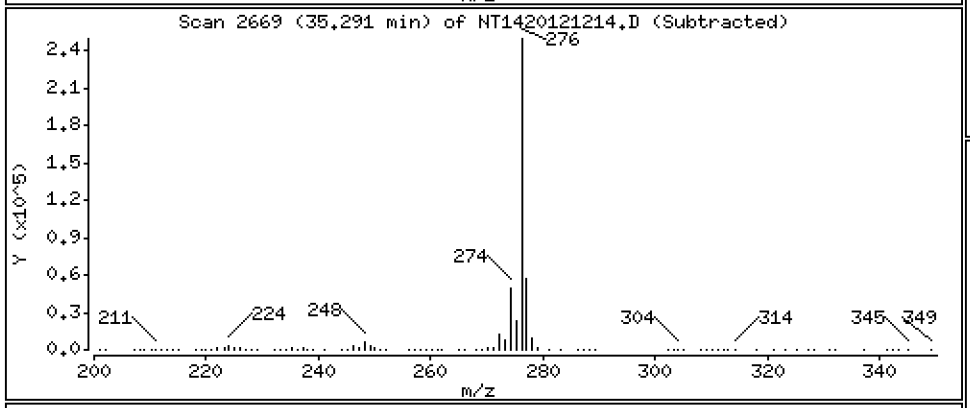
Column diameter: 0.25

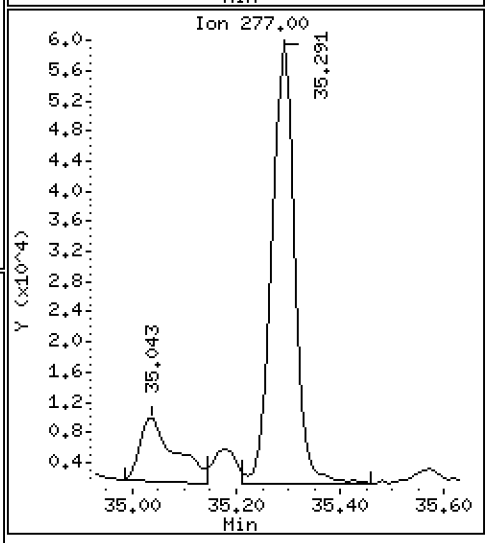
69 Indeno(1,2,3-cd)pyrene

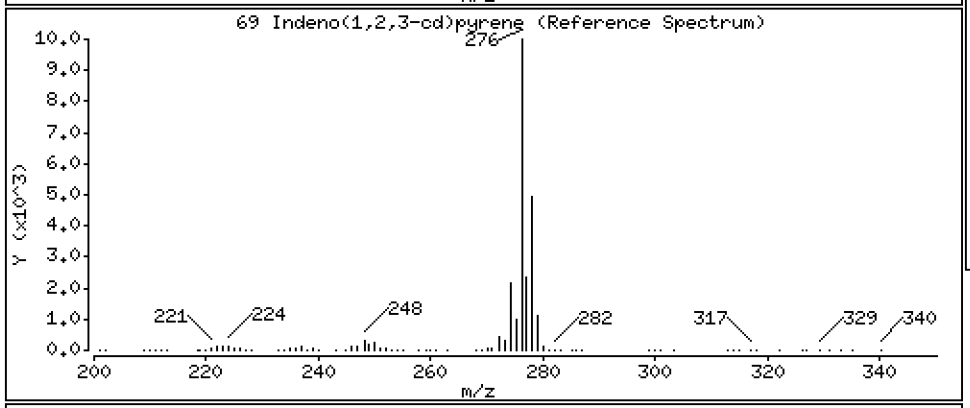
Concentration: 4.772 ug/mL

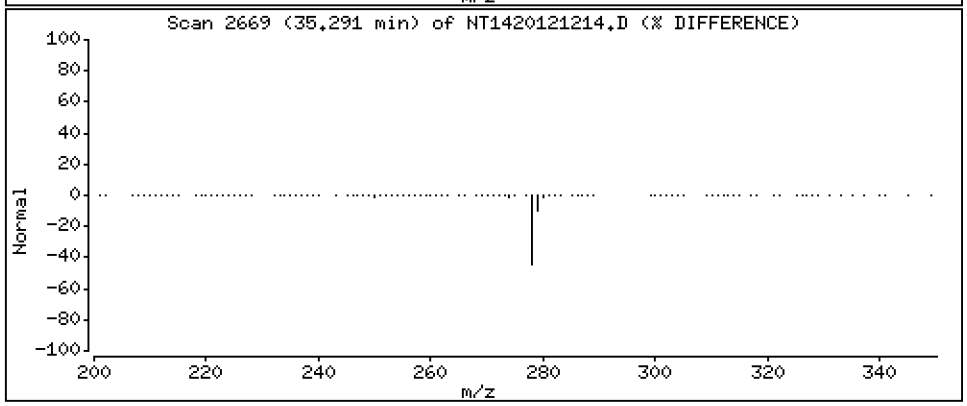












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

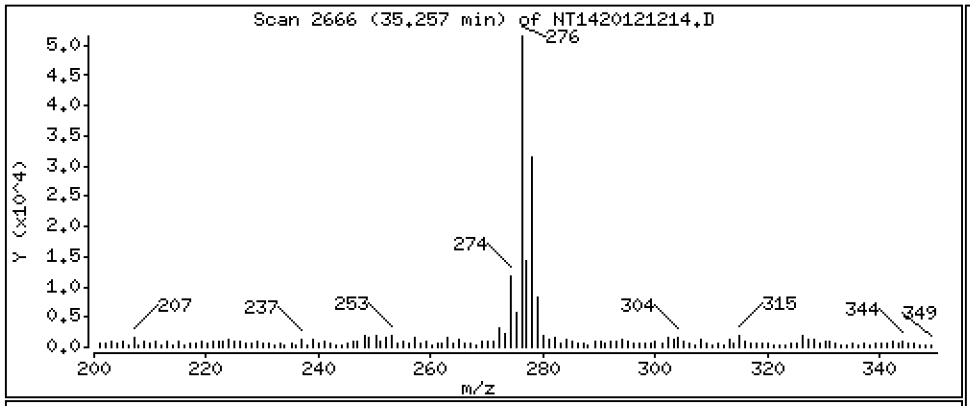
Operator: VTS

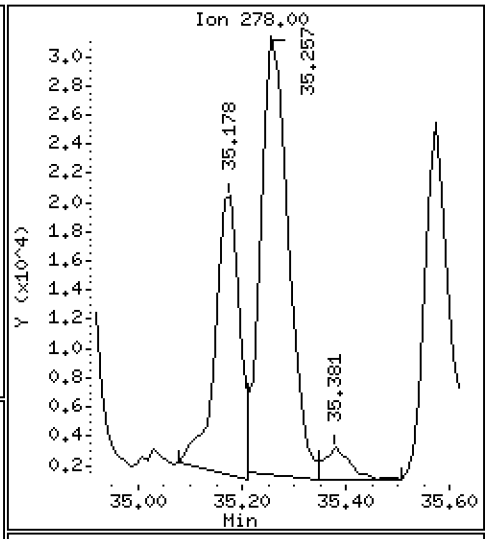
Column phase: Rxi-17Sil MS

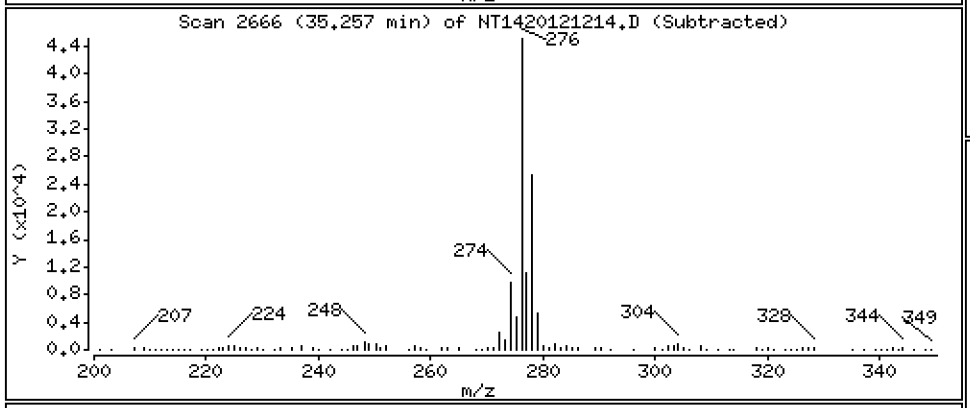
Column diameter: 0.25

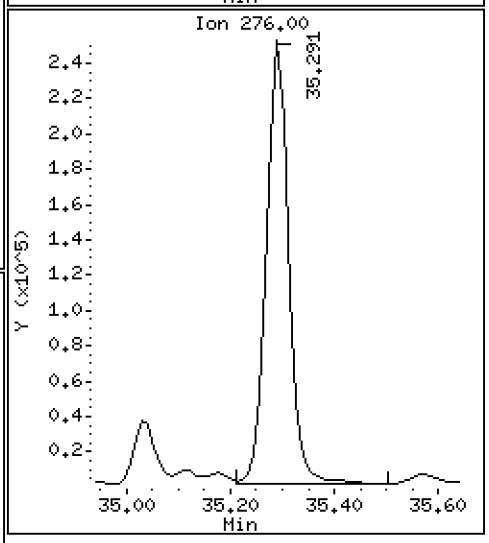
70 Dibenzo(a,h)anthracene

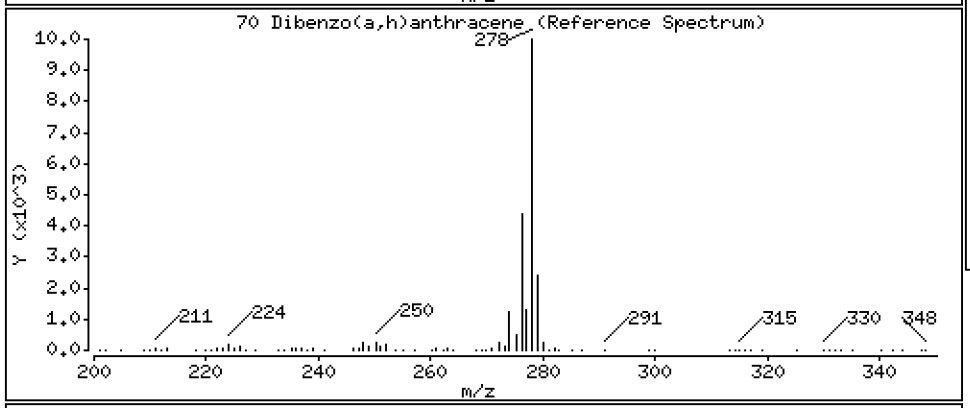
Concentration: 0.8342 ug/mL

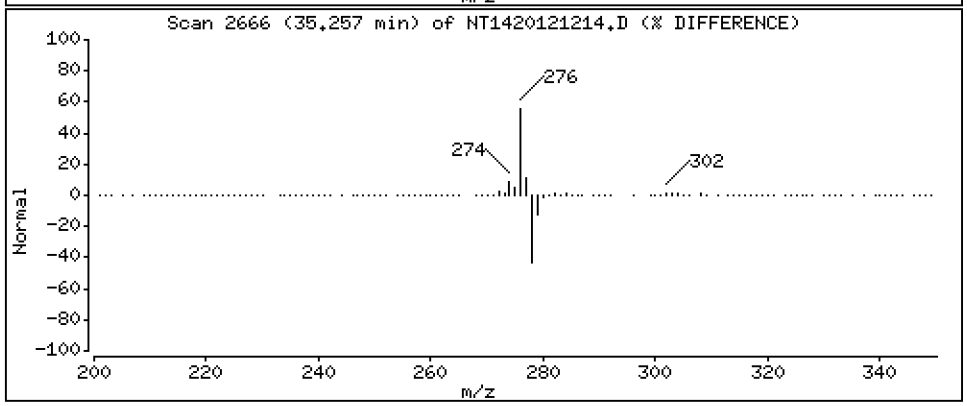












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

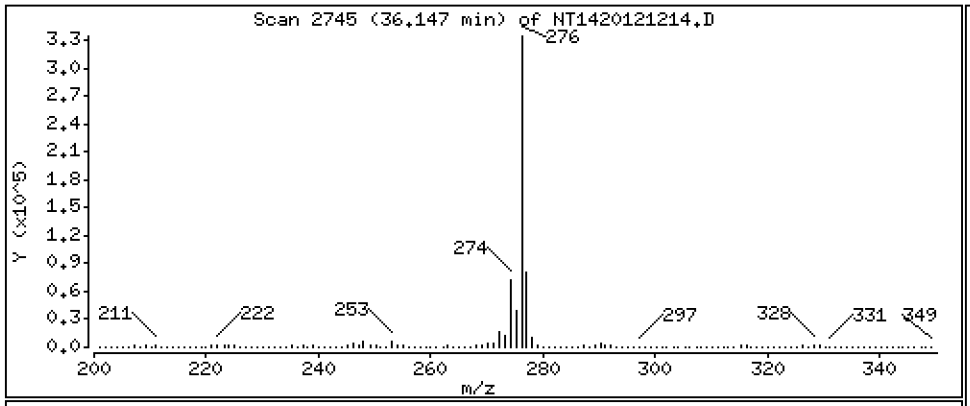
Operator: VTS

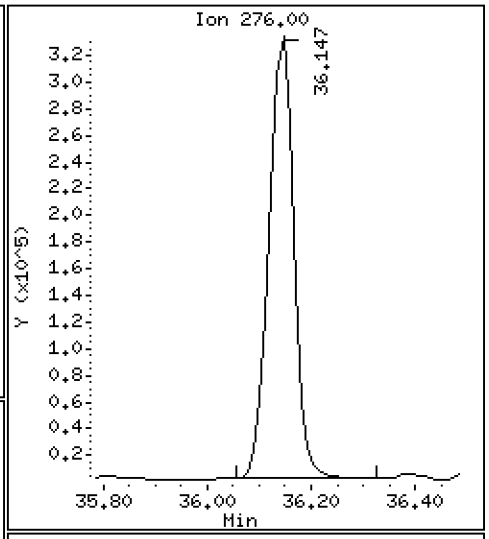
Column phase: Rxi-17Sil MS

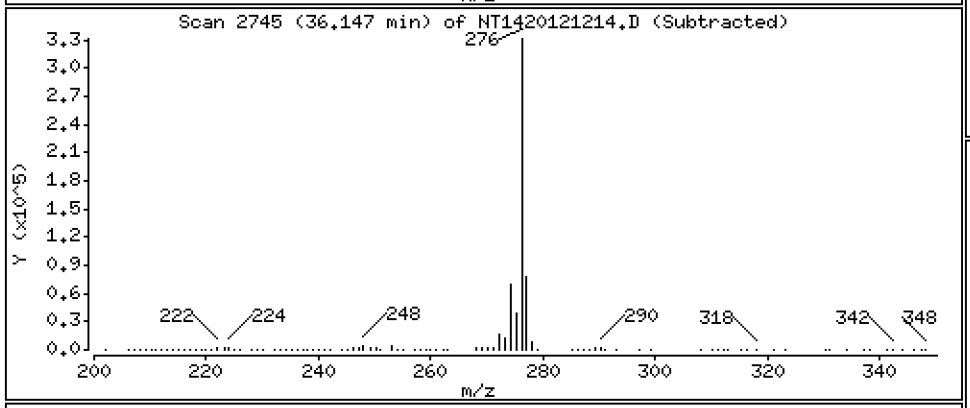
Column diameter: 0.25

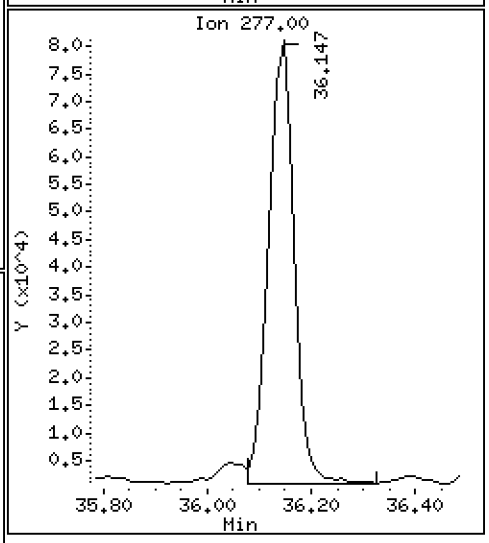
74 Benzo(g,h,i)perylene

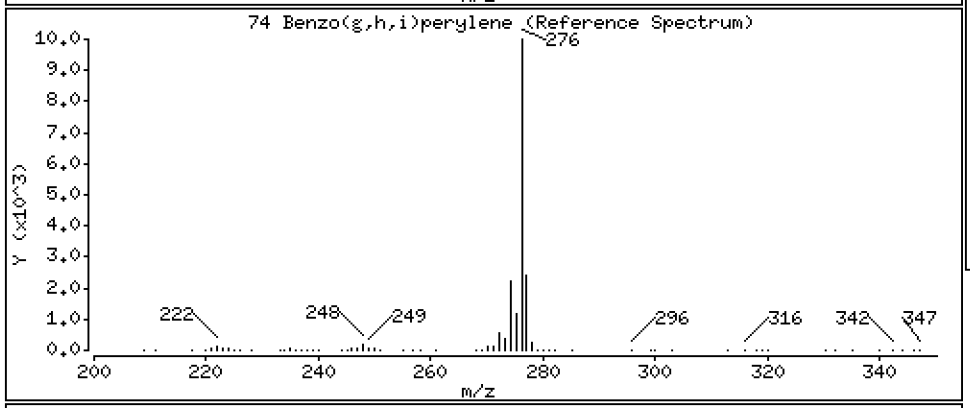
Concentration: 8.168 ug/mL

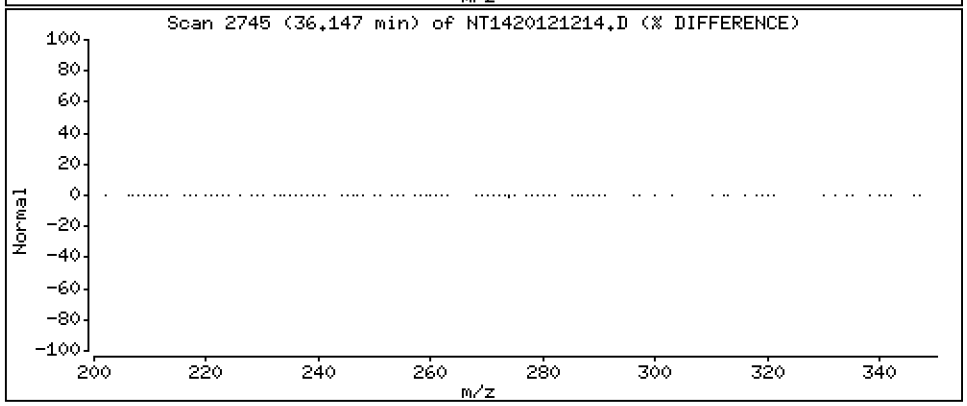












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D
Lab Smp Id: 20K0073-01
Inj Date : 12-DEC-2020 21:35
Operator : VTS Inst ID: nt14.i
Smp Info : 20K0073-01
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201212.b\ALKYLPNA.m
Meth Date : 12-Dec-2020 12:41 van Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: ORGDATA102

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
	1 trans-Decalin	138	Compound Not Detected.					
	2 cis-Decalin	138	Compound Not Detected.					
$	6 Naphthalene-d8	136	11.619	11.630	(0.624)	190865	2.07801	2.078(R)
	7 Naphthalene	128	11.685	11.696	(0.628)	87233	0.94929	0.9493
	12 Benzo(b)thiophene	134	12.135	12.146	(0.652)	6511	0.08433	0.08433
	16 2-Methylnaphthalene	141	13.520	13.531	(0.726)	23102	0.41241	0.4124
	17 1-methylnaphthalene	141	13.970	13.982	(0.750)	11216	0.19439	0.1944
	18 Biphenyl	154	15.157	15.169	(0.814)	13051	0.15480	0.1548
	19 2,6-Dimethylnaphthalene	156	15.234	15.245	(0.818)	22861	0.37143	0.3714
	20 Acenaphthylene	152	16.806	16.806	(0.903)	46285	0.45862	0.4586
$	21 Acenaphthene-d10	164	17.092	17.092	(0.918)	121356	2.20028	2.200(R)
	22 Acenaphthene	153	17.201	17.213	(0.924)	185031	2.79867	2.799
	23 Dibenzofuran	168	17.575	17.586	(0.944)	22771	0.23741	0.2374
	24 1,6,7-Trimethylnaphthalene	170	17.806	17.817	(0.956)	15430	0.24727	0.2473
*	25 Fluorene-d10	176	18.621	18.632	(1.000)	225108	2.00000	
	26 Fluorene	166	18.723	18.734	(1.005)	95415	1.27609	1.276
	30 Dibenzothiophene	184	21.637	21.648	(1.162)	57993	0.53891	0.5389
$	35 Phenanthrene-d10	188	21.952	21.952	(0.995)	233577	2.42428	2.424(R)
	36 Phenanthrene	178	22.040	22.040	(0.999)	1183694	10.6253	10.63
*	250 Anthracene-d10	188	22.062	22.073	(1.000)	201164	2.00000	
	37 Anthracene	178	22.127	22.139	(1.003)	122106	1.11528	1.115
	42 Carbazole	167	23.425	23.425	(1.062)	41346	0.43608	0.4361
	43 1-Methylphenanthrene	192	23.864	23.865	(1.082)	75758	0.92649	0.9265
	44 Fluoranthene	202	25.843	25.844	(1.171)	1604973	13.0534	13.05
	46 Pyrene	202	26.701	26.701	(1.210)	2100308	16.1878	16.19
	51 Naphthobenzothiophene	234	29.256	29.256	(1.326)	118998	1.00623	1.006
	55 Benzo(a)anthracene	228	29.850	29.850	(0.906)	659759	5.36997	5.370
$	56 Chrysene-d12	240	29.974	29.974	(0.910)	231395	2.38471	2.385(R)
	57 Chrysene	228	30.042	30.053	(0.912)	817135	6.69165	6.692
	62 Benzo(b)fluoranthene	252	32.283	32.283	(0.980)	658915	4.74985	4.750(M)
	63 Benzo(k)fluoranthene	252	32.328	32.328	(0.981)	400385	2.86357	2.864(M)
	293 Benzo(j)fluoranthene	252	32.396	32.396	(0.983)	362715	2.96772	2.968
	246 Total Benzofluoranthenes	252	32.283	32.328	(0.980)	1346615	10.4621	10.46(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.947	32.948	(1.000)	284594	2.00000	
64 Benzo(e)pyrene	252	33.004	33.004	(1.002)	808564	6.36592	6.366
66 Benzo(a)pyrene	252	33.105	33.105	(1.005)	1000660	8.33847	8.338
$ 67 Perylene-d12	264	33.274	33.286	(1.010)	227764	1.93546	1.935(R)
68 Perylene	252	33.330	33.342	(1.012)	457691	3.63108	3.631
69 Indeno(1,2,3-cd)pyrene	276	35.290	35.290	(1.071)	709169	4.77210	4.772
70 Dibenzo(a,h)anthracene	278	35.256	35.268	(1.070)	109525	0.83421	0.8342
74 Benzo(g,h,i)perylene	276	36.146	36.135	(1.097)	1066372	8.16818	8.168

QC Flag Legend

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

Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121214.D Page 1
Report Date: 14-Dec-2020 17:00

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1420121214.D
Lab Smp Id: 20K0073-01
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201212.b\ALKYLPNA.m
Misc Info:

Calibration Date: 12-DEC-2020
Calibration Time: 11:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	219929	109965	439858	225108	2.35
250 Anthracene-d10	196749	98375	393498	201164	2.24
251 Benzo(e)pyrene-d1	249762	124881	499524	284594	13.95

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.63	18.13	19.13	18.62	-0.06
250 Anthracene-d10	22.07	21.57	22.57	22.06	-0.05
251 Benzo(e)pyrene-d1	32.95	32.45	33.45	32.95	-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 - NT1420121214.D

Lab ID: 20K0073-01
nt14.i, 20201212.b\ALKYLPNA.m, 12-DEC-2020 21:35

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.062	0.000	1.0618	Carbazole

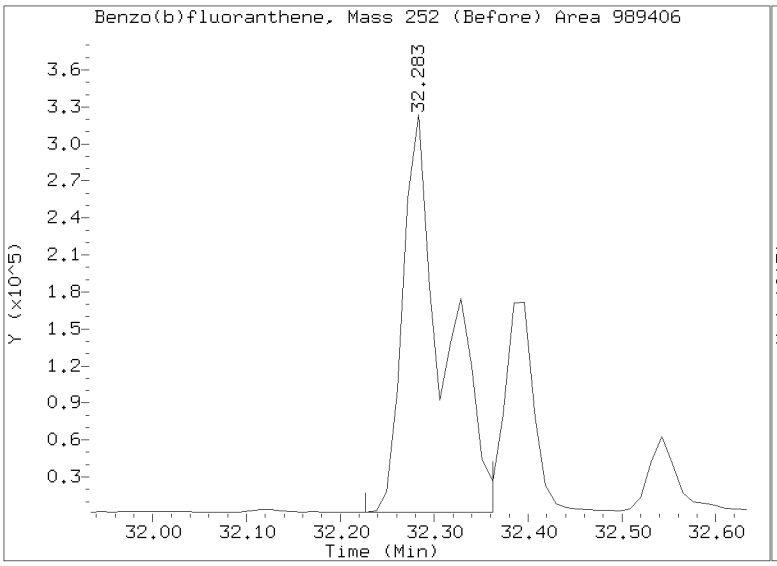
RRT check based on Ccal File: NT1420121202.D

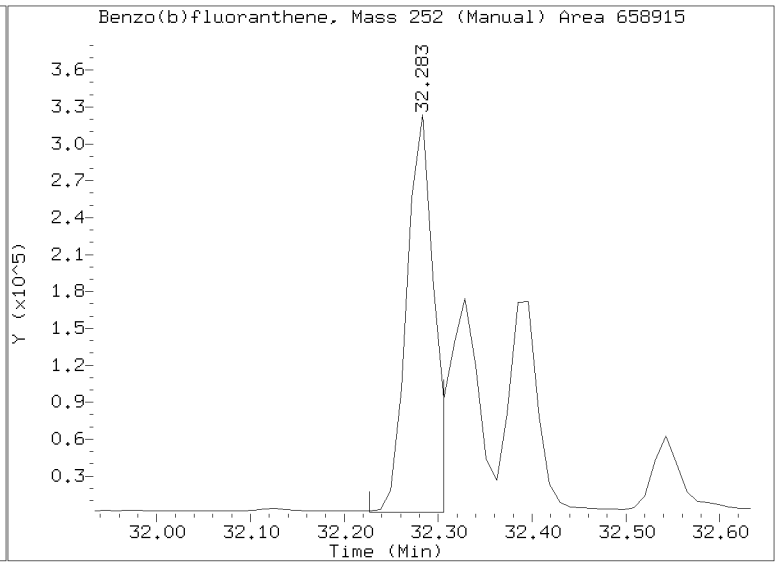
On Column LOD for nt14.i, 20201212.b\ALKYLPNA.m, TARGETS.sub = 0.0000

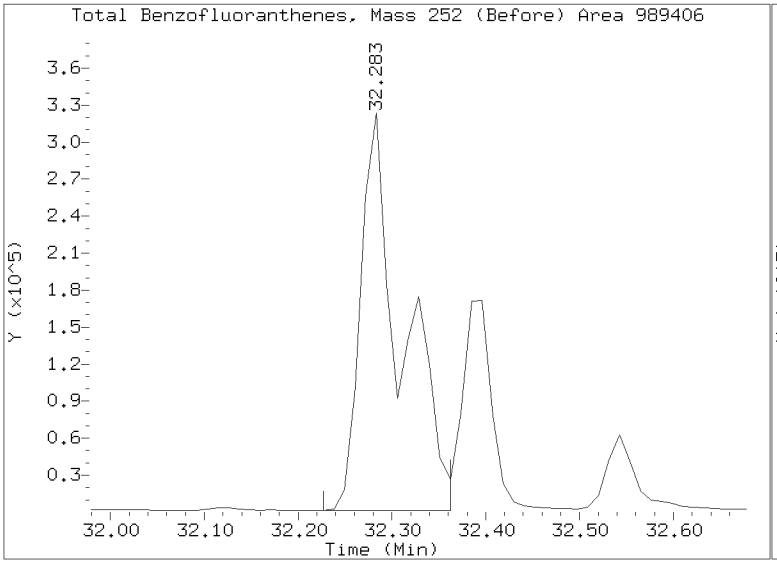
* Only compounds listed in the work order have been verified by the analyst *

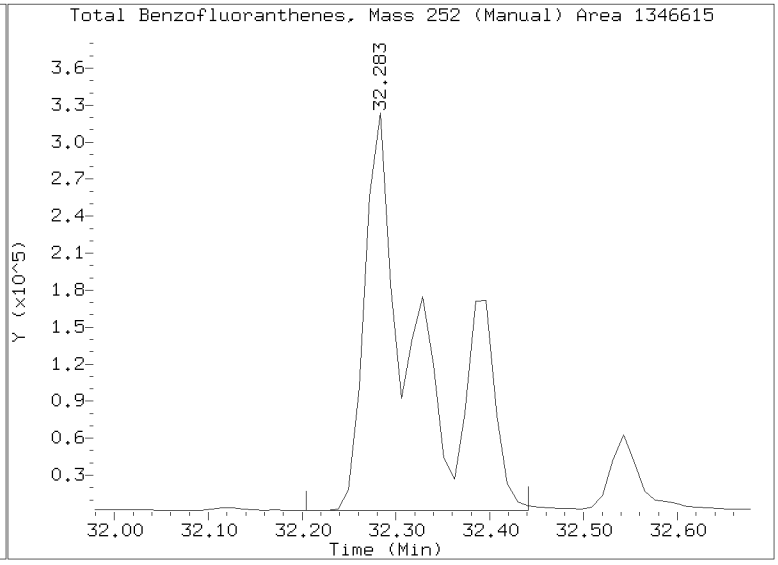
Quant Ion Manual Peak Adjustment Report

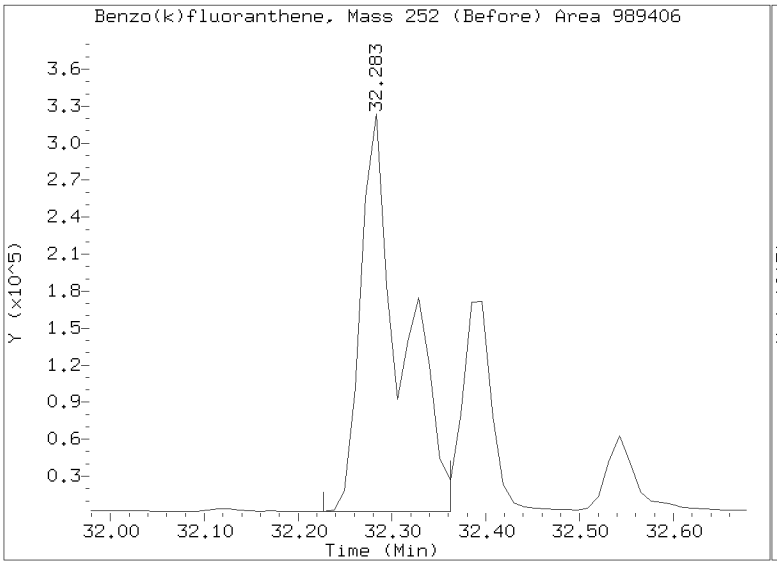
Datafile: //target/share/chem3/nt14.i/20201212.b/NT1420121214.D
Injection Date: 12-DEC-2020 21:35
Lab ID:20K0073-01 Client ID:
Report Date: 12/14/2020 17:00

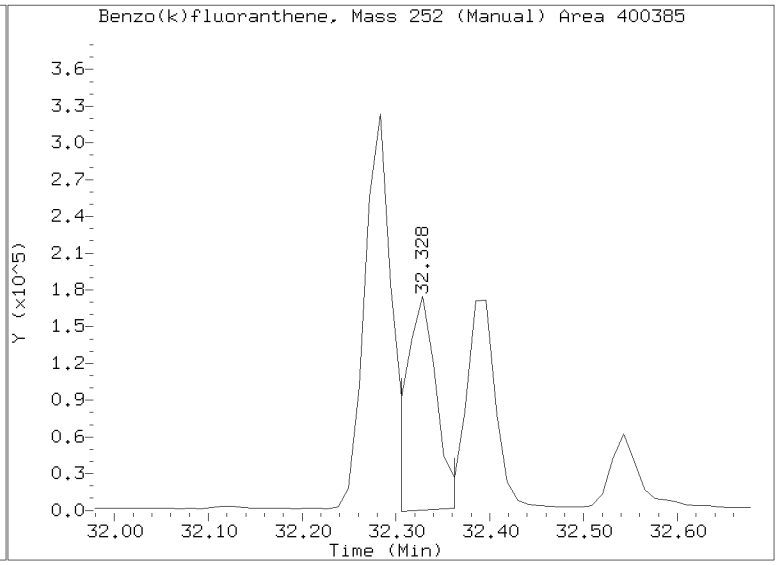












Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-A-00-01-201029

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

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-01 A	SDG:	20K0073
Sampled:	10/29/20 10:40	Prepared:	11/11/20 13:05	File ID:	NT1420121214S.D
% Solids:	81.46	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/12/20 21:35
Batch:	BIK0323	Sequence:	SIL0186	Initial/Final:	12.29 g Wet / 0.5 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	DI00041
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
C1DEC	C1-Decalins	1	5.0	U	0.5	5.0
C2DEC	C2-Decalins	1	33.2		0.5	5.0
C3DEC	C3-Decalins	1	21.7		0.5	5.0
C4DEC	C4-Decalins	1	39.8		0.5	5.0
C1NAPH	C1-Naphthalenes	1	25.7		0.4	5.0
C2NAPH	C2-Naphthalenes	1	77.4		0.4	5.0
C3NAPH	C3-Naphthalenes	1	110		0.4	5.0
C4NAPH	C4-Naphthalenes	1	50.1		0.4	5.0
C1FLR	C1-Fluorenes	1	38.3		0.5	5.0
C2FLR	C2-Fluorenes	1	46.1		0.5	5.0
C3FLR	C3-Fluorenes	1	50.1		0.5	5.0
C1DBTPH	C1-Dibenzothiophenes	1	41.8		0.7	5.0
C2DBTPH	C2-Dibenzothiophenes	1	53.6		0.7	5.0
C3DBTPH	C3-Dibenzothiophenes	1	39.7		0.7	5.0
C4DBTPH	C4-Dibenzothiophenes	1	20.9		0.7	5.0
C1PHNANT	C1-Phenanthrenes/Anthracenes	1	211		0.9	5.0
C2PHNANT	C2-Phenanthrenes/Anthracenes	1	167		0.9	5.0
C3PHNANT	C3-Phenanthrenes/Anthracenes	1	98.4		0.9	5.0
C4PHNANT	C4-Phenanthrenes/Anthracenes	1	44.1		0.9	5.0
C1FLPYR	C1-Fluoranthenes/Pyrenes	1	313		1.0	5.0
C2FLPYR	C2-Fluoranthenes/Pyrenes	1	140		1.0	5.0
C3FLPYR	C3-Fluoranthenes/Pyrenes	1	87.1		1.0	5.0
C4FLPYR	C4-Fluoranthenes/Pyrenes	1	70.6		1.0	5.0
C1BAACYR	C1-Benzo(a)anthracenes/Chrysenes	1	244		0.7	5.0
C2BAACYR	C2-Benzo(a)anthracenes/Chrysenes	1	122		0.7	5.0
C3BAACYR	C3-Benzo(a)anthracenes/Chrysenes	1	58.4		0.7	5.0
C4BAACYR	C4-Benzo(a)anthracenes/Chrysenes	1	22.4		0.7	5.0
C1BZTPH	C1-Benzothiophenes	1	5.8		0.4	5.0
C2BZTPH	C2-Benzothiophenes	1	28.2		0.4	5.0
C3BZTPH	C3-Benzothiophenes	1	16.8		0.4	5.0

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-A-00-01-201029

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

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-01 A	SDG:	20K0073
Sampled:	10/29/20 10:40	Prepared:	11/11/20 13:05	File ID:	NT1420121214S.D
% Solids:	81.46	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/12/20 21:35
Batch:	BIK0323	Sequence:	SIL0186	Initial/Final:	12.29 g Wet / 0.5 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	DI00041
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
C1NPBTP	C1-Naphthobenzothiophenes	1	34.4		2.5	5.0
C2NPBTP	C2-Naphthobenzothiophenes	1	35.1		2.5	5.0
C3NPBTP	C3-Naphthobenzothiophenes	1	18.4		2.5	5.0
C4NPBTP	C4-Naphthobenzothiopenes	1	3.8	J	2.5	5.0
C1DBA	C1-Dibenzo(a)anthracenes	1	55.7		0.7	5.0
C2DBA	C2-Dibenzo(a)anthracenes	1	22.0		0.7	5.0
C3DBA	C3-Dibenzo(a)anthracenes	1	10.6		0.7	5.0

Data File: \\target\share\chem3\nt14.i\20201212.b\sim.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

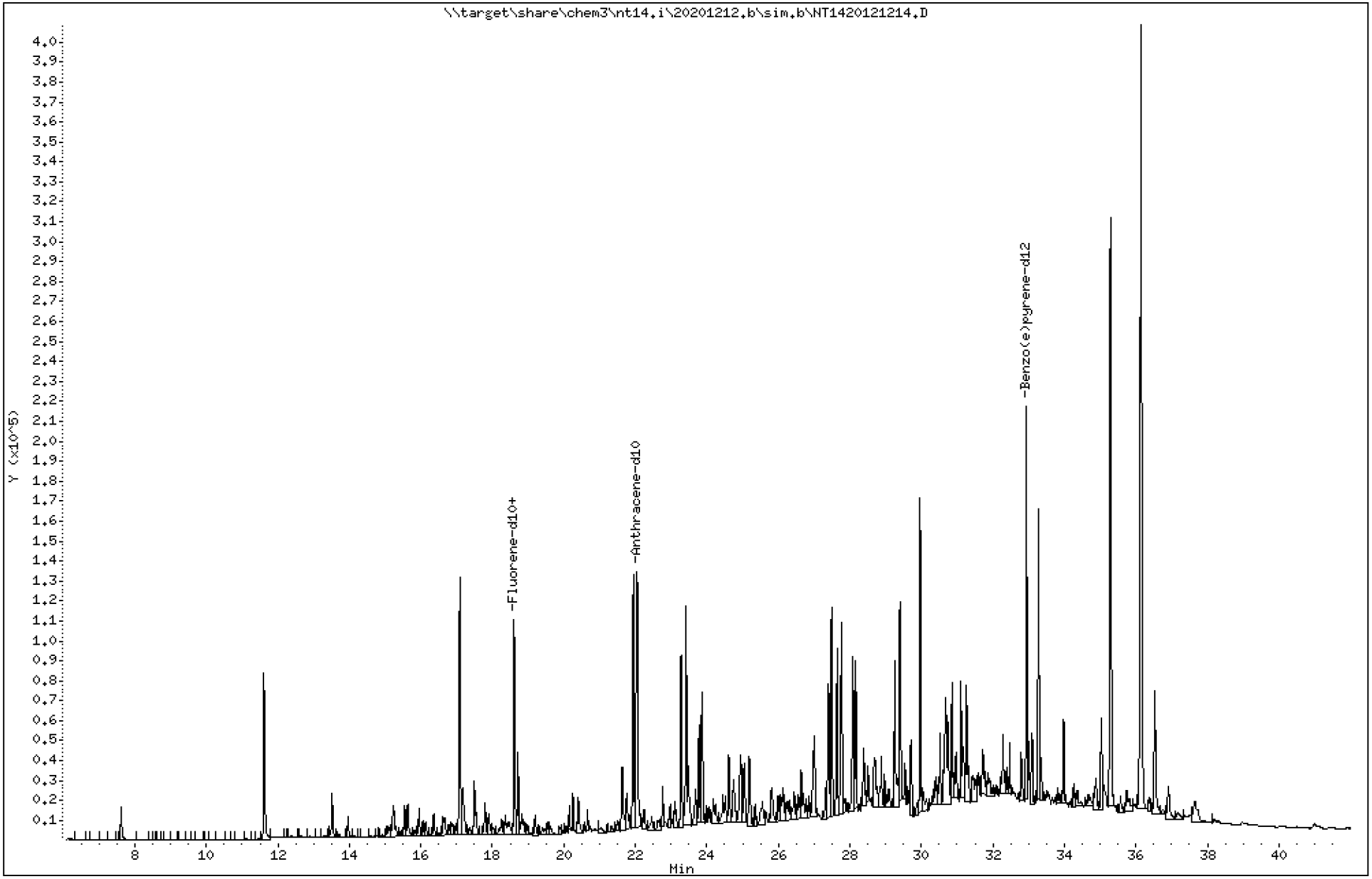
Instrument: nt14.i

Sample Info: 20K0073-01

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

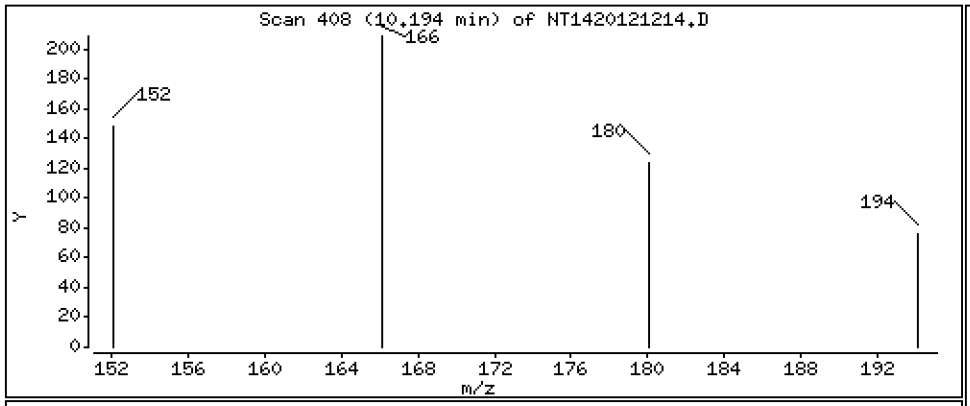
Operator: VTS

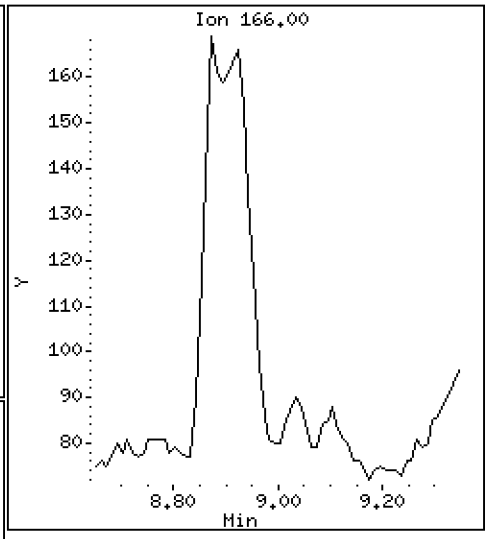
Column phase: Rxi-17Sil MS

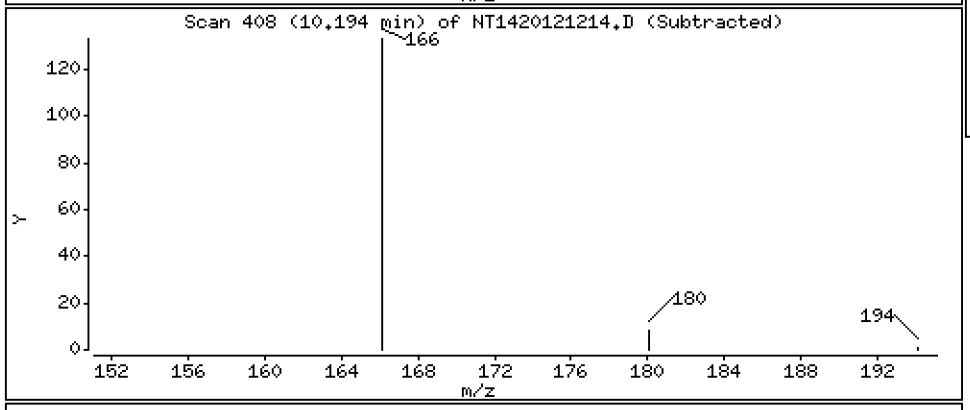
Column diameter: 0.25

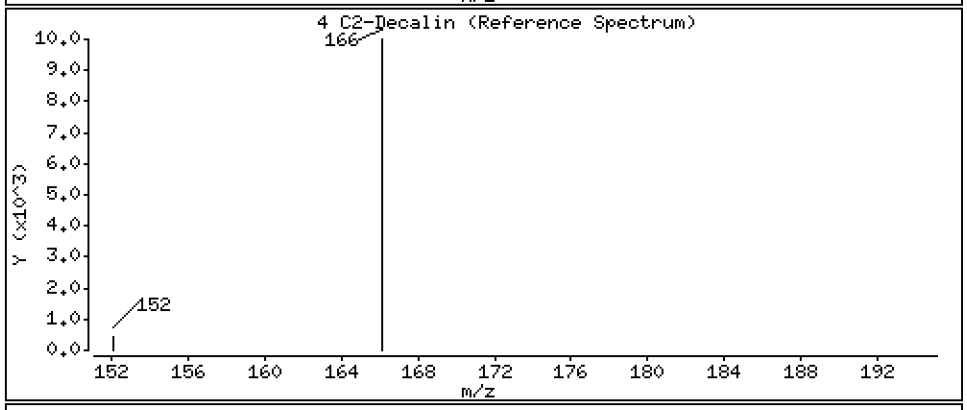
4 C2-Decalin

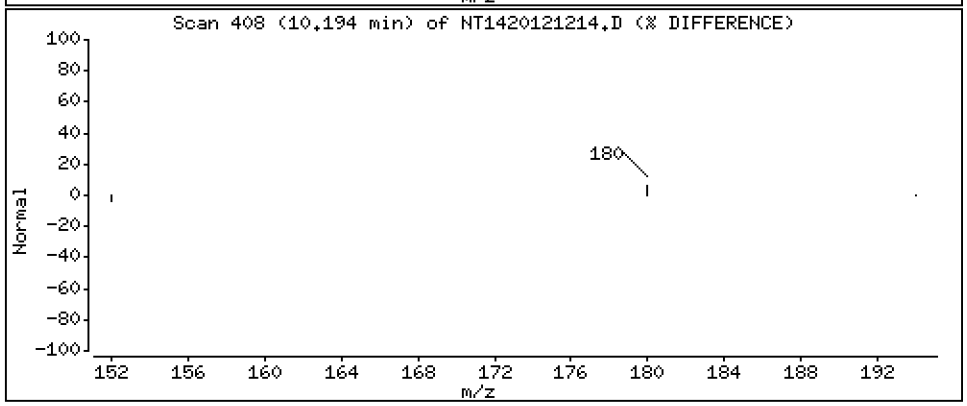
Concentration: 0.6643 ug/mL











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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

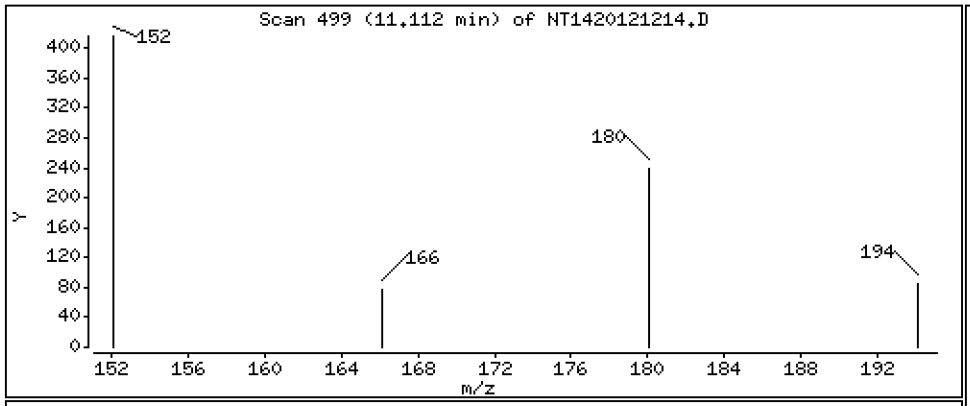
Operator: VTS

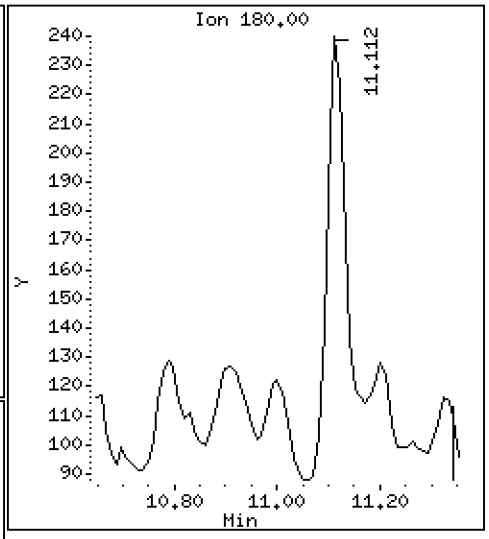
Column phase: Rxi-17Sil MS

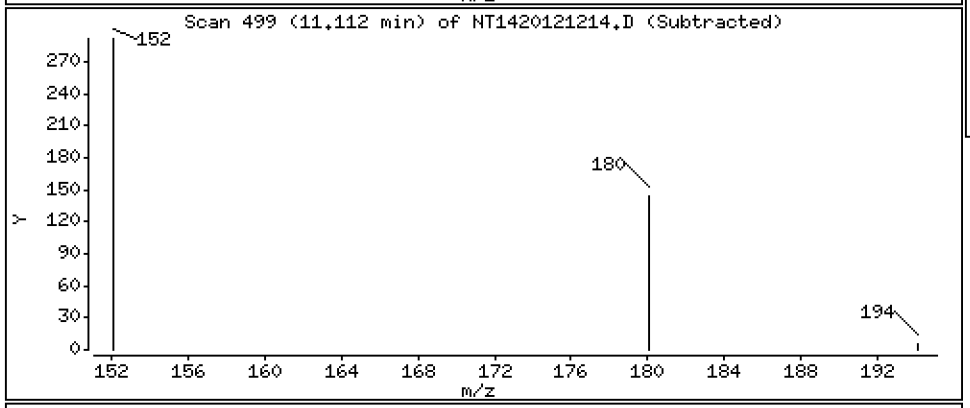
Column diameter: 0.25

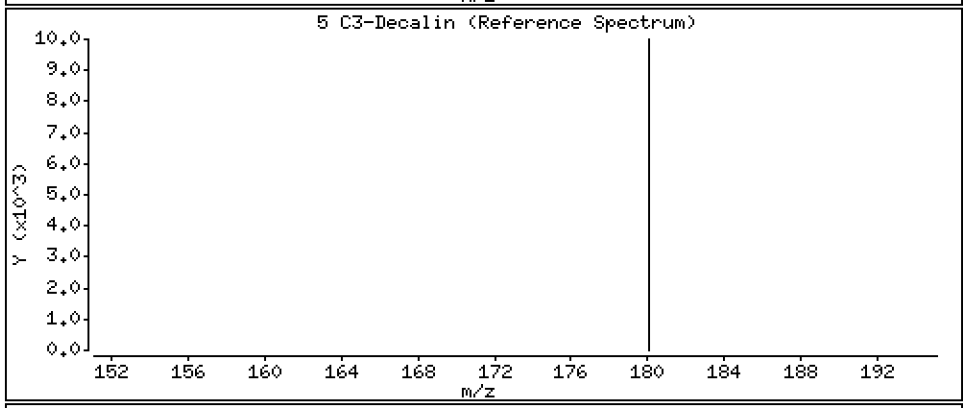
5 C3-Decalin

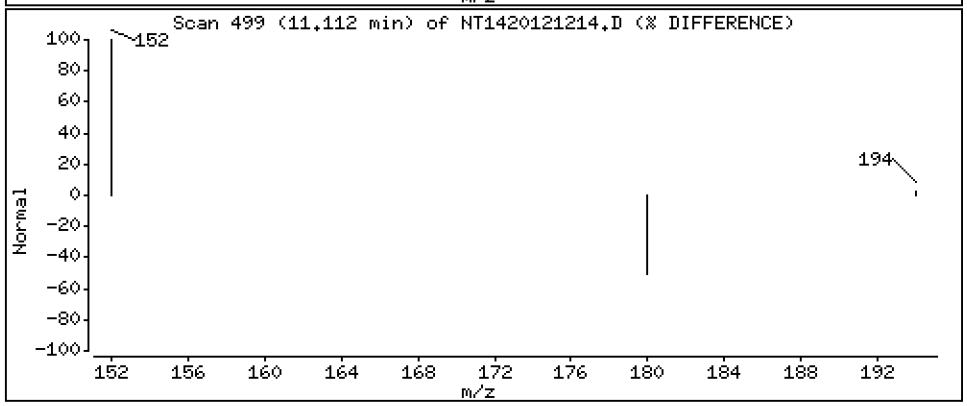
Concentration: 0.4351 ug/mL











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Date : 12-DEC-2020 21:35

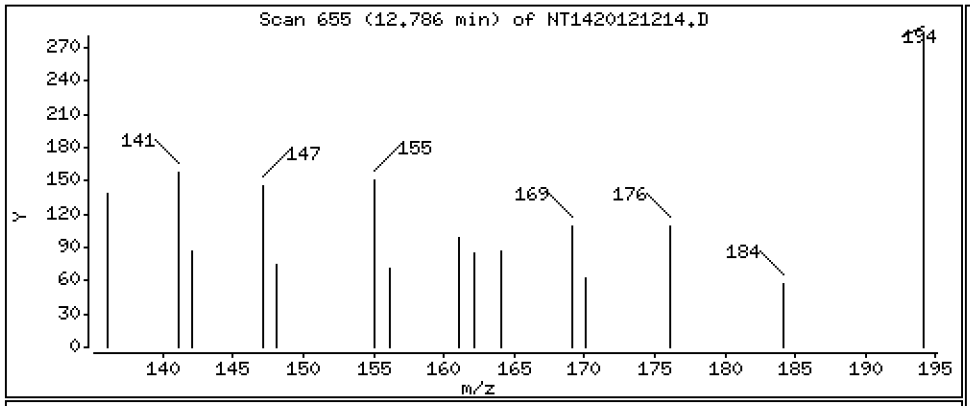
Client ID: Instrument: nt14.i

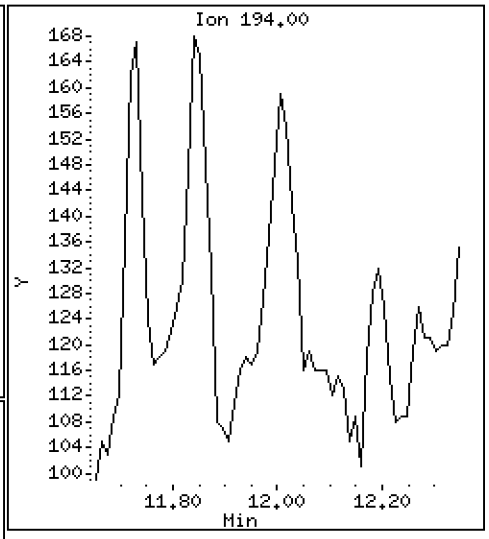
Sample Info: 20K0073-01

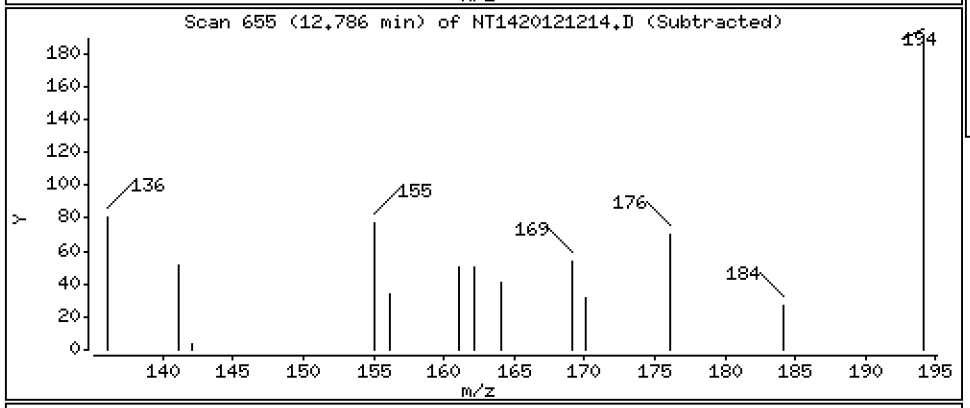
Operator: VTS

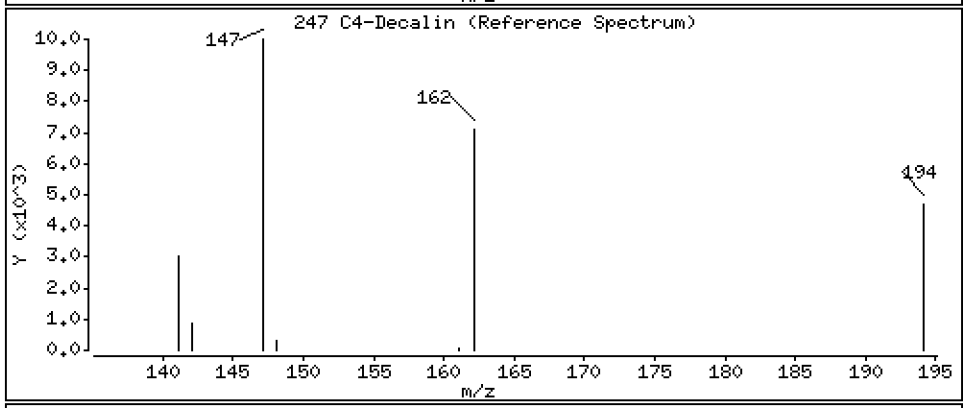
Column phase: Rxi-17Sil MS Column diameter: 0.25

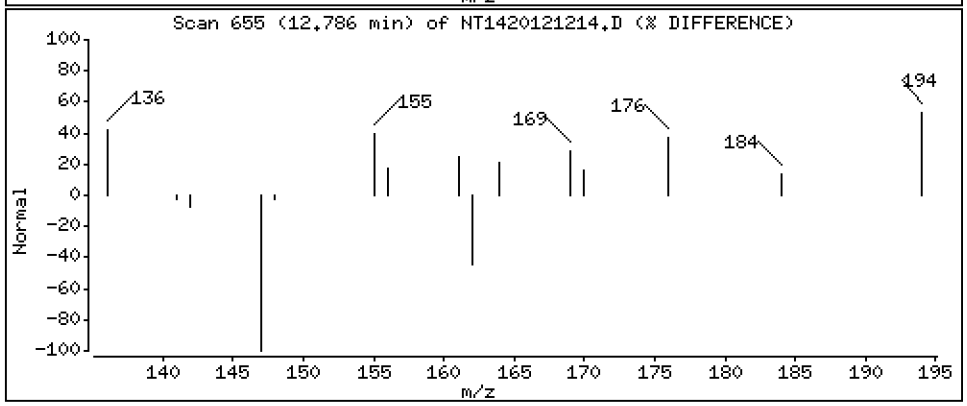
247 C4-Decalin Concentration: 0.7969 ug/mL











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Date : 12-DEC-2020 21:35

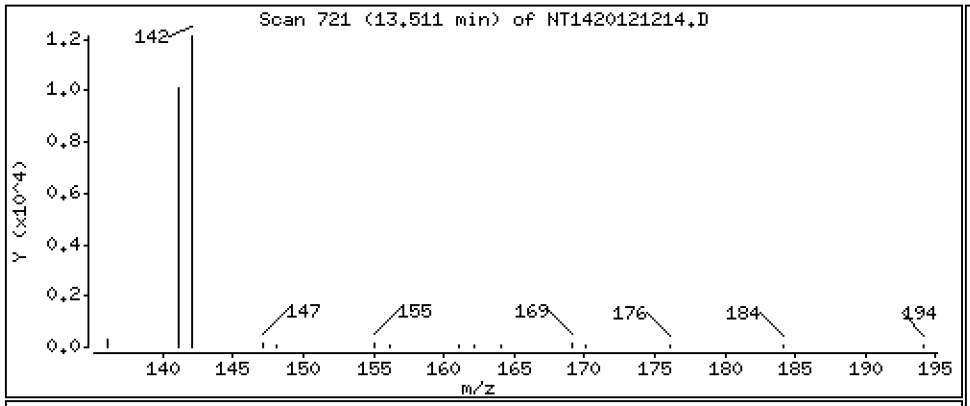
Client ID: Instrument: nt14.i

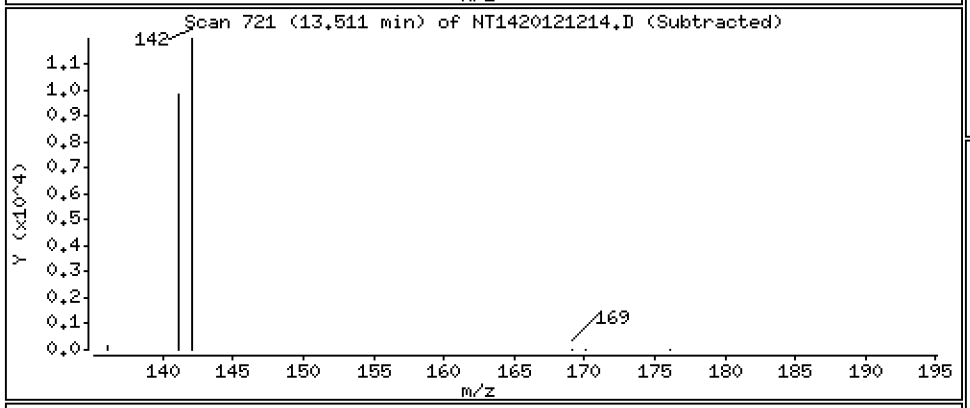
Sample Info: 20K0073-01

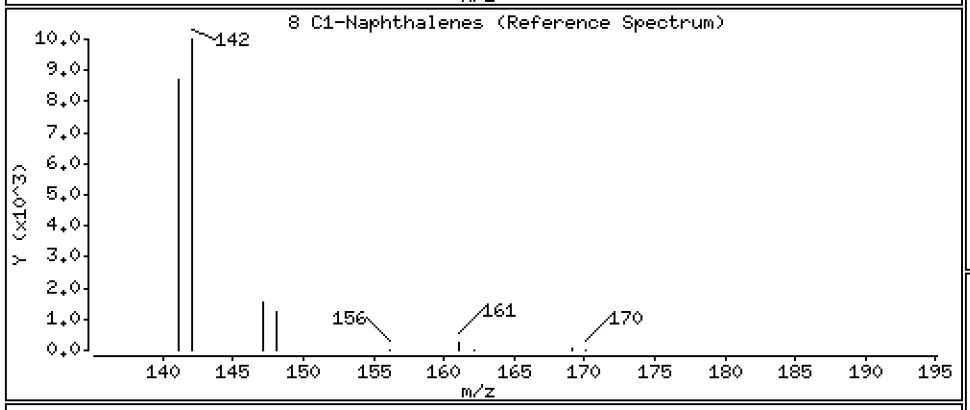
Operator: VTS

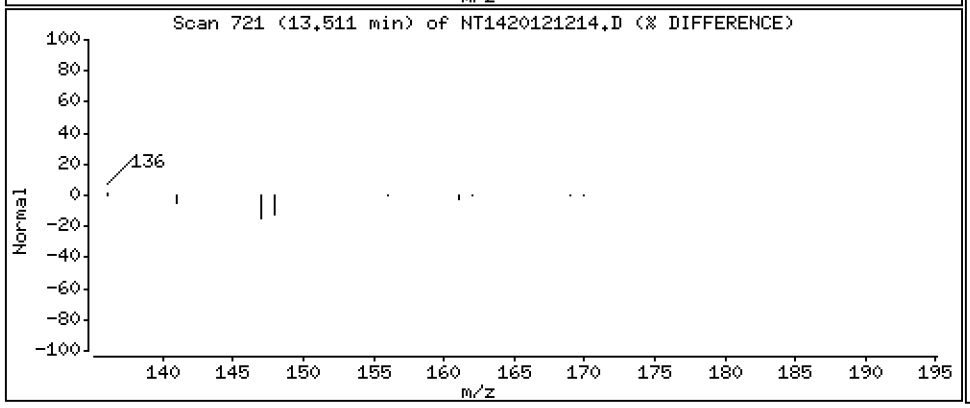
Column phase: Rxi-17Sil MS Column diameter: 0.25

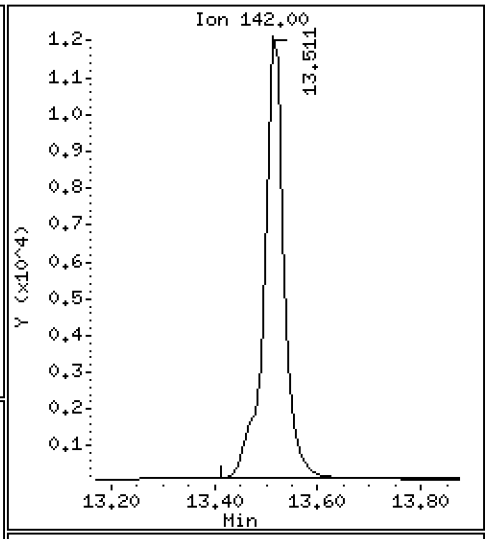
8 C1-Naphthalenes Concentration: 0.5137 ug/mL

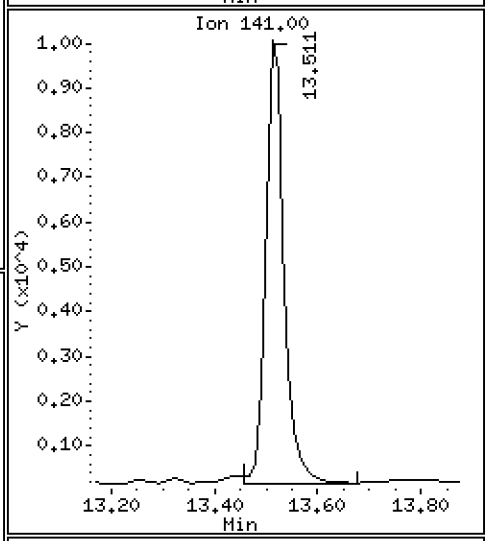


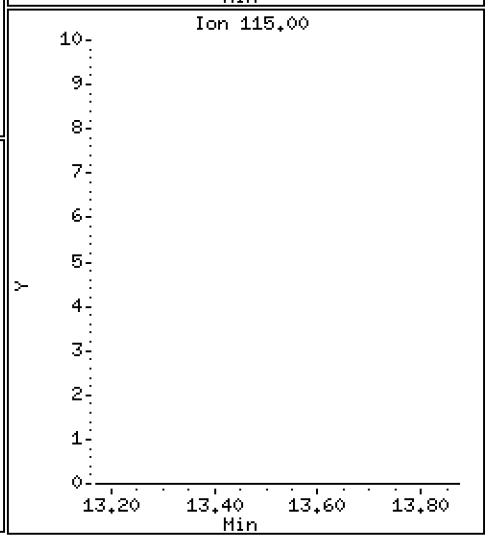












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

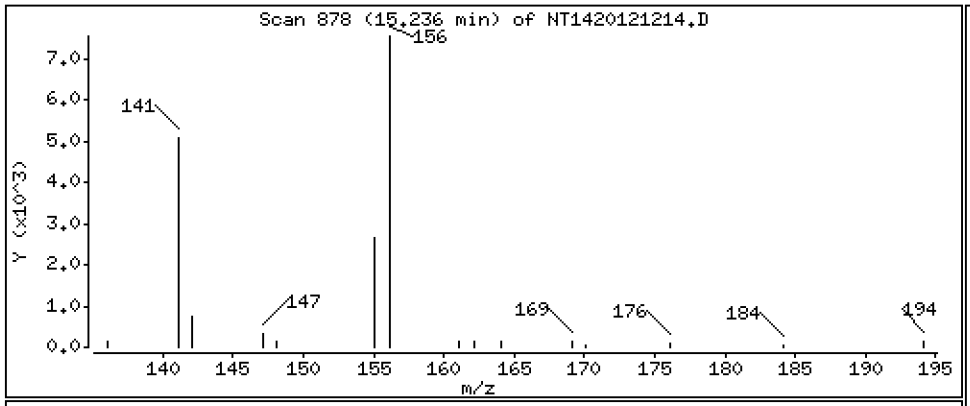
Operator: VTS

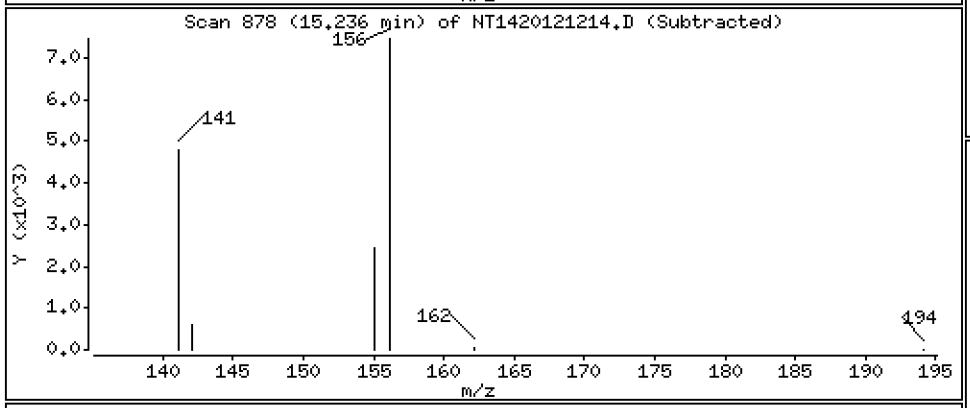
Column phase: Rxi-17Sil MS

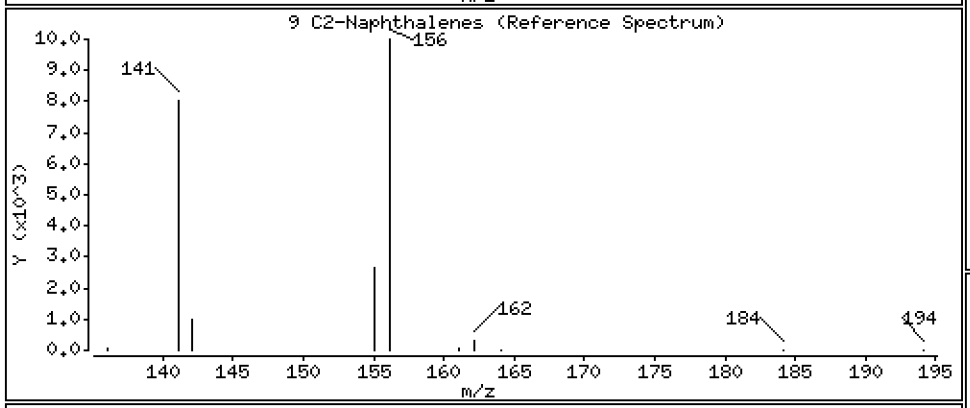
Column diameter: 0.25

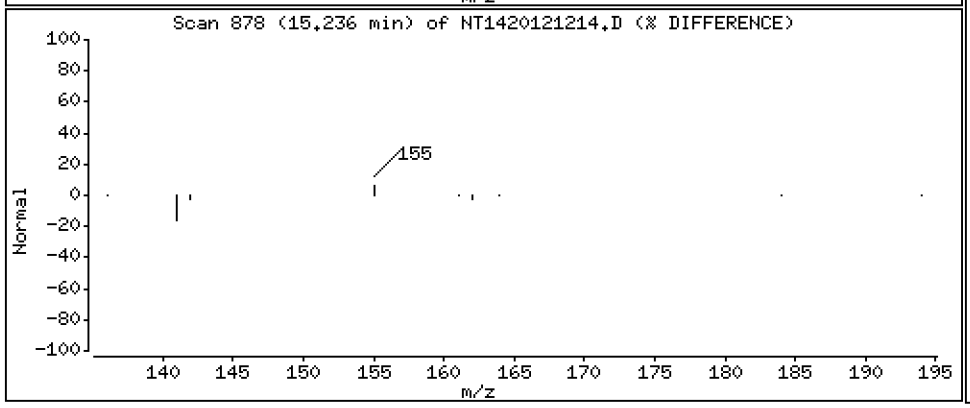
9 C2-Naphthalenes

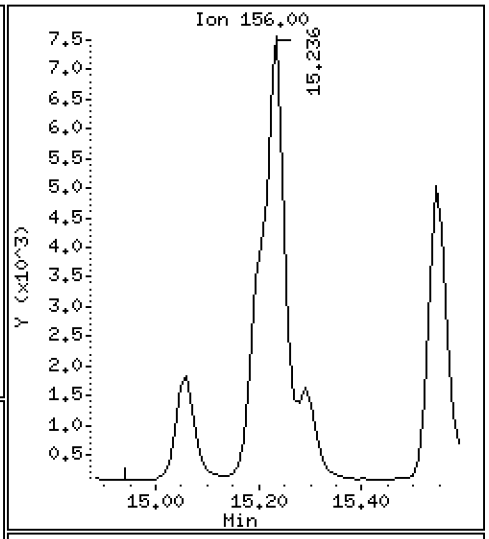
Concentration: 1.549 ug/mL

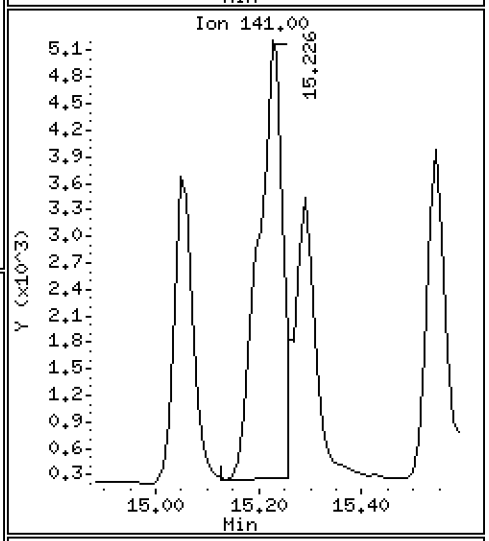


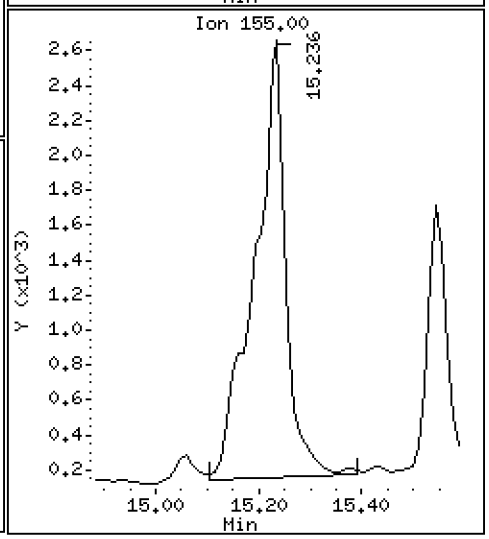












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

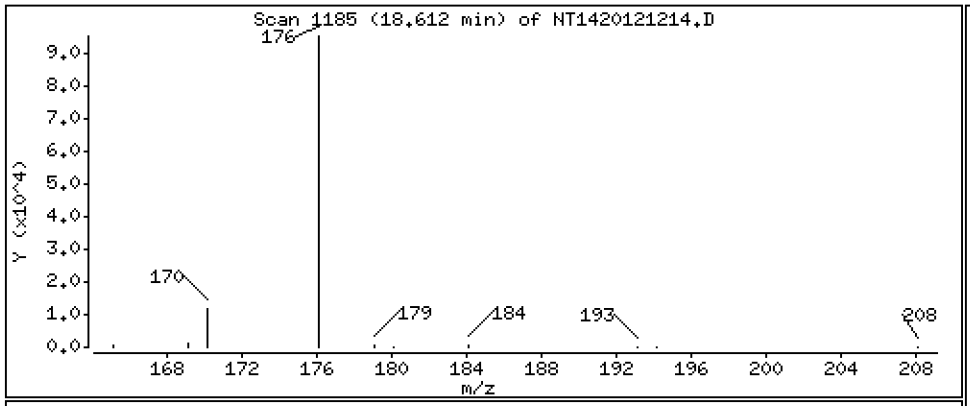
Operator: VTS

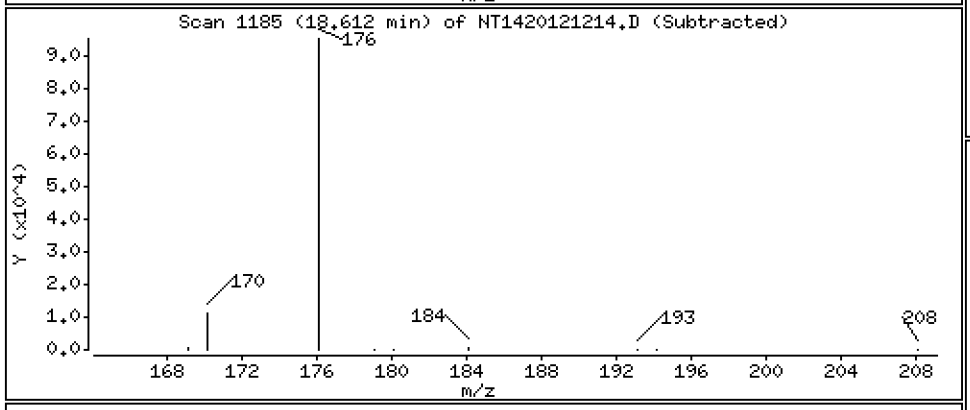
Column phase: Rxi-17Sil MS

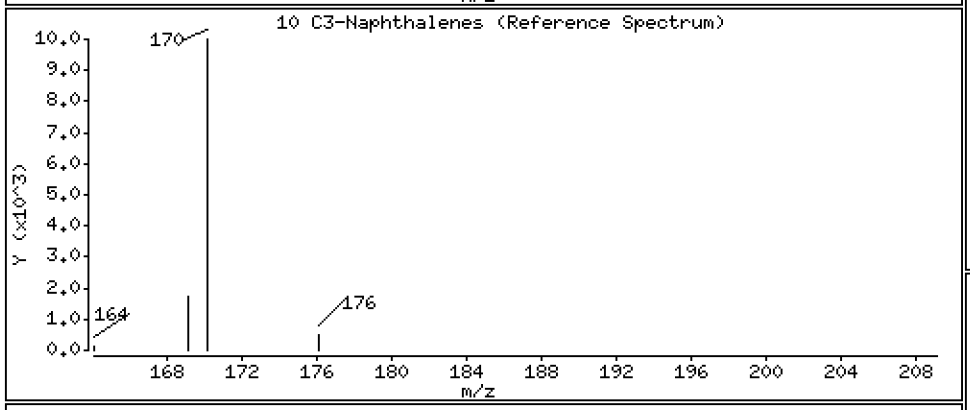
Column diameter: 0.25

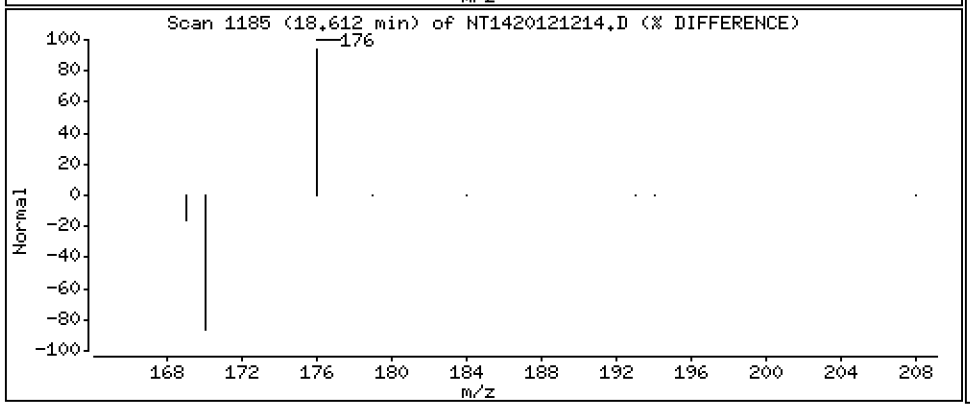
10 C3-Naphthalenes

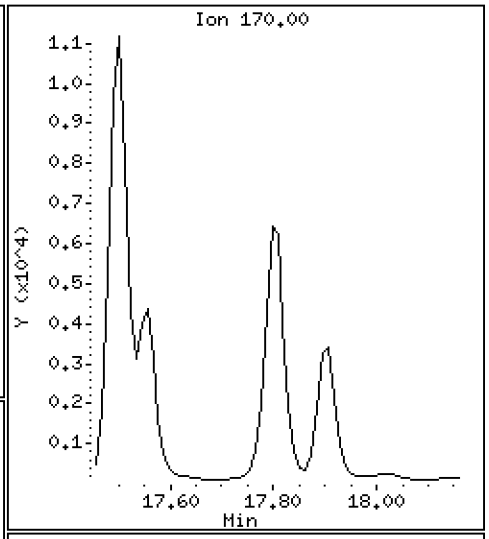
Concentration: 2.206 ug/mL

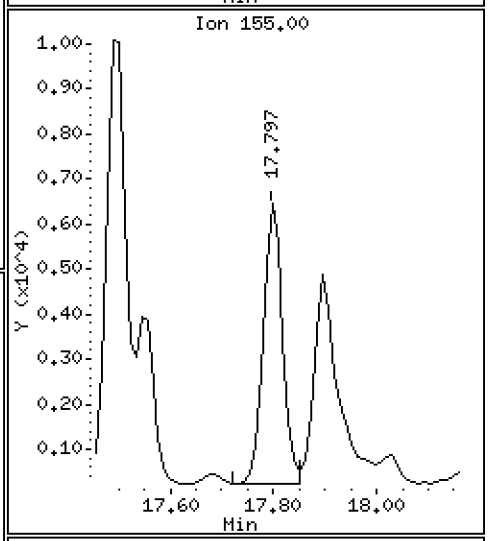


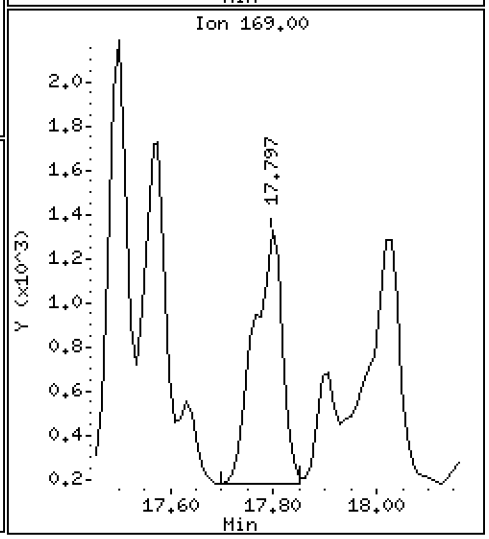












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

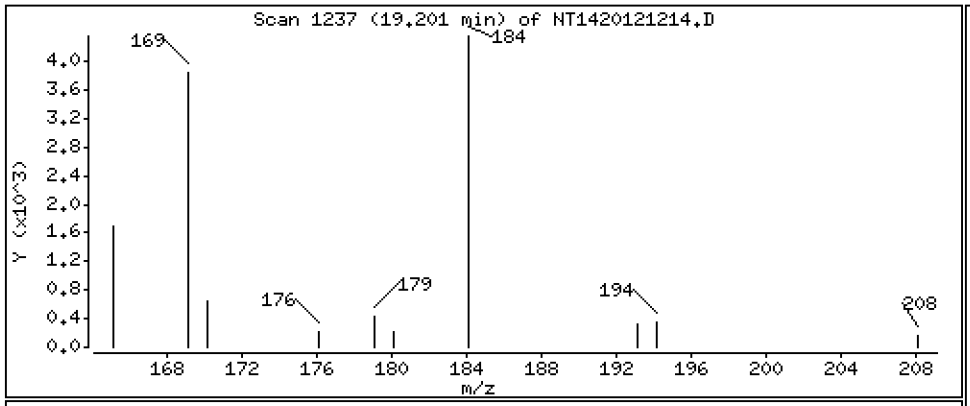
Operator: VTS

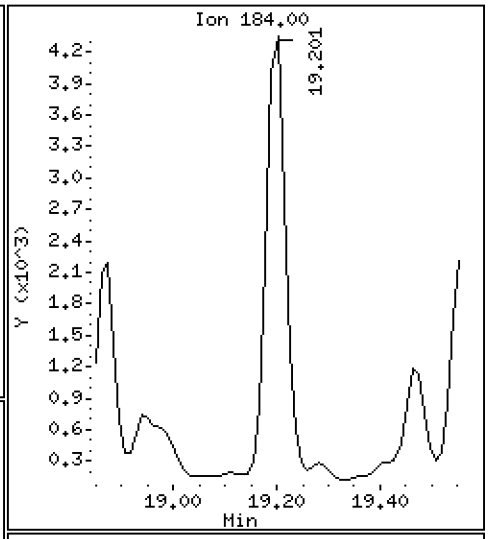
Column phase: Rxi-17Sil MS

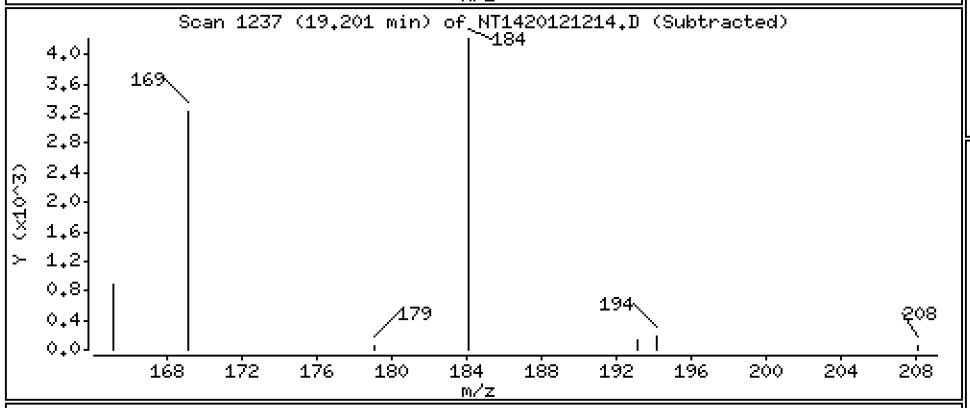
Column diameter: 0.25

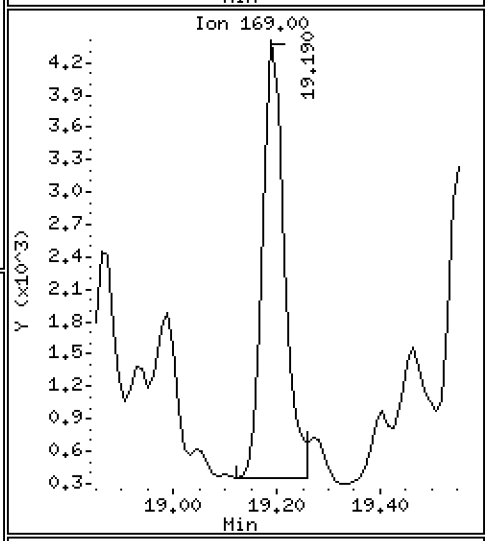
11 C4-Naphthalenes

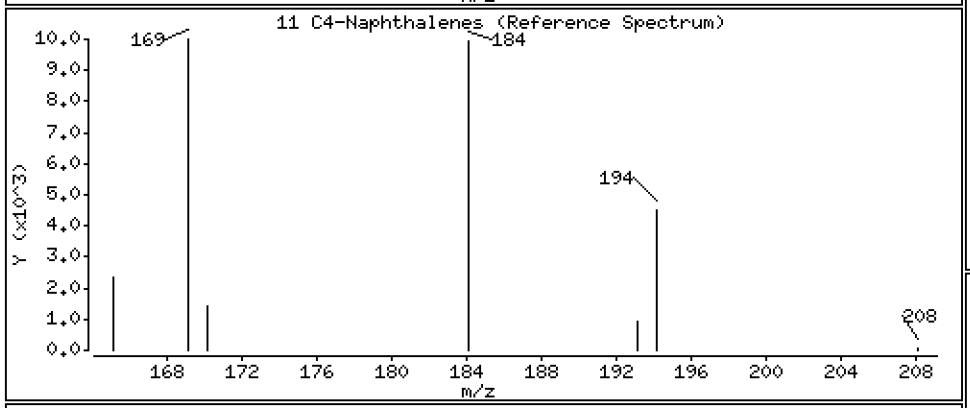
Concentration: 1.004 ug/mL

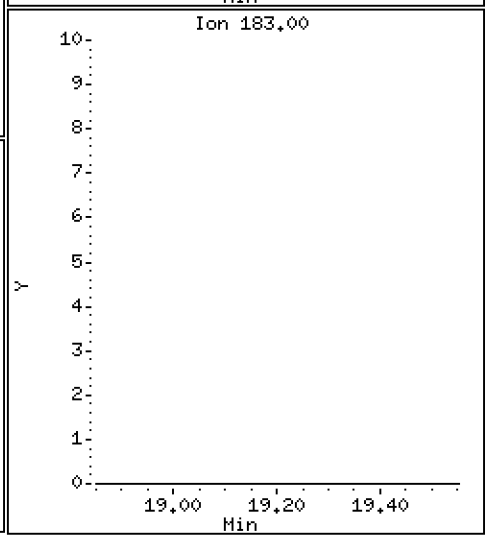


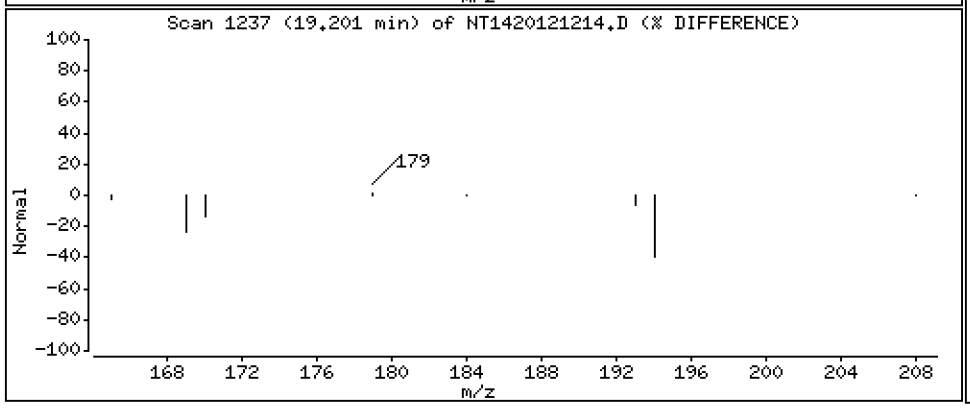












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

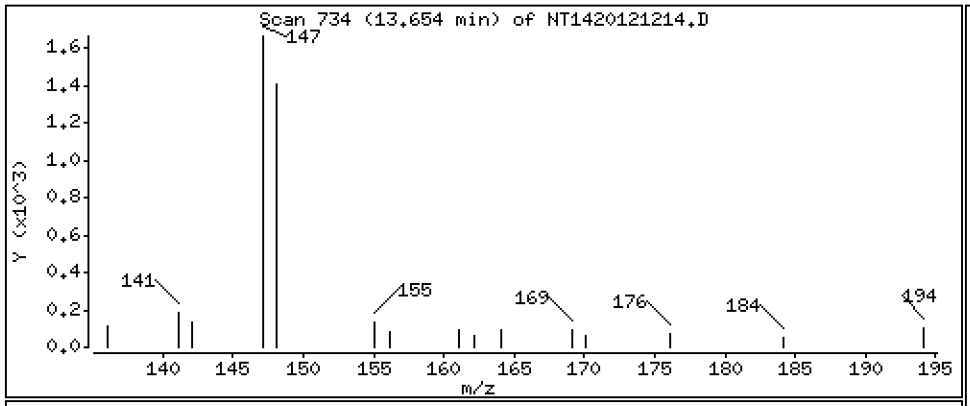
Operator: VTS

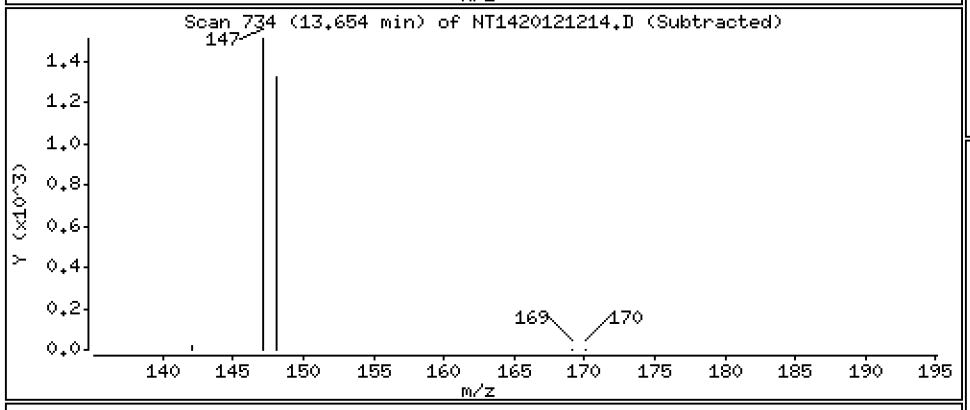
Column phase: Rxi-17Sil MS

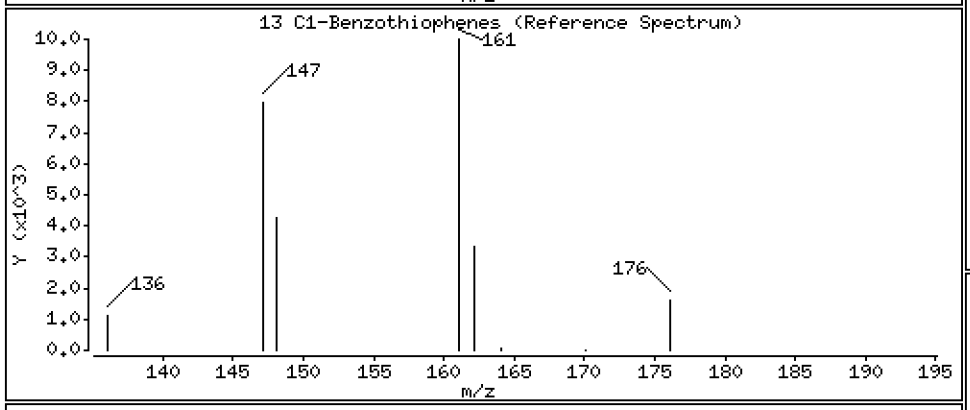
Column diameter: 0.25

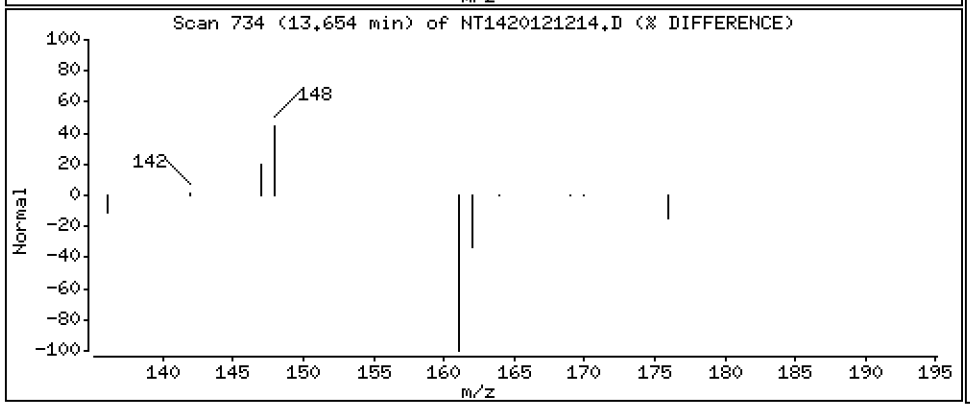
13 C1-Benzothiophenes

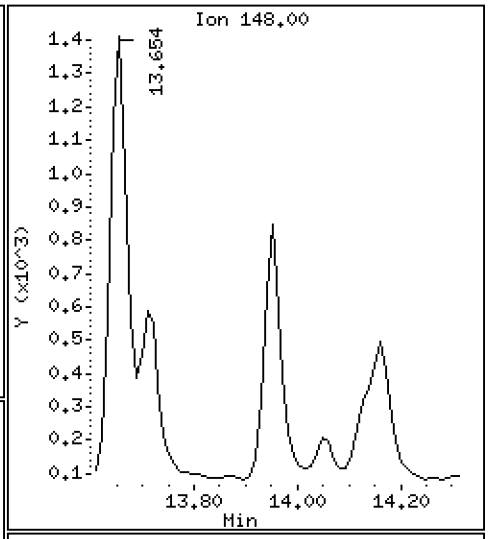
Concentration: 0.1157 ug/mL

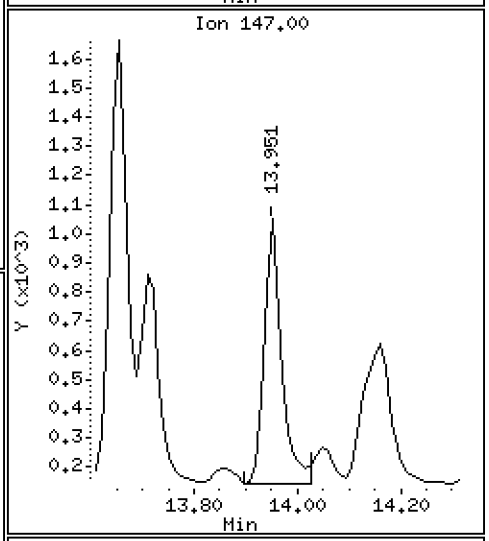


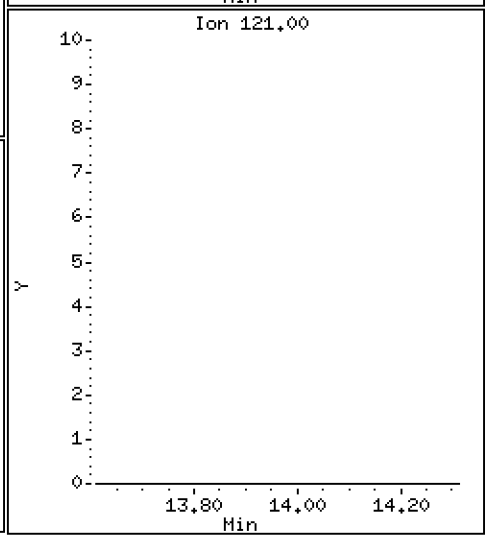












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

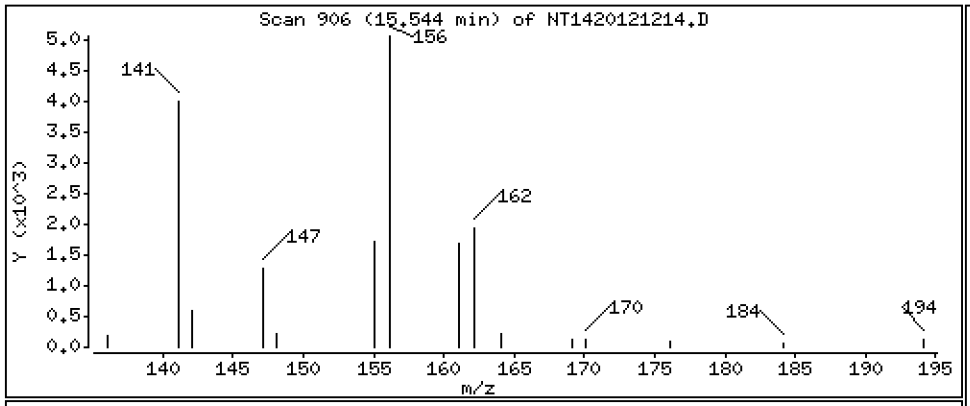
Operator: VTS

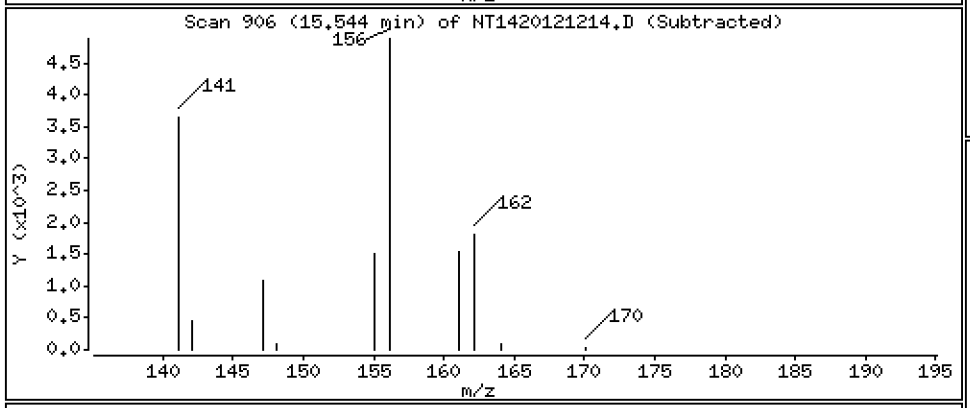
Column phase: Rxi-17Sil MS

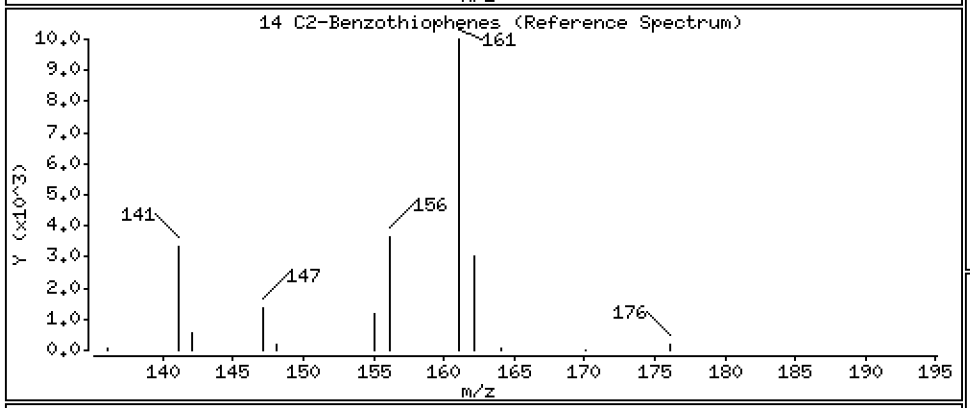
Column diameter: 0.25

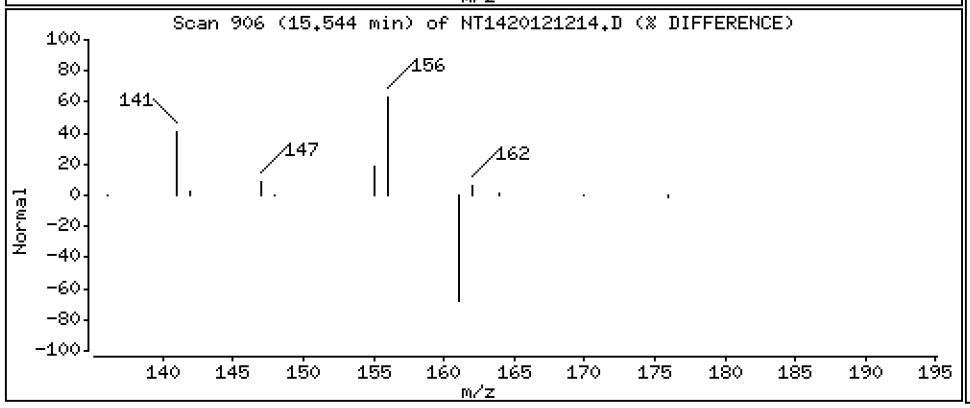
14 C2-Benzothiophenes

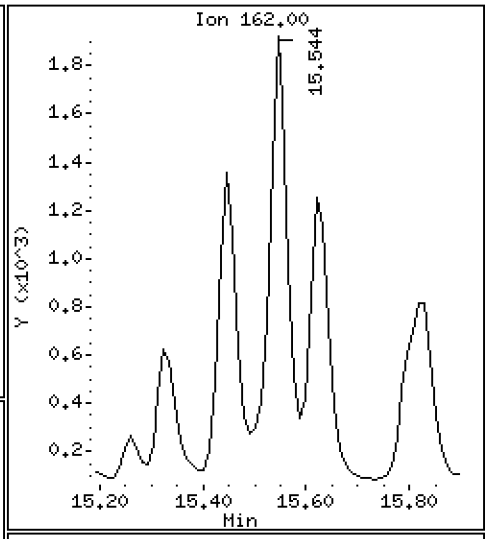
Concentration: 0.5640 ug/mL

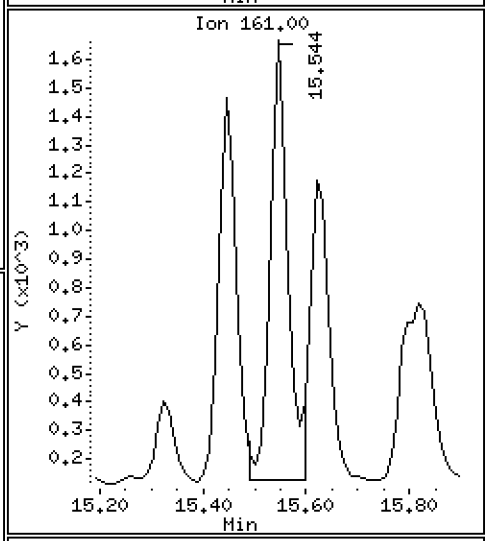


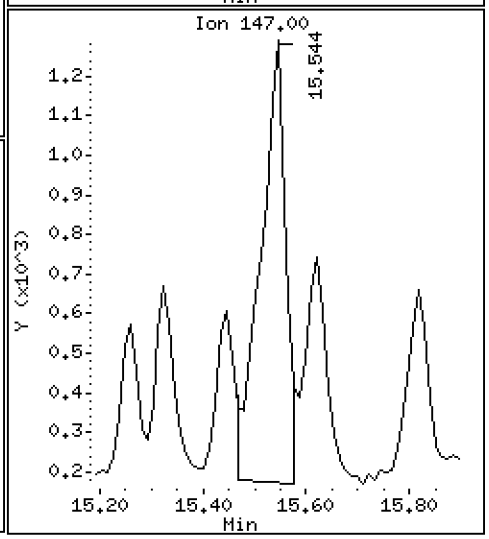












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

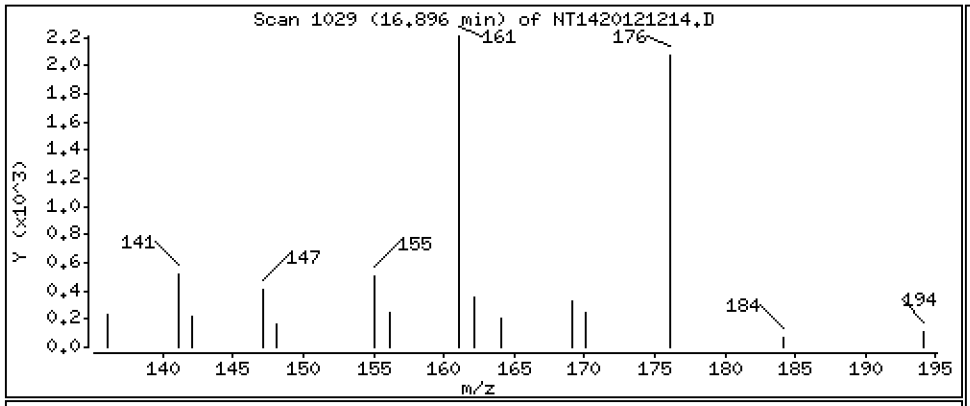
Operator: VTS

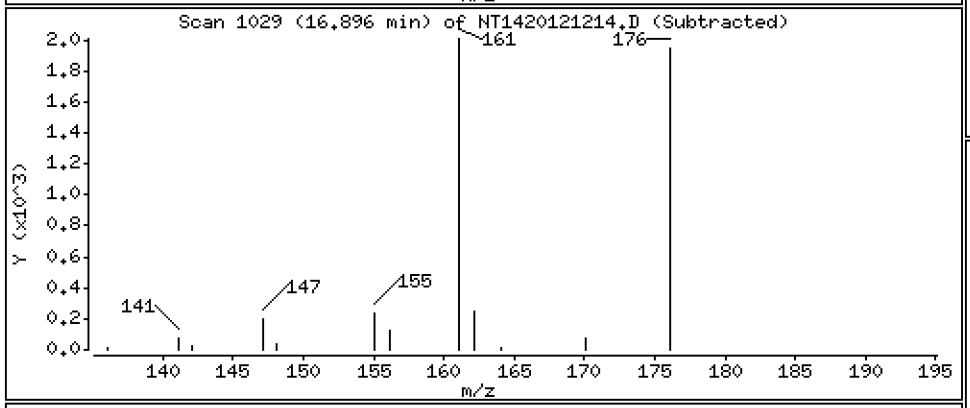
Column phase: Rxi-17Sil MS

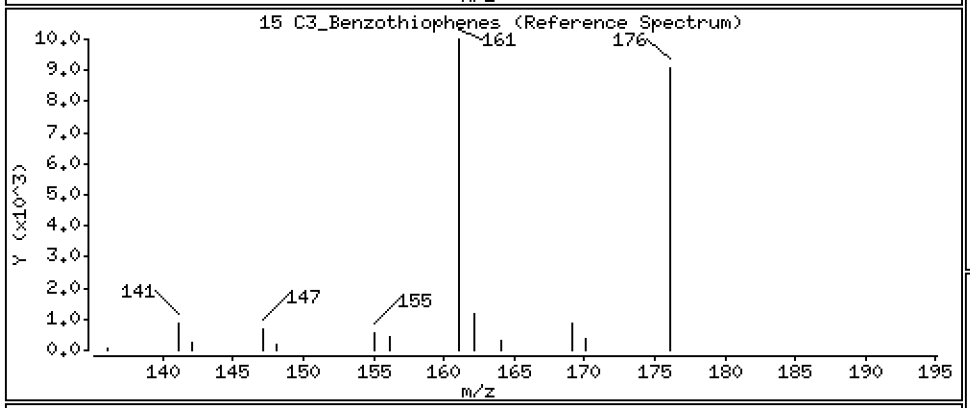
Column diameter: 0.25

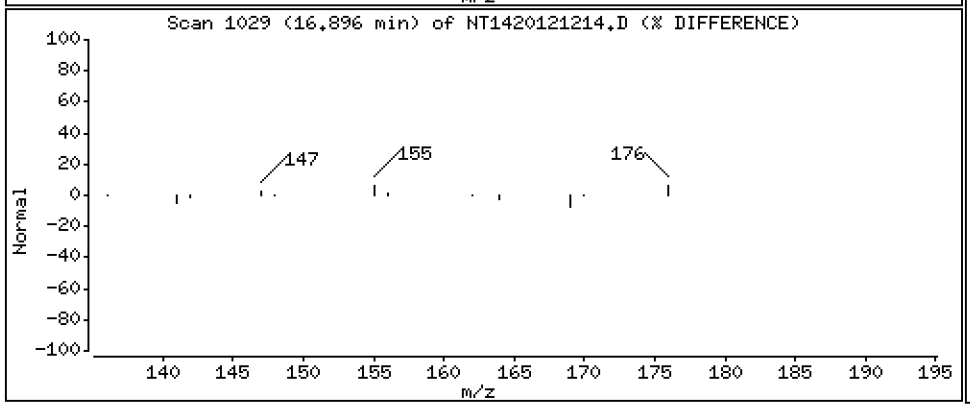
15 C3_Benzothiophenes

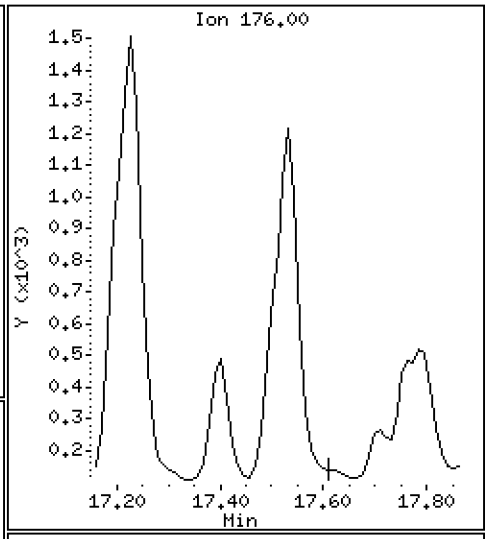
Concentration: 0.3355 ug/mL

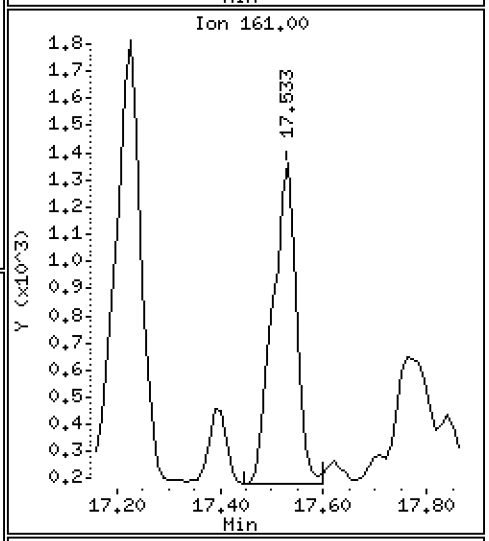


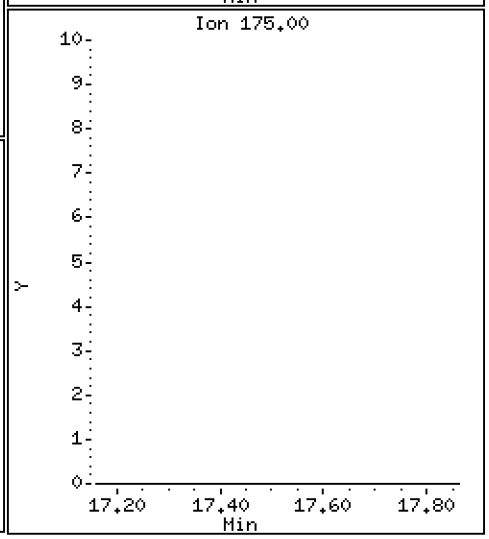












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

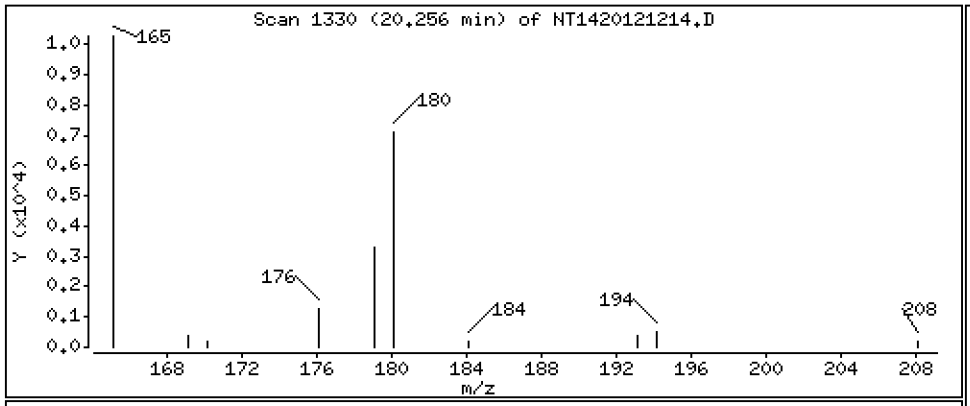
Operator: VTS

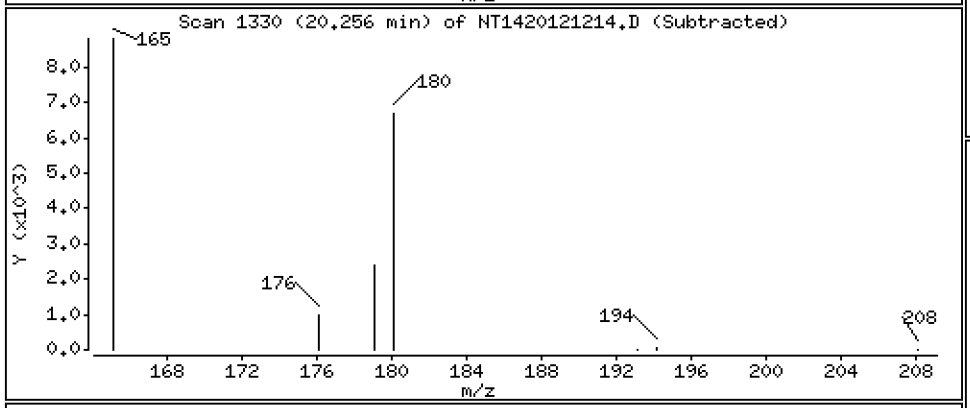
Column phase: Rxi-17Sil MS

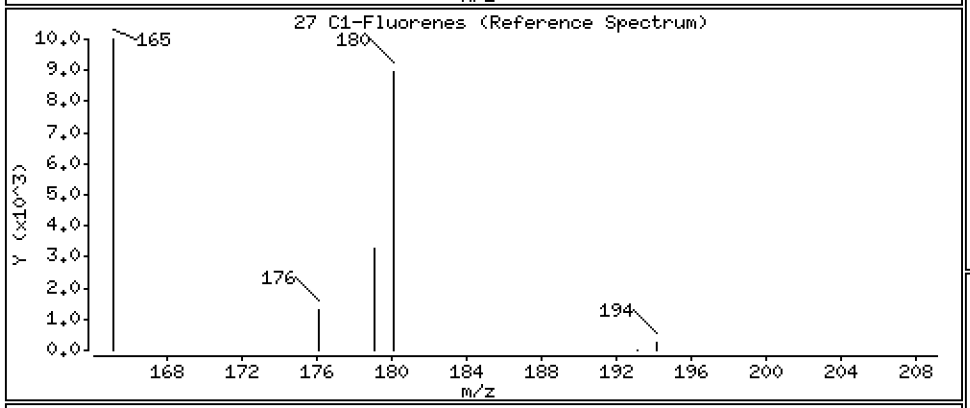
Column diameter: 0.25

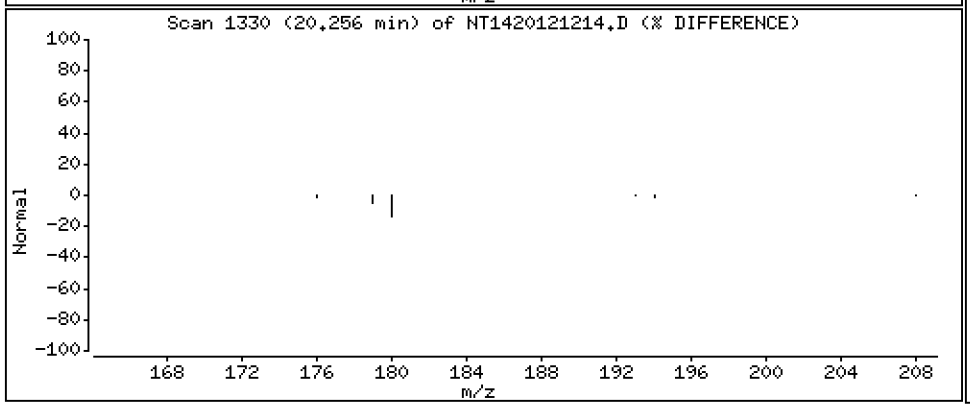
27 C1-Fluorenes

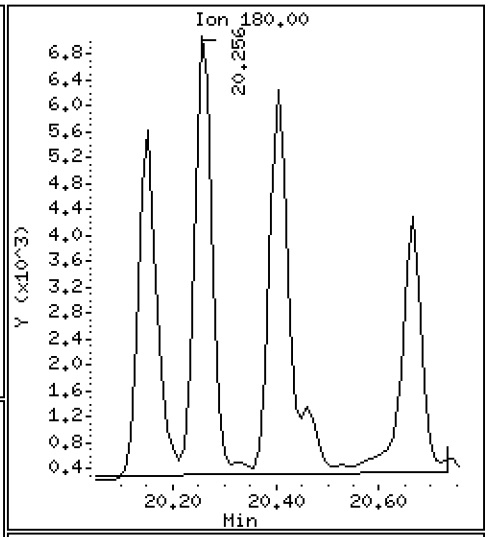
Concentration: 0.7669 ug/mL

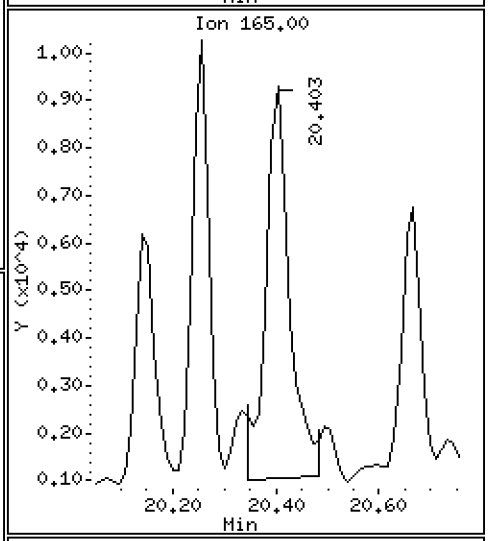


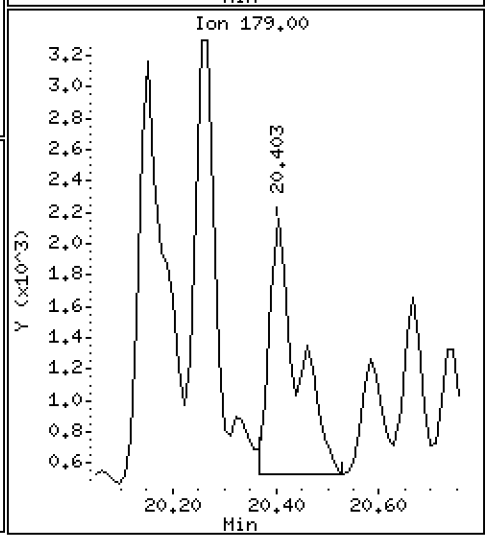












Data File: \\target\share\chem3\nt14.i\20201212.b\sim.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

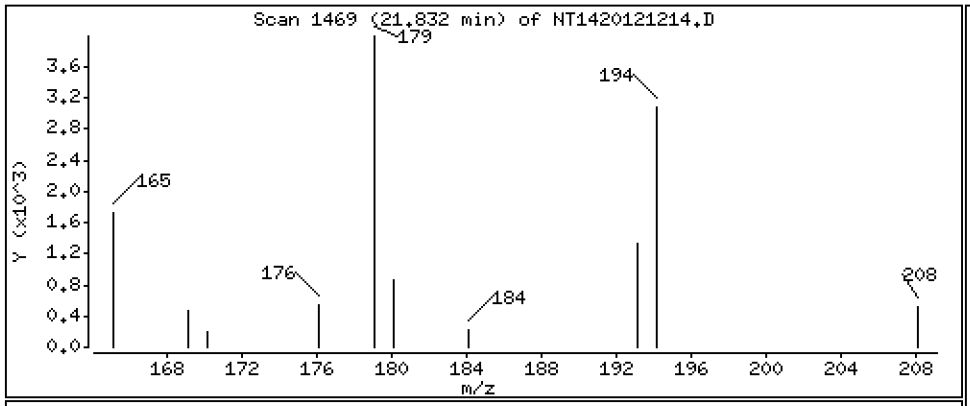
Operator: VTS

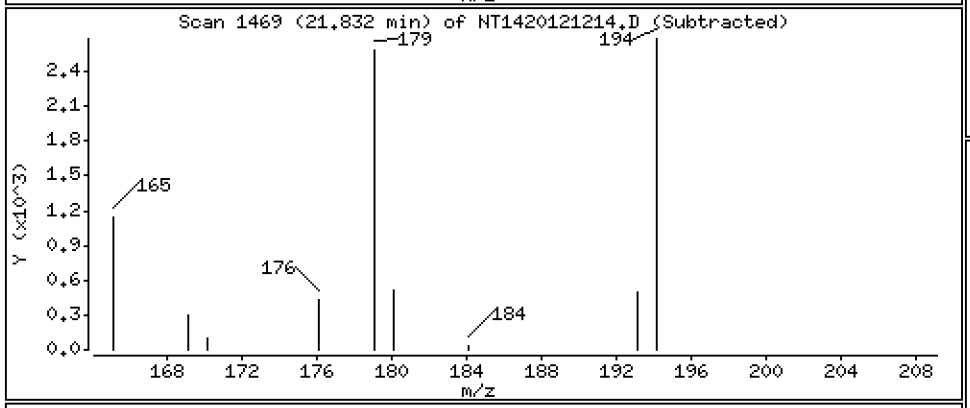
Column phase: Rxi-17Sil MS

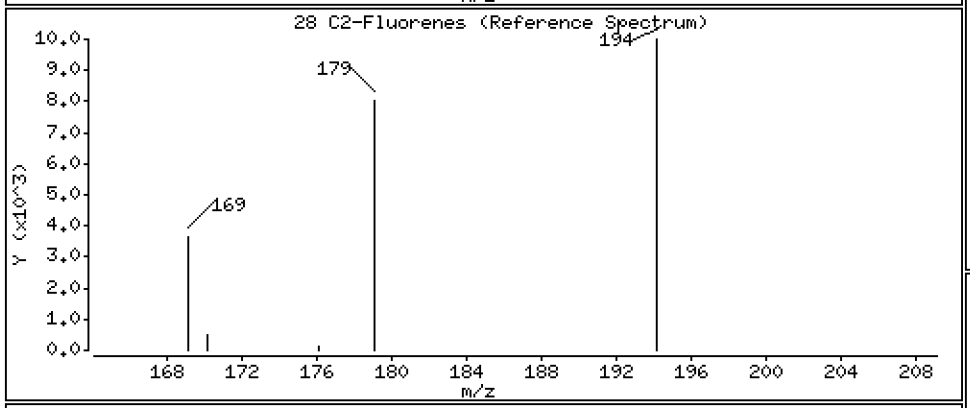
Column diameter: 0.25

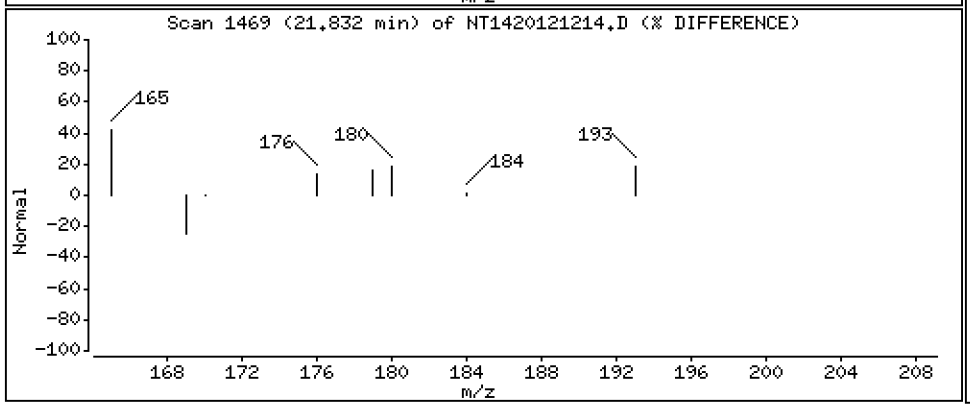
28 C2-Fluorenes

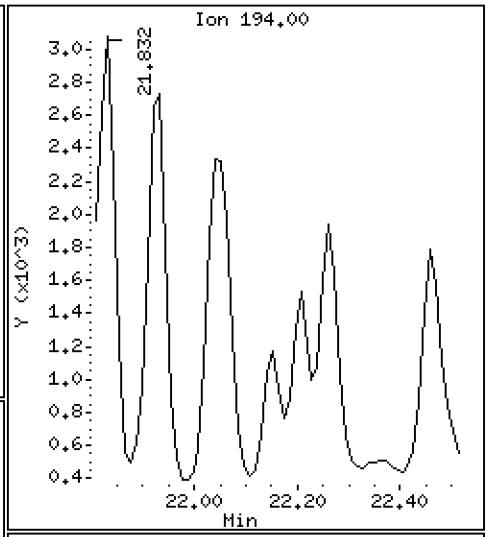
Concentration: 0.9221 ug/mL

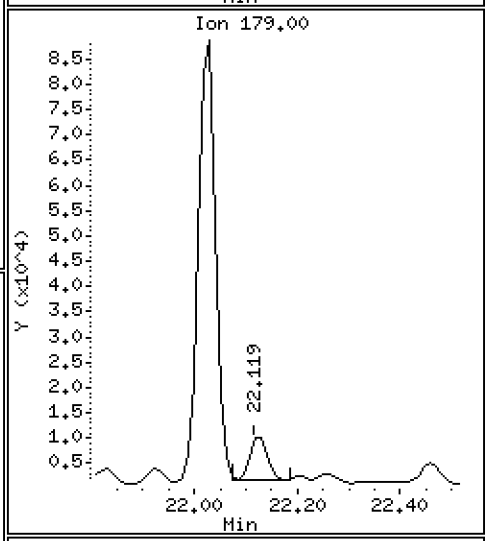


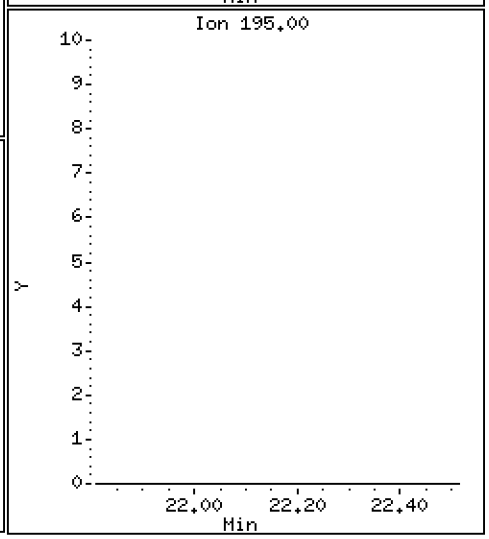












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

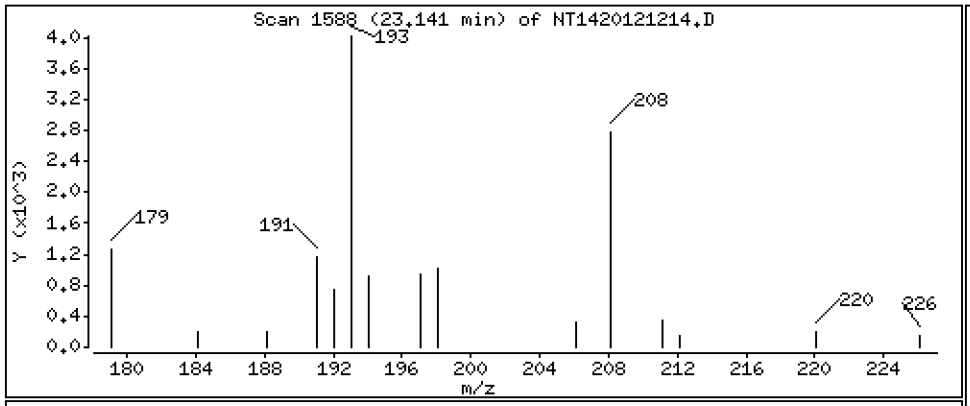
Operator: VTS

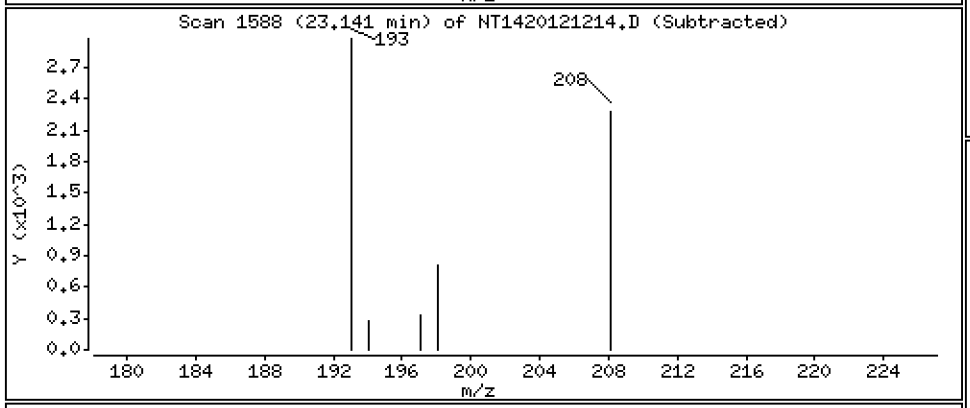
Column phase: Rxi-17Sil MS

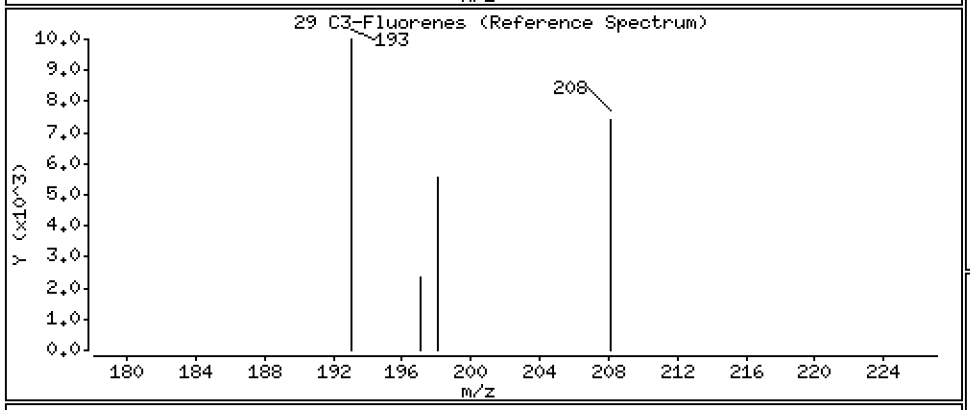
Column diameter: 0.25

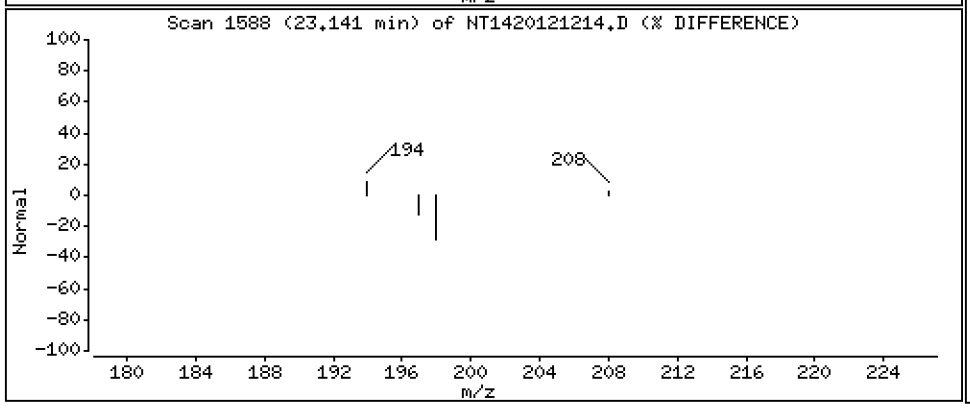
29 C3-Fluorenes

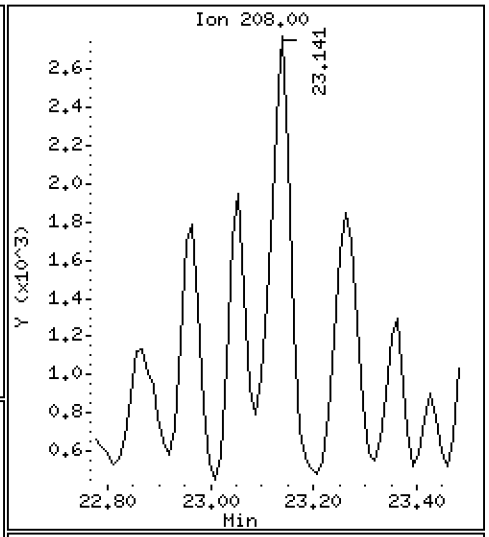
Concentration: 1.004 ug/mL

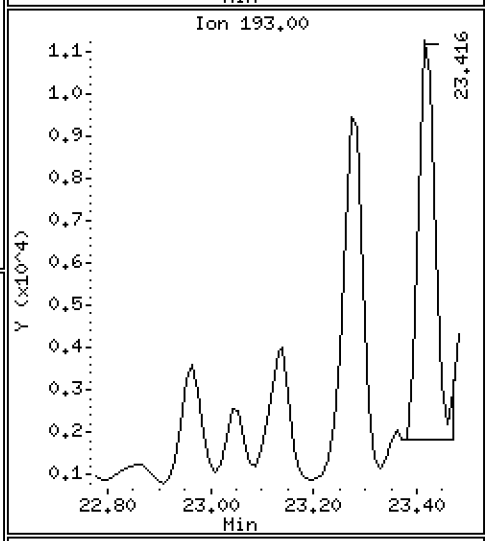


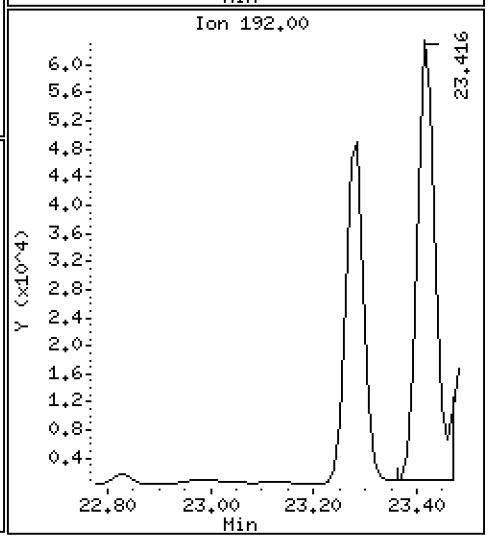












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

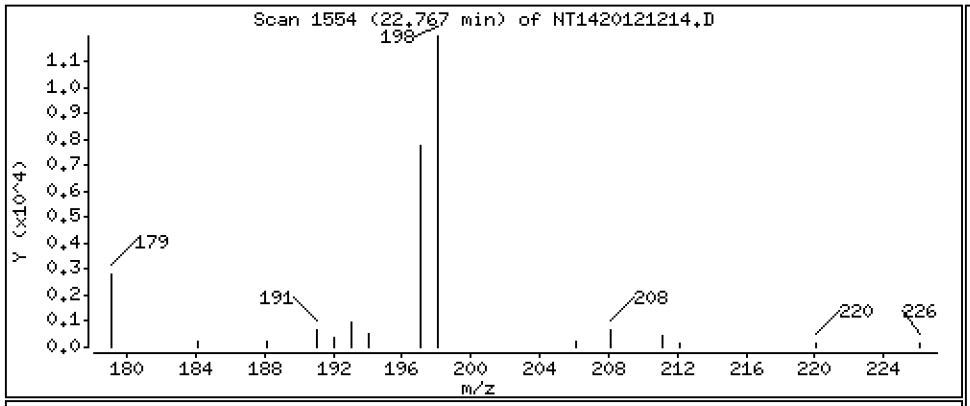
Operator: VTS

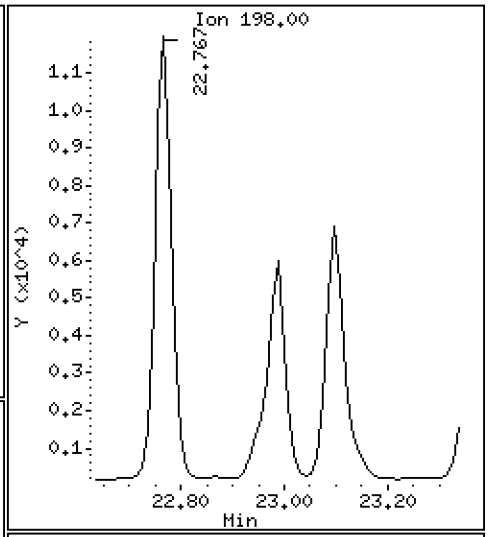
Column phase: Rxi-17Sil MS

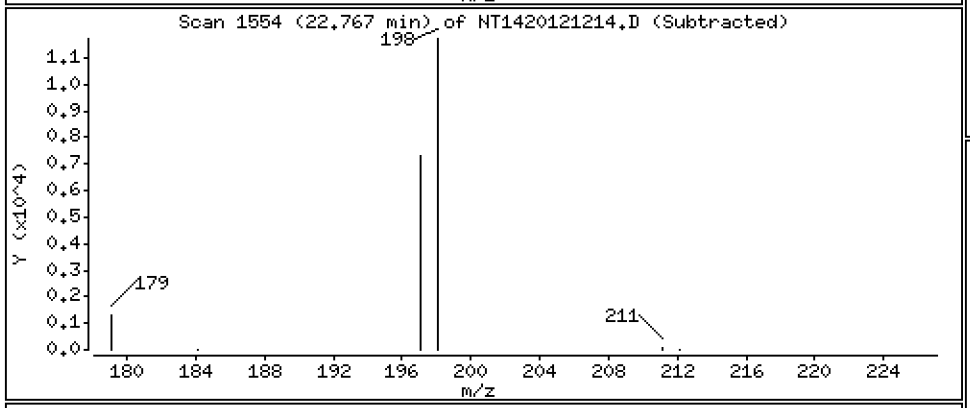
Column diameter: 0.25

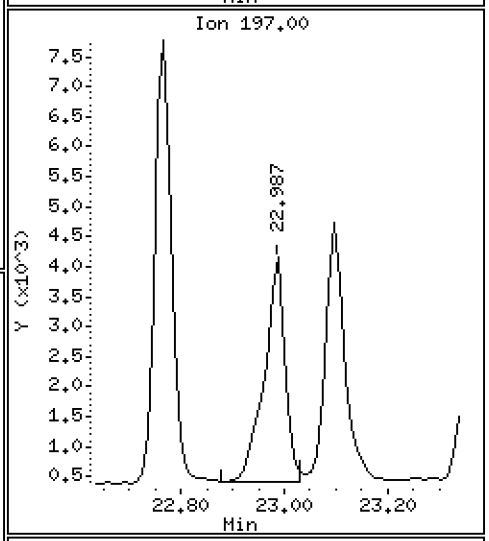
31 C1-Dibenzothiophenes

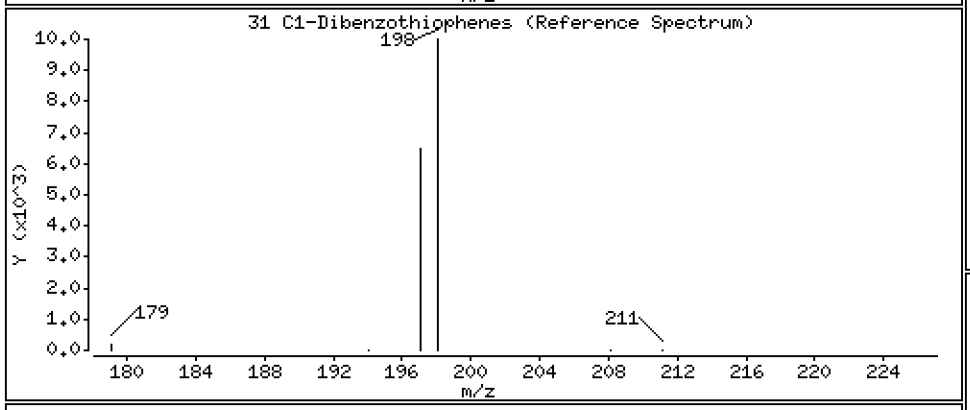
Concentration: 0.8366 ug/mL

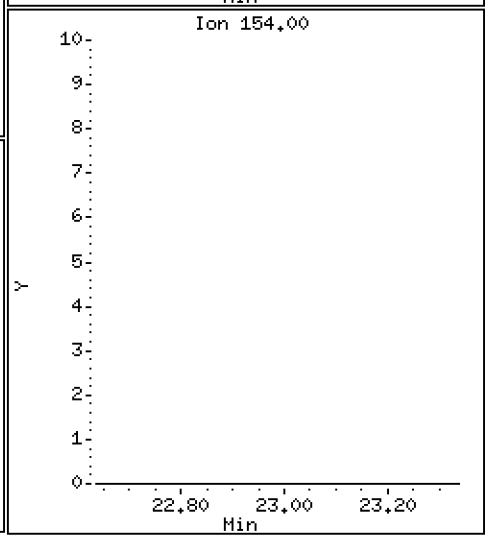


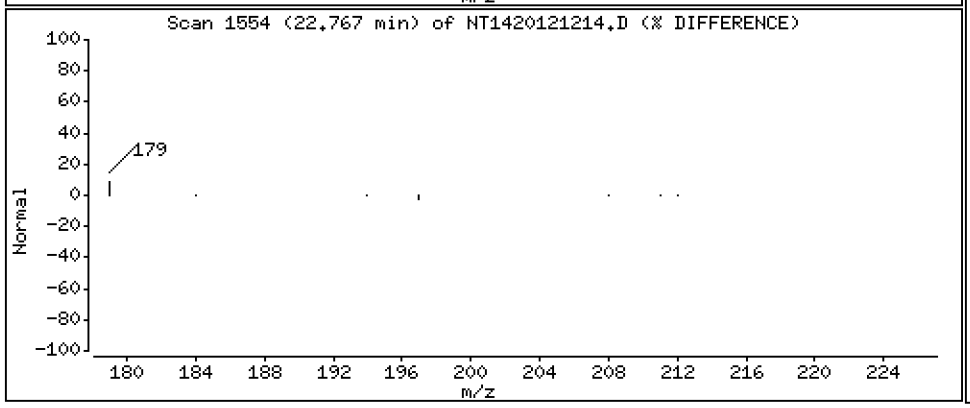












Data File: \\target\share\chem3\nt14.i\20201212.b\sim.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

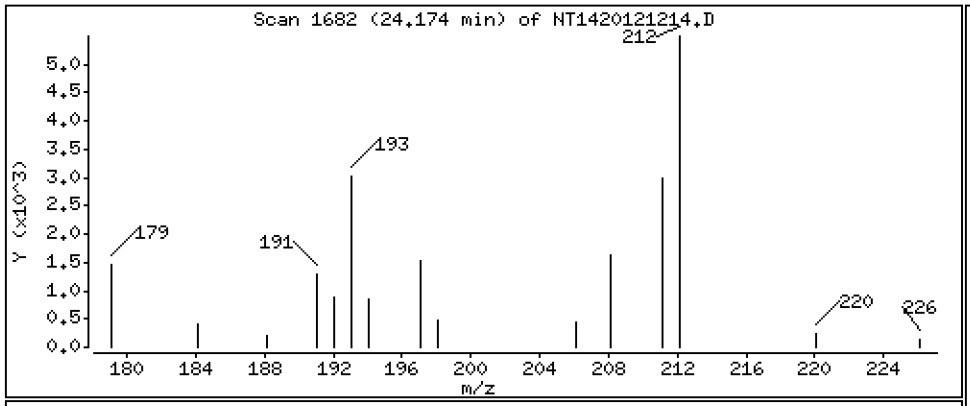
Operator: VTS

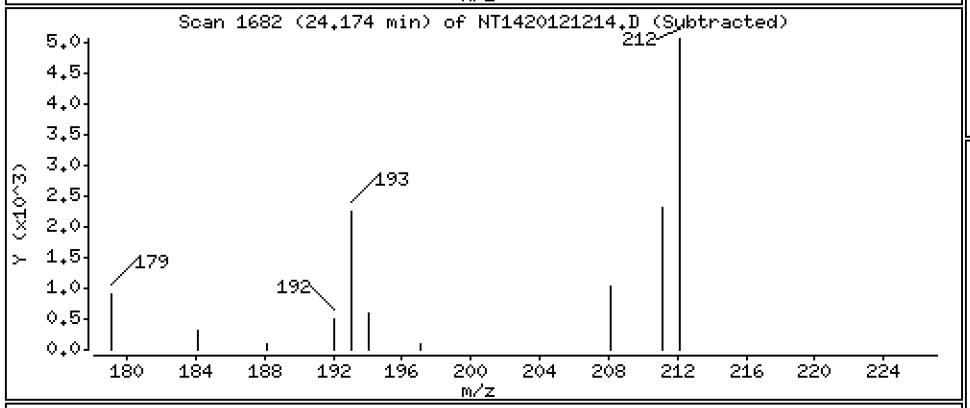
Column phase: Rxi-17Sil MS

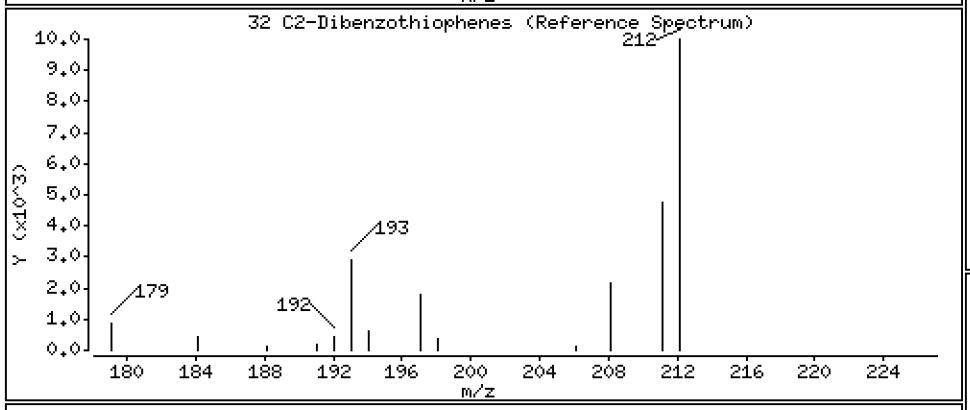
Column diameter: 0.25

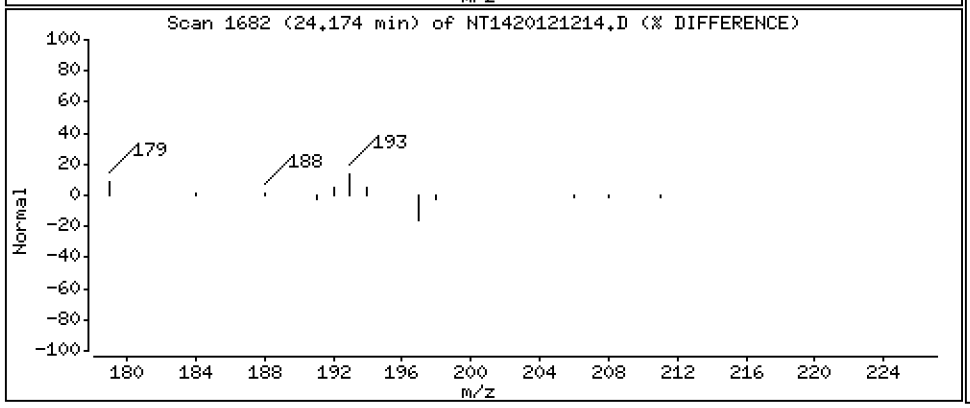
32 C2-Dibenzothiophenes

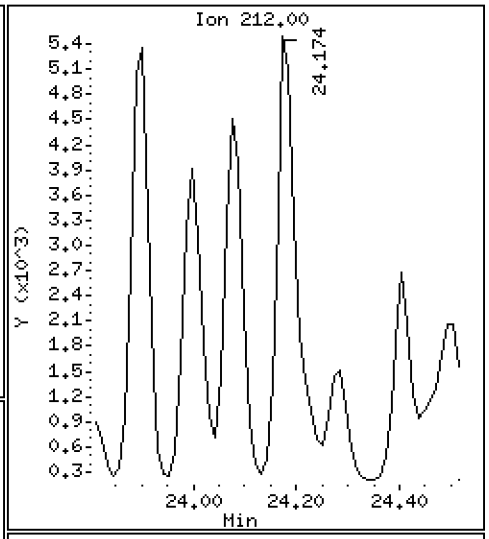
Concentration: 1.074 ug/mL

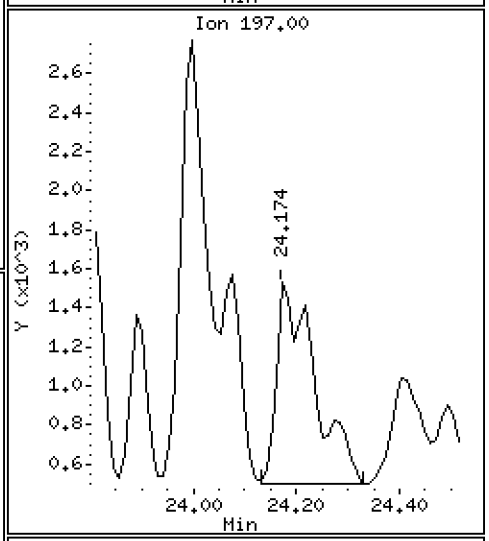


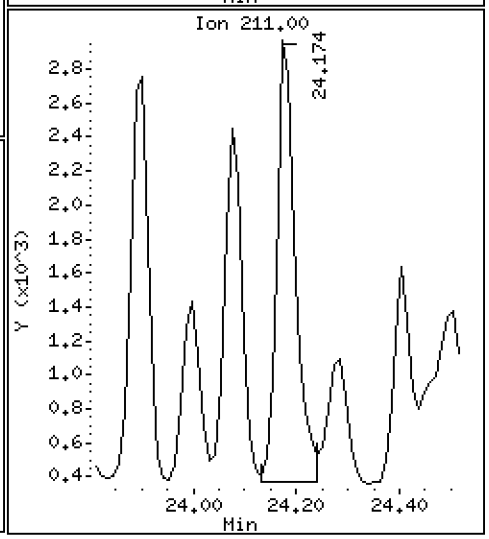












Data File: \\target\share\chem3\nt14.i\20201212.b\sim.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

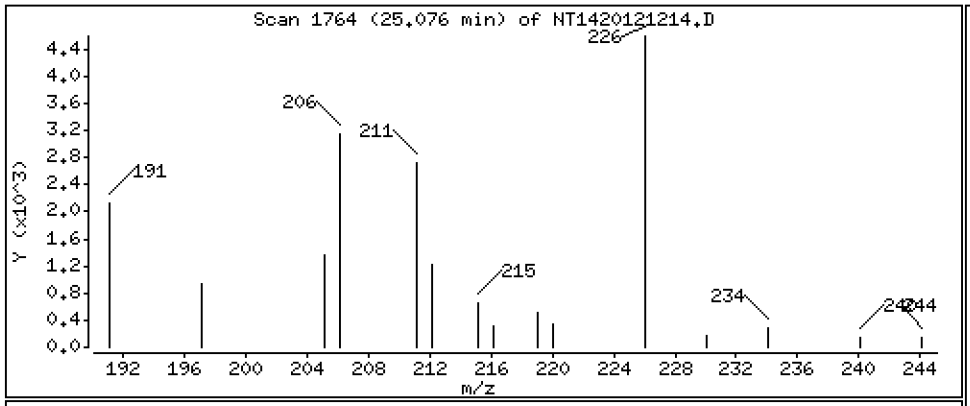
Operator: VTS

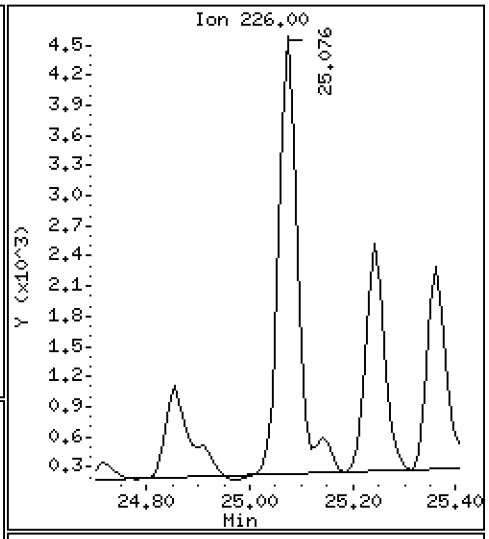
Column phase: Rxi-17Sil MS

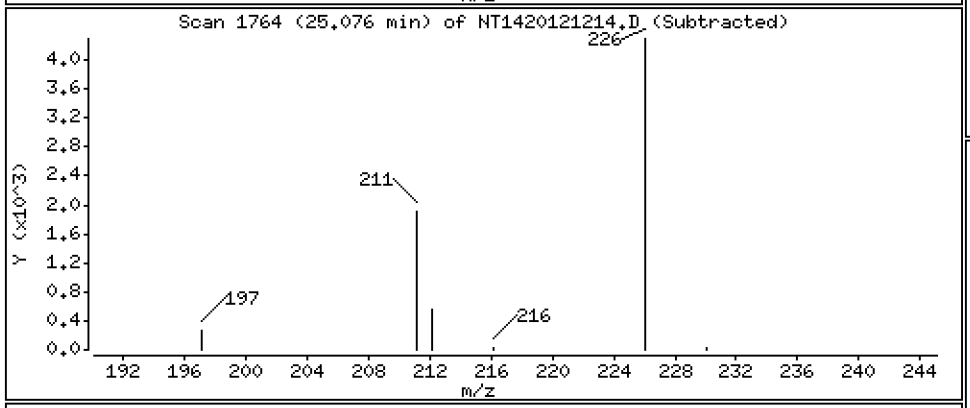
Column diameter: 0.25

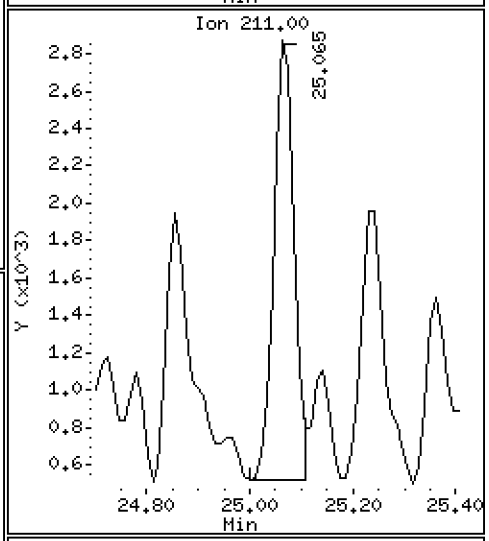
33 C3-Dibenzothiophenes

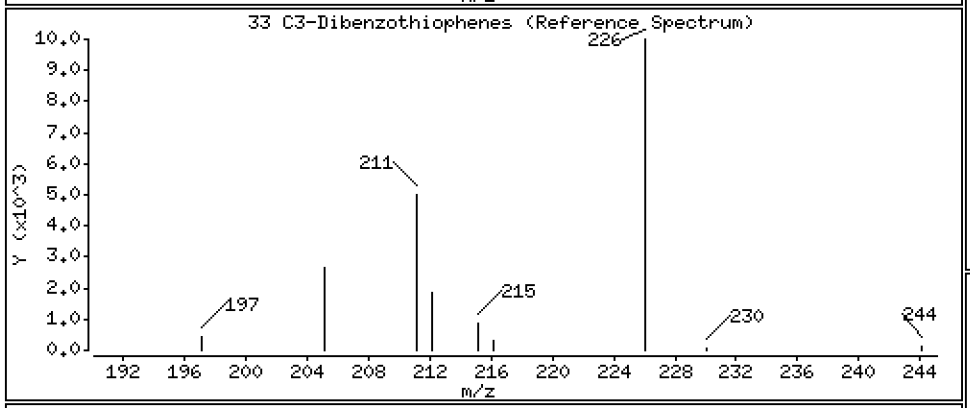
Concentration: 0.7953 ug/mL

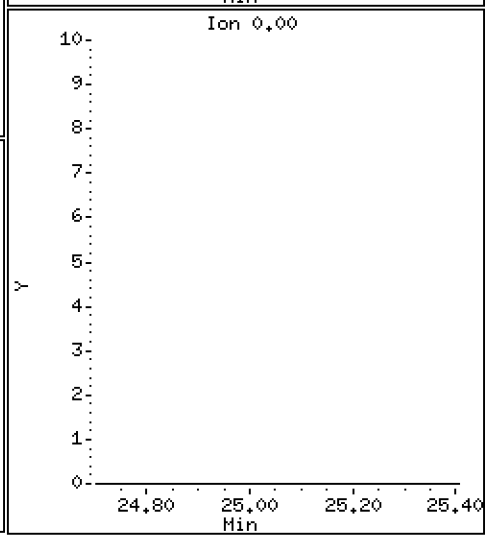


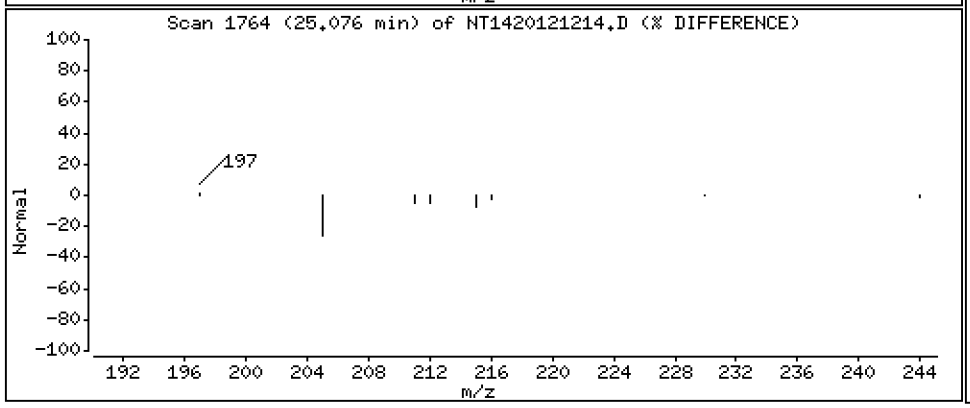












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

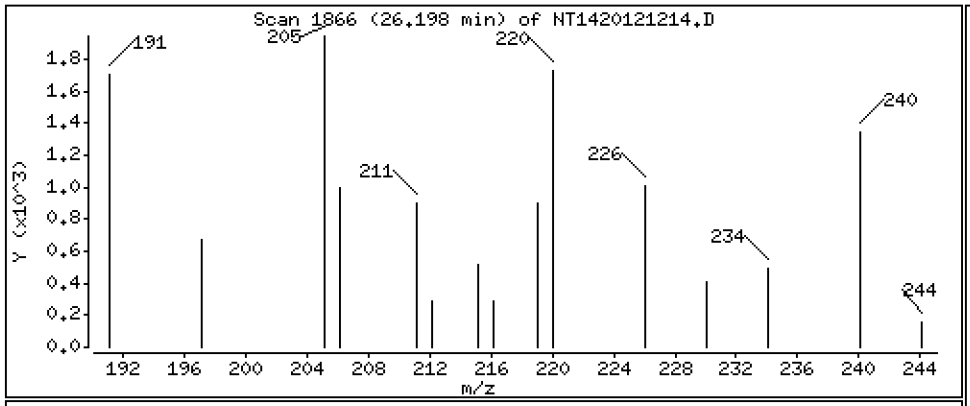
Operator: VTS

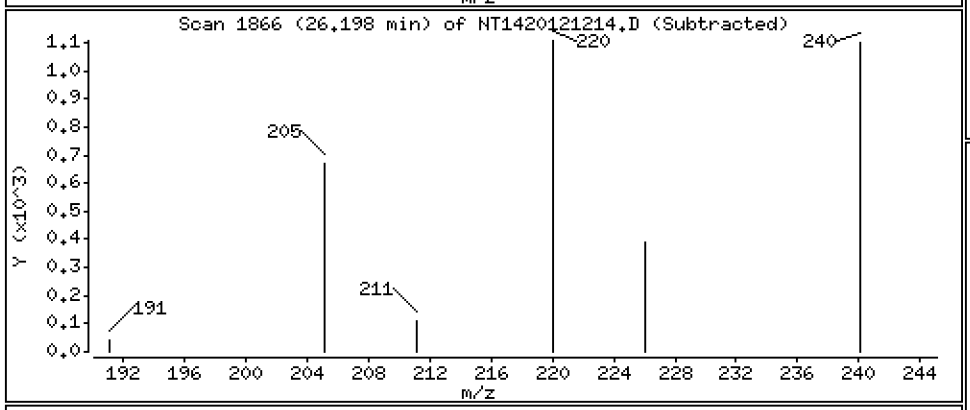
Column phase: Rxi-17Sil MS

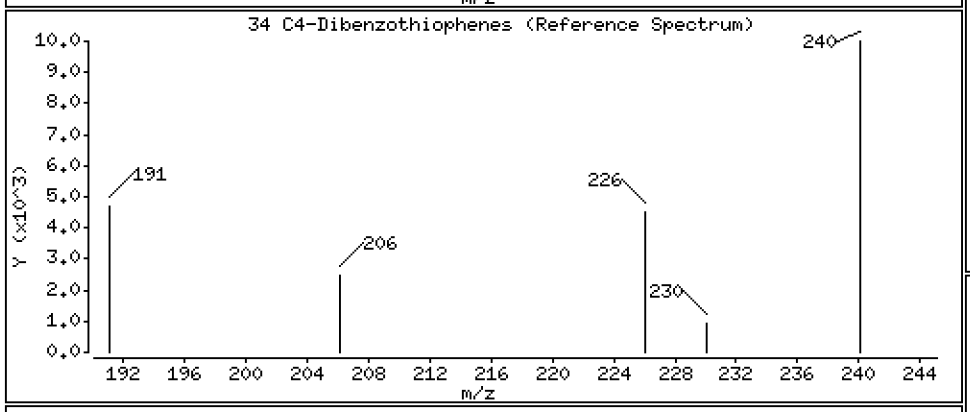
Column diameter: 0.25

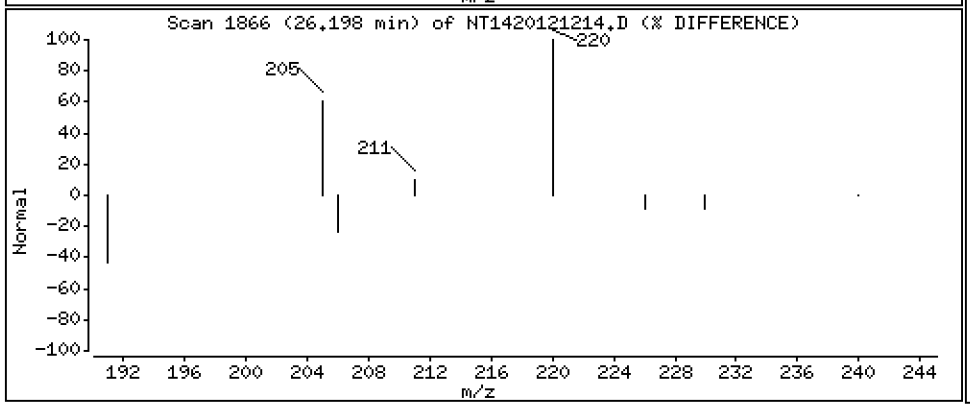
34 C4-Dibenzothiophenes

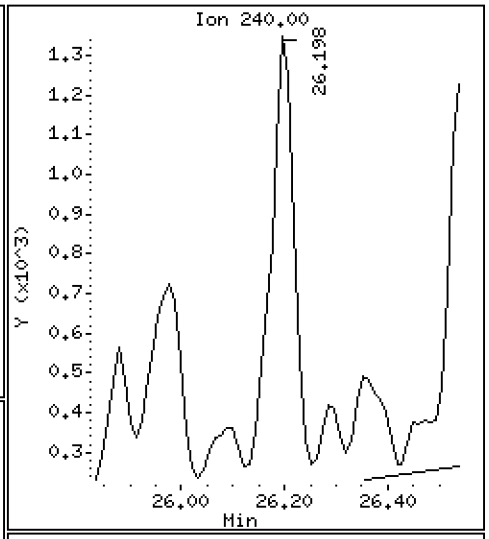
Concentration: 0.4185 ug/mL

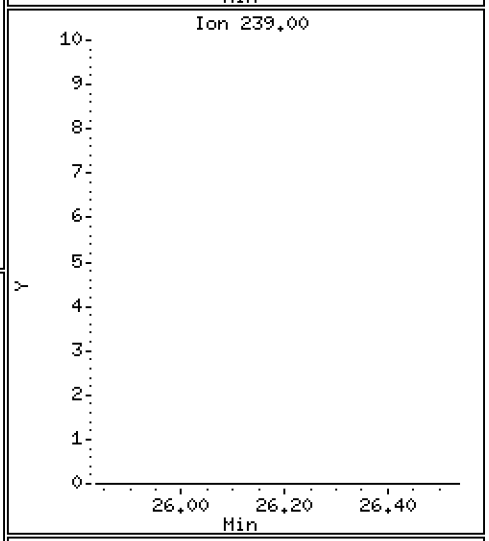


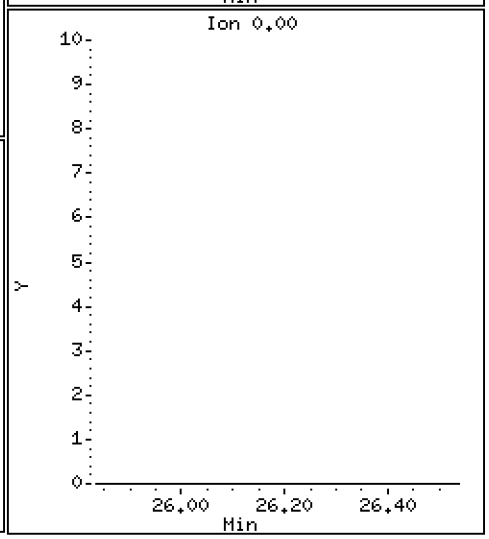












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

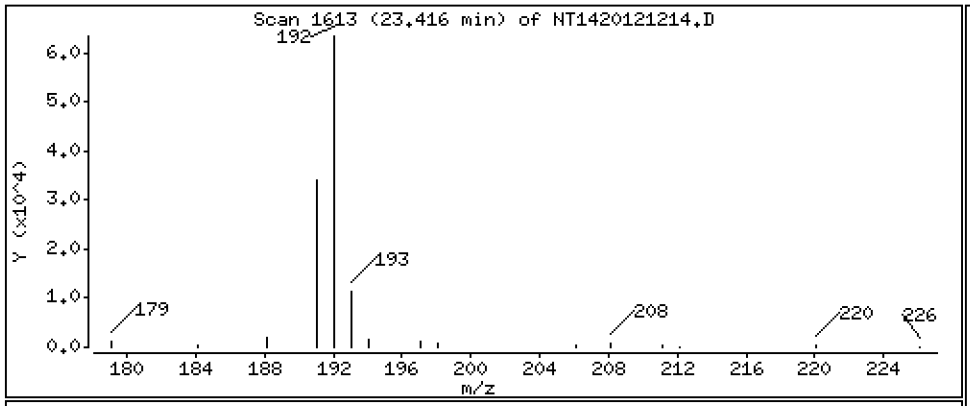
Operator: VTS

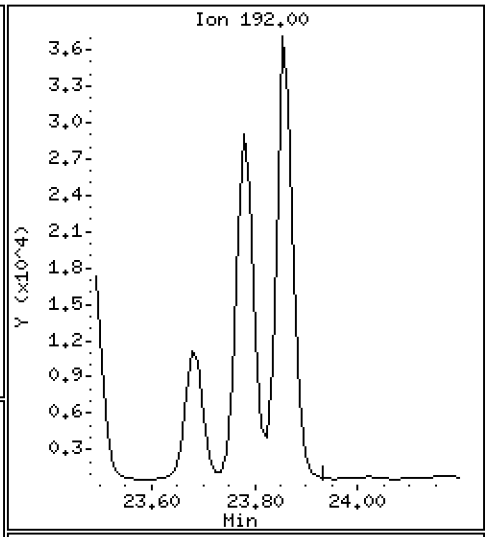
Column phase: Rxi-17Sil MS

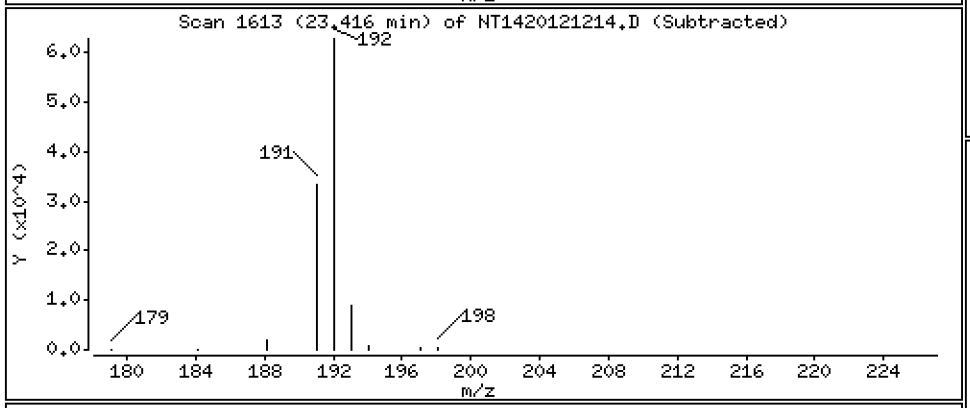
Column diameter: 0.25

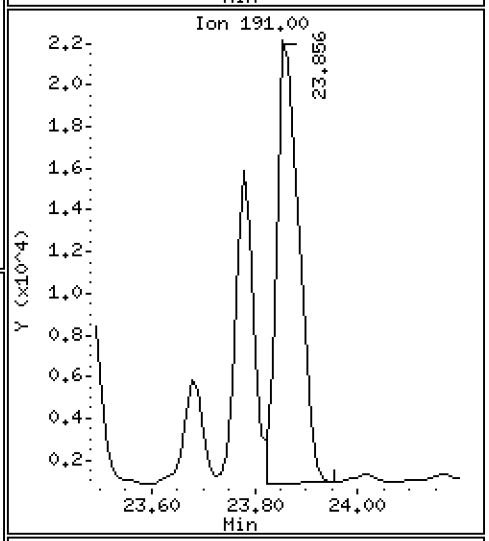
38 C1-Phenanthrenes/Anthracenes

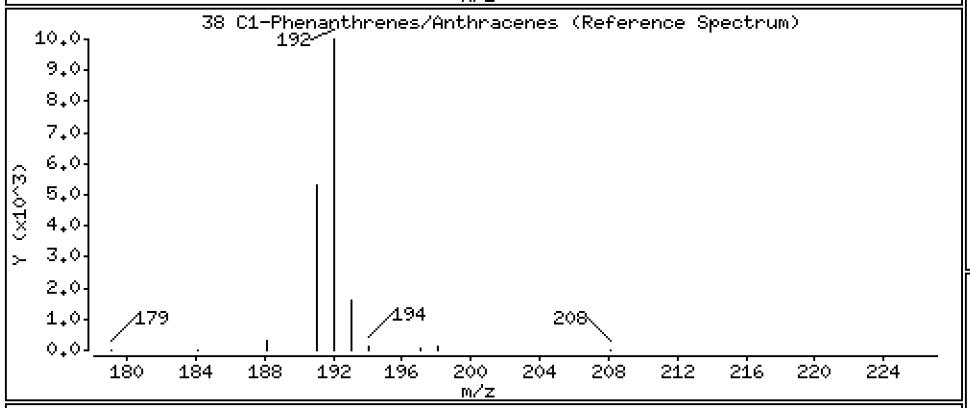
Concentration: 4.226 ug/mL

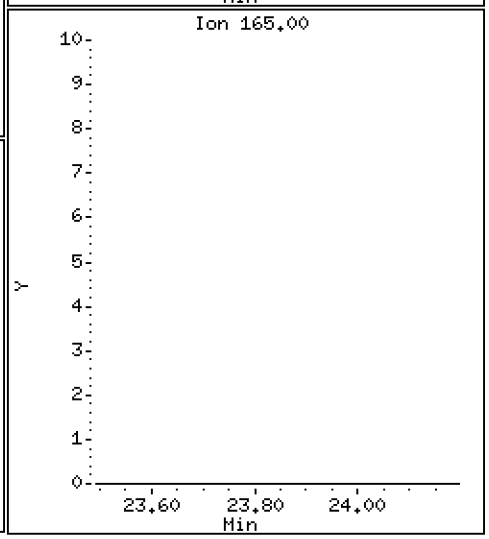


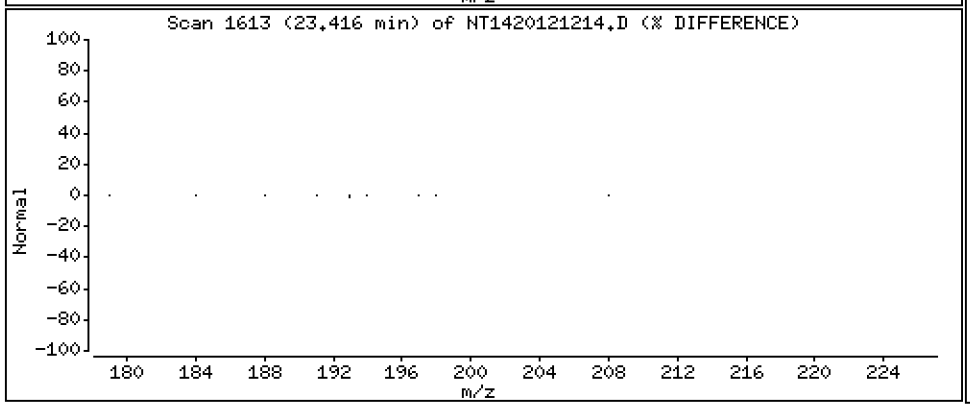












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

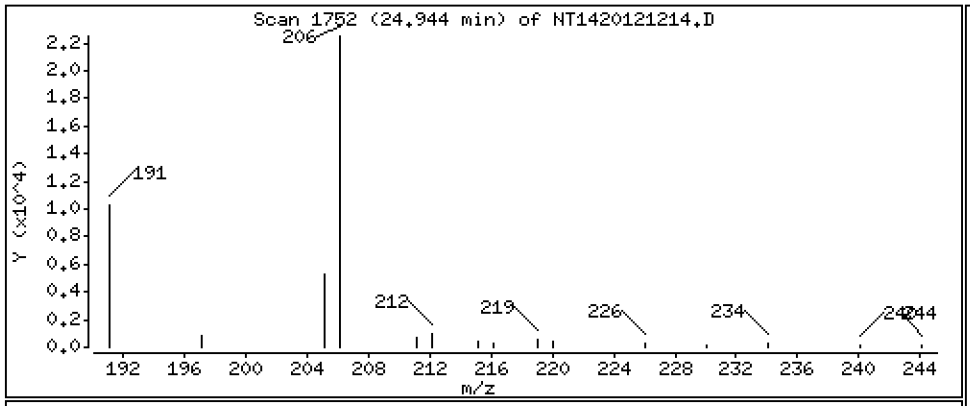
Operator: VTS

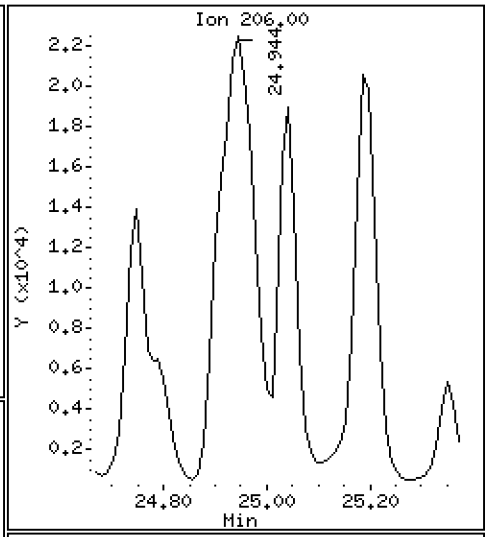
Column phase: Rxi-17Sil MS

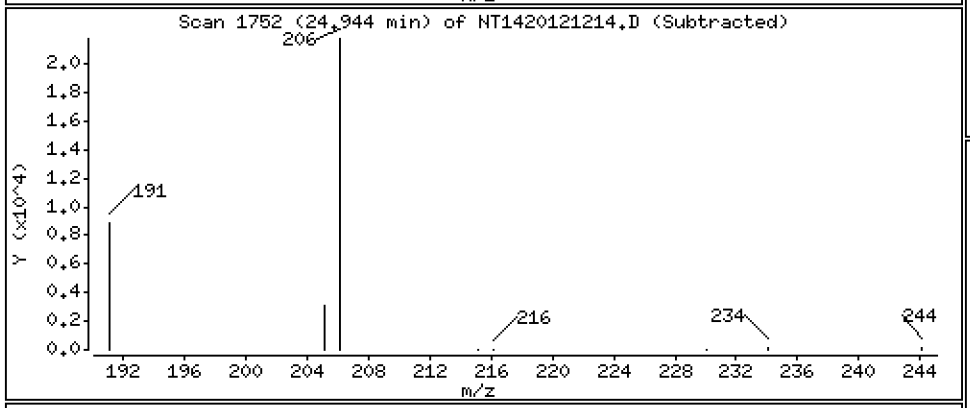
Column diameter: 0.25

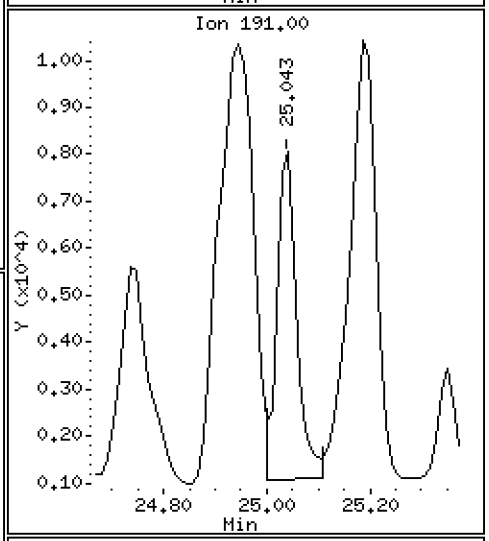
39 C2-Phenanthrenes/Anthracenes

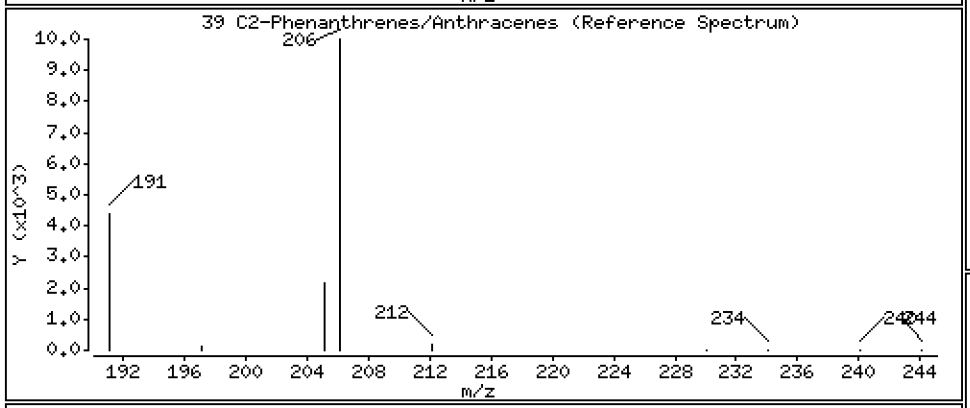
Concentration: 3.345 ug/mL

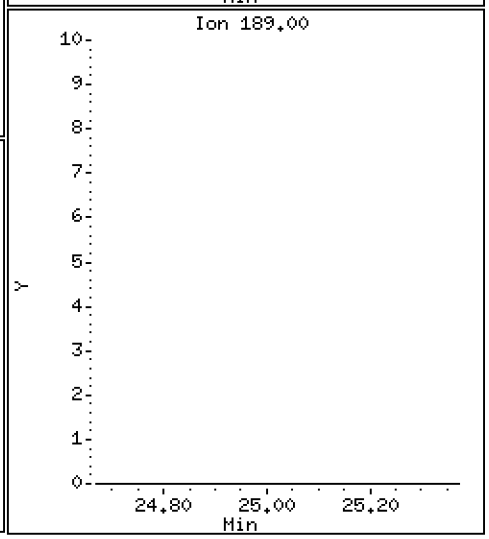


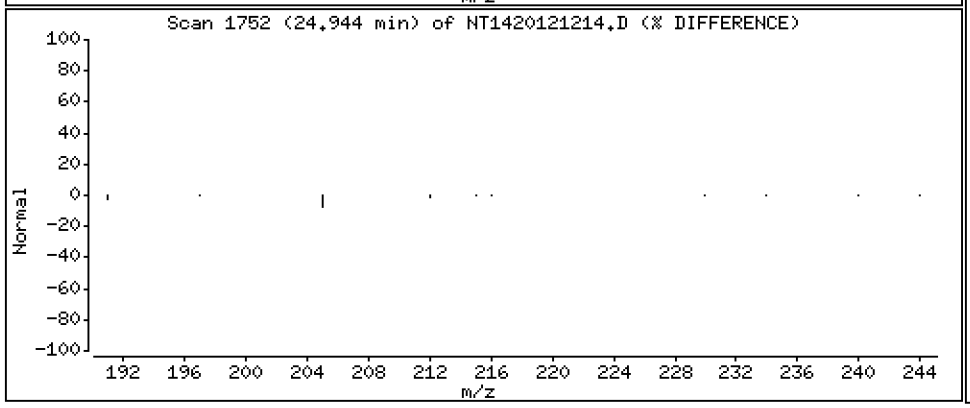












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

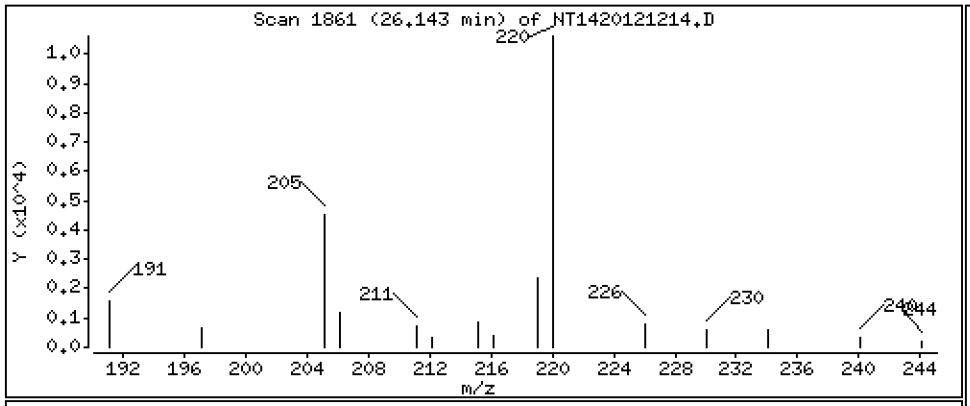
Operator: VTS

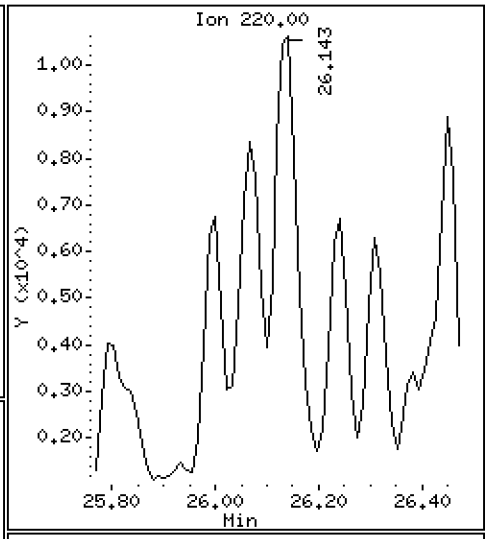
Column phase: Rxi-17Sil MS

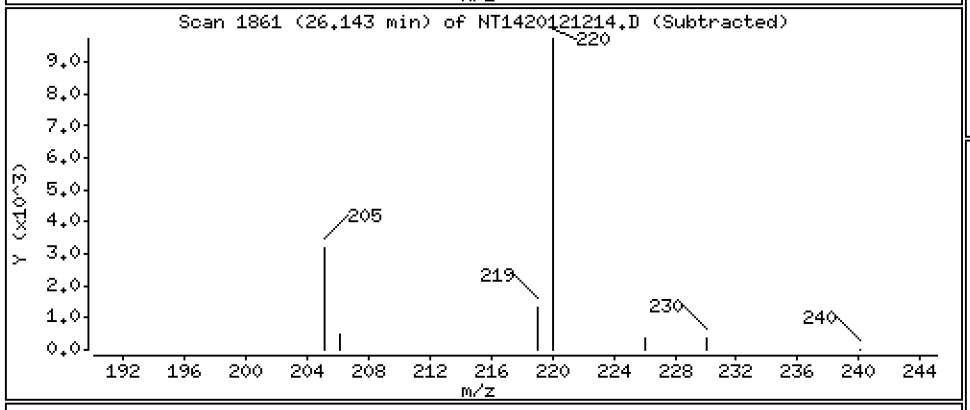
Column diameter: 0.25

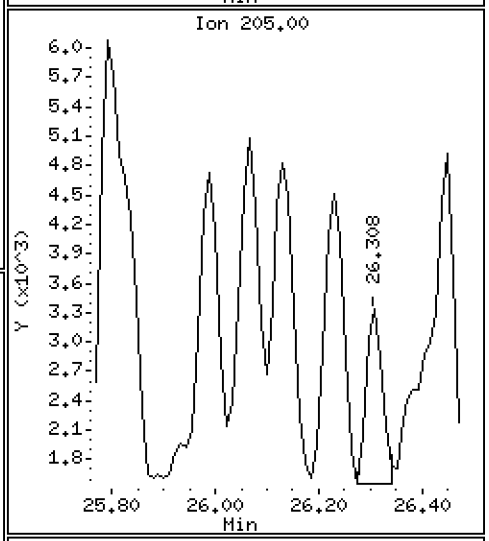
40 C3-Phenanthrenes/Anthracenes

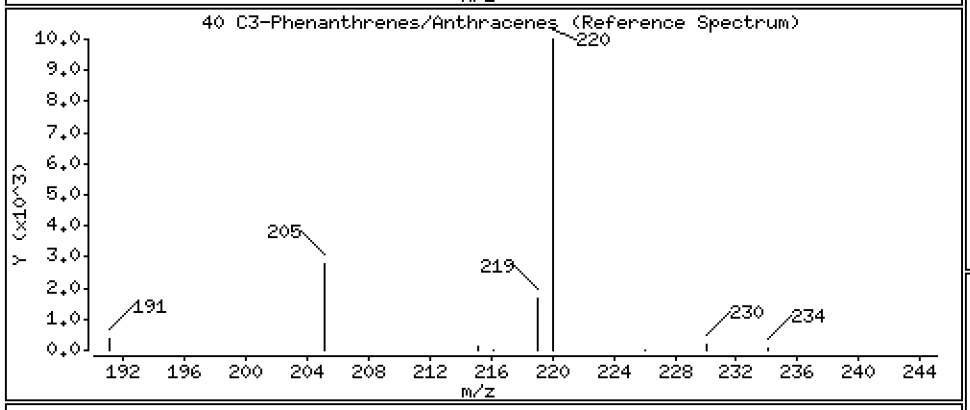
Concentration: 1.970 ug/mL

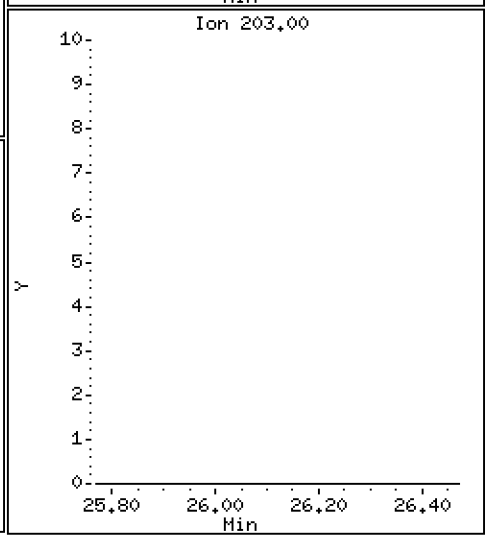


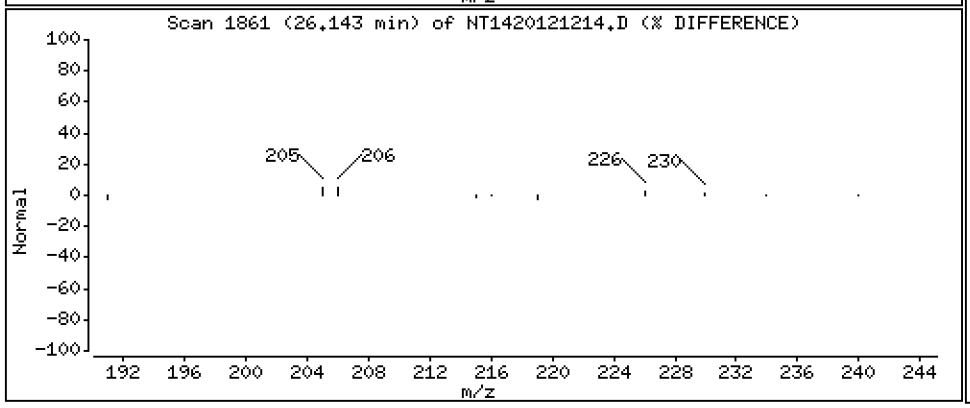












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

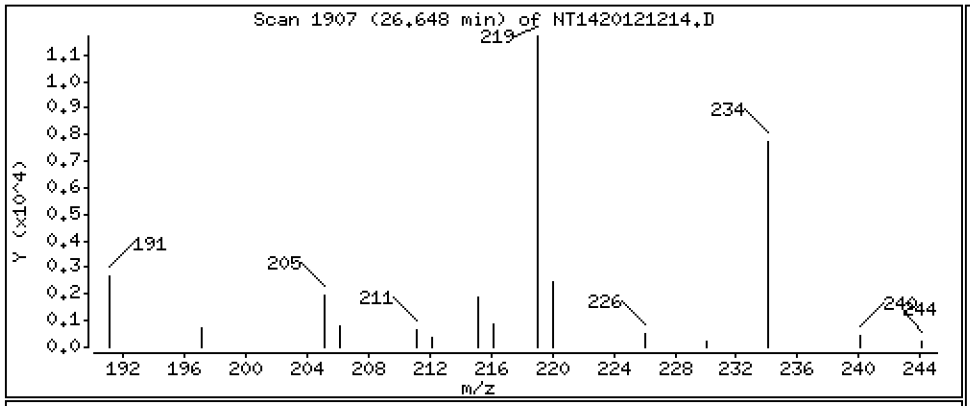
Operator: VTS

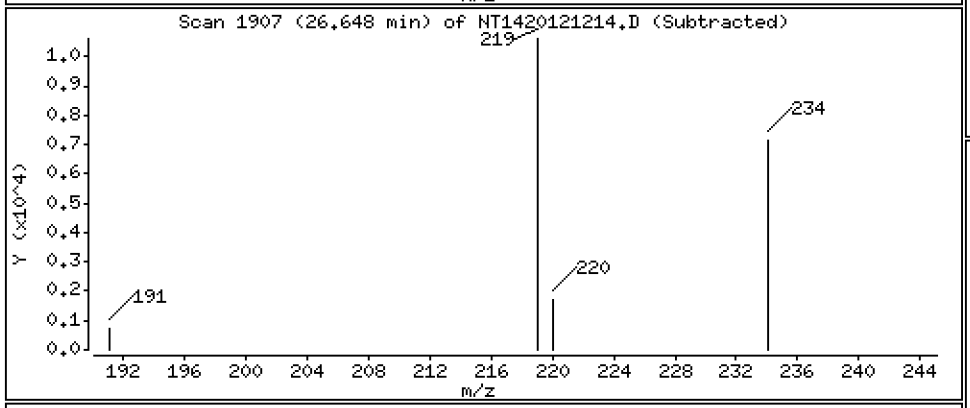
Column phase: Rxi-17Sil MS

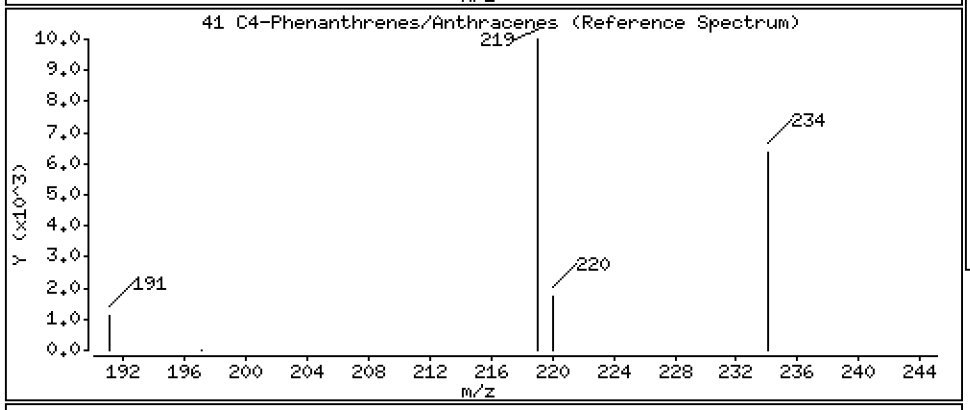
Column diameter: 0.25

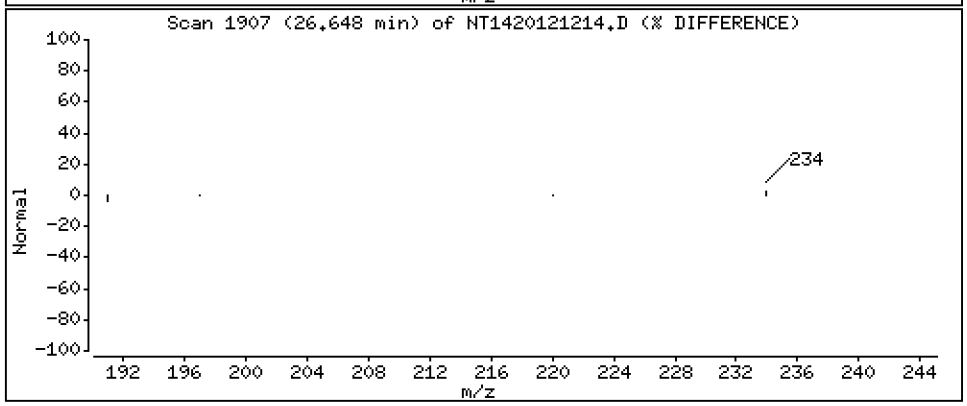
41 C4-Phenanthrenes/Anthracenes

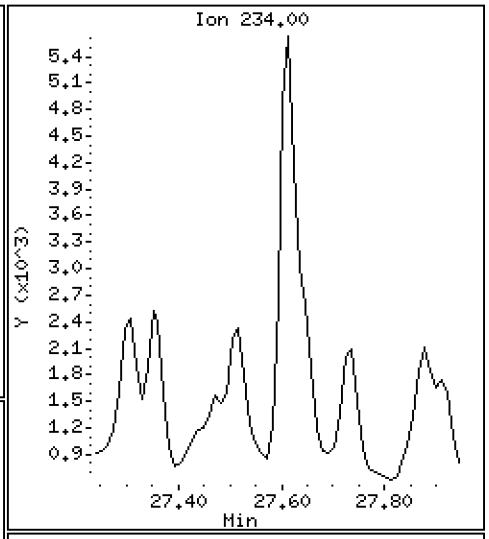
Concentration: 0.8833 ug/mL

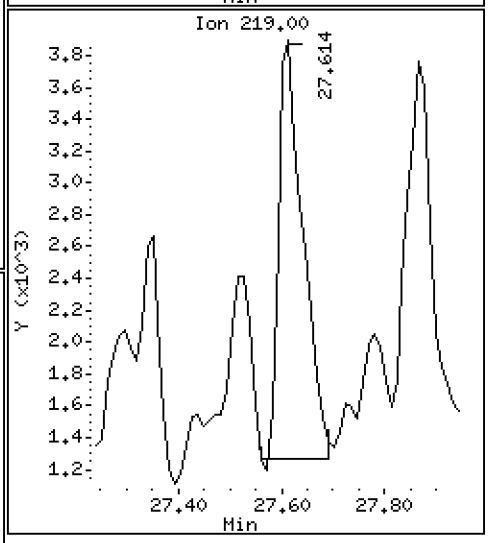












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

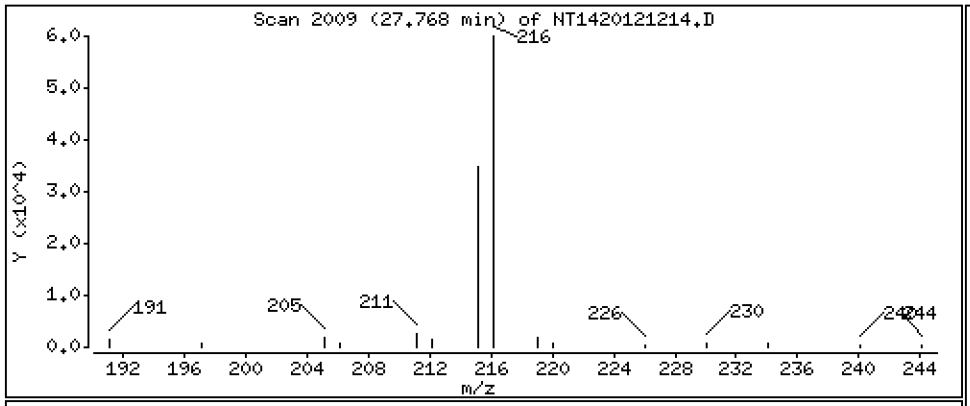
Operator: VTS

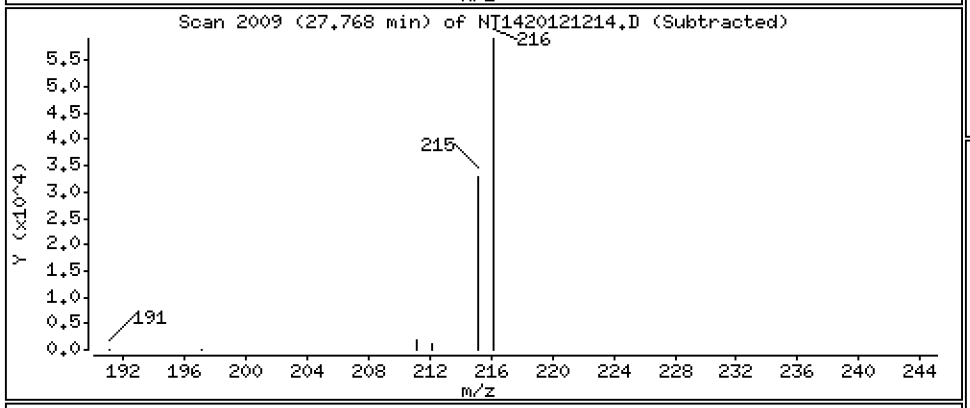
Column phase: Rxi-17Sil MS

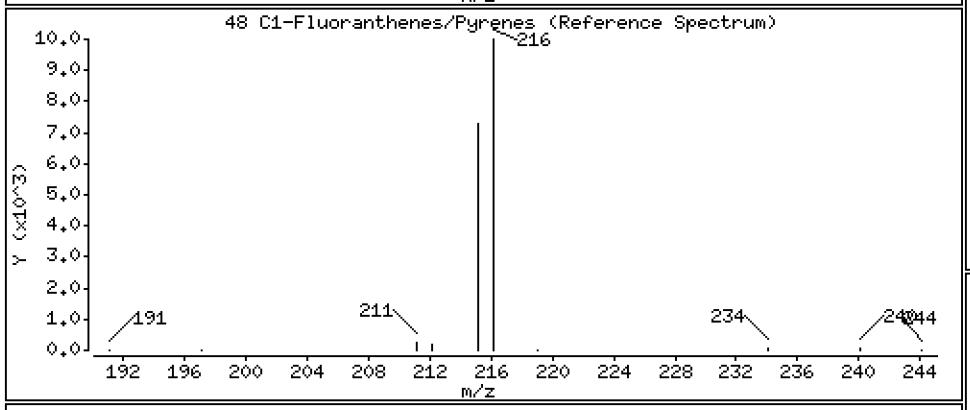
Column diameter: 0.25

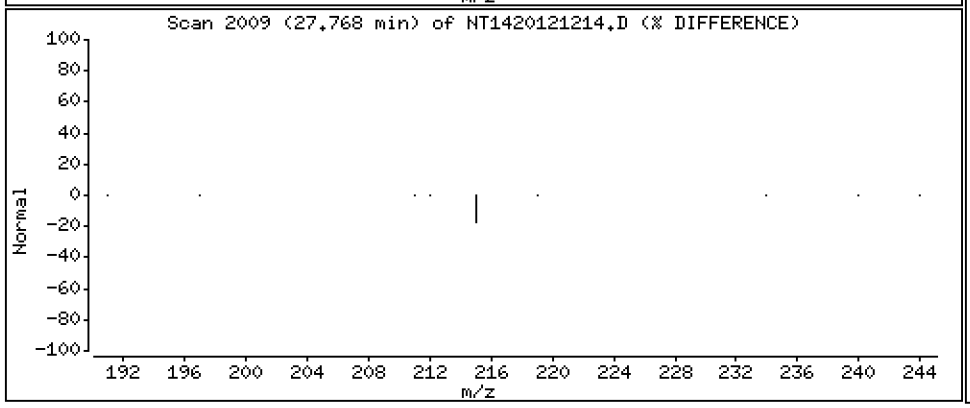
48 C1-Fluoranthenes/Pyrenes

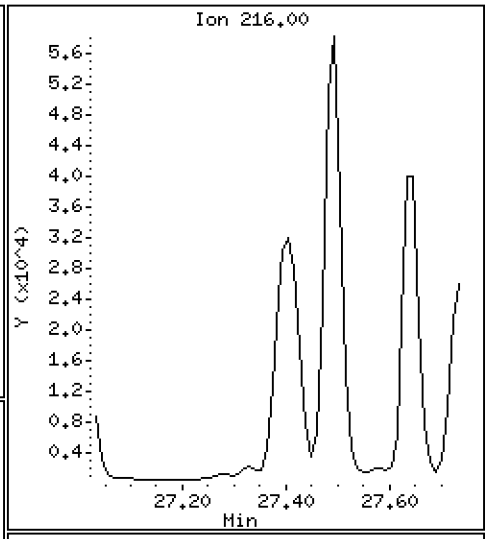
Concentration: 6.260 ug/mL

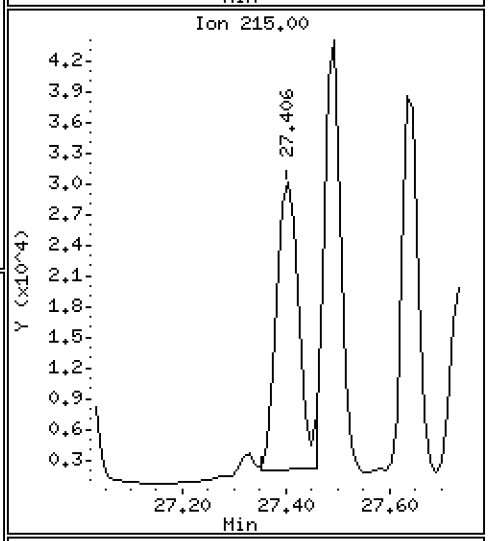


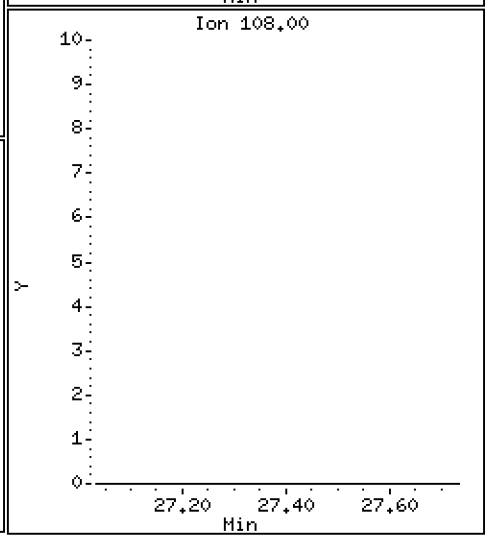












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

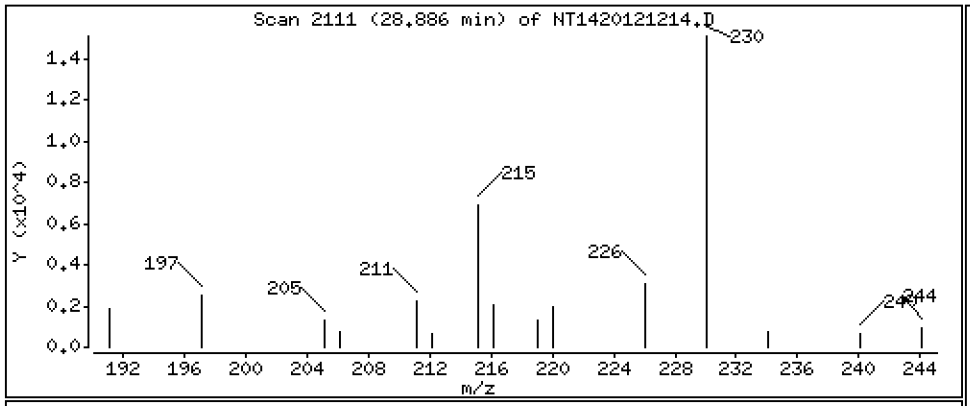
Operator: VTS

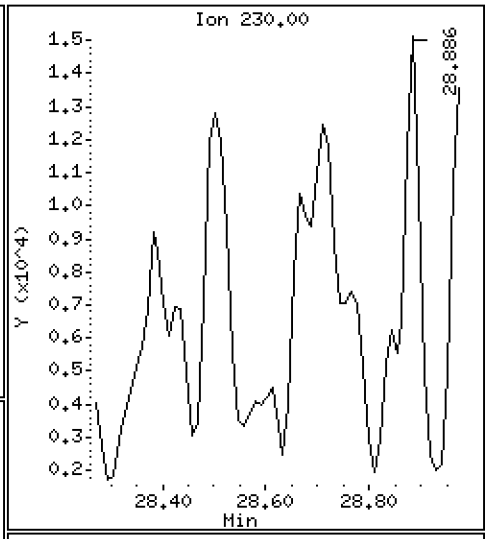
Column phase: Rxi-17Sil MS

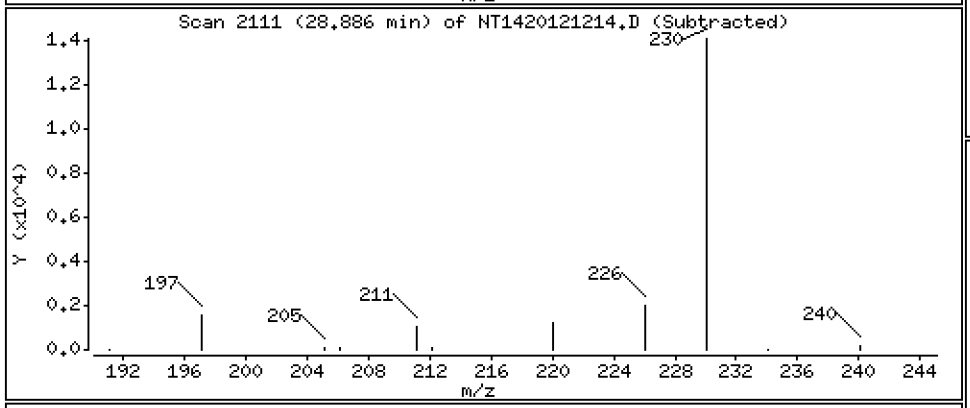
Column diameter: 0.25

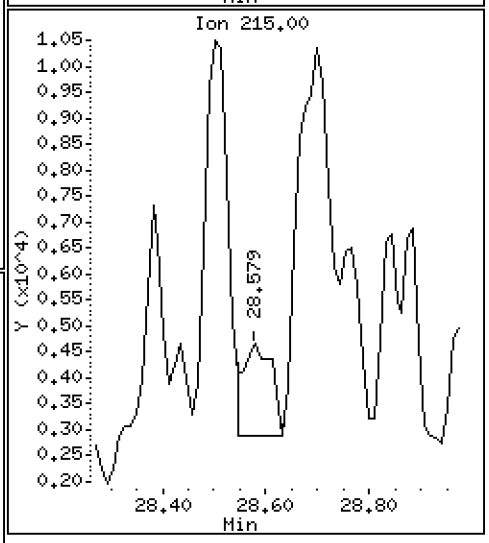
49 C2-Fluoranthenes/Pyrenes

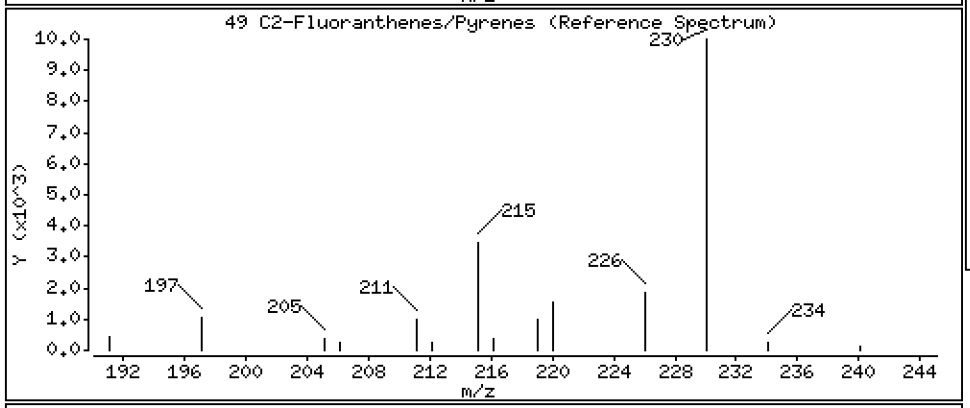
Concentration: 2.808 ug/mL

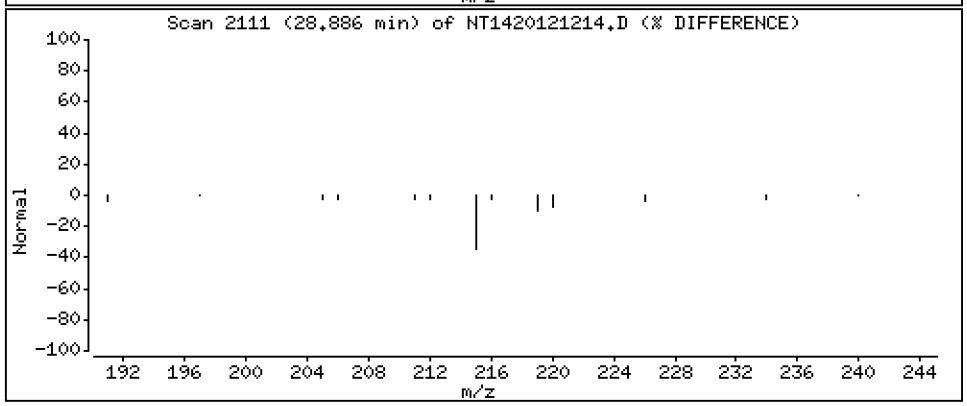












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

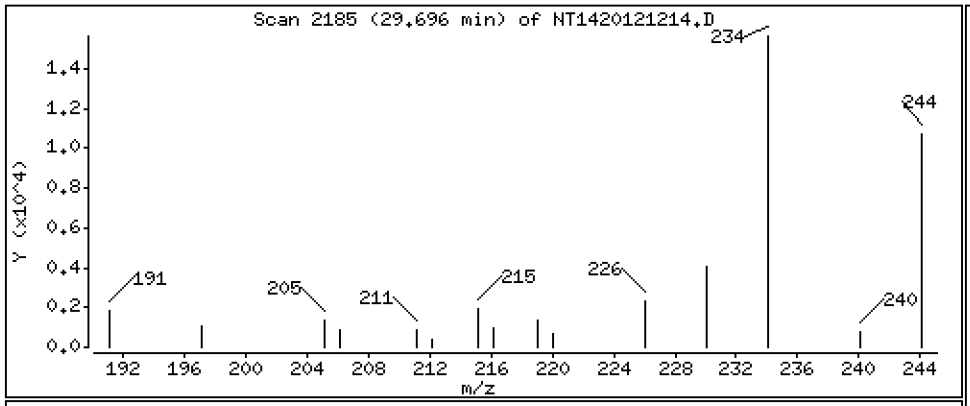
Operator: VTS

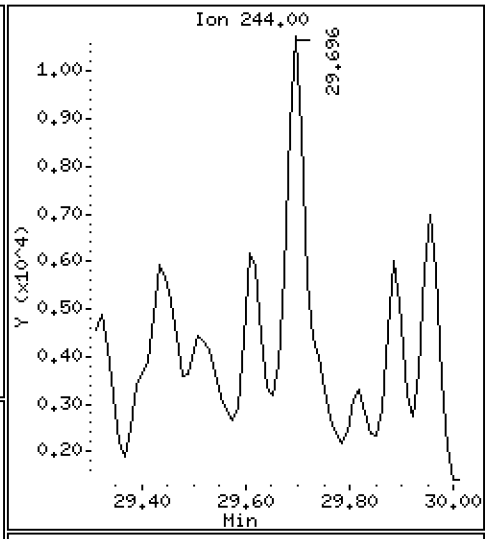
Column phase: Rxi-17Sil MS

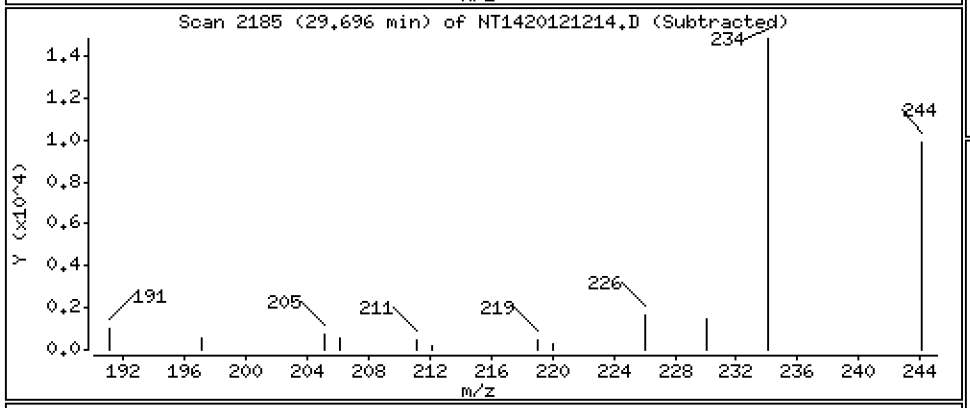
Column diameter: 0.25

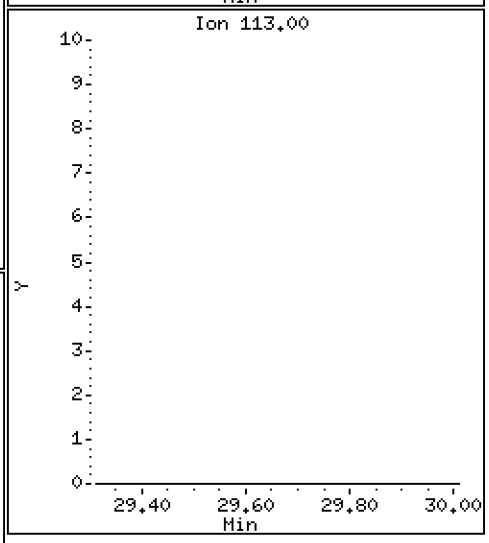
50 C3-Fluoranthenes/Pyrenes

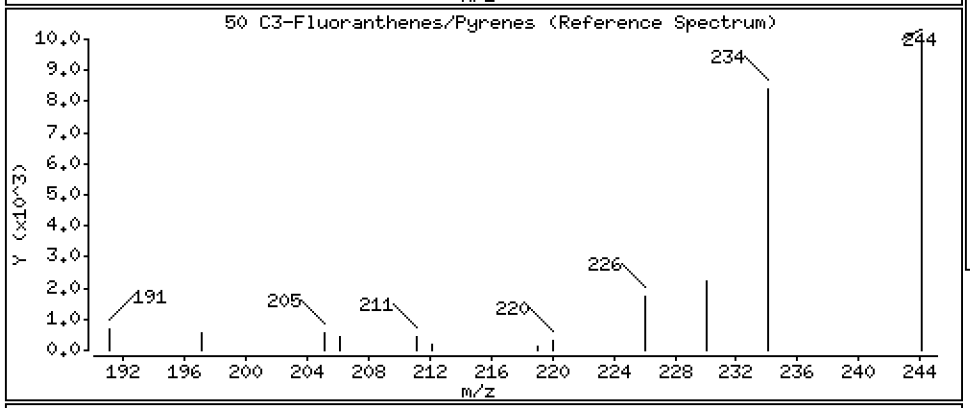
Concentration: 1.744 ug/mL

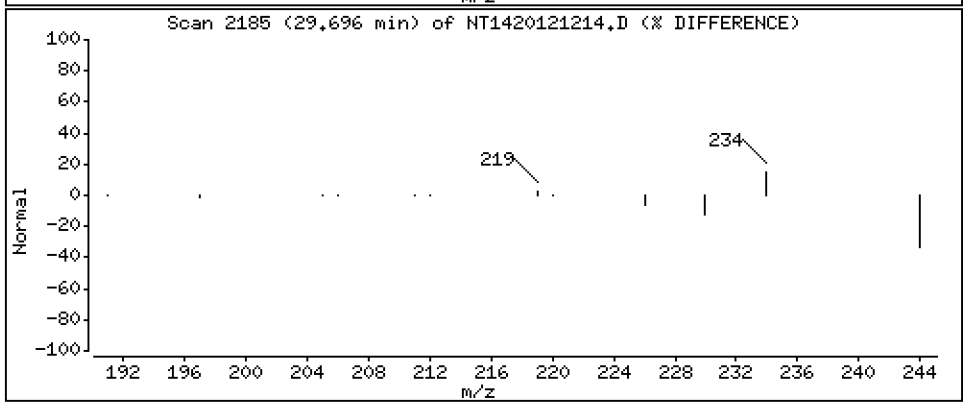












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

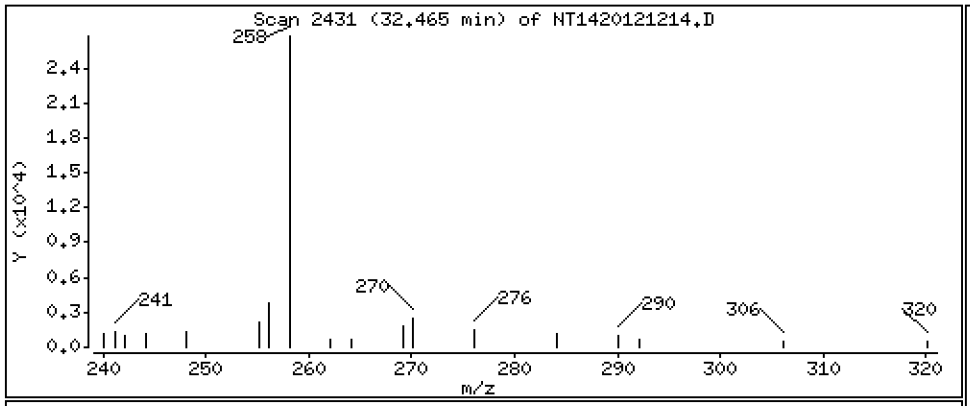
Operator: VTS

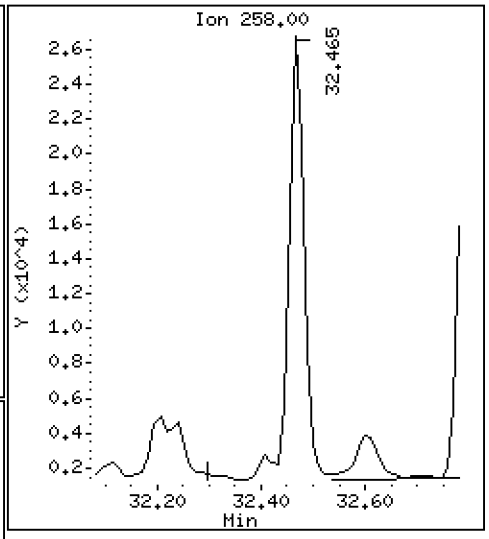
Column phase: Rxi-17Sil MS

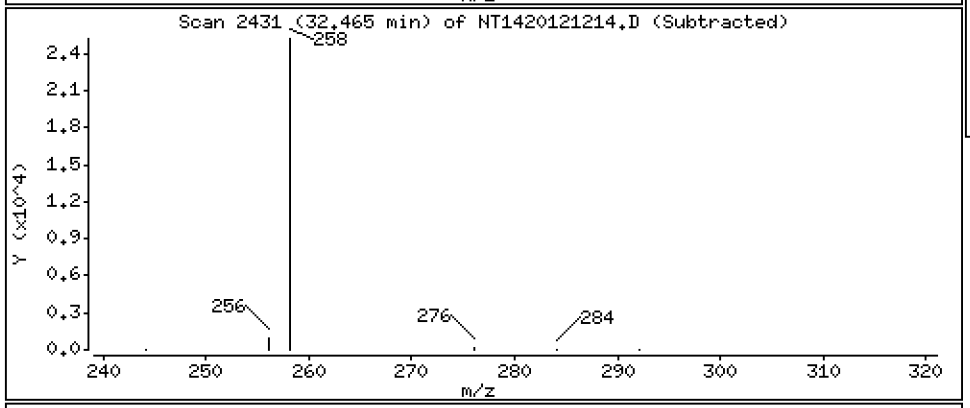
Column diameter: 0.25

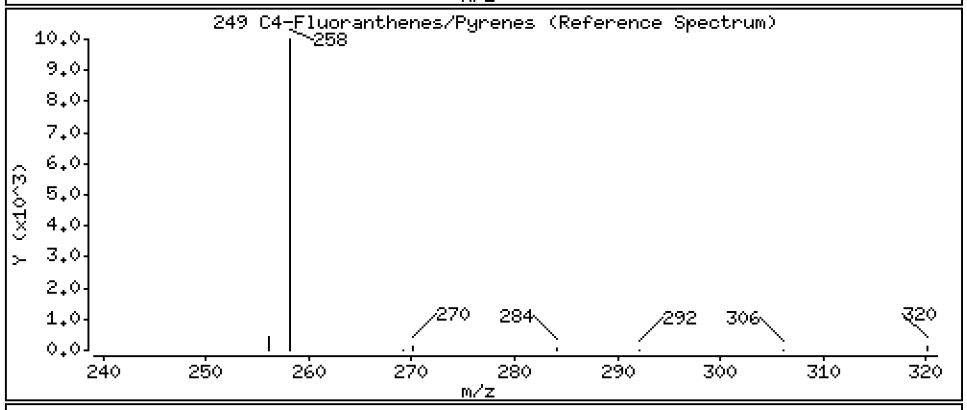
249 C4-Fluoranthenes/Pyrenes

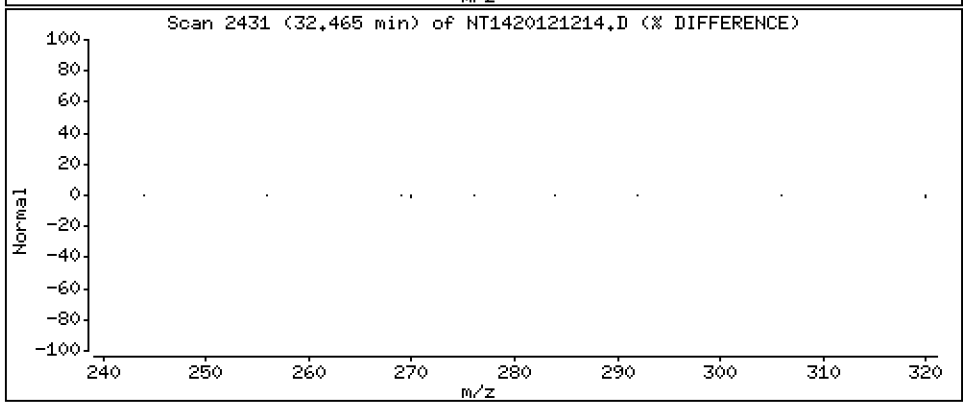
Concentration: 1.414 ug/mL











Data File: \\target\share\chem3\nt14.i\20201212.b\sim.b\NT1420121214.D

Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

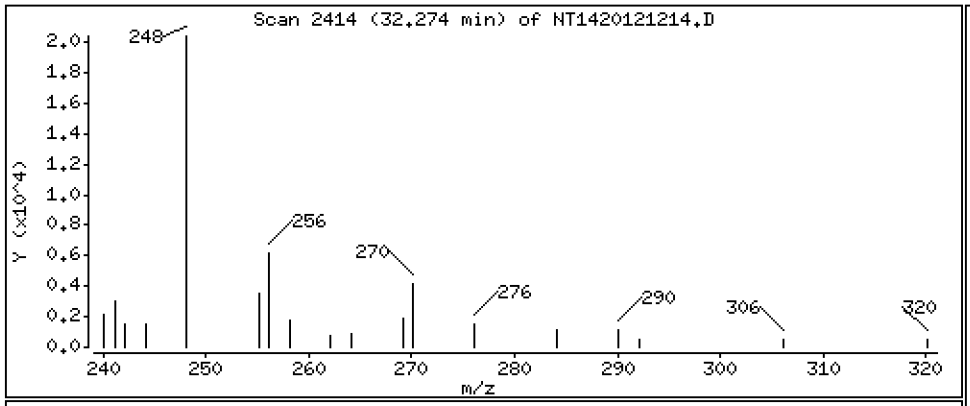
Operator: VTS

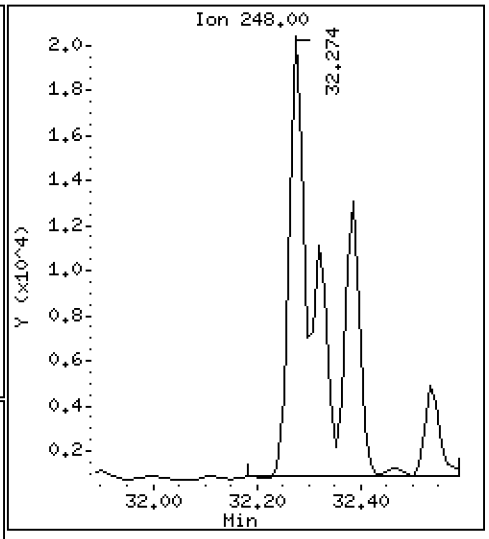
Column phase: Rxi-17Sil MS

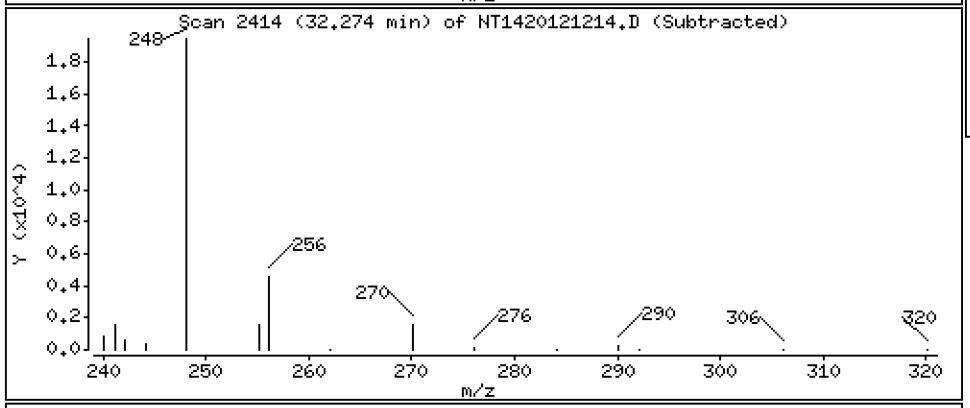
Column diameter: 0.25

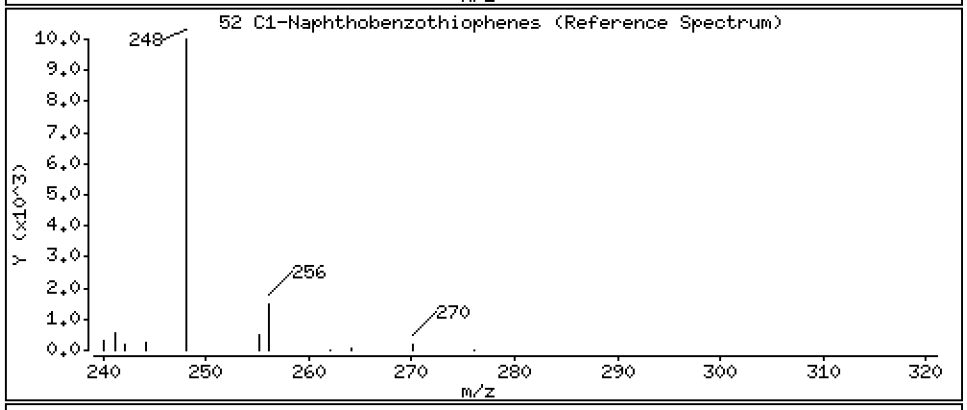
52 C1-Naphthobenzothiophenes

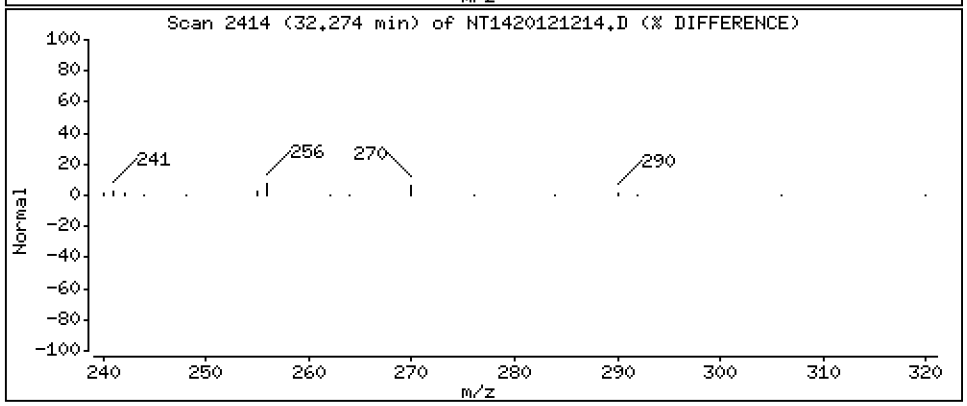
Concentration: 0.6878 ug/mL











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Date : 12-DEC-2020 21:35

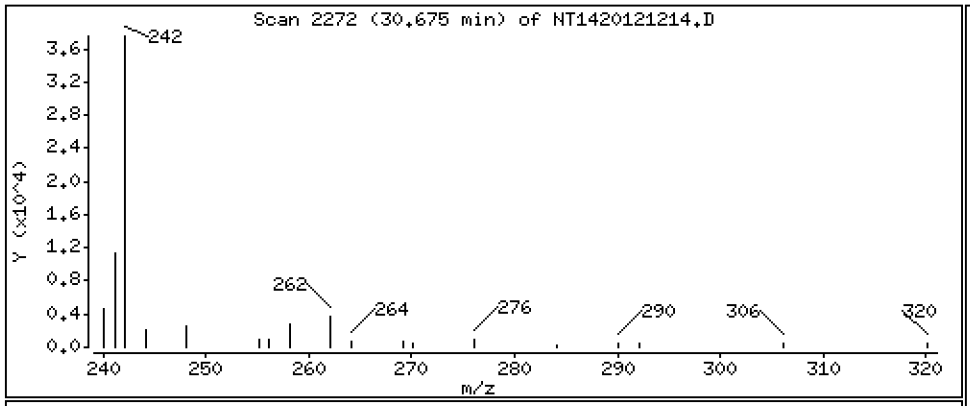
Client ID: Instrument: nt14.i

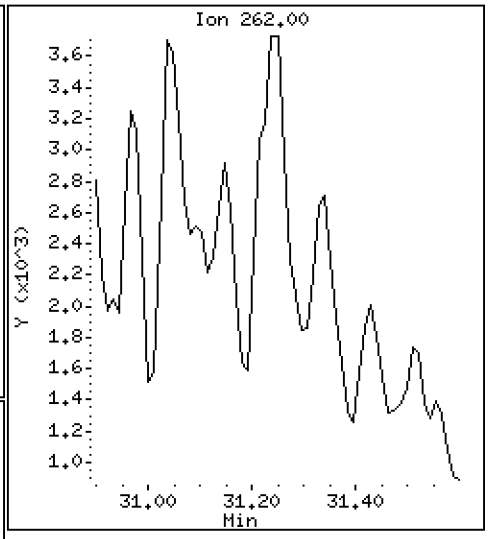
Sample Info: 20K0073-01

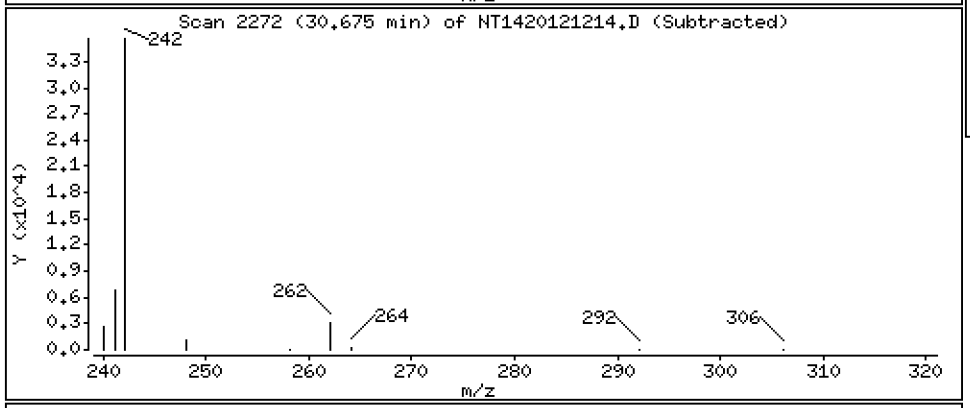
Operator: VTS

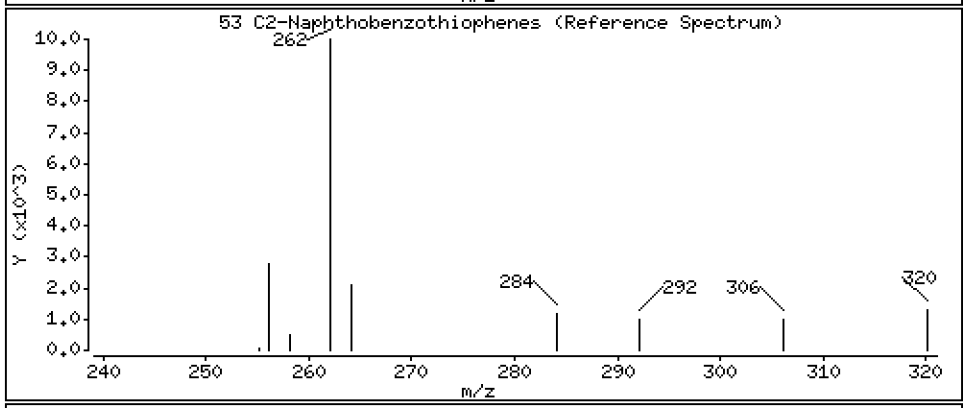
Column phase: Rxi-17Sil MS Column diameter: 0.25

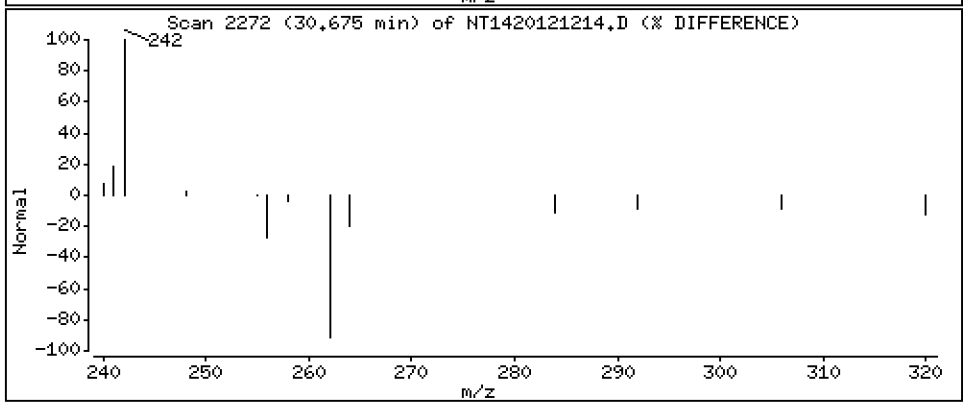
53 C2-Naphthobenzothiophenes Concentration: 0.7026 ug/mL











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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

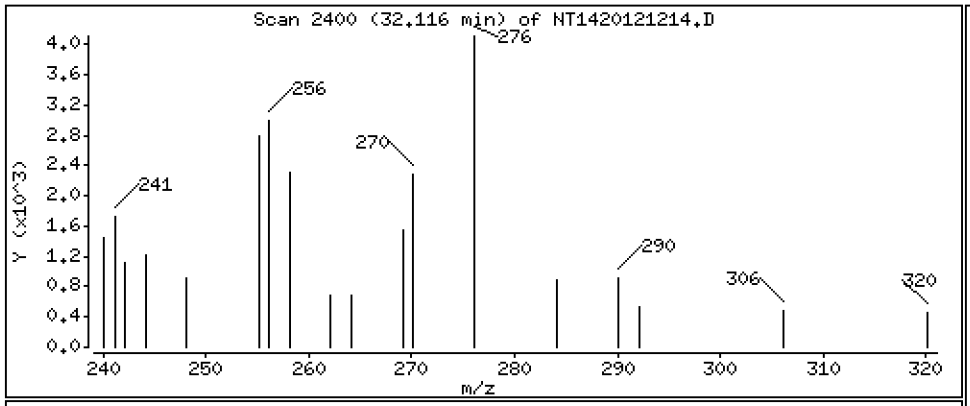
Operator: VTS

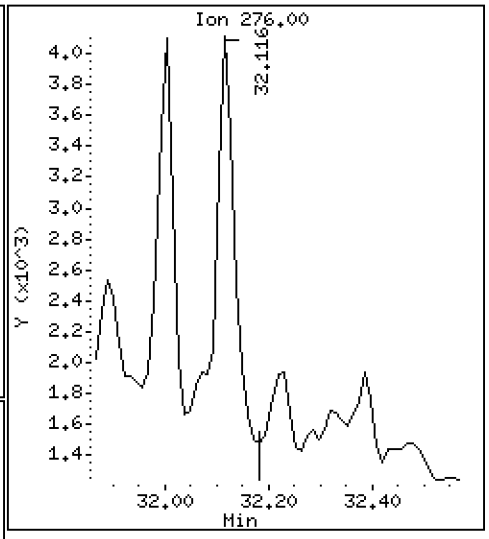
Column phase: Rxi-17Sil MS

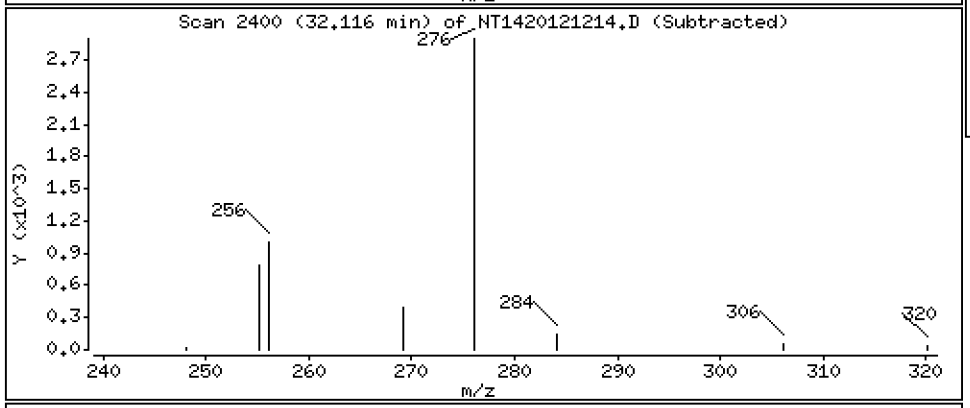
Column diameter: 0.25

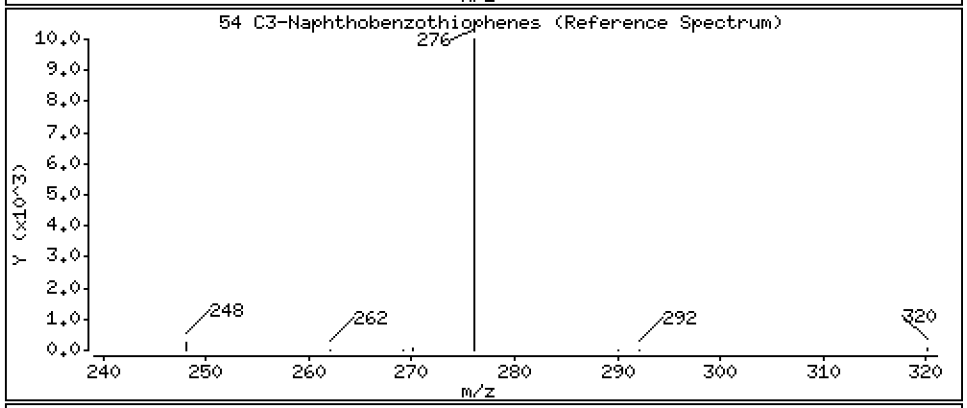
54 C3-Naphthobenzothiophenes

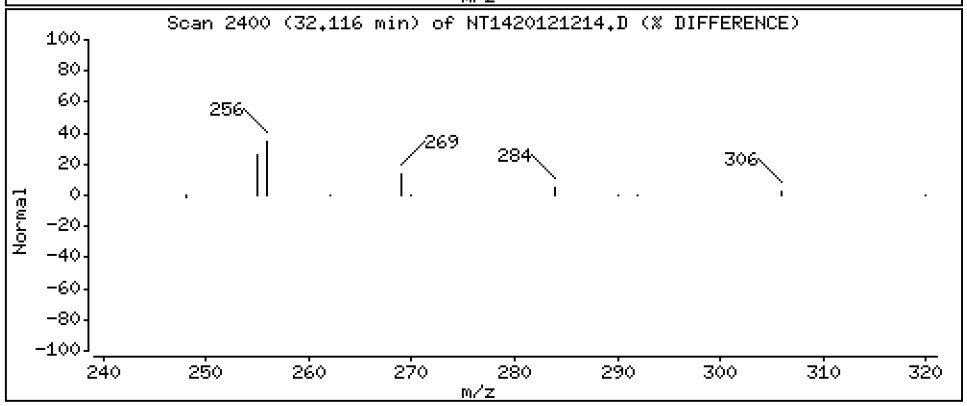
Concentration: 0.3676 ug/mL











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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

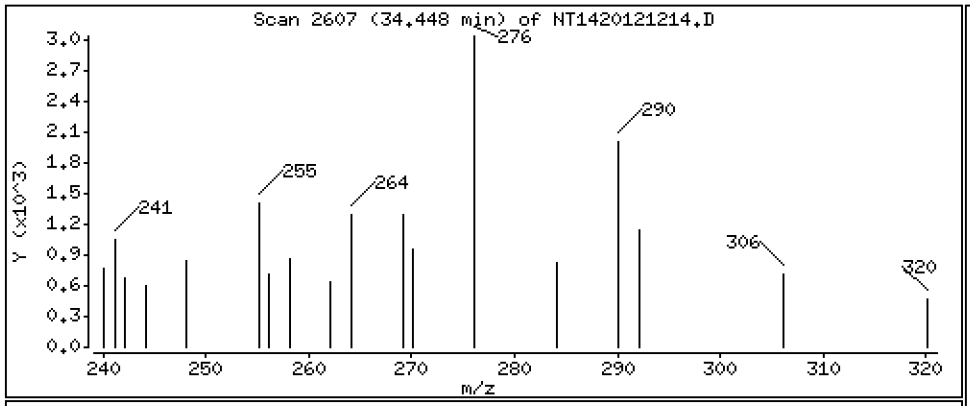
Operator: VTS

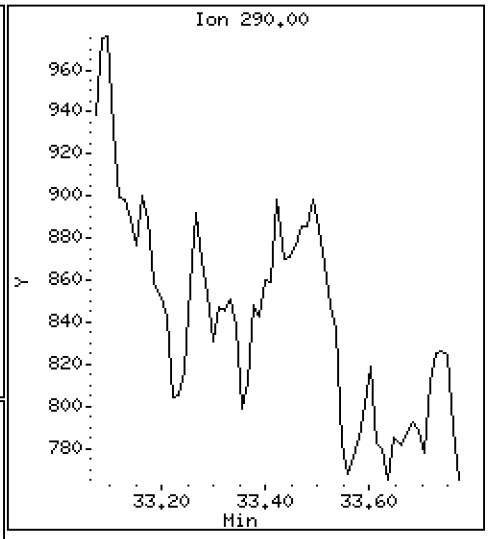
Column phase: Rxi-17Sil MS

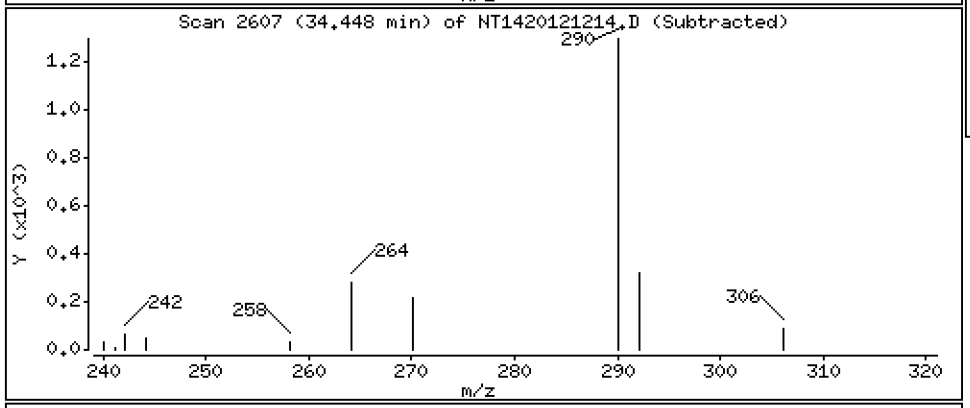
Column diameter: 0.25

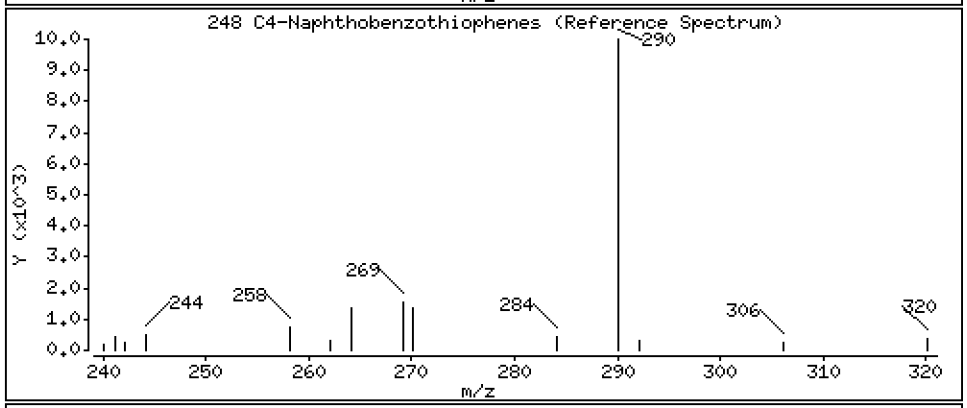
248 C4-Naphthobenzothiophenes

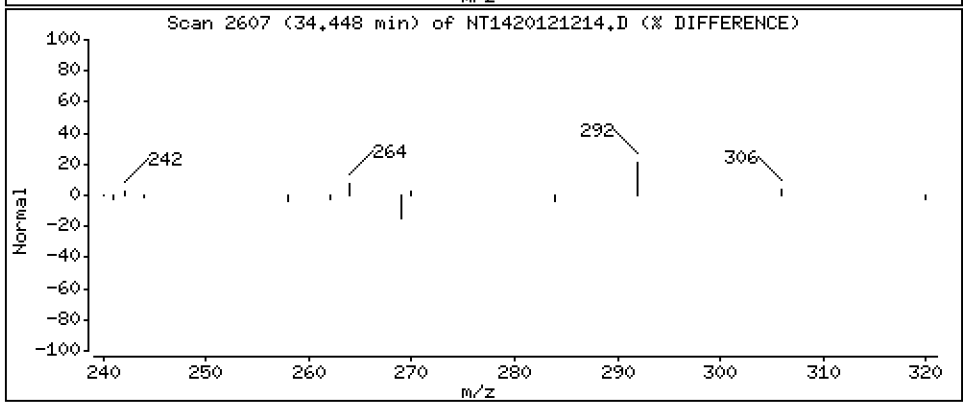
Concentration: 0.07594 ug/mL











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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

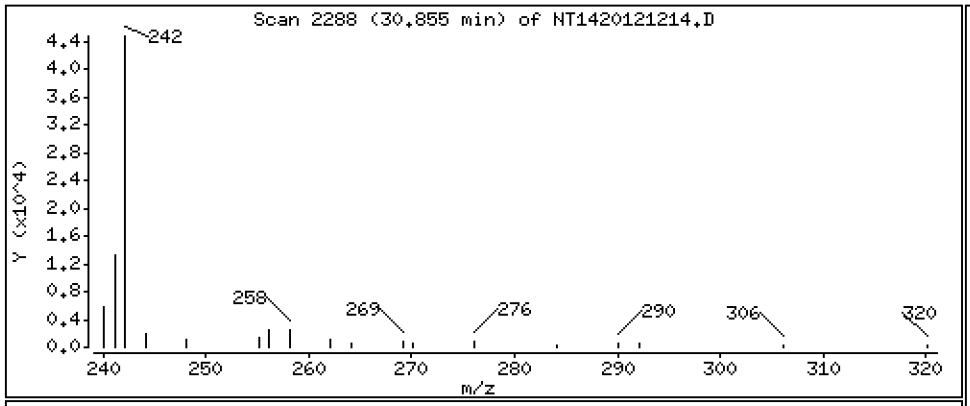
Operator: VTS

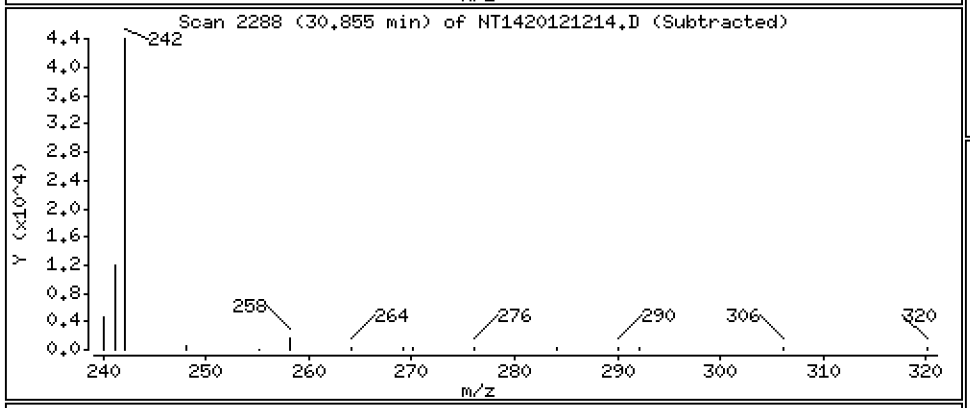
Column phase: Rxi-17Sil MS

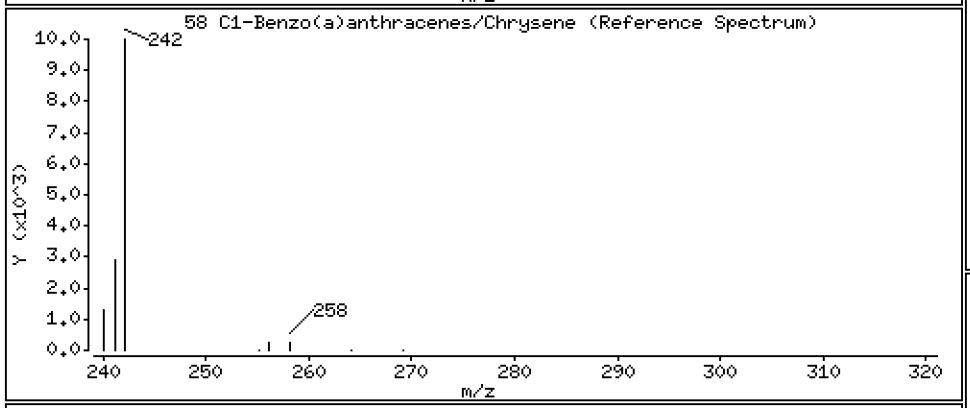
Column diameter: 0.25

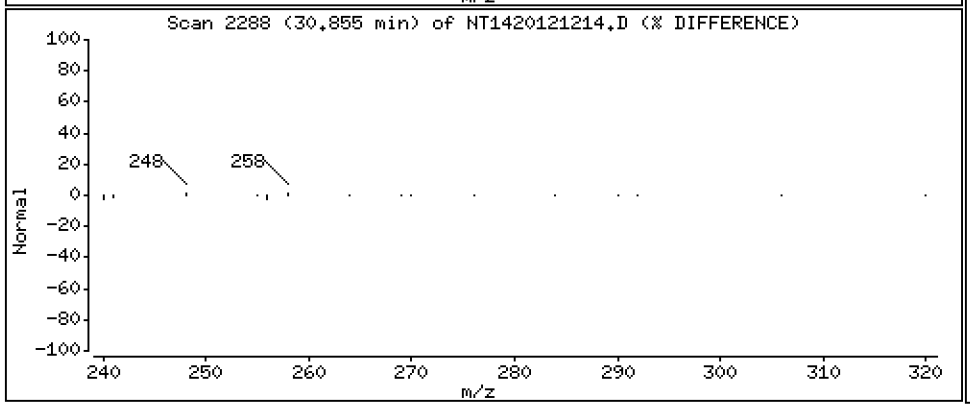
58 C1-Benzo(a)anthracenes/Chrysene

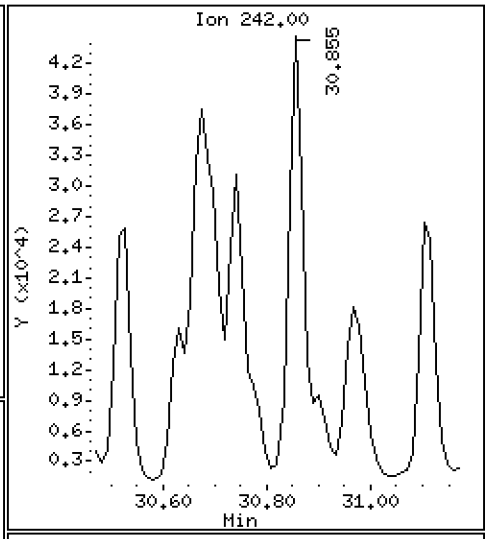
Concentration: 4.882 ug/mL

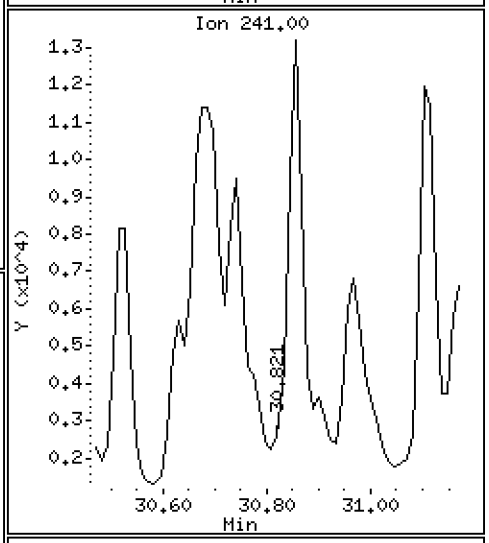


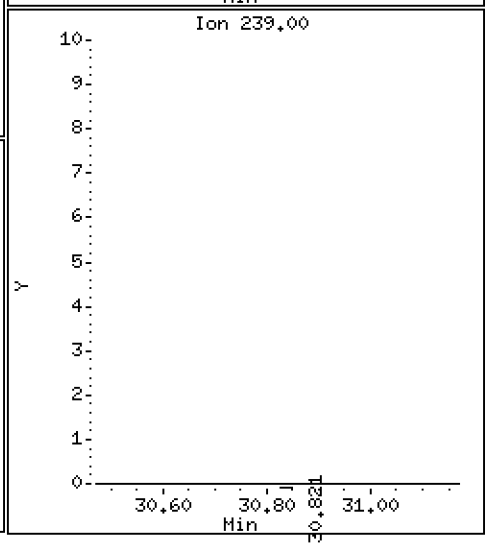












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

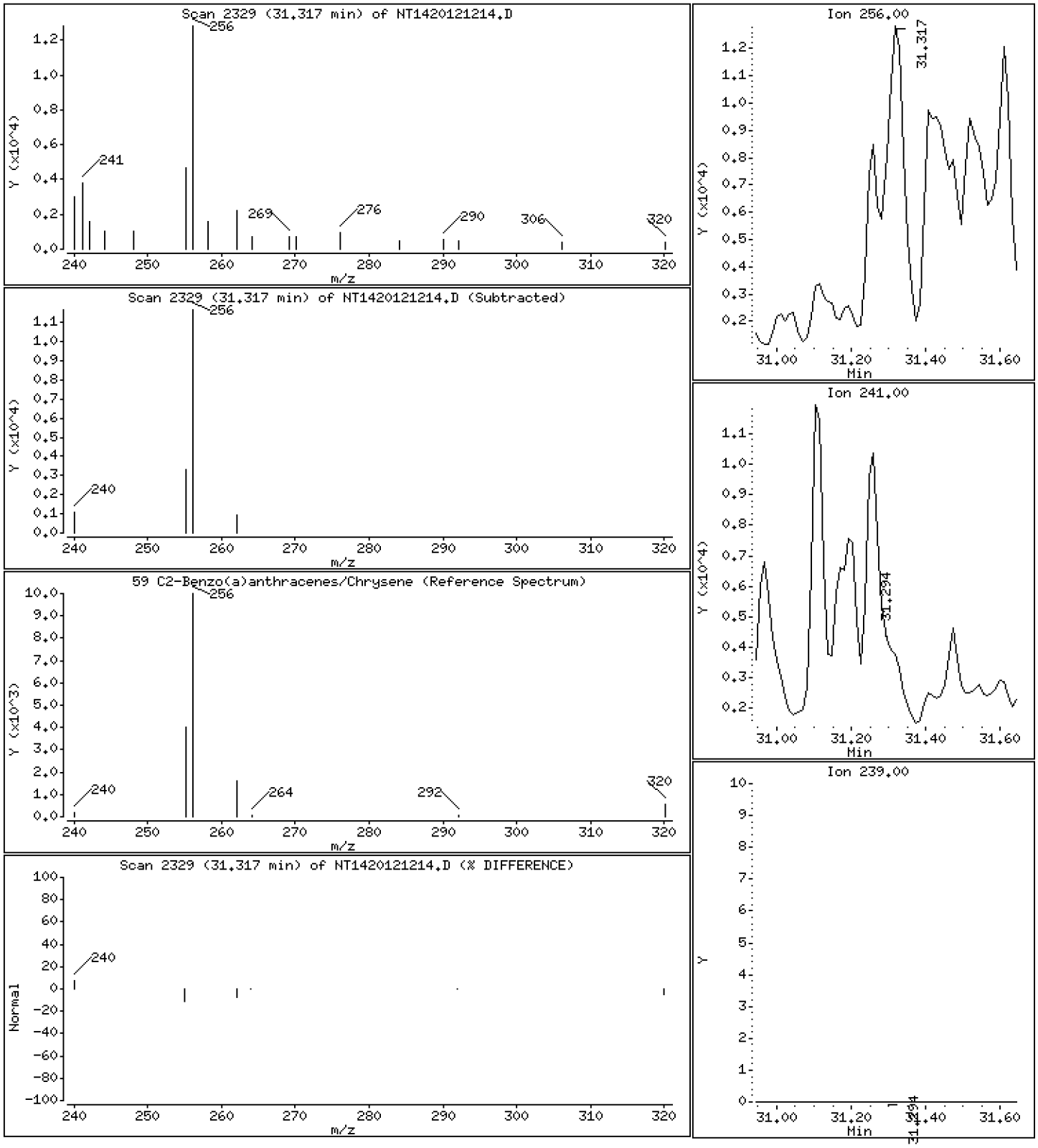
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

59 C2-Benzo(a)anthracenes/Chrysene

Concentration: 2.448 ug/mL



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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

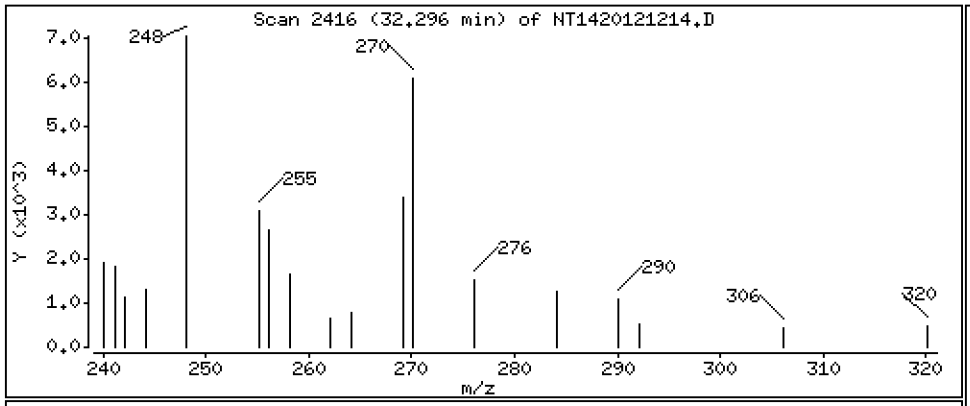
Operator: VTS

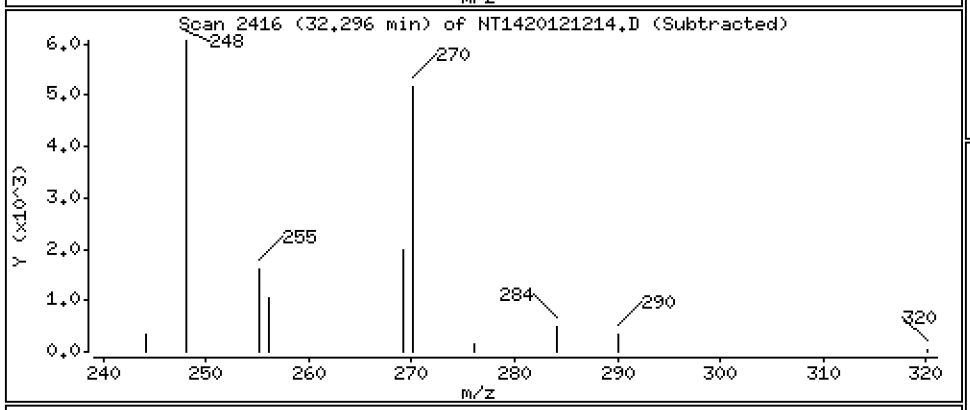
Column phase: Rxi-17Sil MS

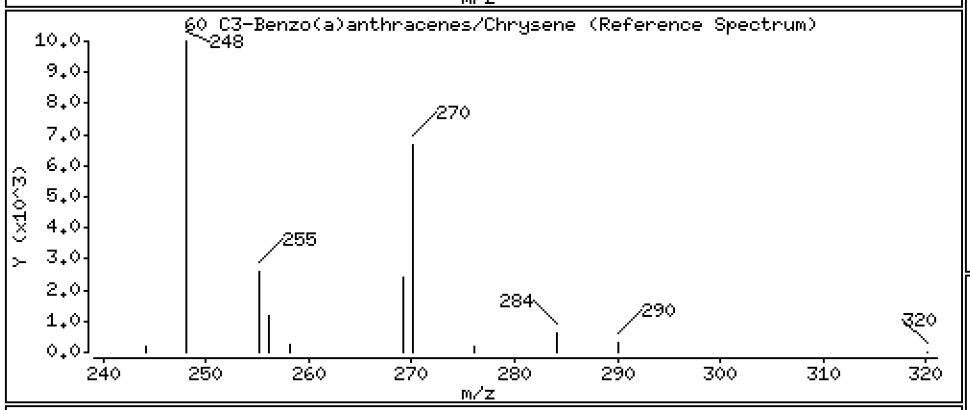
Column diameter: 0.25

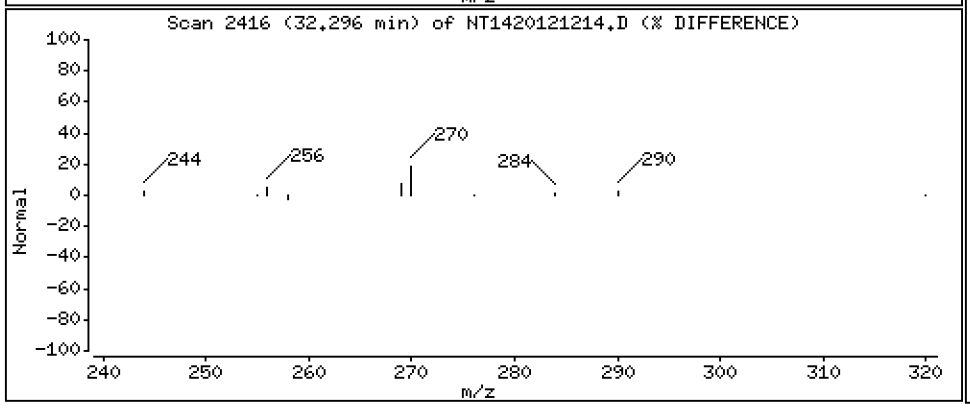
60 C3-Benzo(a)anthracenes/Chrysene

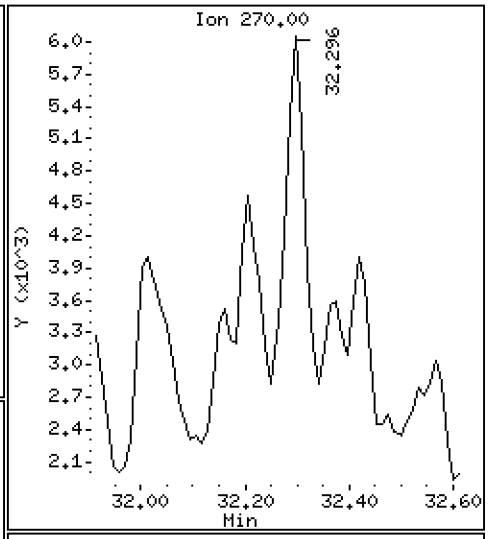
Concentration: 1.168 ug/mL

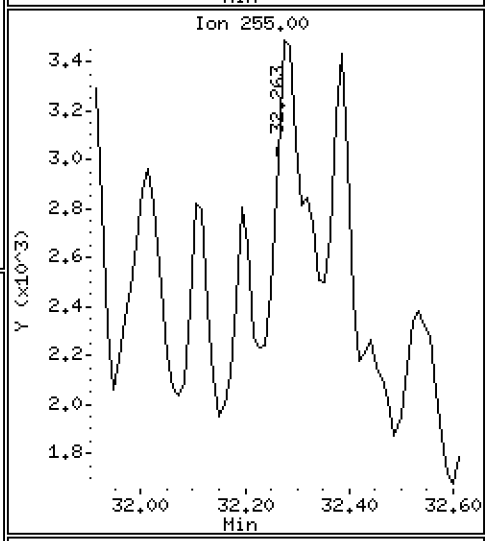


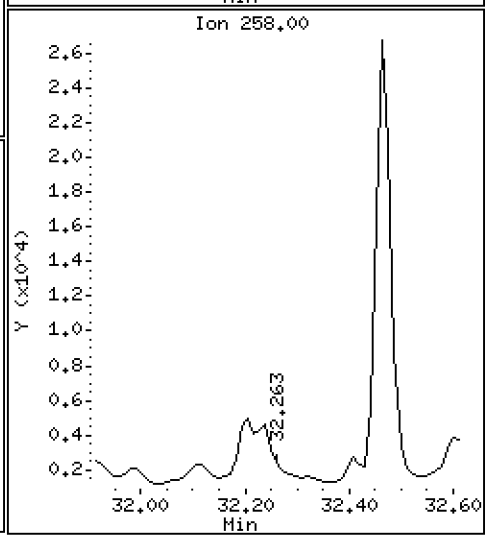












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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

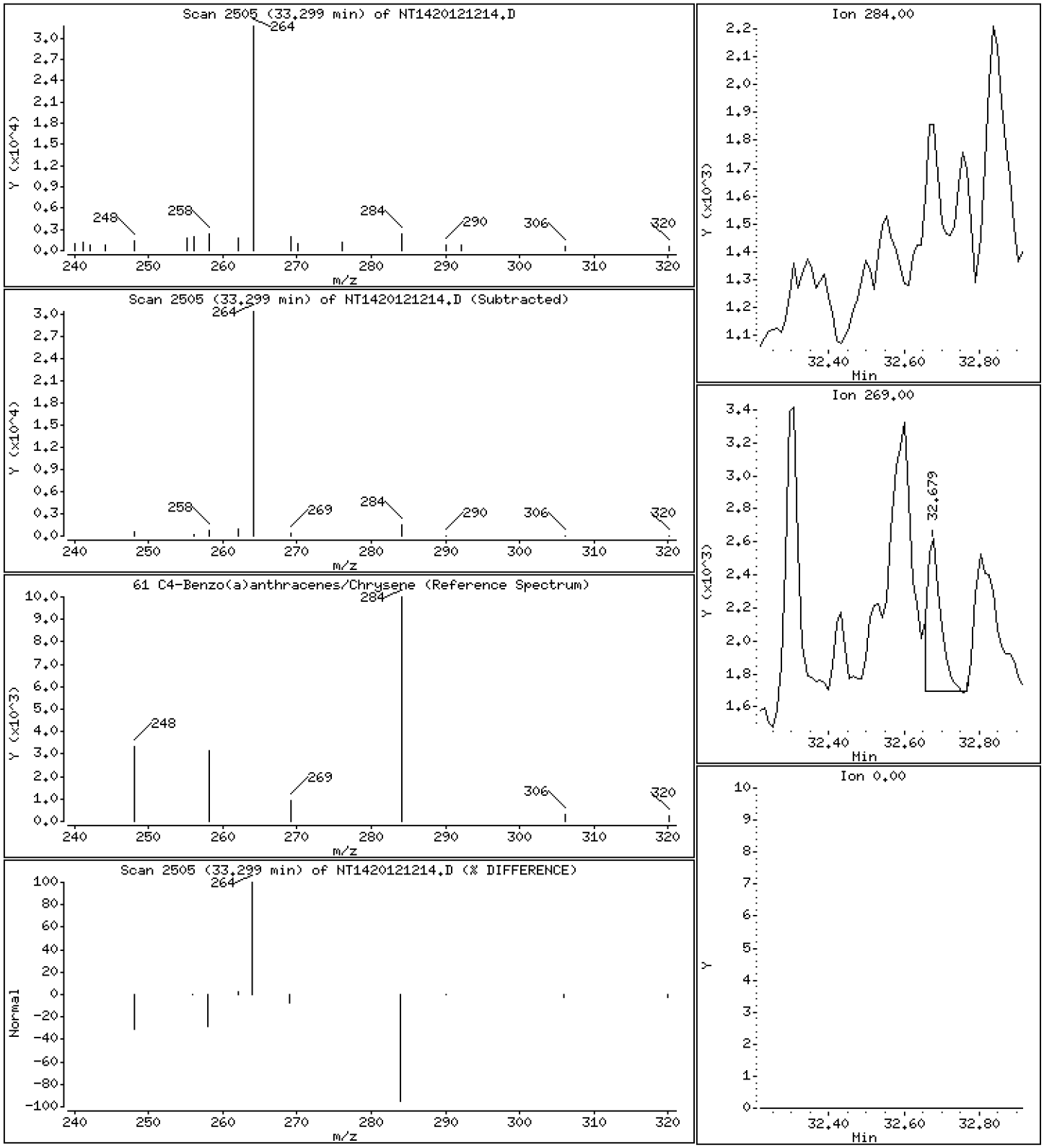
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

61 C4-Benzo(a)anthracenes/Chrysene

Concentration: 0.4494 ug/mL



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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

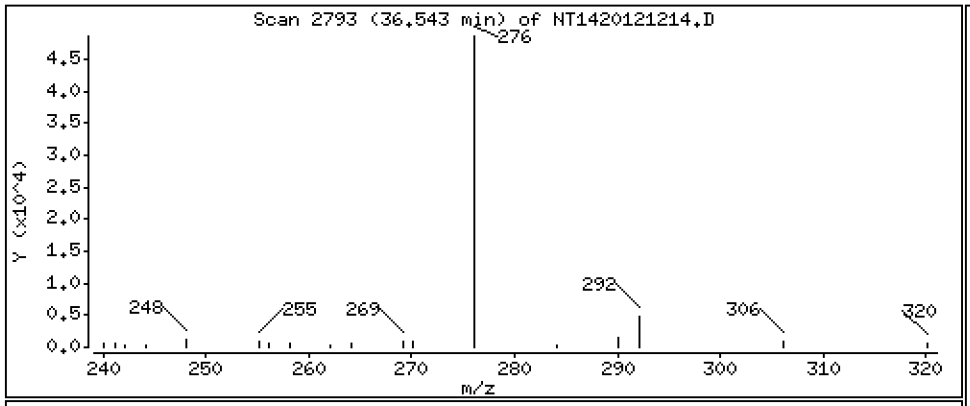
Operator: VTS

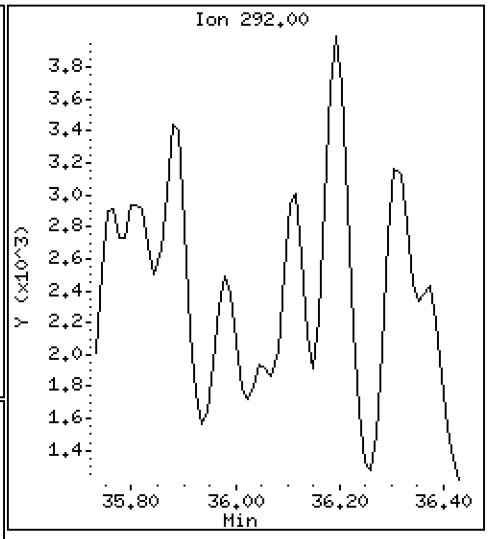
Column phase: Rxi-17Sil MS

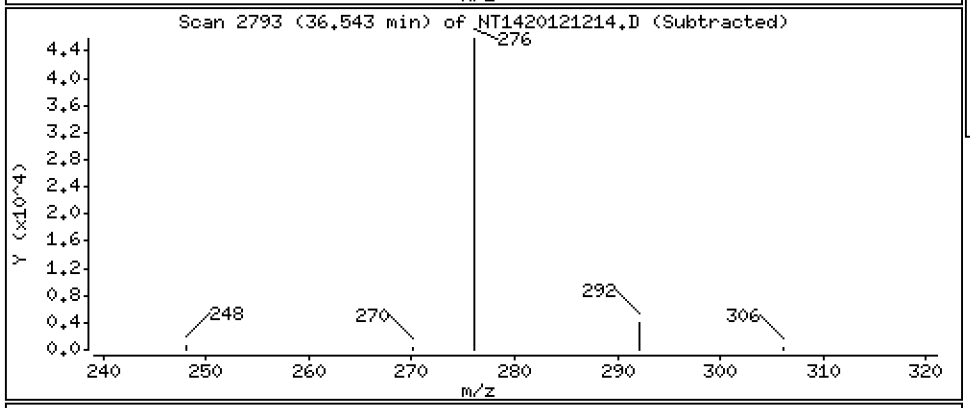
Column diameter: 0.25

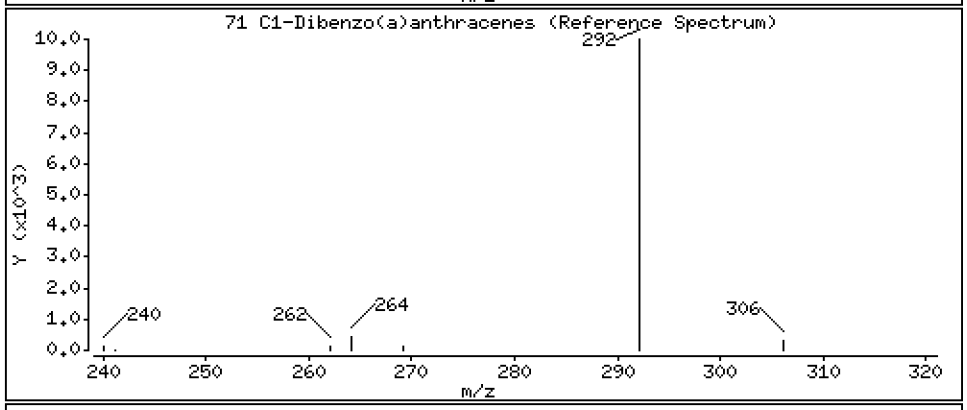
71 C1-Dibenzo(a)anthracenes

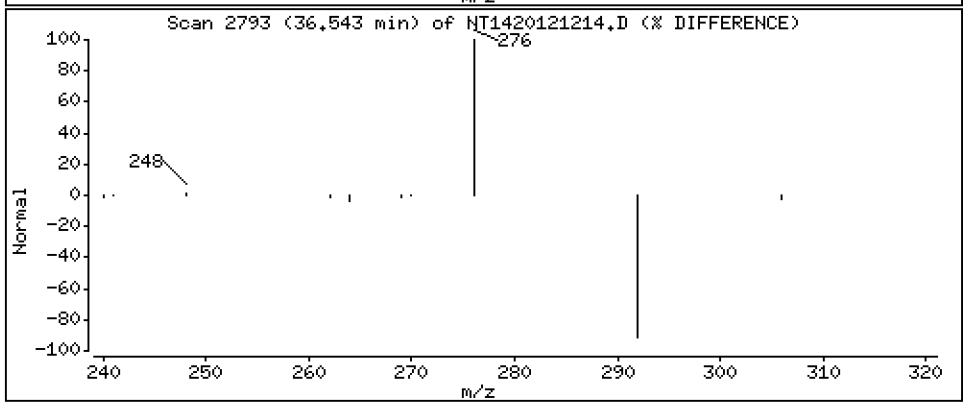
Concentration: 1.114 ug/mL











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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

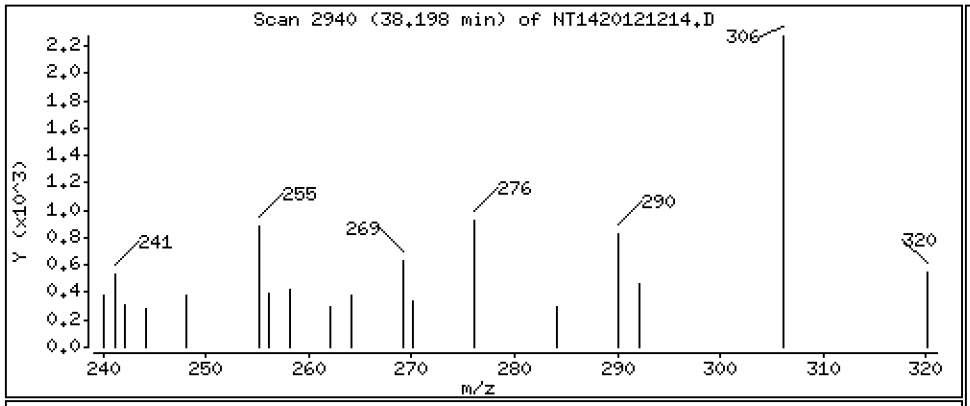
Operator: VTS

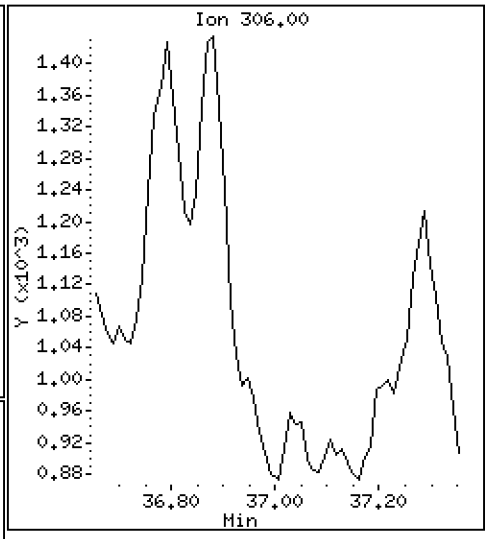
Column phase: Rxi-17Sil MS

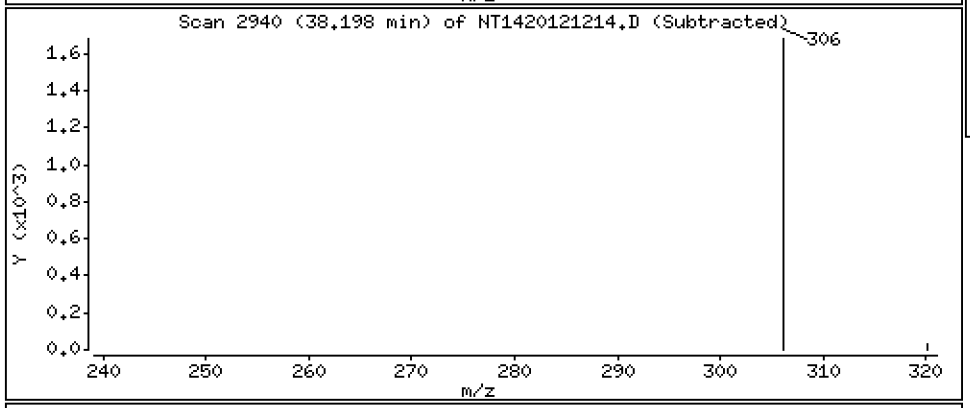
Column diameter: 0.25

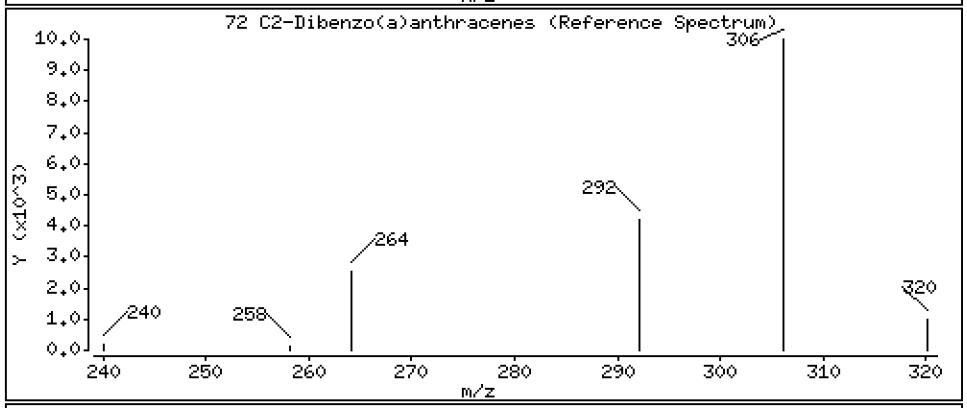
72 C2-Dibenzo(a)anthracenes

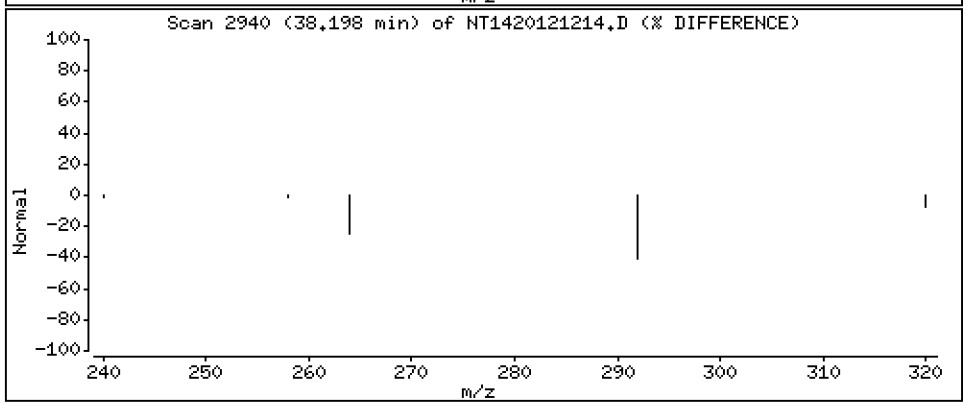
Concentration: 0.4403 ug/mL











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Date : 12-DEC-2020 21:35

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01

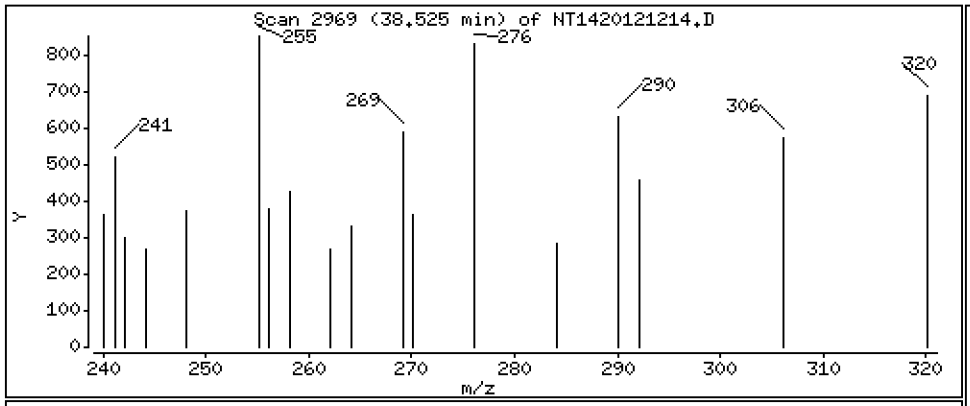
Operator: VTS

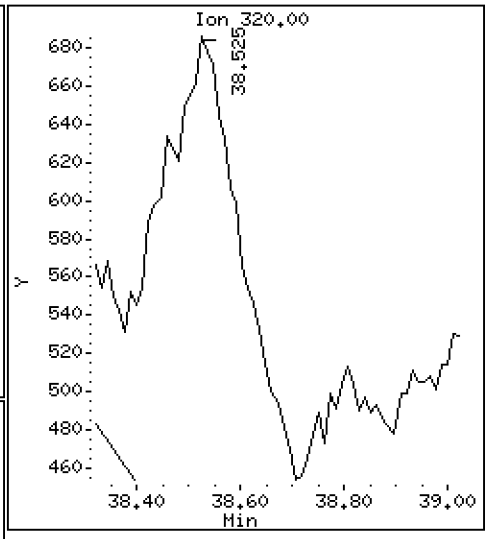
Column phase: Rxi-17Sil MS

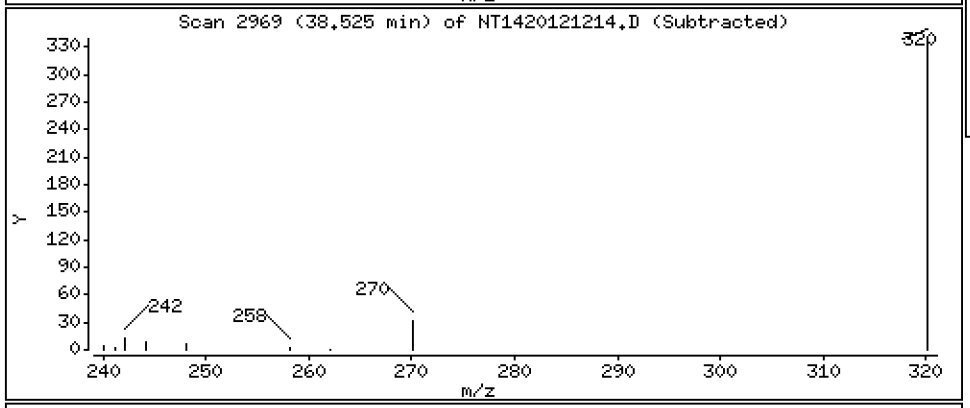
Column diameter: 0.25

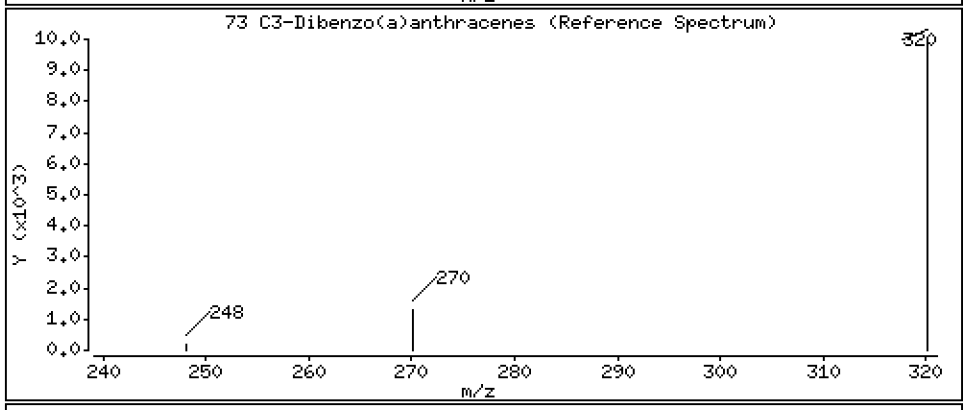
73 C3-Dibenzo(a)anthracenes

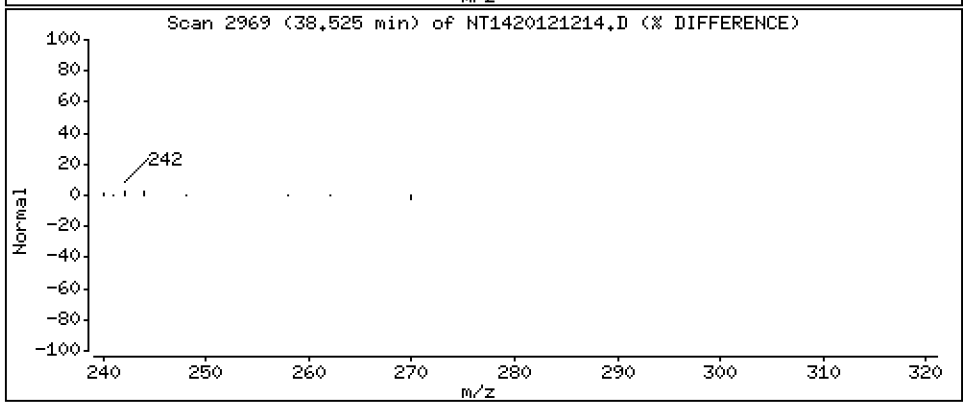
Concentration: 0.2132 ug/mL











ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201212.b\sim.b\NT1420121214.D
Lab Smp Id: 20K0073-01
Inj Date : 12-DEC-2020 21:35
Operator : VTS Inst ID: nt14.i
Smp Info : 20K0073-01
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201212.b\sim.b\ALKYLRANGE.m
Meth Date : 15-Dec-2020 17:14 yev Quant Type: ISTD
Cal Date : 17-OCT-2020 17:58 Cal File: NT1420101709S.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ALKYLRANGES.sub
Target Version: 4.14
Processing Host: ORGDATA102

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
3 C1-Decalin	152	Compound Not Detected.					
4 C2-Decalin	166	10.194	9.000	(0.548)	4596	0.66432	0.6643(M)
5 C3-Decalin	180	11.112	11.000	(0.597)	3010	0.43507	0.4351(M)
247 C4-Decalin	194	12.785	12.000	(0.687)	5513	0.79686	0.7969(M)
8 C1-Naphthalenes	142	13.511	13.522	(0.726)	46136	0.51373	0.5137(M)
9 C2-Naphthalenes	156	15.236	15.236	(0.819)	139104	1.54894	1.549(M)
10 C3-Naphthalenes	170	18.611	17.808	(1.000)	198091	2.20577	2.206(M)
11 C4-Naphthalenes	184	19.201	19.201	(1.032)	90166	1.00401	1.004(M)
13 C1-Benzothiophenes	148	13.653	13.961	(0.734)	8655	0.11570	0.1157(M)
14 C2-Benzothiophenes	162	15.544	15.544	(0.835)	42192	0.56405	0.5640(M)
15 C3_Benzothiophenes	176	16.895	17.511	(0.908)	25096	0.33550	0.3355(M)
27 C1-Fluorenes	180	20.255	20.403	(1.088)	56038	0.76688	0.7669(M)
28 C2-Fluorenes	194	21.831	22.162	(1.173)	67380	0.92210	0.9221(M)
29 C3-Fluorenes	208	23.141	23.130	(1.243)	73340	1.00366	1.004(M)
31 C1-Dibenzothiophenes	198	22.767	22.987	(1.223)	87979	0.83657	0.8366(M)
* 25 Fluorene-d10	176	18.611	18.623	(1.000)	219994	2.00000	
32 C2-Dibenzothiophenes	212	24.174	24.163	(1.299)	112941	1.07393	1.074(M)
33 C3-Dibenzothiophenes	226	25.075	25.054	(1.347)	83643	0.79534	0.7953(M)
34 C4-Dibenzothiophenes	240	26.197	26.186	(1.408)	44015	0.41853	0.4185(M)
38 C1-Phenanthrenes/Anthracenes	192	23.415	23.844	(1.061)	516454	4.22613	4.226(M)
39 C2-Phenanthrenes/Anthracenes	206	24.943	25.021	(1.131)	408760	3.34487	3.345(M)
40 C3-Phenanthrenes/Anthracenes	220	26.142	26.120	(1.185)	240781	1.97030	1.970(M)
41 C4-Phenanthrenes/Anthracenes	234	26.648	27.592	(1.208)	107946	0.88332	0.8833(M)
48 C1-Fluoranthenes/Pyrenes	216	27.767	27.384	(1.259)	859158	6.26030	6.260(M)
* 250 Anthracene-d10	188	22.063	22.063	(1.000)	224536	2.00000	
49 C2-Fluoranthenes/Pyrenes	230	28.885	28.622	(1.309)	385334	2.80776	2.808(M)
50 C3-Fluoranthenes/Pyrenes	244	29.696	29.663	(1.346)	239340	1.74396	1.744(M)
249 C4-Fluoranthenes/Pyrenes	258	32.465	32.431	(1.471)	194023	1.41376	1.414(M)
52 C1-Naphthobenzothiophenes	248	32.273	32.240	(1.463)	90790	0.68780	0.6878(M)
53 C2-Naphthobenzothiophenes	262	30.674	31.249	(1.390)	92747	0.70262	0.7026(M)
54 C3-Naphthobenzothiophenes	276	32.116	32.217	(1.456)	48524	0.36760	0.3676(M)
248 C4-Naphthobenzothiophenes	290	34.447	33.422	(1.561)	10024	0.07594	0.07594(M)
58 C1-Benzo(a)anthracenes/Chrysen	242	30.854	30.821	(0.937)	673814	4.88165	4.882(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.938	32.938	(1.000)	321691	2.00000	
59 C2-Benzo(a)anthracenes/Chrysen	256	31.316	31.294	(0.951)	337873	2.44782	2.448(M)
60 C3-Benzo(a)anthracenes/Chrysen	270	32.296	32.262	(0.981)	161271	1.16838	1.168(M)
61 C4-Benzo(a)anthracenes/Chrysen	284	33.298	32.566	(1.011)	62032	0.44941	0.4494(M)
71 C1-Dibenzo(a)anthracenes	292	36.542	36.081	(1.109)	165395	1.11447	1.114(M)
72 C2-Dibenzo(a)anthracenes	306	38.198	37.004	(1.160)	65350	0.44035	0.4403(M)
73 C3-Dibenzo(a)anthracenes	320	38.524	38.671	(1.170)	31639	0.21319	0.2132(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: NT1420121214.D
Lab Smp Id: 20K0073-01
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201212.b\sim.b\ALKYLRANGE.m
Misc Info:

Calibration Date: 12-DEC-2020
Calibration Time: 11:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

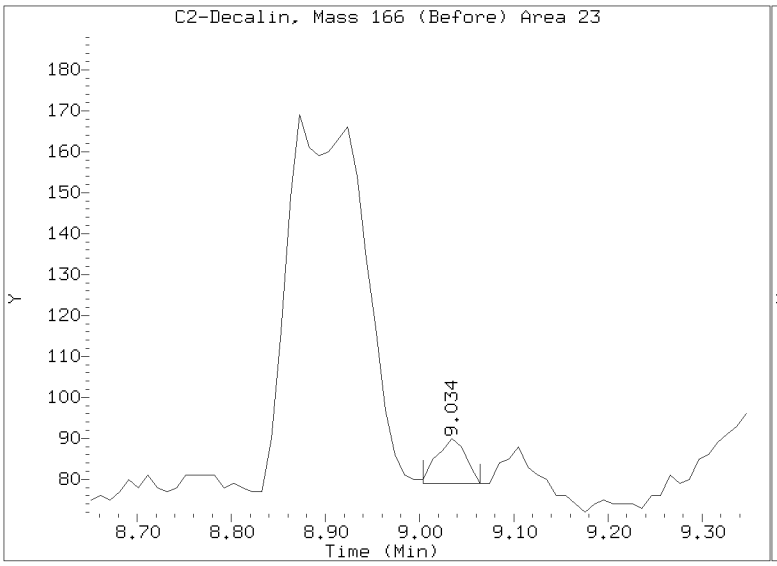
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	211292	105646	422584	219994	4.12
250 Anthracene-d10	219166	109583	438332	224536	2.45
251 Benzo(e)pyrene-d1	281561	140781	563122	321691	14.25

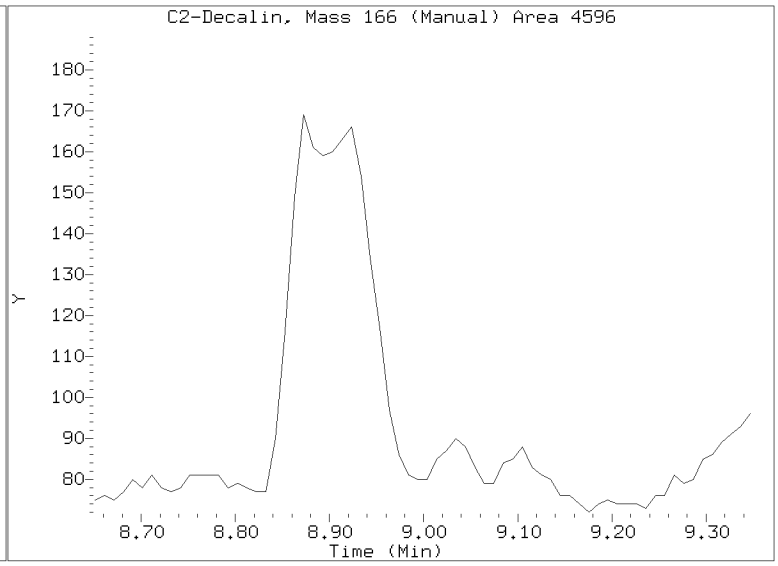
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.62	18.12	19.12	18.61	-0.06
250 Anthracene-d10	22.06	21.56	22.56	22.06	-0.00
251 Benzo(e)pyrene-d1	32.94	32.44	33.44	32.94	-0.00

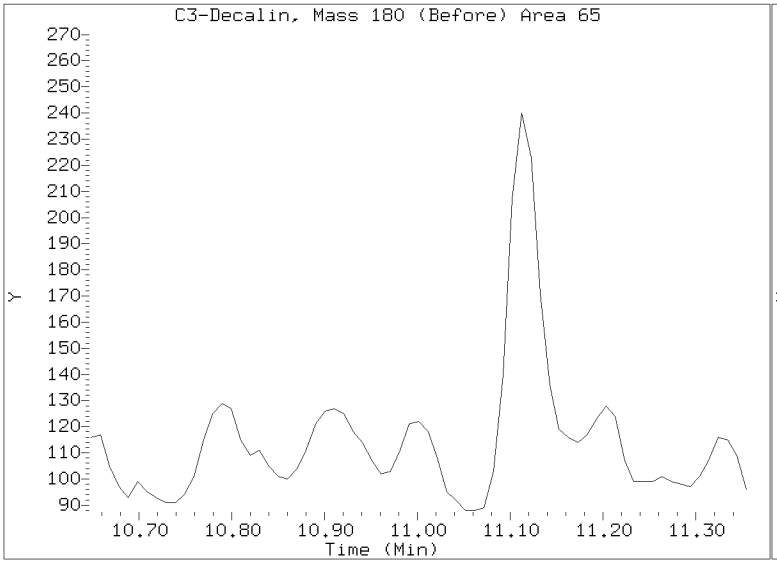
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

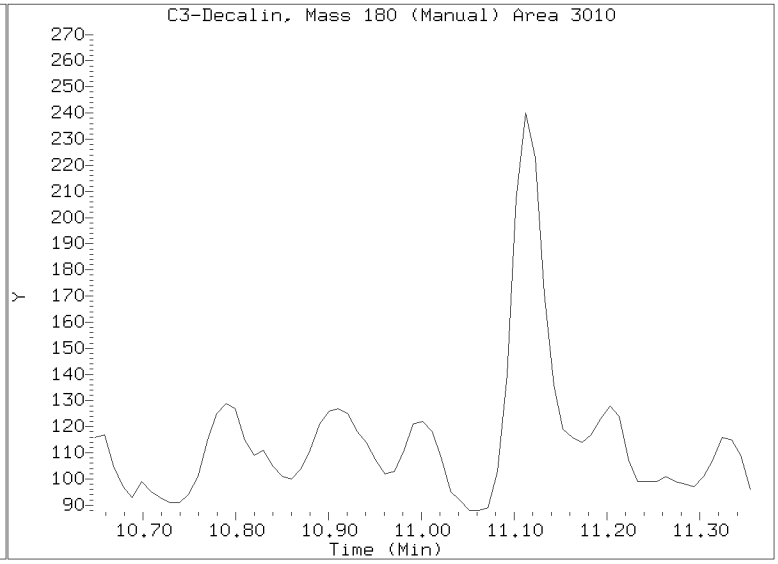
Quant Ion Manual Peak Adjustment Report

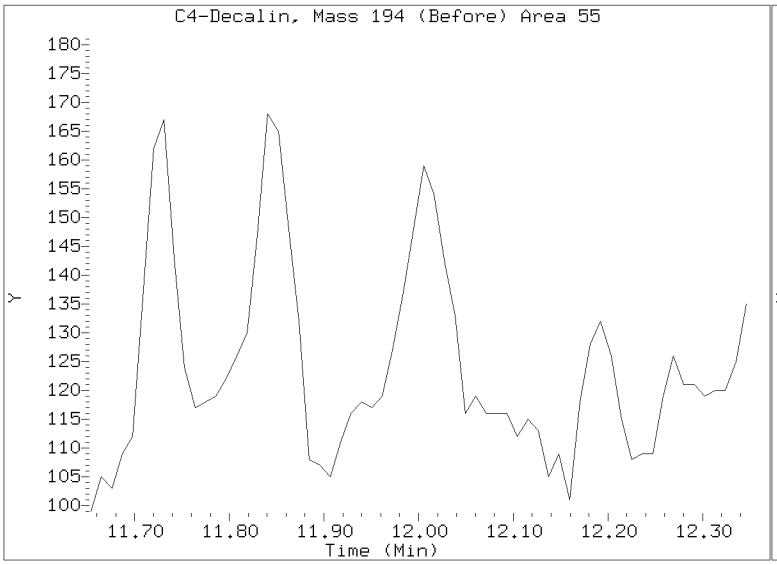
Datafile: //target/share/chem3/nt14.i/20201212.b/sim.b/NT1420121214.D
Injection Date: 12-DEC-2020 21:35
Lab ID:20K0073-01 Client ID:
Report Date: 12/15/2020 17:15

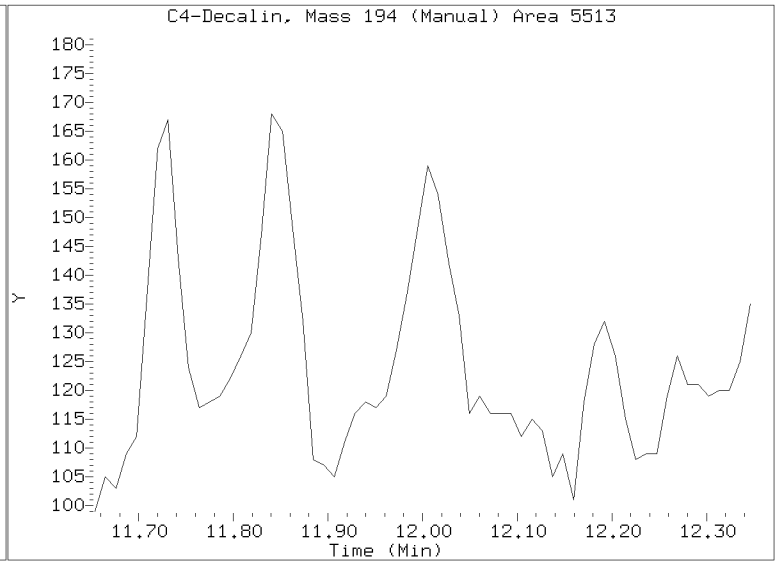












Quant Ion Manual Peak Adjustment Report

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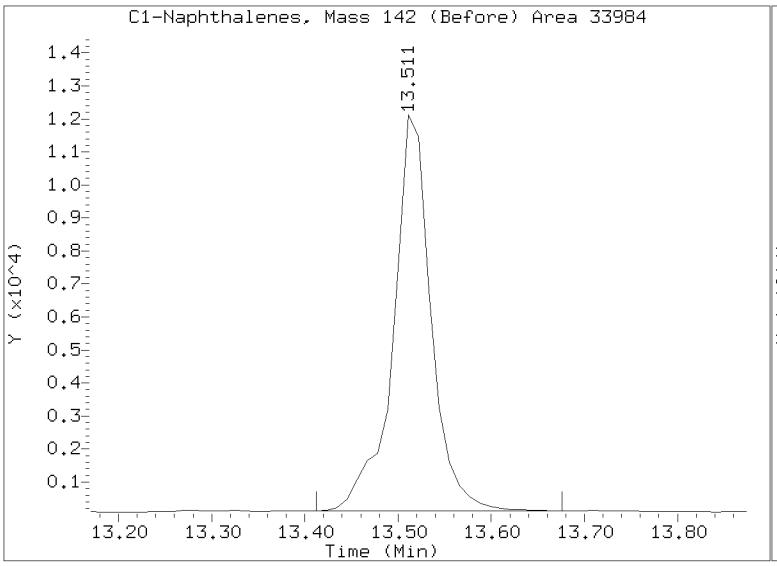

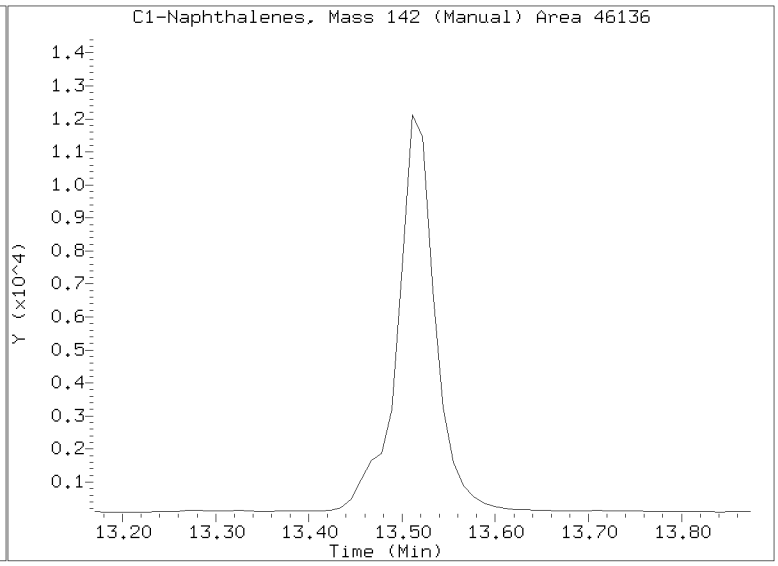

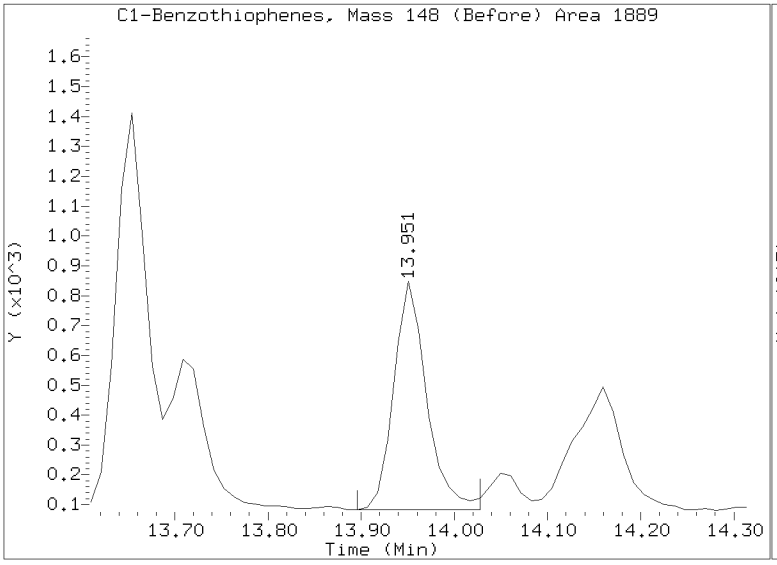

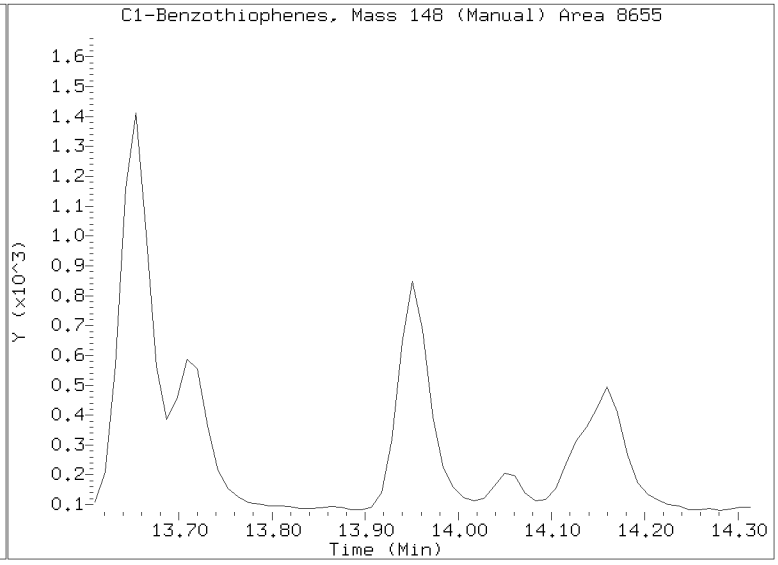

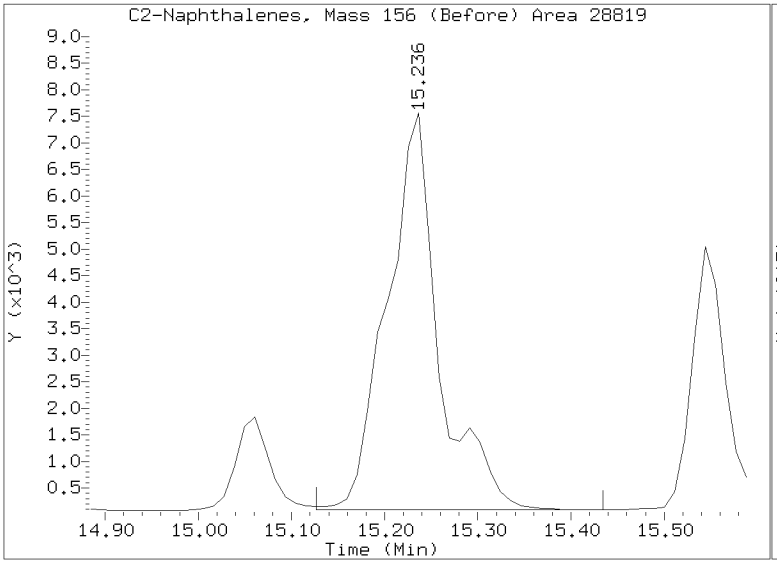

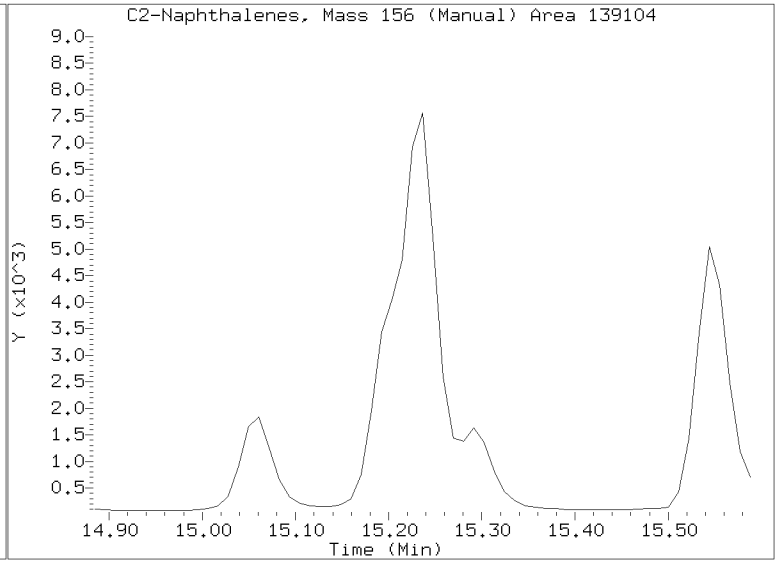

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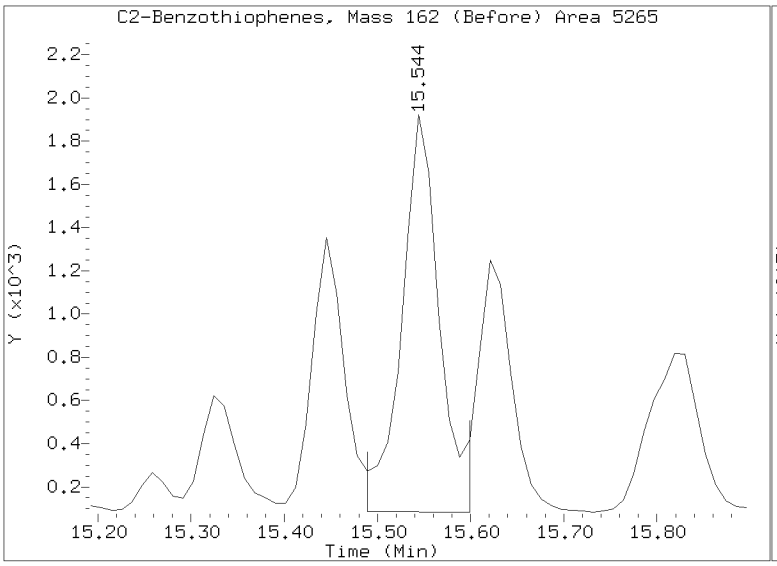

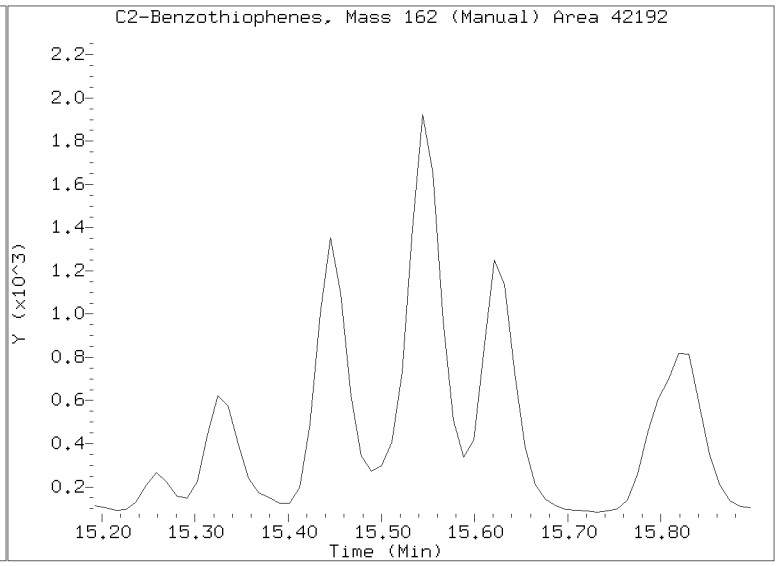

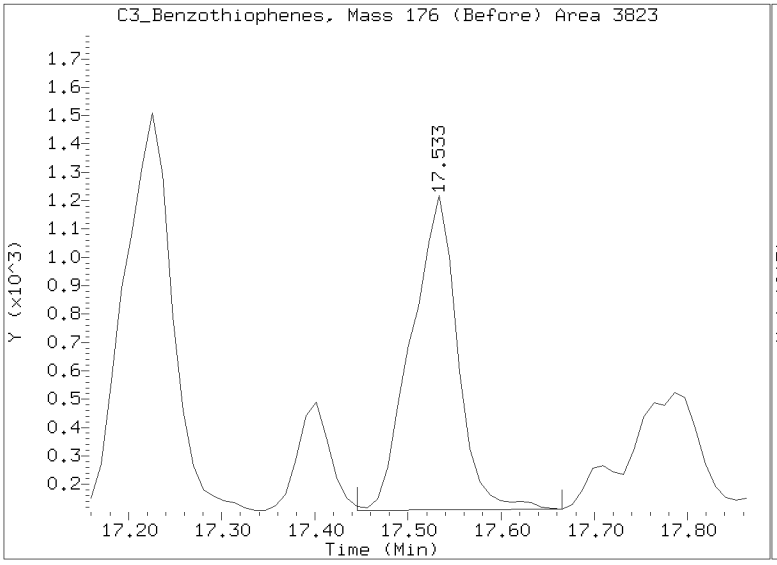

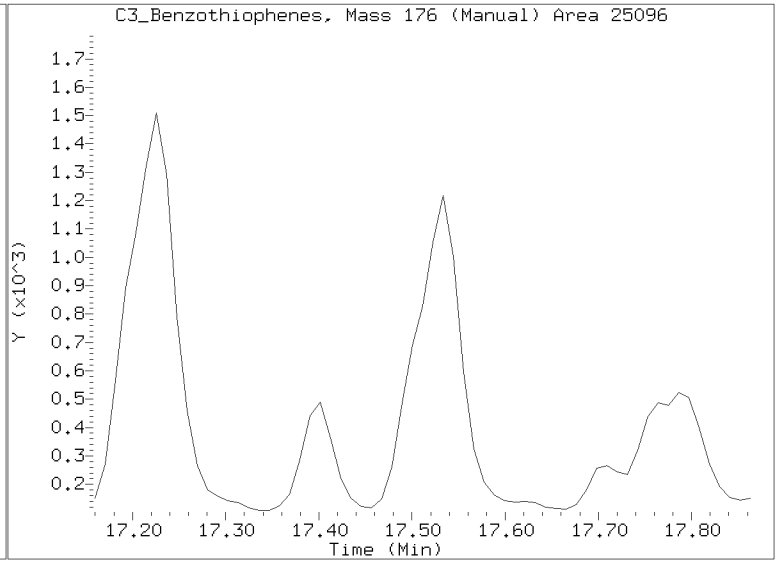

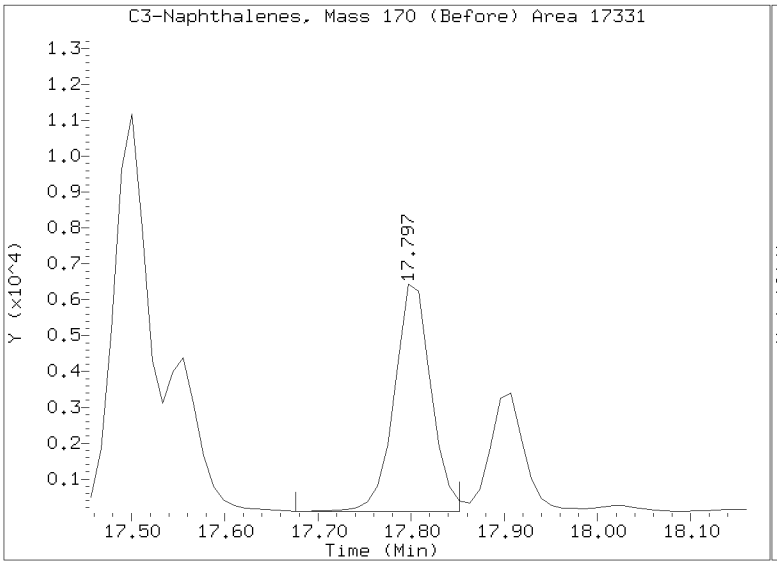

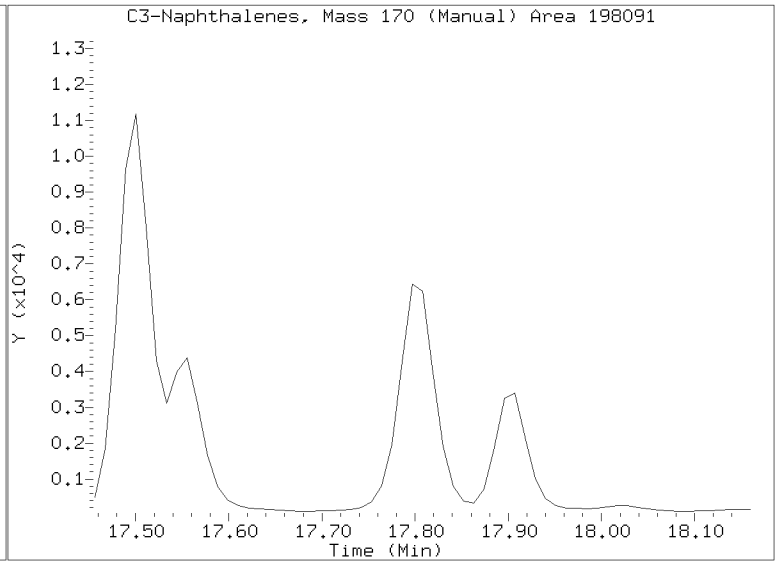

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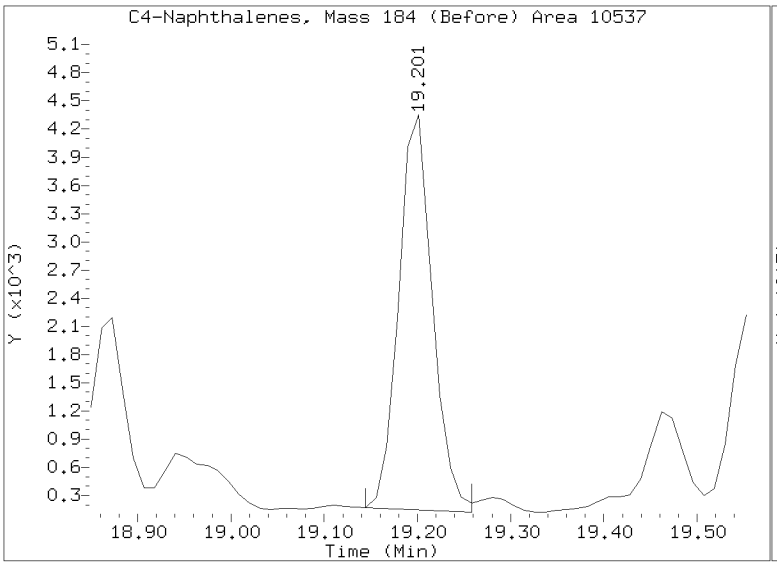

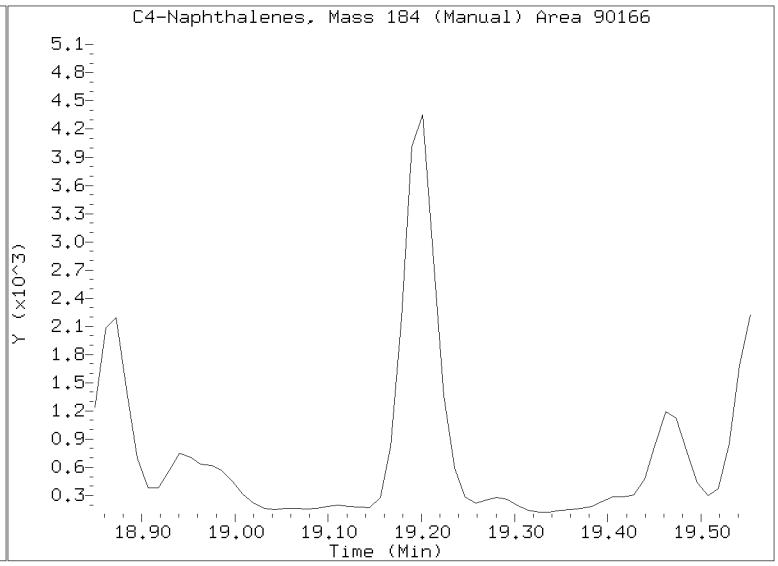

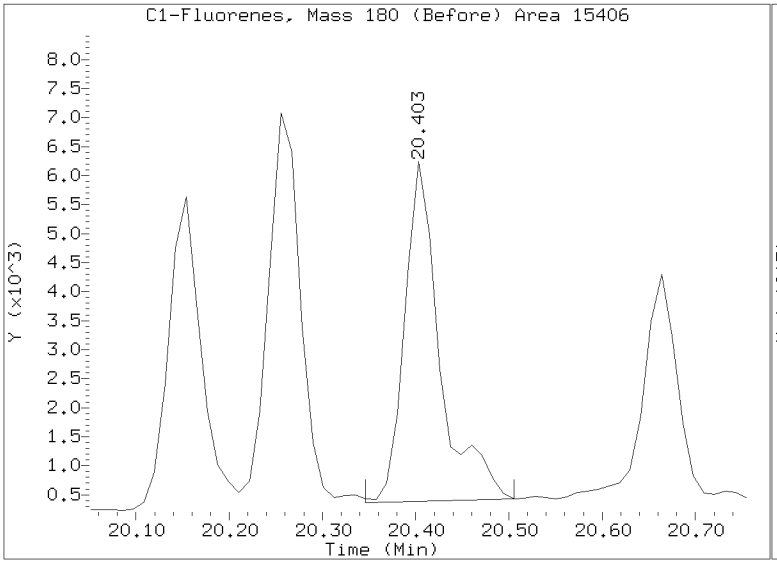

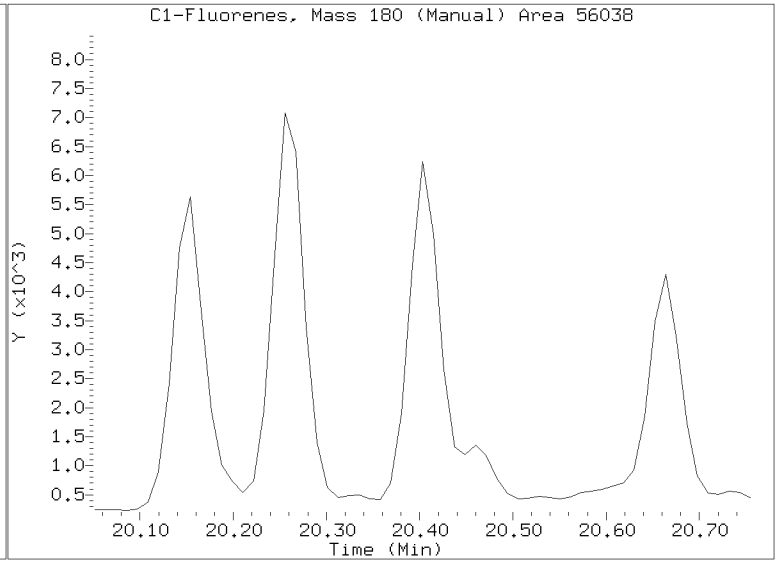

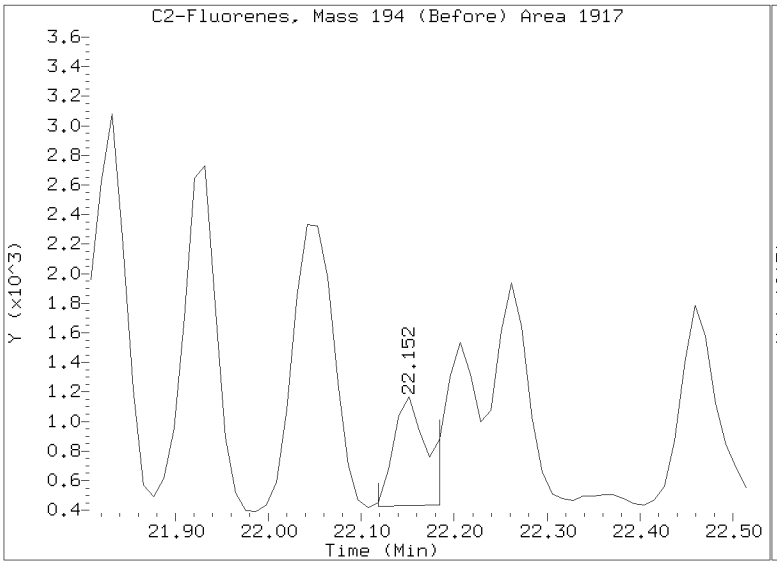

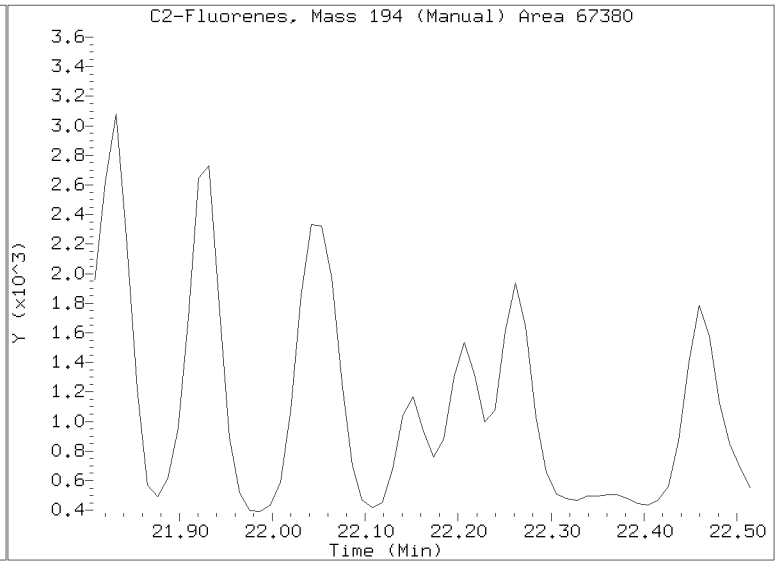

Quant Ion Manual Peak Adjustment Report

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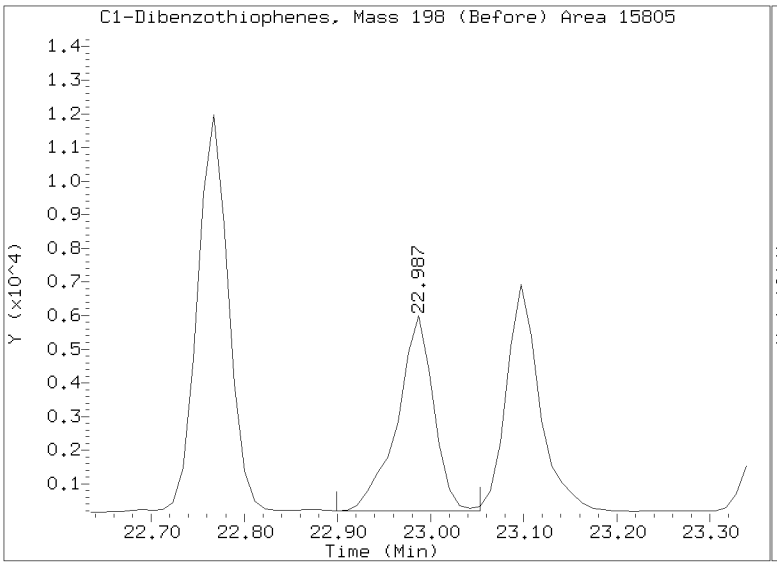

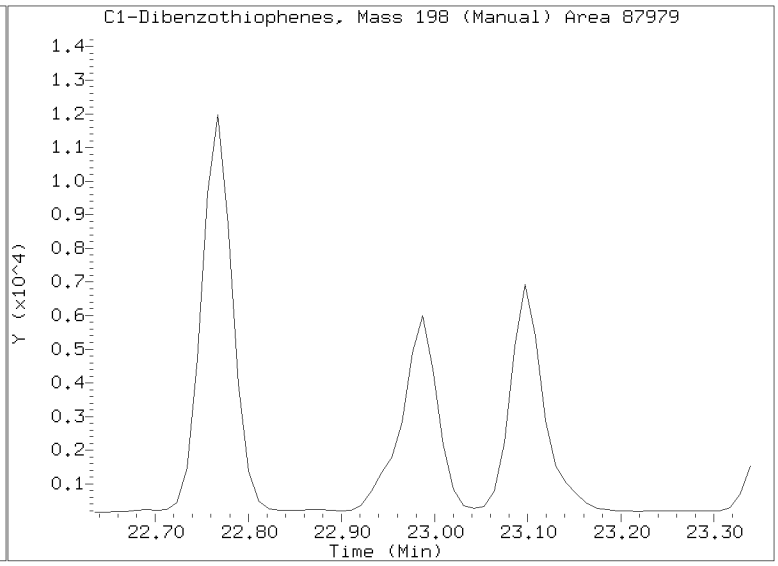

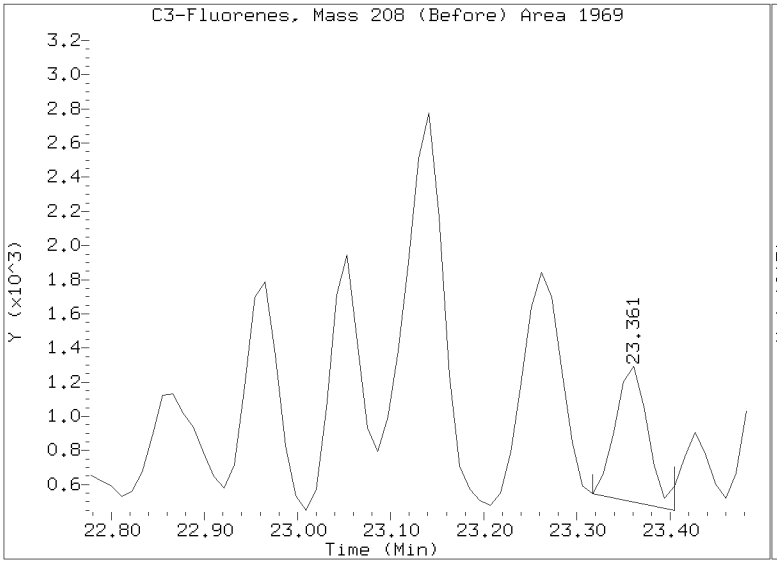

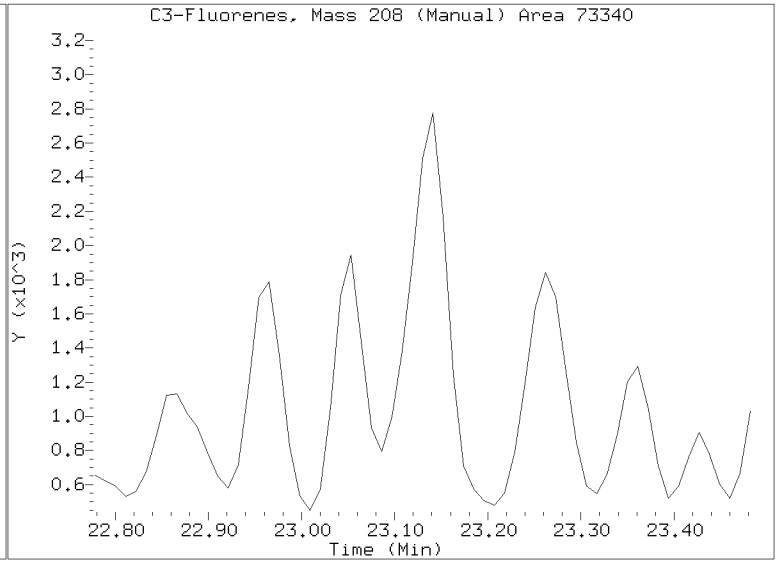

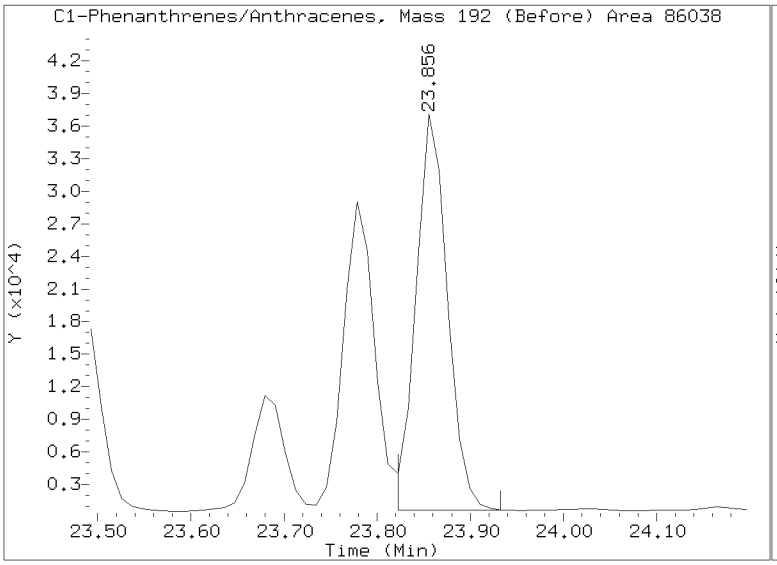

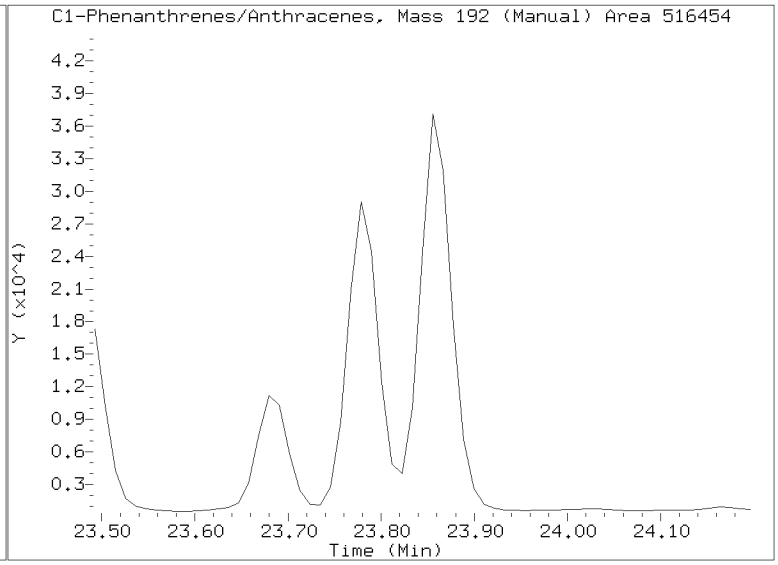

Quant Ion Manual Peak Adjustment Report

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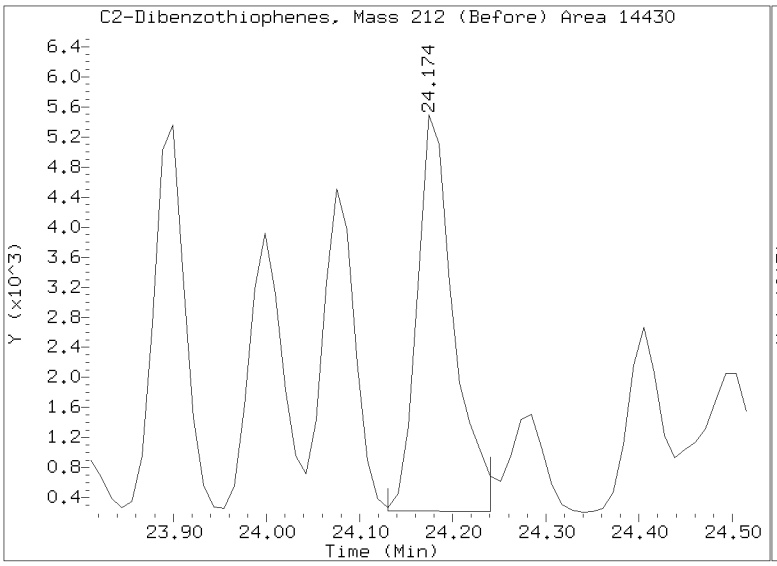

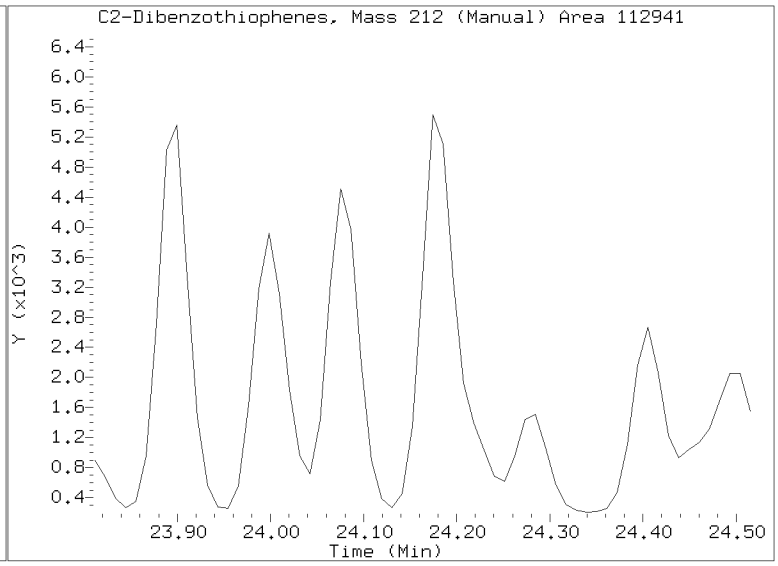

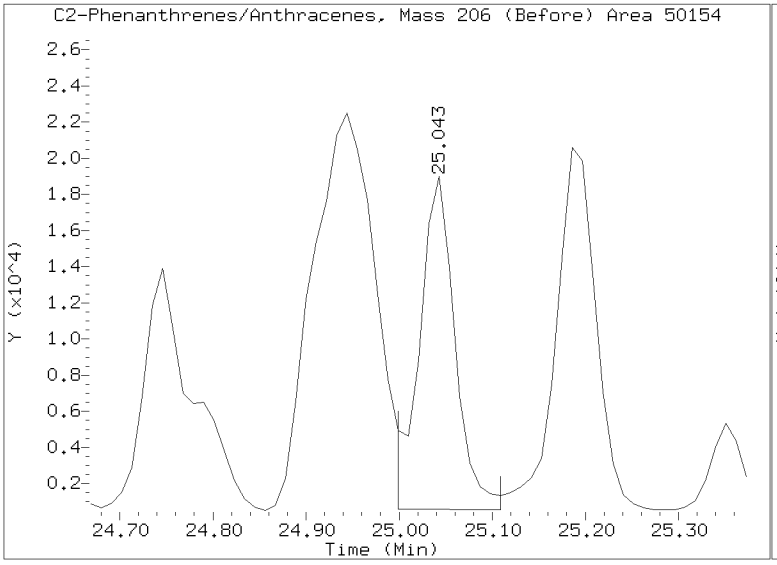

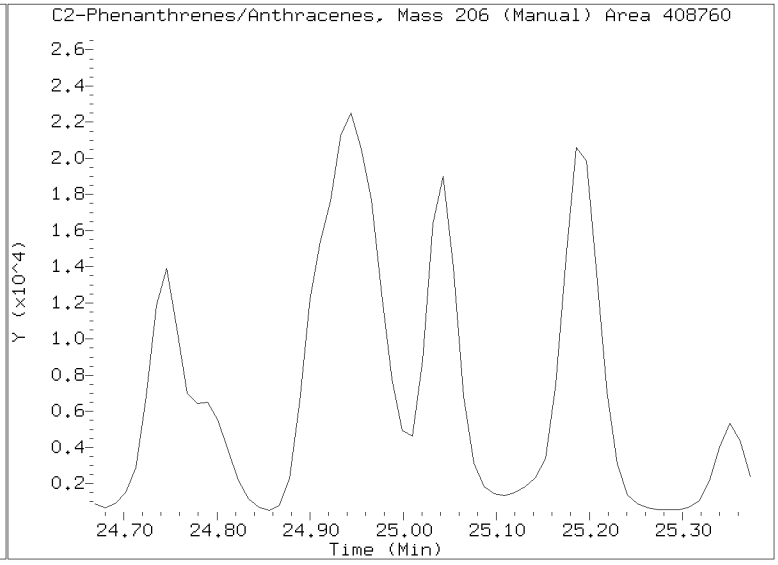

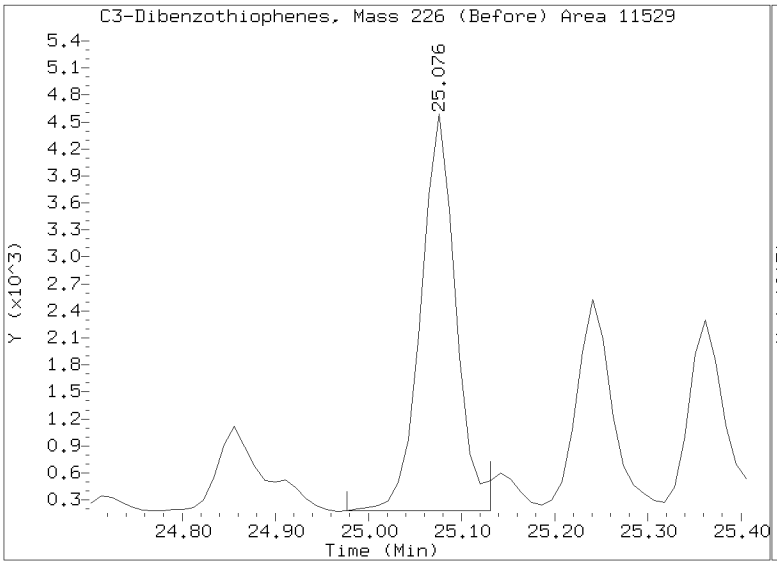

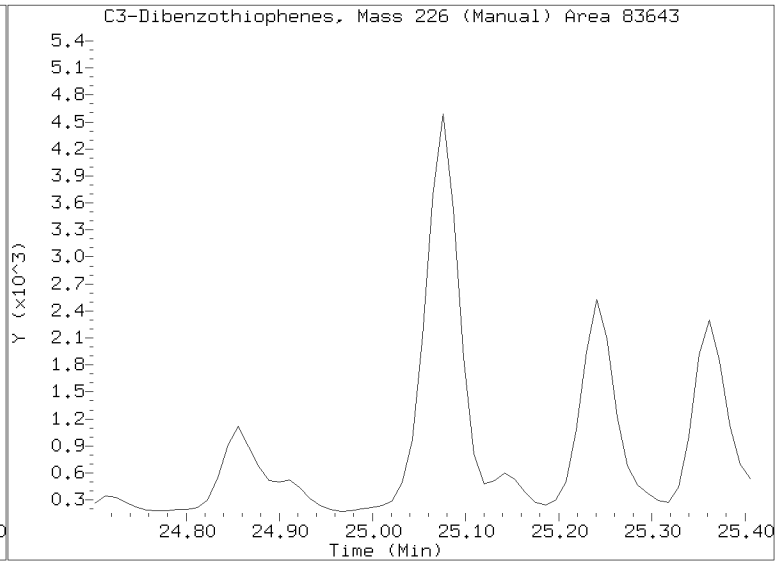

Quant Ion Manual Peak Adjustment Report

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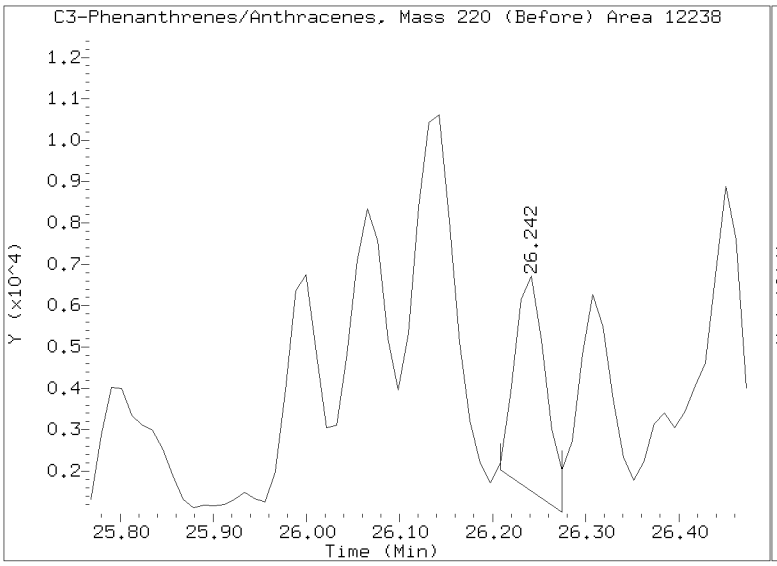

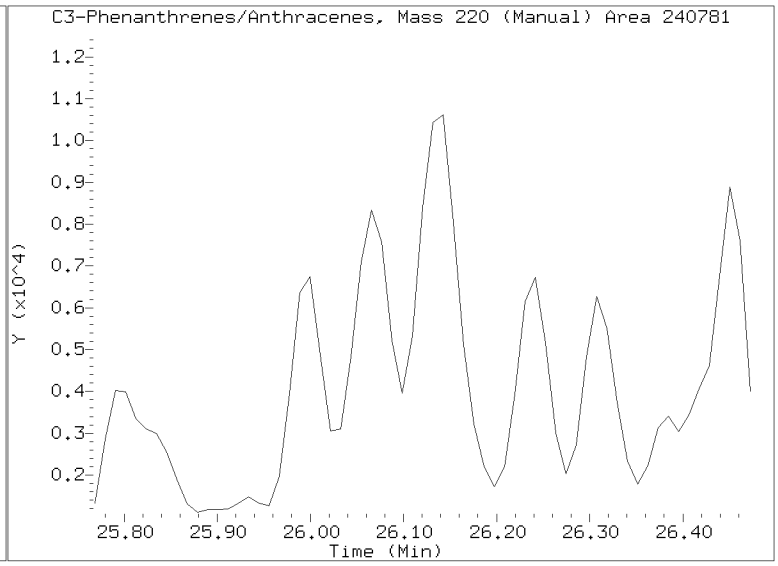

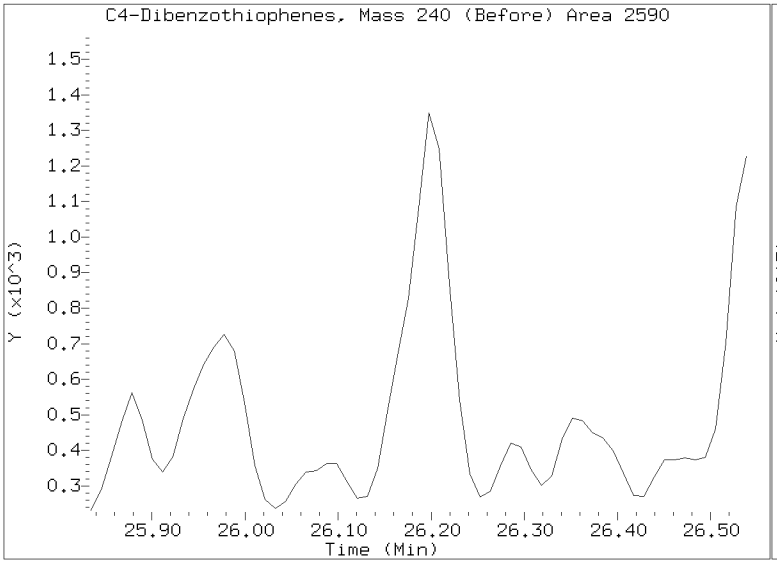

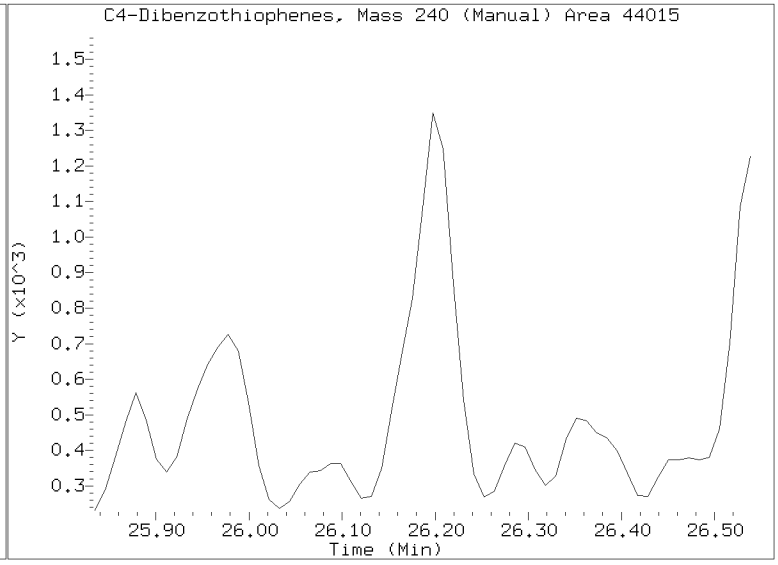

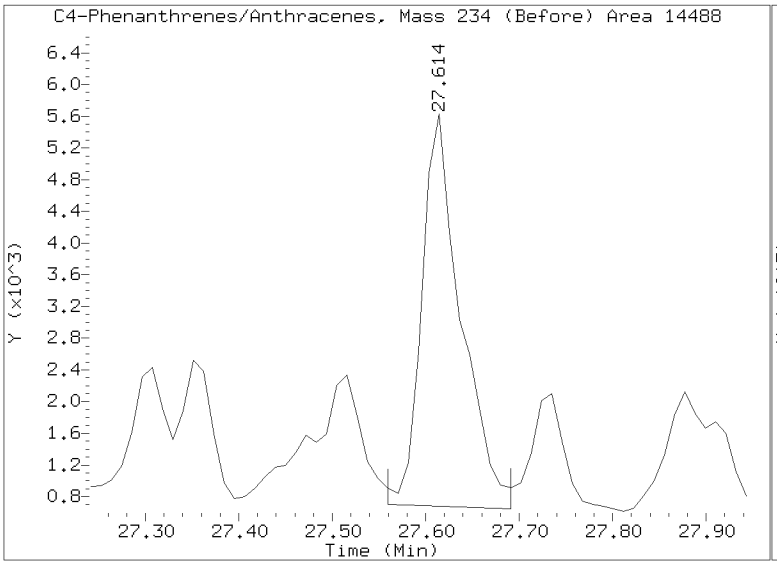

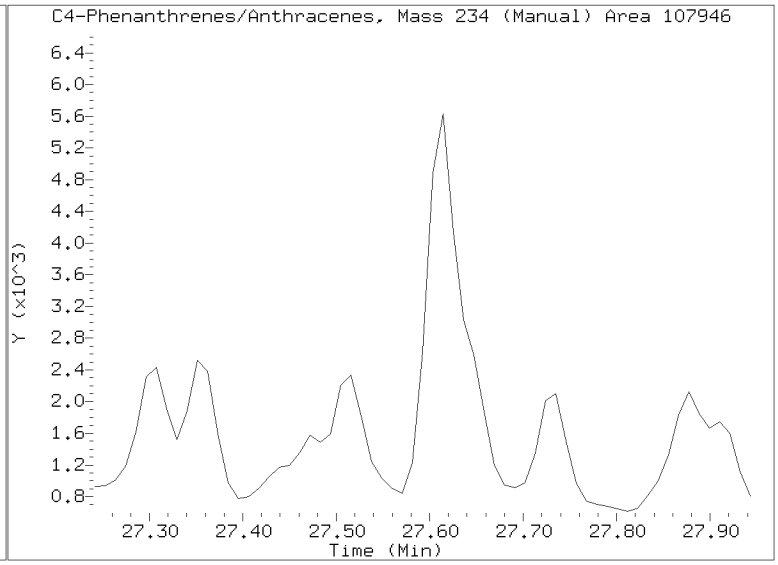

Quant Ion Manual Peak Adjustment Report

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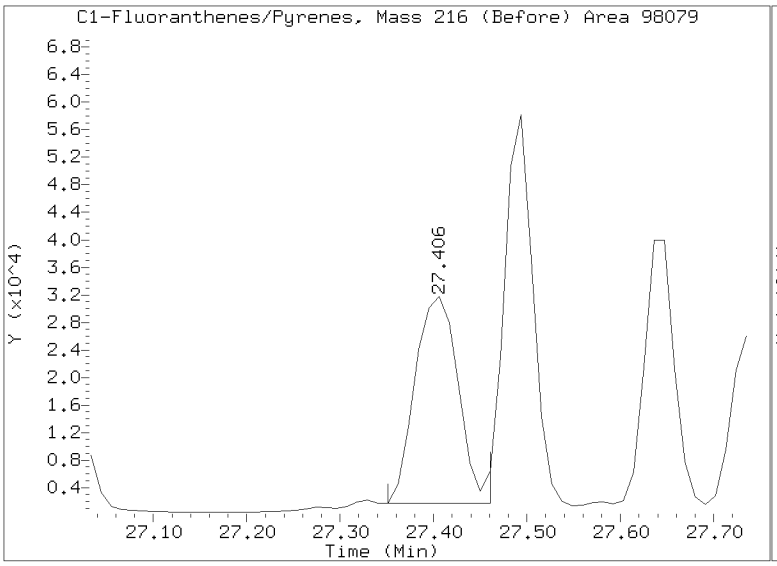
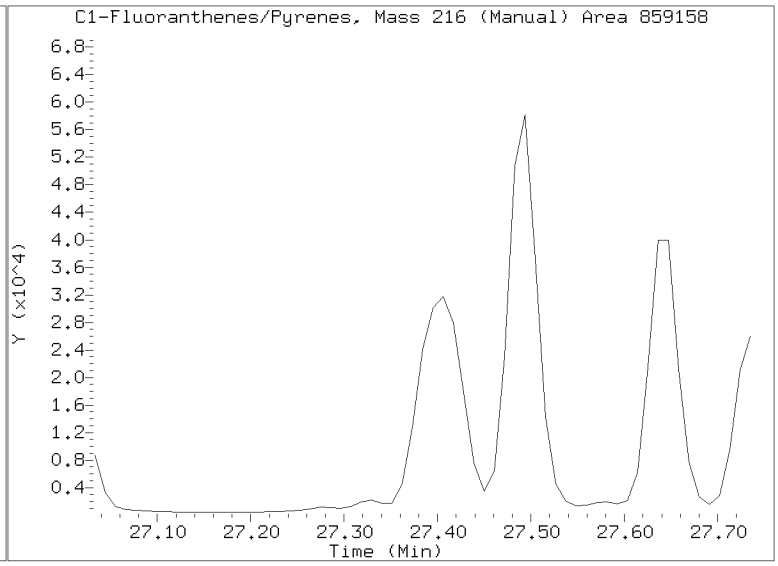
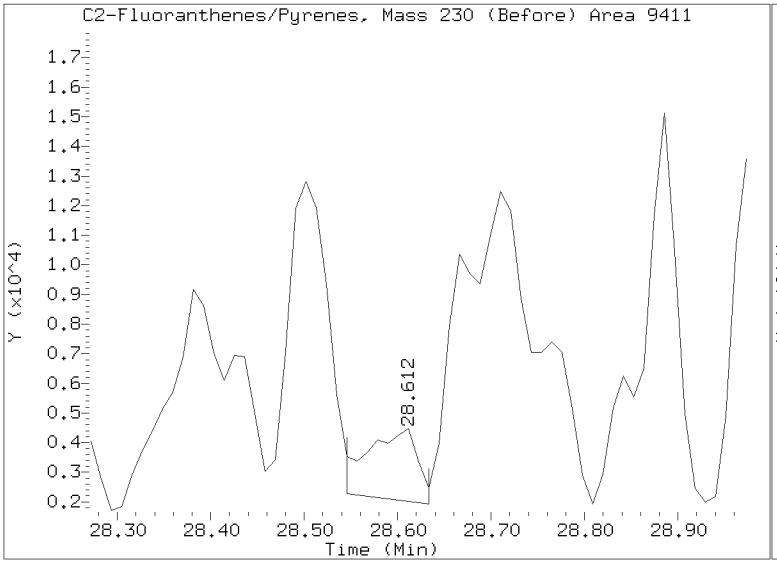
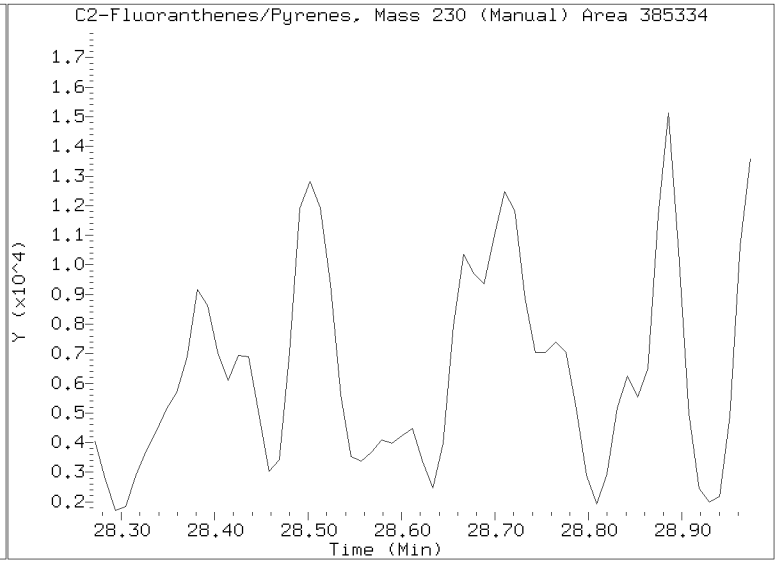
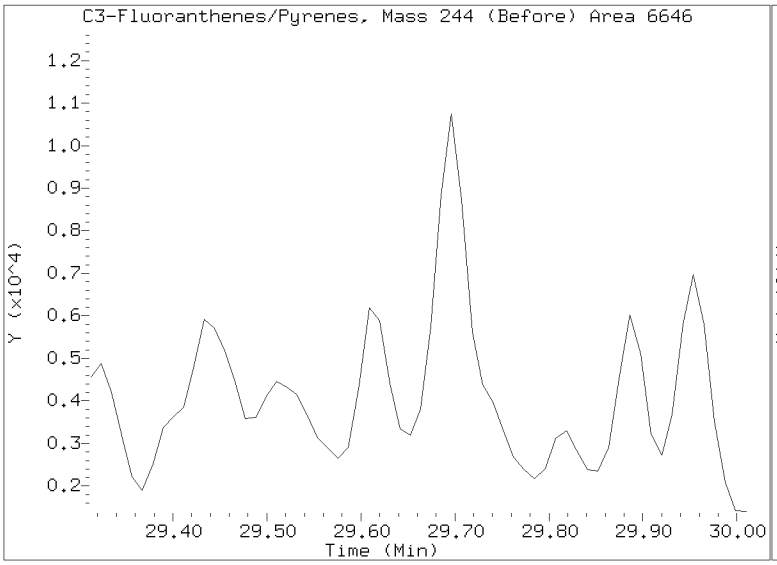
Injection Date: 12-DEC-2020 21:35
Lab ID:20K0073-01 Client ID:
Report Date: 12/15/2020 17:15

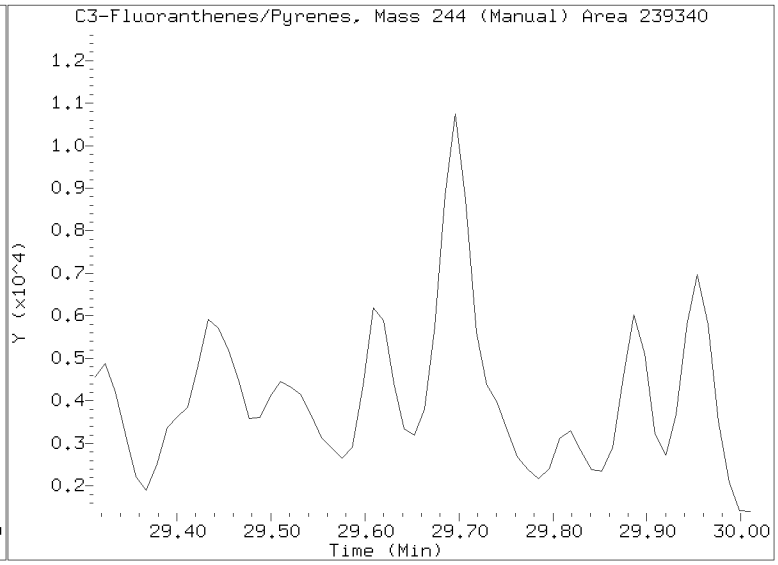












Quant Ion Manual Peak Adjustment Report

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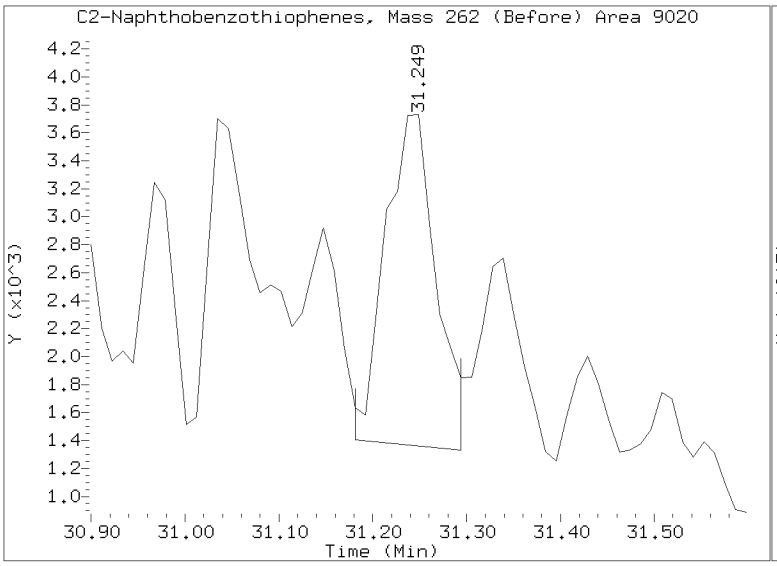

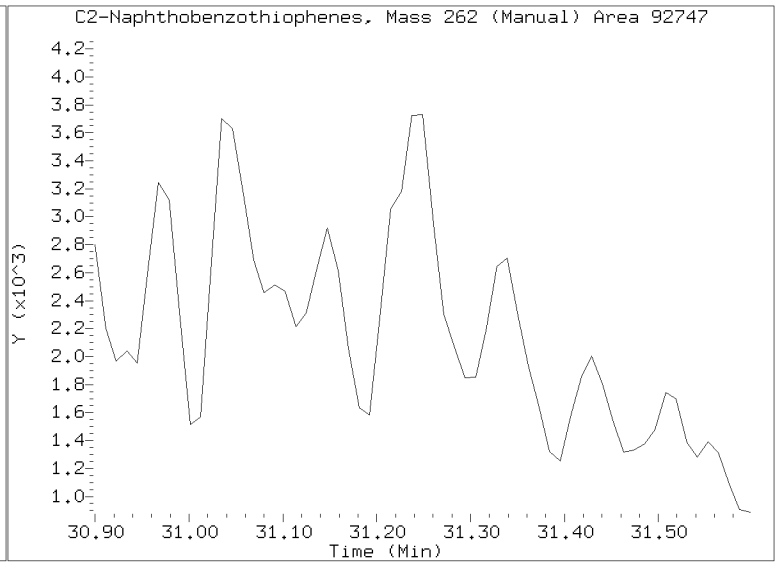

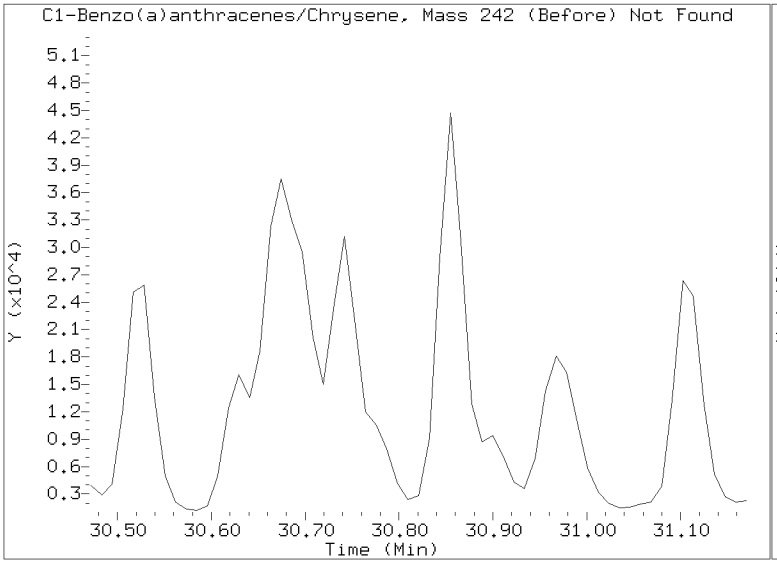

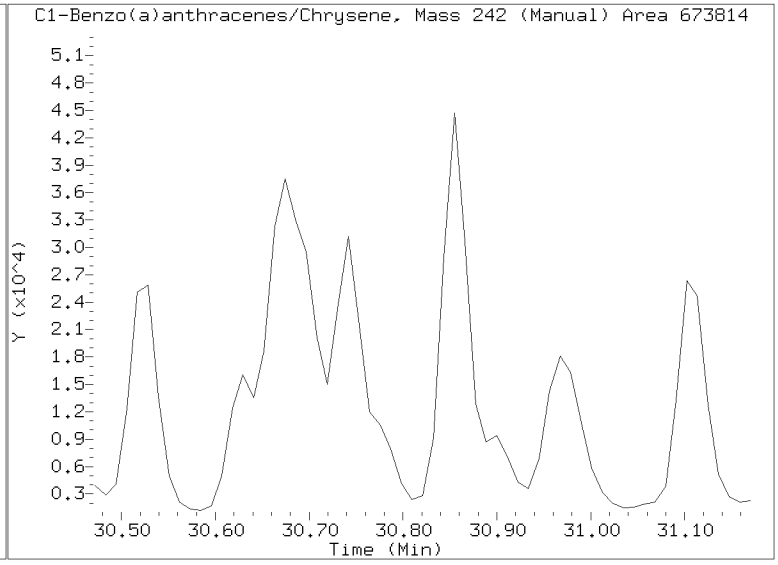

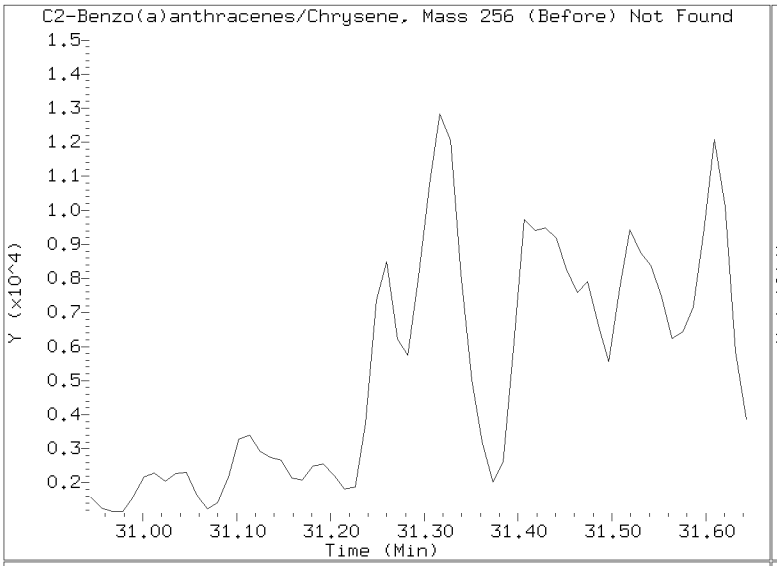

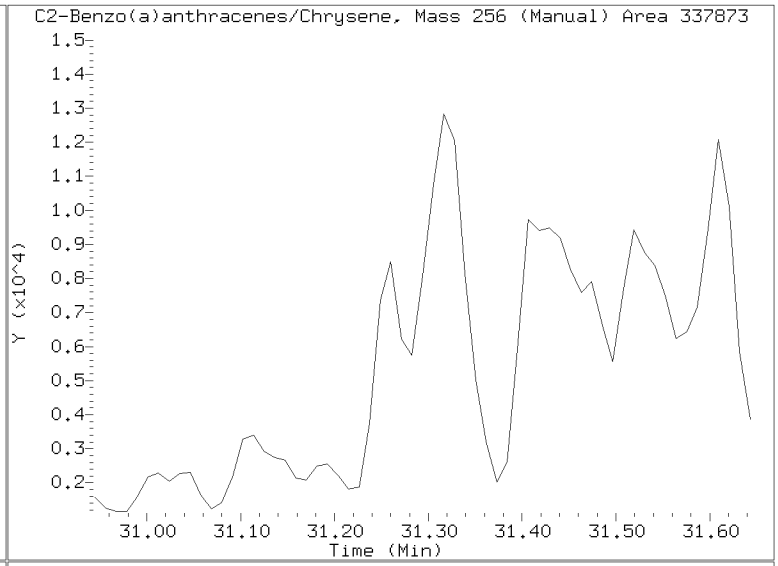

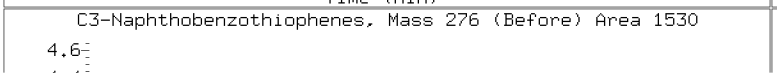

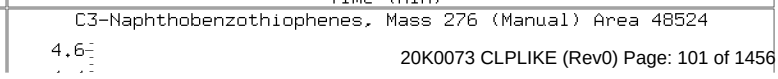

SIM ALKYL PNA RANGE ION WINDOWS - NT1420121214.D

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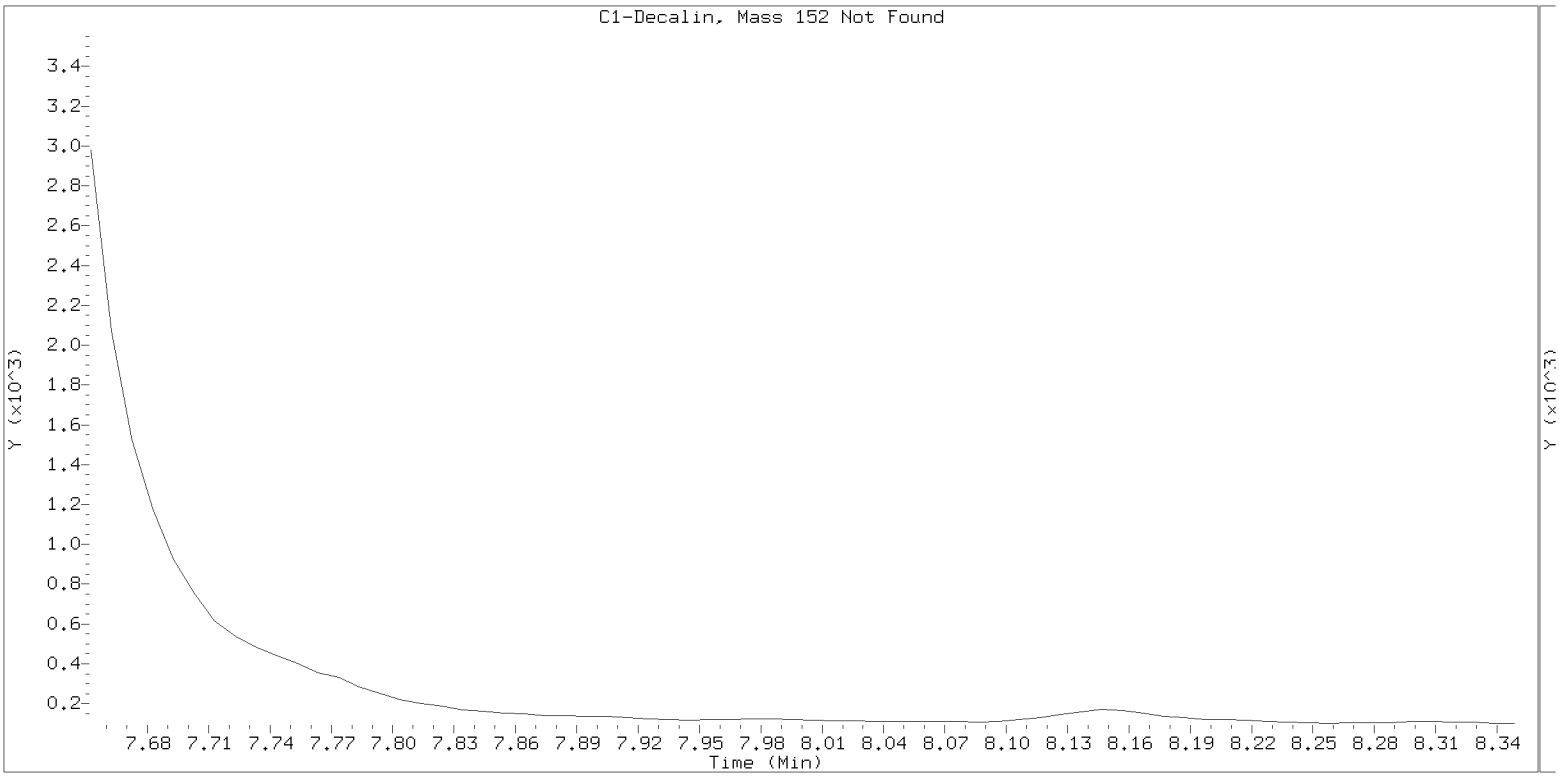

SIM ALKYL PNA RANGE ION WINDOWS - NT1420121214.D

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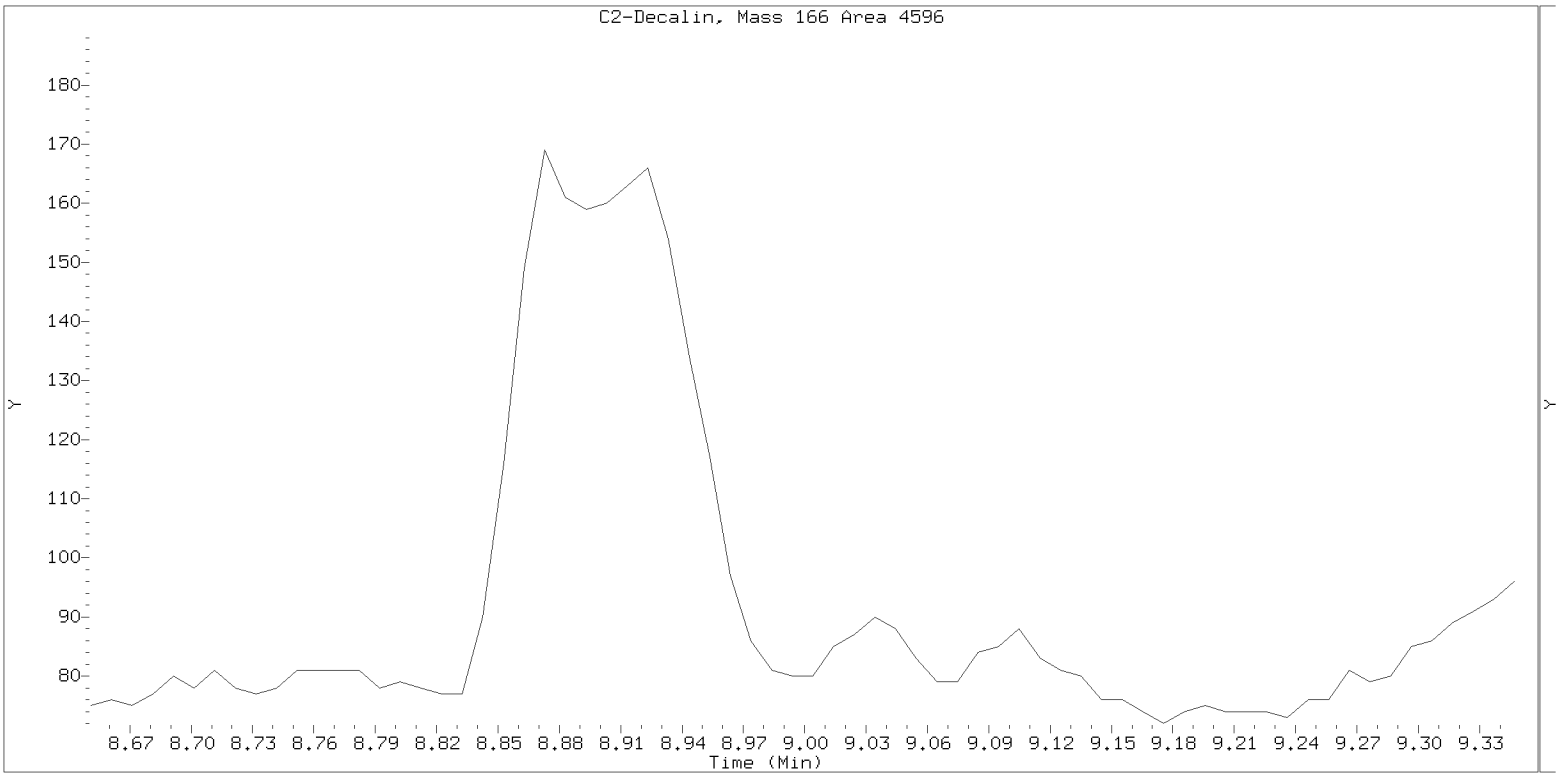

SIM ALKYL PNA RANGE ION WINDOWS - NT1420121214.D

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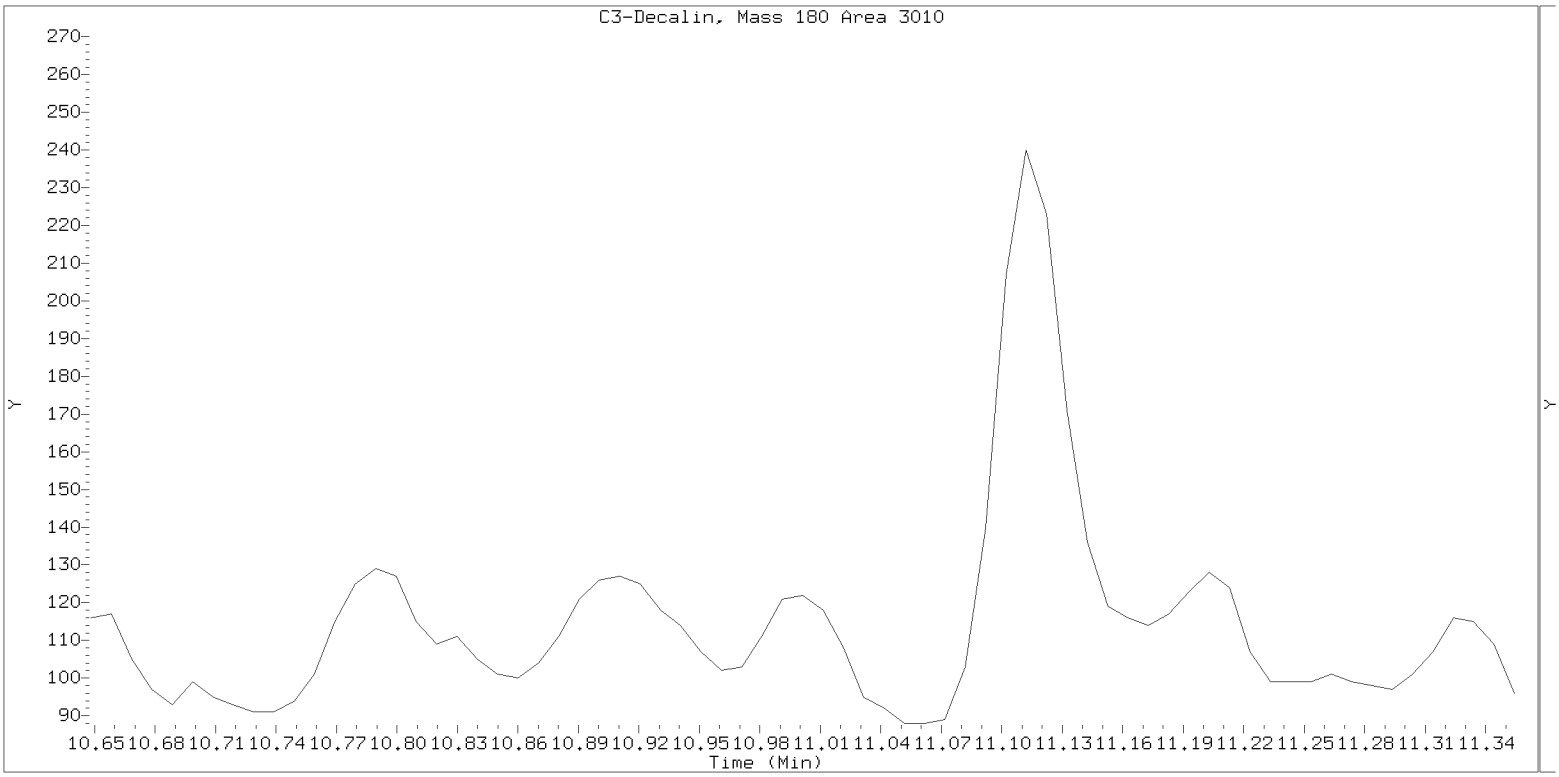

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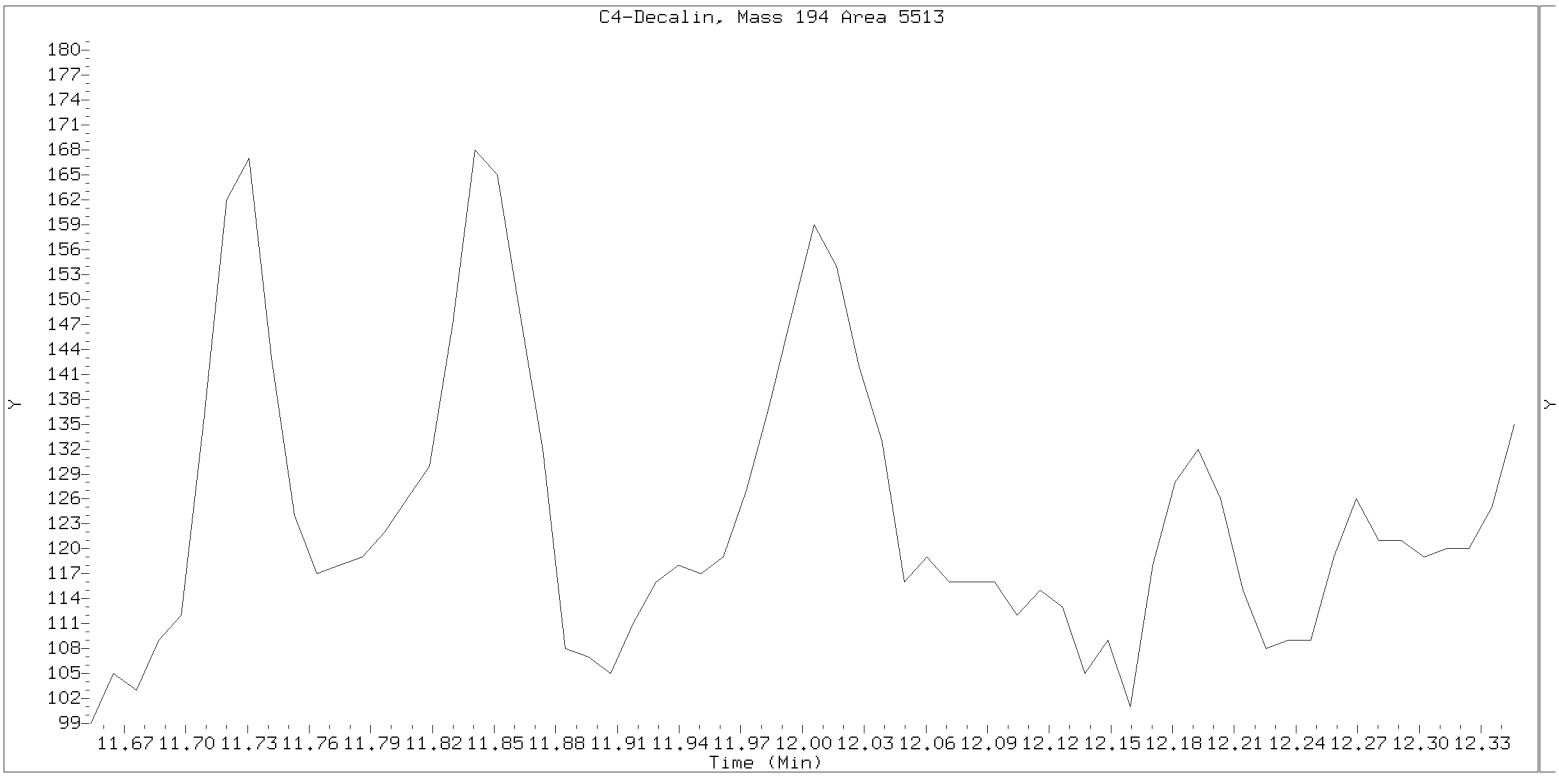

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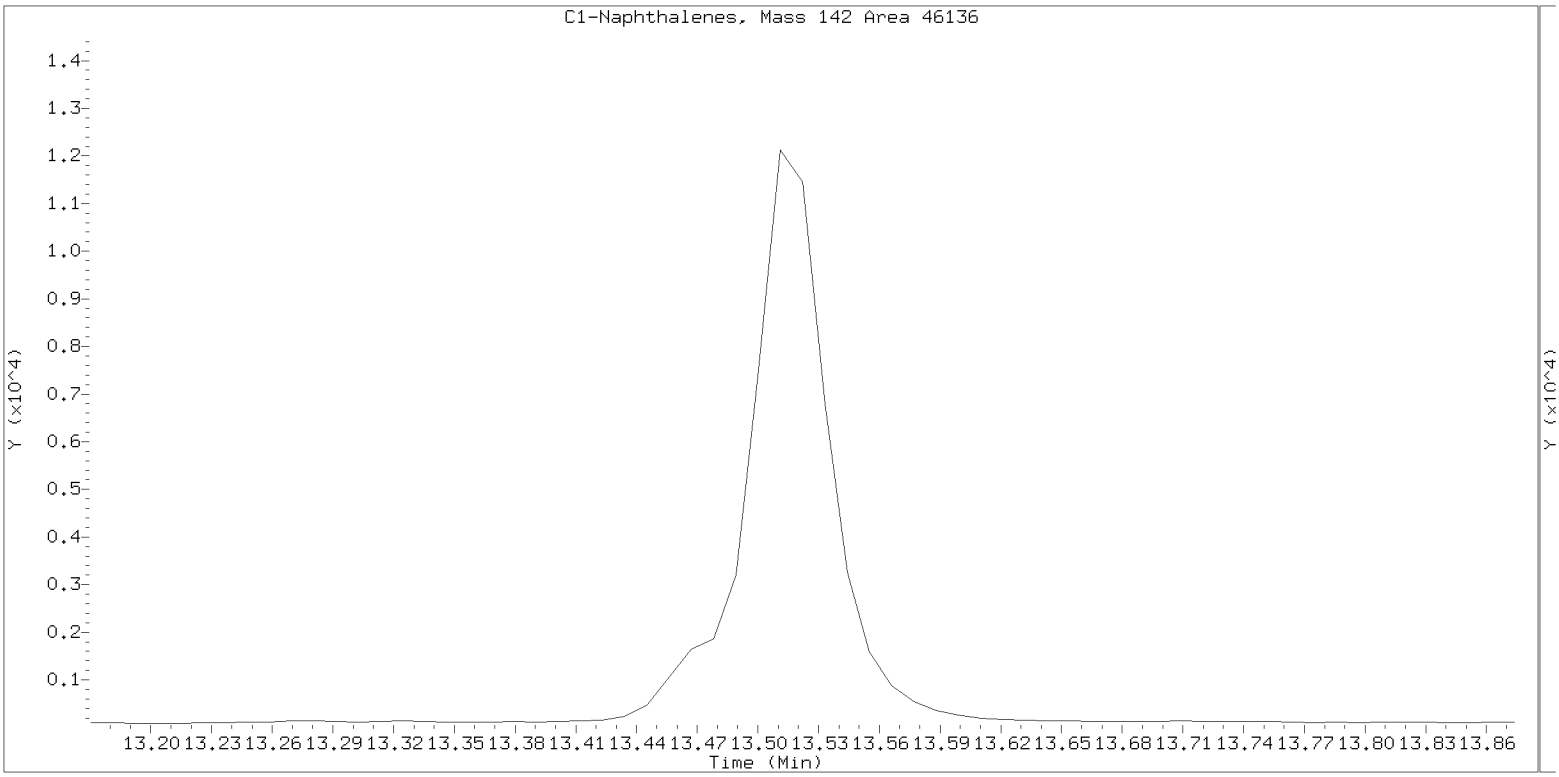

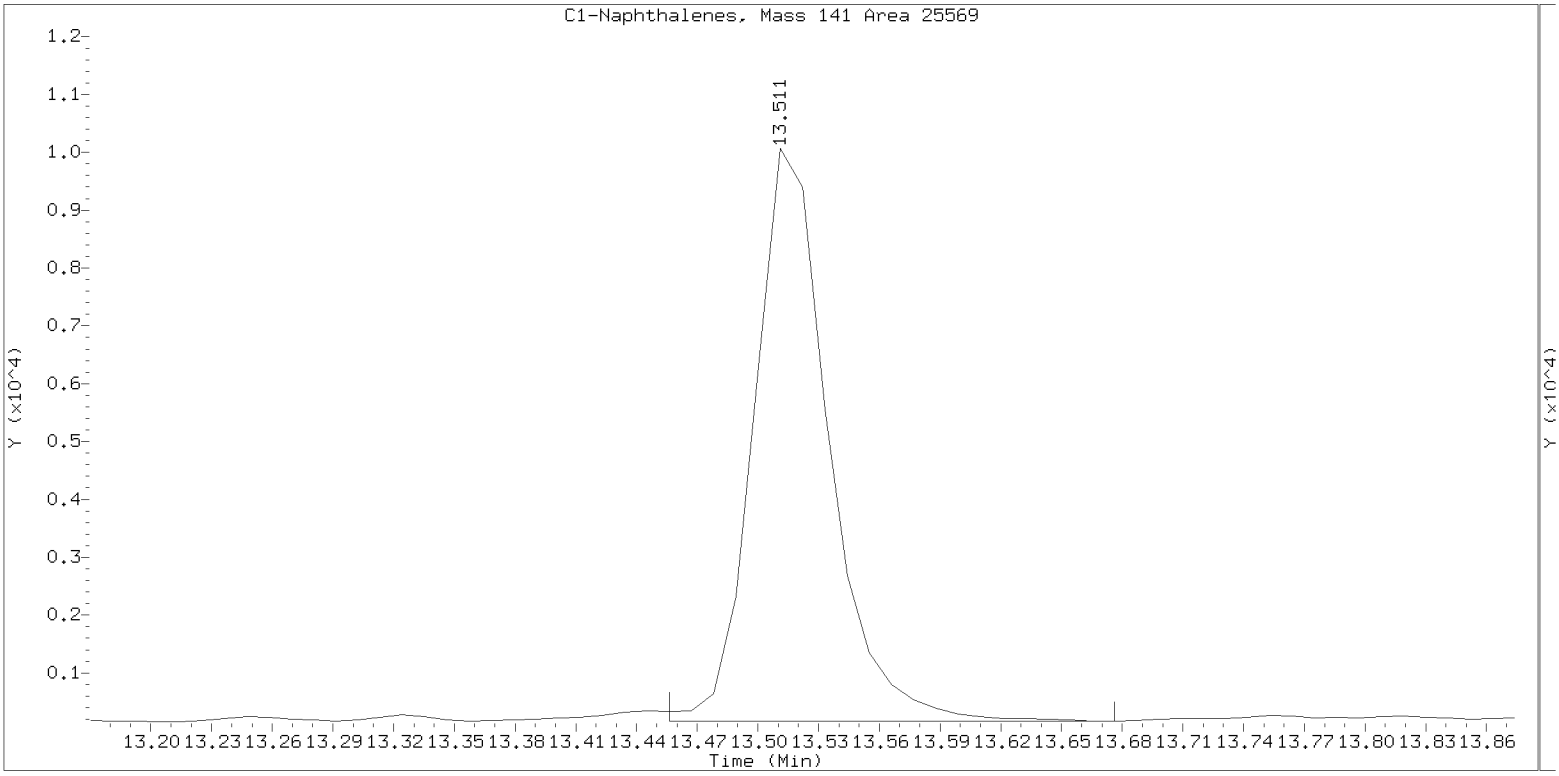

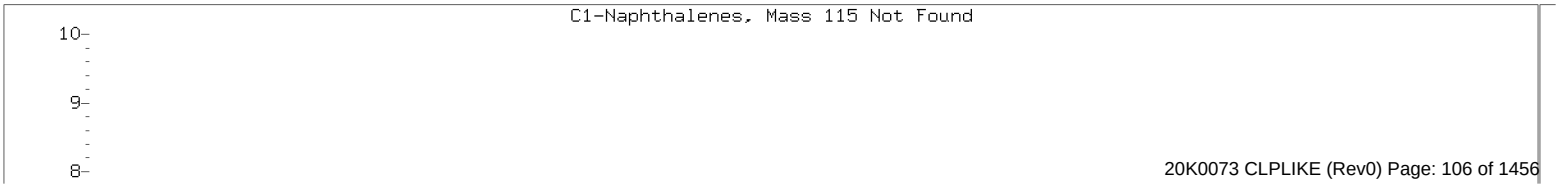

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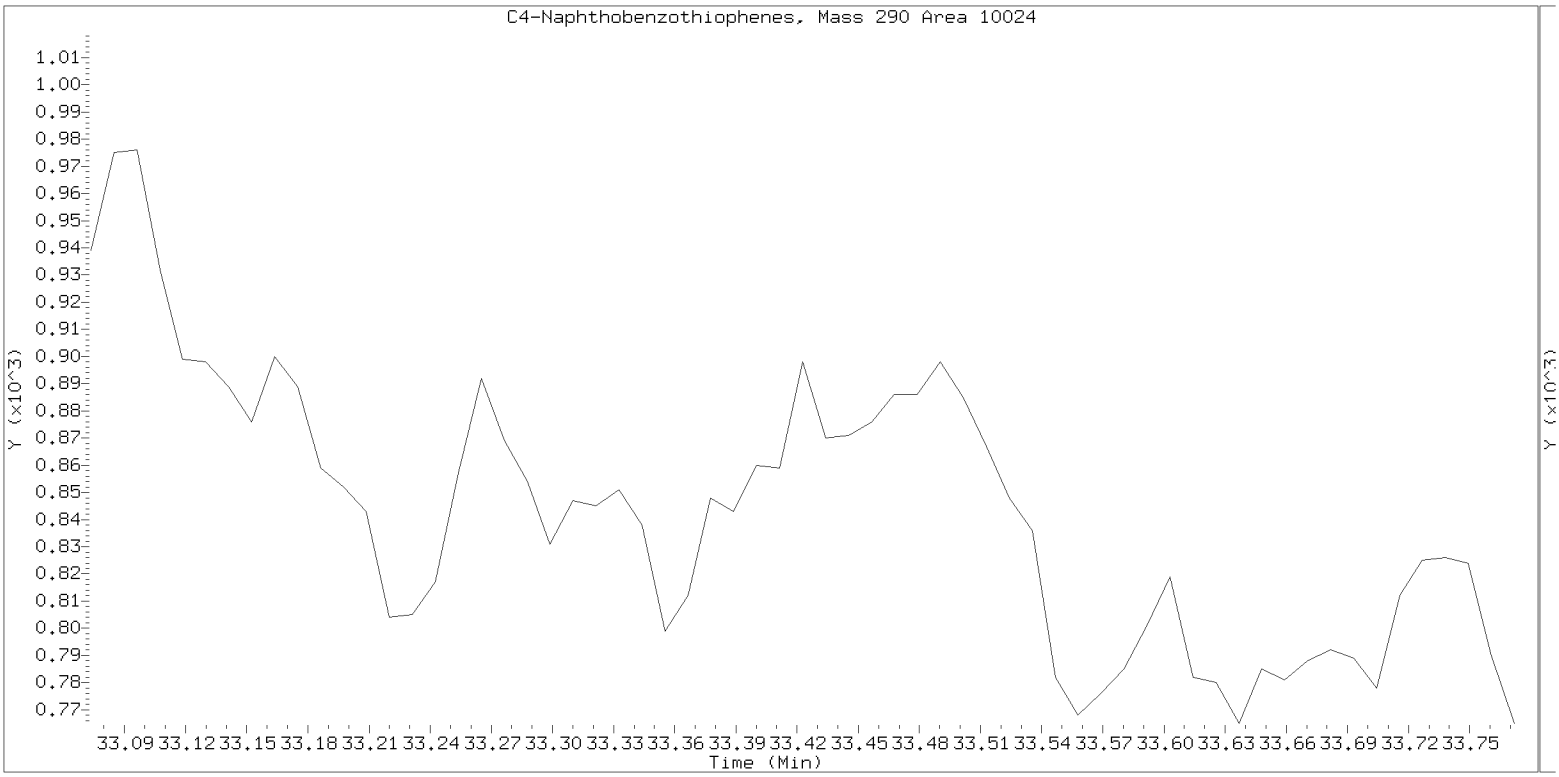

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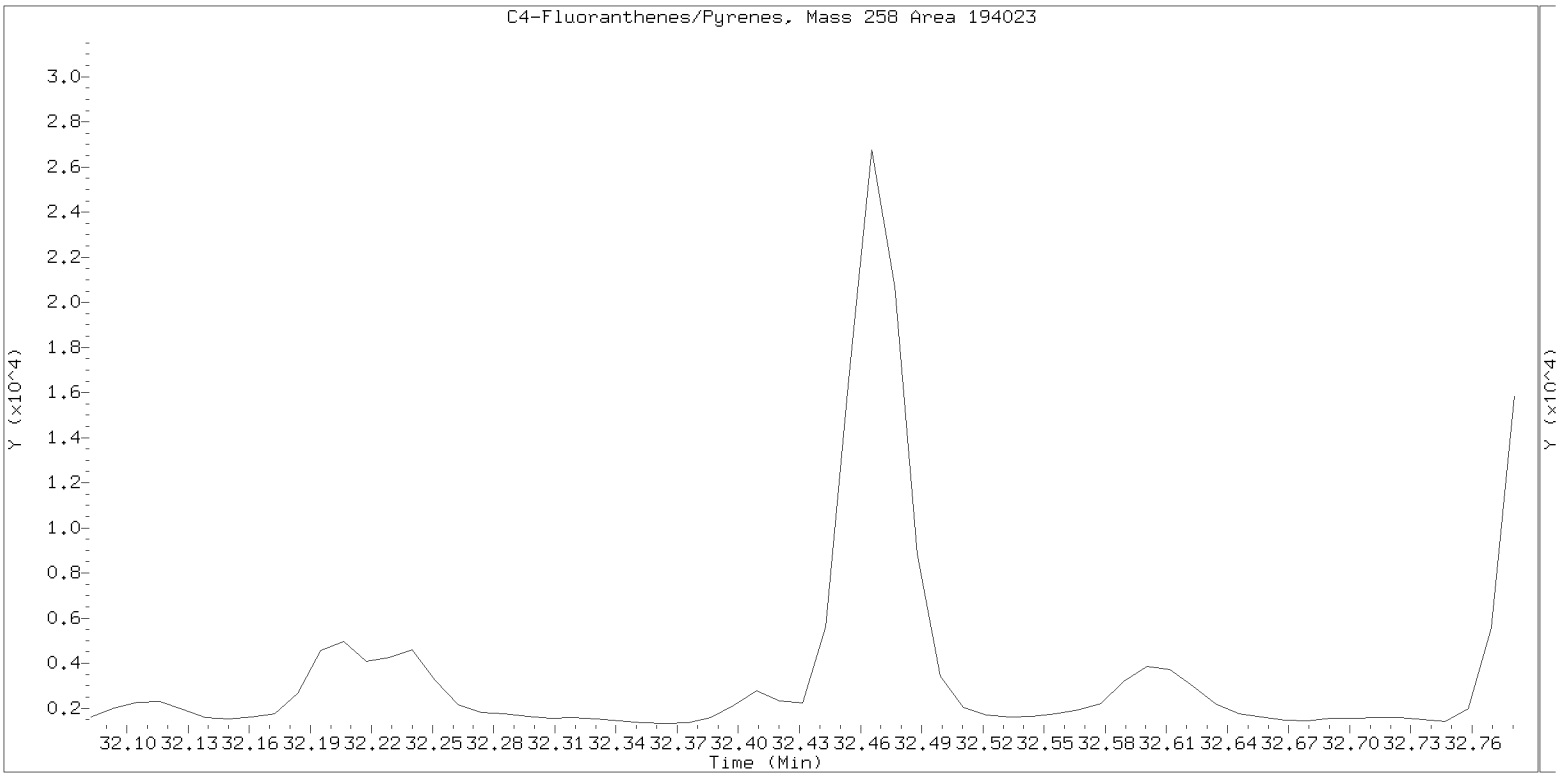

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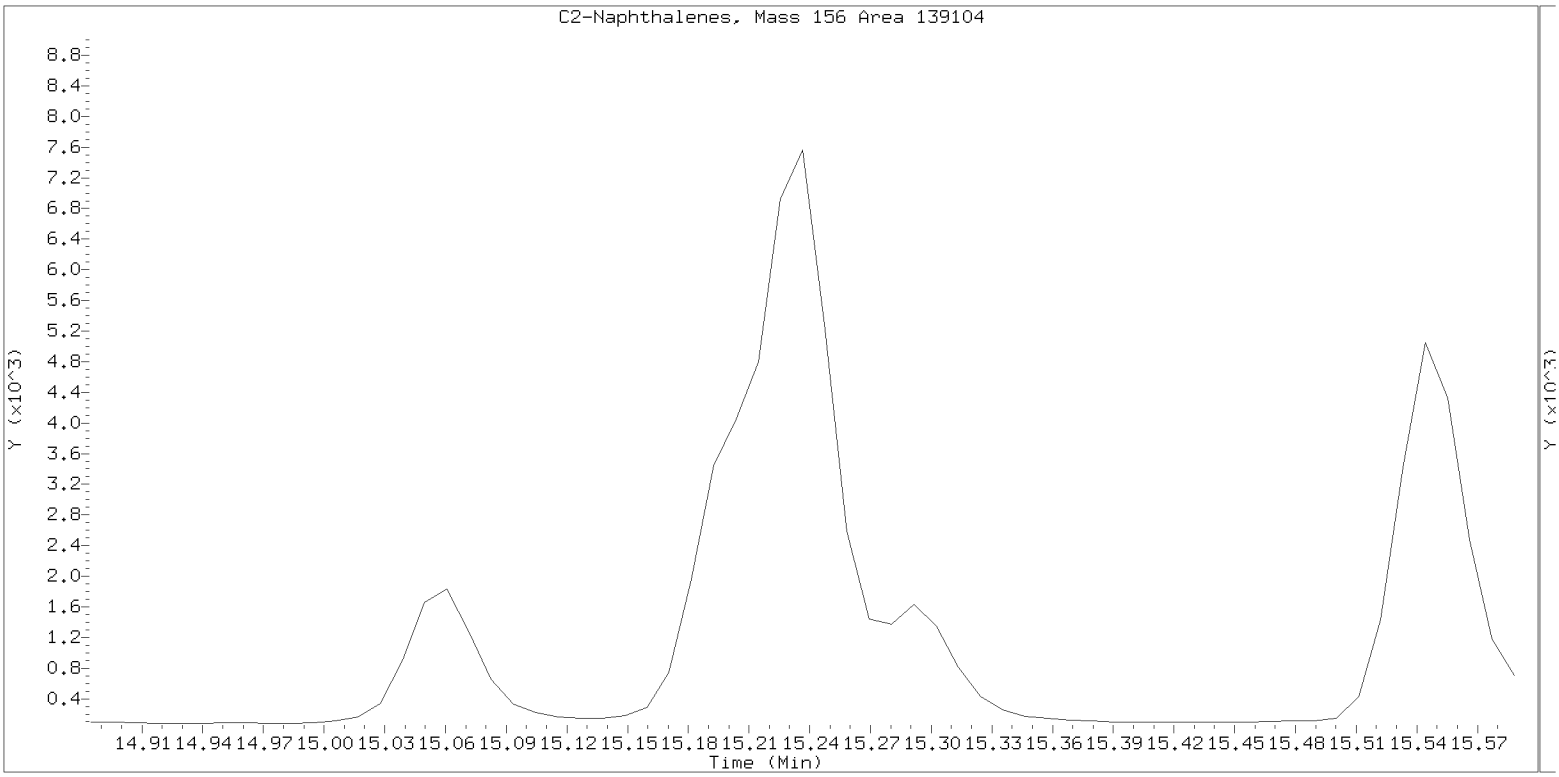

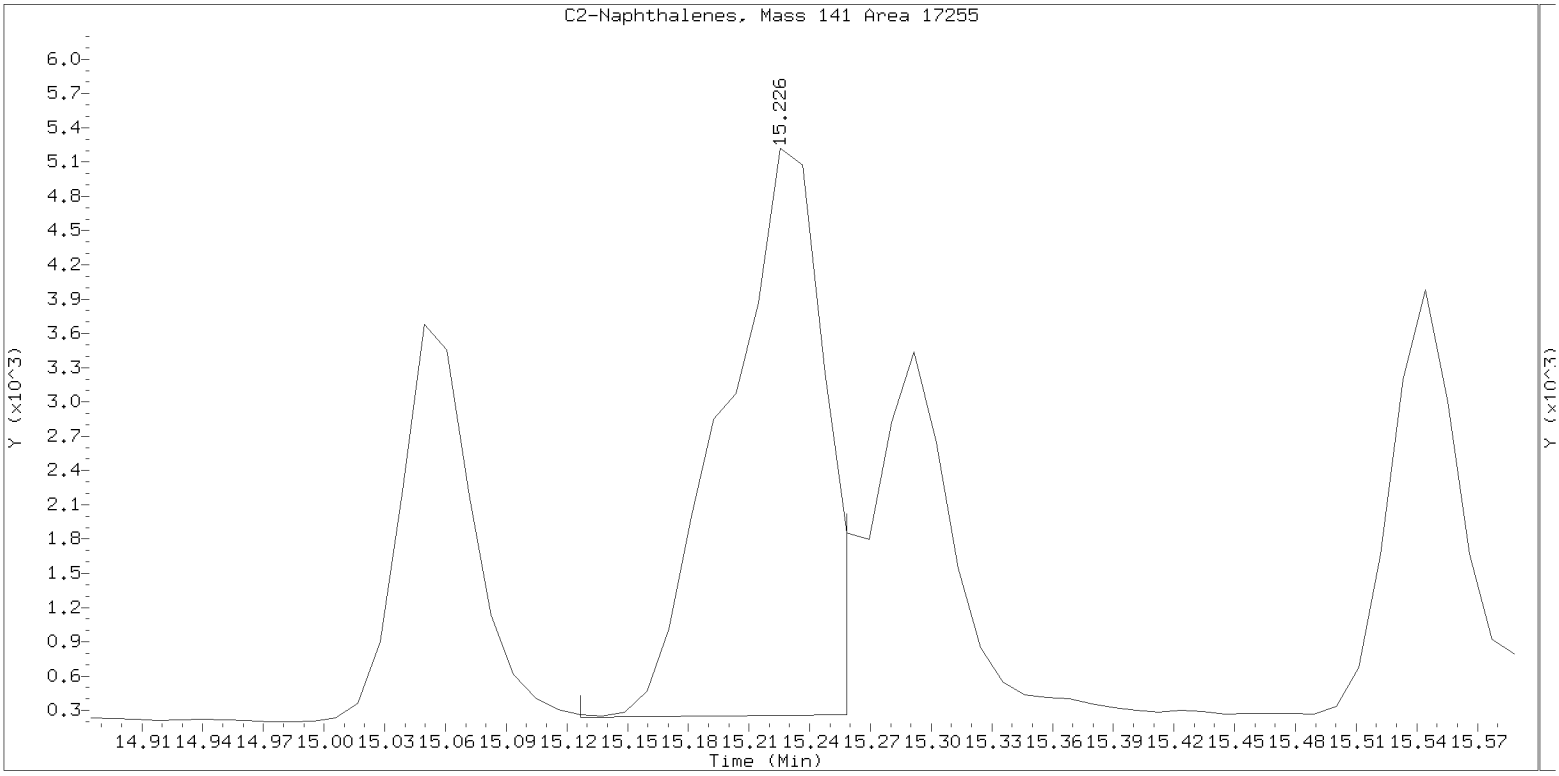

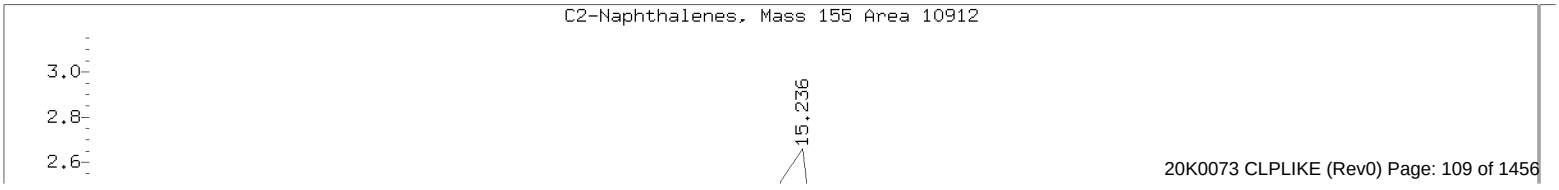

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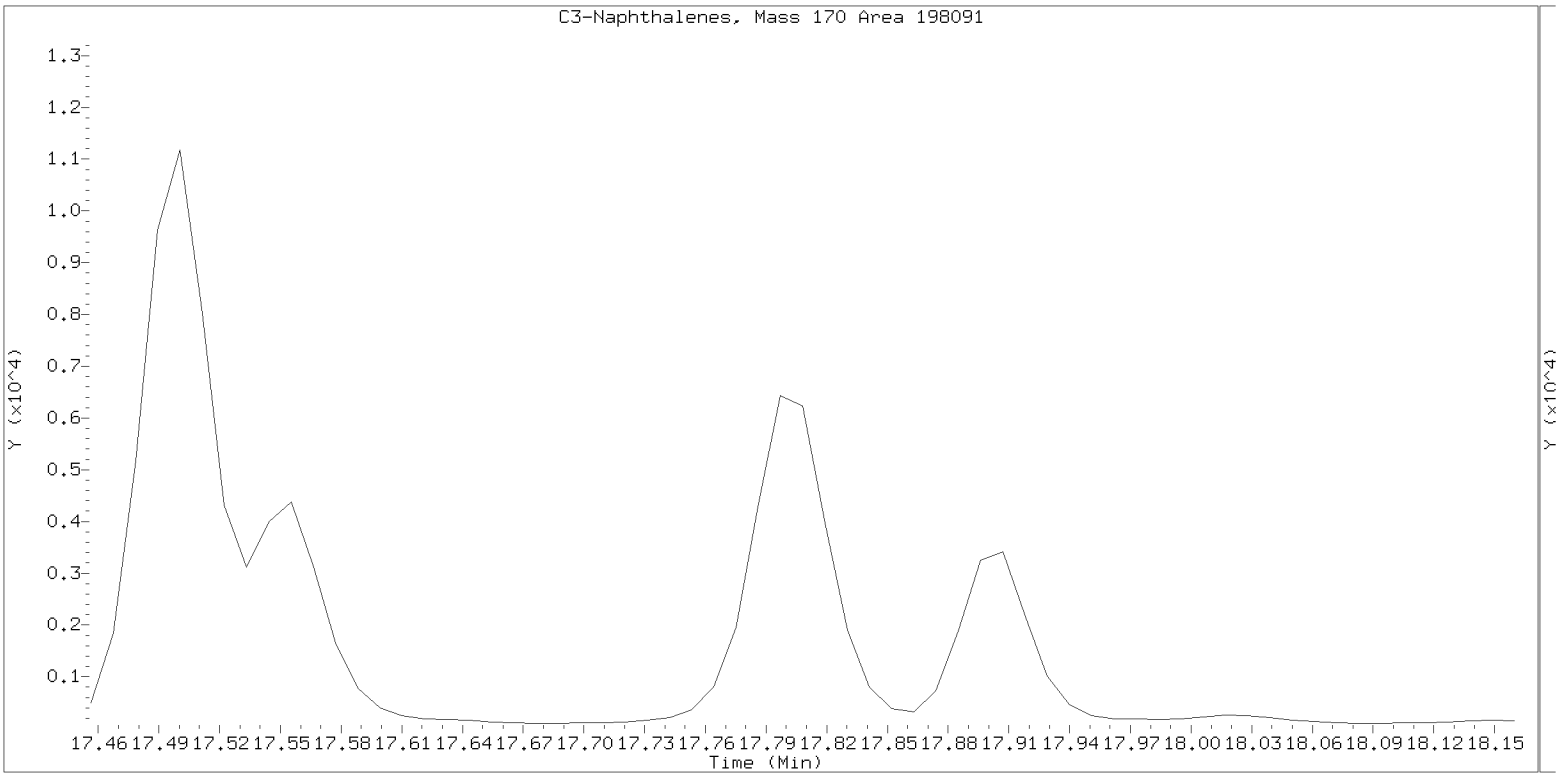

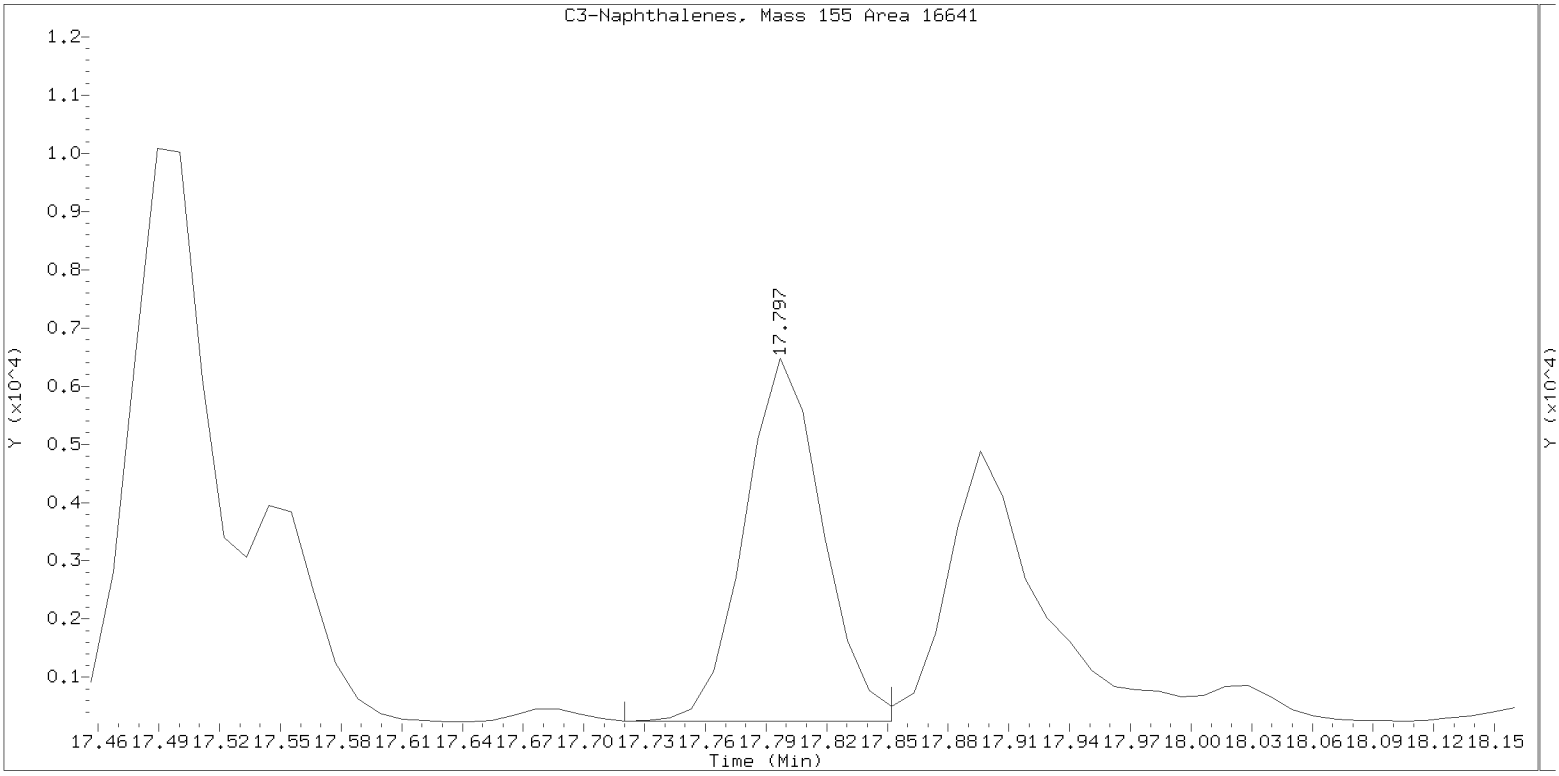

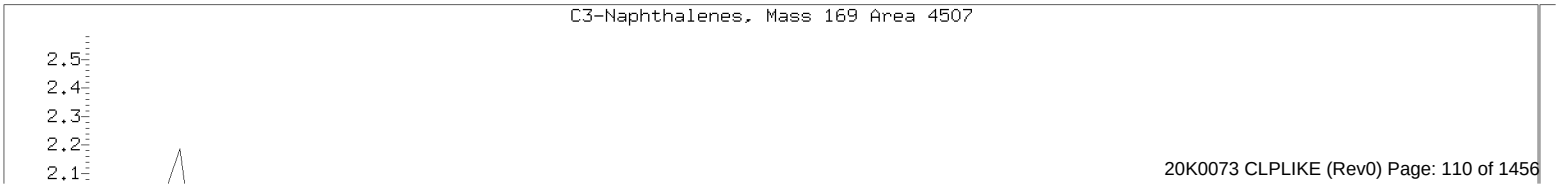

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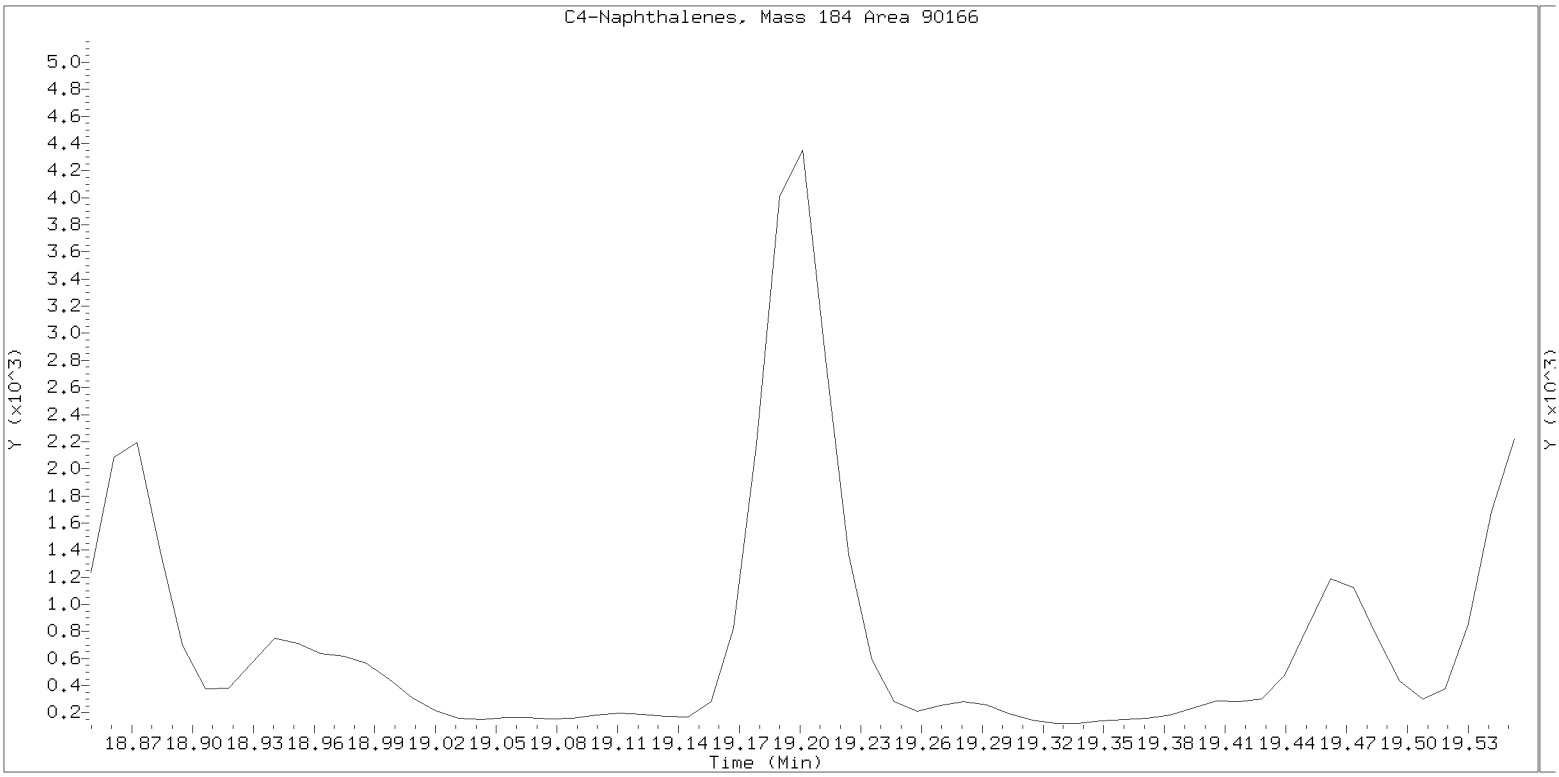

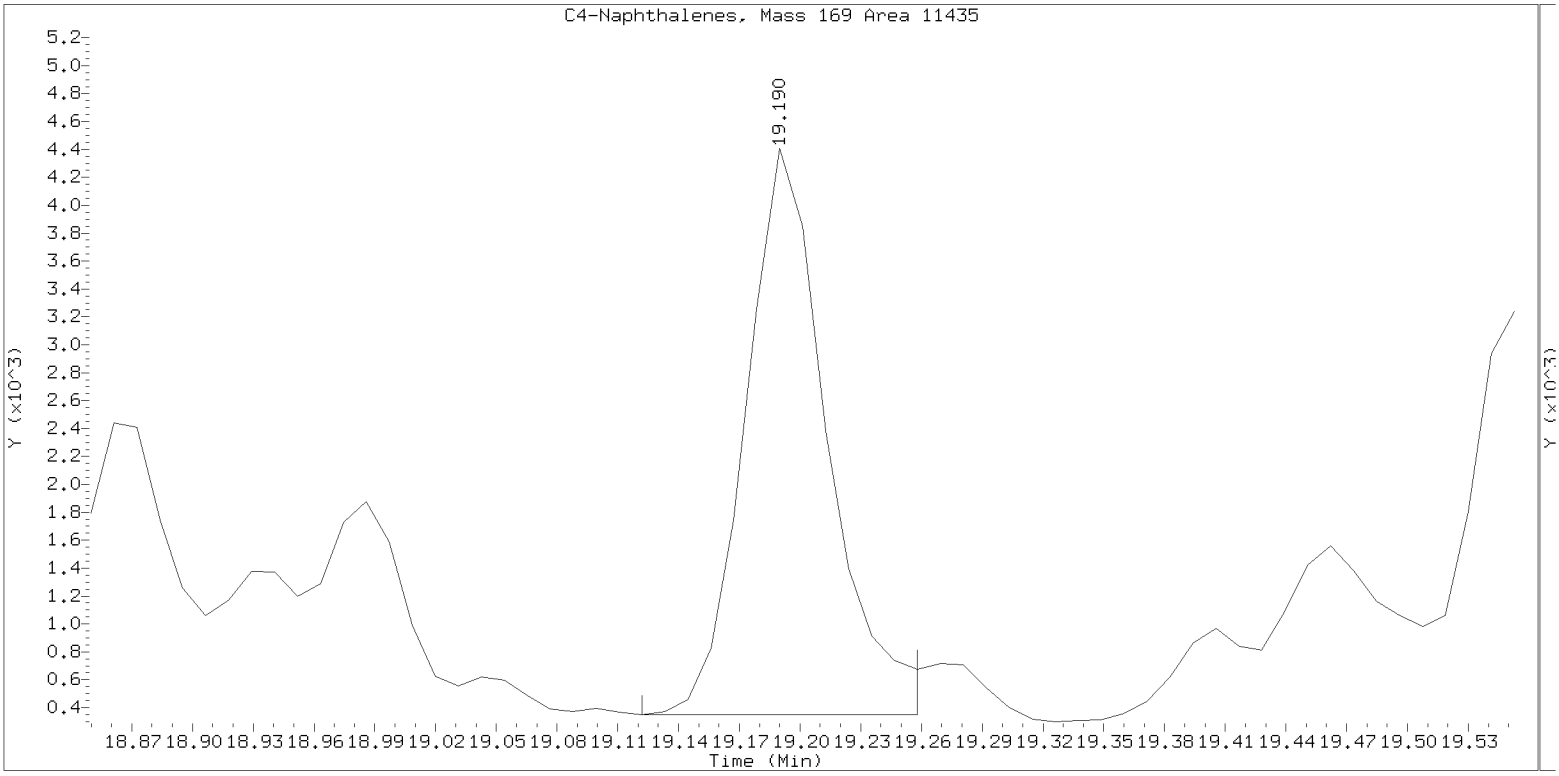

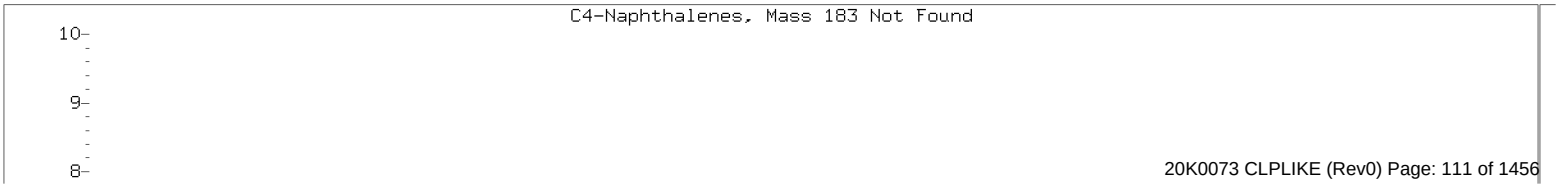

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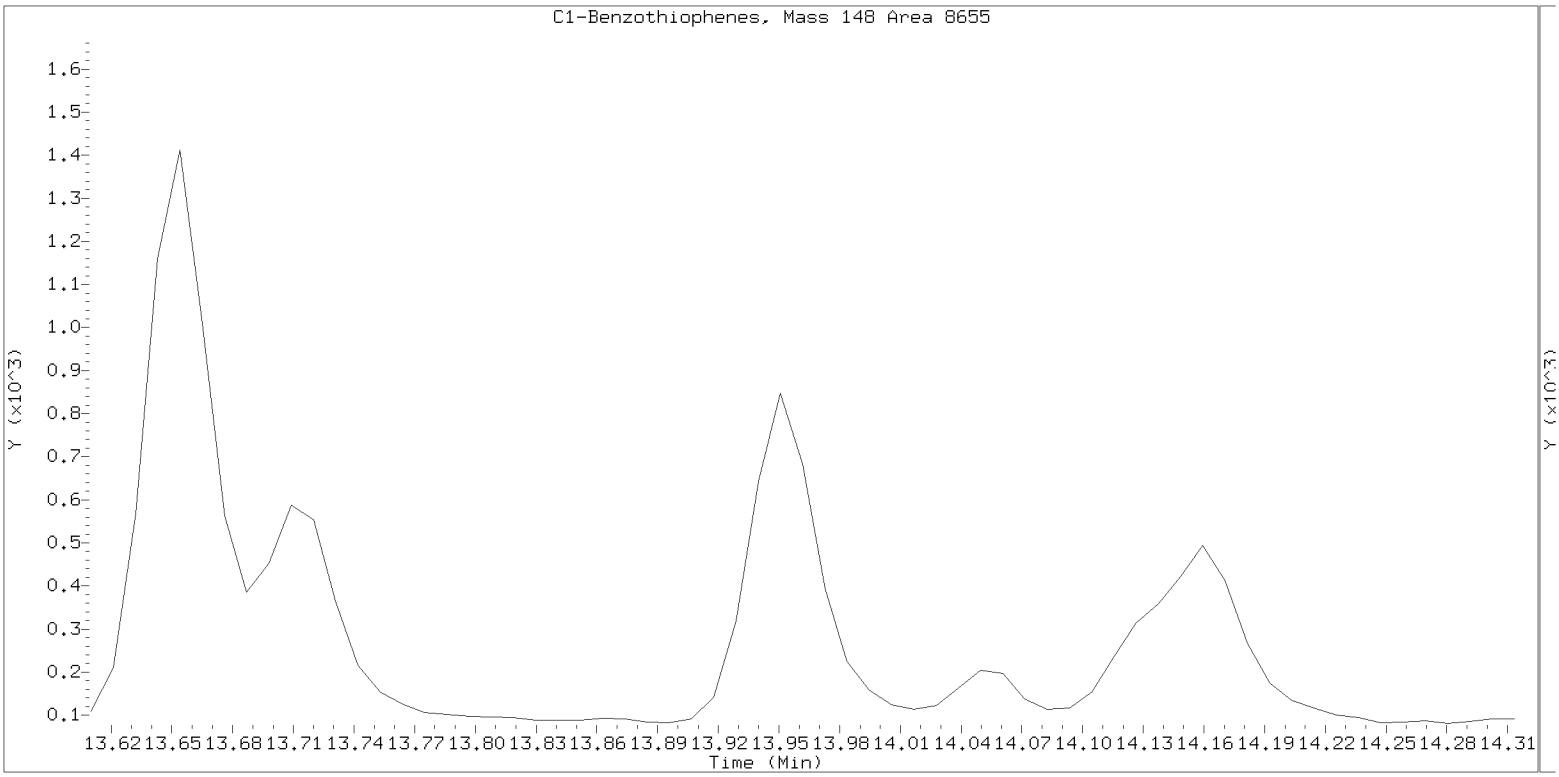

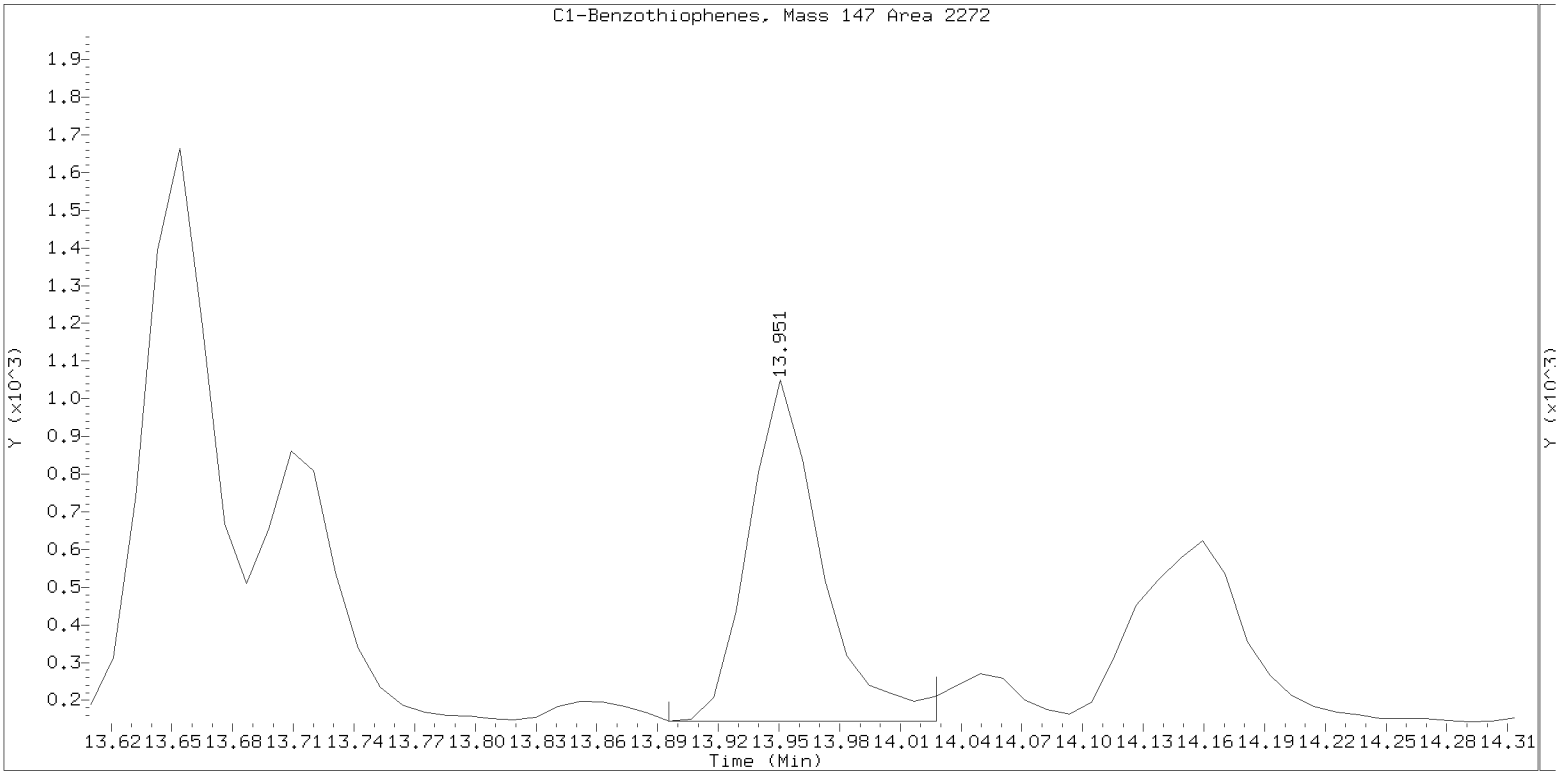

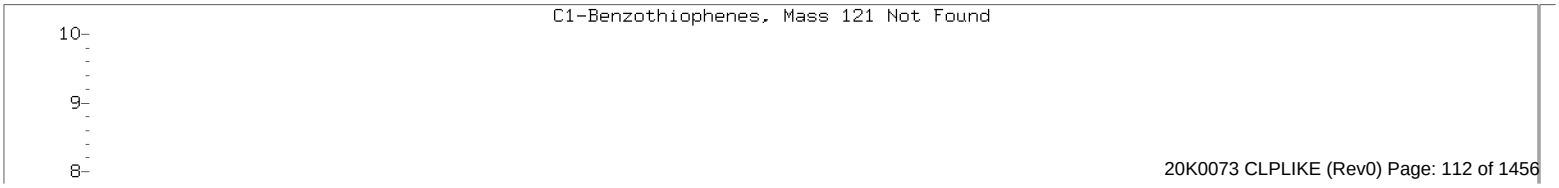

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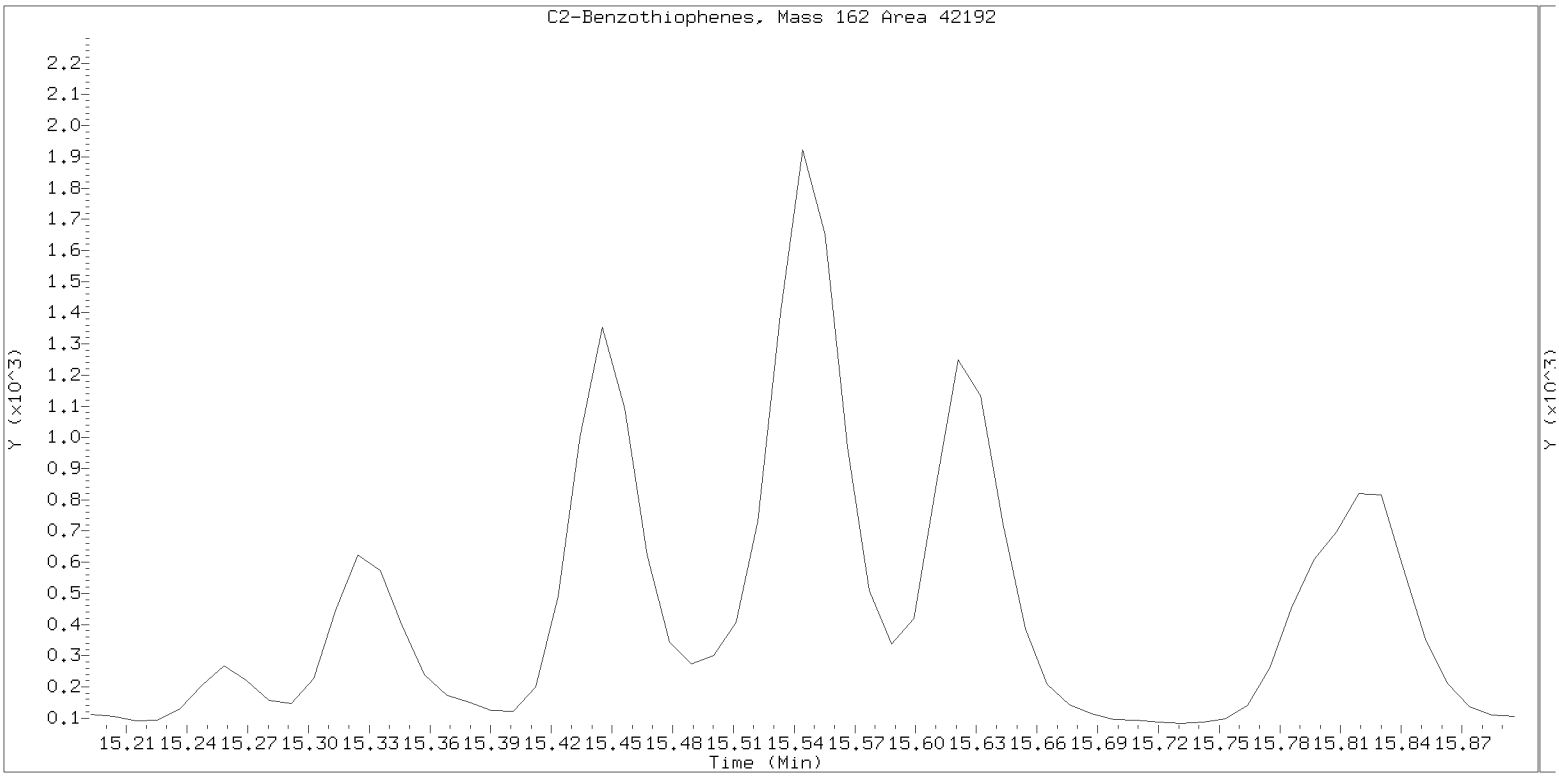

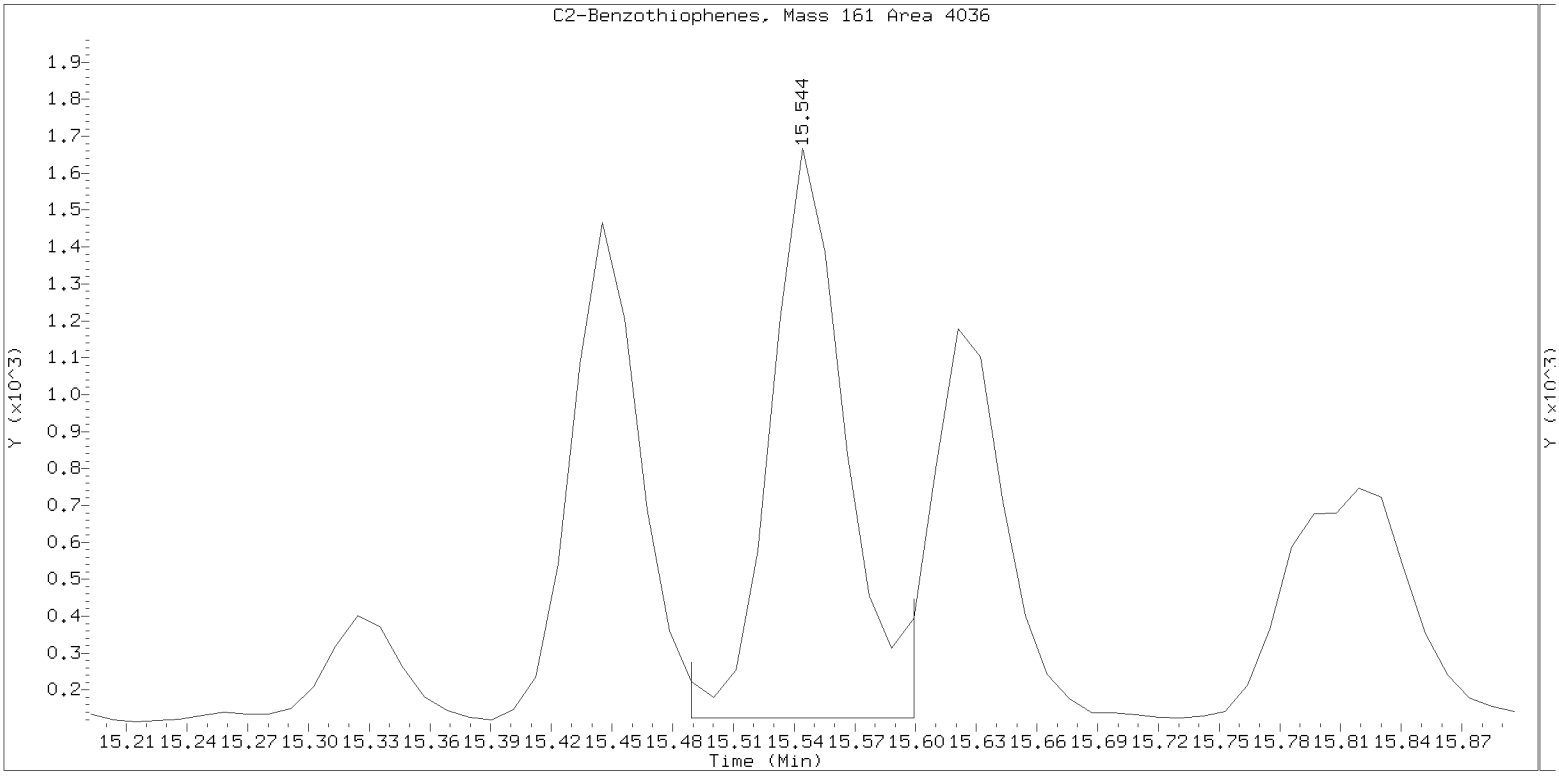

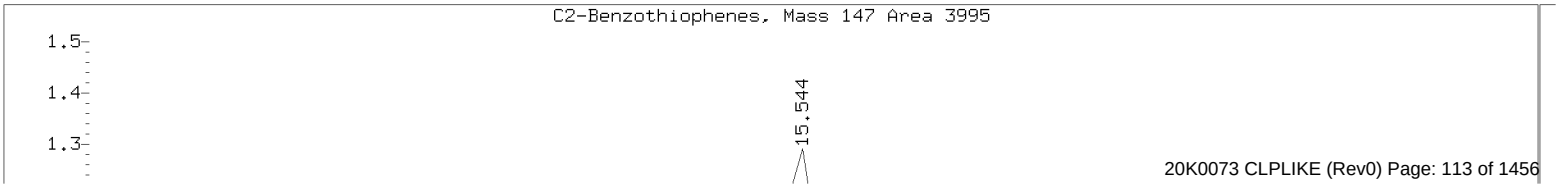

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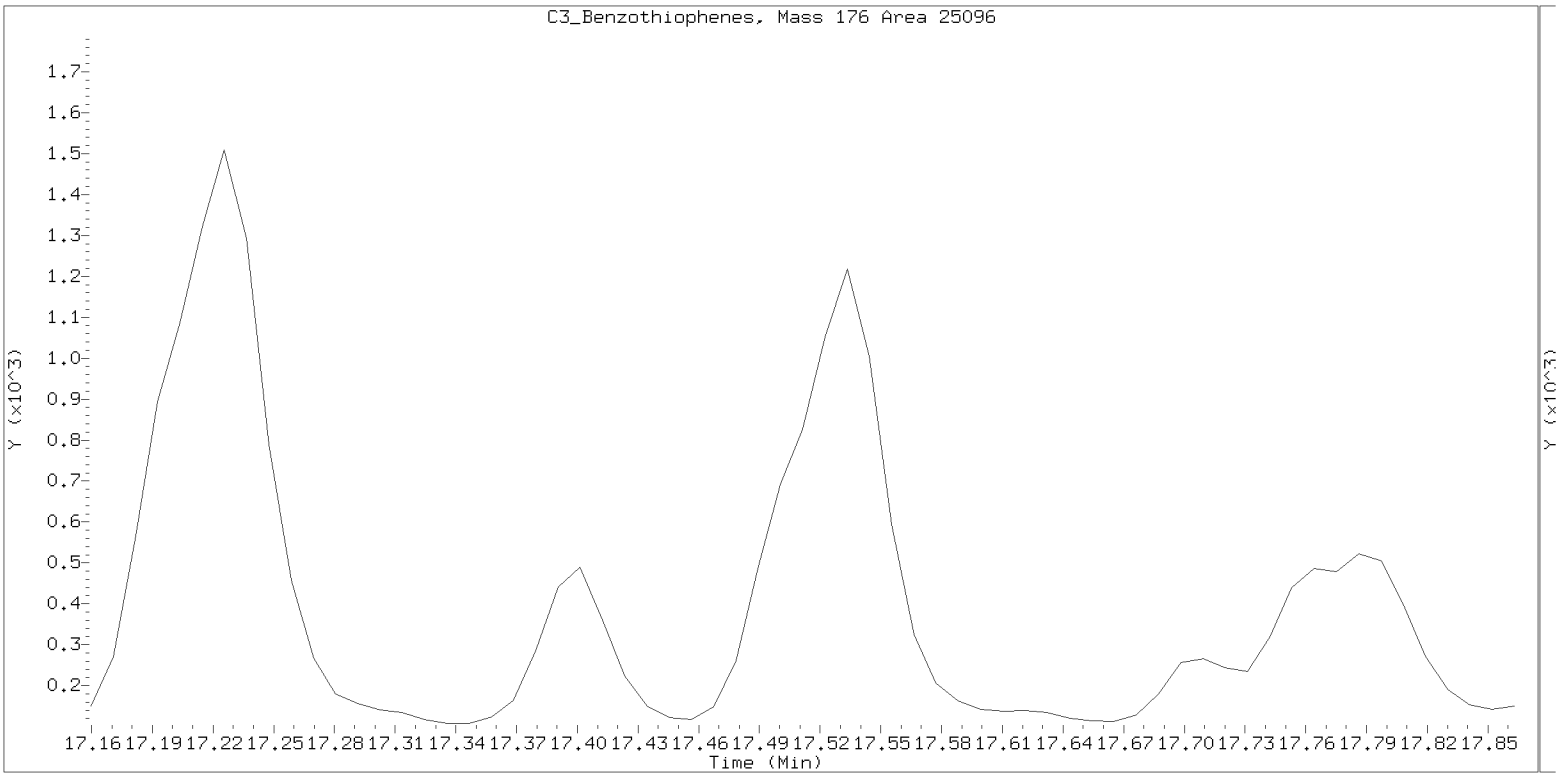

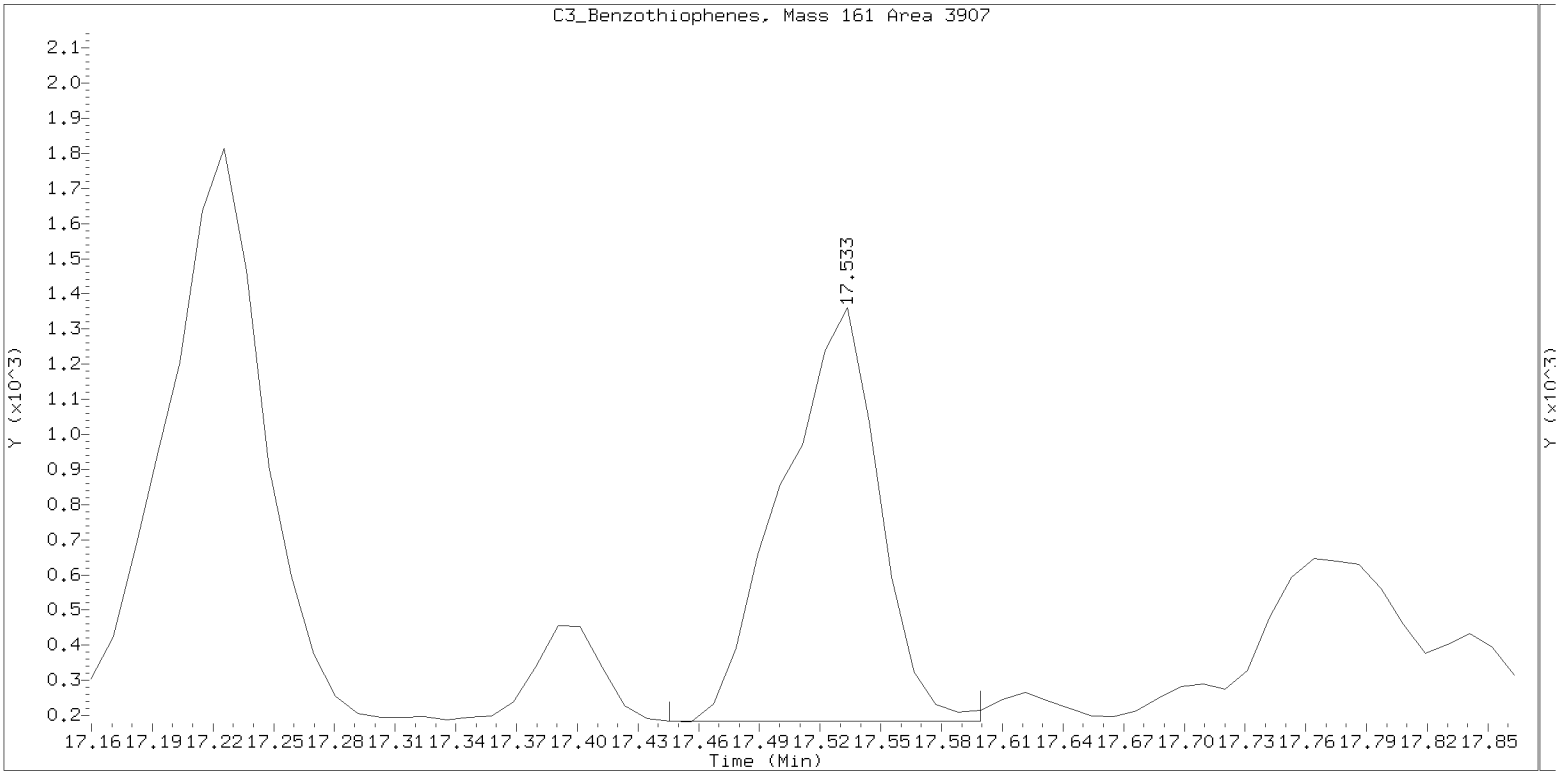

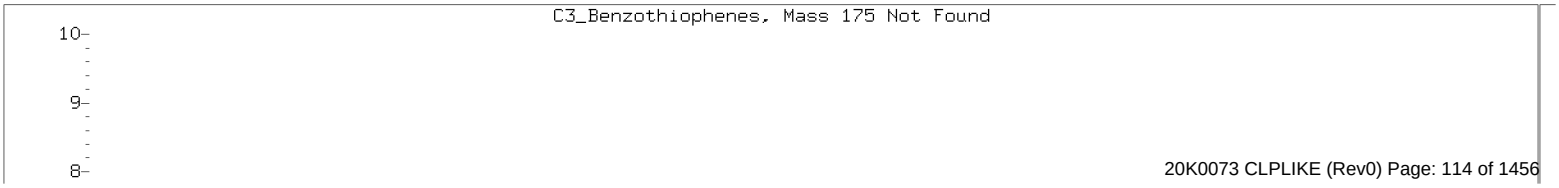

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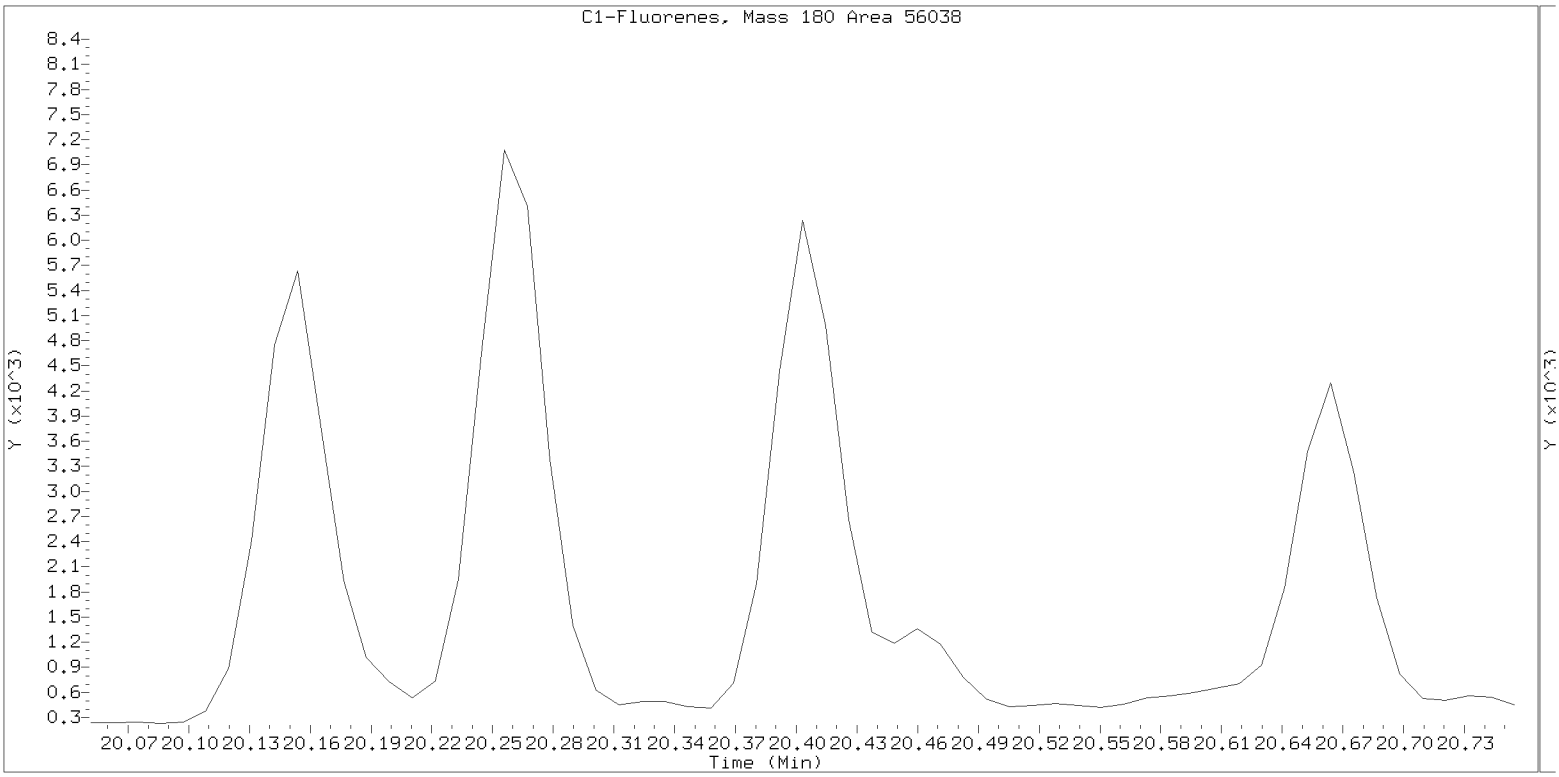

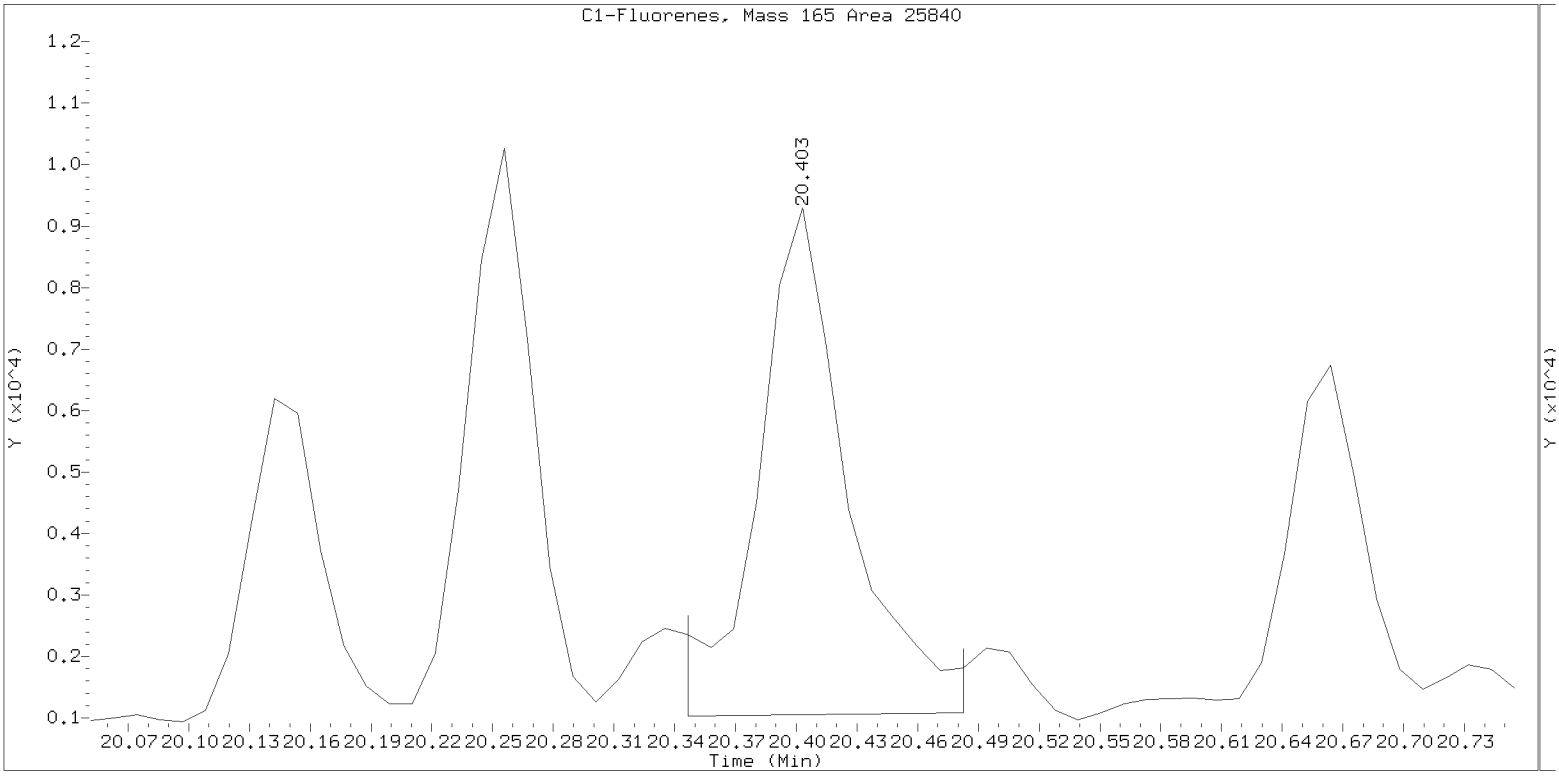

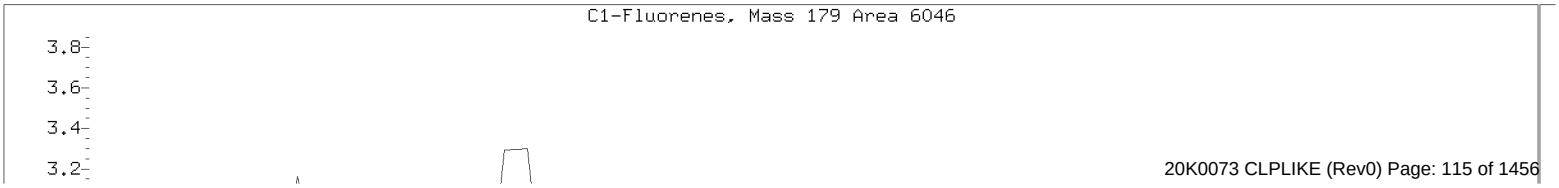

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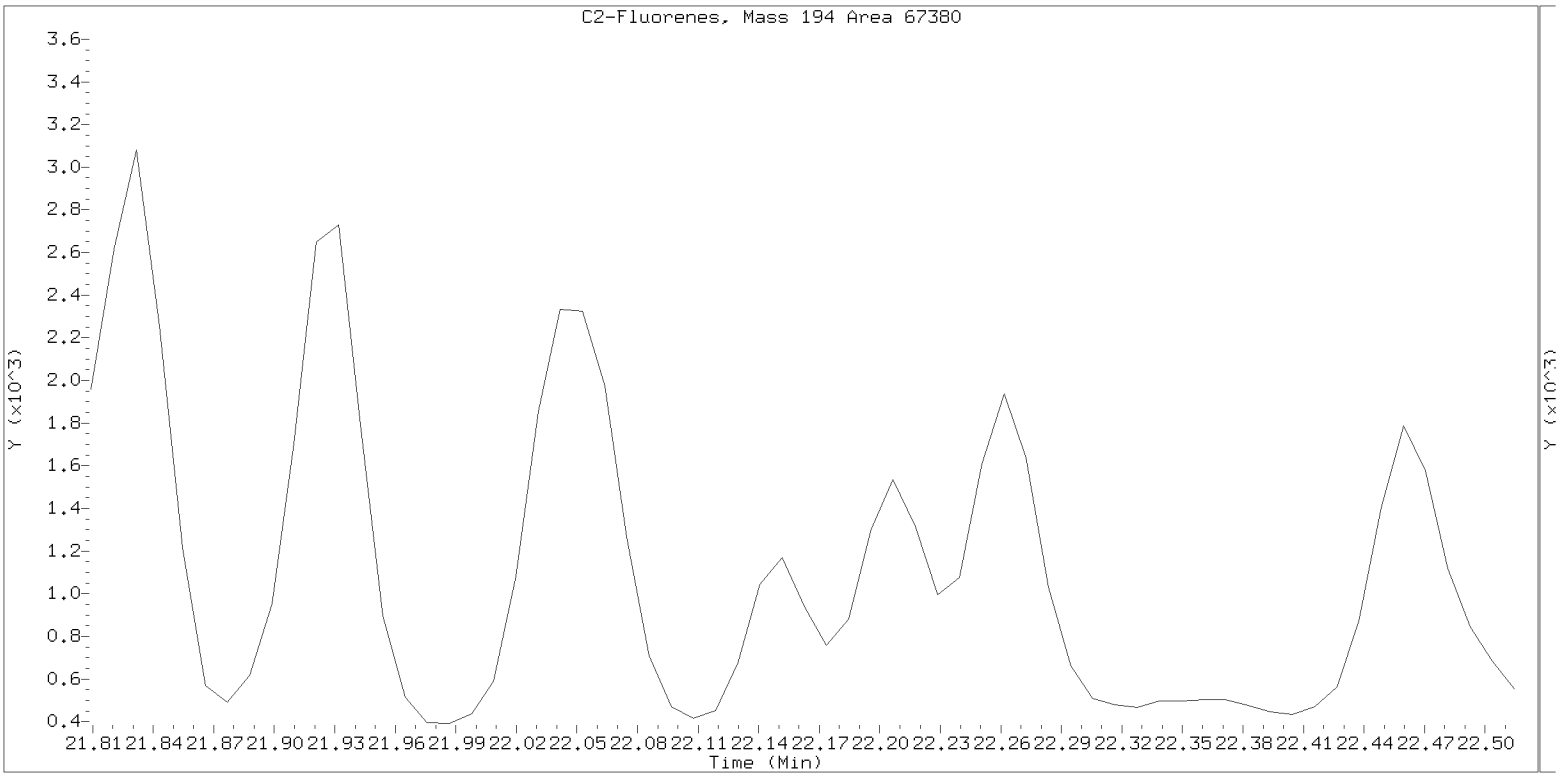

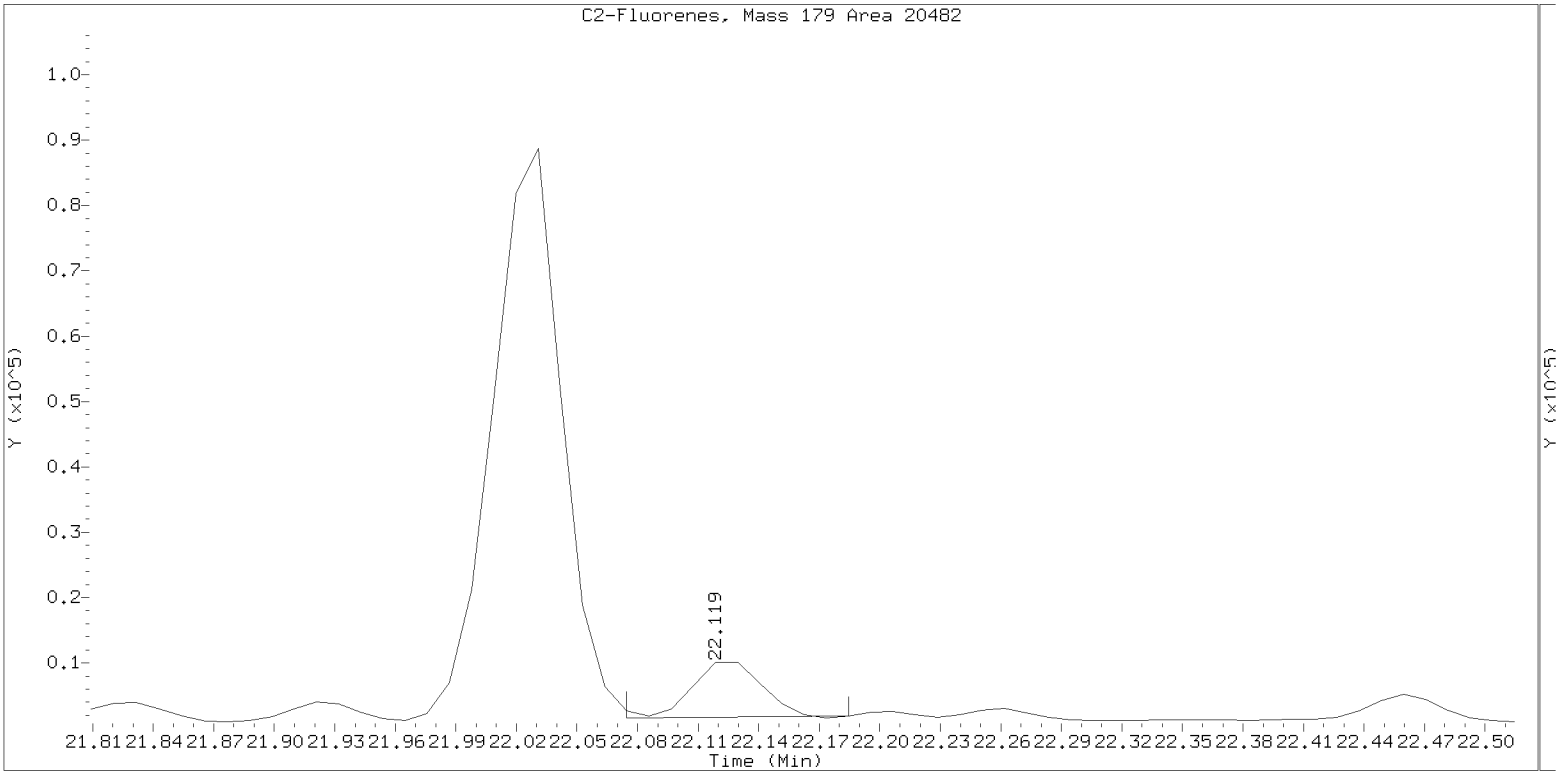

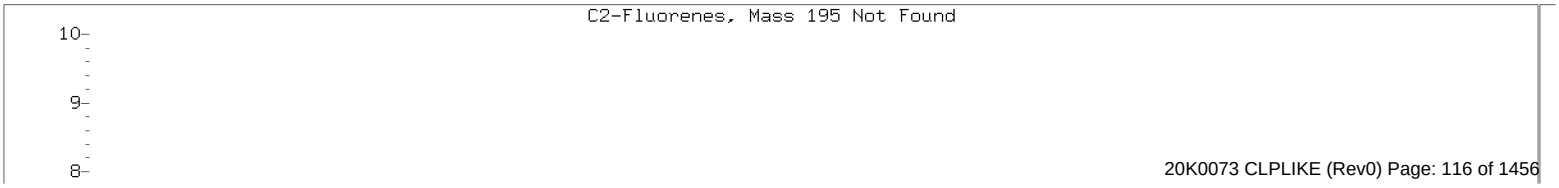

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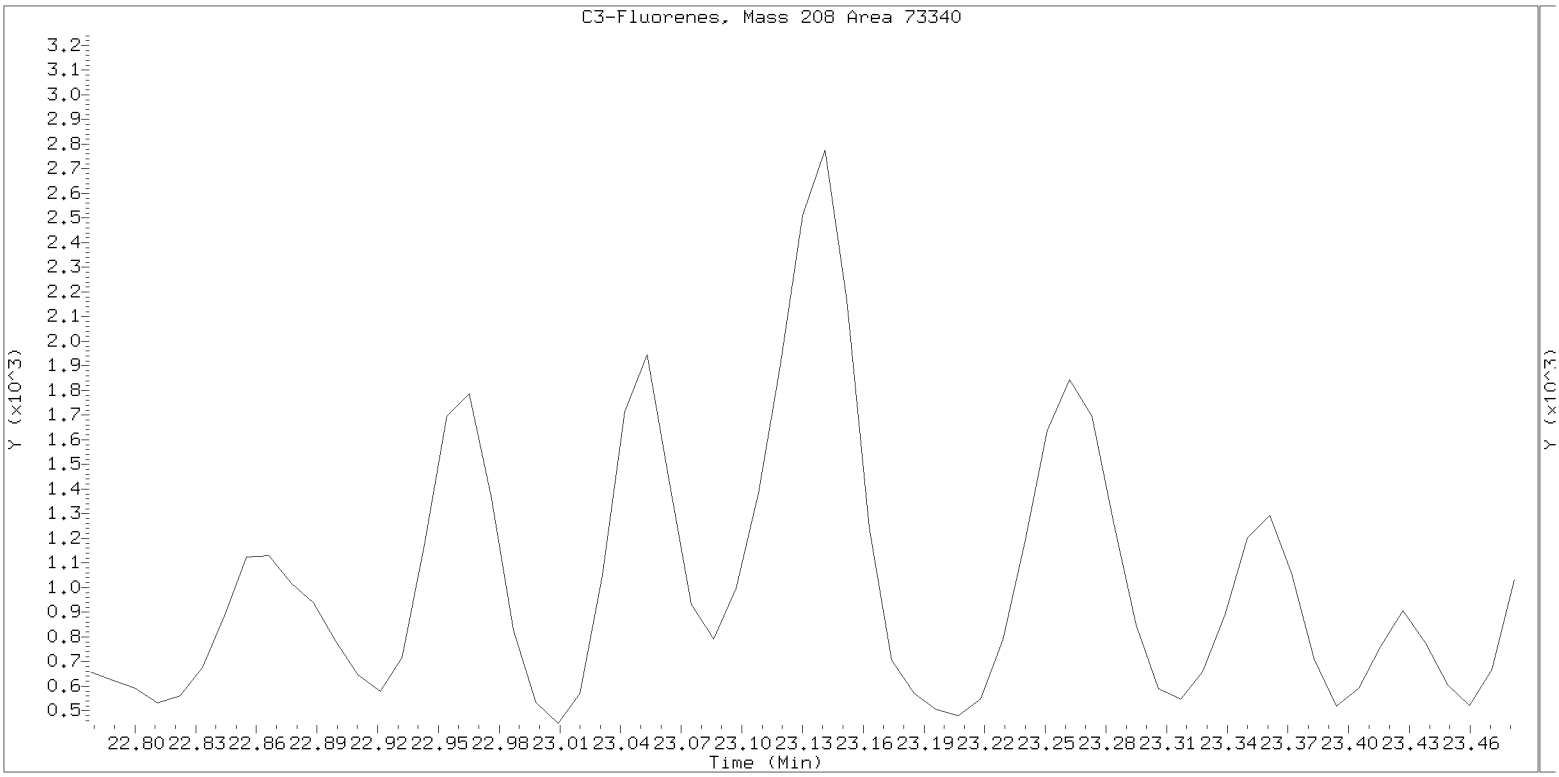

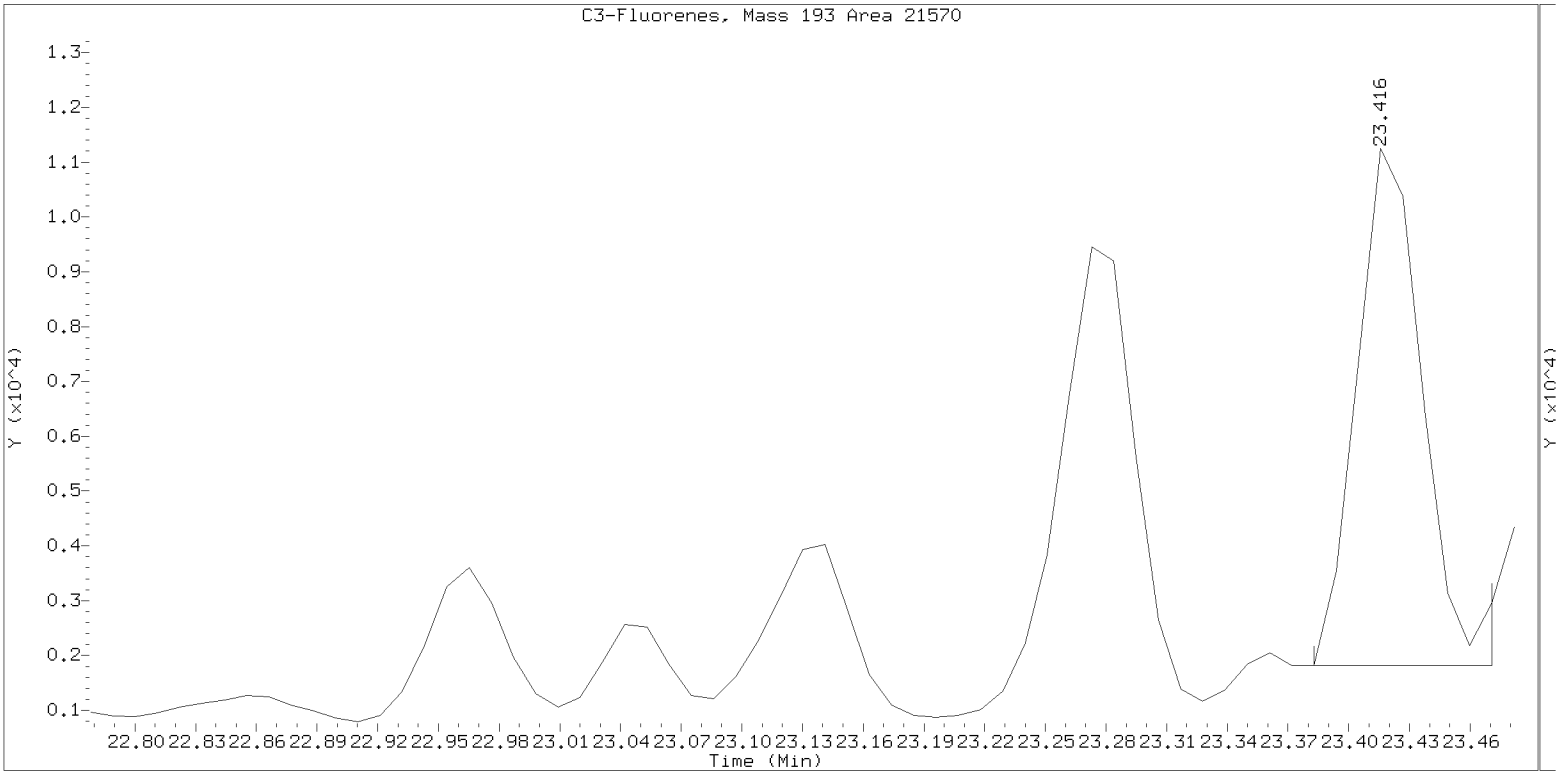

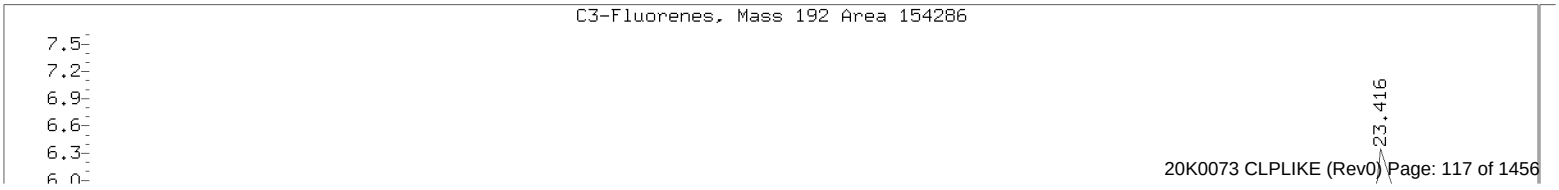

SIM ALKYL PNA RANGE ION WINDOWS - NT1420121214.D

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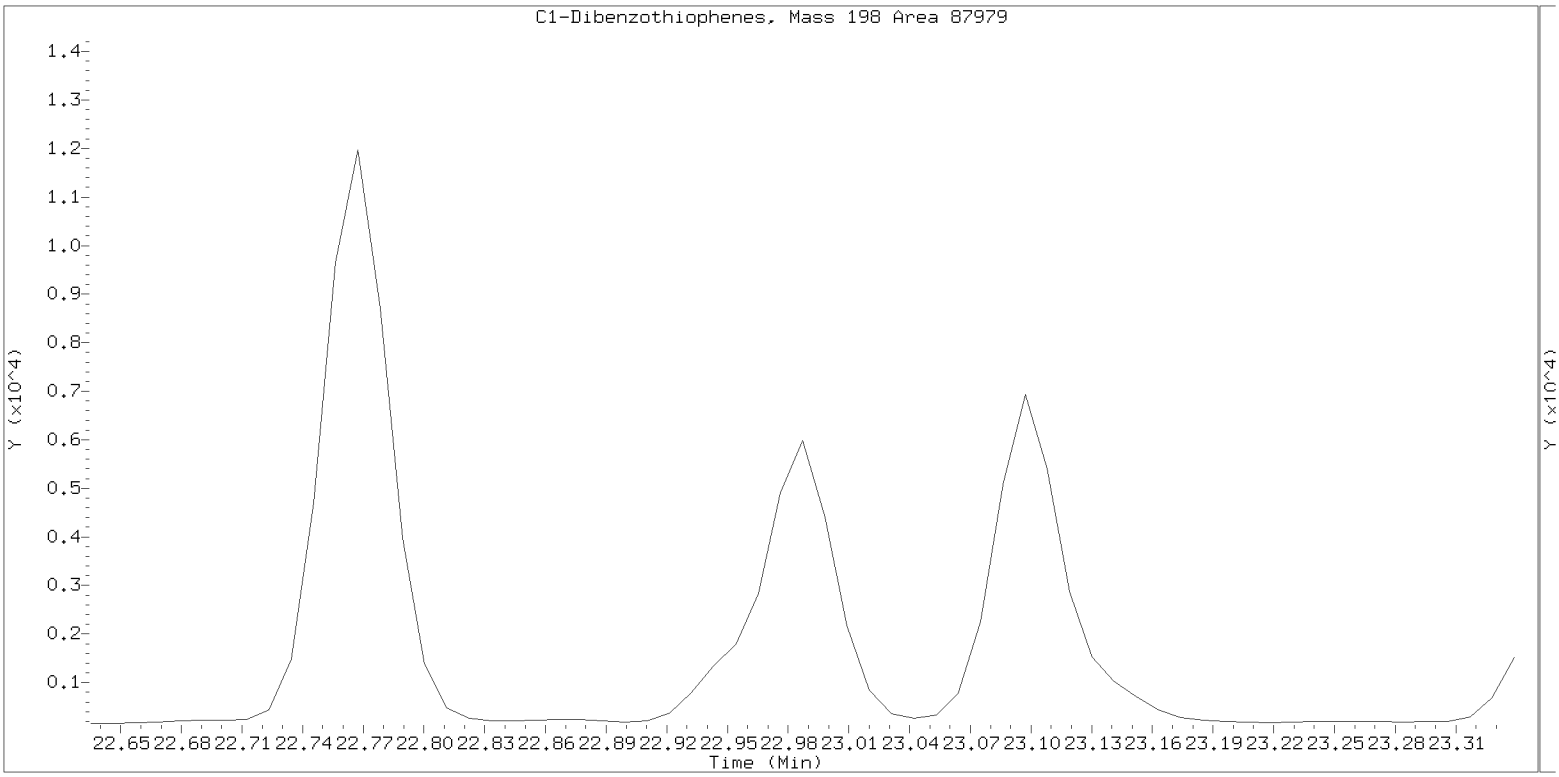

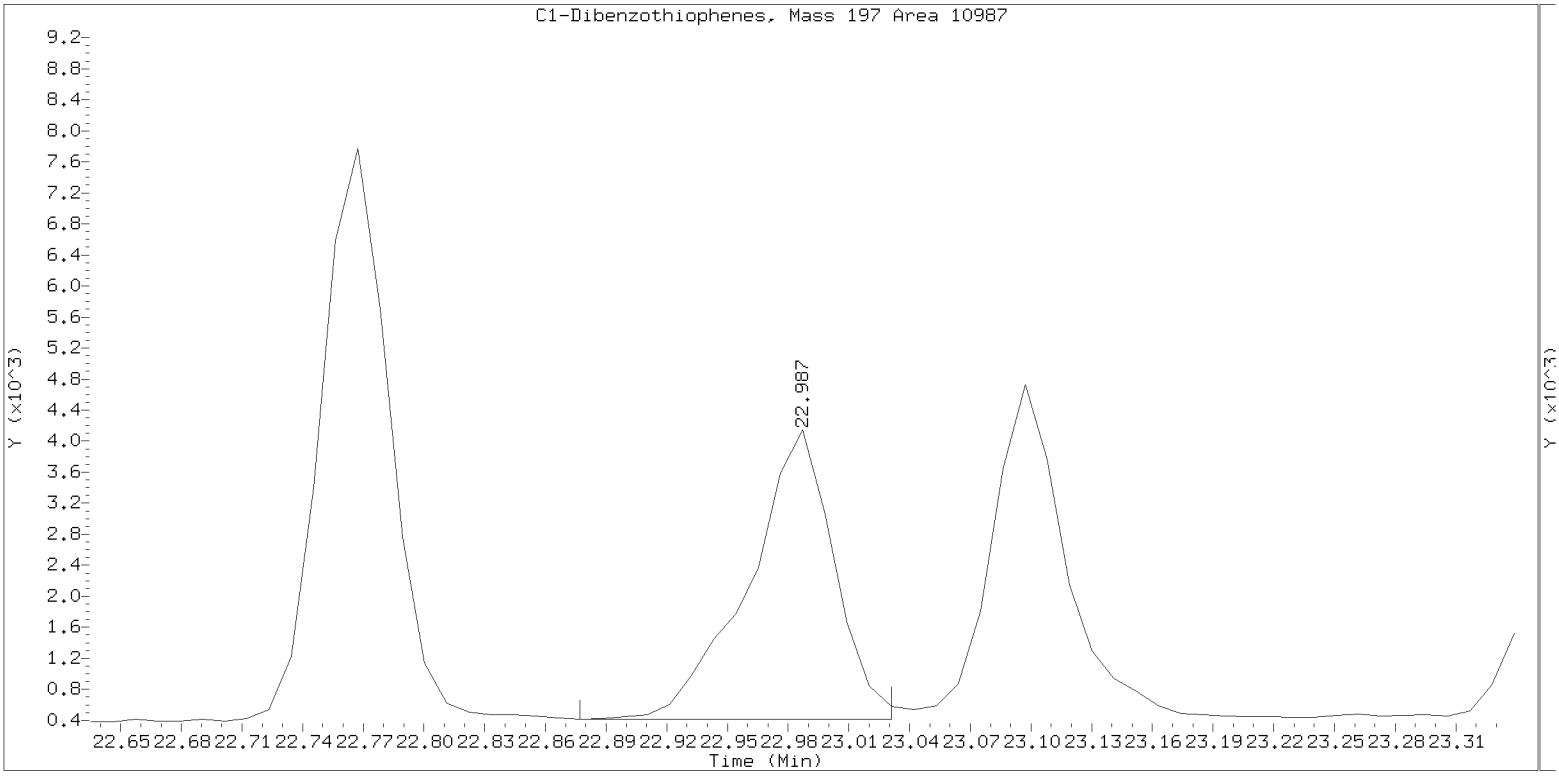

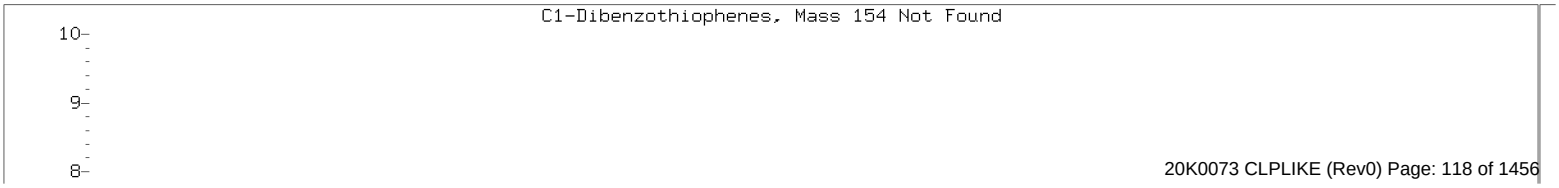

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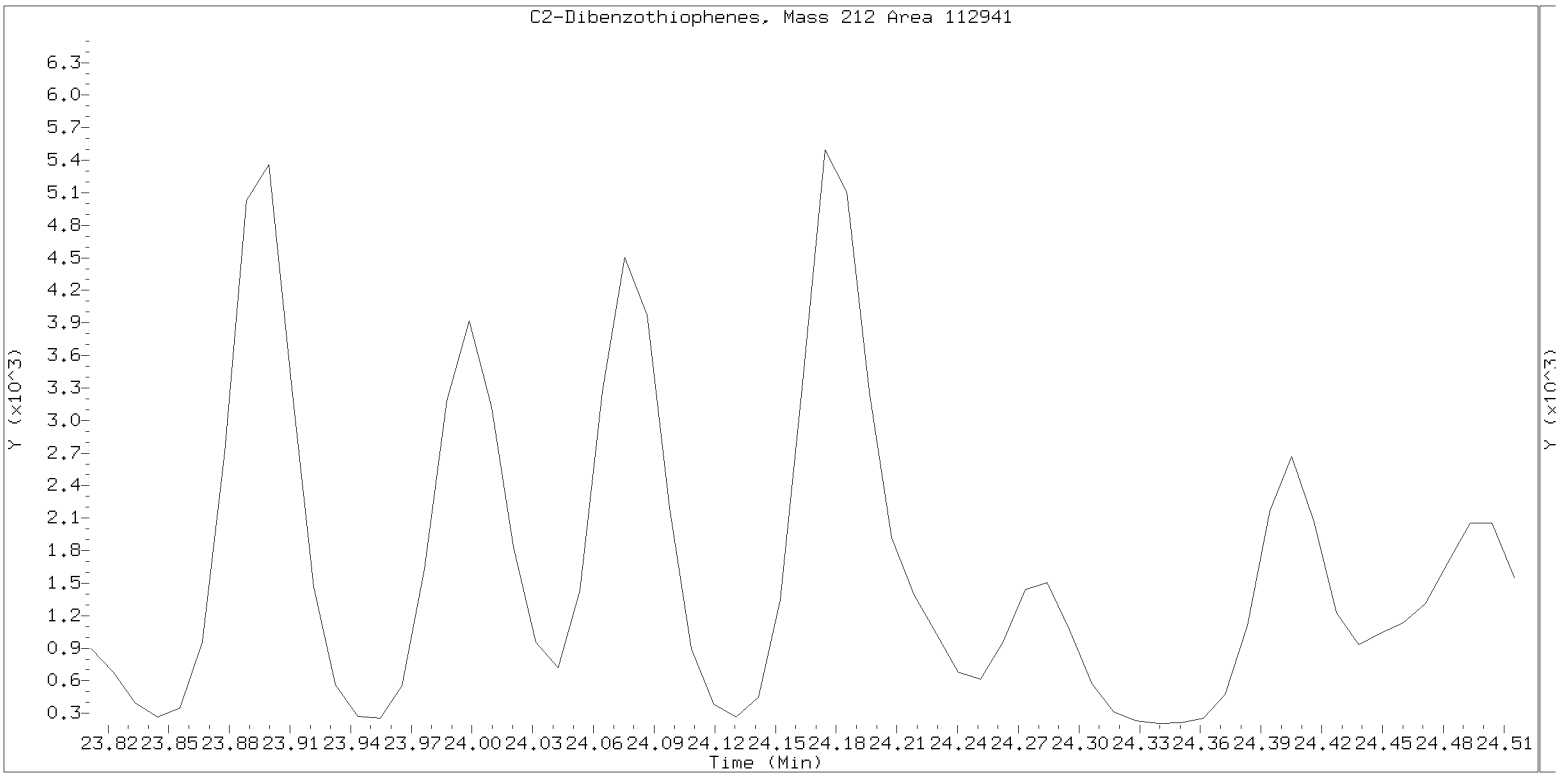

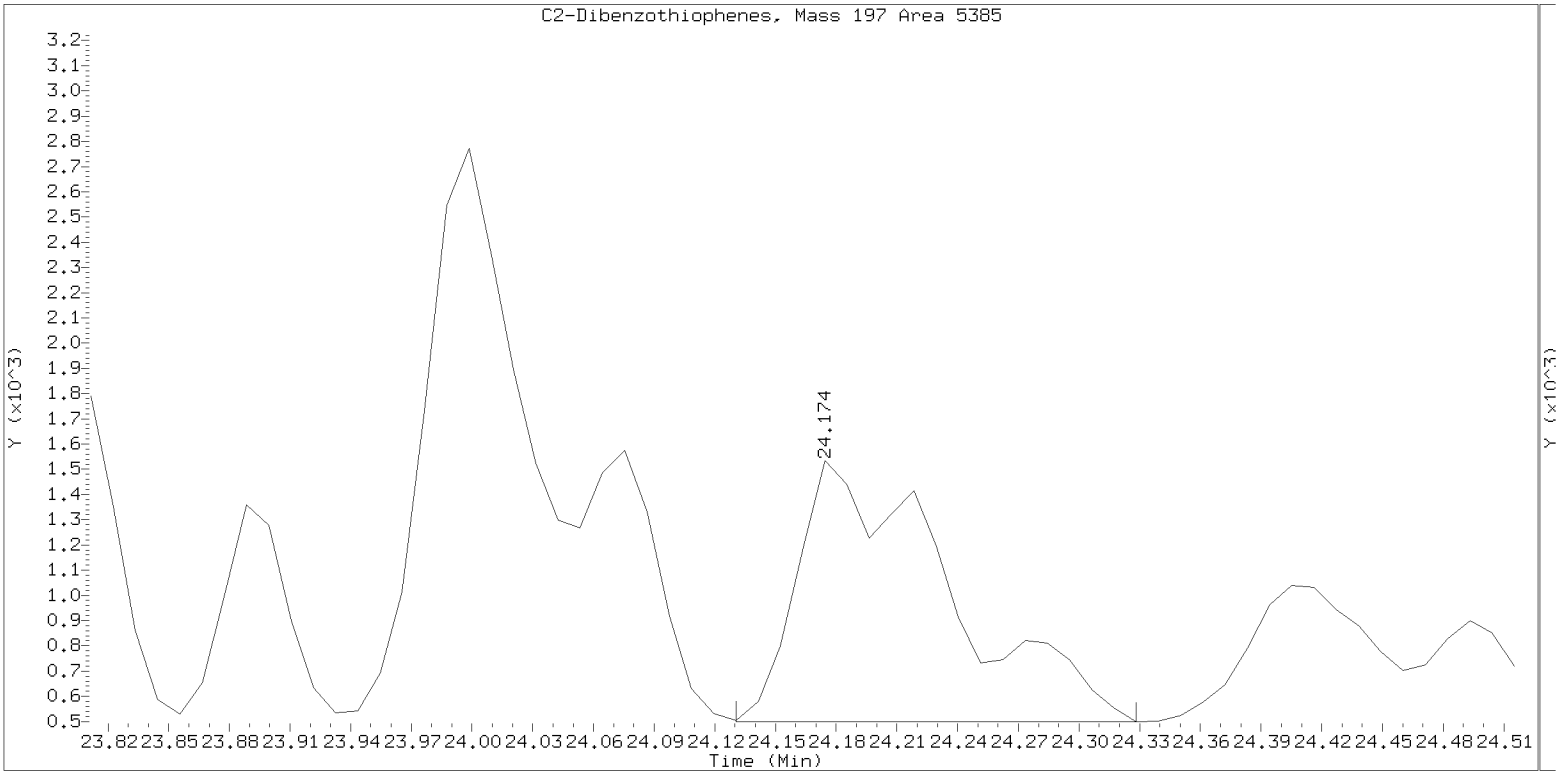

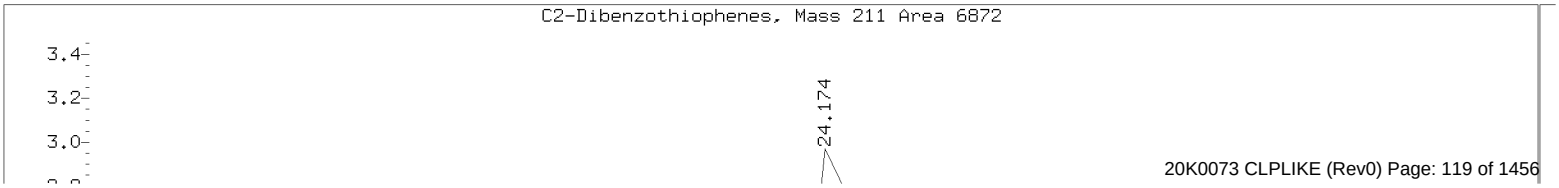

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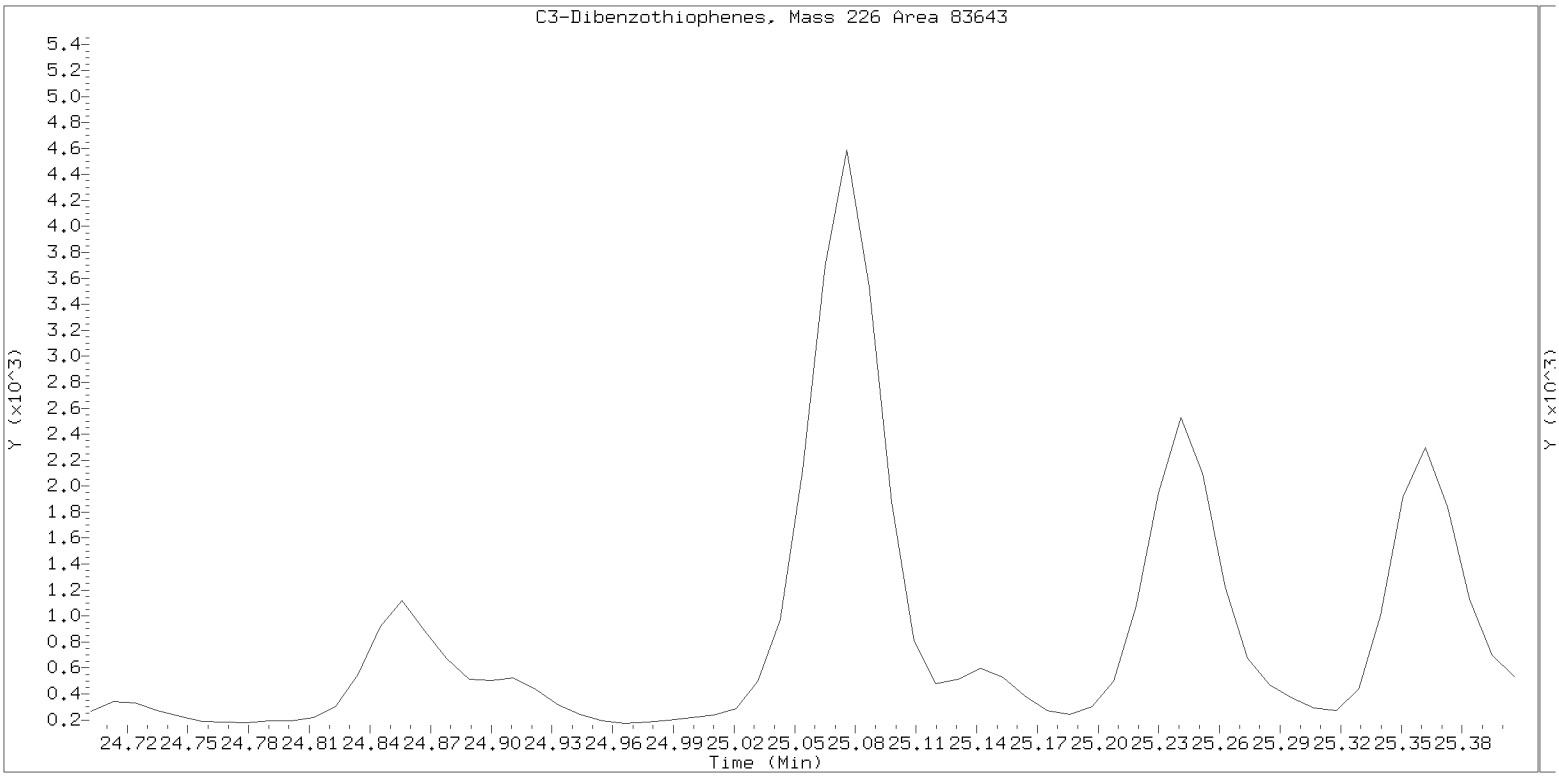

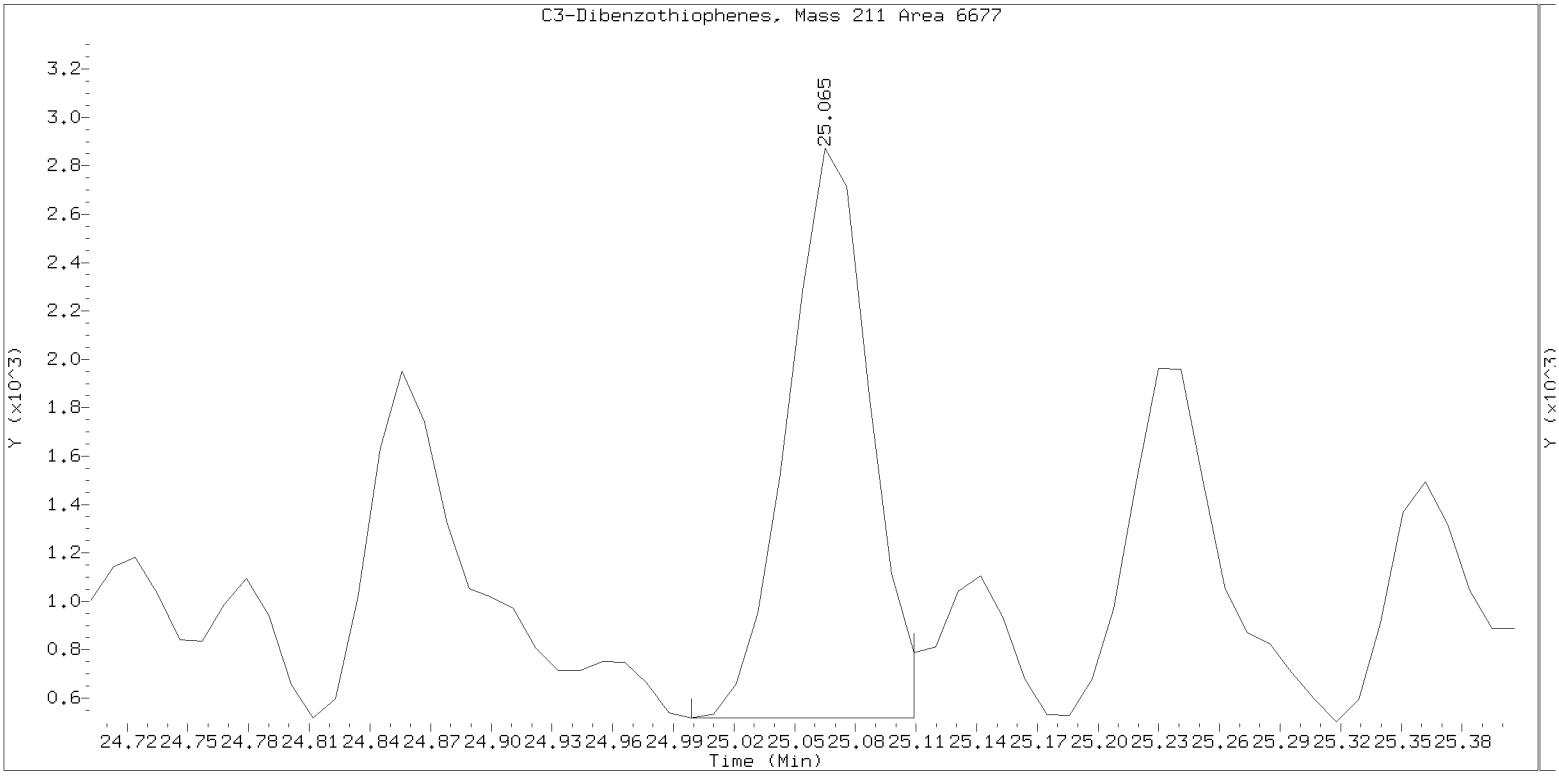

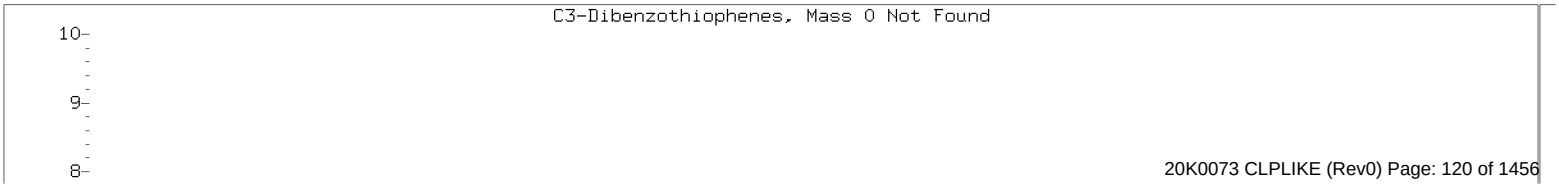

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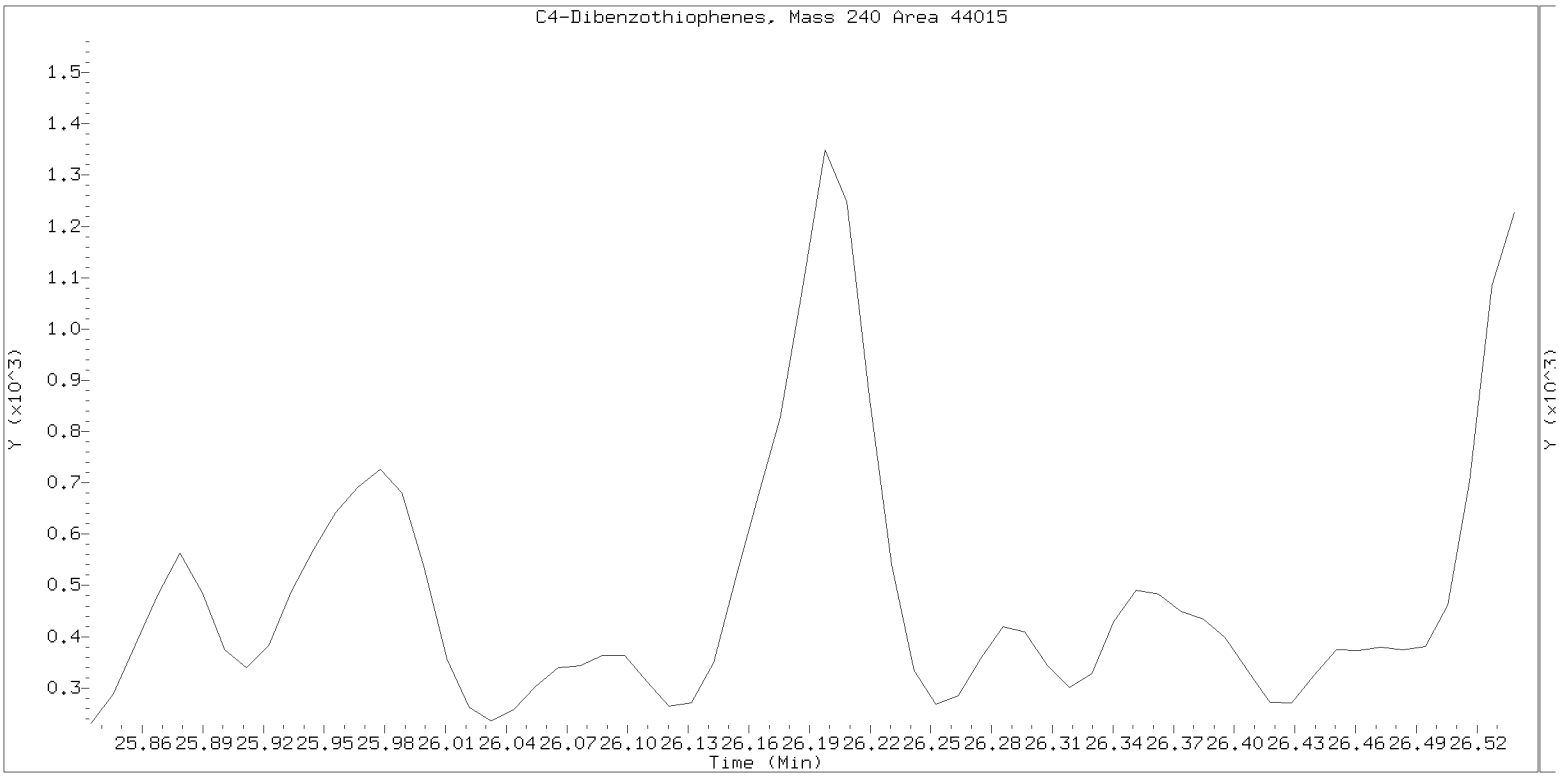

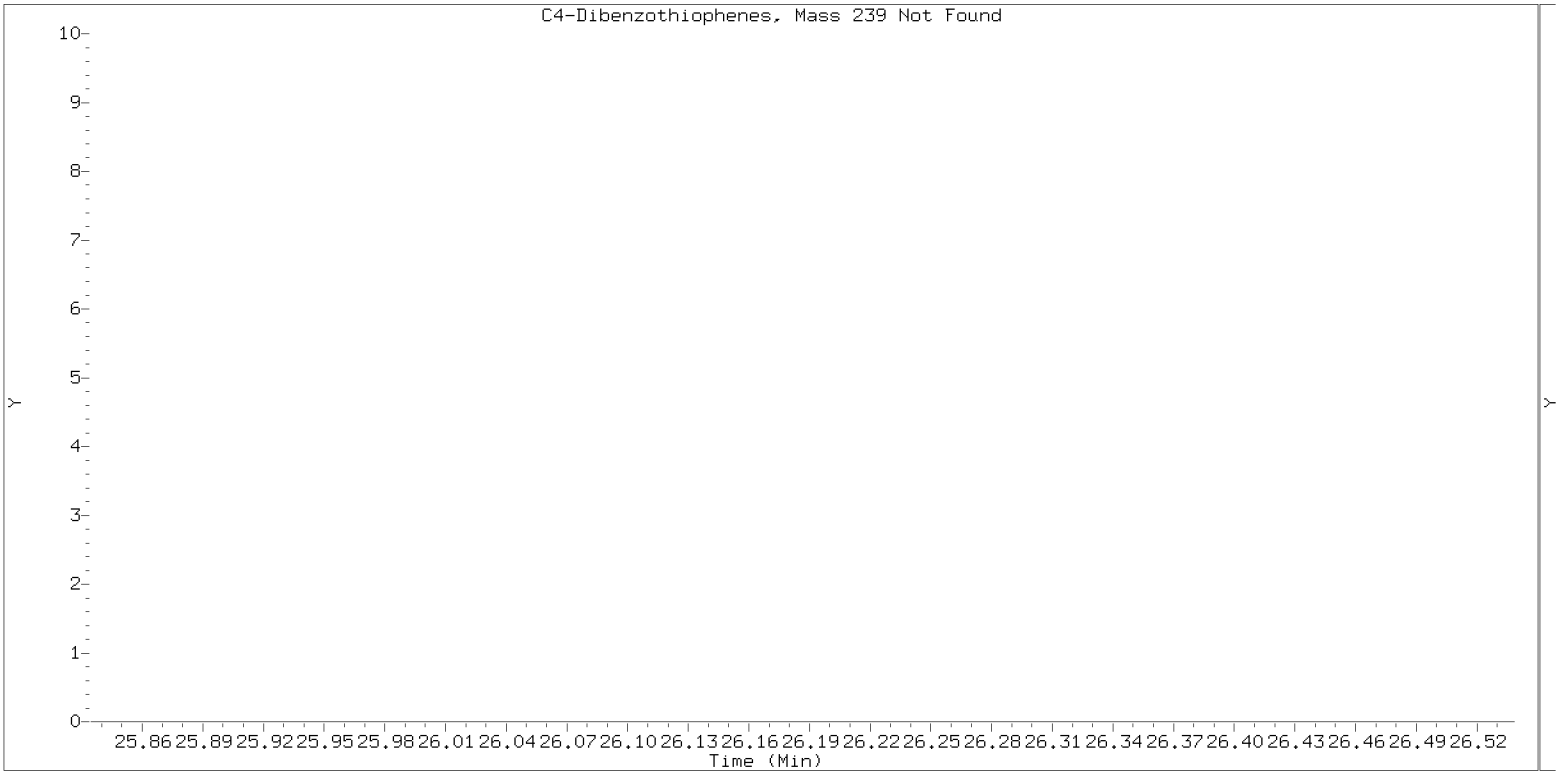

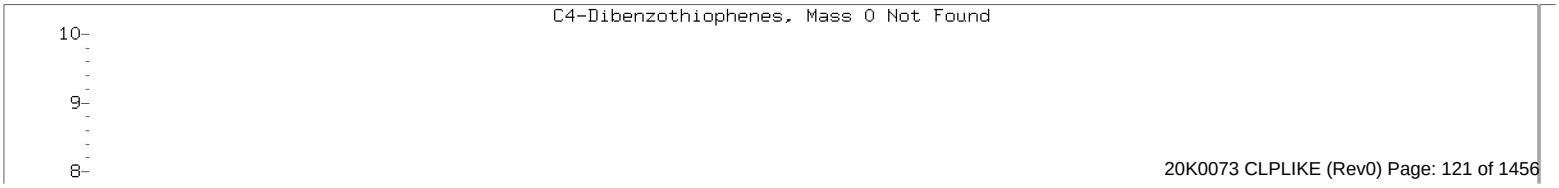

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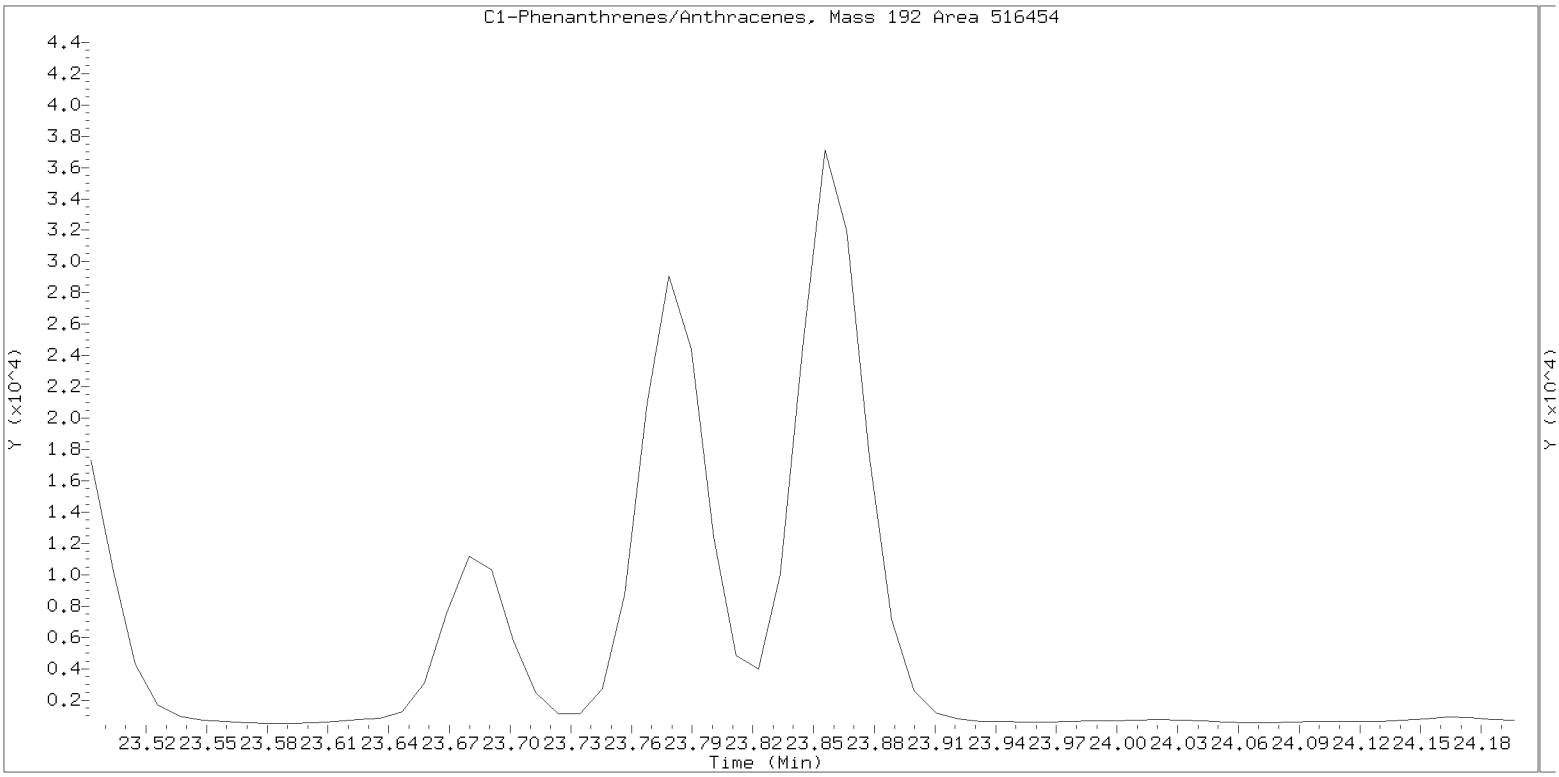

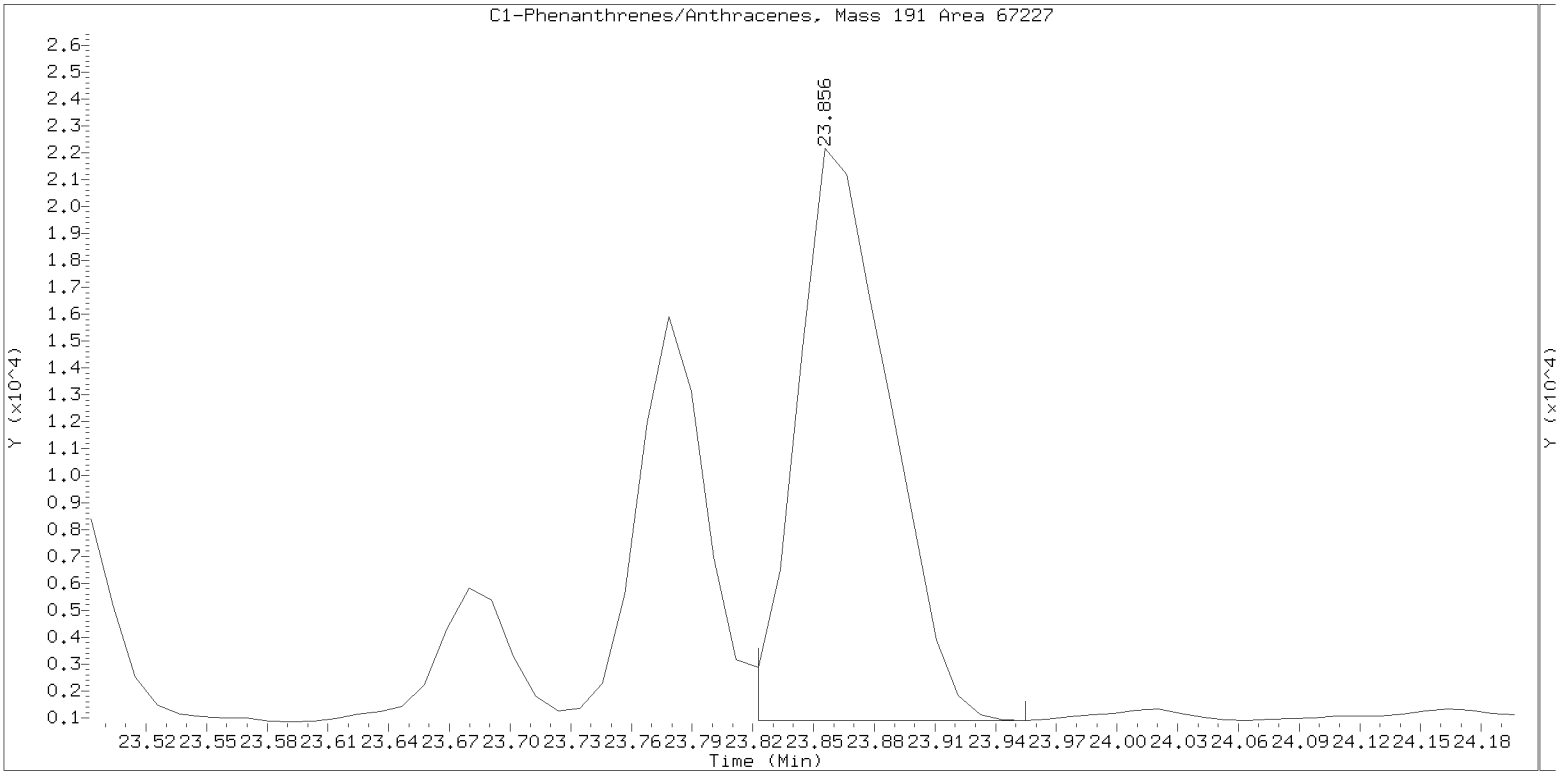

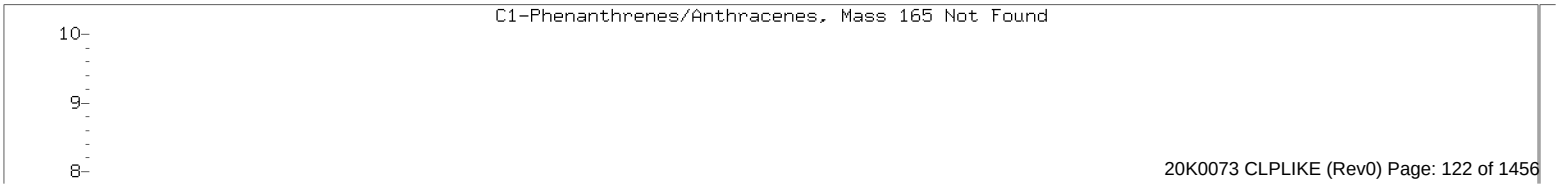

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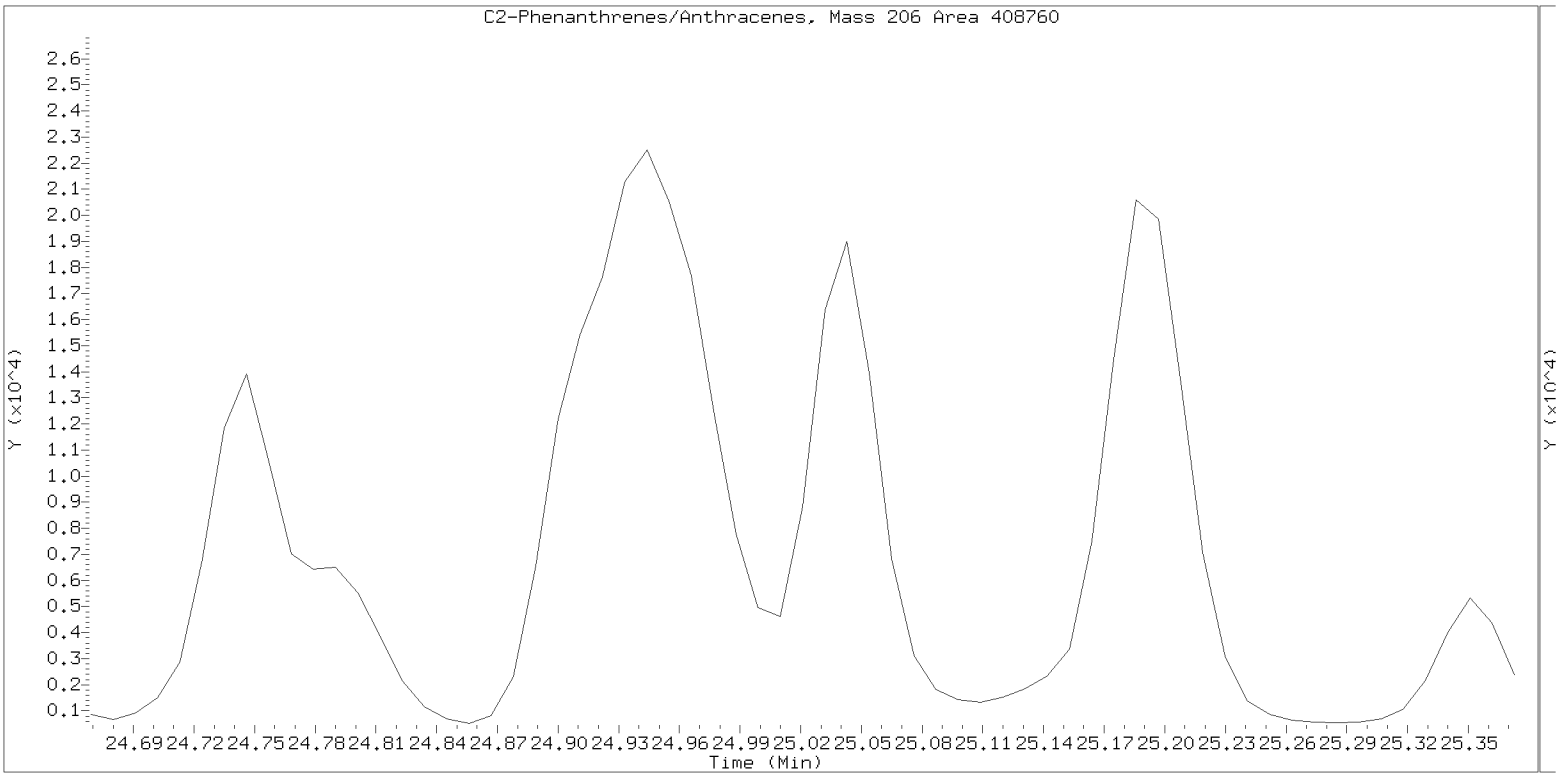

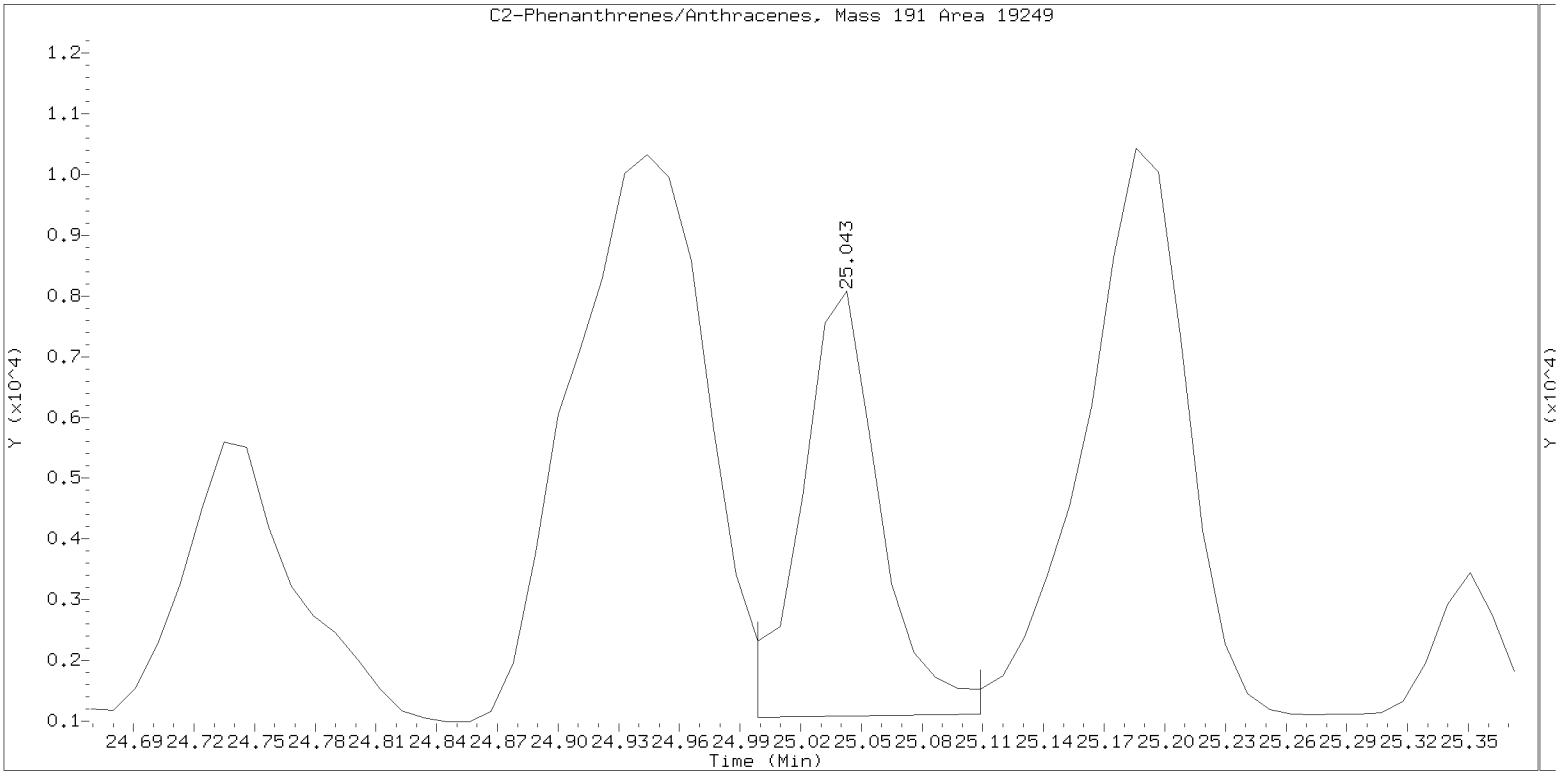

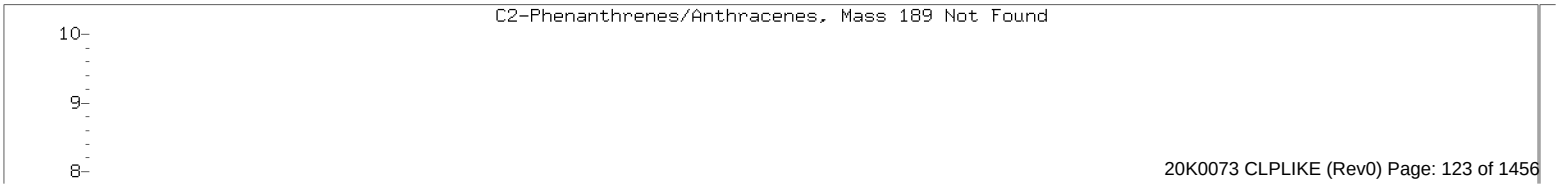

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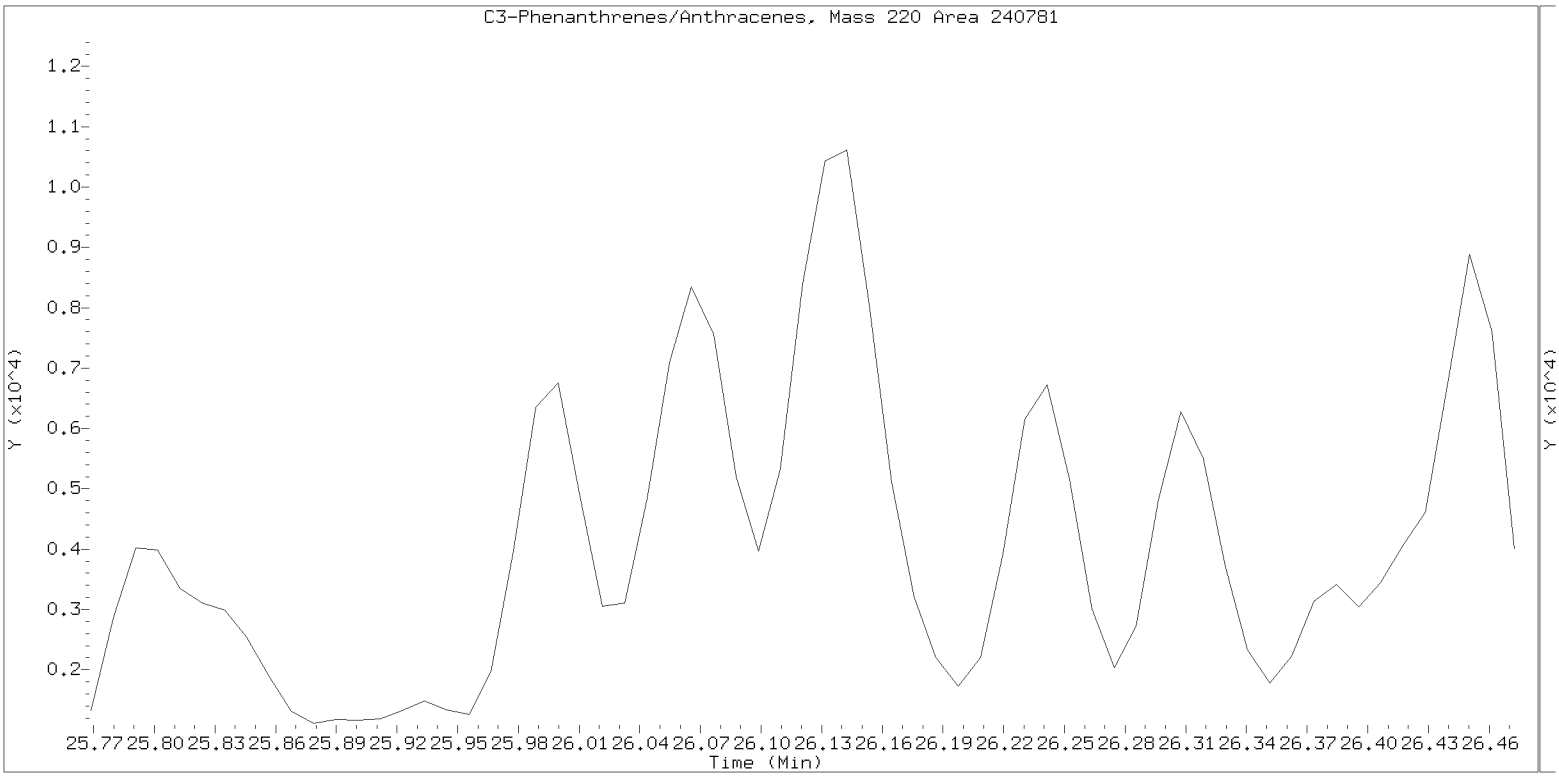

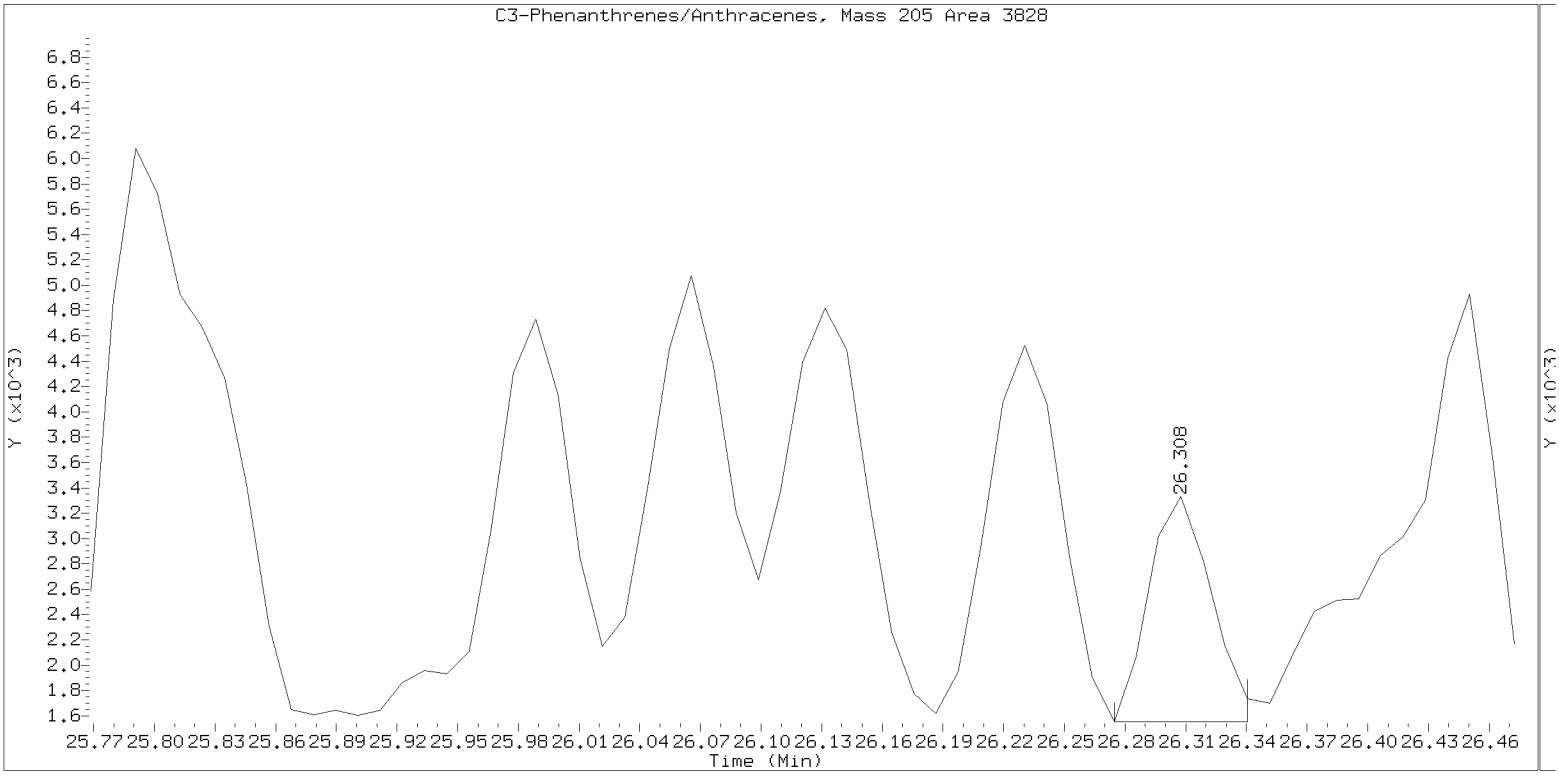

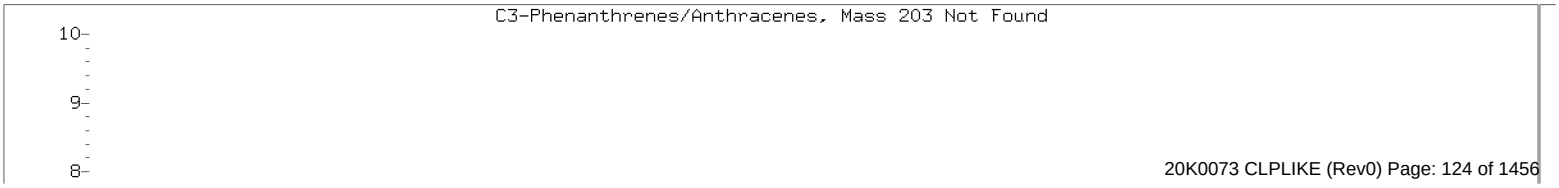

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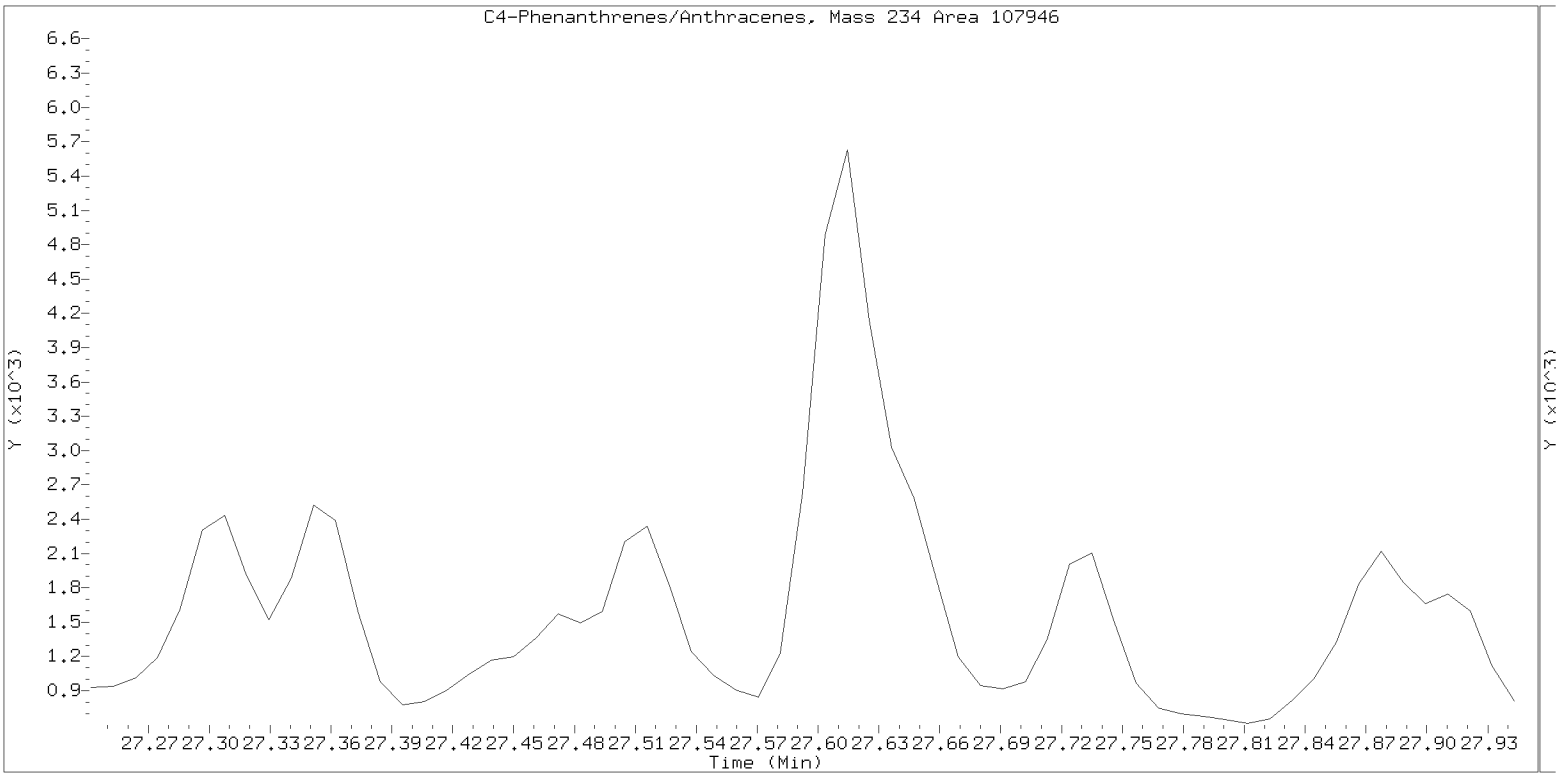

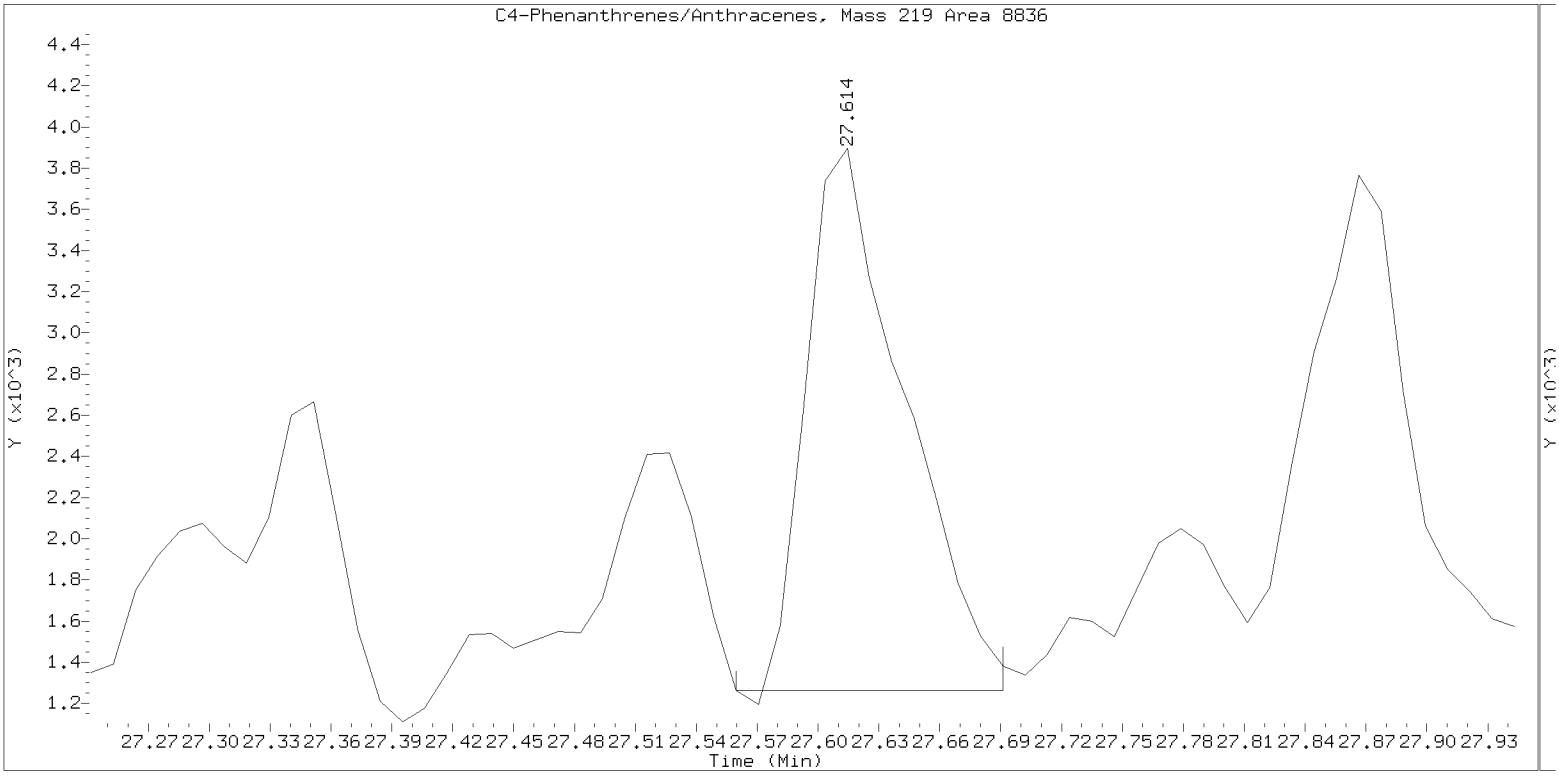

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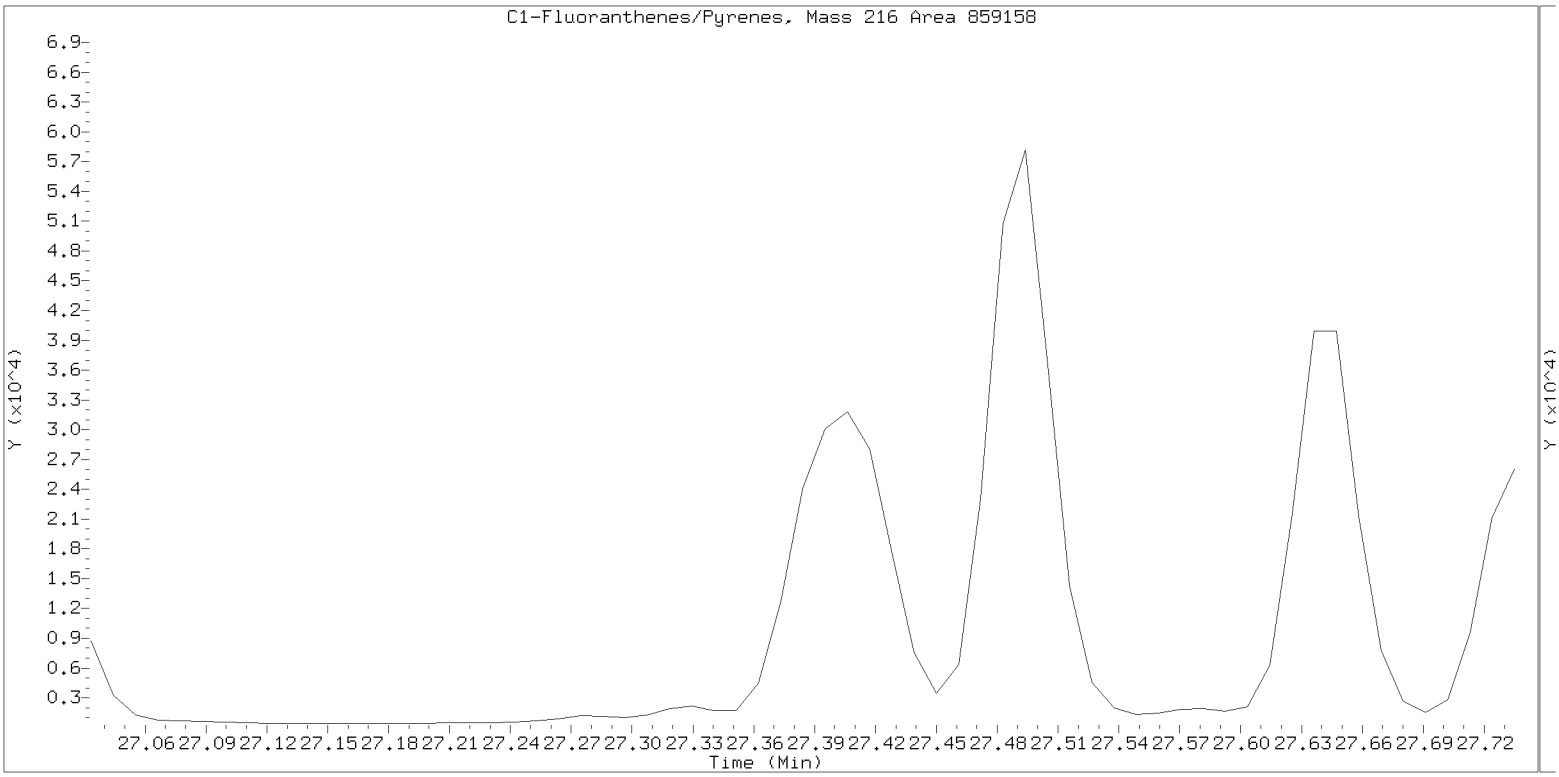

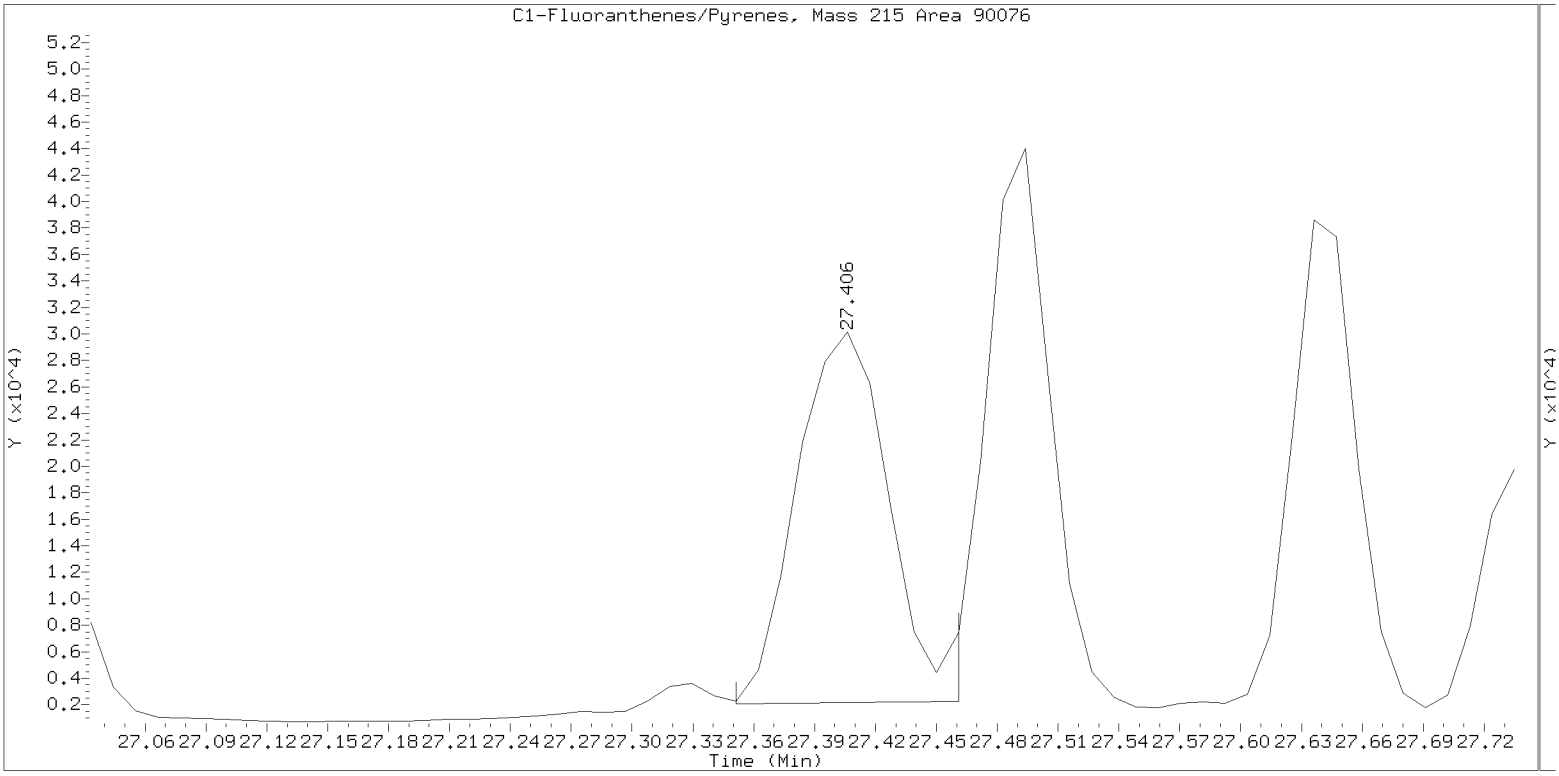

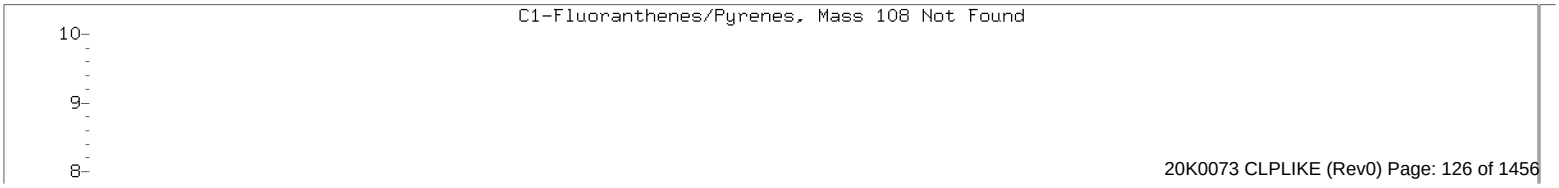

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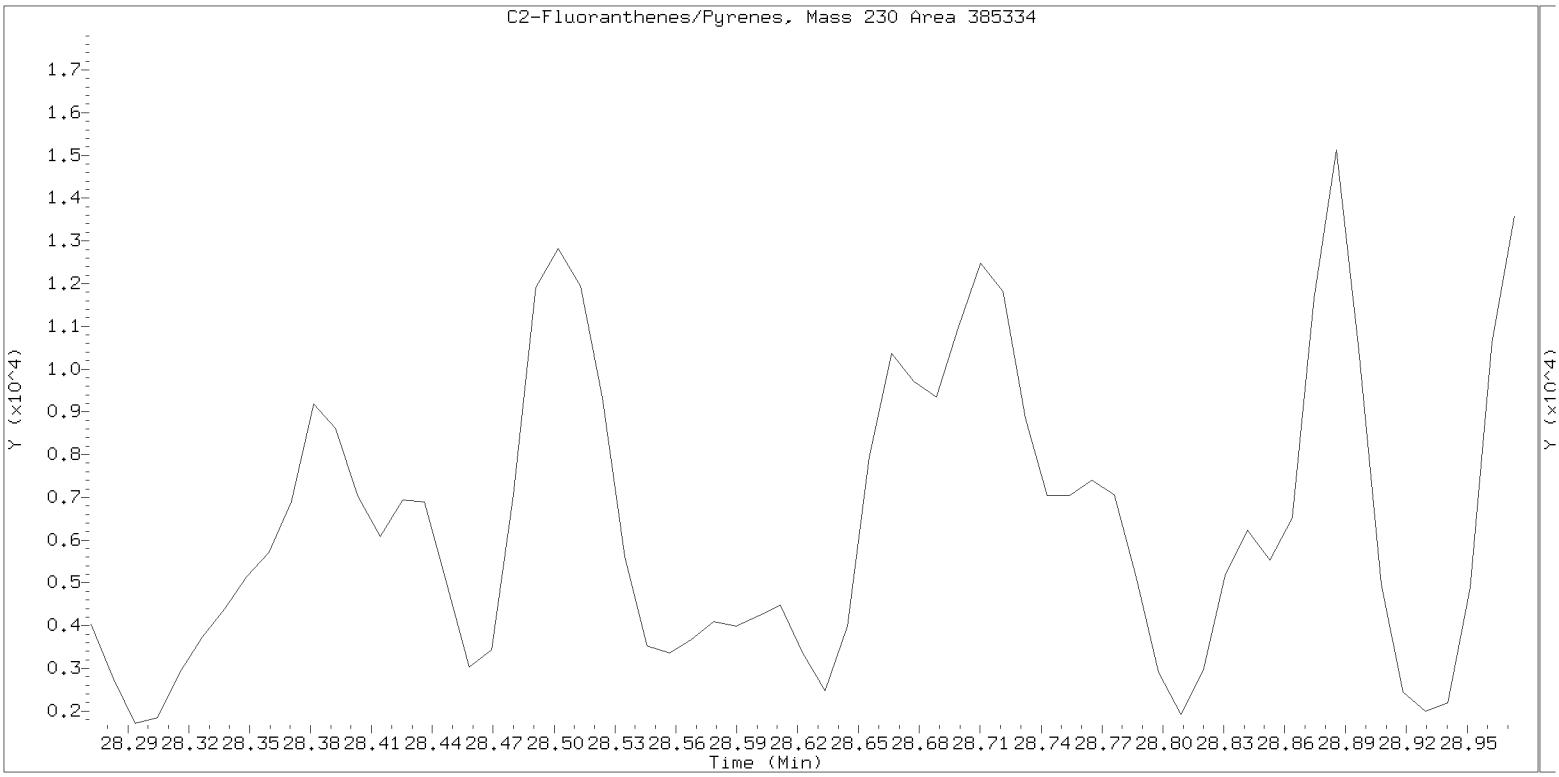

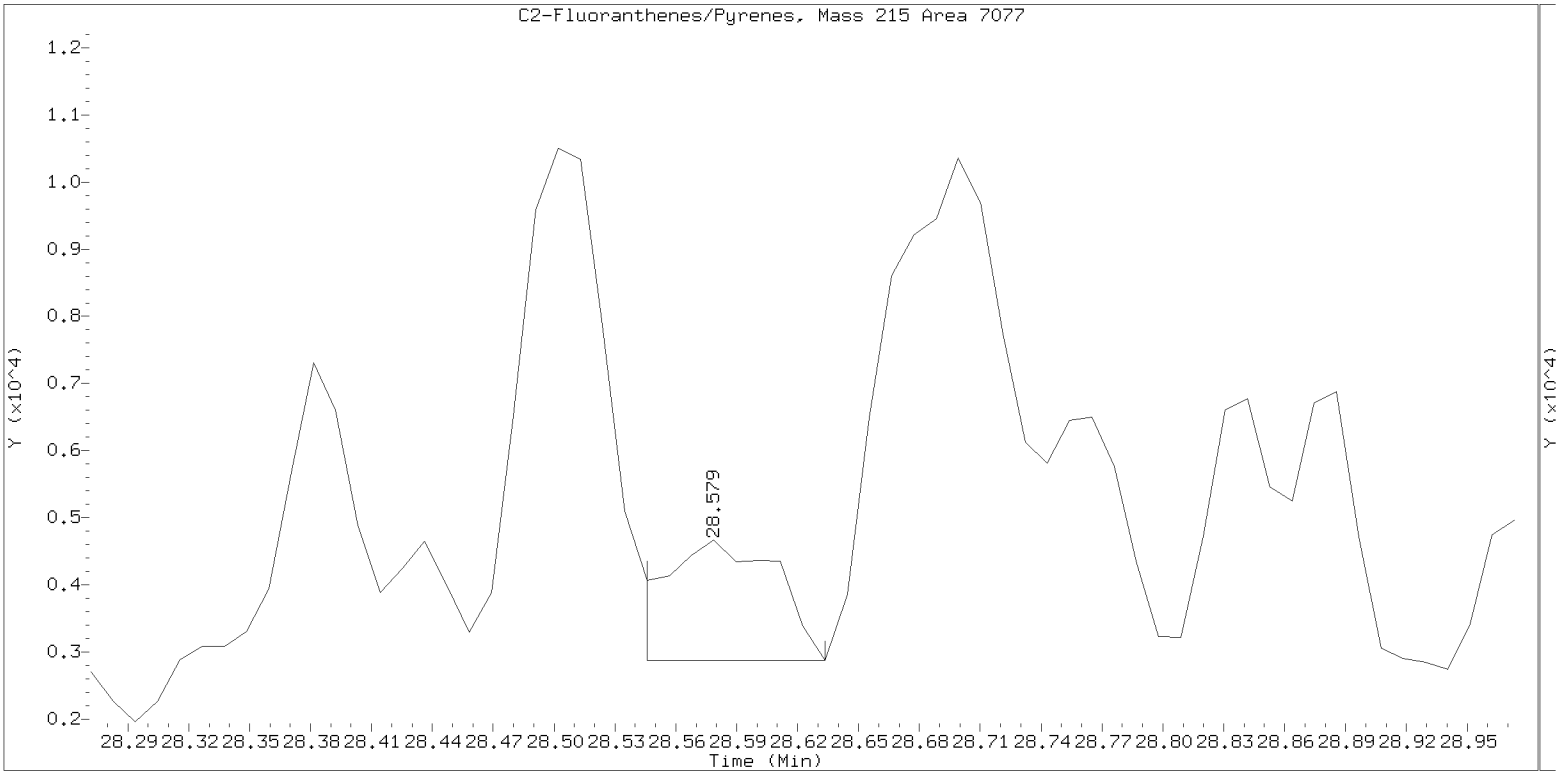

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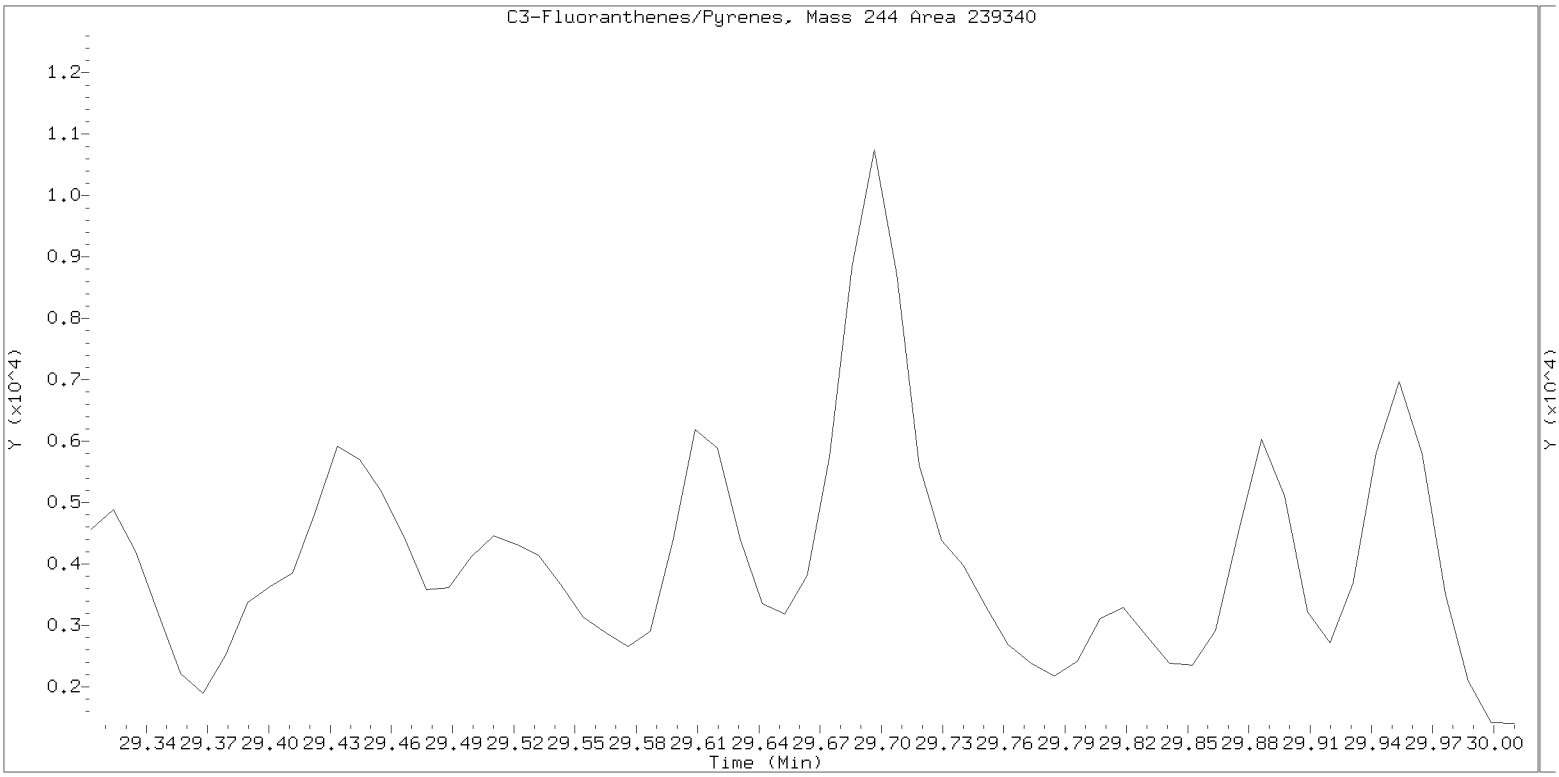

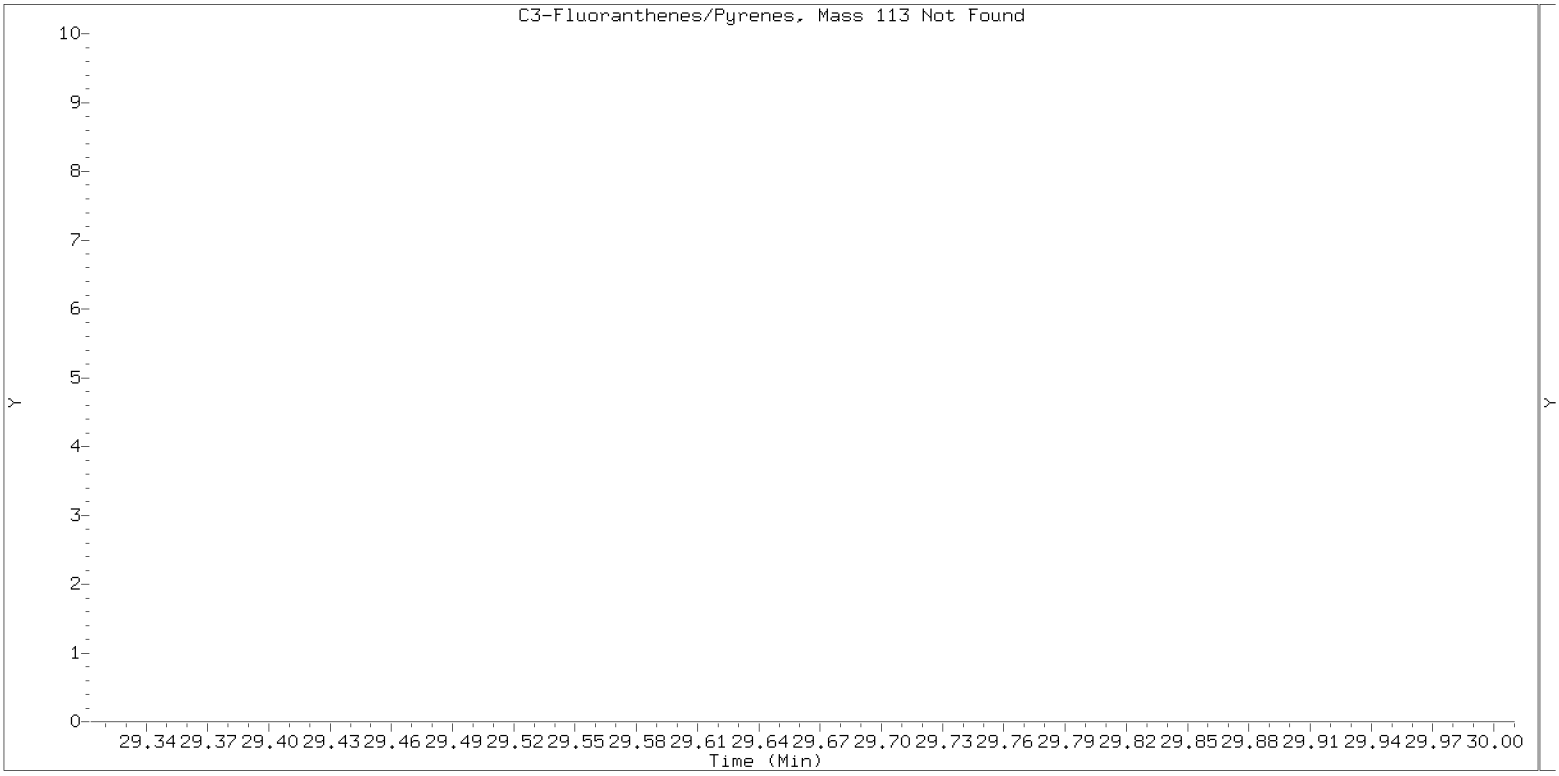

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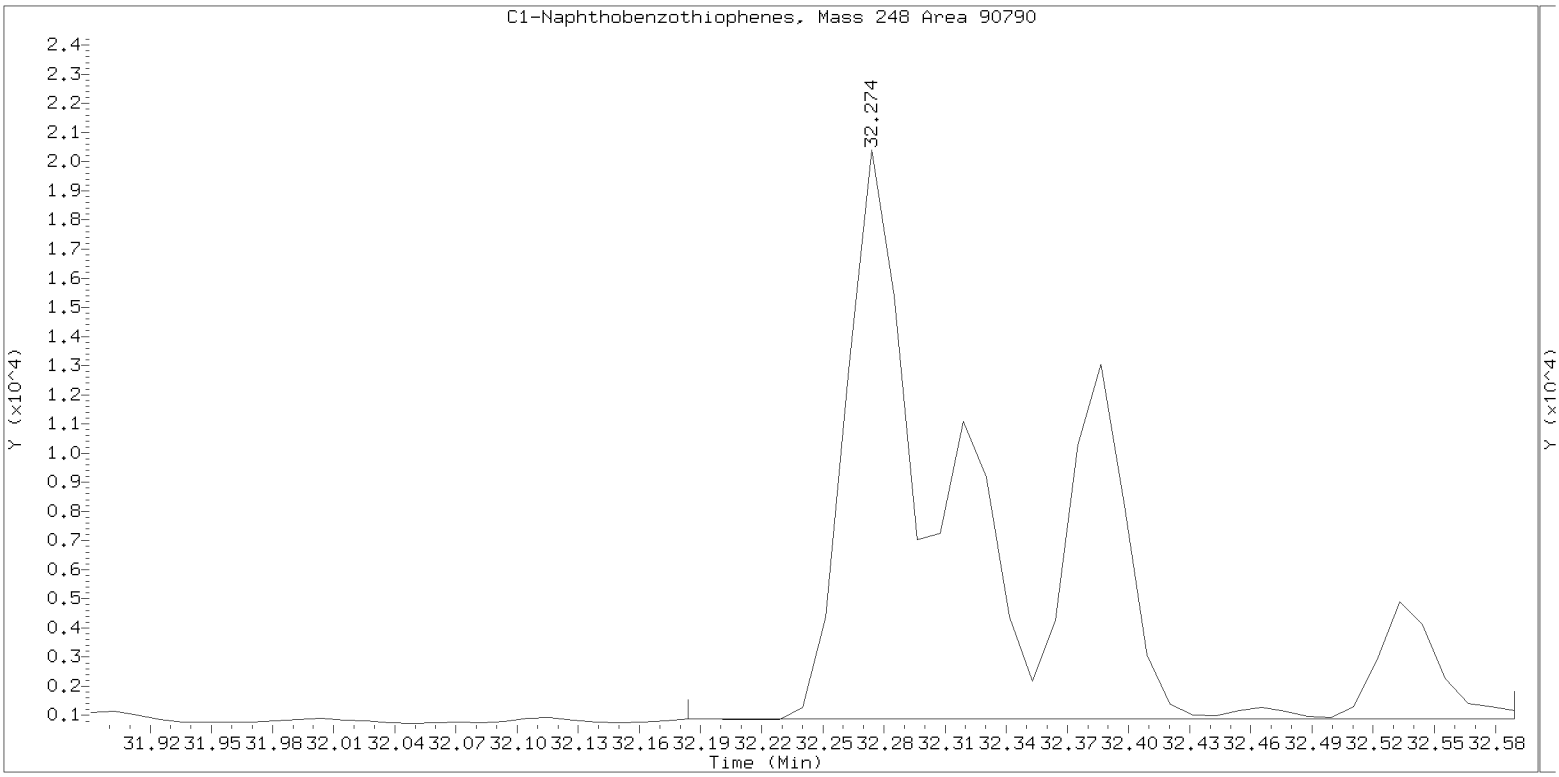

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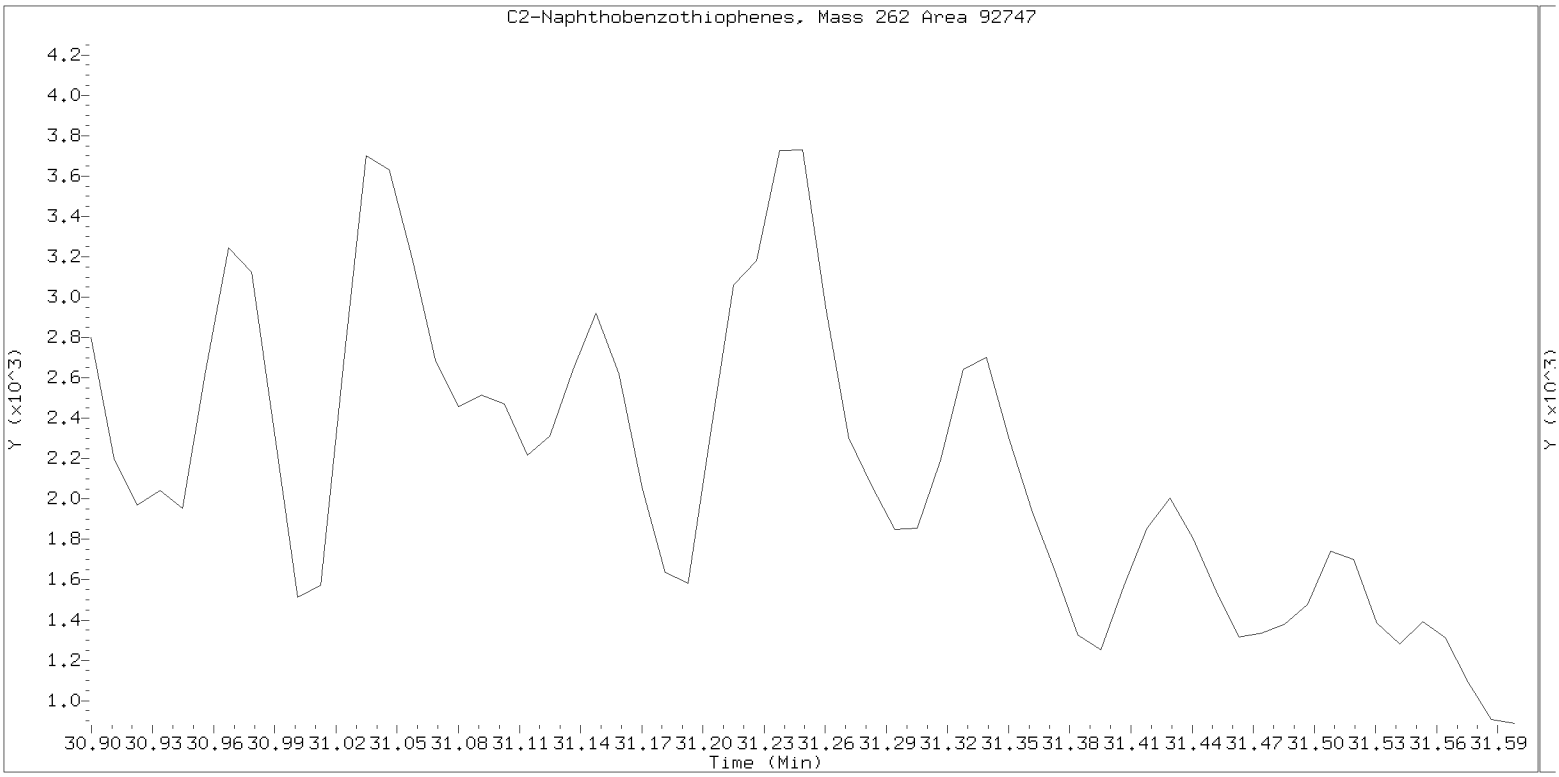

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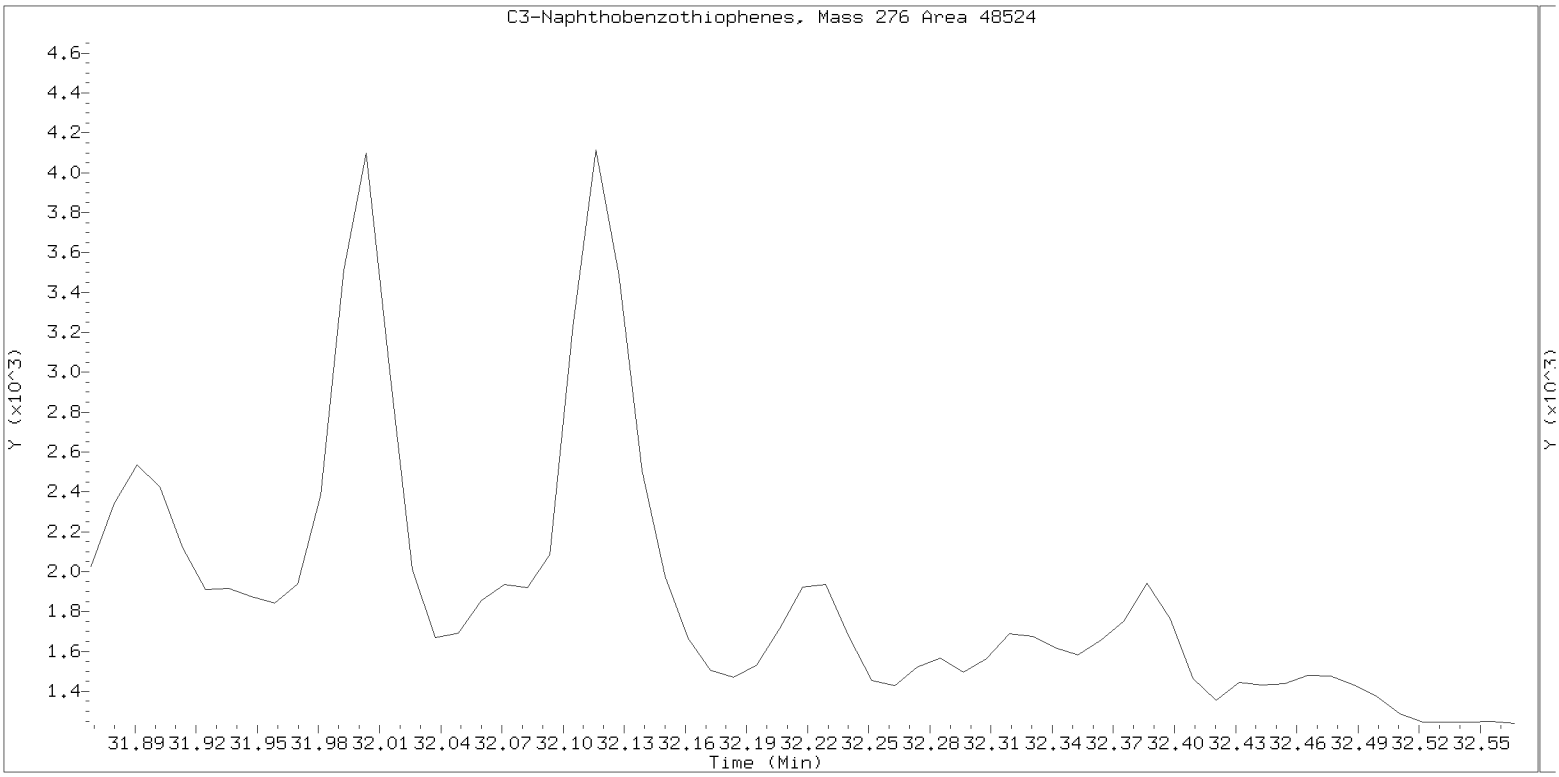

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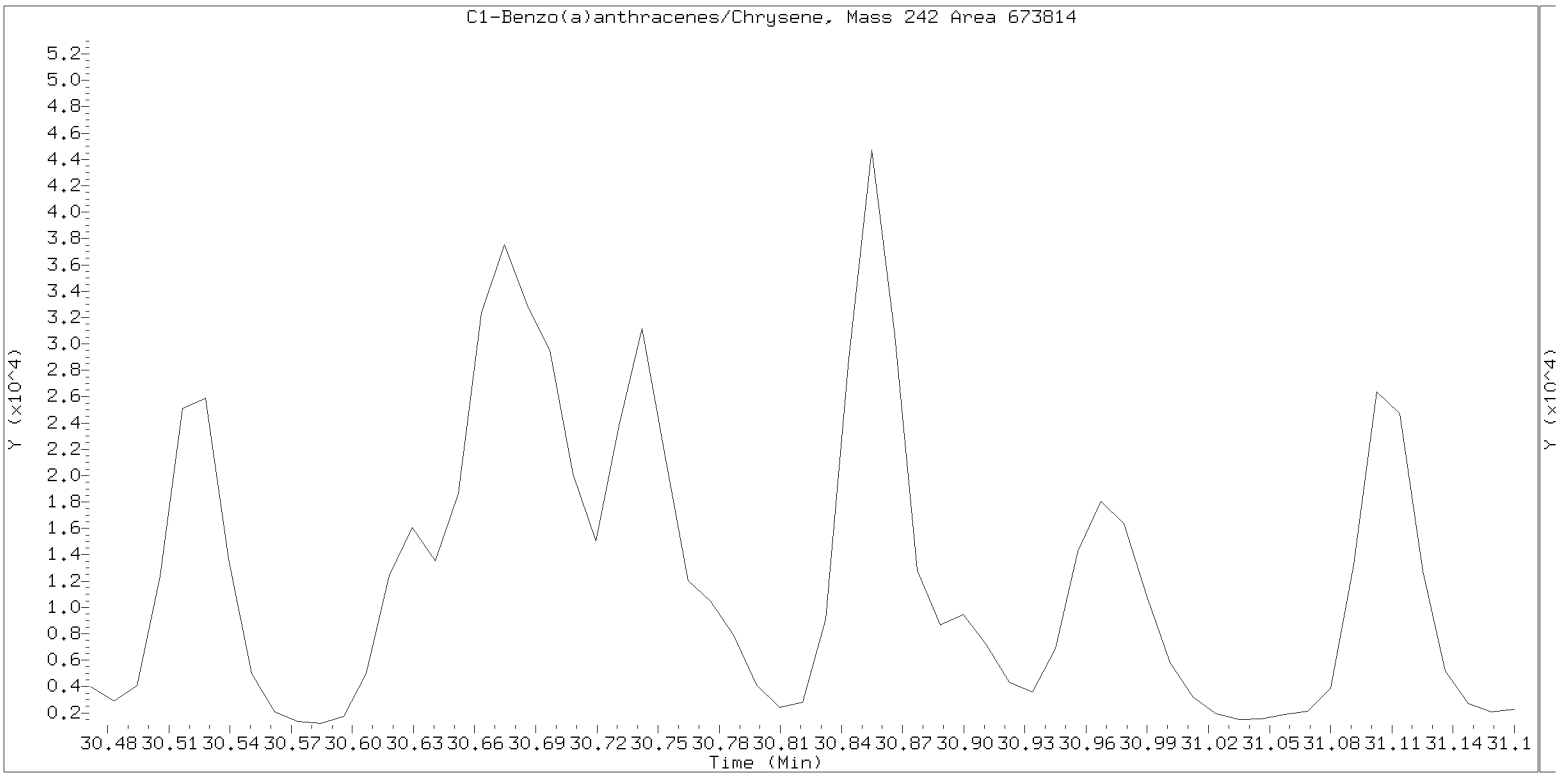

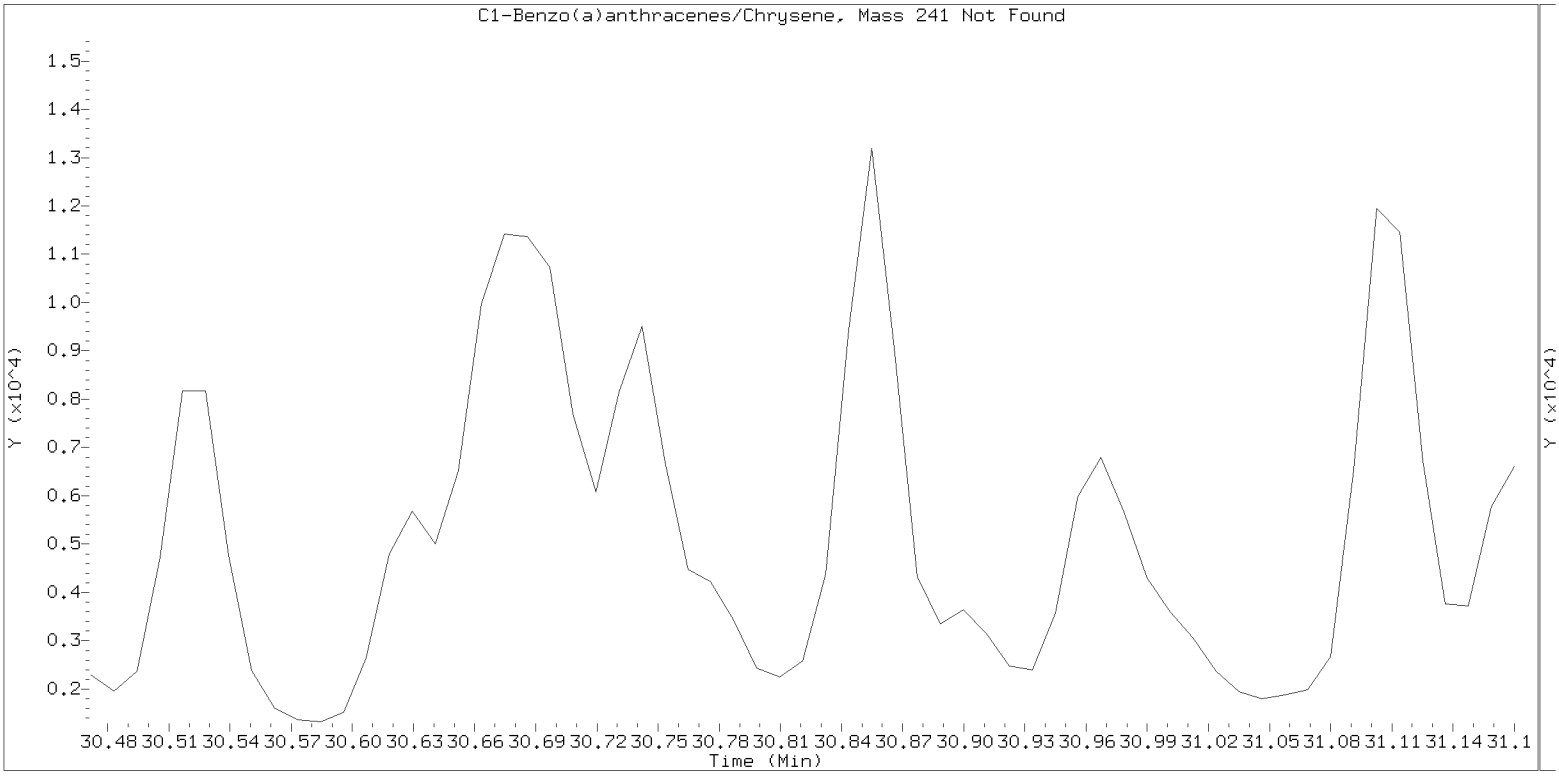

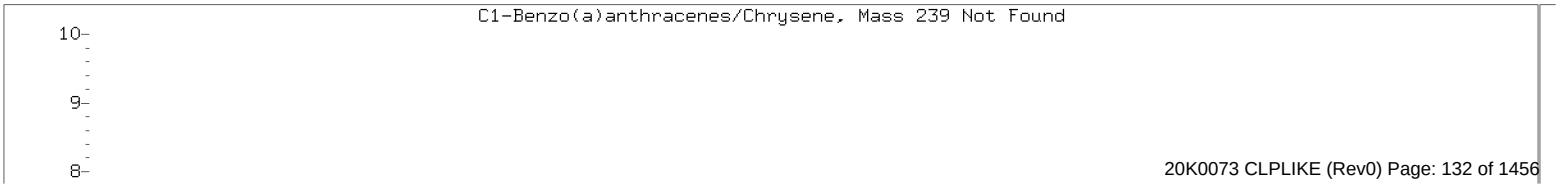

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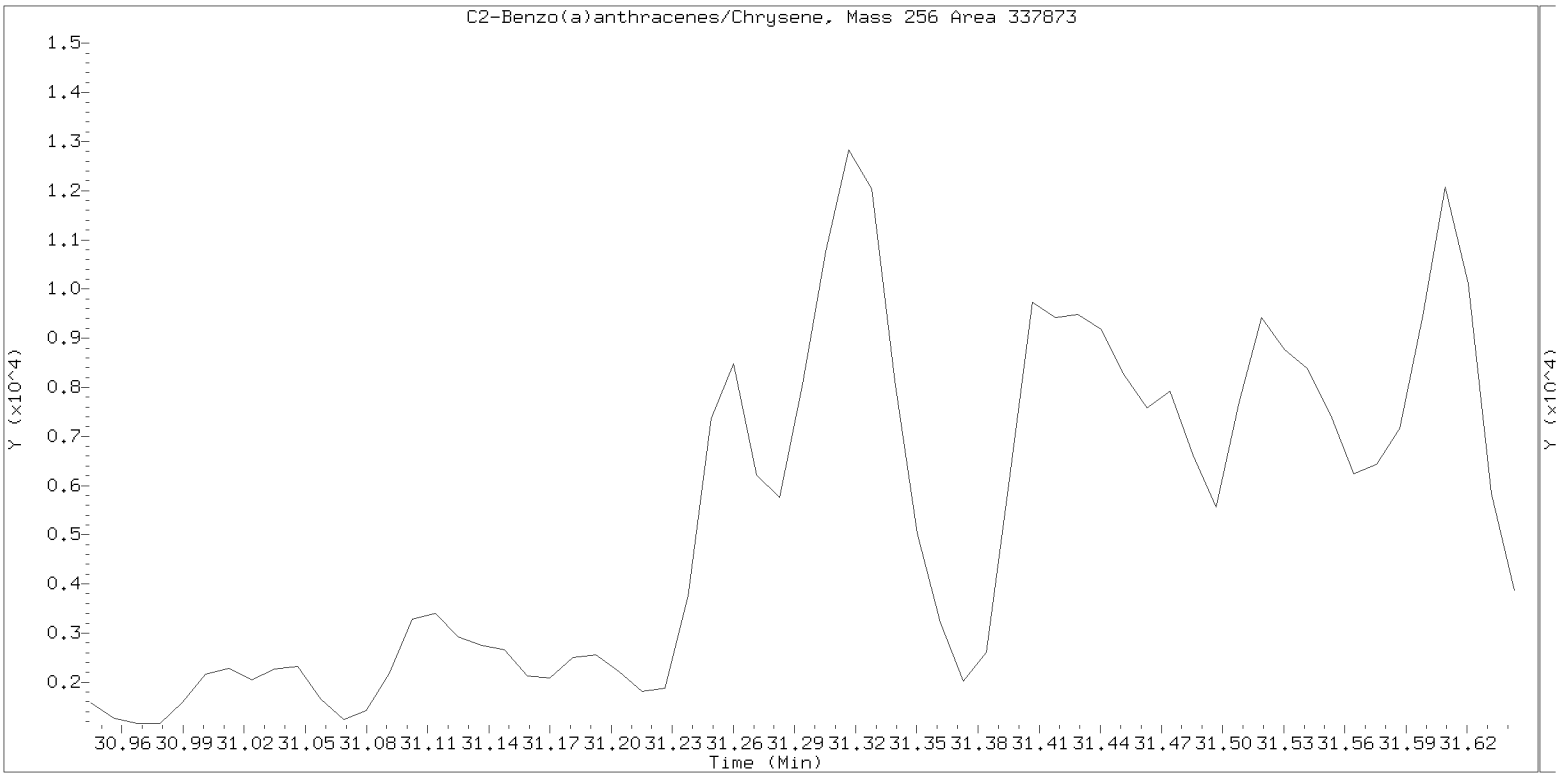

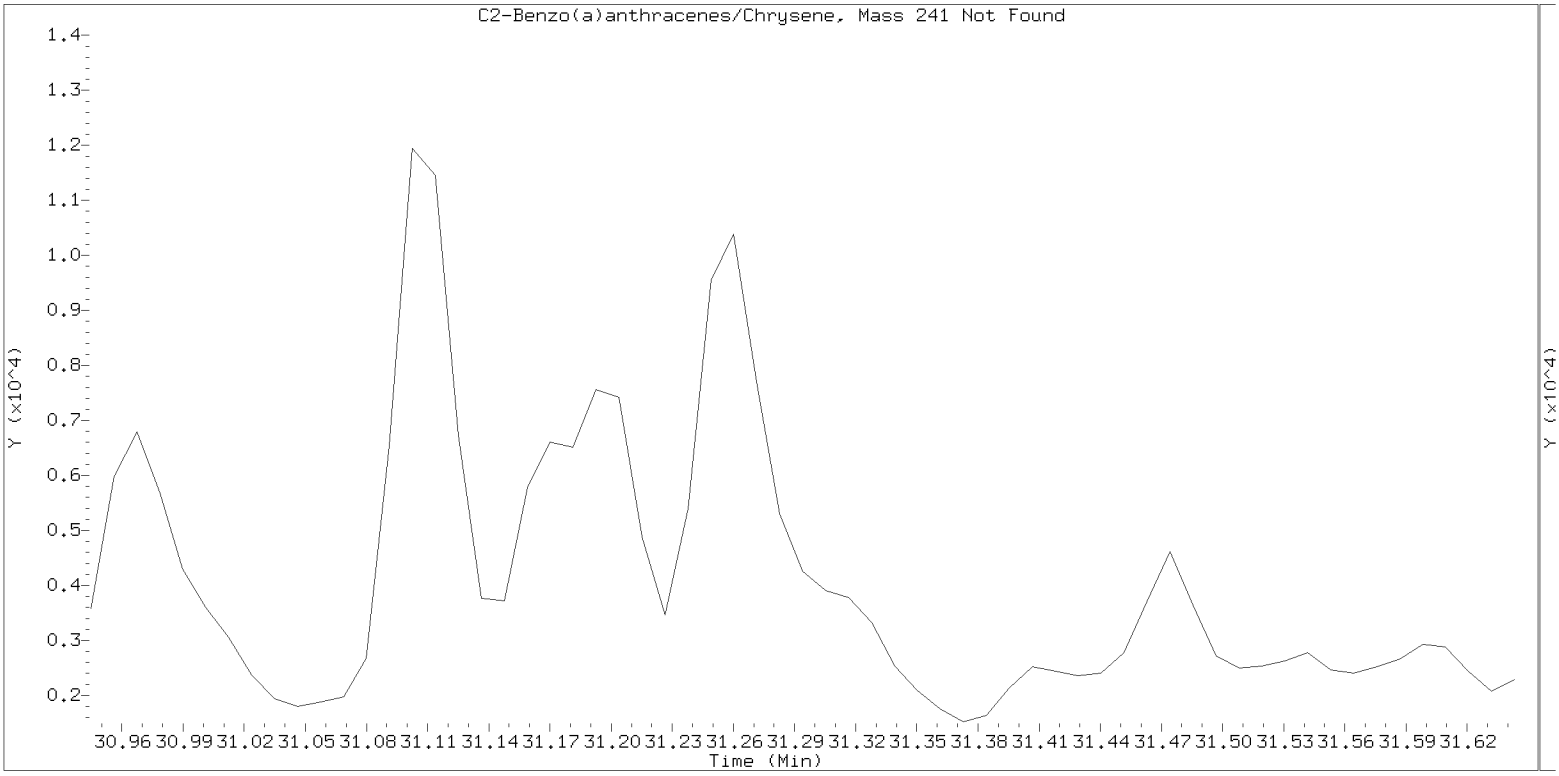

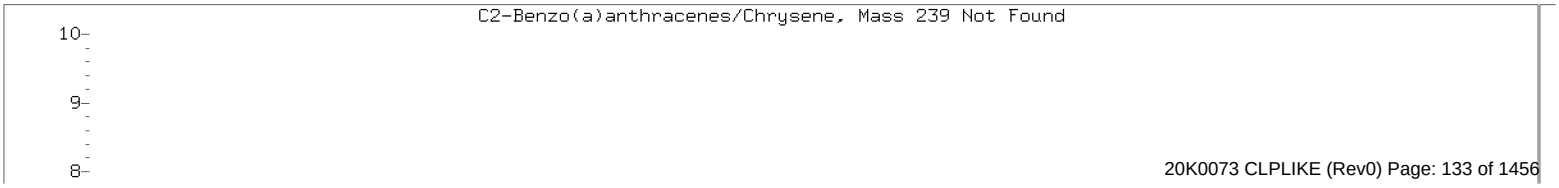

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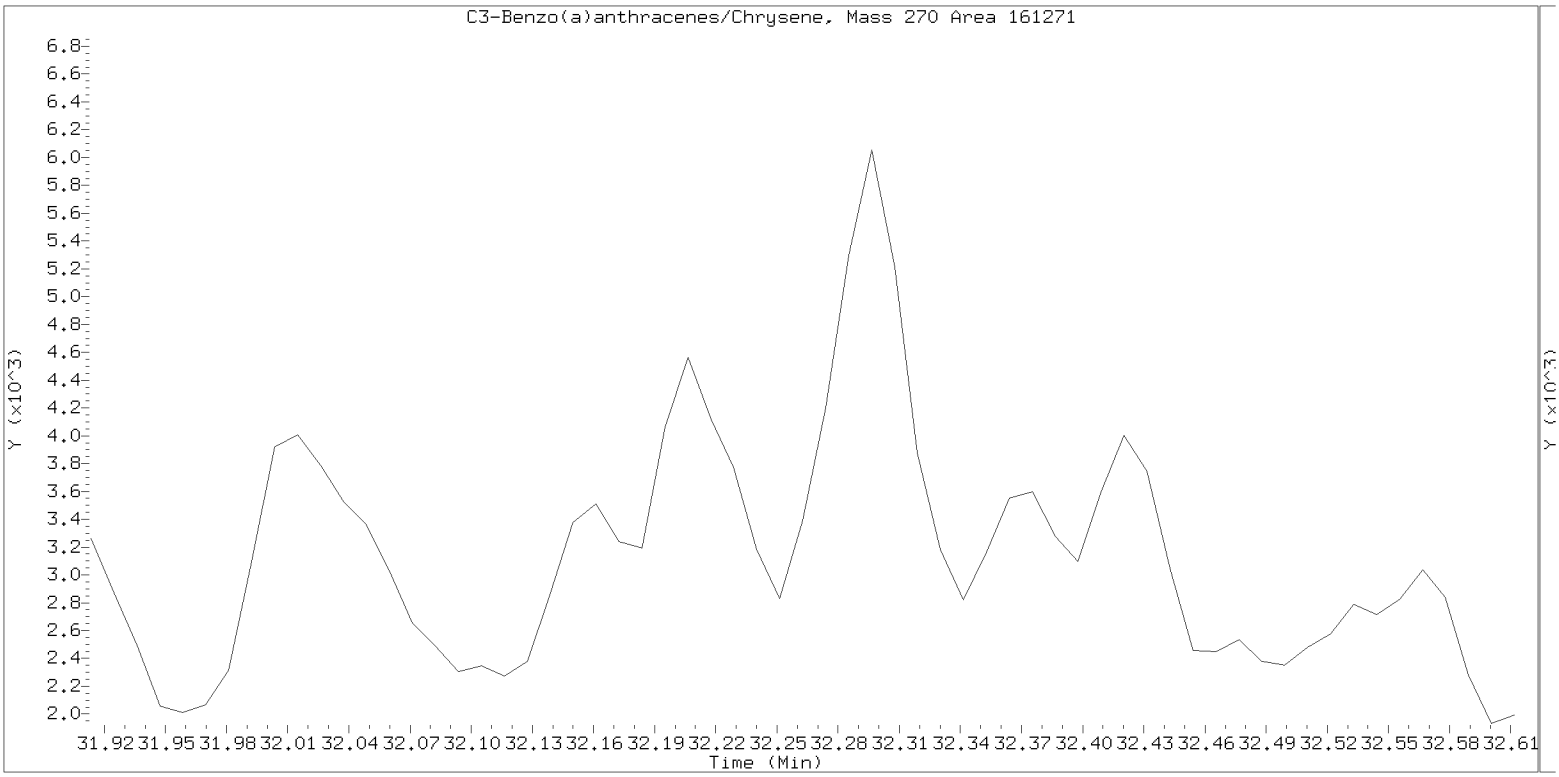

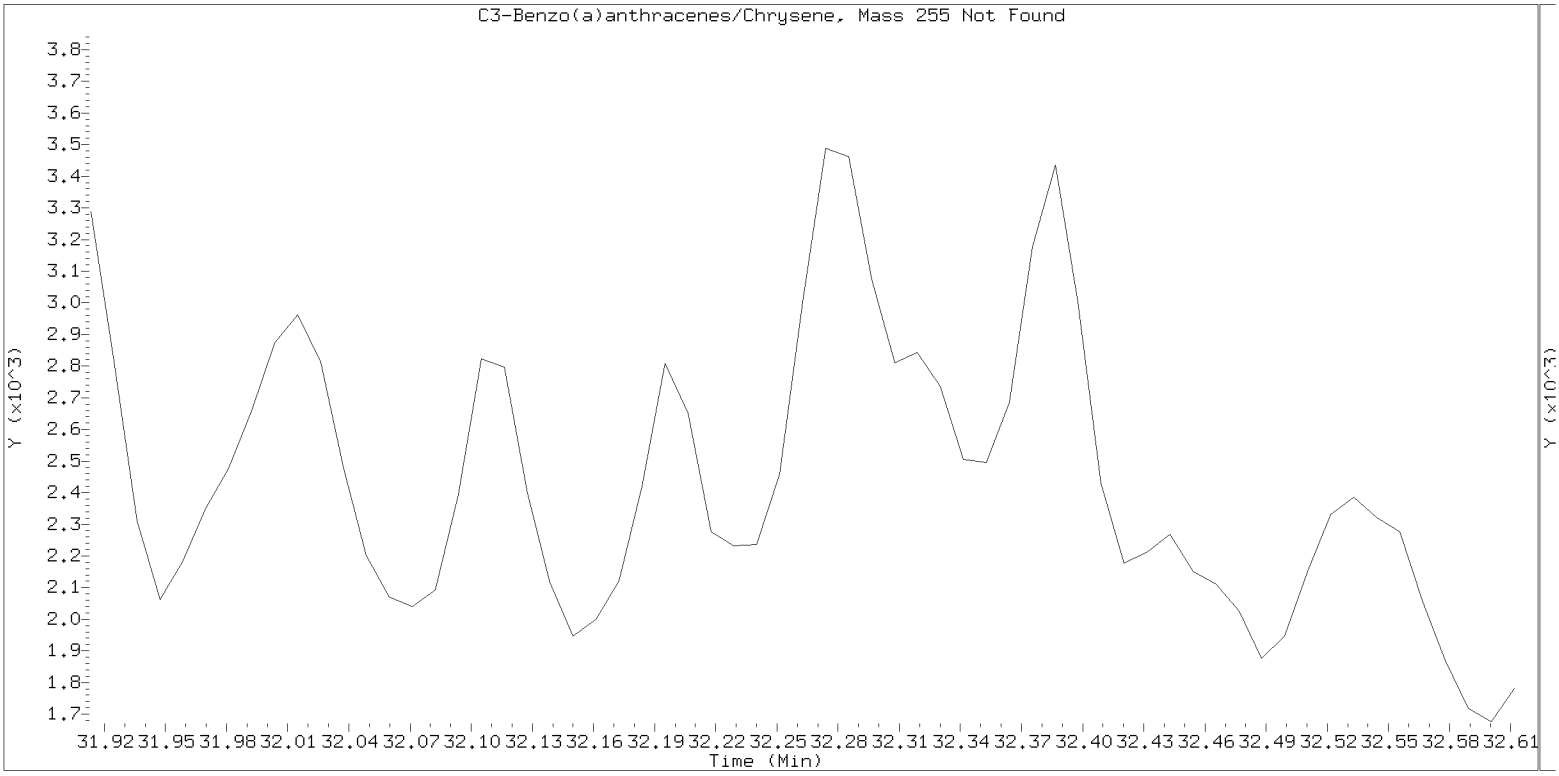

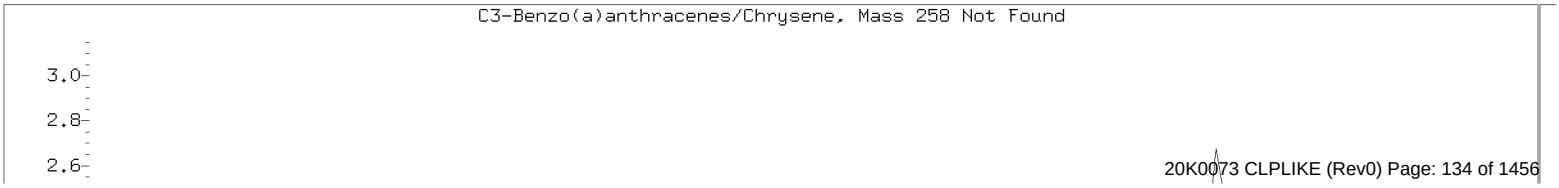

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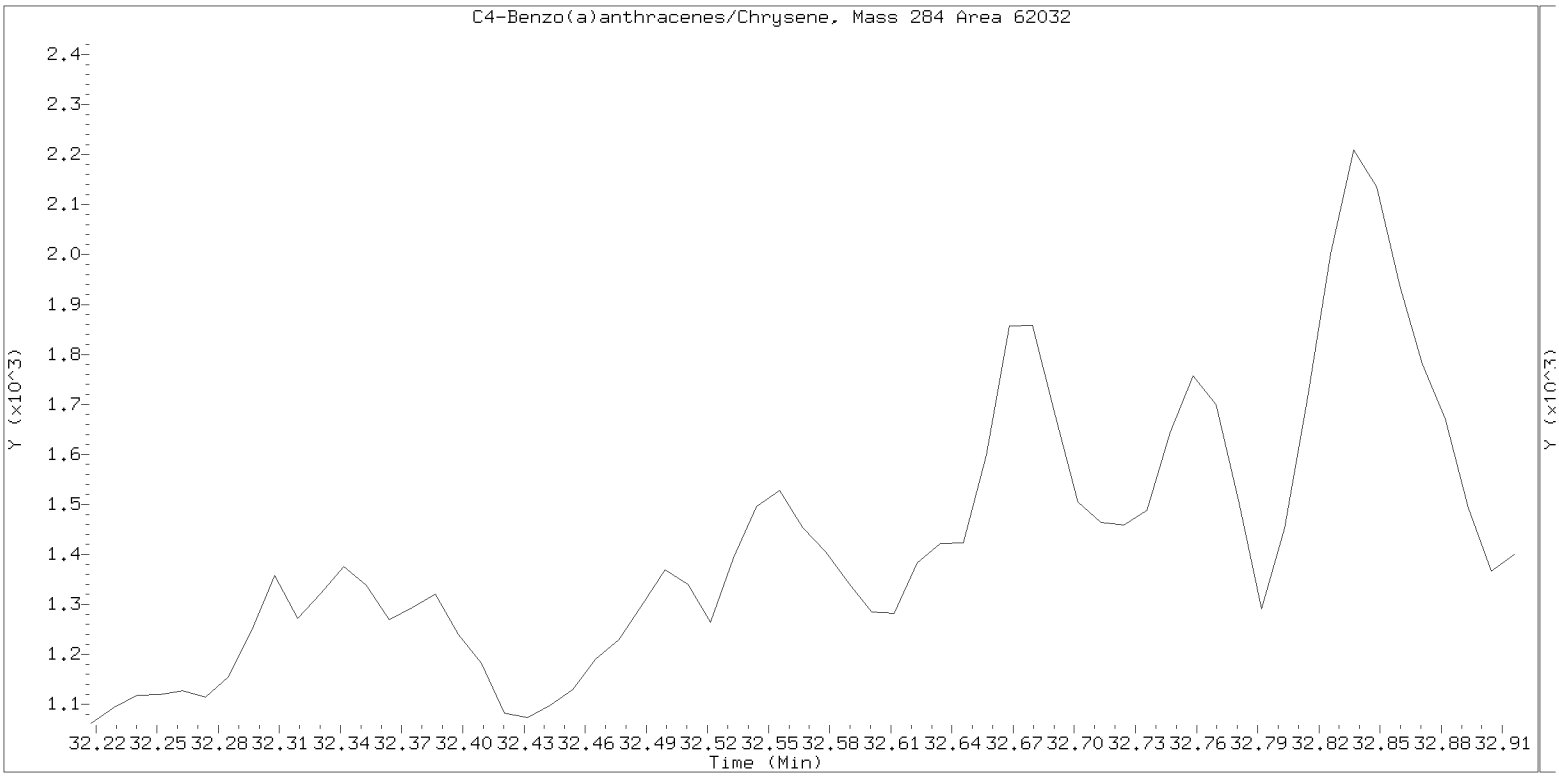

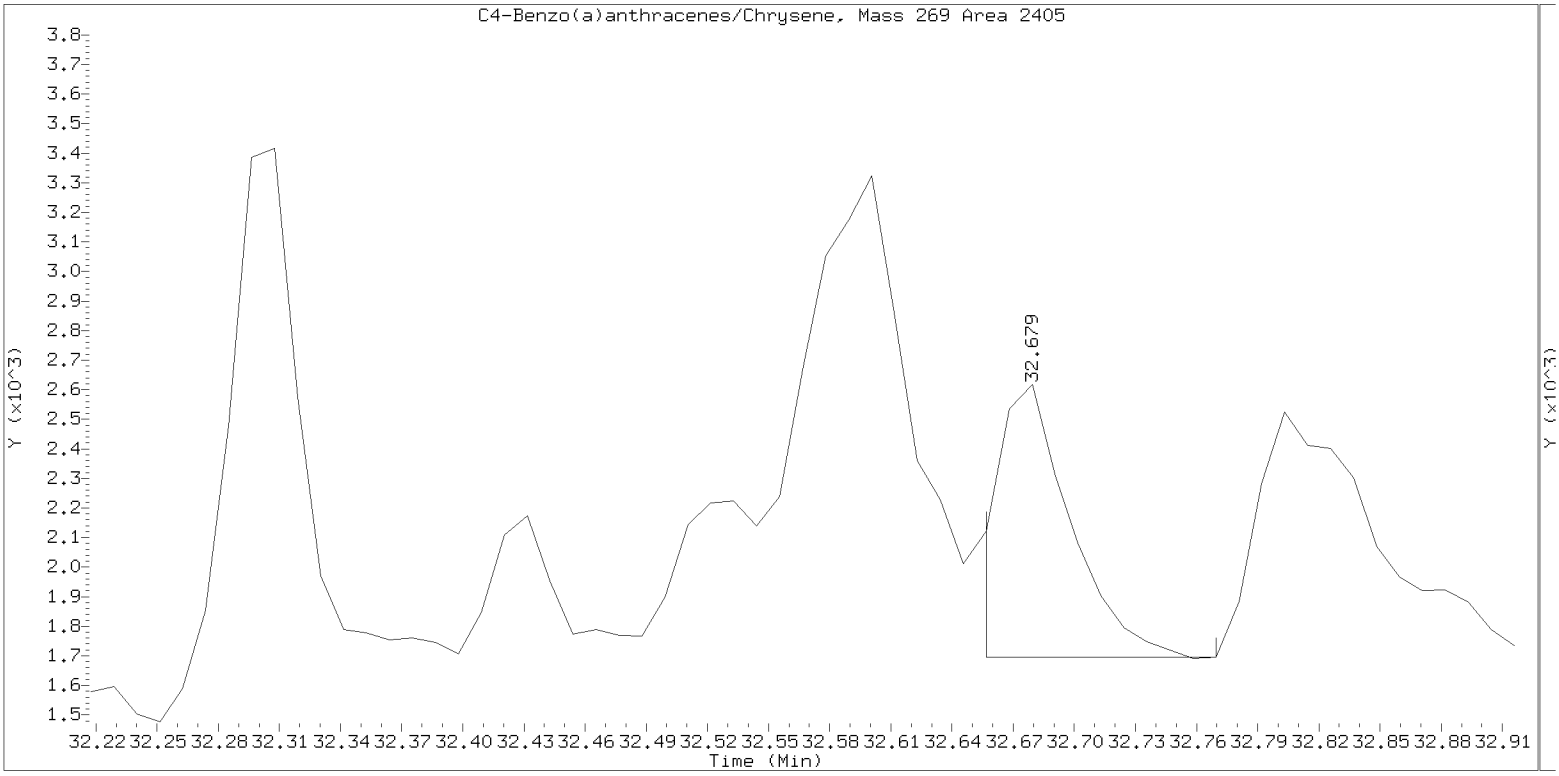

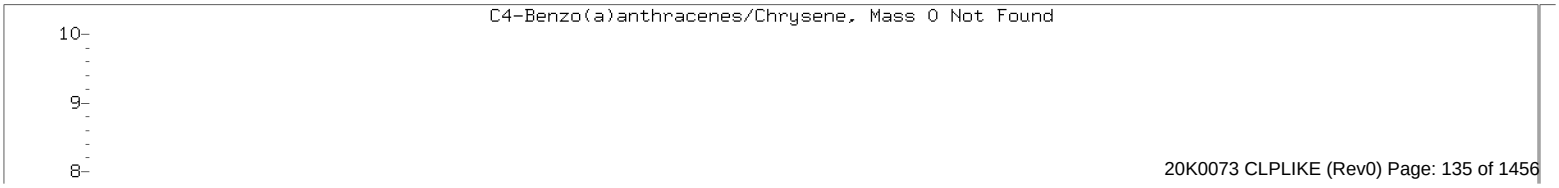

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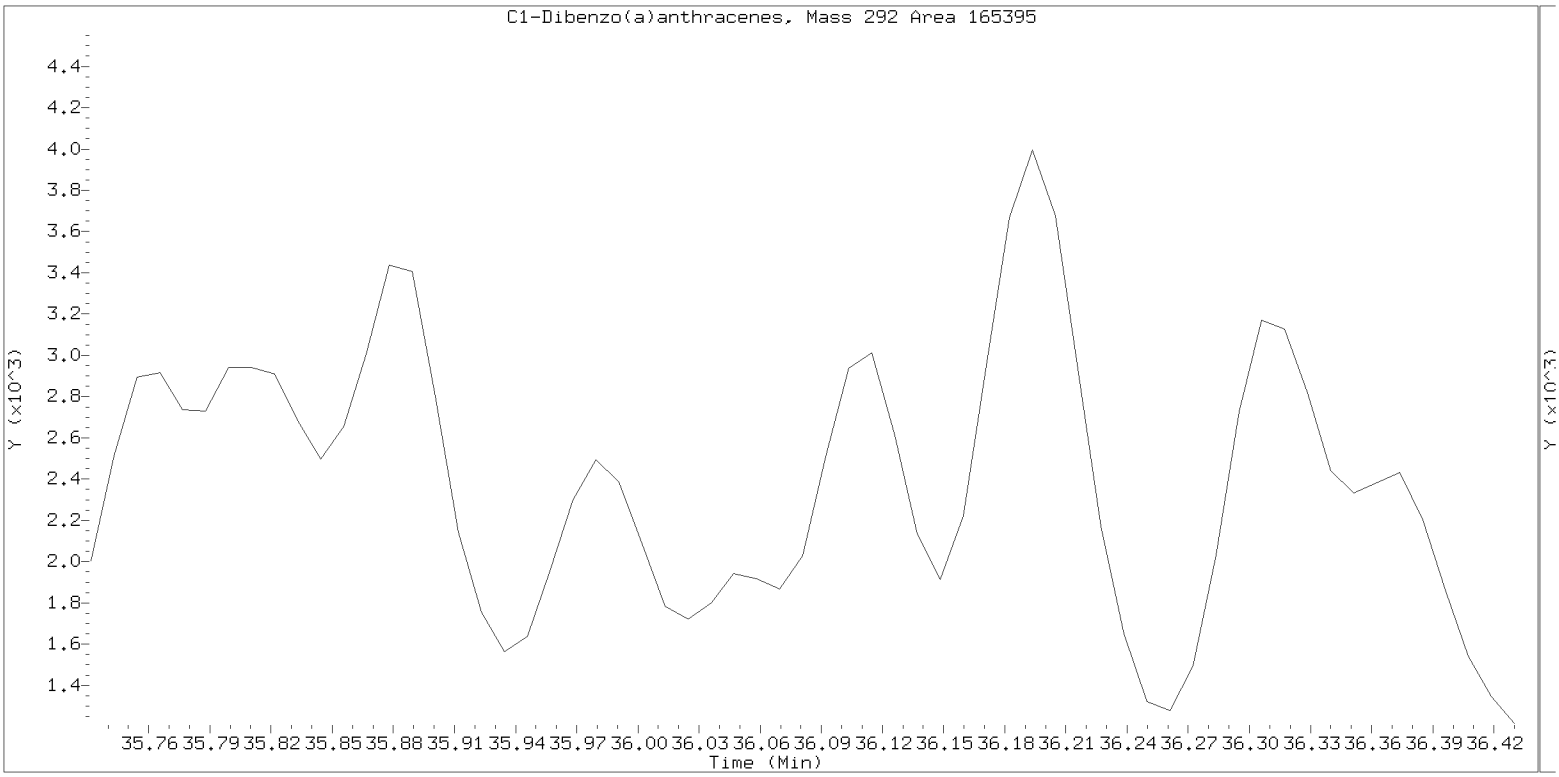

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nt14.i, sim.b\ALKYLRANGE.m, 12-DEC-2020 21:35

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-A-00-01-201029

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

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-01RE1 A	SDG:	20K0073
Sampled:	10/29/20 10:40	Prepared:	11/11/20 13:05	File ID:	NT1420121520.D
% Solids:	81.46	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/16/20 03:00
Batch:	BIK0323	Sequence:	SIL0233	Initial/Final:	12.29 g Wet / 0.5 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	DJ00029
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
493-02-7	trans-Decalin	2	10.0	U	0.06	10.0
493-01-6	cis-Decalin	2	10.0	U	1.0	10.0
91-20-3	Naphthalene	2	41.4	D	0.9	10.0
90-12-0	1-Methylnaphthalene	2	8.1	J, D	0.8	10.0
91-57-6	2-Methylnaphthalene	2	18.8	D	0.9	10.0
92-52-4	Biphenyl	2	5.6	J, D	0.7	10.0
581-42-0	2,6-Dimethylnaphthalene	2	15.6	D	0.8	10.0
208-96-8	Acenaphthylene	2	17.4	D	0.5	10.0
83-32-9	Acenaphthene	2	122	D	0.9	10.0
132-64-9	Dibenzofuran	2	9.0	J, D	0.8	10.0
2245-38-7	2,3,5-Trimethylnaphthalene	2	10.3	D	0.9	10.0
86-73-7	Fluorene	2	53.9	D	0.9	10.0
95-15-8	Benzo(b)thiophene	2	3.2	J, D	0.7	10.0
85-01-8	Phenanthrene	2	458	D	1.9	10.0
120-12-7	Anthracene	2	46.9	D	0.09	10.0
86-74-8	Carbazole	2	19.0	D	1.4	10.0
832-69-9	1-Methylphenanthrene	2	40.7	D	1.0	10.0
206-44-0	Fluoranthene	2	566	D	2.7	10.0
132-65-0	Dibenzothiophene	2	22.6	D	1.3	10.0
129-00-0	Pyrene	2	701	D	2.0	10.0
56-55-3	Benzo(a)anthracene	2	224	D	2.8	10.0
218-01-9	Chrysene	2	283	D	1.4	10.0
205-99-2	Benzo(b)fluoranthene	2	192	D	1.6	10.0
205-82-3	Benzo(j)fluoranthene	2	123	D	1.4	10.0
207-08-9	Benzo(k)fluoranthene	2	113	D	1.6	10.0
	Benzofluoranthenes, Total	2	432	D	6.0	20.0
197-97-2	Benzo(e)pyrene	2	264	D	1.2	10.0
50-32-8	Benzo(a)pyrene	2	335	D	2.0	10.0
193-39-5	Indeno(1,2,3-cd)pyrene	2	195	Q, D	0.7	10.0
53-70-3	Dibenzo(a,h)anthracene	2	25.9	Q, D	1.3	10.0

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-A-00-01-201029

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

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Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
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Batch:	BIK0323	Sequence:	SIL0233	Initial/Final:	12.29 g Wet / 0.5 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	DJ00029
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
191-24-2	Benzo(g,h,i)perylene	2	354	D	1.0	10.0
1985-5-0	Perylene	2	148	D	0.9	10.0
239-35-0	Benzo(b)naphtho(2,1-d)thiophene	2	44.6	D	10.0	10.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
Naphthalene-d8	149.83	91.3	60.9	30 - 160	
Acenaphthene-d10	149.83	95.4	63.6	30 - 160	
Phenanthrene-d10	149.83	126	84.4	30 - 160	
Chrysene-d12	149.83	101	67.5	30 - 160	
Perylene-d12	149.83	81.9	54.7	30 - 160	

Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

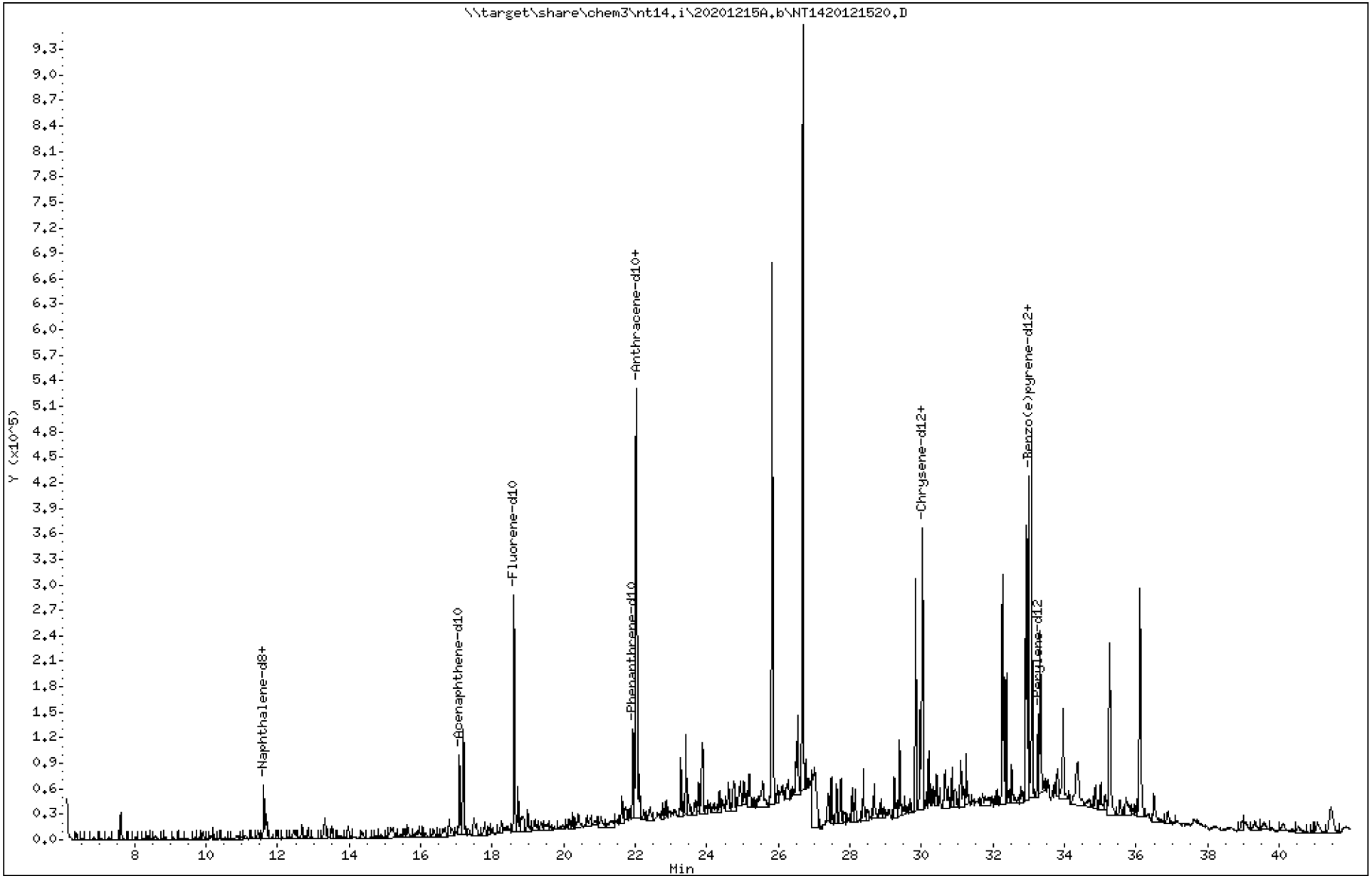
Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



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Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

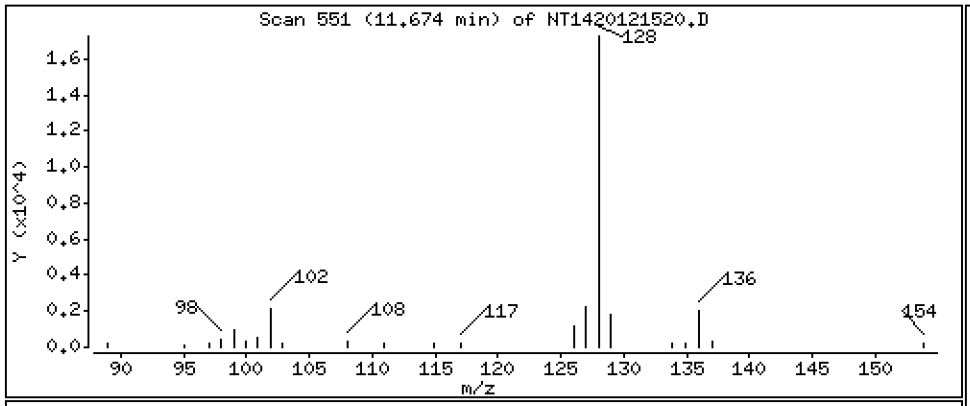
Operator: VTS

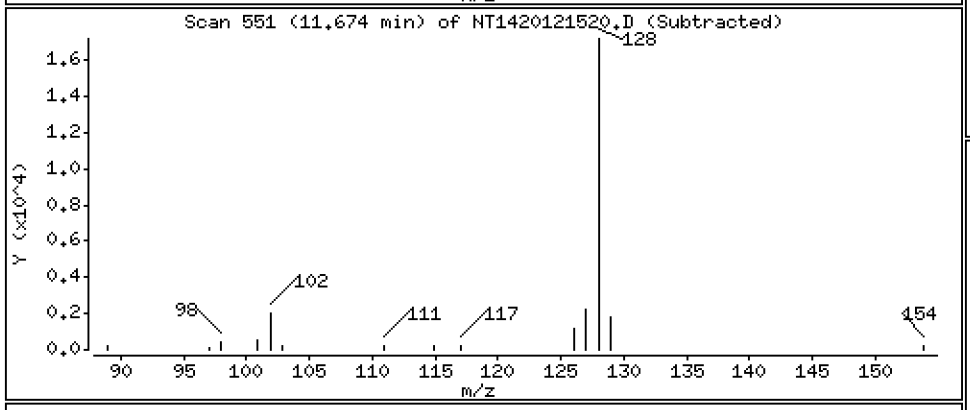
Column phase: Rxi-17Sil MS

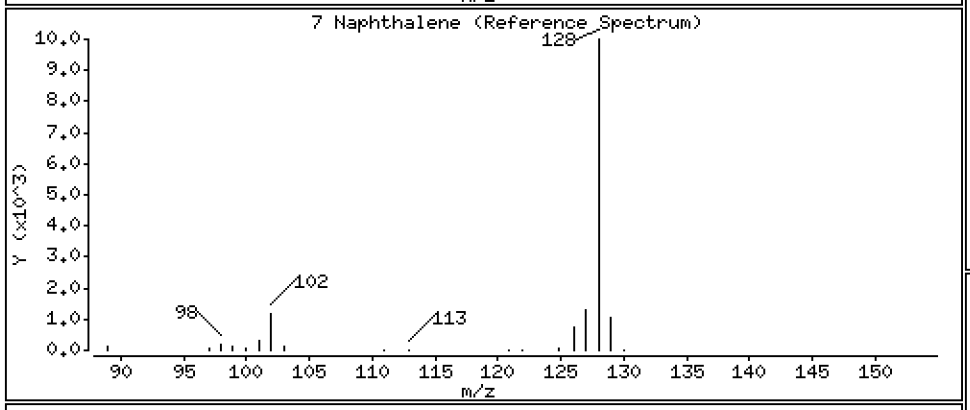
Column diameter: 0.25

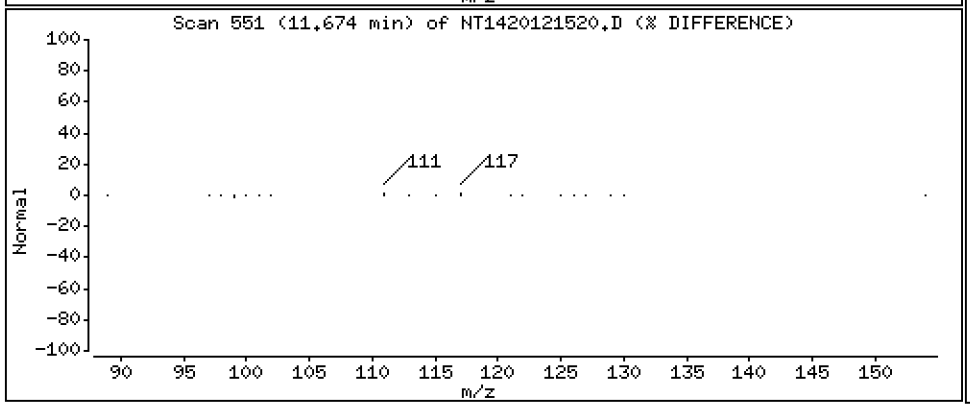
7 Naphthalene

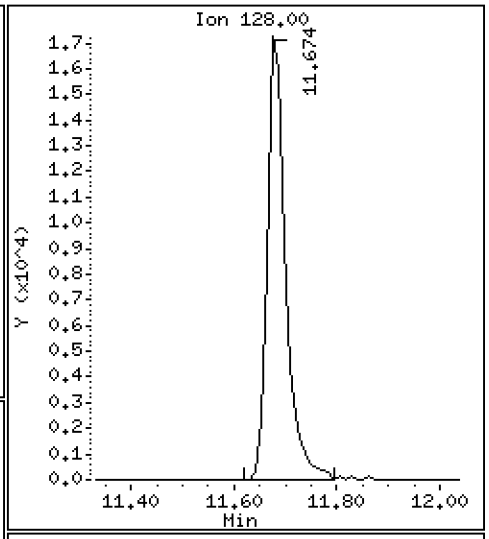
Concentration: 0.8283 ug/mL

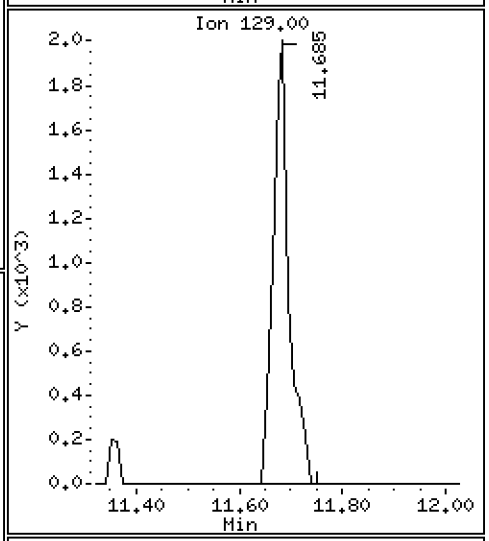


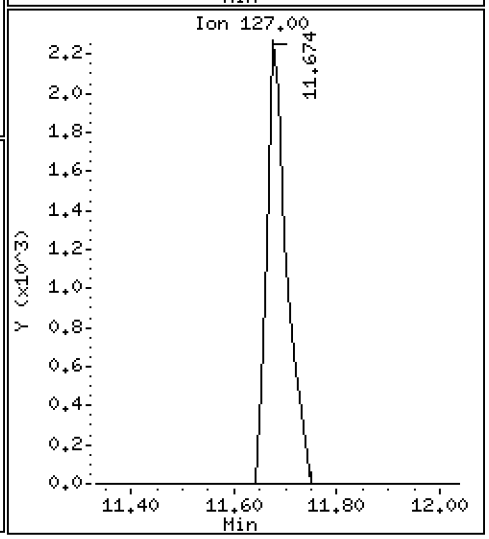












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Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

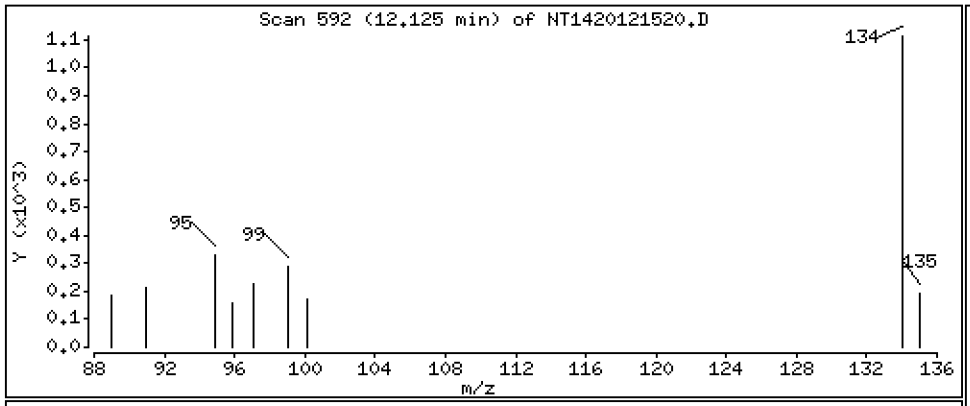
Operator: VTS

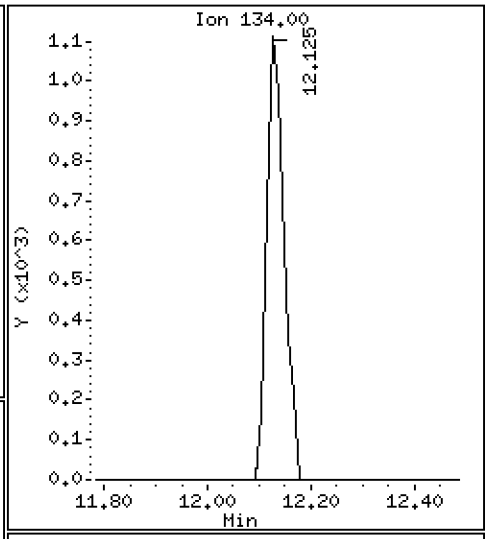
Column phase: Rxi-17Sil MS

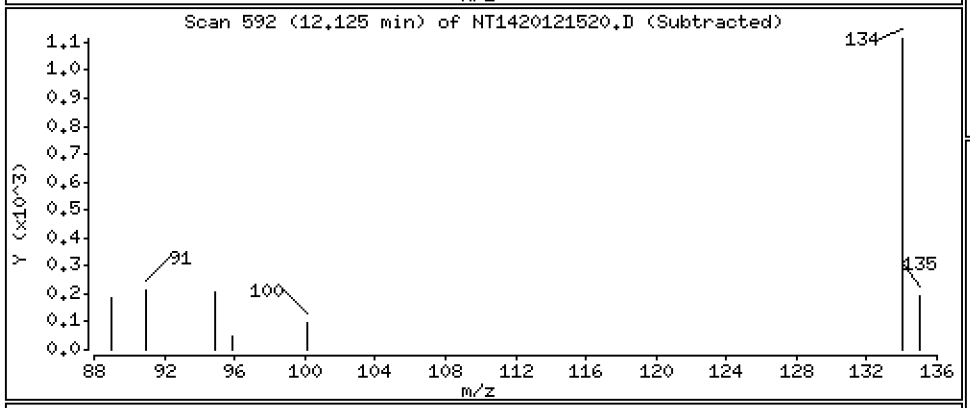
Column diameter: 0.25

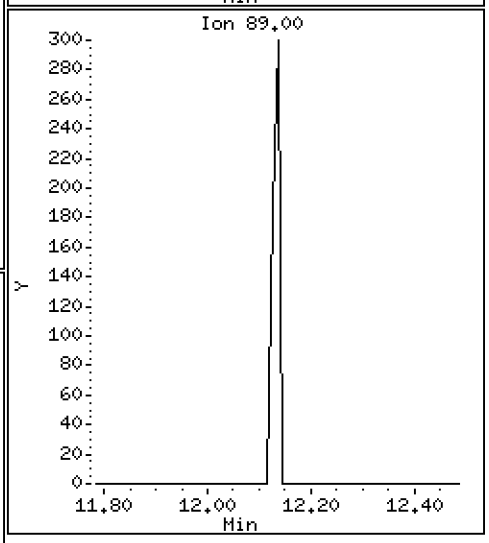
12 Benzo(b)thiophene

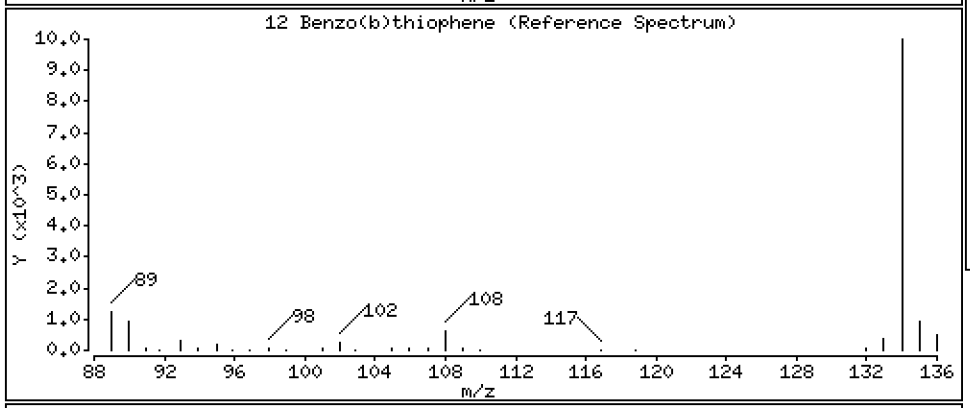
Concentration: 0.06446 ug/mL

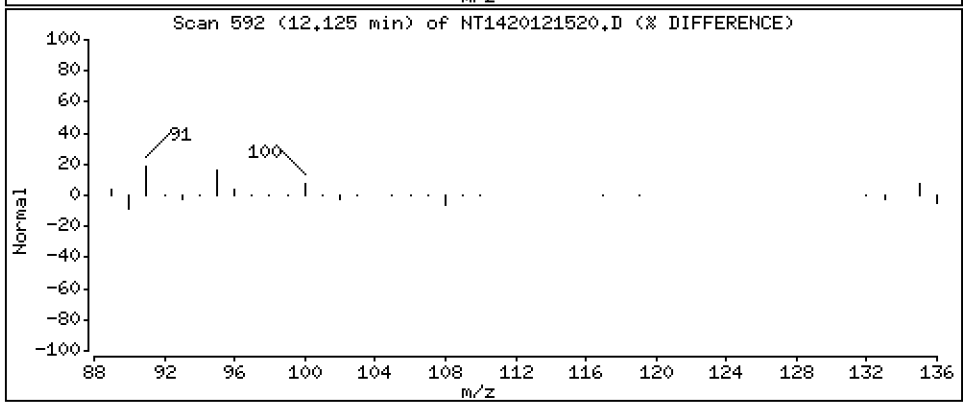












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Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

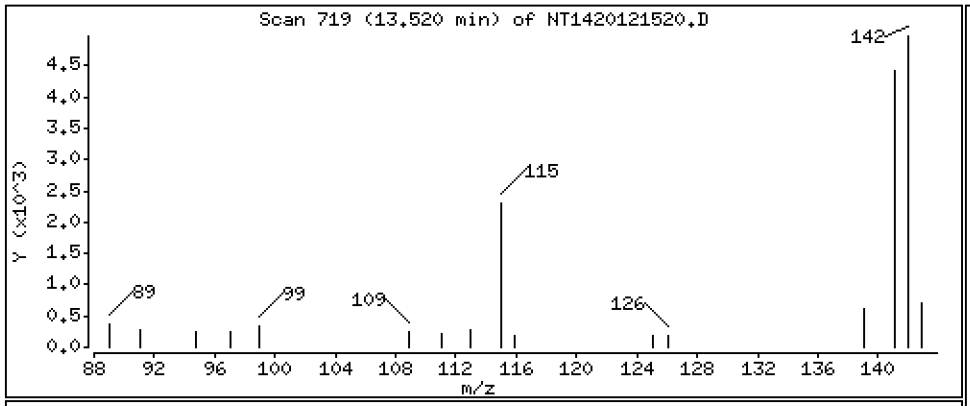
Operator: VTS

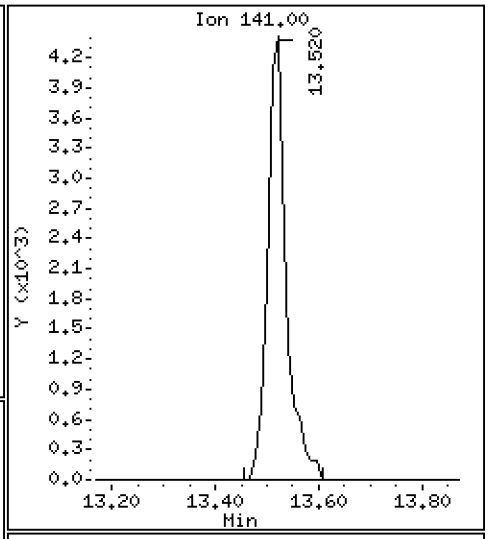
Column phase: Rxi-17Sil MS

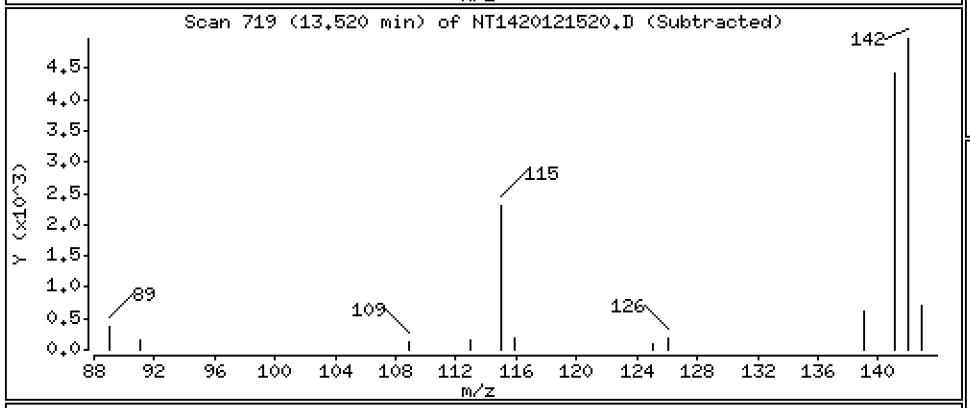
Column diameter: 0.25

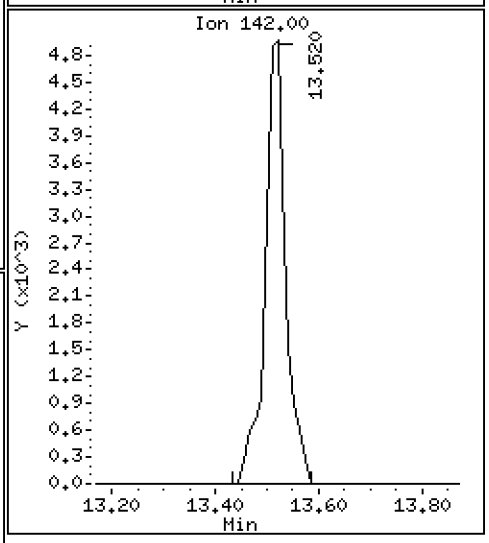
16 2-Methylnaphthalene

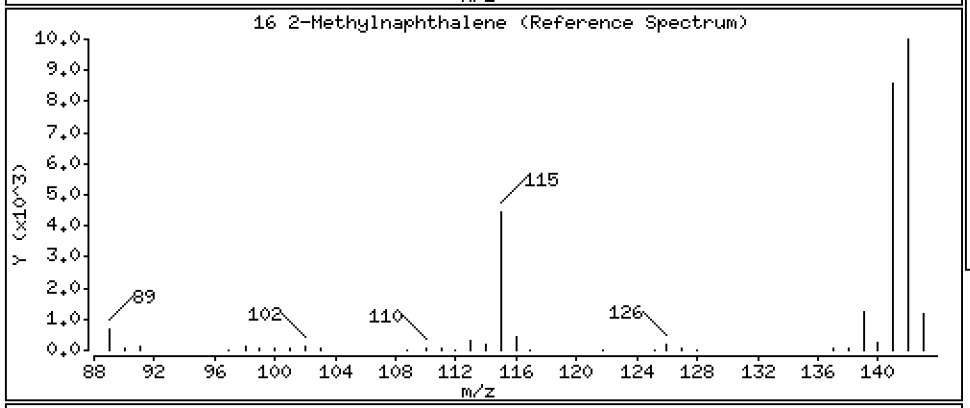
Concentration: 0.3755 ug/mL

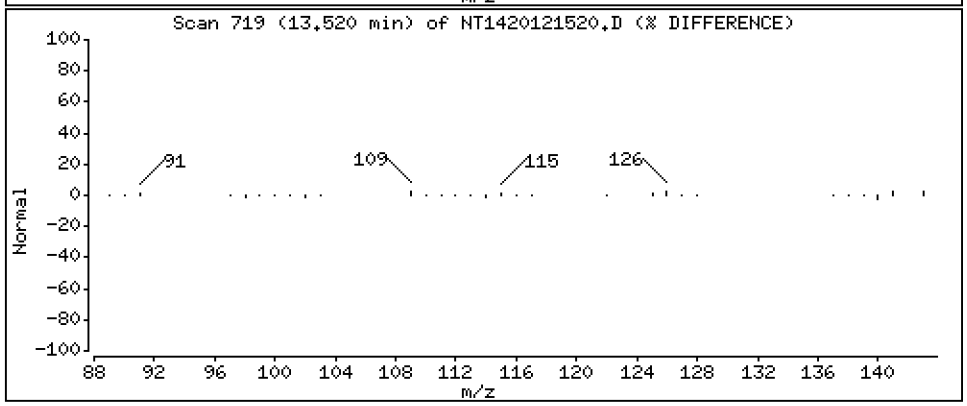












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Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

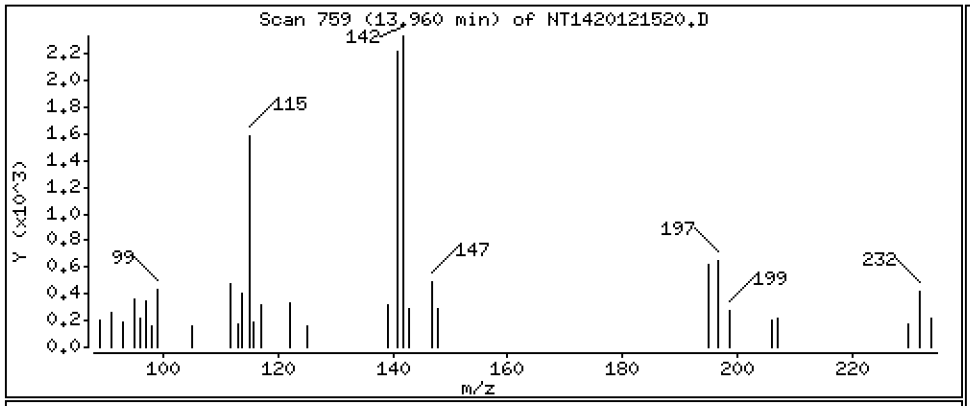
Operator: VTS

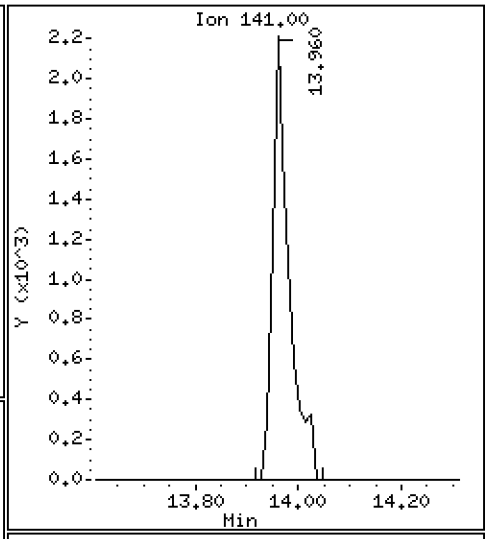
Column phase: Rxi-17Sil MS

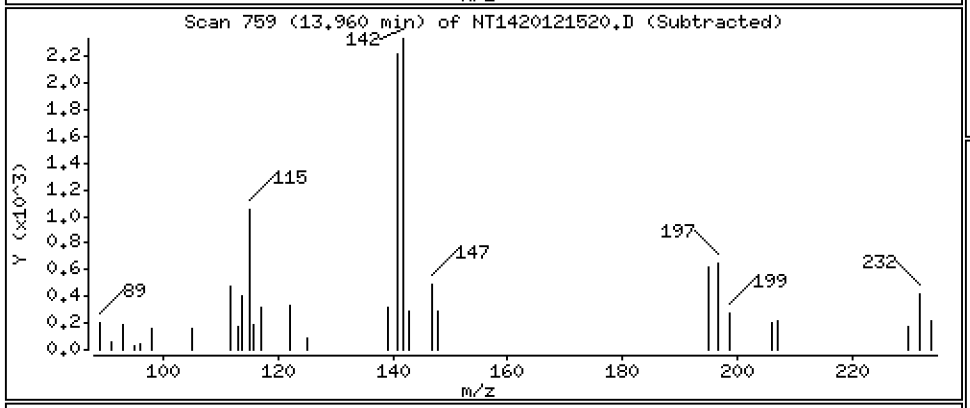
Column diameter: 0.25

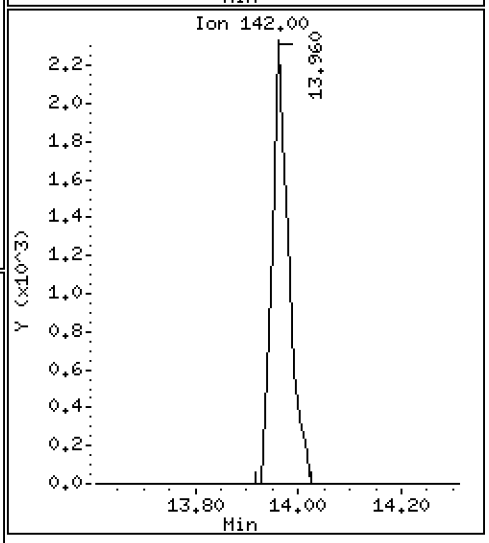
17 1-methylnaphthalene

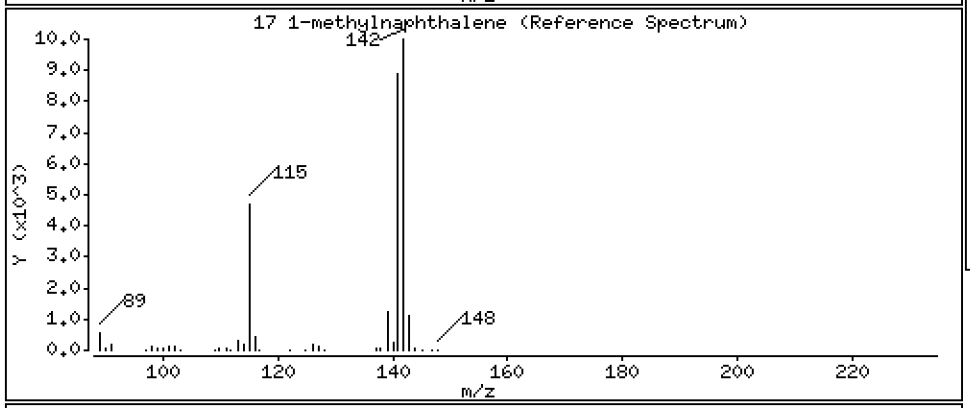
Concentration: 0.1625 ug/mL

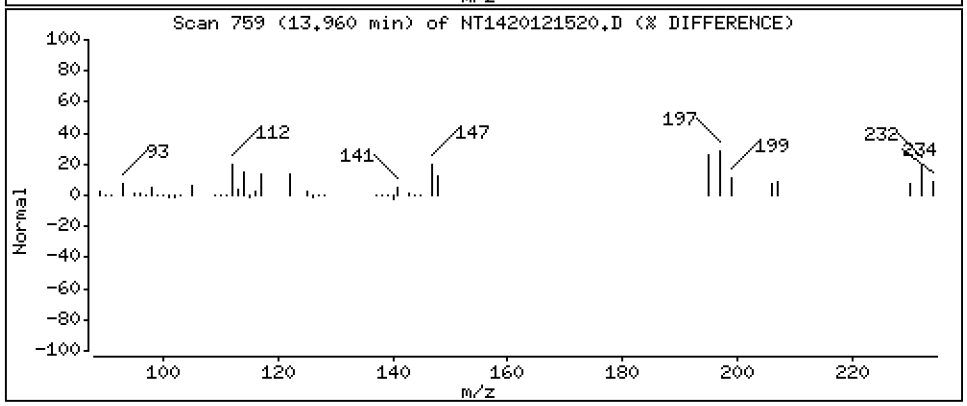












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Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

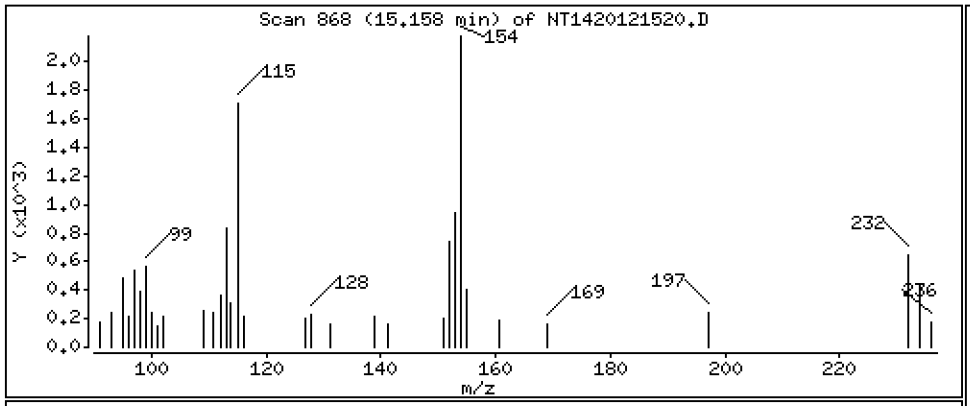
Operator: VTS

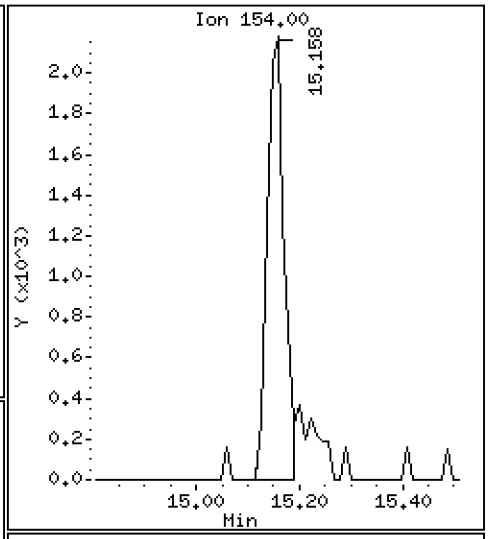
Column phase: Rxi-17Sil MS

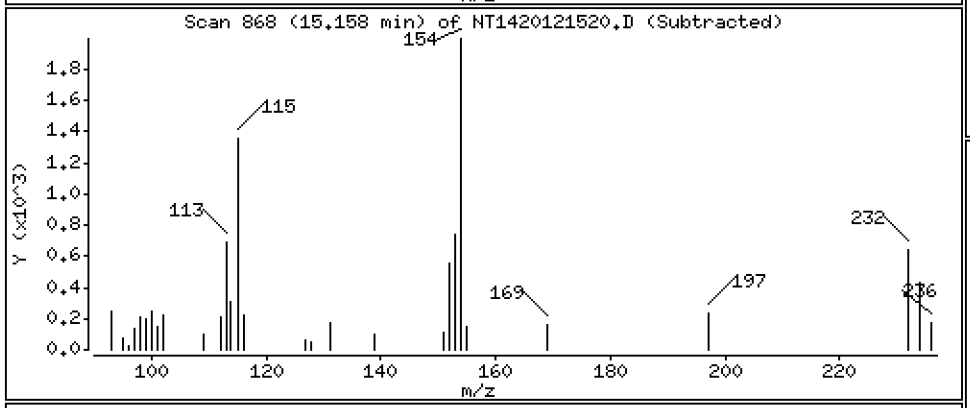
Column diameter: 0.25

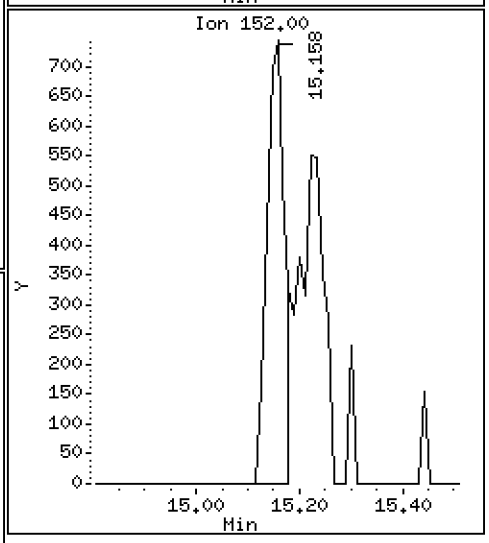
18 Biphenyl

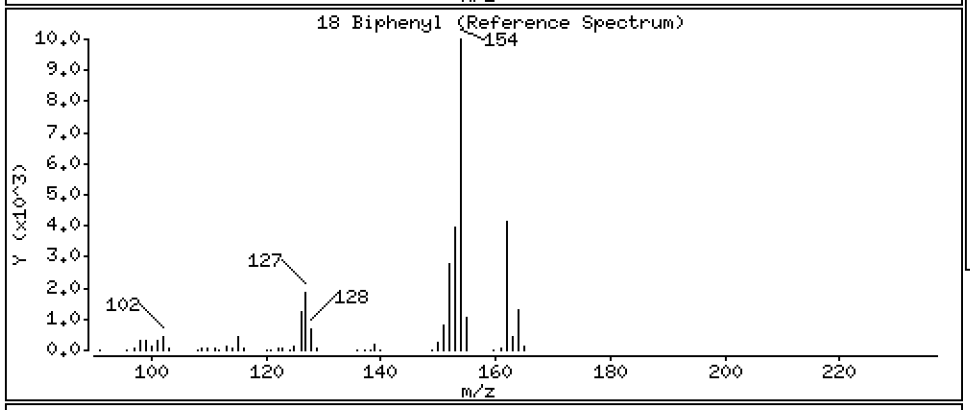
Concentration: 0.1129 ug/mL

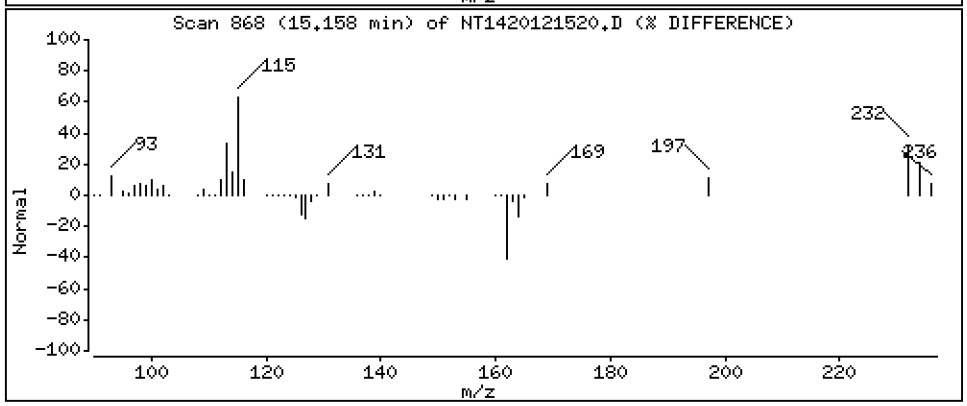












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Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

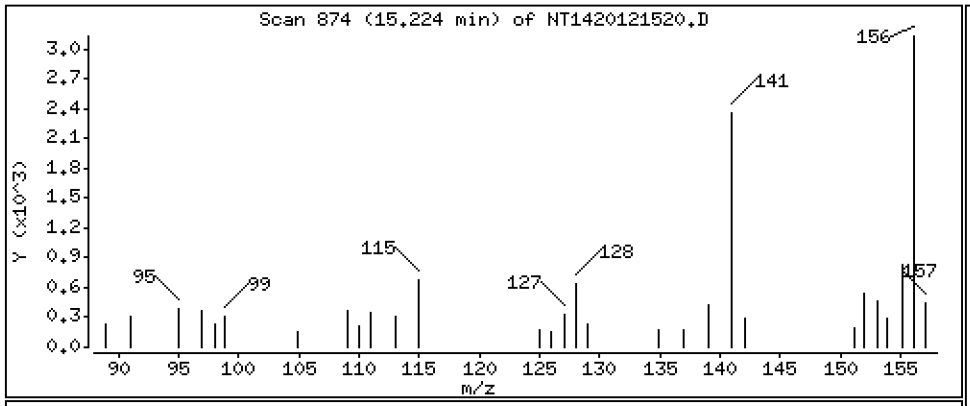
Operator: VTS

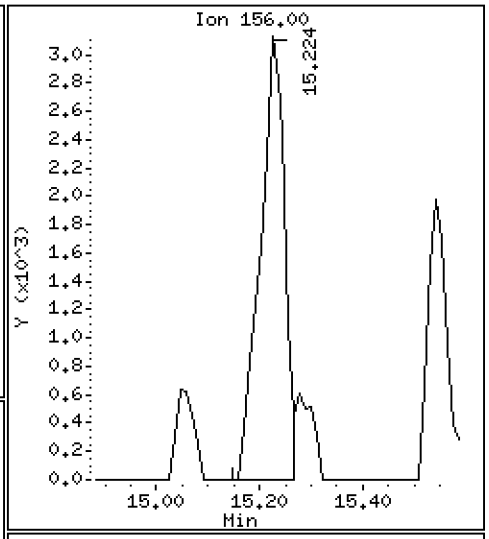
Column phase: Rxi-17Sil MS

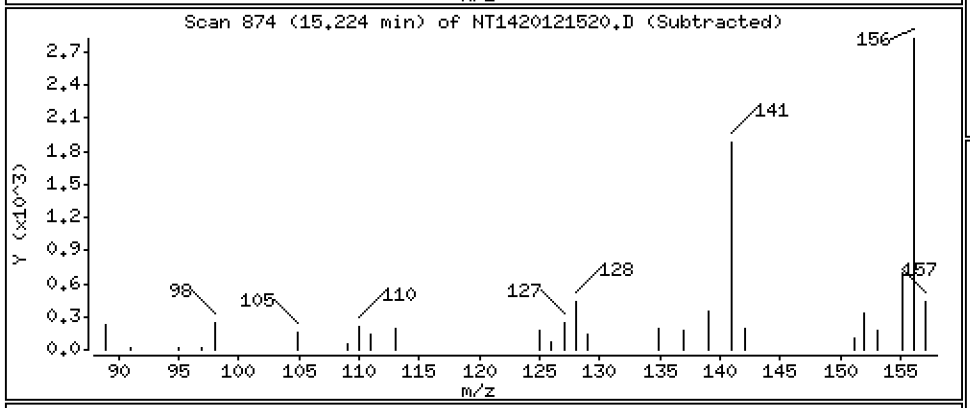
Column diameter: 0.25

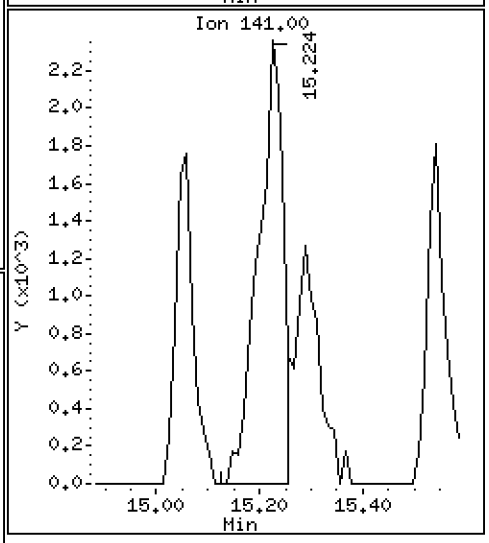
19 2,6-Dimethylnaphthalene

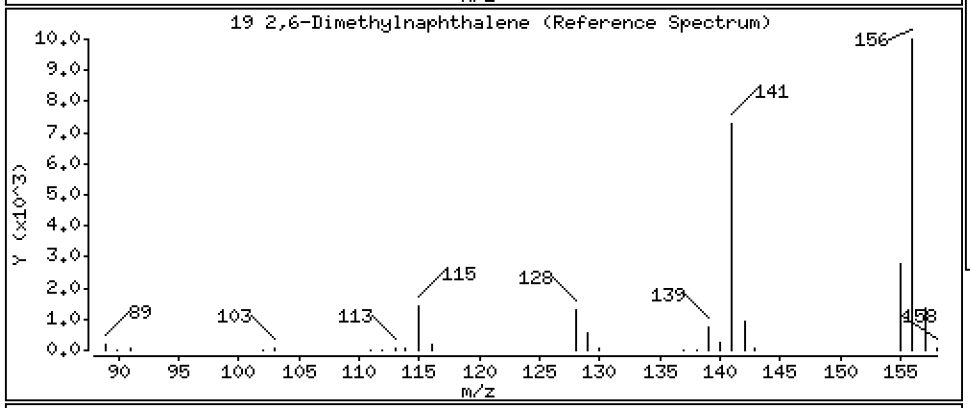
Concentration: 0.3133 ug/mL

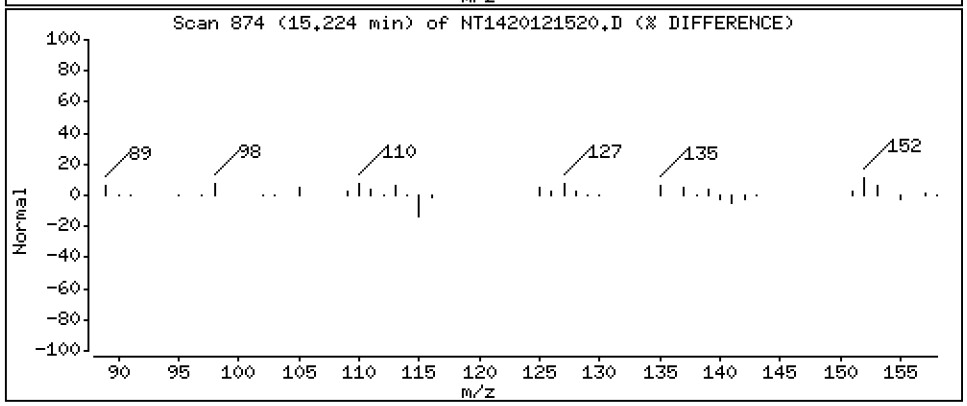












Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

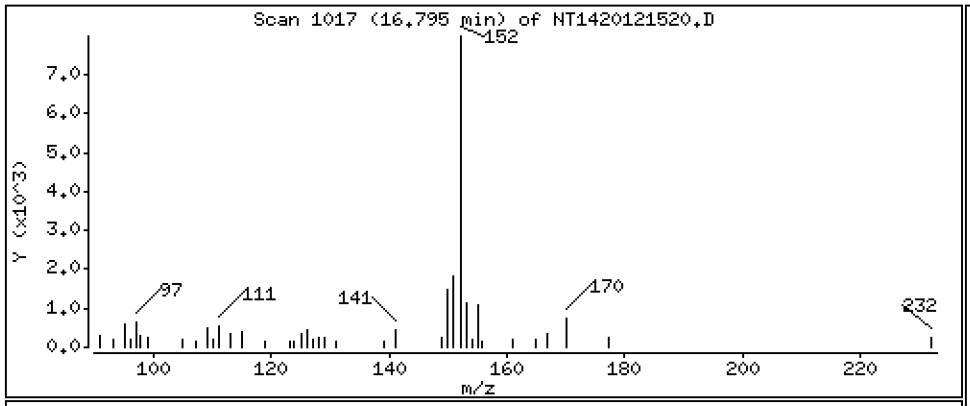
Operator: VTS

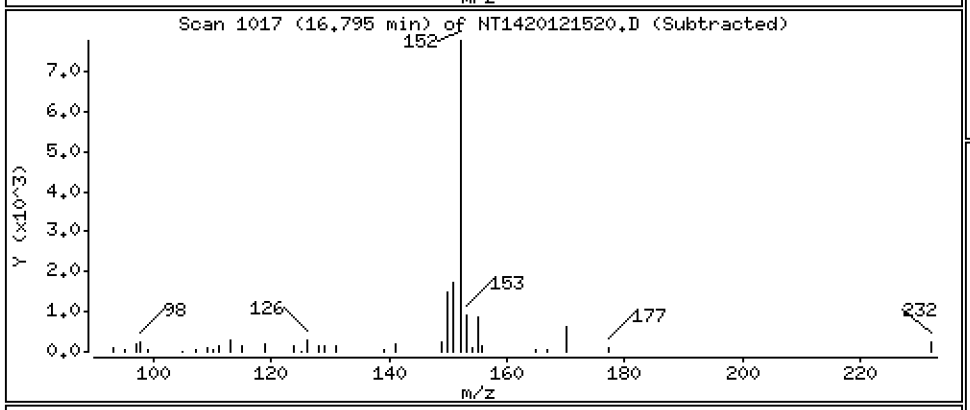
Column phase: Rxi-17Sil MS

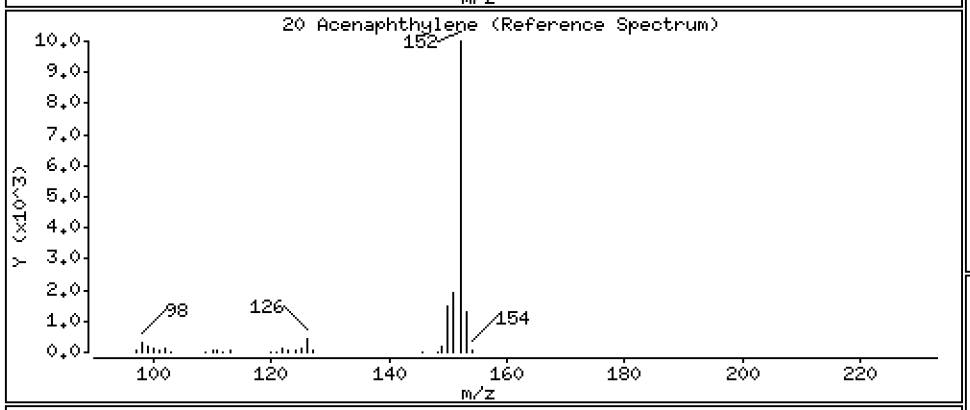
Column diameter: 0.25

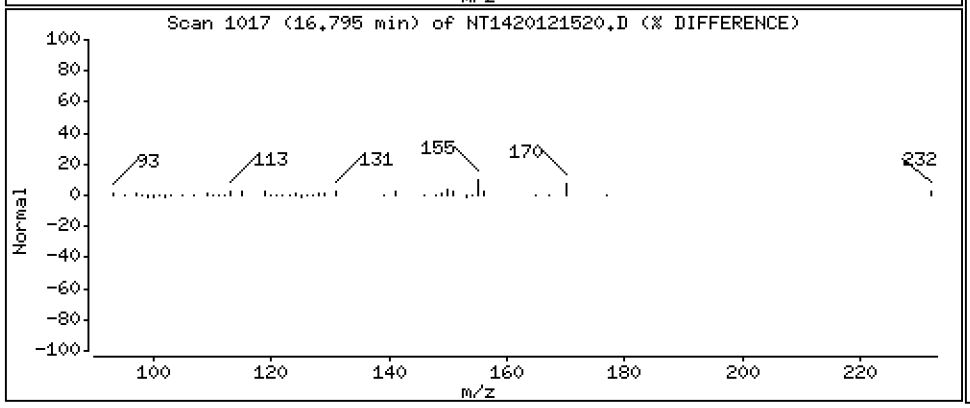
20 Acenaphthylene

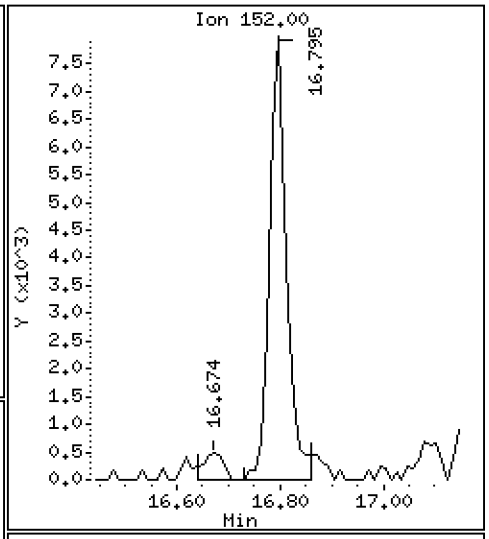
Concentration: 0.3493 ug/mL

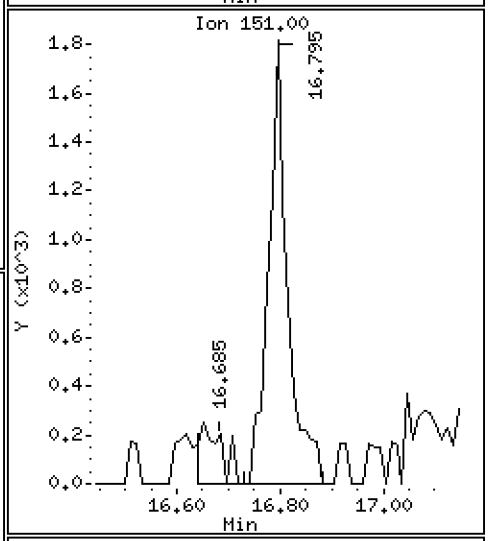


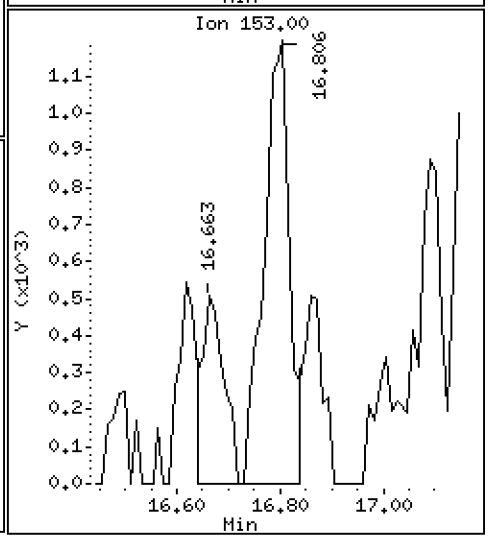












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Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

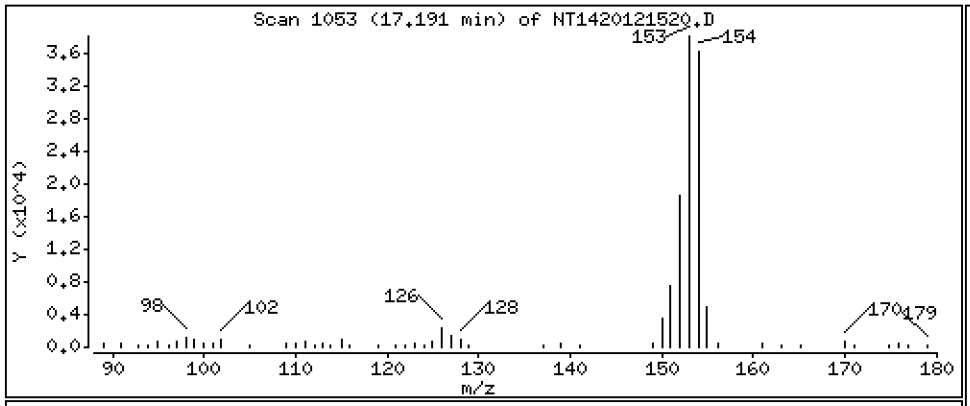
Operator: VTS

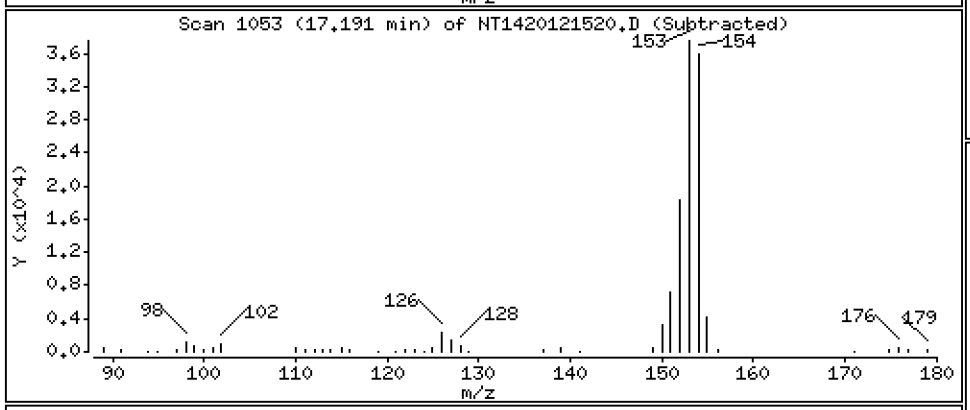
Column phase: Rxi-17Sil MS

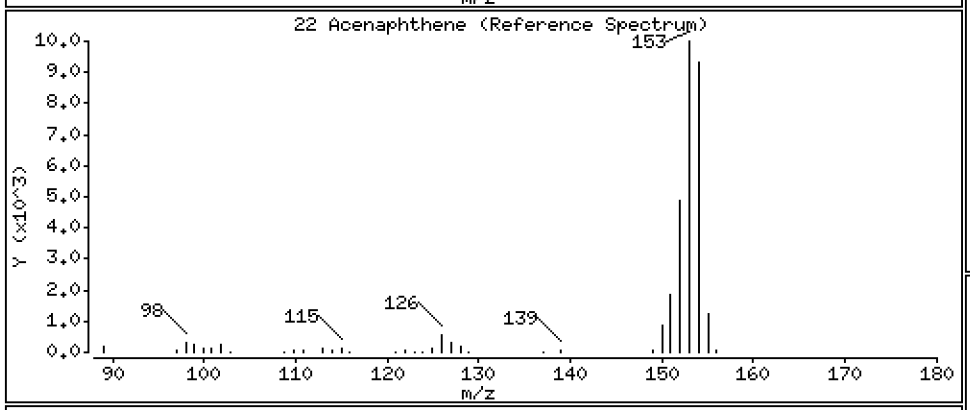
Column diameter: 0.25

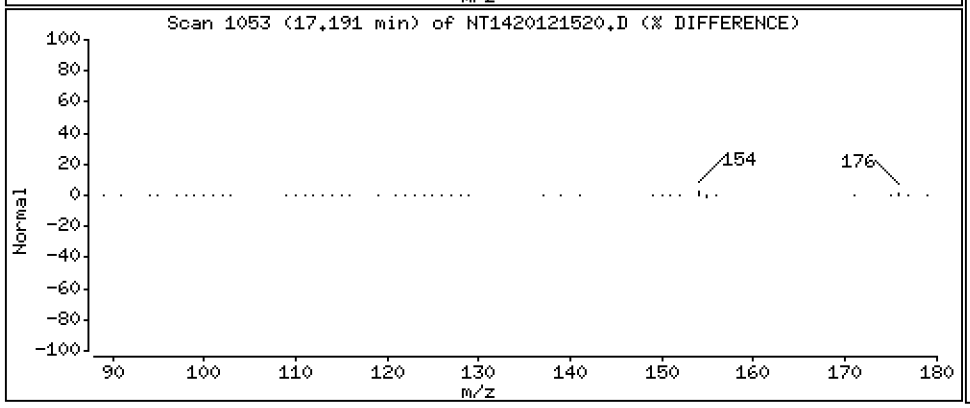
22 Acenaphthene

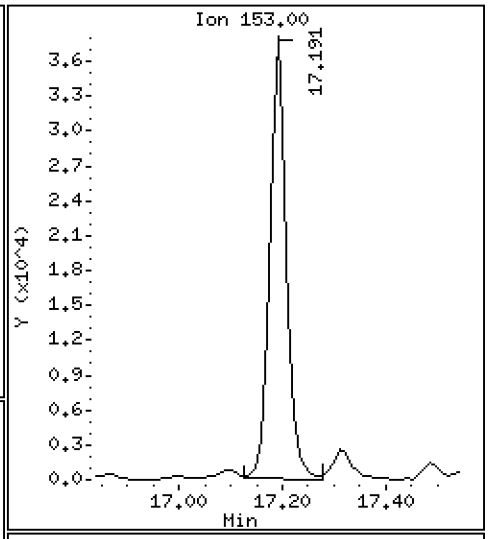
Concentration: 2.452 ug/mL

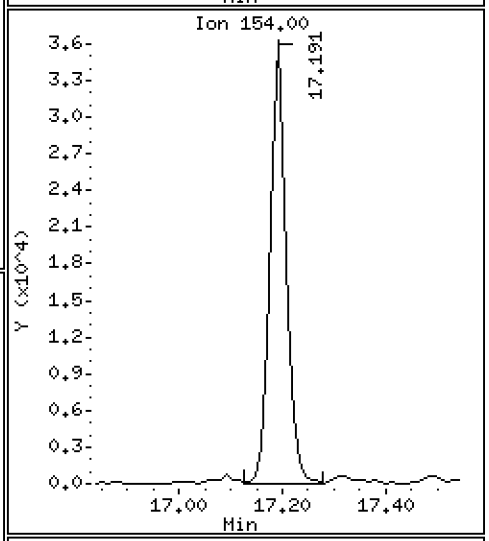


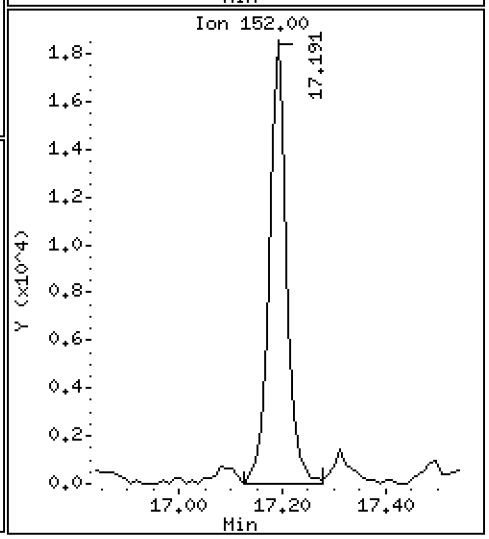












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Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

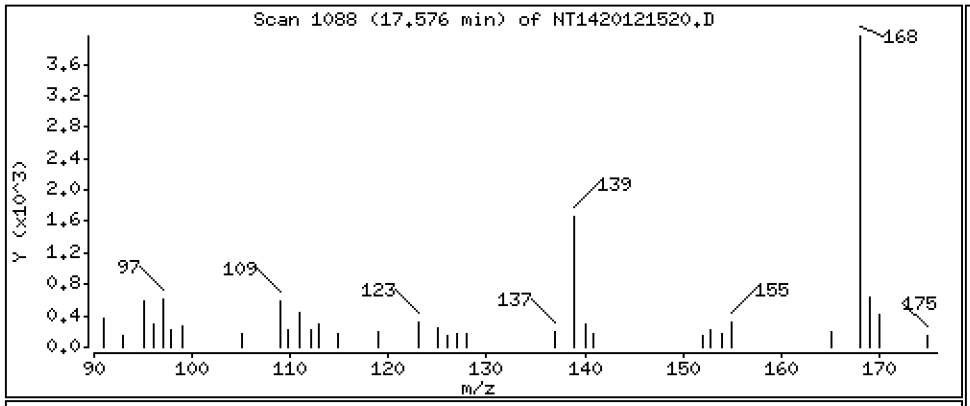
Operator: VTS

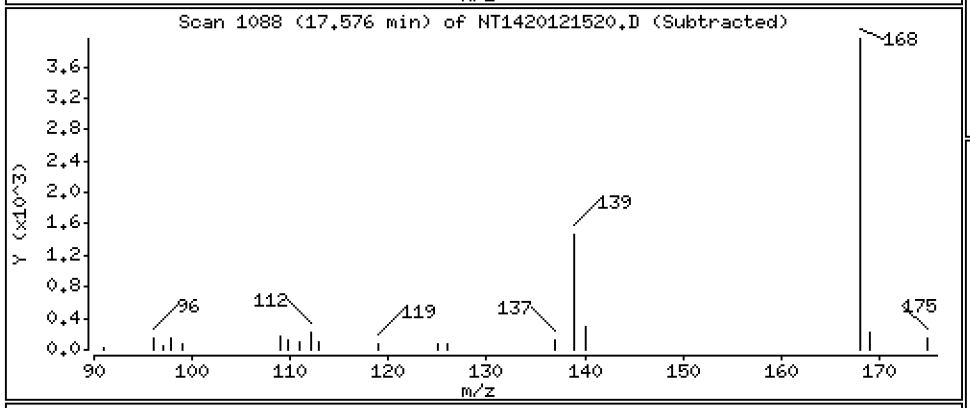
Column phase: Rxi-17Sil MS

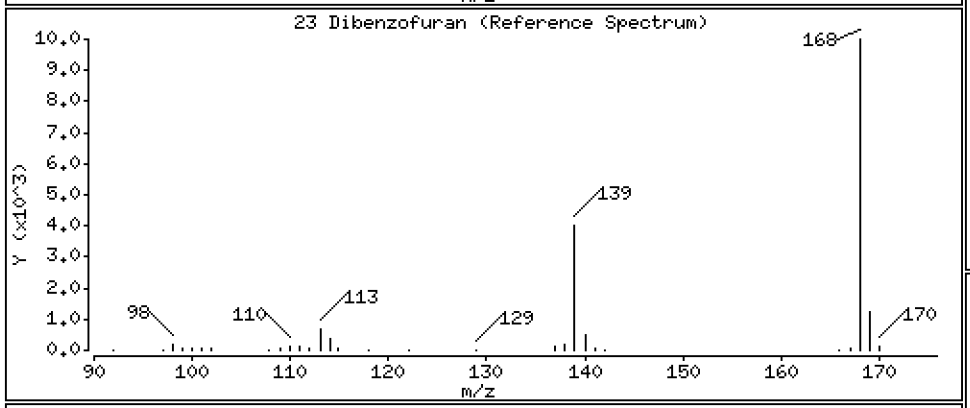
Column diameter: 0.25

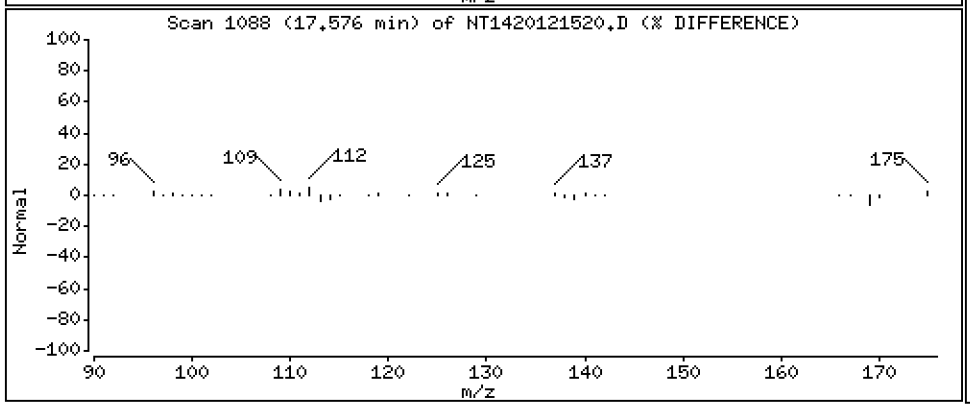
23 Dibenzofuran

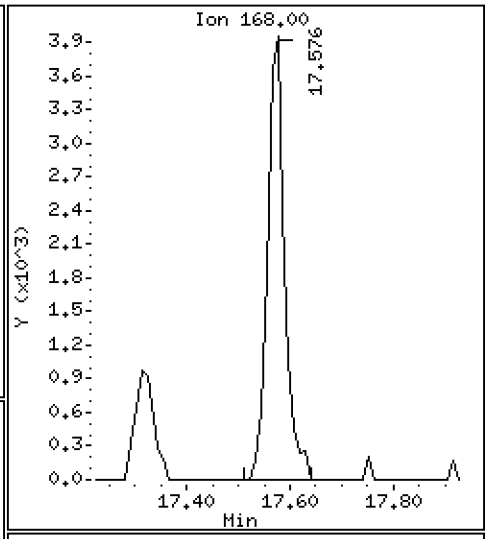
Concentration: 0.1807 ug/mL

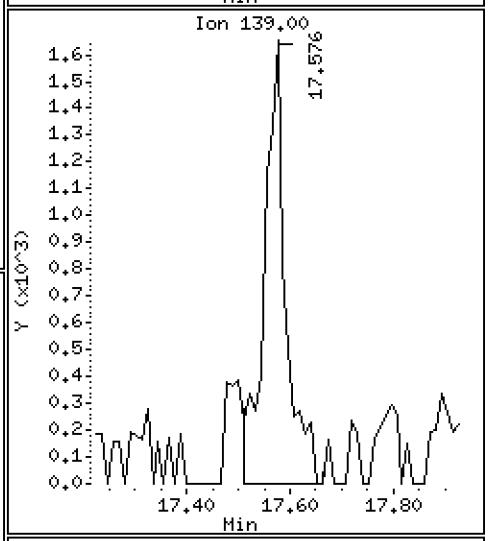


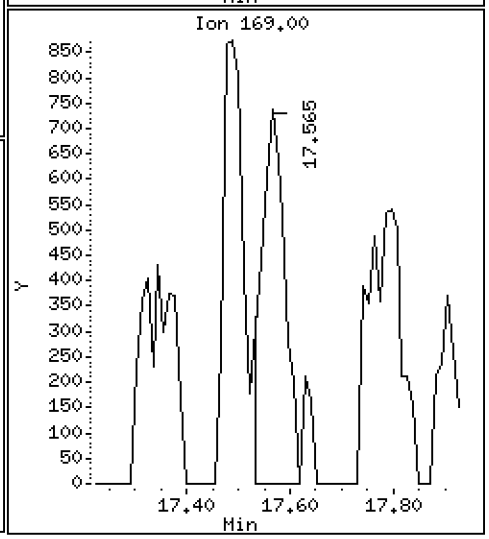












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Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

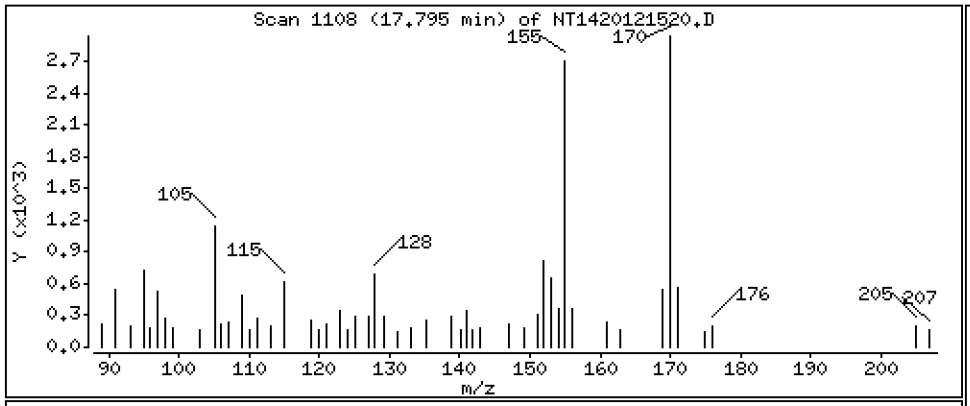
Operator: VTS

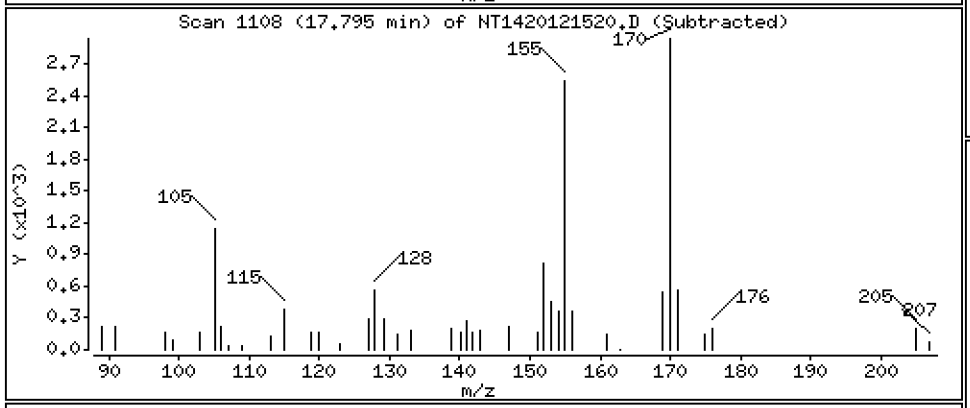
Column phase: Rxi-17Sil MS

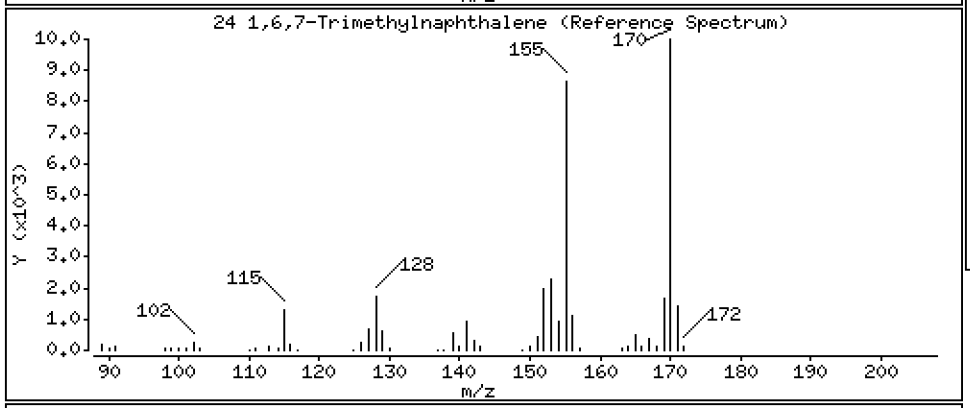
Column diameter: 0.25

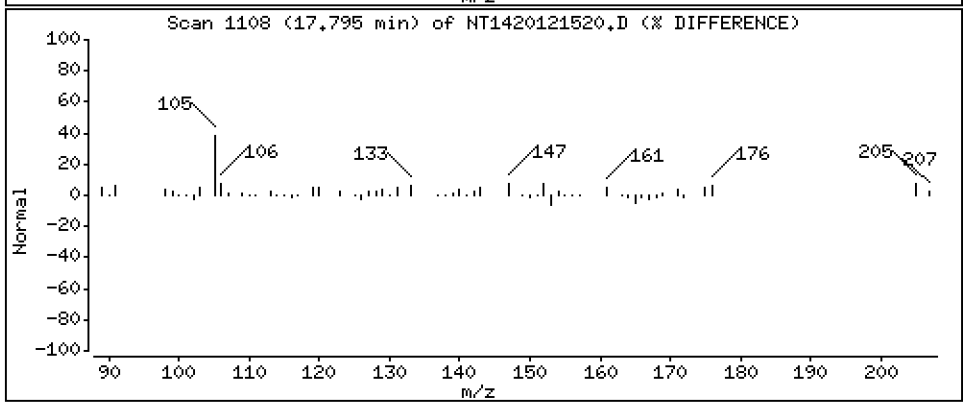
24 1,6,7-Trimethylnaphthalene

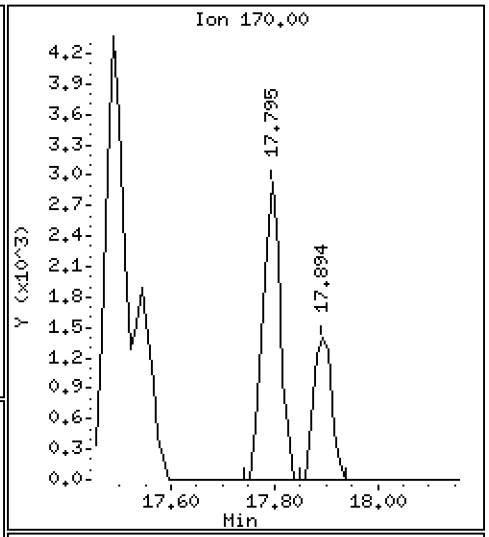
Concentration: 0.2061 ug/mL

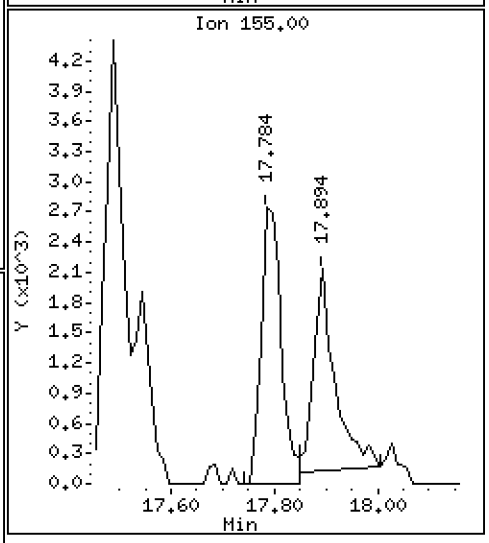












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Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

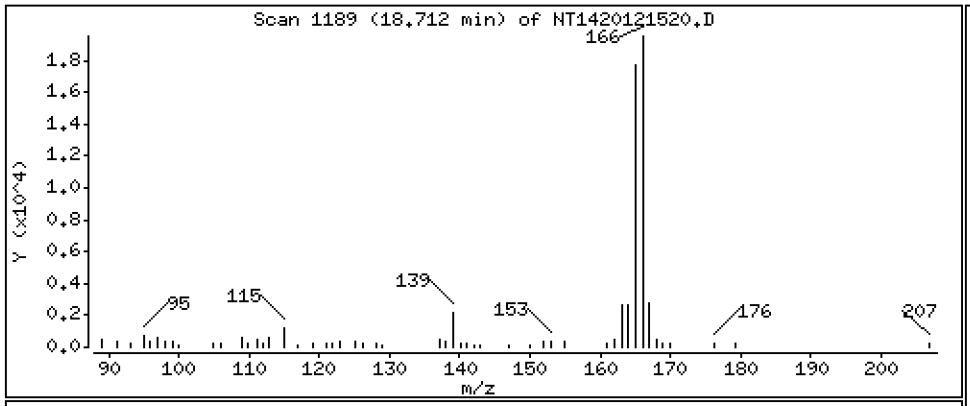
Operator: VTS

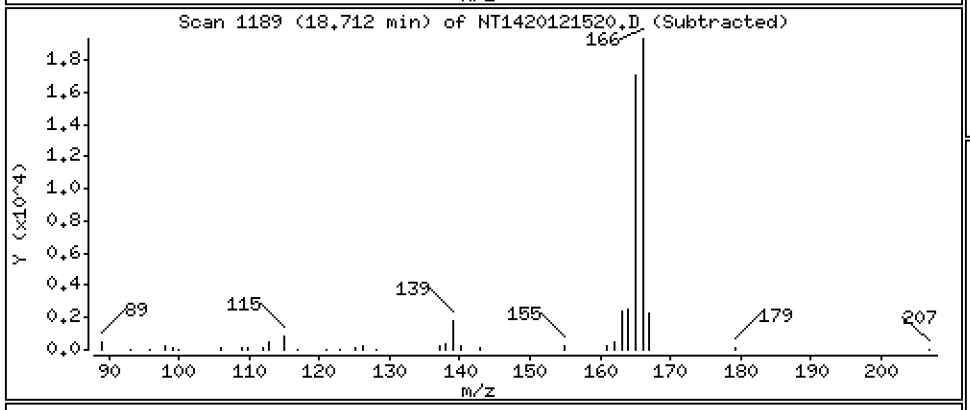
Column phase: Rxi-17Sil MS

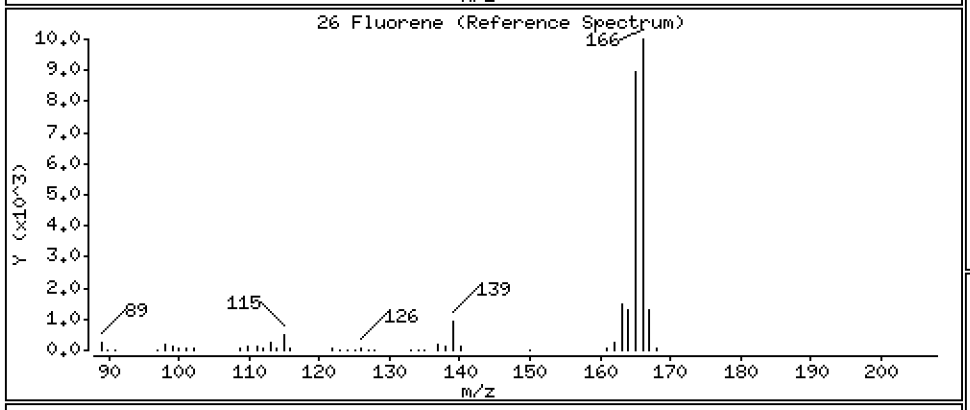
Column diameter: 0.25

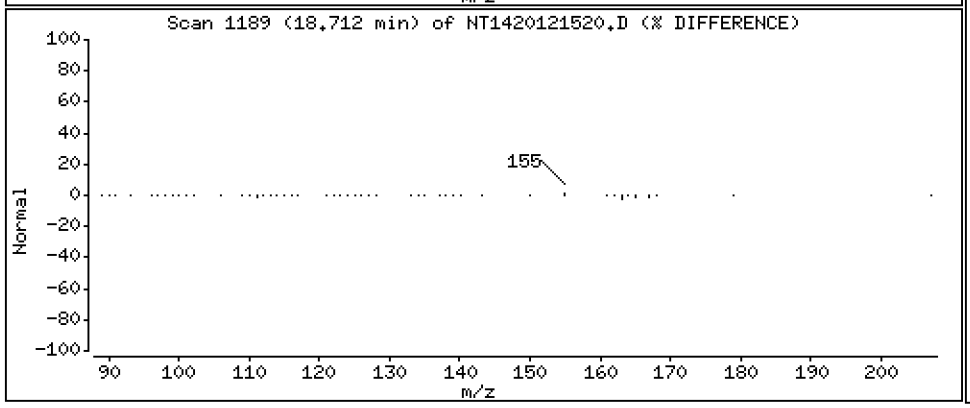
26 Fluorene

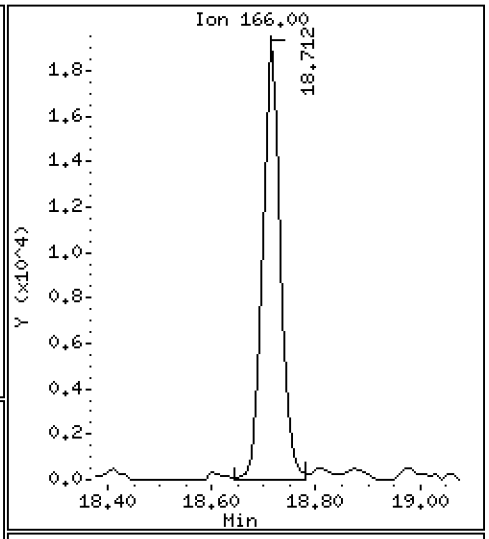
Concentration: 1.079 ug/mL

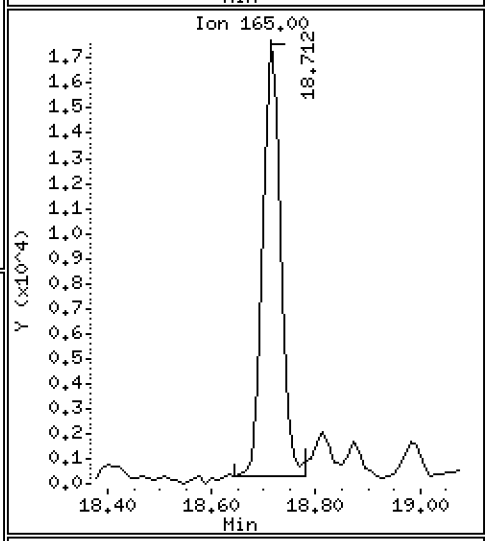


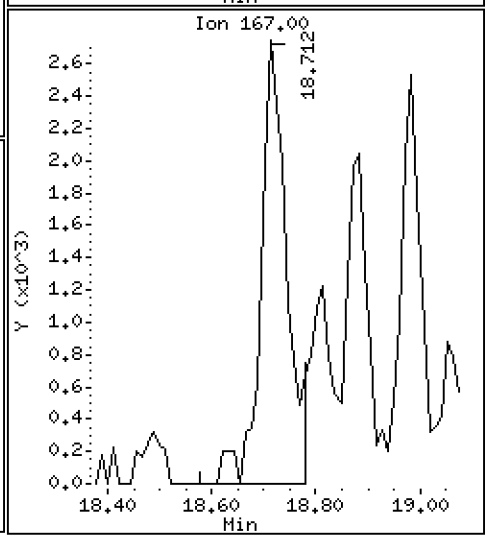












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Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

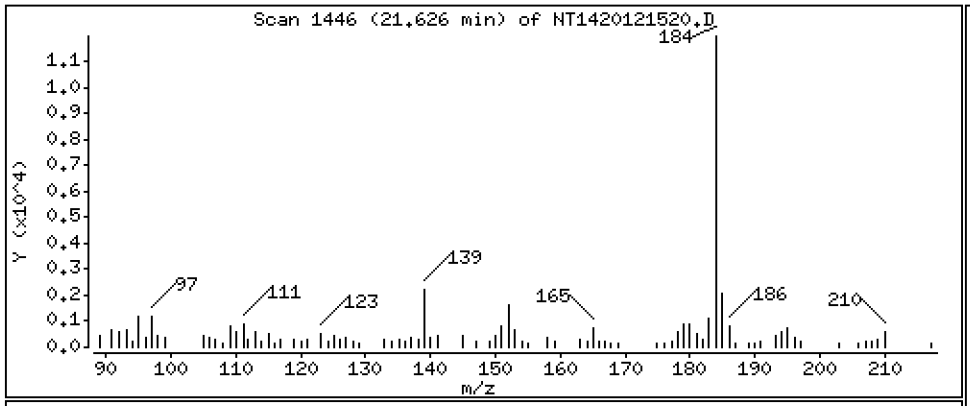
Operator: VTS

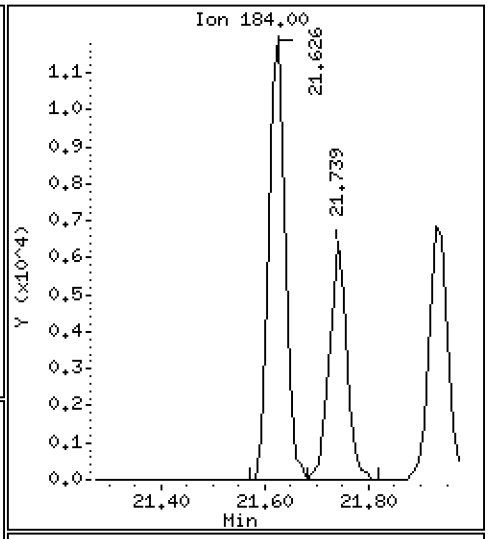
Column phase: Rxi-17Sil MS

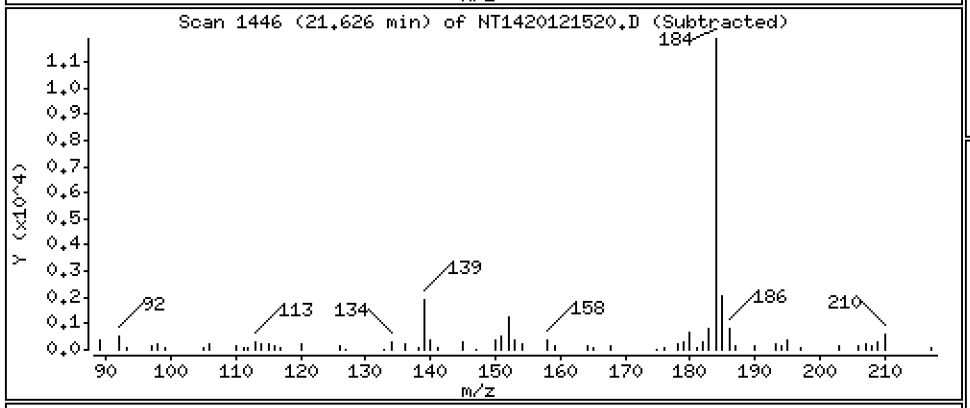
Column diameter: 0.25

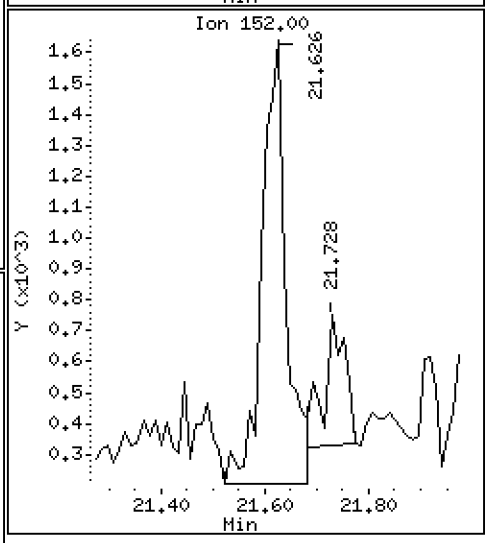
30 Dibenzothiophene

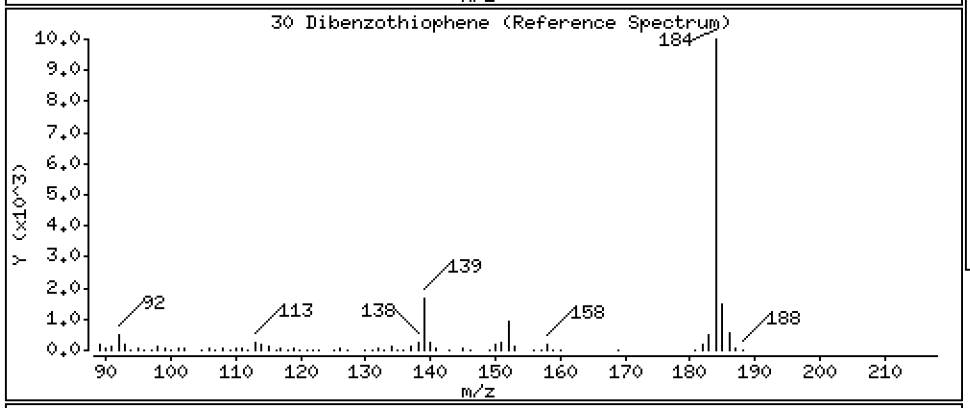
Concentration: 0.4524 ug/mL

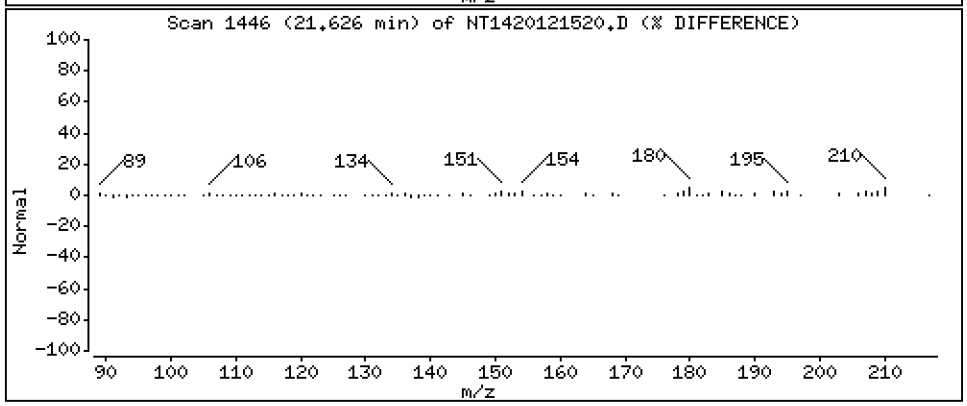












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Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

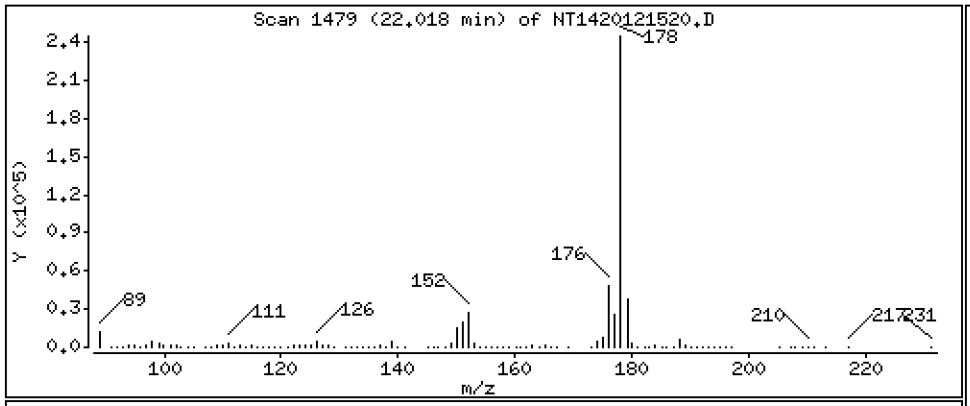
Operator: VTS

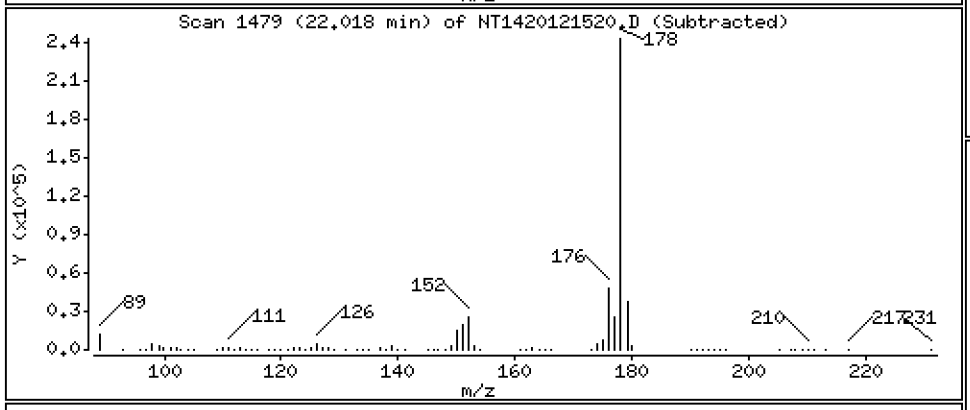
Column phase: Rxi-17Sil MS

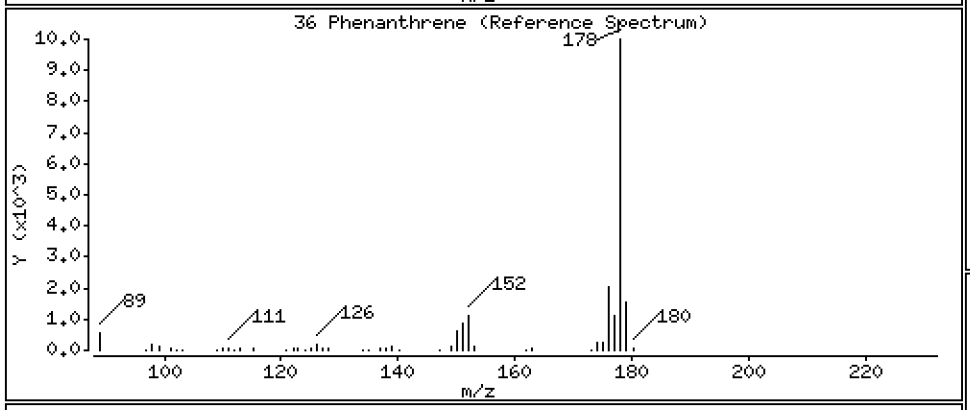
Column diameter: 0.25

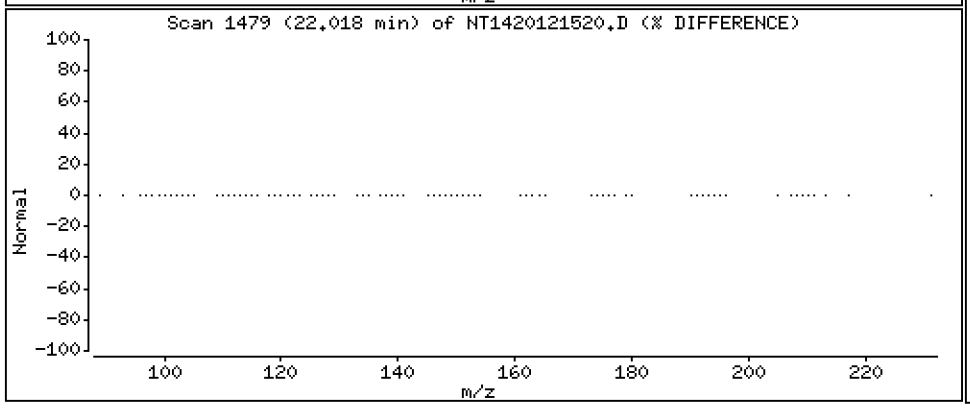
36 Phenanthrene

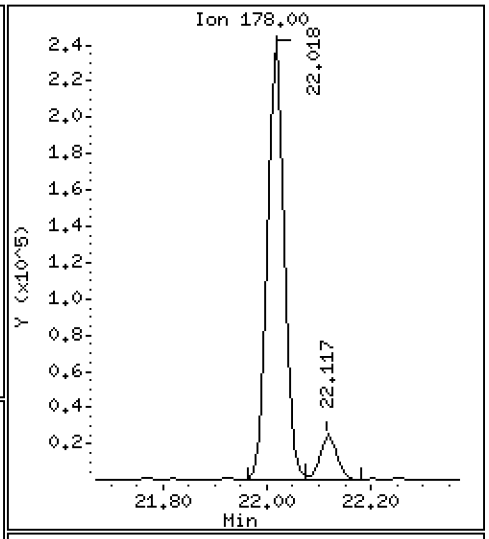
Concentration: 9.173 ug/mL

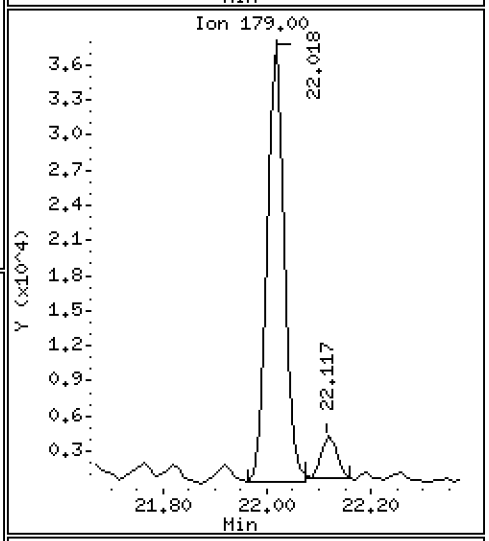


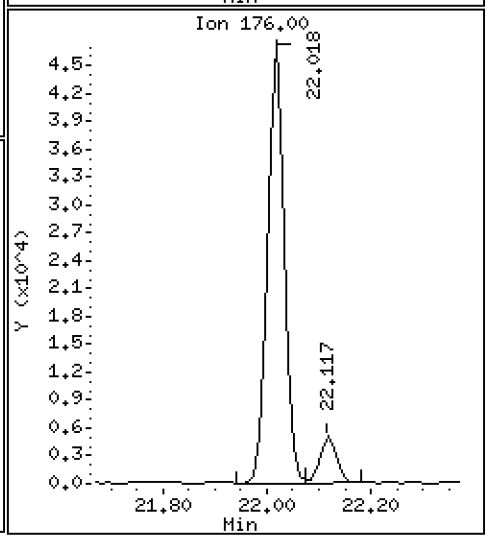












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Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

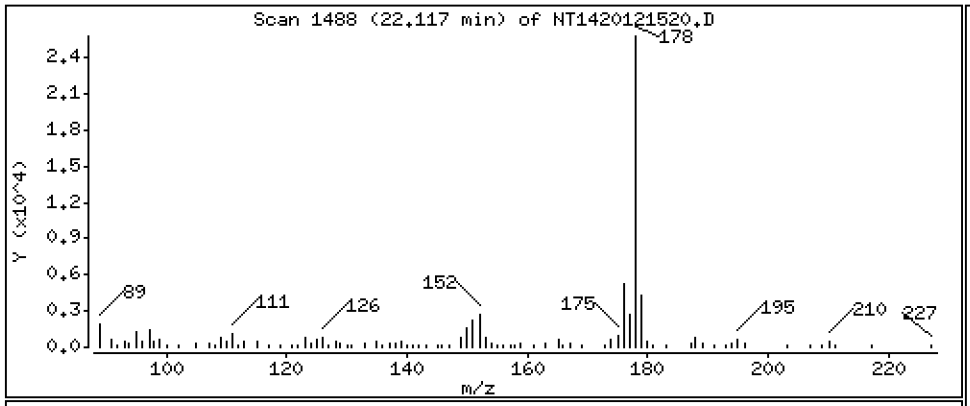
Operator: VTS

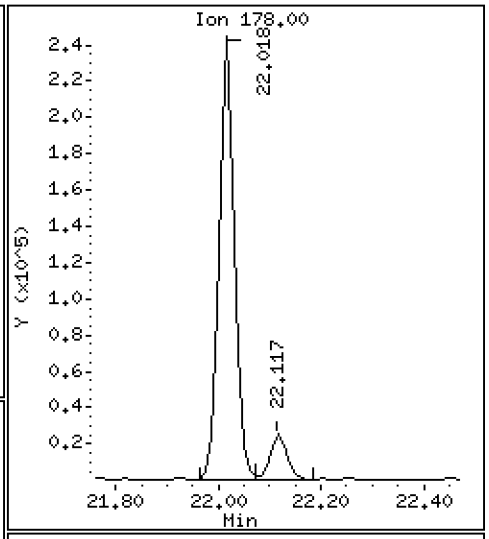
Column phase: Rxi-17Sil MS

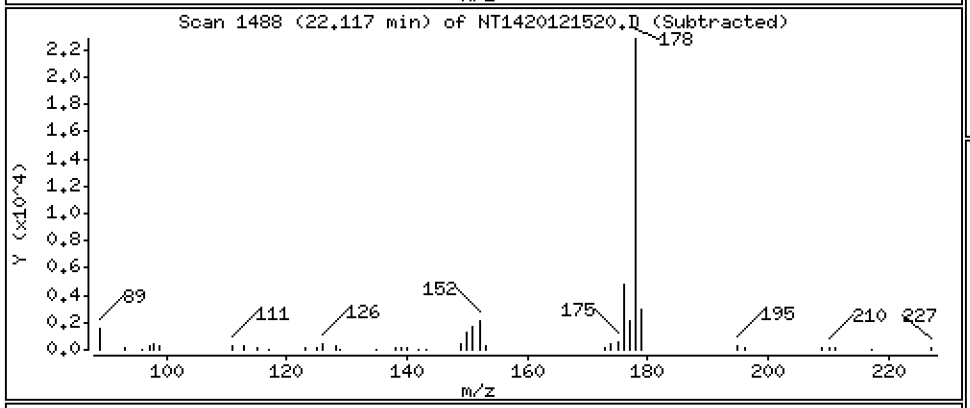
Column diameter: 0.25

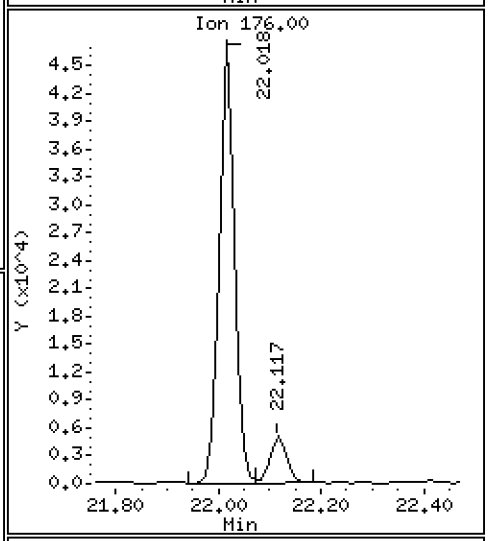
37 Anthracene

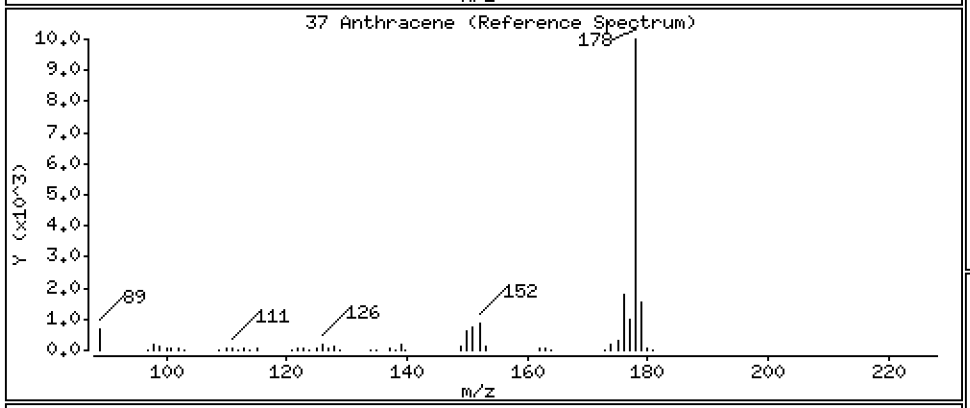
Concentration: 0.9393 ug/mL

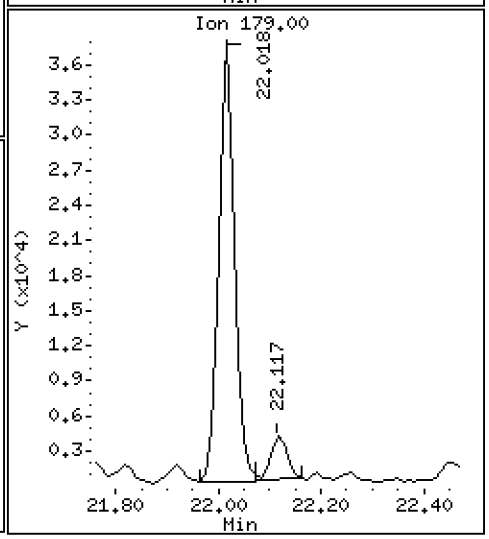


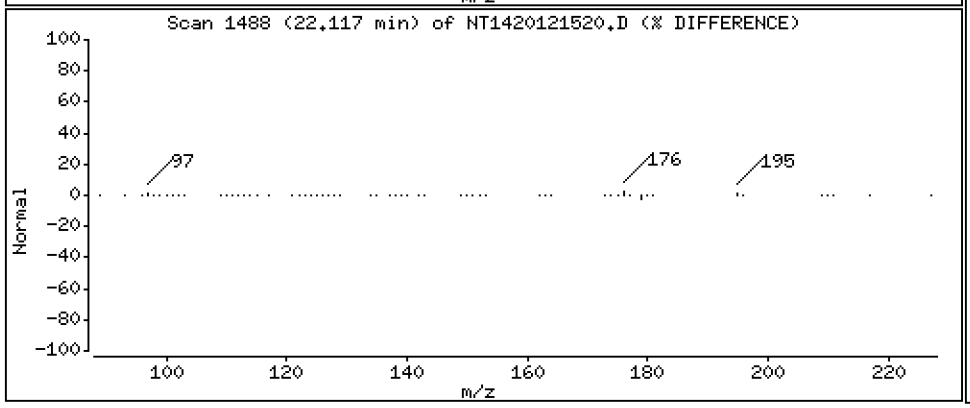












Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

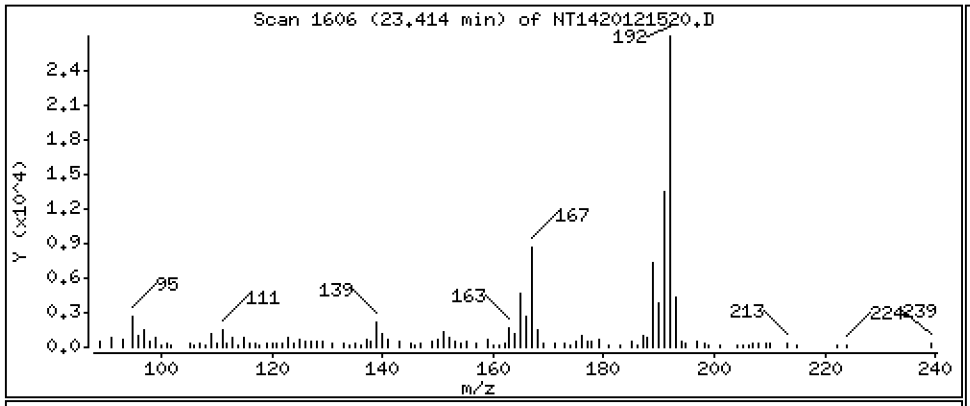
Operator: VTS

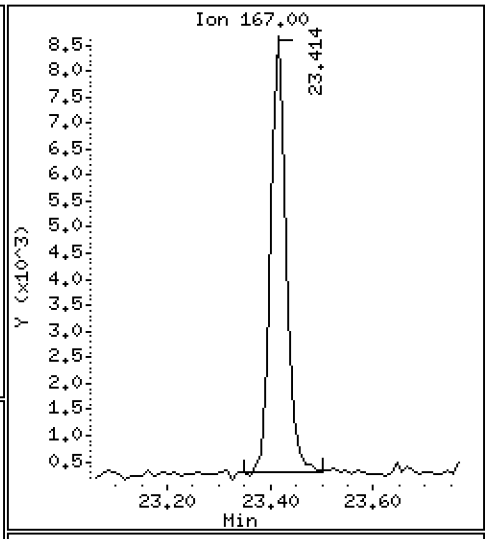
Column phase: Rxi-17Sil MS

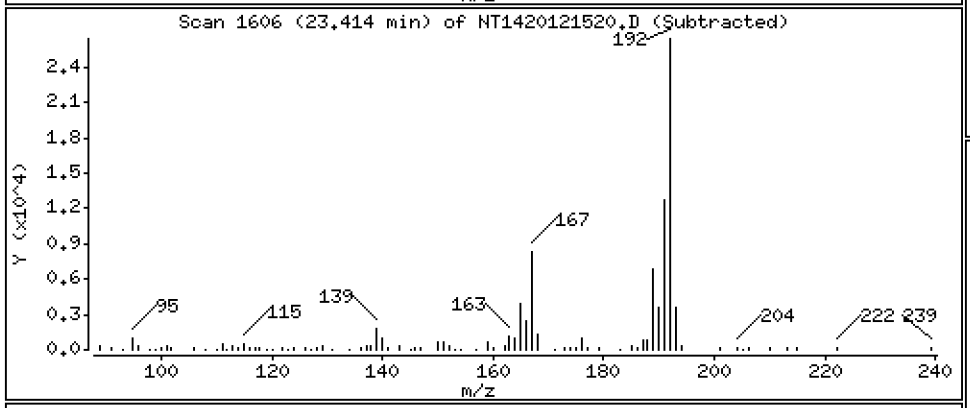
Column diameter: 0.25

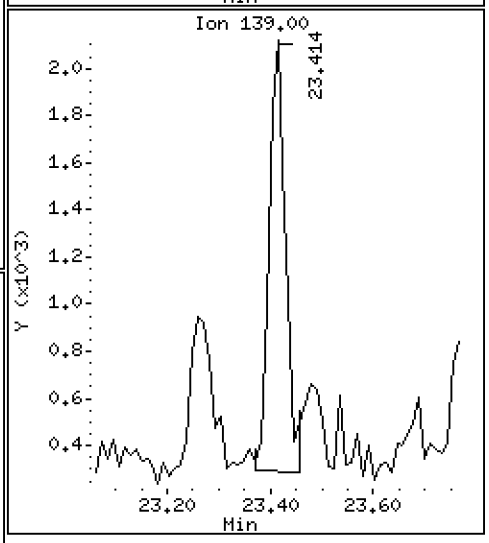
42 Carbazole

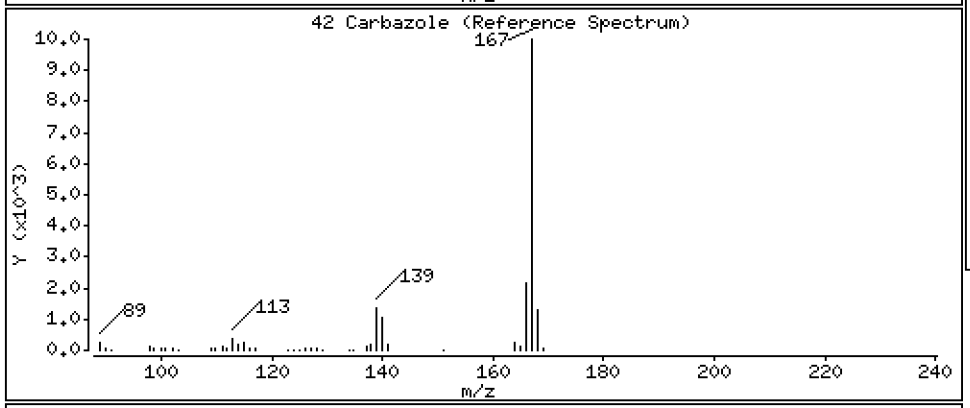
Concentration: 0.3812 ug/mL

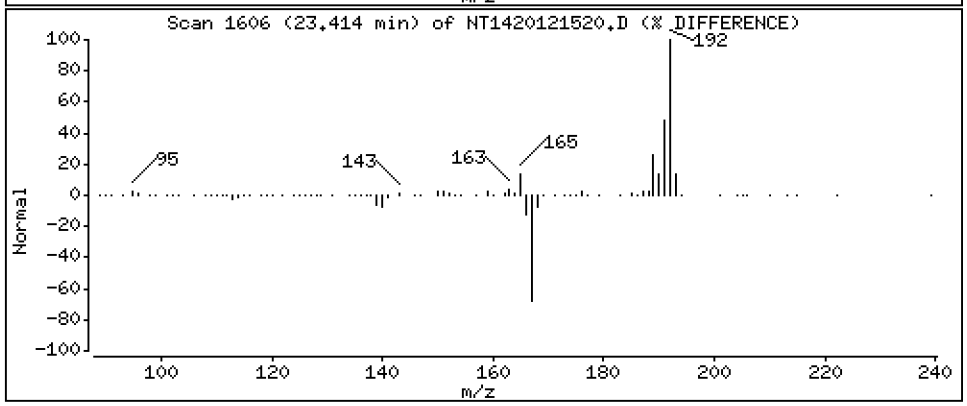












Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

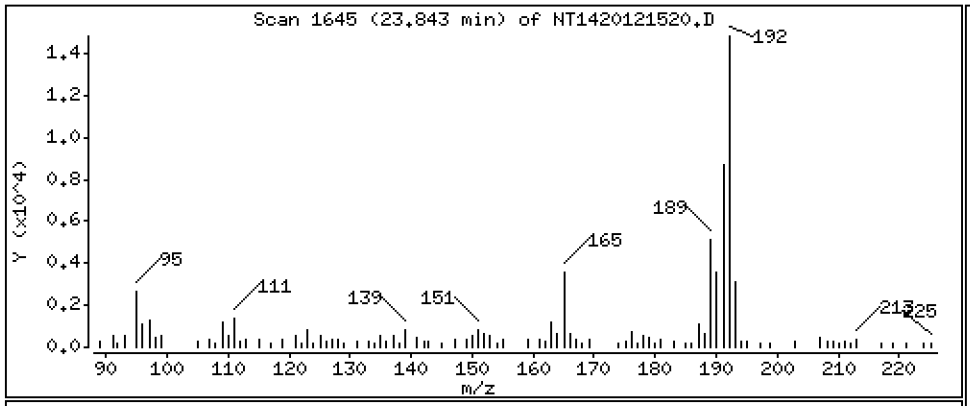
Operator: VTS

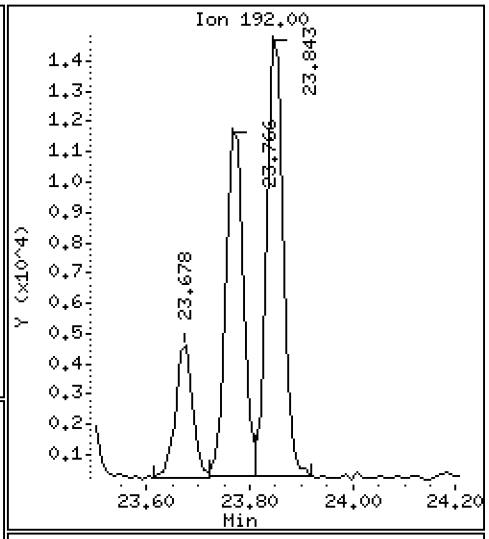
Column phase: Rxi-17Sil MS

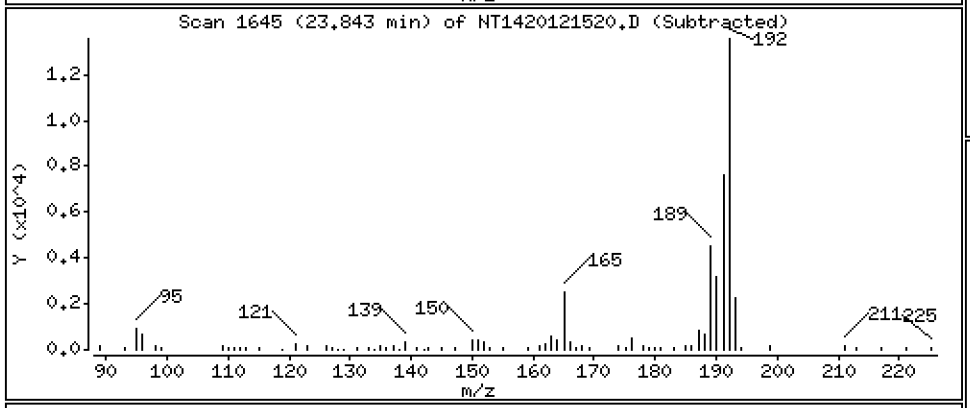
Column diameter: 0.25

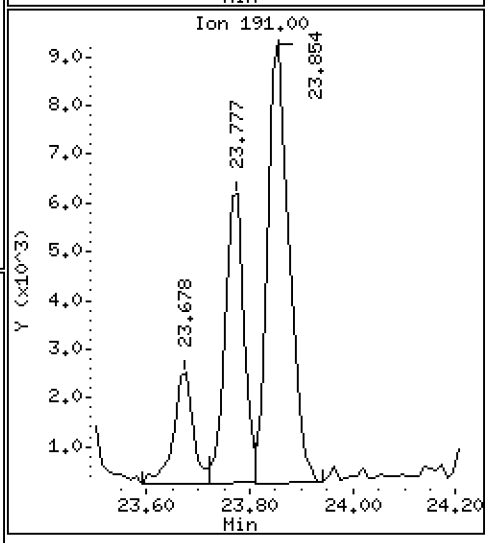
43 1-Methylphenanthrene

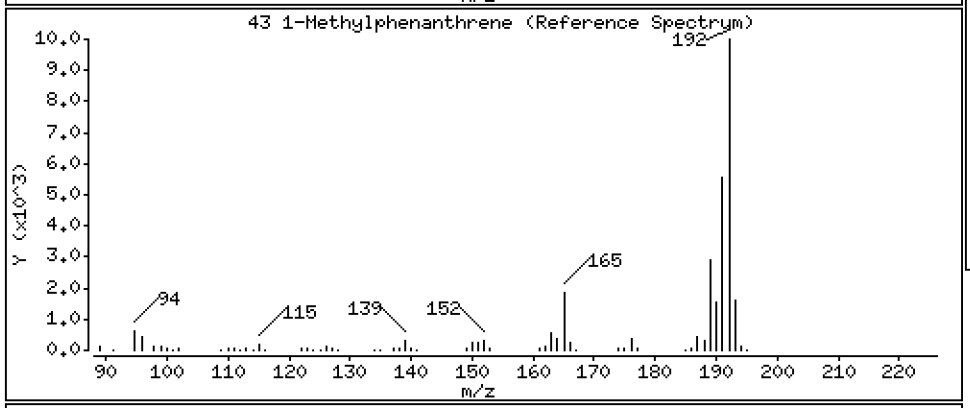
Concentration: 0.8147 ug/mL

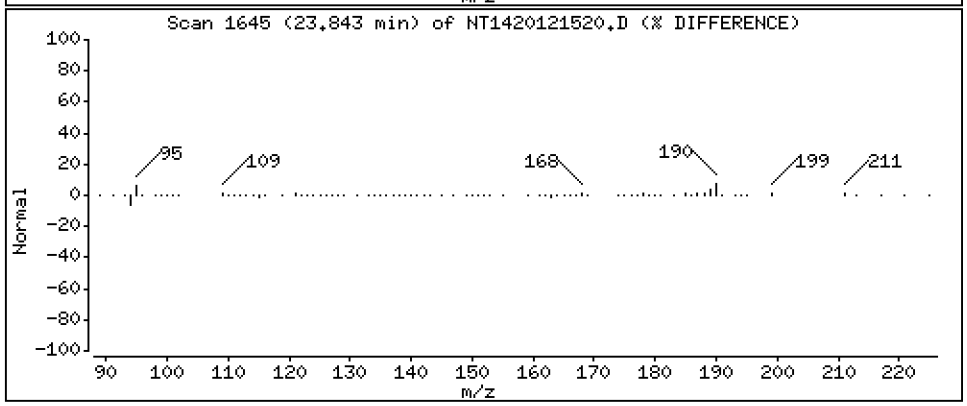












Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

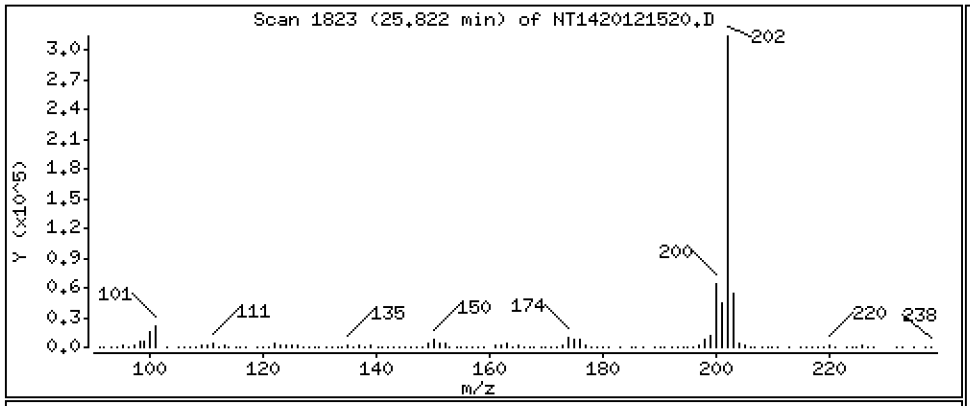
Operator: VTS

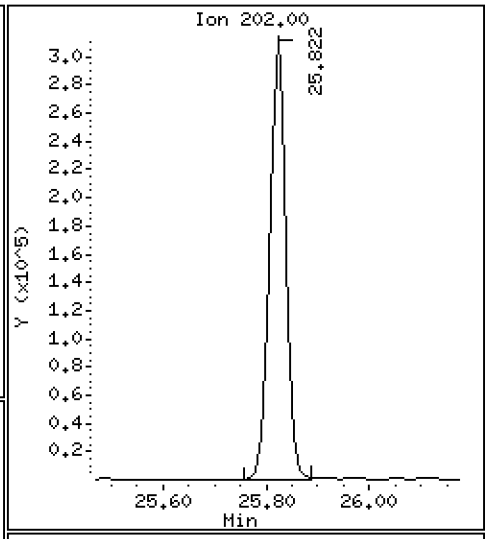
Column phase: Rxi-17Sil MS

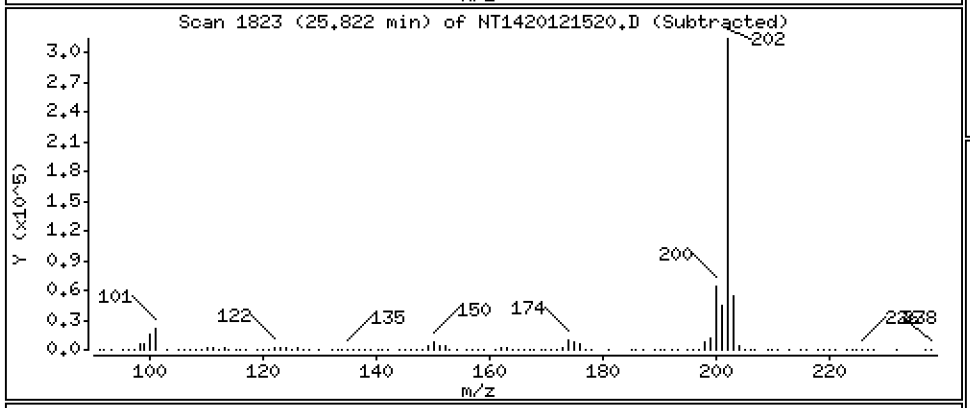
Column diameter: 0.25

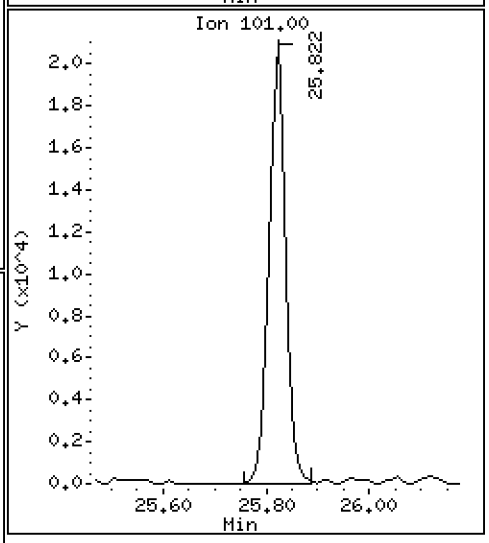
44 Fluoranthene

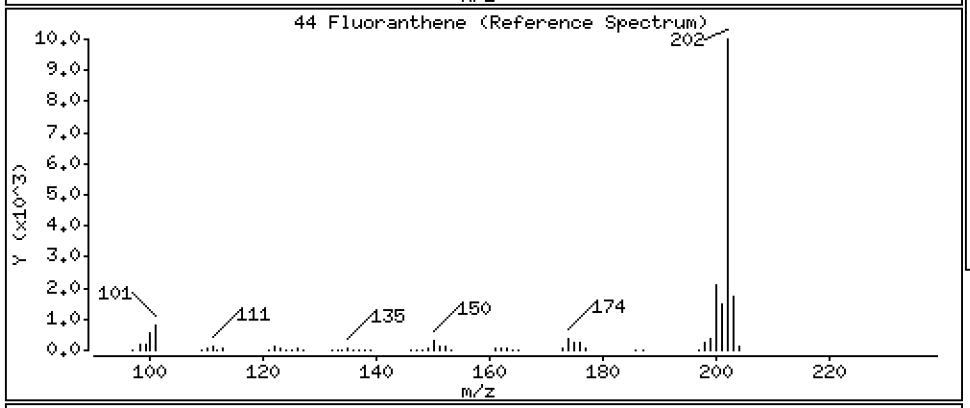
Concentration: 11.34 ug/mL

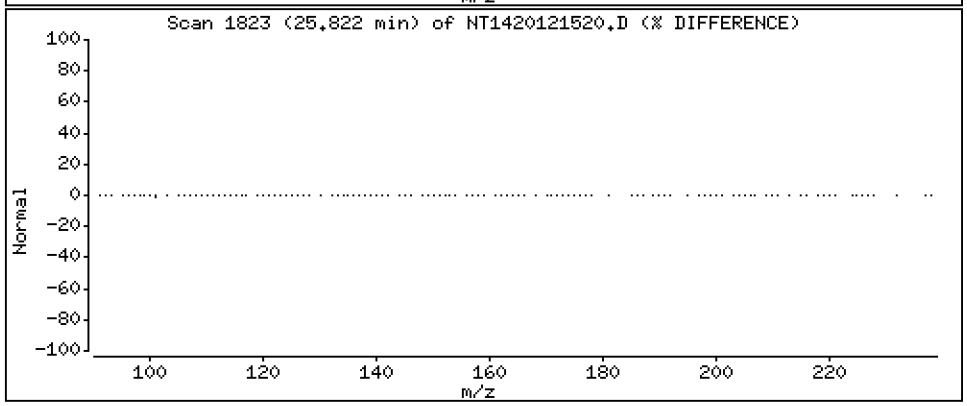












Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

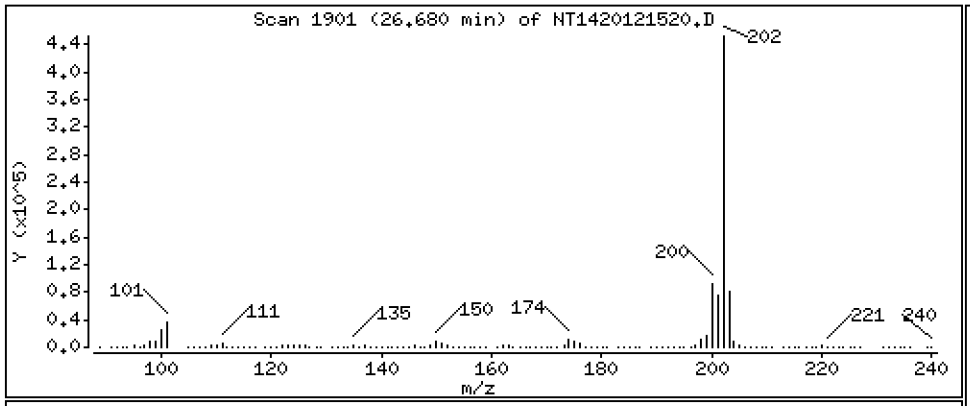
Operator: VTS

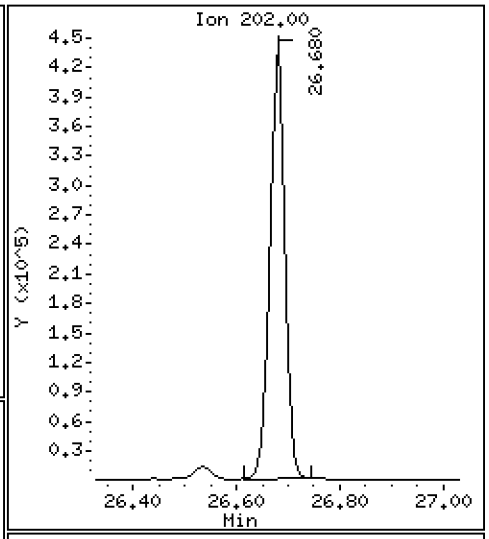
Column phase: Rxi-17Sil MS

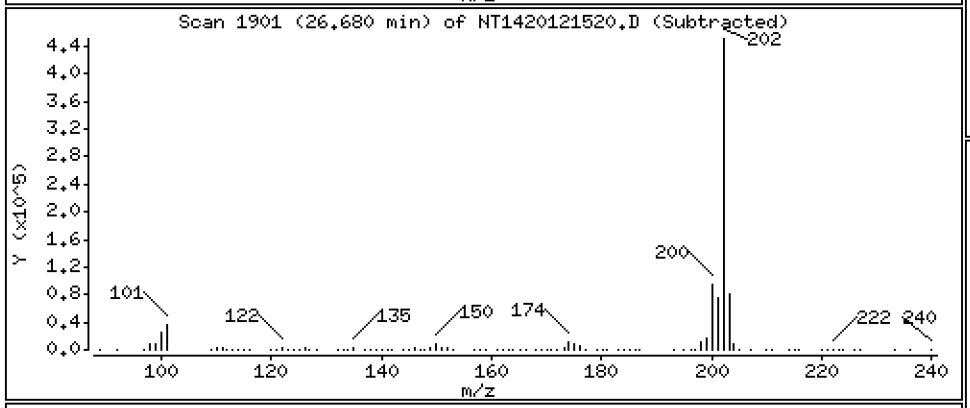
Column diameter: 0.25

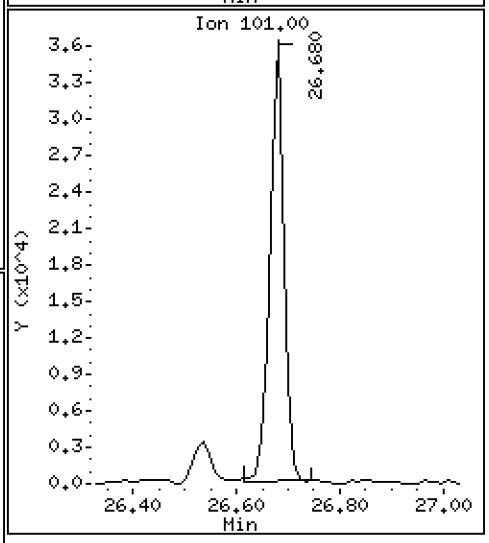
46 Pyrene

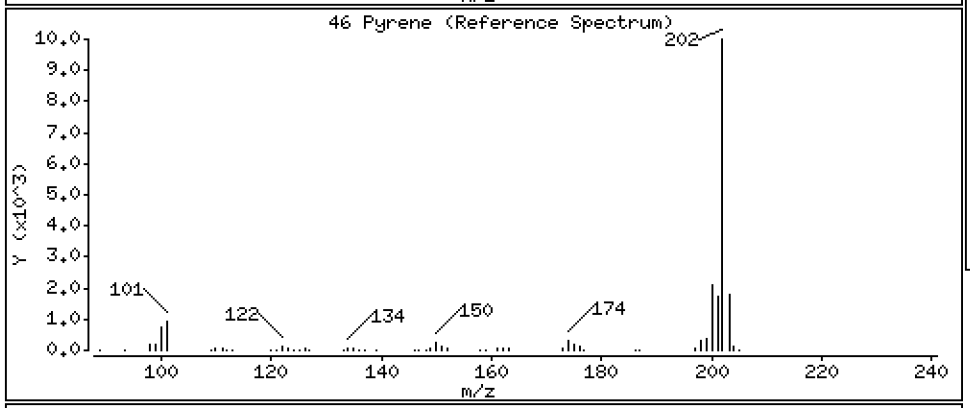
Concentration: 14.04 ug/mL

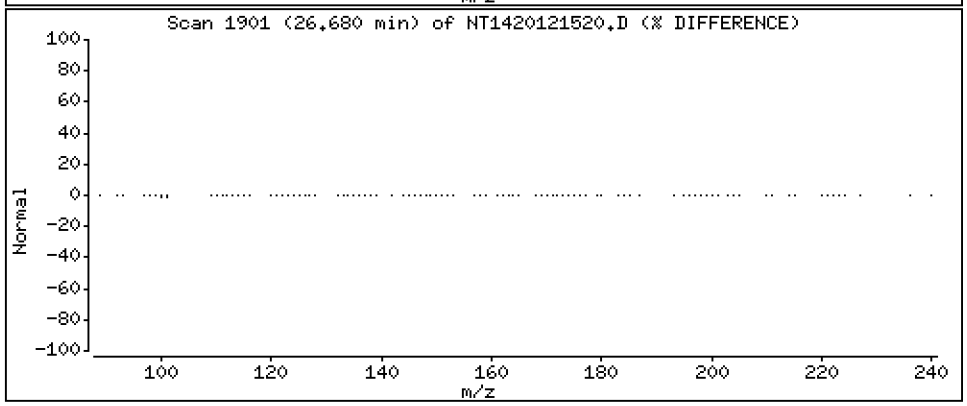












Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

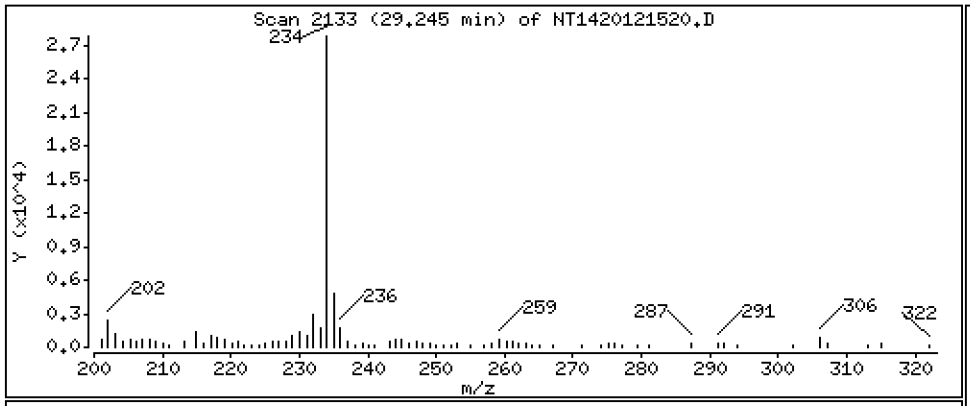
Operator: VTS

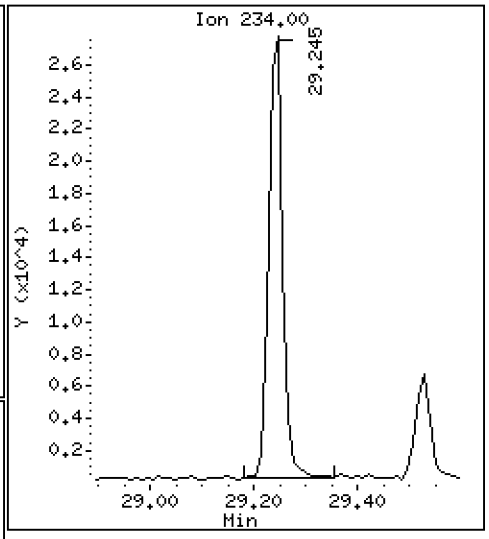
Column phase: Rxi-17Sil MS

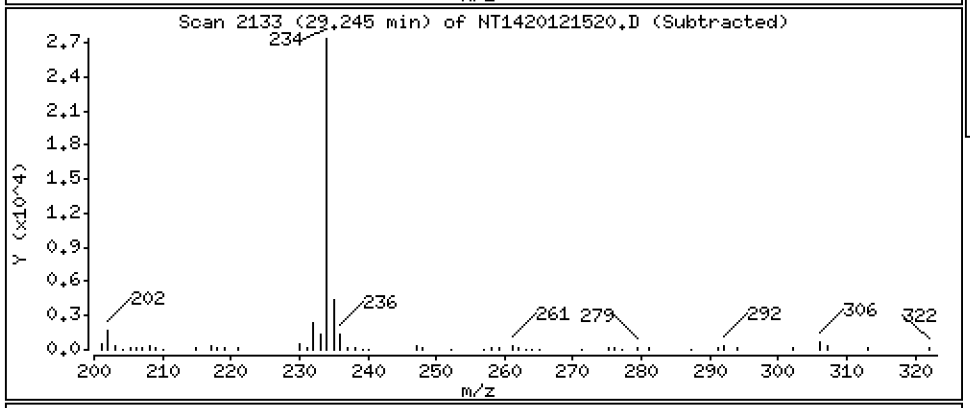
Column diameter: 0.25

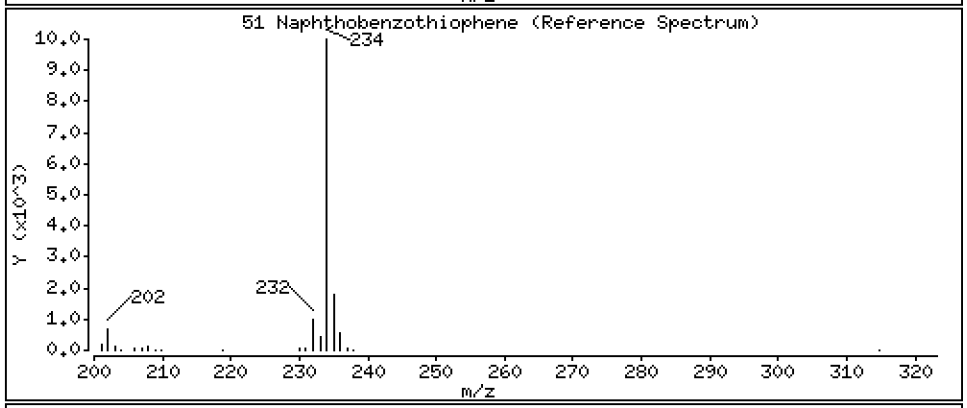
51 Naphthobenzothiophene

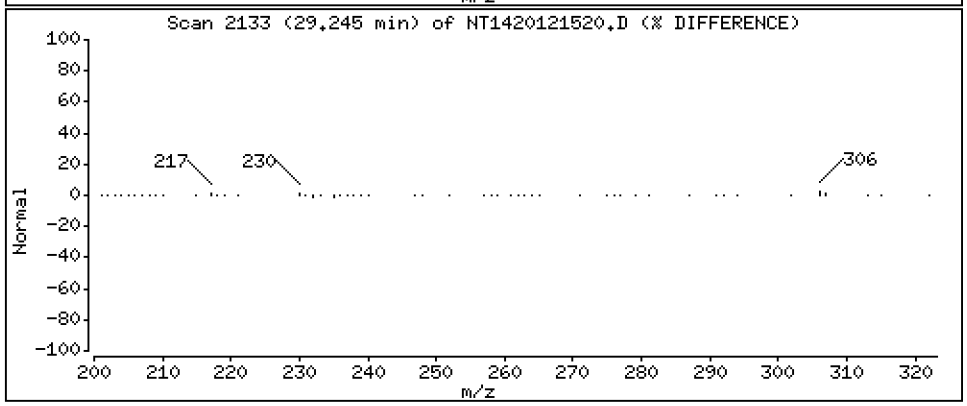
Concentration: 0.8935 ug/mL











Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

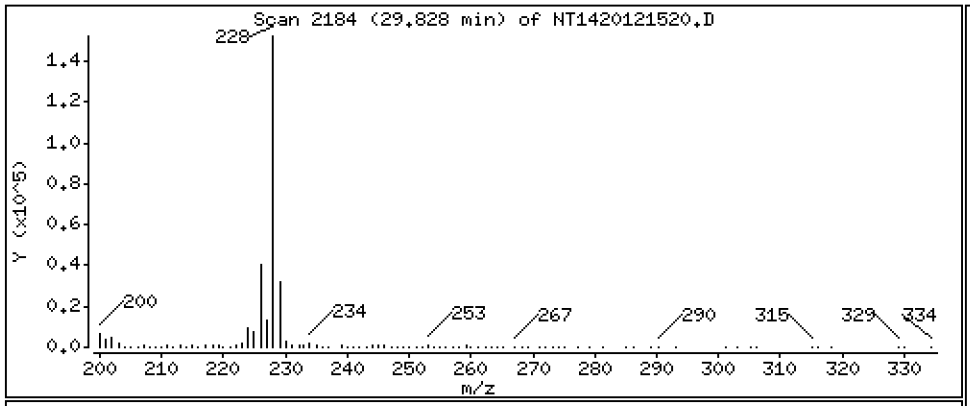
Operator: VTS

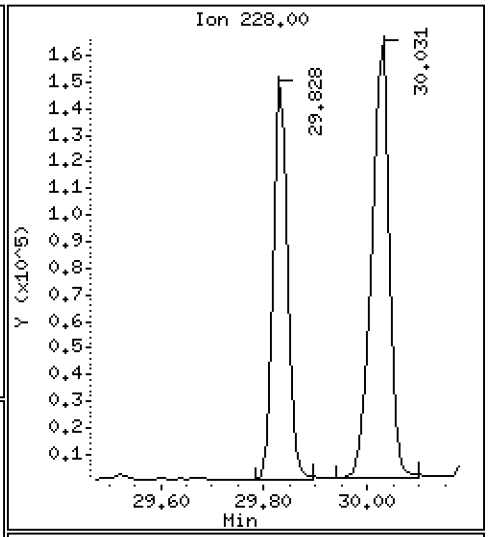
Column phase: Rxi-17Sil MS

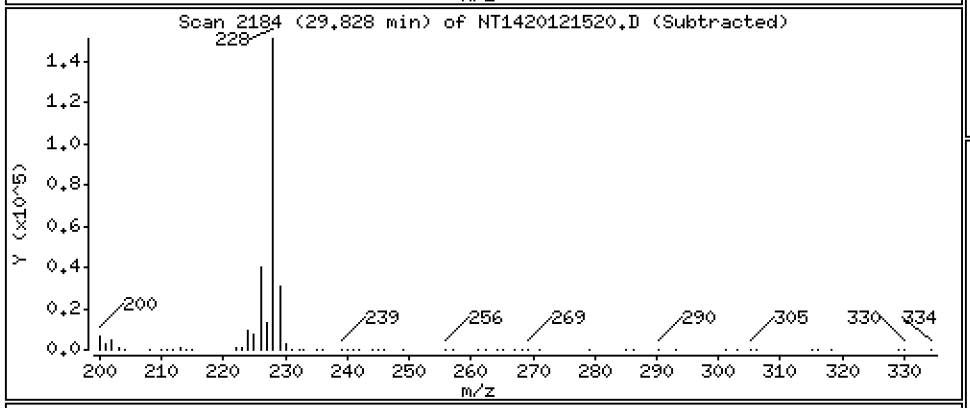
Column diameter: 0.25

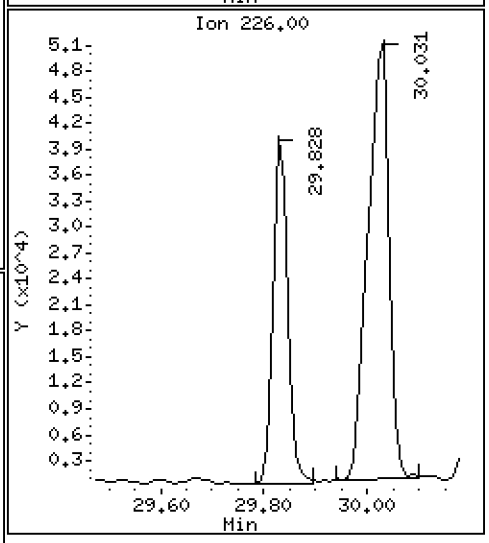
55 Benzo(a)anthracene

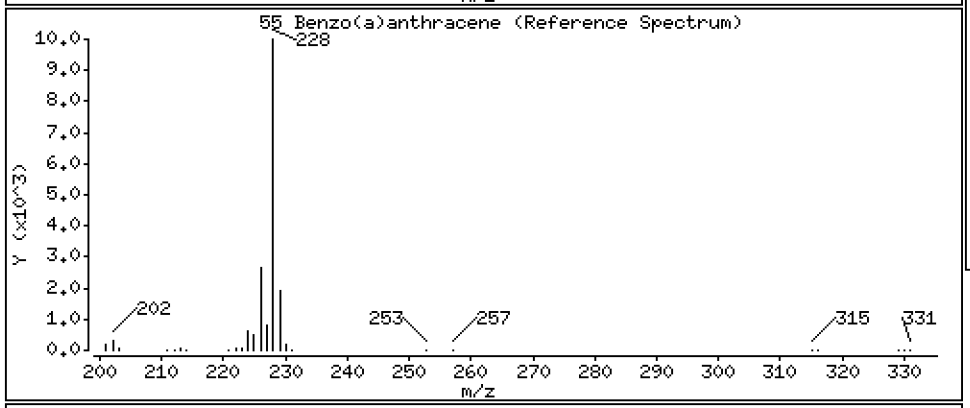
Concentration: 4.481 ug/mL

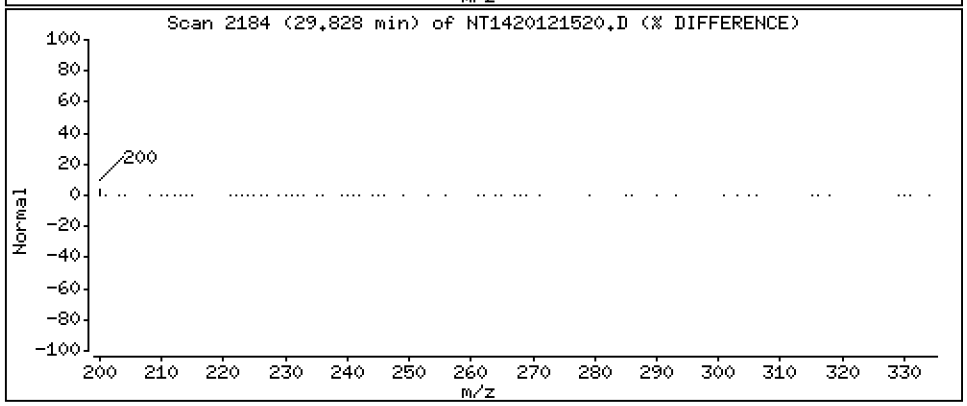












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Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

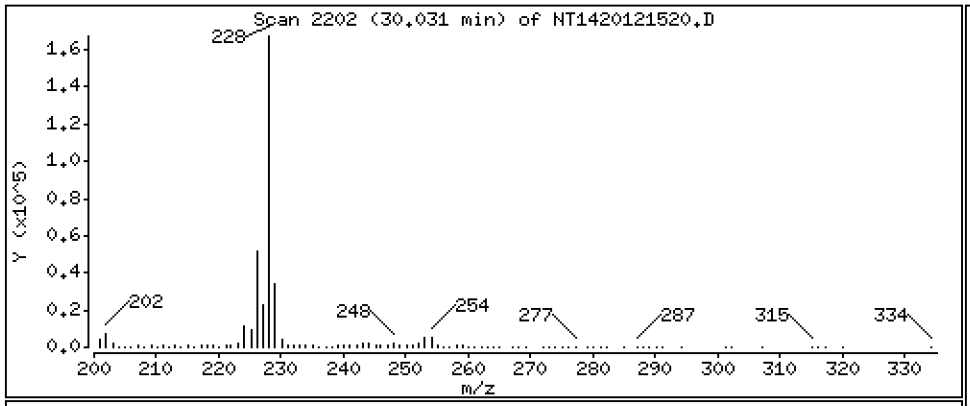
Operator: VTS

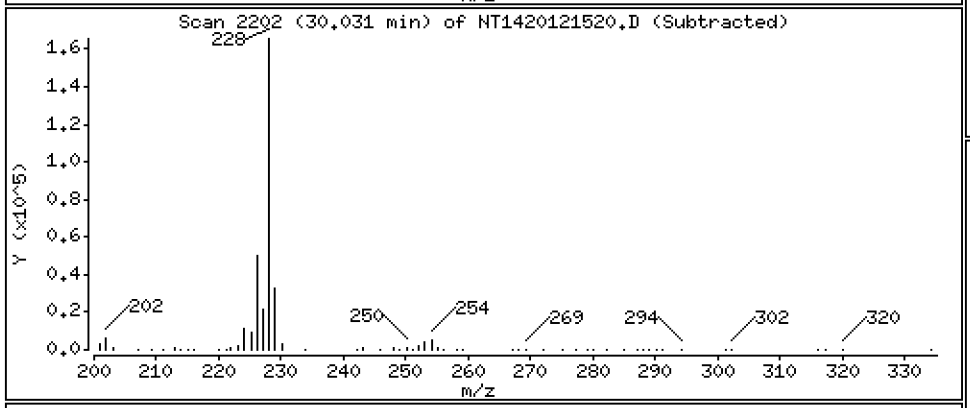
Column phase: Rxi-17Sil MS

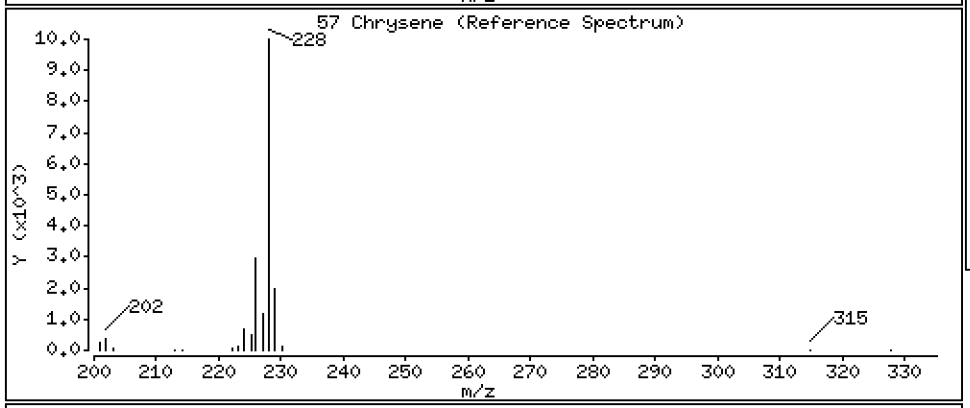
Column diameter: 0.25

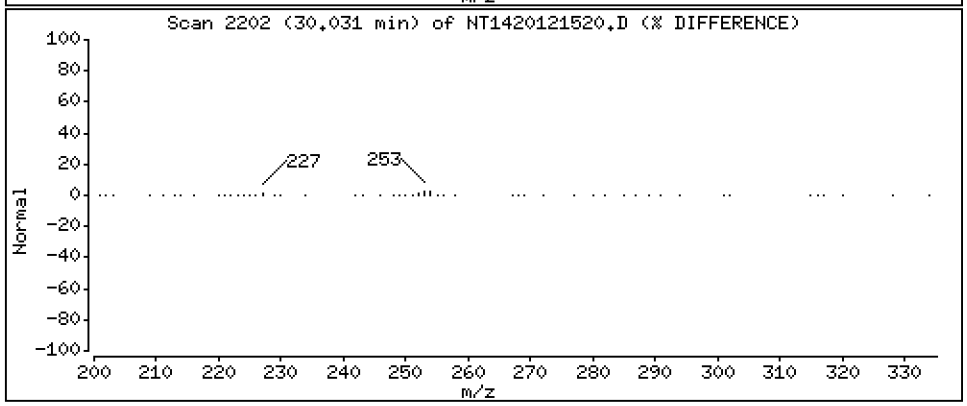
57 Chrysene

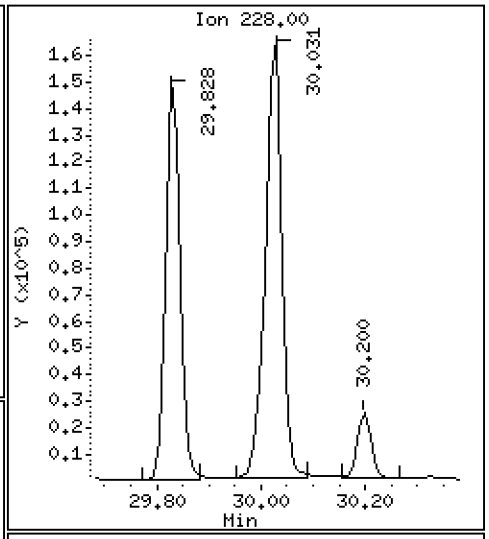
Concentration: 5.659 ug/mL

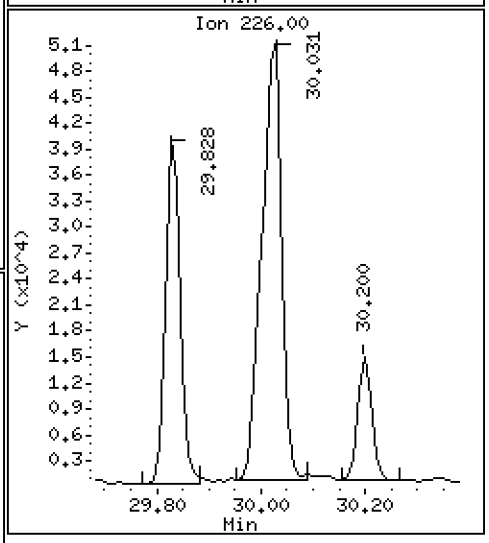












Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

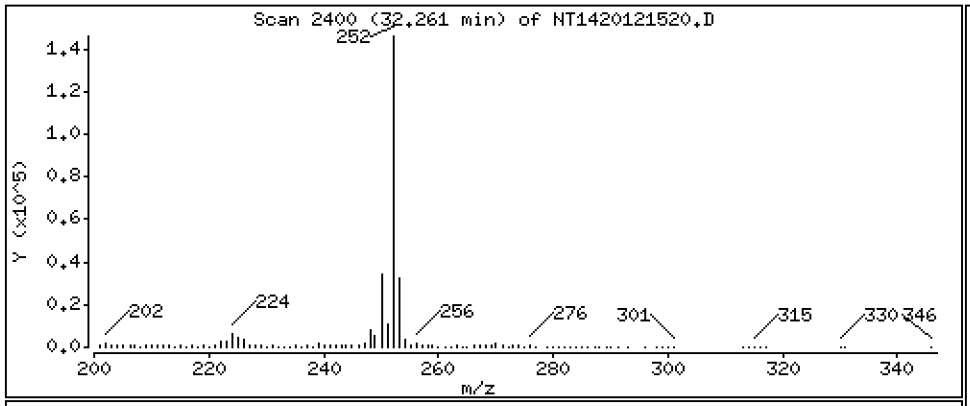
Operator: VTS

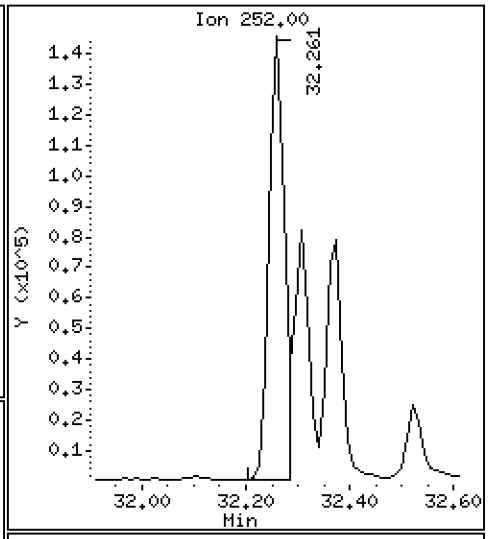
Column phase: Rxi-17Sil MS

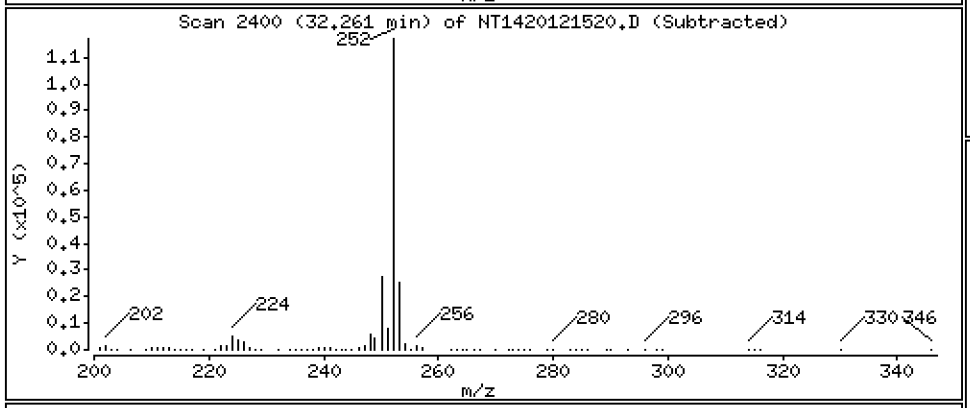
Column diameter: 0.25

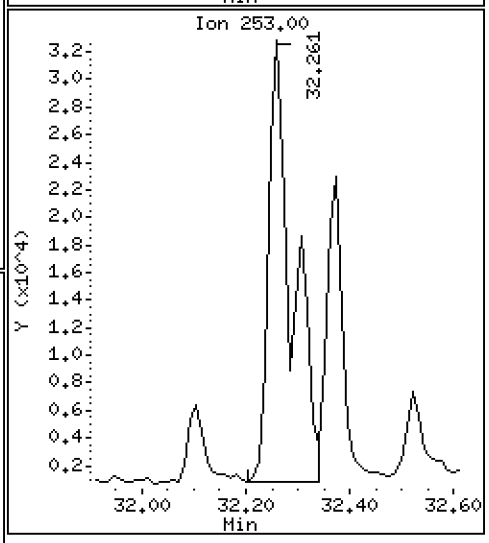
62 Benzo(b)fluoranthene

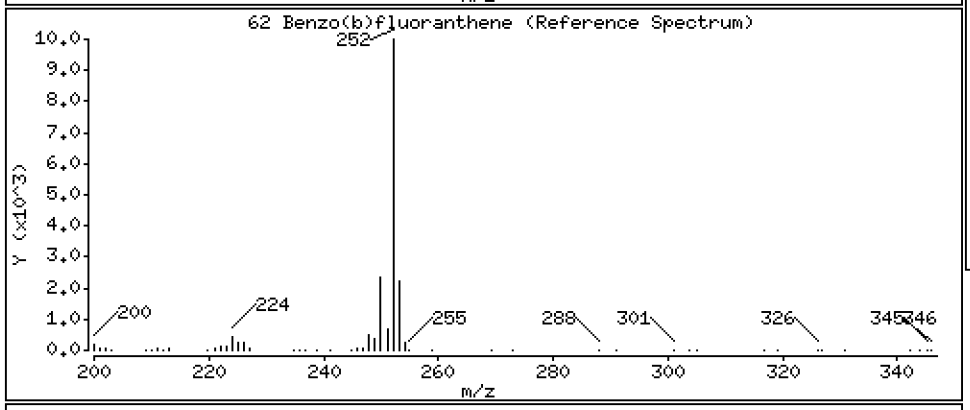
Concentration: 3.835 ug/mL

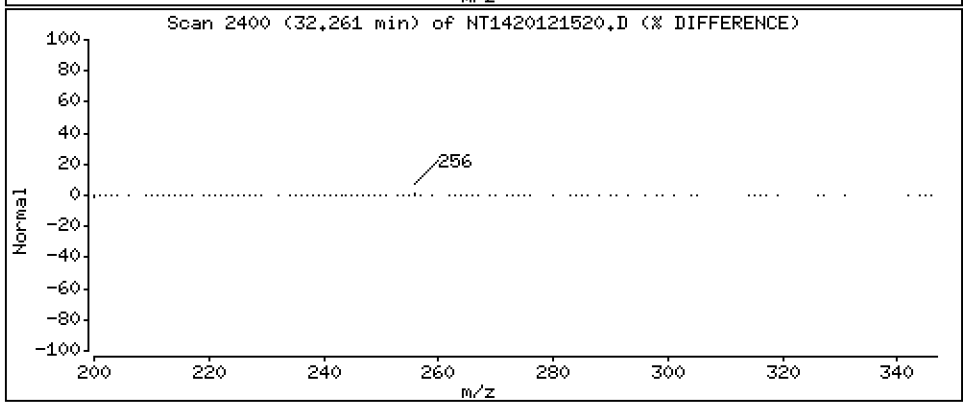












Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

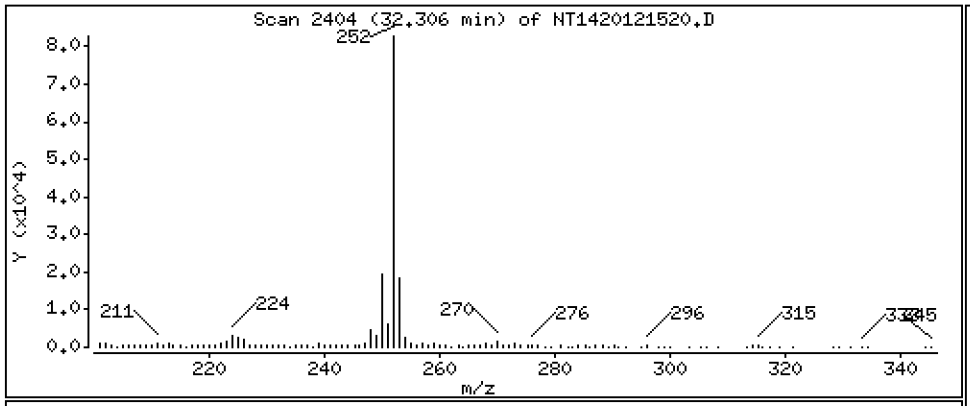
Operator: VTS

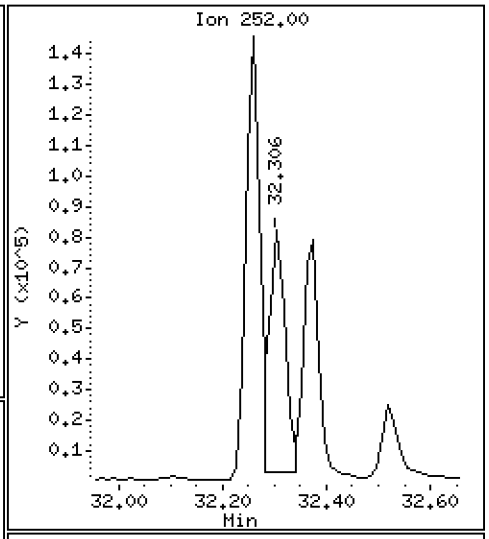
Column phase: Rxi-17Sil MS

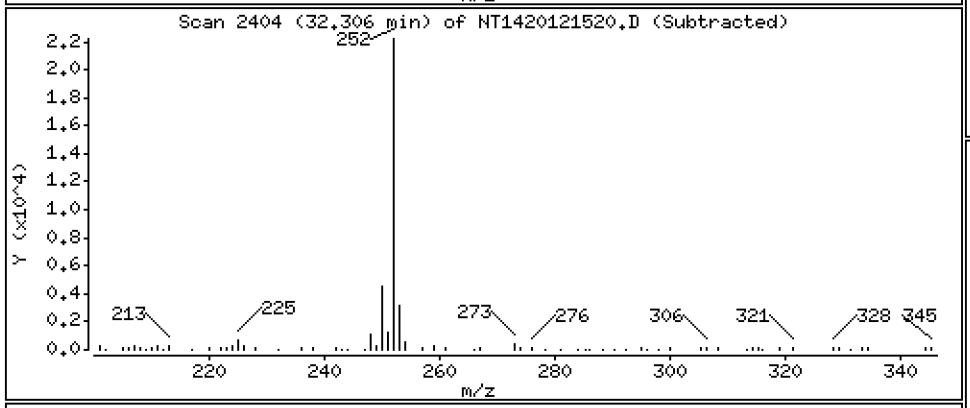
Column diameter: 0.25

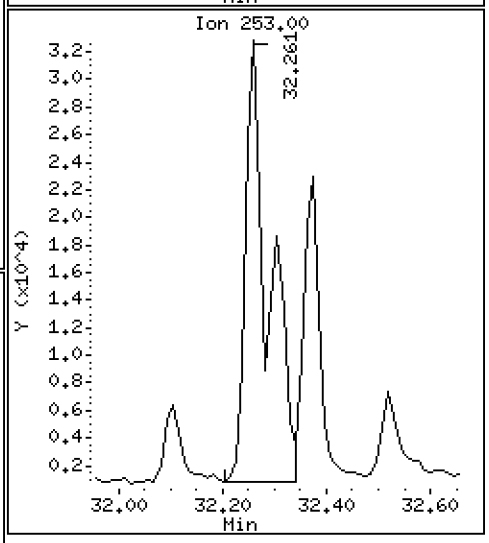
63 Benzo(k)fluoranthene

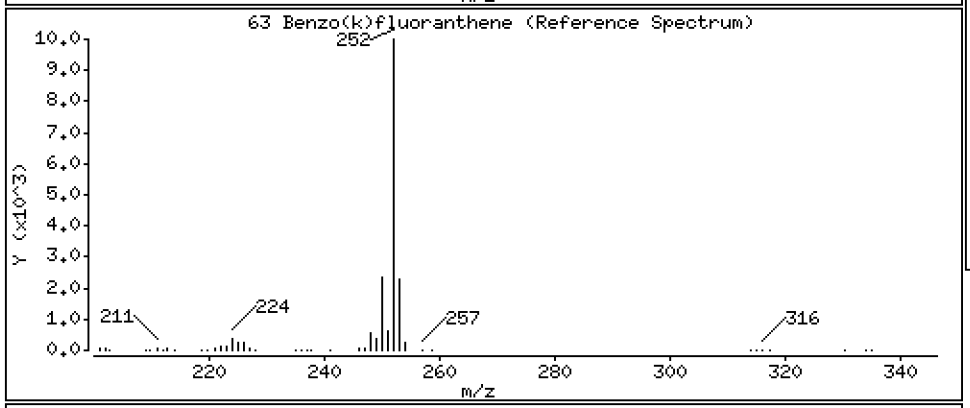
Concentration: 2.259 ug/mL

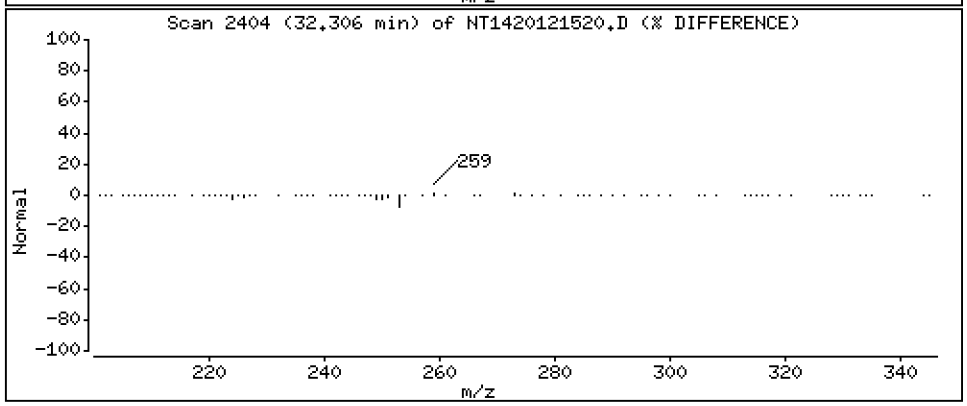












Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

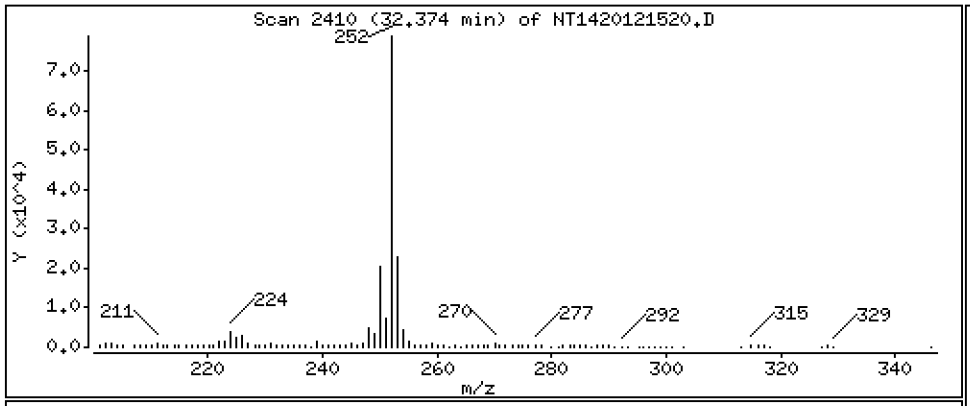
Operator: VTS

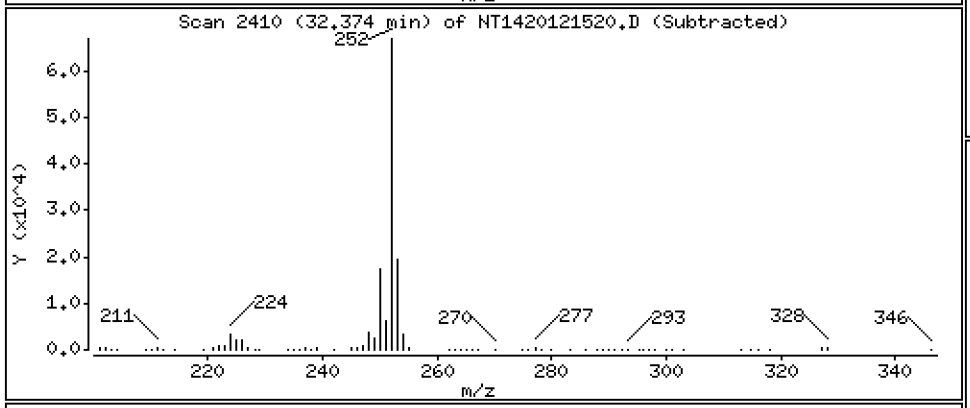
Column phase: Rxi-17Sil MS

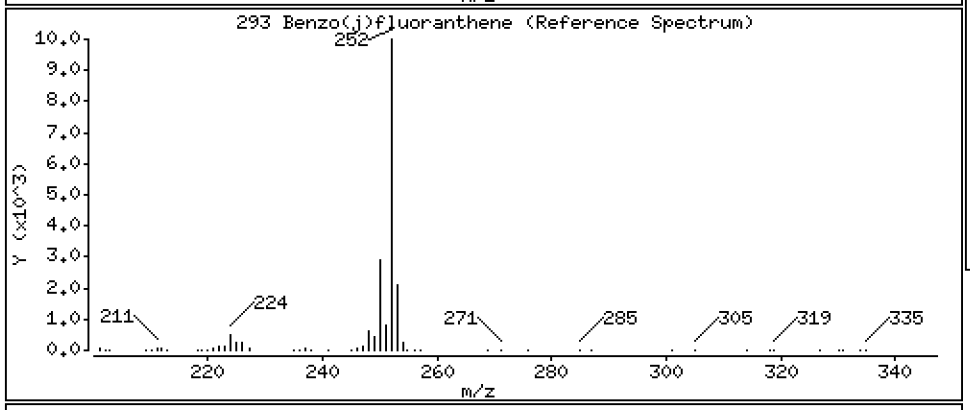
Column diameter: 0.25

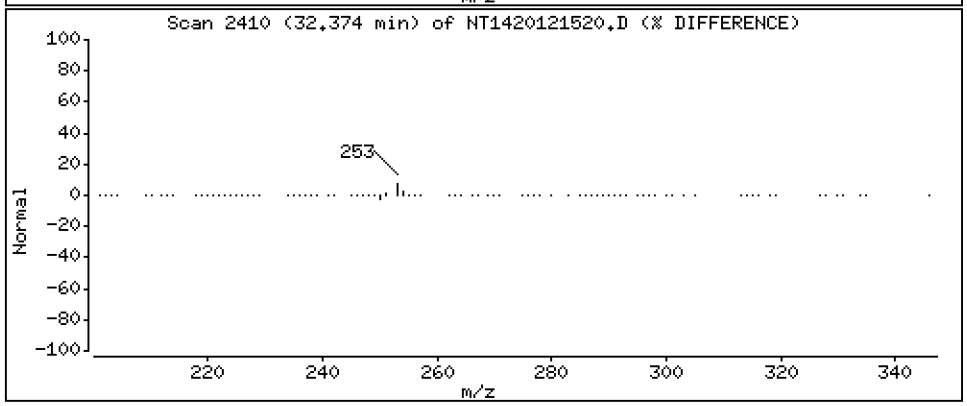
293 Benzo(j)fluoranthene

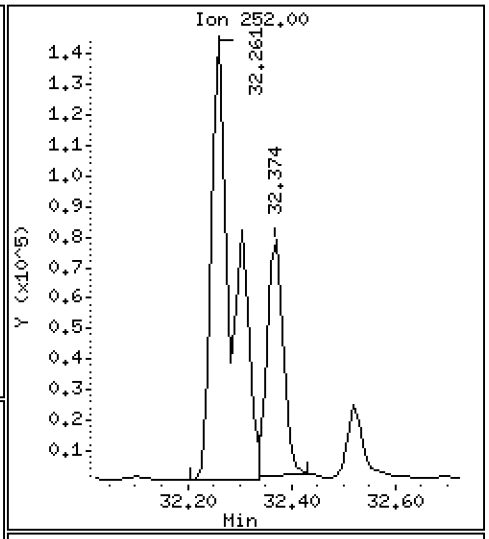
Concentration: 2.466 ug/mL

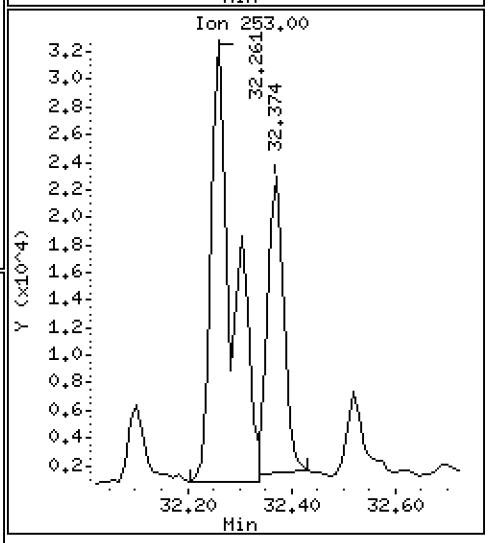












Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

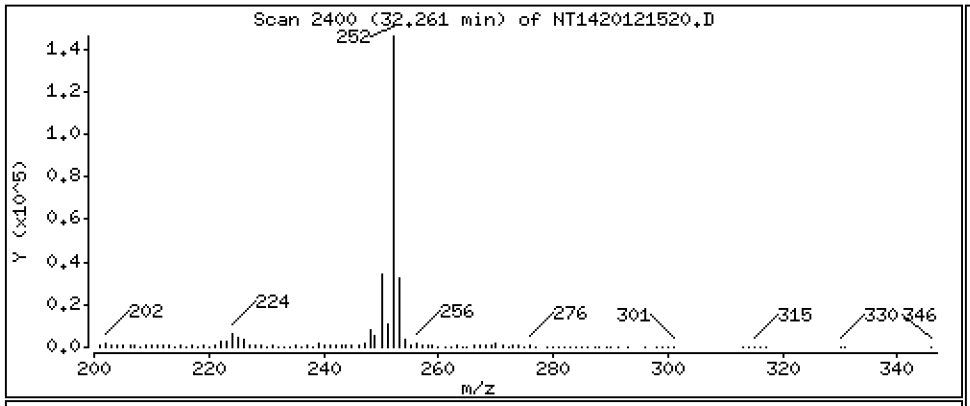
Operator: VTS

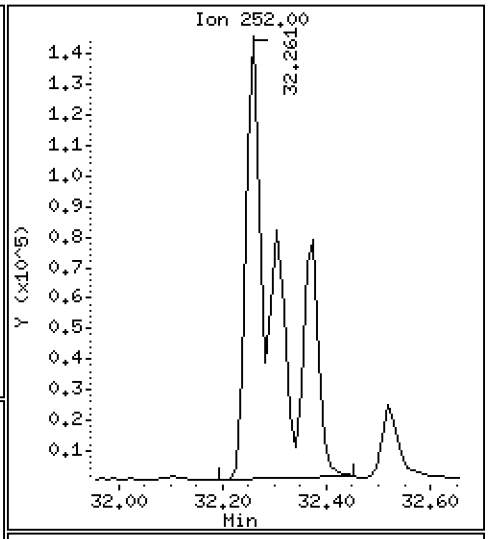
Column phase: Rxi-17Sil MS

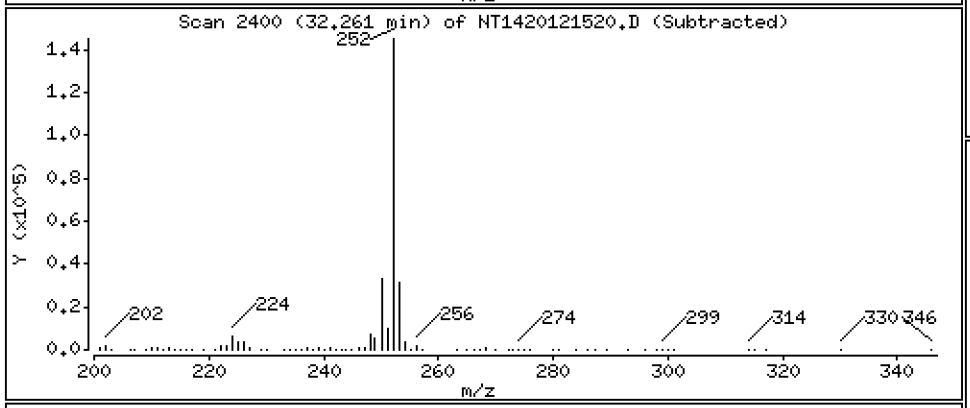
Column diameter: 0.25

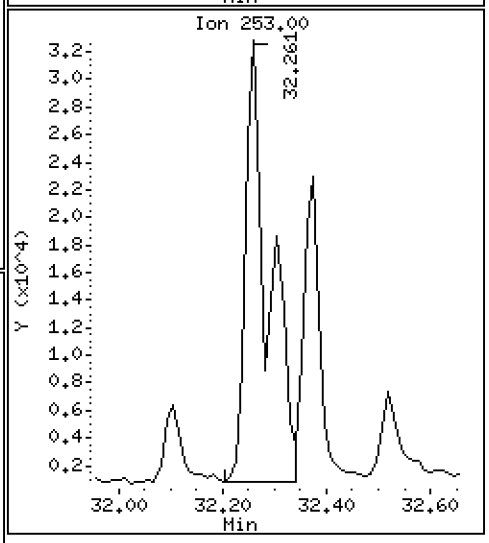
246 Total Benzofluoranthenes

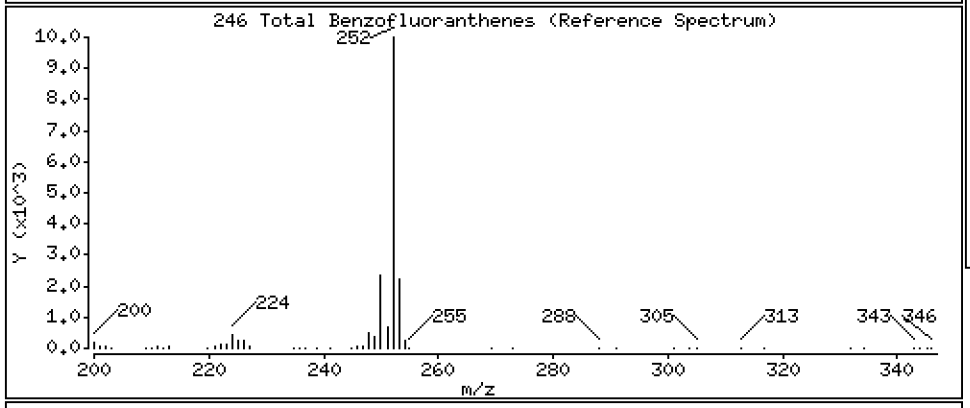
Concentration: 8.648 ug/mL

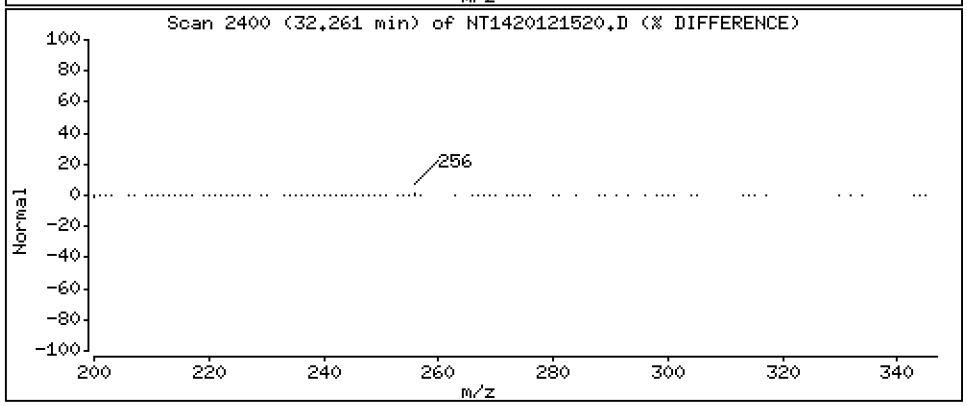












Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

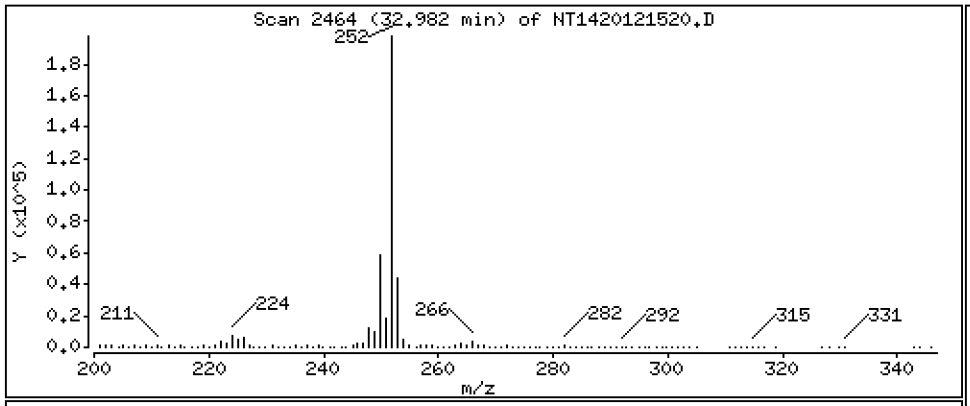
Operator: VTS

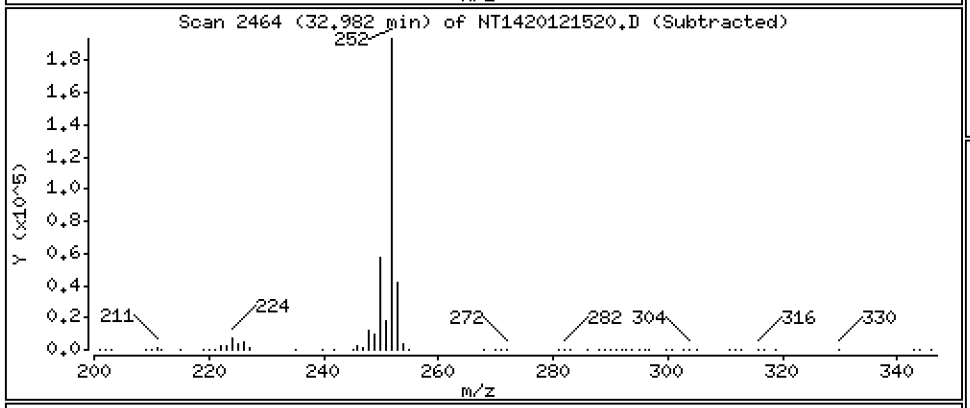
Column phase: Rxi-17Sil MS

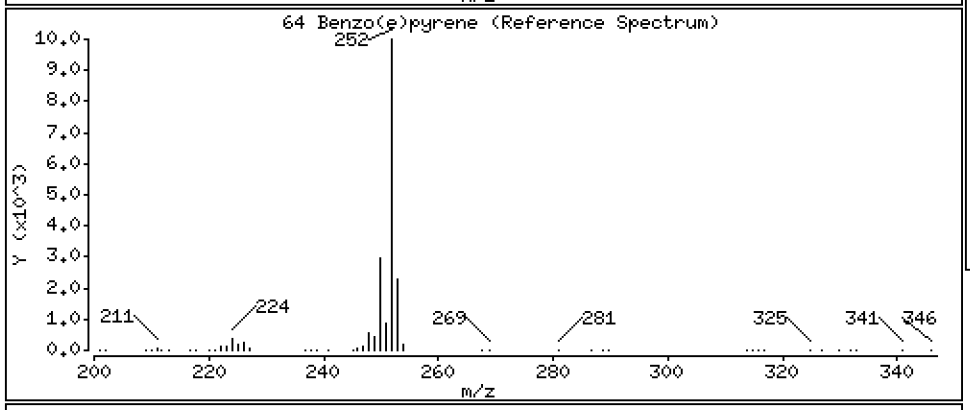
Column diameter: 0.25

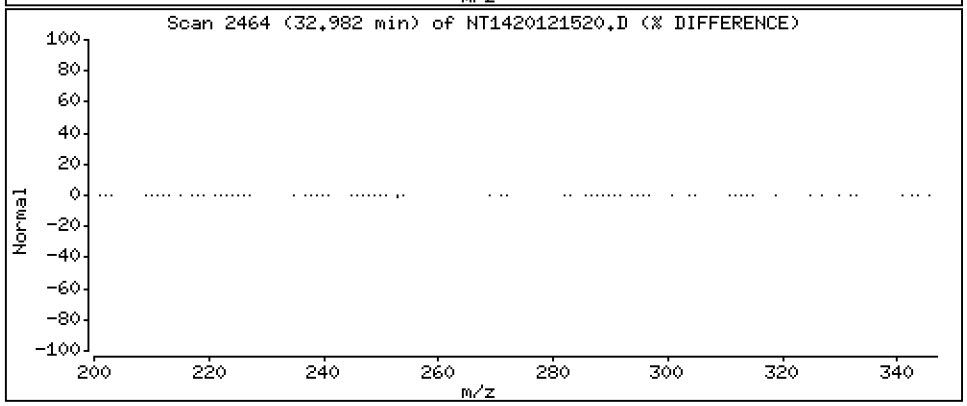
64 Benzo(e)pyrene

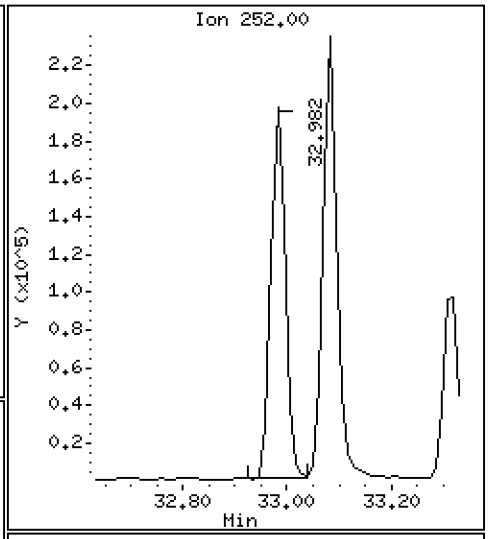
Concentration: 5.278 ug/mL

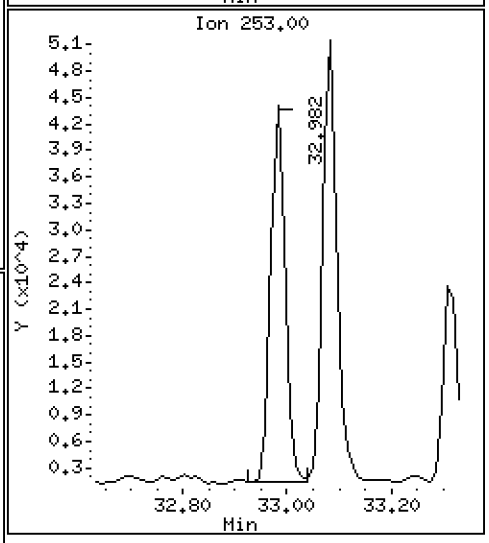












Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

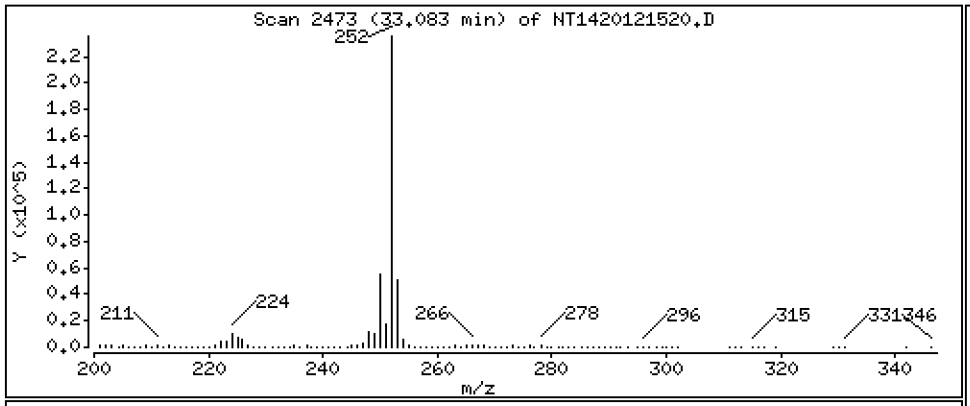
Operator: VTS

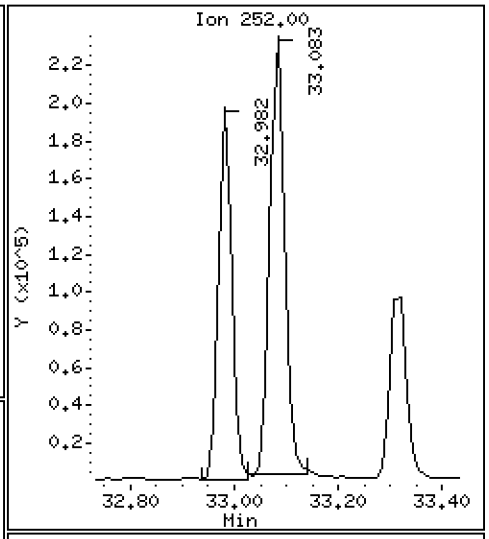
Column phase: Rxi-17Sil MS

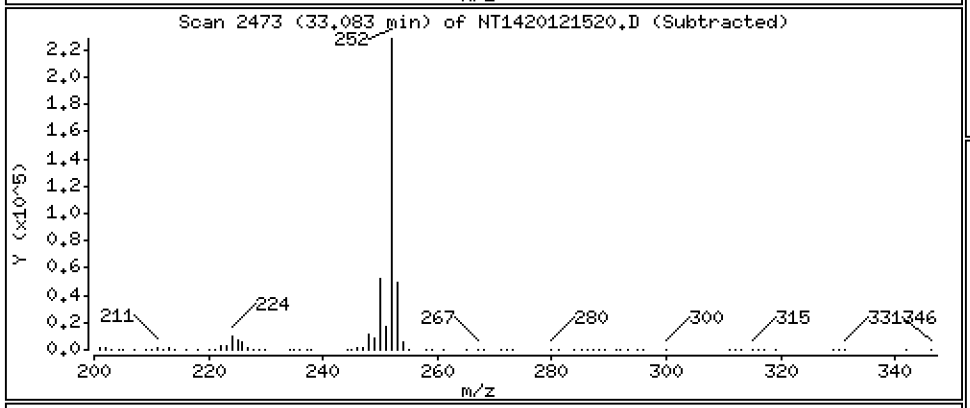
Column diameter: 0.25

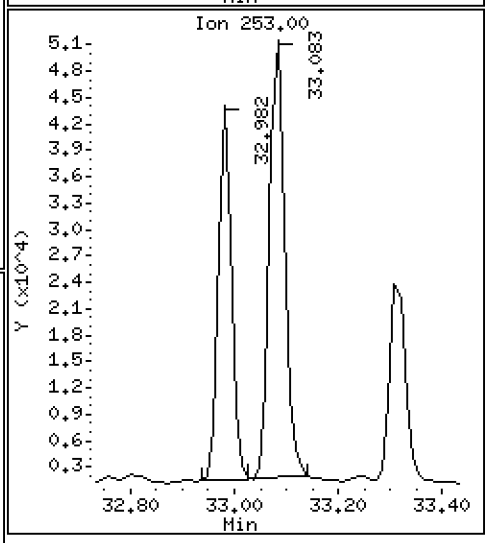
66 Benzo(a)pyrene

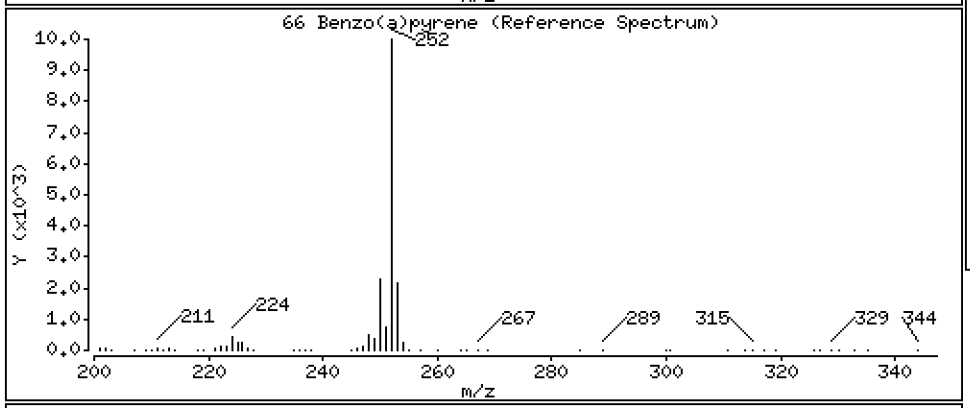
Concentration: 6.712 ug/mL

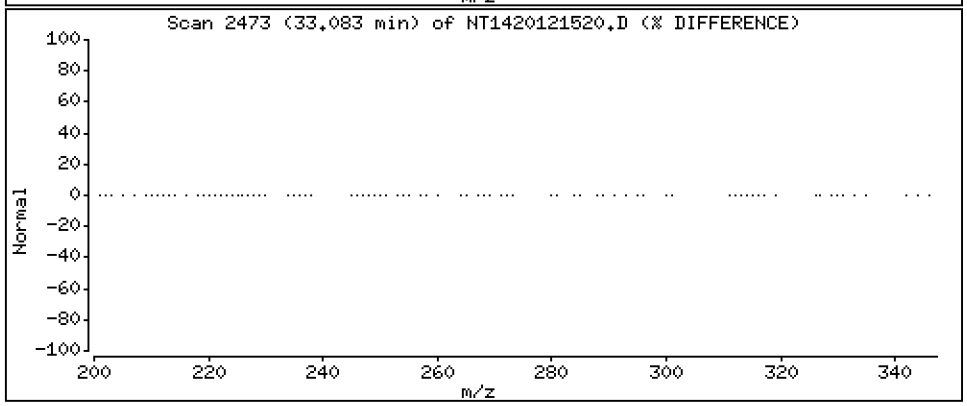












Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

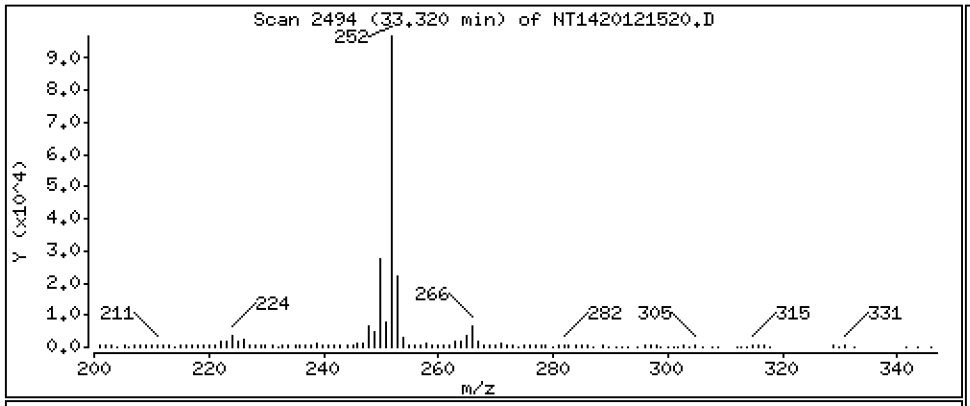
Operator: VTS

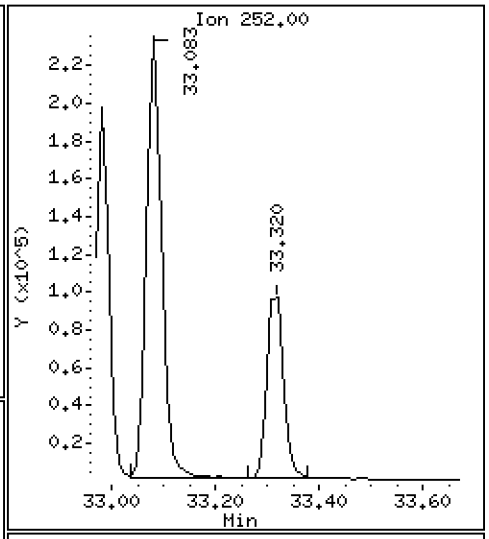
Column phase: Rxi-17Sil MS

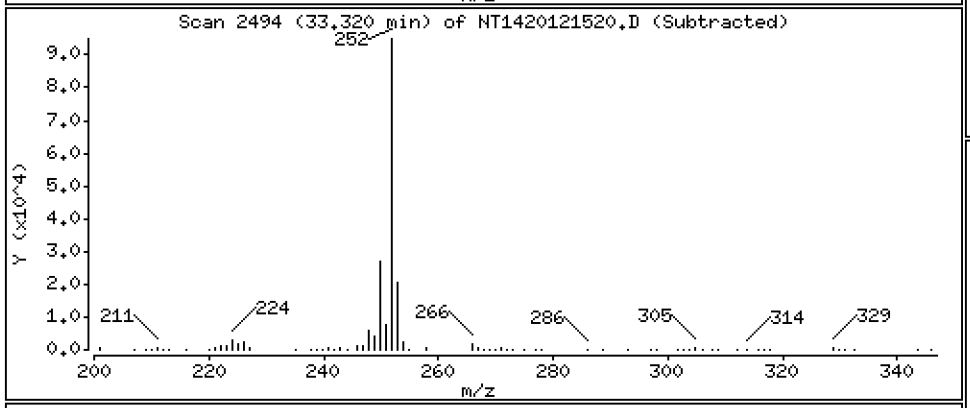
Column diameter: 0.25

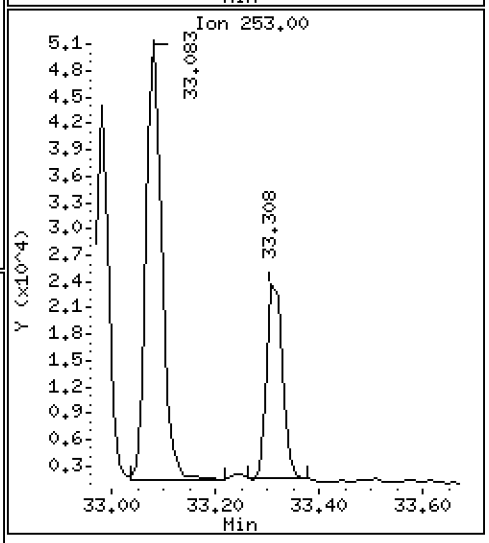
68 Perylene

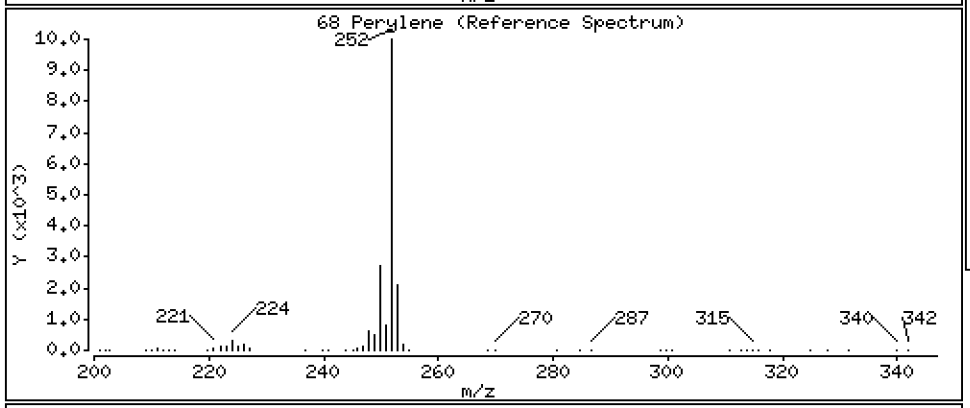
Concentration: 2.965 ug/mL

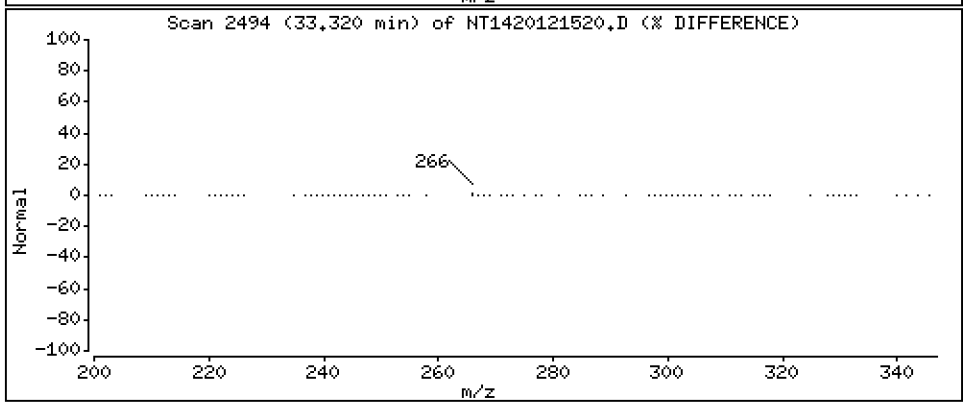












Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

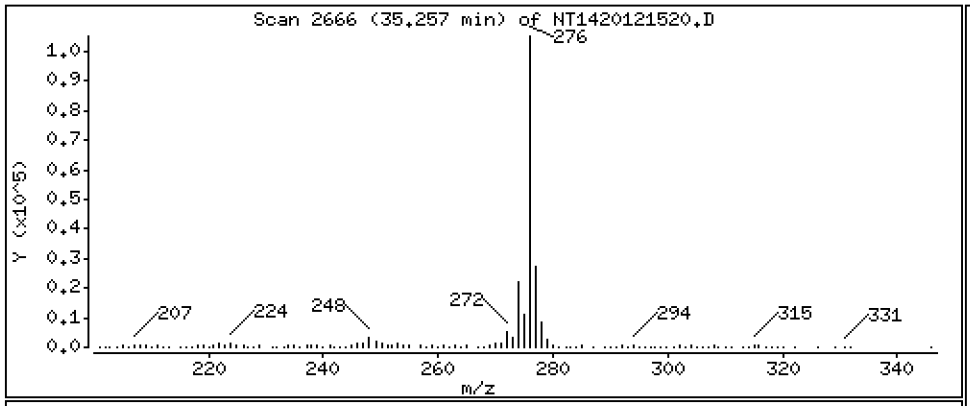
Operator: VTS

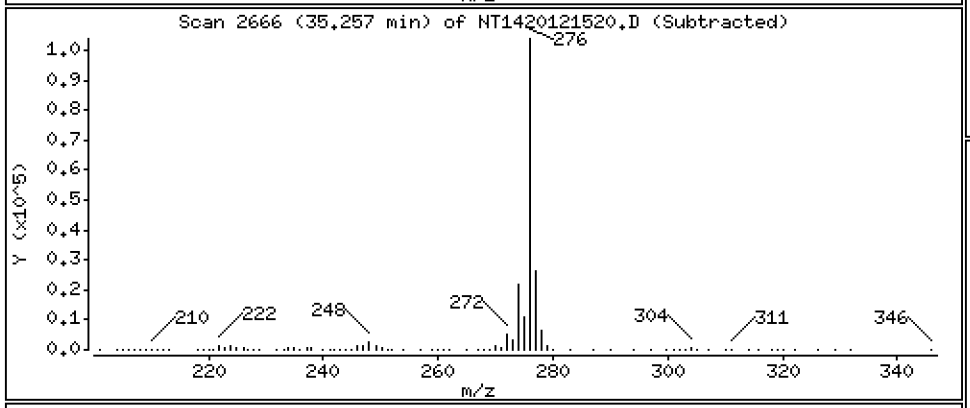
Column phase: Rxi-17Sil MS

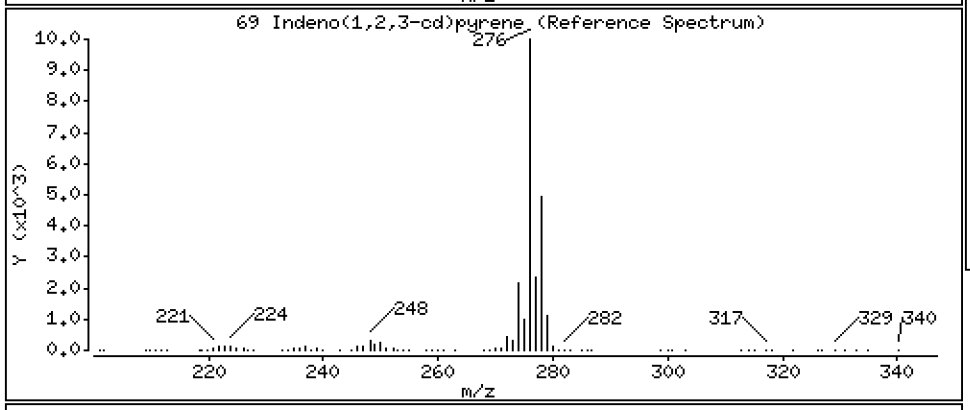
Column diameter: 0.25

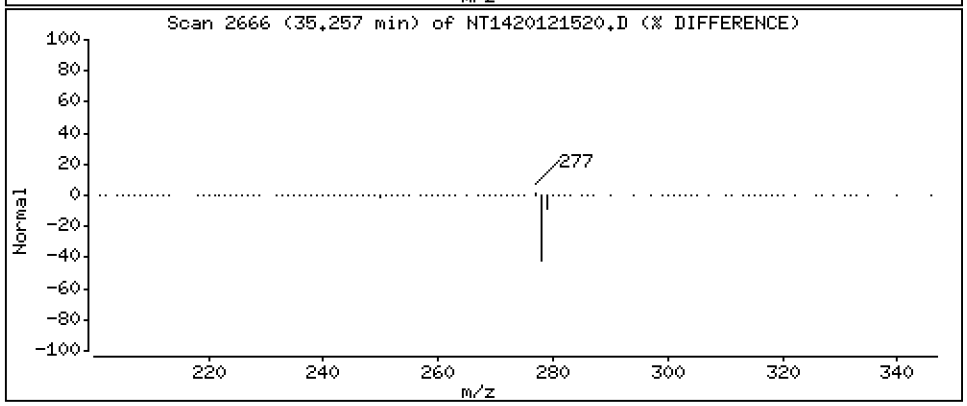
69 Indeno(1,2,3-cd)pyrene

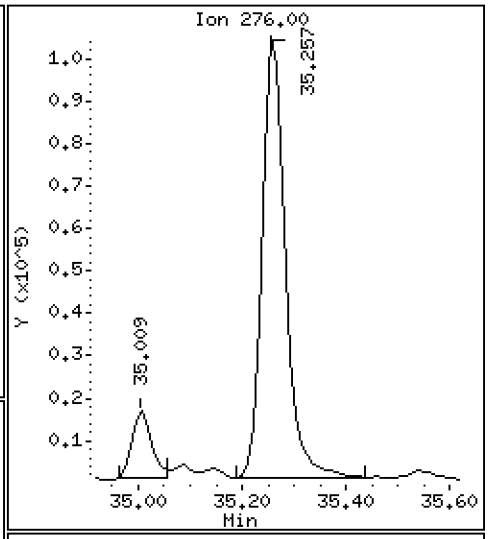
Concentration: 3.913 ug/mL

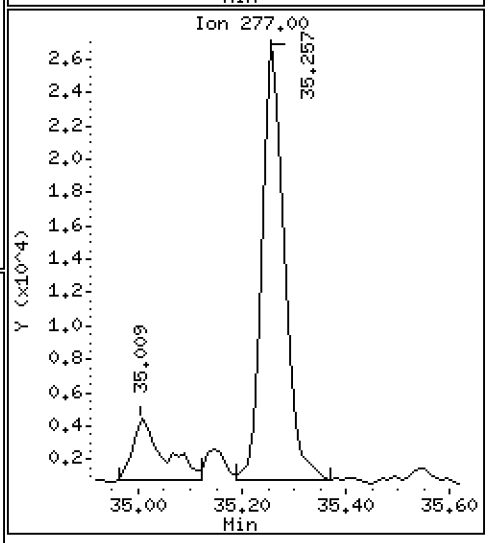












Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

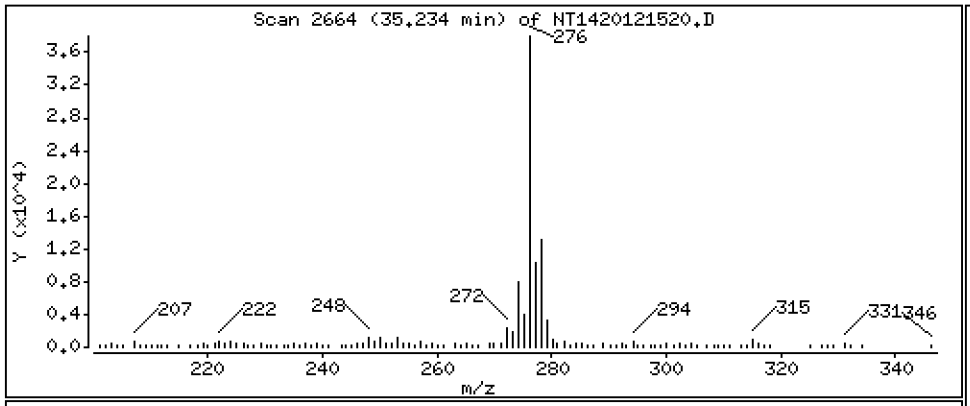
Operator: VTS

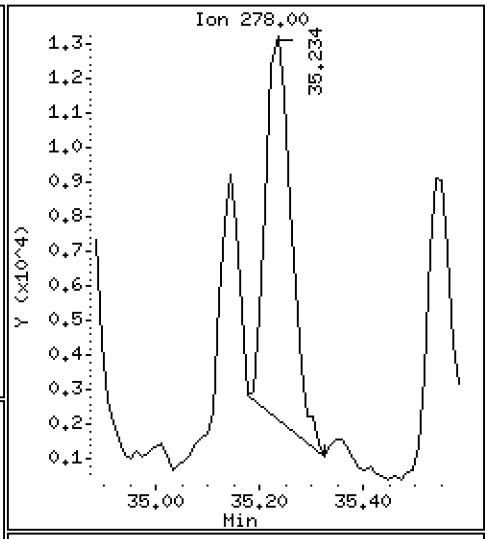
Column phase: Rxi-17Sil MS

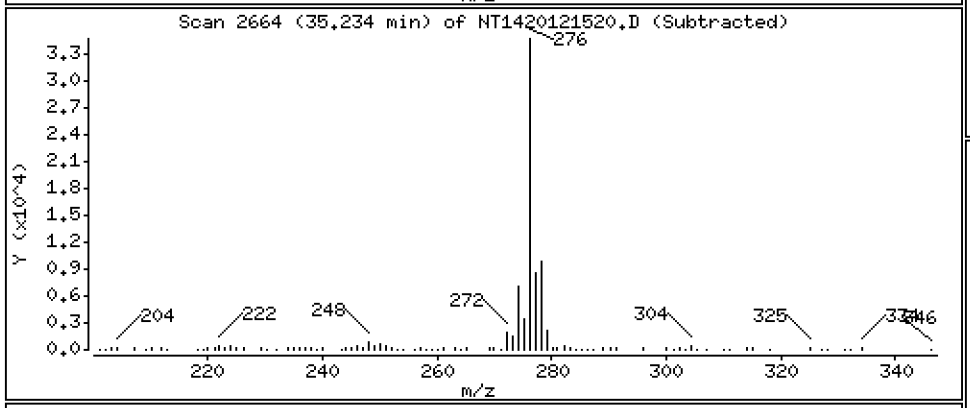
Column diameter: 0.25

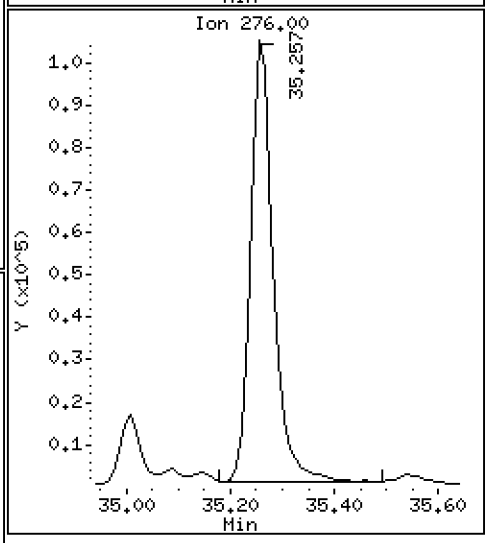
70 Dibenzo(a,h)anthracene

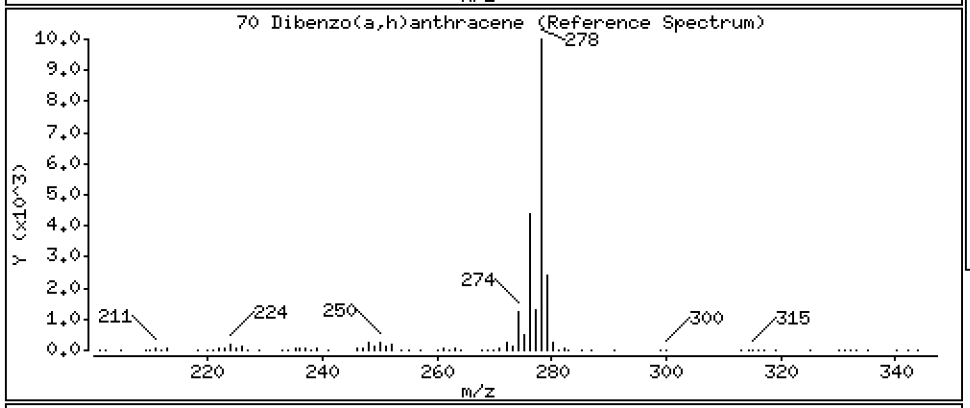
Concentration: 0.5193 ug/mL

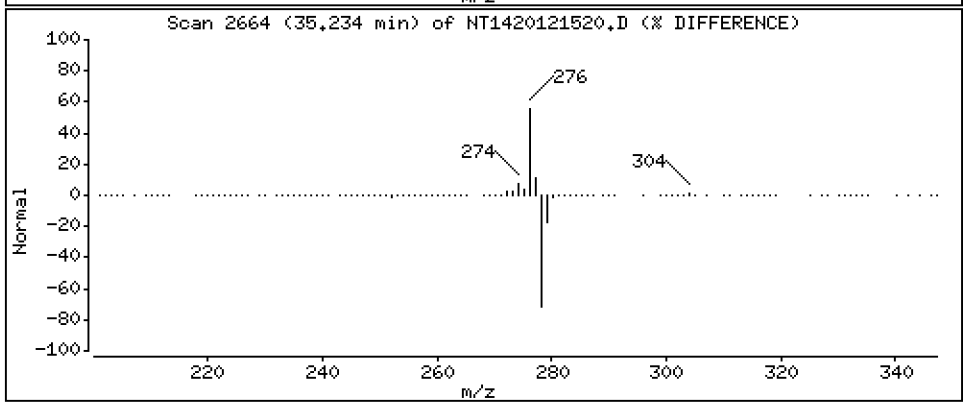












Data File: \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D

Date : 16-DEC-2020 03:00

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-01RE1,2X

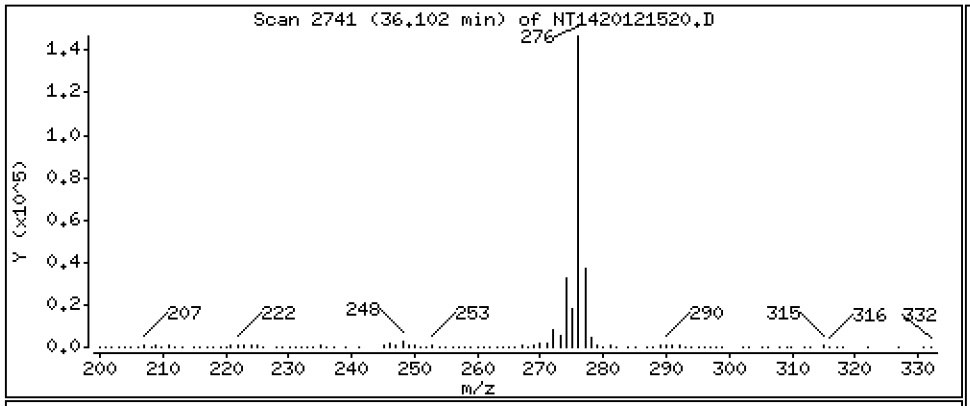
Operator: VTS

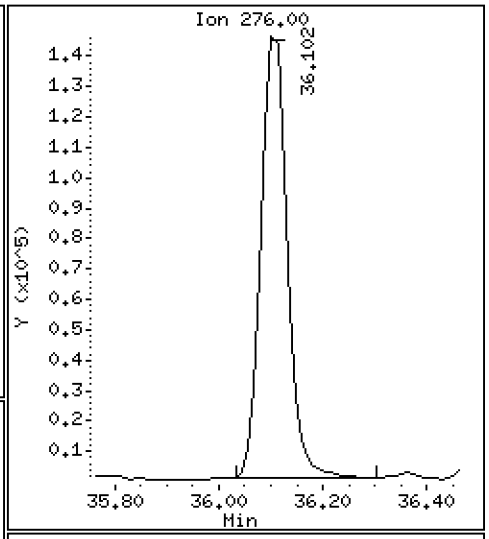
Column phase: Rxi-17Sil MS

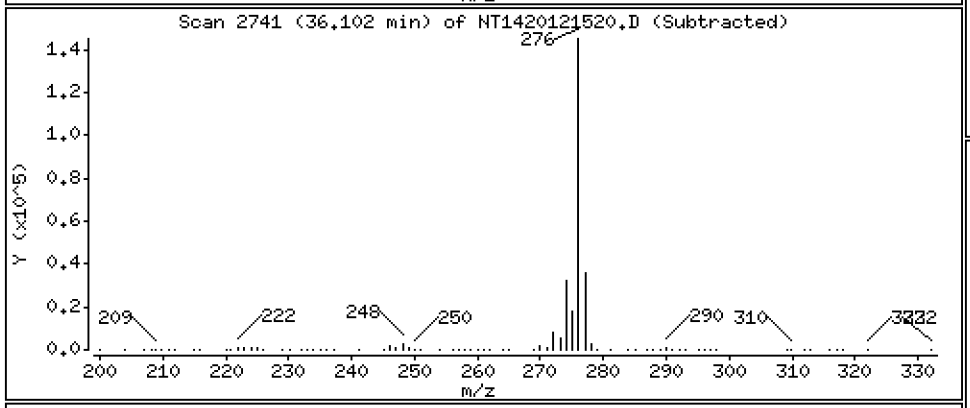
Column diameter: 0.25

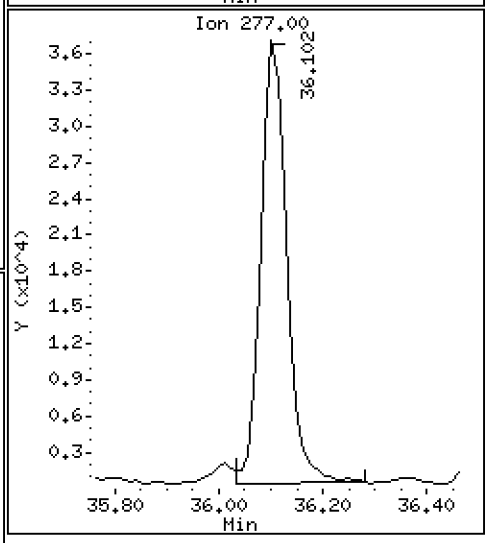
74 Benzo(g,h,i)perylene

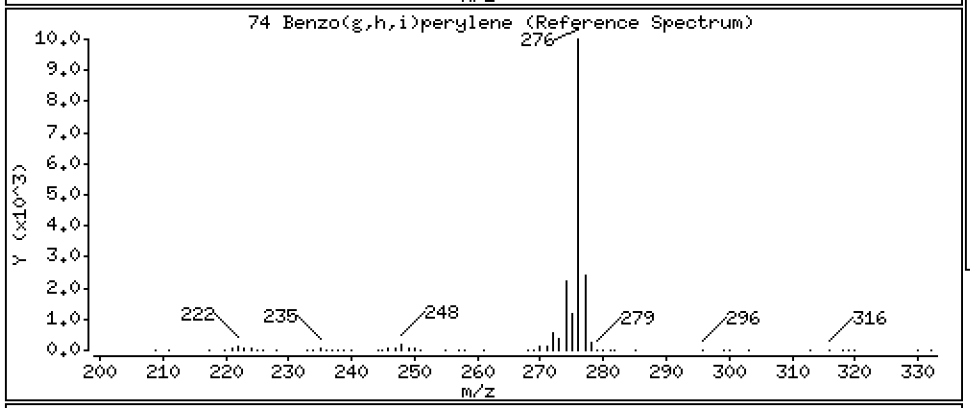
Concentration: 7.098 ug/mL

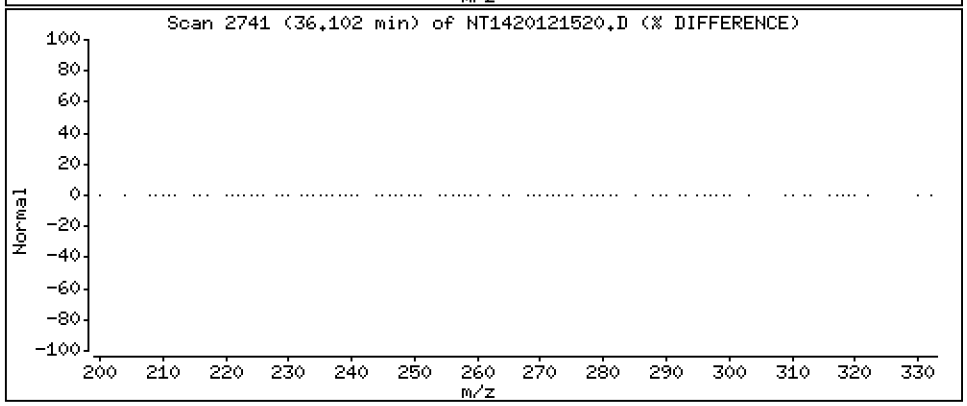












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201215A.b\NT1420121520.D
Lab Smp Id: 20K0073-01RE1
Inj Date : 16-DEC-2020 03:00
Operator : VTS Inst ID: nt14.i
Smp Info : 20K0073-01RE1,2X
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201215A.b\ALKYLPNA.m
Meth Date : 16-Dec-2020 07:15 van Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 19
Dil Factor: 2.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: VANS-202011

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
	1 trans-Decalin	138	Compound Not Detected.					
	2 cis-Decalin	138	Compound Not Detected.					
$	6 Naphthalene-d8	136	11.608	11.619	(0.624)	93611	0.91397	1.828(R)
	7 Naphthalene	128	11.674	11.685	(0.627)	42436	0.41413	0.8283
	12 Benzo(b)thiophene	134	12.124	12.135	(0.652)	2775	0.03223	0.06446
	16 2-Methylnaphthalene	141	13.520	13.520	(0.727)	11728	0.18775	0.3755
	17 1-methylnaphthalene	141	13.959	13.960	(0.750)	5235	0.08127	0.1625
	18 Biphenyl	154	15.157	15.158	(0.815)	5307	0.05645	0.1129(M)
	19 2,6-Dimethylnaphthalene	156	15.223	15.234	(0.818)	10753	0.15667	0.3133(M)
	20 Acenaphthylene	152	16.795	16.795	(0.902)	19654	0.17464	0.3493
$	21 Acenaphthene-d10	164	17.081	17.081	(0.918)	58714	0.95465	1.909(R)
	22 Acenaphthene	153	17.190	17.191	(0.924)	90383	1.22597	2.452
	23 Dibenzofuran	168	17.575	17.575	(0.944)	9661	0.09033	0.1807
	24 1,6,7-Trimethylnaphthalene	170	17.795	17.806	(0.956)	7172	0.10307	0.2061
*	25 Fluorene-d10	176	18.610	18.610	(1.000)	251018	2.00000	
	26 Fluorene	166	18.712	18.723	(1.005)	44976	0.53943	1.079
	30 Dibenzothiophene	184	21.626	21.626	(1.162)	27146	0.22622	0.4524
$	35 Phenanthrene-d10	188	21.930	21.941	(0.995)	128400	1.26643	2.533(R)
	36 Phenanthrene	178	22.018	22.018	(0.999)	537666	4.58647	9.173
*	250 Anthracene-d10	188	22.051	22.051	(1.000)	211684	2.00000	
	37 Anthracene	178	22.116	22.117	(1.003)	54108	0.46964	0.9393
	42 Carbazole	167	23.414	23.414	(1.062)	19018	0.19062	0.3812
	43 1-Methylphenanthrene	192	23.842	23.854	(1.081)	35052	0.40737	0.8147
	44 Fluoranthene	202	25.821	25.822	(1.171)	733462	5.66888	11.34
	46 Pyrene	202	26.679	26.679	(1.210)	958327	7.01910	14.04
	51 Naphthobenzothiophene	234	29.245	29.245	(1.326)	55599	0.44677	0.8935
	55 Benzo(a)anthracene	228	29.828	29.828	(0.906)	293302	2.24052	4.481
$	56 Chrysene-d12	240	29.951	29.952	(0.910)	104738	1.01306	2.026(R)
	57 Chrysene	228	30.030	30.031	(0.912)	368150	2.82951	5.659
	62 Benzo(b)fluoranthene	252	32.260	32.261	(0.980)	283447	1.91765	3.835(M)
	63 Benzo(k)fluoranthene	252	32.305	32.306	(0.981)	168274	1.12952	2.259(M)
	293 Benzo(j)fluoranthene	252	32.373	32.373	(0.983)	160551	1.23287	2.466
	246 Total Benzofluoranthenes	252	32.260	32.306	(0.980)	593007	4.32397	8.648(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.925	32.925	(1.000)	303234	2.00000	
64 Benzo(e)pyrene	252	32.981	32.981	(1.002)	357158	2.63909	5.278
66 Benzo(a)pyrene	252	33.083	33.083	(1.005)	429087	3.35577	6.712
$ 67 Perylene-d12	264	33.252	33.263	(1.010)	102851	0.82027	1.641(R)
68 Perylene	252	33.319	33.319	(1.012)	199124	1.48264	2.965
69 Indeno(1,2,3-cd)pyrene	276	35.256	35.268	(1.071)	309770	1.95635	3.913
70 Dibenzo(a,h)anthracene	278	35.234	35.234	(1.070)	36321	0.25964	0.5193(M)
74 Benzo(g,h,i)perylene	276	36.101	36.113	(1.096)	493661	3.54889	7.098

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
Lab File ID: NT1420121520.D
Lab Smp Id: 20K0073-01RE1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201215A.b\ALKYLPNA.m
Misc Info:

Calibration Date: 16-DEC-2020
Calibration Time: 00:36
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	244647	122324	489294	251018	2.60
250 Anthracene-d10	215002	107501	430004	211684	-1.54
251 Benzo(e)pyrene-d1	290613	145307	581226	303234	4.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.61	18.11	19.11	18.61	-0.00
250 Anthracene-d10	22.05	21.55	22.55	22.05	-0.00
251 Benzo(e)pyrene-d1	32.93	32.43	33.43	32.93	-0.00

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

REVIEW SUMMARY FOR FILE - NT1420121520.D

Lab ID: 20K0073-01RE1
nt14.i, 20201215A.b\ALKYLPNA.m, 16-DEC-2020 03:00

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

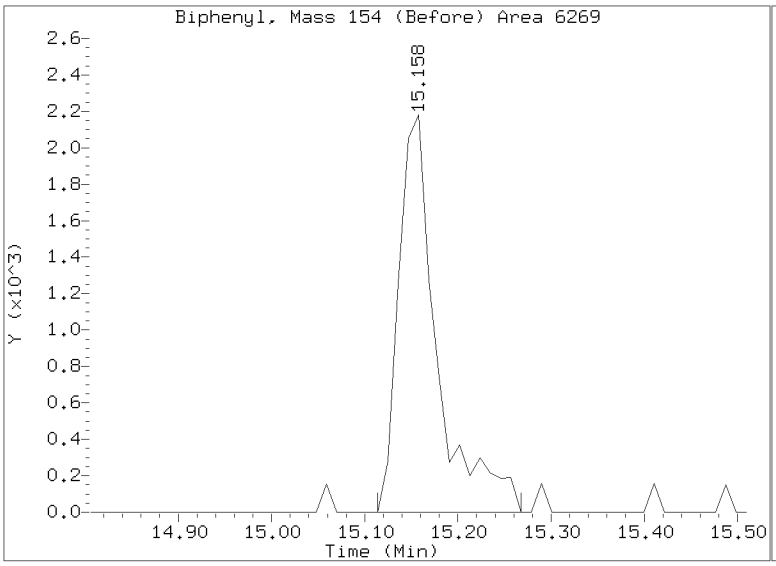
RRT check based on Ccal File: NT1420121517ICV.D

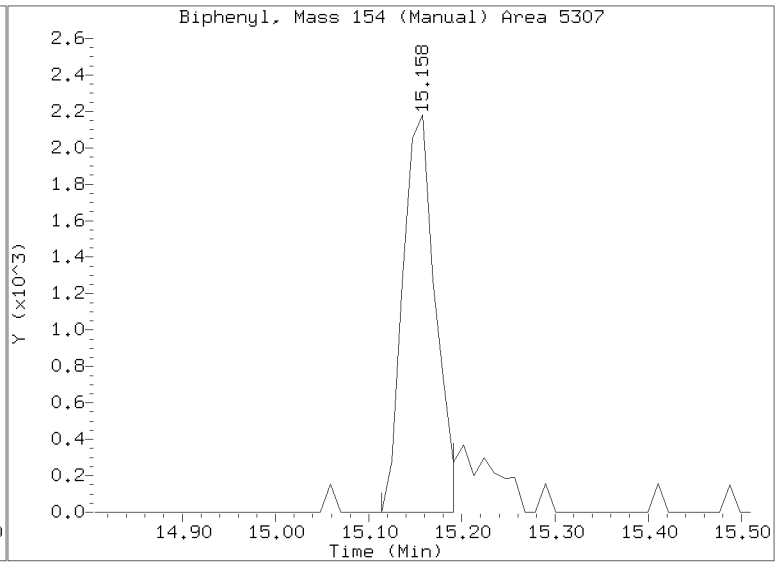
On Column LOD for nt14.i, 20201215A.b\ALKYLPNA.m, TARGETS.sub = 0.0000

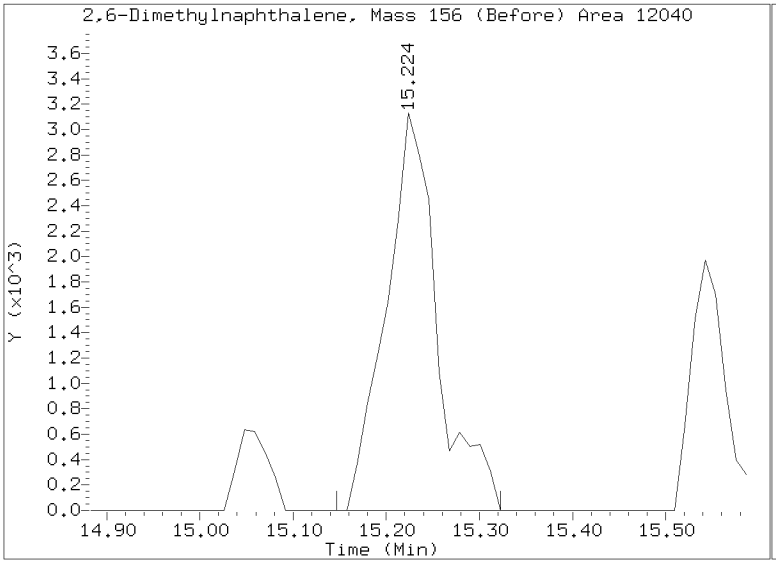
* Only compounds listed in the work order have been verified by the analyst *

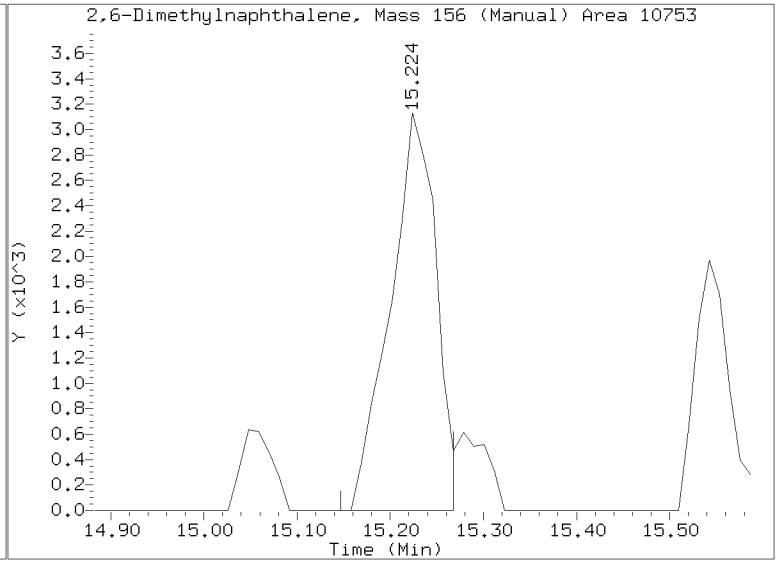
Quant Ion Manual Peak Adjustment Report

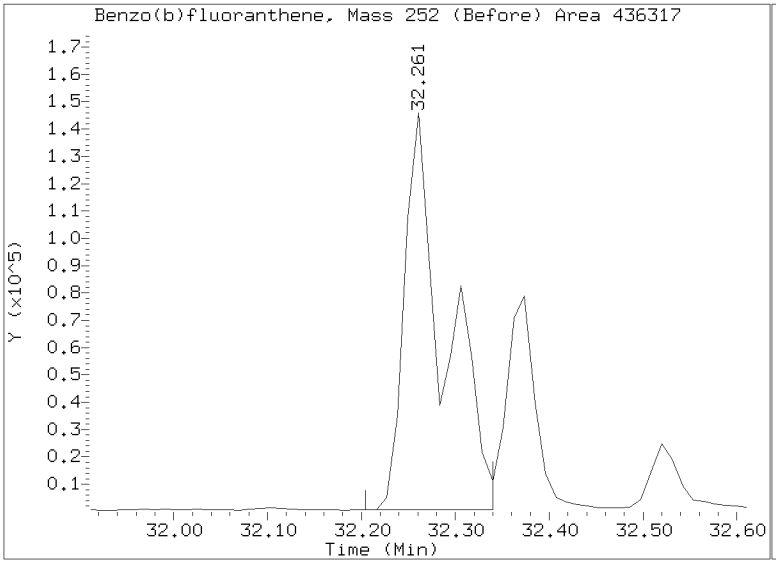
Datafile: //target/share/chem3/nt14.i/20201215A.b/NT1420121520.D
Injection Date: 16-DEC-2020 03:00
Lab ID:20K0073-01RE1 Client ID:
Report Date: 12/16/2020 14:13

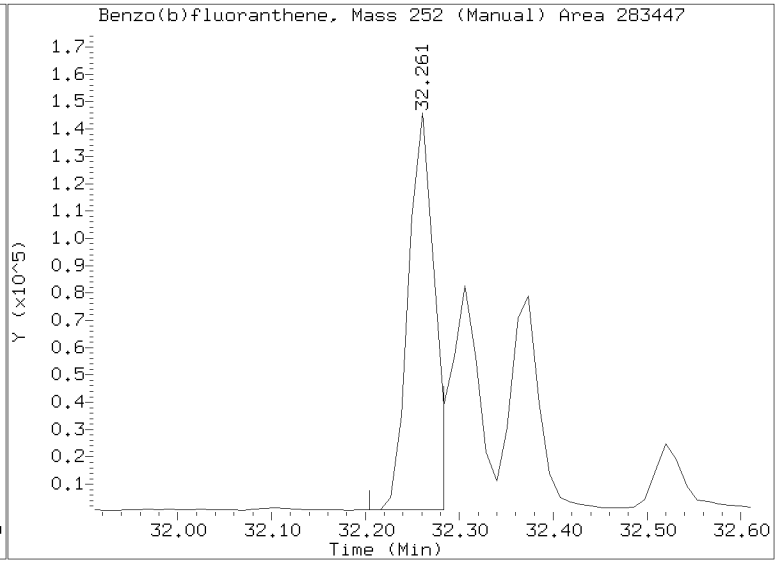






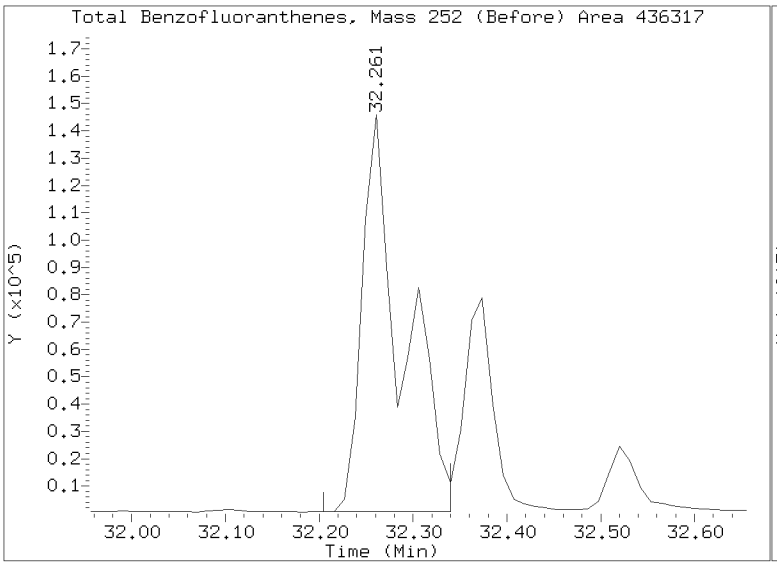


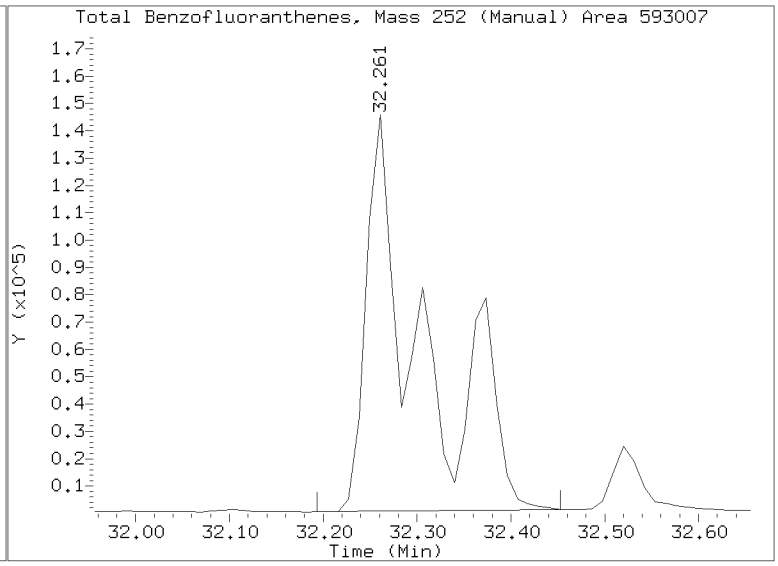


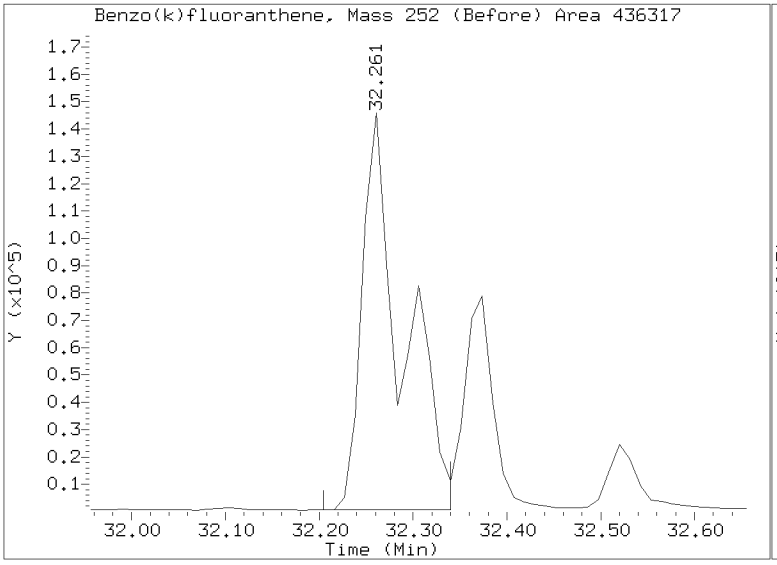


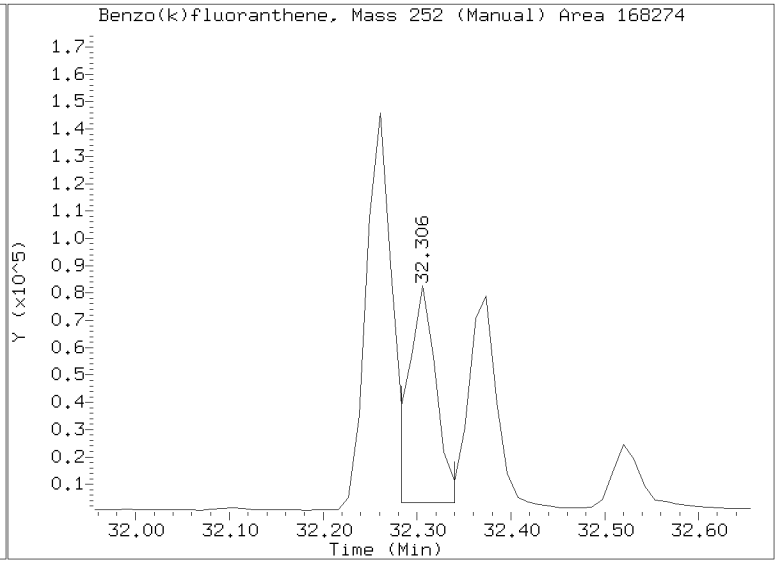
Quant Ion Manual Peak Adjustment Report

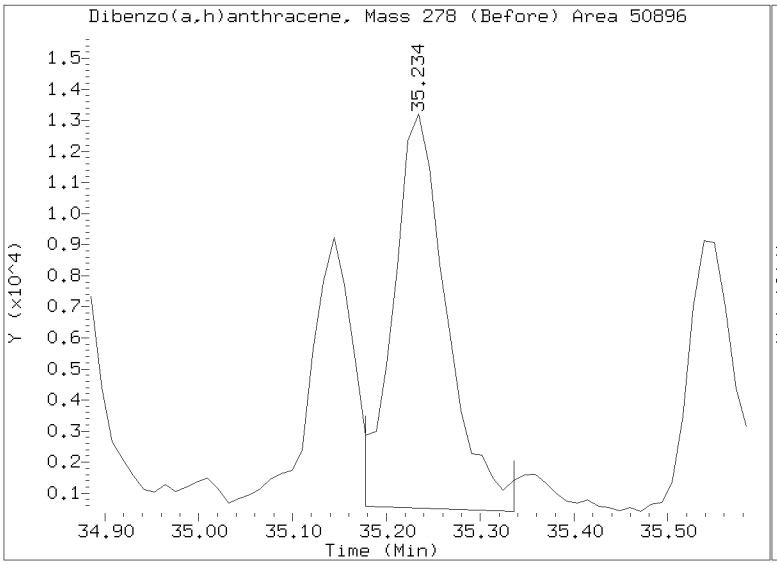
Datafile: //target/share/chem3/nt14.i/20201215A.b/NT1420121520.D
Injection Date: 16-DEC-2020 03:00
Lab ID:20K0073-01RE1 Client ID:
Report Date: 12/16/2020 14:13

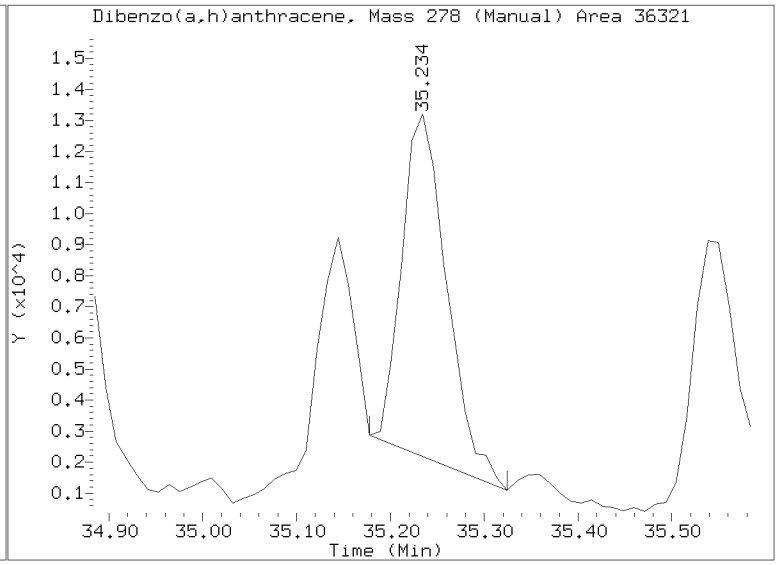












Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-A-01-02-201029

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

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-02 A	SDG:	20K0073
Sampled:	10/29/20 10:40	Prepared:	11/11/20 13:05	File ID:	NT1420121215.D
% Solids:	87.62	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/12/20 22:23
Batch:	BIK0323	Sequence:	SIL0184	Initial/Final:	11.44 g Wet / 0.5 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	DJ00029
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
493-02-7	trans-Decalin	1	5.0	U	0.03	5.0
493-01-6	cis-Decalin	1	5.0	U	0.5	5.0
91-20-3	Naphthalene	1	5.7		0.4	5.0
90-12-0	1-Methylnaphthalene	1	1.6	J	0.4	5.0
91-57-6	2-Methylnaphthalene	1	2.4	J	0.4	5.0
92-52-4	Biphenyl	1	1.2	J	0.3	5.0
581-42-0	2,6-Dimethylnaphthalene	1	2.9	J	0.4	5.0
208-96-8	Acenaphthylene	1	7.9		0.3	5.0
83-32-9	Acenaphthene	1	20.9		0.5	5.0
132-64-9	Dibenzofuran	1	0.7	J	0.4	5.0
2245-38-7	2,3,5-Trimethylnaphthalene	1	3.2	J	0.4	5.0
86-73-7	Fluorene	1	9.4		0.5	5.0
95-15-8	Benzo(b)thiophene	1	5.0	U	0.4	5.0
85-01-8	Phenanthrene	1	161		0.9	5.0
120-12-7	Anthracene	1	9.9		0.05	5.0
86-74-8	Carbazole	1	3.2	J	0.7	5.0
832-69-9	1-Methylphenanthrene	1	17.1		0.5	5.0
206-44-0	Fluoranthene	1	211		1.4	5.0
132-65-0	Dibenzothiophene	1	8.9		0.7	5.0
129-00-0	Pyrene	1	258		1.0	5.0
56-55-3	Benzo(a)anthracene	1	83.3		1.4	5.0
218-01-9	Chrysene	1	111		0.7	5.0
205-99-2	Benzo(b)fluoranthene	1	61.7		0.8	5.0
205-82-3	Benzo(j)fluoranthene	1	42.6		0.7	5.0
207-08-9	Benzo(k)fluoranthene	1	41.9		0.8	5.0
	Benzofluoranthenes, Total	1	143		3.0	10.0
197-97-2	Benzo(e)pyrene	1	68.3		0.6	5.0
50-32-8	Benzo(a)pyrene	1	96.5		1.0	5.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	56.4	Q	0.4	5.0
53-70-3	Dibenzo(a,h)anthracene	1	10.1	Q	0.7	5.0

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-A-01-02-201029

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

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-02 A	SDG:	20K0073
Sampled:	10/29/20 10:40	Prepared:	11/11/20 13:05	File ID:	NT1420121215.D
% Solids:	87.62	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/12/20 22:23
Batch:	BIK0323	Sequence:	SIL0184	Initial/Final:	11.44 g Wet / 0.5 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	DJ00029
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
191-24-2	Benzo(g,h,i)perylene	1	67.0		0.5	5.0
1985-5-0	Perylene	1	37.5		0.4	5.0
239-35-0	Benzo(b)naphtho(2,1-d)thiophene	1	18.4		5.0	5.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
Naphthalene-d8	149.64	92.0	61.5	30 - 160	Q
Acenaphthene-d10	149.64	94.2	62.9	30 - 160	
Phenanthrene-d10	149.64	115	76.6	30 - 160	
Chrysene-d12	149.64	113	75.7	30 - 160	
Perylene-d12	149.64	90.8	60.7	30 - 160	

Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

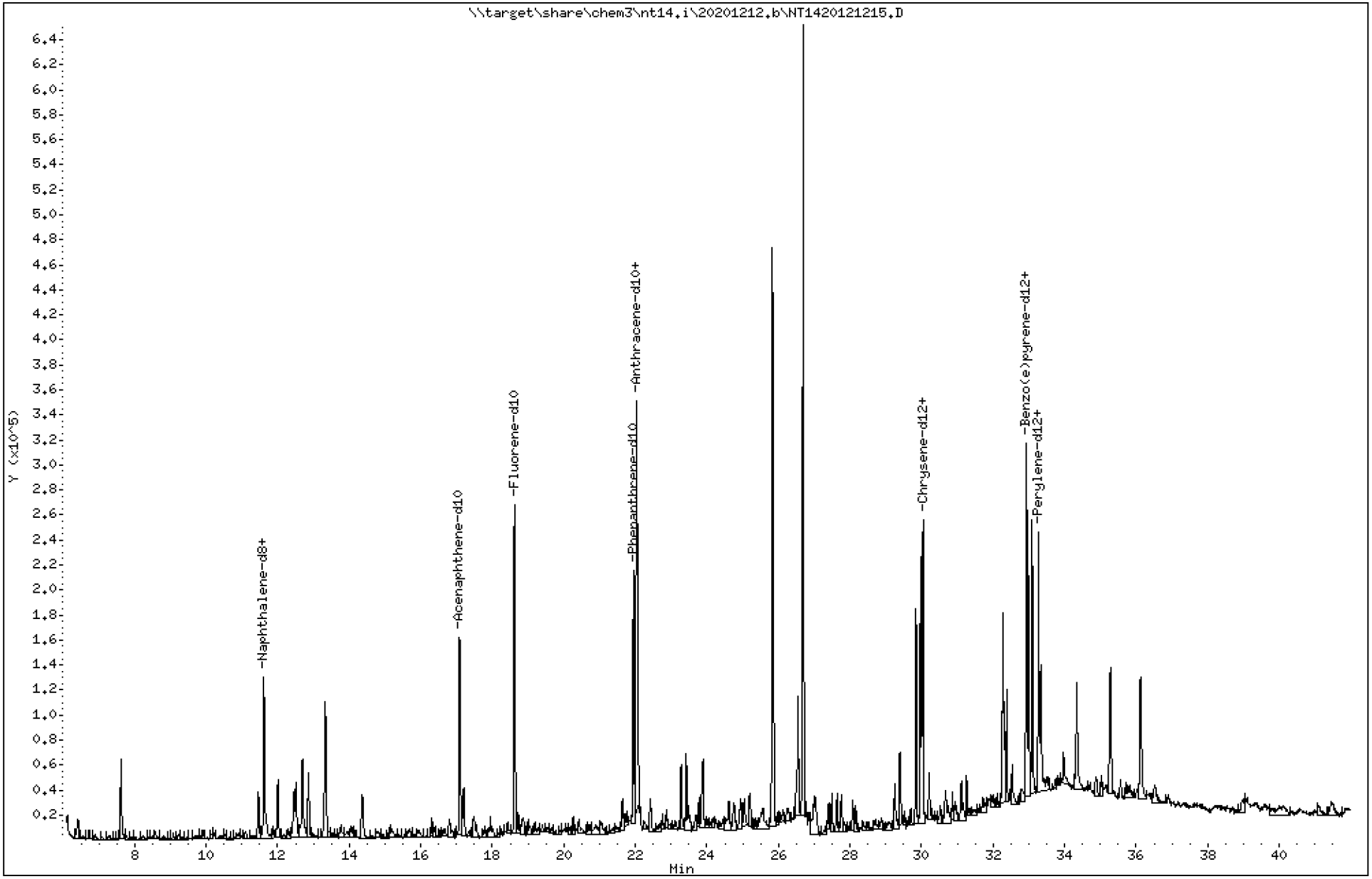
Instrument: nt14.i

Sample Info: 20K0073-02

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

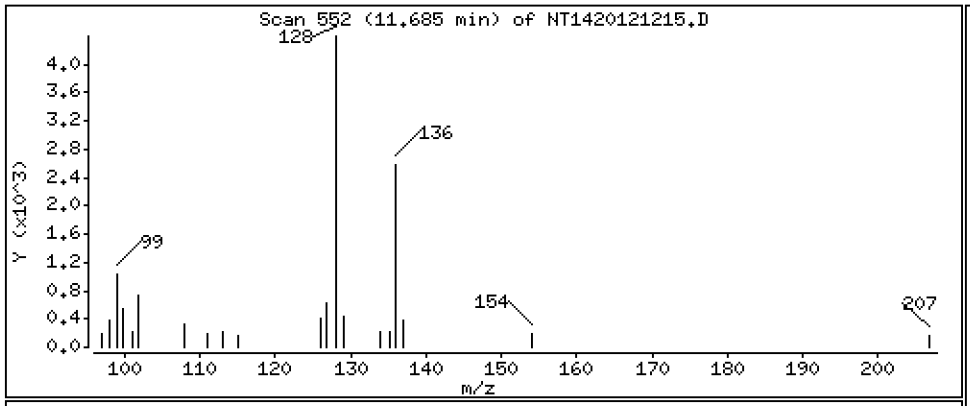
Operator: VTS

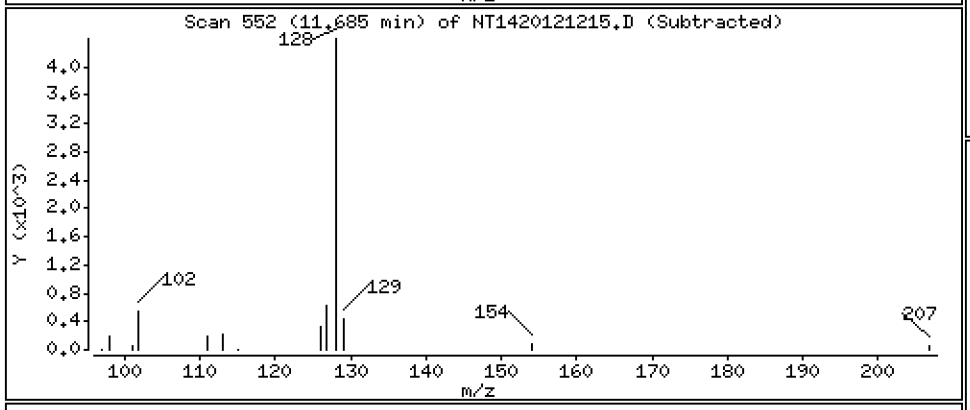
Column phase: Rxi-17Sil MS

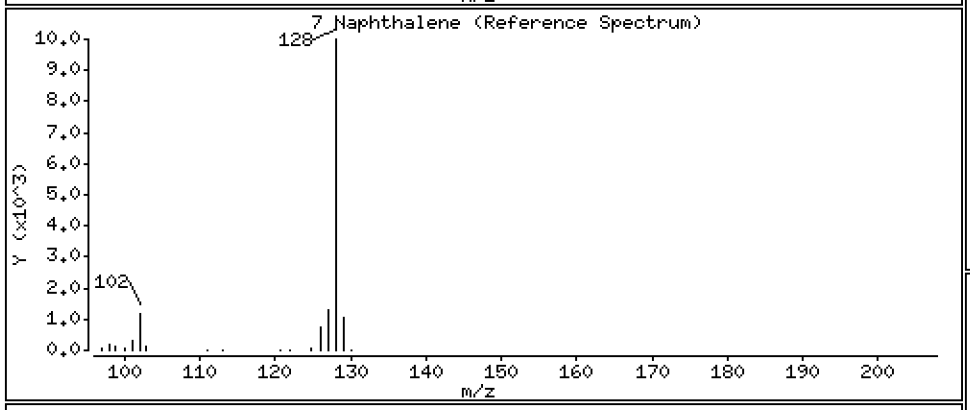
Column diameter: 0.25

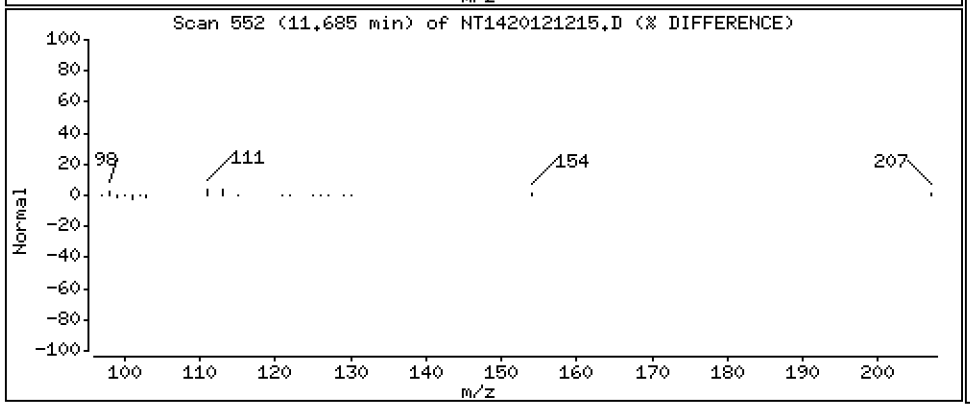
7 Naphthalene

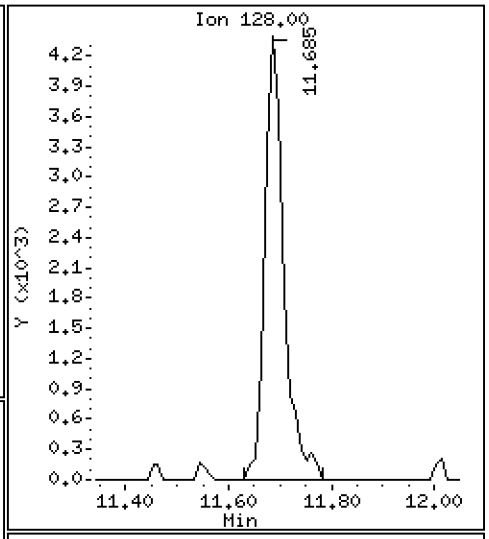
Concentration: 0.1135 ug/mL

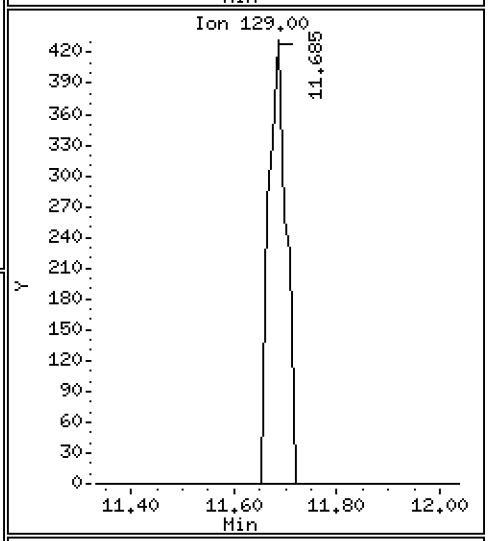


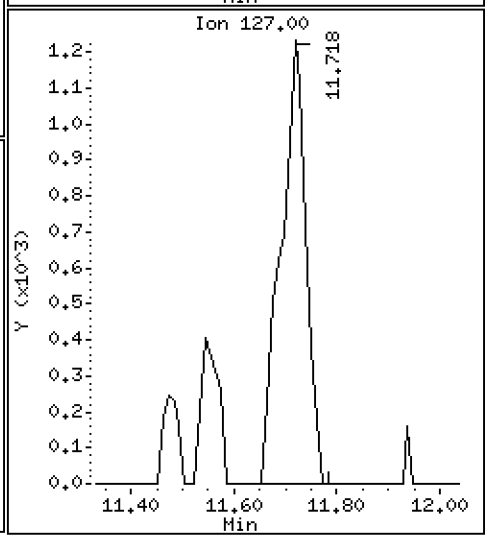












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

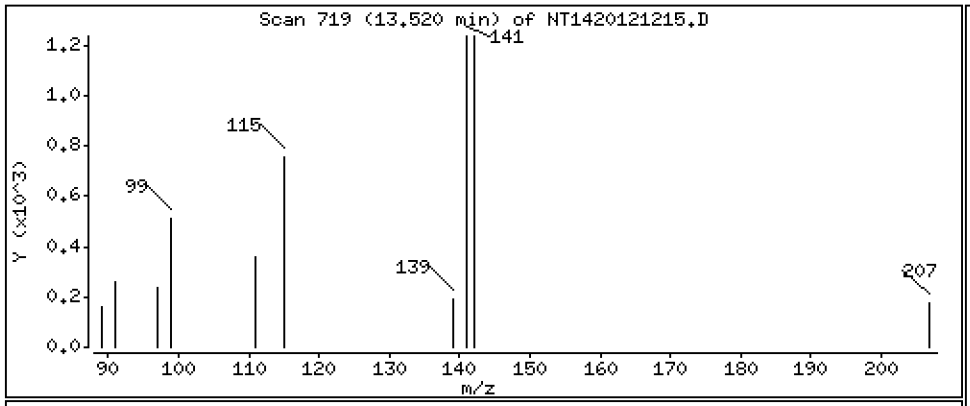
Client ID: Instrument: nt14.i

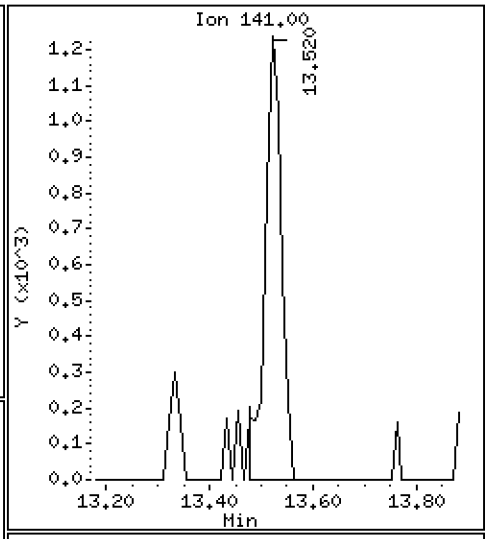
Sample Info: 20K0073-02

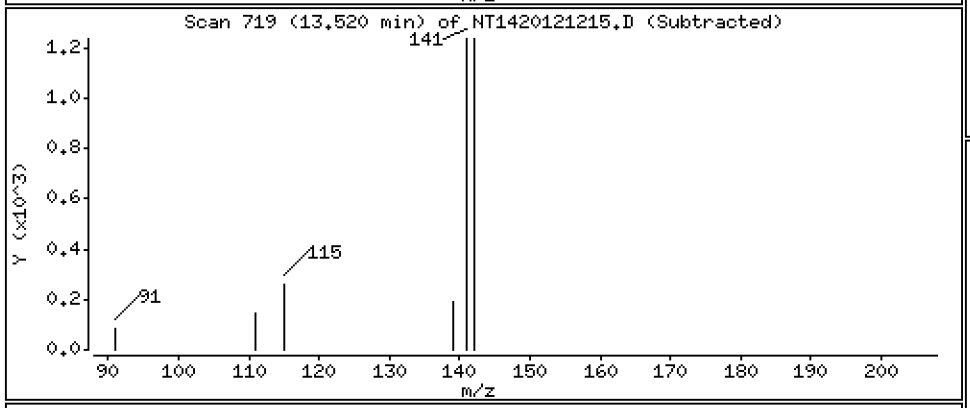
Operator: VTS

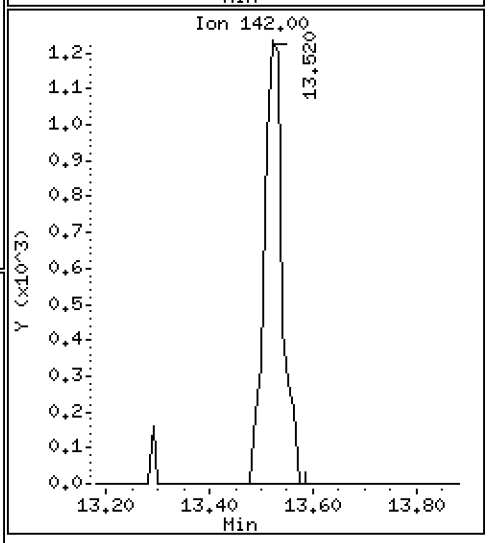
Column phase: Rxi-17Sil MS Column diameter: 0.25

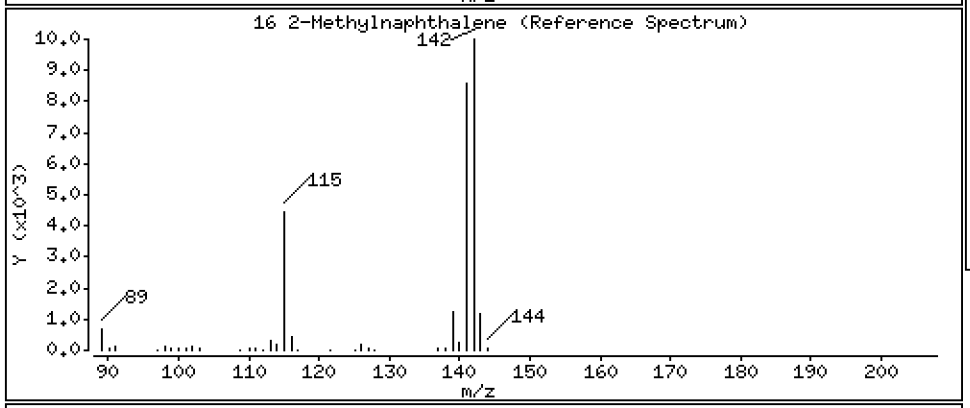
16 2-Methylnaphthalene Concentration: 0.04828 ug/mL

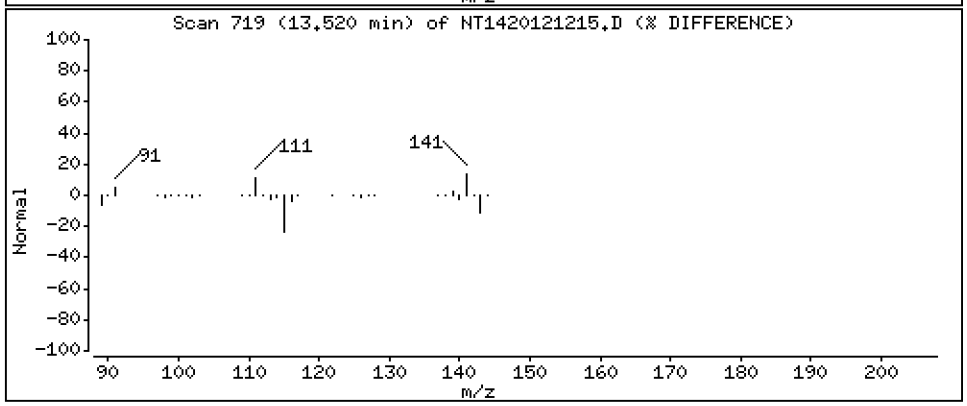












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

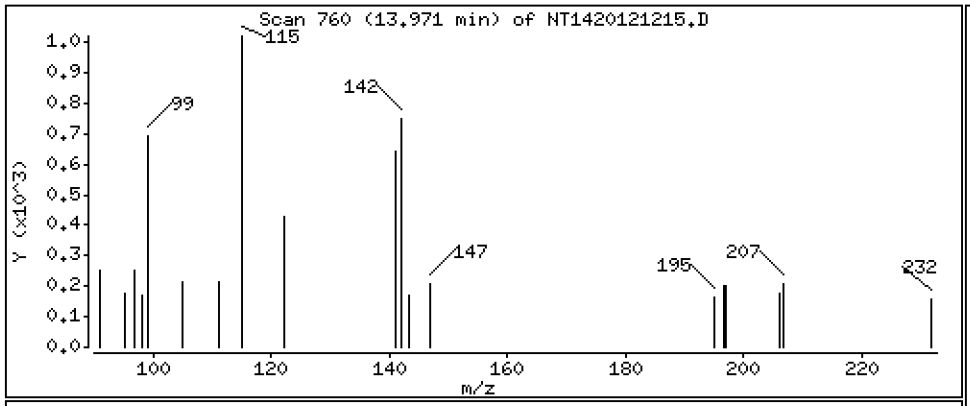
Operator: VTS

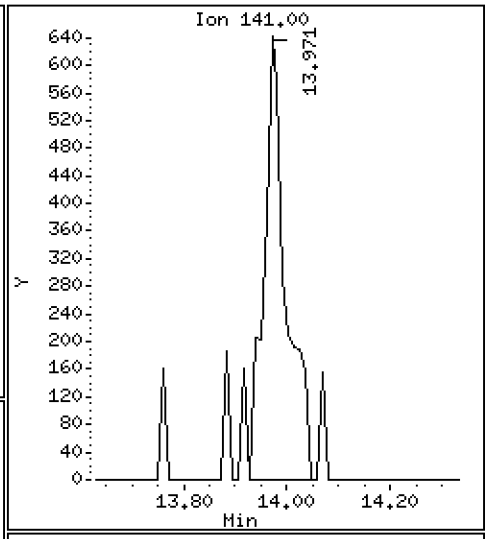
Column phase: Rxi-17Sil MS

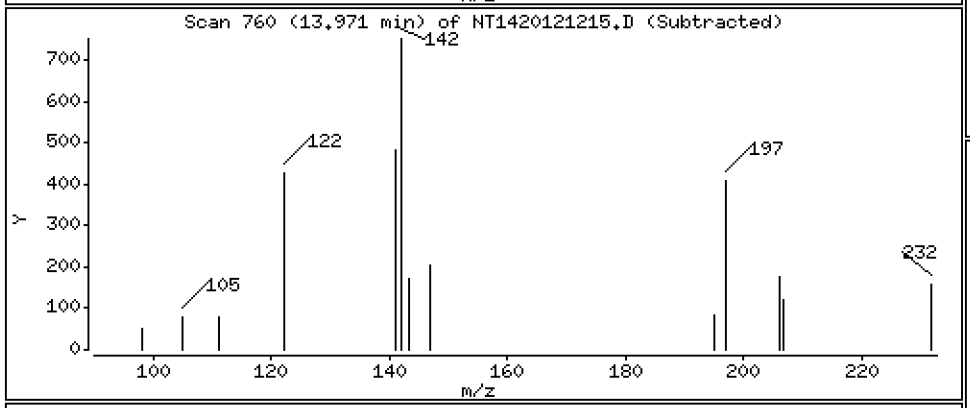
Column diameter: 0.25

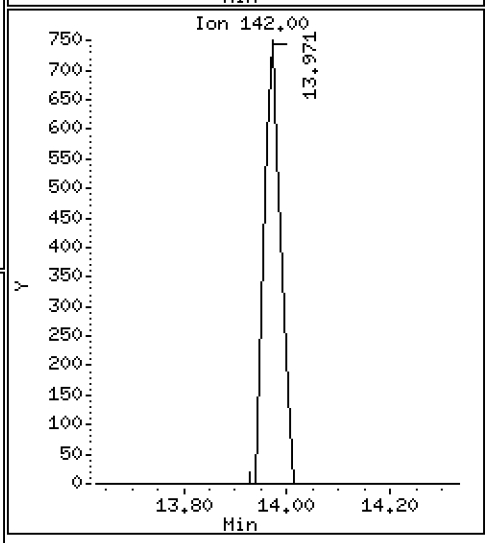
17 1-methylnaphthalene

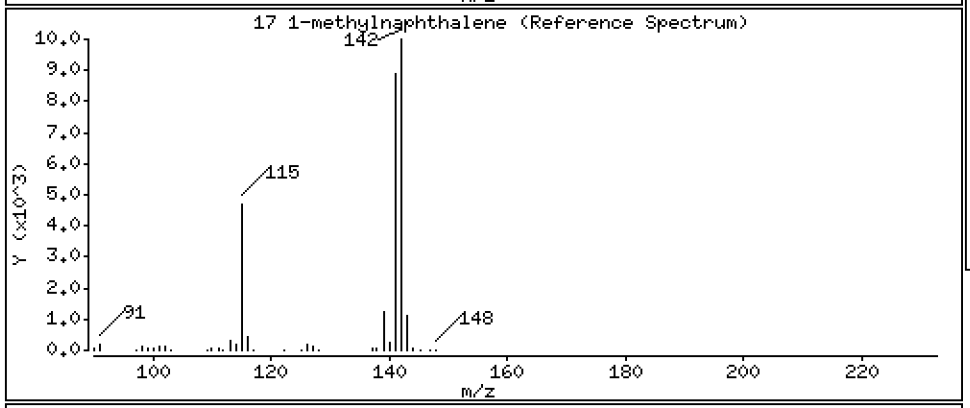
Concentration: 0.03231 ug/mL

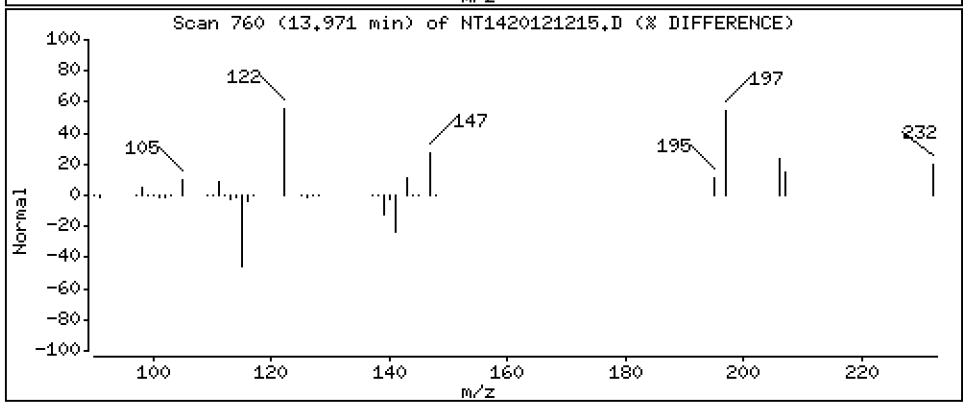












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

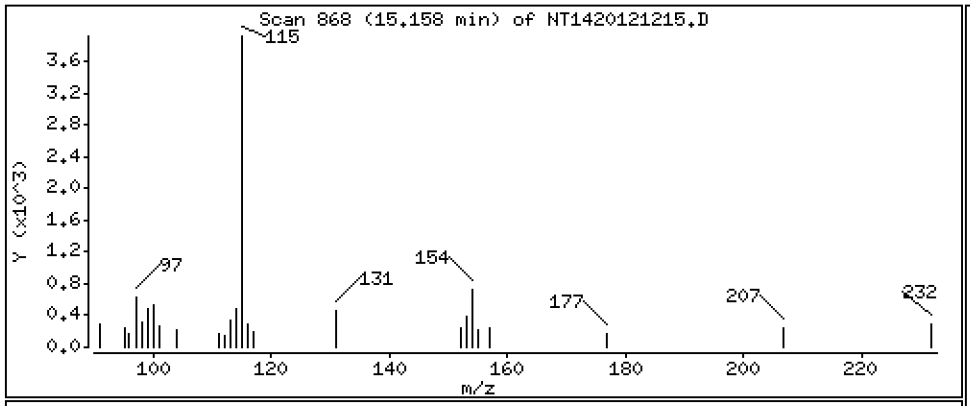
Operator: VTS

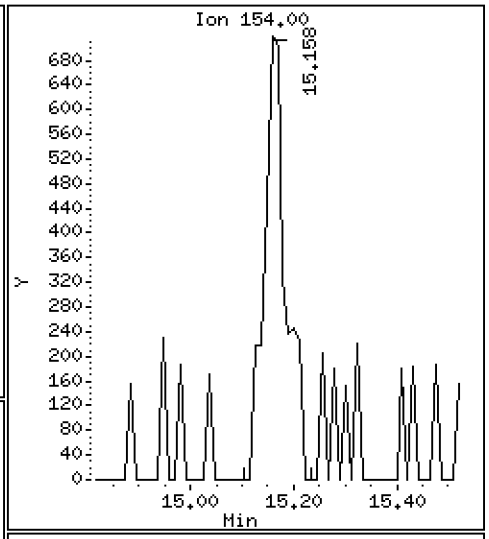
Column phase: Rxi-17Sil MS

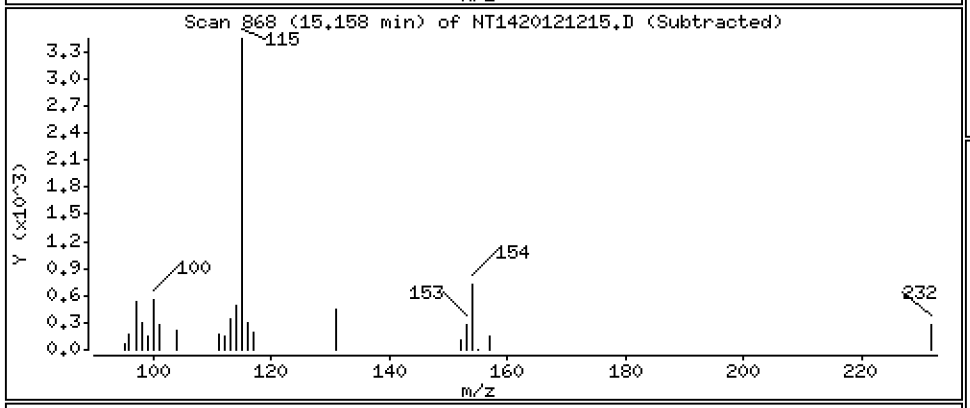
Column diameter: 0.25

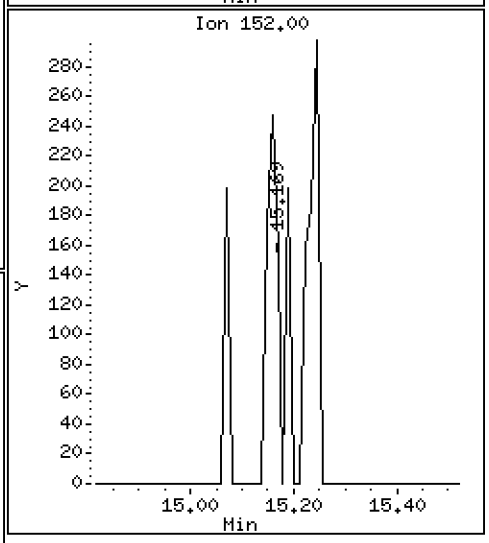
18 Biphenyl

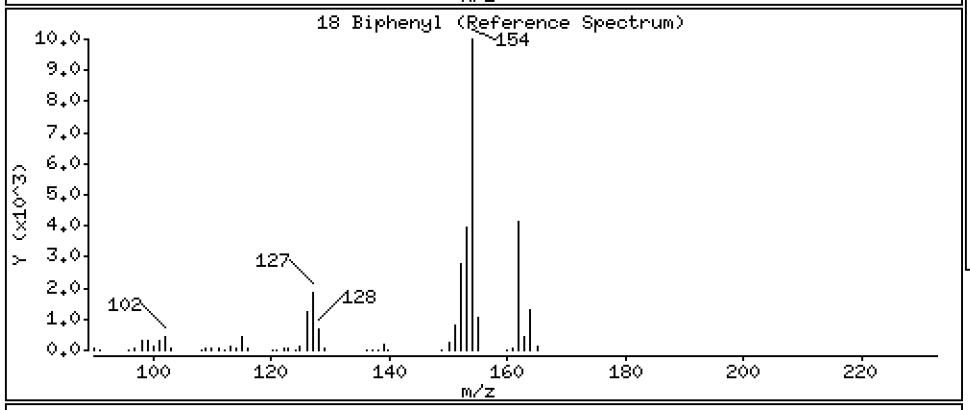
Concentration: 0.02498 ug/mL

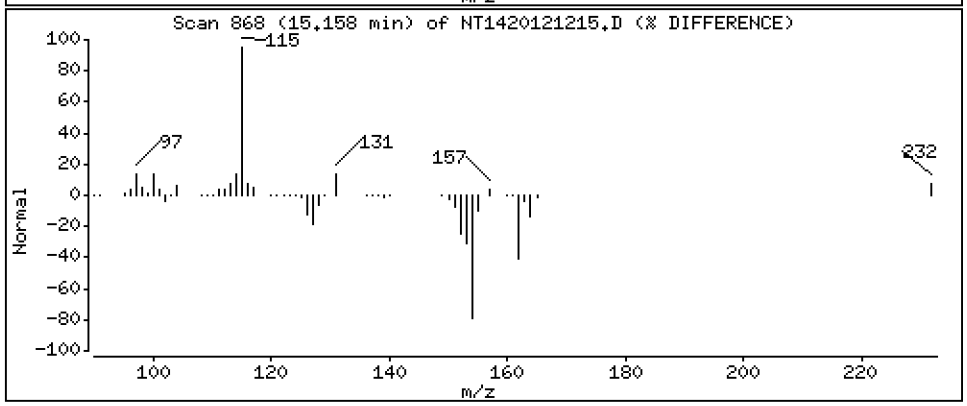












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

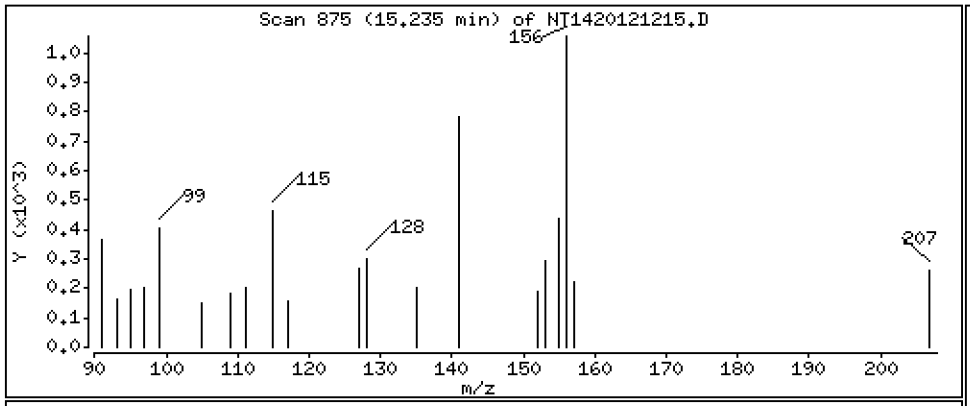
Operator: VTS

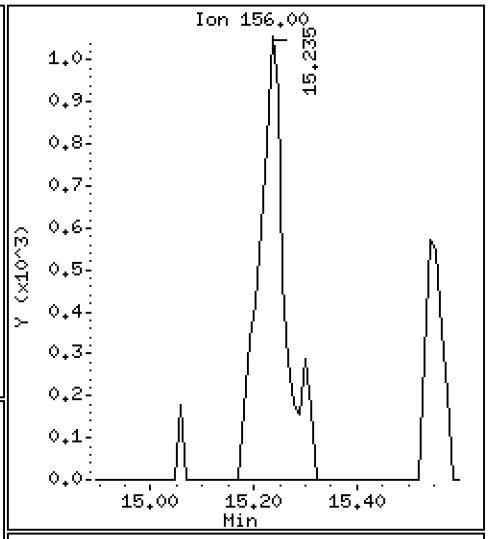
Column phase: Rxi-17Sil MS

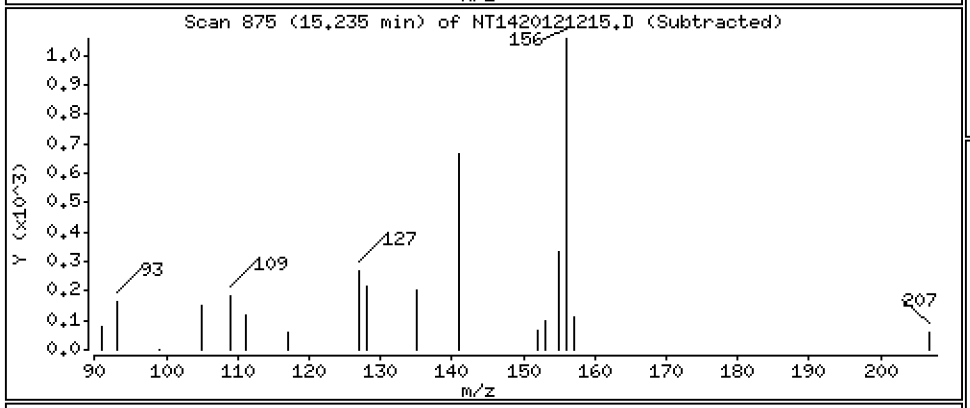
Column diameter: 0.25

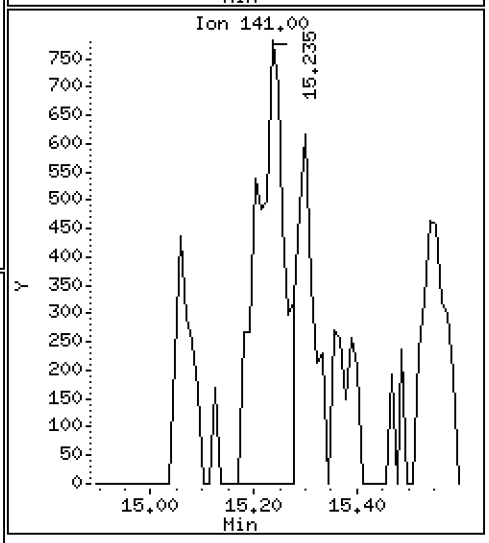
19 2,6-Dimethylnaphthalene

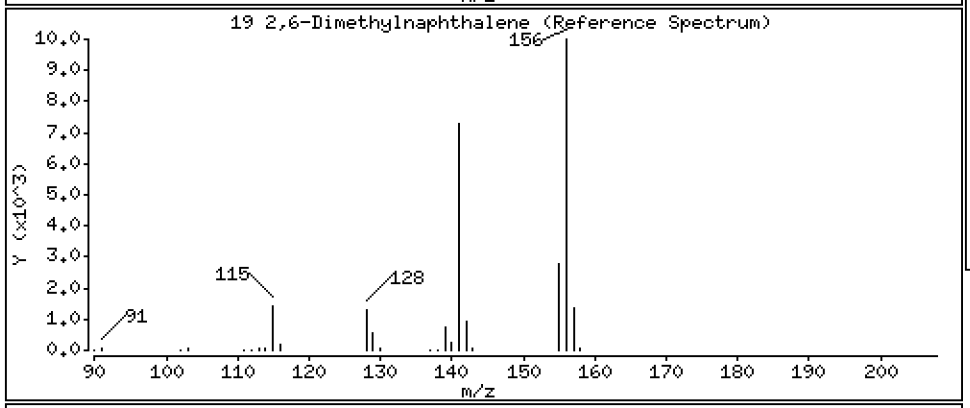
Concentration: 0.05820 ug/mL

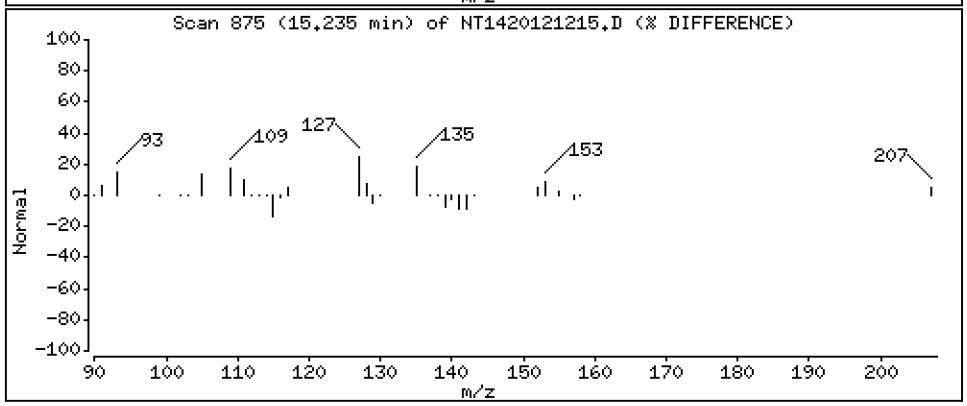












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

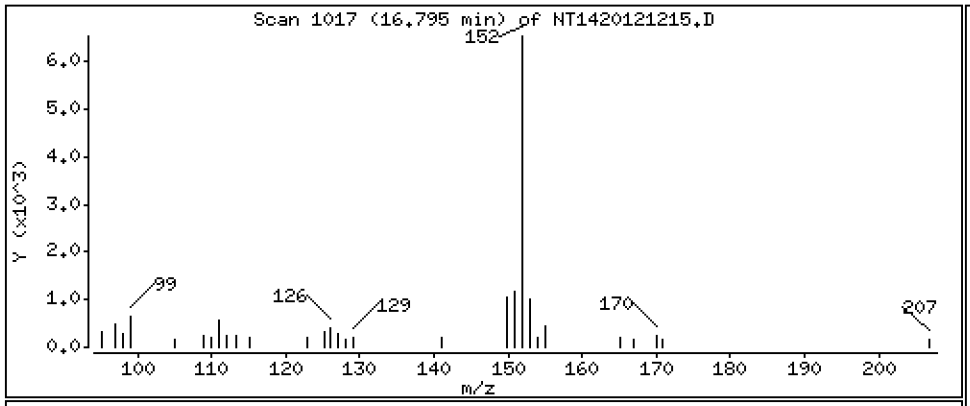
Operator: VTS

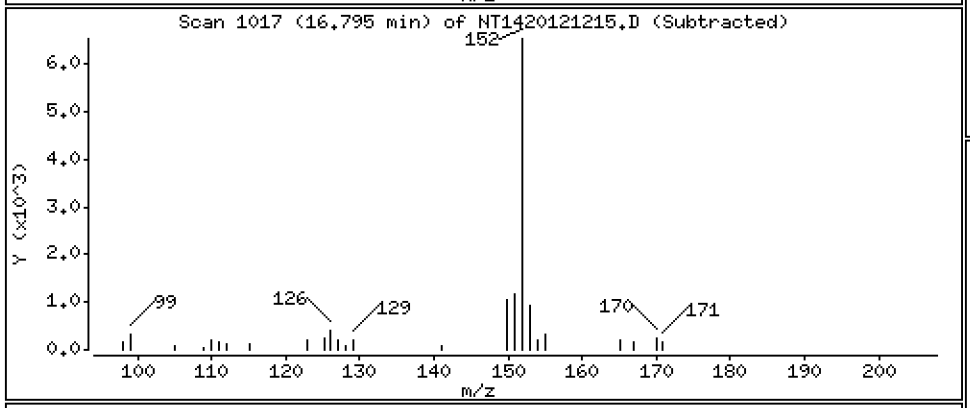
Column phase: Rxi-17Sil MS

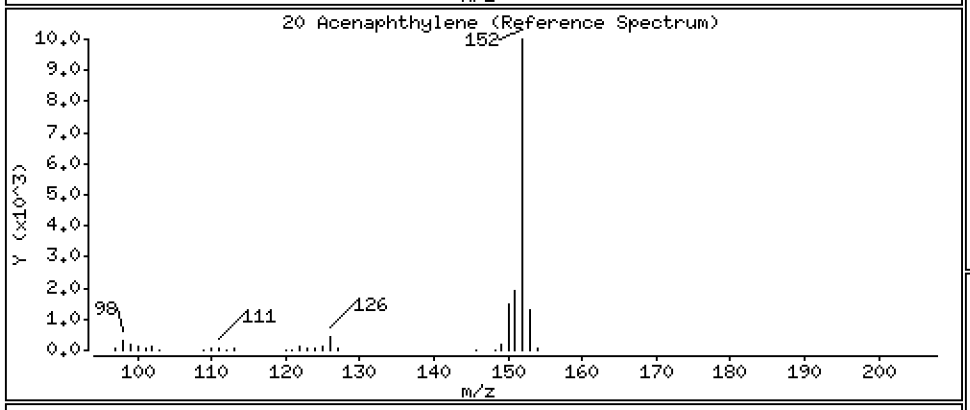
Column diameter: 0.25

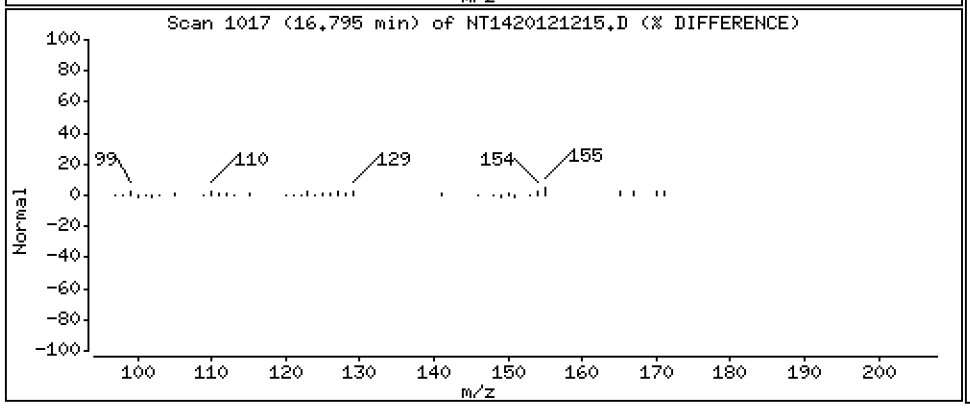
20 Acenaphthylene

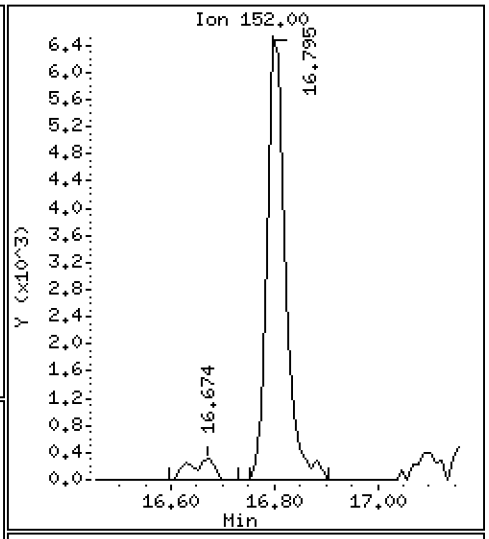
Concentration: 0.1588 ug/mL

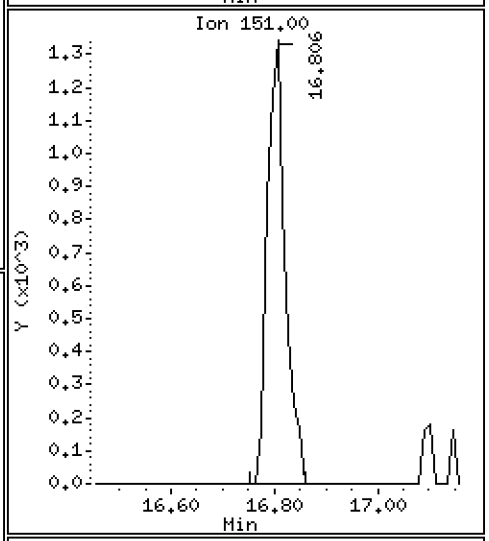


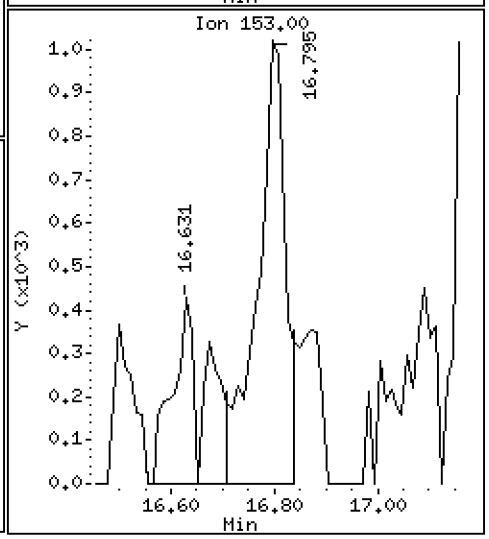












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

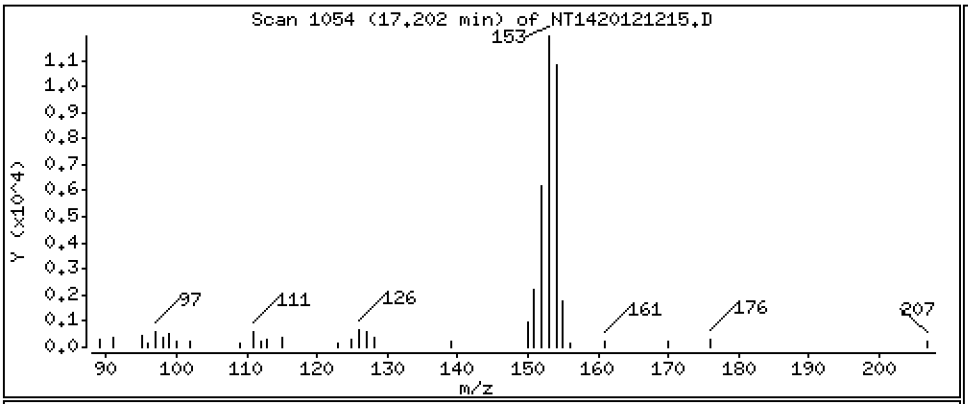
Operator: VTS

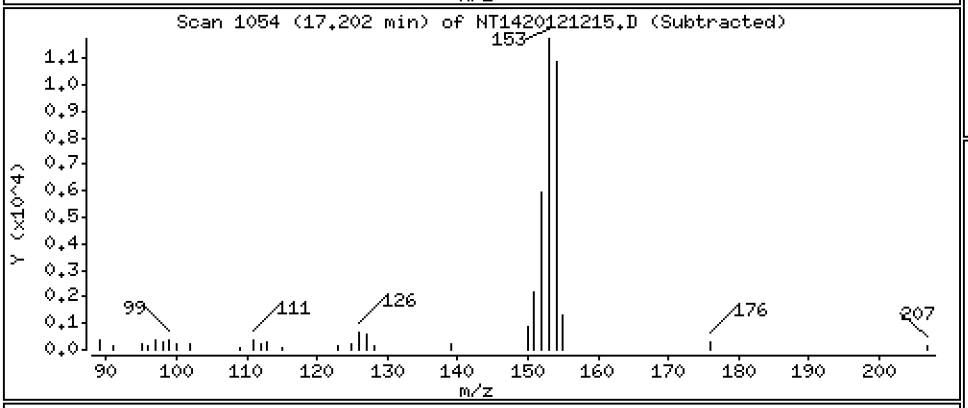
Column phase: Rxi-17Sil MS

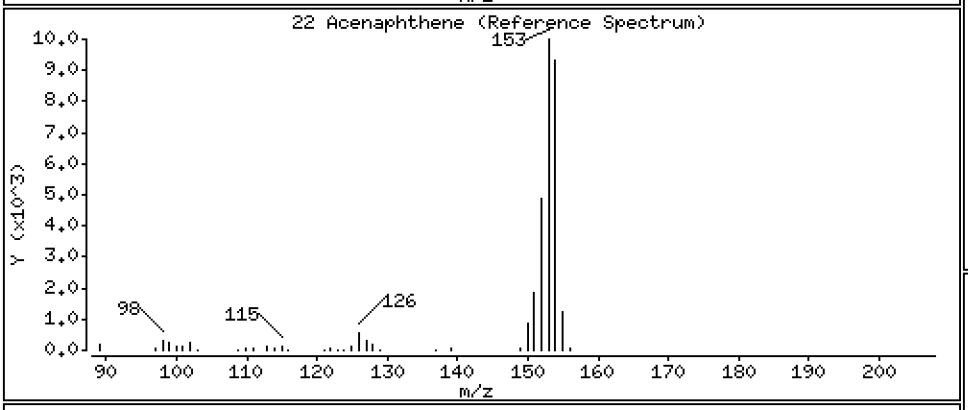
Column diameter: 0.25

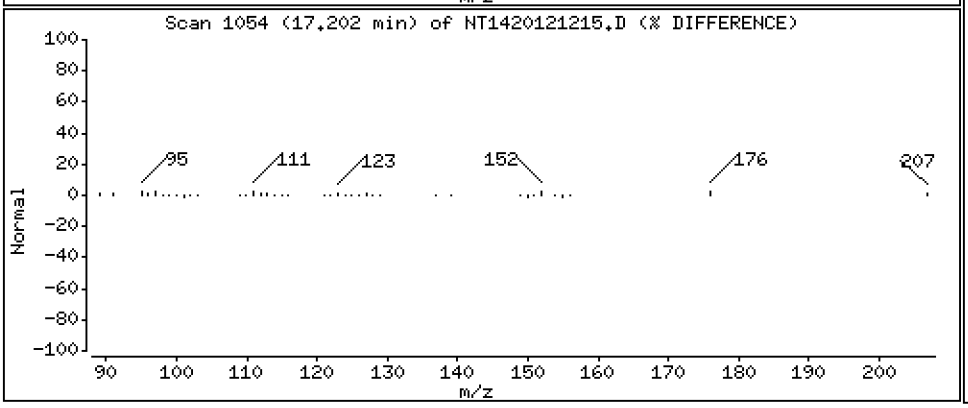
22 Acenaphthene

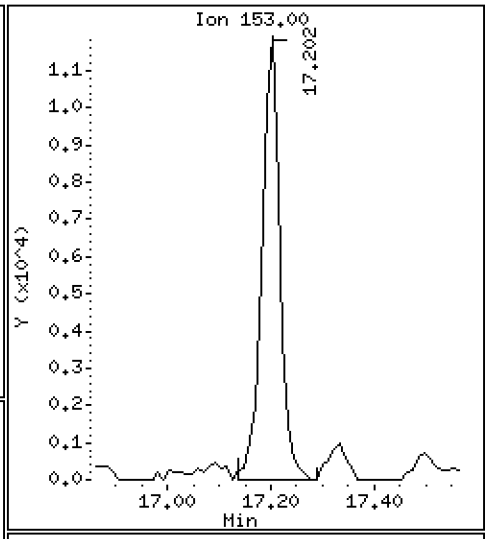
Concentration: 0.4182 ug/mL

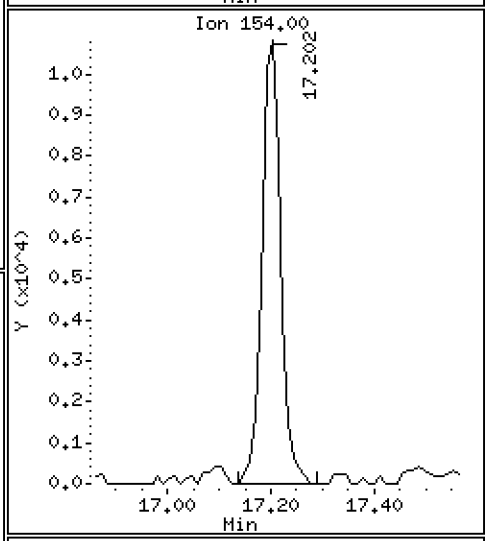


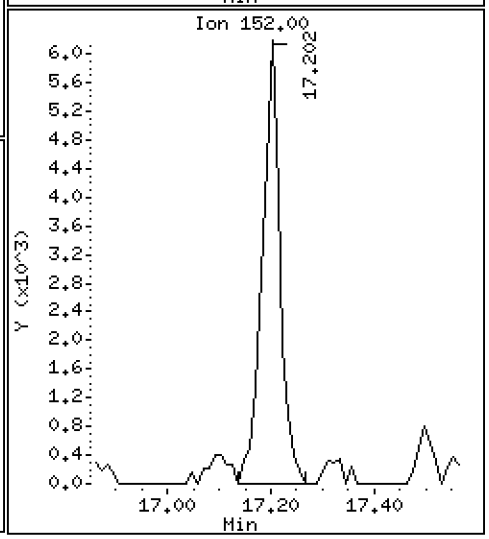












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

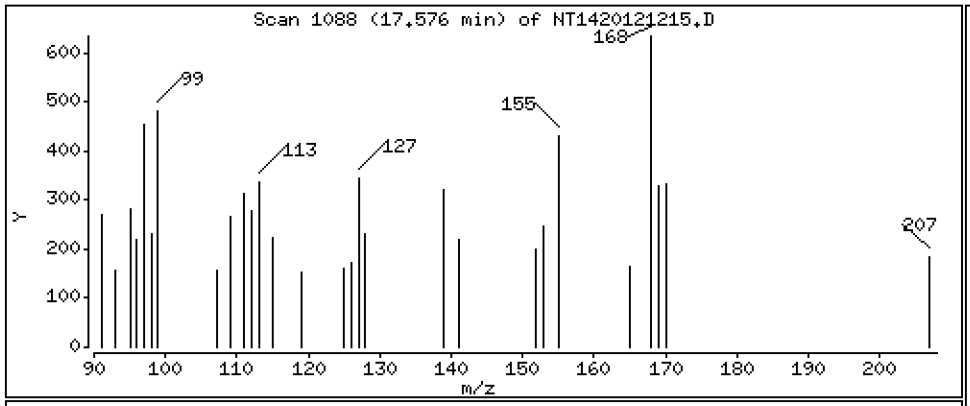
Operator: VTS

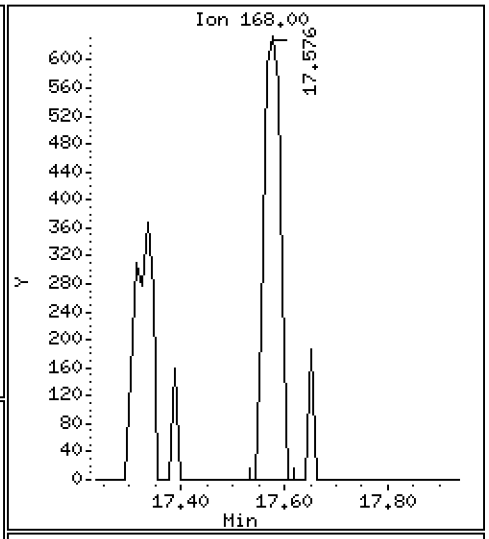
Column phase: Rxi-17Sil MS

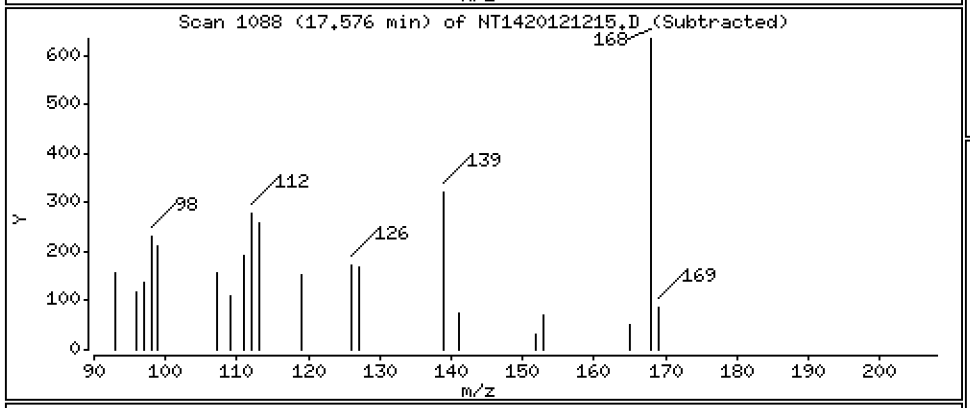
Column diameter: 0.25

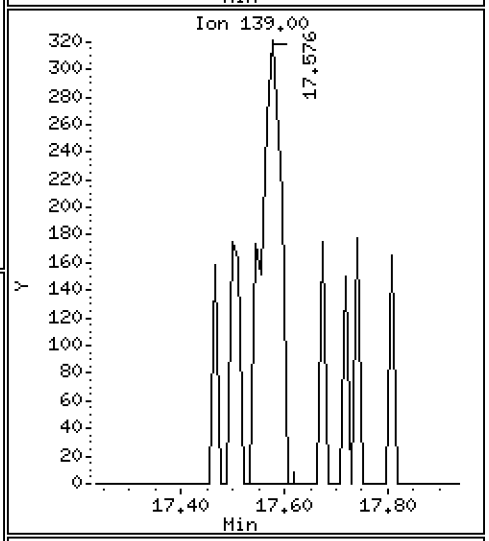
23 Dibenzofuran

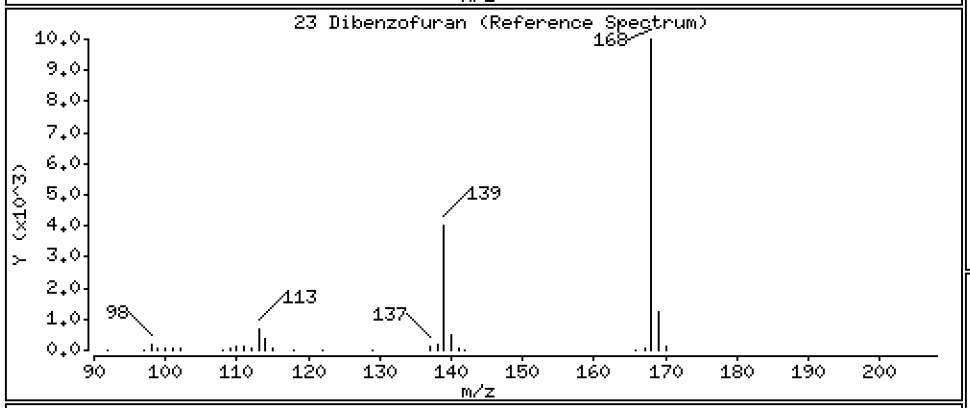
Concentration: 0.01462 ug/mL

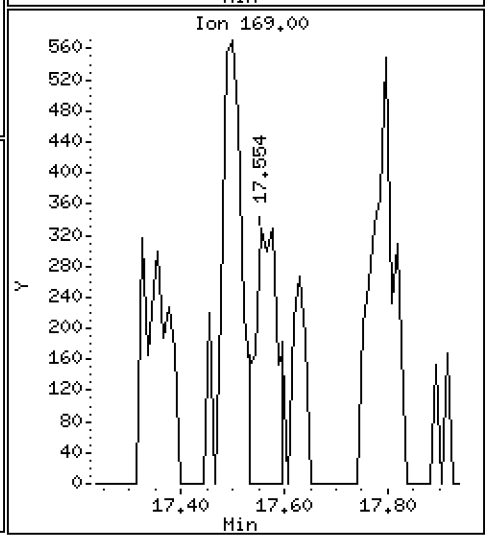


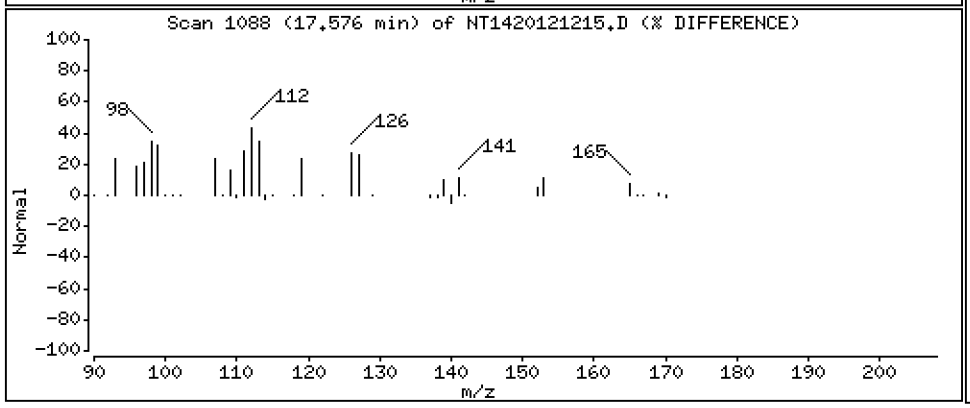












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

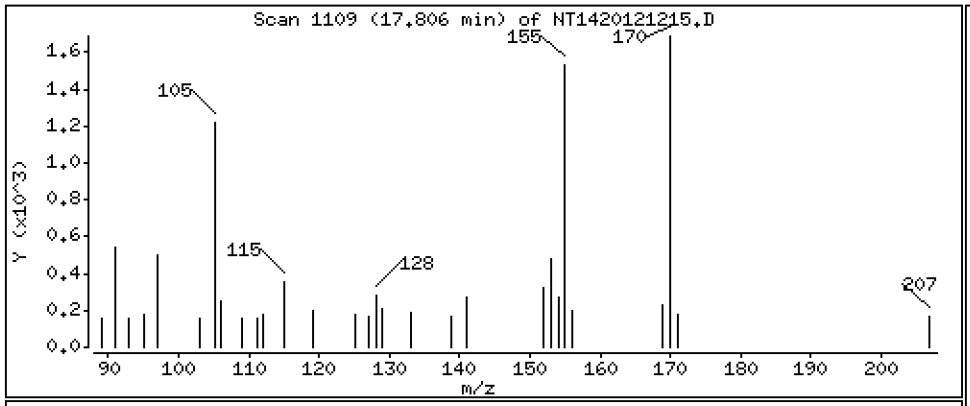
Operator: VTS

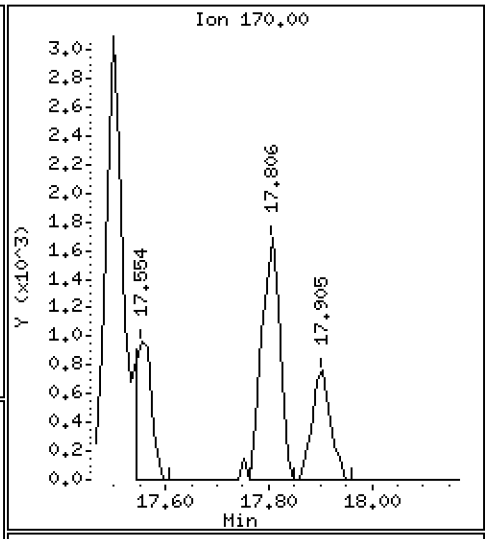
Column phase: Rxi-17Sil MS

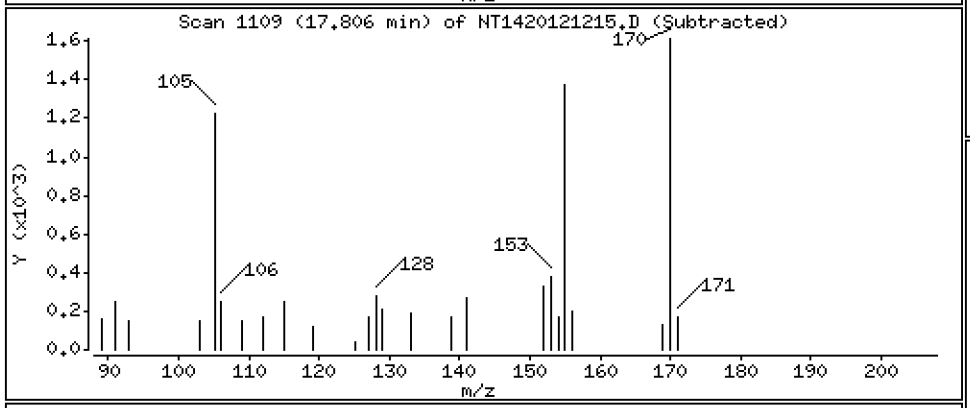
Column diameter: 0.25

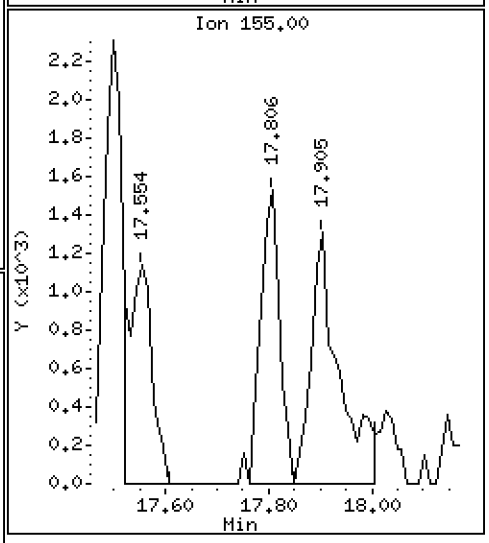
24 1,6,7-Trimethylnaphthalene

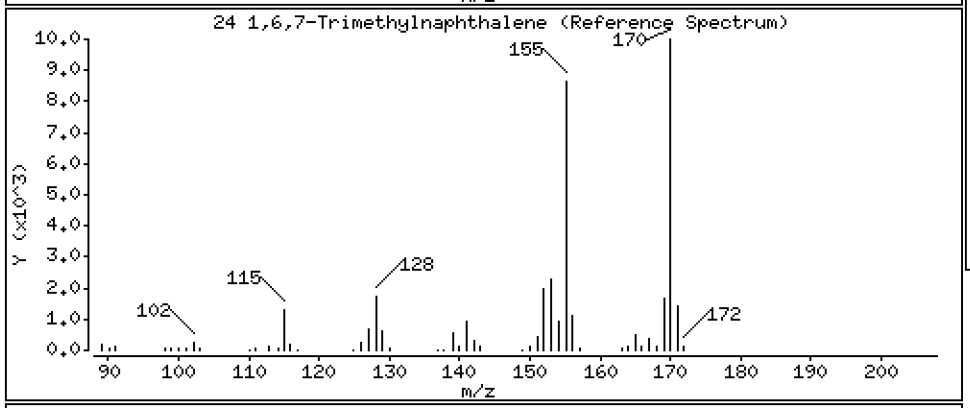
Concentration: 0.06415 ug/mL

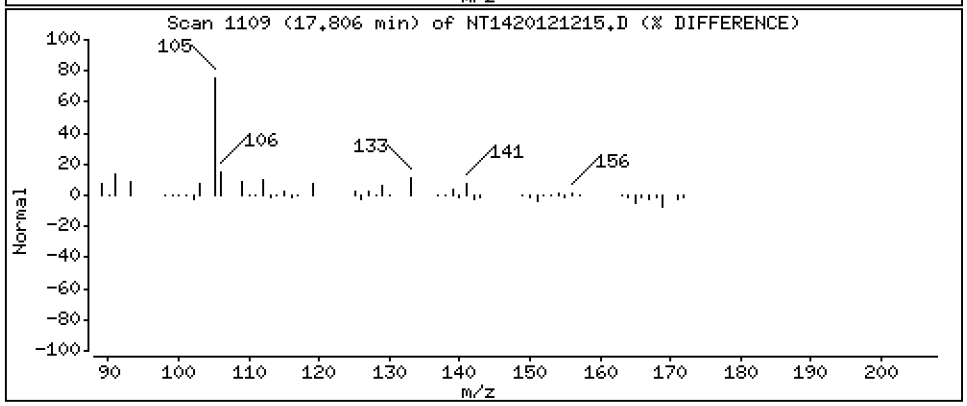












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

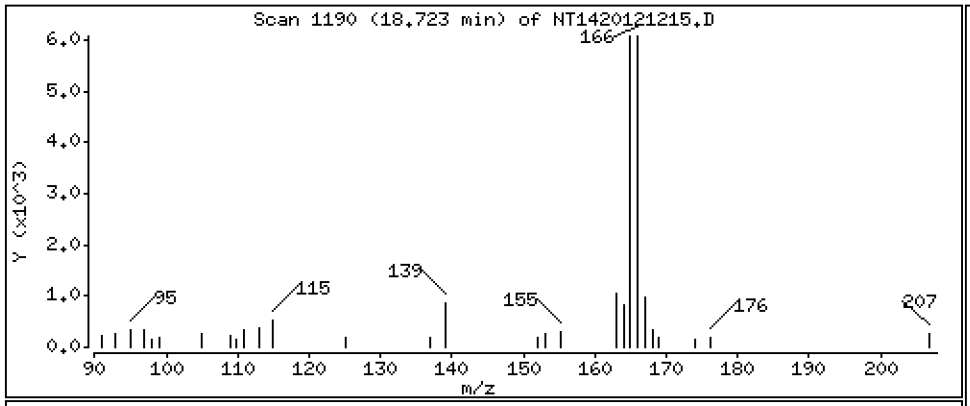
Operator: VTS

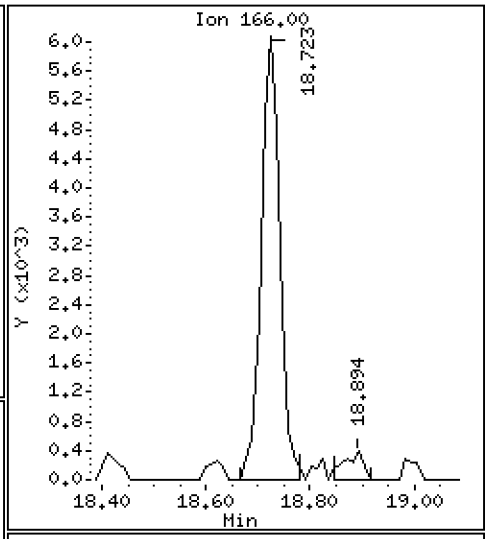
Column phase: Rxi-17Sil MS

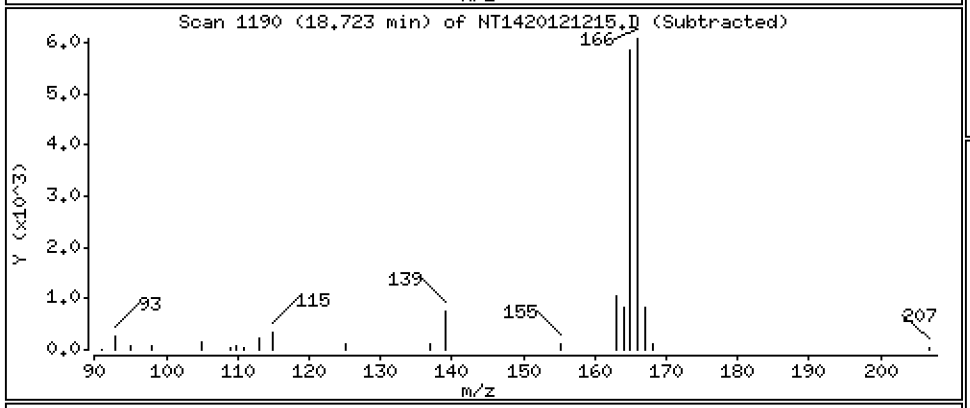
Column diameter: 0.25

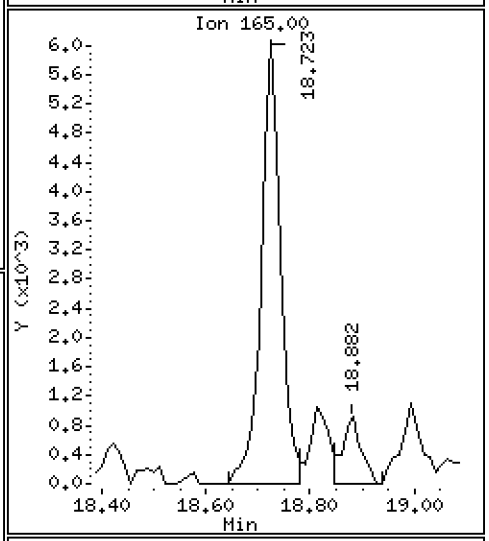
26 Fluorene

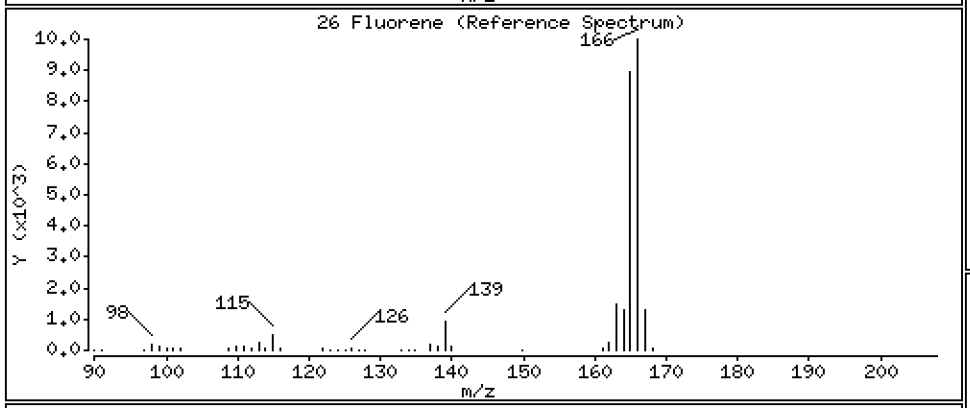
Concentration: 0.1890 ug/mL

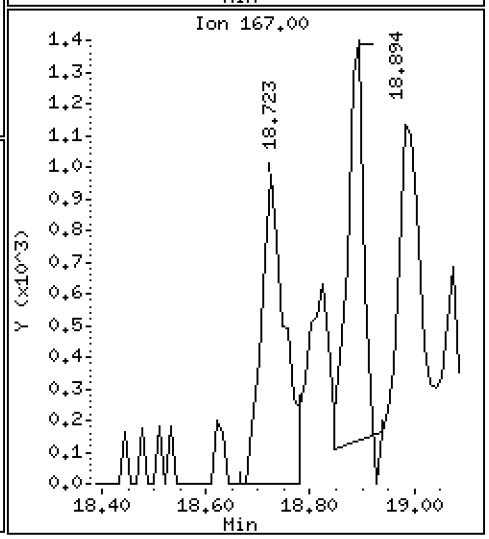


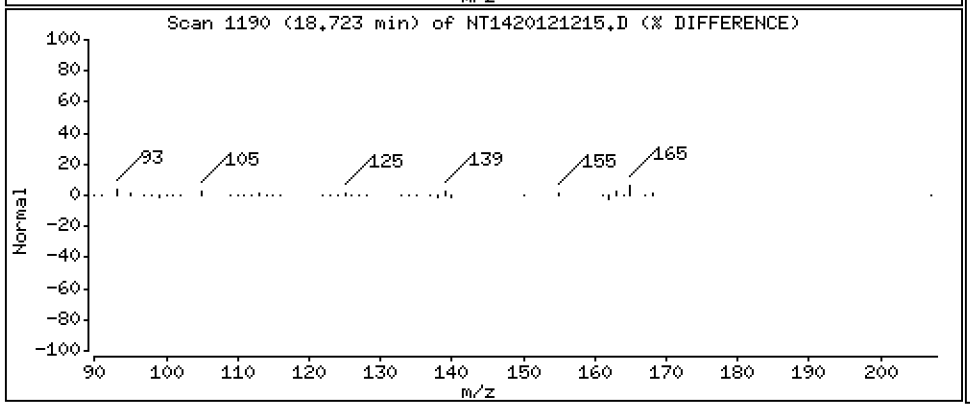












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

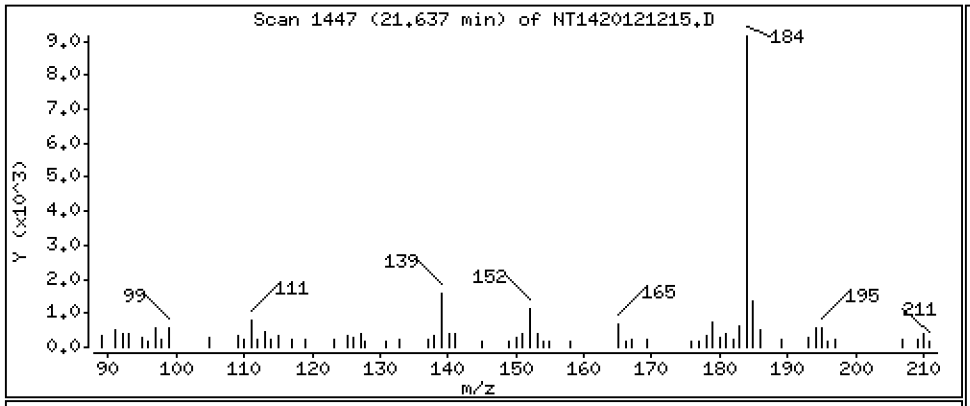
Operator: VTS

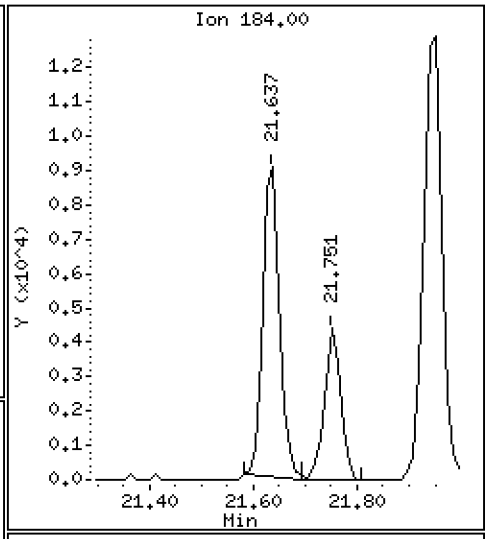
Column phase: Rxi-17Sil MS

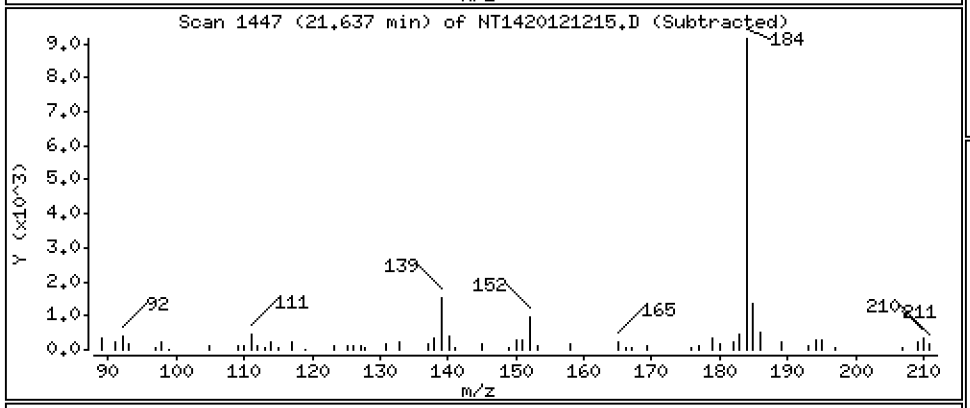
Column diameter: 0.25

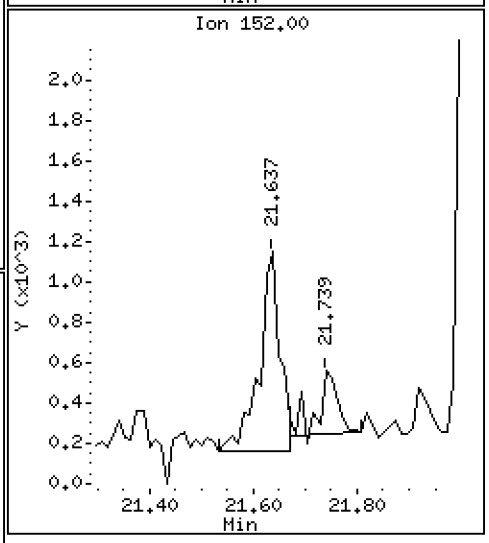
30 Dibenzothiophene

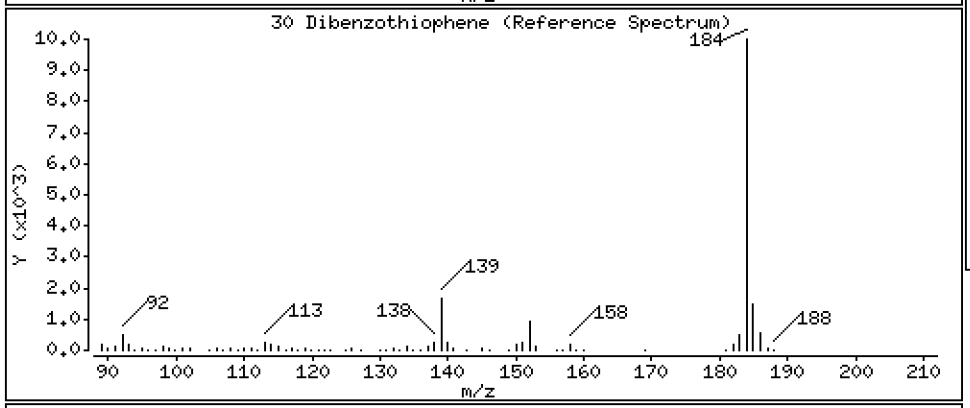
Concentration: 0.1786 ug/mL

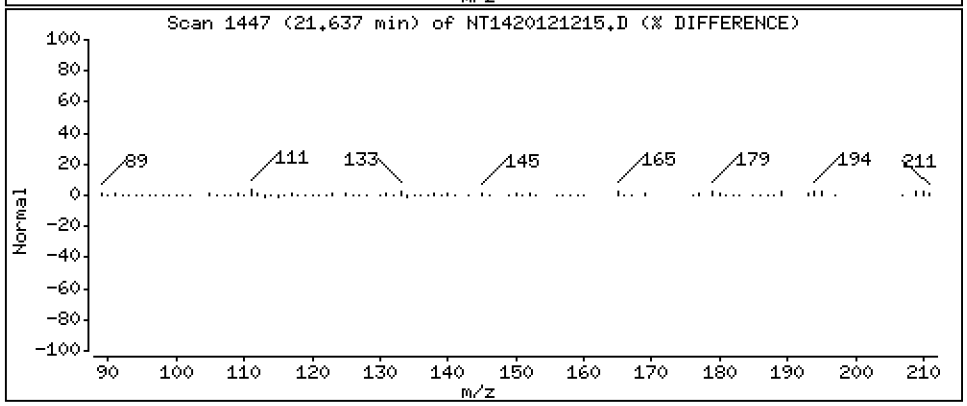












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

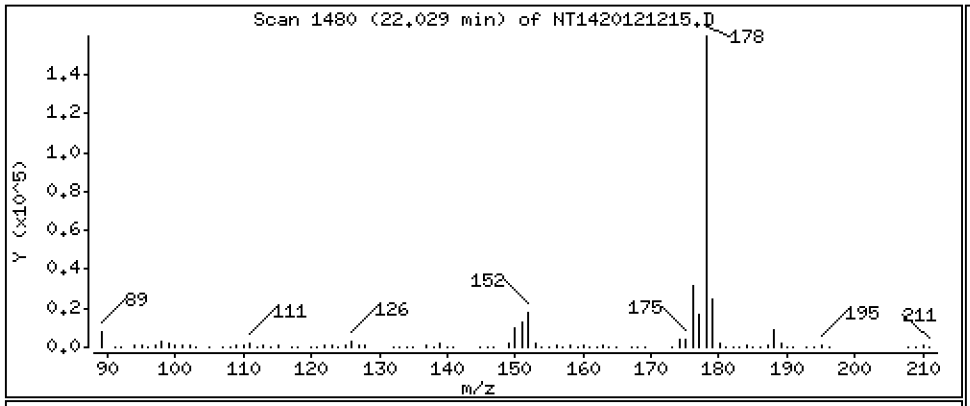
Operator: VTS

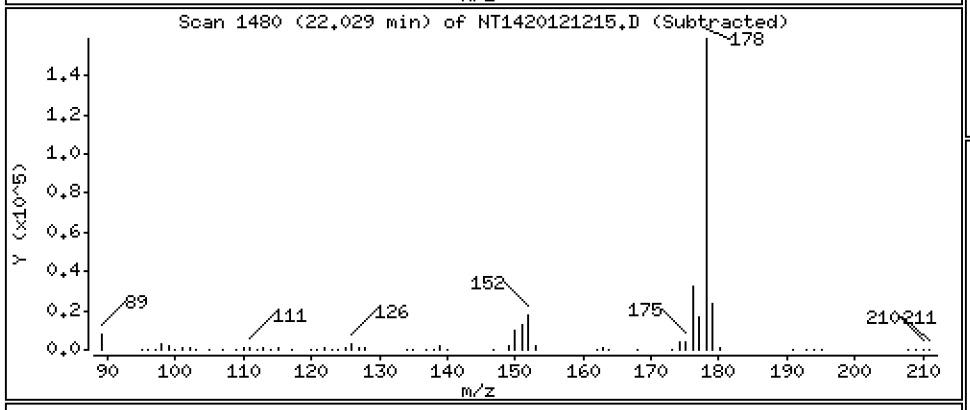
Column phase: Rxi-17Sil MS

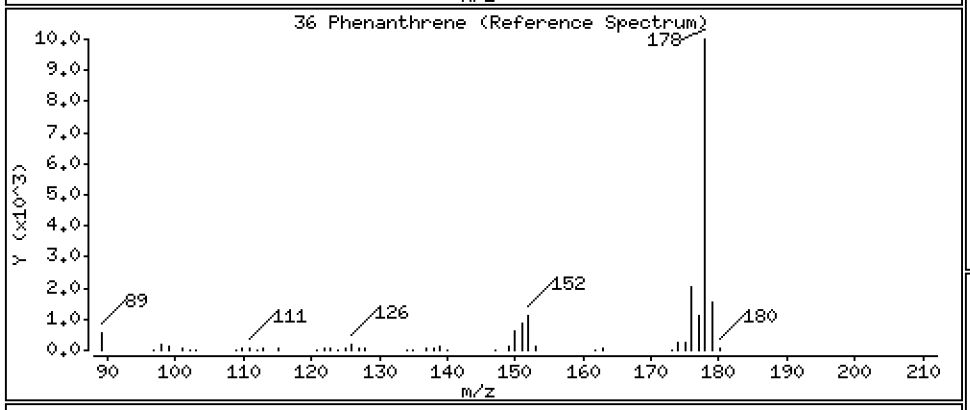
Column diameter: 0.25

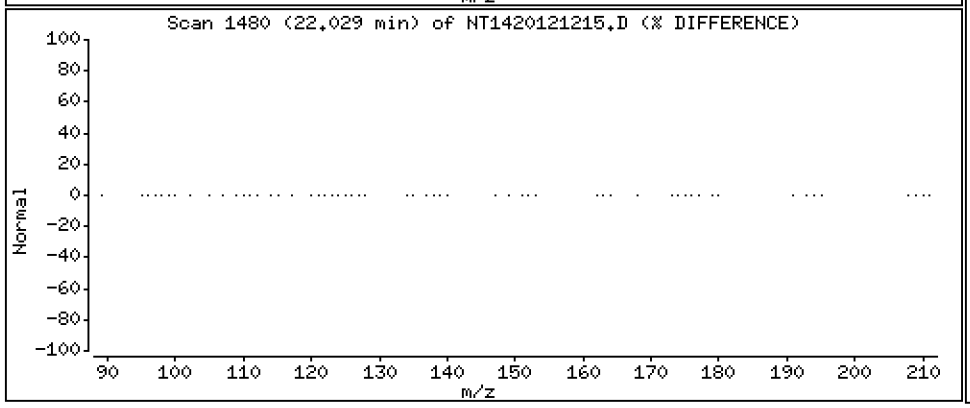
36 Phenanthrene

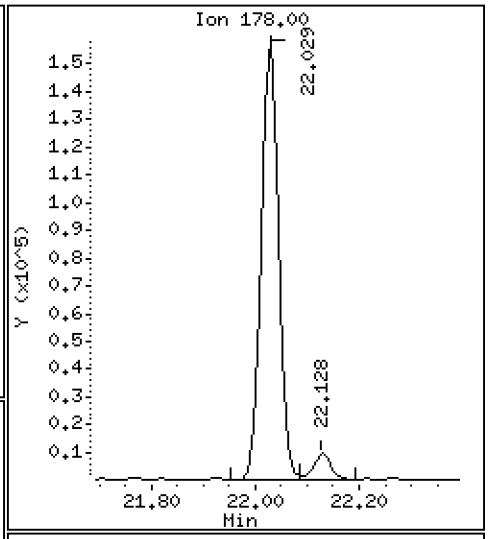
Concentration: 3.237 ug/mL

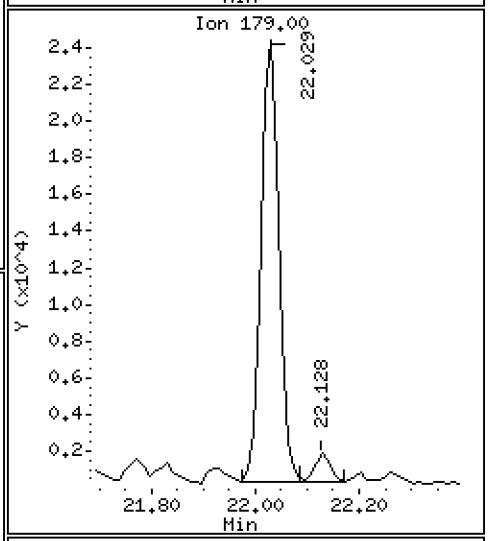


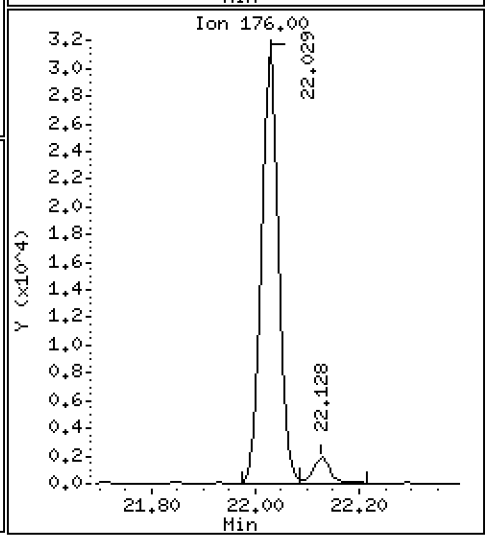












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

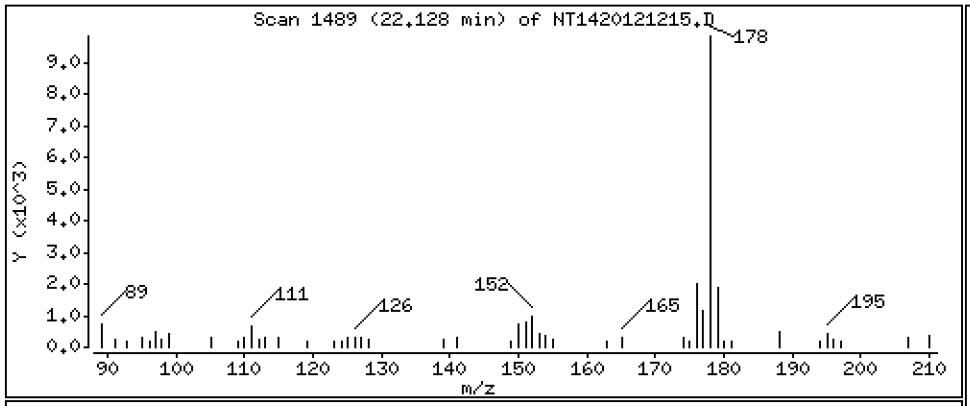
Operator: VTS

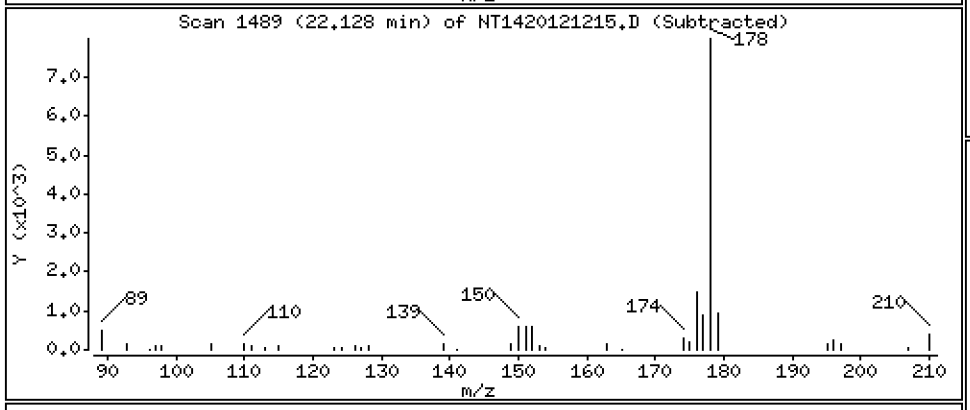
Column phase: Rxi-17Sil MS

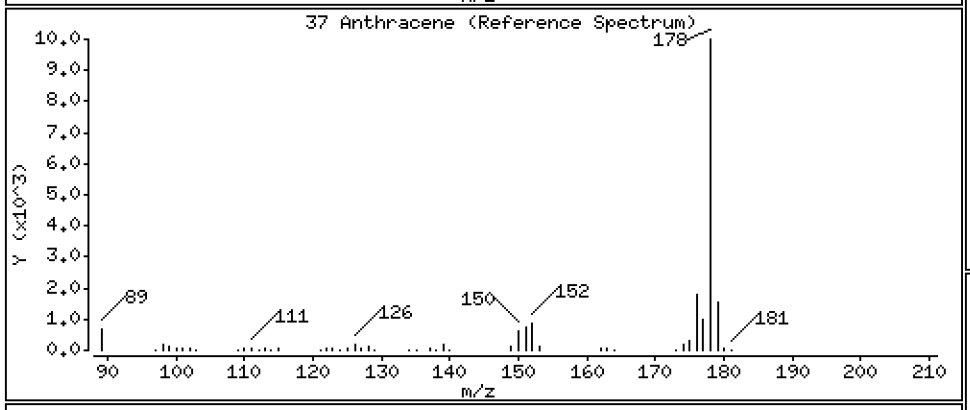
Column diameter: 0.25

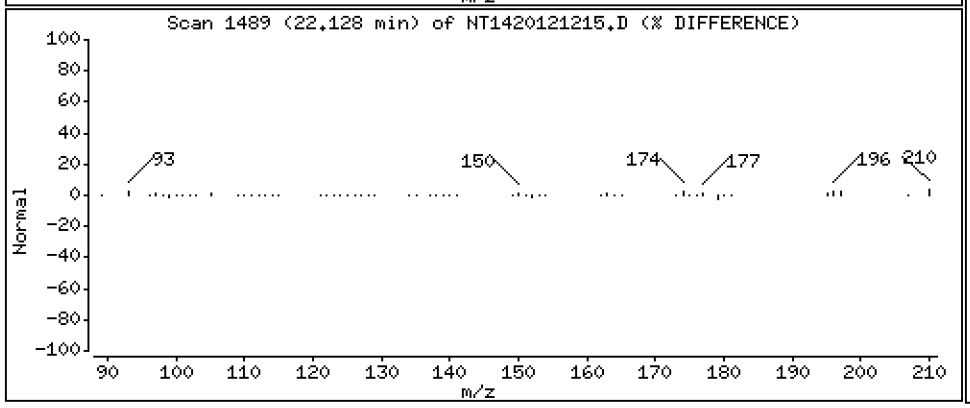
37 Anthracene

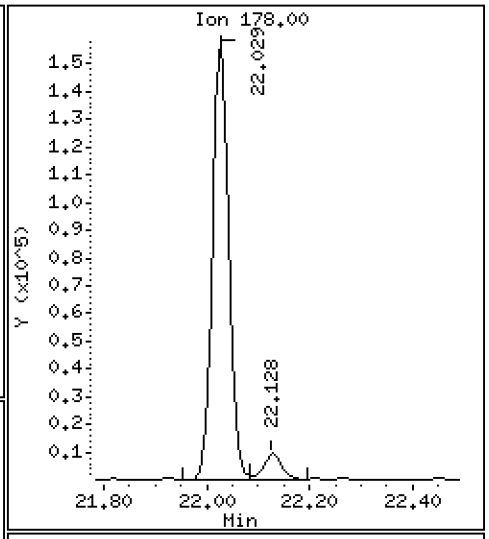
Concentration: 0.1983 ug/mL

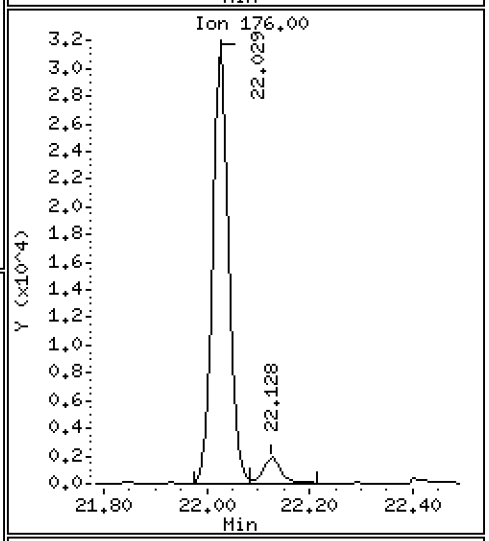


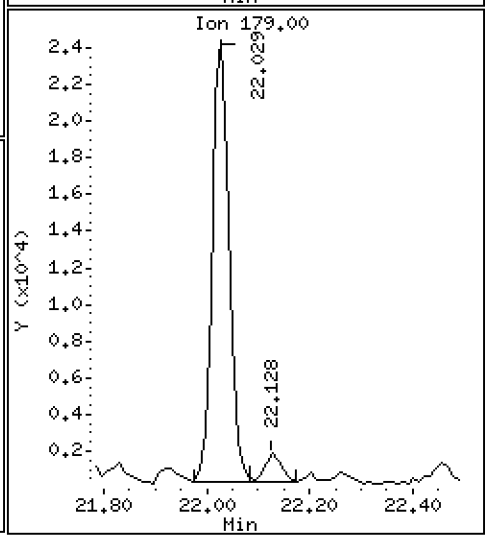












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

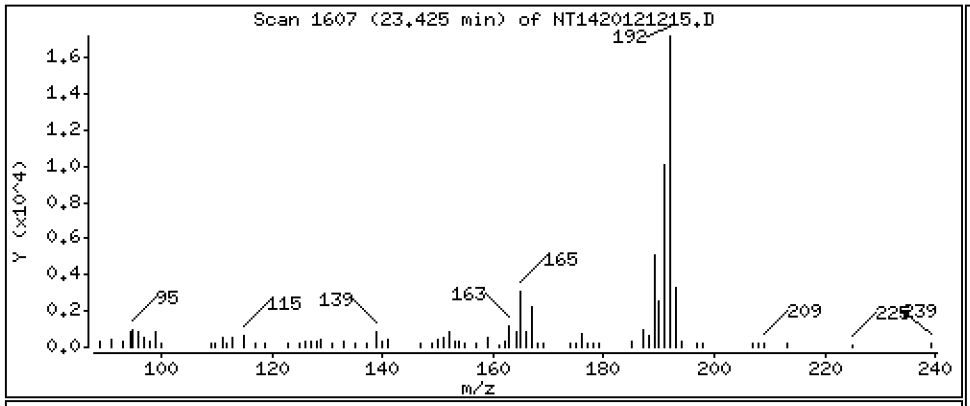
Operator: VTS

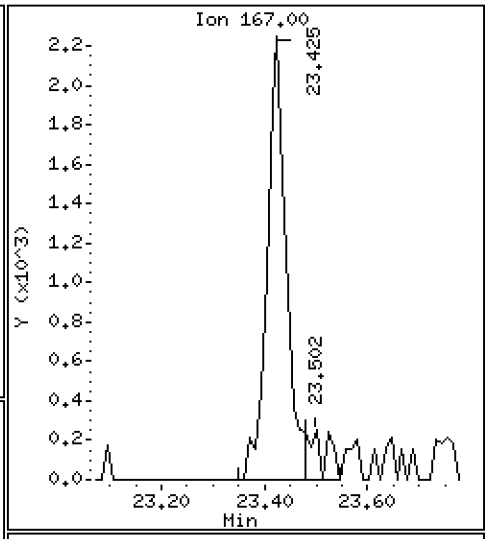
Column phase: Rxi-17Sil MS

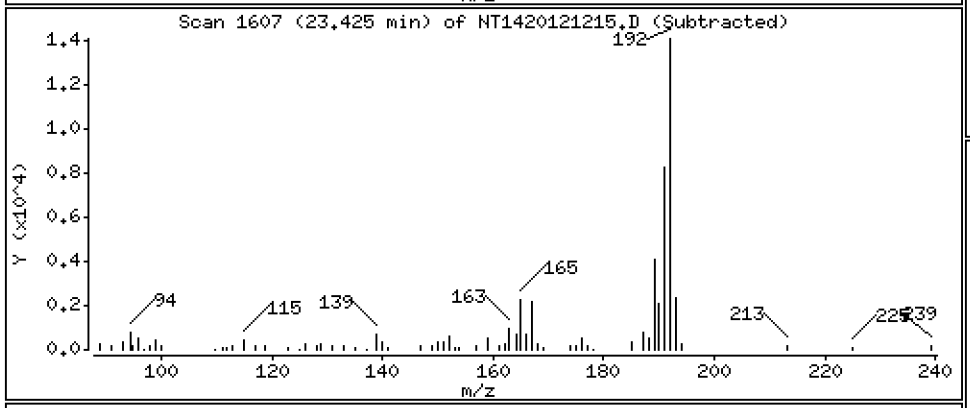
Column diameter: 0.25

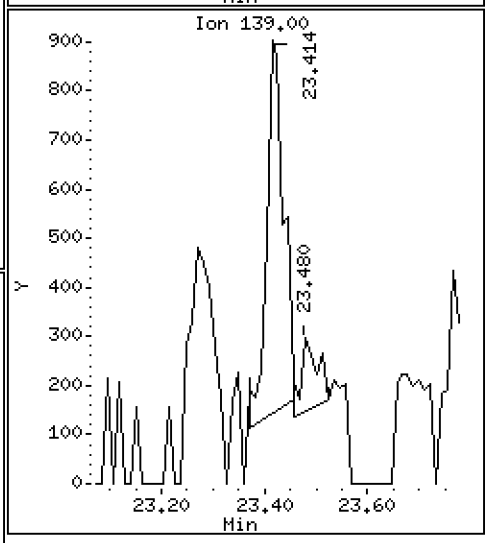
42 Carbazole

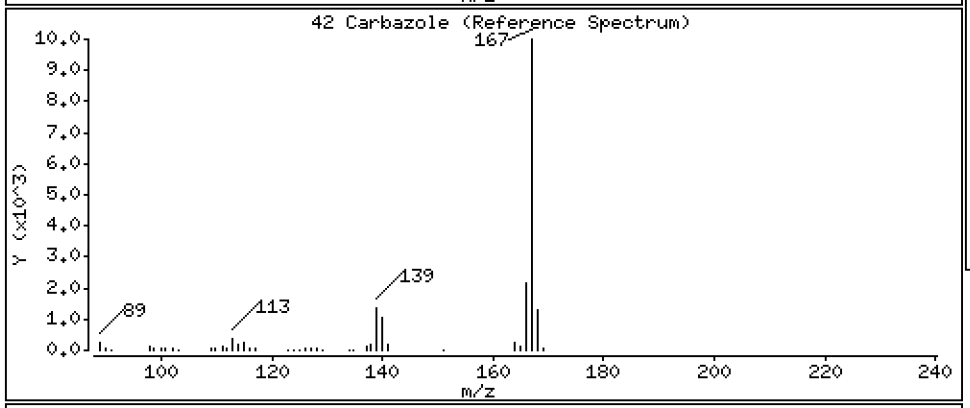
Concentration: 0.06450 ug/mL

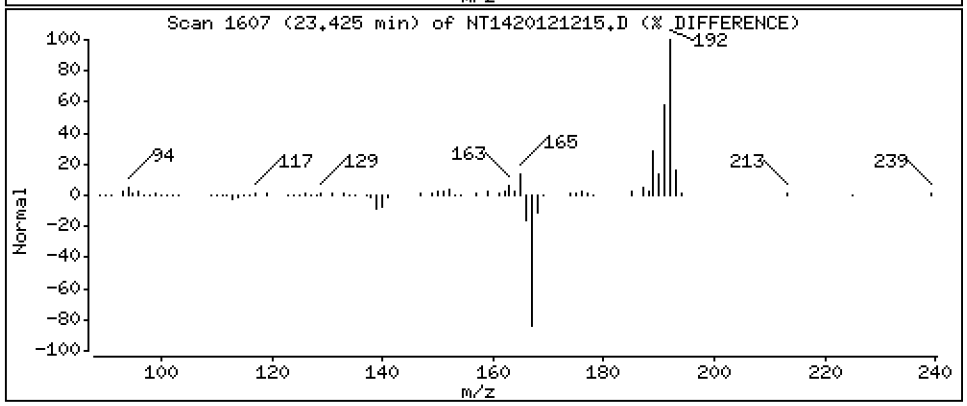












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

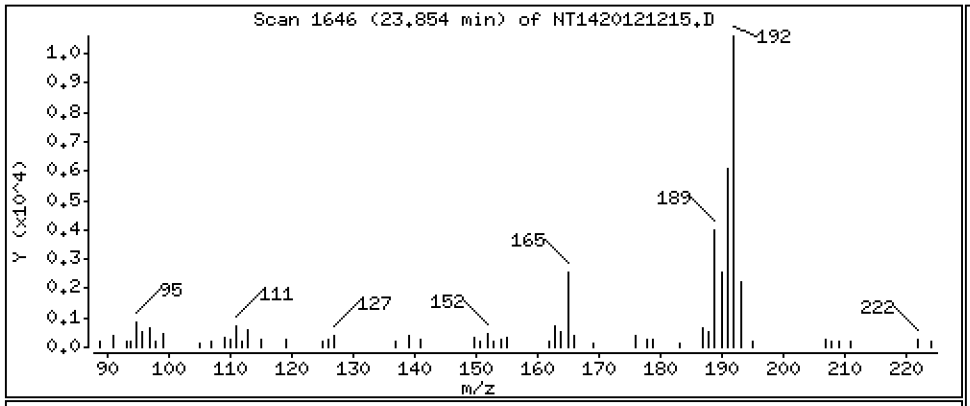
Operator: VTS

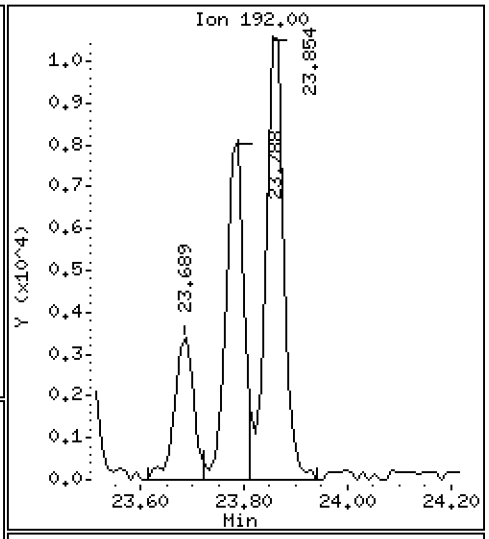
Column phase: Rxi-17Sil MS

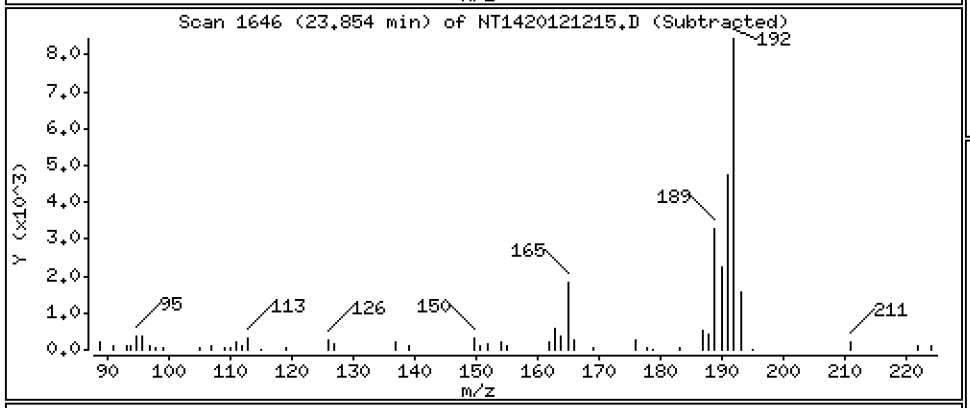
Column diameter: 0.25

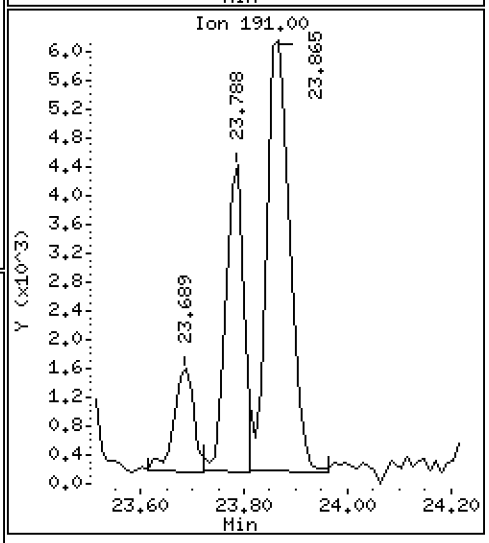
43 1-Methylphenanthrene

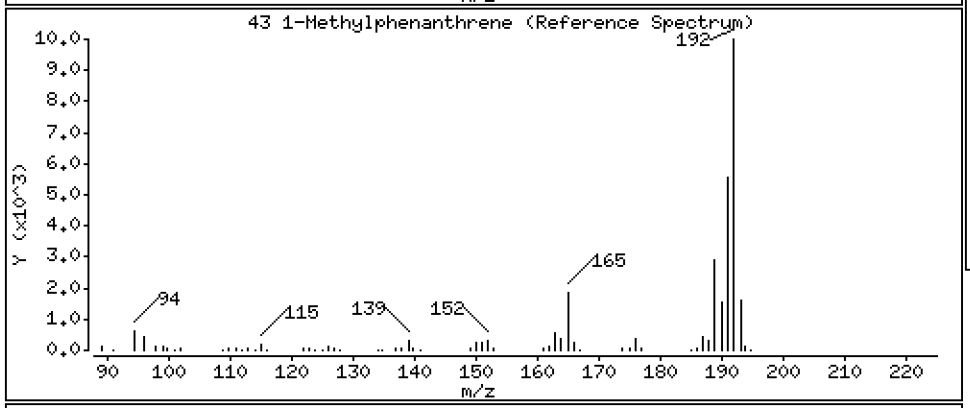
Concentration: 0.3433 ug/mL

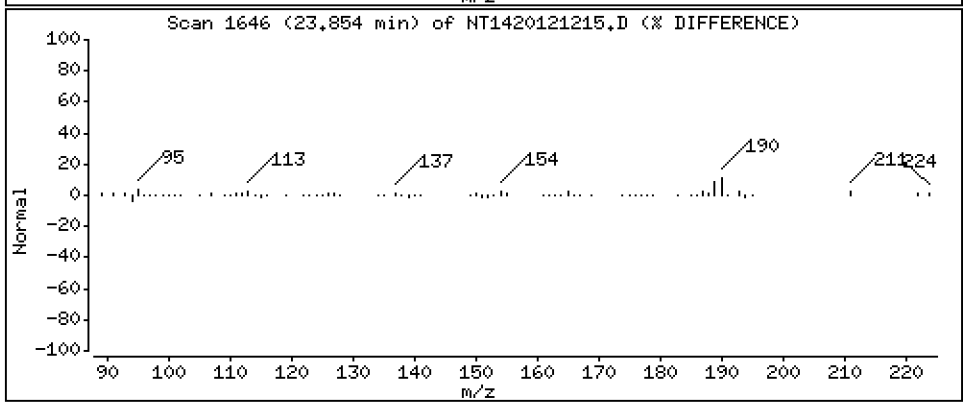












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

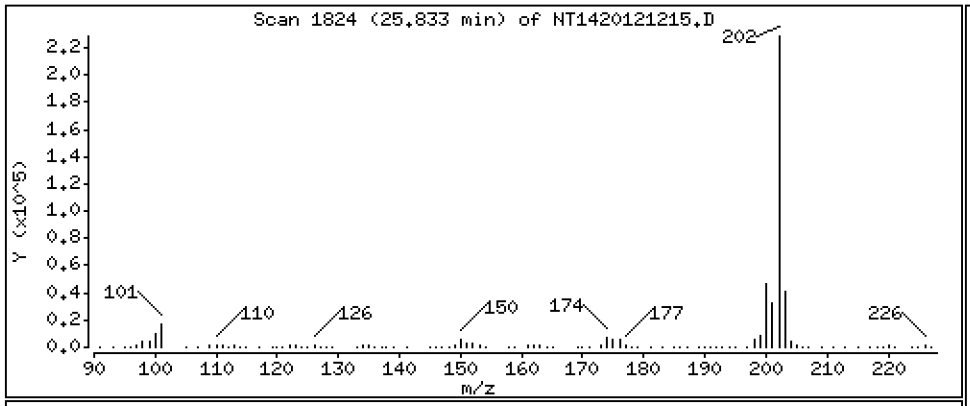
Operator: VTS

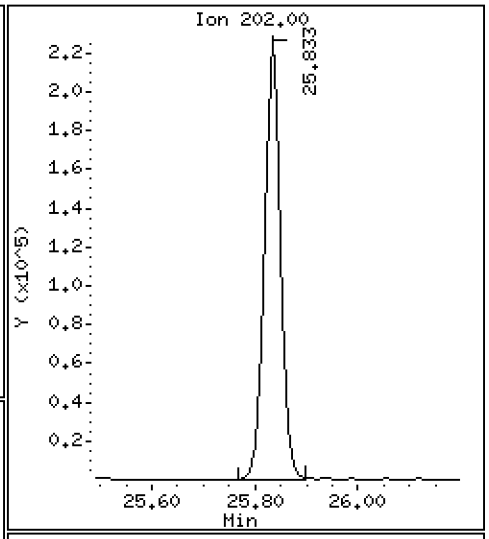
Column phase: Rxi-17Sil MS

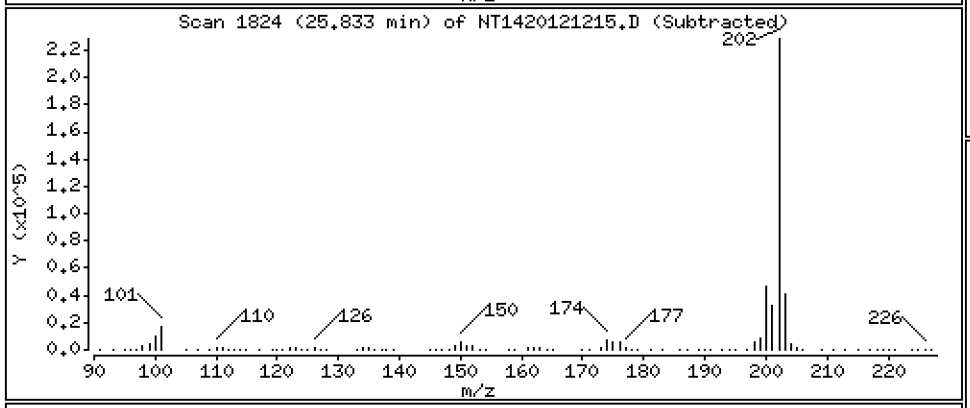
Column diameter: 0.25

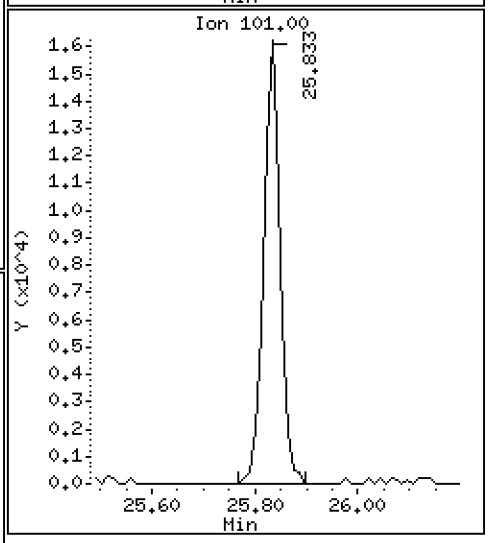
44 Fluoranthene

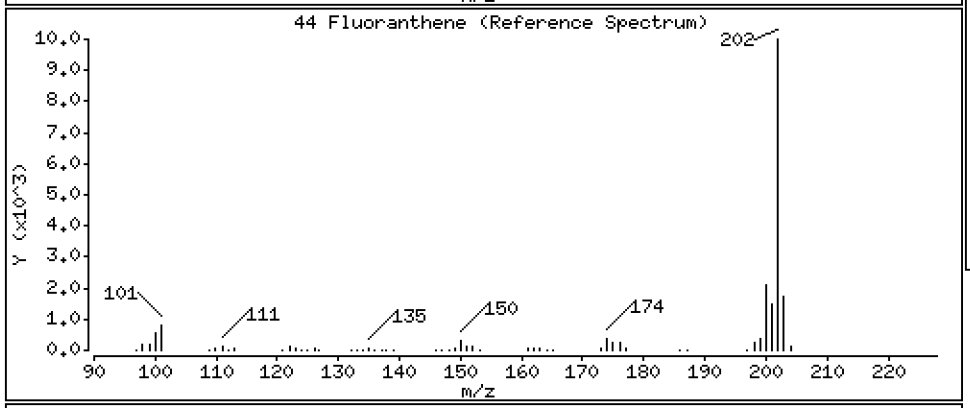
Concentration: 4.232 ug/mL

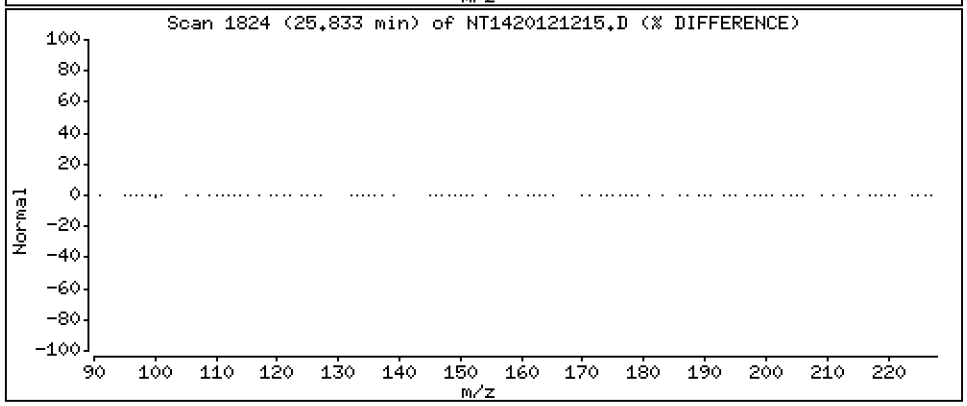












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

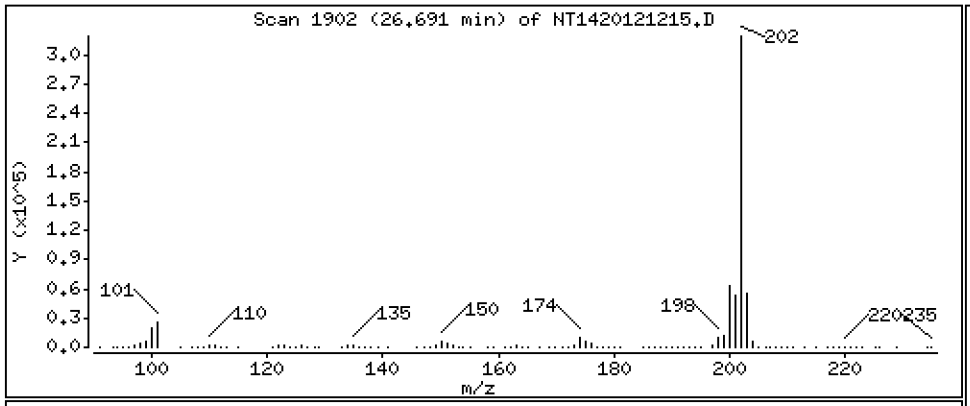
Operator: VTS

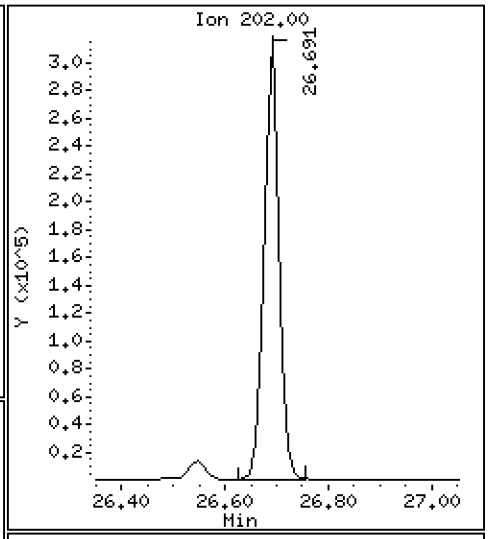
Column phase: Rxi-17Sil MS

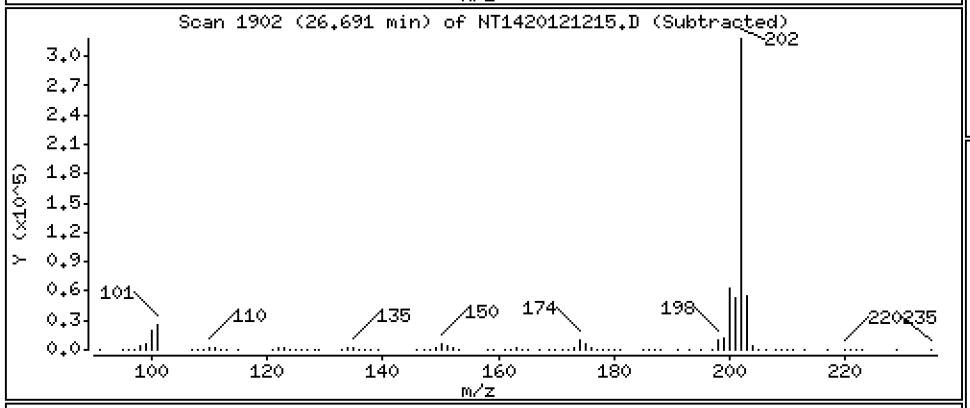
Column diameter: 0.25

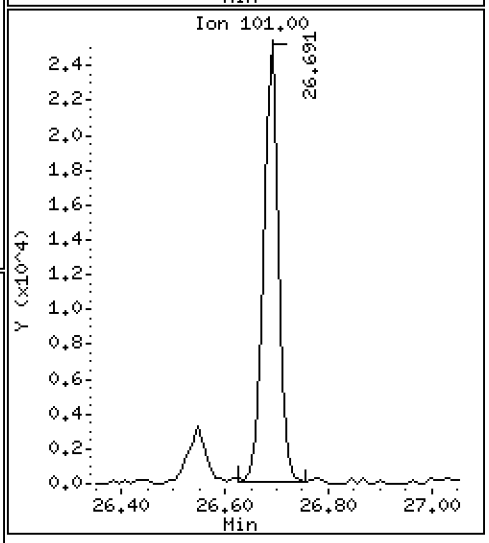
46 Pyrene

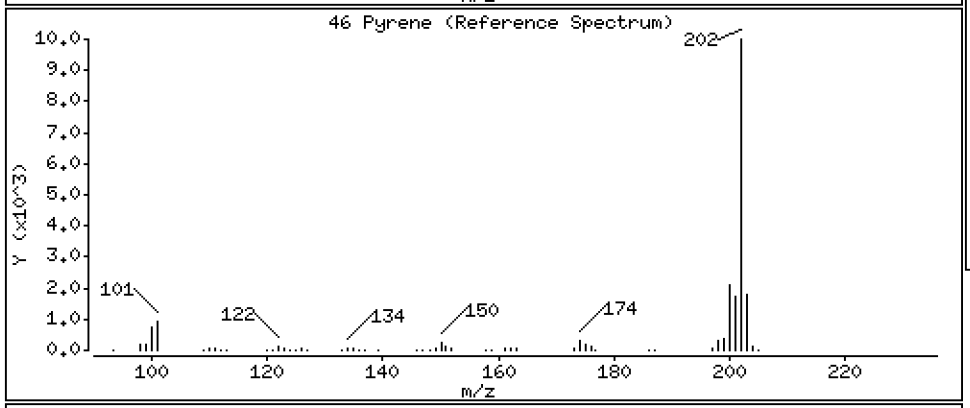
Concentration: 5.172 ug/mL

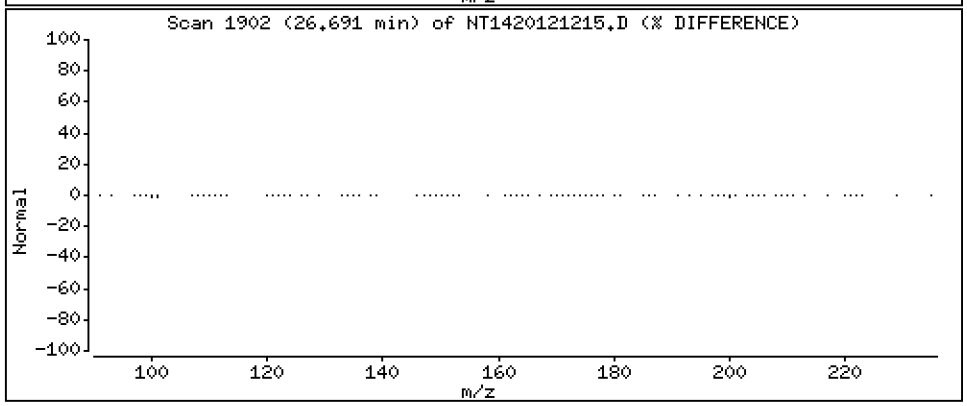












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

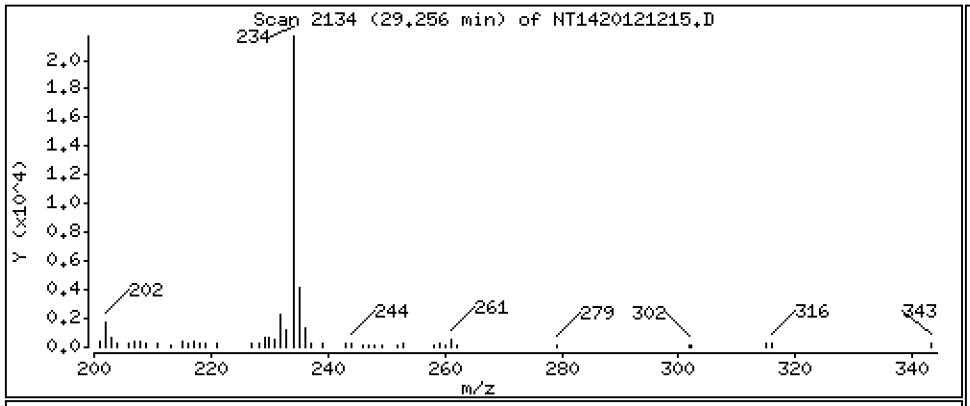
Operator: VTS

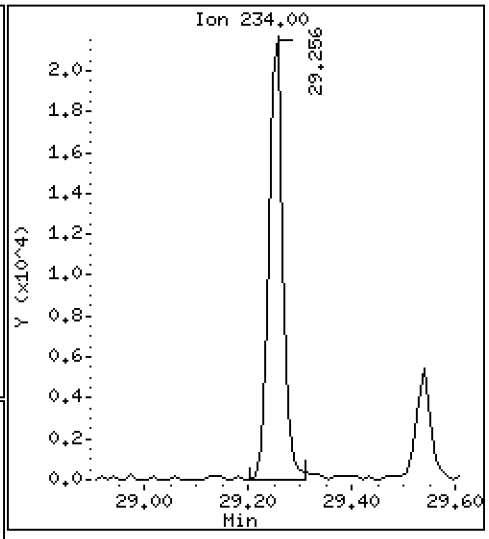
Column phase: Rxi-17Sil MS

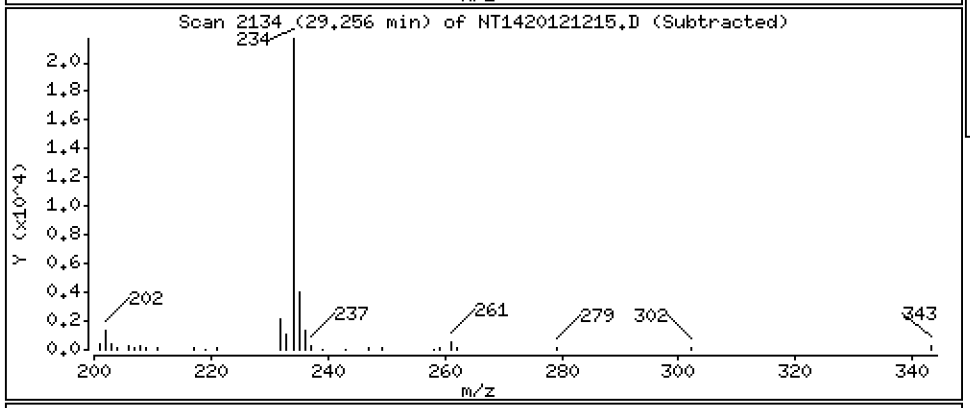
Column diameter: 0.25

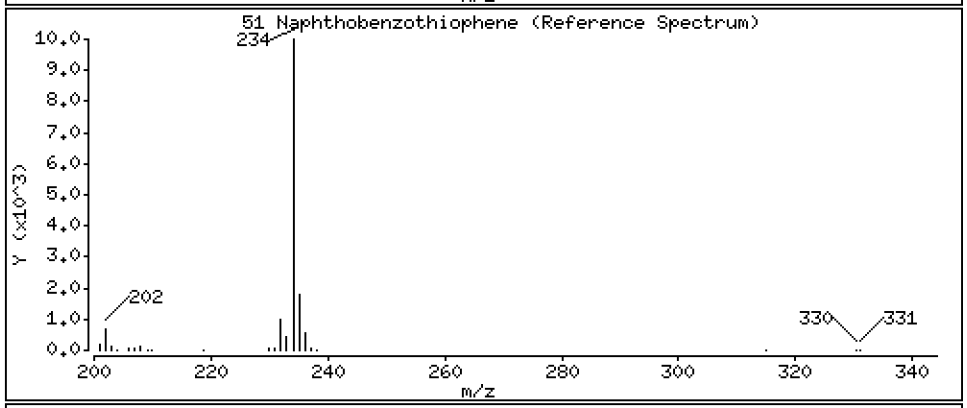
51 Naphthobenzothiophene

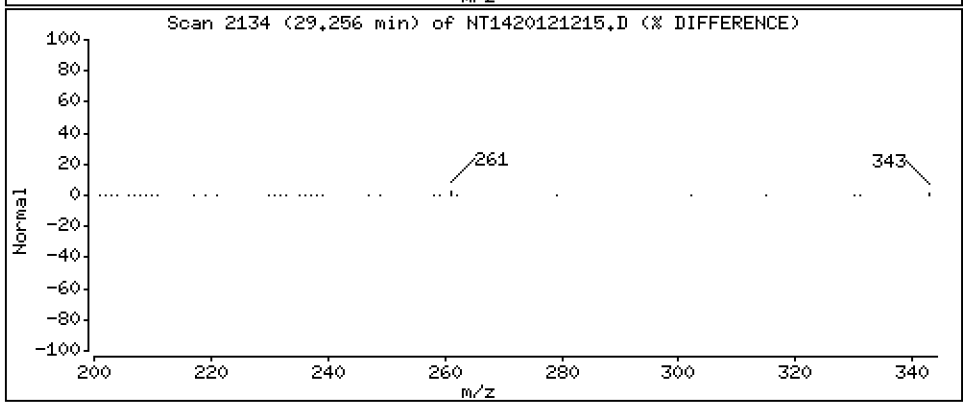
Concentration: 0.3691 ug/mL











Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

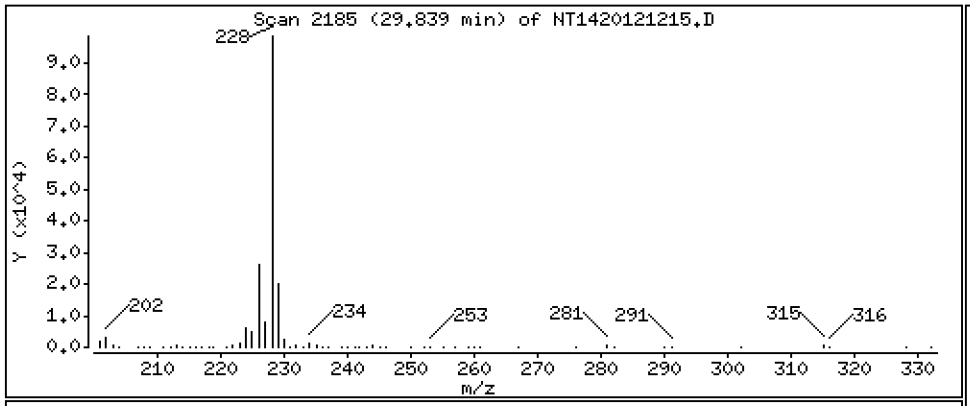
Operator: VTS

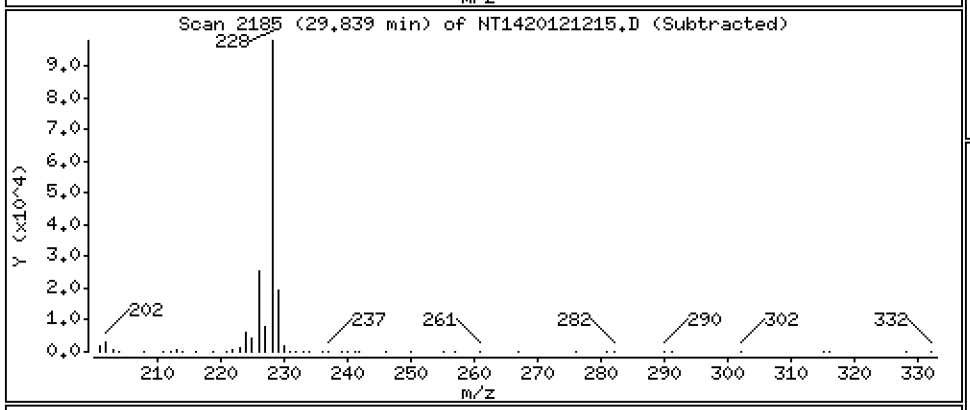
Column phase: Rxi-17Sil MS

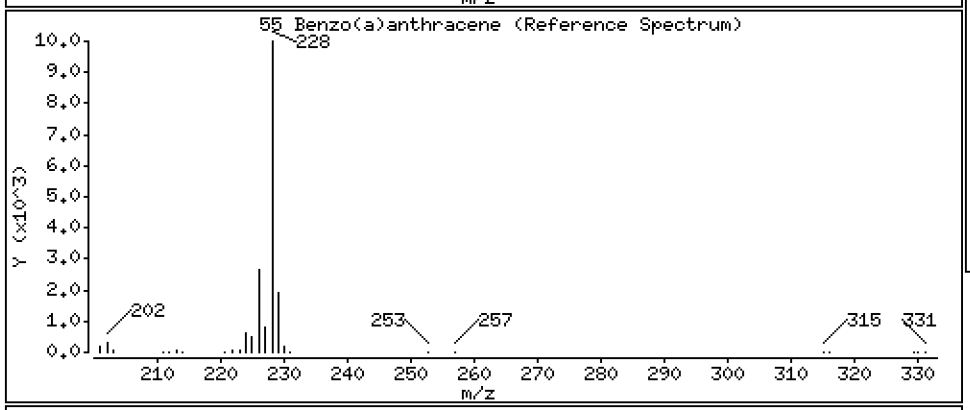
Column diameter: 0.25

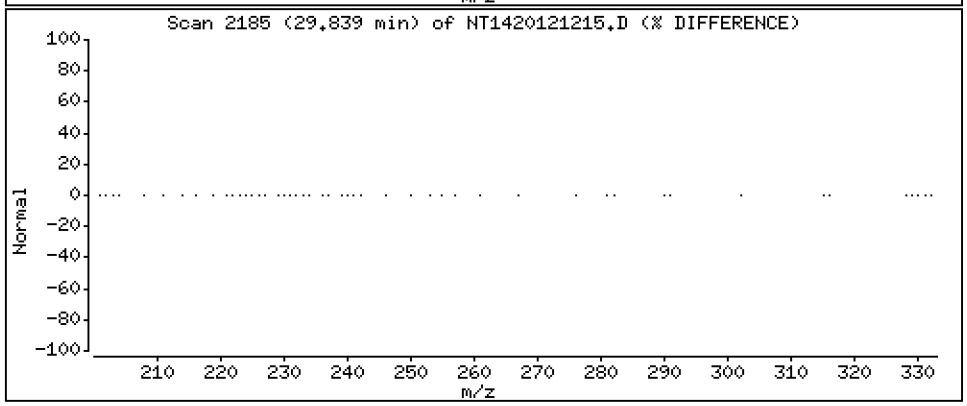
55 Benzo(a)anthracene

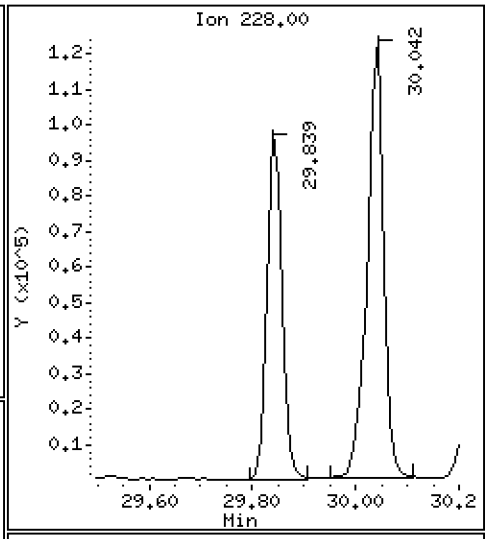
Concentration: 1.670 ug/mL

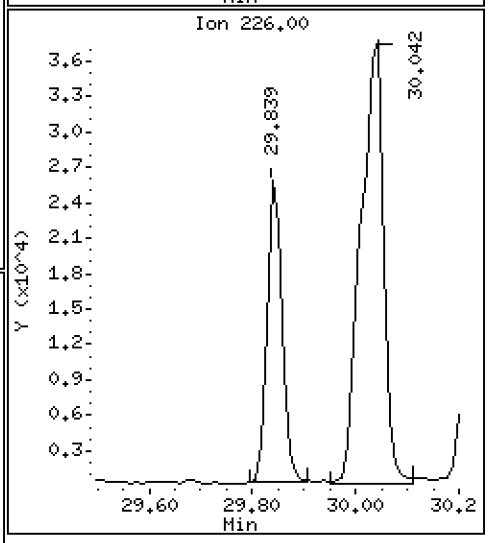












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

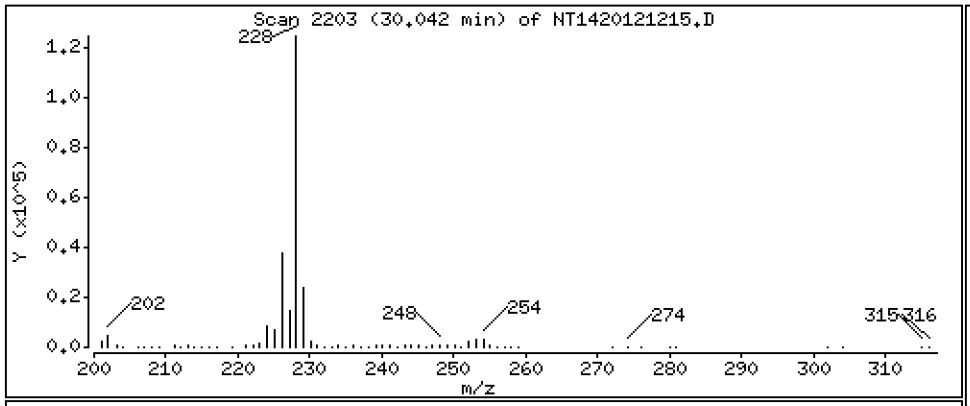
Operator: VTS

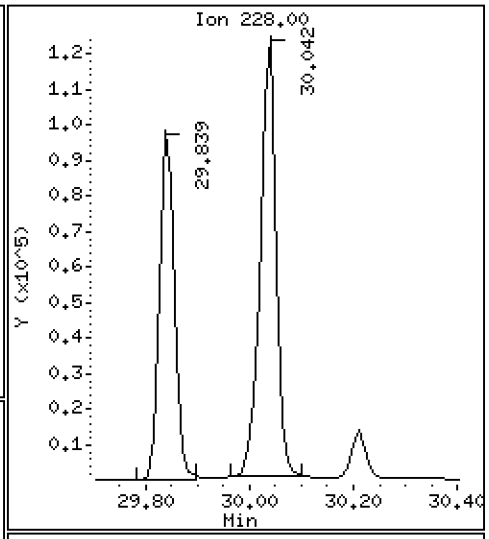
Column phase: Rxi-17Sil MS

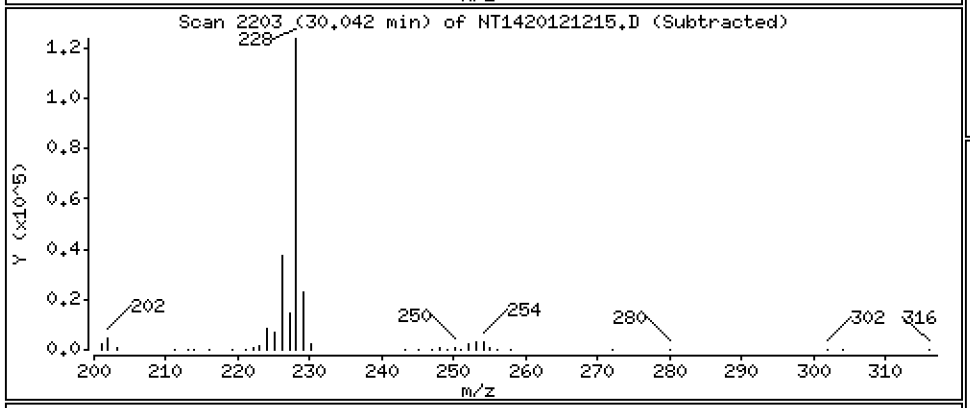
Column diameter: 0.25

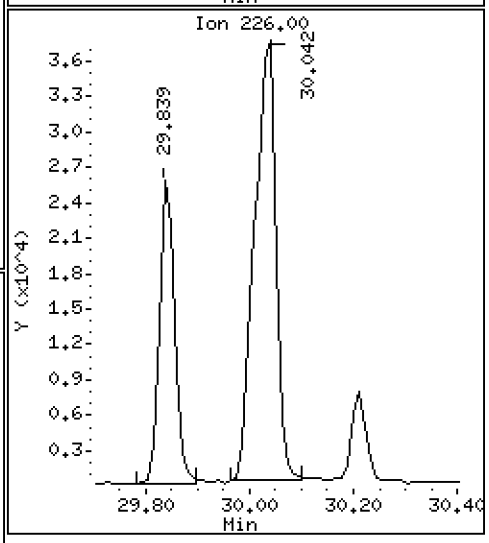
57 Chrysene

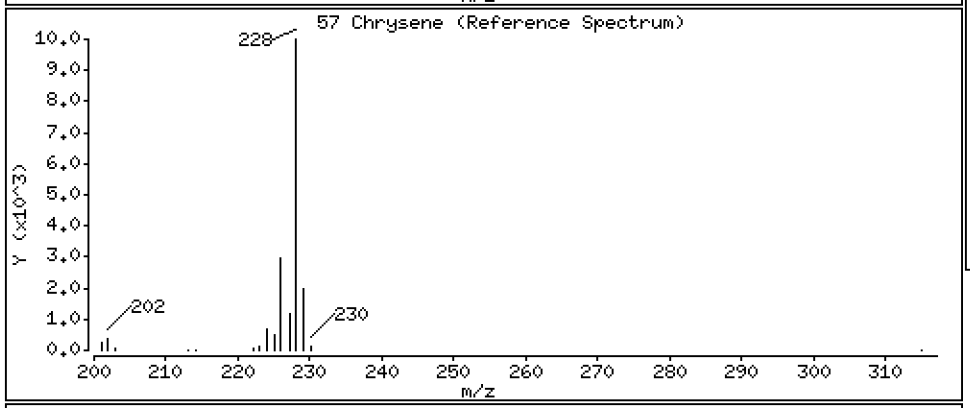
Concentration: 2.219 ug/mL

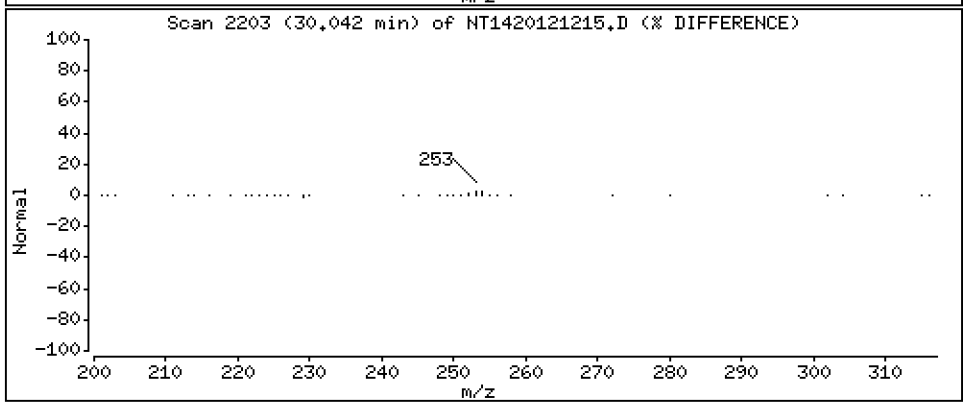












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

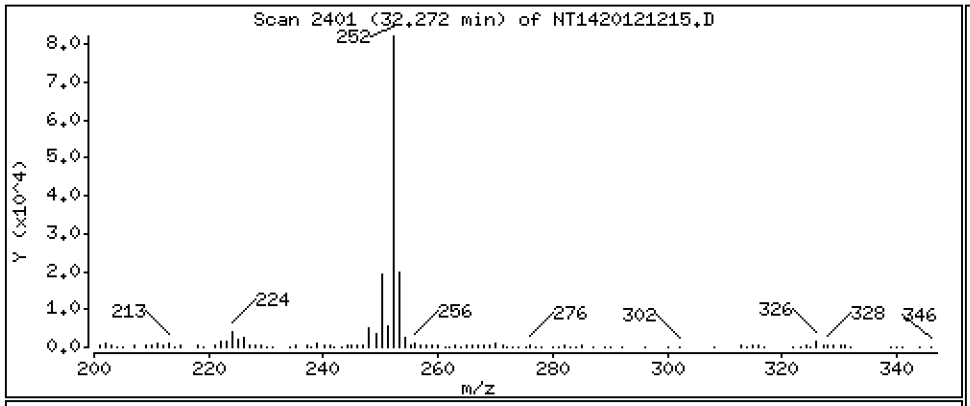
Operator: VTS

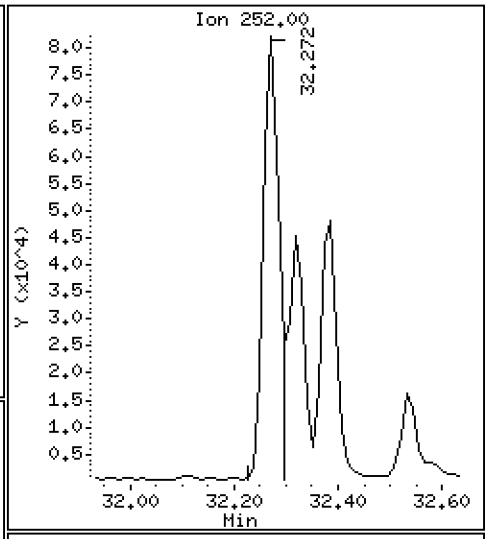
Column phase: Rxi-17Sil MS

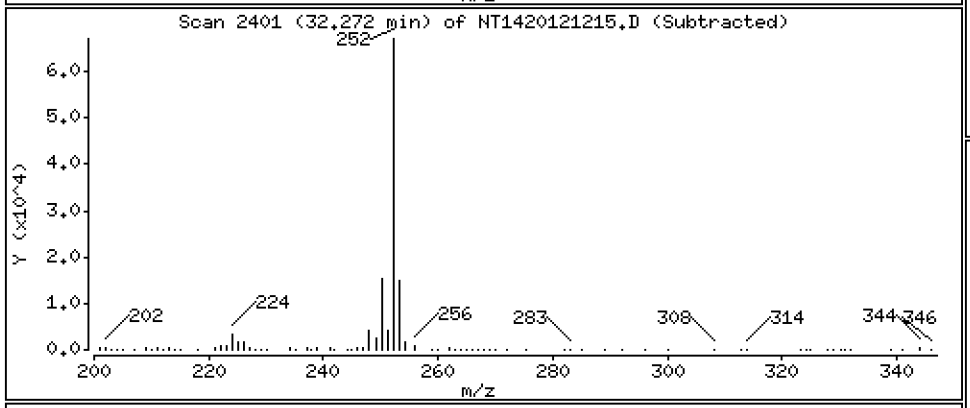
Column diameter: 0.25

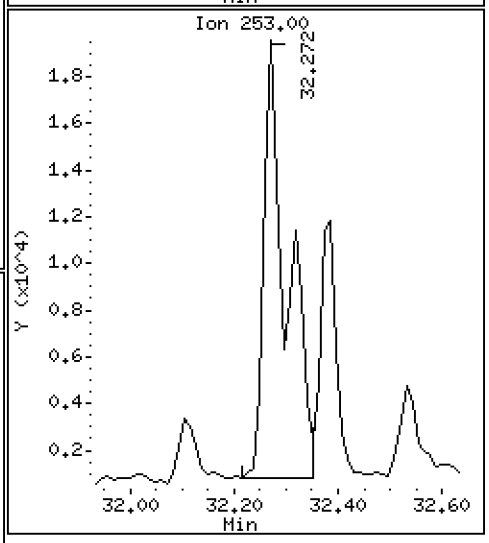
62 Benzo(b)fluoranthene

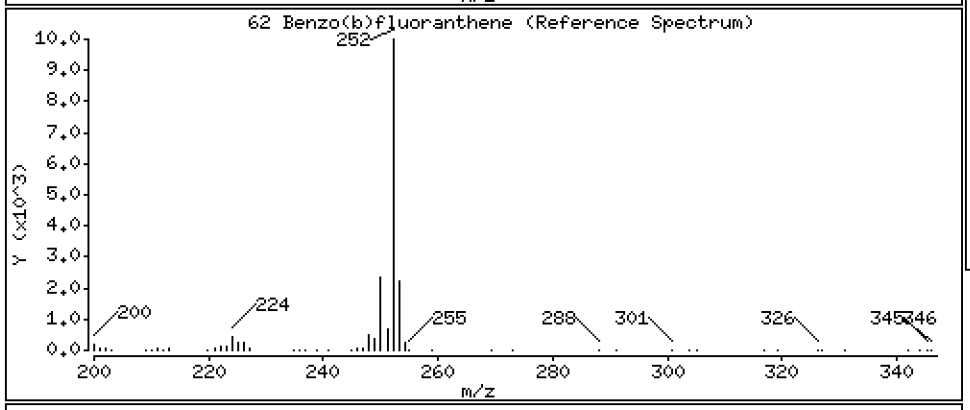
Concentration: 1.238 ug/mL

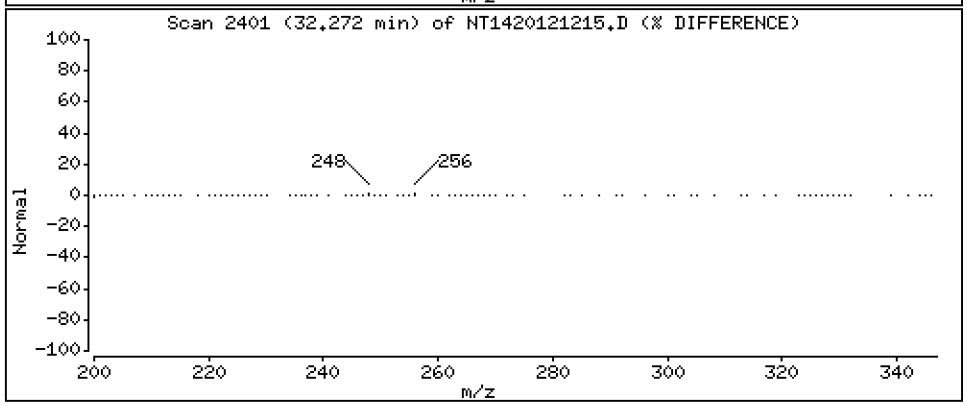












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

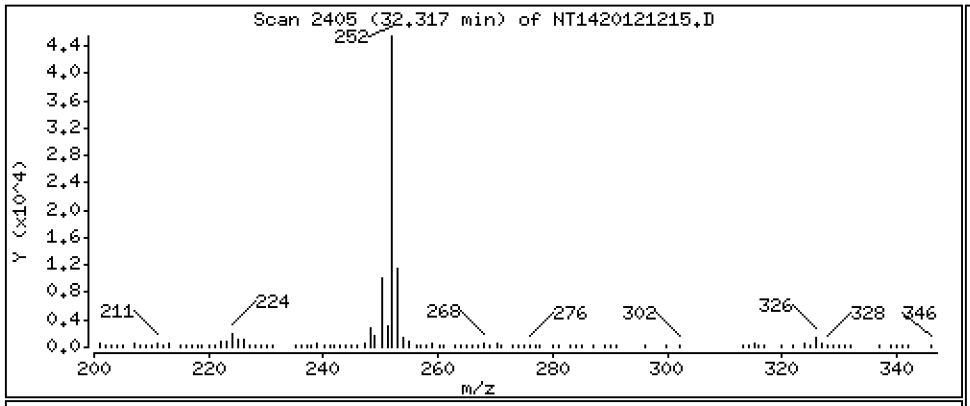
Operator: VTS

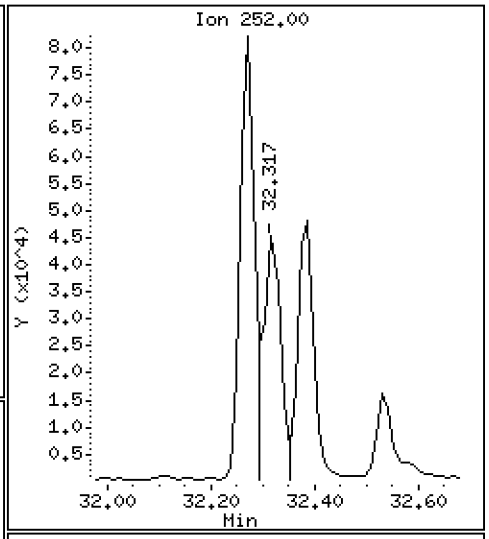
Column phase: Rxi-17Sil MS

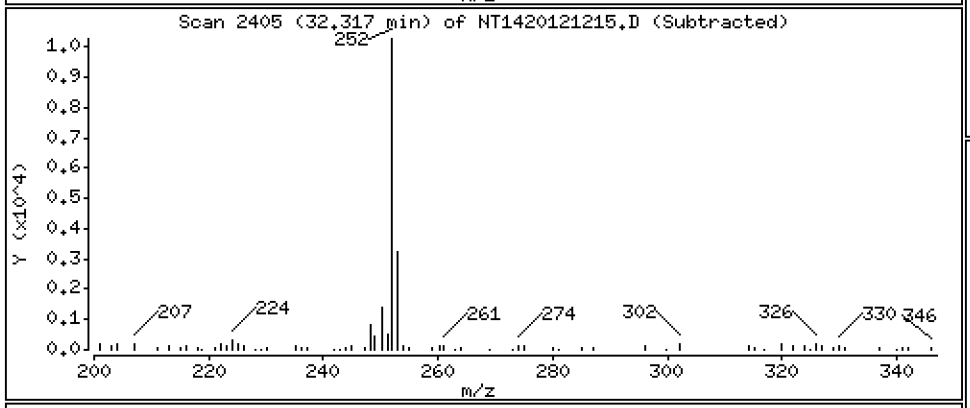
Column diameter: 0.25

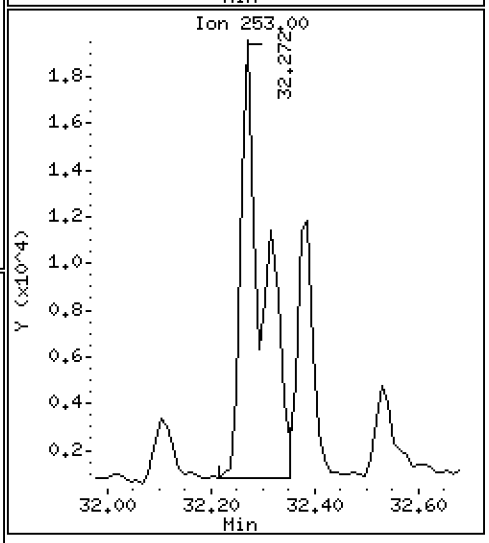
63 Benzo(k)fluoranthene

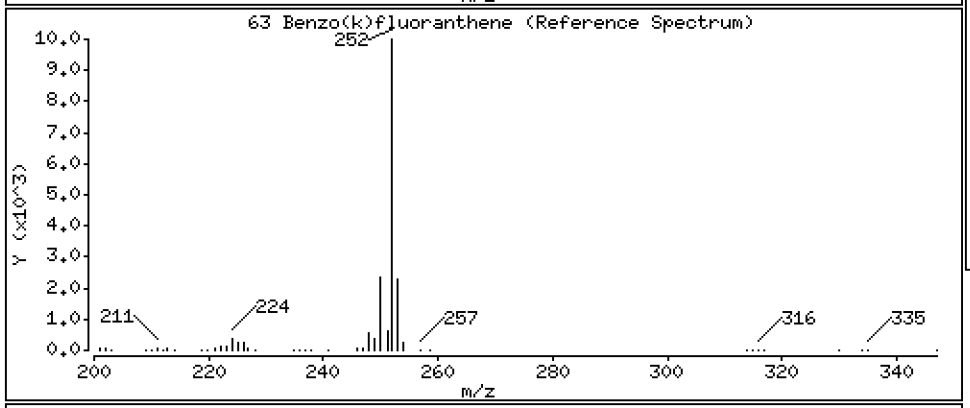
Concentration: 0.8393 ug/mL

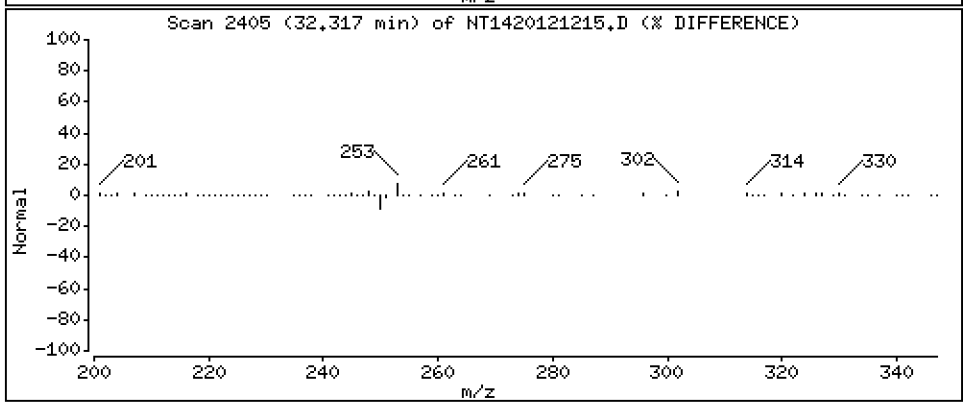












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

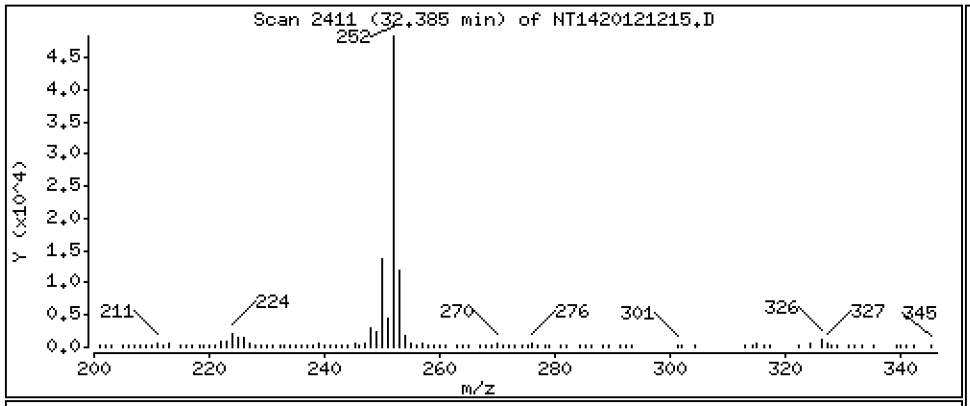
Operator: VTS

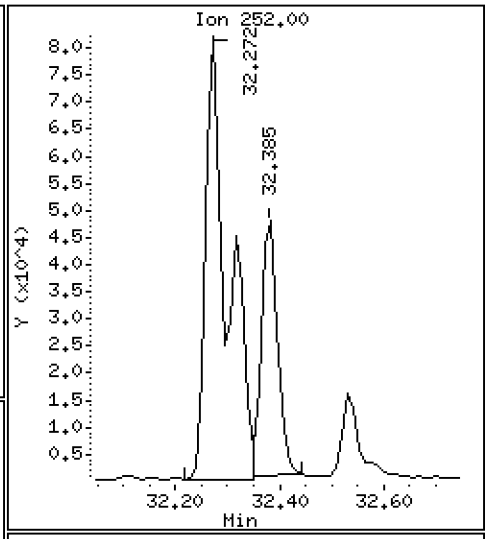
Column phase: Rxi-17Sil MS

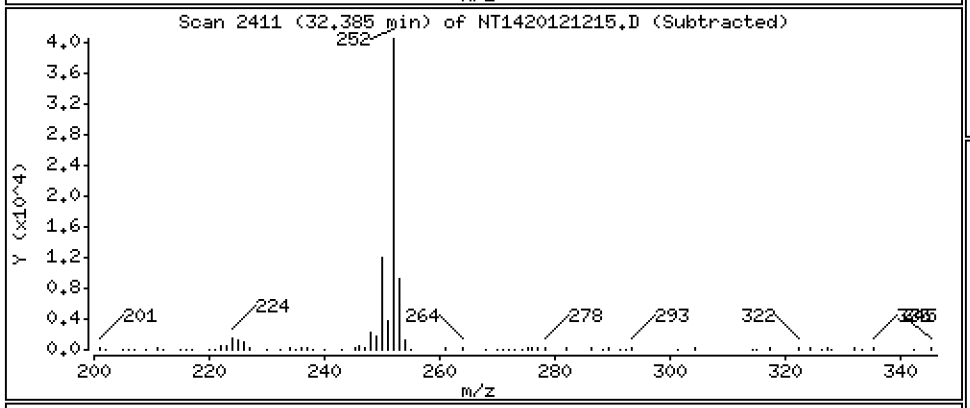
Column diameter: 0.25

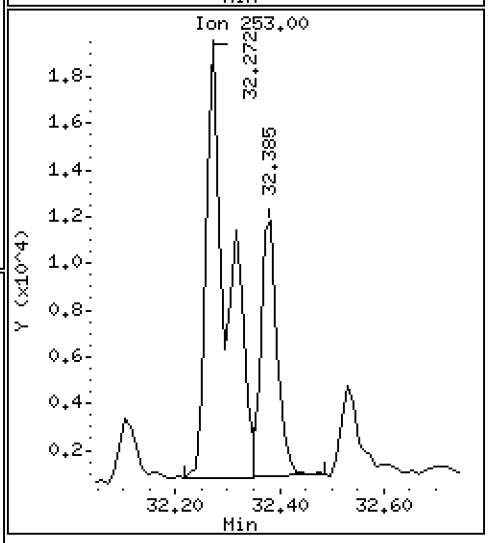
293 Benzo(j)fluoranthene

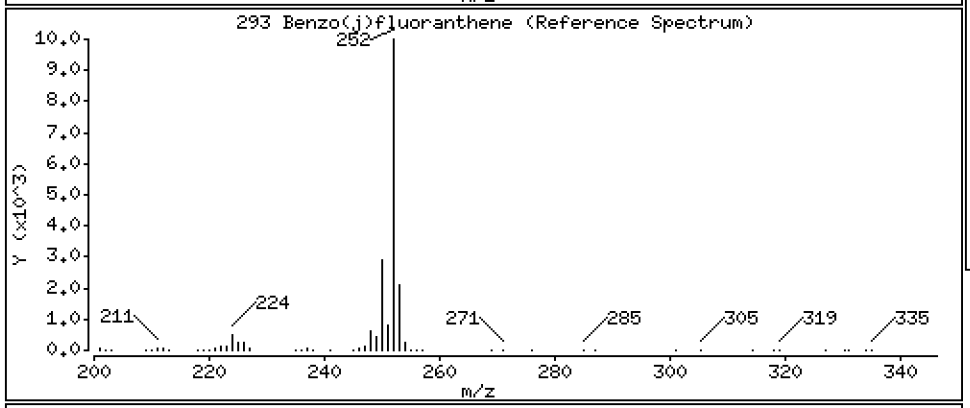
Concentration: 0.8533 ug/mL

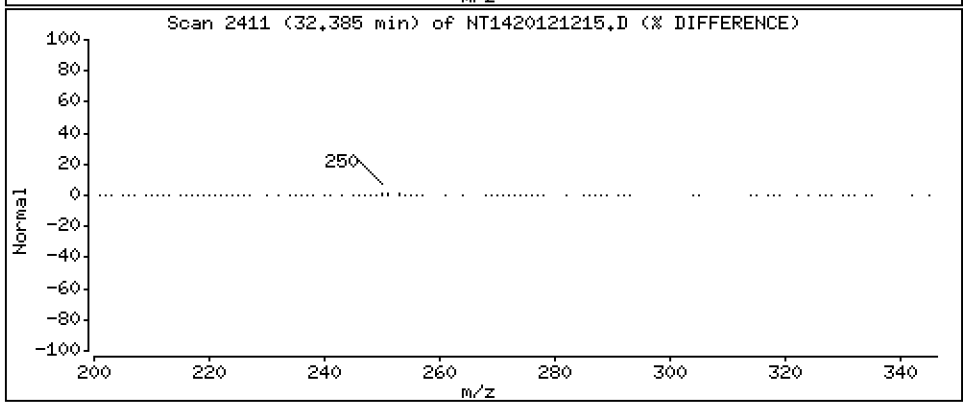












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

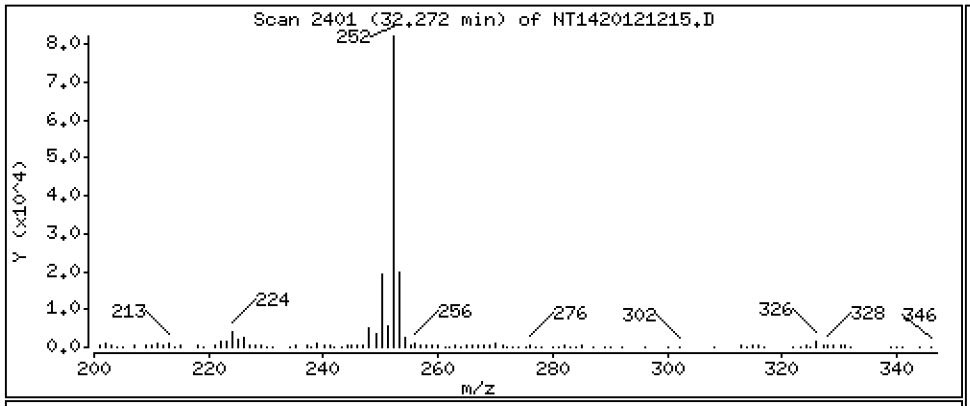
Operator: VTS

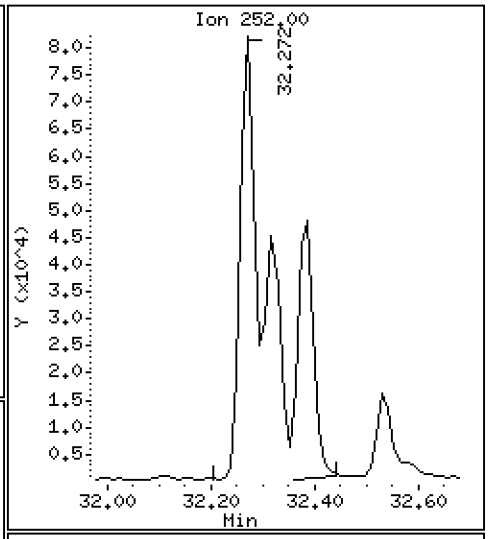
Column phase: Rxi-17Sil MS

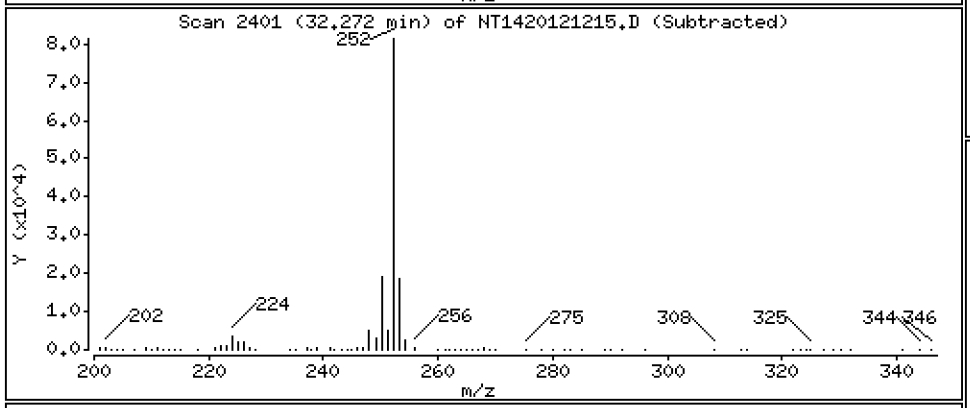
Column diameter: 0.25

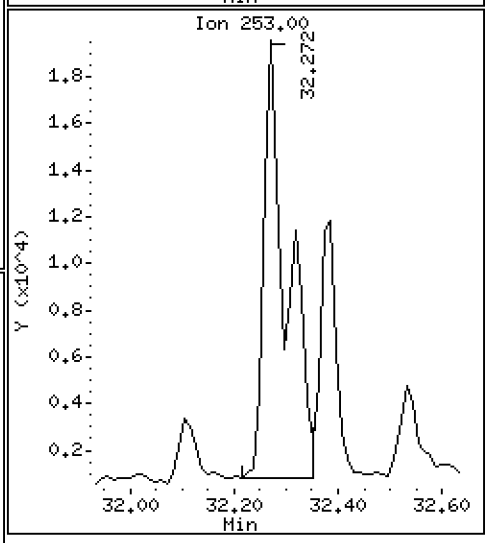
246 Total Benzofluoranthenes

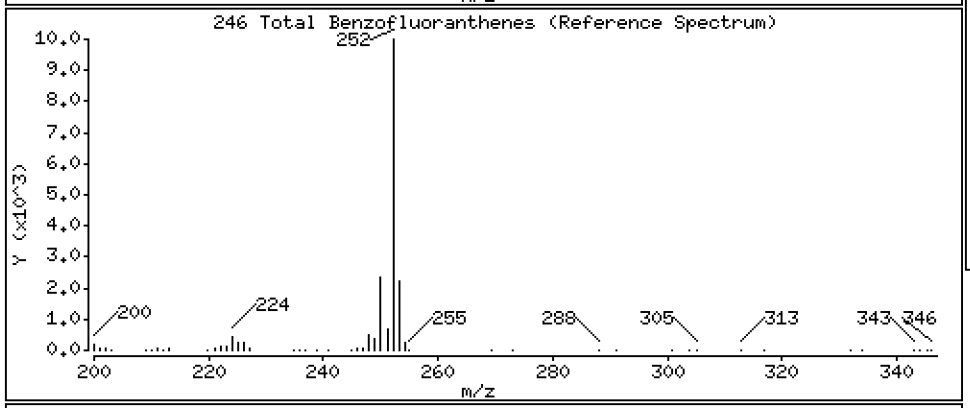
Concentration: 2.868 ug/mL

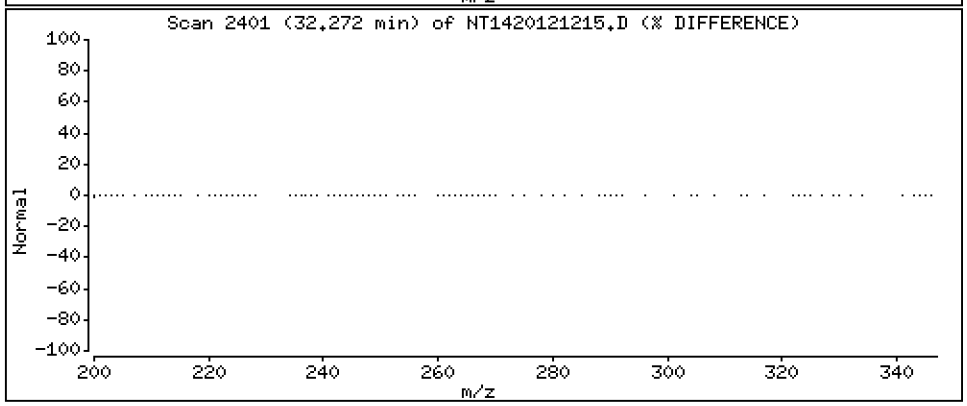












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

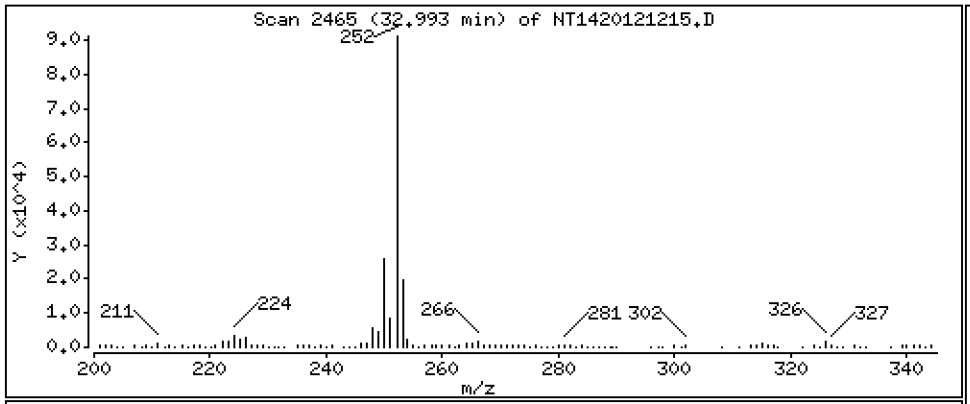
Operator: VTS

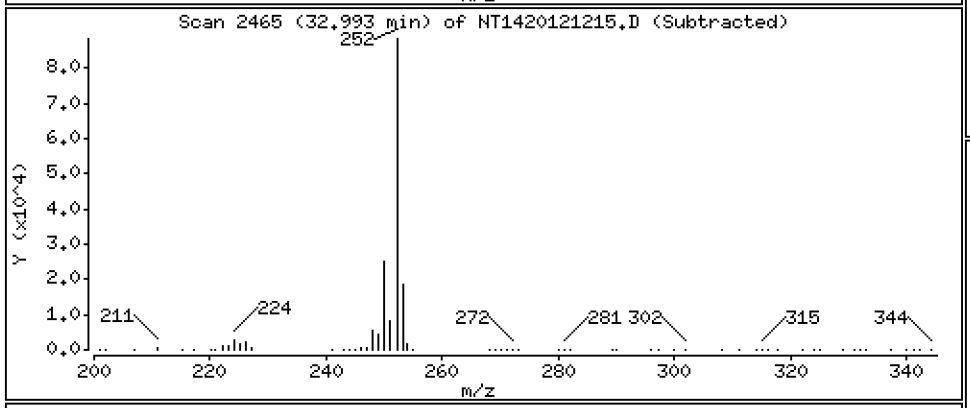
Column phase: Rxi-17Sil MS

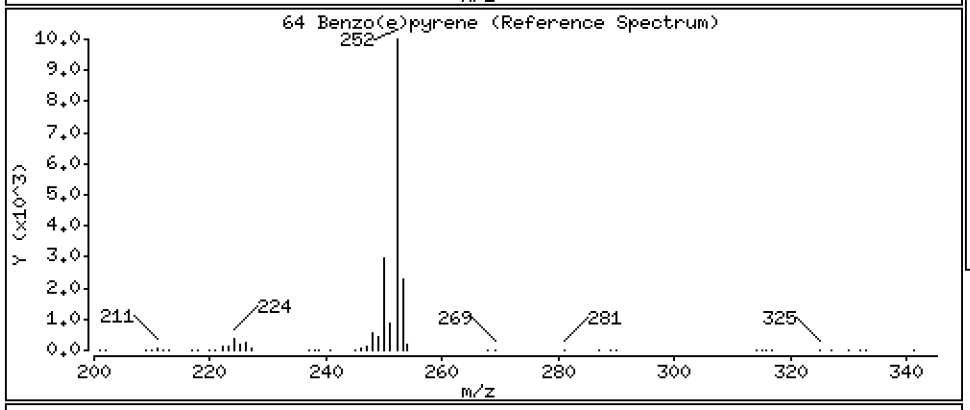
Column diameter: 0.25

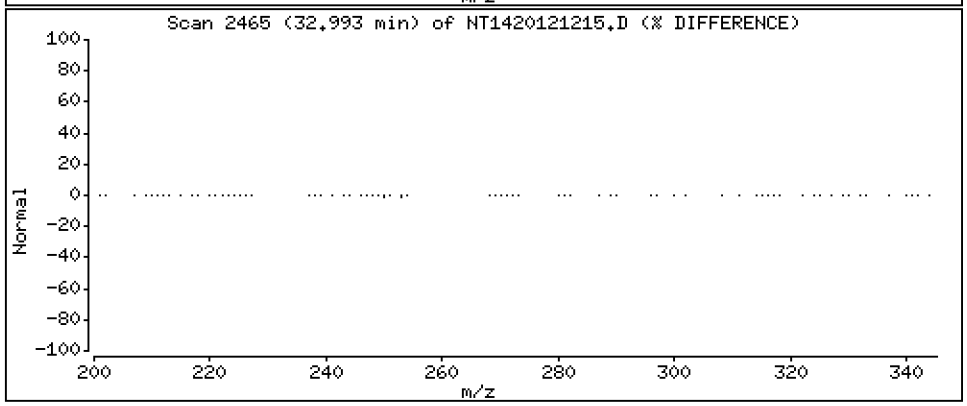
64 Benzo(e)pyrene

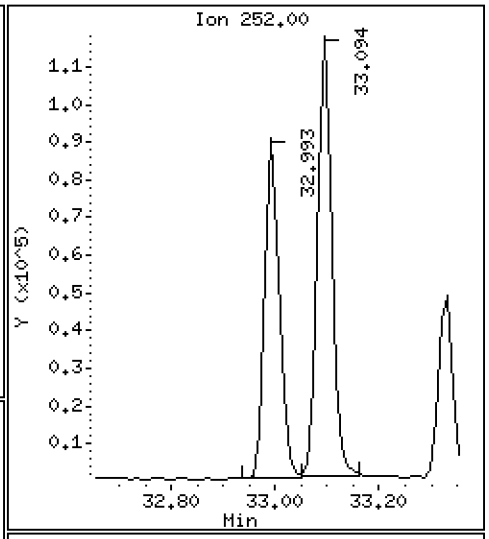
Concentration: 1.369 ug/mL

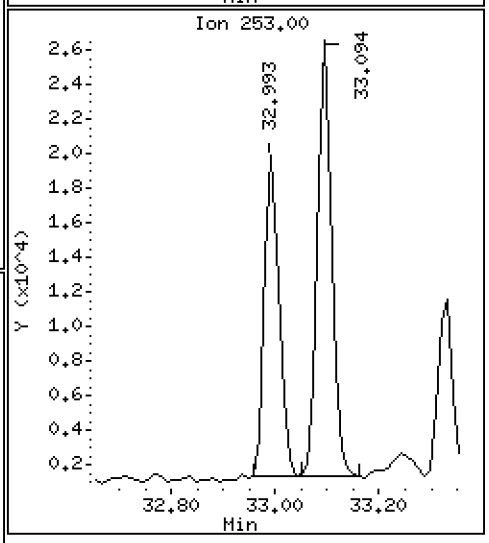












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

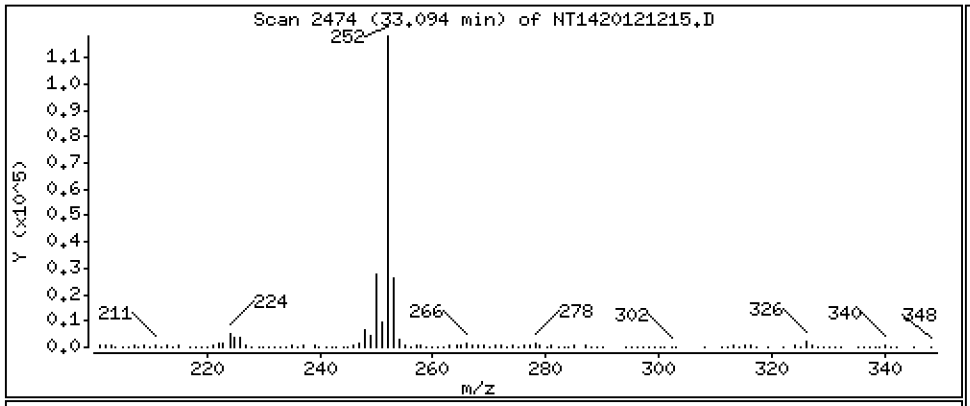
Operator: VTS

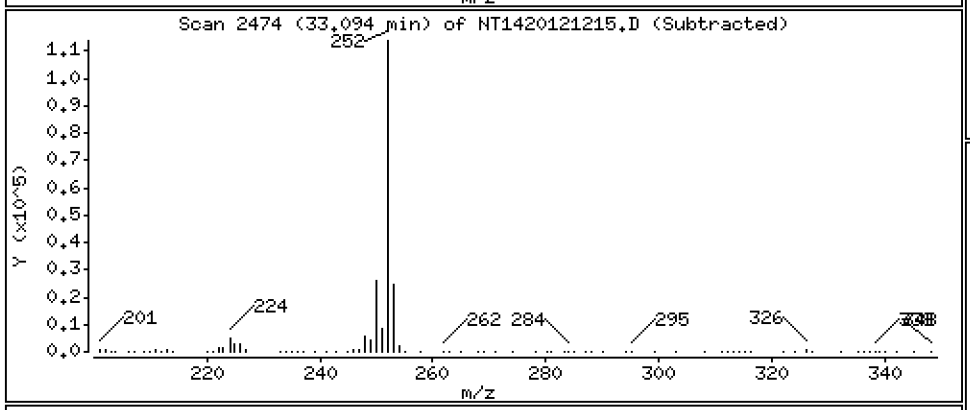
Column phase: Rxi-17Sil MS

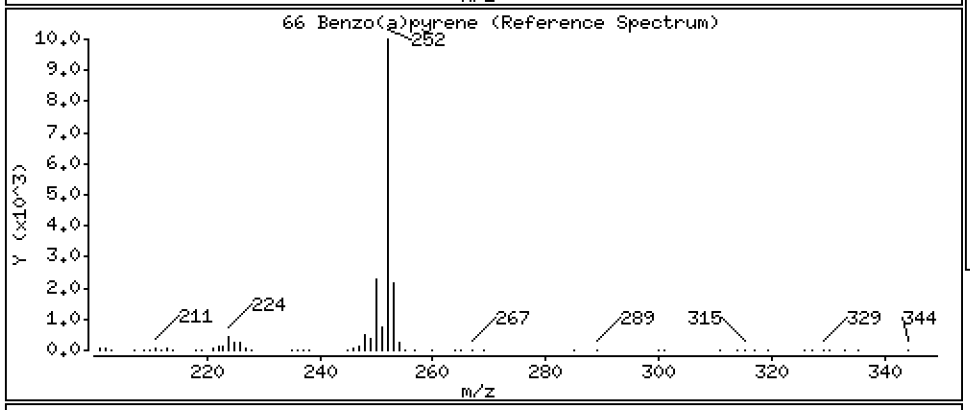
Column diameter: 0.25

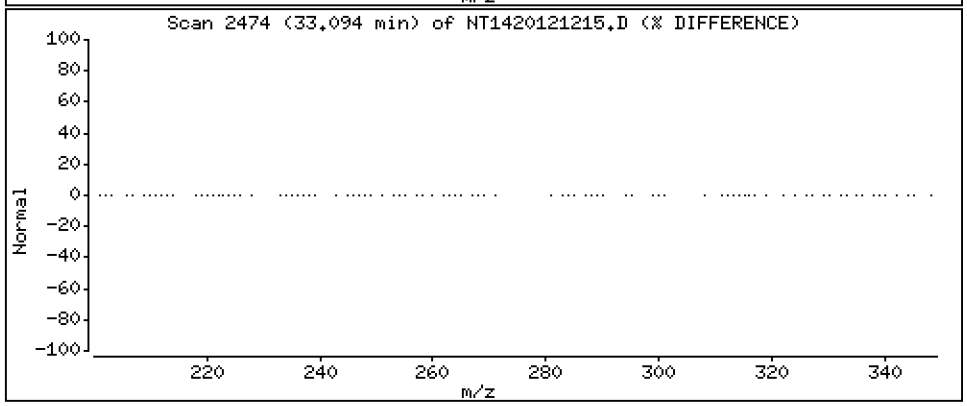
66 Benzo(a)pyrene

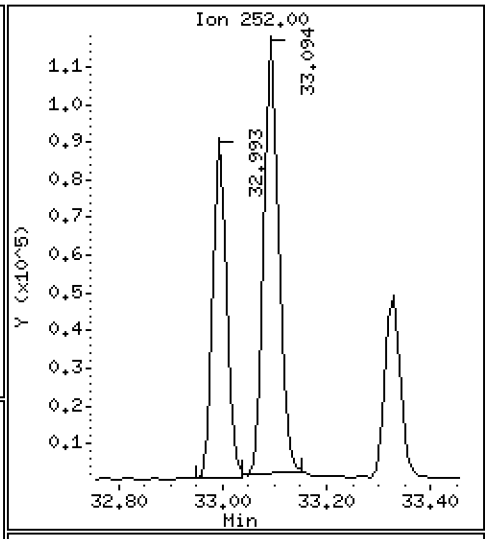
Concentration: 1.935 ug/mL

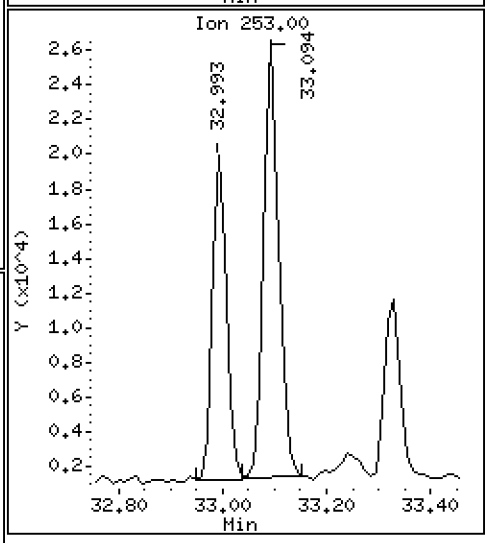












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

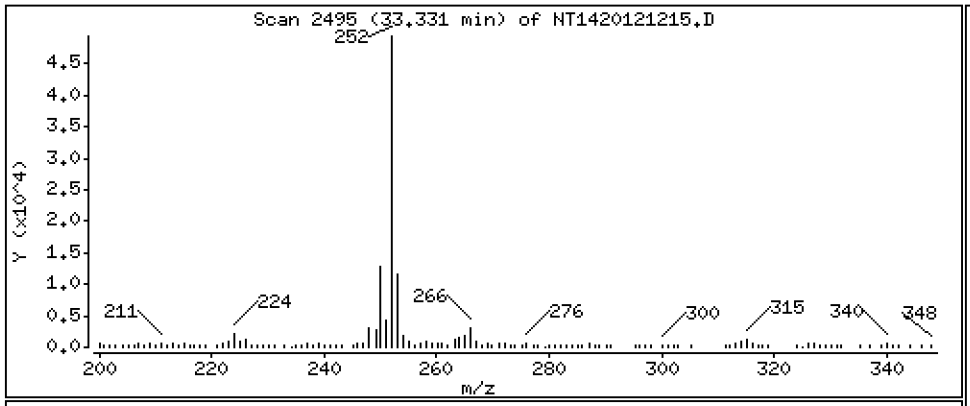
Operator: VTS

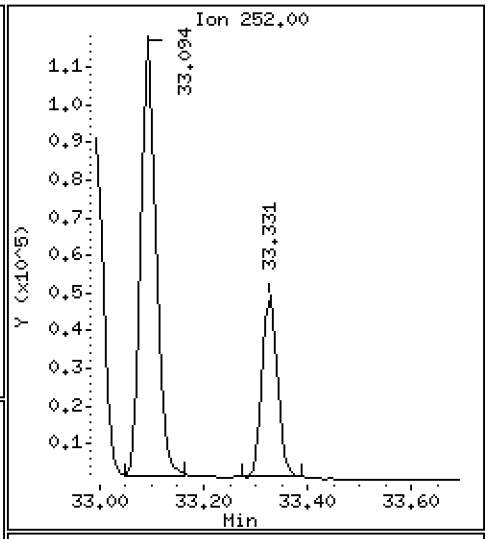
Column phase: Rxi-17Sil MS

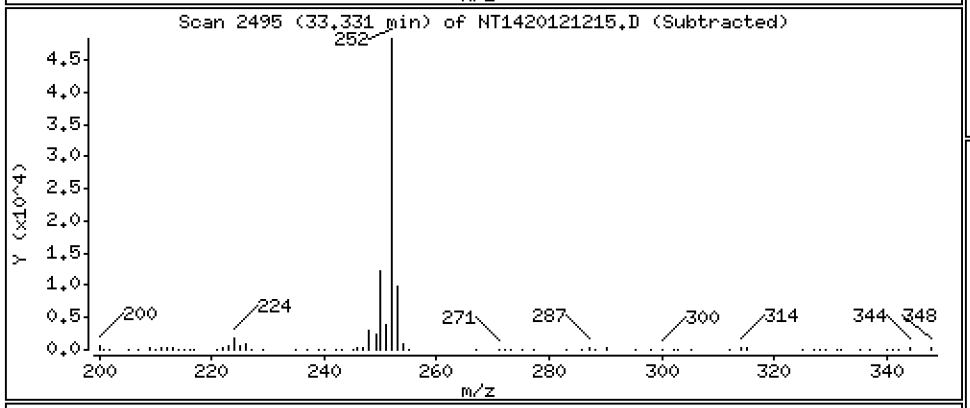
Column diameter: 0.25

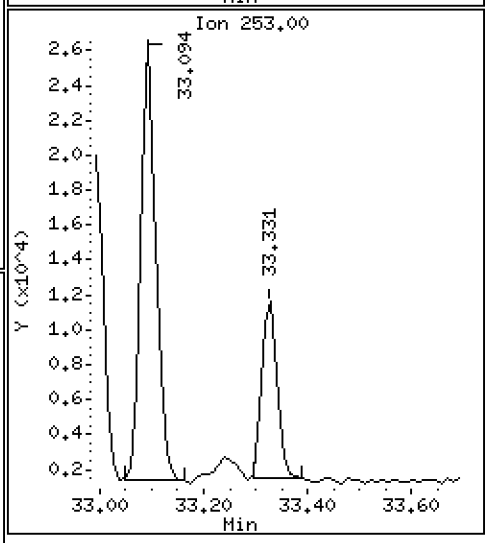
68 Perylene

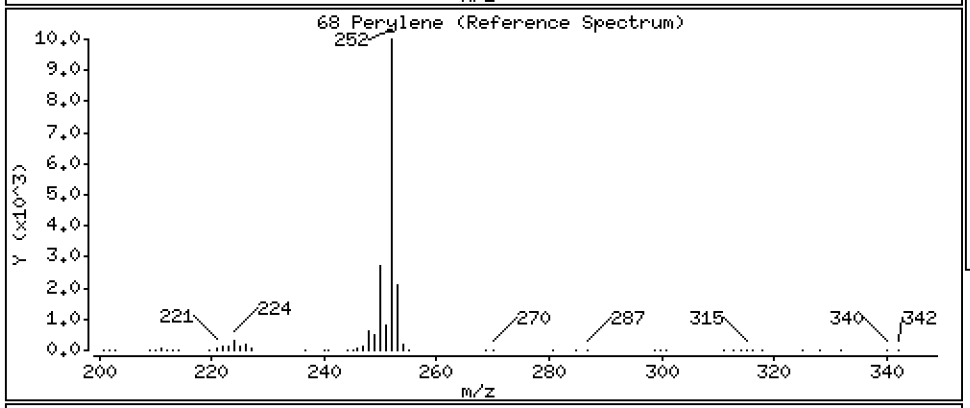
Concentration: 0.7515 ug/mL

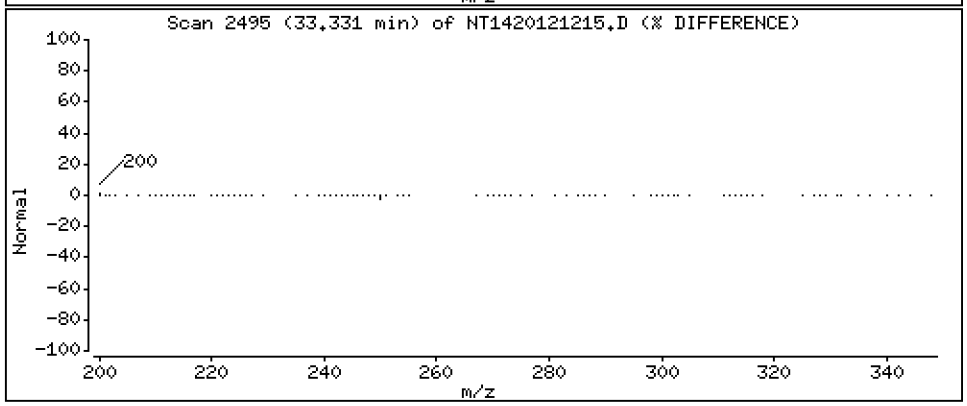












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

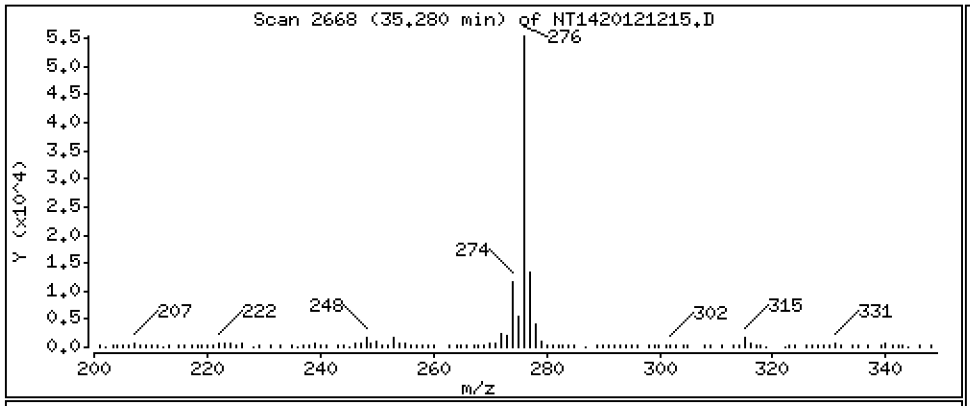
Operator: VTS

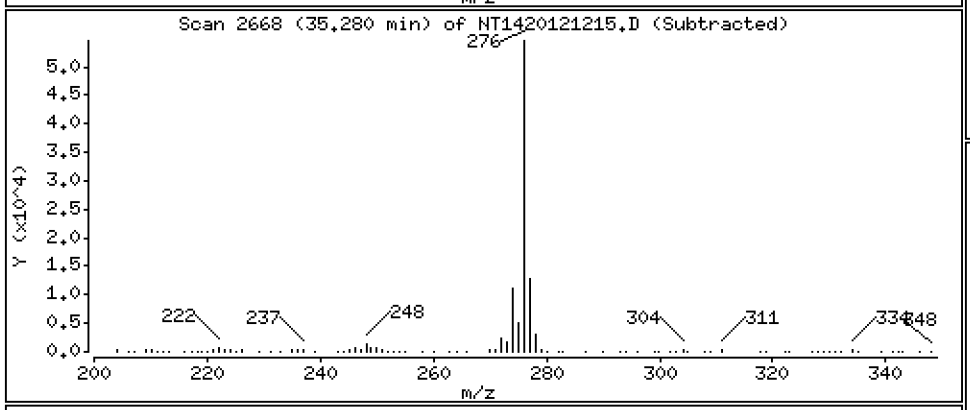
Column phase: Rxi-17Sil MS

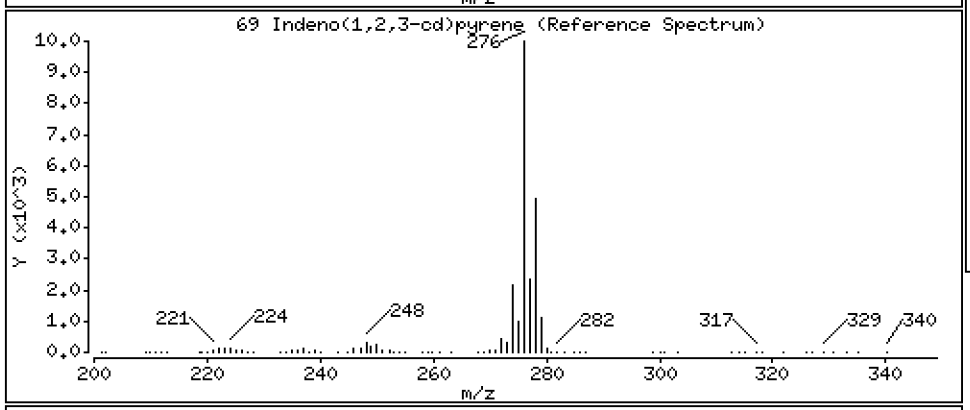
Column diameter: 0.25

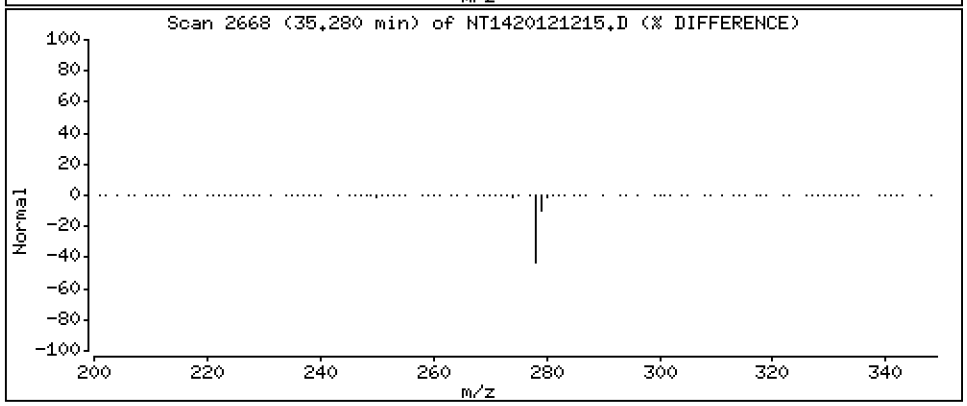
69 Indeno(1,2,3-cd)pyrene

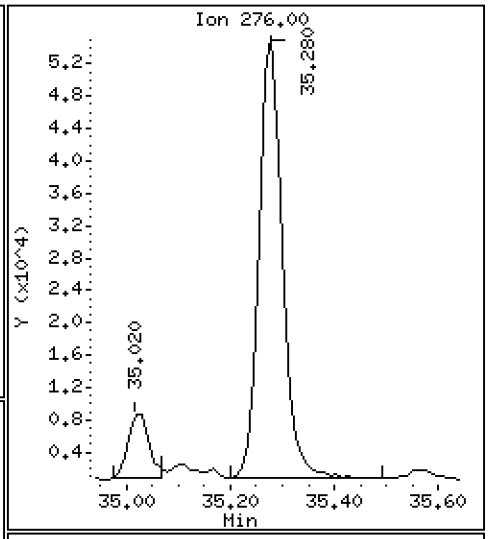
Concentration: 1.131 ug/mL

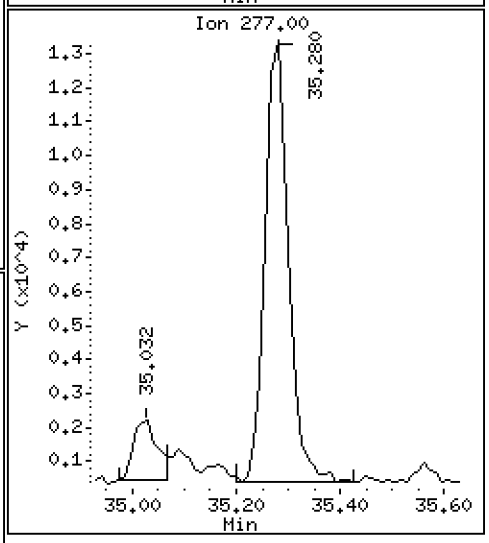












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

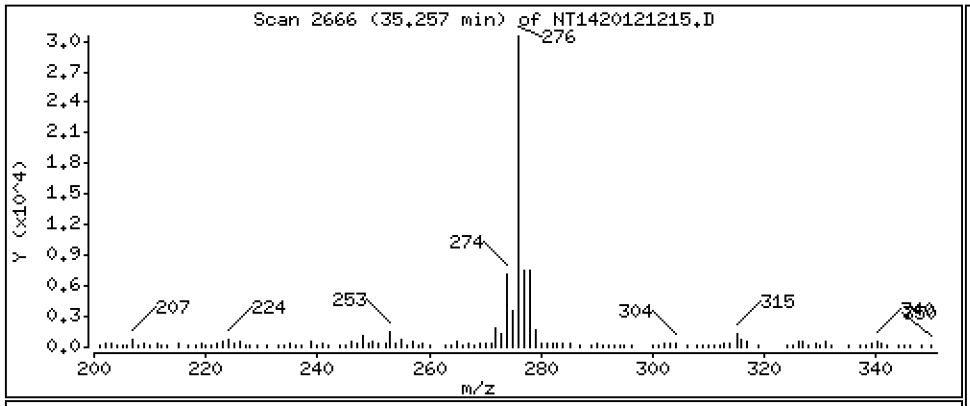
Operator: VTS

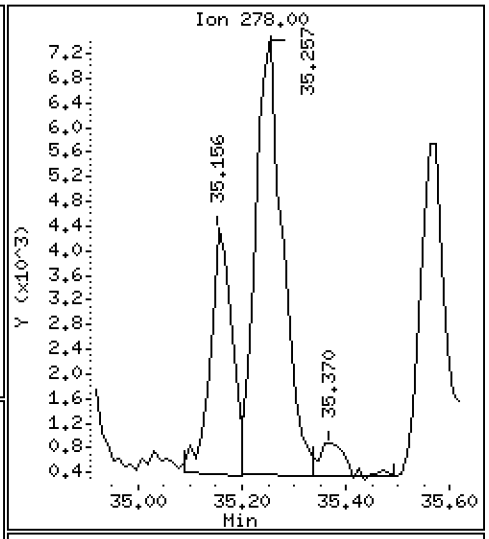
Column phase: Rxi-17Sil MS

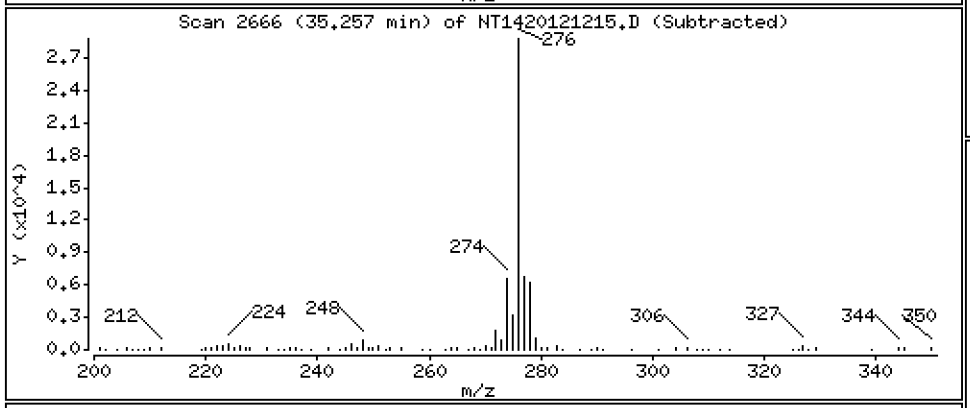
Column diameter: 0.25

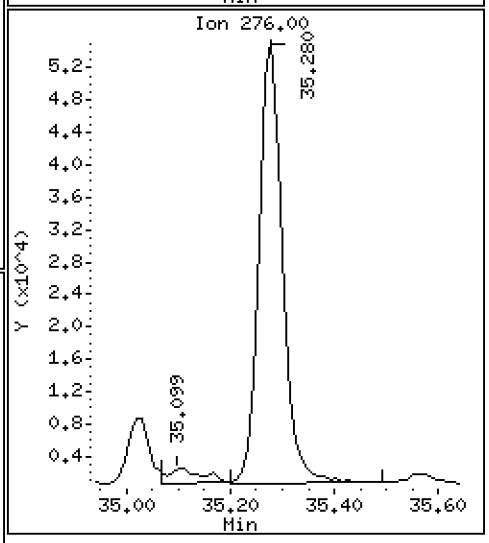
70 Dibenzo(a,h)anthracene

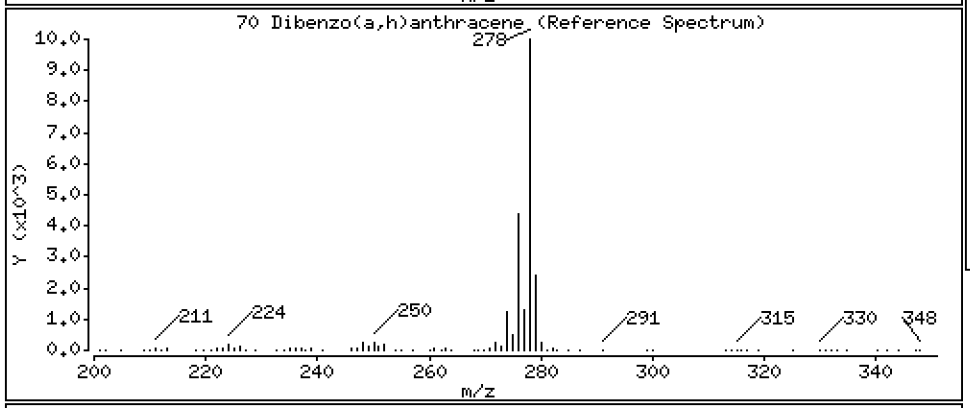
Concentration: 0.2024 ug/mL

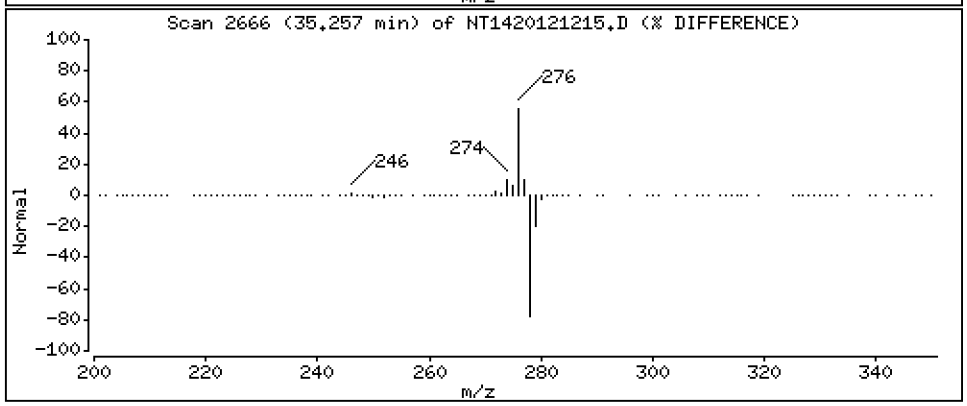












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

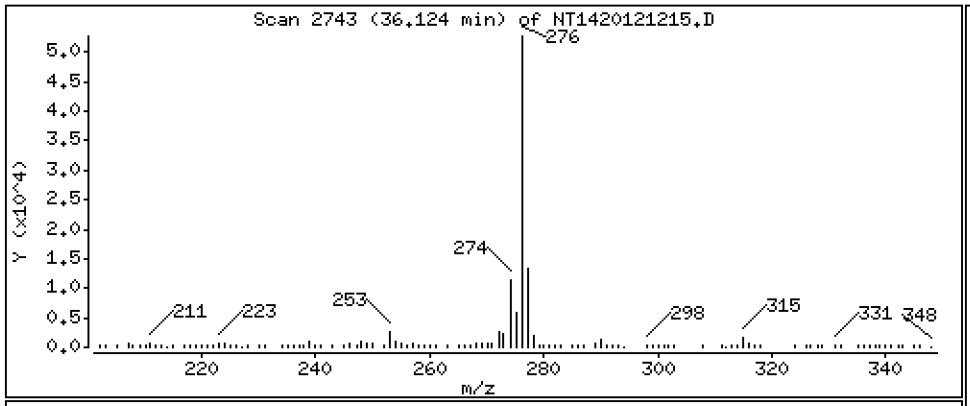
Operator: VTS

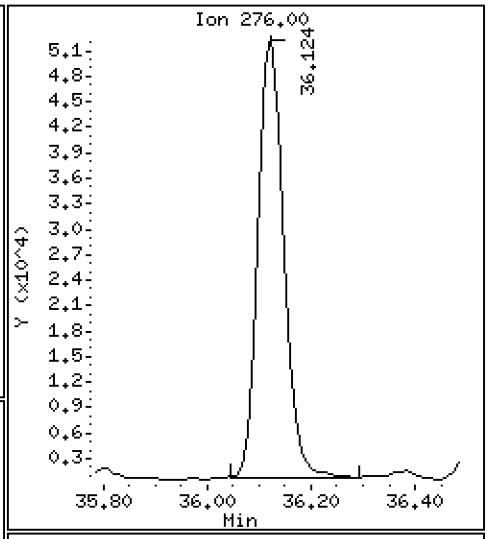
Column phase: Rxi-17Sil MS

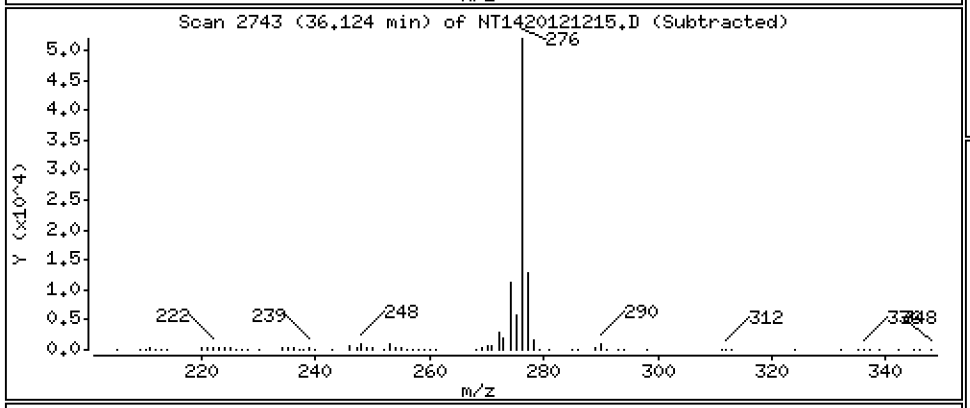
Column diameter: 0.25

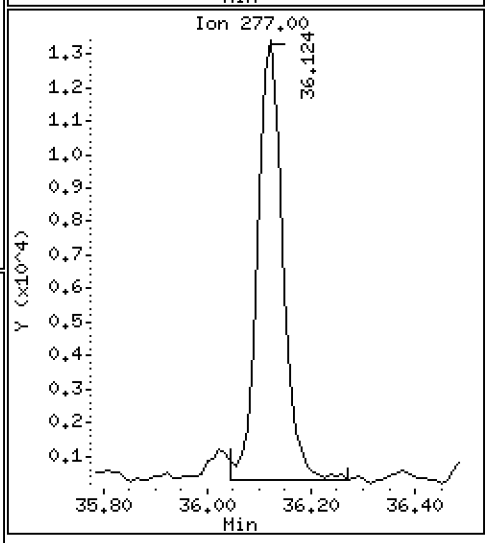
74 Benzo(g,h,i)perylene

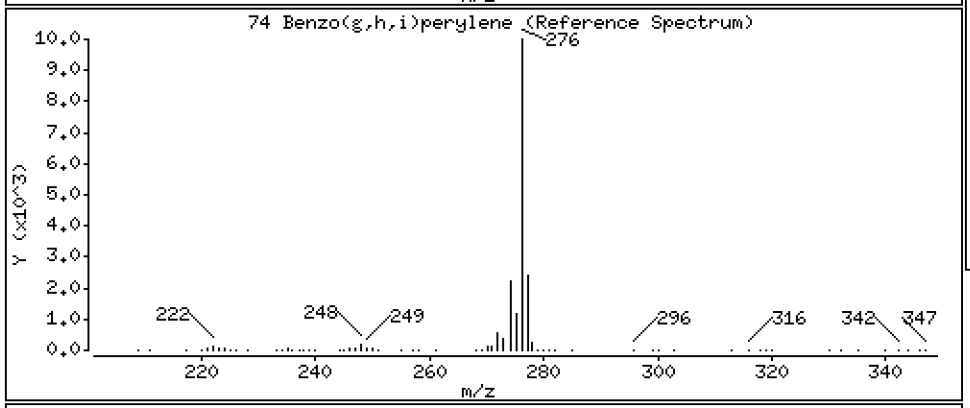
Concentration: 1.342 ug/mL

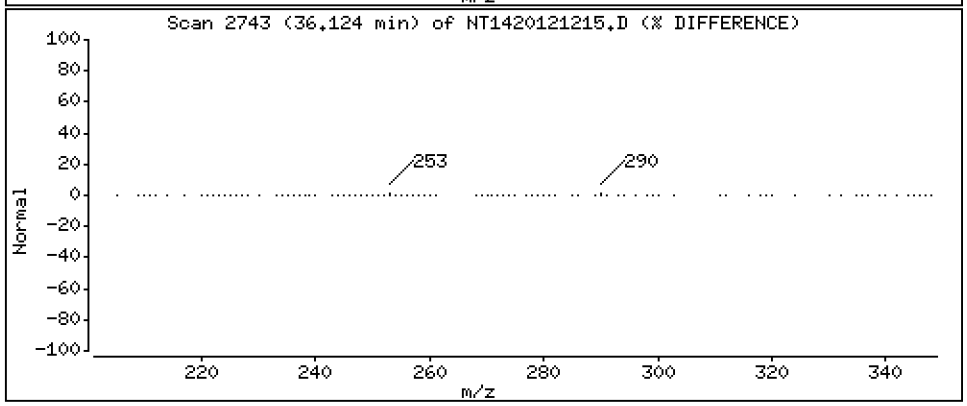












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D
Lab Smp Id: 20K0073-02
Inj Date : 12-DEC-2020 22:23
Operator : VTS Inst ID: nt14.i
Smp Info : 20K0073-02
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201212.b\ALKYLPNA.m
Meth Date : 12-Dec-2020 12:41 van Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: ORGDATA102

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
	1 trans-Decalin	138	Compound Not Detected.					
	2 cis-Decalin	138	Compound Not Detected.					
$	6 Naphthalene-d8	136	11.619	11.630	(0.624)	182614	1.84409	1.844(R)
	7 Naphthalene	128	11.685	11.696	(0.628)	11242	0.11347	0.1135
	12 Benzo(b)thiophene	134	Compound Not Detected.					
	16 2-Methylnaphthalene	141	13.520	13.531	(0.726)	2916	0.04828	0.04828
	17 1-methylnaphthalene	141	13.971	13.982	(0.750)	2013	0.03231	0.03231
	18 Biphenyl	154	15.157	15.169	(0.814)	2271	0.02498	0.02498(M)
	19 2,6-Dimethylnaphthalene	156	15.234	15.245	(0.818)	3862	0.05820	0.05820
	20 Acenaphthylene	152	16.795	16.806	(0.902)	17275	0.15877	0.1588
$	21 Acenaphthene-d10	164	17.081	17.092	(0.917)	112292	1.88839	1.888(R)
	22 Acenaphthene	153	17.201	17.213	(0.924)	29809	0.41820	0.4182
	23 Dibenzofuran	168	17.575	17.586	(0.944)	1512	0.01462	0.01462
	24 1,6,7-Trimethylnaphthalene	170	17.806	17.817	(0.956)	4316	0.06415	0.06415
*	25 Fluorene-d10	176	18.621	18.632	(1.000)	242697	2.00000	
	26 Fluorene	166	18.723	18.734	(1.005)	15232	0.18895	0.1890
	30 Dibenzothiophene	184	21.637	21.648	(1.162)	20719	0.17858	0.1786
$	35 Phenanthrene-d10	188	21.941	21.952	(0.995)	223051	2.29796	2.298(R)
	36 Phenanthrene	178	22.029	22.040	(0.999)	363253	3.23668	3.237
*	250 Anthracene-d10	188	22.062	22.073	(1.000)	202658	2.00000	
	37 Anthracene	178	22.128	22.139	(1.003)	21876	0.19834	0.1983
	42 Carbazole	167	23.425	23.425	(1.062)	6161	0.06450	0.06450
	43 1-Methylphenanthrene	192	23.853	23.865	(1.081)	28280	0.34330	0.3433
	44 Fluoranthene	202	25.833	25.844	(1.171)	524263	4.23246	4.232
	46 Pyrene	202	26.690	26.701	(1.210)	676041	5.17208	5.172
	51 Naphthobenzothiophene	234	29.256	29.256	(1.326)	43971	0.36907	0.3691
	55 Benzo(a)anthracene	228	29.839	29.850	(0.906)	199519	1.66999	1.670
$	56 Chrysene-d12	240	29.963	29.974	(0.910)	214152	2.26959	2.270(R)
	57 Chrysene	228	30.042	30.053	(0.912)	263515	2.21916	2.219
	62 Benzo(b)fluoranthene	252	32.272	32.283	(0.980)	166967	1.23773	1.238(M)
	63 Benzo(k)fluoranthene	252	32.317	32.328	(0.981)	114109	0.83926	0.8393(M)
	293 Benzo(j)fluoranthene	252	32.384	32.396	(0.983)	101420	0.85335	0.8533
	246 Total Benzofluoranthenes	252	32.272	32.328	(0.980)	359022	2.86840	2.868(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.936	32.948	(1.000)	276746	2.00000	
64 Benzo(e)pyrene	252	32.993	33.004	(1.002)	169088	1.36900	1.369
66 Benzo(a)pyrene	252	33.094	33.105	(1.005)	225800	1.93494	1.935
$ 67 Perylene-d12	264	33.274	33.286	(1.010)	208239	1.81972	1.820(R)
68 Perylene	252	33.330	33.342	(1.012)	92119	0.75155	0.7515
69 Indeno(1,2,3-cd)pyrene	276	35.279	35.290	(1.071)	163498	1.13140	1.131
70 Dibenzo(a,h)anthracene	278	35.256	35.268	(1.070)	25841	0.20240	0.2024
74 Benzo(g,h,i)perylene	276	36.124	36.135	(1.097)	170402	1.34226	1.342

QC Flag Legend

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

Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121215.D Page 1
Report Date: 14-Dec-2020 17:03

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1420121215.D
Lab Smp Id: 20K0073-02
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201212.b\ALKYLPNA.m
Misc Info:

Calibration Date: 12-DEC-2020
Calibration Time: 11:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	219929	109965	439858	242697	10.35
250 Anthracene-d10	196749	98375	393498	202658	3.00
251 Benzo(e)pyrene-d1	249762	124881	499524	276746	10.80

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.63	18.13	19.13	18.62	-0.06
250 Anthracene-d10	22.07	21.57	22.57	22.06	-0.05
251 Benzo(e)pyrene-d1	32.95	32.45	33.45	32.94	-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 - NT1420121215.D

Lab ID: 20K0073-02
nt14.i, 20201212.b\ALKYLPNA.m, 12-DEC-2020 22:23

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.062	0.000	1.0618	Carbazole

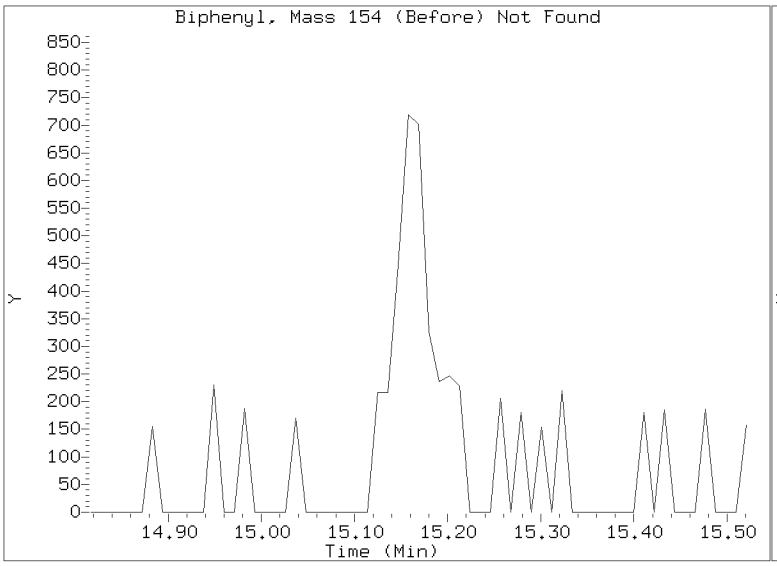
RRT check based on Ccal File: NT1420121202.D

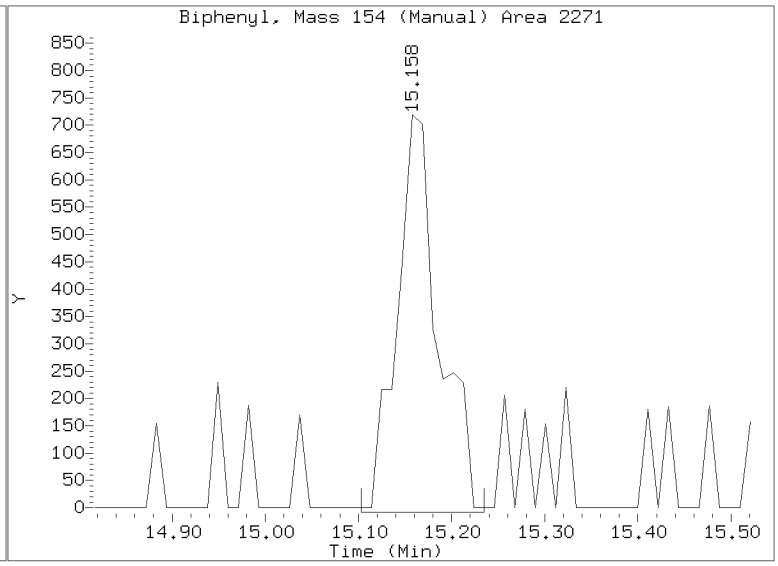
On Column LOD for nt14.i, 20201212.b\ALKYLPNA.m, TARGETS.sub = 0.0000

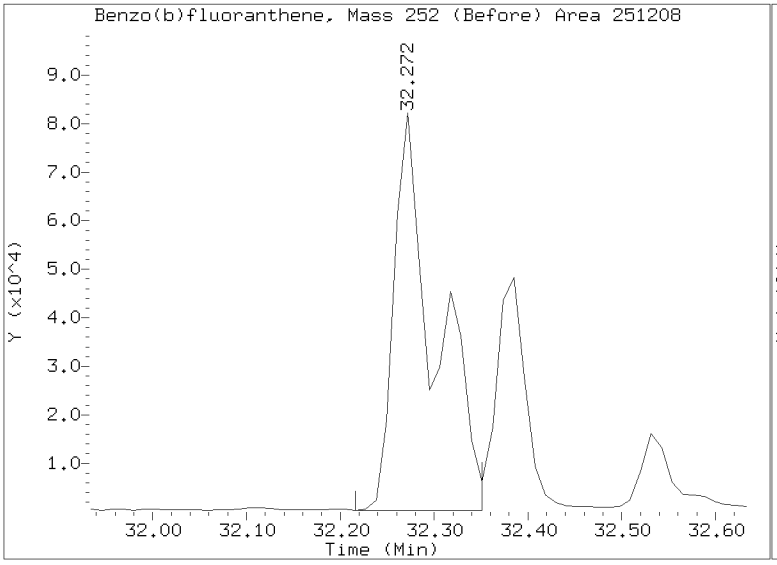
* Only compounds listed in the work order have been verified by the analyst *

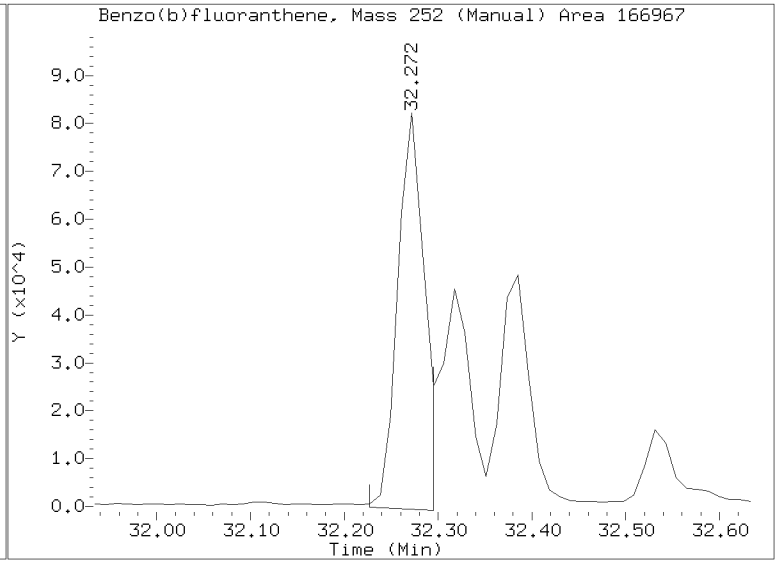
Quant Ion Manual Peak Adjustment Report

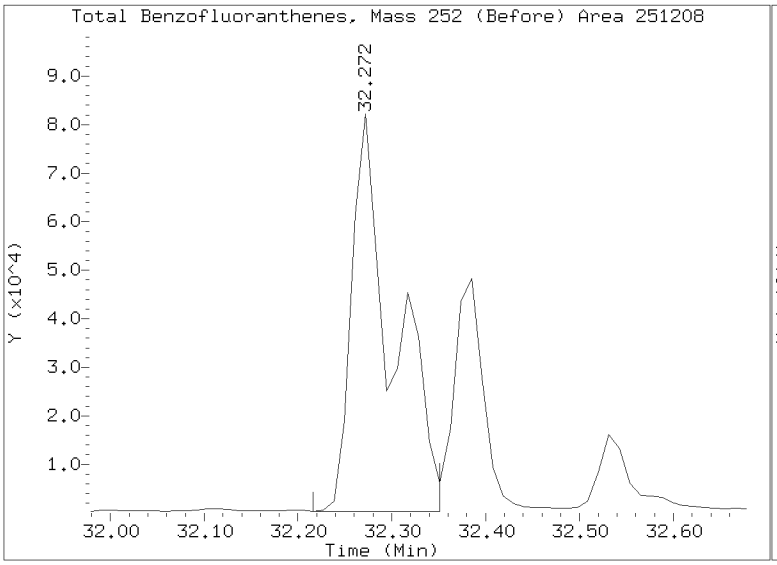
Datafile: //target/share/chem3/nt14.i/20201212.b/NT1420121215.D
Injection Date: 12-DEC-2020 22:23
Lab ID:20K0073-02 Client ID:
Report Date: 12/14/2020 17:03

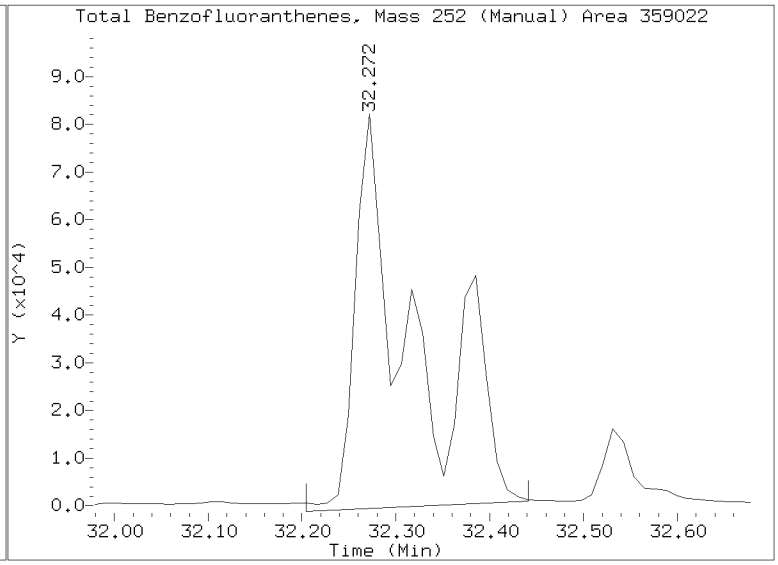












Quant Ion Manual Peak Adjustment Report

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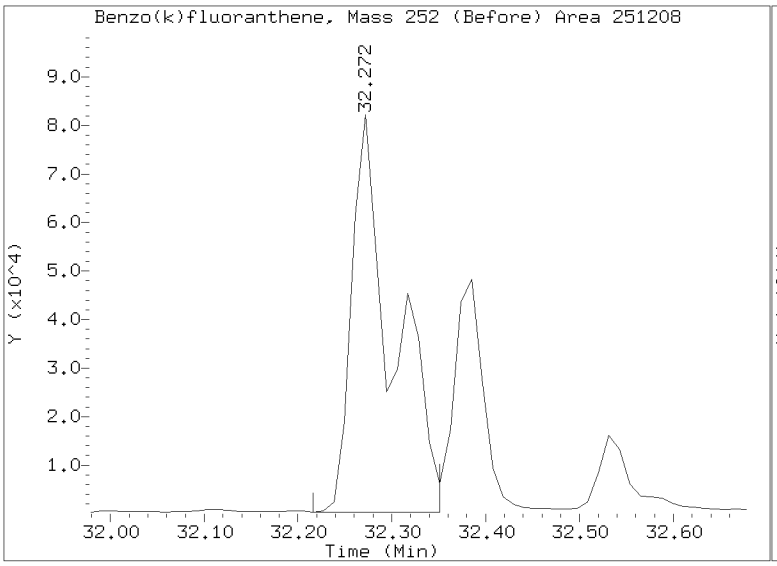
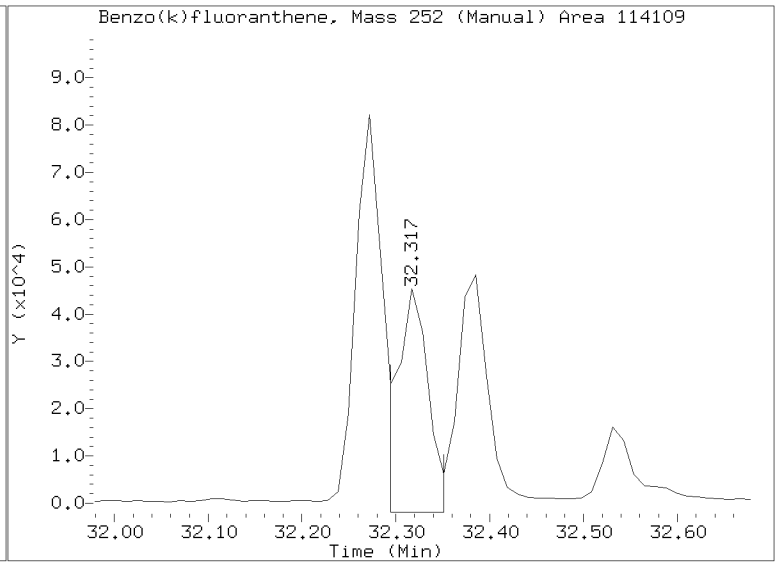
Injection Date: 12-DEC-2020 22:23
Lab ID:20K0073-02 Client ID:
Report Date: 12/14/2020 17:03





Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-A-01-02-201029

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

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-02 A	SDG:	20K0073
Sampled:	10/29/20 10:40	Prepared:	11/11/20 13:05	File ID:	NT1420121215S.D
% Solids:	87.62	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/12/20 22:23
Batch:	BIK0323	Sequence:	SIL0186	Initial/Final:	11.44 g Wet / 0.5 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	DI00041
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
C1DEC	C1-Decalins	1	5.0	U	0.5	5.0
C2DEC	C2-Decalins	1	5.0	U	0.5	5.0
C3DEC	C3-Decalins	1	4.6	J	0.5	5.0
C4DEC	C4-Decalins	1	12.1		0.5	5.0
C1NAPH	C1-Naphthalenes	1	3.0	J	0.4	5.0
C2NAPH	C2-Naphthalenes	1	10.2		0.4	5.0
C3NAPH	C3-Naphthalenes	1	27.5		0.4	5.0
C4NAPH	C4-Naphthalenes	1	17.4		0.4	5.0
C1FLR	C1-Fluorenes	1	10.7		0.5	5.0
C2FLR	C2-Fluorenes	1	16.5		0.5	5.0
C3FLR	C3-Fluorenes	1	16.2		0.5	5.0
C1DBTPH	C1-Dibenzothiophenes	1	13.9		0.7	5.0
C2DBTPH	C2-Dibenzothiophenes	1	17.9		0.7	5.0
C3DBTPH	C3-Dibenzothiophenes	1	13.4		0.7	5.0
C4DBTPH	C4-Dibenzothiophenes	1	5.5		0.7	5.0
C1PHNANT	C1-Phenanthrenes/Anthracenes	1	73.4		0.9	5.0
C2PHNANT	C2-Phenanthrenes/Anthracenes	1	52.9		0.9	5.0
C3PHNANT	C3-Phenanthrenes/Anthracenes	1	27.9		0.9	5.0
C4PHNANT	C4-Phenanthrenes/Anthracenes	1	8.6		0.9	5.0
C1FLPYR	C1-Fluoranthenes/Pyrenes	1	83.8		1.0	5.0
C2FLPYR	C2-Fluoranthenes/Pyrenes	1	31.9		1.0	5.0
C3FLPYR	C3-Fluoranthenes/Pyrenes	1	16.2		1.0	5.0
C4FLPYR	C4-Fluoranthenes/Pyrenes	1	26.7		1.0	5.0
C1BAACYR	C1-Benzo(a)anthracenes/Chrysenes	1	55.6		0.7	5.0
C2BAACYR	C2-Benzo(a)anthracenes/Chrysenes	1	21.5		0.7	5.0
C3BAACYR	C3-Benzo(a)anthracenes/Chrysenes	1	10.0		0.7	5.0
C4BAACYR	C4-Benzo(a)anthracenes/Chrysenes	1	3.1	J	0.7	5.0
C1BZTPH	C1-Benzothiophenes	1	1.1	J	0.4	5.0
C2BZTPH	C2-Benzothiophenes	1	5.0	U	0.4	5.0
C3BZTPH	C3-Benzothiophenes	1	0.7	J	0.4	5.0

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-A-01-02-201029

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

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-02 A	SDG:	20K0073
Sampled:	10/29/20 10:40	Prepared:	11/11/20 13:05	File ID:	NT1420121215S.D
% Solids:	87.62	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/12/20 22:23
Batch:	BIK0323	Sequence:	SIL0186	Initial/Final:	11.44 g Wet / 0.5 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	DI00041
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
C1NPBTP	C1-Naphthobenzothiophenes	1	9.1		2.5	5.0
C2NPBTP	C2-Naphthobenzothiophenes	1	7.5		2.5	5.0
C3NPBTP	C3-Naphthobenzothiophenes	1	4.3	J	2.5	5.0
C4NPBTP	C4-Naphthobenzothiopenes	1	5.0	U	2.5	5.0
C1DBA	C1-Dibenzo(a)anthracenes	1	10.2		0.7	5.0
C2DBA	C2-Dibenzo(a)anthracenes	1	3.8	J	0.7	5.0
C3DBA	C3-Dibenzo(a)anthracenes	1	2.3	J	0.7	5.0

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Date : 12-DEC-2020 22:23

Client ID:

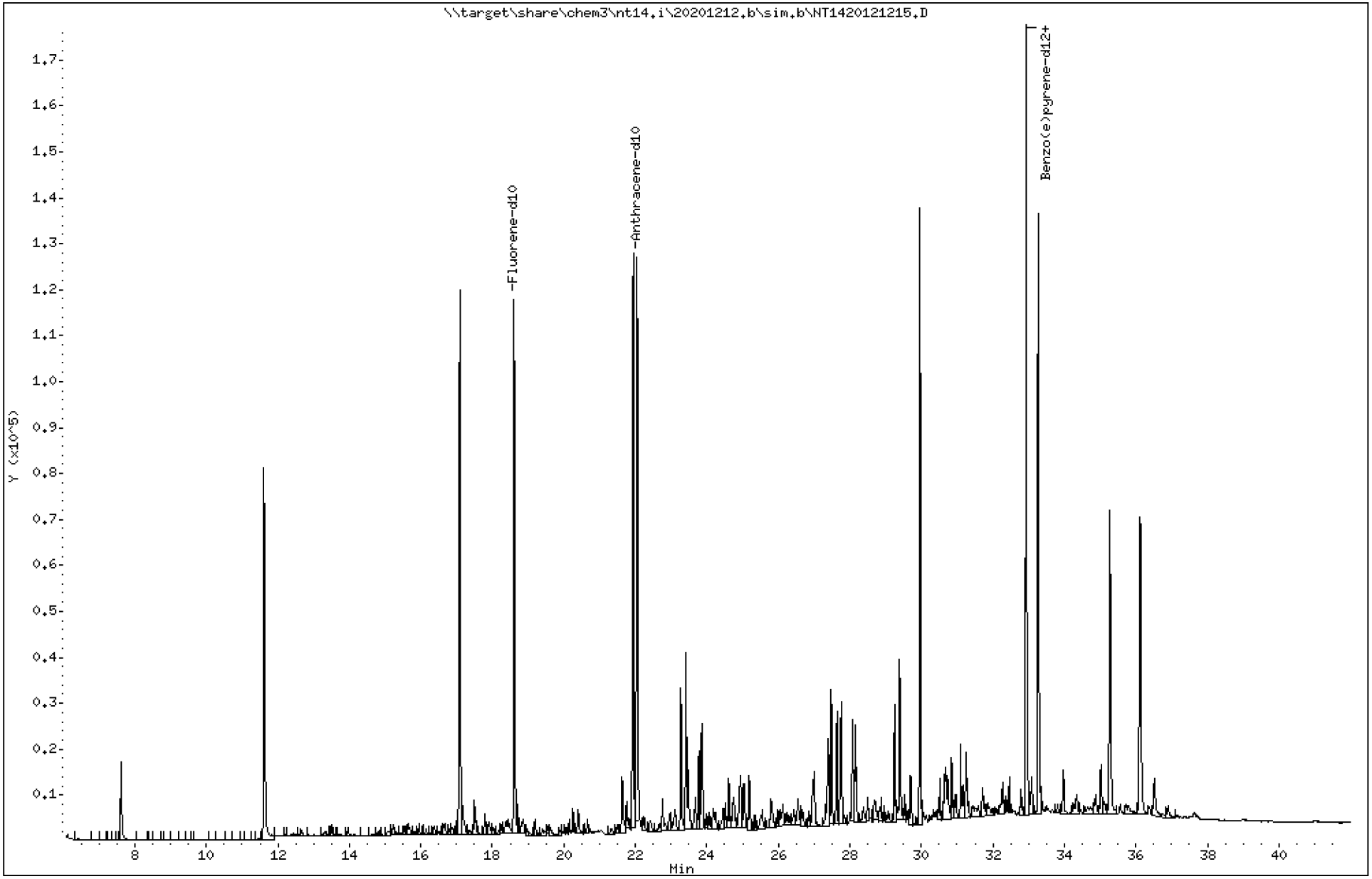
Instrument: nt14.i

Sample Info: 20K0073-02

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

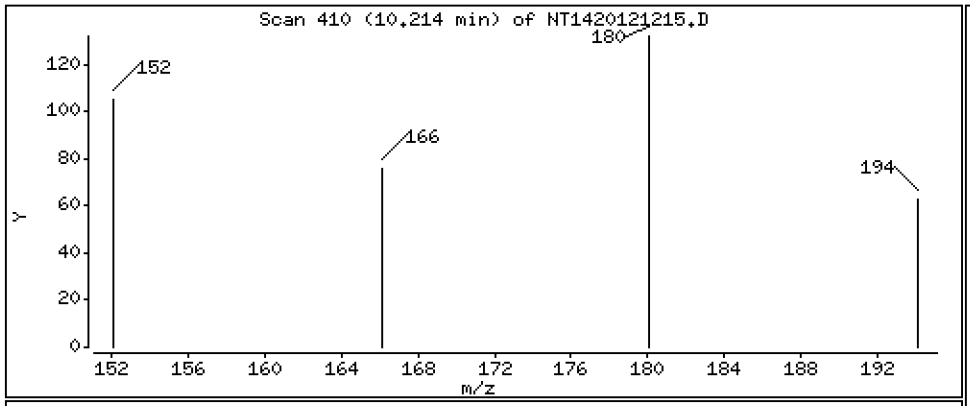
Operator: VTS

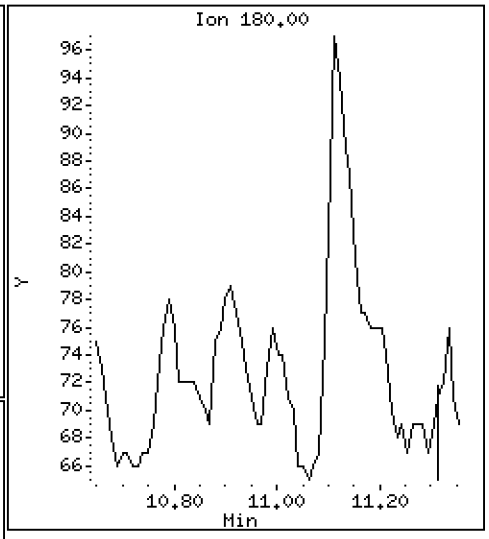
Column phase: Rxi-17Sil MS

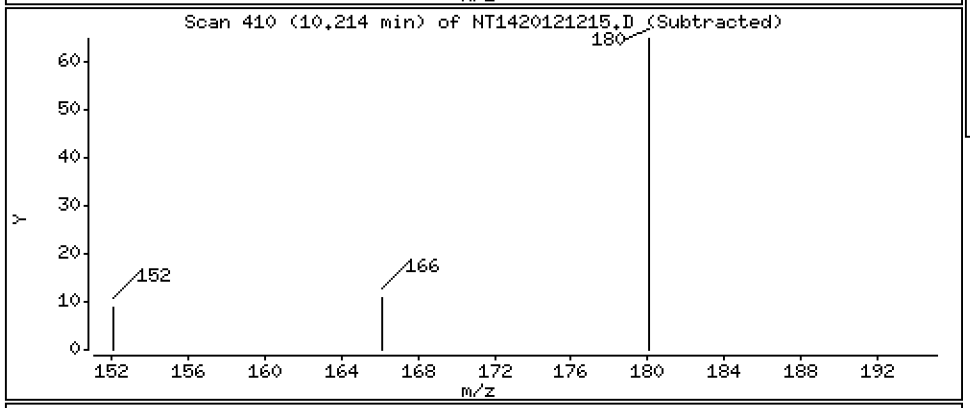
Column diameter: 0.25

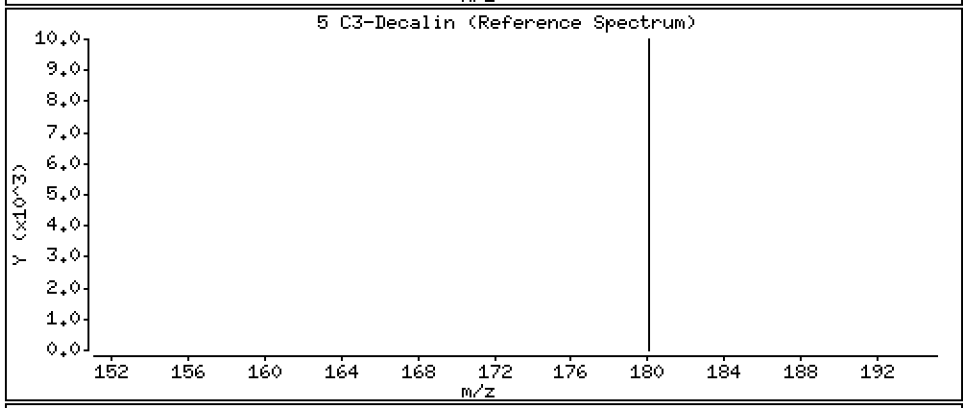
5 C3-Decalin

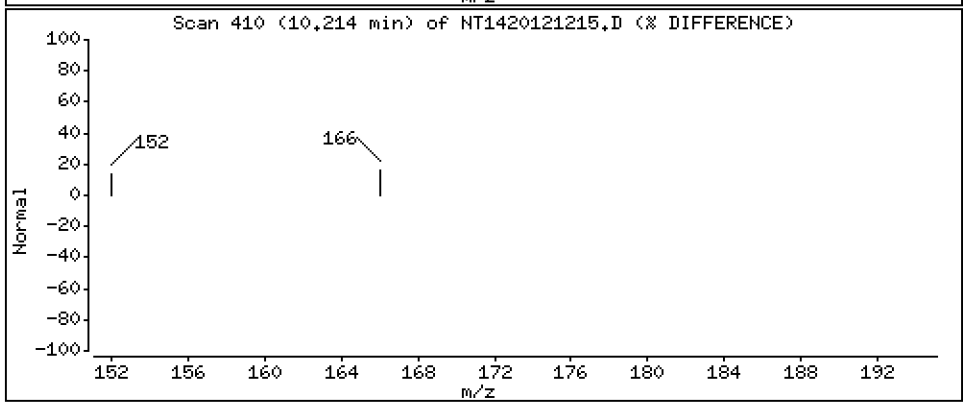
Concentration: 0.09227 ug/mL











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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

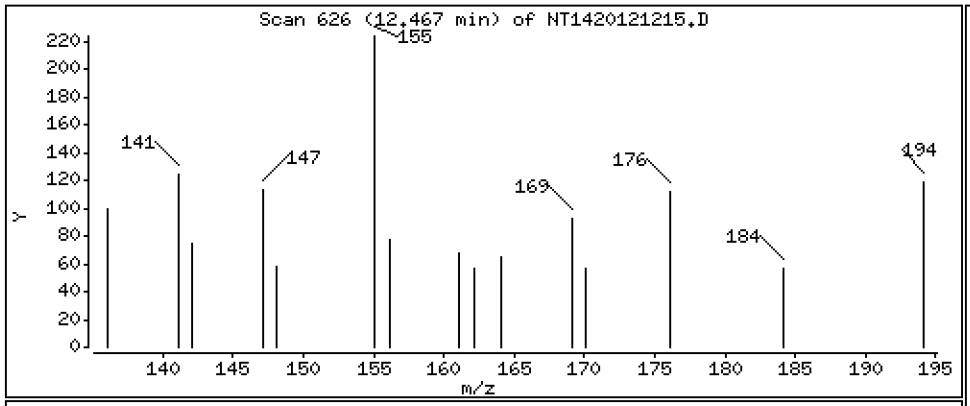
Operator: VTS

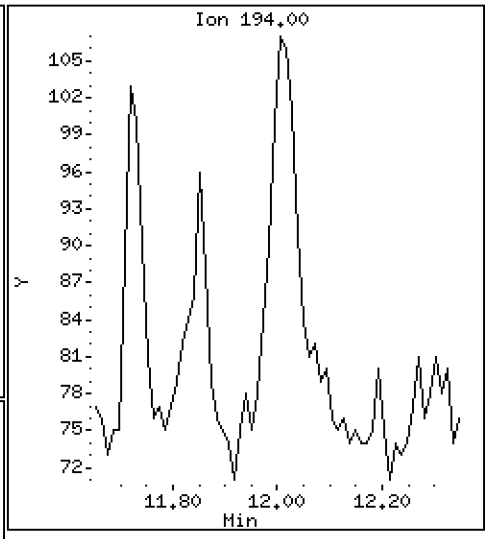
Column phase: Rxi-17Sil MS

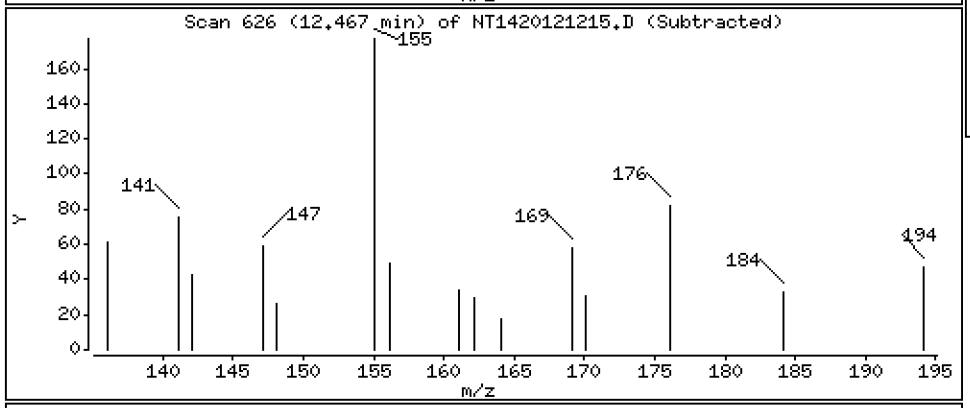
Column diameter: 0.25

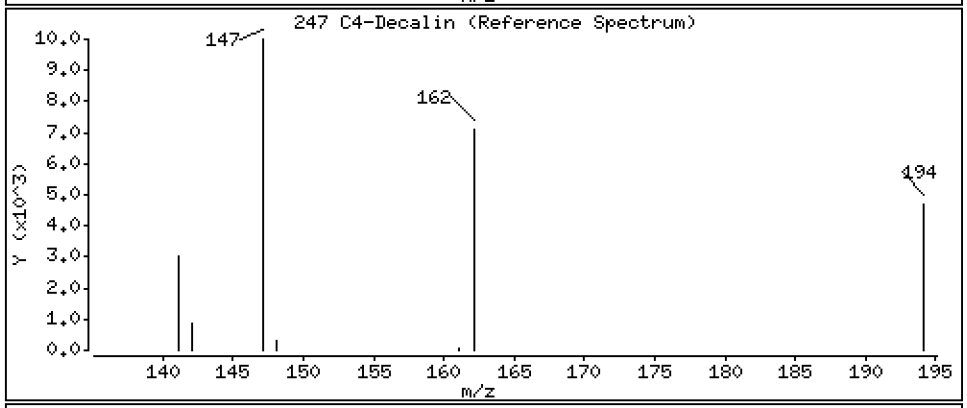
247 C4-Decalin

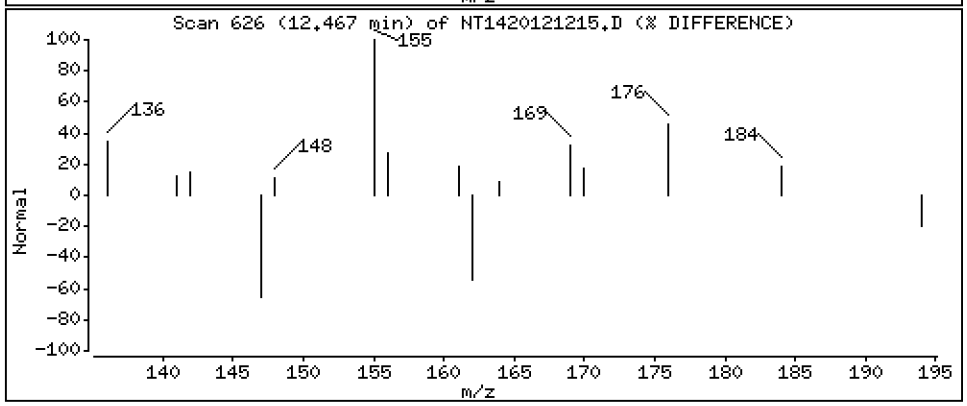
Concentration: 0.2422 ug/mL











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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

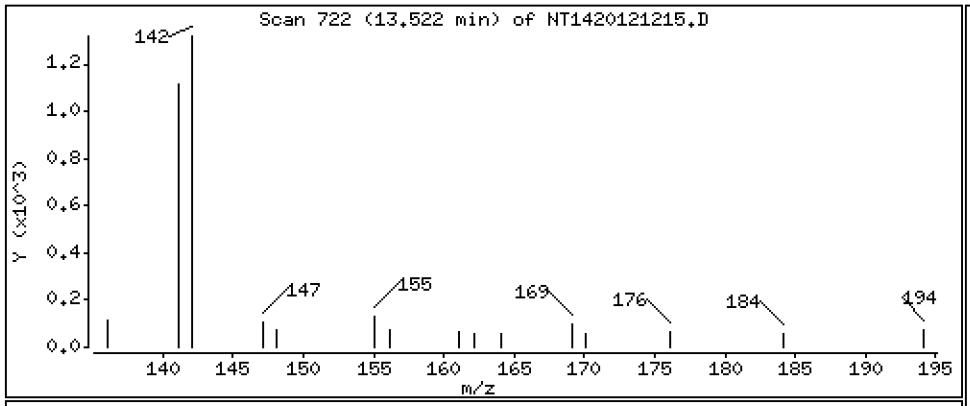
Operator: VTS

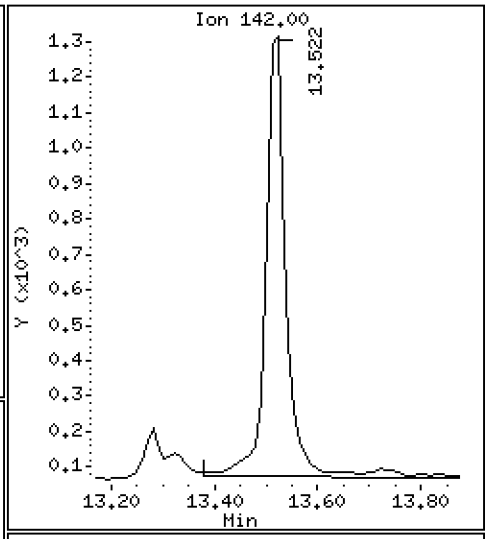
Column phase: Rxi-17Sil MS

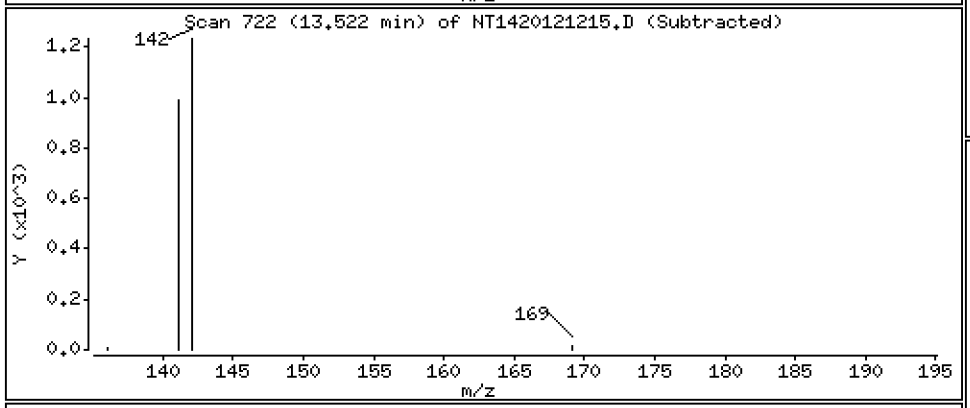
Column diameter: 0.25

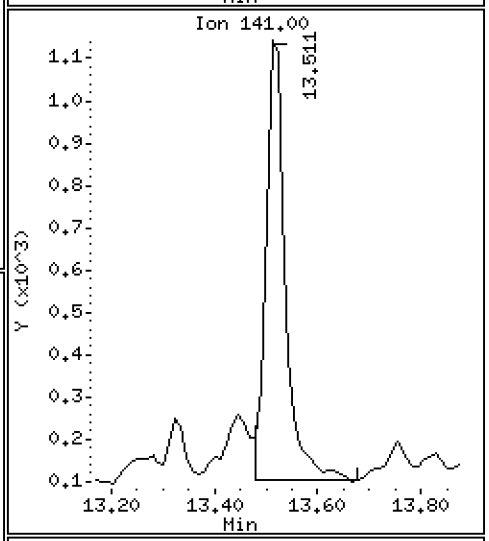
8 C1-Naphthalenes

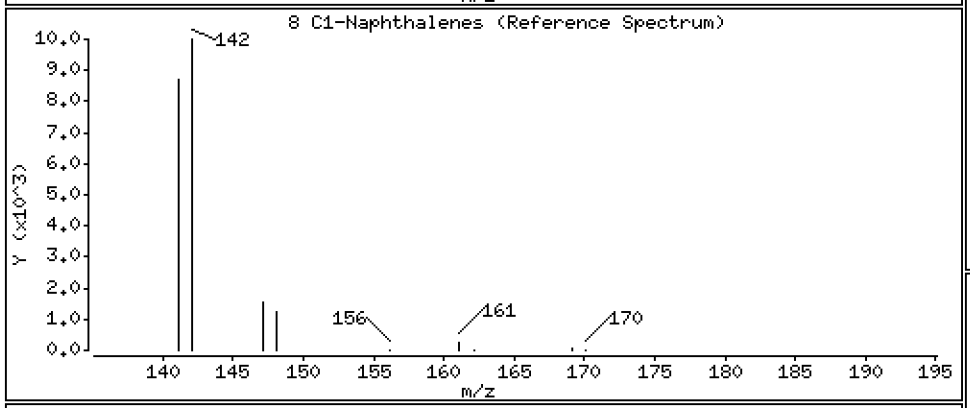
Concentration: 0.06086 ug/mL

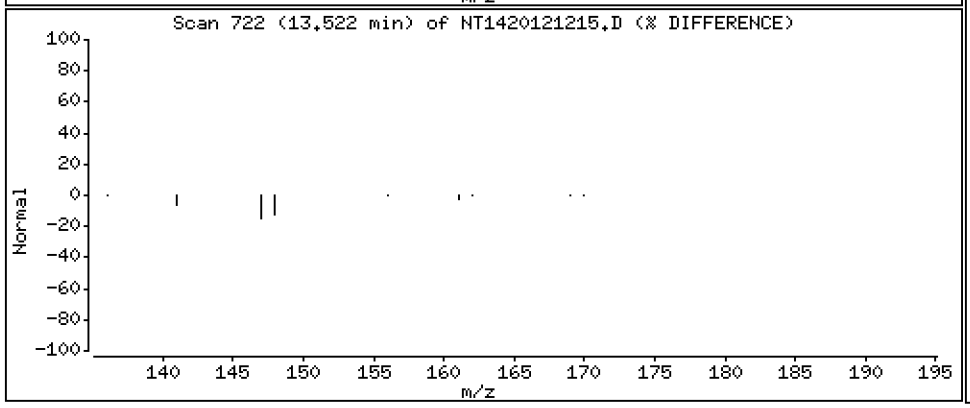


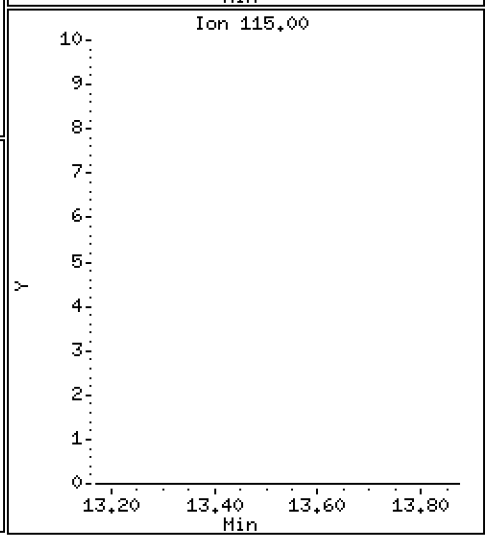












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Date : 12-DEC-2020 22:23

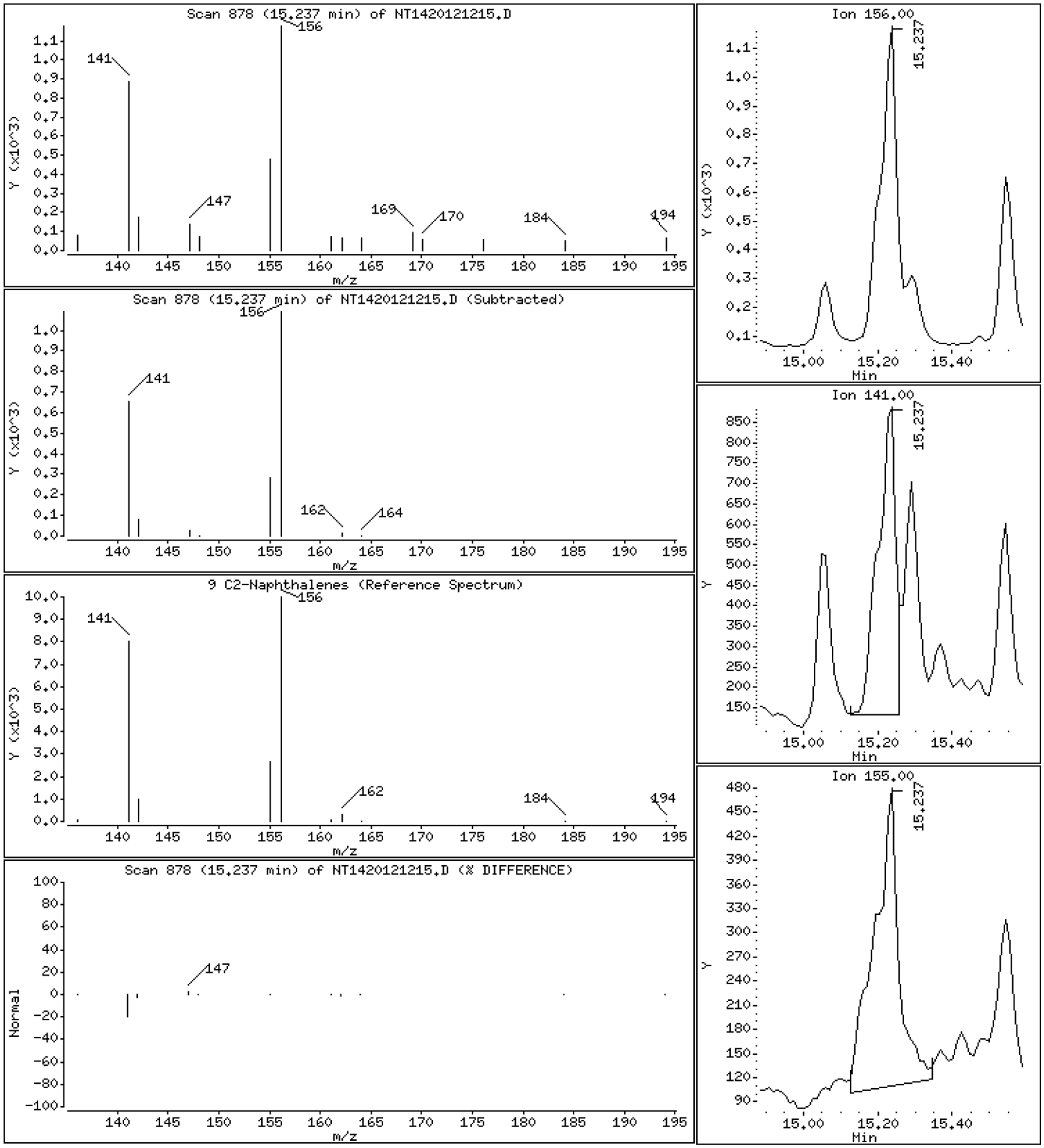
Client ID: Instrument: nt14.i

Sample Info: 20K0073-02

Operator: VTS

Column phase: Rxi-17Sil MS Column diameter: 0.25

9 C2-Naphthalenes Concentration: 0.2045 ug/mL



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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

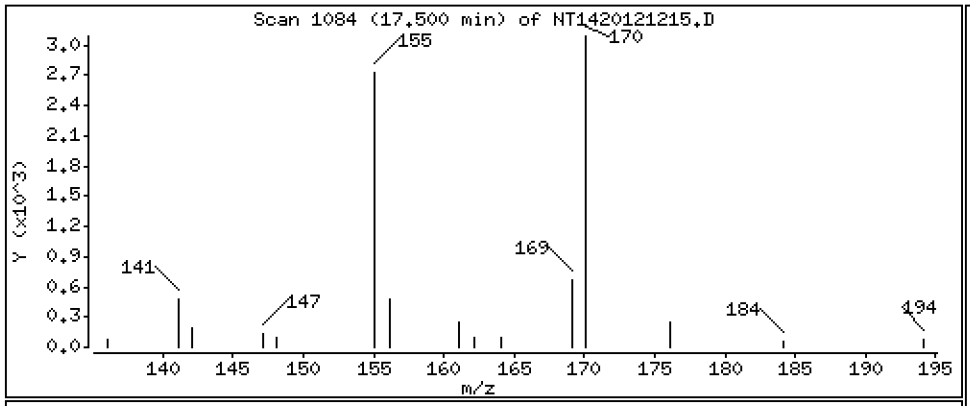
Operator: VTS

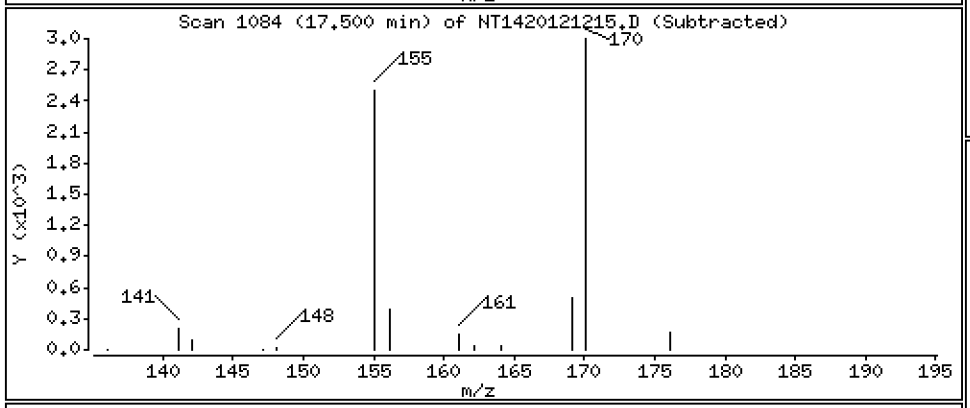
Column phase: Rxi-17Sil MS

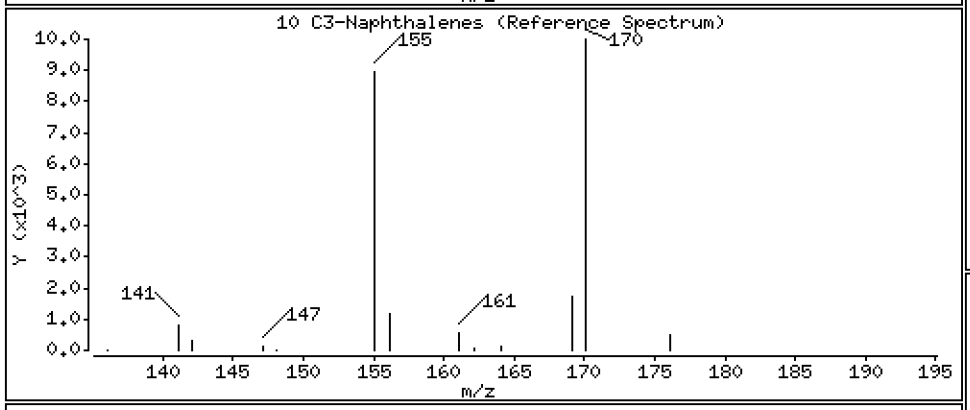
Column diameter: 0.25

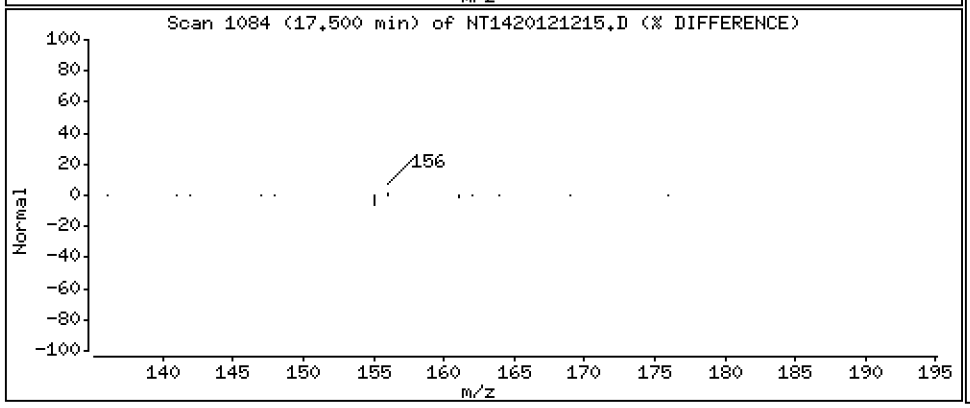
10 C3-Naphthalenes

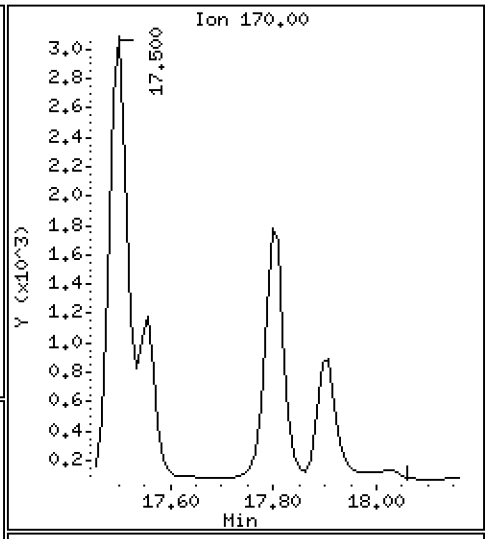
Concentration: 0.5507 ug/mL

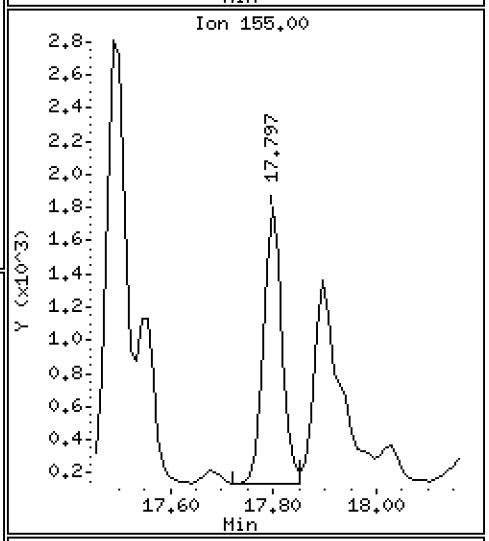


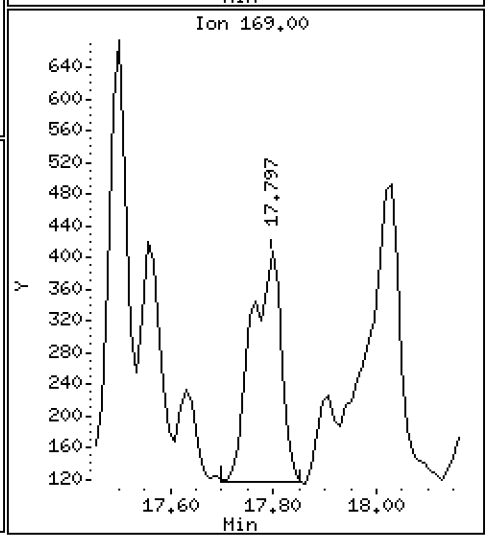












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

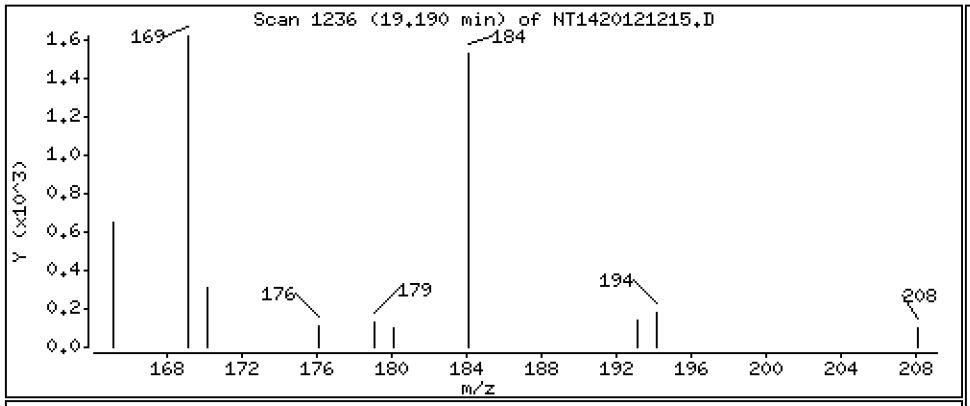
Operator: VTS

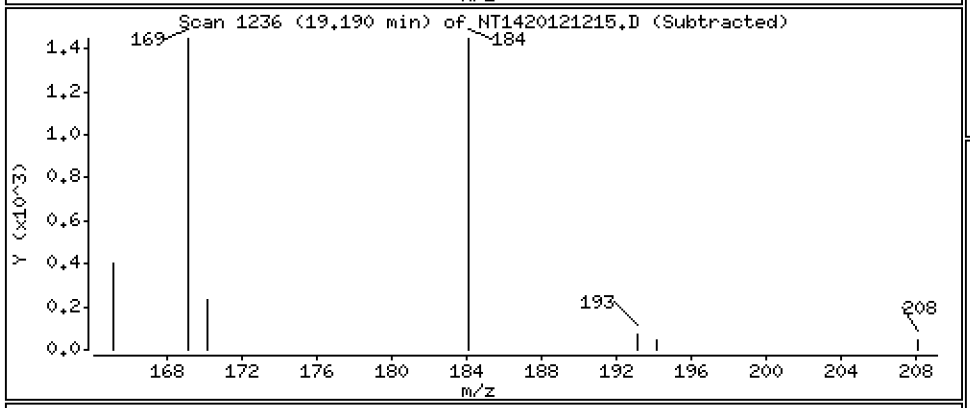
Column phase: Rxi-17Sil MS

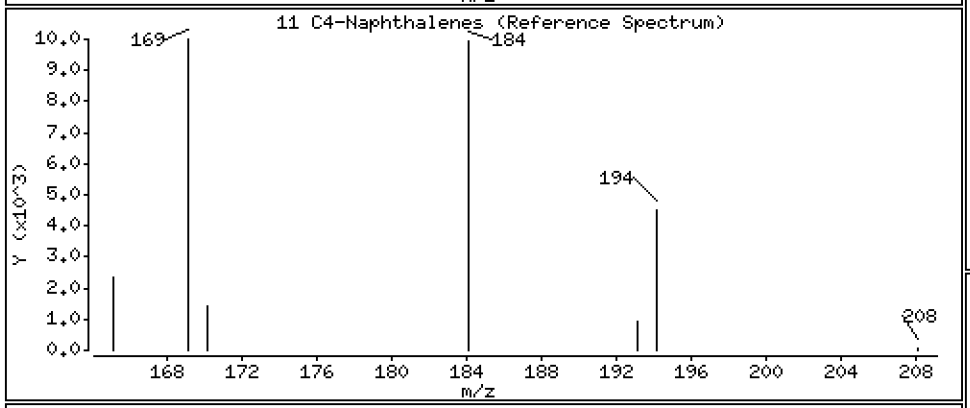
Column diameter: 0.25

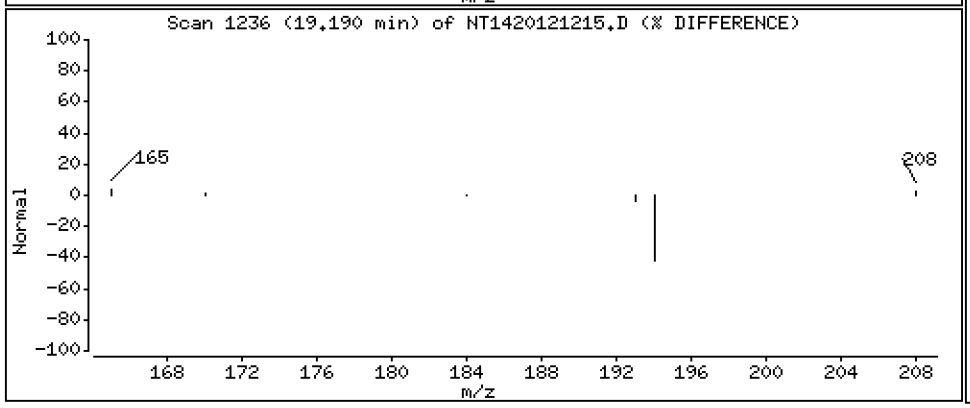
11 C4-Naphthalenes

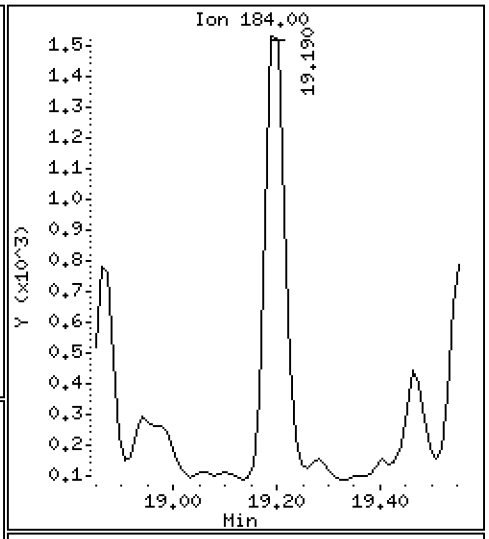
Concentration: 0.3492 ug/mL

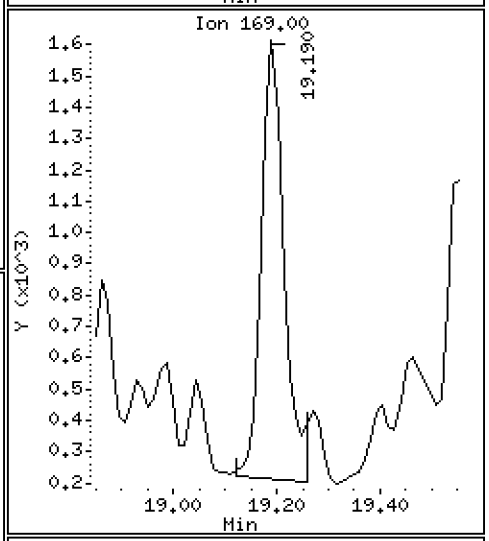


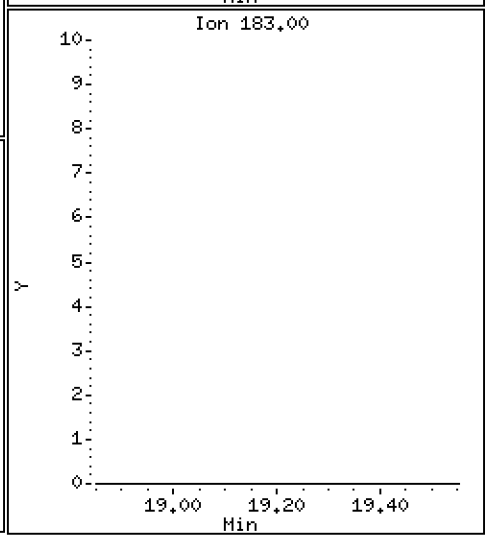












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

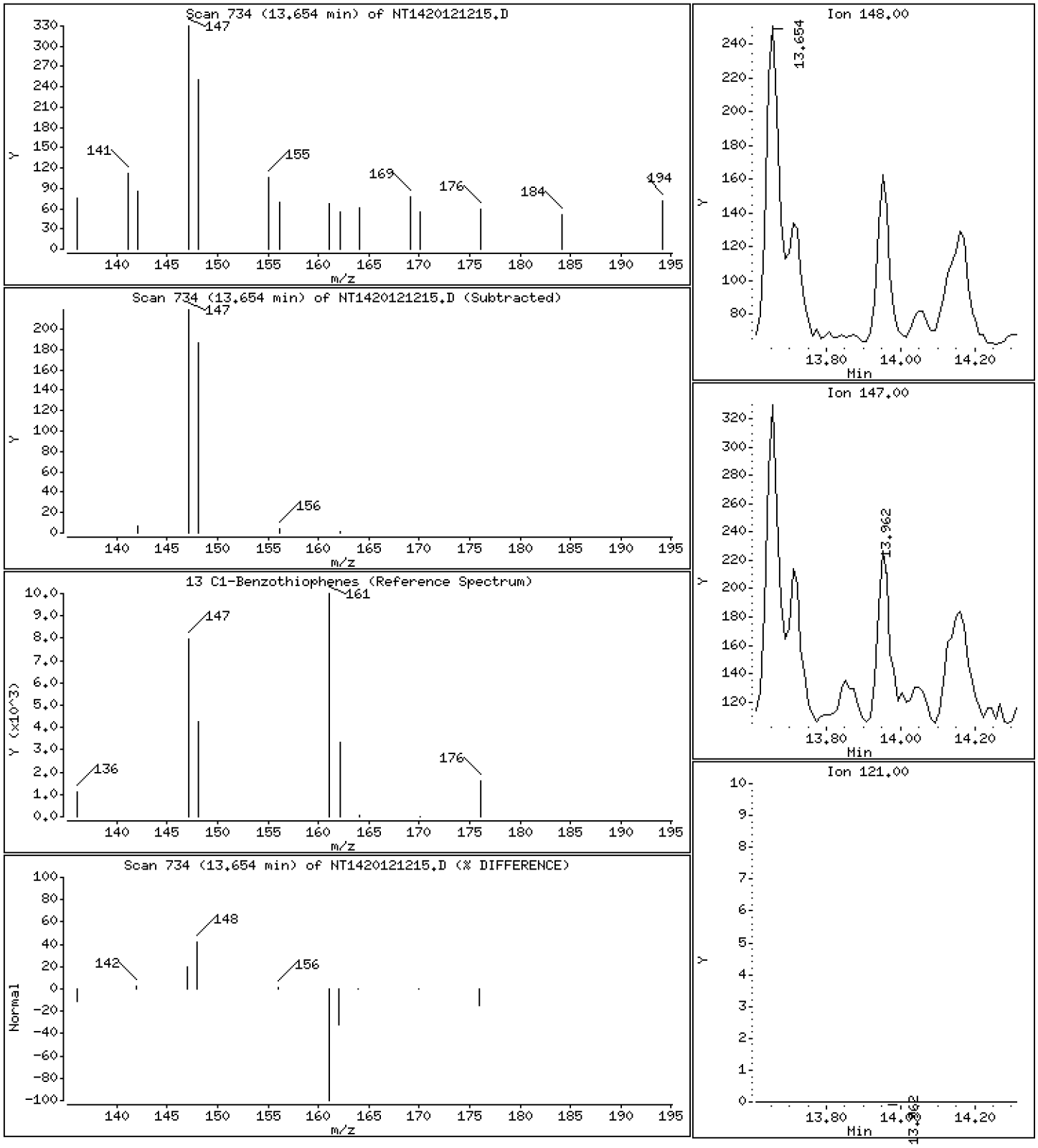
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

13 C1-Benzothiophenes

Concentration: 0.02200 ug/mL



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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

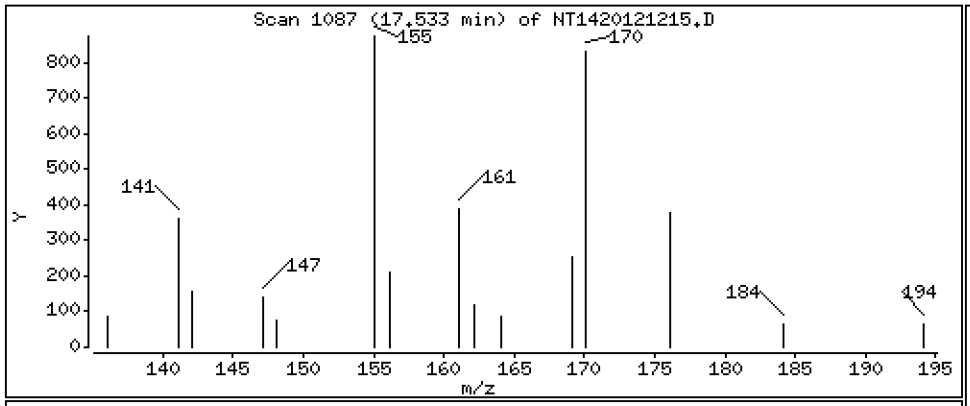
Operator: VTS

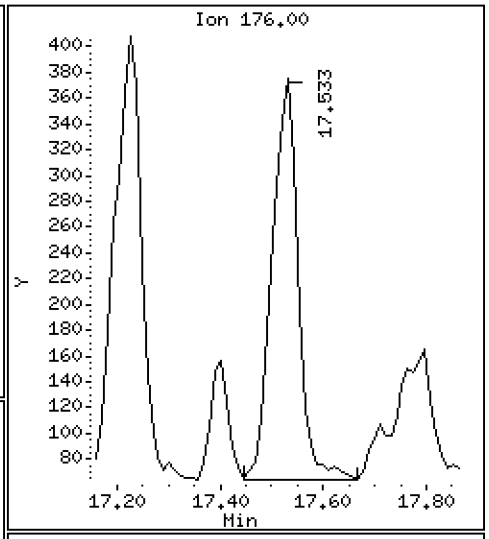
Column phase: Rxi-17Sil MS

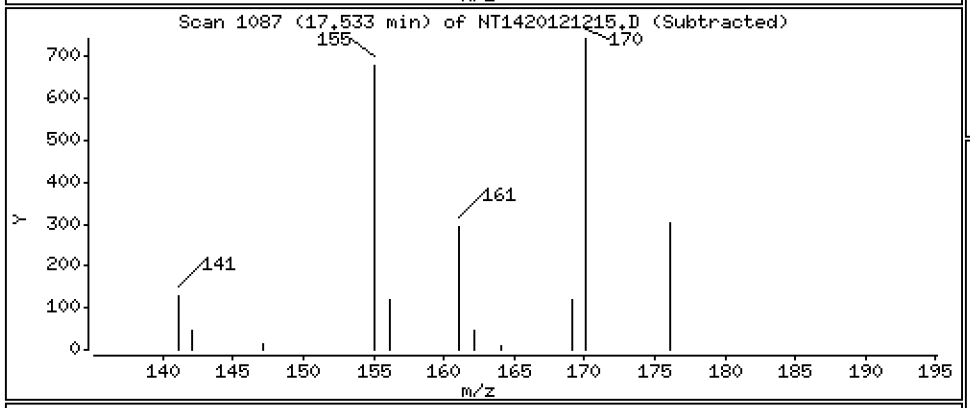
Column diameter: 0.25

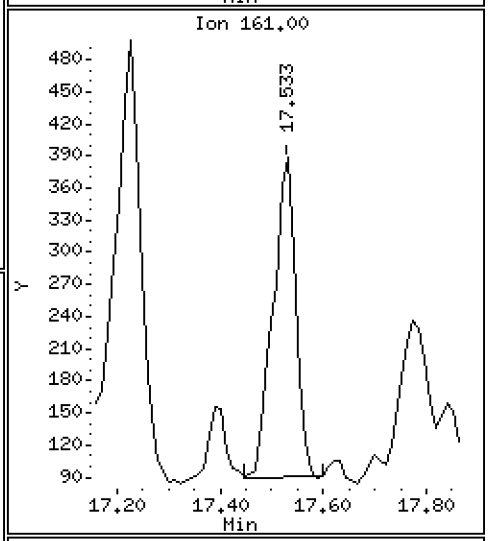
15 C3_Benzothiophenes

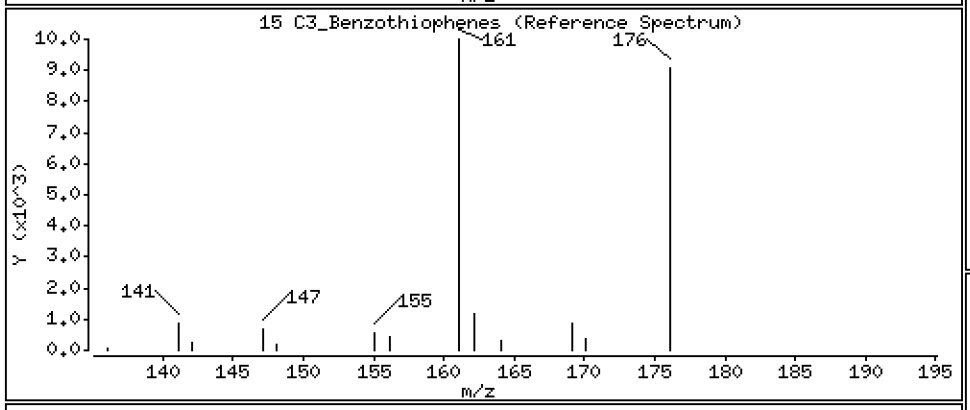
Concentration: 0.01430 ug/mL

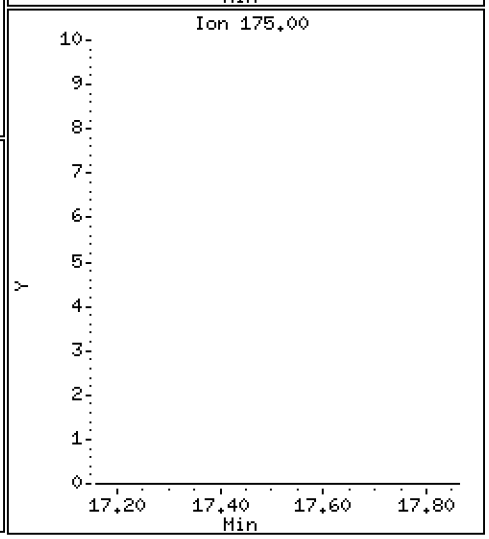


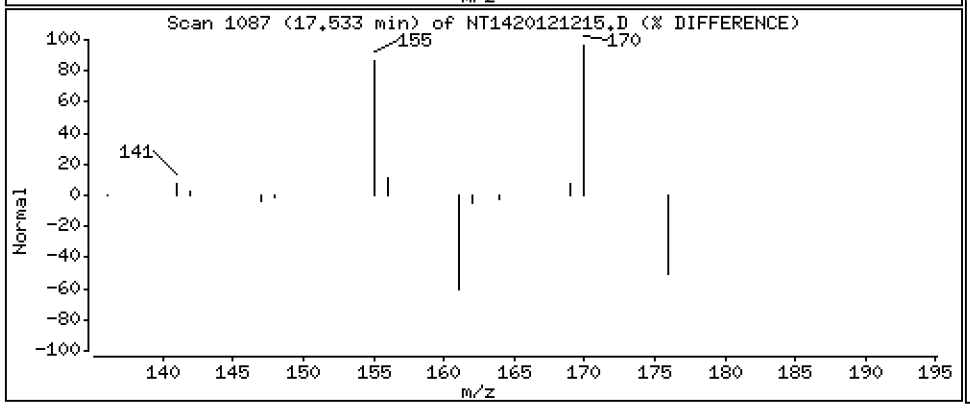












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

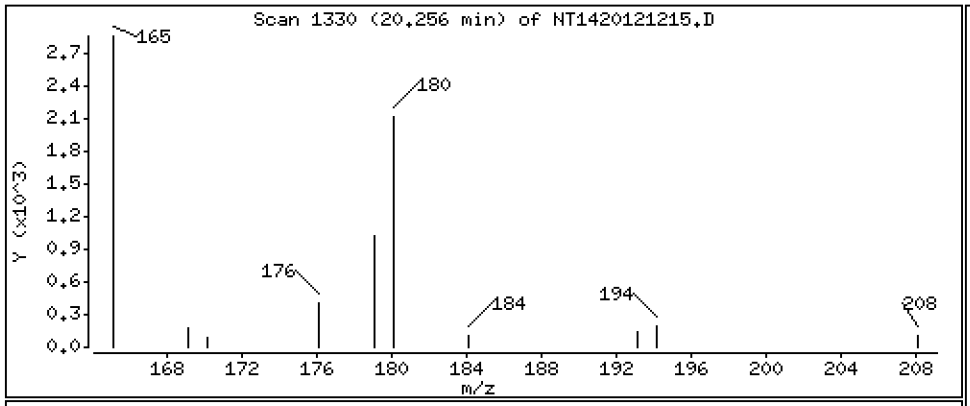
Operator: VTS

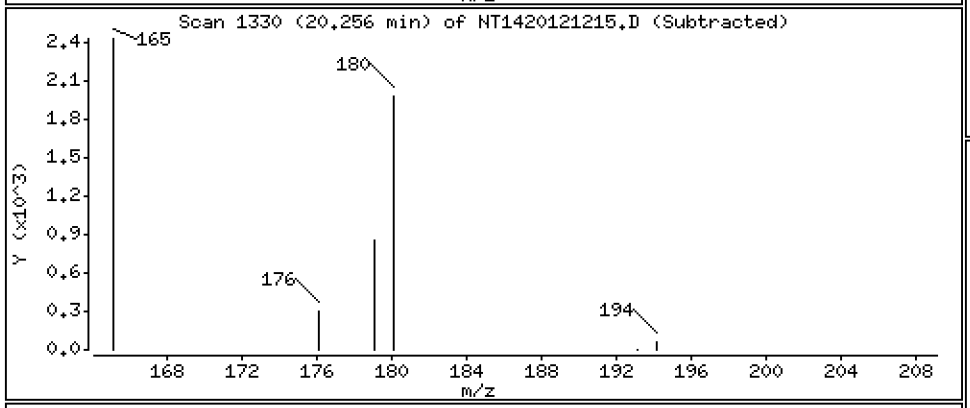
Column phase: Rxi-17Sil MS

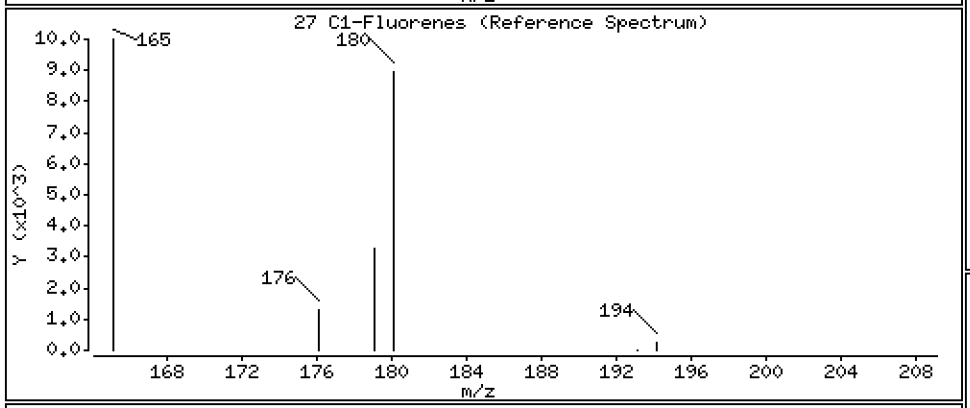
Column diameter: 0.25

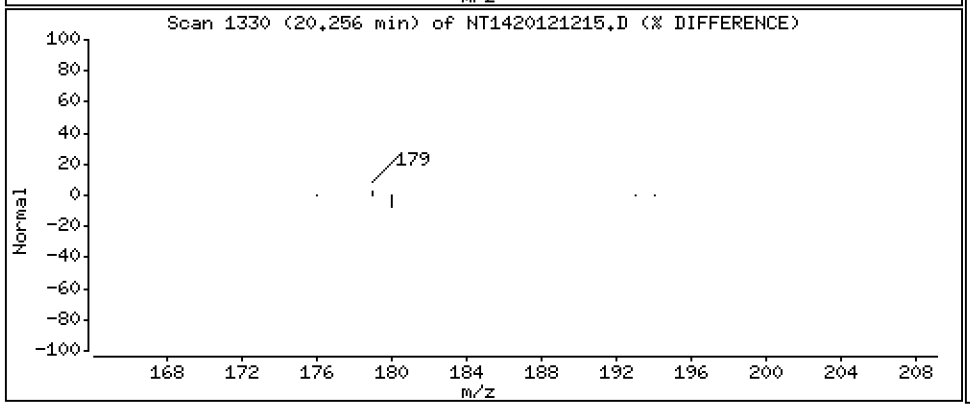
27 C1-Fluorenes

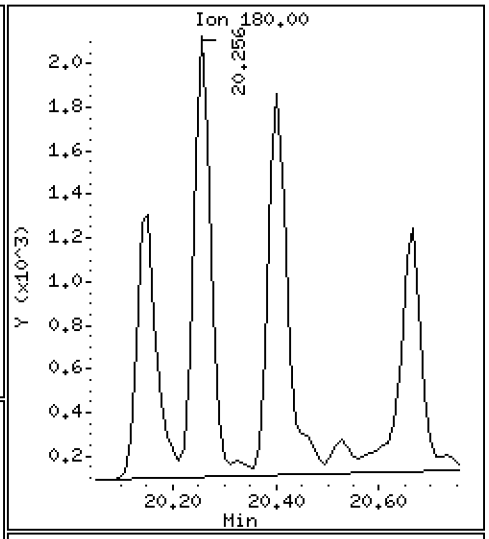
Concentration: 0.2146 ug/mL

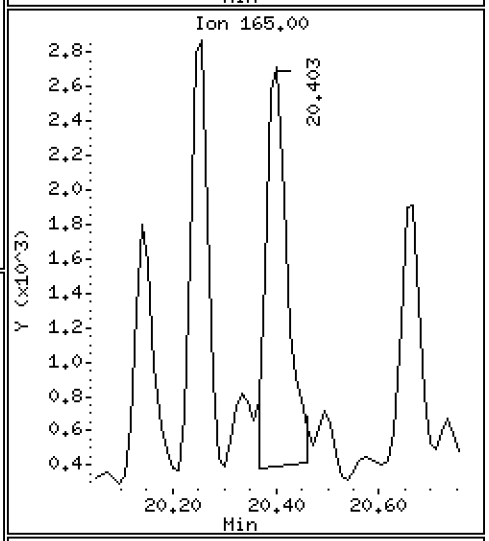


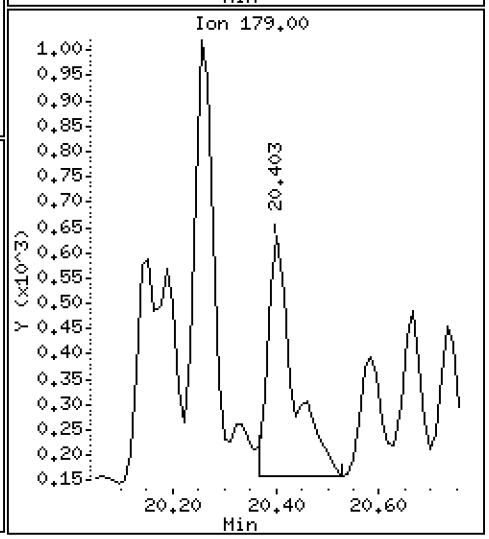












Data File: \\target\share\chem3\nt14.i\20201212.b\sim.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

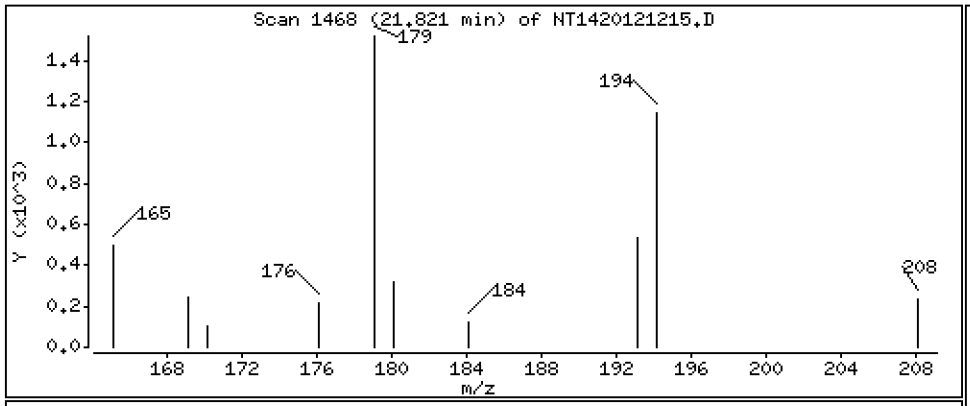
Operator: VTS

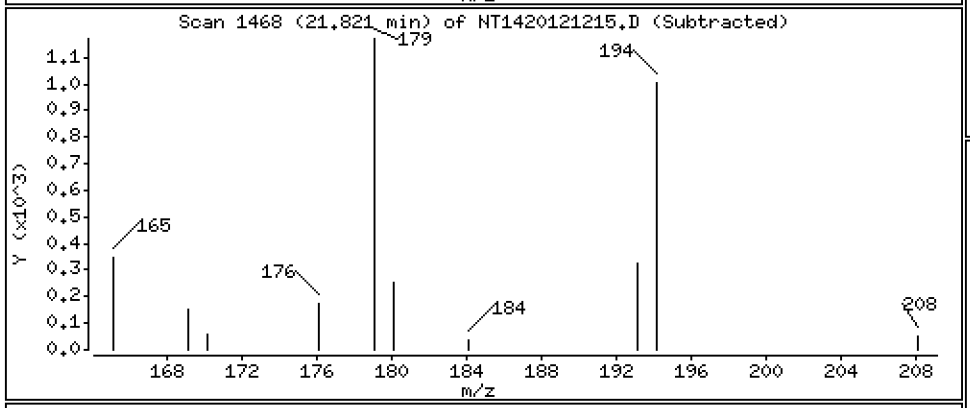
Column phase: Rxi-17Sil MS

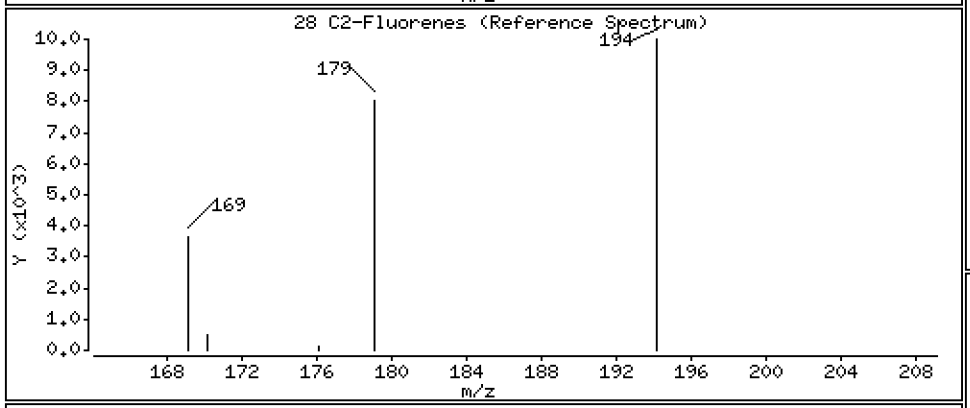
Column diameter: 0.25

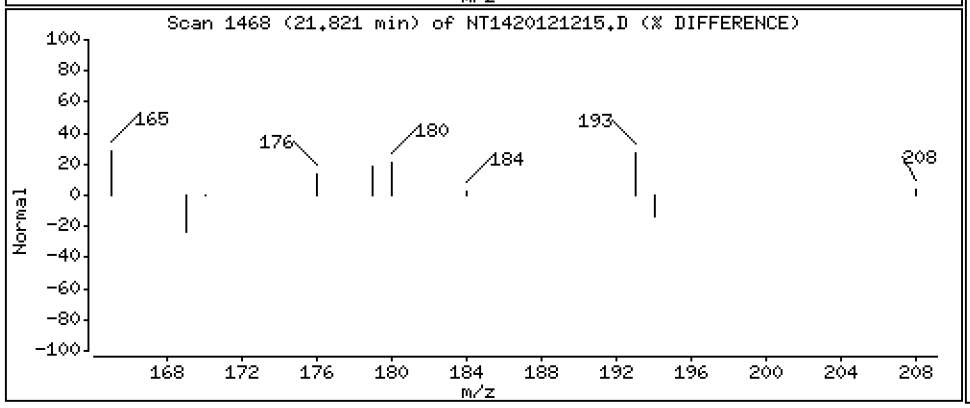
28 C2-Fluorenes

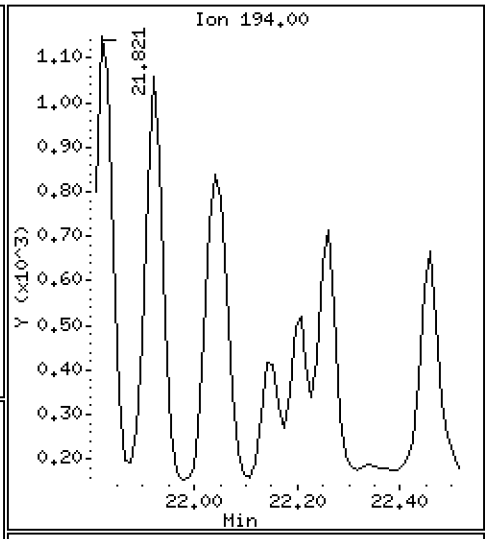
Concentration: 0.3300 ug/mL

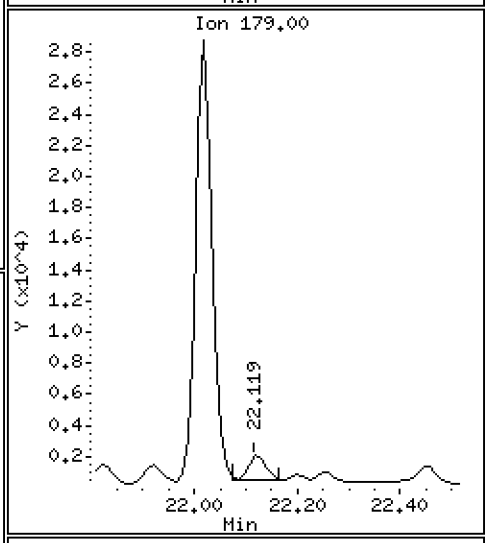


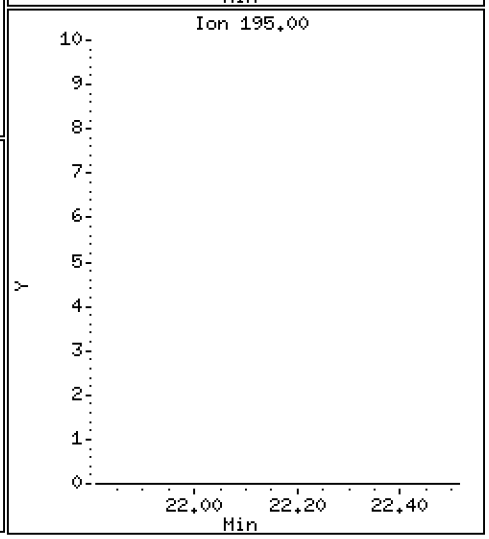












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

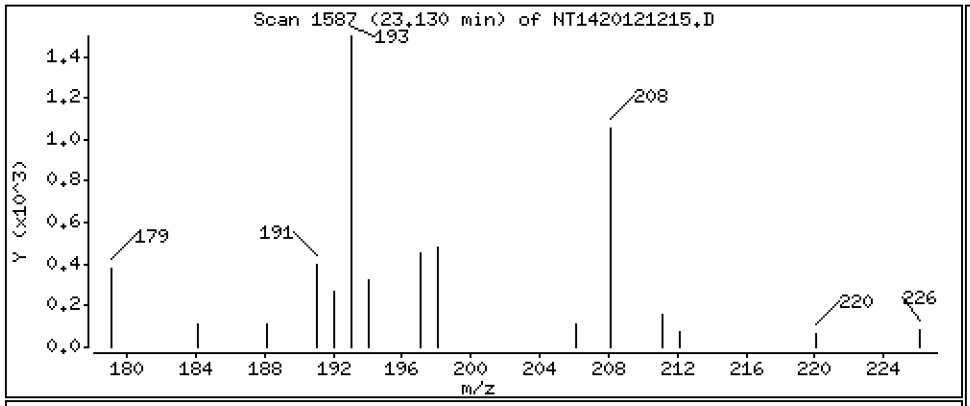
Operator: VTS

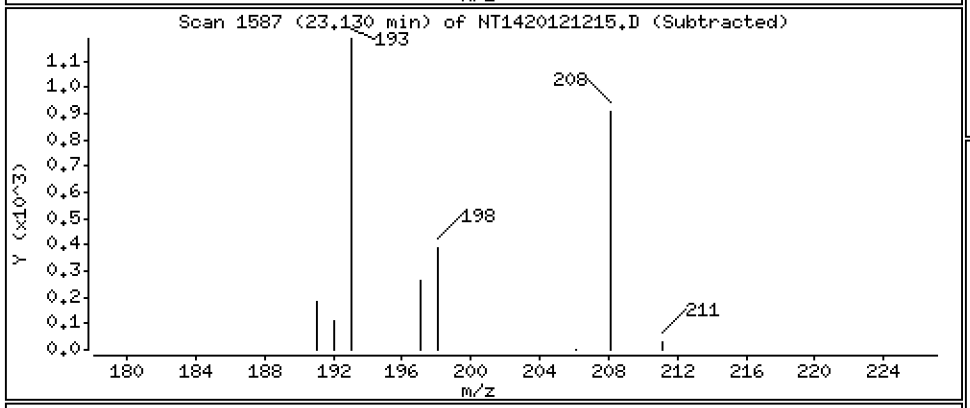
Column phase: Rxi-17Sil MS

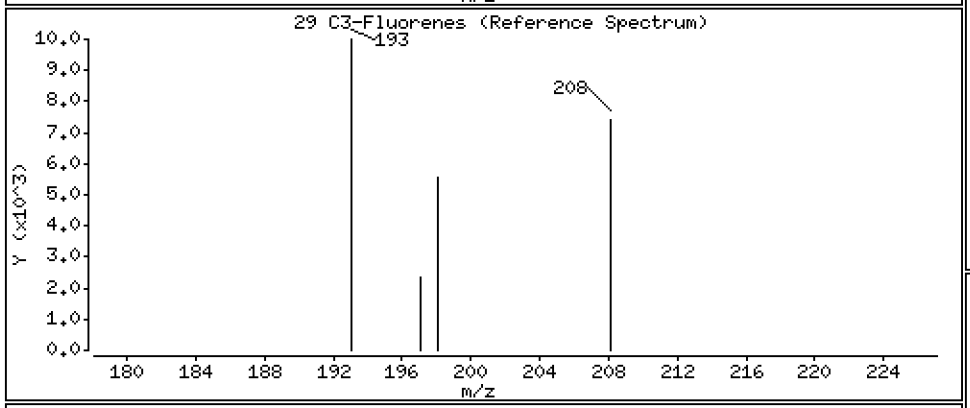
Column diameter: 0.25

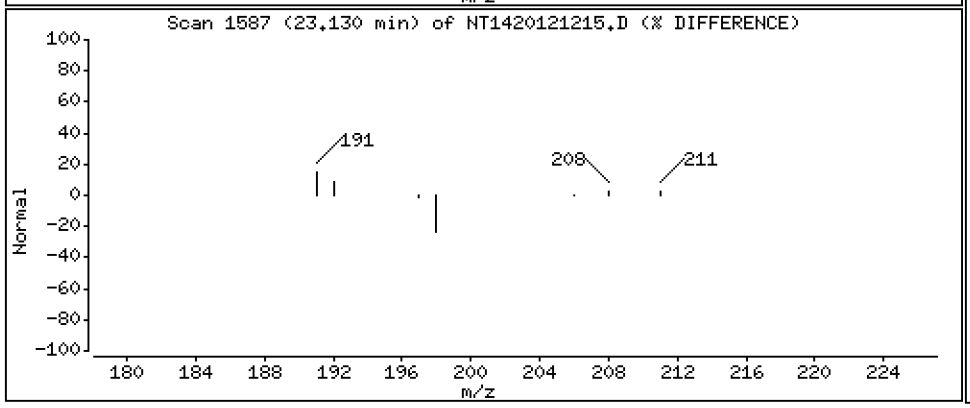
29 C3-Fluorenes

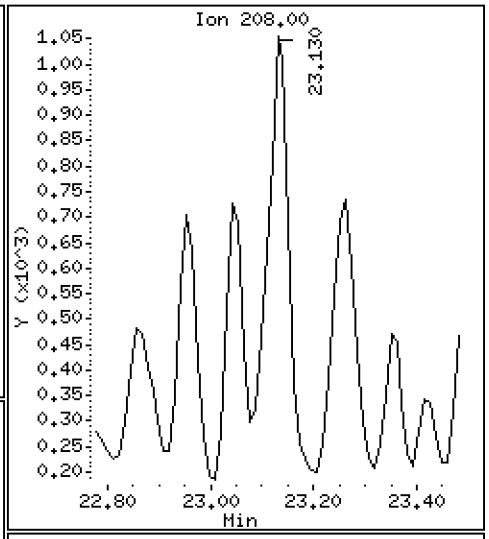
Concentration: 0.3252 ug/mL

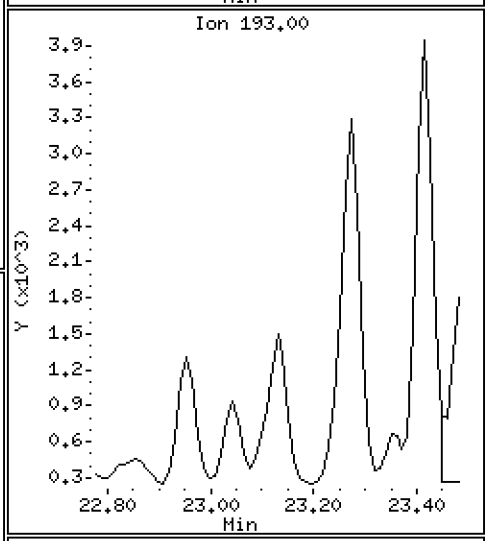


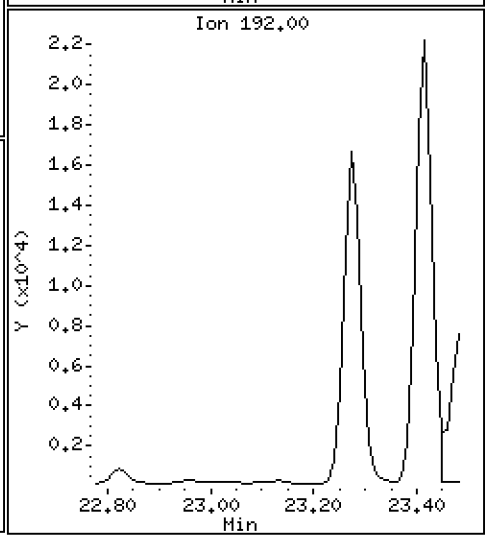












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

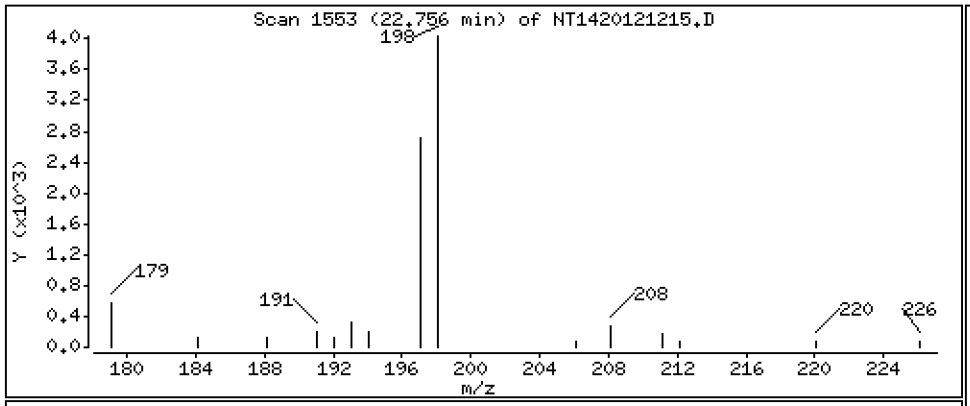
Operator: VTS

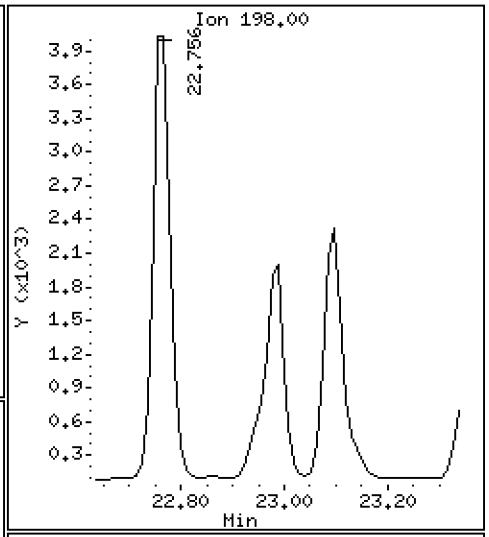
Column phase: Rxi-17Sil MS

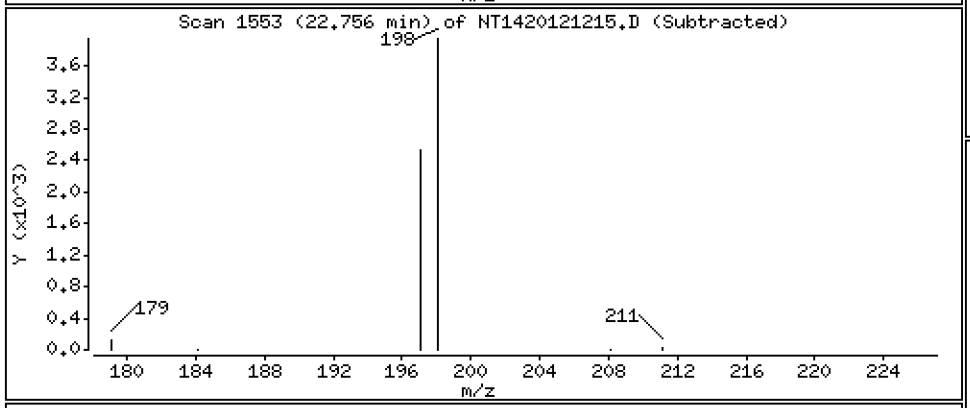
Column diameter: 0.25

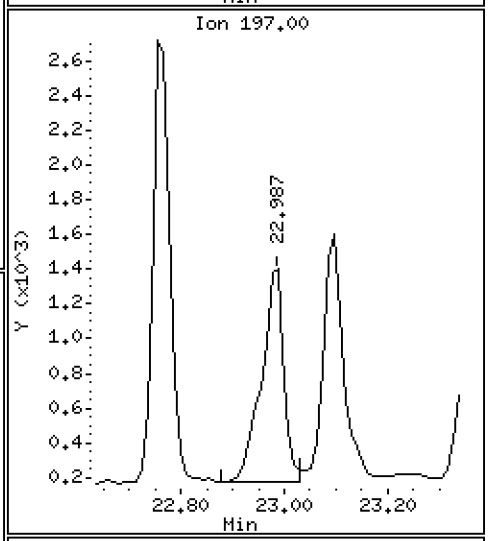
31 C1-Dibenzothiophenes

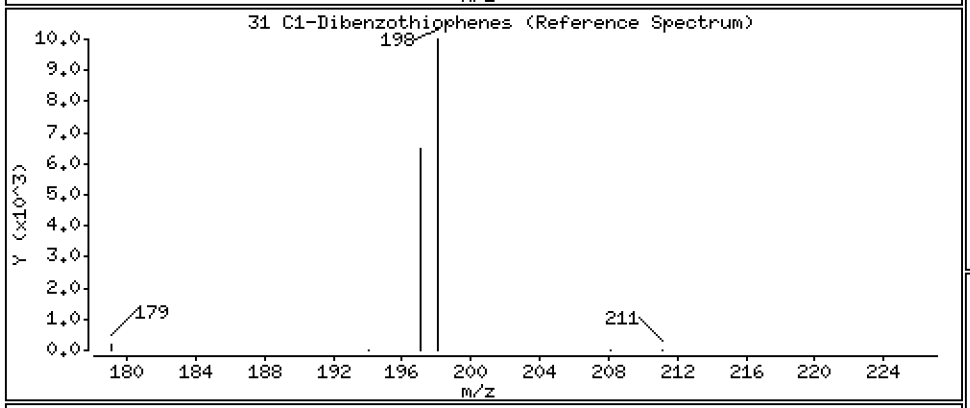
Concentration: 0.2793 ug/mL

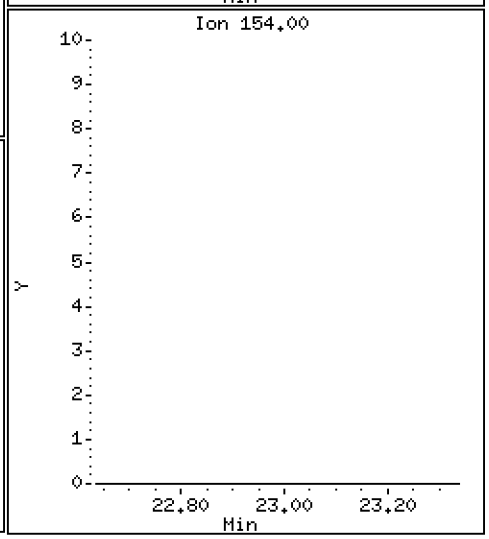


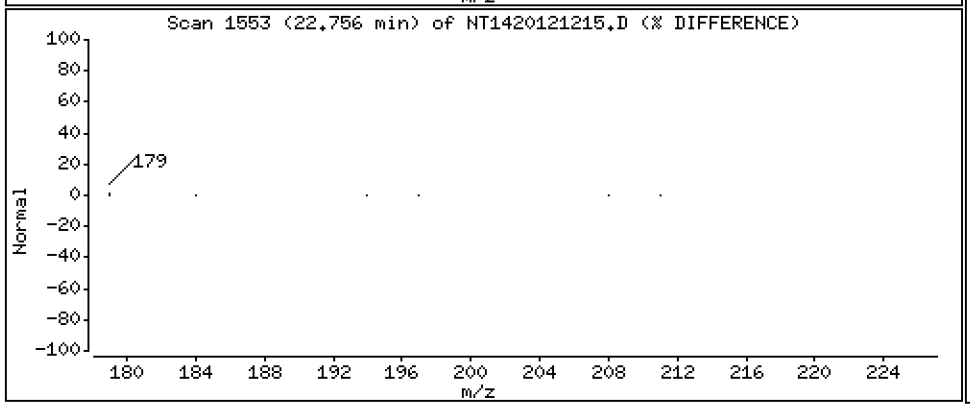












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

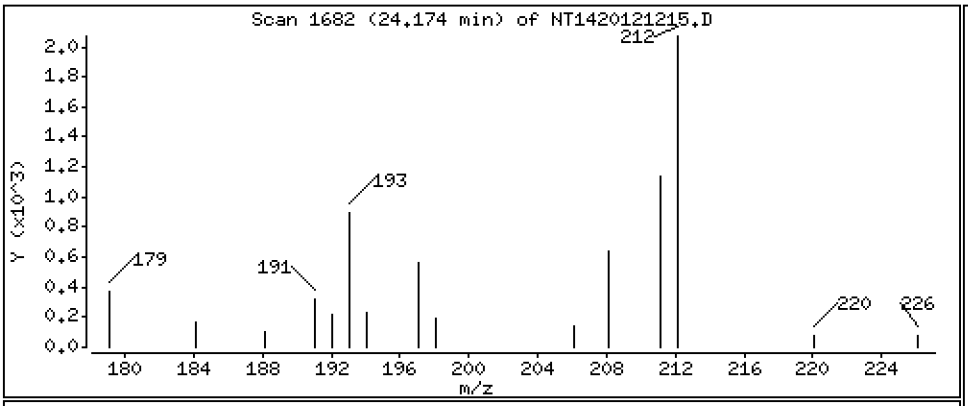
Operator: VTS

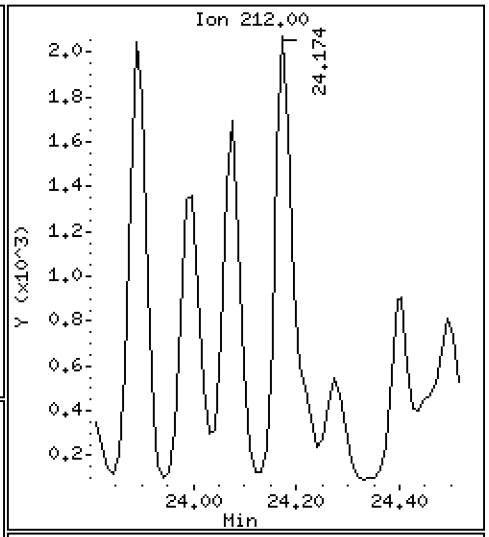
Column phase: Rxi-17Sil MS

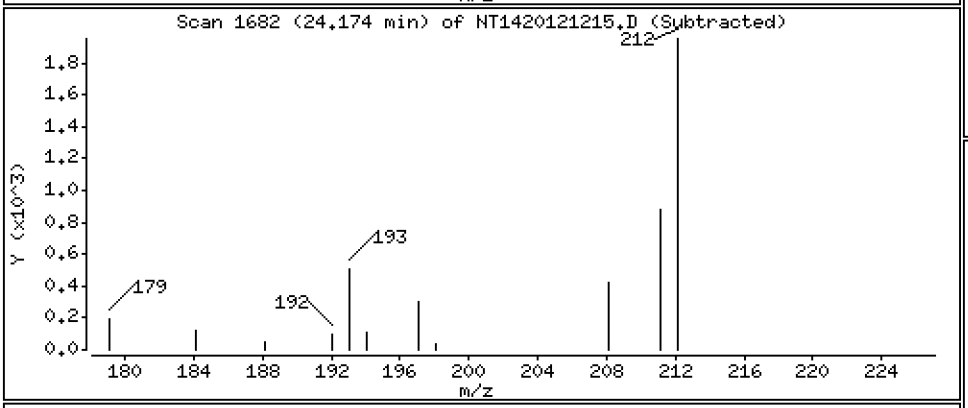
Column diameter: 0.25

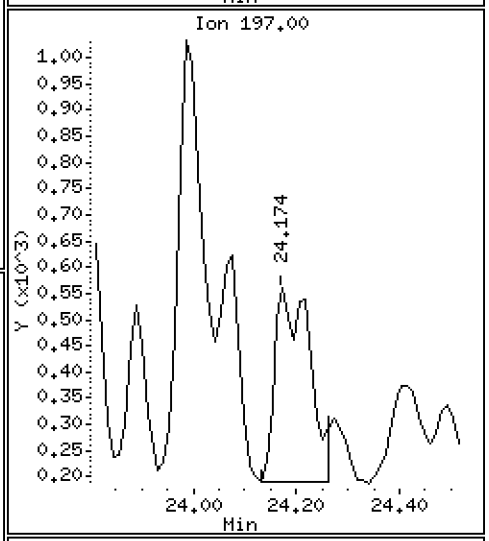
32 C2-Dibenzothiophenes

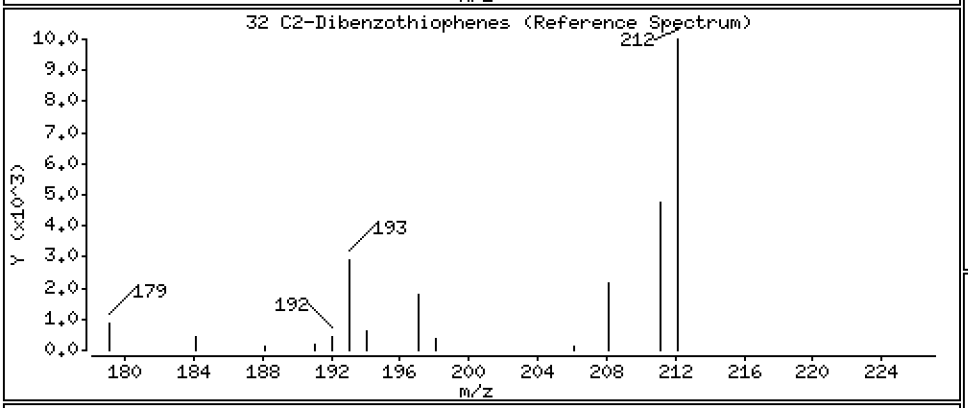
Concentration: 0.3591 ug/mL

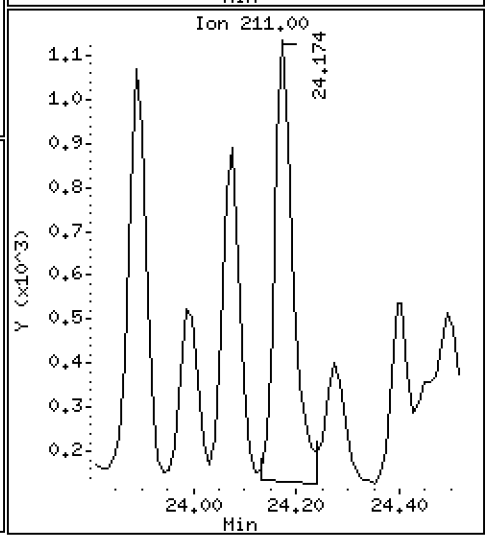


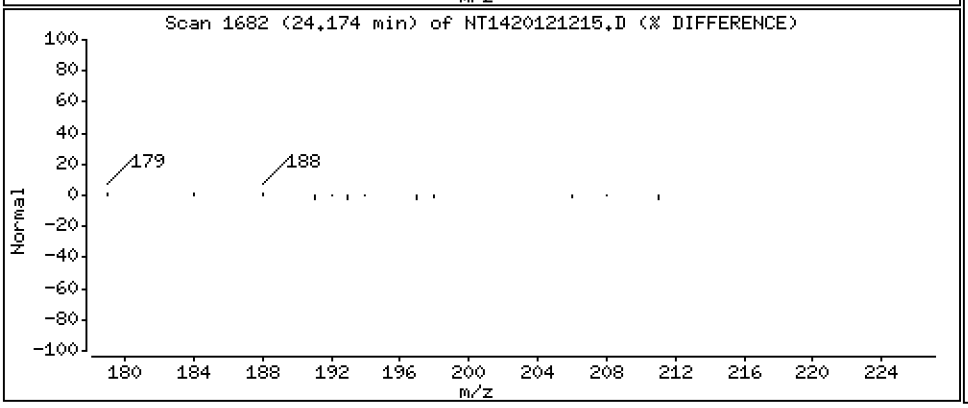












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

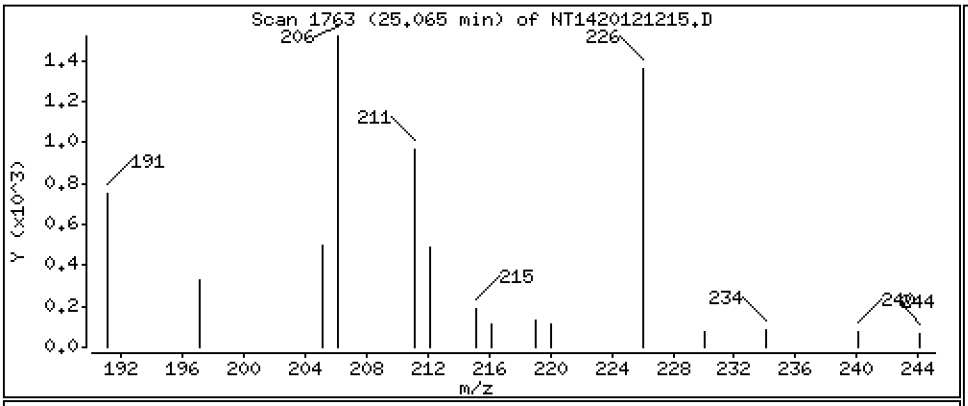
Operator: VTS

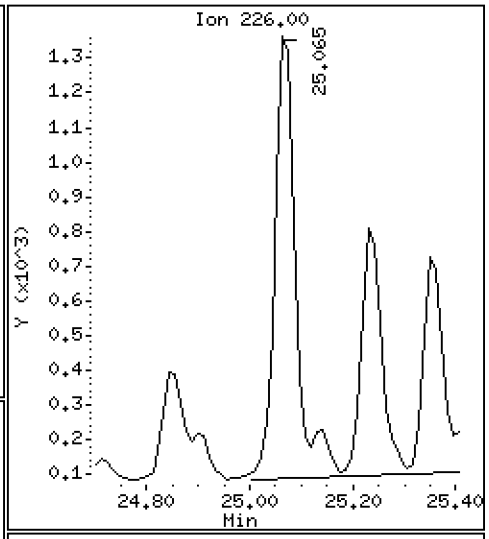
Column phase: Rxi-17Sil MS

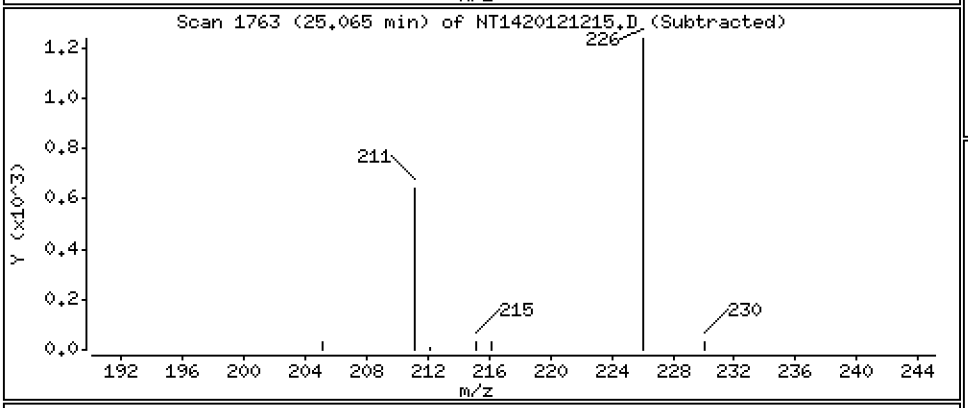
Column diameter: 0.25

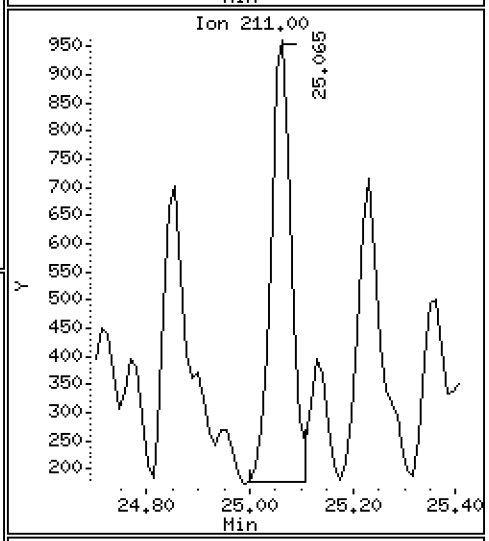
33 C3-Dibenzothiophenes

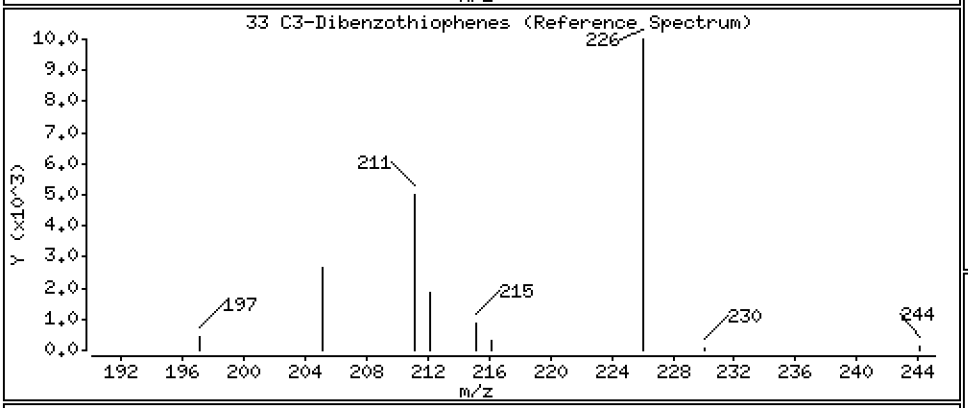
Concentration: 0.2677 ug/mL

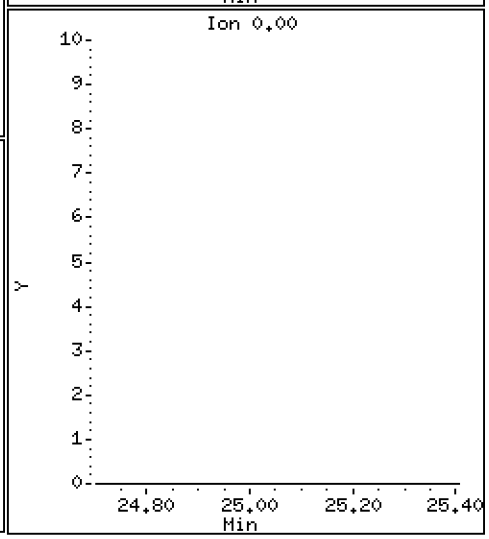


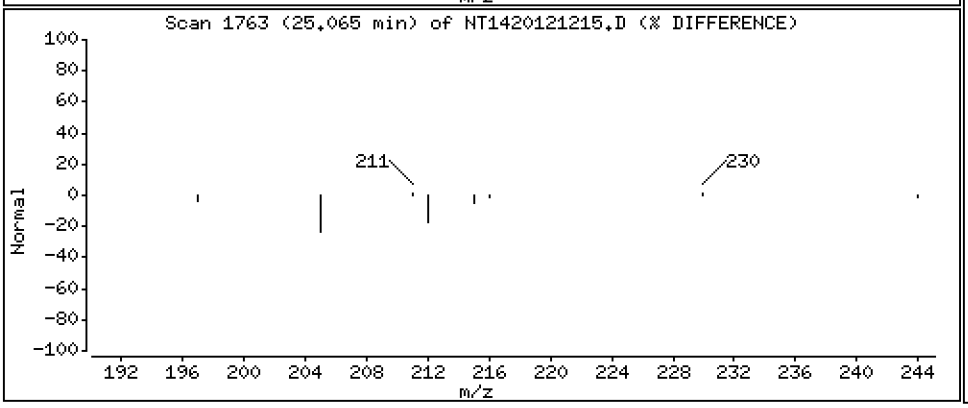












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

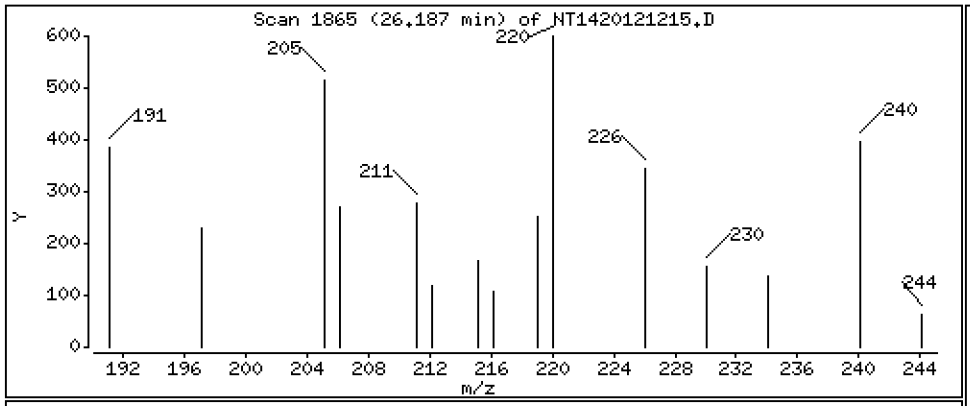
Operator: VTS

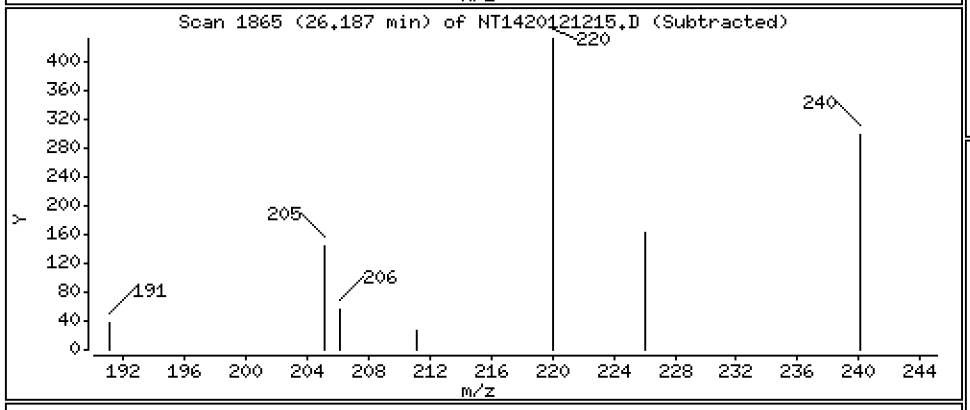
Column phase: Rxi-17Sil MS

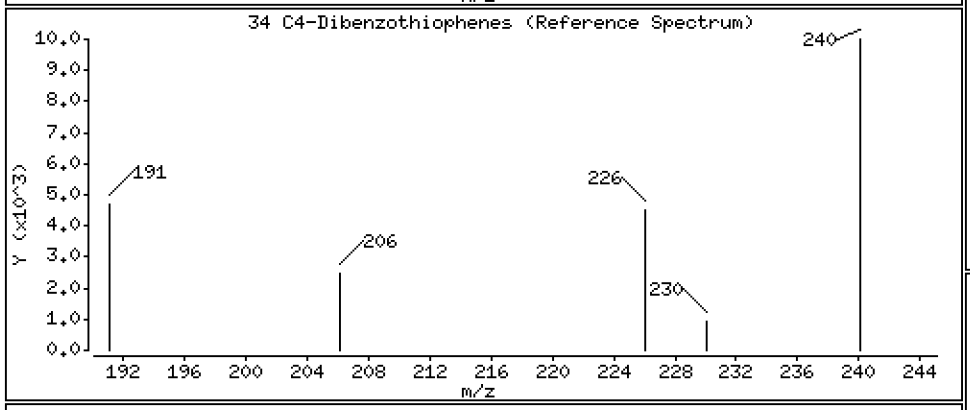
Column diameter: 0.25

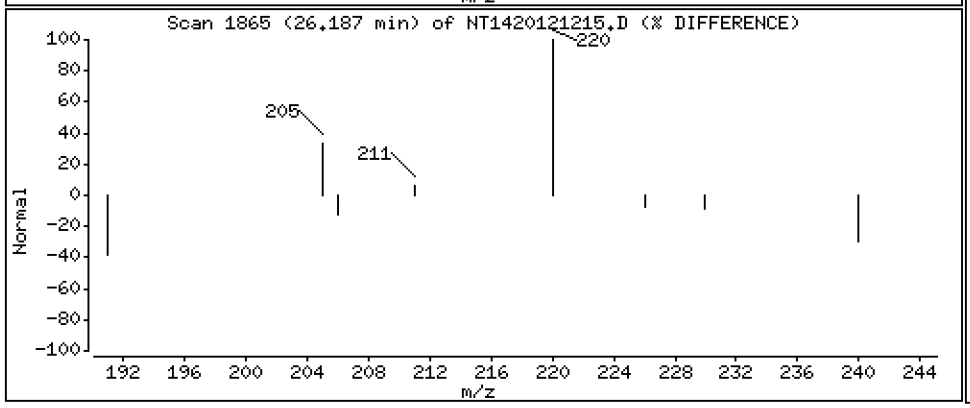
34 C4-Dibenzothiophenes

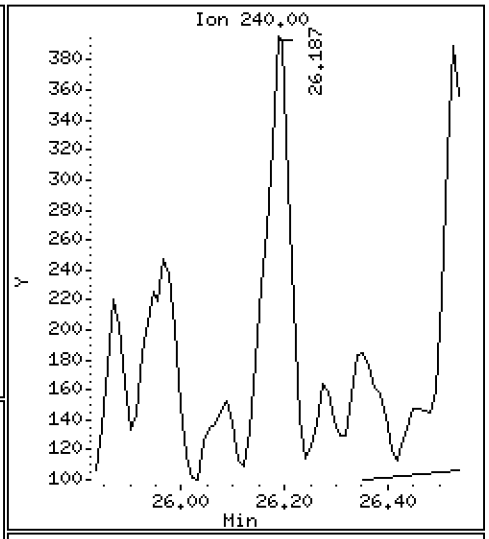
Concentration: 0.1110 ug/mL

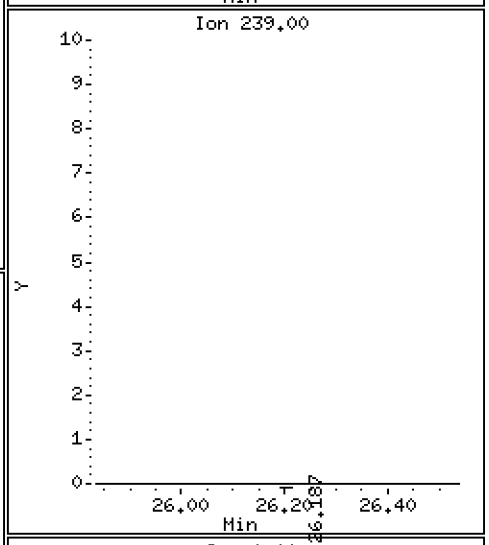


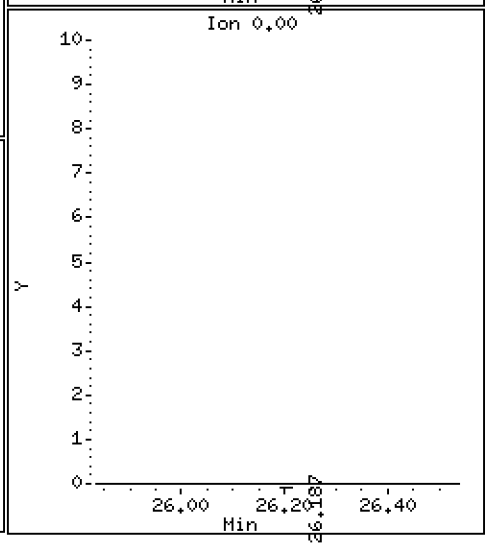












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

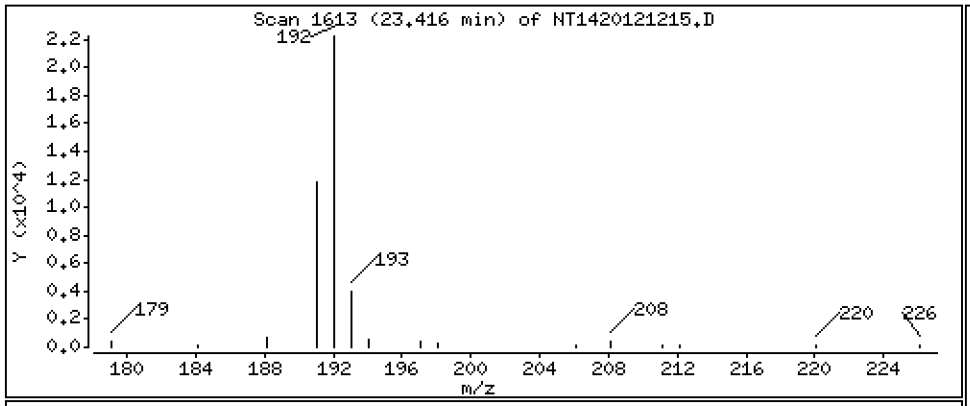
Operator: VTS

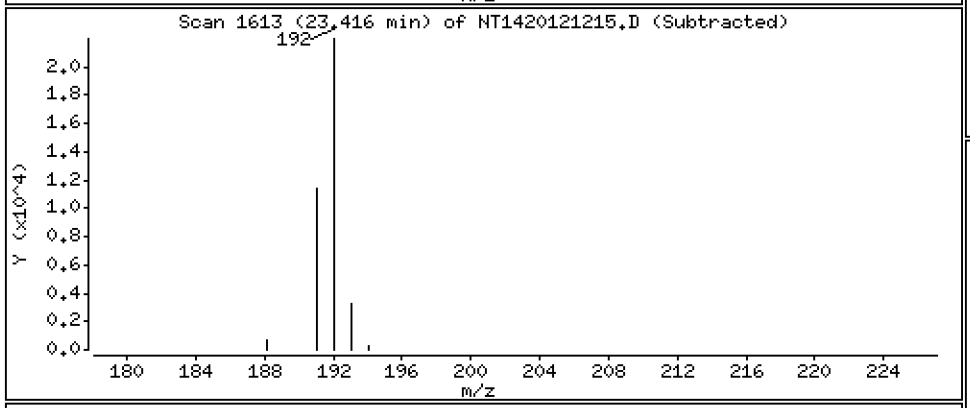
Column phase: Rxi-17Sil MS

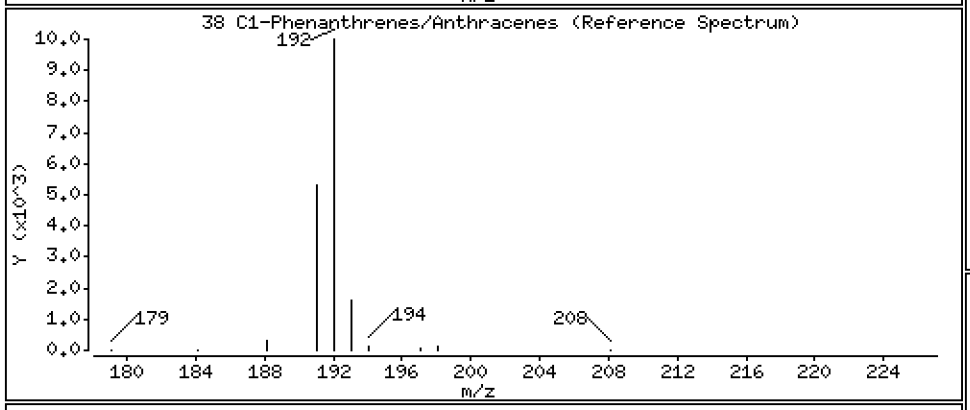
Column diameter: 0.25

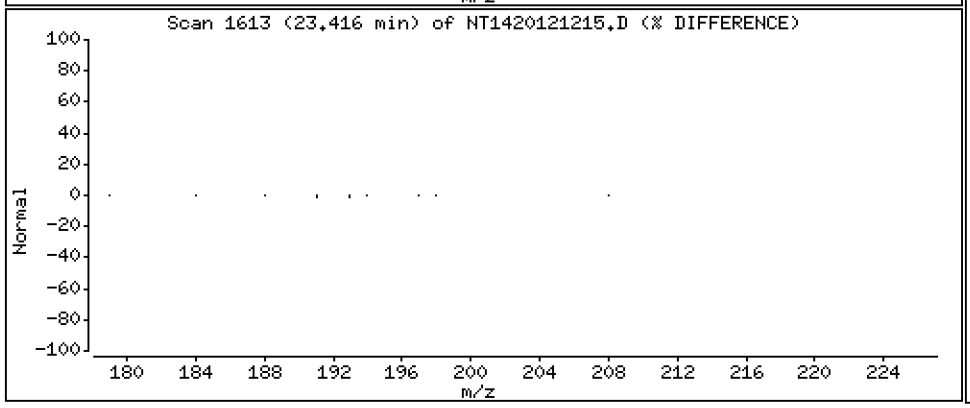
38 C1-Phenanthrenes/Anthracenes

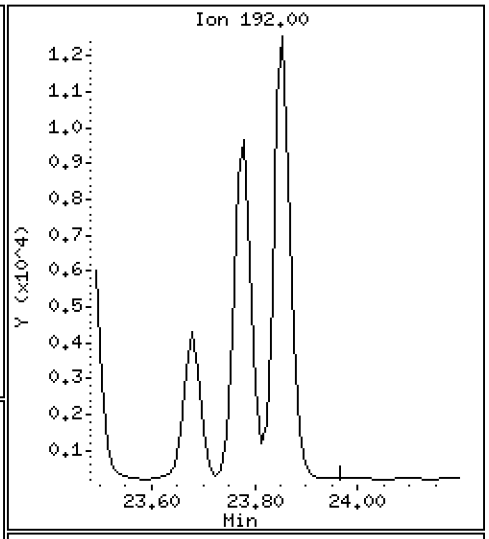
Concentration: 1.471 ug/mL

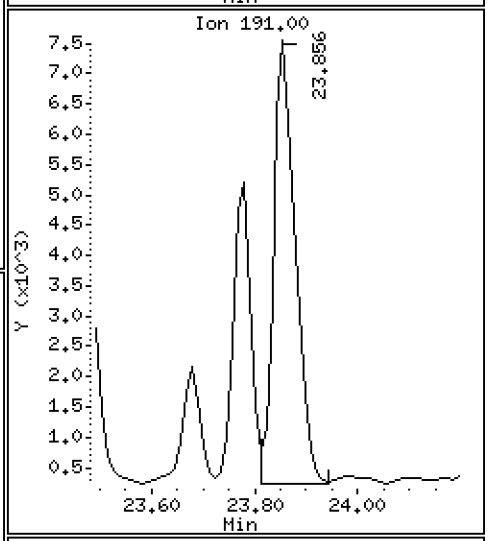


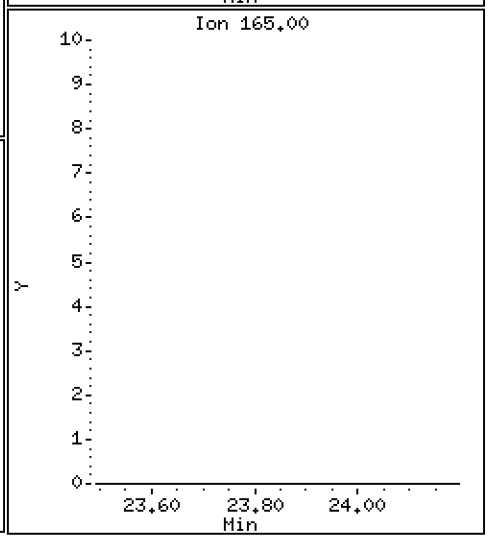












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

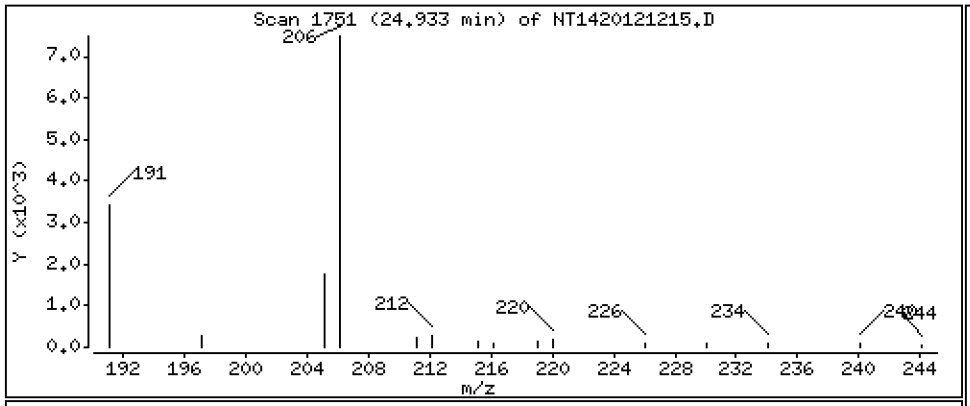
Operator: VTS

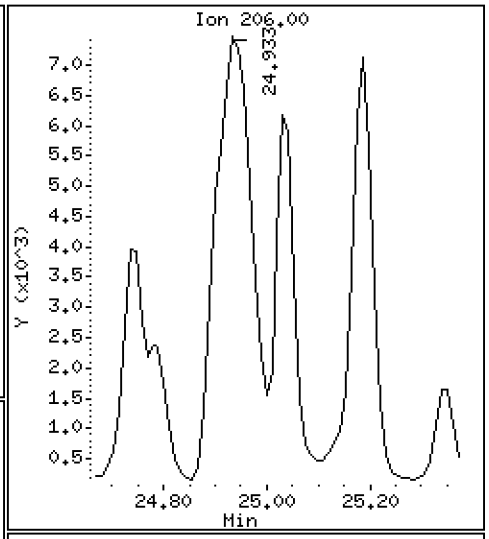
Column phase: Rxi-17Sil MS

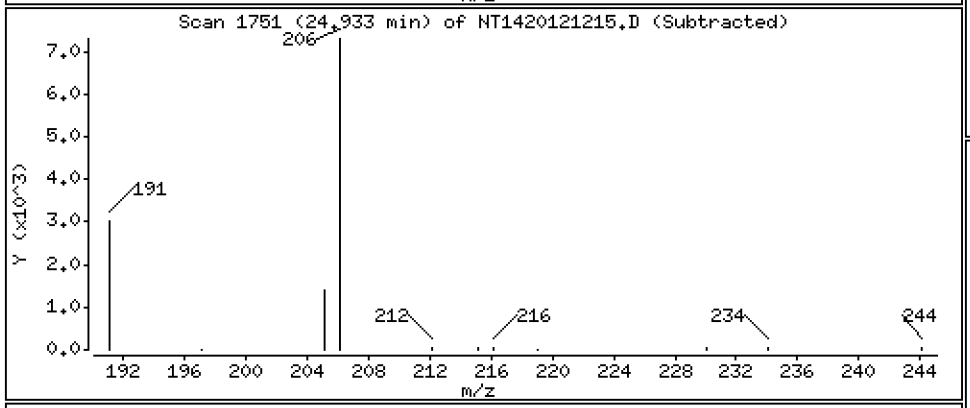
Column diameter: 0.25

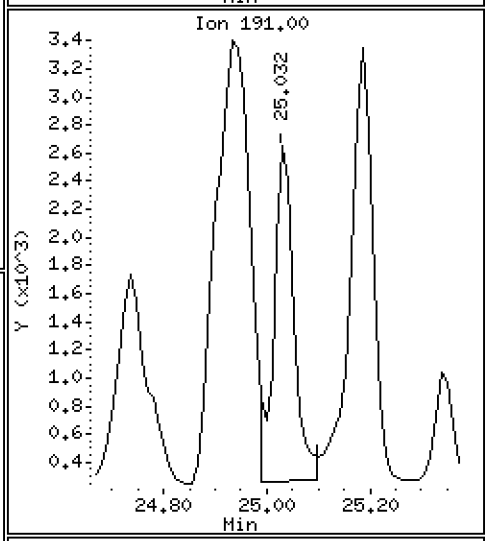
39 C2-Phenanthrenes/Anthracenes

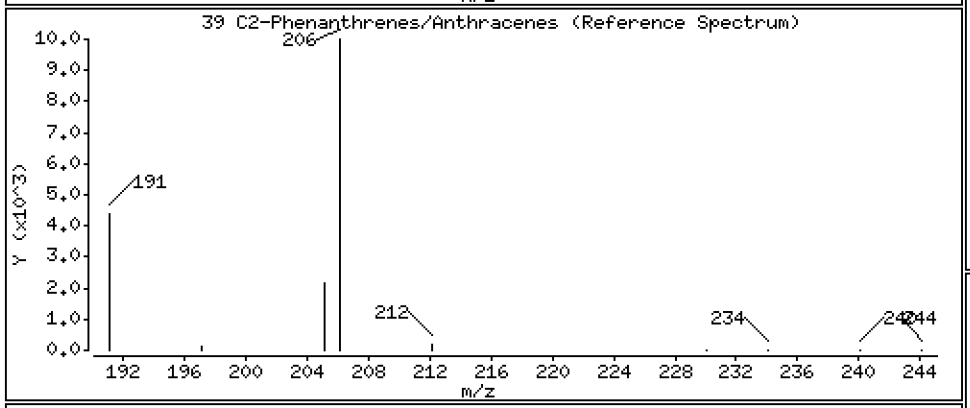
Concentration: 1.060 ug/mL

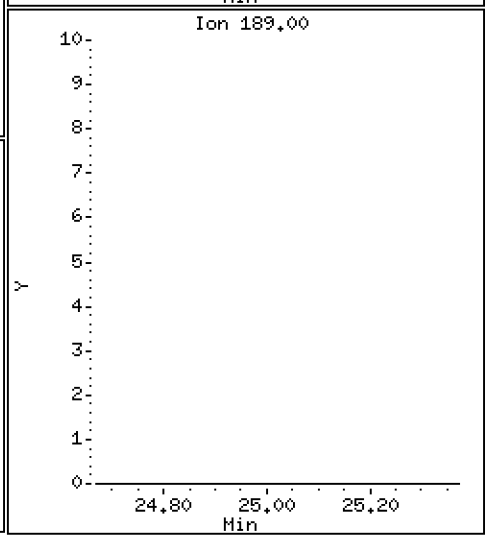


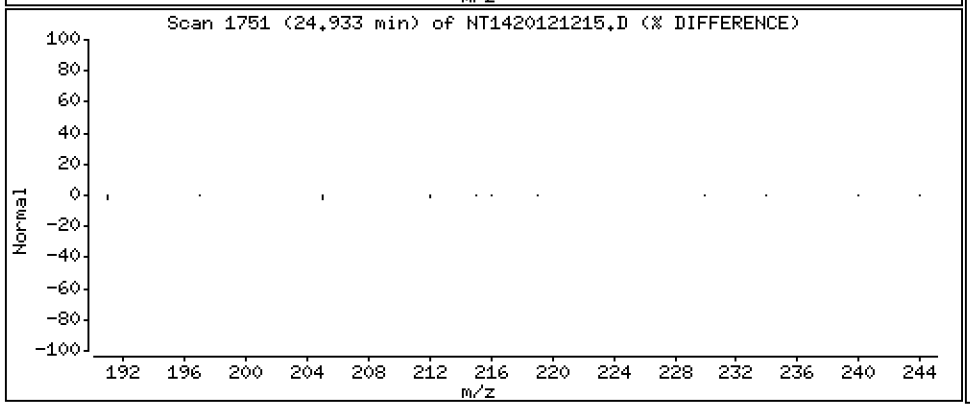












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

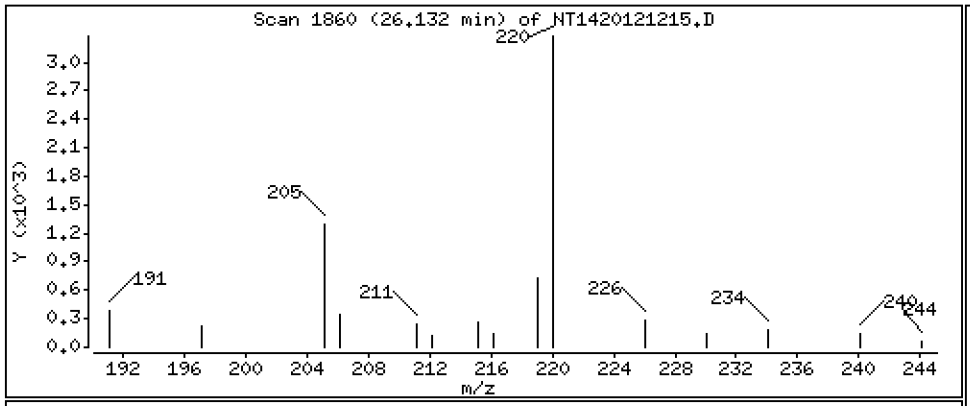
Operator: VTS

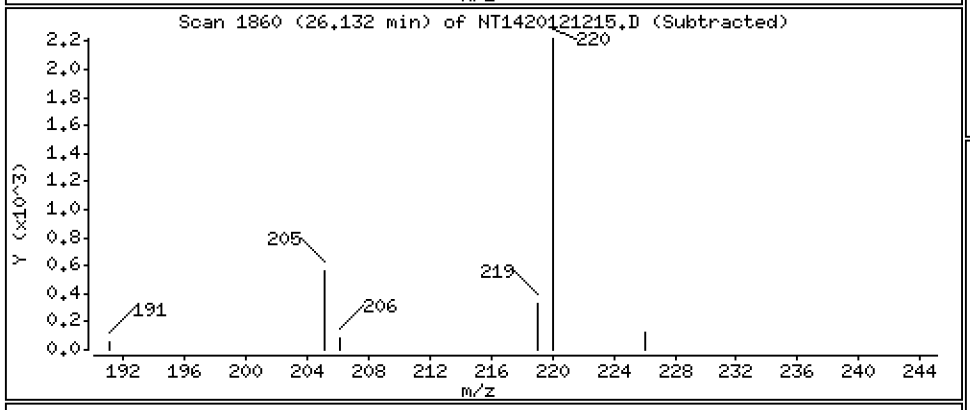
Column phase: Rxi-17Sil MS

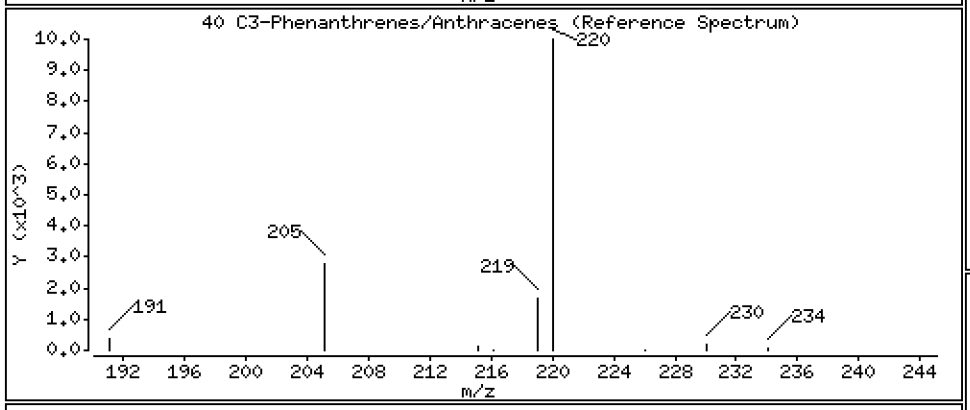
Column diameter: 0.25

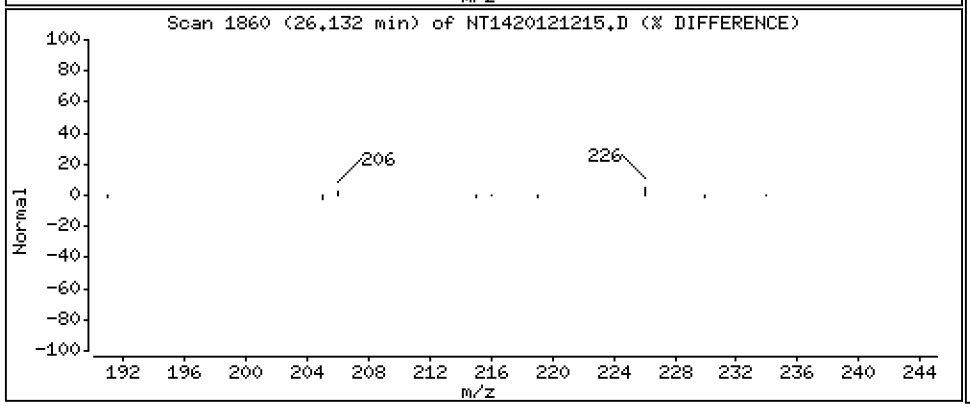
40 C3-Phenanthrenes/Anthracenes

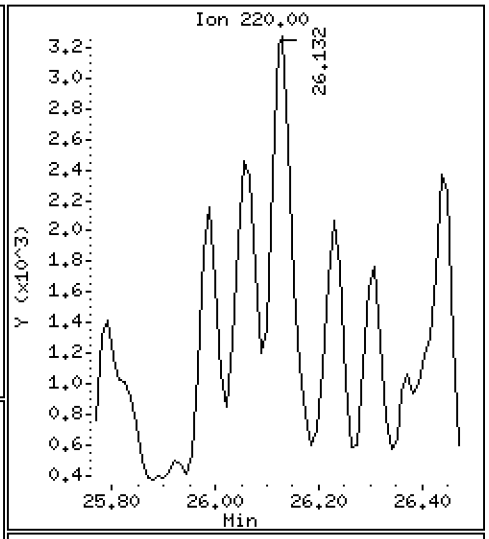
Concentration: 0.5587 ug/mL

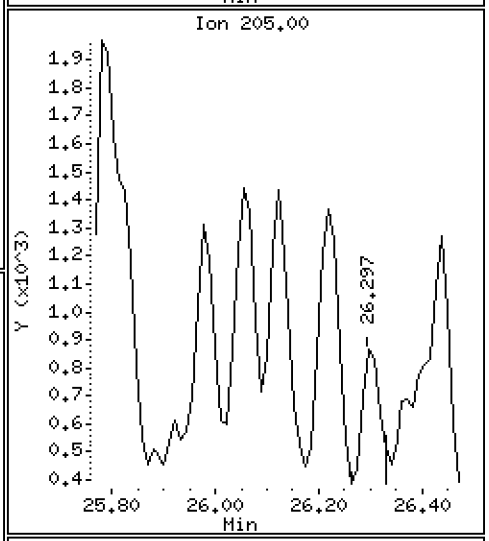


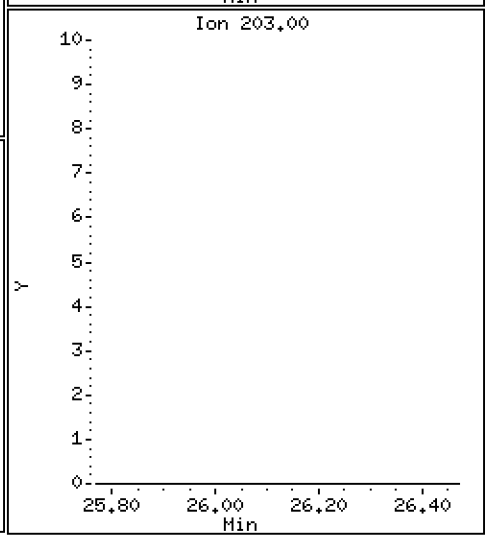












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

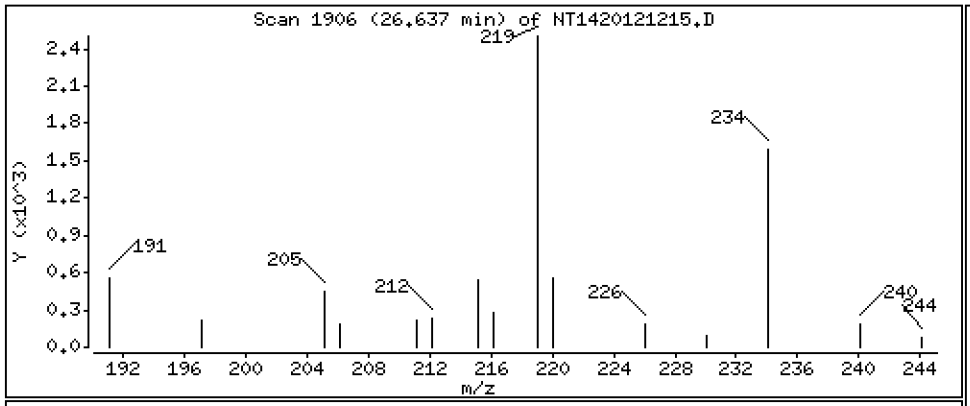
Operator: VTS

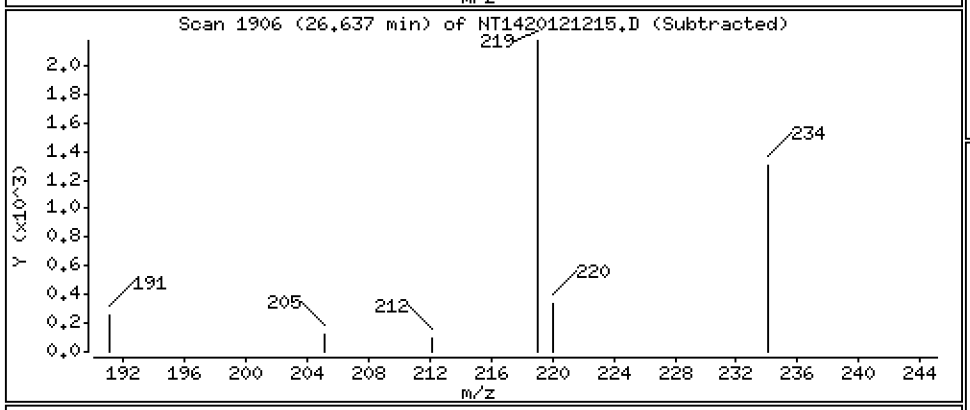
Column phase: Rxi-17Sil MS

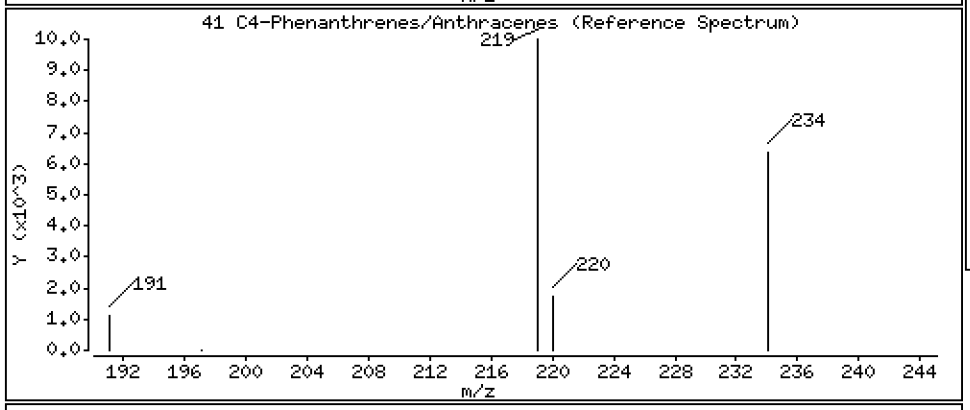
Column diameter: 0.25

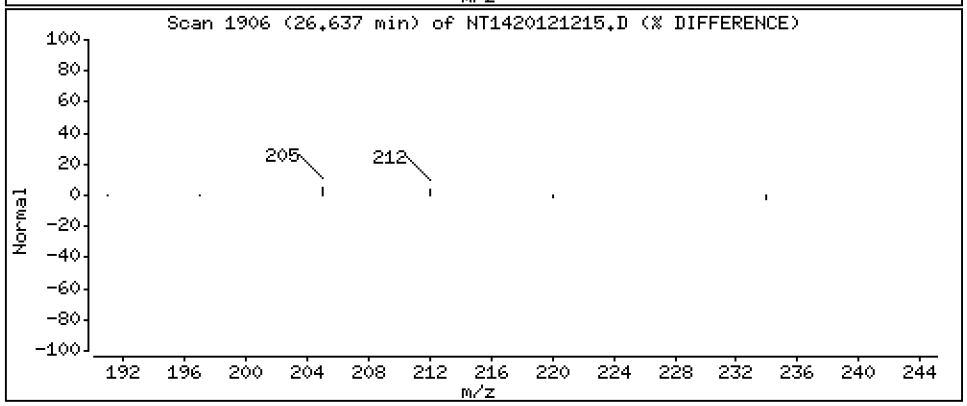
41 C4-Phenanthrenes/Anthracenes

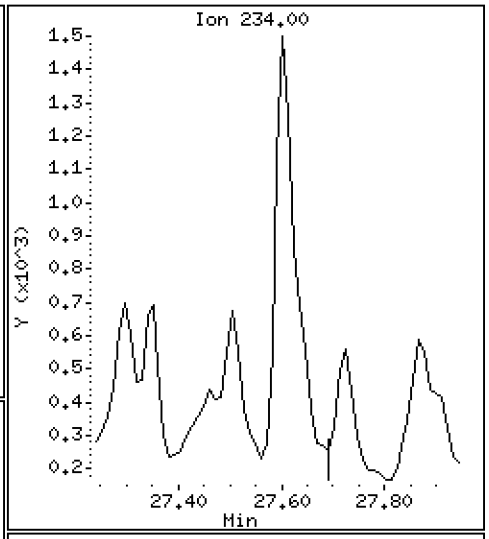
Concentration: 0.1720 ug/mL

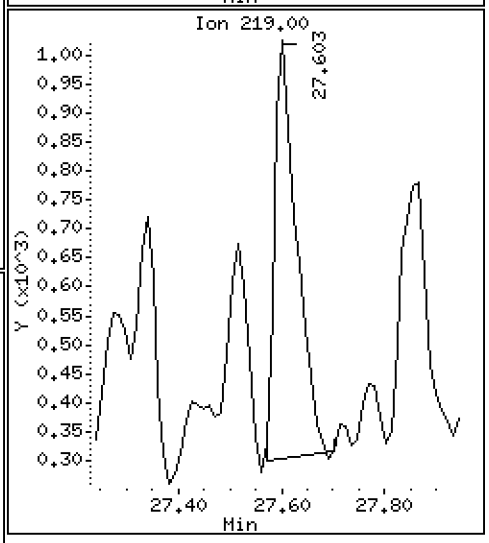












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

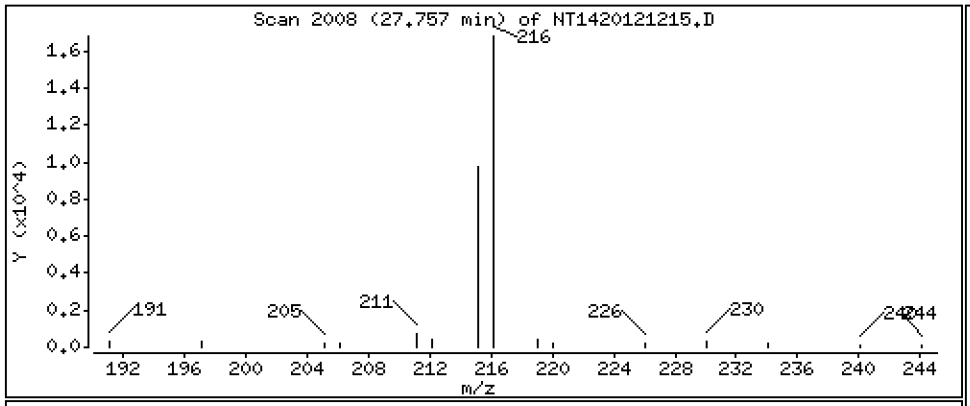
Operator: VTS

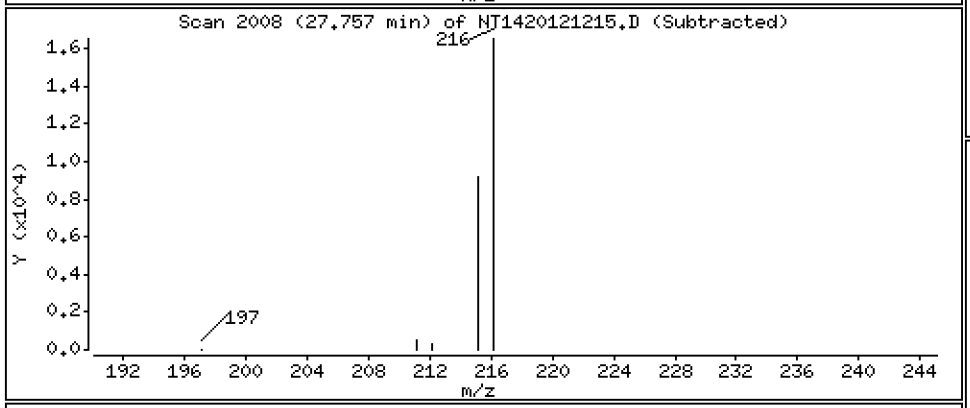
Column phase: Rxi-17Sil MS

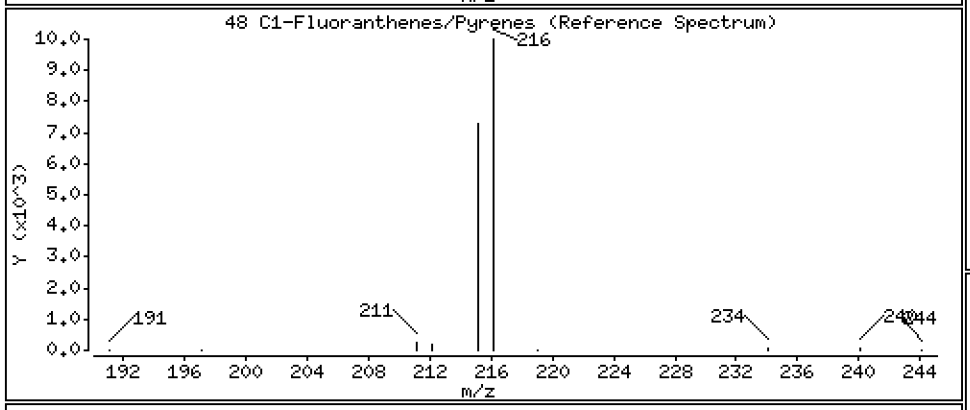
Column diameter: 0.25

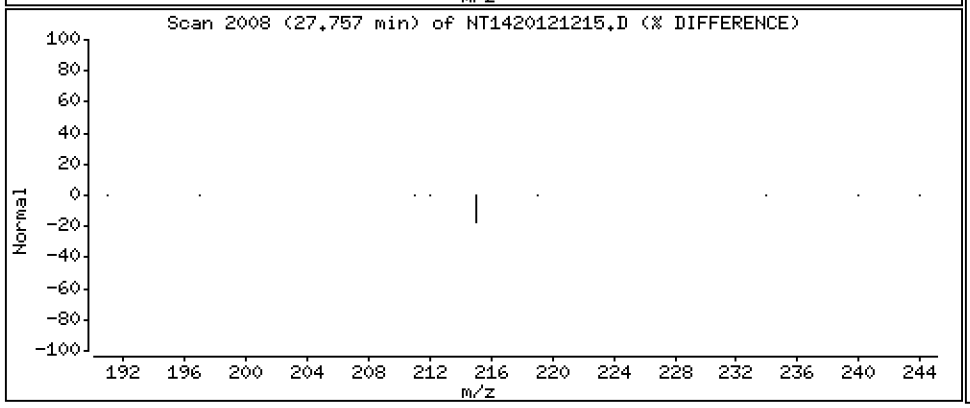
48 C1-Fluoranthenes/Pyrenes

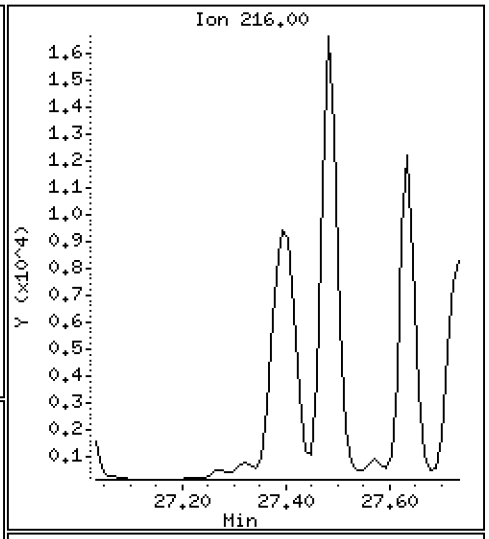
Concentration: 1.680 ug/mL

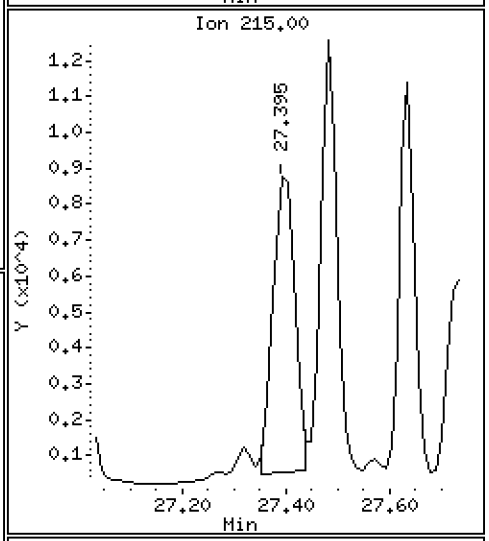


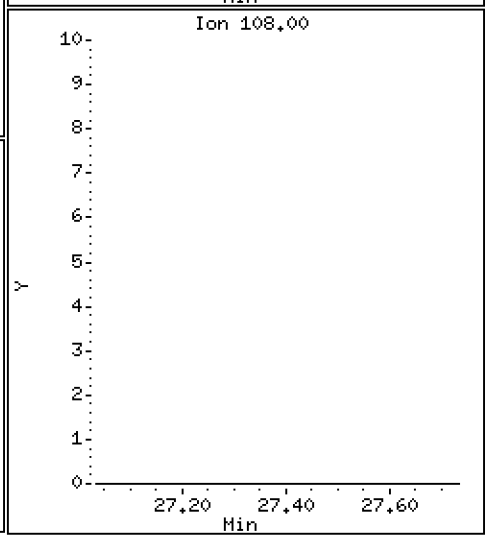












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

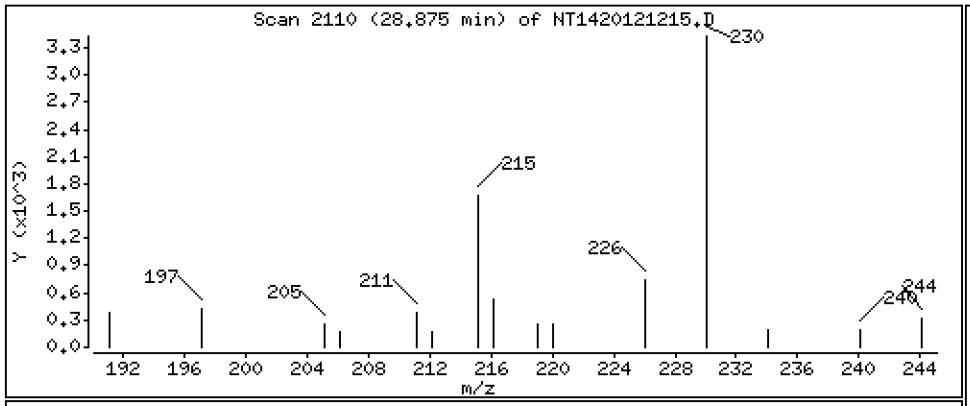
Operator: VTS

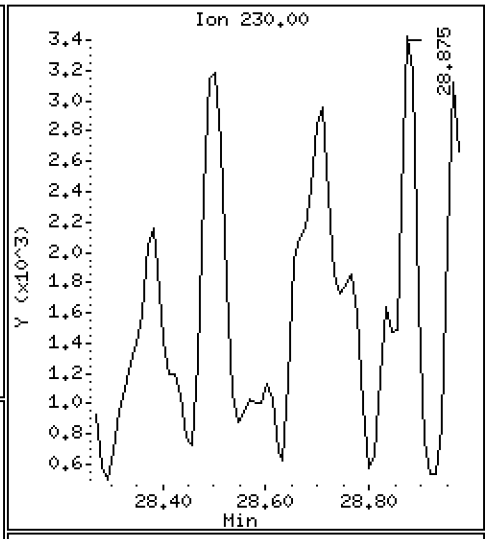
Column phase: Rxi-17Sil MS

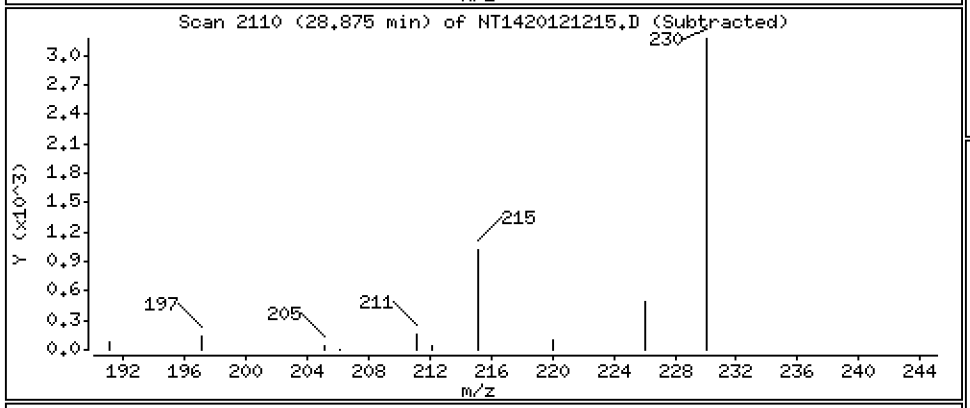
Column diameter: 0.25

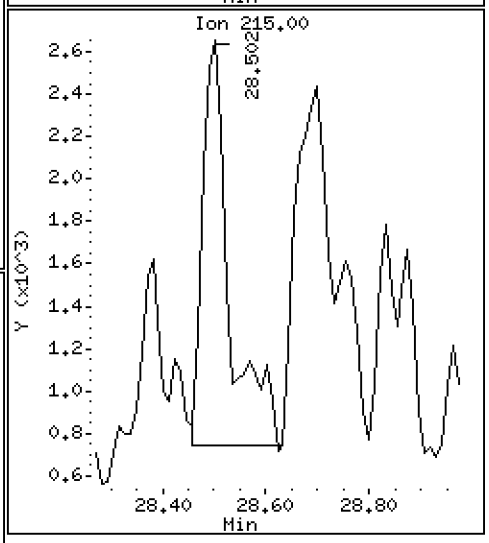
49 C2-Fluoranthenes/Pyrenes

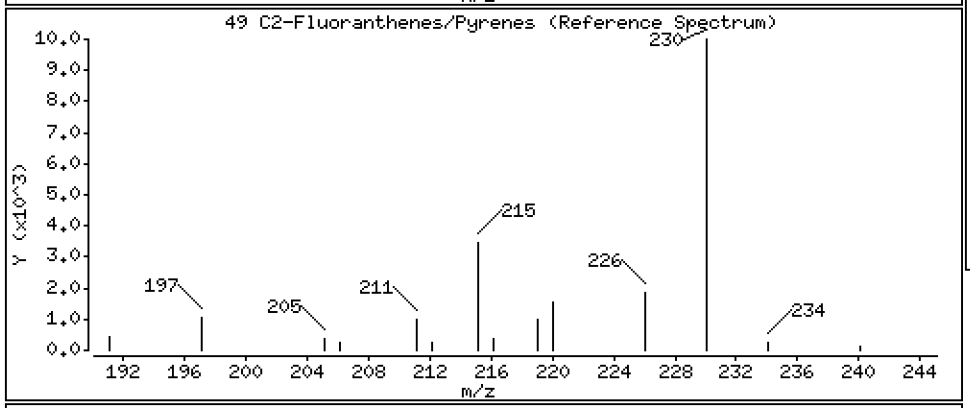
Concentration: 0.6386 ug/mL

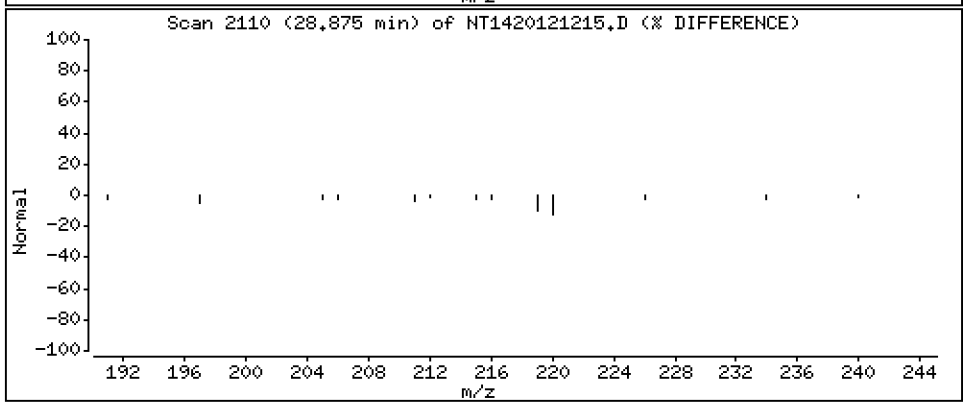












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

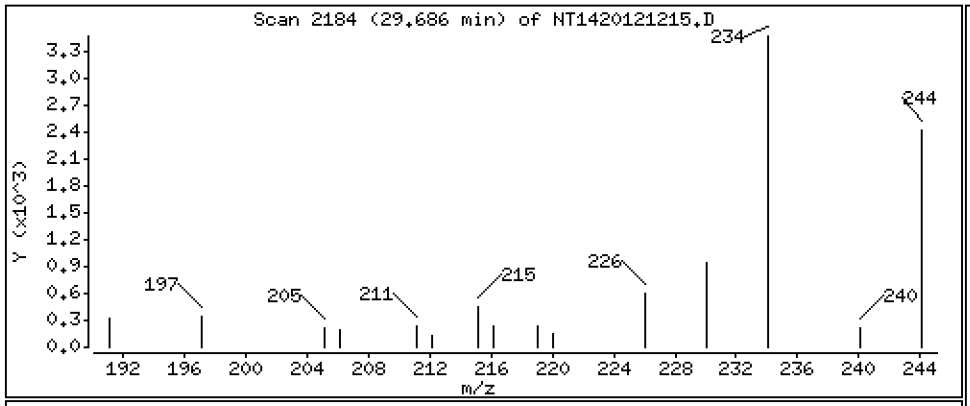
Operator: VTS

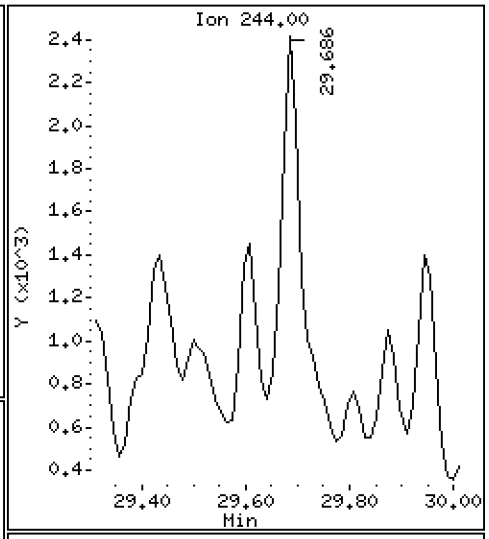
Column phase: Rxi-17Sil MS

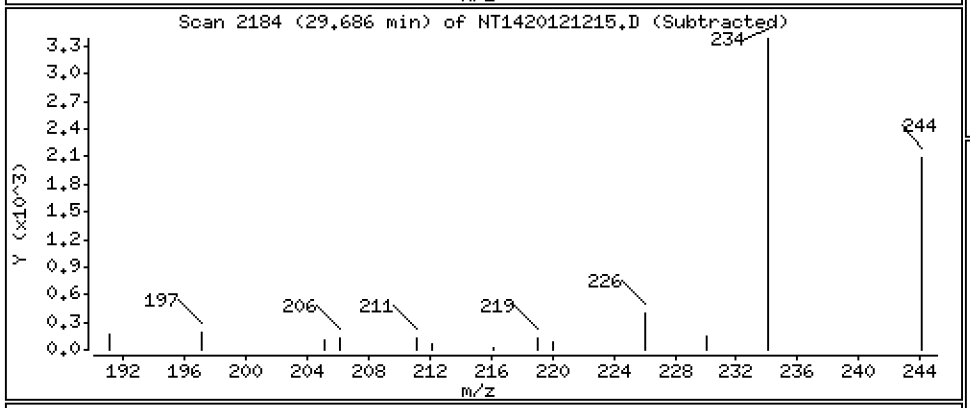
Column diameter: 0.25

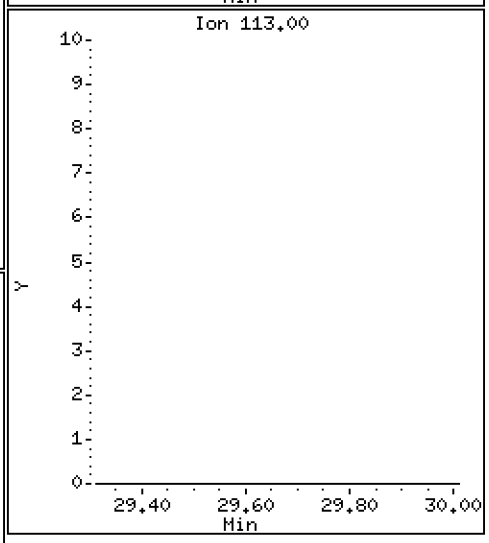
50 C3-Fluoranthenes/Pyrenes

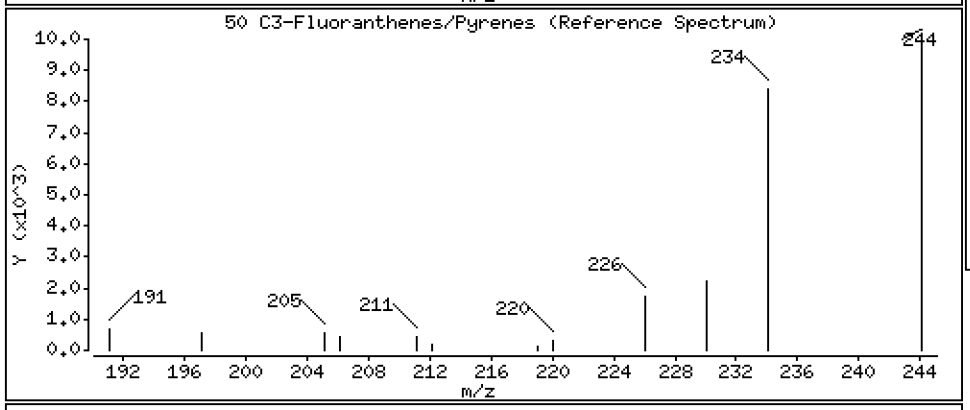
Concentration: 0.3242 ug/mL

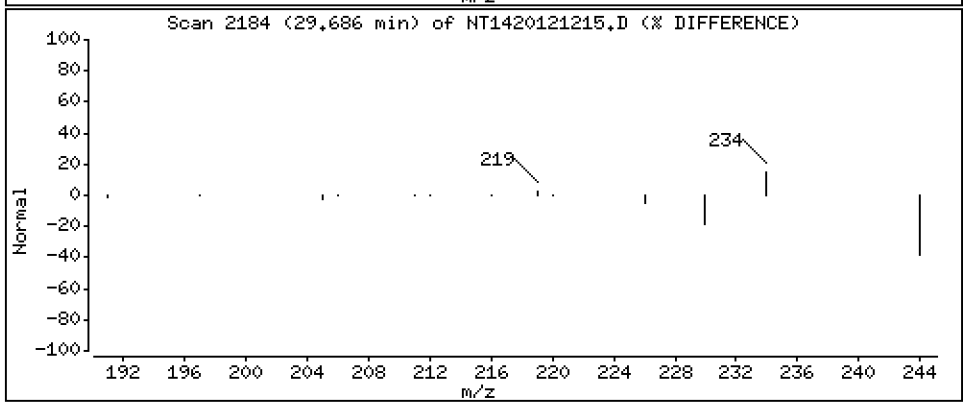












Data File: \\target\share\chem3\nt14.i\20201212.b\sim.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

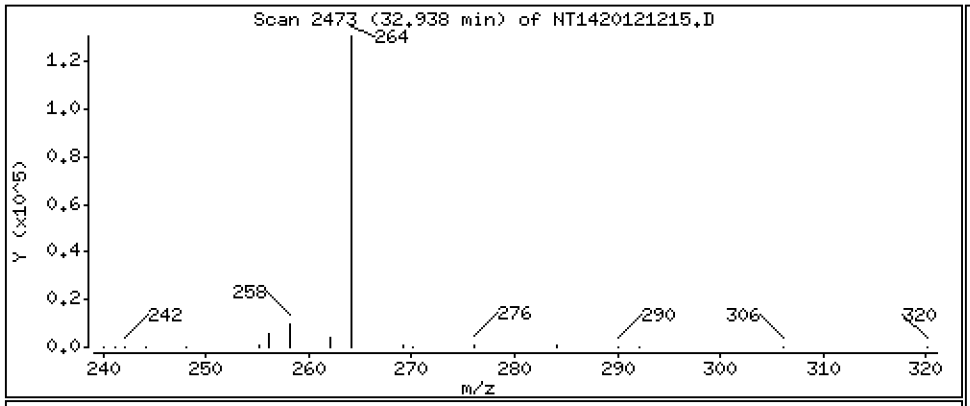
Operator: VTS

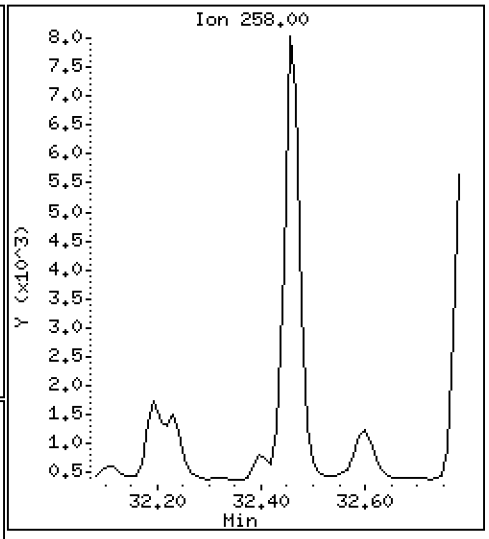
Column phase: Rxi-17Sil MS

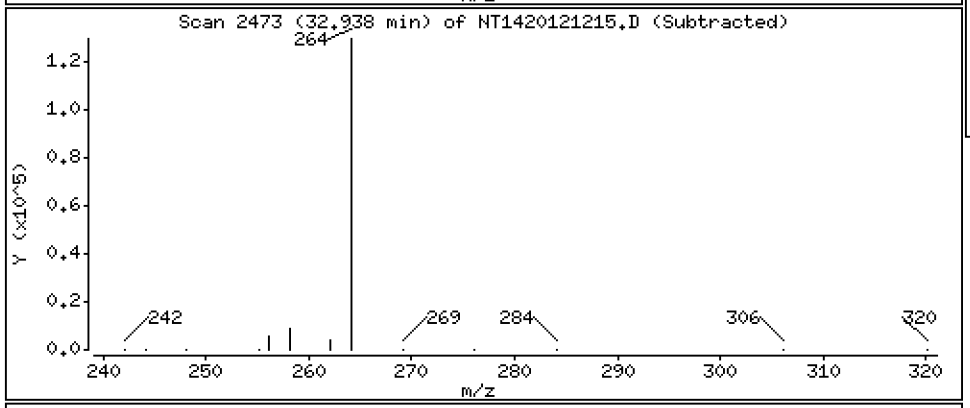
Column diameter: 0.25

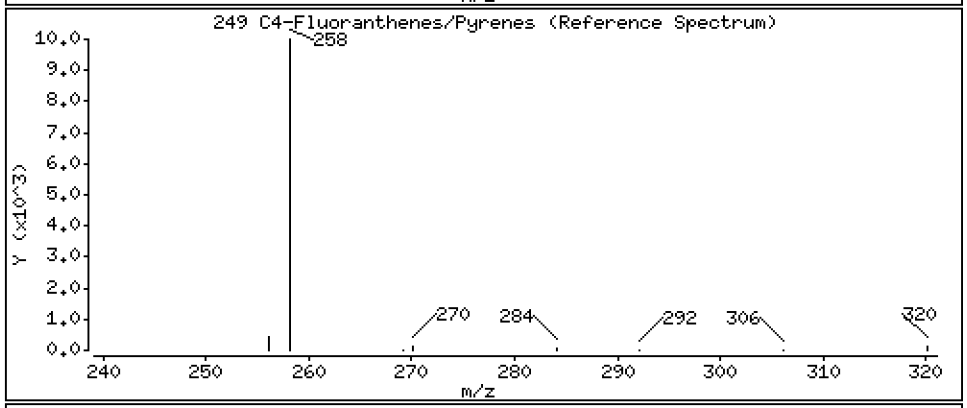
249 C4-Fluoranthenes/Pyrenes

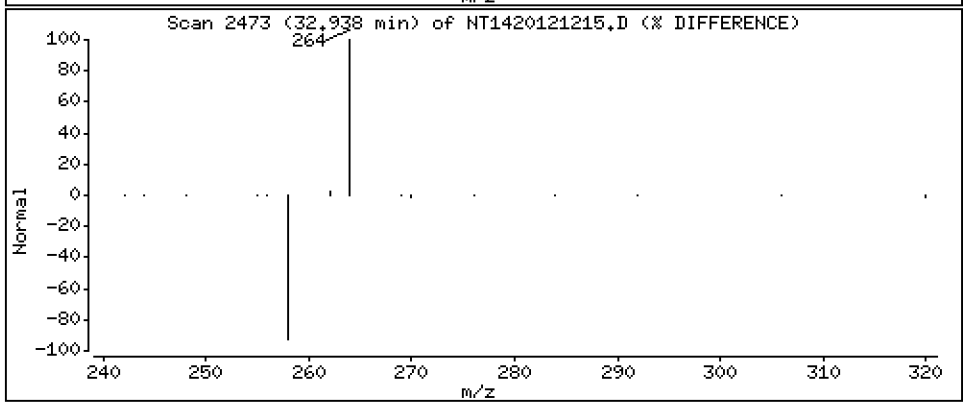
Concentration: 0.5359 ug/mL











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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

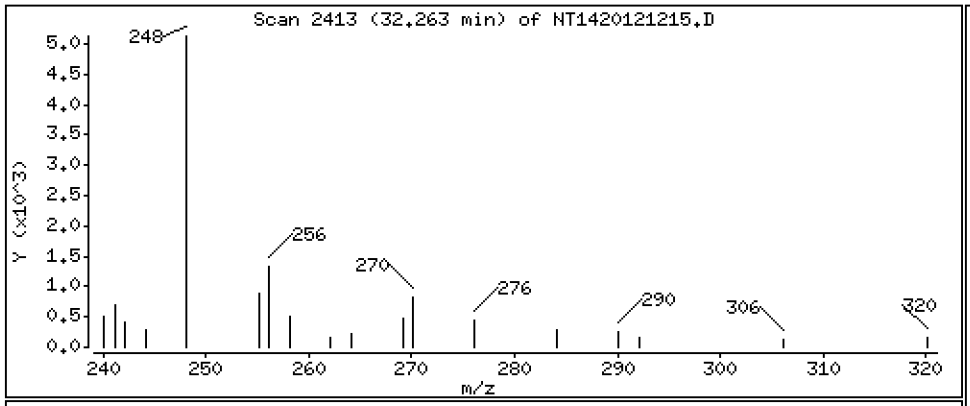
Operator: VTS

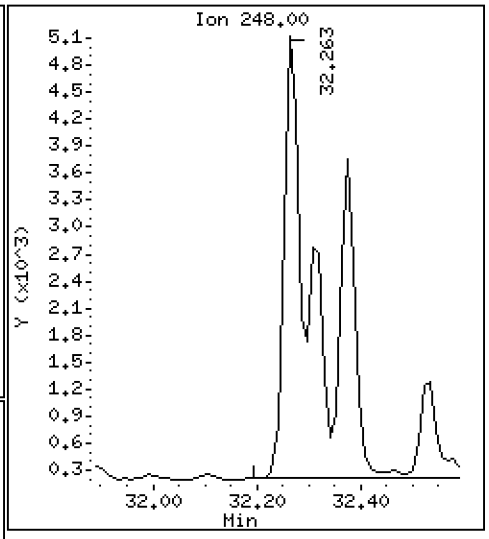
Column phase: Rxi-17Sil MS

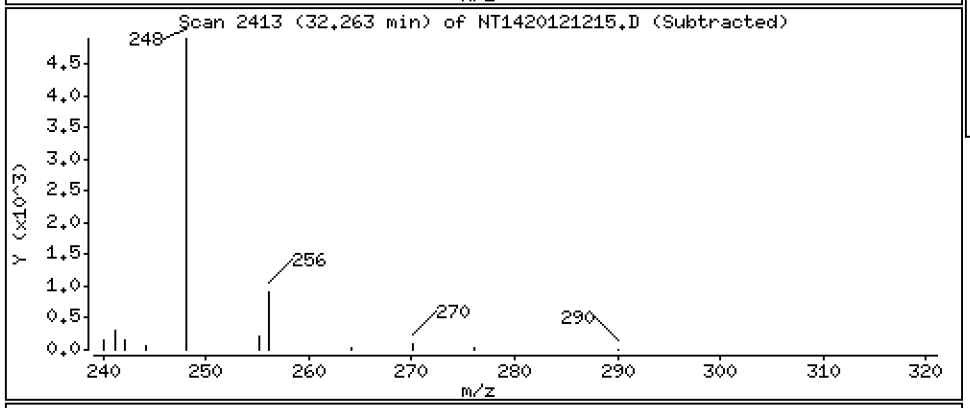
Column diameter: 0.25

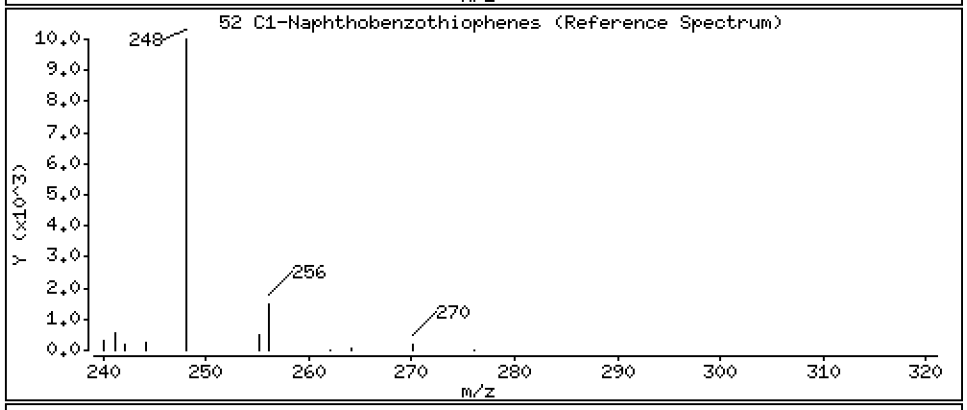
52 C1-Naphthobenzothiophenes

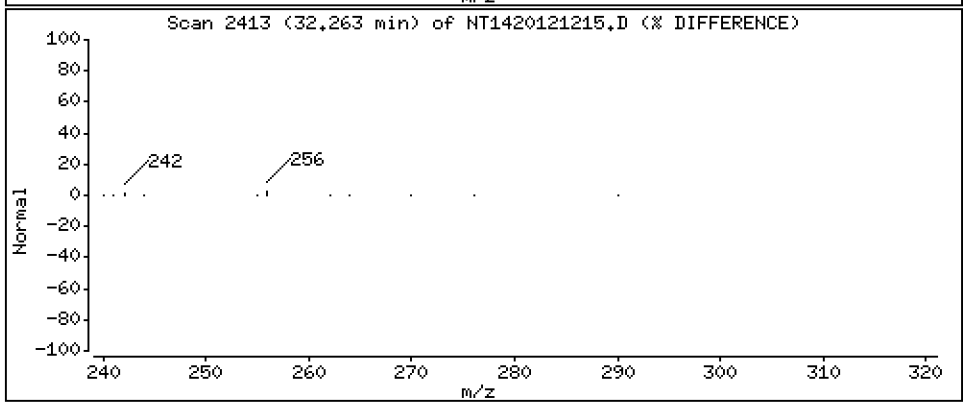
Concentration: 0.1830 ug/mL











Data File: \\target\share\chem3\nt14.i\20201212.b\sim.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

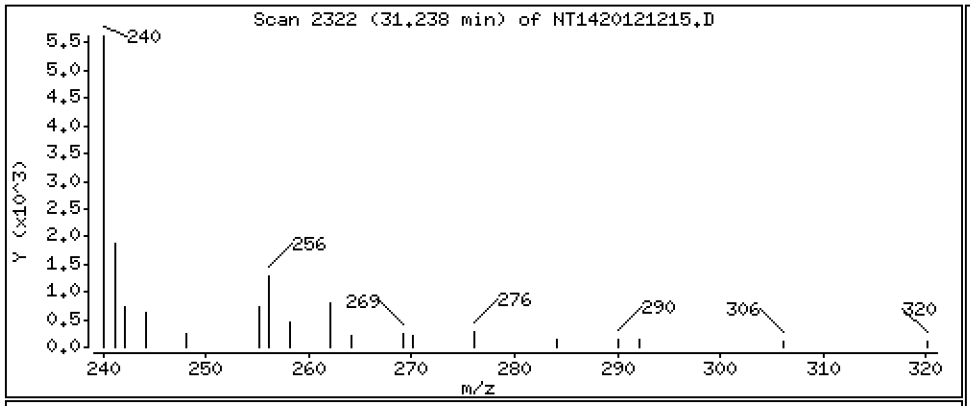
Operator: VTS

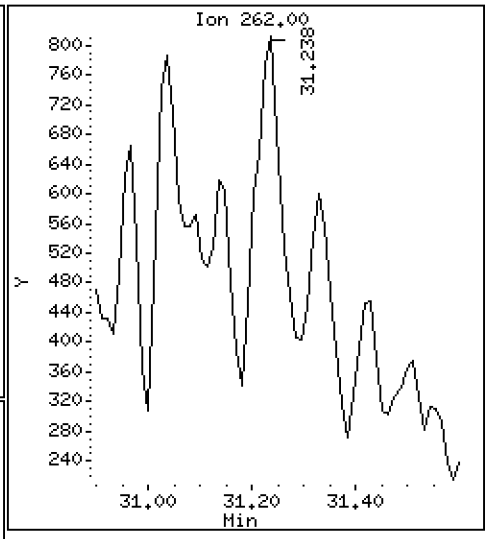
Column phase: Rxi-17Sil MS

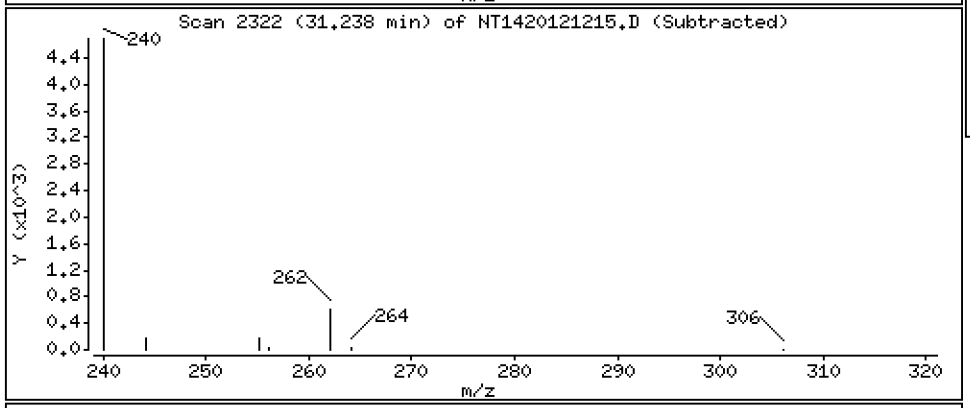
Column diameter: 0.25

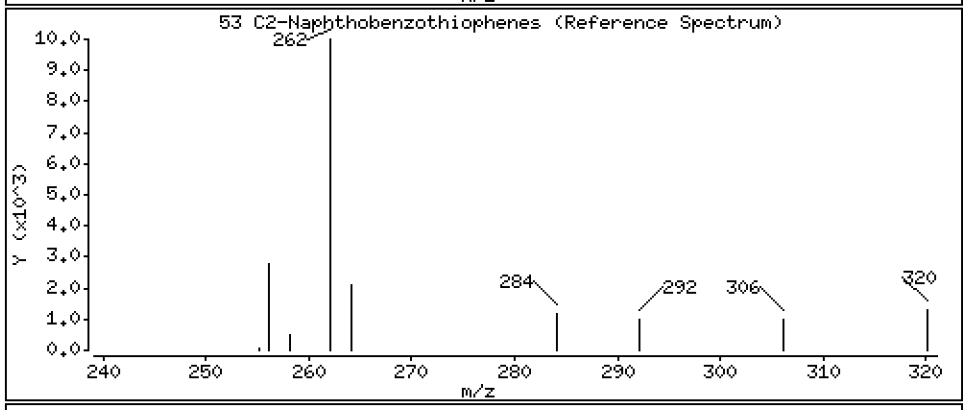
53 C2-Naphthobenzothiophenes

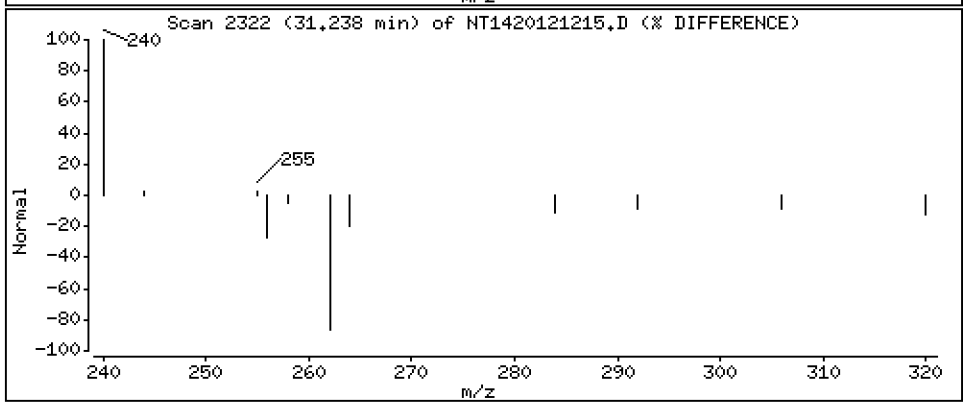
Concentration: 0.1505 ug/mL











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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

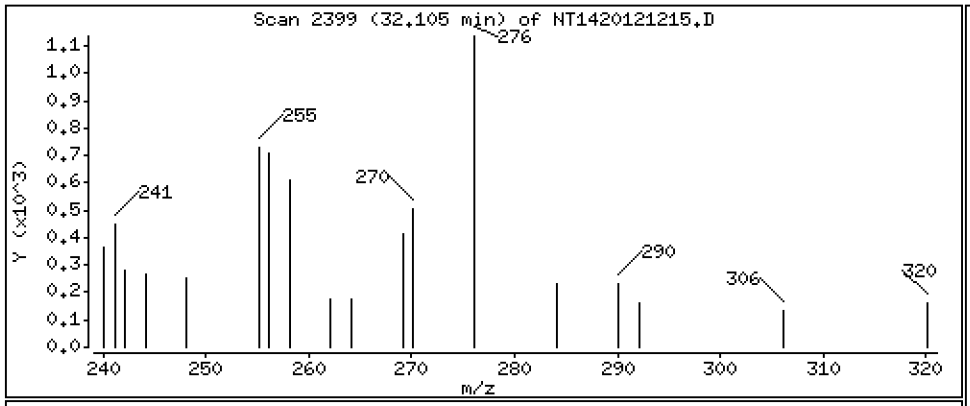
Operator: VTS

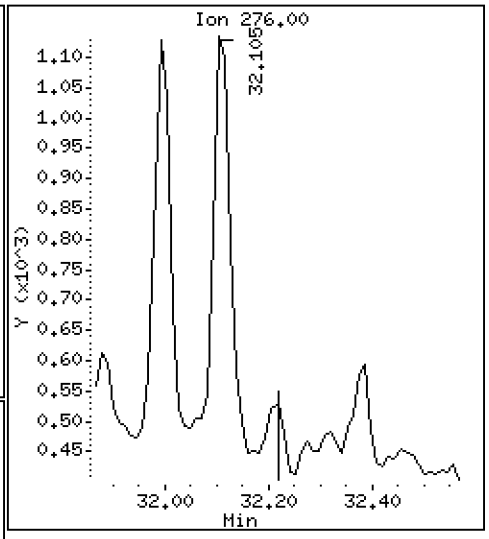
Column phase: Rxi-17Sil MS

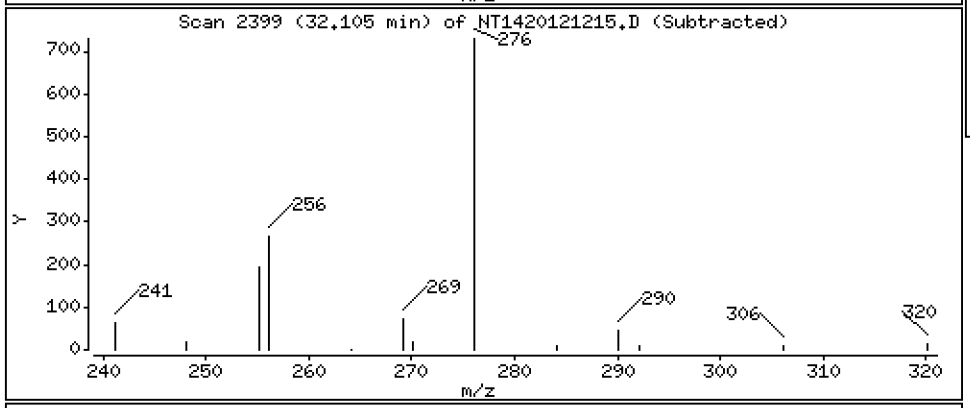
Column diameter: 0.25

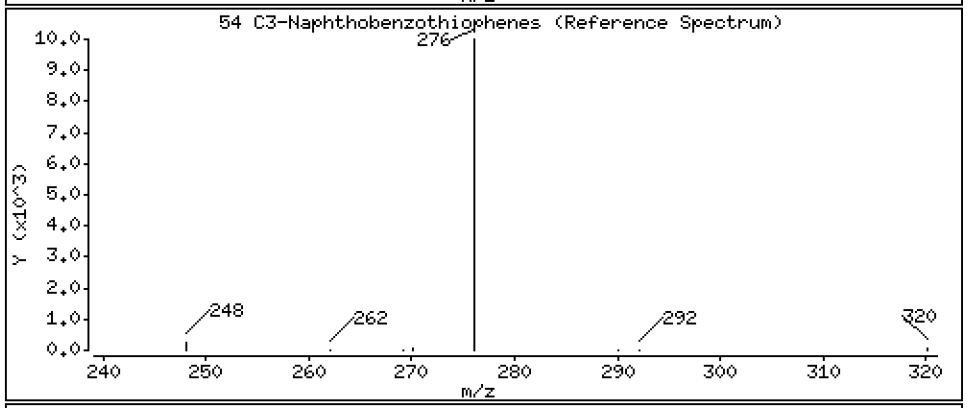
54 C3-Naphthobenzothiophenes

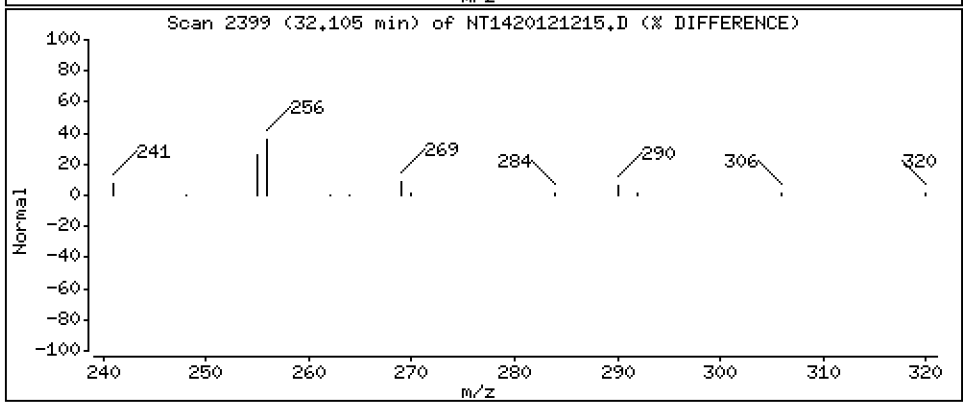
Concentration: 0.08590 ug/mL











Data File: \\target\share\chem3\nt14.i\20201212.b\sim.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

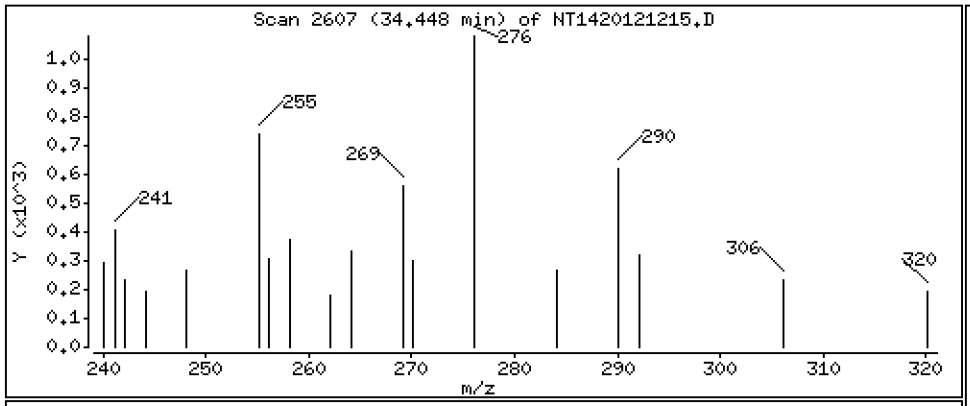
Operator: VTS

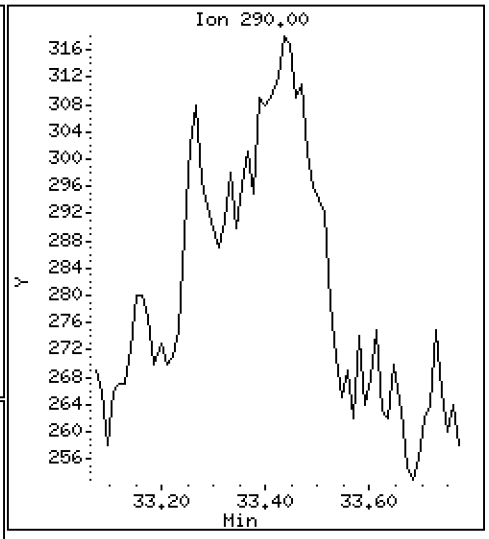
Column phase: Rxi-17Sil MS

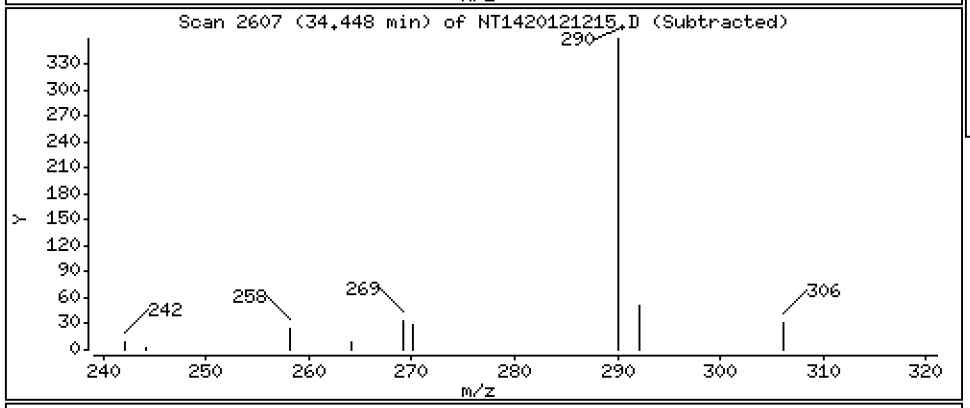
Column diameter: 0.25

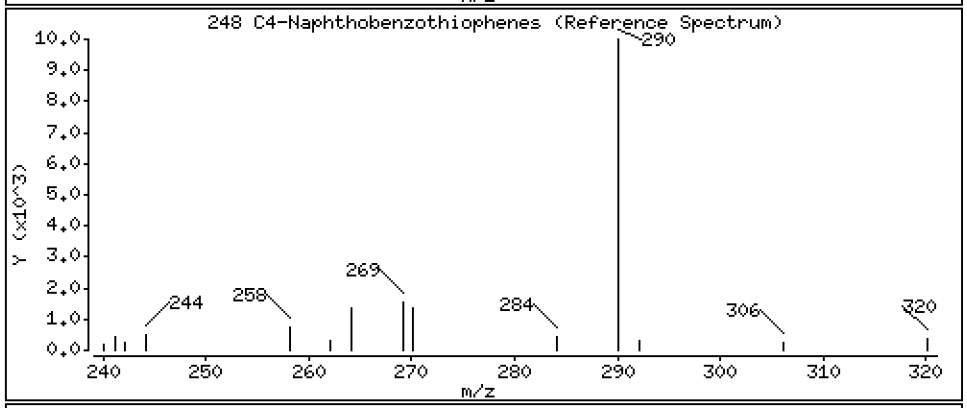
248 C4-Naphthobenzothiophenes

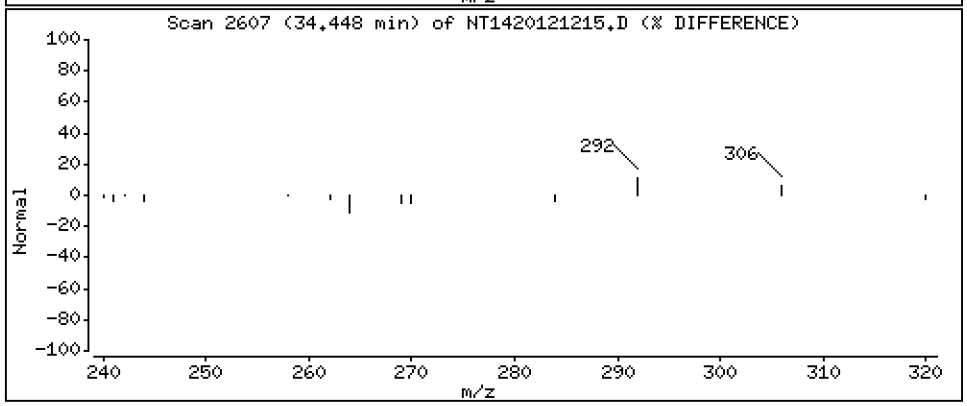
Concentration: 0.02537 ug/mL











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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

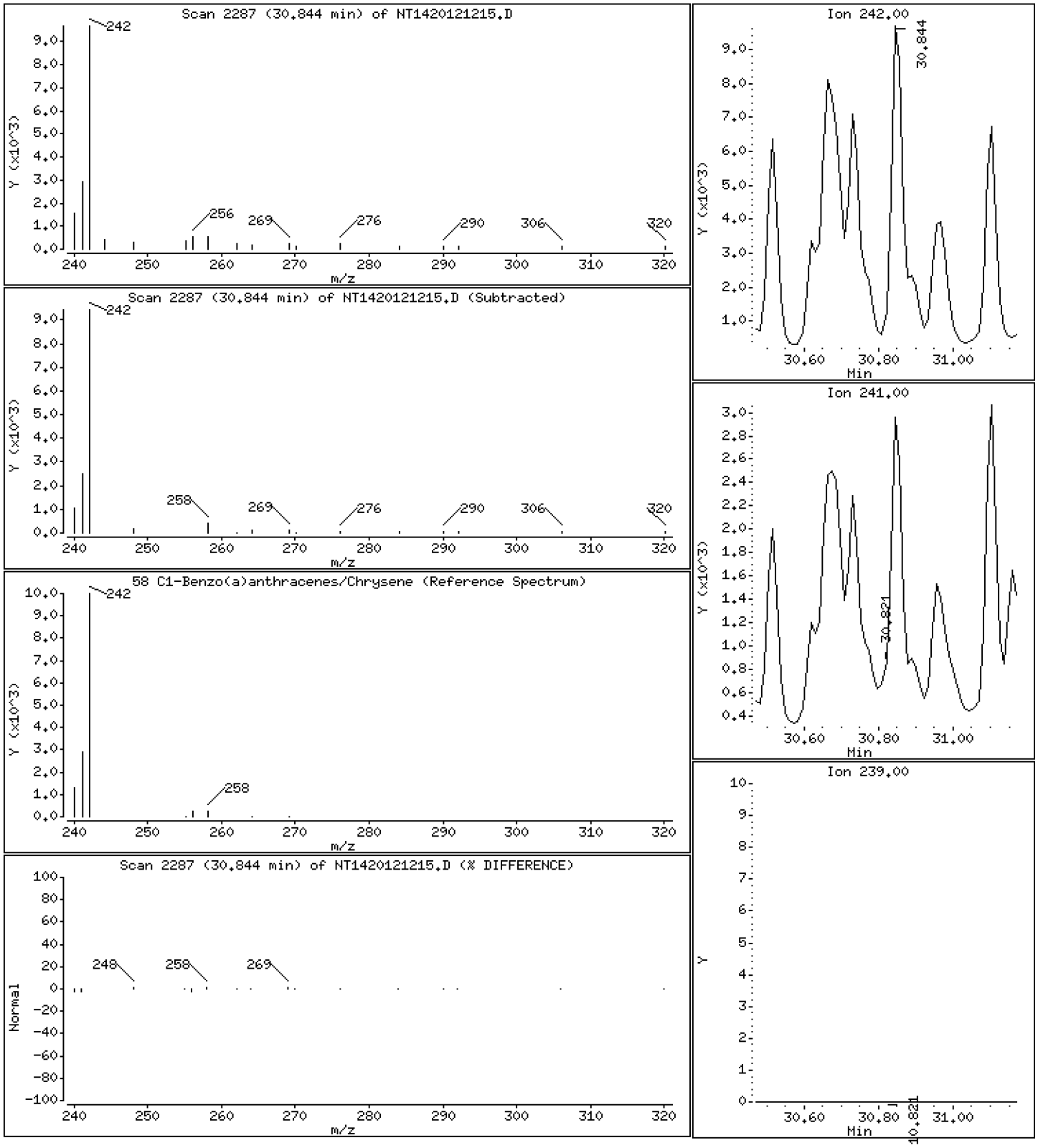
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

58 C1-Benzo(a)anthracenes/Chrysene

Concentration: 1.115 ug/mL



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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

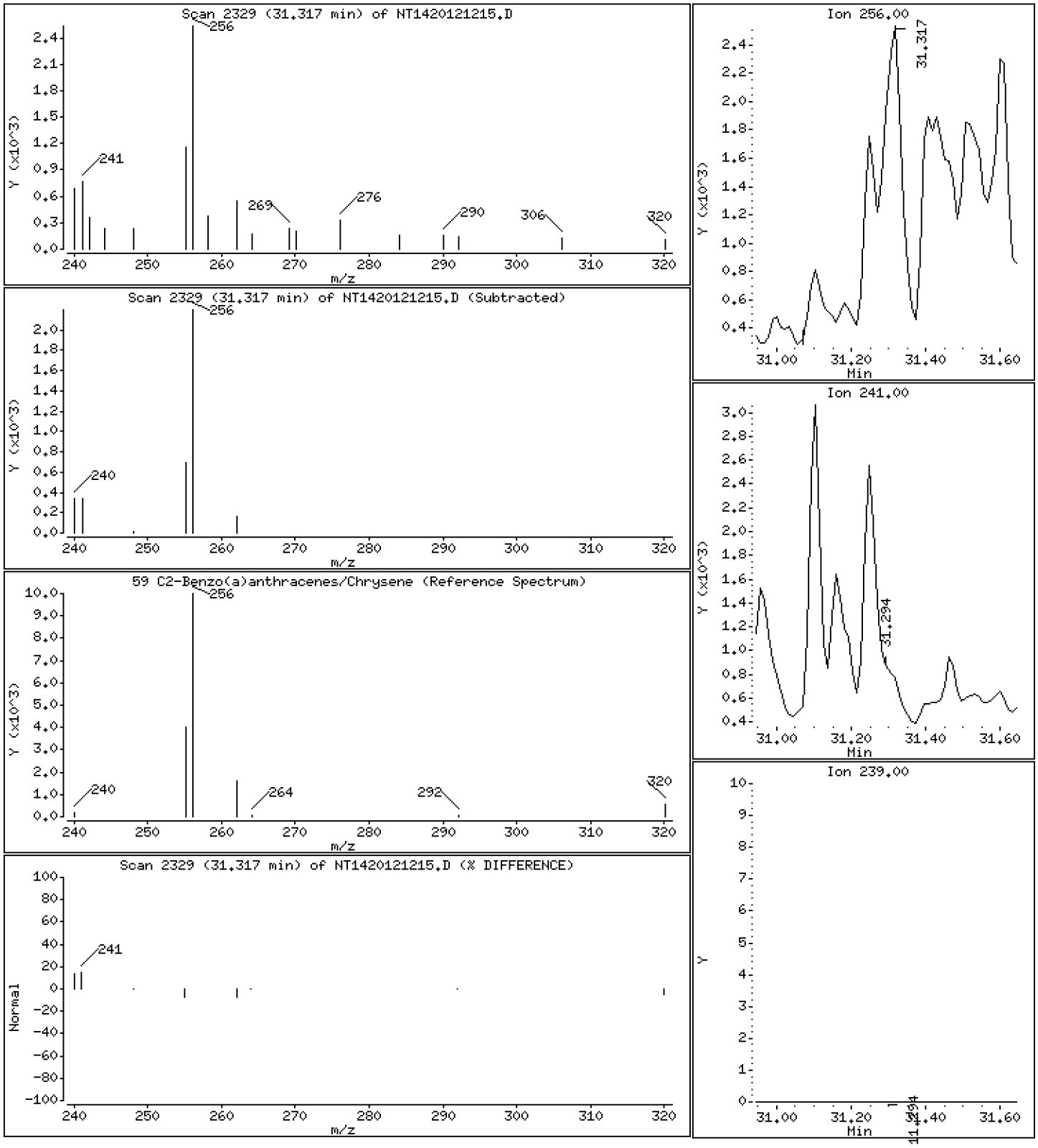
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

59 C2-Benzo(a)anthracenes/Chrysene

Concentration: 0.4305 ug/mL



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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

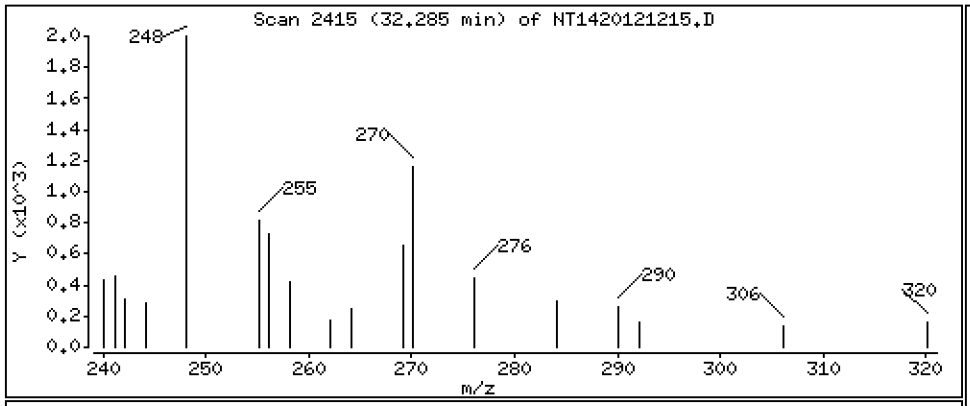
Operator: VTS

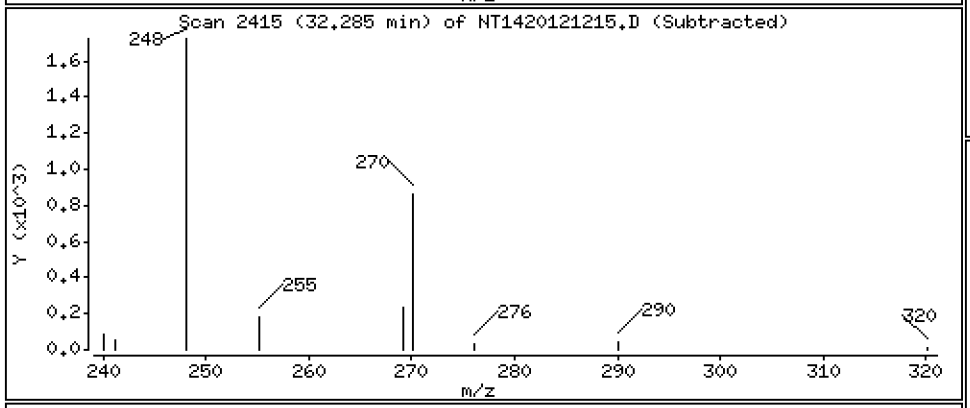
Column phase: Rxi-17Sil MS

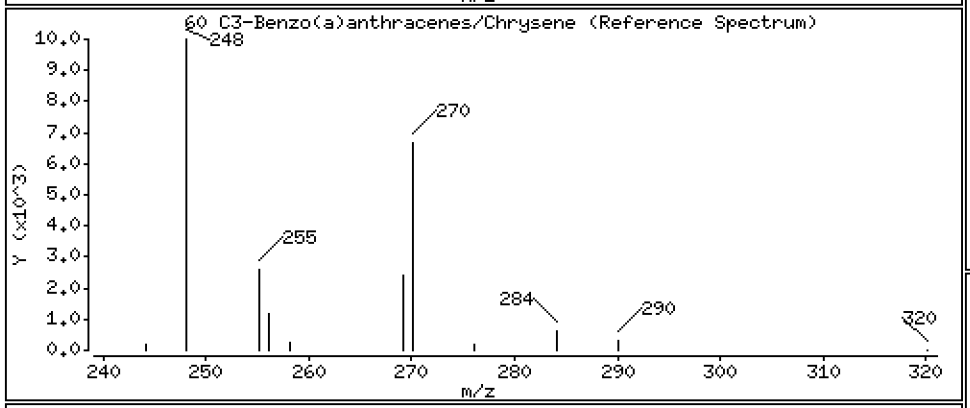
Column diameter: 0.25

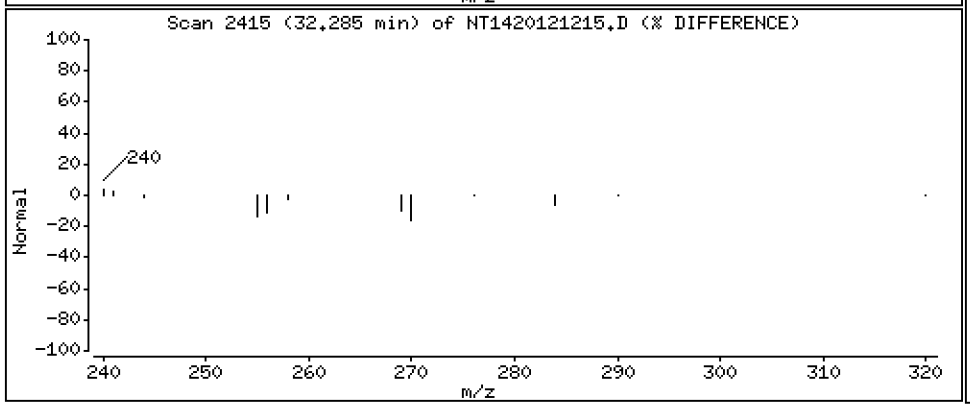
60 C3-Benzo(a)anthracenes/Chrysene

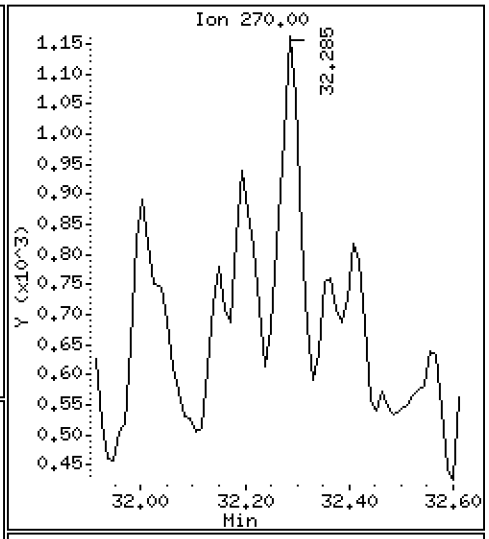
Concentration: 0.1996 ug/mL

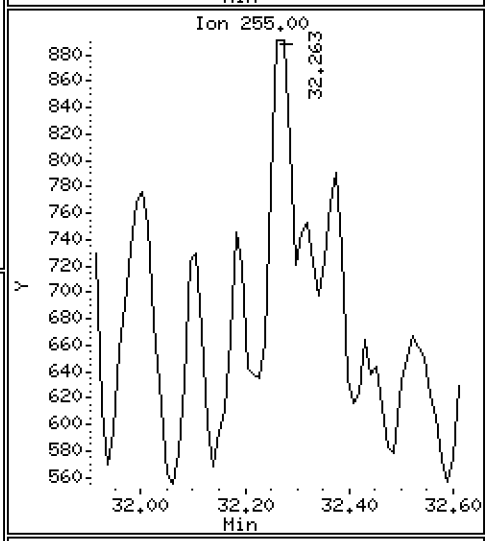


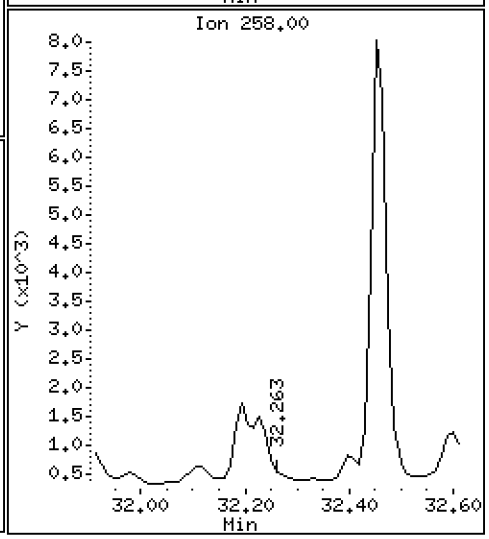












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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

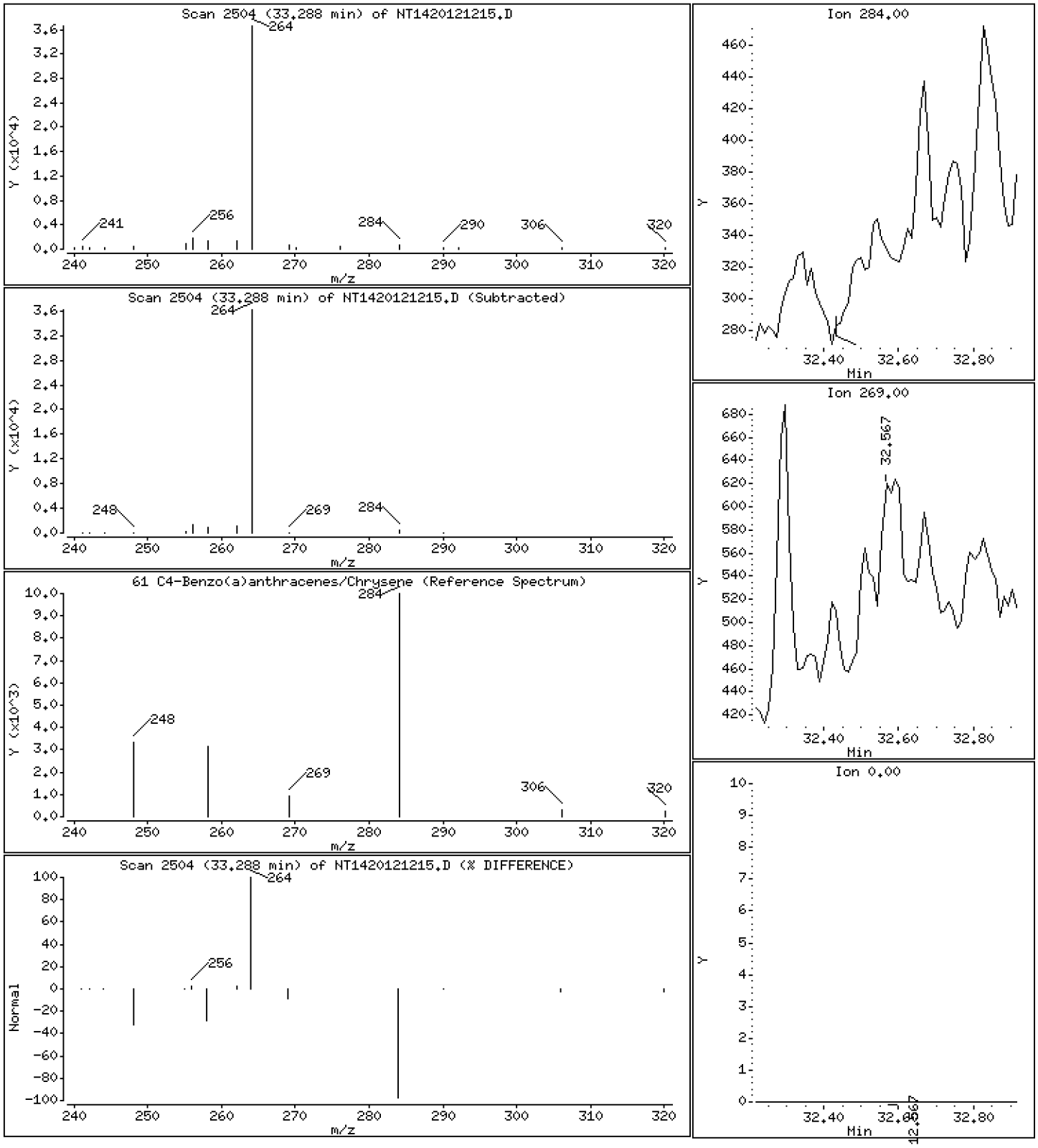
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

61 C4-Benzo(a)anthracenes/Chrysene

Concentration: 0.06237 ug/mL



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Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

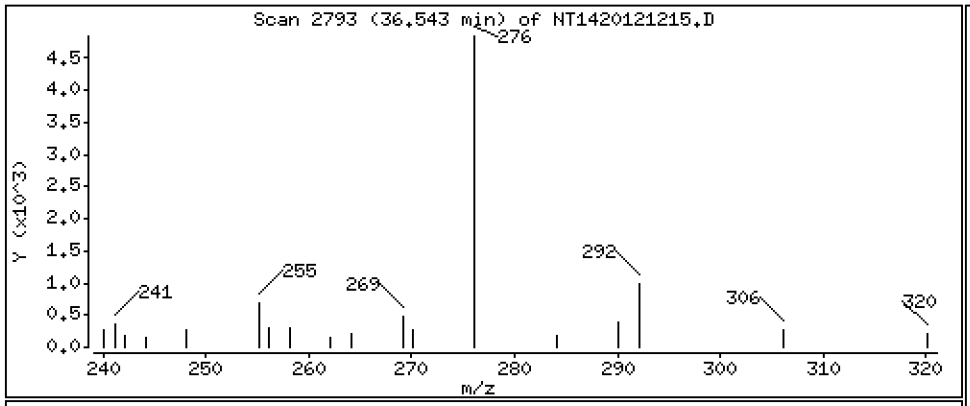
Operator: VTS

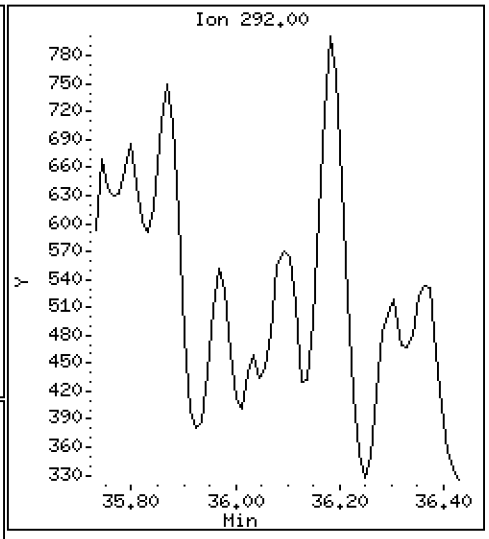
Column phase: Rxi-17Sil MS

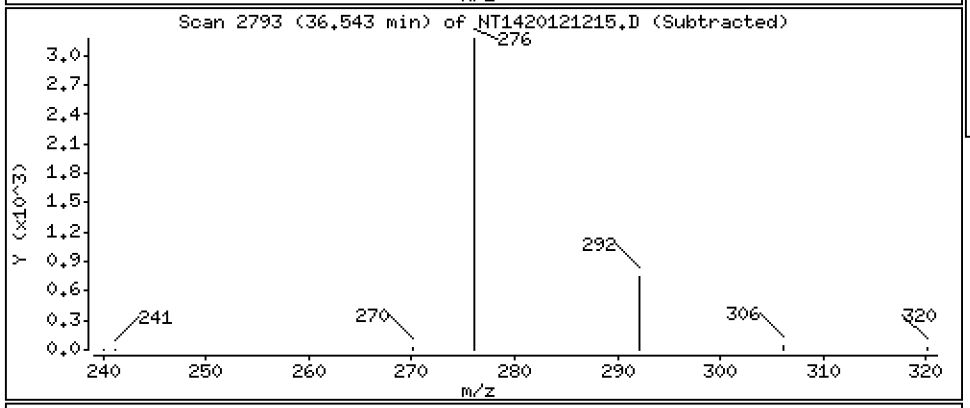
Column diameter: 0.25

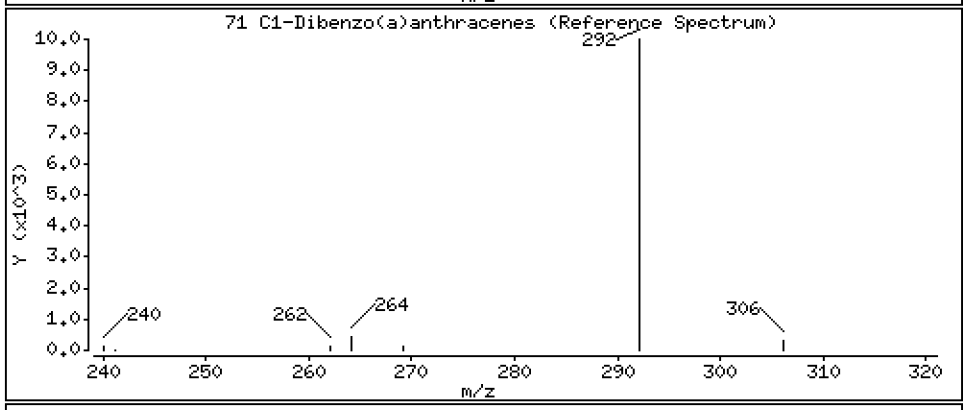
71 C1-Dibenzo(a)anthracenes

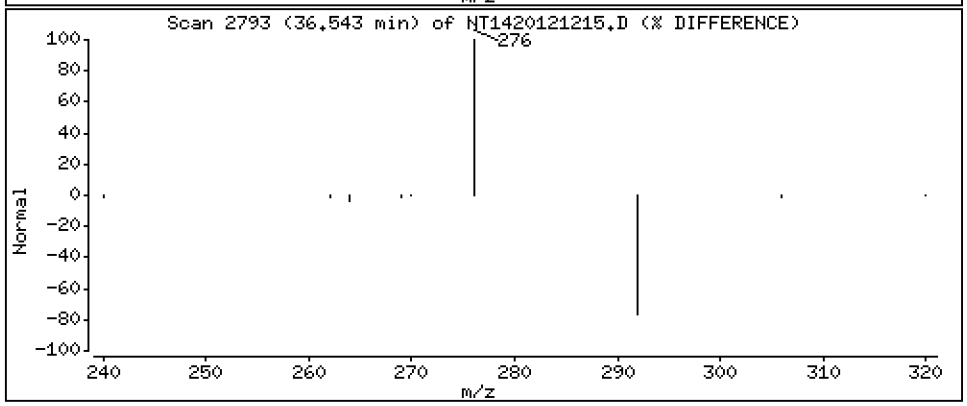
Concentration: 0.2050 ug/mL











Data File: \\target\share\chem3\nt14.i\20201212.b\sim.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

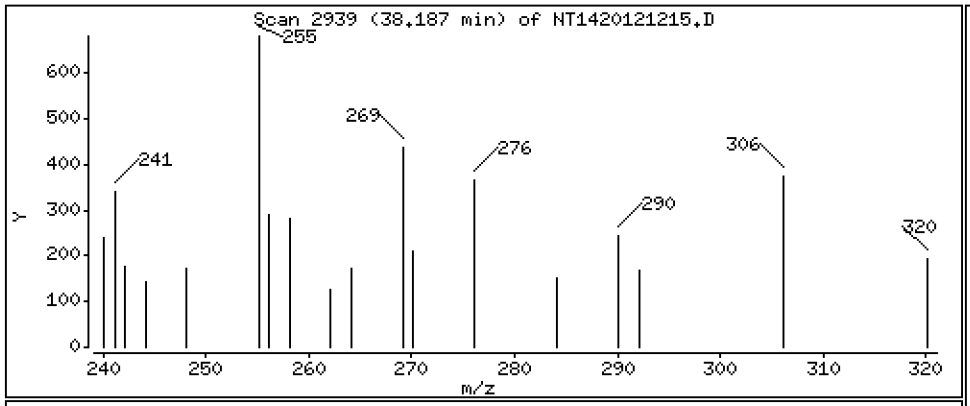
Operator: VTS

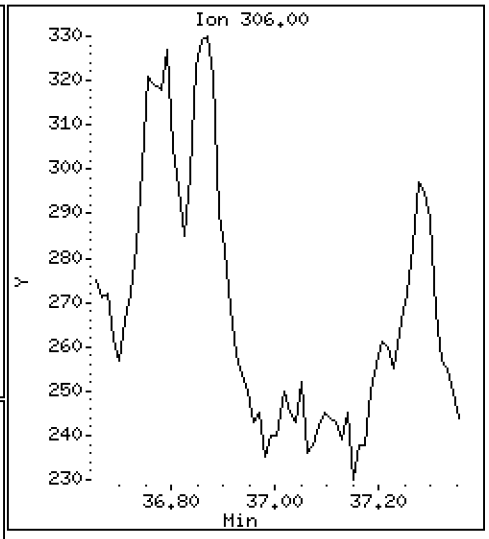
Column phase: Rxi-17Sil MS

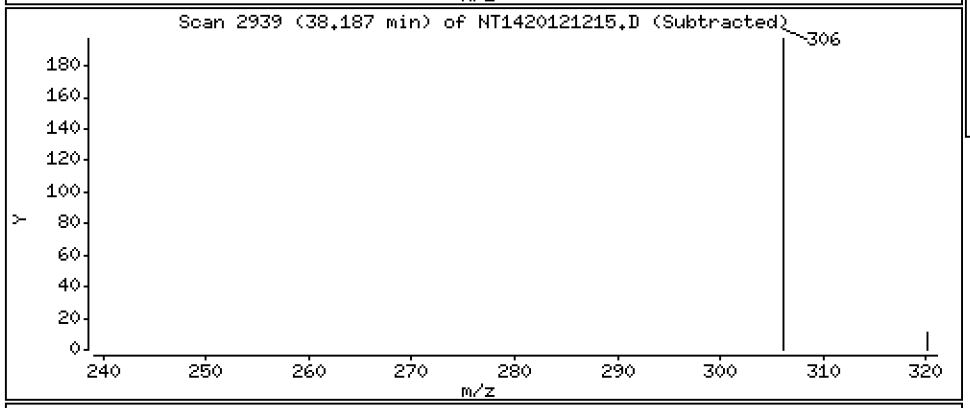
Column diameter: 0.25

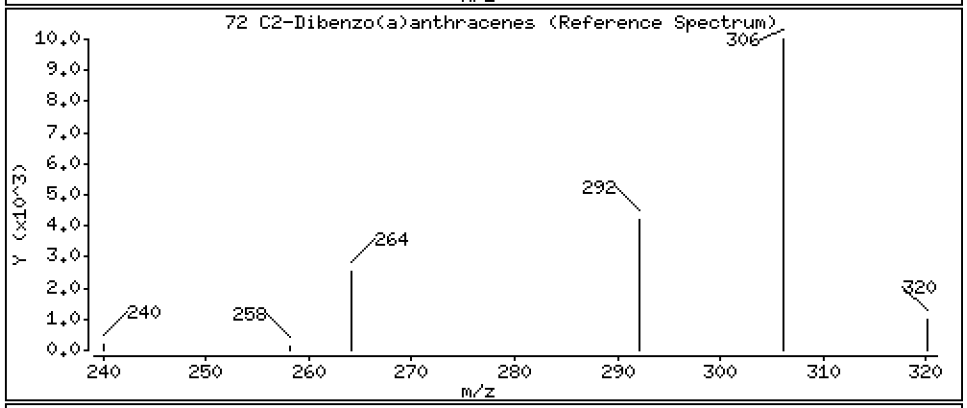
72 C2-Dibenzo(a)anthracenes

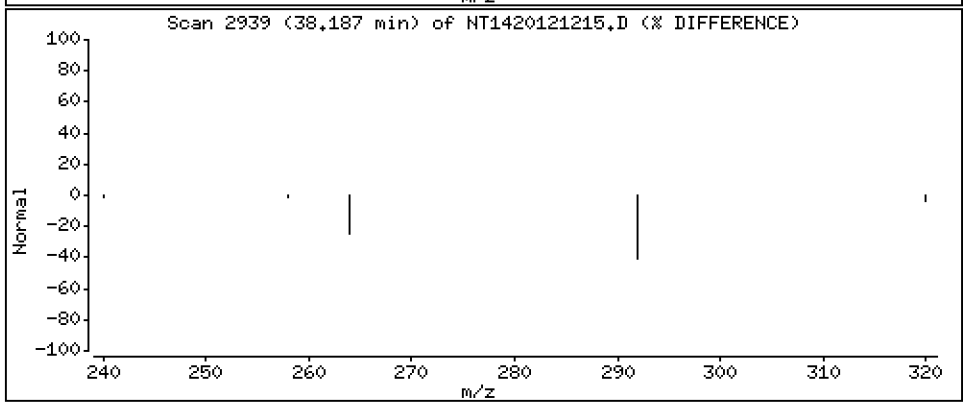
Concentration: 0.07667 ug/mL











Data File: \\target\share\chem3\nt14.i\20201212.b\sim.b\NT1420121215.D

Date : 12-DEC-2020 22:23

Client ID:

Instrument: nt14.i

Sample Info: 20K0073-02

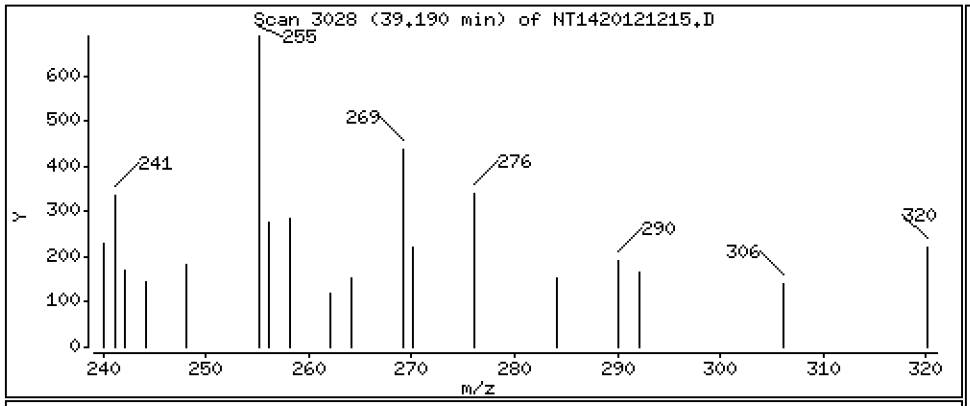
Operator: VTS

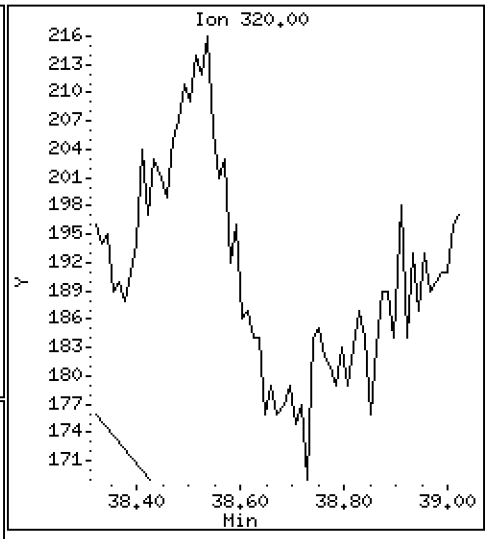
Column phase: Rxi-17Sil MS

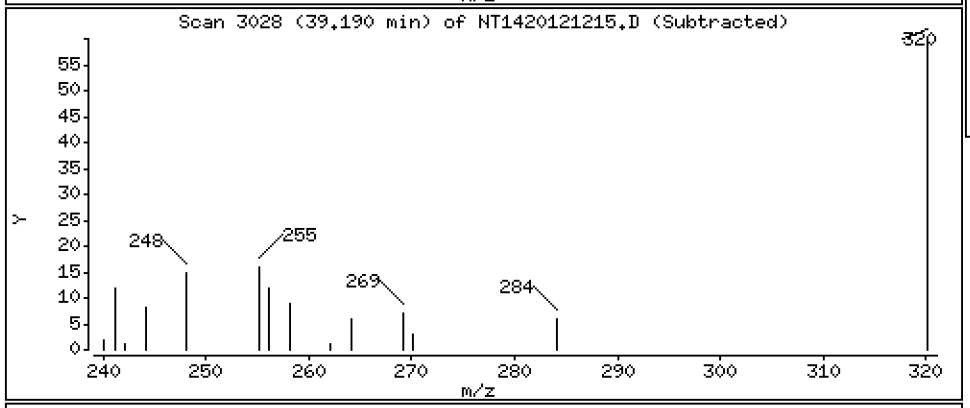
Column diameter: 0.25

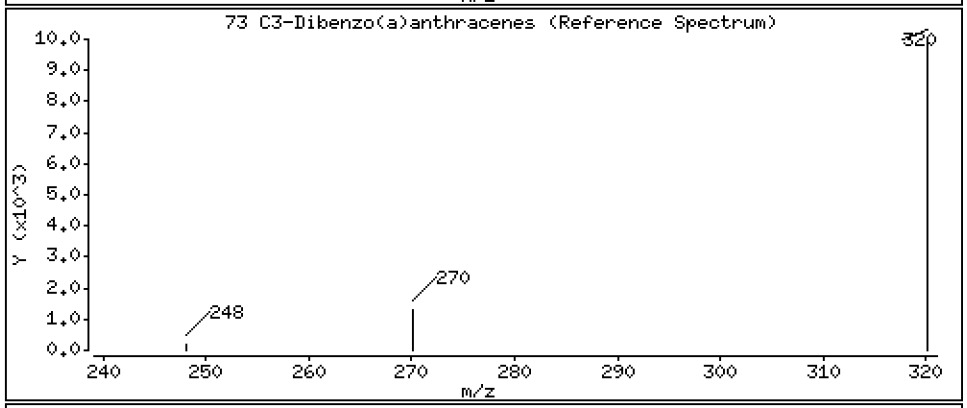
73 C3-Dibenzo(a)anthracenes

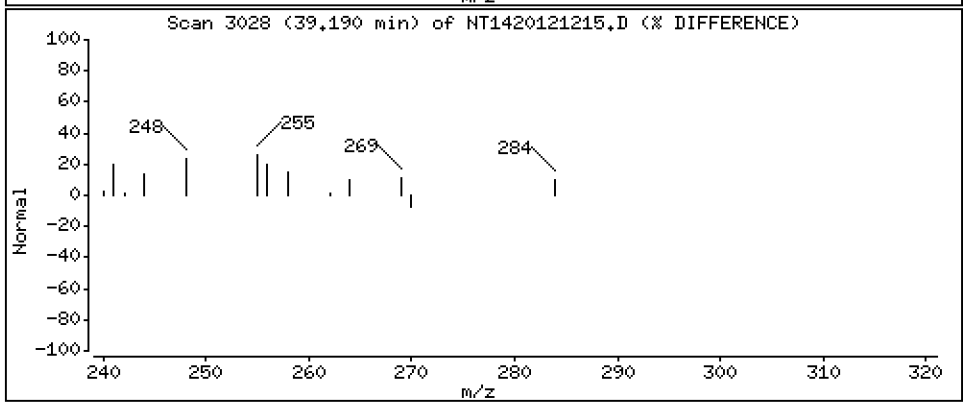
Concentration: 0.04668 ug/mL











ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201212.b\sim.b\NT1420121215.D
Lab Smp Id: 20K0073-02
Inj Date : 12-DEC-2020 22:23
Operator : VTS Inst ID: nt14.i
Smp Info : 20K0073-02
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201212.b\sim.b\ALKYLRANGE.m
Meth Date : 15-Dec-2020 17:14 yev Quant Type: ISTD
Cal Date : 17-OCT-2020 17:58 Cal File: NT1420101709S.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ALKYLRANGES.sub
Target Version: 4.14
Processing Host: ORGDATA102

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
3 C1-Decalin	152	Compound Not Detected.					
4 C2-Decalin	166	Compound Not Detected.					
5 C3-Decalin	180	10.214	11.000	(0.549)	671	0.09227	0.09227(M)
247 C4-Decalin	194	12.467	12.000	(0.670)	1761	0.24216	0.2422(M)
8 C1-Naphthalenes	142	13.522	13.522	(0.727)	5745	0.06086	0.06086(M)
9 C2-Naphthalenes	156	15.236	15.236	(0.819)	19305	0.20451	0.2045(M)
10 C3-Naphthalenes	170	17.500	17.808	(0.940)	51986	0.55072	0.5507(M)
11 C4-Naphthalenes	184	19.190	19.201	(1.031)	32965	0.34922	0.3492(M)
13 C1-Benzothiophenes	148	13.654	13.961	(0.734)	1730	0.02200	0.02200(M)
14 C2-Benzothiophenes	162	Compound Not Detected.					
15 C3_Benzothiophenes	176	17.533	17.511	(0.942)	1124	0.01430	0.01430
27 C1-Fluorenes	180	20.255	20.403	(1.088)	16484	0.21461	0.2146(M)
28 C2-Fluorenes	194	21.820	22.162	(1.172)	25343	0.32996	0.3300(M)
29 C3-Fluorenes	208	23.130	23.130	(1.243)	24978	0.32520	0.3252(M)
31 C1-Dibenzothiophenes	198	22.756	22.987	(1.223)	30878	0.27933	0.2793(M)
* 25 Fluorene-d10	176	18.611	18.623	(1.000)	231239	2.00000	
32 C2-Dibenzothiophenes	212	24.174	24.163	(1.299)	39692	0.35907	0.3591(M)
33 C3-Dibenzothiophenes	226	25.064	25.054	(1.347)	29592	0.26770	0.2677(M)
34 C4-Dibenzothiophenes	240	26.186	26.186	(1.407)	12268	0.11098	0.1110(M)
38 C1-Phenanthrenes/Anthracenes	192	23.415	23.844	(1.062)	185529	1.47120	1.471(M)
39 C2-Phenanthrenes/Anthracenes	206	24.933	25.021	(1.131)	133688	1.06011	1.060(M)
40 C3-Phenanthrenes/Anthracenes	220	26.131	26.120	(1.185)	70462	0.55875	0.5587(M)
41 C4-Phenanthrenes/Anthracenes	234	26.637	27.592	(1.208)	21689	0.17199	0.1720(M)
48 C1-Fluoranthenes/Pyrenes	216	27.756	27.384	(1.259)	237960	1.68025	1.680(M)
* 250 Anthracene-d10	188	22.052	22.063	(1.000)	231706	2.00000	
49 C2-Fluoranthenes/Pyrenes	230	28.874	28.622	(1.309)	90440	0.63860	0.6386(M)
50 C3-Fluoranthenes/Pyrenes	244	29.685	29.663	(1.346)	45914	0.32420	0.3242(M)
249 C4-Fluoranthenes/Pyrenes	258	32.938	32.431	(1.494)	75891	0.53587	0.5359(M)
52 C1-Naphthobenzothiophenes	248	32.262	32.240	(1.463)	24924	0.18297	0.1830(M)
53 C2-Naphthobenzothiophenes	262	31.237	31.249	(1.416)	20502	0.15051	0.1505(M)
54 C3-Naphthobenzothiophenes	276	32.104	32.217	(1.456)	11701	0.08590	0.08590(M)
248 C4-Naphthobenzothiophenes	290	34.447	33.422	(1.562)	3456	0.02537	0.02537(M)
58 C1-Benzo(a)anthracenes/Chrysen	242	30.843	30.821	(0.937)	148019	1.11529	1.115(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.927	32.938	(1.000)	309310	2.00000	
59 C2-Benzo(a)anthracenes/Chrysen	256	31.316	31.294	(0.951)	57129	0.43046	0.4305(M)
60 C3-Benzo(a)anthracenes/Chrysen	270	32.285	32.262	(0.981)	26496	0.19964	0.1996(M)
61 C4-Benzo(a)anthracenes/Chrysen	284	33.287	32.566	(1.011)	8277	0.06237	0.06237(M)
71 C1-Dibenzo(a)anthracenes	292	36.542	36.081	(1.110)	29255	0.20502	0.2050(M)
72 C2-Dibenzo(a)anthracenes	306	38.187	37.004	(1.160)	10941	0.07667	0.07667(M)
73 C3-Dibenzo(a)anthracenes	320	39.189	38.671	(1.190)	6661	0.04668	0.04668(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: NT1420121215.D
Lab Smp Id: 20K0073-02
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201212.b\sim.b\ALKYLRANGE.m
Misc Info:

Calibration Date: 12-DEC-2020
Calibration Time: 11:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

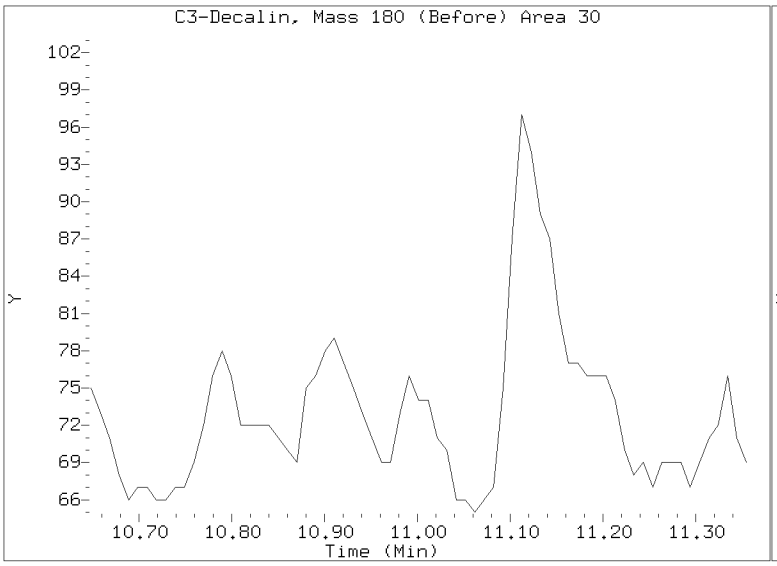
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	211292	105646	422584	231239	9.44
250 Anthracene-d10	219166	109583	438332	231706	5.72
251 Benzo(e)pyrene-d1	281561	140781	563122	309310	9.86

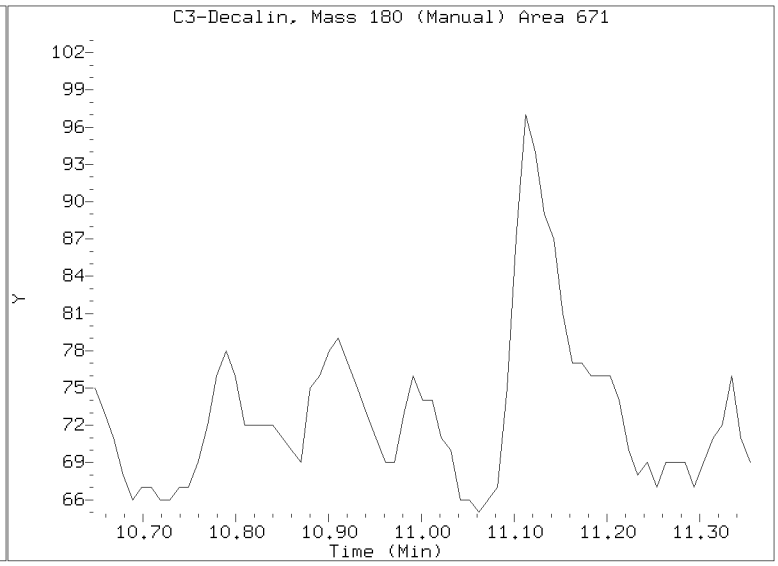
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.62	18.12	19.12	18.61	-0.06
250 Anthracene-d10	22.06	21.56	22.56	22.05	-0.05
251 Benzo(e)pyrene-d1	32.94	32.44	33.44	32.93	-0.03

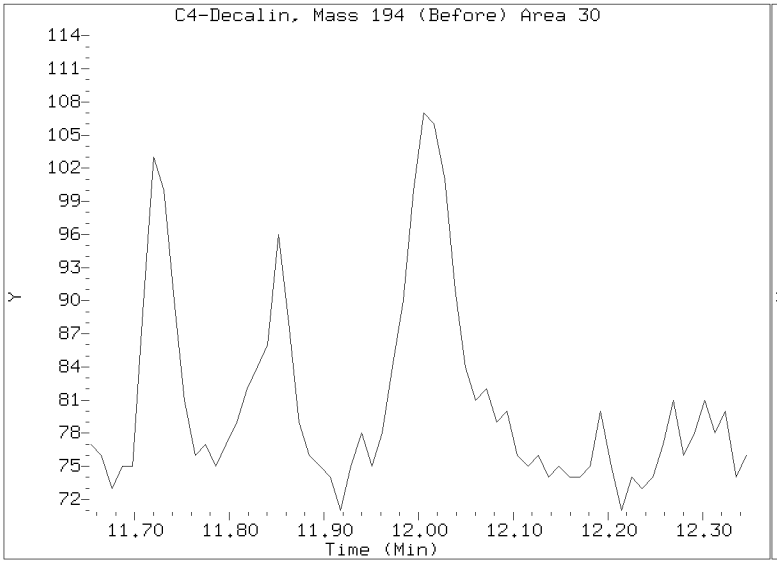
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

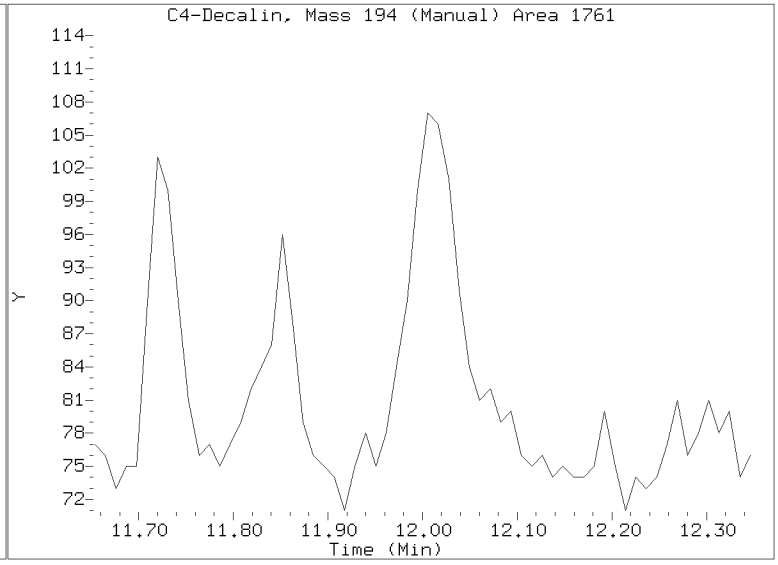
Quant Ion Manual Peak Adjustment Report

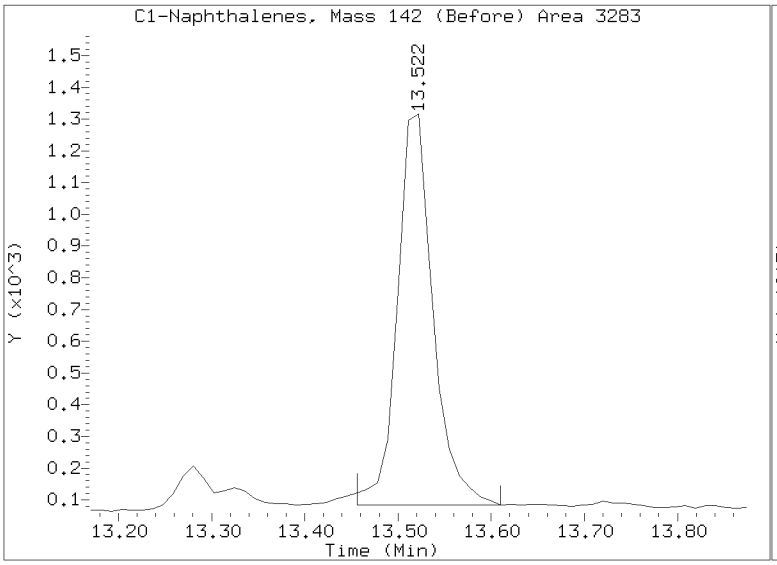
Datafile: //target/share/chem3/nt14.i/20201212.b/sim.b/NT1420121215.D
Injection Date: 12-DEC-2020 22:23
Lab ID:20K0073-02 Client ID:
Report Date: 12/15/2020 17:15

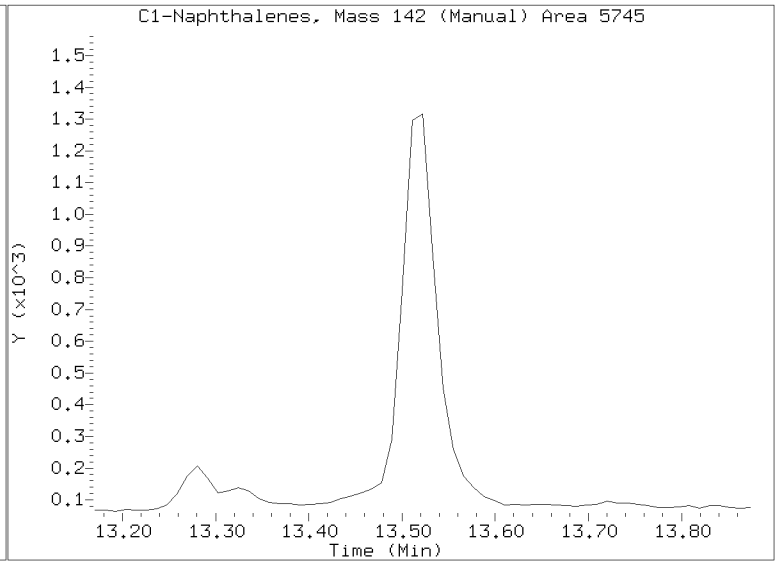












Quant Ion Manual Peak Adjustment Report

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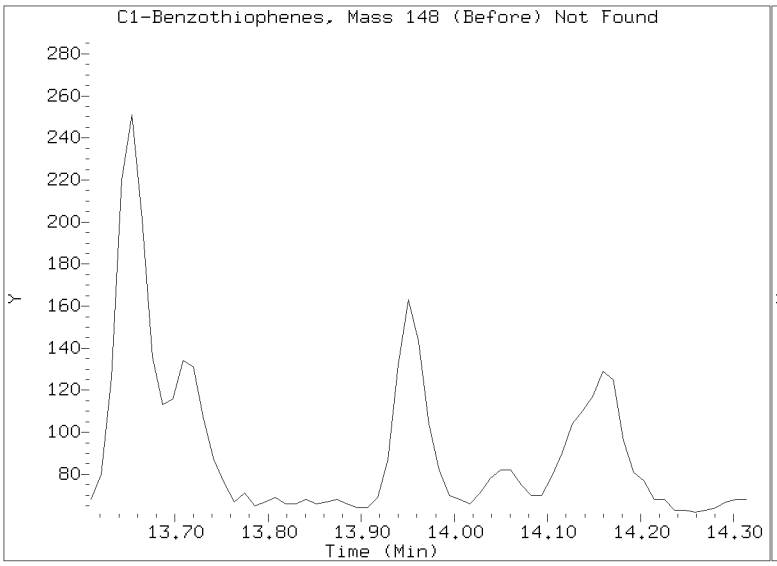
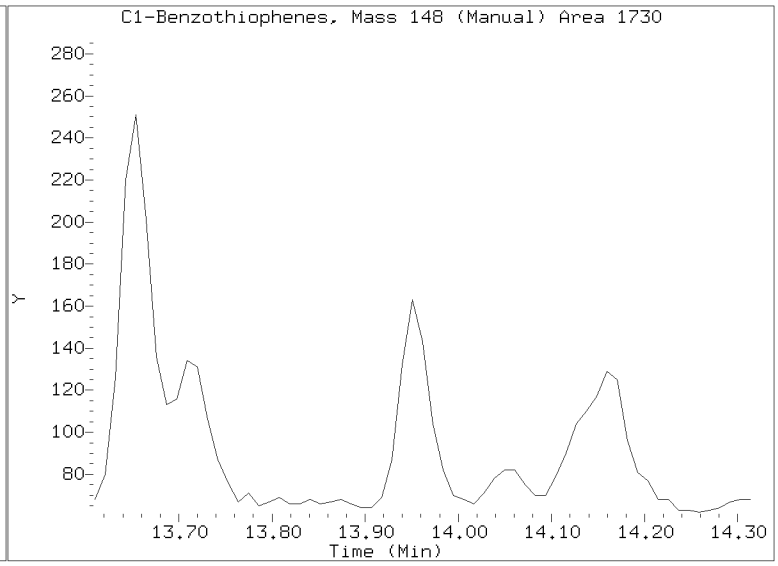
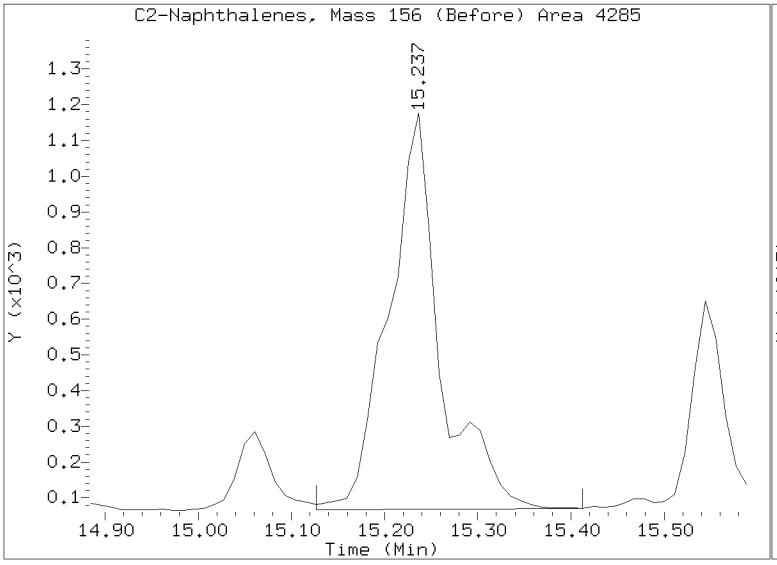
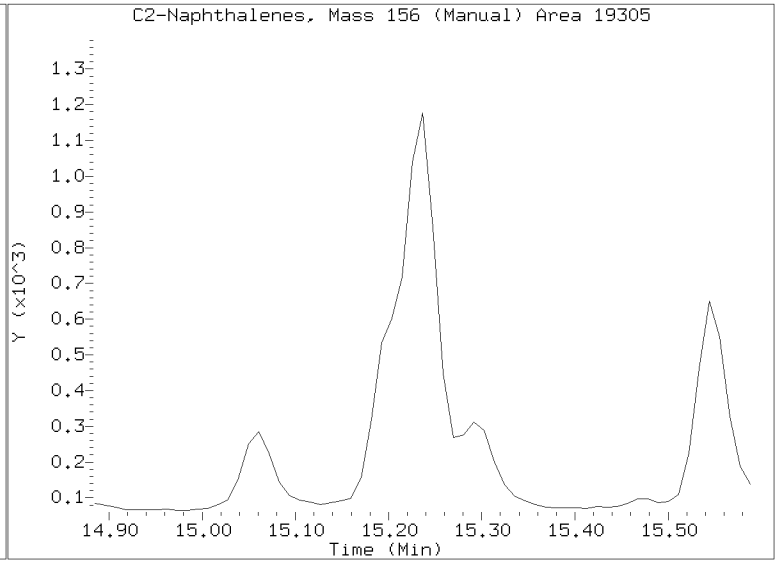
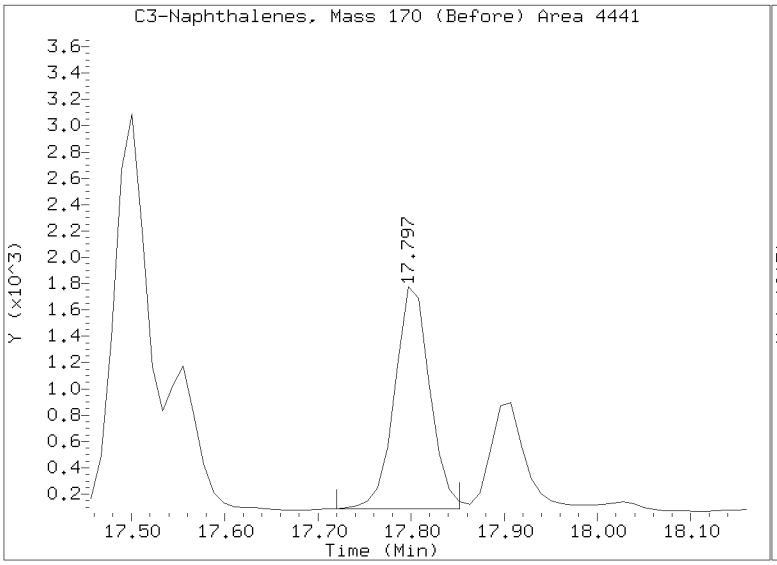
Injection Date: 12-DEC-2020 22:23
Lab ID:20K0073-02 Client ID:
Report Date: 12/15/2020 17:15

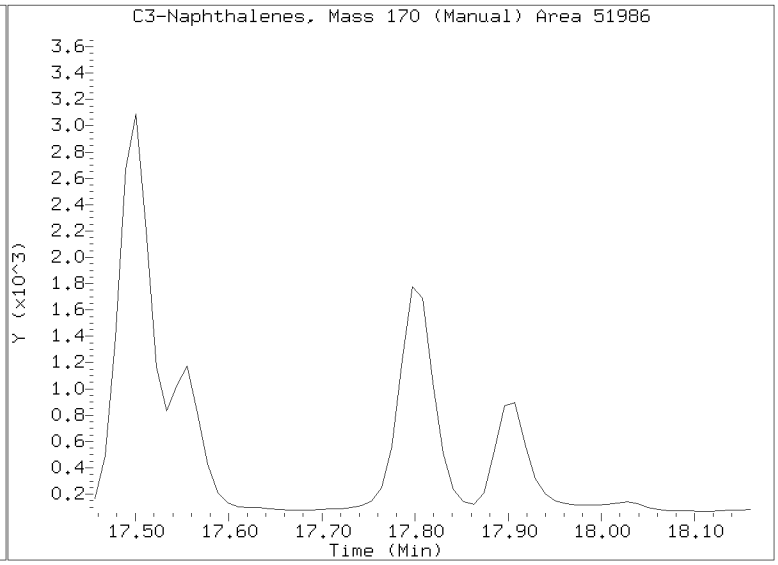












Quant Ion Manual Peak Adjustment Report

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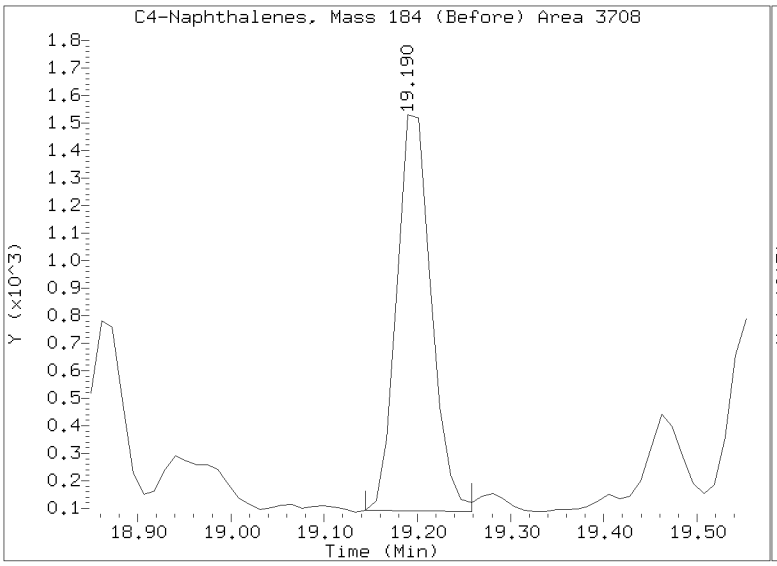
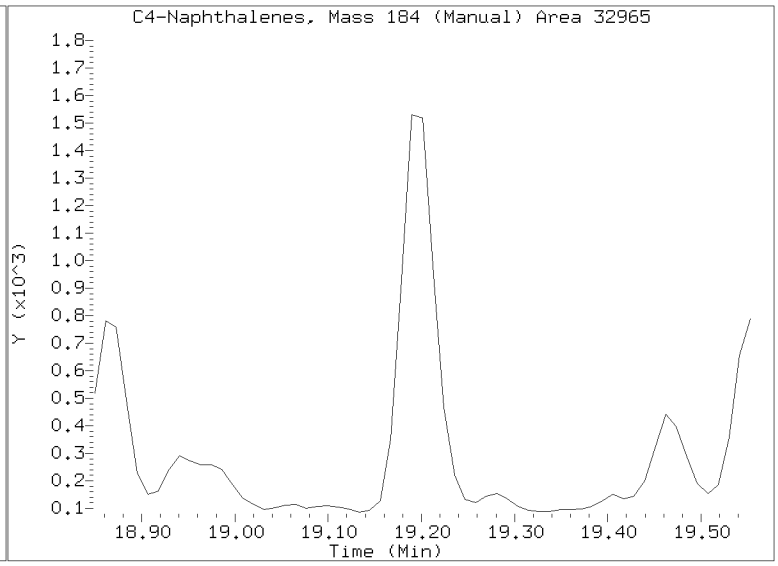
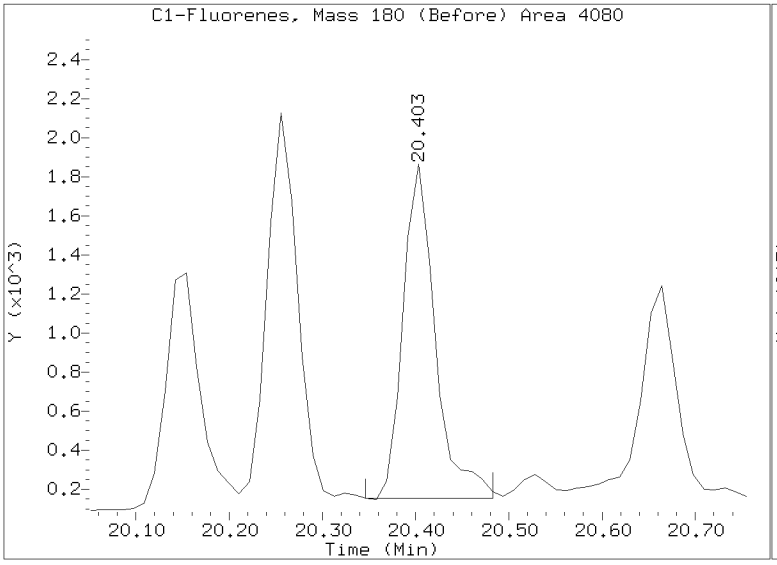
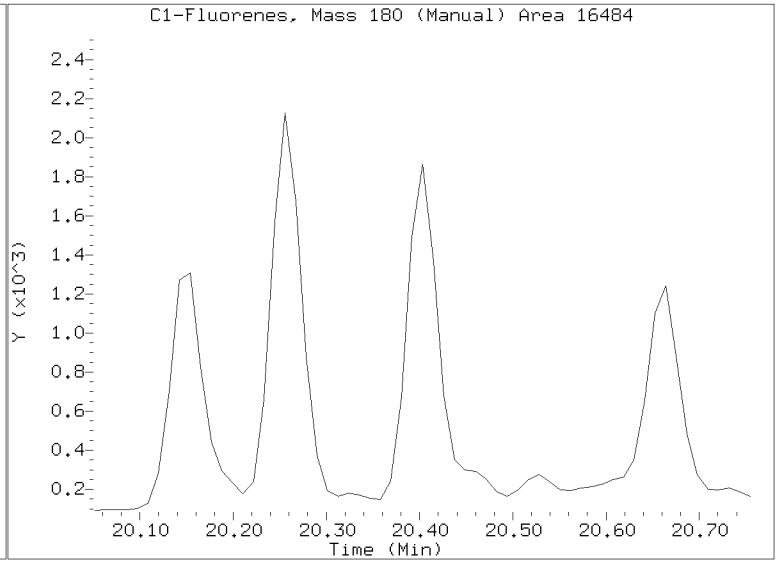
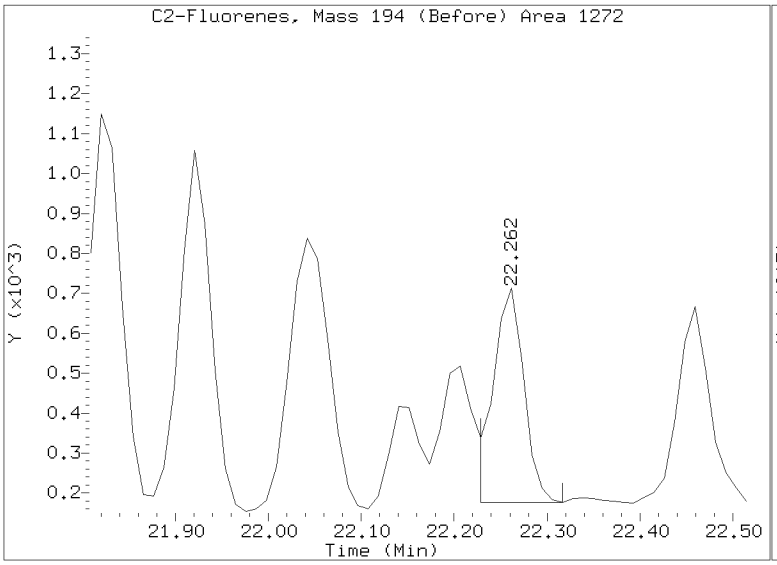
Injection Date: 12-DEC-2020 22:23
Lab ID:20K0073-02 Client ID:
Report Date: 12/15/2020 17:15

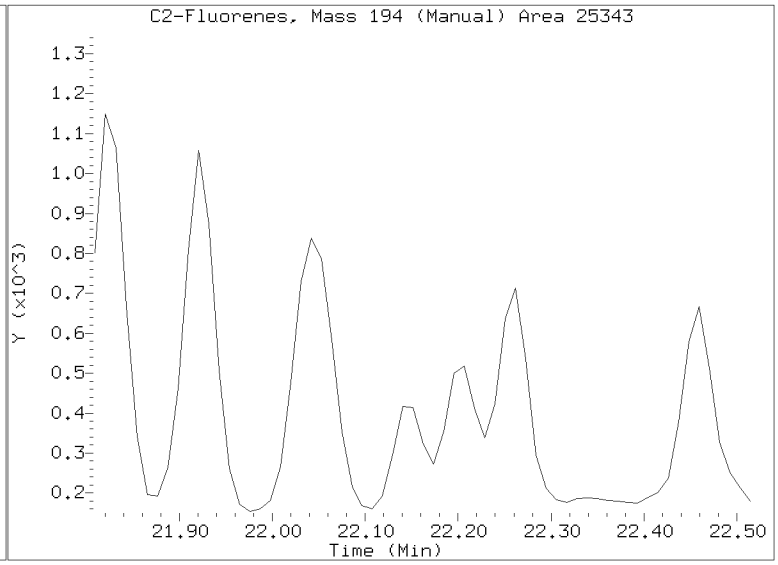






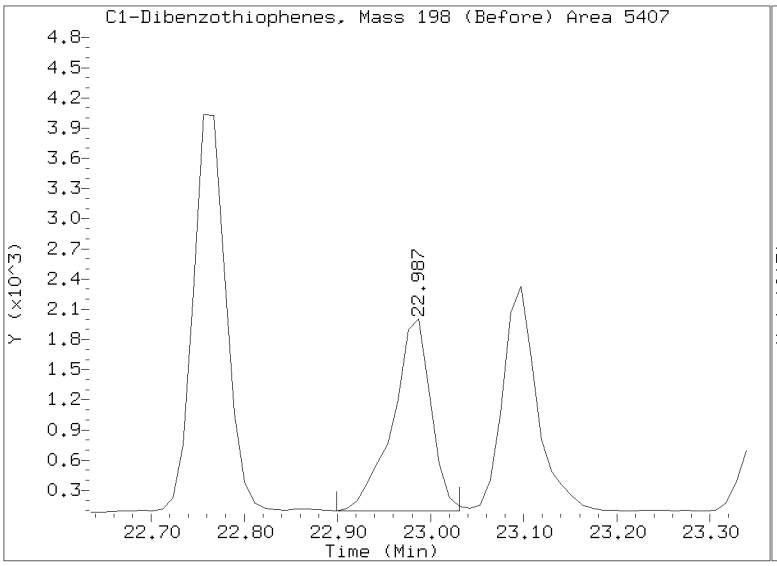


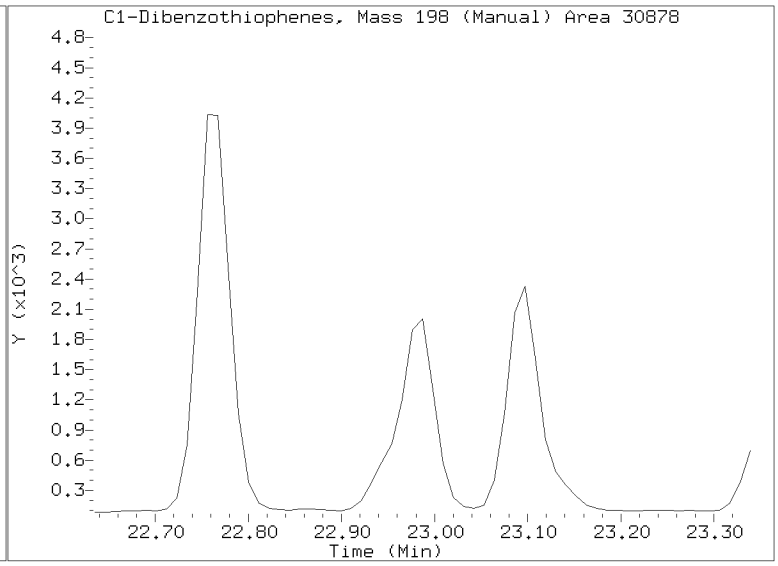


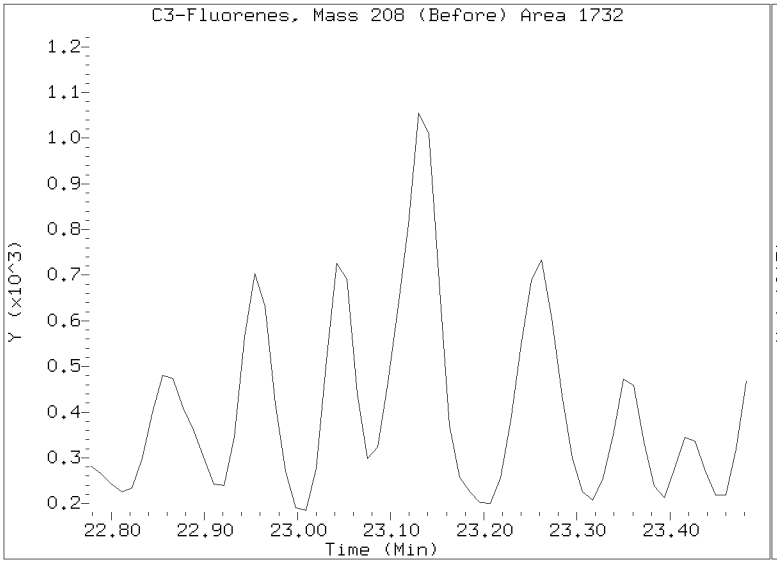


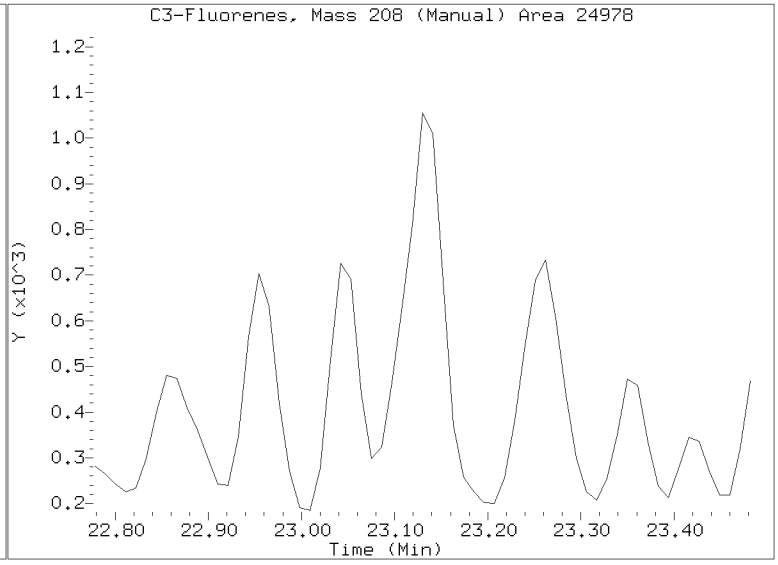
Quant Ion Manual Peak Adjustment Report

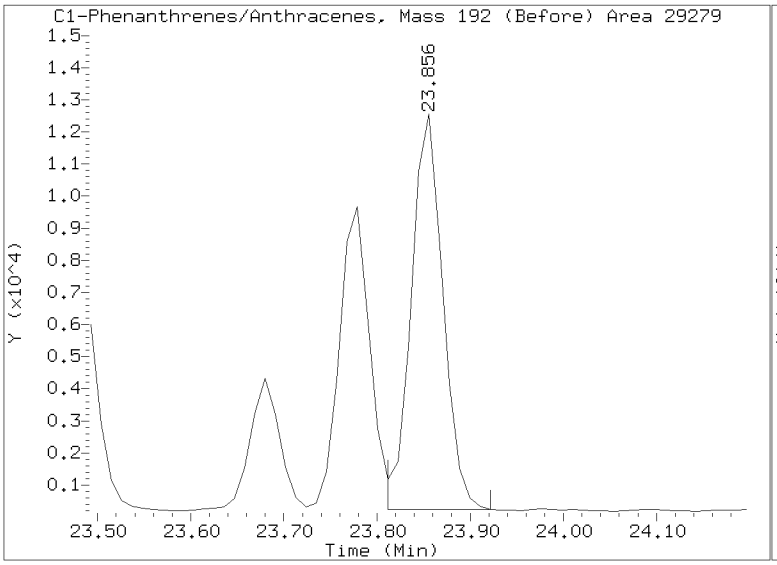
Datafile: //target/share/chem3/nt14.i/20201212.b/sim.b/NT1420121215.D
Injection Date: 12-DEC-2020 22:23
Lab ID:20K0073-02 Client ID:
Report Date: 12/15/2020 17:15

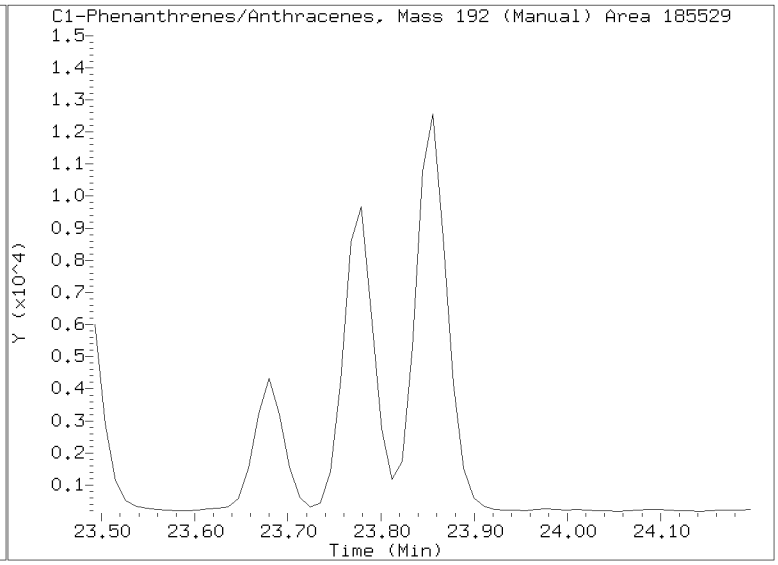






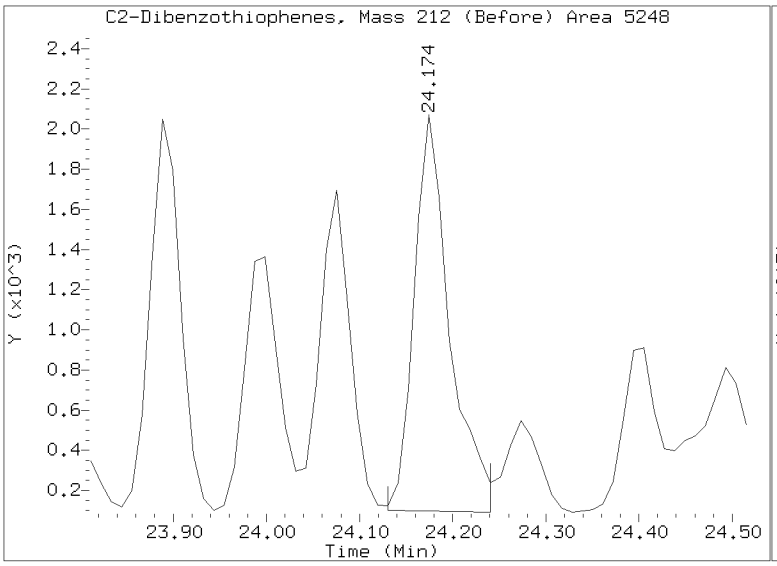


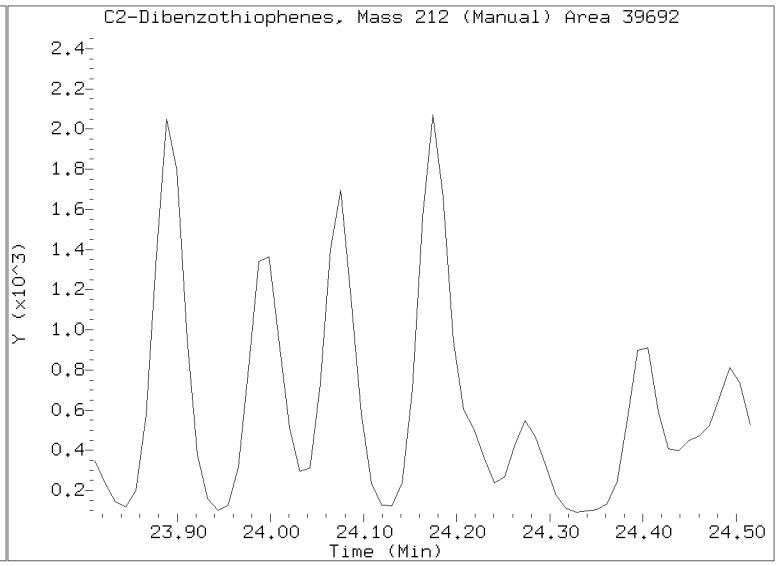


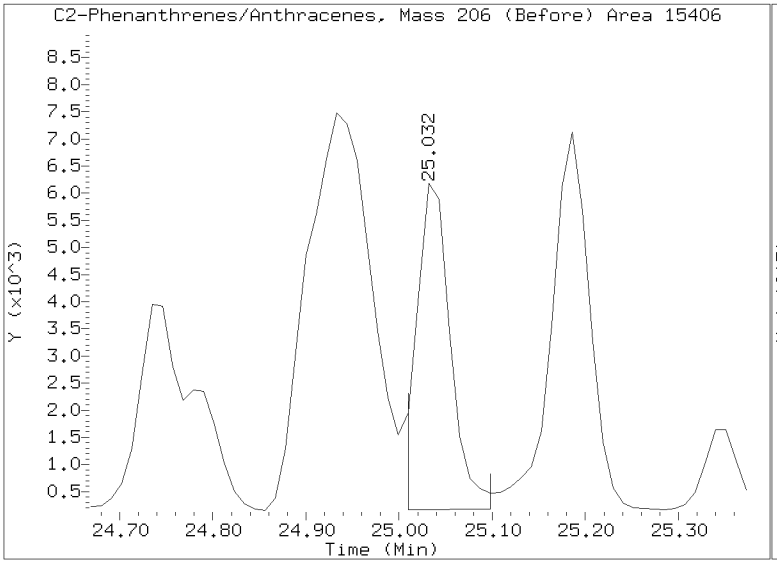


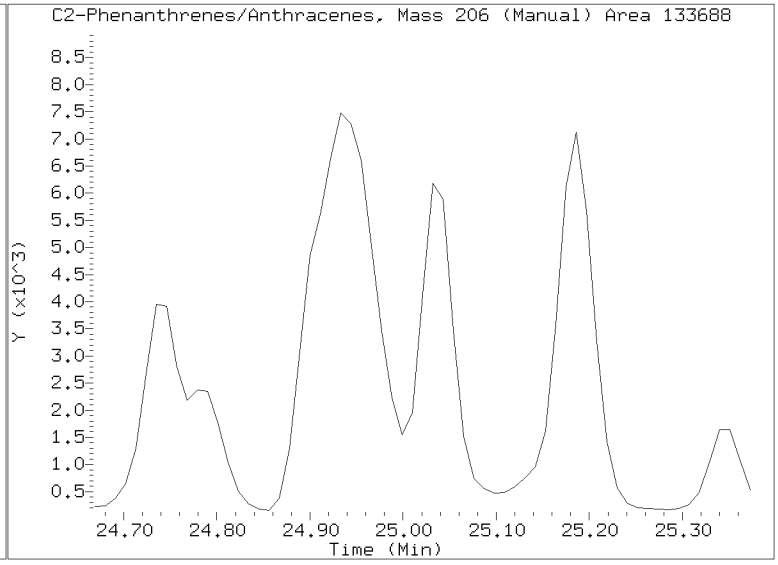
Quant Ion Manual Peak Adjustment Report

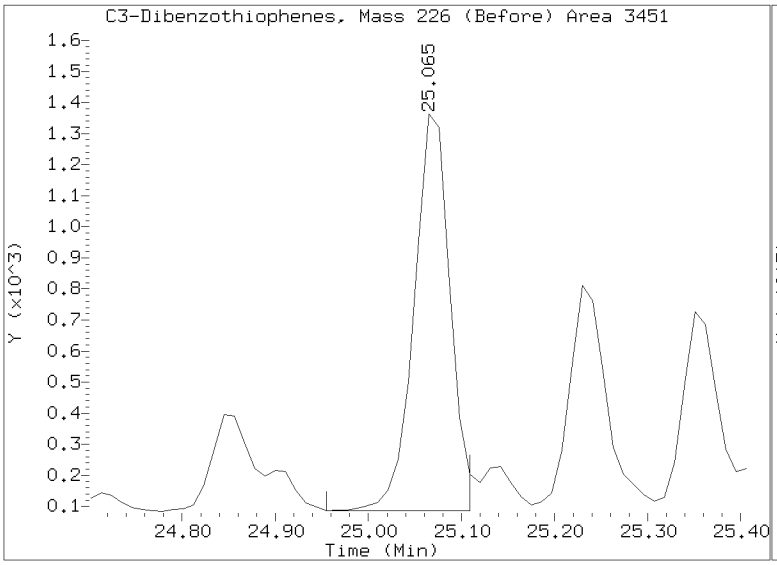
Datafile: //target/share/chem3/nt14.i/20201212.b/sim.b/NT1420121215.D
Injection Date: 12-DEC-2020 22:23
Lab ID:20K0073-02 Client ID:
Report Date: 12/15/2020 17:15

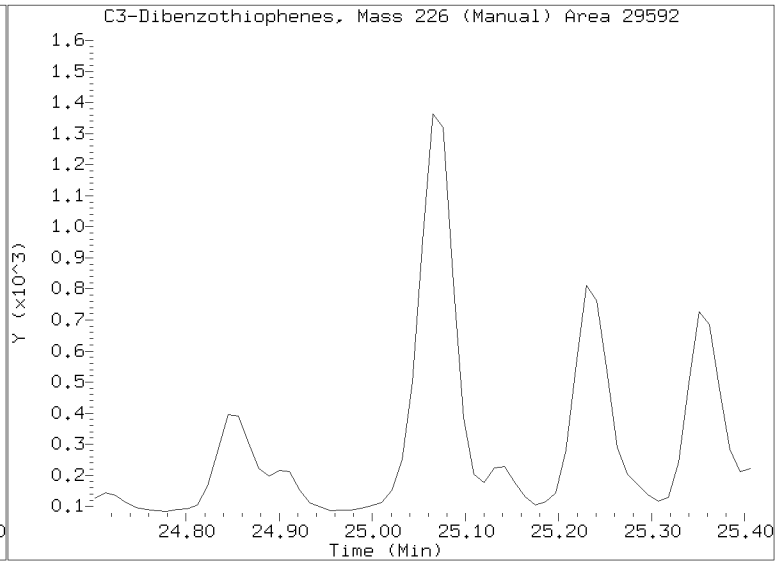












Quant Ion Manual Peak Adjustment Report

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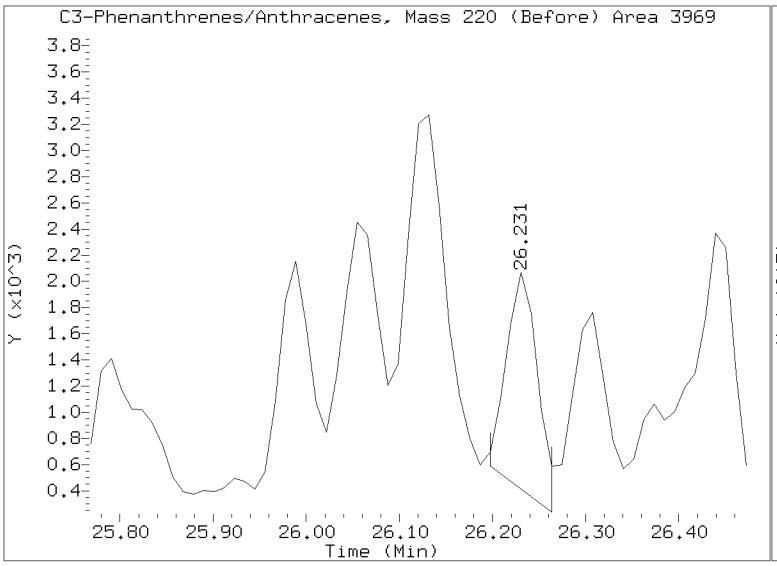

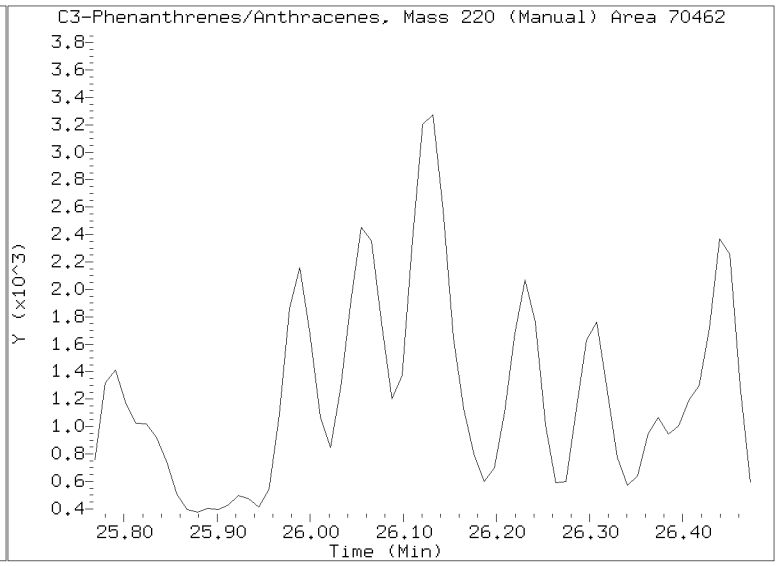

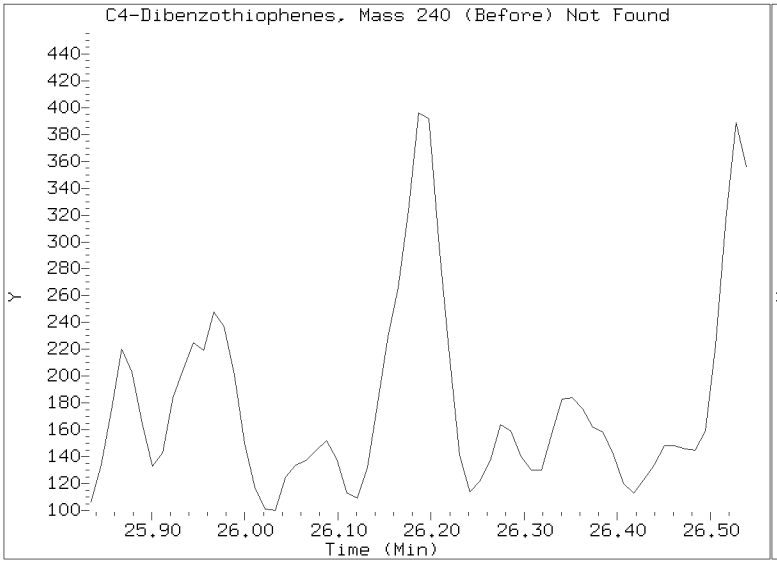

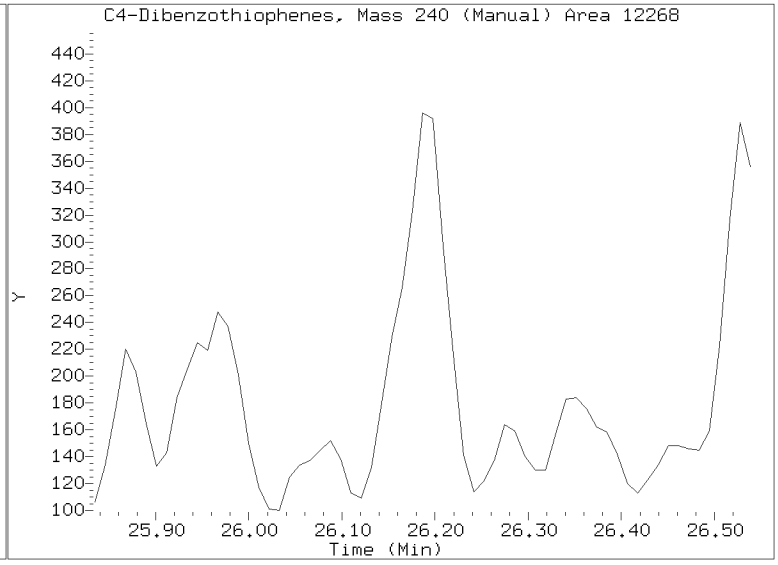

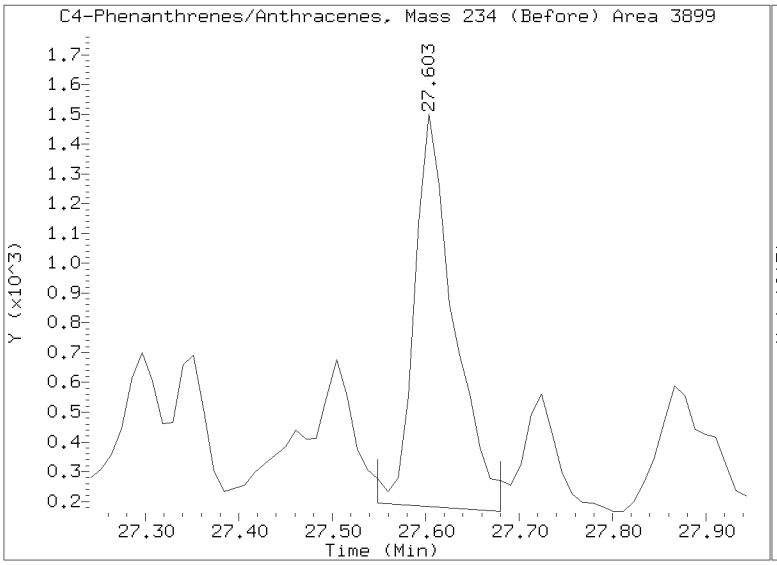

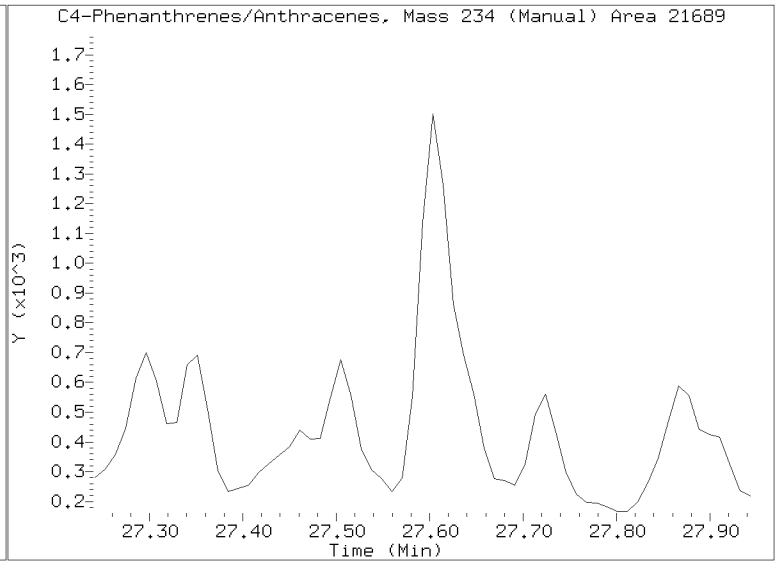

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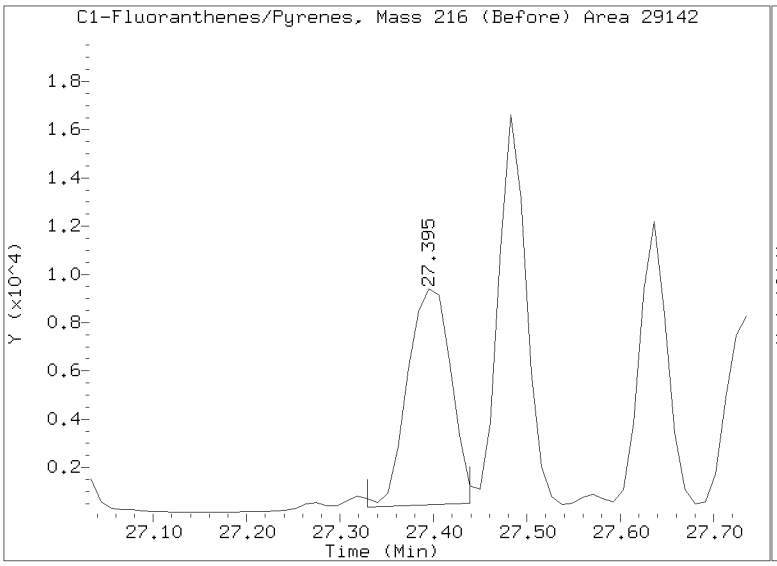

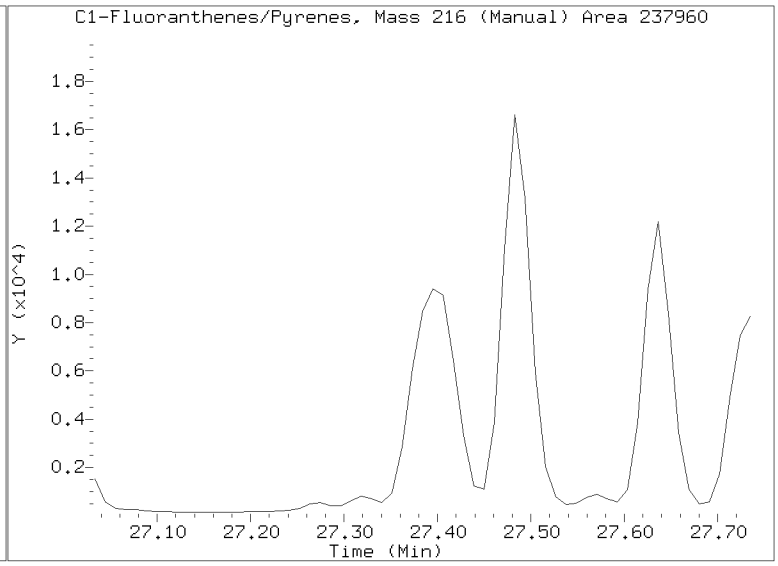

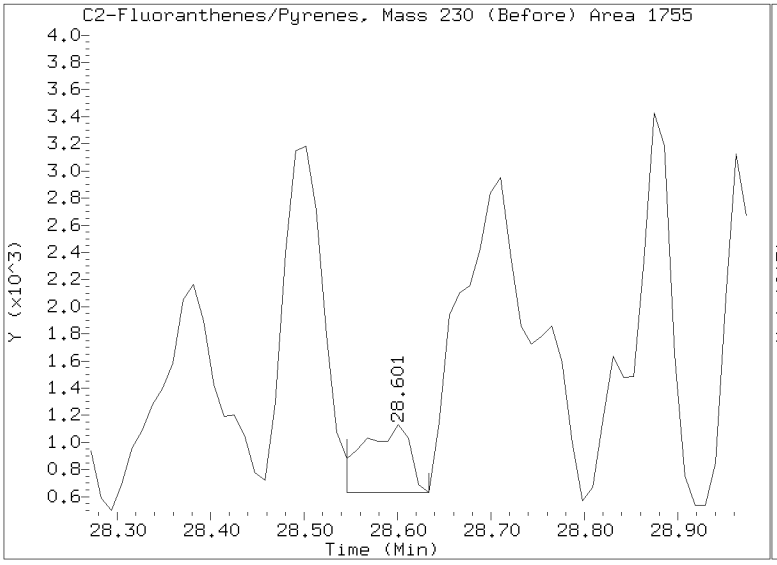

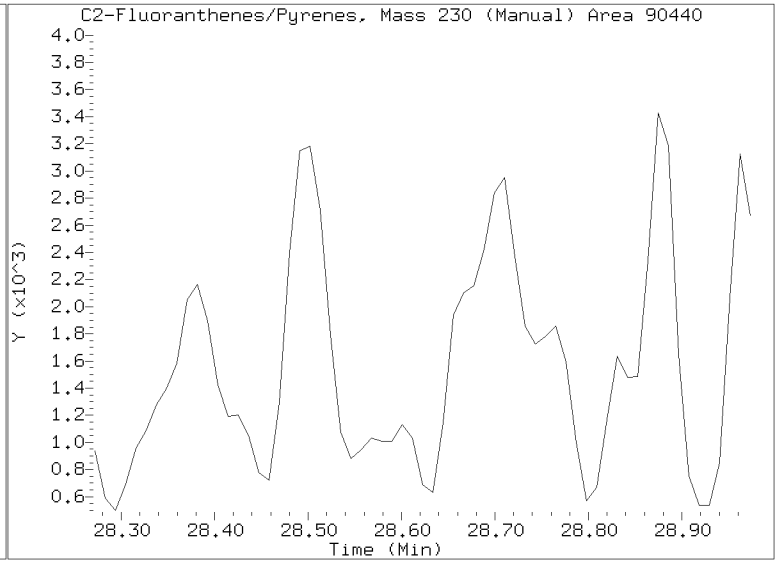

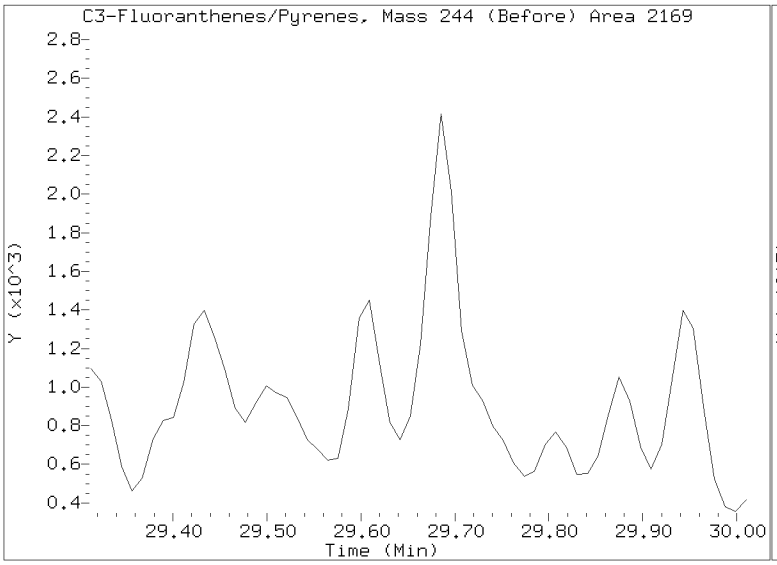

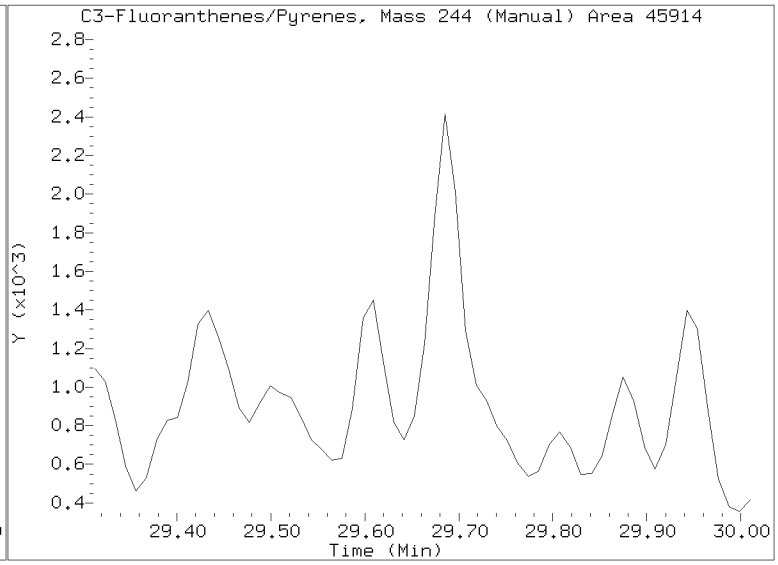

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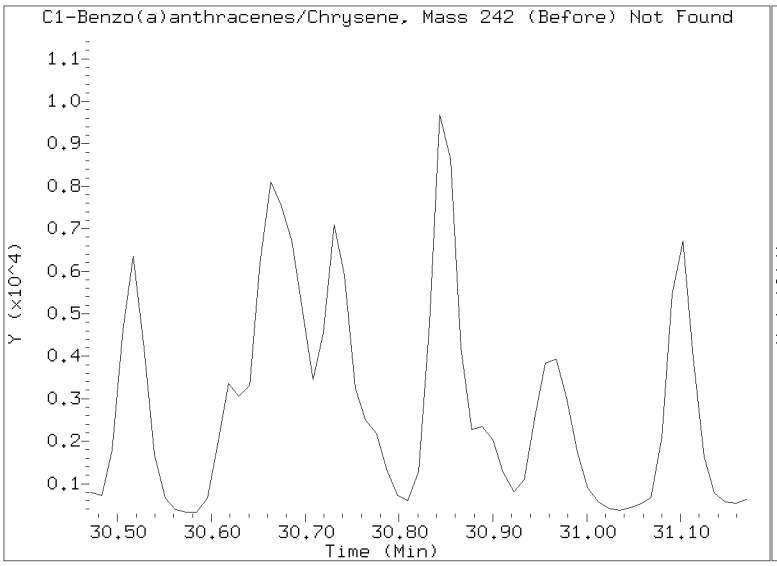

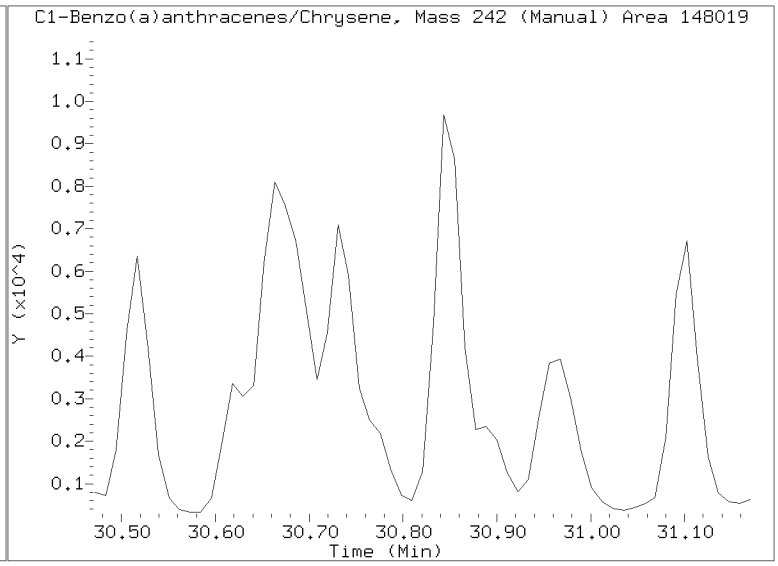

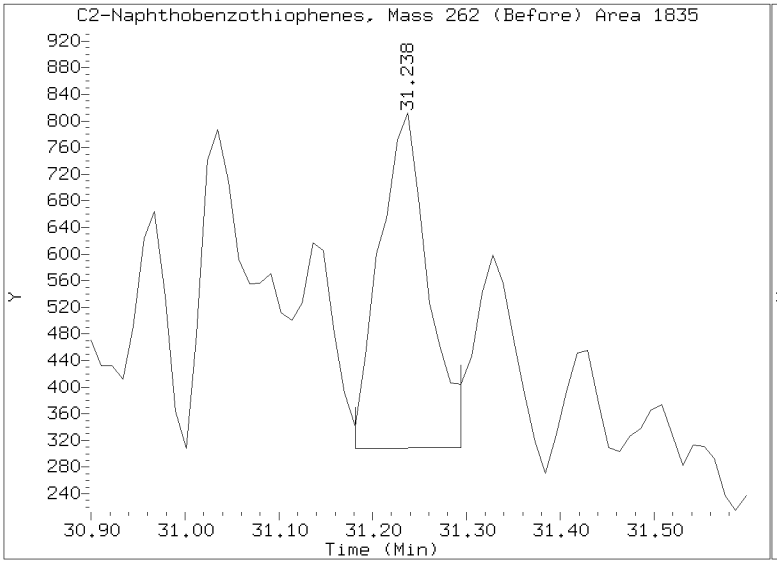

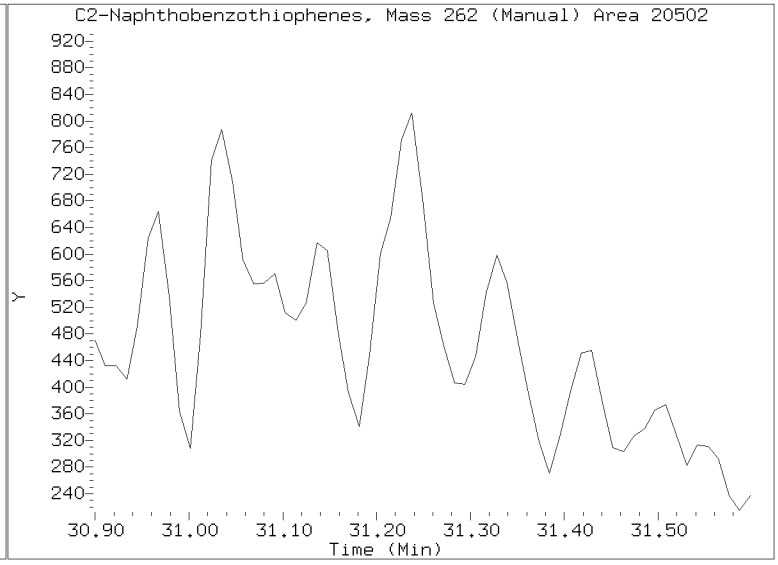

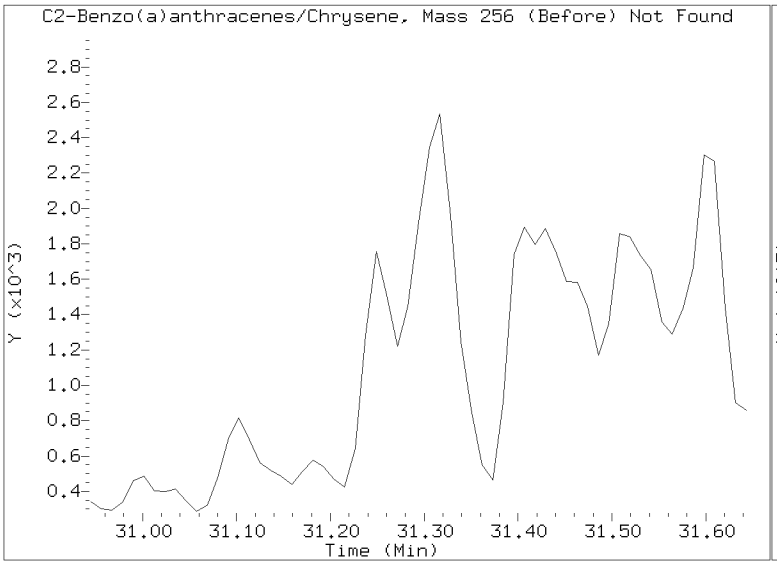

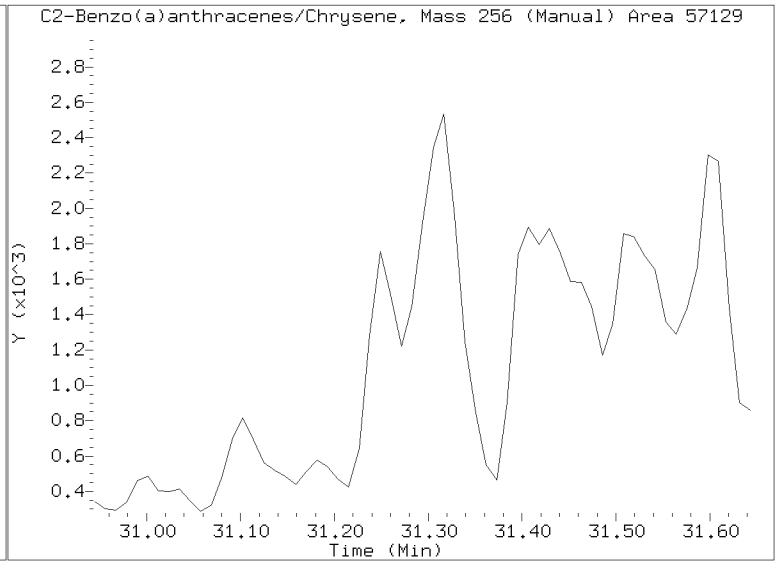

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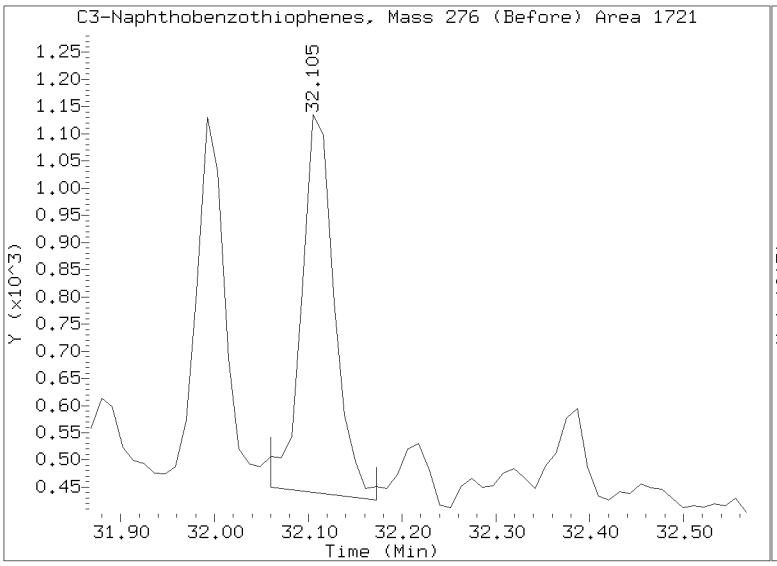

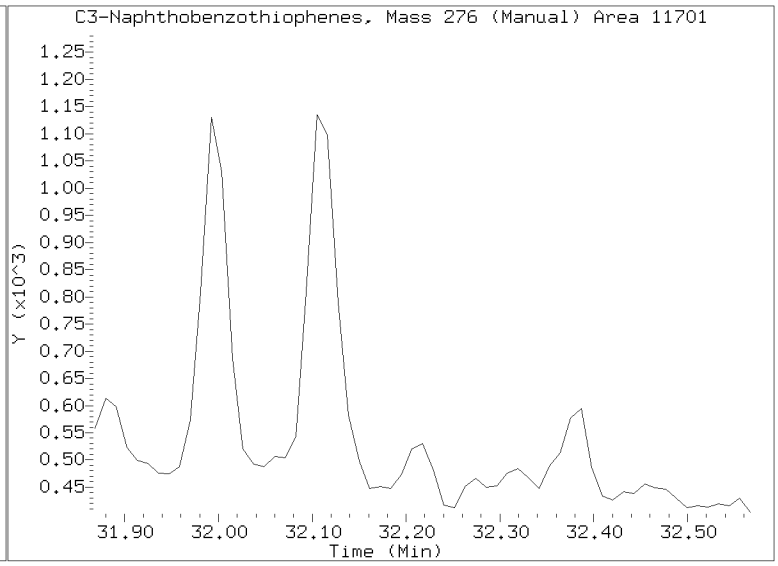

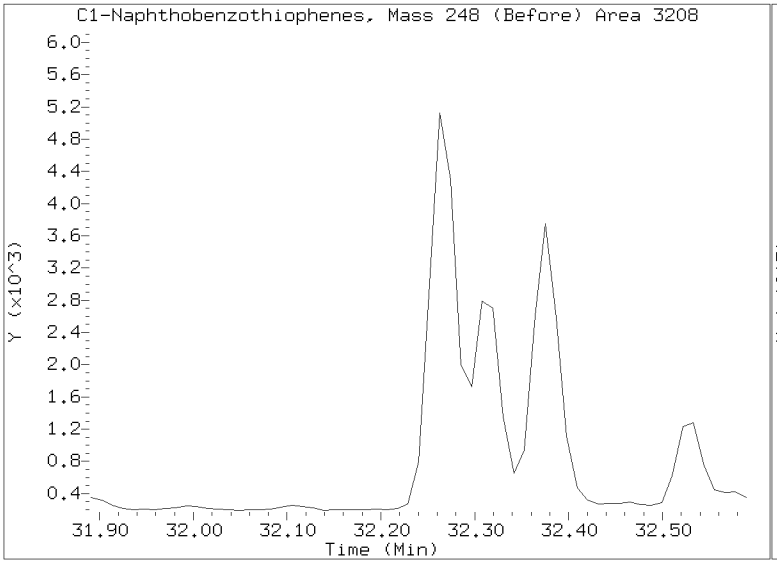

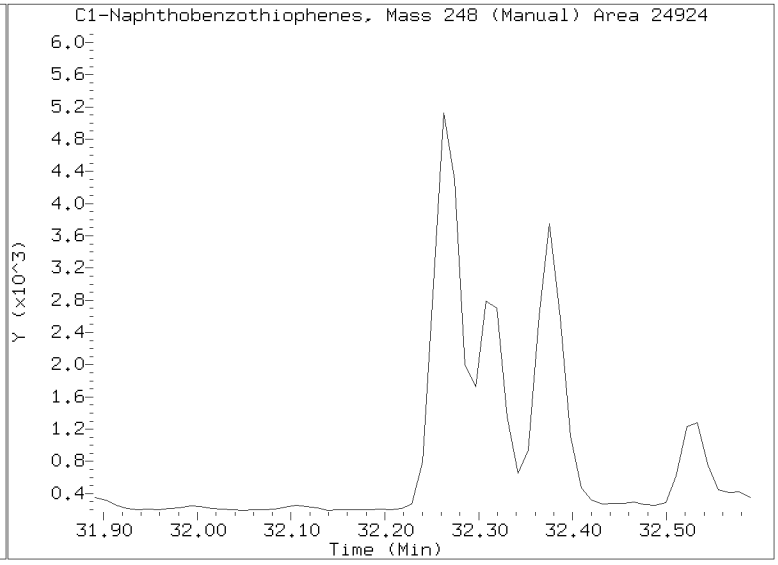

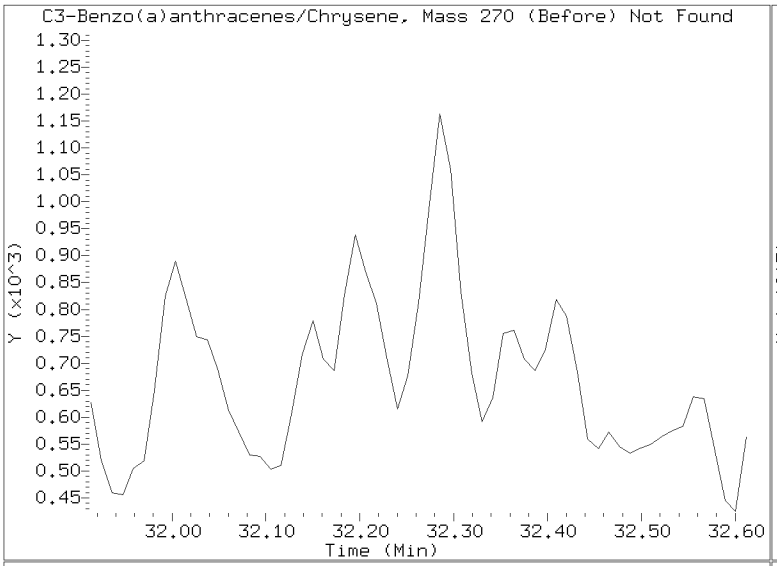

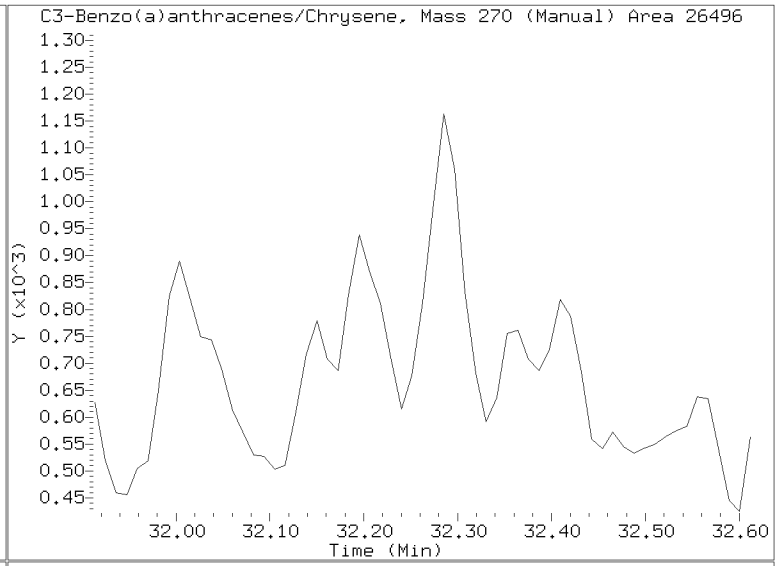

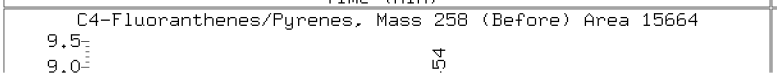

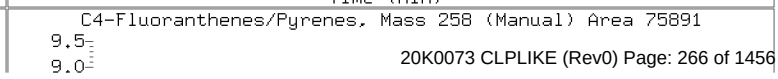

SIM ALKYL PNA RANGE ION WINDOWS - NT1420121215.D

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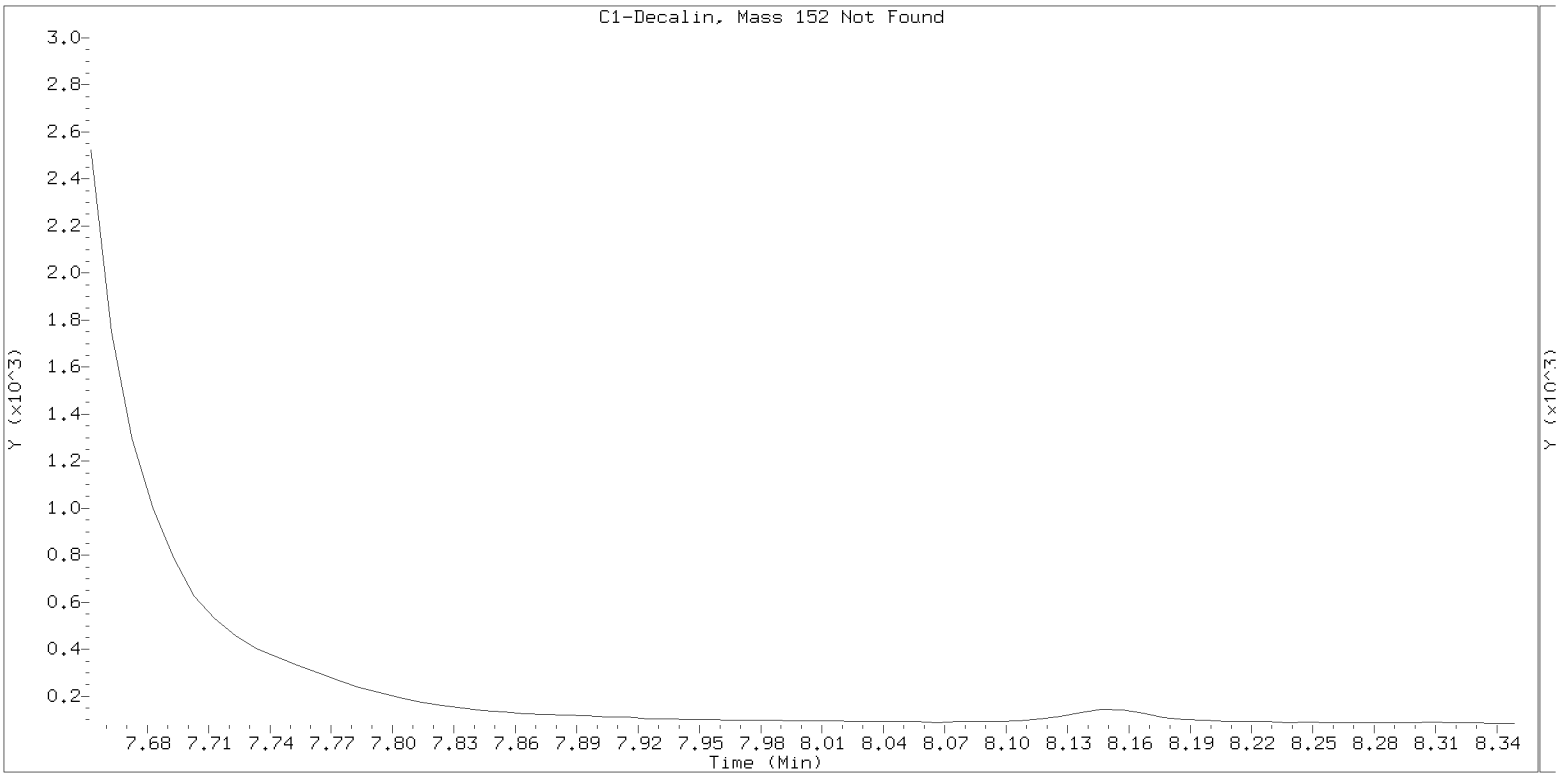

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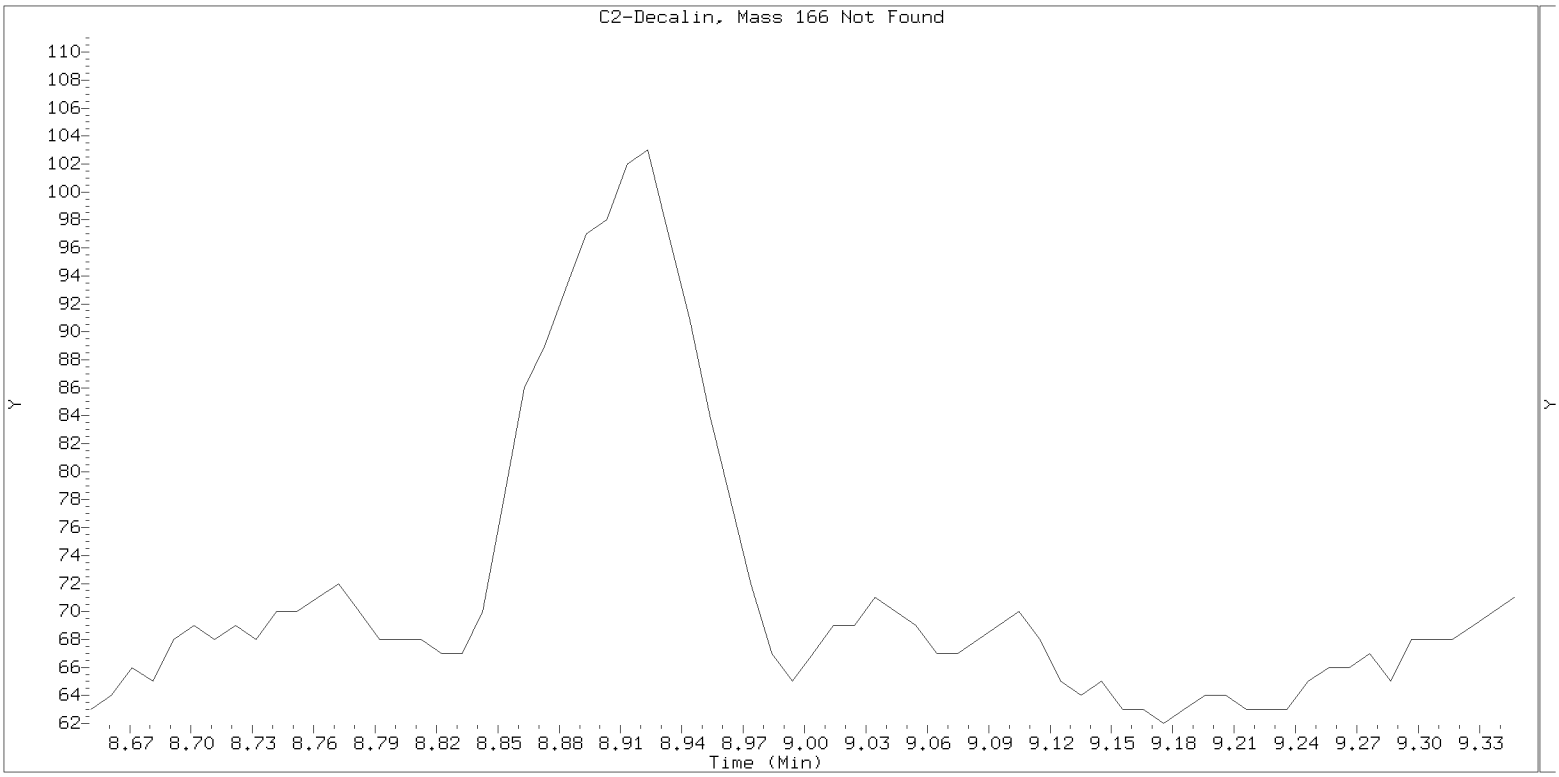

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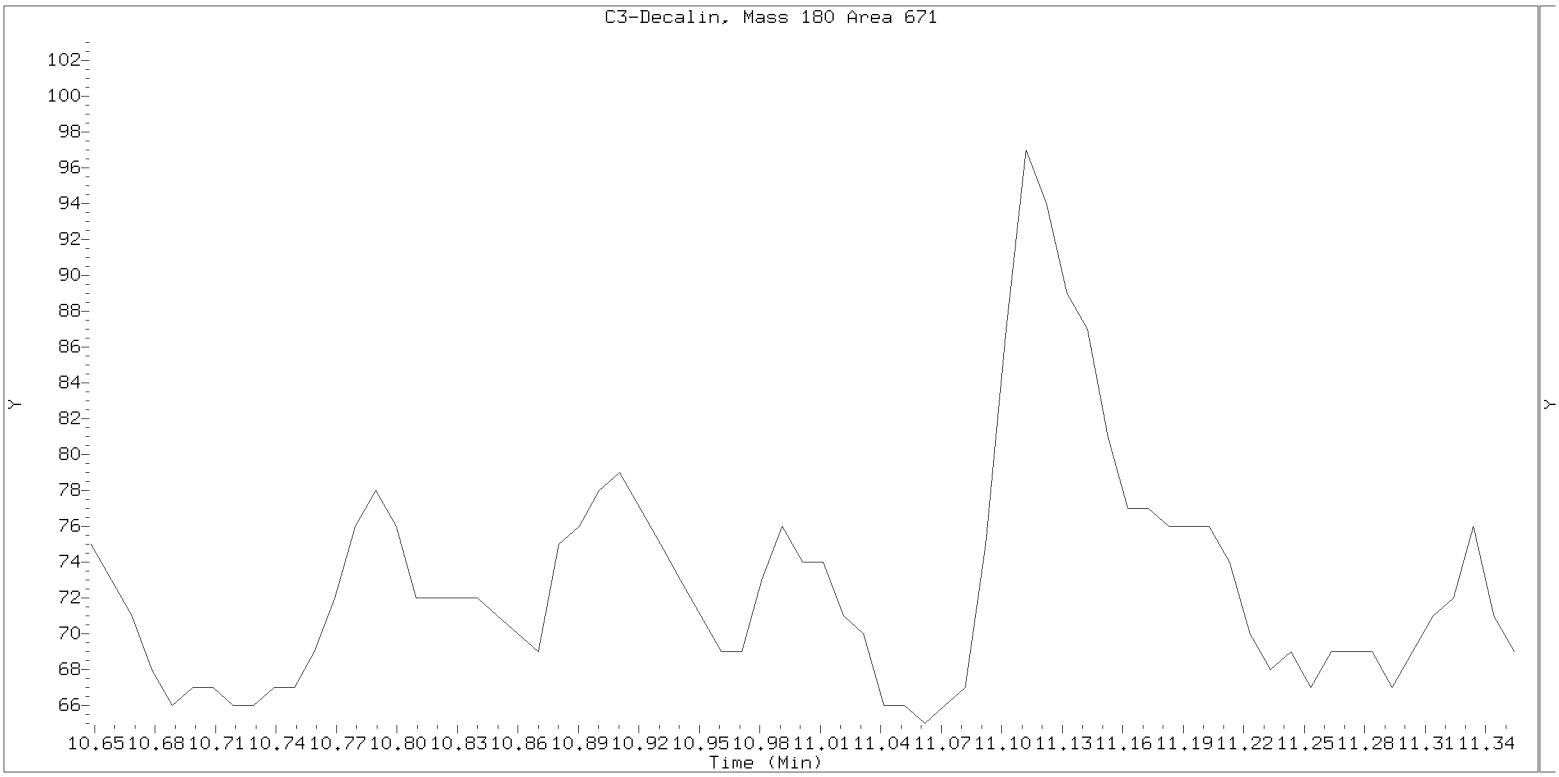

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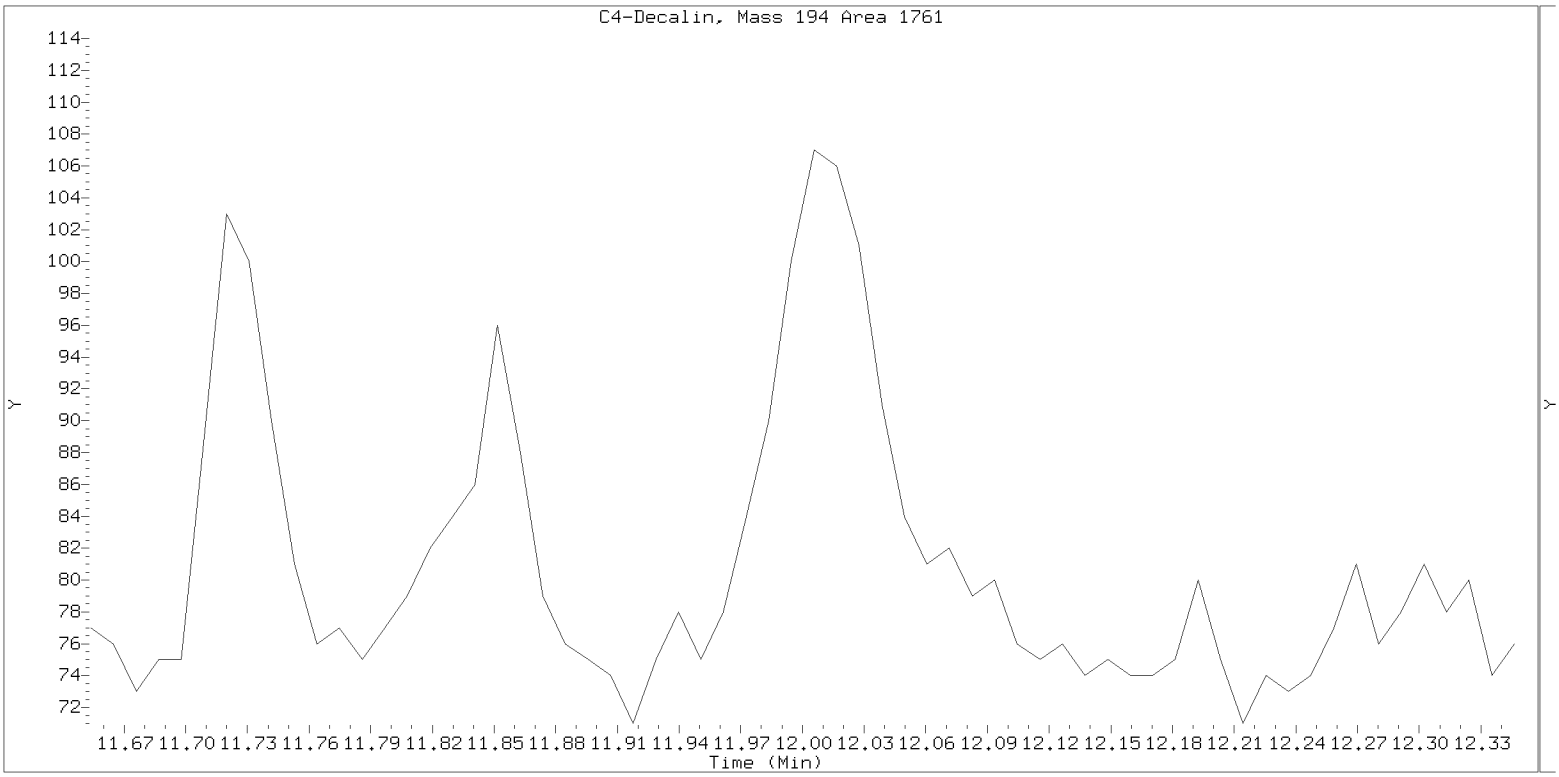

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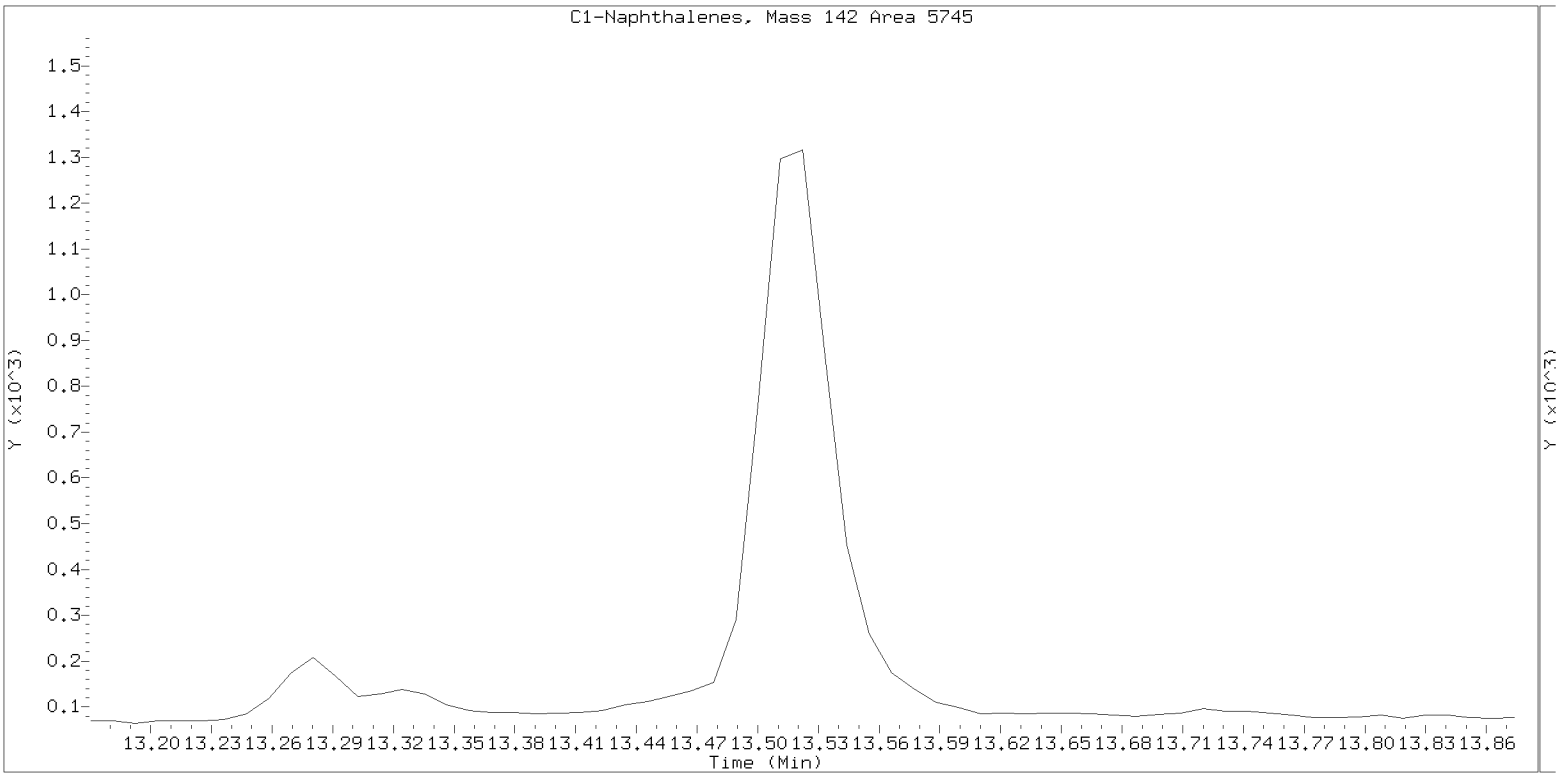

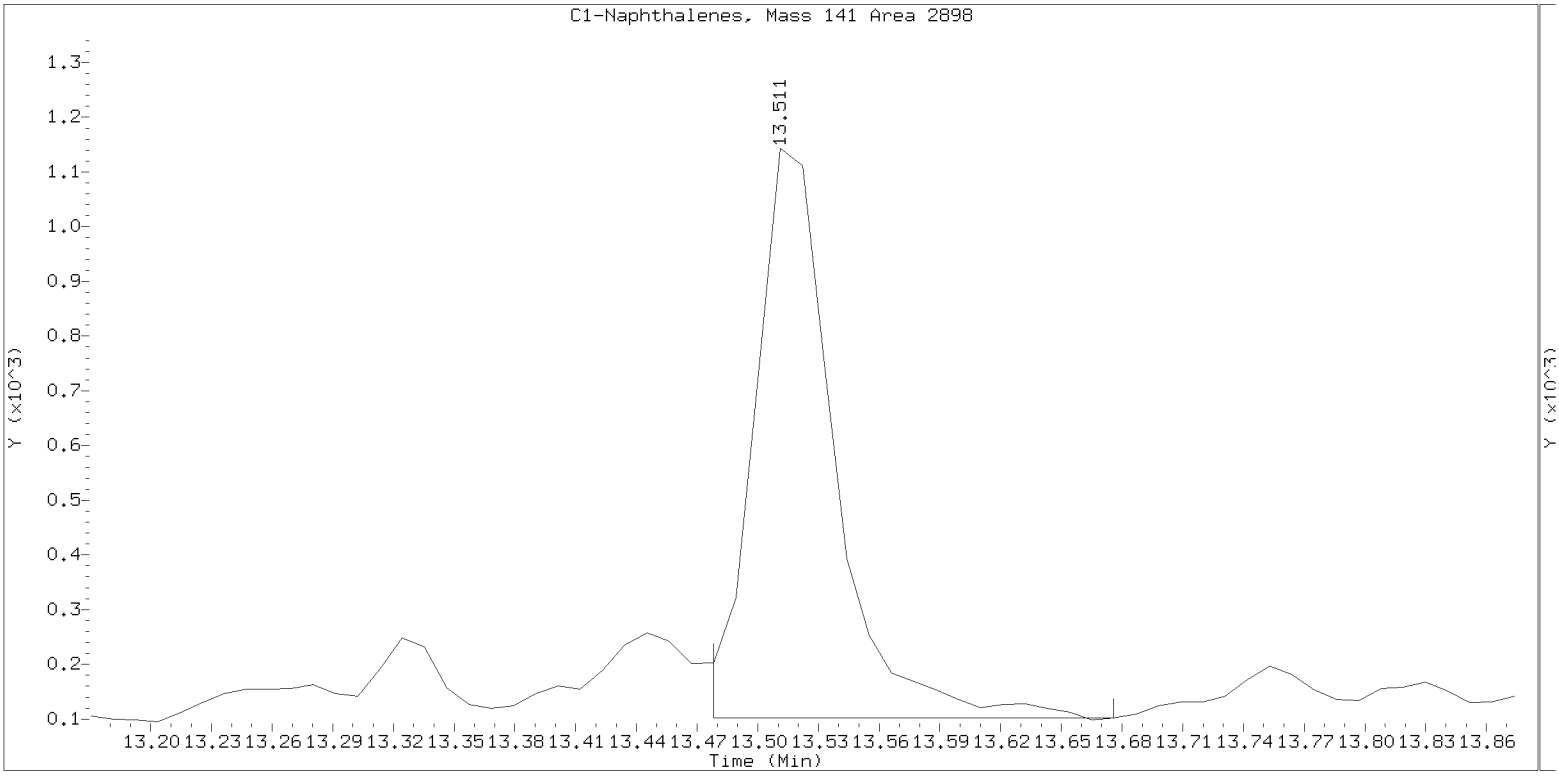

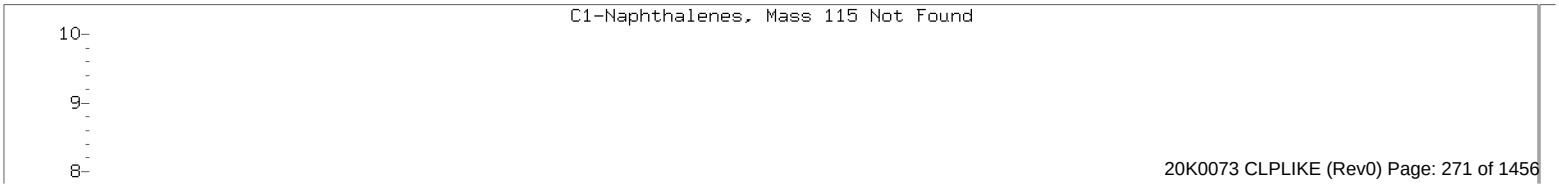

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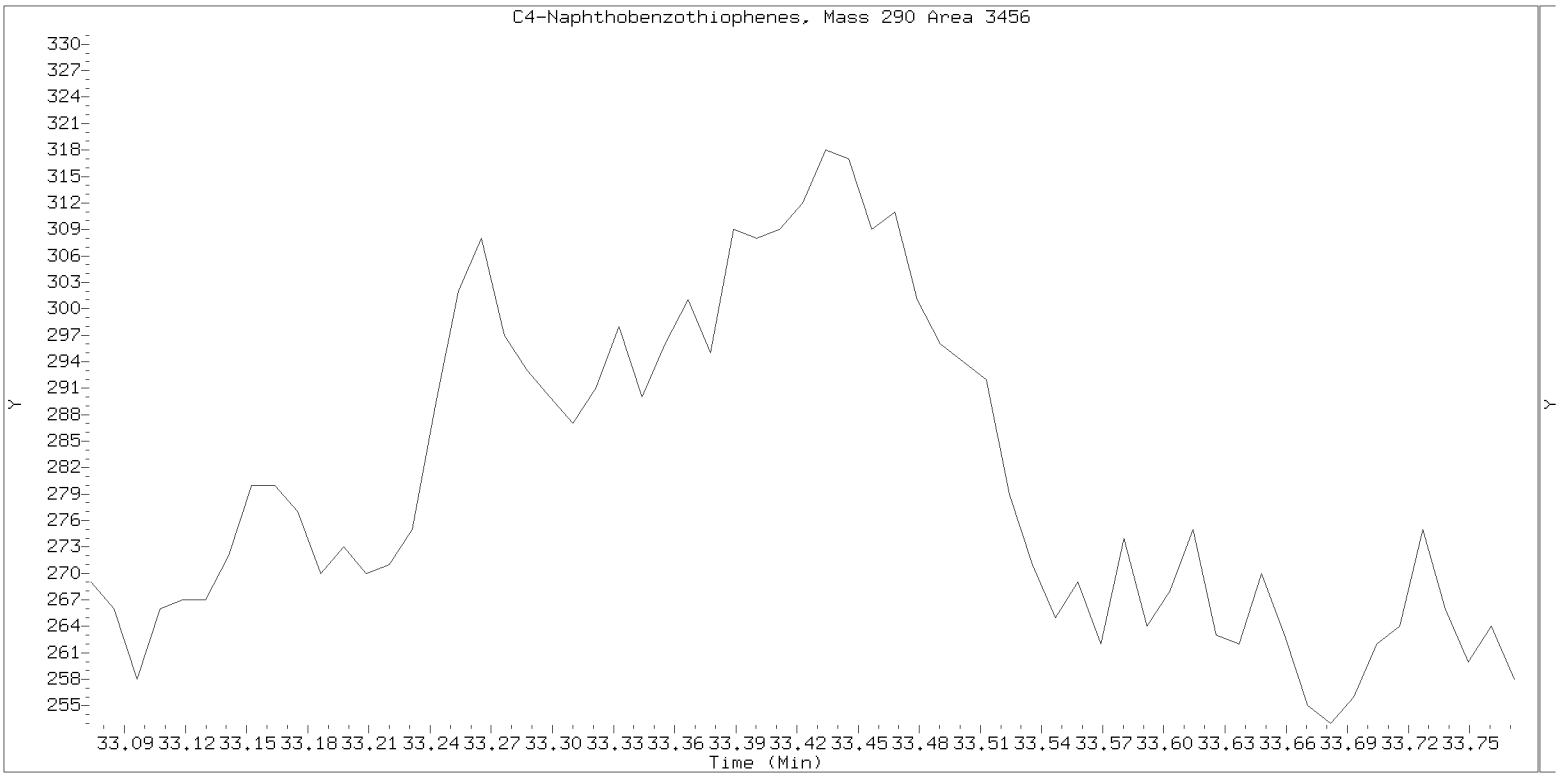

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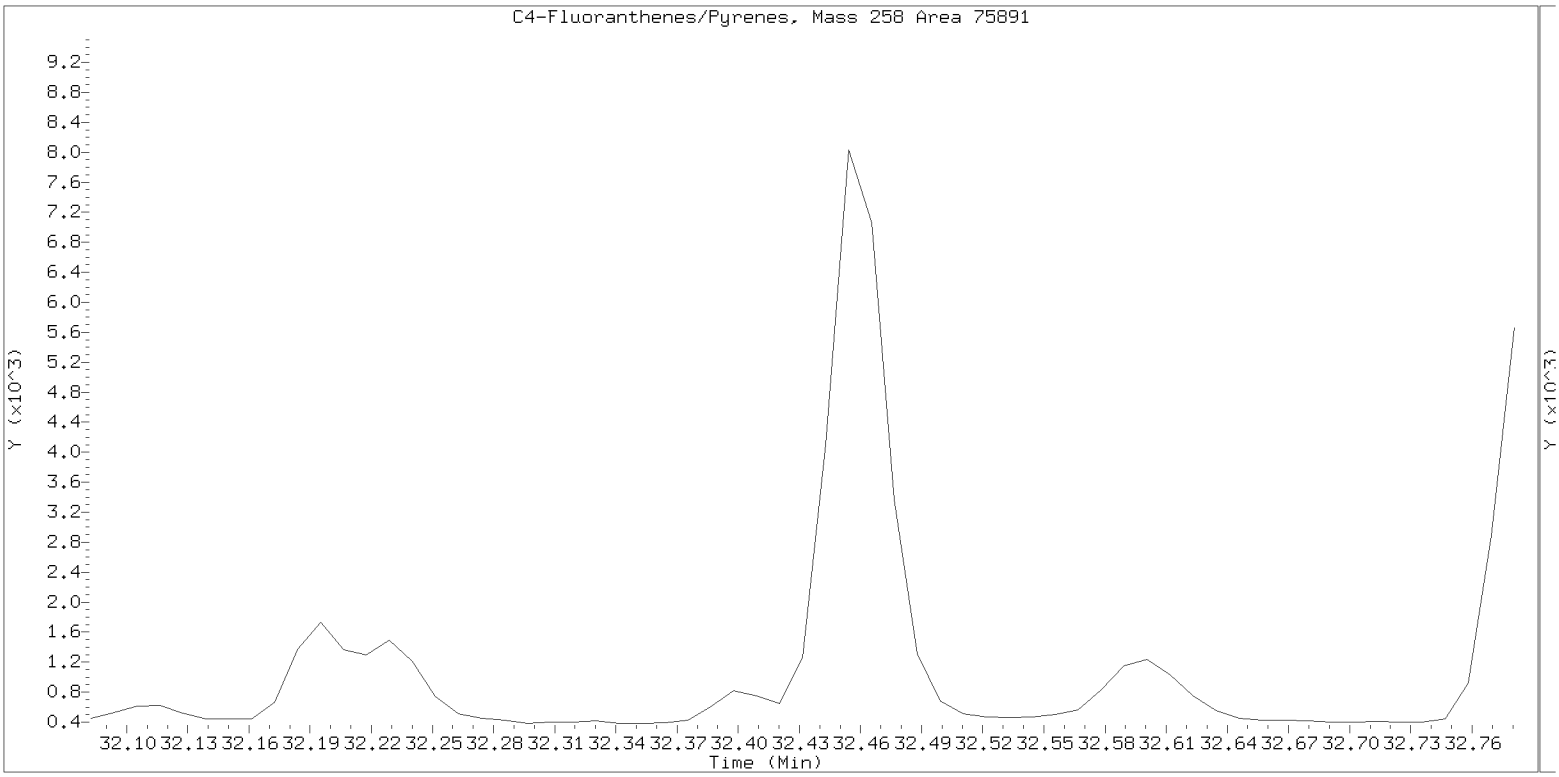

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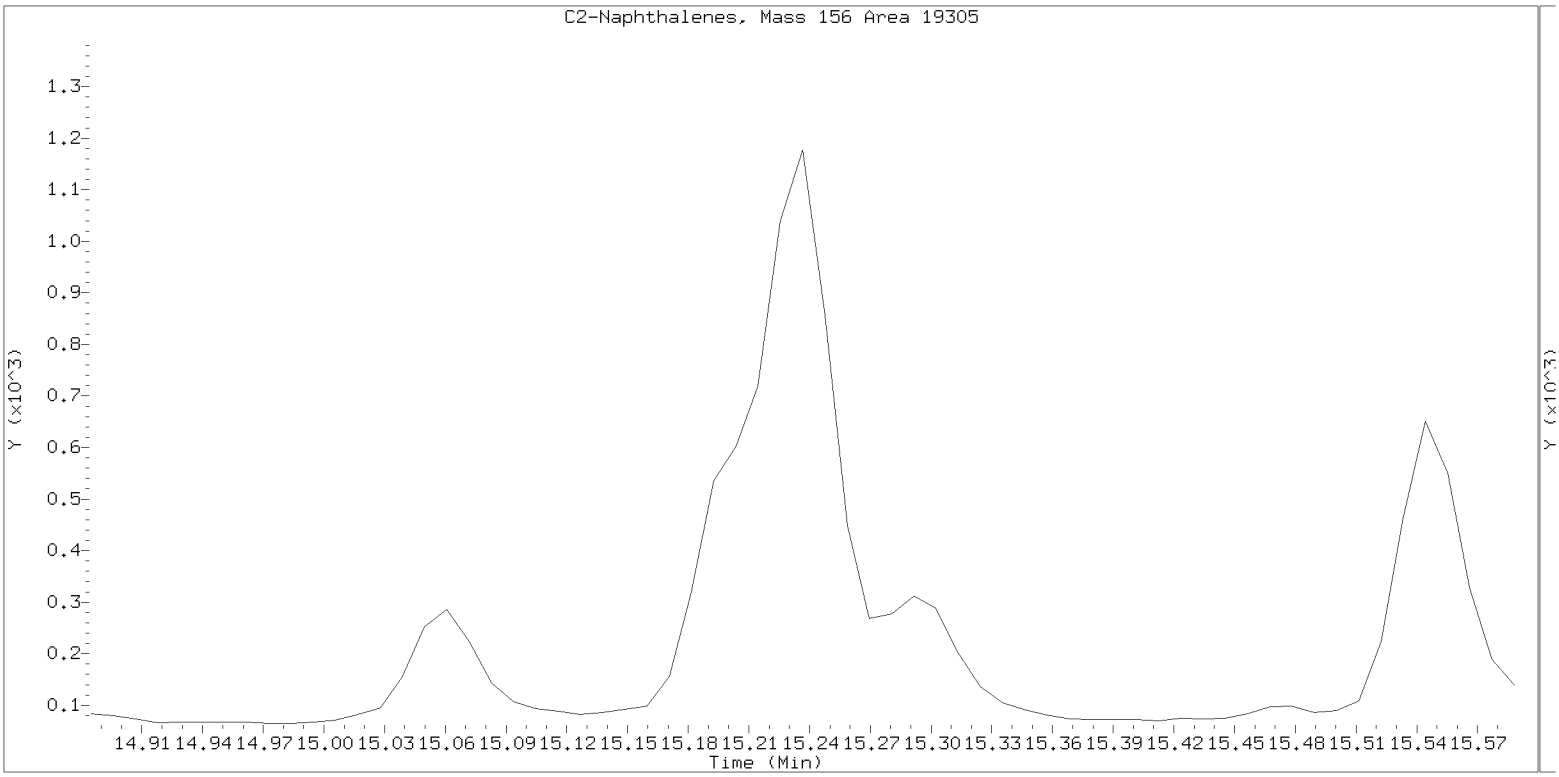

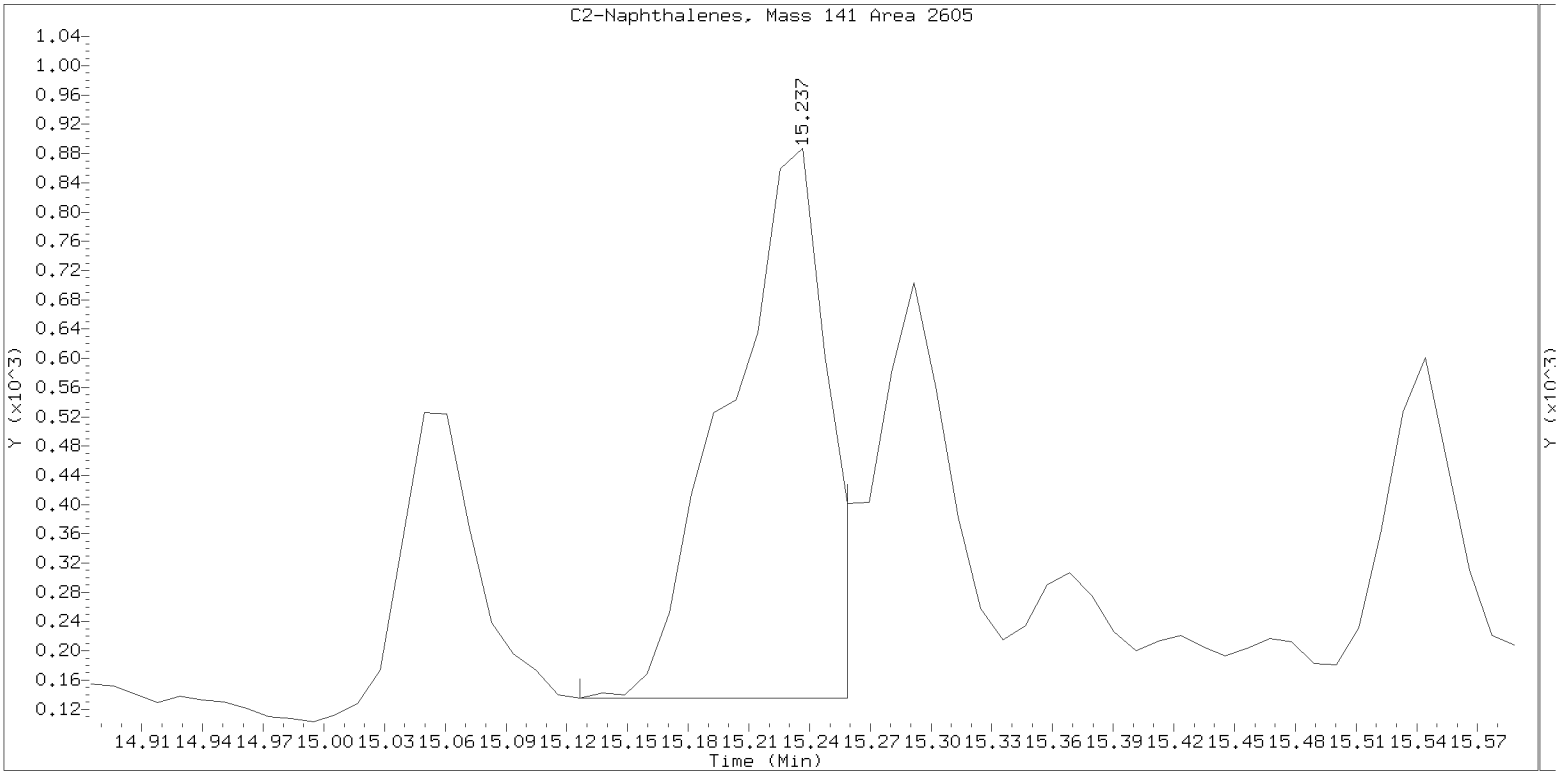

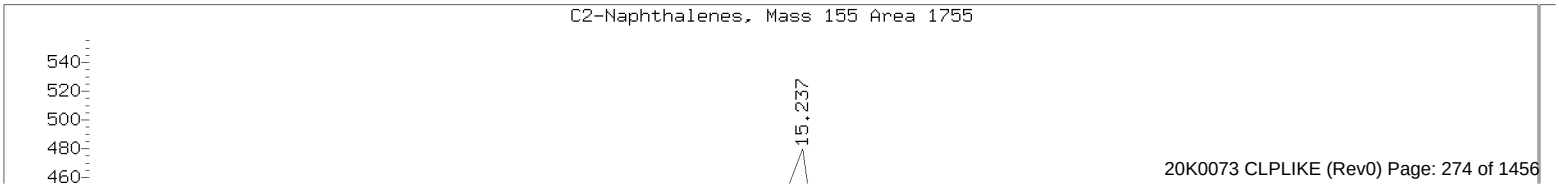

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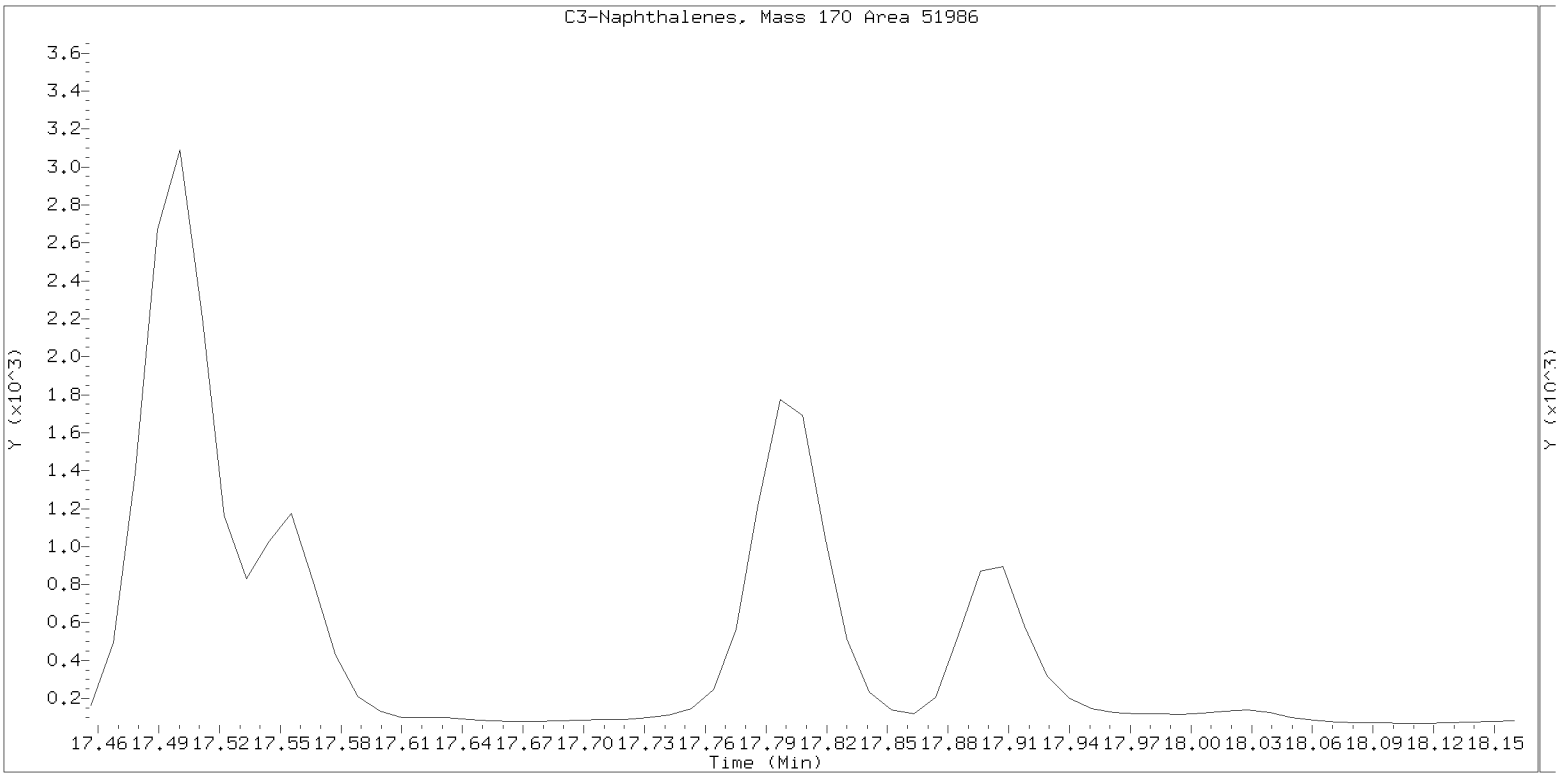

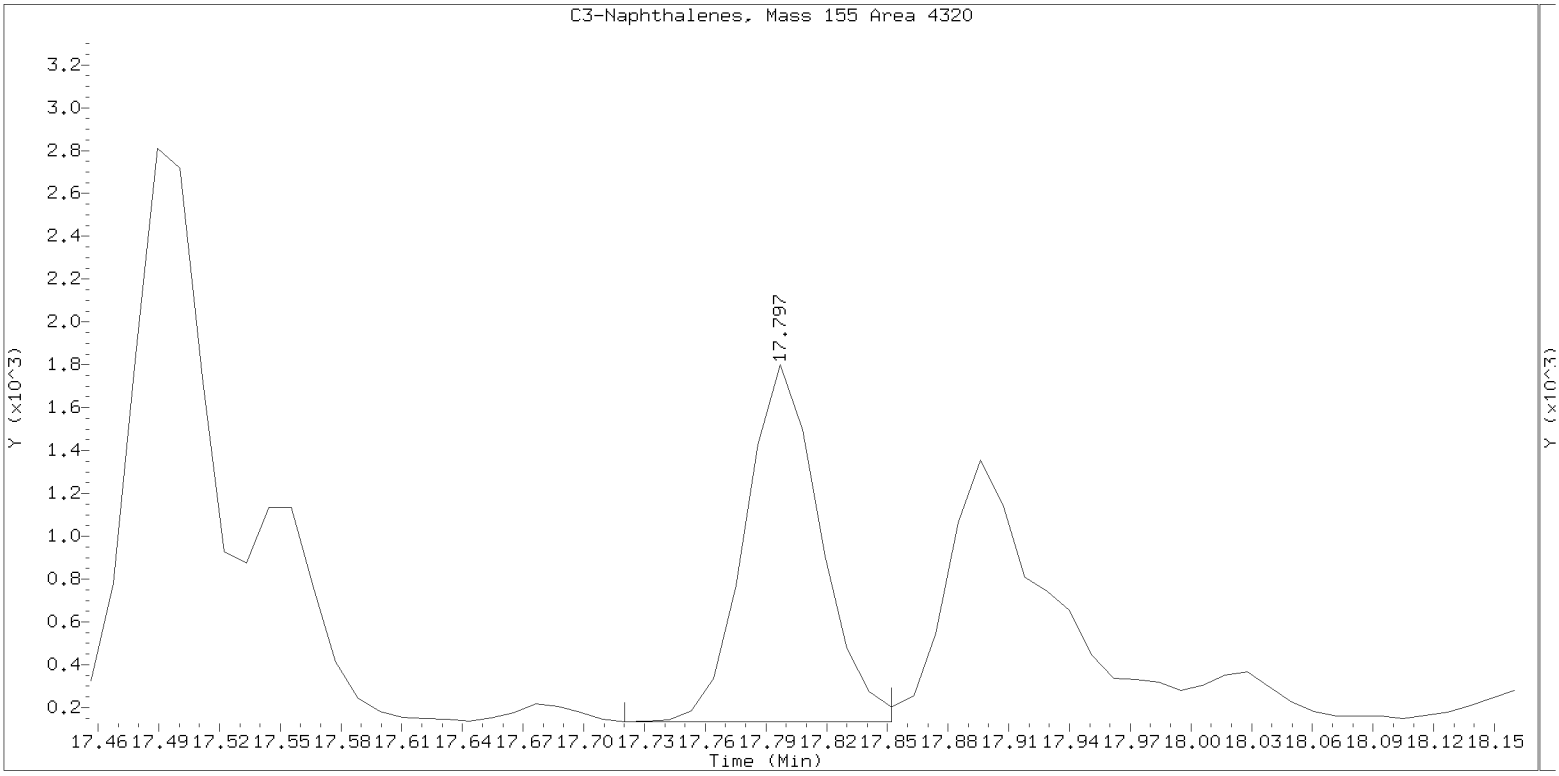

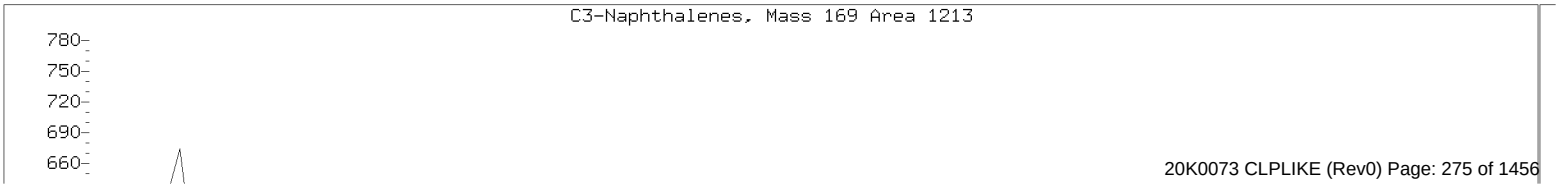

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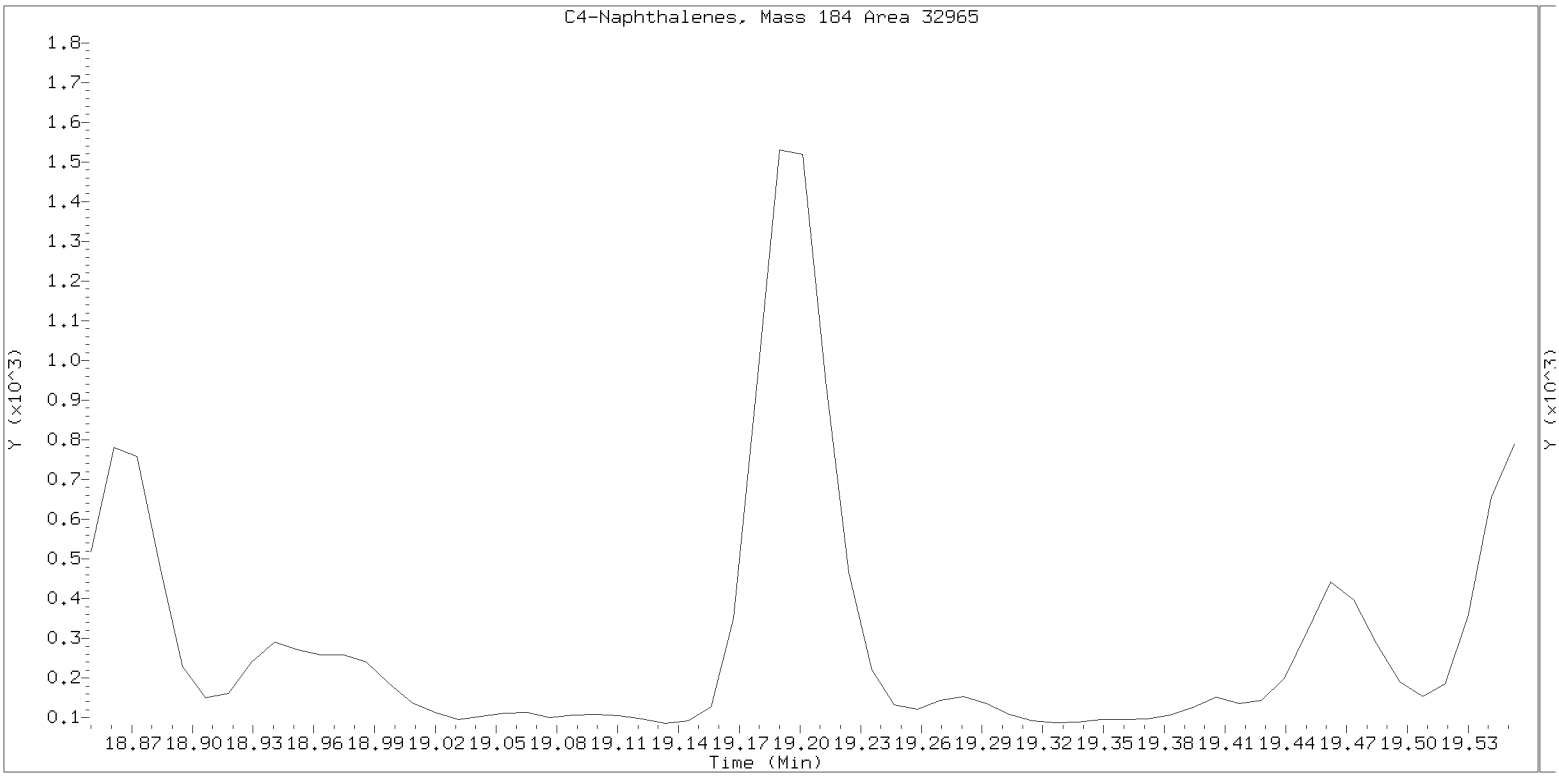

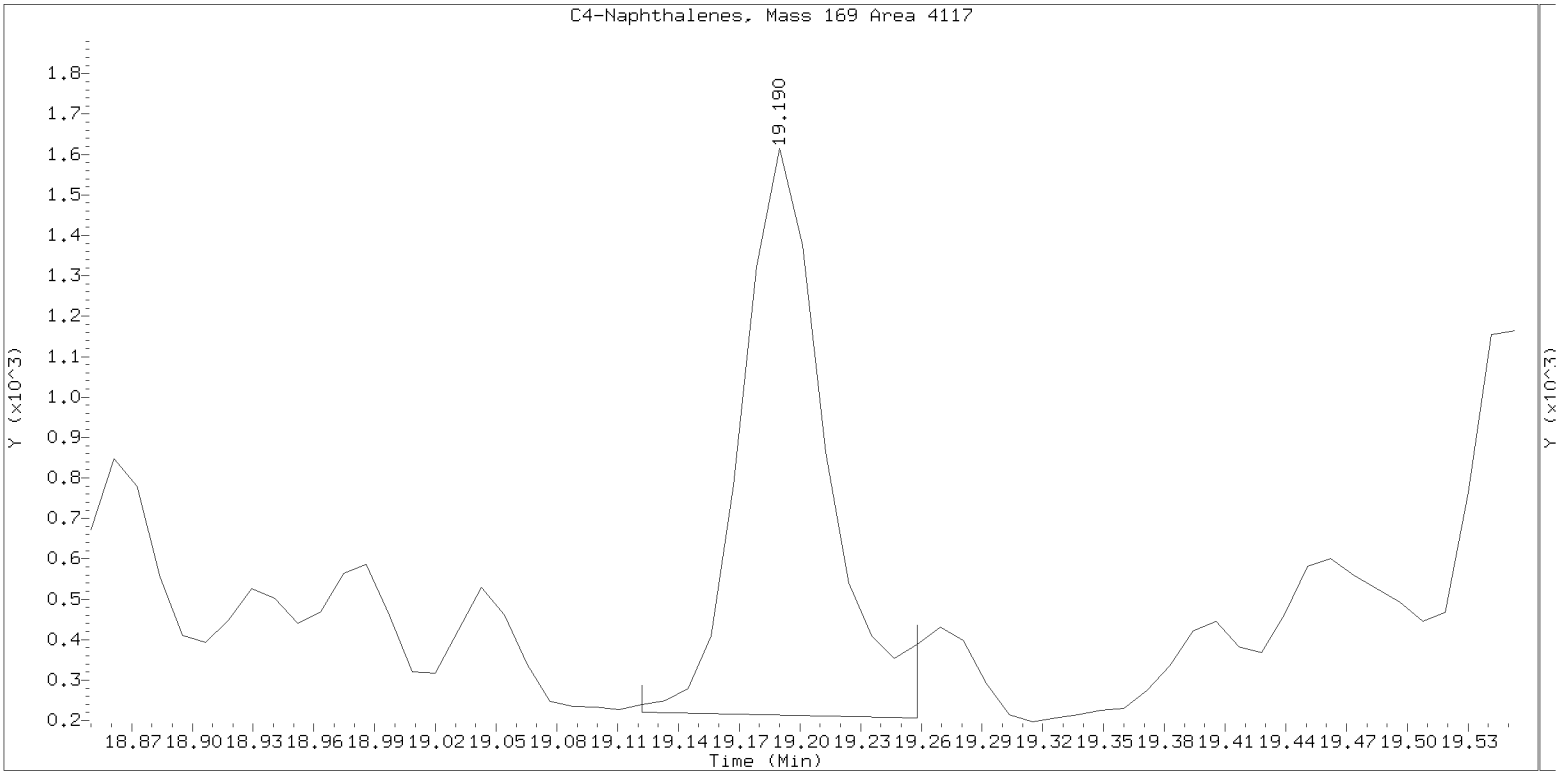

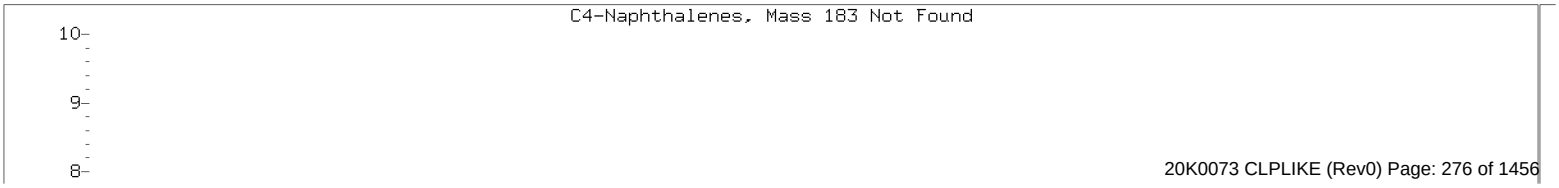

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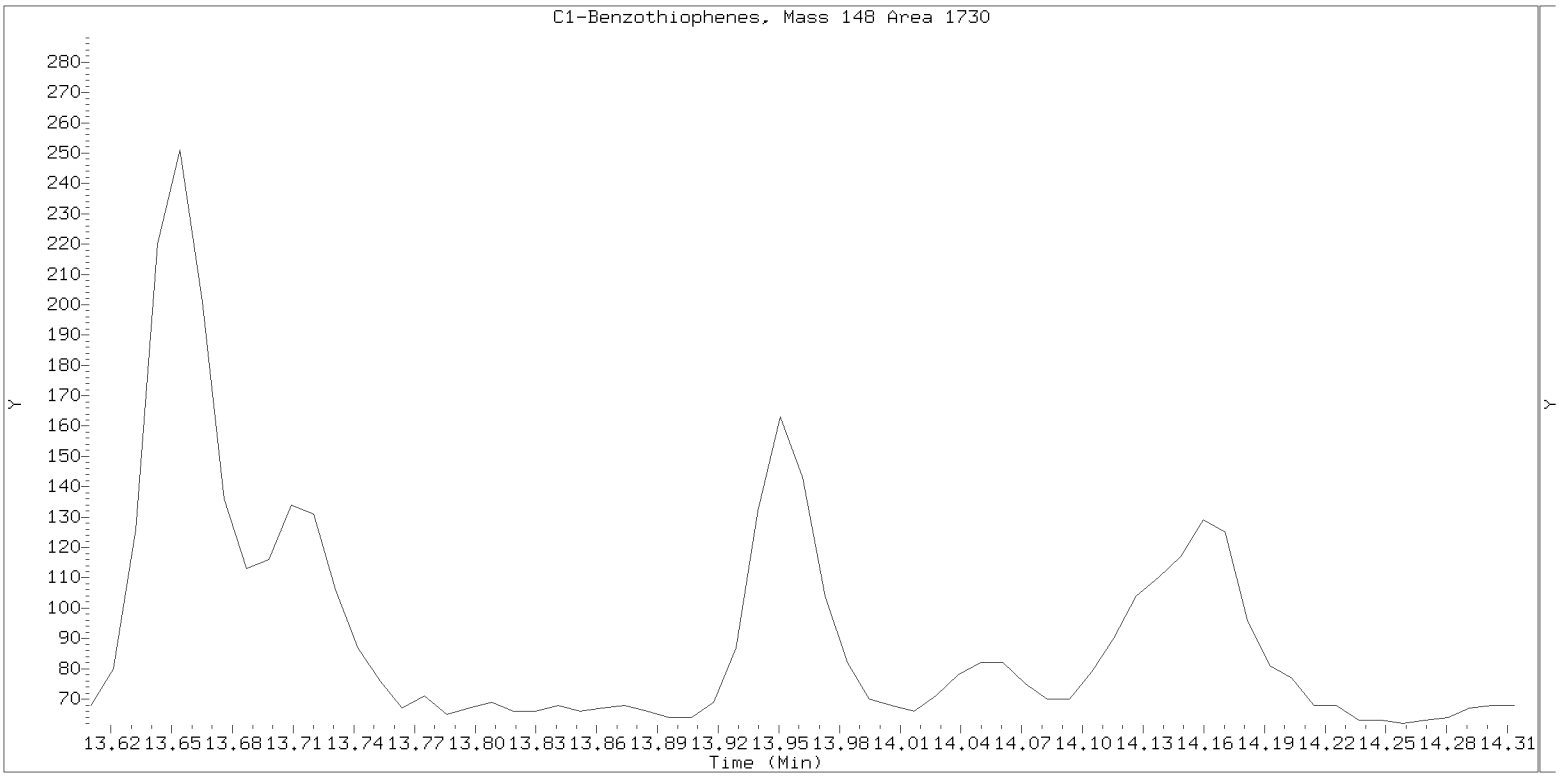

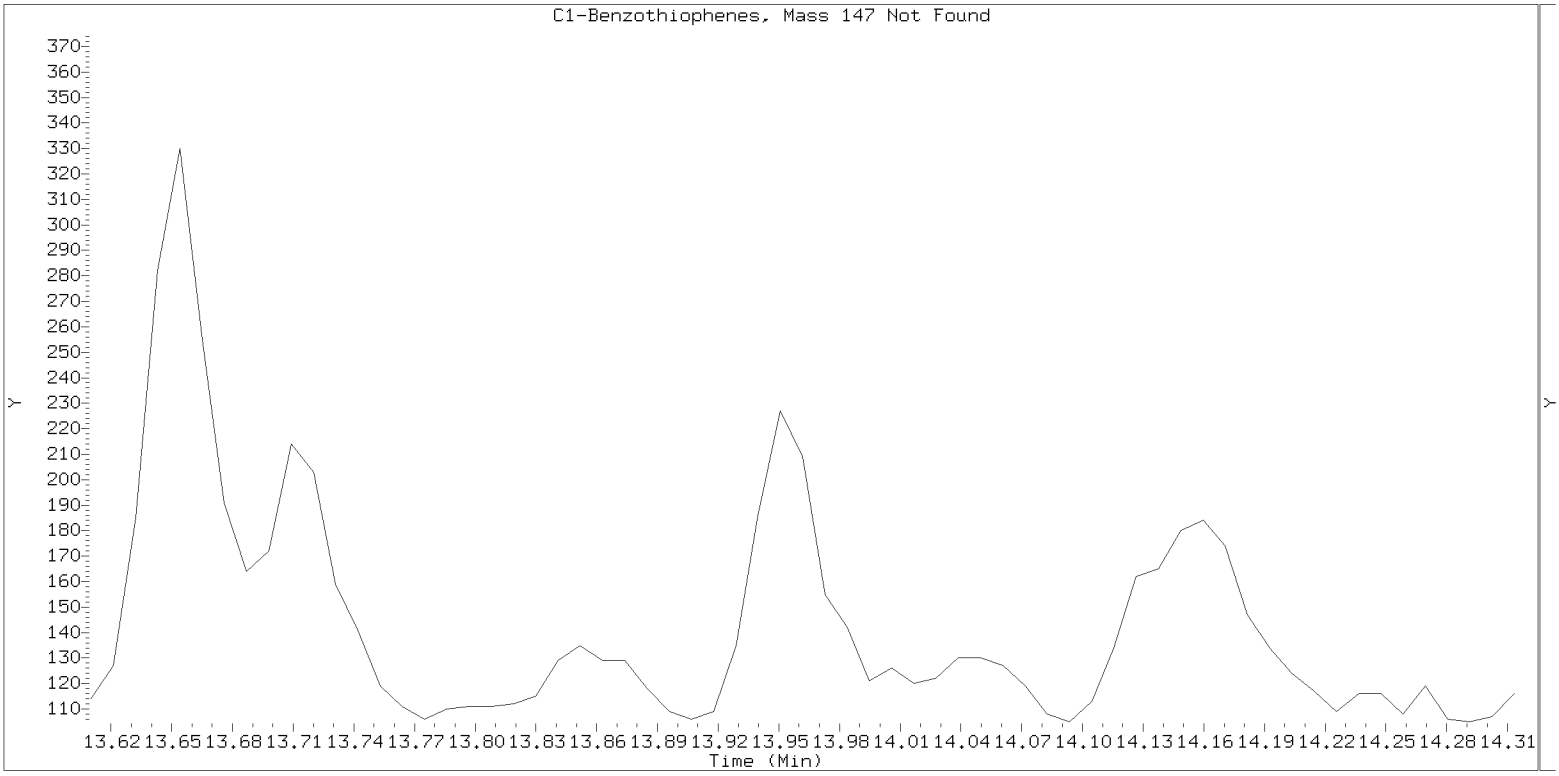

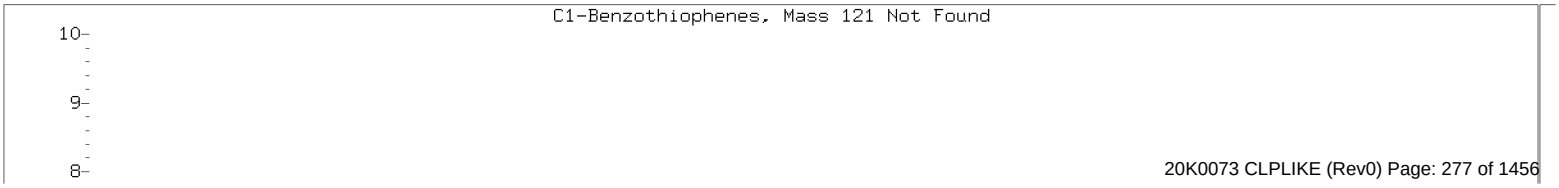

SIM ALKYL PNA RANGE ION WINDOWS - NT1420121215.D

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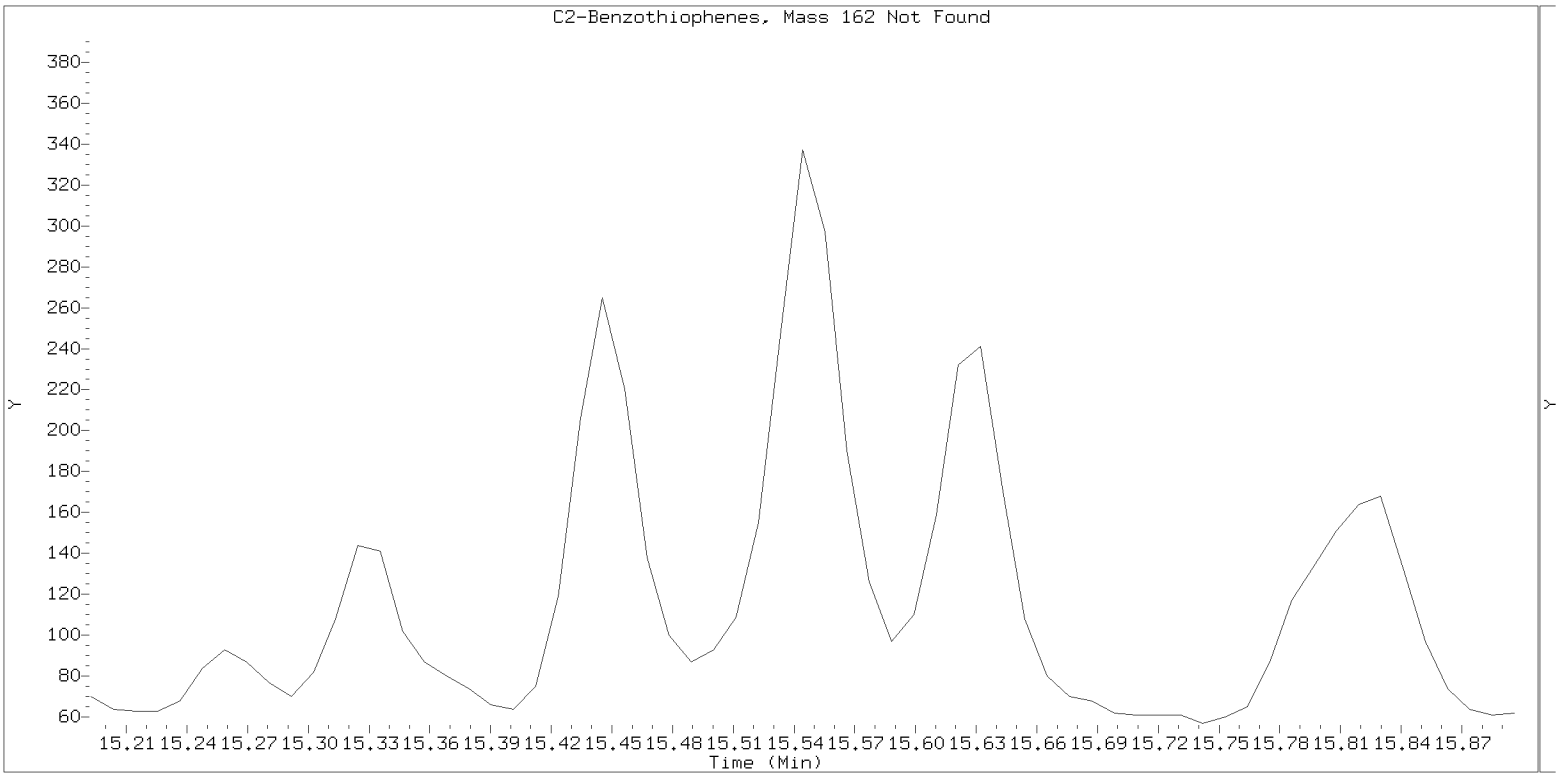

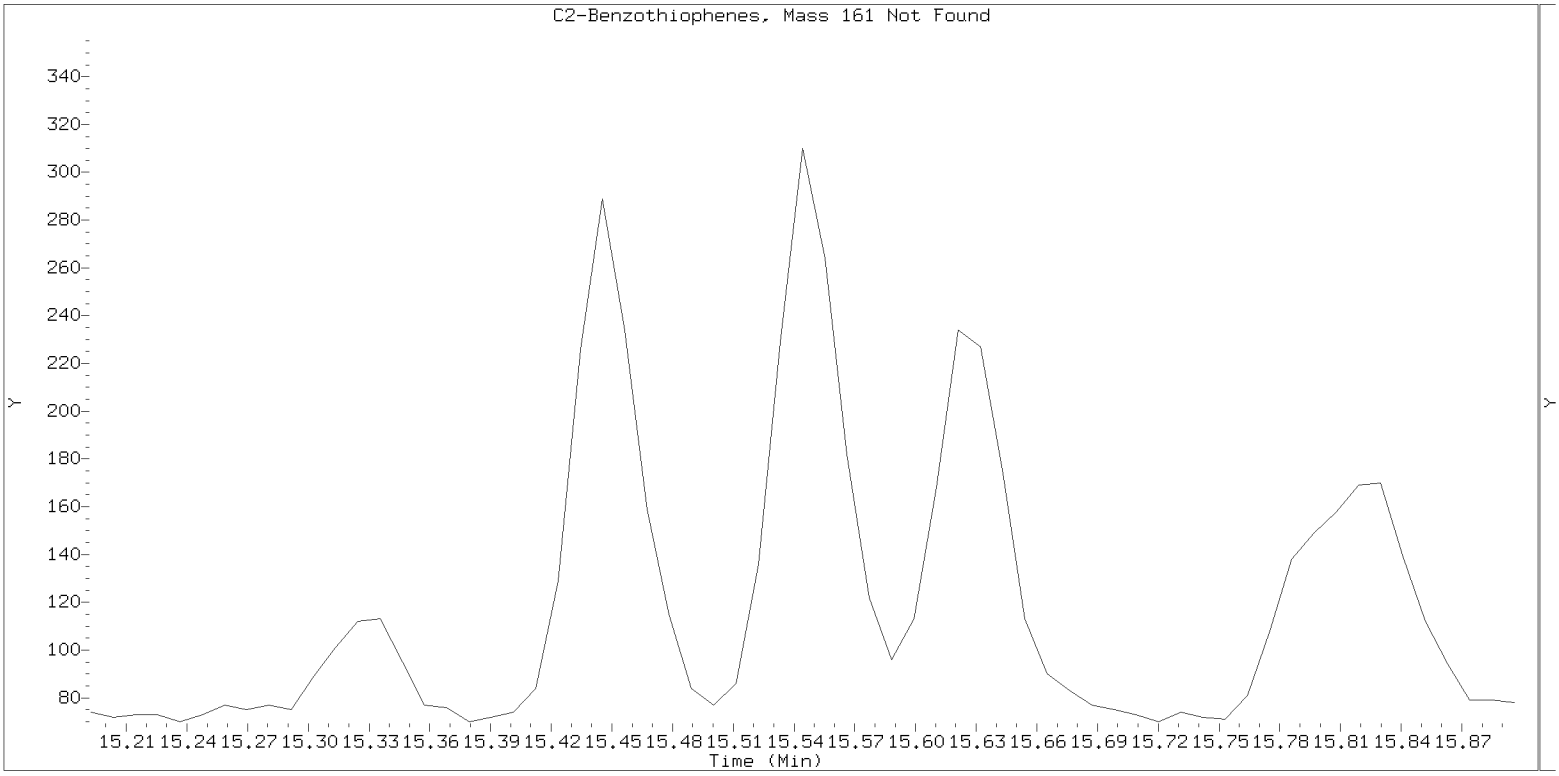

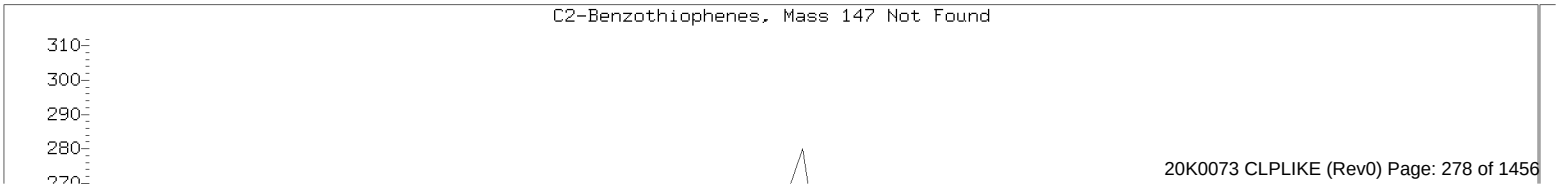

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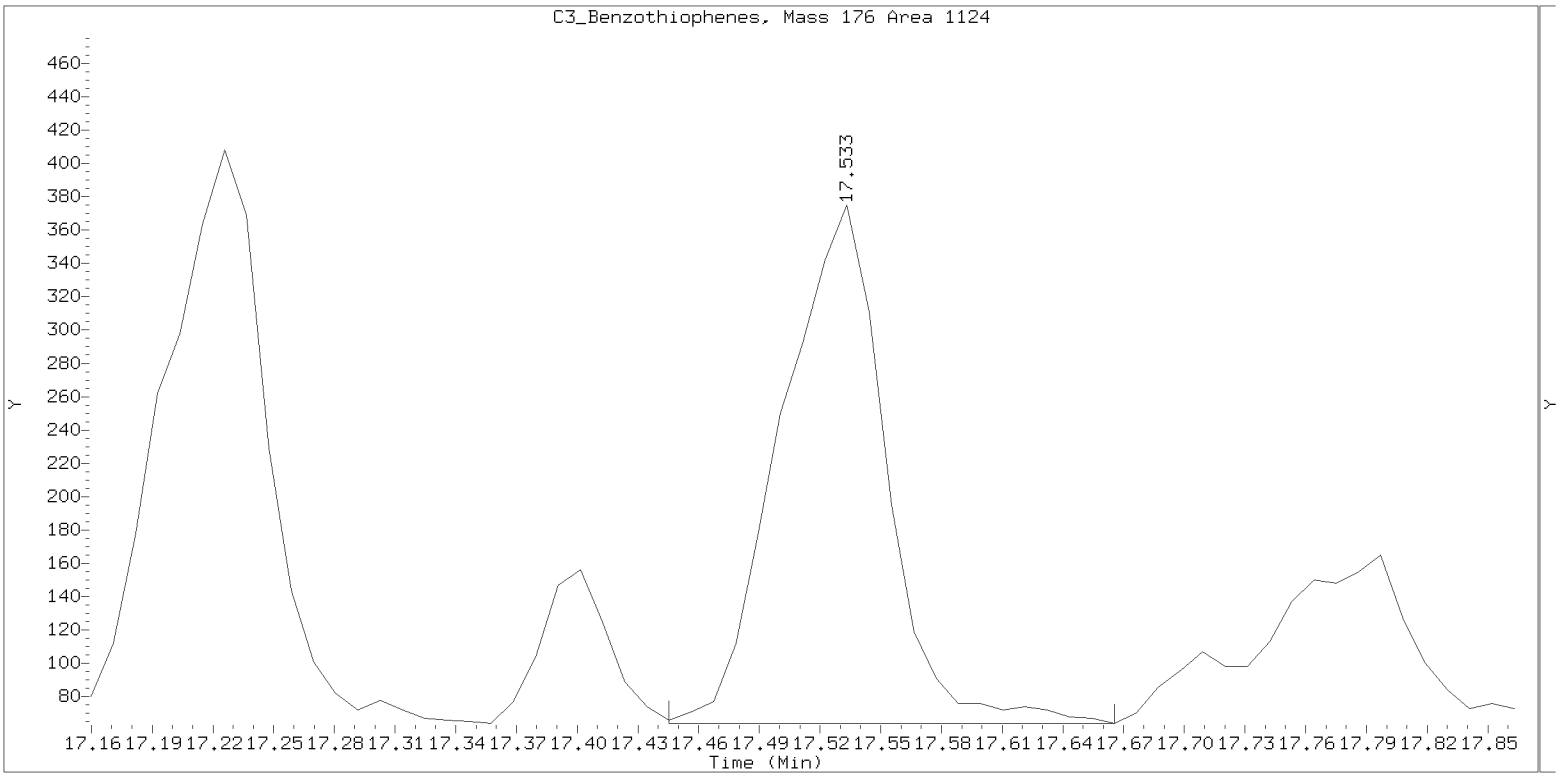

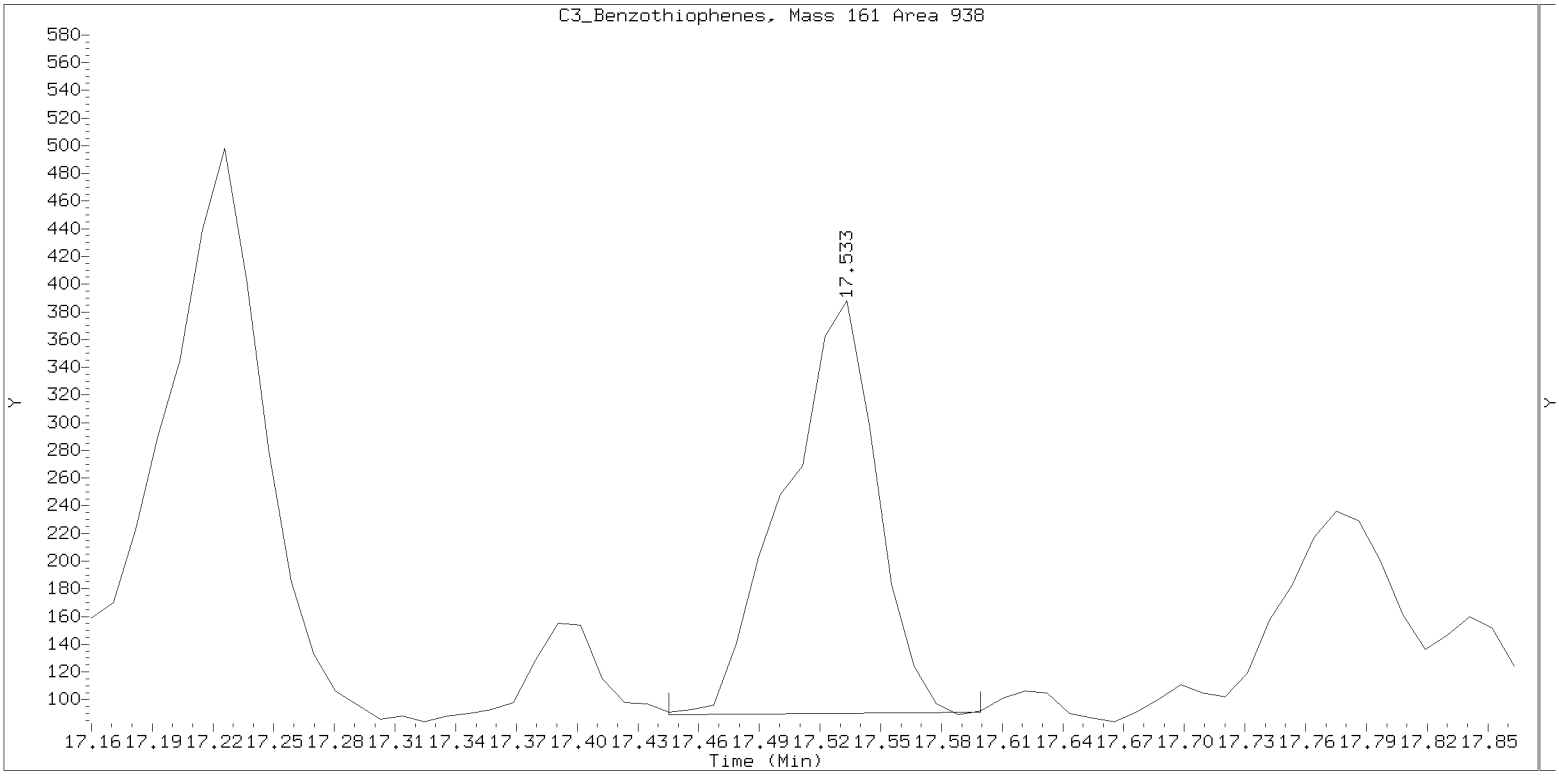

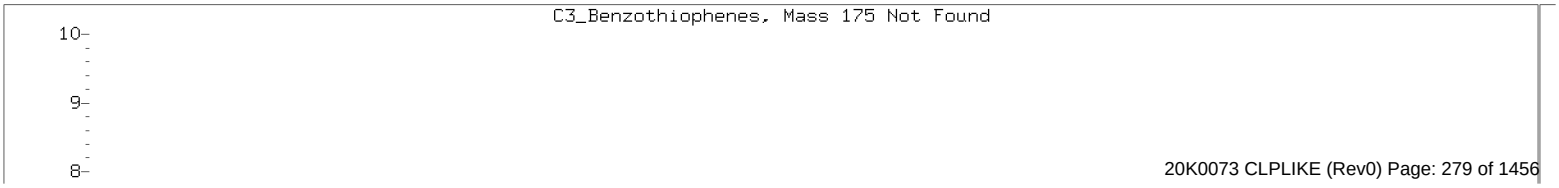

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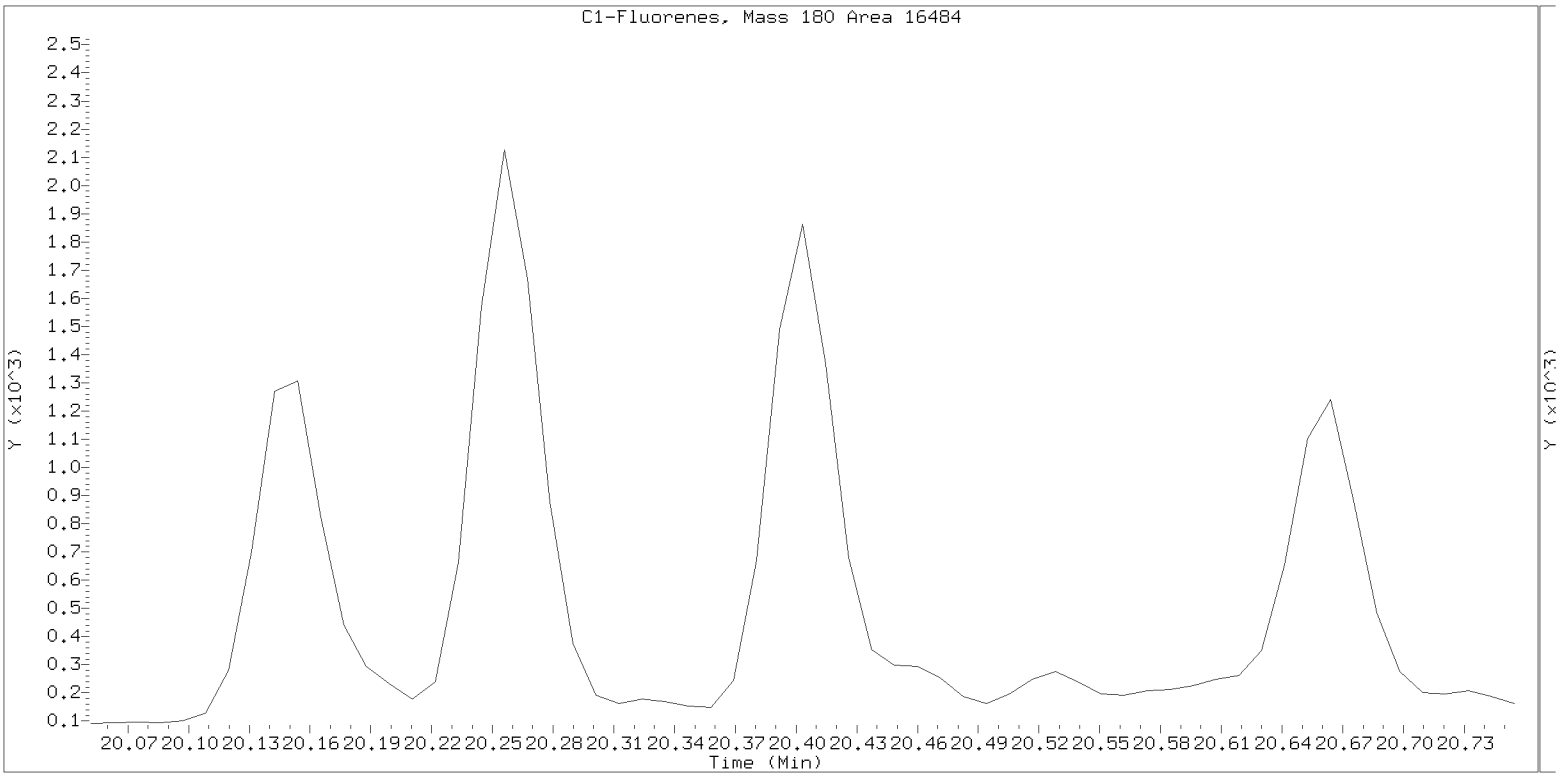

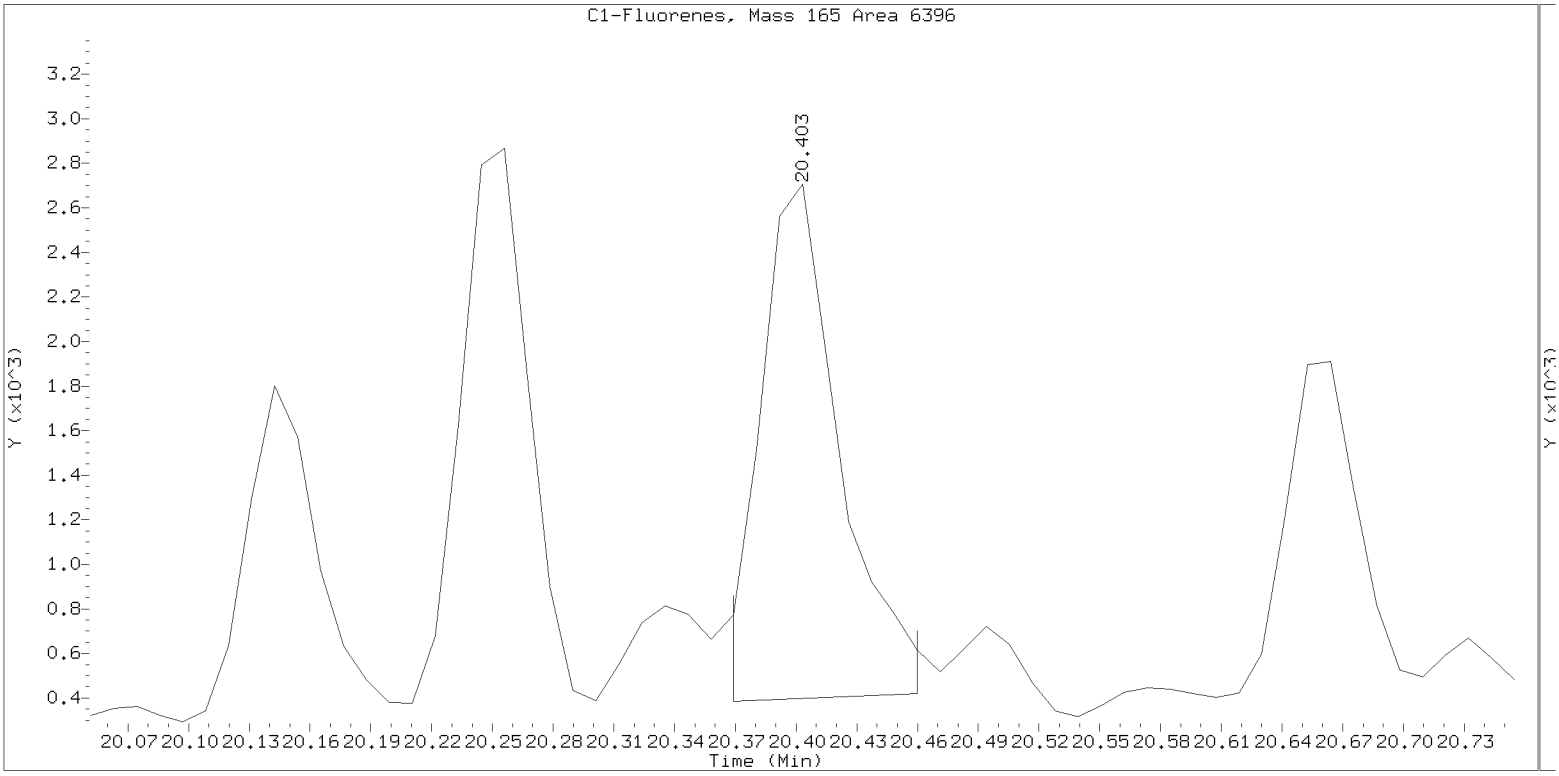

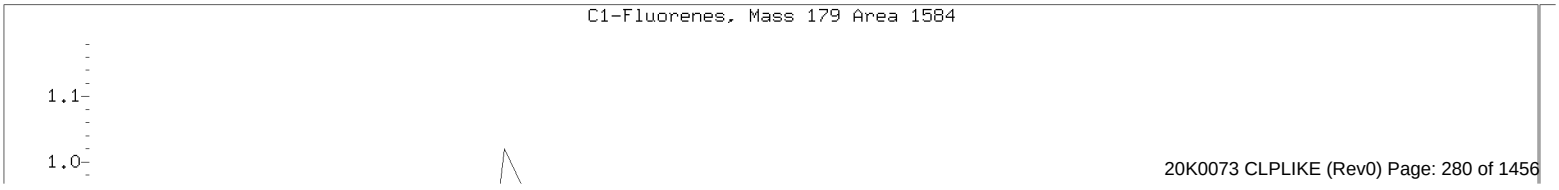

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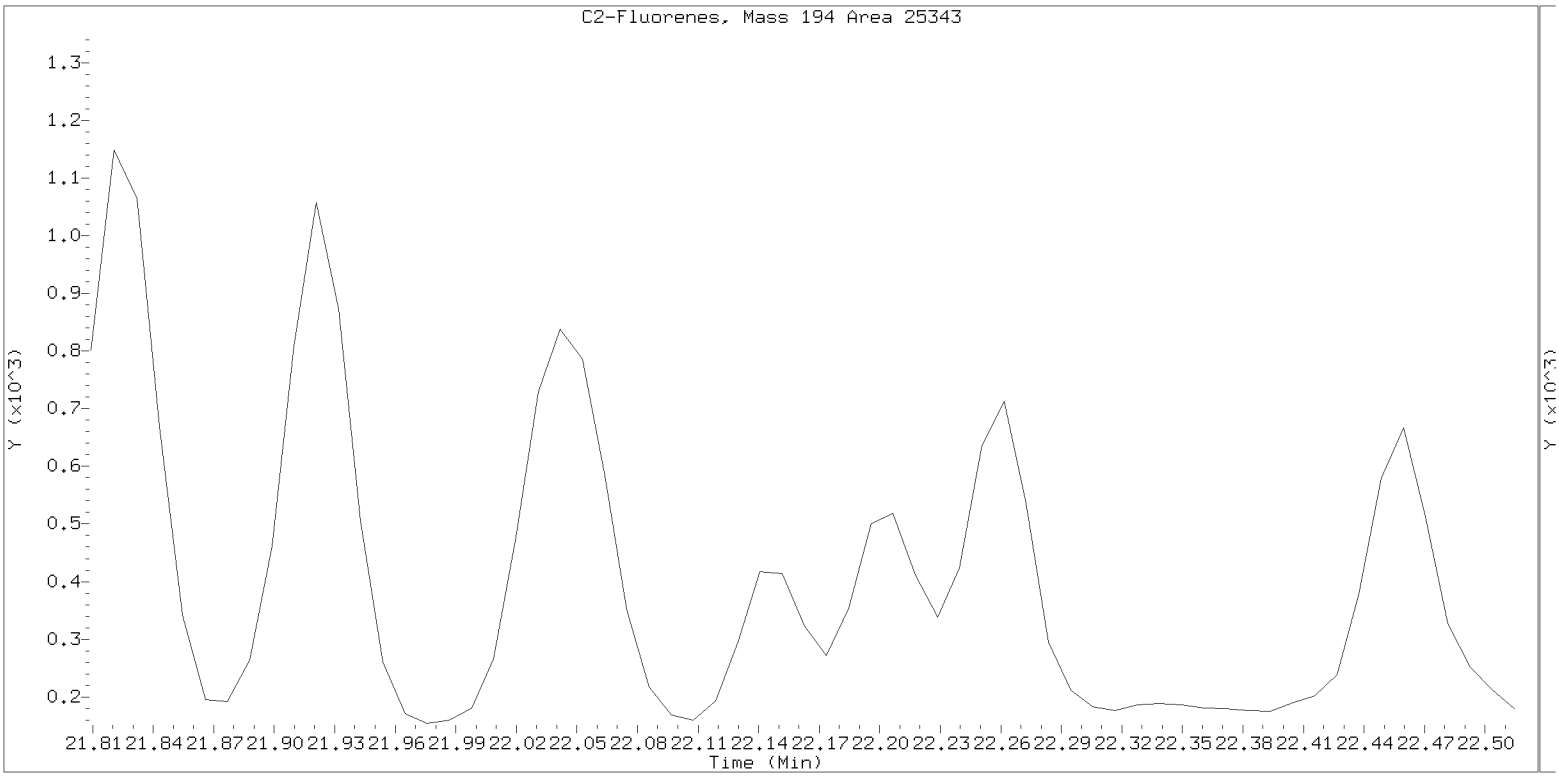

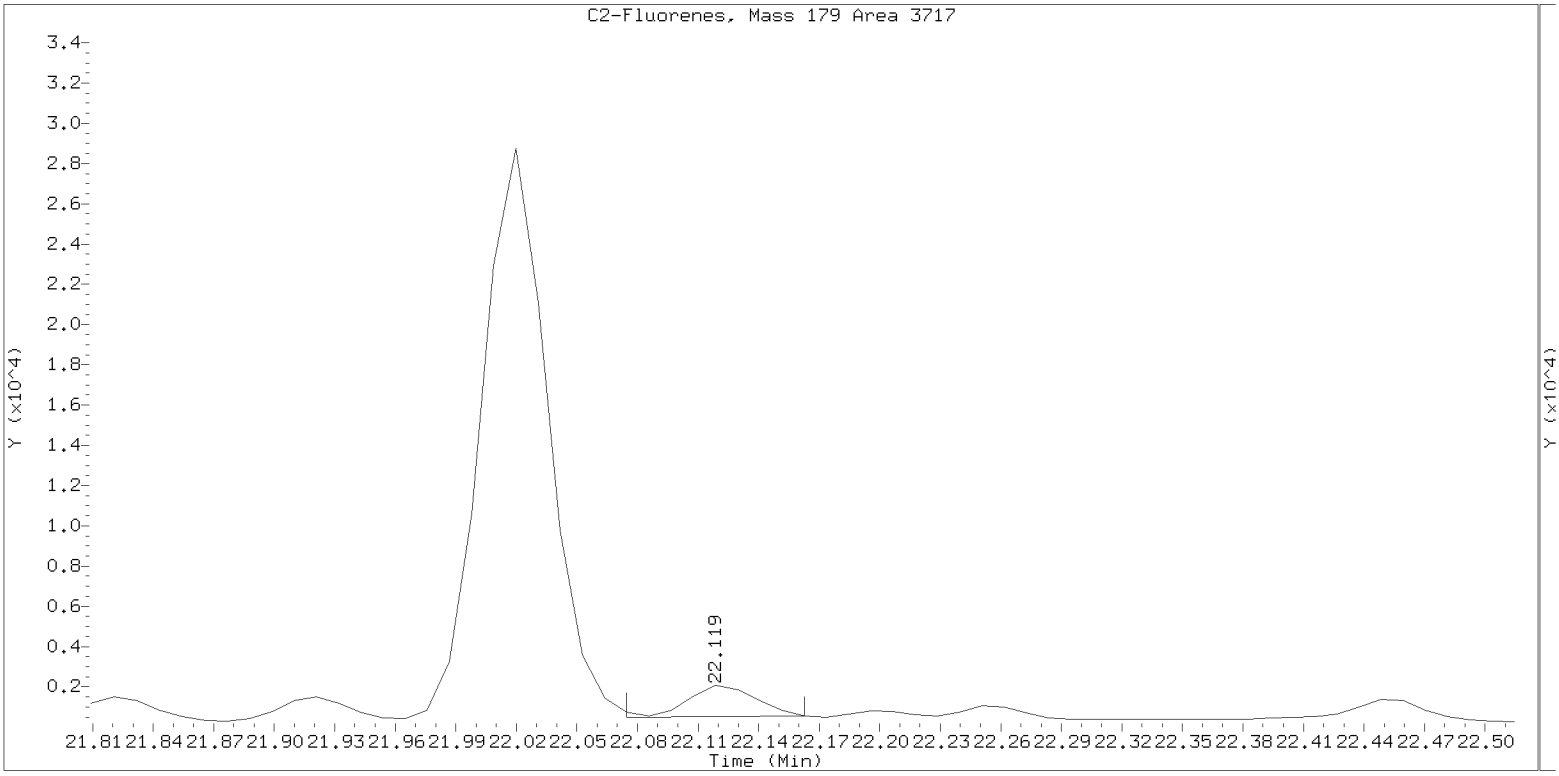

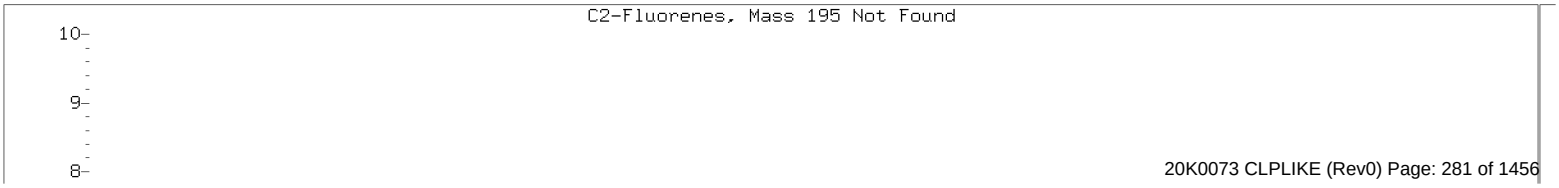

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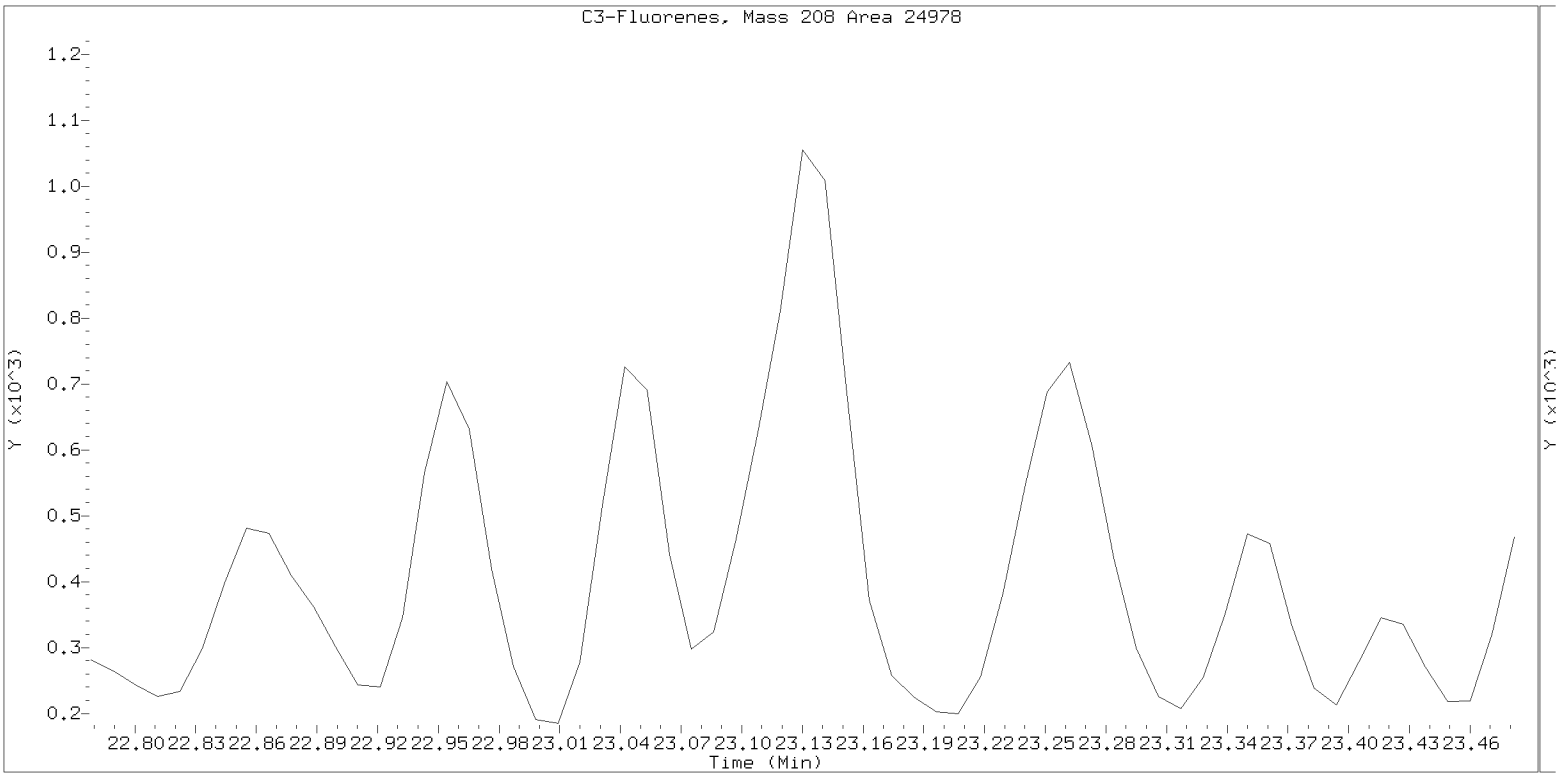

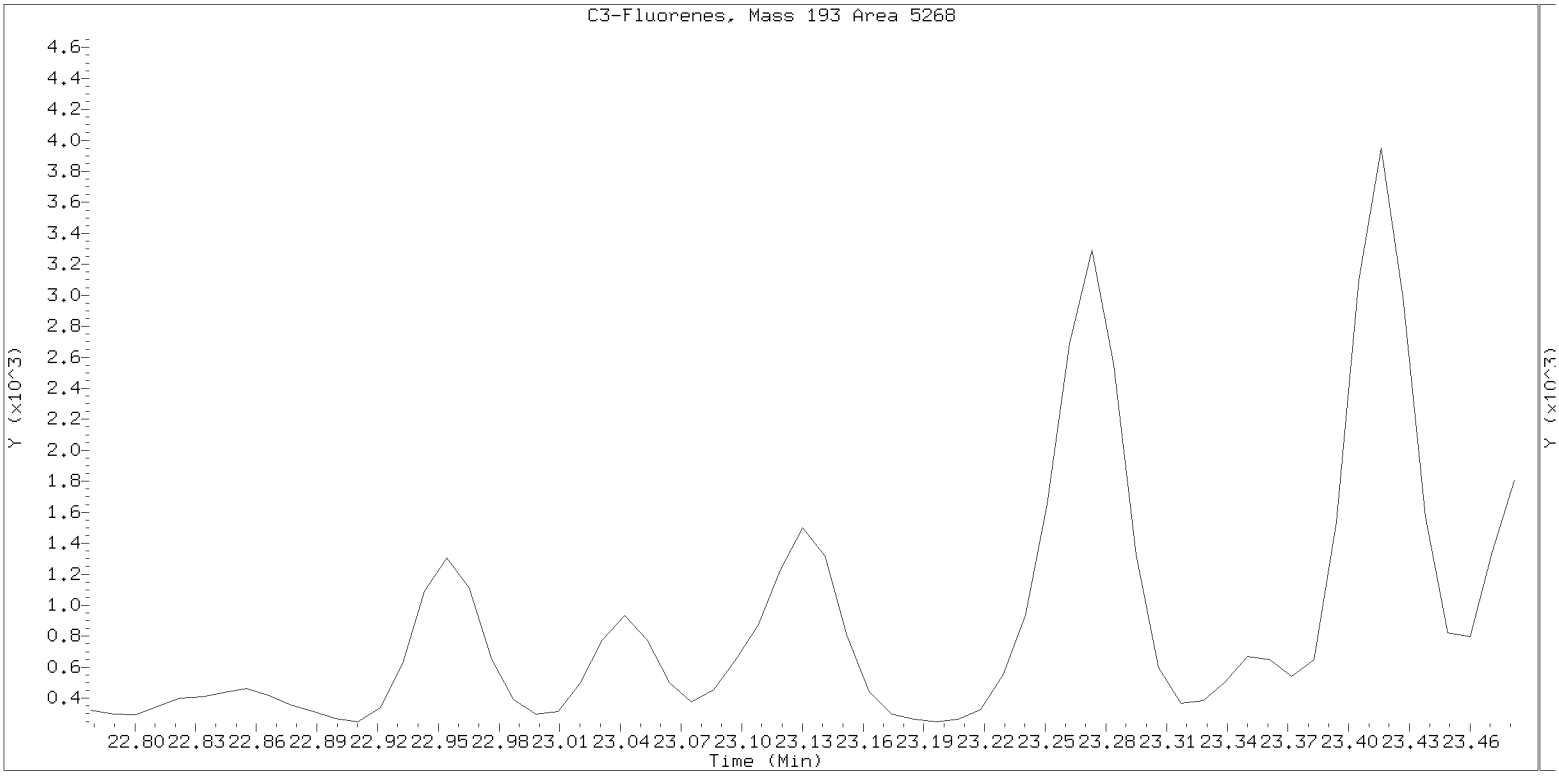

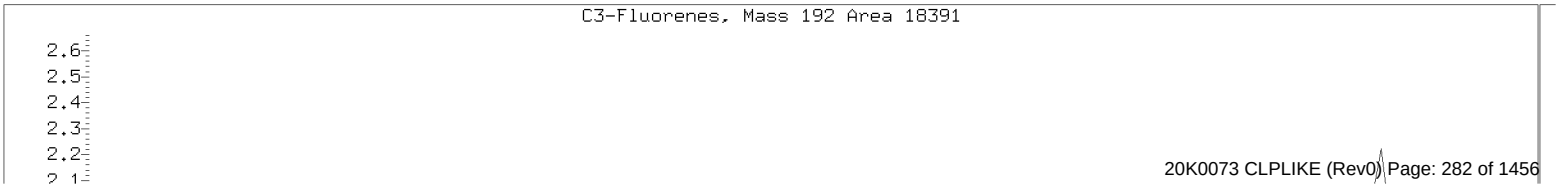

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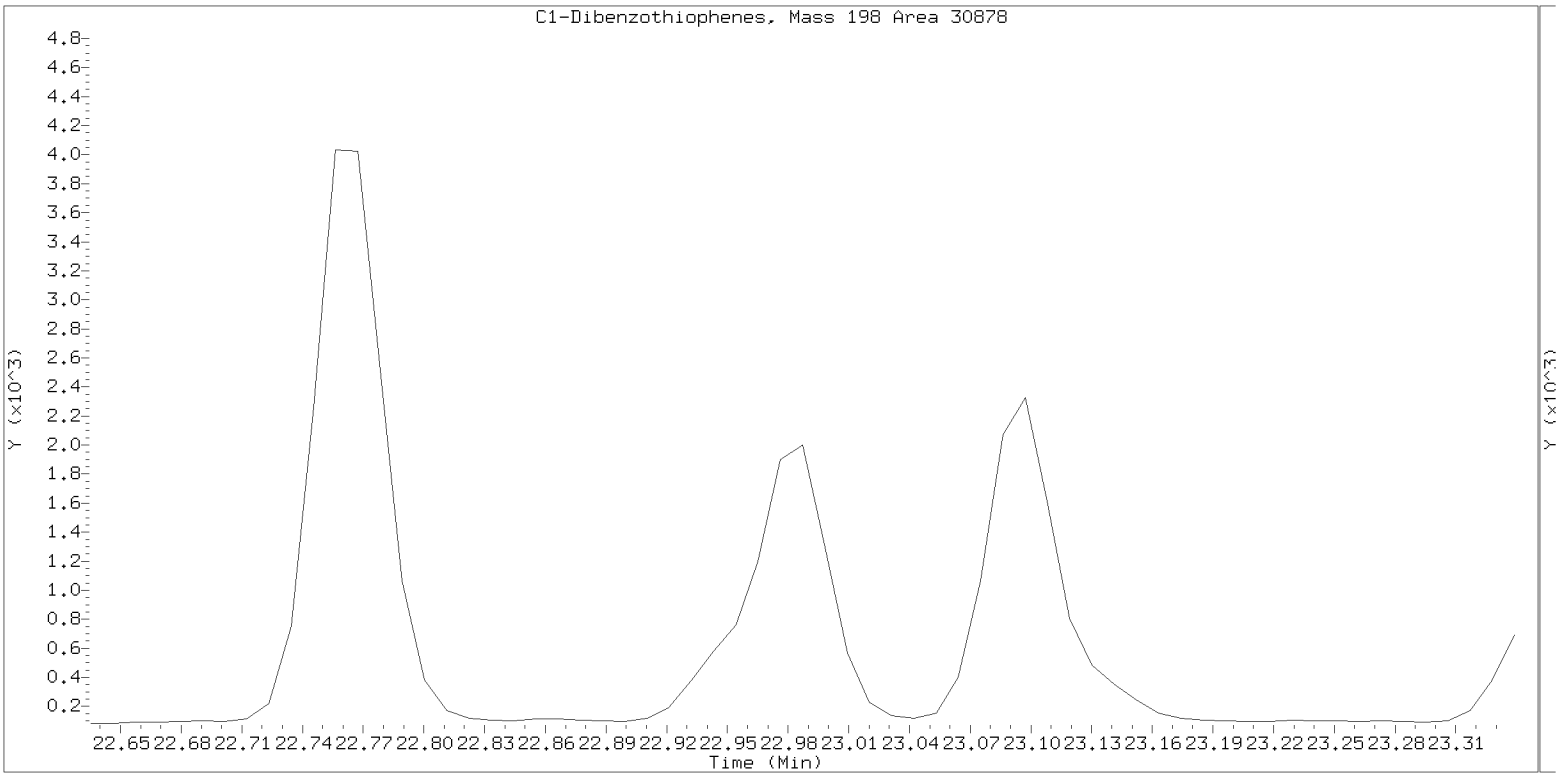

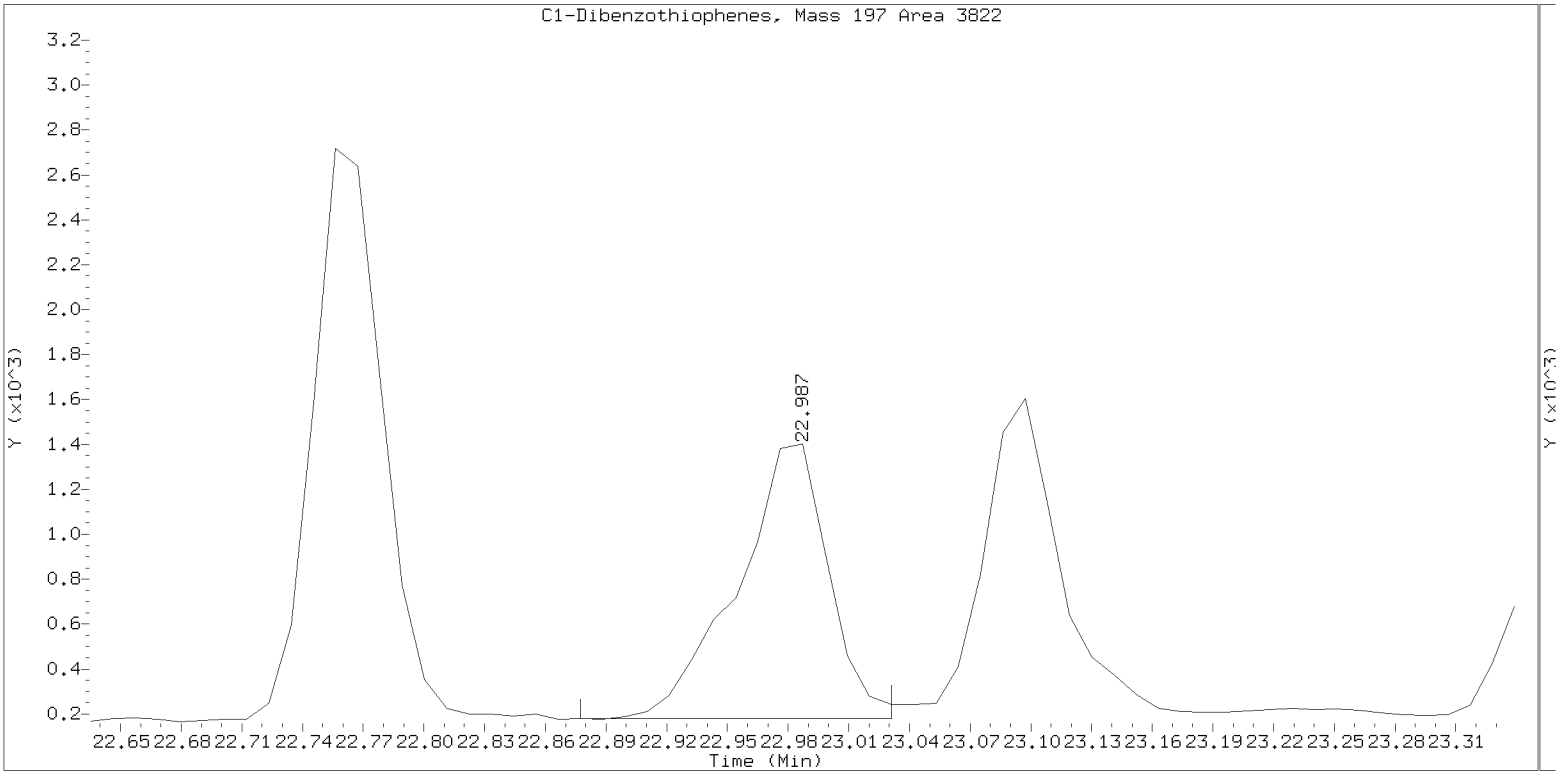

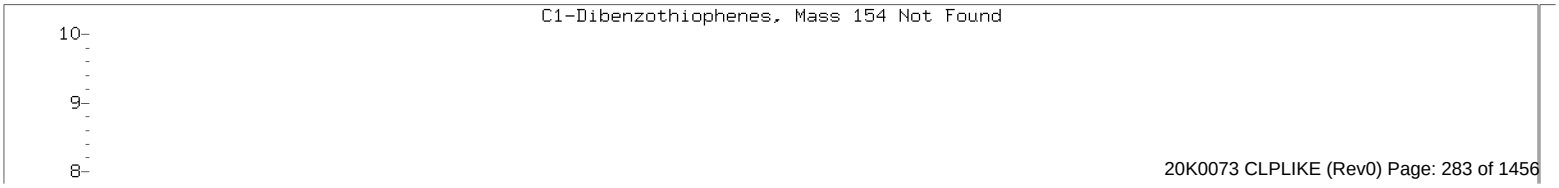

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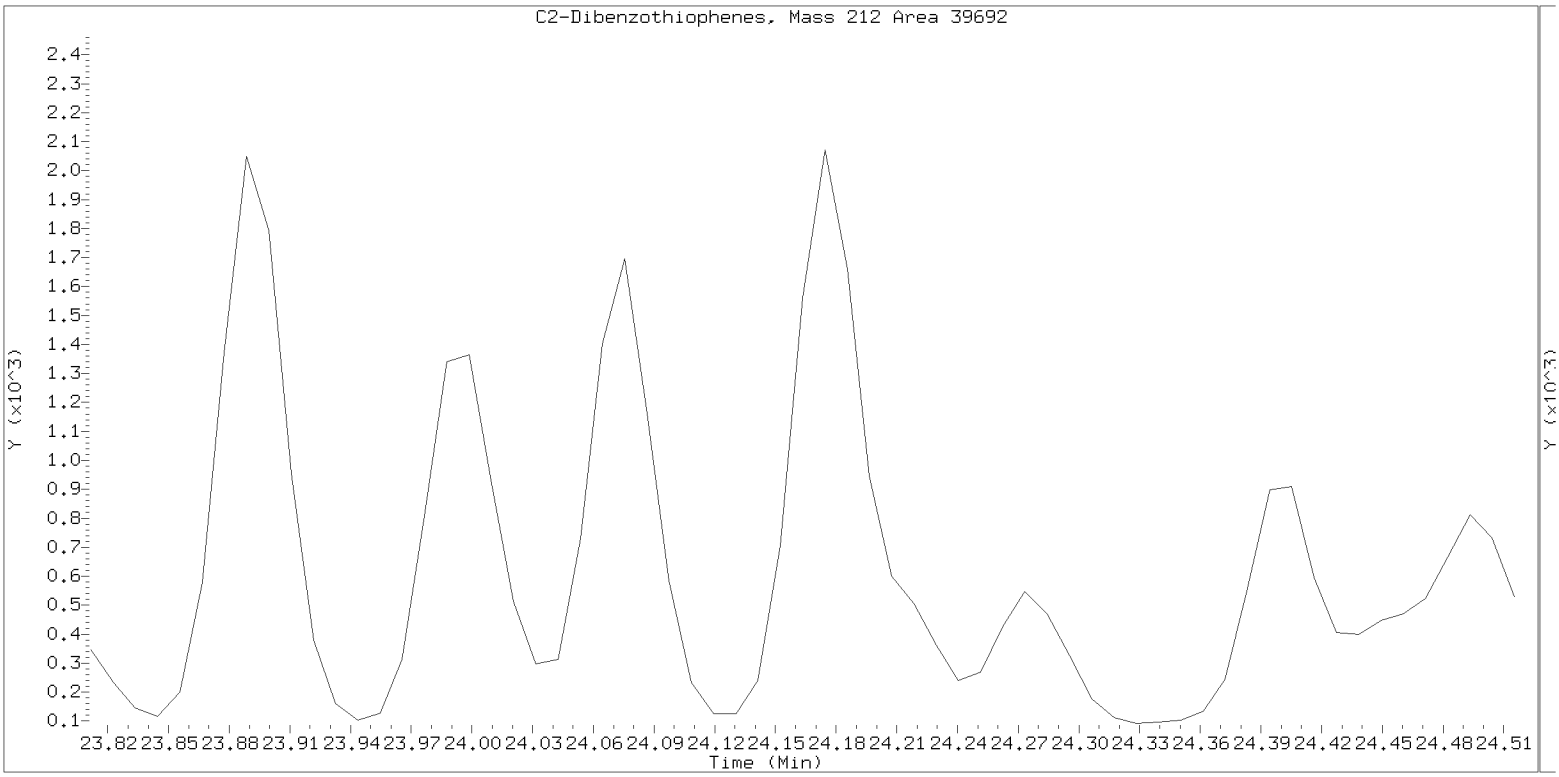

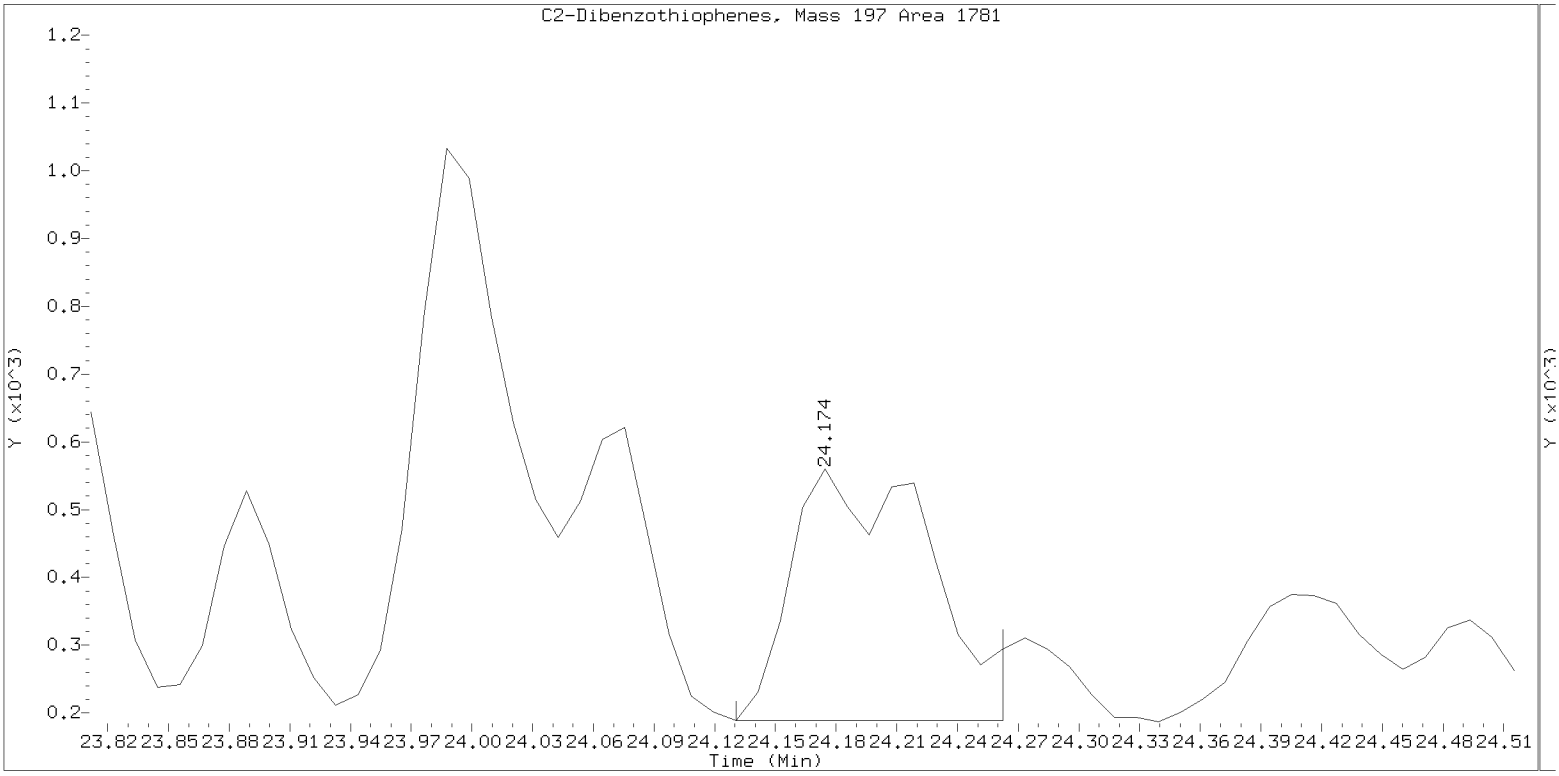

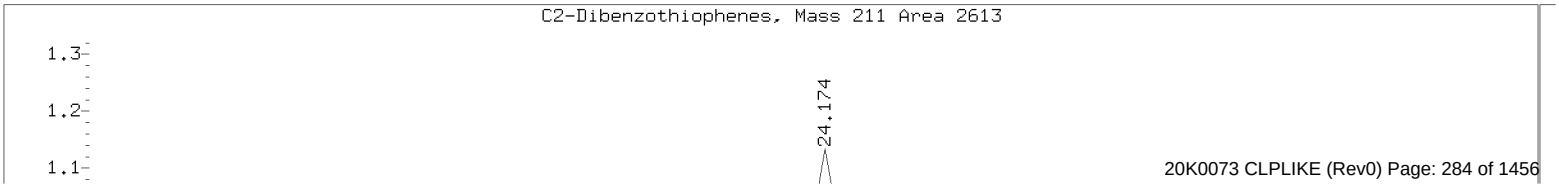

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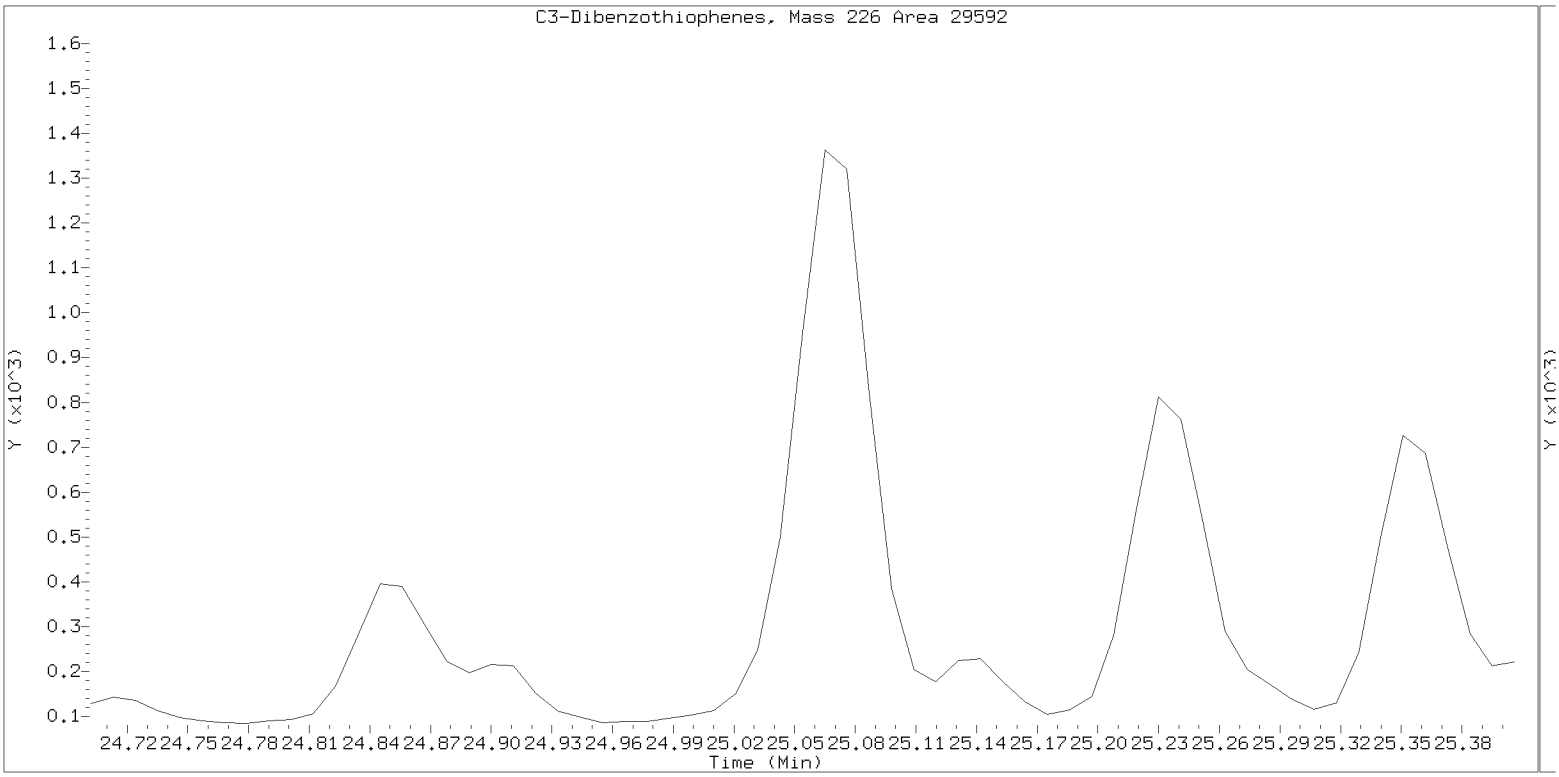

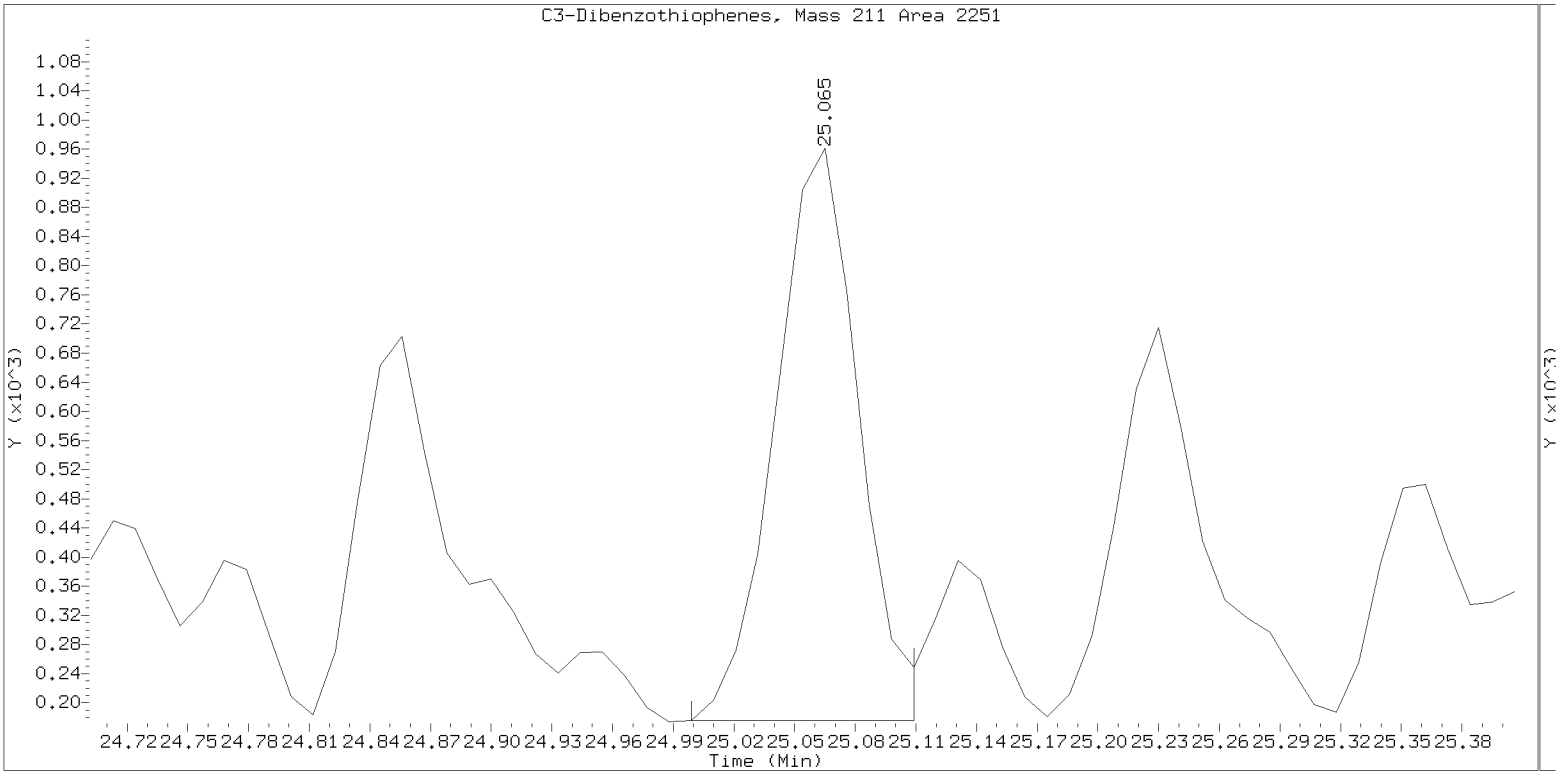

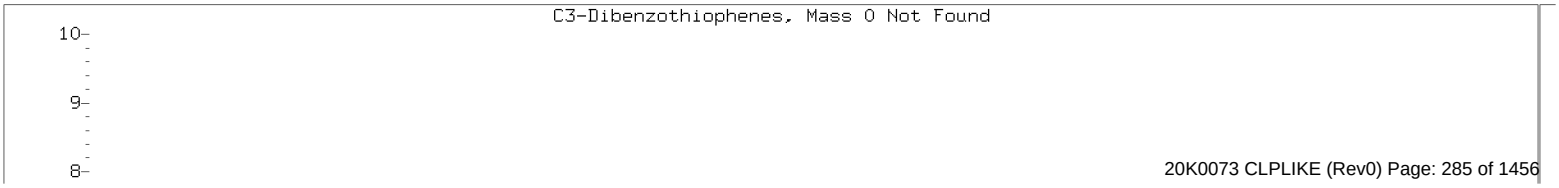

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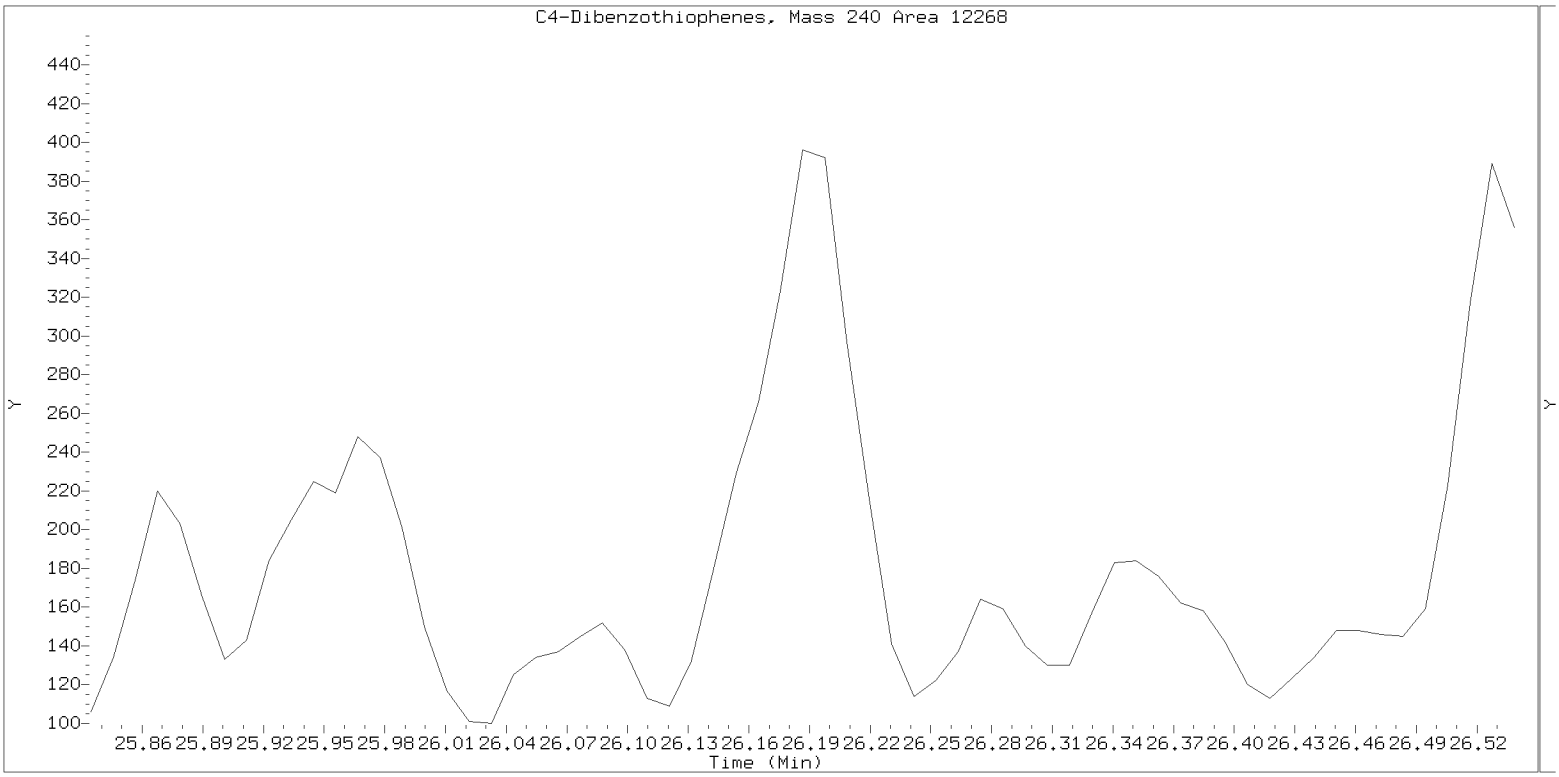

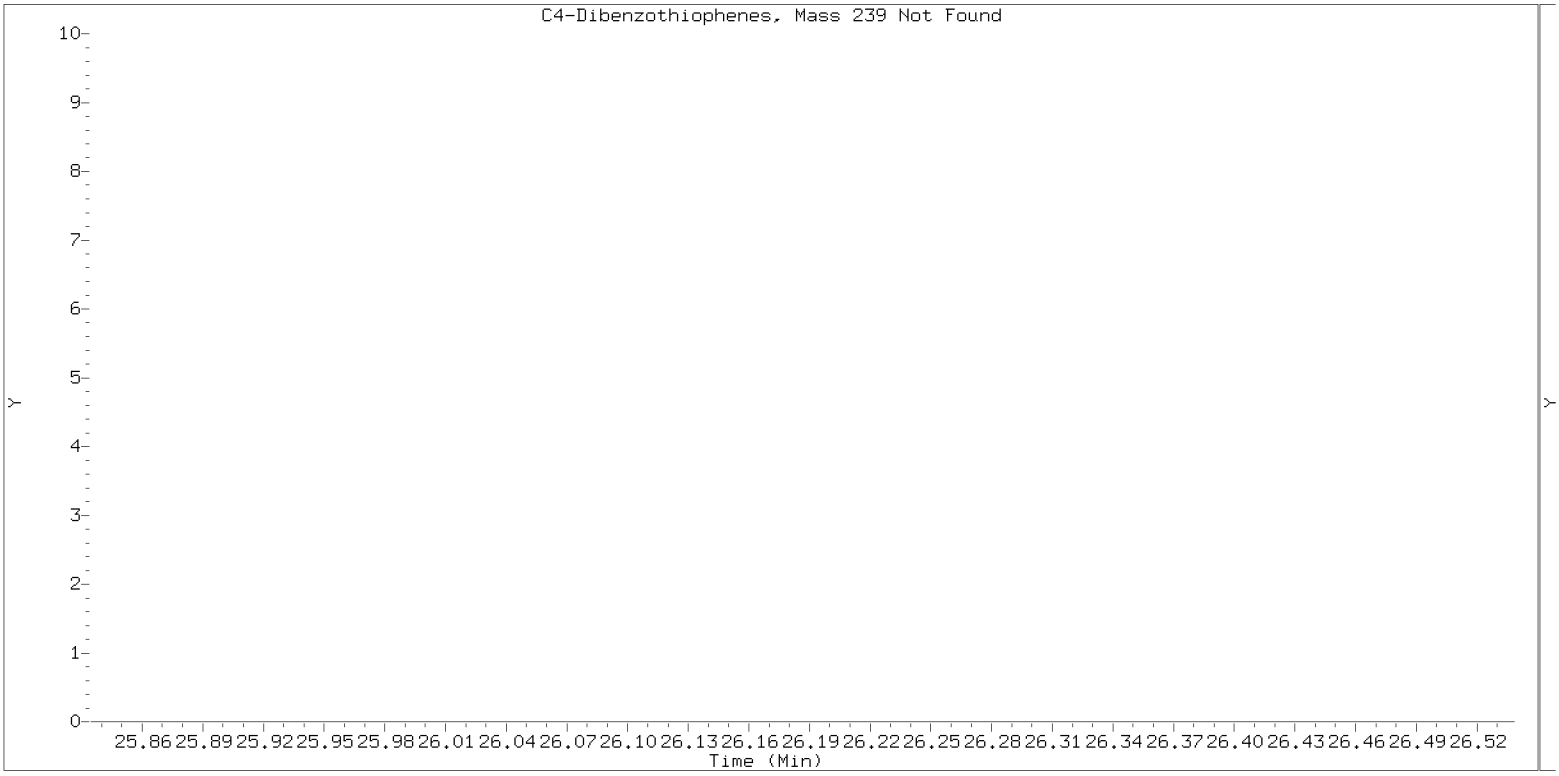

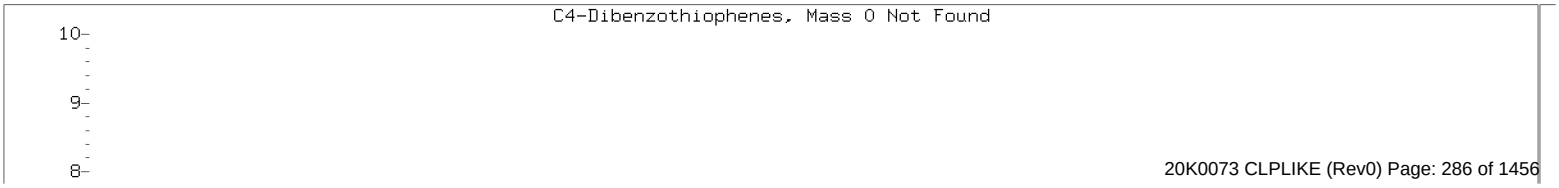

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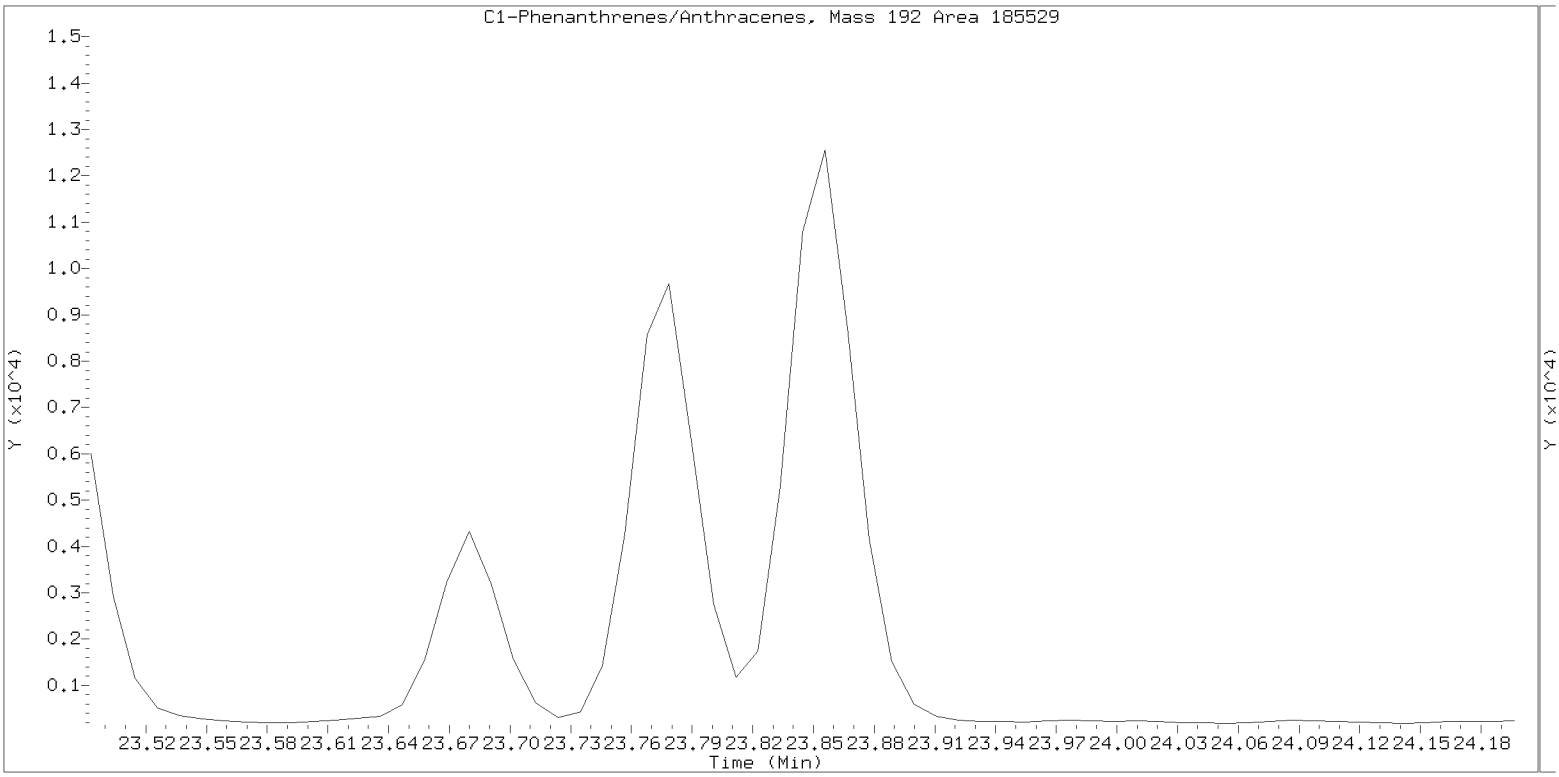

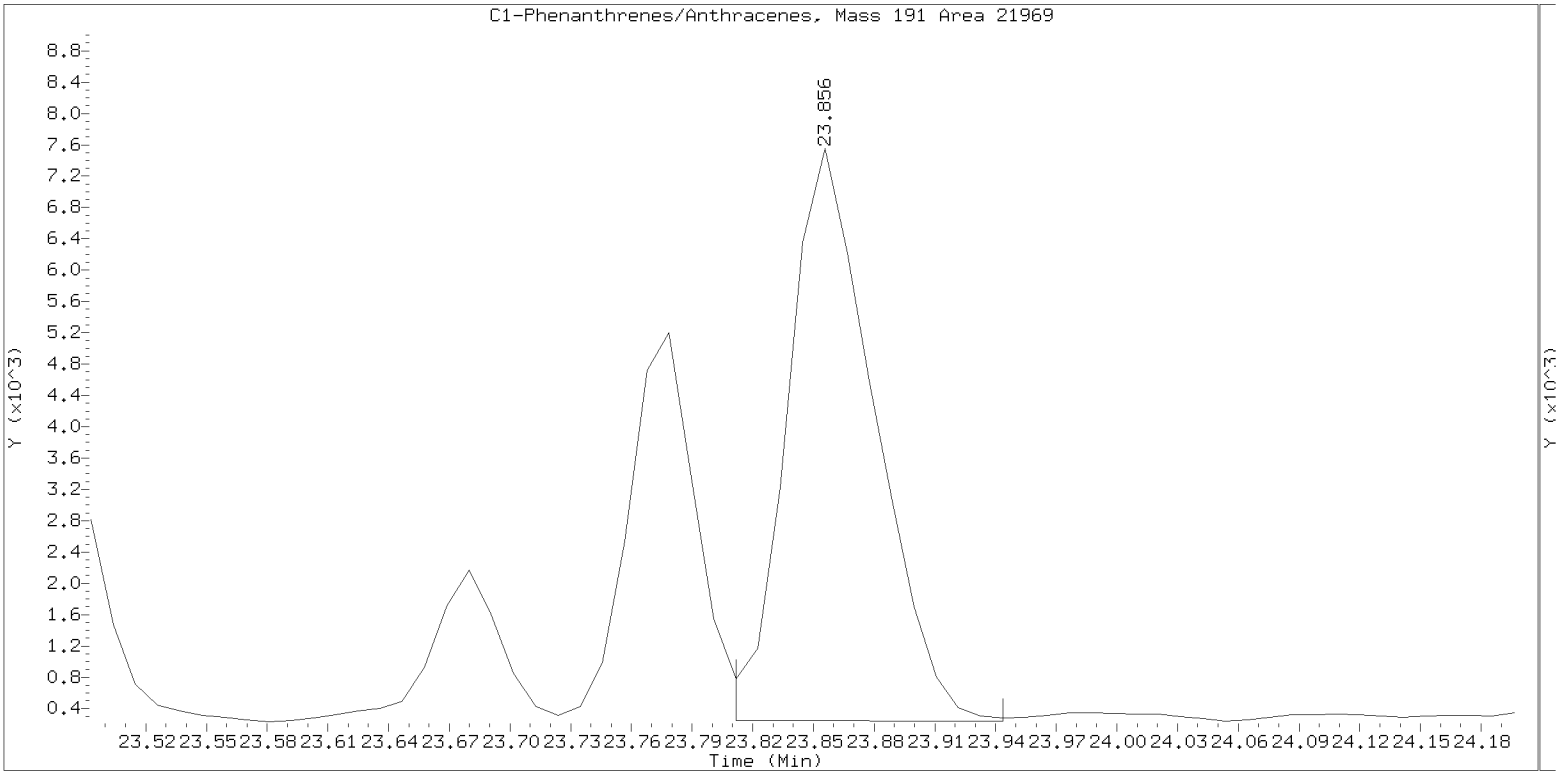

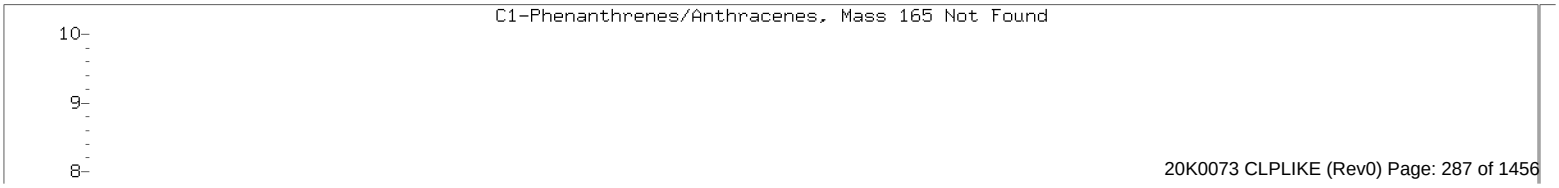

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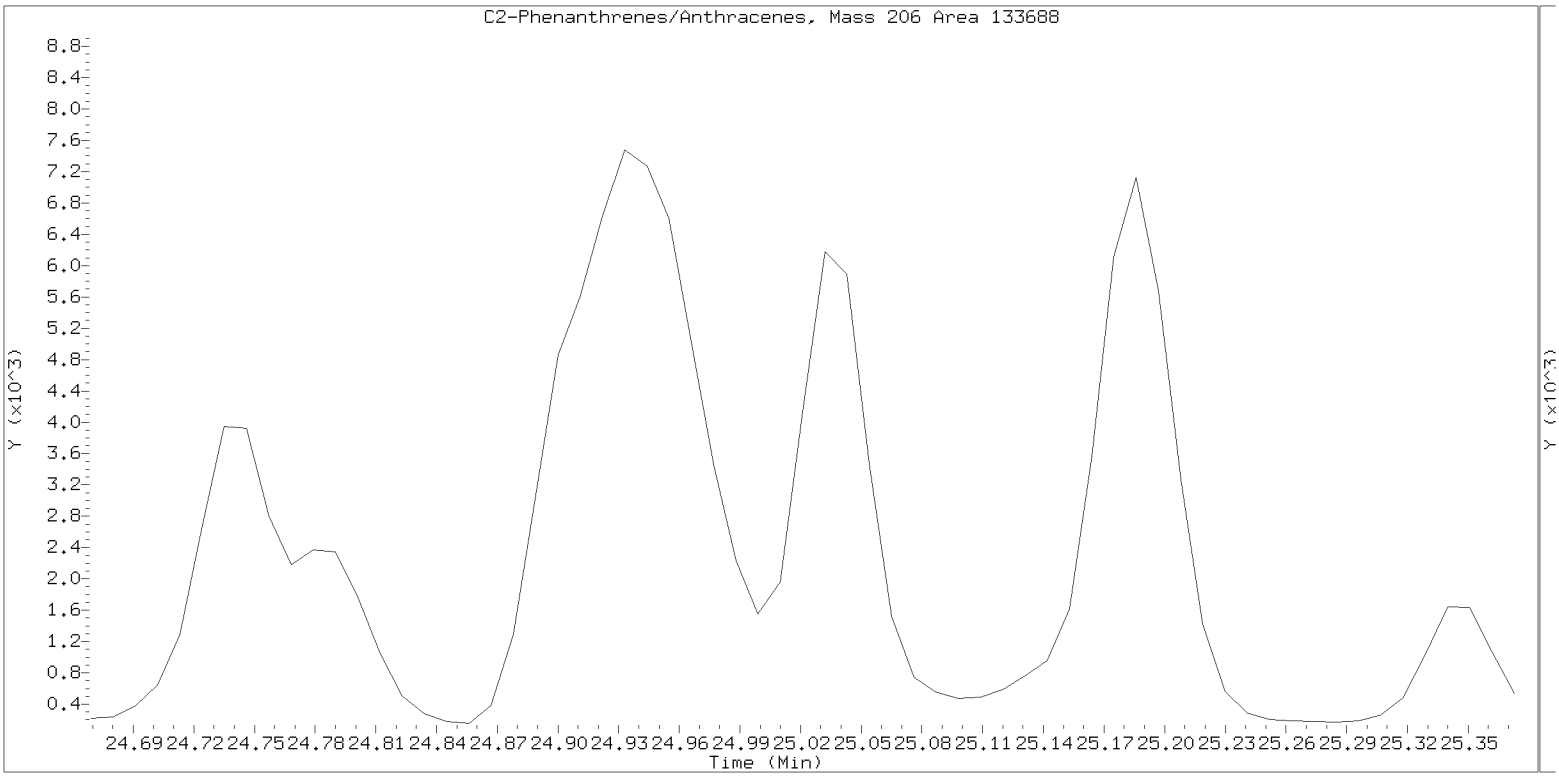

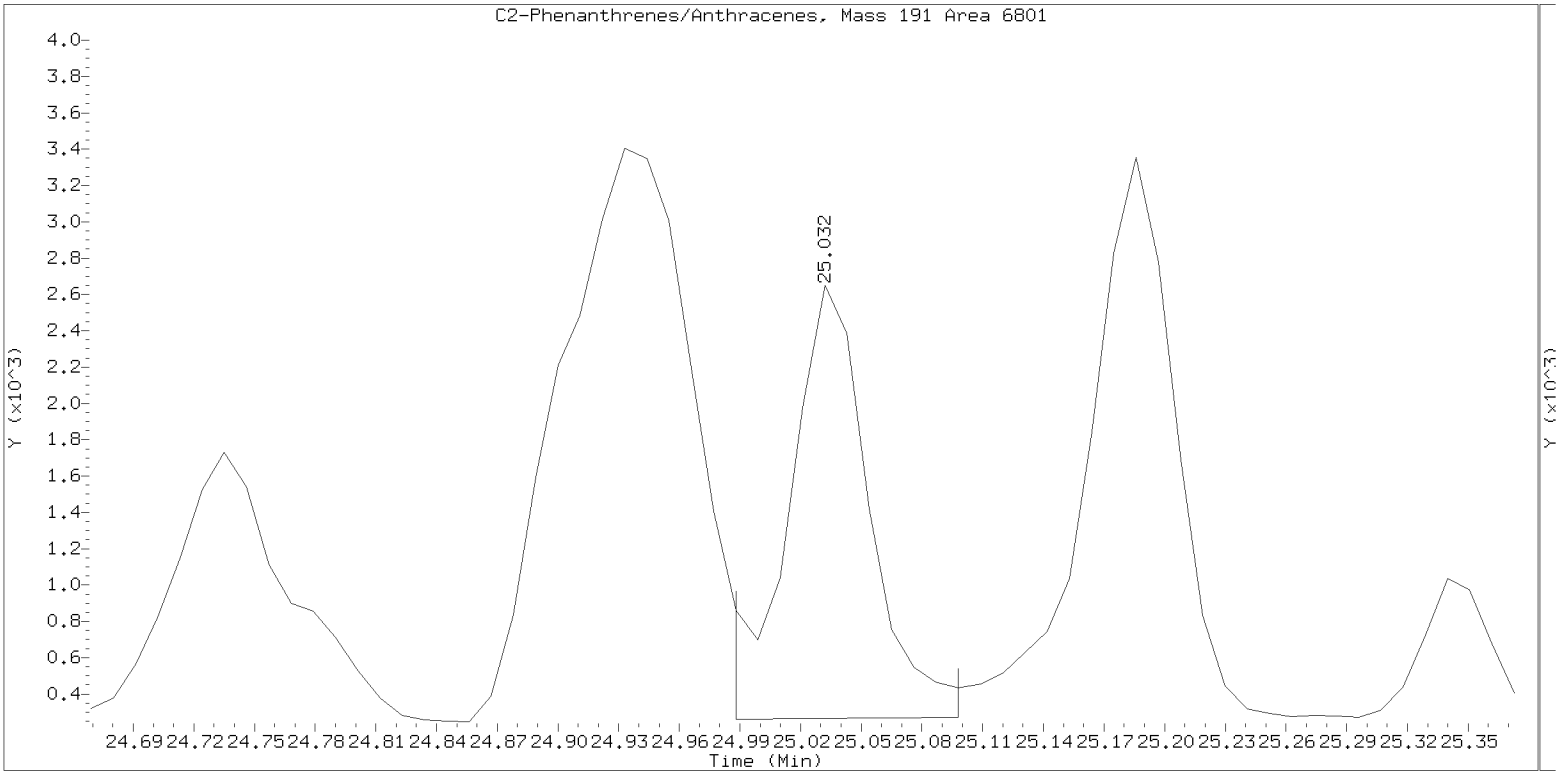

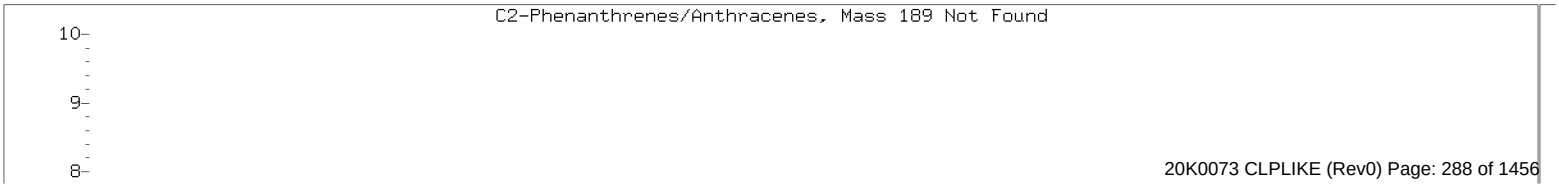

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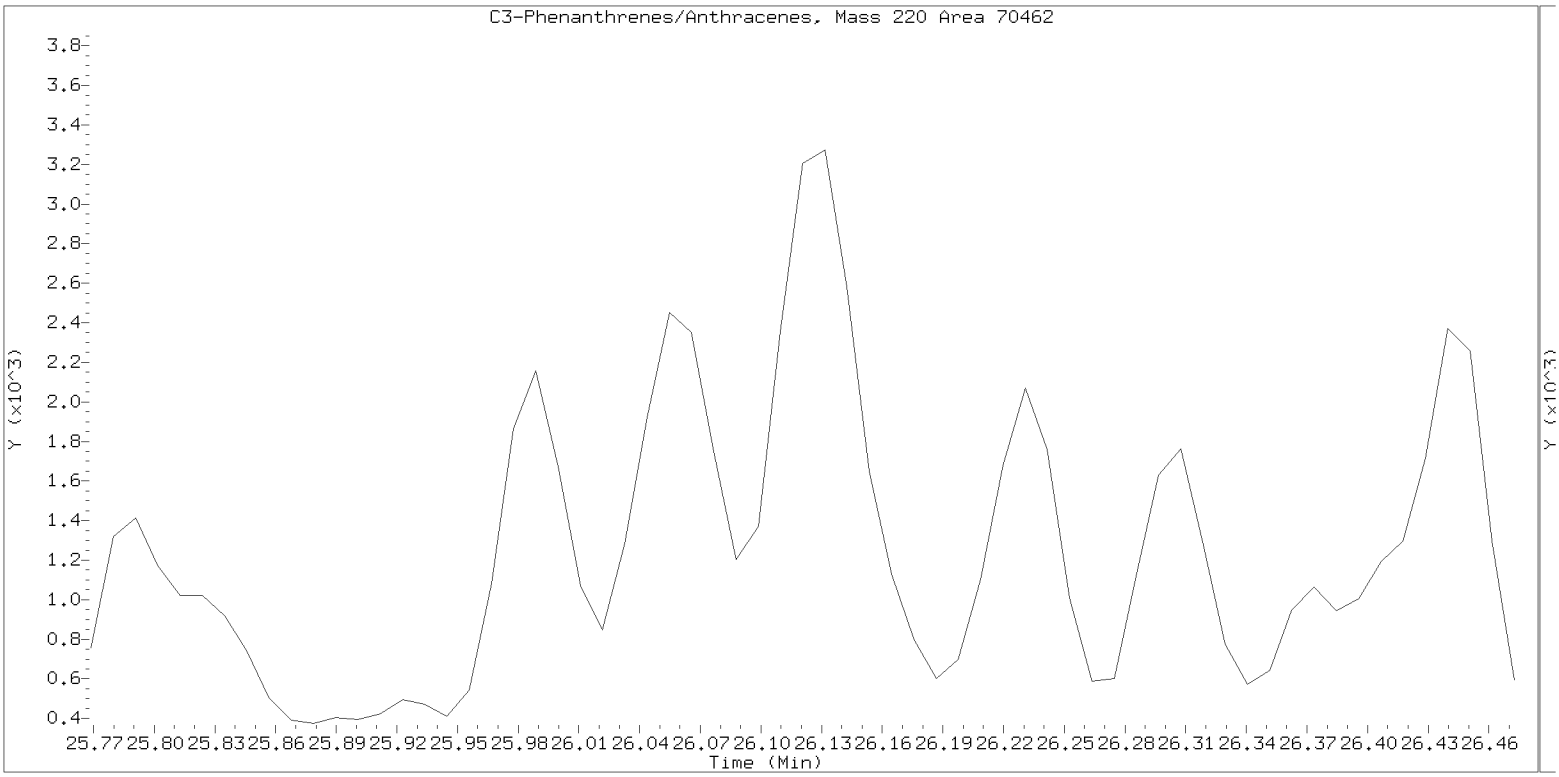

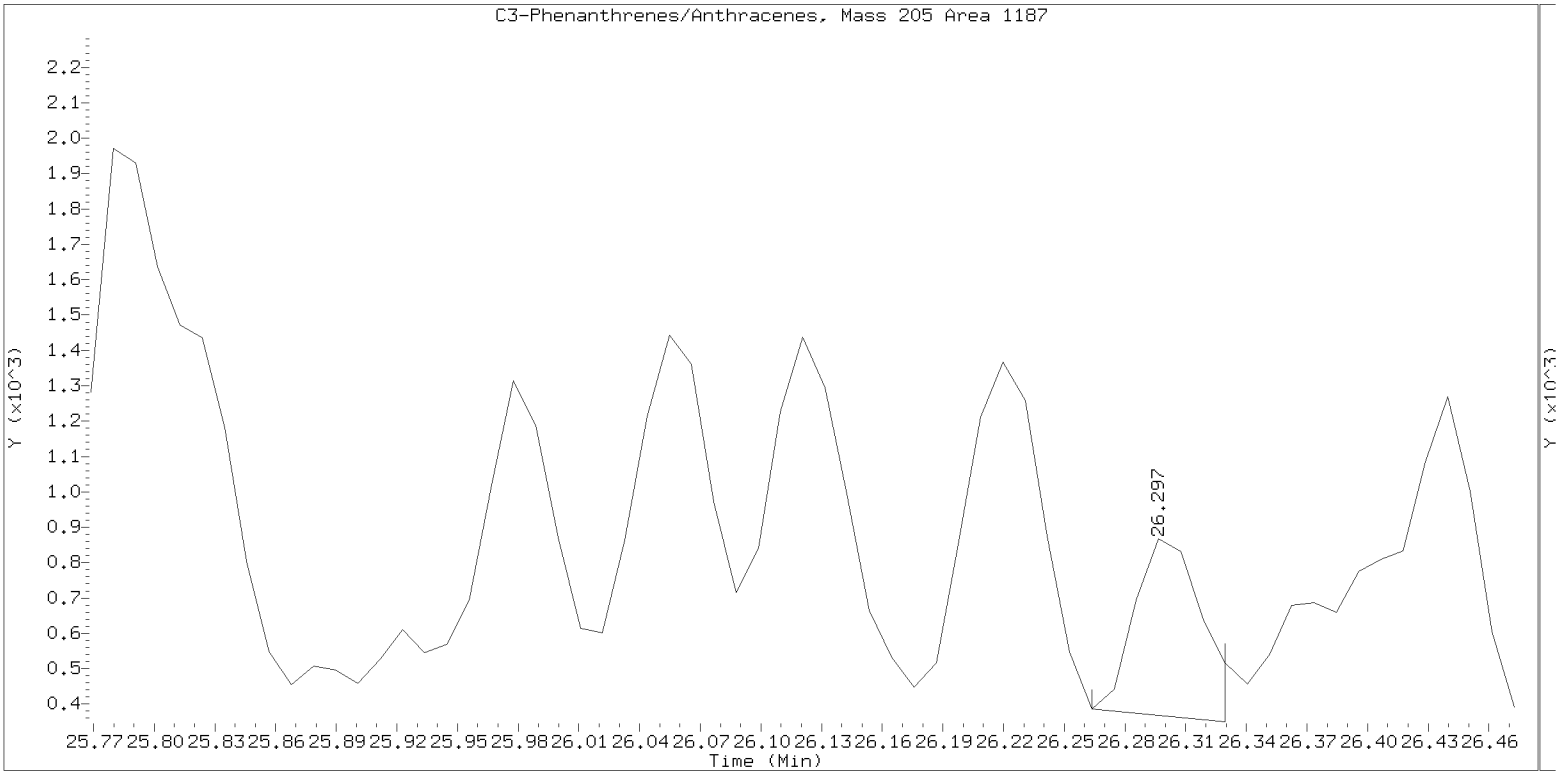

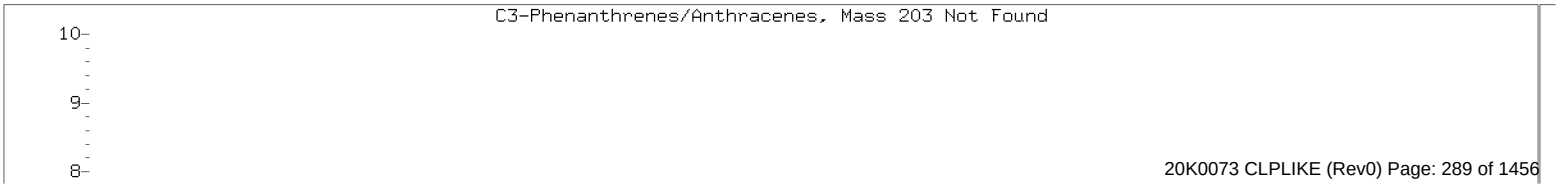

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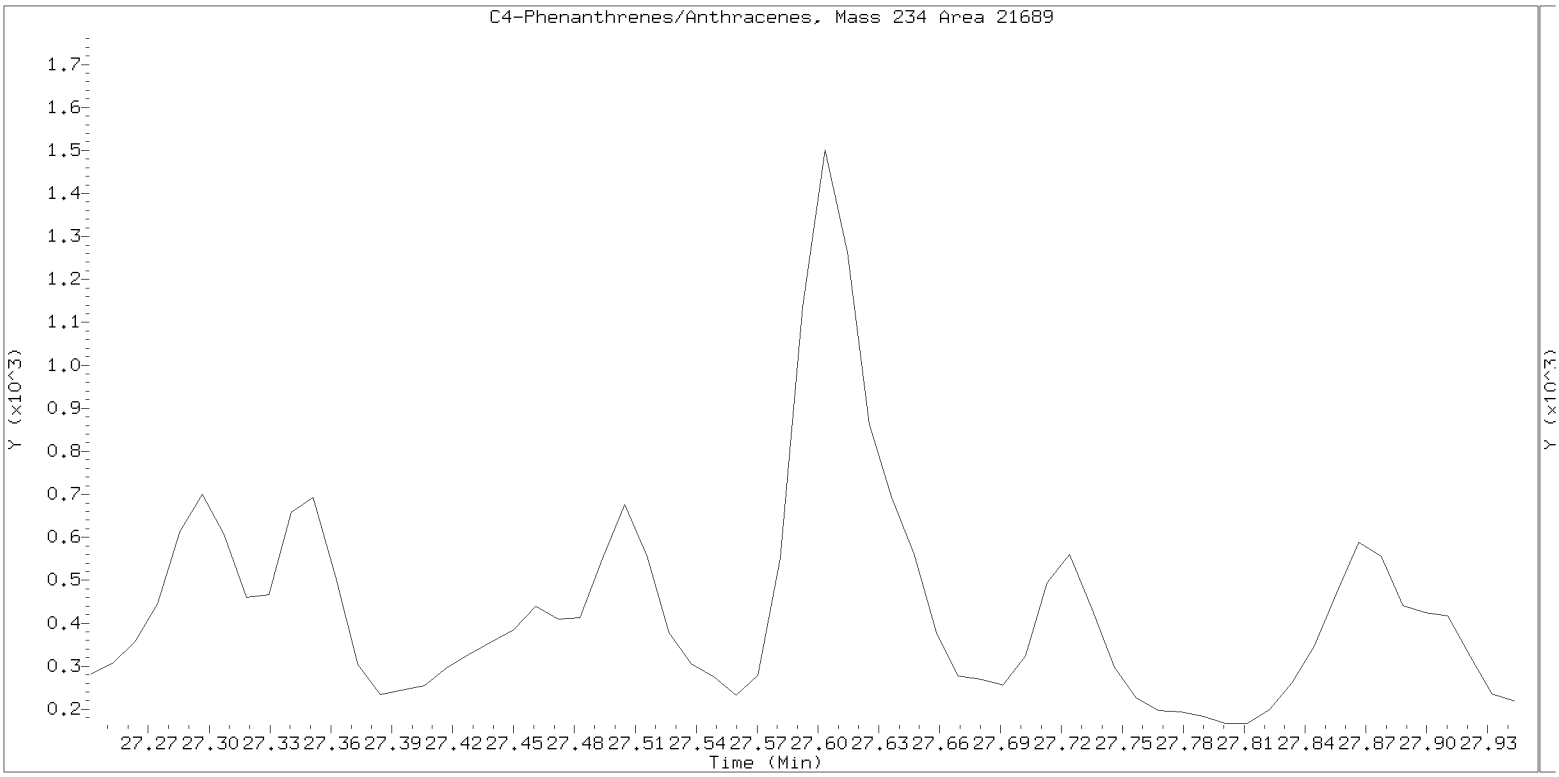

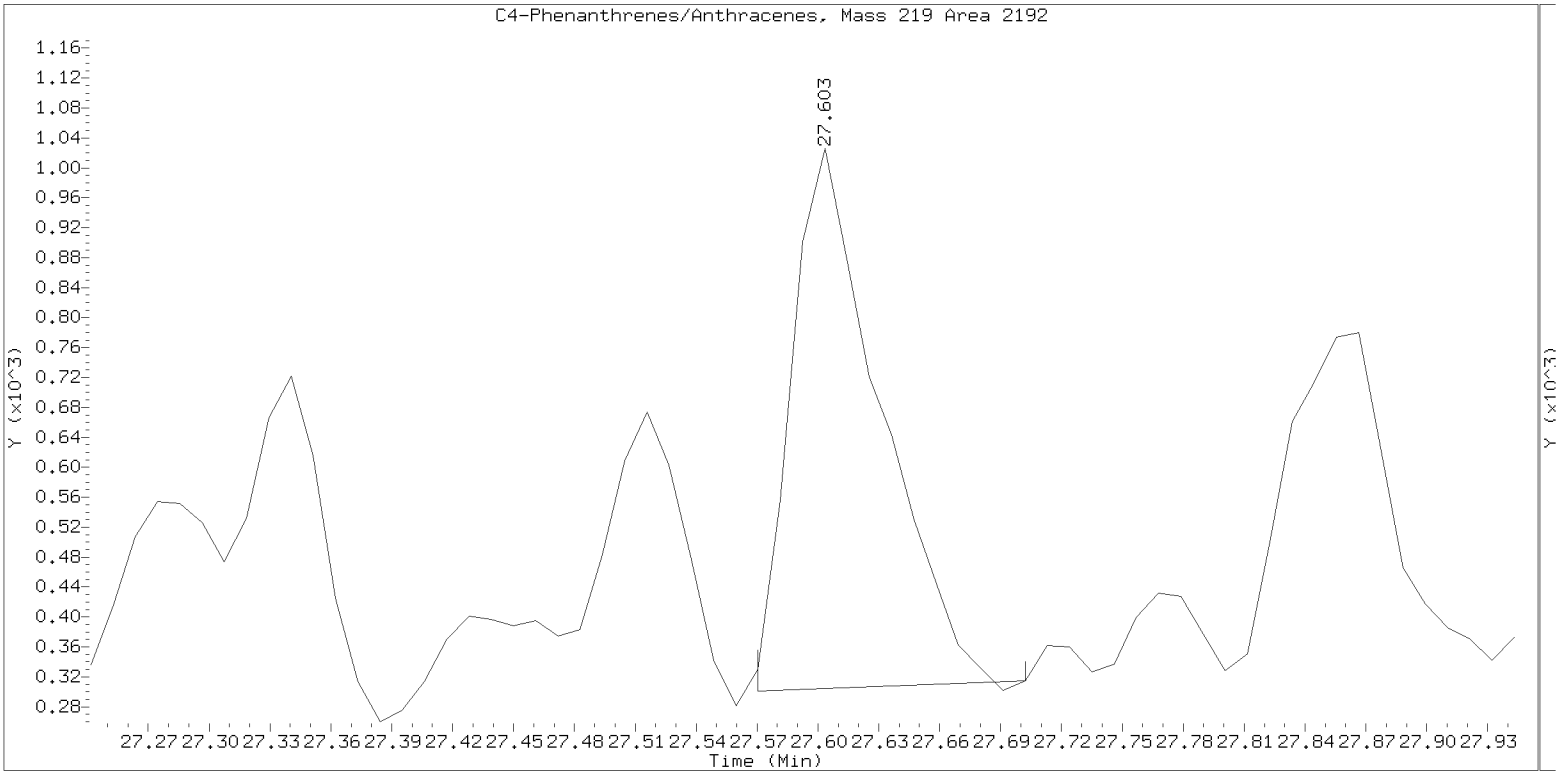

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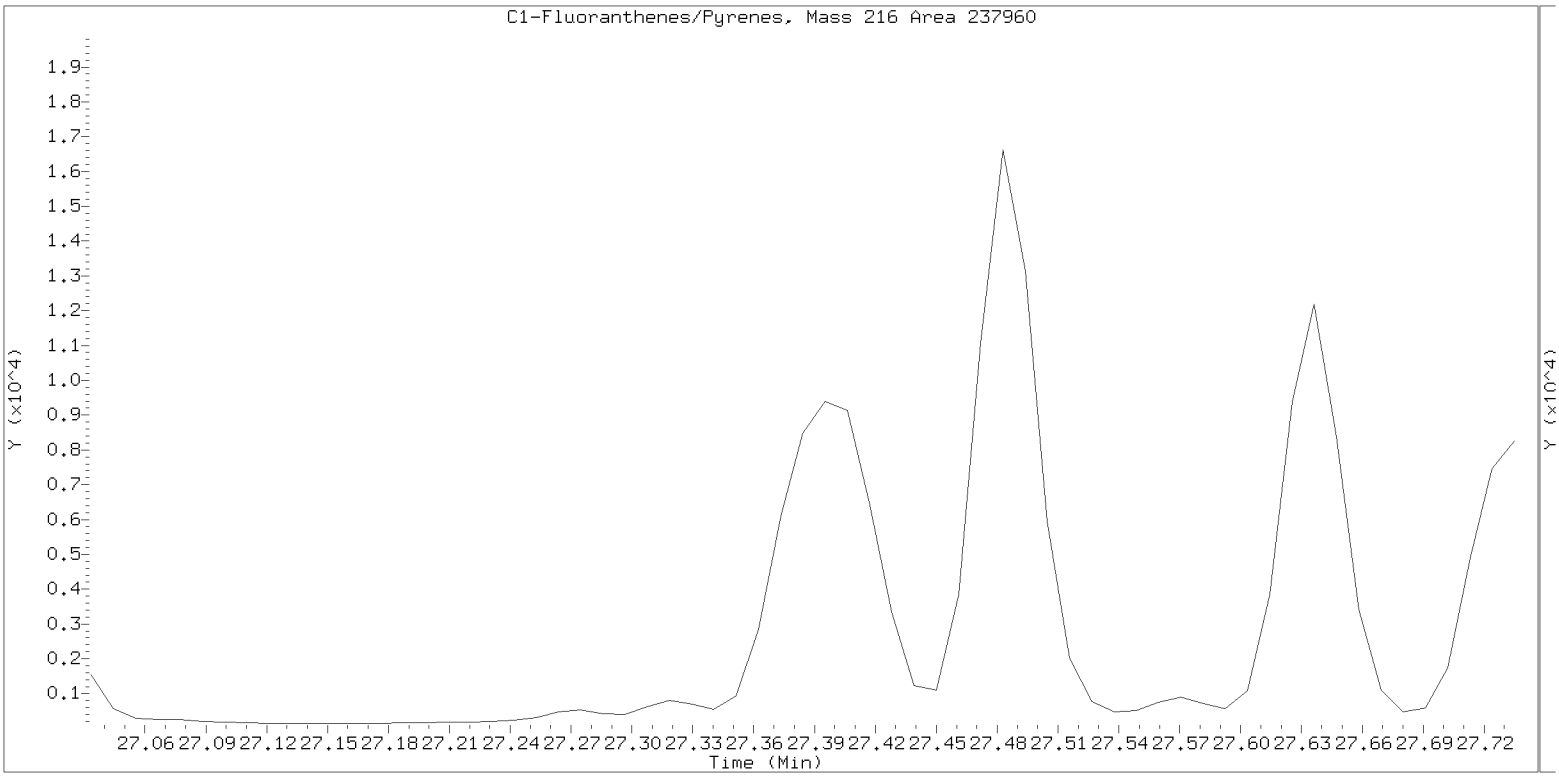

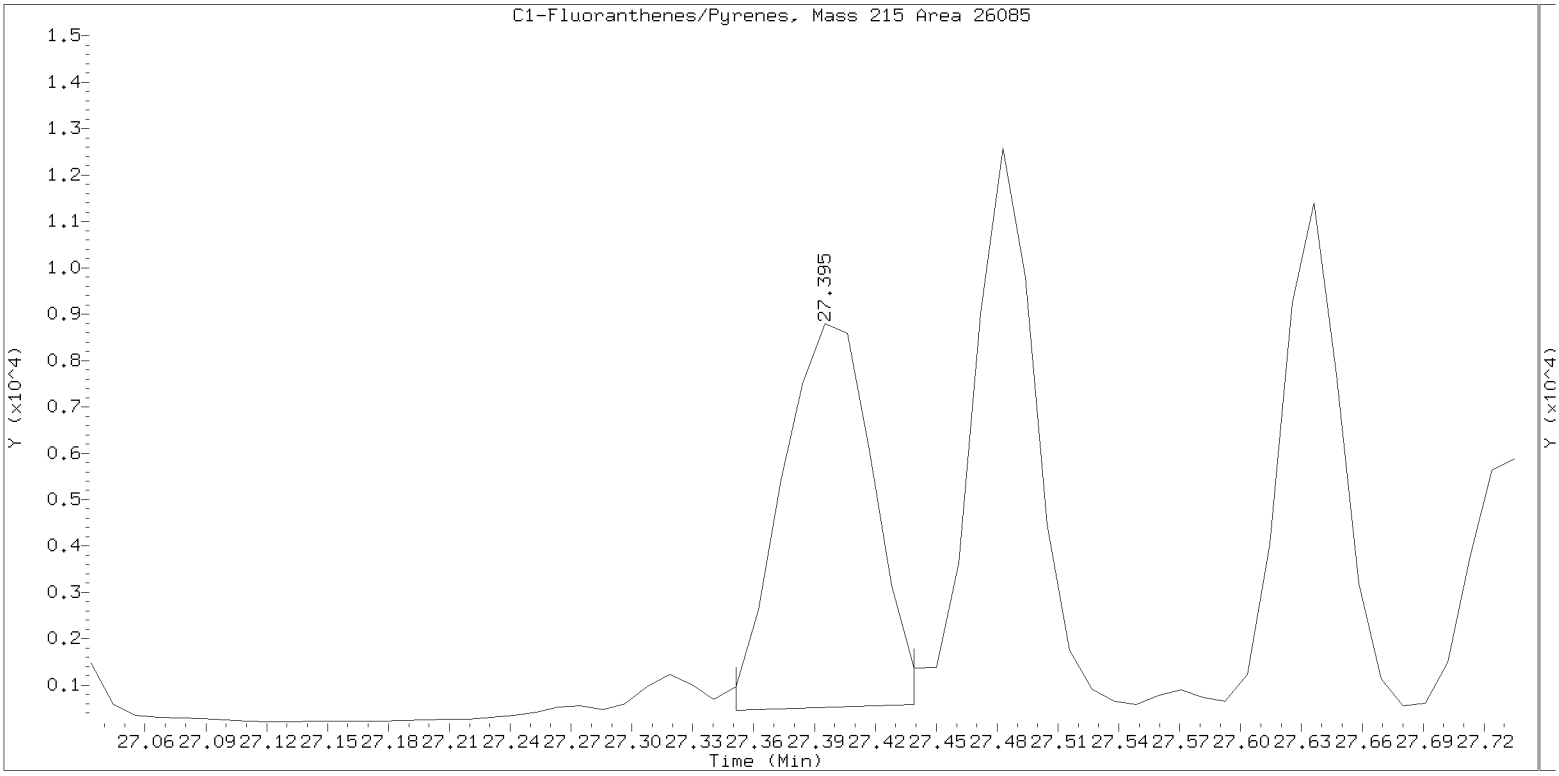

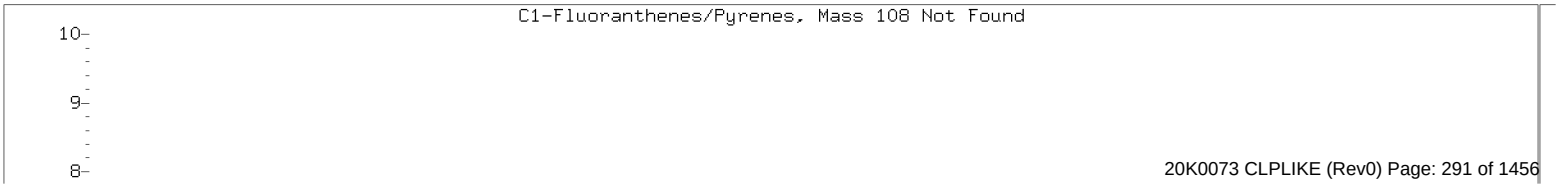

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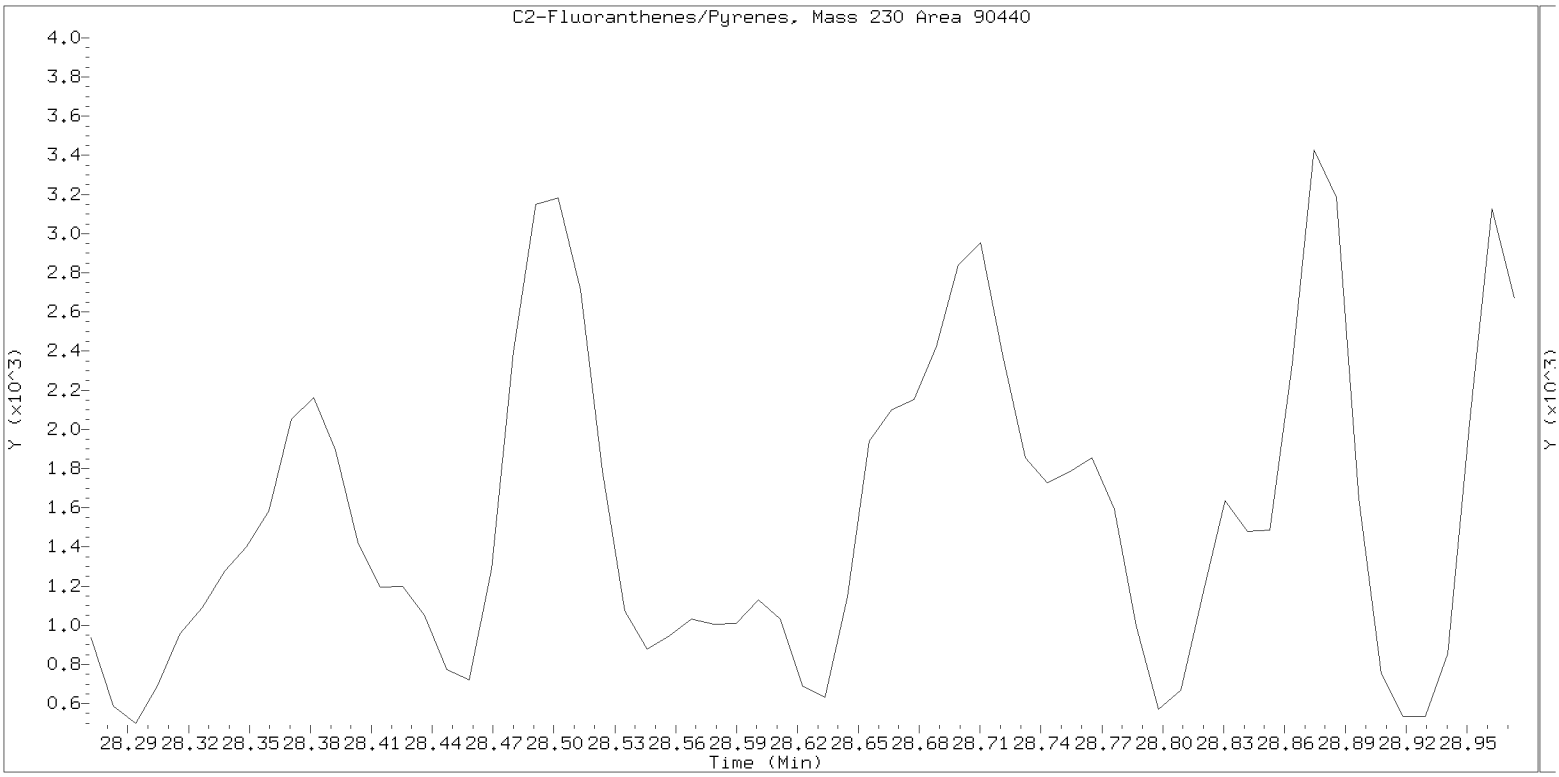

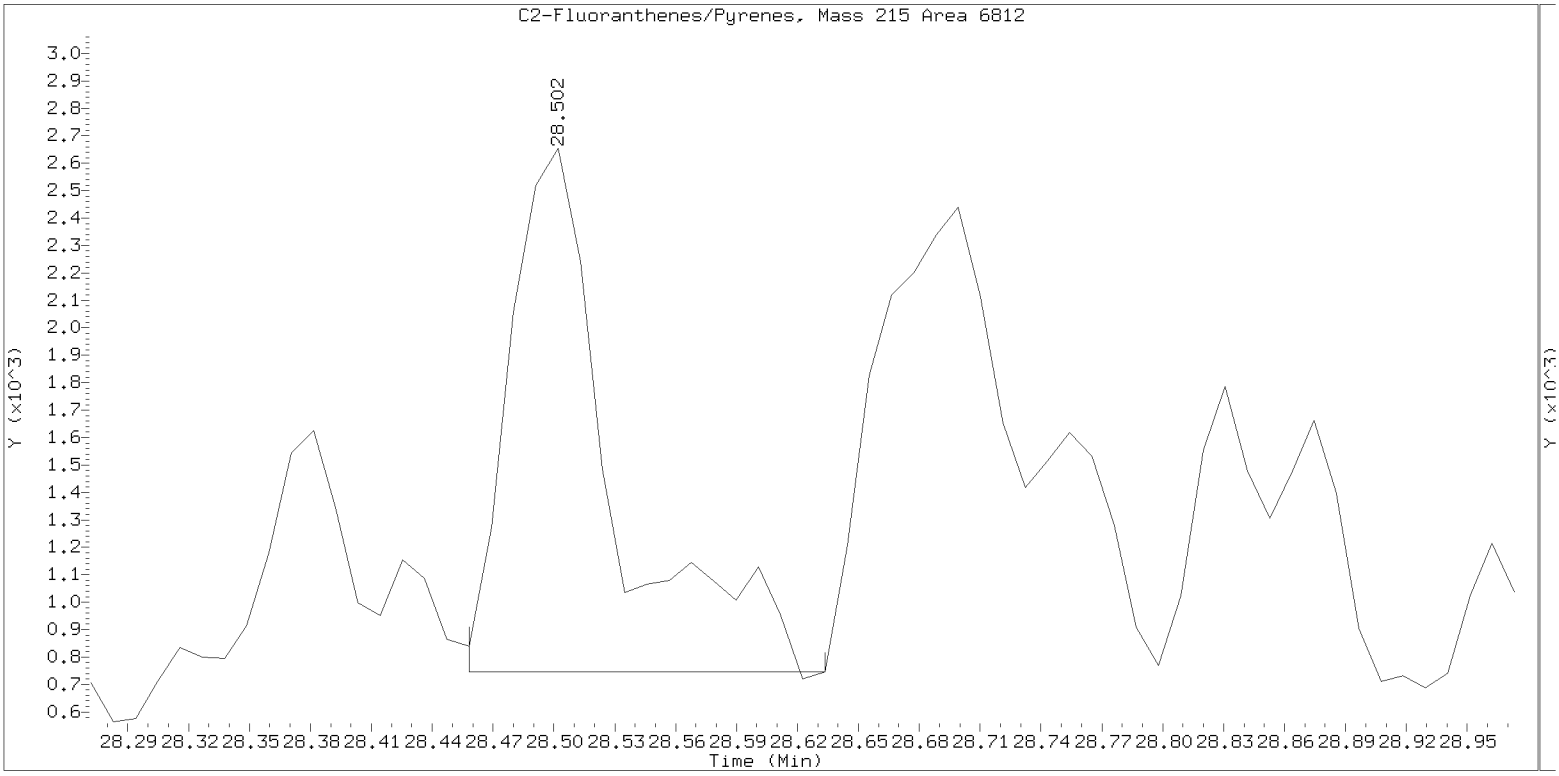

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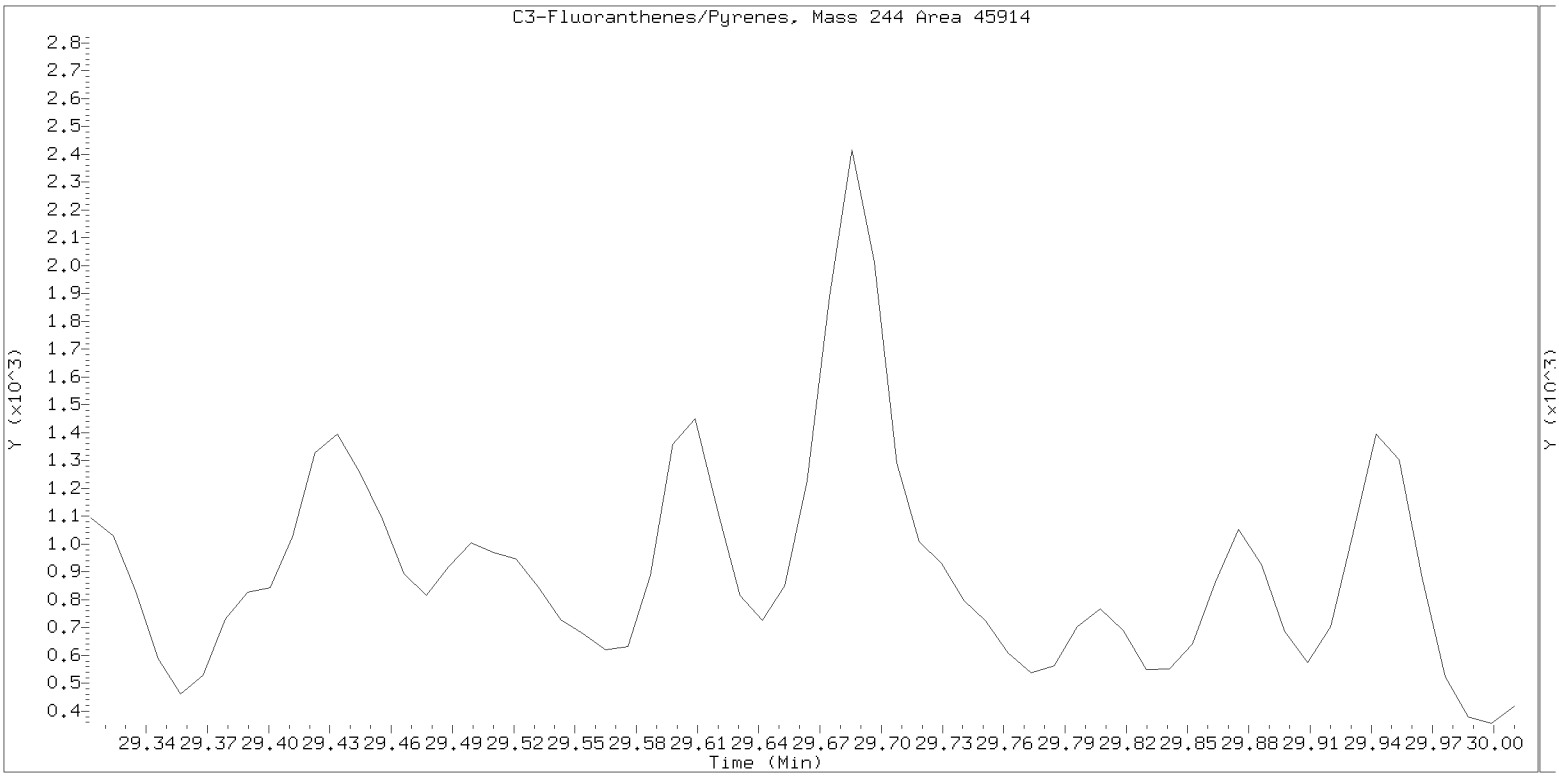

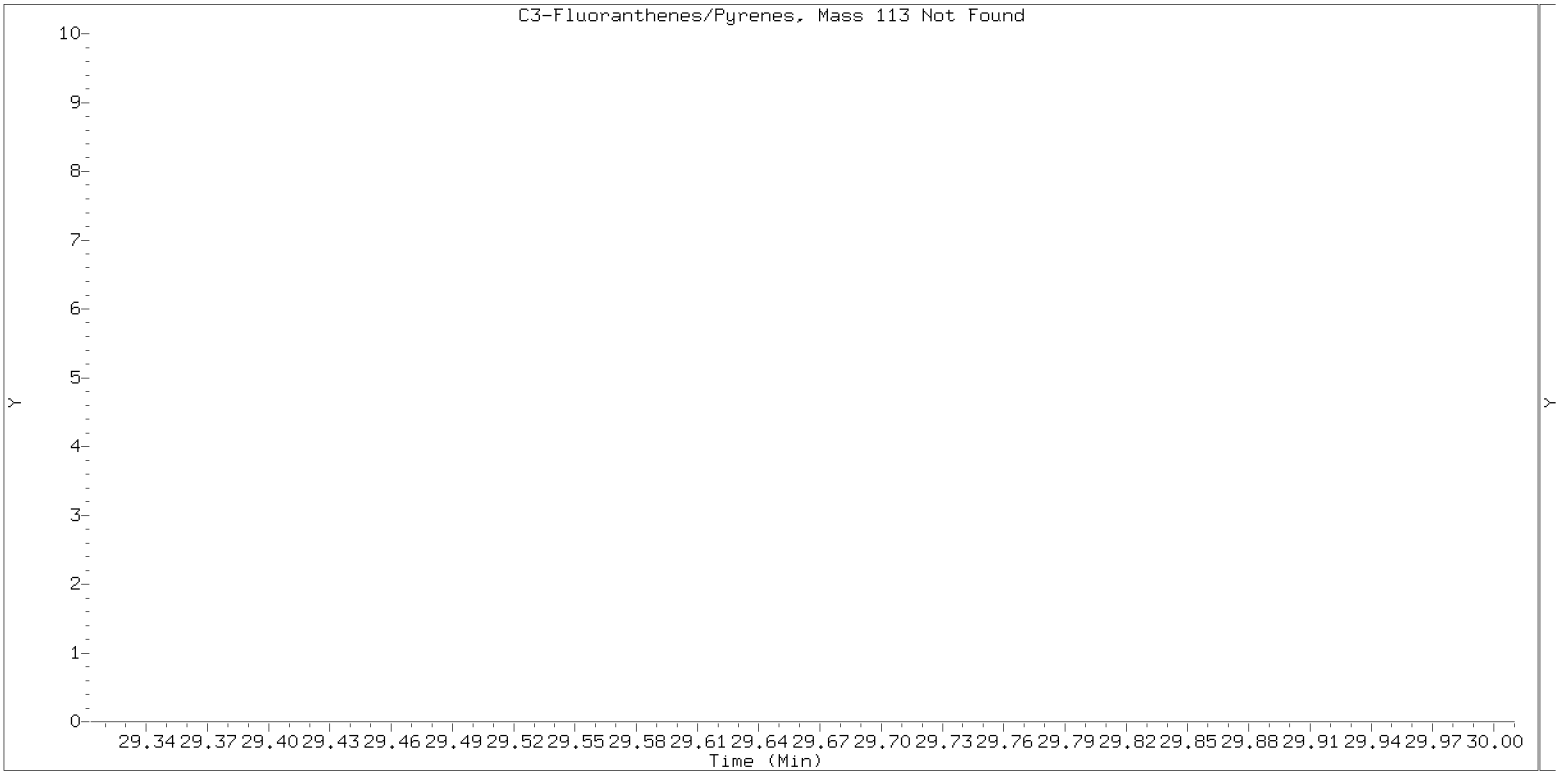

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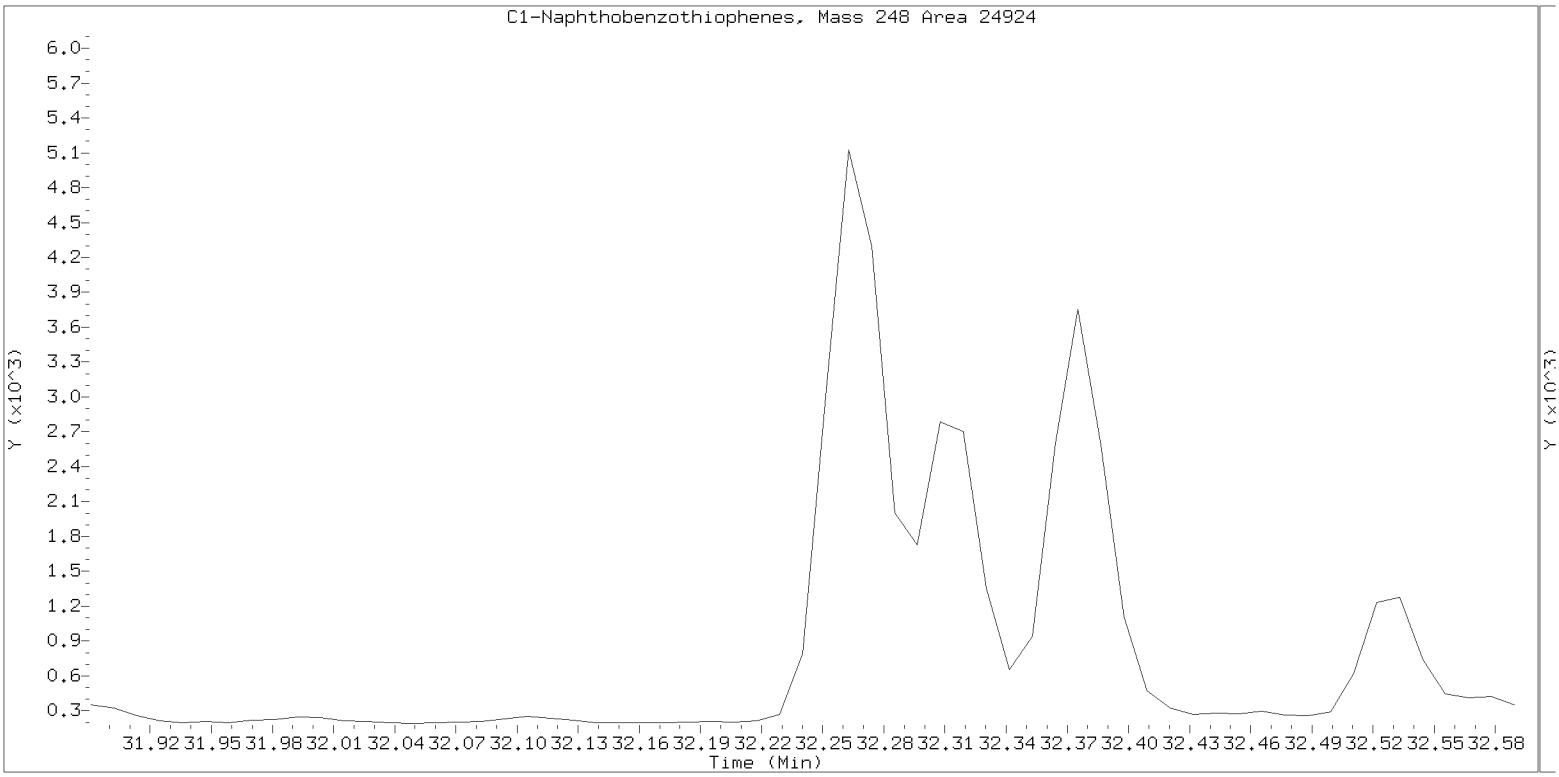

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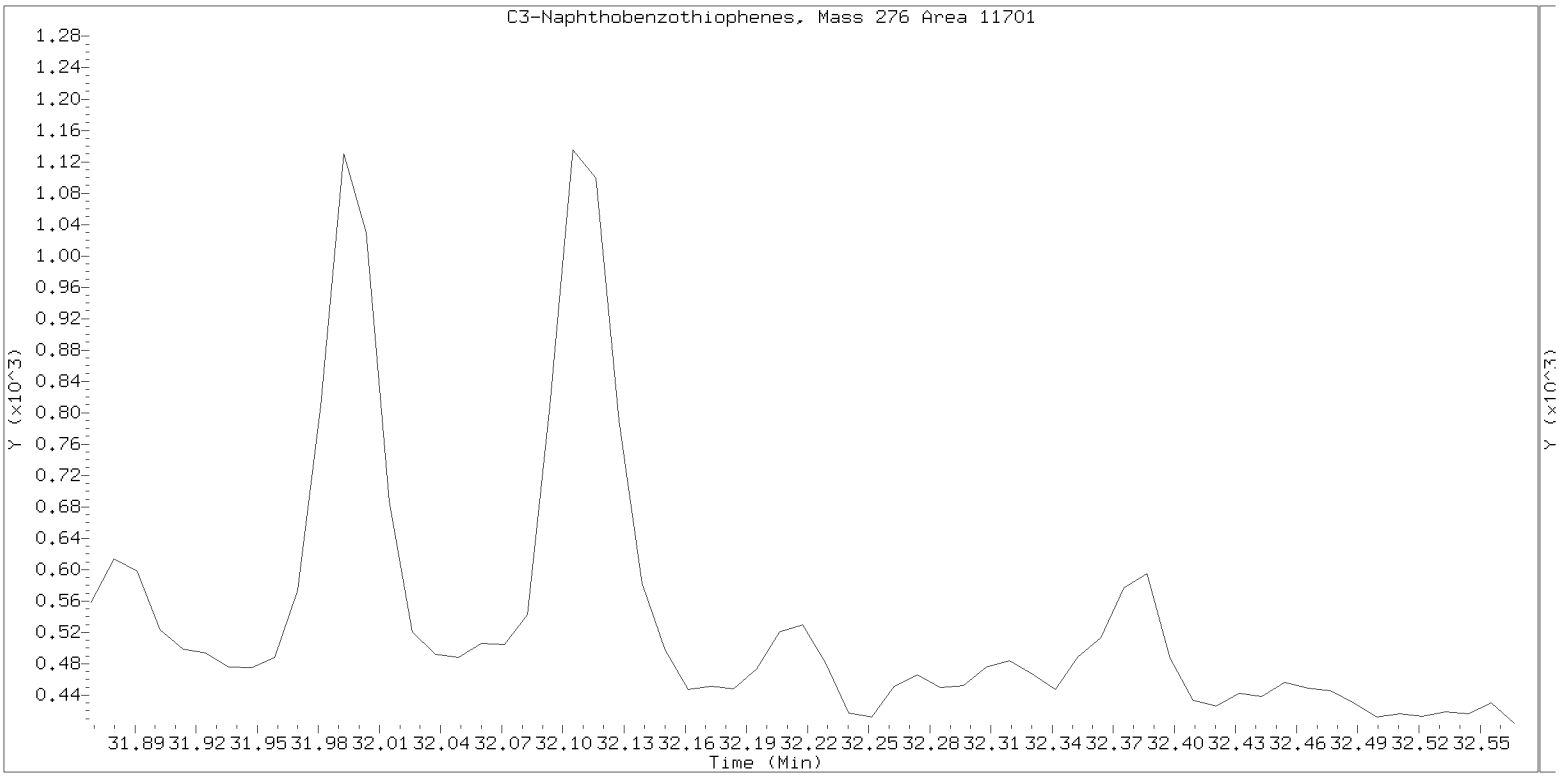
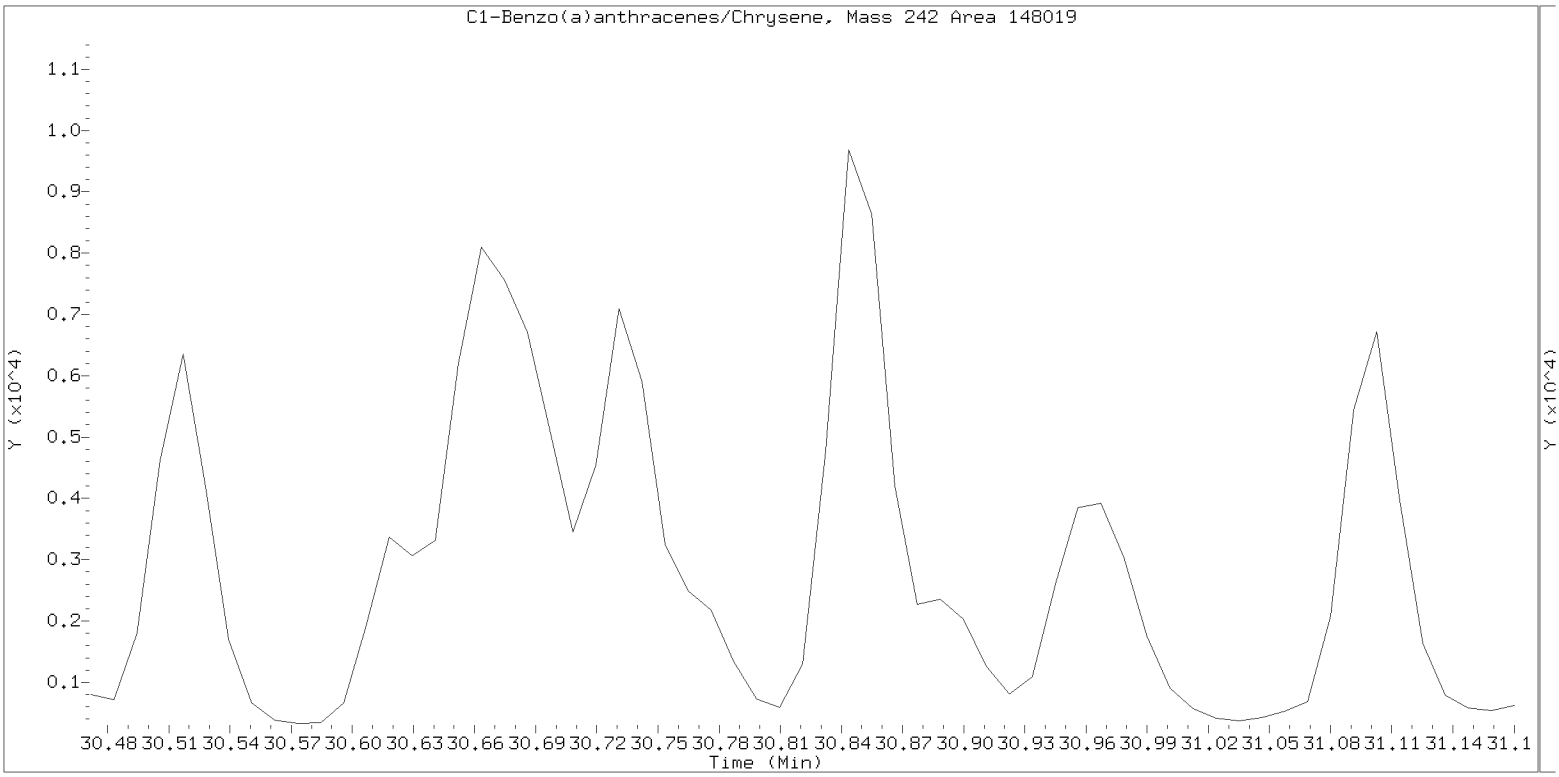
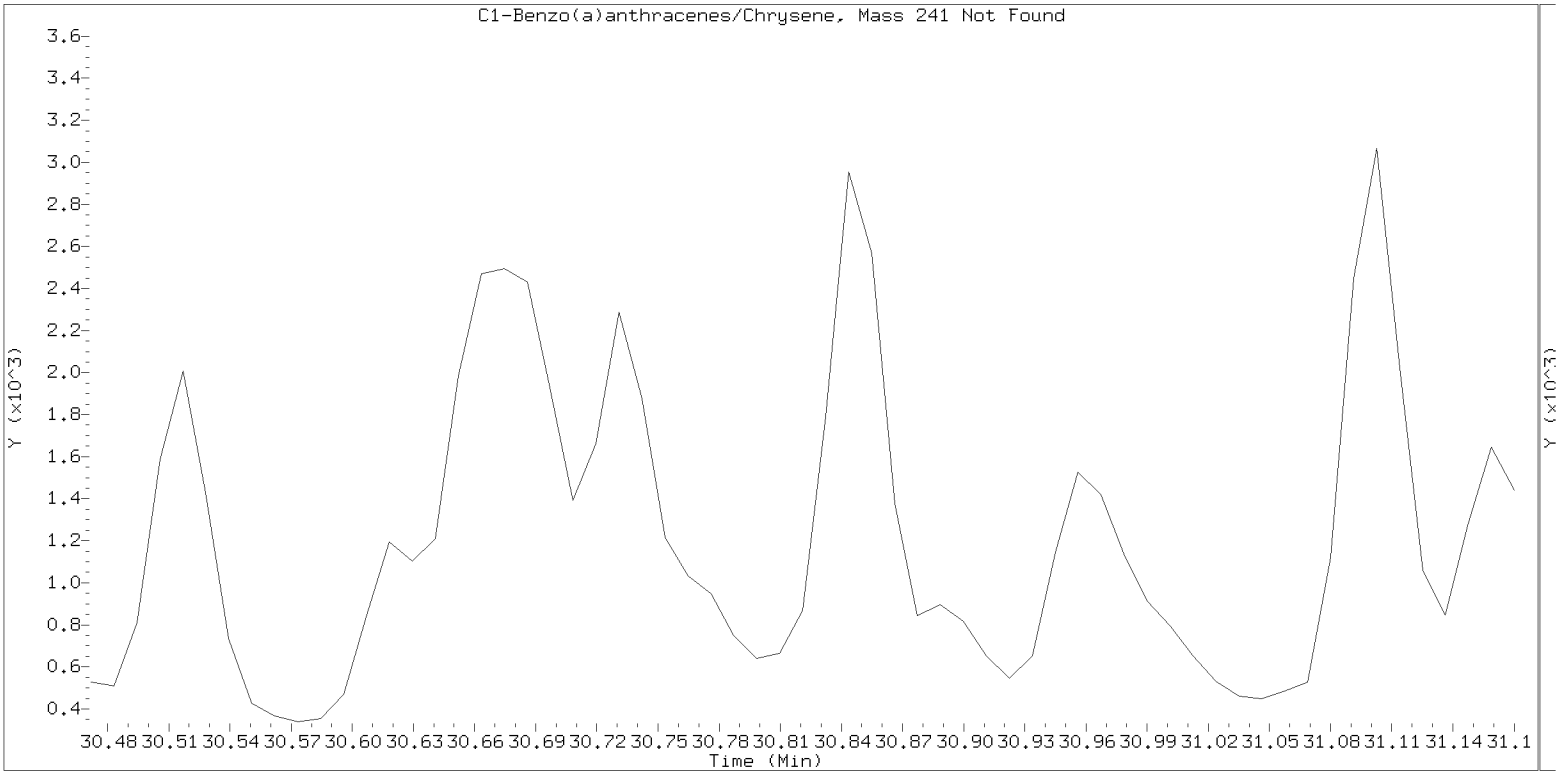
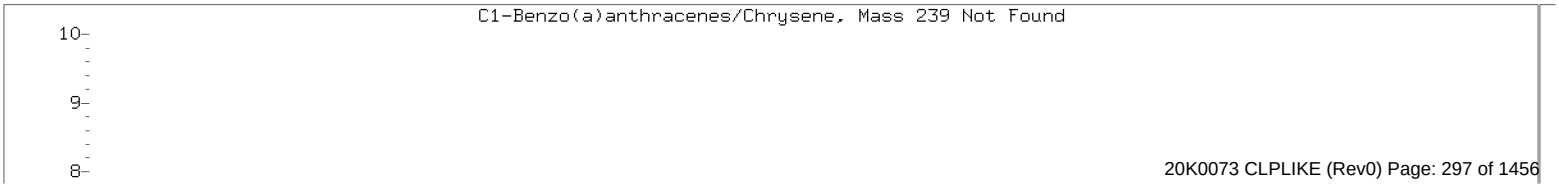


SIM ALKYL PNA RANGE ION WINDOWS - NT1420121215.D

Lab ID: 20K0073-02
nt14.i, sim.b\ALKYLRANGE.m, 12-DEC-2020 22:23

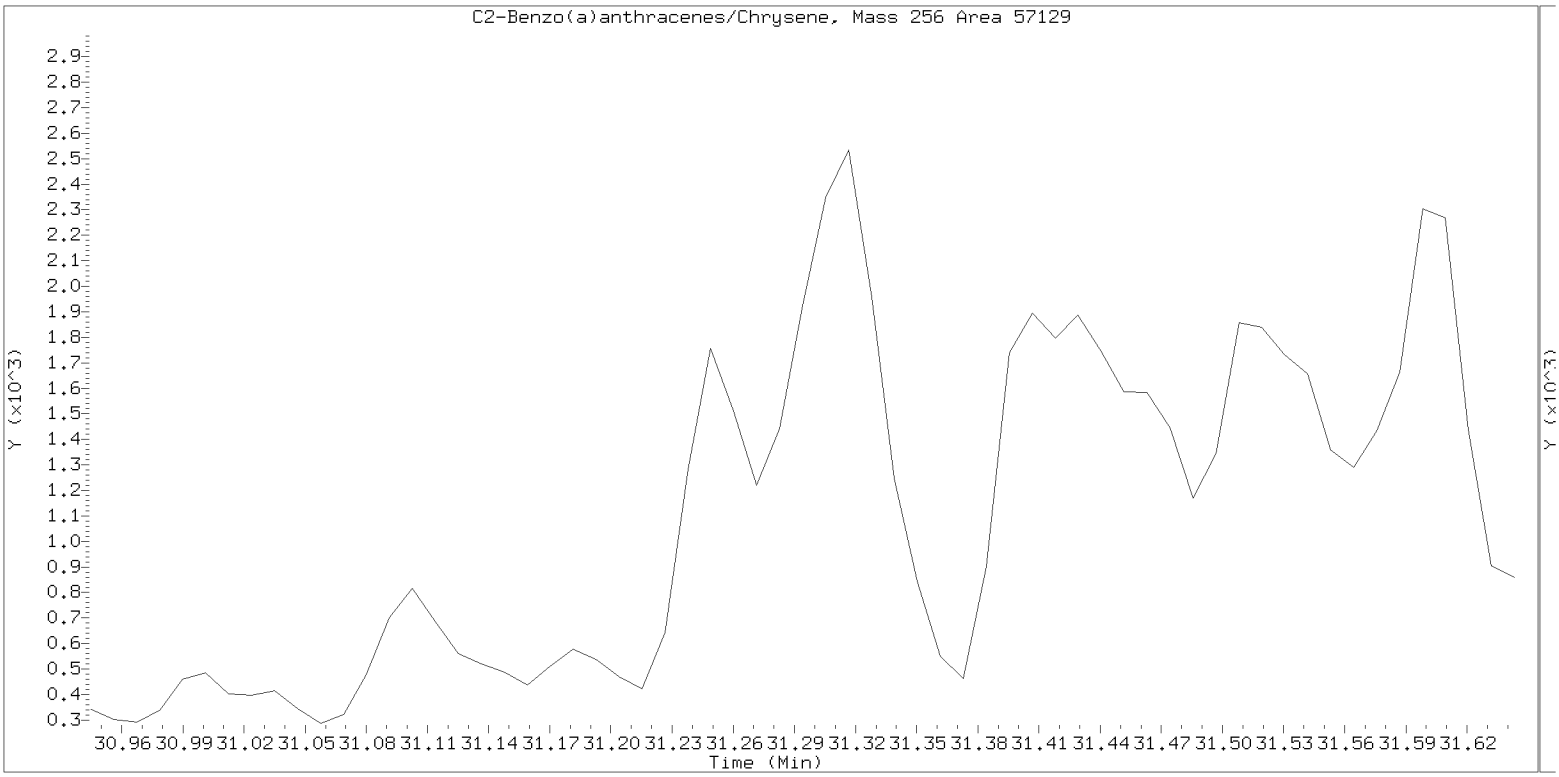


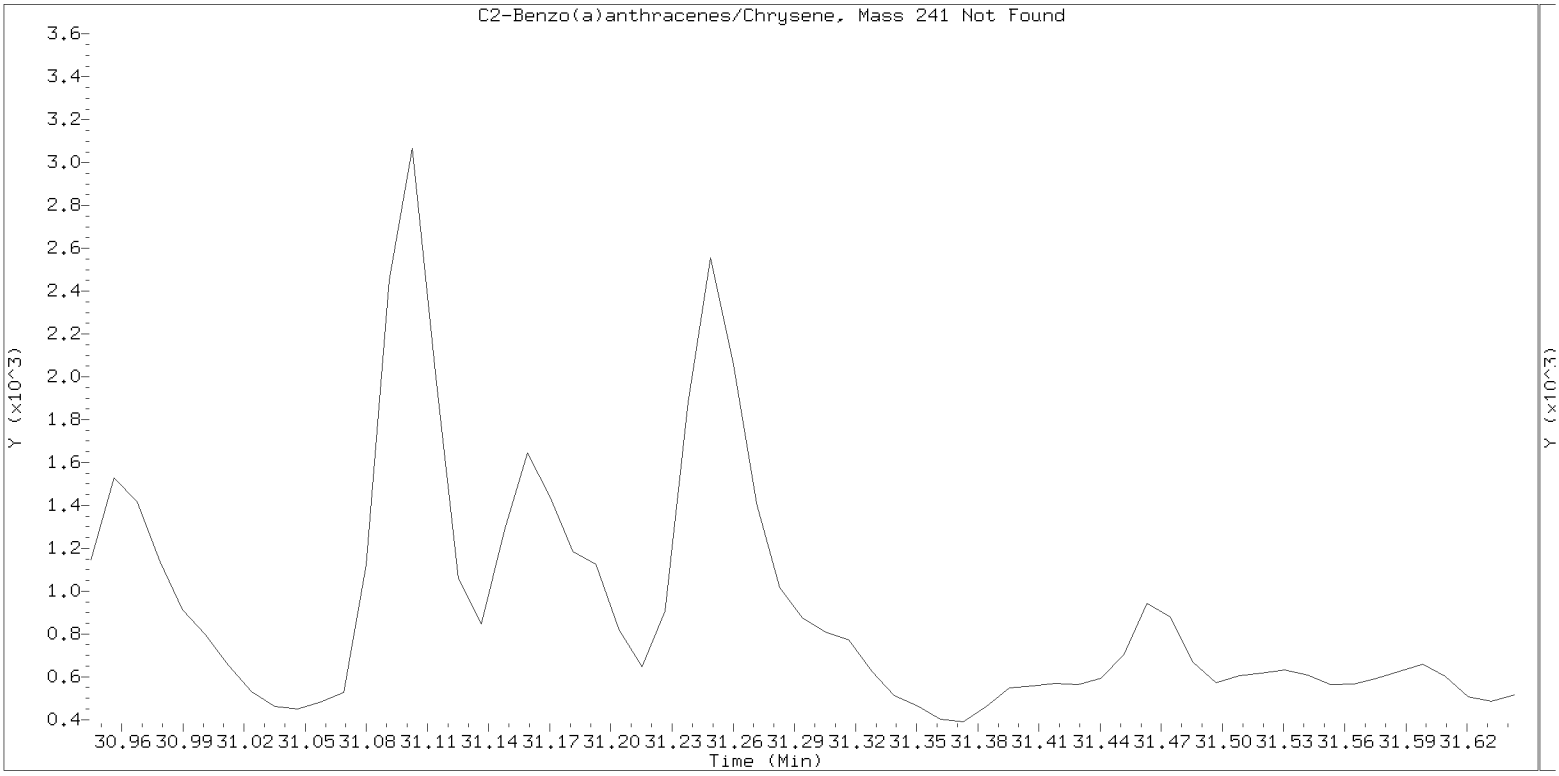


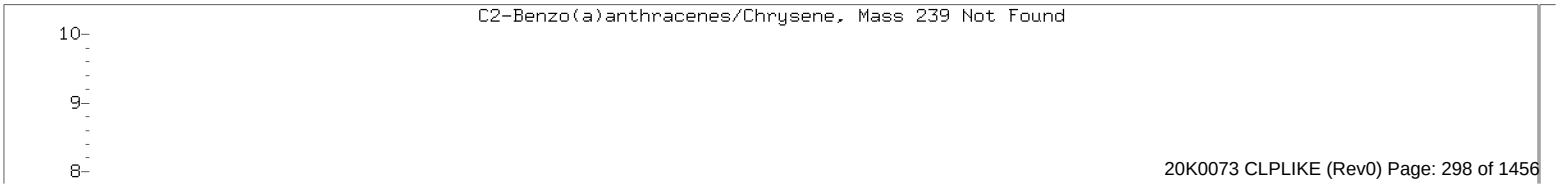


SIM ALKYL PNA RANGE ION WINDOWS - NT1420121215.D

Lab ID: 20K0073-02
nt14.i, sim.b\ALKYLRANGE.m, 12-DEC-2020 22:23

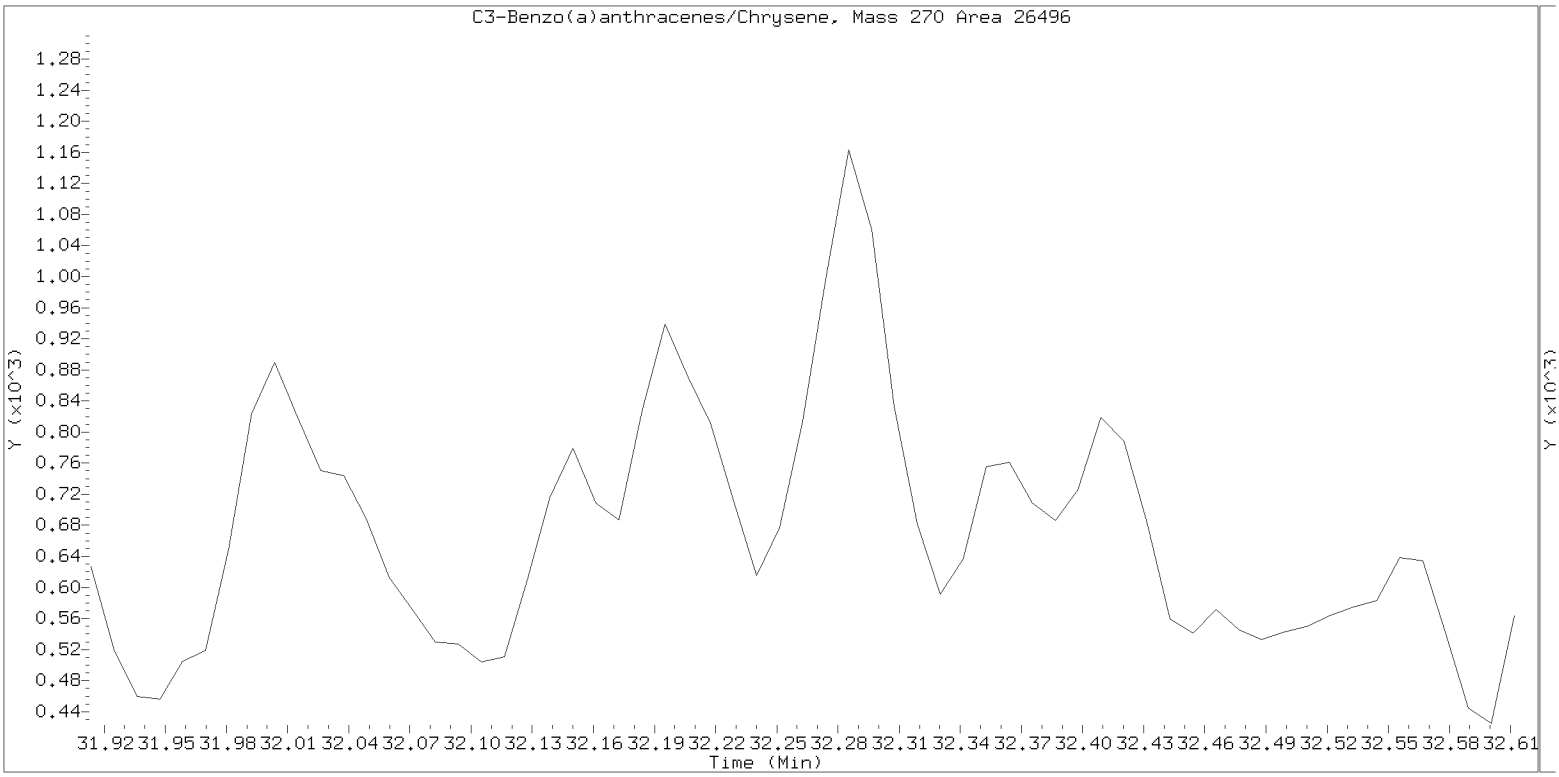


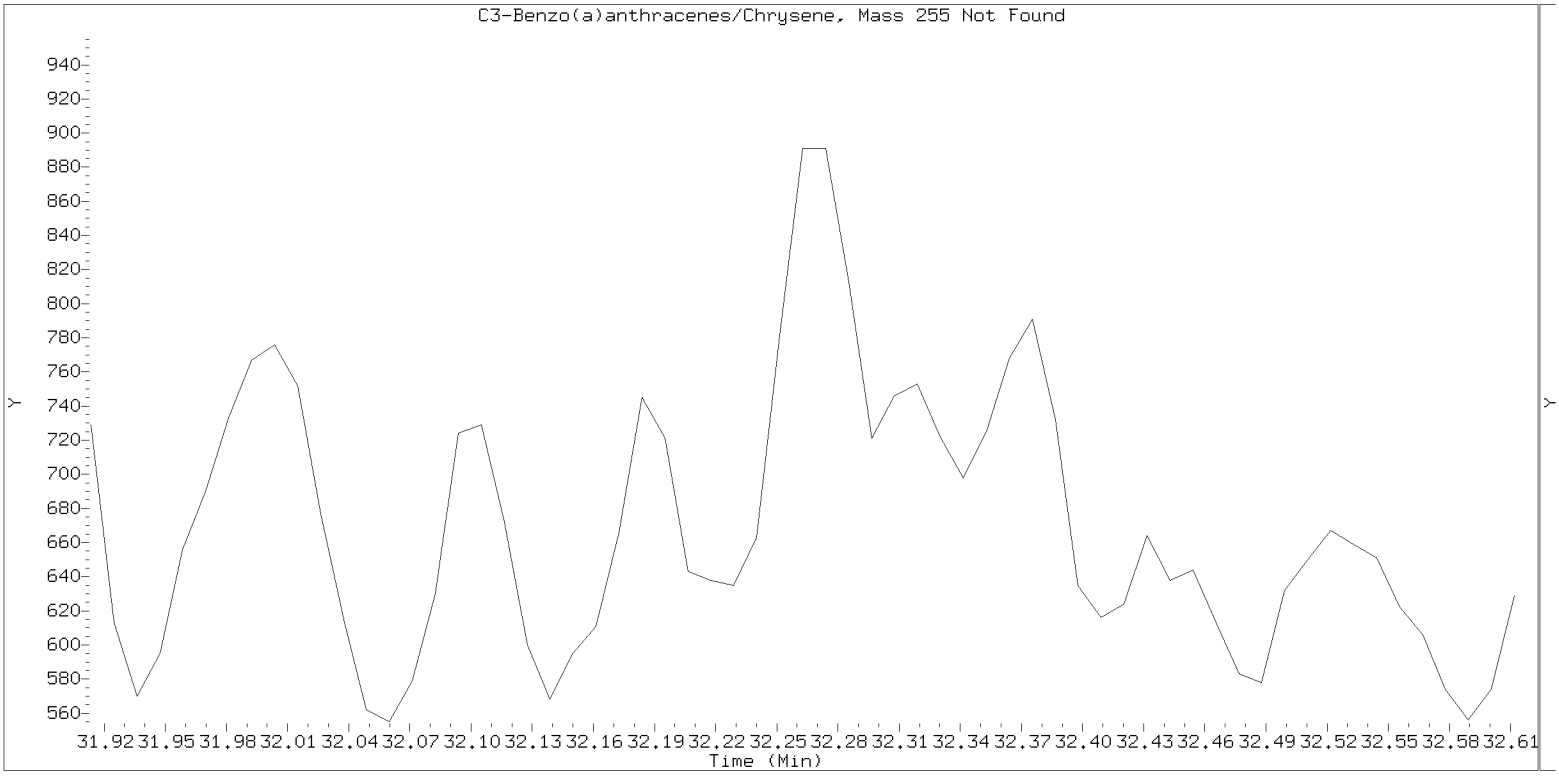


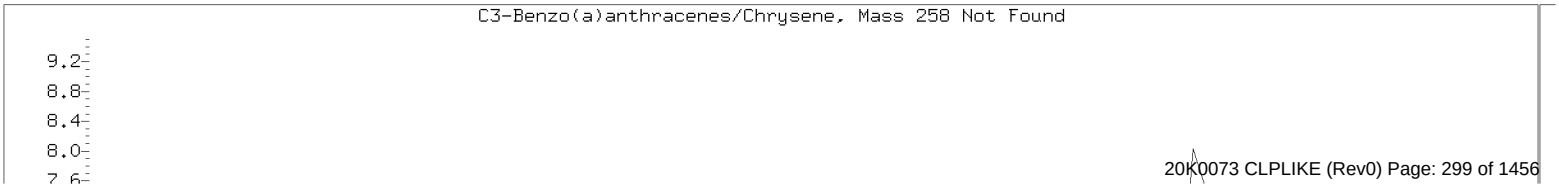


SIM ALKYL PNA RANGE ION WINDOWS - NT1420121215.D

Lab ID: 20K0073-02
nt14.i, sim.b\ALKYLRANGE.m, 12-DEC-2020 22:23

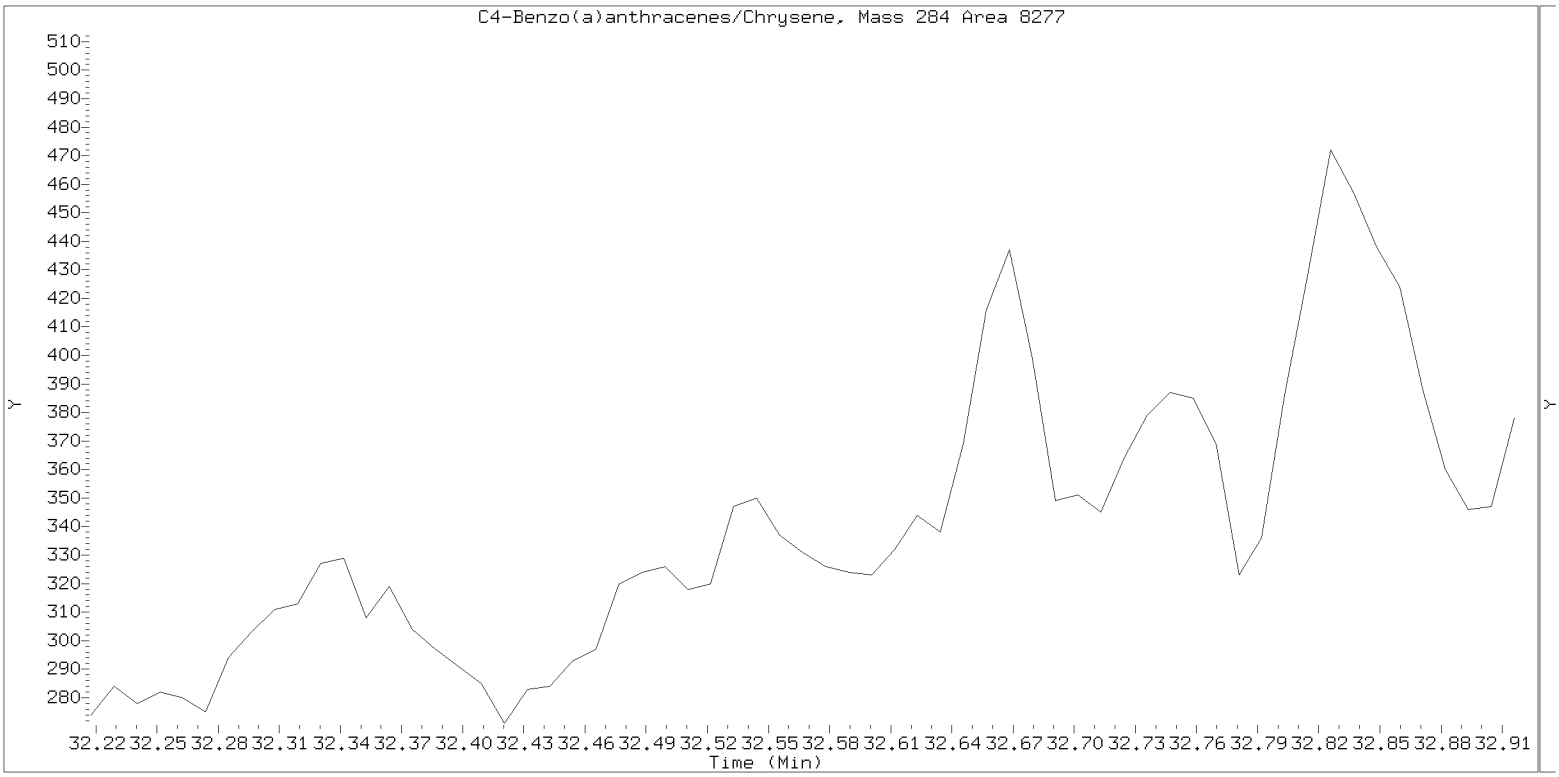


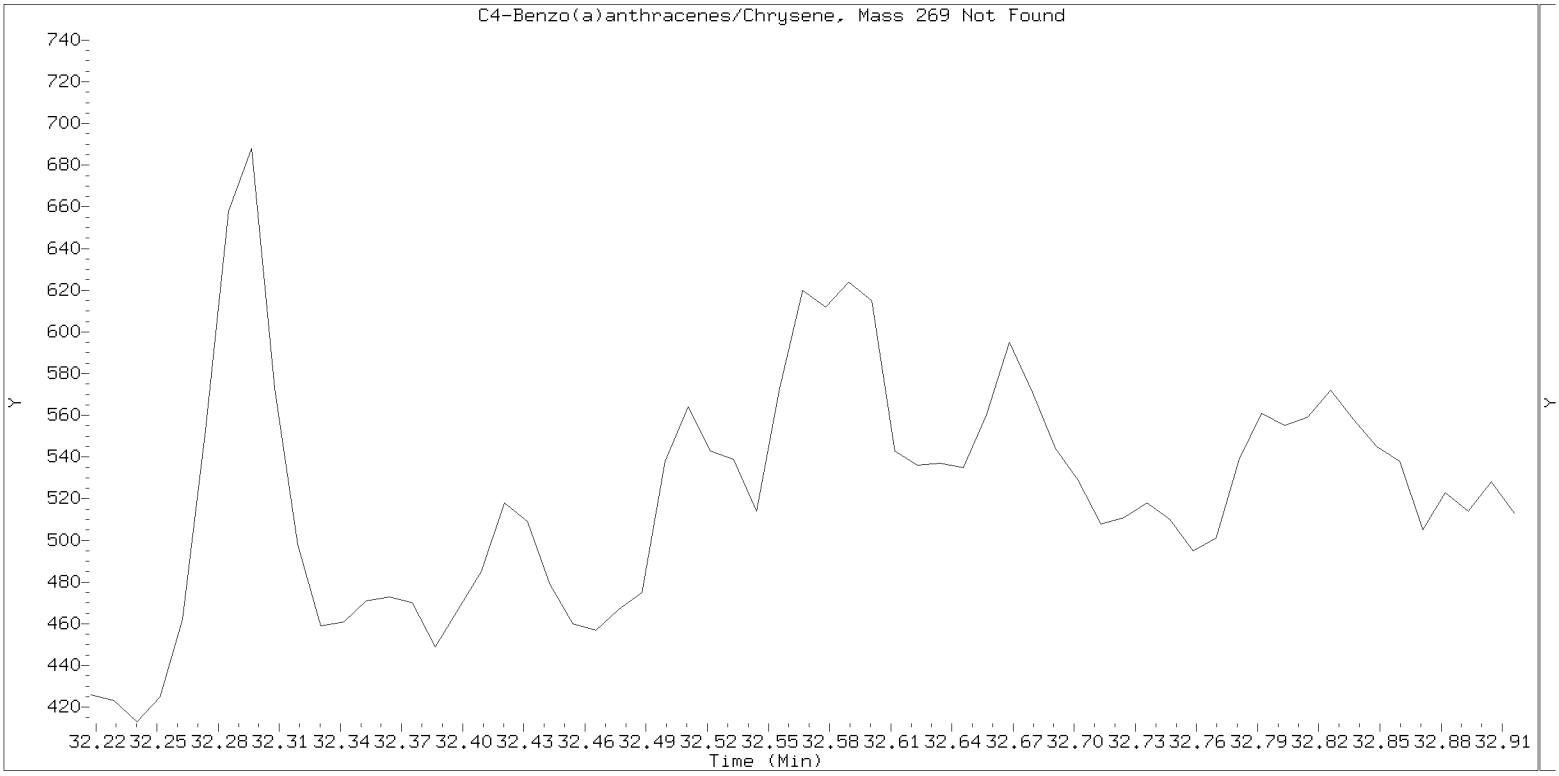


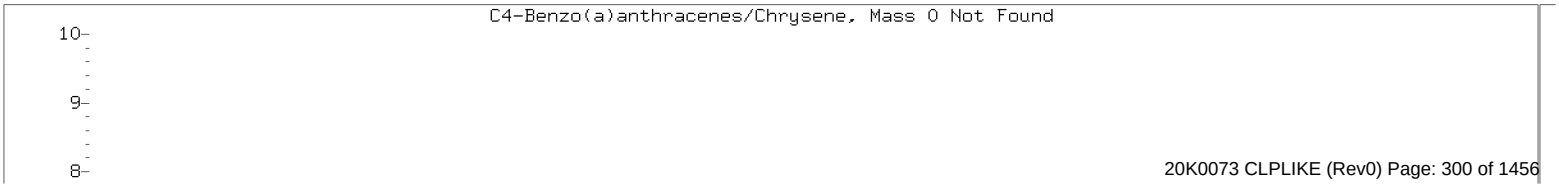


SIM ALKYL PNA RANGE ION WINDOWS - NT1420121215.D

Lab ID: 20K0073-02
nt14.i, sim.b\ALKYLRANGE.m, 12-DEC-2020 22:23

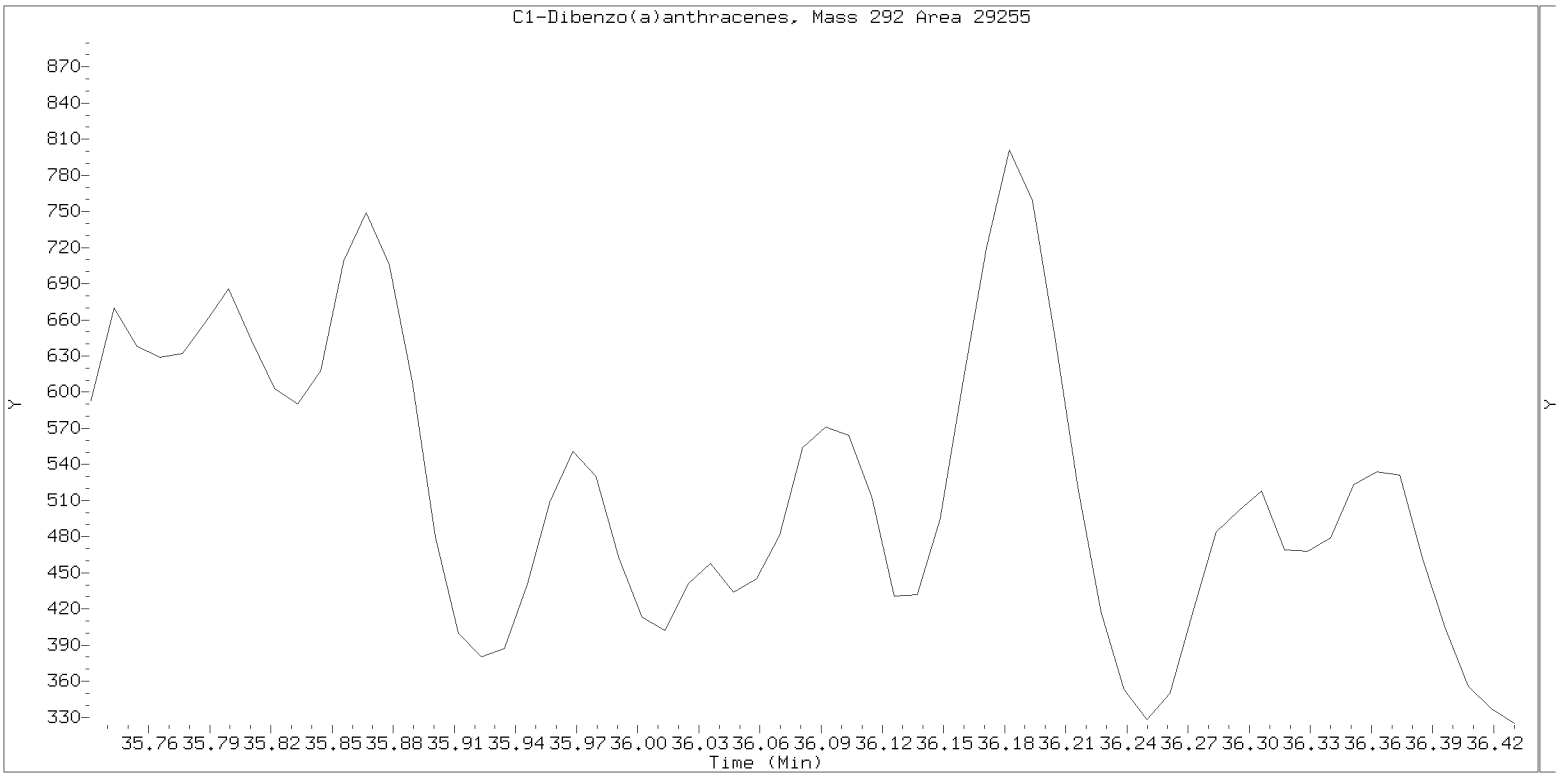






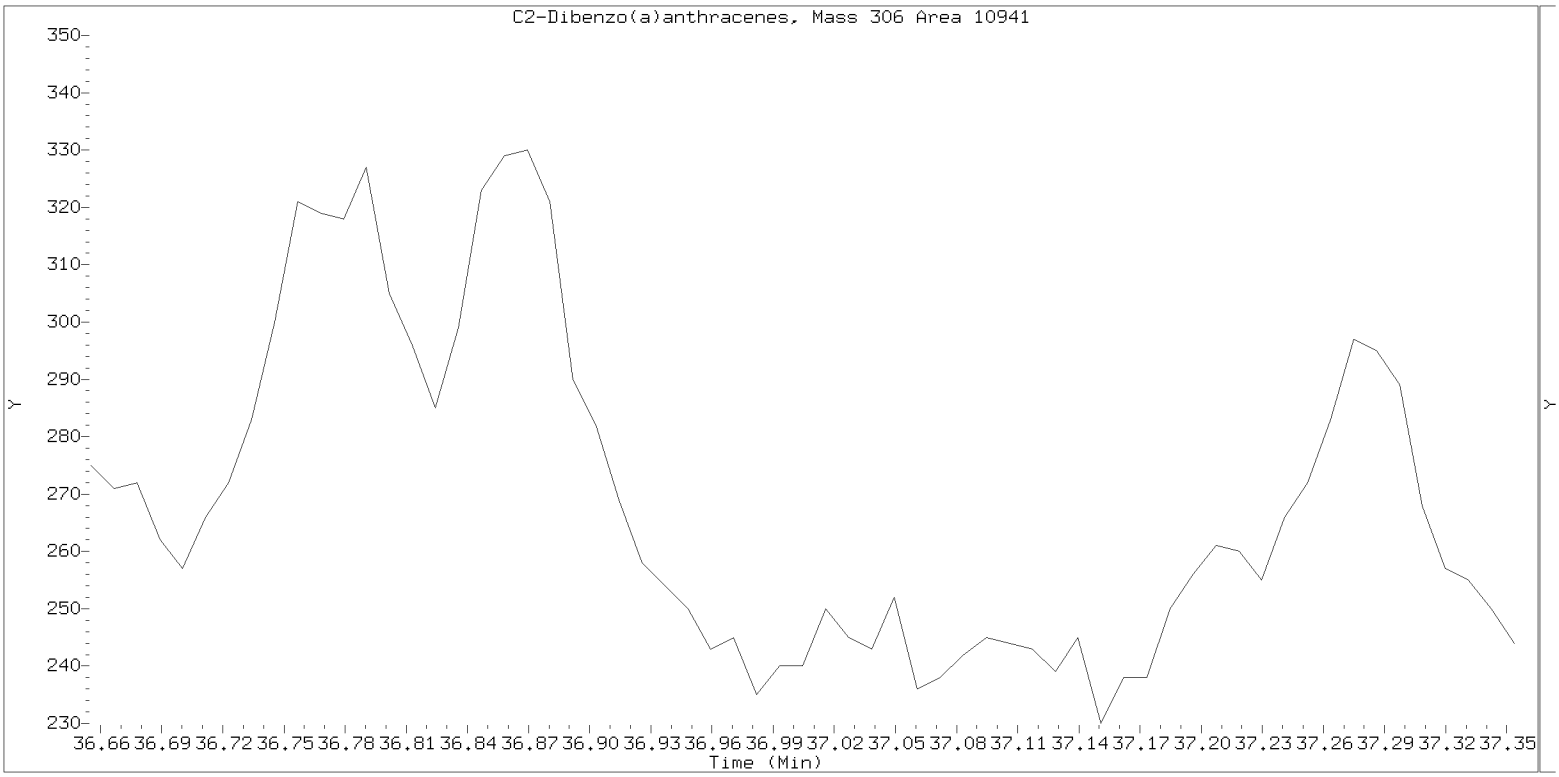
SIM ALKYL PNA RANGE ION WINDOWS - NT1420121215.D

Lab ID: 20K0073-02
nt14.i, sim.b\ALKYLRANGE.m, 12-DEC-2020 22:23



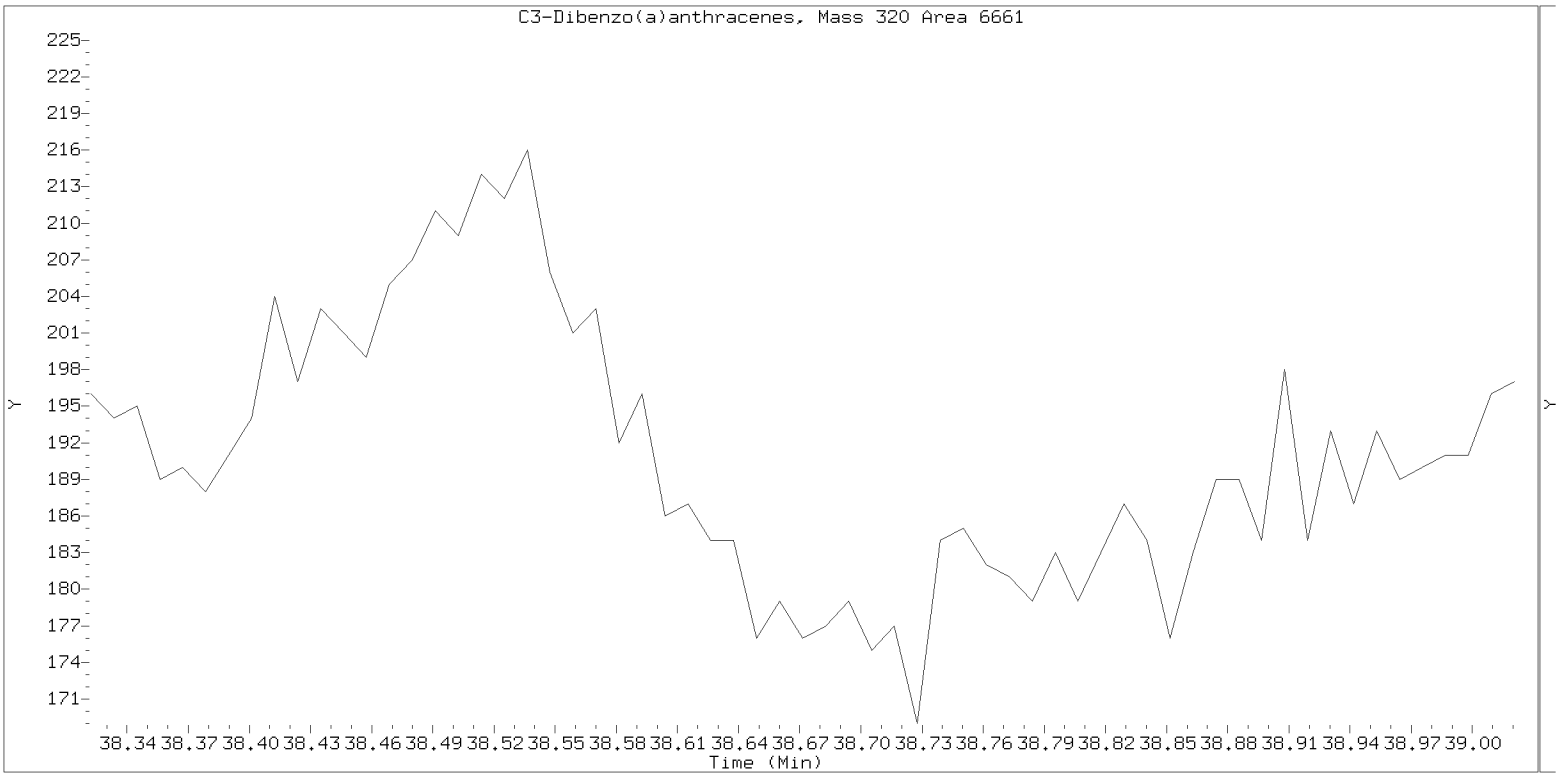
SIM ALKYL PNA RANGE ION WINDOWS - NT1420121215.D

Lab ID: 20K0073-02
nt14.i, sim.b\ALKYLRANGE.m, 12-DEC-2020 22:23



SIM ALKYL PNA RANGE ION WINDOWS - NT1420121215.D

Lab ID: 20K0073-02
nt14.i, sim.b\ALKYLRANGE.m, 12-DEC-2020 22:23



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Batch:	BIK0323 Batch Matrix: Solid	Preparation:	EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
USMPDI-046SC-A-00-01-201029	20K0073-01	NT1420121214S.D	11/11/20 13:05	
USMPDI-046SC-A-00-01-201029	20K0073-01	NT1420121214.D	11/11/20 13:05	
USMPDI-046SC-A-00-01-201029	20K0073-01RE1	NT1420121520.D	11/11/20 13:05	Added 12/16/2020 by VTS
USMPDI-046SC-A-01-02-201029	20K0073-02	NT1420121215S.D	11/11/20 13:05	
USMPDI-046SC-A-01-02-201029	20K0073-02	NT1420121215.D	11/11/20 13:05	
Blank	BIK0323-BLK1	NT1420121210.D	11/11/20 13:05	
Blank	BIK0323-BLK2	NT1420121210S.D	11/11/20 13:05	
LCS	BIK0323-BS1	NT1420121211.D	11/11/20 13:05	
USMPDI-046SC-A-01-02-201029	BIK0323-MS1	NT1420121219.D	11/11/20 13:05	
USMPDI-046SC-A-01-02-201029	BIK0323-MSD1	NT1420121220.D	11/11/20 13:05	

PRE-SCREEN BEFORE GPC

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0323

Prepared using: EPA 3546 (Microwave)

8270E-SIM Alkyl PAH (Parents) Dual Scan in Solid
8270E-SIM Alkyl PAH (Range) Dual Scan in Solid

Matrix: Solid **Date Prepared:** 11/11/20 **Balance ID:** B1464626 14 **Set Up By:** CTO 11/11/20

Analysis: 8270E-SIM Alkyl PAH (Parents) Dual Scan

Lab Number & Container	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ/Opt) GPC C/U (1:1) 1 2 3	(REQ/Opt) Sulfur C/U (1:1) Y/N (Transfer Rinse)	(REQ) Silica Gel C/U (1:1)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
20K0069-01 A	47.2	(21.18) 21.23	(1:1) Y / N	(1:1) Y / N	(1:1)	0.5 ____	0.5 ____	
20K0069-02 A	51.9	(19.26) 19.28	(1:1) Y / N	(1:1) Y / N	(1:1)	0.5 ____	0.5 ____	
20K0073-01 A	81.5	(12.28) 12.29	(1:1) Y / N	(1:1) Y / N	(1:1)	0.5 ____	0.5 ____	
20K0073-02 A	87.6	(11.41) 11.44	(1:1) Y / N	(1:1) Y / N	(1:1)	0.5 ____	0.5 ____	

Analysis: 8270E-SIM Alkyl PAH (Range) Dual Scan

Lab Number & Container	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ/Opt) GPC C/U (1:1) 1 2 3	(REQ/Opt) Sulfur C/U (1:1) Y/N (Transfer Rinse)	(REQ) Silica Gel C/U (1:1)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
20K0069-01 A	47.2	(21.18) 21.23	(1:1) Y / N	(1:1) Y / N	(1:1)	0.5 ____	0.5 ____	
20K0069-02 A	51.9	(19.26) 19.28	(1:1) Y / N	(1:1) Y / N	(1:1)	0.5 ____	0.5 ____	
20K0073-01 A	81.5	(12.28) 12.29	(1:1) Y / N	(1:1) Y / N	(1:1)	0.5 ____	0.5 ____	
20K0073-02 A	87.6	(11.41) 11.44	(1:1) Y / N	(1:1) Y / N	(1:1)	0.5 ____	0.5 ____	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ/Opt) GPC C/U (1:1) 1 2 3	(REQ/Opt) Sulfur C/U (1:1) Y/N (Transfer Rinse)	(REQ) Silica Gel C/U (1:1)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BIK0323-BLK1	100.0	(10.00) 10.00	(1:1) Y / N	(1:1) Y / N	(1:1)	0.5 ____	0.5 ____	
BIK0323-BLK2	100.0	(10.00) 10.00	(1:1) Y / N	(1:1) Y / N	(1:1)	0.5 ____	0.5 ____	
BIK0323-BS1	100.0	(10.00) 10.00	(1:1) Y / N	(1:1) Y / N	(1:1)	0.5 ____	0.5 ____	
BIK0323-BS2	100.0	(10.00) 10.00	(1:1) Y / N	(1:1) Y / N	(1:1)	0.5 ____	0.5 ____	
BIK0323-MS1	87.6	((11.41) 11.41	(1:1) Y / N	(1:1) Y / N	(1:1)	0.5 ____	0.5 ____	Use 20K0073-02
BIK0323-MS2	87.6	((11.41) 11.41	(1:1) Y / N	(1:1) Y / N	(1:1)	0.5 ____	0.5 ____	Use 20K0073-02
BIK0323-MSD1	87.6	((11.41) 11.41	(1:1) Y / N	(1:1) Y / N	(1:1)	0.5 ____	0.5 ____	Use 20K0073-02
BIK0323-MSD2	87.6	((11.41) 11.41	(1:1) Y / N	(1:1) Y / N	(1:1)	0.5 ____	0.5 ____	Use 20K0073-02

YJ 11/11/20 — Client ID verified By — Date

BH — Preparation Reviewed By — 12/8/20 Date

11/11/20 13:05 — Extraction Date and Time

Printed: 11/11/2020 9:21:58AM

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0323

Prepared using: EPA 3546 (Microwave)

8270E-SIM Alkyl PAH (Parents) Dual Scan in Solid
8270E-SIM Alkyl PAH (Range) Dual Scan in Solid

Prep Steps

Step	Analyst/Date
Microwave 1 (2) 3	CG / MB 11/11/20
Pre-GPC KD 100°C (No Exchange) 1 2 3 (4) 5 6	TWC / MB 11/30/20
Pre GPC TurboVap (1) 2 3 4	CG 12/1/20
Post-GPC KD 80°C Hexane Exchange 2 x 20 mL 100°C (1) 2 3 (4) (5) 6	VLB 12/7/20
Pre-Cleanup TurboVap 1 2 3 (4)	BH 12/8/20
Post-Cleanup TurboVap 1 2 (3) 4	BH 12/8/20
Vialing	BH 12/8/20

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: CG / MB Date: 11/11/20	
1:1 Methylene Chloride/Acetone	I0101
Methylene Chloride	I0136
Anhydrous Sodium Sulfate	I0132
Pre-Deactivated Glass Wool	I0097
Pre GPC KD Analyst: TWC / MB Date: 11/30/20	
Methylene Chloride	I010679
Hexane	I009769
GPC Filter Prep Analyst: CG Date: 12/1/20	
Methylene Chloride	I010679
GPC Analyst: CG Date: 12/1/20	
Methylene Chloride	I010679
GPC Calibration File	CHG0168-GPC1
Post GPC KD Analyst: VLB Date: 12/7/20	
Hexane	I009769
Methylene Chloride	I011119
Vialing Analyst: BH Date: 12/8/20	
Silica Gel (SPE) darts	~~I009985~~
Methylene Chloride	I011119
Hexane	~~I009769~~
Tetrabutylammonium hydrogensulfate (TBAS)	N/A ~~I010916~~ BH
Sodium Sulfite	N/A

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surr 15µg/mL	T 1000266 Exp: 01/09/2021	100µL	CG	MB
Spike 15/75µg/mL	15 1010207 Exp: 10/03/2021	100µL	CG	MB
Spike 15µg/mL	42 1008202 Exp: 03/13/2021	100µL	CG	MB

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

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0323

Prepared using: EPA 3546 (Microwave)

8270E-SIM Alkyl PAH (Parents) Dual Scan in Solid
8270E-SIM Alkyl PAH (Range) Dual Scan in Solid

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh into beakers dry with Sodium Sulfate. 2. Transfer to microwave vessel. 3. Add DCM ONLY to the vessels (until solvent is 3 inches above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-re-homogenize while hot then let cool 10-15 min in Refridgerator 05. Re-homogenize while cool. 7. Decant DCM into Erlenmeyer flask with a funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using 1:1 DCM/ACE. 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. If GPC is Req add 10mL Hexane and KD to 5mL at 100ºC (NO EXCHANGE) 12. If GPC is NOT Req = KD to 5mL at 100ºC. Exchange to Hexane (2X with 10mL) to 5mL at 100ºC. 13. TurboVap. 14. Sulfur clean = Hexane transfer rinse. 15. Silica Clean-up REQ. 16. TurboVap 17. Vial in DCM. A. Need Total Solids Y / N B. Archive/Freeze Y / N	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: SIM ALKYL Extraction Batch BIK0323

Total Solids Batch: BIK0262 Work Order(s): 20K0069

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 01, 02 — 07	11/10/20
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples (Y) / N 01, 02 only	11/10/20
☒ Multiple Jars Y / (N)	11/10/20
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

3056F

Revision 15
07/01/19

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

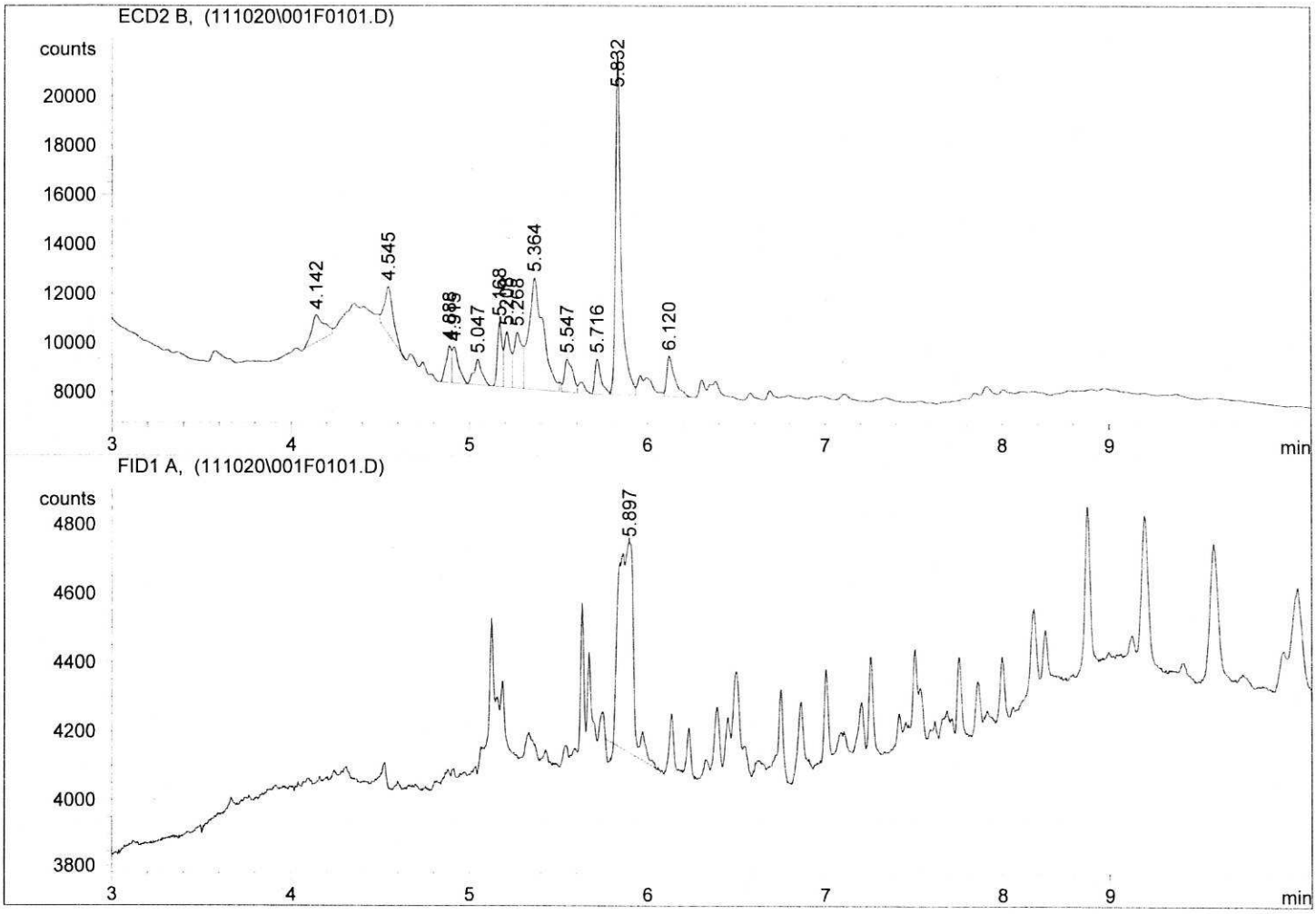
Extraction Parameter: SIM ALKPL Extraction Batch BIK0323

Total Solids Batch: BIK0268 Work Order(s): 20K0073

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 01-13. 15-18.	NB 11/10/20
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= fuel odor = 14.	NB 11/10/20
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples (Y) / N 01, 02 only	NB 11/10/20
☒ Multiple Jars (Y) / N 15x2	NB 11/10/20
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

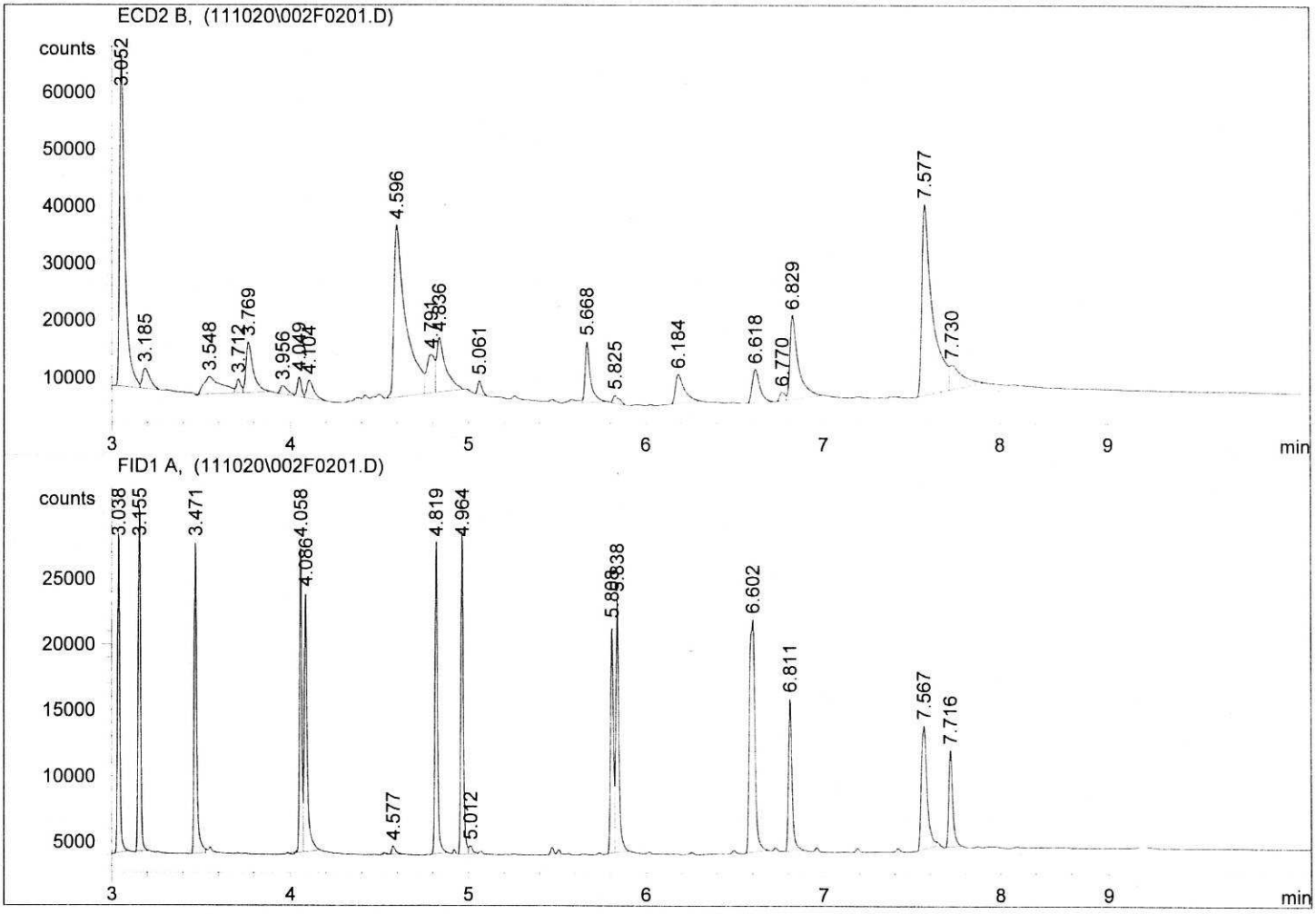
Injection Date	: 11/10/2020 5:49:02 PM	Seq. Line :	1
Sample Name	: DCM RINSE	Location :	Vial 1
Acq. Operator	: YL	Inj :	1
		Inj Volume :	1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\111020.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 9/11/2020 3:50:10 PM by JGR
SCREEN METHOD



*** End of Report ***

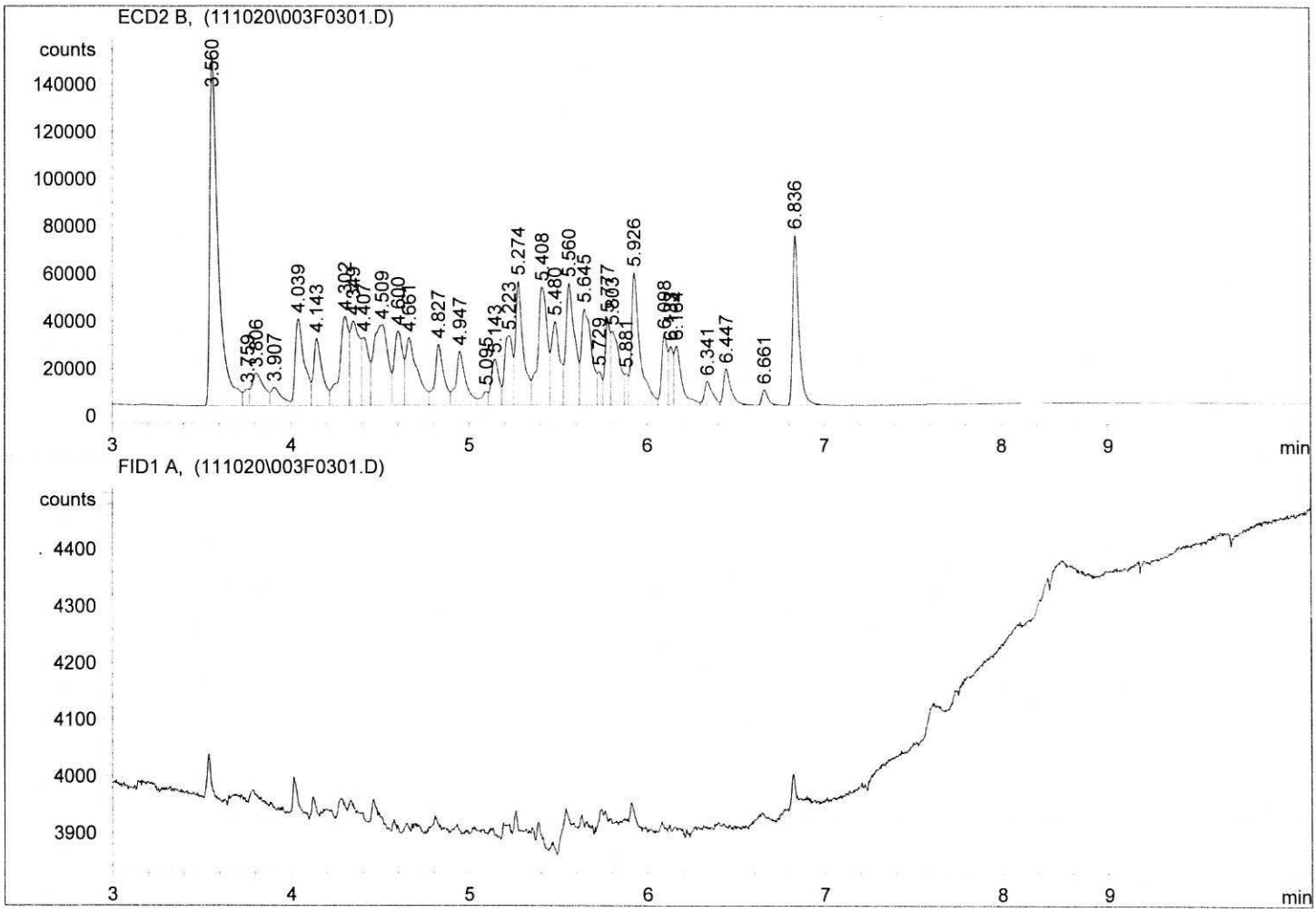
Injection Date	: 11/10/2020 6:02:55 PM	Seq. Line :	2
Sample Name	: PNA STD 10PPM	Location :	Vial 2
Acq. Operator	: YL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\111020.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 9/11/2020 3:50:10 PM by JGR		
SCREEN METHOD			



*** End of Report ***

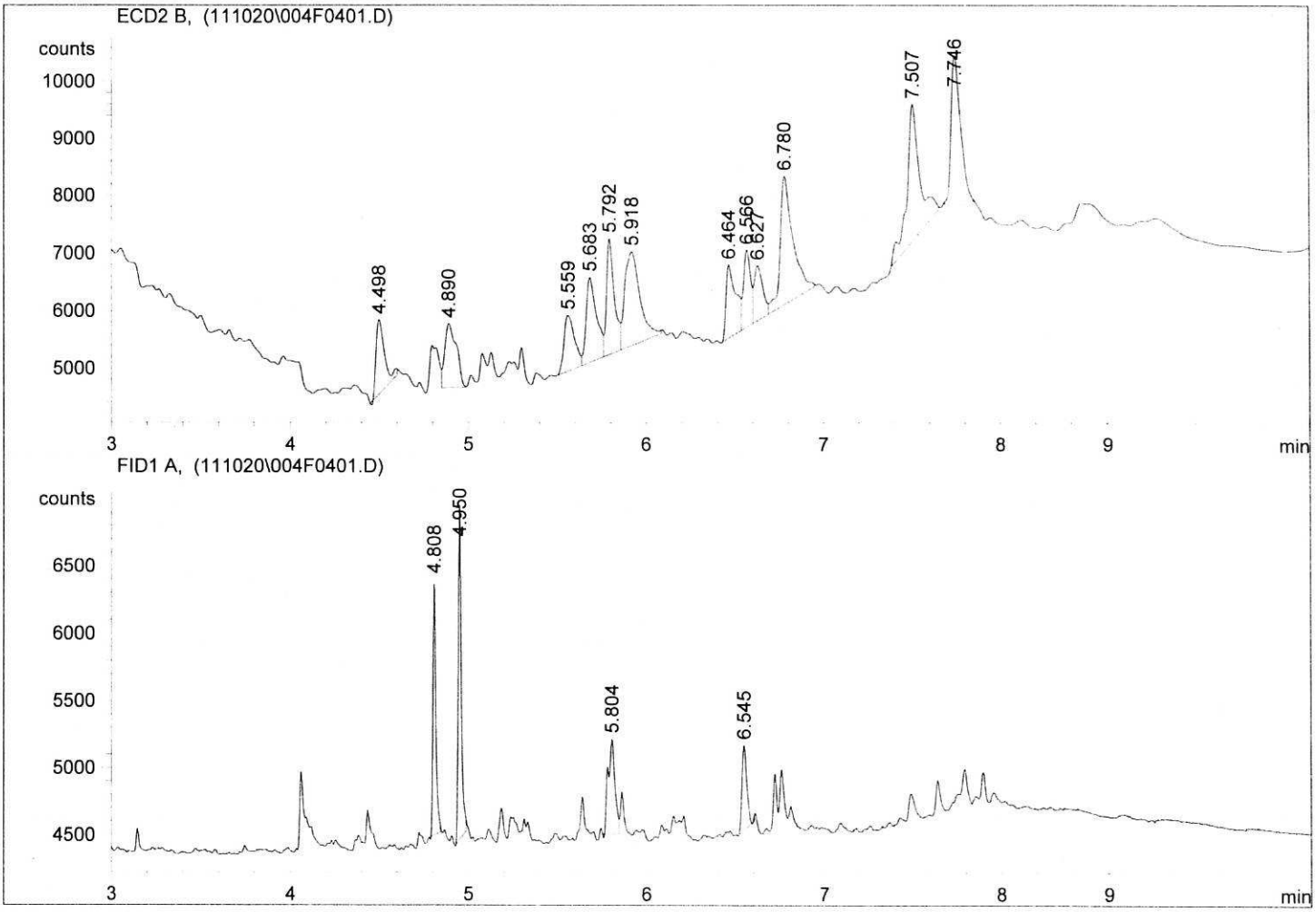
Injection Date	: 11/10/2020 6:17:03 PM	Seq. Line :	3
Sample Name	: AR1660 1PPM	Location :	Vial 3
Acq. Operator	: YL	Inj :	1
		Inj Volume :	1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\111020.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 9/11/2020 3:50:10 PM by JGR
SCREEN METHOD



*** End of Report ***

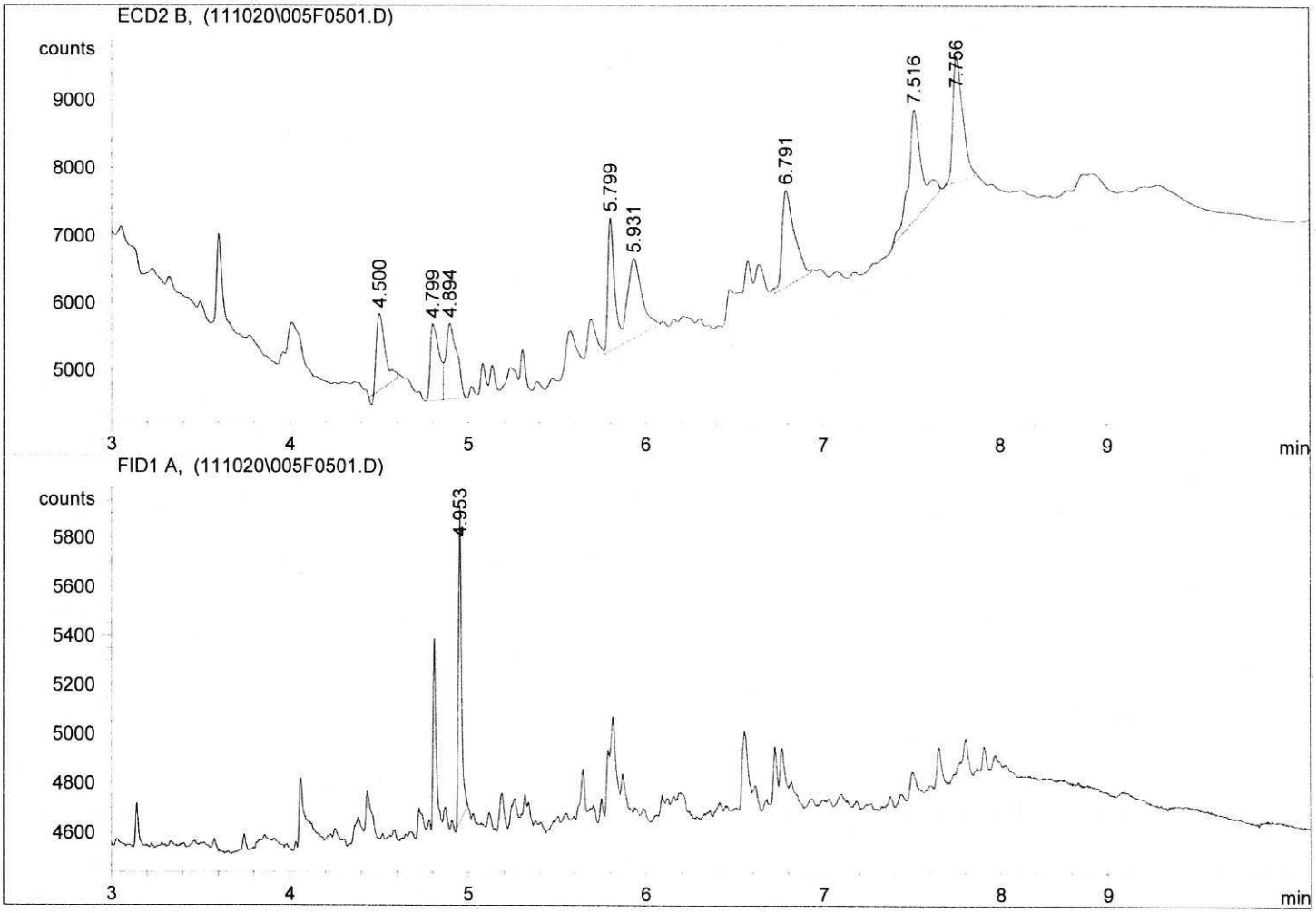
Injection Date	: 11/10/2020 6:30:55 PM	Seq. Line :	4
Sample Name	: 20K0069 01	Location :	Vial 4
Acq. Operator	: YL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\111020.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 9/11/2020 3:50:10 PM by JGR		
SCREEN METHOD			



*** End of Report ***

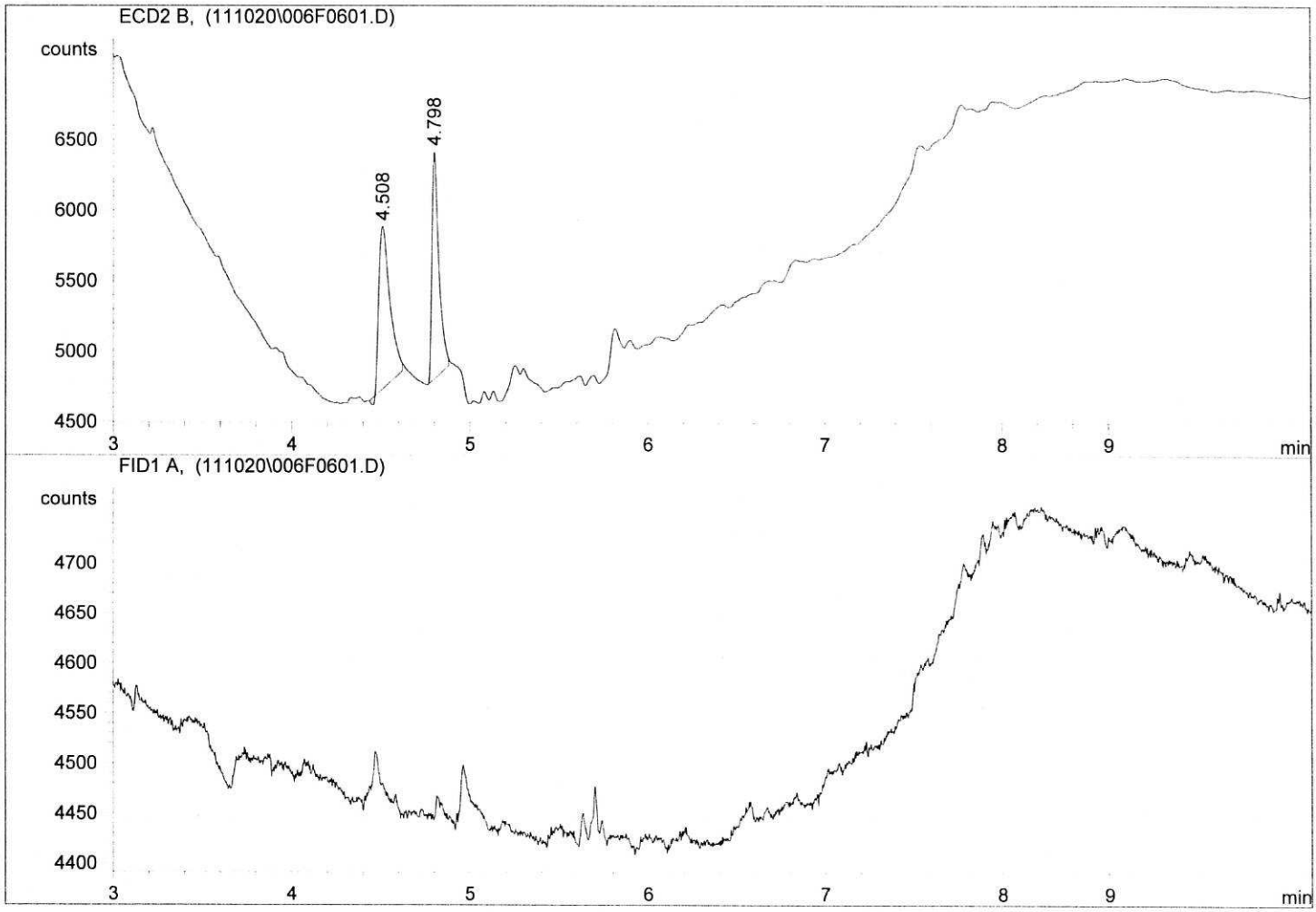
Injection Date	: 11/10/2020 6:45:14 PM	Seq. Line :	5
Sample Name	: 20K0069 02	Location :	Vial 5
Acq. Operator	: YL	Inj :	1
		Inj Volume :	1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\111020.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 9/11/2020 3:50:10 PM by JGR
SCREEN METHOD



*** End of Report ***

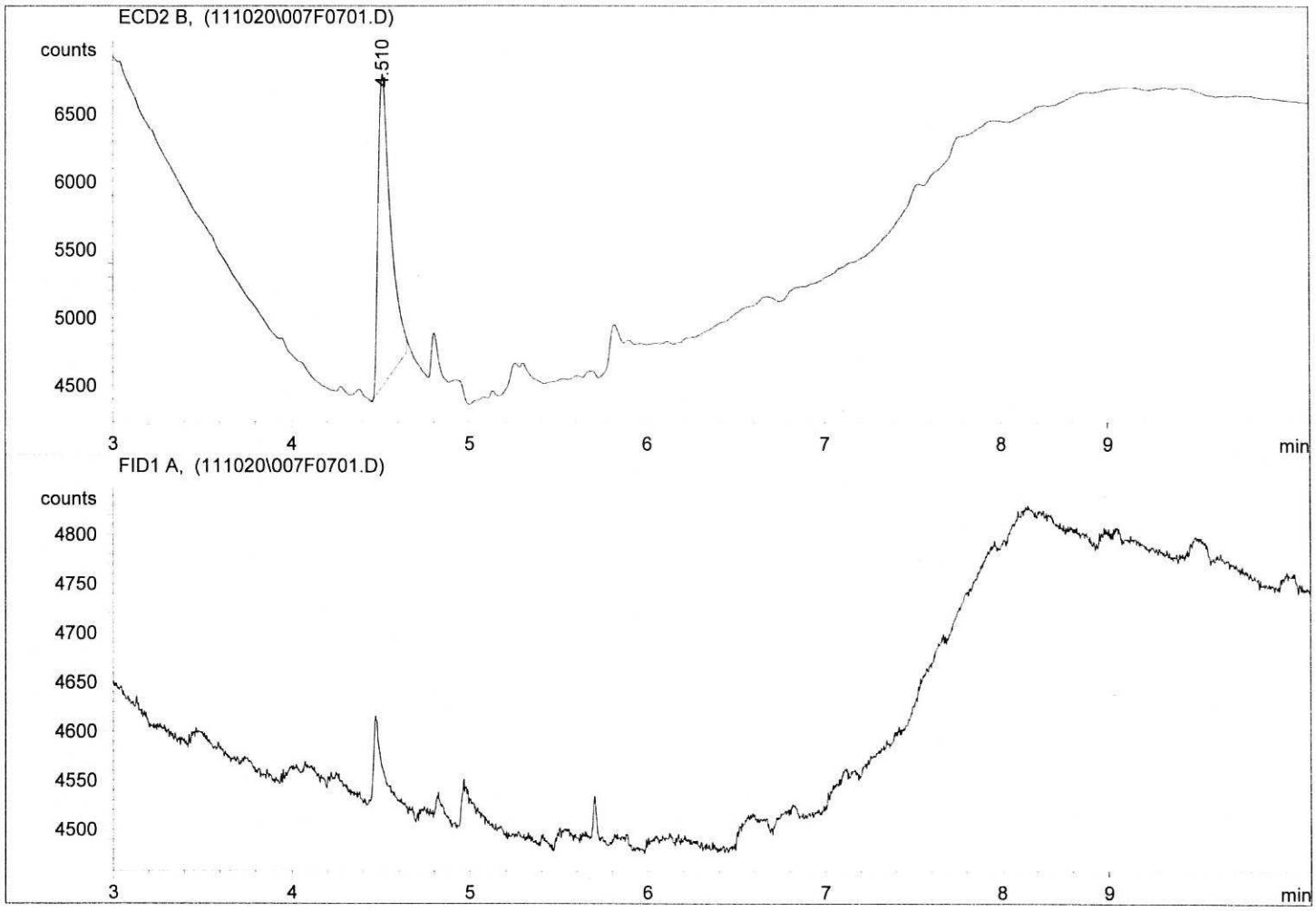
Injection Date	: 11/10/2020 6:59:03 PM	Seq. Line :	6
Sample Name	: 20K0073 01	Location :	Vial 6
Acq. Operator	: YL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\111020.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 9/11/2020 3:50:10 PM by JGR		
SCREEN METHOD			



*** End of Report ***

Injection Date	: 11/10/2020 7:13:25 PM	Seq. Line :	7
Sample Name	: 20K0073 02	Location :	Vial 7
Acq. Operator	: YL	Inj :	1
		Inj Volume :	1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\111020.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 9/11/2020 3:50:10 PM by JGR
SCREEN METHOD



*** End of Report ***

Batch: BIK0323
Batch Comment: **NONE**
Project: Gasco Siltronic
Project Comments: <G> MS/MSD per 20 samples, please batch with other work orders, SM2540 Needed </G>
Work Order:20K0069
Work Order Comments: <G> MS/MSD per 20 samples, please batch with other work orders, SM2540 Needed </G>
Sample: 20K0069-01
Sample Comments: **NONE**
Analysis: 8270E-SIM Alkyl PAH (Parents) Dual Scan
Sample Extraction Comments: **NONE**
Analysis: 8270E-SIM Alkyl PAH (Range) Dual Scan
Sample Extraction Comments: **NONE**
Sample: 20K0069-02
Sample Comments: **NONE**
Analysis: 8270E-SIM Alkyl PAH (Parents) Dual Scan
Sample Extraction Comments: **NONE**
Analysis: 8270E-SIM Alkyl PAH (Range) Dual Scan
Sample Extraction Comments: **NONE**
Work Order:20K0073
Work Order Comments: <G> MS/MSD per 20 samples, please batch with other work orders, SM2540 Needed </G>
Sample: 20K0073-01
Sample Comments: **NONE**
Analysis: 8270E-SIM Alkyl PAH (Parents) Dual Scan
Sample Extraction Comments: **NONE**
Analysis: 8270E-SIM Alkyl PAH (Range) Dual Scan
Sample Extraction Comments: **NONE**
Sample: 20K0073-02
Sample Comments: **NONE**
Analysis: 8270E-SIM Alkyl PAH (Parents) Dual Scan
Sample Extraction Comments: **NONE**
Analysis: 8270E-SIM Alkyl PAH (Range) Dual Scan
Sample Extraction Comments: **NONE**

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Cleanup Batch:	CIL0088	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup	Analysis:	EPA 8270E-SIM

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
USMPDI-046SC-A-00-01-201029	20K0073-01	NT1420121214S.D	12/08/2020	
USMPDI-046SC-A-01-02-201029	20K0073-02	NT1420121215.D	12/08/2020	
USMPDI-046SC-A-01-02-201029	20K0073-02	NT1420121215S.D	12/08/2020	
Matrix Spike Dup	BIK0323-MSD1	NT1420121220.D	12/08/2020	
Matrix Spike	BIK0323-MS1	NT1420121219.D	12/08/2020	
LCS	BIK0323-BS1	NT1420121211.D	12/08/2020	
Blank	BIK0323-BLK1	NT1420121210.D	12/08/2020	
USMPDI-046SC-A-00-01-201029	20K0073-01	NT1420121214.D	12/08/2020	
Blank	BIK0323-BLK2	NT1420121210S.D	12/08/2020	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CIL0088

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup** **Printed: 12/8/2020 11:11:31AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
20K0073-02	A	USMPDI-046SC-A-01-02-20 1029	A 02	0.5	0.5	0E-SIM Alkyl PAH (Range) Dual S	12/8/2020	BH	
20K0073-02	A	USMPDI-046SC-A-01-02-20 1029	A 01	0.5	0.5	)E-SIM Alkyl PAH (Parents) Dual S	12/8/2020	BH	
20K0069-02	A	USMPDI-055SC-A-01-02-20 1028	A 01	0.5	0.5	)E-SIM Alkyl PAH (Parents) Dual S	12/8/2020	BH	
20K0069-02	A	USMPDI-055SC-A-01-02-20 1028	A 02	0.5	0.5	0E-SIM Alkyl PAH (Range) Dual S	12/8/2020	BH	
20K0073-01	A	USMPDI-046SC-A-00-01-20 1029	A 01	0.5	0.5	)E-SIM Alkyl PAH (Parents) Dual S	12/8/2020	BH	
20K0073-01	A	USMPDI-046SC-A-00-01-20 1029	A 02	0.5	0.5	0E-SIM Alkyl PAH (Range) Dual S	12/8/2020	BH	
20K0069-01	A	USMPDI-055SC-A-00-01-20 1028	A 01	0.5	0.5	)E-SIM Alkyl PAH (Parents) Dual S	12/8/2020	BH	
20K0069-01	A	USMPDI-055SC-A-00-01-20 1028	A 02	0.5	0.5	0E-SIM Alkyl PAH (Range) Dual S	12/8/2020	BH	
BIK0323-MSD2	-	Matrix Spike Dup	-	0.5	0.5	-	12/8/2020	BH	
BIK0323-MSD1	-	Matrix Spike Dup	-	0.5	0.5	-	12/8/2020	BH	
BIK0323-BS1	-	LCS	-	0.5	0.5	-	12/8/2020	BH	
BIK0323-BS2	-	LCS	-	0.5	0.5	-	12/8/2020	BH	
BIK0323-MS1	-	Matrix Spike	-	0.5	0.5	-	12/8/2020	BH	
BIK0323-MS2	-	Matrix Spike	-	0.5	0.5	-	12/8/2020	BH	
BIK0323-BLK1	-	Blank	-	0.5	0.5	-	12/8/2020	BH	
BIK0323-BLK2	-	Blank	-	0.5	0.5	-	12/8/2020	BH	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
METHOD BLANK DATA SHEET
EPA 8270E-SIM

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	20K0073
Client:	Anchor QEA, LLC			Project:	Gasco Siltronic
Matrix:	Solid	Laboratory ID:	BIK0323-BLK1	File ID:	NT1420121210.D
Sampled:	N/A	Prepared:	11/11/20 13:05	Analyzed:	12/12/20 18:23
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 0.5 mL
Batch:	BIK0323	Sequence:	SIL0184	Calibration:	DJ00029
Instrument:	NT14	Column:	ZB-5MS	Cleanups:	Silica Gel

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
493-02-7	trans-Decalin	1	5.0	U	0.03	5.0
493-01-6	cis-Decalin	1	5.0	U	0.5	5.0
91-20-3	Naphthalene	1	5.0	U	0.4	5.0
90-12-0	1-Methylnaphthalene	1	5.0	U	0.4	5.0
91-57-6	2-Methylnaphthalene	1	5.0	U	0.4	5.0
92-52-4	Biphenyl	1	5.0	U	0.3	5.0
581-42-0	2,6-Dimethylnaphthalene	1	5.0	U	0.4	5.0
208-96-8	Acenaphthylene	1	5.0	U	0.3	5.0
83-32-9	Acenaphthene	1	5.0	U	0.5	5.0
132-64-9	Dibenzofuran	1	5.0	U	0.4	5.0
2245-38-7	2,3,5-Trimethylnaphthalene	1	5.0	U	0.4	5.0
86-73-7	Fluorene	1	5.0	U	0.5	5.0
95-15-8	Benzo(b)thiophene	1	5.0	U	0.4	5.0
85-01-8	Phenanthrene	1	5.0	U	0.9	5.0
120-12-7	Anthracene	1	5.0	U	0.05	5.0
86-74-8	Carbazole	1	5.0	U	0.7	5.0
832-69-9	1-Methylphenanthrene	1	5.0	U	0.5	5.0
206-44-0	Fluoranthene	1	5.0	U	1.4	5.0
132-65-0	Dibenzothiophene	1	5.0	U	0.7	5.0
129-00-0	Pyrene	1	5.0	U	1.0	5.0
56-55-3	Benzo(a)anthracene	1	5.0	U	1.4	5.0
218-01-9	Chrysene	1	5.0	U	0.7	5.0
205-99-2	Benzo(b)fluoranthene	1	5.0	U	0.8	5.0
205-82-3	Benzo(j)fluoranthene	1	5.0	U	0.7	5.0
207-08-9	Benzo(k)fluoranthene	1	5.0	U	0.8	5.0
	Benzofluoranthenes, Total	1	10.0	U	3.0	10.0
197-97-2	Benzo(e)pyrene	1	5.0	U	0.6	5.0
50-32-8	Benzo(a)pyrene	1	5.0	U	1.0	5.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	5.0	U	0.4	5.0
53-70-3	Dibenzo(a,h)anthracene	1	5.0	U	0.7	5.0
191-24-2	Benzo(g,h,i)perylene	1	5.0	U	0.5	5.0
1985-5-0	Perylene	1	5.0	U	0.4	5.0
239-35-0	Benzo(b)naphtho(2,1-d)thiophene	1	5.0	U	5.0	5.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Naphthalene-d8	150.00	100	66.7	30 - 160	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
METHOD BLANK DATA SHEET
EPA 8270E-SIM

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	20K0073
Client:	Anchor QEA, LLC			Project:	Gasco Siltronic
Matrix:	Solid	Laboratory ID:	BIK0323-BLK1	File ID:	NT1420121210.D
Sampled:	N/A	Prepared:	11/11/20 13:05	Analyzed:	12/12/20 18:23
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 0.5 mL
Batch:	BIK0323	Sequence:	SIL0184	Calibration:	DJ00029
Instrument:	NT14	Column:	ZB-5MS	Cleanups:	Silica Gel

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Acenaphthene-d10	150.00	100	66.9	30 - 160	
Phenanthrene-d10	150.00	121	80.8	30 - 160	
Chrysene-d12	150.00	127	84.6	30 - 160	
Perylene-d12	150.00	69.8	46.5	30 - 160	

Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121210.D

Date : 12-DEC-2020 18:23

Client ID:

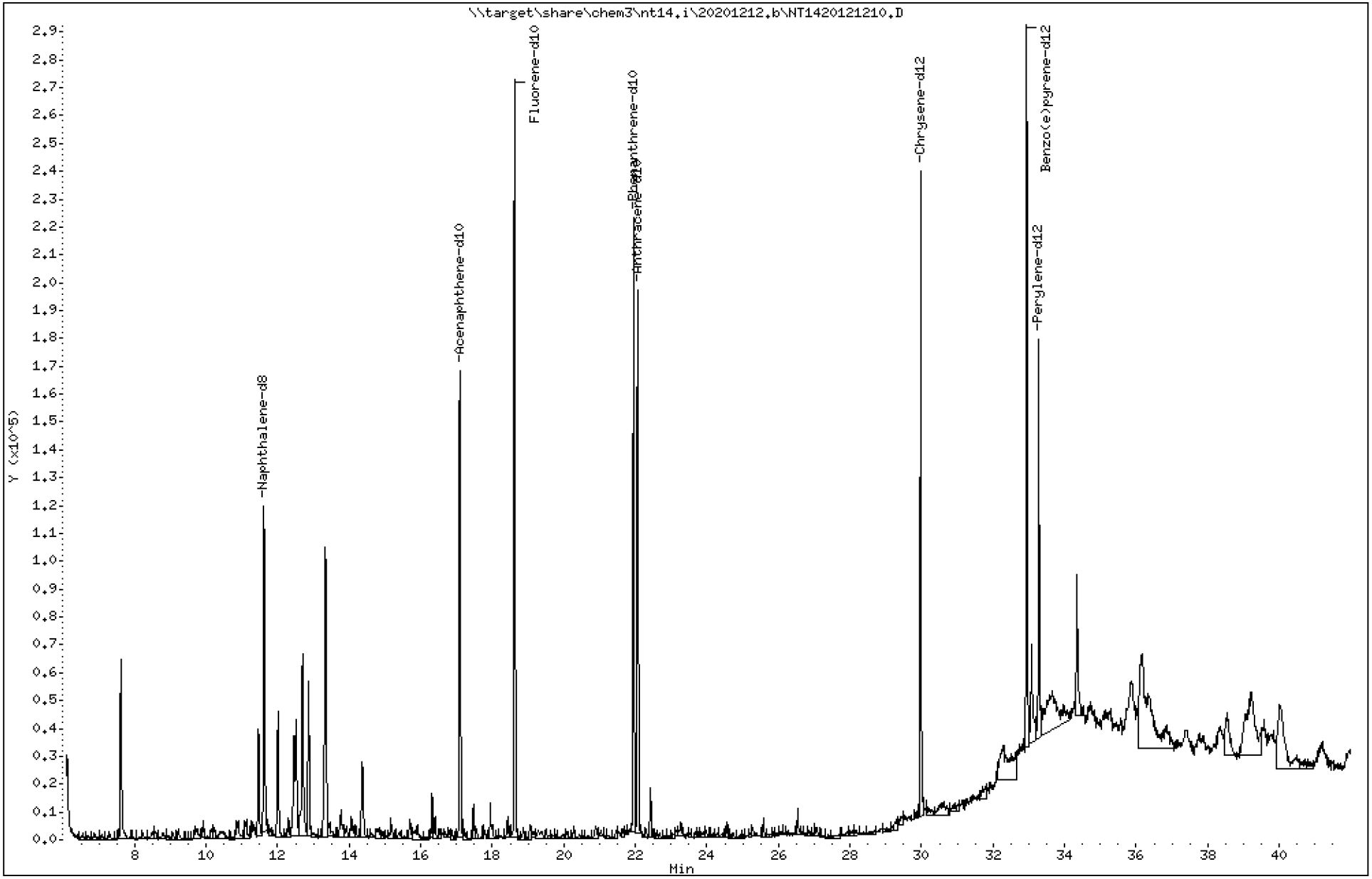
Instrument: nt14.i

Sample Info: BIK0323-BLK1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201212.b\NT1420121210.D
Lab Smp Id: BIK0323-BLK1
Inj Date : 12-DEC-2020 18:23
Operator : VTS Inst ID: nt14.i
Smp Info : BIK0323-BLK1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201212.b\ALKYLPNA.m
Meth Date : 12-Dec-2020 12:41 van Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: ORGDATA102

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
	1 trans-Decalin	138	Compound Not Detected.					
	2 cis-Decalin	138	Compound Not Detected.					
$	6 Naphthalene-d8	136	11.619	11.630	(0.624)	193049	2.00014	2.000(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	17.092	17.092	(0.918)	116284	2.00636	2.006(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	18.621	18.632	(1.000)	236548	2.00000	
	26 Fluorene	166	Compound Not Detected.					
	30 Dibenzothiophene	184	Compound Not Detected.					
$	35 Phenanthrene-d10	188	21.952	21.952	(0.995)	232012	2.42451	2.425(R)
	36 Phenanthrene	178	Compound Not Detected.					
*	250 Anthracene-d10	188	22.062	22.073	(1.000)	199797	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	29.974	29.974	(0.910)	216141	2.53818	2.538(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 MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.936	32.948	(1.000)	249760	2.00000	
64 Benzo(e)pyrene	252	Compound Not Detected.					
66 Benzo(a)pyrene	252	Compound Not Detected.					
$ 67 Perylene-d12	264	33.274	33.286	(1.010)	144206	1.39632	1.396(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.

Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121210.D Page 1
Report Date: 14-Dec-2020 16:53

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1420121210.D
Lab Smp Id: BIK0323-BLK1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201212.b\ALKYLPNA.m
Misc Info:

Calibration Date: 12-DEC-2020
Calibration Time: 11:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	219929	109965	439858	236548	7.56
250 Anthracene-d10	196749	98375	393498	199797	1.55
251 Benzo(e)pyrene-d1	249762	124881	499524	249760	-0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.63	18.13	19.13	18.62	-0.06
250 Anthracene-d10	22.07	21.57	22.57	22.06	-0.05
251 Benzo(e)pyrene-d1	32.95	32.45	33.45	32.94	-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 - NT1420121210.D

Lab ID: BIK0323-BLK1
nt14.i, 20201212.b\ALKYLPNA.m, 12-DEC-2020 18:23

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: NT1420121202.D

On Column LOD for nt14.i, 20201212.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
METHOD BLANK DATA SHEET
EPA 8270E-SIM

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	20K0073
Client:	Anchor QEA, LLC			Project:	Gasco Siltronic
Matrix:	Solid	Laboratory ID:	BIK0323-BLK2	File ID:	NT1420121210S.D
Sampled:	N/A	Prepared:	11/11/20 13:05	Analyzed:	12/12/20 18:23
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 0.5 mL
Batch:	BIK0323	Sequence:	SIL0186	Calibration:	DI00041
Instrument:	NT14	Column:	ZB-5MS	Cleanups:	Silica Gel

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
C1DEC	C1-Decalins	1	5.0	U	0.5	5.0
C2DEC	C2-Decalins	1	5.0	U	0.5	5.0
C3DEC	C3-Decalins	1	5.0	U	0.5	5.0
C4DEC	C4-Decalins	1	5.0	U	0.5	5.0
C1NAPH	C1-Naphthalenes	1	5.0	U	0.4	5.0
C2NAPH	C2-Naphthalenes	1	5.0	U	0.4	5.0
C3NAPH	C3-Naphthalenes	1	5.0	U	0.4	5.0
C4NAPH	C4-Naphthalenes	1	5.0	U	0.4	5.0
C1FLR	C1-Fluorenes	1	5.0	U	0.5	5.0
C2FLR	C2-Fluorenes	1	5.0	U	0.5	5.0
C3FLR	C3-Fluorenes	1	5.0	U	0.5	5.0
C1DBTPH	C1-Dibenzothiophenes	1	5.0	U	0.7	5.0
C2DBTPH	C2-Dibenzothiophenes	1	5.0	U	0.7	5.0
C3DBTPH	C3-Dibenzothiophenes	1	5.0	U	0.7	5.0
C4DBTPH	C4-Dibenzothiophenes	1	5.0	U	0.7	5.0
C1PHNANT	C1-Phenanthrenes/Anthracenes	1	5.0	U	0.9	5.0
C2PHNANT	C2-Phenanthrenes/Anthracenes	1	5.0	U	0.9	5.0
C3PHNANT	C3-Phenanthrenes/Anthracenes	1	5.0	U	0.9	5.0
C4PHNANT	C4-Phenanthrenes/Anthracenes	1	5.0	U	0.9	5.0
C1FLPYR	C1-Fluoranthenes/Pyrenes	1	5.0	U	1.0	5.0
C2FLPYR	C2-Fluoranthenes/Pyrenes	1	5.0	U	1.0	5.0
C3FLPYR	C3-Fluoranthenes/Pyrenes	1	5.0	U	1.0	5.0
C4FLPYR	C4-Fluoranthenes/Pyrenes	1	5.0	U	1.0	5.0
C1BAACYR	C1-Benzo(a)anthracenes/Chrysenes	1	5.0	U	0.7	5.0
C2BAACYR	C2-Benzo(a)anthracenes/Chrysenes	1	5.0	U	0.7	5.0
C3BAACYR	C3-Benzo(a)anthracenes/Chrysenes	1	5.0	U	0.7	5.0
C4BAACYR	C4-Benzo(a)anthracenes/Chrysenes	1	5.0	U	0.7	5.0
C1BZTPH	C1-Benzothiophenes	1	5.0	U	0.4	5.0
C2BZTPH	C2-Benzothiophenes	1	5.0	U	0.4	5.0
C3BZTPH	C3-Benzothiophenes	1	5.0	U	0.4	5.0
C1NPBTP	C1-Naphthobenzothiophenes	1	5.0	U	2.5	5.0
C2NPBTP	C2-Naphthobenzothiophenes	1	5.0	U	2.5	5.0
C3NPBTP	C3-Naphthobenzothiophenes	1	5.0	U	2.5	5.0
C4NPBTP	C4-Naphthobenzothiopenes	1	5.0	U	2.5	5.0
C1DBA	C1-Dibenzo(a)anthracenes	1	5.0	U	0.7	5.0
C2DBA	C2-Dibenzo(a)anthracenes	1	5.0	U	0.7	5.0

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
METHOD BLANK DATA SHEET
EPA 8270E-SIM

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	20K0073
Client:	Anchor QEA, LLC			Project:	Gasco Siltronic
Matrix:	Solid	Laboratory ID:	BIK0323-BLK2	File ID:	NT1420121210S.D
Sampled:	N/A	Prepared:	11/11/20 13:05	Analyzed:	12/12/20 18:23
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 0.5 mL
Batch:	BIK0323	Sequence:	SIL0186	Calibration:	DI00041
Instrument:	NT14	Column:	ZB-5MS	Cleanups:	Silica Gel

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
C3DBA	C3-Dibenzo(a)anthracenes	1	5.0	U	0.7	5.0

Data File: \\target\share\chem3\nt14.i\20201212.b\sim.b\NT1420121210.D

Date : 12-DEC-2020 18:23

Client ID:

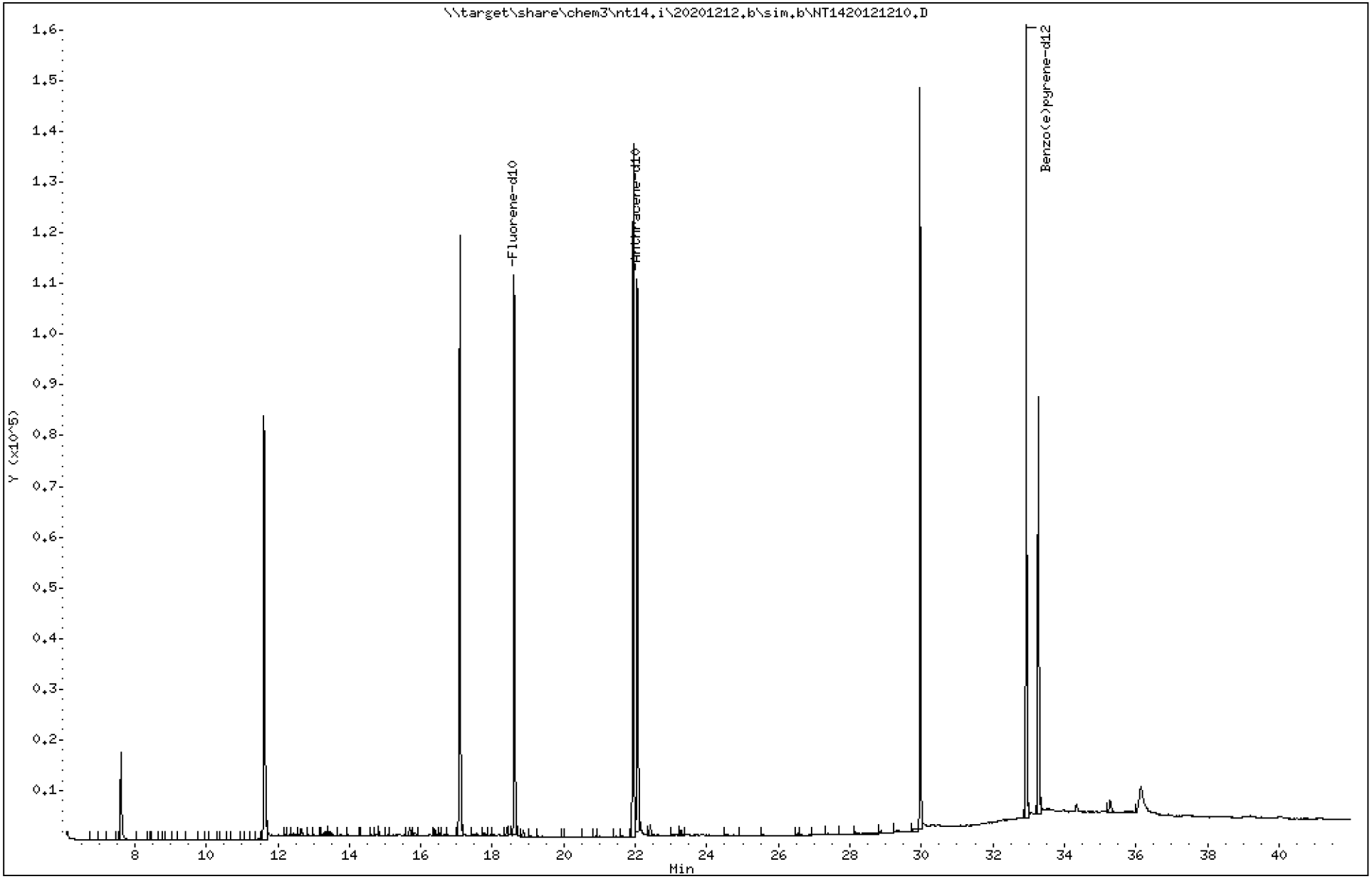
Instrument: nt14.i

Sample Info: BIK0323-BLK2

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20201212.b\sim.b\NT1420121210.D

Date : 12-DEC-2020 18:23

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BLK2

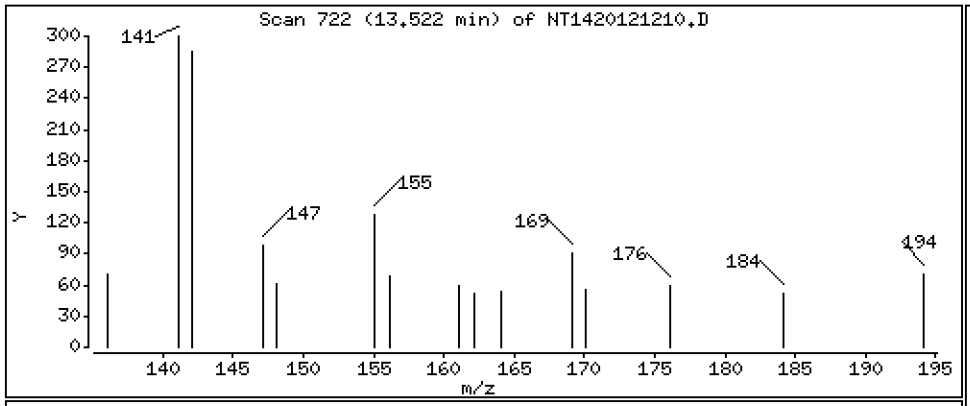
Operator: VTS

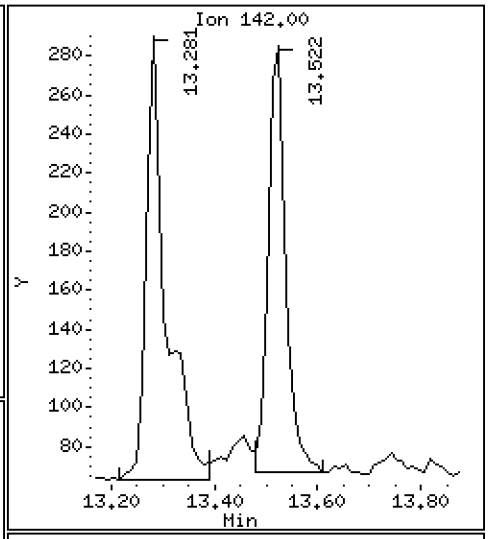
Column phase: Rxi-17Sil MS

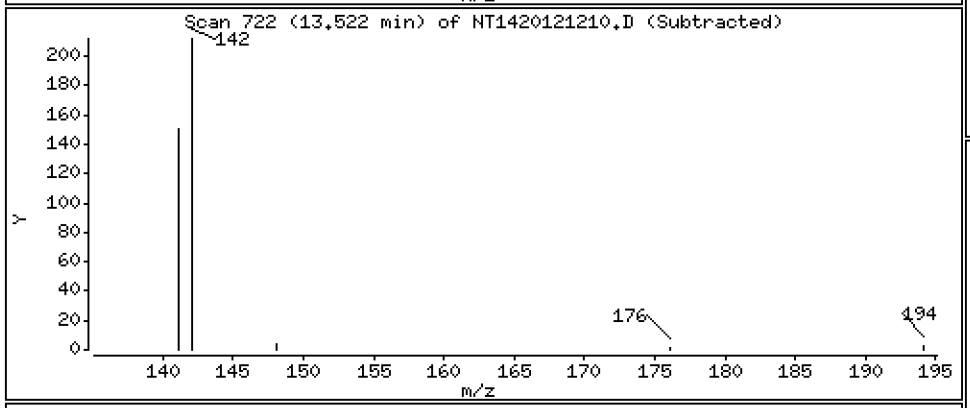
Column diameter: 0.25

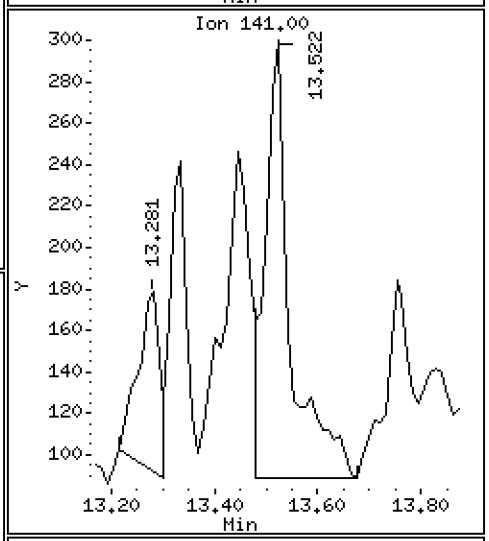
8 C1-Naphthalenes

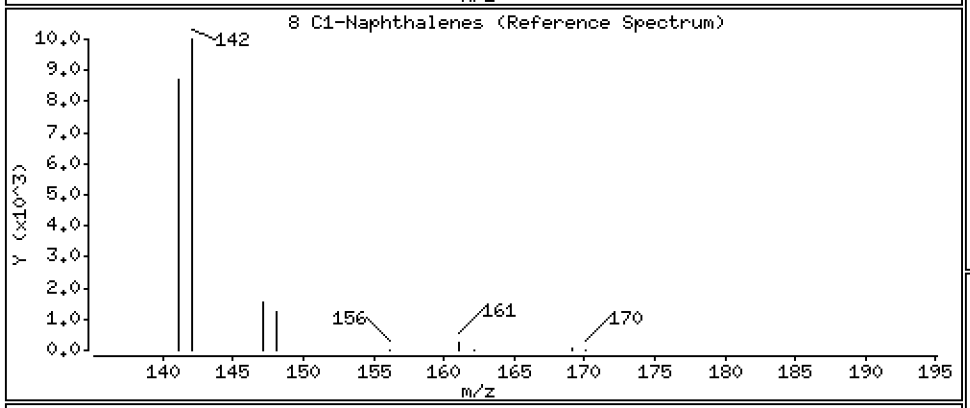
Concentration: 0.006050 ug/mL

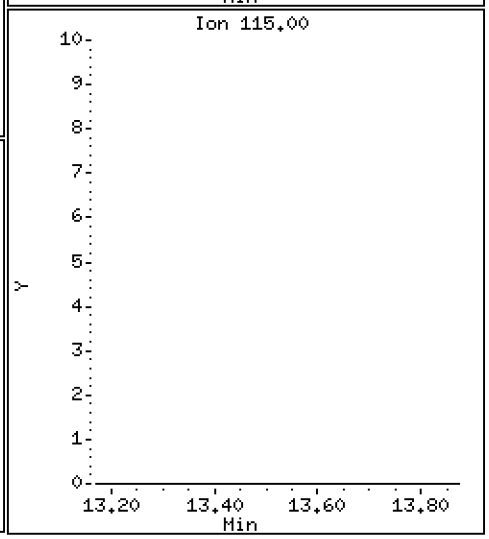


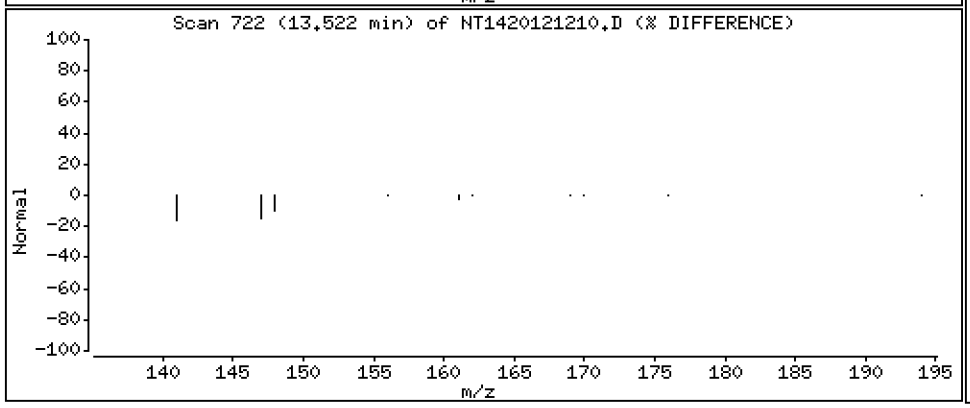












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201212.b\sim.b\NT1420121210.D
Lab Smp Id: BIK0323-BLK2
Inj Date : 12-DEC-2020 18:23
Operator : VTS Inst ID: nt14.i
Smp Info : BIK0323-BLK2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201212.b\sim.b\ALKYLRANGE.m
Meth Date : 15-Dec-2020 17:14 yev Quant Type: ISTD
Cal Date : 17-OCT-2020 17:58 Cal File: NT1420101709S.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ALKYLRANGES.sub
Target Version: 4.14
Processing Host: ORGDATA102

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
3 C1-Decalin	152	Compound Not Detected.					
4 C2-Decalin	166	Compound Not Detected.					
5 C3-Decalin	180	Compound Not Detected.					
247 C4-Decalin	194	Compound Not Detected.					
8 C1-Naphthalenes	142	13.522	13.522	(0.727)	551	0.00605	0.006050
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.					
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.					
* 25 Fluorene-d10	176	18.611	18.623	(1.000)	223103	2.00000	
32 C2-Dibenzothiophenes	212	Compound Not Detected.					
33 C3-Dibenzothiophenes	226	Compound Not Detected.					
34 C4-Dibenzothiophenes	240	Compound Not Detected.					
38 C1-Phenanthrenes/Anthracenes	192	Compound Not Detected.					
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.					
* 250 Anthracene-d10	188	22.052	22.063	(1.000)	221666	2.00000	
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.					
58 C1-Benzo(a)anthracenes/Chrysen	242	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.938	32.938	(1.000)	281798	2.00000	
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)anthracenes	292	Compound Not Detected.					
72 C2-Dibenzo(a)anthracenes	306	Compound Not Detected.					
73 C3-Dibenzo(a)anthracenes	320	Compound Not Detected.					

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1420121210.D
Lab Smp Id: BIK0323-BLK2
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201212.b\sim.b\ALKYLRANGE.m
Misc Info:

Calibration Date: 12-DEC-2020
Calibration Time: 11:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

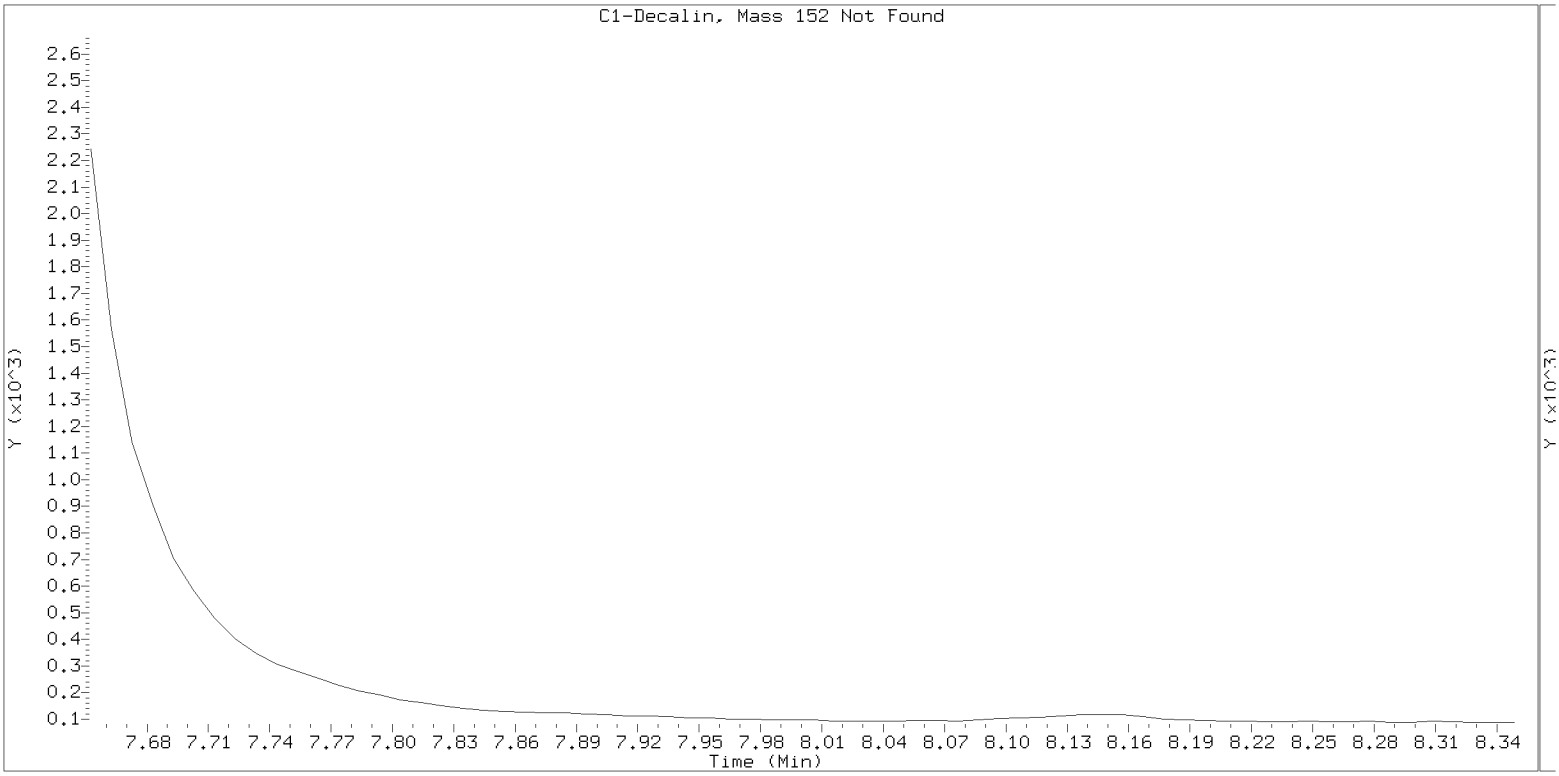
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	211292	105646	422584	223103	5.59
250 Anthracene-d10	219166	109583	438332	221666	1.14
251 Benzo(e)pyrene-d1	281561	140781	563122	281798	0.08

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.62	18.12	19.12	18.61	-0.06
250 Anthracene-d10	22.06	21.56	22.56	22.05	-0.05
251 Benzo(e)pyrene-d1	32.94	32.44	33.44	32.94	-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.

SIM ALKYL PNA RANGE ION WINDOWS - NT1420121210.D

Lab ID: BIK0323-BLK2
nt14.i, sim.b\ALKYLRANGE.m, 12-DEC-2020 18:23



SIM ALKYL PNA RANGE ION WINDOWS - NT1420121210.D

Lab ID: BIK0323-BLK2
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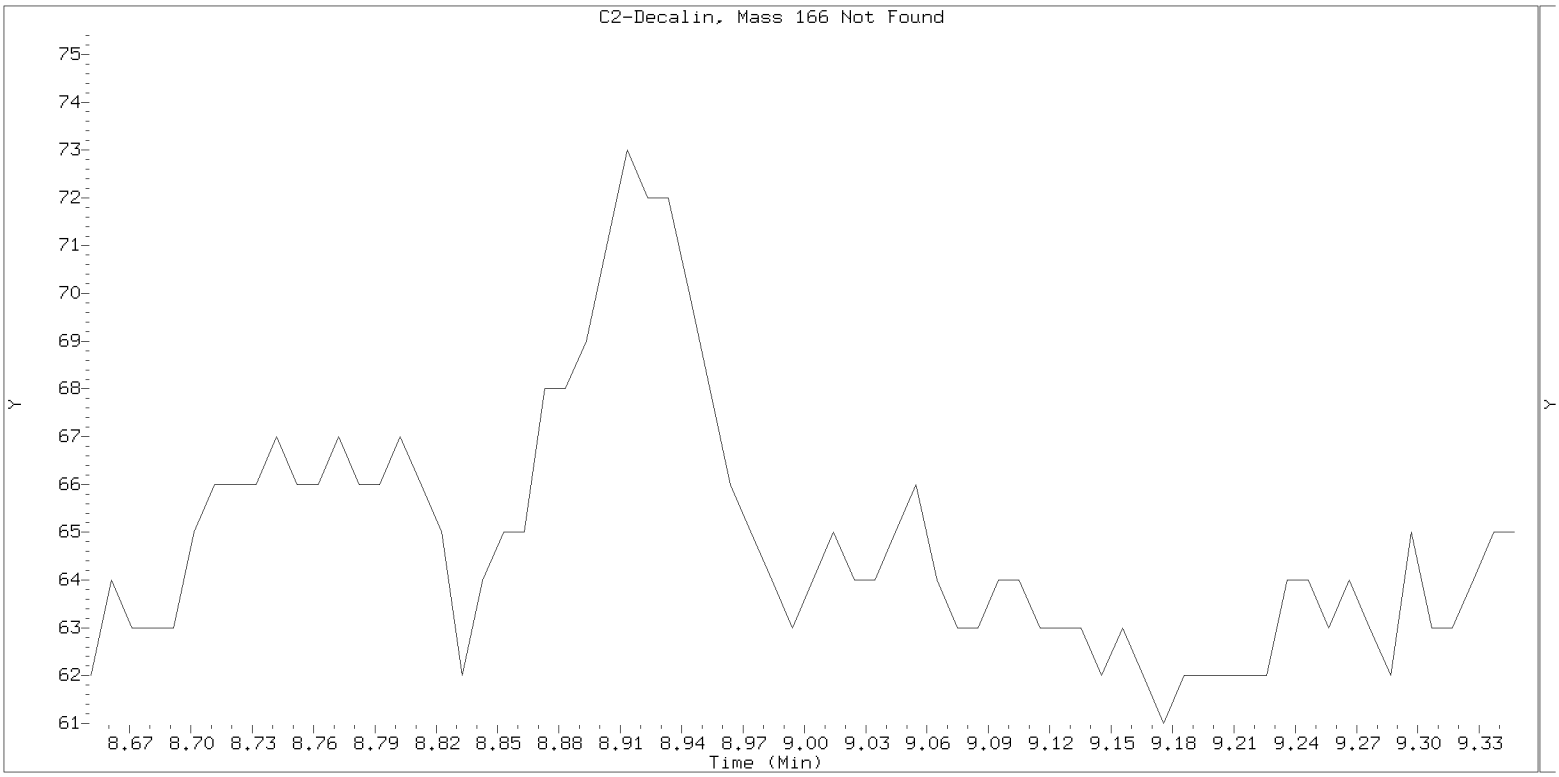

SIM ALKYL PNA RANGE ION WINDOWS - NT1420121210.D

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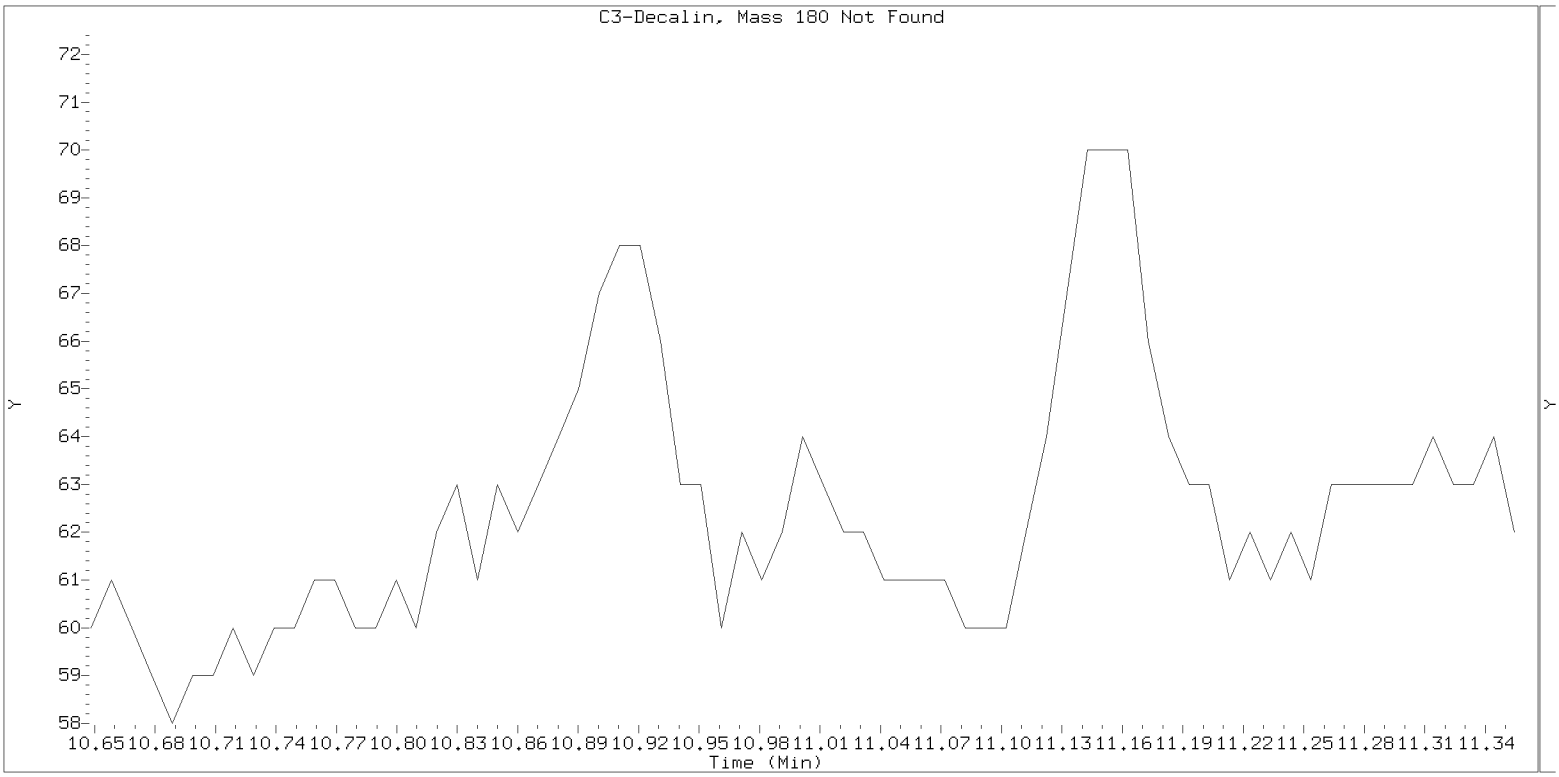

SIM ALKYL PNA RANGE ION WINDOWS - NT1420121210.D

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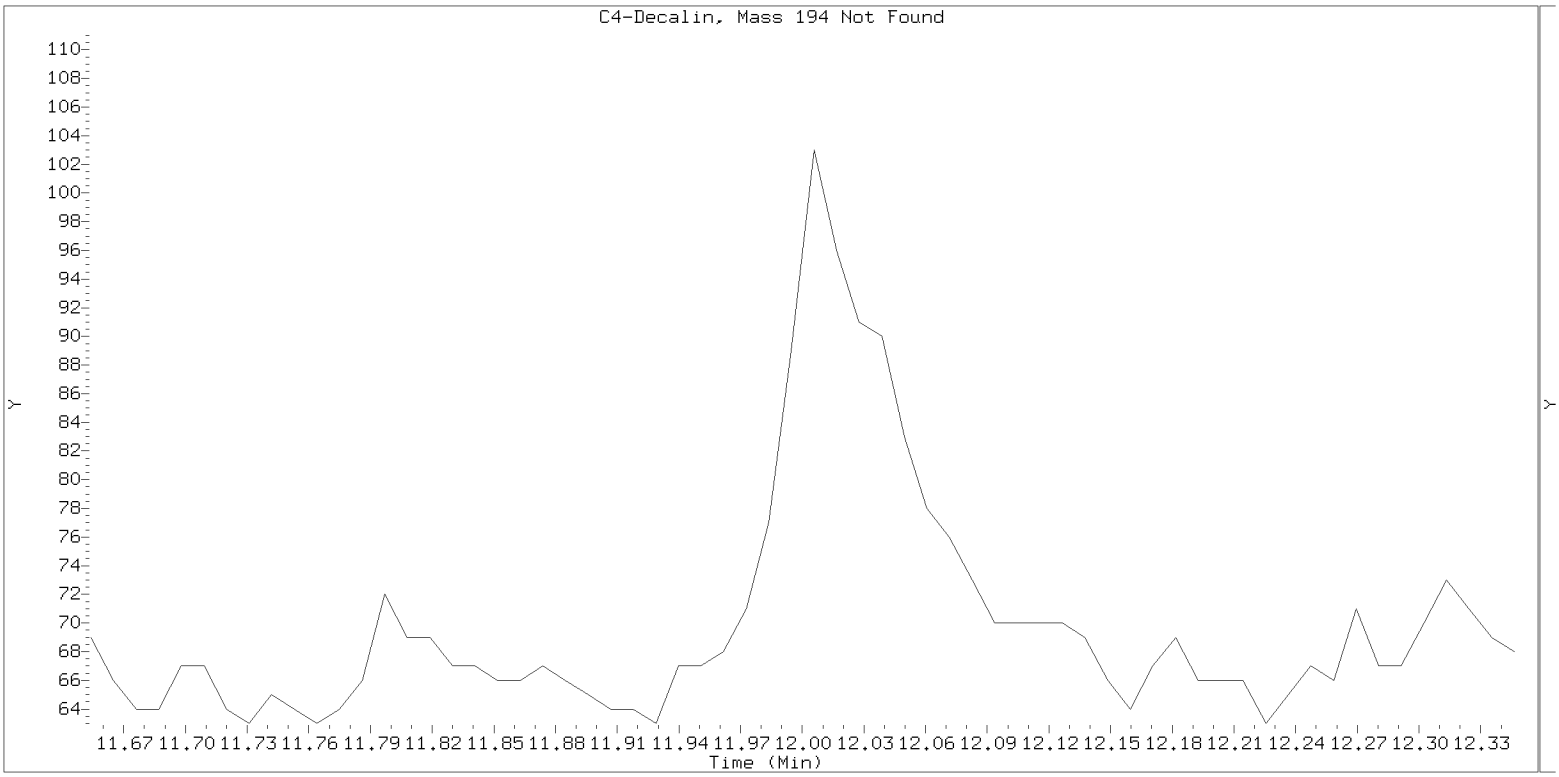

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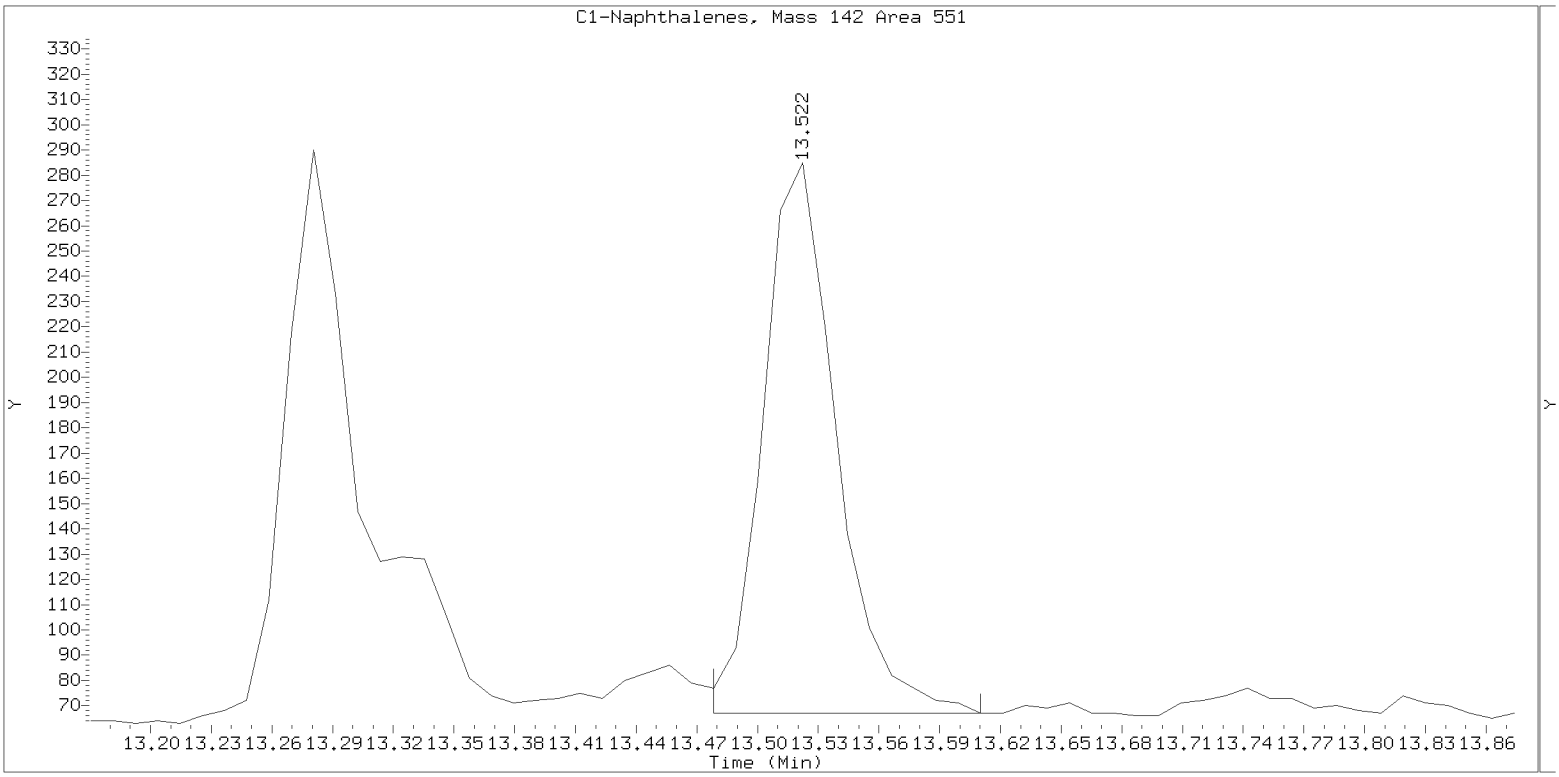

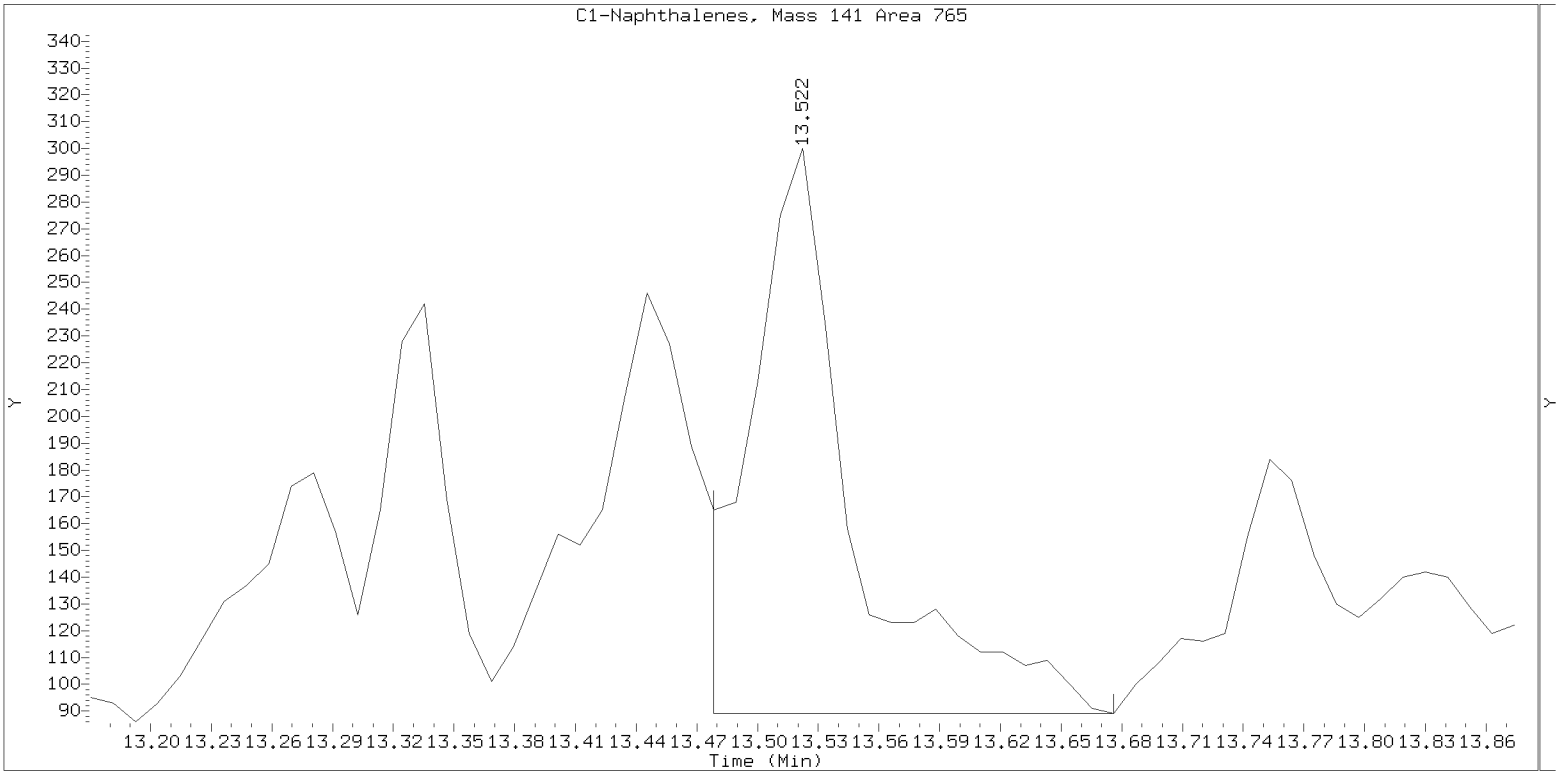

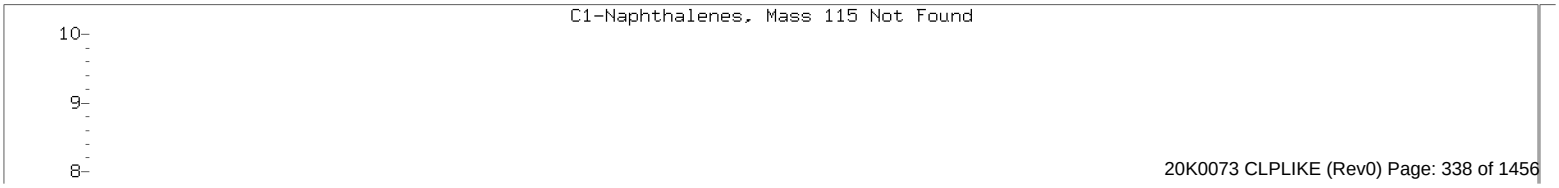

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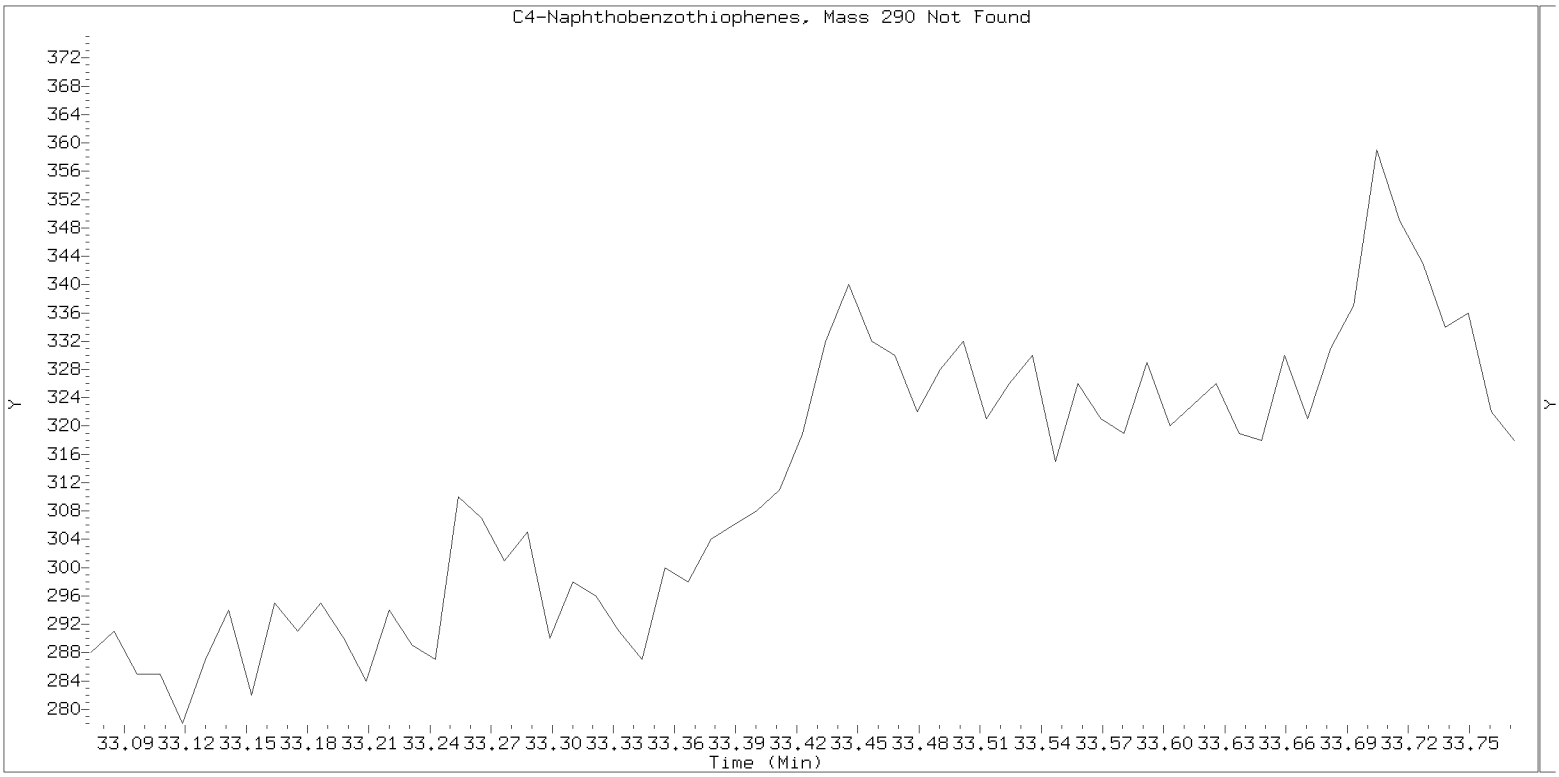

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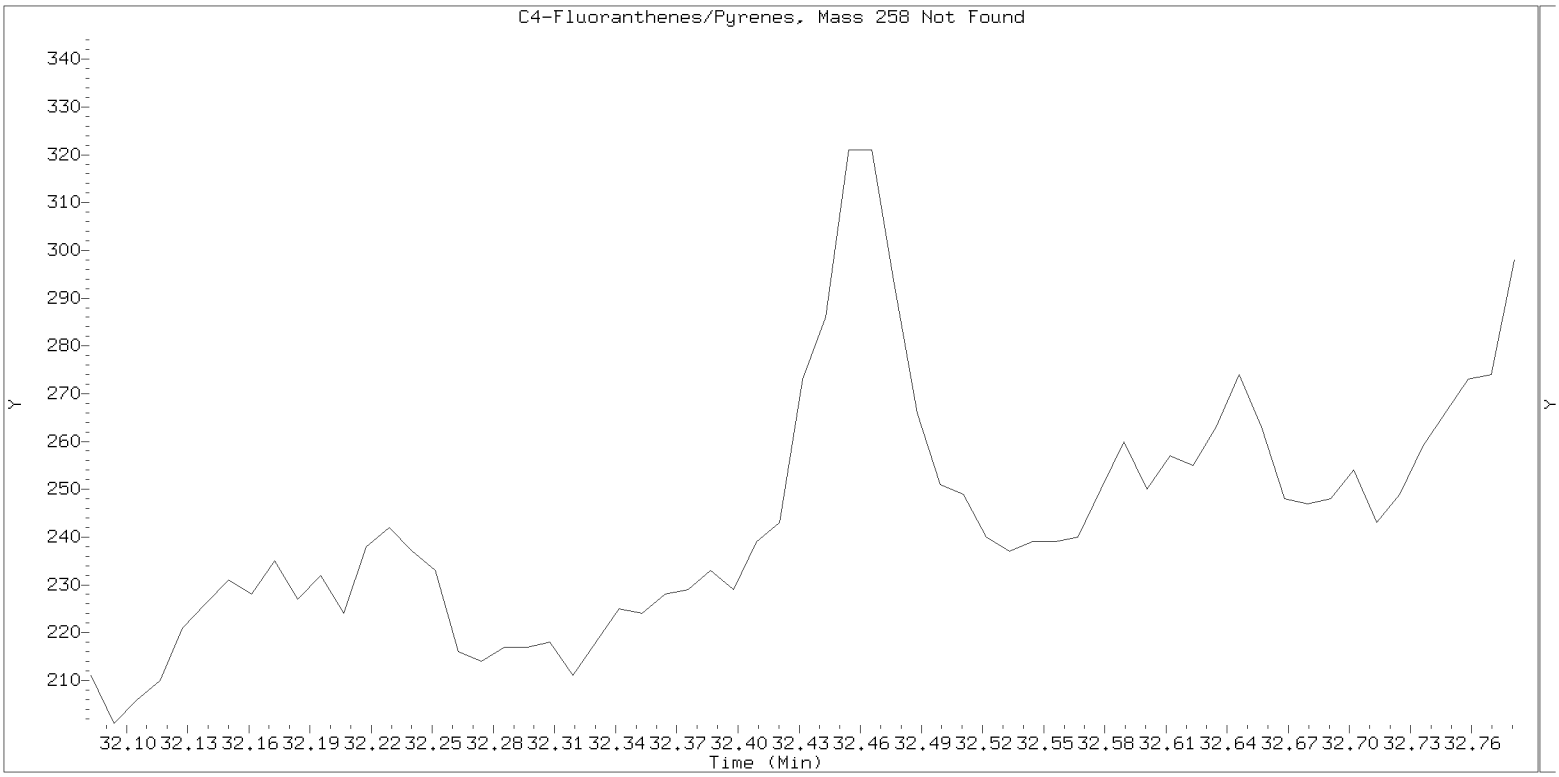

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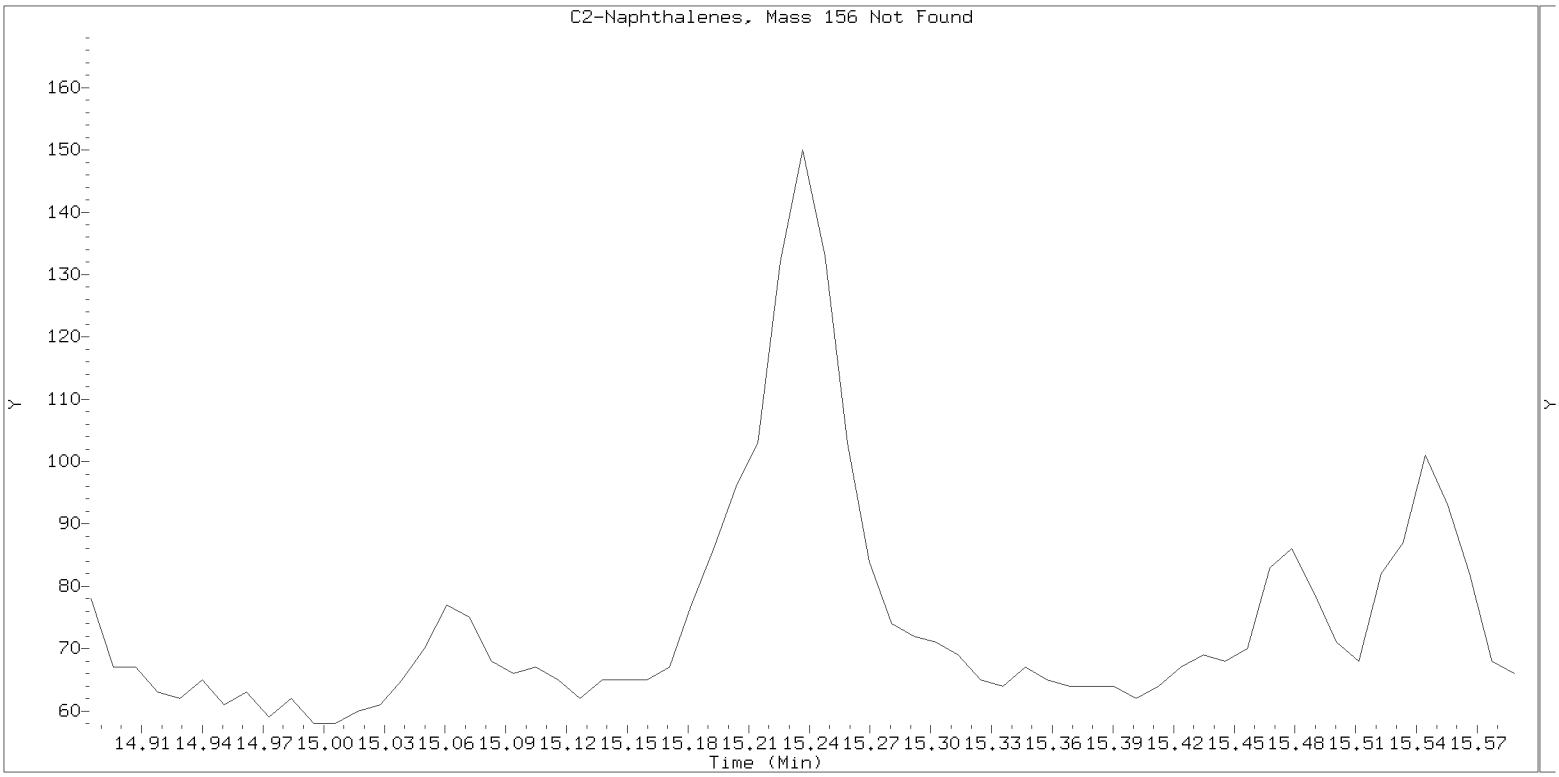

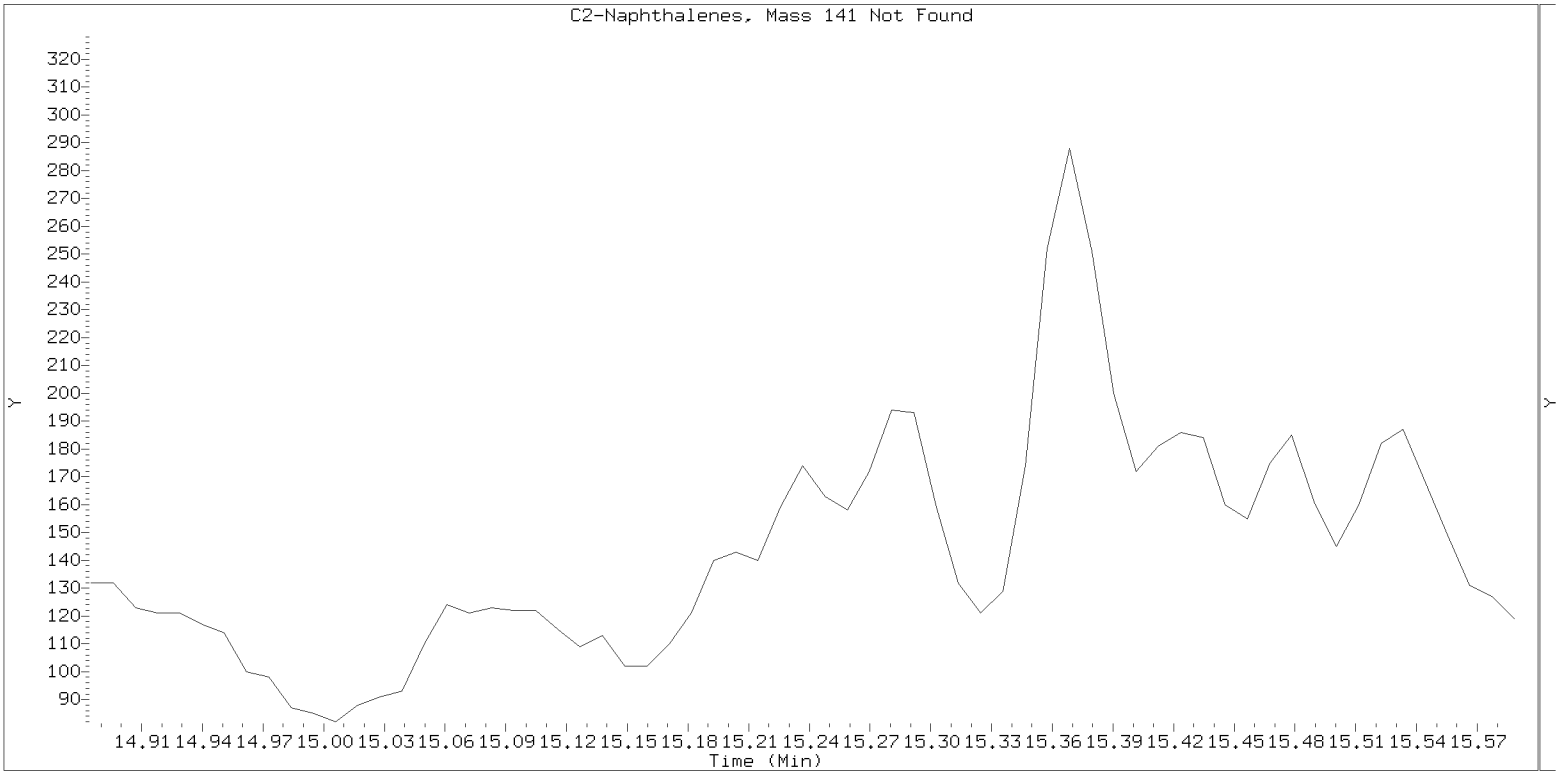

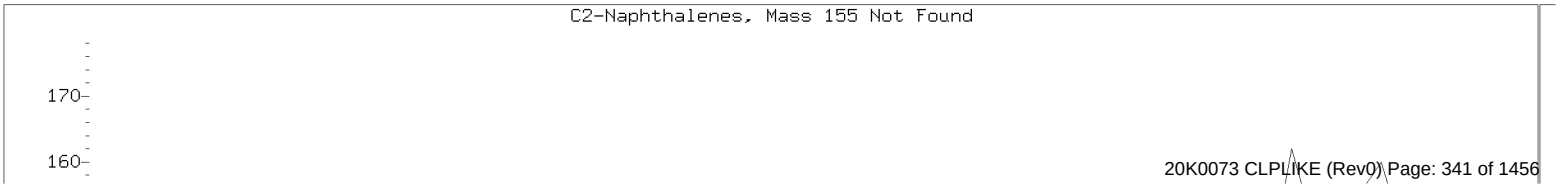

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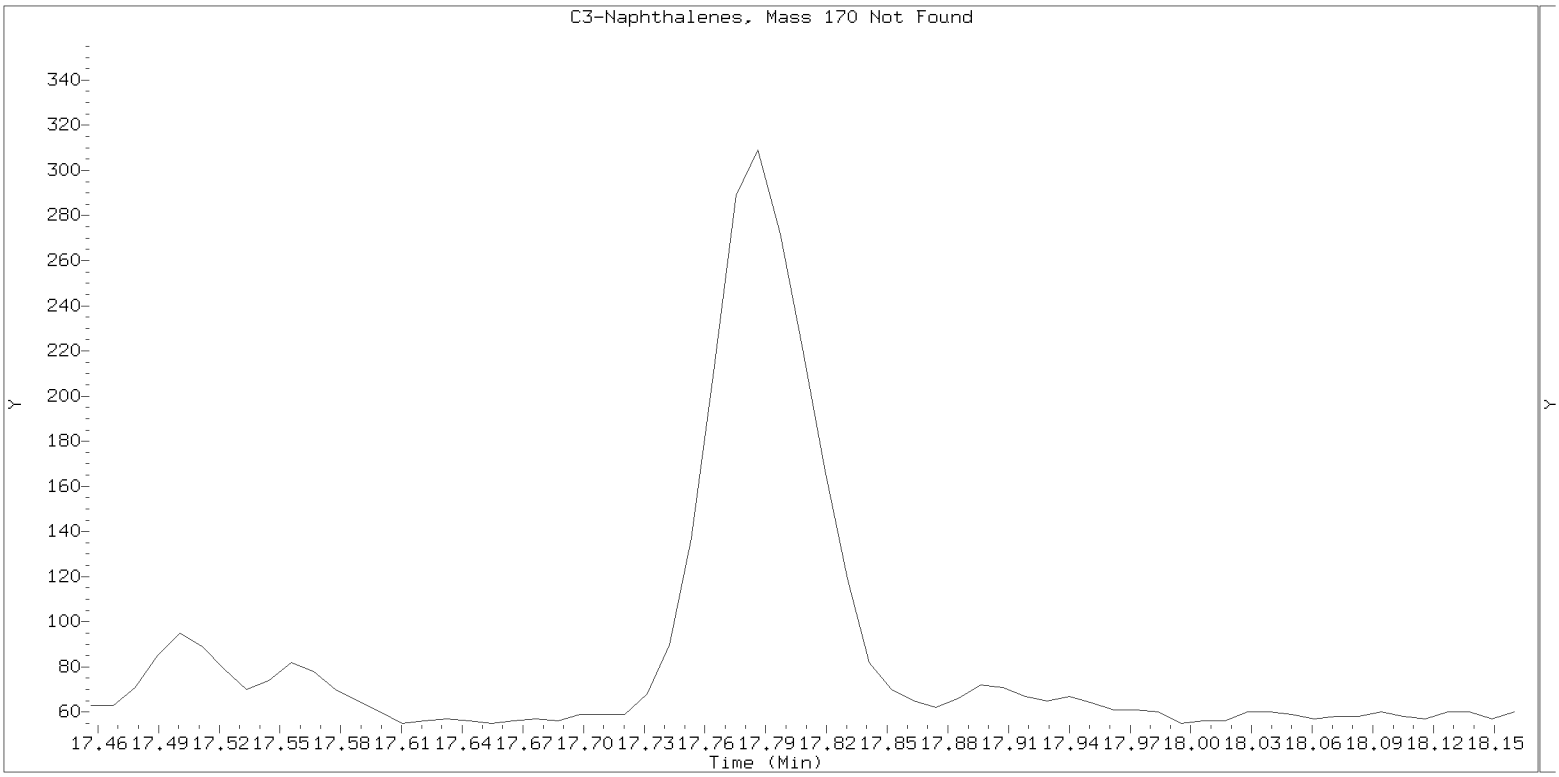

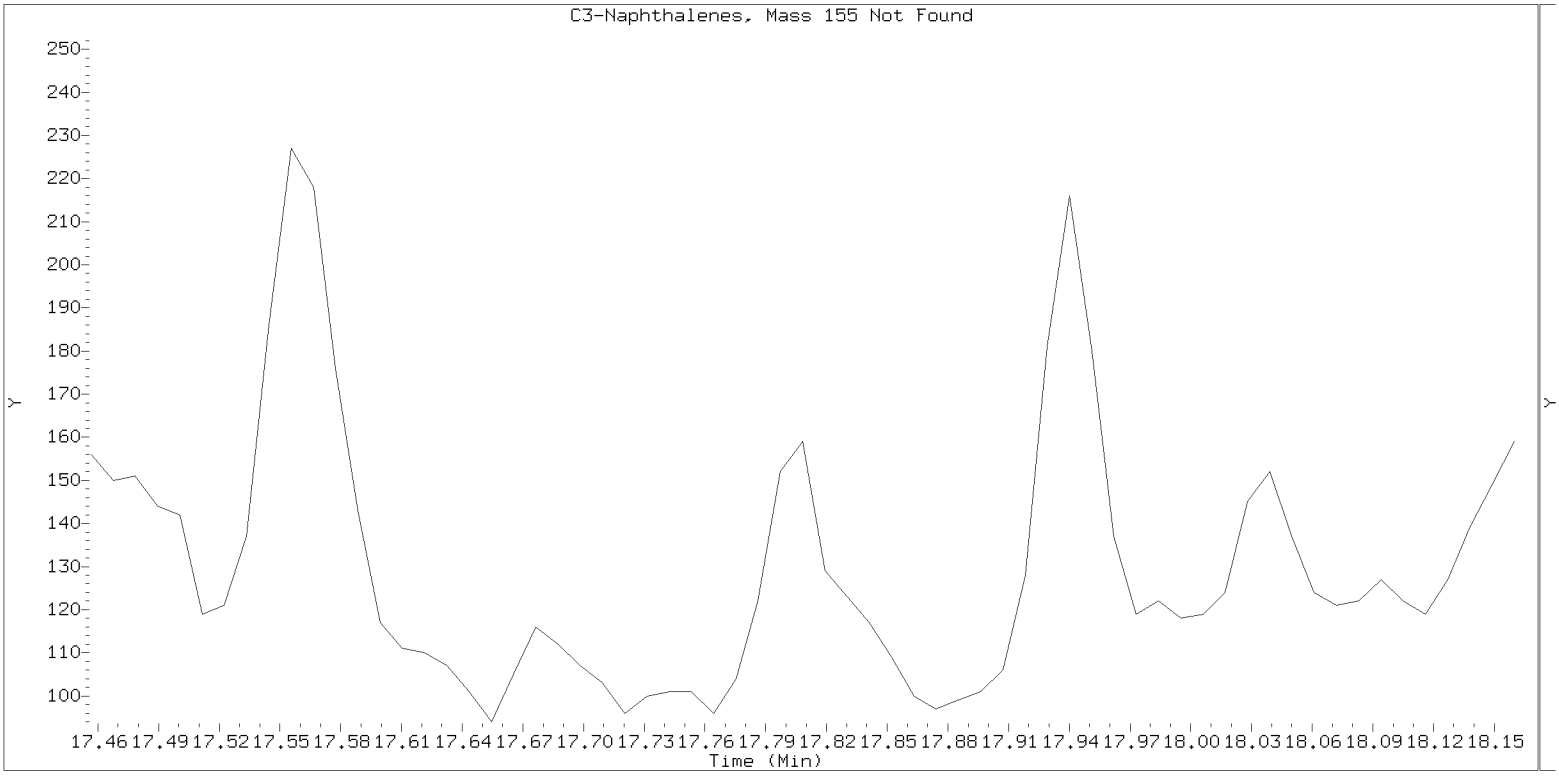

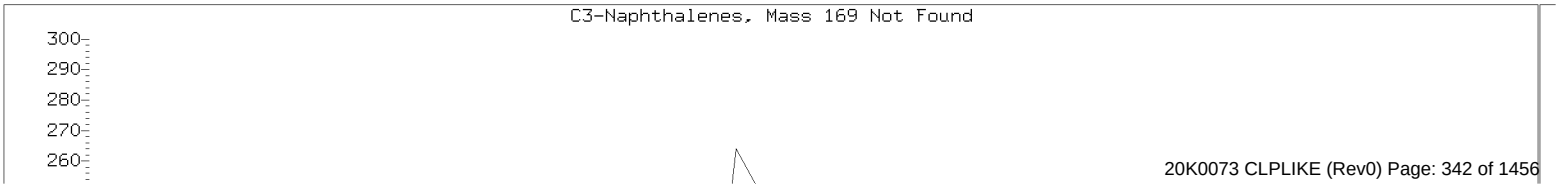

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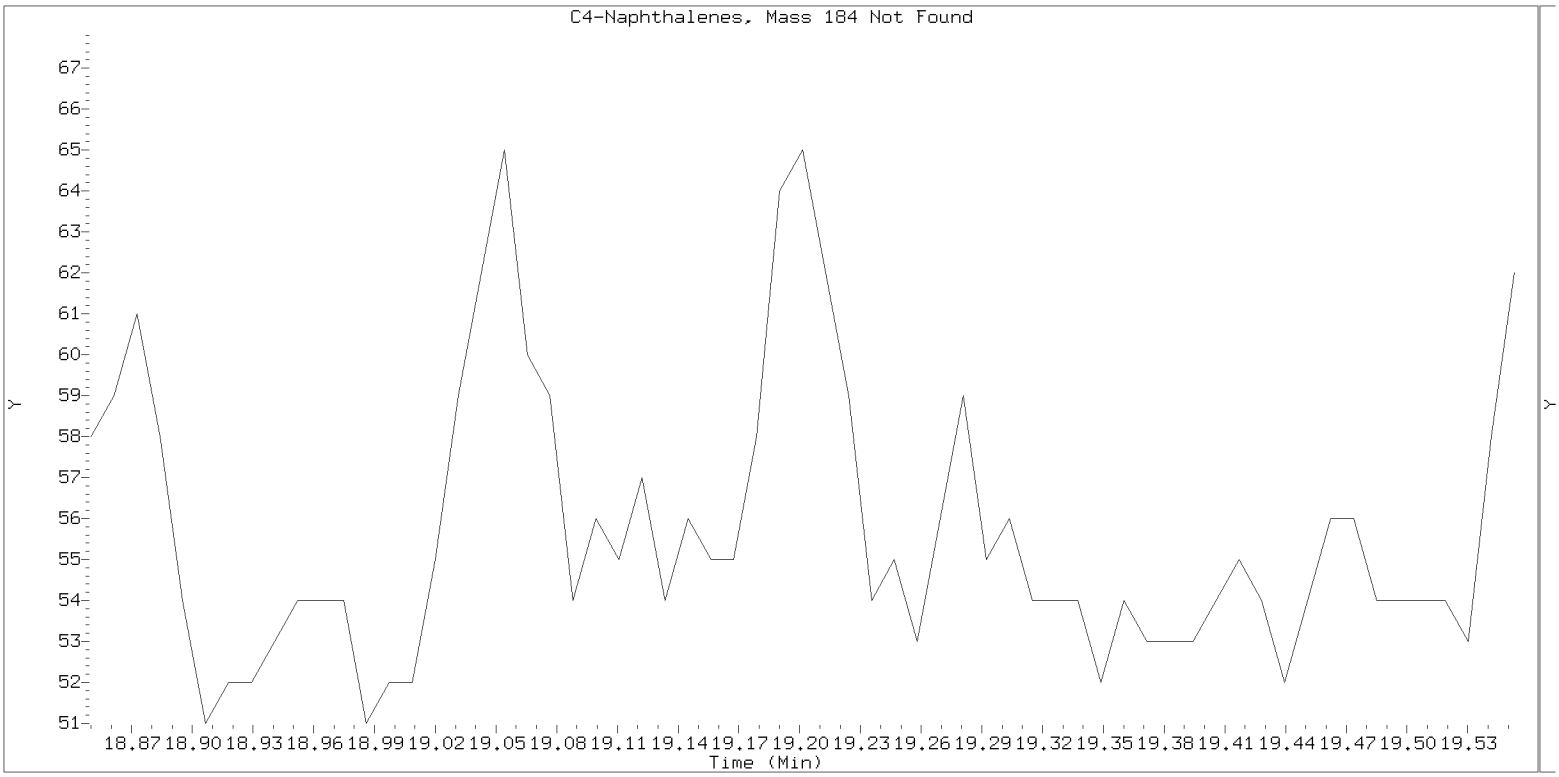

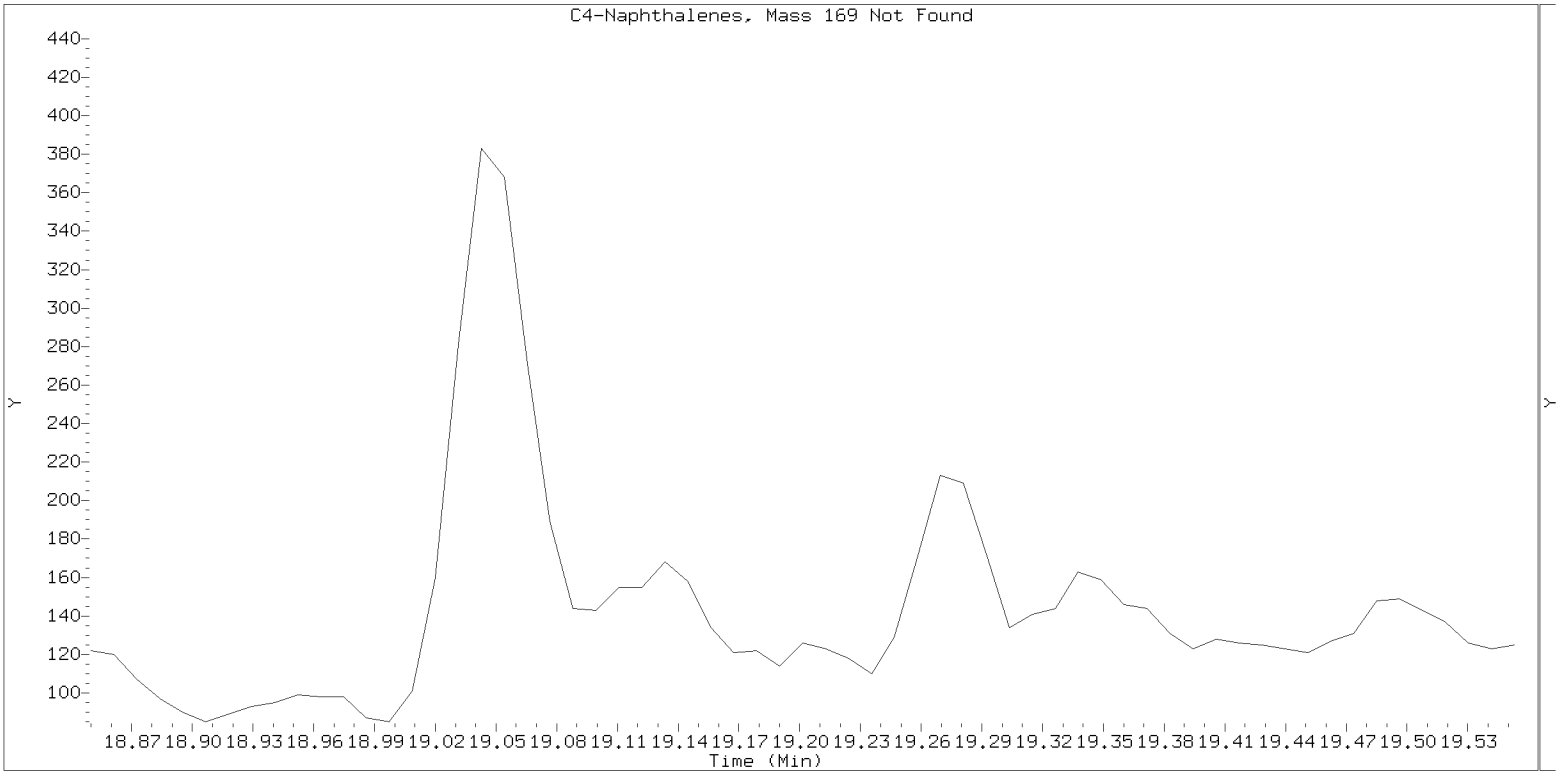

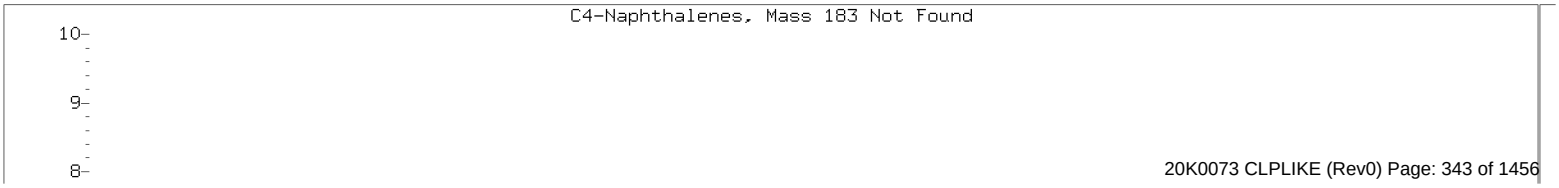

SIM ALKYL PNA RANGE ION WINDOWS - NT1420121210.D

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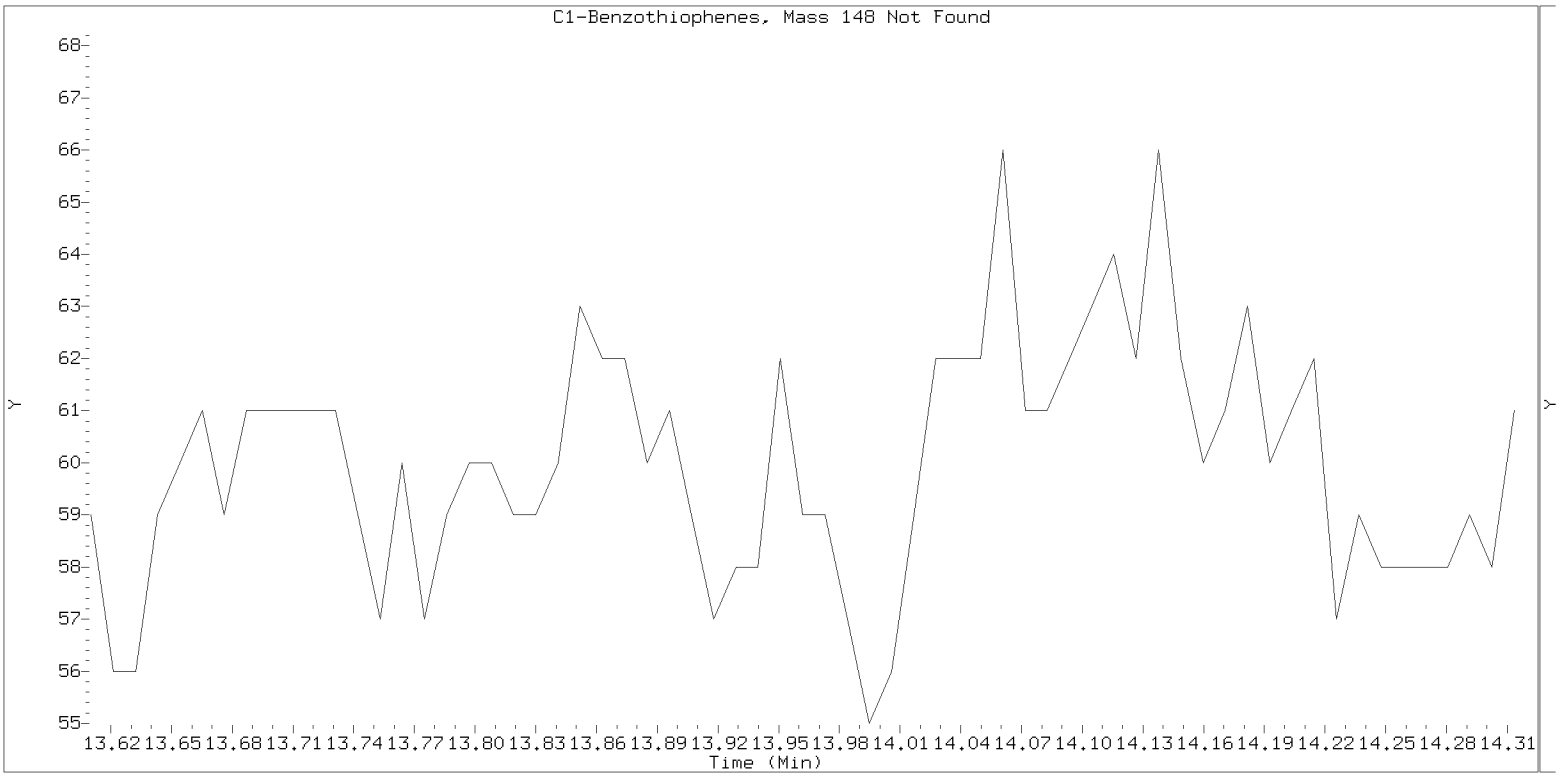

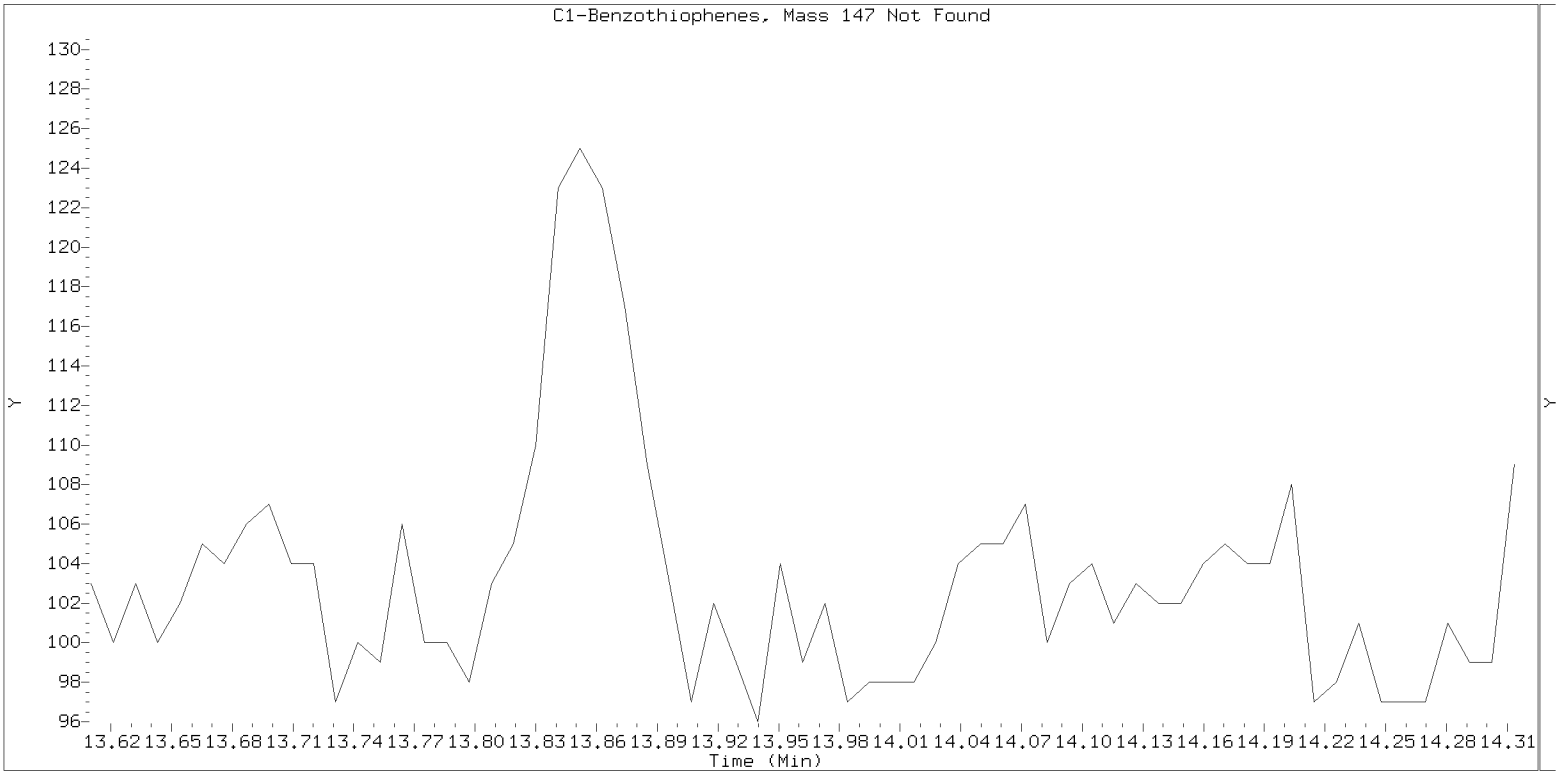

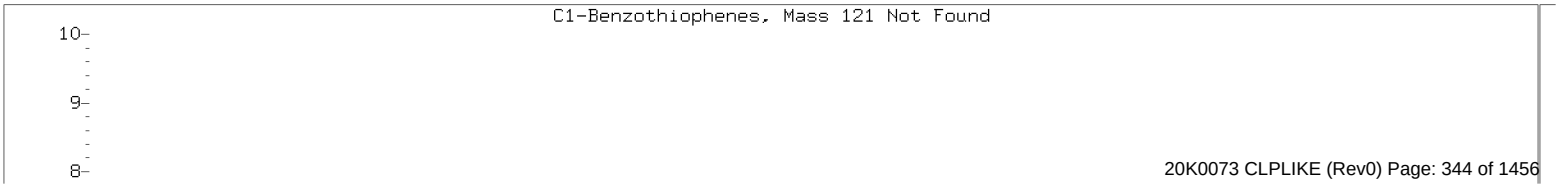

SIM ALKYL PNA RANGE ION WINDOWS - NT1420121210.D

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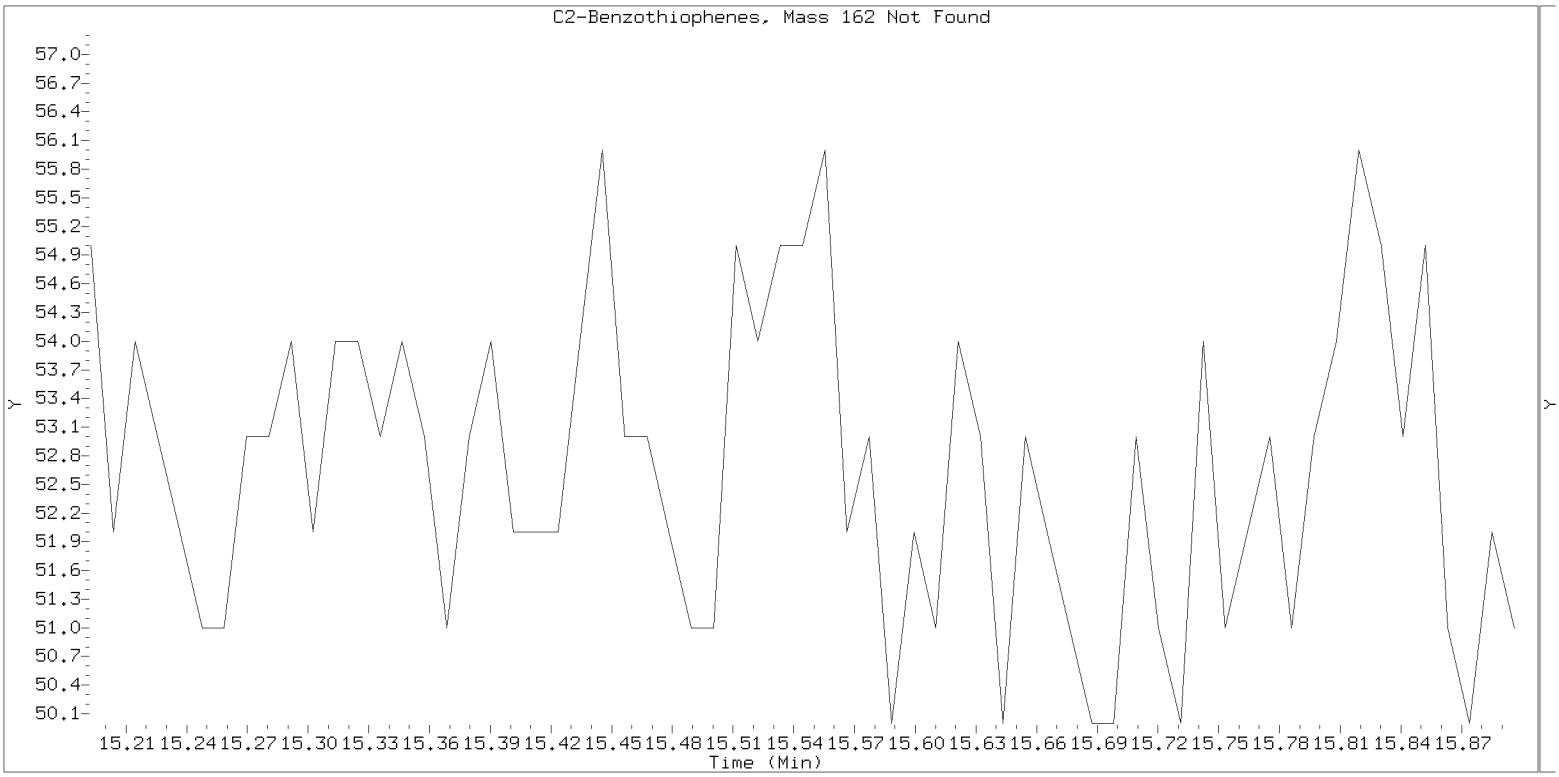
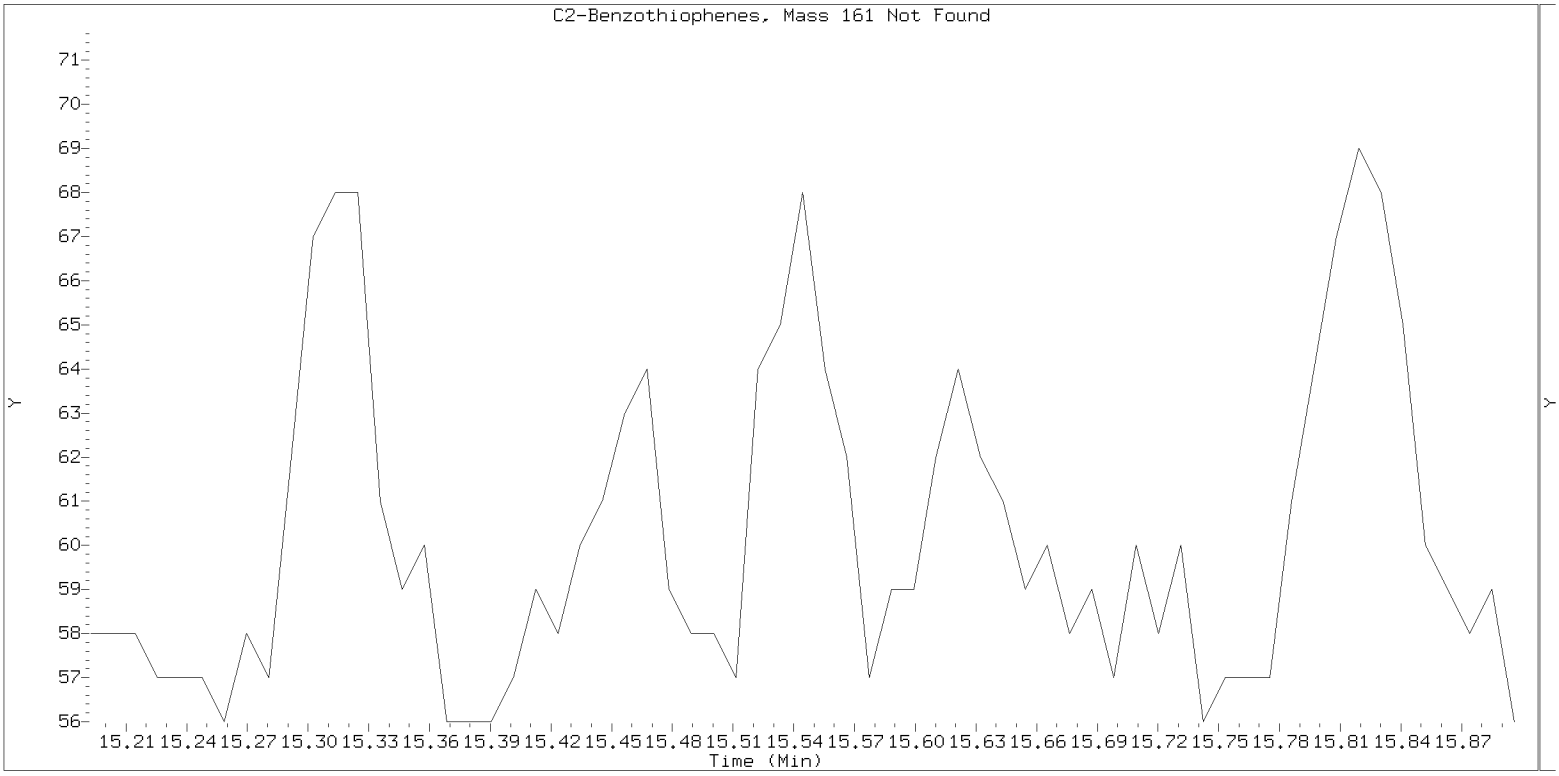
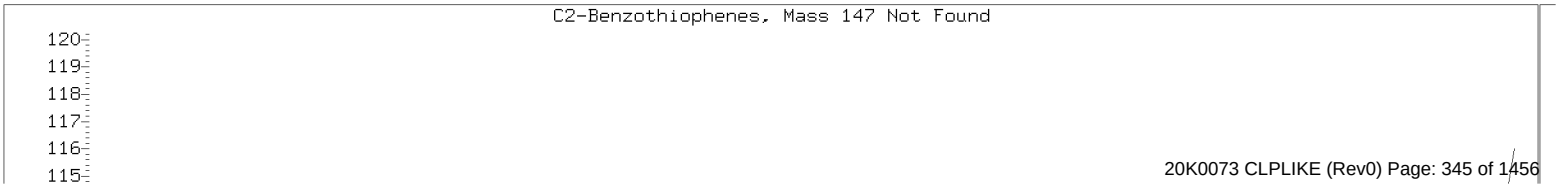
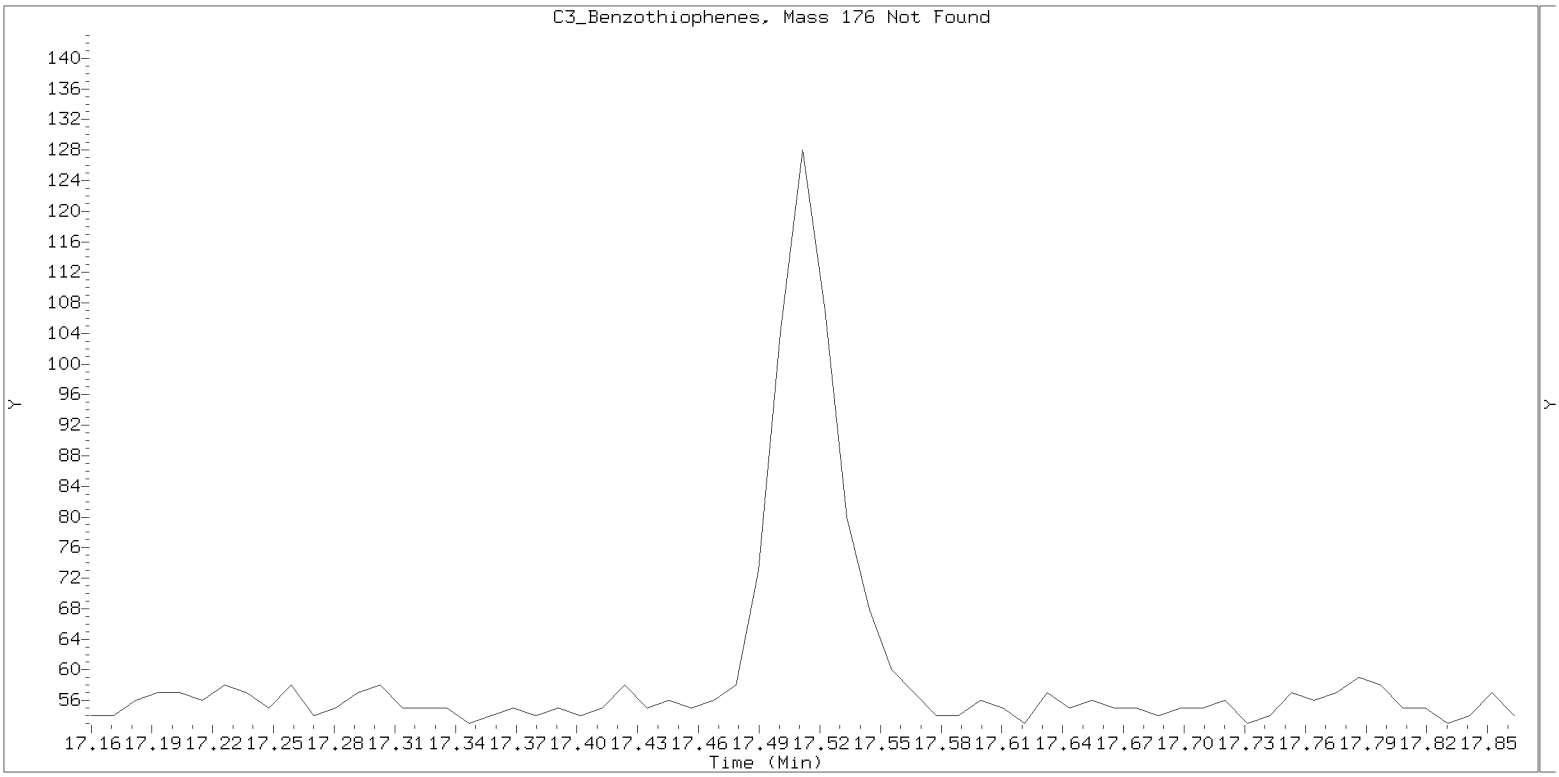


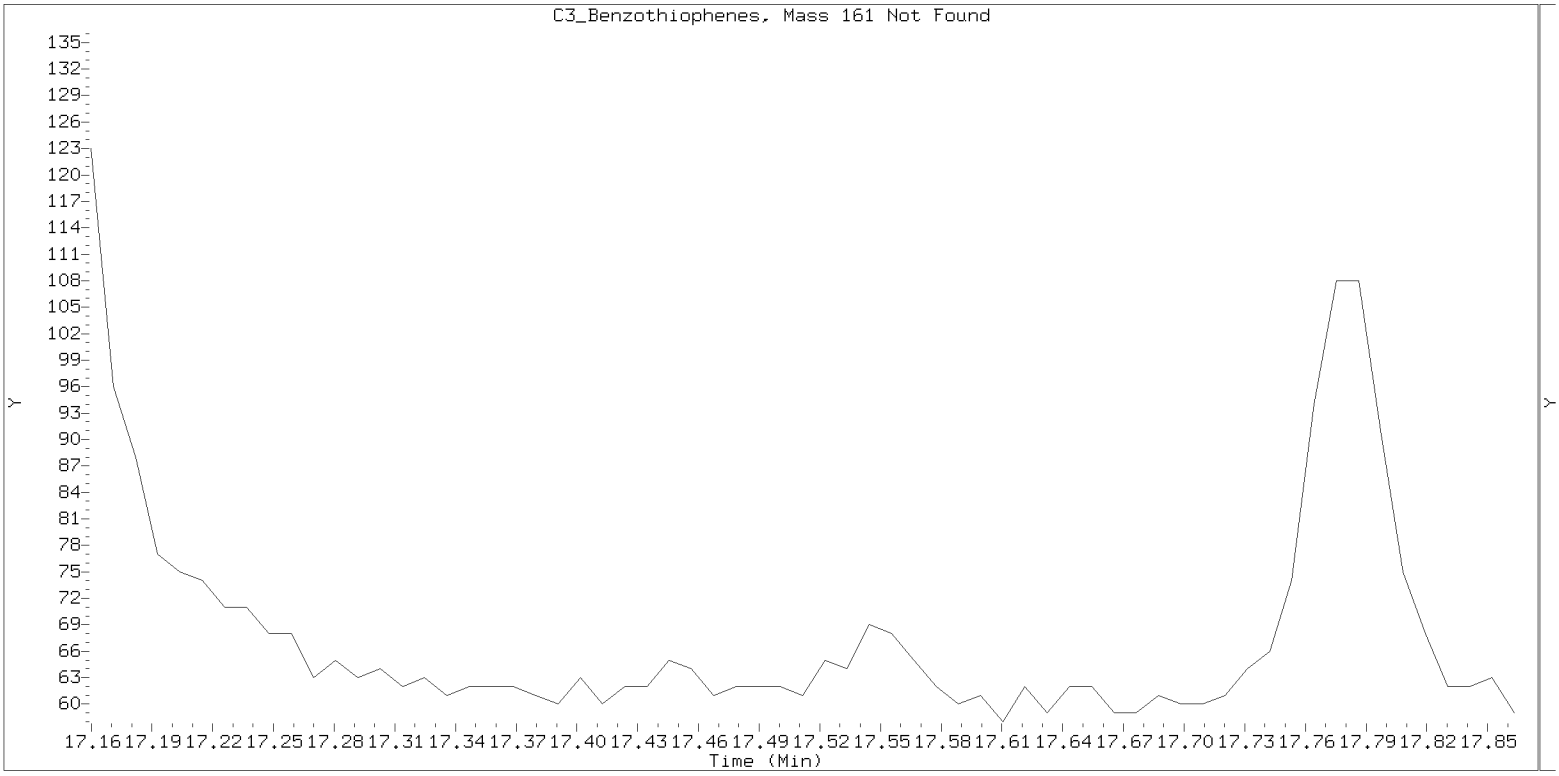


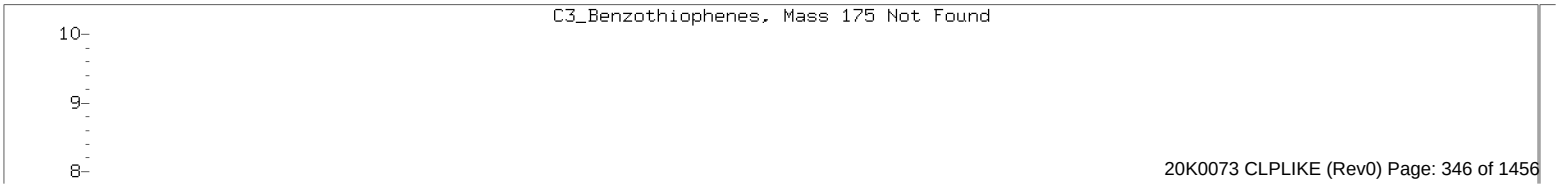


SIM ALKYL PNA RANGE ION WINDOWS - NT1420121210.D

Lab ID: BIK0323-BLK2
nt14.i, sim.b\ALKYLRANGE.m, 12-DEC-2020 18:23







SIM ALKYL PNA RANGE ION WINDOWS - NT1420121210.D

Lab ID: BIK0323-BLK2
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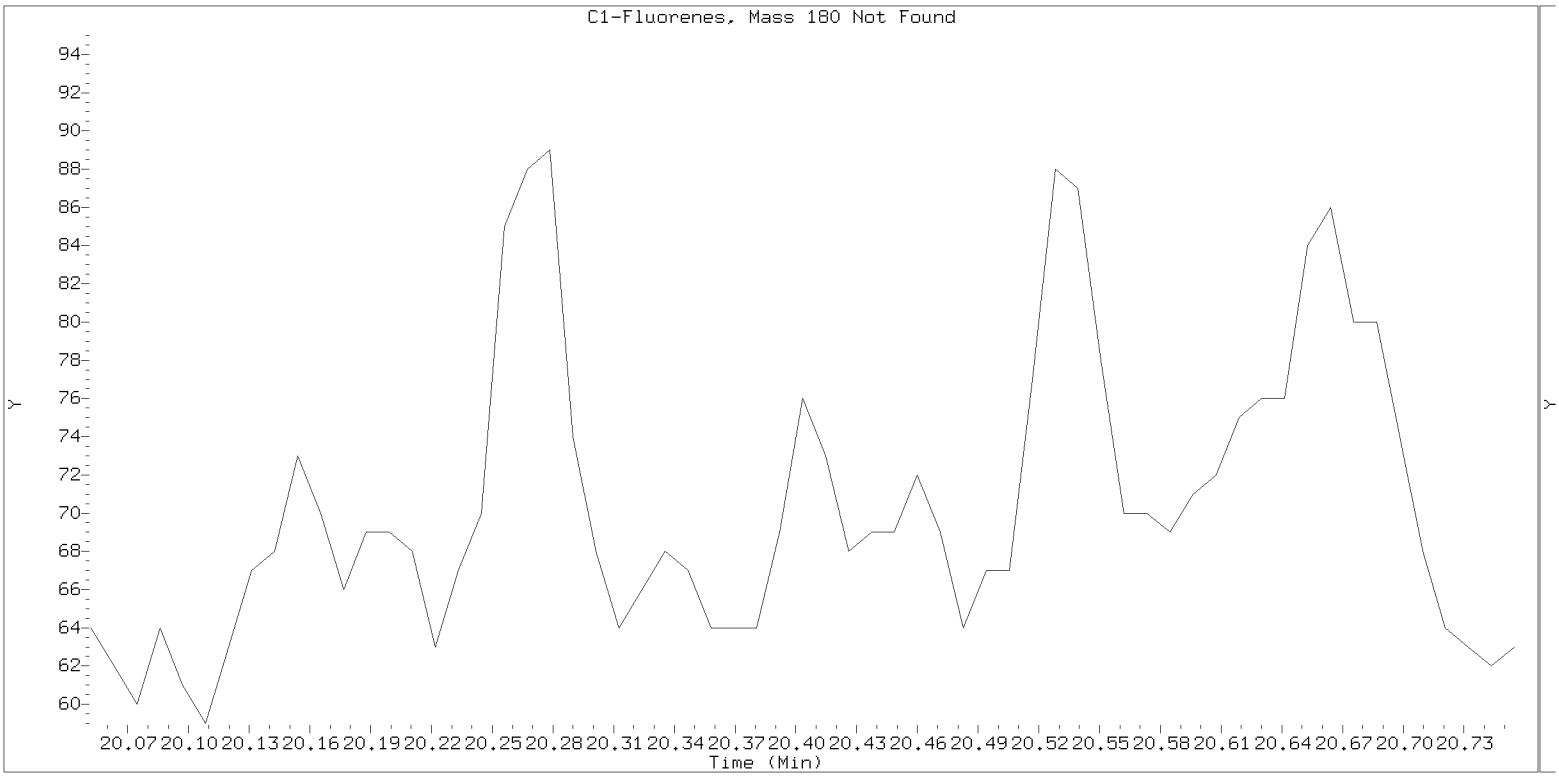

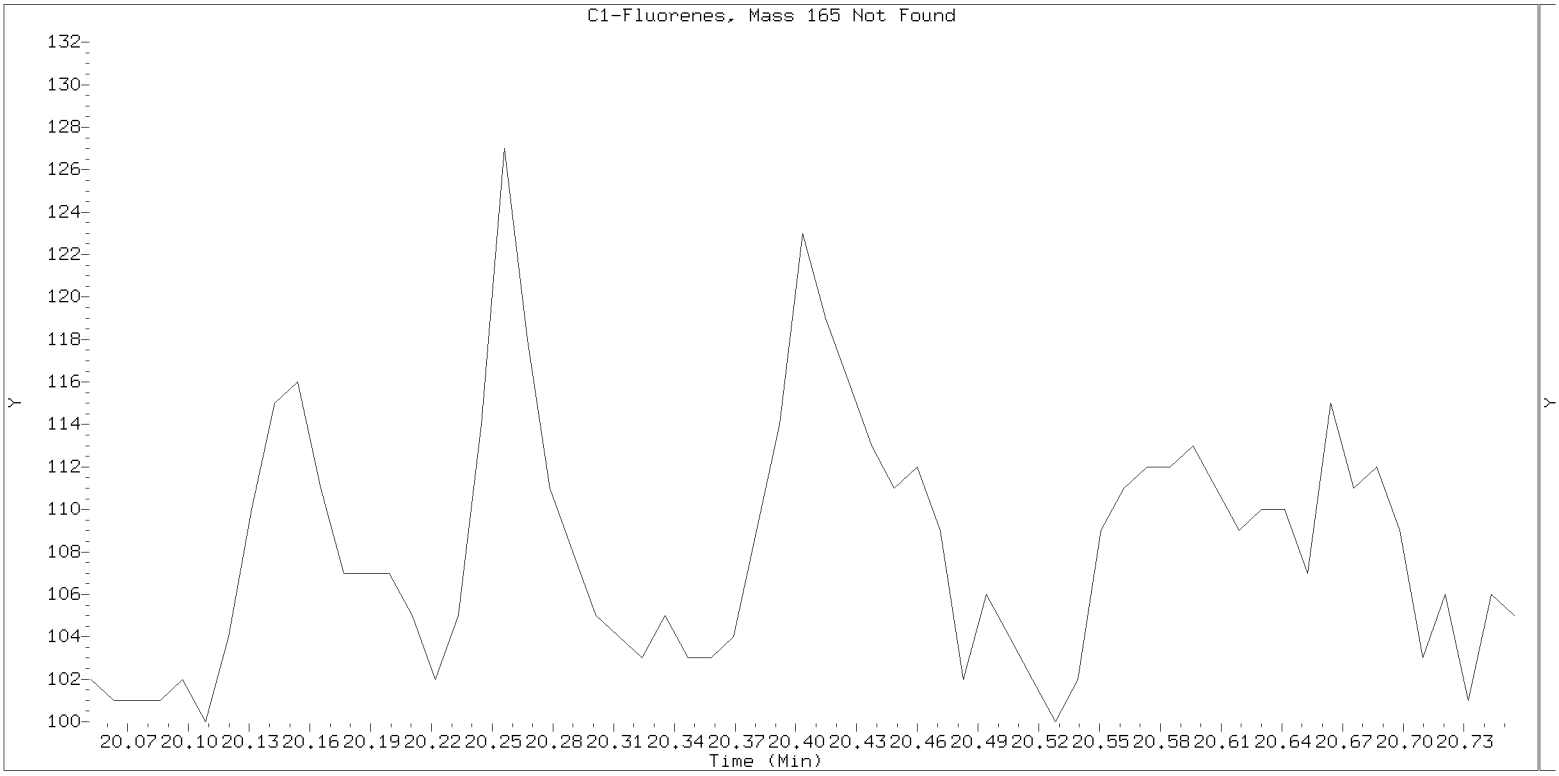

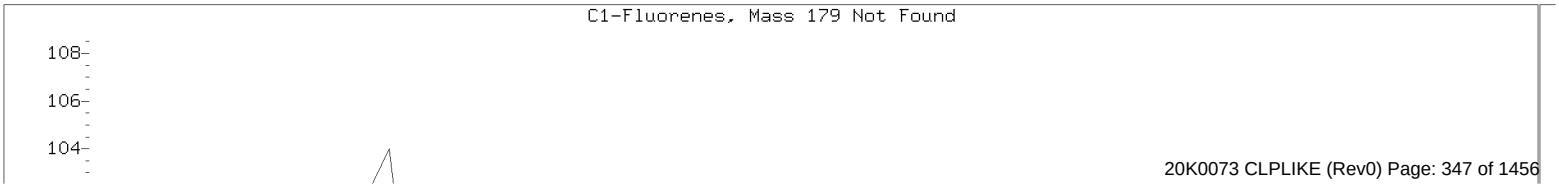

SIM ALKYL PNA RANGE ION WINDOWS - NT1420121210.D

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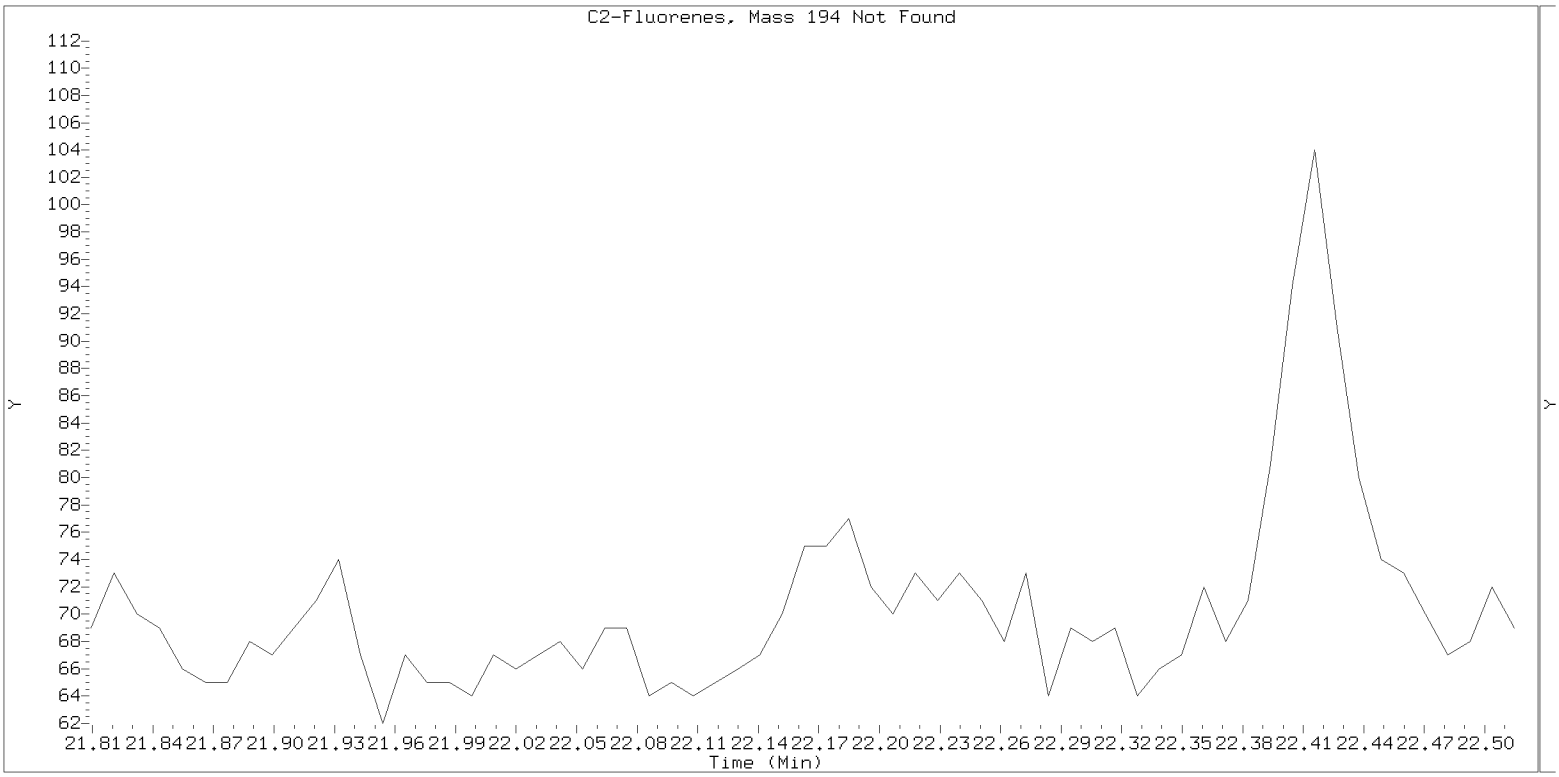

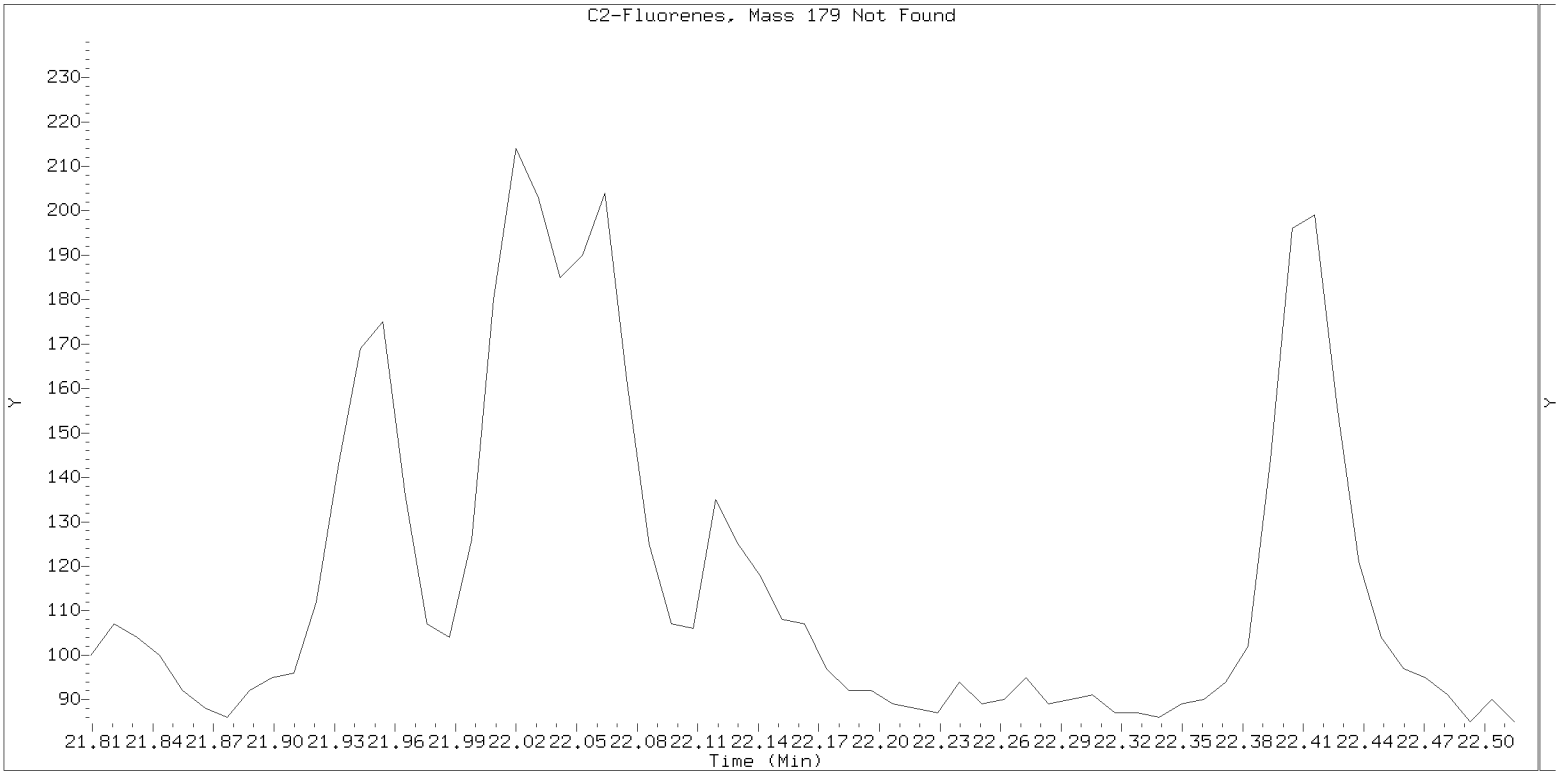

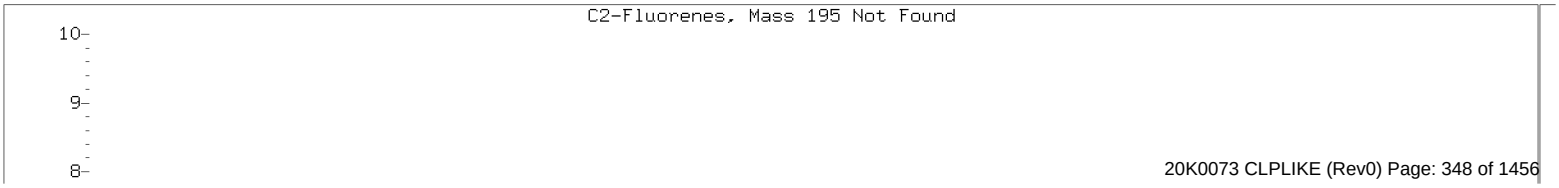

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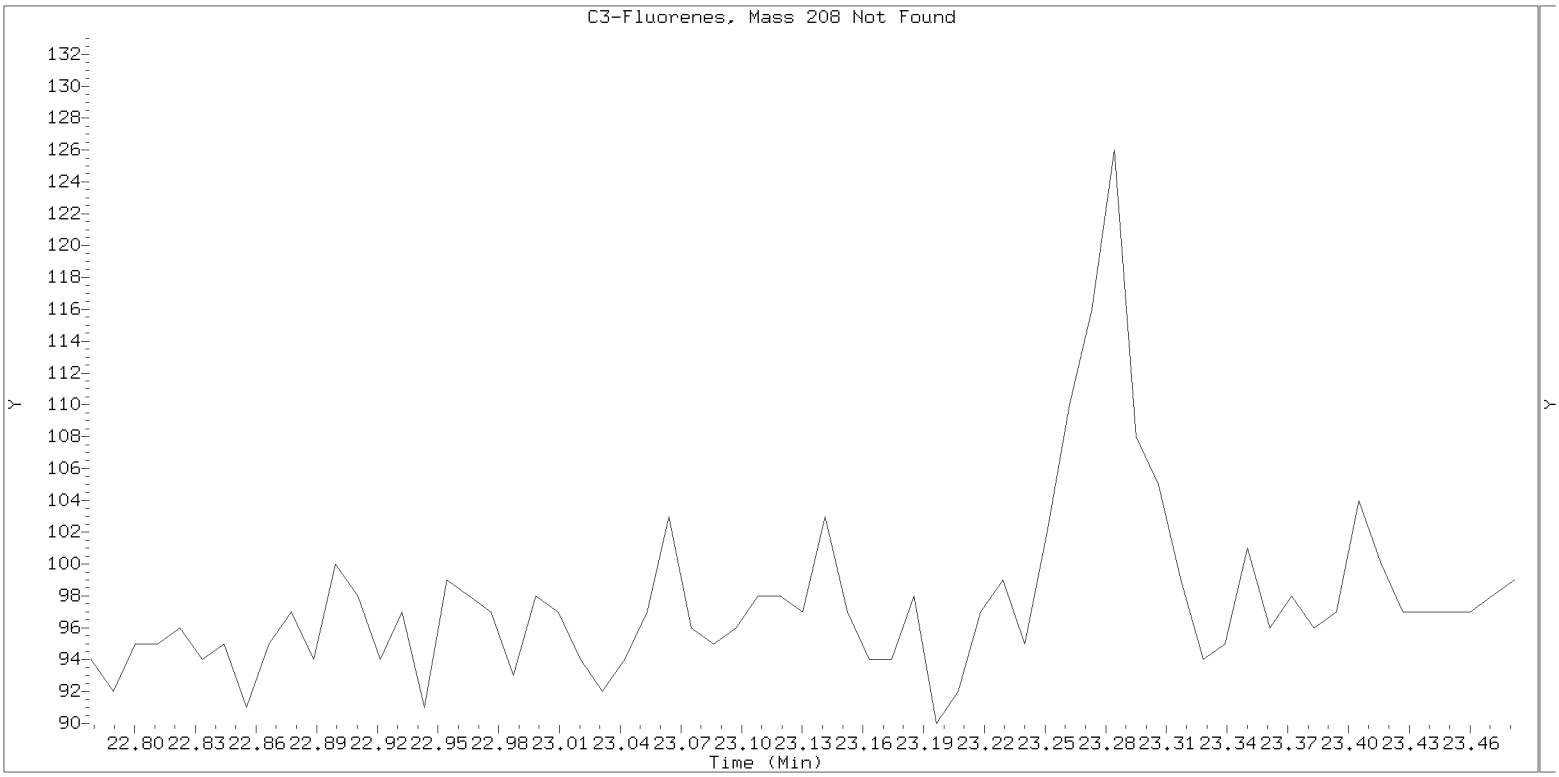

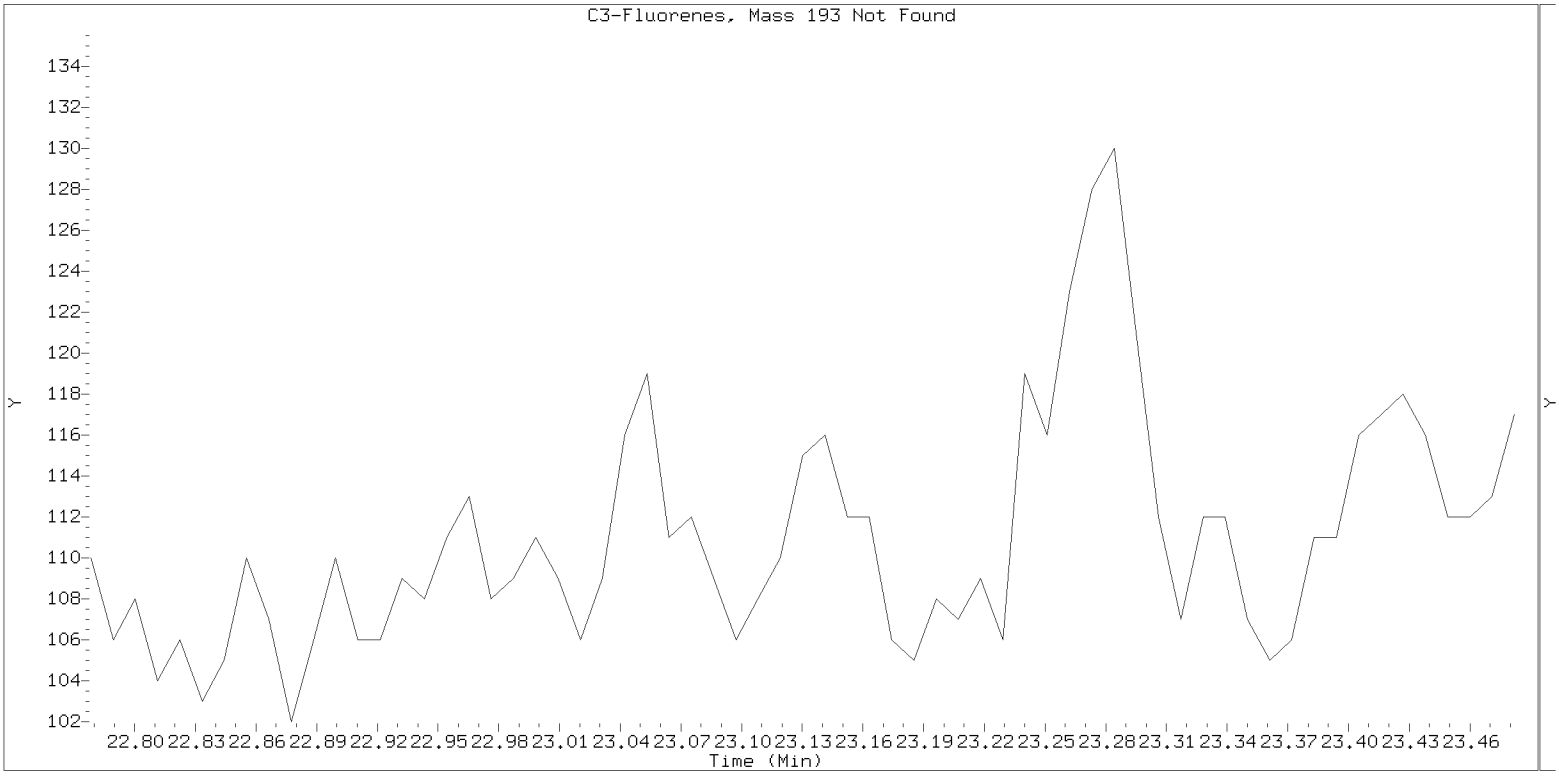

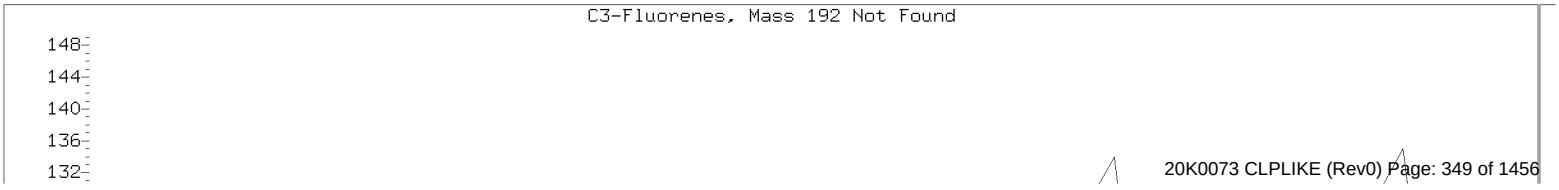

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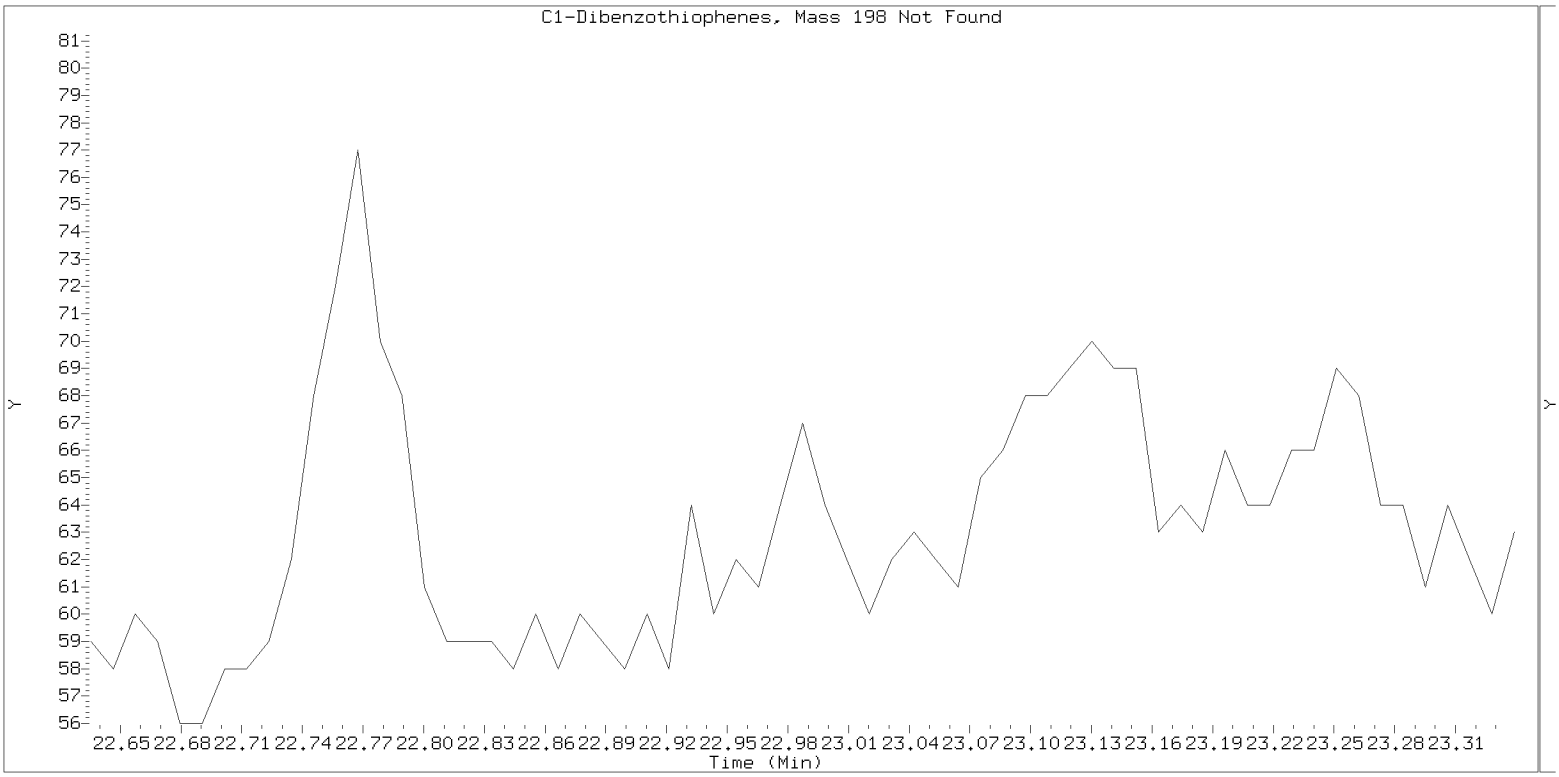

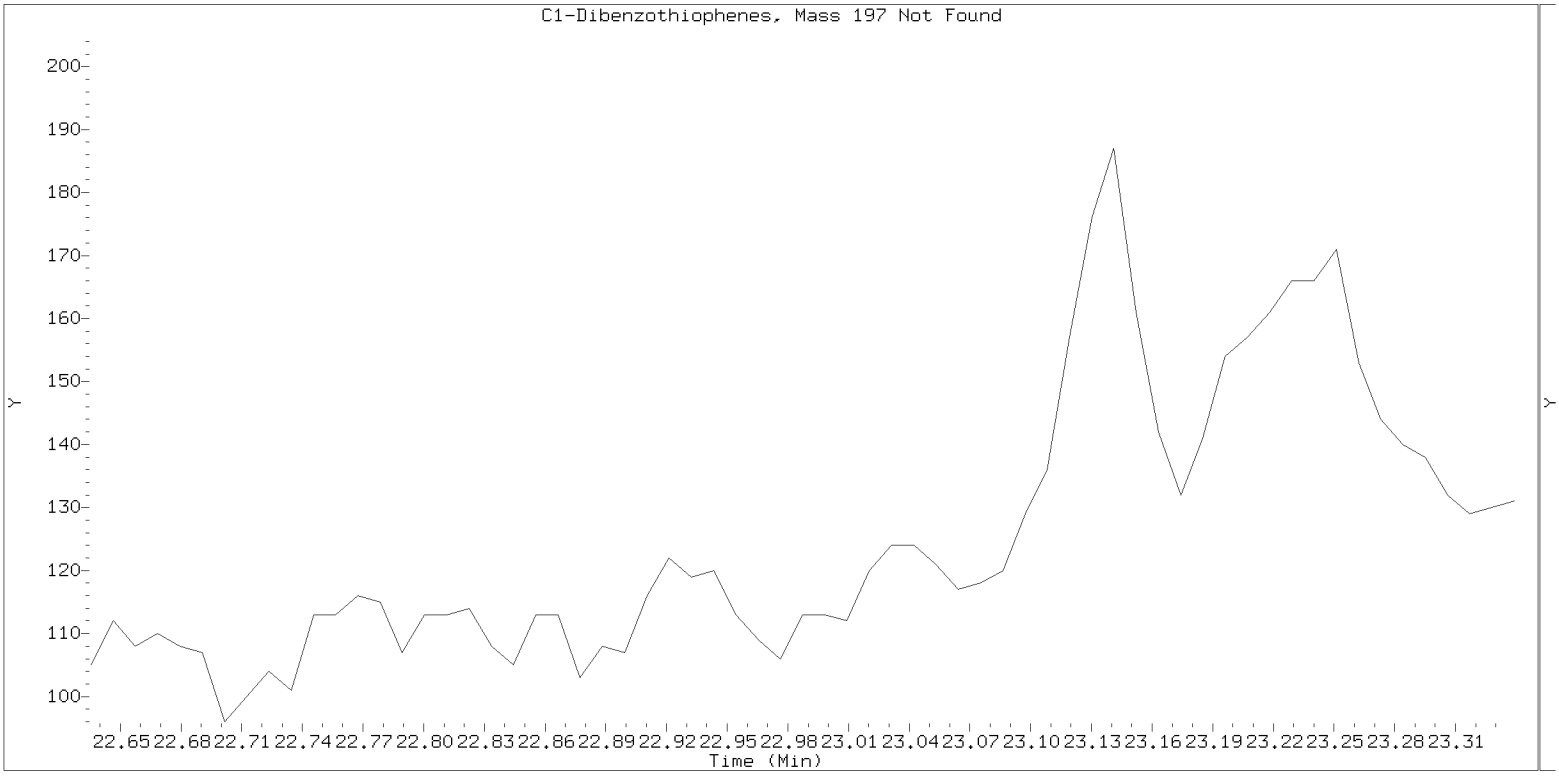

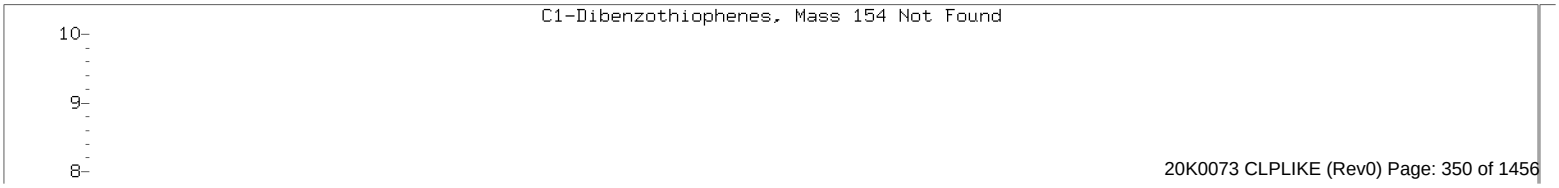

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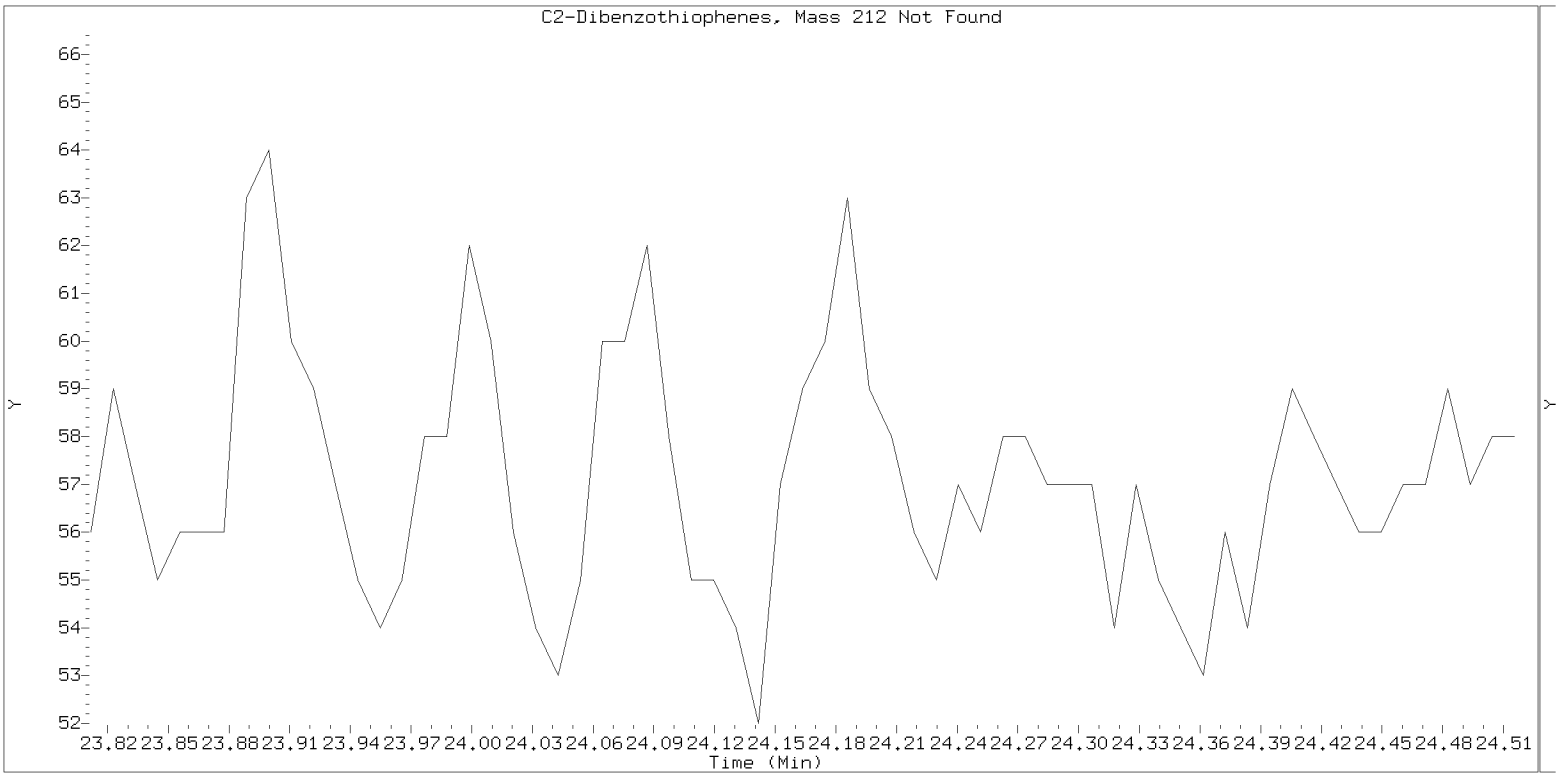

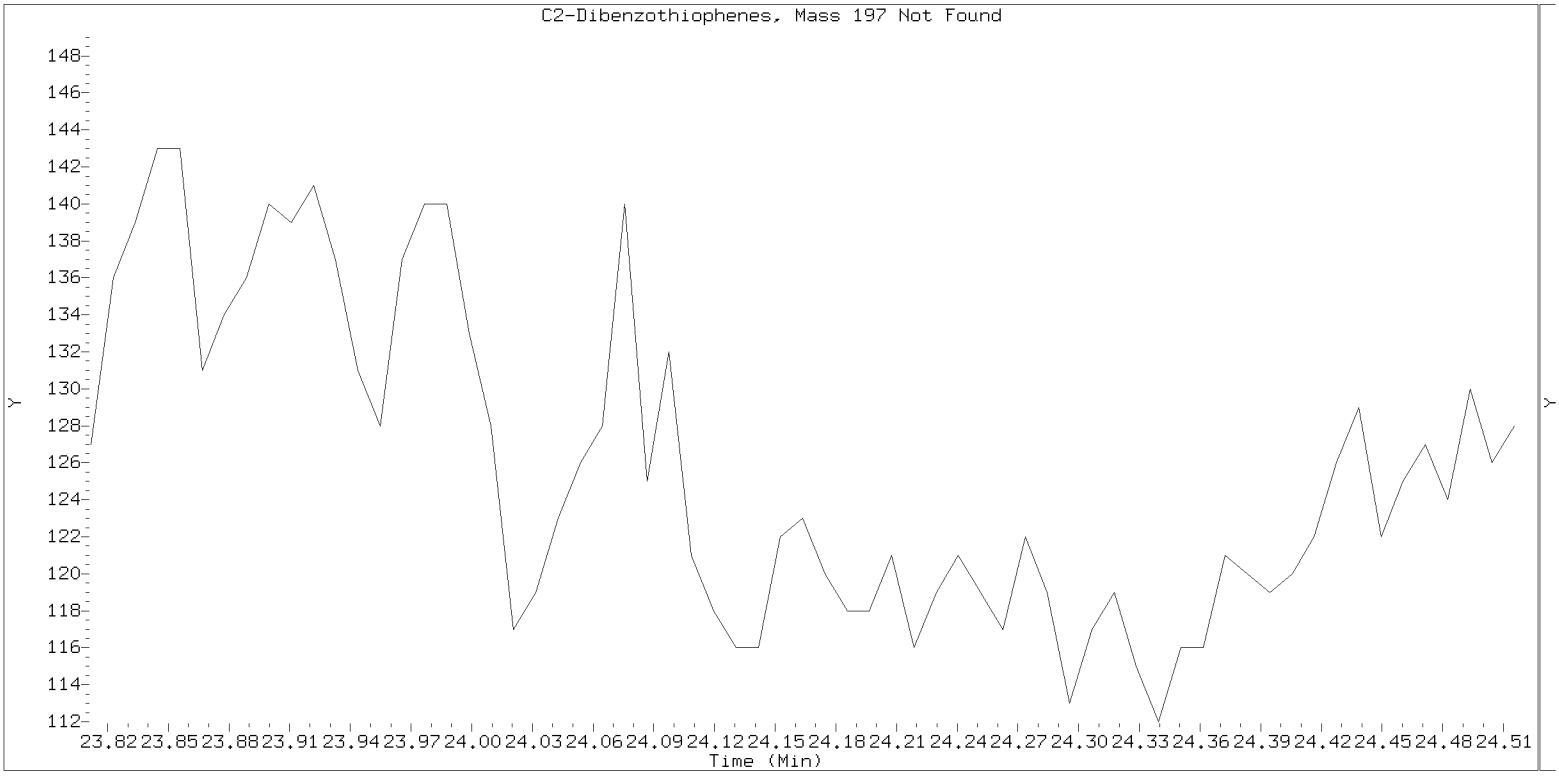

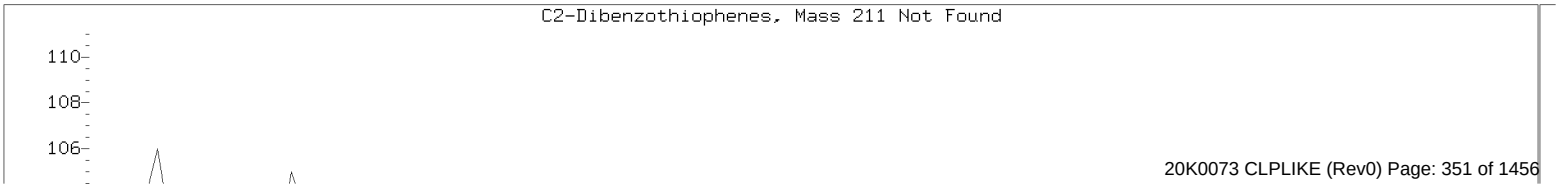

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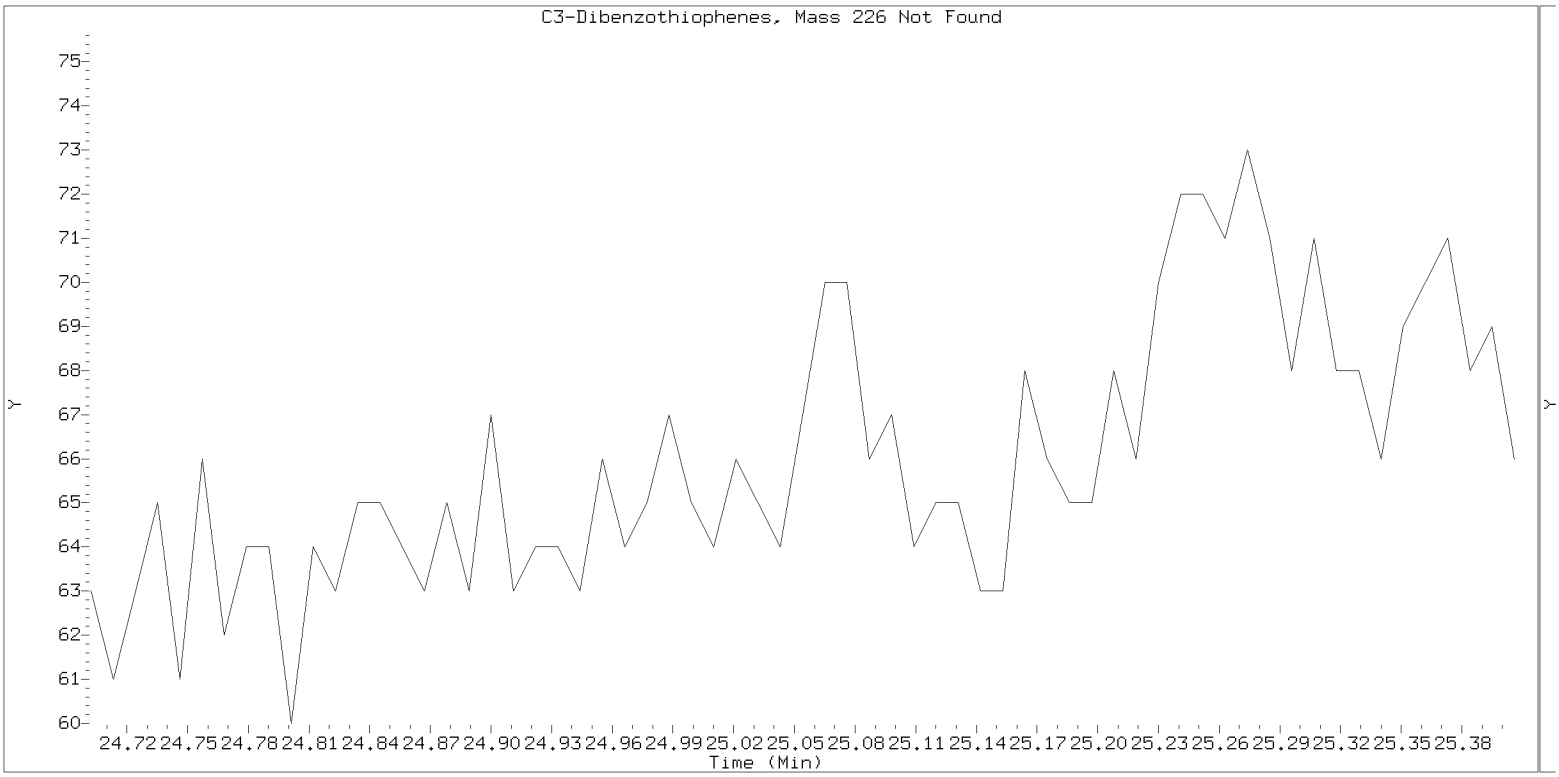

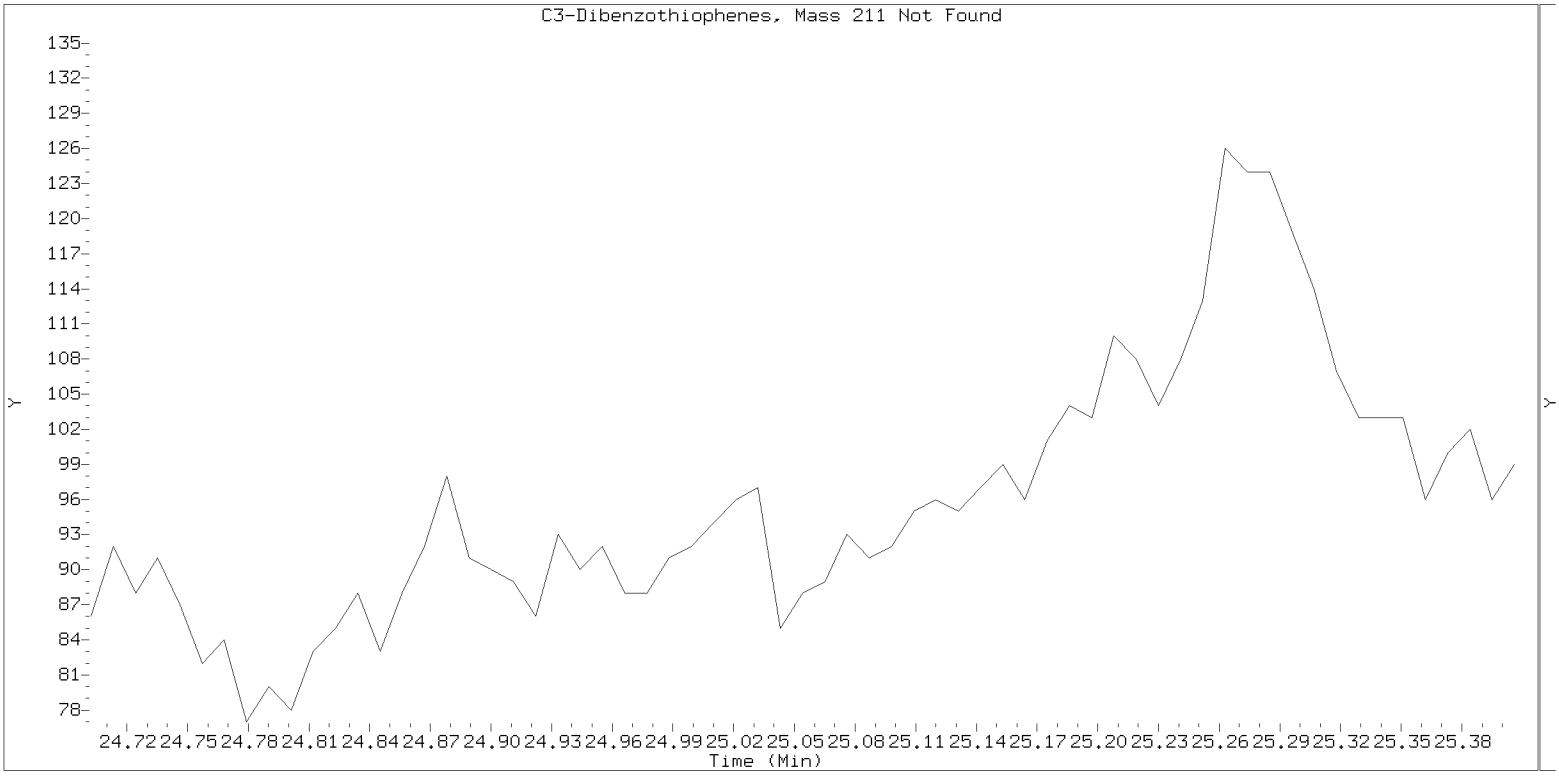

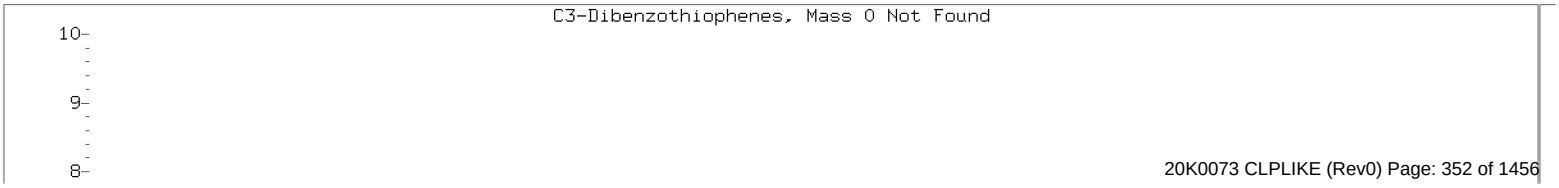

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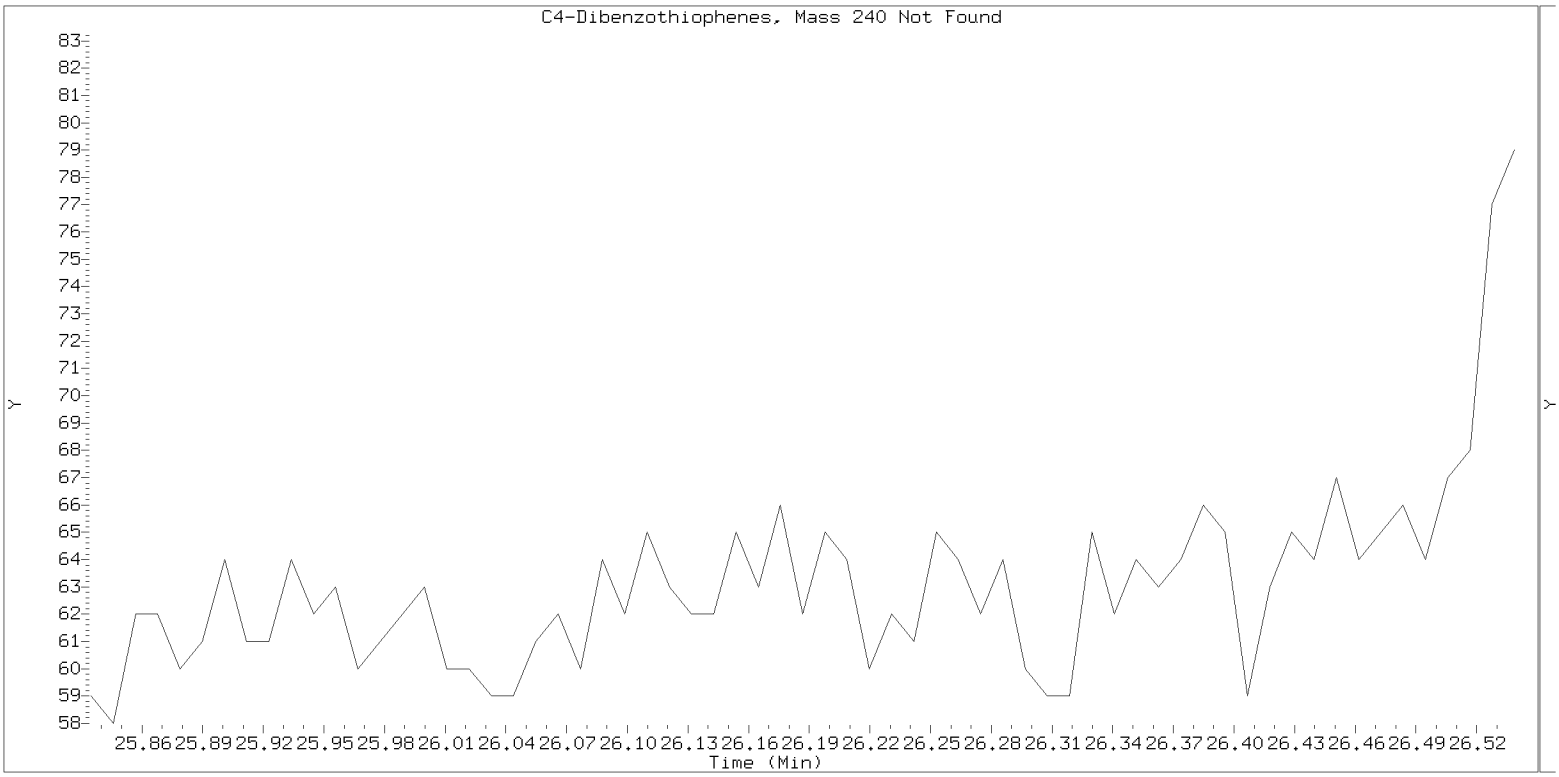

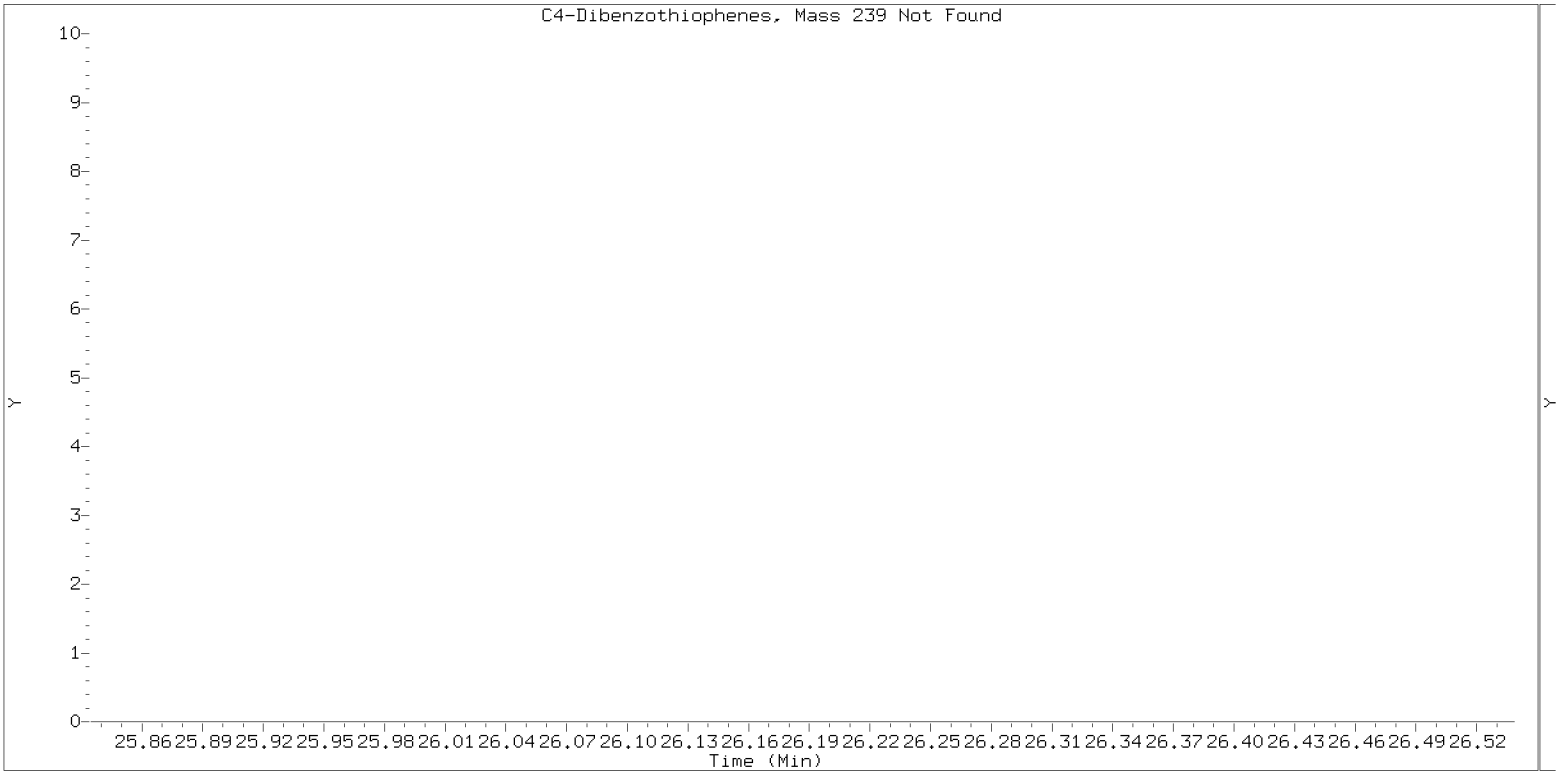

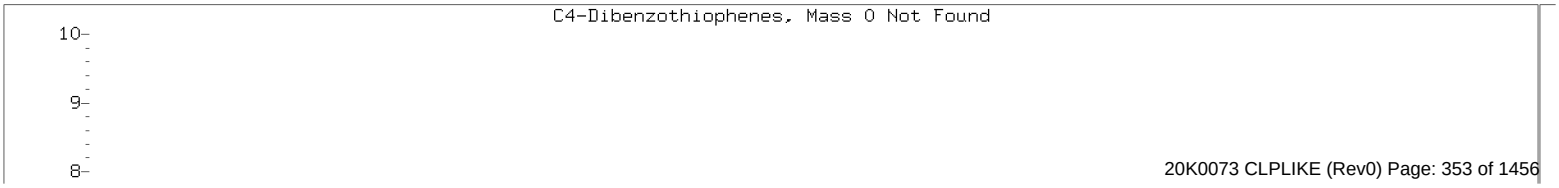

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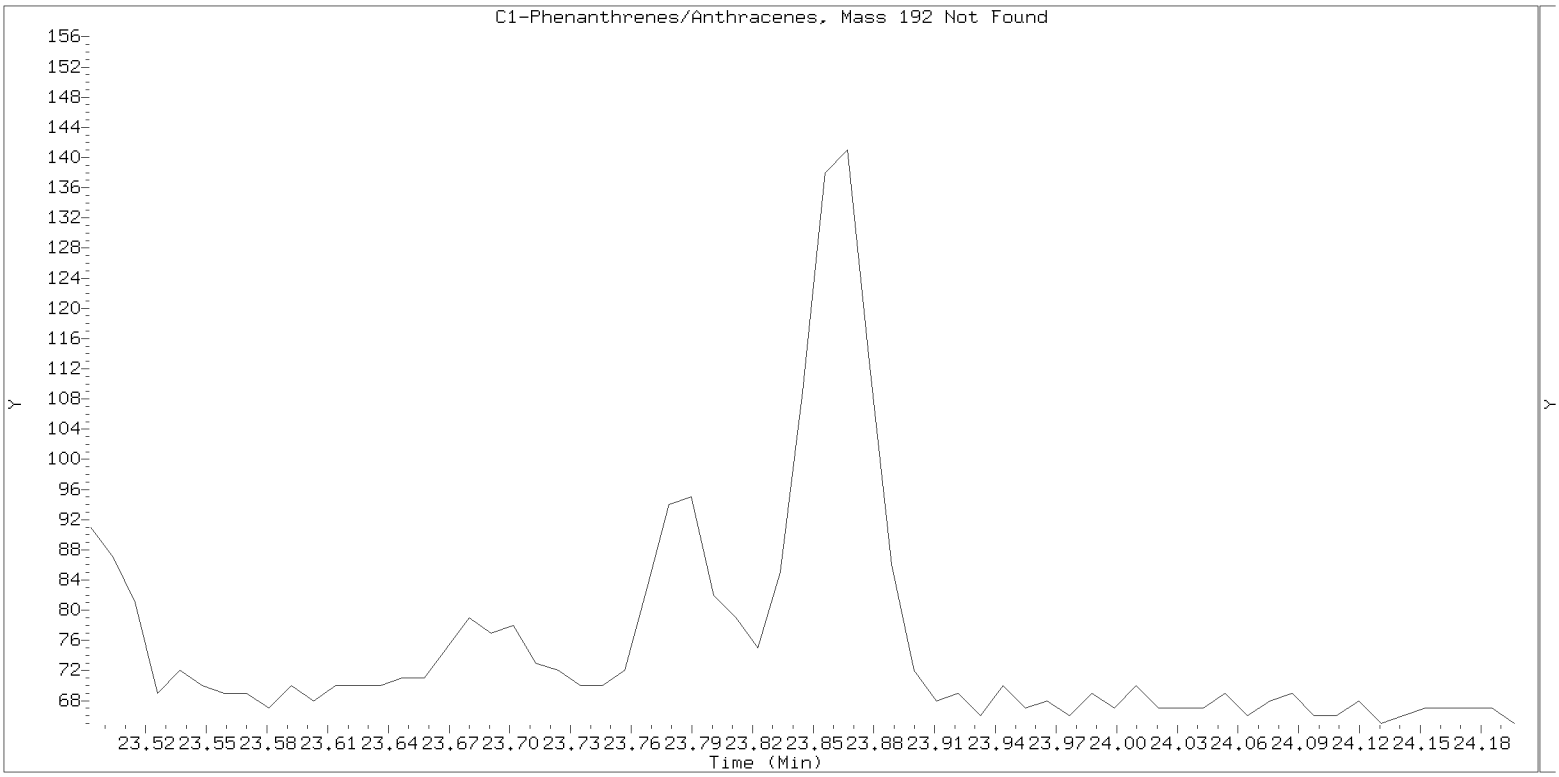

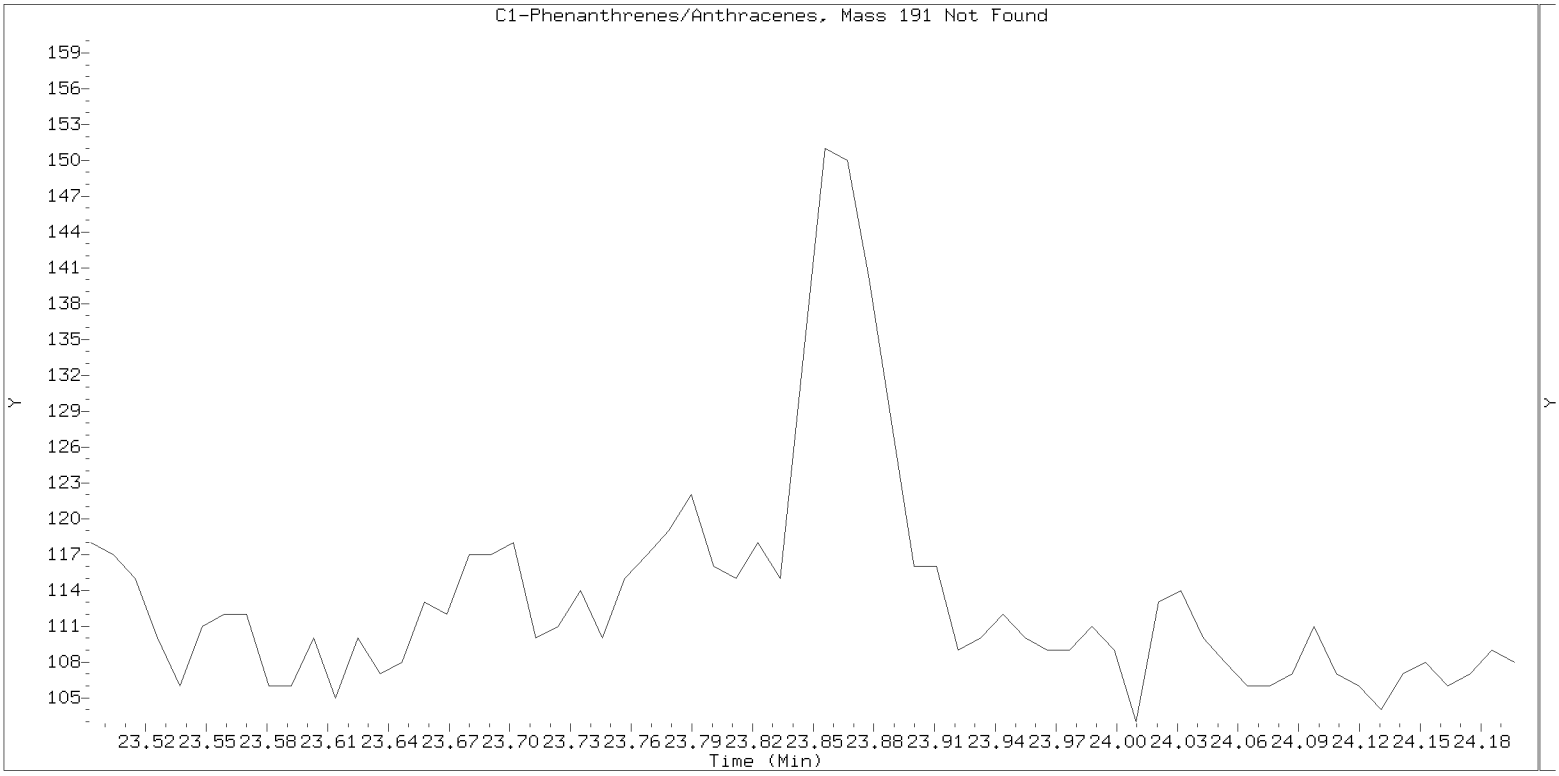

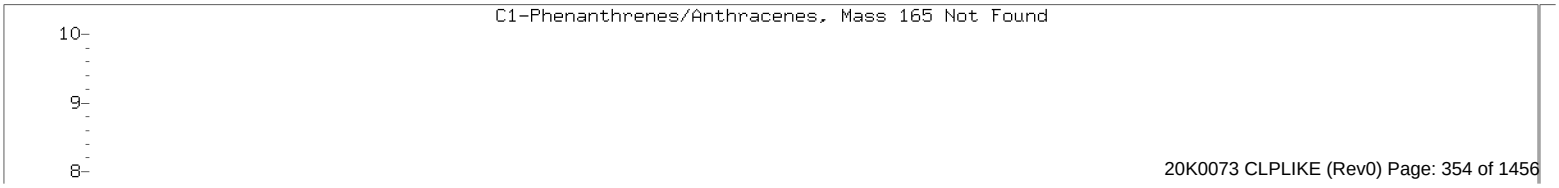

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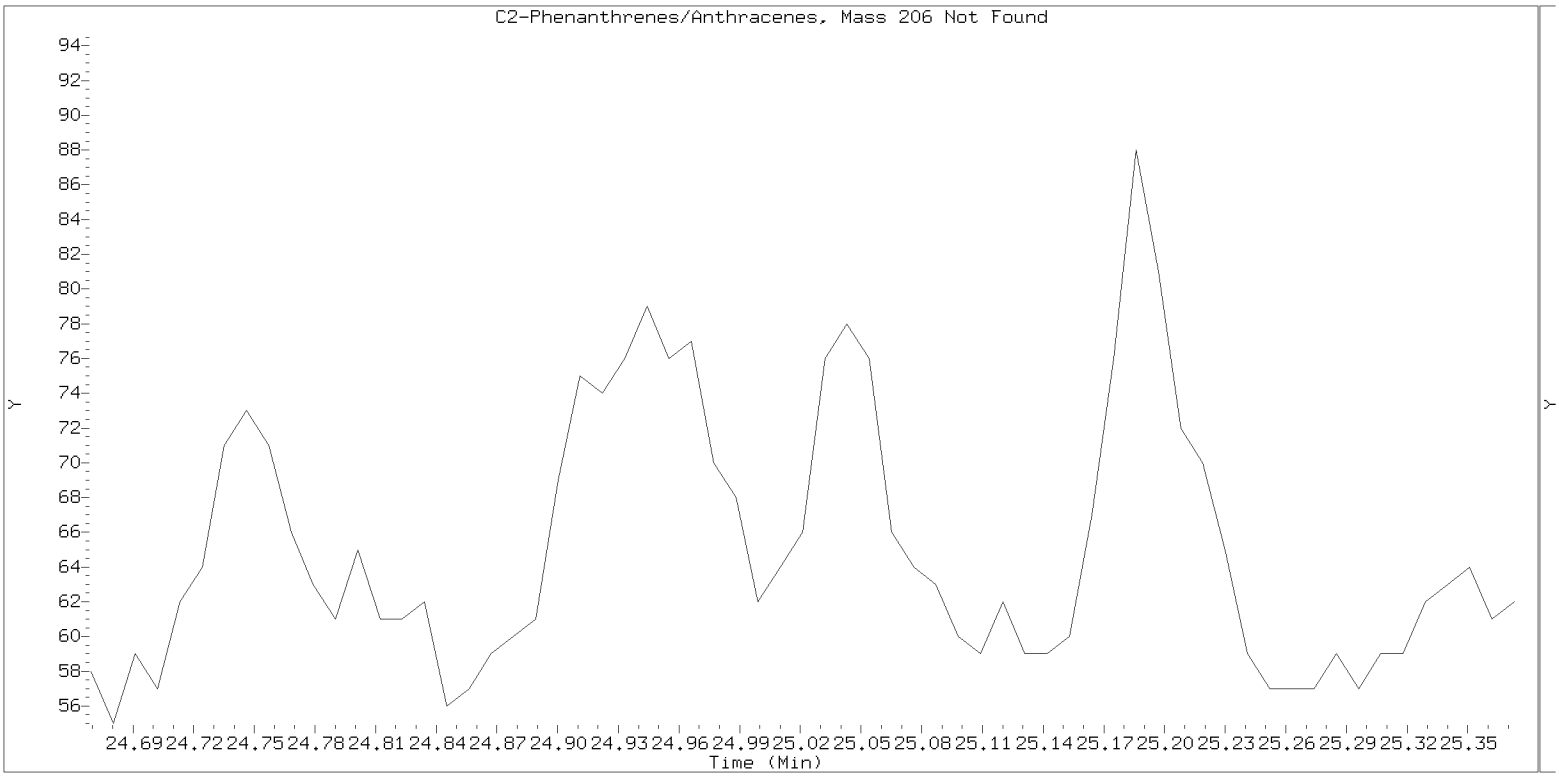

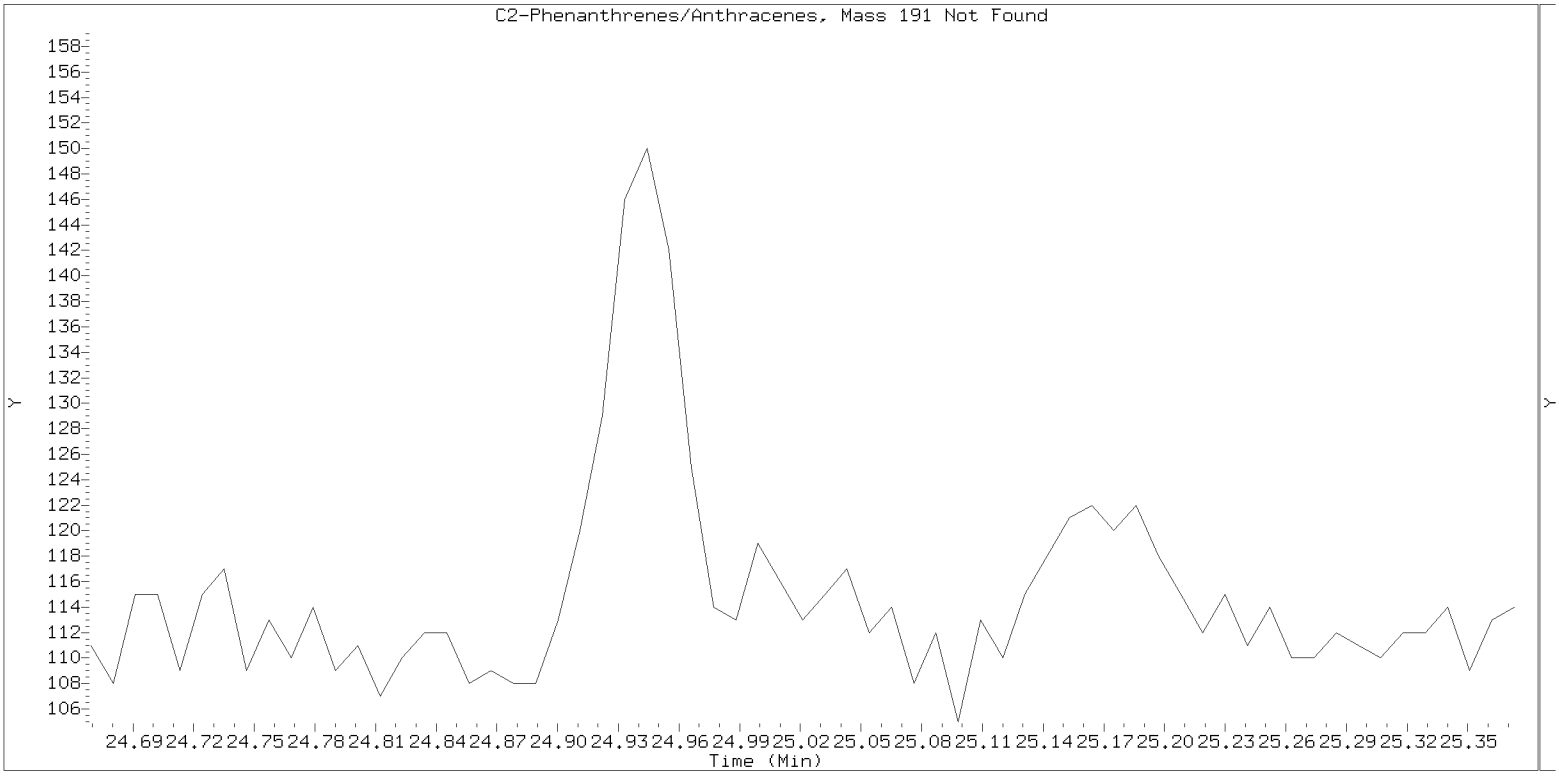

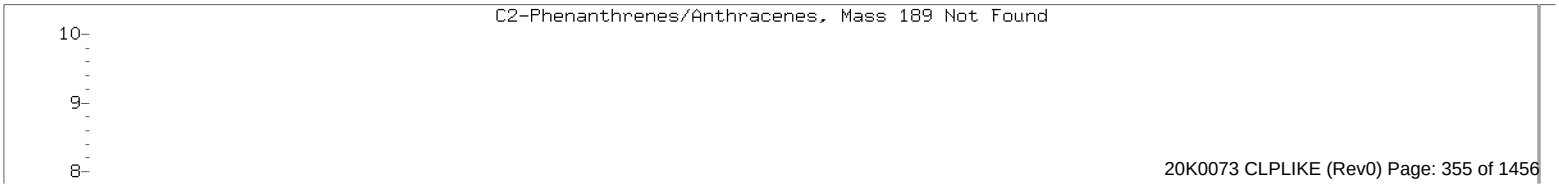

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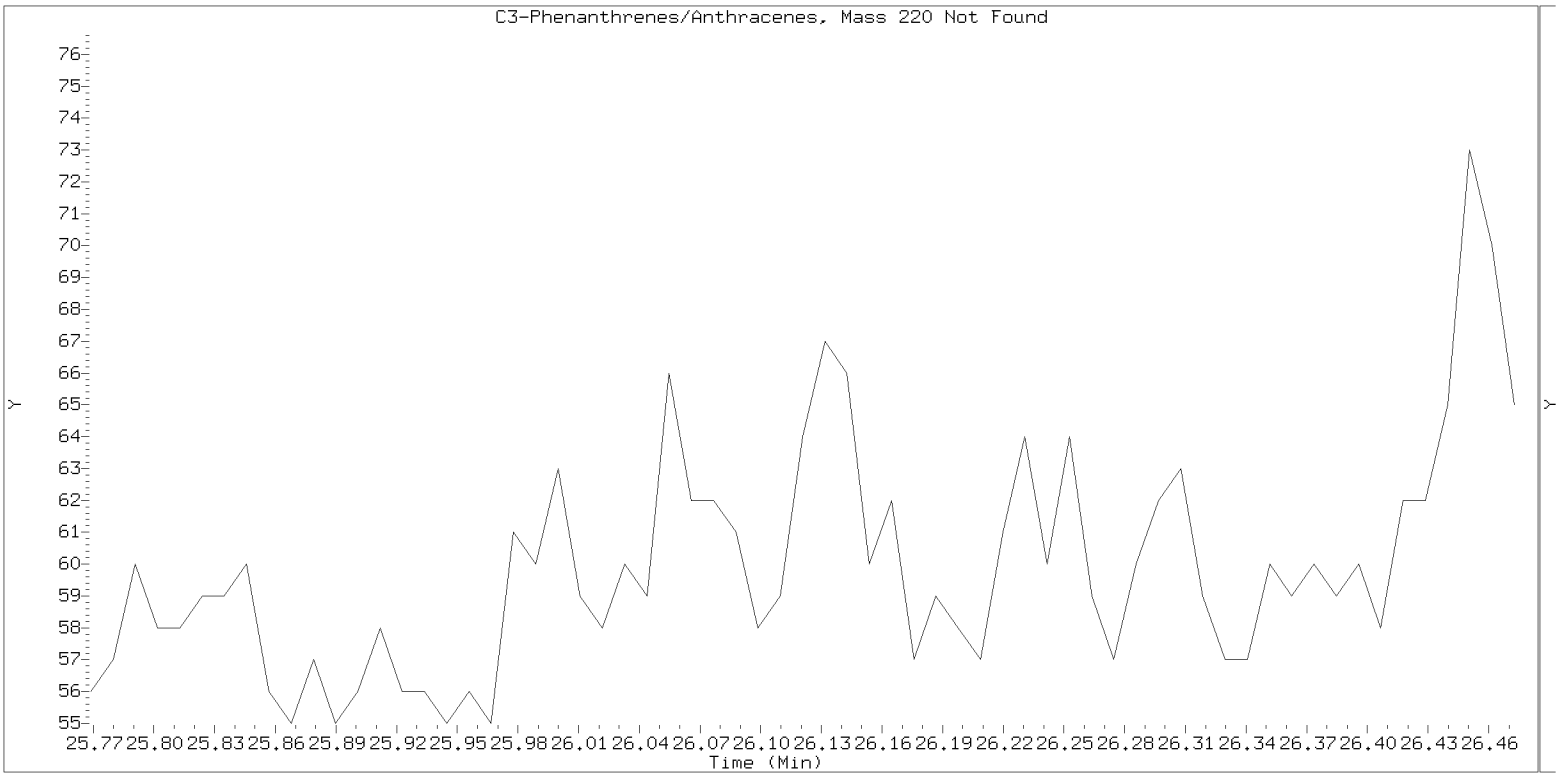

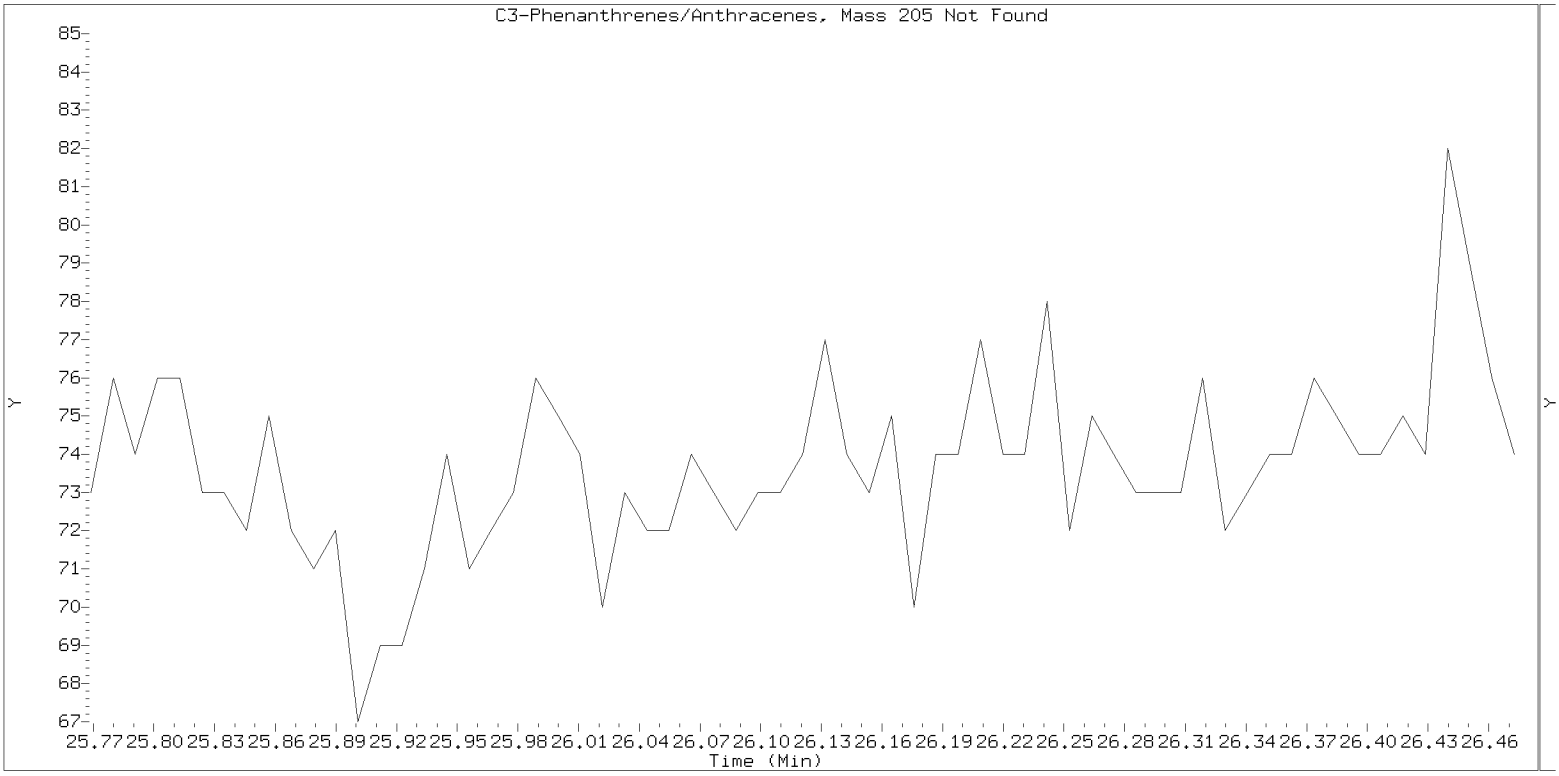

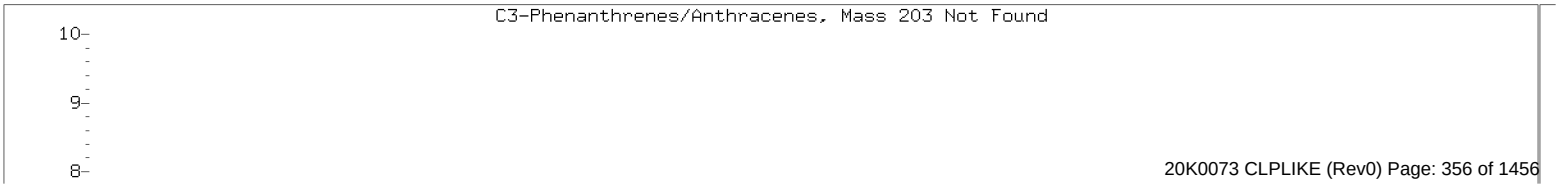

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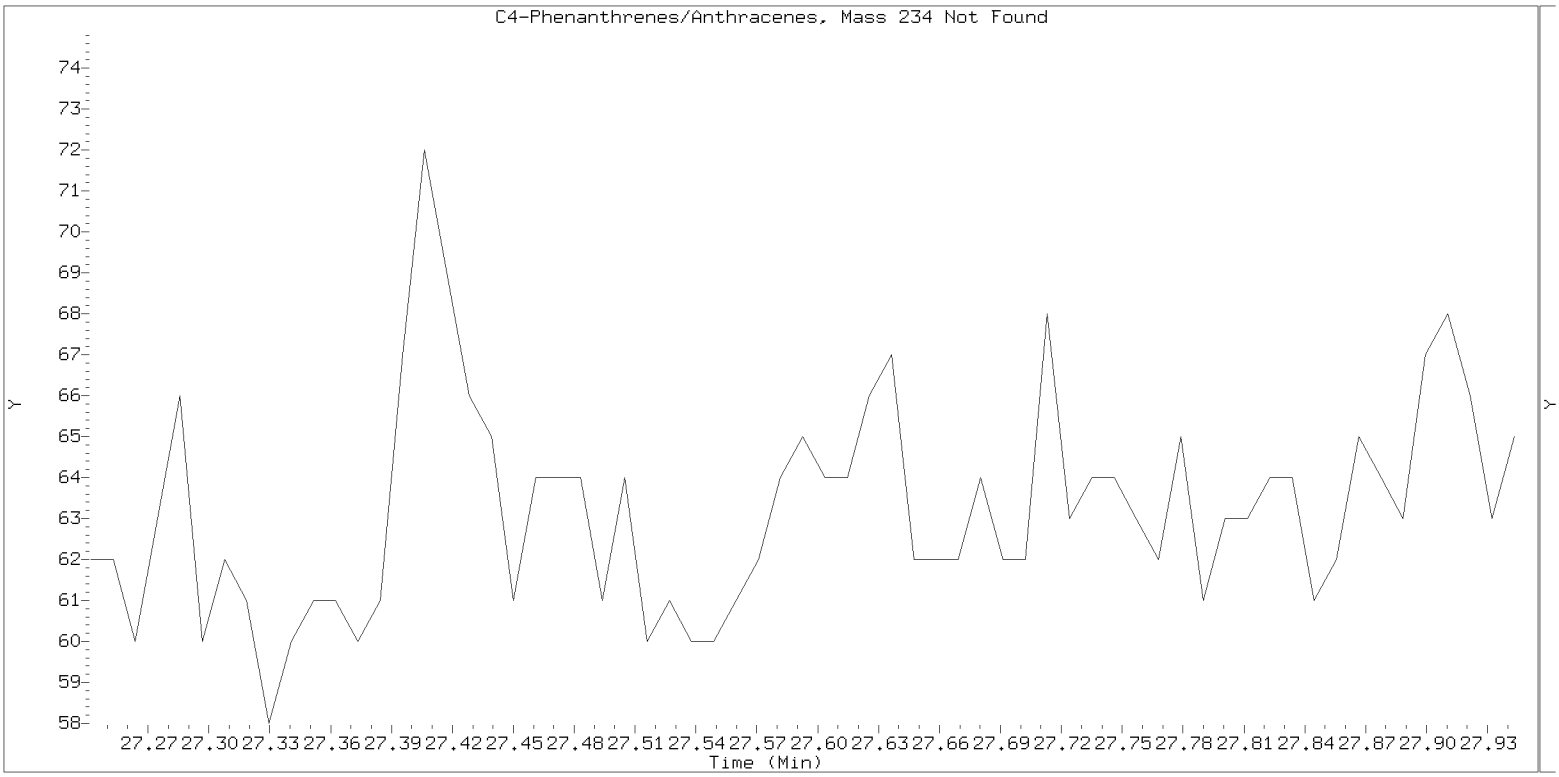

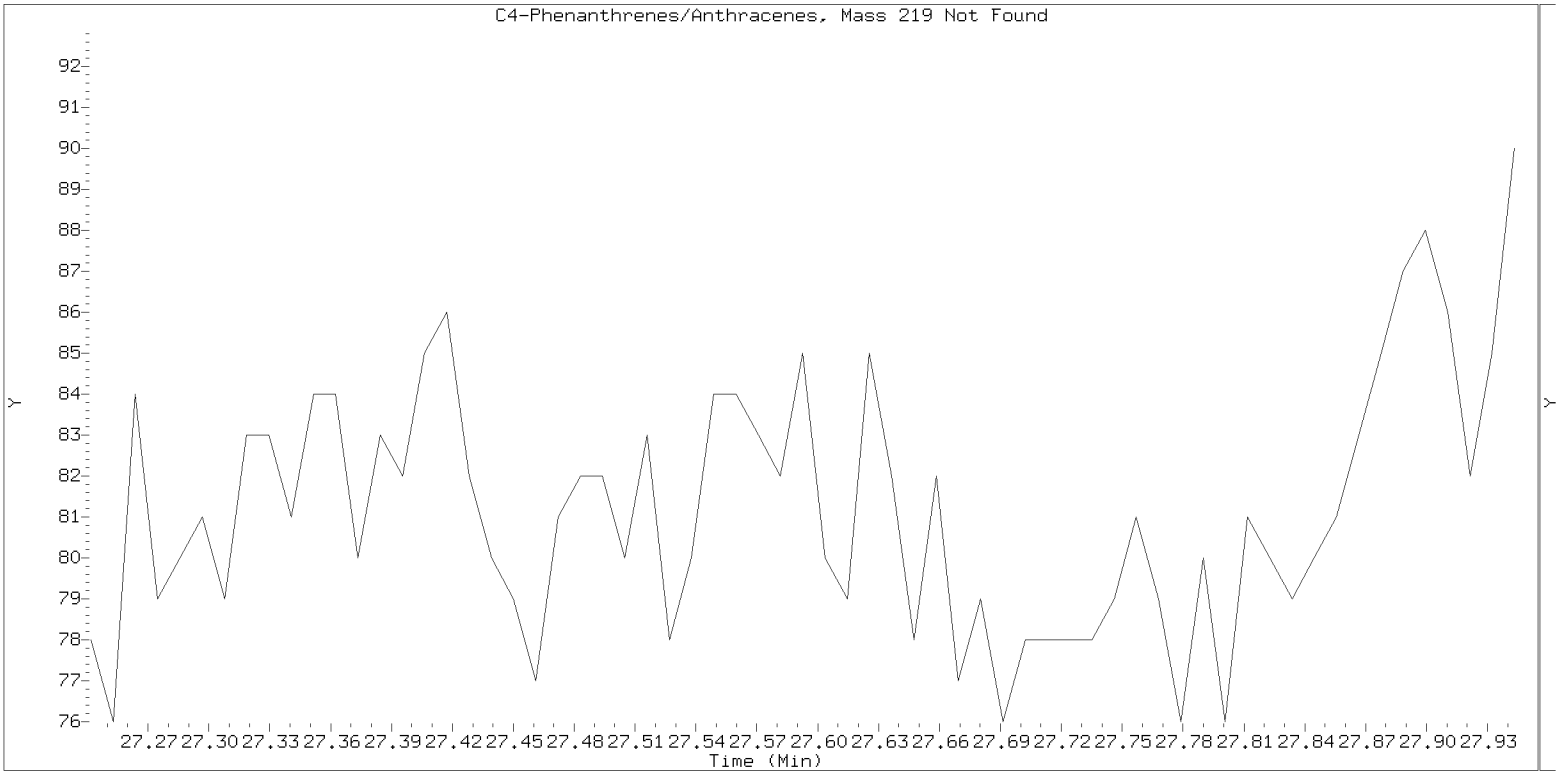

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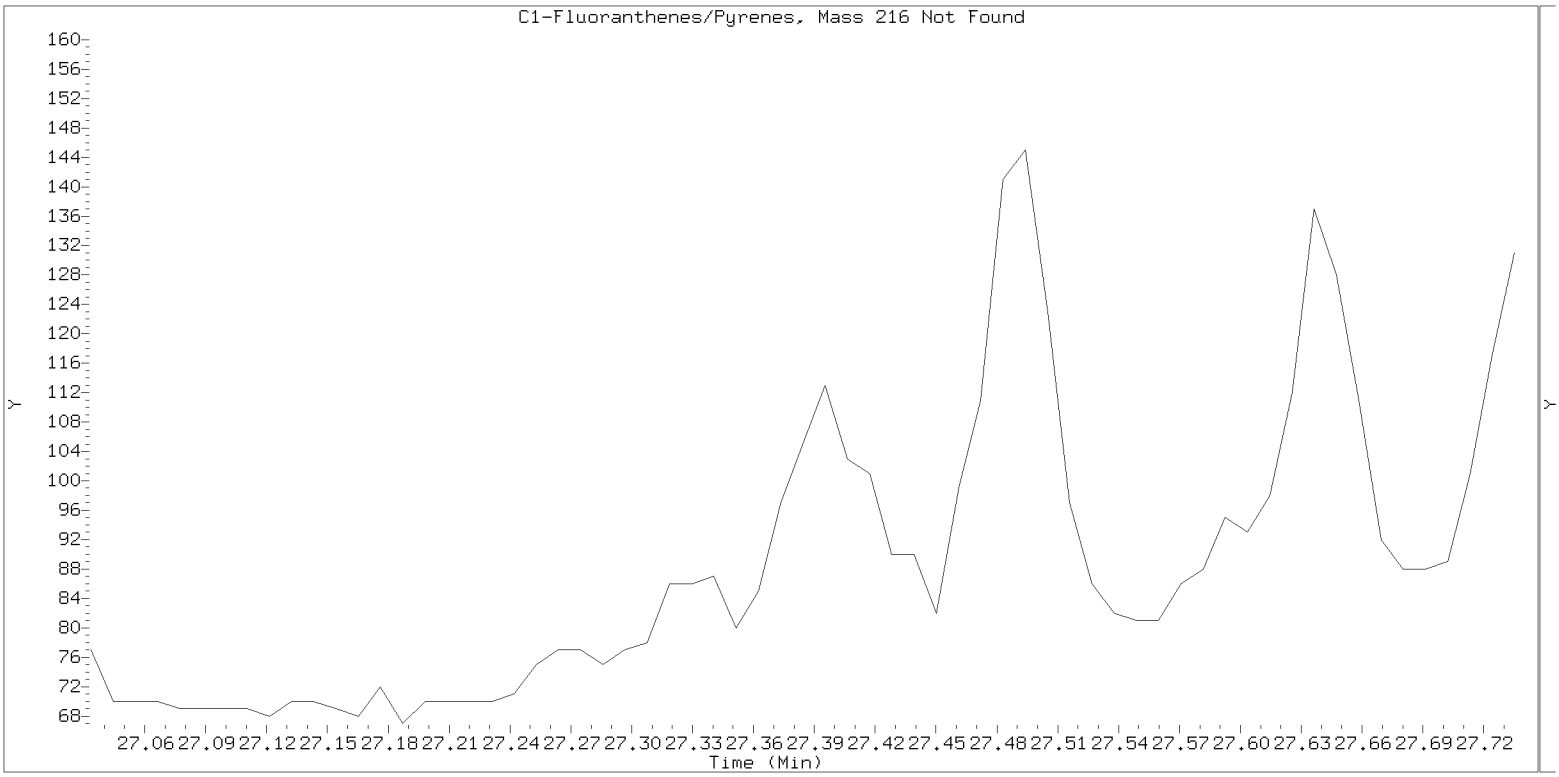

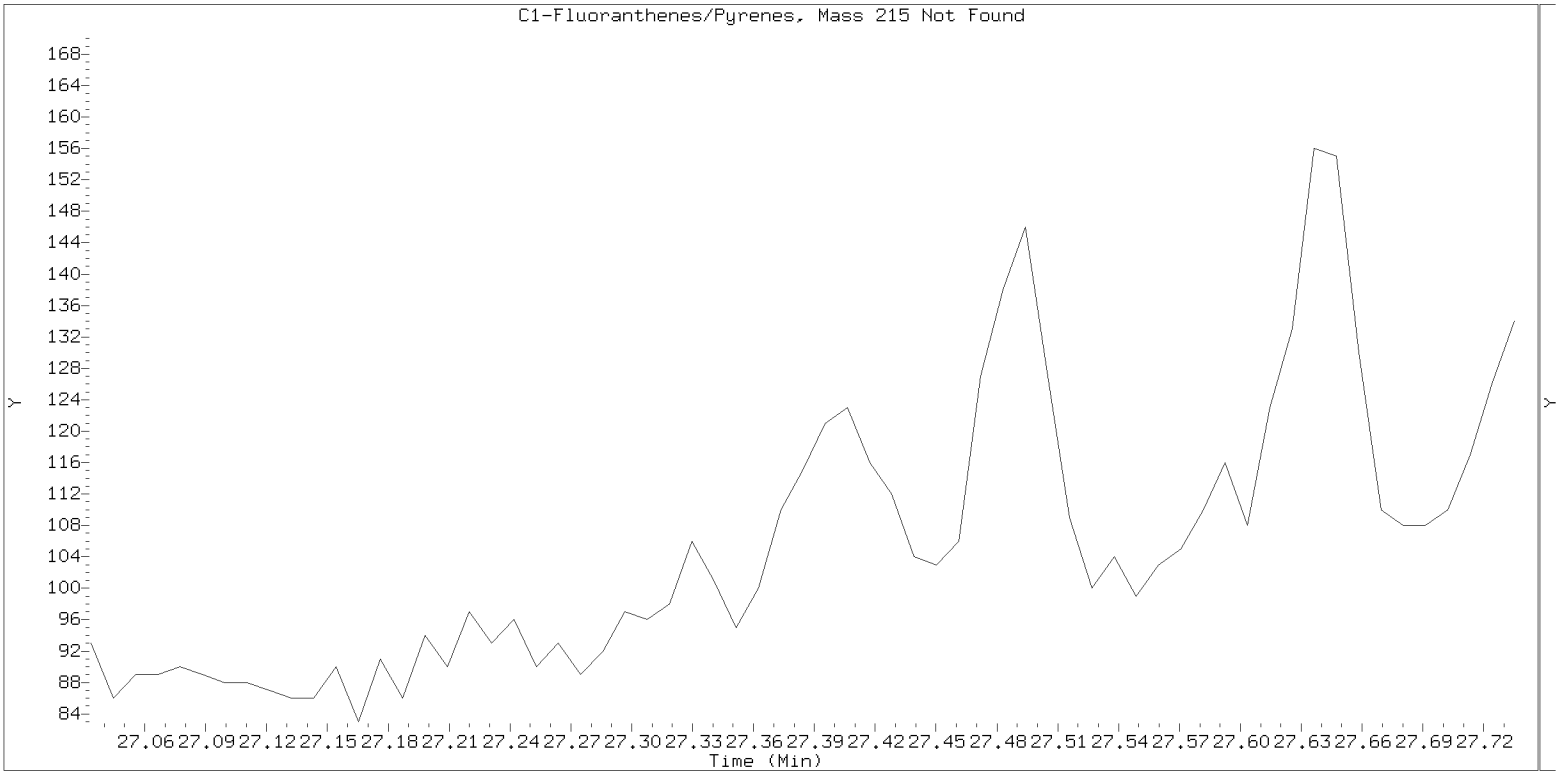

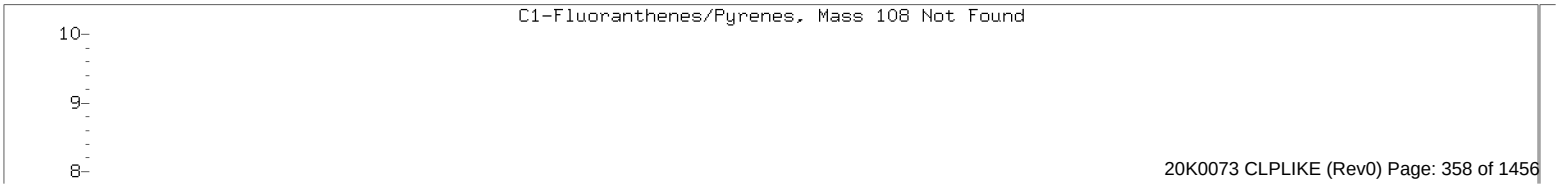

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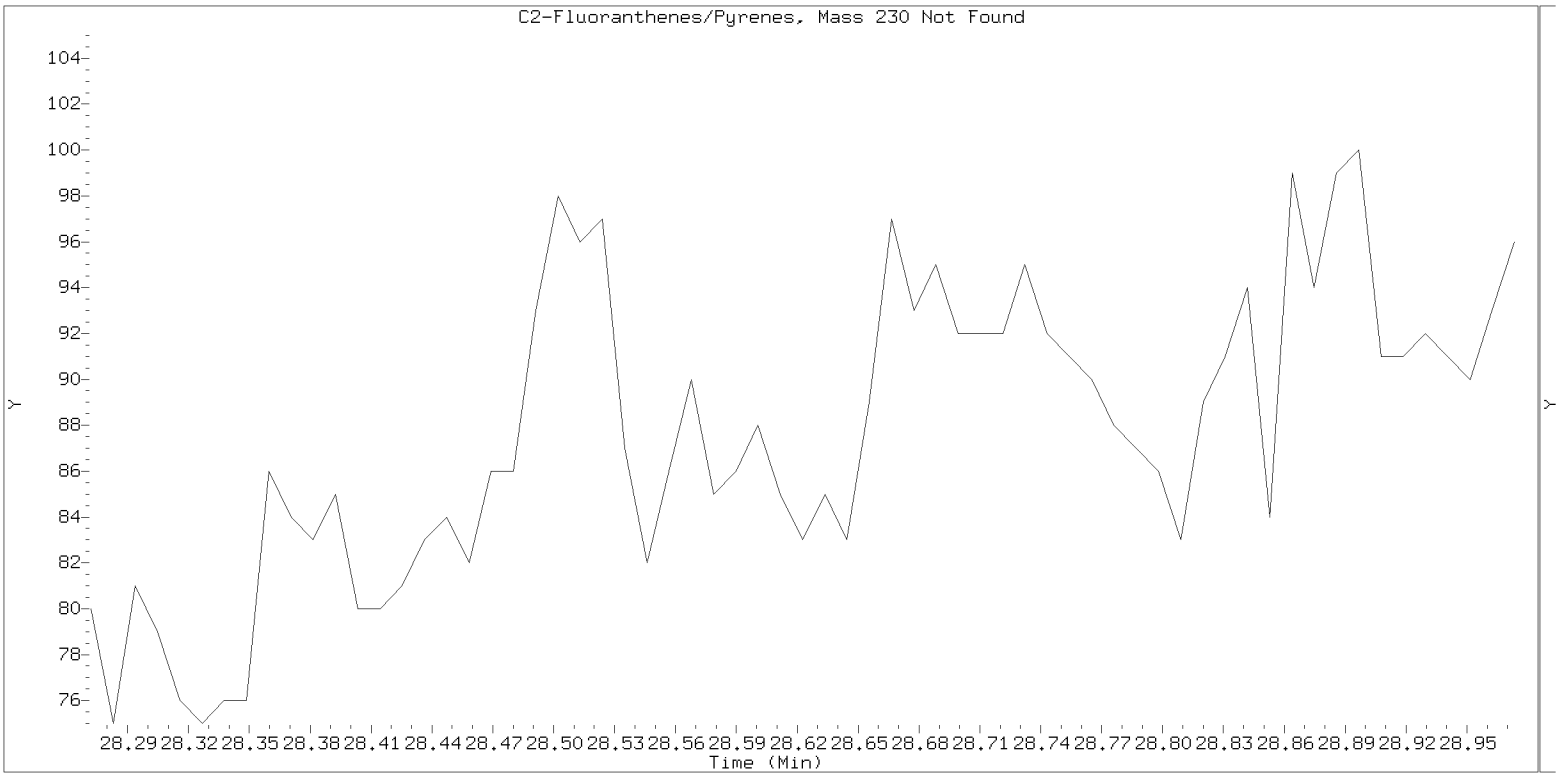

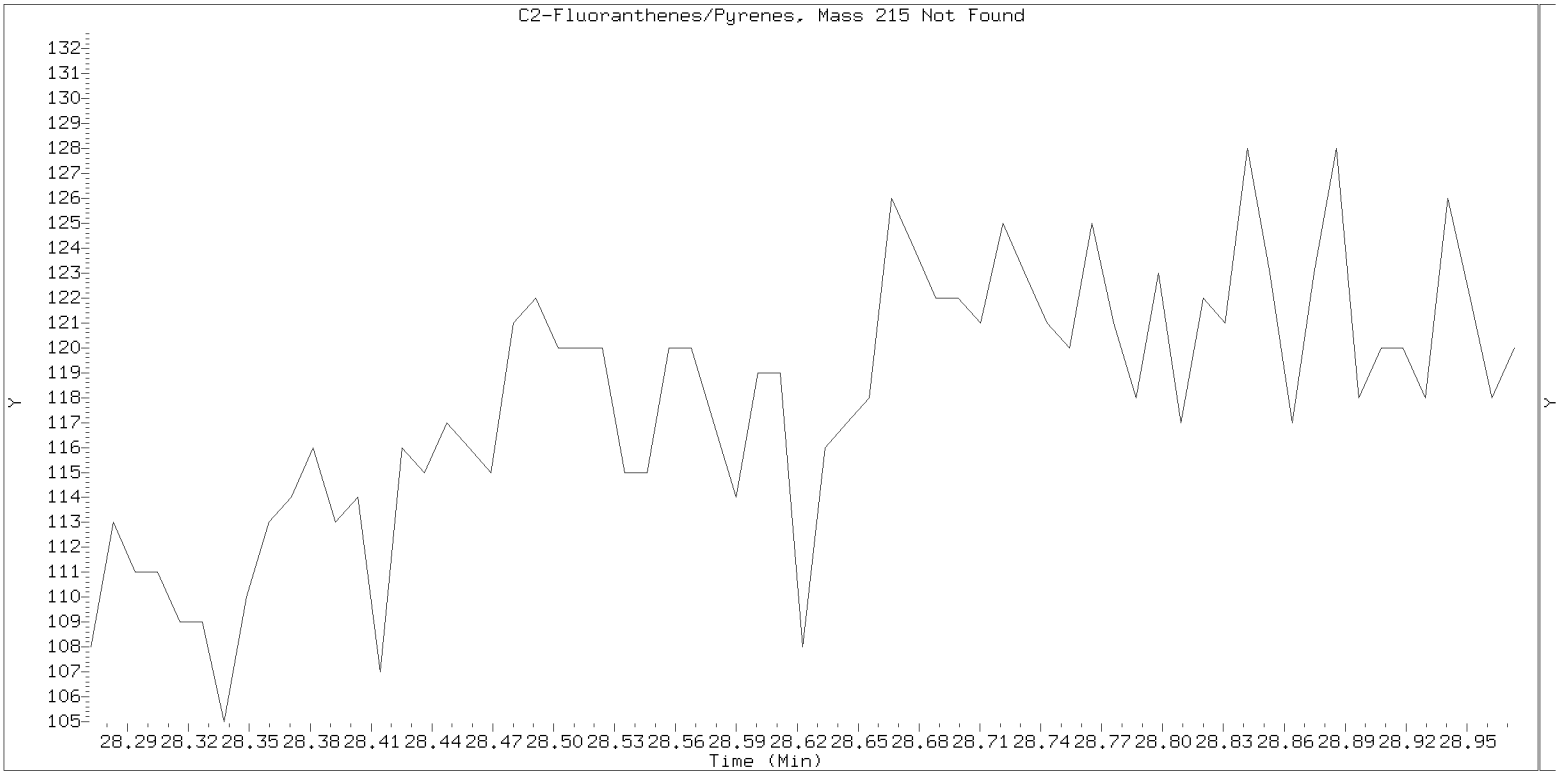

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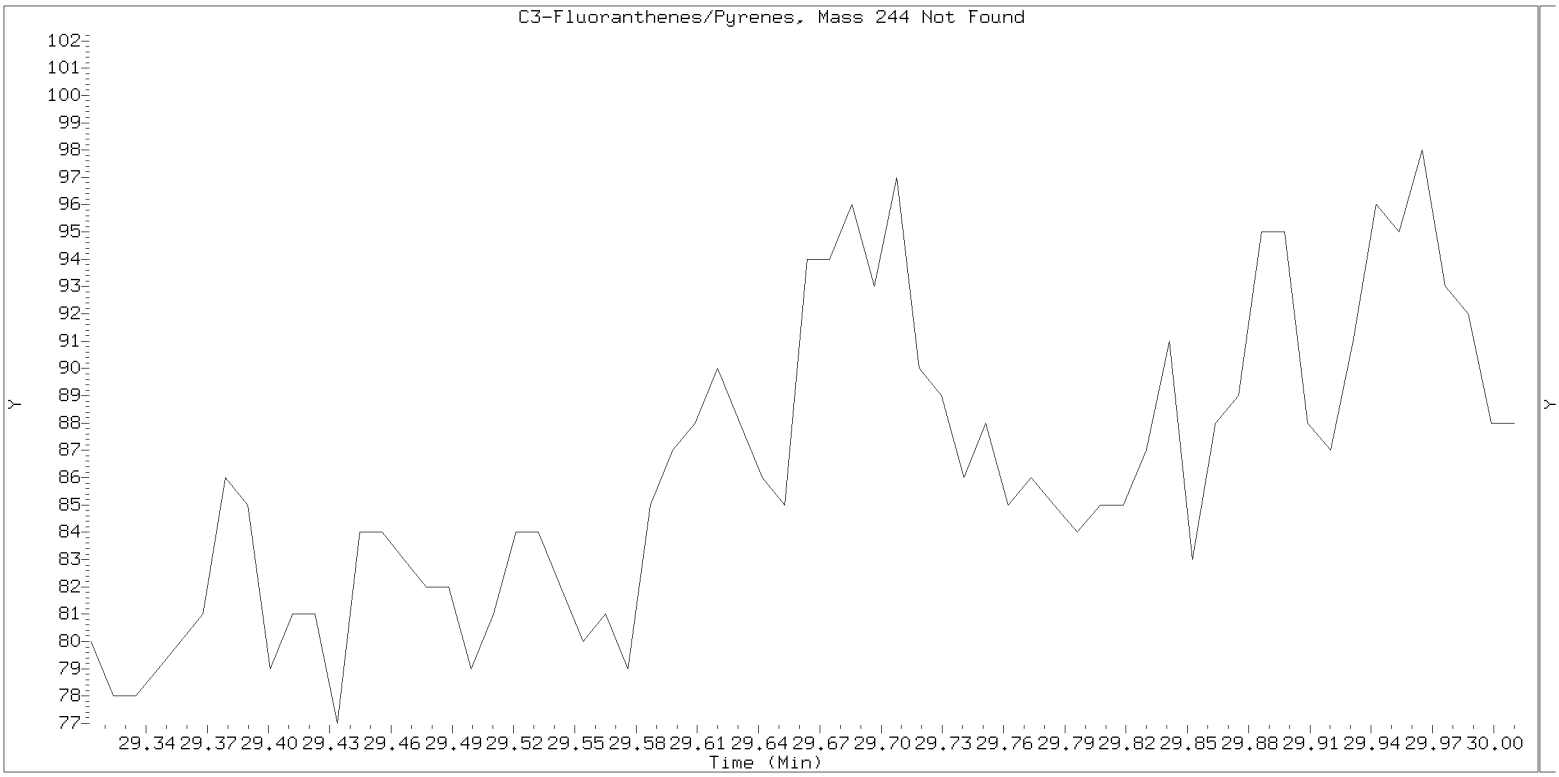

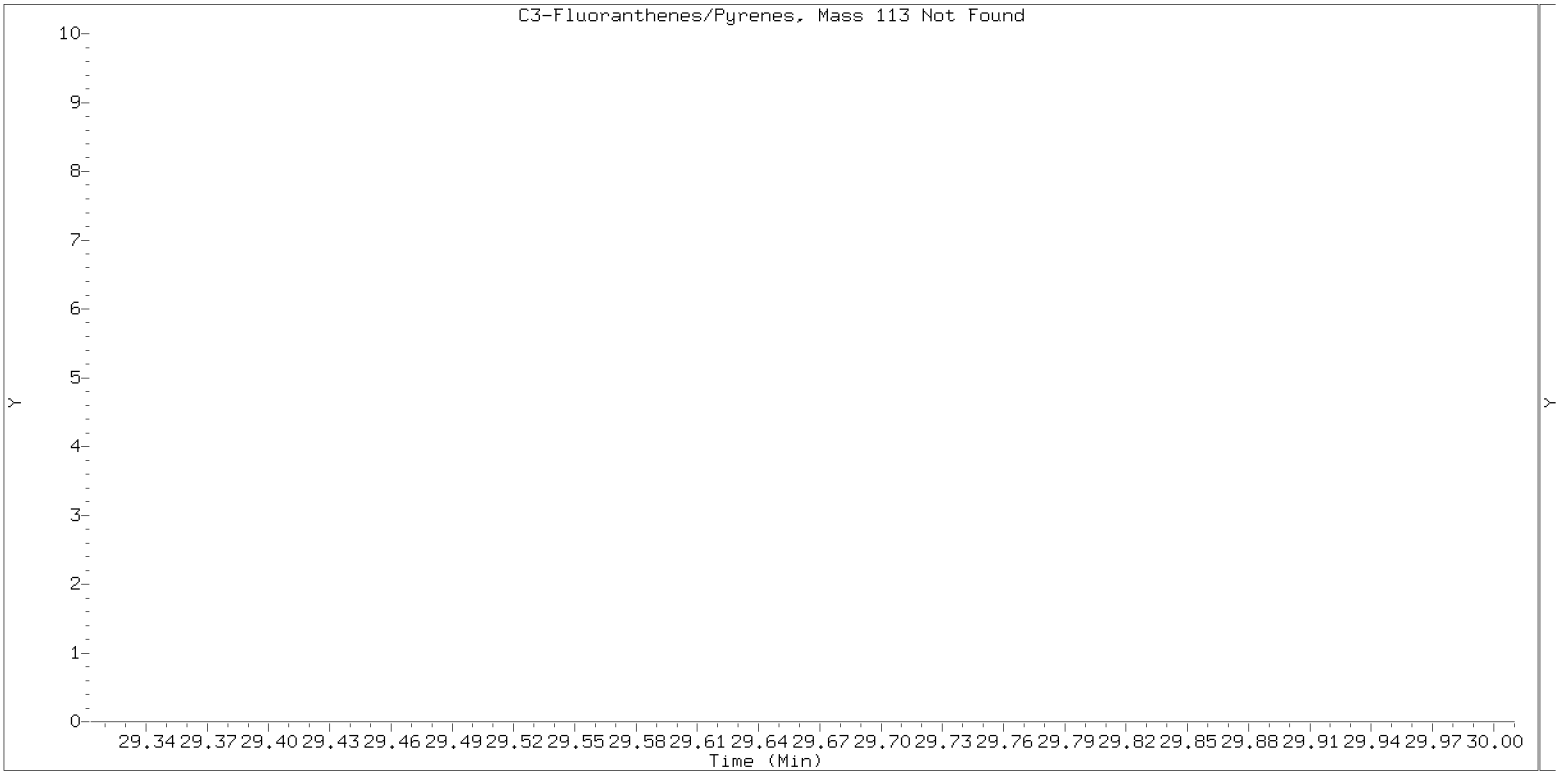

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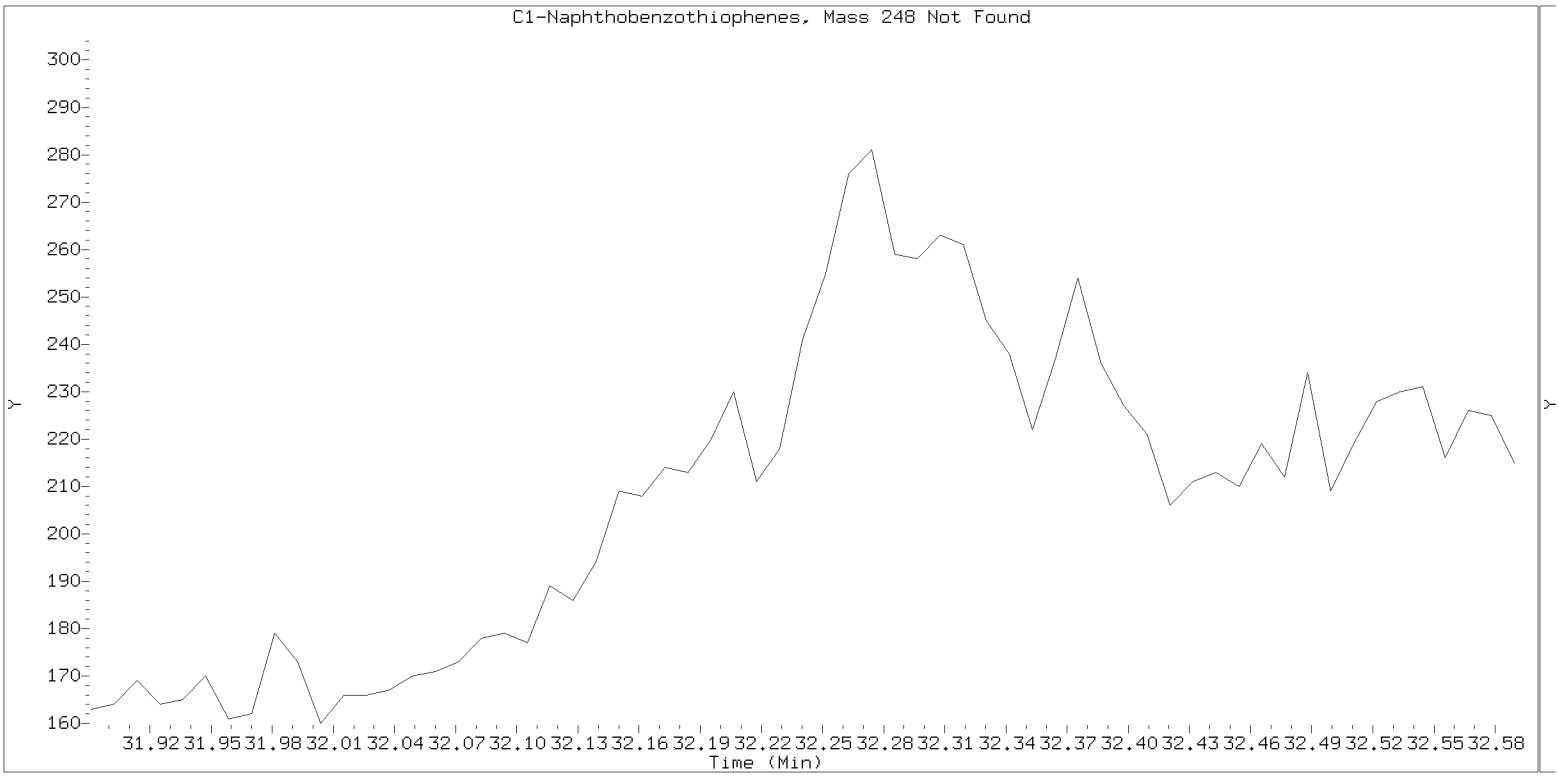

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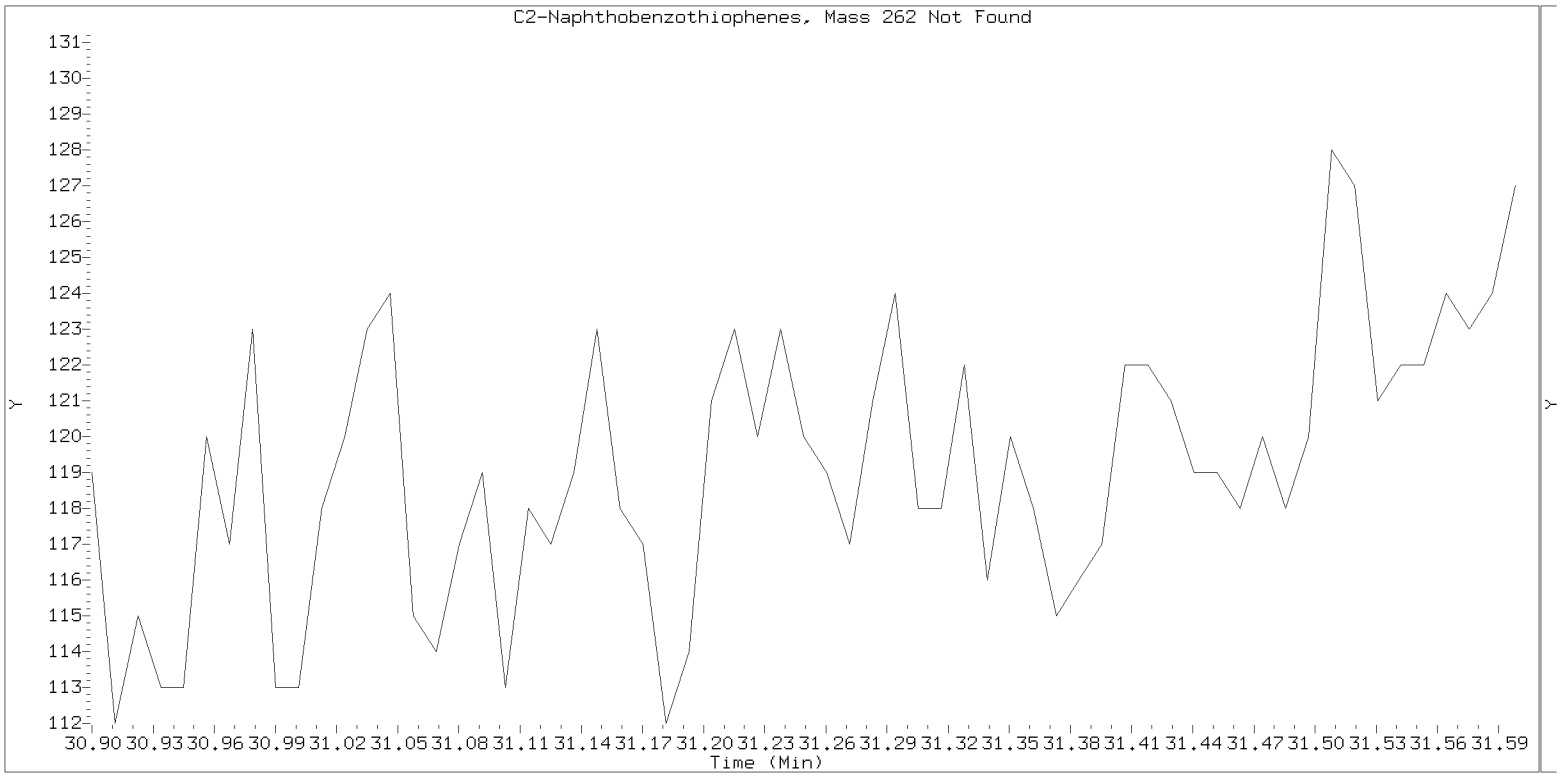

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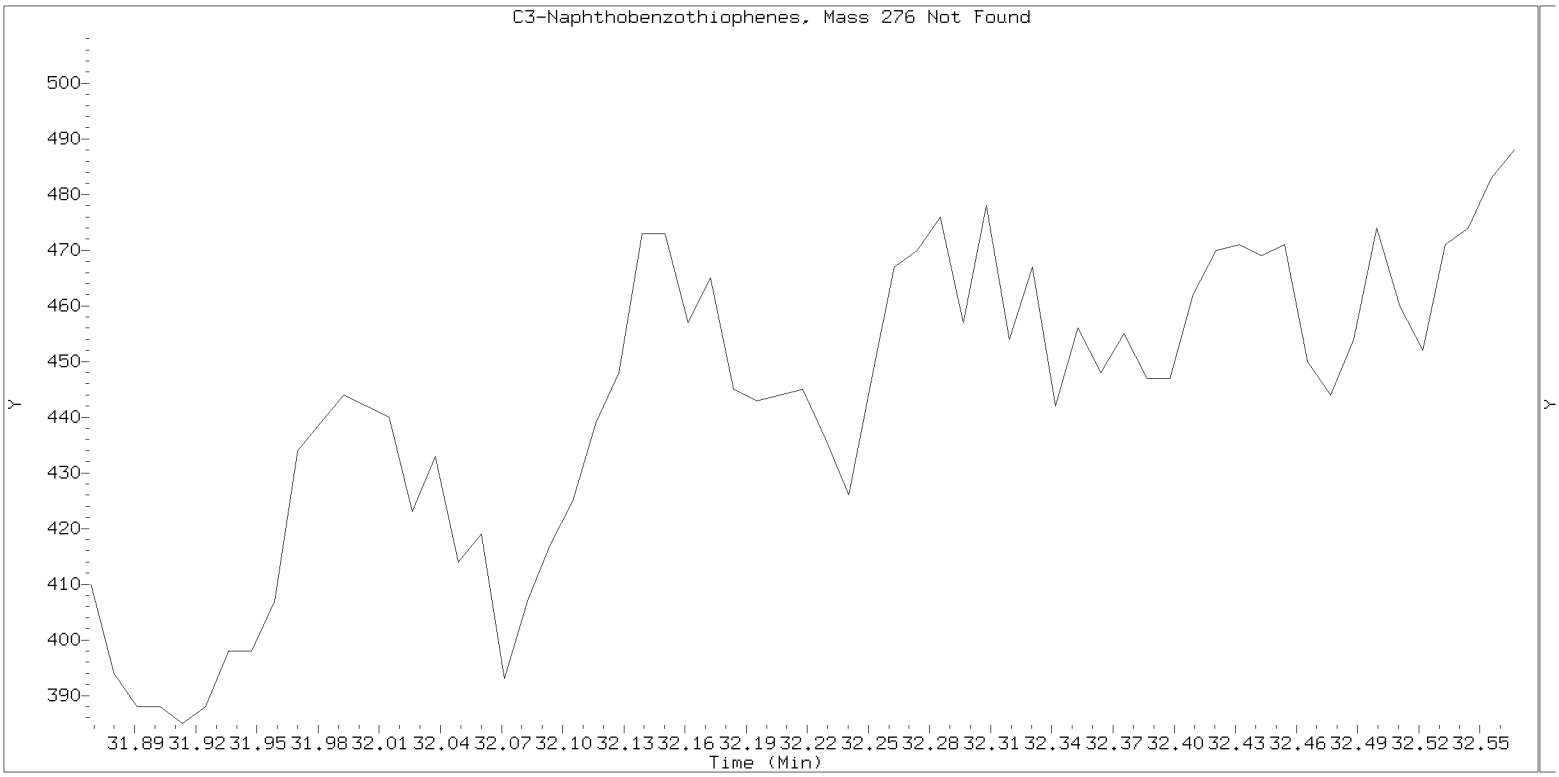

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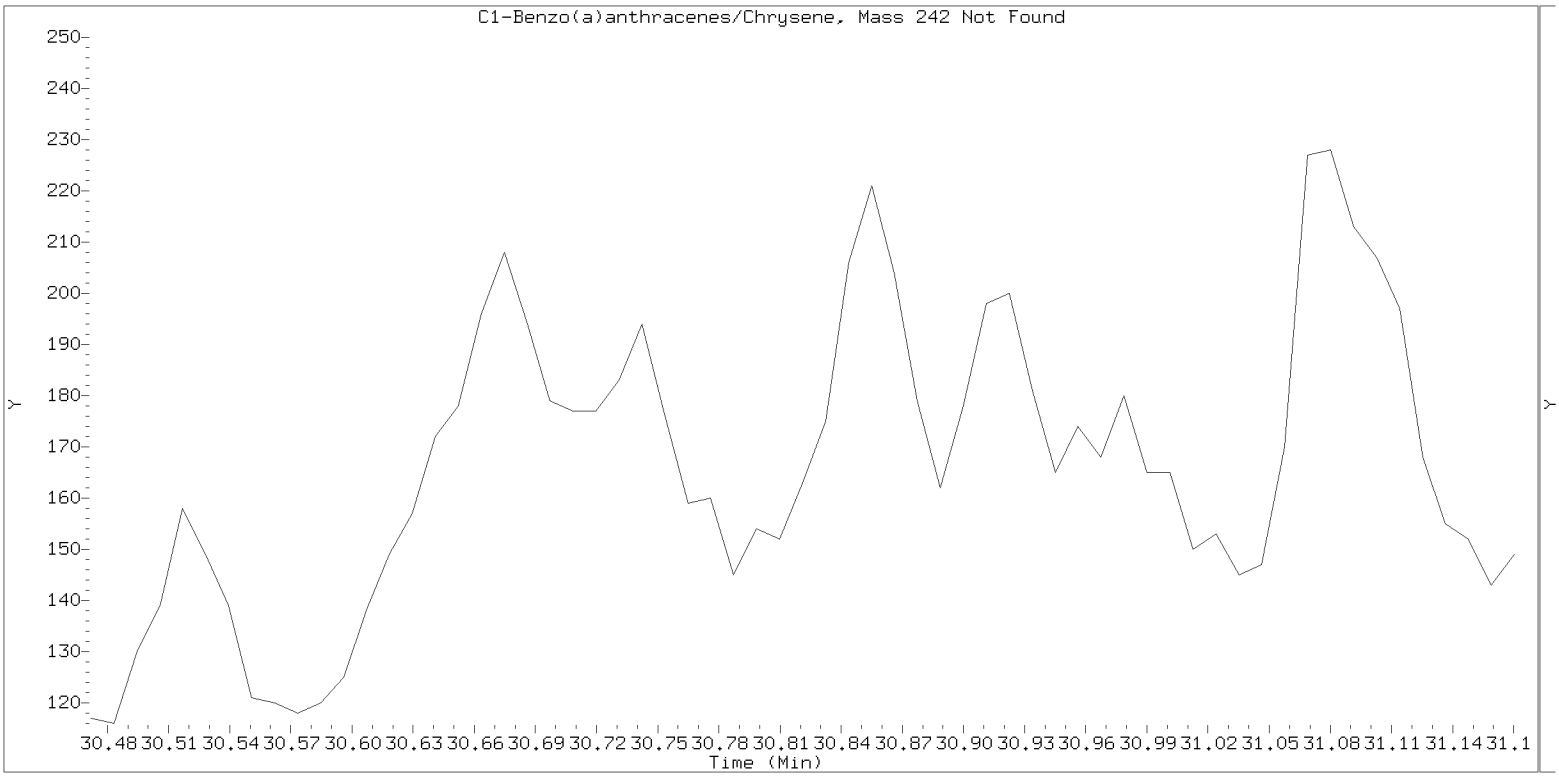

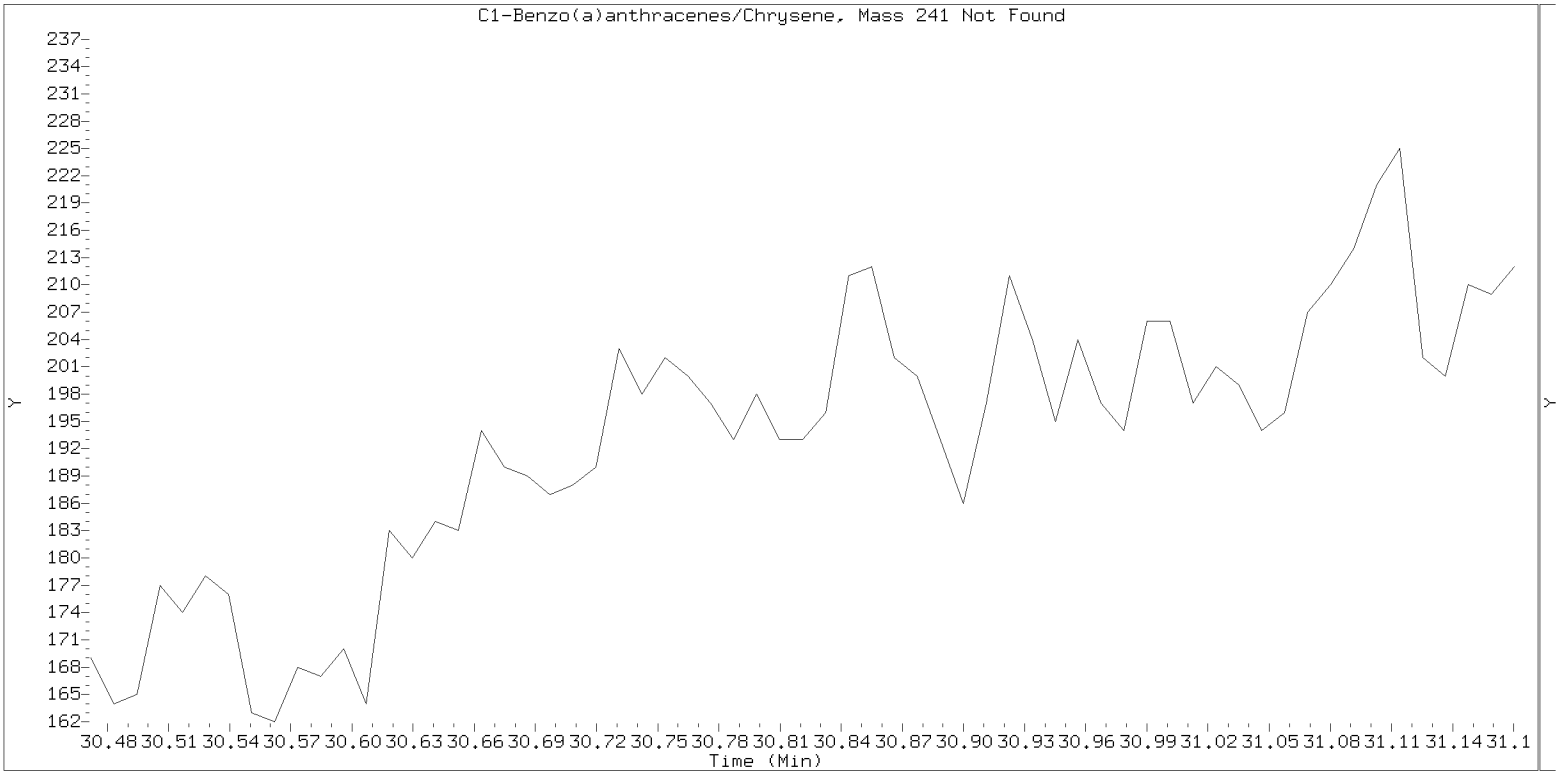

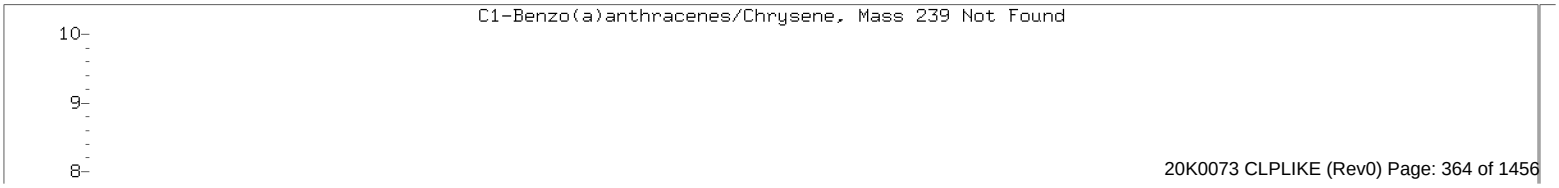

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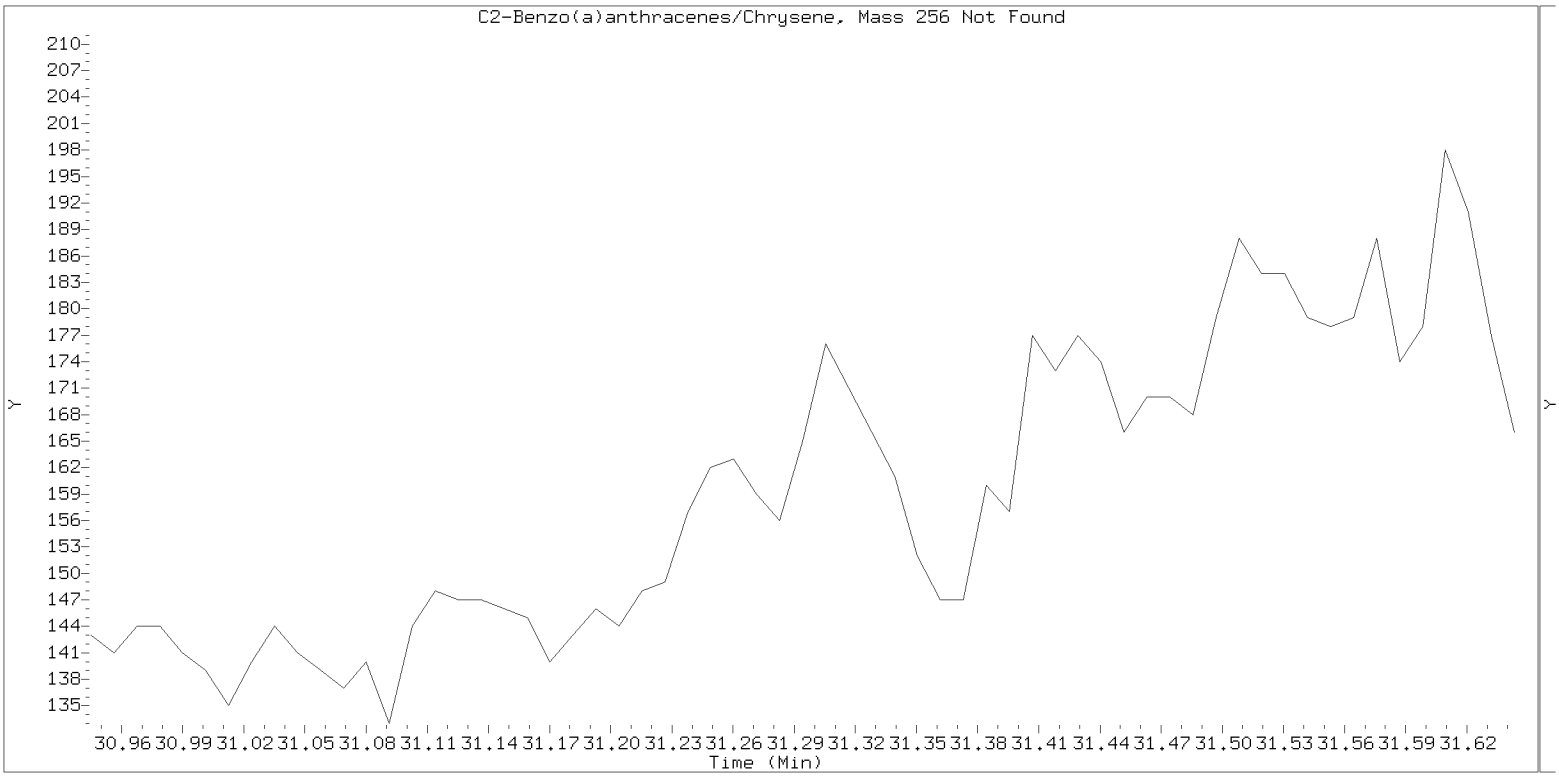

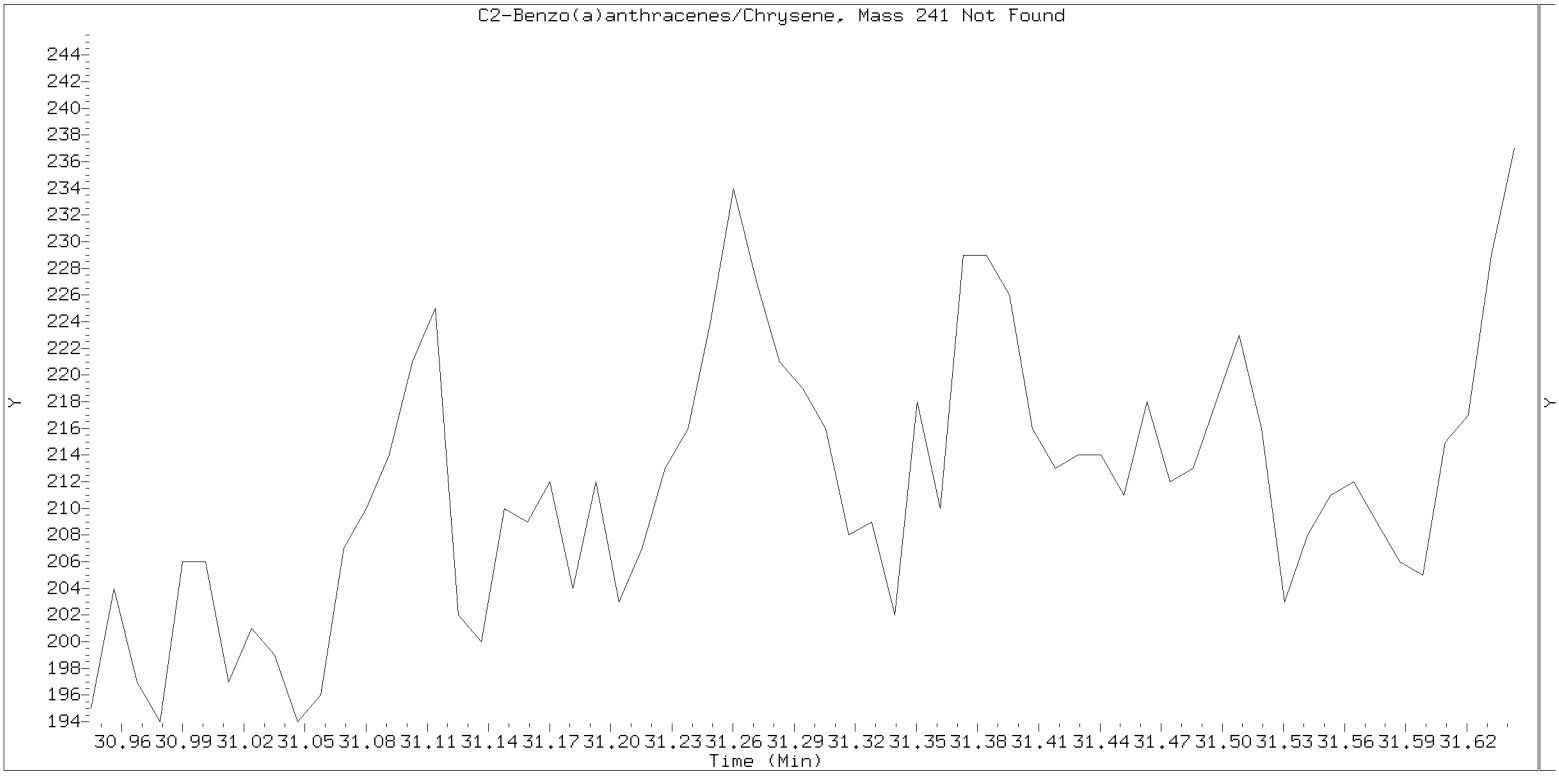

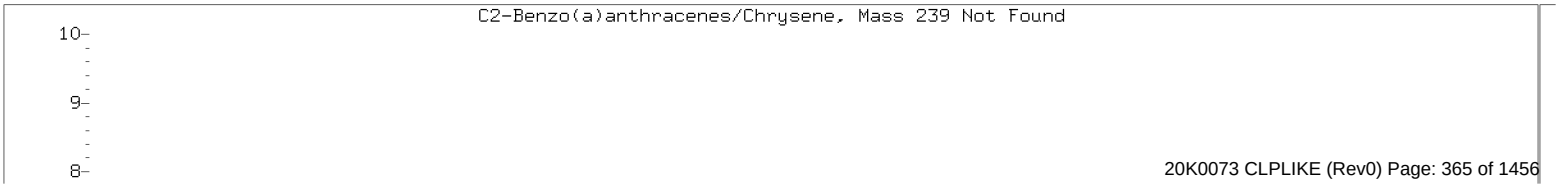

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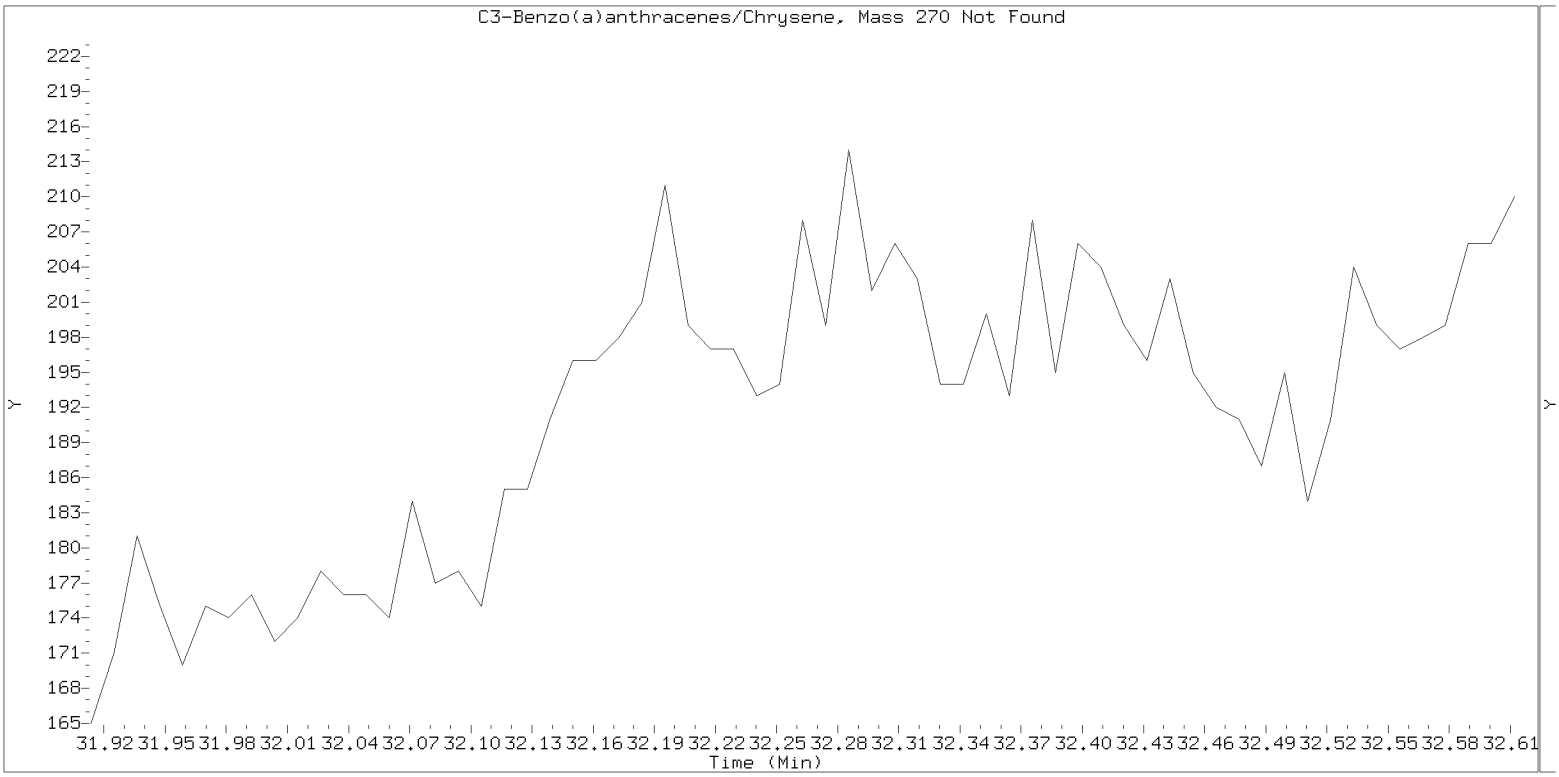
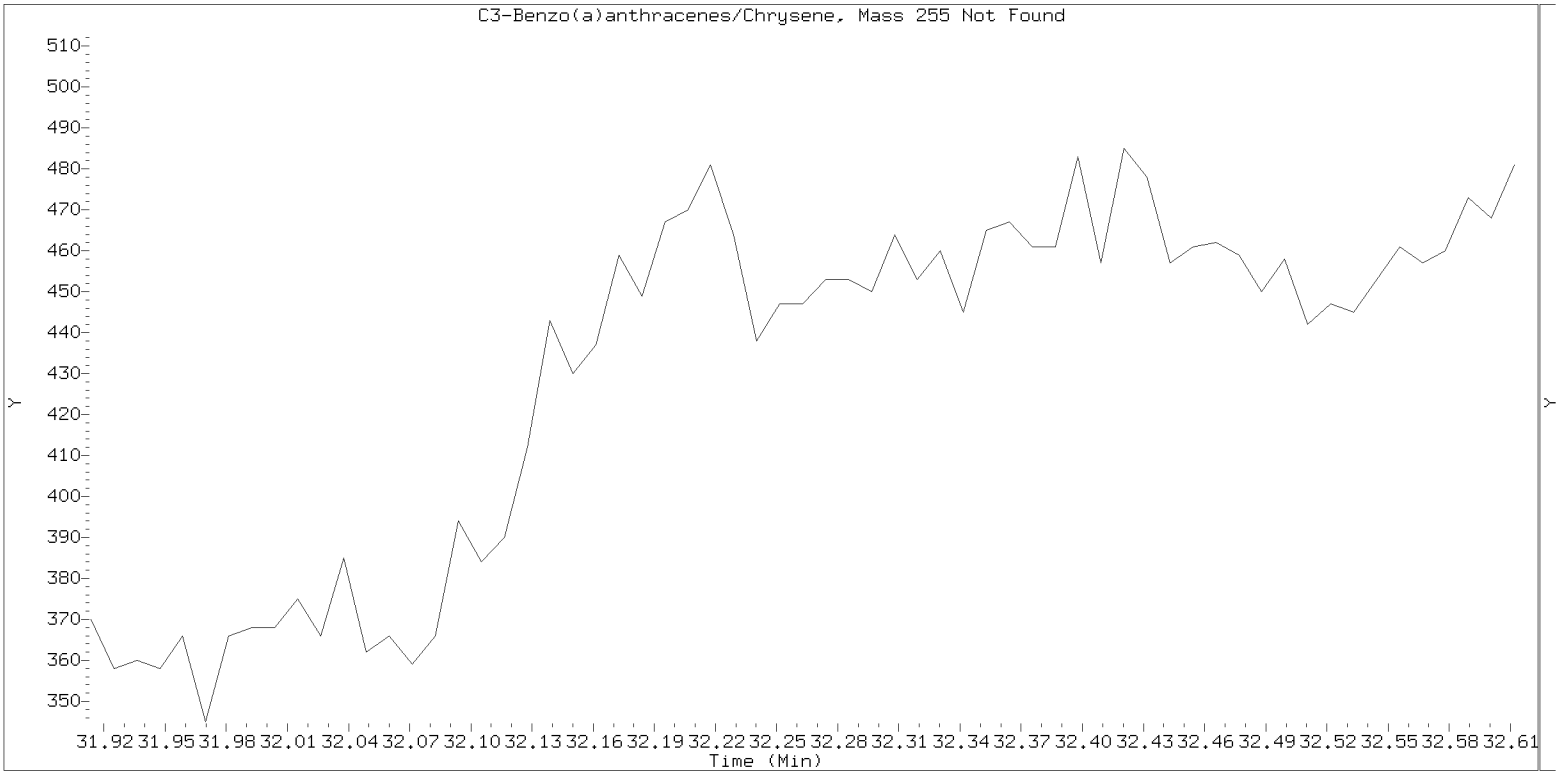
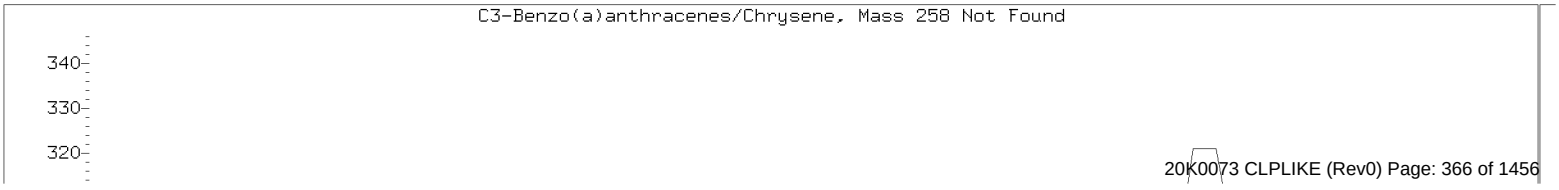
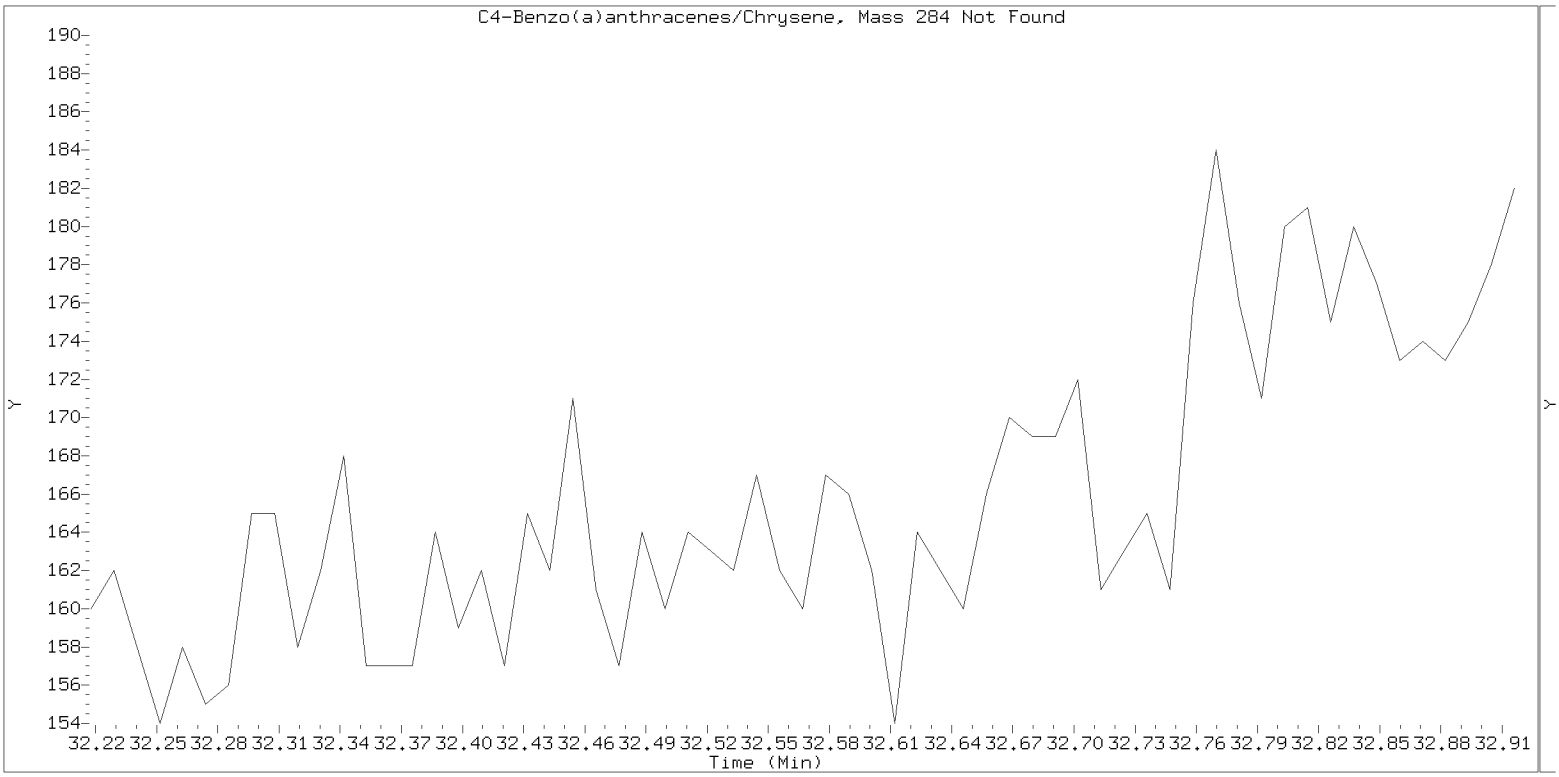


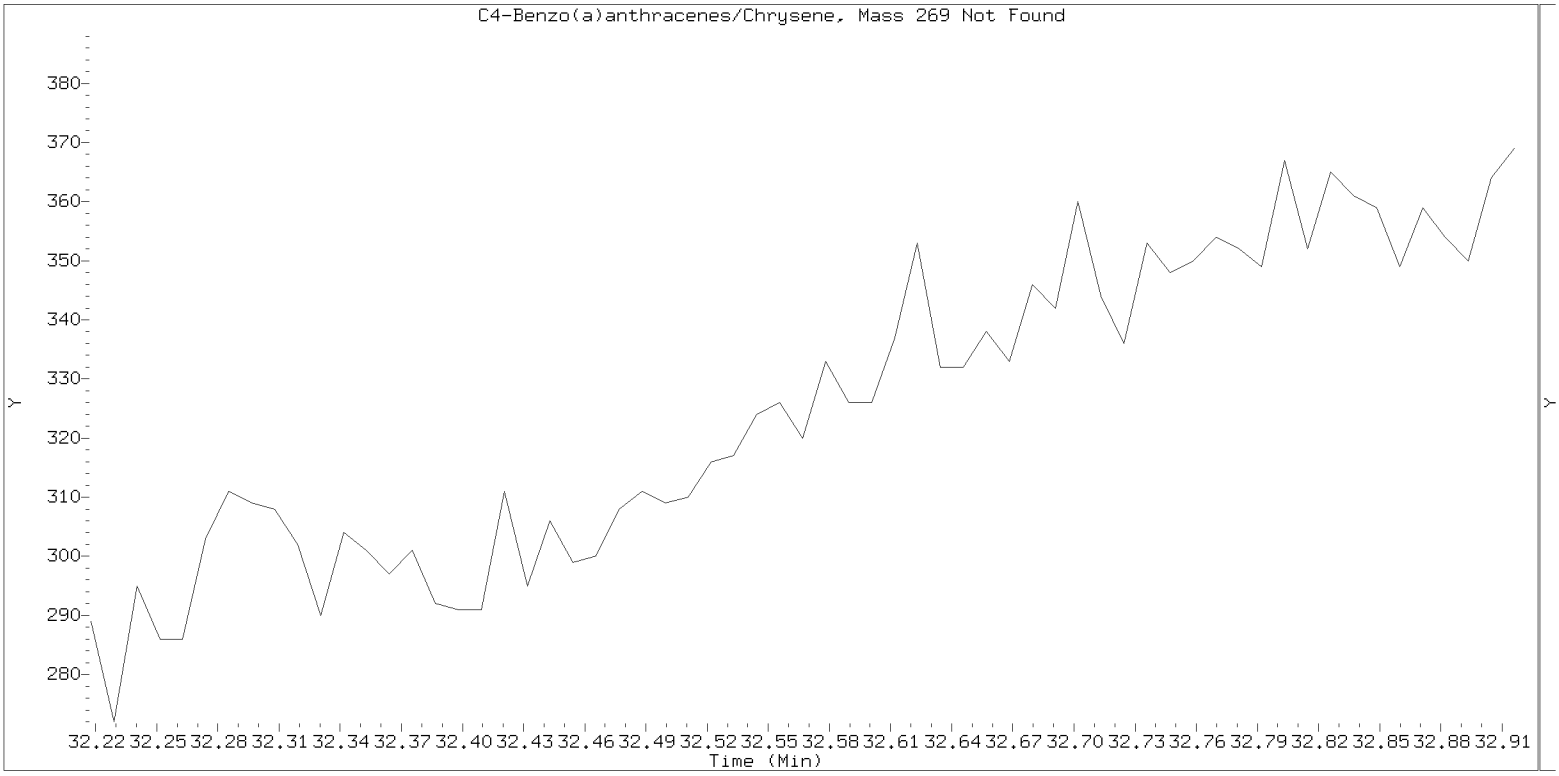


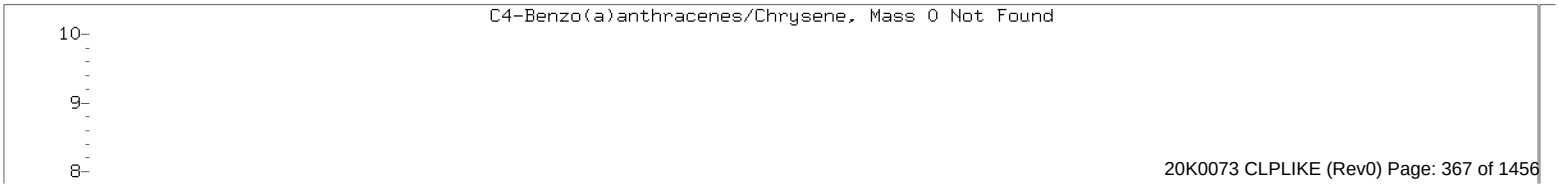


SIM ALKYL PNA RANGE ION WINDOWS - NT1420121210.D

Lab ID: BIK0323-BLK2
nt14.i, sim.b\ALKYLRANGE.m, 12-DEC-2020 18:23







SIM ALKYL PNA RANGE ION WINDOWS - NT1420121210.D

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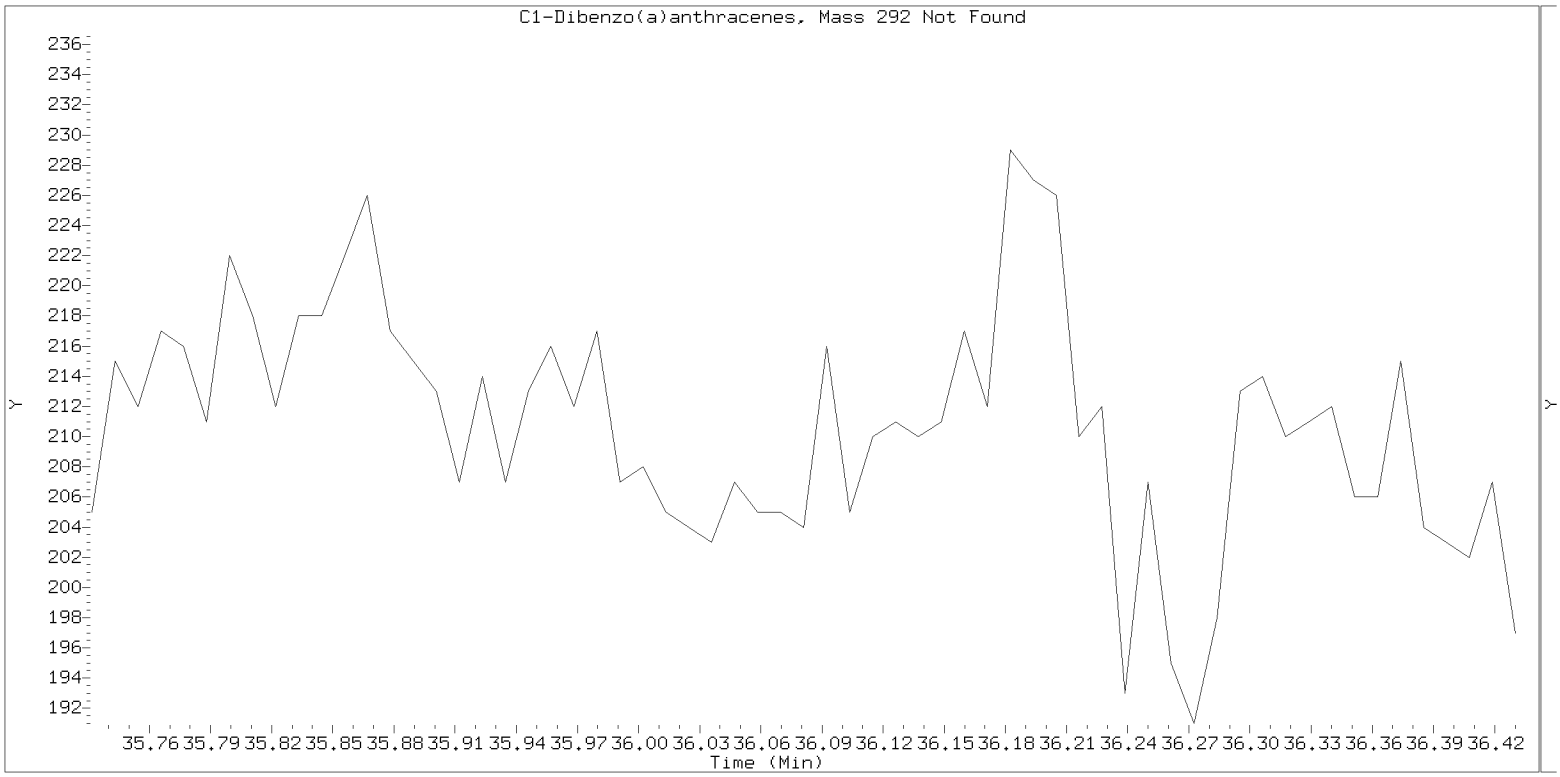

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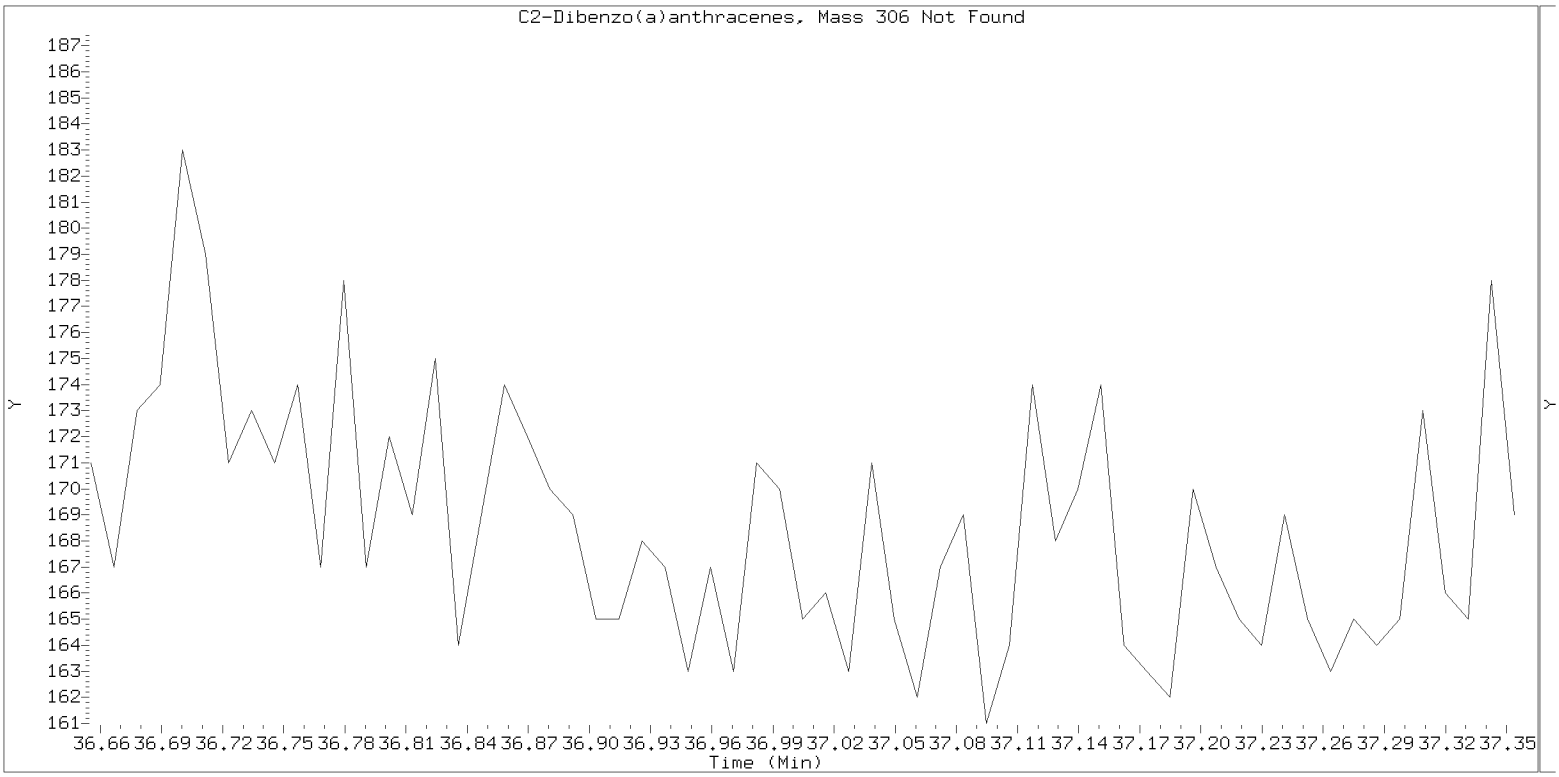

SIM ALKYL PNA RANGE ION WINDOWS - NT1420121210.D

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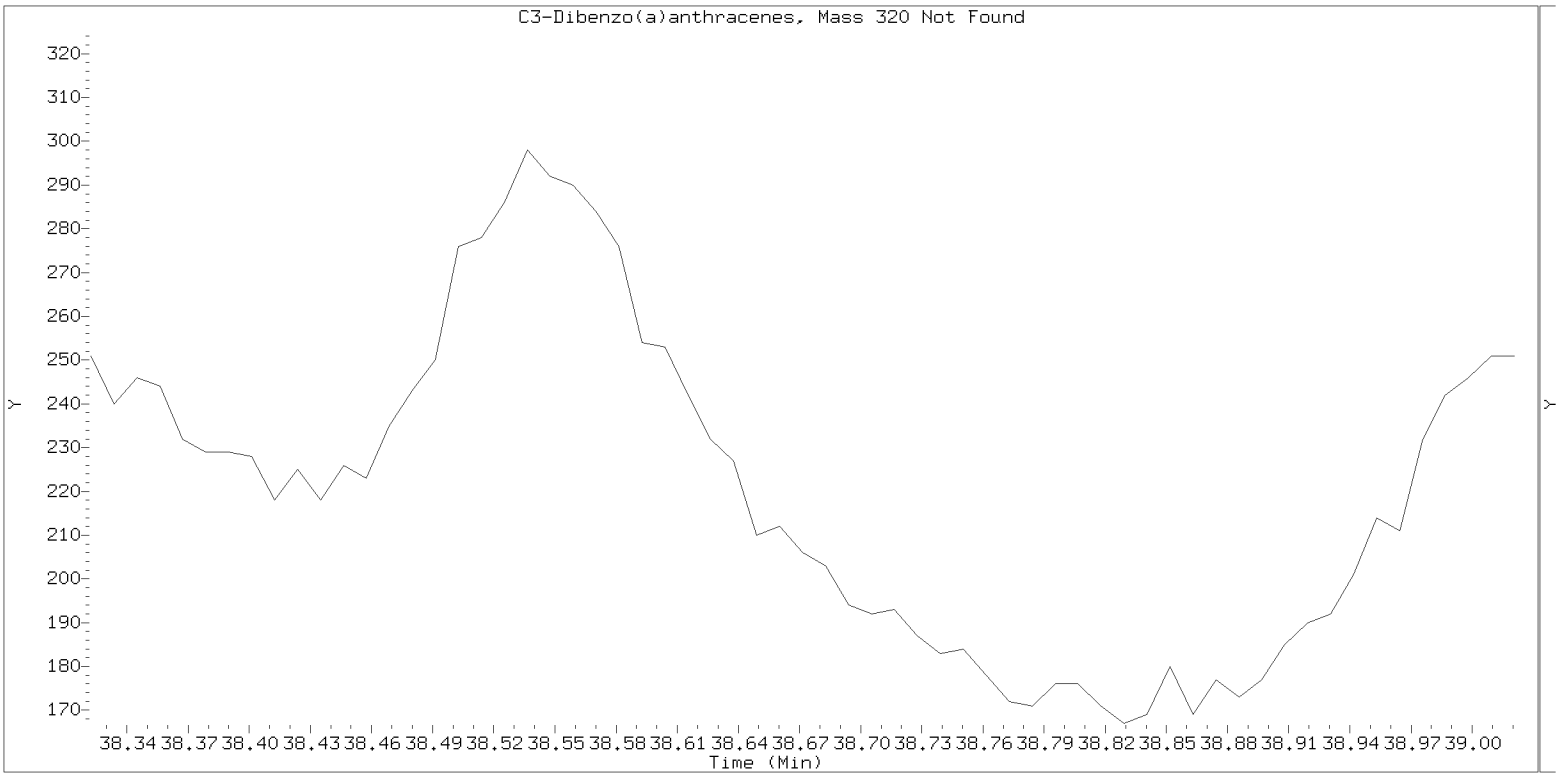


Analytical Resources, Incorporated
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Matrix:	Solid	Analyzed:	12/12/20 19:11
Batch:	BIK0323	Laboratory ID:	BIK0323-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	10 g / 0.5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
trans-Decalin	150	76.8	Q	51.2	30 - 160
cis-Decalin	150	79.6	Q	53.1	30 - 160
Naphthalene	150	86.8		57.8	37 - 120
1-Methylnaphthalene	150	85.8		57.2	30 - 160
2-Methylnaphthalene	150	89.3		59.5	37 - 120
Biphenyl	150	89.7		59.8	30 - 160
2,6-Dimethylnaphthalene	150	93.2		62.1	30 - 160
Acenaphthylene	150	81.3		54.2	35 - 120
Acenaphthene	150	94.4		62.9	39 - 120
Dibenzofuran	150	94.5		63.0	39 - 120
2,3,5-Trimethylnaphthalene	150	98.3		65.5	30 - 160
Fluorene	150	99.1		66.0	42 - 120
Benzo(b)thiophene	150	83.9		56.0	30 - 160
Phenanthrene	150	116		77.1	47 - 120
Anthracene	150	96.1		64.0	41 - 120
Carbazole	150	116		77.1	30 - 160
1-Methylphenanthrene	150	124		82.6	30 - 160
Fluoranthene	150	129		85.9	52 - 120
Dibenzothiophene	150	102		68.2	30 - 160
Pyrene	150	128		85.1	47 - 120
Benzo(a)anthracene	150	125		83.0	47 - 120
Chrysene	150	126		83.9	51 - 120
Benzo(b)fluoranthene	150	139		92.5	35 - 127
Benzo(j)fluoranthene	150	123		82.2	40 - 120
Benzo(k)fluoranthene	150	110		73.4	37 - 129
Benzofluoranthenes, Total	450	375		83.2	46 - 120
Benzo(e)pyrene	150	116		77.4	30 - 160
Benzo(a)pyrene	150	85.3		56.9	44 - 120
Indeno(1,2,3-cd)pyrene	150	94.9	Q	63.3	41 - 120
Dibenzo(a,h)anthracene	150	92.7	Q	61.8	42 - 120
Benzo(g,h,i)perylene	150	65.6		43.7	37 - 120
Perylene	150	82.8		55.2	30 - 160
Benzo(b)naphtho(2,1-d)thiophene	150	112		74.4	30 - 160

* Indicates values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Matrix:	Solid	Analyzed:	12/12/20 19:11
Batch:	BIK0323	Laboratory ID:	BIK0323-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	10 g / 0.5 mL		

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

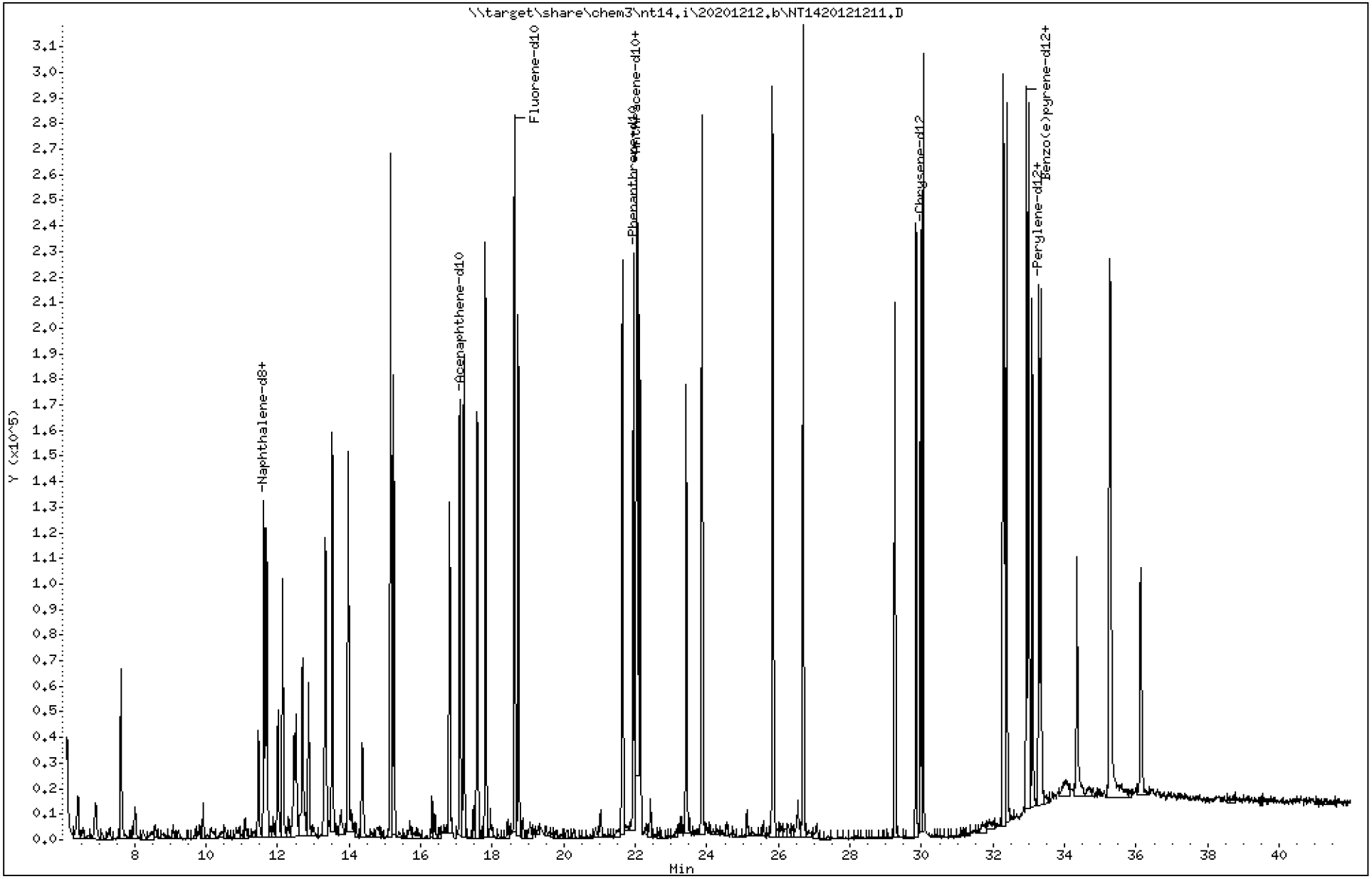
Instrument: nt14.i

Sample Info: BIK0323-BS1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



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Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

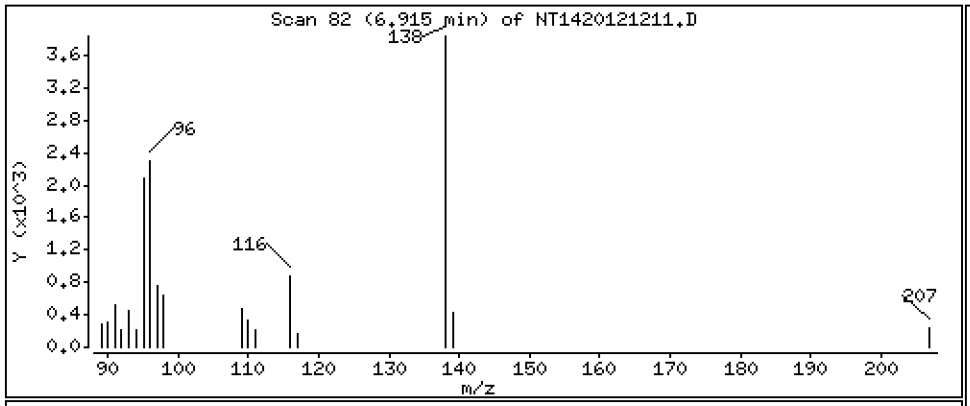
Operator: VTS

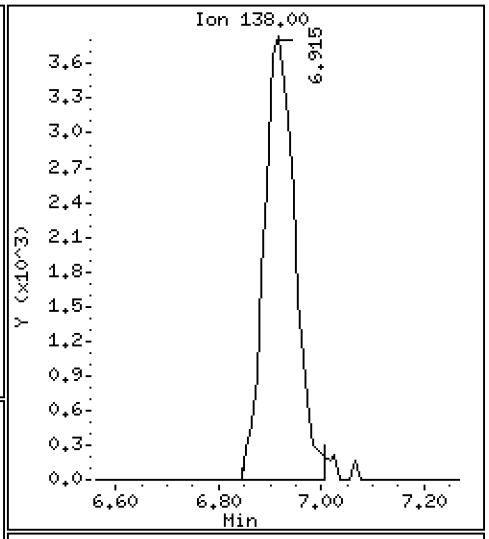
Column phase: Rxi-17Sil MS

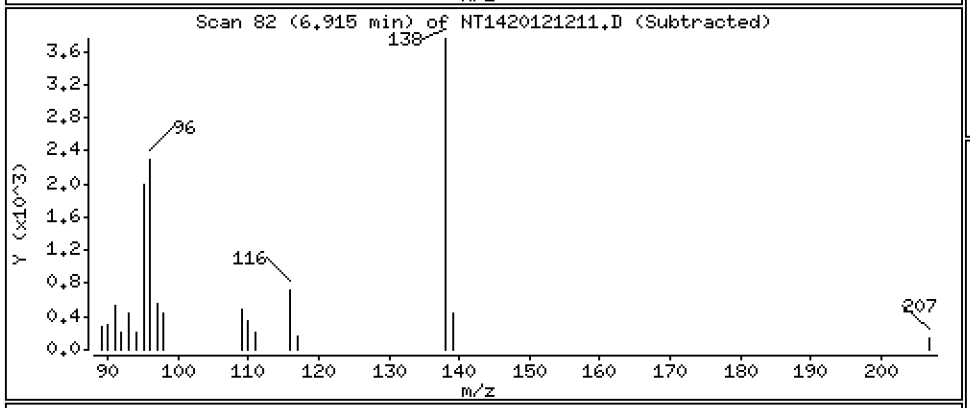
Column diameter: 0.25

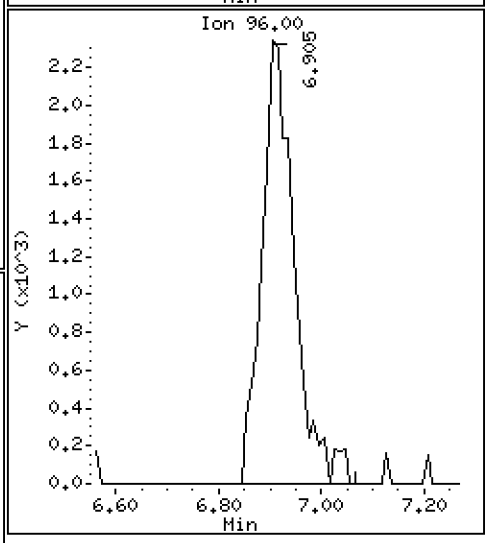
1 trans-Decalin

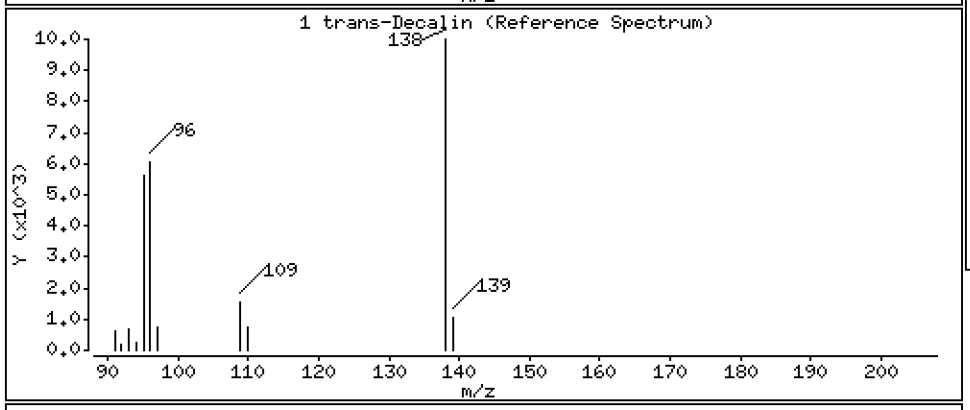
Concentration: 1.536 ug/mL

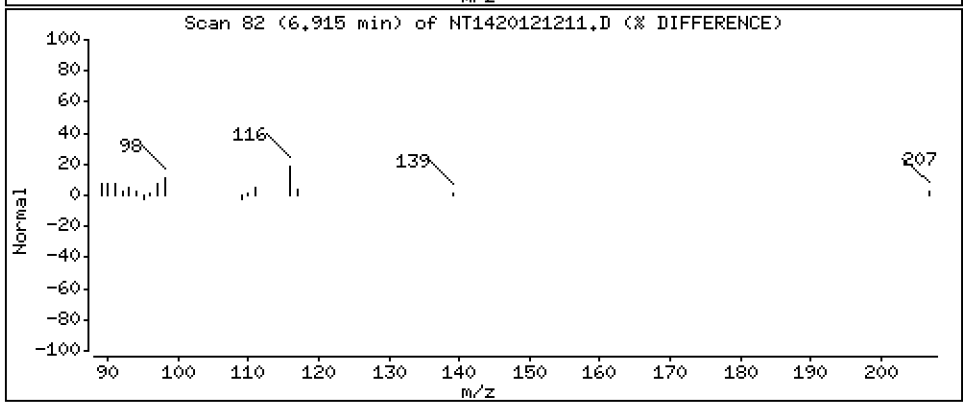












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Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

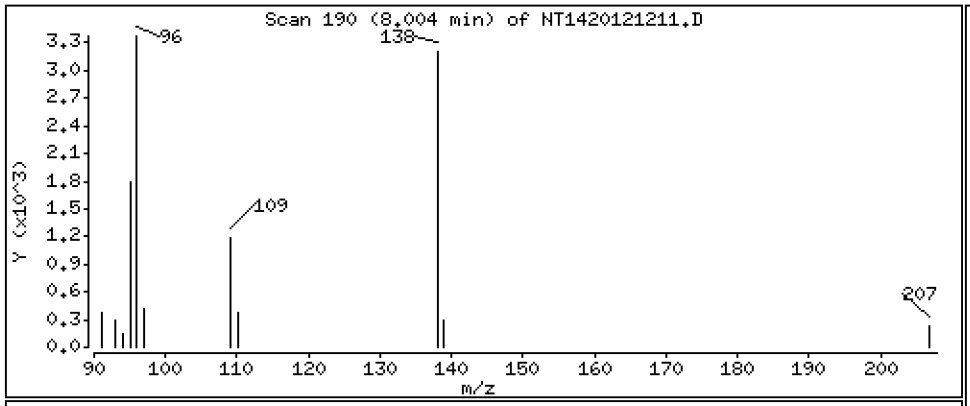
Operator: VTS

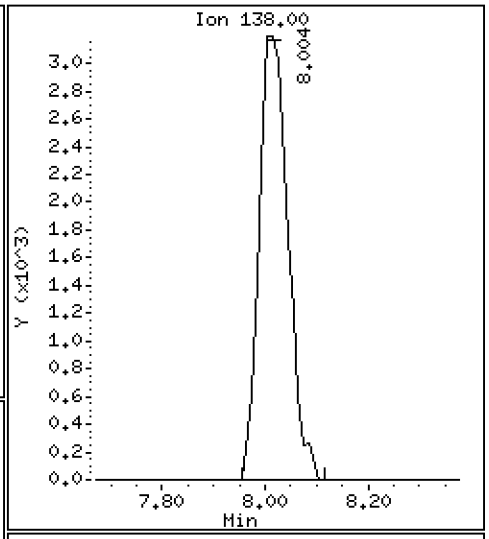
Column phase: Rxi-17Sil MS

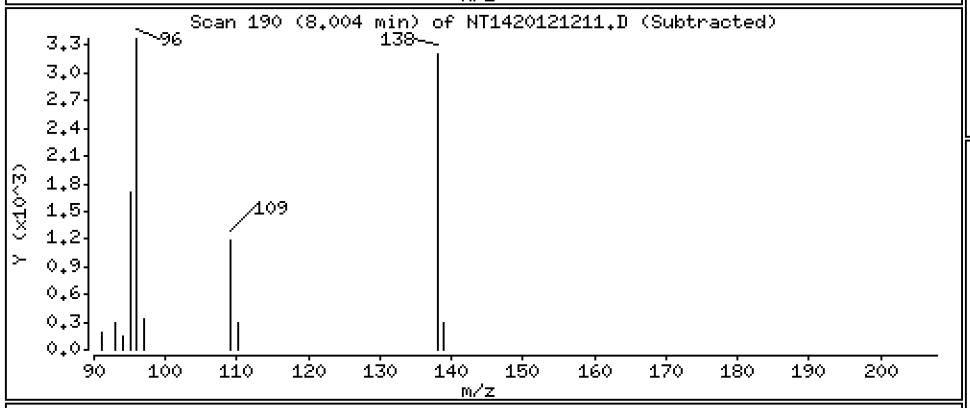
Column diameter: 0.25

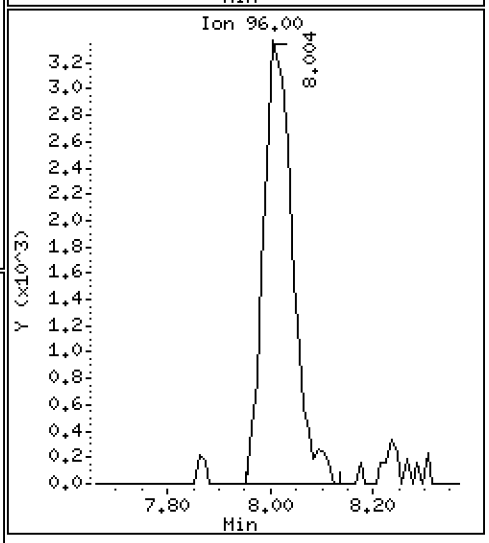
2 cis-Decalin

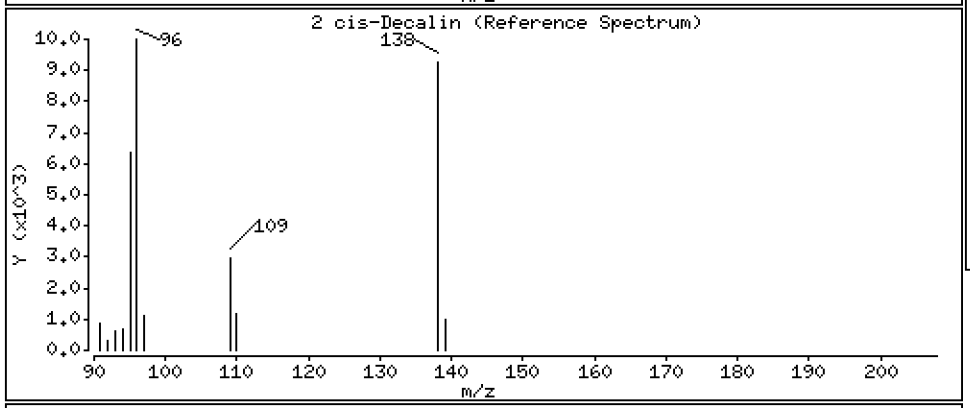
Concentration: 1.592 ug/mL

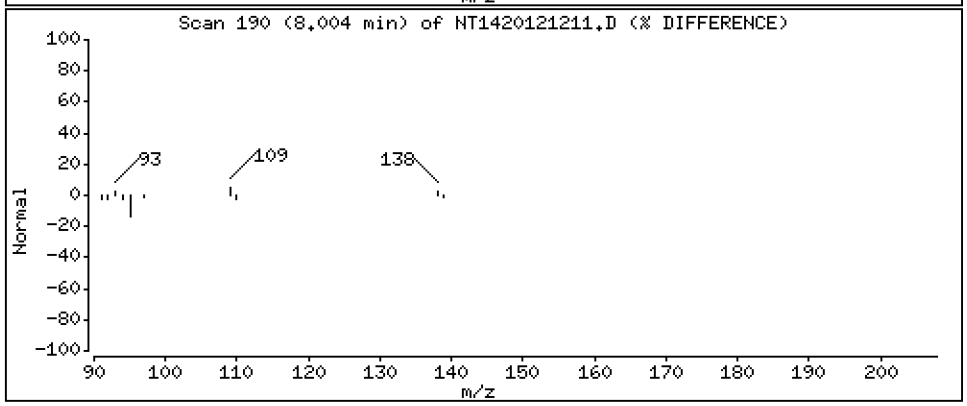












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Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

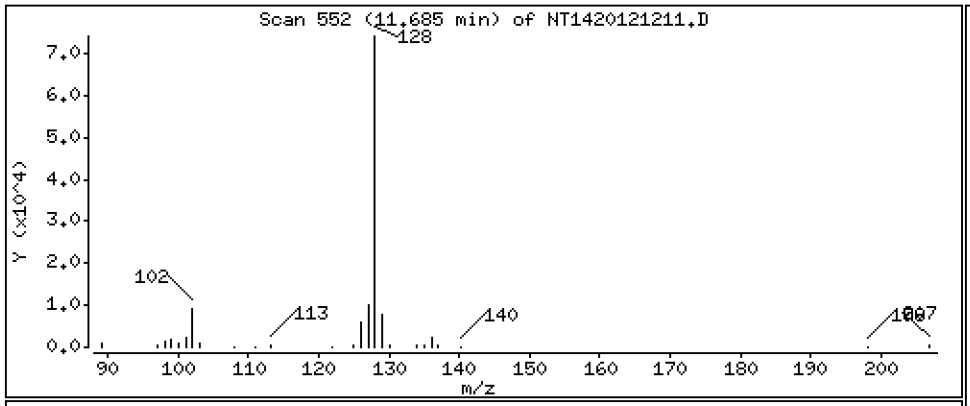
Operator: VTS

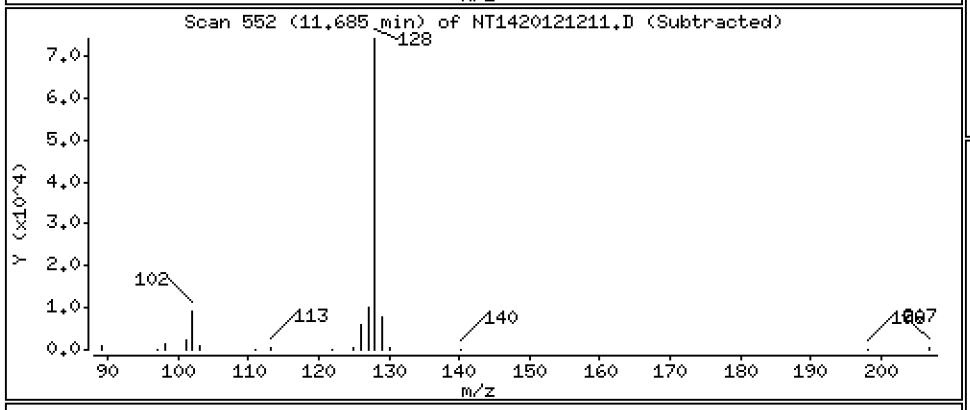
Column phase: Rxi-17Sil MS

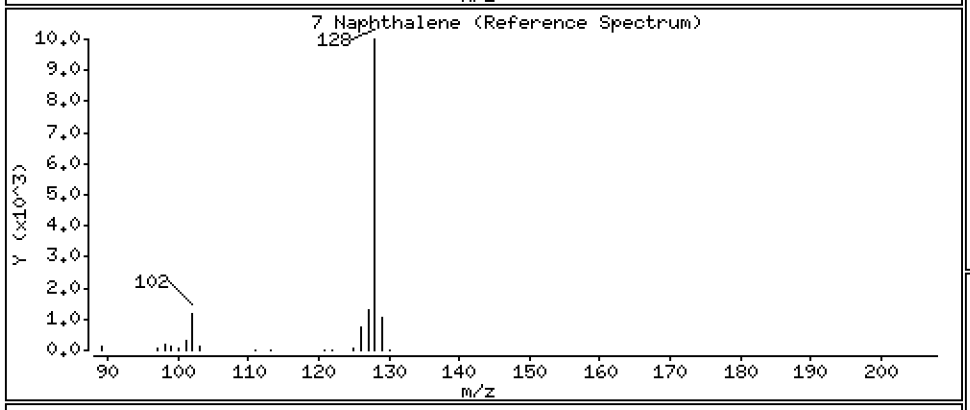
Column diameter: 0.25

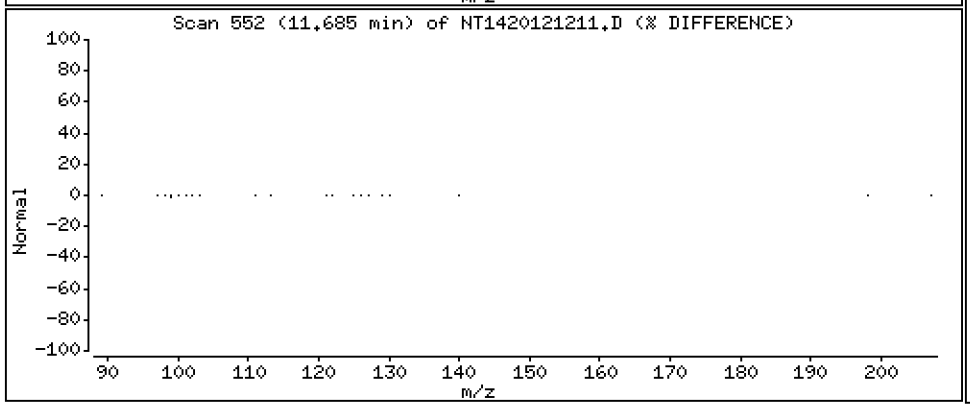
7 Naphthalene

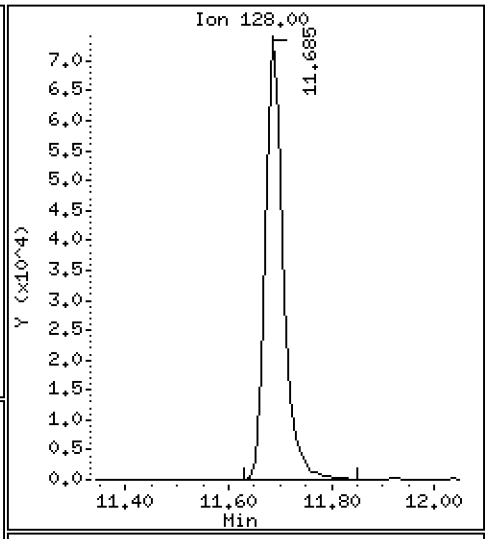
Concentration: 1.735 ug/mL

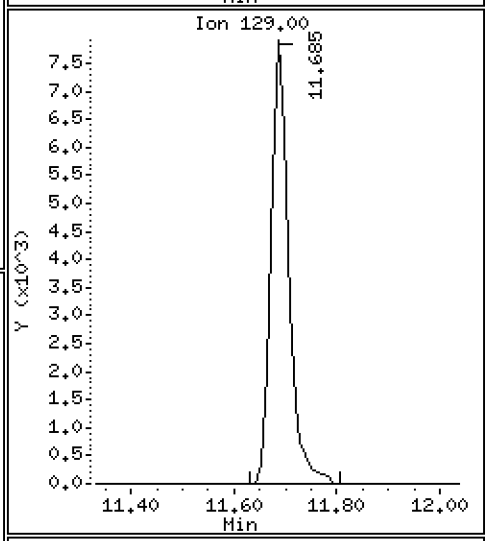


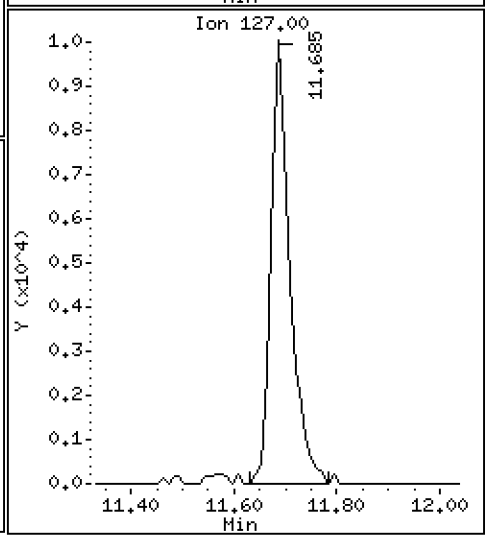












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Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

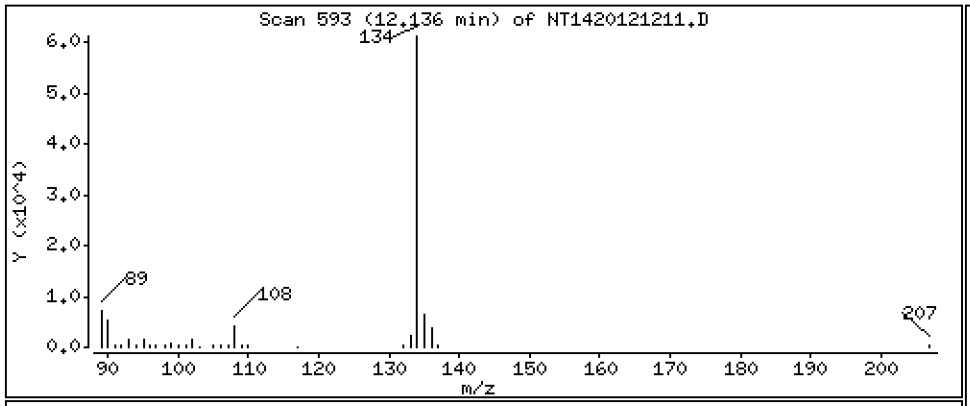
Operator: VTS

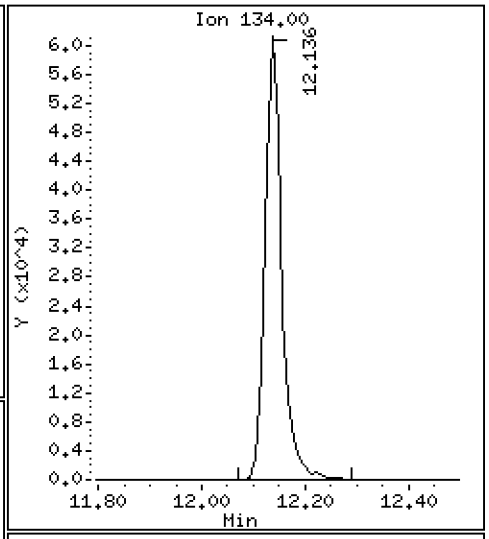
Column phase: Rxi-17Sil MS

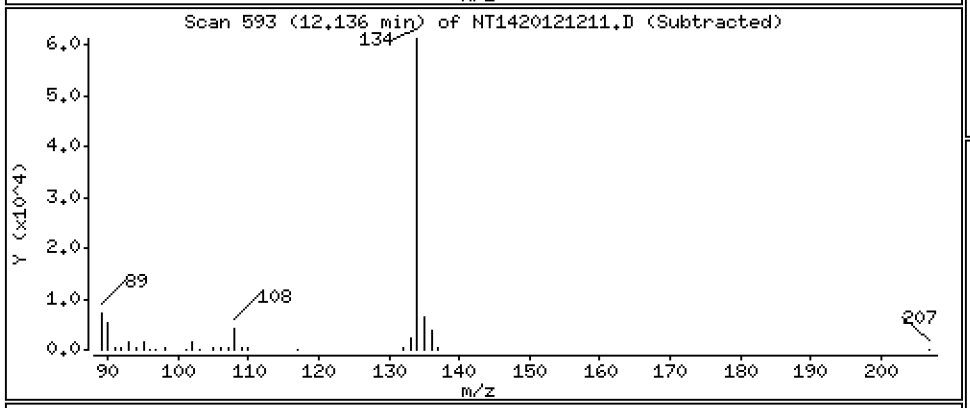
Column diameter: 0.25

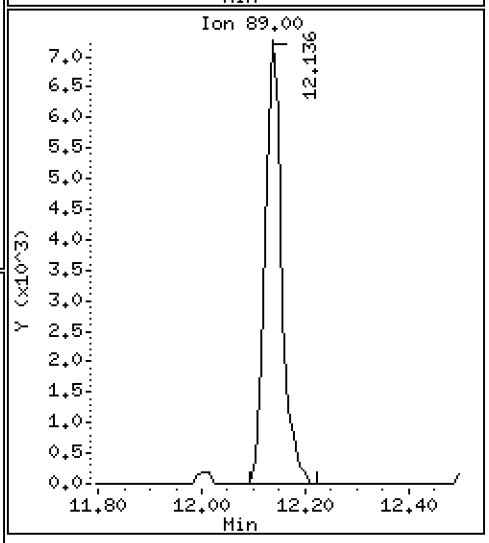
12 Benzo(b)thiophene

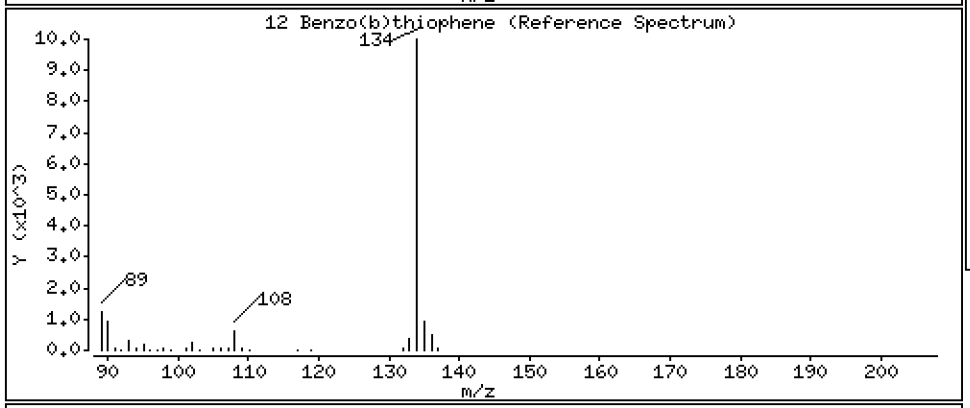
Concentration: 1.679 ug/mL

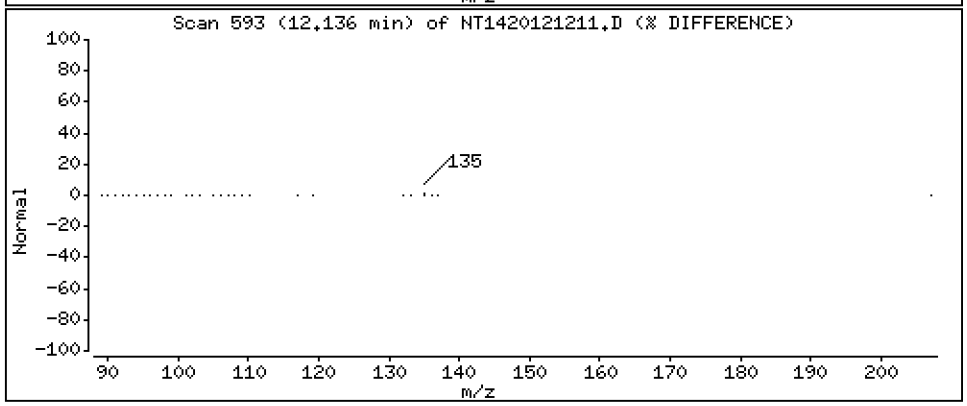












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

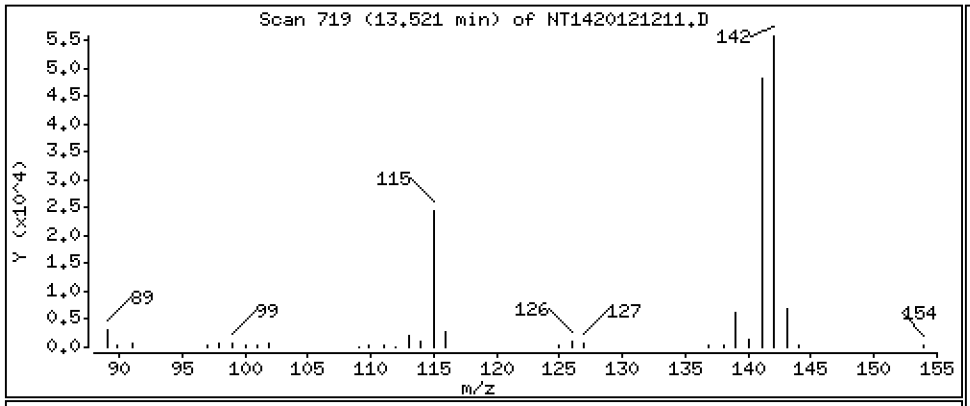
Client ID: Instrument: nt14.i

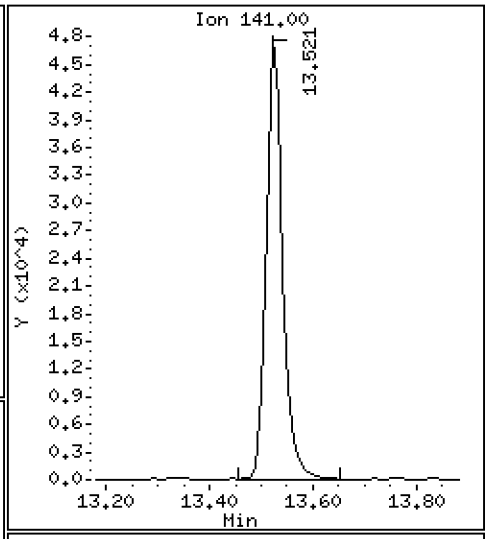
Sample Info: BIK0323-BS1

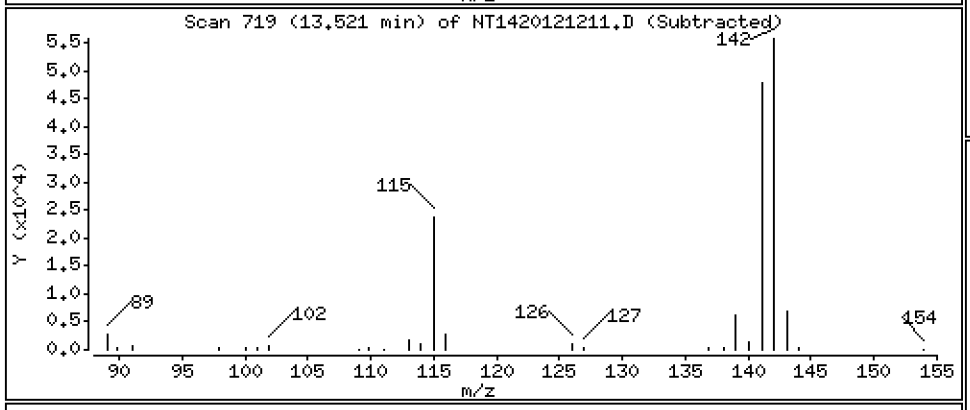
Operator: VTS

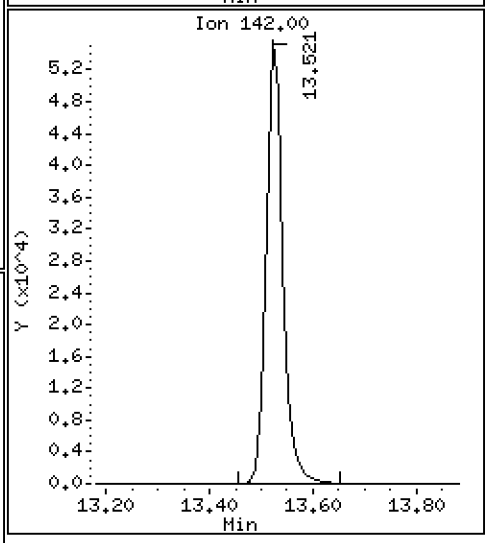
Column phase: Rxi-17Sil MS Column diameter: 0.25

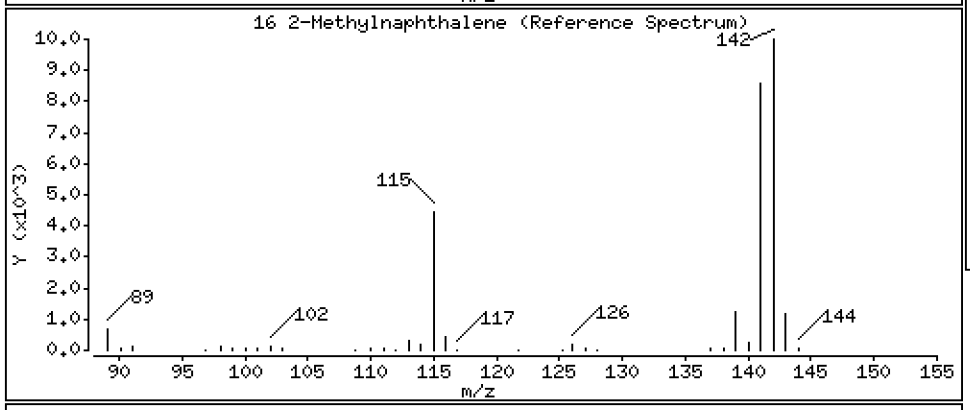
16 2-Methylnaphthalene Concentration: 1.785 ug/mL

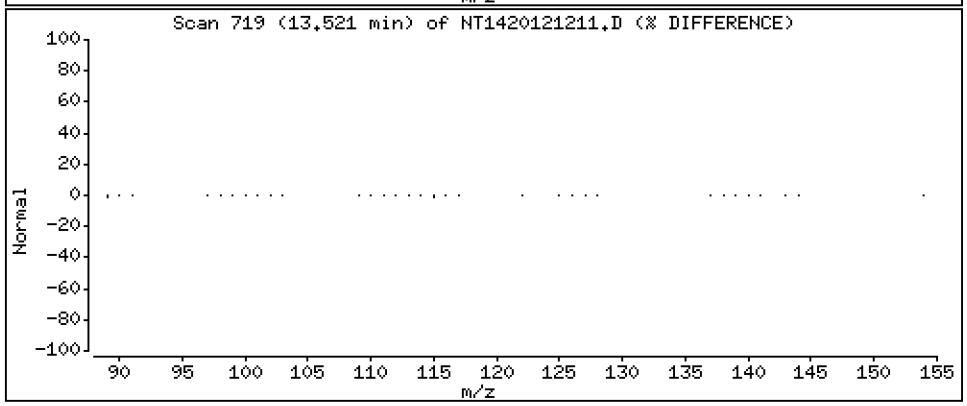












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Date : 12-DEC-2020 19:11

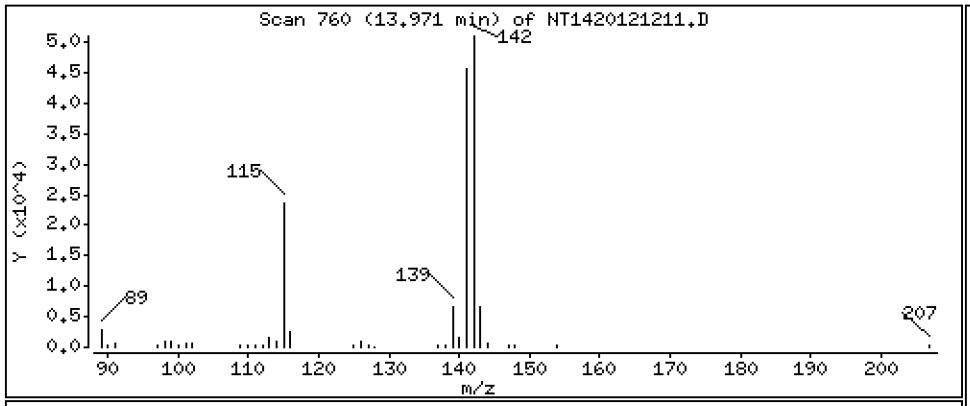
Client ID: Instrument: nt14.i

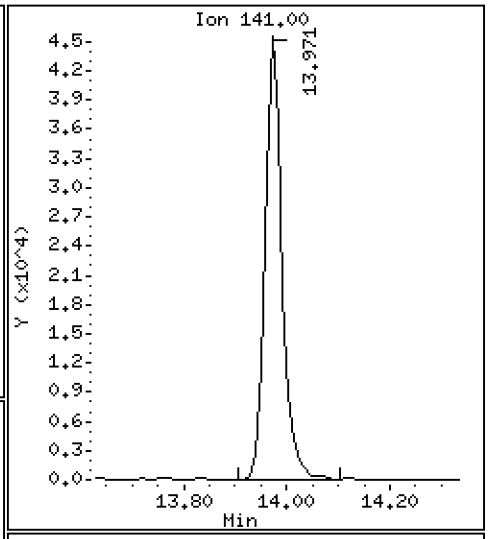
Sample Info: BIK0323-BS1

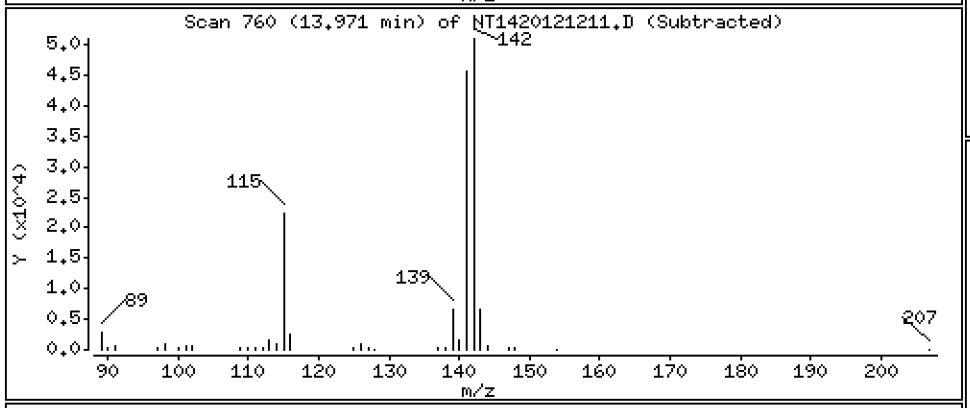
Operator: VTS

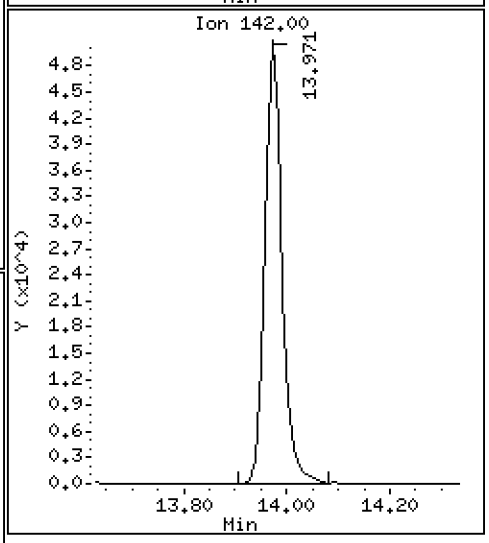
Column phase: Rxi-17Sil MS Column diameter: 0.25

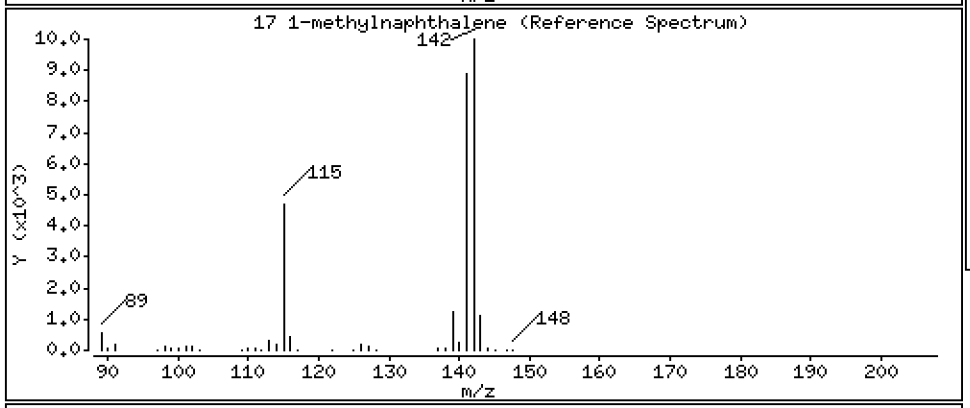
17 1-methylnaphthalene Concentration: 1.716 ug/mL

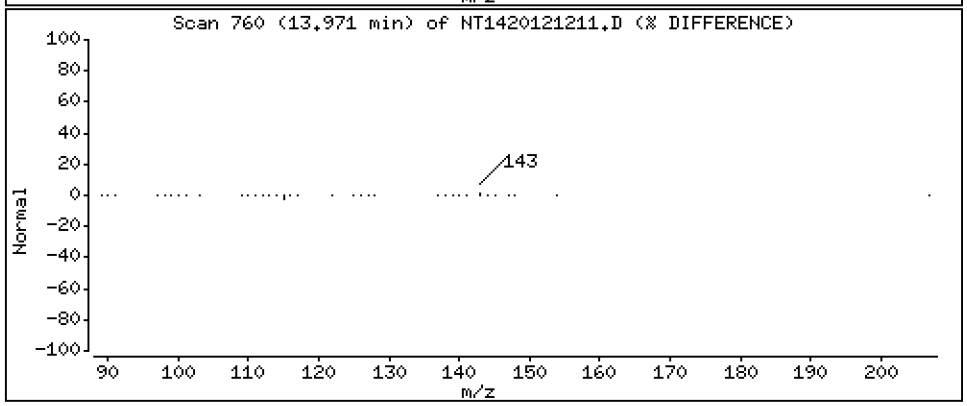












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

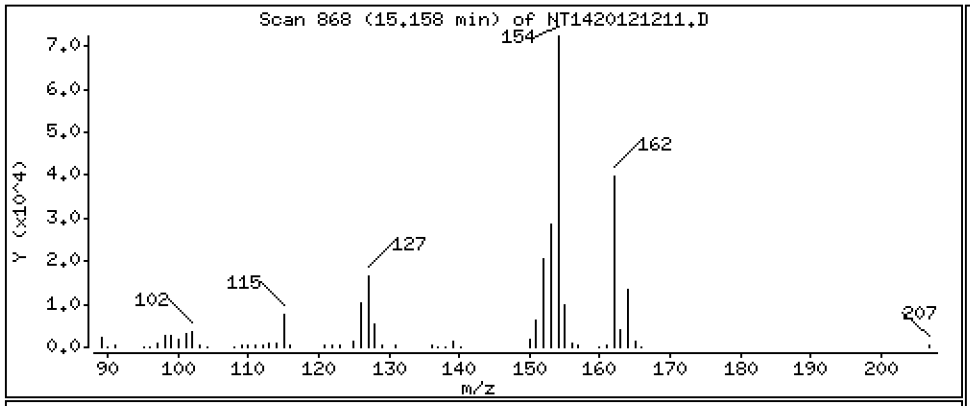
Operator: VTS

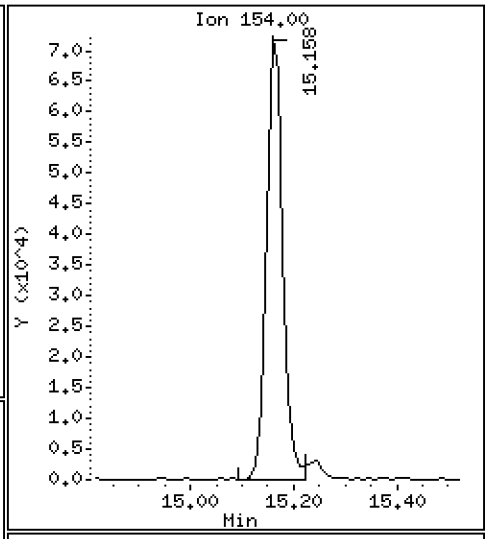
Column phase: Rxi-17Sil MS

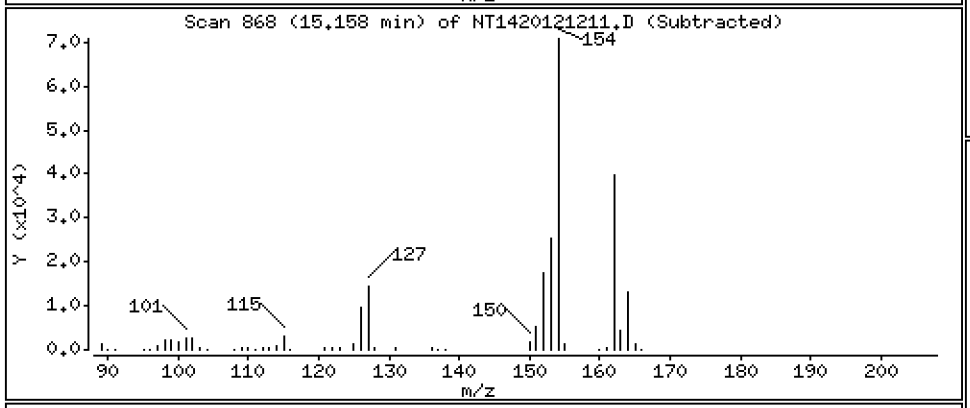
Column diameter: 0.25

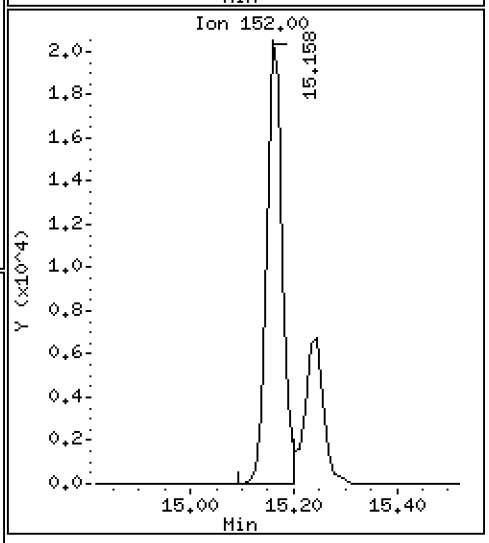
18 Biphenyl

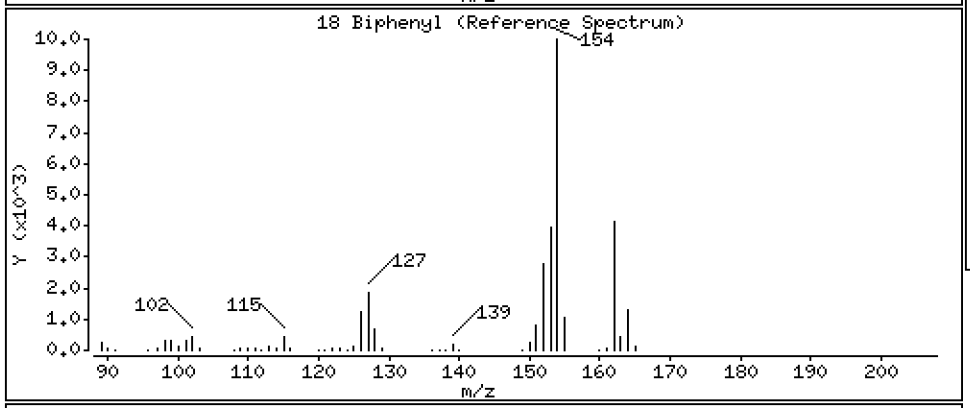
Concentration: 1.793 ug/mL

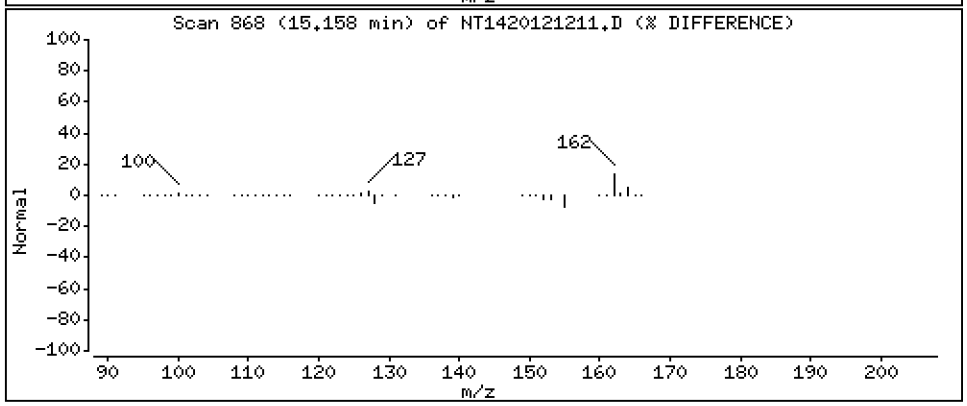












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Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

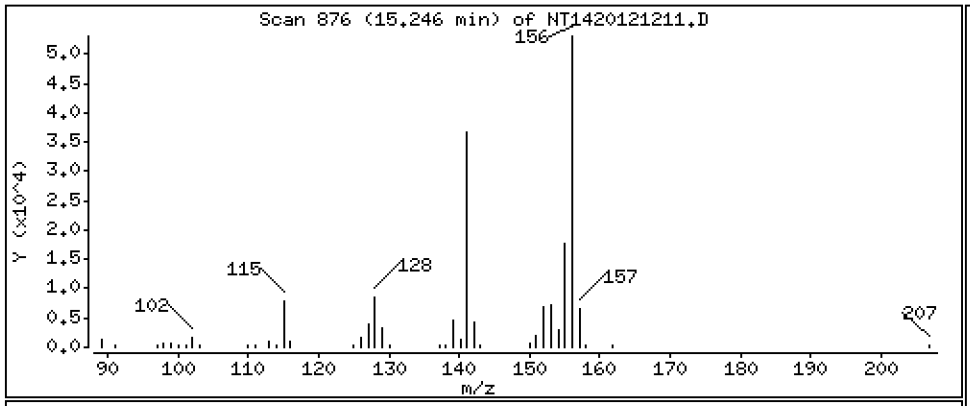
Operator: VTS

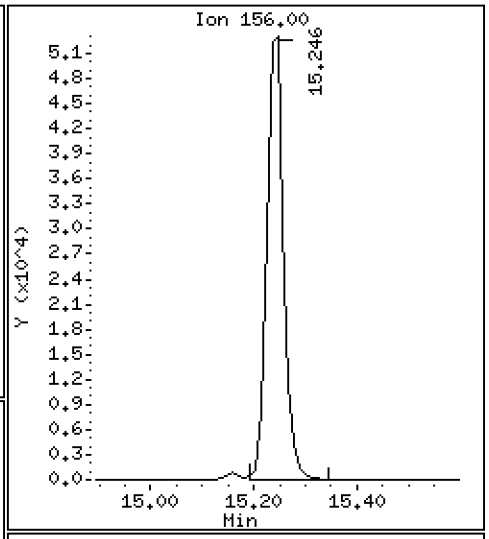
Column phase: Rxi-17Sil MS

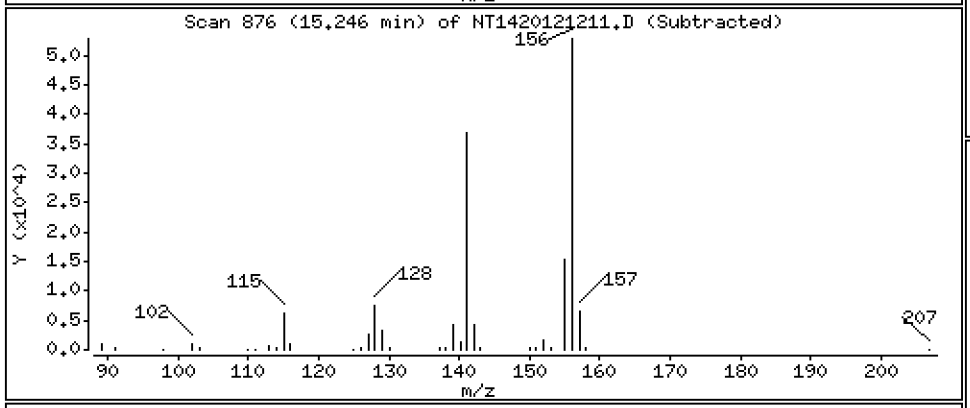
Column diameter: 0.25

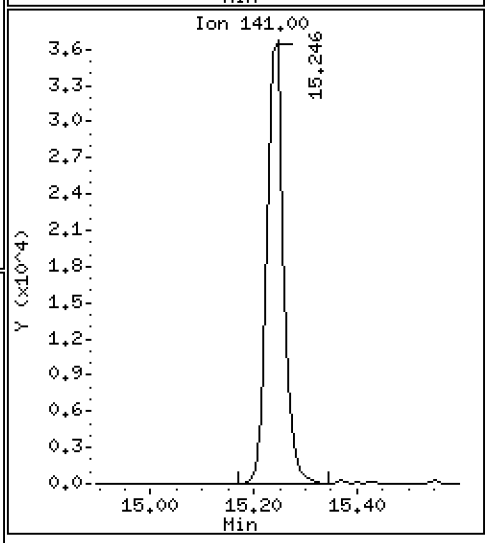
19 2,6-Dimethylnaphthalene

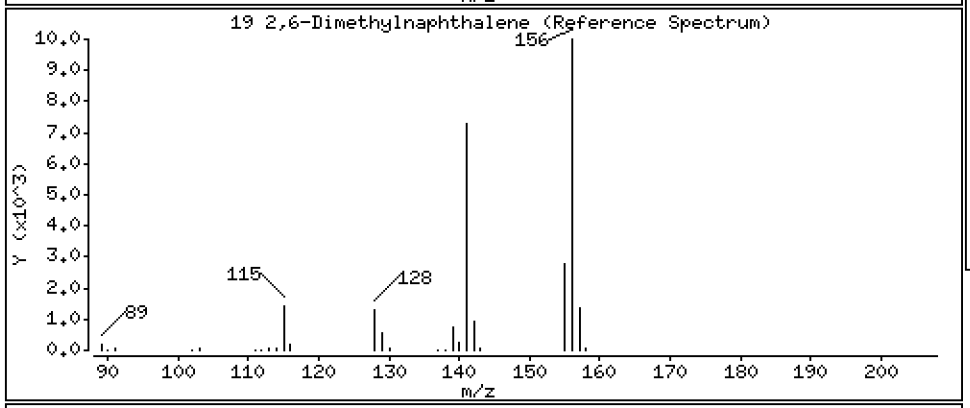
Concentration: 1.864 ug/mL

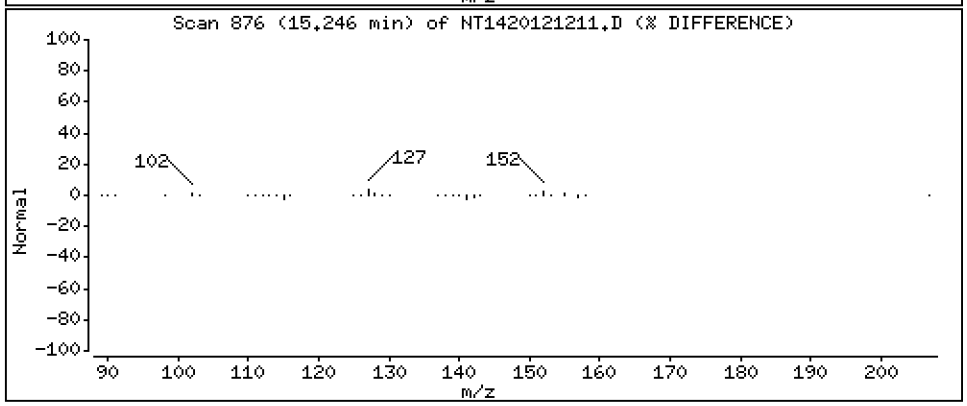












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

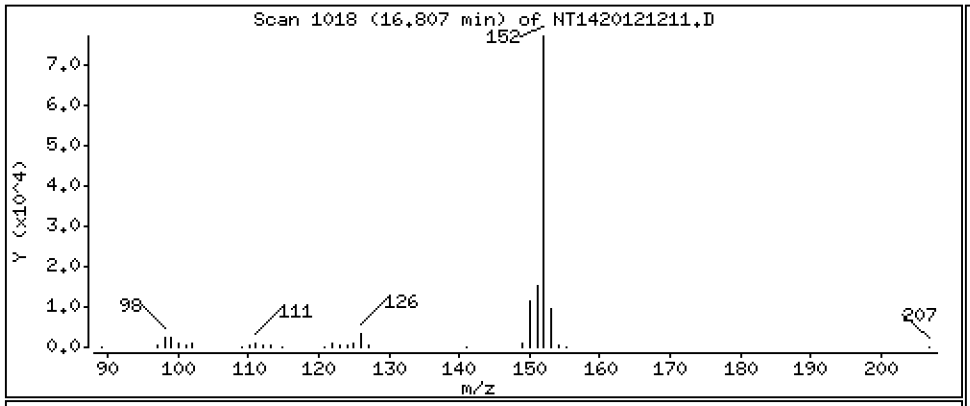
Operator: VTS

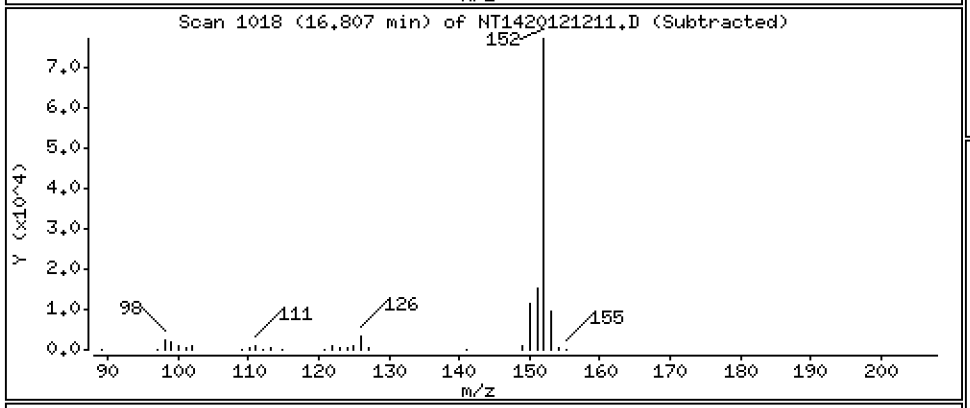
Column phase: Rxi-17Sil MS

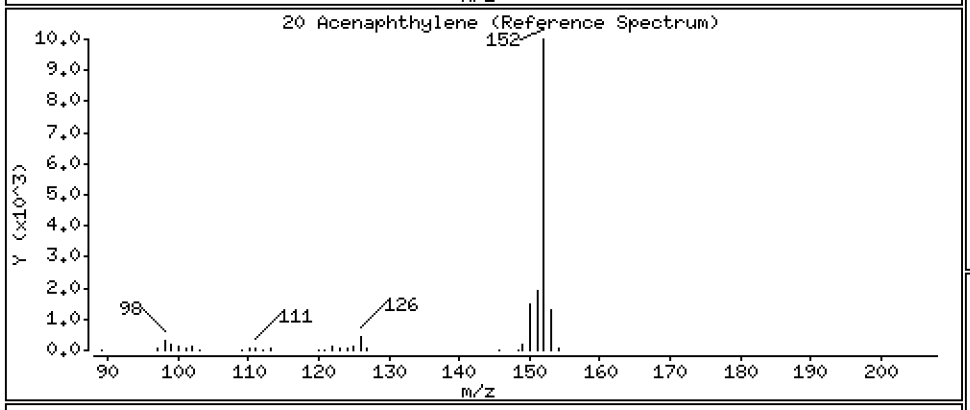
Column diameter: 0.25

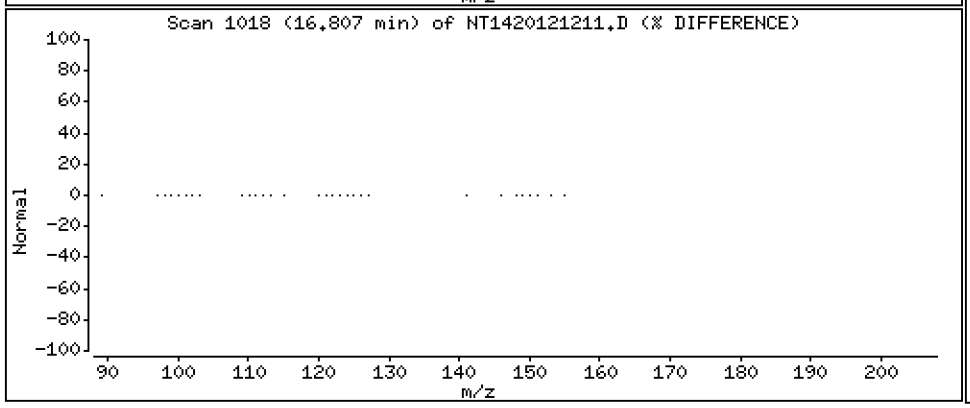
20 Acenaphthylene

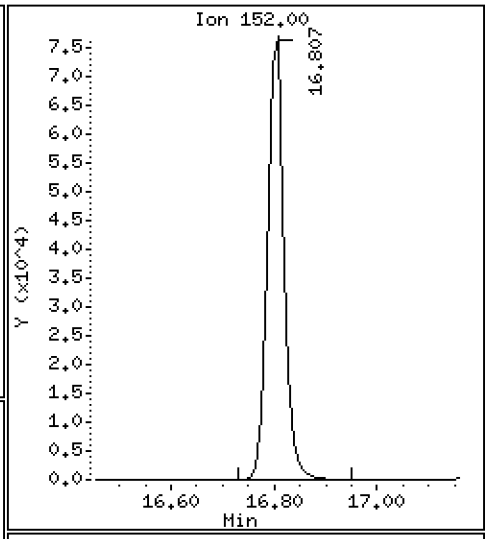
Concentration: 1.627 ug/mL

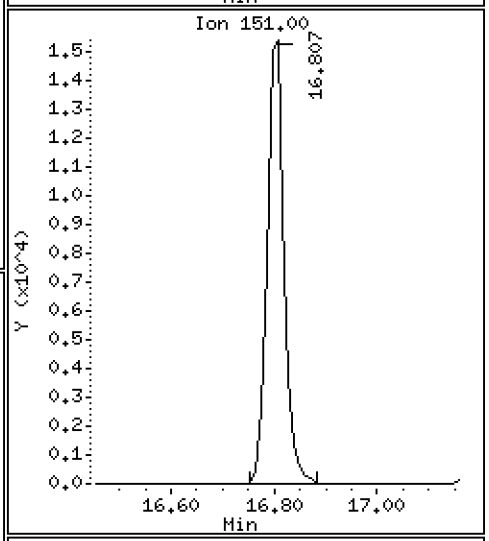


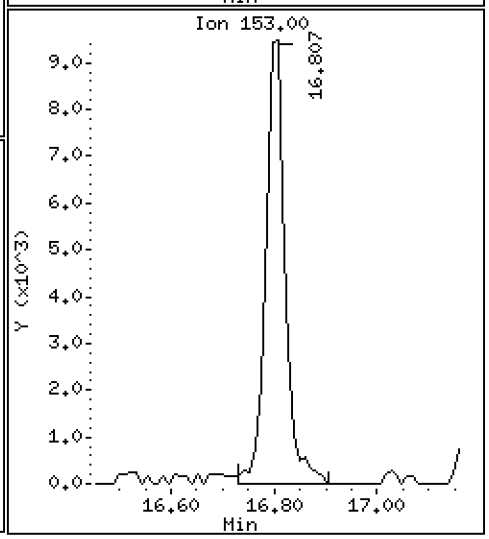












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Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

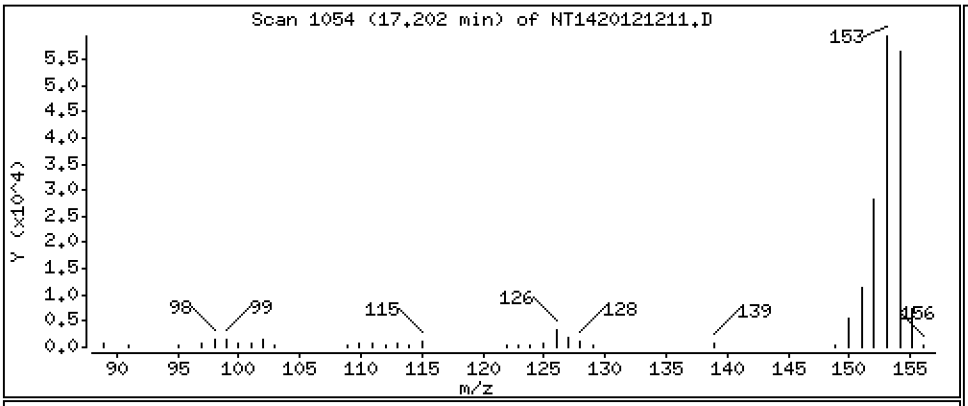
Operator: VTS

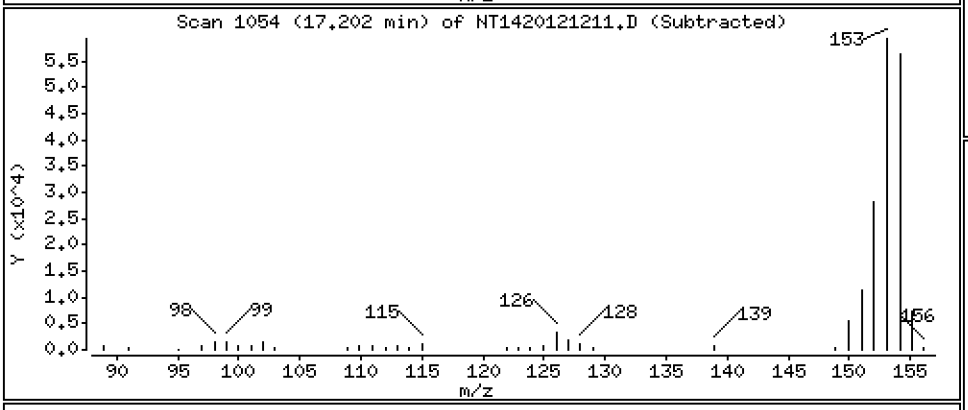
Column phase: Rxi-17Sil MS

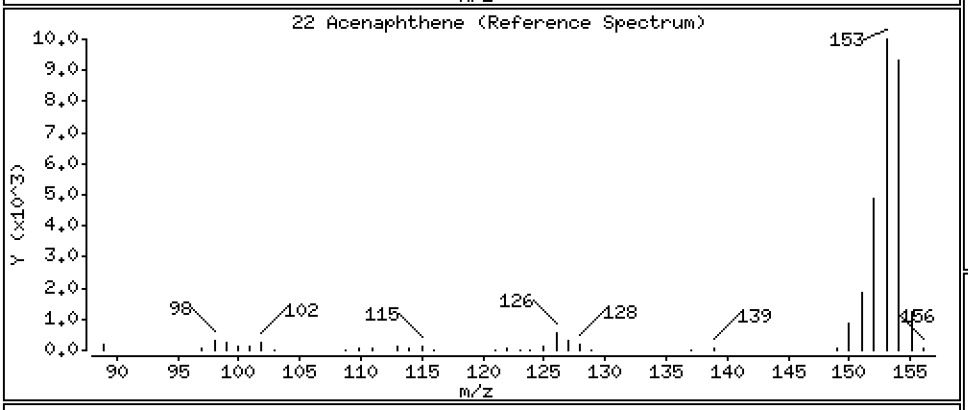
Column diameter: 0.25

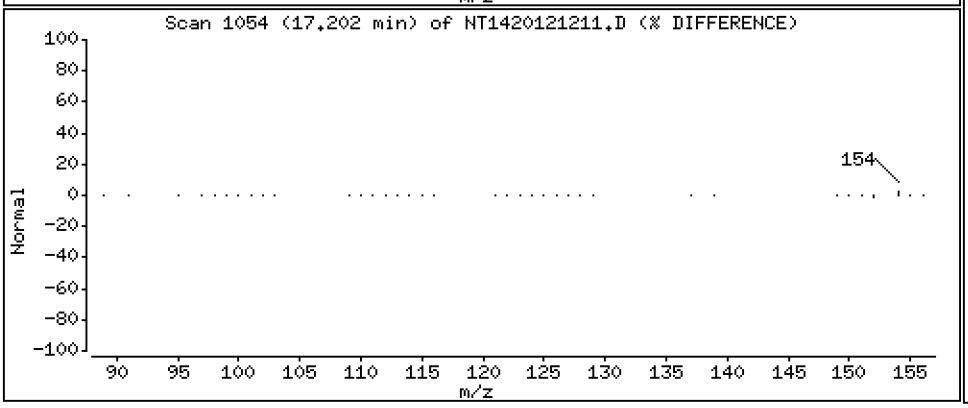
22 Acenaphthene

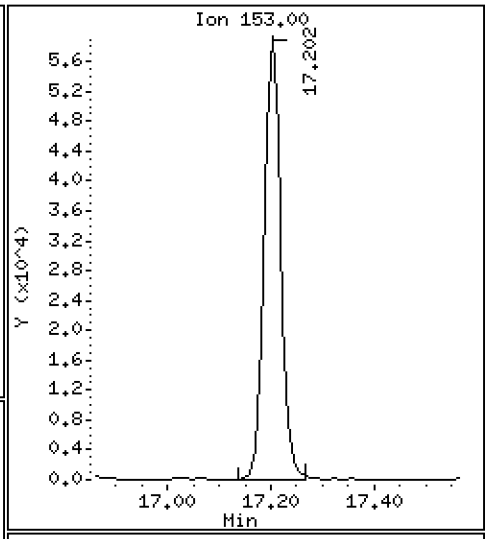
Concentration: 1.887 ug/mL

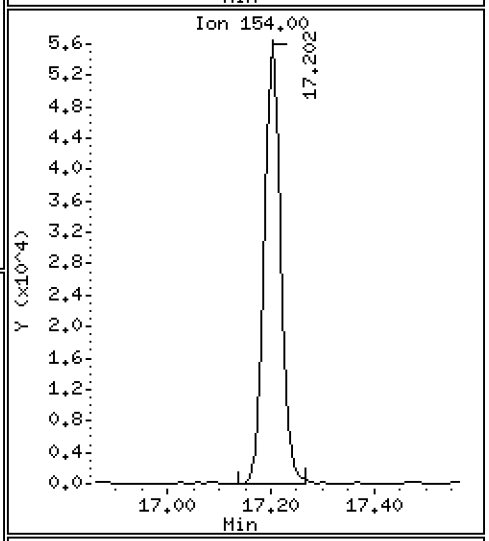


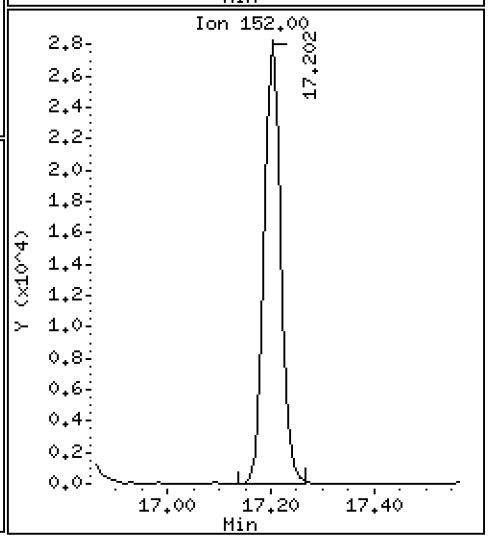












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Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

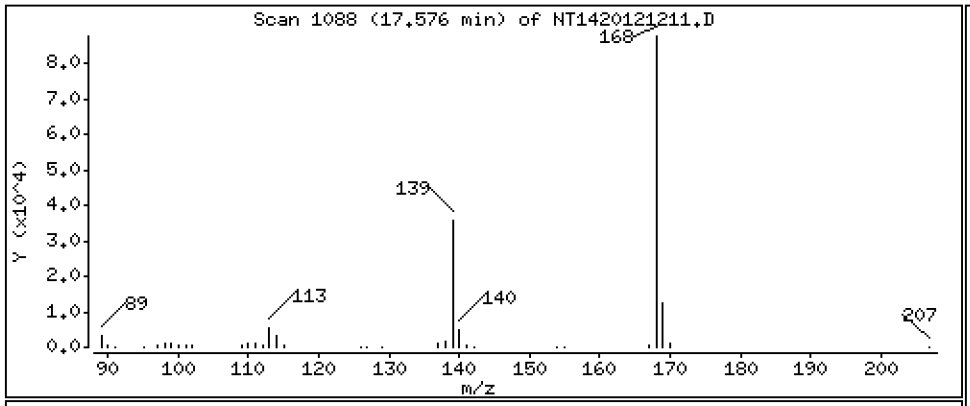
Operator: VTS

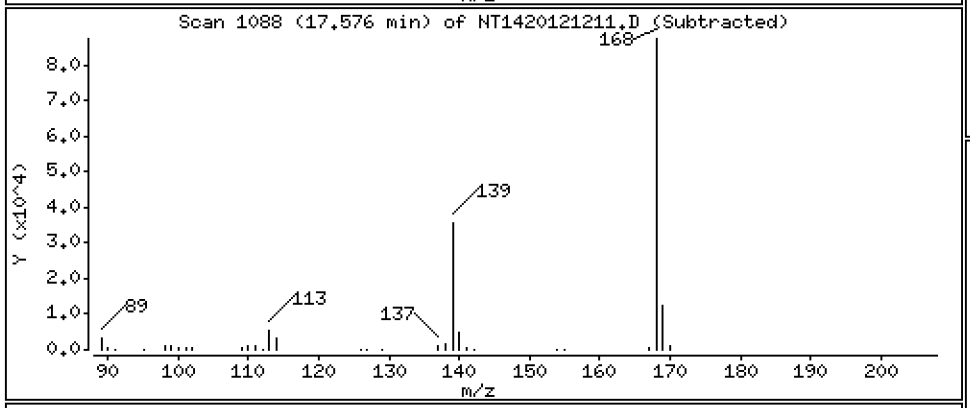
Column phase: Rxi-17Sil MS

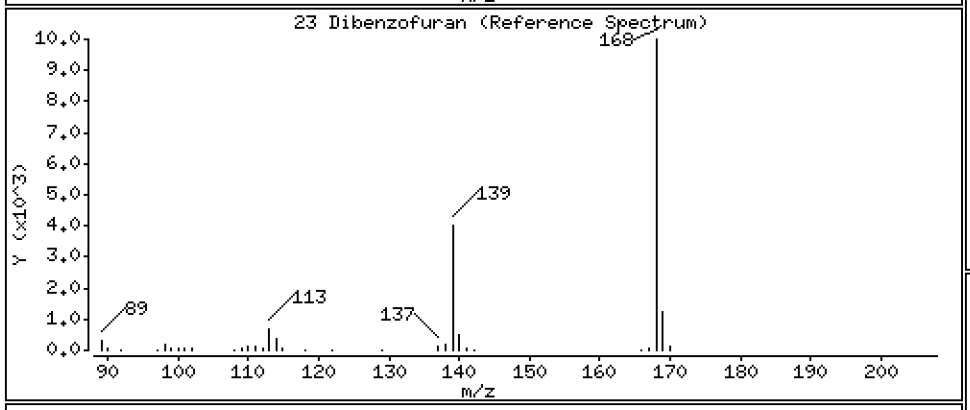
Column diameter: 0.25

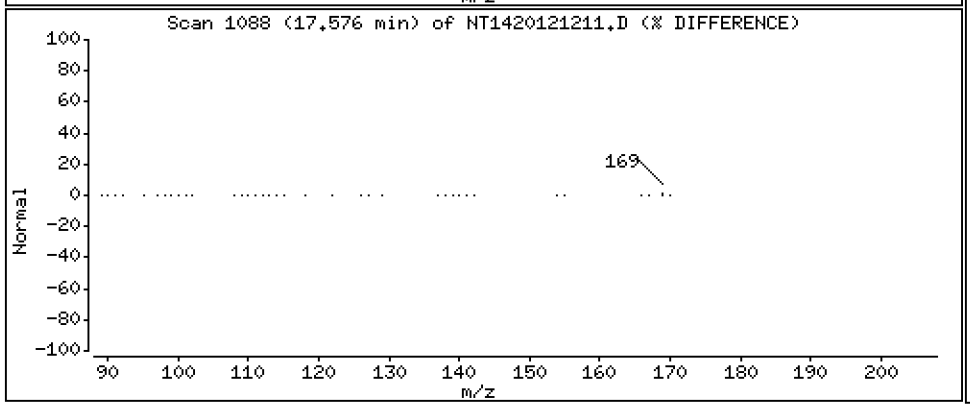
23 Dibenzofuran

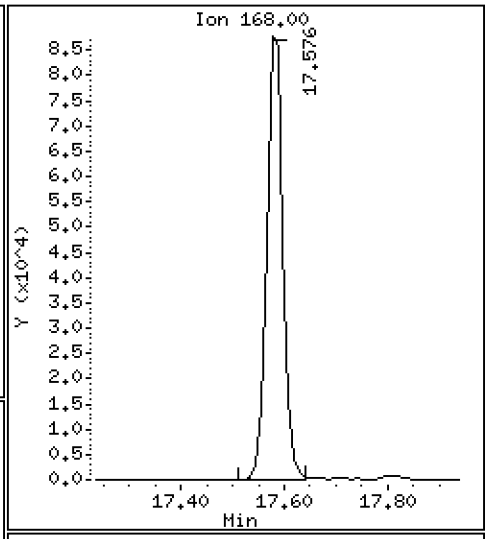
Concentration: 1.890 ug/mL

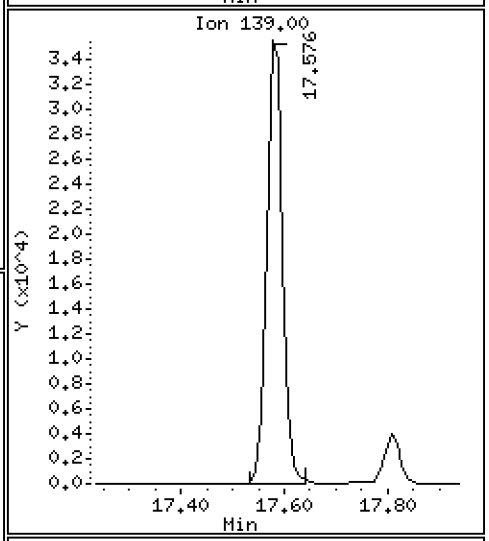


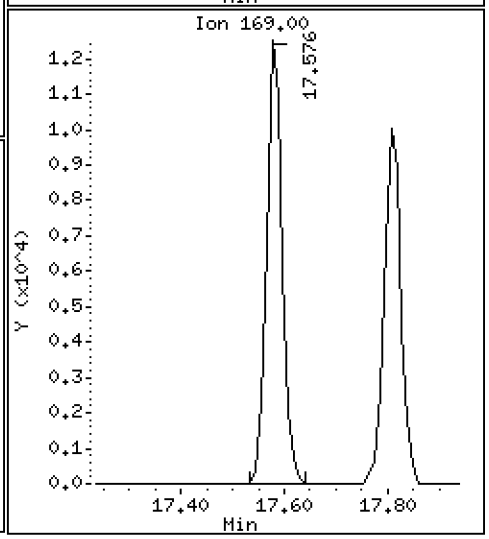












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Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

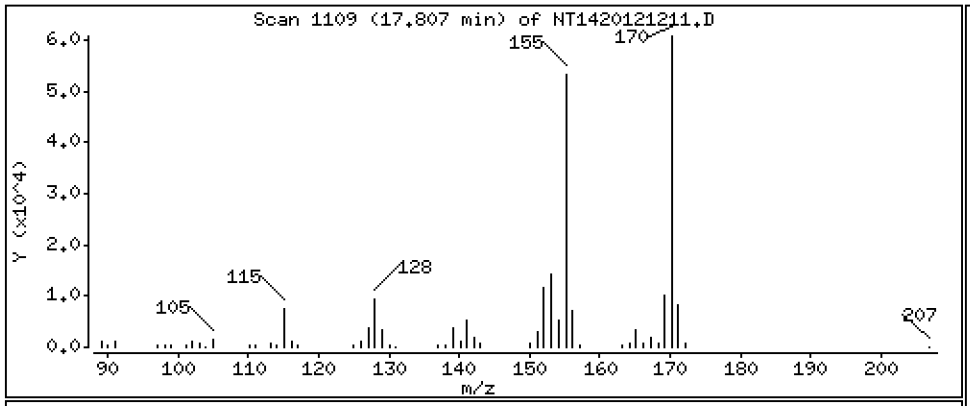
Operator: VTS

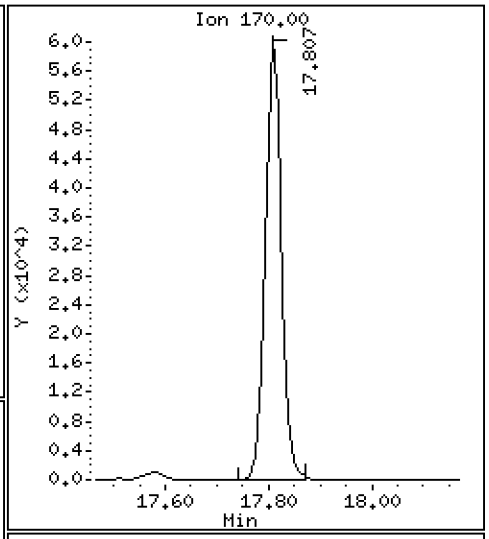
Column phase: Rxi-17Sil MS

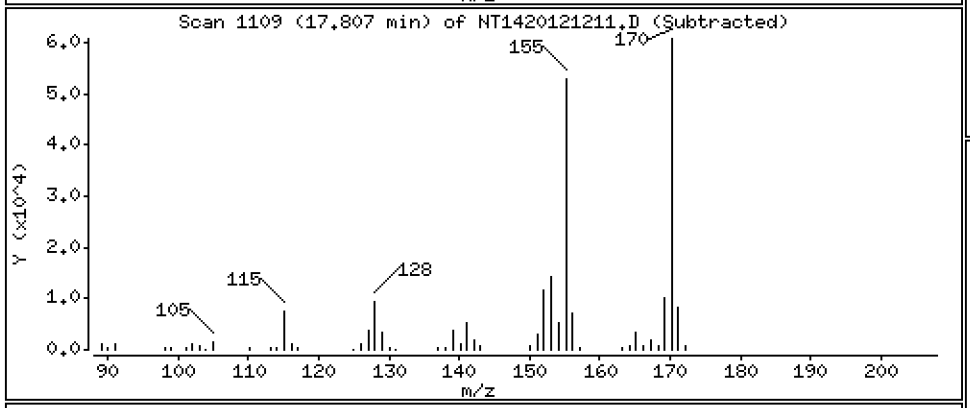
Column diameter: 0.25

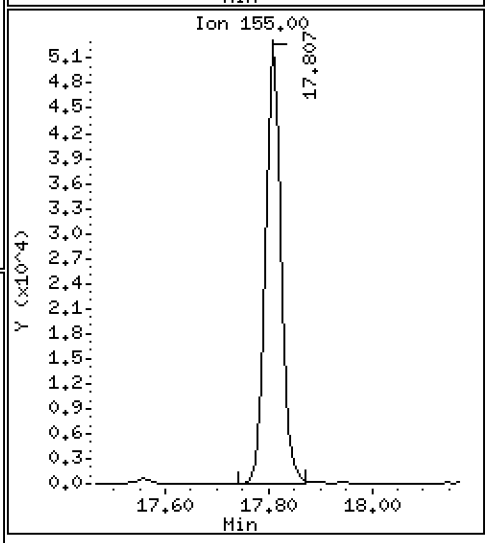
24 1,6,7-Trimethylnaphthalene

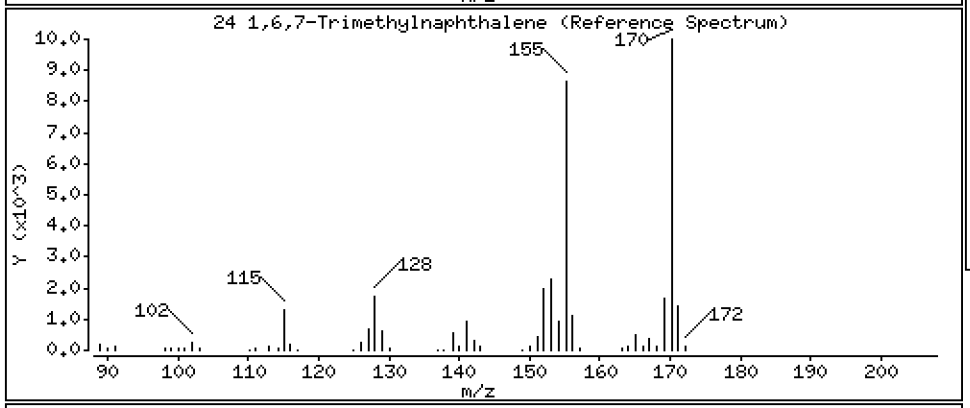
Concentration: 1.966 ug/mL

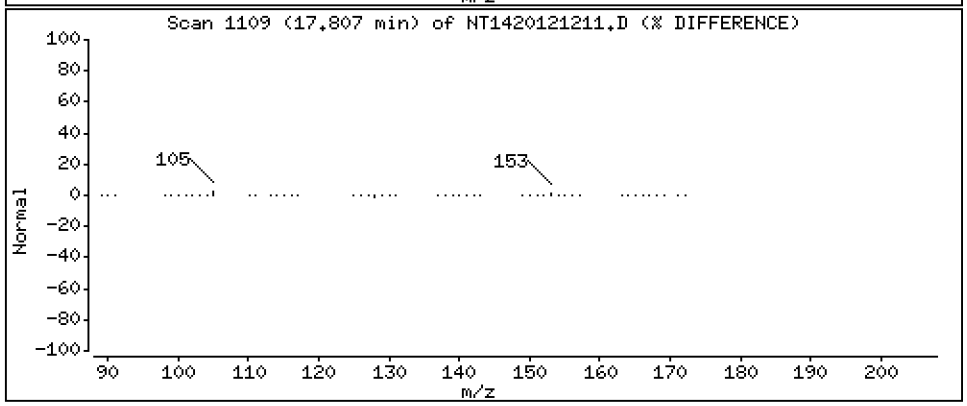












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Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

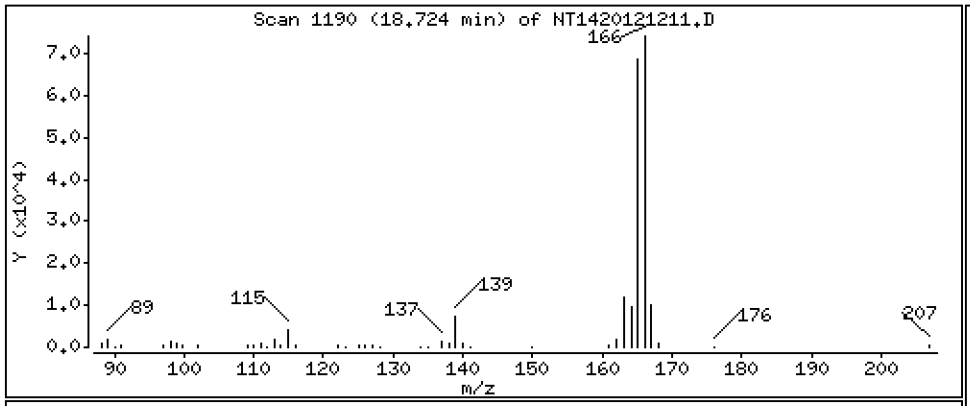
Operator: VTS

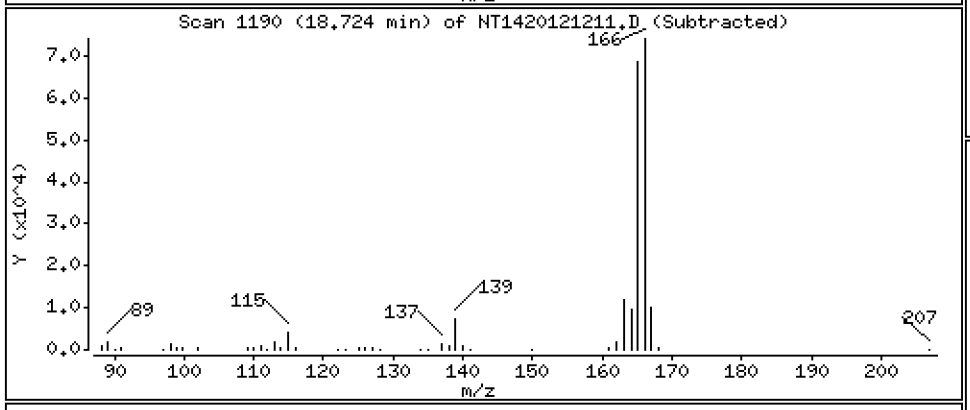
Column phase: Rxi-17Sil MS

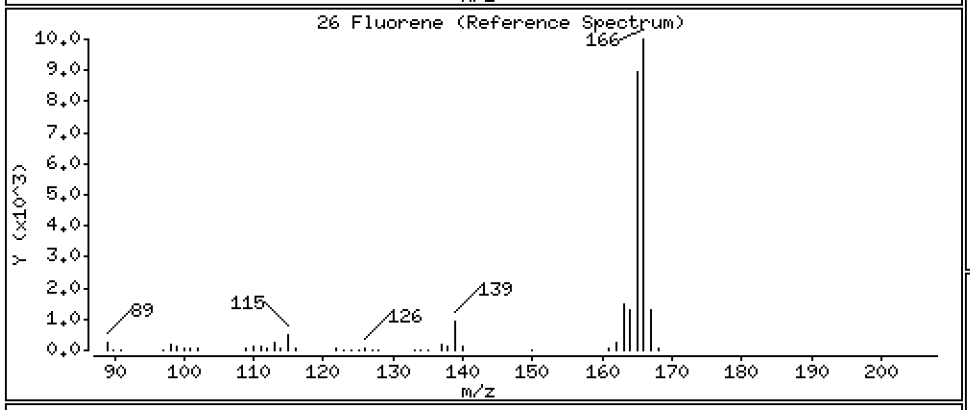
Column diameter: 0.25

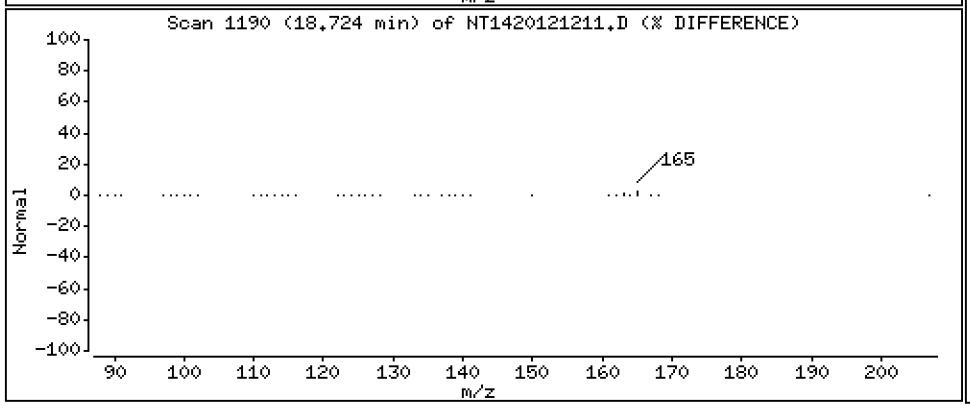
26 Fluorene

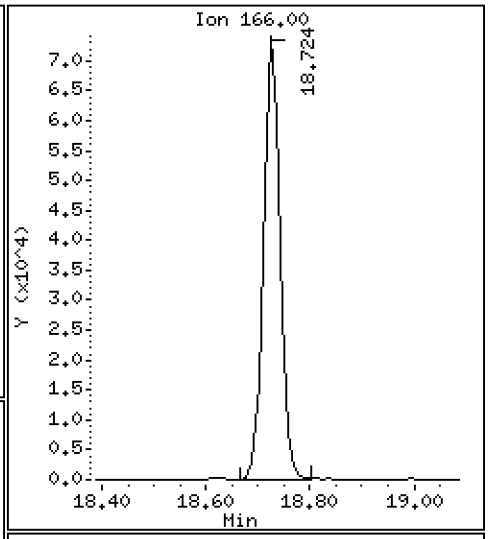
Concentration: 1.981 ug/mL

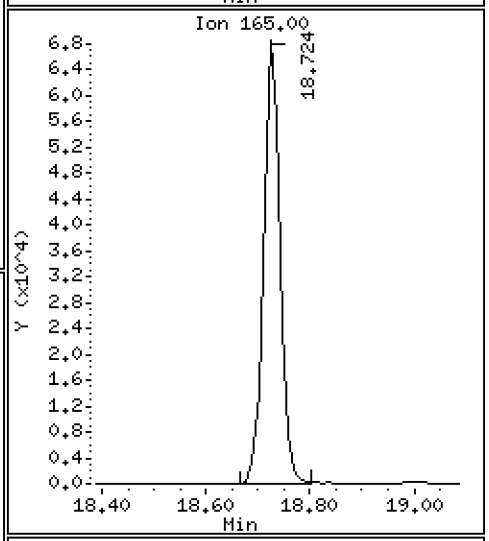


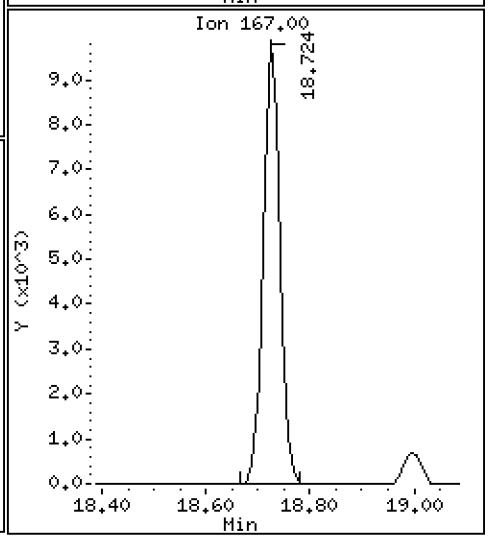












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

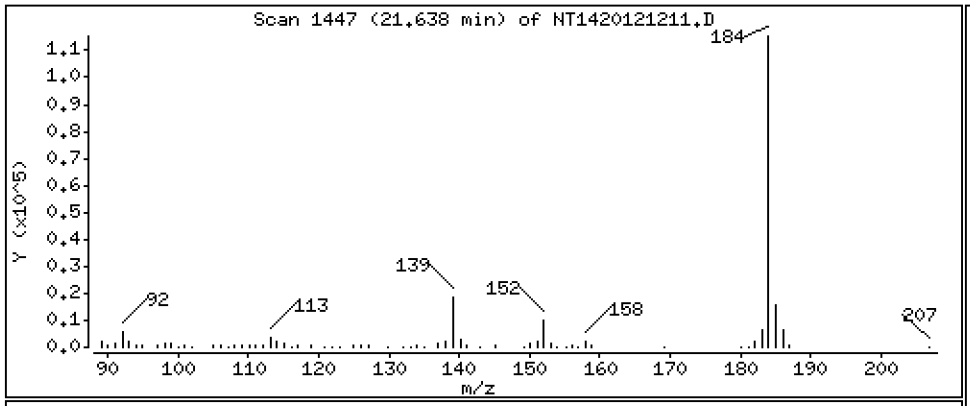
Operator: VTS

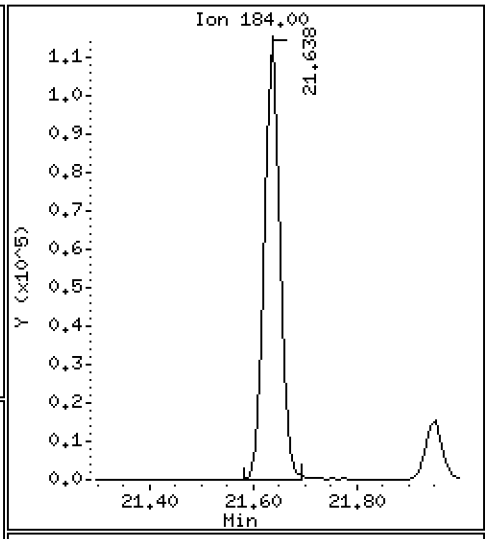
Column phase: Rxi-17Sil MS

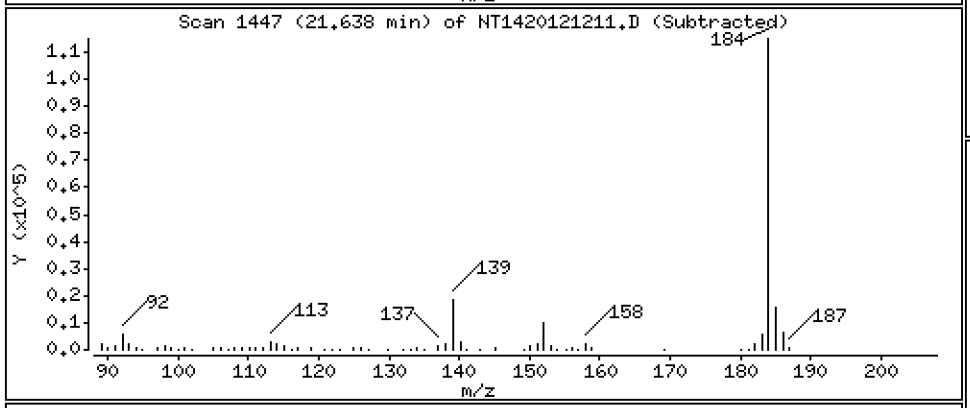
Column diameter: 0.25

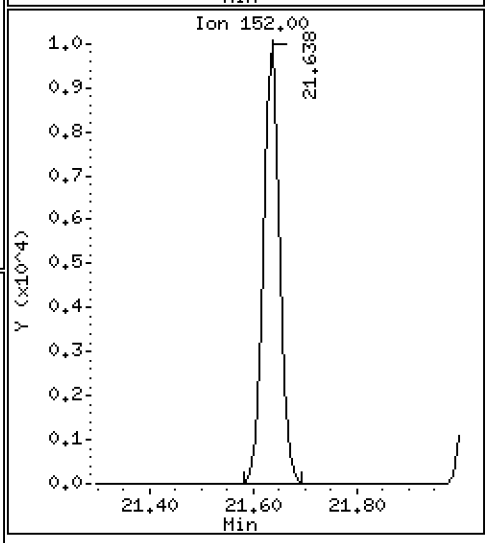
30 Dibenzothiophene

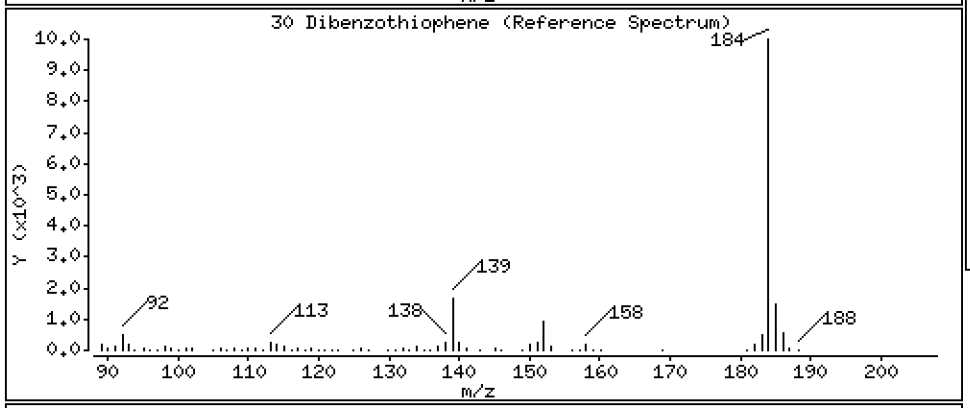
Concentration: 2.046 ug/mL

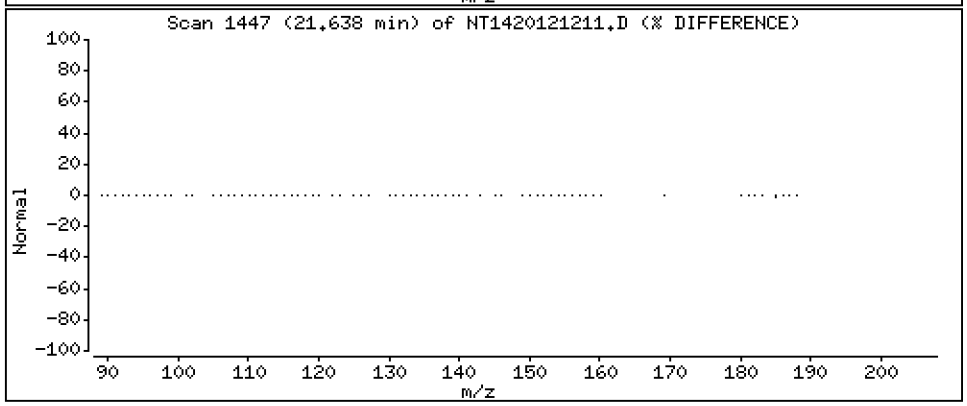












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Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

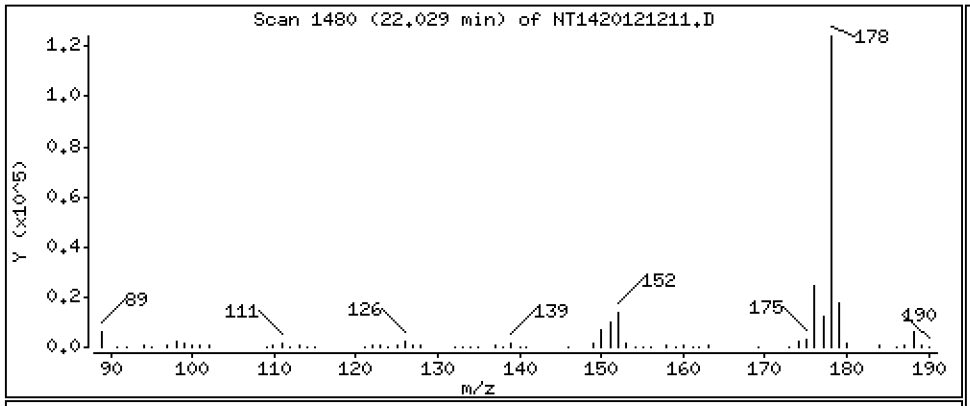
Operator: VTS

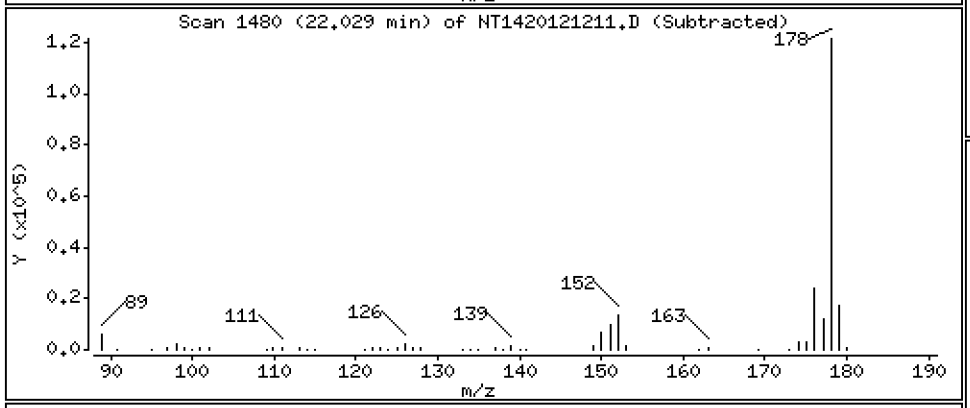
Column phase: Rxi-17Sil MS

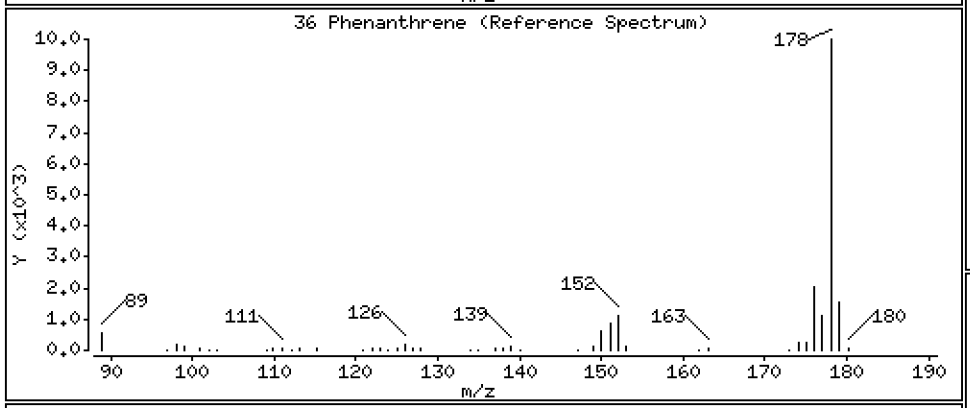
Column diameter: 0.25

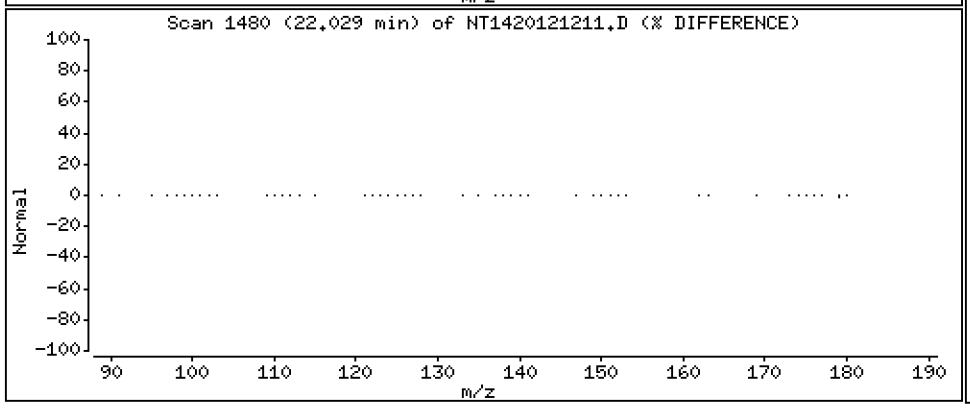
36 Phenanthrene

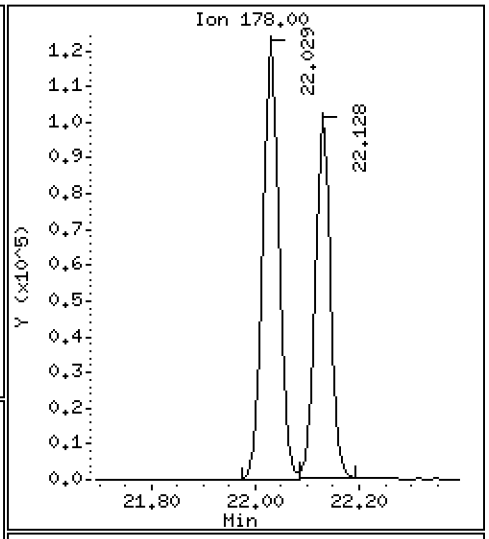
Concentration: 2.313 ug/mL

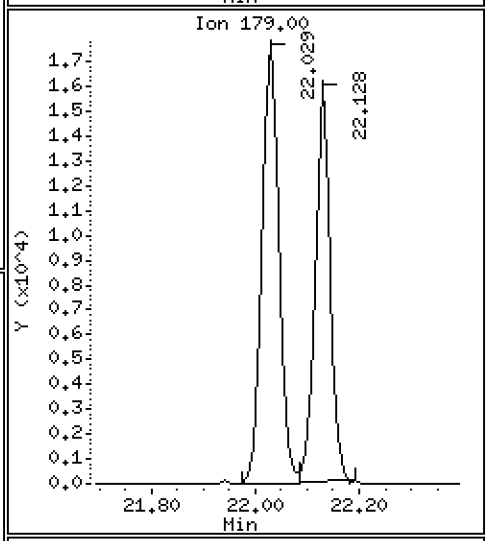


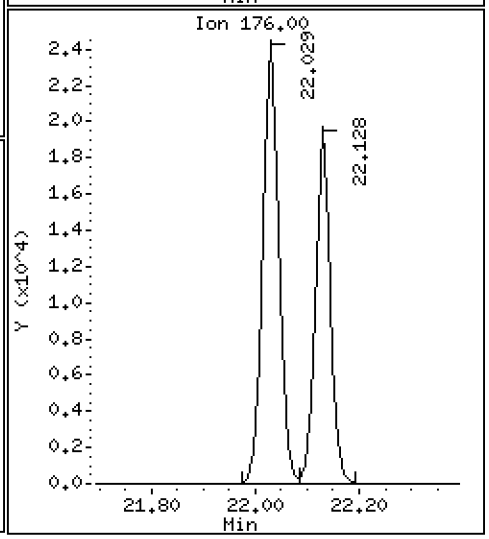












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Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

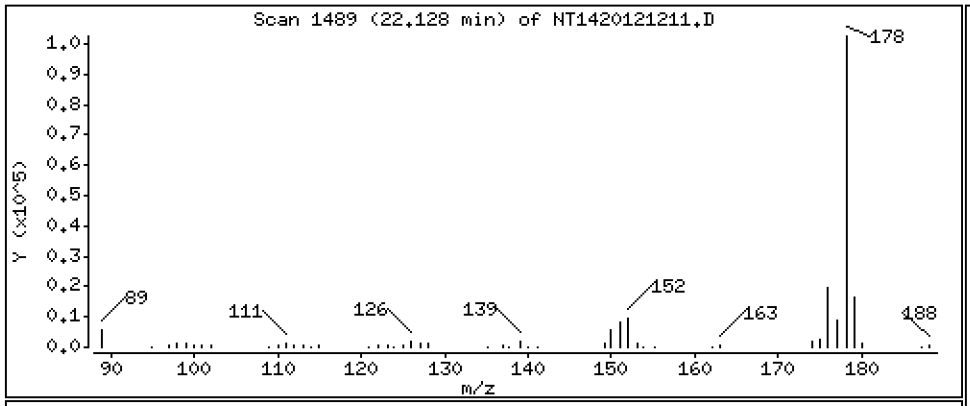
Operator: VTS

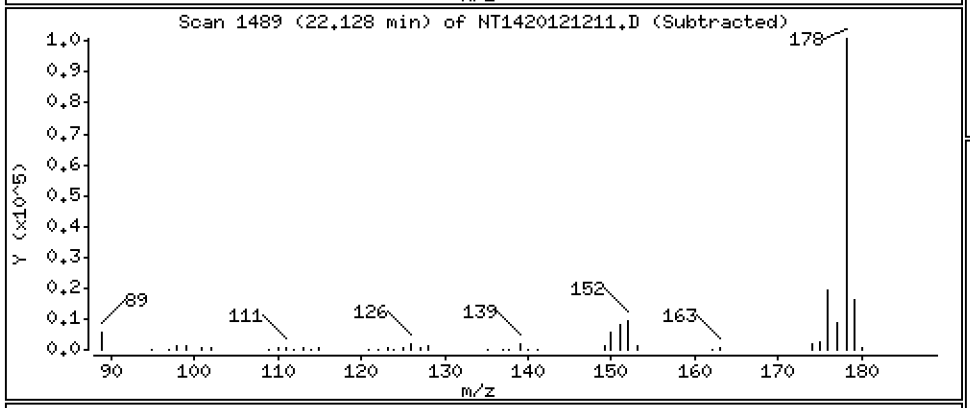
Column phase: Rxi-17Sil MS

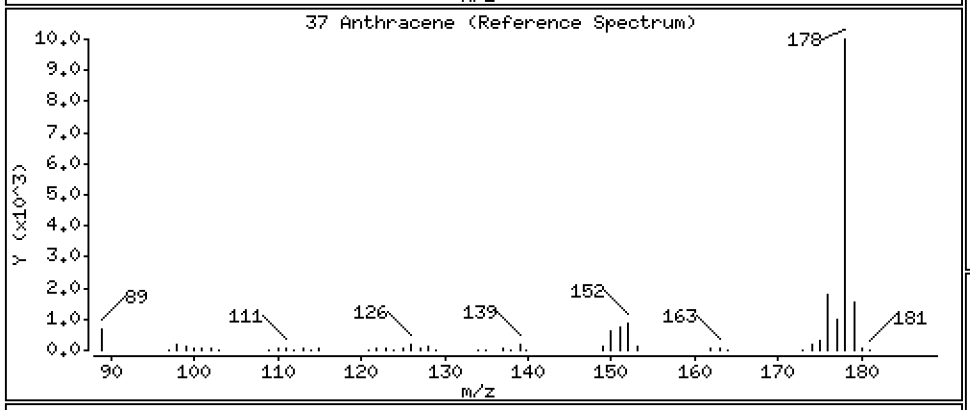
Column diameter: 0.25

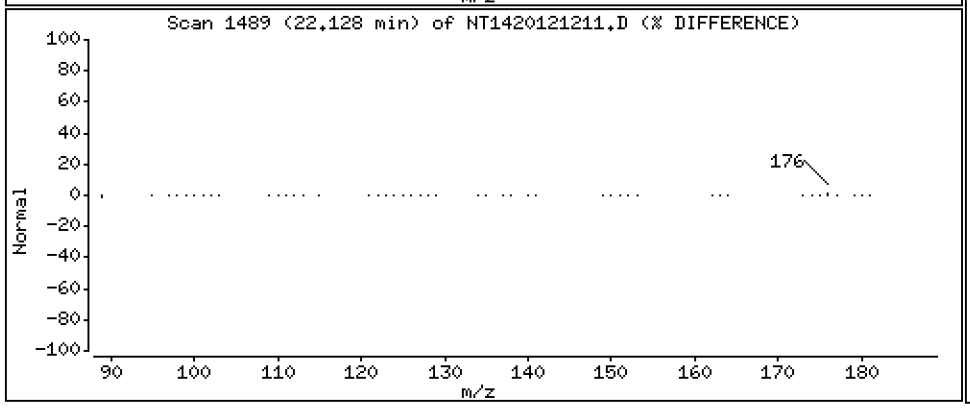
37 Anthracene

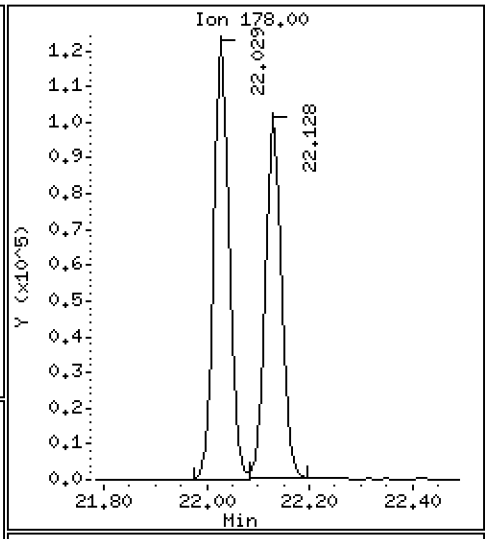
Concentration: 1.921 ug/mL

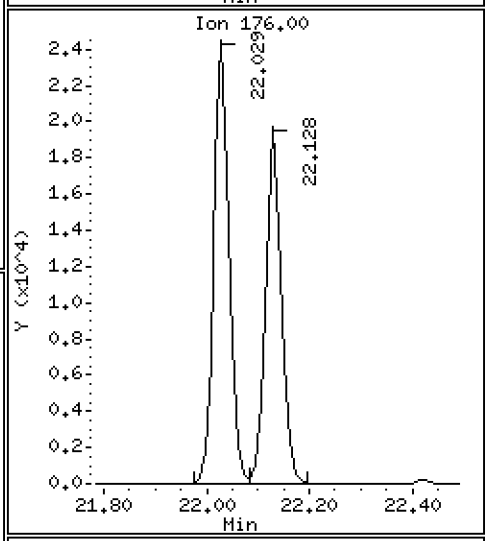


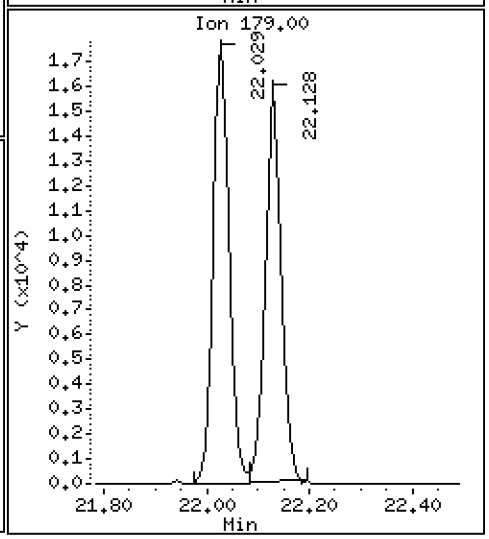












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

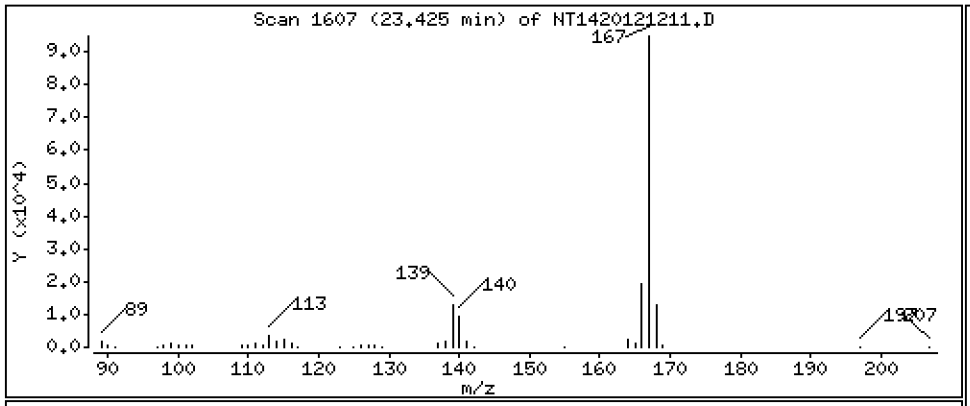
Operator: VTS

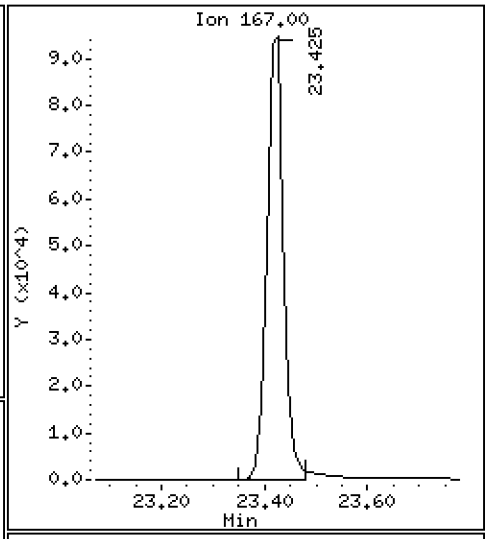
Column phase: Rxi-17Sil MS

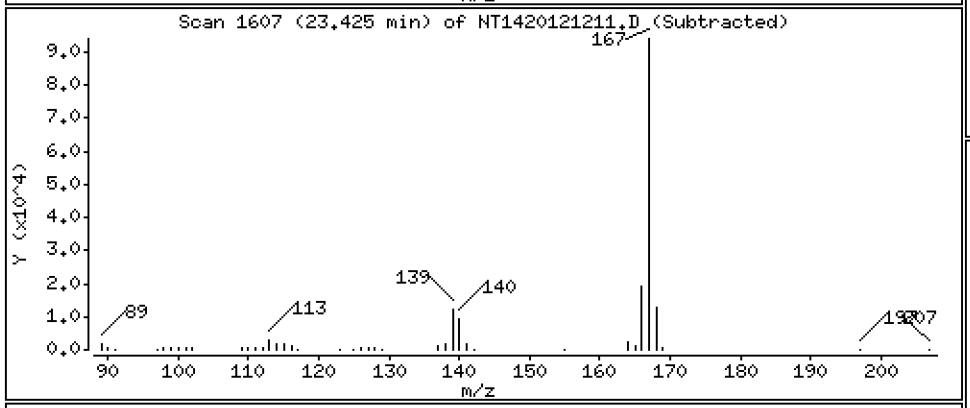
Column diameter: 0.25

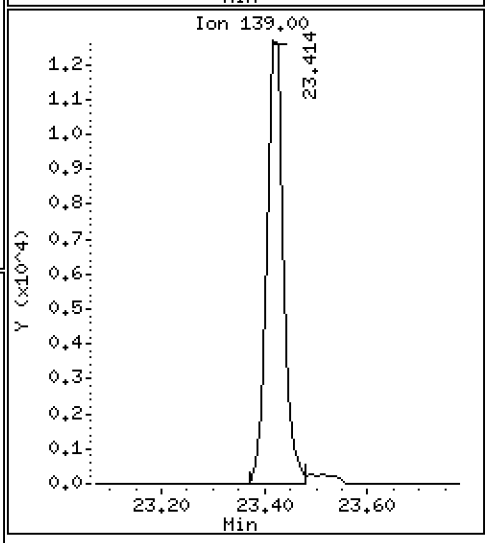
42 Carbazole

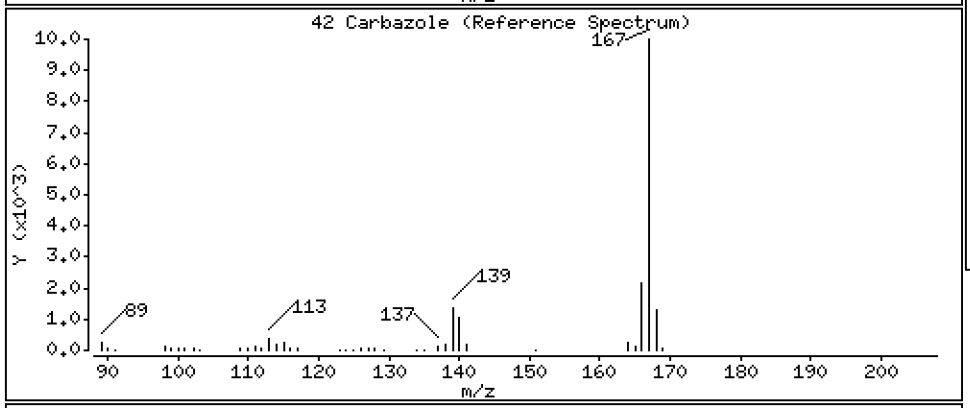
Concentration: 2.314 ug/mL

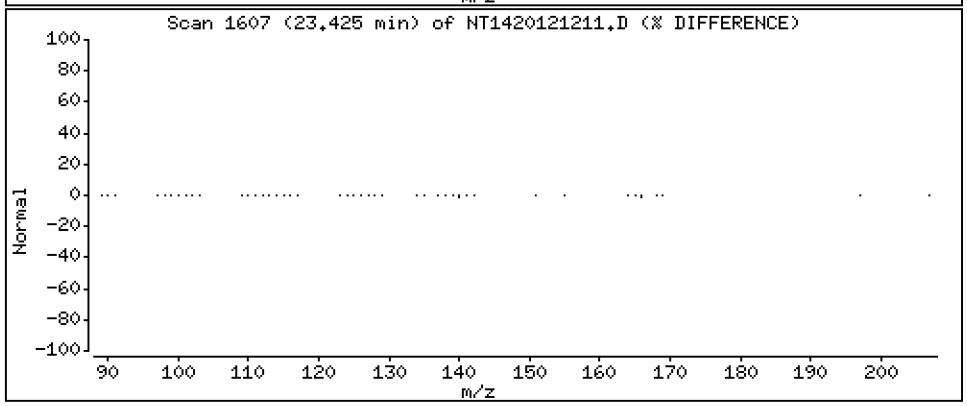












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

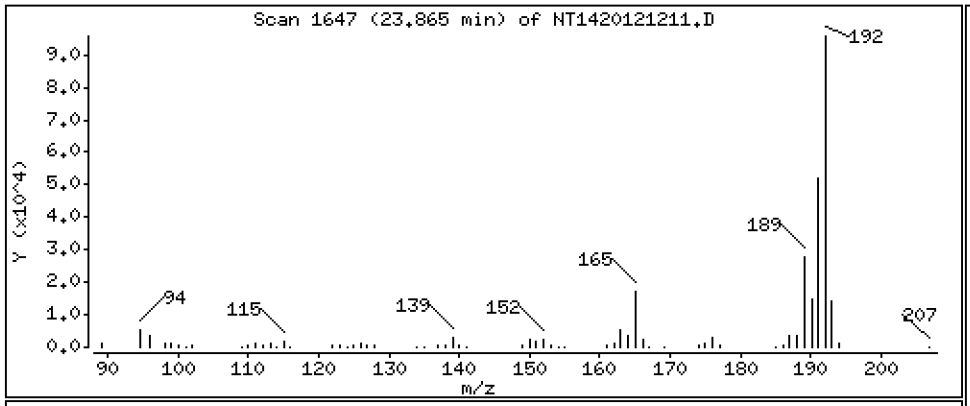
Operator: VTS

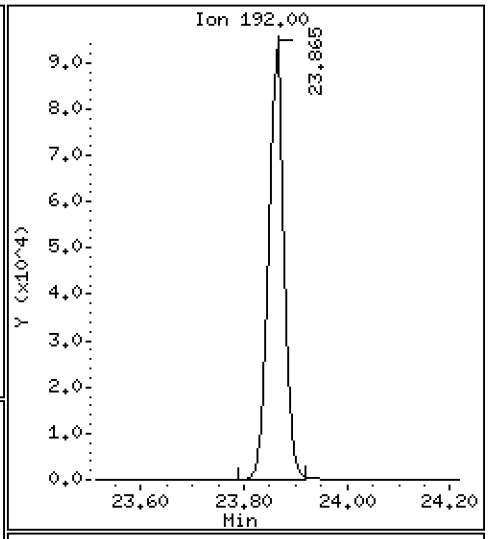
Column phase: Rxi-17Sil MS

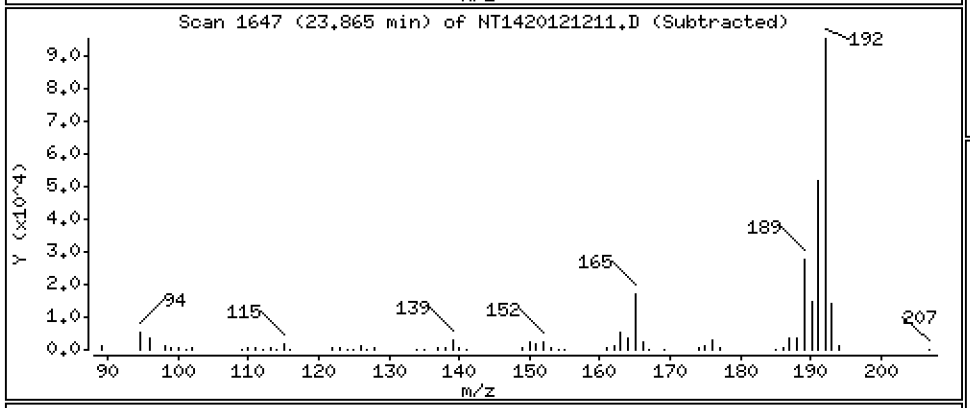
Column diameter: 0.25

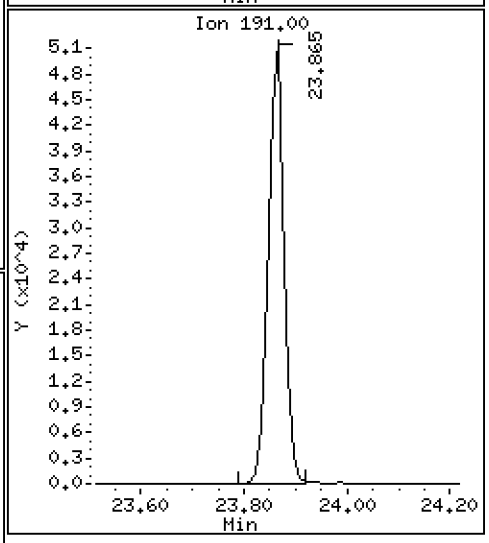
43 1-Methylphenanthrene

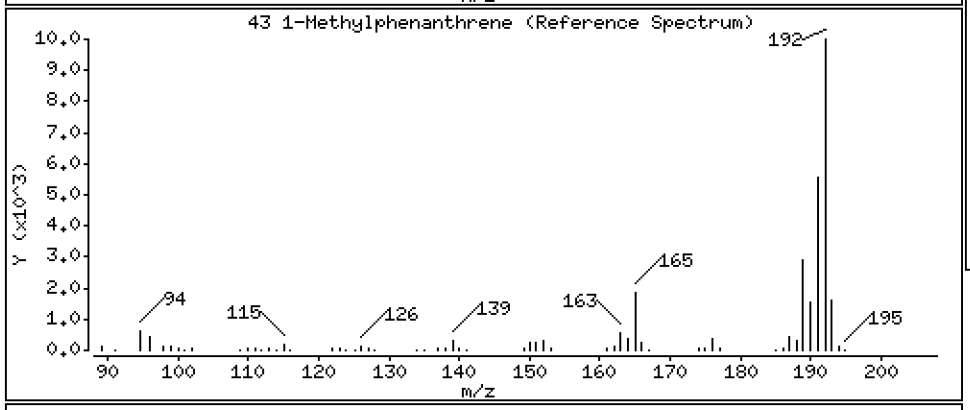
Concentration: 2.479 ug/mL

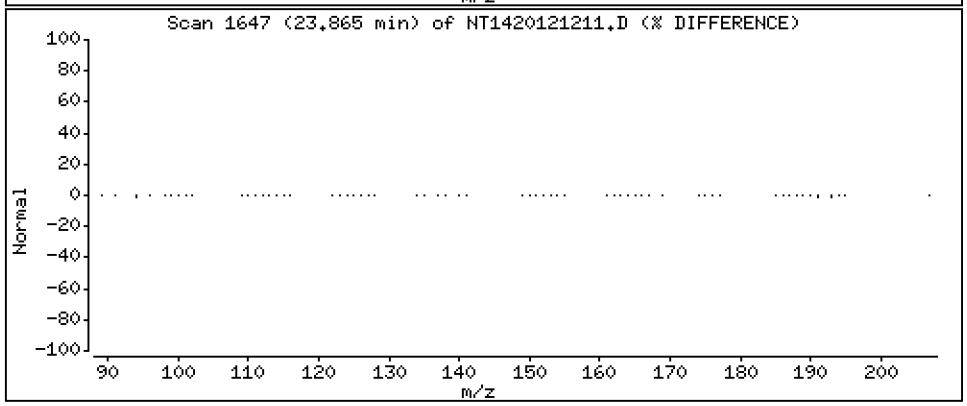












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

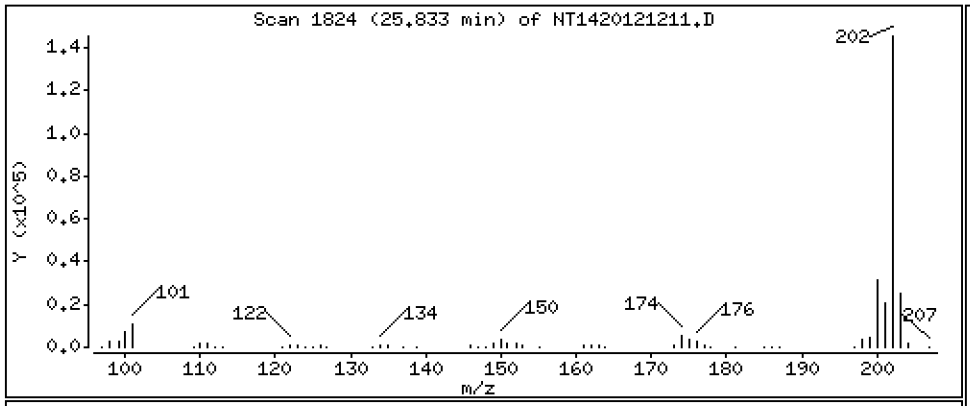
Operator: VTS

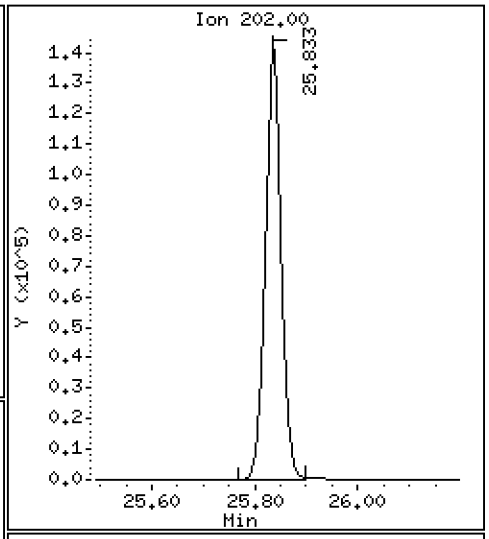
Column phase: Rxi-17Sil MS

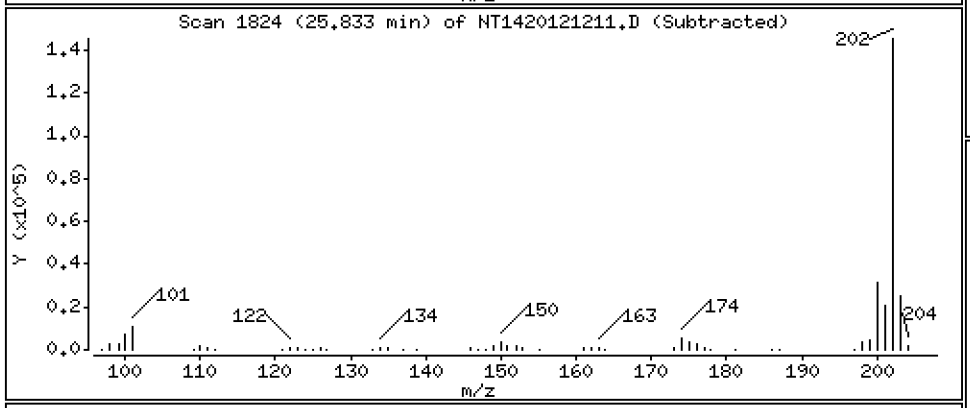
Column diameter: 0.25

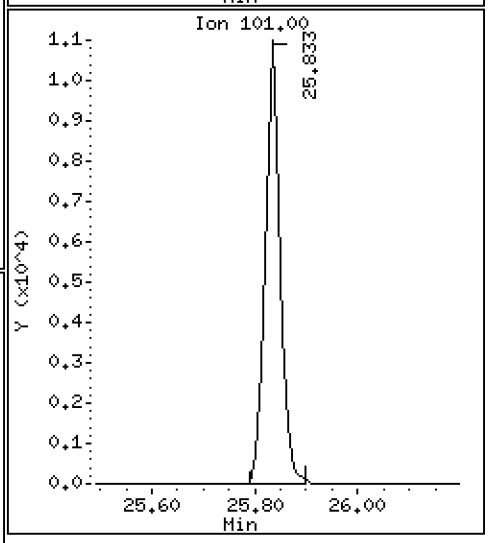
44 Fluoranthene

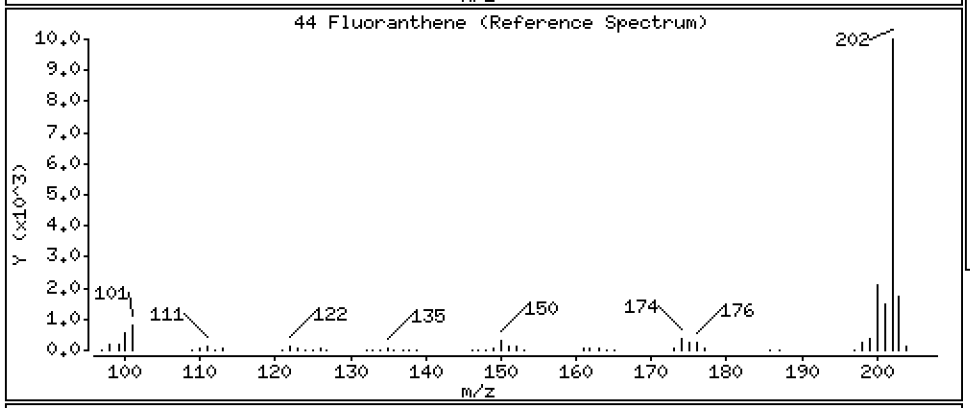
Concentration: 2.578 ug/mL

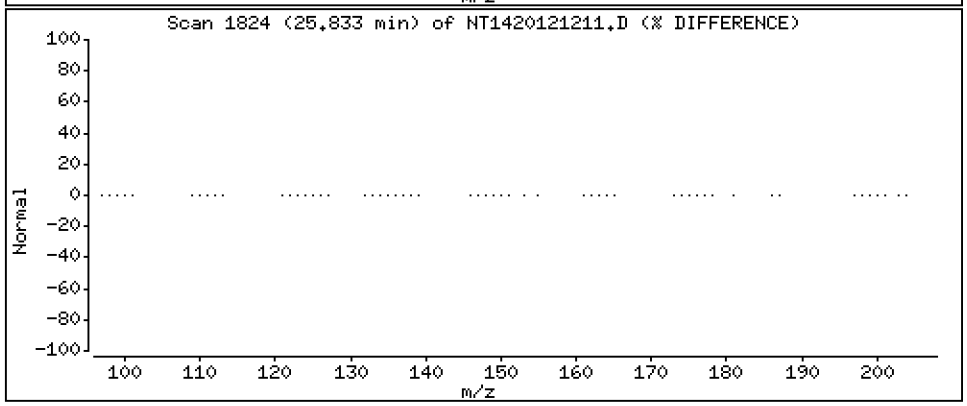












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

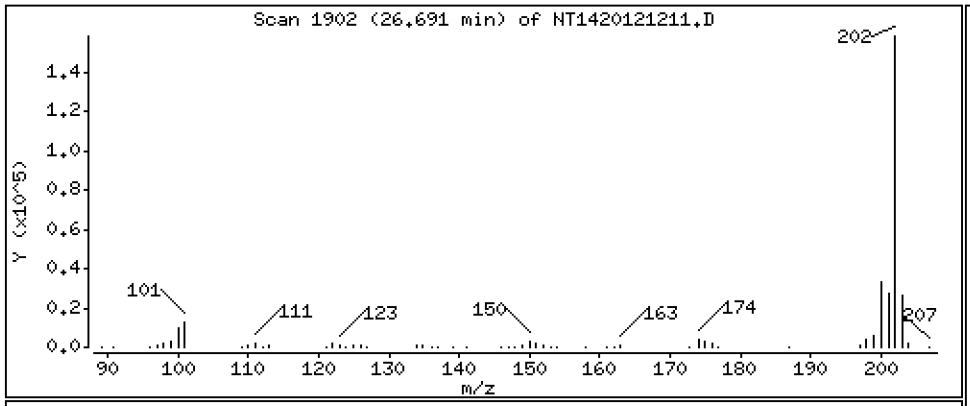
Operator: VTS

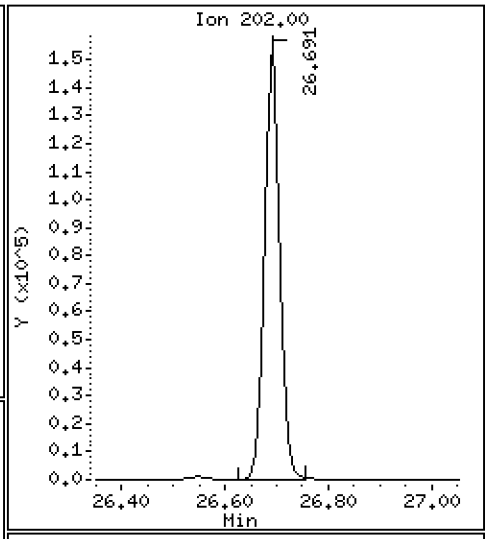
Column phase: Rxi-17Sil MS

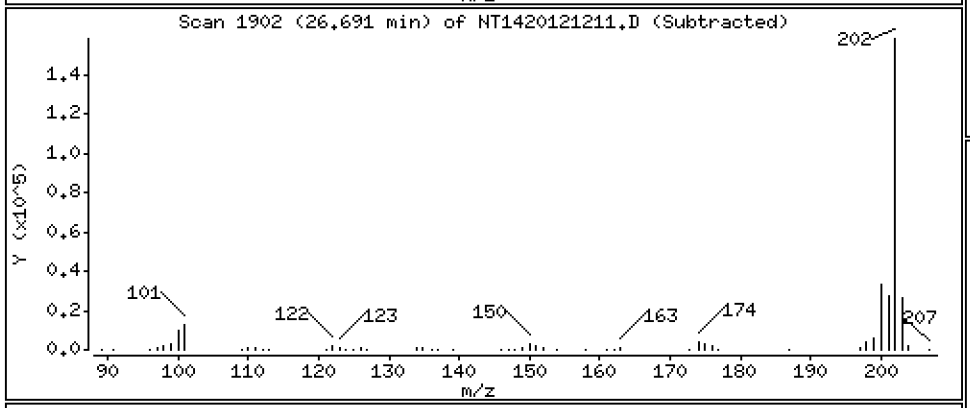
Column diameter: 0.25

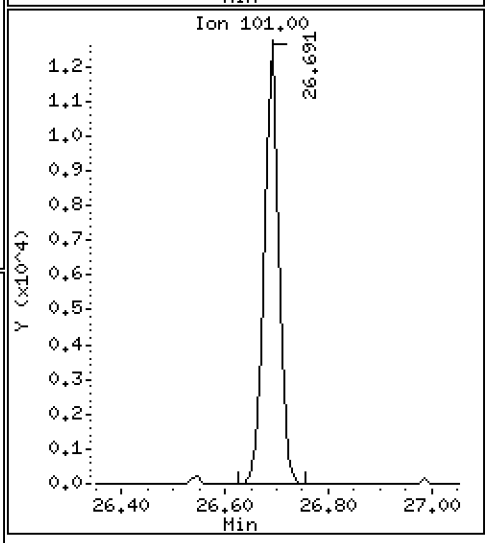
46 Pyrene

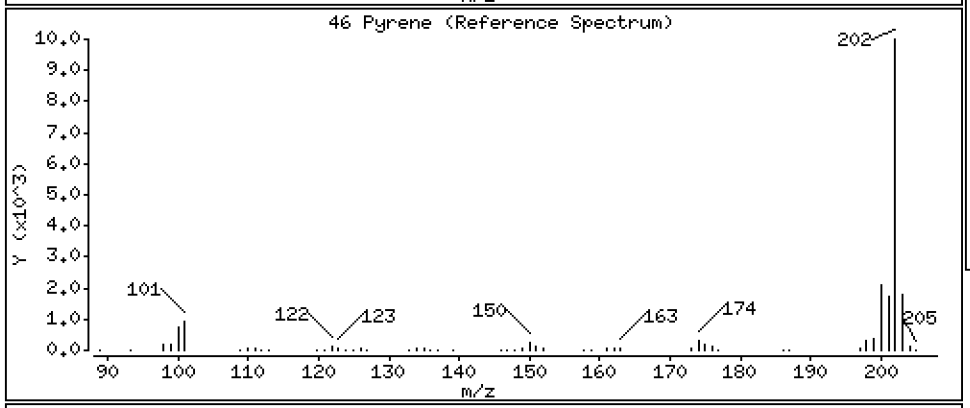
Concentration: 2.552 ug/mL

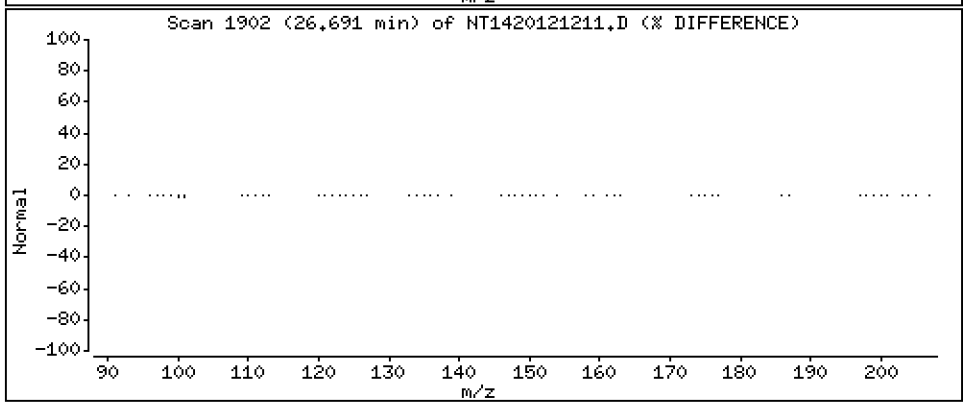












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Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

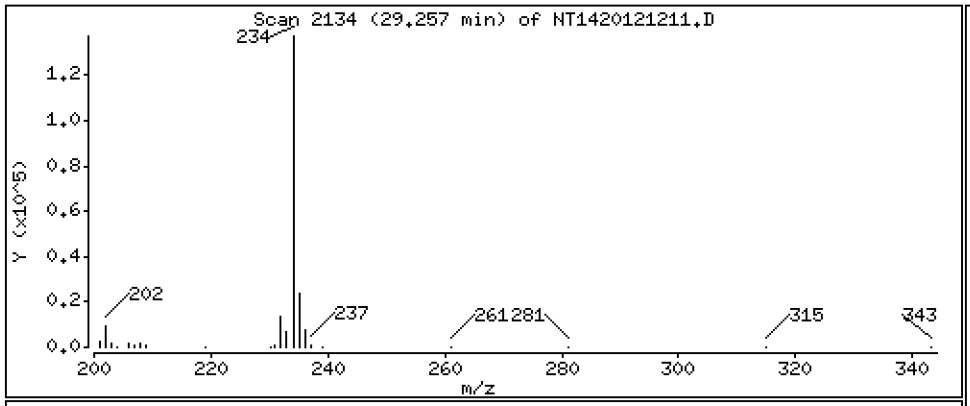
Operator: VTS

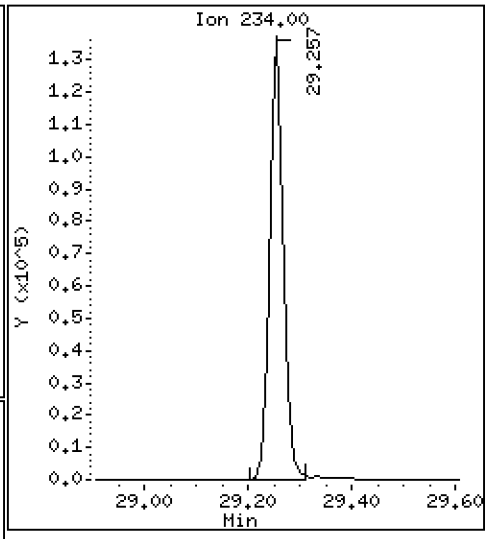
Column phase: Rxi-17Sil MS

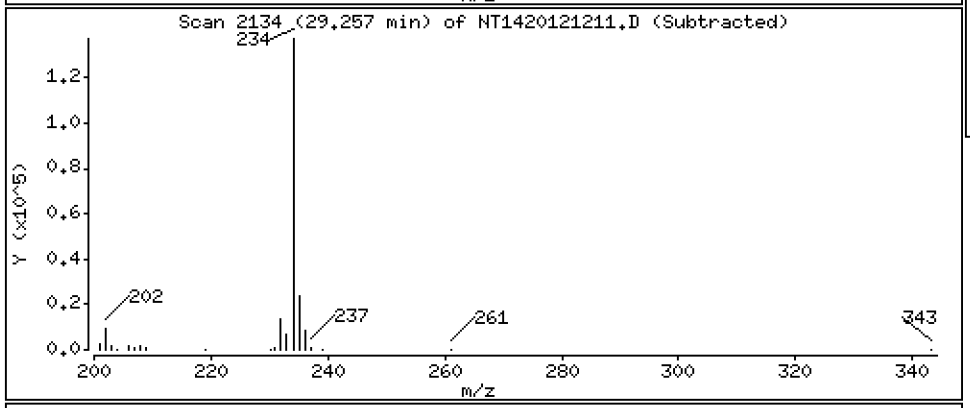
Column diameter: 0.25

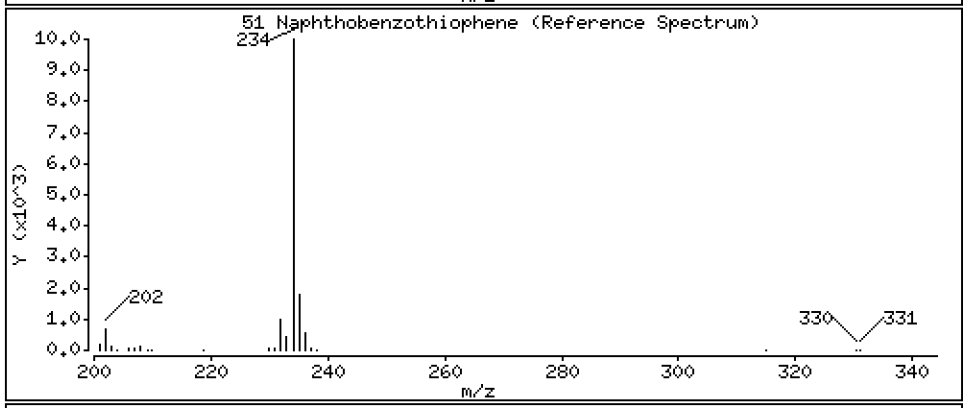
51 Naphthobenzothiophene

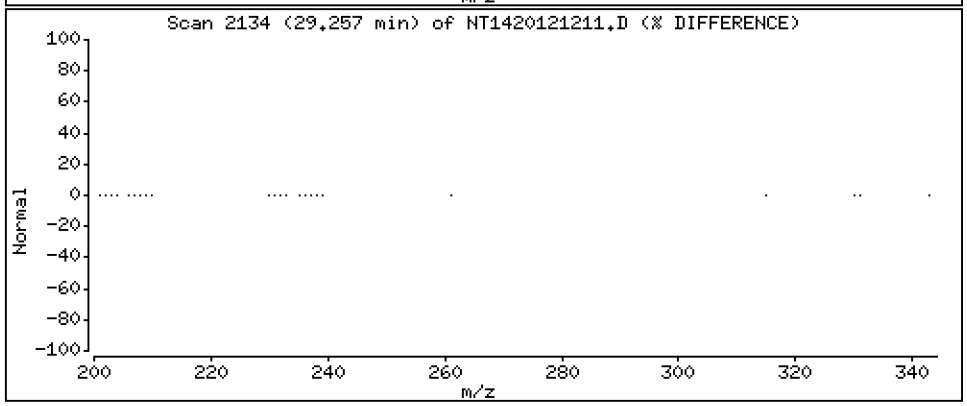
Concentration: 2.231 ug/mL











Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

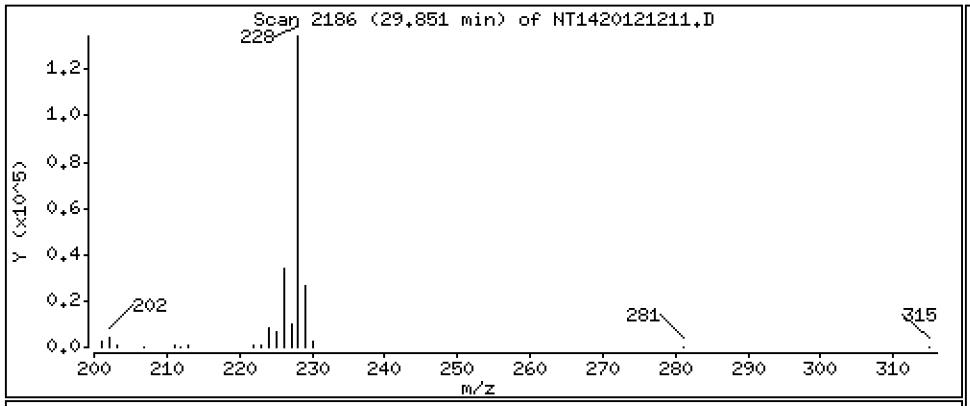
Operator: VTS

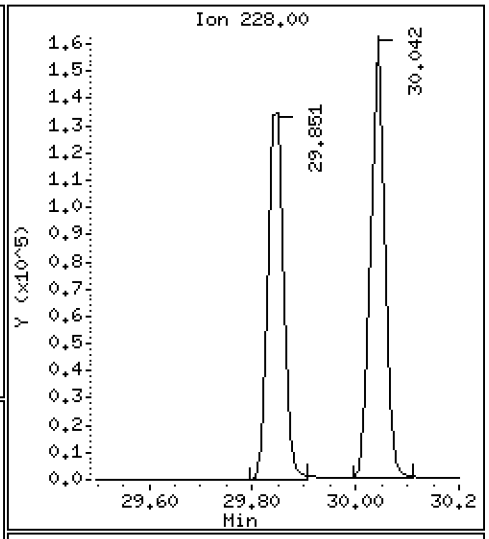
Column phase: Rxi-17Sil MS

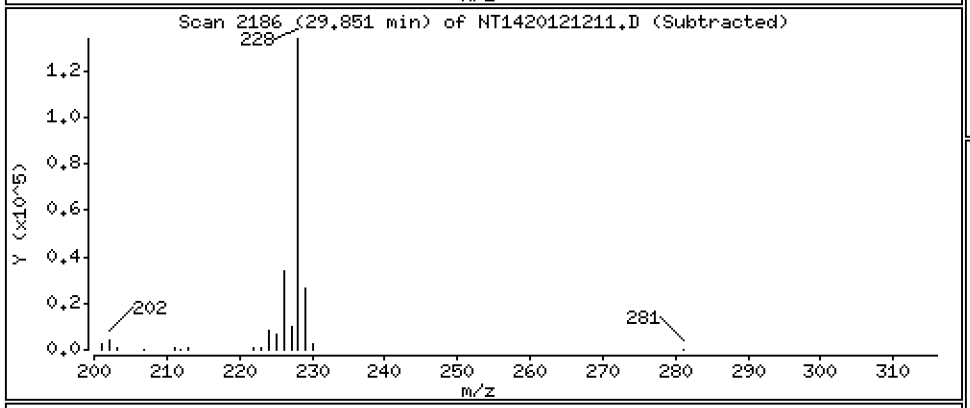
Column diameter: 0.25

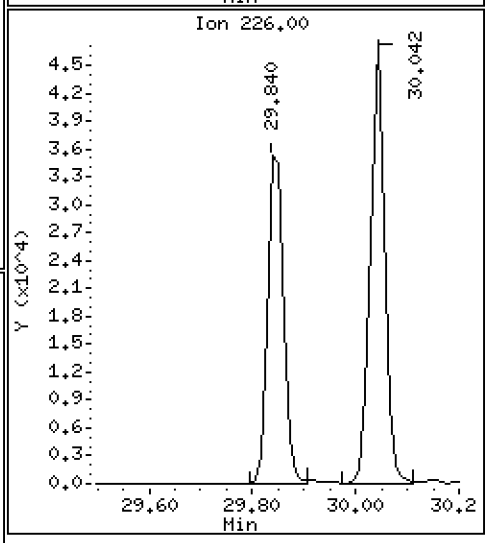
55 Benzo(a)anthracene

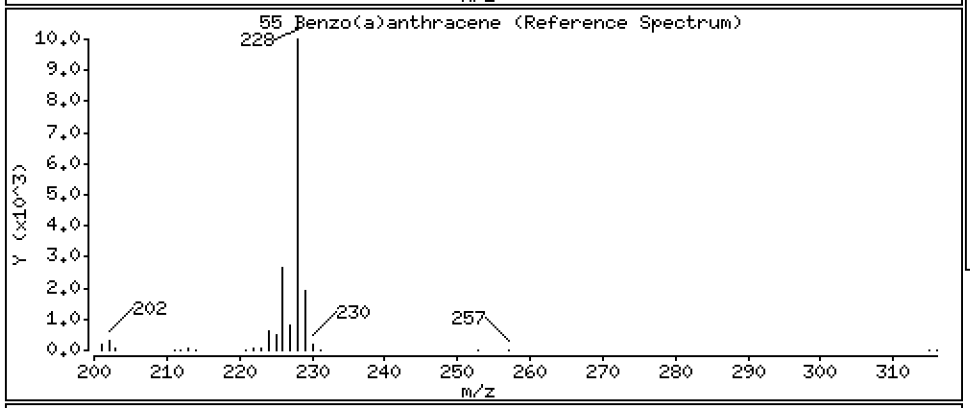
Concentration: 2.491 ug/mL

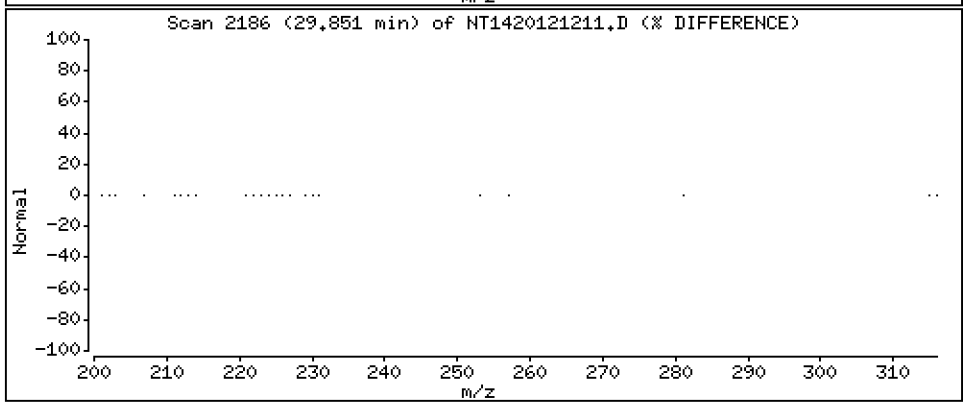












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

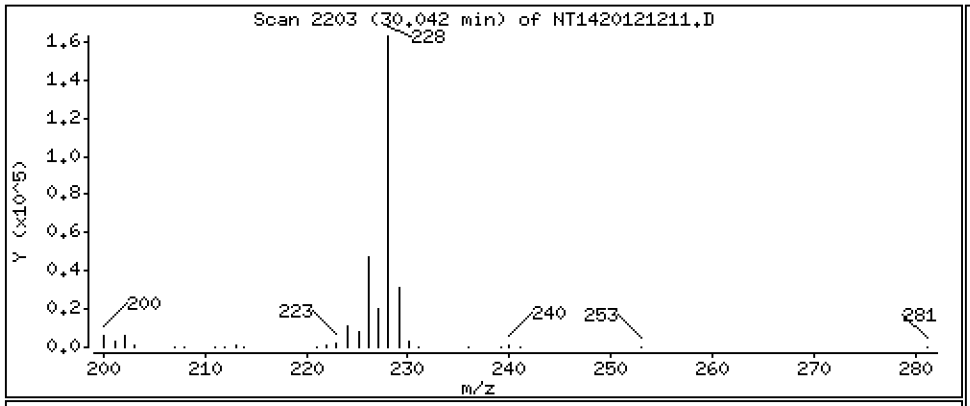
Operator: VTS

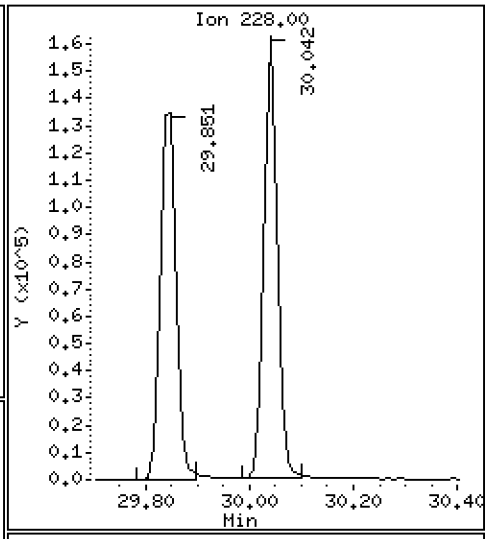
Column phase: Rxi-17Sil MS

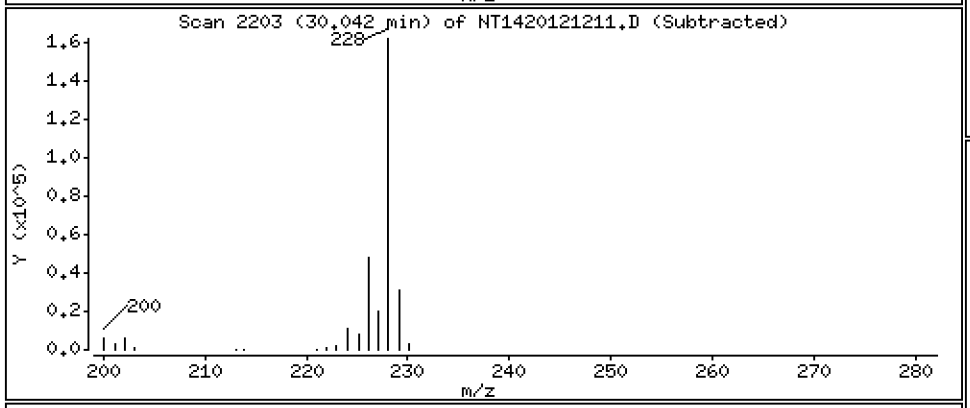
Column diameter: 0.25

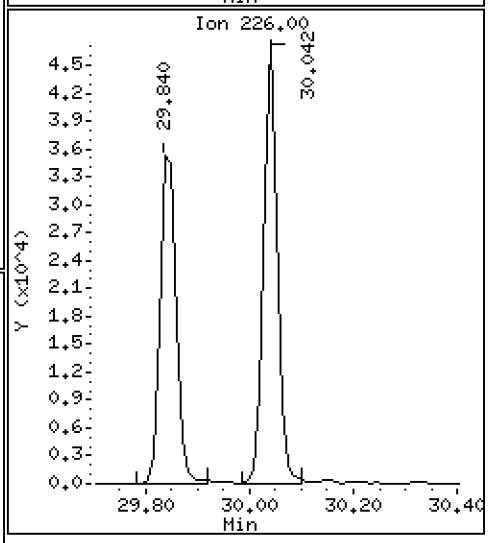
57 Chrysene

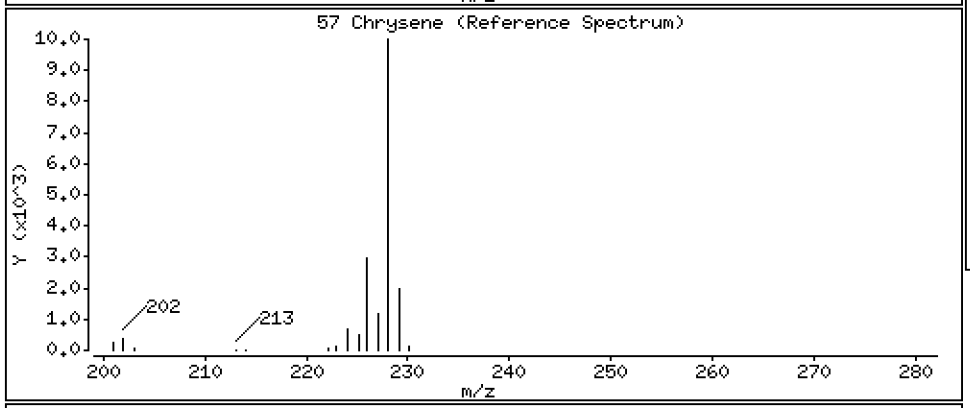
Concentration: 2.518 ug/mL

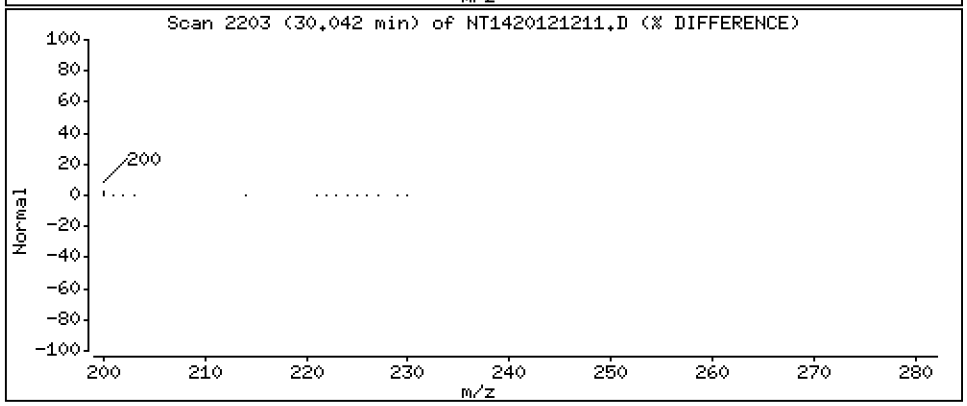












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

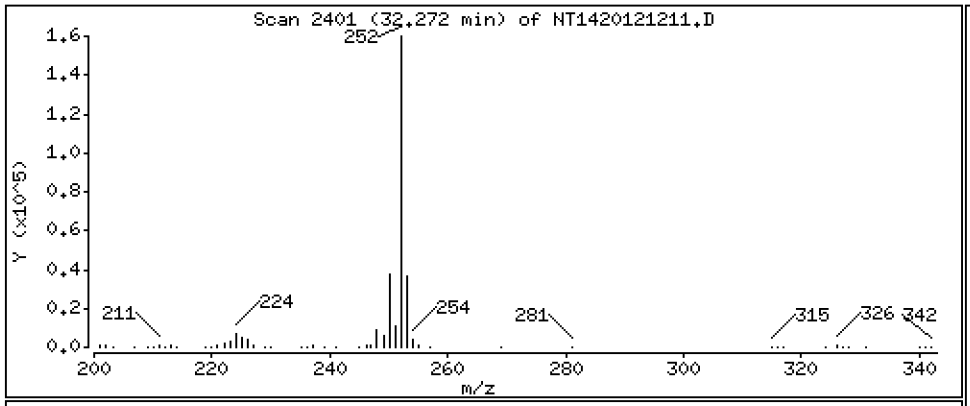
Operator: VTS

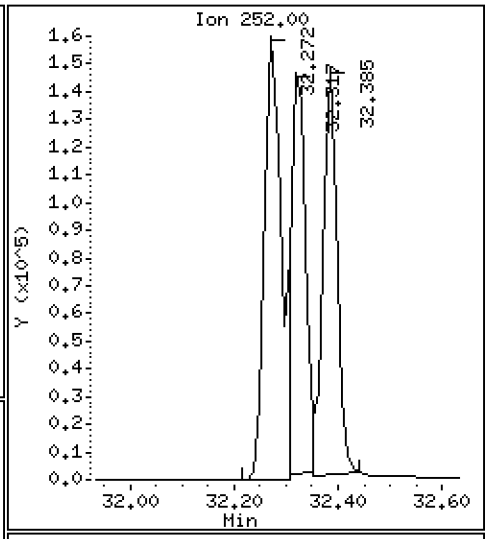
Column phase: Rxi-17Sil MS

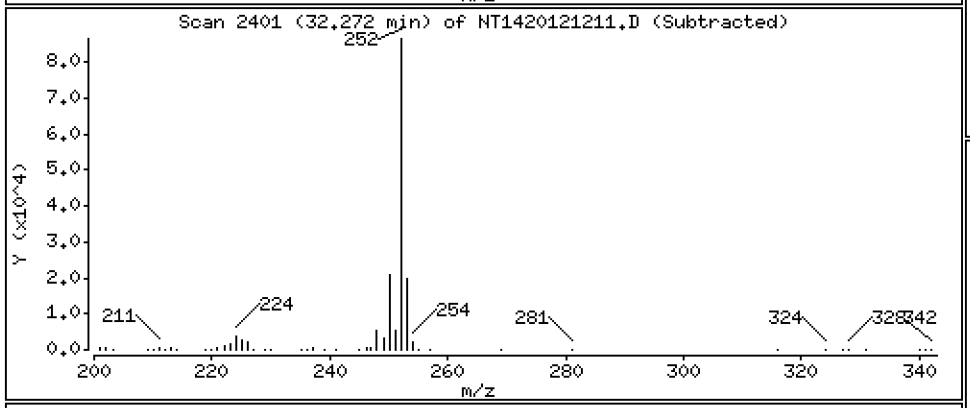
Column diameter: 0.25

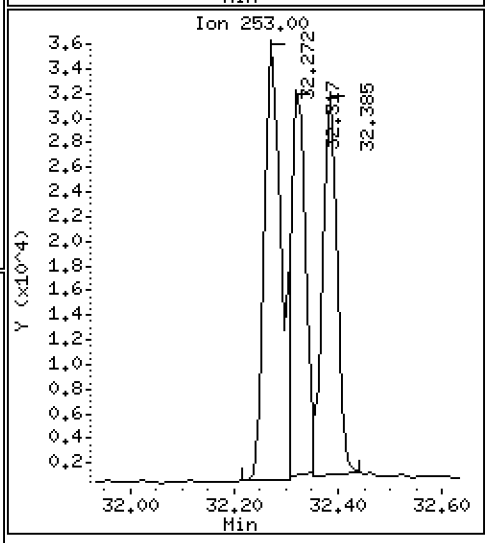
62 Benzo(b)fluoranthene

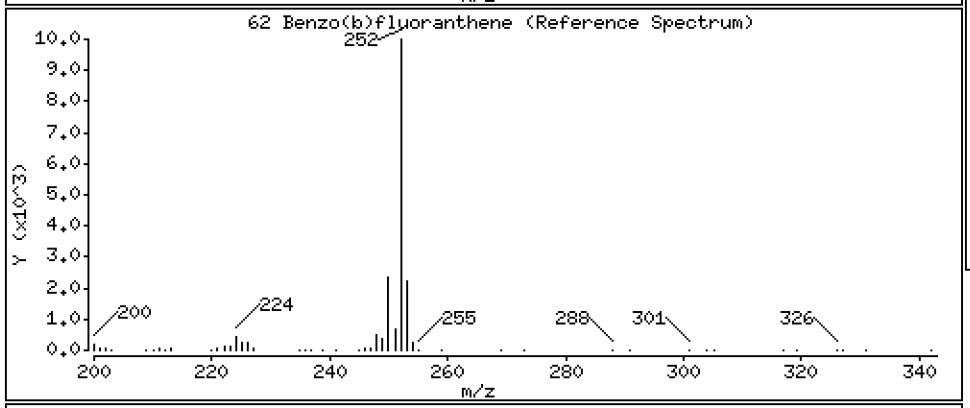
Concentration: 2.776 ug/mL

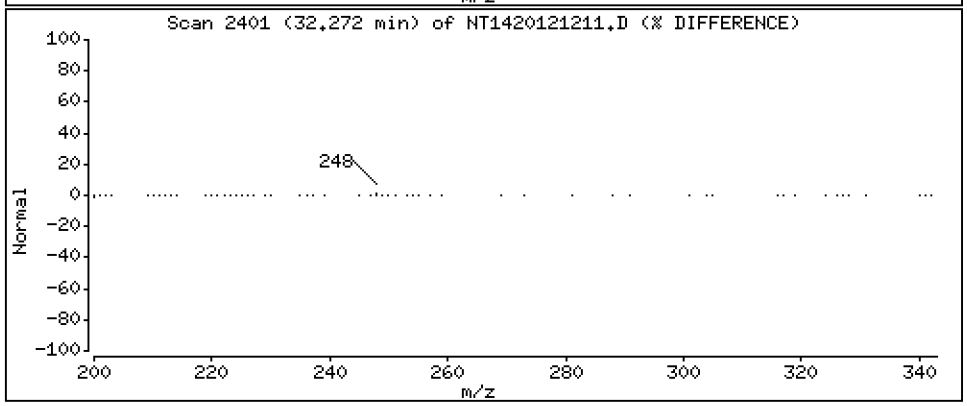












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

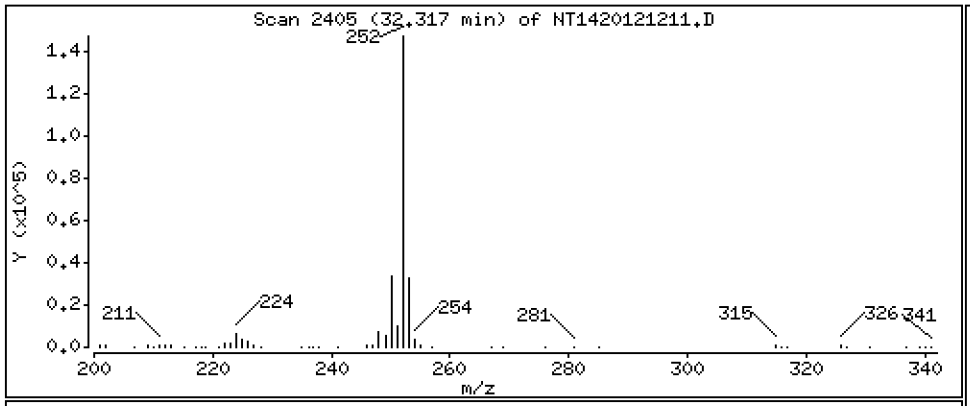
Operator: VTS

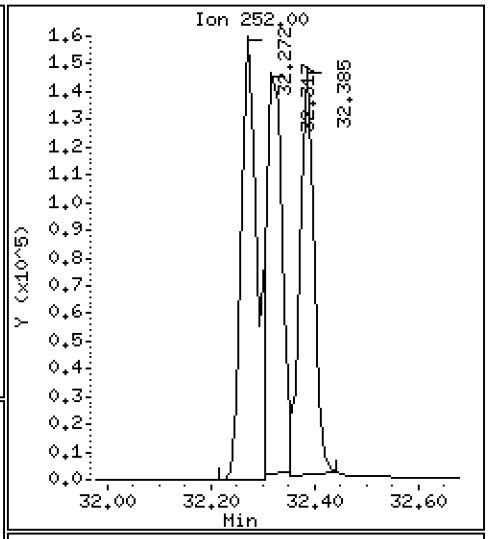
Column phase: Rxi-17Sil MS

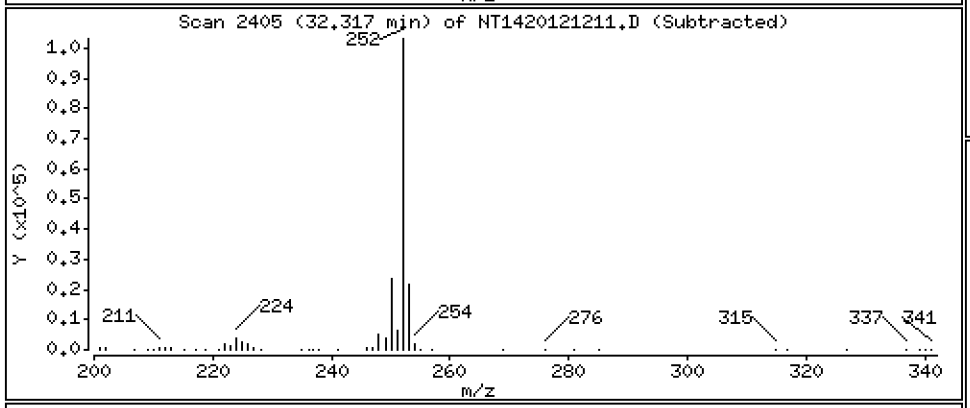
Column diameter: 0.25

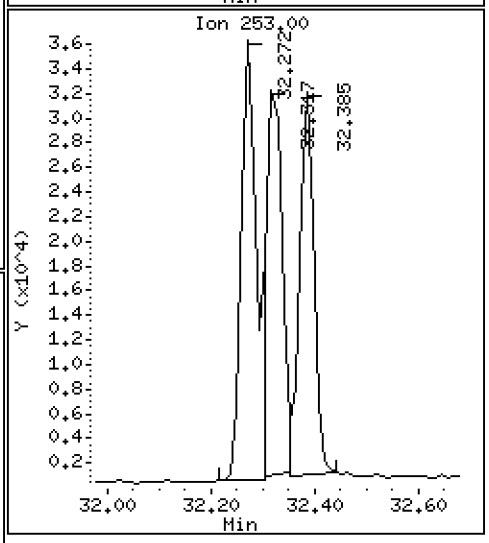
63 Benzo(k)fluoranthene

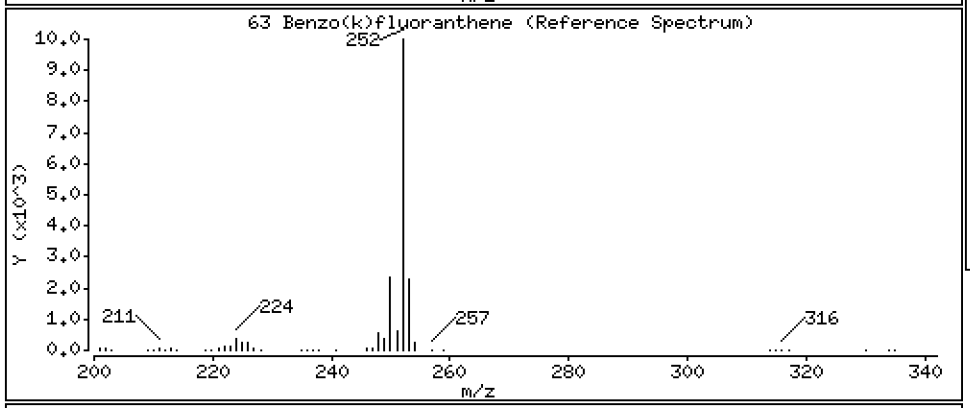
Concentration: 2.201 ug/mL

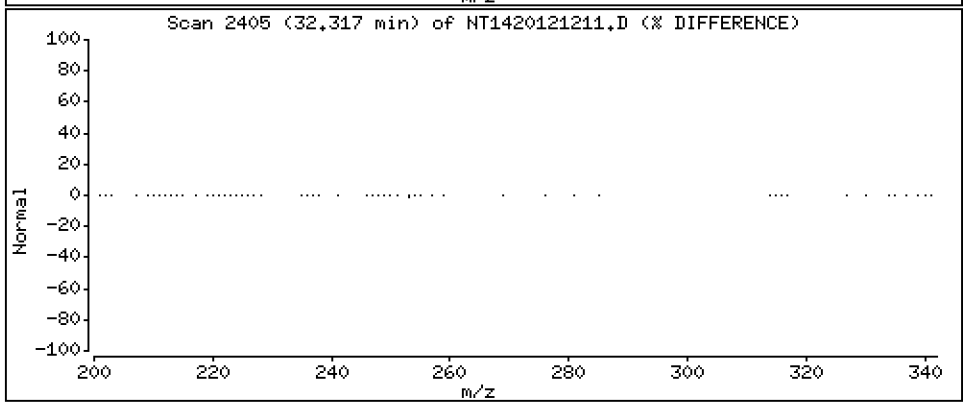












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

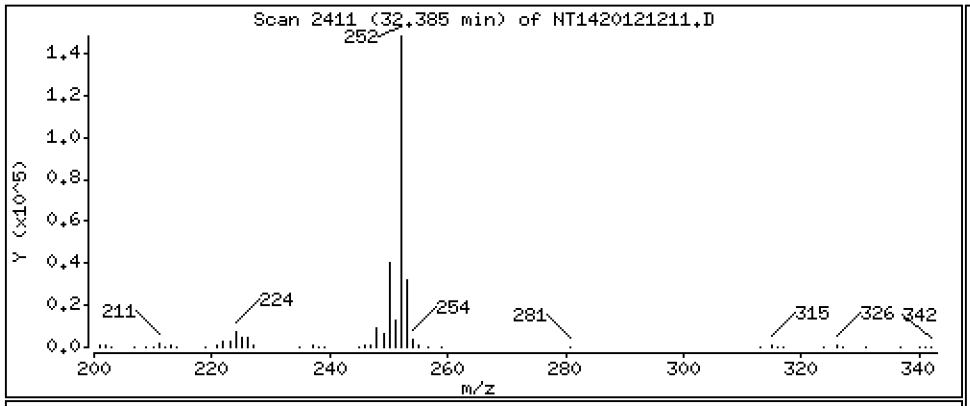
Operator: VTS

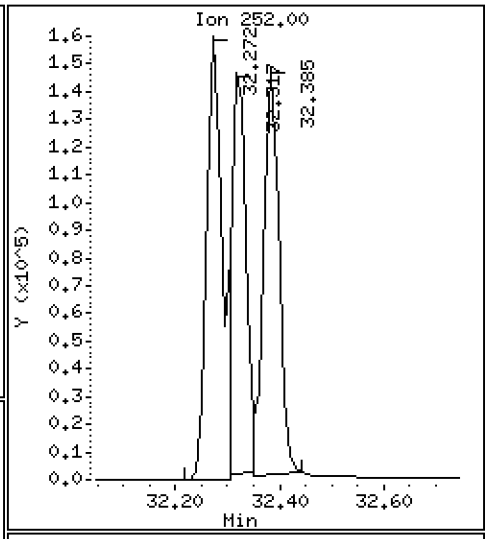
Column phase: Rxi-17Sil MS

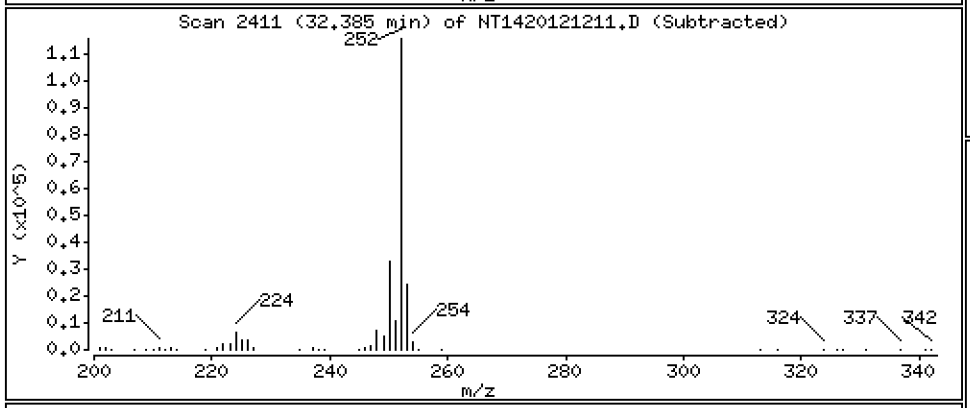
Column diameter: 0.25

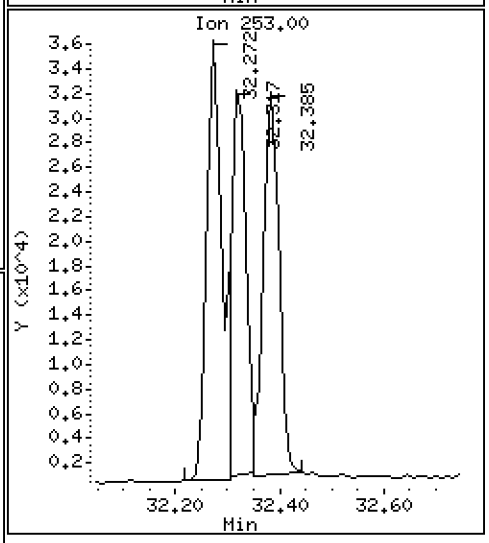
293 Benzo(j)fluoranthene

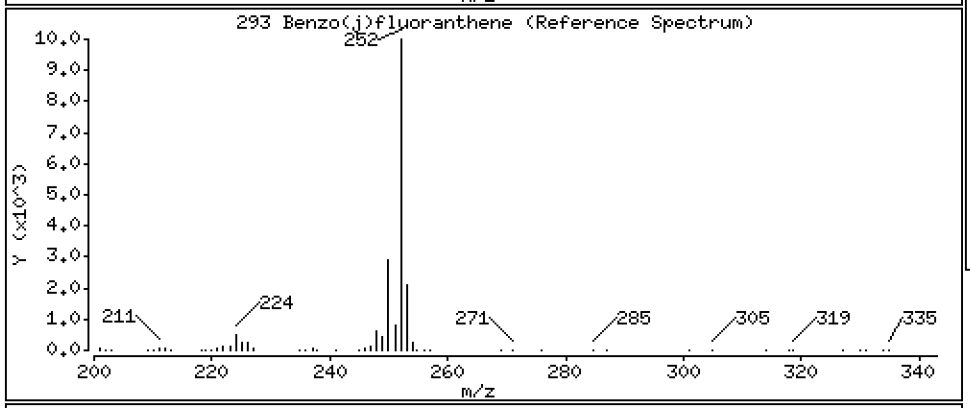
Concentration: 2.466 ug/mL

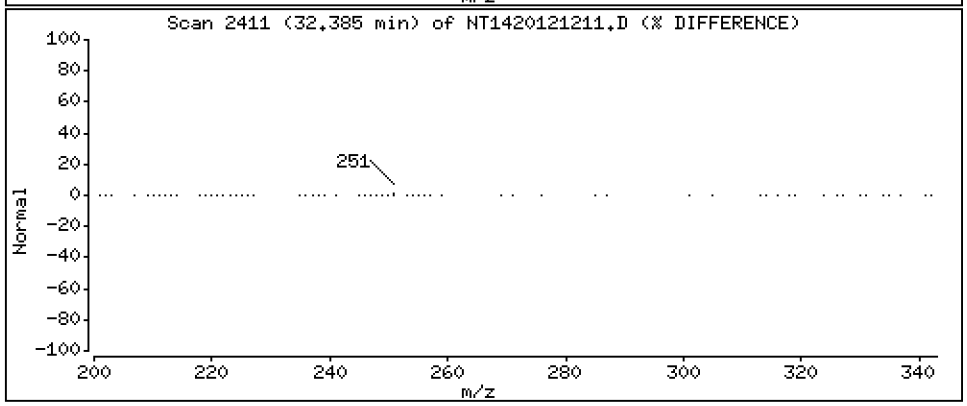












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

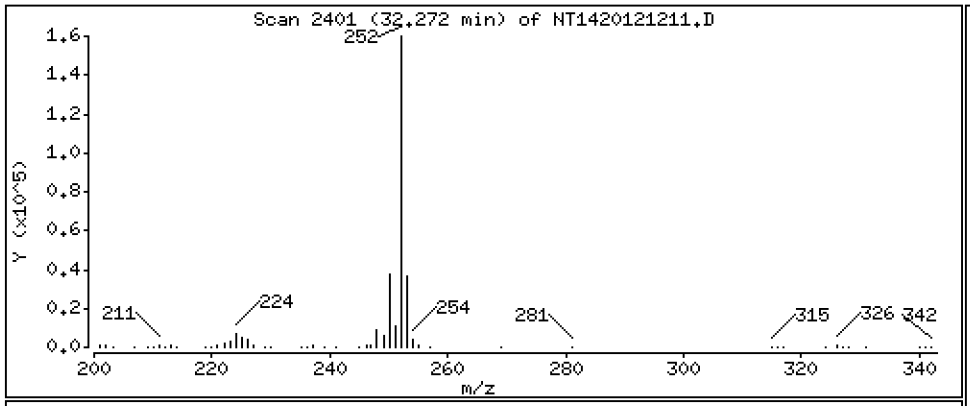
Operator: VTS

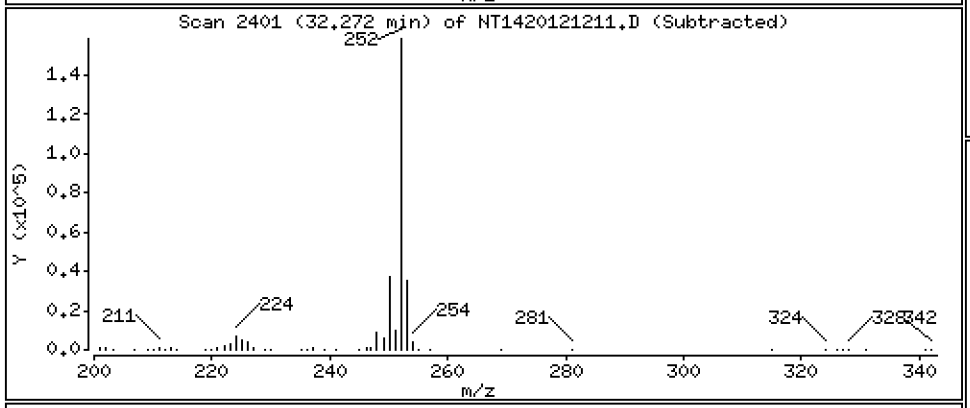
Column phase: Rxi-17Sil MS

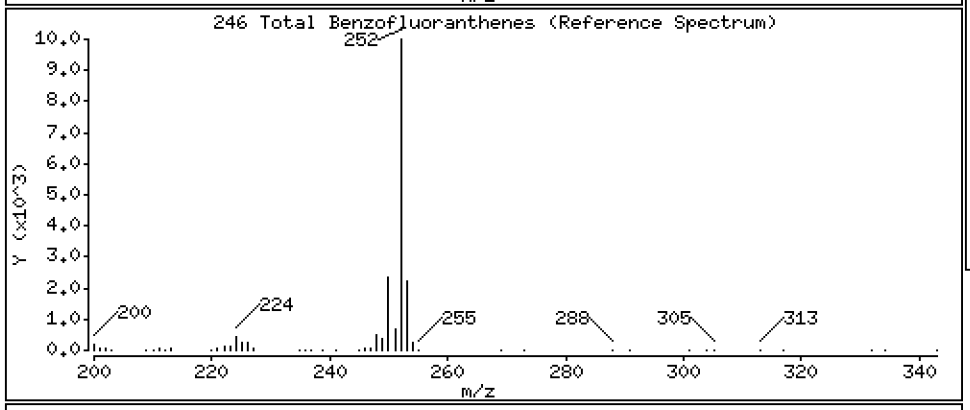
Column diameter: 0.25

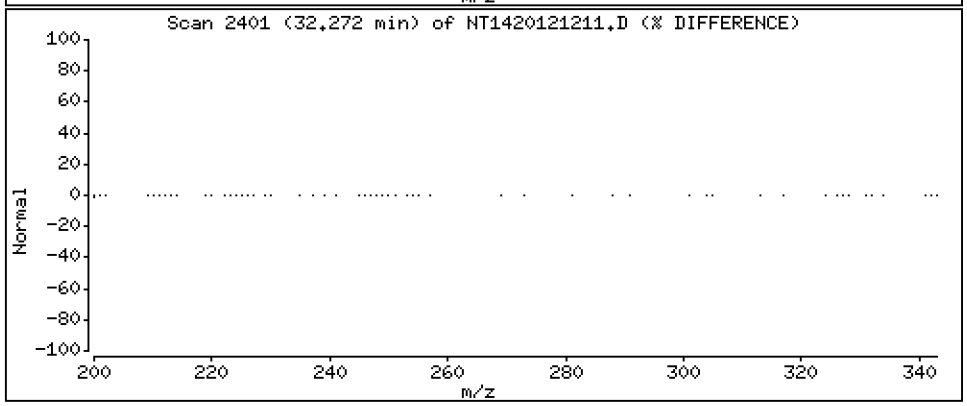
246 Total Benzofluoranthenes

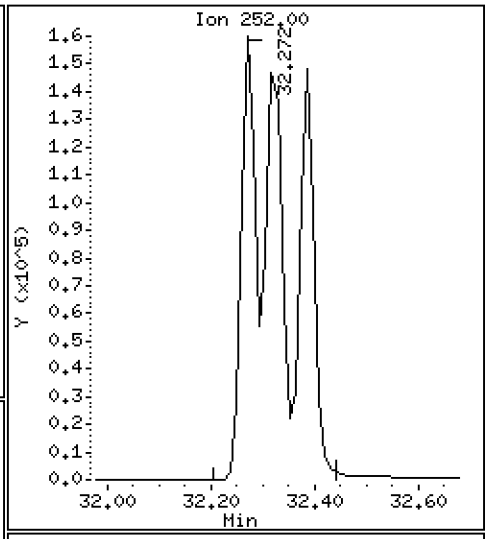
Concentration: 7.490 ug/mL

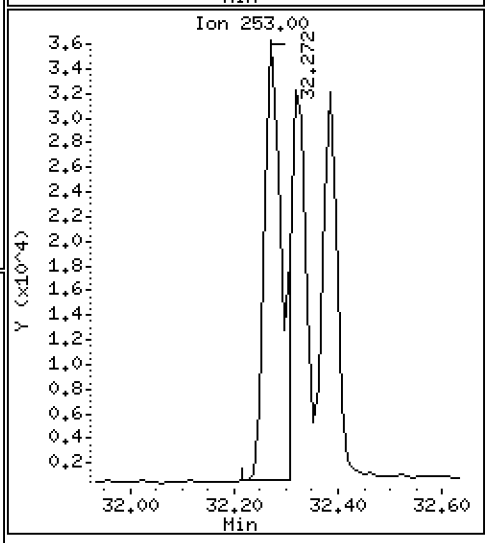












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

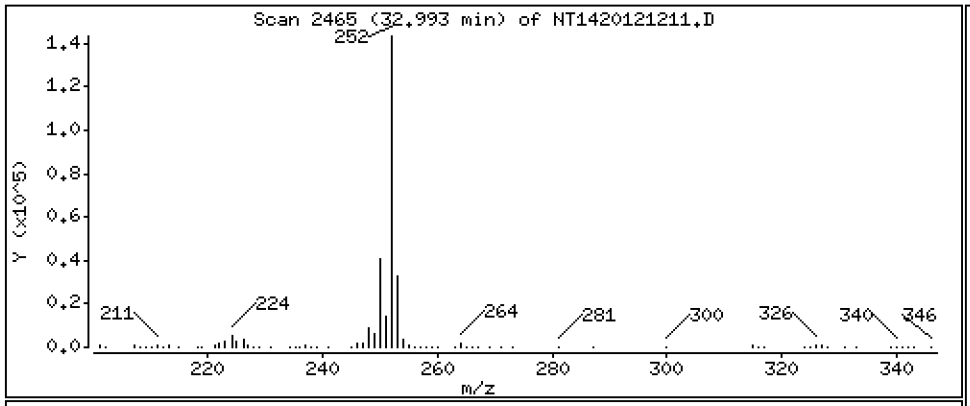
Operator: VTS

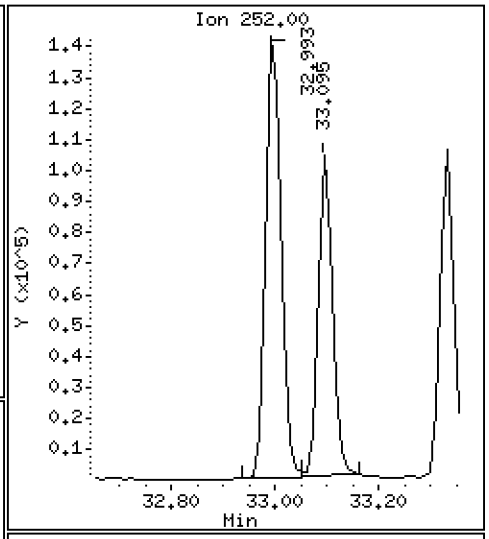
Column phase: Rxi-17Sil MS

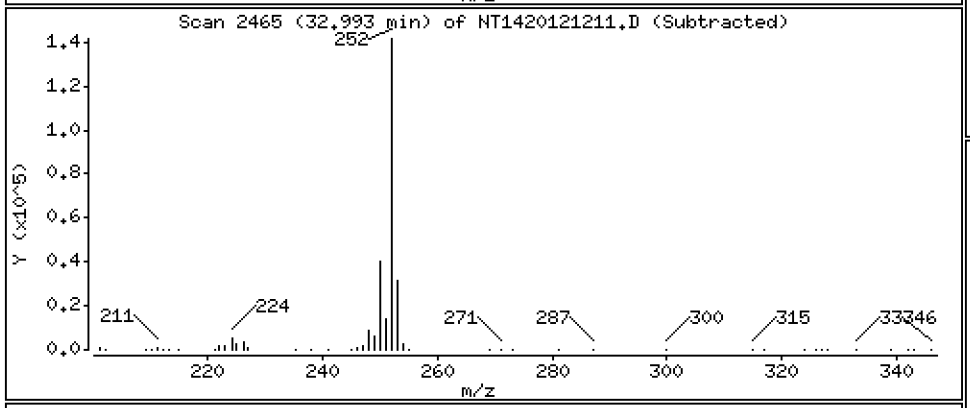
Column diameter: 0.25

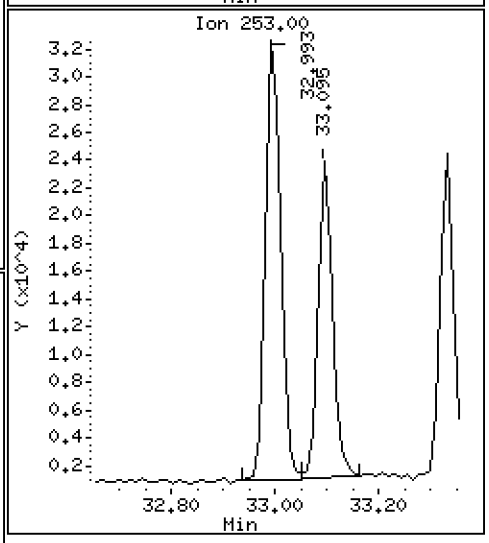
64 Benzo(e)pyrene

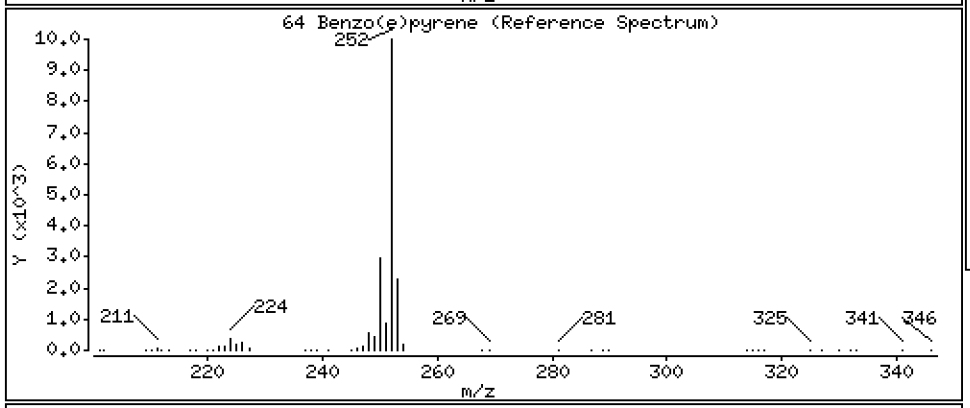
Concentration: 2.321 ug/mL

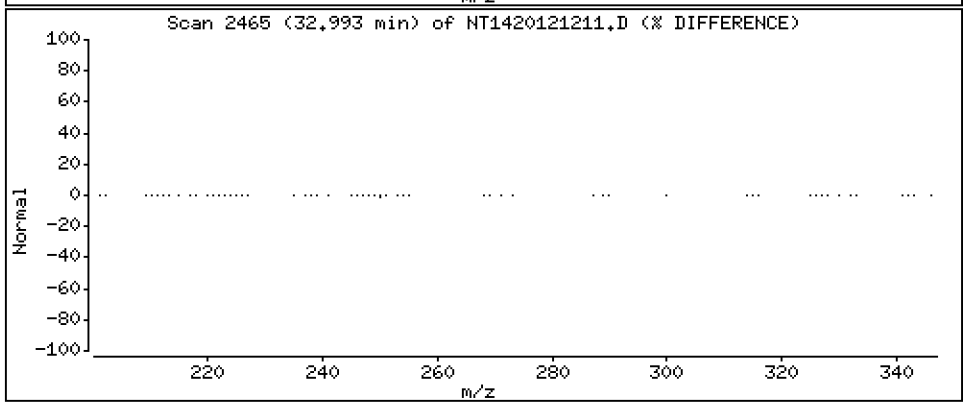












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

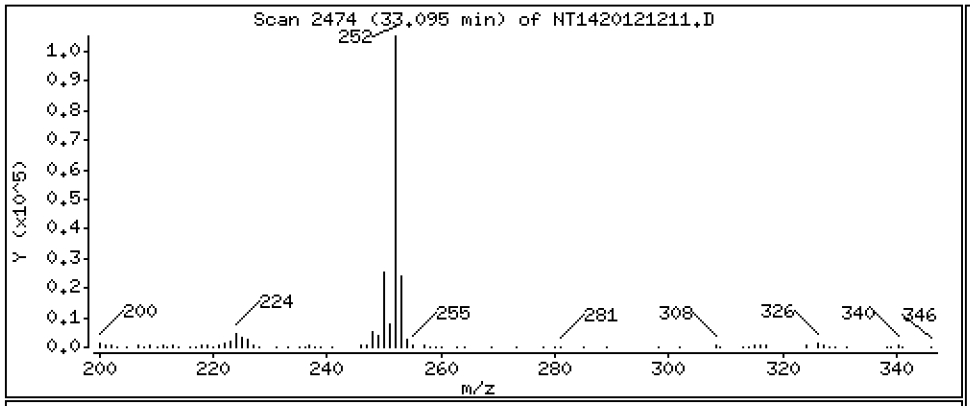
Operator: VTS

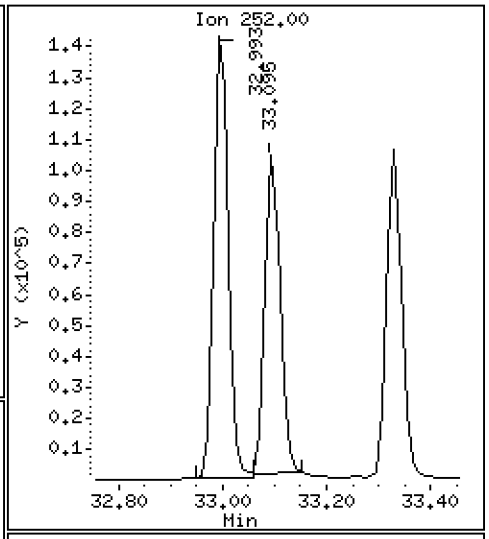
Column phase: Rxi-17Sil MS

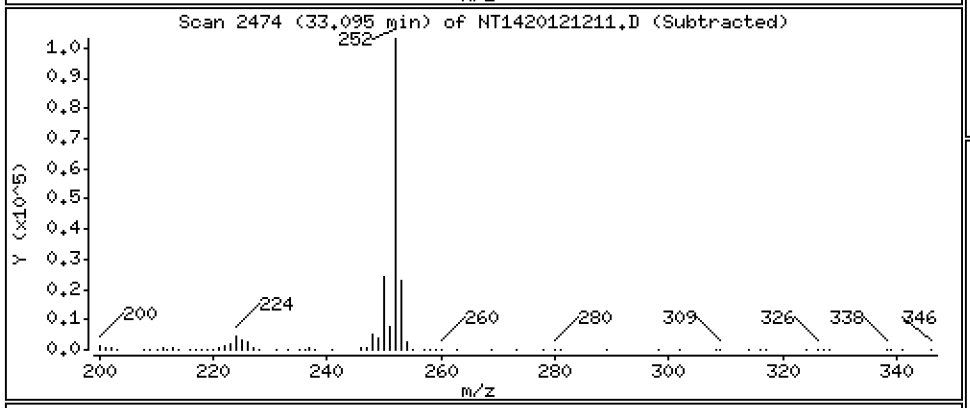
Column diameter: 0.25

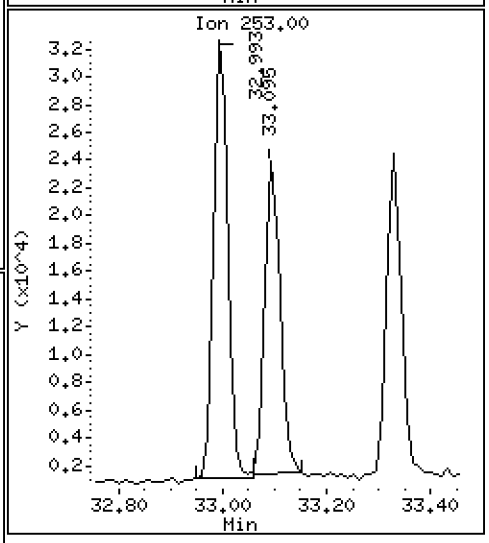
66 Benzo(a)pyrene

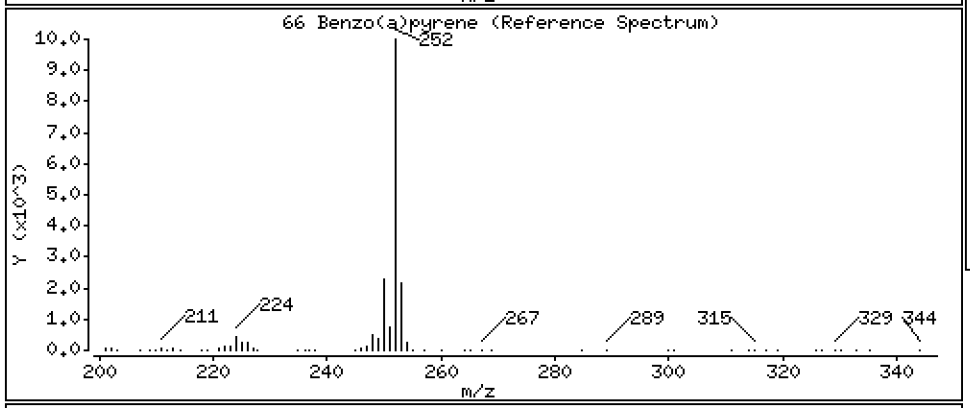
Concentration: 1.706 ug/mL

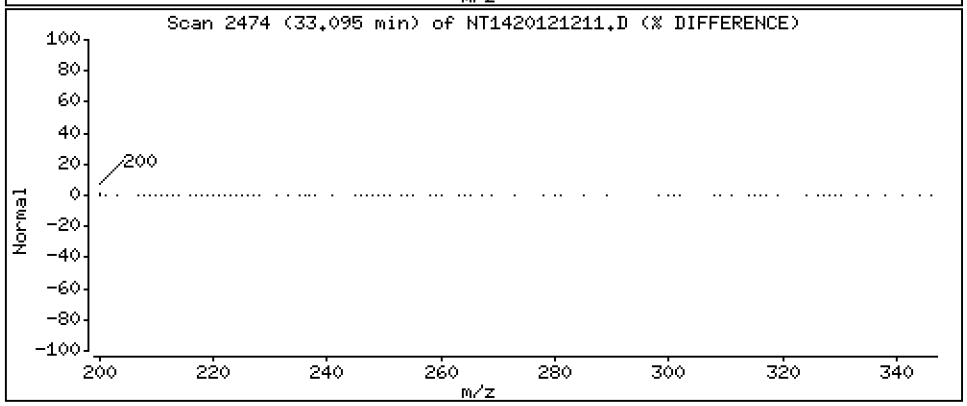












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

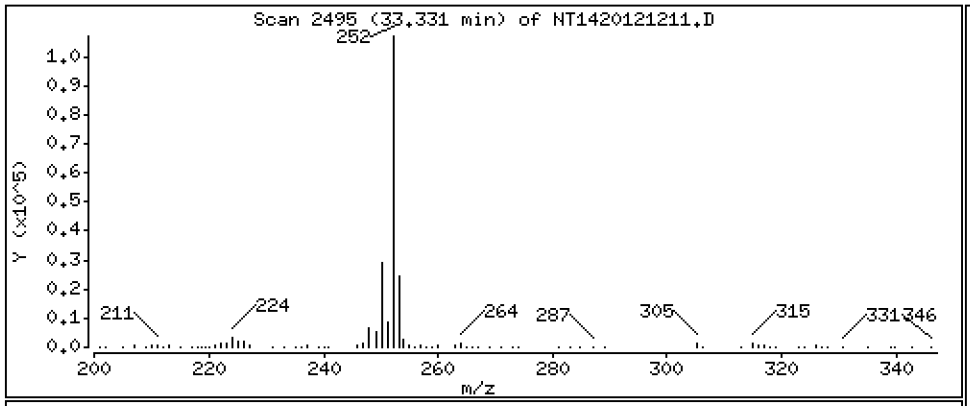
Operator: VTS

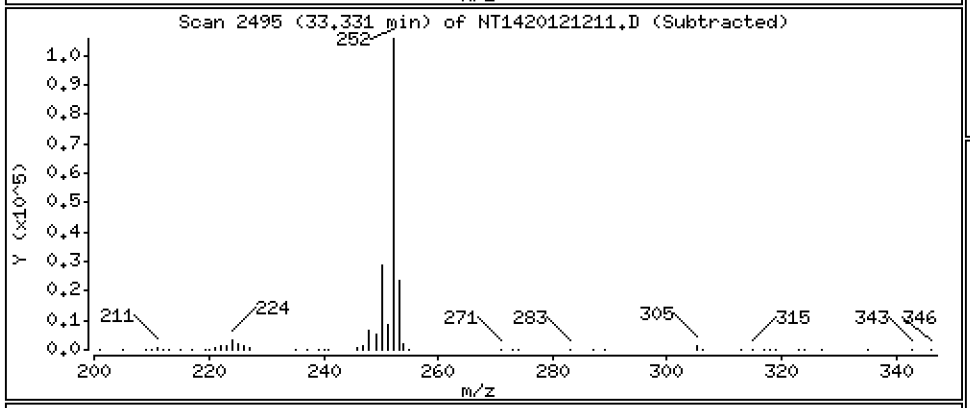
Column phase: Rxi-17Sil MS

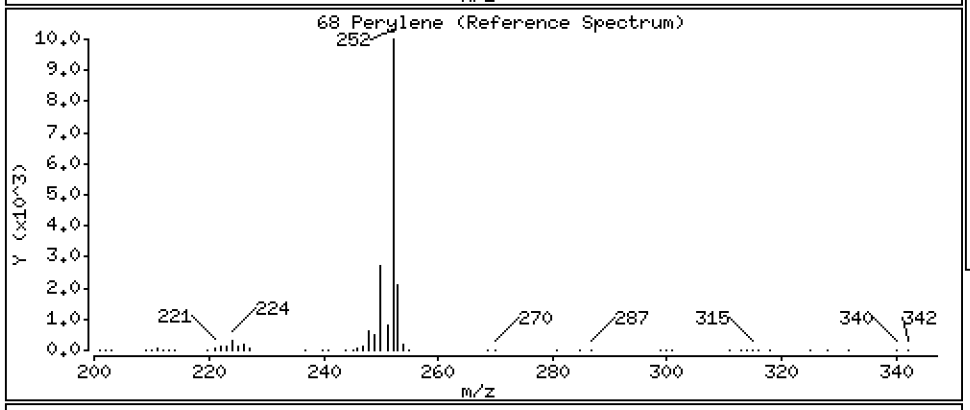
Column diameter: 0.25

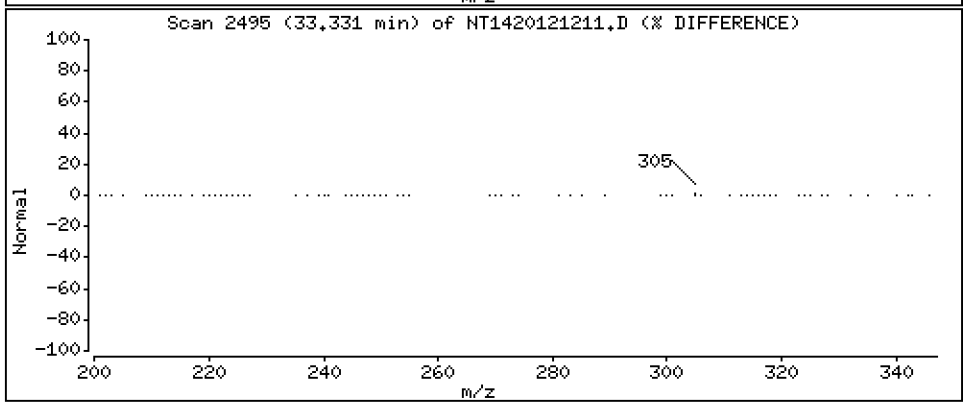
68 Perylene

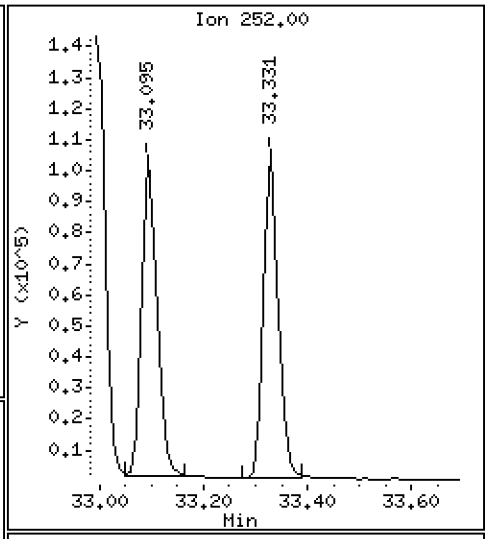
Concentration: 1.656 ug/mL

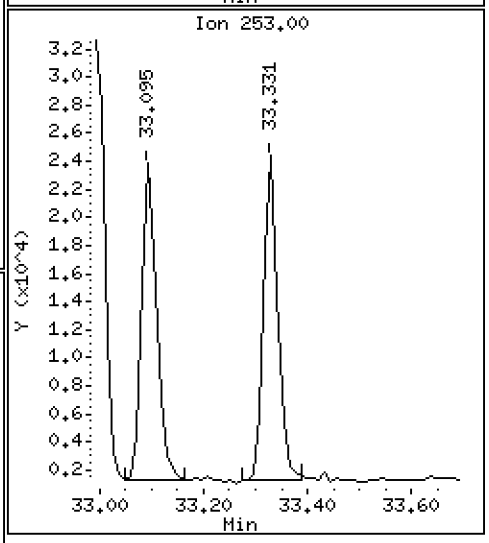












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Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

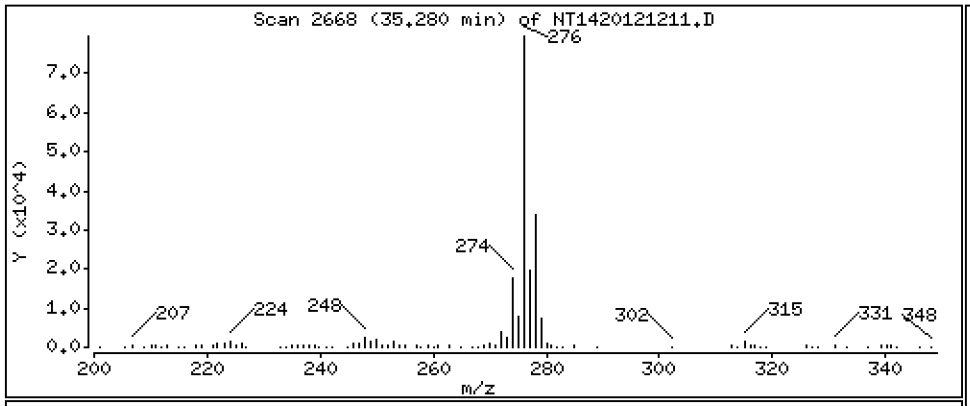
Operator: VTS

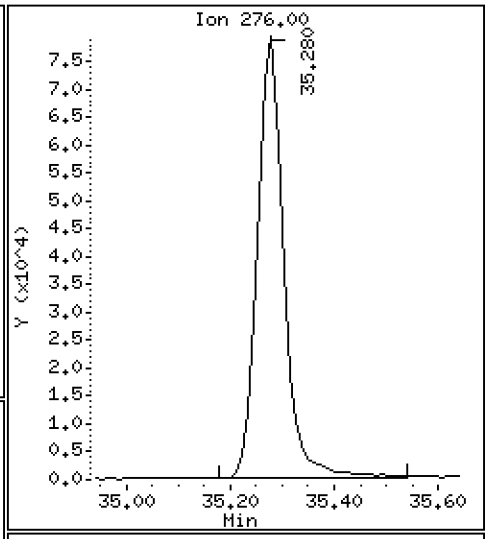
Column phase: Rxi-17Sil MS

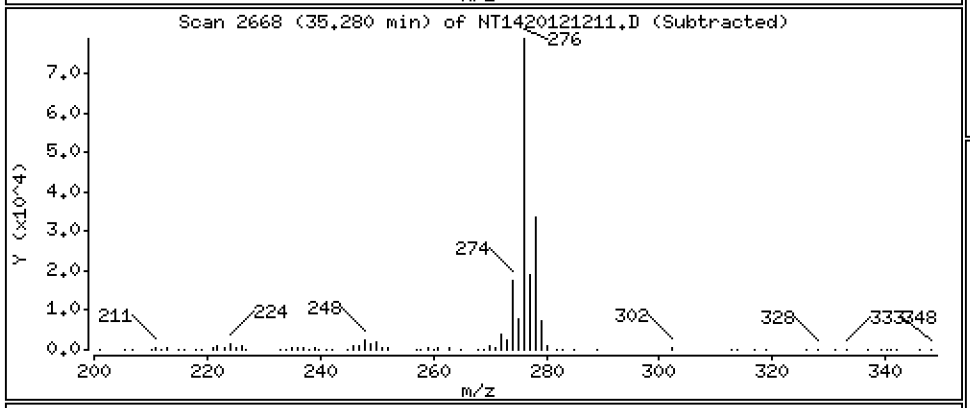
Column diameter: 0.25

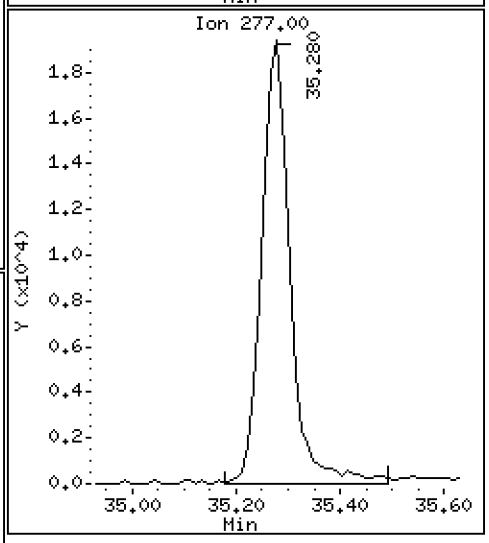
69 Indeno(1,2,3-cd)pyrene

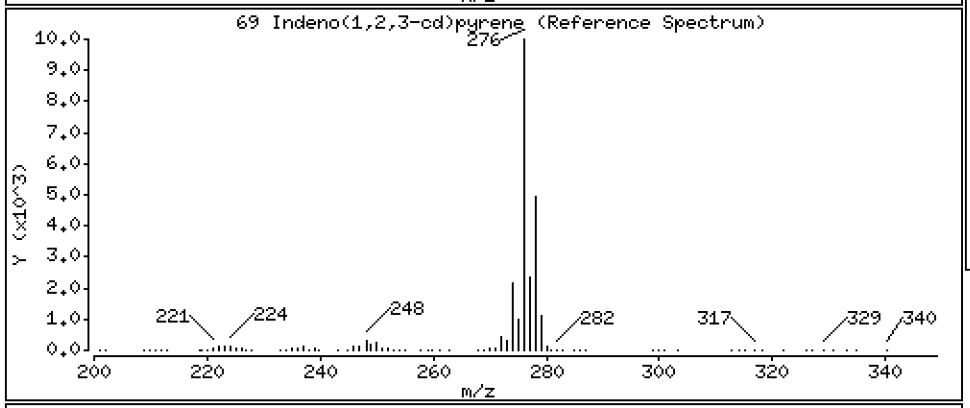
Concentration: 1.898 ug/mL

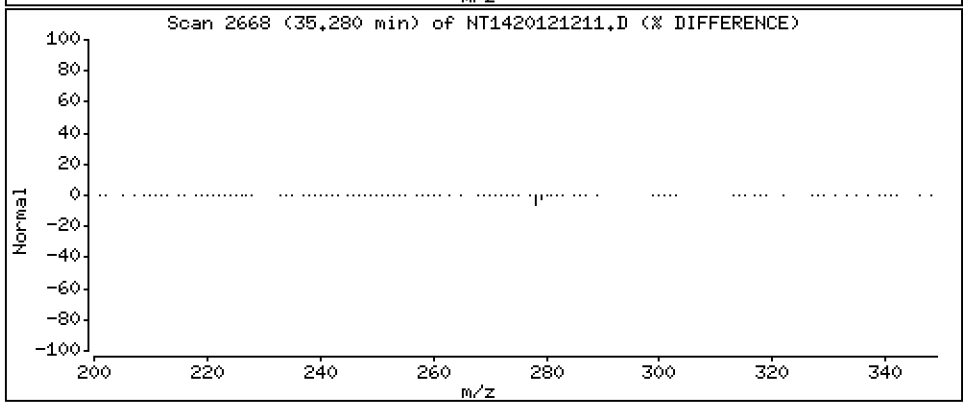












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Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

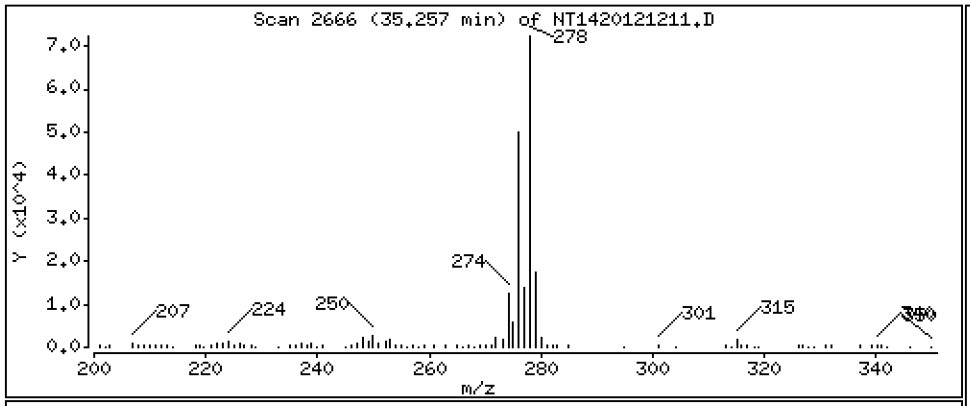
Operator: VTS

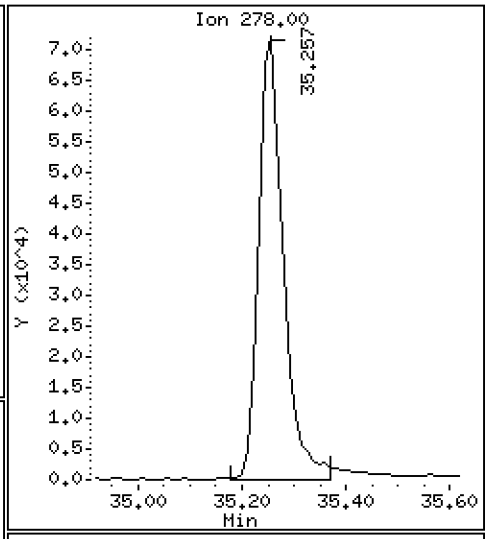
Column phase: Rxi-17Sil MS

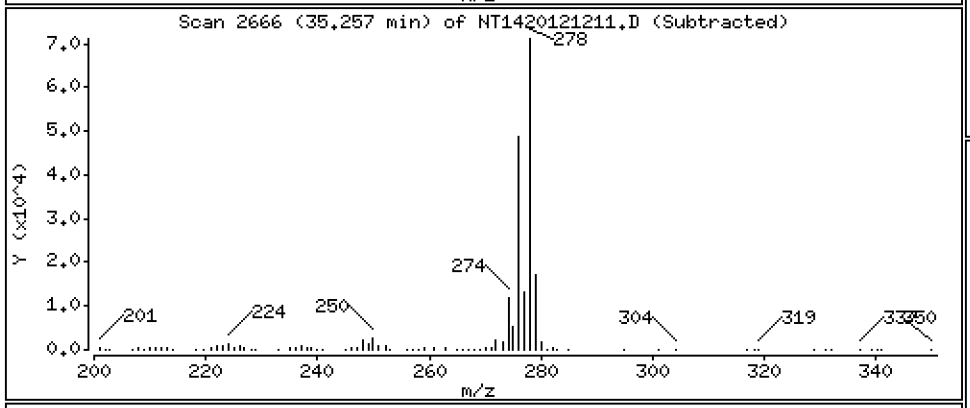
Column diameter: 0.25

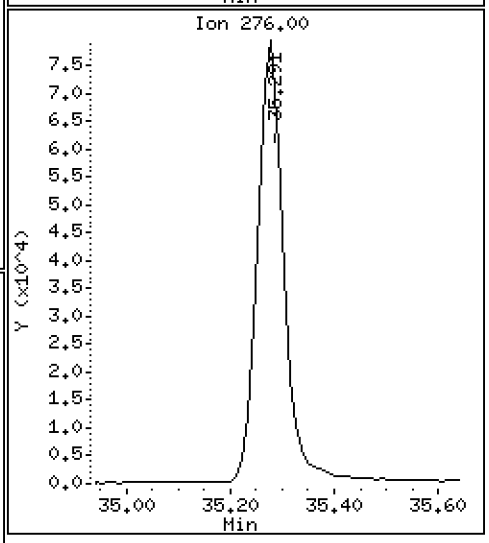
70 Dibenzo(a,h)anthracene

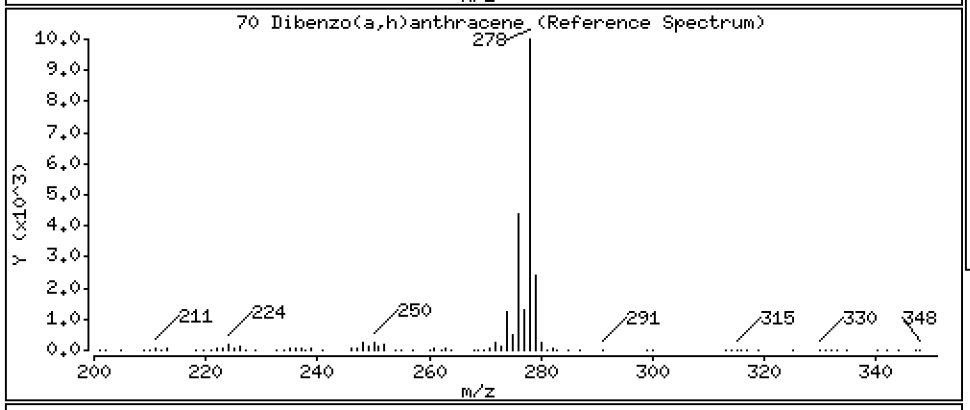
Concentration: 1.854 ug/mL

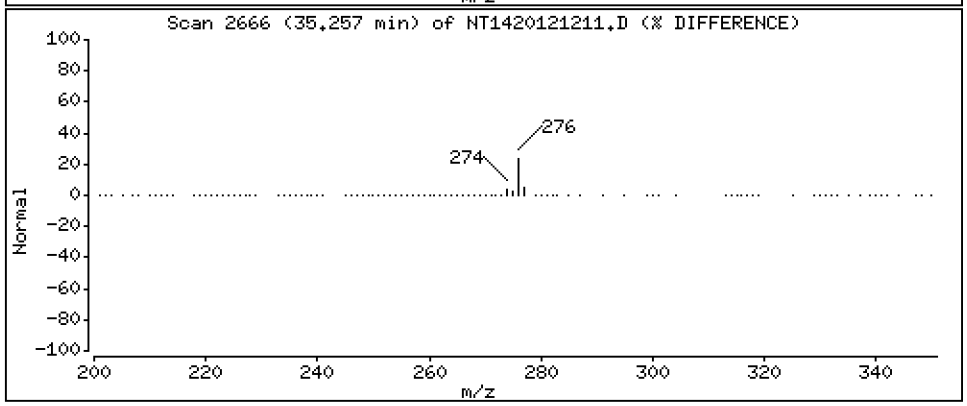












Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D

Date : 12-DEC-2020 19:11

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-BS1

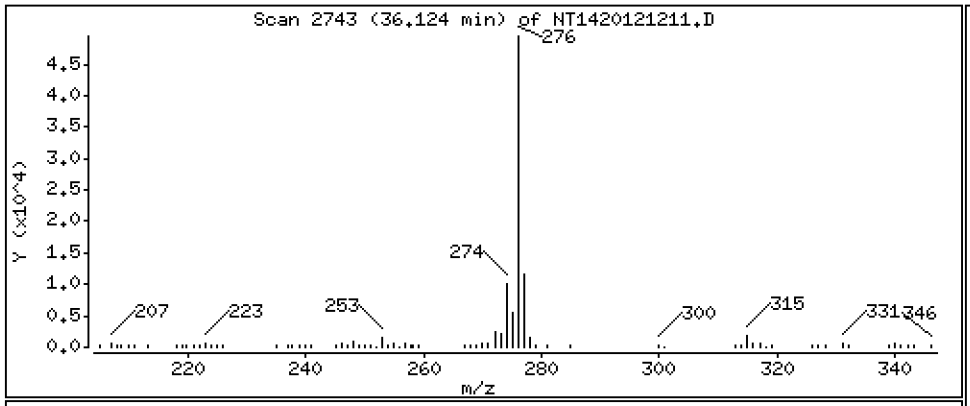
Operator: VTS

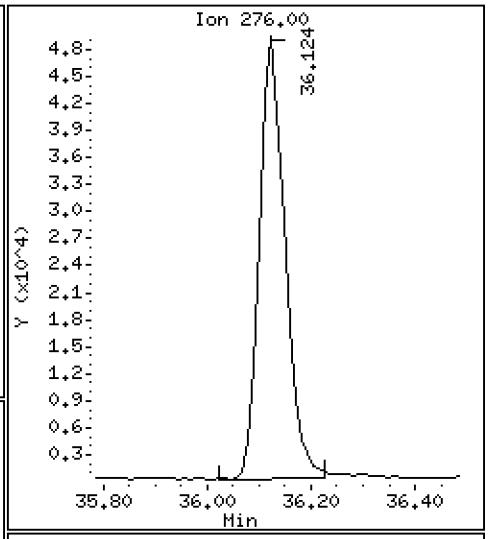
Column phase: Rxi-17Sil MS

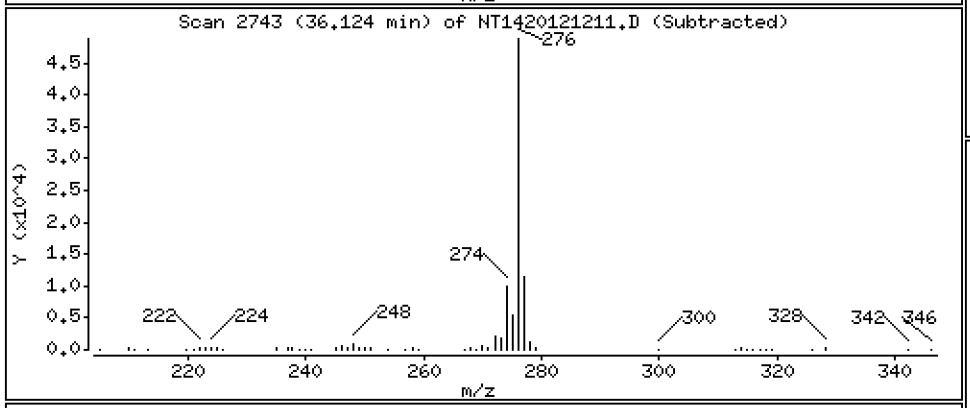
Column diameter: 0.25

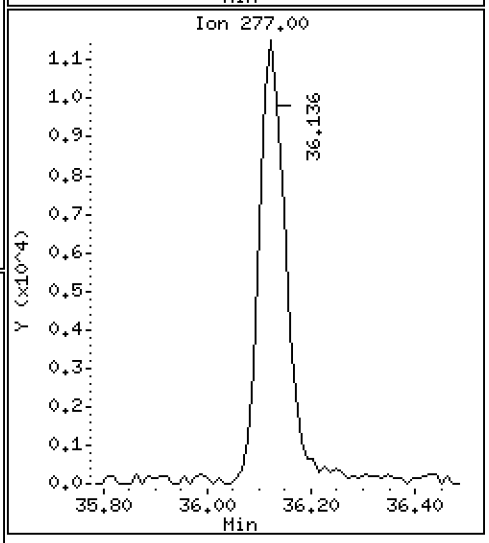
74 Benzo(g,h,i)perylene

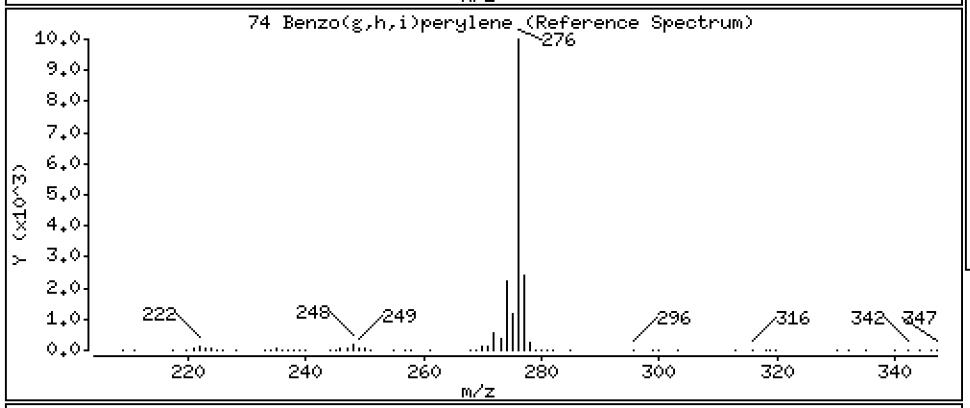
Concentration: 1.311 ug/mL

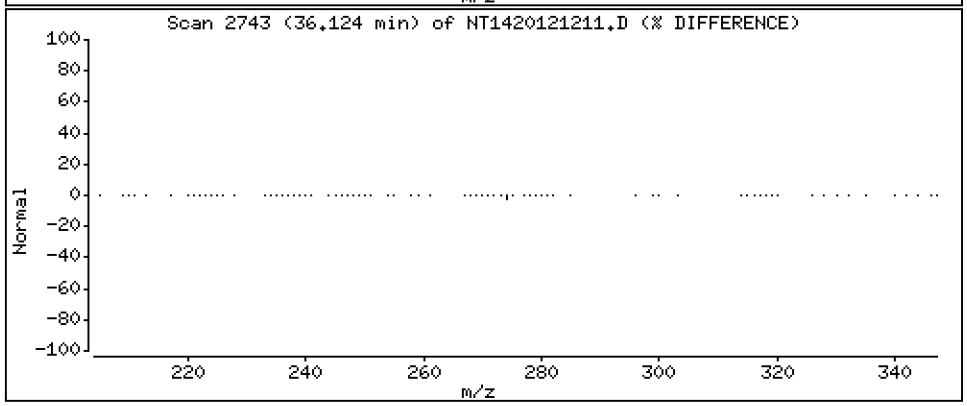












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D
Lab Smp Id: BIK0323-BS1
Inj Date : 12-DEC-2020 19:11
Operator : VTS Inst ID: nt14.i
Smp Info : BIK0323-BS1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201212.b\ALKYLPNA.m
Meth Date : 12-Dec-2020 12:41 van Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: ORGDATA102

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
	1 trans-Decalin	138	6.914	6.914	(0.371)	16068	1.53614	1.536
	2 cis-Decalin	138	8.003	8.024	(0.430)	12528	1.59174	1.592
$	6 Naphthalene-d8	136	11.619	11.630	(0.624)	191680	1.87705	1.877(R)
	7 Naphthalene	128	11.685	11.696	(0.628)	177284	1.73526	1.735
	12 Benzo(b)thiophene	134	12.135	12.146	(0.652)	144098	1.67861	1.679
	16 2-Methylnaphthalene	141	13.520	13.531	(0.726)	111169	1.78501	1.785
	17 1-methylnaphthalene	141	13.971	13.982	(0.750)	108406	1.71645	1.716
	18 Biphenyl	154	15.158	15.169	(0.814)	168103	1.79344	1.793
	19 2,6-Dimethylnaphthalene	156	15.245	15.245	(0.819)	127569	1.86426	1.864
	20 Acenaphthylene	152	16.806	16.806	(0.903)	182520	1.62669	1.627
$	21 Acenaphthene-d10	164	17.092	17.092	(0.918)	116750	1.90394	1.904(R)
	22 Acenaphthene	153	17.202	17.213	(0.924)	138737	1.88746	1.887
	23 Dibenzofuran	168	17.575	17.586	(0.944)	201532	1.88991	1.890
	24 1,6,7-Trimethylnaphthalene	170	17.806	17.817	(0.956)	136406	1.96615	1.966
*	25 Fluorene-d10	176	18.621	18.632	(1.000)	250272	2.00000	
	26 Fluorene	166	18.723	18.734	(1.005)	164686	1.98107	1.981
	30 Dibenzothiophene	184	21.637	21.648	(1.162)	244777	2.04594	2.046
$	35 Phenanthrene-d10	188	21.952	21.952	(0.995)	237781	2.39869	2.399(R)
	36 Phenanthrene	178	22.029	22.040	(0.999)	265106	2.31296	2.313
*	250 Anthracene-d10	188	22.062	22.073	(1.000)	206969	2.00000	
	37 Anthracene	178	22.128	22.139	(1.003)	216396	1.92106	1.921
	42 Carbazole	167	23.425	23.425	(1.062)	225706	2.31378	2.314
	43 1-Methylphenanthrene	192	23.865	23.865	(1.082)	208572	2.47920	2.479
	44 Fluoranthene	202	25.833	25.844	(1.171)	326070	2.57759	2.578
	46 Pyrene	202	26.690	26.701	(1.210)	340667	2.55200	2.552
	51 Naphthobenzothiophene	234	29.256	29.256	(1.326)	271463	2.23108	2.231
	55 Benzo(a)anthracene	228	29.850	29.850	(0.906)	292750	2.49131	2.491
$	56 Chrysene-d12	240	29.974	29.974	(0.910)	231521	2.49469	2.495(R)
	57 Chrysene	228	30.042	30.053	(0.912)	294093	2.51807	2.518
	62 Benzo(b)fluoranthene	252	32.272	32.283	(0.980)	368324	2.77603	2.776
	63 Benzo(k)fluoranthene	252	32.317	32.328	(0.981)	294402	2.20148	2.201
	293 Benzo(j)fluoranthene	252	32.385	32.396	(0.983)	288256	2.46592	2.466
	246 Total Benzofluoranthenes	252	32.272	32.328	(0.980)	922104	7.49029	7.490(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.936	32.948	(1.000)	272196	2.00000	
64 Benzo(e)pyrene	252	32.993	33.004	(1.002)	281986	2.32123	2.321
66 Benzo(a)pyrene	252	33.094	33.105	(1.005)	195786	1.70579	1.706
$ 67 Perylene-d12	264	33.274	33.286	(1.010)	197829	1.75765	1.758(R)
68 Perylene	252	33.331	33.342	(1.012)	199637	1.65596	1.656
69 Indeno(1,2,3-cd)pyrene	276	35.279	35.290	(1.071)	269787	1.89812	1.898
70 Dibenzo(a,h)anthracene	278	35.257	35.268	(1.070)	232799	1.85389	1.854(M)
74 Benzo(g,h,i)perylene	276	36.124	36.135	(1.097)	163733	1.31128	1.311(M)

QC Flag Legend

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

Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121211.D Page 1
Report Date: 14-Dec-2020 16:54

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1420121211.D
Lab Smp Id: BIK0323-BS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201212.b\ALKYLPNA.m
Misc Info:

Calibration Date: 12-DEC-2020
Calibration Time: 11:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	219929	109965	439858	250272	13.80
250 Anthracene-d10	196749	98375	393498	206969	5.19
251 Benzo(e)pyrene-d1	249762	124881	499524	272196	8.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.63	18.13	19.13	18.62	-0.06
250 Anthracene-d10	22.07	21.57	22.57	22.06	-0.05
251 Benzo(e)pyrene-d1	32.95	32.45	33.45	32.94	-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 - NT1420121211.D

Lab ID: BIK0323-BS1
nt14.i, 20201212.b\ALKYLPNA.m, 12-DEC-2020 19:11

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.062	0.000	1.0618	Carbazole

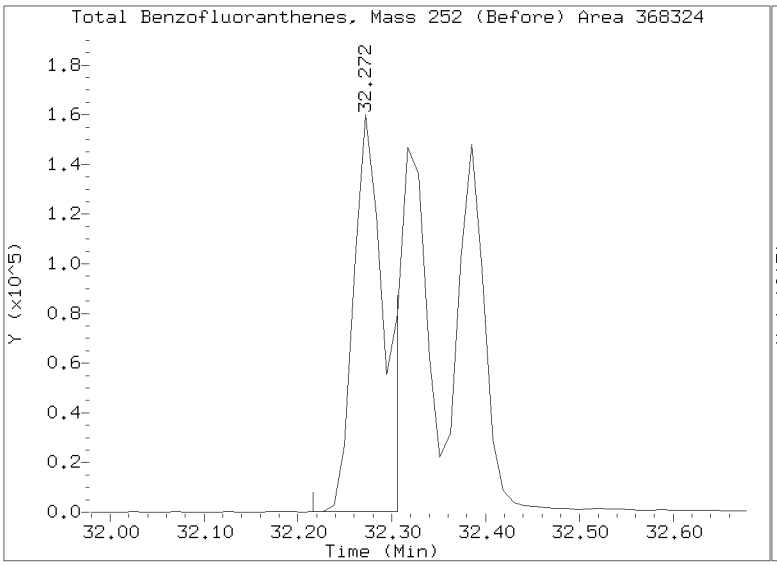
RRT check based on Ccal File: NT1420121202.D

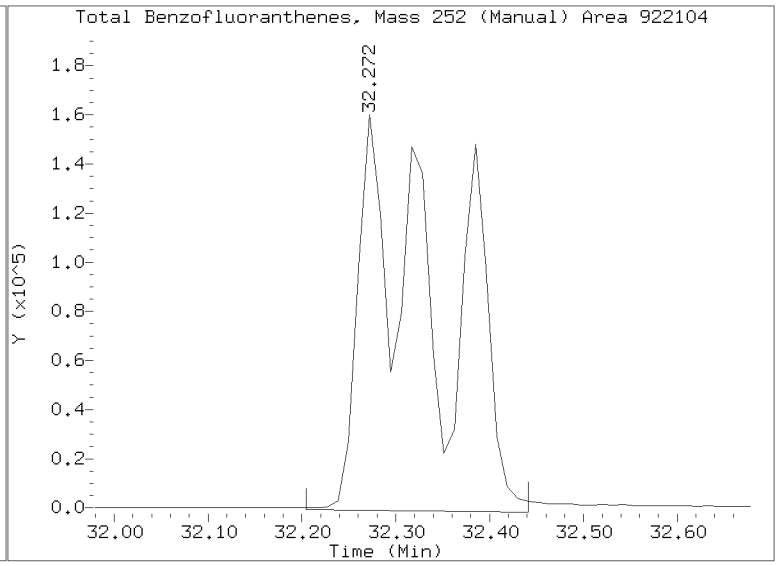
On Column LOD for nt14.i, 20201212.b\ALKYLPNA.m, TARGETS.sub = 0.0000

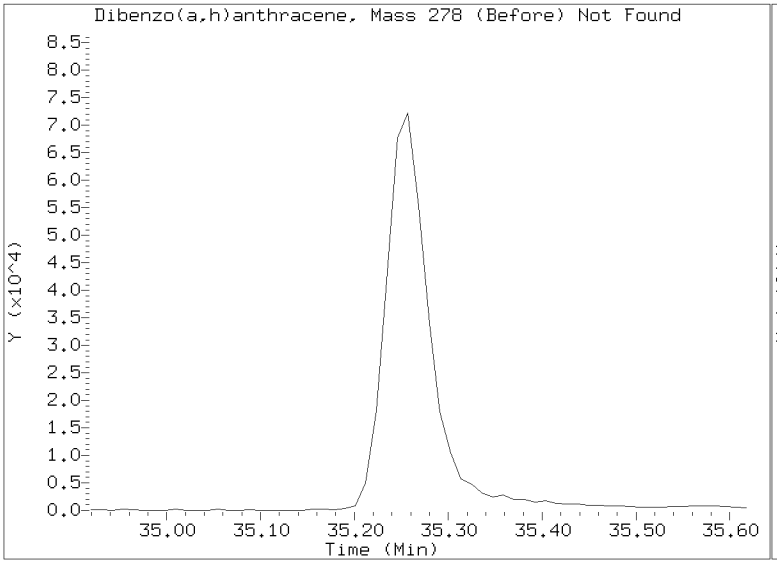
* Only compounds listed in the work order have been verified by the analyst *

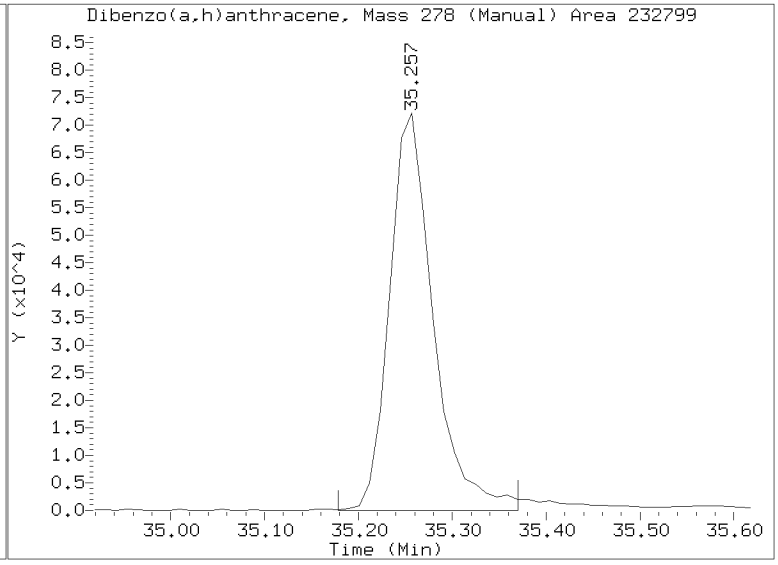
Quant Ion Manual Peak Adjustment Report

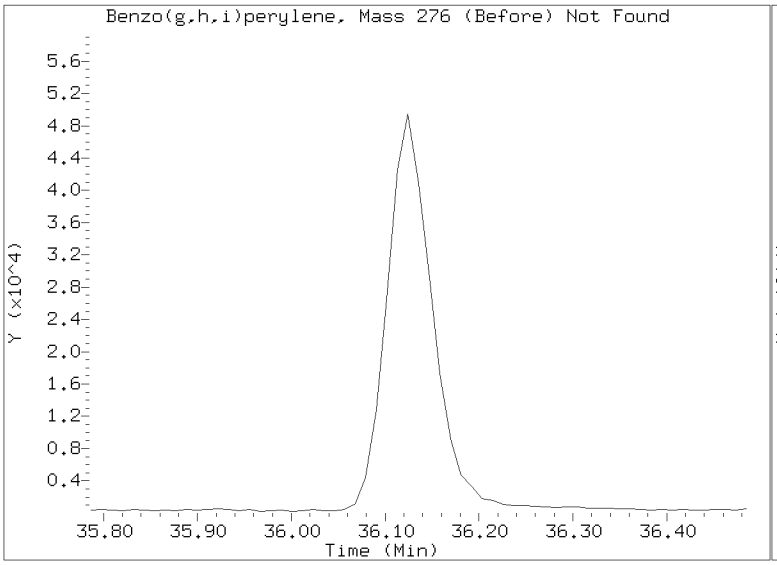
Datafile: //target/share/chem3/nt14.i/20201212.b/NT1420121211.D
Injection Date: 12-DEC-2020 19:11
Lab ID:BIK0323-BS1 Client ID:
Report Date: 12/14/2020 16:54

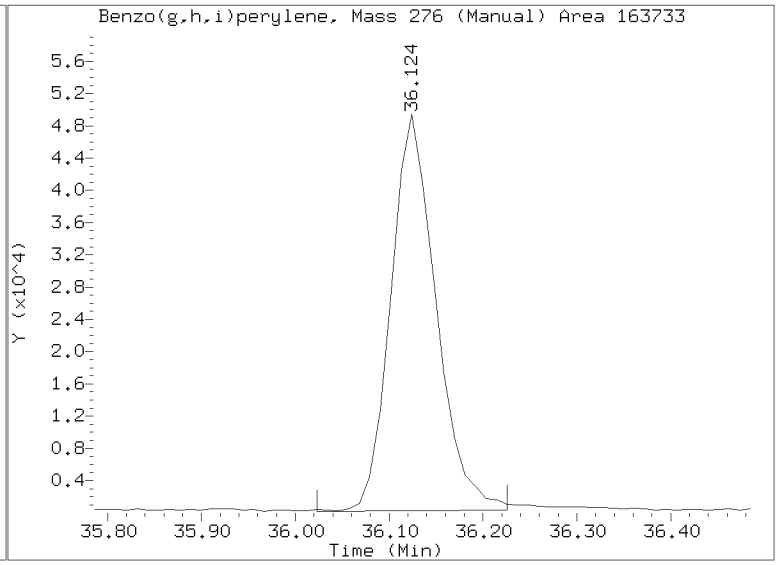












Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-A-01-02-201029

MS / MS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Matrix:	Solid	Analyzed:	12/13/20 01:34
Batch:	BIK0323	Laboratory ID:	BIK0323-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	11.41 g / 0.5 mL	Source Sample:	USMPDI-046SC-A-01-02-201029

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
trans-Decalin	150	ND	U	73.0		48.6	30 - 160
cis-Decalin	150	ND	U	79.4		52.9	30 - 160
Naphthalene	150	5.7		88.6		55.3	37 - 120
1-Methylnaphthalene	150	1.6	J	83.5		54.6	30 - 160
2-Methylnaphthalene	150	2.4	J	89.1		57.8	37 - 120
Biphenyl	150	1.2	J	89.9		59.1	30 - 160
2,6-Dimethylnaphthalene	150	2.9	J	94.1		60.8	30 - 160
Acenaphthylene	150	7.9		92.4		56.3	35 - 120
Acenaphthene	150	20.9		111		59.9	39 - 120
Dibenzofuran	150	0.7	J	96.9		64.1	39 - 120
2,3,5-Trimethylnaphthalene	150	3.2	J	103		66.4	30 - 160
Fluorene	150	9.4		107		64.8	42 - 120
Benzo(b)thiophene	150	ND	U	82.6		55.0	30 - 160
Phenanthrene	150	161		268		71.1	47 - 120
Anthracene	150	9.9		108		65.1	41 - 120
Carbazole	150	3.2	J	116		75.4	30 - 160
1-Methylphenanthrene	150	17.1		139		81.0	30 - 160
Fluoranthene	150	211		343		87.7	52 - 120
Dibenzothiophene	150	8.9		112		68.9	30 - 160
Pyrene	150	258		385		84.5	47 - 120
Benzo(a)anthracene	150	83.3		208		82.9	47 - 120
Chrysene	150	111		230		79.2	51 - 120
Benzo(b)fluoranthene	150	61.7		209		98.2	35 - 127
Benzo(j)fluoranthene	150	42.6		161		79.0	40 - 120
Benzo(k)fluoranthene	150	41.9		135		62.3	37 - 129
Benzofluoranthenes, Total	450	143		495		78.2	46 - 120
Benzo(e)pyrene	150	68.3		175		71.3	30 - 160
Benzo(a)pyrene	150	96.5		184		58.1	44 - 120
Indeno(1,2,3-cd)pyrene	150	56.4	Q	144		58.7	41 - 120
Dibenzo(a,h)anthracene	150	10.1	Q	103	Q	62.1	42 - 120

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-A-01-02-201029

MS / MS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Matrix:	Solid	Analyzed:	12/13/20 01:34
Batch:	BIK0323	Laboratory ID:	BIK0323-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	11.41 g / 0.5 mL	Source Sample:	USMPDI-046SC-A-01-02-201029

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Benzo(g,h,i)perylene	150	67.0		123		37.0	37 - 120
Perylene	150	37.5		121		55.5	30 - 160
Benzo(b)naphtho(2,1-d)thiophene	150	18.4		132		75.5	30 - 160

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-A-01-02-201029

MS / MS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Matrix:	Solid	Analyzed:	12/13/20 02:22
Batch:	BIK0323	Laboratory ID:	BIK0323-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	11.41 g / 0.5 mL	Source Sample:	USMPDI-046SC-A-01-02-201029

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
trans-Decalin	150	69.3		46.2	5.24	30	30 - 160
cis-Decalin	150	75.6		50.4	4.94	30	30 - 160
Naphthalene	150	83.1		51.6	6.43	30	37 - 120
1-Methylnaphthalene	150	78.1		51.0	6.68	30	30 - 160
2-Methylnaphthalene	150	82.7		53.5	7.47	30	37 - 120
Biphenyl	150	83.7		55.0	7.13	30	30 - 160
2,6-Dimethylnaphthalene	150	89.9		58.0	4.64	30	30 - 160
Acenaphthylene	150	86.7		52.5	6.40	30	35 - 120
Acenaphthene	150	113		61.6	2.19	30	39 - 120
Dibenzofuran	150	90.4		59.7	6.94	30	39 - 120
2,3,5-Trimethylnaphthalene	150	98.3		63.4	4.54	30	30 - 160
Fluorene	150	105		63.9	1.39	30	42 - 120
Benzo(b)thiophene	150	76.7		51.1	7.36	30	30 - 160
Phenanthrene	150	316		103	16.2	30	47 - 120
Anthracene	150	106		63.8	1.87	30	41 - 120
Carbazole	150	112		72.2	4.18	30	30 - 160
1-Methylphenanthrene	150	137		79.7	1.38	30	30 - 160
Fluoranthene	150	390		119	13.0	30	52 - 120
Dibenzothiophene	150	108		66.4	3.45	30	30 - 160
Pyrene	150	445	*	124 *	14.4	30	47 - 120
Benzo(a)anthracene	150	219		90.6	5.38	30	47 - 120
Chrysene	150	247		90.8	7.33	30	51 - 120
Benzo(b)fluoranthene	150	224		108	7.01	30	35 - 127
Benzo(j)fluoranthene	150	165		81.8	2.51	30	40 - 120
Benzo(k)fluoranthene	150	140		65.5	3.48	30	37 - 129
Benzofluoranthenes, Total	450	534		87.0	7.69	30	46 - 120
Benzo(e)pyrene	150	188		79.6	6.91	30	30 - 160
Benzo(a)pyrene	150	203		70.9	9.98	30	44 - 120
Indeno(1,2,3-cd)pyrene	150	154		65.1	6.45	30	41 - 120
Dibenzo(a,h)anthracene	150	106	Q	63.7	2.36	30	42 - 120
Benzo(g,h,i)perylene	150	135		45.3	9.67	30	37 - 120

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-A-01-02-201029

MS / MS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Matrix:	Solid	Analyzed:	12/13/20 02:22
Batch:	BIK0323	Laboratory ID:	BIK0323-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	11.41 g / 0.5 mL	Source Sample:	USMPDI-046SC-A-01-02-201029

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Perylene	150	129		61.1	6.66	30	30 - 160
Benzo(b)naphtho(2,1-d)thiophene	150	132		75.7	0.254	30	30 - 160

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D

Date : 13-DEC-2020 01:34

Client ID:

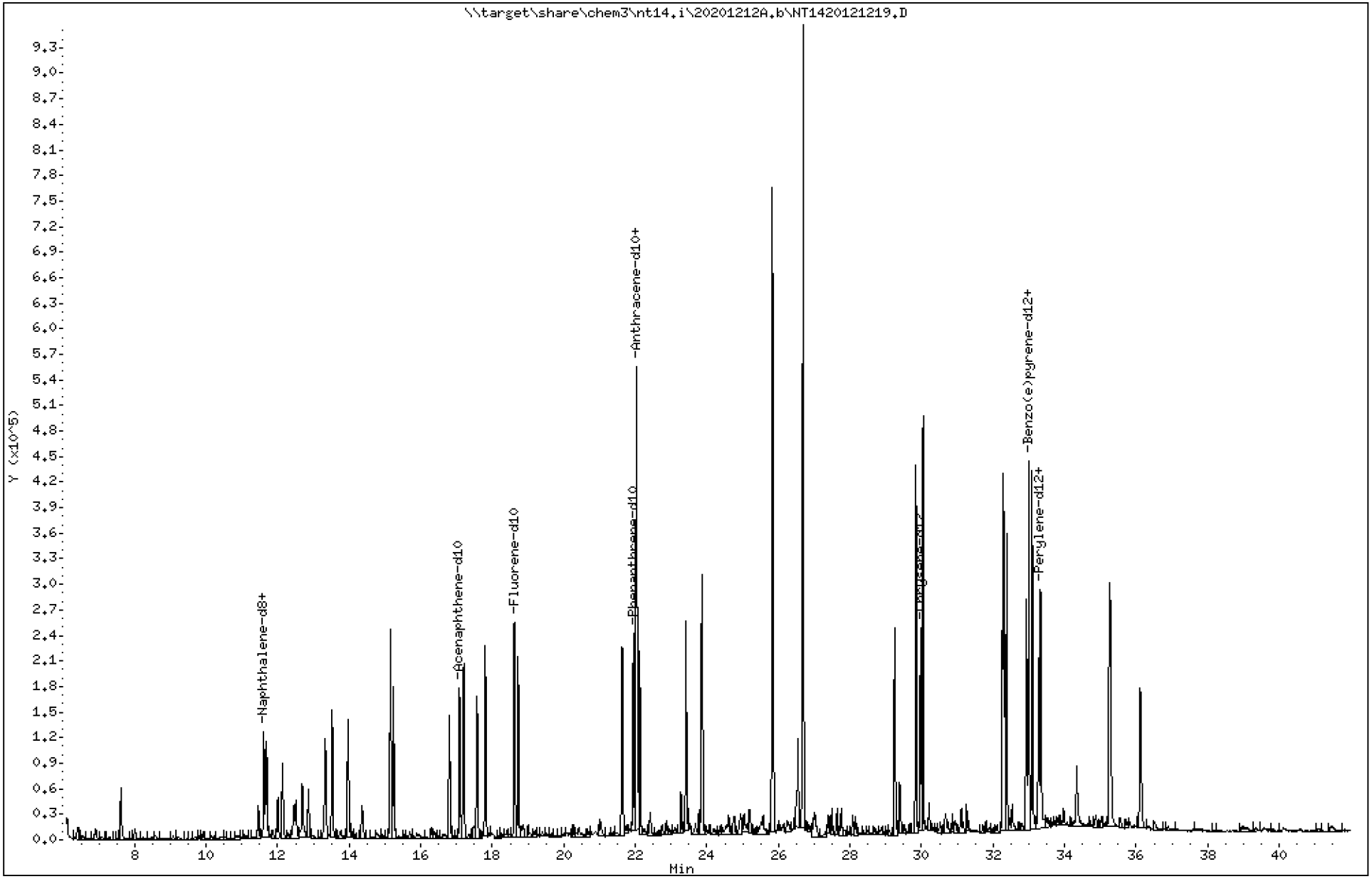
Instrument: nt14.i

Sample Info: BIK0323-MS1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



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Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

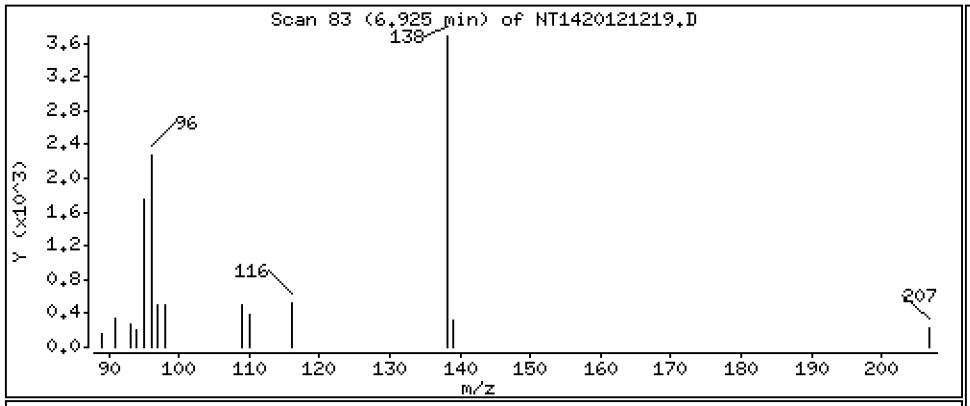
Operator: VTS

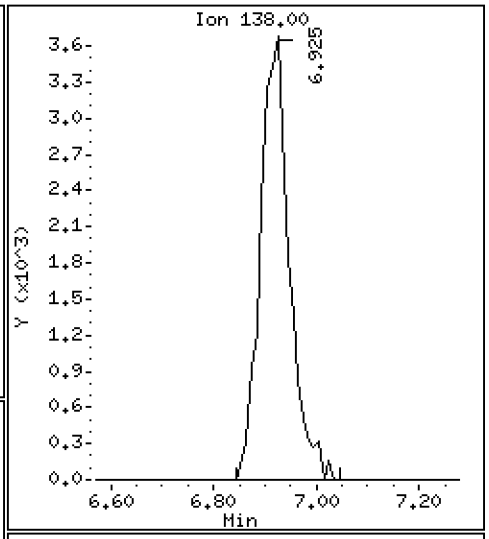
Column phase: Rxi-17Sil MS

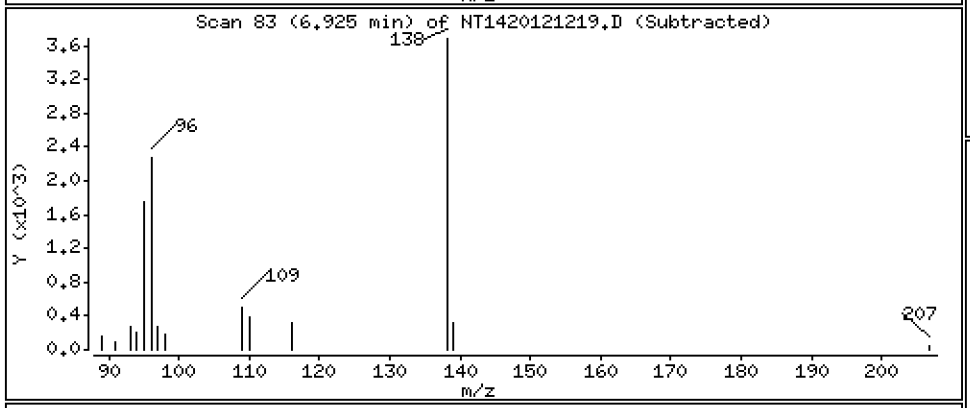
Column diameter: 0.25

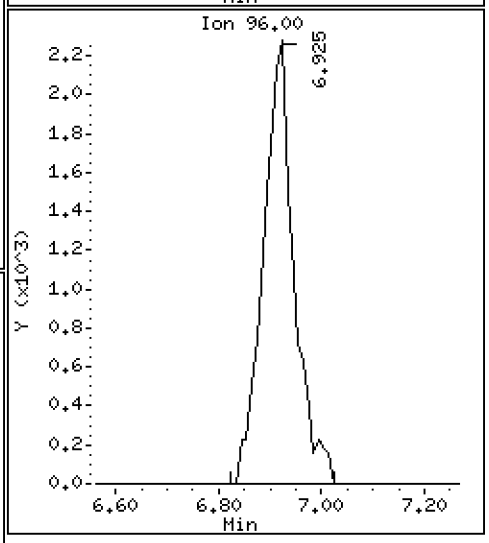
1 trans-Decalin

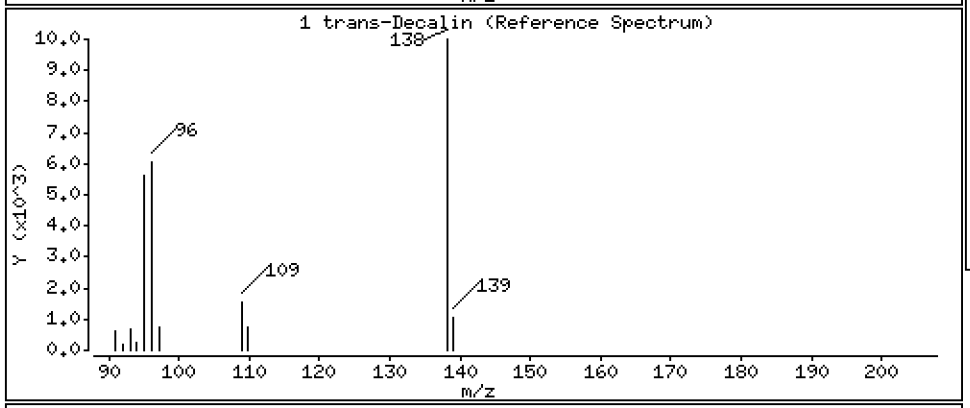
Concentration: 1.459 ug/mL

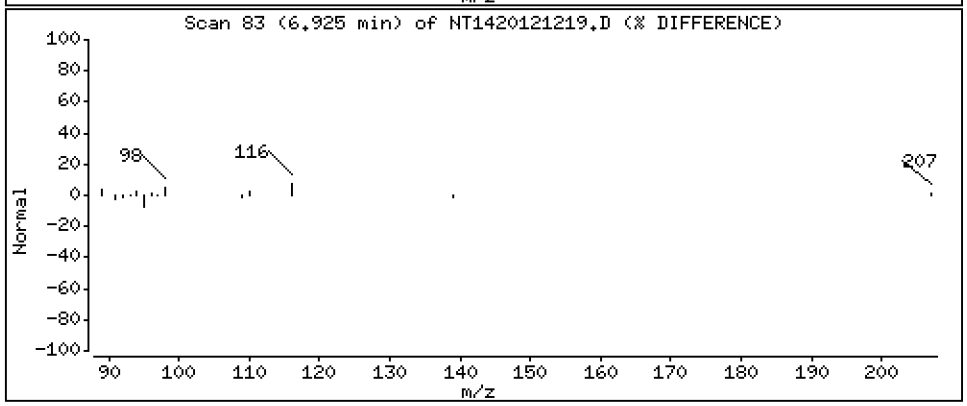












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Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

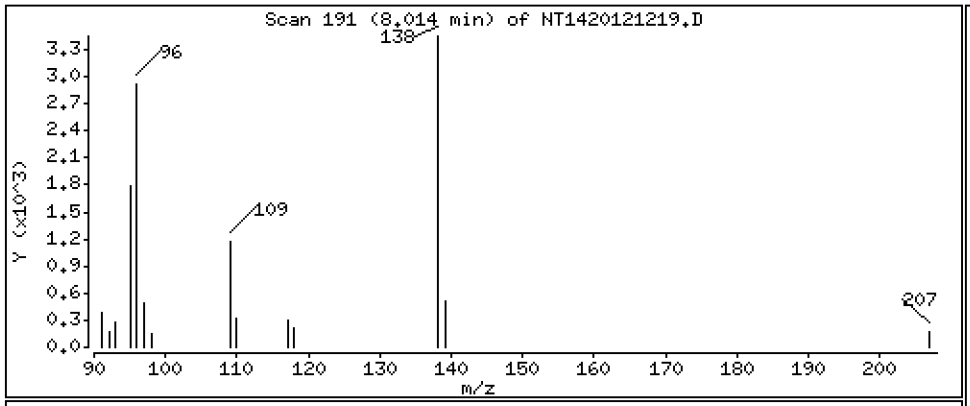
Operator: VTS

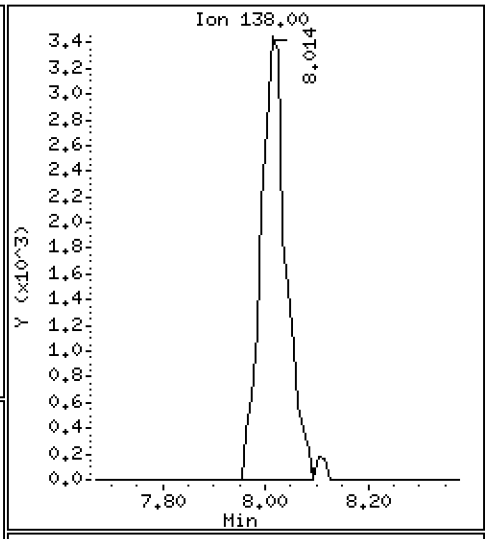
Column phase: Rxi-17Sil MS

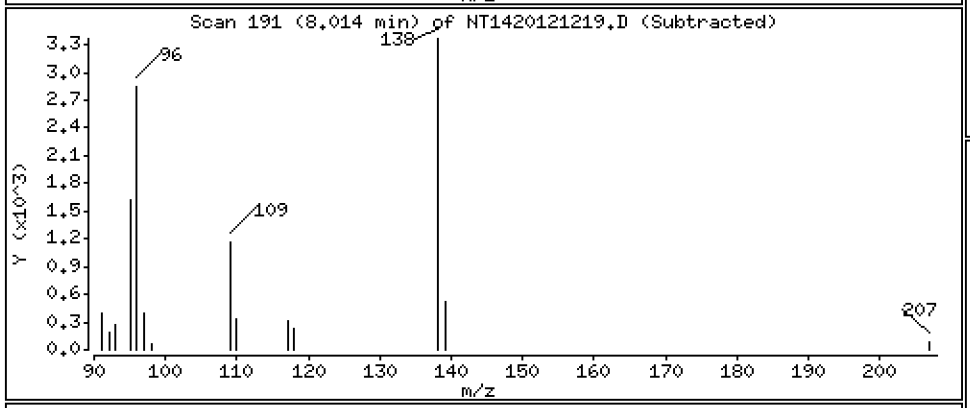
Column diameter: 0.25

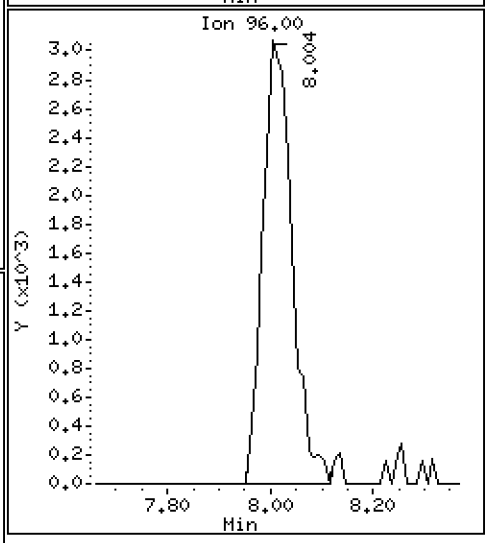
2 cis-Decalin

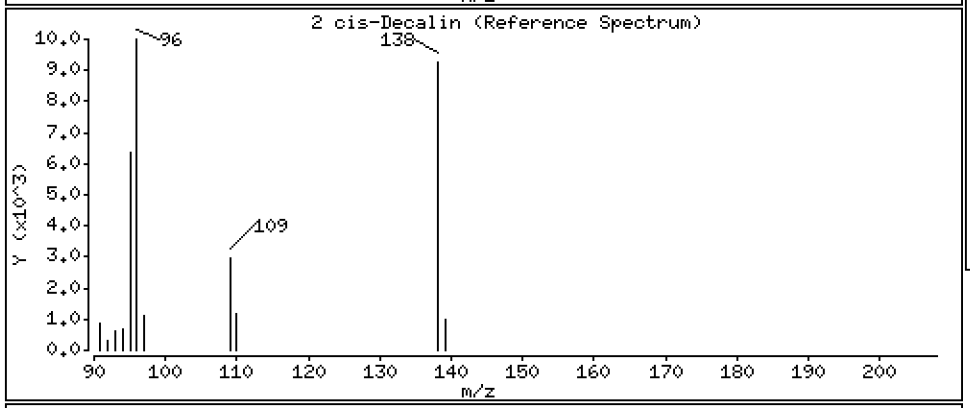
Concentration: 1.587 ug/mL

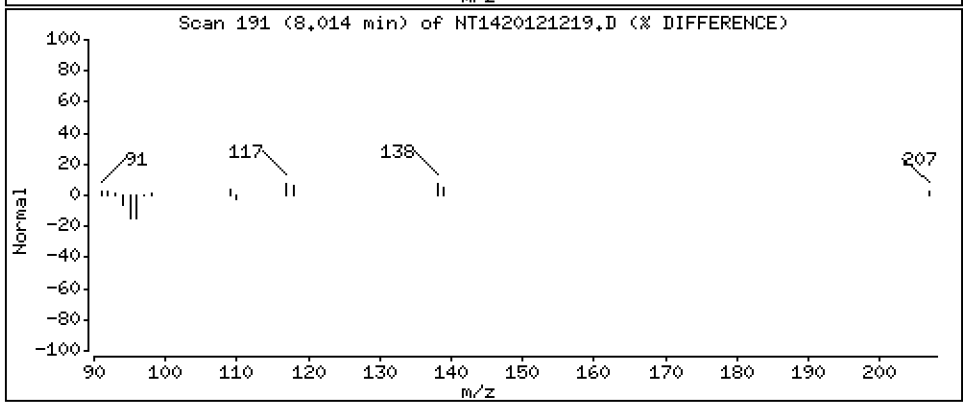












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Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

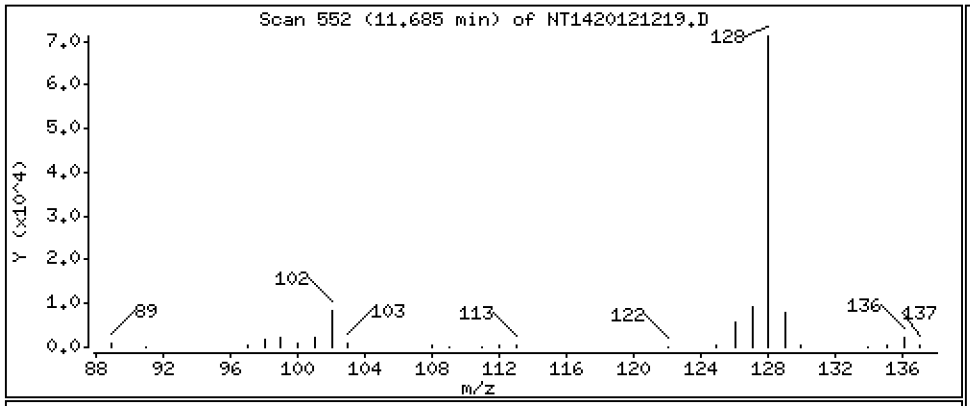
Operator: VTS

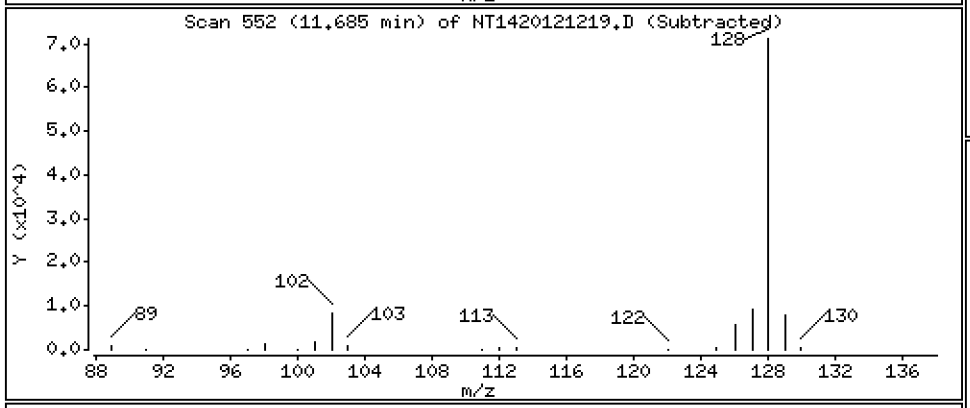
Column phase: Rxi-17Sil MS

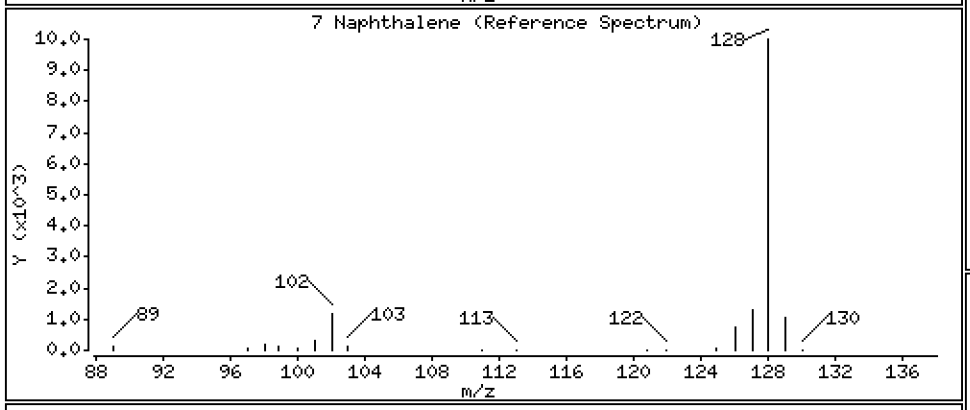
Column diameter: 0.25

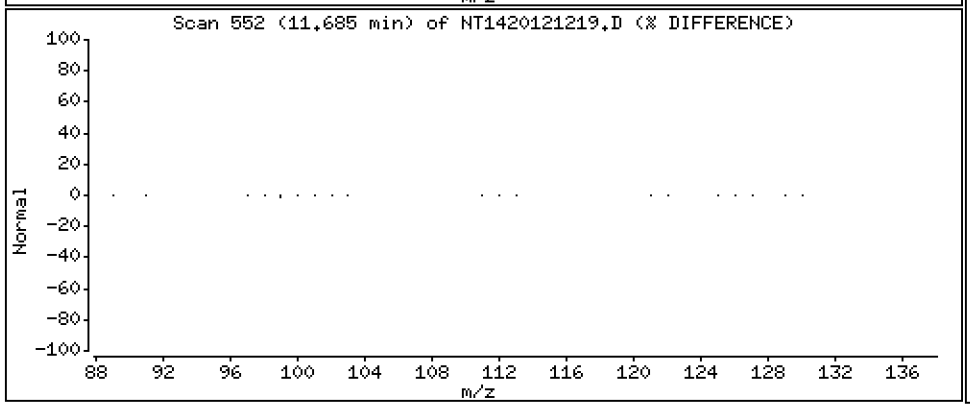
7 Naphthalene

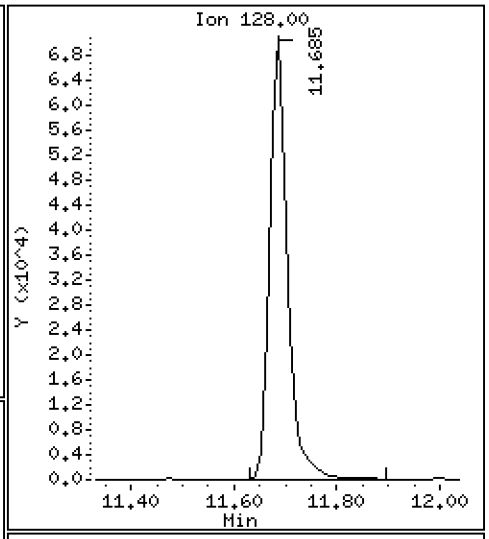
Concentration: 1.771 ug/mL

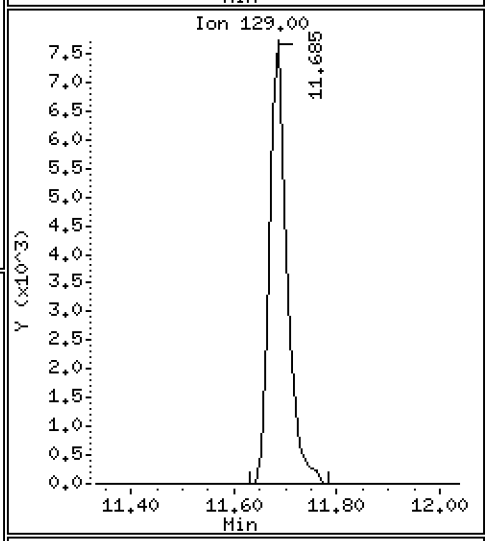


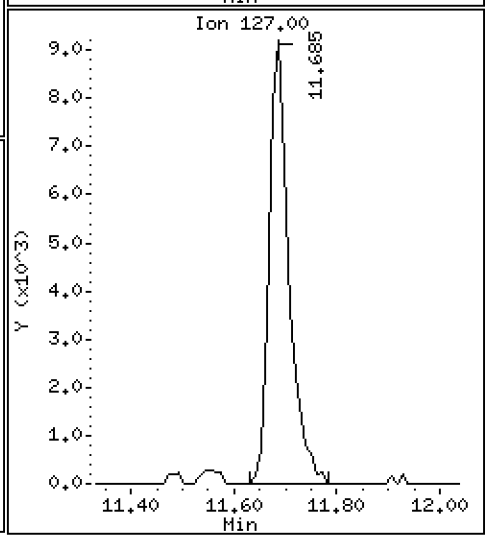












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Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

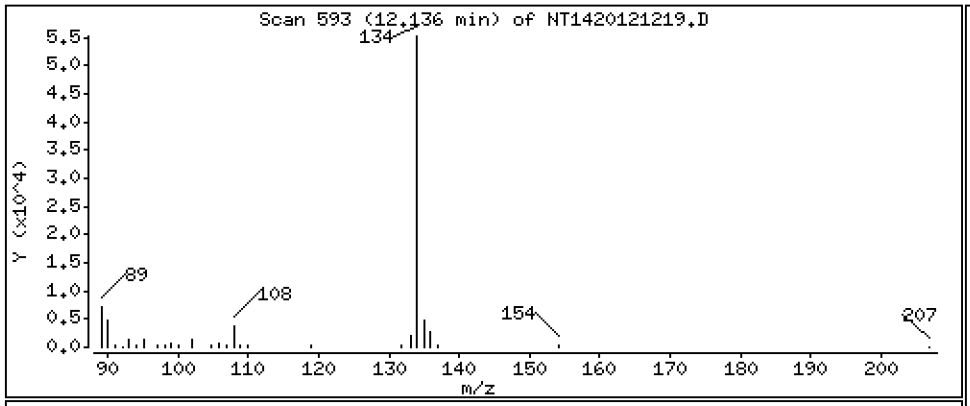
Operator: VTS

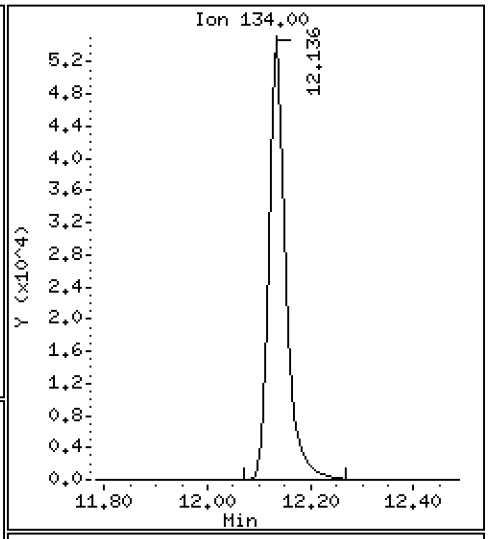
Column phase: Rxi-17Sil MS

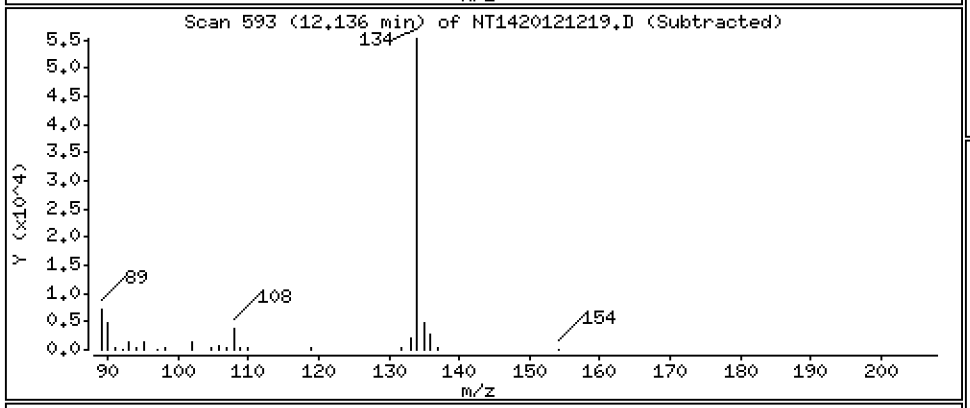
Column diameter: 0.25

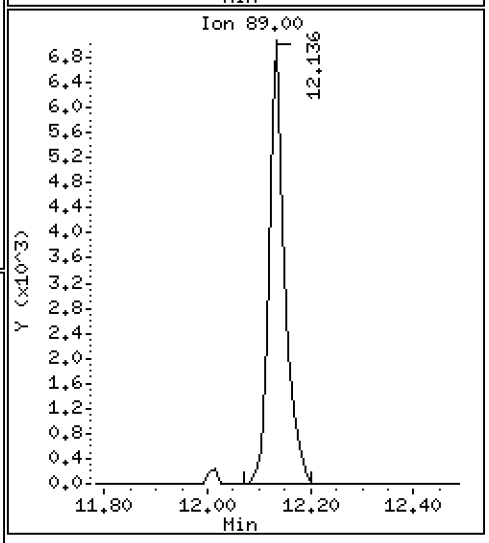
12 Benzo(b)thiophene

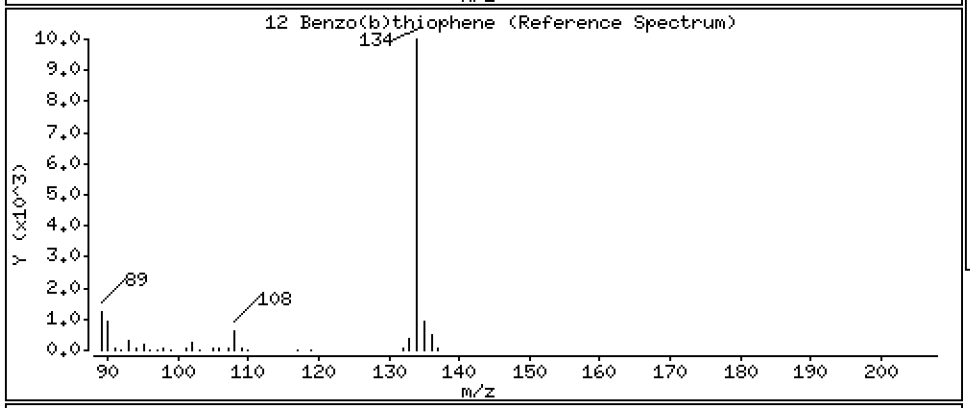
Concentration: 1.651 ug/mL

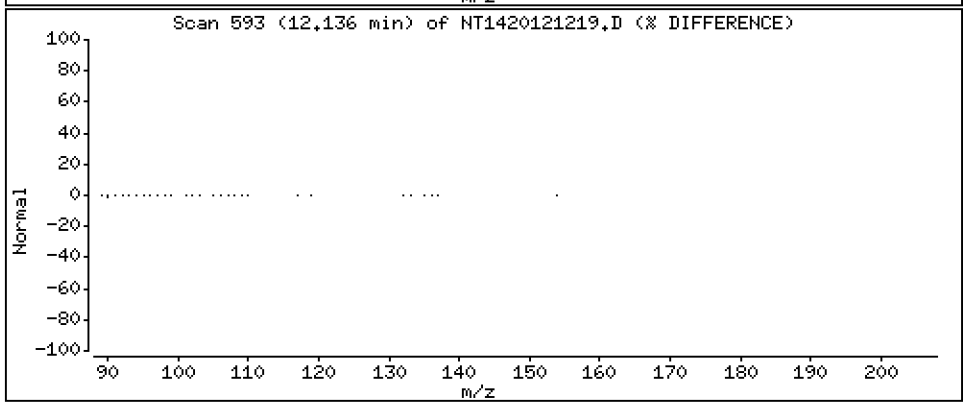












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Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

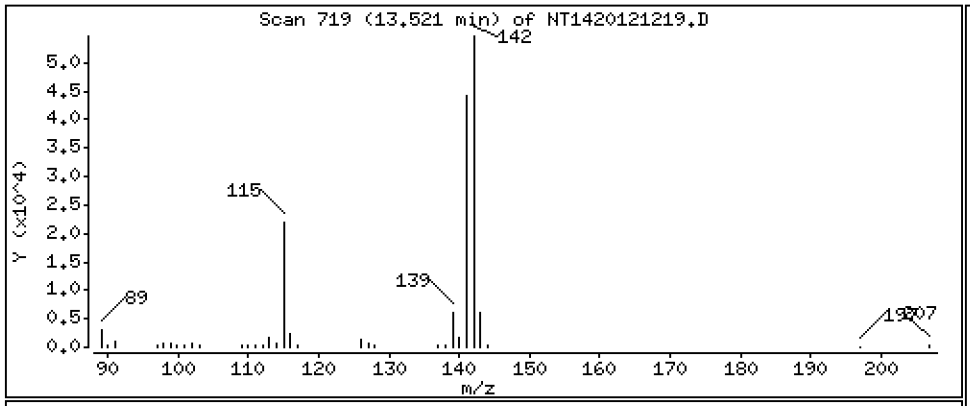
Operator: VTS

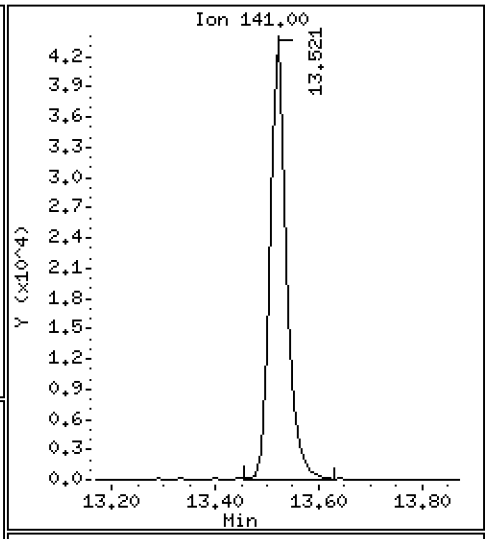
Column phase: Rxi-17Sil MS

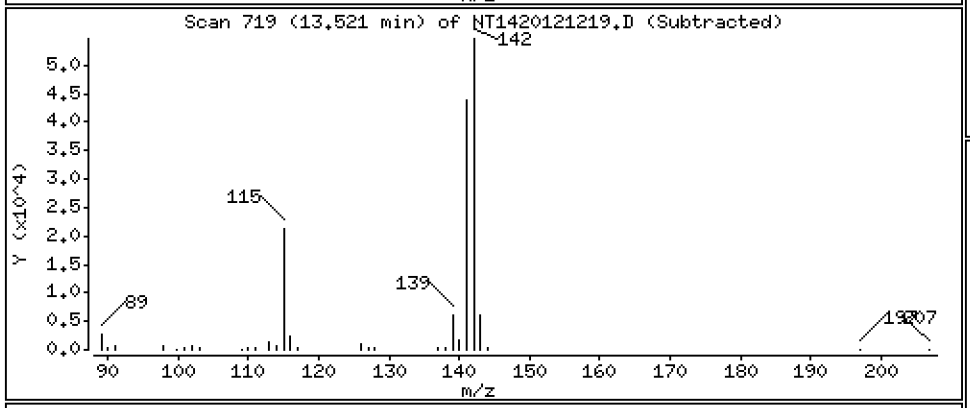
Column diameter: 0.25

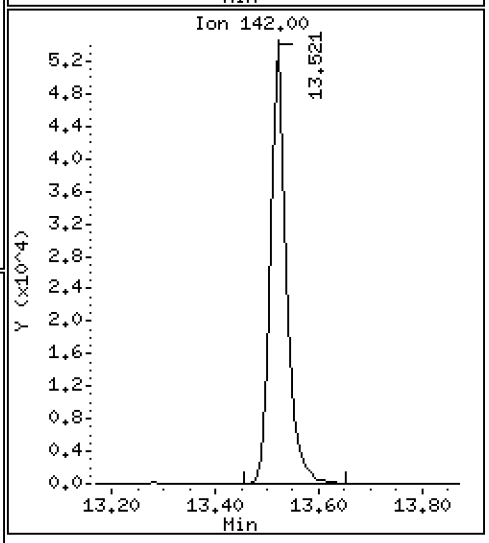
16 2-Methylnaphthalene

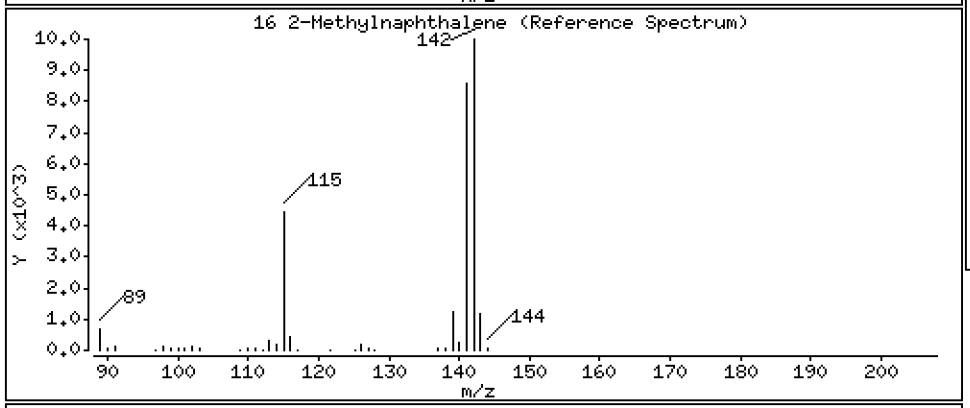
Concentration: 1.781 ug/mL

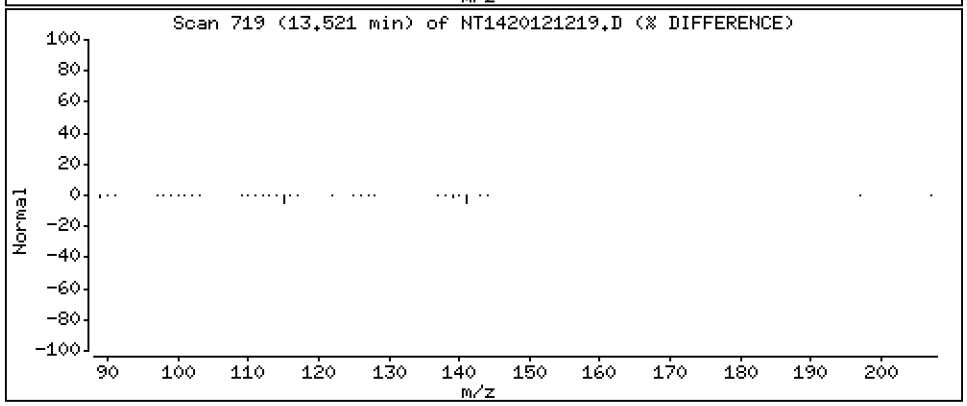












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Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

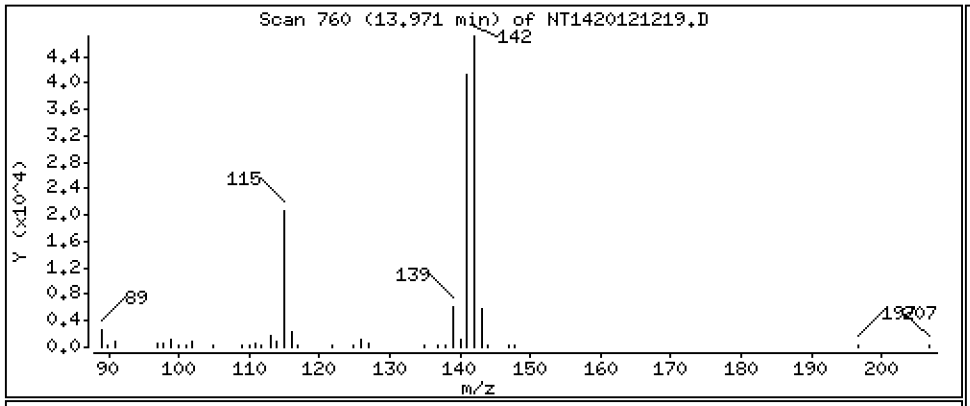
Operator: VTS

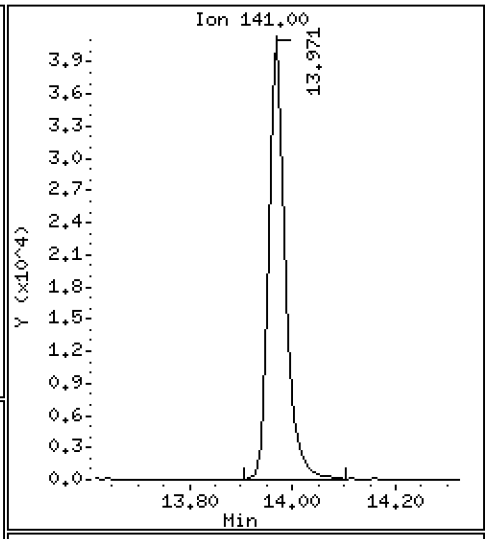
Column phase: Rxi-17Sil MS

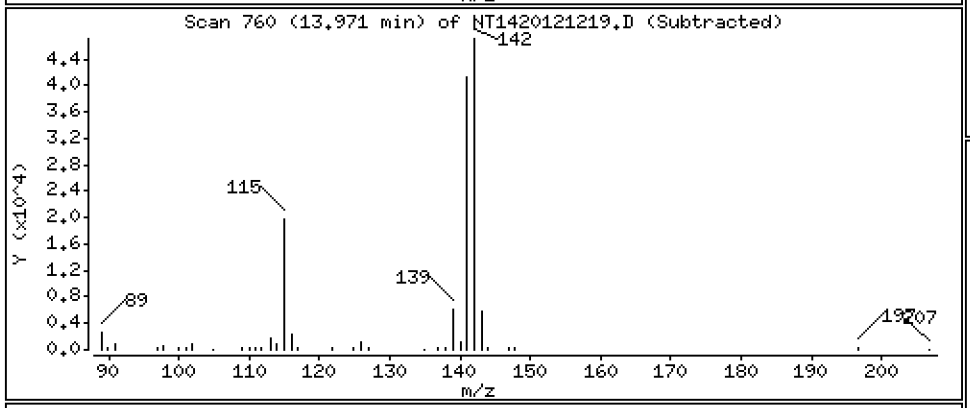
Column diameter: 0.25

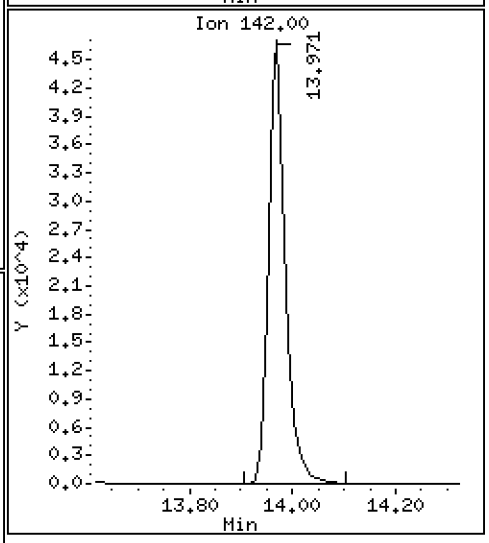
17 1-methylnaphthalene

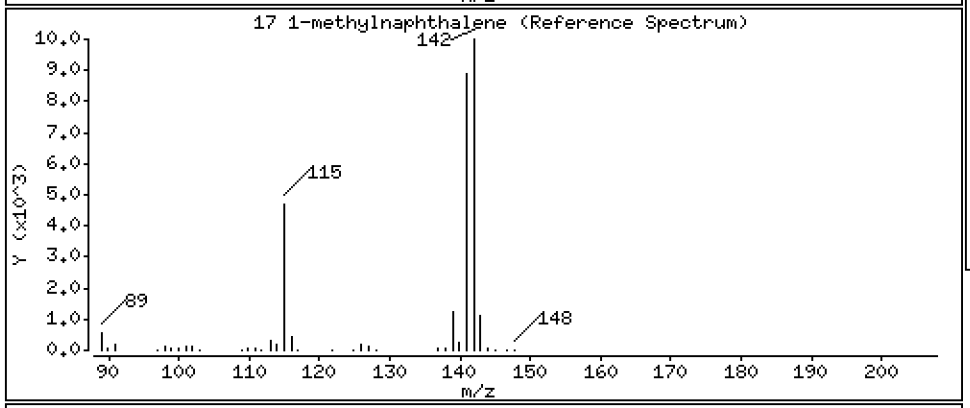
Concentration: 1.669 ug/mL

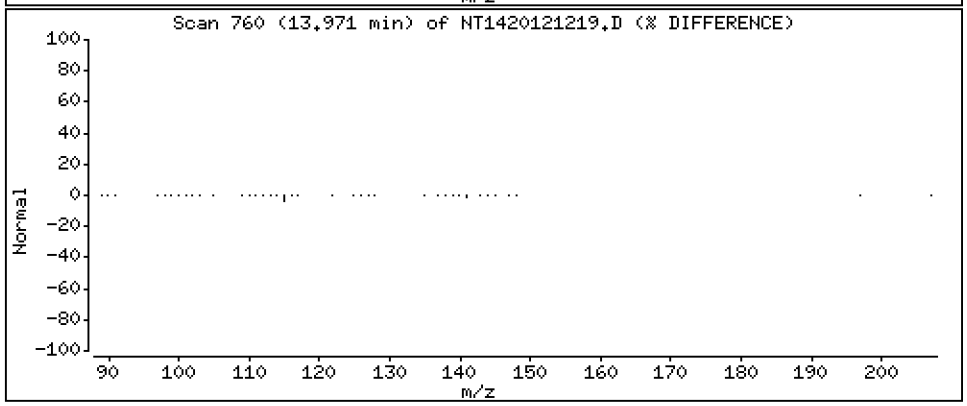












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Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

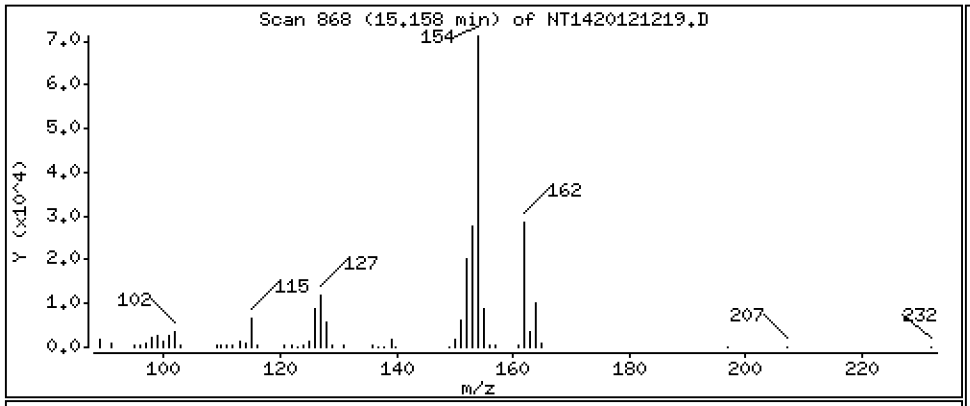
Operator: VTS

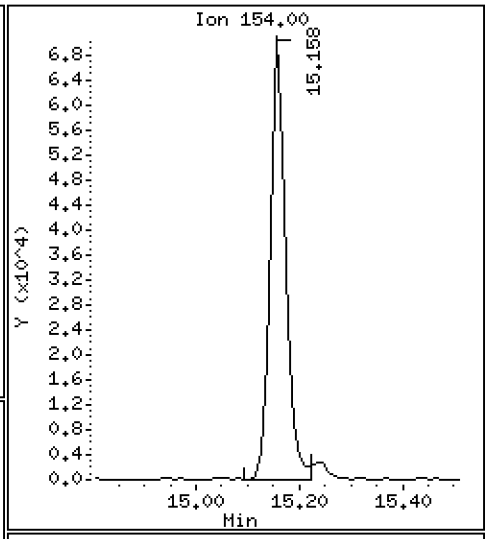
Column phase: Rxi-17Sil MS

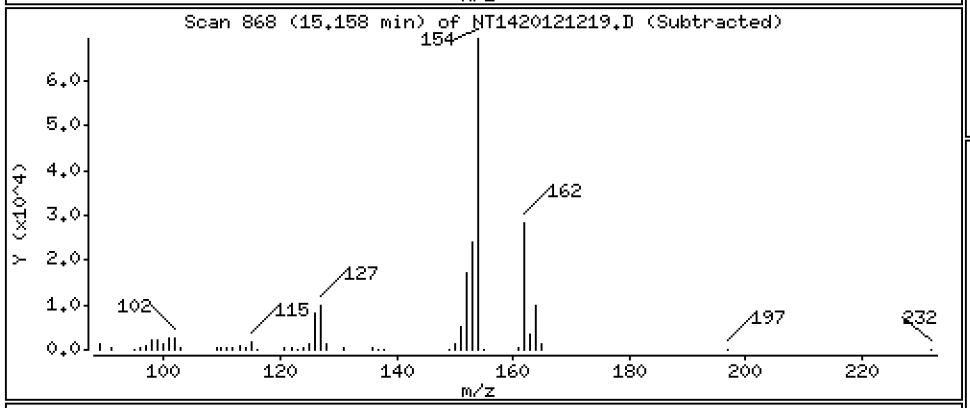
Column diameter: 0.25

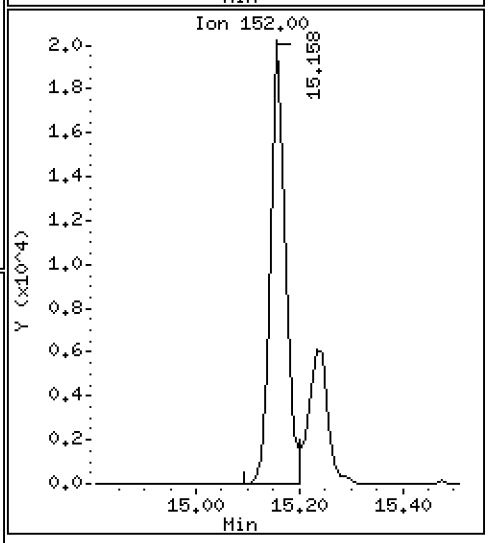
18 Biphenyl

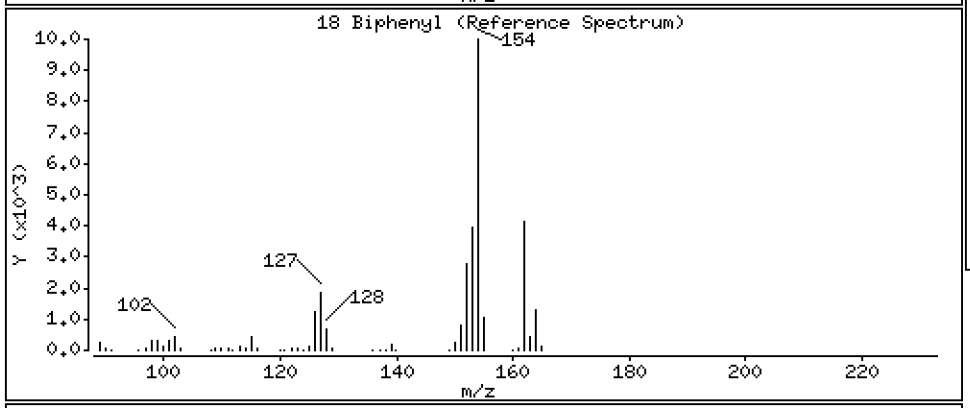
Concentration: 1.798 ug/mL

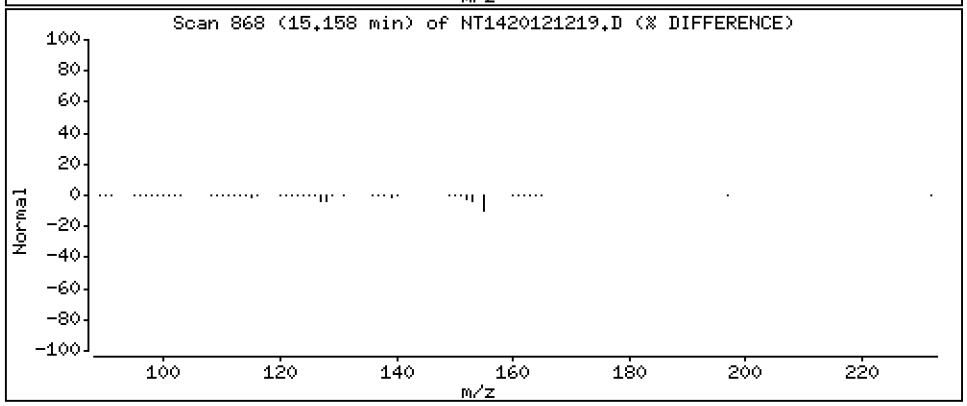












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Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

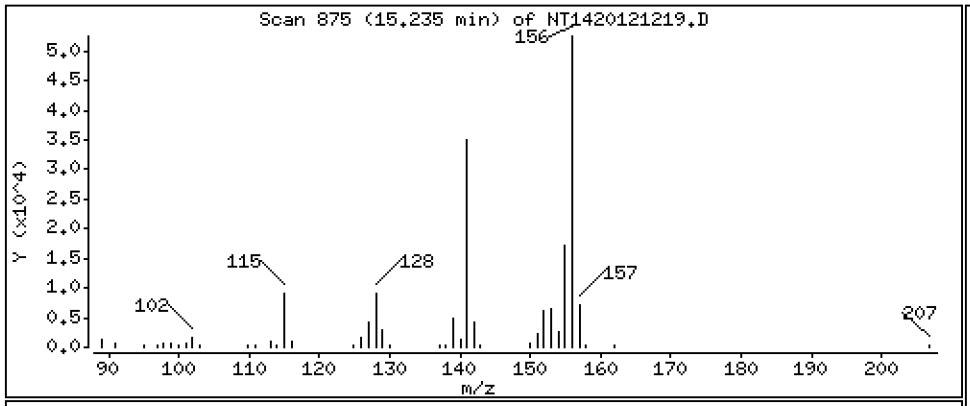
Operator: VTS

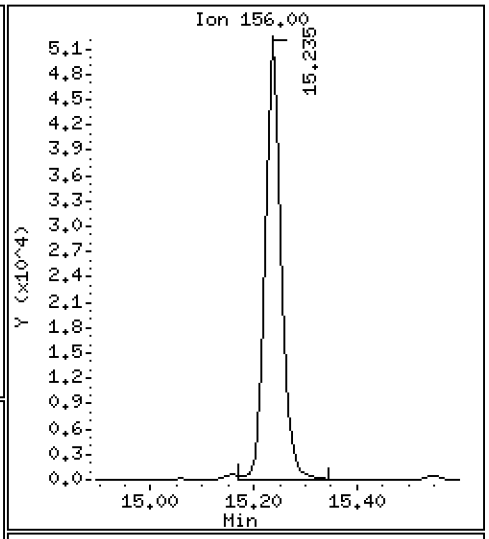
Column phase: Rxi-17Sil MS

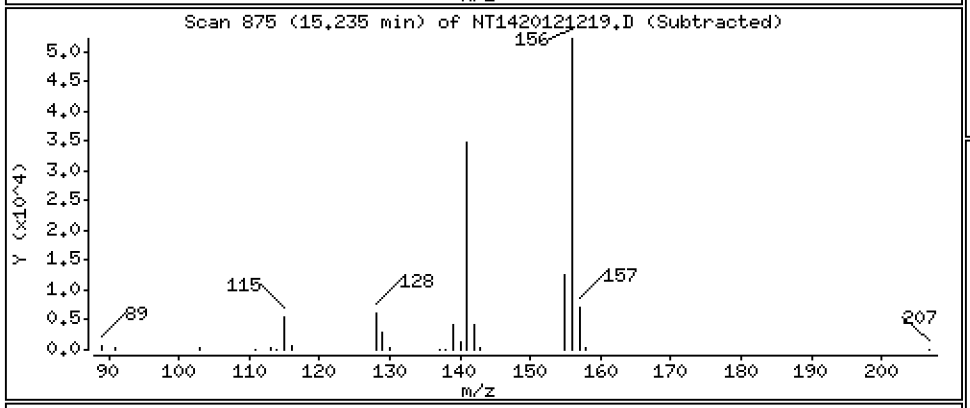
Column diameter: 0.25

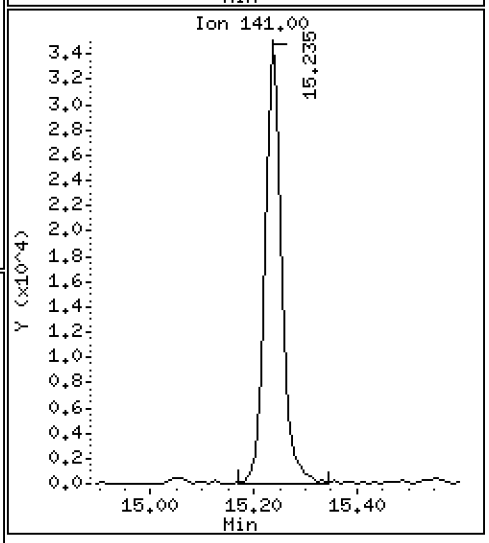
19 2,6-Dimethylnaphthalene

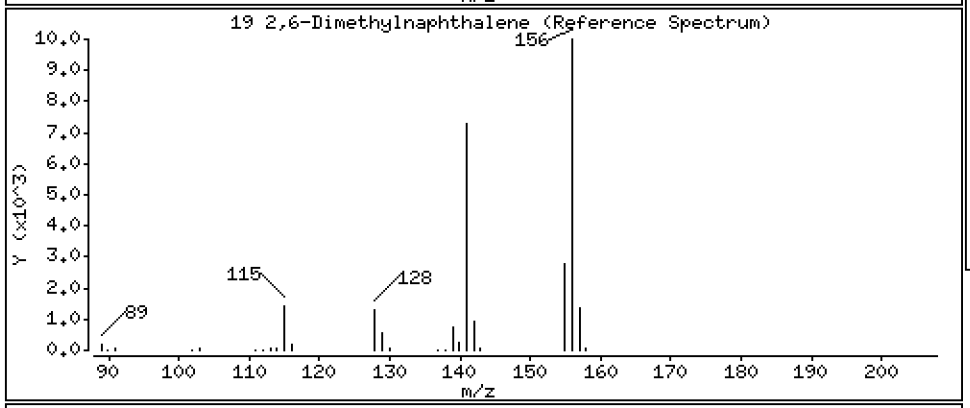
Concentration: 1.882 ug/mL

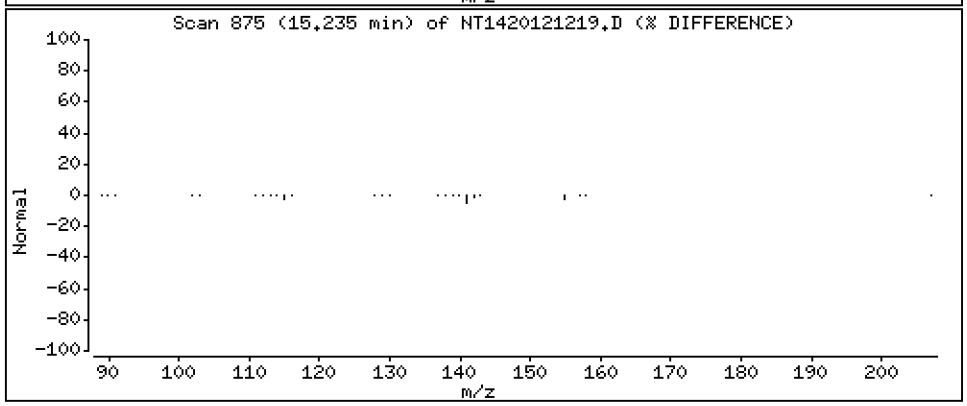












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D

Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

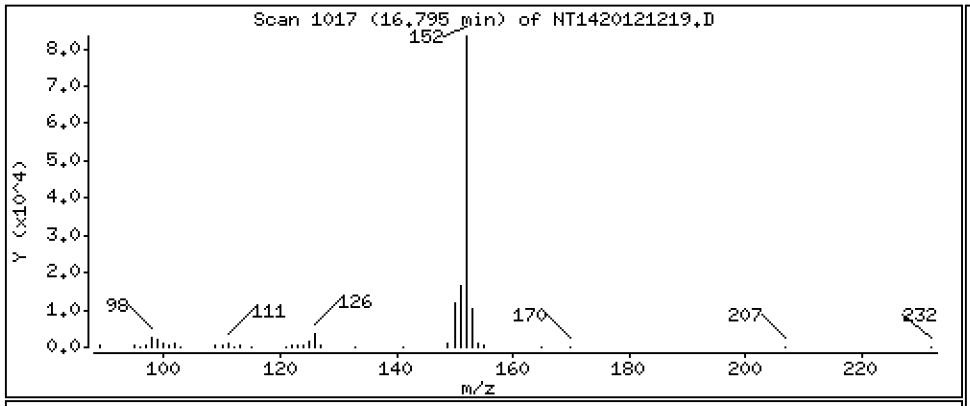
Operator: VTS

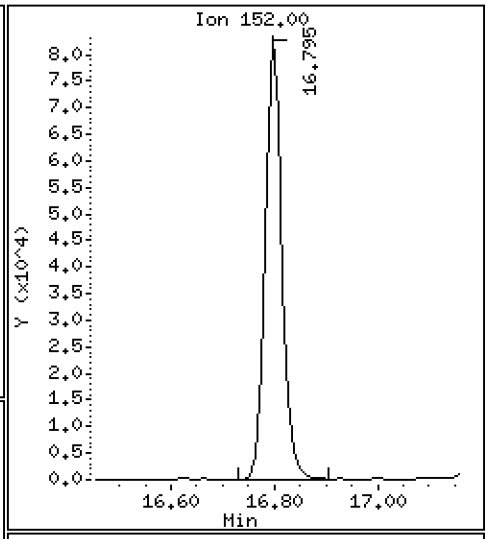
Column phase: Rxi-17Sil MS

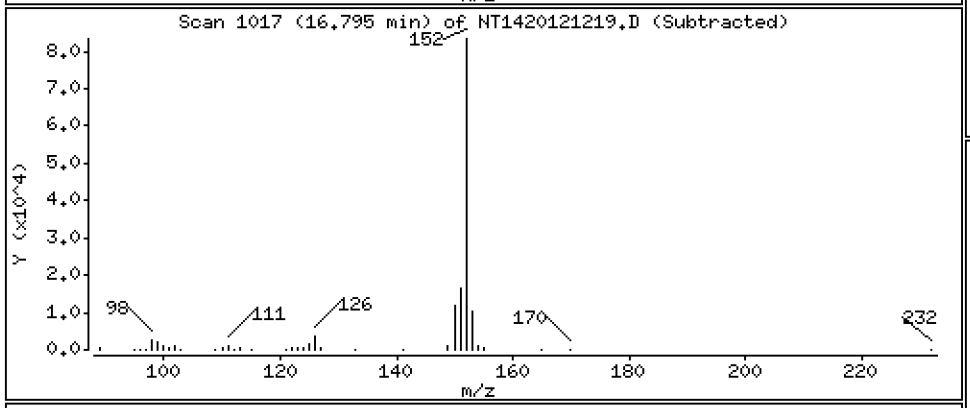
Column diameter: 0.25

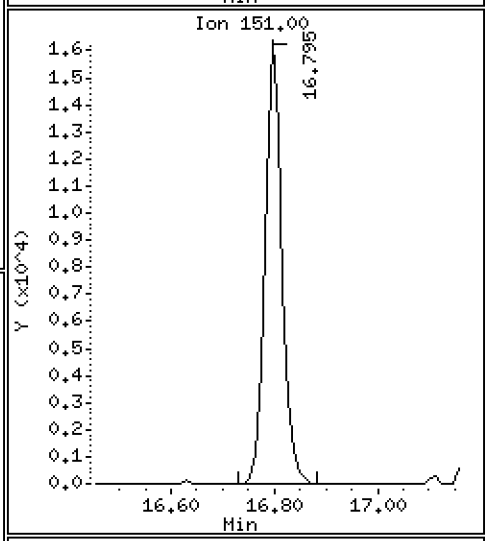
20 Acenaphthylene

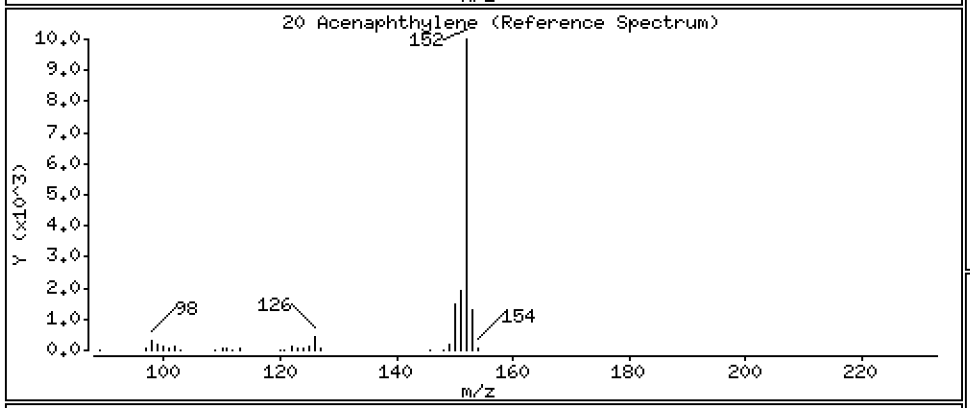
Concentration: 1.847 ug/mL

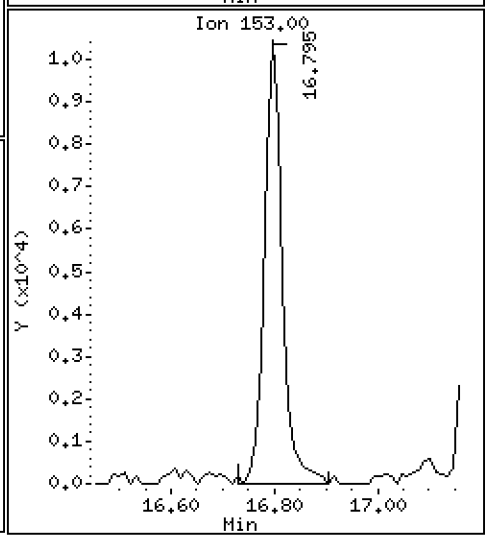


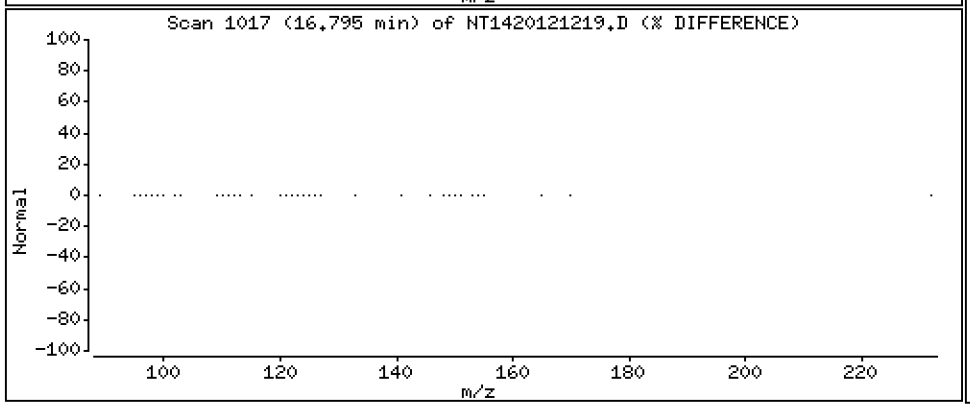












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Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

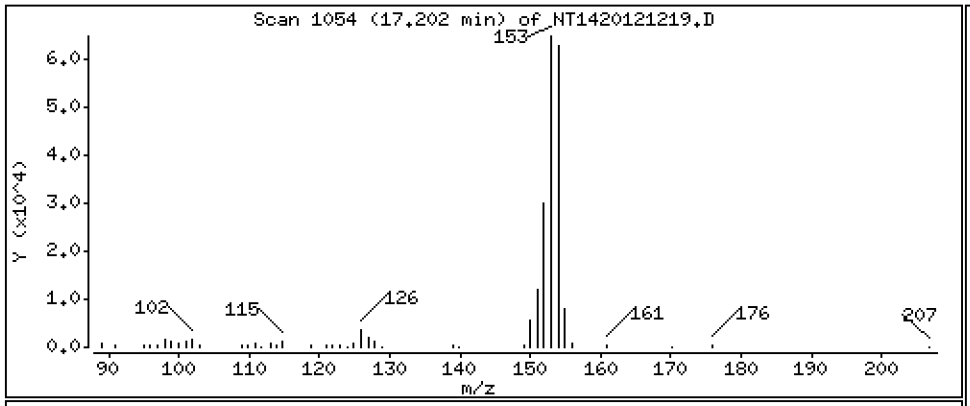
Operator: VTS

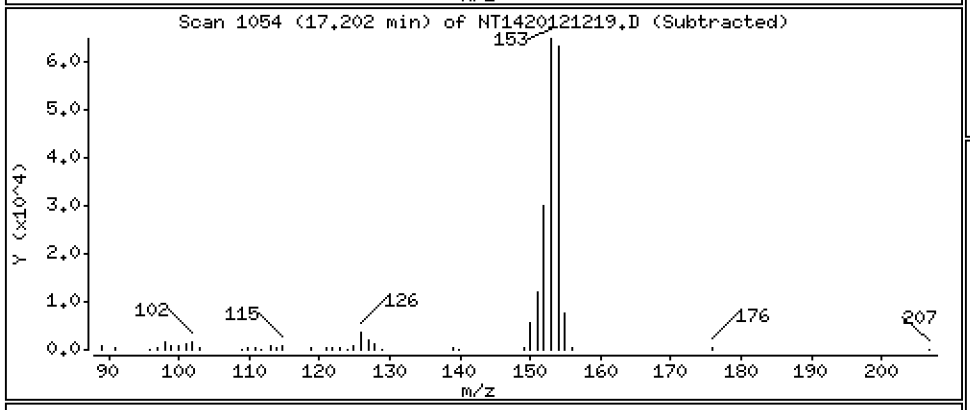
Column phase: Rxi-17Sil MS

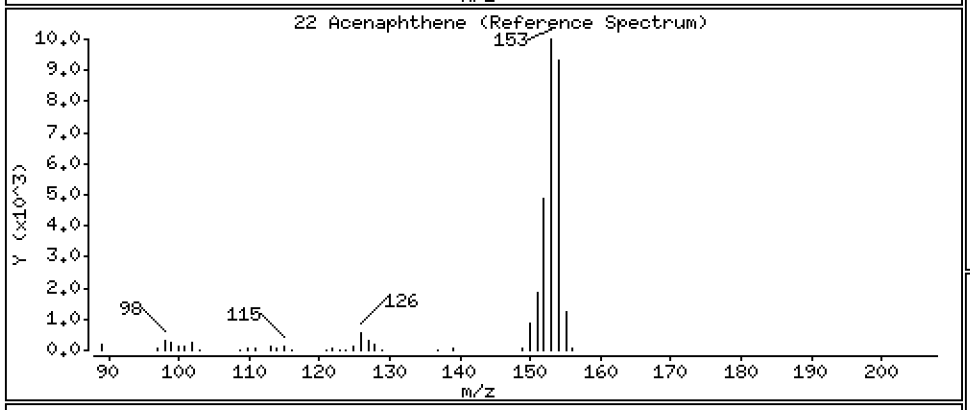
Column diameter: 0.25

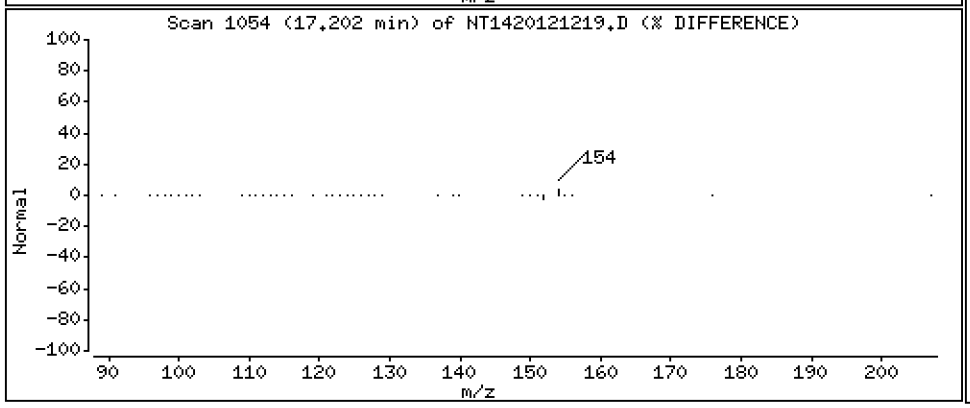
22 Acenaphthene

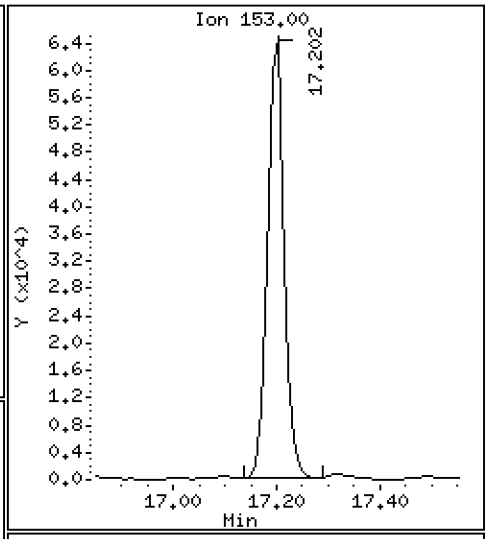
Concentration: 2.215 ug/mL

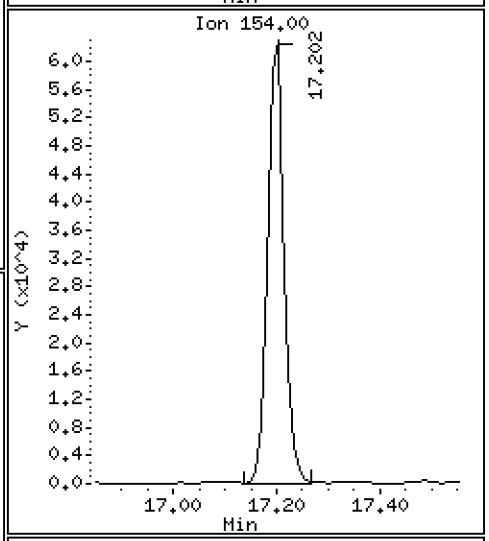


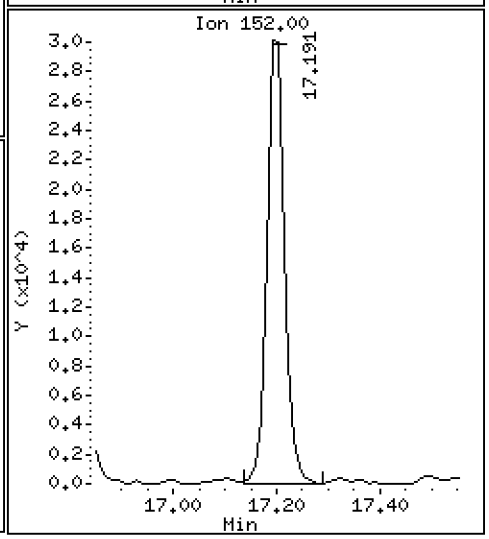












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D

Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

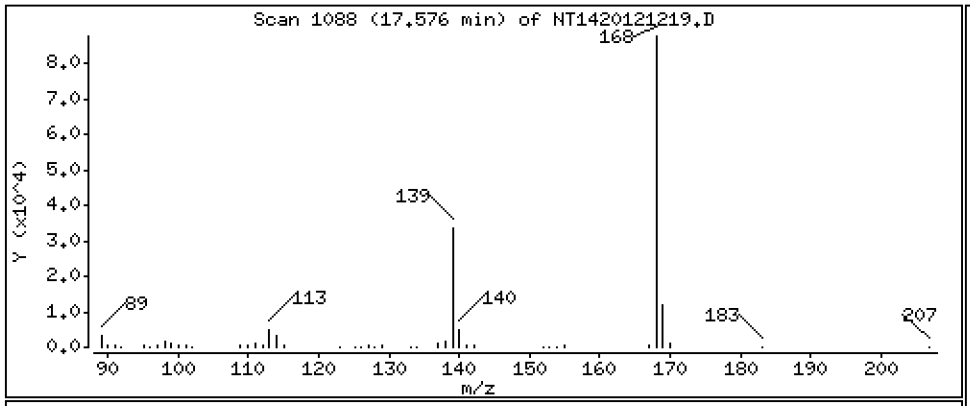
Operator: VTS

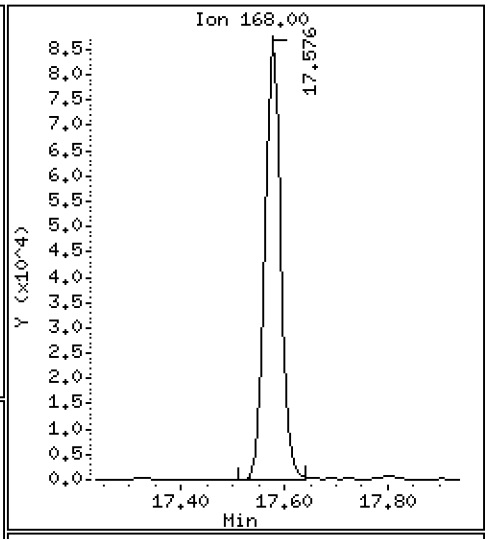
Column phase: Rxi-17Sil MS

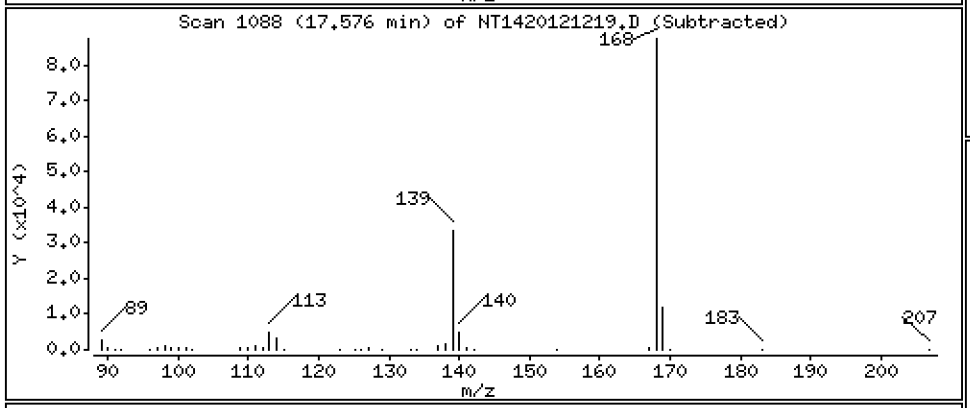
Column diameter: 0.25

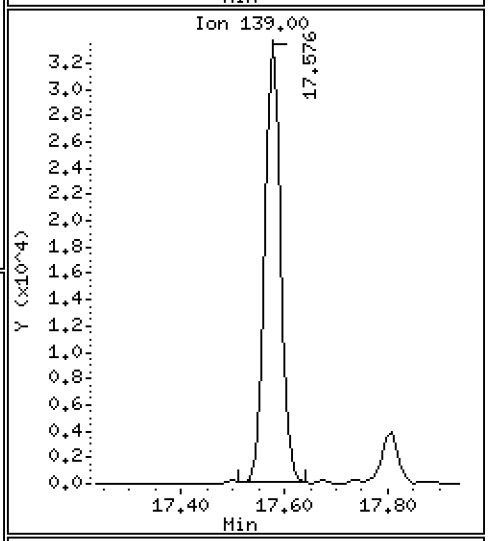
23 Dibenzofuran

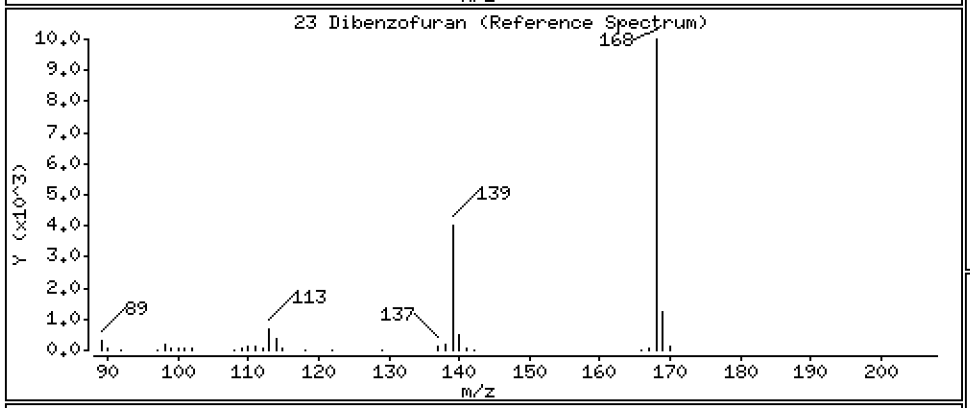
Concentration: 1.937 ug/mL

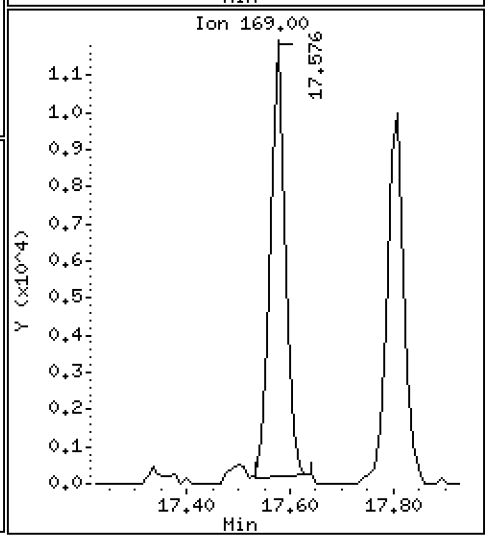


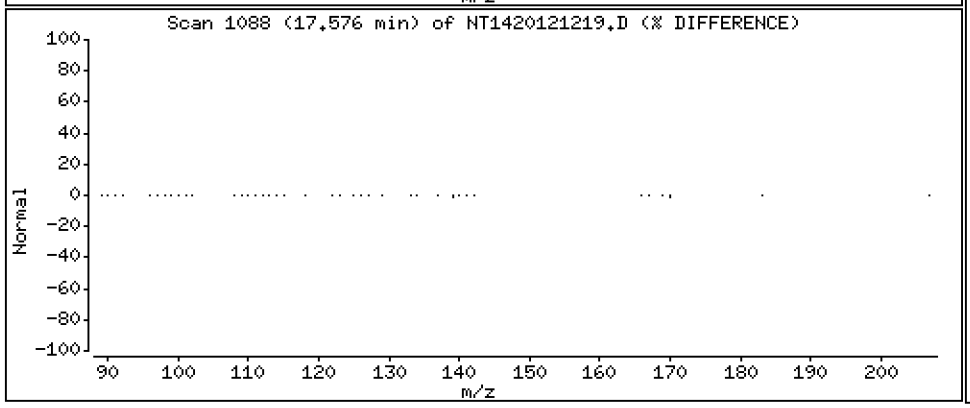












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Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

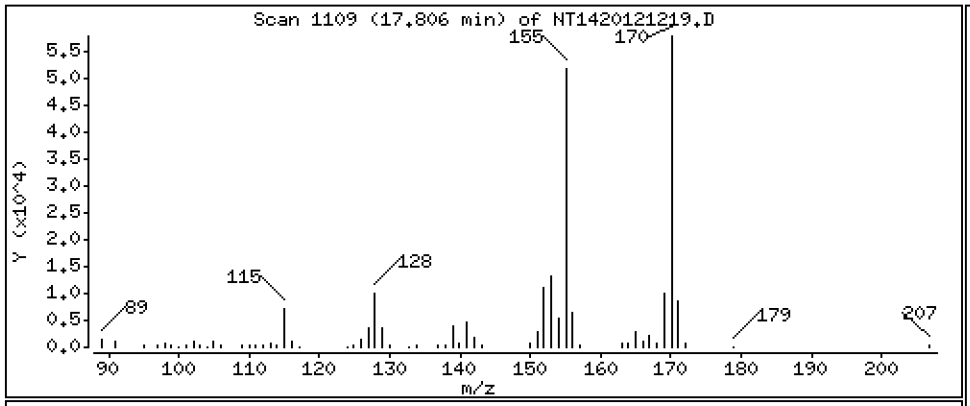
Operator: VTS

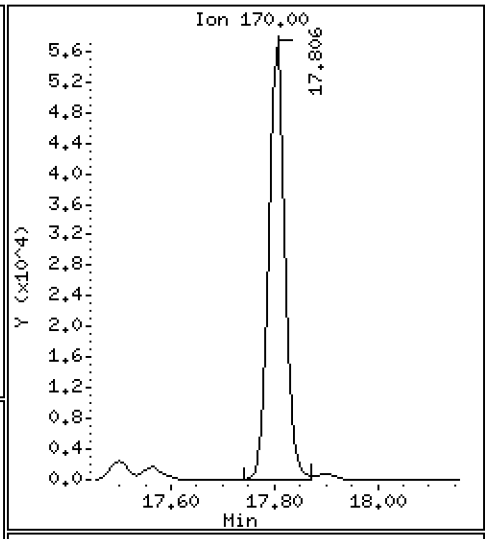
Column phase: Rxi-17Sil MS

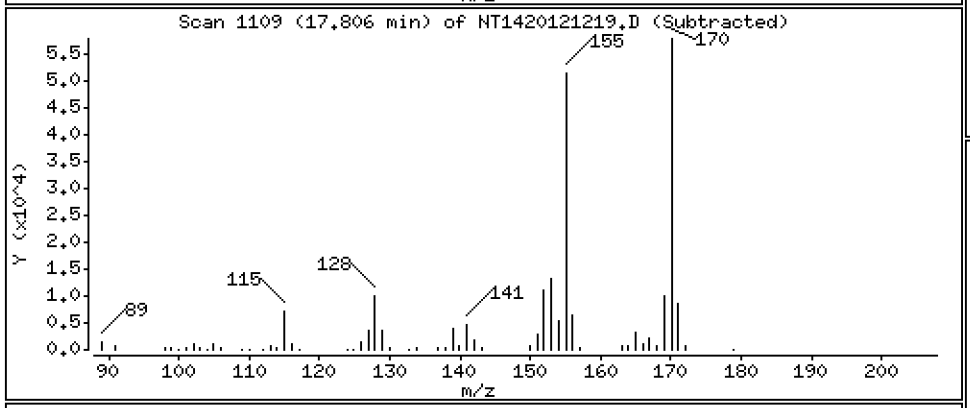
Column diameter: 0.25

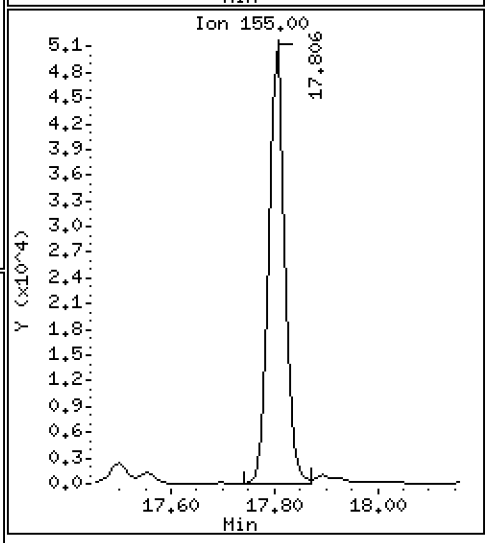
24 1,6,7-Trimethylnaphthalene

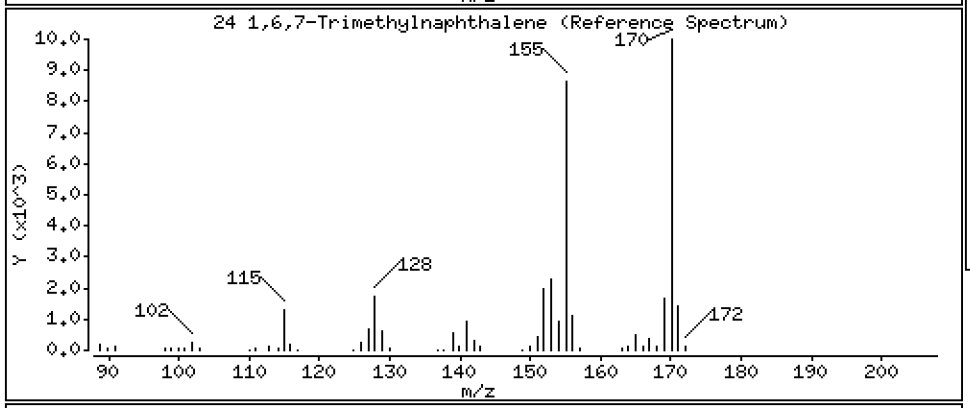
Concentration: 2.057 ug/mL

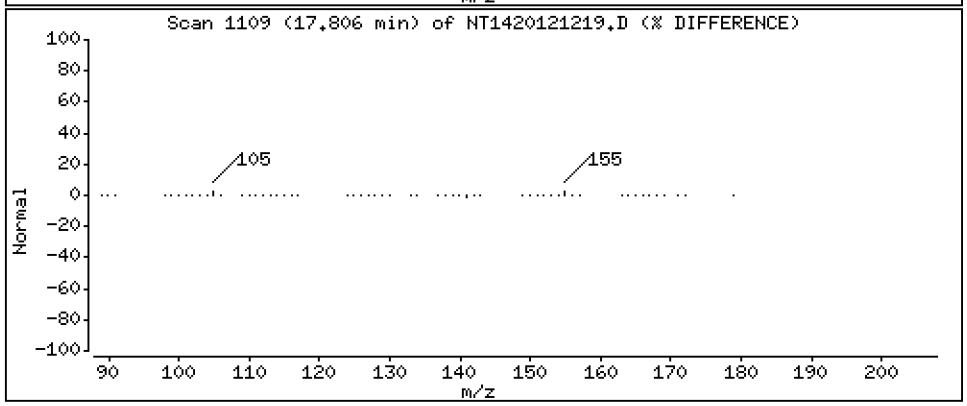












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Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

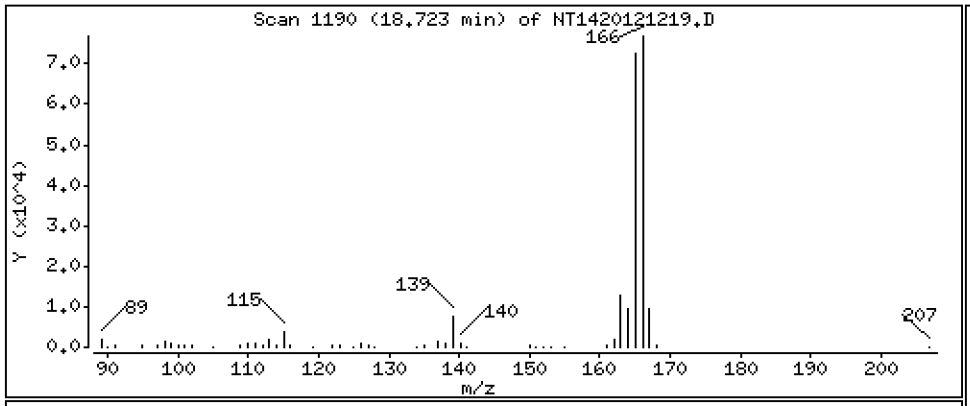
Operator: VTS

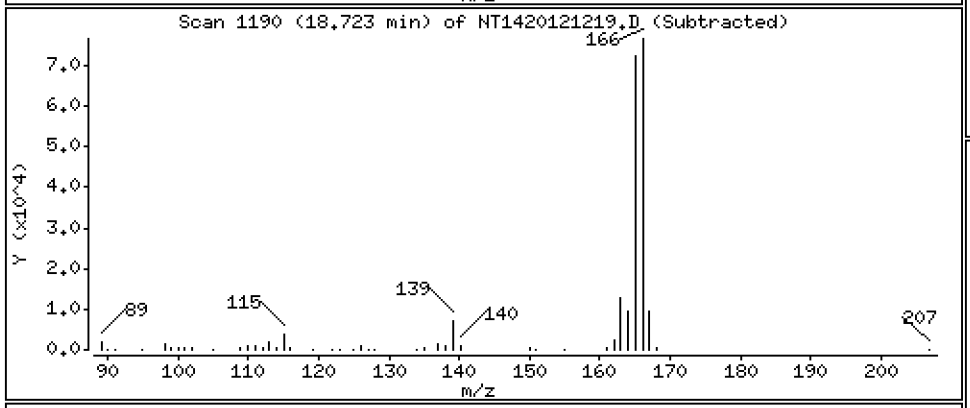
Column phase: Rxi-17Sil MS

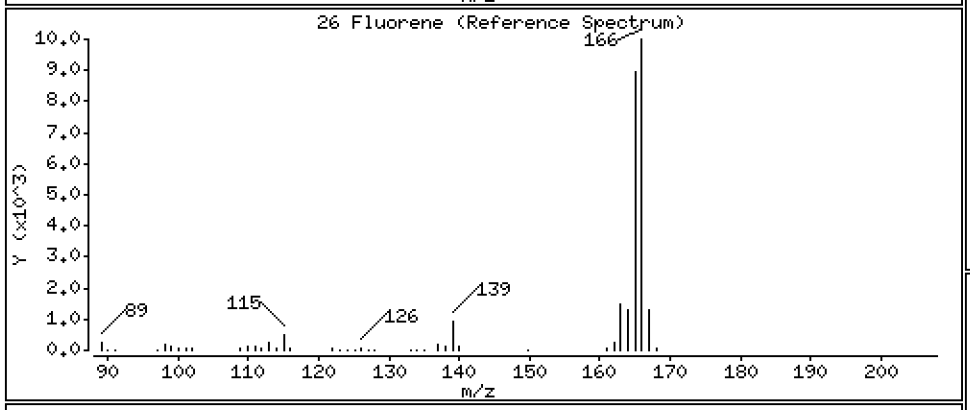
Column diameter: 0.25

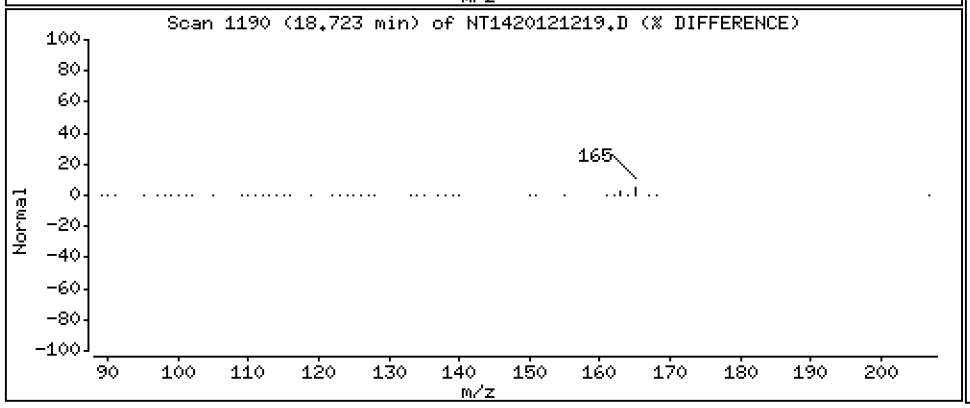
26 Fluorene

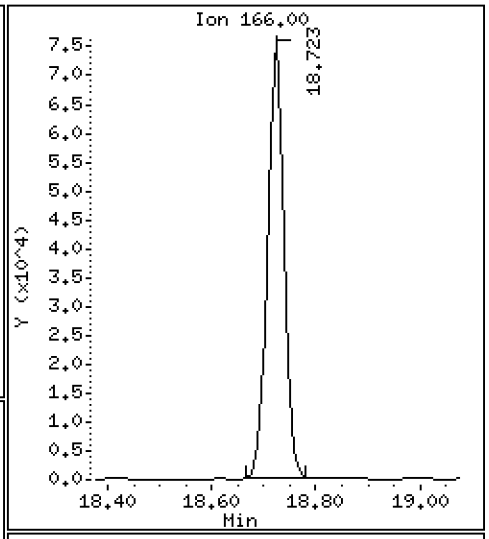
Concentration: 2.133 ug/mL

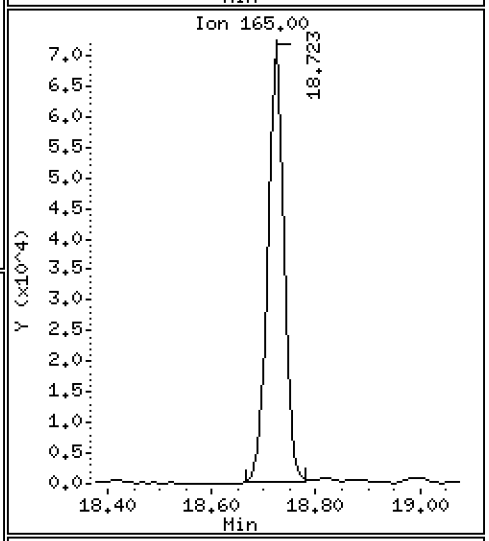


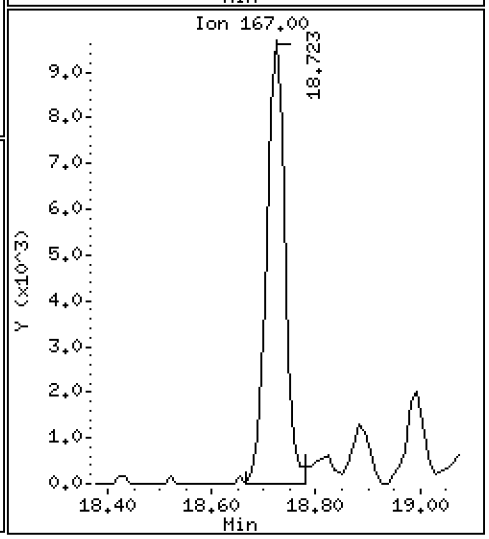












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Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

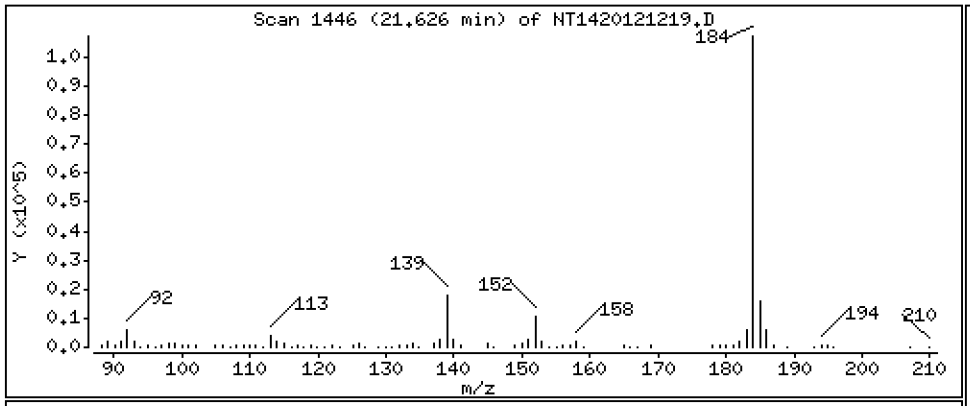
Operator: VTS

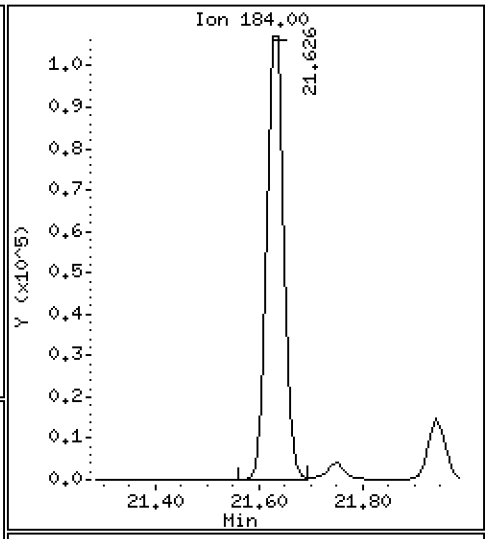
Column phase: Rxi-17Sil MS

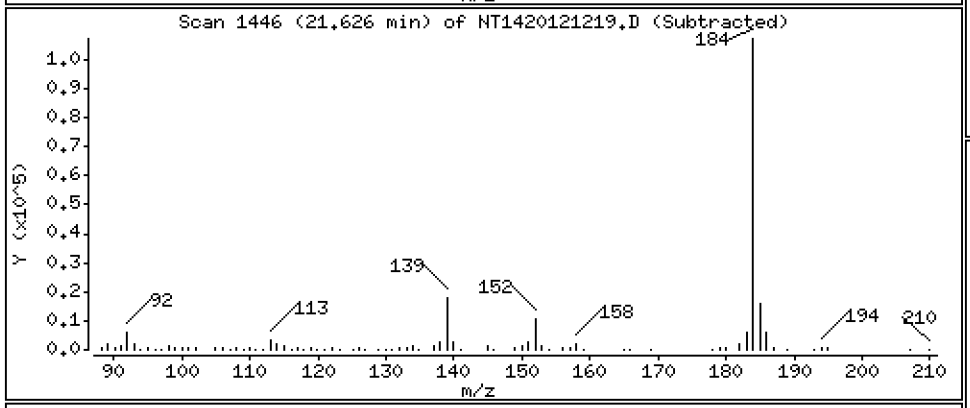
Column diameter: 0.25

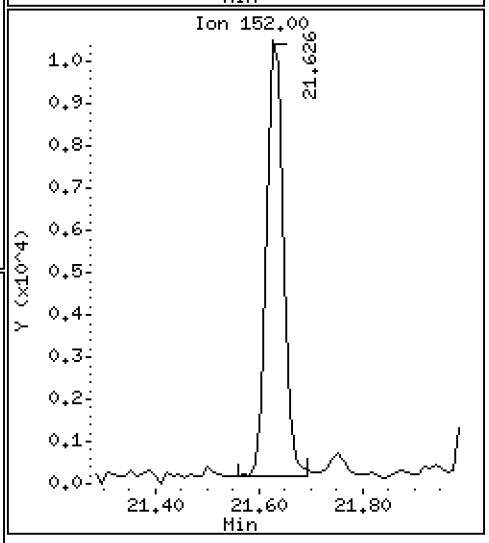
30 Dibenzothiophene

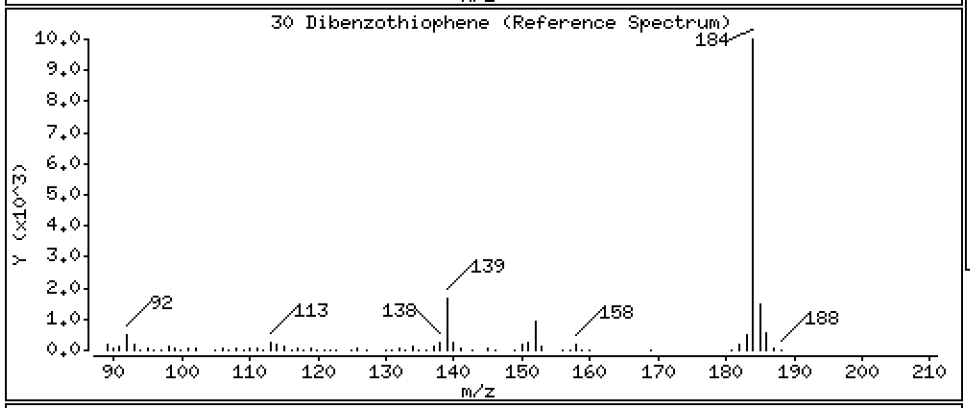
Concentration: 2.245 ug/mL

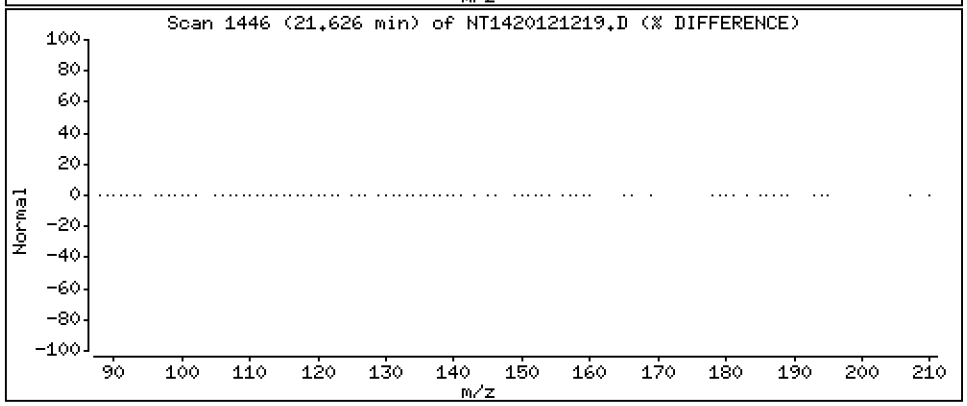












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Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

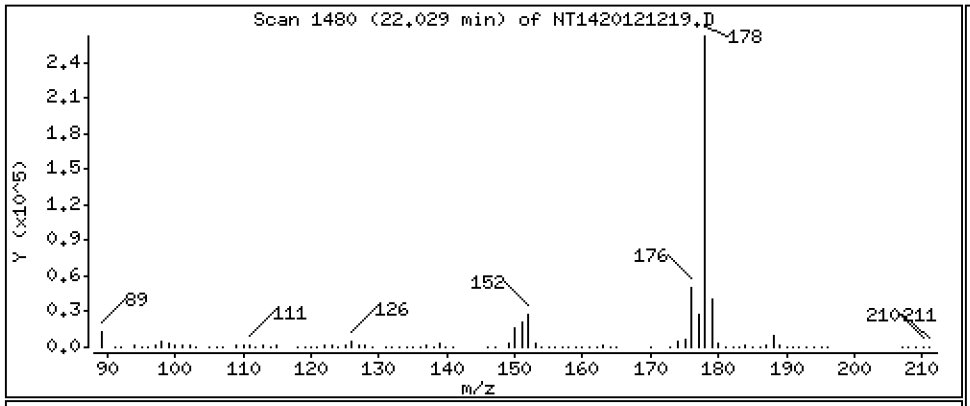
Operator: VTS

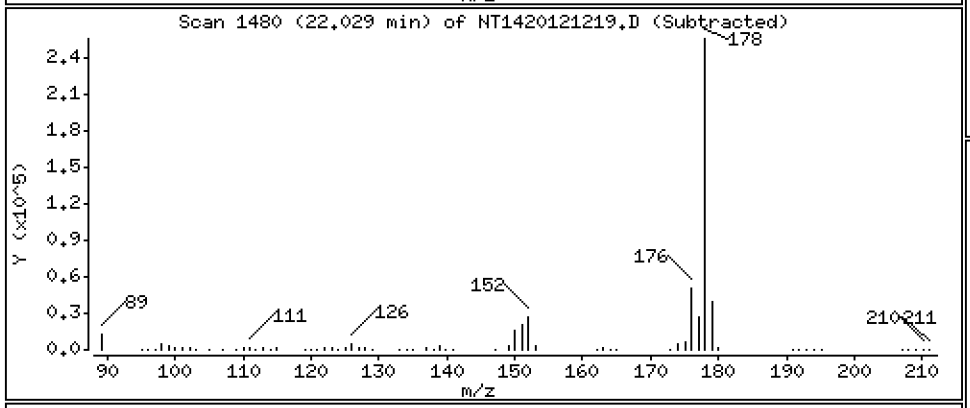
Column phase: Rxi-17Sil MS

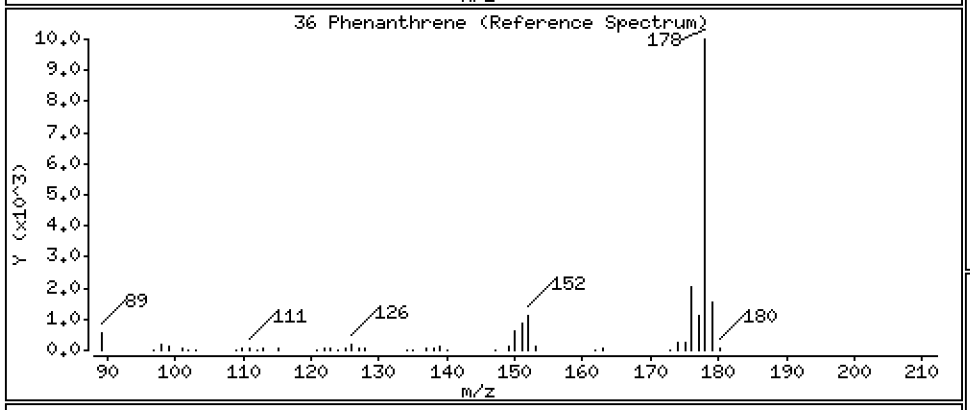
Column diameter: 0.25

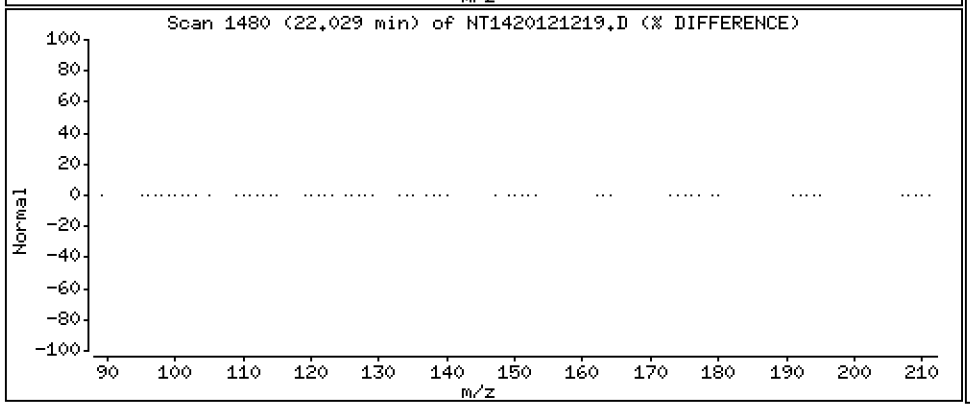
36 Phenanthrene

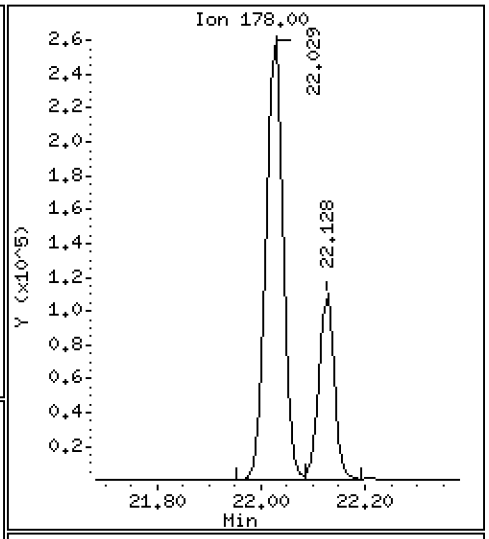
Concentration: 5.362 ug/mL

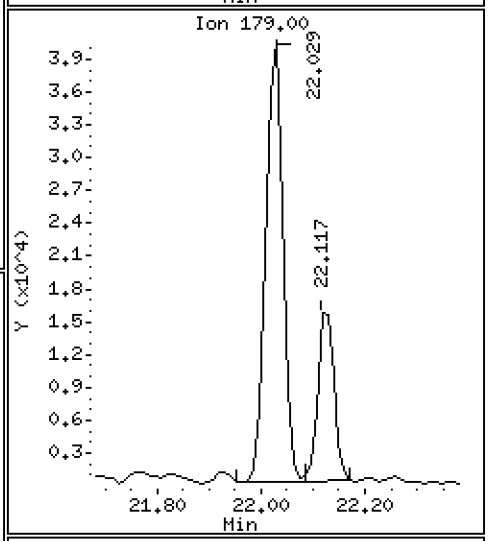


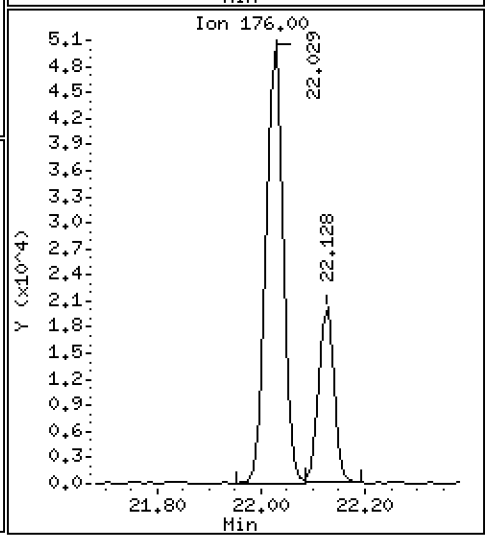












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D

Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

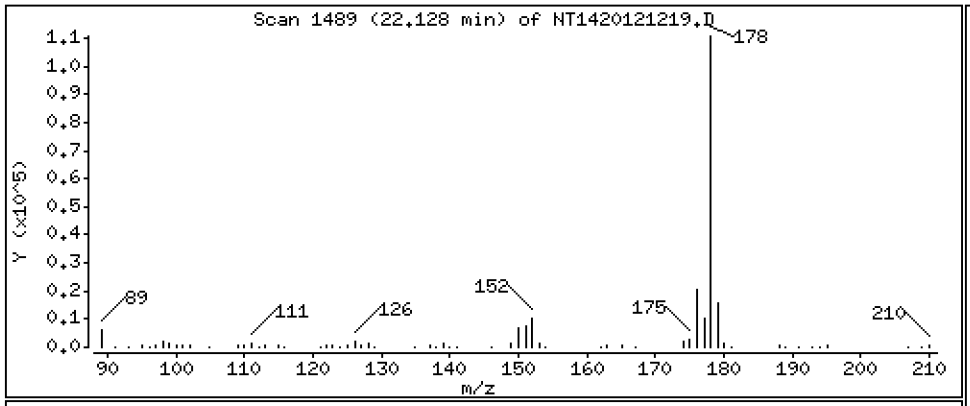
Operator: VTS

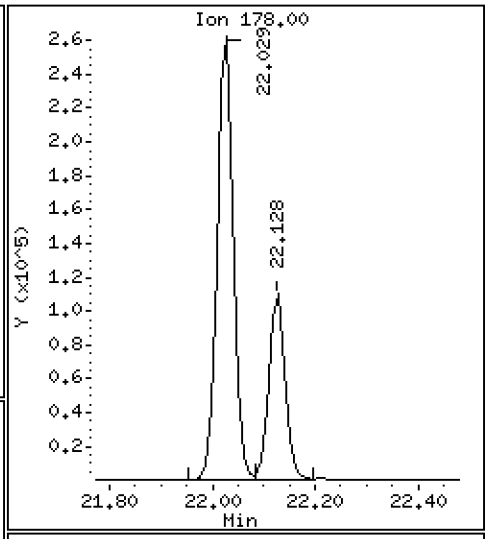
Column phase: Rxi-17Sil MS

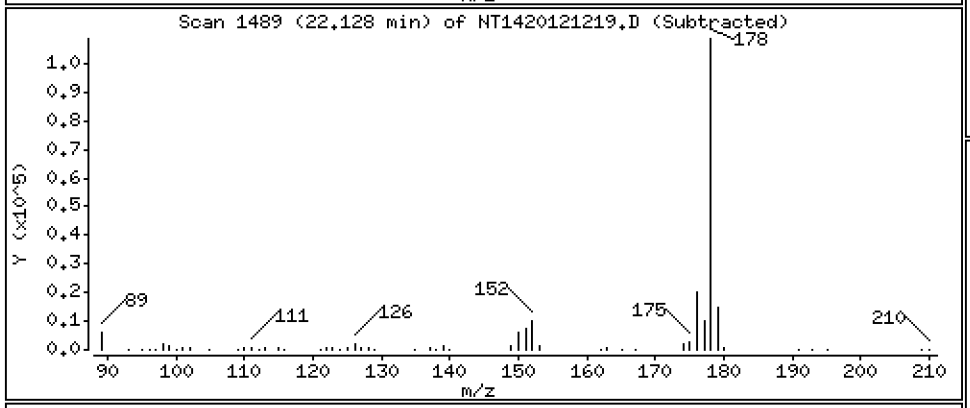
Column diameter: 0.25

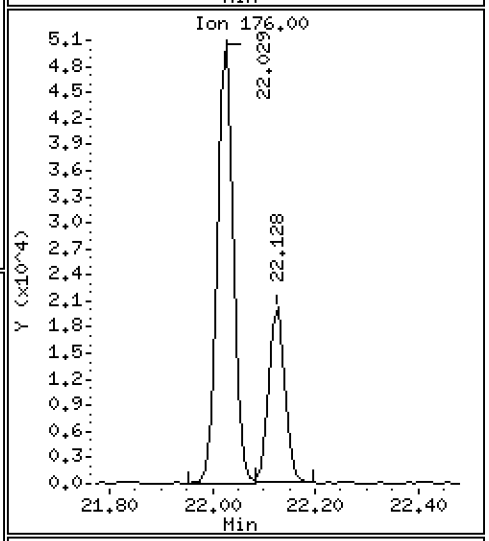
37 Anthracene

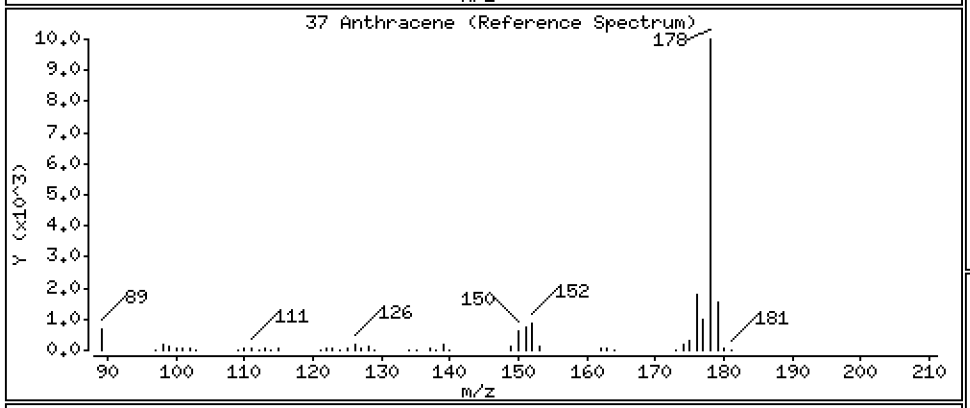
Concentration: 2.151 ug/mL

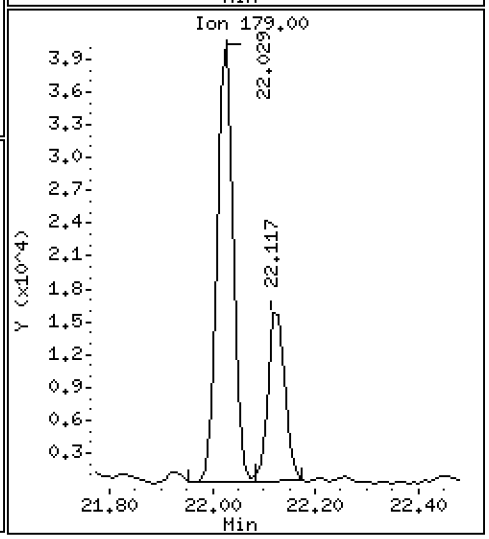


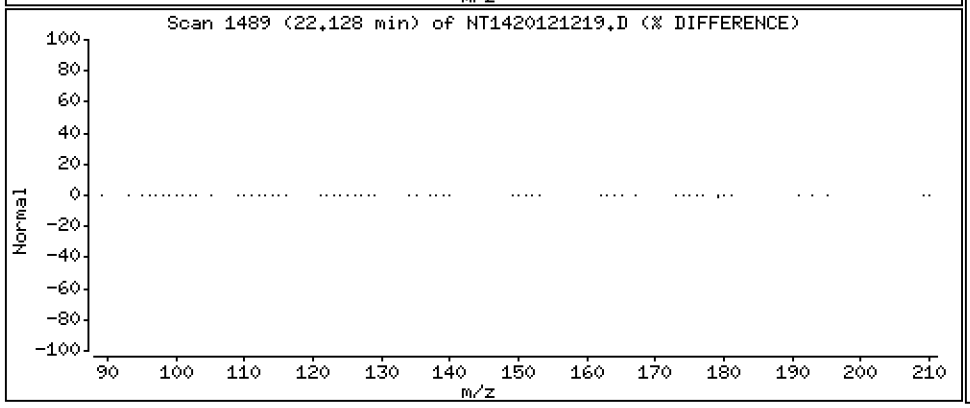












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Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

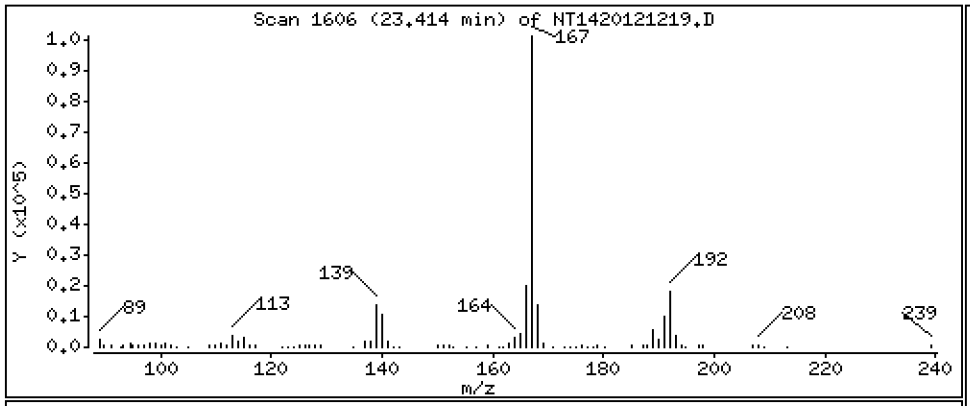
Operator: VTS

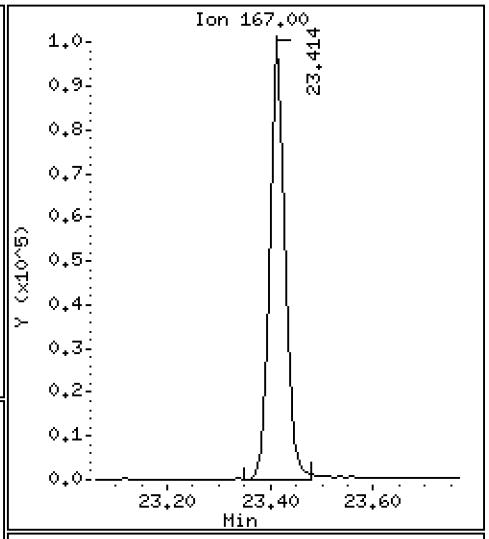
Column phase: Rxi-17Sil MS

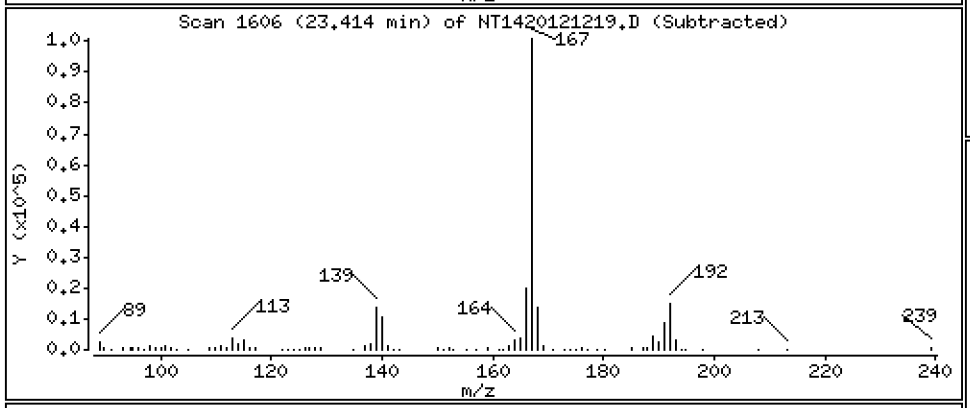
Column diameter: 0.25

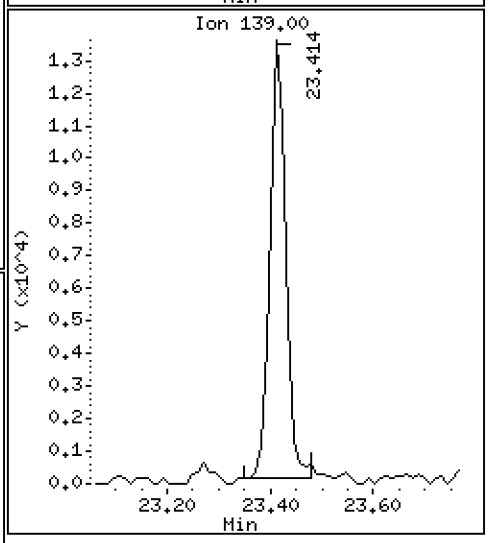
42 Carbazole

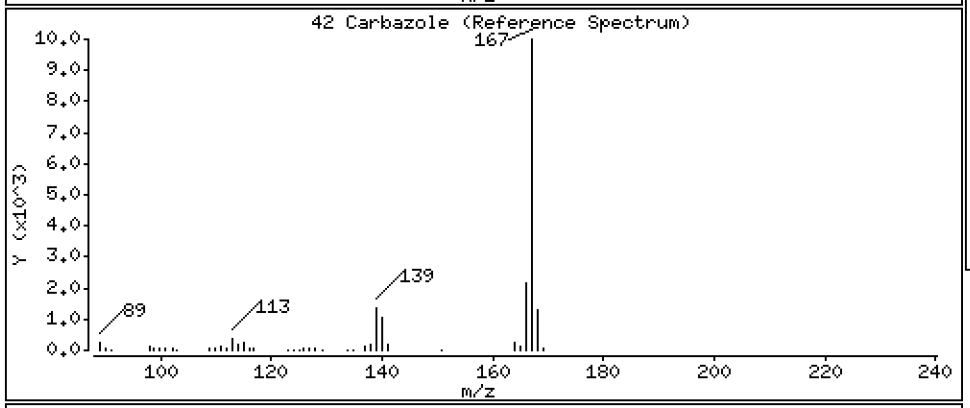
Concentration: 2.325 ug/mL

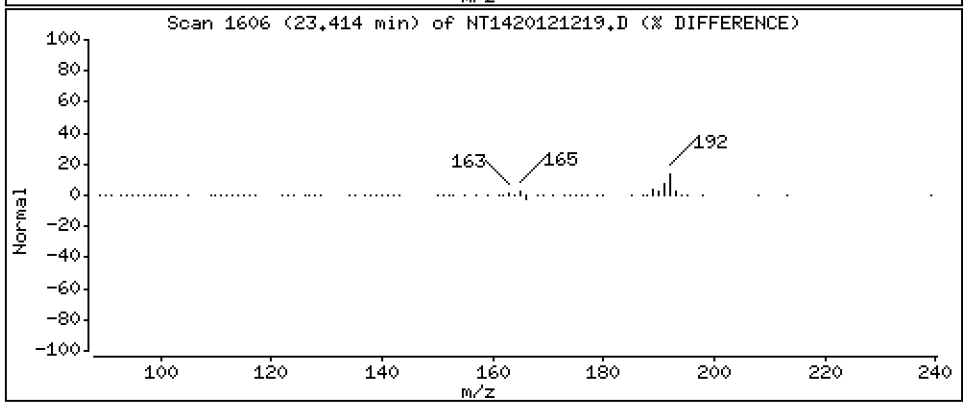












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Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

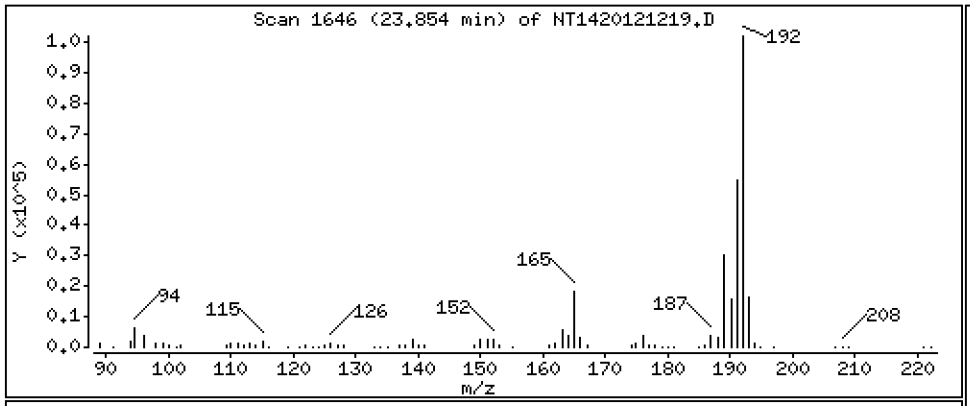
Operator: VTS

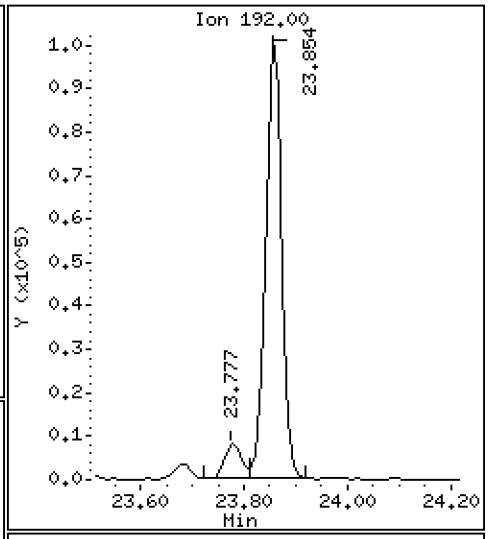
Column phase: Rxi-17Sil MS

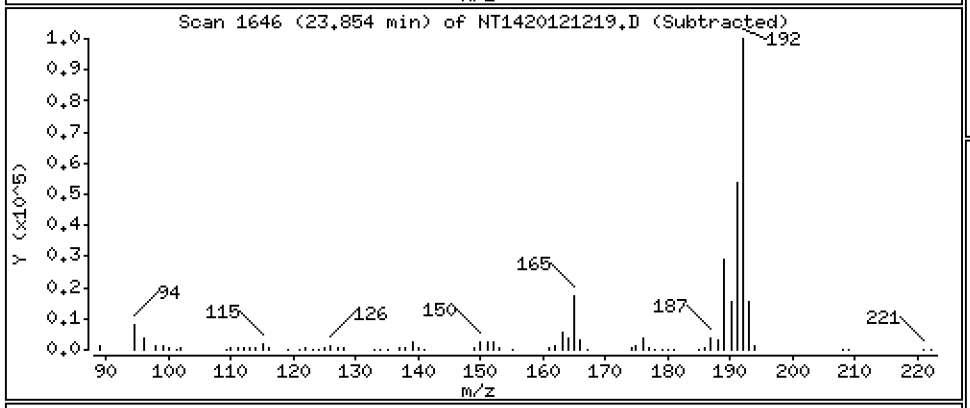
Column diameter: 0.25

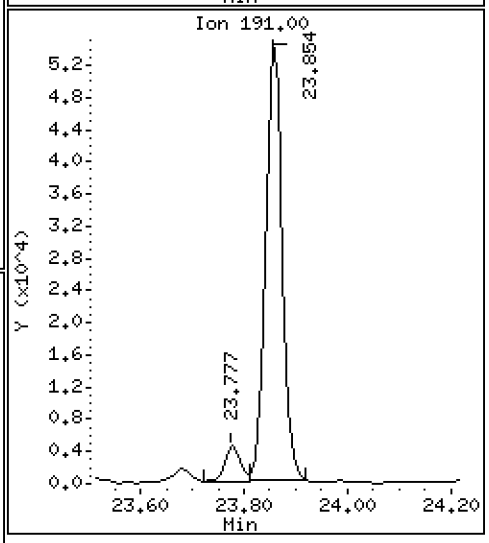
43 1-Methylphenanthrene

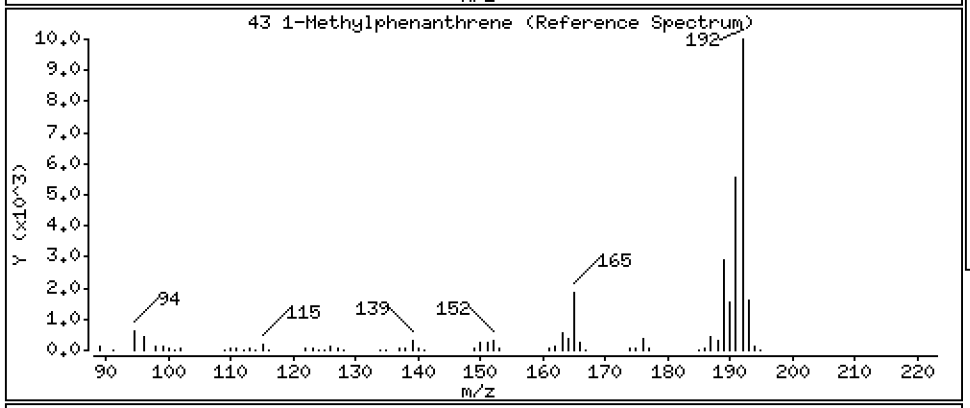
Concentration: 2.773 ug/mL

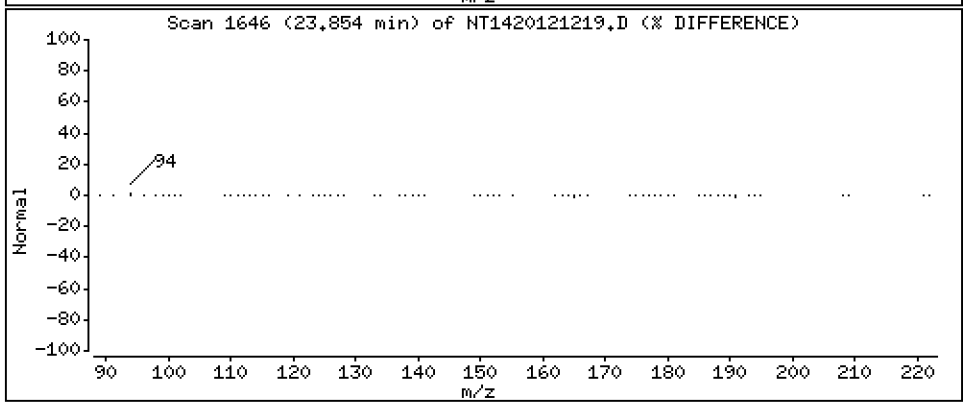












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D

Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

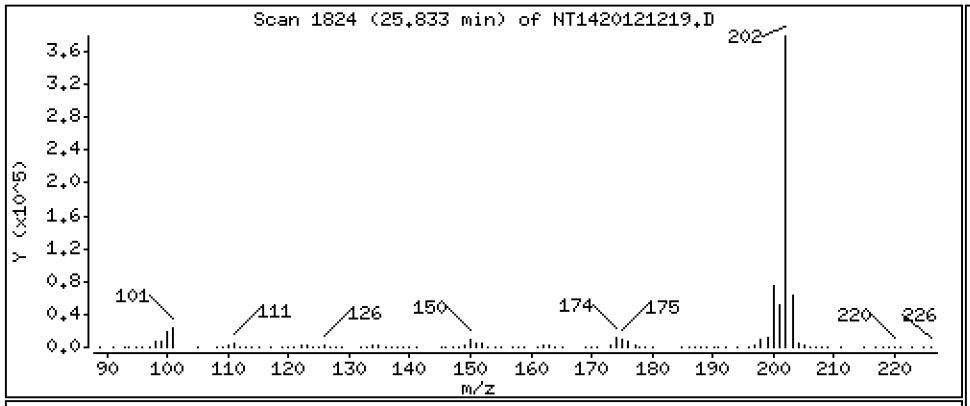
Operator: VTS

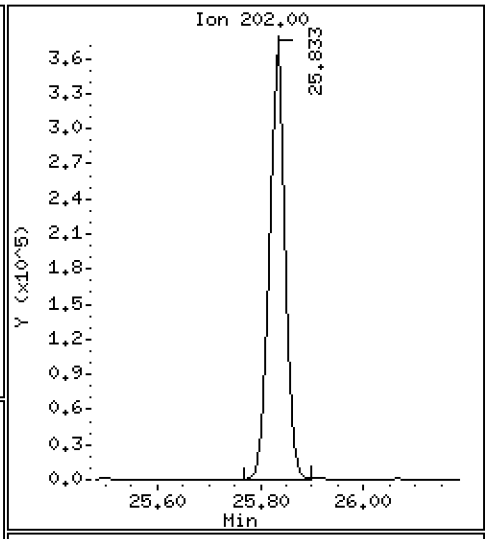
Column phase: Rxi-17Sil MS

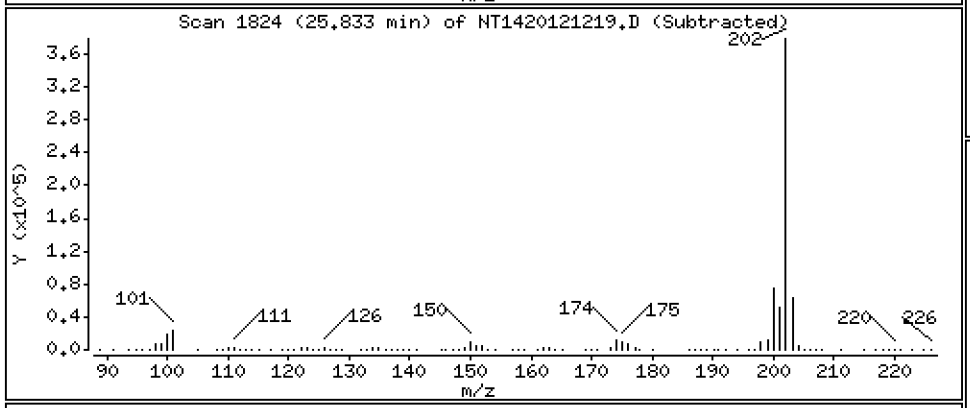
Column diameter: 0.25

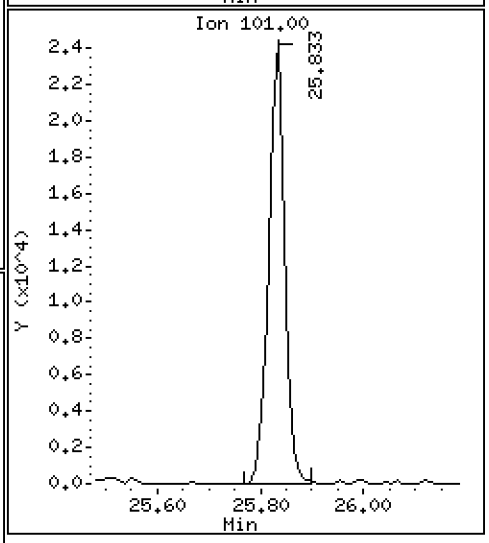
44 Fluoranthene

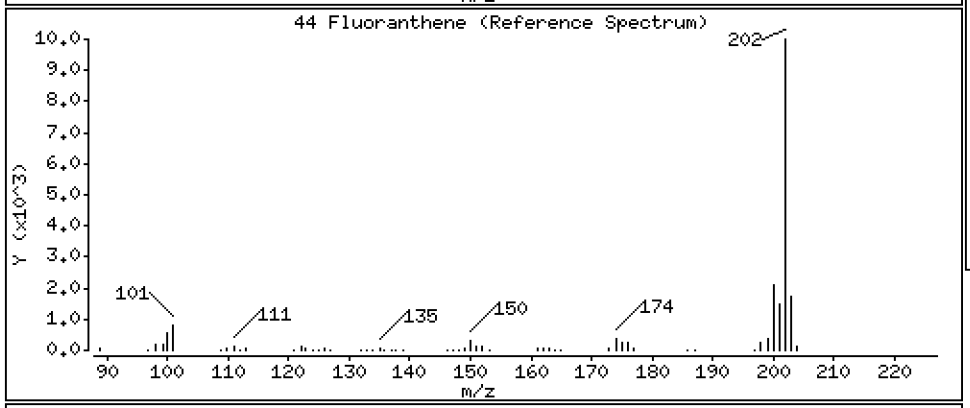
Concentration: 6.851 ug/mL

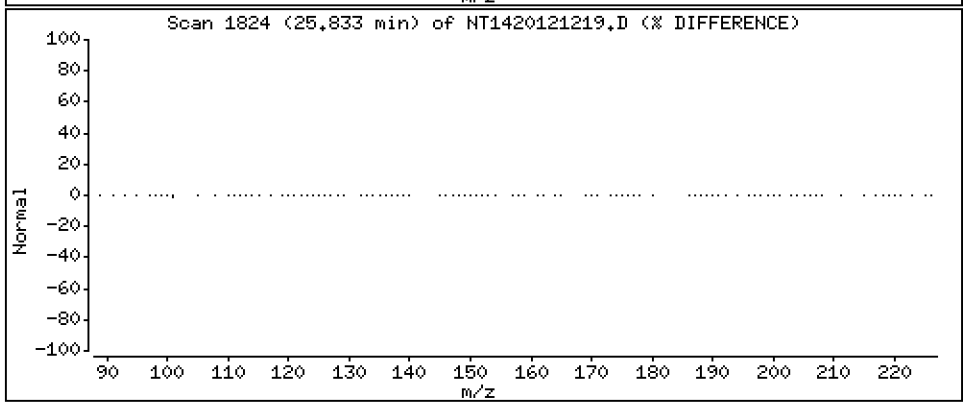












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D

Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

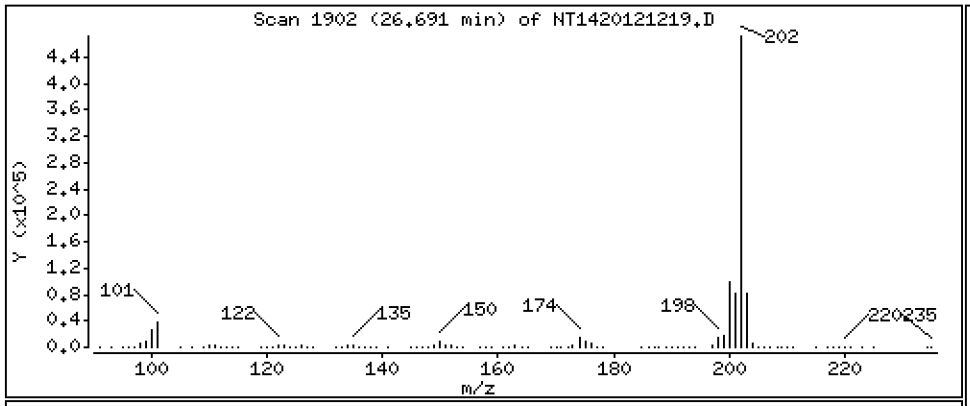
Operator: VTS

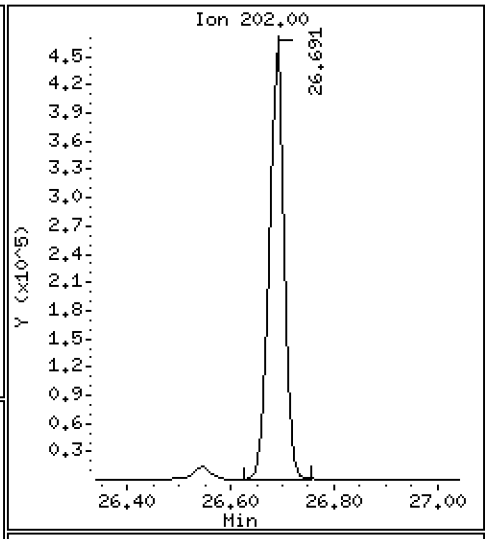
Column phase: Rxi-17Sil MS

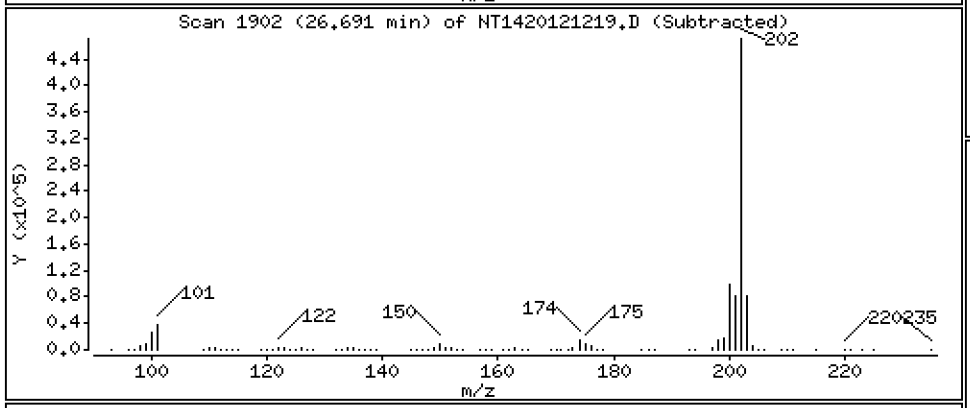
Column diameter: 0.25

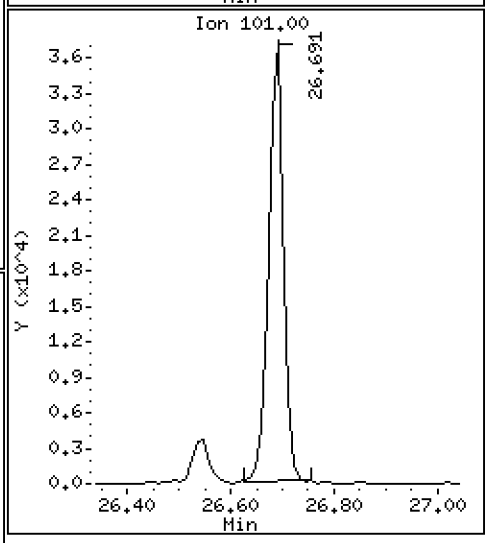
46 Pyrene

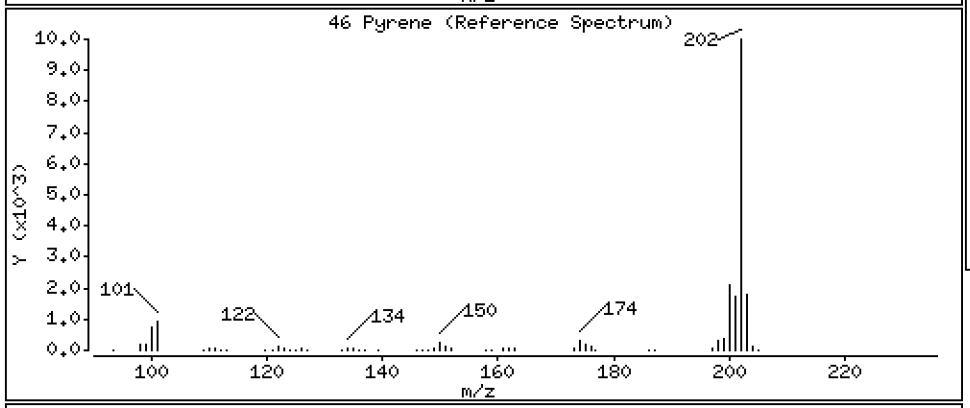
Concentration: 7.692 ug/mL

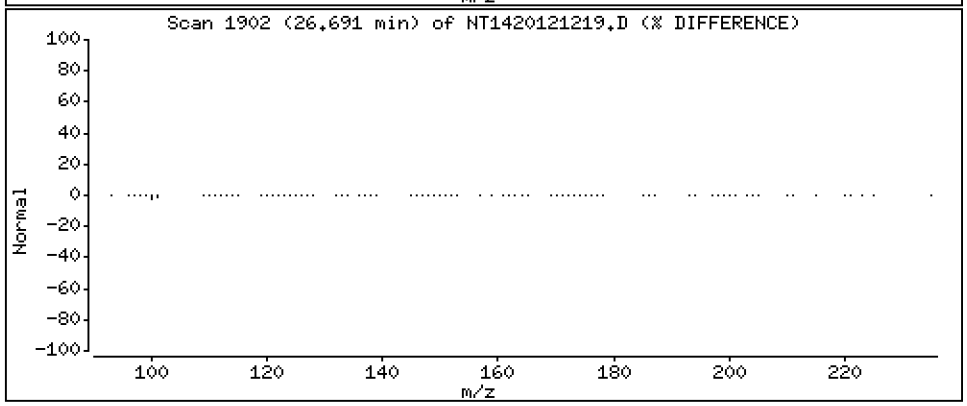












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Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

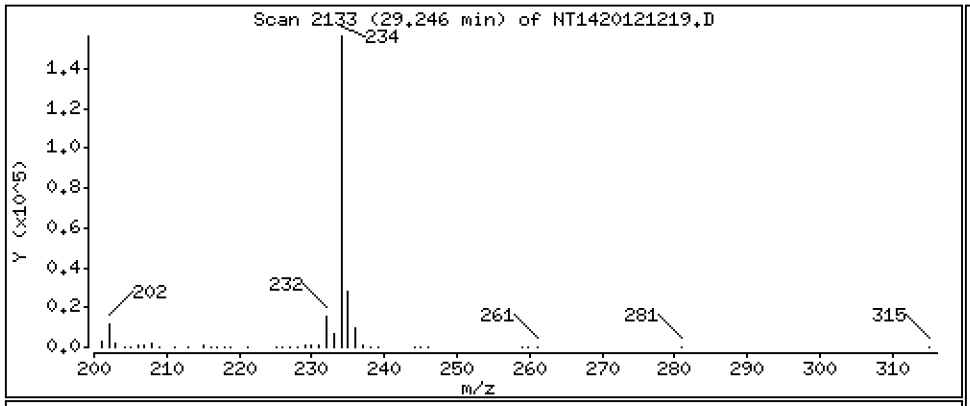
Operator: VTS

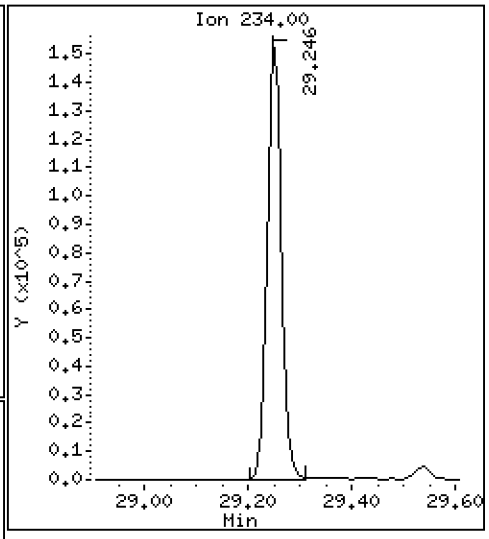
Column phase: Rxi-17Sil MS

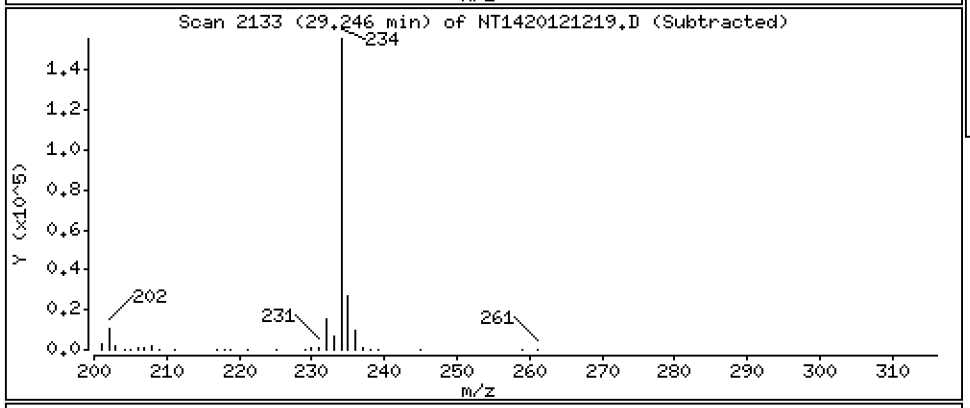
Column diameter: 0.25

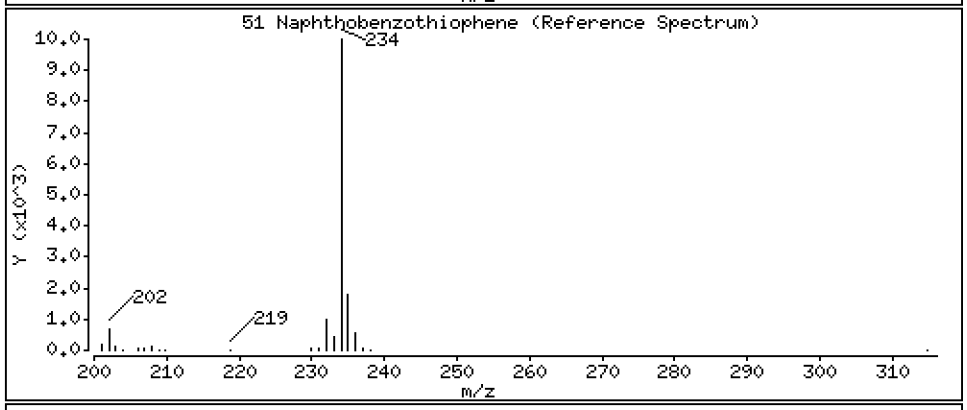
51 Naphthobenzothiophene

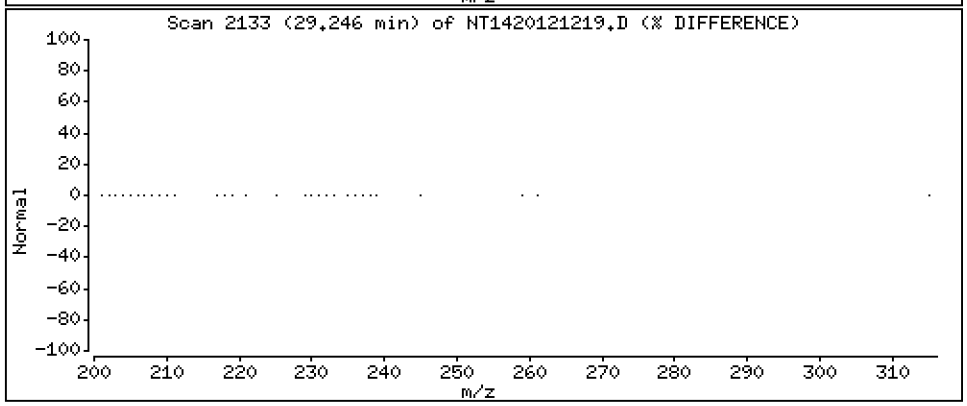
Concentration: 2.632 ug/mL











Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D

Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

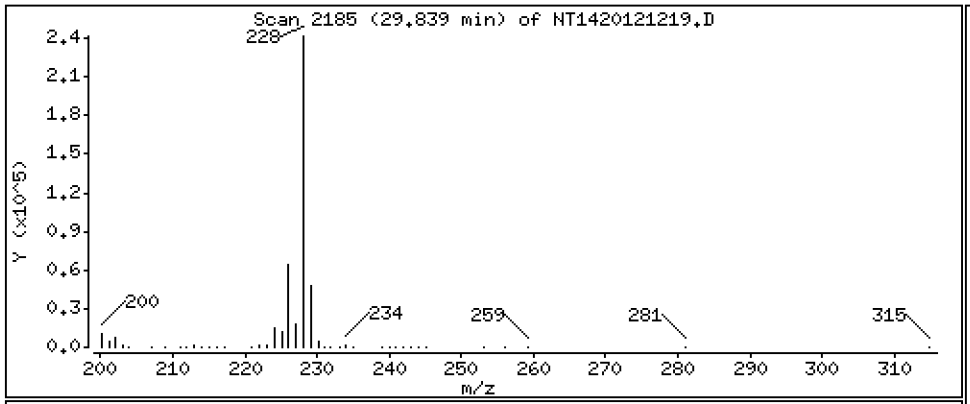
Operator: VTS

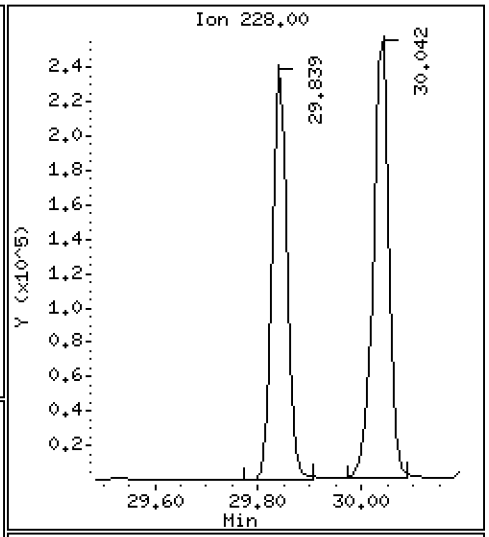
Column phase: Rxi-17Sil MS

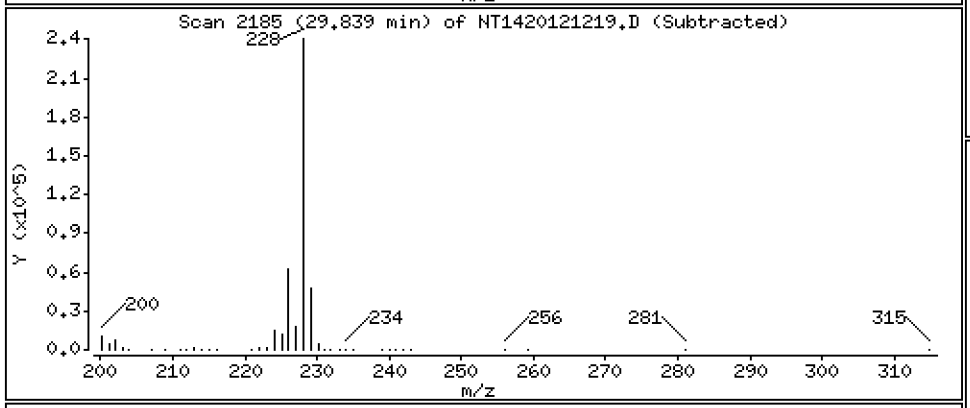
Column diameter: 0.25

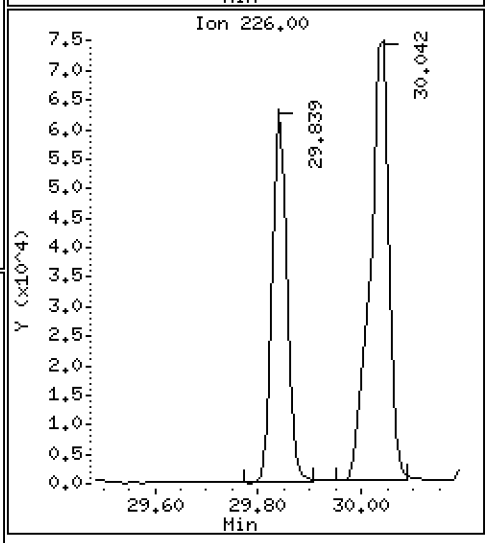
55 Benzo(a)anthracene

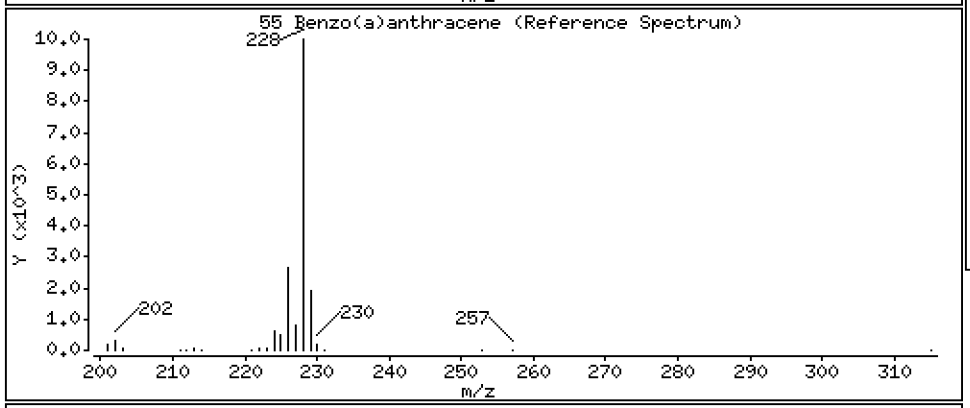
Concentration: 4.153 ug/mL

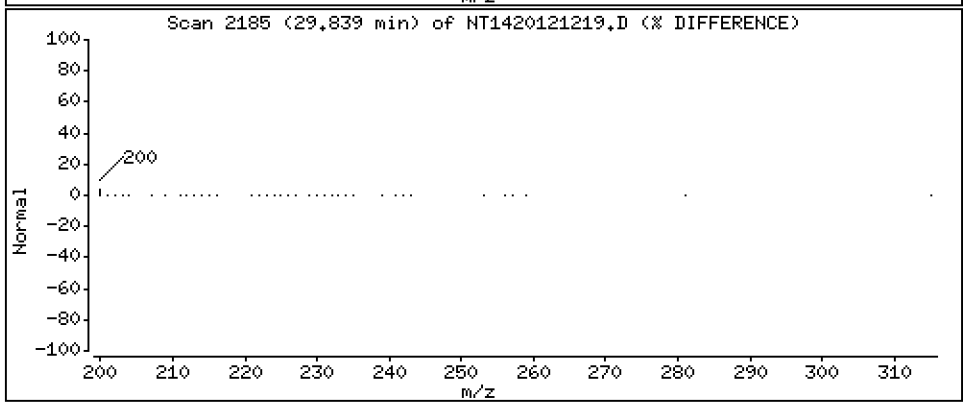












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D

Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

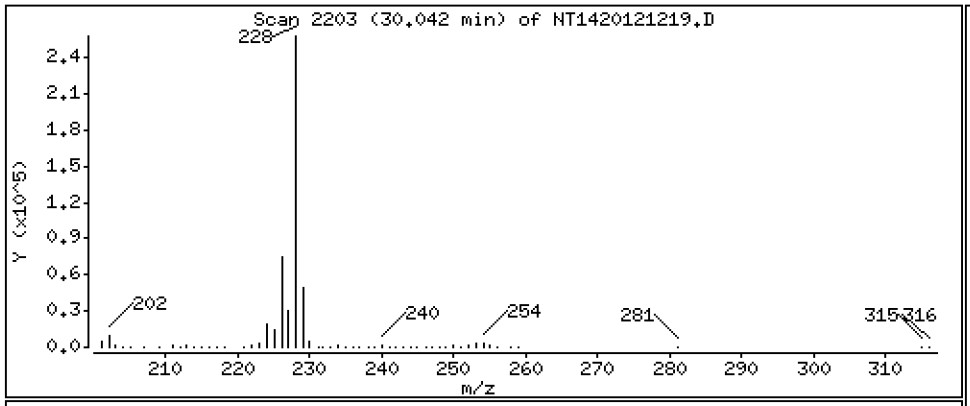
Operator: VTS

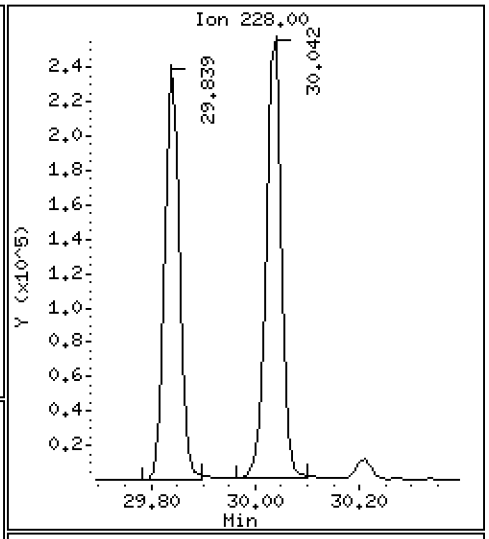
Column phase: Rxi-17Sil MS

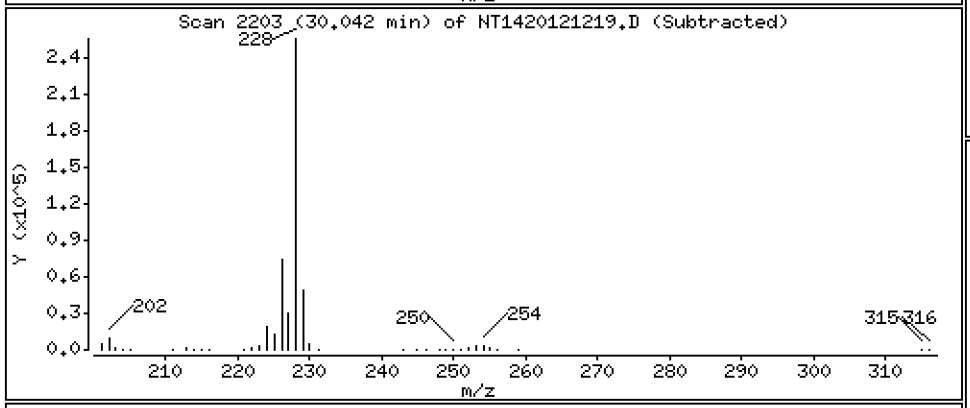
Column diameter: 0.25

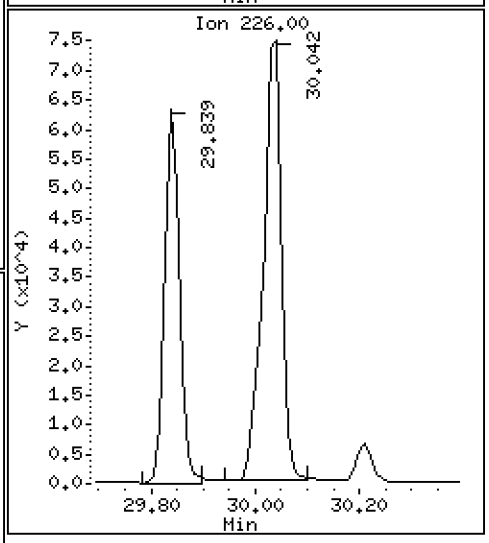
57 Chrysene

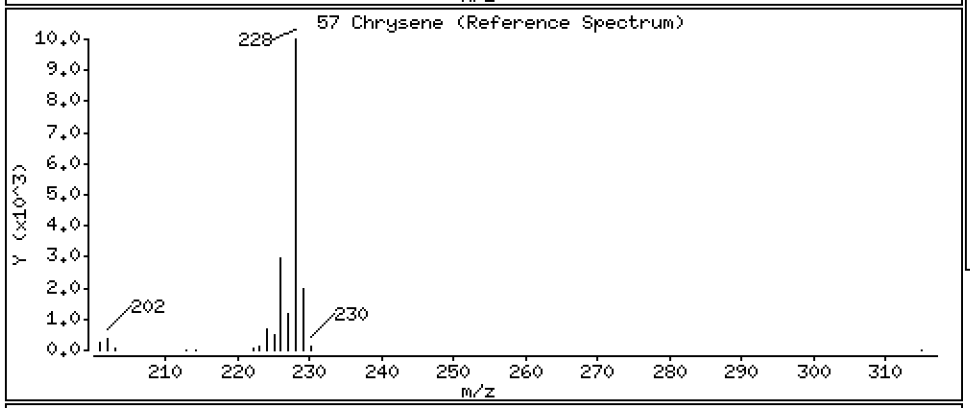
Concentration: 4.590 ug/mL

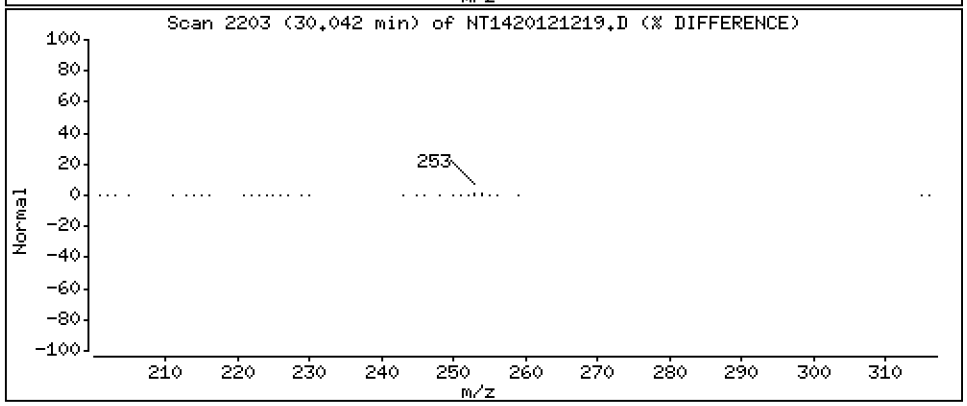












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D

Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

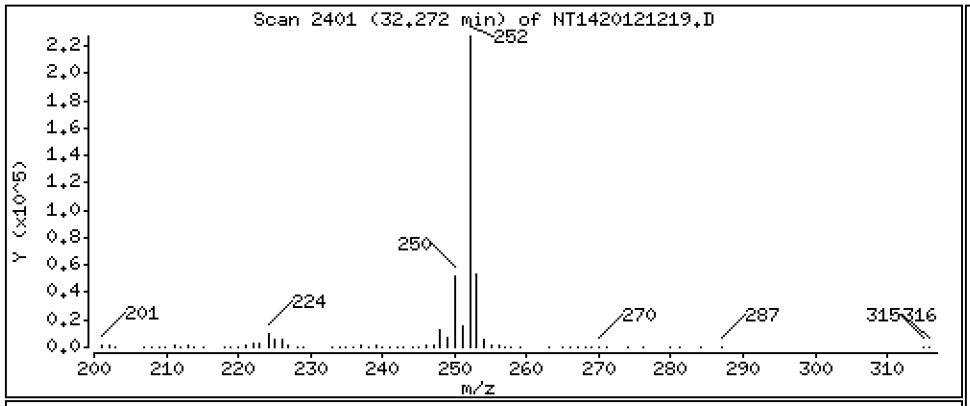
Operator: VTS

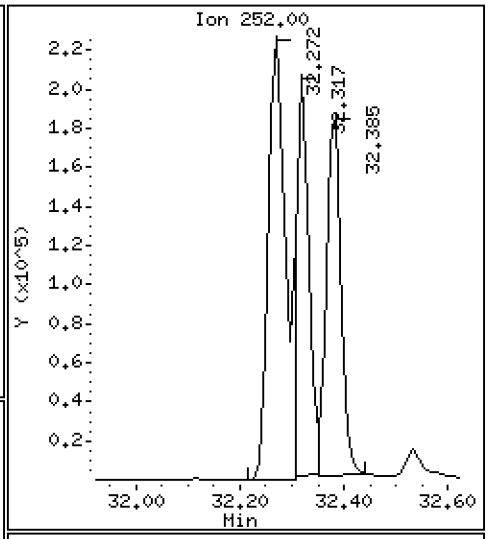
Column phase: Rxi-17Sil MS

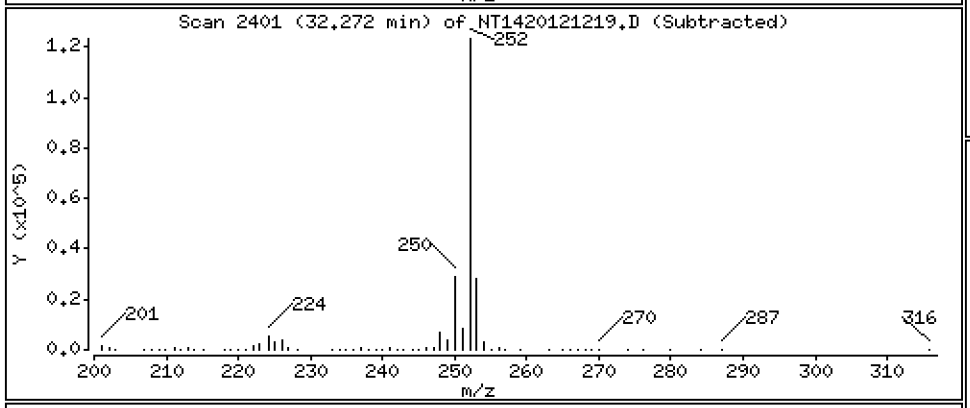
Column diameter: 0.25

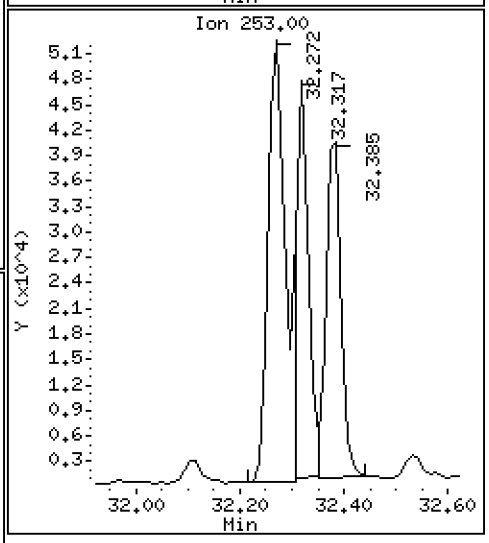
62 Benzo(b)fluoranthene

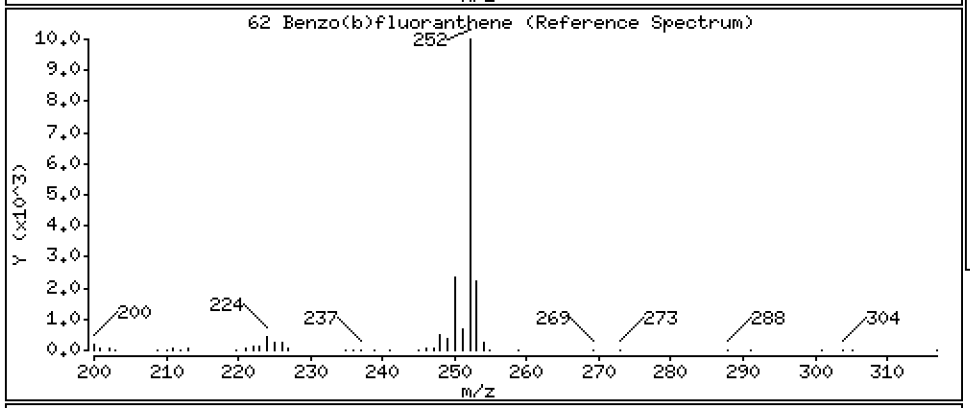
Concentration: 4.180 ug/mL

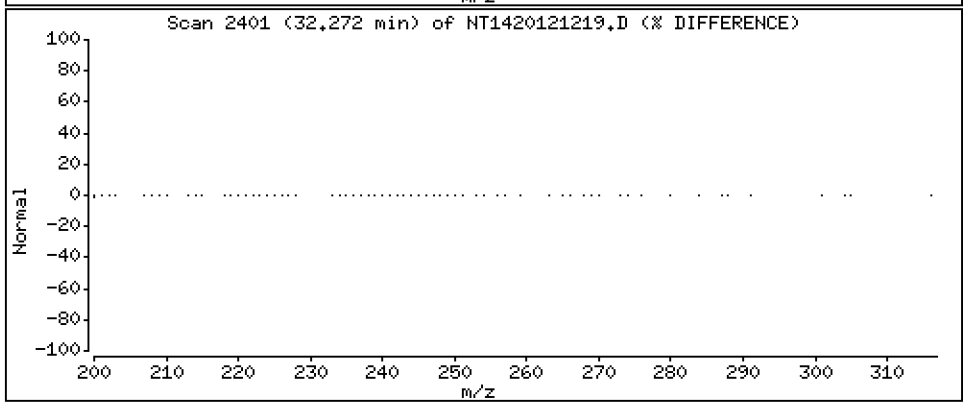












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D

Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

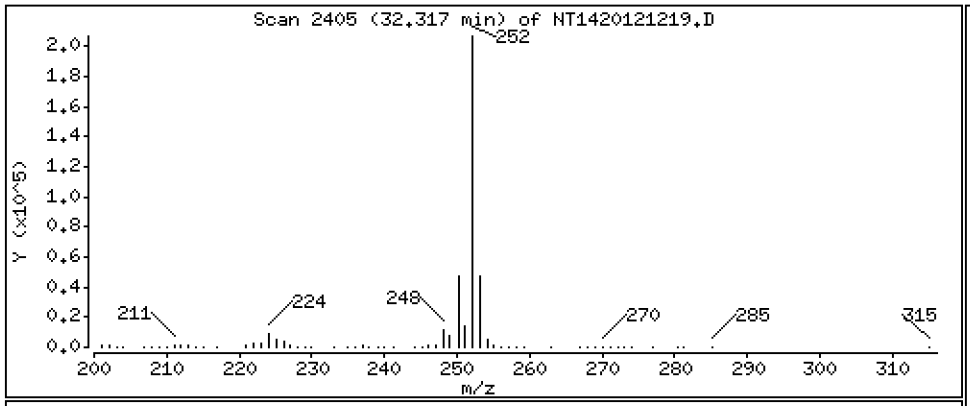
Operator: VTS

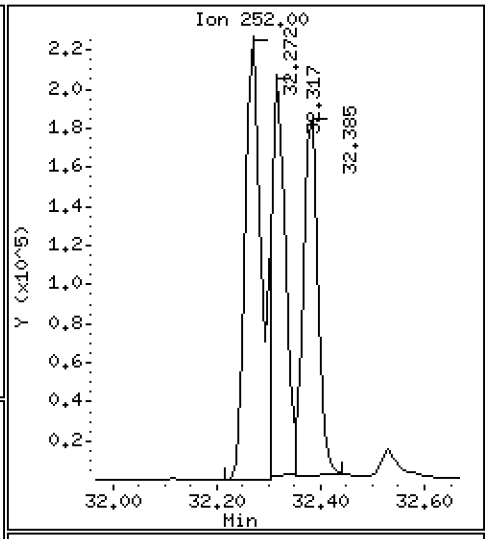
Column phase: Rxi-17Sil MS

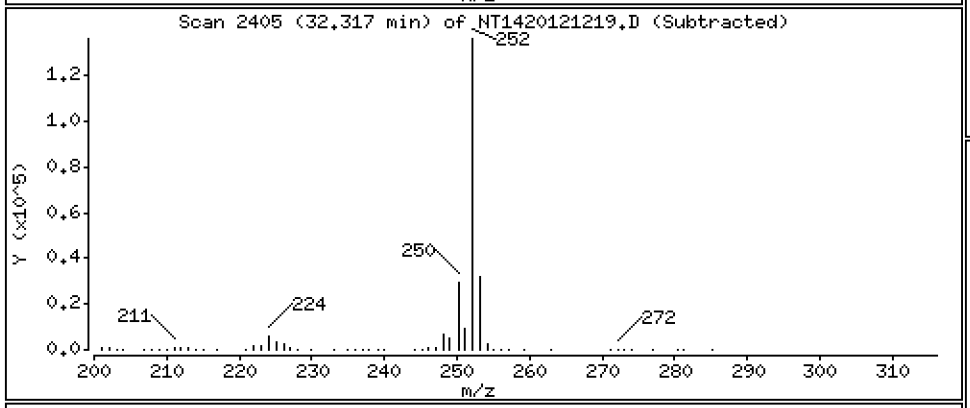
Column diameter: 0.25

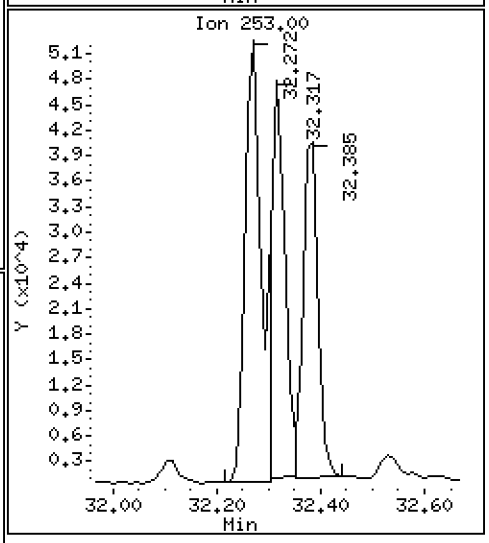
63 Benzo(k)fluoranthene

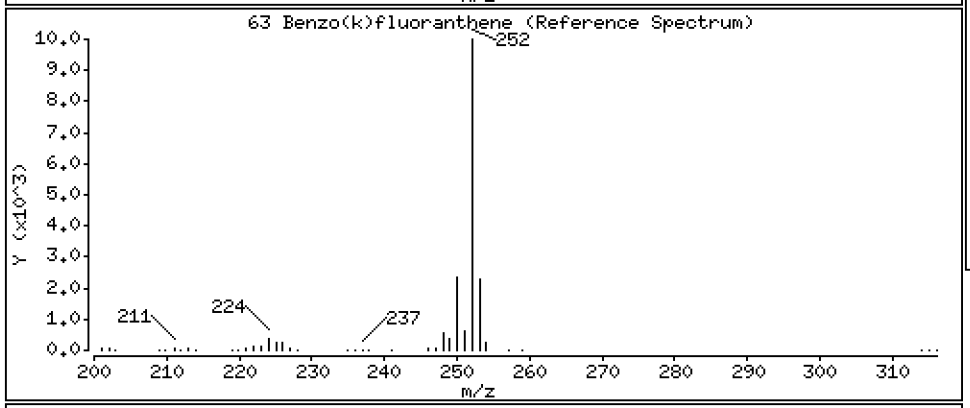
Concentration: 2.707 ug/mL

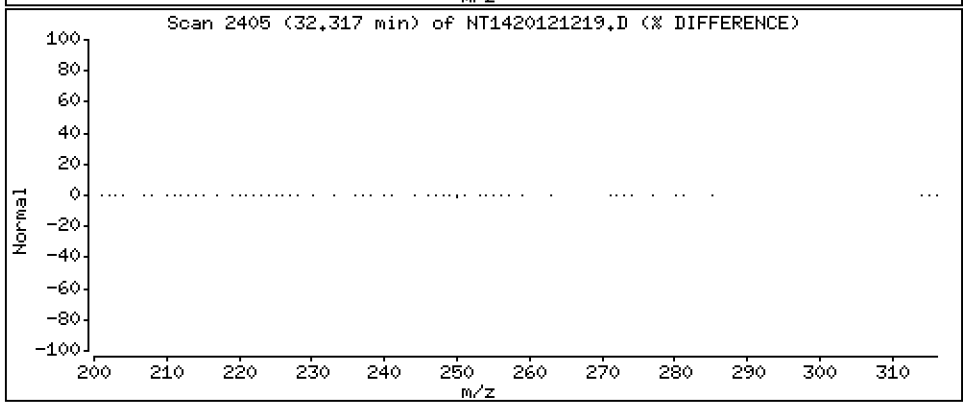












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D

Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

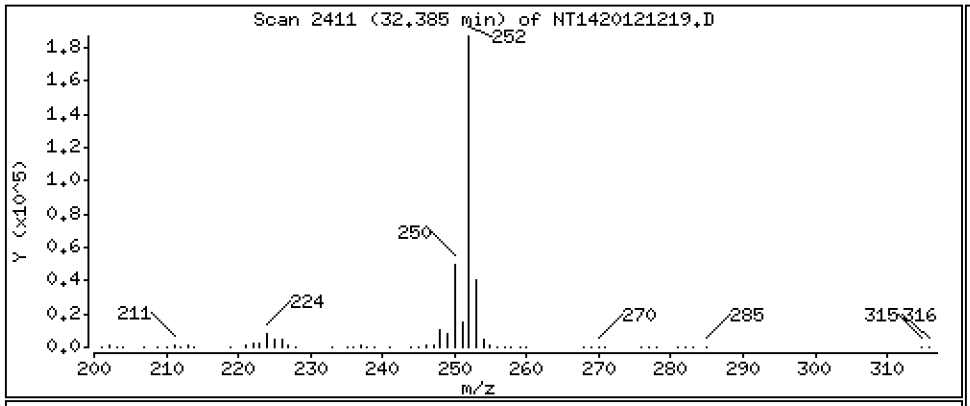
Operator: VTS

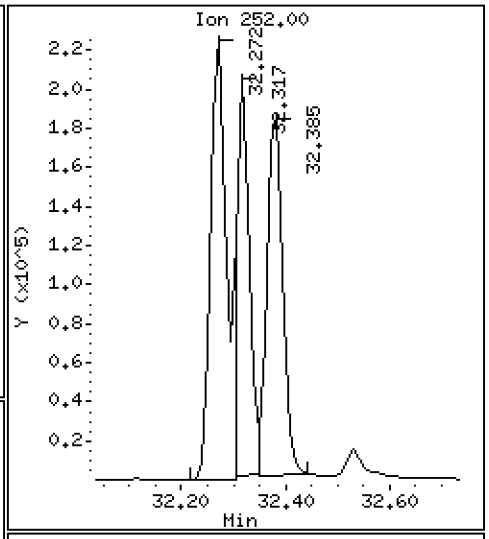
Column phase: Rxi-17Sil MS

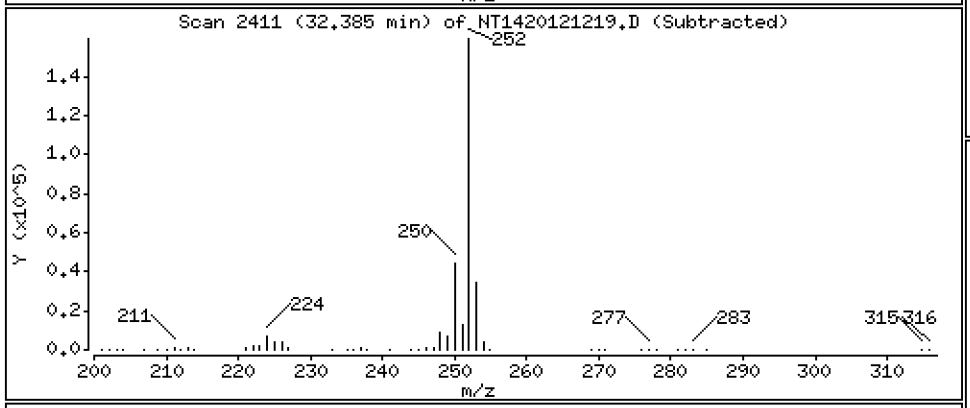
Column diameter: 0.25

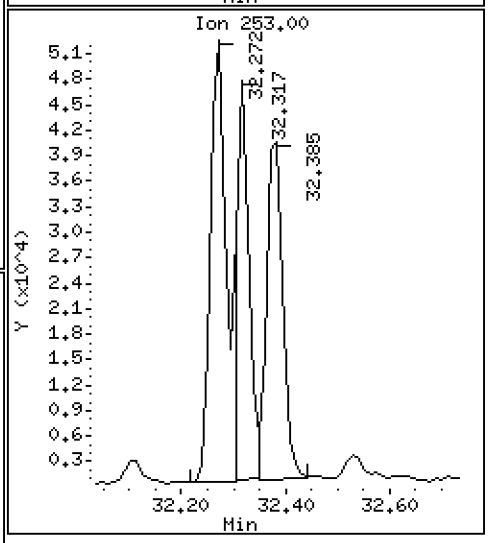
293 Benzo(j)fluoranthene

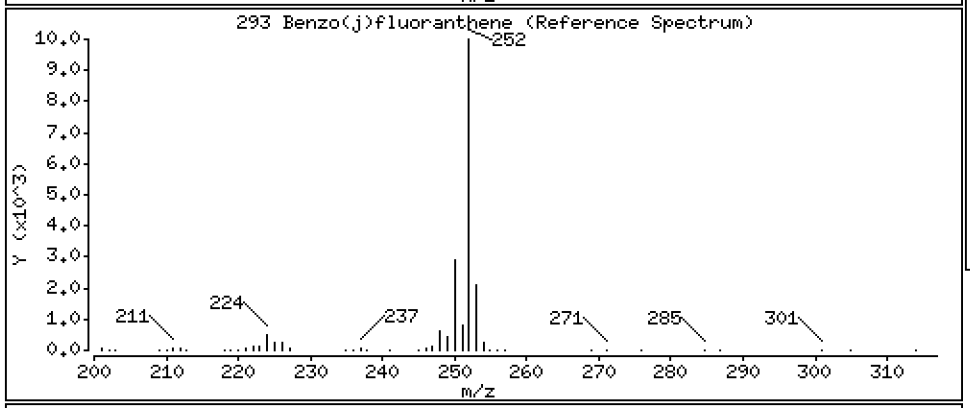
Concentration: 3.222 ug/mL

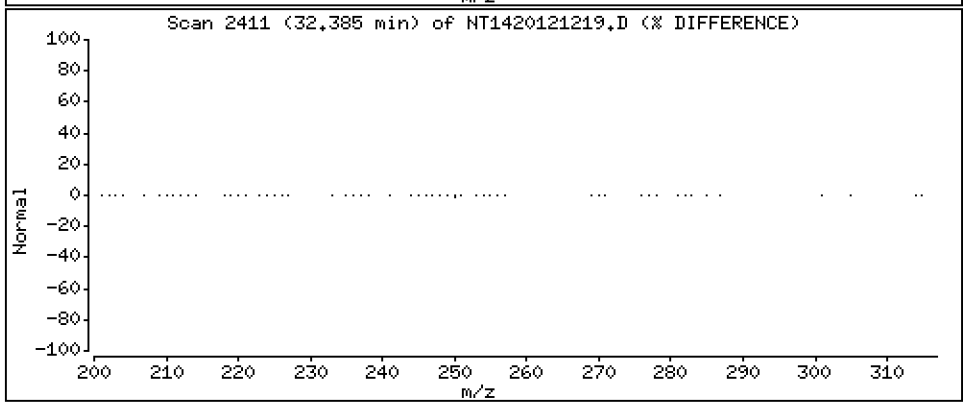












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D

Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

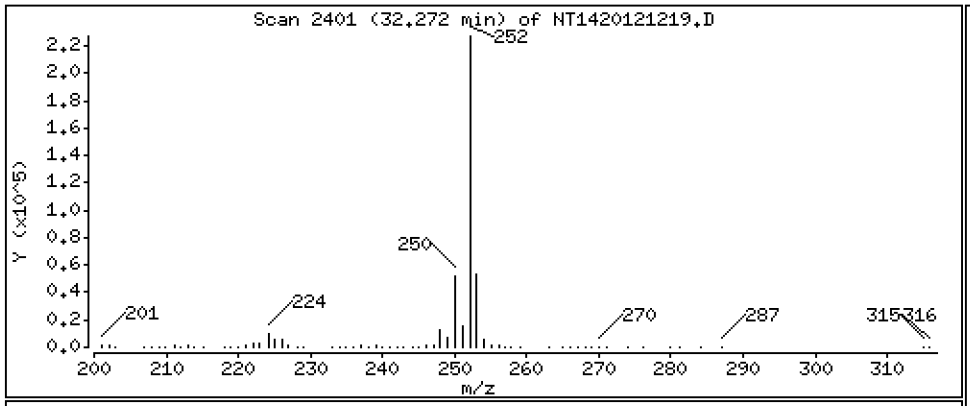
Operator: VTS

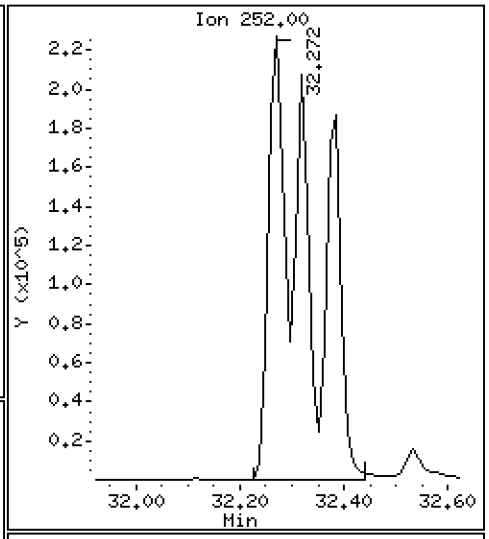
Column phase: Rxi-17Sil MS

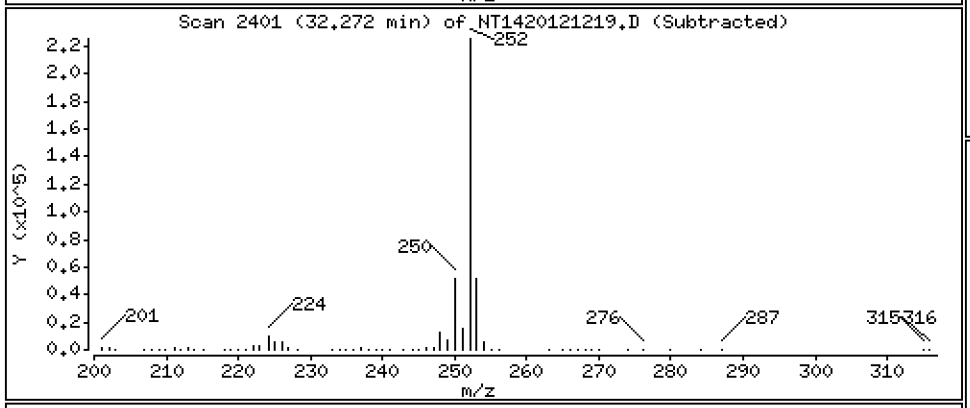
Column diameter: 0.25

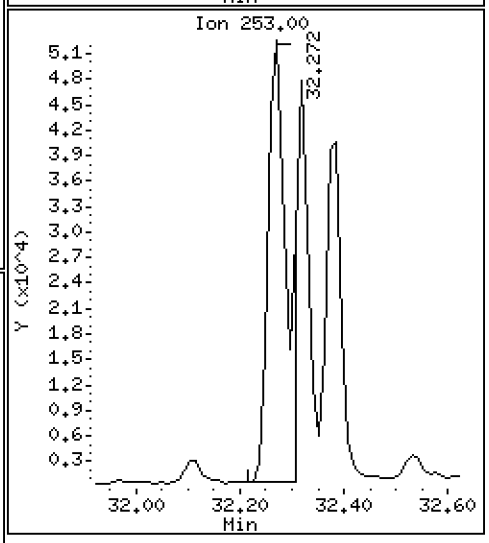
246 Total Benzofluoranthenes

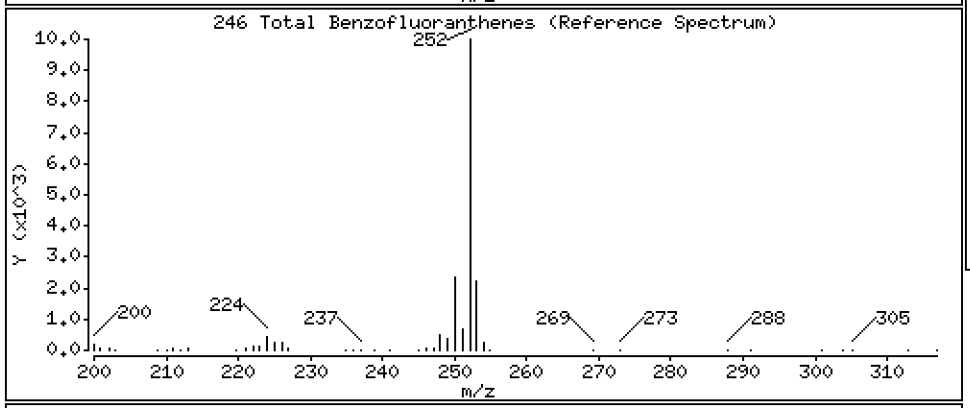
Concentration: 9.895 ug/mL

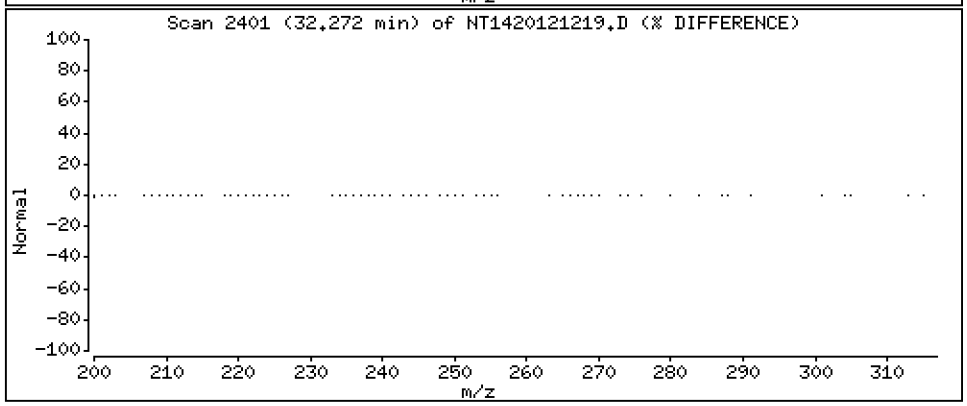












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D

Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

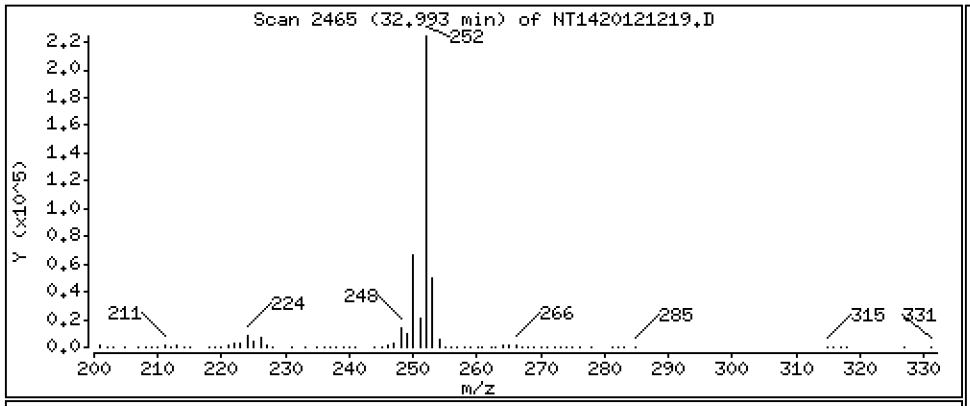
Operator: VTS

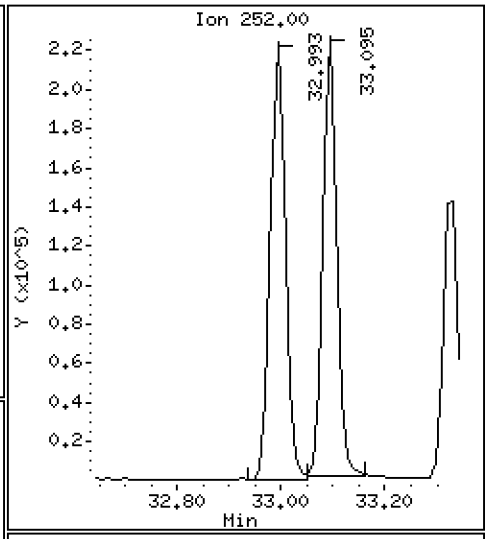
Column phase: Rxi-17Sil MS

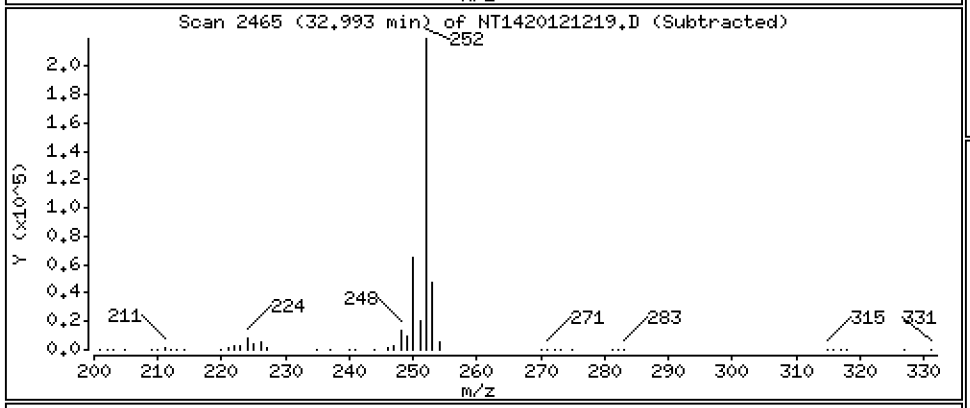
Column diameter: 0.25

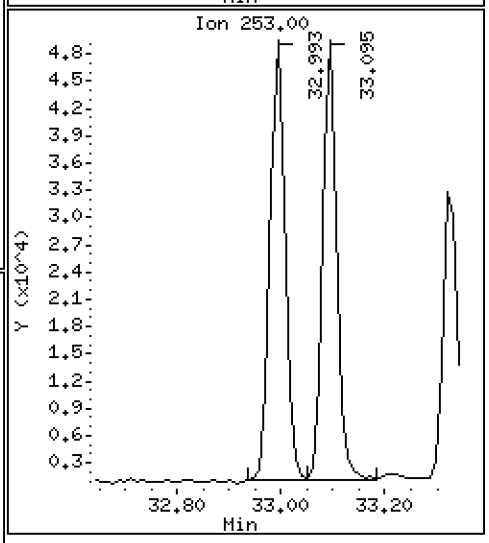
64 Benzo(e)pyrene

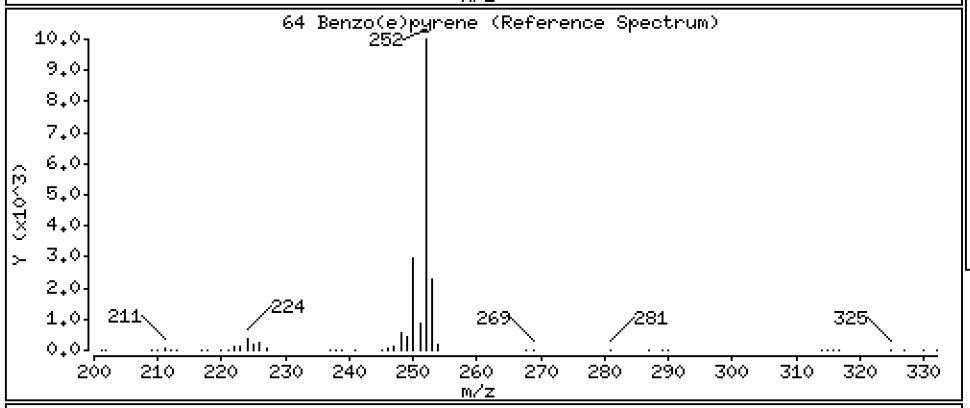
Concentration: 3.504 ug/mL

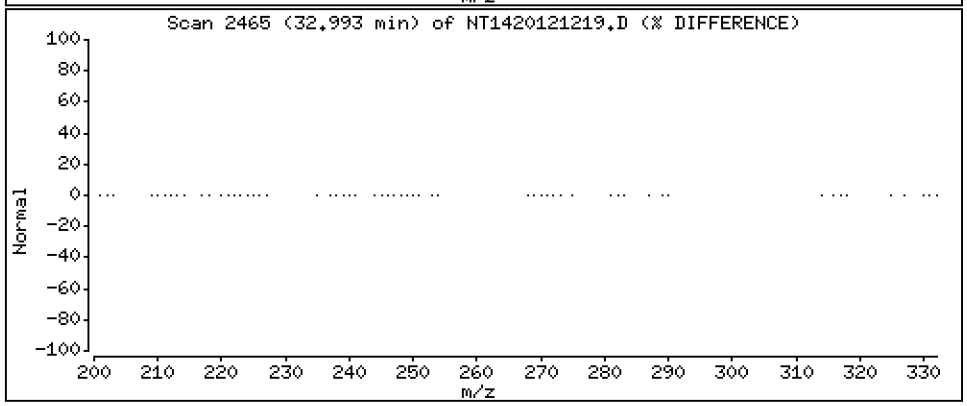












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D

Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

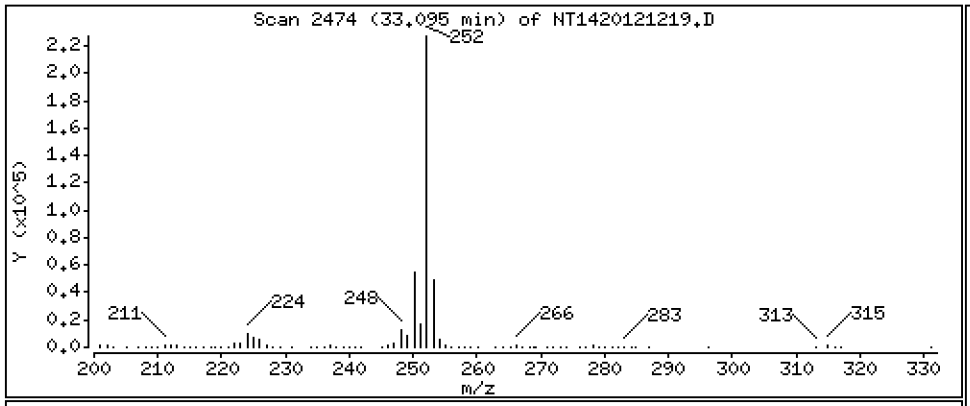
Operator: VTS

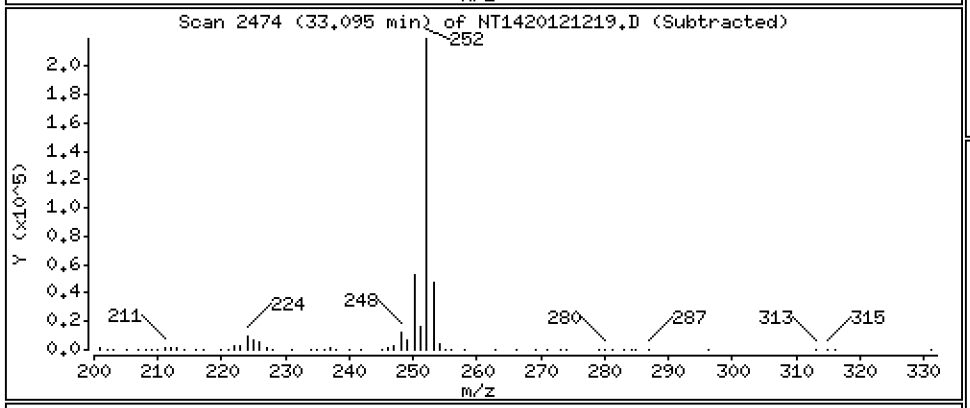
Column phase: Rxi-17Sil MS

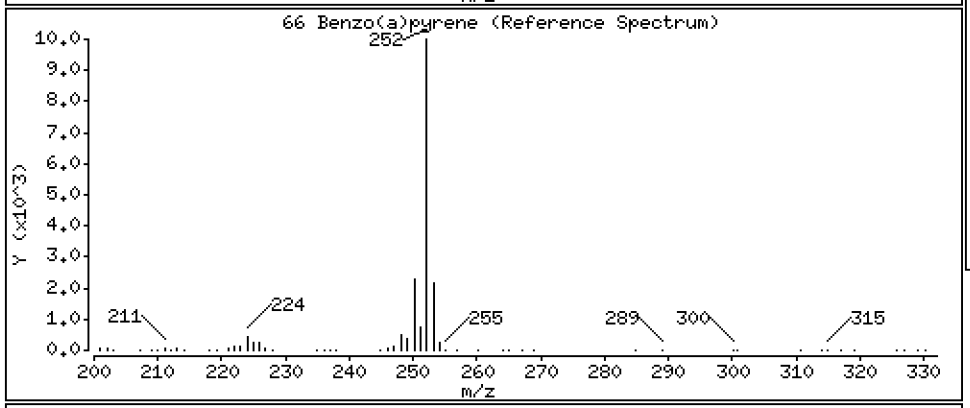
Column diameter: 0.25

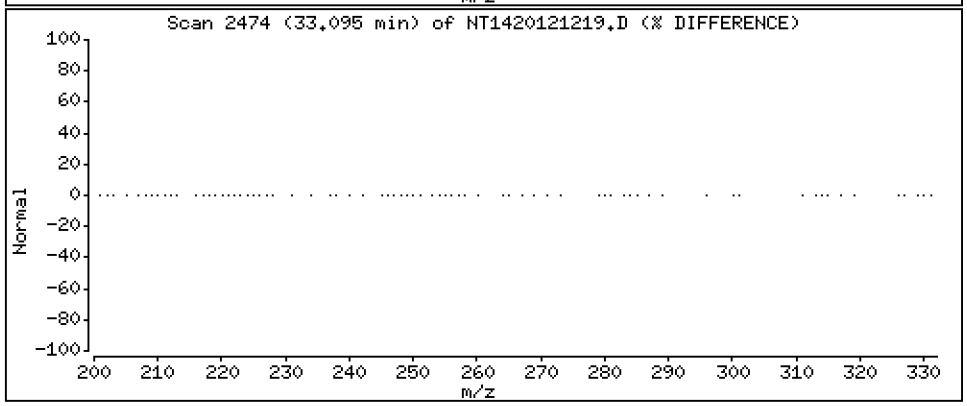
66 Benzo(a)pyrene

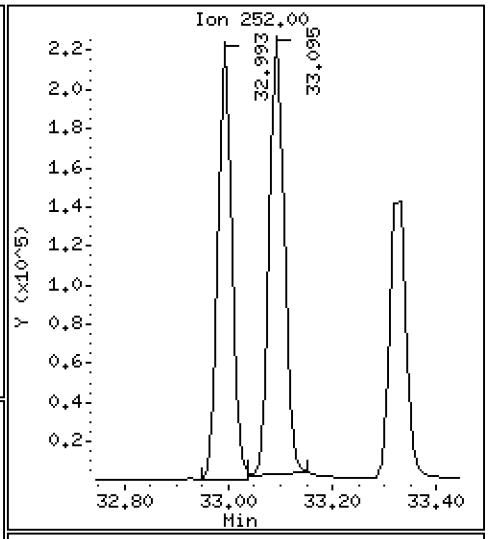
Concentration: 3.672 ug/mL

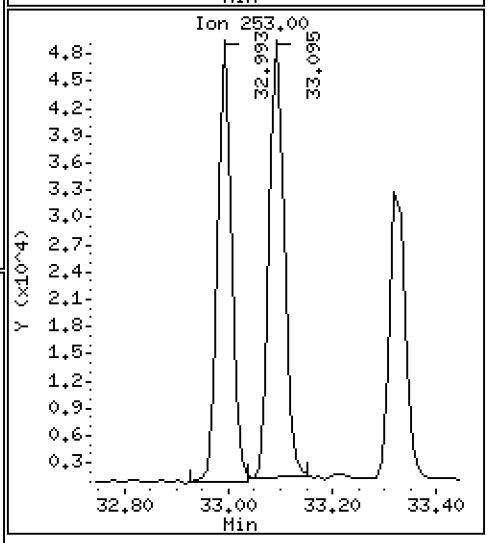












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D

Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

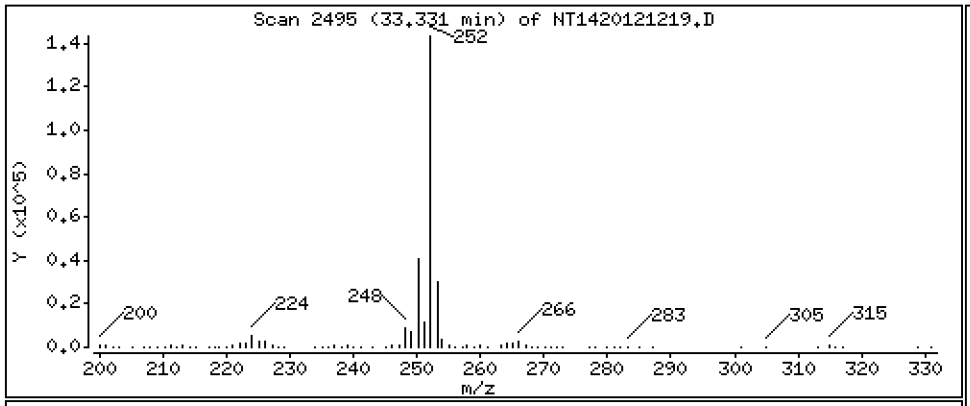
Operator: VTS

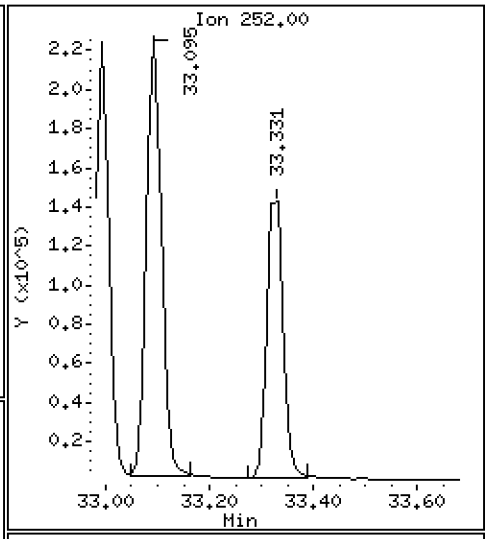
Column phase: Rxi-17Sil MS

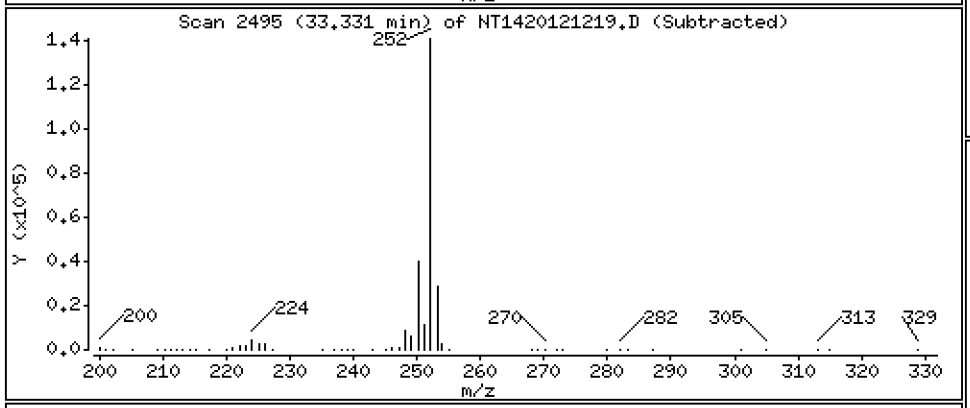
Column diameter: 0.25

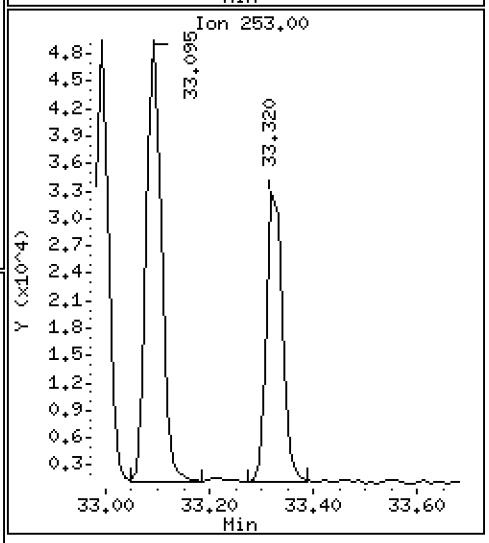
68 Perylene

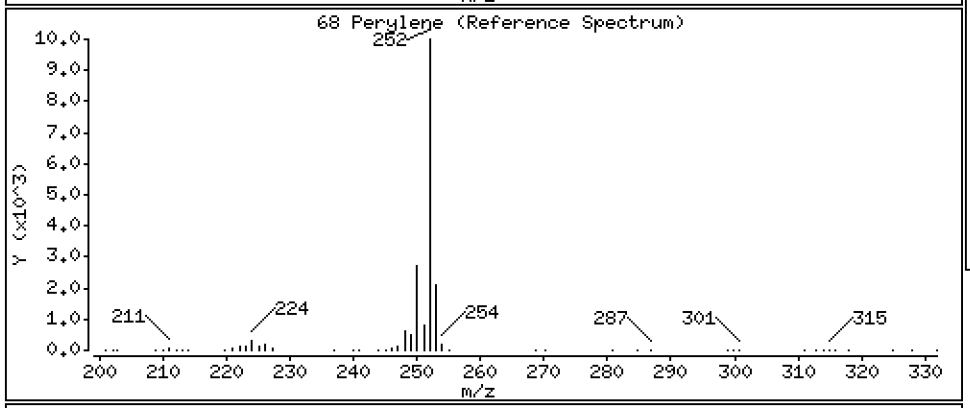
Concentration: 2.415 ug/mL

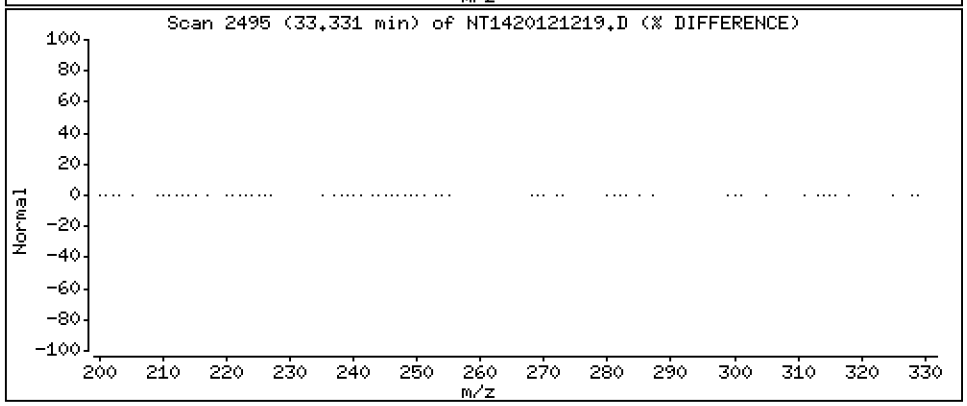












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D

Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

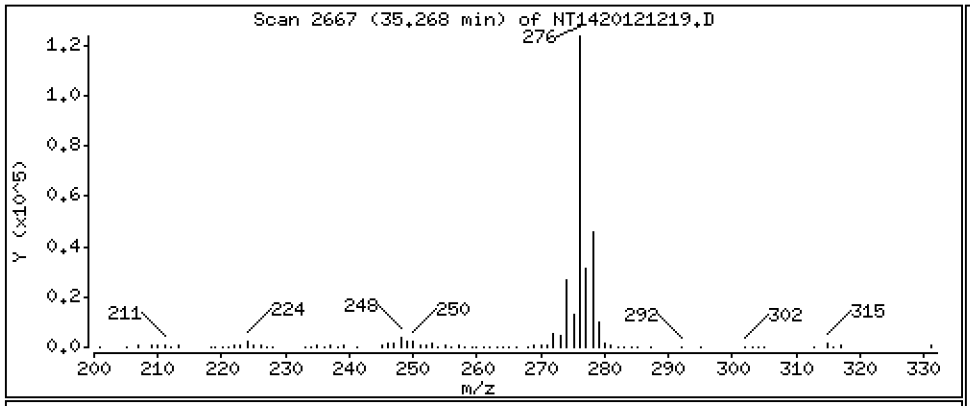
Operator: VTS

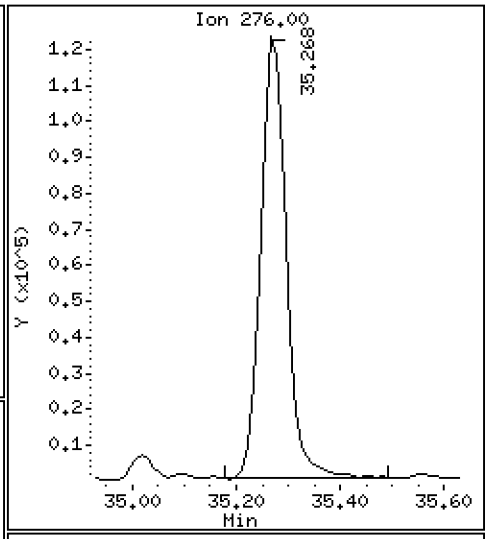
Column phase: Rxi-17Sil MS

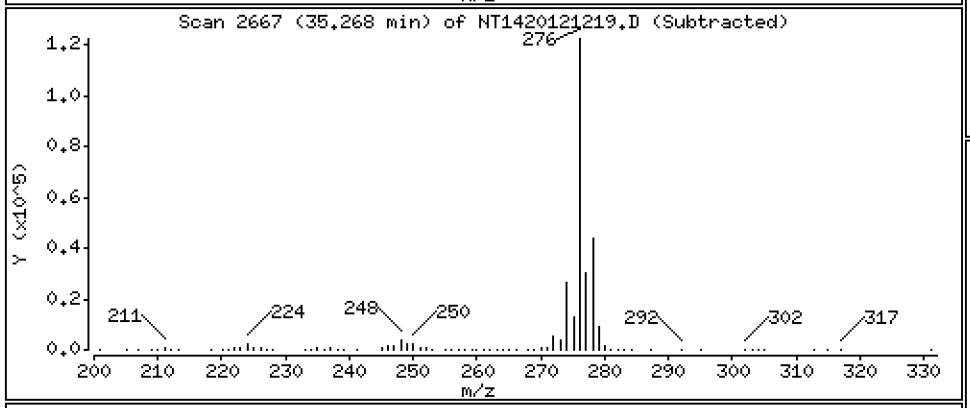
Column diameter: 0.25

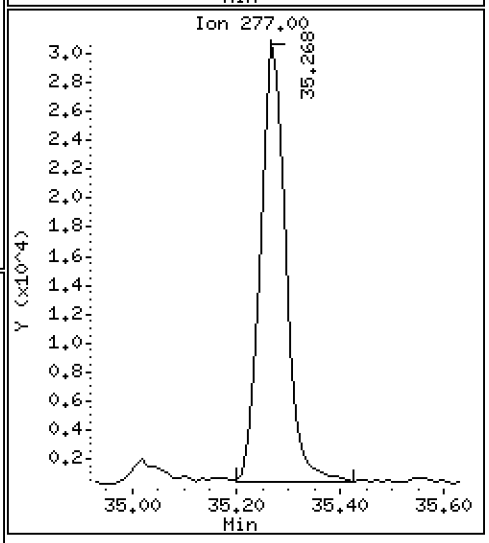
69 Indeno(1,2,3-cd)pyrene

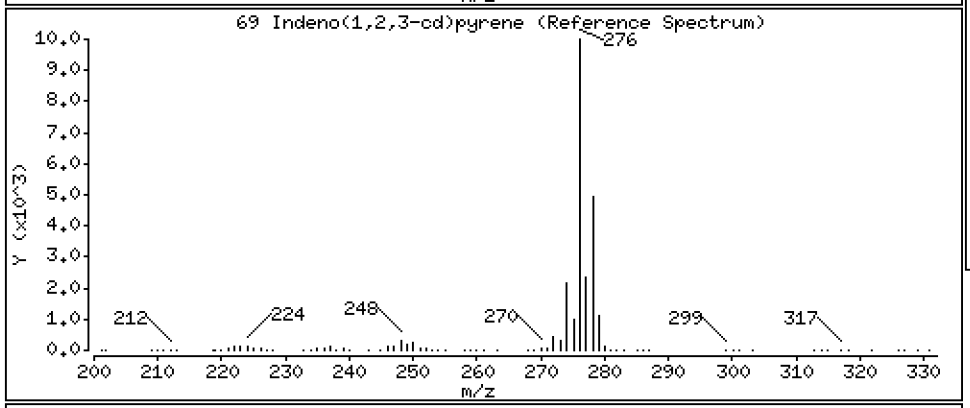
Concentration: 2.888 ug/mL

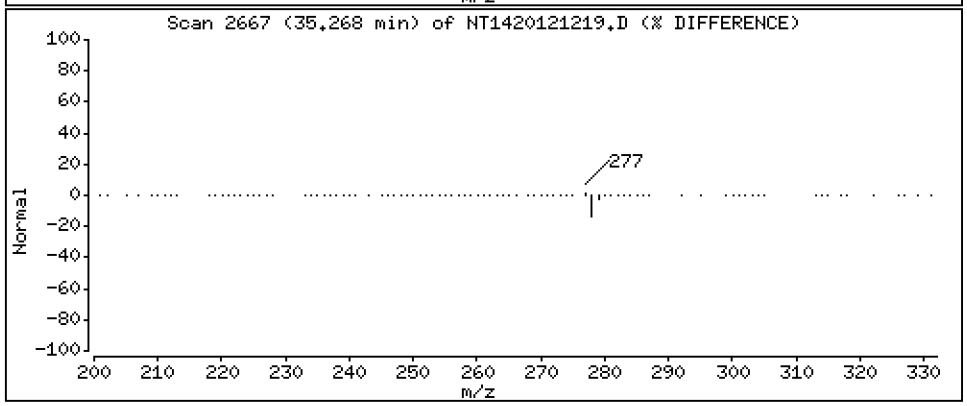












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Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

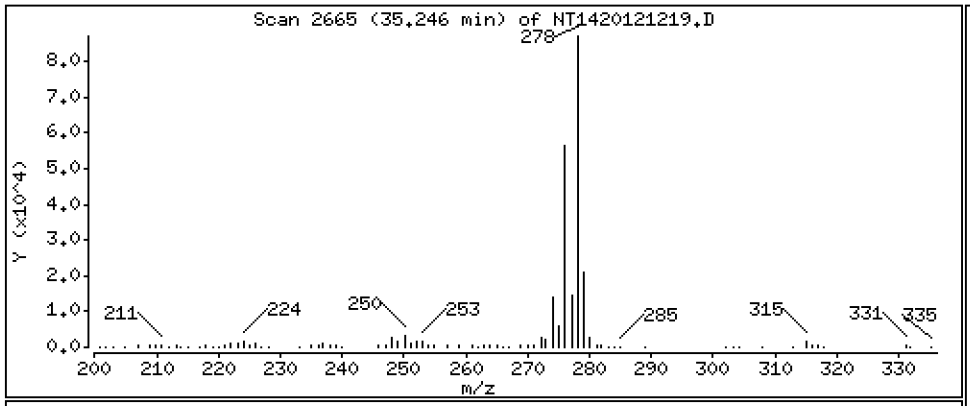
Operator: VTS

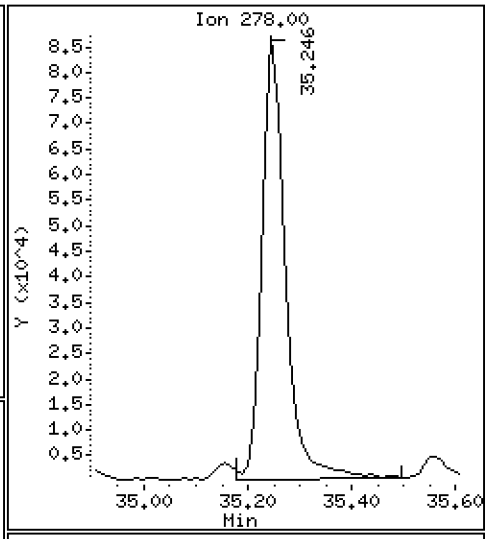
Column phase: Rxi-17Sil MS

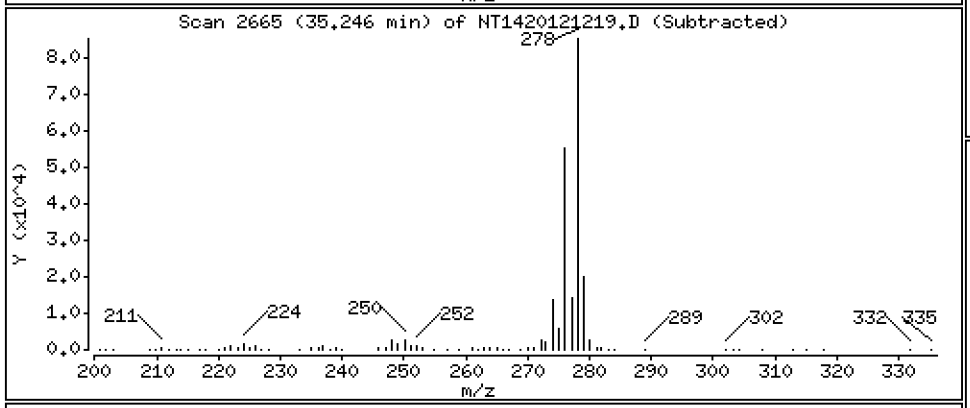
Column diameter: 0.25

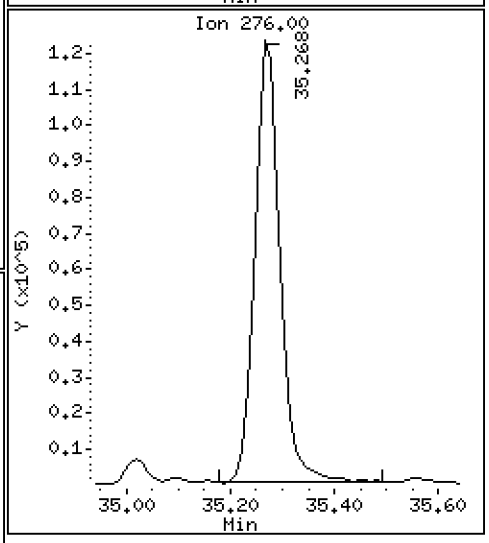
70 Dibenzo(a,h)anthracene

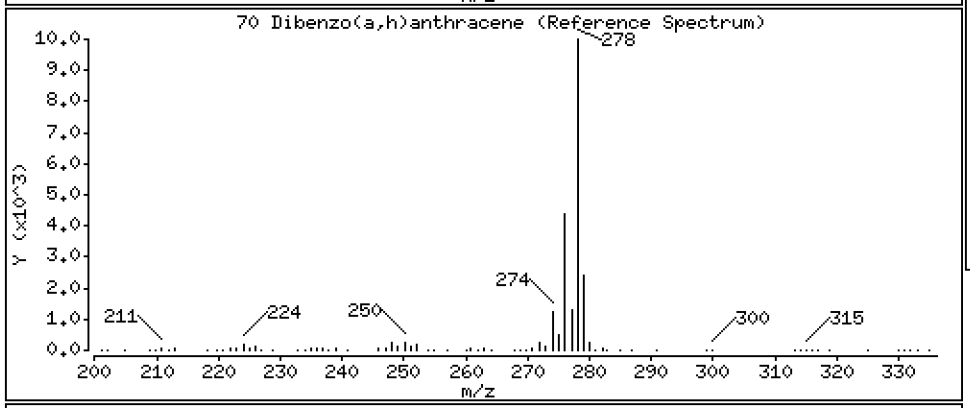
Concentration: 2.064 ug/mL

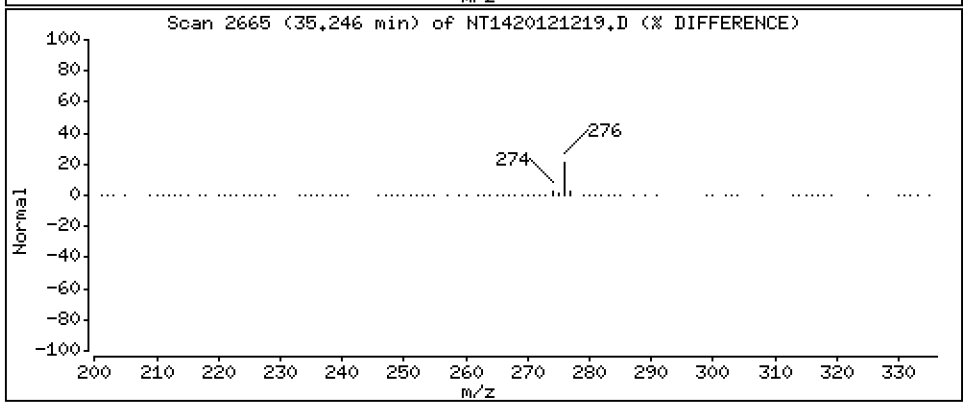












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D

Date : 13-DEC-2020 01:34

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MS1

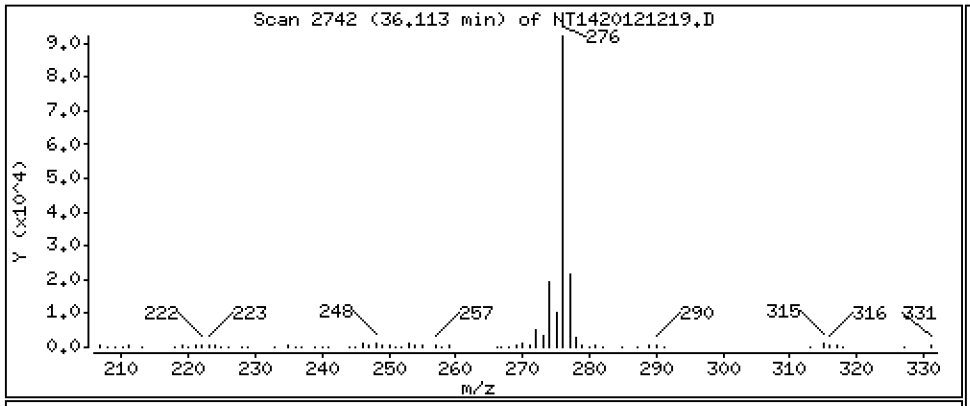
Operator: VTS

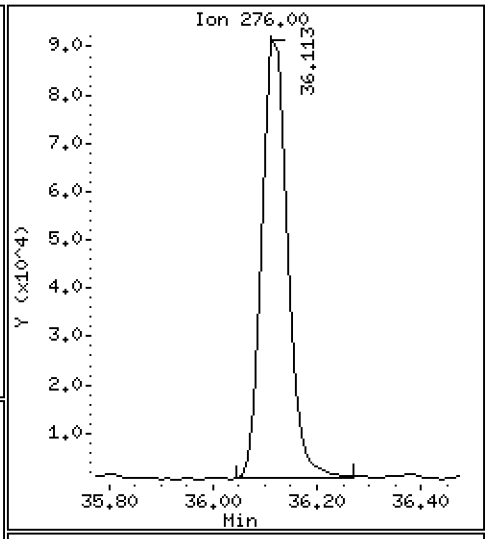
Column phase: Rxi-17Sil MS

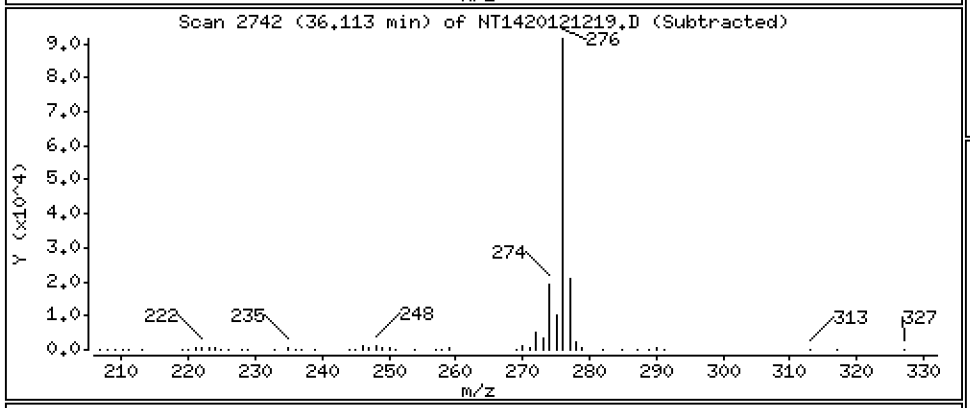
Column diameter: 0.25

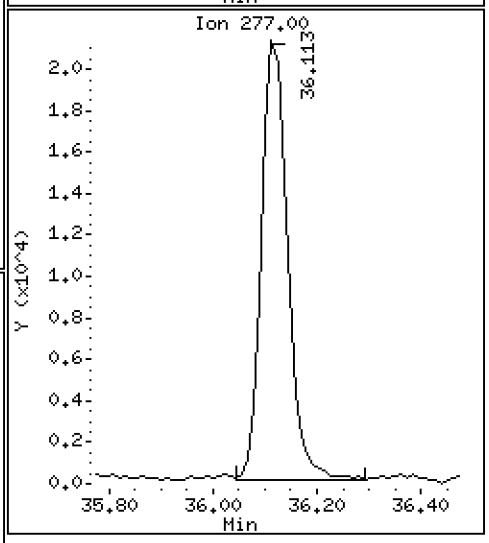
74 Benzo(g,h,i)perylene

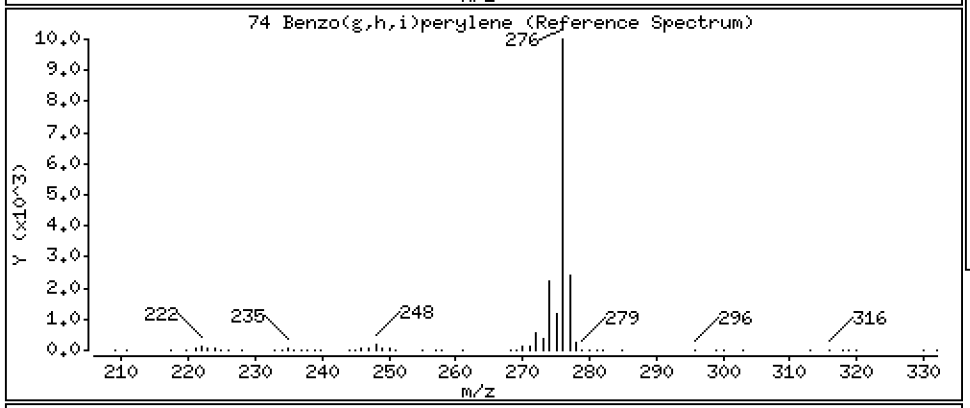
Concentration: 2.450 ug/mL

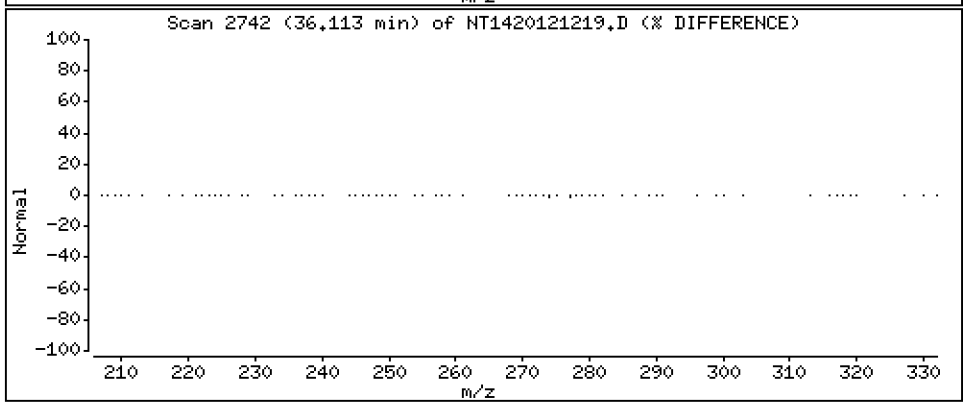












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201212A.b\NT1420121219.D
Lab Smp Id: BIK0323-MS1
Inj Date : 13-DEC-2020 01:34
Operator : VTS Inst ID: nt14.i
Smp Info : BIK0323-MS1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201212A.b\ALKYLPNA.m
Meth Date : 16-Dec-2020 07:38 yev Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: ORGDATA102

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
1 trans-Decalin	138	6.924	6.924	(0.372)	14395	1.45933	1.459
2 cis-Decalin	138	8.013	8.024	(0.430)	11780	1.58711	1.587
$ 6 Naphthalene-d8	136	11.619	11.619	(0.624)	178913	1.85786	1.858(R)
7 Naphthalene	128	11.685	11.685	(0.628)	170638	1.77109	1.771
12 Benzo(b)thiophene	134	12.135	12.135	(0.652)	133633	1.65073	1.651
16 2-Methylnaphthalene	141	13.520	13.520	(0.726)	104599	1.78097	1.781
17 1-methylnaphthalene	141	13.971	13.971	(0.750)	99480	1.66947	1.669
18 Biphenyl	154	15.157	15.157	(0.814)	158895	1.79760	1.798
19 2,6-Dimethylnaphthalene	156	15.234	15.245	(0.818)	121453	1.88209	1.882
20 Acenaphthylene	152	16.795	16.806	(0.902)	195466	1.84729	1.847
$ 21 Acenaphthene-d10	164	17.081	17.081	(0.917)	113875	1.96922	1.969(R)
22 Acenaphthene	153	17.202	17.202	(0.924)	153544	2.21508	2.215
23 Dibenzofuran	168	17.575	17.586	(0.944)	194760	1.93672	1.937
24 1,6,7-Trimethylnaphthalene	170	17.806	17.806	(0.956)	134571	2.05687	2.057
* 25 Fluorene-d10	176	18.621	18.621	(1.000)	236016	2.00000	
26 Fluorene	166	18.723	18.723	(1.005)	167253	2.13348	2.133
30 Dibenzothiophene	184	21.626	21.637	(1.161)	253307	2.24513	2.245
$ 35 Phenanthrene-d10	188	21.941	21.952	(0.995)	235246	2.43858	2.439(R)
36 Phenanthrene	178	22.029	22.029	(0.999)	598029	5.36153	5.362
* 250 Anthracene-d10	188	22.062	22.062	(1.000)	201413	2.00000	
37 Anthracene	178	22.128	22.128	(1.003)	235759	2.15068	2.151
42 Carbazole	167	23.414	23.414	(1.061)	220753	2.32543	2.325
43 1-Methylphenanthrene	192	23.853	23.864	(1.081)	226990	2.77255	2.773
44 Fluoranthene	202	25.833	25.833	(1.171)	843431	6.85125	6.851
46 Pyrene	202	26.690	26.690	(1.210)	999261	7.69214	7.692
51 Naphthobenzothiophene	234	29.245	29.256	(1.326)	311618	2.63175	2.632
55 Benzo(a)anthracene	228	29.839	29.839	(0.906)	484649	4.15282	4.153
$ 56 Chrysene-d12	240	29.963	29.963	(0.910)	223637	2.42636	2.426(R)
57 Chrysene	228	30.042	30.042	(0.912)	532358	4.58958	4.590
62 Benzo(b)fluoranthene	252	32.272	32.272	(0.980)	550821	4.18014	4.180
63 Benzo(k)fluoranthene	252	32.317	32.317	(0.981)	359490	2.70674	2.707
293 Benzo(j)fluoranthene	252	32.384	32.384	(0.983)	374070	3.22211	3.222
246 Total Benzofluoranthenes	252	32.272	32.272	(0.980)	1209812	9.89515	9.895(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.936	32.936	(1.000)	270331	2.00000	
64 Benzo(e)pyrene	252	32.993	32.993	(1.002)	422752	3.50399	3.504
66 Benzo(a)pyrene	252	33.094	33.094	(1.005)	418592	3.67215	3.672
$ 67 Perylene-d12	264	33.274	33.274	(1.010)	210806	1.88587	1.886(R)
68 Perylene	252	33.331	33.331	(1.012)	289205	2.41546	2.415
69 Indeno(1,2,3-cd)pyrene	276	35.268	35.279	(1.071)	407718	2.88835	2.888
70 Dibenzo(a,h)anthracene	278	35.245	35.257	(1.070)	257395	2.06391	2.064
74 Benzo(g,h,i)perylene	276	36.113	36.124	(1.096)	303770	2.44958	2.450

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
Lab File ID: NT1420121219.D
Lab Smp Id: BIK0323-MS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201212A.b\ALKYLPNA.m
Misc Info:

Calibration Date: 12-DEC-2020
Calibration Time: 23:11
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	215231	107616	430462	236016	9.66
250 Anthracene-d10	196849	98425	393698	201413	2.32
251 Benzo(e)pyrene-d1	268559	134280	537118	270331	0.66

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.62	18.12	19.12	18.62	0.00
250 Anthracene-d10	22.06	21.56	22.56	22.06	0.00
251 Benzo(e)pyrene-d1	32.94	32.44	33.44	32.94	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 - NT1420121219.D

Lab ID: BIK0323-MS1
nt14.i, 20201212A.b\ALKYLPNA.m, 13-DEC-2020 01:34

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

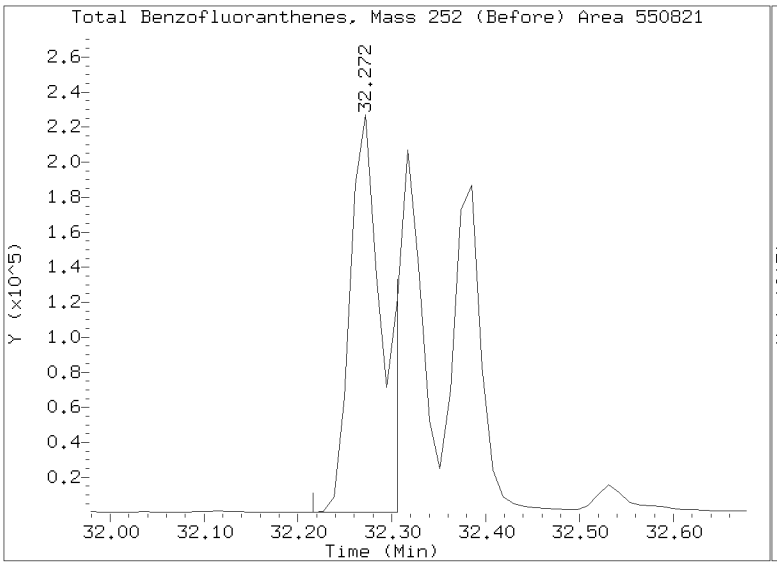
RRT check based on Ccal File: NT1420121216A.D

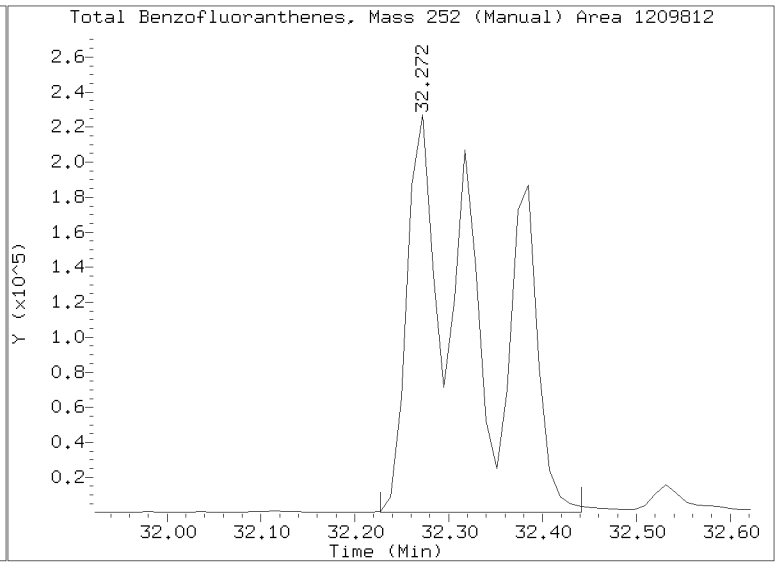
On Column LOD for nt14.i, 20201212A.b\ALKYLPNA.m, TARGETS.sub = 0.0000

* 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/20201212A.b/NT1420121219.D
Injection Date: 13-DEC-2020 01:34
Lab ID:BIK0323-MS1 Client ID:
Report Date: 12/16/2020 07:38





Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121220.D

Date : 13-DEC-2020 02:22

Client ID:

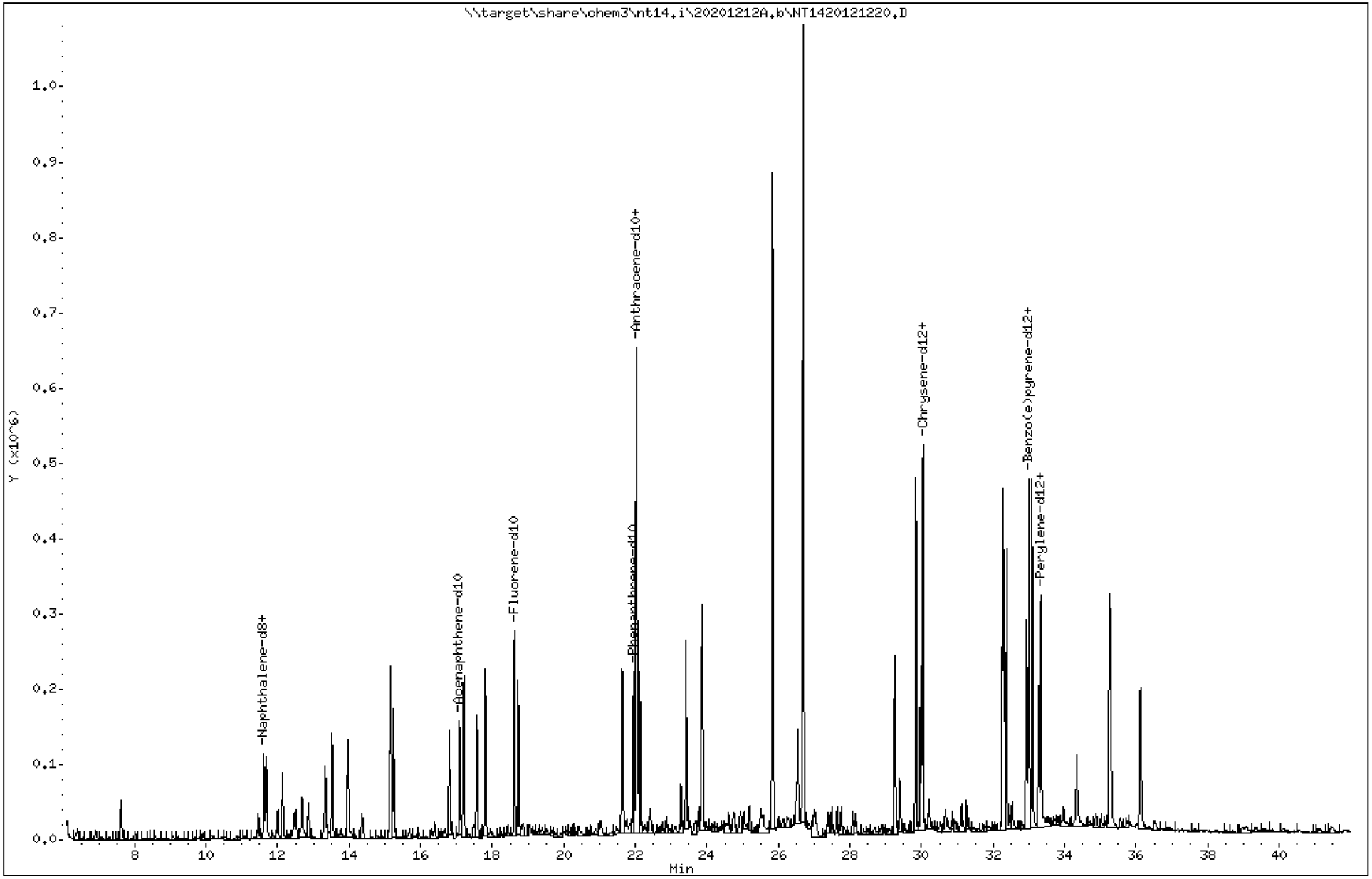
Instrument: nt14.i

Sample Info: BIK0323-MSD1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121220.D

Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

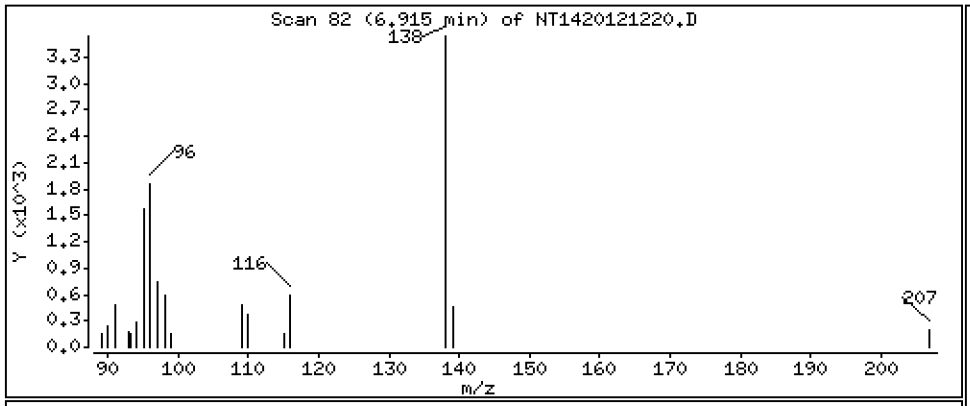
Operator: VTS

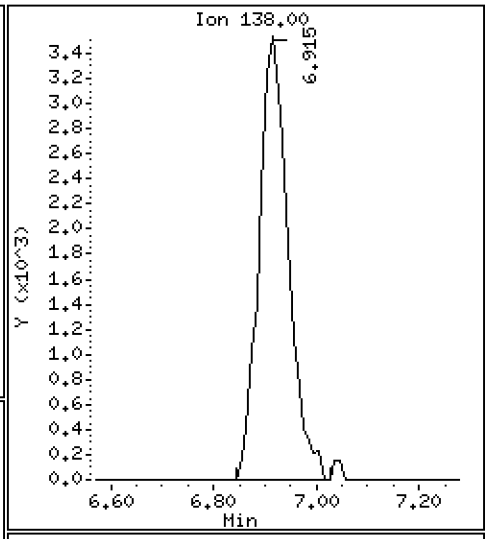
Column phase: Rxi-17Sil MS

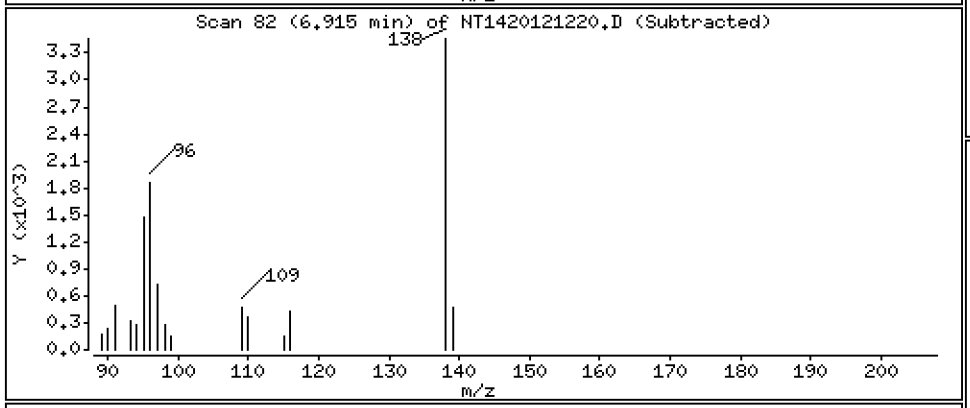
Column diameter: 0.25

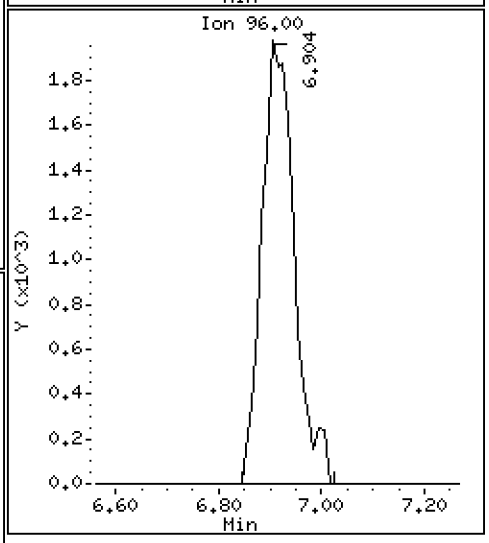
1 trans-Decalin

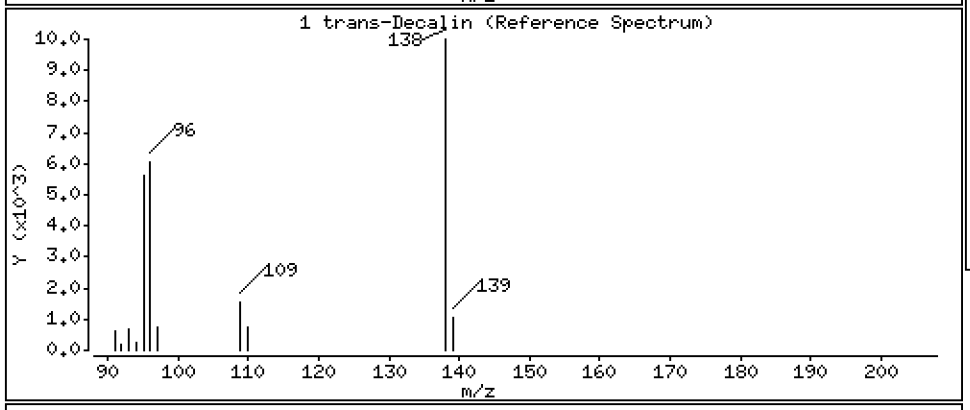
Concentration: 1.385 ug/mL

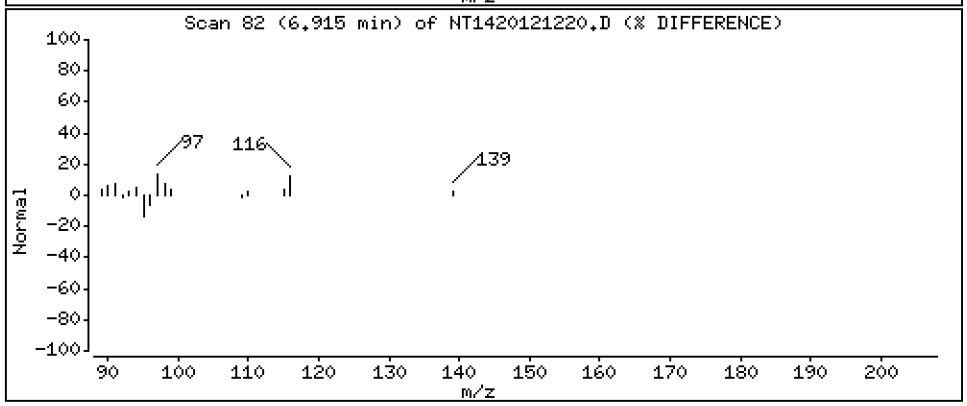












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121220.D

Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

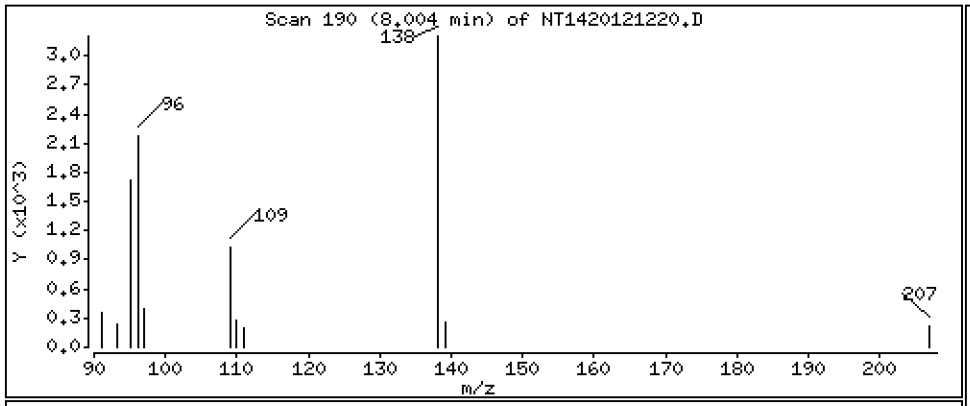
Operator: VTS

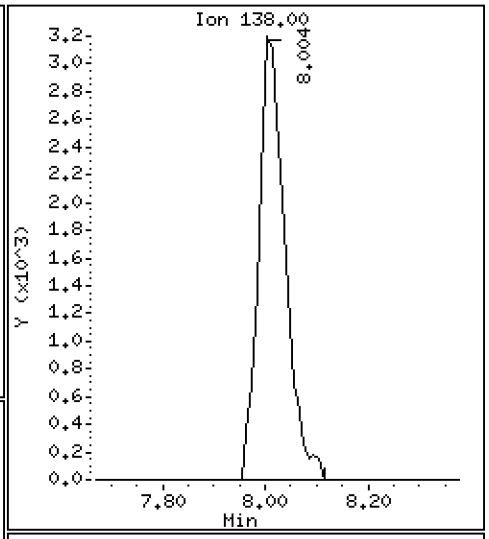
Column phase: Rxi-17Sil MS

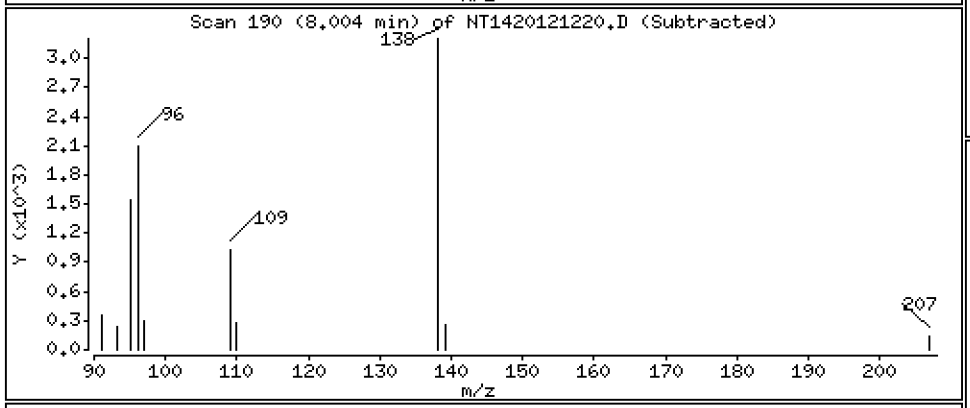
Column diameter: 0.25

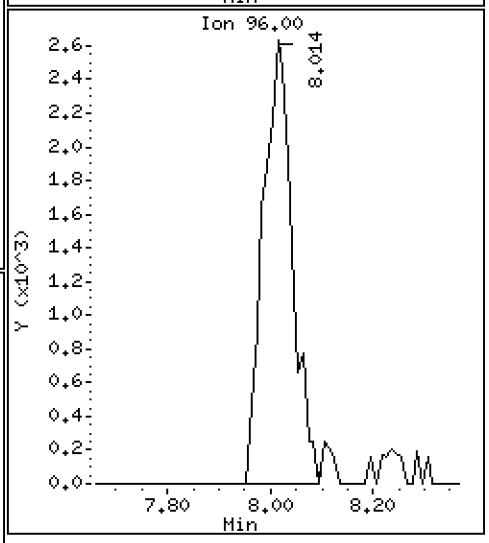
2 cis-Decalin

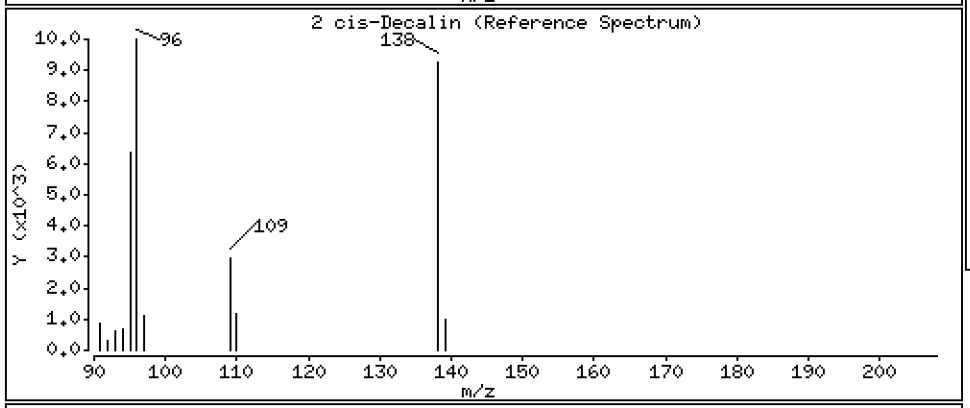
Concentration: 1.511 ug/mL

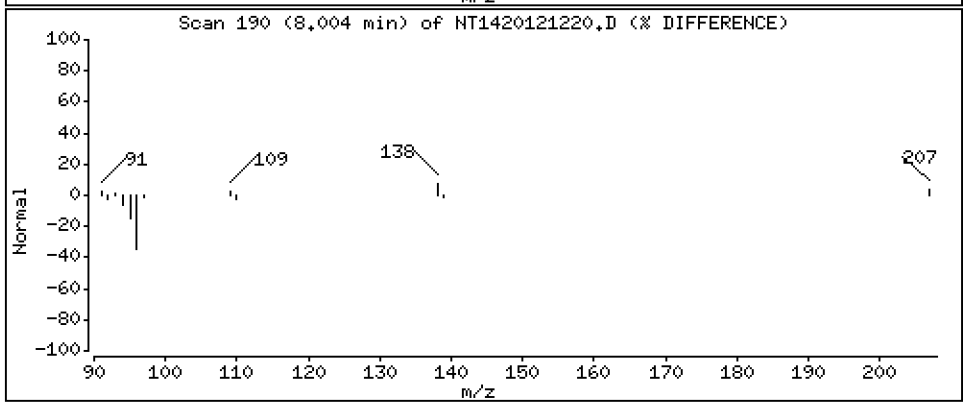












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121220.D

Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

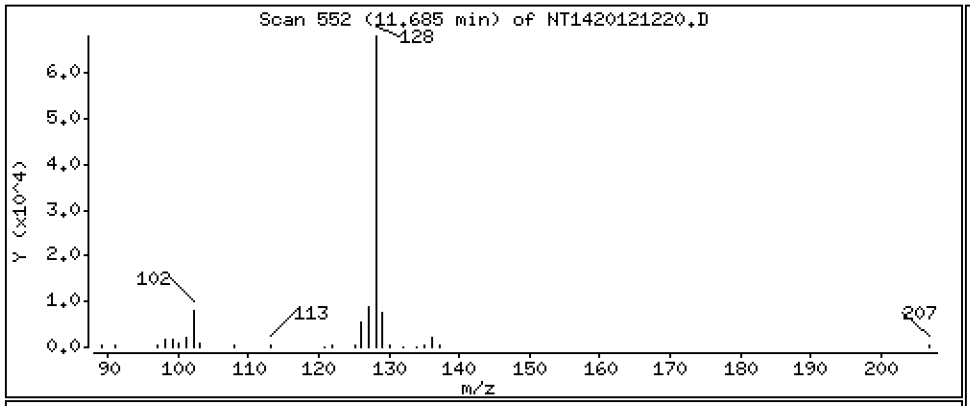
Operator: VTS

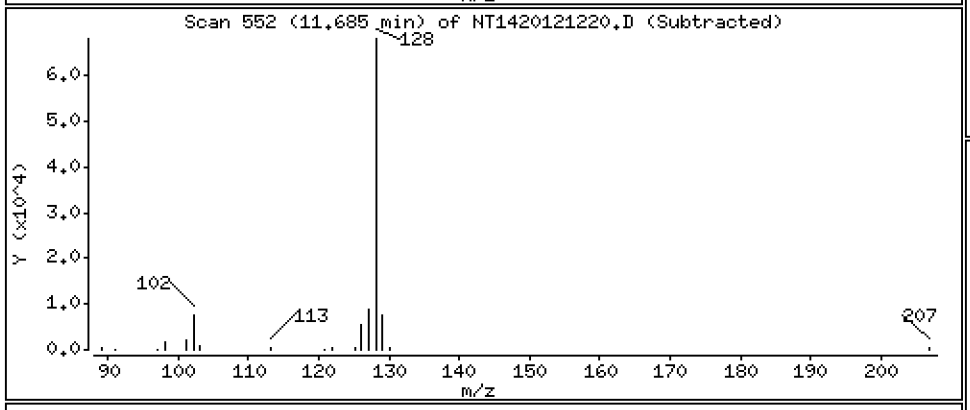
Column phase: Rxi-17Sil MS

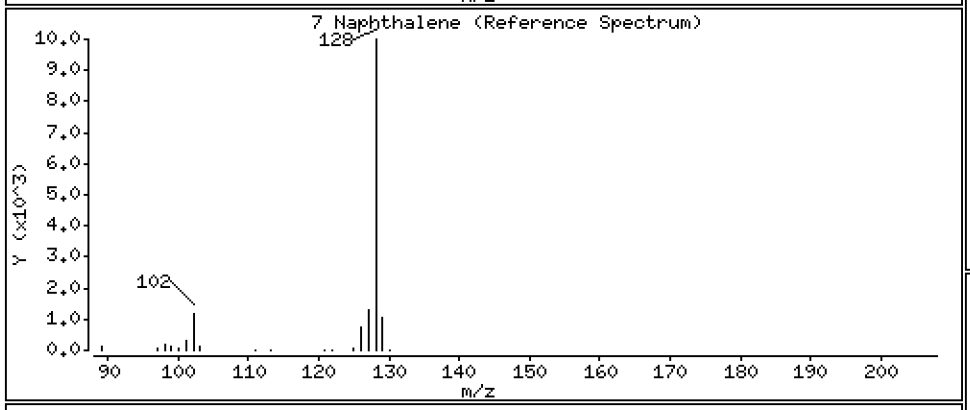
Column diameter: 0.25

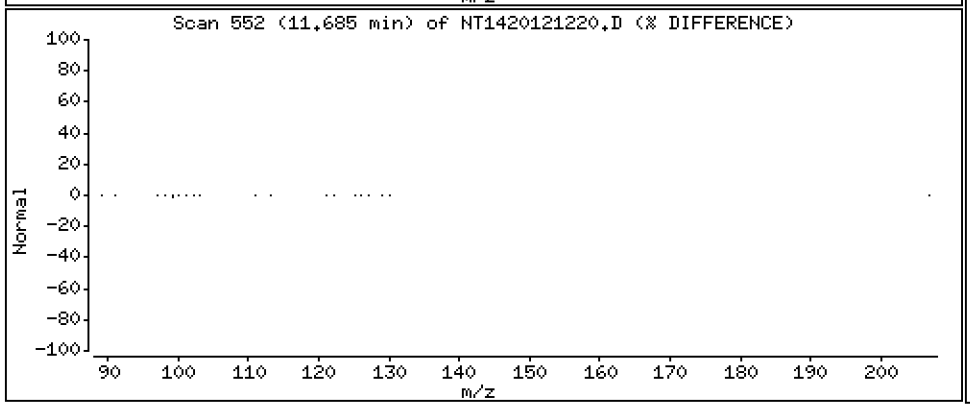
7 Naphthalene

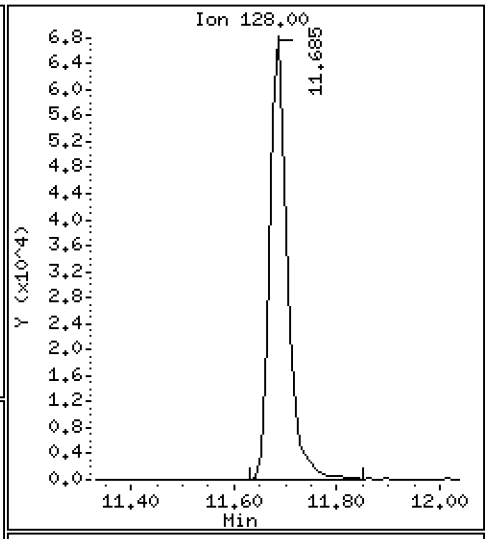
Concentration: 1.661 ug/mL

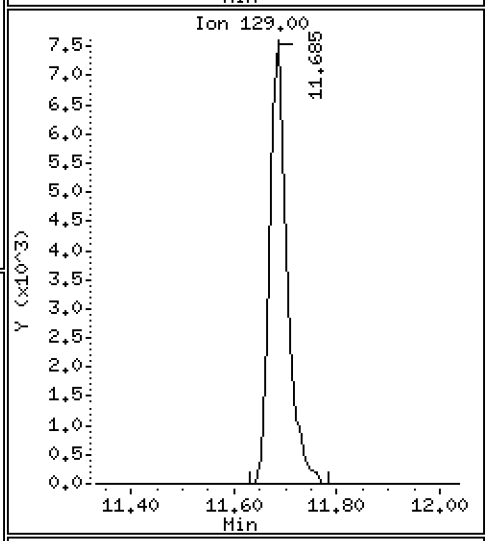


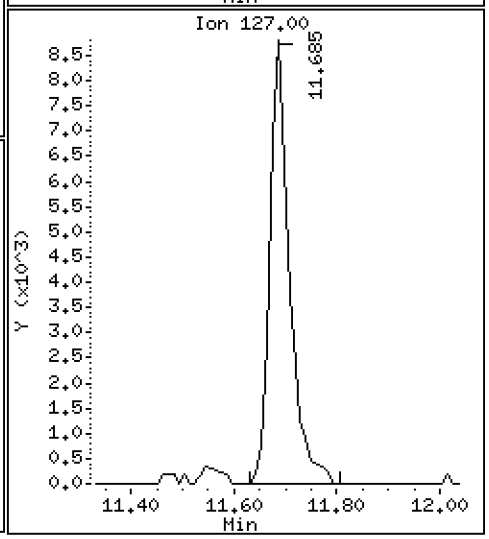












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

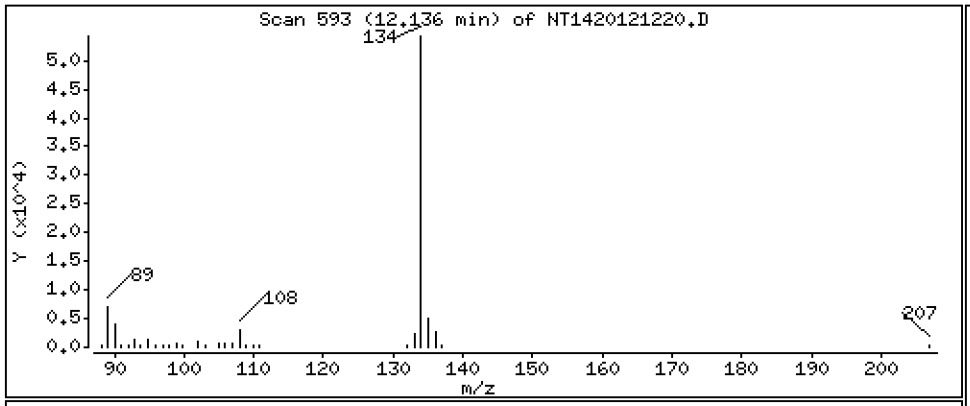
Operator: VTS

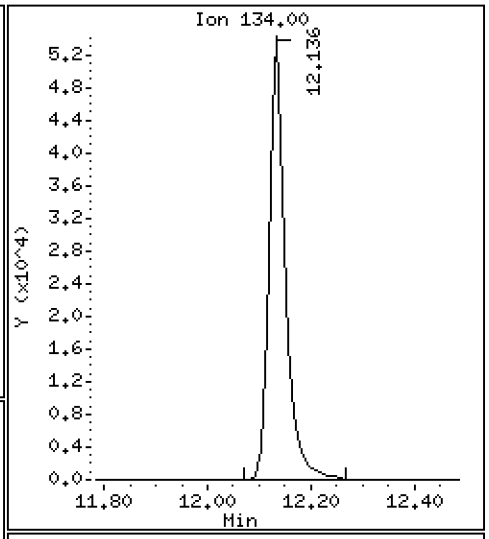
Column phase: Rxi-17Sil MS

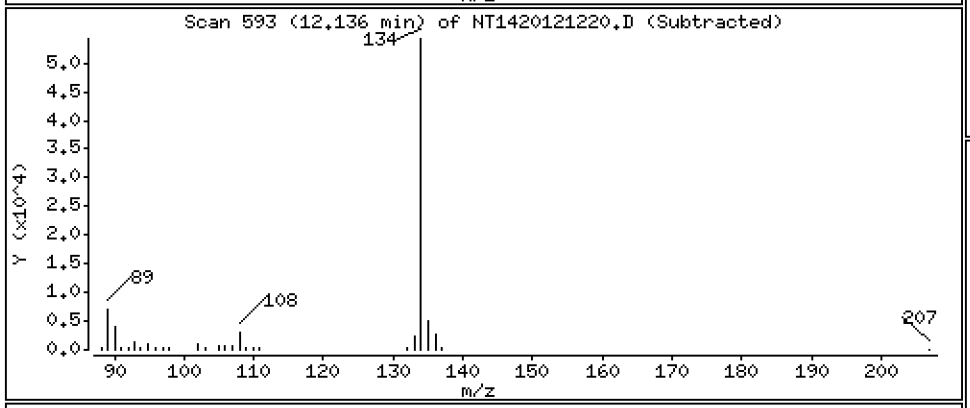
Column diameter: 0.25

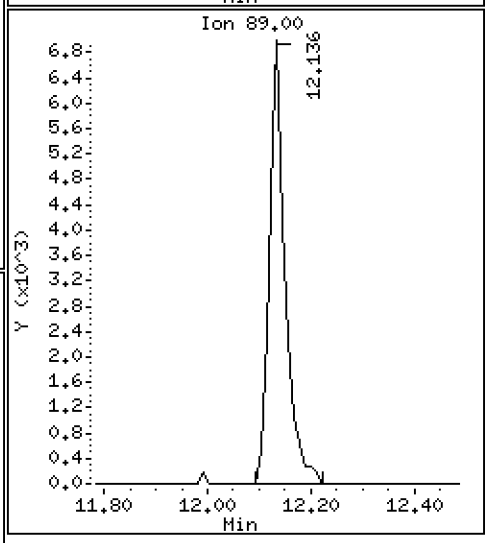
12 Benzo(b)thiophene

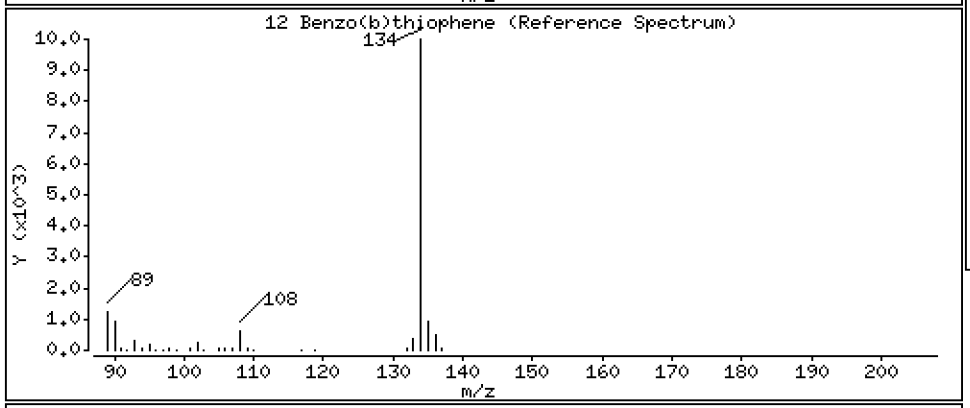
Concentration: 1.534 ug/mL

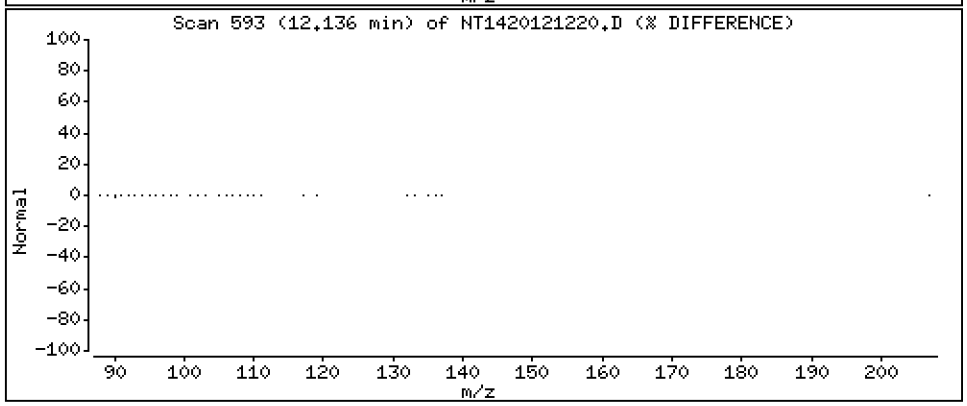












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

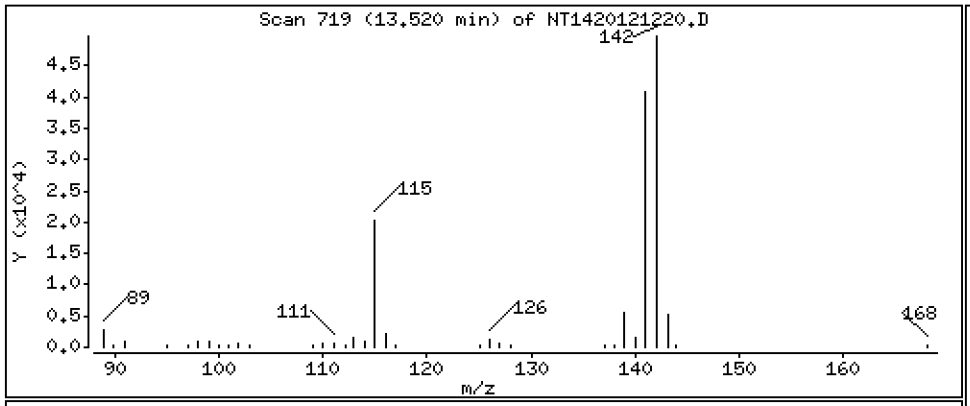
Operator: VTS

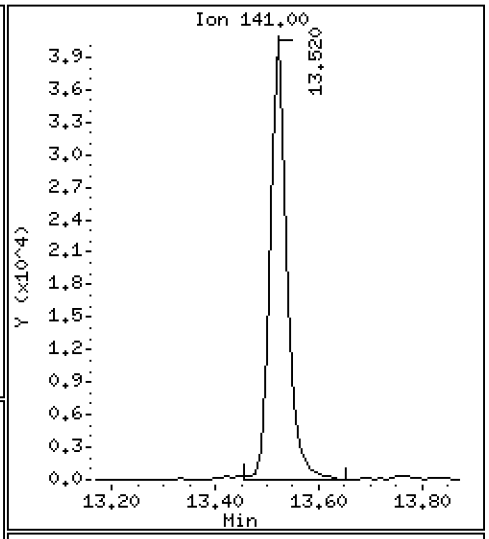
Column phase: Rxi-17Sil MS

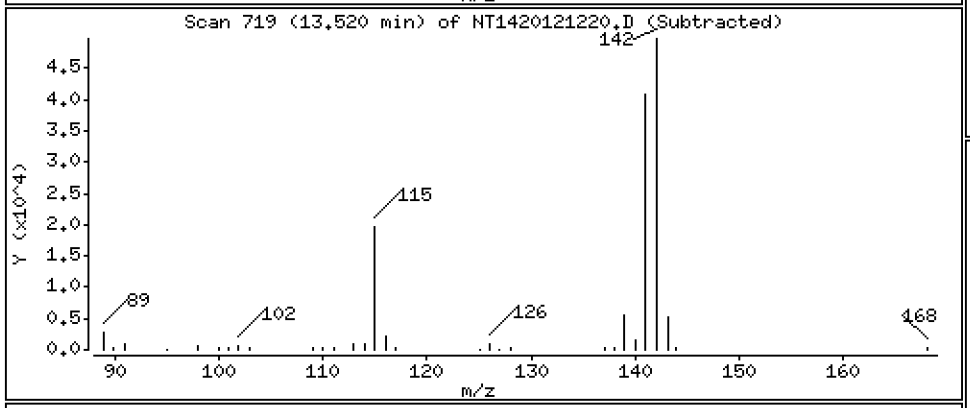
Column diameter: 0.25

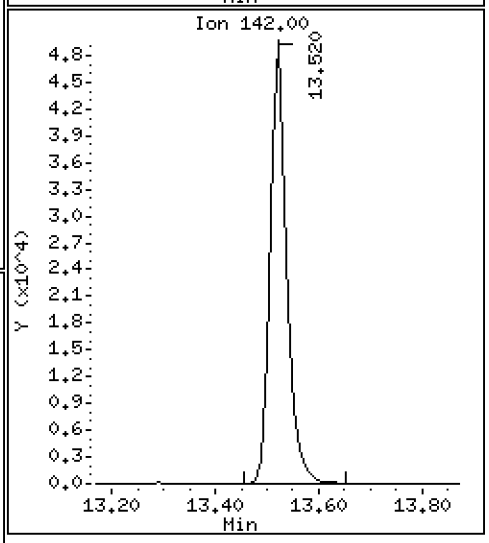
16 2-Methylnaphthalene

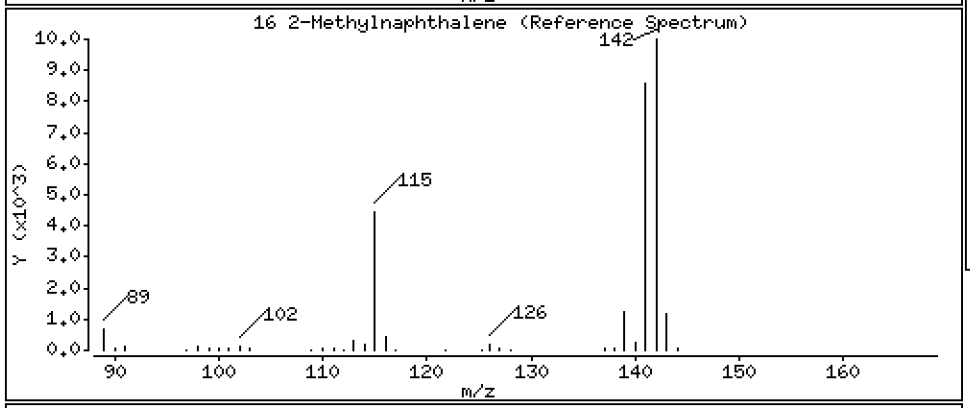
Concentration: 1.653 ug/mL

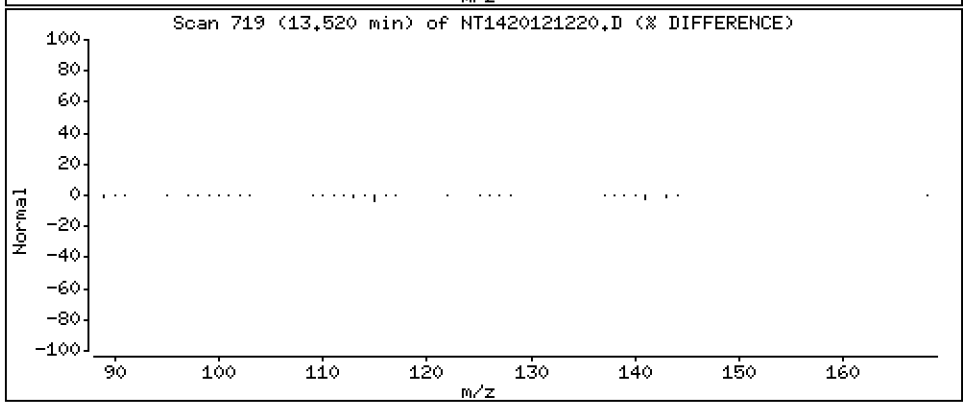












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

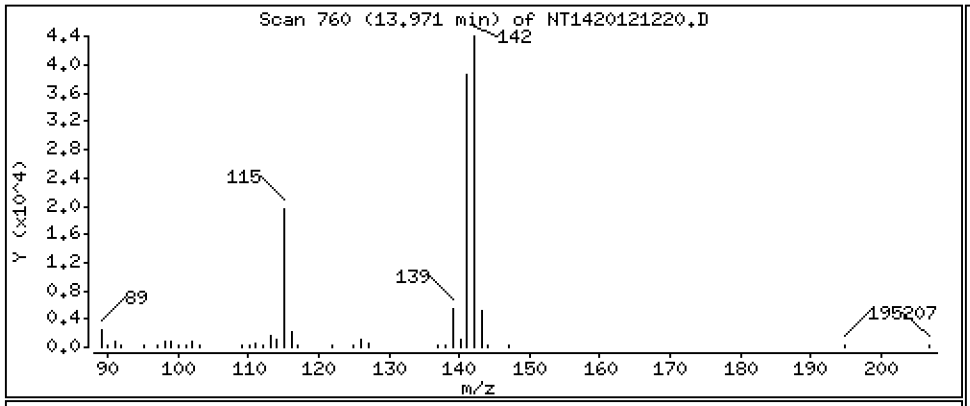
Operator: VTS

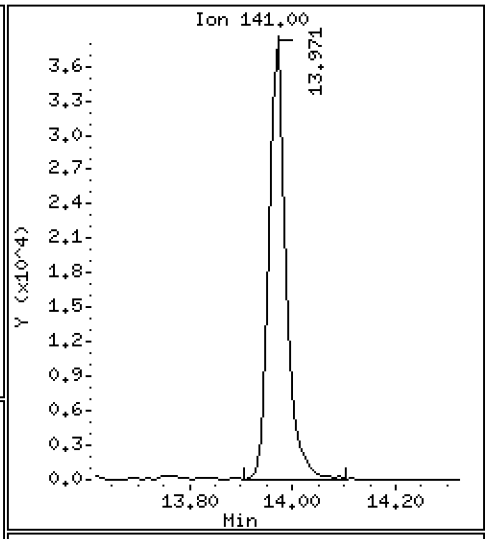
Column phase: Rxi-17Sil MS

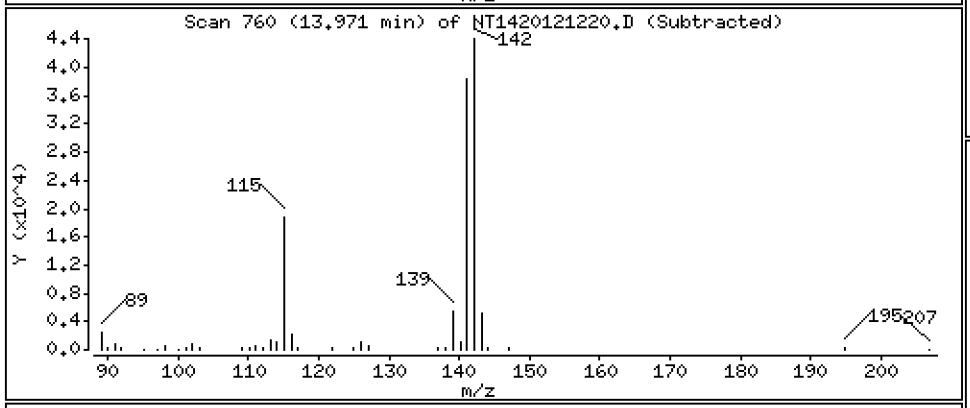
Column diameter: 0.25

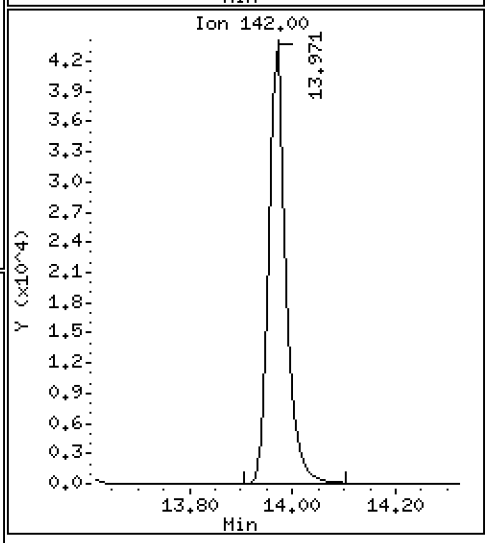
17 1-methylnaphthalene

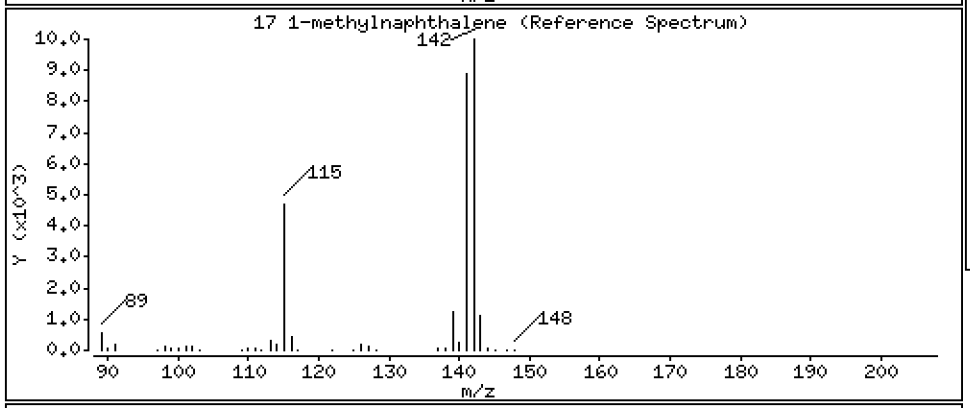
Concentration: 1.561 ug/mL

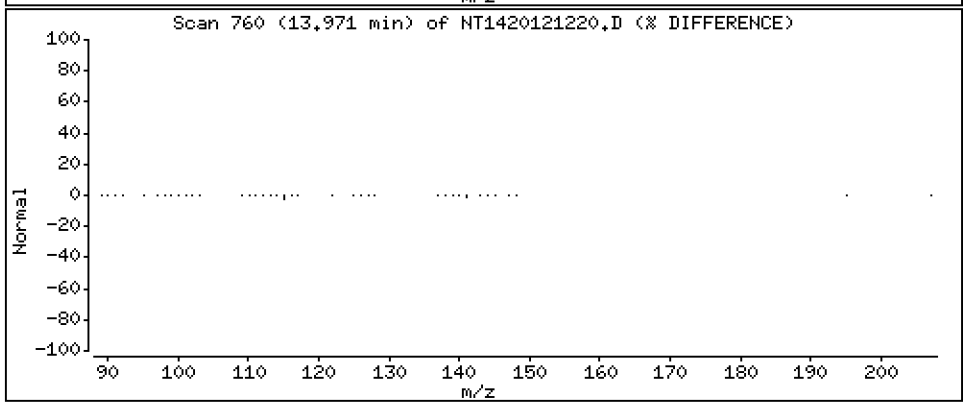












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

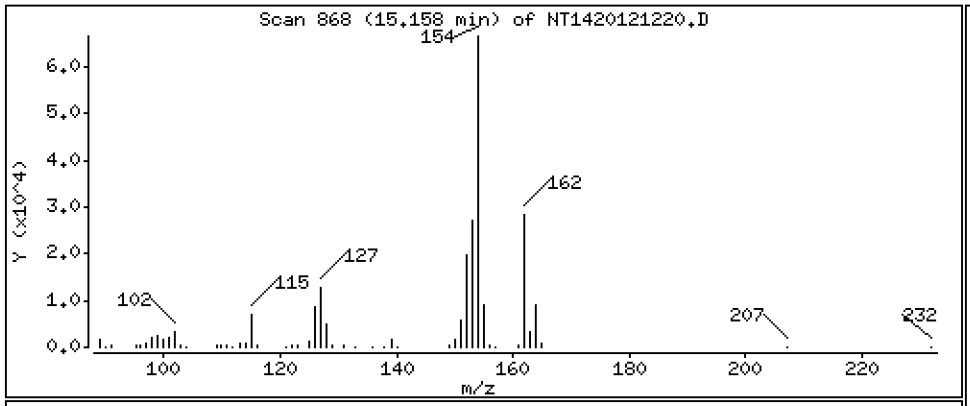
Operator: VTS

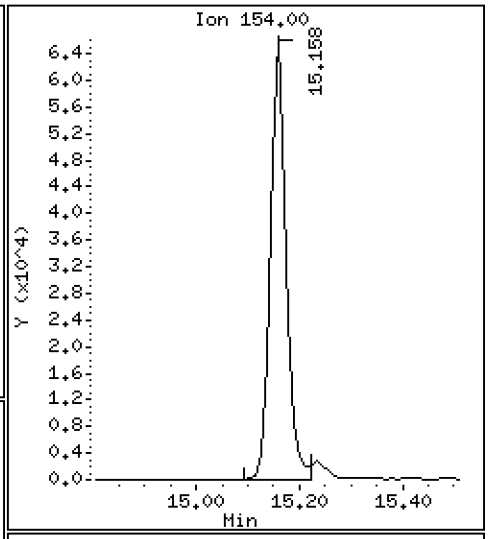
Column phase: Rxi-17Sil MS

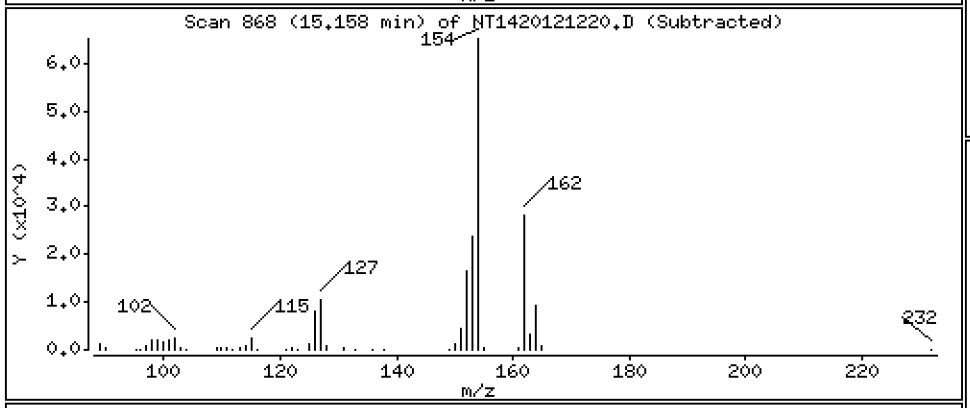
Column diameter: 0.25

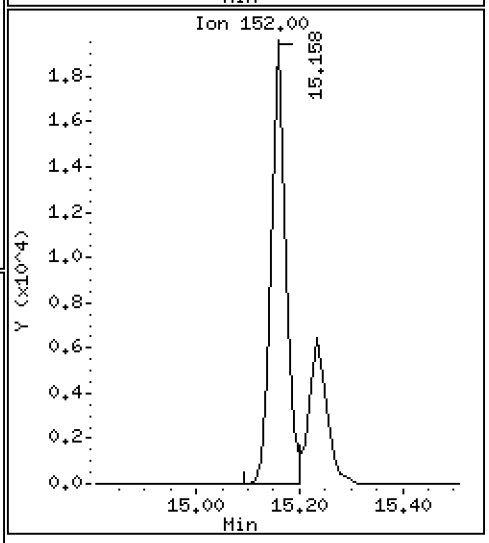
18 Biphenyl

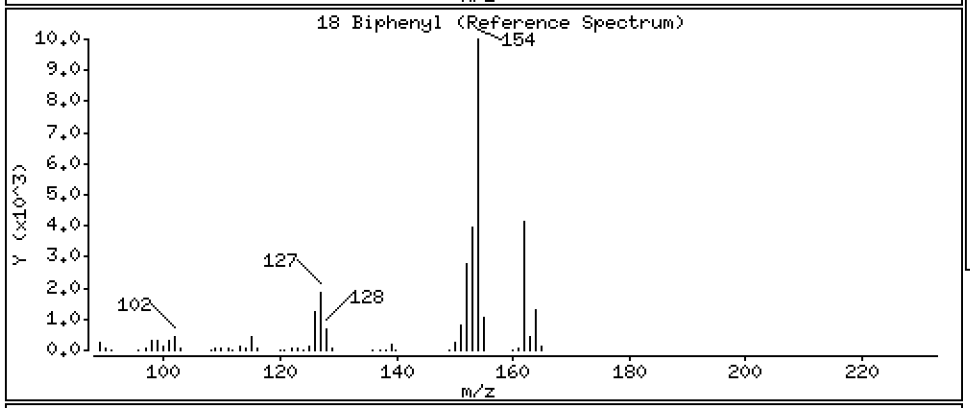
Concentration: 1.674 ug/mL

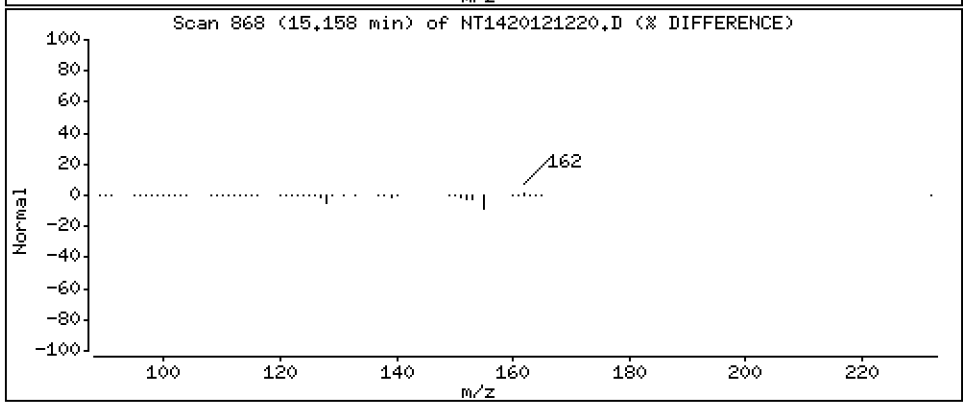












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121220.D

Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

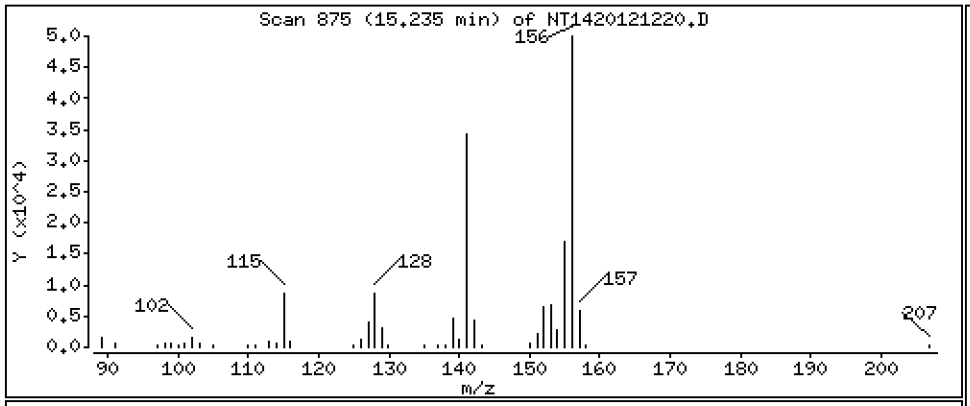
Operator: VTS

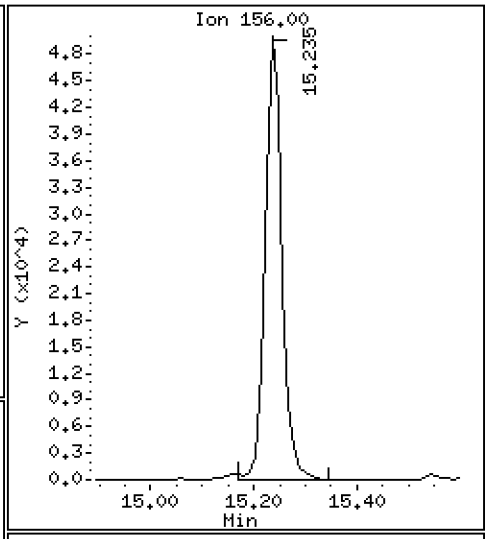
Column phase: Rxi-17Sil MS

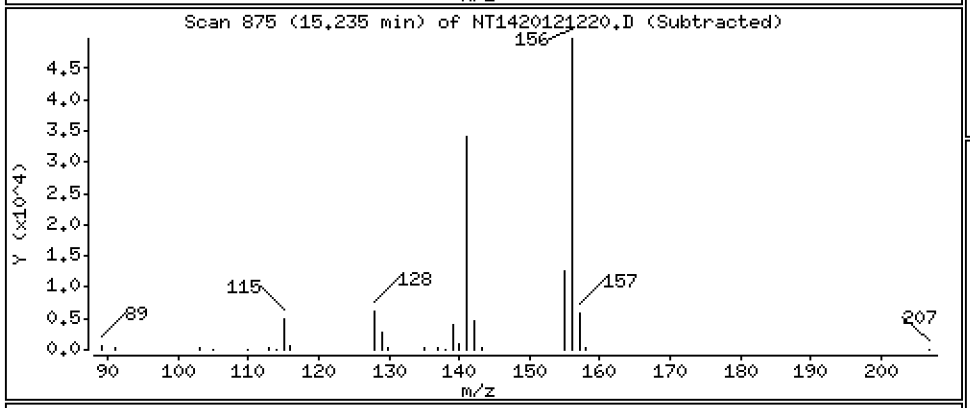
Column diameter: 0.25

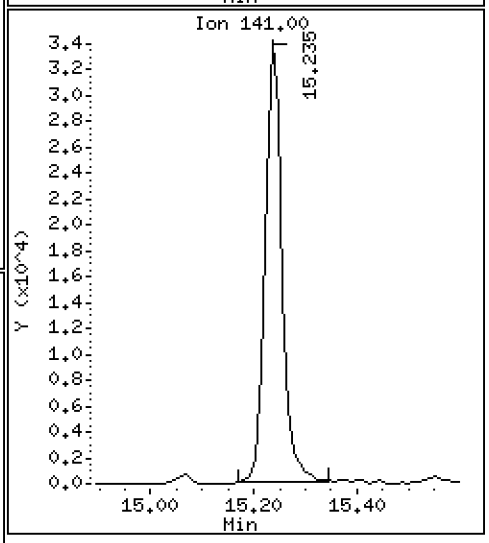
19 2,6-Dimethylnaphthalene

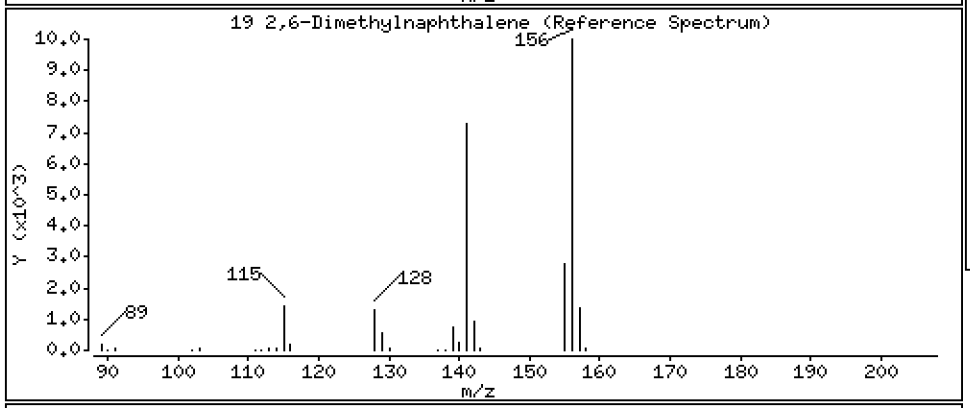
Concentration: 1.797 ug/mL

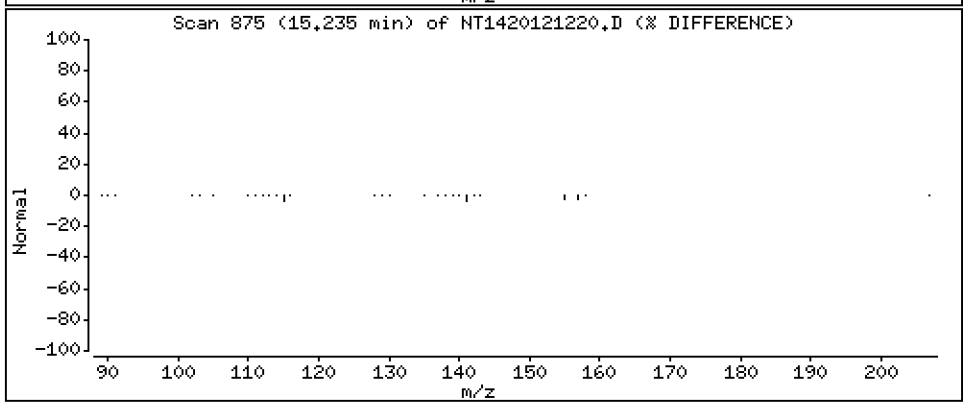












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

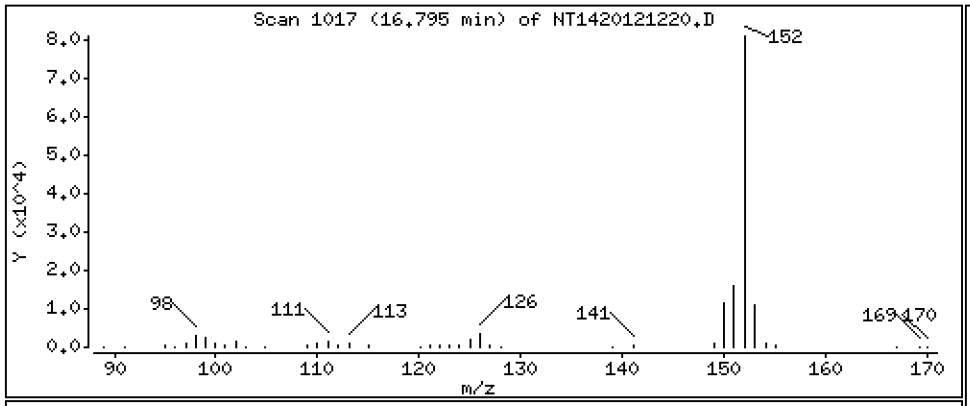
Operator: VTS

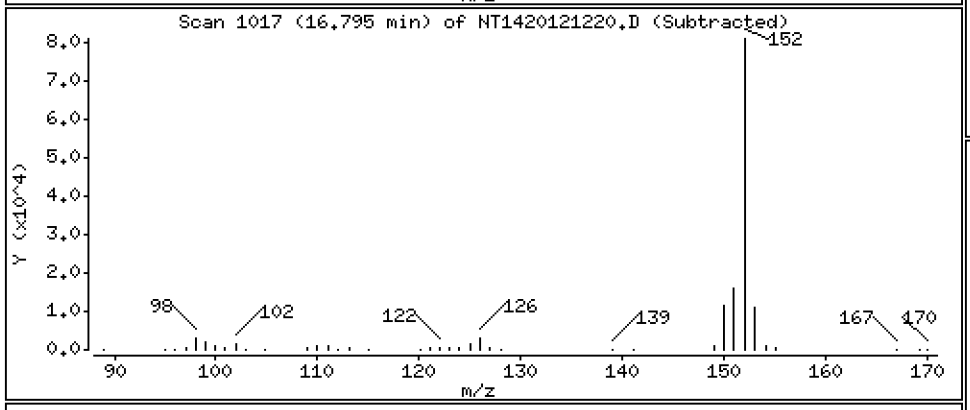
Column phase: Rxi-17Sil MS

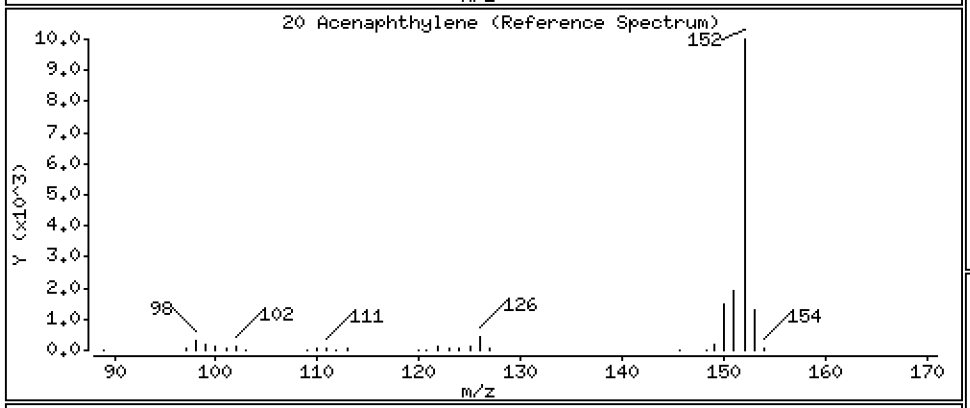
Column diameter: 0.25

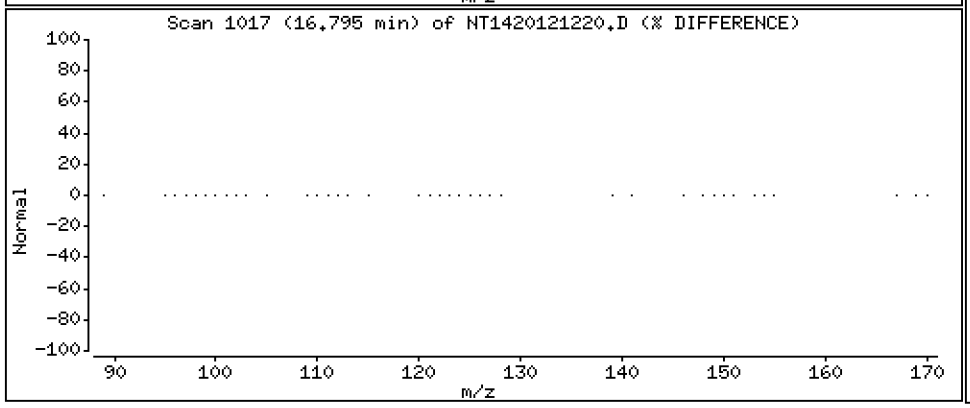
20 Acenaphthylene

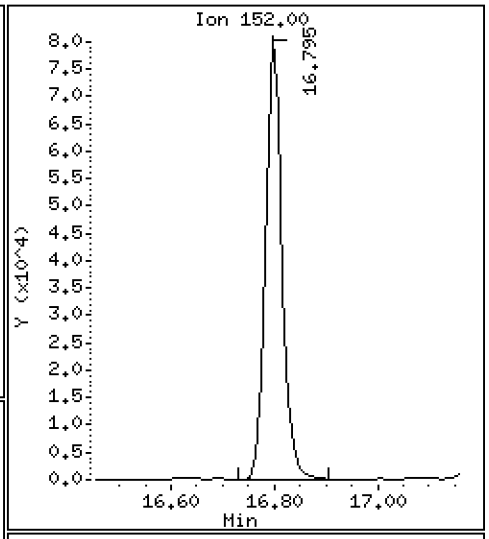
Concentration: 1.733 ug/mL

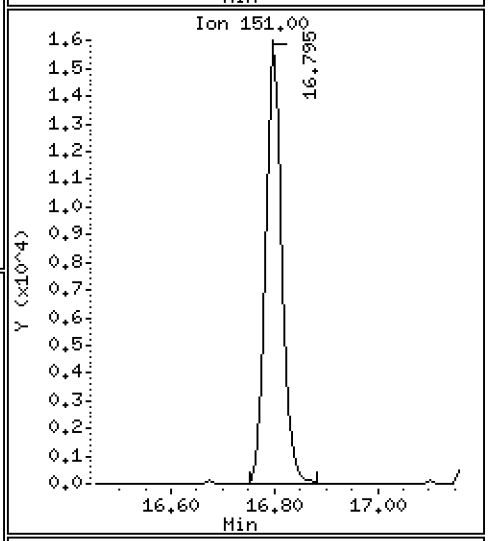


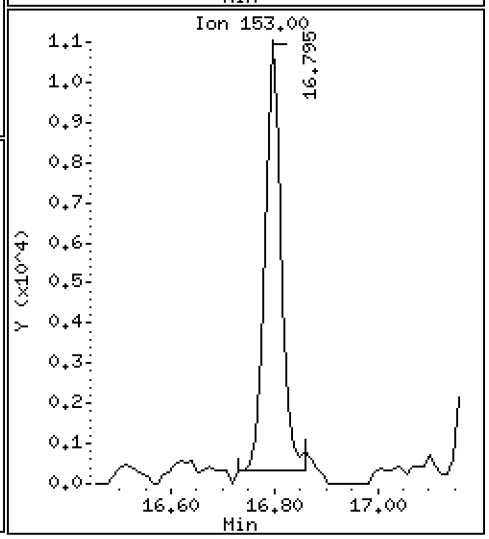












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

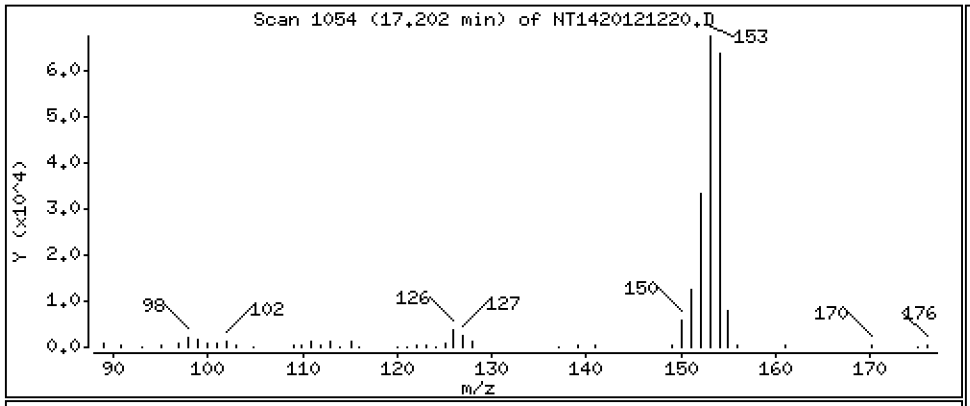
Operator: VTS

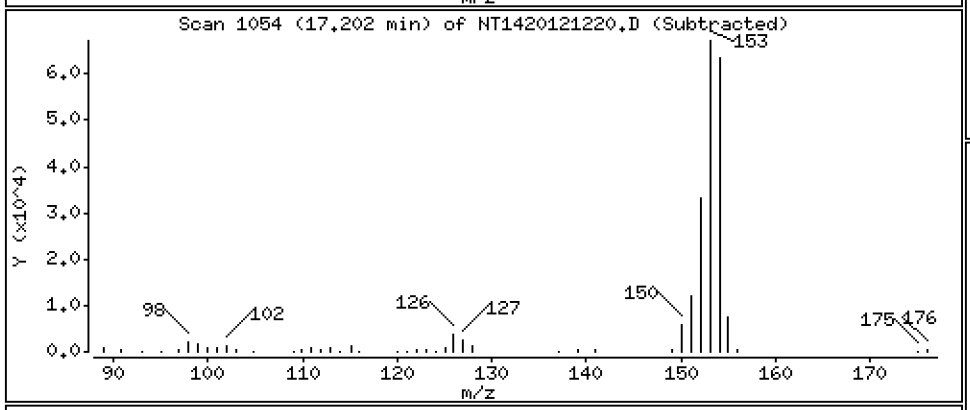
Column phase: Rxi-17Sil MS

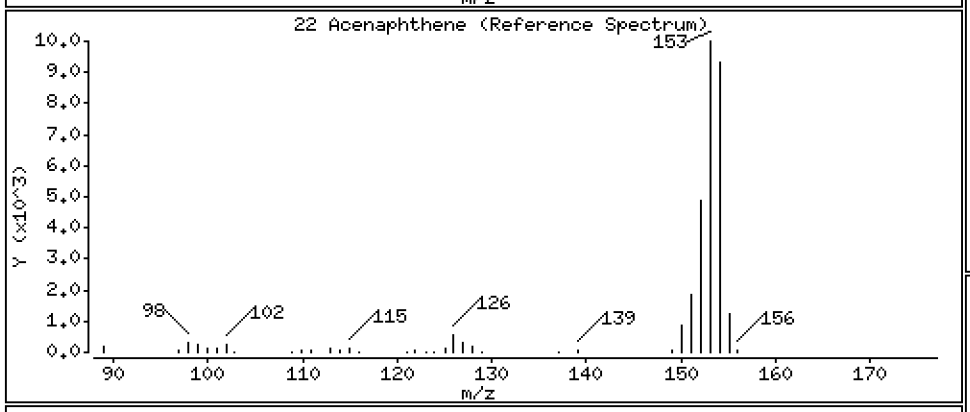
Column diameter: 0.25

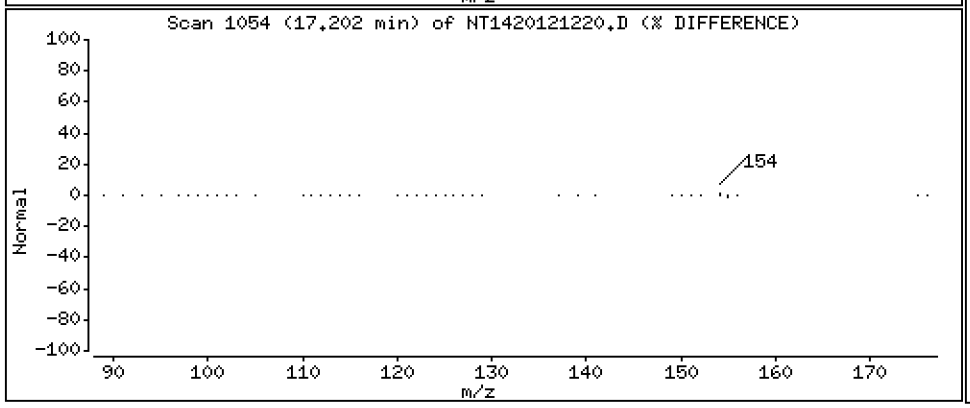
22 Acenaphthene

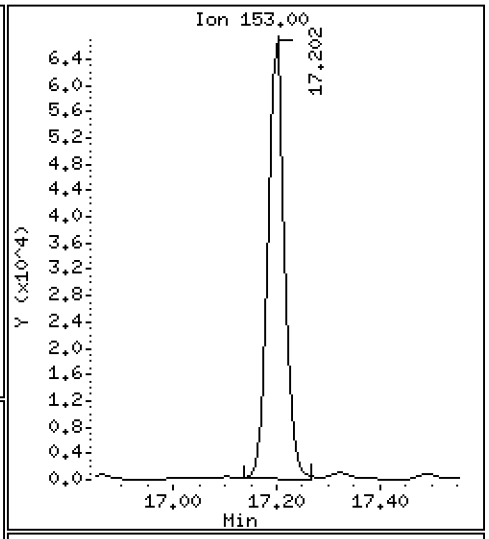
Concentration: 2.264 ug/mL

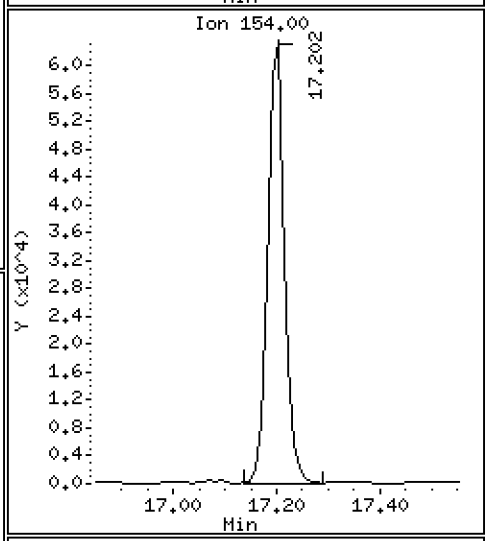


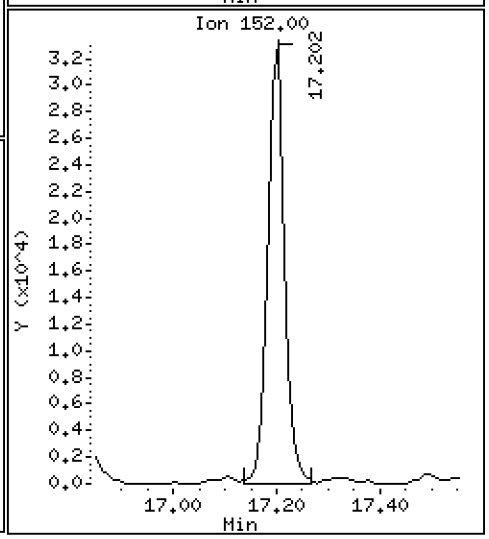












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

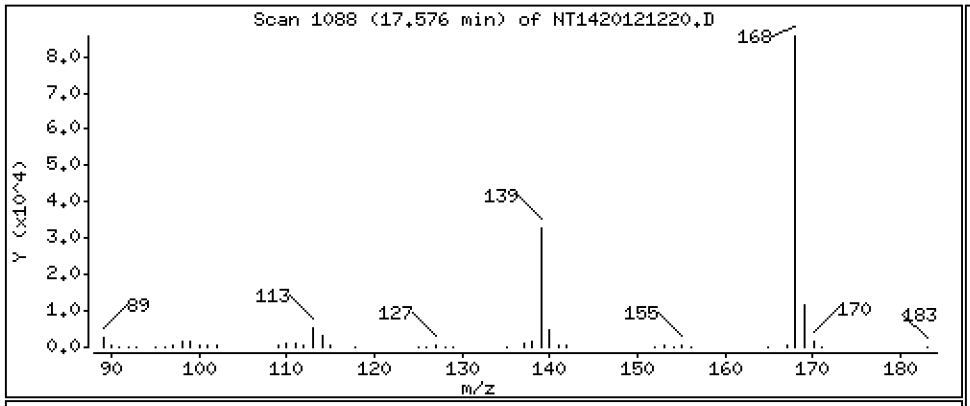
Operator: VTS

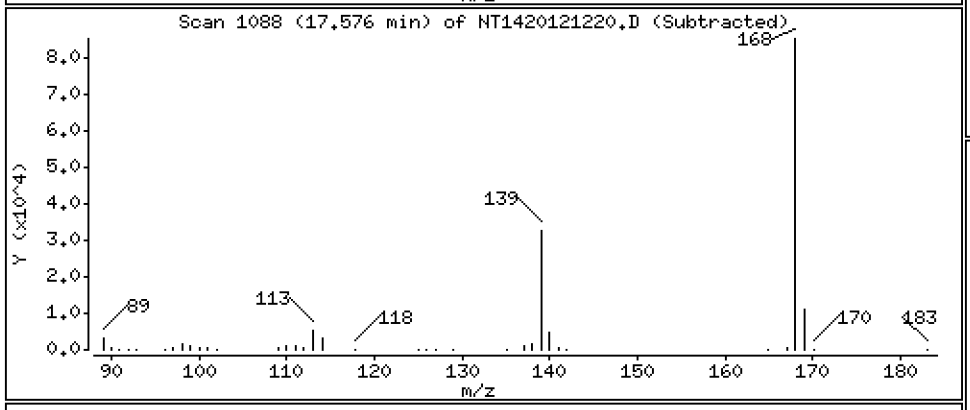
Column phase: Rxi-17Sil MS

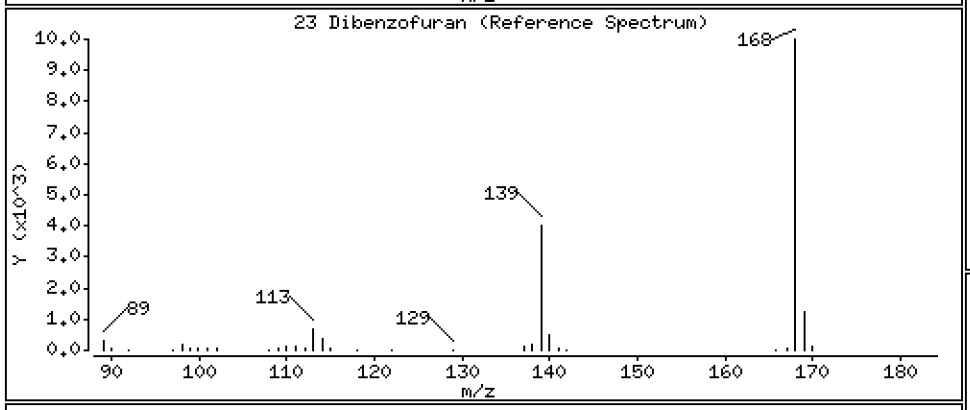
Column diameter: 0.25

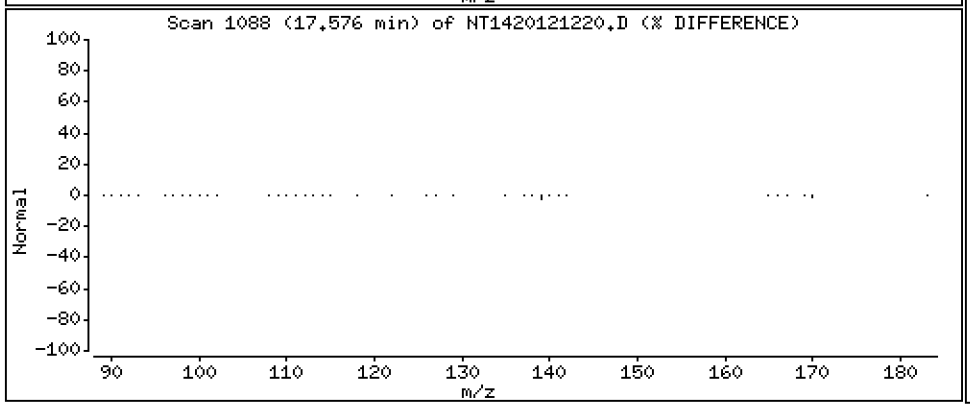
23 Dibenzofuran

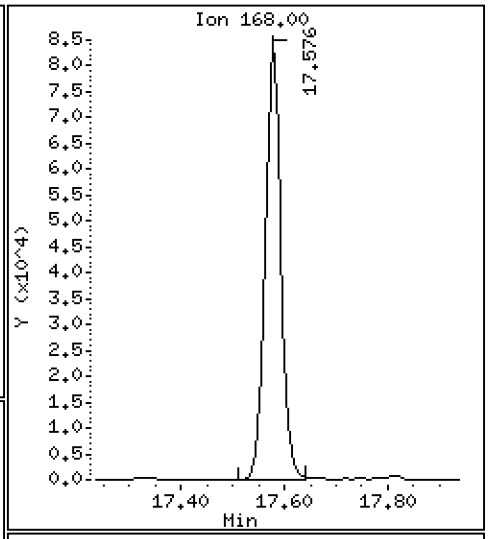
Concentration: 1.807 ug/mL

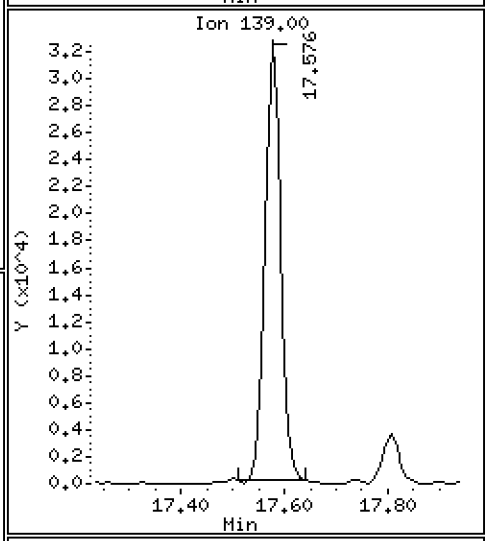


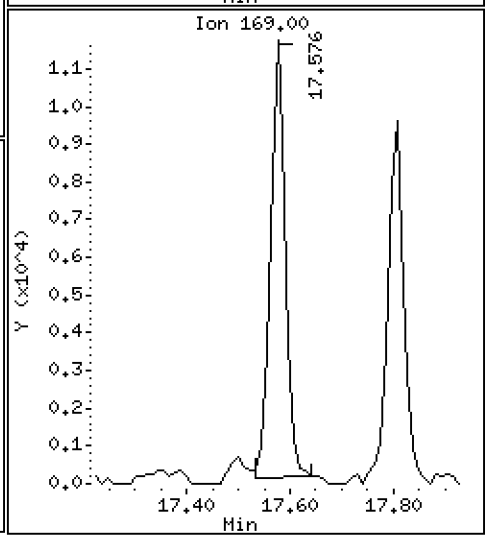












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121220.D

Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

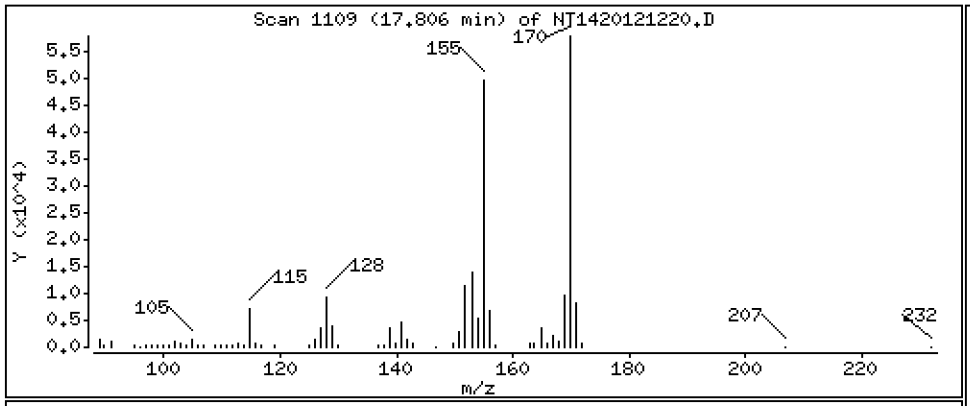
Operator: VTS

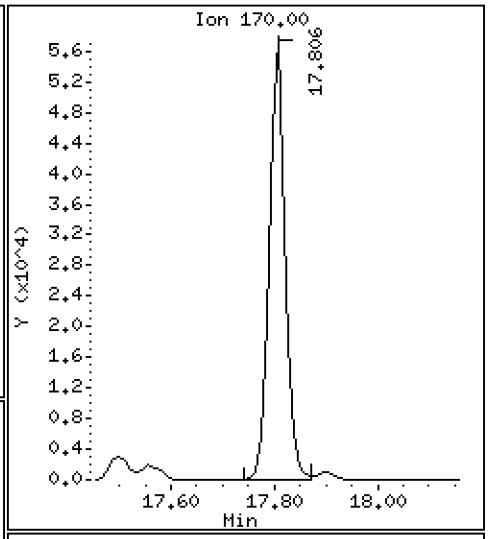
Column phase: Rxi-17Sil MS

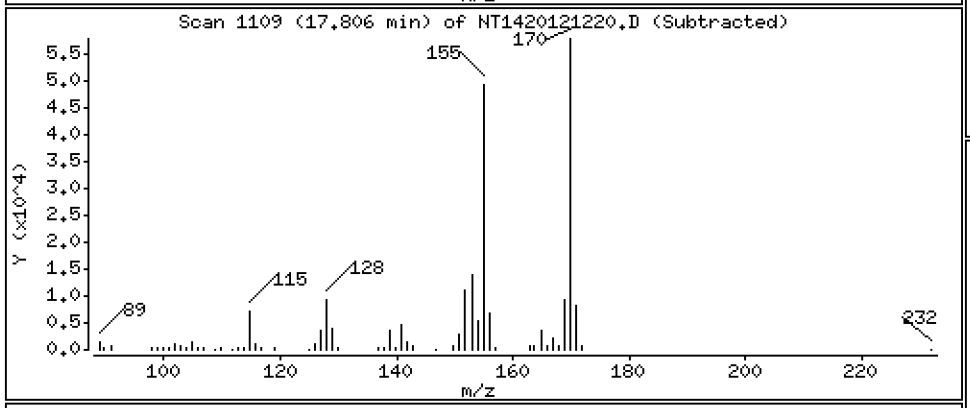
Column diameter: 0.25

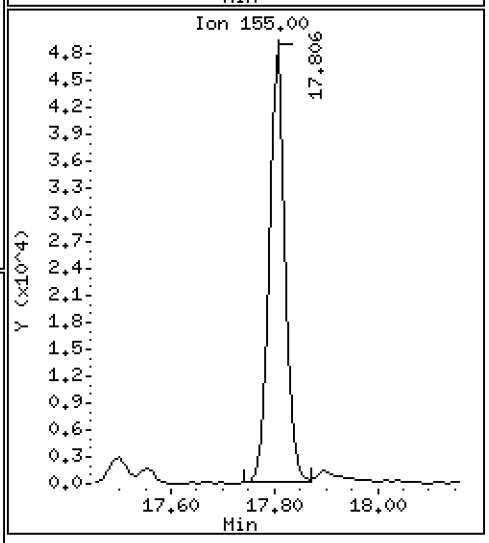
24 1,6,7-Trimethylnaphthalene

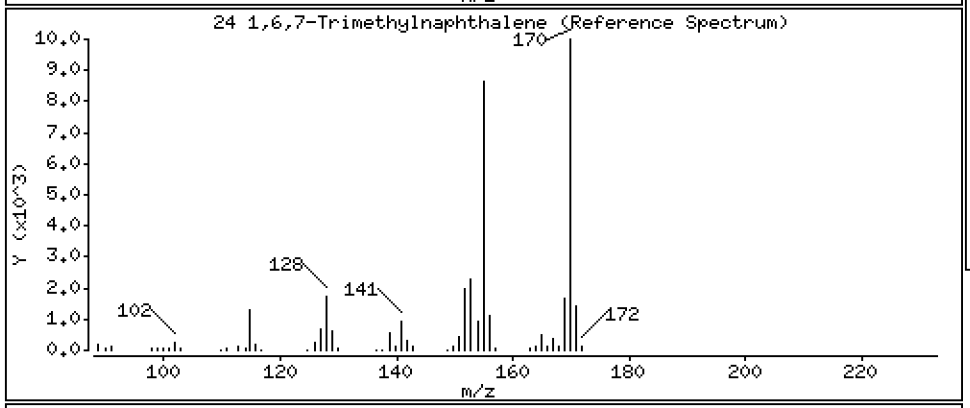
Concentration: 1.966 ug/mL

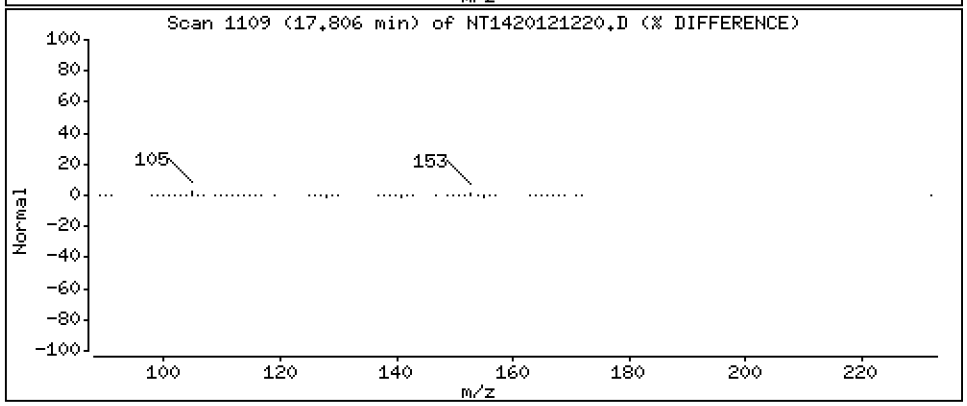












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121220.D

Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

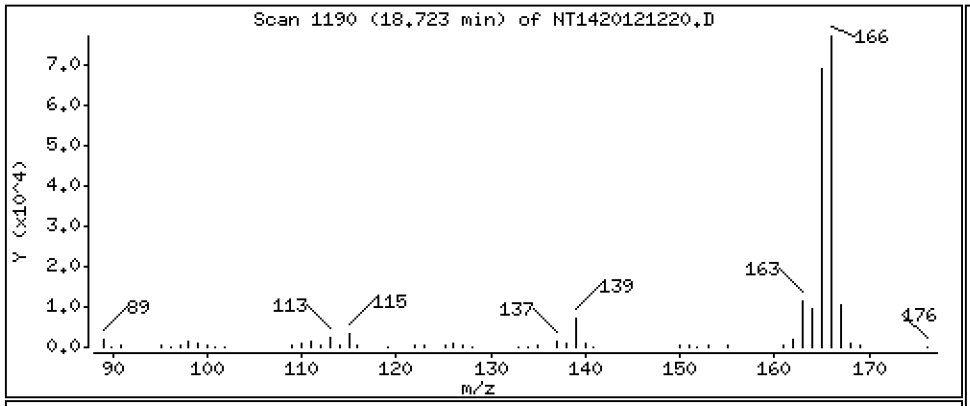
Operator: VTS

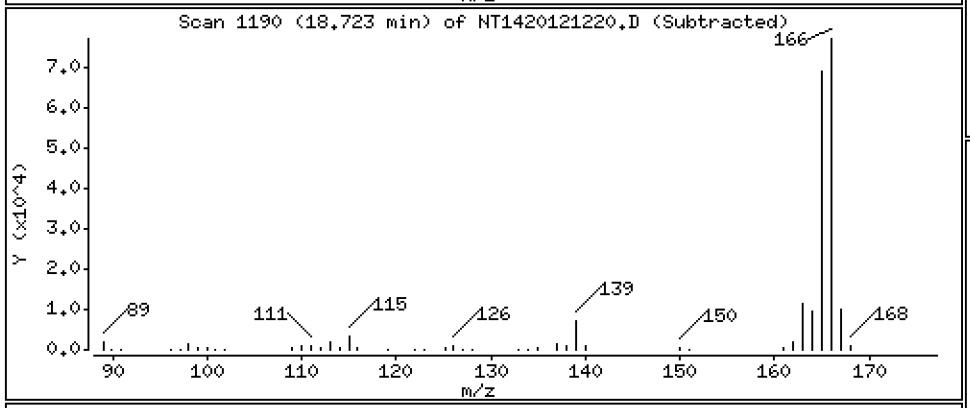
Column phase: Rxi-17Sil MS

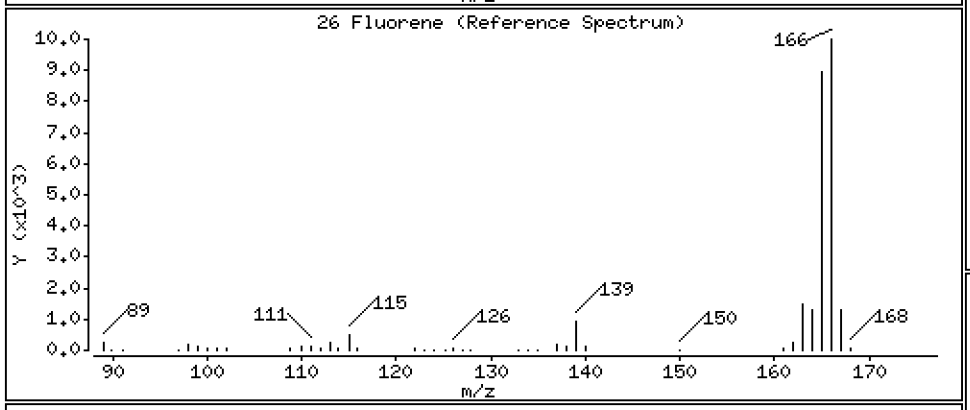
Column diameter: 0.25

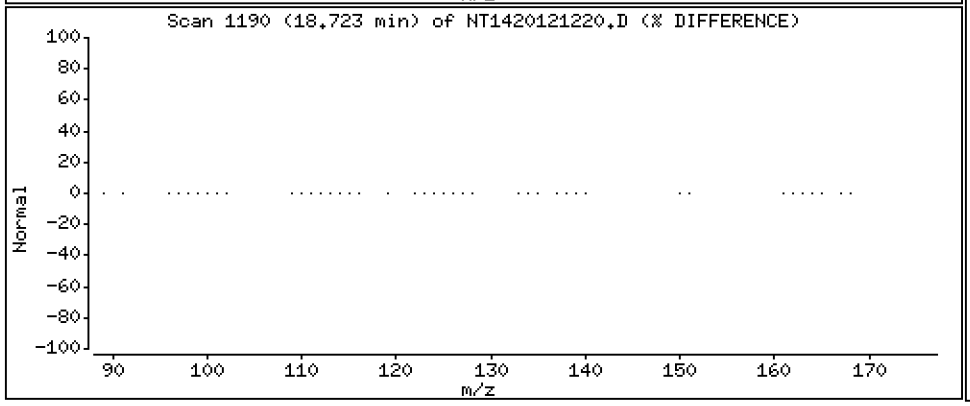
26 Fluorene

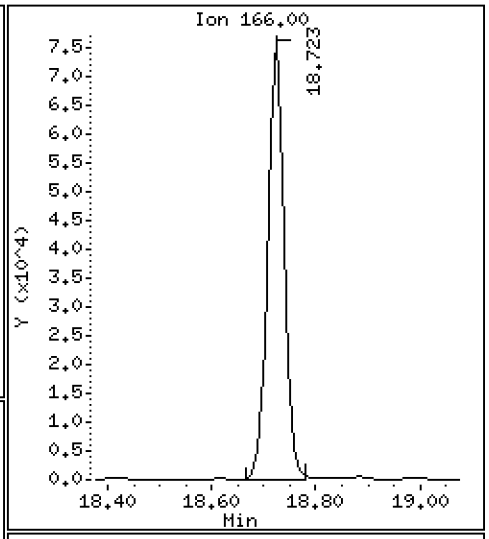
Concentration: 2.104 ug/mL

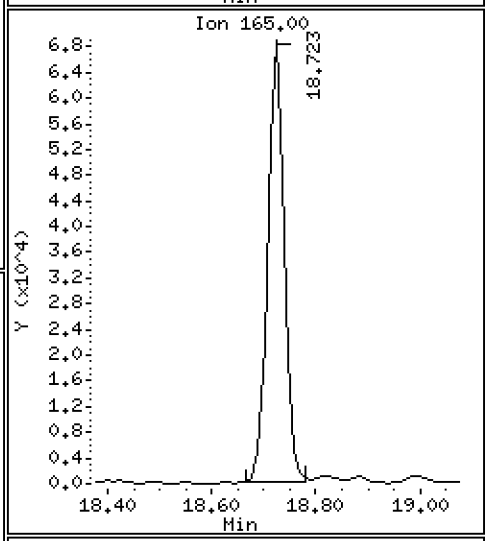


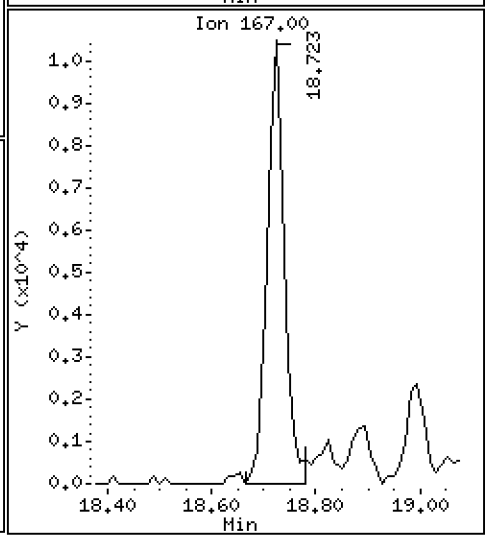












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

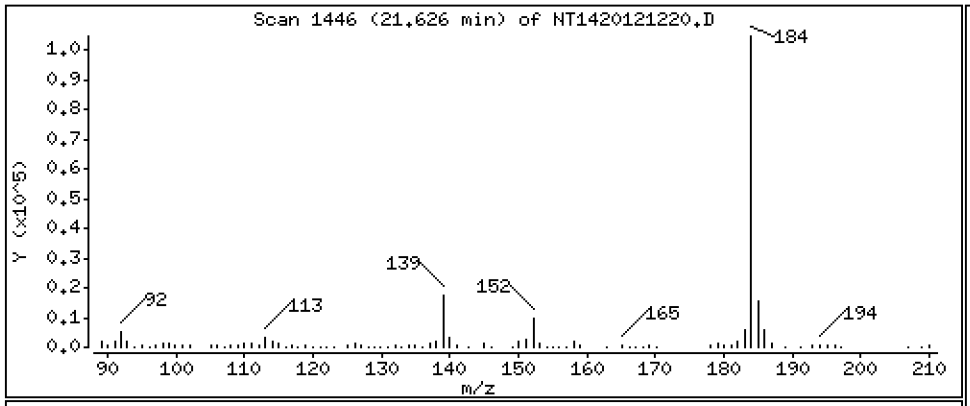
Operator: VTS

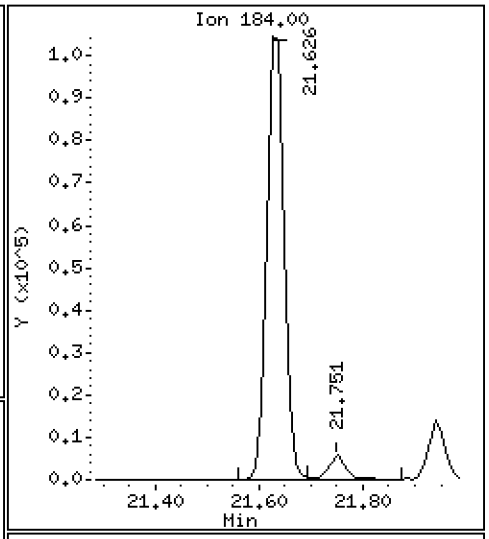
Column phase: Rxi-17Sil MS

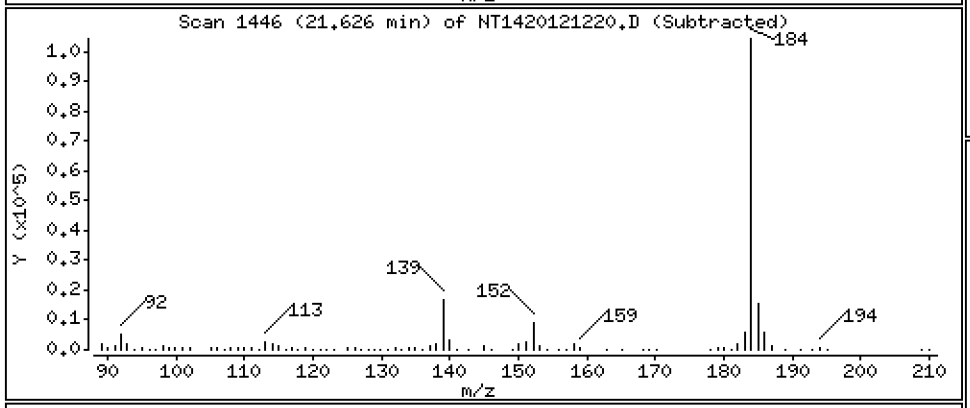
Column diameter: 0.25

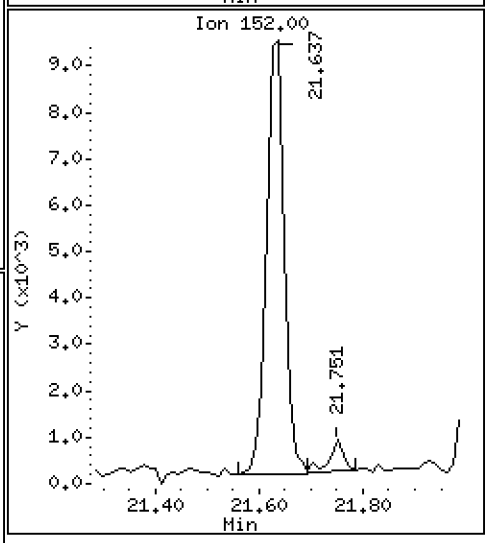
30 Dibenzothiophene

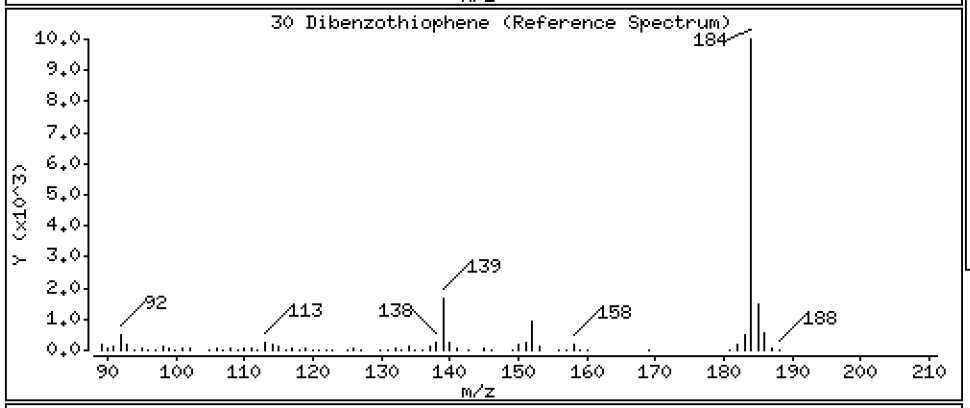
Concentration: 2.169 ug/mL

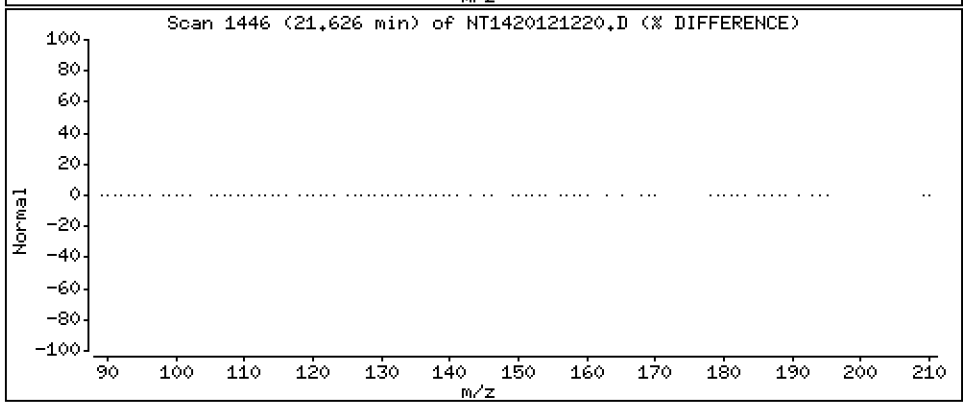












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121220.D

Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

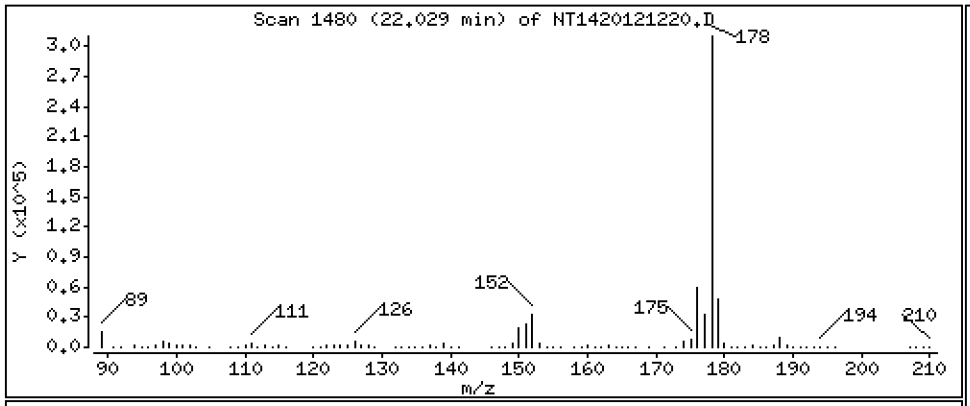
Operator: VTS

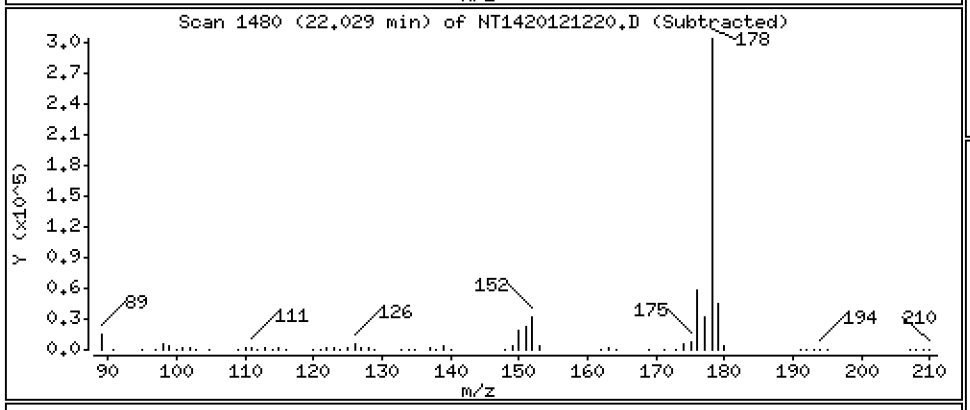
Column phase: Rxi-17Sil MS

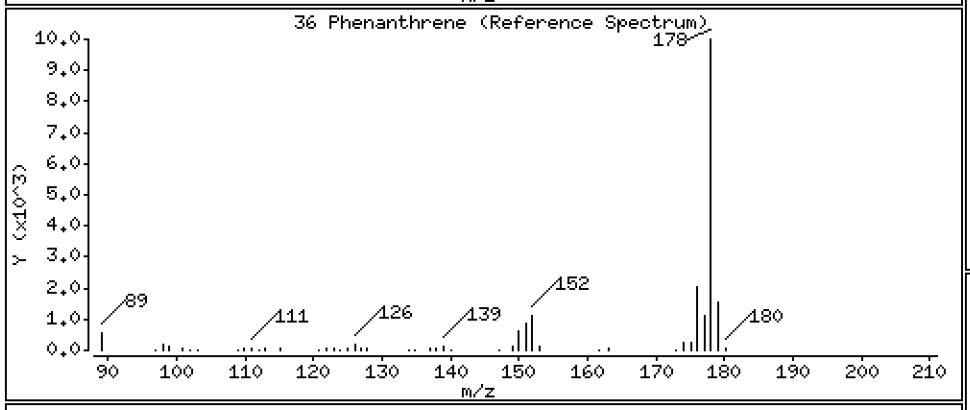
Column diameter: 0.25

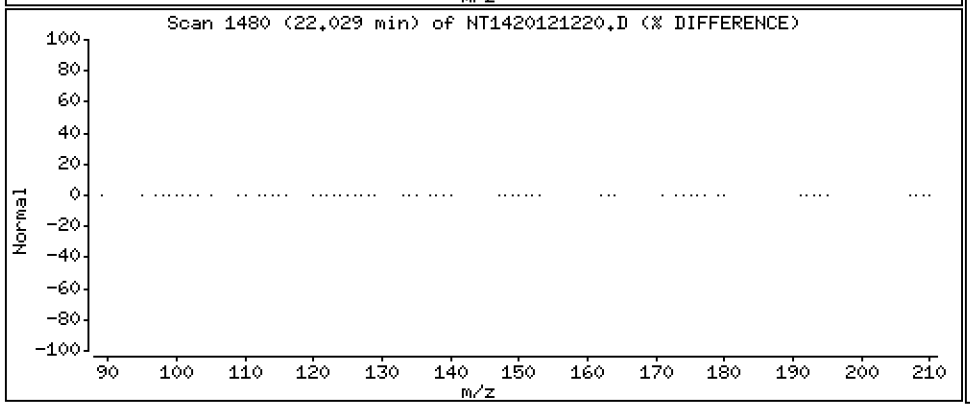
36 Phenanthrene

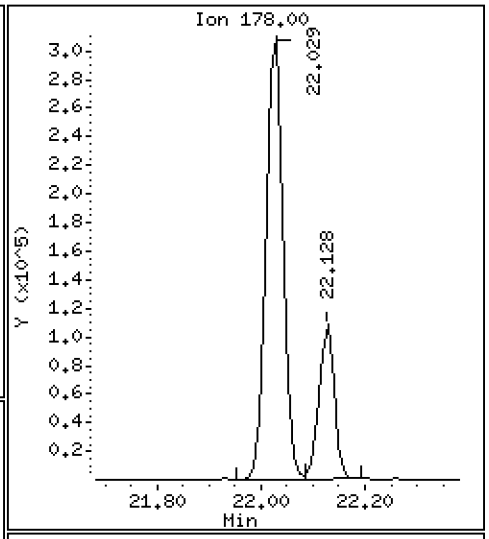
Concentration: 6.309 ug/mL

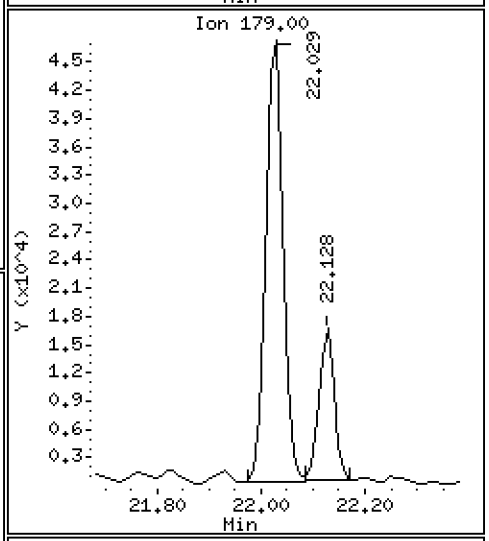


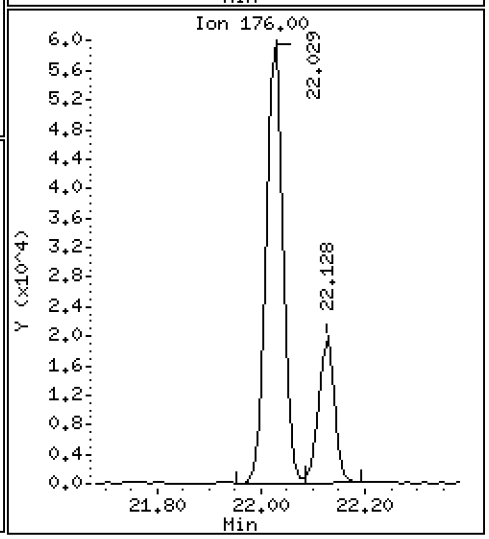












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

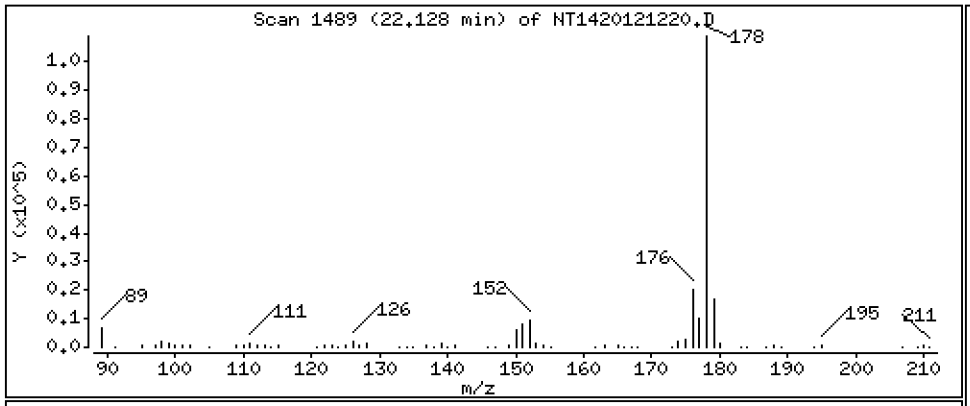
Operator: VTS

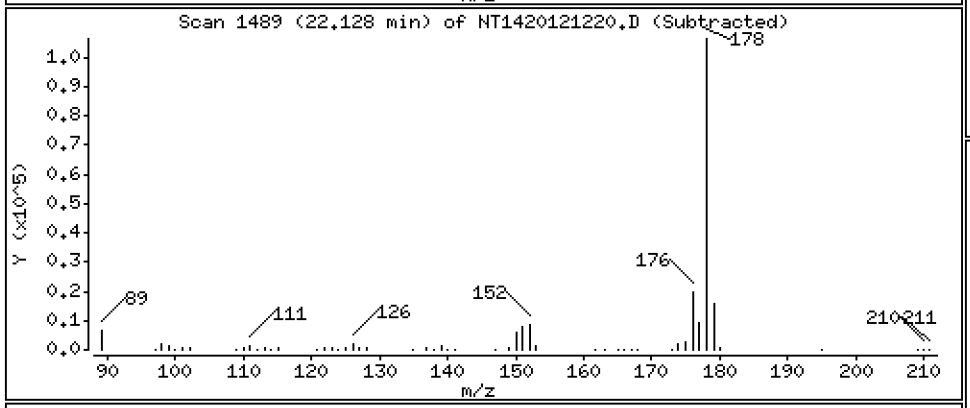
Column phase: Rxi-17Sil MS

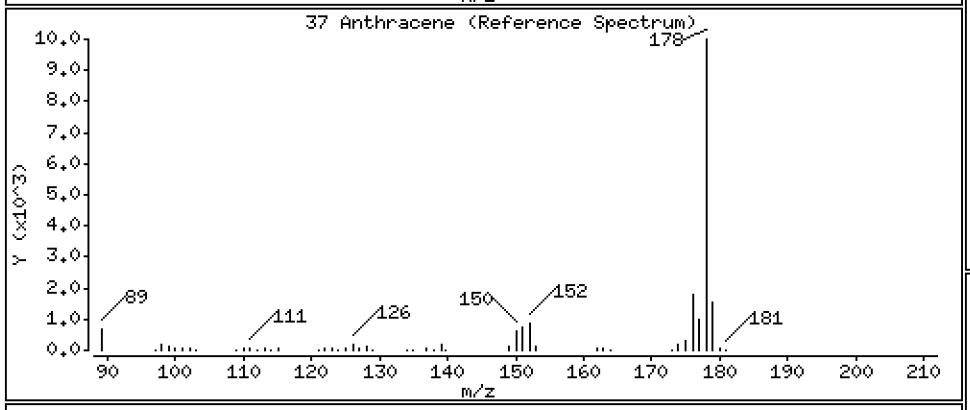
Column diameter: 0.25

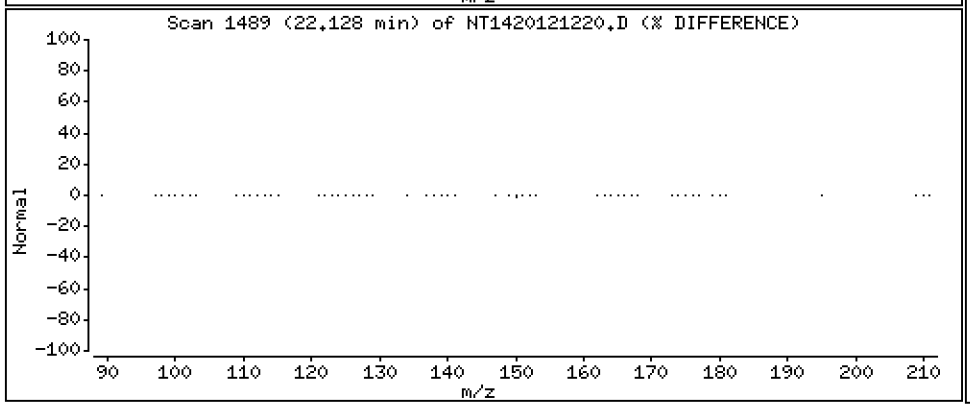
37 Anthracene

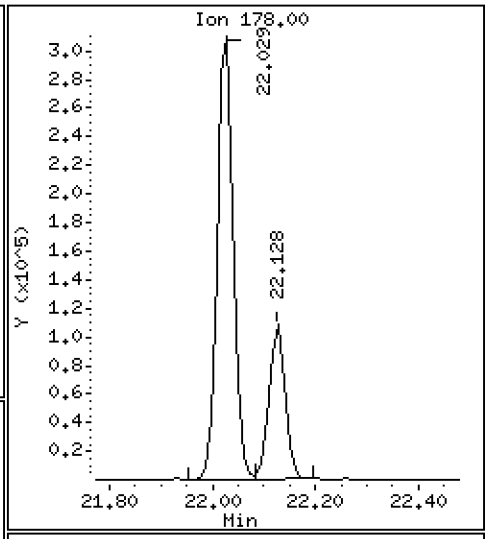
Concentration: 2.111 ug/mL

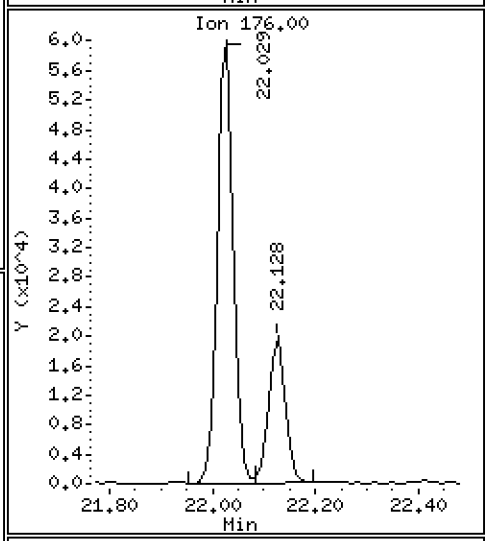


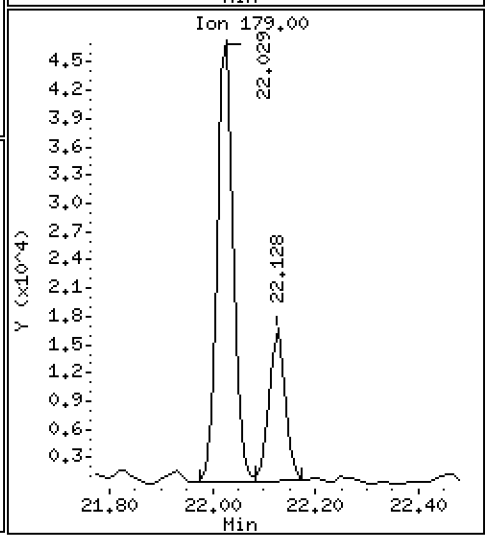












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

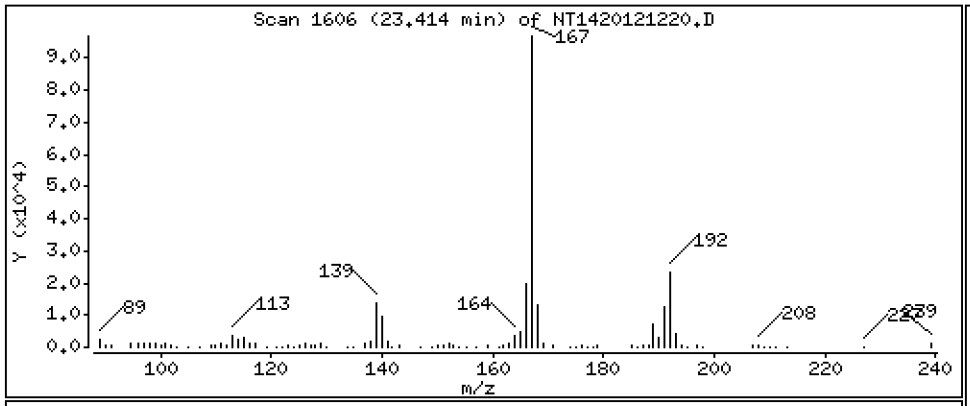
Operator: VTS

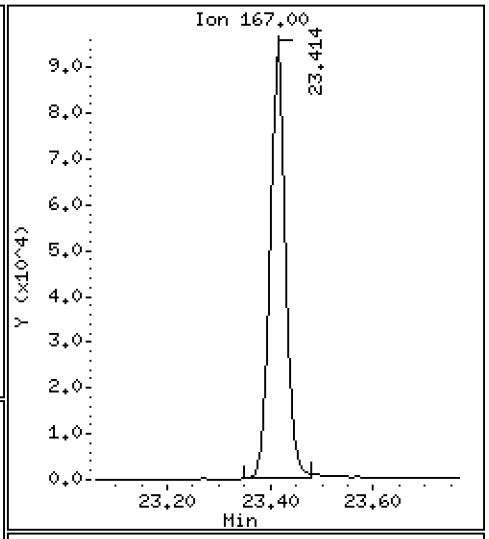
Column phase: Rxi-17Sil MS

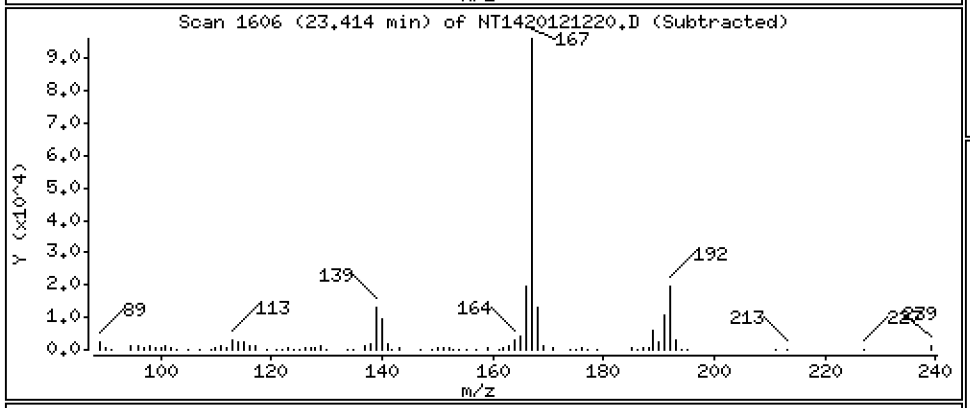
Column diameter: 0.25

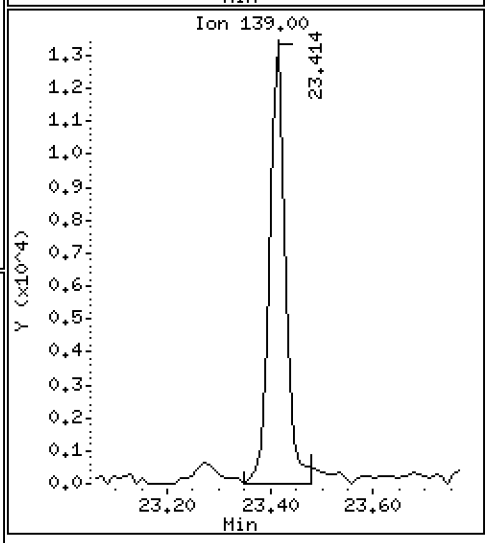
42 Carbazole

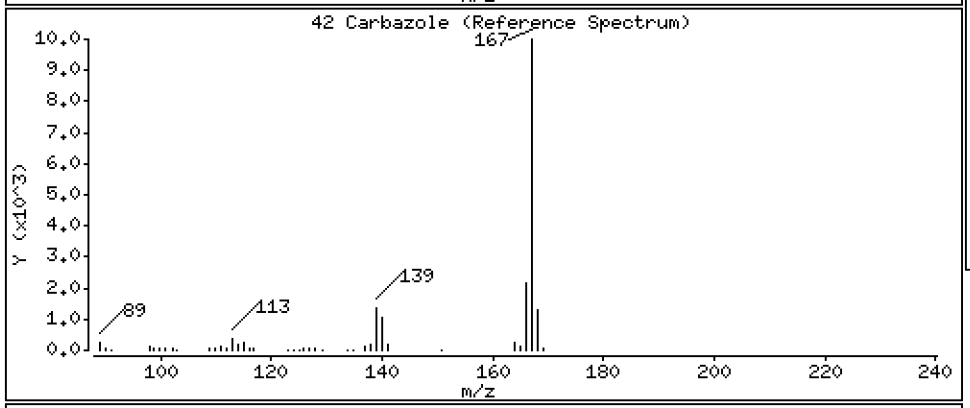
Concentration: 2.230 ug/mL

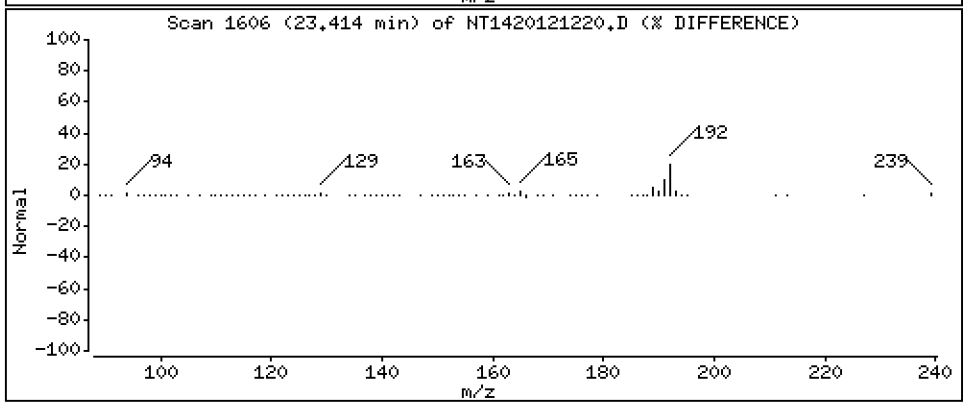












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

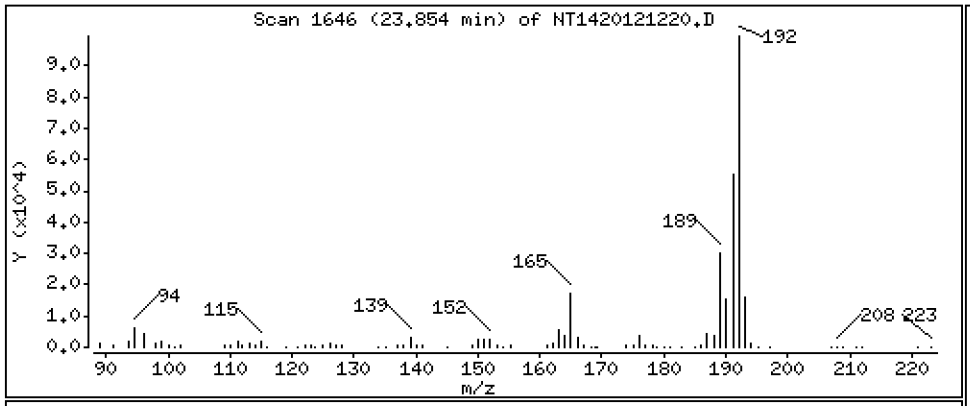
Operator: VTS

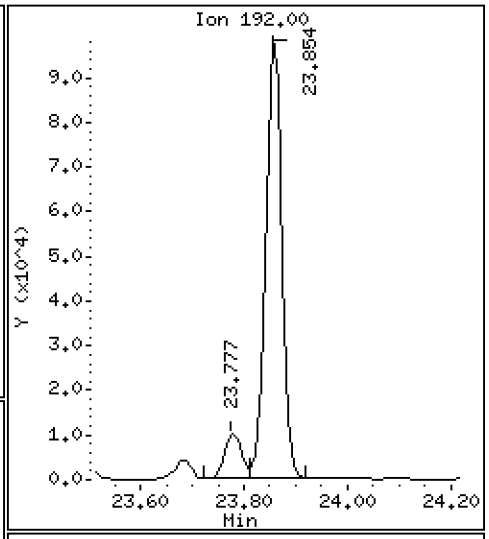
Column phase: Rxi-17Sil MS

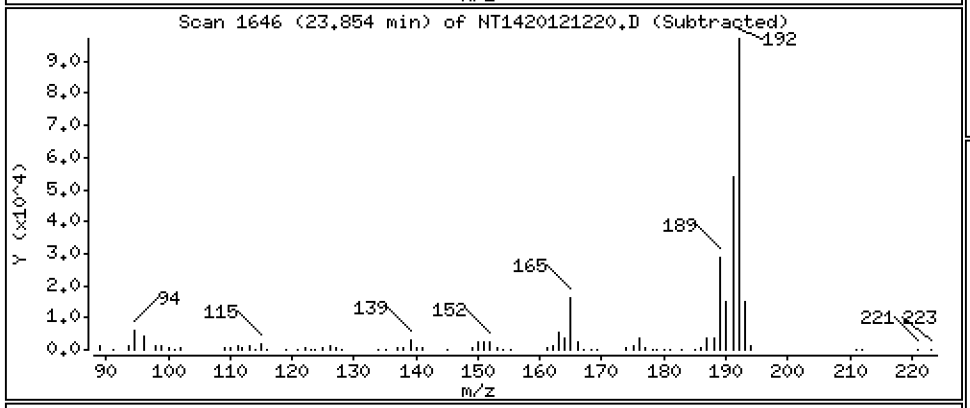
Column diameter: 0.25

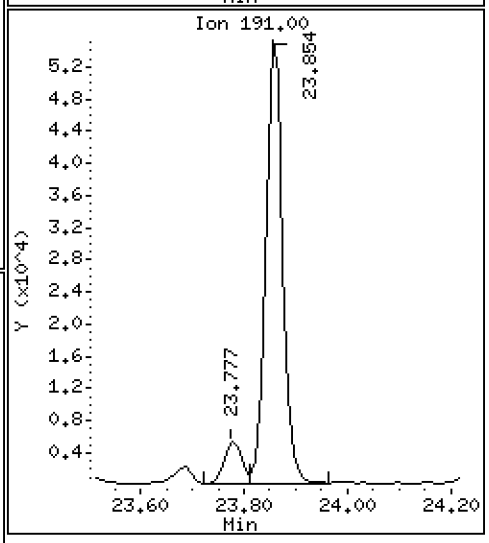
43 1-Methylphenanthrene

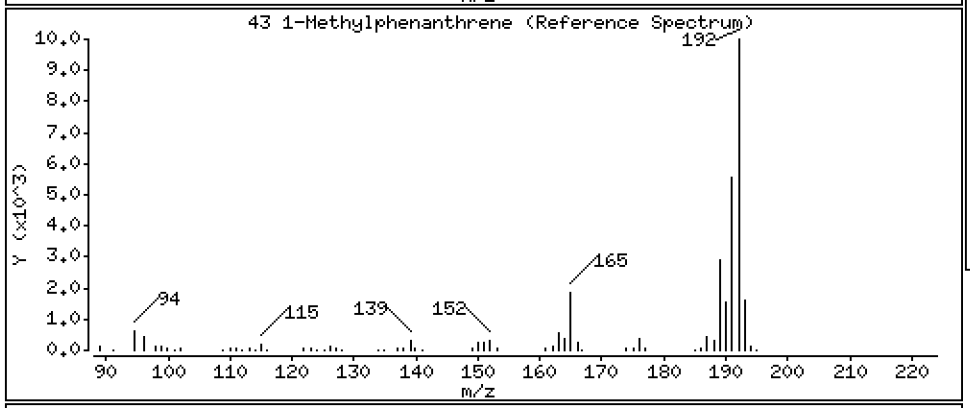
Concentration: 2.734 ug/mL

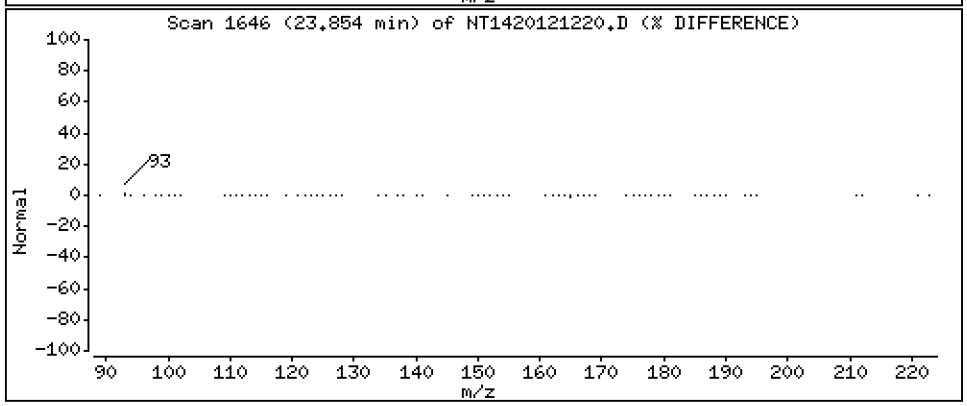












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121220.D

Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

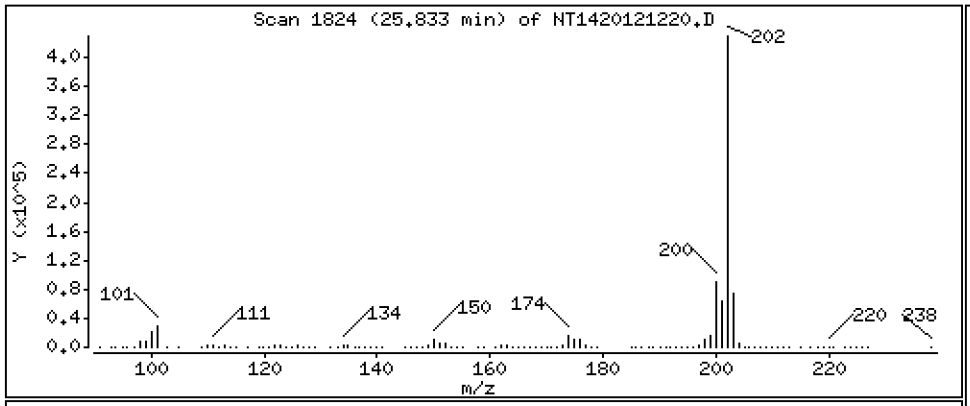
Operator: VTS

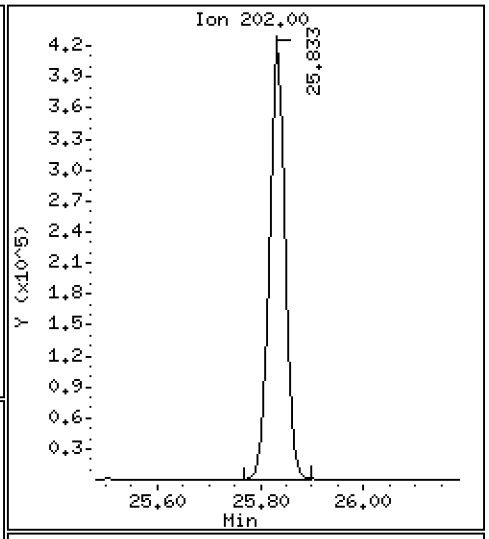
Column phase: Rxi-17Sil MS

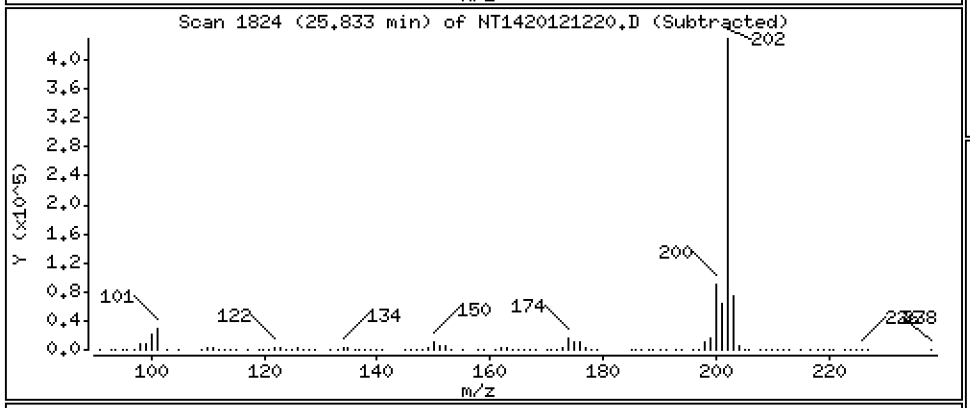
Column diameter: 0.25

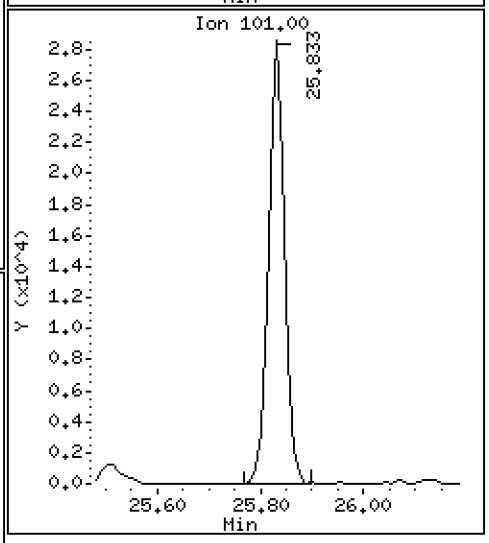
44 Fluoranthene

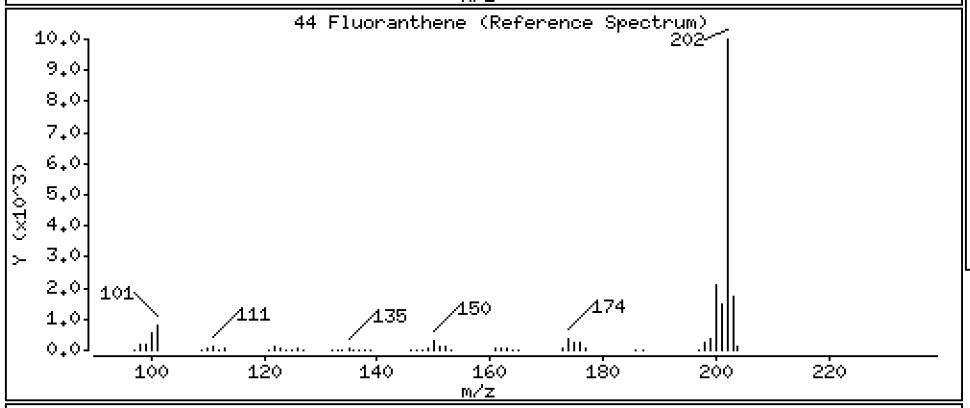
Concentration: 7.805 ug/mL

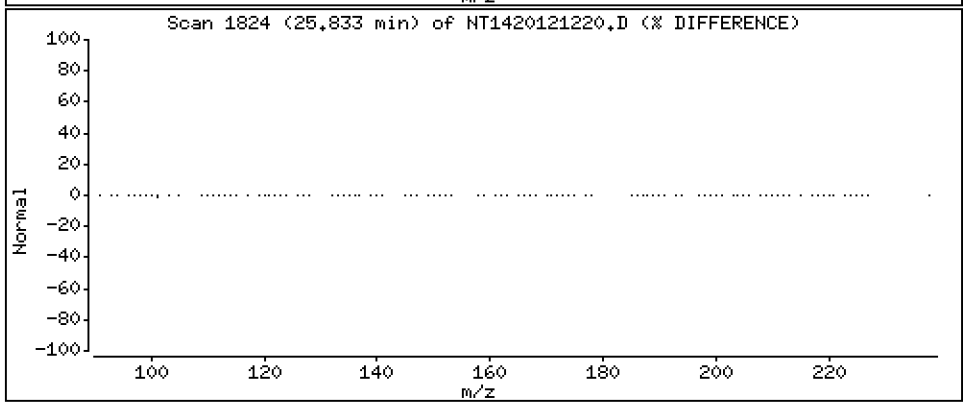












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121220.D

Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

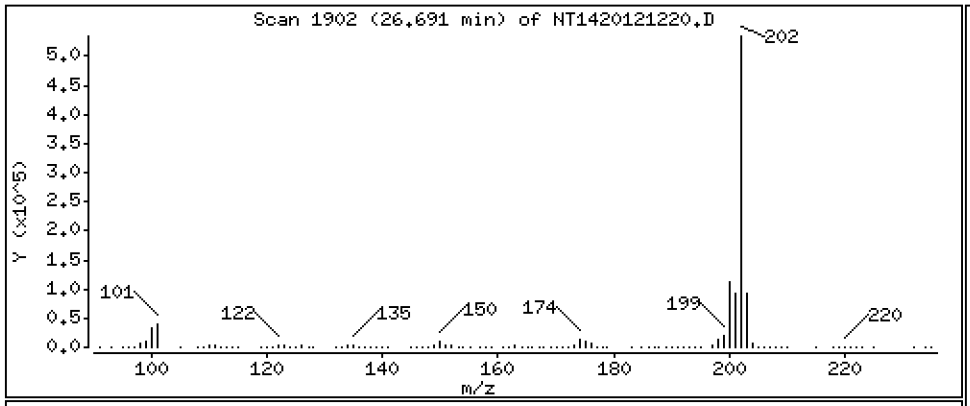
Operator: VTS

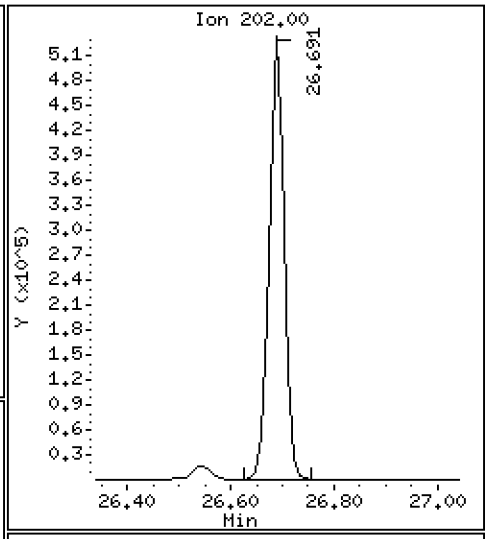
Column phase: Rxi-17Sil MS

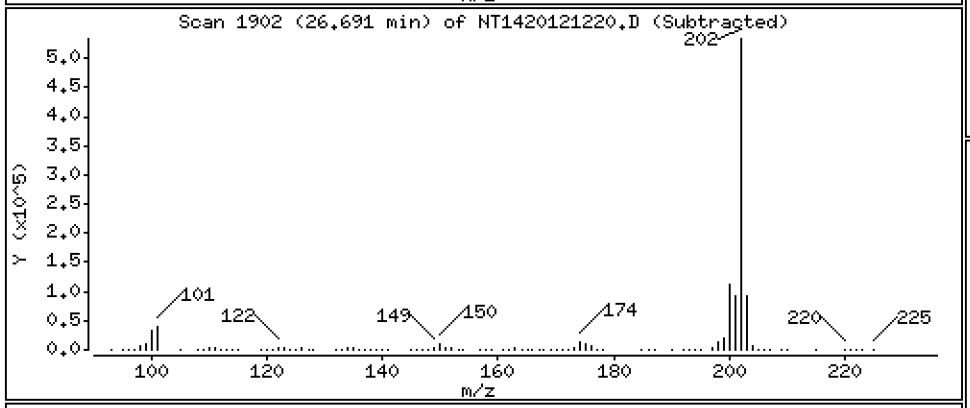
Column diameter: 0.25

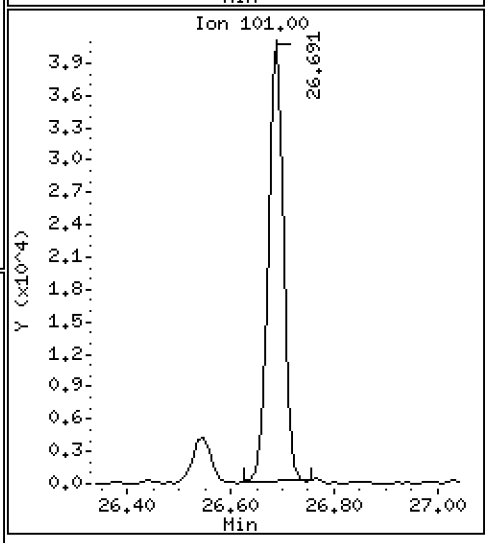
46 Pyrene

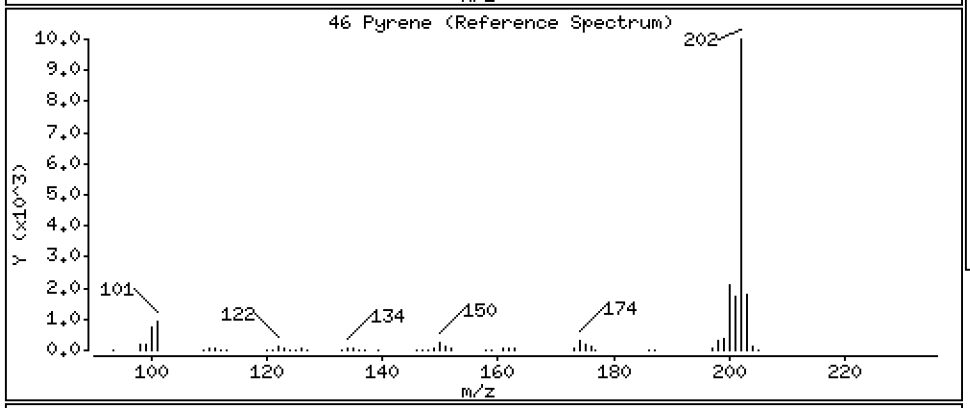
Concentration: 8.889 ug/mL

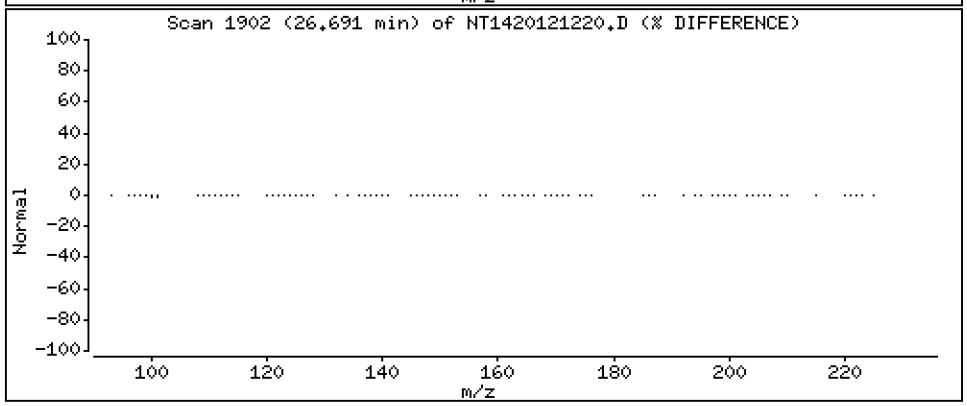












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

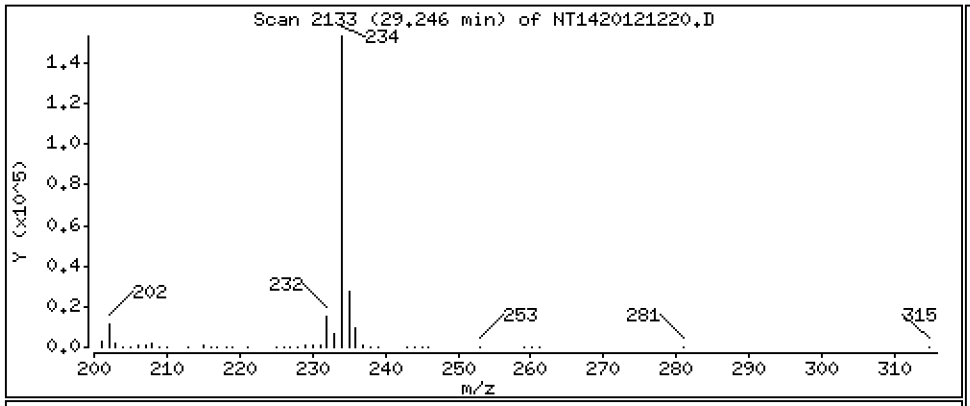
Operator: VTS

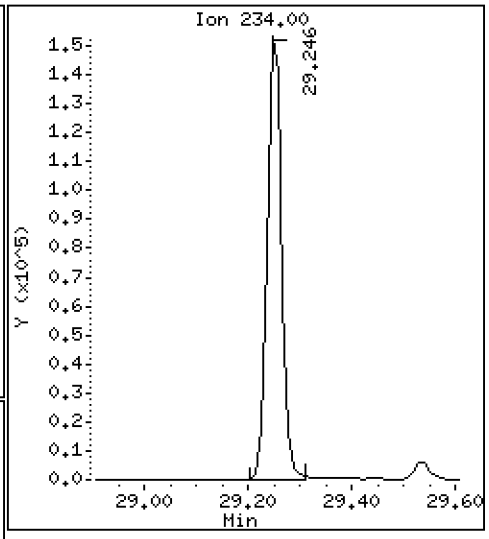
Column phase: Rxi-17Sil MS

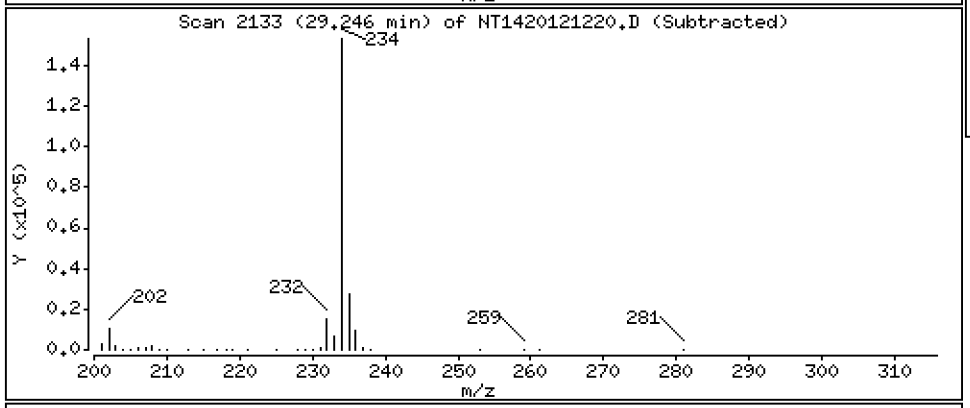
Column diameter: 0.25

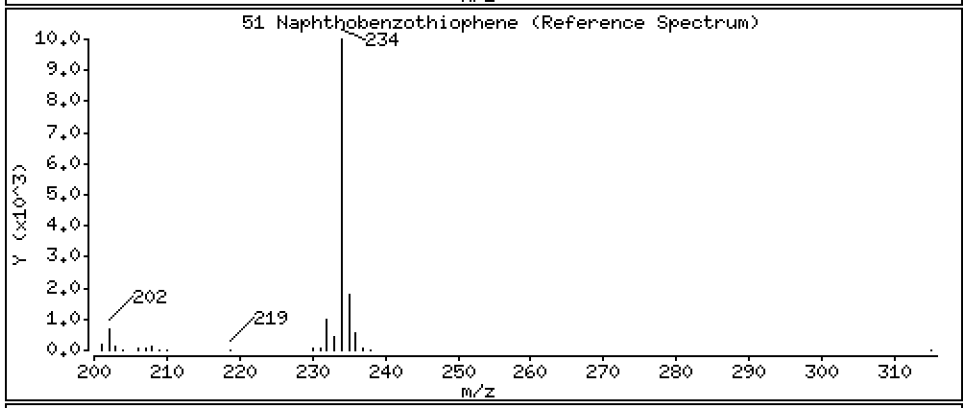
51 Naphthobenzothiophene

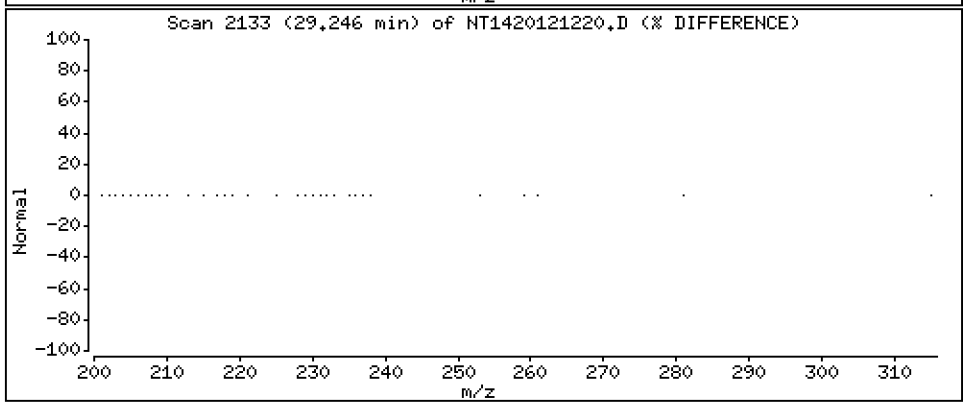
Concentration: 2.638 ug/mL











Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121220.D

Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

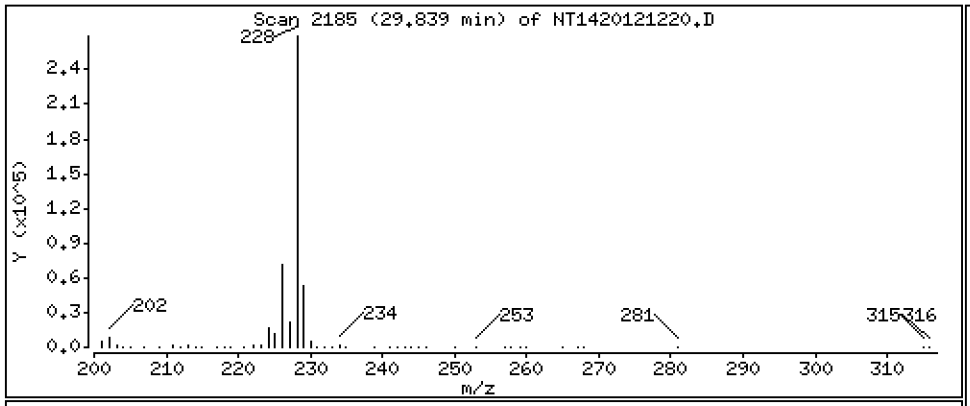
Operator: VTS

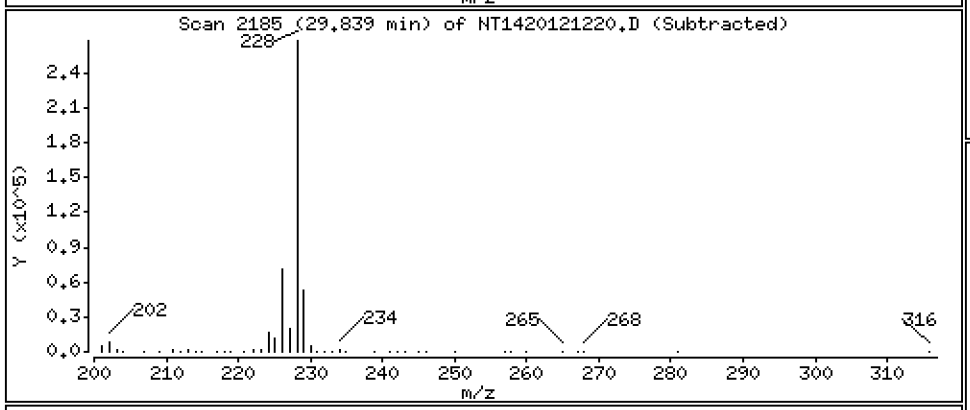
Column phase: Rxi-17Sil MS

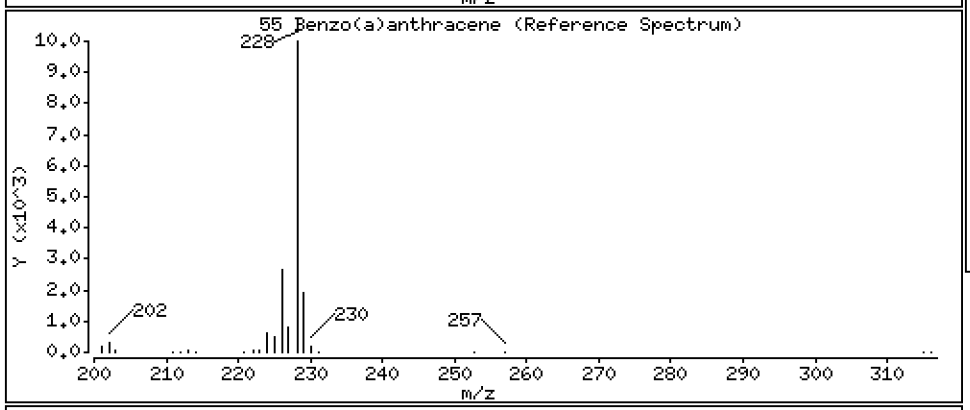
Column diameter: 0.25

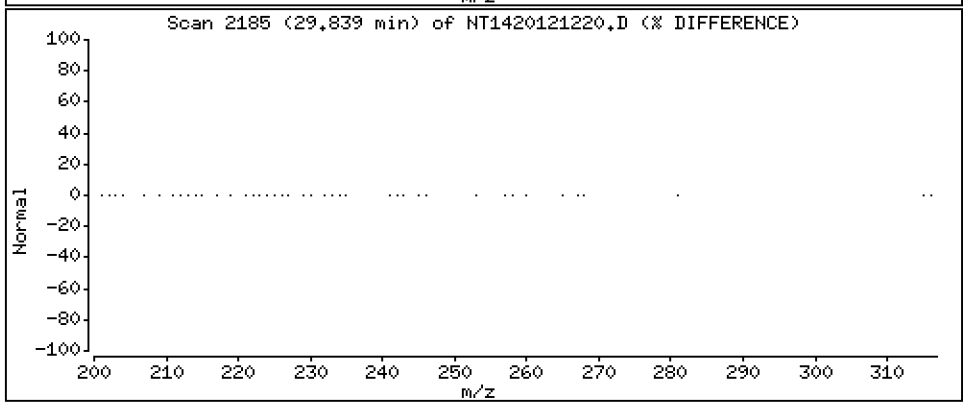
55 Benzo(a)anthracene

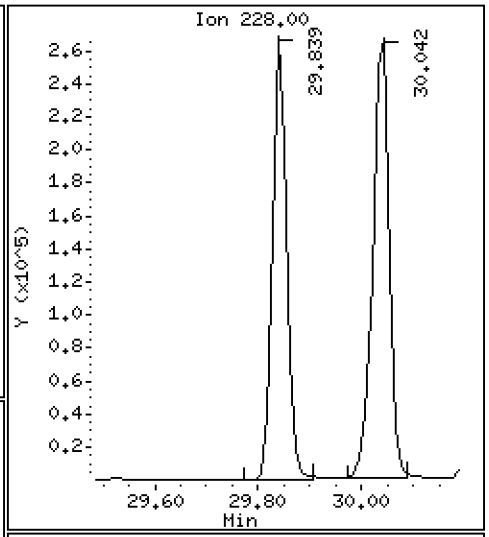
Concentration: 4.383 ug/mL

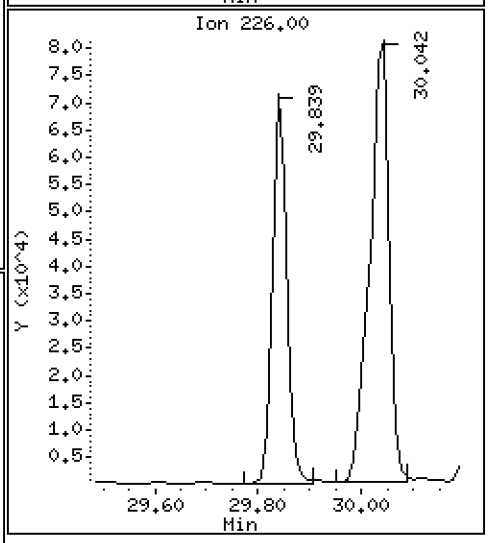












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

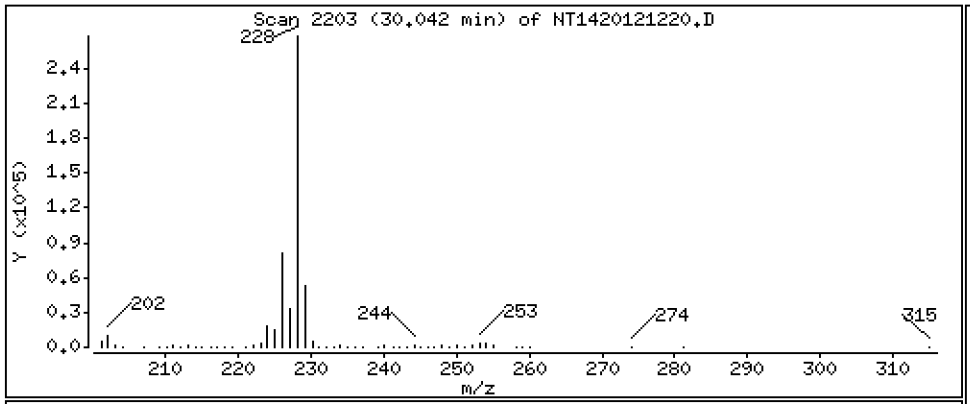
Operator: VTS

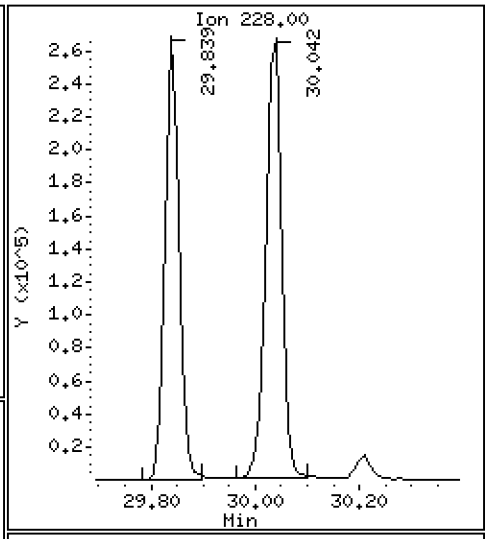
Column phase: Rxi-17Sil MS

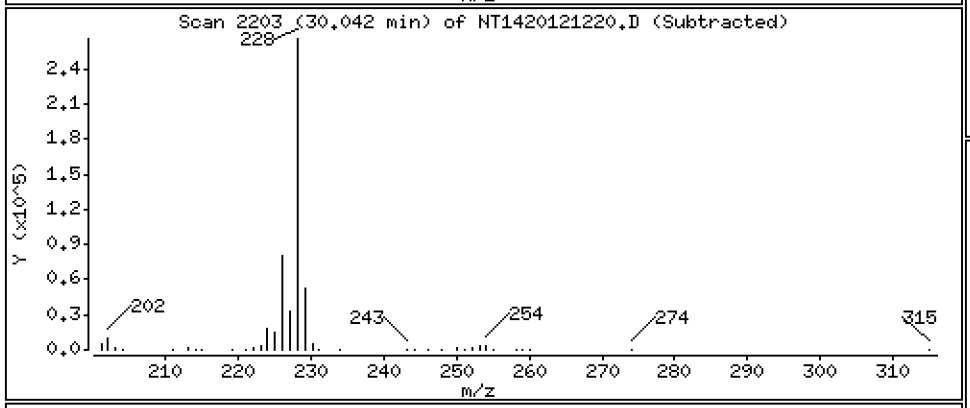
Column diameter: 0.25

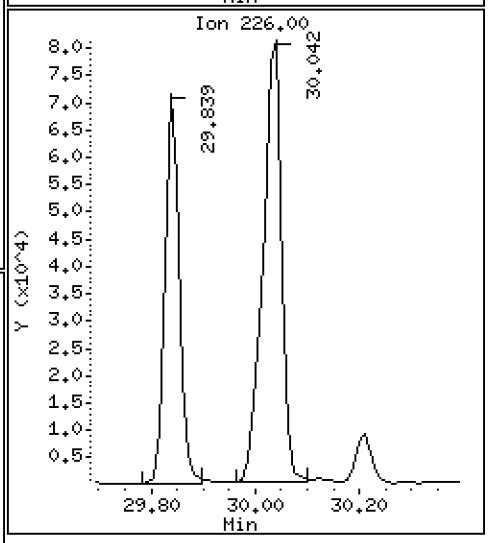
57 Chrysene

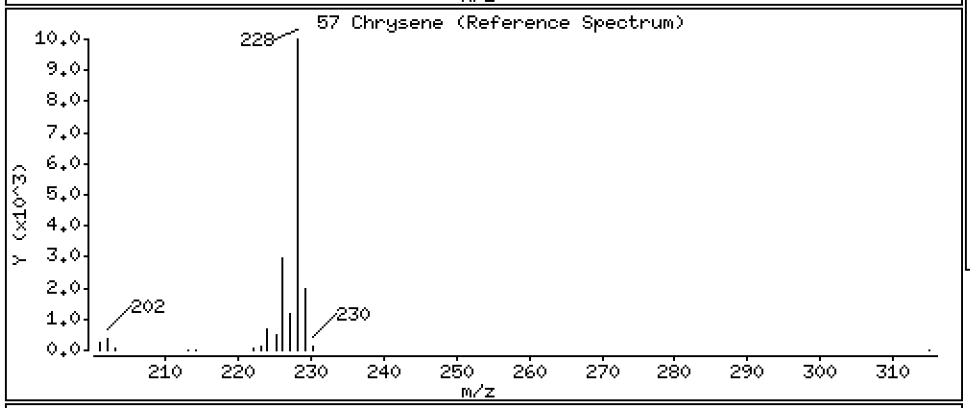
Concentration: 4.939 ug/mL

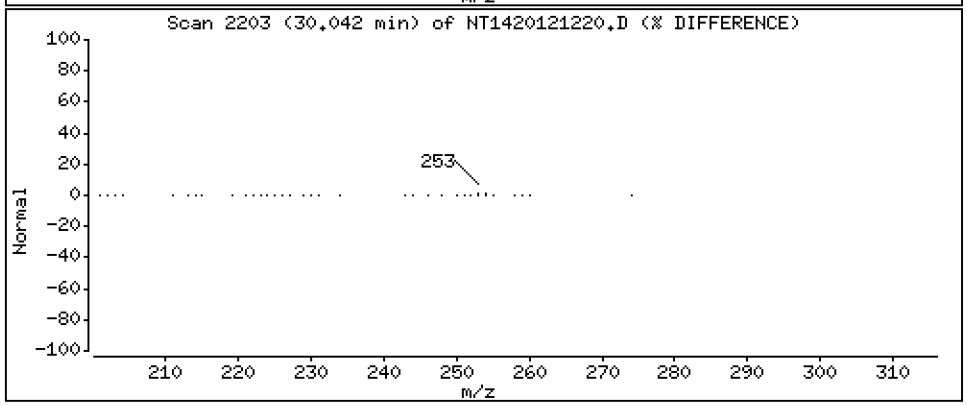












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121220.D

Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

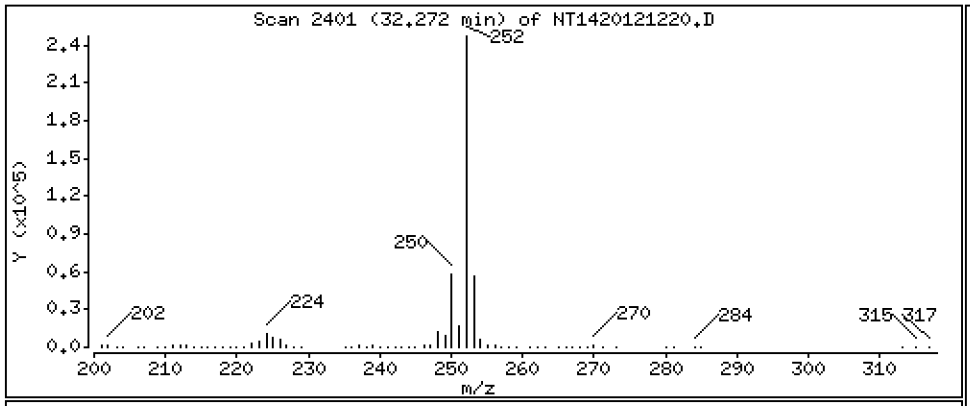
Operator: VTS

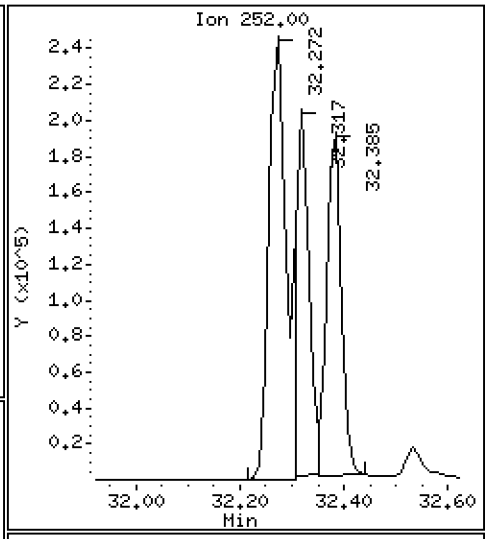
Column phase: Rxi-17Sil MS

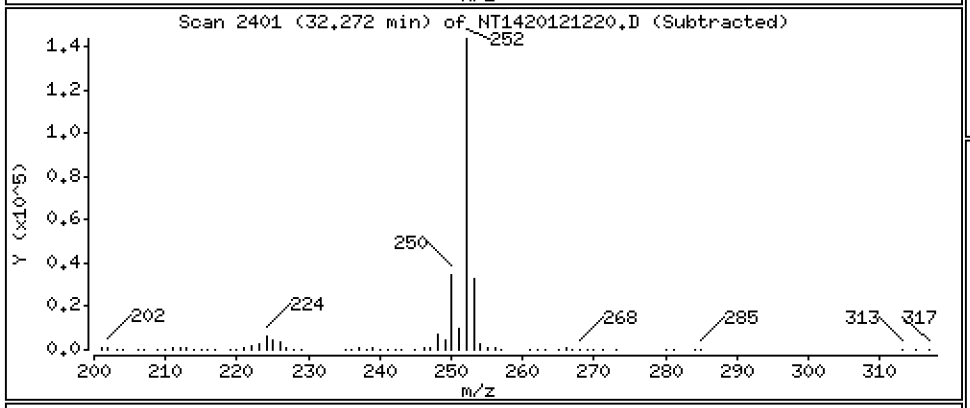
Column diameter: 0.25

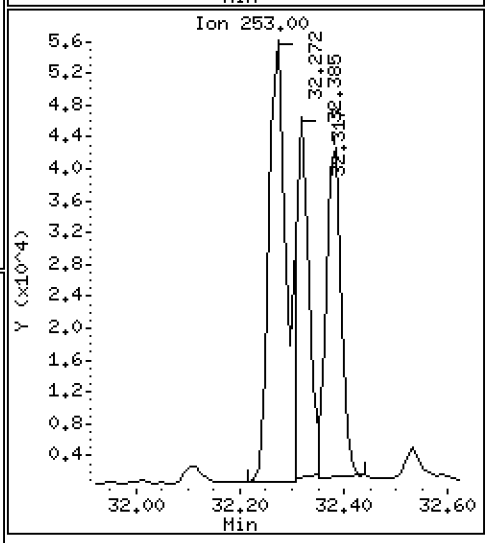
62 Benzo(b)fluoranthene

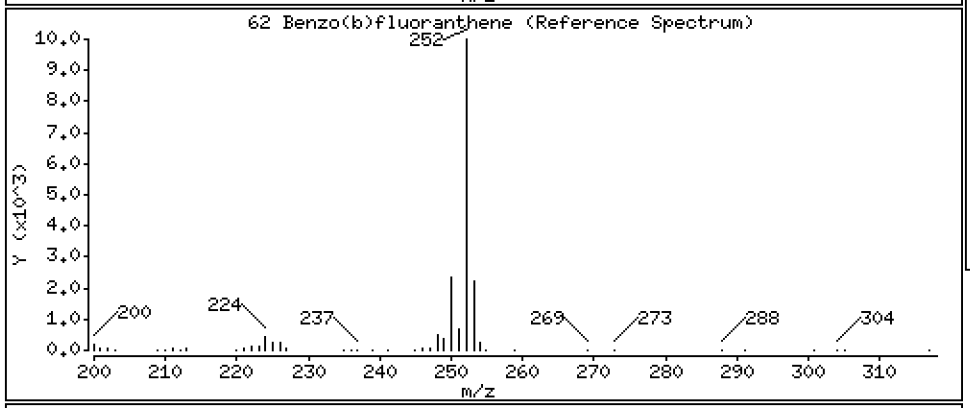
Concentration: 4.484 ug/mL

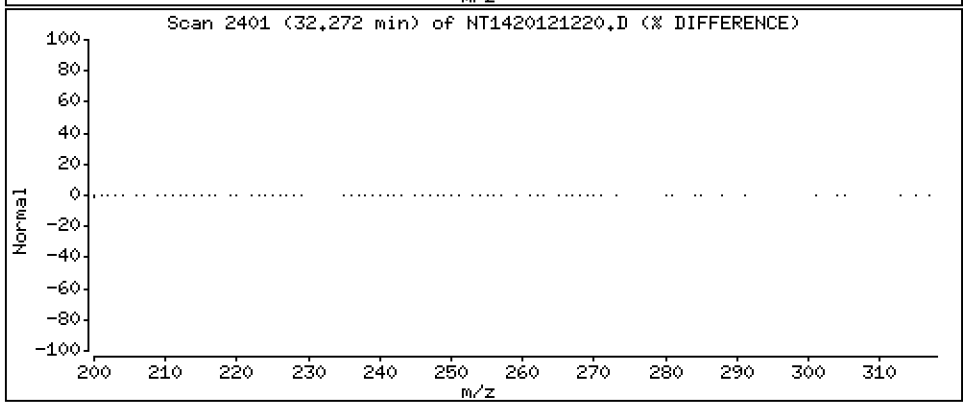












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

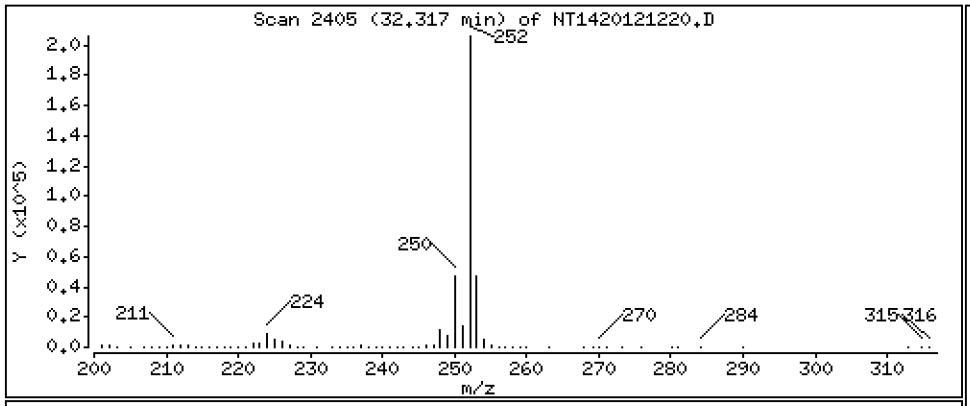
Operator: VTS

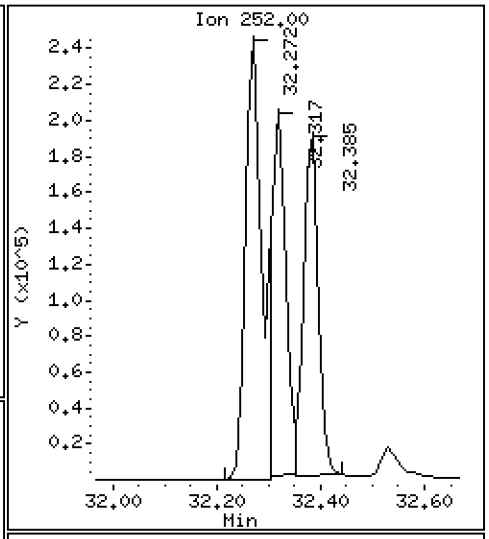
Column phase: Rxi-17Sil MS

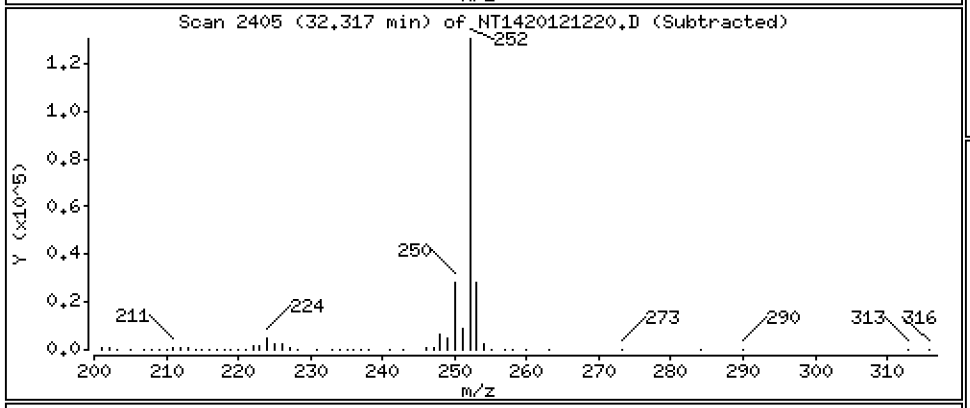
Column diameter: 0.25

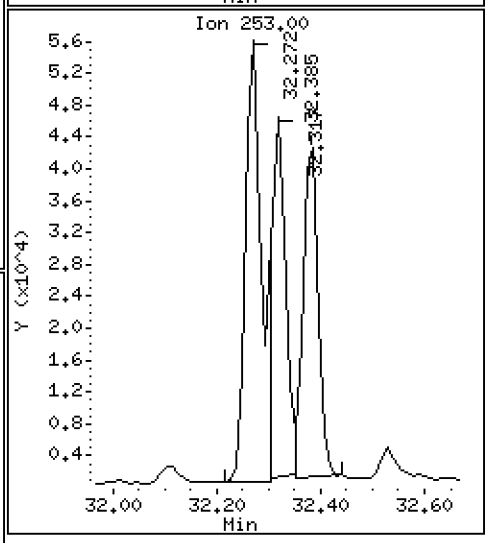
63 Benzo(k)fluoranthene

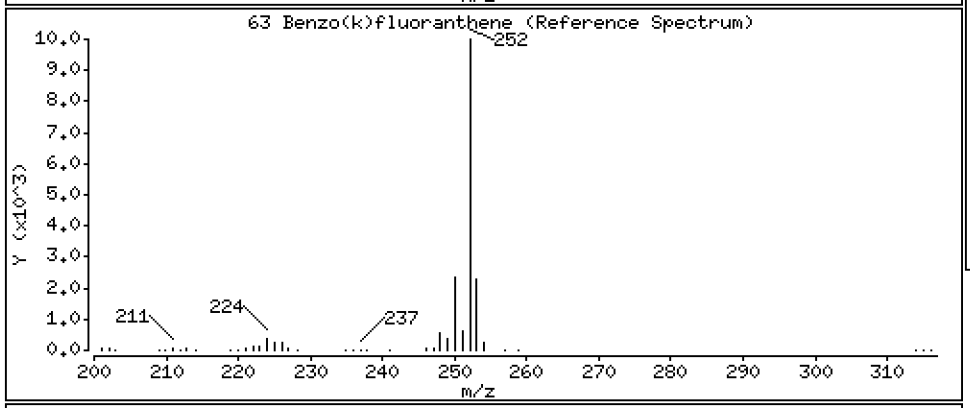
Concentration: 2.803 ug/mL

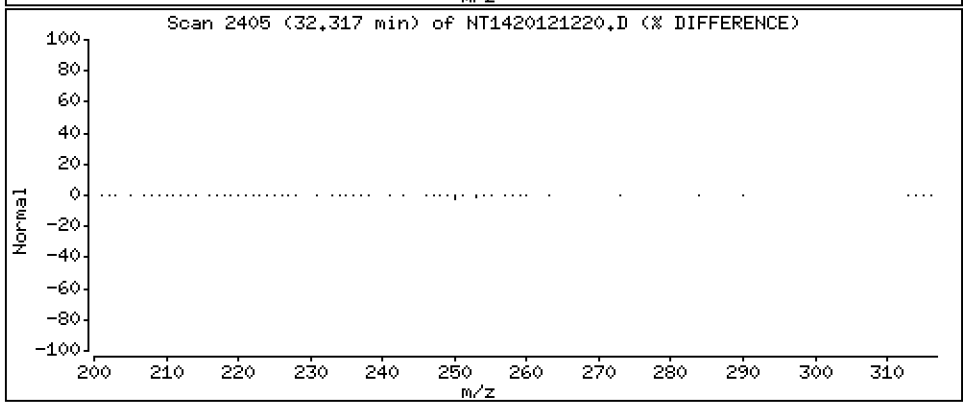












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

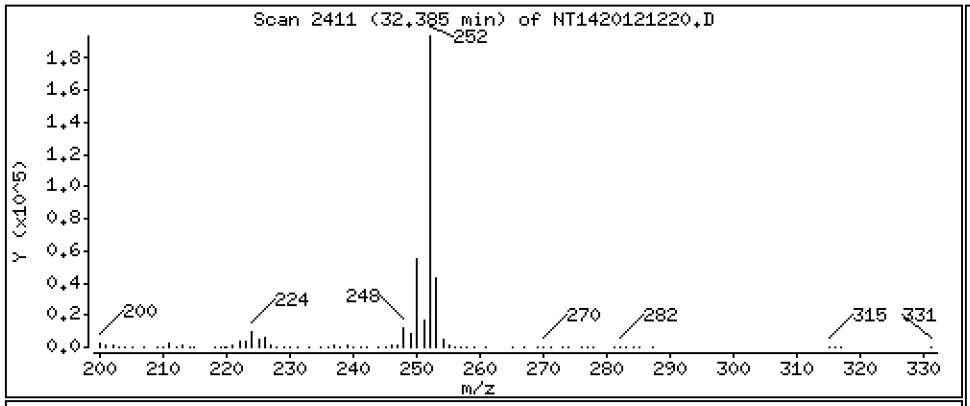
Operator: VTS

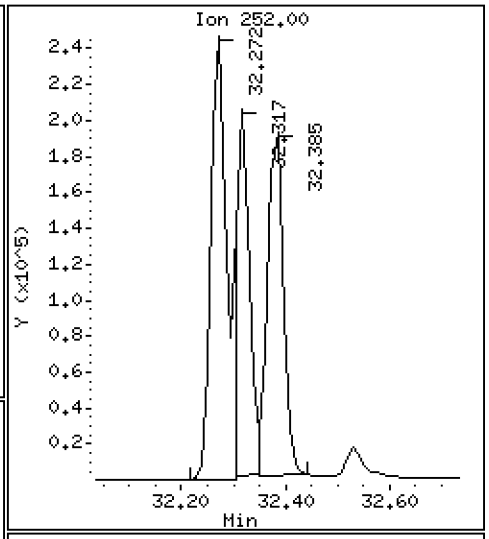
Column phase: Rxi-17Sil MS

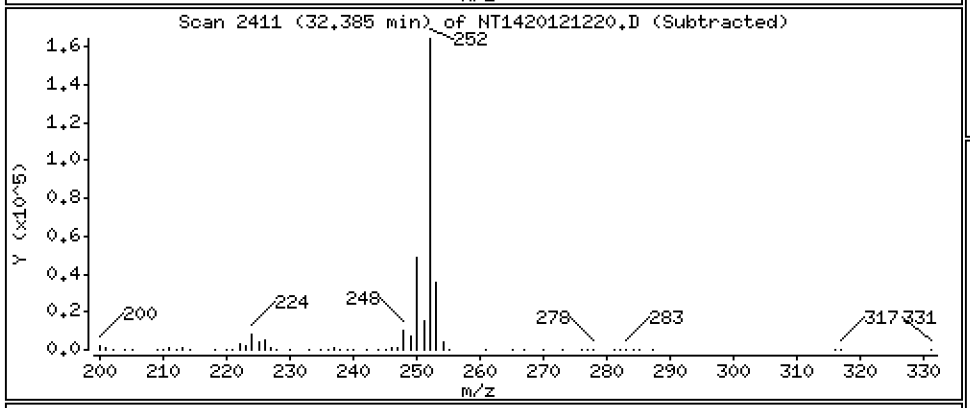
Column diameter: 0.25

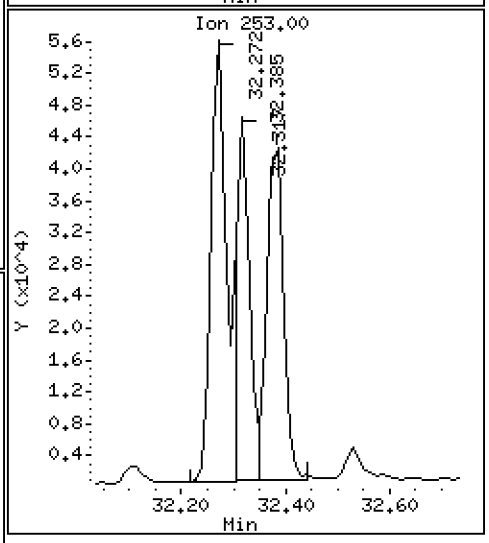
293 Benzo(j)fluoranthene

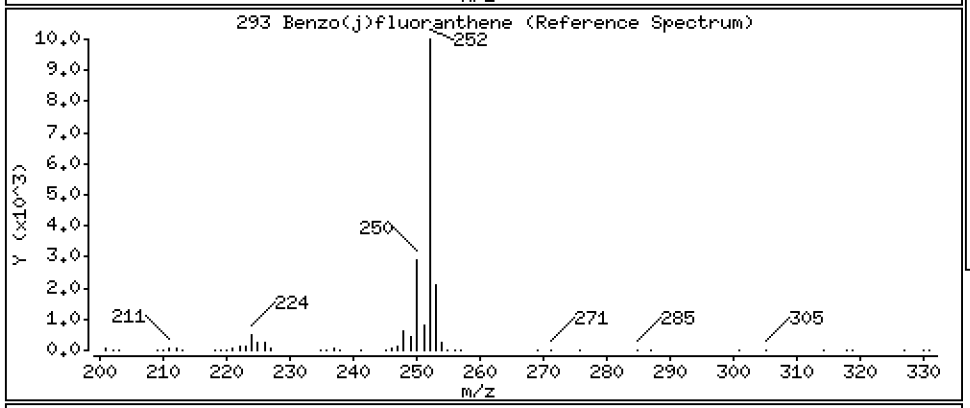
Concentration: 3.304 ug/mL

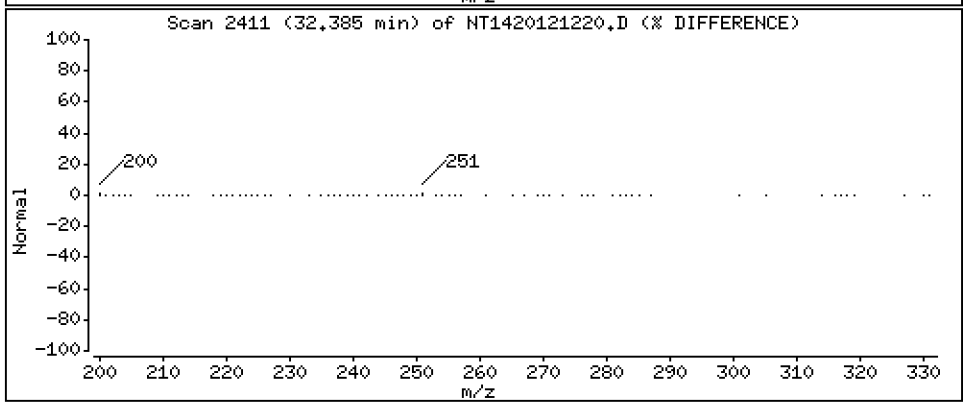












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121220.D

Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

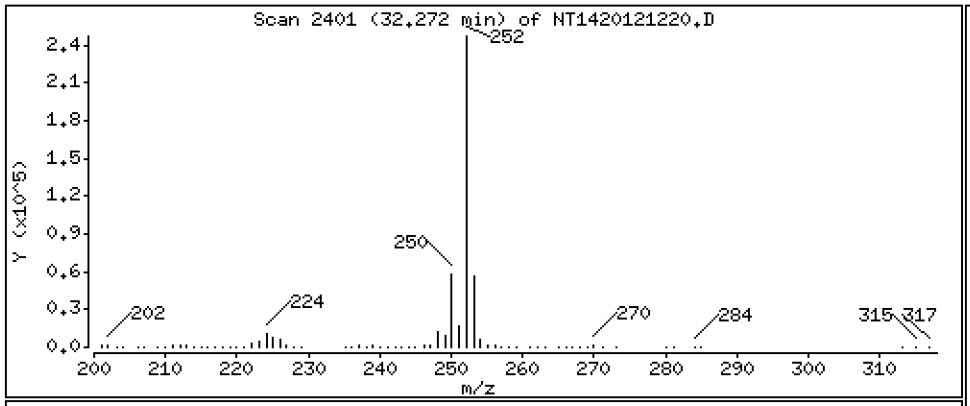
Operator: VTS

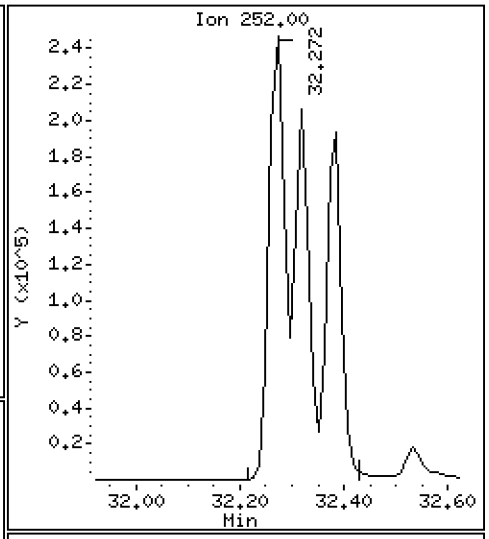
Column phase: Rxi-17Sil MS

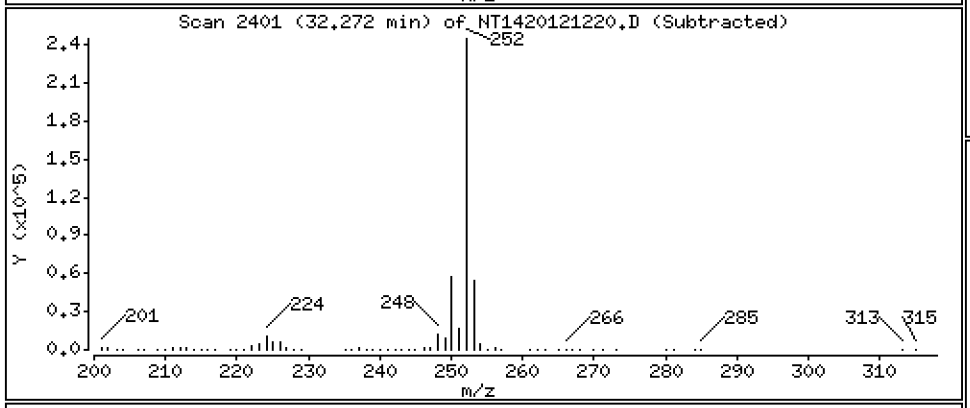
Column diameter: 0.25

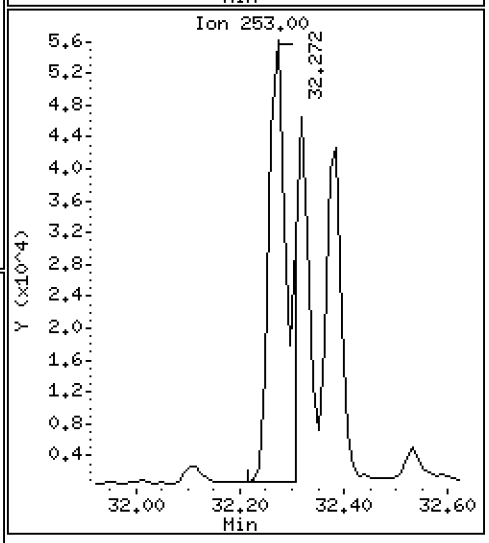
246 Total Benzofluoranthenes

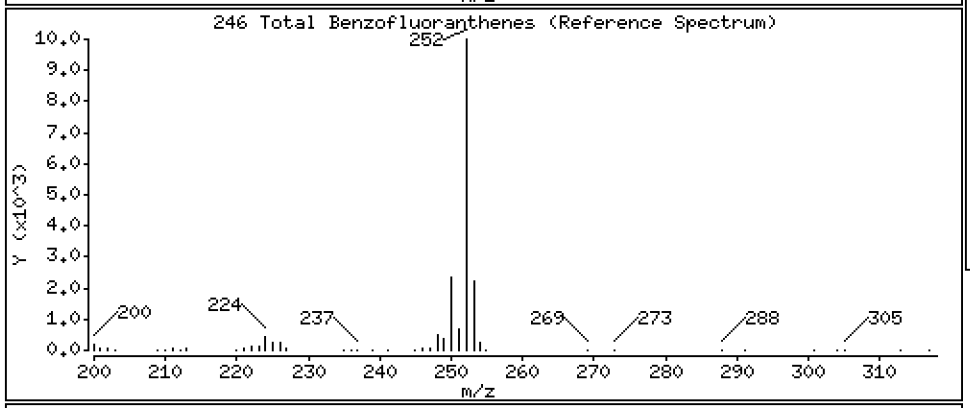
Concentration: 10.69 ug/mL

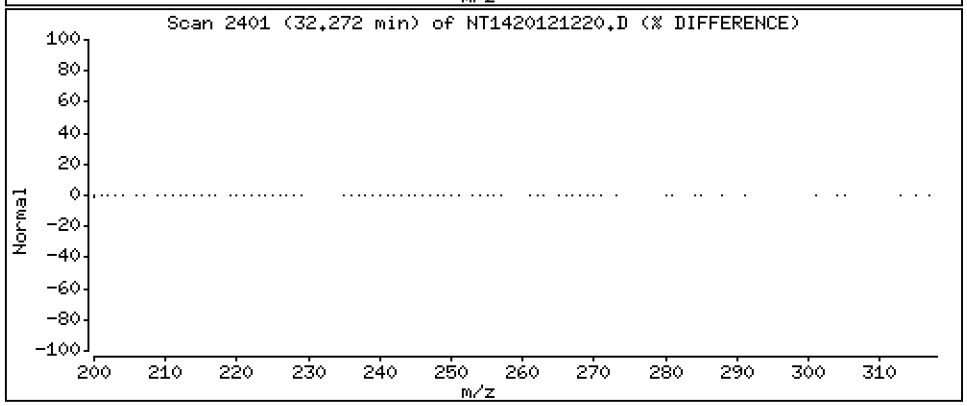












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121220.D

Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

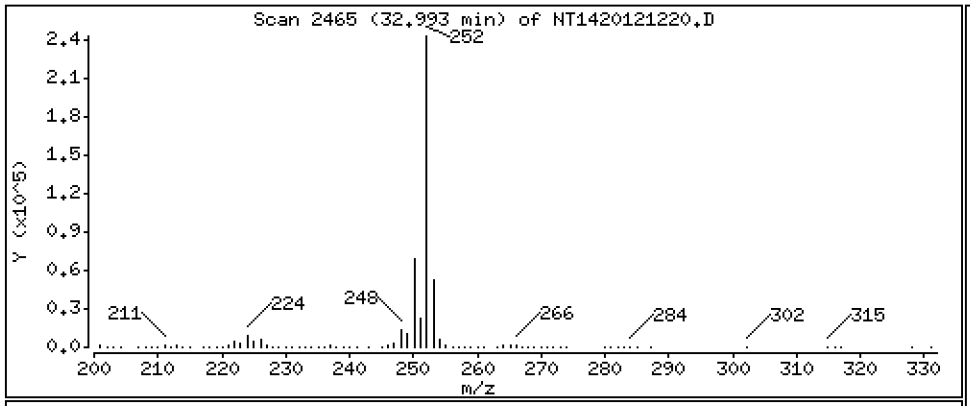
Operator: VTS

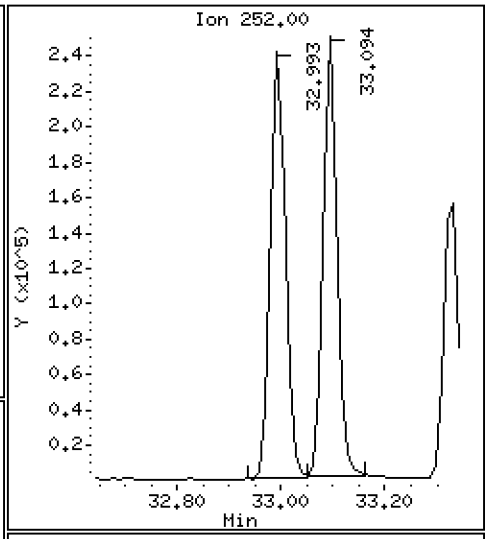
Column phase: Rxi-17Sil MS

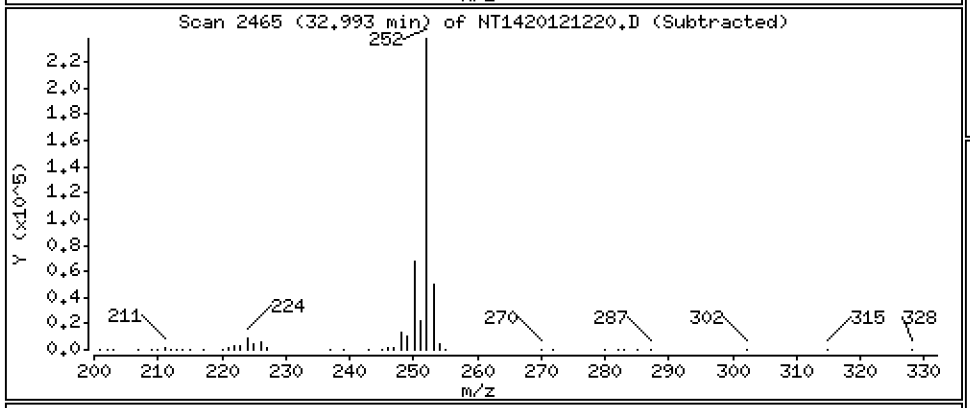
Column diameter: 0.25

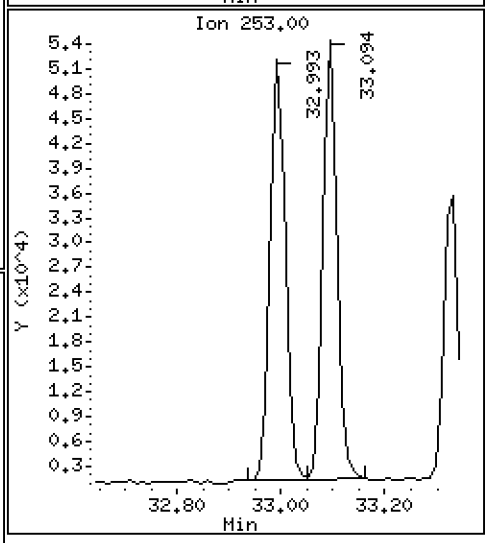
64 Benzo(e)pyrene

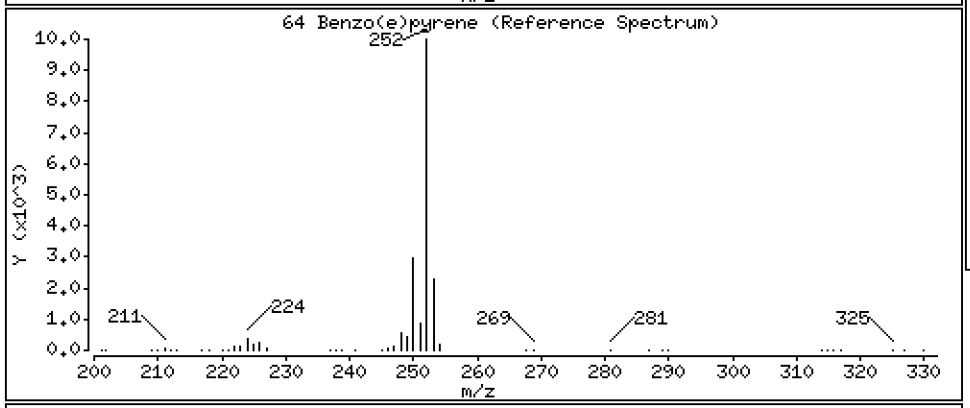
Concentration: 3.755 ug/mL

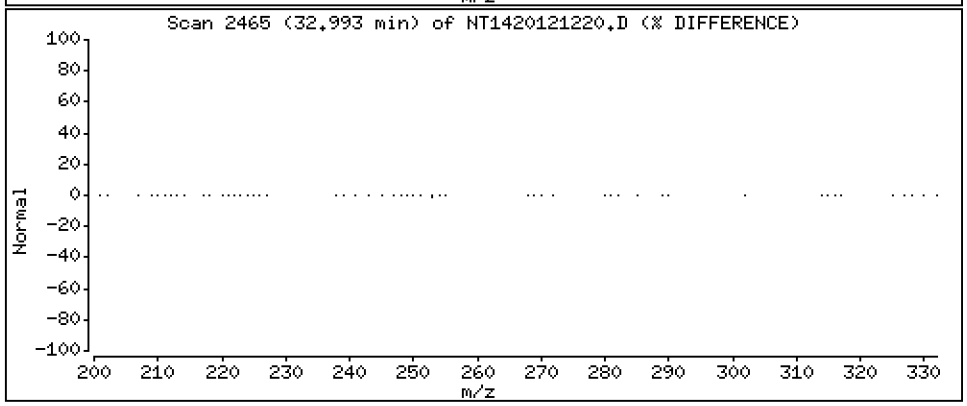












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121220.D

Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

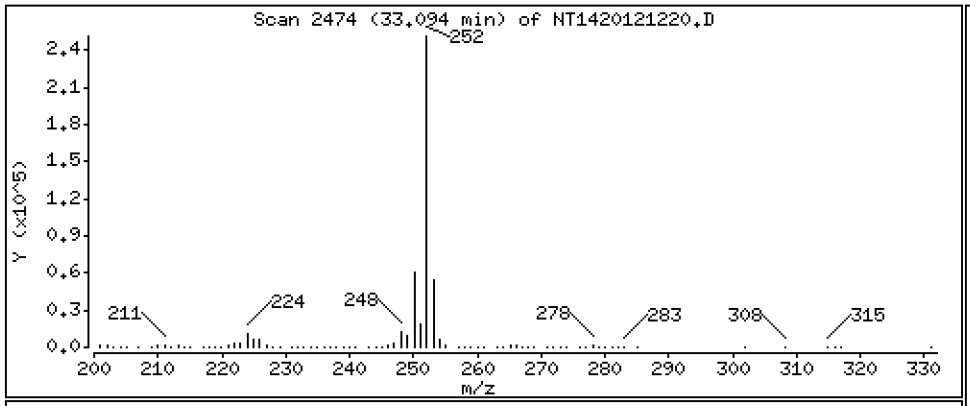
Operator: VTS

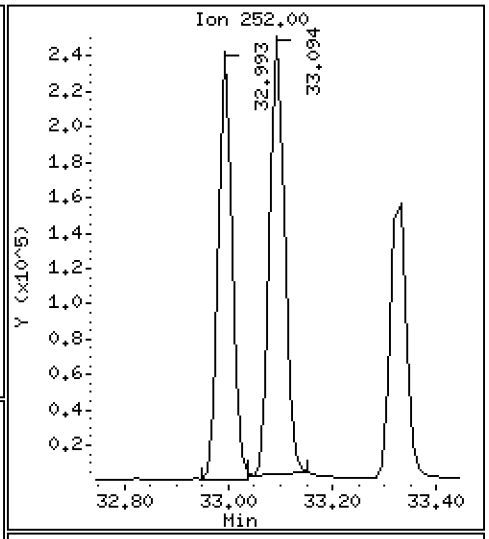
Column phase: Rxi-17Sil MS

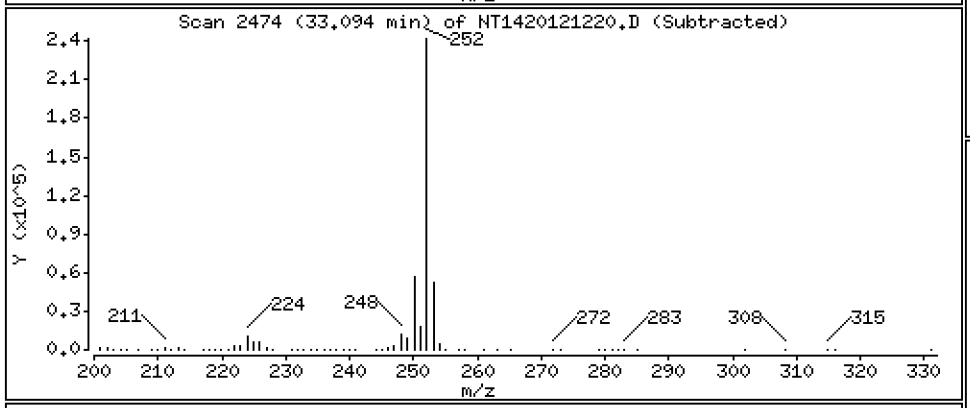
Column diameter: 0.25

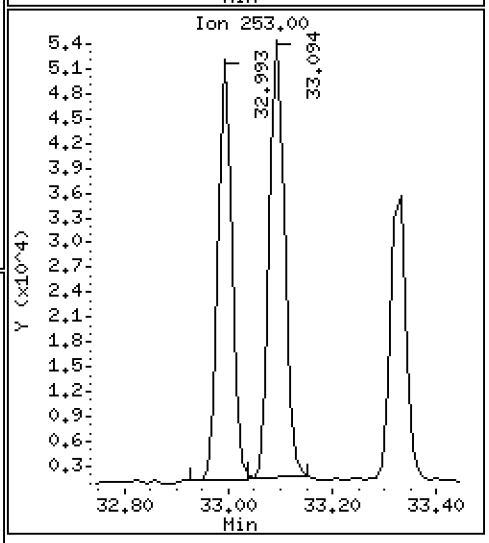
66 Benzo(a)pyrene

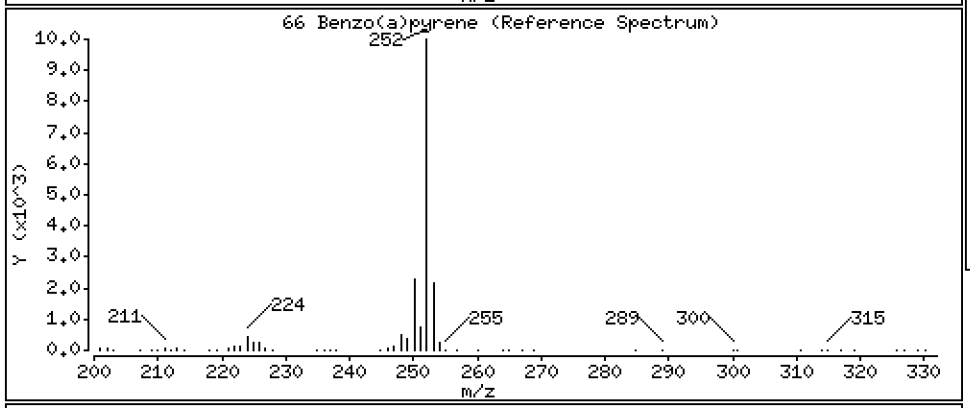
Concentration: 4.058 ug/mL

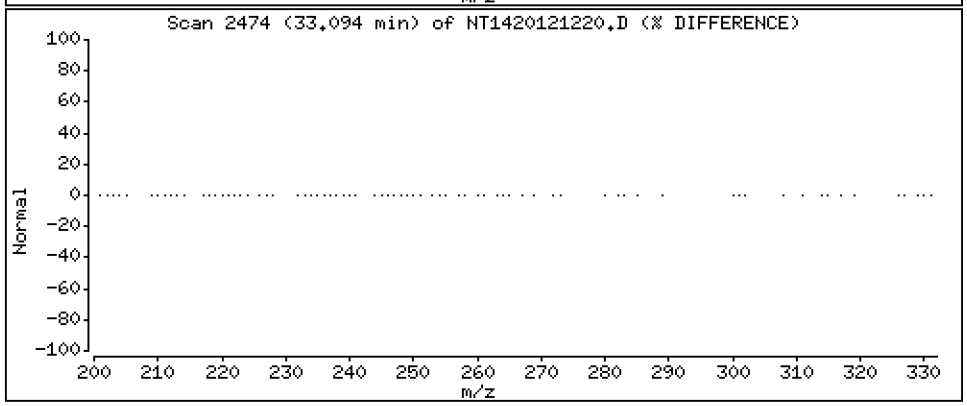












Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121220.D

Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

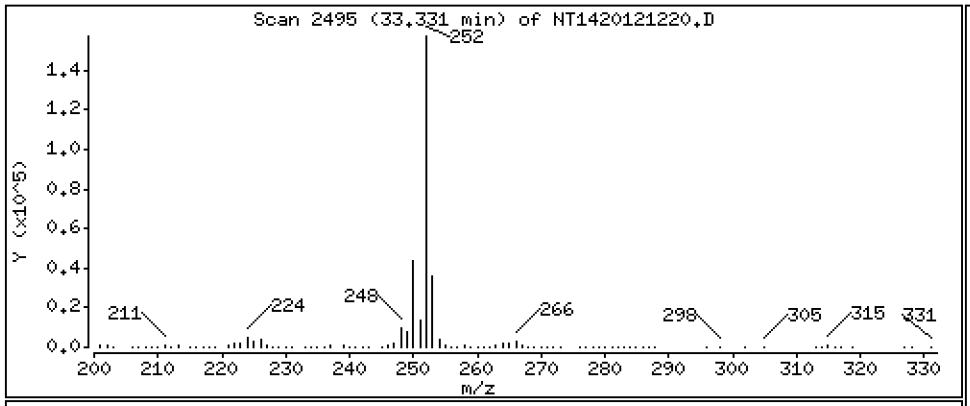
Operator: VTS

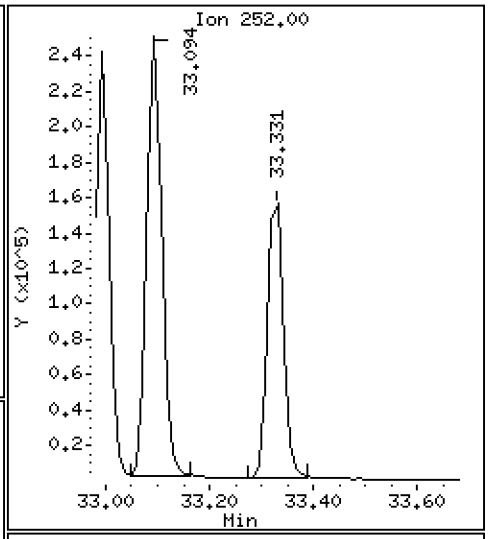
Column phase: Rxi-17Sil MS

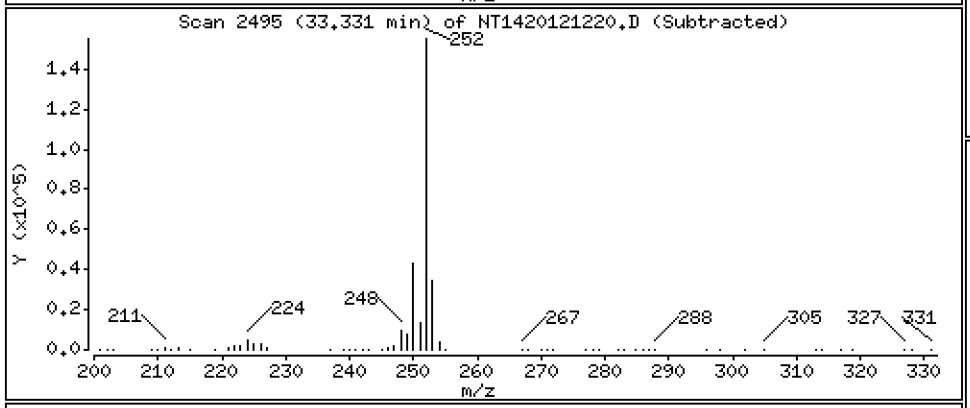
Column diameter: 0.25

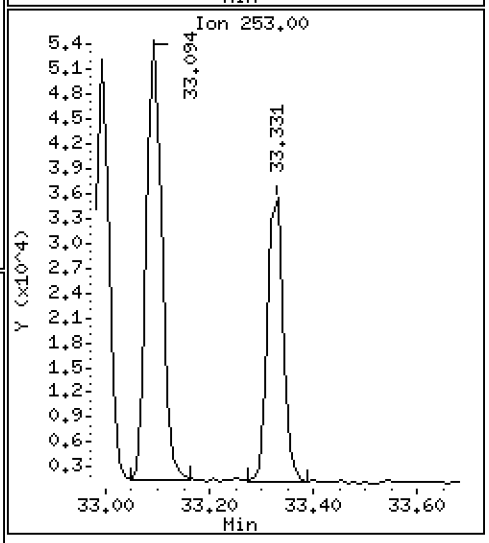
68 Perylene

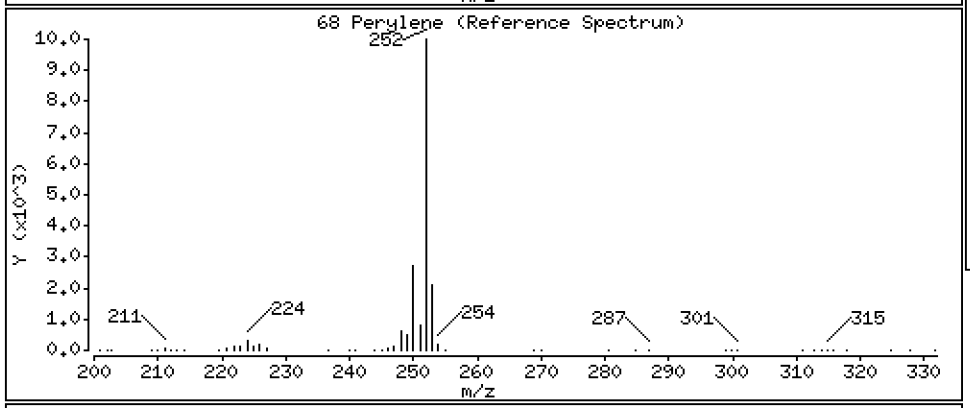
Concentration: 2.582 ug/mL

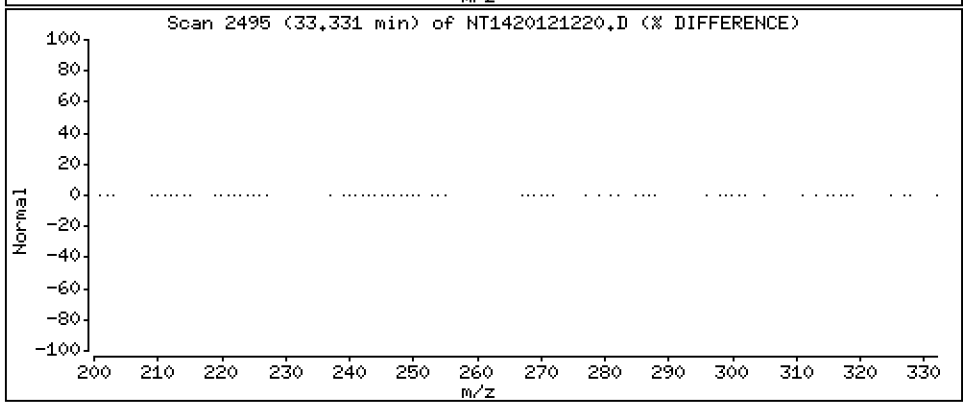












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

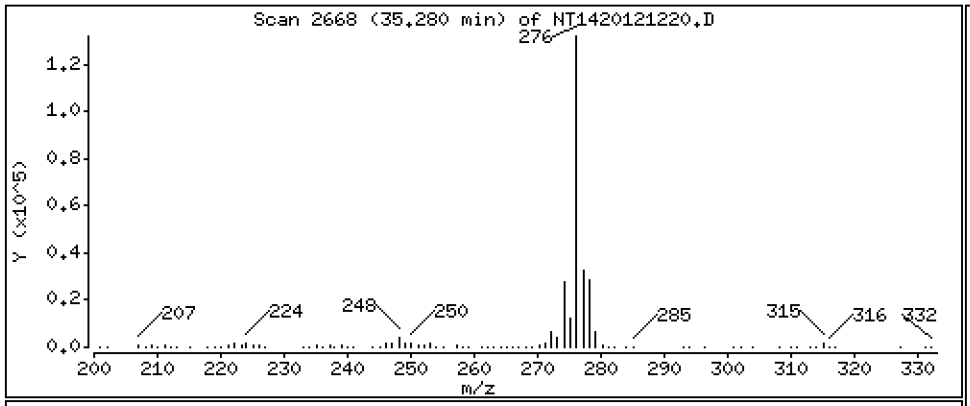
Operator: VTS

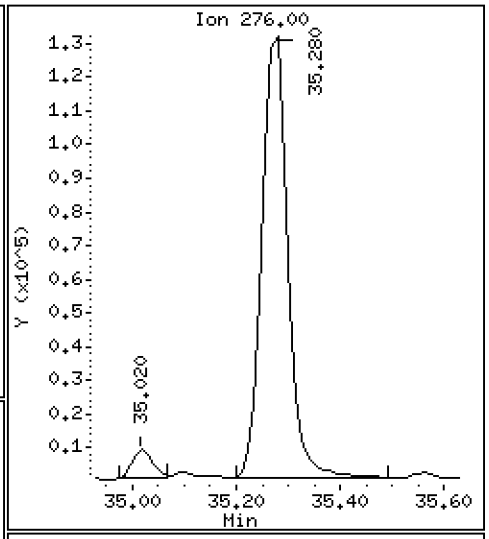
Column phase: Rxi-17Sil MS

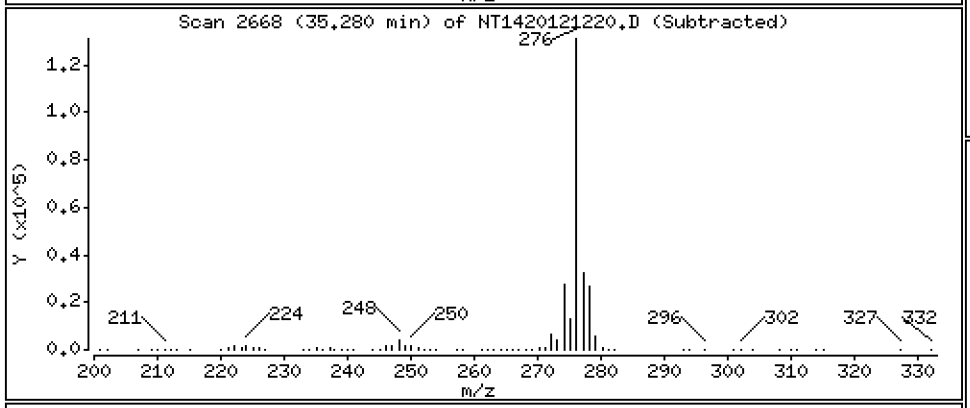
Column diameter: 0.25

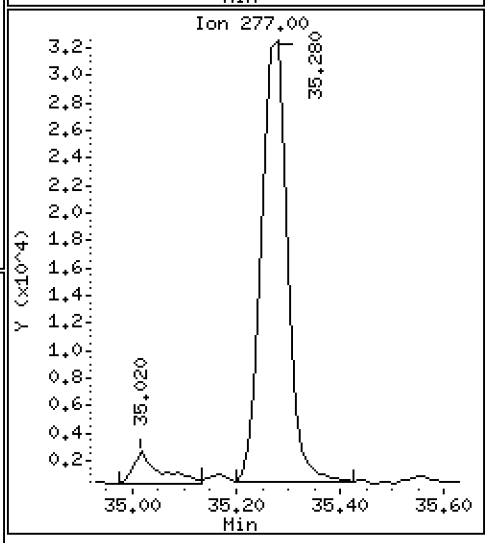
69 Indeno(1,2,3-cd)pyrene

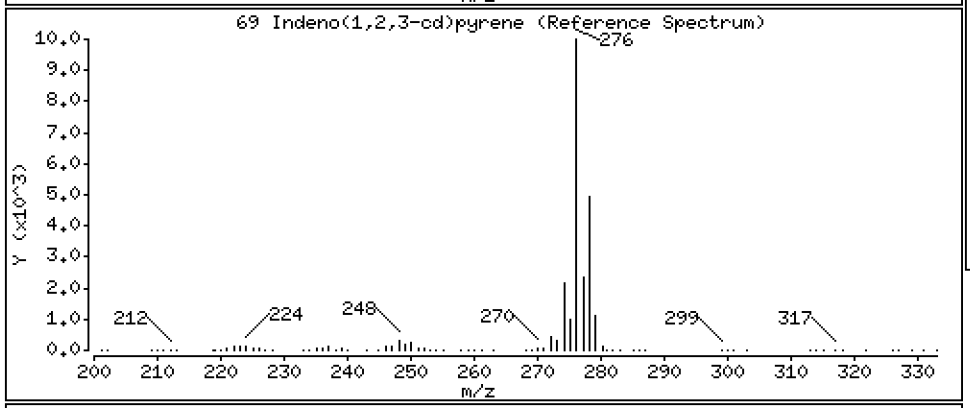
Concentration: 3.081 ug/mL

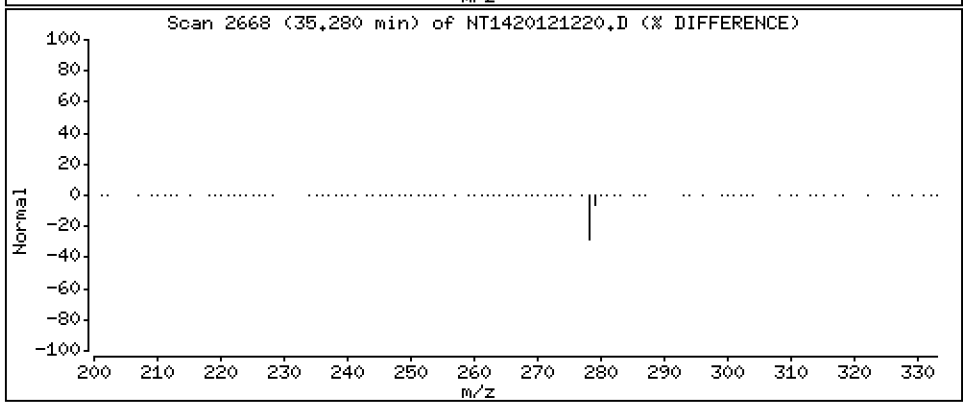












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

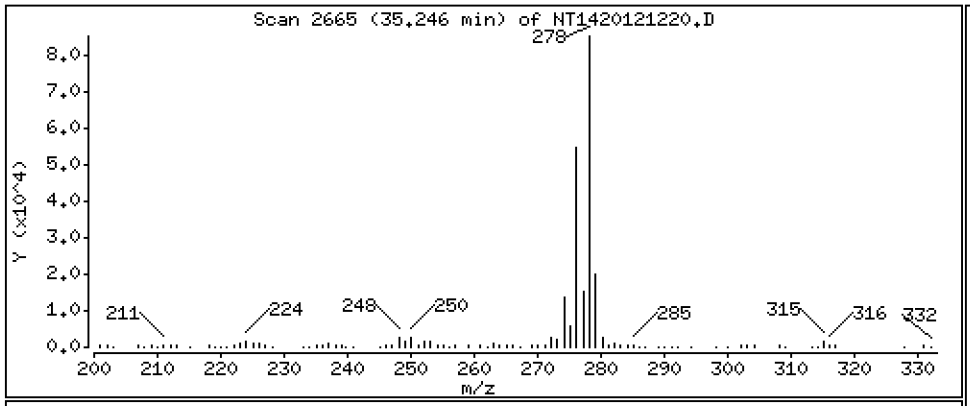
Operator: VTS

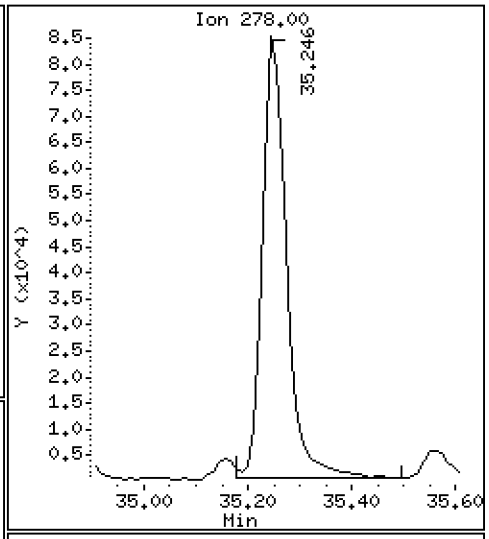
Column phase: Rxi-17Sil MS

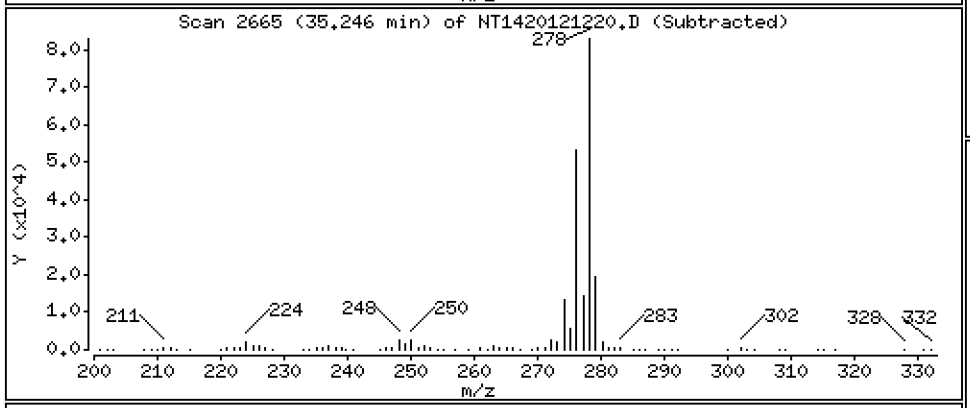
Column diameter: 0.25

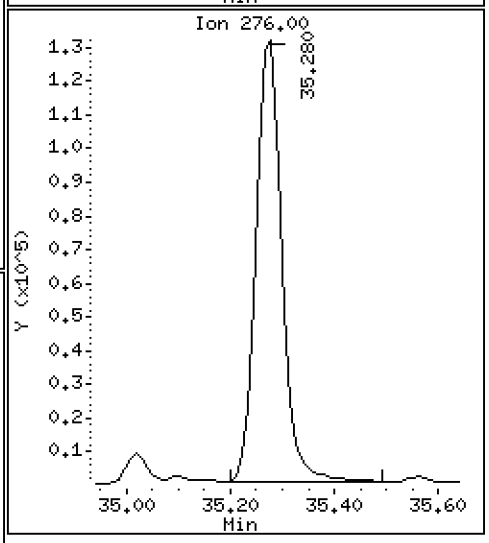
70 Dibenzo(a,h)anthracene

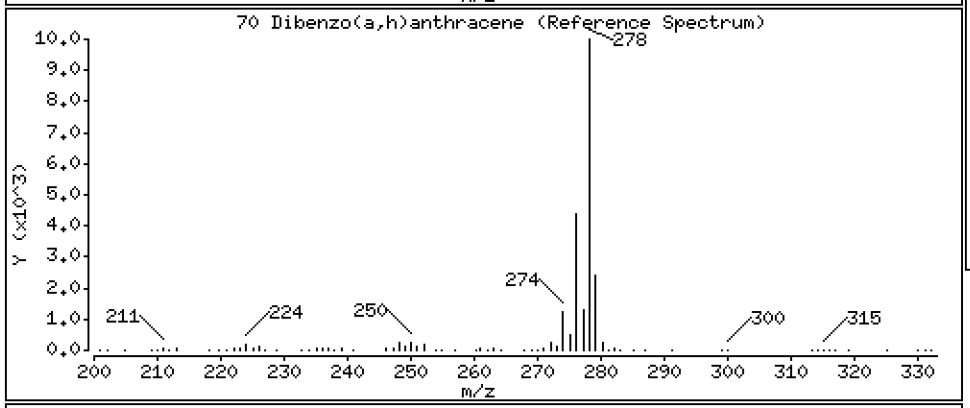
Concentration: 2.113 ug/mL

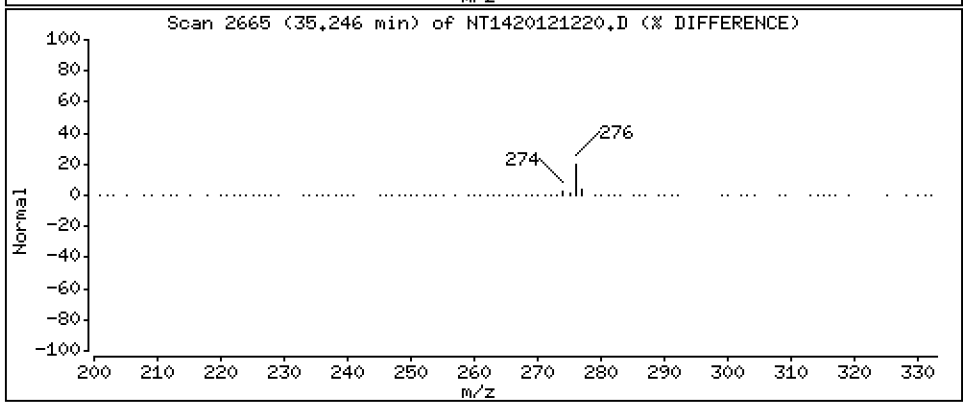












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Date : 13-DEC-2020 02:22

Client ID:

Instrument: nt14.i

Sample Info: BIK0323-MSD1

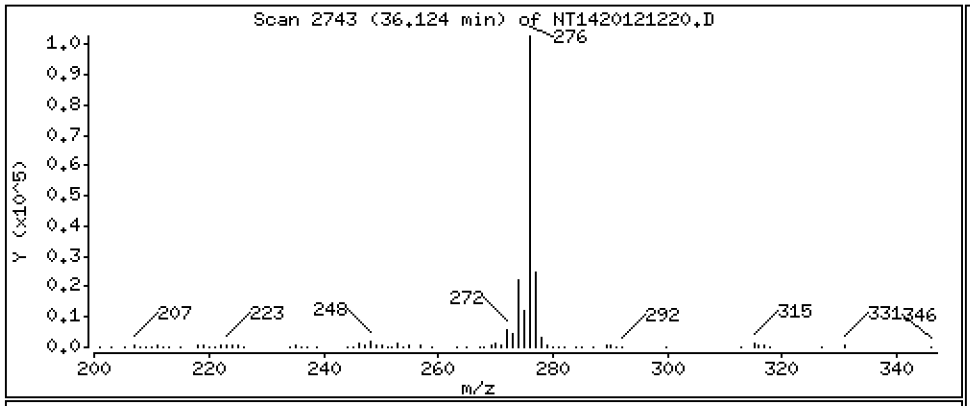
Operator: VTS

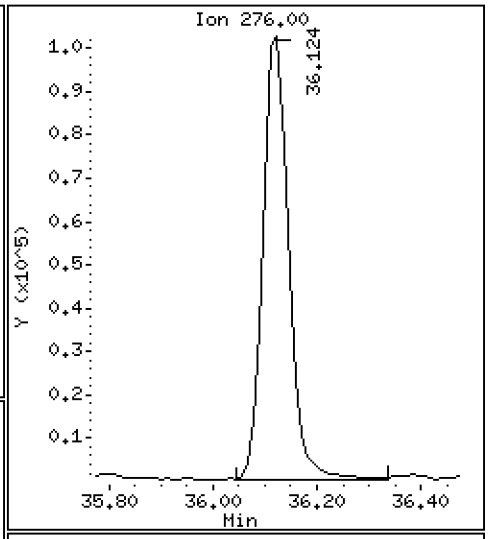
Column phase: Rxi-17Sil MS

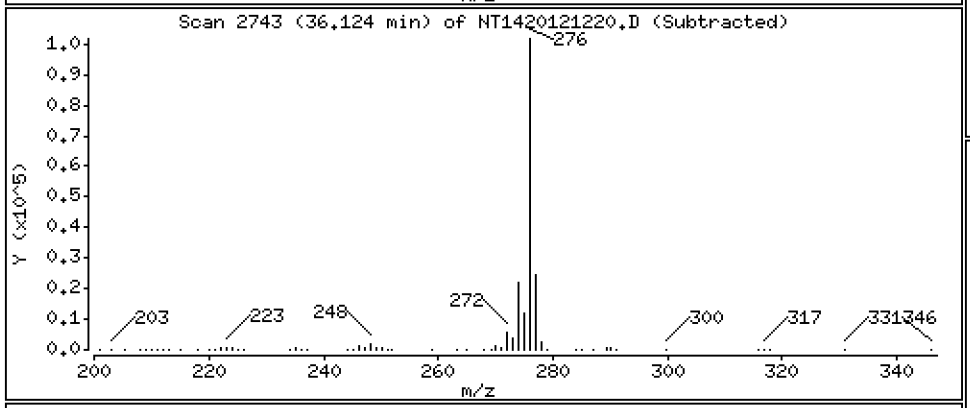
Column diameter: 0.25

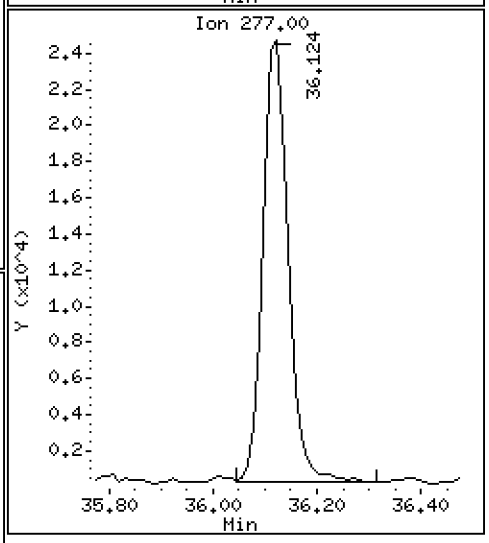
74 Benzo(g,h,i)perylene

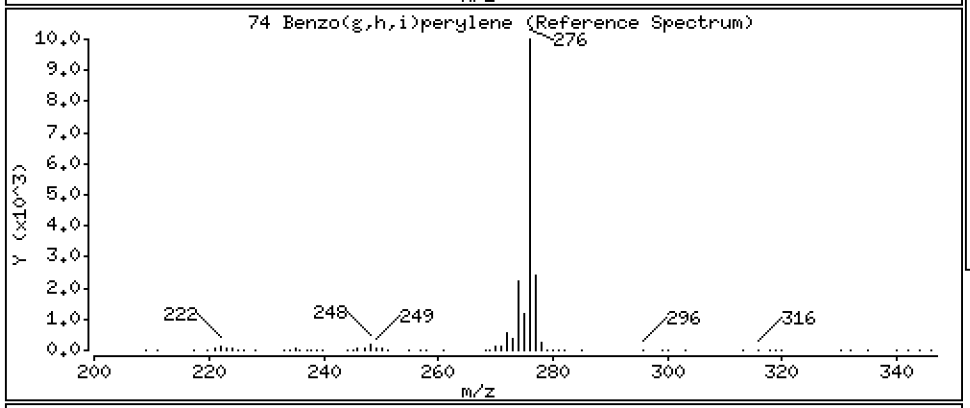
Concentration: 2.698 ug/mL

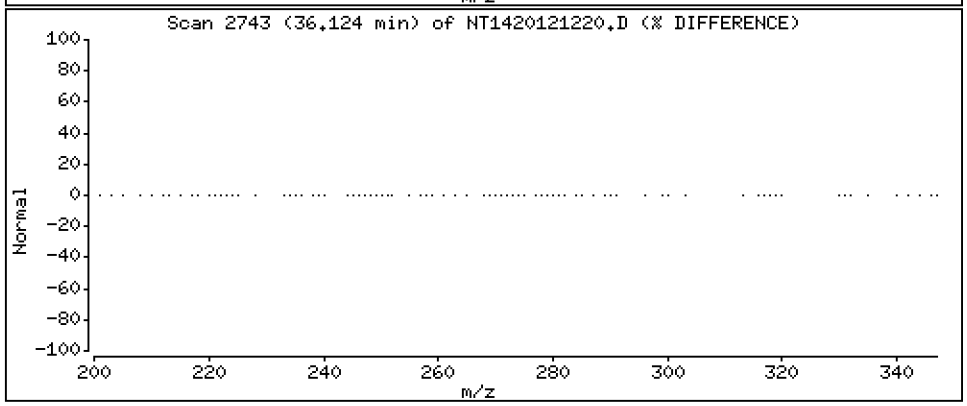












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201212A.b\NT1420121220.D
Lab Smp Id: BIK0323-MSD1
Inj Date : 13-DEC-2020 02:22
Operator : VTS Inst ID: nt14.i
Smp Info : BIK0323-MSD1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201212A.b\ALKYLPNA.m
Meth Date : 16-Dec-2020 07:38 yev Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: ORGDATA102

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
	1 trans-Decalin	138	6.914	6.924	(0.371)	13929	1.38487	1.385
	2 cis-Decalin	138	8.003	8.024	(0.430)	11433	1.51067	1.511
$	6 Naphthalene-d8	136	11.619	11.619	(0.624)	163378	1.66384	1.664(R)
	7 Naphthalene	128	11.685	11.685	(0.628)	163158	1.66082	1.661
	12 Benzo(b)thiophene	134	12.135	12.135	(0.652)	126588	1.53357	1.534
	16 2-Methylnaphthalene	141	13.520	13.520	(0.726)	98975	1.65273	1.653
	17 1-methylnaphthalene	141	13.971	13.971	(0.750)	94976	1.56148	1.561
	18 Biphenyl	154	15.157	15.157	(0.814)	150866	1.67387	1.674
	19 2,6-Dimethylnaphthalene	156	15.234	15.245	(0.818)	118219	1.79666	1.797
	20 Acenaphthylene	152	16.795	16.806	(0.902)	186945	1.73271	1.733
$	21 Acenaphthene-d10	164	17.081	17.081	(0.917)	102251	1.73413	1.734(R)
	22 Acenaphthene	153	17.201	17.202	(0.924)	160020	2.26402	2.264
	23 Dibenzofuran	168	17.575	17.586	(0.944)	185269	1.80684	1.807
	24 1,6,7-Trimethylnaphthalene	170	17.806	17.806	(0.956)	131125	1.96557	1.966
*	25 Fluorene-d10	176	18.621	18.621	(1.000)	240654	2.00000	
	26 Fluorene	166	18.723	18.723	(1.005)	168185	2.10402	2.104
	30 Dibenzothiophene	184	21.626	21.637	(1.161)	249517	2.16891	2.169
$	35 Phenanthrene-d10	188	21.941	21.952	(0.995)	209989	2.17385	2.174(R)
	36 Phenanthrene	178	22.029	22.029	(0.999)	704675	6.30919	6.309
*	250 Anthracene-d10	188	22.062	22.062	(1.000)	201683	2.00000	
	37 Anthracene	178	22.128	22.128	(1.003)	231701	2.11084	2.111
	42 Carbazole	167	23.414	23.414	(1.061)	212001	2.23025	2.230
	43 1-Methylphenanthrene	192	23.853	23.864	(1.081)	224170	2.73444	2.734
	44 Fluoranthene	202	25.833	25.833	(1.171)	962079	7.80457	7.805
	46 Pyrene	202	26.690	26.690	(1.210)	1156326	8.88929	8.889
	51 Naphthobenzothiophene	234	29.245	29.256	(1.326)	312830	2.63845	2.638
	55 Benzo(a)anthracene	228	29.839	29.839	(0.906)	515827	4.38255	4.383
$	56 Chrysene-d12	240	29.963	29.963	(0.910)	204292	2.19770	2.198(R)
	57 Chrysene	228	30.042	30.042	(0.912)	577756	4.93878	4.939
	62 Benzo(b)fluoranthene	252	32.272	32.272	(0.980)	595884	4.48382	4.484
	63 Benzo(k)fluoranthene	252	32.317	32.317	(0.981)	375408	2.80265	2.803
	293 Benzo(j)fluoranthene	252	32.384	32.384	(0.983)	386864	3.30409	3.304
	246 Total Benzofluoranthenes	252	32.272	32.272	(0.980)	1317766	10.6868	10.69(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.936	32.936	(1.000)	272640	2.00000	
64 Benzo(e)pyrene	252	32.993	32.993	(1.002)	456873	3.75473	3.755
66 Benzo(a)pyrene	252	33.094	33.094	(1.005)	466499	4.05776	4.058
$ 67 Perylene-d12	264	33.274	33.274	(1.010)	192401	1.70664	1.707(R)
68 Perylene	252	33.330	33.331	(1.012)	311763	2.58181	2.582
69 Indeno(1,2,3-cd)pyrene	276	35.279	35.279	(1.071)	438613	3.08090	3.081
70 Dibenzo(a,h)anthracene	278	35.245	35.257	(1.070)	265792	2.11319	2.113
74 Benzo(g,h,i)perylene	276	36.124	36.124	(1.097)	337484	2.69840	2.698

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
Lab File ID: NT1420121220.D
Lab Smp Id: BIK0323-MSD1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201212A.b\ALKYLPNA.m
Misc Info:

Calibration Date: 12-DEC-2020
Calibration Time: 23:11
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	215231	107616	430462	240654	11.81
250 Anthracene-d10	196849	98425	393698	201683	2.46
251 Benzo(e)pyrene-d1	268559	134280	537118	272640	1.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.62	18.12	19.12	18.62	-0.00
250 Anthracene-d10	22.06	21.56	22.56	22.06	-0.00
251 Benzo(e)pyrene-d1	32.94	32.44	33.44	32.94	-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 - NT1420121220.D

Lab ID: BIK0323-MSD1
nt14.i, 20201212A.b\ALKYLPNA.m, 13-DEC-2020 02:22

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

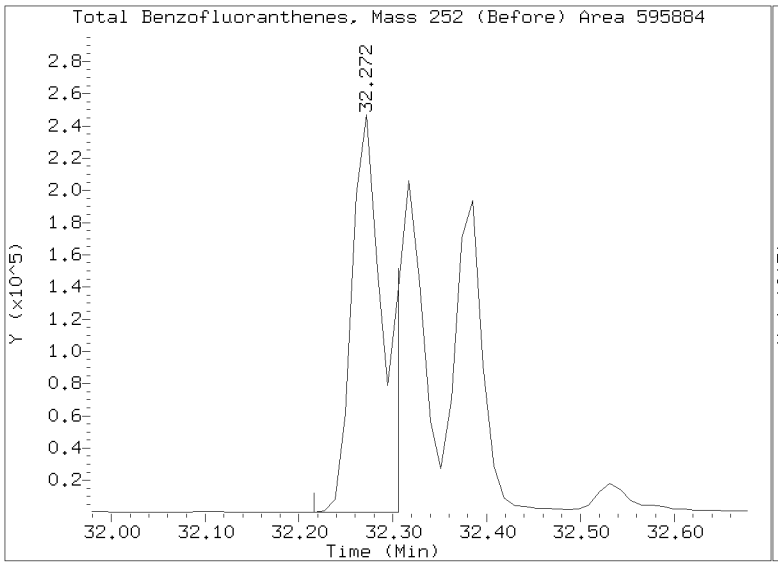
RRT check based on Ccal File: NT1420121216A.D

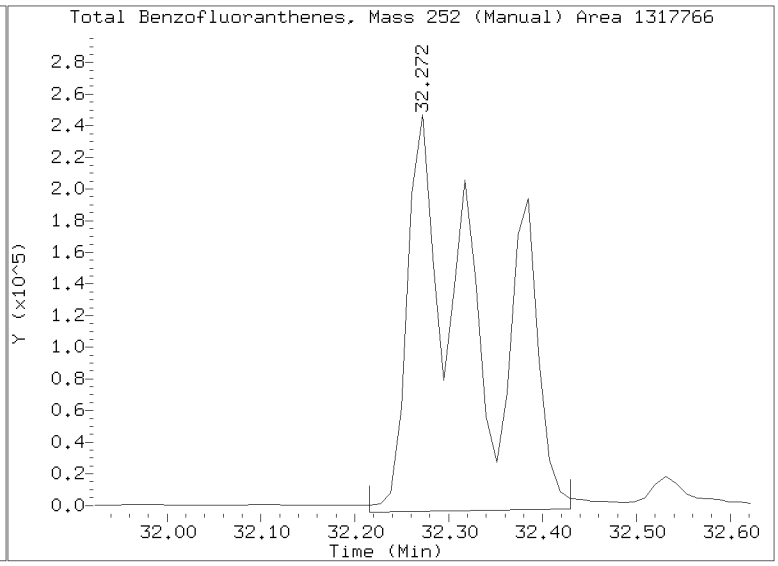
On Column LOD for nt14.i, 20201212A.b\ALKYLPNA.m, TARGETS.sub = 0.0000

* 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/20201212A.b/NT1420121220.D
Injection Date: 13-DEC-2020 02:22
Lab ID:BIK0323-MSD1 Client ID:
Report Date: 12/16/2020 07:38





Analytical Resources, Incorporated
Analytical Chemists and Consultants

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270E-SIM

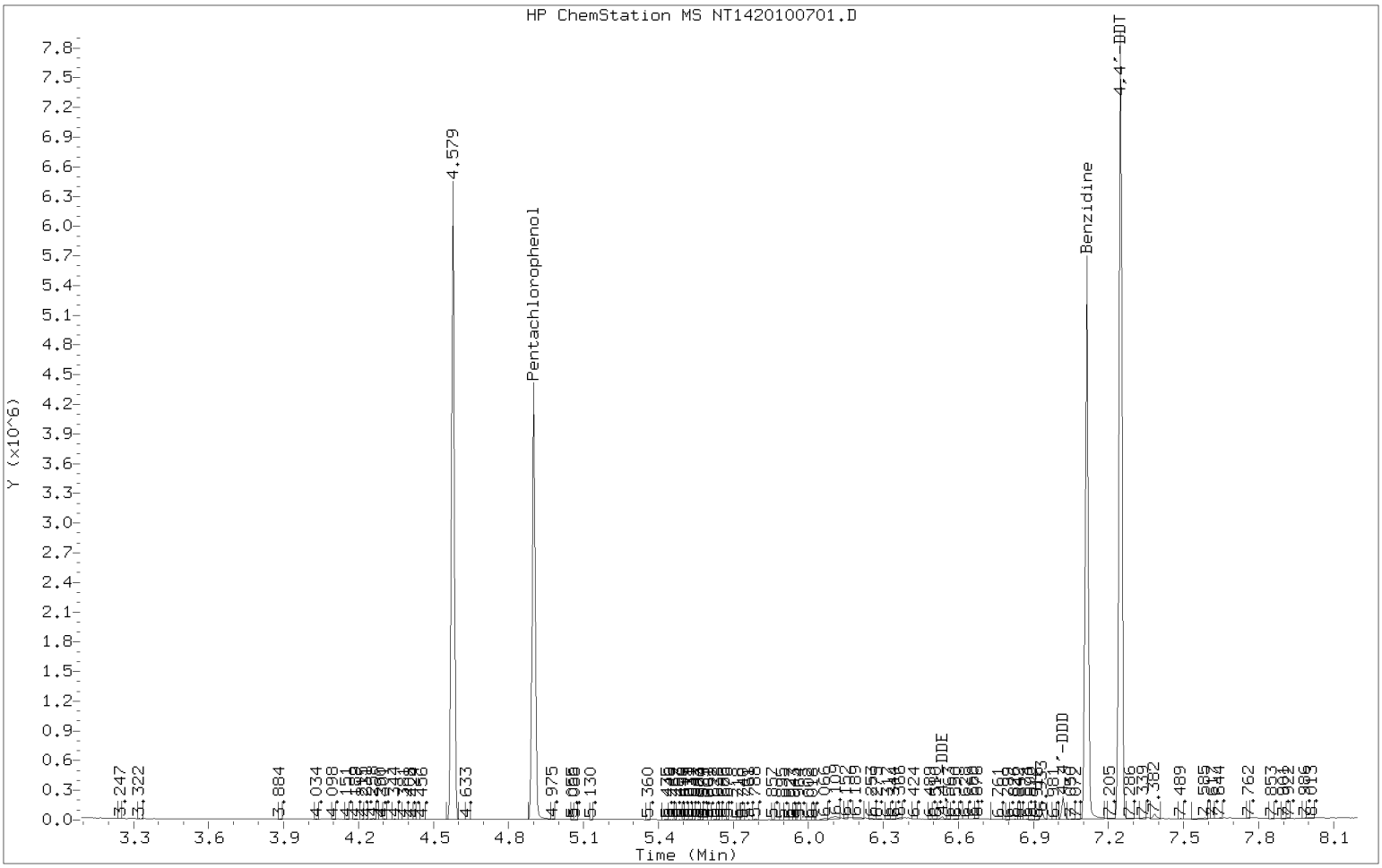
Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Lab File ID:	NT1420100701.D	Injection Date:	10/07/20
Instrument ID:	NT14	Injection Time:	10:11
Sequence:	SIJ0085	Lab Sample ID:	SIJ0085-TUN1

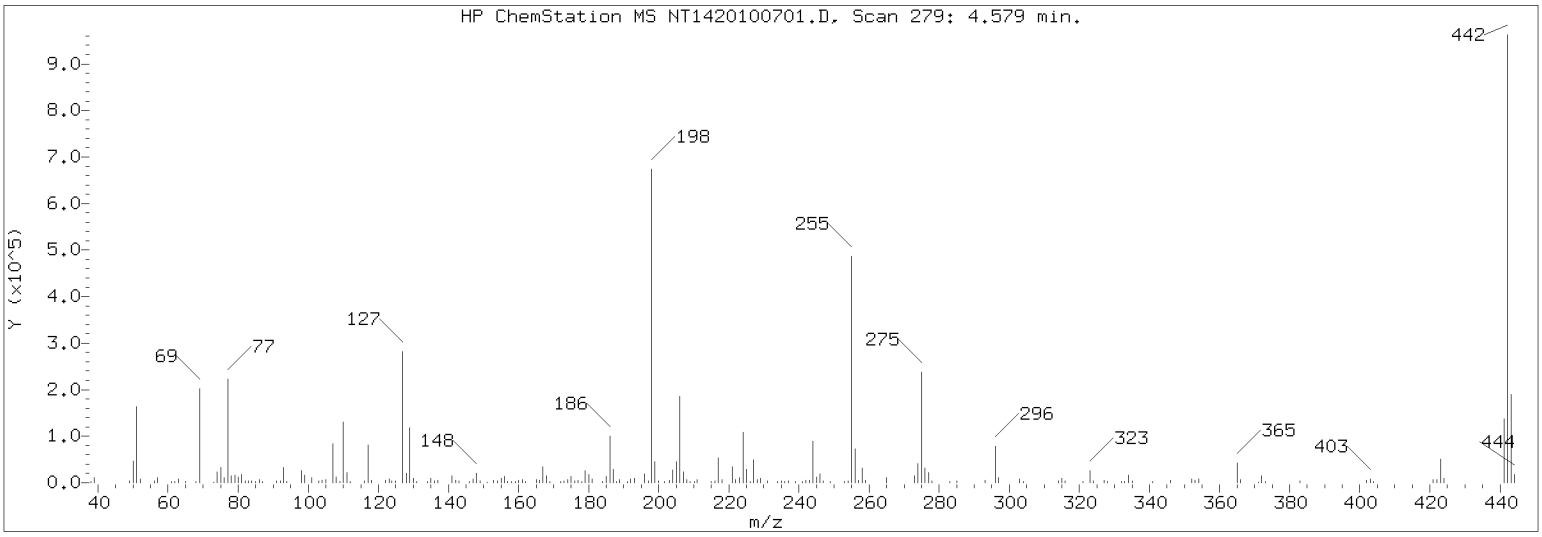
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
68	Less than 2% of 69	1.44	PASS
69	Less than 100% of 198	31.9	PASS
70	Less than 2% of 69	0	PASS
197	Less than 2% of 198	0.461	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.65	PASS
365	1 - 100% of 198	6.47	PASS
441	Less than 150% of 443	73.3	PASS
442	1 - 200% of 198	141	PASS
443	15 - 24% of 442	19.5	PASS
4,4'-DDD	Less than 20% of 4,4'-DDT		
4,4'-DDE	Less than 20% of		
4,4'-DDT	Base peak, 100% relative abundance		

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SIJ0085-TUN1	NT1420100701.D	10/07/2020	10:11
Cal Standard	SIJ0085-CAL4	NT1420100702.D	10/07/2020	10:24
Cal Standard	SIJ0085-CAL6	NT1420100703.D	10/07/2020	11:48
Cal Standard	SIJ0085-CAL1	NT1420100704.D	10/07/2020	12:38
Cal Standard	SIJ0085-CAL5	NT1420100705.D	10/07/2020	13:26
Cal Standard	SIJ0085-CAL2	NT1420100706.D	10/07/2020	14:17
Cal Standard	SIJ0085-CAL3	NT1420100707.D	10/07/2020	15:08
Secondary Cal Check	SIJ0085-SCV1	NT1420100709.D	10/07/2020	16:45
Initial Cal Blank	SIJ0085-ICB1	NT1420100710.D	10/07/2020	17:33
Initial Cal Check	SIJ0085-ICV1	NT1420100711.D	10/07/2020	18:22
Instrument Blank	SIJ0085-IBL1	NT1420100712.D	10/07/2020	19:11
ZZZZZ	20I0231-01RE1	NT1420100713.D	10/07/2020	19:59
ZZZZZ	20I0231-02RE1	NT1420100714.D	10/07/2020	20:48
ZZZZZ	20I0231-03RE1	NT1420100715.D	10/07/2020	21:36
ZZZZZ	20I0231-05RE1	NT1420100717.D	10/07/2020	23:13
ZZZZZ	20I0231-07RE1	NT1420100719.D	10/08/2020	0:49
ZZZZZ	20I0231-08RE1	NT1420100720.D	10/08/2020	1:38
ZZZZZ	20I0231-09RE1	NT1420100721.D	10/08/2020	2:26
ZZZZZ	20I0231-10RE1	NT1420100722.D	10/08/2020	3:14
ZZZZZ	20I0231-11RE1	NT1420100723.D	10/08/2020	4:03
Calibration Check	SIJ0085-CCV1	NT1420100724.D	10/08/2020	4:51

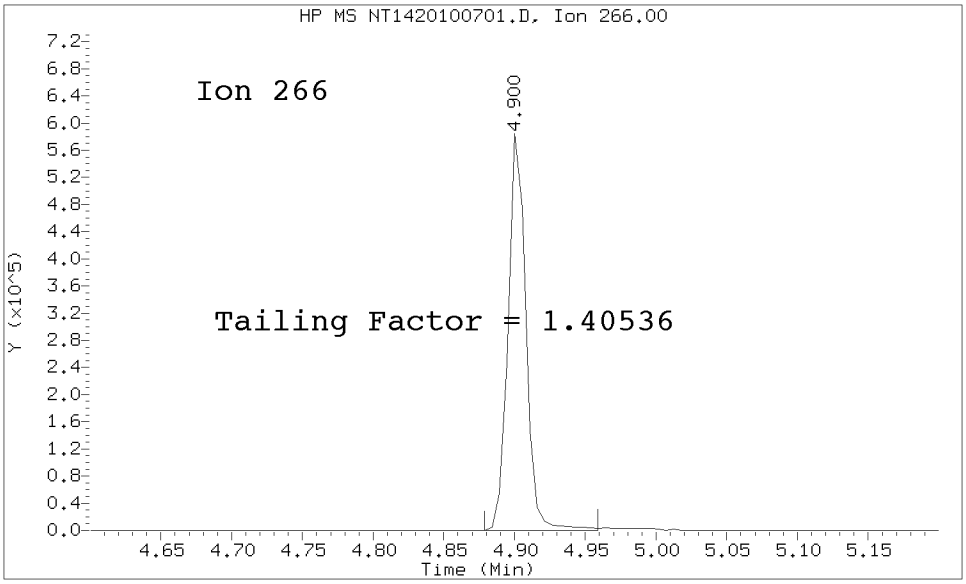
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20201007.b/NT1420100701.D/NT1420100701.D
Method Used: \20201007.b\DFTPP8270E.m Inst: nt14
Injection Date: 07-OCT-2020 10:11 Operator: VTS
Sample Info: SIJ0085-TUN1 SIJ0085-TUN1
Report Date: 10/09/2020 08:53



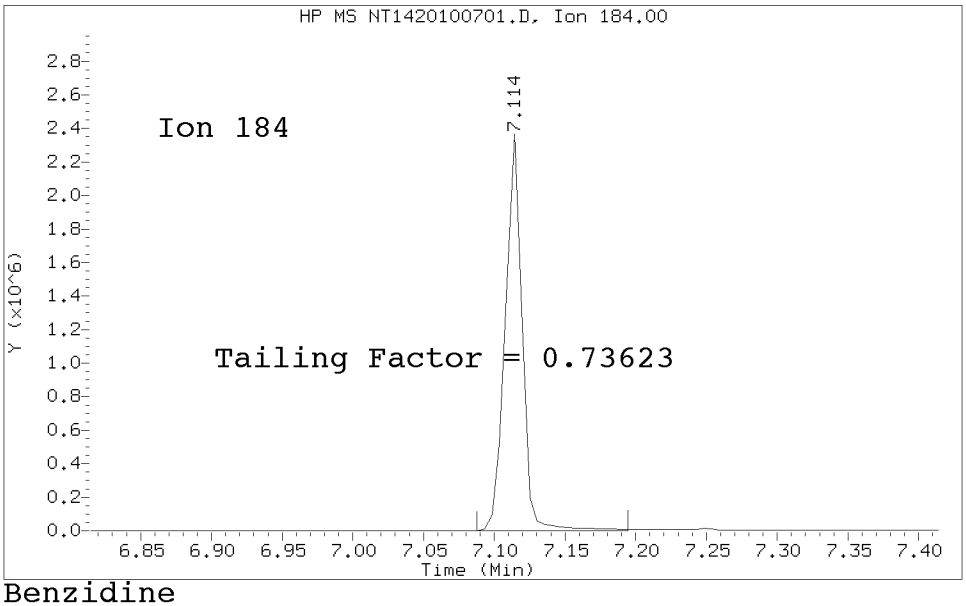


Datafile Analyzed: /20201007.b/NT1420100701.D/NT1420100701.D
Method Used: \20201007.b\DFTPP8270E.m\sw846ddt.m Inst: nt14
Injection Date: 07-OCT-2020 10:11 Operator: JZ
Sample Info: SIJ0XXX-TUN1
Report Date: 10/09/2020 08:53



Pentachlorophenol
==========
Exp. RT = 4.900
Found RT = 4.900

Tail Factor = 1.405 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.114
Found RT = 7.114

Tail Factor = 0.736 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.4053628	2.000	PASS
Benzidine	0.7362251	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1276129			N/A
4,4-DDE	4051	0.3	20.0	PASS
4,4-DDD	44055	3.3	20.0	PASS
4,4-DDD + DDE	48106	3.6	20.0	PASS

Tuning Sample, nt14.i/20201007.b/NT1420100701.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	0.46 (1.44)
69	Mass 69 relative abundance	31.94
70	Less than 2.00% of mass 69	0.00 (0.00)
197	Less than 2.00% of mass 198	0.46
199	5.00 - 9.00% of mass 198	6.65
365	1.00 - 100.00% of mass 198	6.47
441	Less than 150.00% of mass 443	20.20 (73.33)
442	Less than 200.00% of mass 198	140.95
443	15.00 - 24.00% of mass 442	27.55 (19.55)

Data File: NT1420100701.D
Spectrum: Avg. Scans 278-280 (4.58), Background Scan 272
Location of Maximum: 442.00
Number of points: 201

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	1611	124.00	2560	192.00	6276	265.00	8748
39.00	9098	125.00	2264	193.00	7013	273.00	11379
49.00	1311	127.00	207552	196.00	13832	274.00	29256
50.00	36736	128.00	15932	197.00	2232	275.00	165312
51.00	126848	129.00	87728	198.00	484288	276.00	22296
52.00	6325	130.00	7692	199.00	32224	277.00	15785
56.00	3265	131.00	771	200.00	2133	278.00	2083
57.00	8731	134.00	2232	201.00	1677	283.00	874
61.00	700	135.00	7259	203.00	3939	285.00	2151
62.00	1786	136.00	2444	204.00	19424	293.00	3634
63.00	5960	137.00	3313	205.00	33120	296.00	57720
65.00	2324	141.00	12142	206.00	132480	297.00	7735
68.00	2223	142.00	3147	207.00	17392	303.00	6179
69.00	154688	143.00	2464	208.00	4908	304.00	859
73.00	681	146.00	1704	209.00	788	314.00	2768
74.00	17208	147.00	6505	210.00	1771	315.00	6881
75.00	25608	148.00	15223	211.00	4926	316.00	3382
76.00	8556	149.00	2441	215.00	735	321.00	838
77.00	170112	151.00	682	216.00	2464	323.00	17976
78.00	11515	153.00	3408	217.00	37960	324.00	3192
79.00	13007	154.00	2639	218.00	4860	327.00	3669
80.00	9780	155.00	7087	221.00	23352	328.00	869
81.00	13272	156.00	10365	222.00	5324	332.00	731
82.00	3125	157.00	1486	223.00	8424	333.00	733
83.00	2765	158.00	1763	224.00	78312	334.00	11934
84.00	662	159.00	1503	225.00	19896	335.00	3109
85.00	2045	160.00	4069	226.00	1790	341.00	908
86.00	5760	161.00	5581	227.00	35384	346.00	4456
87.00	1727	162.00	729	228.00	5126	352.00	5824
91.00	2838	165.00	4905	229.00	7313	353.00	3740
92.00	2840	166.00	3054	231.00	2278	354.00	5874
93.00	24904	167.00	25360	234.00	1819	365.00	31344
94.00	1429	168.00	11411	235.00	2079	366.00	4724
98.00	19440	169.00	1727	236.00	1466	371.00	678
99.00	13142	172.00	1787	237.00	2042	372.00	10553
101.00	7647	173.00	2530	239.00	719	373.00	1846
103.00	2165	174.00	5454	241.00	989	383.00	2091
104.00	4836	175.00	9785	242.00	4264	402.00	4064
105.00	4897	176.00	2246	243.00	4691	403.00	5510
106.00	697	177.00	4153	244.00	63136	404.00	1571
107.00	63464	178.00	745	245.00	8415	421.00	5059
108.00	9088	179.00	19048	246.00	14109	422.00	4905
109.00	1552	180.00	13423	247.00	2271	423.00	36056
110.00	98656	181.00	6161	249.00	1833	424.00	6636
111.00	16440	184.00	1429	253.00	750	441.00	97848
112.00	1866	185.00	10069	254.00	1955	442.00	682624
116.00	3130	186.00	71968	255.00	344640	443.00	133440
117.00	62280	187.00	20688	256.00	51192	444.00	12305
118.00	4682	188.00	1797	257.00	4076		

122.00	3721	189.00	4659	258.00	22792	
123.00	6613	191.00	1774	259.00	3624	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	DI00041	Instrument:	NT14
Calibration Date:	09/08/2020	Column (1):	ZB-5MS

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RRF		RRF		RRF		RRF		RRF		RRF
Fluorene-d10	2	144793.5										
Anthracene-d10	2	151113										
Benzo(e)pyrene-d12	2	194381										

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	DI00041	Instrument:	NT14
Calibration Date:	09/08/2020	Column (1):	ZB-5MS

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)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	DJ00029	Instrument:	NT14
Calibration Date:	10/07/2020	Column (1):	ZB-5MS

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RRF		RRF		RRF		RRF		RRF		RRF
trans-Decalin	0.1	6.976352E-02	0.25	8.246819E-02	0.5	8.208264E-02	2.5	0.0905733	5	9.006825E-02	10	8.657641E-02
cis-Decalin	0.1	5.200388E-02	0.25	5.837224E-02	0.5	6.613032E-02	2.5	6.875174E-02	5	6.640687E-02	10	6.571472E-02
Naphthalene	0.1	0.8325175	0.25	0.8114621	0.5	0.8422866	2.5	0.8242143	5	0.8148906	10	0.7732564
1-Methylnaphthalene	0.1	0.6990924	0.25	0.4788062	0.5	0.5036957	2.5	0.4942755	5	0.4916775	10	0.4684431
2-Methylnaphthalene	0.1	0.5179441	0.25	0.4655131	0.5	0.4882775	2.5	0.5121687	5	0.5128088	10	0.4894388
Biphenyl	0.1	0.7928998	0.25	0.7238304	0.5	0.7101733	2.5	0.7618376	5	0.764252	10	0.7412584
2,6-Dimethylnaphthalene	0.1	0.4989094	0.25	0.5556715	0.5	0.5636366	2.5	0.5682649	5	0.5587205	10	0.5358131
Acenaphthylene	0.1	0.9061061	0.25	0.8194818	0.5	0.8682598	2.5	0.94102	5	0.9235384	10	0.9215043
Acenaphthene	0.1	0.5895291	0.25	0.5749336	0.5	0.5757759	2.5	0.6021717	5	0.5983592	10	0.5836133
Dibenzofuran	0.1	0.857381	0.25	0.807031	0.5	0.8475917	2.5	0.8747488	5	0.8764949	10	0.8497103
2,3,5-Trimethylnaphthalene	0.1	0.5357037	0.25	0.5274009	0.5	0.5356003	2.5	0.5864214	5	0.5794769	10	0.5618775
Fluorene	0.1	0.6498208	0.25	0.644182	0.5	0.6513192	2.5	0.6915334	5	0.6880851	10	0.6609462
Benzo(b)thiophene	0.1	0.7488194	0.25	0.6836583	0.5	0.662261	2.5	0.6794853	5	0.6784908	10	0.6633111
Phenanthrene	0.1	1.173055	0.25	1.07415	0.5	1.123848	2.5	1.110139	5	1.114972	10	1.049329
Anthracene	0.1	1.246465	0.25	1.015759	0.5	1.046029	2.5	1.095193	5	1.0743	10	1.053339
Carbazole	0.1	0.9762922	0.25	0.8894007	0.5	0.9172786	2.5	0.9782606	5	0.9575252	10	0.9370706
1-Methylphenanthrene	0.1	0.7671942	0.25	0.760173	0.5	0.8136276	2.5	0.8519242	5	0.8633208	10	0.8215277
Fluoranthene	0.1	1.236035	0.25	1.121025	0.5	1.171809	2.5	1.279513	5	1.275712	10	1.250461
Dibenzothiophene	0.1	0.953192	0.25	0.9294516	0.5	0.9303191	2.5	0.9792702	5	0.984566	10	0.959691
Pyrene	0.1	1.331408	0.25	1.224148	0.5	1.213994	2.5	1.319611	5	1.329759	10	1.320801
Benzo(a)anthracene	0.1	0.8763347	0.25	0.7894445	0.5	0.7975884	2.5	0.9040921	5	0.9066241	10	0.9063876
Chrysene	0.1	0.8622567	0.25	0.8443263	0.5	0.8248472	2.5	0.8685951	5	0.8754086	10	0.8734866
Benzo(b)fluoranthene	0.1	0.9419617	0.25	0.867628	0.5	0.951131	2.5	1.028511	5	1.010929	10	1.049157
Benzo(j)fluoranthene	0.1	0.9039303	0.25	0.8109345	0.5	0.8021528	2.5	0.9013495	5	0.8522586	10	0.8828252
Benzo(k)fluoranthene	0.1	1.086033	0.25	0.9947285	0.5	0.8722978	2.5	0.9234414	5	1.030431	10	0.9886371
Benzofluoranthenes, Total	0.3	0.914016	0.75	0.8317556	1.5	0.847698	7.5	0.930595	15	0.9480758	30	0.9551231
Benzo(e)pyrene	0.1	0.8787861	0.25	0.8599351	0.5	0.8449394	2.5	0.9075786	5	0.9331093	10	0.9312596
Benzo(a)pyrene	0.1	0.8301786	0.25	0.7592582	0.5	0.7853596	2.5	0.8836344	5	0.8918164	10	0.909816

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	DJ00029	Instrument:	NT14
Calibration Date:	10/07/2020	Column (1):	ZB-5MS

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RRF		RRF		RRF		RRF		RRF		RRF
Indeno(1,2,3-cd)pyrene	0.1	1.037286	0.25	0.9482086	0.5	0.9597054	2.5	1.068531	5	1.122973	10	1.129377
Dibenzo(a,h)anthracene	0.1	0.8834087	0.25	0.8489253	0.5	0.8204818	2.5	0.9733234	5	0.9833202	10	1.026537
Benzo(g,h,i)perylene	0.1	0.9348177	0.25	0.8295815	0.5	0.8801328	2.5	0.9468803	5	0.956302	10	0.9570557
Perylene	0.1	0.9198292	0.25	0.793068	0.5	0.829625	2.5	0.9288907	5	0.926447	10	0.9170021
Benzo(b)naphtho(2,1-d)thiophene	0.1	1.141164	0.25	1.13533	0.5	1.132635	2.5	1.220138	5	1.229175	10	1.196144
Naphthalene-d8	0.1	0.8588382	0.25	0.7957521	0.5	0.7879639	2.5	0.835773	5	0.8220143	10	0.7959781
Acenaphthene-d10	0.1	0.4750477	0.25	0.4872288	0.5	0.4749409	2.5	0.5067184	5	0.5068475	10	0.4893936
Phenanthrene-d10	0.1	0.9252462	0.25	0.9220916	0.5	0.9563307	2.5	1.002085	5	0.9924278	10	0.9493134
Chrysene-d12	0.1	0.7660224	0.25	0.6530345	0.5	0.6647636	2.5	0.6648494	5	0.680817	10	0.6619313
Perylene-d12	0.1	0.8784359	0.25	0.7779609	0.5	0.7950146	2.5	0.8323644	5	0.8461003	10	0.8321235

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	DJ00029	Instrument:	NT14
Calibration Date:	10/07/2020	Column (1):	ZB-5MS

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
trans-Decalin	8.358872E-02	9.2			RSD (15)	
cis-Decalin	6.289663E-02	10.2			RSD (15)	
Naphthalene	0.8164379	2.9			RSD (15)	
1-Methylnaphthalene	0.5226651	16.7		1.0000	QCOD (0.99)	
2-Methylnaphthalene	0.4976918	4.1			RSD (15)	
Biphenyl	0.7490419	4.0			RSD (15)	
2,6-Dimethylnaphthalene	0.546836	4.8			RSD (15)	
Acenaphthylene	0.8966517	5.0			RSD (15)	
Acenaphthene	0.5873971	1.9			RSD (15)	
Dibenzofuran	0.8521596	3.0			RSD (15)	
2,3,5-Trimethylnaphthalene	0.5544134	4.5			RSD (15)	
Fluorene	0.6643144	3.1			RSD (15)	
Benzo(b)thiophene	0.6860043	4.7			RSD (15)	
Phenanthrene	1.107582	3.9			RSD (15)	
Anthracene	1.088514	7.5			RSD (15)	
Carbazole	0.942638	3.7			RSD (15)	
1-Methylphenanthrene	0.8129613	5.2			RSD (15)	
Fluoranthene	1.222426	5.2			RSD (15)	
Dibenzothiophene	0.9560816	2.4			RSD (15)	
Pyrene	1.289954	4.3			RSD (15)	
Benzo(a)anthracene	0.8634119	6.4			RSD (15)	
Chrysene	0.8581534	2.3			RSD (15)	
Benzo(b)fluoranthene	0.9748863	6.9			RSD (15)	
Benzo(j)fluoranthene	0.8589085	5.2			RSD (15)	
Benzo(k)fluoranthene	0.9825948	7.7			RSD (15)	
Benzofluoranthenes, Total	0.9045439	5.8			RSD (15)	
Benzo(e)pyrene	0.8926013	4.2			RSD (15)	
Benzo(a)pyrene	0.8433439	7.3			RSD (15)	
Indeno(1,2,3-cd)pyrene	1.044347	7.5			RSD (15)	
Dibenzo(a,h)anthracene	0.9226661	9.0			RSD (15)	
Benzo(g,h,i)perylene	0.9174617	5.6			RSD (15)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	DJ00029	Instrument:	NT14
Calibration Date:	10/07/2020	Column (1):	ZB-5MS

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Perylene	0.8858103	6.7			RSD (15)	
Benzo(b)naphtho(2,1-d)thiophene	1.175764	3.8			RSD (15)	
Naphthalene-d8	0.8160533	3.4			RSD (15)	
Acenaphthene-d10	0.4900295	2.9			RSD (15)	
Phenanthrene-d10	0.9579158	3.5			RSD (15)	
Chrysene-d12	0.681903	6.2			RSD (15)	
Perylene-d12	0.8269999	4.4			RSD (15)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 10/9/2020 11:03:26AM

ANALYSIS SEQUENCE

SIJ0085

Instrument: NT14 Element Column ID: I005863
Calibration ID: DI00026 Tune File: 200104.U
EM Voltage: 1847

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIJ0085-TUN1	MS Tune	QC		1	I007631		
SIJ0085-CAL4	PAH 2.5	QC		2	I007920	I007919	
SIJ0085-CAL6	PAH 10	QC		3	I007921	I007919	
SIJ0085-CAL1	PAH 0.1	QC		4	I007926	I007919	
SIJ0085-CAL5	PAH 5.0	QC		5	I007922	I007919	
SIJ0085-CAL3	PAH 0.5	QC		6	I007924	I007919	
SIJ0085-CAL2	PAH 0.25	QC		7	I007925	I007919	
SIJ0085-SCV1	Secondary Cal Check	QC		8	I009393	I007919	
SIJ0085-ICB1	Initial Cal Blank	QC		9	I008041	I007919	
SIJ0085-ICV1	Initial Cal Check	QC		10	I007920	I007919	
SIJ0085-IBL1	Instrument Blank	QC		11	I008041	I007919	
20I0231-01RE1	PDI-028SC-A-07-08-191003	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	12		I007919	Added 10/5/2020 by YZ
20I0231-02RE1	PDI-028SC-A-09-10-191003	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	13		I007919	Added 10/5/2020 by YZ
20I0231-03RE1	PDI-028SC-A-10-11-191003	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	14		I007919	Added 10/5/2020 by YZ
20I0231-05RE1	PDI-069SC-A-08-09-191016	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	15		I007919	Added 10/5/2020 by YZ
20I0231-07RE1	PDI-080SC-A-00-01-200506	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	16		I007919	Added 10/5/2020 by YZ
20I0231-08RE1	PDI-081SC-A-10-11-191002	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	17		I007919	Added 10/5/2020 by YZ
20I0231-09RE1	PDI-082SC-A-04-05-191002	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	18		I007919	Added 10/5/2020 by YZ
20I0231-10RE1	PDI-082SC-A-07-08-191002	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	19		I007919	Added 10/5/2020 by YZ
20I0231-11RE1	PDI-165SC-A-02-03-200426	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	20		I007919	Added 10/5/2020 by YZ
SIJ0085-CCV1	Calibration Check	QC		21	I007920	I007919	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201007.b

	Time	Filename	LabID	ClientId	DF	
1	1011	NT1420100701.D	SIJ0085-TUN1		1	|NO ISTDS FOUND||
2	1024	NT1420100702.D	SIJ0085-CAL4		1	|18.63 237050||22.07 216685||32.93 311824|
3	1148	NT1420100703.D	SIJ0085-CAL6		1	|18.64 243221||22.08 226778||32.94 315078|
4	1238	NT1420100704.D	SIJ0085-CAL1		1	|18.63 219599||22.07 199428||32.93 285553|
5	1326	NT1420100705.D	SIJ0085-CAL5		1	|18.63 221965||22.07 204432||32.93 290471|
6	1417	NT1420100706.D	SIJ0085-CAL2		1	|18.63 218460||22.07 197976||32.93 287017|
7	1508	NT1420100707.D	SIJ0085-CAL3		1	|18.63 217147||22.07 196660||32.93 281303|
8	1556	NT1420100708.D	SIJ0085-CAL4		1	|18.63 206259||22.07 189225||32.93 280633|
9	1645	NT1420100709.D	SIJ0085-SCV1		1	|18.63 189405||22.07 203362||32.93 288304|
10	1733	NT1420100710.D	SIJ0085-ICB1		1	|18.63 209569||22.07 195015||32.93 275049|
11	1822	NT1420100711.D	SIJ0085-ICV1		1	|18.63 209596||22.07 192407||32.93 274120|
12	1911	NT1420100712.D	SIJ0085-IBL1		1	|18.63 204918||22.07 190308||32.93 277914|
13	1959	NT1420100713.D	20I0231-01RE1		50	|18.63 216675||22.07 201347||32.93 283619|
14	2048	NT1420100714.D	20I0231-02RE1		50	|18.63 223226||22.07 210366||32.93 295832|
15	2136	NT1420100715.D	20I0231-03RE1		50	|18.63 220403||22.07 205010||32.93 294397|
16	2225	NT1420100716.D	20I0231-04RE1		50	|18.63 221665||22.07 207108||32.93 288287|
17	2313	NT1420100717.D	20I0231-05RE1		50	|18.63 213324||22.07 203945||32.93 287899|
18	0001	NT1420100718.D	20I0231-06RE1		50	|18.63 223960||22.07 210571||32.93 296494|
19	0049	NT1420100719.D	20I0231-07RE1		25	|18.63 219212||22.07 209445||32.93 289596|
20	0138	NT1420100720.D	20I0231-08RE1		100	|18.63 222098||22.07 213997||32.93 296812|

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201007.b

	Time	Filename	LabID	ClientId	DF						
21	0226	NT1420100721.D	20I0231-09RE1		50	18.63	230253	22.07	216448	32.93	299511
22	0314	NT1420100722.D	20I0231-10RE1		50	18.63	222736	22.07	211749	32.93	294827
23	0403	NT1420100723.D	20I0231-11RE1		100	18.63	220968	22.07	205977	32.93	288799
24	0451	NT1420100724.D	SIJ0085-CCV1		1	18.63	215012	22.07	198797	32.93	275539

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201007.b

Instrument: nt14.i Date: 07-OCT-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
1011	NT1420100701.D	SIJ0085-TUN1	1	NO MANUAL INTEGRATION
1024	NT1420100702.D	SIJ0085-CAL4	1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Total Benzofluoranthenes,
1148	NT1420100703.D	SIJ0085-CAL6	1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(j)fluoranthene,
1238	NT1420100704.D	SIJ0085-CAL1	1	Benzo(k)fluoranthene, cis-Decalin, Total Benzofluoranthenes, Phenanthrene-d10,
1326	NT1420100705.D	SIJ0085-CAL5	1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Total Benzofluoranthenes, Benzo(j)fluoranthene
1417	NT1420100706.D	SIJ0085-CAL2	1	Total Benzofluoranthenes,
1508	NT1420100707.D	SIJ0085-CAL3	1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Total Benzofluoranthenes, Benzo(j)fluoranthene
1556	NT1420100708.D	SIJ0085-CAL4	1	Total Benzofluoranthenes, Phenanthrene-d10,
1645	NT1420100709.D	SIJ0085-SCV1	1	Benzo(g,h,i)perylene, Total Benzofluoranthenes,
1733	NT1420100710.D	SIJ0085-ICB1	1	NO MANUAL INTEGRATION
1822	NT1420100711.D	SIJ0085-ICV1	1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Total Benzofluoranthen
1911	NT1420100712.D	SIJ0085-IBL1	1	NO MANUAL INTEGRATION
1959	NT1420100713.D	20I0231-01RE1	50	Acenaphthylene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, 2,6-Dimethylnaphthalene, Total Benzofluoranthenes, Perylene-d12,
2048	NT1420100714.D	20I0231-02RE1	50	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Total Benzofluoranthenes, Naphthalene-d8, Phenanthrene-d10, Perylene-d12,
2136	NT1420100715.D	20I0231-03RE1	50	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, 2,6-Dimethylnaphthalen Naphthalene-d8, Phenanthrene-d10, Perylene-d12,
2225	NT1420100716.D	20I0231-04RE1	50	NO MANUAL INTEGRATION
2313	NT1420100717.D	20I0231-05RE1	50	Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, 2,6-Dimethylnaphthalene, Total Benzofluoranthenes, Napht Acenaphthene-d10, Phenanthrene-d10, Perylene-d12,

Instrument: nt14.i Date: 08-OCT-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
0001	NT1420100718.D	20I0231-06RE1	50	NO MANUAL INTEGRATION
0049	NT1420100719.D	20I0231-07RE1	25	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Biphenyl, 2,6-Dimeth Total Benzofluoranthenes, Phenanthrene-d10, Perylene-d12,
0138	NT1420100720.D	20I0231-08RE1	100	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Biphenyl, 2,6-Dimethylnaphthalene, Total B Phenanthrene-d10, Perylene-d12,
0226	NT1420100721.D	20I0231-09RE1	50	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, 2,6-Dimethylnaphthalene, Benzo(b)thiophene, Total Benzofluoranthenes, Phenanthrene-d10, Perylene-d12,
0314	NT1420100722.D	20I0231-10RE1	50	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Biphenyl, 2,6-Dimeth Benzo(b)thiophere, Total Benzofluoranthenes, Phenanthrene-d10, Perylene-d12,
0403	NT1420100723.D	20I0231-11RE1	100	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Total Benzofluoranthenes, Phenanthrene-d10, Chrysene-d12, Perylene-d12,
0451	NT1420100724.D	SIJ0085-CCV1	1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Total Benzofluoranthenes, Benzo(j)fluoranthene

Security Status Report

Date: 09-Oct-2020 11:05

NT1420100701.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100702.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100703.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100704.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100705.D	Data Locked	van, 09-Oct-2020 08:47
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NT1420100721.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100722.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100723.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100724.D	Data Locked	van, 09-Oct-2020 08:47

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-OCT-2020 10:24
End Cal Date : 07-OCT-2020 15:56
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Last Edit : 08-Oct-2020 12:40 van

Calibration File Names:
Level 1: \\target\share\chem3\nt14.i\20201007.b\NT1420100704.D
Level 2: \\target\share\chem3\nt14.i\20201007.b\NT1420100706.D
Level 3: \\target\share\chem3\nt14.i\20201007.b\NT1420100707.D
Level 5: \\target\share\chem3\nt14.i\20201007.b\NT1420100702.D
Level 6: \\target\share\chem3\nt14.i\20201007.b\NT1420100705.D
Level 7: \\target\share\chem3\nt14.i\20201007.b\NT1420100703.D

Compound	0.1000000 Level 1	0.2500000 Level 2	0.5000000 Level 3	2.5000 Level 5	5.0000 Level 6	10.0000 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
1 trans-Decalin	0.06976	0.08247	0.08208	0.09057	0.09007	0.08658	AVRG		0.08359		9.17916	
2 cis-Decalin	0.05200	0.05837	0.06613	0.06875	0.06641	0.06571	AVRG		0.06290		10.15863	
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	0.83252	0.81146	0.84229	0.82421	0.81489	0.77326	AVRG		0.81644		2.93907	
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	0.74882	0.68366	0.66226	0.67949	0.67849	0.66331	AVRG		0.68600		4.66875	
13 C1-Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
14 C2-Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-OCT-2020 10:24
End Cal Date : 07-OCT-2020 15:56
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Last Edit : 08-Oct-2020 12:40 van

Compound	0.1000000 Level 1	0.2500000 Level 2	0.5000000 Level 3	2.5000 Level 5	5.0000 Level 6	10.0000 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
15 C3_Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
16 2-Methylnaphthalene	0.51794	0.46551	0.48828	0.51217	0.51281	0.48944	AVRG		0.49769		4.05900	
17 1-methylnaphthalene	7676	13075	27344	146460	272838	569676	QUAD	0.000e+000	1.94678	0.07978	0.99995	
18 Biphenyl	0.79290	0.72383	0.71017	0.76184	0.76425	0.74126	AVRG		0.74904		4.01648	
19 2,6-Dimethylnaphthalene	0.49891	0.55567	0.56364	0.56826	0.55872	0.53581	AVRG		0.54684		4.75409	
20 Acenaphthylene	0.90611	0.81948	0.86826	0.94102	0.92354	0.92150	AVRG		0.89665		5.02728	
22 Acenaphthene	0.58953	0.57493	0.57578	0.60217	0.59836	0.58361	AVRG		0.58740		1.93764	
23 Dibenzofuran	0.85738	0.80703	0.84759	0.87475	0.87649	0.84971	AVRG		0.85216		2.96556	
24 1,6,7-Trimethylnaphthalene	0.53570	0.52740	0.53560	0.58642	0.57948	0.56188	AVRG		0.55441		4.52157	
26 Fluorene	0.64982	0.64418	0.65132	0.69153	0.68809	0.66095	AVRG		0.66431		3.08609	
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	0.95319	0.92945	0.93032	0.97927	0.98457	0.95969	AVRG		0.95608		2.44995	
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	1.17305	1.07415	1.12385	1.11014	1.11497	1.04933	AVRG		1.10758		3.85673	
37 Anthracene	1.24646	1.01576	1.04603	1.09519	1.07430	1.05334	AVRG		1.08851		7.52318	
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.

INITIAL CALIBRATION DATA

Start Cal Date : 07-OCT-2020 10:24
End Cal Date : 07-OCT-2020 15:56
Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Last Edit : 08-Oct-2020 12:40 van

Compound	0.1000000 Level 1	0.2500000 Level 2	0.5000000 Level 3	2.5000 Level 5	5.0000 Level 6	10.0000 Level 7	Curve	Coefficients b	m1	m2	%RSD 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	0.97629	0.88940	0.91728	0.97826	0.95753	0.93707	AVRG		0.94264		3.71496	
43 1-Methylphenanthrene	0.76719	0.76017	0.81363	0.85192	0.86332	0.82153	AVRG		0.81296		5.22143	
44 Fluoranthene	1.23604	1.12102	1.17181	1.27951	1.27571	1.25046	AVRG		1.22243		5.16260	
45 Pyrene-d10	#####	#####	#####	#####	#####	#####	AVRG		0.000e+000		0.000e+000	<-
46 Pyrene	1.33141	1.22415	1.21399	1.31961	1.32976	1.32080	AVRG		1.28995		4.27909	
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	1.14116	1.13533	1.13264	1.22014	1.22918	1.19614	AVRG		1.17576		3.79015	
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	0.87633	0.78944	0.79759	0.90409	0.90662	0.90639	AVRG		0.86341		6.41519	
57 Chrysene	0.86226	0.84433	0.82485	0.86860	0.87541	0.87349	AVRG		0.85815		2.30669	
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.

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Last Edit : 08-Oct-2020 12:40 van

Compound	0.1000000 Level 1	0.2500000 Level 2	0.5000000 Level 3	2.5000 Level 5	5.0000 Level 6	10.0000 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
61 C4-Benzo(a)anthracenes/Chryse	#####	#####	#####	#####	#####	#####	AVRG		0.000e+000		0.000e+000	<-
62 Benzo(b)fluoranthene	0.94196	0.86763	0.95113	1.02851	1.01093	1.04916	AVRG		0.97489		6.93335	
293 Benzo(j)fluoranthene	0.90393	0.81093	0.80215	0.90135	0.85226	0.88283	AVRG		0.85891		5.19820	
63 Benzo(k)fluoranthene	1.08603	0.99473	0.87230	0.92344	1.03043	0.98864	AVRG		0.98259		7.72874	
64 Benzo(e)pyrene	0.87879	0.85994	0.84494	0.90758	0.93311	0.93126	AVRG		0.89260		4.15857	
246 Total Benzofluoranthenes	0.91402	0.83176	0.84770	0.93060	0.94808	0.95512	AVRG		0.90454		5.79771	
65 Benzo(a)pyrene-d12	#####	#####	#####	#####	#####	#####	AVRG		0.000e+000		0.000e+000	<-
66 Benzo(a)pyrene	0.83018	0.75926	0.78536	0.88363	0.89182	0.90982	AVRG		0.84334		7.30898	
68 Perylene	0.91983	0.79307	0.82962	0.92889	0.92645	0.91700	AVRG		0.88581		6.65873	
69 Indeno(1,2,3-cd)pyrene	1.03729	0.94821	0.95971	1.06853	1.12297	1.12938	AVRG		1.04435		7.47292	
70 Dibenzo(a,h)anthracene	0.88341	0.84893	0.82048	0.97332	0.98332	1.02654	AVRG		0.92267		8.99694	
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	0.93482	0.82958	0.88013	0.94688	0.95630	0.95706	AVRG		0.91746		5.63403	
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.

INITIAL CALIBRATION DATA

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Method file : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Last Edit : 08-Oct-2020 12:40 van

Compound	0.1000000 Level 1	0.2500000 Level 2	0.5000000 Level 3	2.5000 Level 5	5.0000 Level 6	10.0000 Level 7	Curve	Coefficients b	m1	m2	%RSD 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-Triacontain	#####	#####	#####	#####	#####	#####	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	<-

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-OCT-2020 10:24
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Quant Method : ISTD
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Last Edit : 08-Oct-2020 12:40 van

Compound	0.1000000 Level 1	0.2500000 Level 2	0.5000000 Level 3	2.5000 Level 5	5.0000 Level 6	10.0000 Level 7	Curve	Coefficients b	m1	m2	%RSD 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	0.85884	0.79575	0.78796	0.83577	0.82201	0.79598	AVRG		0.81605		3.40440	
$ 21 Acenaphthene-d10	0.47505	0.48723	0.47494	0.50672	0.50685	0.48939	AVRG		0.49003		2.91717	
$ 35 Phenanthrene-d10	0.92525	0.92209	0.95633	1.00209	0.99243	0.94931	AVRG		0.95792		3.48405	
$ 56 Chrysene-d12	0.76602	0.65303	0.66476	0.66485	0.68082	0.66193	AVRG		0.68190		6.18505	
$ 67 Perylene-d12	0.87844	0.77796	0.79501	0.83236	0.84610	0.83212	AVRG		0.82700		4.35758	

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-OCT-2020 10:24
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Method file : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Last Edit : 08-Oct-2020 12:40 van

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Batch File: \\target\share\chem3\nt14.i\20201007.b
Inst ID: nt14.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	NT1420100702	NT1420100703	NT1420100704	NT1420100705	NT1420100706	NT1420100707
INJ.DATE:	07-OCT-2020	07-OCT-2020	07-OCT-2020	07-OCT-2020	07-OCT-2020	07-OCT-2020
INJ.TIME:	10:24	11:48	12:38	13:26	14:17	15:08

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 trans-Decalin	6.925	6.925	6.935	6.935	6.935	6.935	6.935	3.935-9.935	6.931	0.005
2 cis-Decalin	8.034	8.034	8.034	8.024	8.044	8.034	8.034	5.034-11.034	8.034	0.006
3 C1-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	8.800	5.800-11.800	+++++	+++++
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	11.641	11.652	11.641	11.641	11.641	11.641	11.641	8.641-14.641	11.643	0.004
7 Naphthalene	11.707	11.718	11.707	11.707	11.707	11.707	11.707	8.707-14.707	11.709	0.004
8 C1-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	14.000	11.000-17.000	+++++	+++++
9 C2-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	16.000	13.000-19.000	+++++	+++++
10 C3-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	18.000	15.000-21.000	+++++	+++++
11 C4-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	18.500	15.500-21.500	+++++	+++++
12 Benzo(b)thiophene	12.158	12.158	12.158	12.158	12.158	12.158	12.158	9.158-15.158	12.158	0.000
13 C1-Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	14.200	11.200-17.200	+++++	+++++
14 C2-Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	15.800	12.800-18.800	+++++	+++++
15 C3_Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	17.200	14.200-20.200	+++++	+++++
16 2-Methylnaphthalene	13.542	13.553	13.543	13.542	13.543	13.542	13.542	10.542-16.542	13.544	0.004

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Batch File: \\target\share\chem3\nt14.i\20201007.b
Inst ID: nt14.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
17 1-methylnaphthalene	13.993	13.993	13.993	13.993	13.993	13.993	13.993	10.993-16.993	13.993	0.000
18 Biphenyl	15.180	15.191	15.180	15.180	15.180	15.180	15.180	12.180-18.180	15.182	0.004
19 2,6-Dimethylnaphthalen	15.257	15.268	15.257	15.257	15.257	15.257	15.257	12.257-18.257	15.259	0.004
20 Acenaphthylene	16.817	16.828	16.817	16.817	16.818	16.817	16.817	13.817-19.817	16.819	0.004
$ 21 Acenaphthene-d10	17.103	17.114	17.103	17.103	17.103	17.103	17.103	14.103-20.103	17.105	0.004
22 Acenaphthene	17.224	17.224	17.224	17.224	17.224	17.224	17.224	14.224-20.224	17.224	0.000
23 Dibenzofuran	17.598	17.609	17.598	17.598	17.598	17.598	17.598	14.598-20.598	17.599	0.004
24 1,6,7-Trimethylnaphtha	17.828	17.828	17.829	17.828	17.829	17.828	17.828	14.828-20.828	17.828	0.000
* 25 Fluorene-d10	18.633	18.644	18.633	18.633	18.633	18.633	18.633	15.633-21.633	18.635	0.005
26 Fluorene	18.746	18.746	18.746	18.746	18.746	18.746	18.746	15.746-21.746	18.746	0.000
27 C1-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++	21.000	18.000-24.000	+++++	+++++
28 C2-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++	21.200	18.200-24.200	+++++	+++++
29 C3-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++	23.000	20.000-26.000	+++++	+++++
30 Dibenzothiophene	21.649	21.660	21.649	21.649	21.649	21.649	21.649	18.649-24.649	21.651	0.005
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	21.963	21.974	21.963	21.963	21.963	21.963	21.963	18.963-24.963	21.965	0.004
* 250 Anthracene-d10	22.073	22.084	22.073	22.073	22.073	22.073	22.073	19.073-25.073	22.075	0.004
36 Phenanthrene	22.040	22.051	22.040	22.040	22.040	22.040	22.040	19.040-25.040	22.042	0.004
37 Anthracene	22.150	22.150	22.139	22.150	22.139	22.139	22.139	19.139-25.139	22.145	0.006

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Batch File: \\target\share\chem3\nt14.i\20201007.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	+++++	+++++	+++++	+++++	+++++	+++++	25.000	22.000-28.000	+++++	+++++
40 C3-Phenanthrenes/Anthr	+++++	+++++	+++++	+++++	+++++	+++++	27.000	24.000-30.000	+++++	+++++
41 C4-Phenanthrenes/Anthr	+++++	+++++	+++++	+++++	+++++	+++++	28.000	25.000-31.000	+++++	+++++
42 Carbazole	23.425	23.436	23.425	23.425	23.425	23.425	23.425	20.425-26.425	23.427	0.004
43 1-Methylphenanthrene	23.876	23.887	23.876	23.876	23.876	23.876	23.876	20.876-26.876	23.878	0.004
44 Fluoranthene	25.844	25.855	25.844	25.844	25.844	25.844	25.844	22.844-28.844	25.846	0.004
45 Pyrene-d10	+++++	+++++	+++++	+++++	+++++	+++++	18.628	15.628-21.628	+++++	+++++
46 Pyrene	26.702	26.713	26.702	26.702	26.702	26.702	26.702	23.702-29.702	26.704	0.004
47 Retene	+++++	+++++	+++++	+++++	+++++	+++++	17.769	14.769-20.769	+++++	+++++
48 C1-Fluoranthenes/Pyren	+++++	+++++	+++++	+++++	+++++	+++++	27.900	24.900-30.900	+++++	+++++
49 C2-Fluoranthenes/Pyren	+++++	+++++	+++++	+++++	+++++	+++++	29.000	26.000-32.000	+++++	+++++
50 C3-Fluoranthenes/Pyren	+++++	+++++	+++++	+++++	+++++	+++++	30.000	27.000-33.000	+++++	+++++
249 C4-Fluoranthenes/Pyren	+++++	+++++	+++++	+++++	+++++	+++++	33.000	30.000-36.000	+++++	+++++
51 Naphthobenzothiophene	29.256	29.267	29.257	29.256	29.257	29.256	29.256	26.256-32.256	29.258	0.004
52 C1-Naphthobenzothiophe	+++++	+++++	+++++	+++++	+++++	+++++	32.500	29.500-35.500	+++++	+++++
53 C2-Naphthobenzothiophe	+++++	+++++	+++++	+++++	+++++	+++++	33.500	30.500-36.500	+++++	+++++
54 C3-Naphthobenzothiophe	+++++	+++++	+++++	+++++	+++++	+++++	35.000	32.000-38.000	+++++	+++++
248 C4-Naphthobenzothiophe	+++++	+++++	+++++	+++++	+++++	+++++	36.000	33.000-39.000	+++++	+++++
55 Benzo(a)anthracene	29.851	29.851	29.840	29.851	29.840	29.839	29.839	26.839-32.839	29.845	0.006
$ 56 Chrysene-d12	29.974	29.975	29.963	29.975	29.963	29.963	29.974	26.974-32.974	29.969	0.006
57 Chrysene	30.042	30.053	30.042	30.042	30.042	30.042	30.042	27.042-33.042	30.044	0.005
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\20201007.b\ALKYLPNA.m
Batch File: \\target\share\chem3\nt14.i\20201007.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	+++++	+++++	+++++	+++++	+++++	+++++	33.000	30.000-36.000	+++++	+++++
61 C4-Benzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	33.200	30.200-36.200	+++++	+++++
62 Benzo(b)fluoranthene	32.272	32.283	32.261	32.272	32.261	32.261	32.272	29.272-35.272	32.268	0.009
293 Benzo(j)fluoranthene	32.374	32.396	32.374	32.385	32.374	32.374	32.374	29.374-35.374	32.379	0.009
63 Benzo(k)fluoranthene	32.317	32.328	32.317	32.317	32.317	32.317	32.317	29.317-35.317	32.319	0.005
* 251 Benzo(e)pyrene-d12	32.925	32.937	32.926	32.925	32.926	32.925	32.925	29.925-35.925	32.927	0.005
64 Benzo(e)pyrene	32.993	33.004	32.993	32.993	32.982	32.993	32.993	29.993-35.993	32.993	0.007
246 Total Benzofluoranthen	32.317	32.328	32.261	32.272	32.261	32.317	32.317	29.317-35.317	32.293	0.031
65 Benzo(a)pyrene-d12	+++++	+++++	+++++	+++++	+++++	+++++	25.348	22.348-28.348	+++++	+++++
66 Benzo(a)pyrene	33.083	33.106	33.083	33.094	33.083	33.083	33.083	30.083-36.083	33.089	0.009
$ 67 Perylene-d12	33.263	33.275	33.264	33.263	33.264	33.263	33.263	30.263-36.263	33.265	0.005
68 Perylene	33.320	33.331	33.320	33.331	33.320	33.320	33.320	30.320-36.320	33.323	0.006
69 Indeno(1,2,3-cd)pyrene	35.257	35.279	35.257	35.268	35.257	35.257	35.257	32.257-38.257	35.263	0.009
70 Dibenzo(a,h)anthracene	35.246	35.257	35.235	35.246	35.235	35.234	35.246	32.246-38.246	35.242	0.009
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	36.102	36.124	36.102	36.113	36.102	36.102	36.102	33.102-39.102	36.107	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\20201007.b\ALKYLPNA.m
Batch File: \\target\share\chem3\nt14.i\20201007.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-Triacontain	+++++	+++++	+++++	+++++	+++++	+++++	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	+++++	+++++

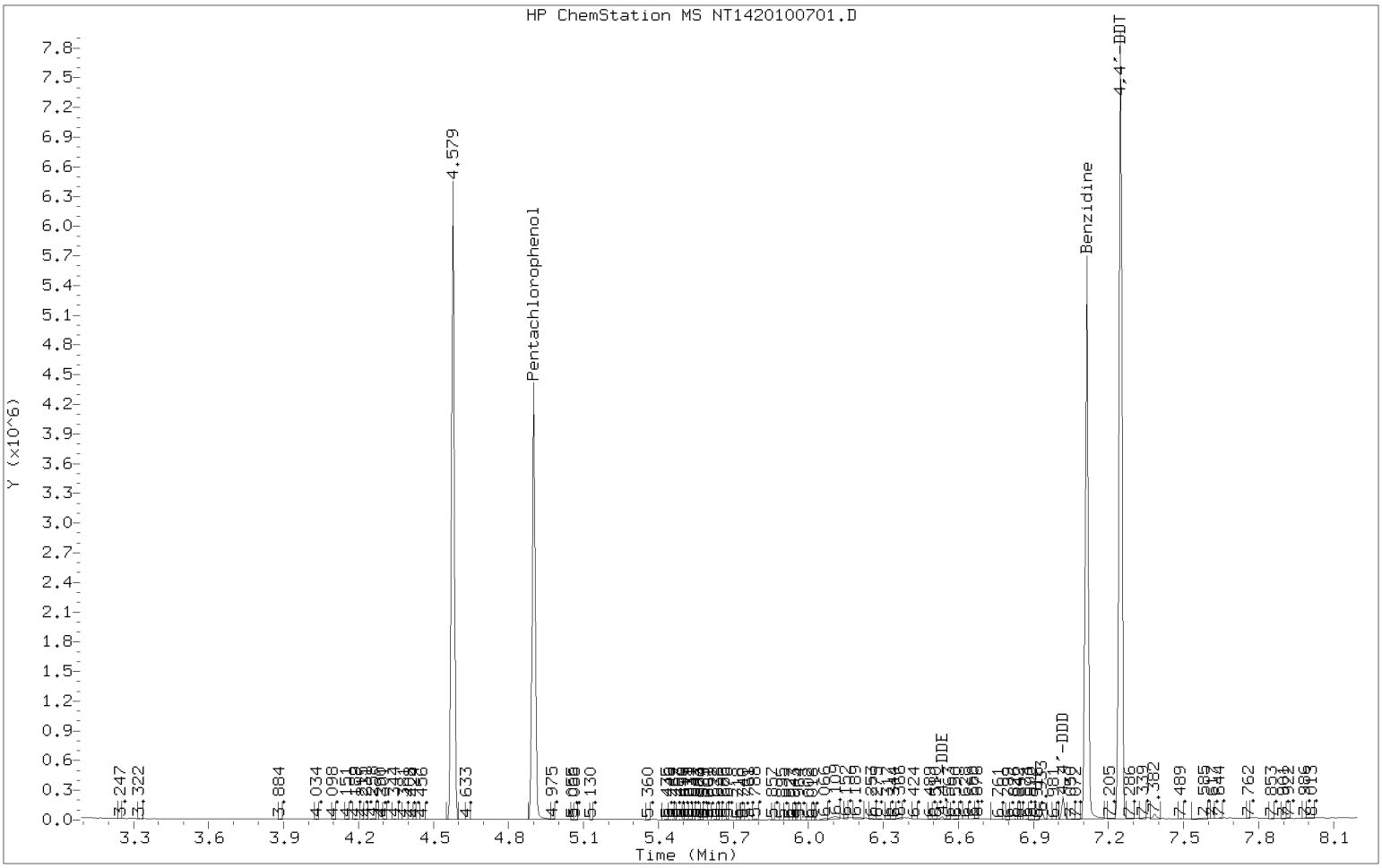
ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

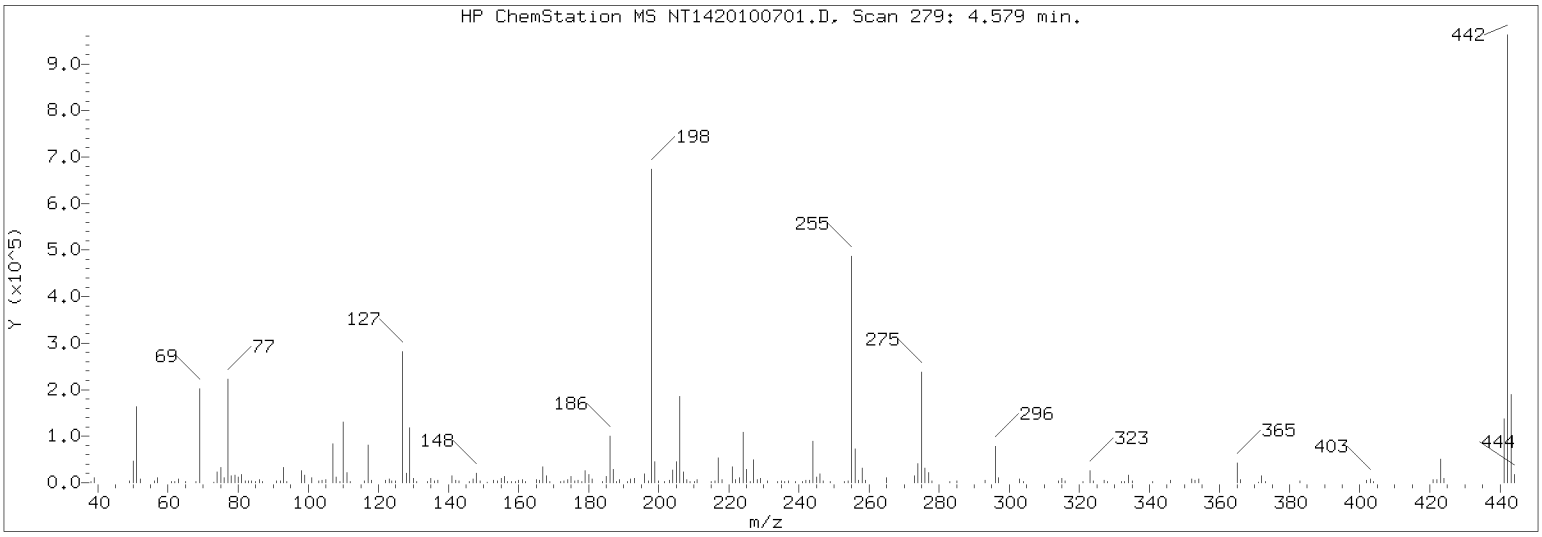
Method File: \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Batch File: \\target\share\chem3\nt14.i\20201007.b
Inst ID: nt14.i

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	+++++	+++++

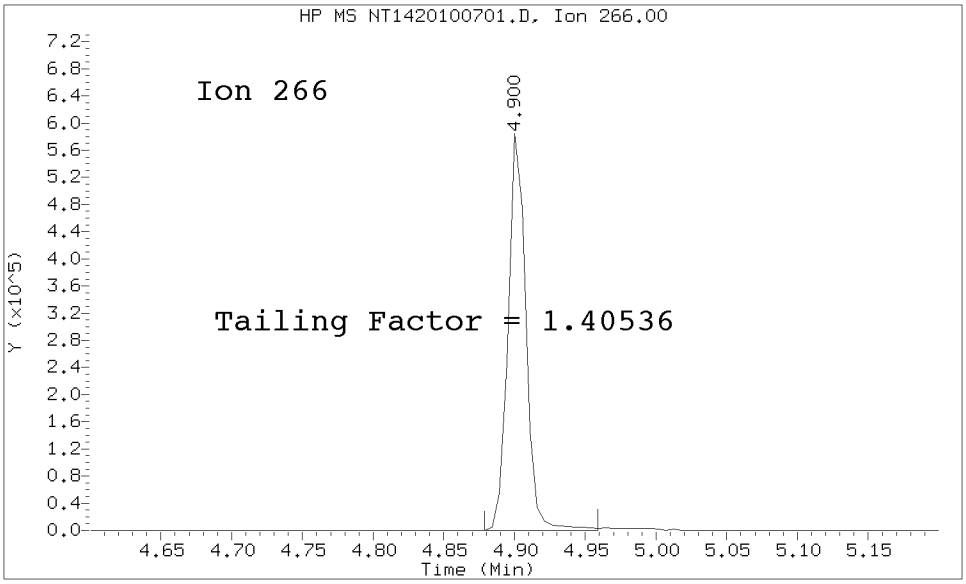
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20201007.b/NT1420100701.D/NT1420100701.D
Method Used: \20201007.b\DFTPP8270E.m Inst: nt14
Injection Date: 07-OCT-2020 10:11 Operator: VTS
Sample Info: SIJ0085-TUN1 SIJ0085-TUN1
Report Date: 10/09/2020 08:53



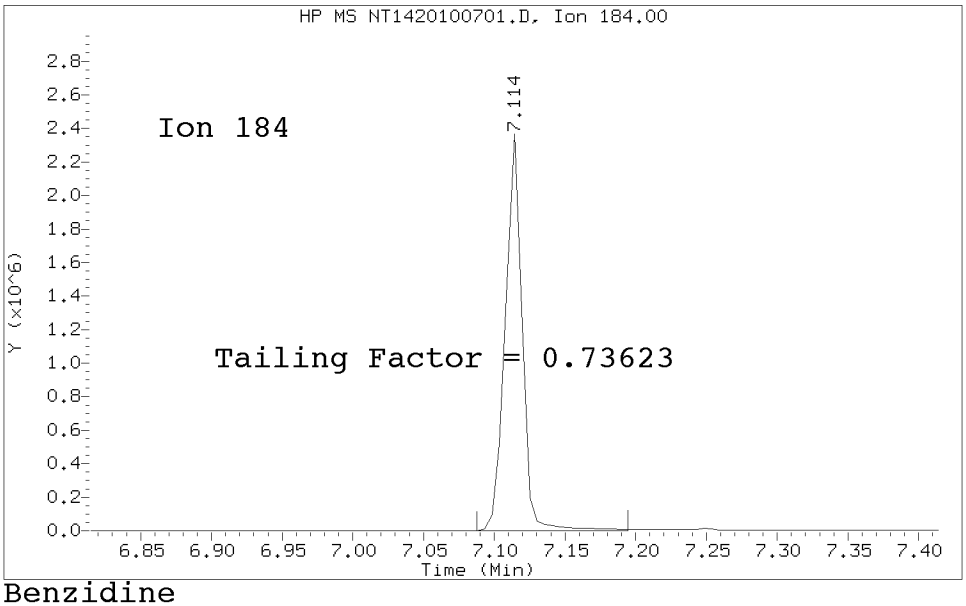


Datafile Analyzed: /20201007.b/NT1420100701.D/NT1420100701.D
Method Used: \20201007.b\DFTPP8270E.m\sw846ddt.m Inst: nt14
Injection Date: 07-OCT-2020 10:11 Operator: JZ
Sample Info: SIJ0XXX-TUN1
Report Date: 10/09/2020 08:53



Pentachlorophenol
==========
Exp. RT = 4.900
Found RT = 4.900

Tail Factor = 1.405 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.114
Found RT = 7.114

Tail Factor = 0.736 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.4053628	2.000	PASS
Benzidine	0.7362251	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1276129			N/A
4,4-DDE	4051	0.3	20.0	PASS
4,4-DDD	44055	3.3	20.0	PASS
4,4-DDD + DDE	48106	3.6	20.0	PASS

Tuning Sample, nt14.i/20201007.b/NT1420100701.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	0.46 (1.44)
69	Mass 69 relative abundance	31.94
70	Less than 2.00% of mass 69	0.00 (0.00)
197	Less than 2.00% of mass 198	0.46
199	5.00 - 9.00% of mass 198	6.65
365	1.00 - 100.00% of mass 198	6.47
441	Less than 150.00% of mass 443	20.20 (73.33)
442	Less than 200.00% of mass 198	140.95
443	15.00 - 24.00% of mass 442	27.55 (19.55)

Data File: NT1420100701.D
Spectrum: Avg. Scans 278-280 (4.58), Background Scan 272
Location of Maximum: 442.00
Number of points: 201

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	1611	124.00	2560	192.00	6276	265.00	8748
39.00	9098	125.00	2264	193.00	7013	273.00	11379
49.00	1311	127.00	207552	196.00	13832	274.00	29256
50.00	36736	128.00	15932	197.00	2232	275.00	165312
51.00	126848	129.00	87728	198.00	484288	276.00	22296
52.00	6325	130.00	7692	199.00	32224	277.00	15785
56.00	3265	131.00	771	200.00	2133	278.00	2083
57.00	8731	134.00	2232	201.00	1677	283.00	874
61.00	700	135.00	7259	203.00	3939	285.00	2151
62.00	1786	136.00	2444	204.00	19424	293.00	3634
63.00	5960	137.00	3313	205.00	33120	296.00	57720
65.00	2324	141.00	12142	206.00	132480	297.00	7735
68.00	2223	142.00	3147	207.00	17392	303.00	6179
69.00	154688	143.00	2464	208.00	4908	304.00	859
73.00	681	146.00	1704	209.00	788	314.00	2768
74.00	17208	147.00	6505	210.00	1771	315.00	6881
75.00	25608	148.00	15223	211.00	4926	316.00	3382
76.00	8556	149.00	2441	215.00	735	321.00	838
77.00	170112	151.00	682	216.00	2464	323.00	17976
78.00	11515	153.00	3408	217.00	37960	324.00	3192
79.00	13007	154.00	2639	218.00	4860	327.00	3669
80.00	9780	155.00	7087	221.00	23352	328.00	869
81.00	13272	156.00	10365	222.00	5324	332.00	731
82.00	3125	157.00	1486	223.00	8424	333.00	733
83.00	2765	158.00	1763	224.00	78312	334.00	11934
84.00	662	159.00	1503	225.00	19896	335.00	3109
85.00	2045	160.00	4069	226.00	1790	341.00	908
86.00	5760	161.00	5581	227.00	35384	346.00	4456
87.00	1727	162.00	729	228.00	5126	352.00	5824
91.00	2838	165.00	4905	229.00	7313	353.00	3740
92.00	2840	166.00	3054	231.00	2278	354.00	5874
93.00	24904	167.00	25360	234.00	1819	365.00	31344
94.00	1429	168.00	11411	235.00	2079	366.00	4724
98.00	19440	169.00	1727	236.00	1466	371.00	678
99.00	13142	172.00	1787	237.00	2042	372.00	10553
101.00	7647	173.00	2530	239.00	719	373.00	1846
103.00	2165	174.00	5454	241.00	989	383.00	2091
104.00	4836	175.00	9785	242.00	4264	402.00	4064
105.00	4897	176.00	2246	243.00	4691	403.00	5510
106.00	697	177.00	4153	244.00	63136	404.00	1571
107.00	63464	178.00	745	245.00	8415	421.00	5059
108.00	9088	179.00	19048	246.00	14109	422.00	4905
109.00	1552	180.00	13423	247.00	2271	423.00	36056
110.00	98656	181.00	6161	249.00	1833	424.00	6636
111.00	16440	184.00	1429	253.00	750	441.00	97848
112.00	1866	185.00	10069	254.00	1955	442.00	682624
116.00	3130	186.00	71968	255.00	344640	443.00	133440
117.00	62280	187.00	20688	256.00	51192	444.00	12305
118.00	4682	188.00	1797	257.00	4076		

122.00	3721	189.00	4659	258.00	22792	
123.00	6613	191.00	1774	259.00	3624	

Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100702.D

Date : 07-OCT-2020 10:24

Client ID:

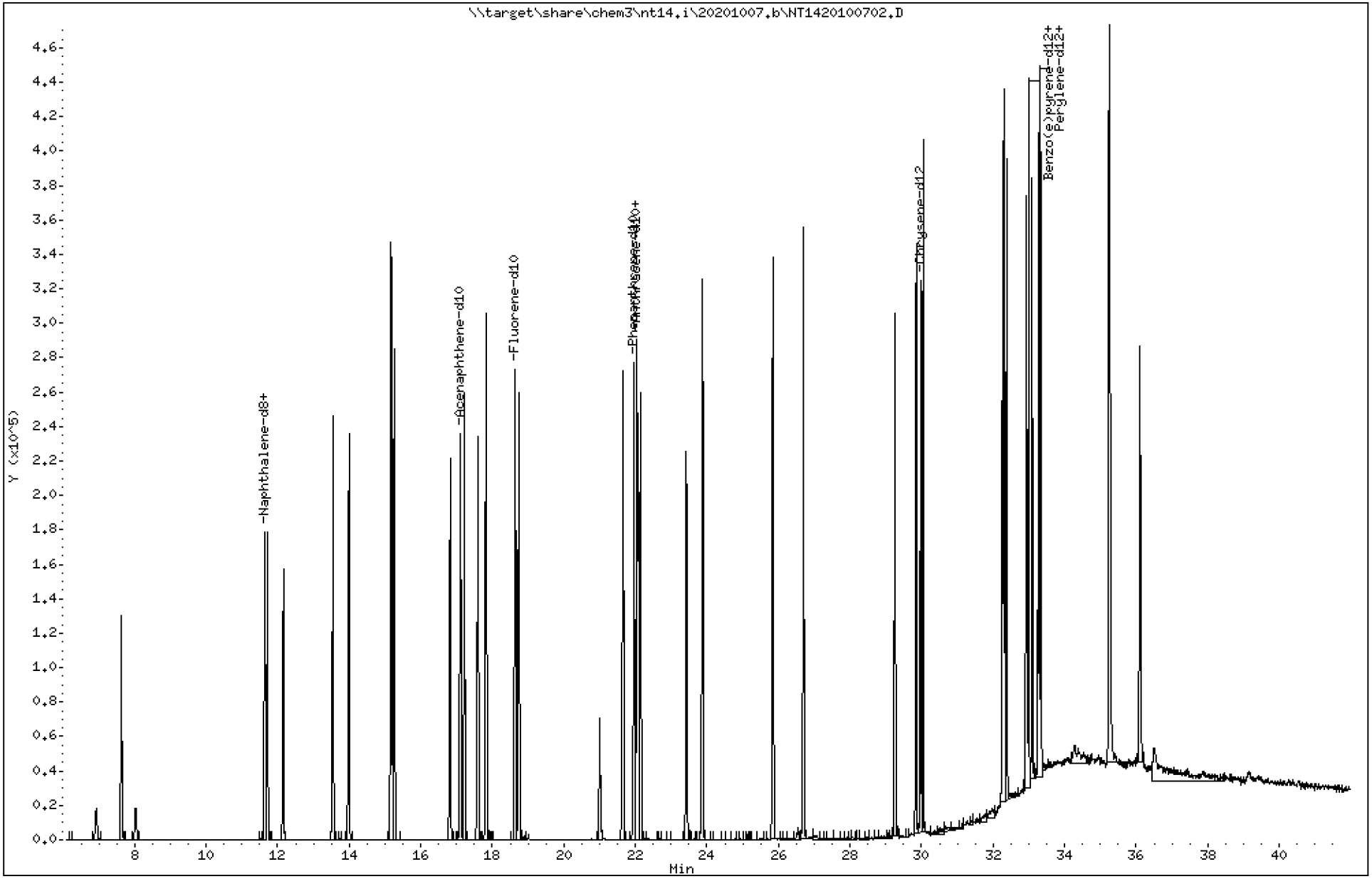
Instrument: nt14.i

Sample Info: SIJ0085-CAL4

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201007.b\NT1420100702.D
Lab Smp Id: SIJ0085-CAL4
Inj Date : 07-OCT-2020 10:24
Operator : VTS Inst ID: nt14.i
Smp Info : SIJ0085-CAL4
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Meth Date : 09-Oct-2020 08:45 van Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 2 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 trans-Decalin	138	6.924	6.934	(0.372)	26838	2.50000	2.709
	2 cis-Decalin	138	8.034	8.034	(0.431)	20372	2.50000	2.733
$	6 Naphthalene-d8	136	11.641	11.641	(0.625)	247650	2.50000	2.560
	7 Naphthalene	128	11.707	11.707	(0.628)	244225	2.50000	2.524
	12 Benzo(b)thiophene	134	12.157	12.157	(0.652)	201340	2.50000	2.476
	16 2-Methylnaphthalene	141	13.542	13.542	(0.727)	151762	2.50000	2.573
	17 1-methylnaphthalene	141	13.992	13.992	(0.751)	146460	2.50000	2.467
	18 Biphenyl	154	15.179	15.179	(0.815)	225742	2.50000	2.543
	19 2,6-Dimethylnaphthalene	156	15.256	15.256	(0.819)	168384	2.50000	2.598
	20 Acenaphthylene	152	16.817	16.817	(0.903)	278836	2.50000	2.624
$	21 Acenaphthene-d10	164	17.103	17.103	(0.918)	150147	2.50000	2.585
	22 Acenaphthene	153	17.223	17.223	(0.924)	178431	2.50000	2.563
	23 Dibenzofuran	168	17.597	17.597	(0.944)	259199	2.50000	2.566
	24 1,6,7-Trimethylnaphthalene	170	17.828	17.828	(0.957)	173764	2.50000	2.644
*	25 Fluorene-d10	176	18.632	18.632	(1.000)	237050	2.00000	
	26 Fluorene	166	18.746	18.746	(1.006)	204910	2.50000	2.602
	30 Dibenzothiophene	184	21.648	21.648	(1.162)	290170	2.50000	2.561
$	35 Phenanthrene-d10	188	21.963	21.963	(0.995)	271421	2.50000	2.615
	36 Phenanthrene	178	22.039	22.040	(0.999)	300688	2.50000	2.506
*	250 Anthracene-d10	188	22.072	22.072	(1.000)	216685	2.00000	
	37 Anthracene	178	22.149	22.138	(1.003)	296640	2.50000	2.515
	42 Carbazole	167	23.425	23.425	(1.061)	264968	2.50000	2.594
	43 1-Methylphenanthrene	192	23.875	23.875	(1.082)	230749	2.50000	2.620
	44 Fluoranthene	202	25.843	25.843	(1.171)	346564	2.50000	2.617
	46 Pyrene	202	26.701	26.701	(1.210)	357425	2.50000	2.557
	51 Naphthobenzothiophene	234	29.256	29.256	(1.325)	330482	2.50000	2.594
	55 Benzo(a)anthracene	228	29.850	29.839	(0.907)	352397	2.50000	2.618
$	56 Chrysene-d12	240	29.974	29.974	(0.910)	259145	2.50000	2.437
	57 Chrysene	228	30.042	30.042	(0.912)	338561	2.50000	2.530
	62 Benzo(b)fluoranthene	252	32.272	32.272	(0.980)	400893	2.50000	2.638(M)
	63 Benzo(k)fluoranthene	252	32.317	32.317	(0.982)	359939	2.50000	2.349(M)
	293 Benzo(j)fluoranthene	252	32.373	32.373	(0.983)	351328	2.50000	2.624
	246 Total Benzofluoranthenes	252	32.317	32.317	(0.982)	1088182	7.50000	7.716(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.925	32.925	(1.000)	311824	2.00000	
64 Benzo(e)pyrene	252	32.993	32.993	(1.002)	353756	2.50000	2.542
66 Benzo(a)pyrene	252	33.083	33.083	(1.005)	344423	2.50000	2.619
$ 67 Perylene-d12	264	33.263	33.263	(1.010)	324439	2.50000	2.516
68 Perylene	252	33.319	33.319	(1.012)	362063	2.50000	2.622
69 Indeno(1,2,3-cd)pyrene	276	35.256	35.256	(1.071)	416492	2.50000	2.558(M)
70 Dibenzo(a,h)anthracene	278	35.245	35.245	(1.070)	379382	2.50000	2.637
74 Benzo(g,h,i)perylene	276	36.101	36.101	(1.096)	369075	2.50000	2.580

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100702.D Page 1
Report Date: 09-Oct-2020 08:50

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1420100702.D
Lab Smp Id: SIJ0085-CAL4
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Misc Info:

Calibration Date: 07-OCT-2020
Calibration Time: 18:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	209596	104798	419192	237050	13.10
250 Anthracene-d10	192407	96204	384814	216685	12.62
251 Benzo(e)pyrene-d1	274120	137060	548240	311824	13.75

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.63	18.13	19.13	18.63	-0.00
250 Anthracene-d10	22.07	21.57	22.57	22.07	-0.00
251 Benzo(e)pyrene-d1	32.93	32.43	33.43	32.93	-0.00

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

REVIEW SUMMARY FOR FILE - NT1420100702.D

Lab ID: SIJ0085-CAL4
nt14.i, 20201007.b\ALKYLPNA.m, 07-OCT-2020 10:24

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

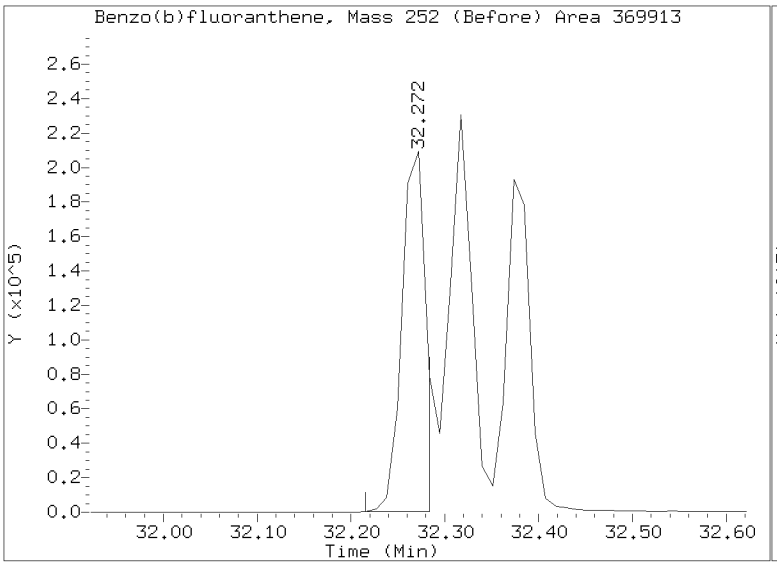
RRT check based on Ccal File: NT1420100711.D

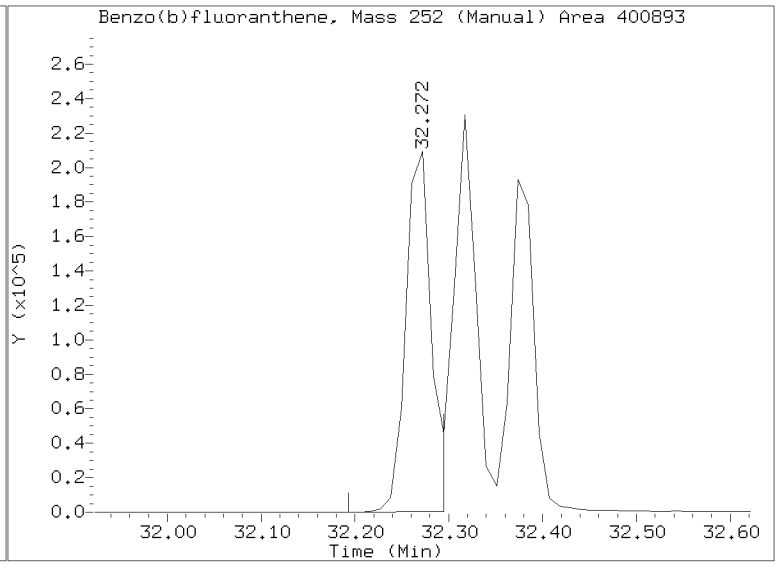
On Column LOD for nt14.i, 20201007.b\ALKYLPNA.m, TARGETS.sub = 0.0000

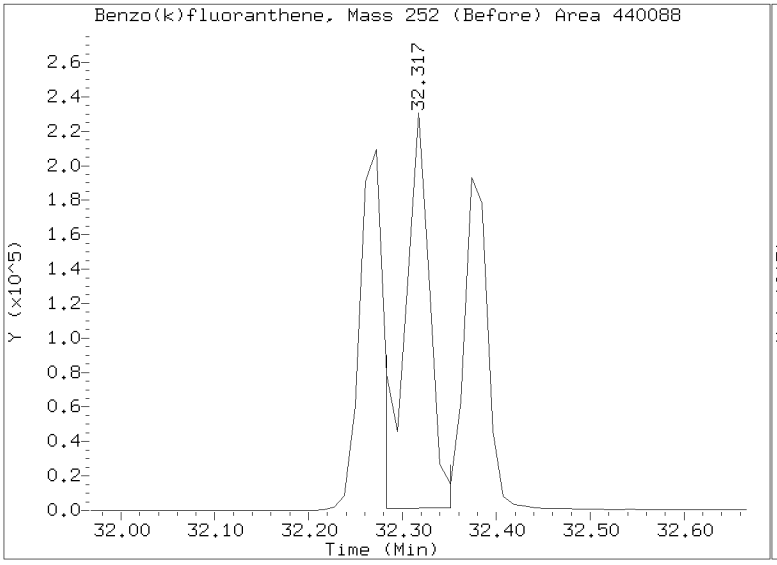
* Only compounds listed in the work order have been verified by the analyst *

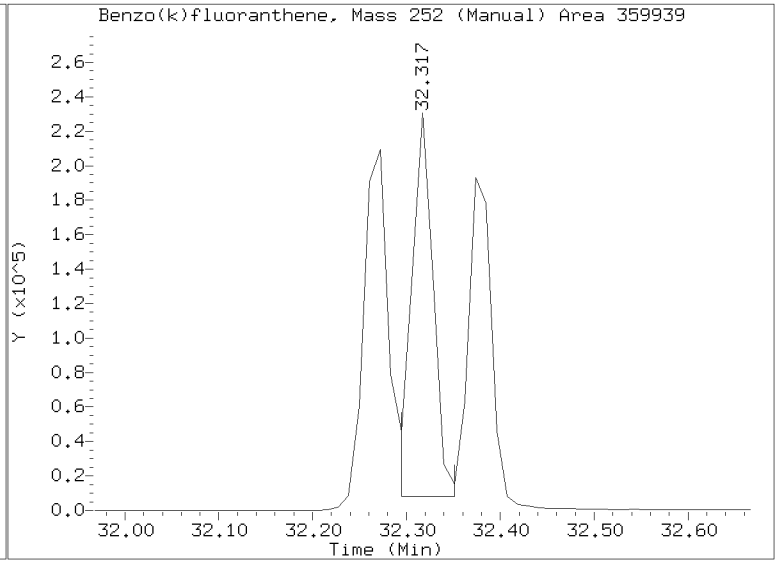
Quant Ion Manual Peak Adjustment Report

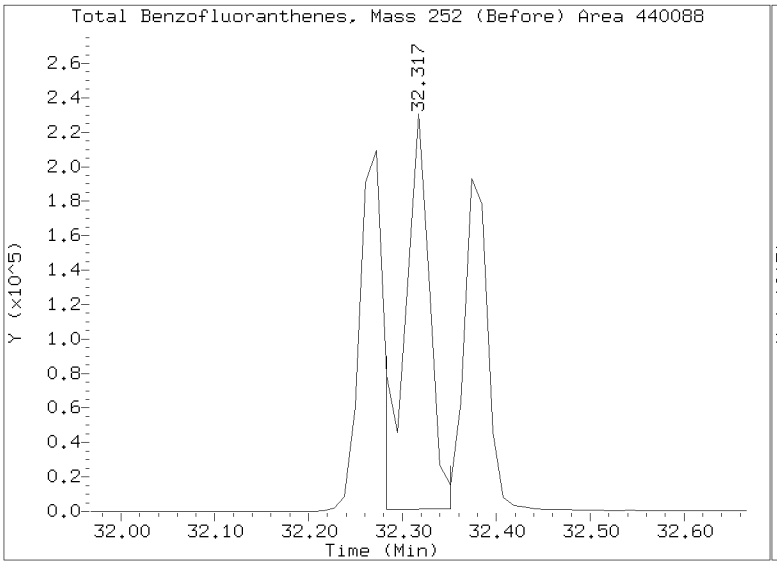
Datafile: //target/share/chem3/nt14.i/20201007.b/NT1420100702.D
Injection Date: 07-OCT-2020 10:24
Lab ID:SIJ0085-CAL4 Client ID:
Report Date: 10/09/2020 08:50

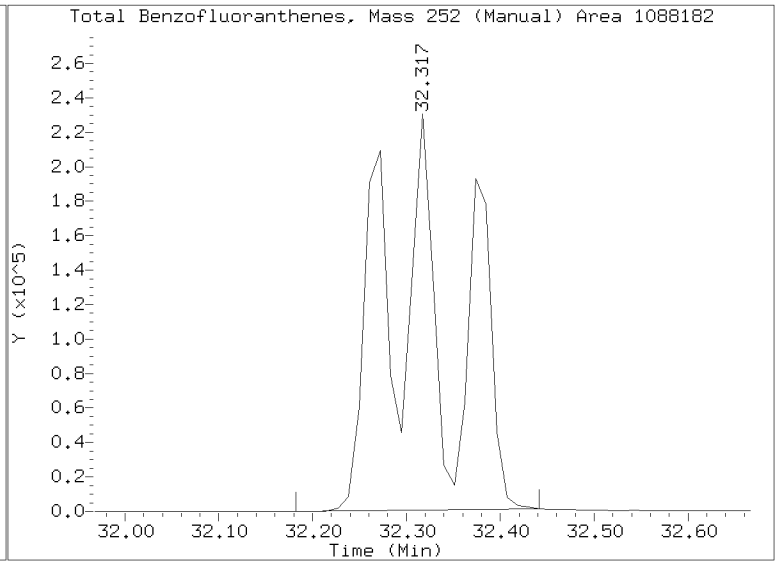






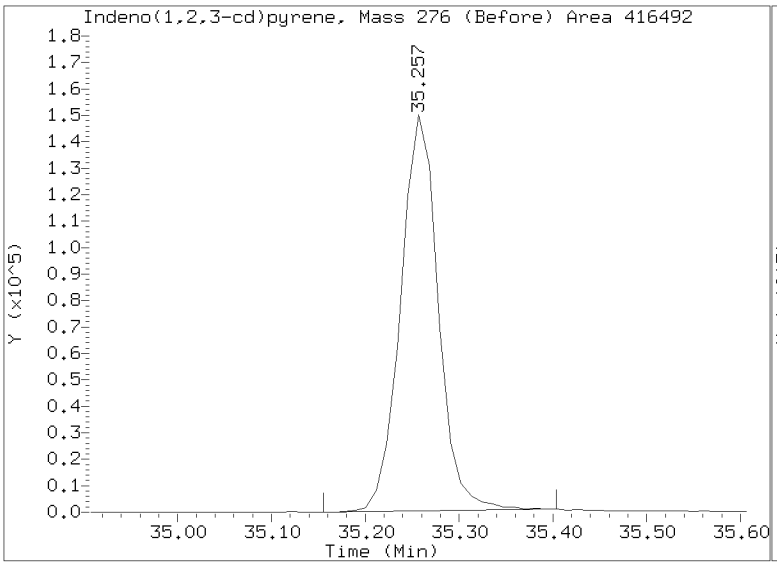


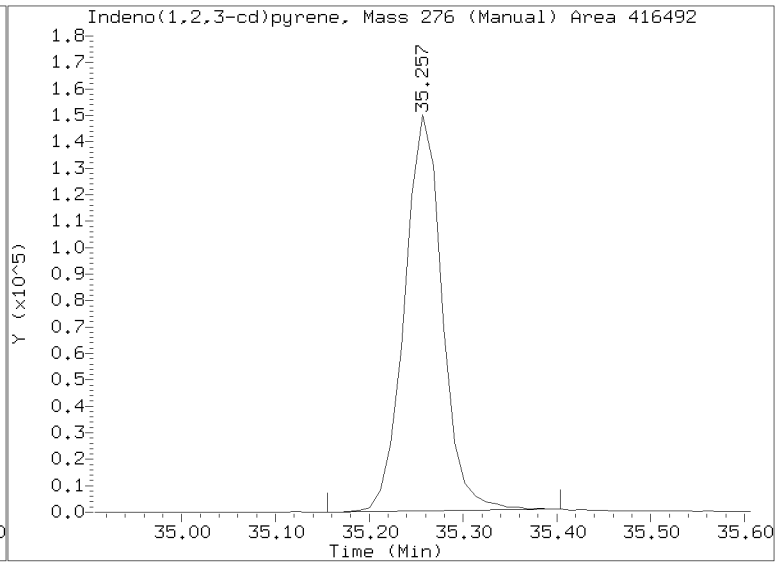




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20201007.b/NT1420100702.D
Injection Date: 07-OCT-2020 10:24
Lab ID:SIJ0085-CAL4 Client ID:
Report Date: 10/09/2020 08:50





Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100703.D

Date : 07-OCT-2020 11:48

Client ID:

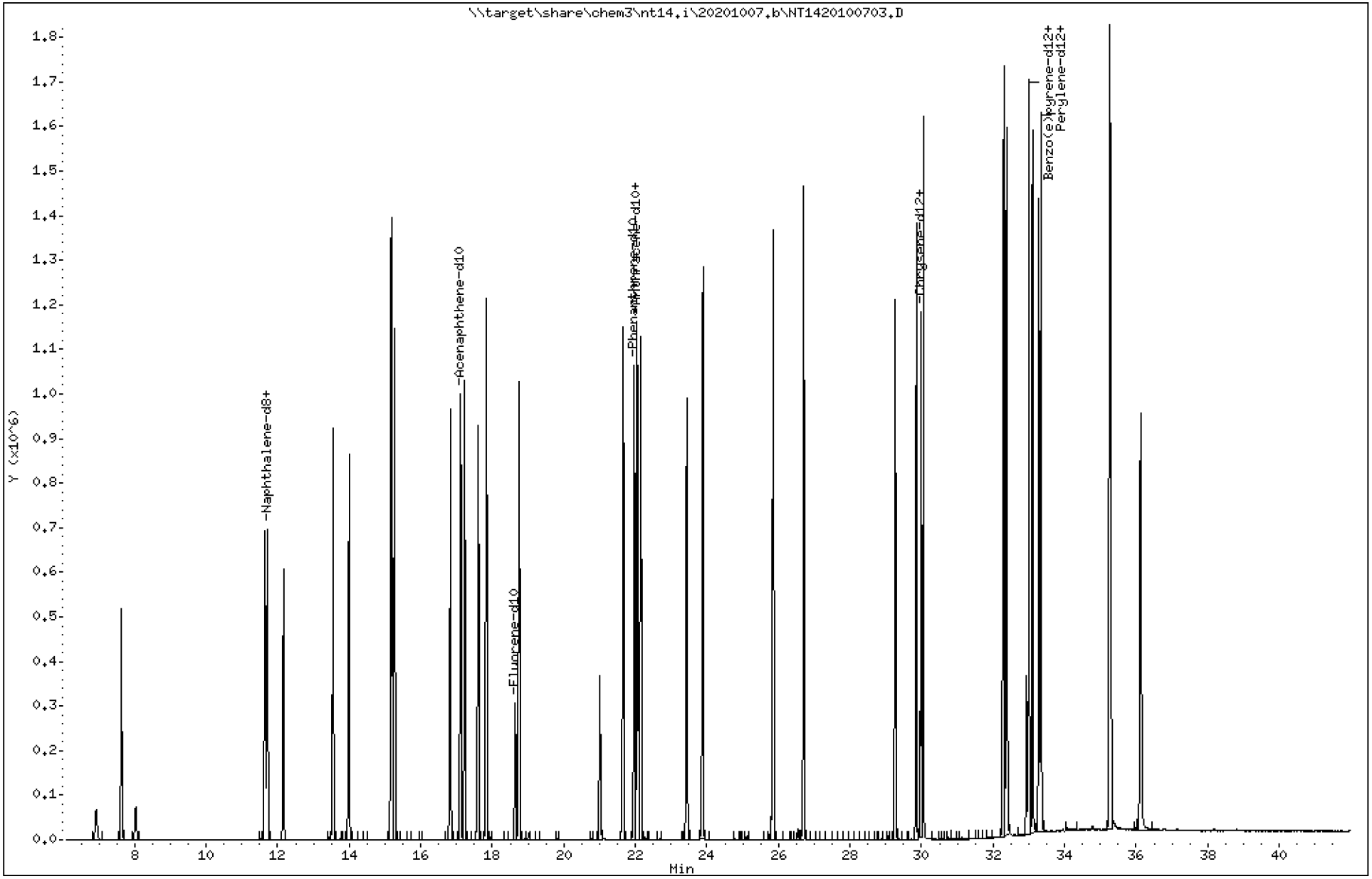
Instrument: nt14.i

Sample Info: SIJ0085-CAL6

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201007.b\NT1420100703.D
Lab Smp Id: SIJ0085-CAL6
Inj Date : 07-OCT-2020 11:48
Operator : VTS Inst ID: nt14.i
Smp Info : SIJ0085-CAL6
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Meth Date : 09-Oct-2020 08:45 van Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 3 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 trans-Decalin	138	6.924	6.934	(0.371)	105286	10.0000	10.36
	2 cis-Decalin	138	8.034	8.034	(0.431)	79916	10.0000	10.45
$	6 Naphthalene-d8	136	11.652	11.641	(0.625)	967993	10.0000	9.754
	7 Naphthalene	128	11.718	11.707	(0.629)	940361	10.0000	9.471
	12 Benzo(b)thiophene	134	12.157	12.157	(0.652)	806656	10.0000	9.669
	16 2-Methylnaphthalene	141	13.553	13.542	(0.727)	595209	10.0000	9.834
	17 1-methylnaphthalene	141	13.992	13.992	(0.751)	569676	10.0000	9.995
	18 Biphenyl	154	15.190	15.179	(0.815)	901448	10.0000	9.896
	19 2,6-Dimethylnaphthalene	156	15.267	15.256	(0.819)	651605	10.0000	9.798
	20 Acenaphthylene	152	16.828	16.817	(0.903)	1120646	10.0000	10.28
$	21 Acenaphthene-d10	164	17.114	17.103	(0.918)	595154	10.0000	9.987
	22 Acenaphthene	153	17.223	17.223	(0.924)	709735	10.0000	9.936
	23 Dibenzofuran	168	17.608	17.597	(0.944)	1033337	10.0000	9.971
	24 1,6,7-Trimethylnaphthalene	170	17.828	17.828	(0.956)	683302	10.0000	10.13
*	25 Fluorene-d10	176	18.644	18.632	(1.000)	243221	2.00000	
	26 Fluorene	166	18.746	18.746	(1.005)	803780	10.0000	9.949
	30 Dibenzothiophene	184	21.660	21.648	(1.162)	1167085	10.0000	10.04
$	35 Phenanthrene-d10	188	21.974	21.963	(0.995)	1076417	10.0000	9.910
	36 Phenanthrene	178	22.051	22.040	(0.999)	1189824	10.0000	9.474
*	250 Anthracene-d10	188	22.083	22.072	(1.000)	226778	2.00000	
	37 Anthracene	178	22.149	22.138	(1.003)	1194371	10.0000	9.677
	42 Carbazole	167	23.436	23.425	(1.061)	1062535	10.0000	9.941
	43 1-Methylphenanthrene	192	23.886	23.875	(1.082)	931522	10.0000	10.11
	44 Fluoranthene	202	25.854	25.843	(1.171)	1417885	10.0000	10.23
	46 Pyrene	202	26.712	26.701	(1.210)	1497643	10.0000	10.24
	51 Naphthobenzothiophene	234	29.267	29.256	(1.325)	1356296	10.0000	10.17
	55 Benzo(a)anthracene	228	29.850	29.839	(0.906)	1427914	10.0000	10.50
$	56 Chrysene-d12	240	29.974	29.974	(0.910)	1042800	10.0000	9.707
	57 Chrysene	228	30.053	30.042	(0.912)	1376082	10.0000	10.18
	62 Benzo(b)fluoranthene	252	32.283	32.272	(0.980)	1652832	10.0000	10.76(M)
	63 Benzo(k)fluoranthene	252	32.328	32.317	(0.982)	1557489	10.0000	10.06(M)
	293 Benzo(j)fluoranthene	252	32.396	32.373	(0.984)	1390794	10.0000	10.28(M)
	246 Total Benzofluoranthenes	252	32.328	32.317	(0.982)	4514074	30.0000	31.68(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.936	32.925	(1.000)	315078	2.00000	
64 Benzo(e)pyrene	252	33.004	32.993	(1.002)	1467097	10.0000	10.43
66 Benzo(a)pyrene	252	33.105	33.083	(1.005)	1433315	10.0000	10.79
$ 67 Perylene-d12	264	33.274	33.263	(1.010)	1310919	10.0000	10.06
68 Perylene	252	33.330	33.319	(1.012)	1444636	10.0000	10.35
69 Indeno(1,2,3-cd)pyrene	276	35.279	35.256	(1.071)	1779209	10.0000	10.81
70 Dibenzo(a,h)anthracene	278	35.256	35.245	(1.070)	1617196	10.0000	11.13
74 Benzo(g,h,i)perylene	276	36.124	36.101	(1.097)	1507736	10.0000	10.43

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100703.D Page 1
Report Date: 09-Oct-2020 08:50

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1420100703.D
Lab Smp Id: SIJ0085-CAL6
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Misc Info:

Calibration Date: 07-OCT-2020
Calibration Time: 18:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	209596	104798	419192	243221	16.04
250 Anthracene-d10	192407	96204	384814	226778	17.86
251 Benzo(e)pyrene-d1	274120	137060	548240	315078	14.94

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.63	18.13	19.13	18.64	0.06
250 Anthracene-d10	22.07	21.57	22.57	22.08	0.05
251 Benzo(e)pyrene-d1	32.93	32.43	33.43	32.94	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 - NT1420100703.D

Lab ID: SIJ0085-CAL6
nt14.i, 20201007.b\ALKYLPNA.m, 07-OCT-2020 11:48

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

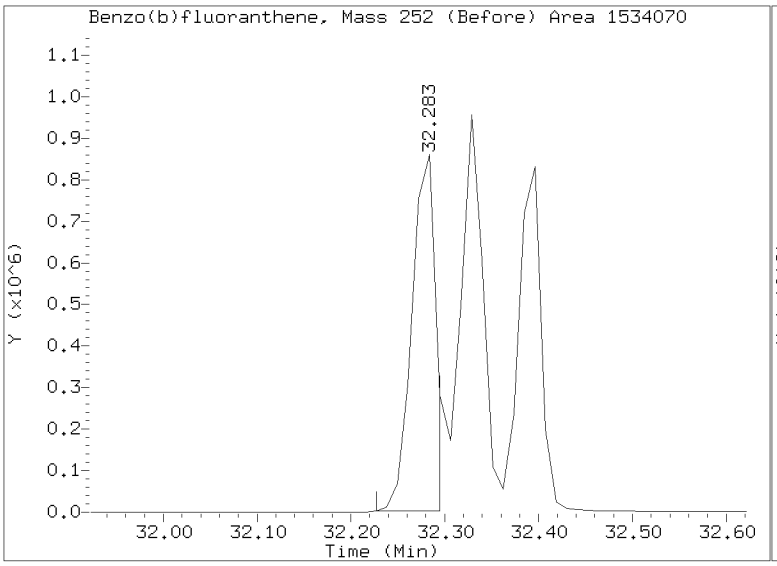
RRT check based on Ccal File: NT1420100711.D

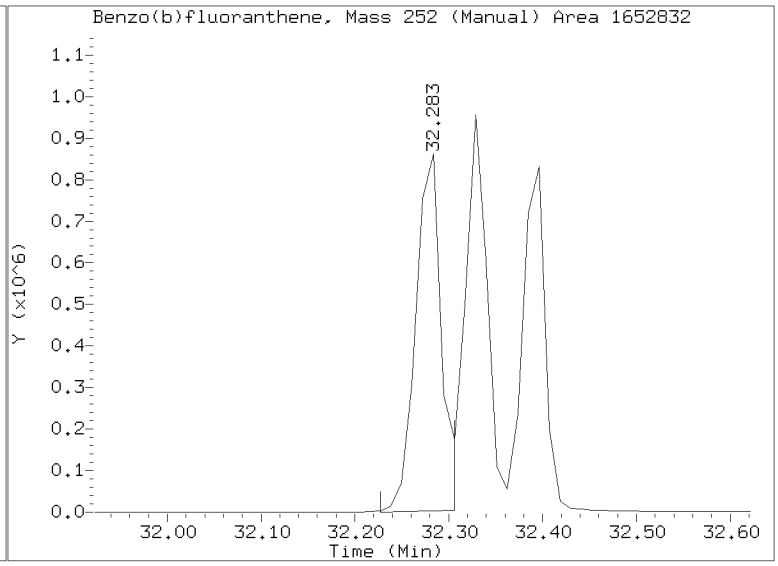
On Column LOD for nt14.i, 20201007.b\ALKYLPNA.m, TARGETS.sub = 0.0000

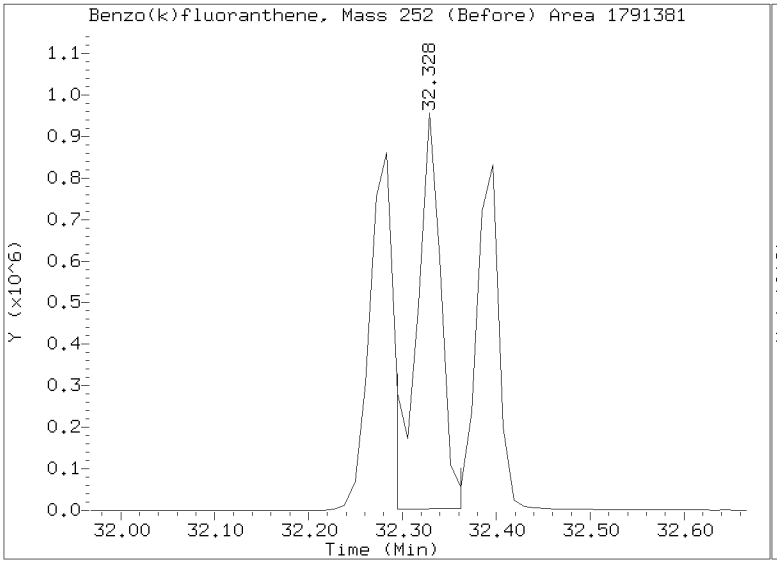
* Only compounds listed in the work order have been verified by the analyst *

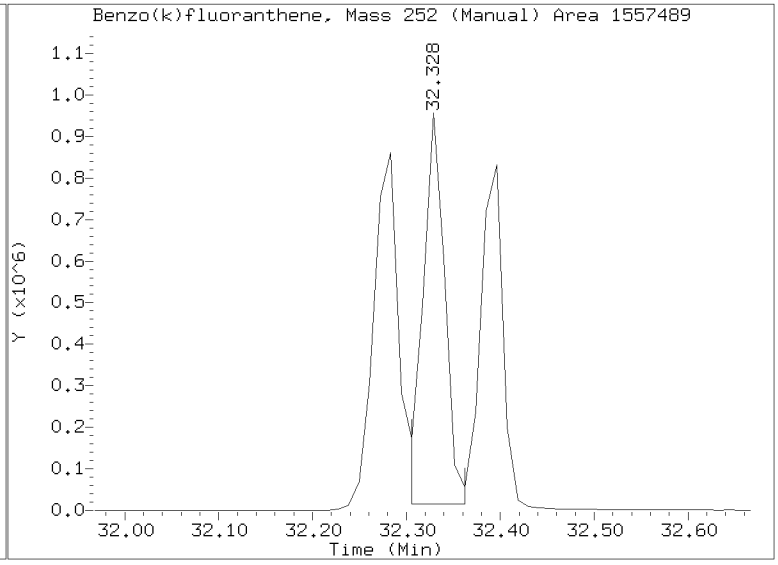
Quant Ion Manual Peak Adjustment Report

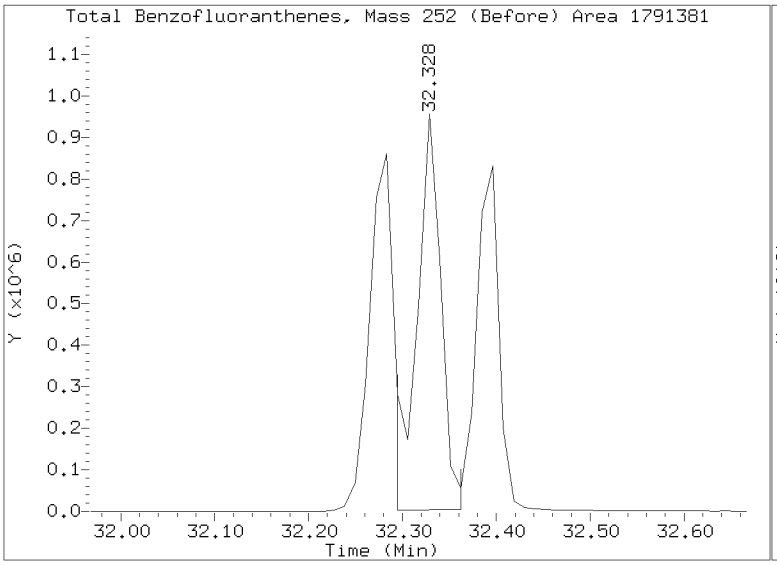
Datafile: //target/share/chem3/nt14.i/20201007.b/NT1420100703.D
Injection Date: 07-OCT-2020 11:48
Lab ID:SIJ0085-CAL6 Client ID:
Report Date: 10/09/2020 08:50

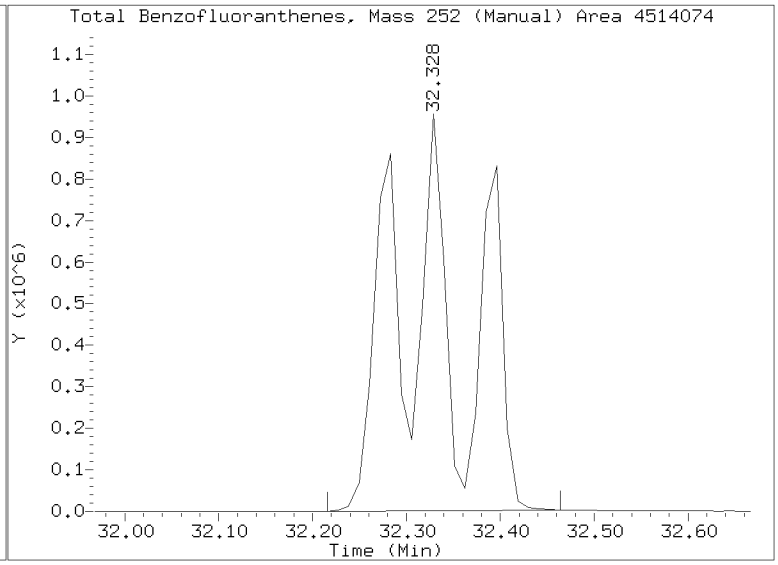






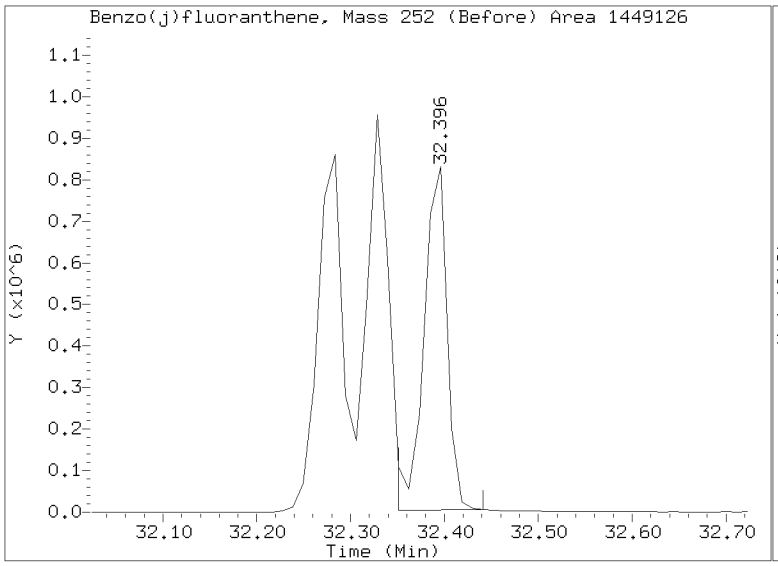


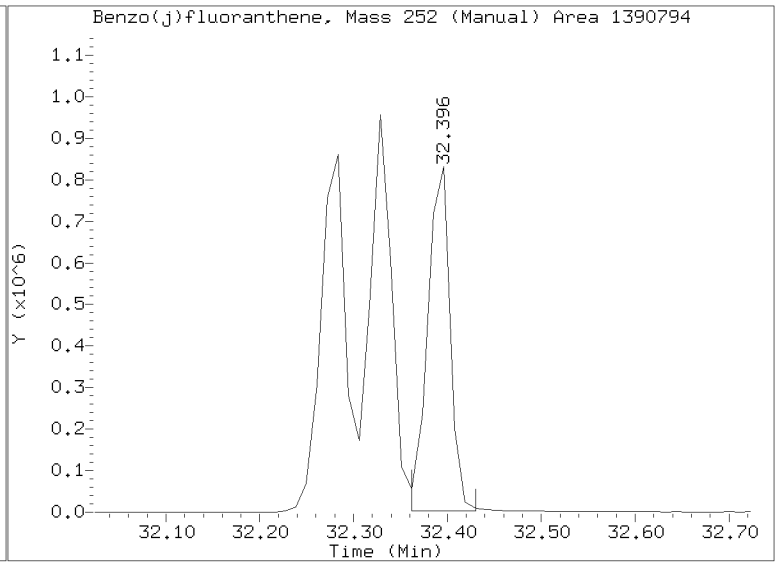




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20201007.b/NT1420100703.D
Injection Date: 07-OCT-2020 11:48
Lab ID:SIJ0085-CAL6 Client ID:
Report Date: 10/09/2020 08:50





Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100704.D

Date : 07-OCT-2020 12:38

Client ID:

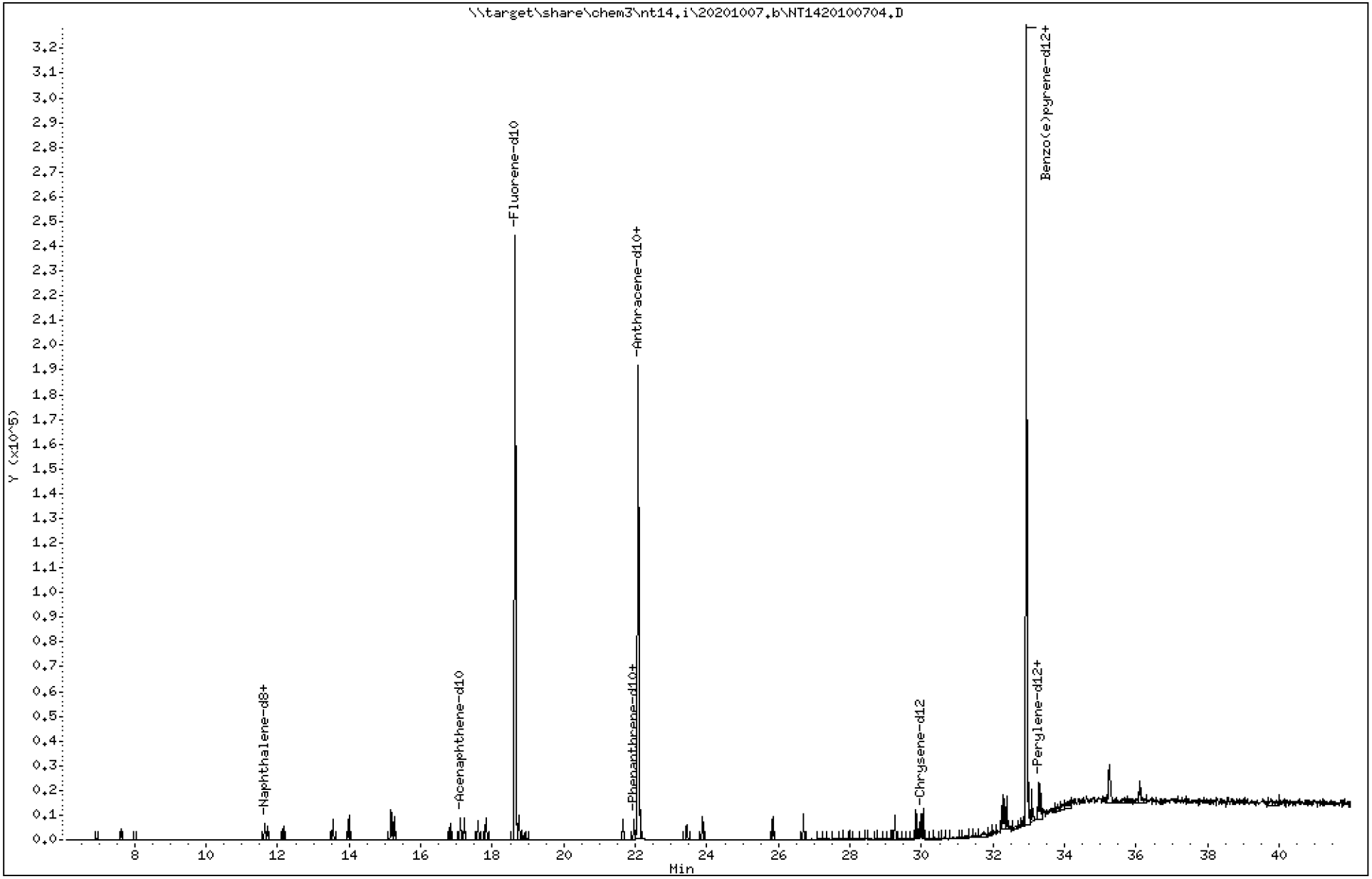
Instrument: nt14.i

Sample Info: SIJ0085-CAL1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201007.b\NT1420100704.D
Lab Smp Id: SIJ0085-CAL1
Inj Date : 07-OCT-2020 12:38
Operator : VTS Inst ID: nt14.i
Smp Info : SIJ0085-CAL1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Meth Date : 09-Oct-2020 08:45 van Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 trans-Decalin	138	6.934	6.934	(0.372)	766	0.10000	0.08346
	2 cis-Decalin	138	8.034	8.034	(0.431)	571	0.10000	0.08268(M)
$	6 Naphthalene-d8	136	11.641	11.641	(0.625)	9430	0.10000	0.1052
	7 Naphthalene	128	11.707	11.707	(0.628)	9141	0.10000	0.1020
	12 Benzo(b)thiophene	134	12.157	12.157	(0.652)	8222	0.10000	0.1092
	16 2-Methylnaphthalene	141	13.542	13.542	(0.727)	5687	0.10000	0.1041
	17 1-methylnaphthalene	141	13.993	13.992	(0.751)	7676	0.10000	0.1363
	18 Biphenyl	154	15.180	15.179	(0.815)	8706	0.10000	0.1059
	19 2,6-Dimethylnaphthalene	156	15.256	15.256	(0.819)	5478	0.10000	0.09124
	20 Acenaphthylene	152	16.817	16.817	(0.903)	9949	0.10000	0.1011
$	21 Acenaphthene-d10	164	17.103	17.103	(0.918)	5216	0.10000	0.09694
	22 Acenaphthene	153	17.224	17.223	(0.924)	6473	0.10000	0.1004
	23 Dibenzofuran	168	17.597	17.597	(0.944)	9414	0.10000	0.1006
	24 1,6,7-Trimethylnaphthalene	170	17.828	17.828	(0.957)	5882	0.10000	0.09663
*	25 Fluorene-d10	176	18.632	18.632	(1.000)	219599	2.00000	
	26 Fluorene	166	18.746	18.746	(1.006)	7135	0.10000	0.09782
	30 Dibenzothiophene	184	21.648	21.648	(1.162)	10466	0.10000	0.09970
$	35 Phenanthrene-d10	188	21.963	21.963	(0.995)	9226	0.10000	0.09659(M)
	36 Phenanthrene	178	22.040	22.040	(0.999)	11697	0.10000	0.1059
*	250 Anthracene-d10	188	22.073	22.072	(1.000)	199428	2.00000	
	37 Anthracene	178	22.139	22.138	(1.003)	12429	0.10000	0.1145
	42 Carbazole	167	23.425	23.425	(1.061)	9735	0.10000	0.1036
	43 1-Methylphenanthrene	192	23.876	23.875	(1.082)	7650	0.10000	0.09437
	44 Fluoranthene	202	25.844	25.843	(1.171)	12325	0.10000	0.1011
	46 Pyrene	202	26.701	26.701	(1.210)	13276	0.10000	0.1032
	51 Naphthobenzothiophene	234	29.256	29.256	(1.325)	11379	0.10000	0.09706
	55 Benzo(a)anthracene	228	29.839	29.839	(0.906)	12512	0.10000	0.1015
$	56 Chrysene-d12	240	29.963	29.974	(0.910)	10937	0.10000	0.1123
	57 Chrysene	228	30.042	30.042	(0.912)	12311	0.10000	0.1005
	62 Benzo(b)fluoranthene	252	32.261	32.272	(0.980)	13449	0.10000	0.09662
	63 Benzo(k)fluoranthene	252	32.317	32.317	(0.982)	15506	0.10000	0.1105(M)
	293 Benzo(j)fluoranthene	252	32.373	32.373	(0.983)	12906	0.10000	0.1052
	246 Total Benzofluoranthenes	252	32.261	32.317	(0.980)	39150	0.30000	0.3031(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.925	32.925	(1.000)	285553	2.00000	
64 Benzo(e)pyrene	252	32.993	32.993	(1.002)	12547	0.10000	0.09845
66 Benzo(a)pyrene	252	33.083	33.083	(1.005)	11853	0.10000	0.09844
$ 67 Perylene-d12	264	33.263	33.263	(1.010)	12542	0.10000	0.1062
68 Perylene	252	33.319	33.319	(1.012)	13133	0.10000	0.1038
69 Indeno(1,2,3-cd)pyrene	276	35.257	35.256	(1.071)	14810	0.10000	0.09932
70 Dibenzo(a,h)anthracene	278	35.234	35.245	(1.070)	12613	0.10000	0.09575
74 Benzo(g,h,i)perylene	276	36.101	36.101	(1.096)	13347	0.10000	0.1019

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100704.D Page 1
Report Date: 09-Oct-2020 08:50

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1420100704.D
Lab Smp Id: SIJ0085-CAL1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Misc Info:

Calibration Date: 07-OCT-2020
Calibration Time: 18:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	209596	104798	419192	219599	4.77
250 Anthracene-d10	192407	96204	384814	199428	3.65
251 Benzo(e)pyrene-d1	274120	137060	548240	285553	4.17

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.63	18.13	19.13	18.63	0.00
250 Anthracene-d10	22.07	21.57	22.57	22.07	0.00
251 Benzo(e)pyrene-d1	32.93	32.43	33.43	32.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1420100704.D

Lab ID: SIJ0085-CAL1
nt14.i, 20201007.b\ALKYLPNA.m, 07-OCT-2020 12:38

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

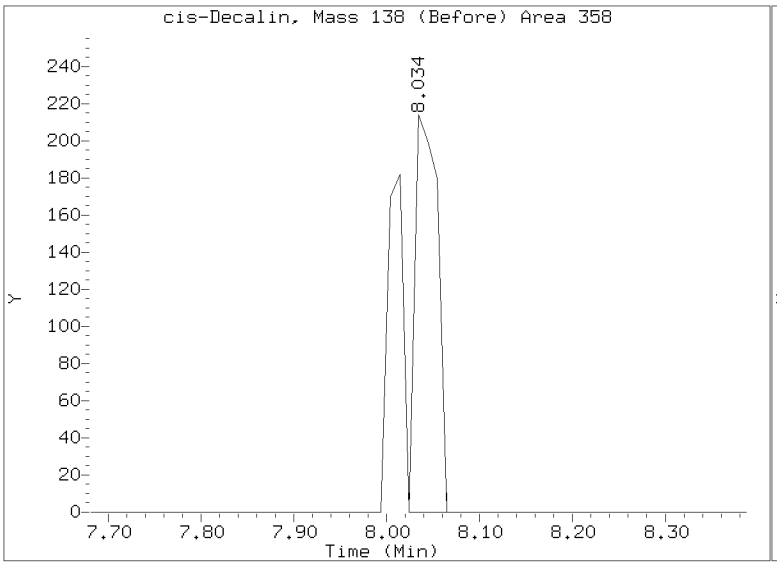
RRT check based on Ccal File: NT1420100711.D

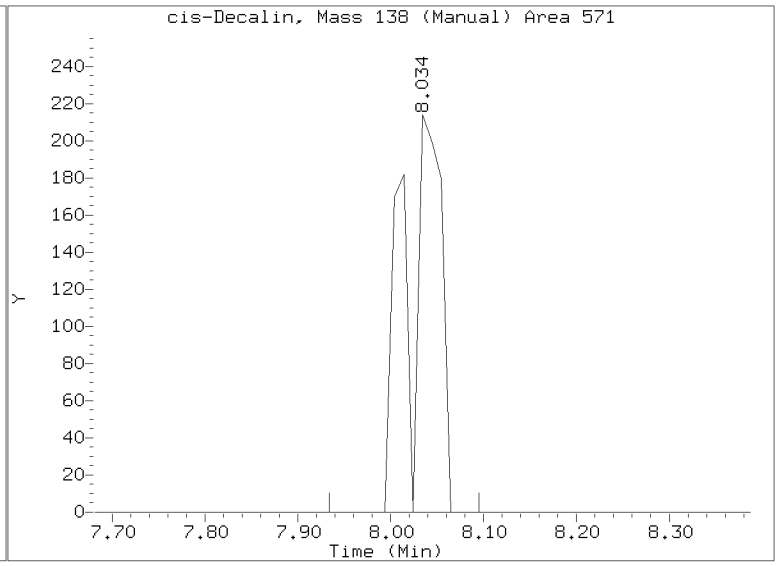
On Column LOD for nt14.i, 20201007.b\ALKYLPNA.m, TARGETS.sub = 0.0000

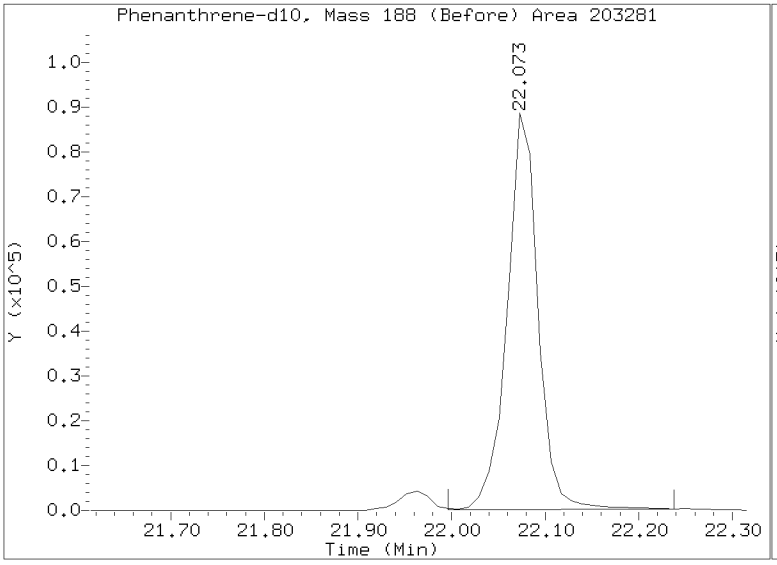
* Only compounds listed in the work order have been verified by the analyst *

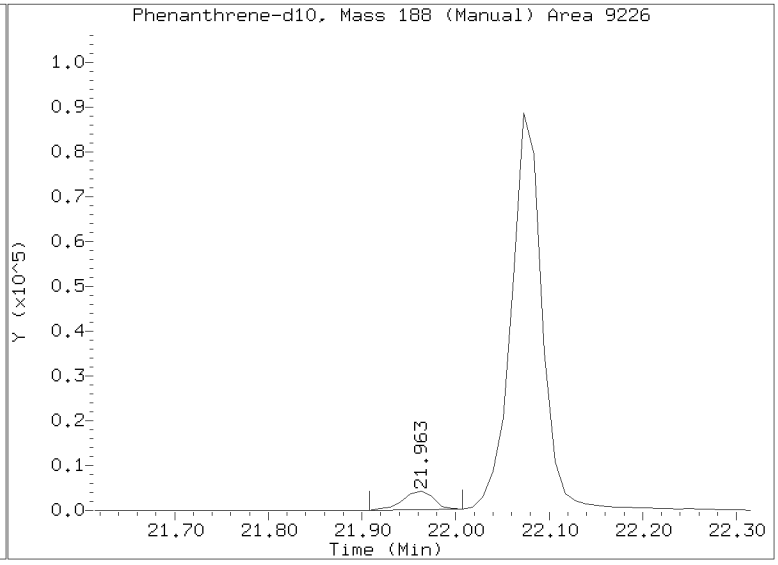
Quant Ion Manual Peak Adjustment Report

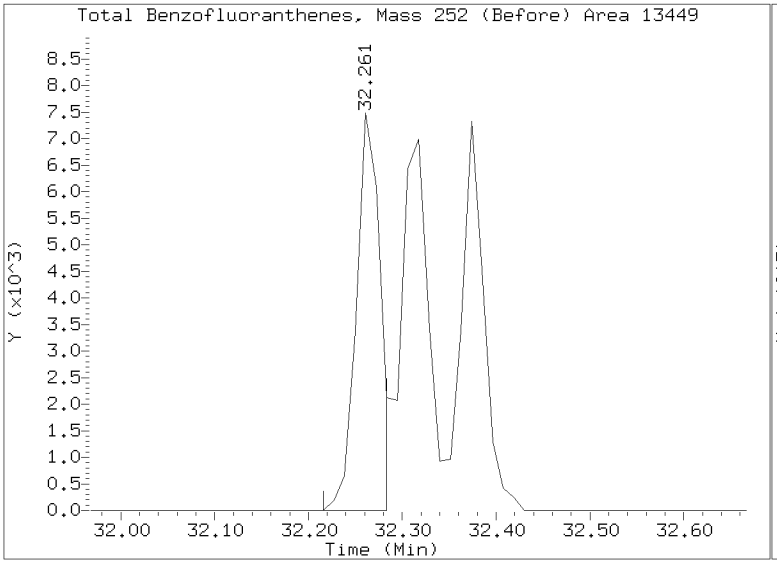
Datafile: //target/share/chem3/nt14.i/20201007.b/NT1420100704.D
Injection Date: 07-OCT-2020 12:38
Lab ID:SIJ0085-CAL1 Client ID:
Report Date: 10/09/2020 08:51

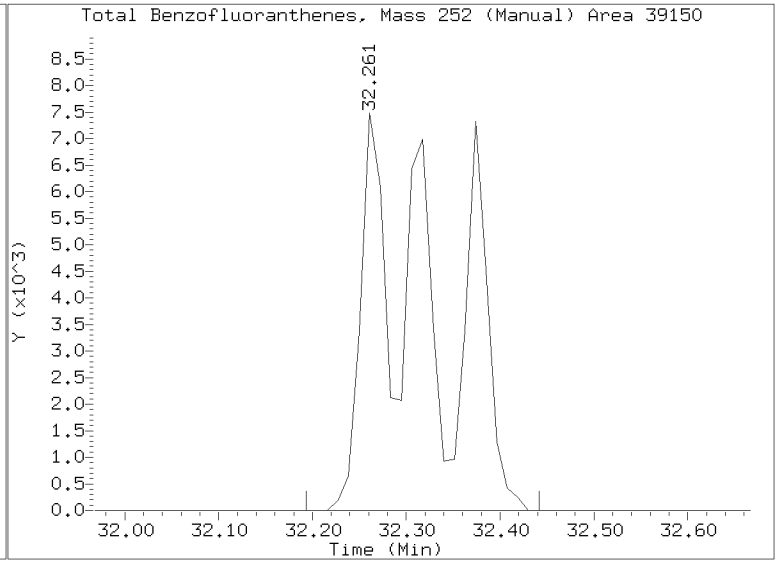






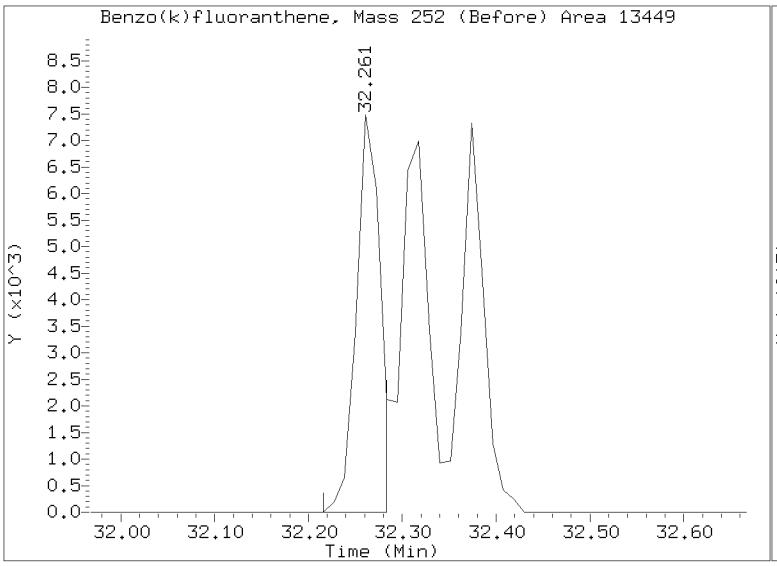


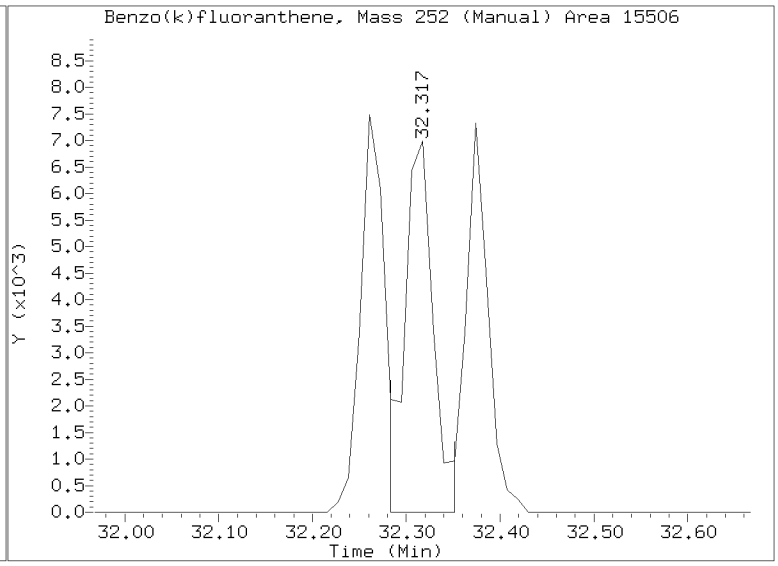




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20201007.b/NT1420100704.D
Injection Date: 07-OCT-2020 12:38
Lab ID:SIJ0085-CAL1 Client ID:
Report Date: 10/09/2020 08:51





Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100705.D

Date : 07-OCT-2020 13:26

Client ID:

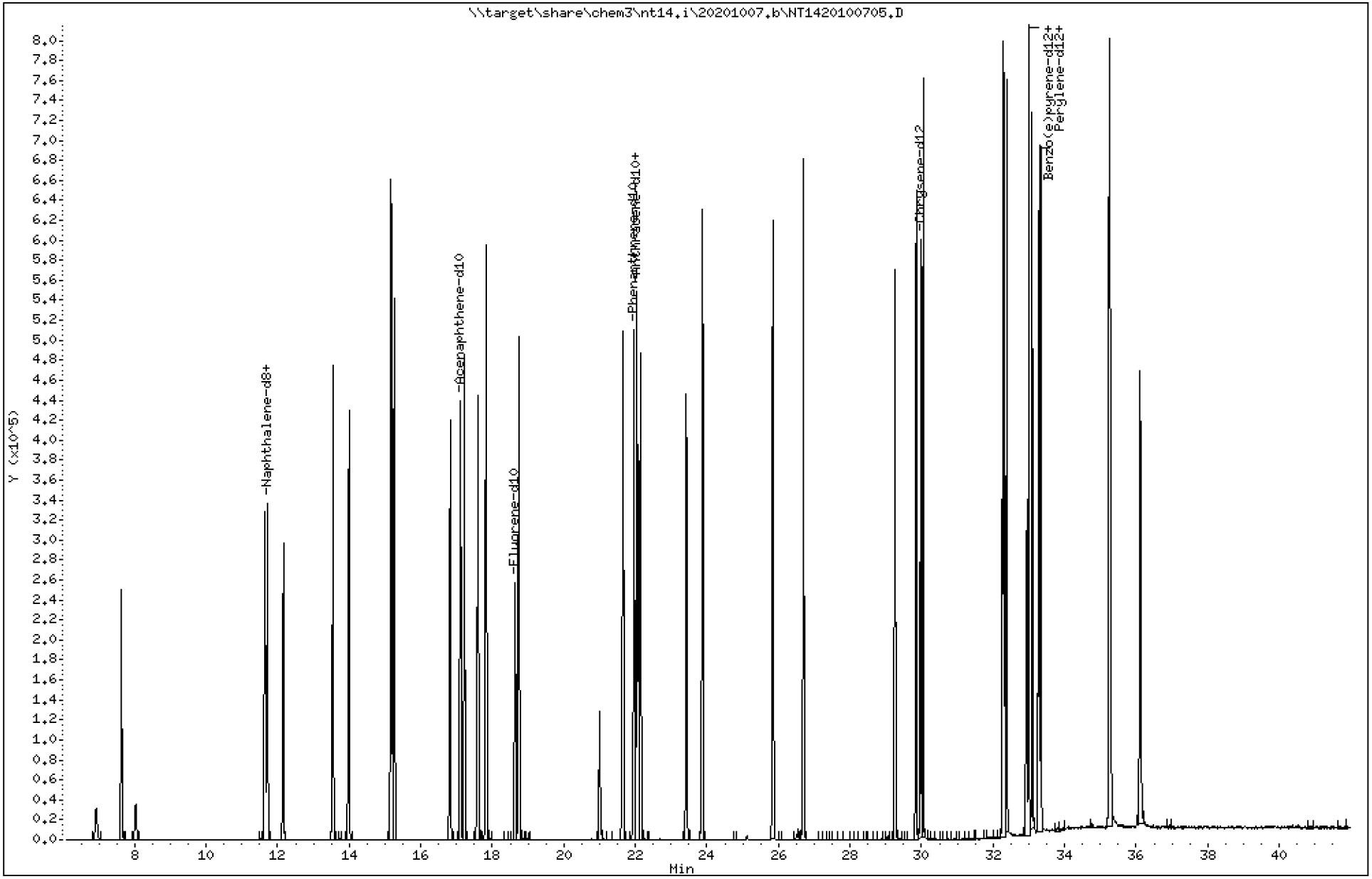
Instrument: nt14.i

Sample Info: SIJ0085-CA15

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201007.b\NT1420100705.D
Lab Smp Id: SIJ0085-CAL5
Inj Date : 07-OCT-2020 13:26
Operator : VTS Inst ID: nt14.i
Smp Info : SIJ0085-CAl5
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Meth Date : 09-Oct-2020 08:45 van Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 5 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 trans-Decalin	138	6.934	6.934	(0.372)	49980	5.00000	5.388
	2 cis-Decalin	138	8.023	8.034	(0.431)	36850	5.00000	5.279
$	6 Naphthalene-d8	136	11.641	11.641	(0.625)	456146	5.00000	5.037
	7 Naphthalene	128	11.707	11.707	(0.628)	452193	5.00000	4.991
	12 Benzo(b)thiophene	134	12.157	12.157	(0.652)	376503	5.00000	4.945
	16 2-Methylnaphthalene	141	13.542	13.542	(0.727)	284564	5.00000	5.152
	17 1-methylnaphthalene	141	13.992	13.992	(0.751)	272838	5.00000	5.027
	18 Biphenyl	154	15.179	15.179	(0.815)	424093	5.00000	5.102
	19 2,6-Dimethylnaphthalene	156	15.256	15.256	(0.819)	310041	5.00000	5.109
	20 Acenaphthylene	152	16.817	16.817	(0.903)	512483	5.00000	5.150
$	21 Acenaphthene-d10	164	17.103	17.103	(0.918)	281256	5.00000	5.172
	22 Acenaphthene	153	17.223	17.223	(0.924)	332037	5.00000	5.093
	23 Dibenzofuran	168	17.597	17.597	(0.944)	486378	5.00000	5.143
	24 1,6,7-Trimethylnaphthalene	170	17.828	17.828	(0.957)	321559	5.00000	5.226
*	25 Fluorene-d10	176	18.632	18.632	(1.000)	221965	2.00000	
	26 Fluorene	166	18.746	18.746	(1.006)	381827	5.00000	5.179
	30 Dibenzothiophene	184	21.648	21.648	(1.162)	546348	5.00000	5.149
$	35 Phenanthrene-d10	188	21.963	21.963	(0.995)	507210	5.00000	5.180
	36 Phenanthrene	178	22.040	22.040	(0.999)	569840	5.00000	5.033
*	250 Anthracene-d10	188	22.073	22.072	(1.000)	204432	2.00000	
	37 Anthracene	178	22.149	22.138	(1.003)	549053	5.00000	4.935
	42 Carbazole	167	23.425	23.425	(1.061)	489372	5.00000	5.079
	43 1-Methylphenanthrene	192	23.875	23.875	(1.082)	441226	5.00000	5.310
	44 Fluoranthene	202	25.843	25.843	(1.171)	651991	5.00000	5.218
	46 Pyrene	202	26.701	26.701	(1.210)	679613	5.00000	5.154
	51 Naphthobenzothiophene	234	29.256	29.256	(1.325)	628207	5.00000	5.227
	55 Benzo(a)anthracene	228	29.850	29.839	(0.907)	658370	5.00000	5.250
$	56 Chrysene-d12	240	29.974	29.974	(0.910)	494394	5.00000	4.992
	57 Chrysene	228	30.042	30.042	(0.912)	635702	5.00000	5.101
	62 Benzo(b)fluoranthene	252	32.272	32.272	(0.980)	734114	5.00000	5.185(M)
	63 Benzo(k)fluoranthene	252	32.317	32.317	(0.982)	748276	5.00000	5.243(M)
	293 Benzo(j)fluoranthene	252	32.384	32.373	(0.984)	618891	5.00000	4.961(M)
	246 Total Benzofluoranthenes	252	32.272	32.317	(0.980)	2065414	15.0000	15.72(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.925	32.925	(1.000)	290471	2.00000	
64 Benzo(e)pyrene	252	32.993	32.993	(1.002)	677603	5.00000	5.227
66 Benzo(a)pyrene	252	33.094	33.083	(1.005)	647617	5.00000	5.287
$ 67 Perylene-d12	264	33.263	33.263	(1.010)	614419	5.00000	5.115
68 Perylene	252	33.330	33.319	(1.012)	672765	5.00000	5.229
69 Indeno(1,2,3-cd)pyrene	276	35.268	35.256	(1.071)	815478	5.00000	5.376
70 Dibenzo(a,h)anthracene	278	35.245	35.245	(1.070)	714065	5.00000	5.329(M)
74 Benzo(g,h,i)perylene	276	36.112	36.101	(1.097)	694445	5.00000	5.212

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100705.D Page 1
Report Date: 09-Oct-2020 08:51

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1420100705.D
Lab Smp Id: SIJ0085-CAL5
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Misc Info:

Calibration Date: 07-OCT-2020
Calibration Time: 18:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	209596	104798	419192	221965	5.90
250 Anthracene-d10	192407	96204	384814	204432	6.25
251 Benzo(e)pyrene-d1	274120	137060	548240	290471	5.96

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.63	18.13	19.13	18.63	0.00
250 Anthracene-d10	22.07	21.57	22.57	22.07	0.00
251 Benzo(e)pyrene-d1	32.93	32.43	33.43	32.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1420100705.D

Lab ID: SIJ0085-CAL5
nt14.i, 20201007.b\ALKYLPNA.m, 07-OCT-2020 13:26

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

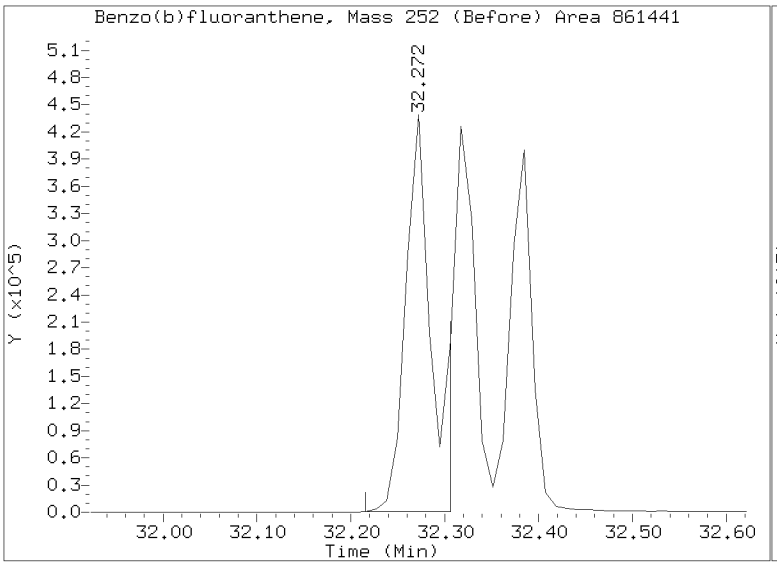
RRT check based on Ccal File: NT1420100711.D

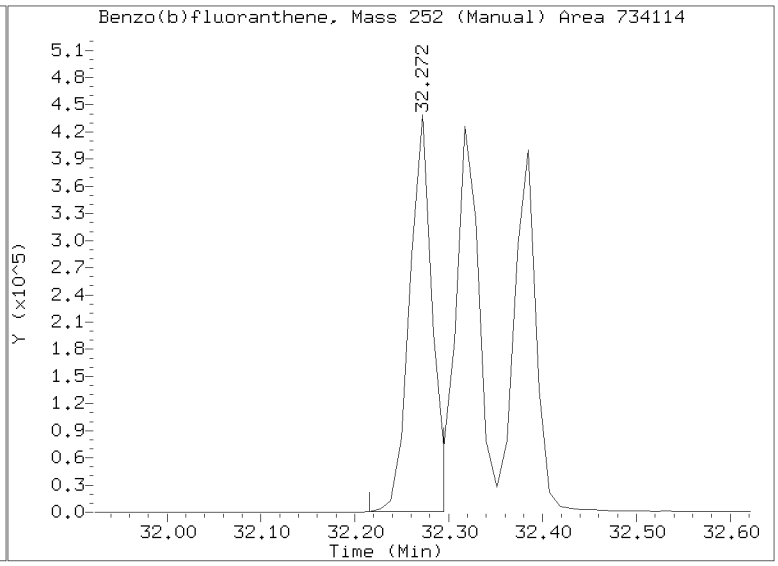
On Column LOD for nt14.i, 20201007.b\ALKYLPNA.m, TARGETS.sub = 0.0000

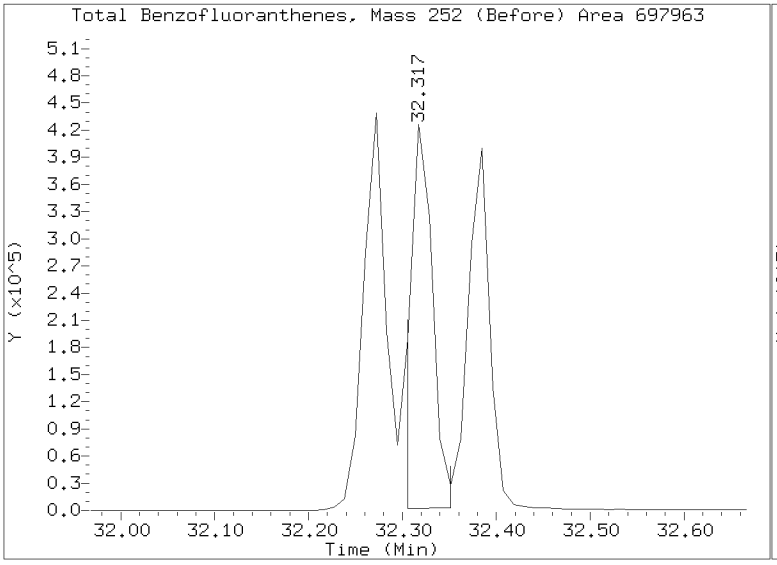
* Only compounds listed in the work order have been verified by the analyst *

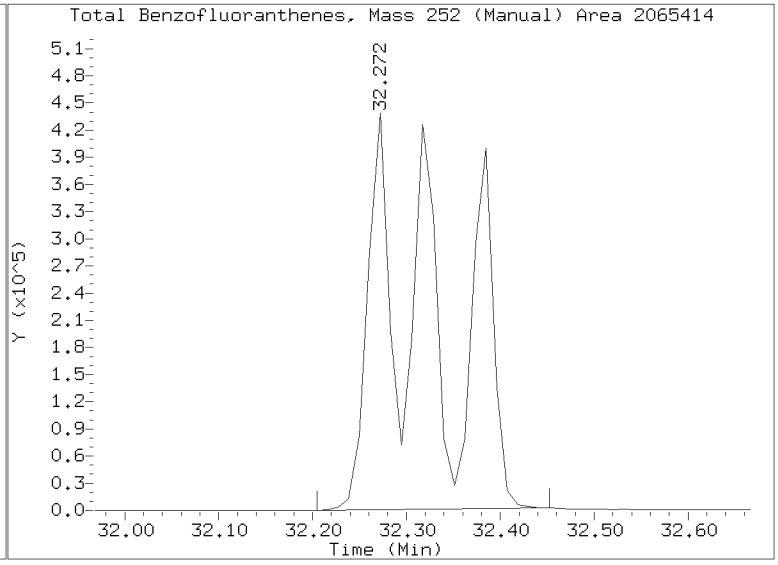
Quant Ion Manual Peak Adjustment Report

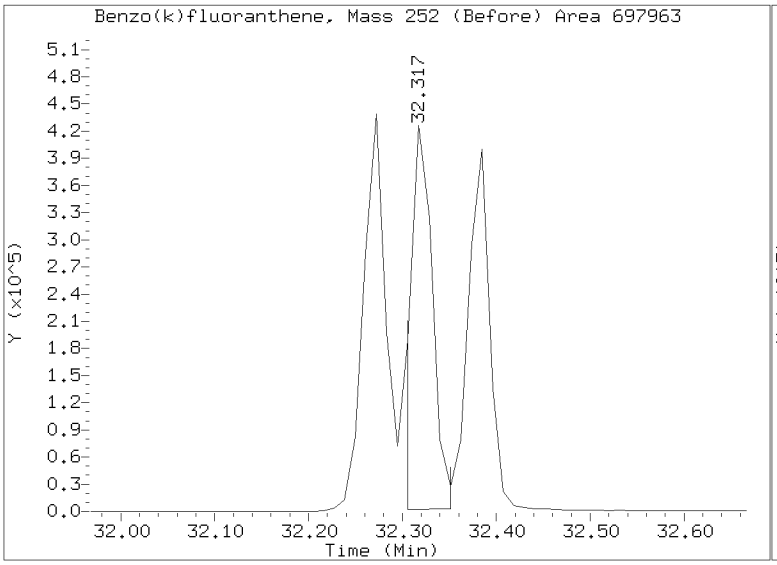
Datafile: //target/share/chem3/nt14.i/20201007.b/NT1420100705.D
Injection Date: 07-OCT-2020 13:26
Lab ID:SIJ0085-CAL5 Client ID:
Report Date: 10/09/2020 08:51

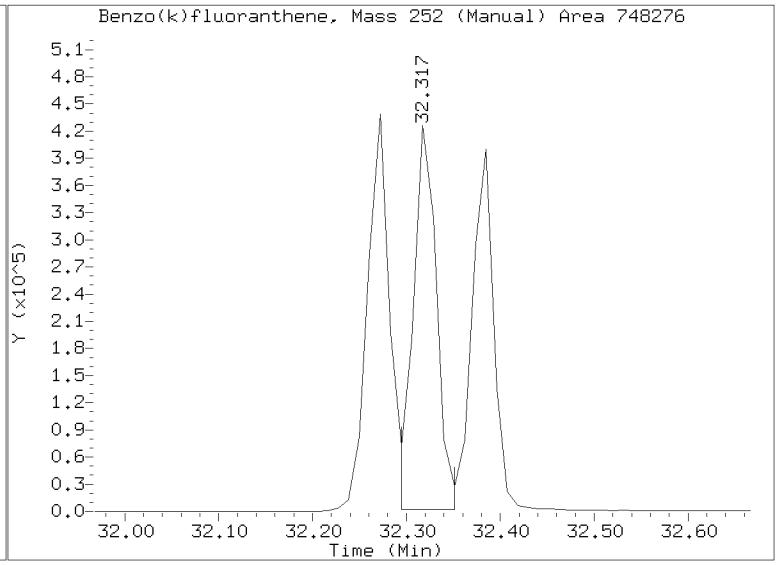






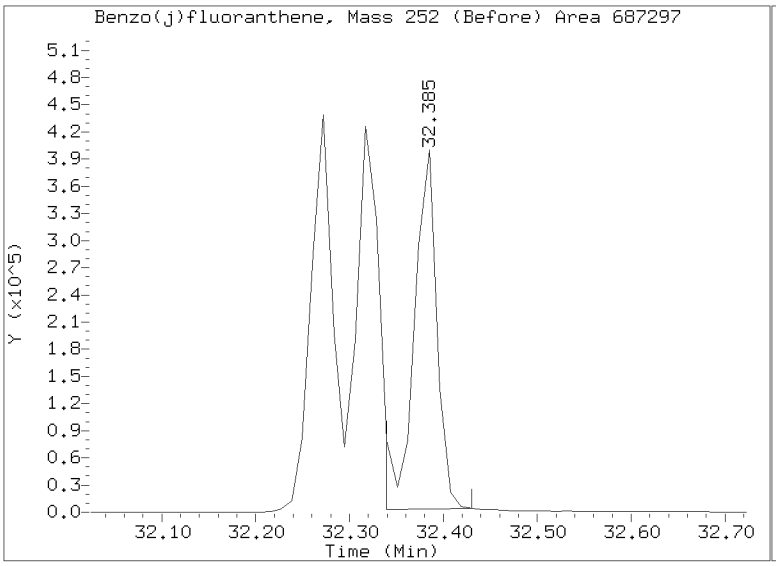


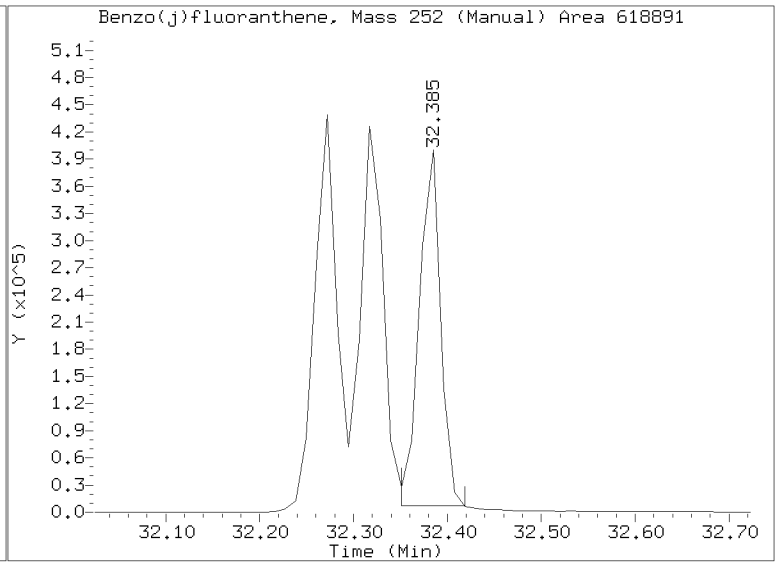


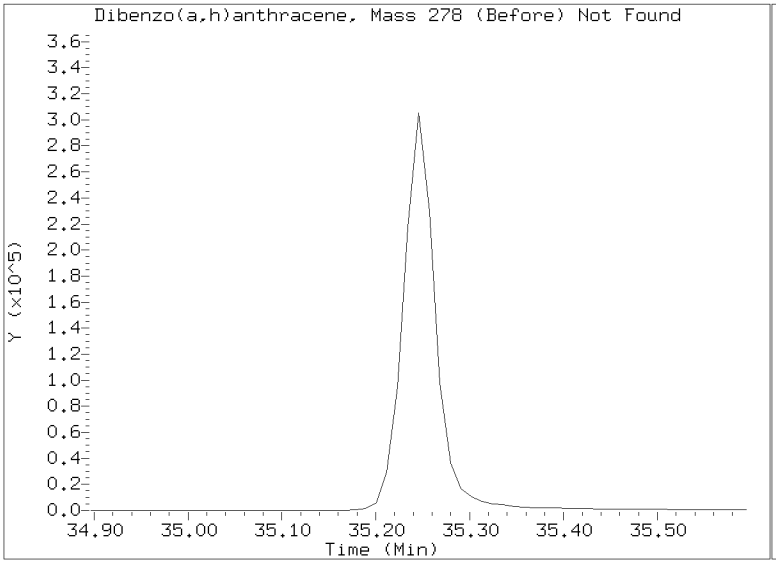


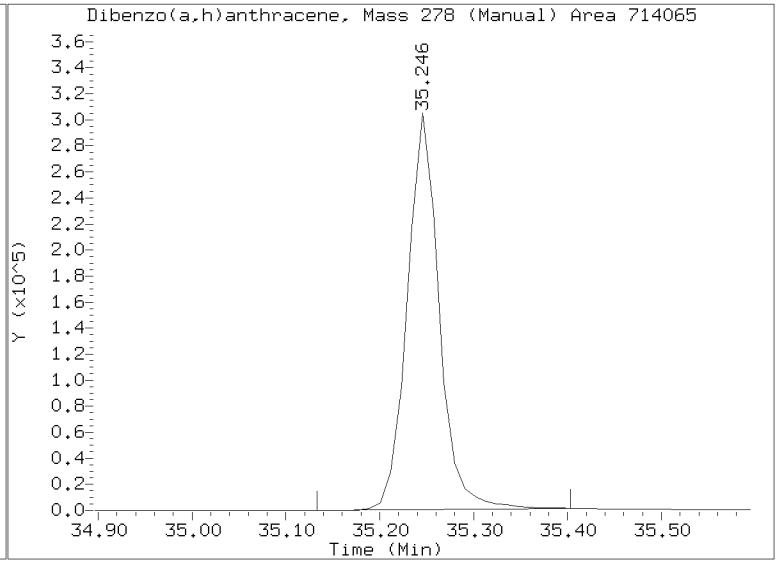
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20201007.b/NT1420100705.D
Injection Date: 07-OCT-2020 13:26
Lab ID:SIJ0085-CAL5 Client ID:
Report Date: 10/09/2020 08:51









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Date : 07-OCT-2020 14:17

Client ID:

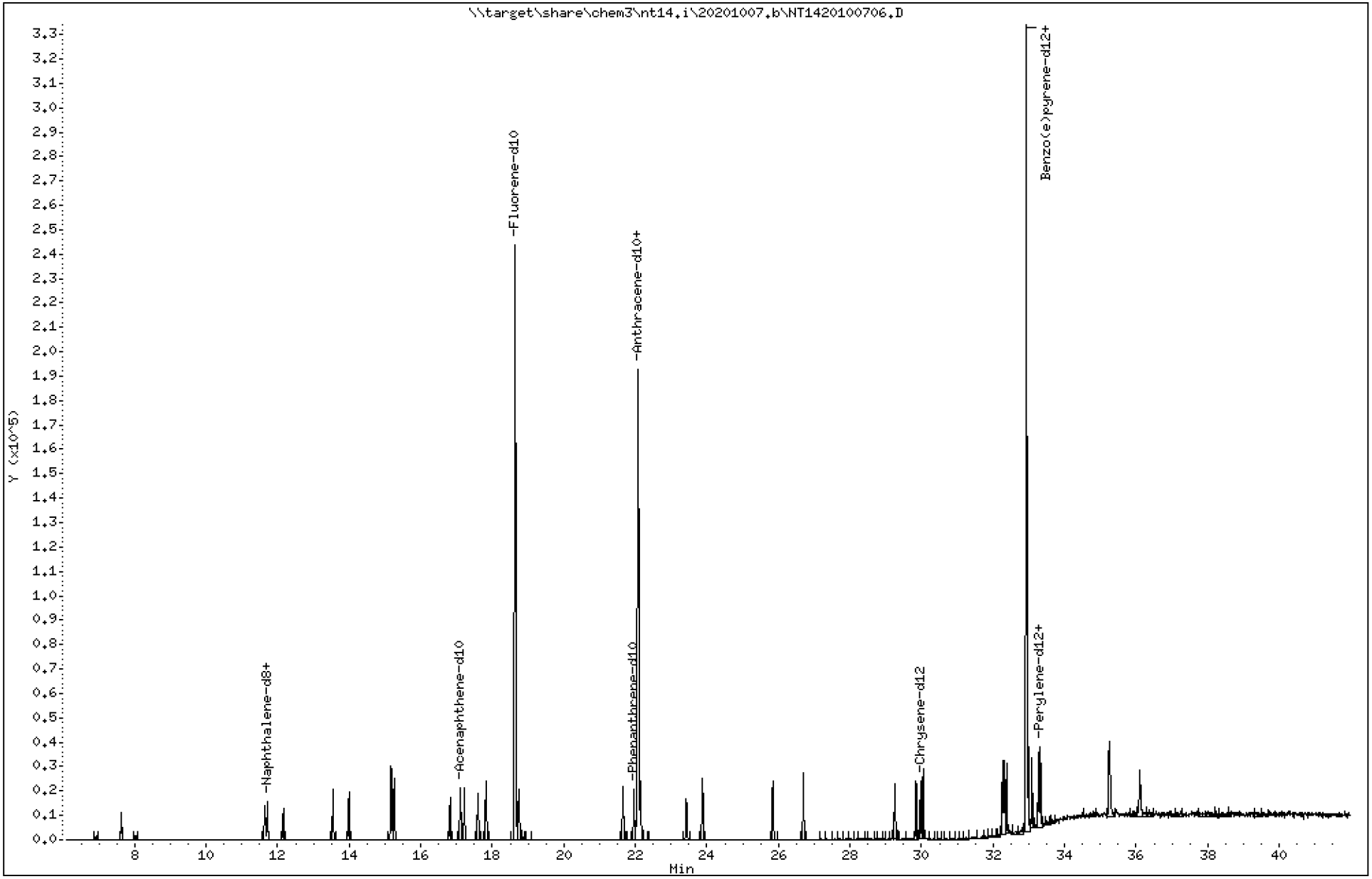
Instrument: nt14.i

Sample Info: SIJ0085-CAL2

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201007.b\NT1420100706.D
Lab Smp Id: SIJ0085-CAL2
Inj Date : 07-OCT-2020 14:17
Operator : VTS Inst ID: nt14.i
Smp Info : SIJ0085-CAL2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Meth Date : 09-Oct-2020 08:45 van Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 6 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: VANS

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
1 trans-Decalin	138	6.934	6.934	(0.372)	2252	0.25000	0.2466
2 cis-Decalin	138	8.044	8.034	(0.432)	1594	0.25000	0.2320
$ 6 Naphthalene-d8	136	11.641	11.641	(0.625)	21730	0.25000	0.2438
7 Naphthalene	128	11.707	11.707	(0.628)	22159	0.25000	0.2485
12 Benzo(b)thiophene	134	12.157	12.157	(0.652)	18669	0.25000	0.2491
16 2-Methylnaphthalene	141	13.542	13.542	(0.727)	12712	0.25000	0.2338
17 1-methylnaphthalene	141	13.993	13.992	(0.751)	13075	0.25000	0.2336
18 Biphenyl	154	15.180	15.179	(0.815)	19766	0.25000	0.2416
19 2,6-Dimethylnaphthalene	156	15.256	15.256	(0.819)	15174	0.25000	0.2540
20 Acenaphthylene	152	16.817	16.817	(0.903)	22378	0.25000	0.2285
$ 21 Acenaphthene-d10	164	17.103	17.103	(0.918)	13305	0.25000	0.2486
22 Acenaphthene	153	17.224	17.223	(0.924)	15700	0.25000	0.2447
23 Dibenzofuran	168	17.597	17.597	(0.944)	22038	0.25000	0.2368
24 1,6,7-Trimethylnaphthalene	170	17.828	17.828	(0.957)	14402	0.25000	0.2378
* 25 Fluorene-d10	176	18.632	18.632	(1.000)	218460	2.00000	
26 Fluorene	166	18.746	18.746	(1.006)	17591	0.25000	0.2424
30 Dibenzothiophene	184	21.648	21.648	(1.162)	25381	0.25000	0.2430
$ 35 Phenanthrene-d10	188	21.963	21.963	(0.995)	22819	0.25000	0.2407
36 Phenanthrene	178	22.040	22.040	(0.999)	26582	0.25000	0.2425
* 250 Anthracene-d10	188	22.073	22.072	(1.000)	197976	2.00000	
37 Anthracene	178	22.139	22.138	(1.003)	25137	0.25000	0.2333
42 Carbazole	167	23.425	23.425	(1.061)	22010	0.25000	0.2359
43 1-Methylphenanthrene	192	23.876	23.875	(1.082)	18812	0.25000	0.2338
44 Fluoranthene	202	25.844	25.843	(1.171)	27742	0.25000	0.2293
46 Pyrene	202	26.701	26.701	(1.210)	30294	0.25000	0.2372
51 Naphthobenzothiophene	234	29.256	29.256	(1.325)	28096	0.25000	0.2414
55 Benzo(a)anthracene	228	29.839	29.839	(0.906)	28323	0.25000	0.2286
$ 56 Chrysene-d12	240	29.963	29.974	(0.910)	23429	0.25000	0.2394
57 Chrysene	228	30.042	30.042	(0.912)	30292	0.25000	0.2460
62 Benzo(b)fluoranthene	252	32.261	32.272	(0.980)	31128	0.25000	0.2225
63 Benzo(k)fluoranthene	252	32.317	32.317	(0.982)	35688	0.25000	0.2531
293 Benzo(j)fluoranthene	252	32.373	32.373	(0.983)	29094	0.25000	0.2360
246 Total Benzofluoranthenes	252	32.261	32.317	(0.980)	89523	0.75000	0.6896(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.925	32.925	(1.000)	287017	2.00000	
64 Benzo(e)pyrene	252	32.981	32.993	(1.002)	30852	0.25000	0.2409
66 Benzo(a)pyrene	252	33.083	33.083	(1.005)	27240	0.25000	0.2251
$ 67 Perylene-d12	264	33.263	33.263	(1.010)	27911	0.25000	0.2352
68 Perylene	252	33.319	33.319	(1.012)	28453	0.25000	0.2238
69 Indeno(1,2,3-cd)pyrene	276	35.257	35.256	(1.071)	34019	0.25000	0.2270
70 Dibenzo(a,h)anthracene	278	35.234	35.245	(1.070)	30457	0.25000	0.2300
74 Benzo(g,h,i)perylene	276	36.101	36.101	(1.096)	29763	0.25000	0.2261

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100706.D Page 1
Report Date: 09-Oct-2020 09:36

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1420100706.D
Lab Smp Id: SIJ0085-CAL2
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Misc Info:

Calibration Date: 07-OCT-2020
Calibration Time: 18:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	209596	104798	419192	218460	4.23
250 Anthracene-d10	192407	96204	384814	197976	2.89
251 Benzo(e)pyrene-d1	274120	137060	548240	287017	4.70

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.63	18.13	19.13	18.63	0.00
250 Anthracene-d10	22.07	21.57	22.57	22.07	0.00
251 Benzo(e)pyrene-d1	32.93	32.43	33.43	32.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1420100706.D

Lab ID: SIJ0085-CAL2
nt14.i, 20201007.b\ALKYLPNA.m, 07-OCT-2020 14:17

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

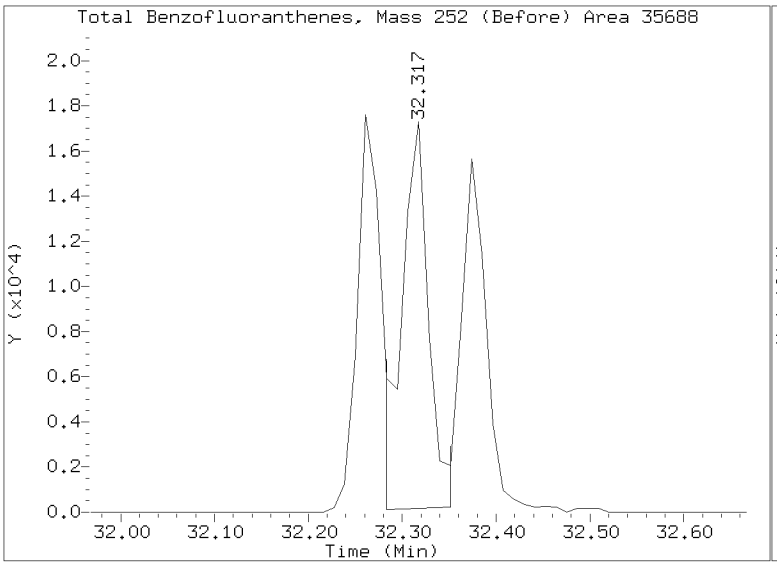
RRT check based on Ccal File: NT1420100711.D

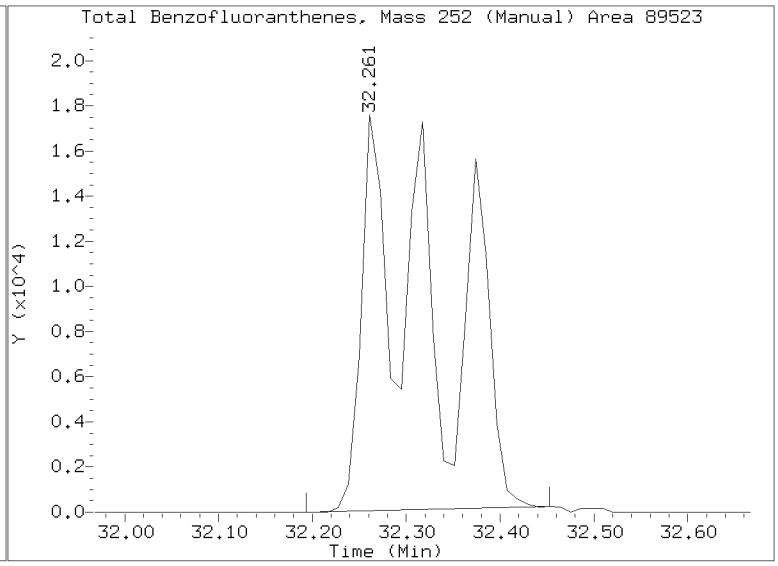
On Column LOD for nt14.i, 20201007.b\ALKYLPNA.m, TARGETS.sub = 0.0000

* 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/20201007.b/NT1420100706.D
Injection Date: 07-OCT-2020 14:17
Lab ID:SIJ0085-CAL2 Client ID:
Report Date: 10/09/2020 09:36





Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100707.D

Date : 07-OCT-2020 15:08

Client ID:

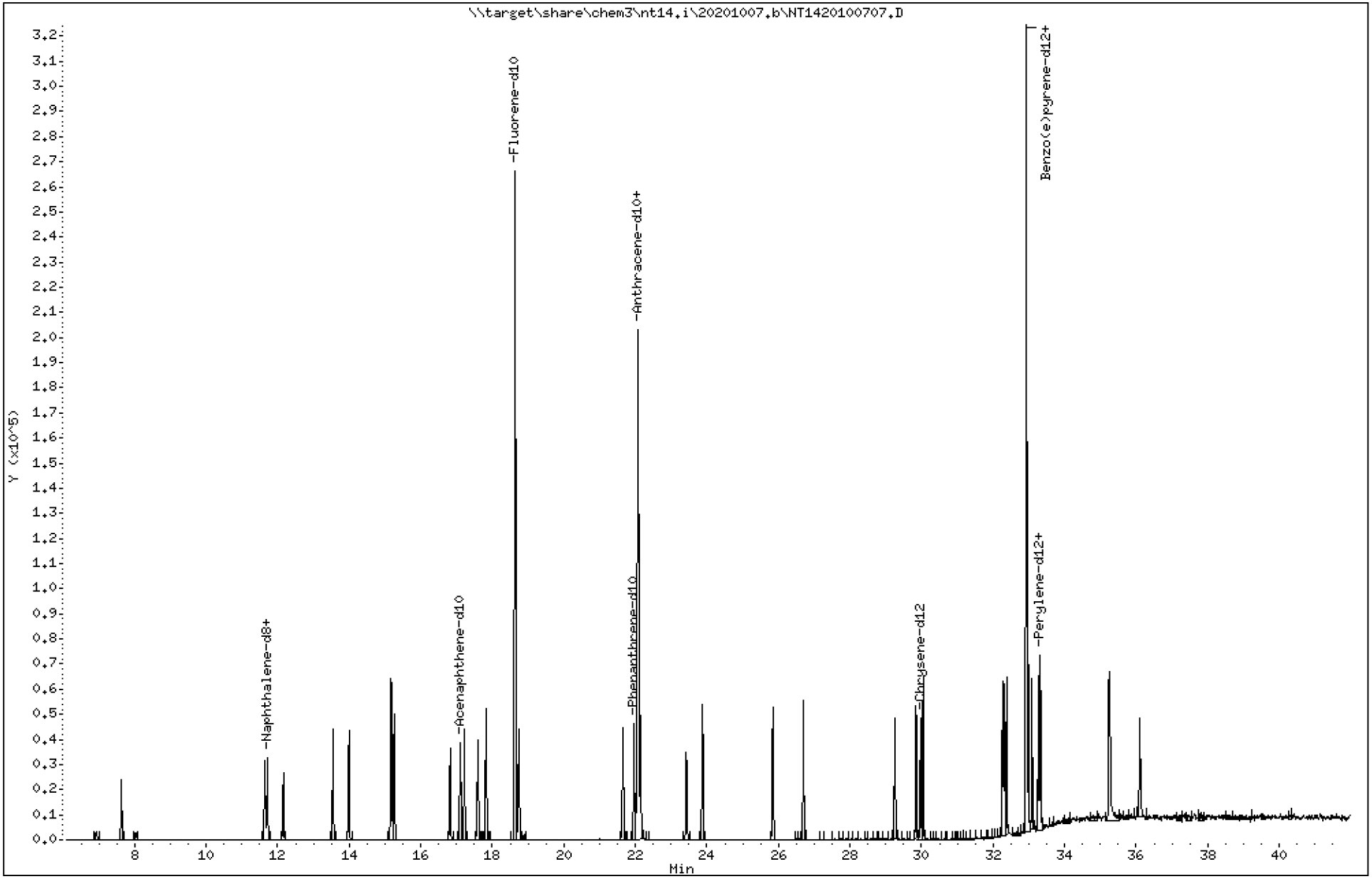
Instrument: nt14.i

Sample Info: SIJ0085-CAL3

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201007.b\NT1420100707.D
Lab Smp Id: SIJ0085-CAL3
Inj Date : 07-OCT-2020 15:08
Operator : VTS Inst ID: nt14.i
Smp Info : SIJ0085-CAL3
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Meth Date : 09-Oct-2020 08:45 van Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: VANS

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
1 trans-Decalin	138	6.934	6.934	(0.372)	4456	0.50000	0.4910
2 cis-Decalin	138	8.034	8.034	(0.431)	3590	0.50000	0.5257
$ 6 Naphthalene-d8	136	11.641	11.641	(0.625)	42776	0.50000	0.4828
7 Naphthalene	128	11.707	11.707	(0.628)	45725	0.50000	0.5158
12 Benzo(b)thiophene	134	12.157	12.157	(0.652)	35952	0.50000	0.4827
16 2-Methylnaphthalene	141	13.542	13.542	(0.727)	26507	0.50000	0.4905
17 1-methylnaphthalene	141	13.992	13.992	(0.751)	27344	0.50000	0.4928
18 Biphenyl	154	15.179	15.179	(0.815)	38553	0.50000	0.4741
19 2,6-Dimethylnaphthalene	156	15.256	15.256	(0.819)	30598	0.50000	0.5154
20 Acenaphthylene	152	16.817	16.817	(0.903)	47135	0.50000	0.4842
$ 21 Acenaphthene-d10	164	17.103	17.103	(0.918)	25783	0.50000	0.4846
22 Acenaphthene	153	17.223	17.223	(0.924)	31257	0.50000	0.4901
23 Dibenzofuran	168	17.597	17.597	(0.944)	46013	0.50000	0.4973
24 1,6,7-Trimethylnaphthalene	170	17.828	17.828	(0.957)	29076	0.50000	0.4830
* 25 Fluorene-d10	176	18.632	18.632	(1.000)	217147	2.00000	
26 Fluorene	166	18.746	18.746	(1.006)	35358	0.50000	0.4902
30 Dibenzothiophene	184	21.648	21.648	(1.162)	50504	0.50000	0.4865
$ 35 Phenanthrene-d10	188	21.963	21.963	(0.995)	47018	0.50000	0.4992
36 Phenanthrene	178	22.040	22.040	(0.999)	55254	0.50000	0.5073
* 250 Anthracene-d10	188	22.072	22.072	(1.000)	196660	2.00000	
37 Anthracene	178	22.138	22.138	(1.003)	51428	0.50000	0.4805
42 Carbazole	167	23.425	23.425	(1.061)	45098	0.50000	0.4865
43 1-Methylphenanthrene	192	23.875	23.875	(1.082)	40002	0.50000	0.5004
44 Fluoranthene	202	25.843	25.843	(1.171)	57612	0.50000	0.4793
46 Pyrene	202	26.701	26.701	(1.210)	59686	0.50000	0.4706
51 Naphthobenzothiophene	234	29.256	29.256	(1.325)	55686	0.50000	0.4817
55 Benzo(a)anthracene	228	29.839	29.839	(0.906)	56091	0.50000	0.4619
$ 56 Chrysene-d12	240	29.963	29.974	(0.910)	46750	0.50000	0.4874
57 Chrysene	228	30.042	30.042	(0.912)	58008	0.50000	0.4806
62 Benzo(b)fluoranthene	252	32.260	32.272	(0.980)	66889	0.50000	0.4878(M)
63 Benzo(k)fluoranthene	252	32.317	32.317	(0.982)	61345	0.50000	0.4439(M)
293 Benzo(j)fluoranthene	252	32.373	32.373	(0.983)	56412	0.50000	0.4670(M)
246 Total Benzofluoranthenes	252	32.317	32.317	(0.982)	178845	1.50000	1.406(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.925	32.925	(1.000)	281303	2.00000	
64 Benzo(e)pyrene	252	32.993	32.993	(1.002)	59421	0.50000	0.4733
66 Benzo(a)pyrene	252	33.083	33.083	(1.005)	55231	0.50000	0.4656
$ 67 Perylene-d12	264	33.263	33.263	(1.010)	55910	0.50000	0.4807
68 Perylene	252	33.319	33.319	(1.012)	58344	0.50000	0.4683
69 Indeno(1,2,3-cd)pyrene	276	35.256	35.256	(1.071)	67492	0.50000	0.4595
70 Dibenzo(a,h)anthracene	278	35.234	35.245	(1.070)	57701	0.50000	0.4446(M)
74 Benzo(g,h,i)perylene	276	36.101	36.101	(1.096)	61896	0.50000	0.4797

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100707.D Page 1
Report Date: 09-Oct-2020 09:36

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1420100707.D
Lab Smp Id: SIJ0085-CAL3
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Misc Info:

Calibration Date: 07-OCT-2020
Calibration Time: 18:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	209596	104798	419192	217147	3.60
250 Anthracene-d10	192407	96204	384814	196660	2.21
251 Benzo(e)pyrene-d1	274120	137060	548240	281303	2.62

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.63	18.13	19.13	18.63	0.00
250 Anthracene-d10	22.07	21.57	22.57	22.07	0.00
251 Benzo(e)pyrene-d1	32.93	32.43	33.43	32.93	-0.00

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

REVIEW SUMMARY FOR FILE - NT1420100707.D

Lab ID: SIJ0085-CAL3
nt14.i, 20201007.b\ALKYLPNA.m, 07-OCT-2020 15:08

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

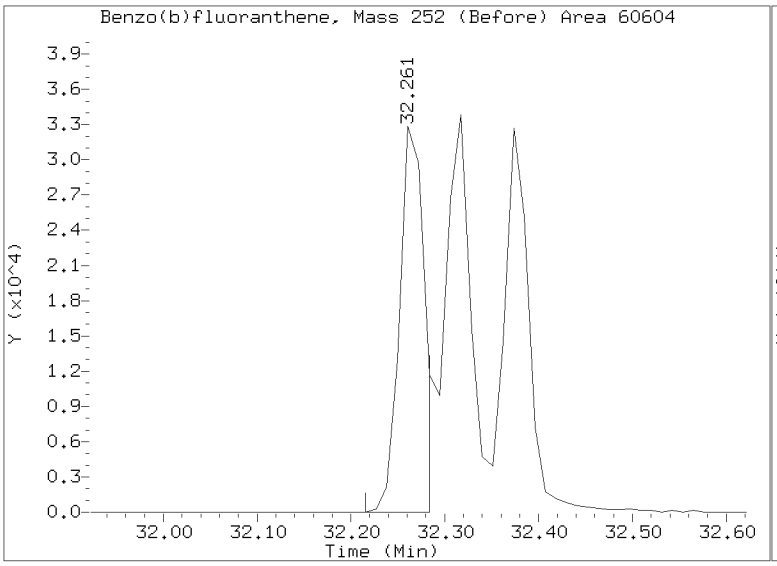
RRT check based on Ccal File: NT1420100711.D

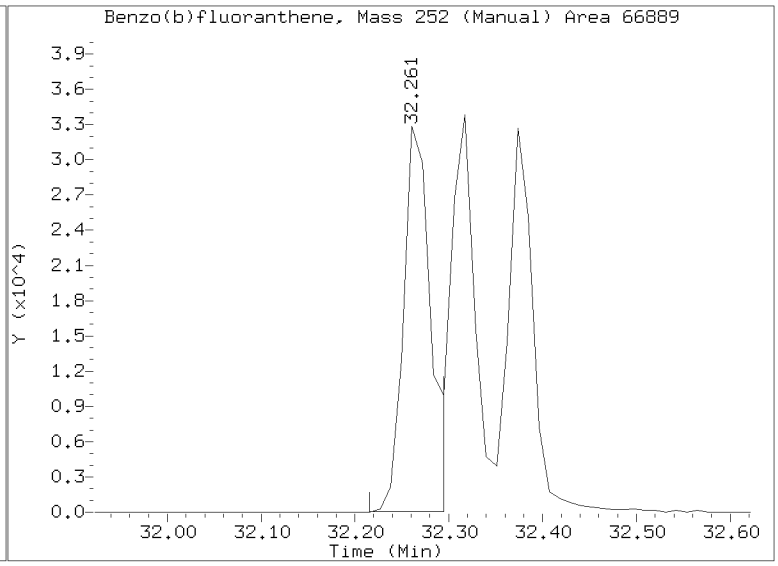
On Column LOD for nt14.i, 20201007.b\ALKYLPNA.m, TARGETS.sub = 0.0000

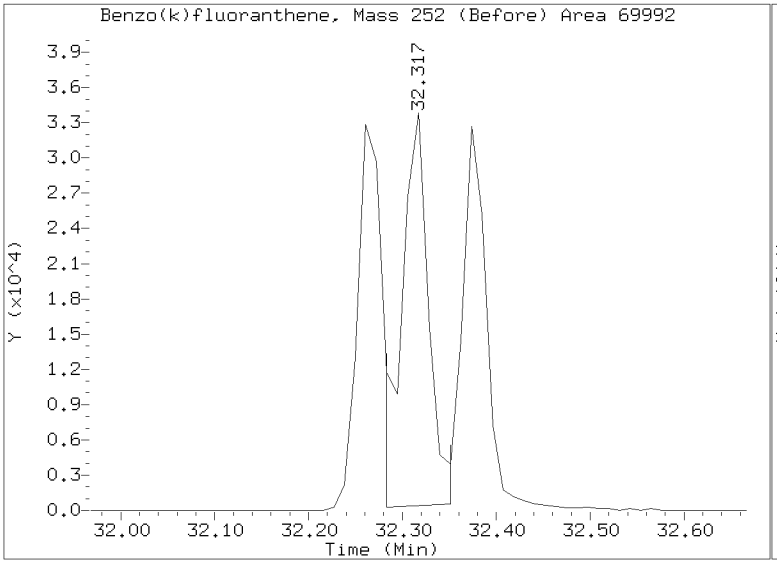
* Only compounds listed in the work order have been verified by the analyst *

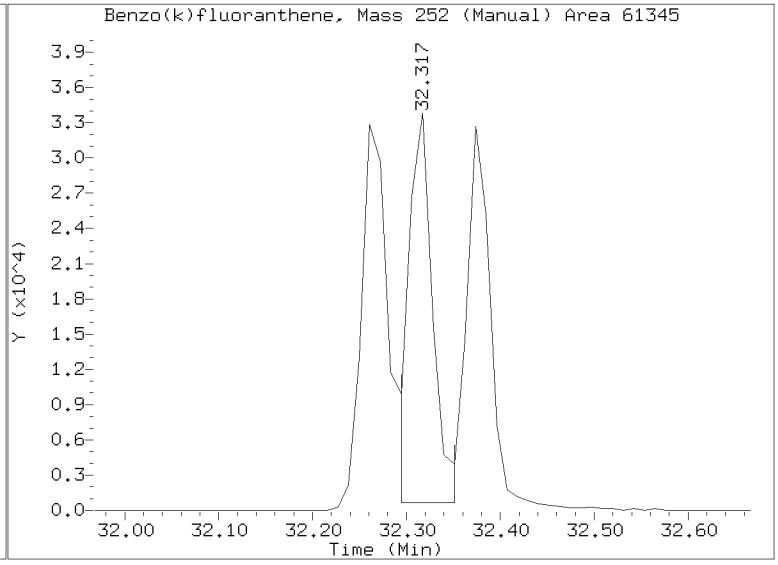
Quant Ion Manual Peak Adjustment Report

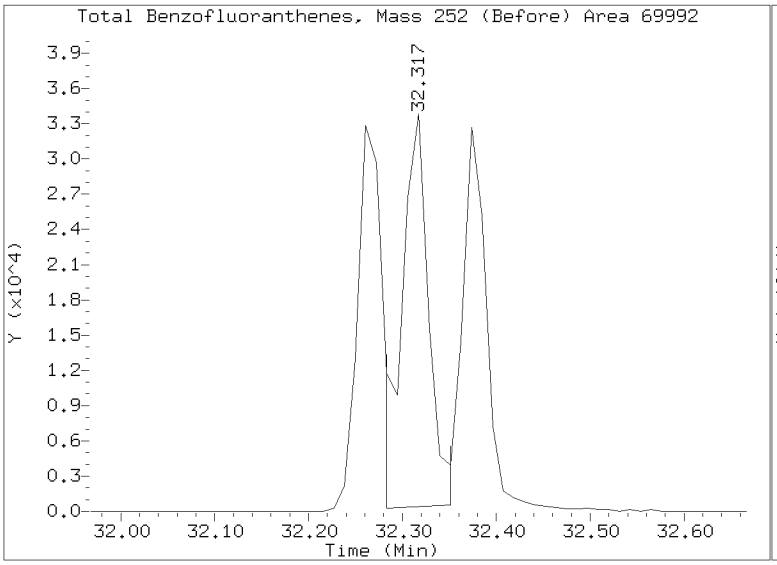
Datafile: //target/share/chem3/nt14.i/20201007.b/NT1420100707.D
Injection Date: 07-OCT-2020 15:08
Lab ID:SIJ0085-CAL3 Client ID:
Report Date: 10/09/2020 09:36

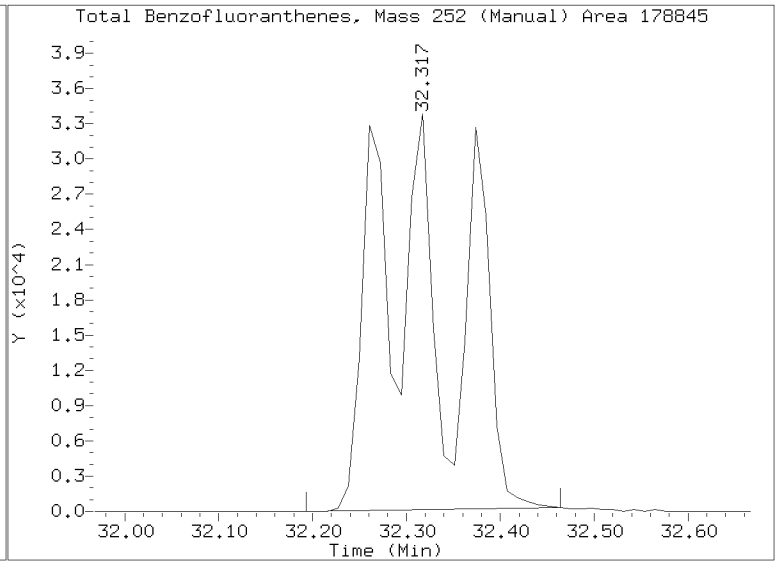






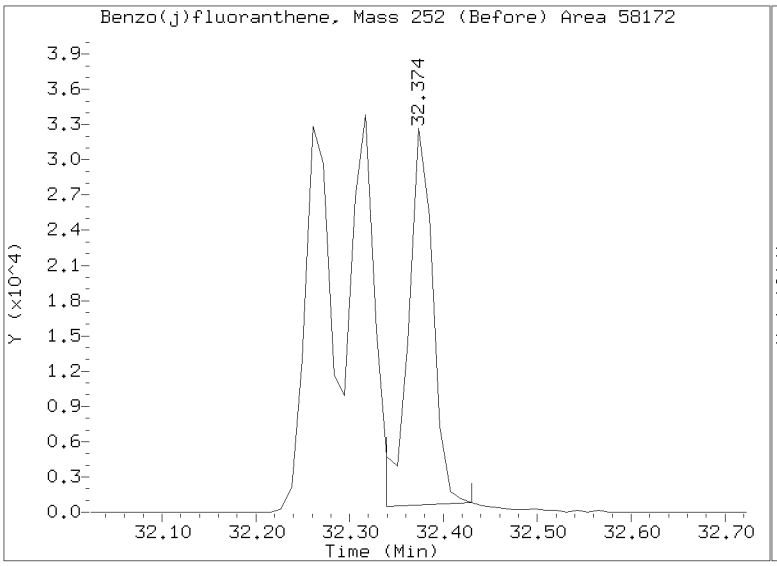


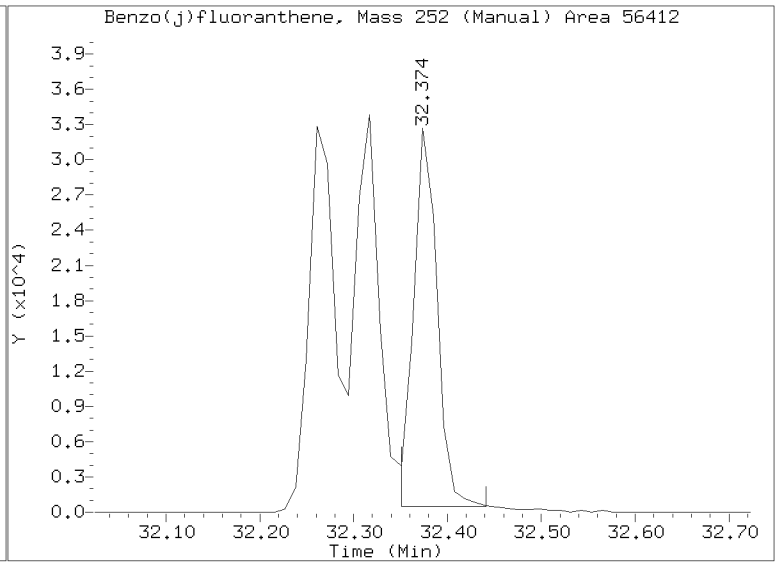


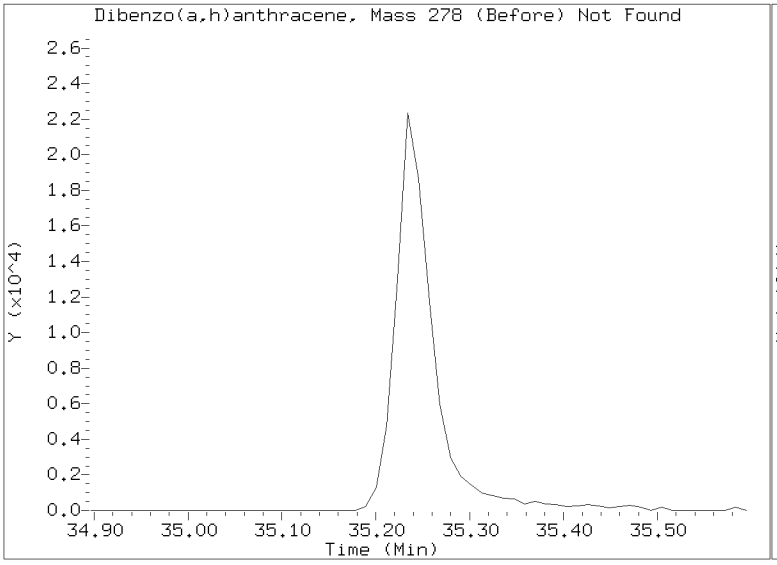


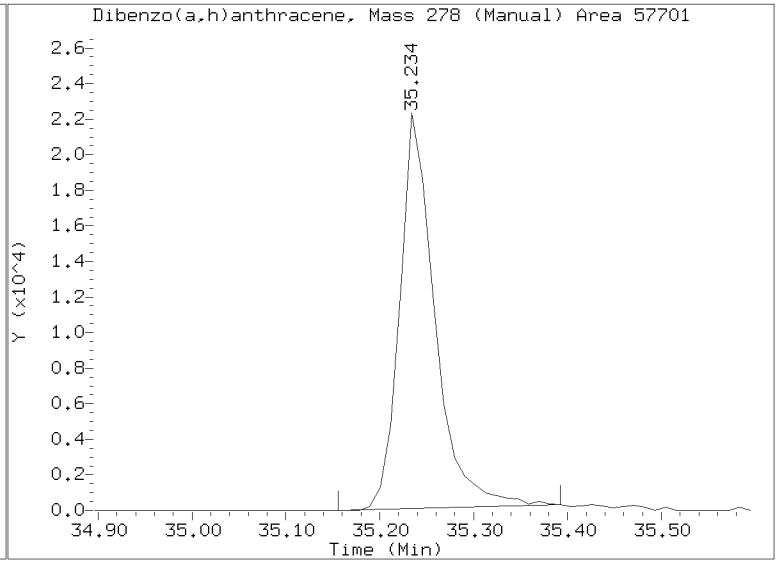
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20201007.b/NT1420100707.D
Injection Date: 07-OCT-2020 15:08
Lab ID:SIJ0085-CAL3 Client ID:
Report Date: 10/09/2020 09:36









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Date : 07-OCT-2020 16:45

Client ID:

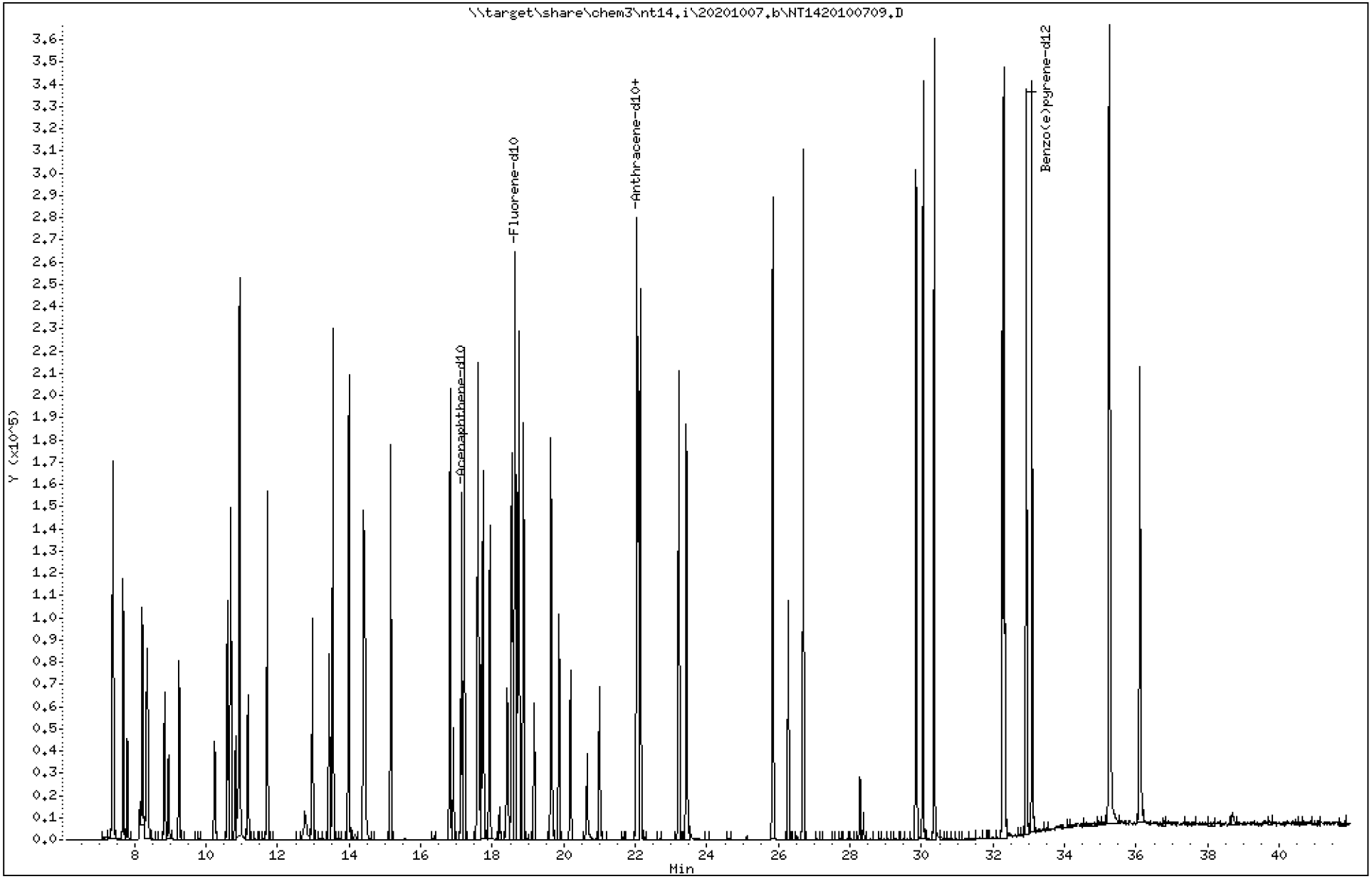
Instrument: nt14.i

Sample Info: SIJ0085-SCV1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



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Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

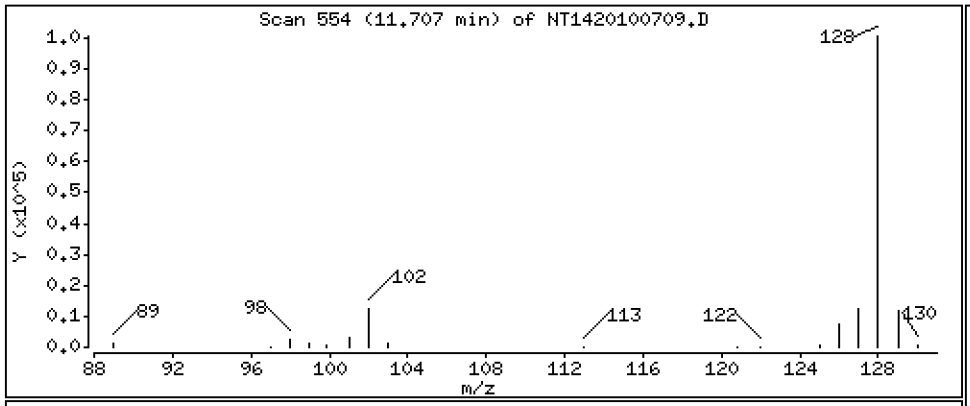
Operator: VTS

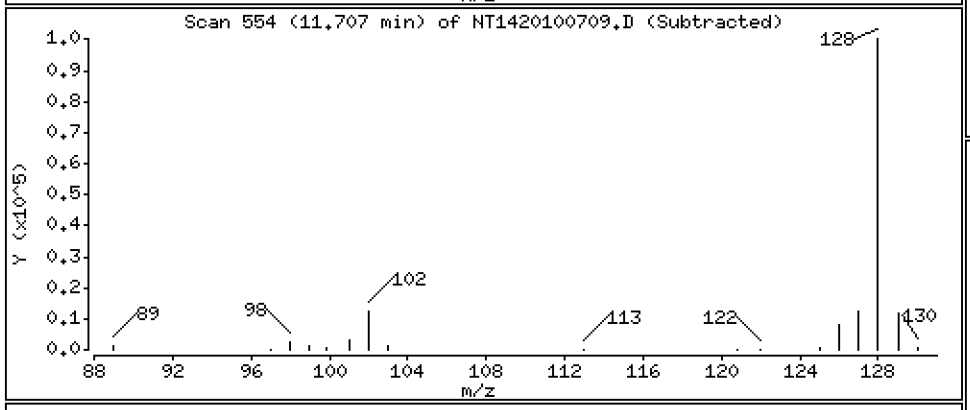
Column phase: Rxi-17Sil MS

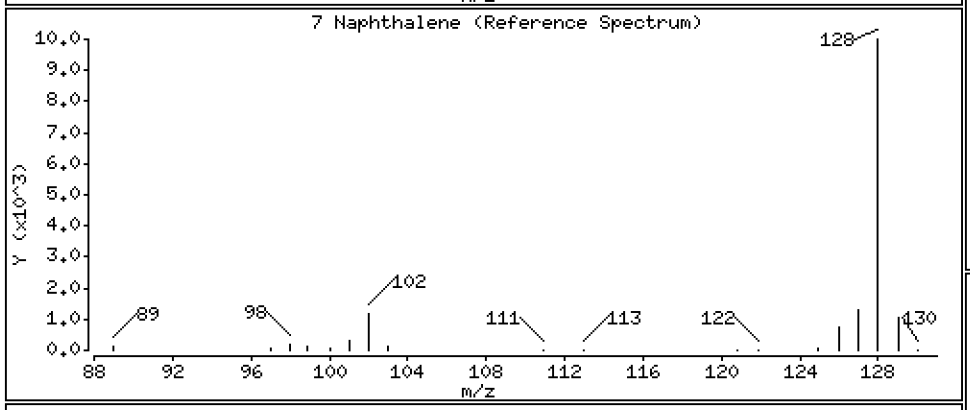
Column diameter: 0.25

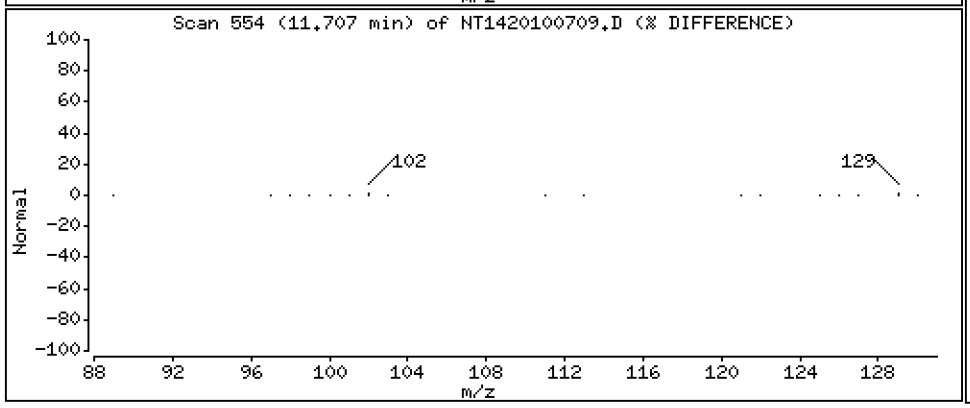
7 Naphthalene

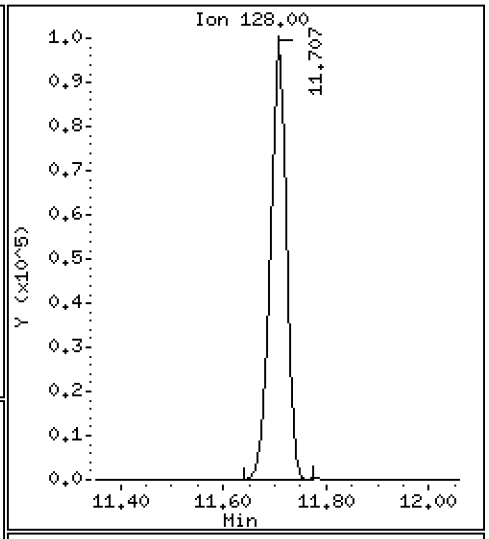
Concentration: 2.757 ug/mL

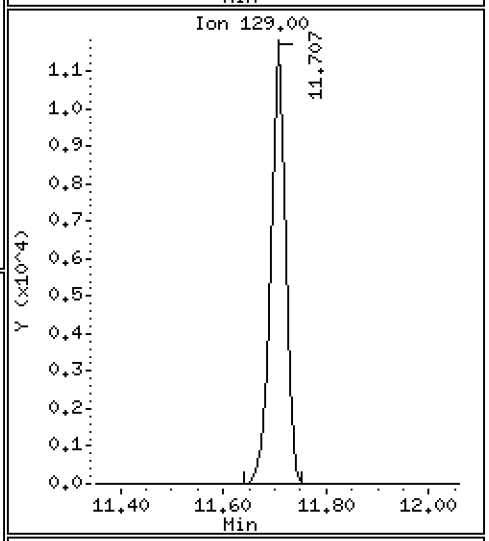


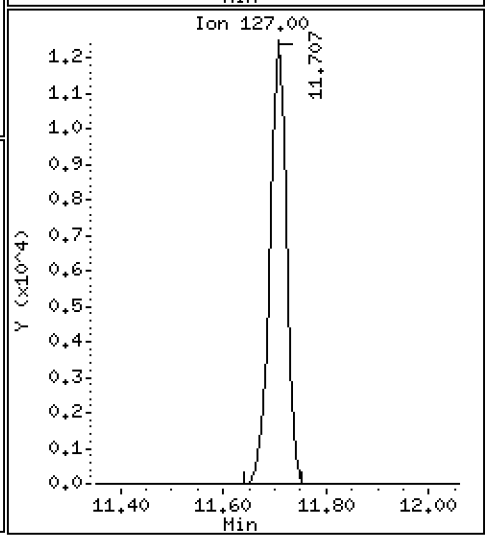












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

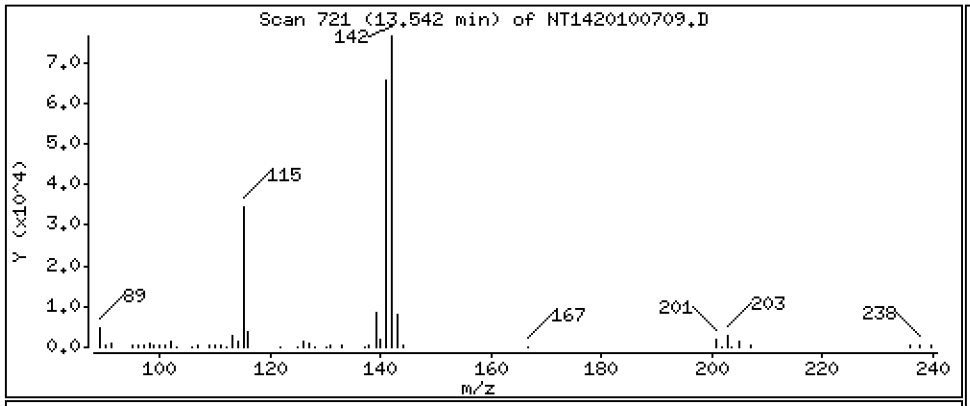
Operator: VTS

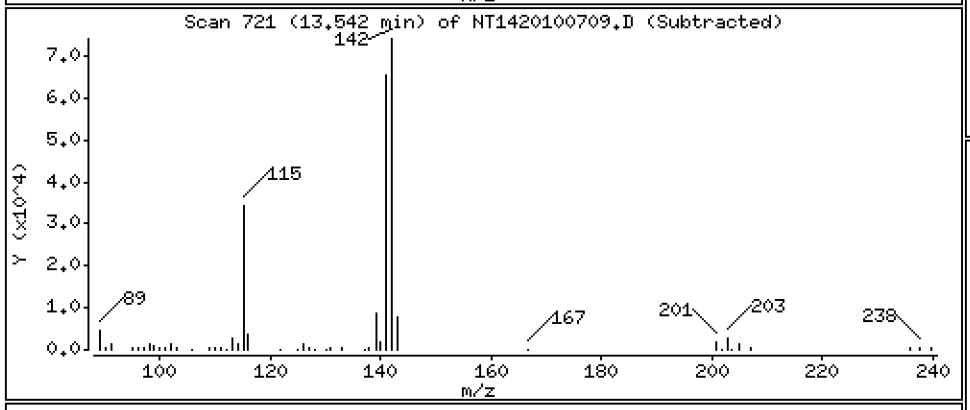
Column phase: Rxi-17Sil MS

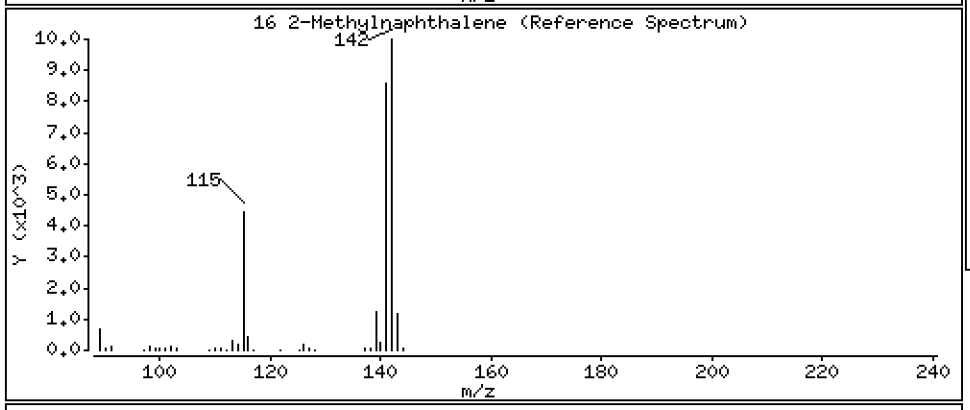
Column diameter: 0.25

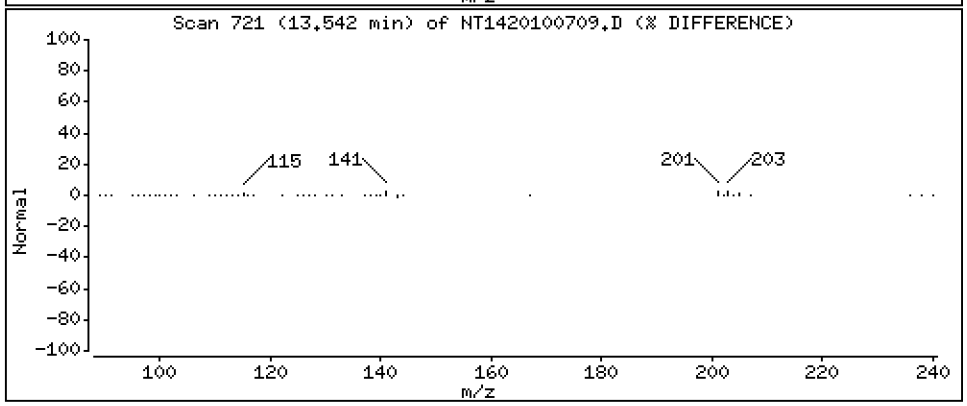
16 2-Methylnaphthalene

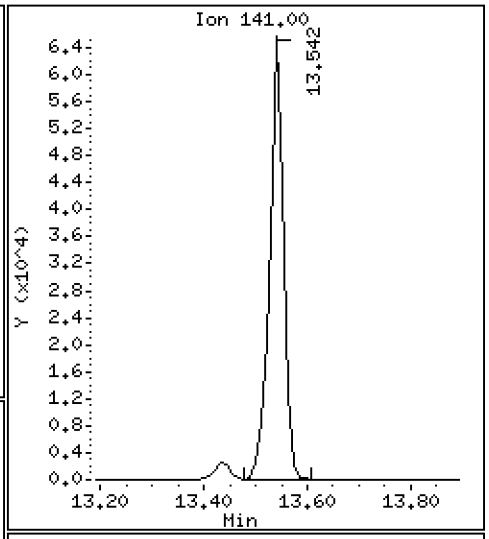
Concentration: 2.807 ug/mL

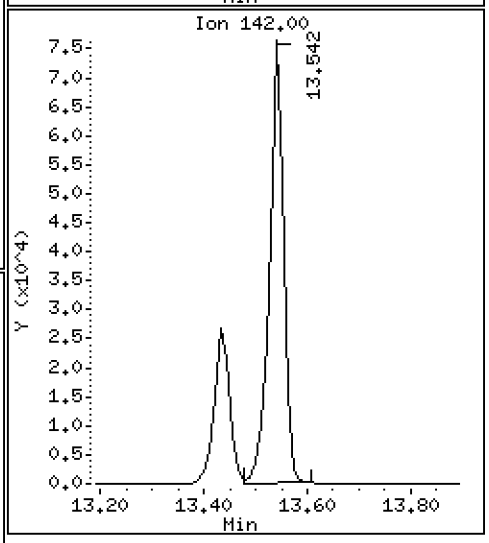












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

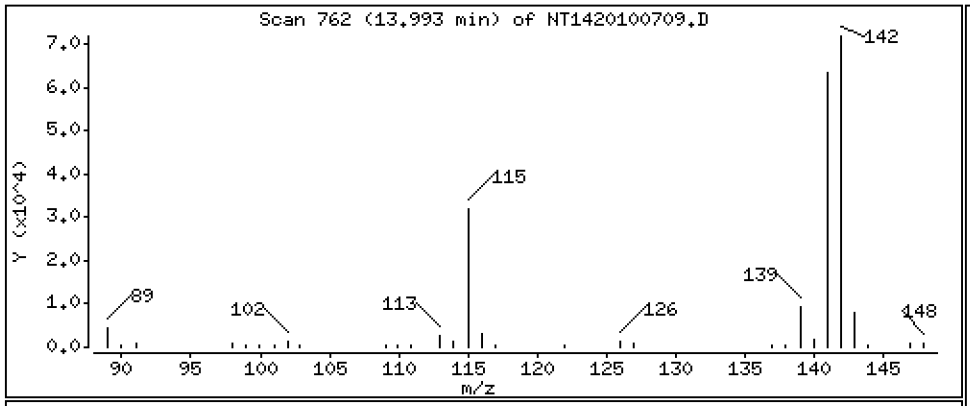
Operator: VTS

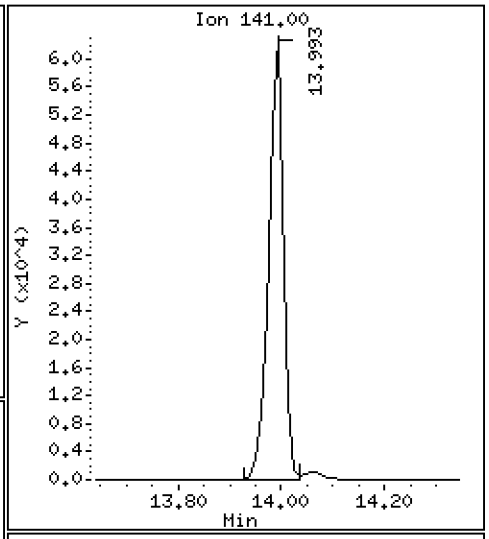
Column phase: Rxi-17Sil MS

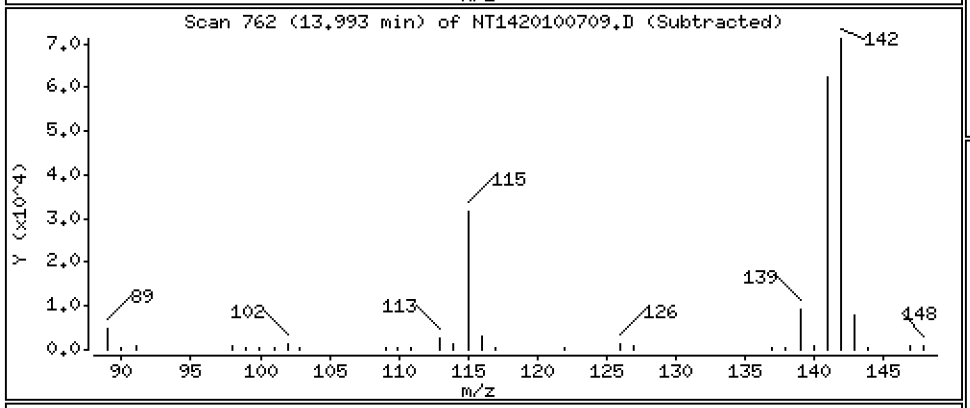
Column diameter: 0.25

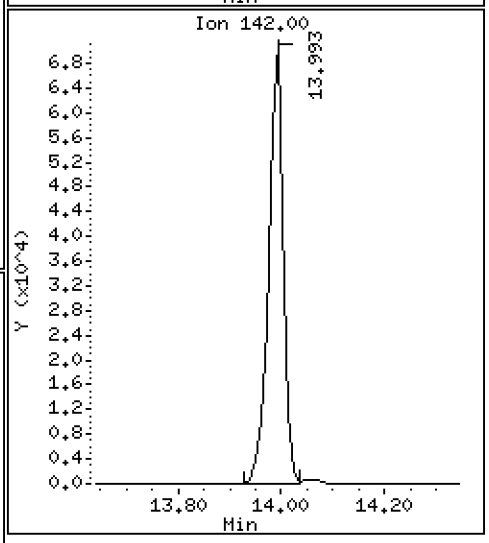
17 1-methylnaphthalene

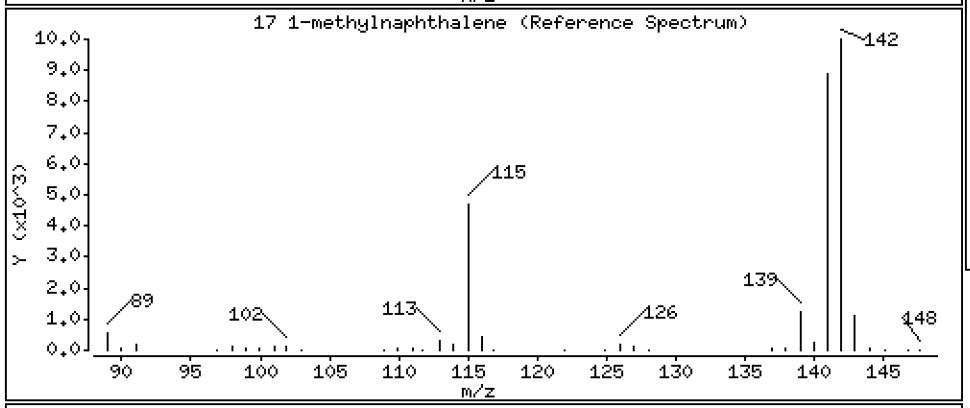
Concentration: 2.835 ug/mL

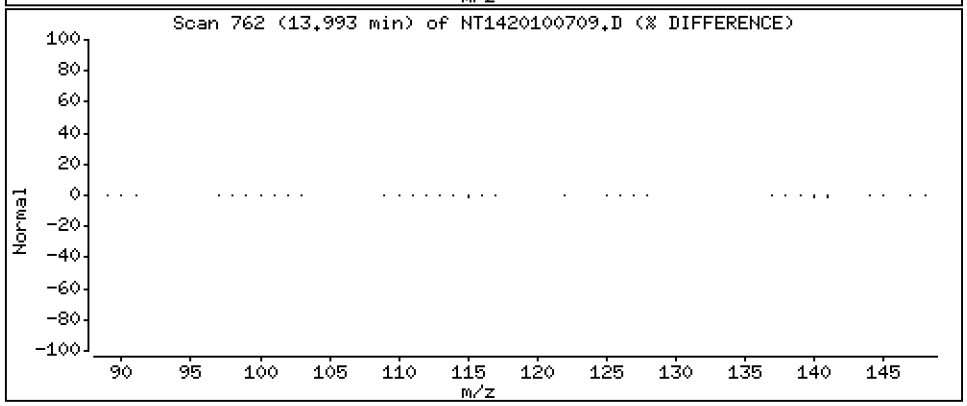












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Date : 07-OCT-2020 16:45

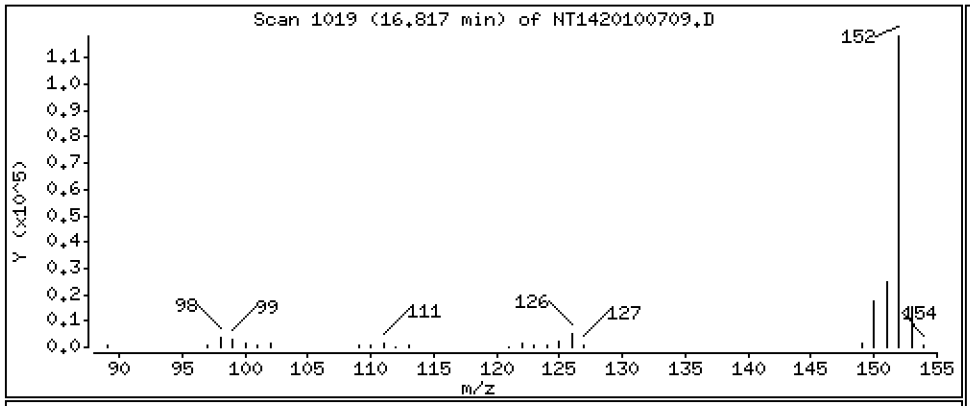
Client ID: Instrument: nt14.i

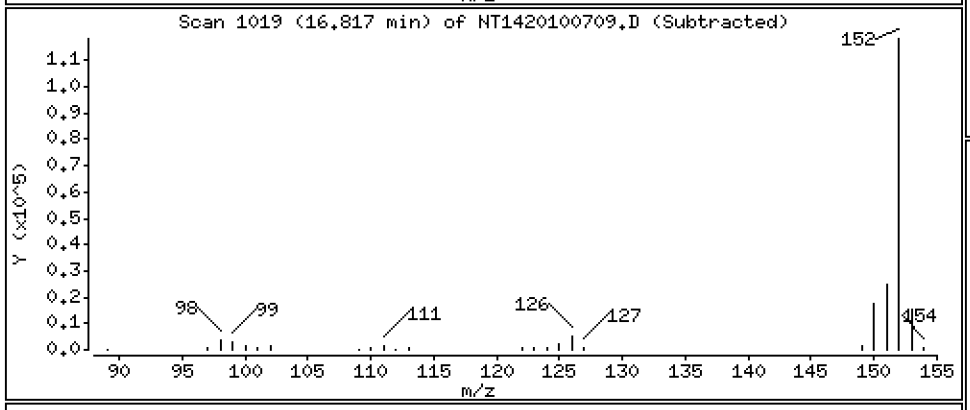
Sample Info: SIJ0085-SCV1

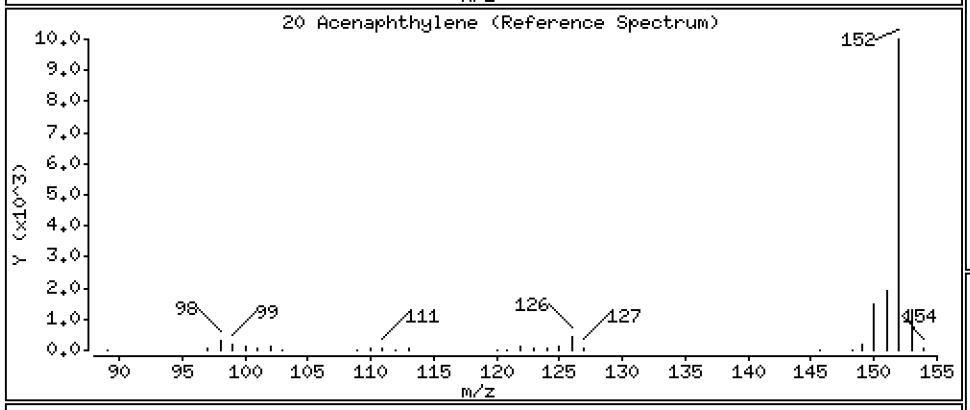
Operator: VTS

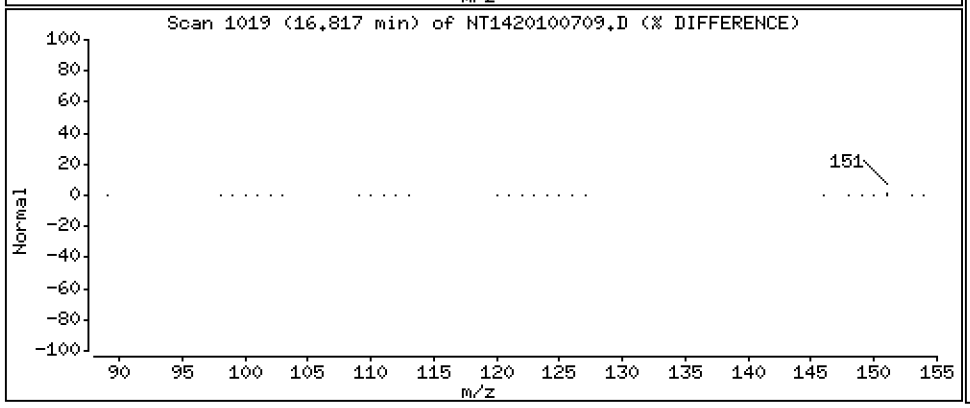
Column phase: Rxi-17Sil MS Column diameter: 0.25

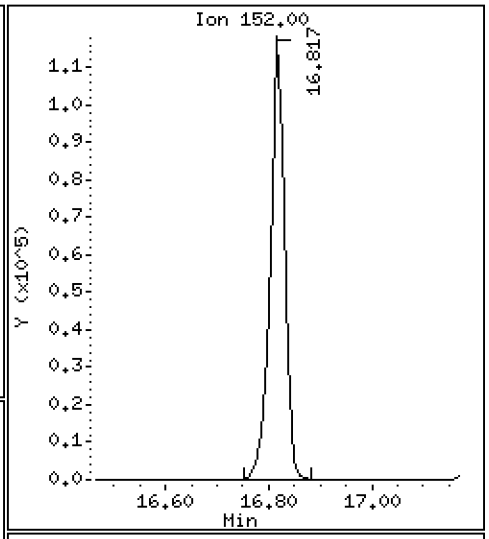
20 Acenaphthylene Concentration: 2.875 ug/mL

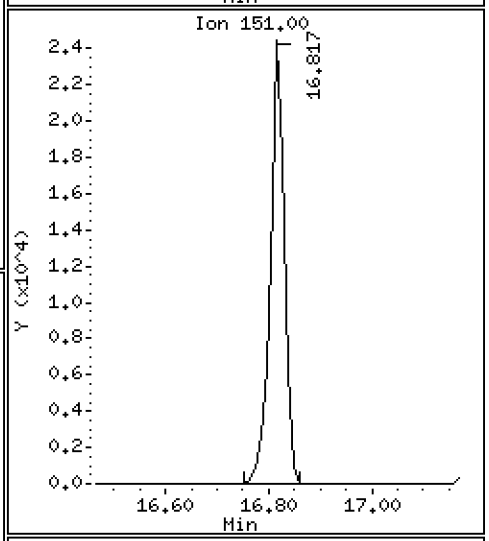


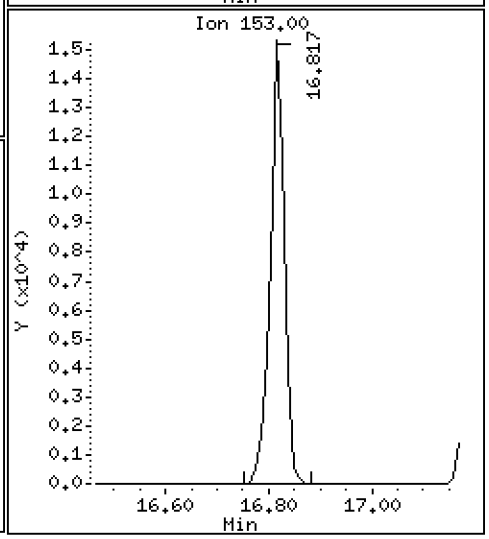












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Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

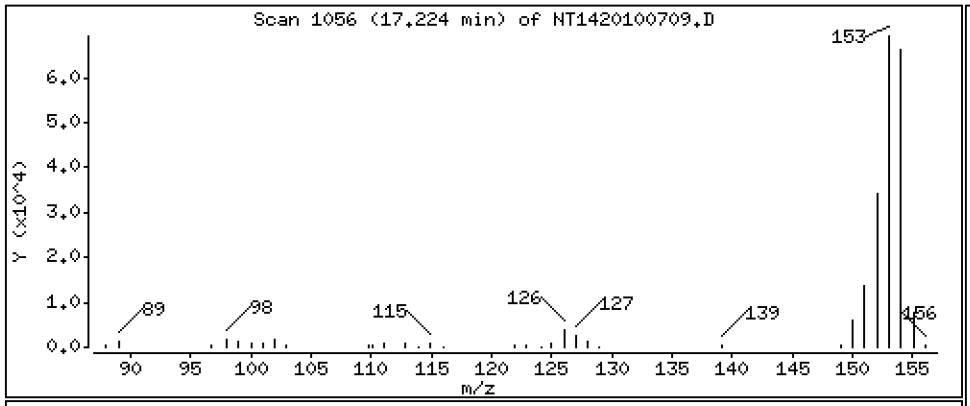
Operator: VTS

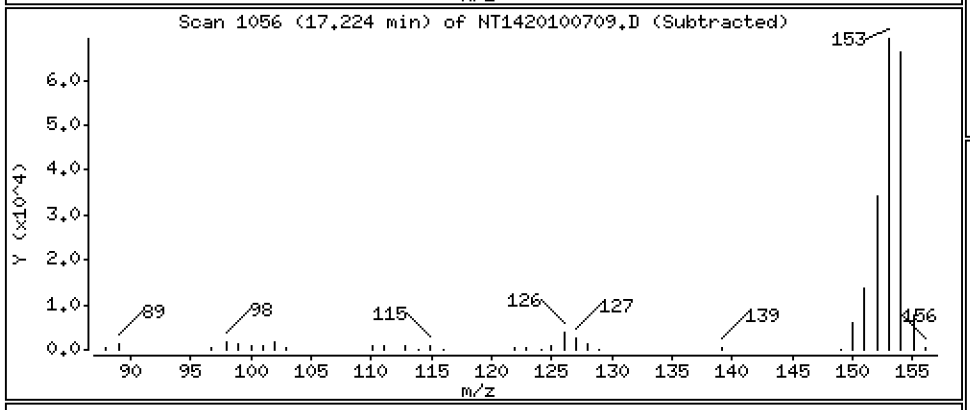
Column phase: Rxi-17Sil MS

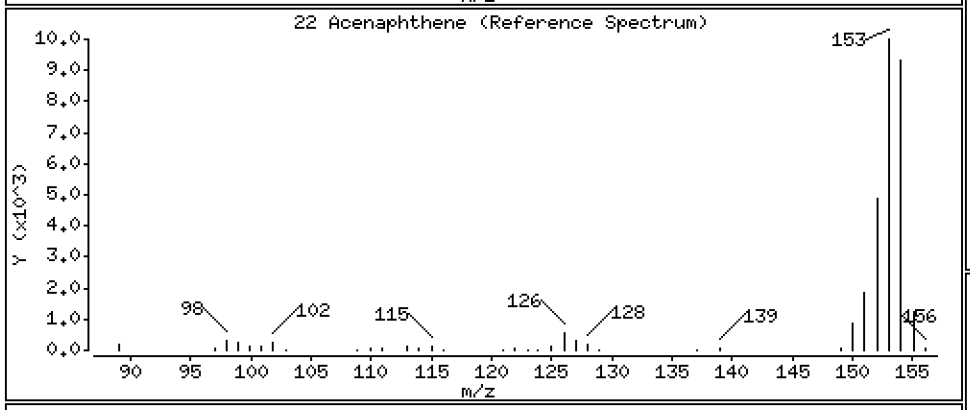
Column diameter: 0.25

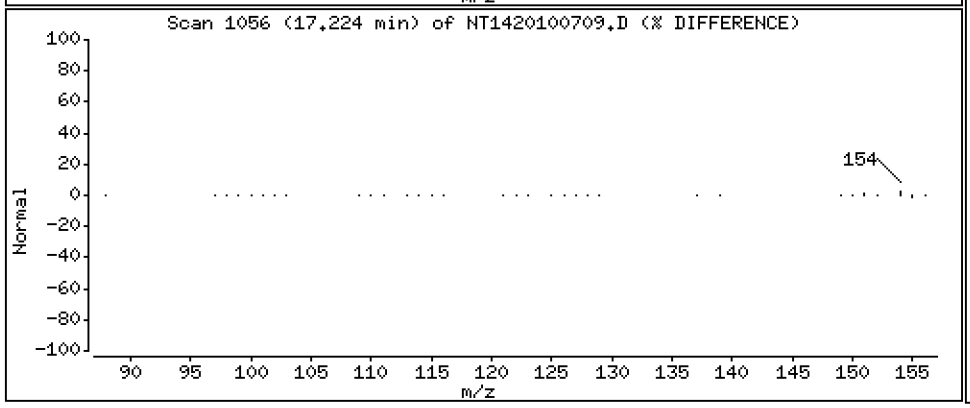
22 Acenaphthene

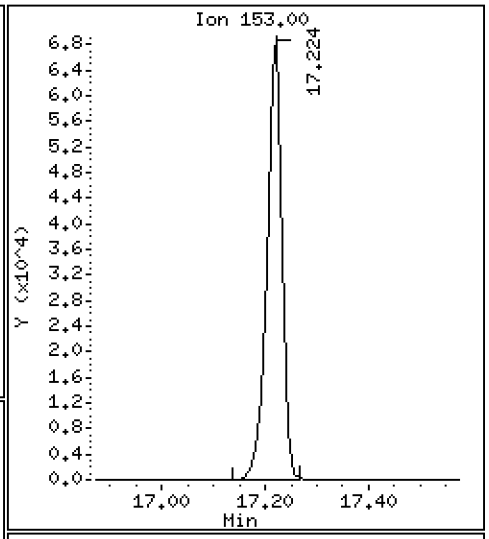
Concentration: 2.714 ug/mL

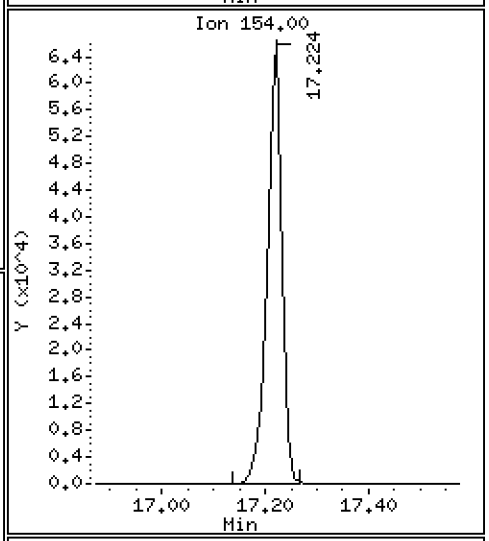


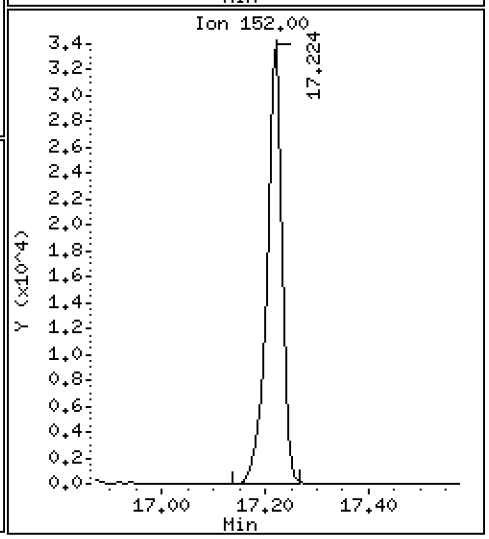












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Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

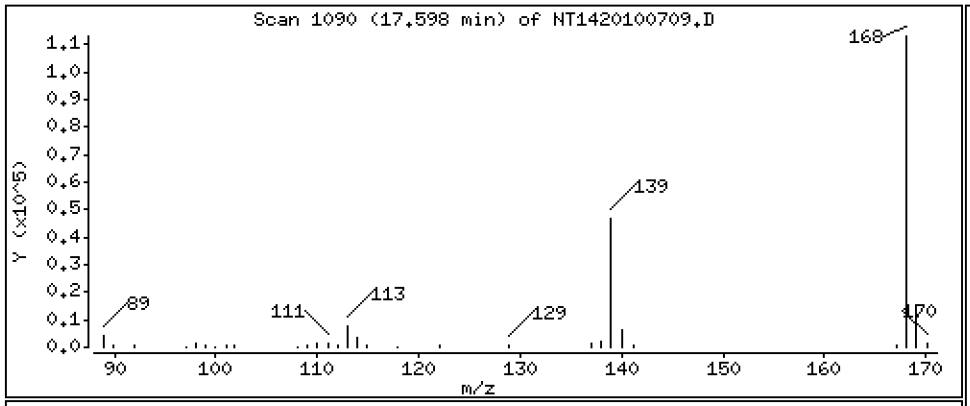
Operator: VTS

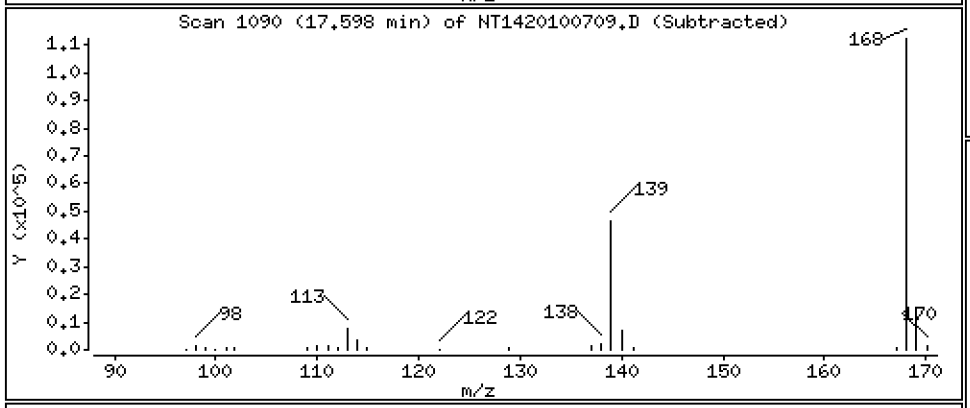
Column phase: Rxi-17Sil MS

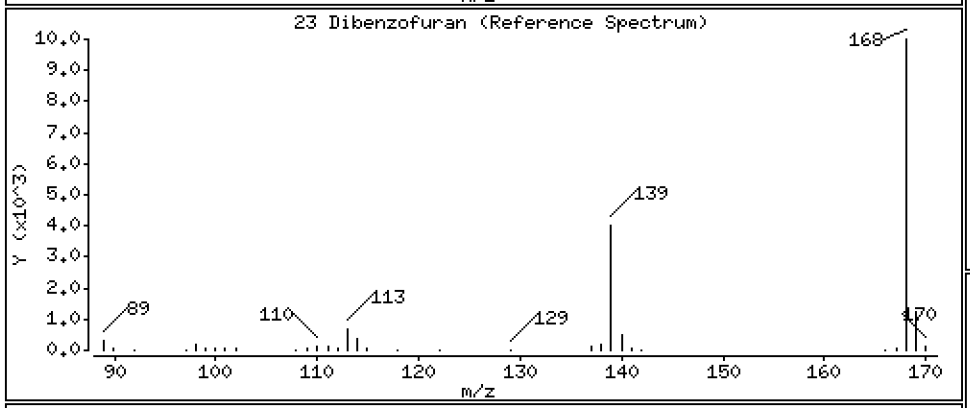
Column diameter: 0.25

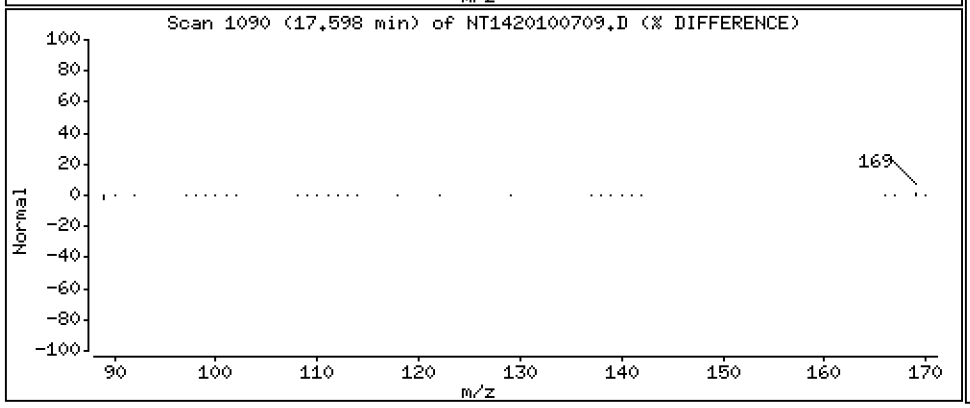
23 Dibenzofuran

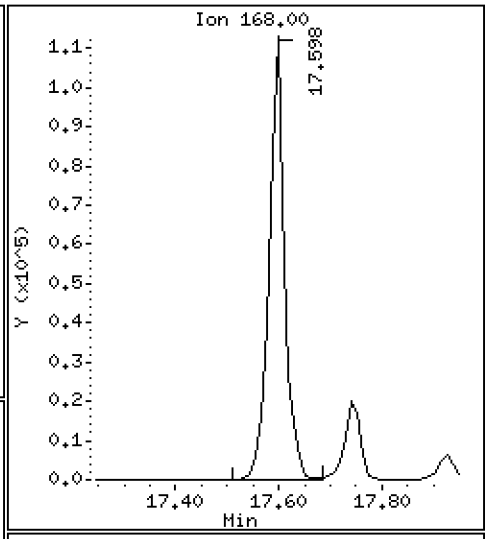
Concentration: 3.090 ug/mL

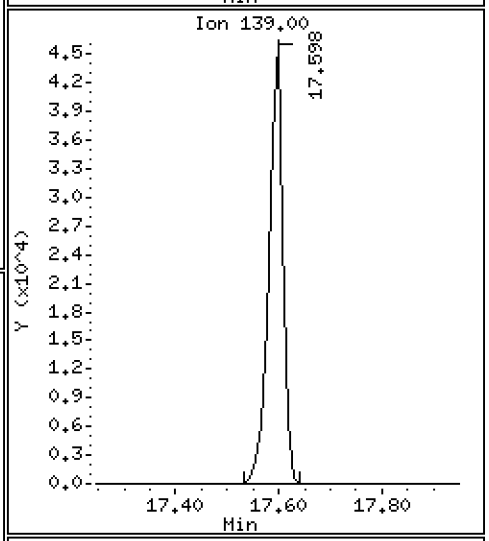


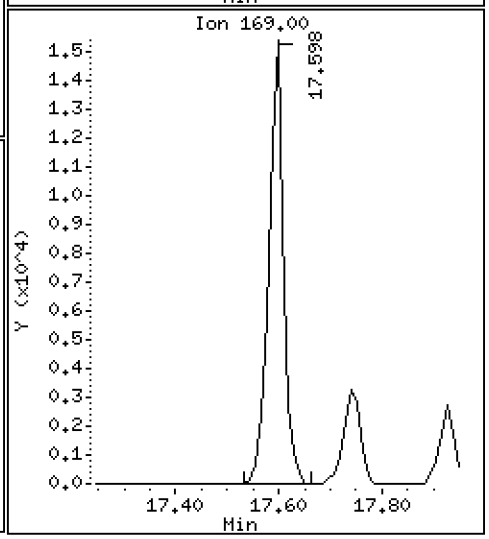












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Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

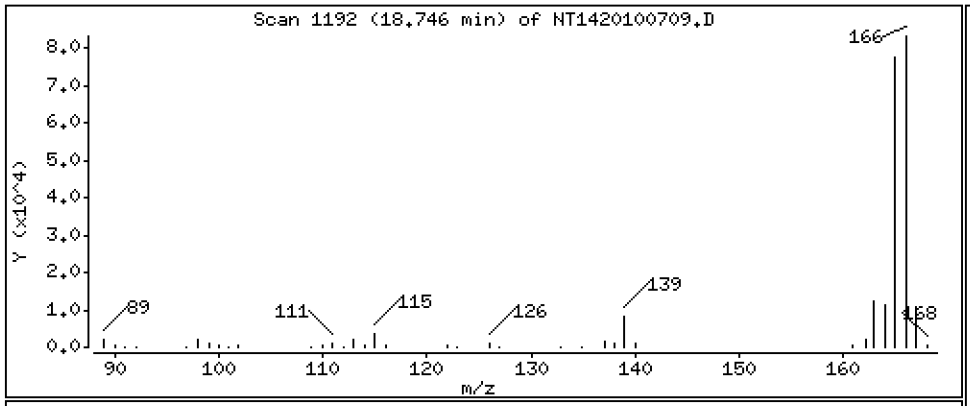
Operator: VTS

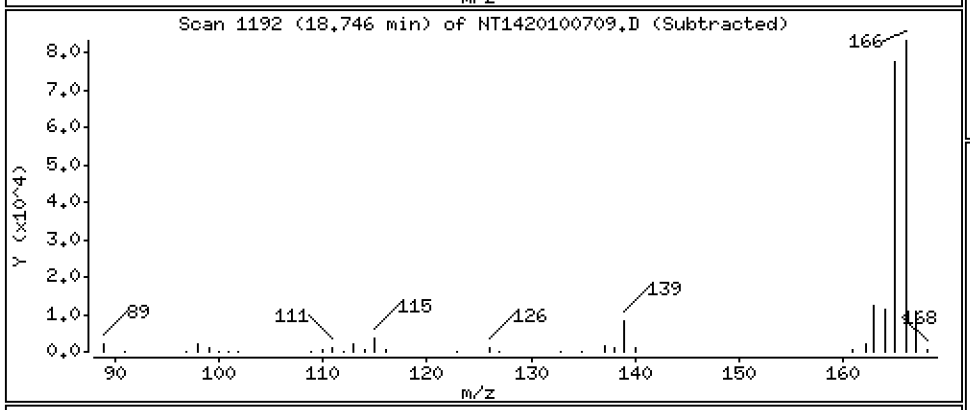
Column phase: Rxi-17Sil MS

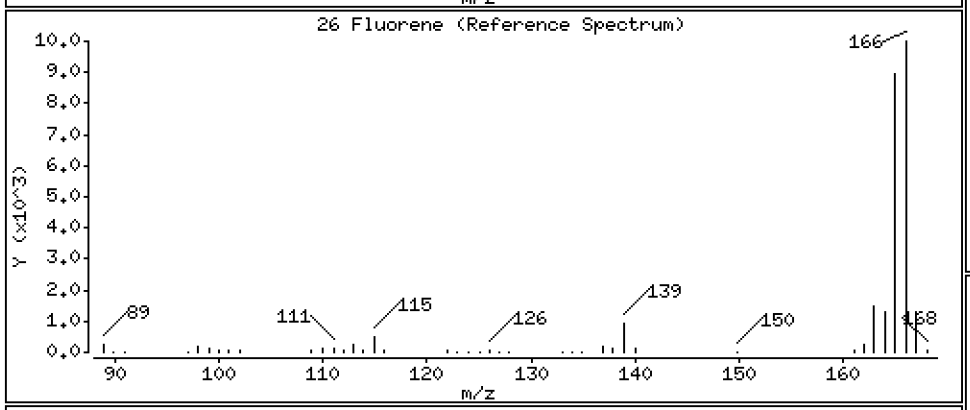
Column diameter: 0.25

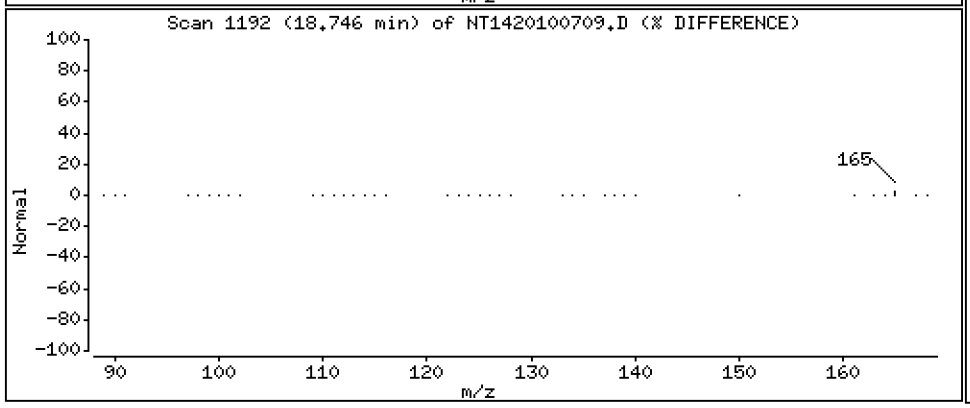
26 Fluorene

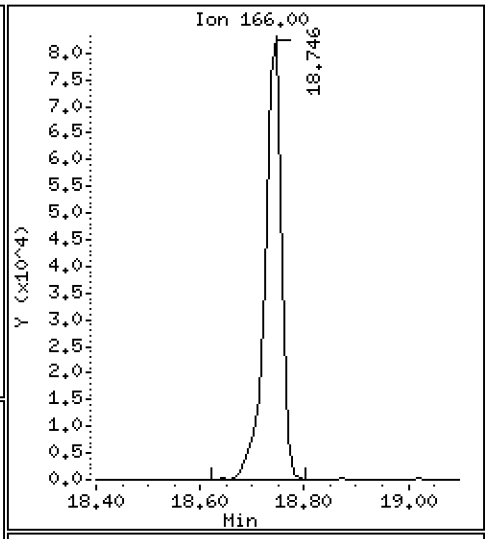
Concentration: 2.967 ug/mL

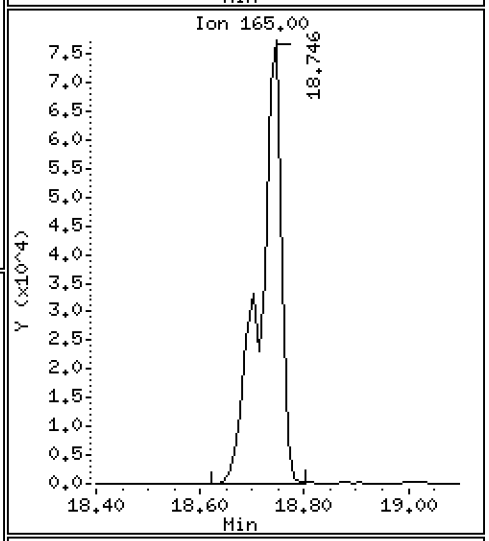


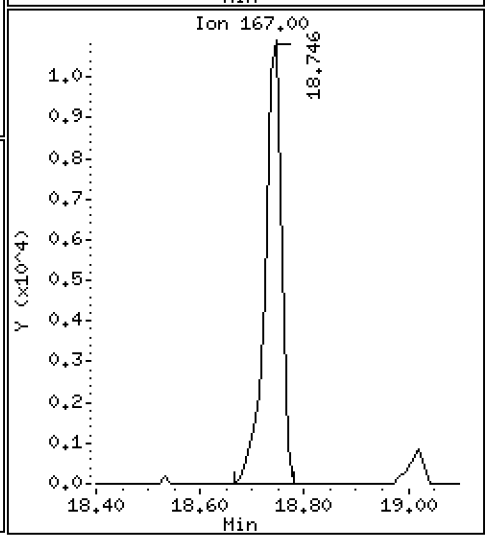












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Date : 07-OCT-2020 16:45

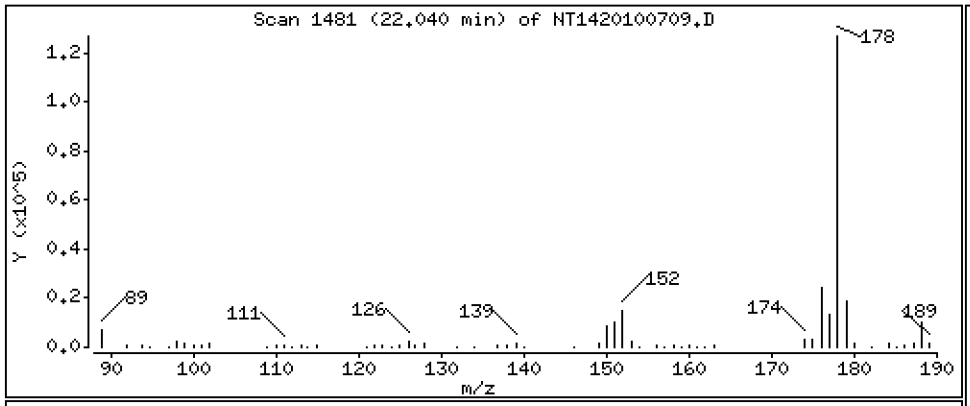
Client ID: Instrument: nt14.i

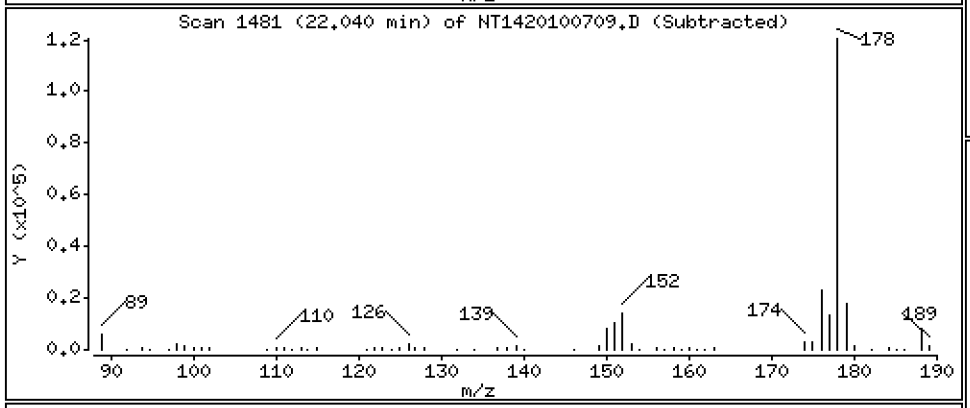
Sample Info: SIJ0085-SCV1

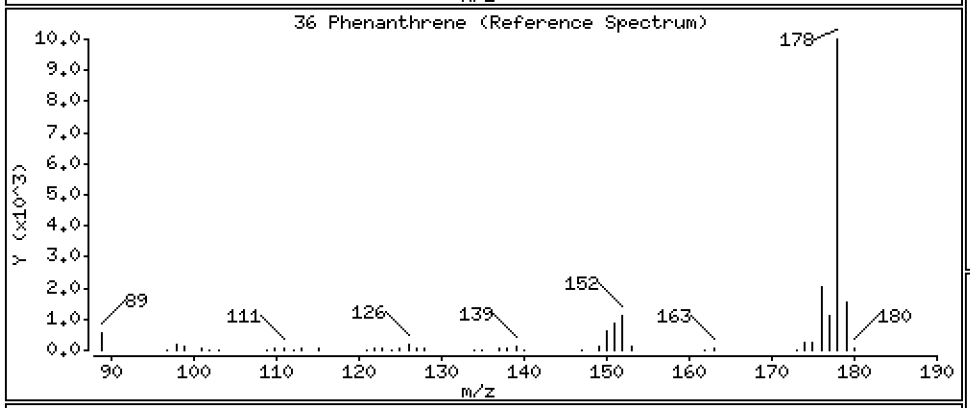
Operator: VTS

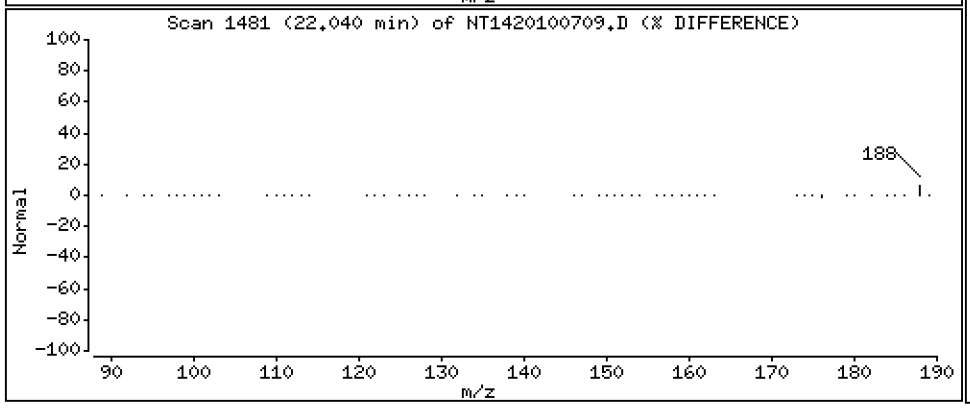
Column phase: Rxi-17Sil MS Column diameter: 0.25

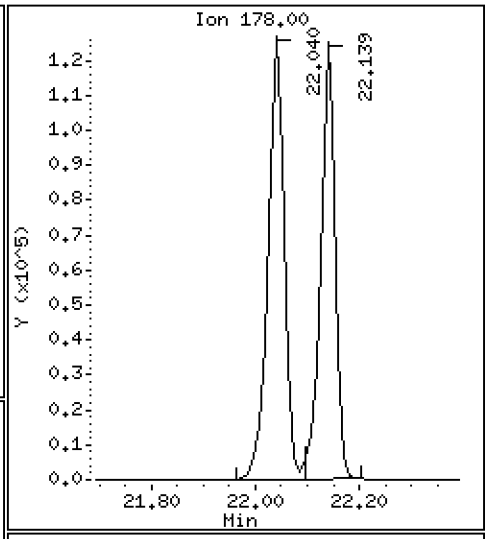
36 Phenanthrene Concentration: 2.454 ug/mL

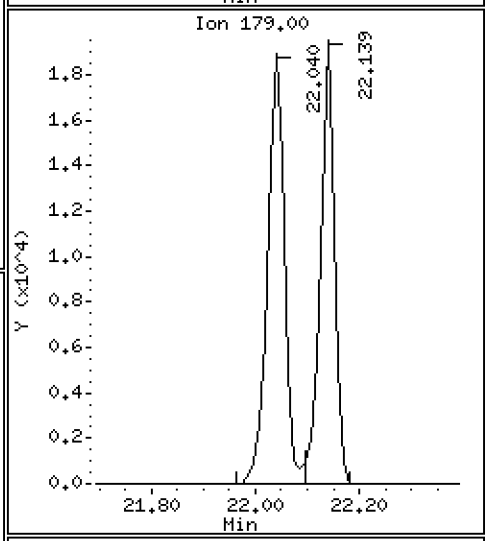


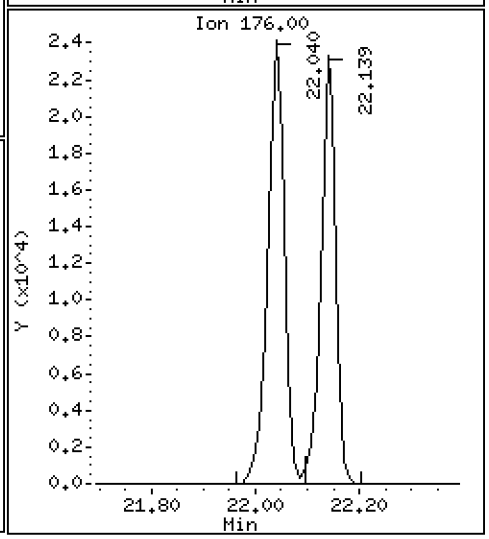












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Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

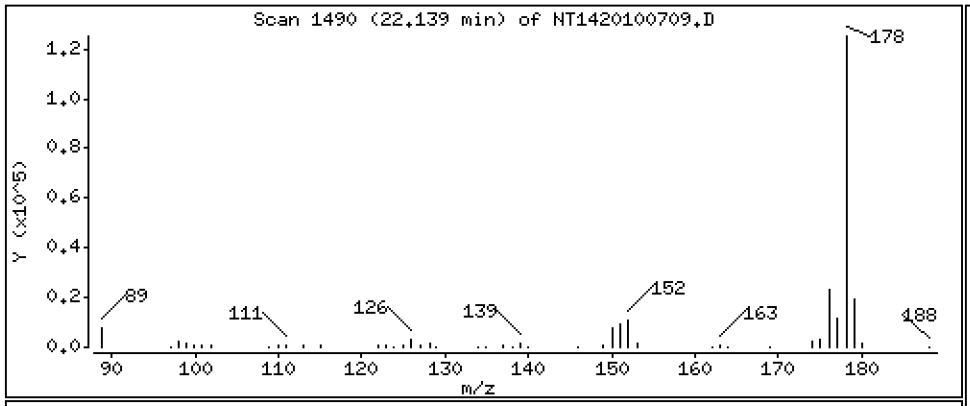
Operator: VTS

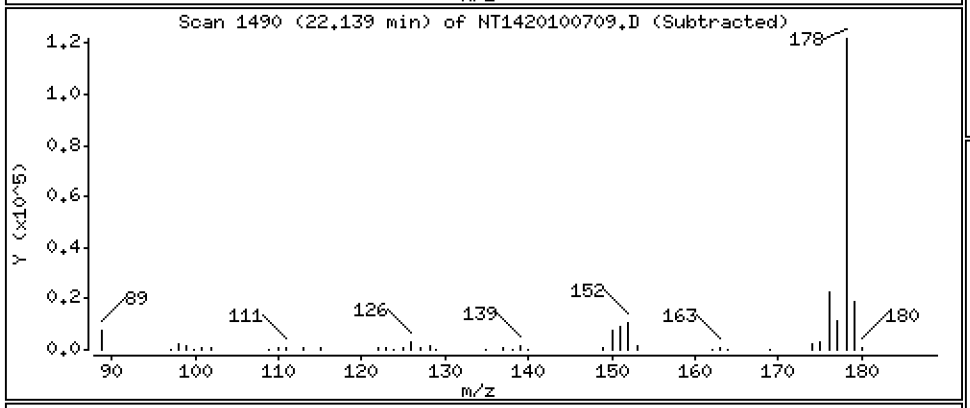
Column phase: Rxi-17Sil MS

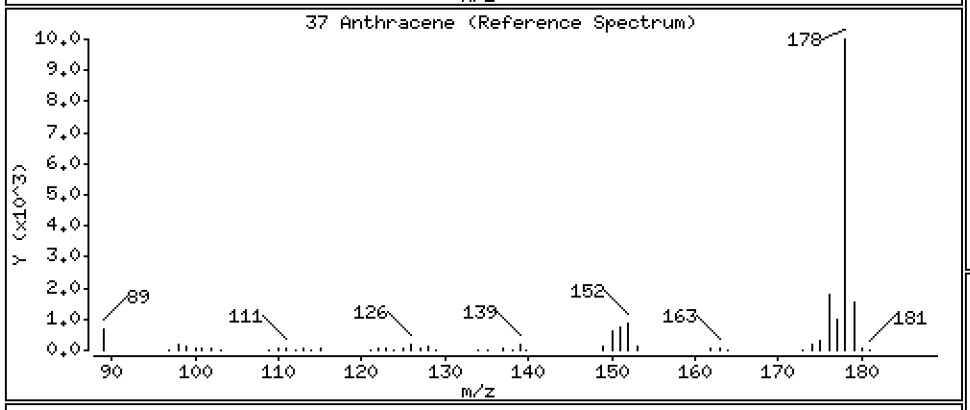
Column diameter: 0.25

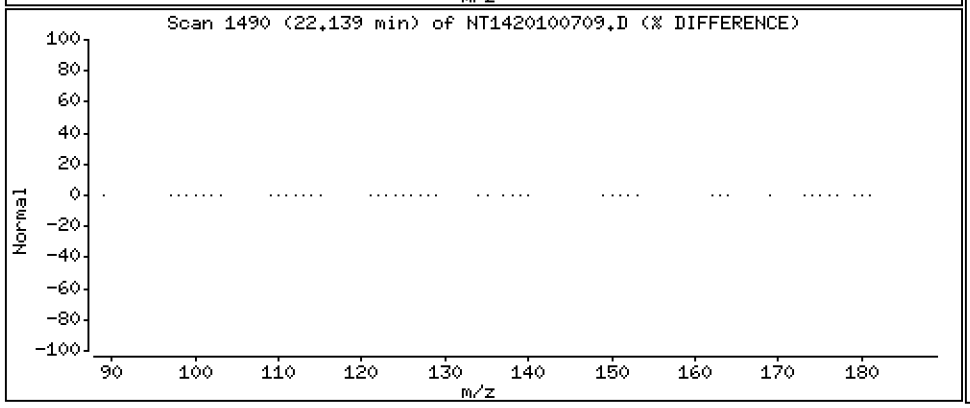
37 Anthracene

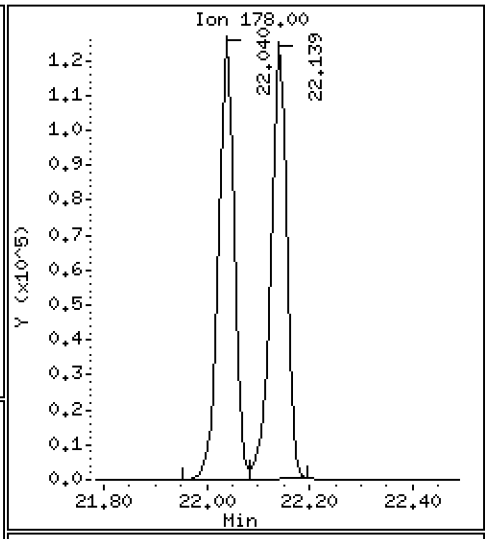
Concentration: 2.385 ug/mL

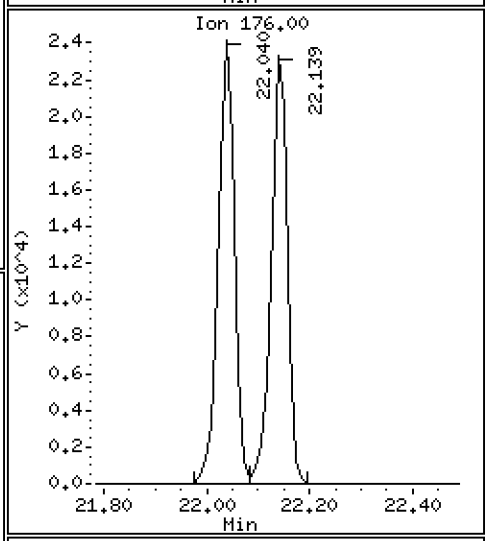


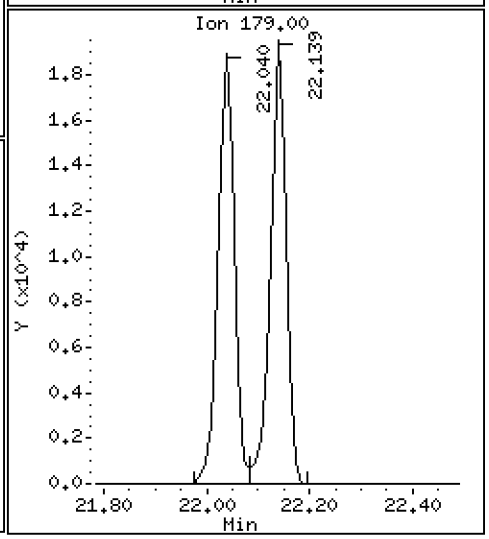












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

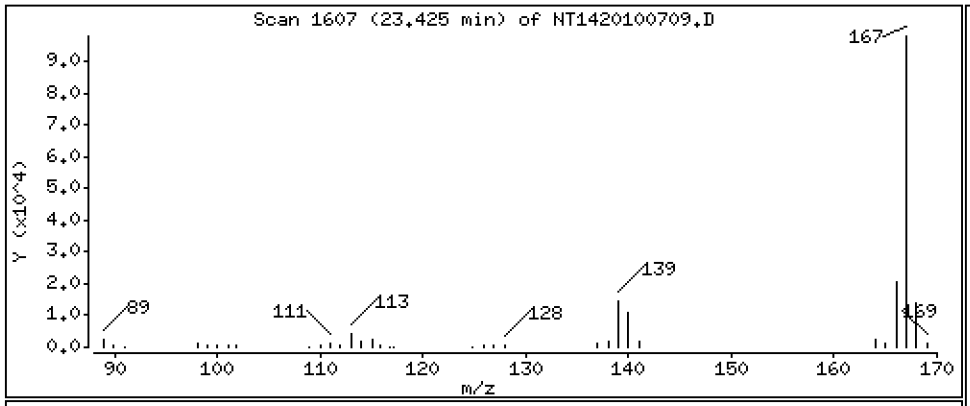
Operator: VTS

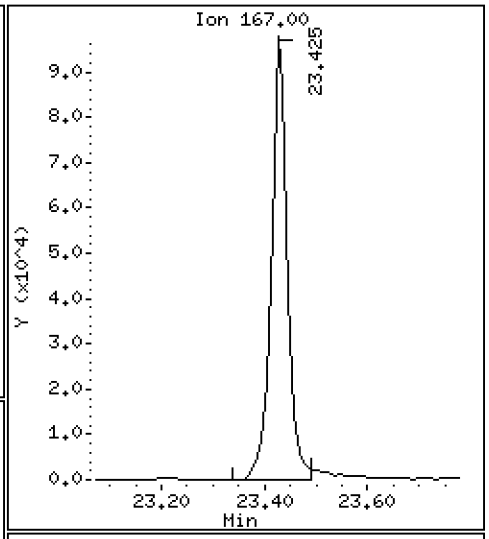
Column phase: Rxi-17Sil MS

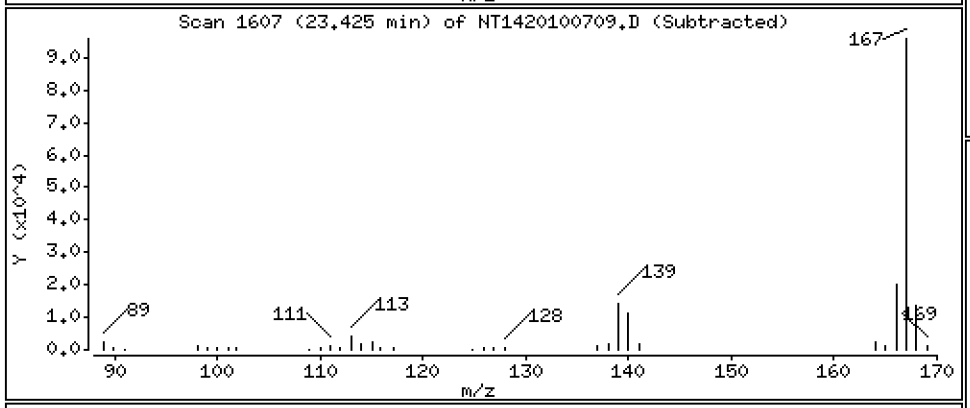
Column diameter: 0.25

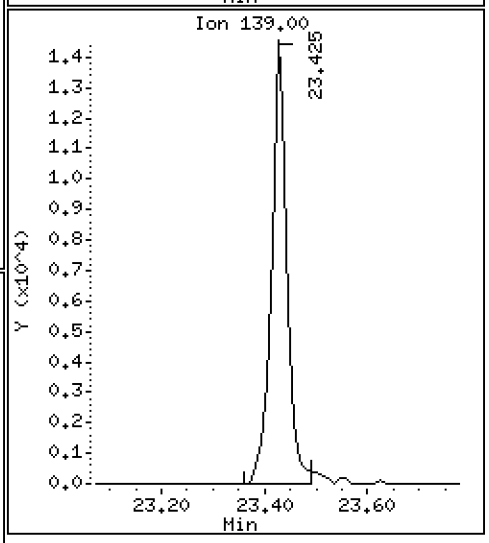
42 Carbazole

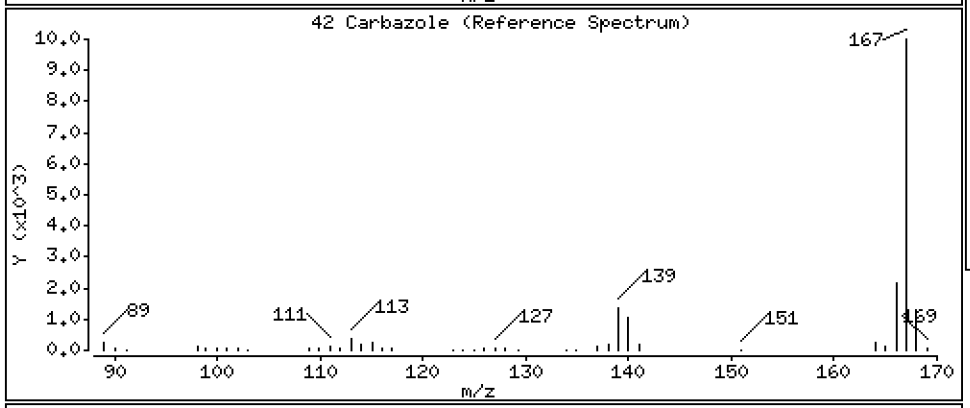
Concentration: 2.354 ug/mL

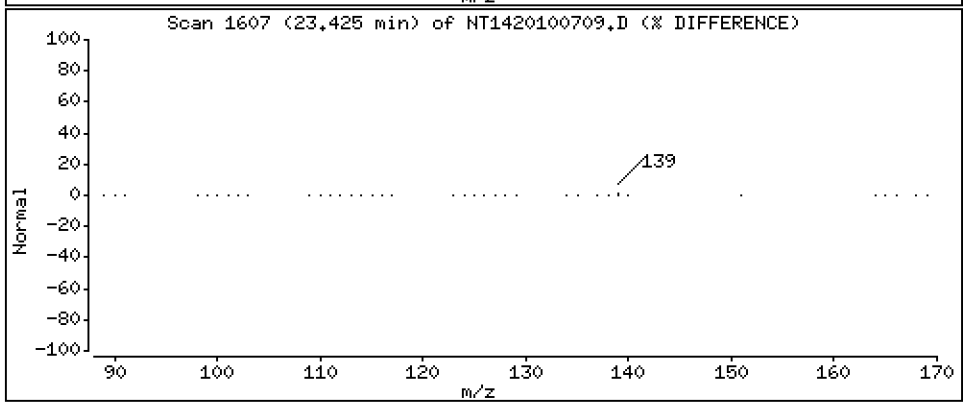












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

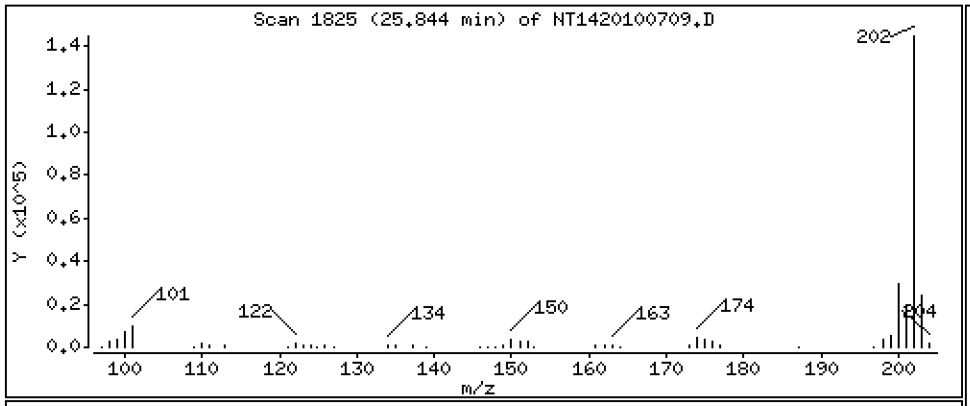
Operator: VTS

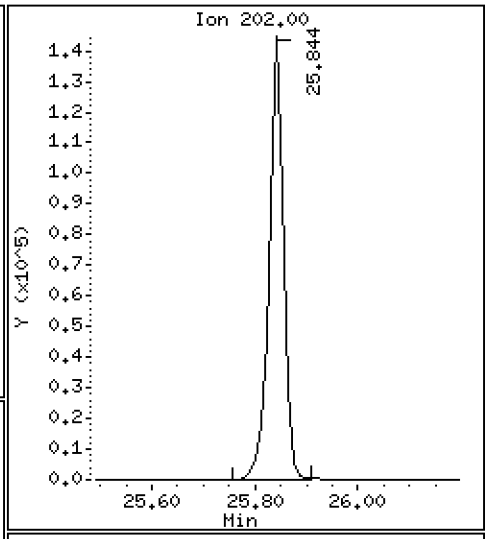
Column phase: Rxi-17Sil MS

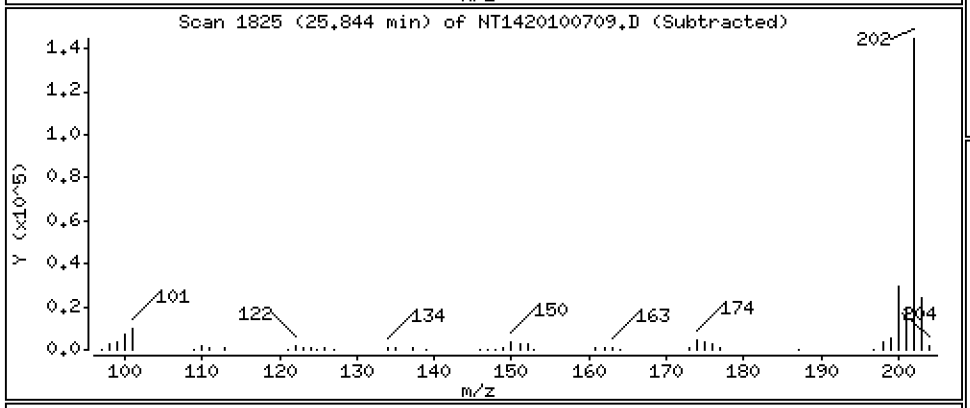
Column diameter: 0.25

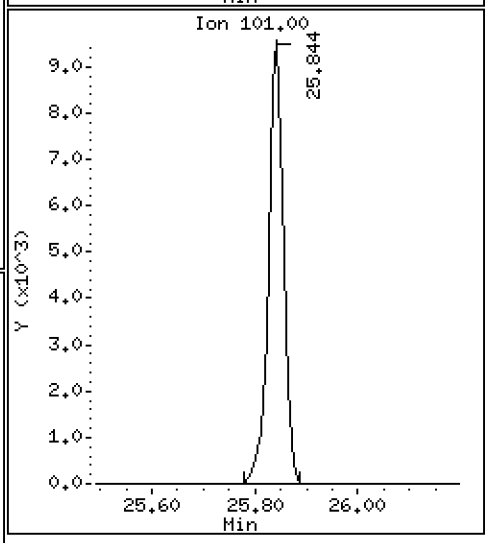
44 Fluoranthene

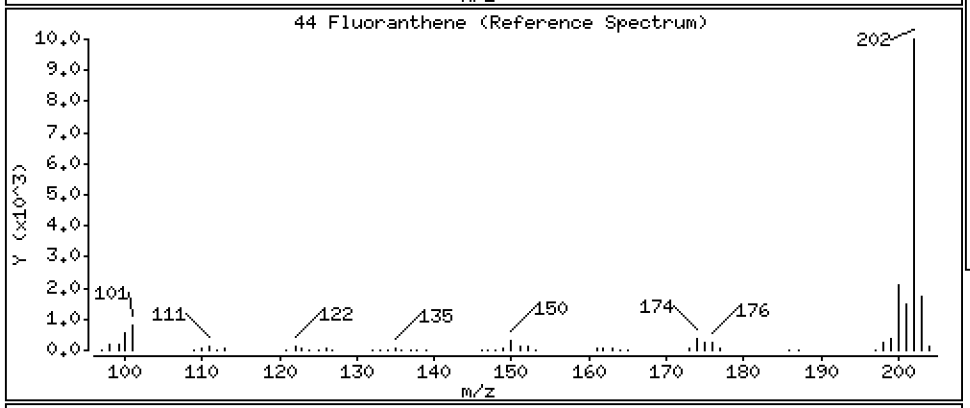
Concentration: 2.436 ug/mL

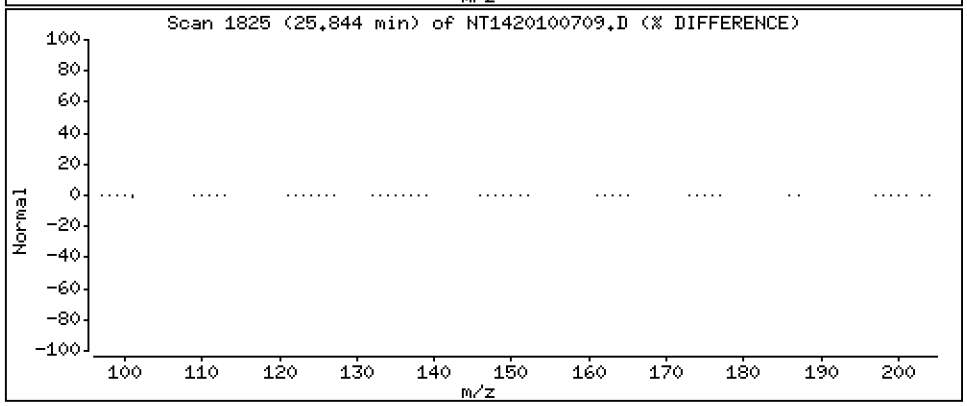












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

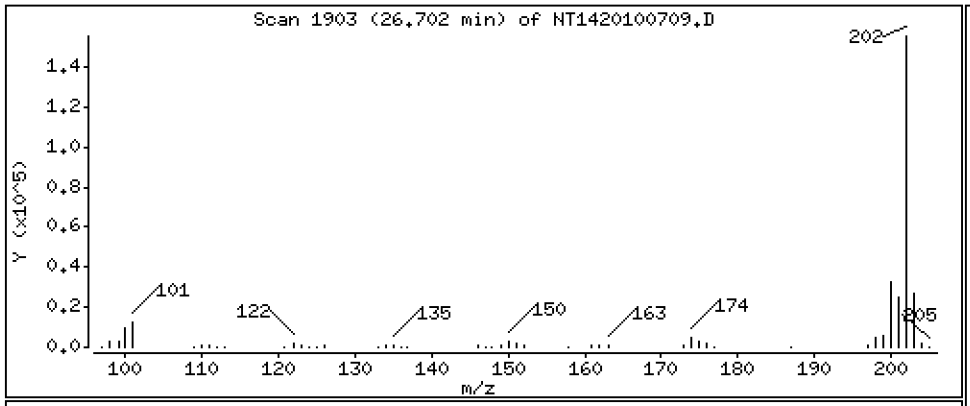
Operator: VTS

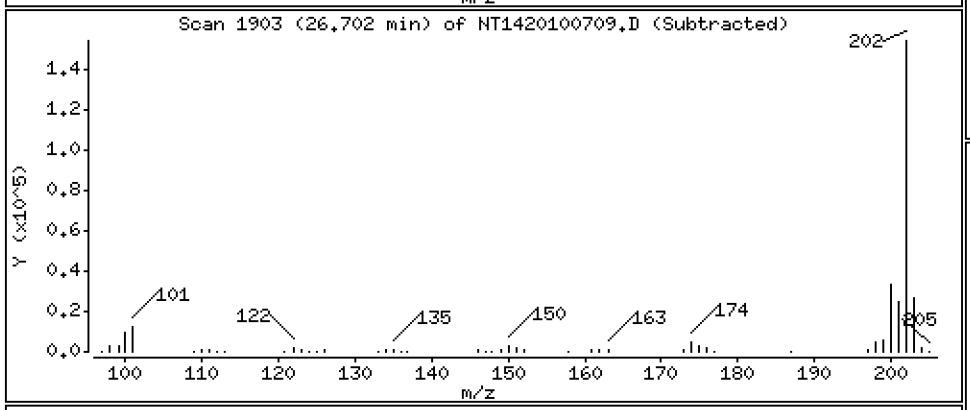
Column phase: Rxi-17Sil MS

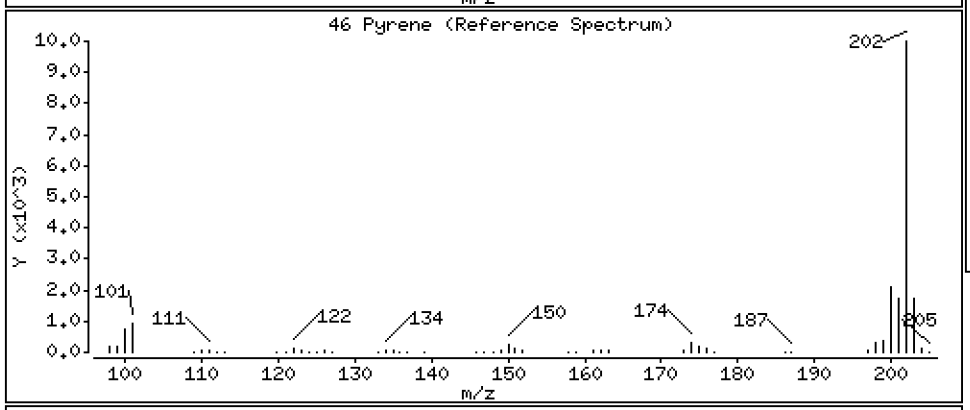
Column diameter: 0.25

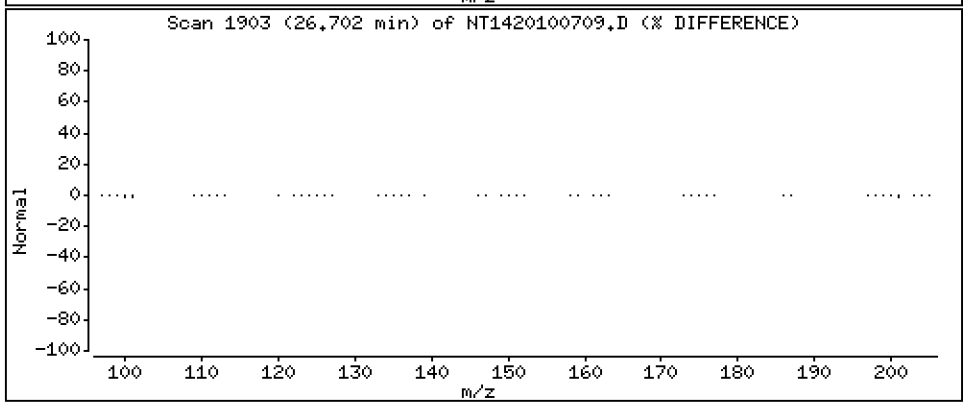
46 Pyrene

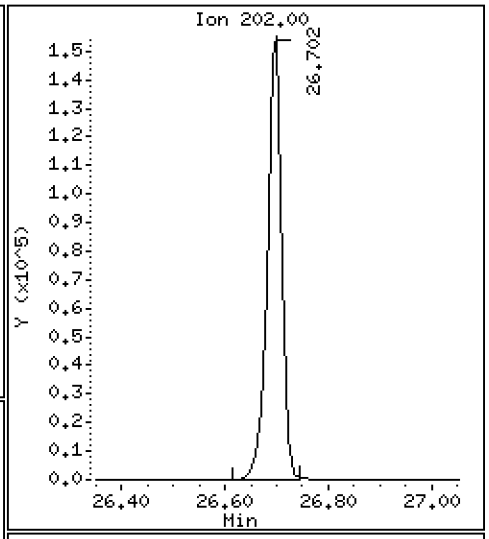
Concentration: 2.497 ug/mL

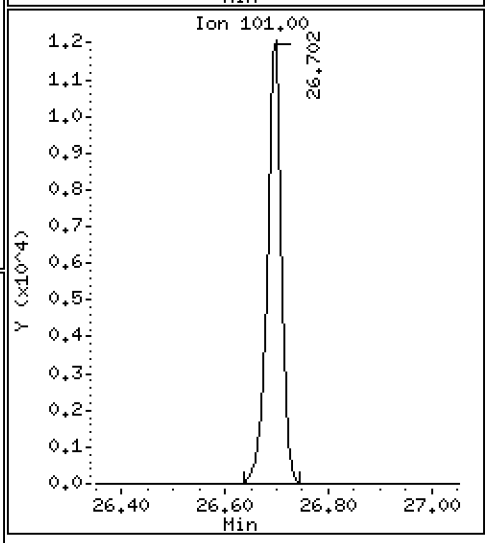












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

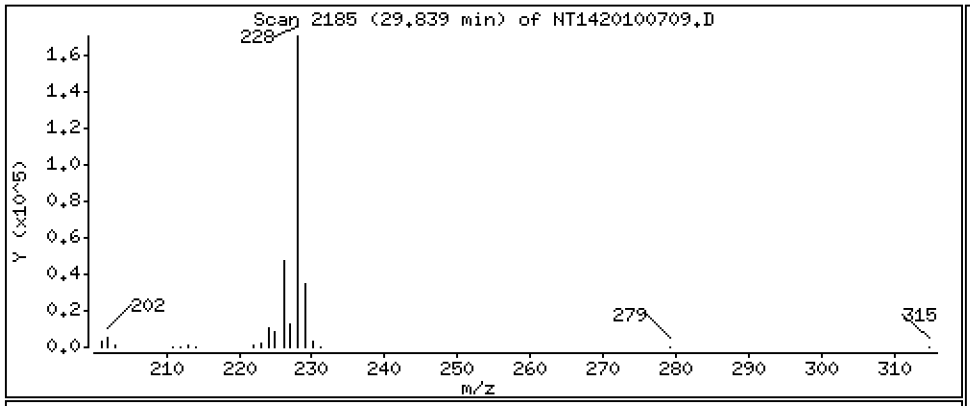
Operator: VTS

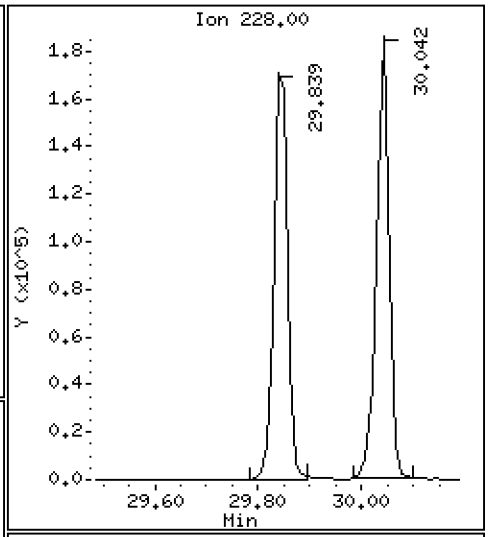
Column phase: Rxi-17Sil MS

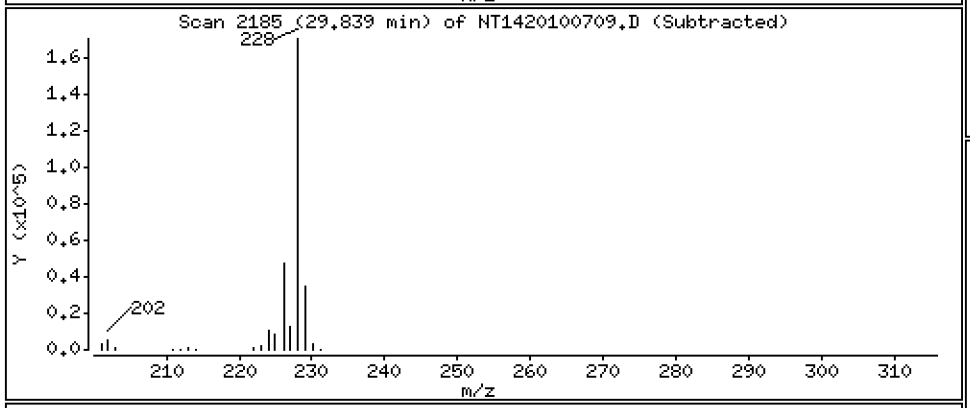
Column diameter: 0.25

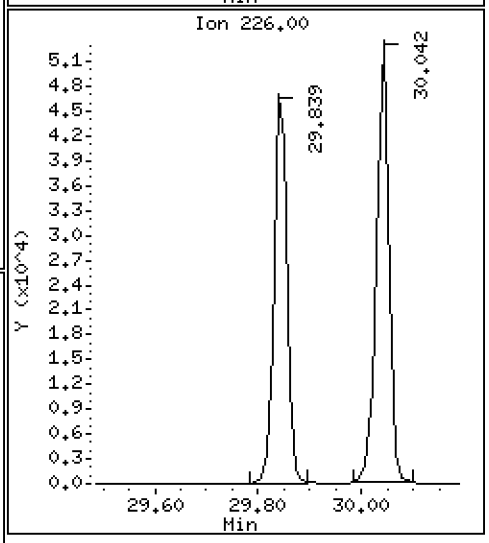
55 Benzo(a)anthracene

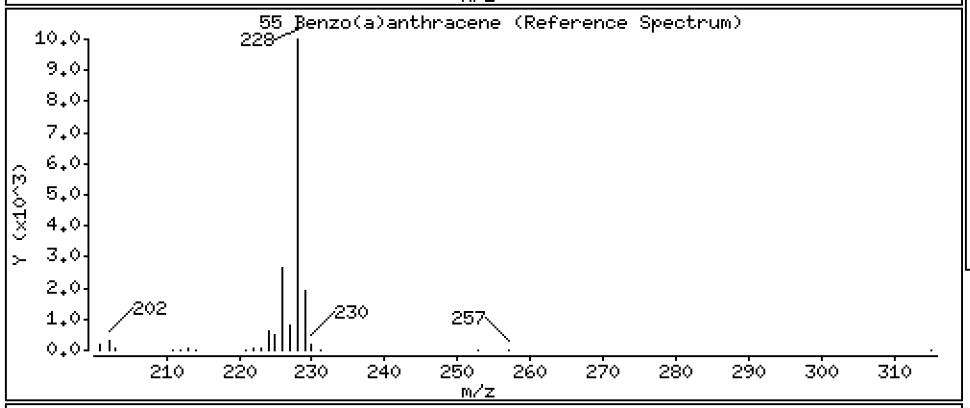
Concentration: 2.581 ug/mL

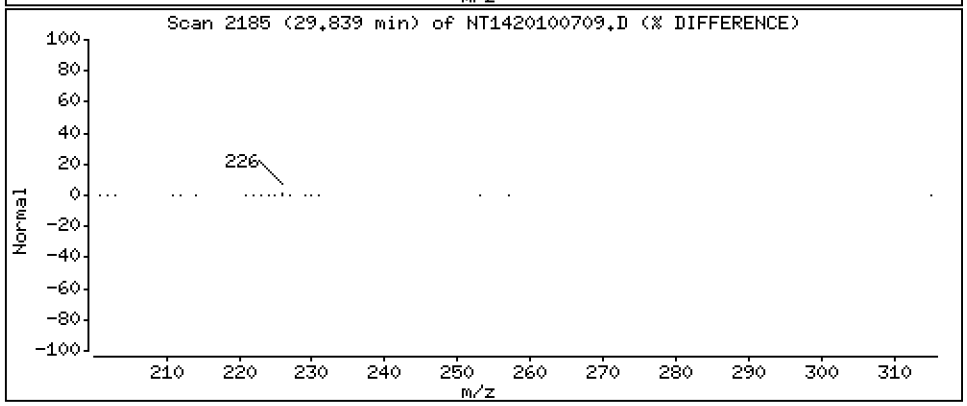












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

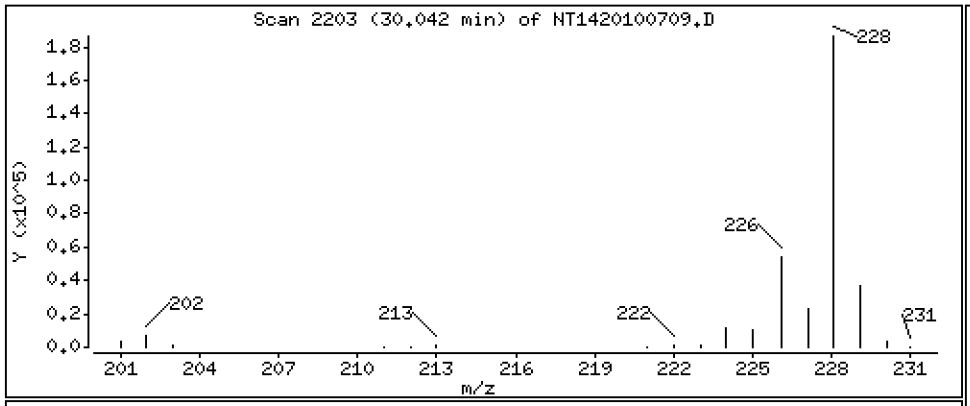
Client ID: Instrument: nt14.i

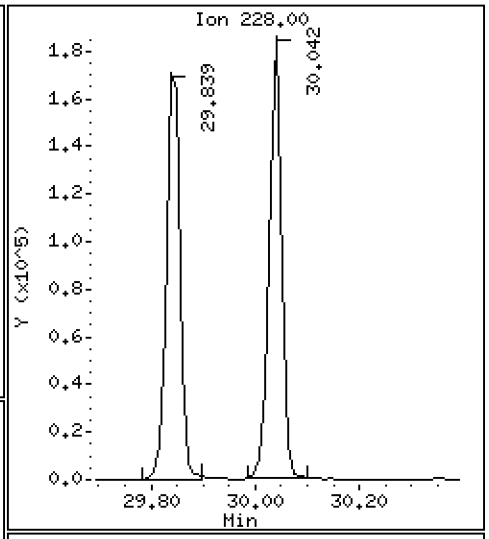
Sample Info: SIJ0085-SCV1

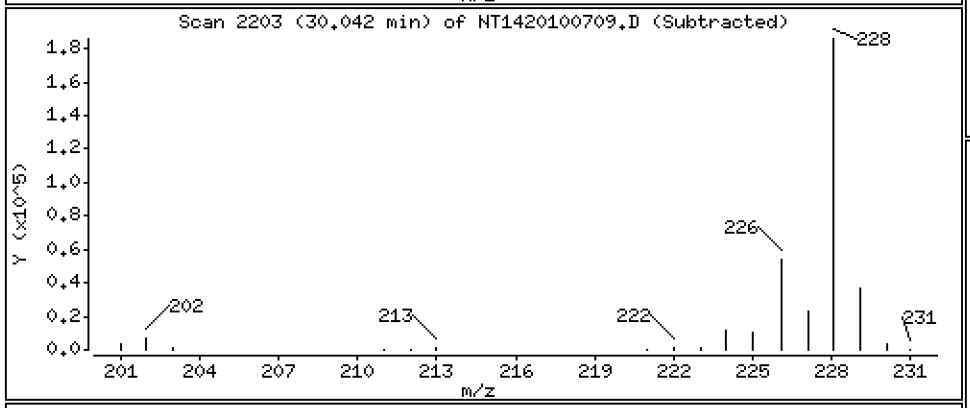
Operator: VTS

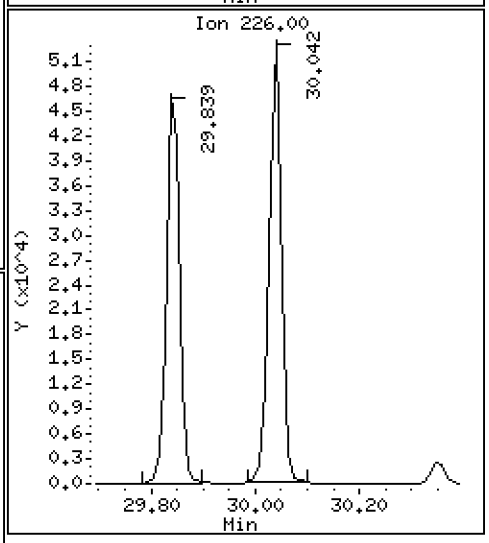
Column phase: Rxi-17Sil MS Column diameter: 0.25

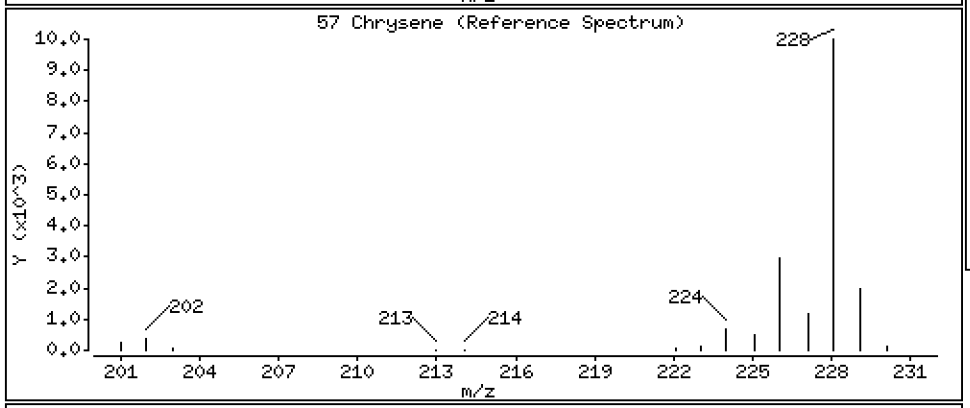
57 Chrysene Concentration: 2.516 ug/mL

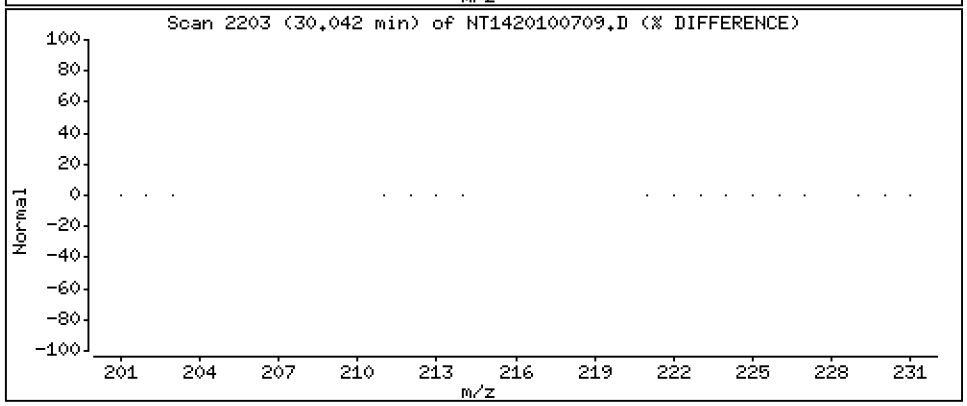












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

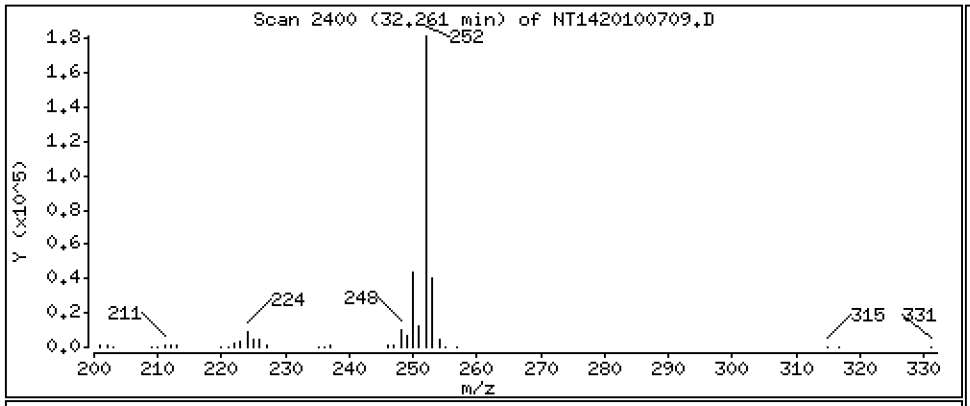
Operator: VTS

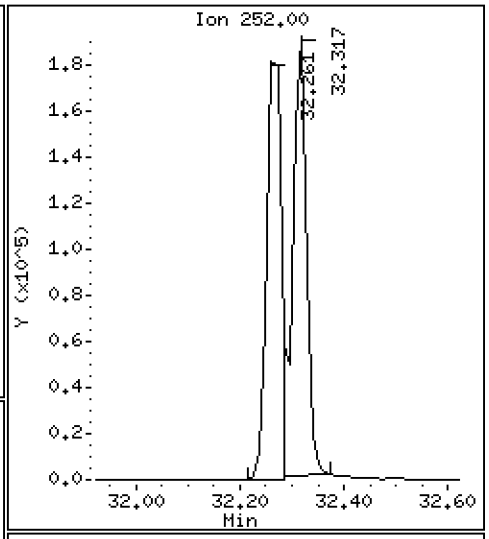
Column phase: Rxi-17Sil MS

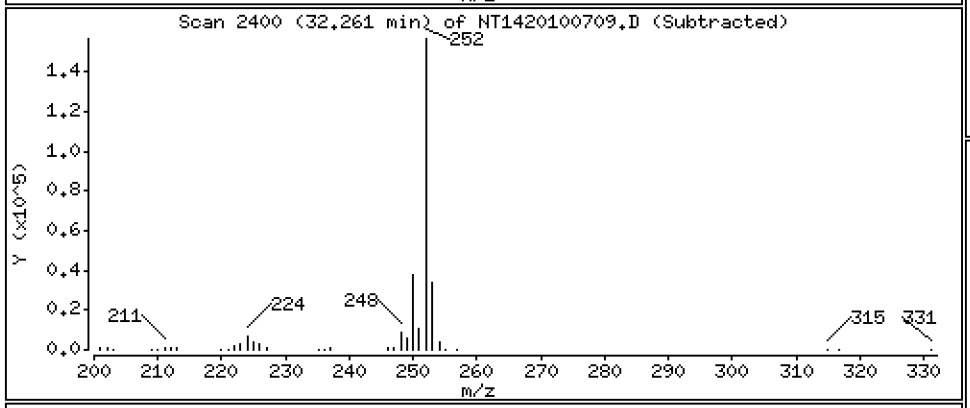
Column diameter: 0.25

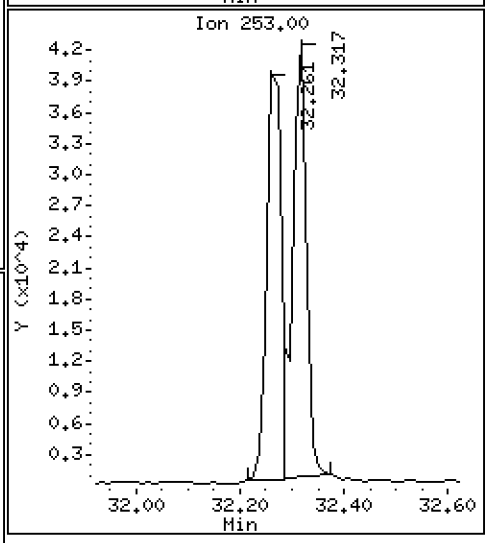
62 Benzo(b)fluoranthene

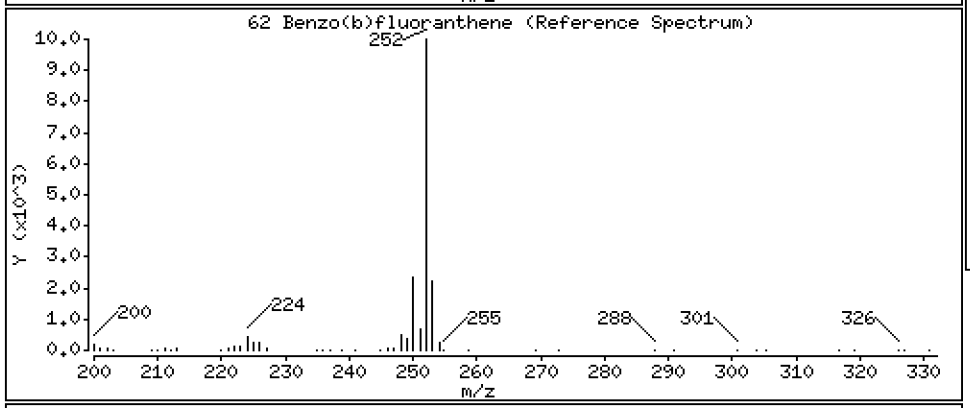
Concentration: 2.387 ug/mL

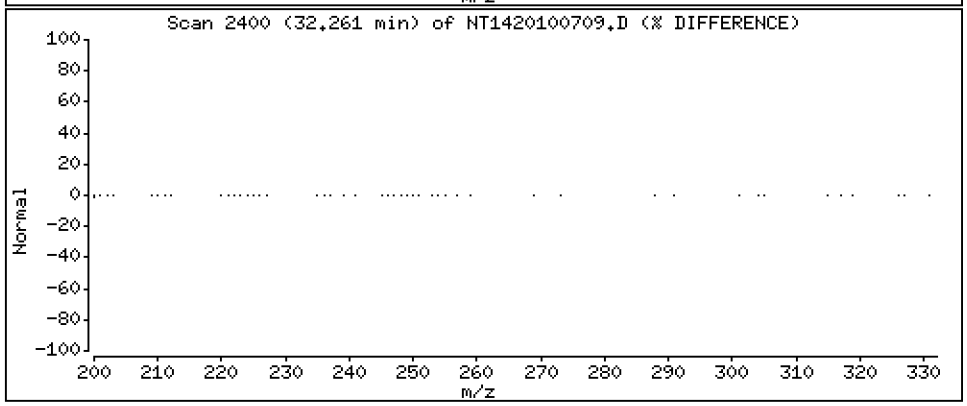












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

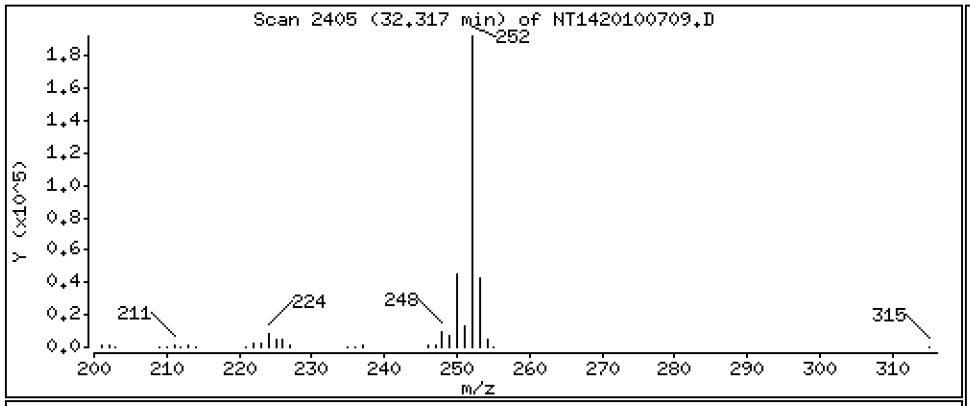
Operator: VTS

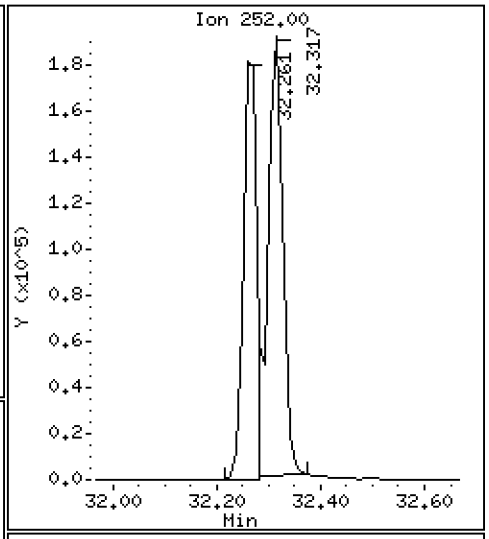
Column phase: Rxi-17Sil MS

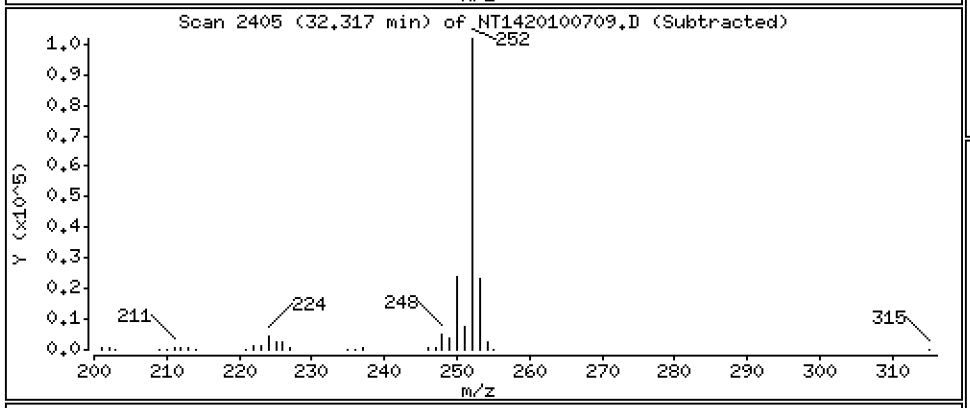
Column diameter: 0.25

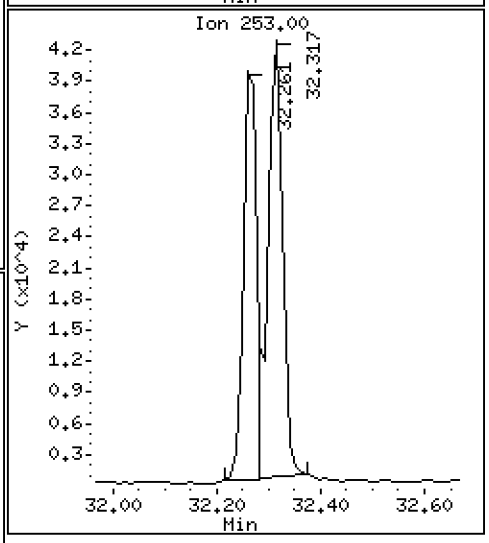
63 Benzo(k)fluoranthene

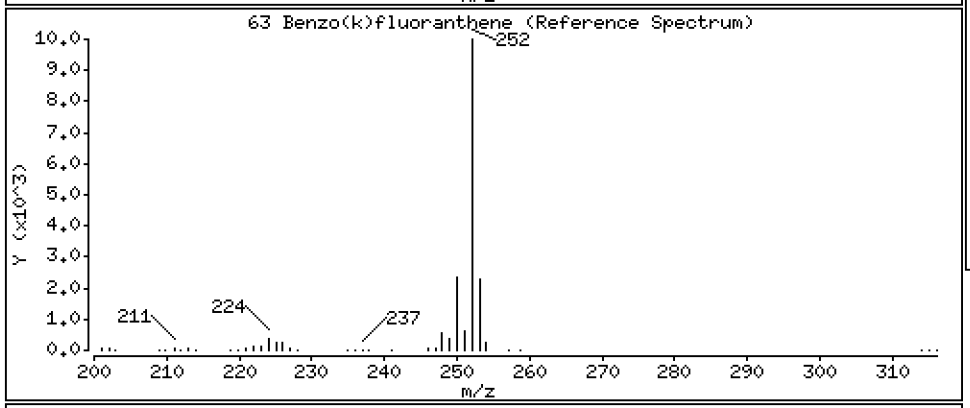
Concentration: 2.656 ug/mL

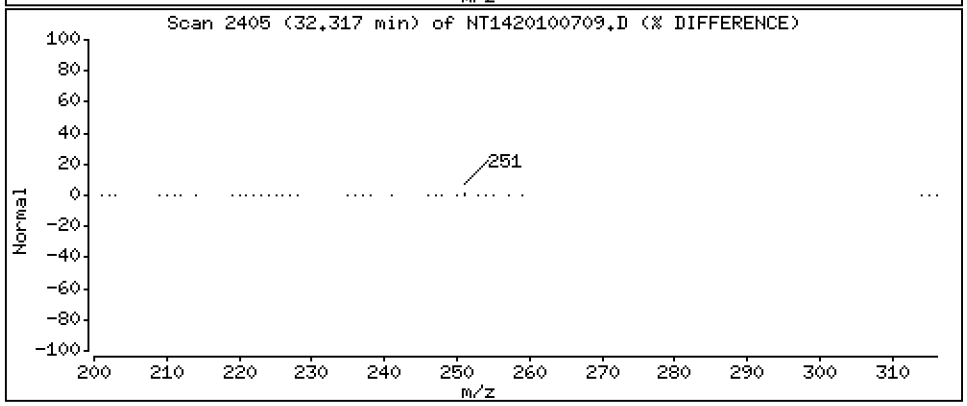












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

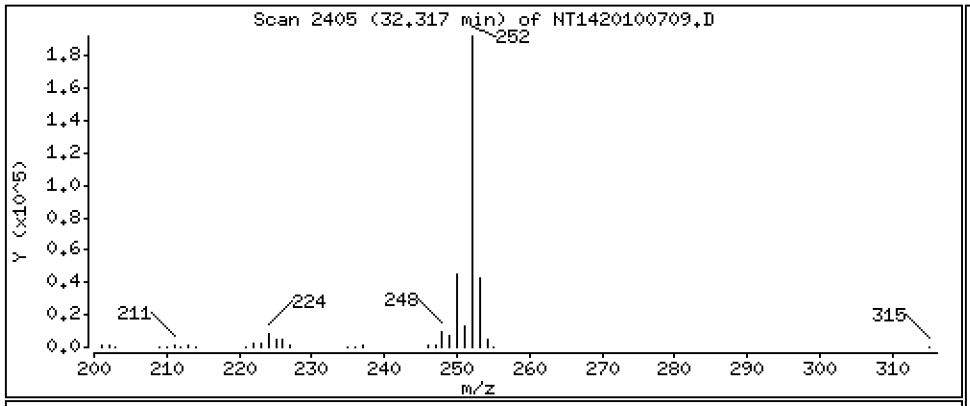
Client ID: Instrument: nt14.i

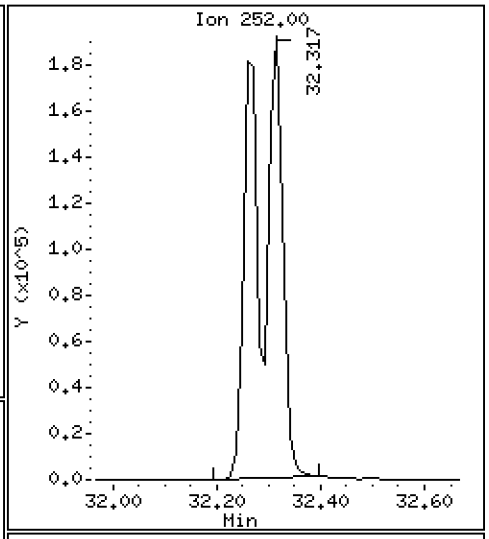
Sample Info: SIJ0085-SCV1

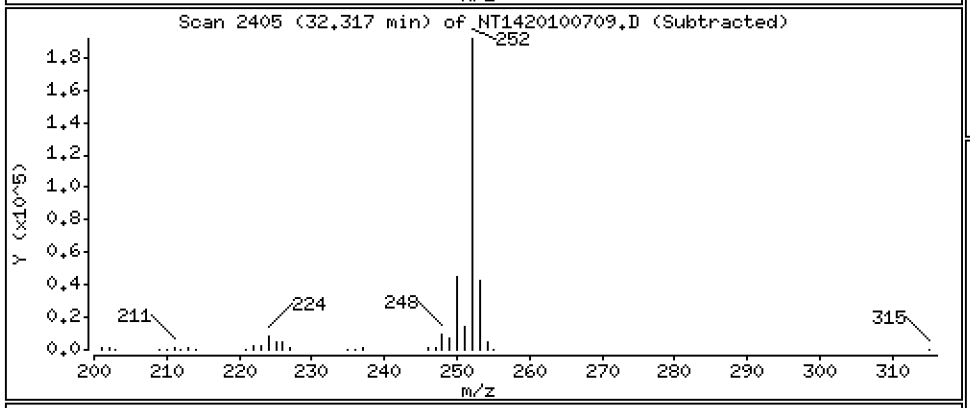
Operator: VTS

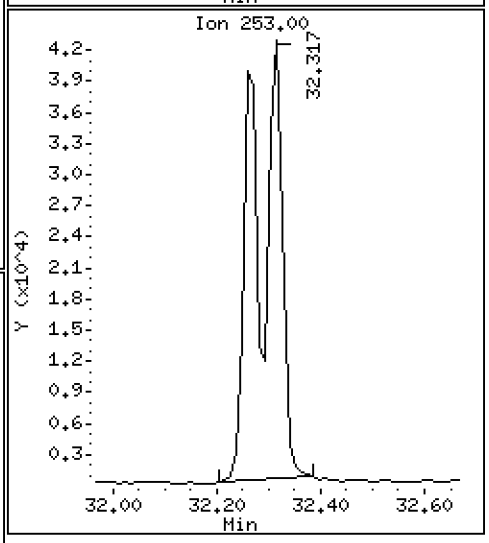
Column phase: Rxi-17Sil MS Column diameter: 0.25

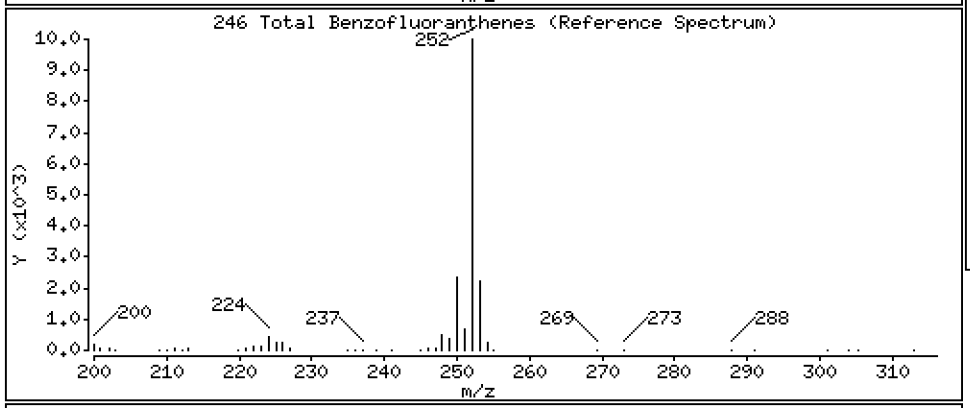
246 Total Benzofluoranthenes Concentration: 5.207 ug/mL

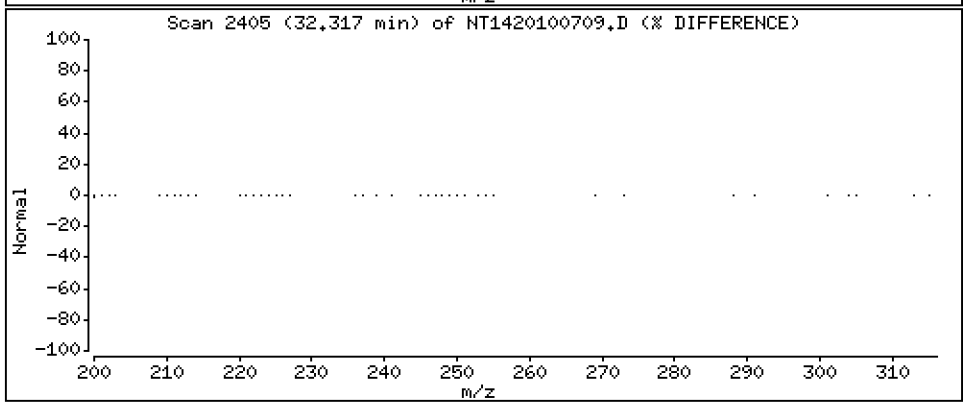












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

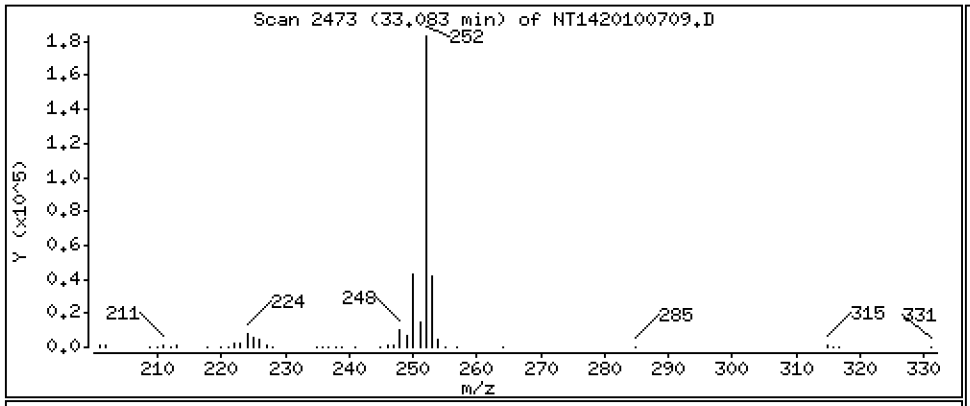
Operator: VTS

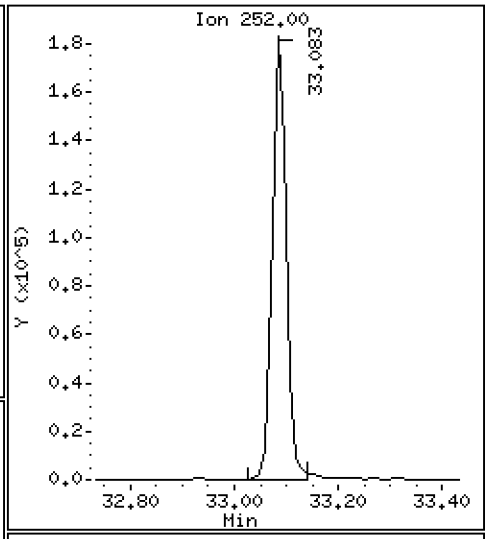
Column phase: Rxi-17Sil MS

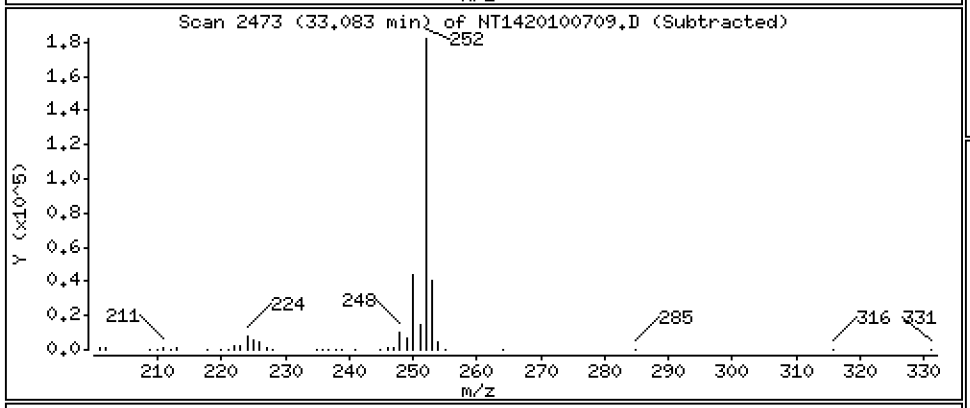
Column diameter: 0.25

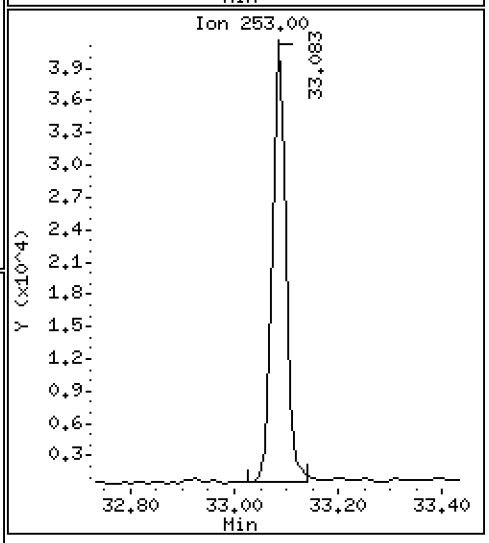
66 Benzo(a)pyrene

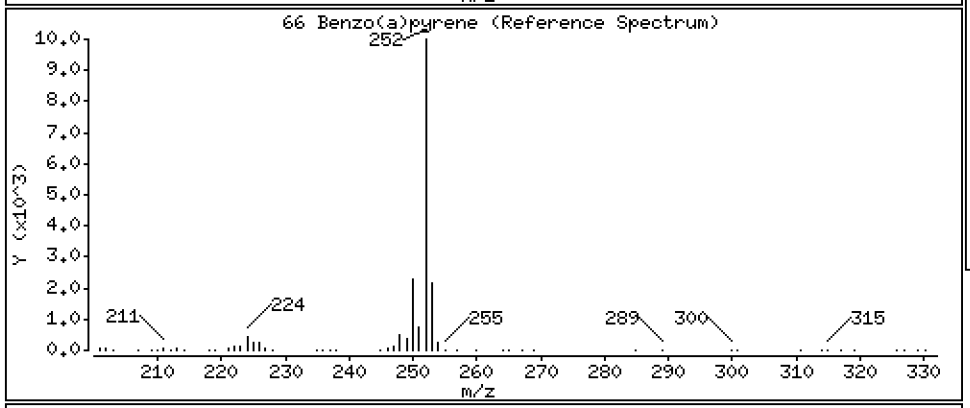
Concentration: 2.617 ug/mL

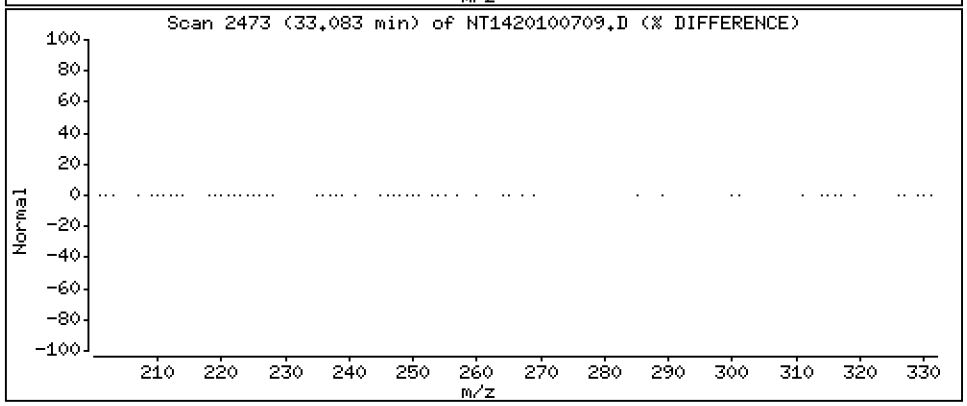












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

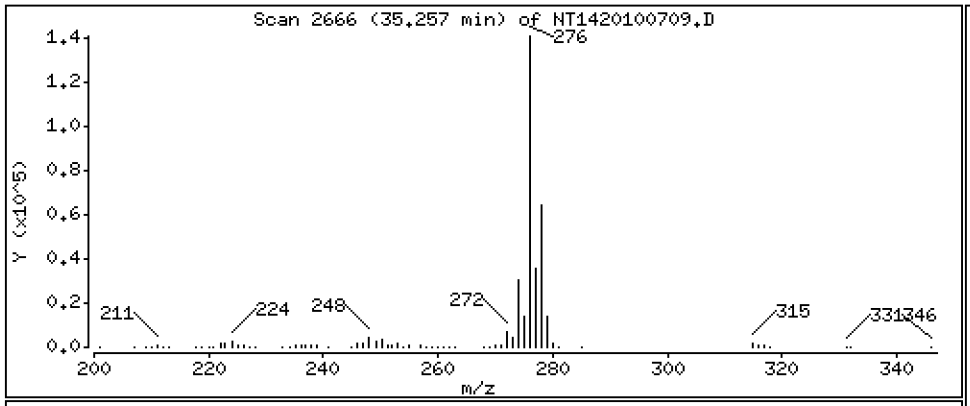
Operator: VTS

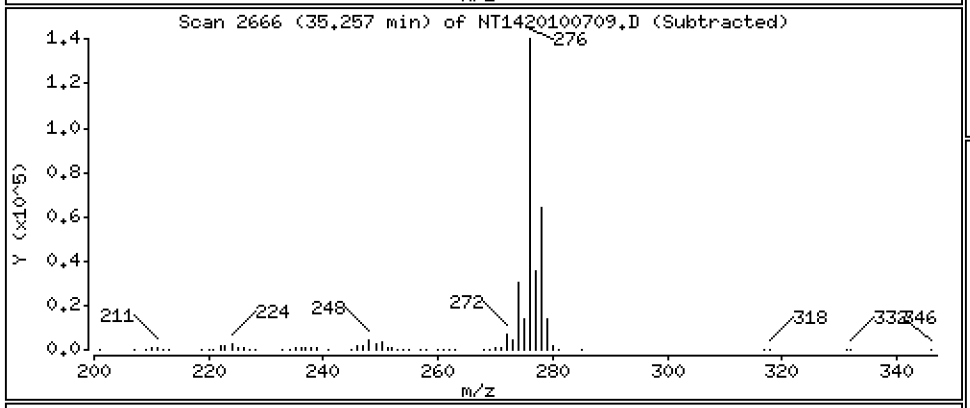
Column phase: Rxi-17Sil MS

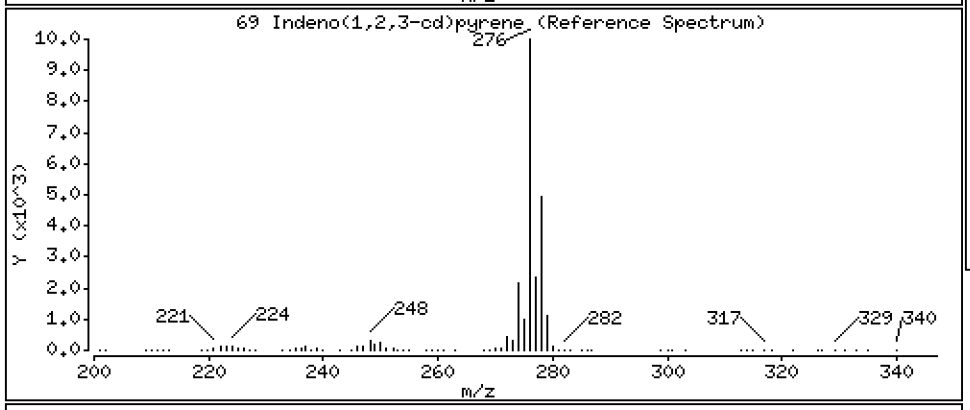
Column diameter: 0.25

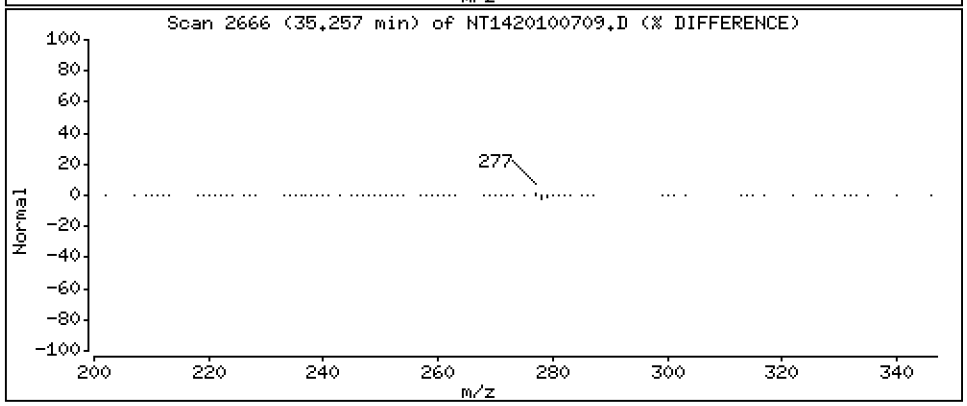
69 Indeno(1,2,3-cd)pyrene

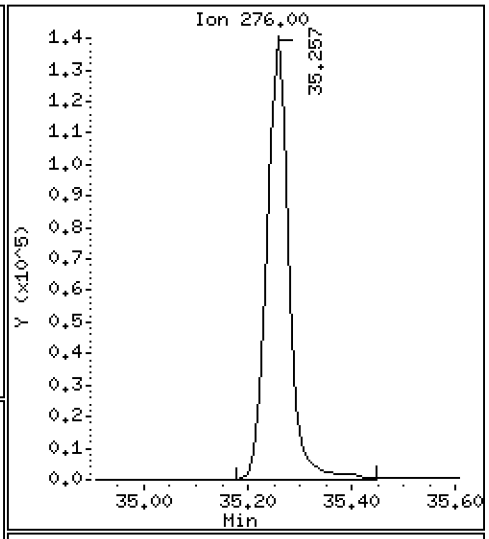
Concentration: 2.625 ug/mL

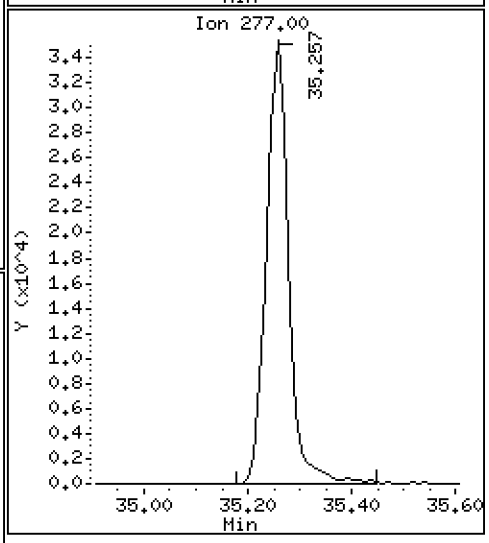












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

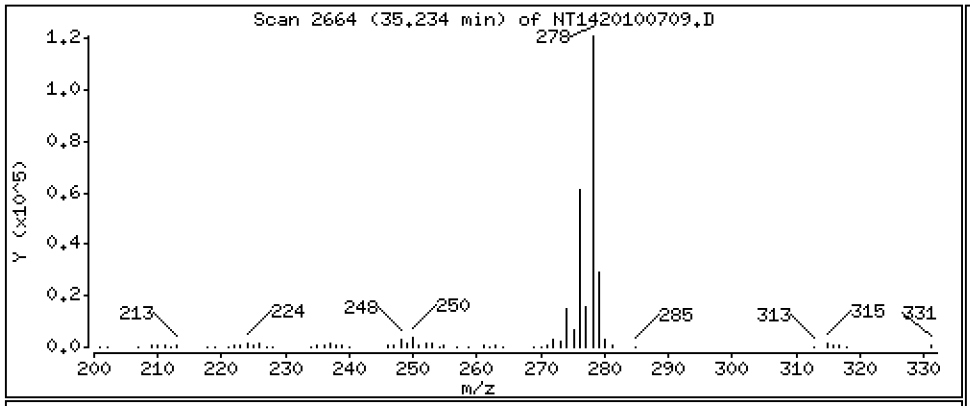
Operator: VTS

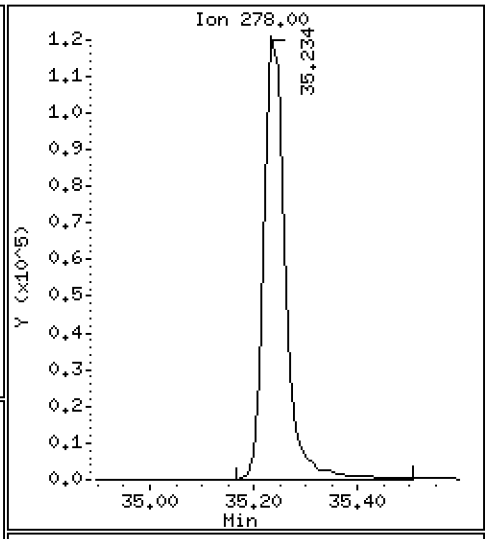
Column phase: Rxi-17Sil MS

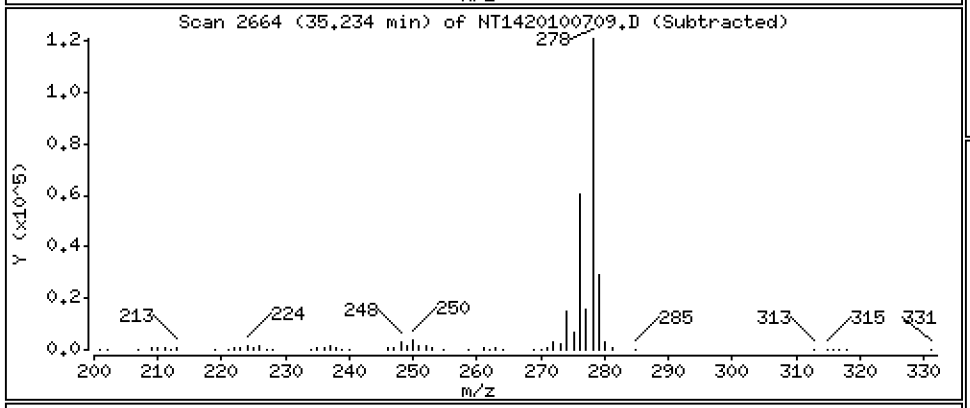
Column diameter: 0.25

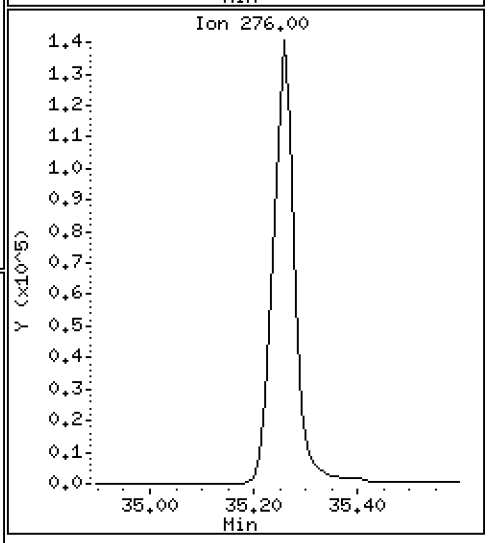
70 Dibenzo(a,h)anthracene

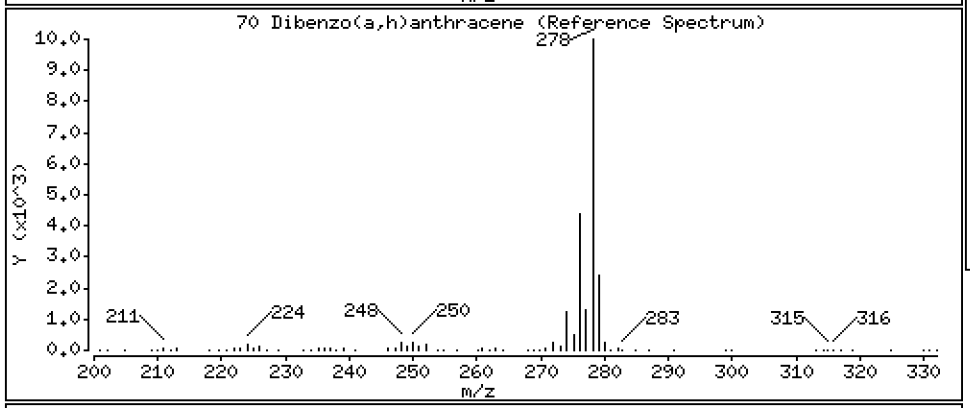
Concentration: 2.517 ug/mL

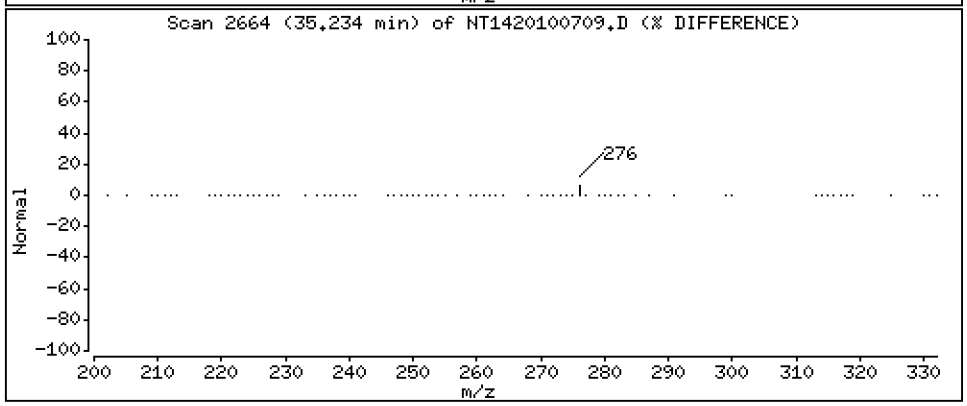












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

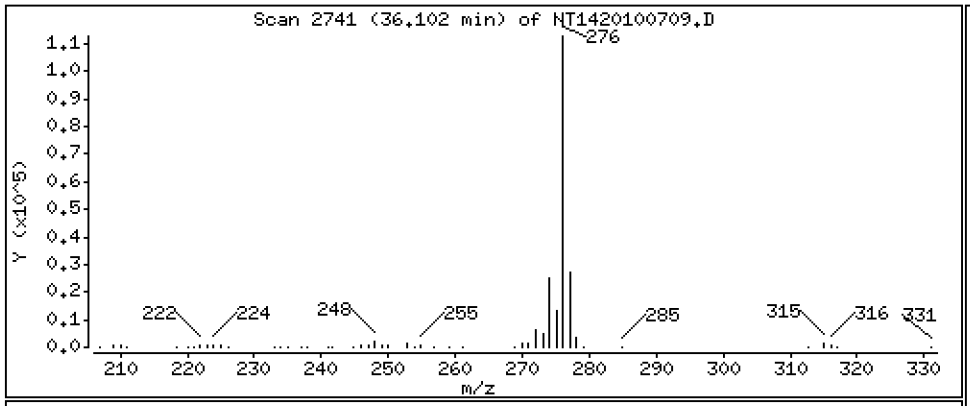
Operator: VTS

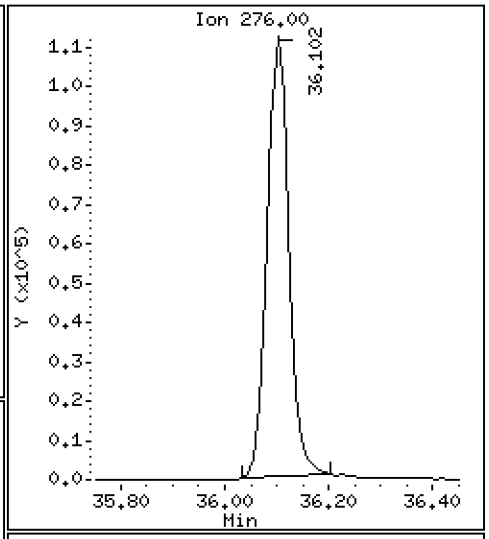
Column phase: Rxi-17Sil MS

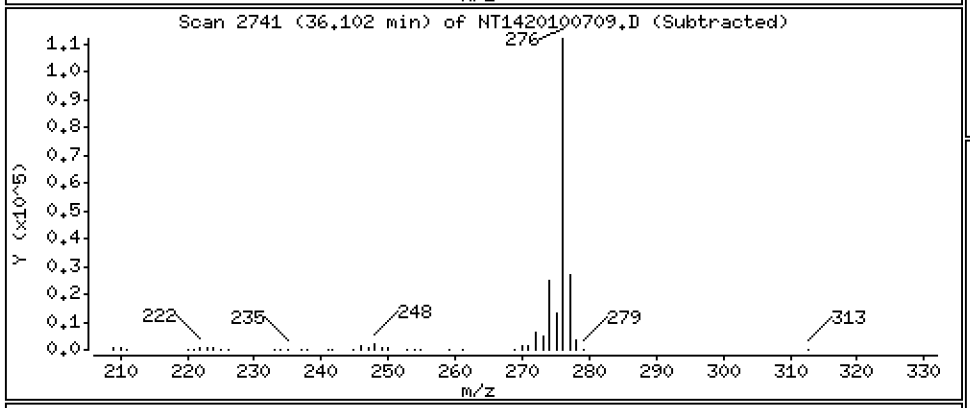
Column diameter: 0.25

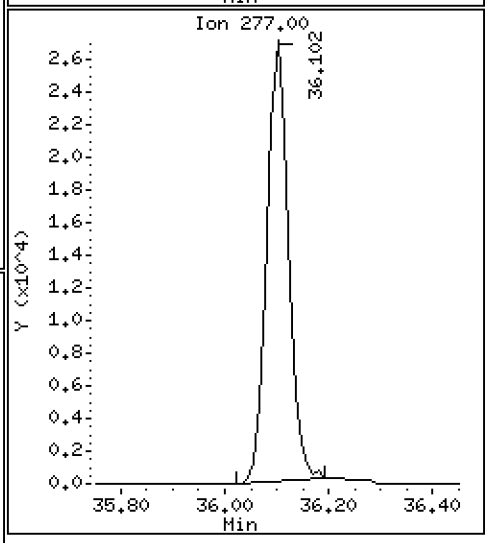
74 Benzo(g,h,i)perylene

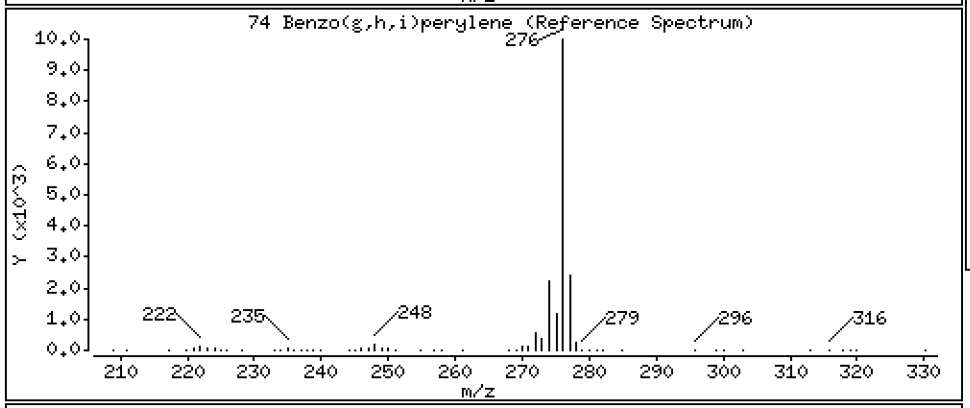
Concentration: 2.329 ug/mL

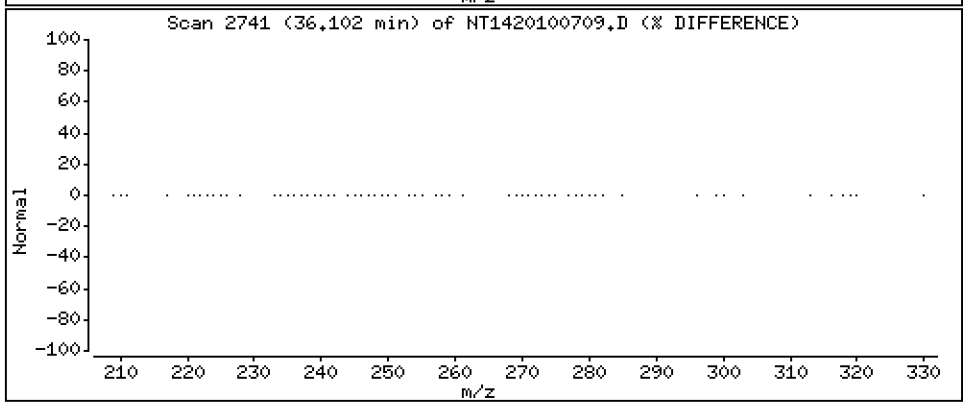












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D
Lab Smp Id: SIJ0085-SCV1
Inj Date : 07-OCT-2020 16:45
Operator : VTS Inst ID: nt14.i
Smp Info : SIJ0085-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Meth Date : 09-Oct-2020 08:45 van Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (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	11.707	11.707	(0.628)	213173	2.75707	2.757
	12 Benzo(b)thiophene	134	Compound Not Detected.					
	16 2-Methylnaphthalene	141	13.542	13.542	(0.727)	132308	2.80714	2.807
	17 1-methylnaphthalene	141	13.992	13.992	(0.751)	134040	2.83535	2.835
	18 Biphenyl	154	Compound Not Detected.					
	19 2,6-Dimethylnaphthalene	156	Compound Not Detected.					
	20 Acenaphthylene	152	16.817	16.817	(0.903)	244094	2.87456	2.875
$	21 Acenaphthene-d10	164	17.135	17.103	(0.920)	20448	0.44062	0.4406(R)
	22 Acenaphthene	153	17.223	17.223	(0.924)	150978	2.71407	2.714
	23 Dibenzofuran	168	17.597	17.597	(0.944)	249328	3.08950	3.090
	24 1,6,7-Trimethylnaphthalene	170	Compound Not Detected.					
*	25 Fluorene-d10	176	18.632	18.632	(1.000)	189405	2.00000	
	26 Fluorene	166	18.746	18.746	(1.006)	186659	2.96697	2.967
	30 Dibenzothiophene	184	Compound Not Detected.					
$	35 Phenanthrene-d10	188	Compound Not Detected.					
	36 Phenanthrene	178	22.040	22.040	(0.999)	276406	2.45432	2.454
*	250 Anthracene-d10	188	22.072	22.072	(1.000)	203362	2.00000	
	37 Anthracene	178	22.138	22.138	(1.003)	263969	2.38495	2.385
	42 Carbazole	167	23.425	23.425	(1.061)	225622	2.35395	2.354
	43 1-Methylphenanthrene	192	Compound Not Detected.					
	44 Fluoranthene	202	25.843	25.843	(1.171)	302784	2.43596	2.436
	46 Pyrene	202	26.701	26.701	(1.210)	327478	2.49671	2.497
	51 Naphthobenzothiophene	234	Compound Not Detected.					
	55 Benzo(a)anthracene	228	29.839	29.839	(0.906)	321298	2.58148	2.581
$	56 Chrysene-d12	240	Compound Not Detected.					
	57 Chrysene	228	30.042	30.042	(0.912)	311187	2.51557	2.516
	62 Benzo(b)fluoranthene	252	32.260	32.272	(0.980)	335486	2.38726	2.387
	63 Benzo(k)fluoranthene	252	32.317	32.317	(0.982)	376214	2.65607	2.656
	293 Benzo(j)fluoranthene	252	Compound Not Detected.					
	246 Total Benzofluoranthenes	252	32.317	32.317	(0.982)	678991	5.20731	5.207(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.925	32.925	(1.000)	288304	2.00000	
64 Benzo(e)pyrene	252	Compound Not Detected.					
66 Benzo(a)pyrene	252	33.083	33.083	(1.005)	318127	2.61683	2.617
$ 67 Perylene-d12	264	Compound Not Detected.					
68 Perylene	252	Compound Not Detected.					
69 Indeno(1,2,3-cd)pyrene	276	35.256	35.256	(1.071)	395155	2.62484	2.625
70 Dibenzo(a,h)anthracene	278	35.234	35.245	(1.070)	334739	2.51676	2.517
74 Benzo(g,h,i)perylene	276	36.101	36.101	(1.096)	307983	2.32872	2.329(M)

QC Flag Legend

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

Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D Page 1
Report Date: 09-Oct-2020 08:51

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1420100709.D
Lab Smp Id: SIJ0085-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Misc Info:

Calibration Date: 07-OCT-2020
Calibration Time: 18:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	209596	104798	419192	189405	-9.63
250 Anthracene-d10	192407	96204	384814	203362	5.69
251 Benzo(e)pyrene-d1	274120	137060	548240	288304	5.17

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.63	18.13	19.13	18.63	0.00
250 Anthracene-d10	22.07	21.57	22.57	22.07	0.00
251 Benzo(e)pyrene-d1	32.93	32.43	33.43	32.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1420100709.D

Lab ID: SIJ0085-SCV1
nt14.i, 20201007.b\ALKYLPNA.m, 07-OCT-2020 16:45

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

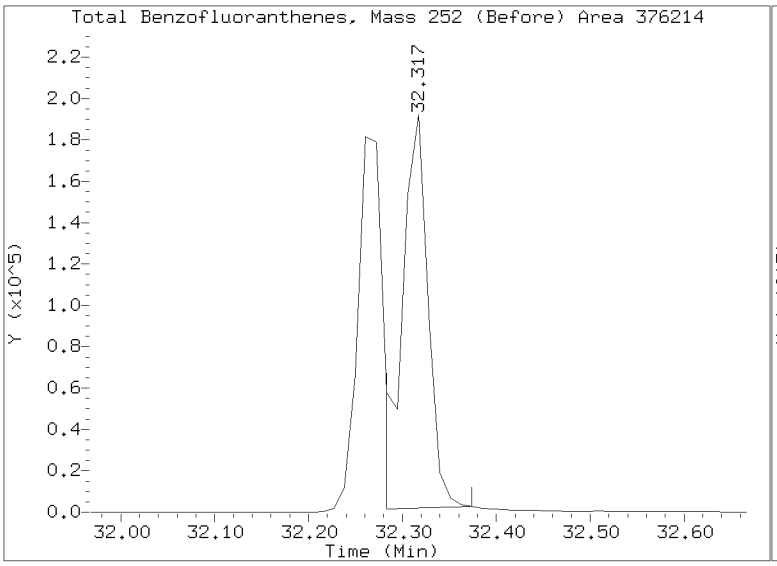
RRT check based on Ccal File: NT1420100711.D

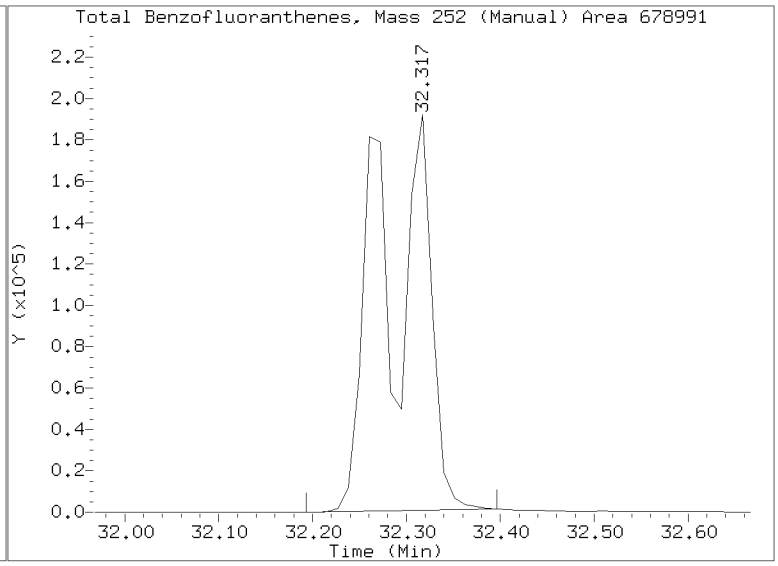
On Column LOD for nt14.i, 20201007.b\ALKYLPNA.m, TARGETS.sub = 0.0000

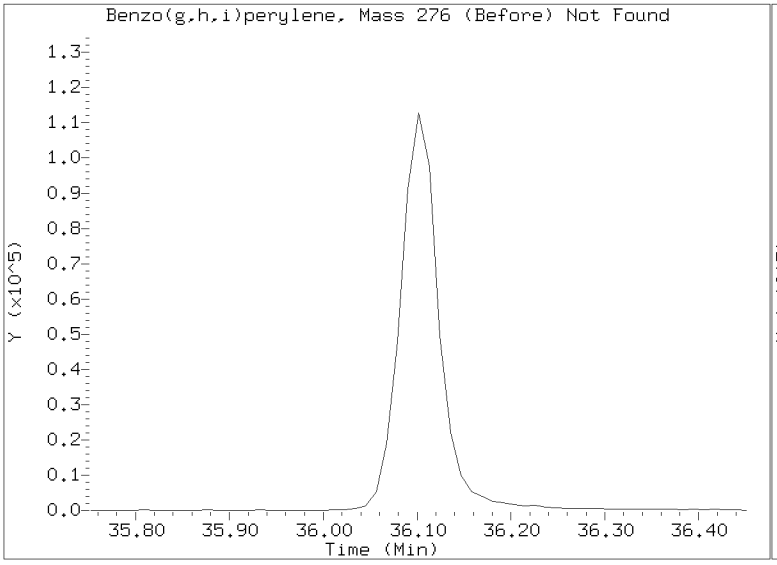
* Only compounds listed in the work order have been verified by the analyst *

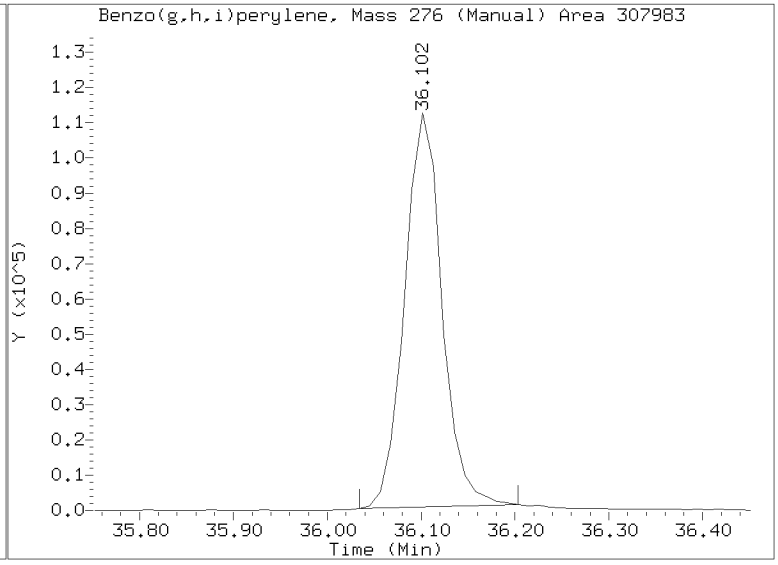
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20201007.b/NT1420100709.D
Injection Date: 07-OCT-2020 16:45
Lab ID:SIJ0085-SCV1 Client ID:
Report Date: 10/09/2020 08:51









Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100710.D

Date : 07-OCT-2020 17:33

Client ID:

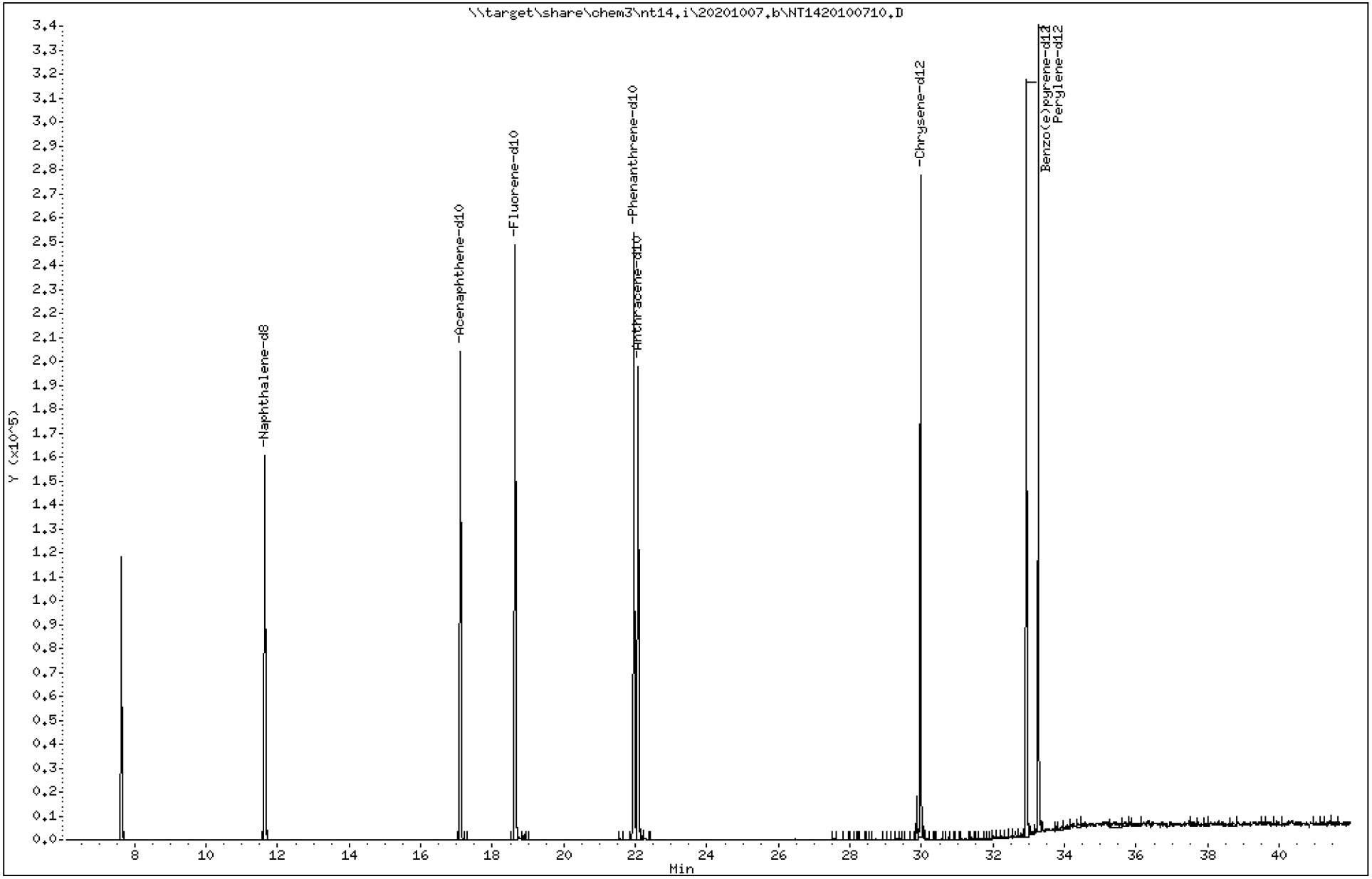
Instrument: nt14.i

Sample Info: SIJ0085-ICB1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201007.b\NT1420100710.D
Lab Smp Id: SIJ0085-ICB1
Inj Date : 07-OCT-2020 17:33
Operator : VTS Inst ID: nt14.i
Smp Info : SIJ0085-ICB1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Meth Date : 09-Oct-2020 08:45 van Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
	1 trans-Decalin	138	Compound Not Detected.					
	2 cis-Decalin	138	Compound Not Detected.					
$	6 Naphthalene-d8	136	11.641	11.641	(0.625)	224827	2.62926	2.629(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	17.103	17.103	(0.918)	126563	2.46483	2.465(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	18.632	18.632	(1.000)	209569	2.00000	
	26 Fluorene	166	Compound Not Detected.					
	30 Dibenzothiophene	184	Compound Not Detected.					
$	35 Phenanthrene-d10	188	21.963	21.963	(0.995)	257418	2.75596	2.756(R)
	36 Phenanthrene	178	Compound Not Detected.					
*	250 Anthracene-d10	188	22.073	22.072	(1.000)	195015	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	29.974	29.974	(0.910)	248251	2.64721	2.647(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 MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.925	32.925	(1.000)	275049	2.00000	
64 Benzo(e)pyrene	252	Compound Not Detected.					
66 Benzo(a)pyrene	252	Compound Not Detected.					
$ 67 Perylene-d12	264	33.263	33.263	(1.010)	293187	2.57786	2.578(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.

Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100710.D Page 1
Report Date: 09-Oct-2020 08:51

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1420100710.D
Lab Smp Id: SIJ0085-ICB1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Misc Info:

Calibration Date: 07-OCT-2020
Calibration Time: 18:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	209596	104798	419192	209569	-0.01
250 Anthracene-d10	192407	96204	384814	195015	1.36
251 Benzo(e)pyrene-d1	274120	137060	548240	275049	0.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.63	18.13	19.13	18.63	0.00
250 Anthracene-d10	22.07	21.57	22.57	22.07	0.00
251 Benzo(e)pyrene-d1	32.93	32.43	33.43	32.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1420100710.D

Lab ID: SIJ0085-ICB1
nt14.i, 20201007.b\ALKYLPNA.m, 07-OCT-2020 17:33

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: NT1420100711.D

On Column LOD for nt14.i, 20201007.b\ALKYLPNA.m, TARGETS.sub = 0.0000

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E-SIM

Laboratory: Analytical Resources, Inc.
Client: Anchor QEA, LLC
Calibration: DJ00029
Sequence: SIJ0085

SDG: 20K0073
Project: Gasco Siltronic
Laboratory ID: SIJ0085-SCV1
Sequence Name: Secondary Cal Check
Standard ID: I009393

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Naphthalene	2.5000	2.8	10.3	20.00
1-Methylnaphthalene	2.5000	2.8	13.4	20.00
2-Methylnaphthalene	2.5000	2.8	12.3	20.00
Acenaphthylene	2.5000	2.9	15.0	20.00
Acenaphthene	2.5000	2.7	8.6	20.00
Dibenzofuran	2.5000	3.1	23.6 *	20.00
Fluorene	2.5000	3.0	18.7	20.00
Phenanthrene	2.5000	2.5	-1.8	20.00
Anthracene	2.5000	2.4	-4.6	20.00
Carbazole	2.5000	2.4	-5.8	20.00
Fluoranthene	2.5000	2.4	-2.6	20.00
Pyrene	2.5000	2.5	-0.1	20.00
Benzo(a)anthracene	2.5000	2.6	3.3	20.00
Chrysene	2.5000	2.5	0.6	20.00
Benzo(b)fluoranthene	2.5000	2.4	-4.5	
Benzo(k)fluoranthene	2.5000	2.7	6.2	
Benzofluoranthenes, Total	5.0000	5.2	4.1	
Benzo(a)pyrene	2.5000	2.6	4.7	20.00
Indeno(1,2,3-cd)pyrene	2.5000	2.6	5.0	20.00
Dibenzo(a,h)anthracene	2.5000	2.5	0.7	20.00
Benzo(g,h,i)perylene	2.5000	2.3	-6.9	20.00

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

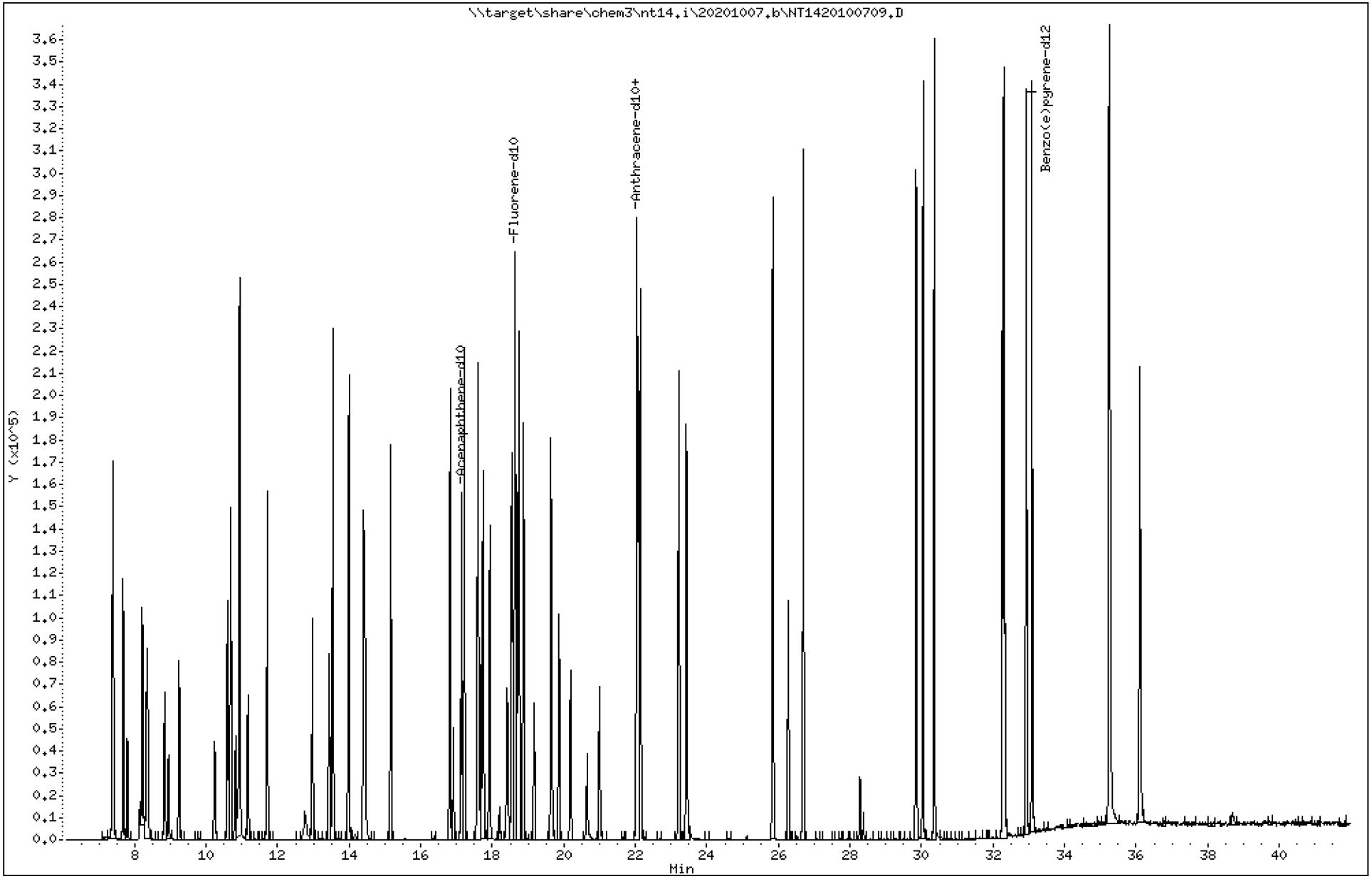
Instrument: nt14.i

Sample Info: SIJ0085-SCV1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

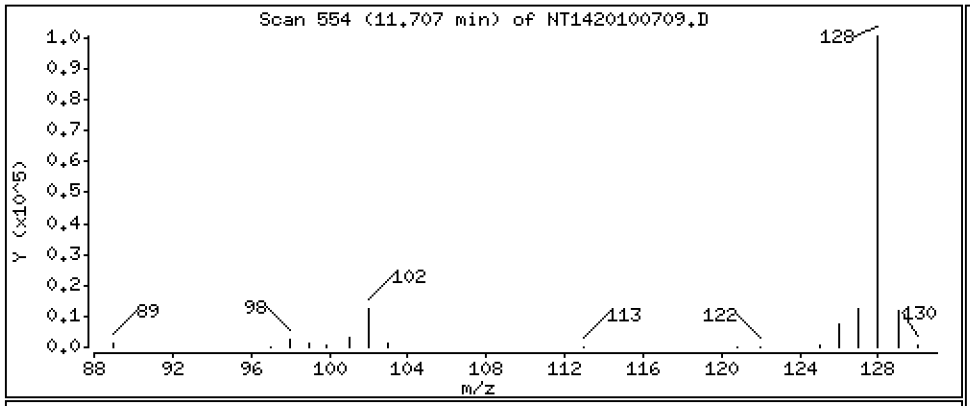
Operator: VTS

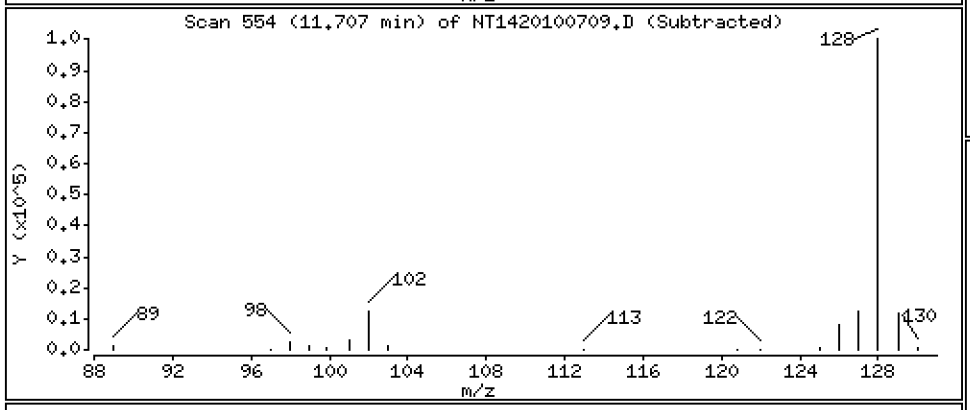
Column phase: Rxi-17Sil MS

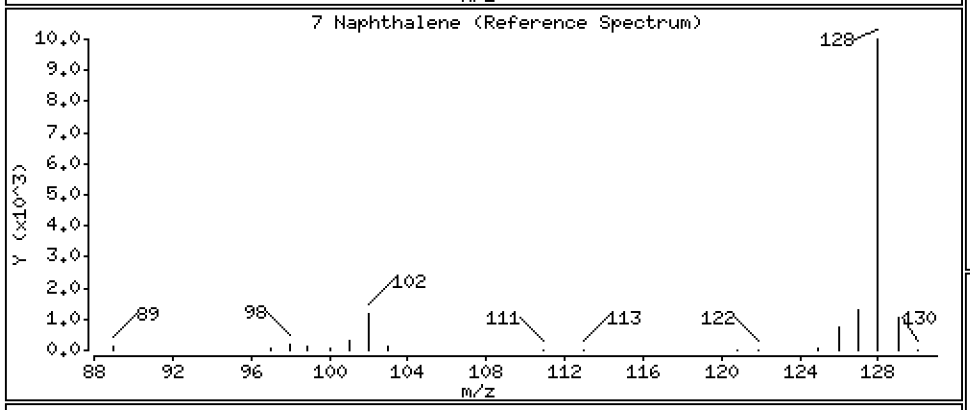
Column diameter: 0.25

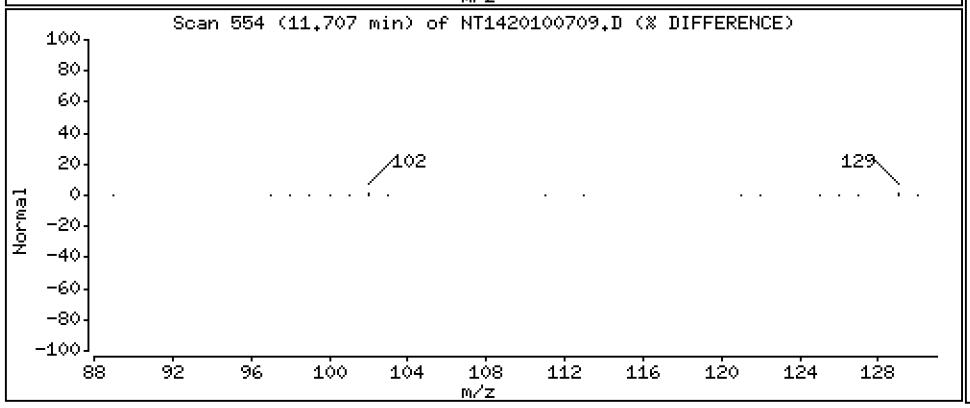
7 Naphthalene

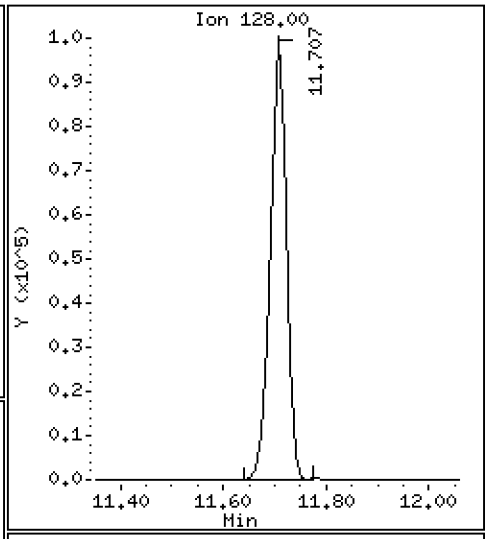
Concentration: 2.757 ug/mL

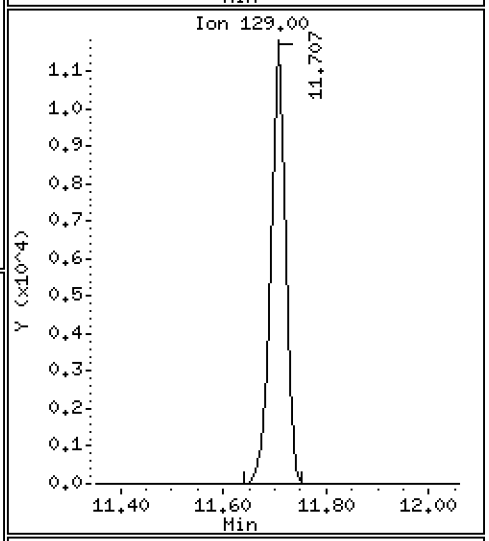


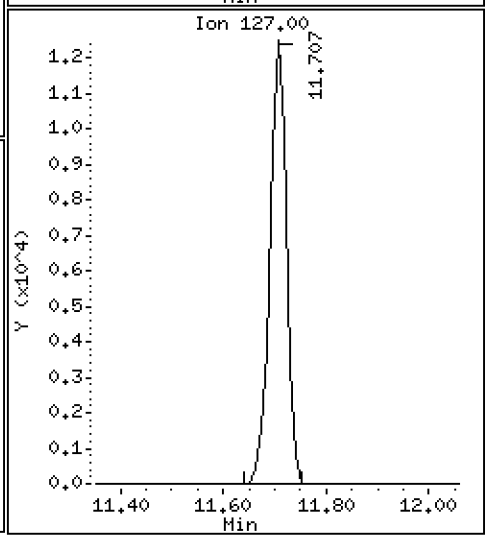












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

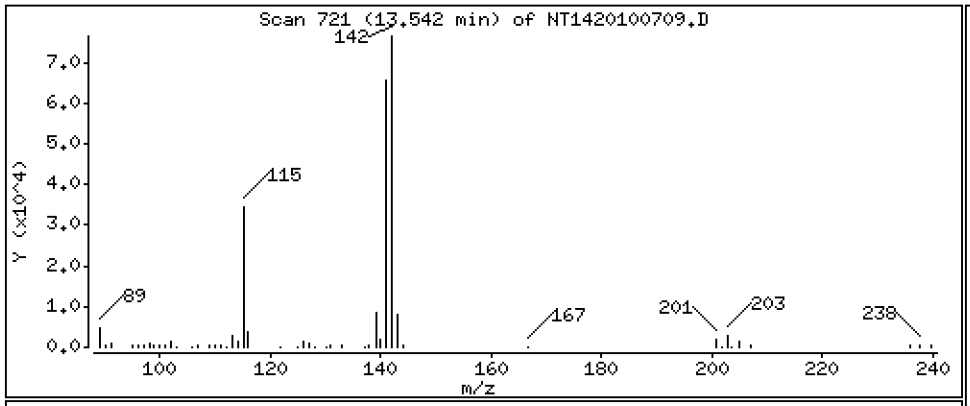
Operator: VTS

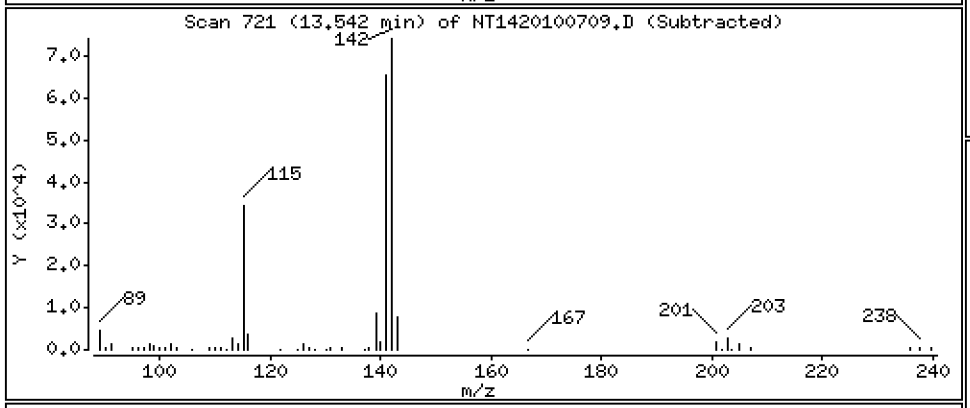
Column phase: Rxi-17Sil MS

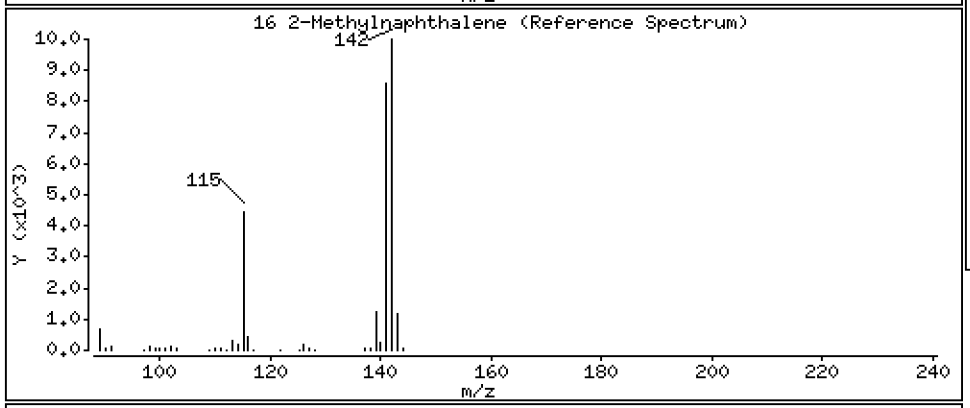
Column diameter: 0.25

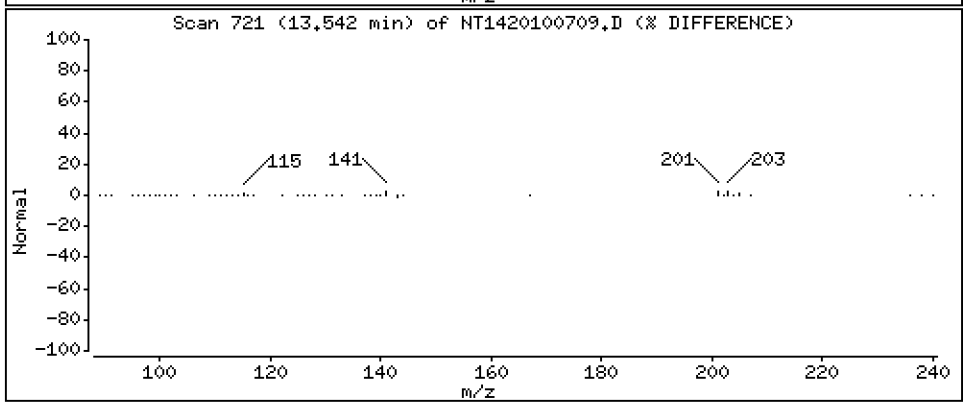
16 2-Methylnaphthalene

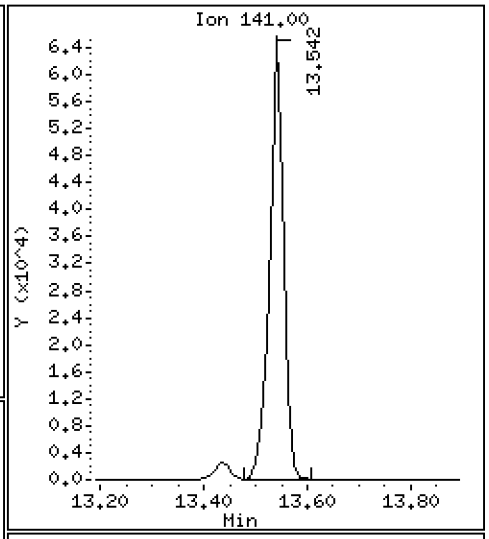
Concentration: 2.807 ug/mL

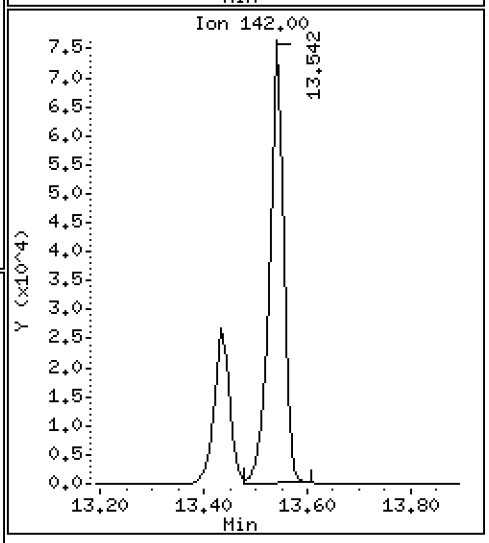












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

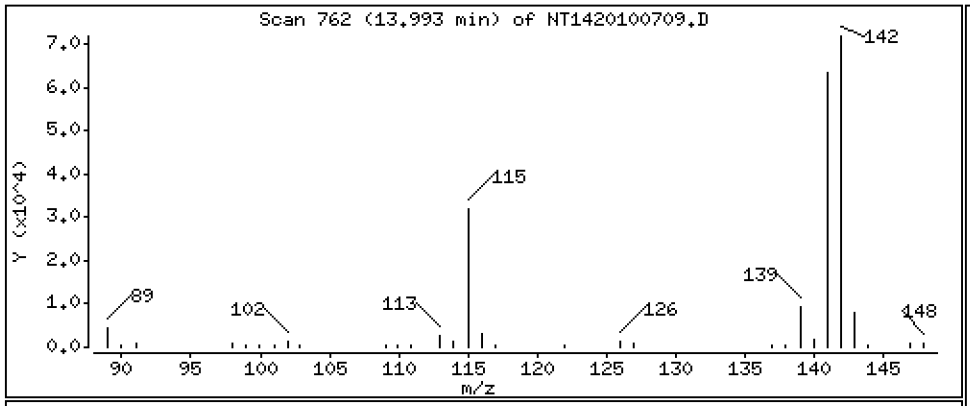
Operator: VTS

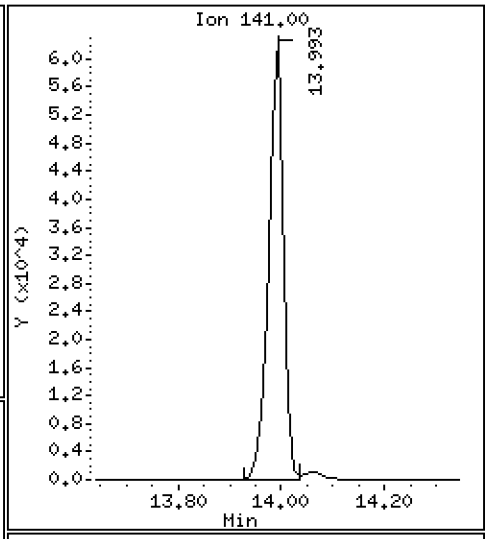
Column phase: Rxi-17Sil MS

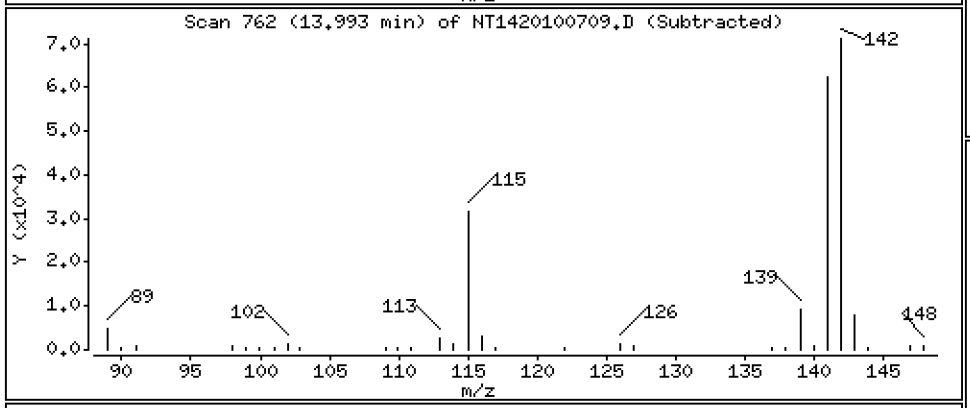
Column diameter: 0.25

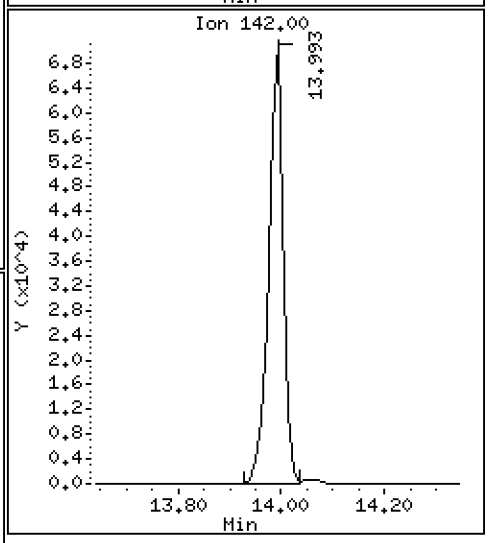
17 1-methylnaphthalene

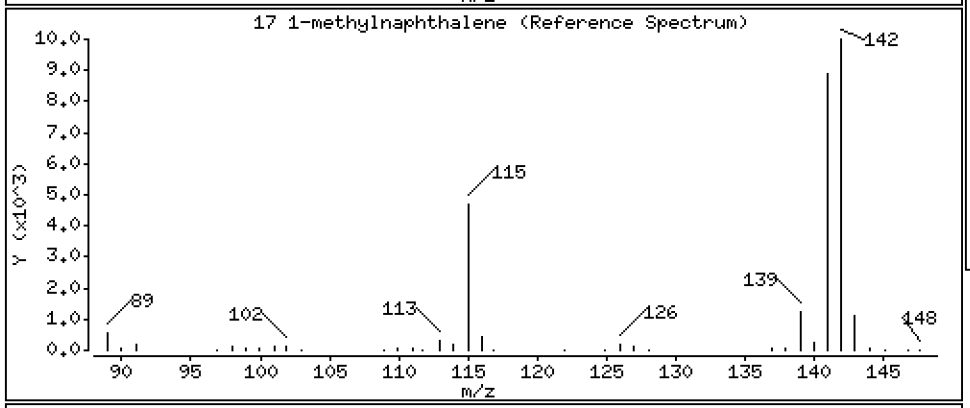
Concentration: 2.835 ug/mL

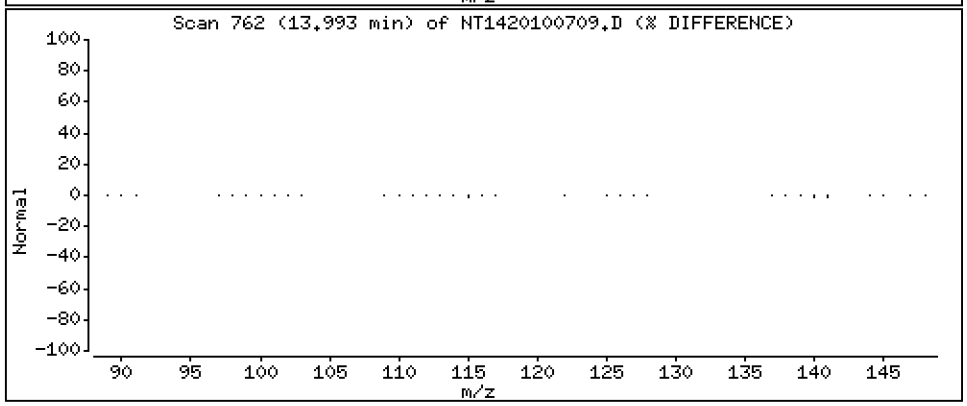












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

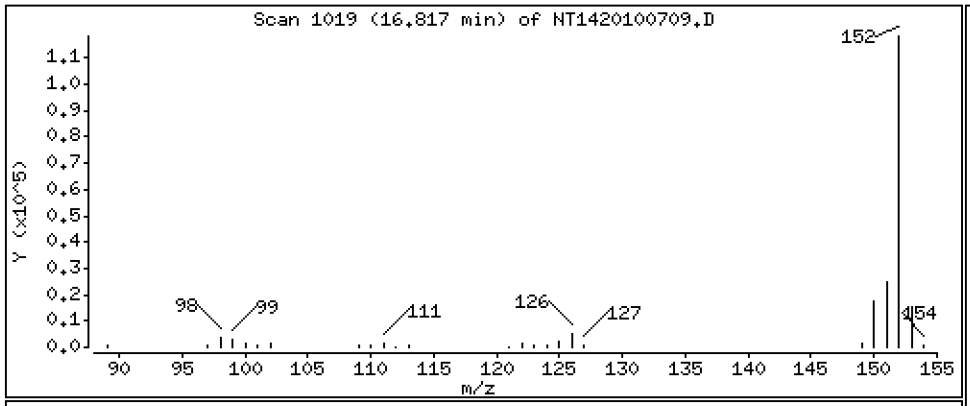
Client ID: Instrument: nt14.i

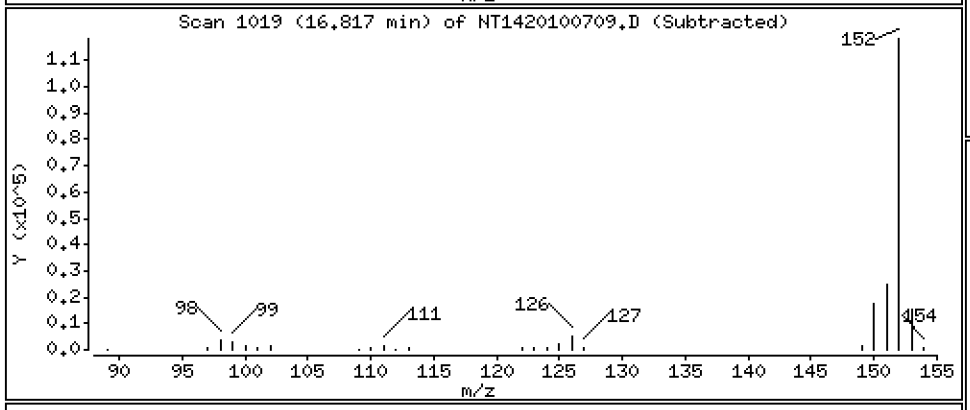
Sample Info: SIJ0085-SCV1

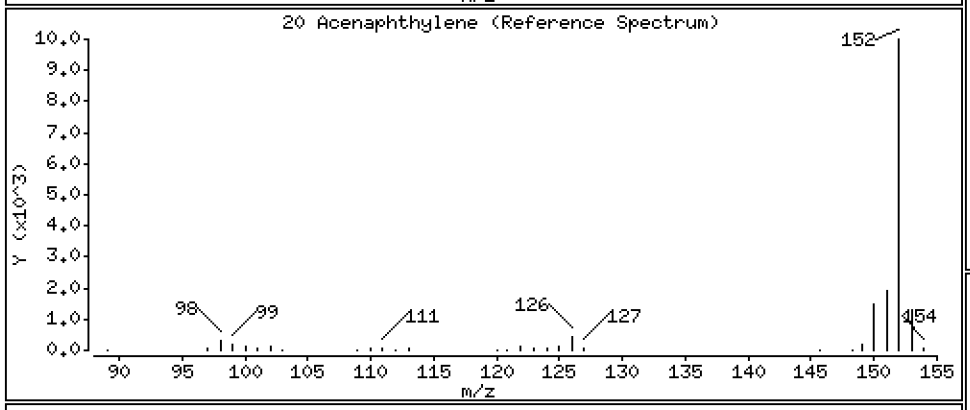
Operator: VTS

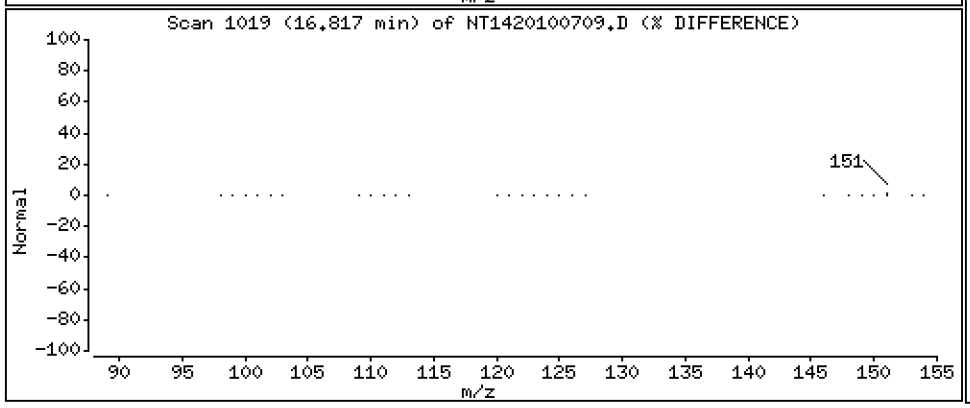
Column phase: Rxi-17Sil MS Column diameter: 0.25

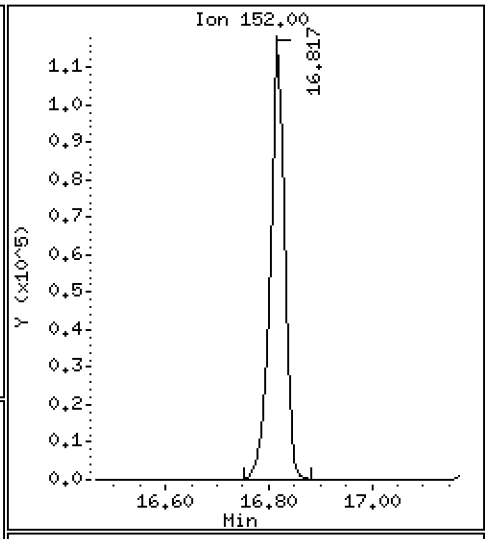
20 Acenaphthylene Concentration: 2.875 ug/mL

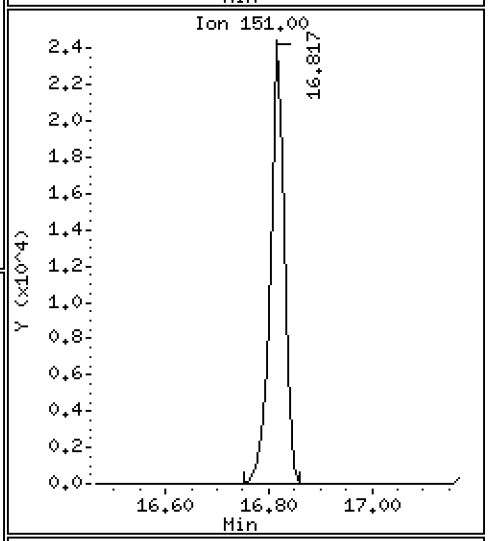


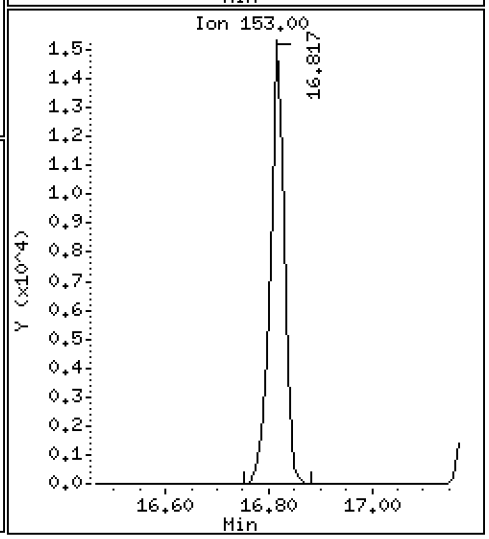












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

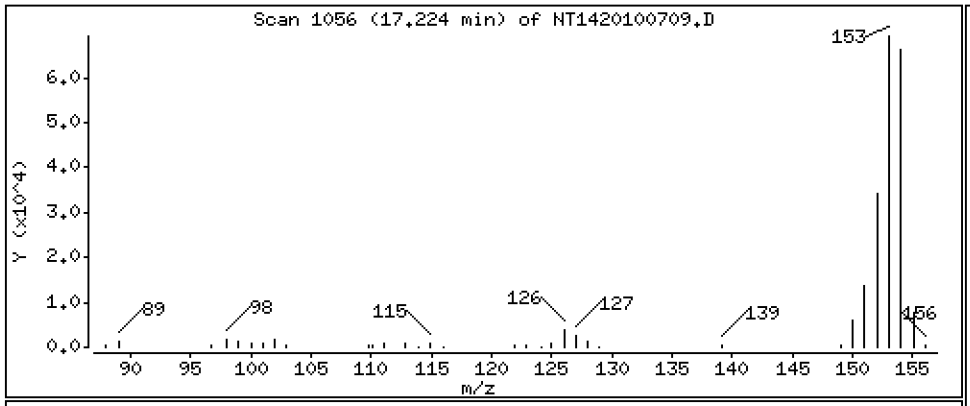
Operator: VTS

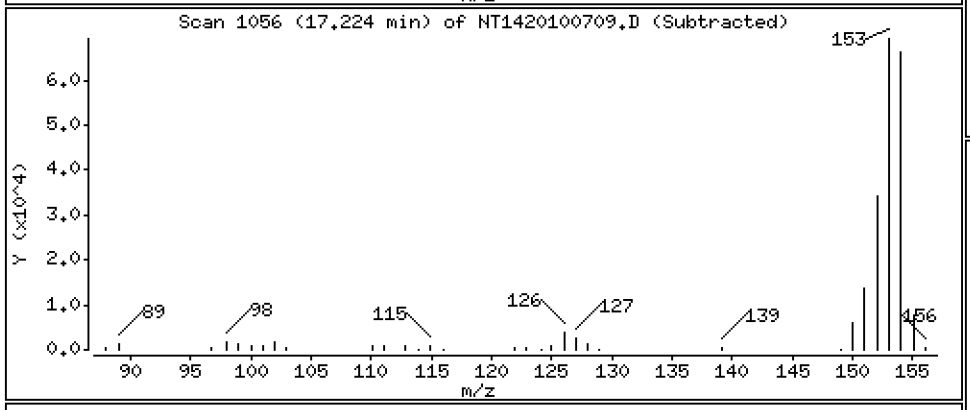
Column phase: Rxi-17Sil MS

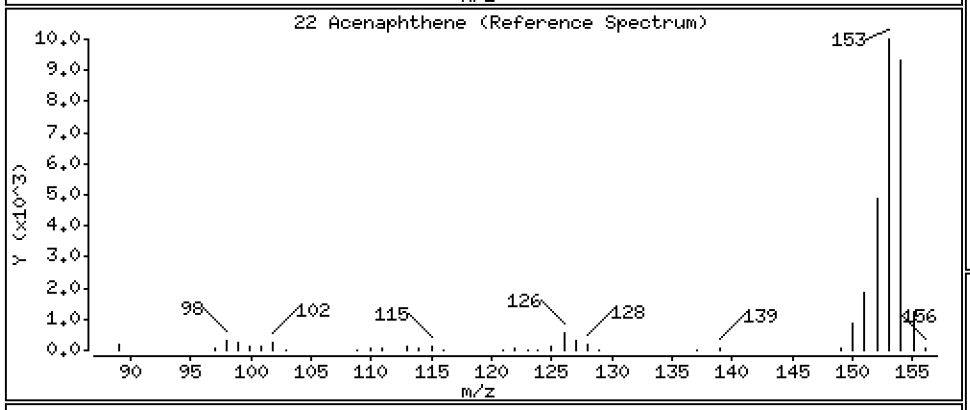
Column diameter: 0.25

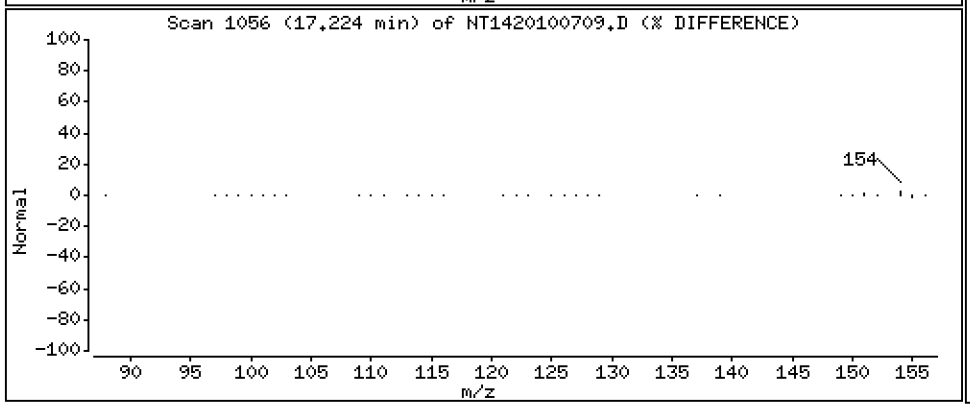
22 Acenaphthene

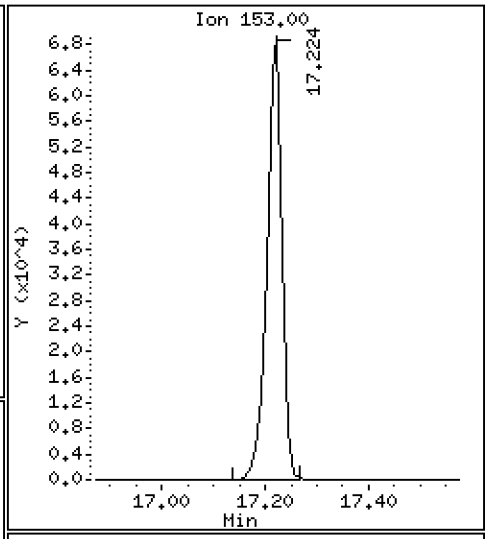
Concentration: 2.714 ug/mL

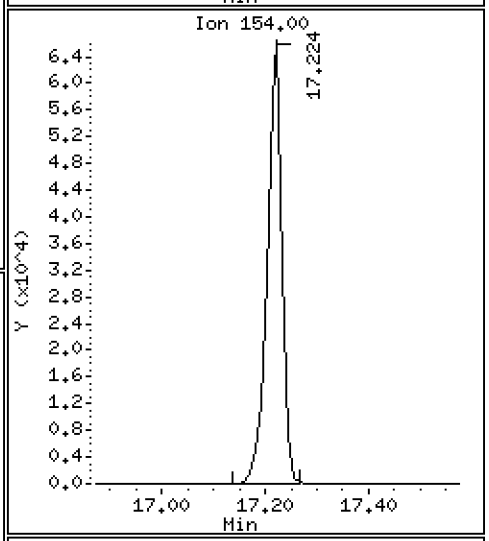


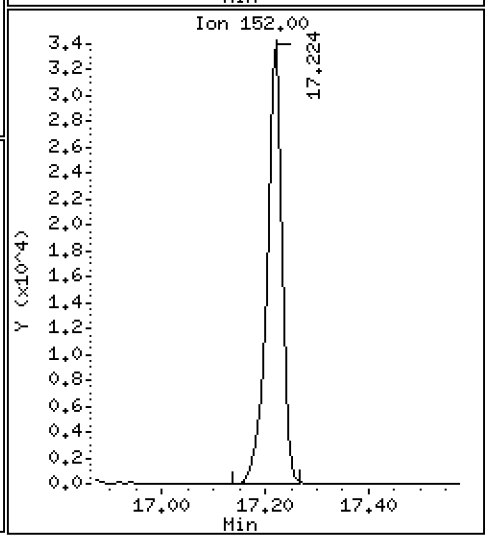












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

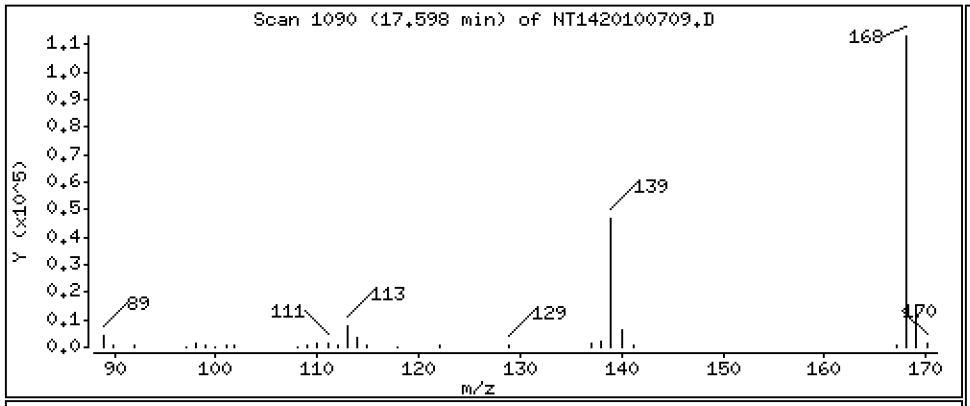
Operator: VTS

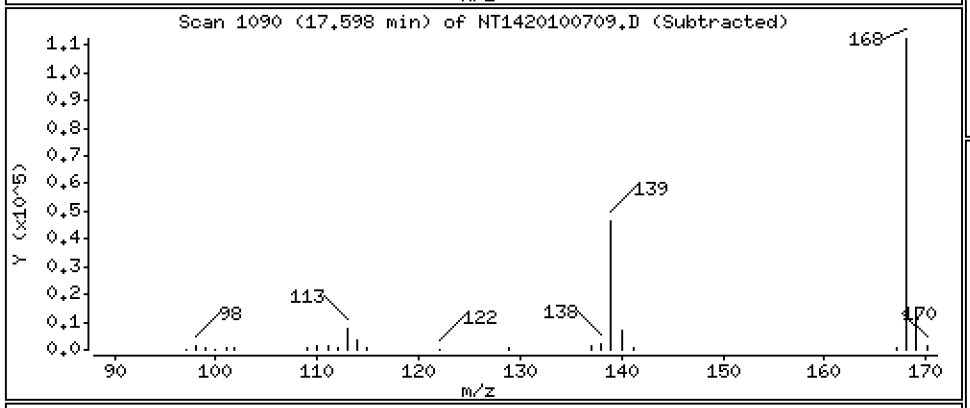
Column phase: Rxi-17Sil MS

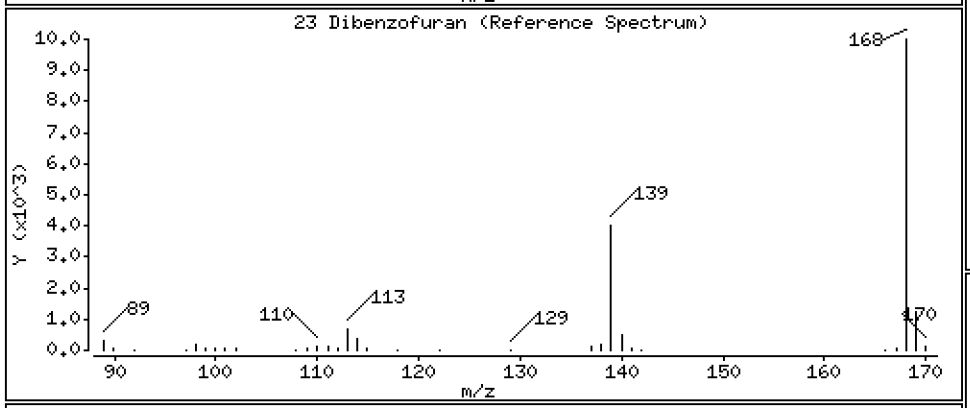
Column diameter: 0.25

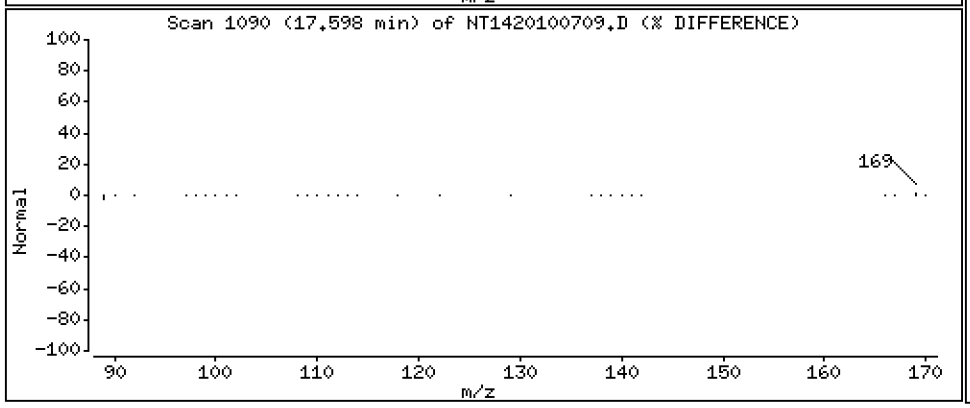
23 Dibenzofuran

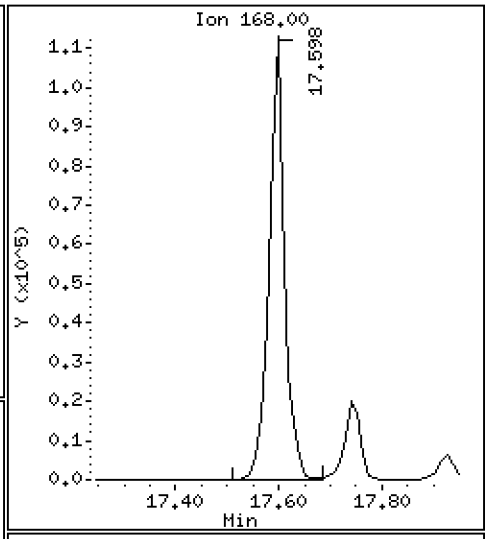
Concentration: 3.090 ug/mL

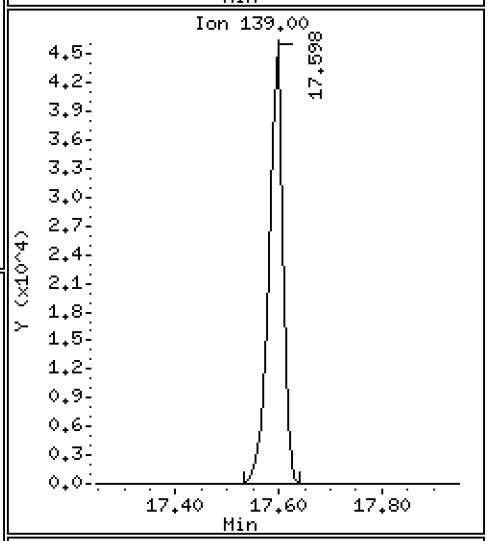


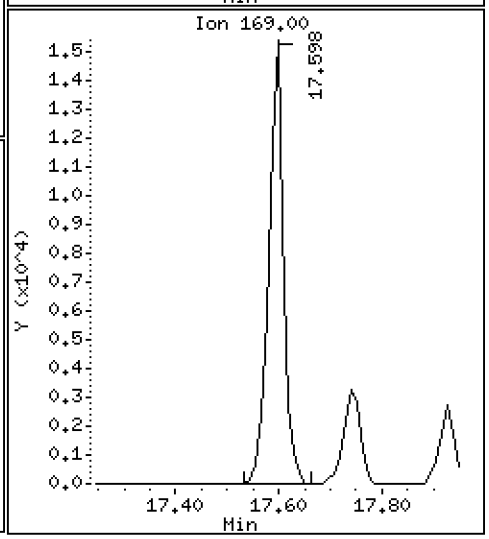












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Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

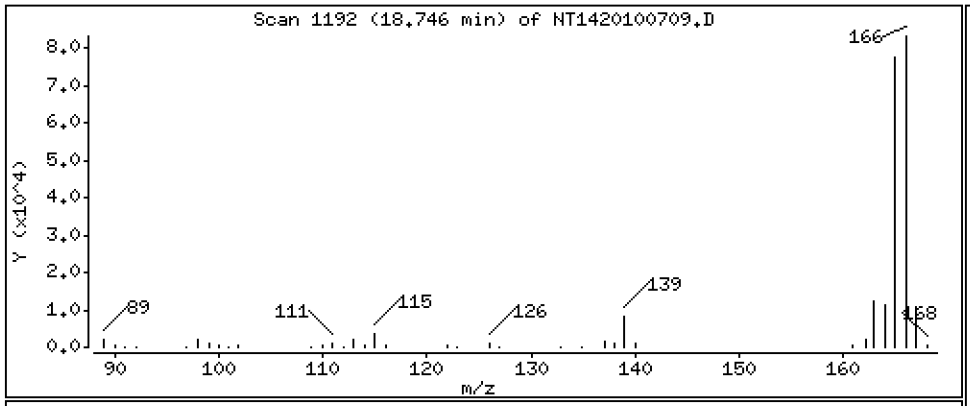
Operator: VTS

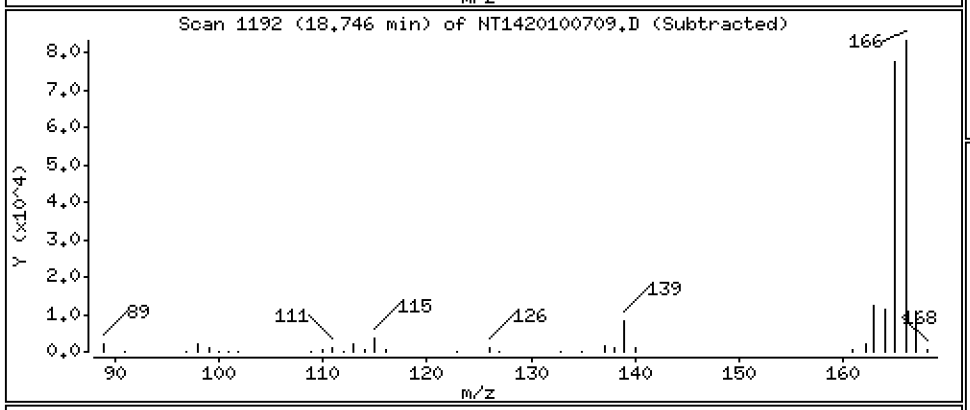
Column phase: Rxi-17Sil MS

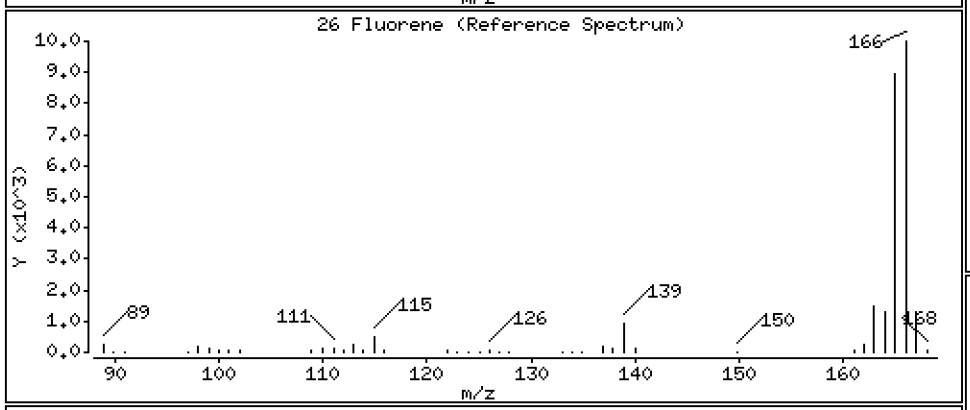
Column diameter: 0.25

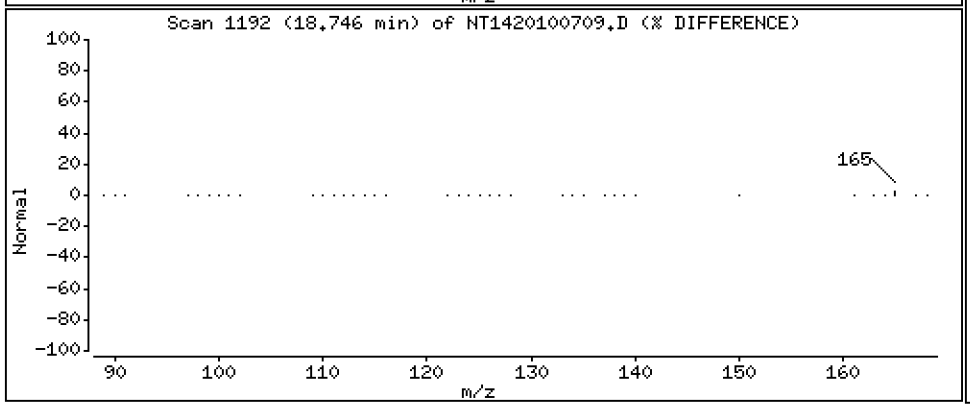
26 Fluorene

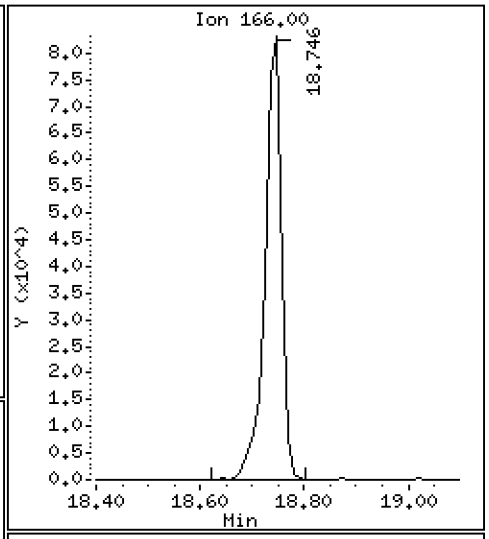
Concentration: 2.967 ug/mL

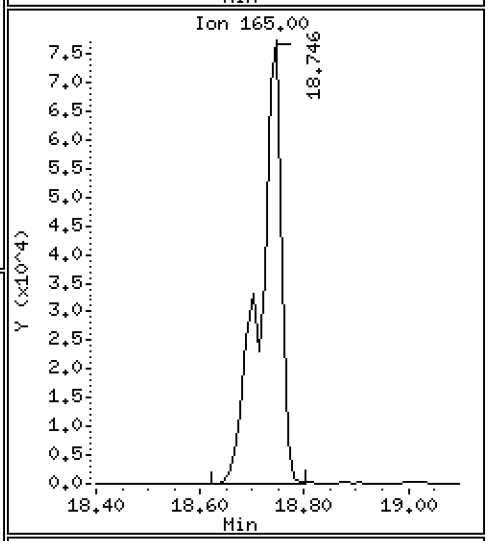


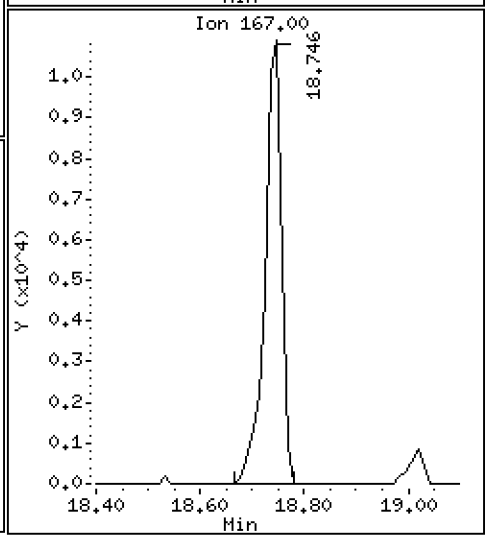












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Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

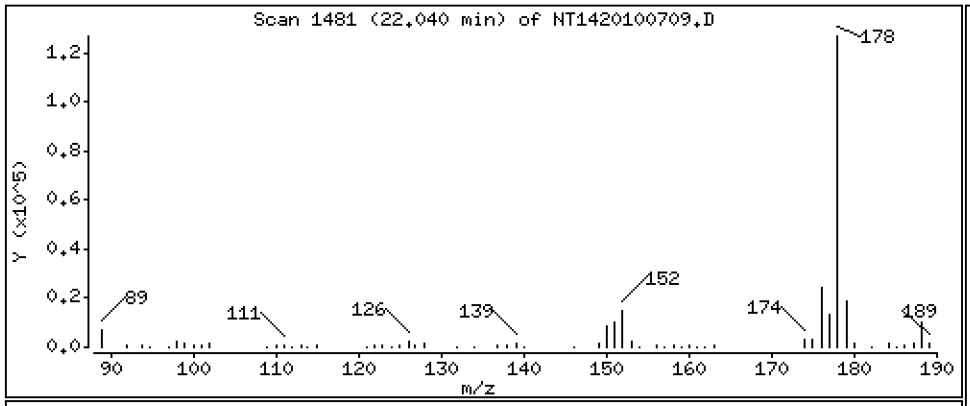
Operator: VTS

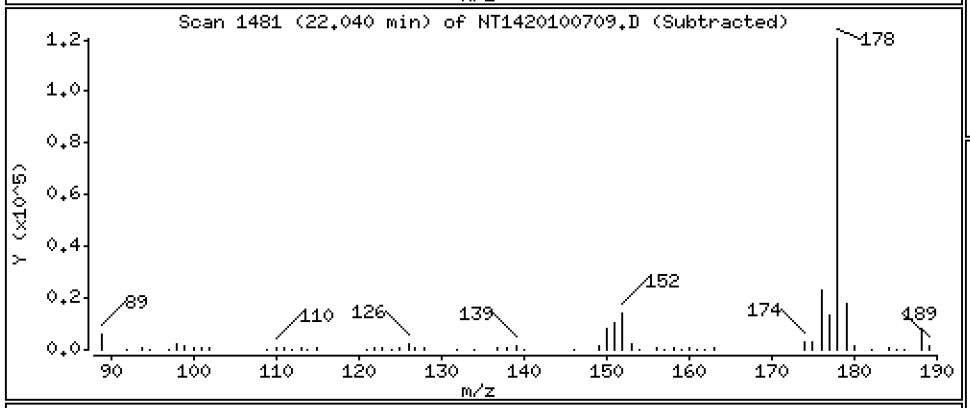
Column phase: Rxi-17Sil MS

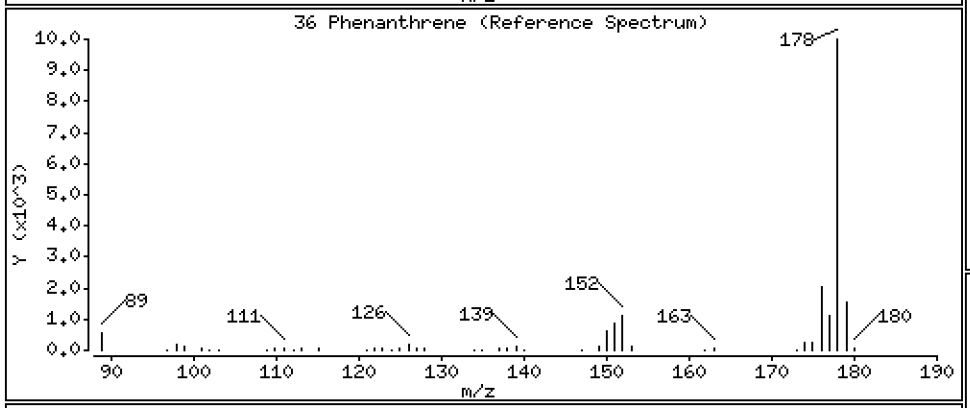
Column diameter: 0.25

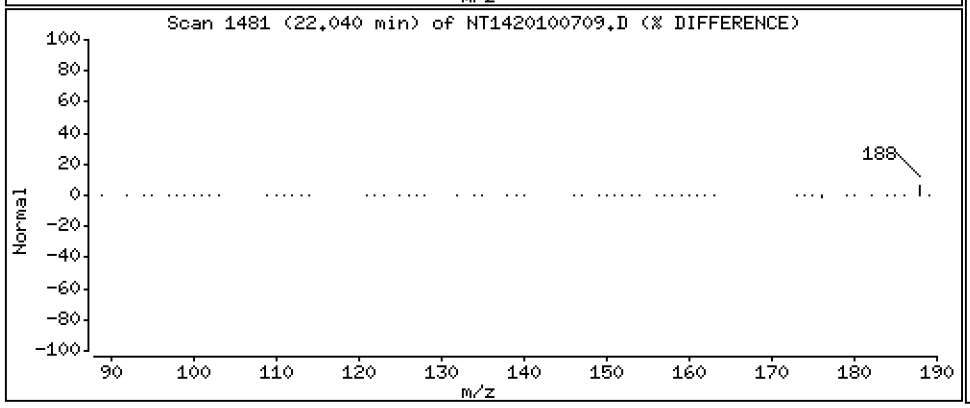
36 Phenanthrene

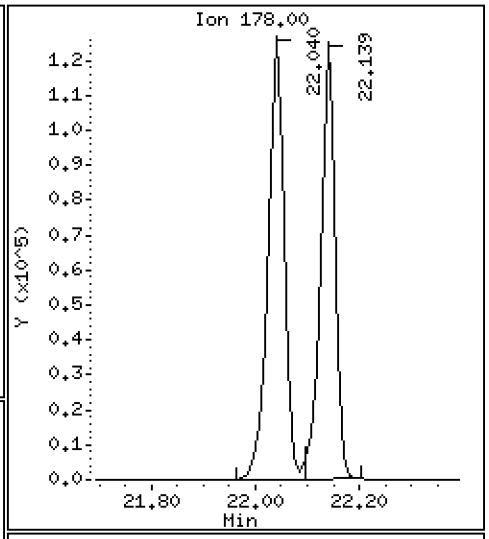
Concentration: 2.454 ug/mL

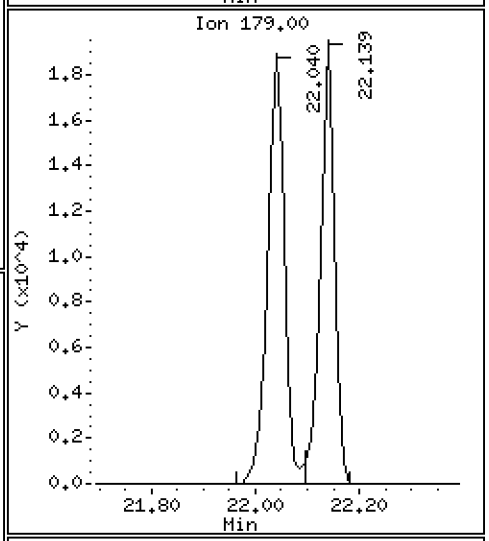


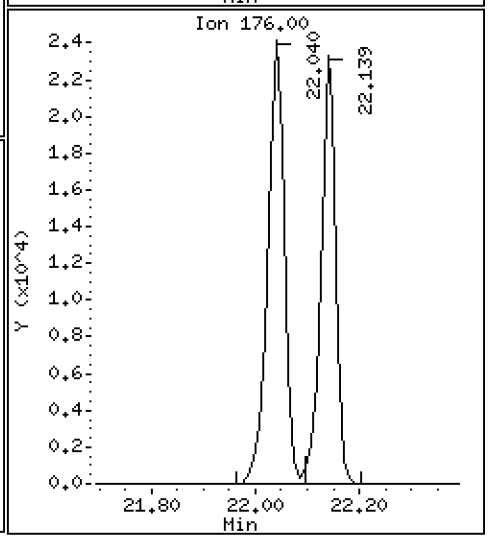












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

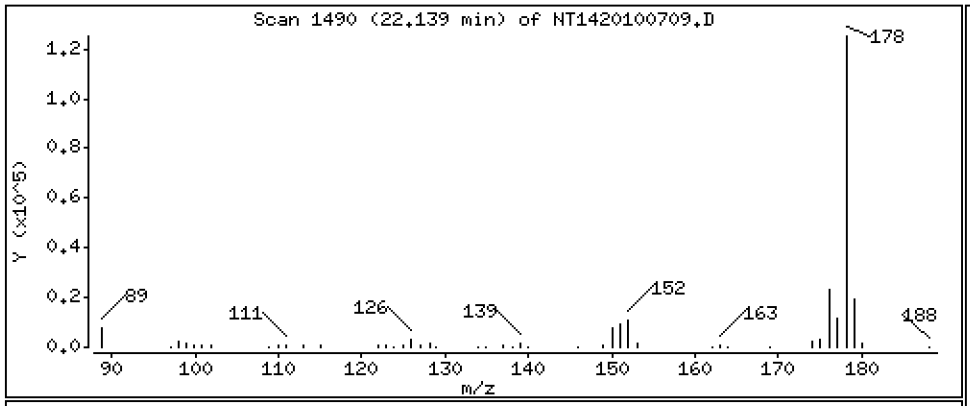
Client ID: Instrument: nt14.i

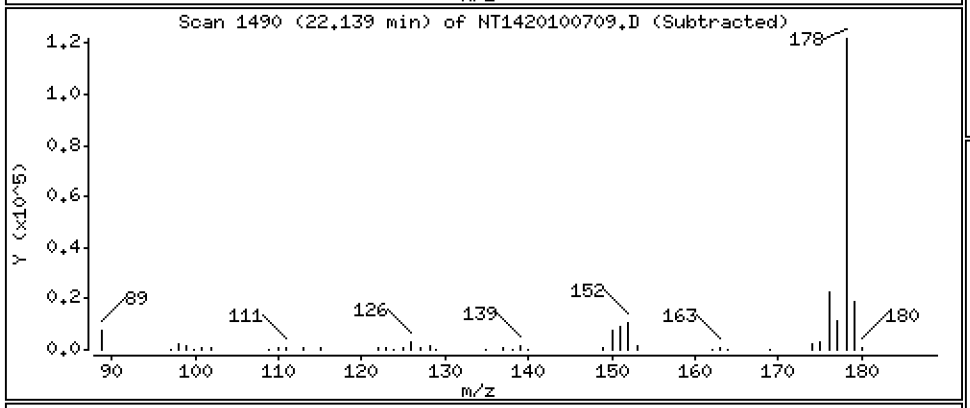
Sample Info: SIJ0085-SCV1

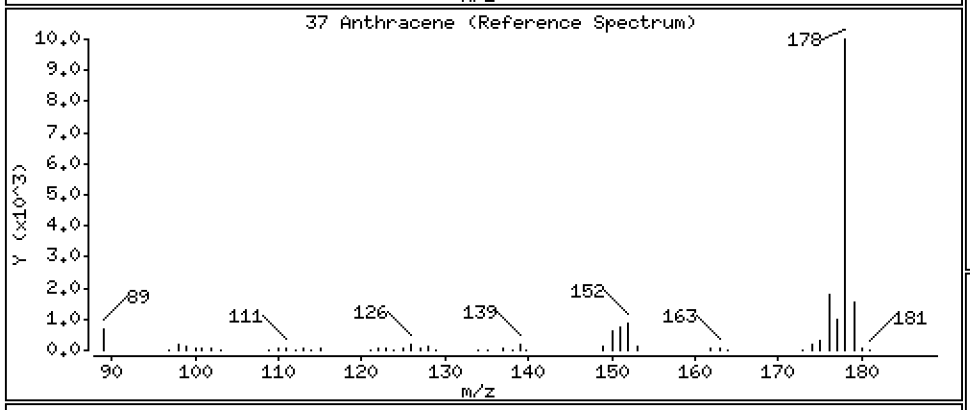
Operator: VTS

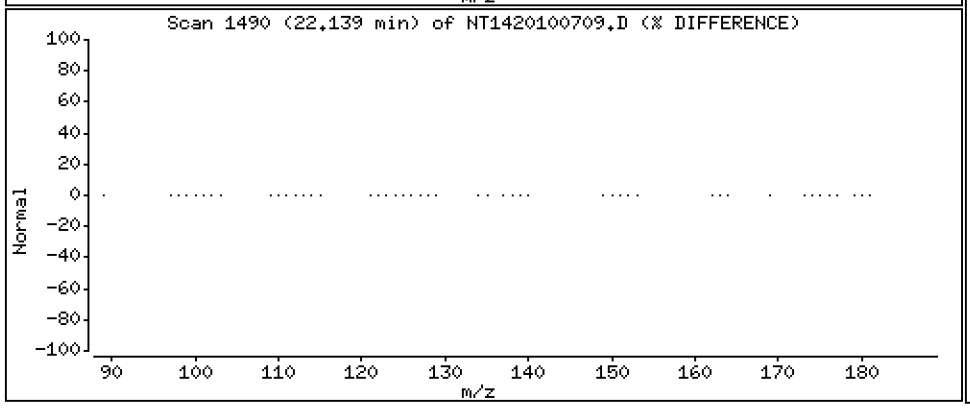
Column phase: Rxi-17Sil MS Column diameter: 0.25

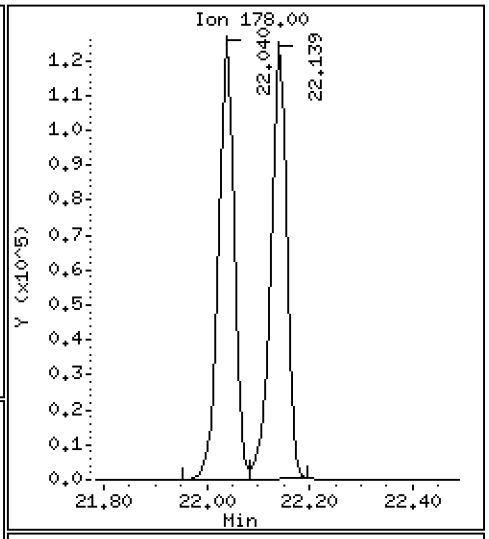
37 Anthracene Concentration: 2.385 ug/mL

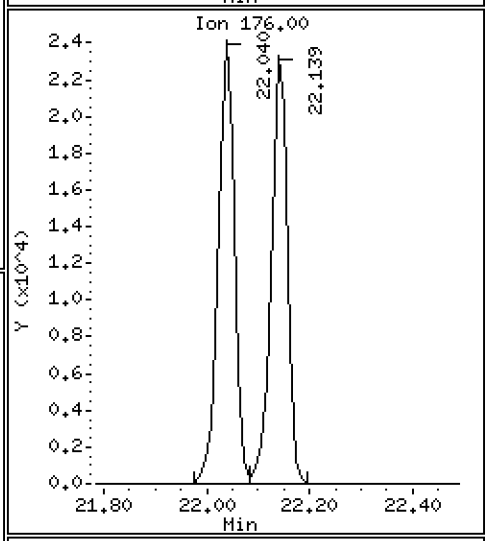


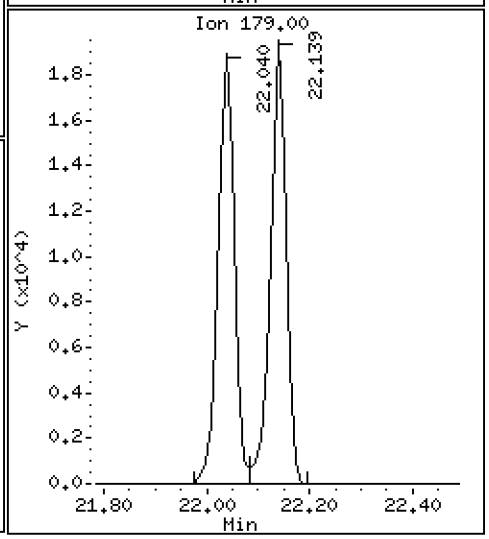












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

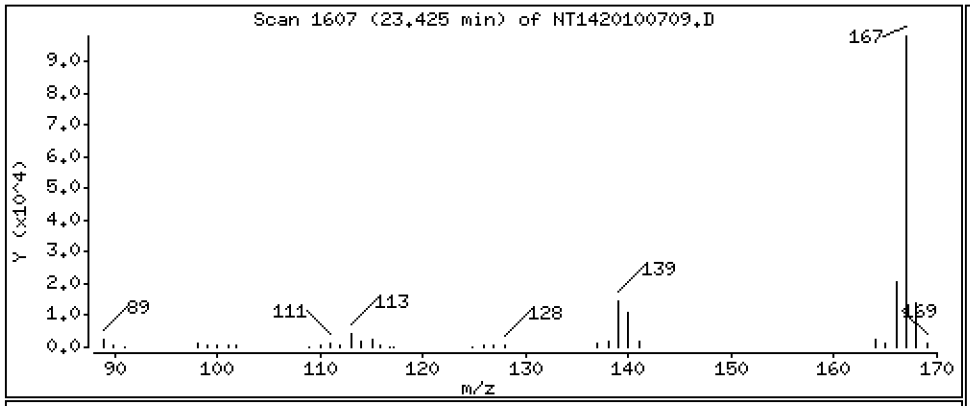
Operator: VTS

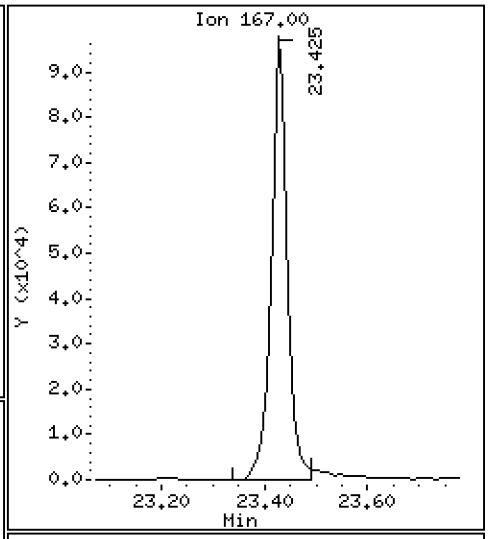
Column phase: Rxi-17Sil MS

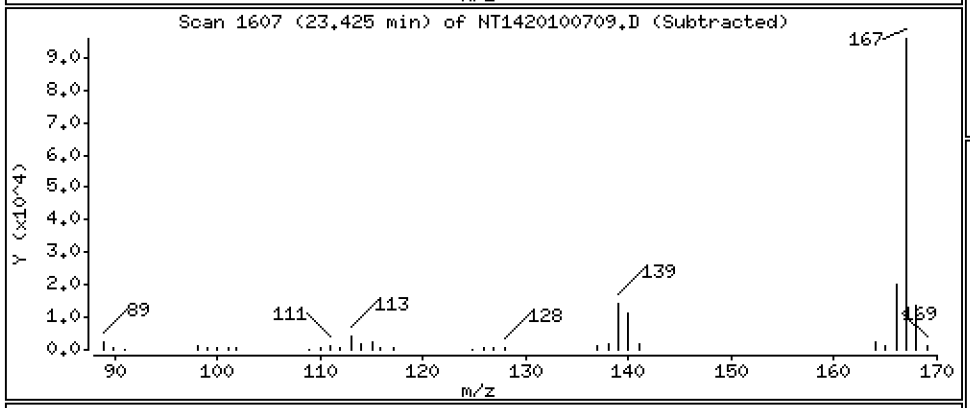
Column diameter: 0.25

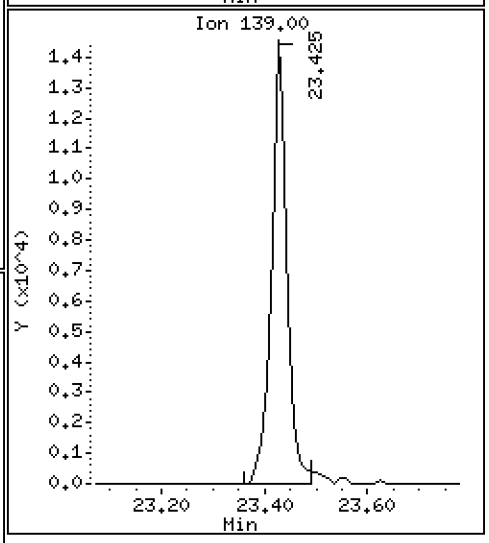
42 Carbazole

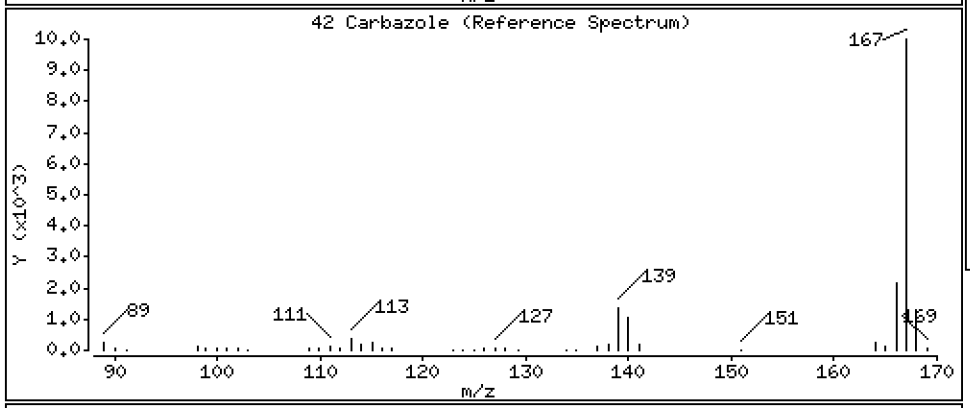
Concentration: 2.354 ug/mL

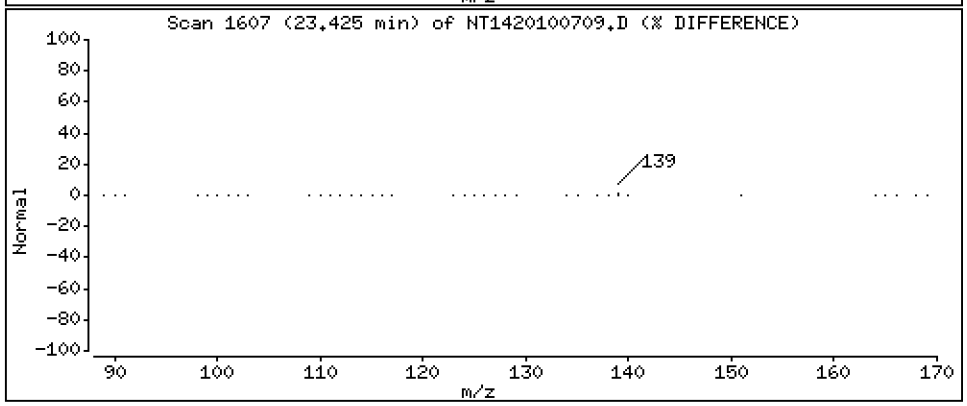












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Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

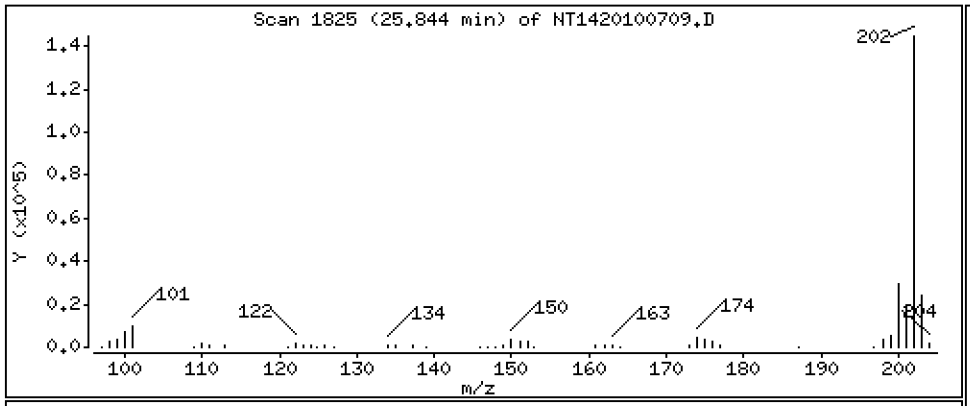
Operator: VTS

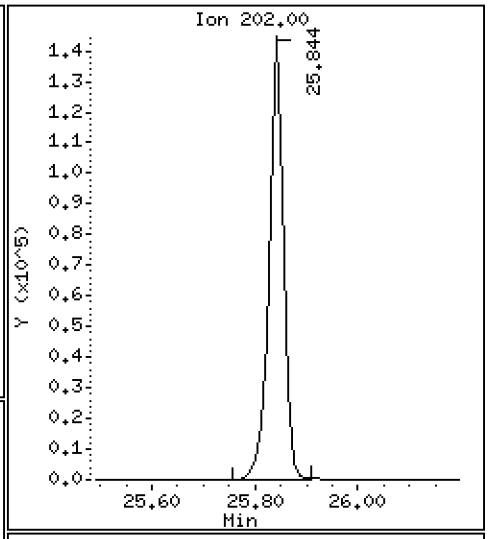
Column phase: Rxi-17Sil MS

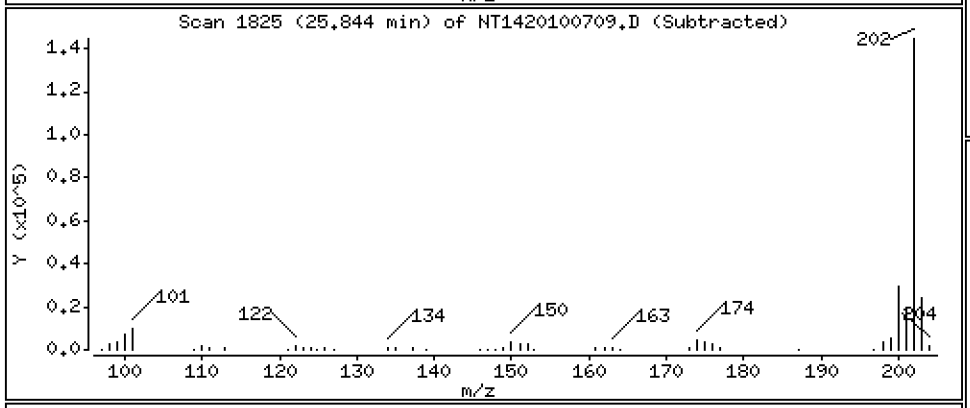
Column diameter: 0.25

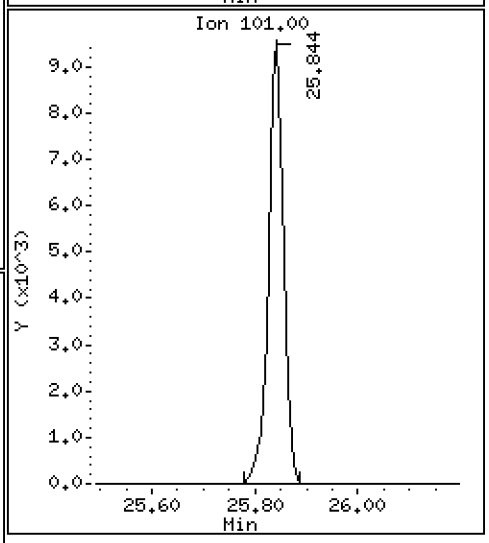
44 Fluoranthene

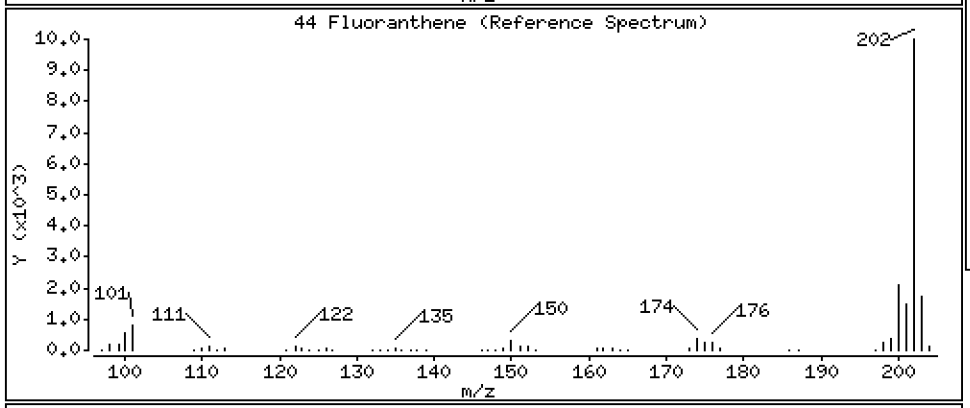
Concentration: 2.436 ug/mL

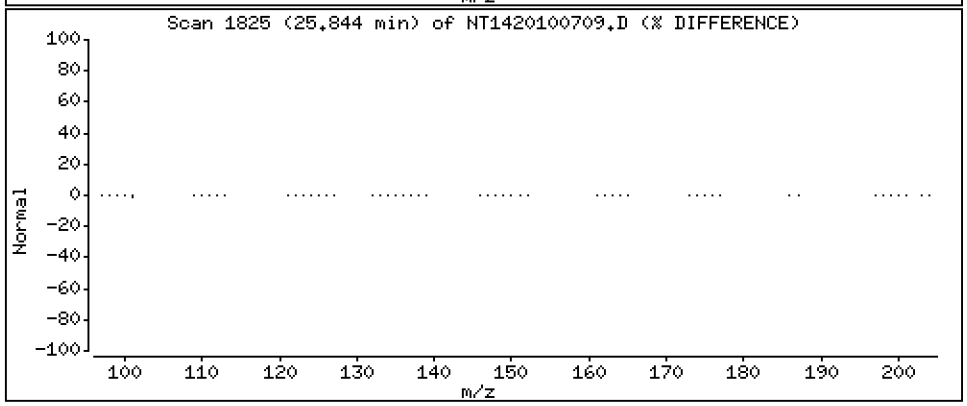












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Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

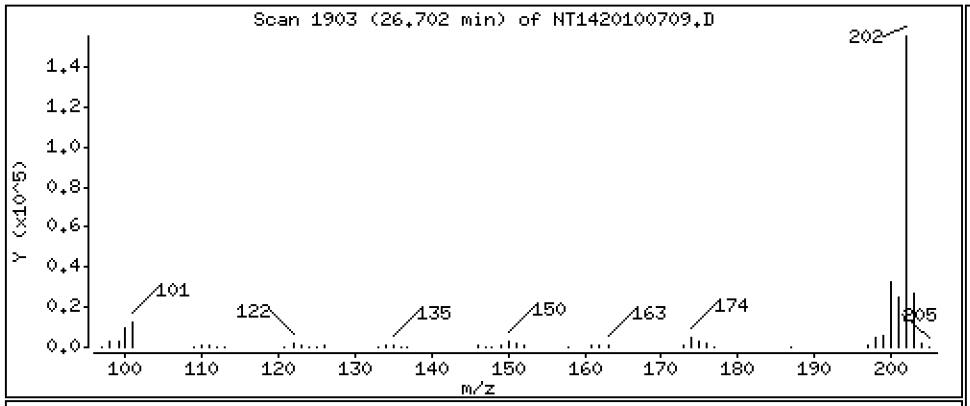
Operator: VTS

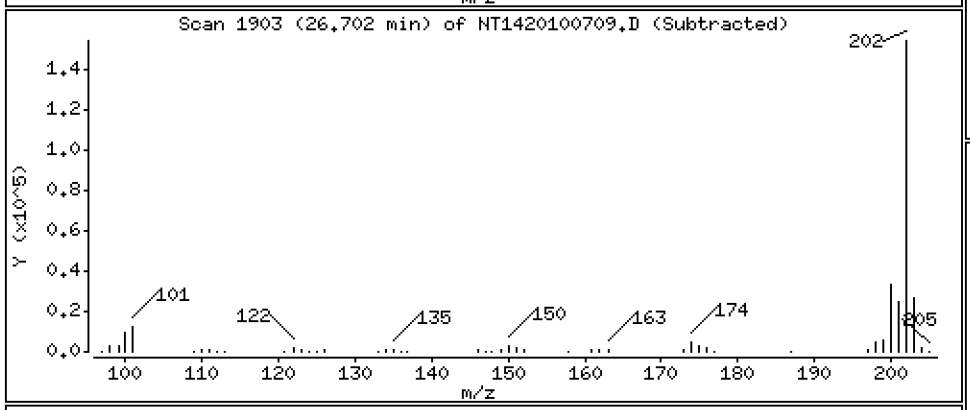
Column phase: Rxi-17Sil MS

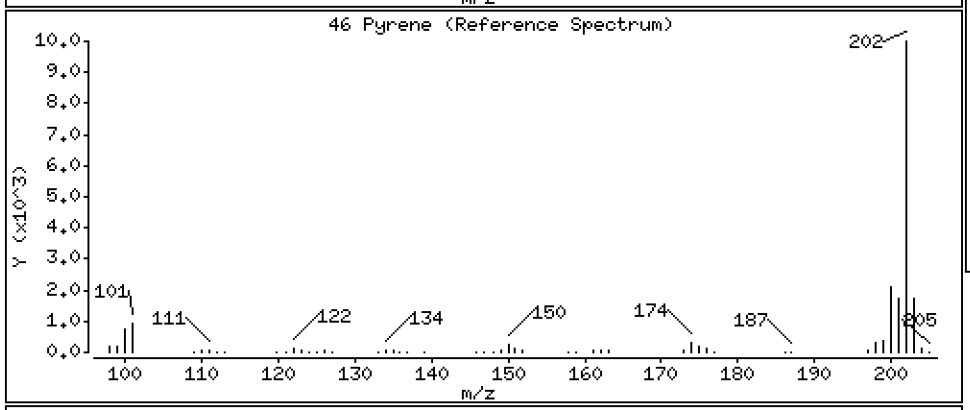
Column diameter: 0.25

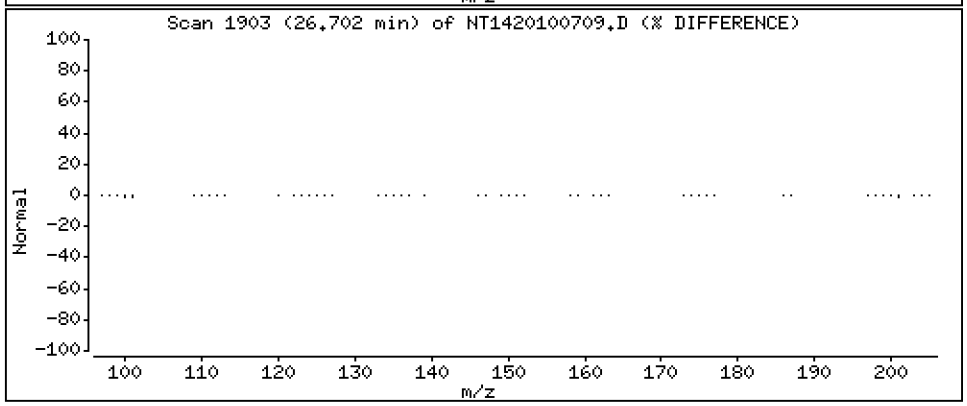
46 Pyrene

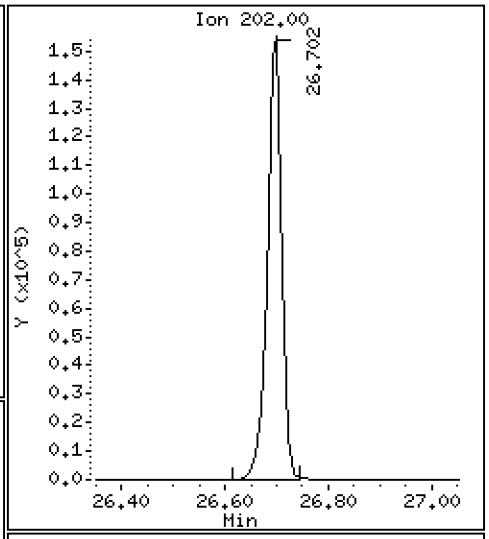
Concentration: 2.497 ug/mL

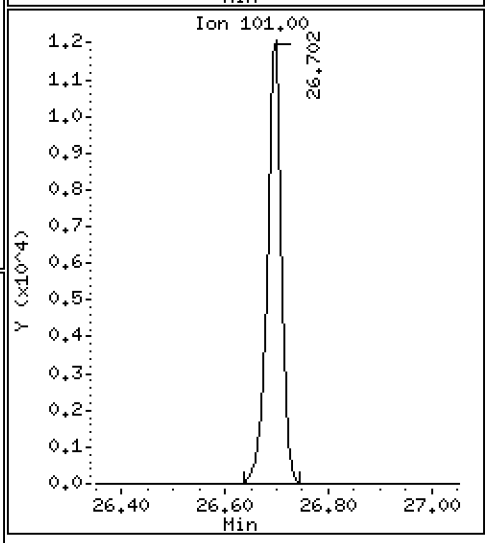












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Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

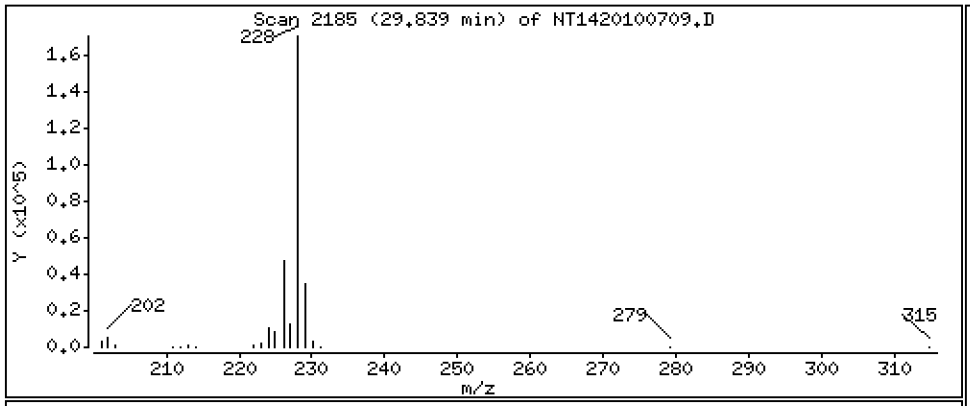
Operator: VTS

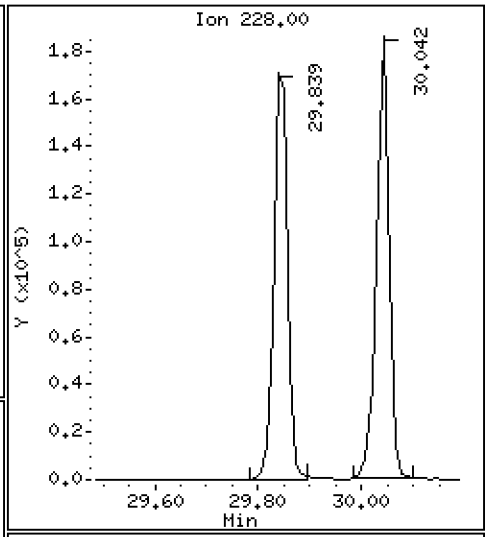
Column phase: Rxi-17Sil MS

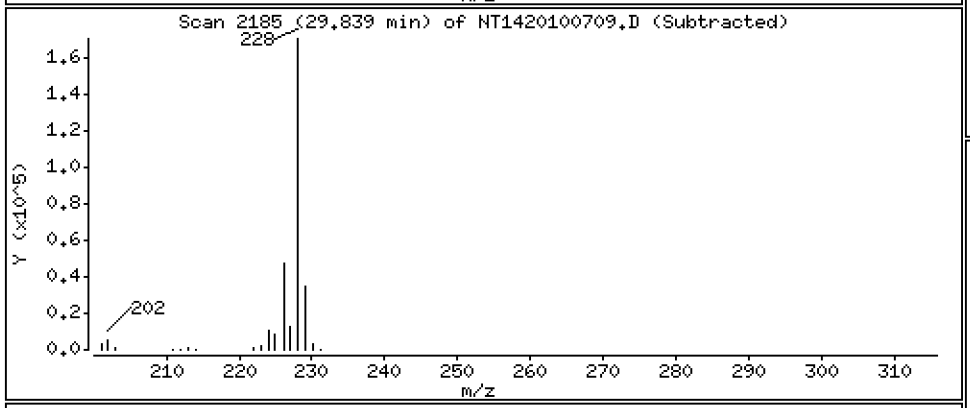
Column diameter: 0.25

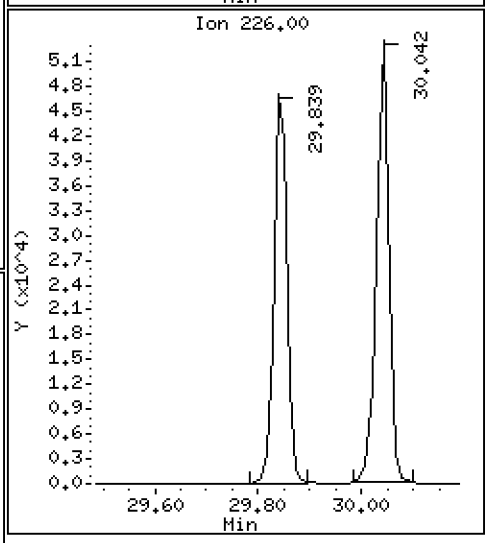
55 Benzo(a)anthracene

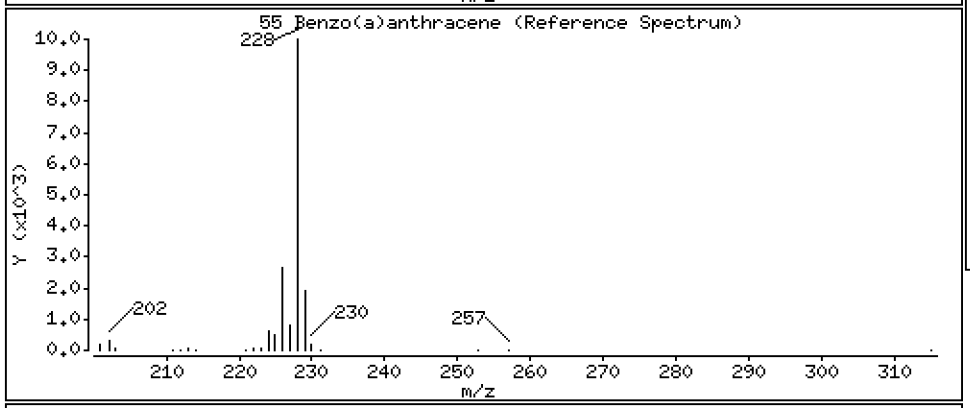
Concentration: 2.581 ug/mL

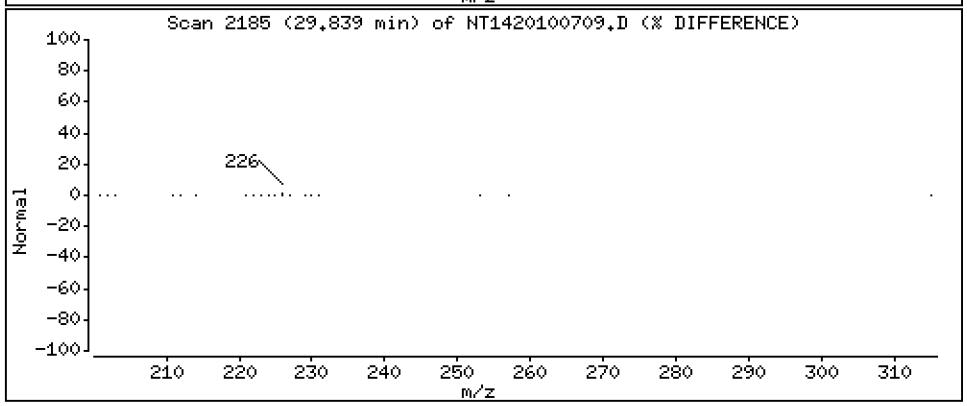












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

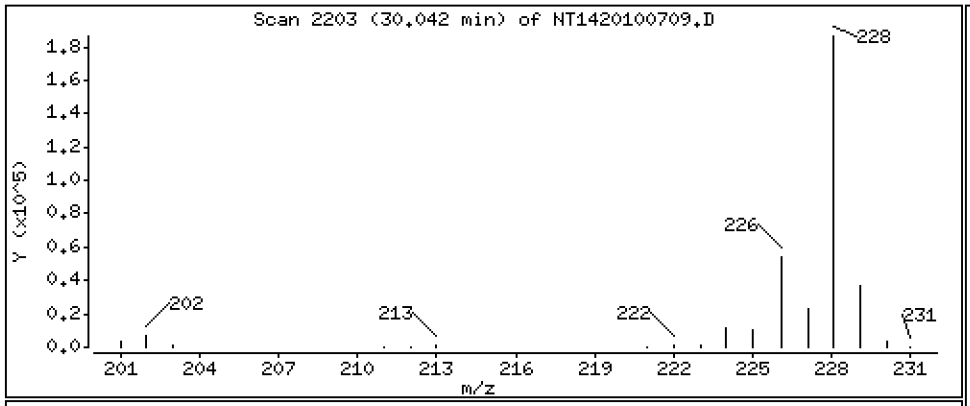
Client ID: Instrument: nt14.i

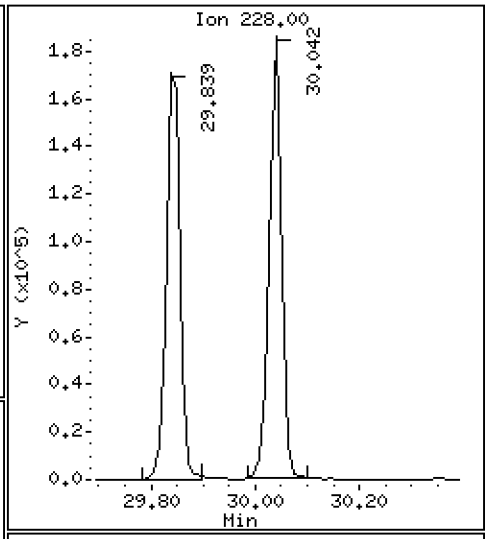
Sample Info: SIJ0085-SCV1

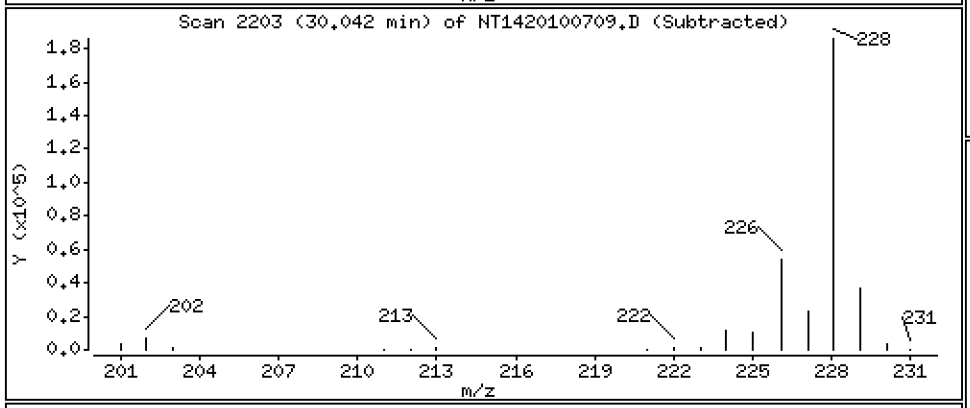
Operator: VTS

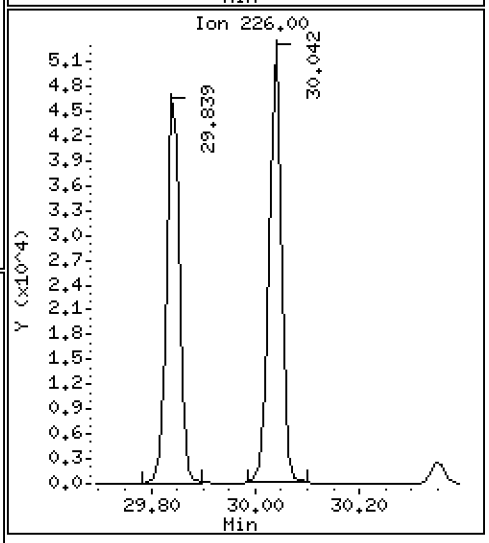
Column phase: Rxi-17Sil MS Column diameter: 0.25

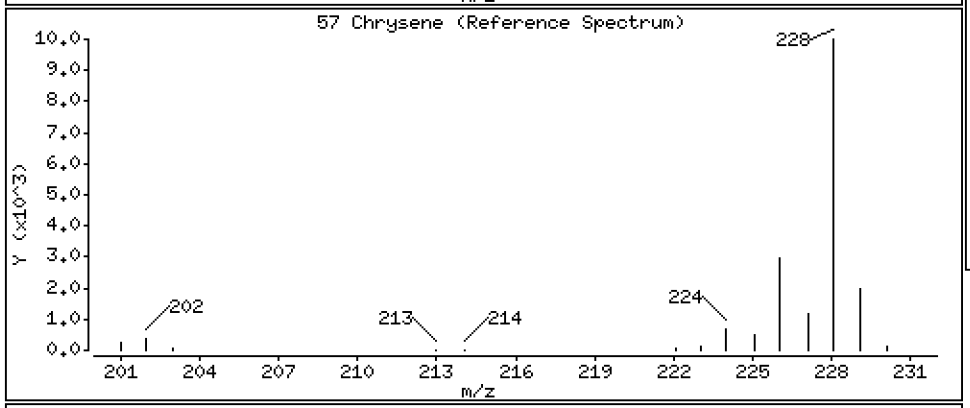
57 Chrysene Concentration: 2.516 ug/mL

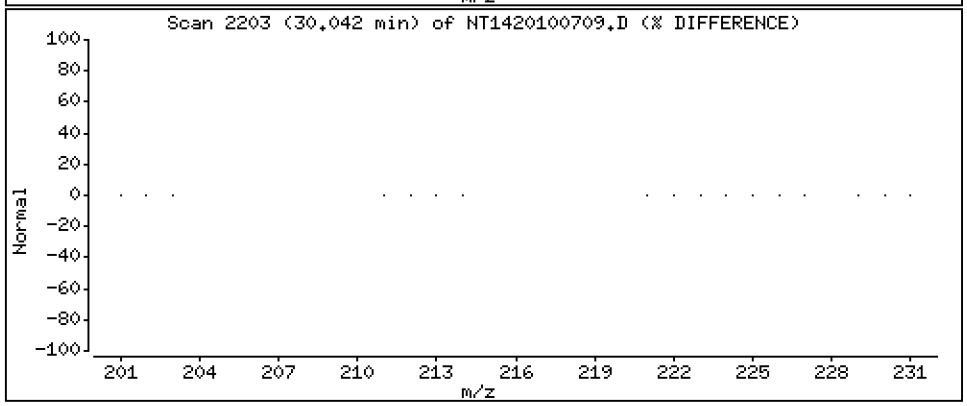












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

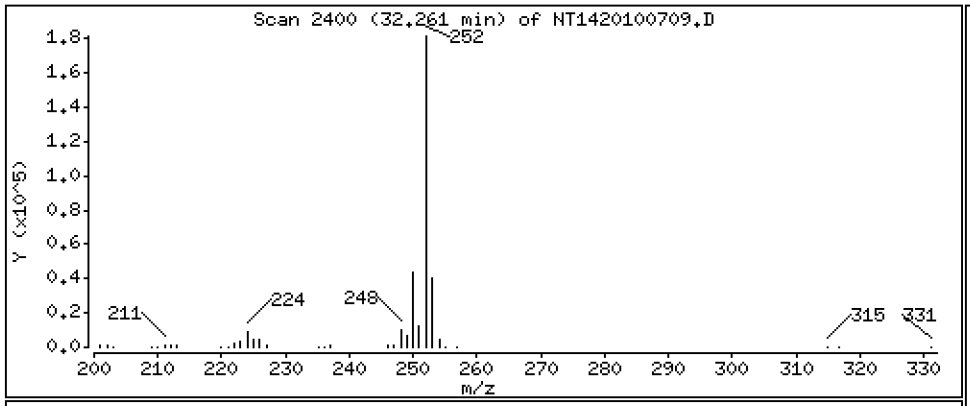
Operator: VTS

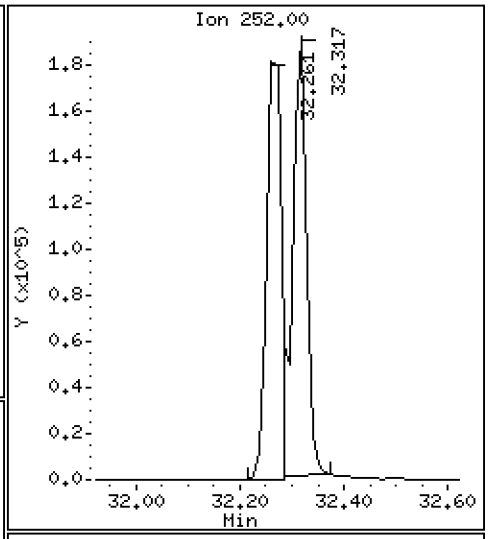
Column phase: Rxi-17Sil MS

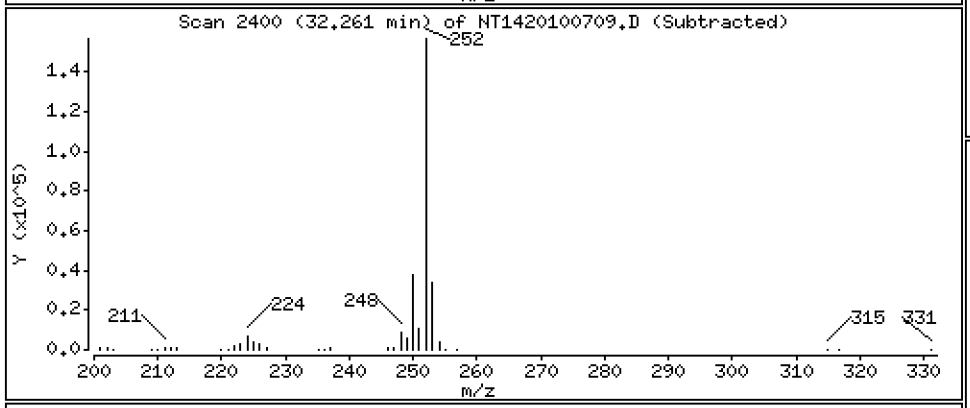
Column diameter: 0.25

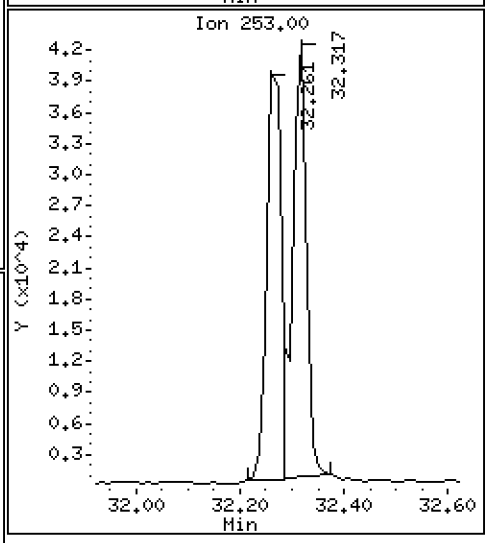
62 Benzo(b)fluoranthene

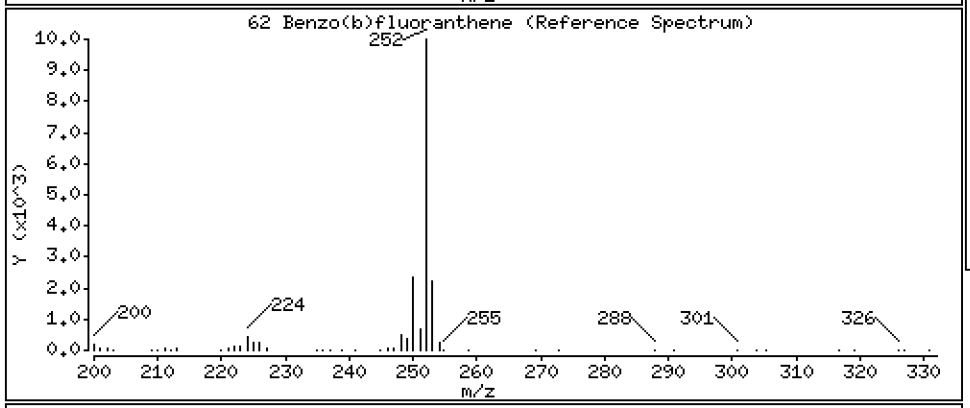
Concentration: 2.387 ug/mL

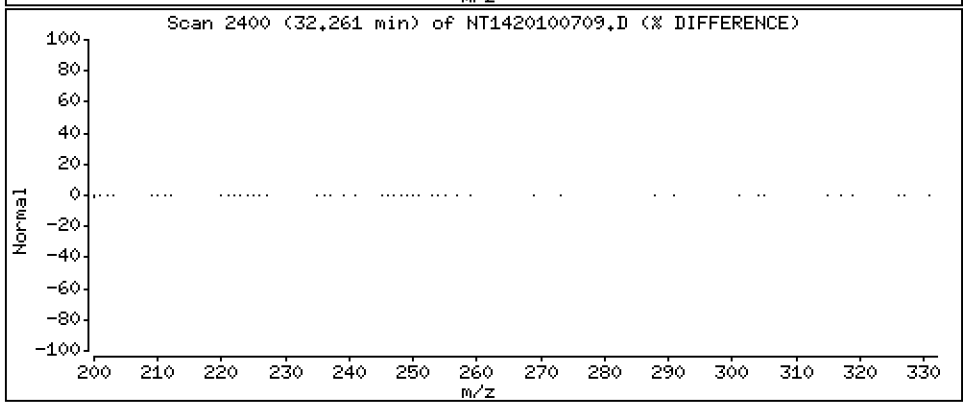












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

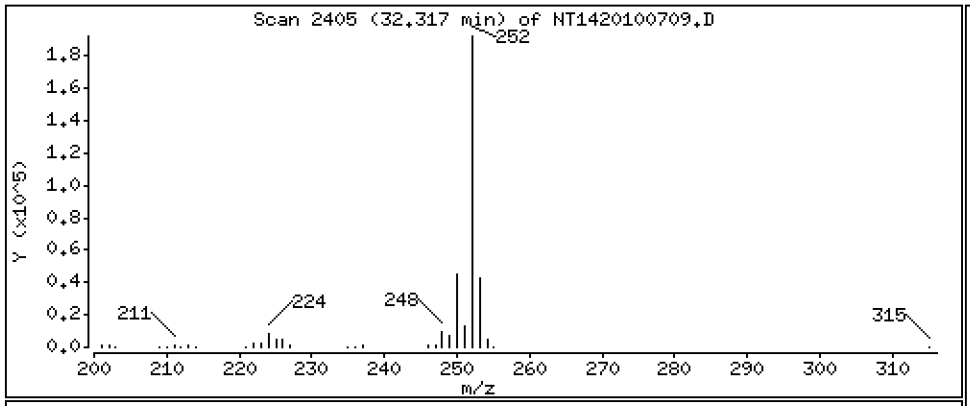
Operator: VTS

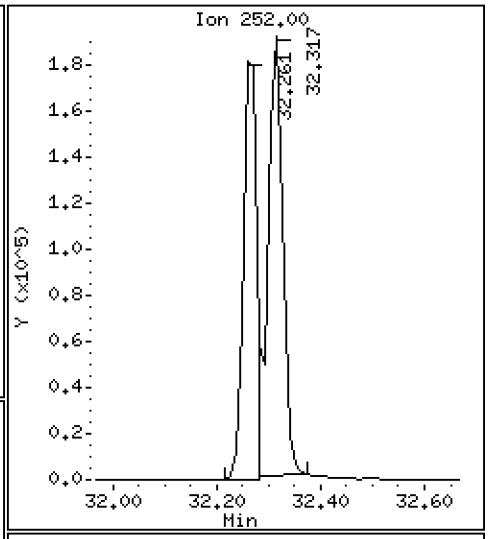
Column phase: Rxi-17Sil MS

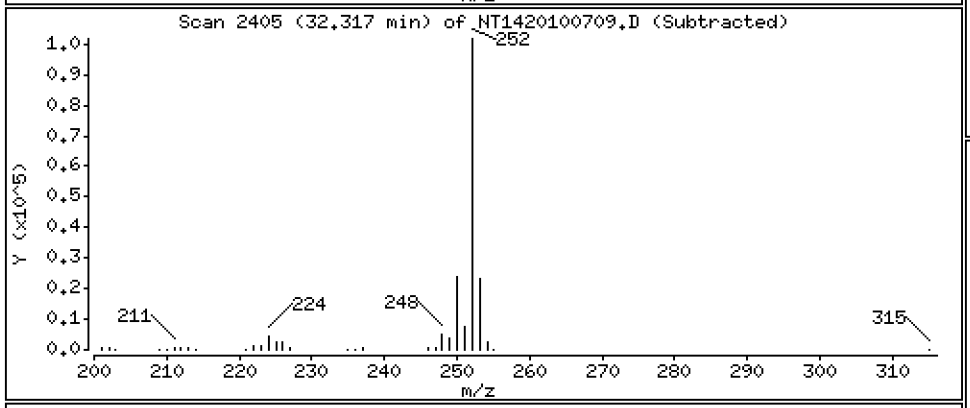
Column diameter: 0.25

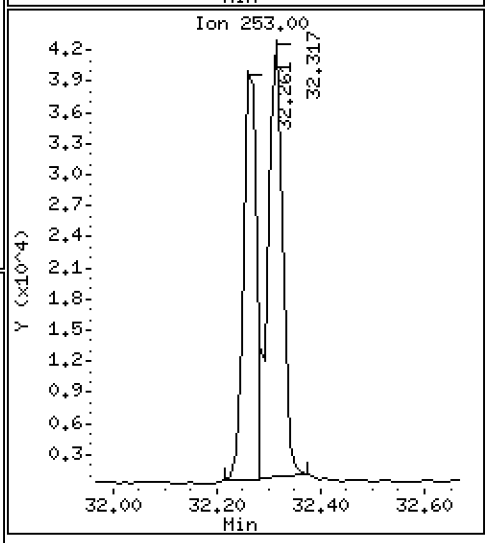
63 Benzo(k)fluoranthene

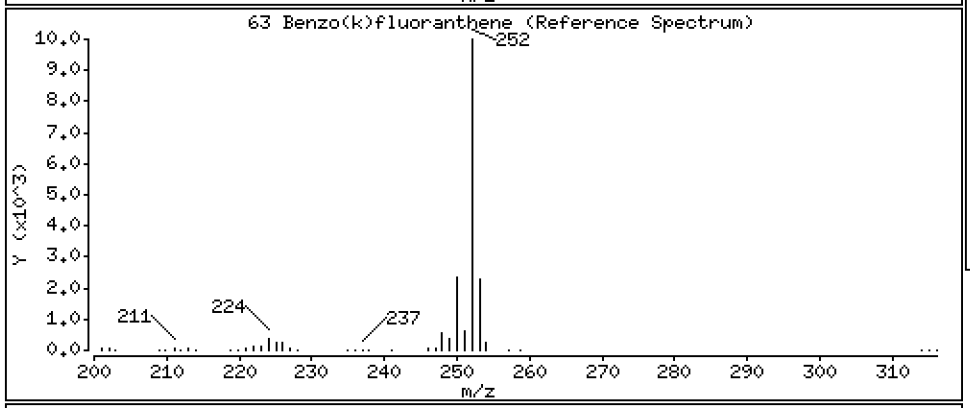
Concentration: 2.656 ug/mL

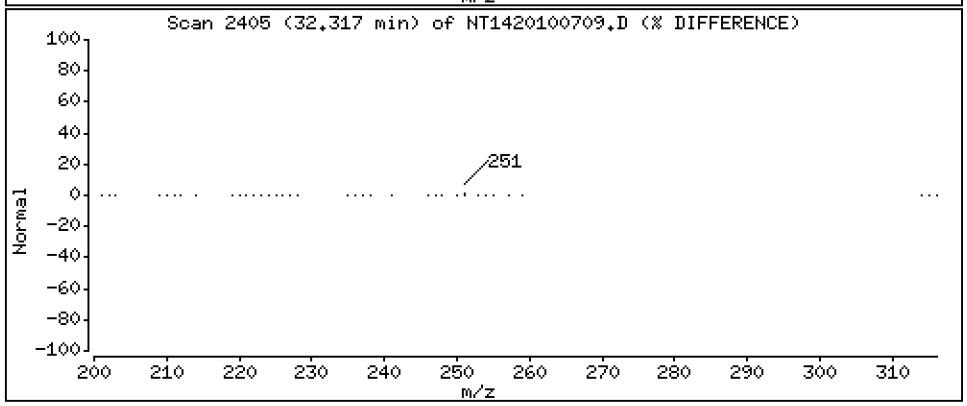












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

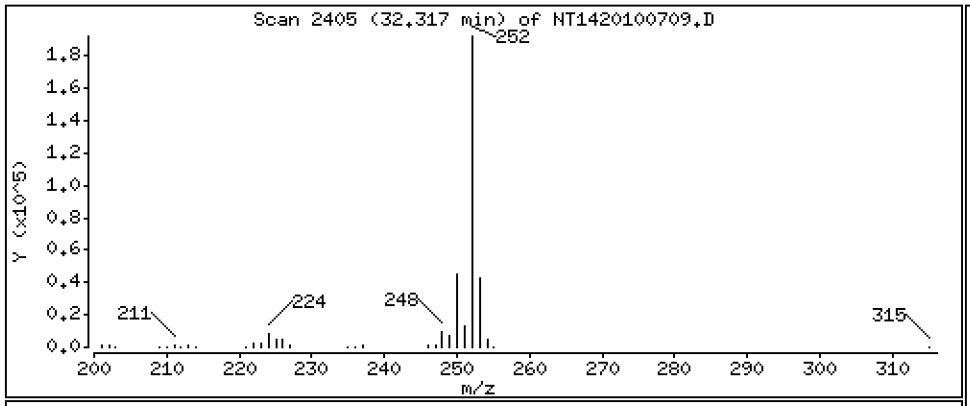
Operator: VTS

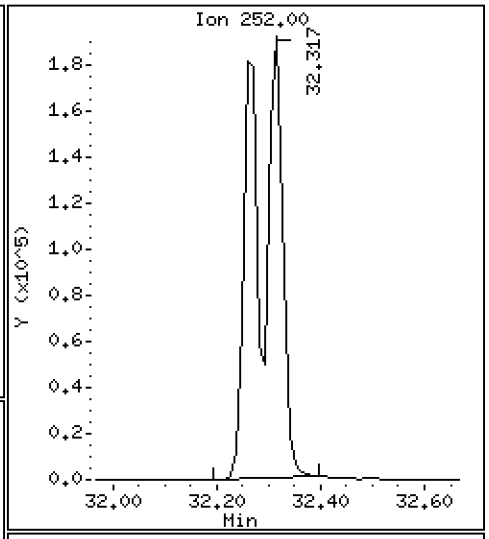
Column phase: Rxi-17Sil MS

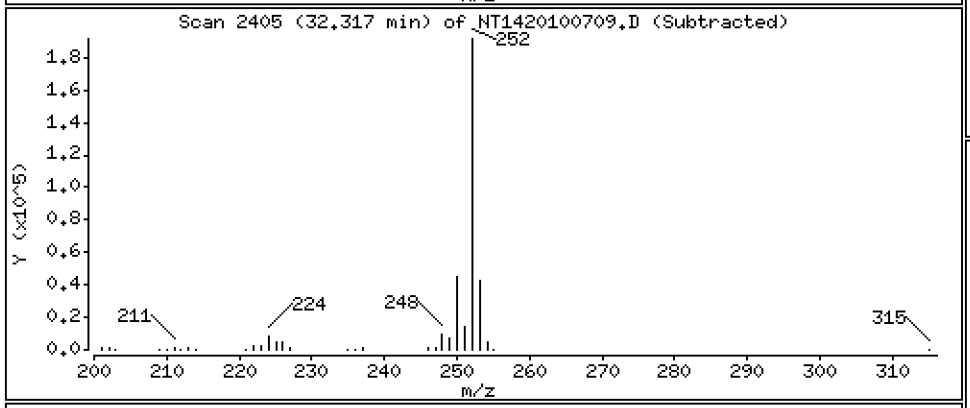
Column diameter: 0.25

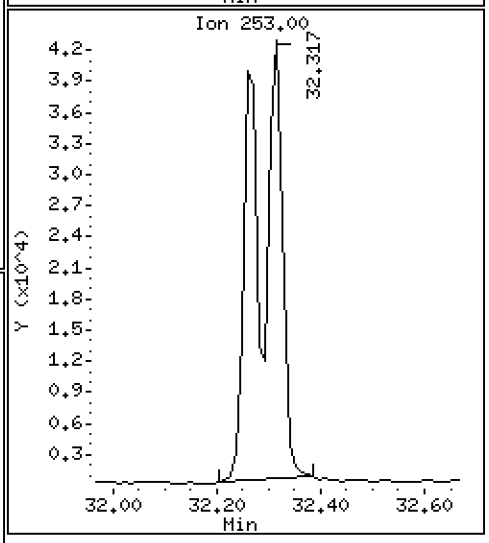
246 Total Benzofluoranthenes

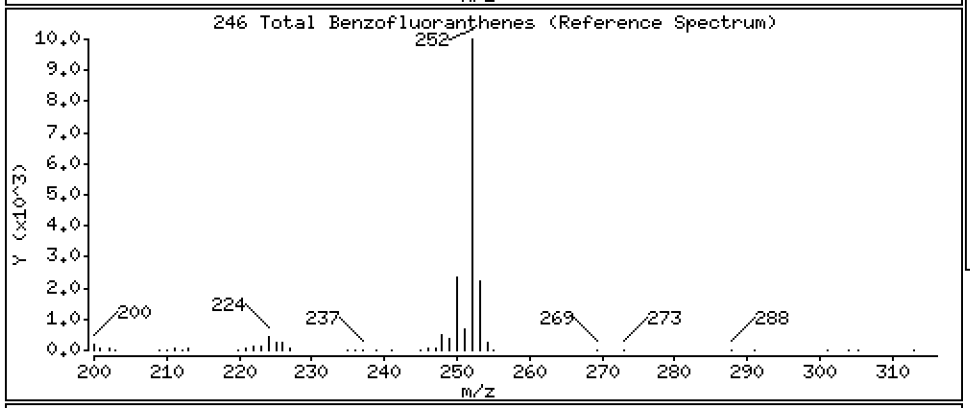
Concentration: 5.207 ug/mL

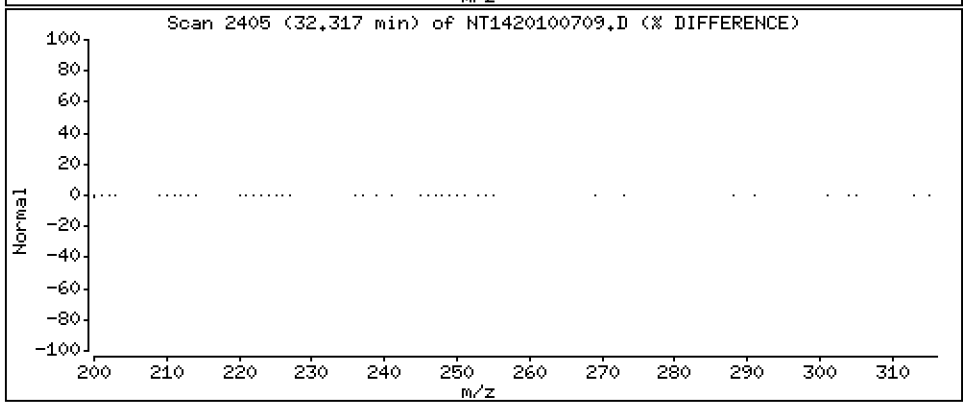












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

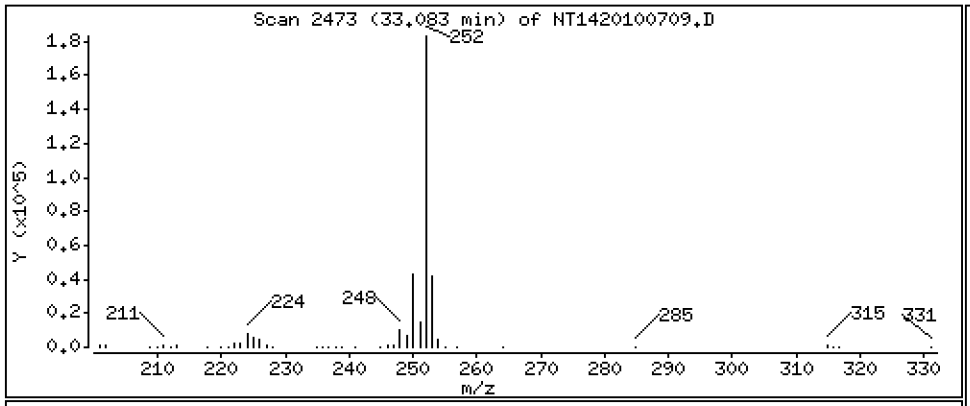
Operator: VTS

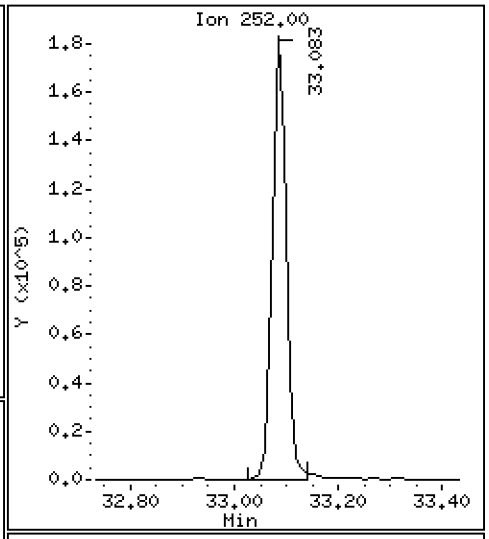
Column phase: Rxi-17Sil MS

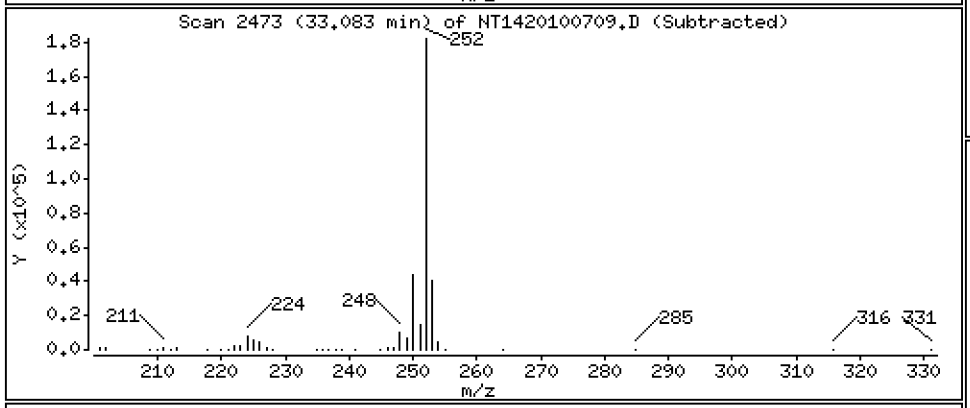
Column diameter: 0.25

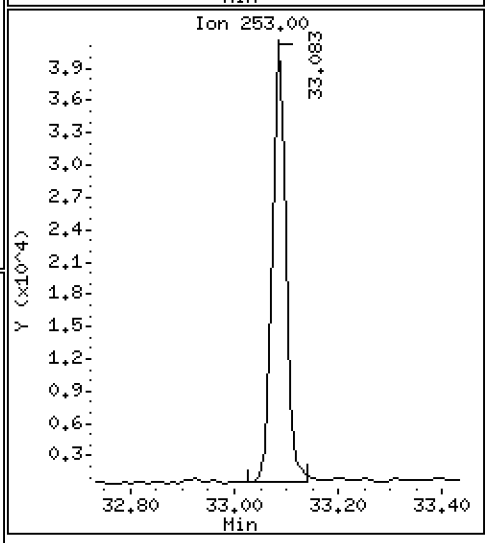
66 Benzo(a)pyrene

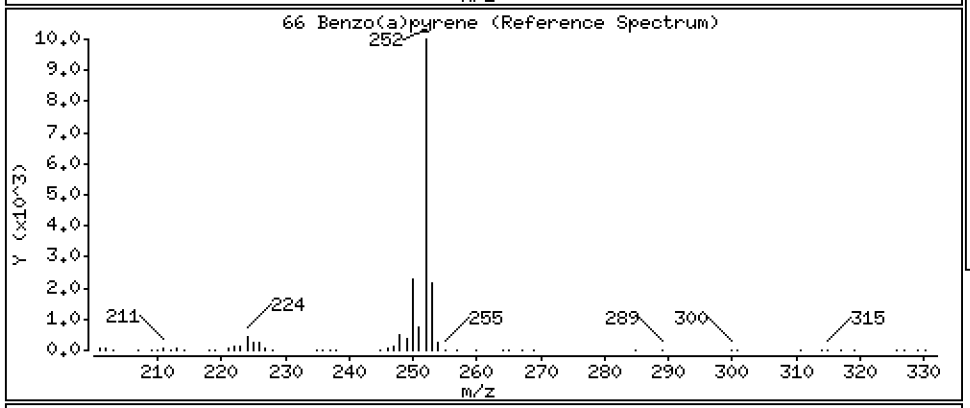
Concentration: 2.617 ug/mL

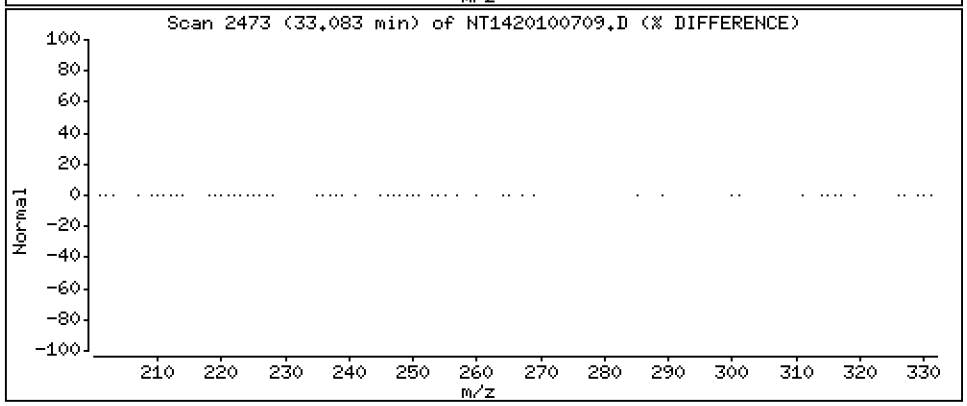












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Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

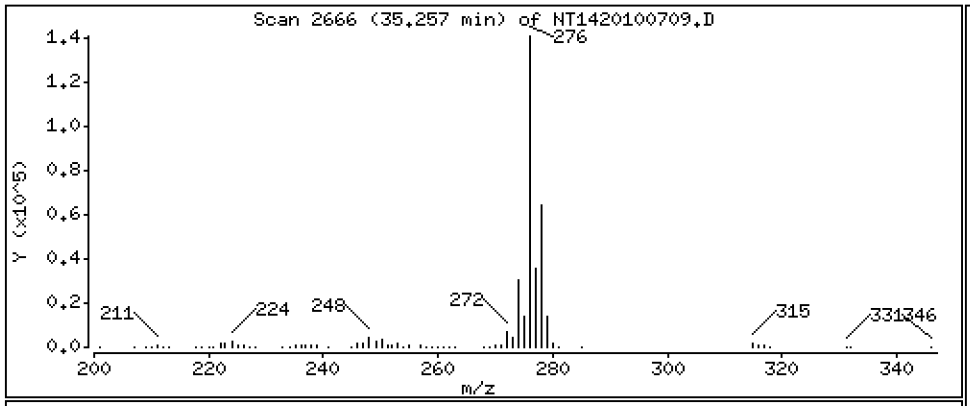
Operator: VTS

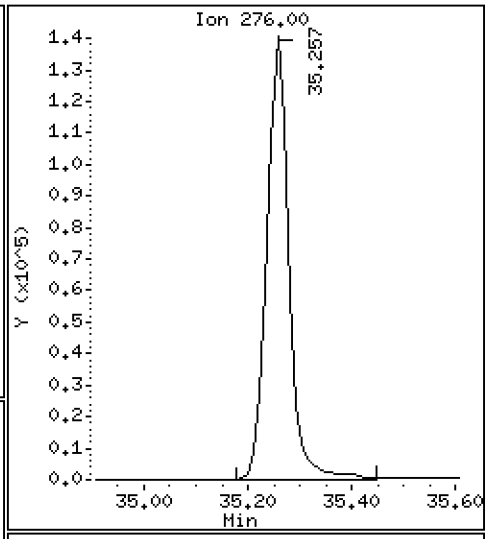
Column phase: Rxi-17Sil MS

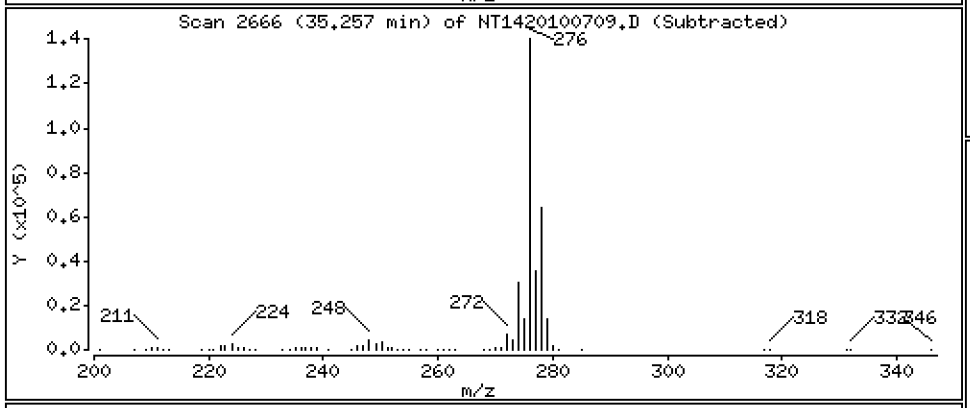
Column diameter: 0.25

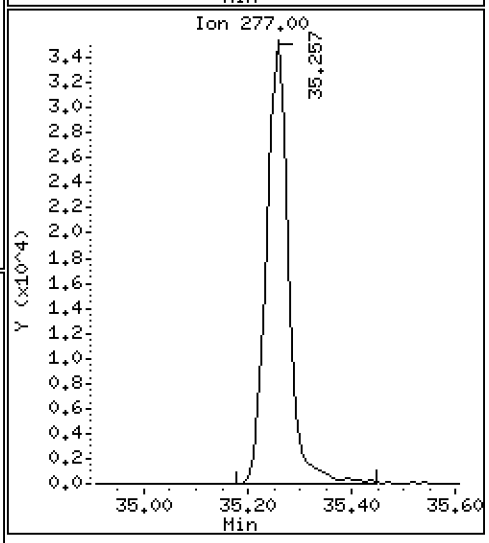
69 Indeno(1,2,3-cd)pyrene

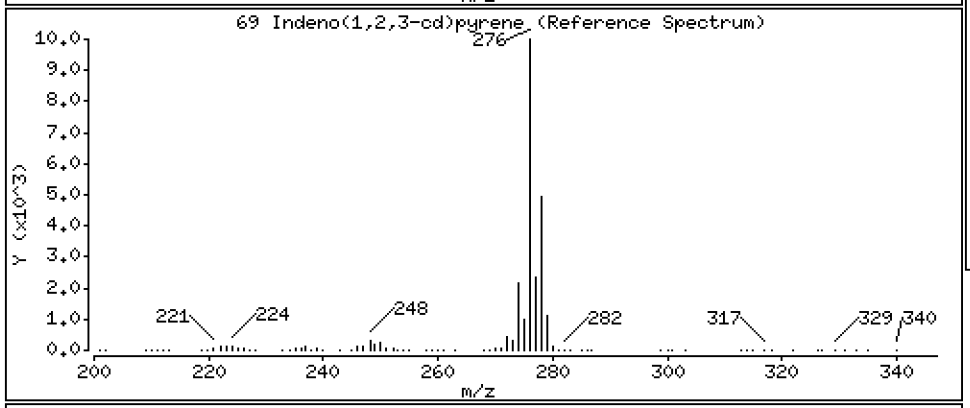
Concentration: 2.625 ug/mL

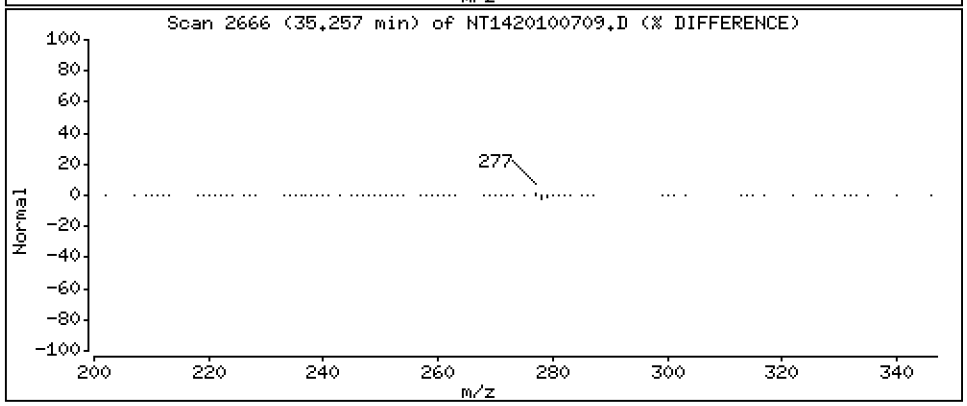












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Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

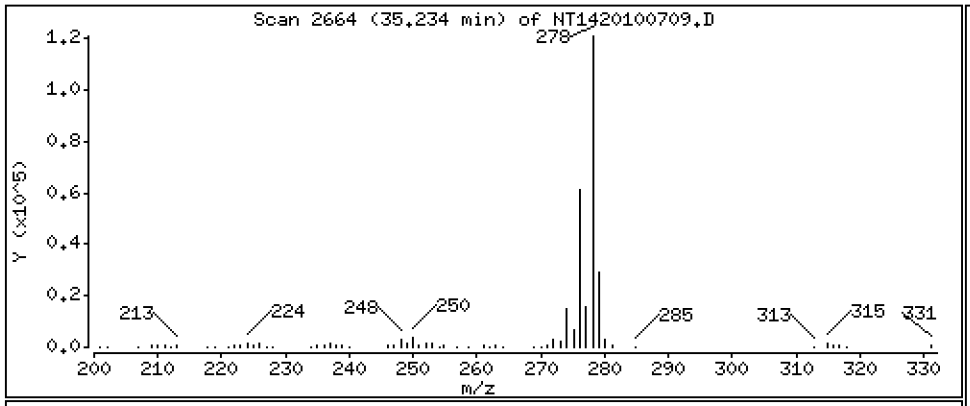
Operator: VTS

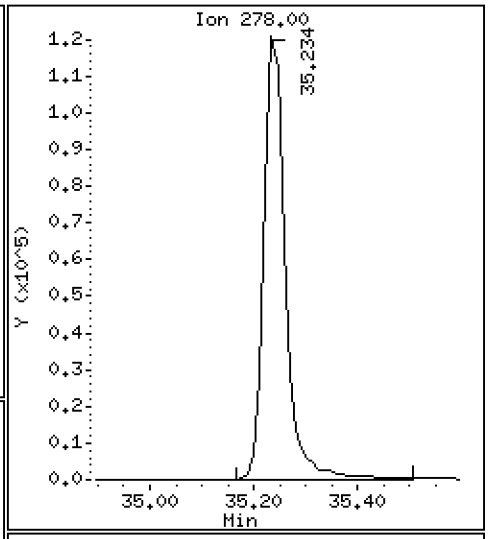
Column phase: Rxi-17Sil MS

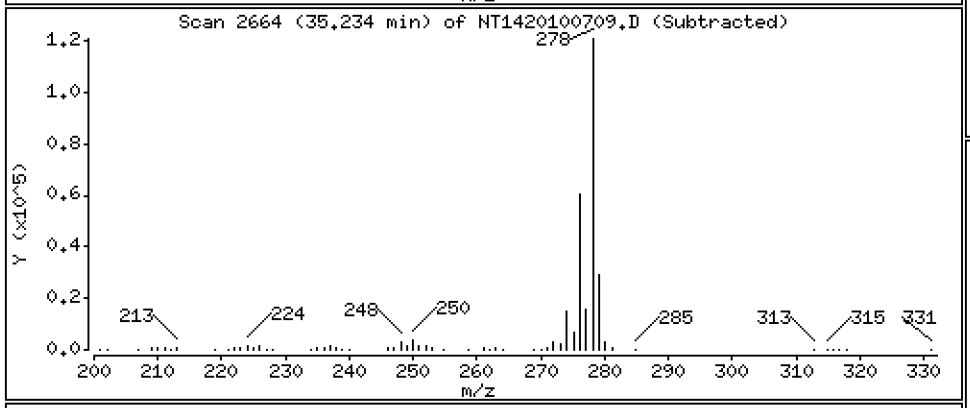
Column diameter: 0.25

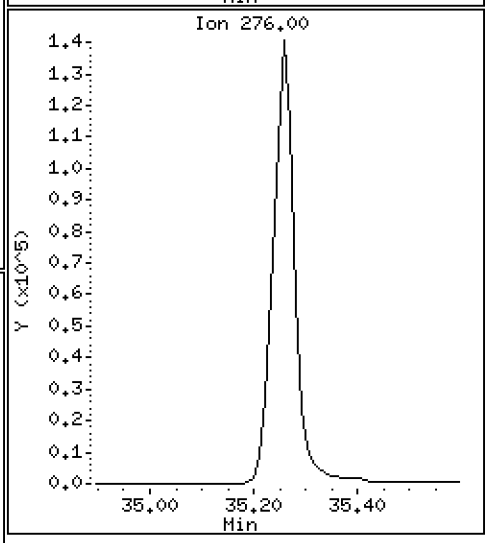
70 Dibenzo(a,h)anthracene

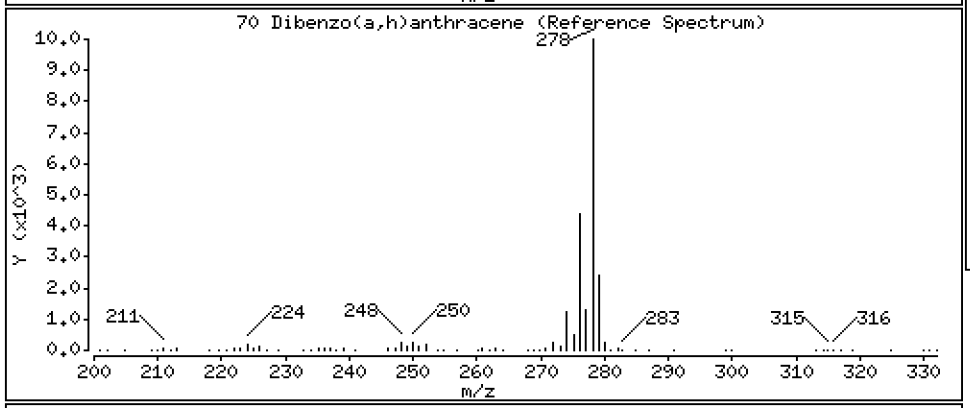
Concentration: 2.517 ug/mL

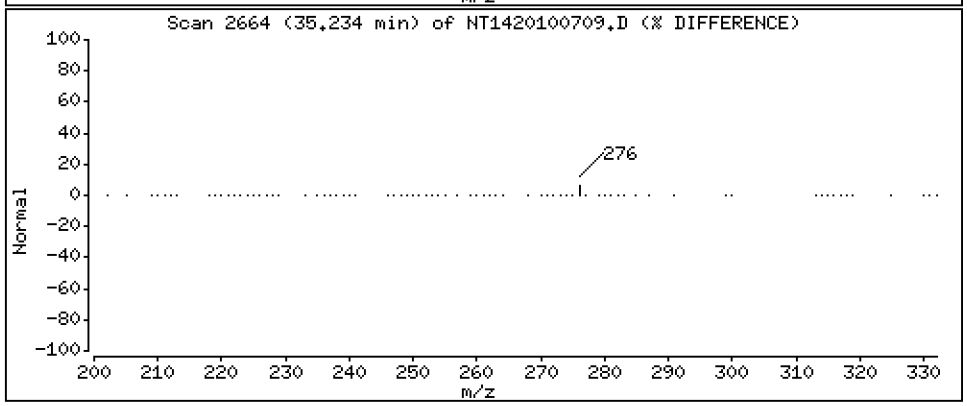












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

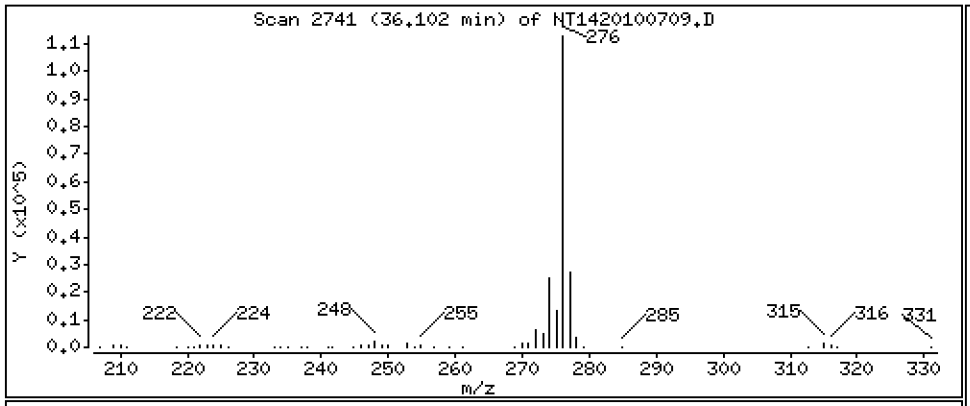
Operator: VTS

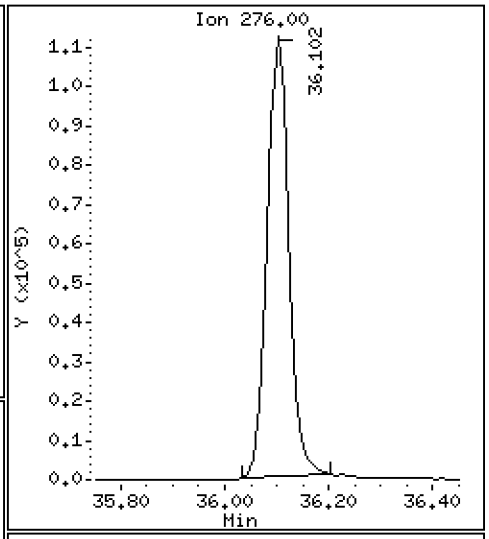
Column phase: Rxi-17Sil MS

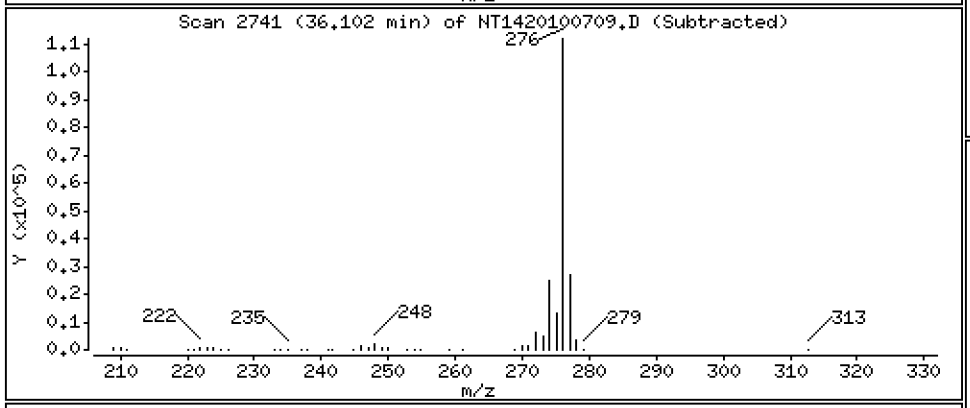
Column diameter: 0.25

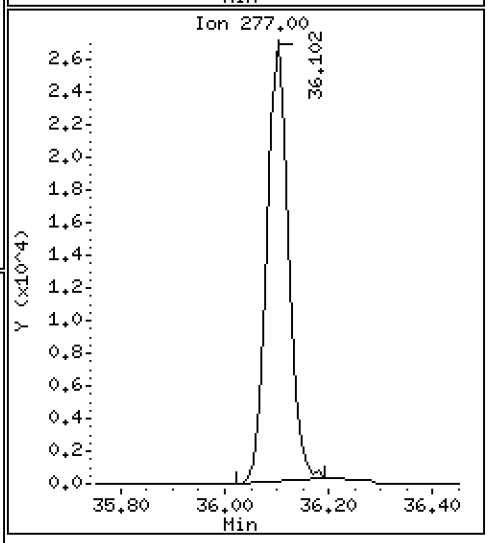
74 Benzo(g,h,i)perylene

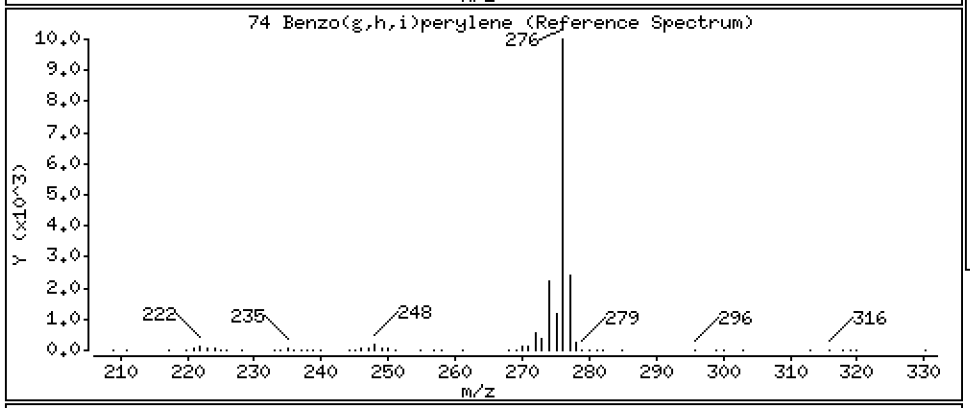
Concentration: 2.329 ug/mL

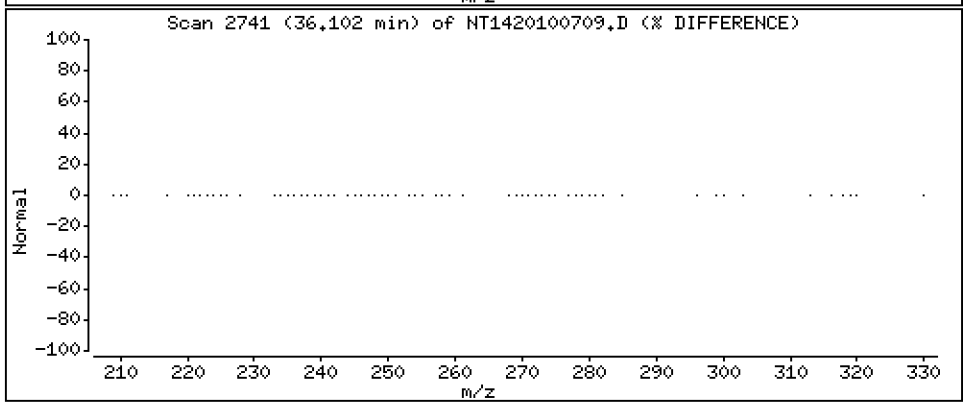












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D
Lab Smp Id: SIJ0085-SCV1
Inj Date : 07-OCT-2020 16:45
Operator : VTS Inst ID: nt14.i
Smp Info : SIJ0085-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Meth Date : 09-Oct-2020 08:45 van Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (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	11.707	11.707	(0.628)	213173	2.75707	2.757
	12 Benzo(b)thiophene	134	Compound Not Detected.					
	16 2-Methylnaphthalene	141	13.542	13.542	(0.727)	132308	2.80714	2.807
	17 1-methylnaphthalene	141	13.992	13.992	(0.751)	134040	2.83535	2.835
	18 Biphenyl	154	Compound Not Detected.					
	19 2,6-Dimethylnaphthalene	156	Compound Not Detected.					
	20 Acenaphthylene	152	16.817	16.817	(0.903)	244094	2.87456	2.875
$	21 Acenaphthene-d10	164	17.135	17.103	(0.920)	20448	0.44062	0.4406(R)
	22 Acenaphthene	153	17.223	17.223	(0.924)	150978	2.71407	2.714
	23 Dibenzofuran	168	17.597	17.597	(0.944)	249328	3.08950	3.090
	24 1,6,7-Trimethylnaphthalene	170	Compound Not Detected.					
*	25 Fluorene-d10	176	18.632	18.632	(1.000)	189405	2.00000	
	26 Fluorene	166	18.746	18.746	(1.006)	186659	2.96697	2.967
	30 Dibenzothiophene	184	Compound Not Detected.					
$	35 Phenanthrene-d10	188	Compound Not Detected.					
	36 Phenanthrene	178	22.040	22.040	(0.999)	276406	2.45432	2.454
*	250 Anthracene-d10	188	22.072	22.072	(1.000)	203362	2.00000	
	37 Anthracene	178	22.138	22.138	(1.003)	263969	2.38495	2.385
	42 Carbazole	167	23.425	23.425	(1.061)	225622	2.35395	2.354
	43 1-Methylphenanthrene	192	Compound Not Detected.					
	44 Fluoranthene	202	25.843	25.843	(1.171)	302784	2.43596	2.436
	46 Pyrene	202	26.701	26.701	(1.210)	327478	2.49671	2.497
	51 Naphthobenzothiophene	234	Compound Not Detected.					
	55 Benzo(a)anthracene	228	29.839	29.839	(0.906)	321298	2.58148	2.581
$	56 Chrysene-d12	240	Compound Not Detected.					
	57 Chrysene	228	30.042	30.042	(0.912)	311187	2.51557	2.516
	62 Benzo(b)fluoranthene	252	32.260	32.272	(0.980)	335486	2.38726	2.387
	63 Benzo(k)fluoranthene	252	32.317	32.317	(0.982)	376214	2.65607	2.656
	293 Benzo(j)fluoranthene	252	Compound Not Detected.					
	246 Total Benzofluoranthenes	252	32.317	32.317	(0.982)	678991	5.20731	5.207(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.925	32.925	(1.000)	288304	2.00000	
64 Benzo(e)pyrene	252	Compound Not Detected.					
66 Benzo(a)pyrene	252	33.083	33.083	(1.005)	318127	2.61683	2.617
$ 67 Perylene-d12	264	Compound Not Detected.					
68 Perylene	252	Compound Not Detected.					
69 Indeno(1,2,3-cd)pyrene	276	35.256	35.256	(1.071)	395155	2.62484	2.625
70 Dibenzo(a,h)anthracene	278	35.234	35.245	(1.070)	334739	2.51676	2.517
74 Benzo(g,h,i)perylene	276	36.101	36.101	(1.096)	307983	2.32872	2.329(M)

QC Flag Legend

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

Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D Page 1
Report Date: 09-Oct-2020 08:51

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1420100709.D
Lab Smp Id: SIJ0085-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Misc Info:

Calibration Date: 07-OCT-2020
Calibration Time: 18:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	209596	104798	419192	189405	-9.63
250 Anthracene-d10	192407	96204	384814	203362	5.69
251 Benzo(e)pyrene-d1	274120	137060	548240	288304	5.17

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.63	18.13	19.13	18.63	0.00
250 Anthracene-d10	22.07	21.57	22.57	22.07	0.00
251 Benzo(e)pyrene-d1	32.93	32.43	33.43	32.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1420100709.D

Lab ID: SIJ0085-SCV1
nt14.i, 20201007.b\ALKYLPNA.m, 07-OCT-2020 16:45

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

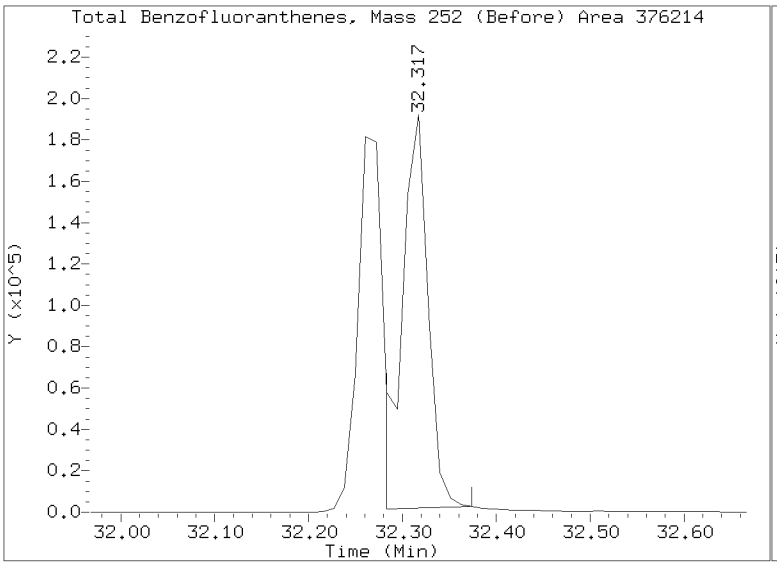
RRT check based on Ccal File: NT1420100711.D

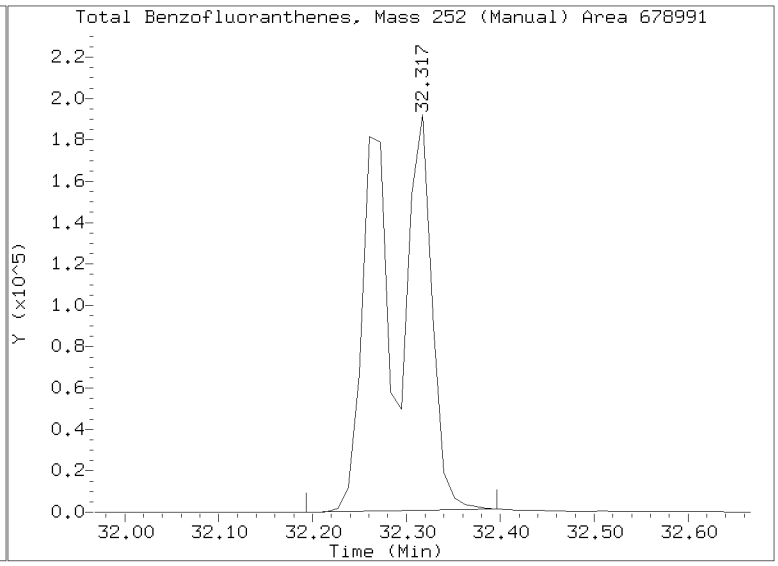
On Column LOD for nt14.i, 20201007.b\ALKYLPNA.m, TARGETS.sub = 0.0000

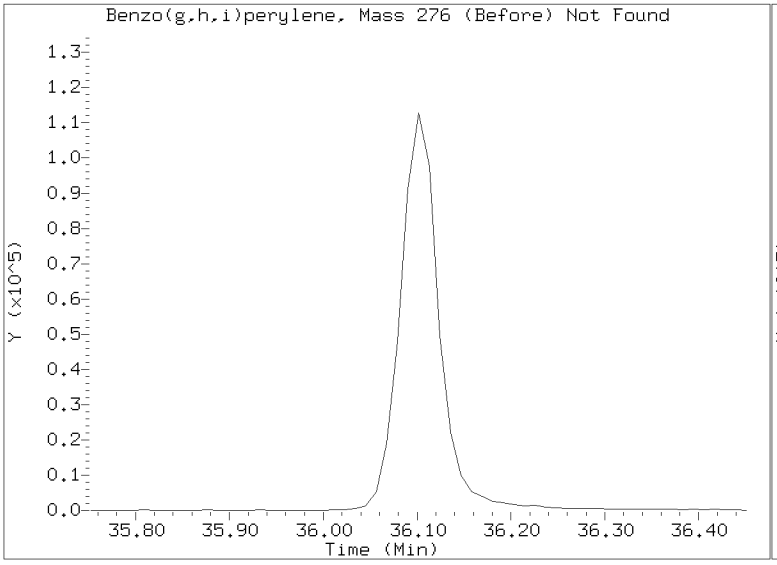
* Only compounds listed in the work order have been verified by the analyst *

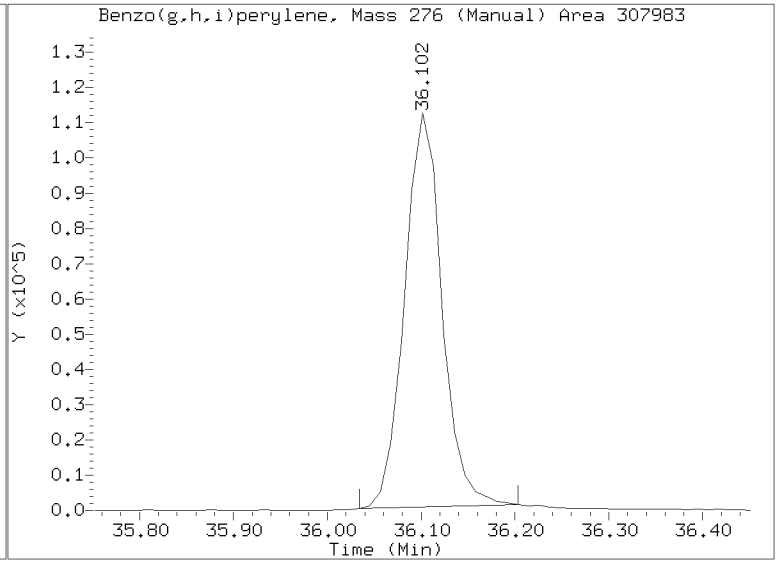
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20201007.b/NT1420100709.D
Injection Date: 07-OCT-2020 16:45
Lab ID:SIJ0085-SCV1 Client ID:
Report Date: 10/09/2020 08:51









Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E-SIM

Laboratory: Analytical Resources, Inc.
SDG: 20K0073
Client: Anchor QEA, LLC
Project: Gasco Siltronic
Calibration: DJ00029
Laboratory ID: SIJ0085-SCV1
Sequence: SIJ0085
Standard ID: I009393

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Naphthalene	2.5000	2.8	10.3	20.00
1-Methylnaphthalene	2.5000	2.8	13.4	20.00
2-Methylnaphthalene	2.5000	2.8	12.3	20.00
Acenaphthylene	2.5000	2.9	15.0	20.00
Acenaphthene	2.5000	2.7	8.6	20.00
Dibenzofuran	2.5000	3.1	23.6 *	20.00
Fluorene	2.5000	3.0	18.7	20.00
Phenanthrene	2.5000	2.5	-1.8	20.00
Anthracene	2.5000	2.4	-4.6	20.00
Carbazole	2.5000	2.4	-5.8	20.00
Fluoranthene	2.5000	2.4	-2.6	20.00
Pyrene	2.5000	2.5	-0.1	20.00
Benzo(a)anthracene	2.5000	2.6	3.3	20.00
Chrysene	2.5000	2.5	0.6	20.00
Benzo(b)fluoranthene	2.5000	2.4	-4.5	
Benzo(k)fluoranthene	2.5000	2.7	6.2	
Benzofluoranthenes, Total	5.0000	5.2	4.1	
Benzo(a)pyrene	2.5000	2.6	4.7	20.00
Indeno(1,2,3-cd)pyrene	2.5000	2.6	5.0	20.00
Dibenzo(a,h)anthracene	2.5000	2.5	0.7	20.00
Benzo(g,h,i)perylene	2.5000	2.3	-6.9	20.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

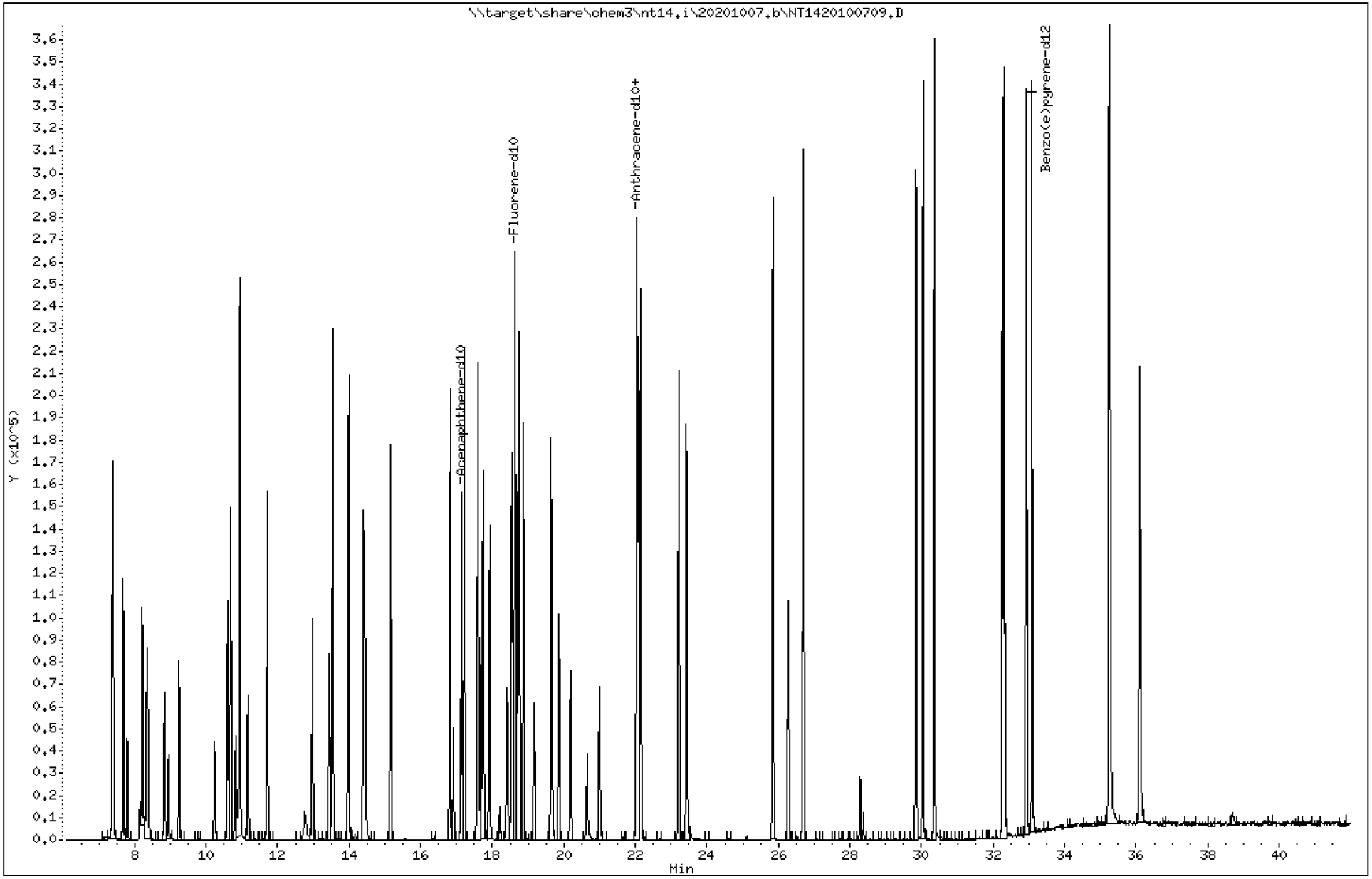
Instrument: nt14.i

Sample Info: SIJ0085-SCV1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



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Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

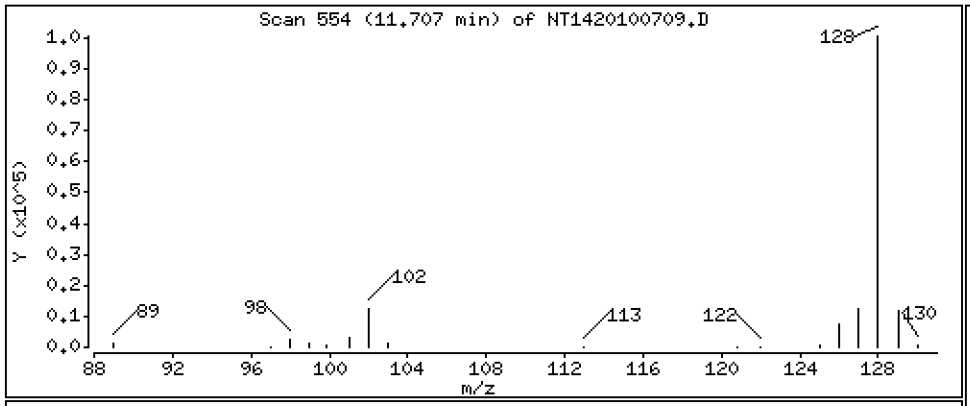
Operator: VTS

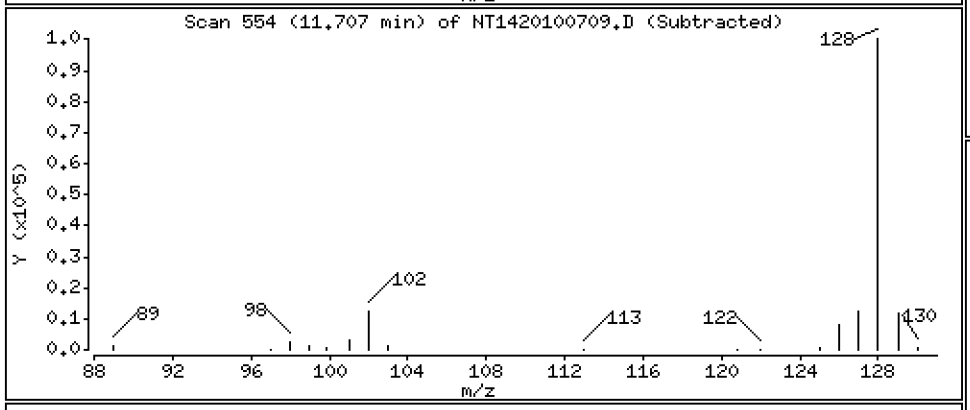
Column phase: Rxi-17Sil MS

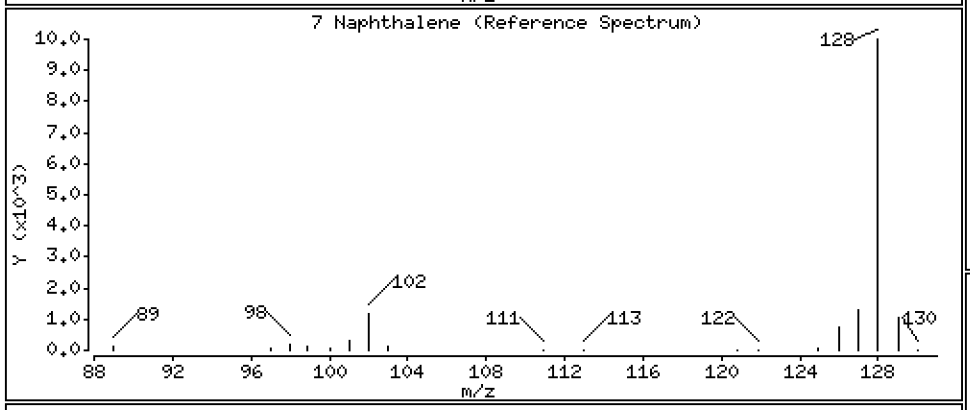
Column diameter: 0.25

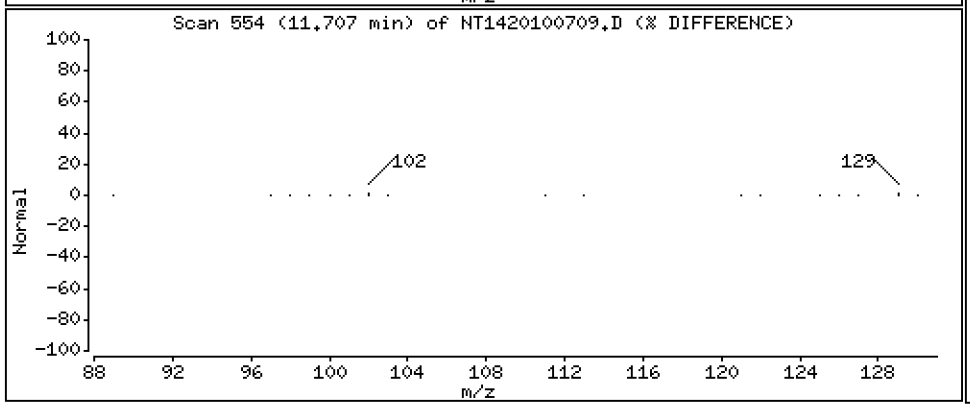
7 Naphthalene

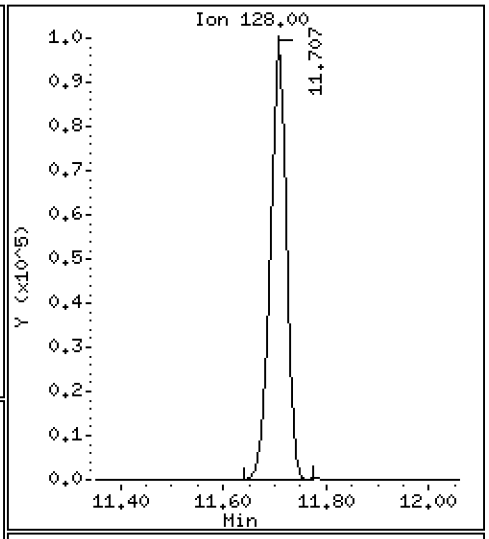
Concentration: 2.757 ug/mL

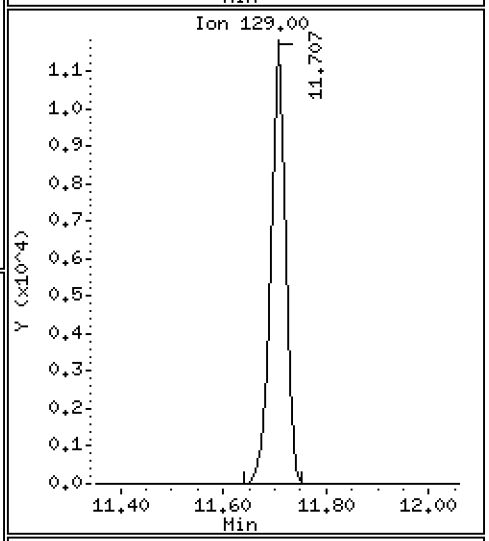


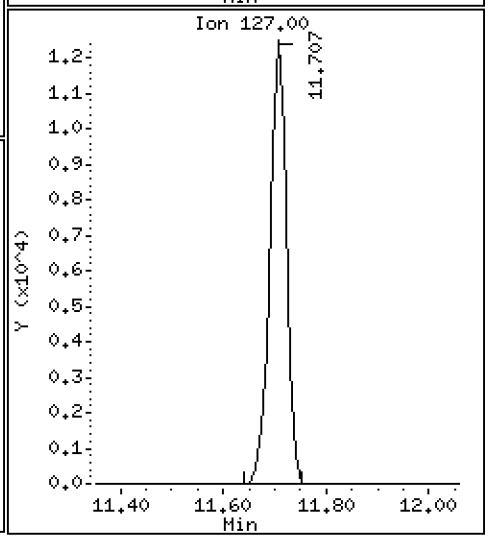












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

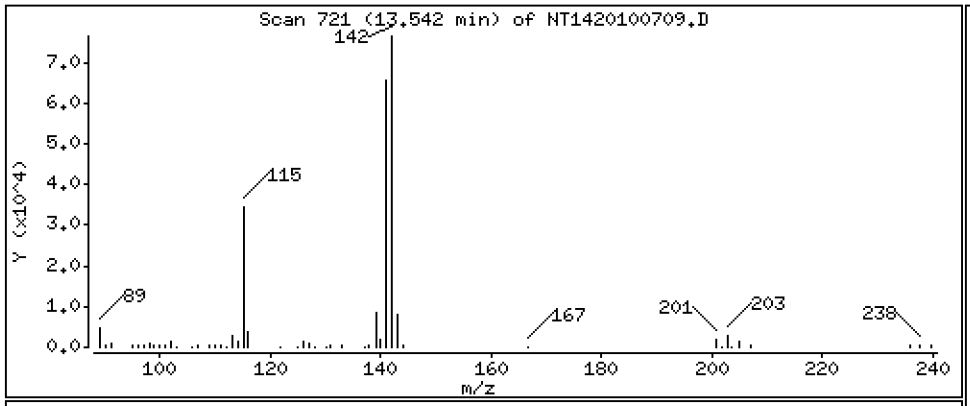
Client ID: Instrument: nt14.i

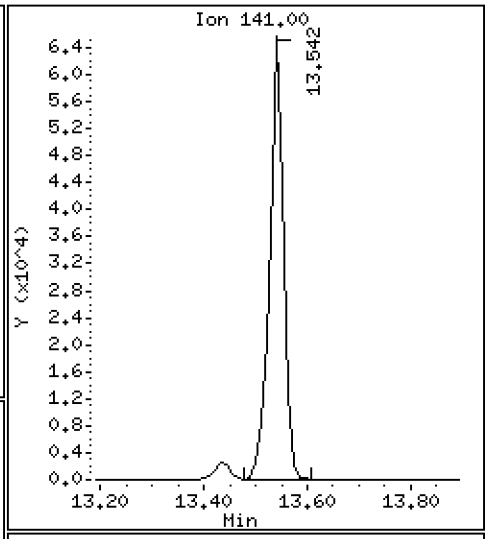
Sample Info: SIJ0085-SCV1

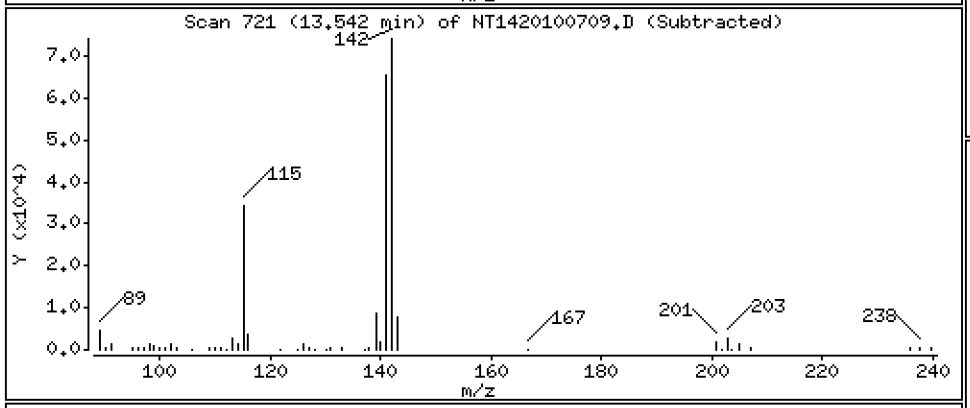
Operator: VTS

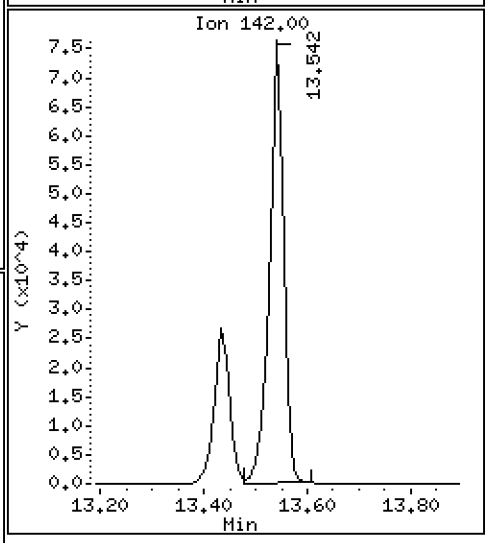
Column phase: Rxi-17Sil MS Column diameter: 0.25

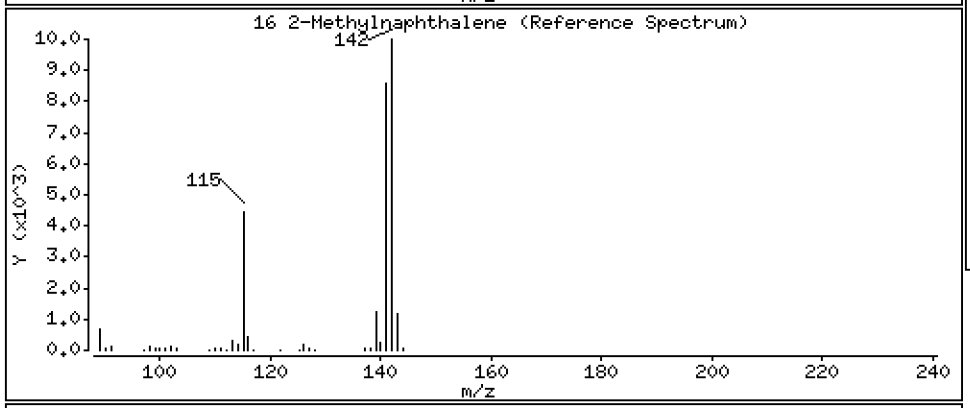
16 2-Methylnaphthalene Concentration: 2.807 ug/mL

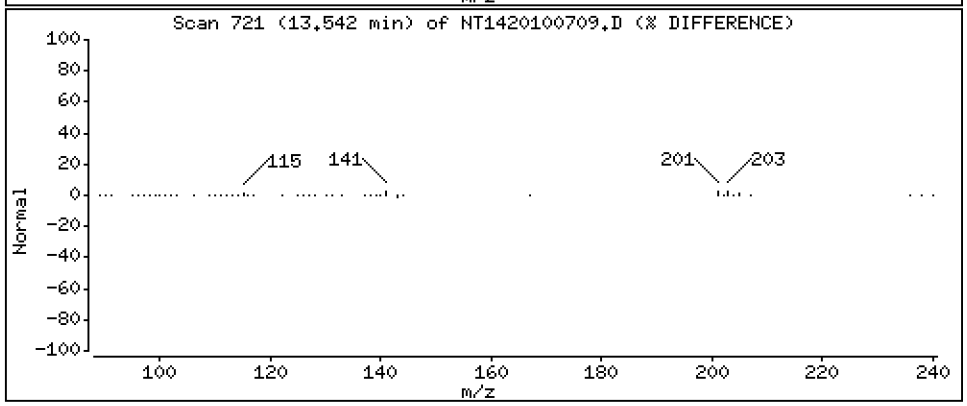












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Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

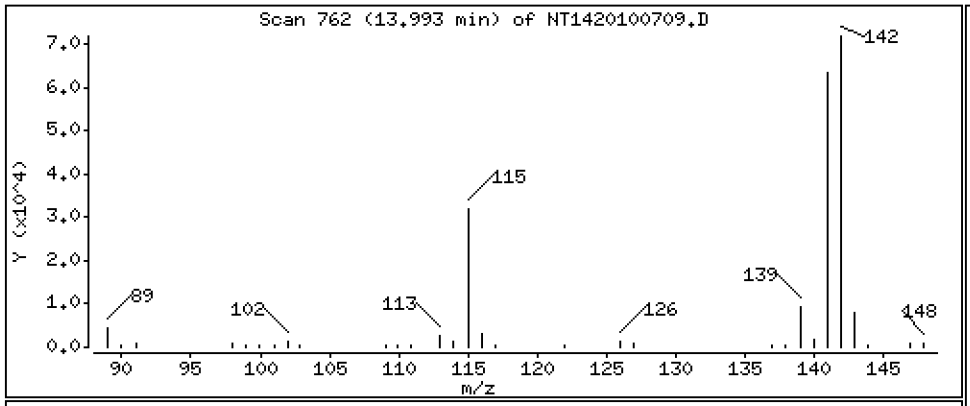
Operator: VTS

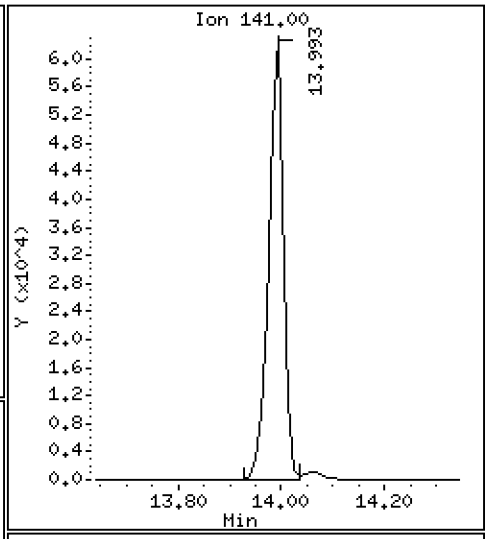
Column phase: Rxi-17Sil MS

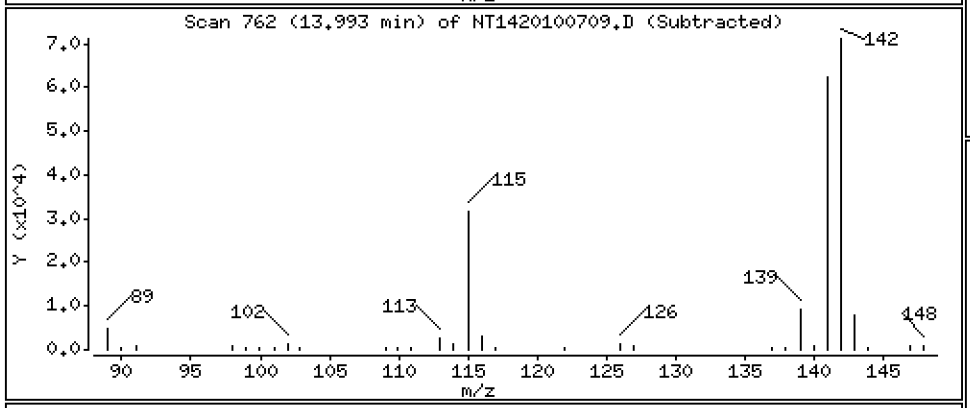
Column diameter: 0.25

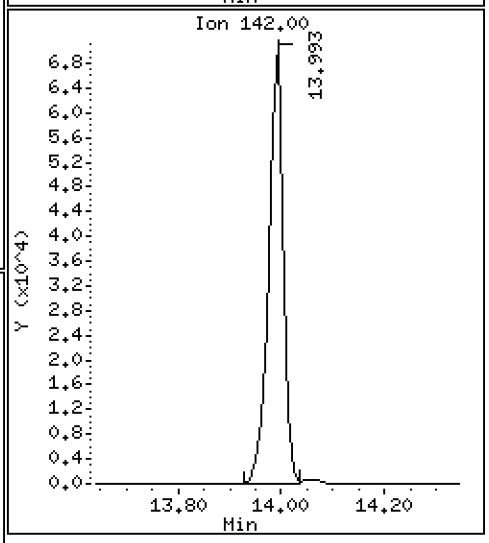
17 1-methylnaphthalene

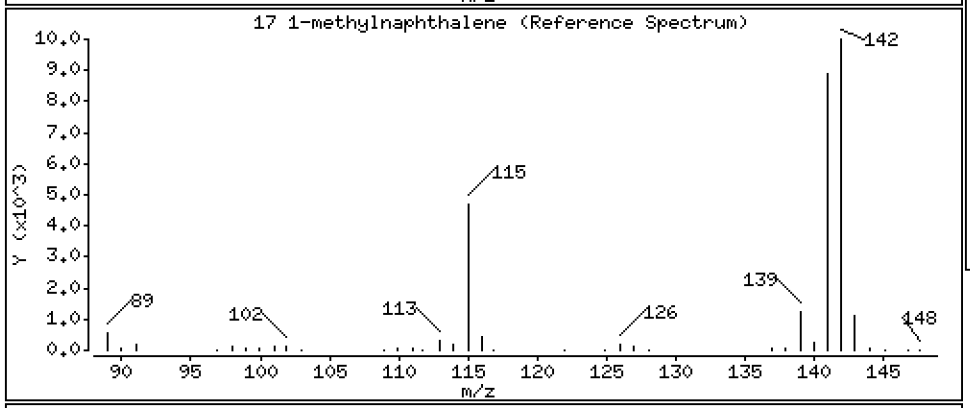
Concentration: 2.835 ug/mL

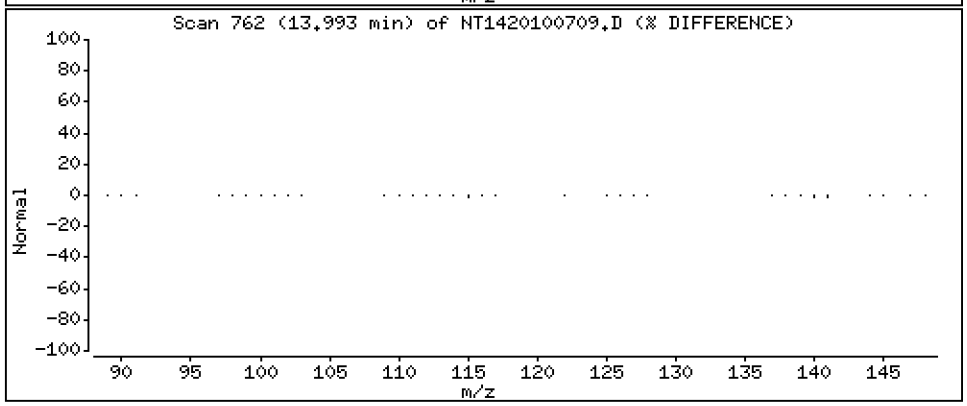












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Date : 07-OCT-2020 16:45

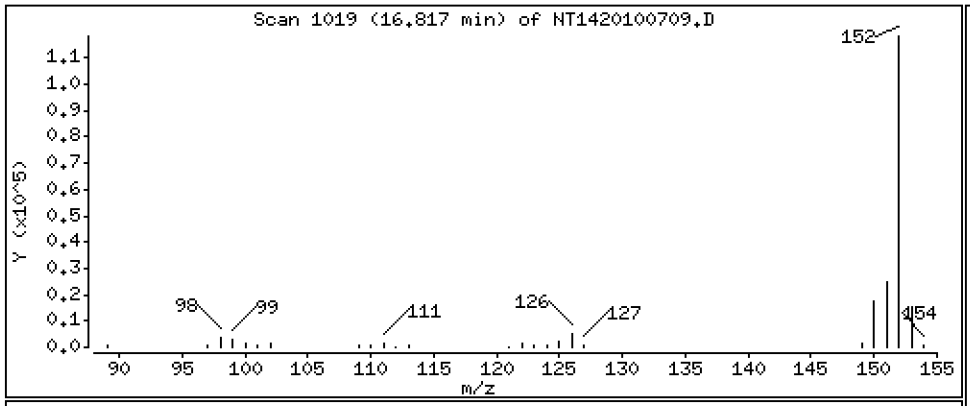
Client ID: Instrument: nt14.i

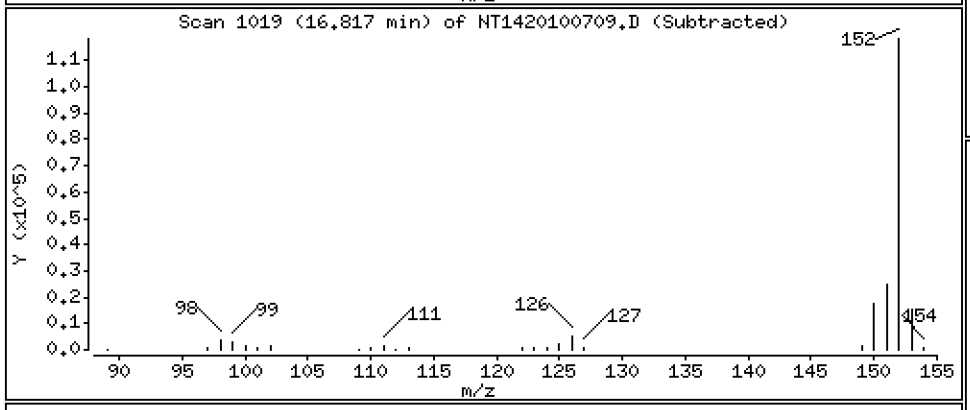
Sample Info: SIJ0085-SCV1

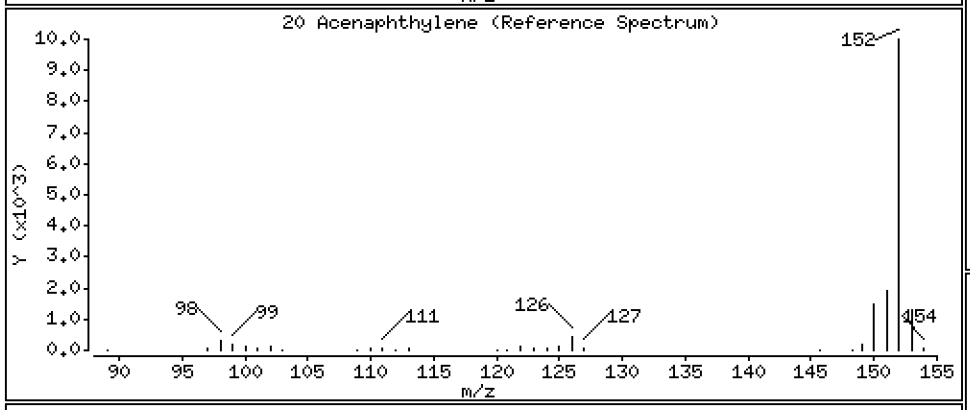
Operator: VTS

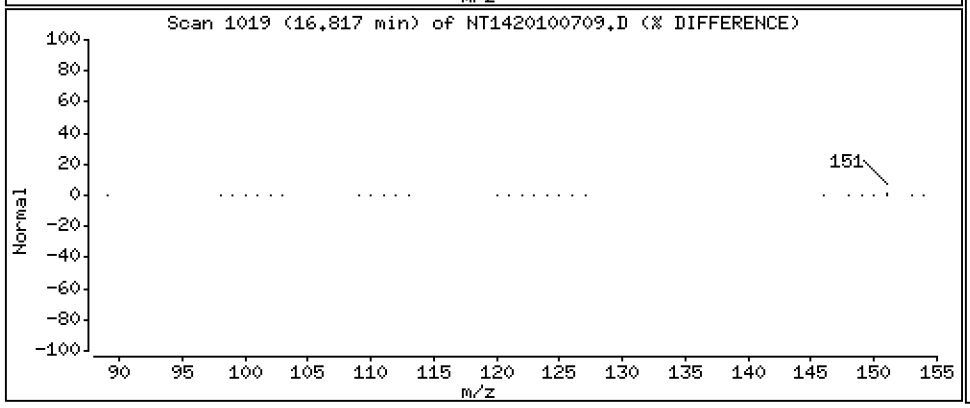
Column phase: Rxi-17Sil MS Column diameter: 0.25

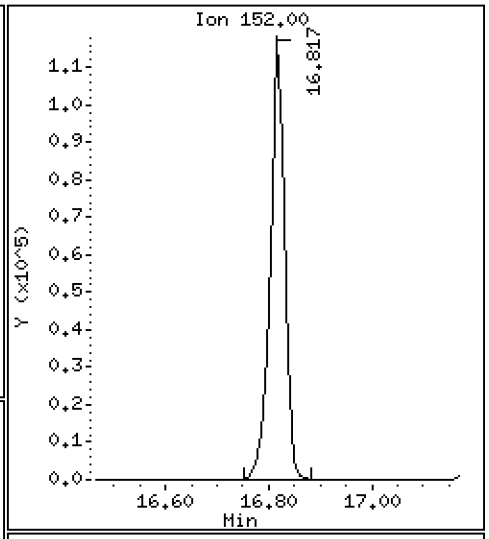
20 Acenaphthylene Concentration: 2.875 ug/mL

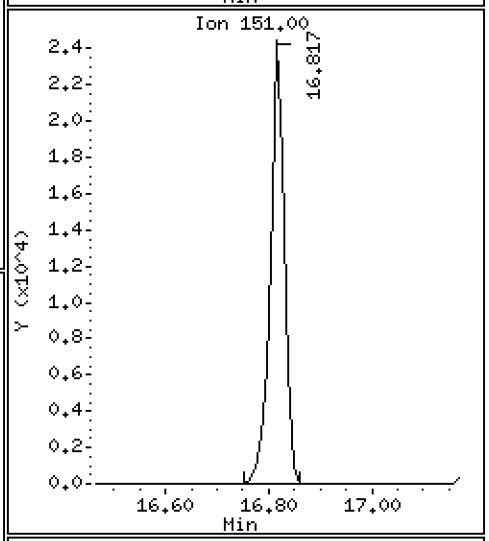


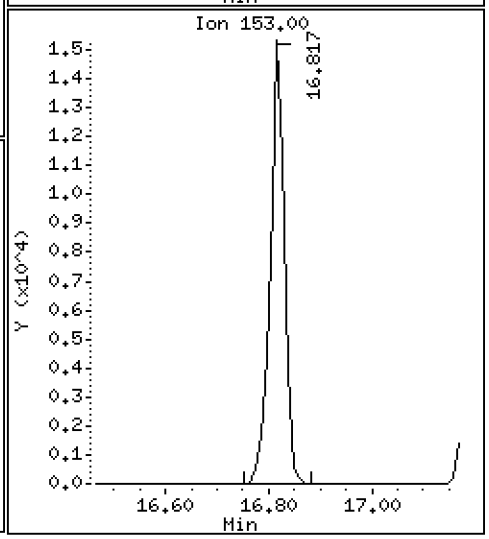












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

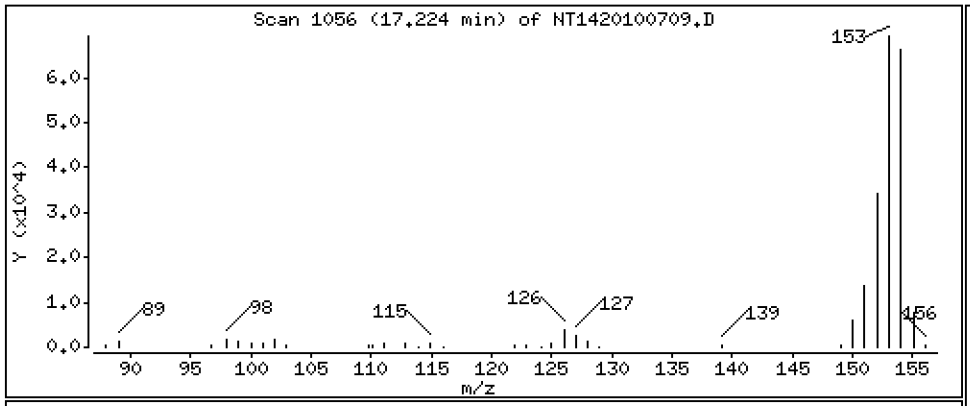
Operator: VTS

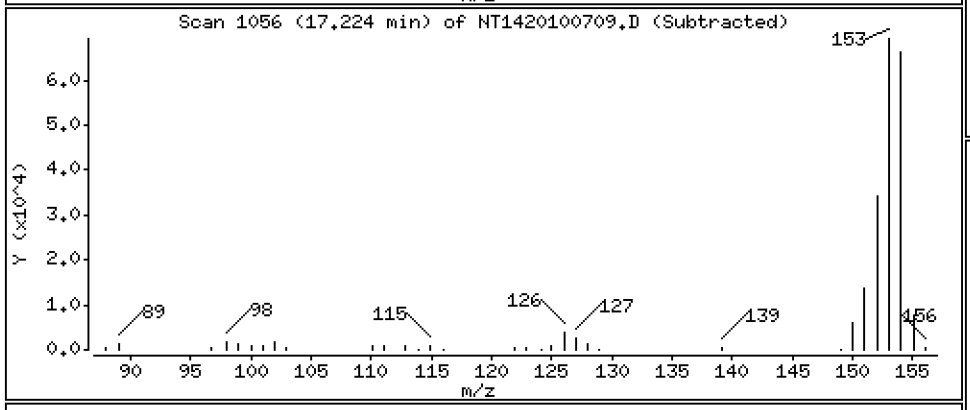
Column phase: Rxi-17Sil MS

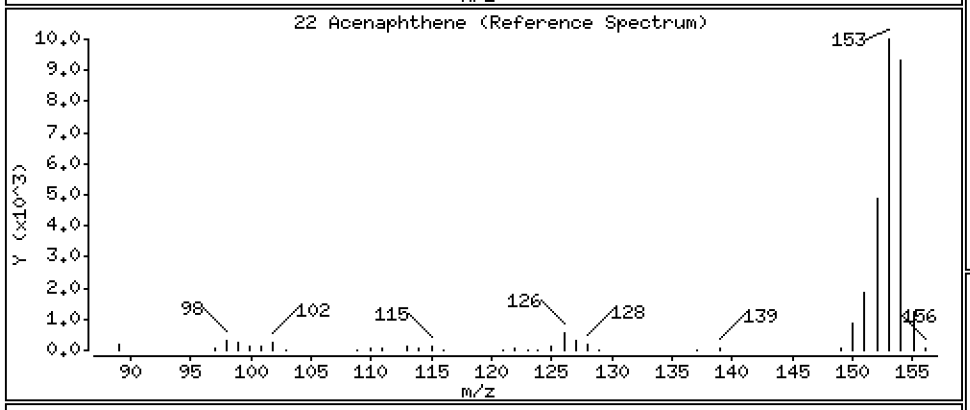
Column diameter: 0.25

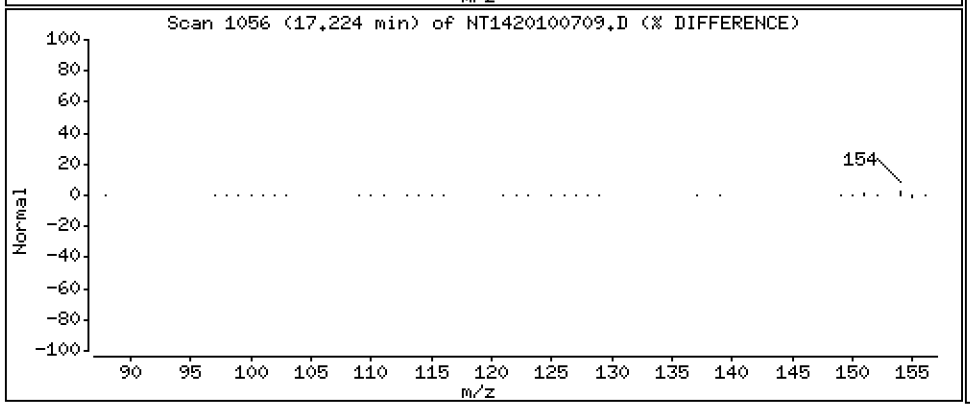
22 Acenaphthene

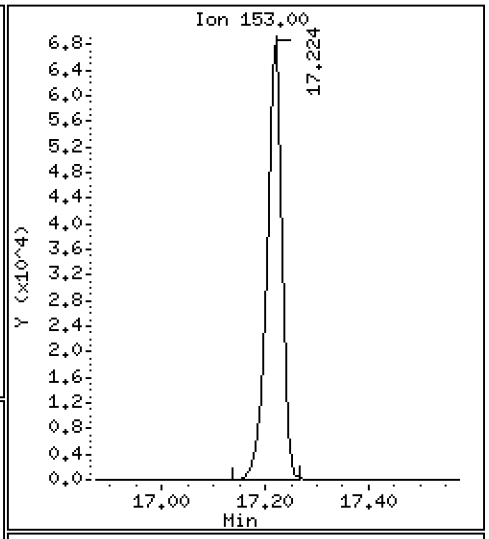
Concentration: 2.714 ug/mL

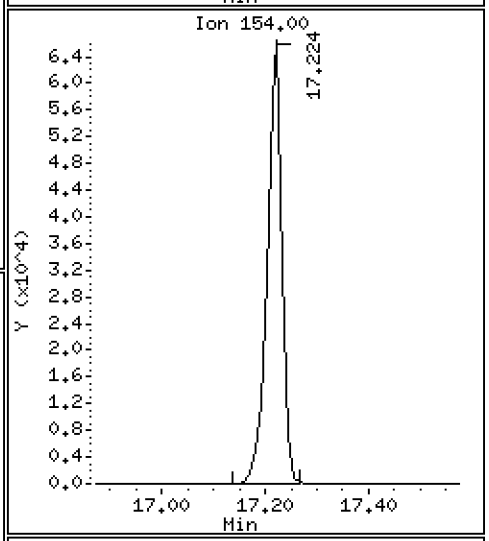


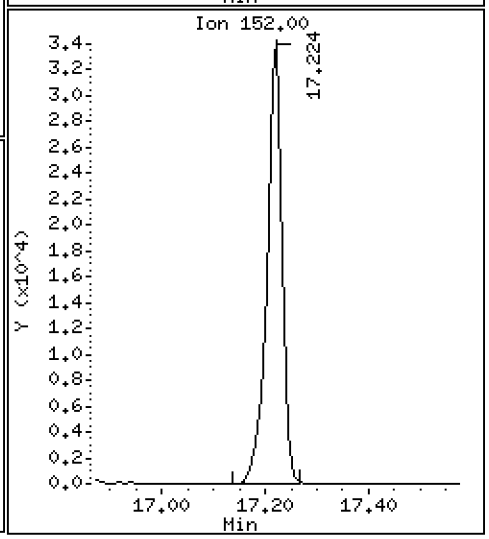












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

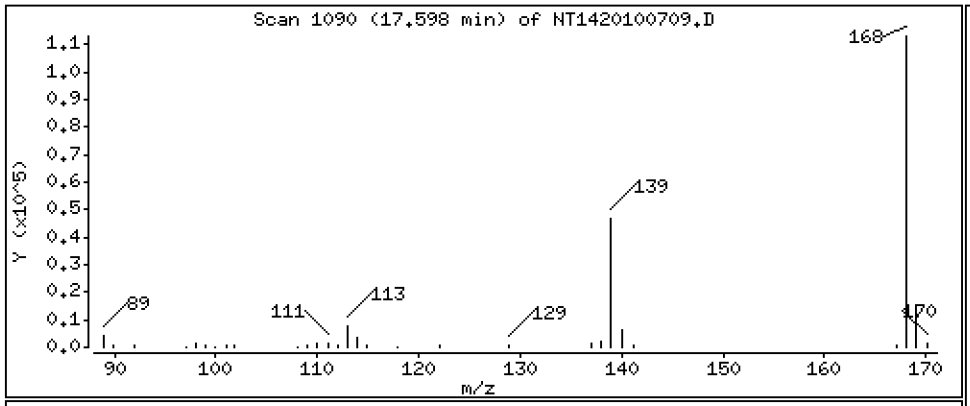
Operator: VTS

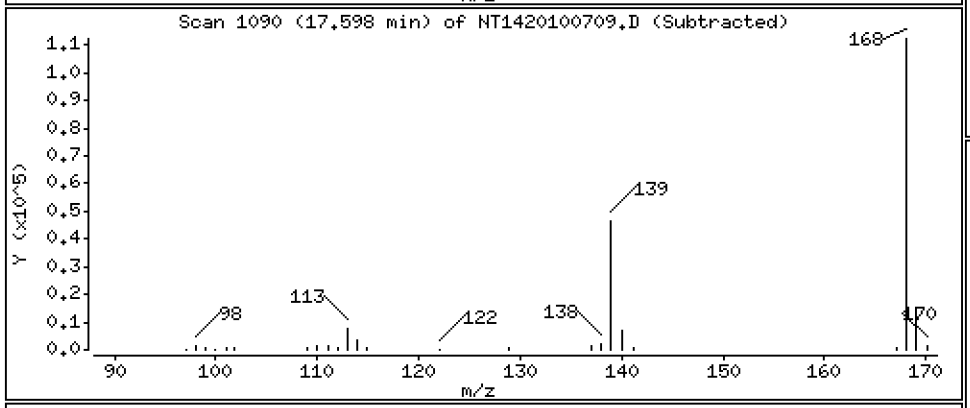
Column phase: Rxi-17Sil MS

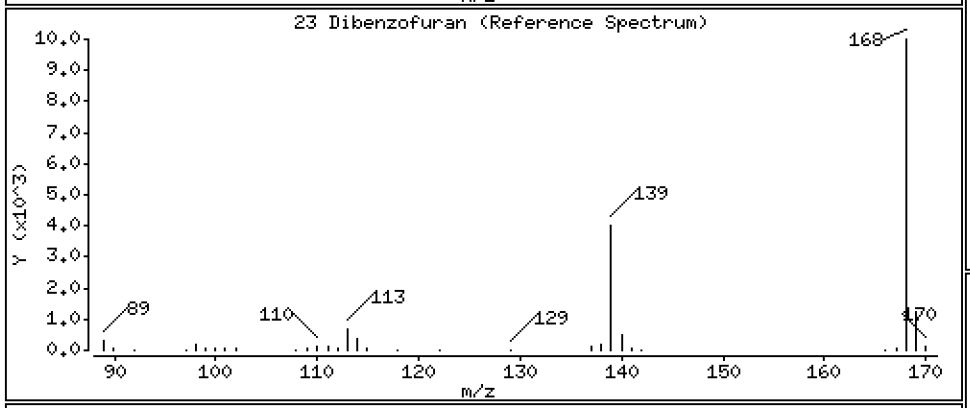
Column diameter: 0.25

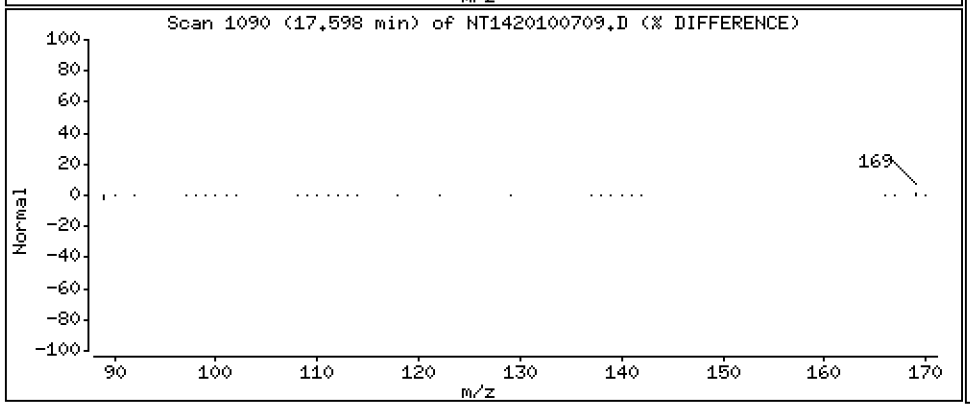
23 Dibenzofuran

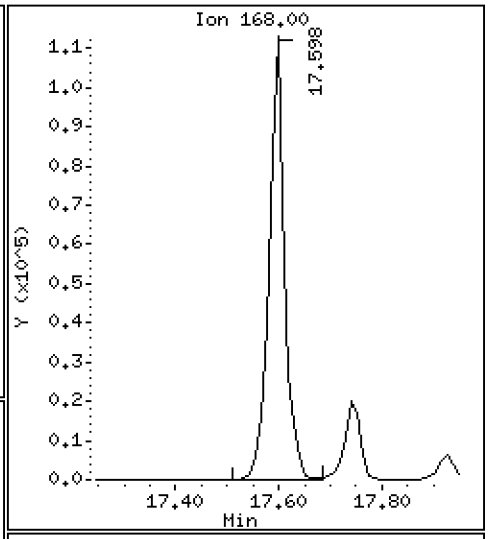
Concentration: 3.090 ug/mL

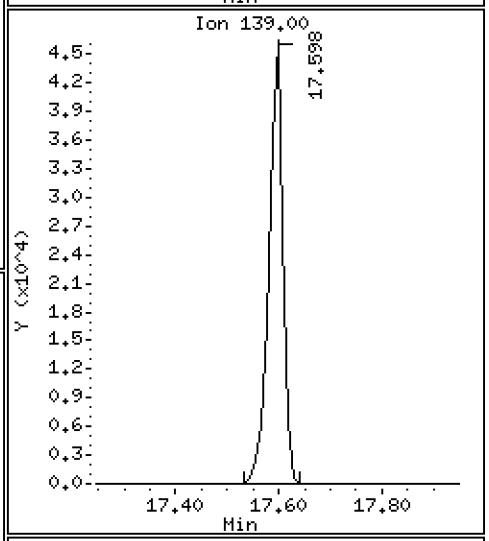


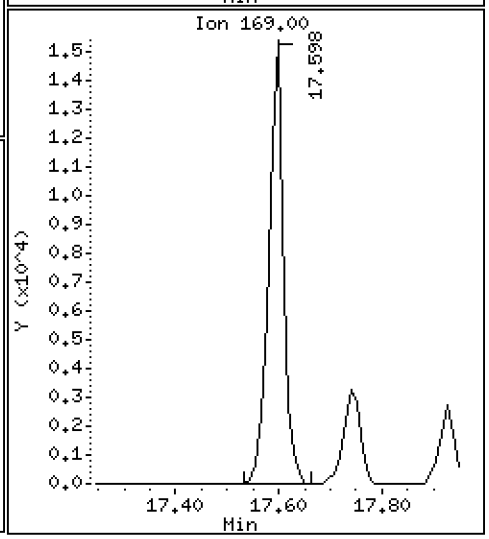












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

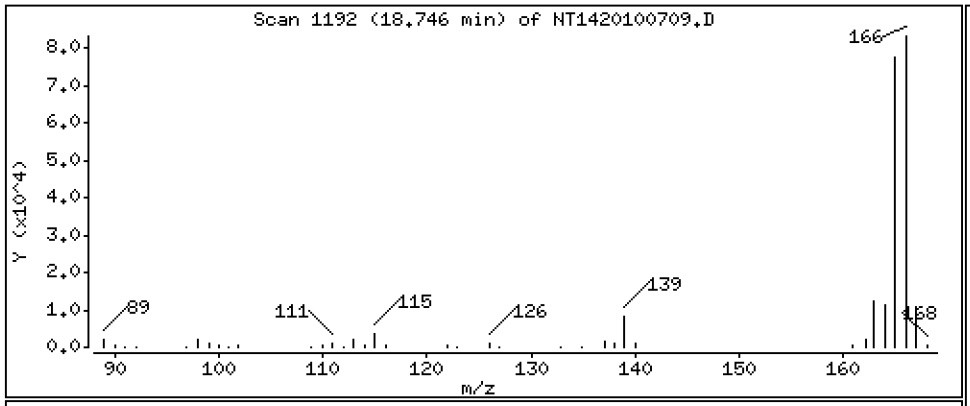
Operator: VTS

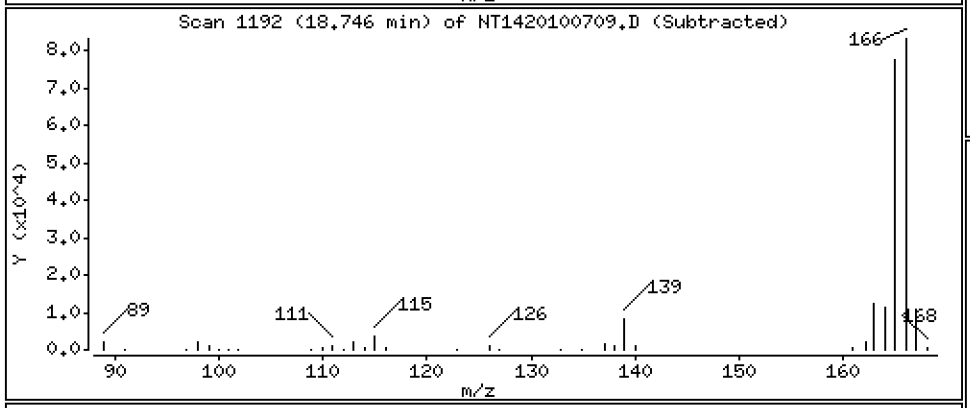
Column phase: Rxi-17Sil MS

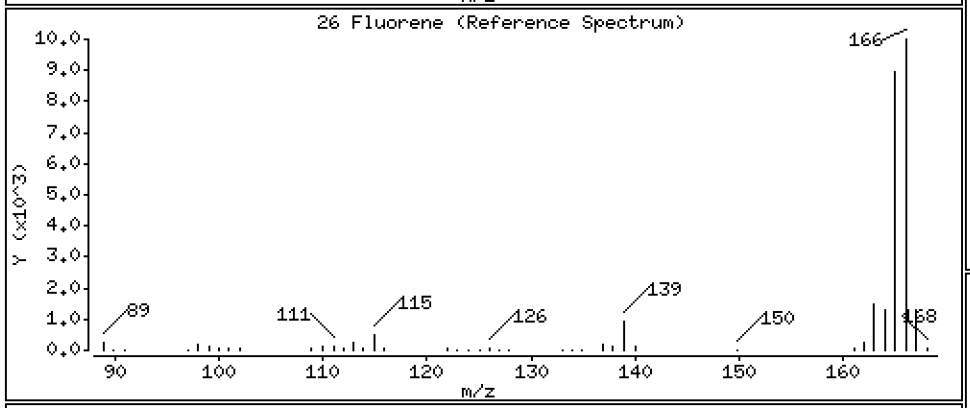
Column diameter: 0.25

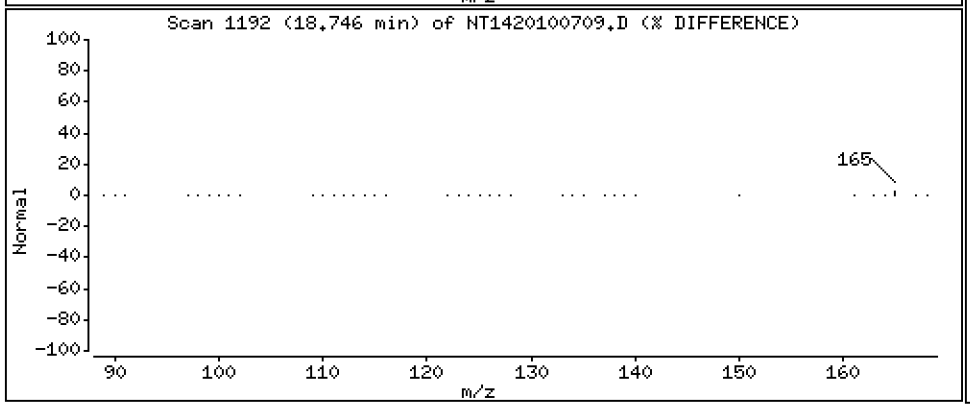
26 Fluorene

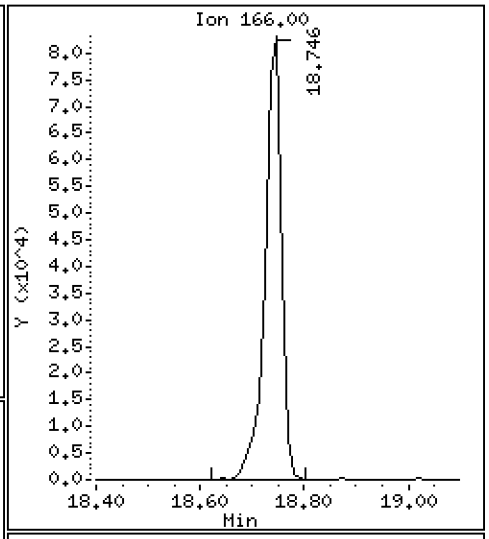
Concentration: 2.967 ug/mL

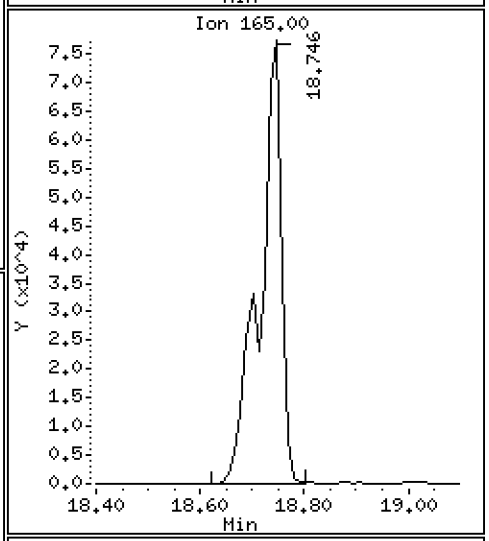


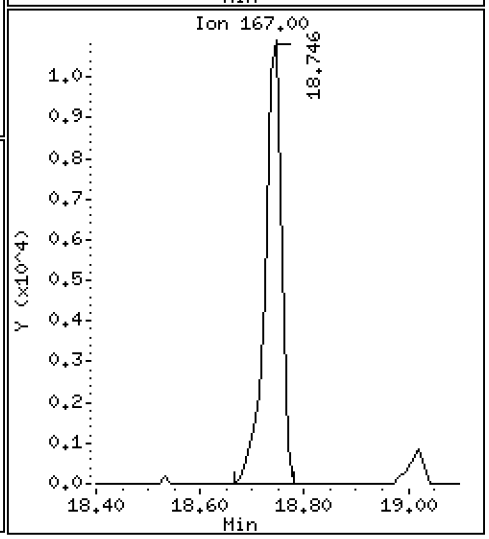












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

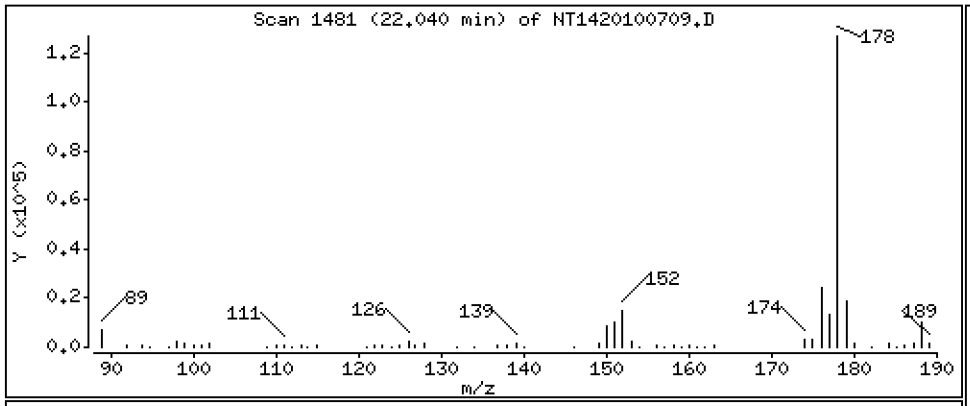
Client ID: Instrument: nt14.i

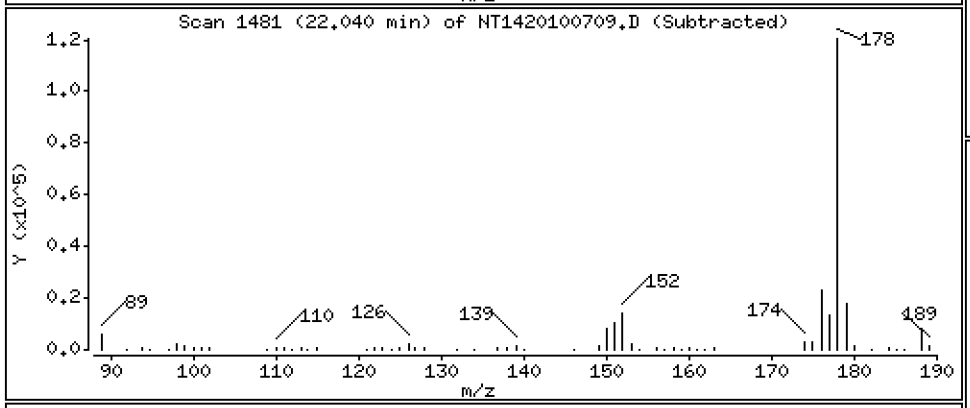
Sample Info: SIJ0085-SCV1

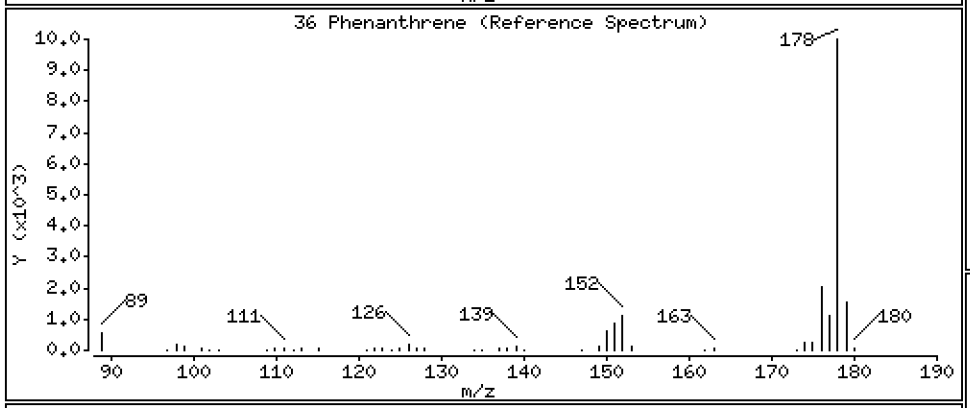
Operator: VTS

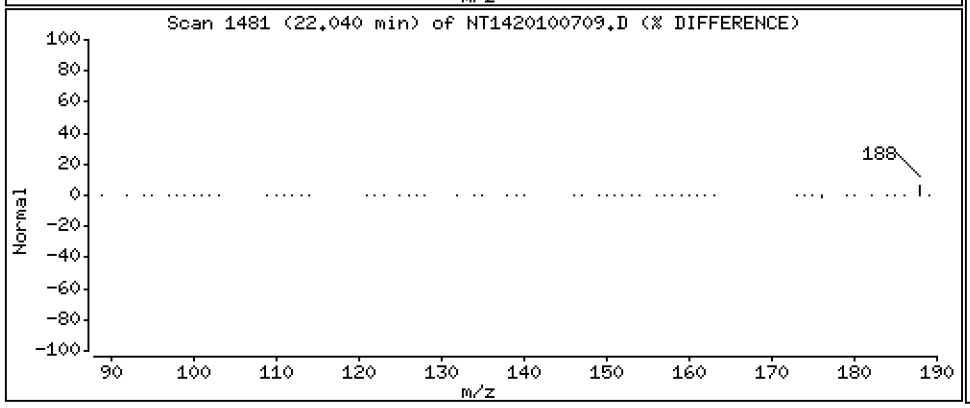
Column phase: Rxi-17Sil MS Column diameter: 0.25

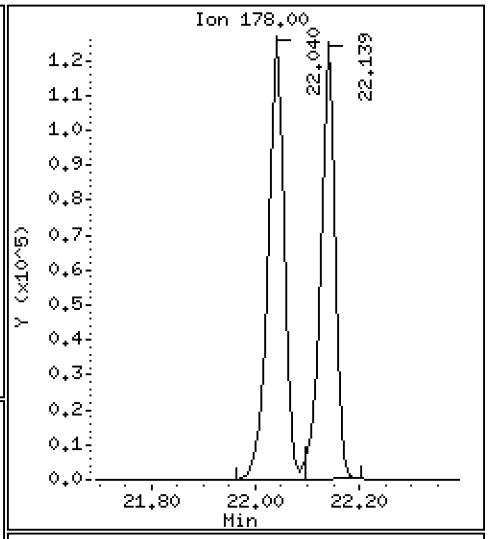
36 Phenanthrene Concentration: 2.454 ug/mL

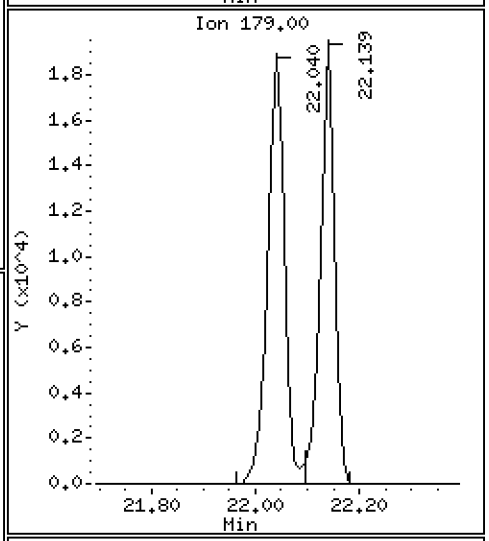


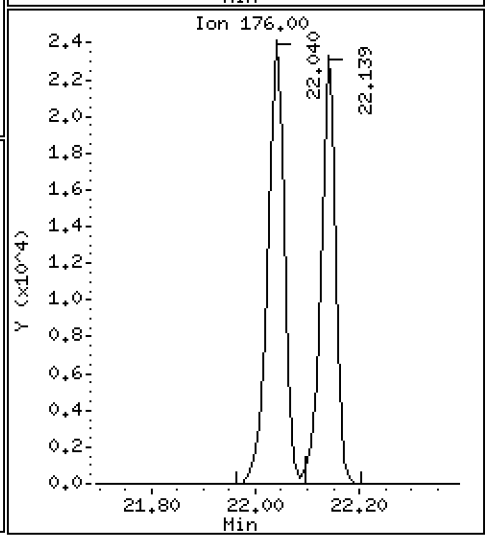












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

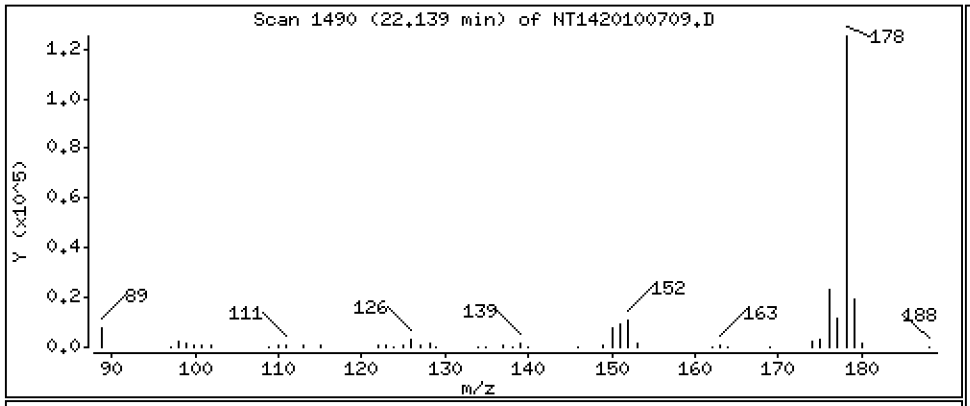
Operator: VTS

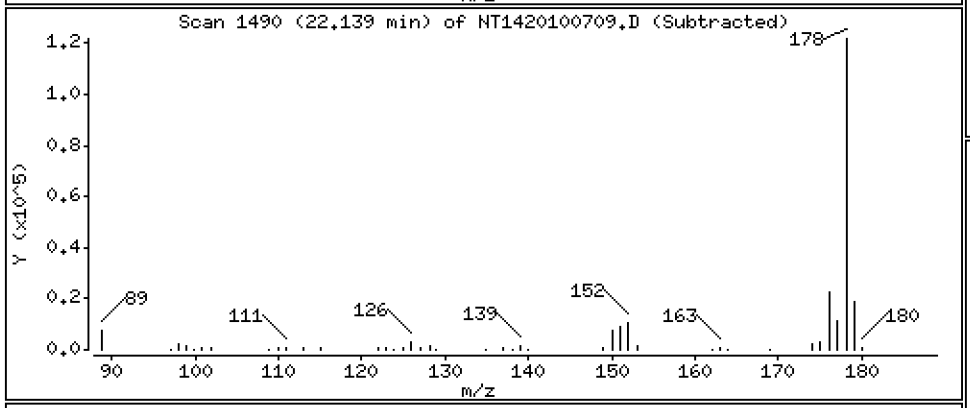
Column phase: Rxi-17Sil MS

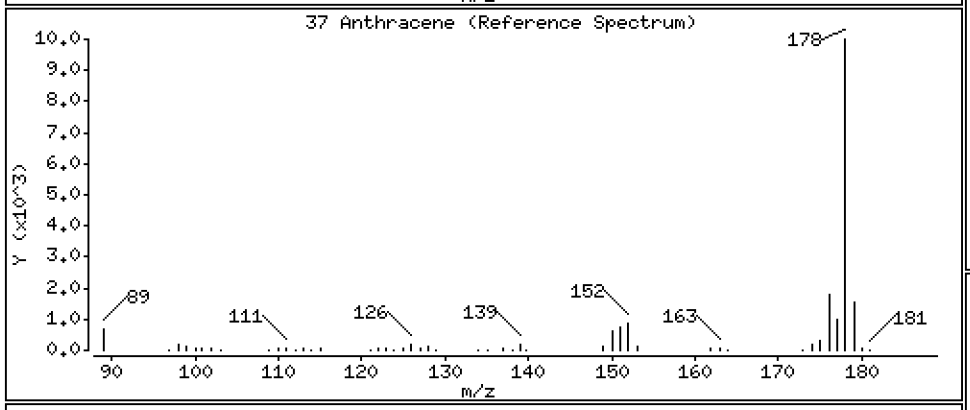
Column diameter: 0.25

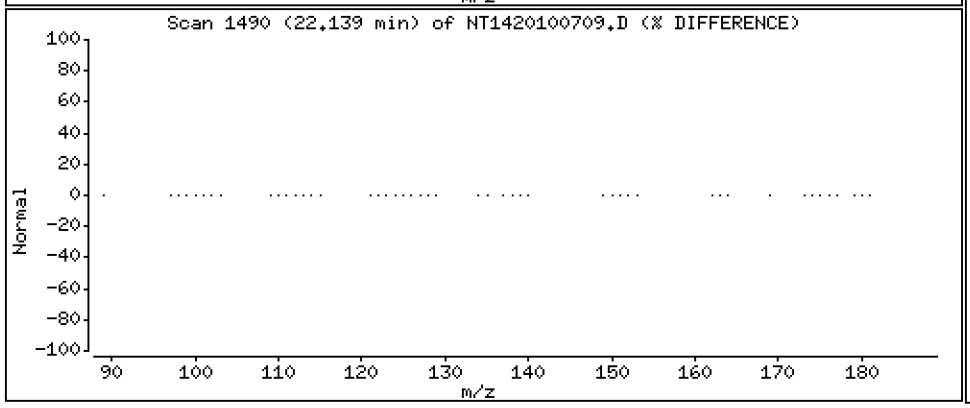
37 Anthracene

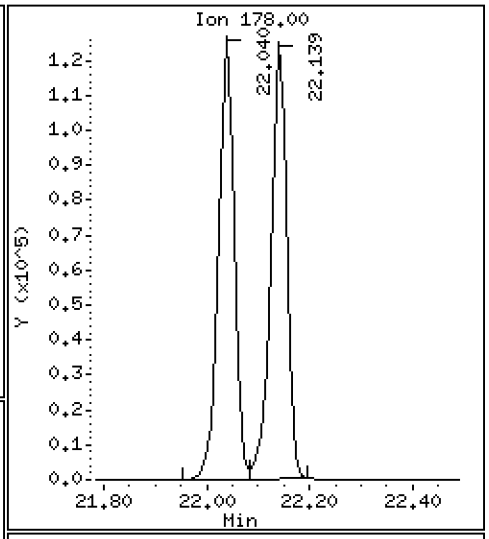
Concentration: 2.385 ug/mL

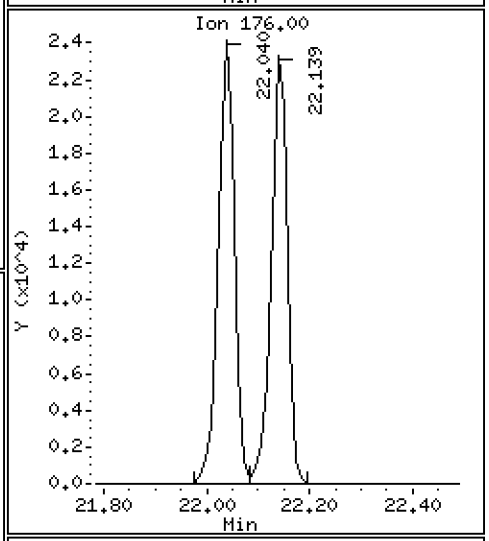


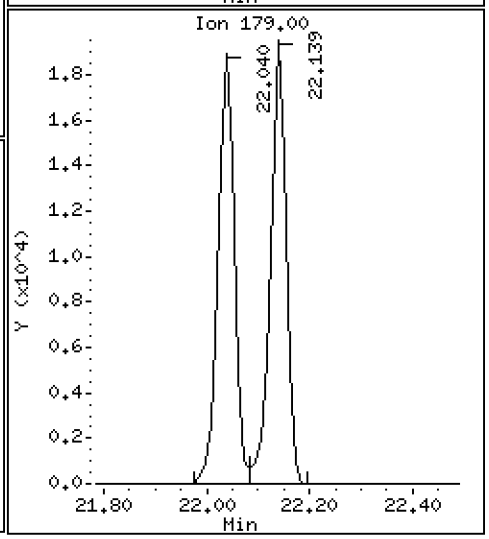












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

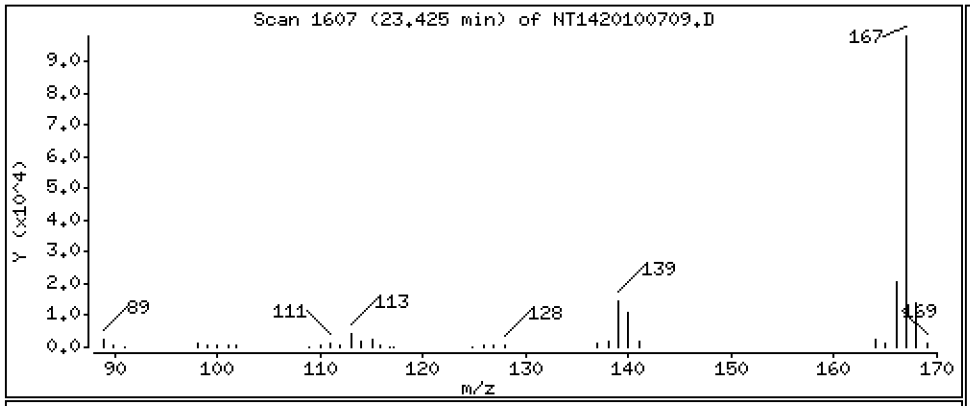
Operator: VTS

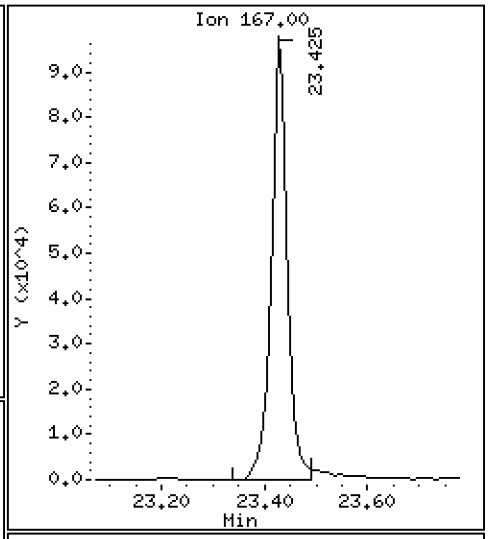
Column phase: Rxi-17Sil MS

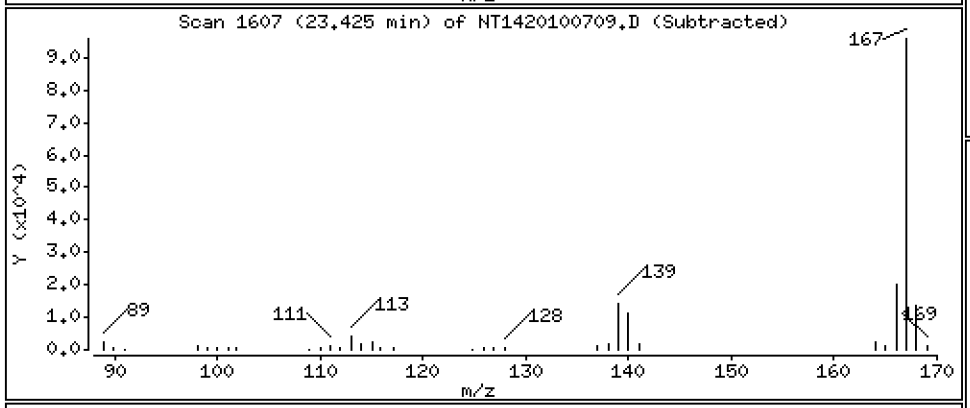
Column diameter: 0.25

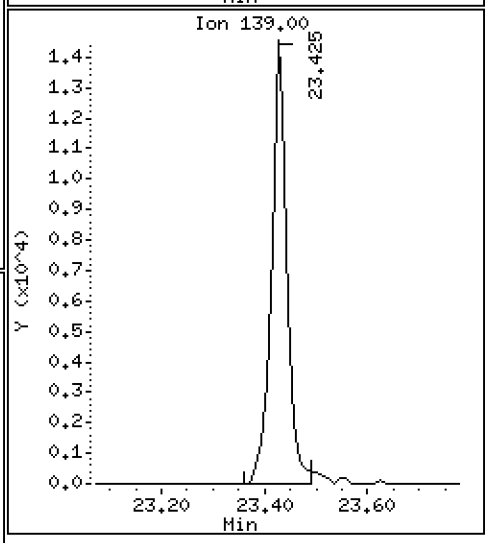
42 Carbazole

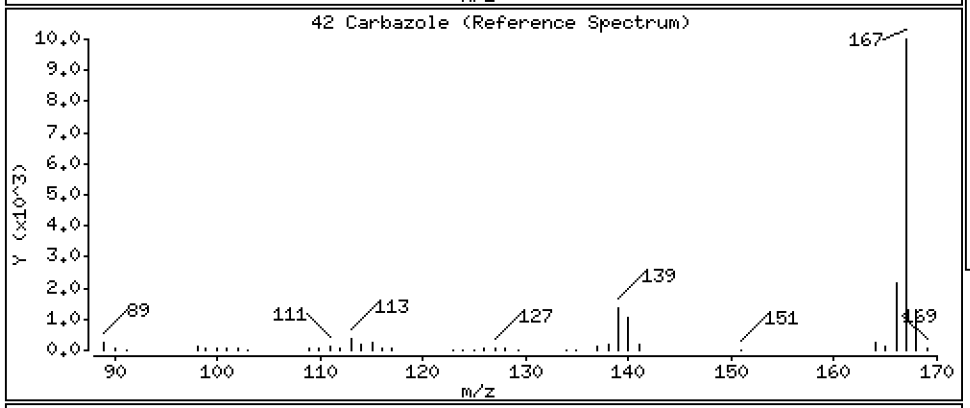
Concentration: 2.354 ug/mL

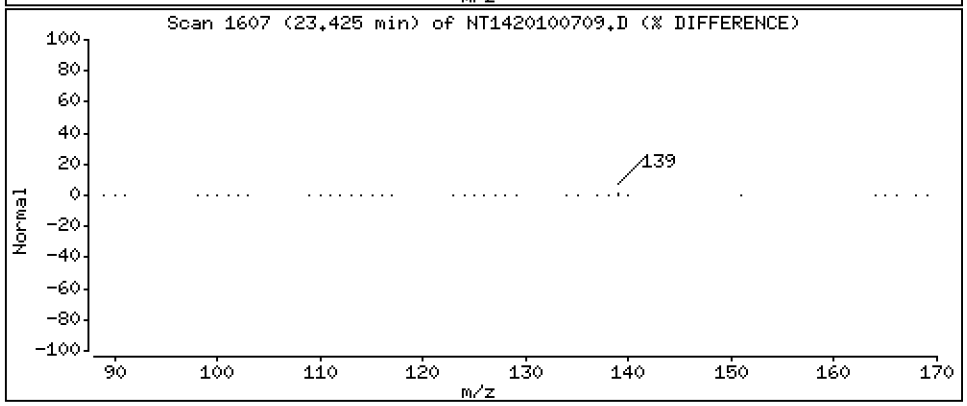












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Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

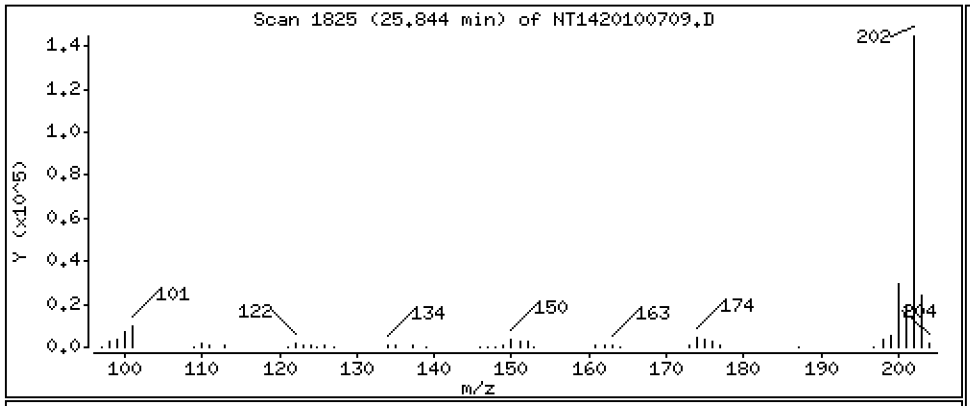
Operator: VTS

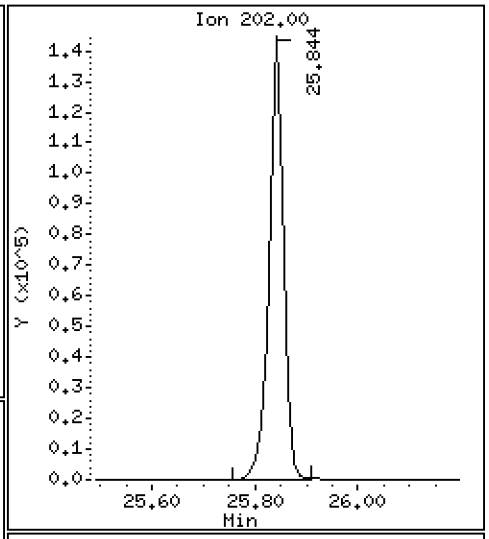
Column phase: Rxi-17Sil MS

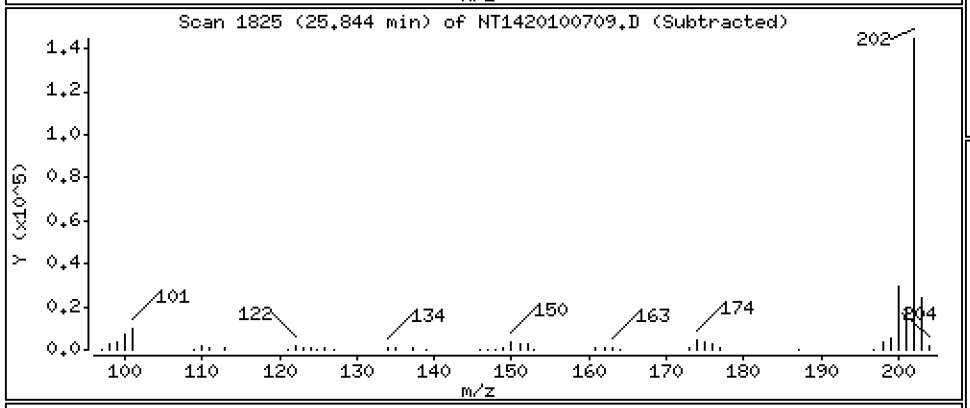
Column diameter: 0.25

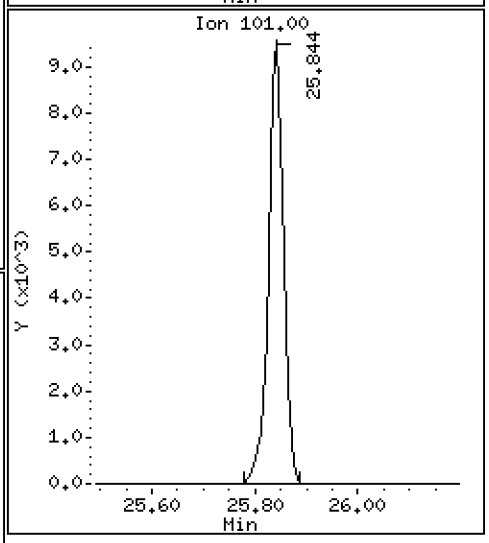
44 Fluoranthene

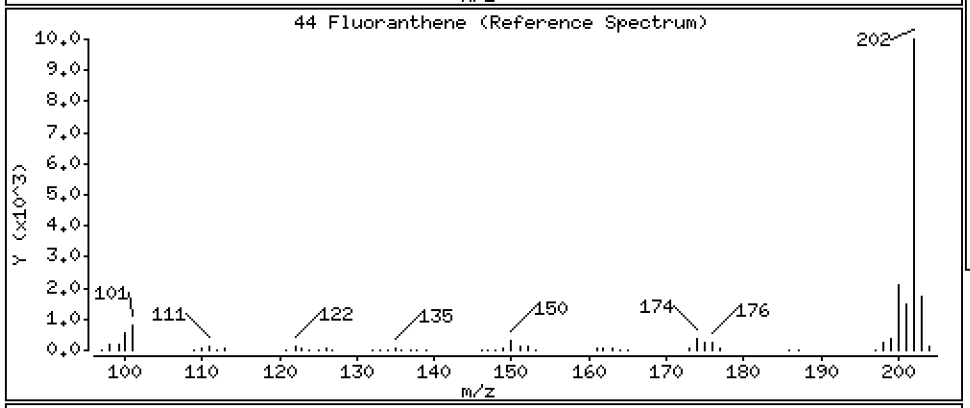
Concentration: 2.436 ug/mL

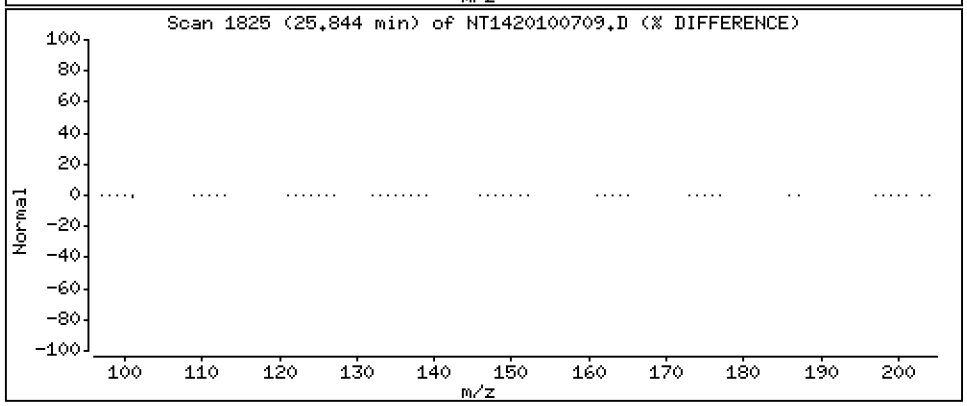












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Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

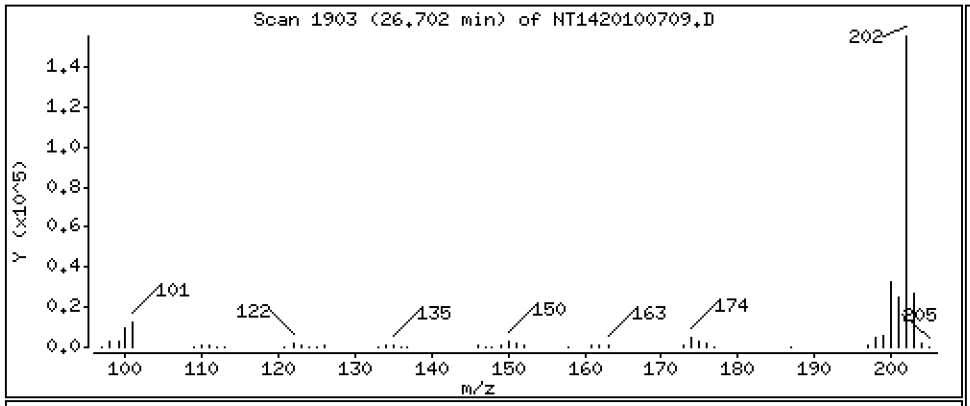
Operator: VTS

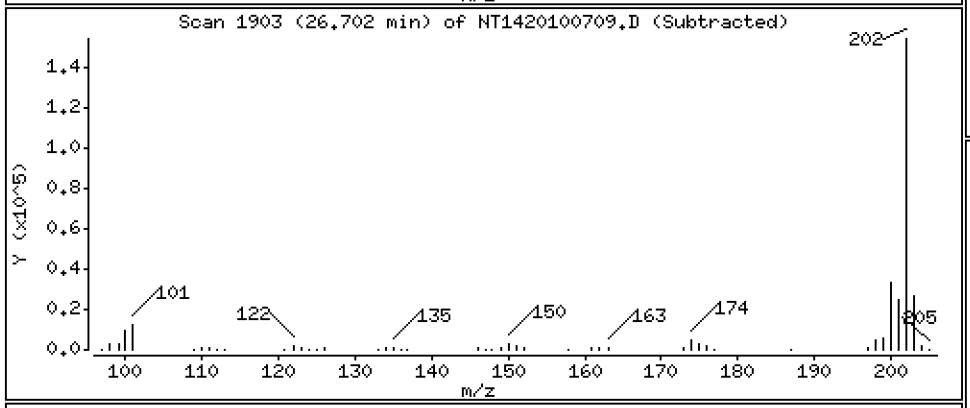
Column phase: Rxi-17Sil MS

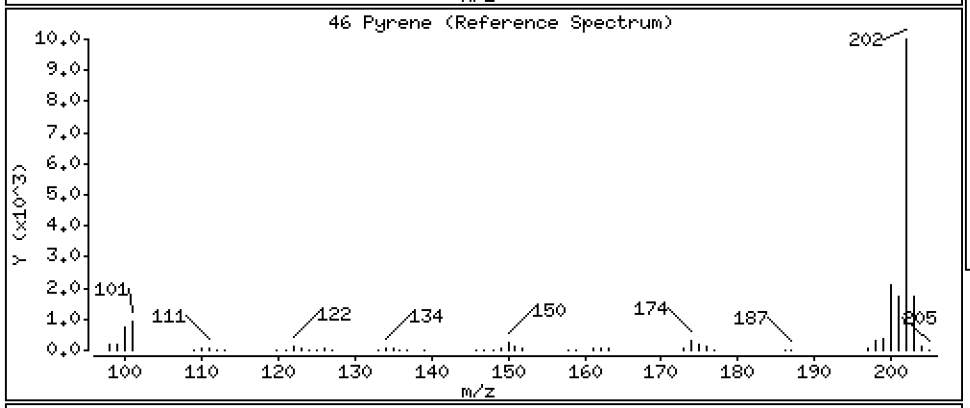
Column diameter: 0.25

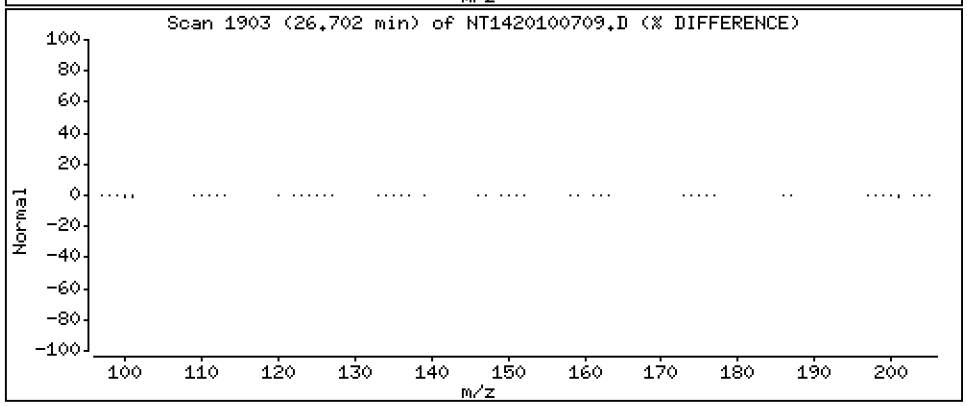
46 Pyrene

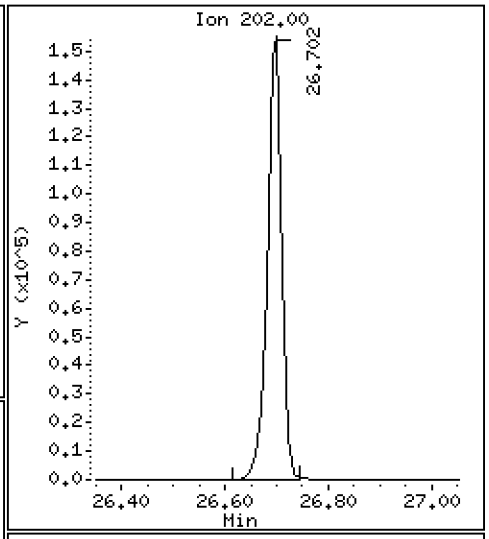
Concentration: 2.497 ug/mL

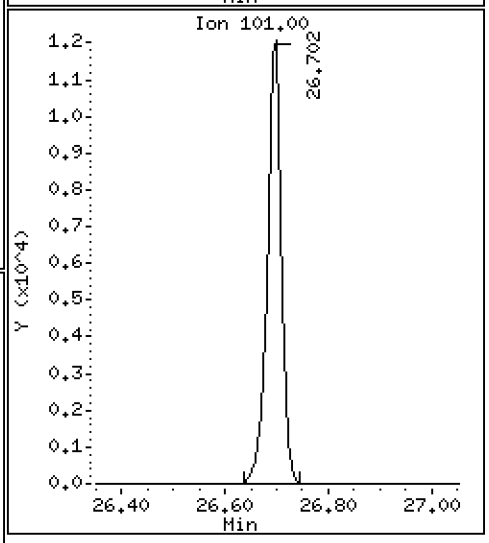












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

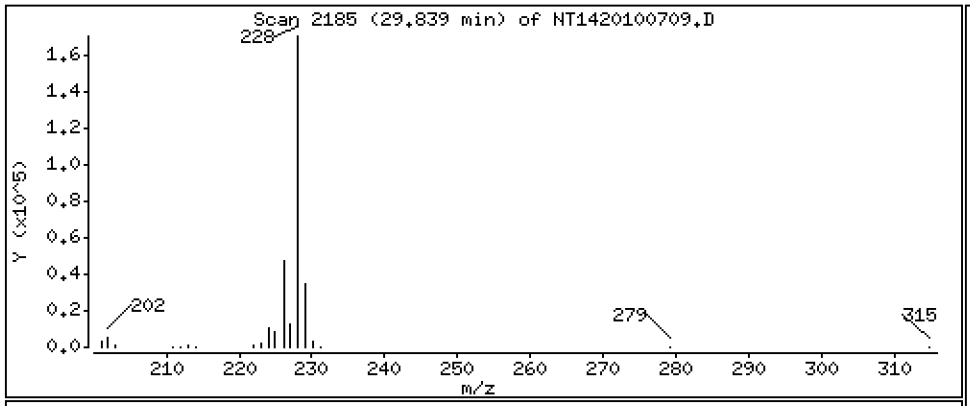
Operator: VTS

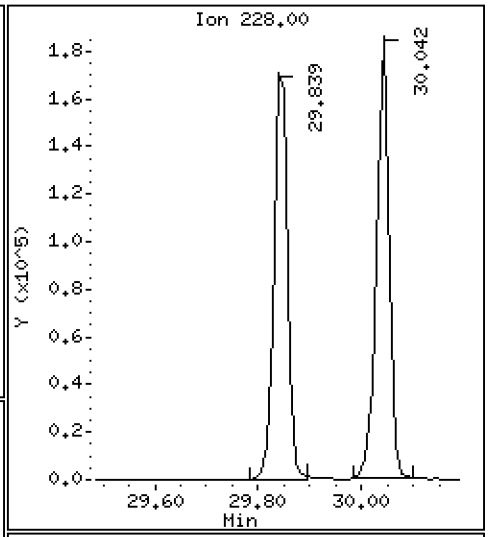
Column phase: Rxi-17Sil MS

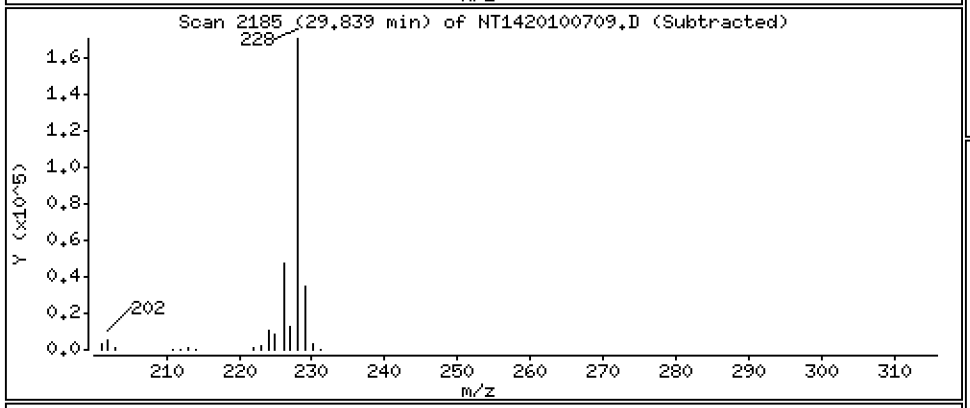
Column diameter: 0.25

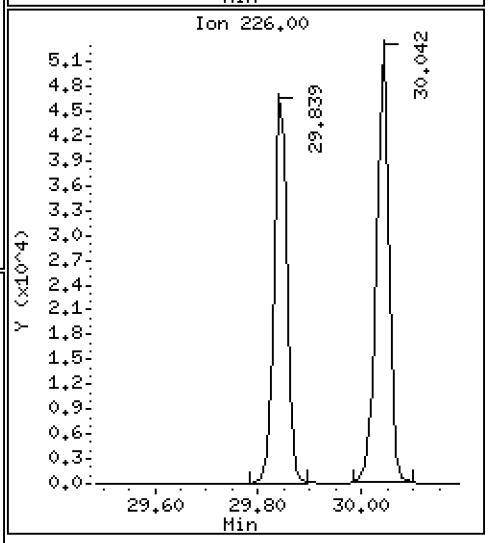
55 Benzo(a)anthracene

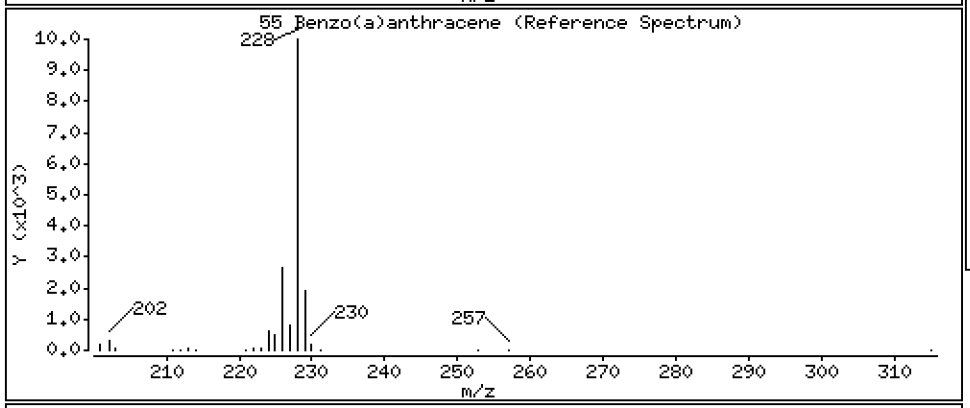
Concentration: 2.581 ug/mL

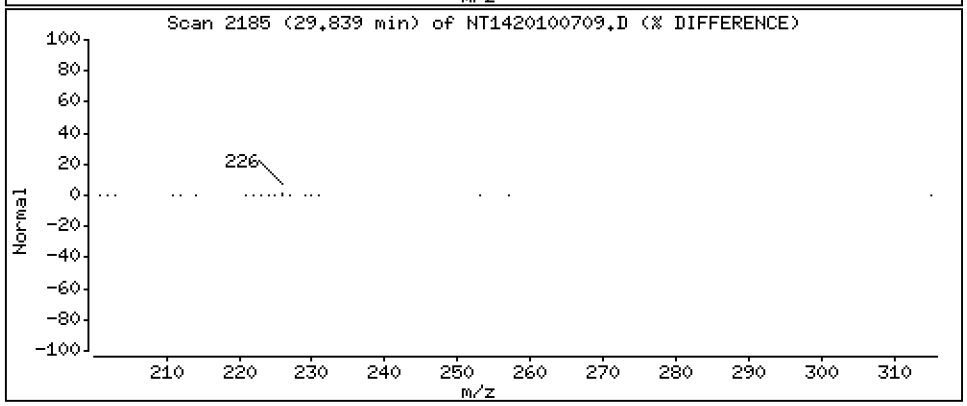












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

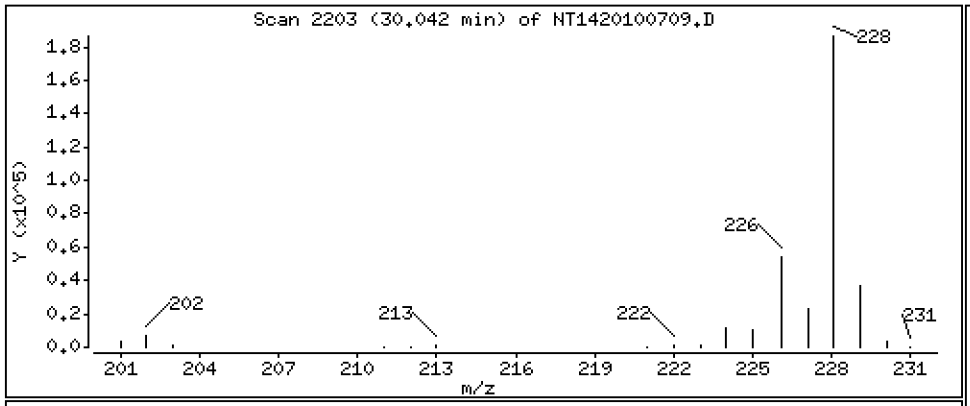
Operator: VTS

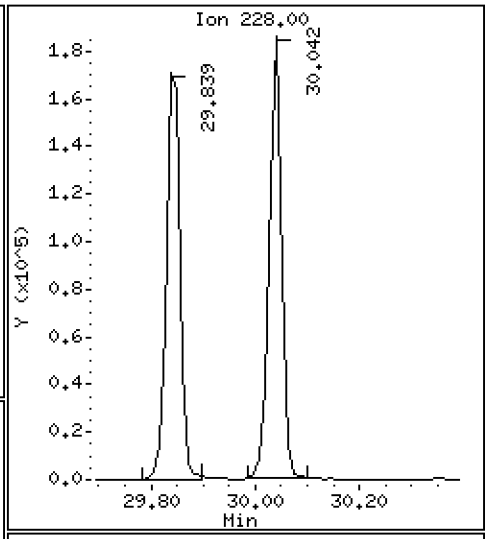
Column phase: Rxi-17Sil MS

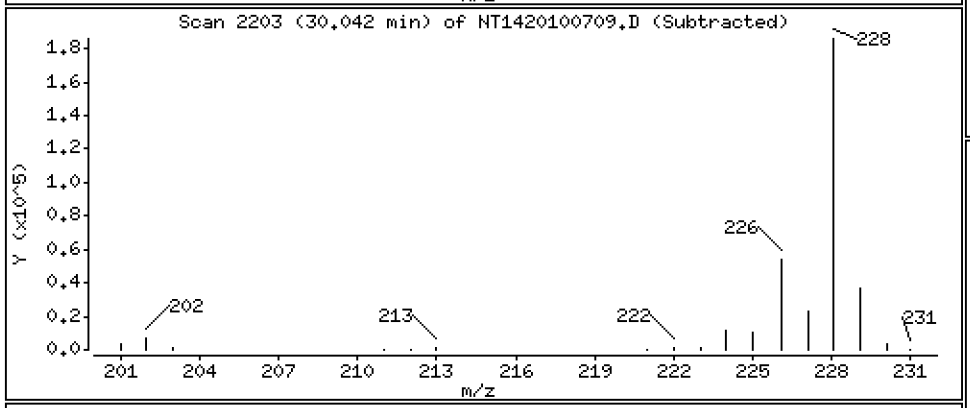
Column diameter: 0.25

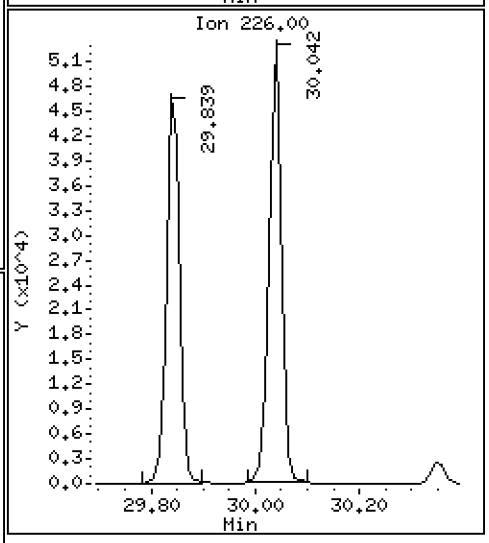
57 Chrysene

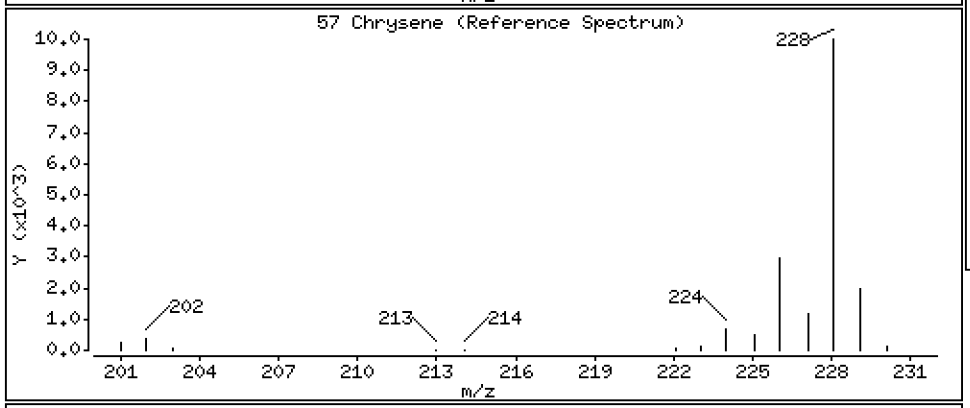
Concentration: 2.516 ug/mL

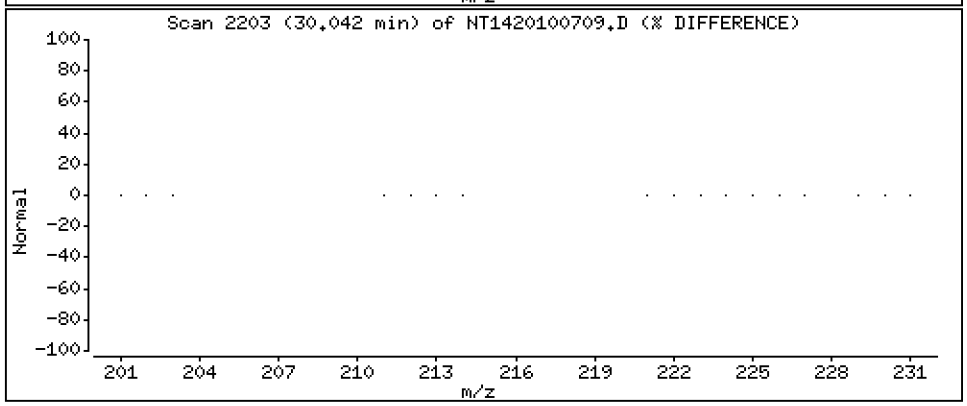












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

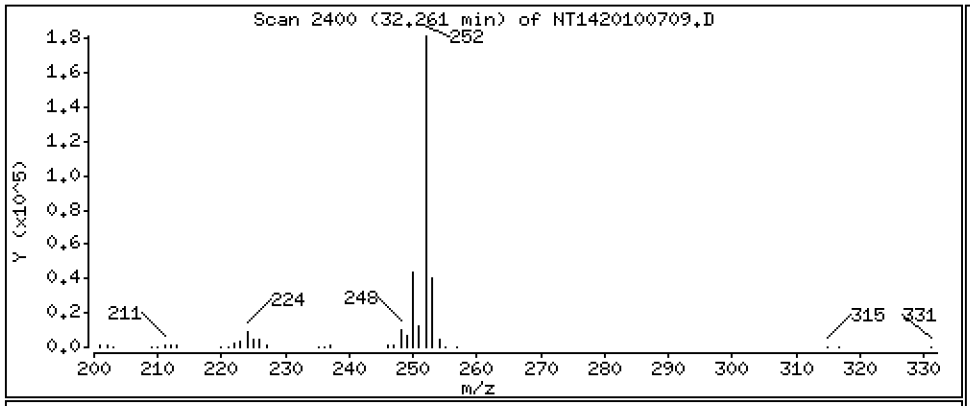
Operator: VTS

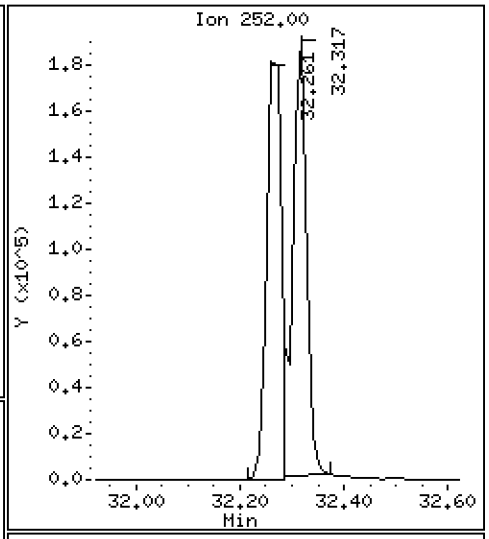
Column phase: Rxi-17Sil MS

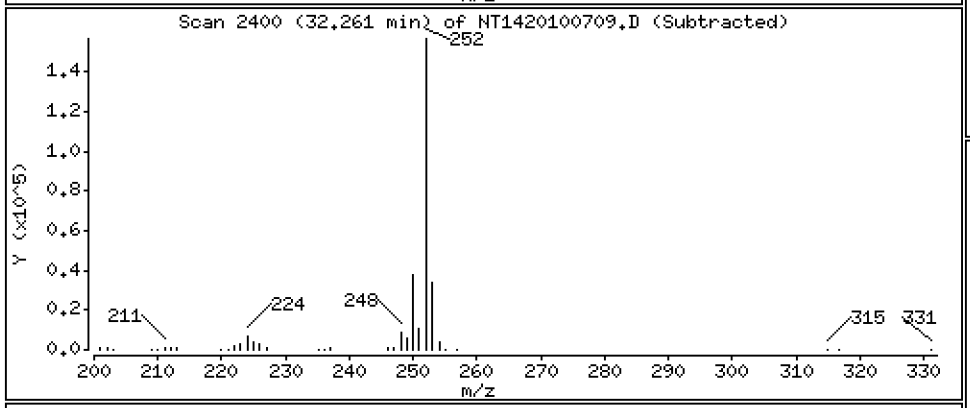
Column diameter: 0.25

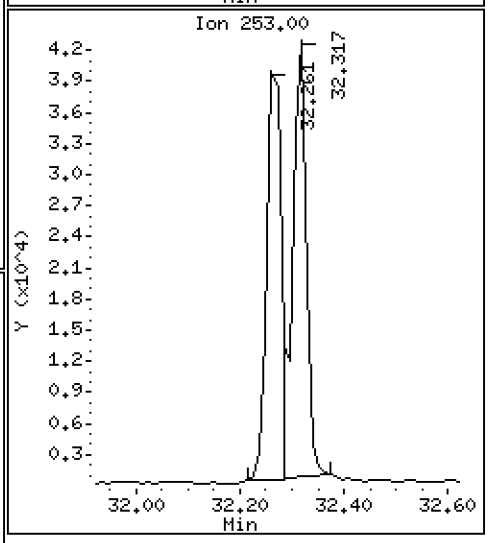
62 Benzo(b)fluoranthene

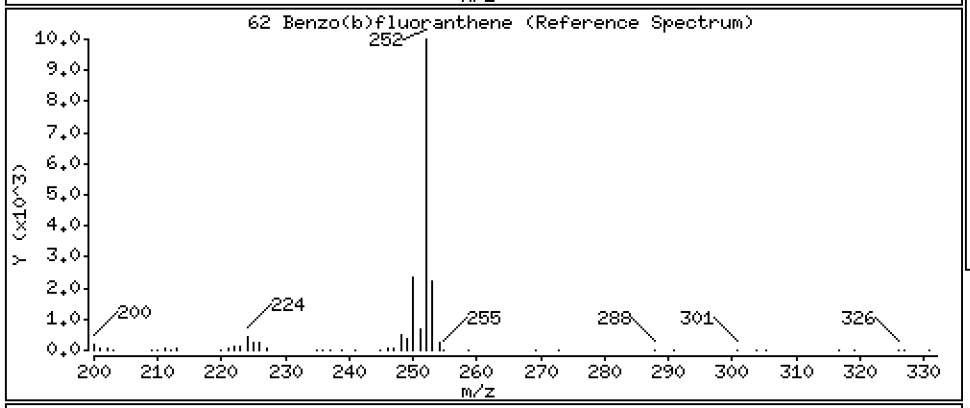
Concentration: 2.387 ug/mL

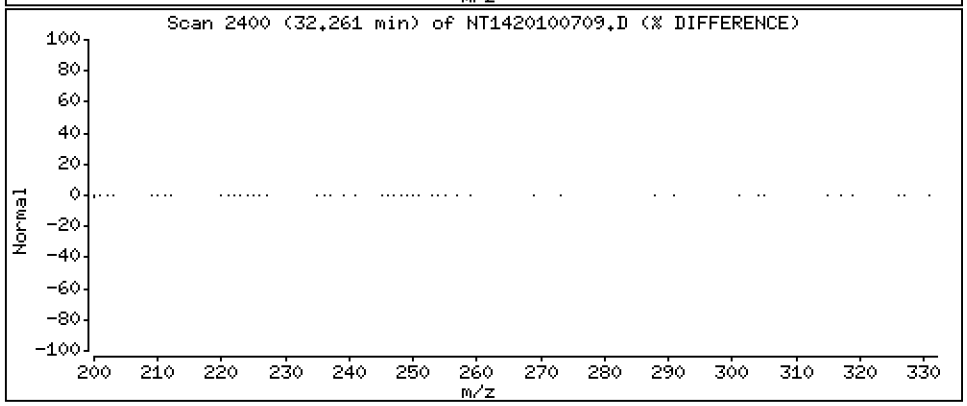












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

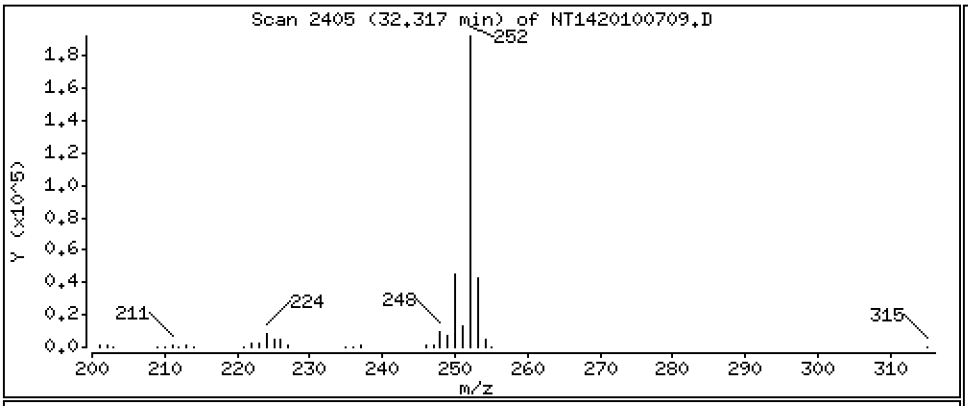
Operator: VTS

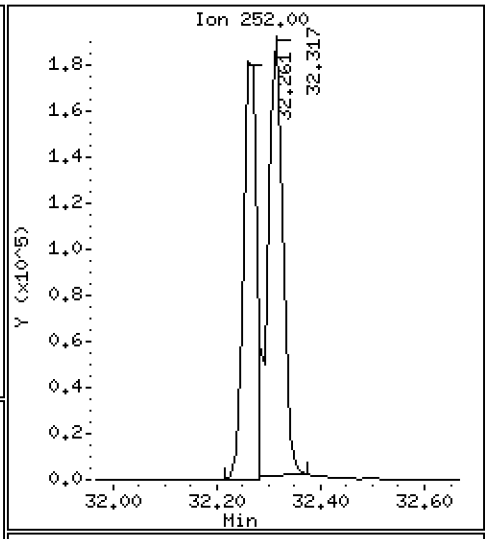
Column phase: Rxi-17Sil MS

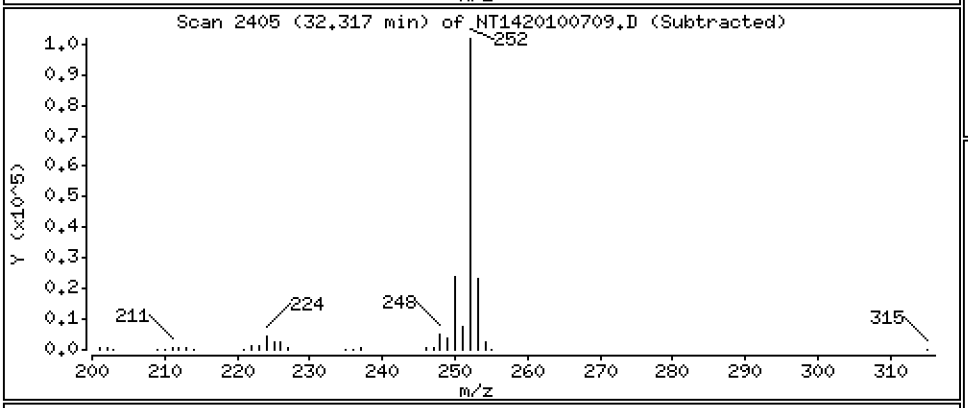
Column diameter: 0.25

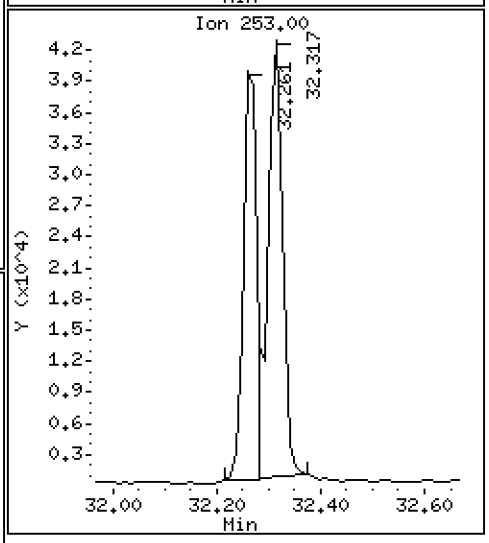
63 Benzo(k)fluoranthene

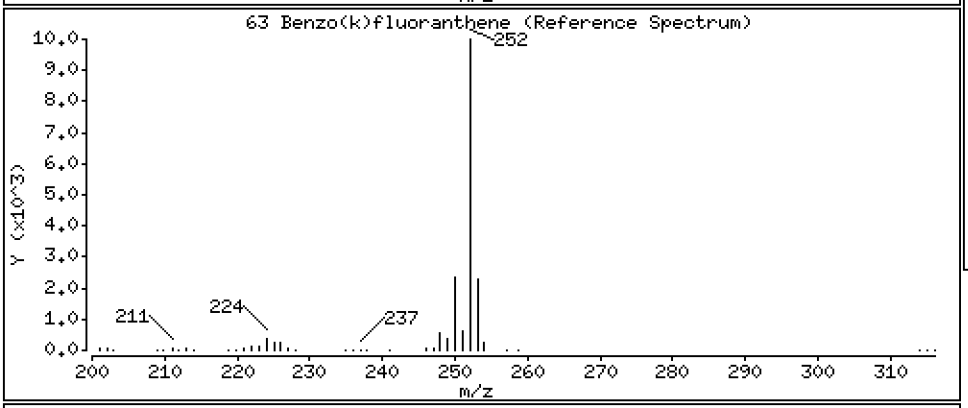
Concentration: 2.656 ug/mL

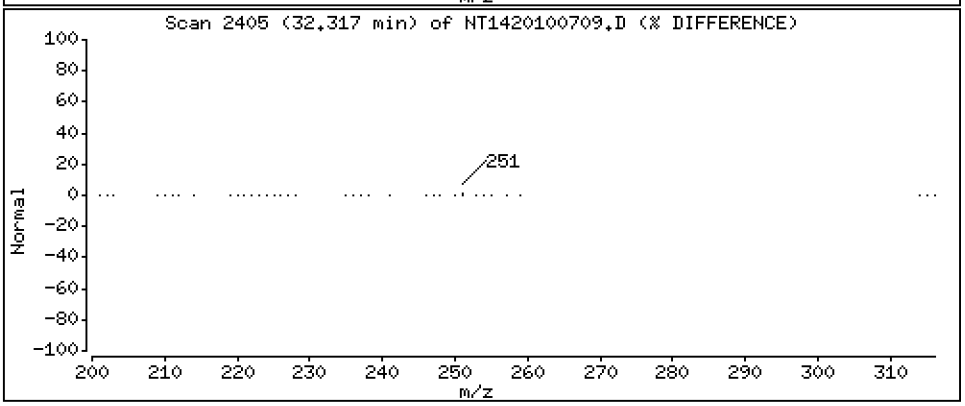












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

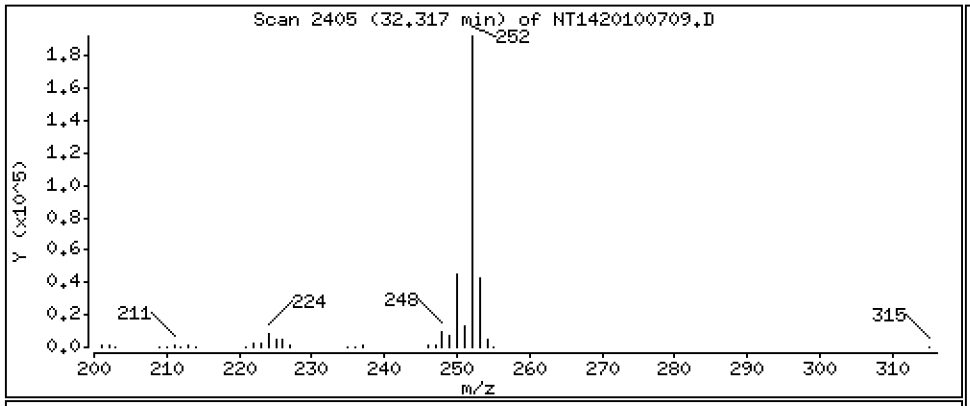
Operator: VTS

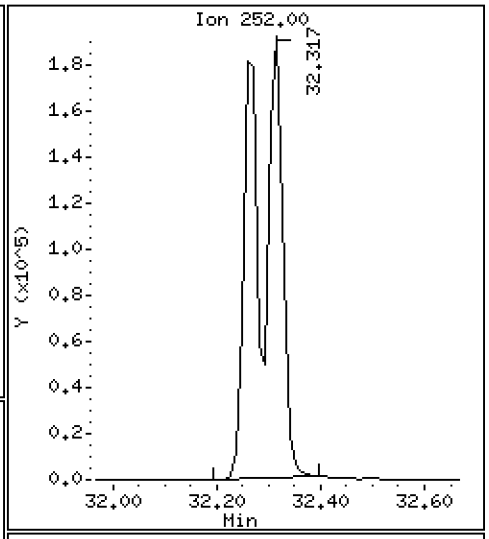
Column phase: Rxi-17Sil MS

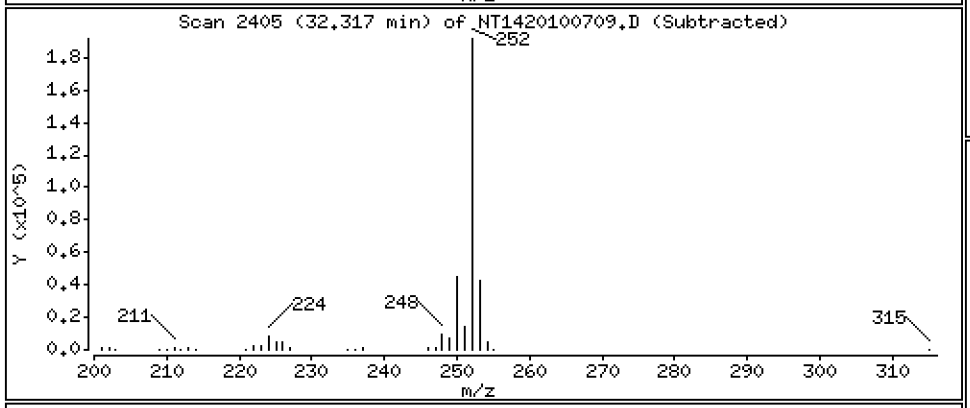
Column diameter: 0.25

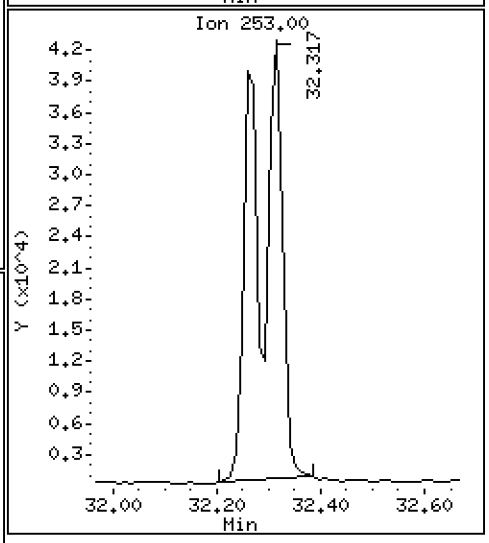
246 Total Benzofluoranthenes

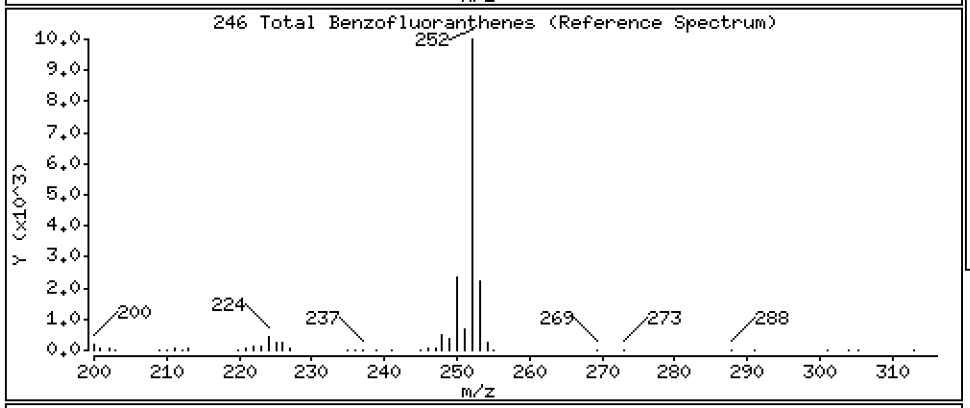
Concentration: 5.207 ug/mL

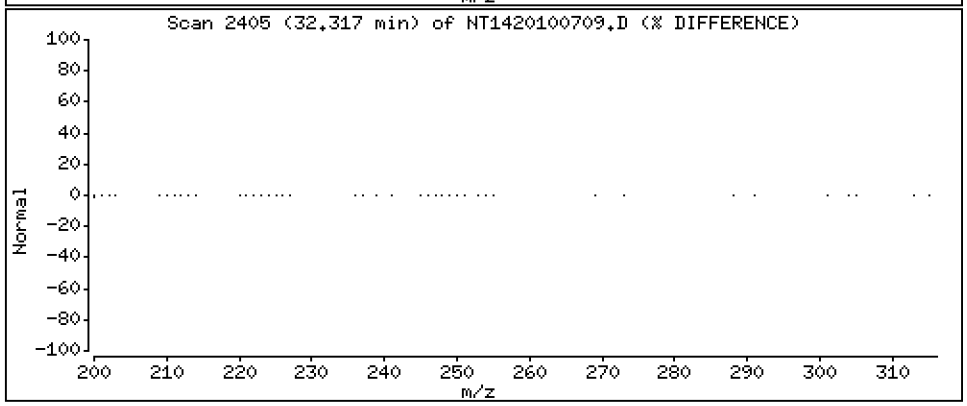












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

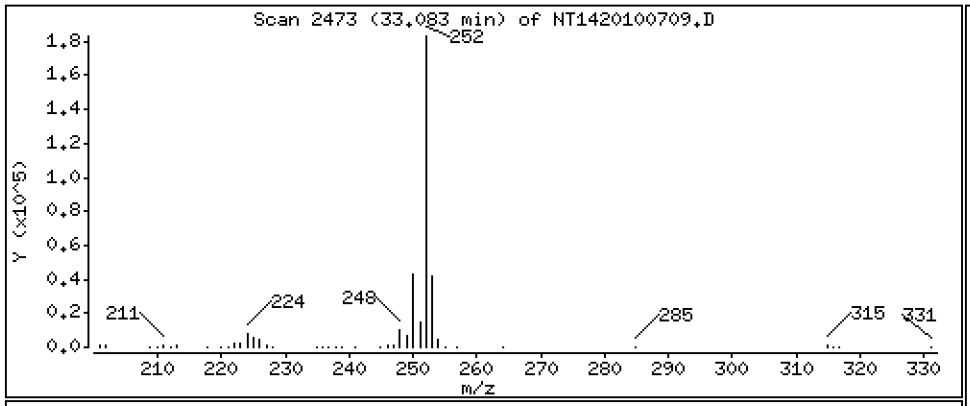
Operator: VTS

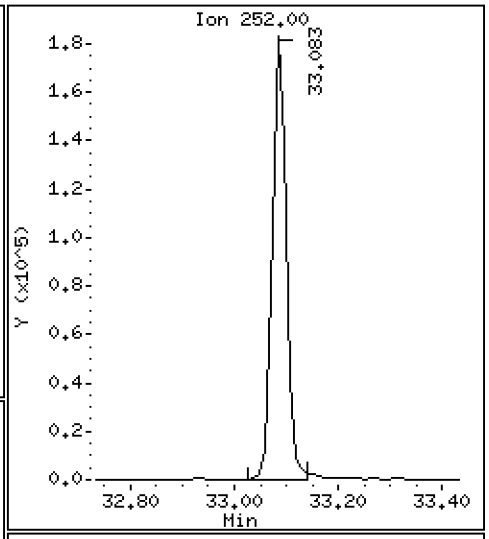
Column phase: Rxi-17Sil MS

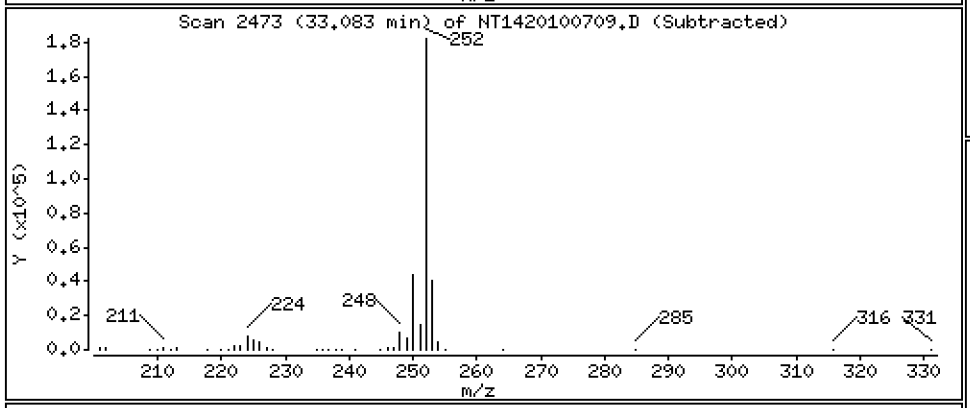
Column diameter: 0.25

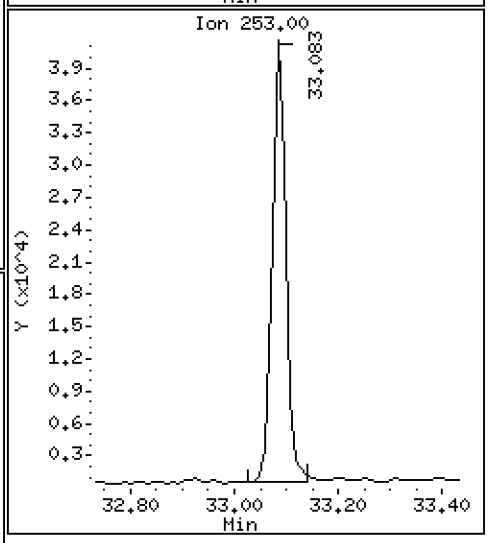
66 Benzo(a)pyrene

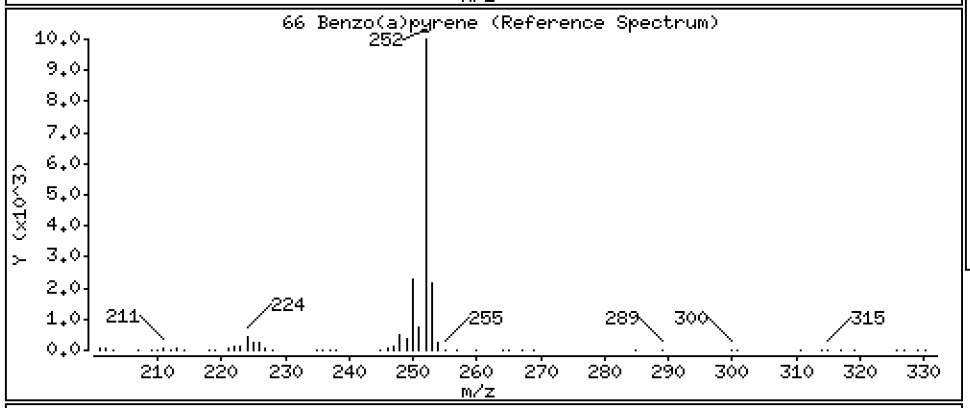
Concentration: 2.617 ug/mL

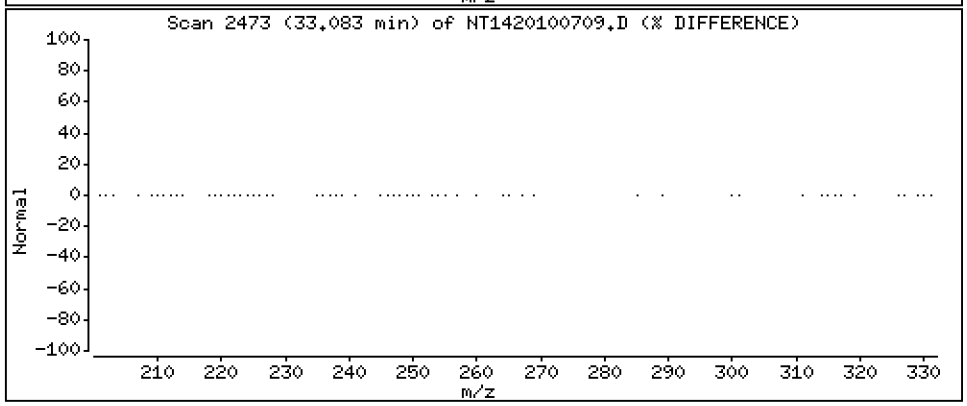












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

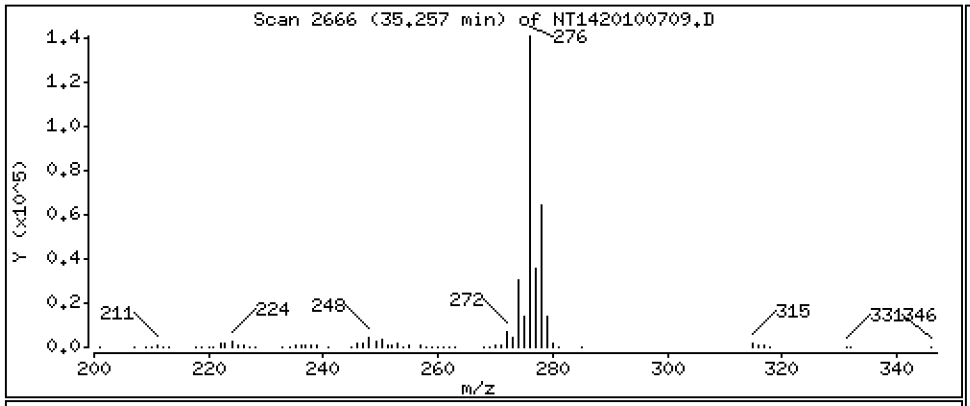
Operator: VTS

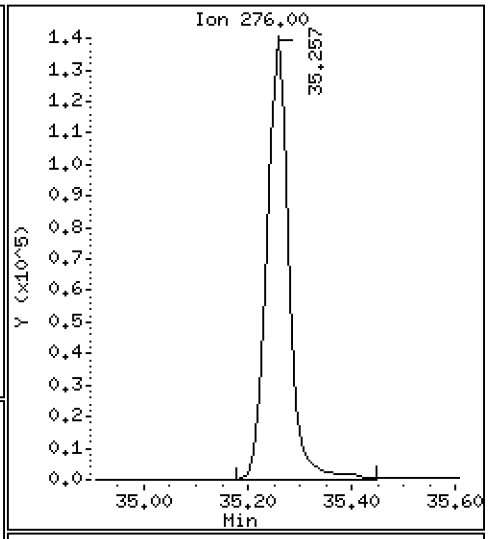
Column phase: Rxi-17Sil MS

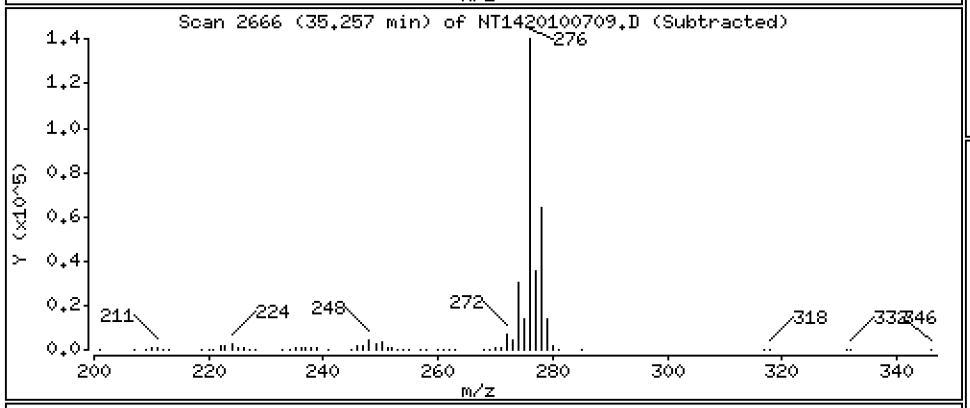
Column diameter: 0.25

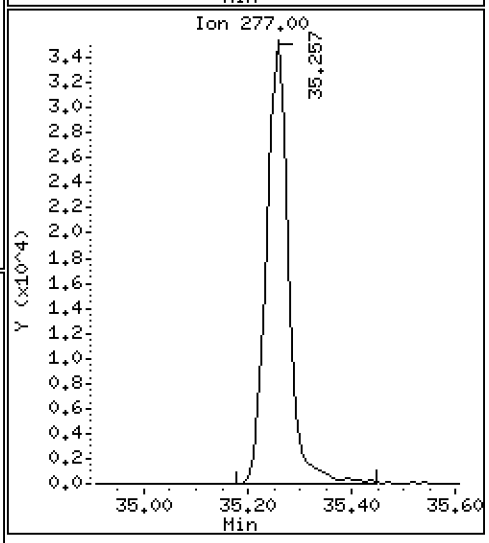
69 Indeno(1,2,3-cd)pyrene

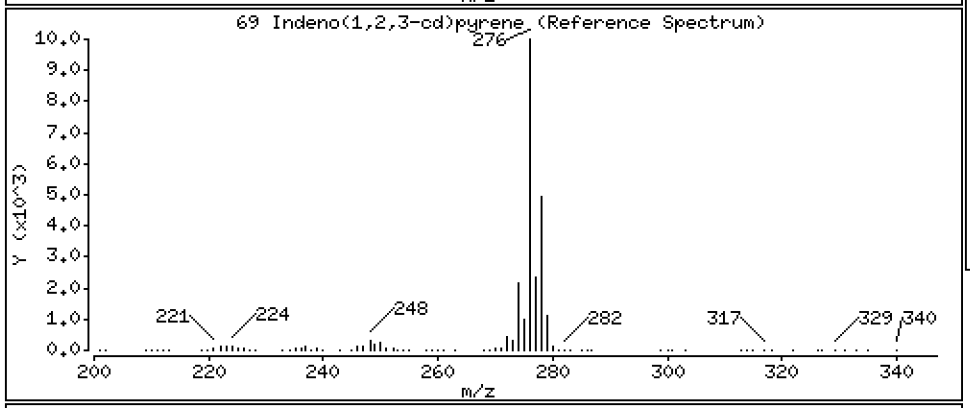
Concentration: 2.625 ug/mL

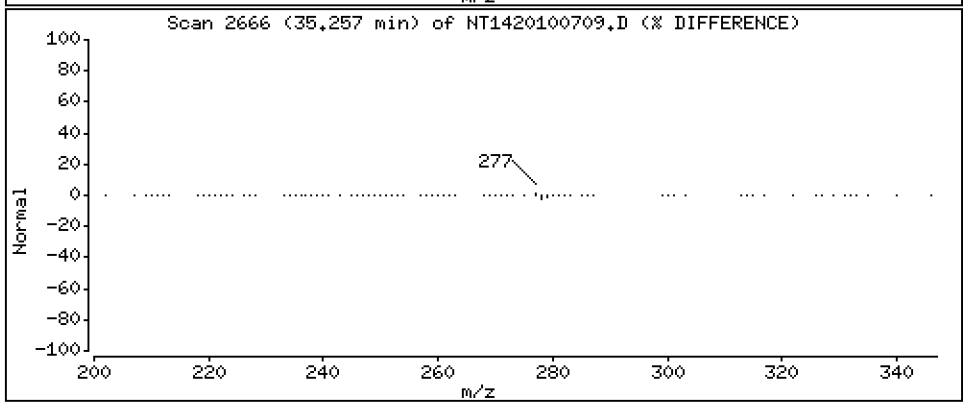












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

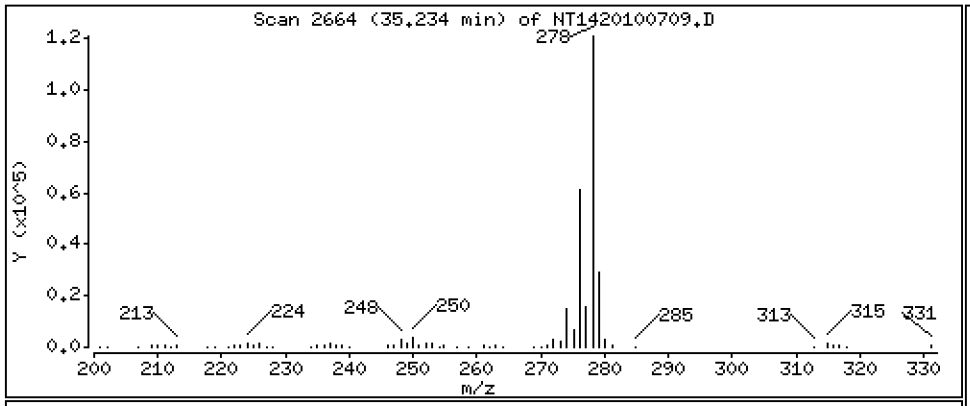
Operator: VTS

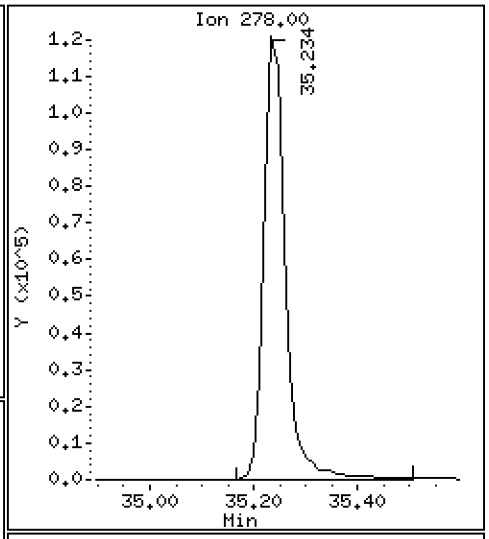
Column phase: Rxi-17Sil MS

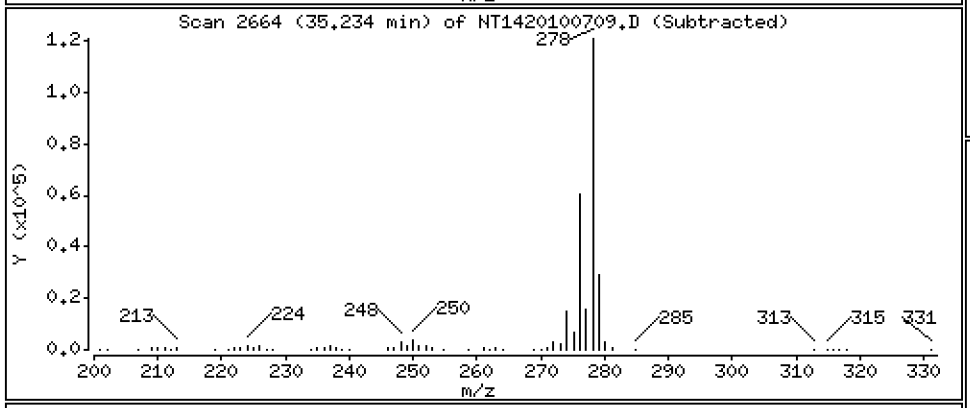
Column diameter: 0.25

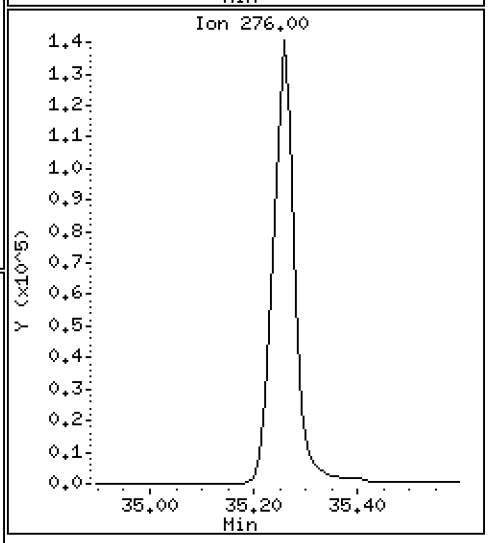
70 Dibenzo(a,h)anthracene

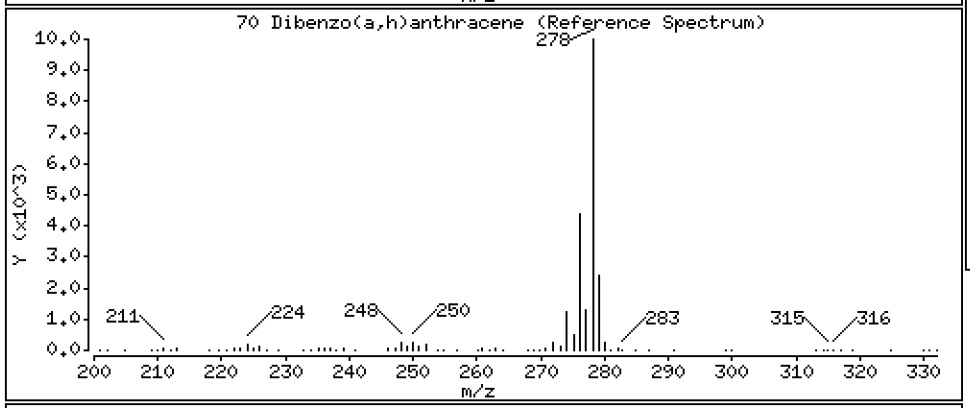
Concentration: 2.517 ug/mL

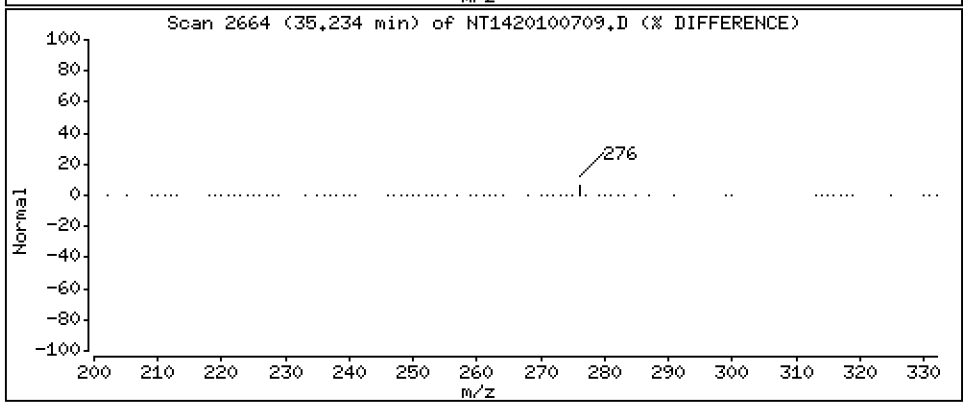












Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D

Date : 07-OCT-2020 16:45

Client ID:

Instrument: nt14.i

Sample Info: SIJ0085-SCV1

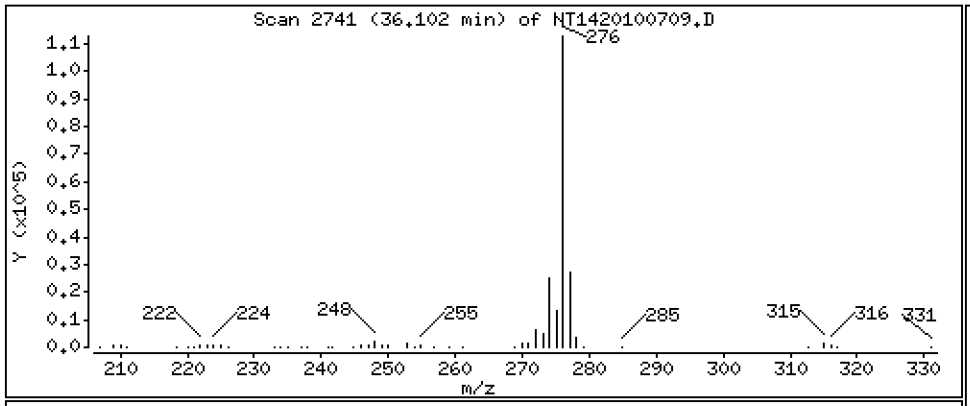
Operator: VTS

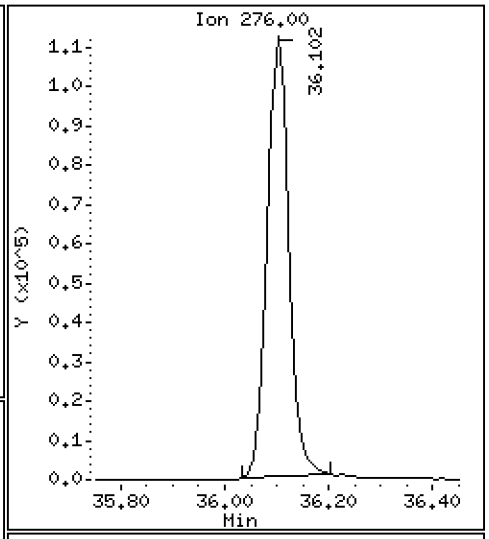
Column phase: Rxi-17Sil MS

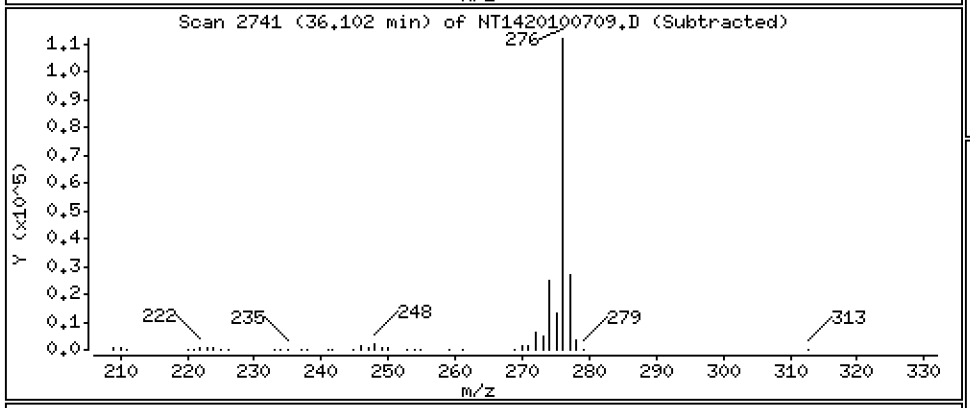
Column diameter: 0.25

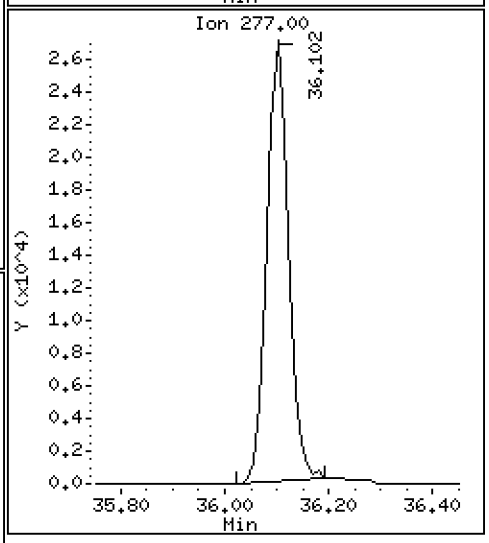
74 Benzo(g,h,i)perylene

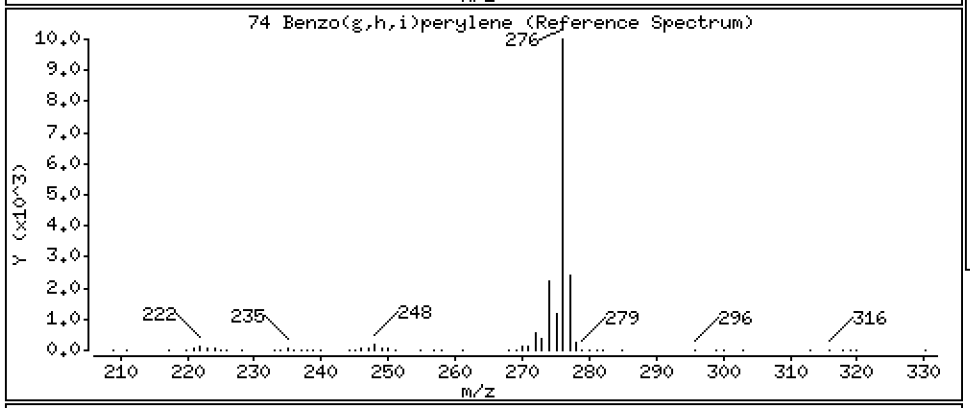
Concentration: 2.329 ug/mL

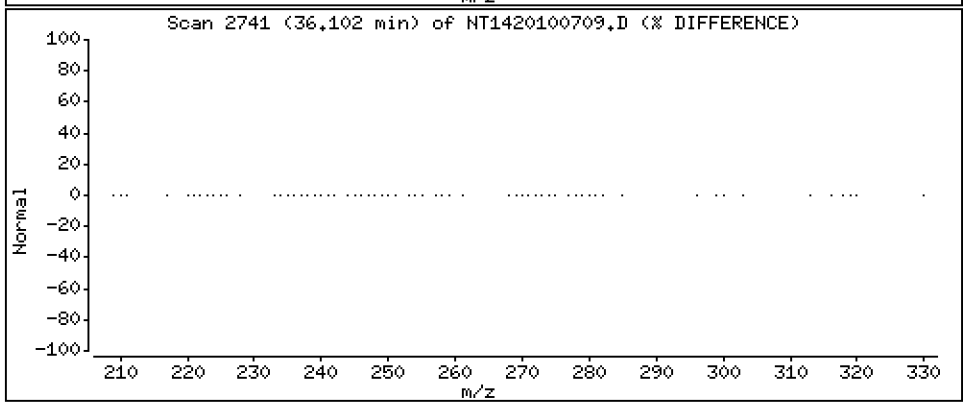












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D
Lab Smp Id: SIJ0085-SCV1
Inj Date : 07-OCT-2020 16:45
Operator : VTS Inst ID: nt14.i
Smp Info : SIJ0085-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Meth Date : 09-Oct-2020 08:45 van Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (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	11.707	11.707	(0.628)	213173	2.75707	2.757
	12 Benzo(b)thiophene	134	Compound Not Detected.					
	16 2-Methylnaphthalene	141	13.542	13.542	(0.727)	132308	2.80714	2.807
	17 1-methylnaphthalene	141	13.992	13.992	(0.751)	134040	2.83535	2.835
	18 Biphenyl	154	Compound Not Detected.					
	19 2,6-Dimethylnaphthalene	156	Compound Not Detected.					
	20 Acenaphthylene	152	16.817	16.817	(0.903)	244094	2.87456	2.875
$	21 Acenaphthene-d10	164	17.135	17.103	(0.920)	20448	0.44062	0.4406(R)
	22 Acenaphthene	153	17.223	17.223	(0.924)	150978	2.71407	2.714
	23 Dibenzofuran	168	17.597	17.597	(0.944)	249328	3.08950	3.090
	24 1,6,7-Trimethylnaphthalene	170	Compound Not Detected.					
*	25 Fluorene-d10	176	18.632	18.632	(1.000)	189405	2.00000	
	26 Fluorene	166	18.746	18.746	(1.006)	186659	2.96697	2.967
	30 Dibenzothiophene	184	Compound Not Detected.					
$	35 Phenanthrene-d10	188	Compound Not Detected.					
	36 Phenanthrene	178	22.040	22.040	(0.999)	276406	2.45432	2.454
*	250 Anthracene-d10	188	22.072	22.072	(1.000)	203362	2.00000	
	37 Anthracene	178	22.138	22.138	(1.003)	263969	2.38495	2.385
	42 Carbazole	167	23.425	23.425	(1.061)	225622	2.35395	2.354
	43 1-Methylphenanthrene	192	Compound Not Detected.					
	44 Fluoranthene	202	25.843	25.843	(1.171)	302784	2.43596	2.436
	46 Pyrene	202	26.701	26.701	(1.210)	327478	2.49671	2.497
	51 Naphthobenzothiophene	234	Compound Not Detected.					
	55 Benzo(a)anthracene	228	29.839	29.839	(0.906)	321298	2.58148	2.581
$	56 Chrysene-d12	240	Compound Not Detected.					
	57 Chrysene	228	30.042	30.042	(0.912)	311187	2.51557	2.516
	62 Benzo(b)fluoranthene	252	32.260	32.272	(0.980)	335486	2.38726	2.387
	63 Benzo(k)fluoranthene	252	32.317	32.317	(0.982)	376214	2.65607	2.656
	293 Benzo(j)fluoranthene	252	Compound Not Detected.					
	246 Total Benzofluoranthenes	252	32.317	32.317	(0.982)	678991	5.20731	5.207(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.925	32.925	(1.000)	288304	2.00000	
64 Benzo(e)pyrene	252	Compound Not Detected.					
66 Benzo(a)pyrene	252	33.083	33.083	(1.005)	318127	2.61683	2.617
$ 67 Perylene-d12	264	Compound Not Detected.					
68 Perylene	252	Compound Not Detected.					
69 Indeno(1,2,3-cd)pyrene	276	35.256	35.256	(1.071)	395155	2.62484	2.625
70 Dibenzo(a,h)anthracene	278	35.234	35.245	(1.070)	334739	2.51676	2.517
74 Benzo(g,h,i)perylene	276	36.101	36.101	(1.096)	307983	2.32872	2.329(M)

QC Flag Legend

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

Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100709.D Page 1
Report Date: 09-Oct-2020 08:51

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1420100709.D
Lab Smp Id: SIJ0085-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Misc Info:

Calibration Date: 07-OCT-2020
Calibration Time: 18:22
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	209596	104798	419192	189405	-9.63
250 Anthracene-d10	192407	96204	384814	203362	5.69
251 Benzo(e)pyrene-d1	274120	137060	548240	288304	5.17

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.63	18.13	19.13	18.63	0.00
250 Anthracene-d10	22.07	21.57	22.57	22.07	0.00
251 Benzo(e)pyrene-d1	32.93	32.43	33.43	32.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1420100709.D

Lab ID: SIJ0085-SCV1
nt14.i, 20201007.b\ALKYLPNA.m, 07-OCT-2020 16:45

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

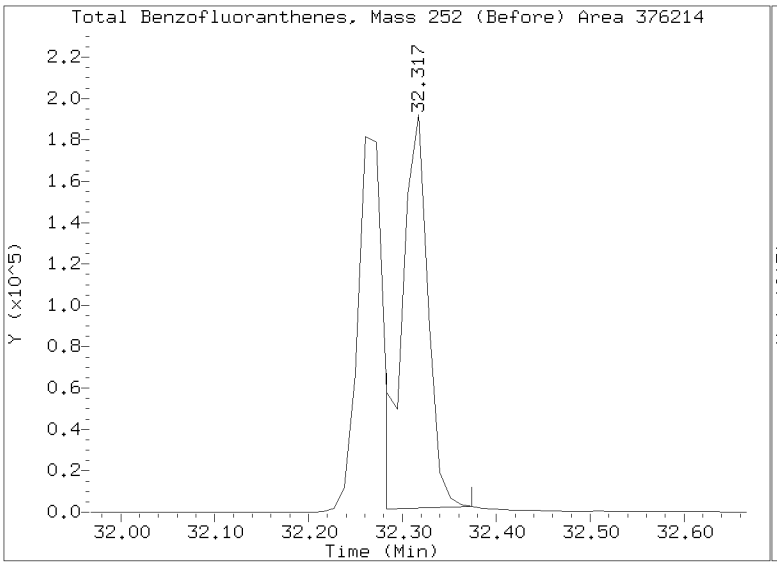
RRT check based on Ccal File: NT1420100711.D

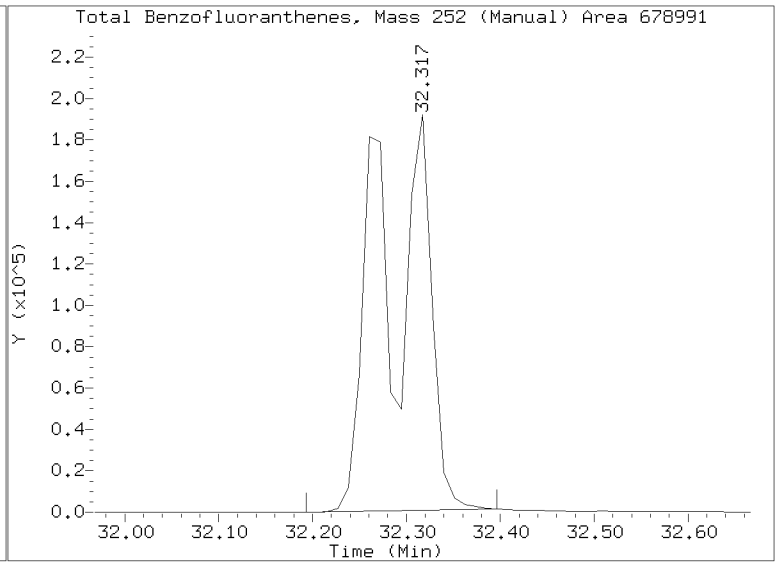
On Column LOD for nt14.i, 20201007.b\ALKYLPNA.m, TARGETS.sub = 0.0000

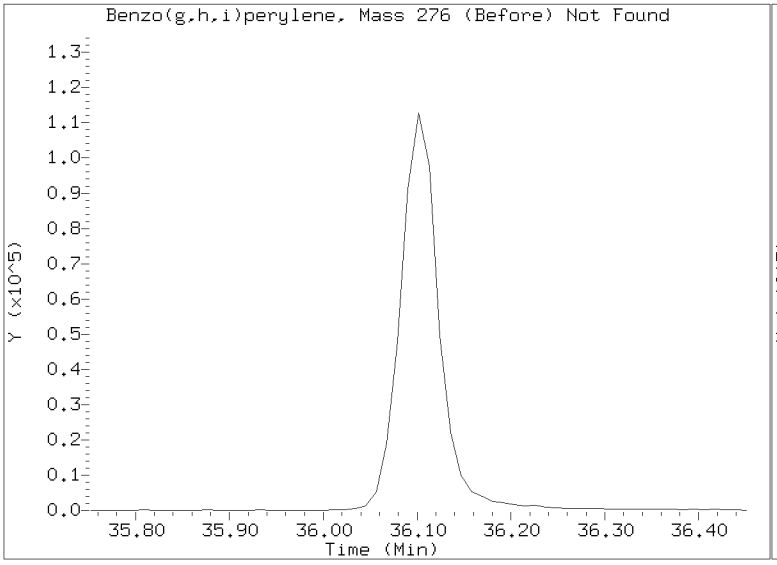
* Only compounds listed in the work order have been verified by the analyst *

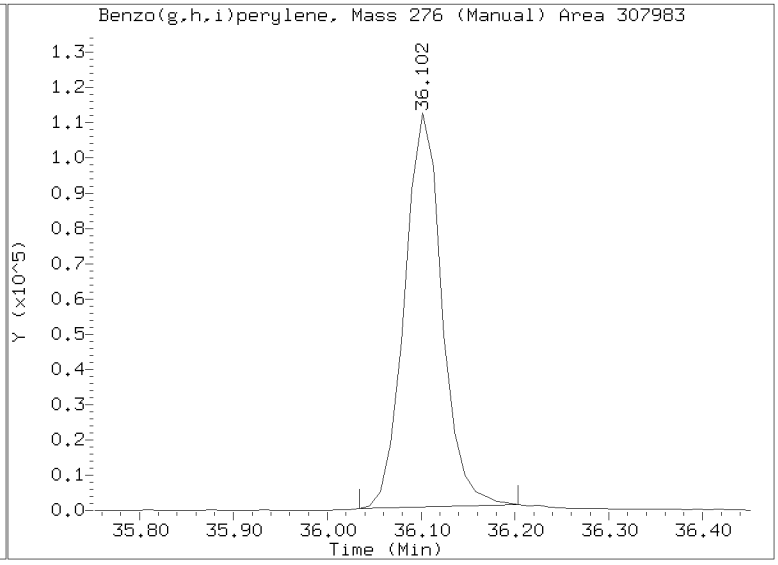
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20201007.b/NT1420100709.D
Injection Date: 07-OCT-2020 16:45
Lab ID:SIJ0085-SCV1 Client ID:
Report Date: 10/09/2020 08:51









Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	NT14	Calibration:	DJ00029
Lab File ID:	NT1420100711.D	Calibration Date:	10/07/2020
Sequence:	SIJ0085	Injection Date:	10/07/20
Lab Sample ID:	SIJ0085-ICV1	Injection Time:	18:22
Sequence Name:	Initial Cal Check		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
trans-Decalin	A	2.5000	2.9	0.0835887	0.0955285		14.3	+/-20
cis-Decalin	A	2.5000	2.8	0.0628966	0.0713296		13.4	+/-20
Naphthalene	A	2.5000	2.6	0.8164379	0.8491651		4.0	+/-20
1-Methylnaphthalene	A	2.5000	2.6	0.5226651	0.5192618		3.8	+/-20
2-Methylnaphthalene	A	2.5000	2.7	0.4976918	0.5288803		6.3	+/-20
Biphenyl	A	2.5000	2.6	0.7490419	0.7738850		3.3	+/-20
2,6-Dimethylnaphthalene	A	2.5000	2.6	0.5468360	0.5738964		5.0	+/-20
Acenaphthylene	A	2.5000	2.6	0.8966517	0.9243612		3.1	+/-20
Acenaphthene	A	2.5000	2.6	0.5873971	0.6113323		4.1	+/-20
Dibenzofuran	A	2.5000	2.6	0.8521596	0.8977156		5.4	+/-20
2,3,5-Trimethylnaphthalene	A	2.5000	2.6	0.5544134	0.5829882		5.2	+/-20
Fluorene	A	2.5000	2.6	0.6643144	0.6937422		4.4	+/-20
Benzo(b)thiophene	A	2.5000	2.6	0.6860043	0.7008111		2.2	+/-20
Phenanthrene	A	2.5000	2.5	1.1075820	1.1120140		0.4	+/-20
Anthracene	A	2.5000	2.5	1.0885140	1.0878480		-0.08	+/-20
Carbazole	A	2.5000	2.6	0.9426380	0.9639982		2.3	+/-20
1-Methylphenanthrene	A	2.5000	2.6	0.8129613	0.8462769		4.1	+/-20
Fluoranthene	A	2.5000	2.5	1.2224260	1.2331190		0.9	+/-20
Dibenzothiophene	A	2.5000	2.6	0.9560816	0.9864234		3.2	+/-20
Pyrene	A	2.5000	2.5	1.2899540	1.2916370		0.1	+/-20
Benzo(a)anthracene	A	2.5000	2.5	0.8634119	0.8737341		1.2	+/-20
Chrysene	A	2.5000	2.5	0.8581534	0.8727973		1.7	+/-20
Benzo(b)fluoranthene	A	2.5000	2.5	0.9748863	0.9905005		1.6	+/-20
Benzo(j)fluoranthene	A	2.5000	2.5	0.8589085	0.8672435		1.0	+/-20
Benzo(k)fluoranthene	A	2.5000	2.5	0.9825948	0.9804553		-0.2	+/-20
Benzofluoranthenes, Total	A	7.5000	7.7	0.9045439	0.9266316		2.4	+/-20
Benzo(e)pyrene	A	2.5000	2.6	0.8926013	0.9121144		2.2	+/-20
Benzo(a)pyrene	A	2.5000	2.5	0.8433439	0.8549599		1.4	+/-20
Indeno(1,2,3-cd)pyrene	A	2.5000	2.5	1.0443470	1.0404350		-0.4	+/-20
Dibenzo(a,h)anthracene	A	2.5000	2.5	0.9226661	0.9252211		0.3	+/-20
Benzo(g,h,i)perylene	A	2.5000	2.6	0.9174617	0.9596381		4.6	+/-20

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	NT14	Calibration:	DJ00029
Lab File ID:	NT1420100711.D	Calibration Date:	10/07/2020
Sequence:	SIJ0085	Injection Date:	10/07/20
Lab Sample ID:	SIJ0085-ICV1	Injection Time:	18:22
Sequence Name:	Initial Cal Check		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Perylene	A	2.5000	2.6	0.8858103	0.9126193		3.0	+/-20
Benzo(b)naphtho(2,1-d)thiophene	A	2.5000	2.6	1.1757640	1.2120270		3.1	+/-20
Naphthalene-d8	A	2.5000	2.64	0.8160533	0.8602073		5.4	+/-20
Acenaphthene-d10	A	2.5000	2.60	0.4900295	0.5103609		4.2	+/-20
Phenanthrene-d10	A	2.5000	2.62	0.9579158	1.0053270		5.0	+/-20
Chrysene-d12	A	2.5000	2.49	0.6819030	0.6789698		-0.4	+/-20
Perylene-d12	A	2.5000	2.54	0.8269999	0.8397694		1.6	+/-20

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20201007.b\NT1420100711.D

Date : 07-OCT-2020 18:22

Client ID:

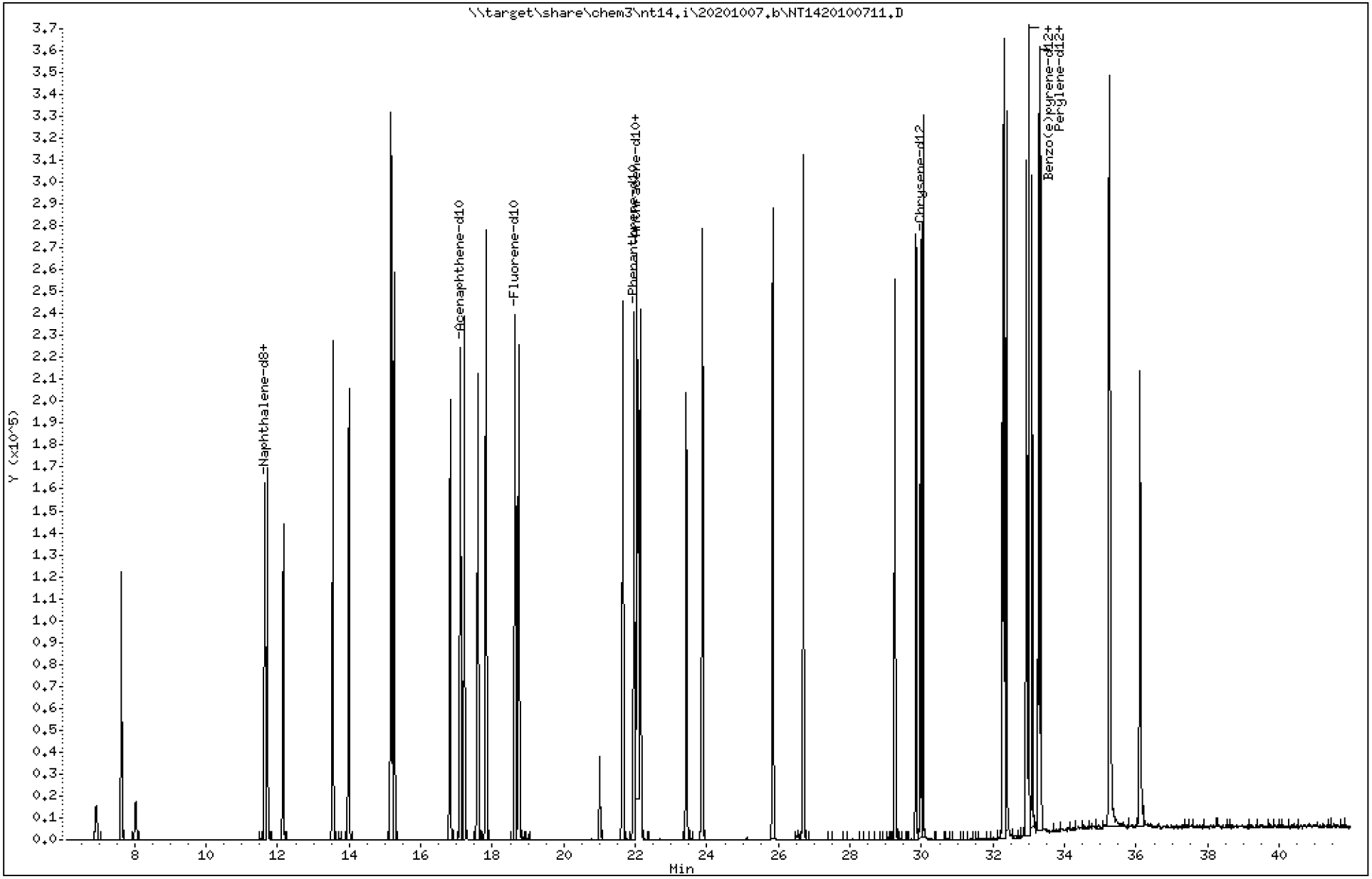
Instrument: nt14.i

Sample Info: SIJ0085-ICV1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201007.b\NT1420100711.D
Lab Smp Id: SIJ0085-ICV1
Inj Date : 07-OCT-2020 18:22
Operator : VTS Inst ID: nt14.i
Smp Info : SIJ0085-ICV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Meth Date : 09-Oct-2020 08:45 van Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: VANS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 trans-Decalin	138	6.934	6.934	(0.372)	25028	2.50000	2.857
	2 cis-Decalin	138	8.034	8.034	(0.431)	18688	2.50000	2.835
$	6 Naphthalene-d8	136	11.641	11.641	(0.625)	225370	2.50000	2.635
	7 Naphthalene	128	11.707	11.707	(0.628)	222477	2.50000	2.600
	12 Benzo(b)thiophene	134	12.157	12.157	(0.652)	183609	2.50000	2.554
	16 2-Methylnaphthalene	141	13.542	13.542	(0.727)	138564	2.50000	2.657
	17 1-methylnaphthalene	141	13.992	13.992	(0.751)	136044	2.50000	2.594
	18 Biphenyl	154	15.179	15.179	(0.815)	202754	2.50000	2.583
	19 2,6-Dimethylnaphthalene	156	15.256	15.256	(0.819)	150358	2.50000	2.624
	20 Acenaphthylene	152	16.817	16.817	(0.903)	242178	2.50000	2.577
$	21 Acenaphthene-d10	164	17.103	17.103	(0.918)	133712	2.50000	2.604
	22 Acenaphthene	153	17.223	17.223	(0.924)	160166	2.50000	2.602
	23 Dibenzofuran	168	17.597	17.597	(0.944)	235197	2.50000	2.634
	24 1,6,7-Trimethylnaphthalene	170	17.828	17.828	(0.957)	152740	2.50000	2.629
*	25 Fluorene-d10	176	18.632	18.632	(1.000)	209596	2.00000	
	26 Fluorene	166	18.746	18.746	(1.006)	181757	2.50000	2.611
	30 Dibenzothiophene	184	21.648	21.648	(1.162)	258438	2.50000	2.579
$	35 Phenanthrene-d10	188	21.963	21.963	(0.995)	241790	2.50000	2.624
	36 Phenanthrene	178	22.040	22.040	(0.999)	267449	2.50000	2.510
*	250 Anthracene-d10	188	22.072	22.072	(1.000)	192407	2.00000	
	37 Anthracene	178	22.138	22.138	(1.003)	261637	2.50000	2.498
	42 Carbazole	167	23.425	23.425	(1.061)	231850	2.50000	2.557
	43 1-Methylphenanthrene	192	23.875	23.875	(1.082)	203537	2.50000	2.602
	44 Fluoranthene	202	25.843	25.843	(1.171)	296576	2.50000	2.522
	46 Pyrene	202	26.701	26.701	(1.210)	310650	2.50000	2.503
	51 Naphthobenzothiophene	234	29.256	29.256	(1.325)	291503	2.50000	2.577
	55 Benzo(a)anthracene	228	29.839	29.839	(0.906)	299385	2.50000	2.530
$	56 Chrysene-d12	240	29.974	29.974	(0.910)	232649	2.50000	2.489
	57 Chrysene	228	30.042	30.042	(0.912)	299064	2.50000	2.543
	62 Benzo(b)fluoranthene	252	32.272	32.272	(0.980)	339395	2.50000	2.540(M)
	63 Benzo(k)fluoranthene	252	32.317	32.317	(0.982)	335953	2.50000	2.495(M)
	293 Benzo(j)fluoranthene	252	32.373	32.373	(0.983)	297161	2.50000	2.524(M)
	246 Total Benzofluoranthenes	252	32.317	32.317	(0.982)	952531	7.50000	7.683(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.925	32.925	(1.000)	274120	2.00000	
64 Benzo(e)pyrene	252	32.993	32.993	(1.002)	312536	2.50000	2.555
66 Benzo(a)pyrene	252	33.083	33.083	(1.005)	292952	2.50000	2.534
$ 67 Perylene-d12	264	33.263	33.263	(1.010)	287747	2.50000	2.539
68 Perylene	252	33.319	33.319	(1.012)	312709	2.50000	2.576
69 Indeno(1,2,3-cd)pyrene	276	35.256	35.256	(1.071)	356505	2.50000	2.491(M)
70 Dibenzo(a,h)anthracene	278	35.245	35.245	(1.070)	317027	2.50000	2.507(M)
74 Benzo(g,h,i)perylene	276	36.101	36.101	(1.096)	328820	2.50000	2.615

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: NT1420100711.D
Lab Smp Id: SIJ0085-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201007.b\ALKYLPNA.m
Misc Info:

Calibration Date: 07-OCT-2020
Calibration Time: 10:24
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	209596	104798	419192	209596	0.00
250 Anthracene-d10	192407	96204	384814	192407	0.00
251 Benzo(e)pyrene-d1	274120	137060	548240	274120	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.63	18.13	19.13	18.63	0.00
250 Anthracene-d10	22.07	21.57	22.57	22.07	0.00
251 Benzo(e)pyrene-d1	32.93	32.43	33.43	32.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1420100711.D

Lab ID: SIJ0085-ICV1
nt14.i, 20201007.b\ALKYLPNA.m, 07-OCT-2020 18:22

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

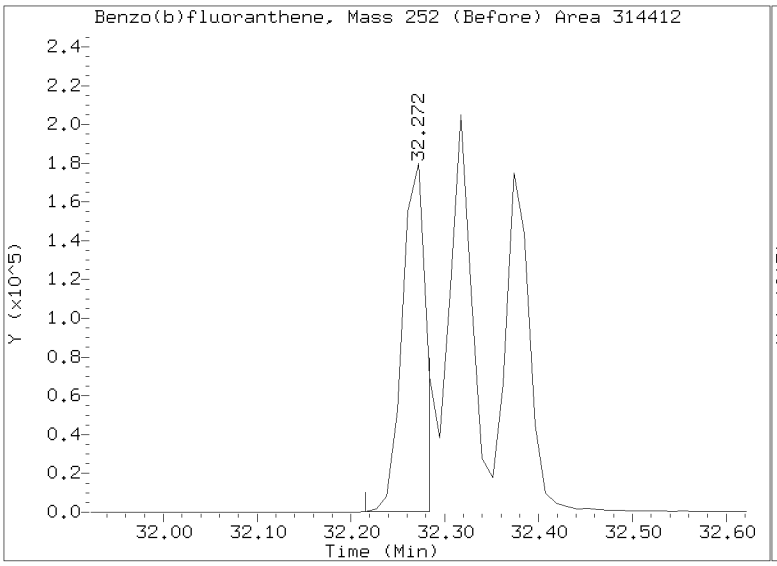
No RRT check. Ccal file.

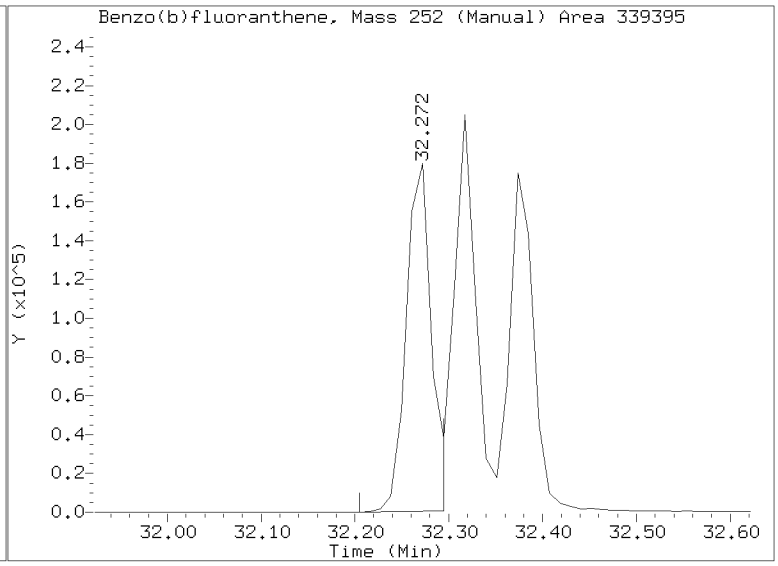
On Column LOD for nt14.i, 20201007.b\ALKYLPNA.m, TARGETS.sub = 0.0000

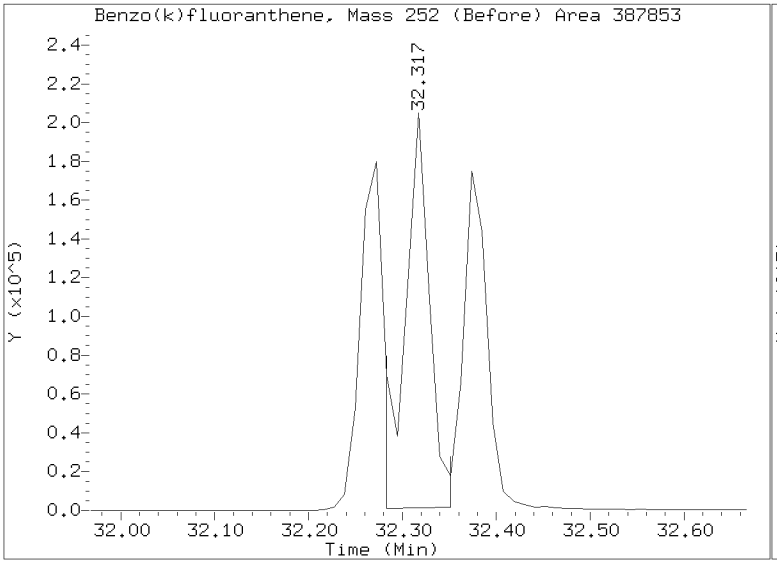
* Only compounds listed in the work order have been verified by the analyst *

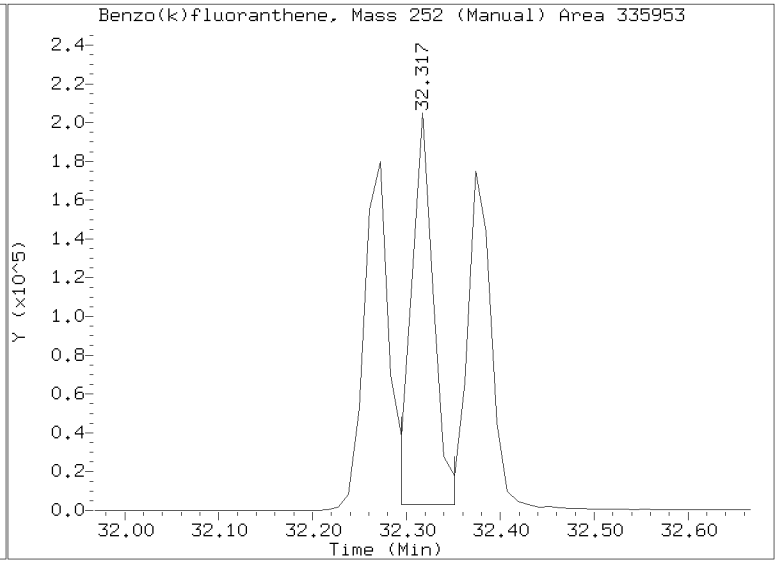
Quant Ion Manual Peak Adjustment Report

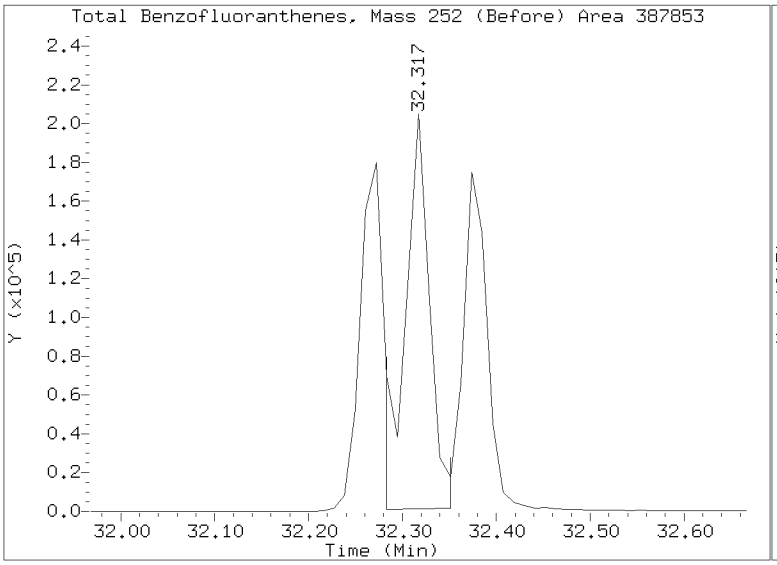
Datafile: //target/share/chem3/nt14.i/20201007.b/NT1420100711.D
Injection Date: 07-OCT-2020 18:22
Lab ID:SIJ0085-ICV1 Client ID:
Report Date: 10/09/2020 08:51

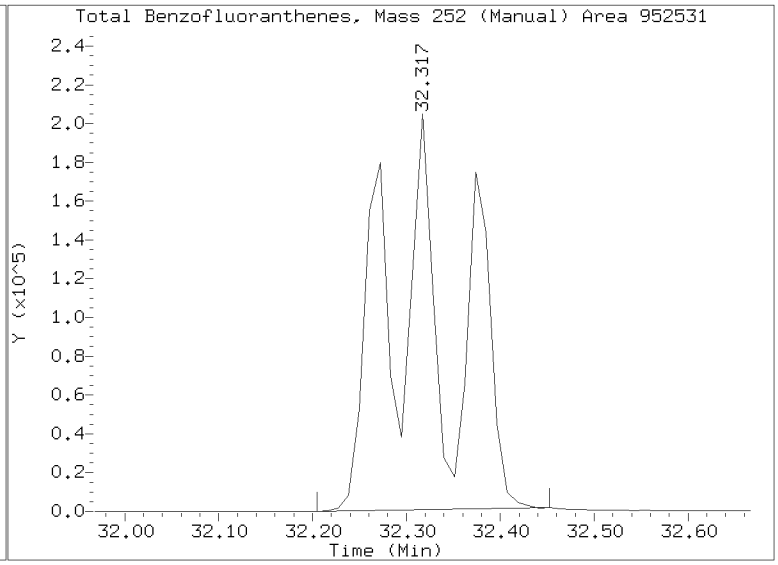






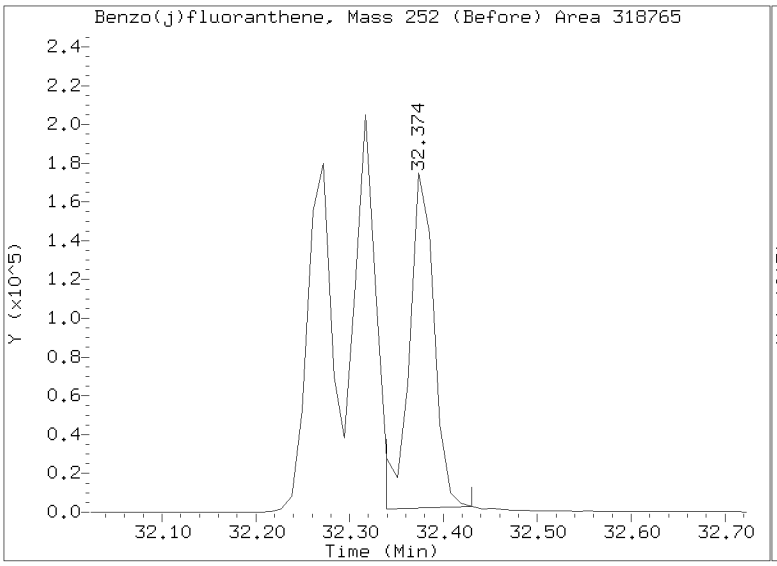


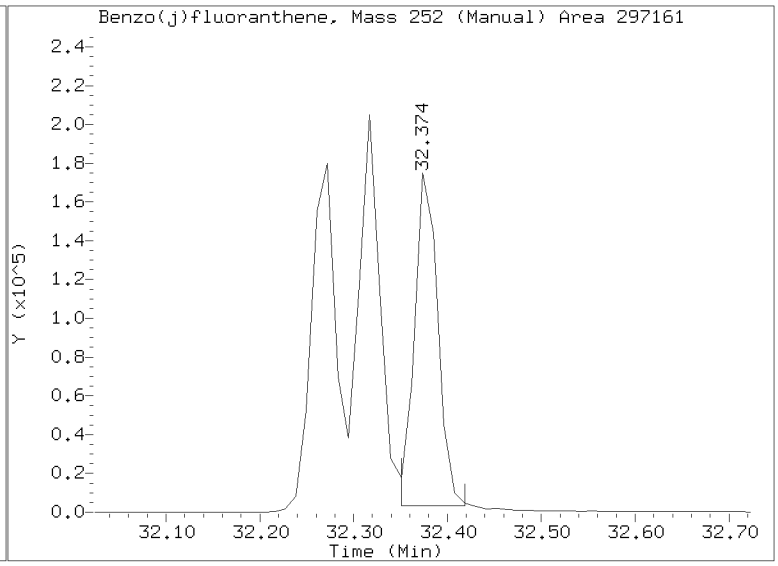


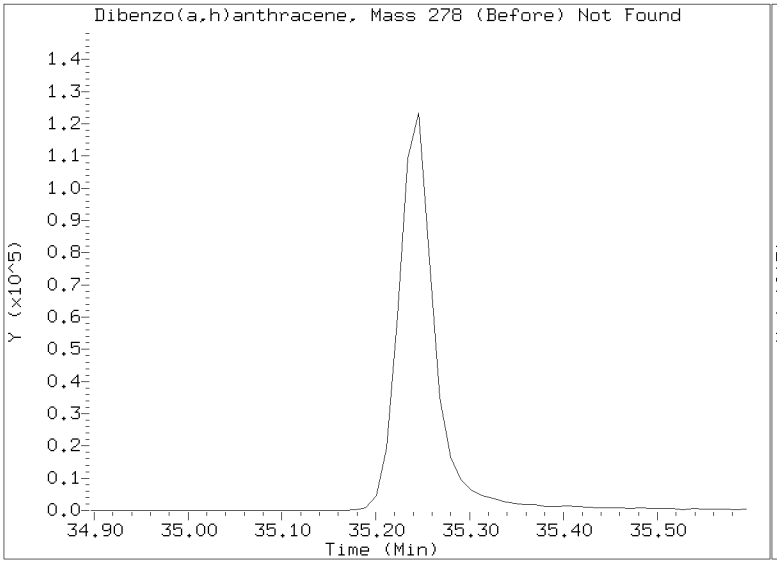


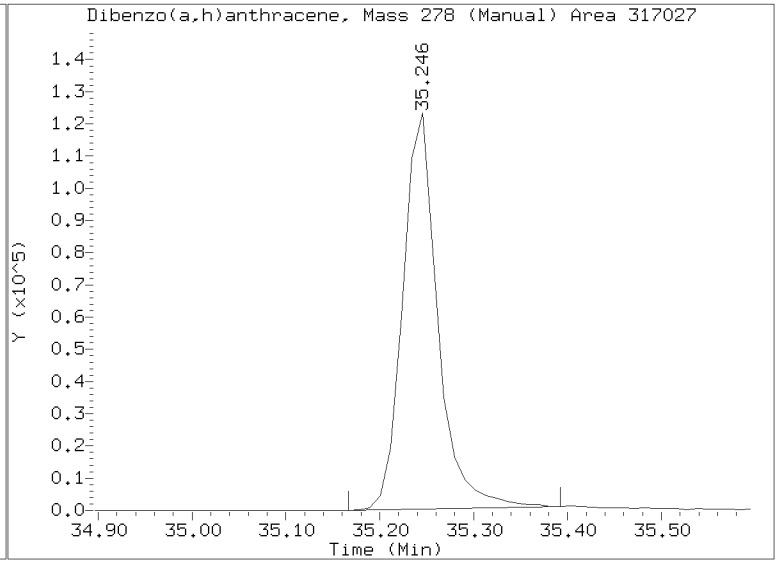
Quant Ion Manual Peak Adjustment Report

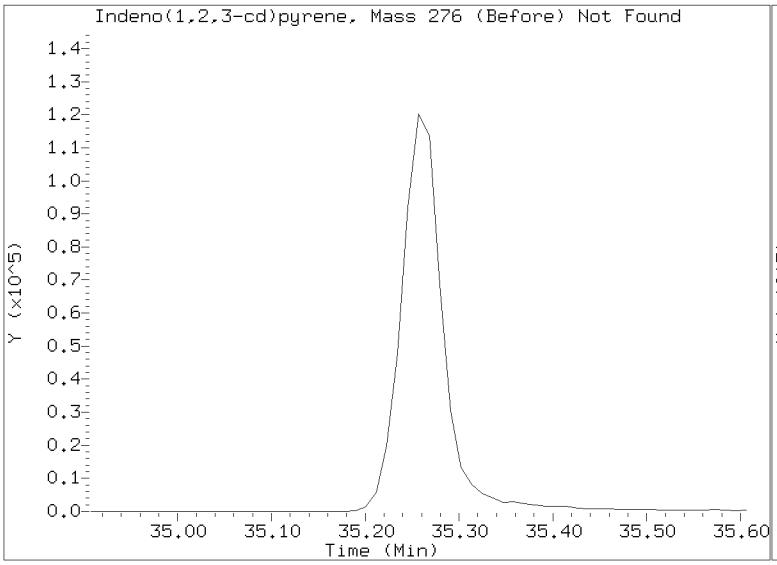
Datafile: //target/share/chem3/nt14.i/20201007.b/NT1420100711.D
Injection Date: 07-OCT-2020 18:22
Lab ID:SIJ0085-ICV1 Client ID:
Report Date: 10/09/2020 08:51

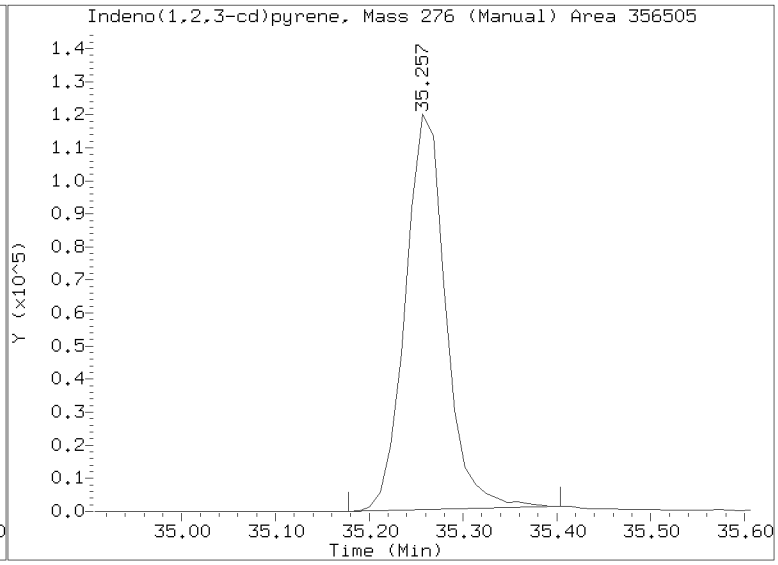












Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201007.b

Instrument: nt14.i Date: 07-OCT-2020 Method: 20201007.b\ALKYLPNA.m

INITIAL CAL: 07-OCT-2020

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1420100711.D 07-OCT-2020 18:22

Compound	%D
NO Q-FLAGS	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	NT14	Calibration:	DJ00029
Lab File ID:	NT1420121202.D	Calibration Date:	10/07/2020
Sequence:	SIL0184	Injection Date:	12/12/20
Lab Sample ID:	SIL0184-ICV1	Injection Time:	11:50
Sequence Name:	Initial Cal Check		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
trans-Decalin	A	2.5000	3.1	0.0835887	0.1024112		22.5	+/-20	*
cis-Decalin	A	2.5000	3.2	0.0628966	0.0804623		27.9	+/-20	*
Naphthalene	A	2.5000	2.8	0.8164379	0.9151535		12.1	+/-20	
1-Methylnaphthalene	A	2.5000	2.7	0.5226651	0.5364168		7.3	+/-20	
2-Methylnaphthalene	A	2.5000	2.8	0.4976918	0.5481296		10.1	+/-20	
Biphenyl	A	2.5000	2.6	0.7490419	0.7782439		3.9	+/-20	
2,6-Dimethylnaphthalene	A	2.5000	2.6	0.5468360	0.5768007		5.5	+/-20	
Acenaphthylene	A	2.5000	2.7	0.8966517	0.9766352		8.9	+/-20	
Acenaphthene	A	2.5000	2.6	0.5873971	0.6197491		5.5	+/-20	
Dibenzofuran	A	2.5000	2.6	0.8521596	0.8724125		2.4	+/-20	
2,3,5-Trimethylnaphthalene	A	2.5000	2.8	0.5544134	0.6163044		11.2	+/-20	
Fluorene	A	2.5000	2.6	0.6643144	0.6776951		2.0	+/-20	
Benzo(b)thiophene	A	2.5000	2.8	0.6860043	0.7594342		10.7	+/-20	
Phenanthrene	A	2.5000	2.6	1.1075820	1.1500580		3.8	+/-20	
Anthracene	A	2.5000	2.5	1.0885140	1.0712900		-1.6	+/-20	
Carbazole	A	2.5000	2.4	0.9426380	0.9122486		-3.2	+/-20	
1-Methylphenanthrene	A	2.5000	2.8	0.8129613	0.9023680		11.0	+/-20	
Fluoranthene	A	2.5000	2.8	1.2224260	1.3461900		10.1	+/-20	
Dibenzothiophene	A	2.5000	2.6	0.9560816	0.9884499		3.4	+/-20	
Pyrene	A	2.5000	2.7	1.2899540	1.4166680		9.8	+/-20	
Benzo(a)anthracene	A	2.5000	2.7	0.8634119	0.9465619		9.6	+/-20	
Chrysene	A	2.5000	2.6	0.8581534	0.9047173		5.4	+/-20	
Benzo(b)fluoranthene	A	2.5000	2.6	0.9748863	1.0019840		2.8	+/-20	
Benzo(j)fluoranthene	A	2.5000	2.5	0.8589085	0.8688367		1.2	+/-20	
Benzo(k)fluoranthene	A	2.5000	2.6	0.9825948	1.0211100		3.9	+/-20	
Benzofluoranthenes, Total	A	7.5000	7.8	0.9045439	0.9389568		3.8	+/-20	
Benzo(e)pyrene	A	2.5000	2.6	0.8926013	0.9233590		3.4	+/-20	
Benzo(a)pyrene	A	2.5000	2.3	0.8433439	0.7659580		-9.2	+/-20	
Indeno(1,2,3-cd)pyrene	A	2.5000	1.9	1.0443470	0.7772744		-25.6	+/-20	*
Dibenzo(a,h)anthracene	A	2.5000	1.6	0.9226661	0.5818659		-36.9	+/-20	*
Benzo(g,h,i)perylene	A	2.5000	2.1	0.9174617	0.7867266		-14.2	+/-20	

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	NT14	Calibration:	DJ00029
Lab File ID:	NT1420121202.D	Calibration Date:	10/07/2020
Sequence:	SIL0184	Injection Date:	12/12/20
Lab Sample ID:	SIL0184-ICV1	Injection Time:	11:50
Sequence Name:	Initial Cal Check		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Perylene	A	2.5000	2.4	0.8858103	0.8578823		-3.2	+/-20
Benzo(b)naphtho(2,1-d)thiophene	A	2.5000	2.5	1.1757640	1.1597230		-1.4	+/-20
Naphthalene-d8	A	2.5000	3.06	0.8160533	1.0003050		22.6	+/-20 *
Acenaphthene-d10	A	2.5000	2.68	0.4900295	0.5258970		7.3	+/-20
Phenanthrene-d10	A	2.5000	2.65	0.9579158	1.0151170		6.0	+/-20
Chrysene-d12	A	2.5000	2.52	0.6819030	0.6872719		0.8	+/-20
Perylene-d12	A	2.5000	2.32	0.8269999	0.7664160		-7.3	+/-20

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20201212.b\NT1420121202.D

Date : 12-DEC-2020 11:50

Client ID:

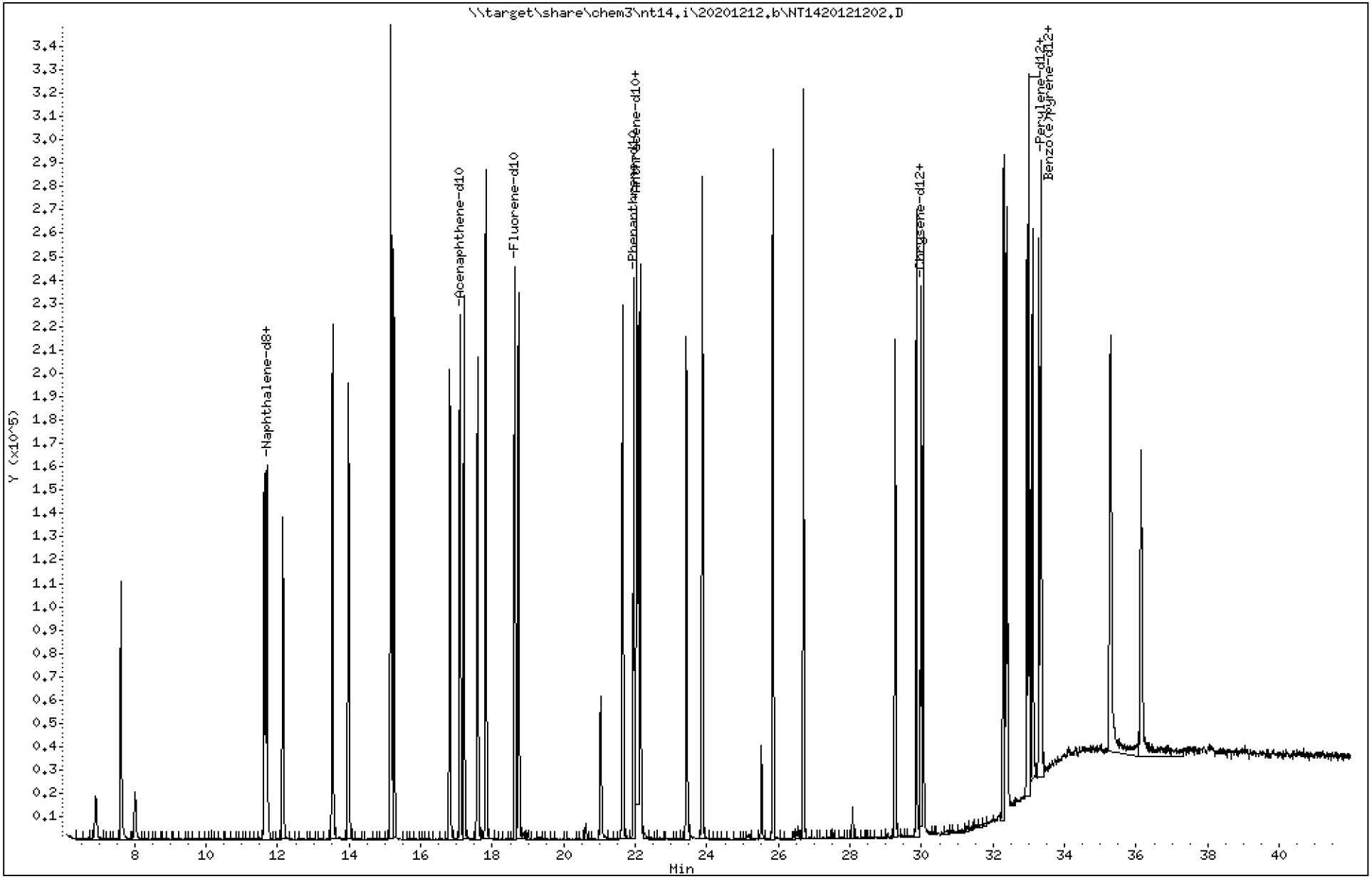
Instrument: nt14.i

Sample Info: SIL0184-ICV1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201212.b\NT1420121202.D
Lab Smp Id: SIL0184-ICV1
Inj Date : 12-DEC-2020 11:50
Operator : VTS Inst ID: nt14.i
Smp Info : SIL0184-ICV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201212.b\ALKYLPNA.m
Meth Date : 14-Dec-2020 19:14 yev Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: ORGDATA102

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 trans-Decalin	138	6.914	6.914	(0.371)	28154	2.50000	3.063
	2 cis-Decalin	138	8.024	8.024	(0.431)	22120	2.50000	3.198
$	6 Naphthalene-d8	136	11.630	11.630	(0.624)	274995	2.50000	3.064
	7 Naphthalene	128	11.696	11.696	(0.628)	251586	2.50000	2.802
	12 Benzo(b)thiophene	134	12.146	12.146	(0.652)	208777	2.50000	2.768
	16 2-Methylnaphthalene	141	13.531	13.531	(0.726)	150687	2.50000	2.753
	17 1-methylnaphthalene	141	13.982	13.982	(0.750)	147467	2.50000	2.682
	18 Biphenyl	154	15.169	15.169	(0.814)	213948	2.50000	2.597
	19 2,6-Dimethylnaphthalene	156	15.245	15.245	(0.818)	158569	2.50000	2.637
	20 Acenaphthylene	152	16.806	16.806	(0.902)	268488	2.50000	2.723
$	21 Acenaphthene-d10	164	17.092	17.092	(0.917)	144575	2.50000	2.683
	22 Acenaphthene	153	17.213	17.213	(0.924)	170376	2.50000	2.638
	23 Dibenzofuran	168	17.586	17.586	(0.944)	239836	2.50000	2.559
	24 1,6,7-Trimethylnaphthalene	170	17.817	17.817	(0.956)	169429	2.50000	2.779
*	25 Fluorene-d10	176	18.632	18.632	(1.000)	219929	2.00000	
	26 Fluorene	166	18.734	18.734	(1.005)	186306	2.50000	2.550
	30 Dibenzothiophene	184	21.648	21.648	(1.162)	271736	2.50000	2.585
$	35 Phenanthrene-d10	188	21.952	21.952	(0.995)	249654	2.50000	2.649
	36 Phenanthrene	178	22.040	22.040	(0.999)	282841	2.50000	2.596
*	250 Anthracene-d10	188	22.073	22.073	(1.000)	196749	2.00000	
	37 Anthracene	178	22.139	22.139	(1.003)	263469	2.50000	2.460
	42 Carbazole	167	23.425	23.425	(1.061)	224355	2.50000	2.419(M)
	43 1-Methylphenanthrene	192	23.865	23.865	(1.081)	221925	2.50000	2.775
	44 Fluoranthene	202	25.844	25.844	(1.171)	331077	2.50000	2.753
	46 Pyrene	202	26.701	26.701	(1.210)	348410	2.50000	2.746
	51 Naphthobenzothiophene	234	29.256	29.256	(1.325)	285218	2.50000	2.466
	55 Benzo(a)anthracene	228	29.850	29.850	(0.906)	295519	2.50000	2.741
$	56 Chrysene-d12	240	29.974	29.974	(0.910)	214568	2.50000	2.520
	57 Chrysene	228	30.053	30.053	(0.912)	282455	2.50000	2.636
	62 Benzo(b)fluoranthene	252	32.283	32.283	(0.980)	312822	2.50000	2.569(MH)
	63 Benzo(k)fluoranthene	252	32.328	32.328	(0.981)	318793	2.50000	2.598(M)
	293 Benzo(j)fluoranthene	252	32.396	32.396	(0.983)	271253	2.50000	2.529
	246 Total Benzofluoranthenes	252	32.328	32.328	(0.981)	879434	7.50000	7.785(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.948	32.948	(1.000)	249762	2.00000	
64 Benzo(e)pyrene	252	33.004	33.004	(1.002)	288275	2.50000	2.586
66 Benzo(a)pyrene	252	33.105	33.105	(1.005)	239134	2.50000	2.271
$ 67 Perylene-d12	264	33.286	33.286	(1.010)	239277	2.50000	2.317
68 Perylene	252	33.342	33.342	(1.012)	267833	2.50000	2.421
69 Indeno(1,2,3-cd)pyrene	276	35.290	35.290	(1.071)	242667	2.50000	1.861(M)
70 Dibenzo(a,h)anthracene	278	35.268	35.268	(1.070)	181660	2.50000	1.577(M)
74 Benzo(g,h,i)perylene	276	36.135	36.135	(1.097)	245618	2.50000	2.144(M)

QC Flag Legend

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
Lab File ID: NT1420121202.D
Lab Smp Id: SIL0184-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201212.b\ALKYLPNA.m
Misc Info:

Calibration Date: 21-NOV-2020
Calibration Time: 14:26
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	219929	109965	439858	219929	0.00
250 Anthracene-d10	196749	98375	393498	196749	0.00
251 Benzo(e)pyrene-d1	249762	124881	499524	249762	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.63	18.13	19.13	18.63	0.00
250 Anthracene-d10	22.07	21.57	22.57	22.07	0.00
251 Benzo(e)pyrene-d1	32.95	32.45	33.45	32.95	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 - NT1420121202.D

Lab ID: SIL0184-ICV1
nt14.i, 20201212.b\ALKYLPNA.m, 12-DEC-2020 11:50

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

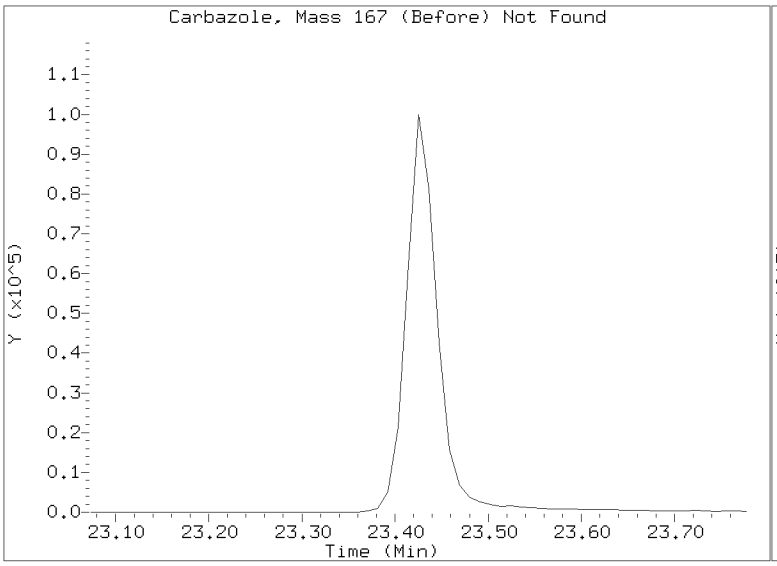
No RRT check. Ccal file.

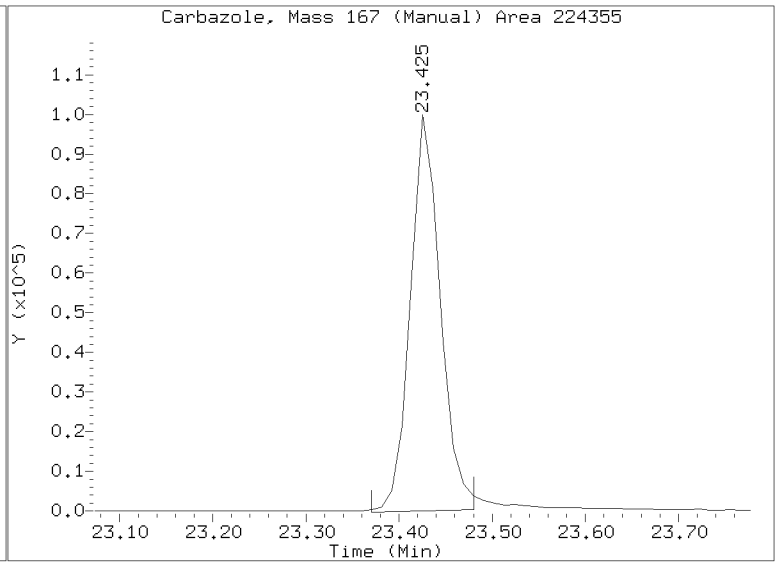
On Column LOD for nt14.i, 20201212.b\ALKYLPNA.m, TARGETS.sub = 0.0000

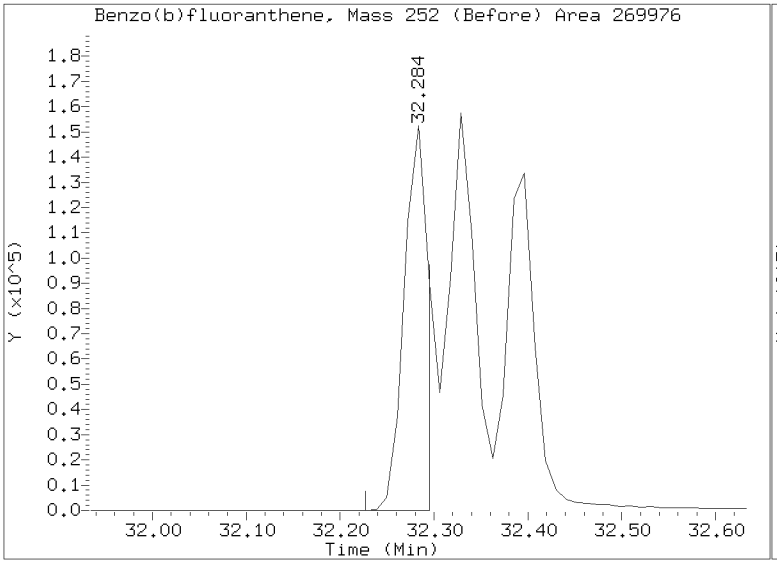
* Only compounds listed in the work order have been verified by the analyst *

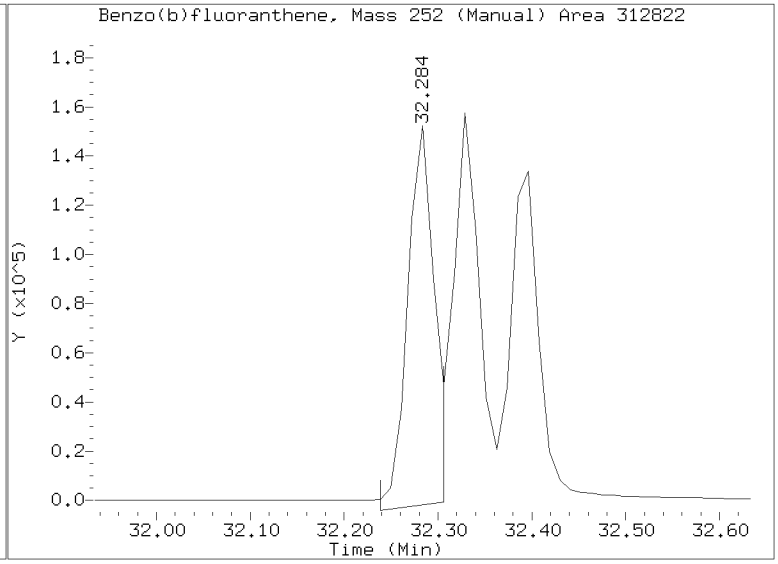
Quant Ion Manual Peak Adjustment Report

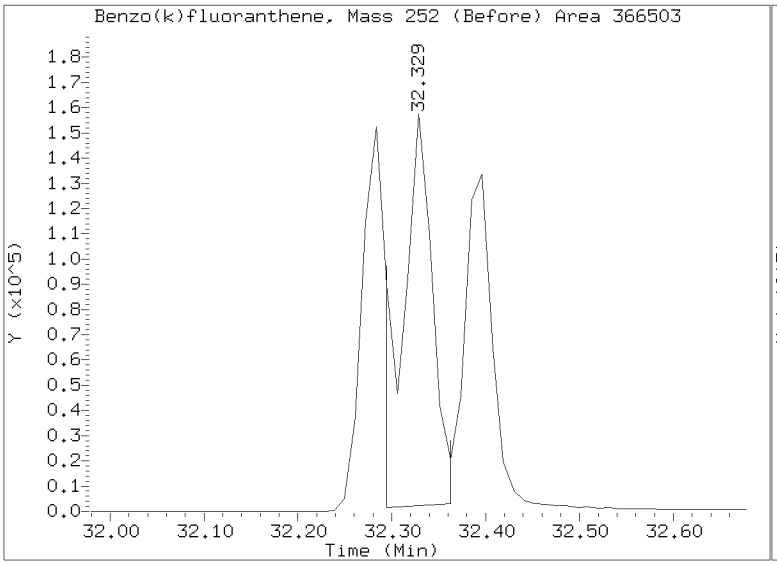
Datafile: //target/share/chem3/nt14.i/20201212.b/NT1420121202.D
Injection Date: 12-DEC-2020 11:50
Lab ID:SIL0184-ICV1 Client ID:
Report Date: 12/14/2020 19:14

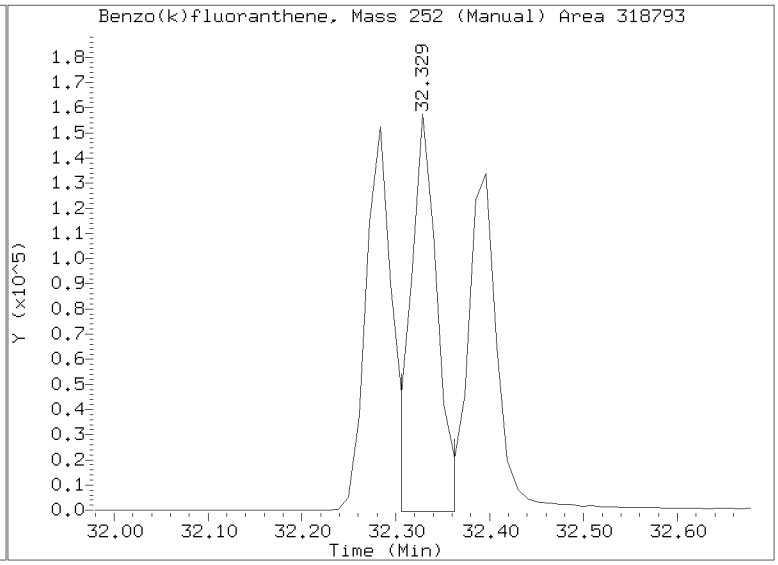






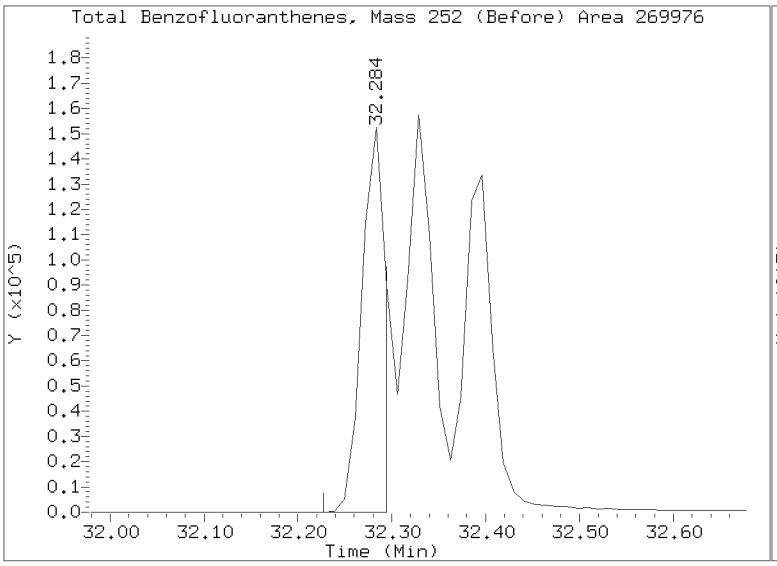


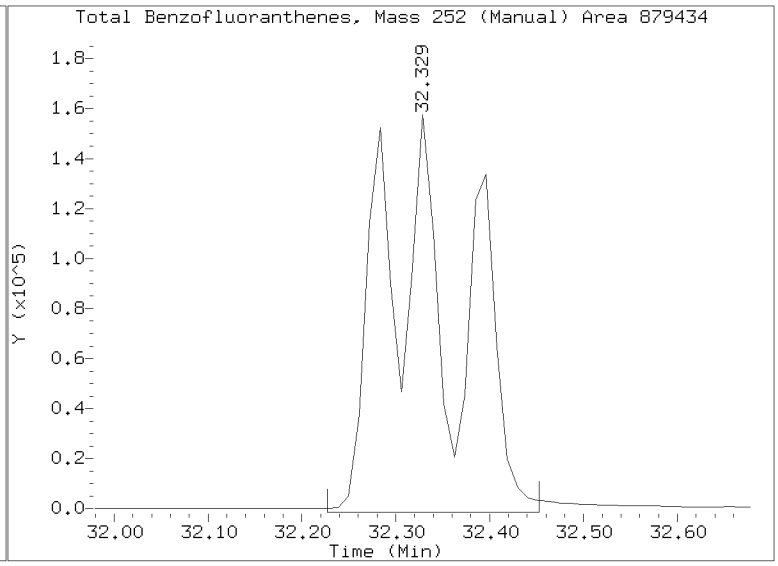


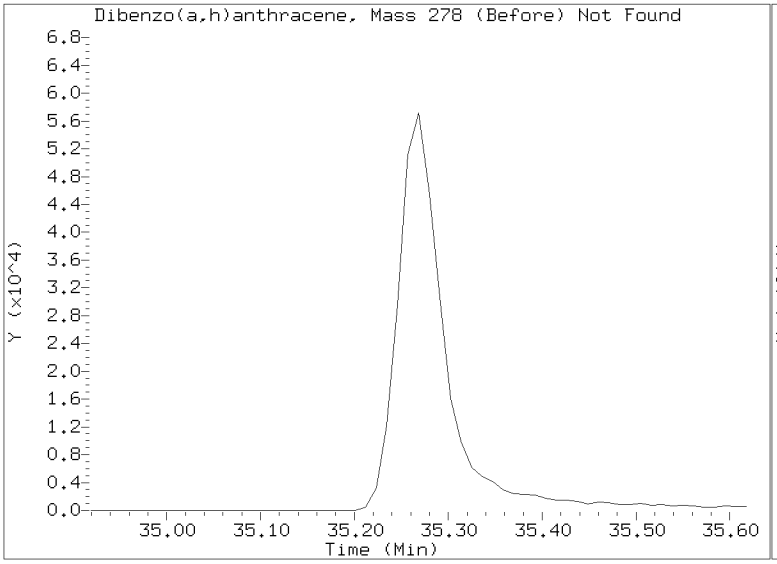


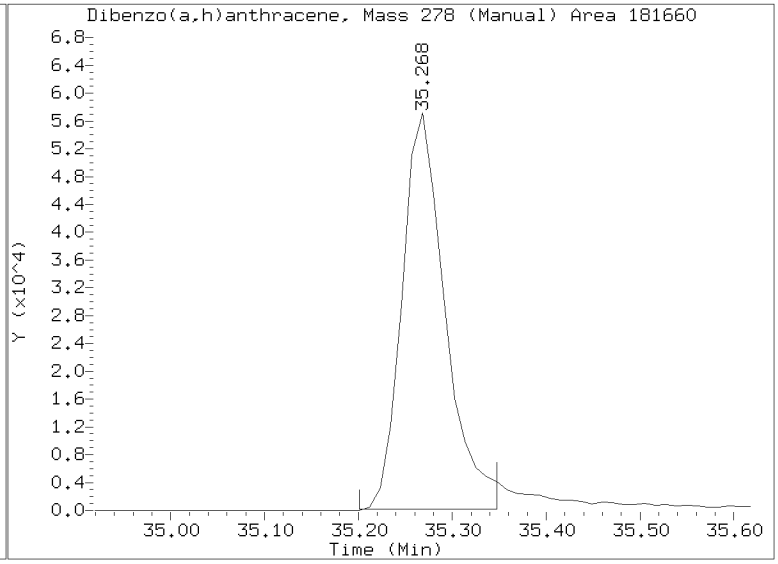
Quant Ion Manual Peak Adjustment Report

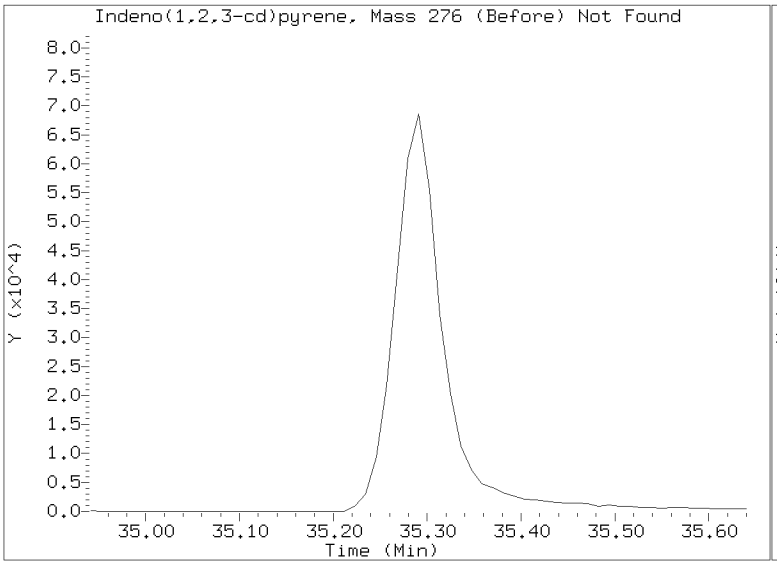
Datafile: //target/share/chem3/nt14.i/20201212.b/NT1420121202.D
Injection Date: 12-DEC-2020 11:50
Lab ID:SIL0184-ICV1 Client ID:
Report Date: 12/14/2020 19:14

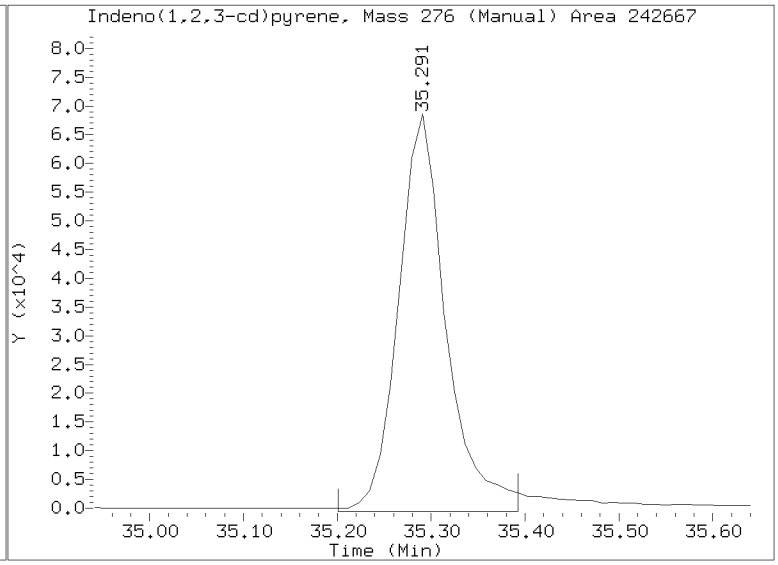






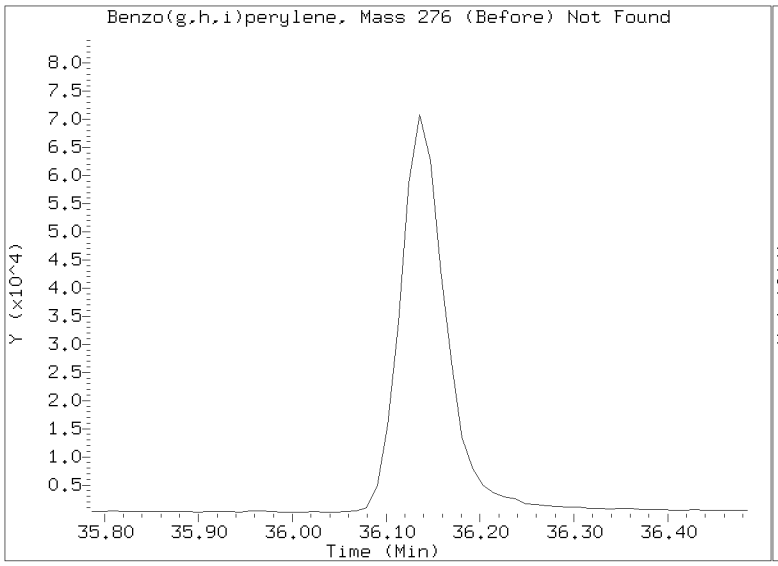


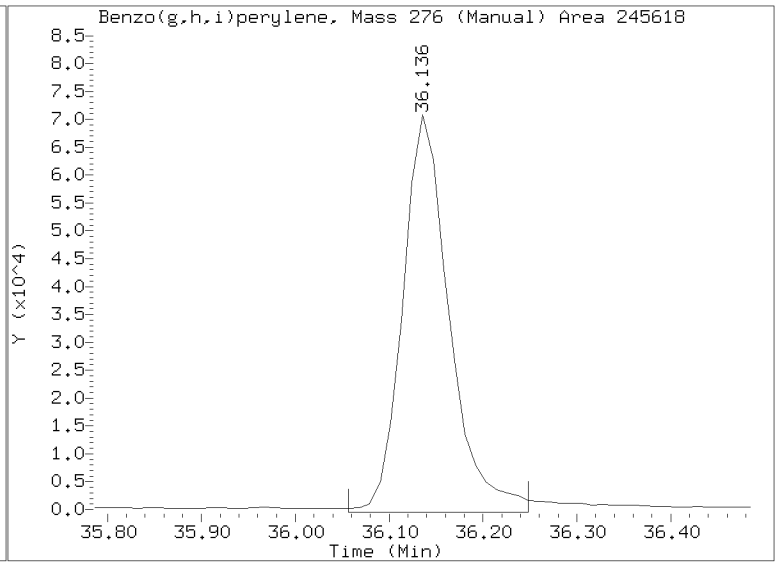




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20201212.b/NT1420121202.D
Injection Date: 12-DEC-2020 11:50
Lab ID:SIL0184-ICV1 Client ID:
Report Date: 12/14/2020 19:14





Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201212.b

Instrument: nt14.i Date: 12-DEC-2020 Method: 20201212.b\ALKYLPNA.m

INITIAL CAL: 07-OCT-2020

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1420121202.D 12-DEC-2020 11:50

Compound	%D
Indeno(1,2,3-cd)pyrene	-25.6
Dibenzo(a,h)anthracene	-36.9
cis-Decalin	27.9
trans-Decalin	22.5
Naphthalene-d8	22.6

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	NT14	Calibration:	DJ00029
Lab File ID:	NT1420121517ICV.D	Calibration Date:	10/07/2020
Sequence:	SIL0233	Injection Date:	12/16/20
Lab Sample ID:	SIL0233-ICV1	Injection Time:	00:36
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	2.5	0.0835887	0.0830552		-0.6	+/-20
cis-Decalin	A	2.5000	2.5	0.0628966	0.0621663		-1.2	+/-20
Naphthalene	A	2.5000	2.3	0.8164379	0.7607663		-6.8	+/-20
1-Methylnaphthalene	A	2.5000	2.3	0.5226651	0.4571158		-8.9	+/-20
2-Methylnaphthalene	A	2.5000	2.4	0.4976918	0.4693751		-5.7	+/-20
Biphenyl	A	2.5000	2.3	0.7490419	0.6927859		-7.5	+/-20
2,6-Dimethylnaphthalene	A	2.5000	2.4	0.5468360	0.5310868		-2.9	+/-20
Acenaphthylene	A	2.5000	2.4	0.8966517	0.8509763		-5.1	+/-20
Acenaphthene	A	2.5000	2.3	0.5873971	0.5508672		-6.2	+/-20
Dibenzofuran	A	2.5000	2.3	0.8521596	0.7974886		-6.4	+/-20
2,3,5-Trimethylnaphthalene	A	2.5000	2.5	0.5544134	0.5489117		-1.0	+/-20
Fluorene	A	2.5000	2.4	0.6643144	0.6263555		-5.7	+/-20
Benzo(b)thiophene	A	2.5000	2.3	0.6860043	0.6250573		-8.9	+/-20
Phenanthrene	A	2.5000	2.4	1.1075820	1.0621930		-4.1	+/-20
Anthracene	A	2.5000	2.3	1.0885140	1.0118600		-7.0	+/-20
Carbazole	A	2.5000	2.4	0.9426380	0.8865294		-6.0	+/-20
1-Methylphenanthrene	A	2.5000	2.5	0.8129613	0.8285318		1.9	+/-20
Fluoranthene	A	2.5000	2.5	1.2224260	1.2323120		0.8	+/-20
Dibenzothiophene	A	2.5000	2.3	0.9560816	0.8818191		-7.8	+/-20
Pyrene	A	2.5000	2.6	1.2899540	1.3259670		2.8	+/-20
Benzo(a)anthracene	A	2.5000	2.5	0.8634119	0.8626538		-0.08	+/-20
Chrysene	A	2.5000	2.5	0.8581534	0.8476538		-1.2	+/-20
Benzo(b)fluoranthene	A	2.5000	2.4	0.9748863	0.9262820		-5.0	+/-20
Benzo(j)fluoranthene	A	2.5000	2.5	0.8589085	0.8619023		0.4	+/-20
Benzo(k)fluoranthene	A	2.5000	2.5	0.9825948	0.9641771		-1.9	+/-20
Benzofluoranthenes, Total	A	7.5000	7.3	0.9045439	0.8831465		-2.4	+/-20
Benzo(e)pyrene	A	2.5000	2.5	0.8926013	0.9038357		1.2	+/-20
Benzo(a)pyrene	A	2.5000	2.2	0.8433439	0.7550302		-10.5	+/-20
Indeno(1,2,3-cd)pyrene	A	2.5000	1.9	1.0443470	0.7946513		-23.9	+/-20 *
Dibenzo(a,h)anthracene	A	2.5000	1.9	0.9226661	0.6944080		-24.7	+/-20 *
Benzo(g,h,i)perylene	A	2.5000	2.1	0.9174617	0.7781923		-15.2	+/-20

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	NT14	Calibration:	DJ00029
Lab File ID:	NT1420121517ICV.D	Calibration Date:	10/07/2020
Sequence:	SIL0233	Injection Date:	12/16/20
Lab Sample ID:	SIL0233-ICV1	Injection Time:	00:36
Sequence Name:	Initial Cal Check		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Perylene	A	2.5000	2.4	0.8858103	0.8627611		-2.6	+/-20
Benzo(b)naphtho(2,1-d)thiophene	A	2.5000	2.4	1.1757640	1.1282830		-4.0	+/-20
Naphthalene-d8	A	2.5000	2.54	0.8160533	0.8288710		1.6	+/-20
Acenaphthene-d10	A	2.5000	2.40	0.4900295	0.4704672		-4.0	+/-20
Phenanthrene-d10	A	2.5000	2.94	0.9579158	1.1276290		17.7	+/-20
Chrysene-d12	A	2.5000	2.42	0.6819030	0.6599017		-3.2	+/-20
Perylene-d12	A	2.5000	2.37	0.8269999	0.7823931		-5.4	+/-20

* Values outside of QC limits

ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201215A.b\NT1420121517ICV.D
Lab Smp Id: SIL0233-ICV1
Inj Date : 16-DEC-2020 00:36
Operator : VTS Inst ID: nt14.i
Smp Info : SIL0233-ICV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201215A.b\ALKYLPNA.m
Meth Date : 16-Dec-2020 07:15 van Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: VANS-202011

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
1 trans-Decalin	138	6.914	6.914	(0.372)	25399	2.50000	2.484
2 cis-Decalin	138	8.014	8.014	(0.431)	19011	2.50000	2.471
$ 6 Naphthalene-d8	136	11.619	11.619	(0.624)	253476	2.50000	2.539
7 Naphthalene	128	11.685	11.685	(0.628)	232649	2.50000	2.330
12 Benzo(b)thiophene	134	12.135	12.135	(0.652)	191148	2.50000	2.278
16 2-Methylnaphthalene	141	13.520	13.520	(0.727)	143539	2.50000	2.358
17 1-methylnaphthalene	141	13.960	13.960	(0.750)	139790	2.50000	2.277
18 Biphenyl	154	15.158	15.158	(0.815)	211860	2.50000	2.312
19 2,6-Dimethylnaphthalene	156	15.234	15.234	(0.819)	162411	2.50000	2.428
20 Acenaphthylene	152	16.795	16.795	(0.902)	260236	2.50000	2.373
$ 21 Acenaphthene-d10	164	17.081	17.081	(0.918)	143873	2.50000	2.400
22 Acenaphthene	153	17.191	17.191	(0.924)	168460	2.50000	2.345
23 Dibenzofuran	168	17.575	17.575	(0.944)	243879	2.50000	2.340
24 1,6,7-Trimethylnaphthalene	170	17.806	17.806	(0.957)	167862	2.50000	2.475
* 25 Fluorene-d10	176	18.610	18.610	(1.000)	244647	2.00000	
26 Fluorene	166	18.723	18.723	(1.006)	191545	2.50000	2.357
30 Dibenzothiophene	184	21.626	21.626	(1.162)	269668	2.50000	2.306
$ 35 Phenanthrene-d10	188	21.941	21.941	(0.995)	303053	2.50000	2.943
36 Phenanthrene	178	22.018	22.018	(0.999)	285467	2.50000	2.398
* 250 Anthracene-d10	188	22.051	22.051	(1.000)	215002	2.00000	
37 Anthracene	178	22.117	22.117	(1.003)	271940	2.50000	2.324
42 Carbazole	167	23.414	23.414	(1.062)	238257	2.50000	2.351
43 1-Methylphenanthrene	192	23.854	23.854	(1.082)	222670	2.50000	2.548
44 Fluoranthene	202	25.822	25.822	(1.171)	331187	2.50000	2.520
46 Pyrene	202	26.679	26.679	(1.210)	356357	2.50000	2.570
51 Naphthobenzothiophene	234	29.245	29.245	(1.326)	303229	2.50000	2.399
55 Benzo(a)anthracene	228	29.828	29.828	(0.906)	313373	2.50000	2.498
$ 56 Chrysene-d12	240	29.952	29.952	(0.910)	239720	2.50000	2.419
57 Chrysene	228	30.031	30.031	(0.912)	307924	2.50000	2.469
62 Benzo(b)fluoranthene	252	32.261	32.261	(0.980)	336487	2.50000	2.375(M)
63 Benzo(k)fluoranthene	252	32.306	32.306	(0.981)	350253	2.50000	2.453(M)
293 Benzo(j)fluoranthene	252	32.373	32.373	(0.983)	313100	2.50000	2.509
246 Total Benzofluoranthenes	252	32.306	32.306	(0.981)	962452	7.50000	7.323(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.925	32.925	(1.000)	290613	2.00000	
64 Benzo(e)pyrene	252	32.981	32.981	(1.002)	328333	2.50000	2.531
66 Benzo(a)pyrene	252	33.083	33.083	(1.005)	274277	2.50000	2.238
$ 67 Perylene-d12	264	33.263	33.263	(1.010)	284217	2.50000	2.365
68 Perylene	252	33.319	33.319	(1.012)	313412	2.50000	2.435
69 Indeno(1,2,3-cd)pyrene	276	35.268	35.268	(1.071)	288670	2.50000	1.902(M)
70 Dibenzo(a,h)anthracene	278	35.234	35.234	(1.070)	252255	2.50000	1.882
74 Benzo(g,h,i)perylene	276	36.113	36.113	(1.097)	282691	2.50000	2.121

QC Flag Legend

M - Compound response manually integrated.

Data File: NT1420121517ICV.D
Report Date: 16-Dec-2020 13:58

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1420121517ICV.D
Lab Smp Id: SIL0233-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201215A.b\ALKYLPNA.m
Misc Info:

Calibration Date: 15-DEC-2020
Calibration Time: 12:15
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	244647	122324	489294	244647	0.00
250 Anthracene-d10	215002	107501	430004	215002	0.00
251 Benzo(e)pyrene-d1	290613	145307	581226	290613	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.61	18.11	19.11	18.61	0.00
250 Anthracene-d10	22.05	21.55	22.55	22.05	0.00
251 Benzo(e)pyrene-d1	32.93	32.43	33.43	32.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1420121517ICV.D

Lab ID: SIL0233-ICV1
nt14.i, 20201215A.b\ALKYLPNA.m, 16-DEC-2020 00:36

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

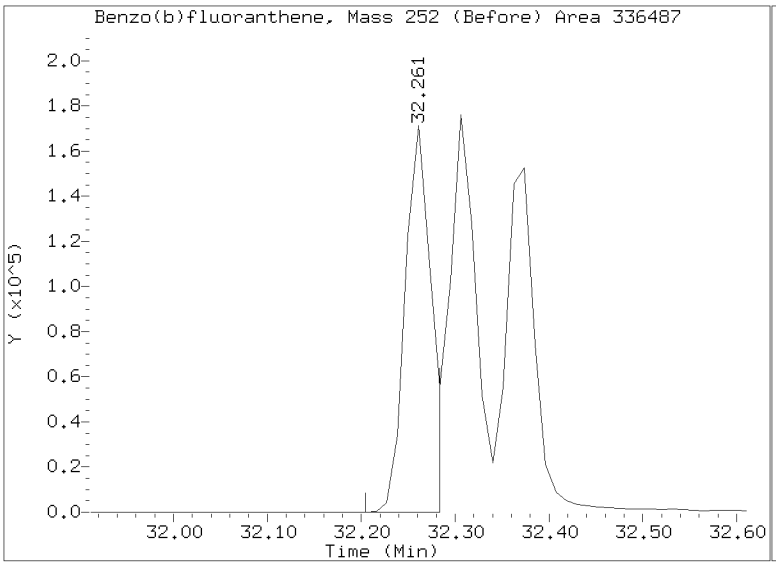
No RRT check. Ccal file.

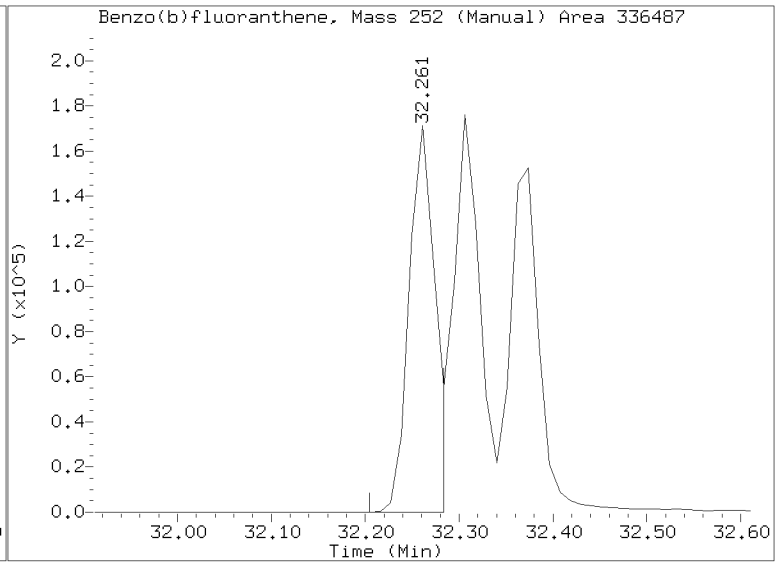
On Column LOD for nt14.i, 20201215A.b\ALKYLPNA.m, TARGETS.sub = 0.0000

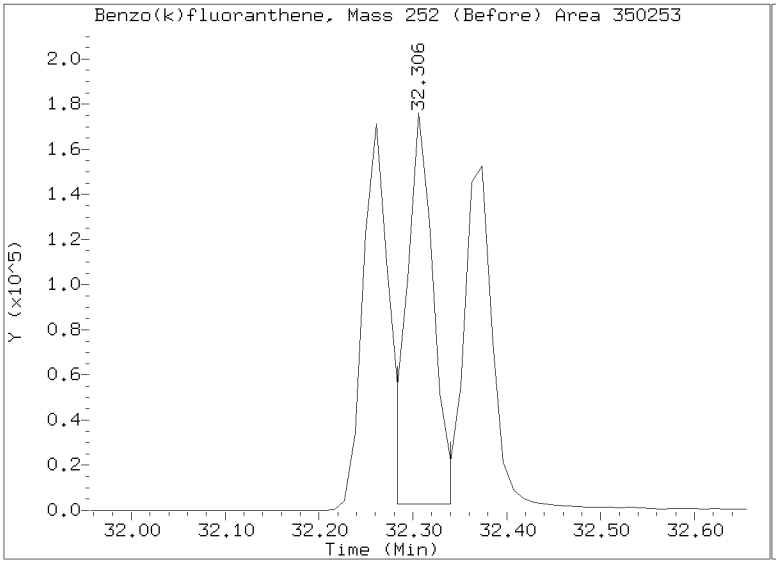
* Only compounds listed in the work order have been verified by the analyst *

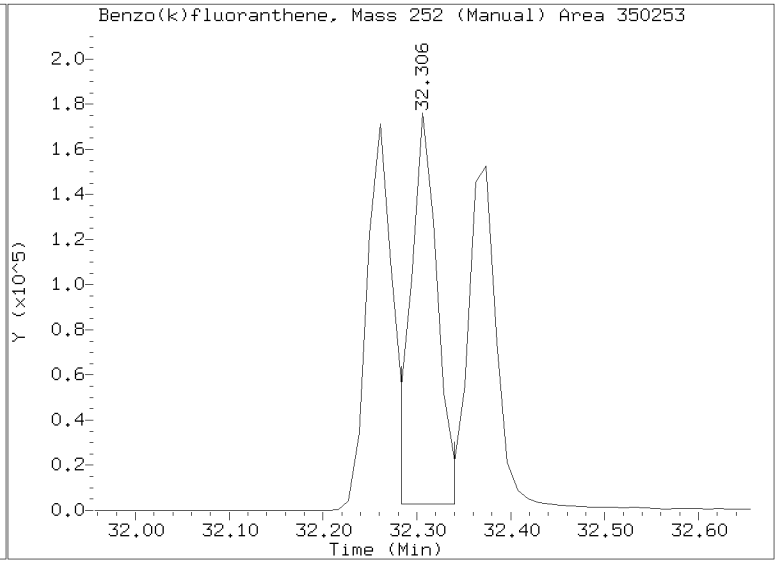
Quant Ion Manual Peak Adjustment Report

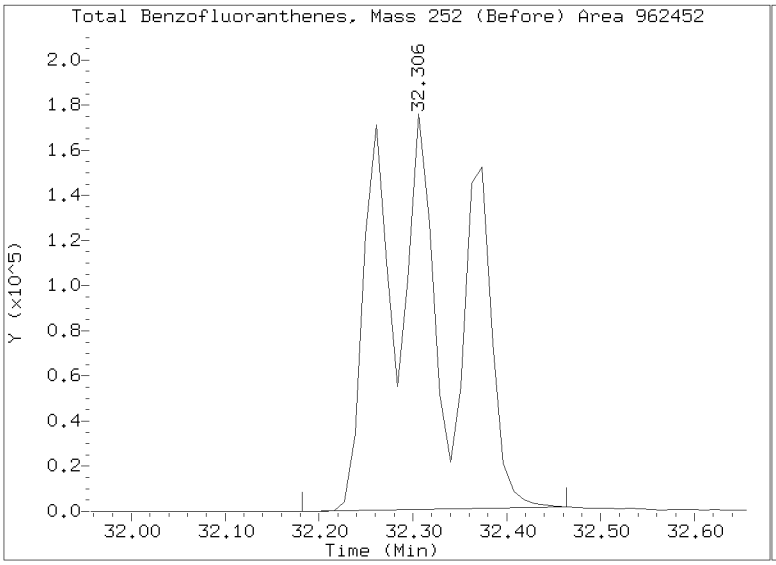
Datafile: //target/share/chem3/nt14.i/20201215A.b/NT1420121517ICV.D
Injection Date: 16-DEC-2020 00:36
Lab ID:SIL0233-ICV1 Client ID:
Report Date: 12/16/2020 13:58

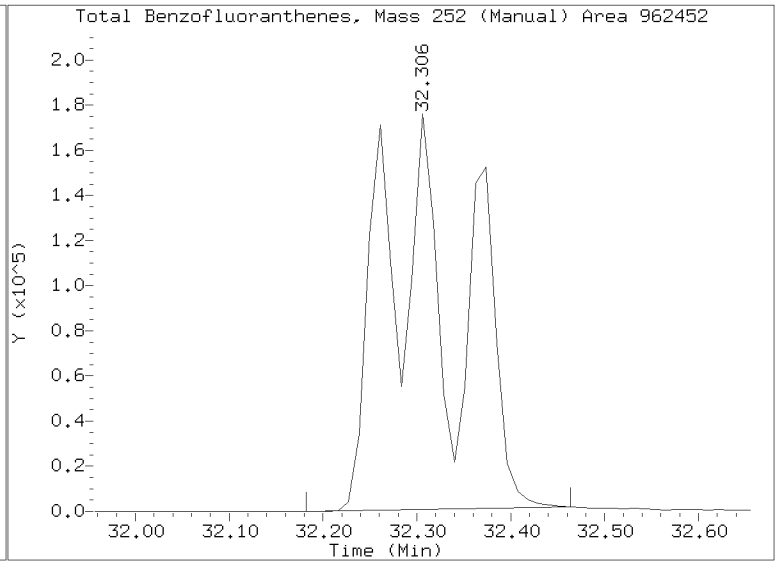






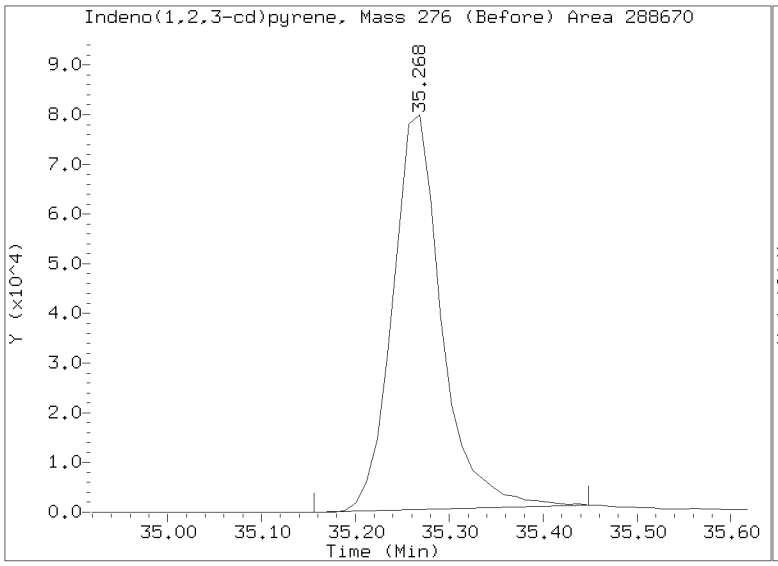


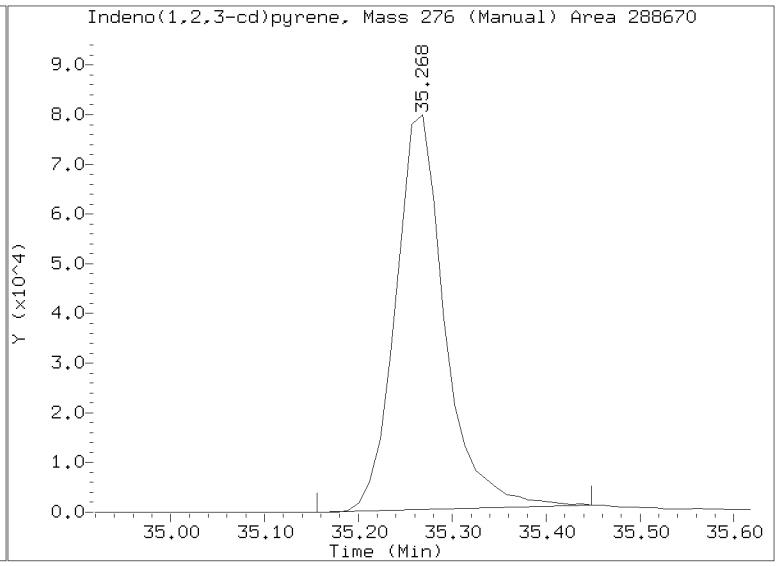




Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20201215A.b/NT1420121517ICV.D
Injection Date: 16-DEC-2020 00:36
Lab ID:SIL0233-ICV1 Client ID:
Report Date: 12/16/2020 13:58





Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201215A.b

Instrument: nt14.i Date: 16-DEC-2020 Method: 20201215A.b\ALKYLPNA.m

INITIAL CAL: 07-OCT-2020

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1420121517ICV.D 16-DEC-2020 00:36

Compound	%D
Indeno(1,2,3-cd)pyrene	-23.9
Dibenzo(a,h)anthracene	-24.7

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	NT14	Calibration:	DJ00029
Lab File ID:	NT1420121216A.D	Calibration Date:	10/07/2020
Sequence:	SIL0236	Injection Date:	12/12/20
Lab Sample ID:	SIL0236-ICV1	Injection Time:	23:11
Sequence Name:	Initial Cal Check		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
trans-Decalin	A	2.5000	2.8	0.0835887	0.0935776		12.0	+/-20	
cis-Decalin	A	2.5000	2.9	0.0628966	0.0724580		15.2	+/-20	
Naphthalene	A	2.5000	2.7	0.8164379	0.8681129		6.3	+/-20	
1-Methylnaphthalene	A	2.5000	2.6	0.5226651	0.5209733		4.1	+/-20	
2-Methylnaphthalene	A	2.5000	2.7	0.4976918	0.5402605		8.6	+/-20	
Biphenyl	A	2.5000	2.6	0.7490419	0.7755351		3.5	+/-20	
2,6-Dimethylnaphthalene	A	2.5000	2.7	0.5468360	0.5829309		6.6	+/-20	
Acenaphthylene	A	2.5000	2.7	0.8966517	0.9565760		6.7	+/-20	
Acenaphthene	A	2.5000	2.6	0.5873971	0.6197100		5.5	+/-20	
Dibenzofuran	A	2.5000	2.6	0.8521596	0.8698747		2.1	+/-20	
2,3,5-Trimethylnaphthalene	A	2.5000	2.7	0.5544134	0.6078344		9.6	+/-20	
Fluorene	A	2.5000	2.6	0.6643144	0.6946732		4.6	+/-20	
Benzo(b)thiophene	A	2.5000	2.6	0.6860043	0.7264009		5.9	+/-20	
Phenanthrene	A	2.5000	2.5	1.1075820	1.1220010		1.3	+/-20	
Anthracene	A	2.5000	2.5	1.0885140	1.0799550		-0.8	+/-20	
Carbazole	A	2.5000	2.5	0.9426380	0.9344218		-0.9	+/-20	
1-Methylphenanthrene	A	2.5000	2.7	0.8129613	0.8910424		9.6	+/-20	
Fluoranthene	A	2.5000	2.7	1.2224260	1.3248160		8.4	+/-20	
Dibenzothiophene	A	2.5000	2.5	0.9560816	0.9705814		1.5	+/-20	
Pyrene	A	2.5000	2.7	1.2899540	1.4134450		9.6	+/-20	
Benzo(a)anthracene	A	2.5000	2.5	0.8634119	0.8728451		1.1	+/-20	
Chrysene	A	2.5000	2.5	0.8581534	0.8554634		-0.3	+/-20	
Benzo(b)fluoranthene	A	2.5000	3.0	0.9748863	1.1644700		19.4	+/-20	
Benzo(j)fluoranthene	A	2.5000	2.5	0.8589085	0.8667622		0.9	+/-20	
Benzo(k)fluoranthene	A	2.5000	2.2	0.9825948	0.8828749		-10.2	+/-20	
Benzofluoranthenes, Total	A	7.5000	8.0	0.9045439	0.9645007		6.6	+/-20	
Benzo(e)pyrene	A	2.5000	2.5	0.8926013	0.9056215		1.4	+/-20	
Benzo(a)pyrene	A	2.5000	2.4	0.8433439	0.7955913		-5.7	+/-20	
Indeno(1,2,3-cd)pyrene	A	2.5000	2.0	1.0443470	0.8545936		-18.2	+/-20	
Dibenzo(a,h)anthracene	A	2.5000	1.9	0.9226661	0.6974140		-24.4	+/-20	*
Benzo(g,h,i)perylene	A	2.5000	2.2	0.9174617	0.7905391		-13.8	+/-20	

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	NT14	Calibration:	DJ00029
Lab File ID:	NT1420121216A.D	Calibration Date:	10/07/2020
Sequence:	SIL0236	Injection Date:	12/12/20
Lab Sample ID:	SIL0236-ICV1	Injection Time:	23:11
Sequence Name:	Initial Cal Check		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Perylene	A	2.5000	2.4	0.8858103	0.8647247		-2.4	+/-20
Benzo(b)naphtho(2,1-d)thiophene	A	2.5000	2.5	1.1757640	1.1628240		-1.1	+/-20
Naphthalene-d8	A	2.5000	2.95	0.8160533	0.9637199		18.1	+/-20
Acenaphthene-d10	A	2.5000	2.67	0.4900295	0.5236755		6.9	+/-20
Phenanthrene-d10	A	2.5000	2.62	0.9579158	1.0024780		4.6	+/-20
Chrysene-d12	A	2.5000	2.41	0.6819030	0.6575002		-3.6	+/-20
Perylene-d12	A	2.5000	2.35	0.8269999	0.7756061		-6.2	+/-20

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20201212A.b\NT1420121216A.D

Date : 12-DEC-2020 23:11

Client ID:

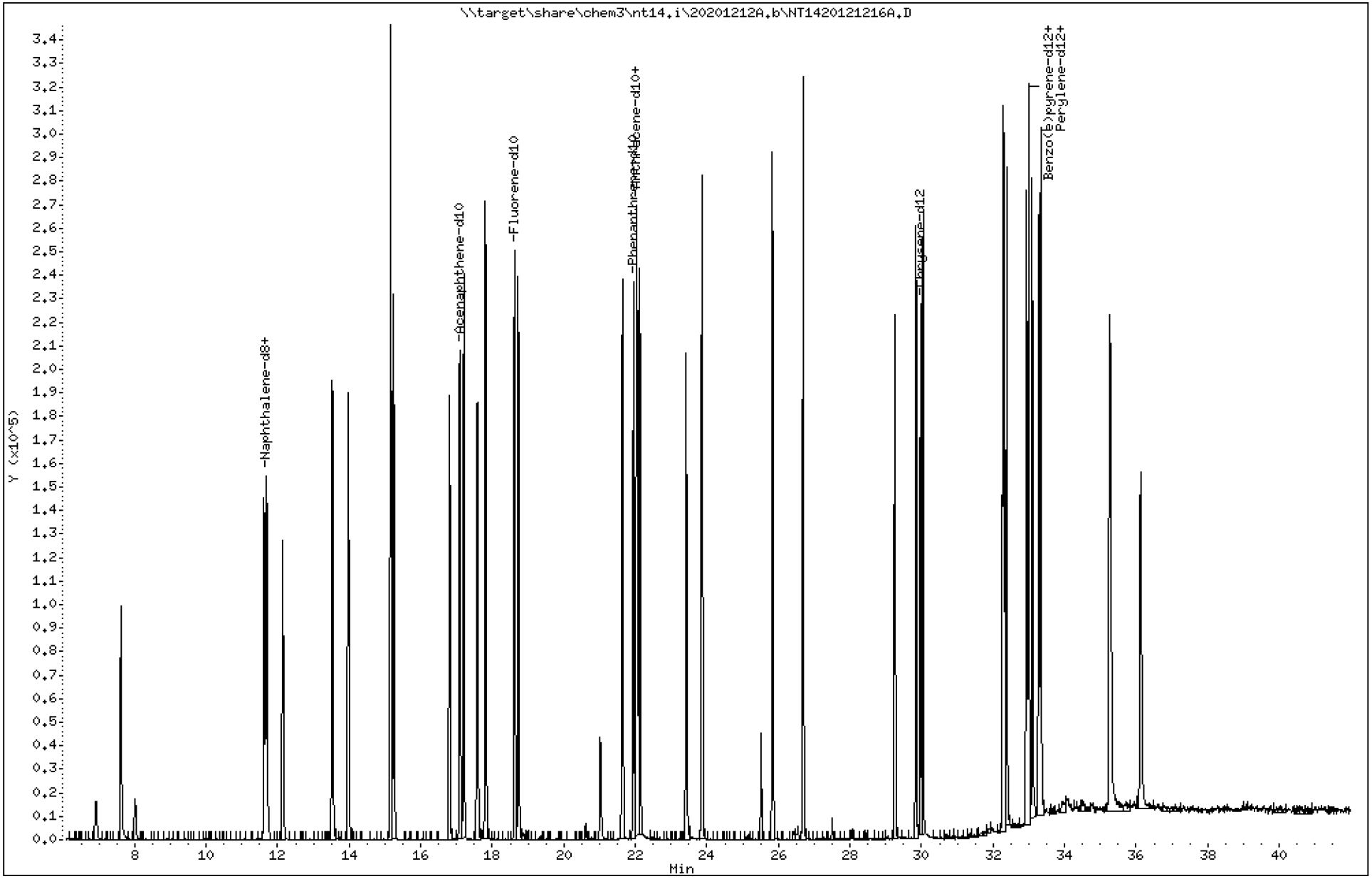
Instrument: nt14.i

Sample Info: SIL0236-ICV1

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20201212A.b\NT1420121216A.D
Lab Smp Id: SIL0236-ICV1
Inj Date : 12-DEC-2020 23:11
Operator : VTS Inst ID: nt14.i
Smp Info : SIL0236-ICV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20201212A.b\ALKYLPNA.m
Meth Date : 16-Dec-2020 08:00 yev Quant Type: ISTD
Cal Date : 07-OCT-2020 15:56 Cal File: NT1420100708.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TARGETS.sub
Target Version: 4.14
Processing Host: ORGDATA102

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 trans-Decalin	138	6.924	6.924	(0.372)	25176	2.50000	2.799
	2 cis-Decalin	138	8.024	8.024	(0.431)	19494	2.50000	2.880
$	6 Naphthalene-d8	136	11.619	11.619	(0.624)	259278	2.50000	2.952
	7 Naphthalene	128	11.685	11.685	(0.628)	233556	2.50000	2.658
	12 Benzo(b)thiophene	134	12.135	12.135	(0.652)	195430	2.50000	2.647
	16 2-Methylnaphthalene	141	13.520	13.520	(0.726)	145351	2.50000	2.714
	17 1-methylnaphthalene	141	13.971	13.971	(0.750)	140162	2.50000	2.603
	18 Biphenyl	154	15.157	15.157	(0.814)	208649	2.50000	2.588
	19 2,6-Dimethylnaphthalene	156	15.245	15.245	(0.819)	156831	2.50000	2.665
	20 Acenaphthylene	152	16.806	16.806	(0.903)	257356	2.50000	2.667
$	21 Acenaphthene-d10	164	17.081	17.081	(0.917)	140889	2.50000	2.672
	22 Acenaphthene	153	17.202	17.202	(0.924)	166726	2.50000	2.638
	23 Dibenzofuran	168	17.586	17.586	(0.944)	234030	2.50000	2.552
	24 1,6,7-Trimethylnaphthalene	170	17.806	17.806	(0.956)	163531	2.50000	2.741
*	25 Fluorene-d10	176	18.621	18.621	(1.000)	215231	2.00000	
	26 Fluorene	166	18.723	18.723	(1.005)	186894	2.50000	2.614
	30 Dibenzothiophene	184	21.637	21.637	(1.162)	261124	2.50000	2.538
$	35 Phenanthrene-d10	188	21.952	21.952	(0.995)	246671	2.50000	2.616
	36 Phenanthrene	178	22.029	22.029	(0.999)	276081	2.50000	2.533
*	250 Anthracene-d10	188	22.062	22.062	(1.000)	196849	2.00000	
	37 Anthracene	178	22.128	22.128	(1.003)	265735	2.50000	2.480
	42 Carbazole	167	23.414	23.414	(1.061)	229925	2.50000	2.478
	43 1-Methylphenanthrene	192	23.864	23.864	(1.082)	219251	2.50000	2.740
	44 Fluoranthene	202	25.833	25.833	(1.171)	325986	2.50000	2.709
	46 Pyrene	202	26.690	26.690	(1.210)	347794	2.50000	2.739
	51 Naphthobenzothiophene	234	29.256	29.256	(1.326)	286126	2.50000	2.472
	55 Benzo(a)anthracene	228	29.839	29.839	(0.906)	293013	2.50000	2.527
$	56 Chrysene-d12	240	29.963	29.963	(0.910)	220722	2.50000	2.411
	57 Chrysene	228	30.042	30.042	(0.912)	287178	2.50000	2.492
	62 Benzo(b)fluoranthene	252	32.272	32.272	(0.980)	390911	2.50000	2.986
	63 Benzo(k)fluoranthene	252	32.317	32.317	(0.981)	296380	2.50000	2.246
	293 Benzo(j)fluoranthene	252	32.384	32.384	(0.983)	290971	2.50000	2.523
	246 Total Benzofluoranthenes	252	32.272	32.272	(0.980)	971345	7.50000	7.997(M)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
* 251 Benzo(e)pyrene-d12	264	32.936	32.936	(1.000)	268559	2.00000	
64 Benzo(e)pyrene	252	32.993	32.993	(1.002)	304016	2.50000	2.536
66 Benzo(a)pyrene	252	33.094	33.094	(1.005)	267079	2.50000	2.358
$ 67 Perylene-d12	264	33.274	33.274	(1.010)	260370	2.50000	2.345
68 Perylene	252	33.331	33.331	(1.012)	290287	2.50000	2.440
69 Indeno(1,2,3-cd)pyrene	276	35.279	35.279	(1.071)	286886	2.50000	2.046
70 Dibenzo(a,h)anthracene	278	35.257	35.257	(1.070)	234121	2.50000	1.890
74 Benzo(g,h,i)perylene	276	36.124	36.124	(1.097)	265383	2.50000	2.154

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: NT1420121216A.D
Lab Smp Id: SIL0236-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt14.i\20201212A.b\ALKYLPNA.m
Misc Info:

Calibration Date: 12-DEC-2020
Calibration Time: 11:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	215231	107616	430462	215231	0.00
250 Anthracene-d10	196849	98425	393698	196849	0.00
251 Benzo(e)pyrene-d1	268559	134280	537118	268559	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
25 Fluorene-d10	18.62	18.12	19.12	18.62	0.00
250 Anthracene-d10	22.06	21.56	22.56	22.06	0.00
251 Benzo(e)pyrene-d1	32.94	32.44	33.44	32.94	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 - NT1420121216A.D

Lab ID: SIL0236-ICV1
nt14.i, 20201212A.b\ALKYLPNA.m, 12-DEC-2020 23:11

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

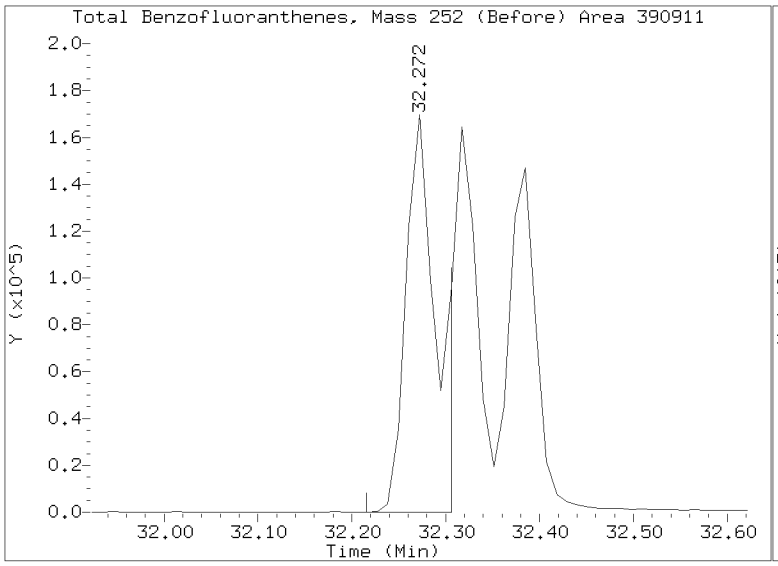
No RRT check. Ccal file.

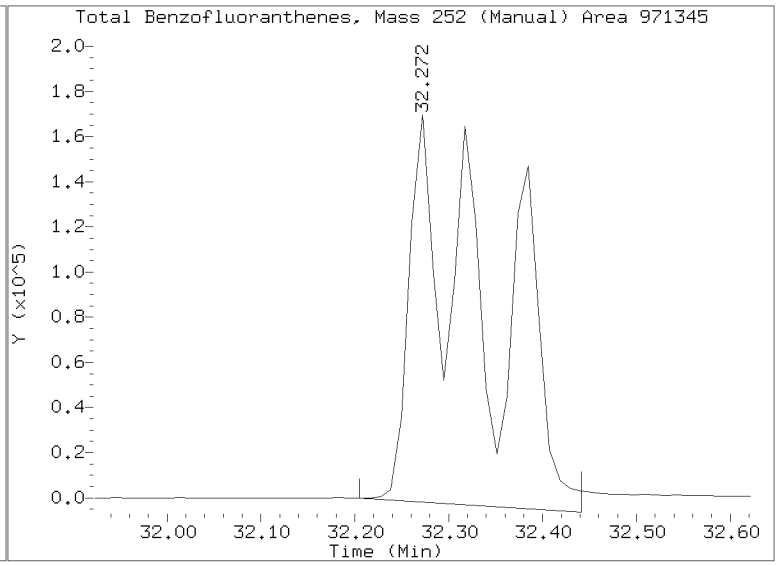
On Column LOD for nt14.i, 20201212A.b\ALKYLPNA.m, TARGETS.sub = 0.0000

* 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/20201212A.b/NT1420121216A.D
Injection Date: 12-DEC-2020 23:11
Lab ID:SIL0236-ICV1 Client ID:
Report Date: 12/16/2020 08:00





Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201212A.b

Instrument: nt14.i Date: 12-DEC-2020 Method: 20201212A.b\ALKYLPNA.m

INITIAL CAL: 07-OCT-2020

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1420121216A.D 12-DEC-2020 23:11

Compound	%D
Dibenzo(a,h)anthracene	-24.4

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SII0123	Instrument:	NT14
		Calibration:	DI00041

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	BIH0457-BLK2	NT1420090813S.D	Solid	09/08/20 17:29
ZZZZZ	20H0199-17	NT1420090819S.D	Solid	09/08/20 22:20
ZZZZZ	20H0199-18	NT1420090820S.D	Solid	09/08/20 23:08
ZZZZZ	20H0199-19	NT1420090821S.D	Solid	09/08/20 23:56
ZZZZZ	20H0199-20	NT1420090822S.D	Solid	09/09/20 00:44
ZZZZZ	20H0199-21	NT1420090823S.D	Solid	09/09/20 01:32
ZZZZZ	20H0199-22	NT1420090824S.D	Solid	09/09/20 02:20
ZZZZZ	20H0199-23	NT1420090825S.D	Solid	09/09/20 03:08
ZZZZZ	20H0199-24	NT1420090826S.D	Solid	09/09/20 03:56

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 9/12/2020 2:17:58PM

ANALYSIS SEQUENCE

SII0123

Instrument: NT14 Element Column ID: I005863
Calibration ID: DI00041 Tune File: 200104.U
EM Voltage: 1847

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SII0123-CAL1	Cal Standard	QC		1	I008041	I007919	
SII0123-ICV1	Initial Cal Check	QC		2	I008041	I007919	
BIH0457-BLK2	Blank	QC		3		I007919	
20H0199-17	BGW-PWN-SS617-08182020	8270E-SIM Alkyl PAH (Range) Dual Scan	B 03	4		I007919	
20H0199-18	BGW-PWN-SS618-08182020	8270E-SIM Alkyl PAH (Range) Dual Scan	B 03	5		I007919	
20H0199-19	BGW-PWN-SS619-08182020	8270E-SIM Alkyl PAH (Range) Dual Scan	B 03	6		I007919	
20H0199-20	BGW-PWN-SS620-08182020	8270E-SIM Alkyl PAH (Range) Dual Scan	B 03	7		I007919	
20H0199-21	BGW-PWN-SS622-08172020	8270E-SIM Alkyl PAH (Range) Dual Scan	B 03	8		I007919	
20H0199-22	BGW-ISA-SS623-08172020	8270E-SIM Alkyl PAH (Range) Dual Scan	B 03	9		I007919	
20H0199-23	BGW-ISA-SS624-08172020	8270E-SIM Alkyl PAH (Range) Dual Scan	B 03	10		I007919	
20H0199-24	BGW-ISA-SS625-08172020	8270E-SIM Alkyl PAH (Range) Dual Scan	B 03	11		I007919	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20200908.b\SIM.b

	Time	Filename	LabID	ClientId	DF						
1	0833	NT1420090802S.D	SII0123-ICV1		1	|18.85	289587||22.30	302226||33.10	388762|		
2	1729	NT1420090813S.D	BIH0457-BLK1		1	|18.86	275739||22.29	276529||33.10	371336|		
3	2220	NT1420090819S.D	20H0199-17		1	|18.86	293372||22.30	304319||33.10	386542|		
4	2308	NT1420090820S.D	20H0199-18		1	|18.86	294959||22.29	312091||33.10	384541|		
5	2356	NT1420090821S.D	20H0199-19		1	|18.86	297481||22.29	311487||33.10	379379|		
6	0044	NT1420090822S.D	20H0199-20		1	|18.85	294282||22.29	305915||33.10	385519|		
7	0132	NT1420090823S.D	20H0199-21		1	|18.86	290472||22.29	299224||33.10	382457|		
8	0220	NT1420090824S.D	20H0199-22		1	|18.86	298099||22.29	310862||33.10	402719|		
9	0308	NT1420090825S.D	20H0199-23		1	|18.86	298076||22.29	310129||33.10	394204|		
10	0356	NT1420090826S.D	20H0199-24		1	|18.85	269629||22.30	273879||33.10	350684|		

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20200908.b\SIM.b

Instrument: nt14.i Date: 08-SEP-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
0833	NT1420090802S.D	SII0123-ICV1	1	NO MANUAL INTEGRATION
1729	NT1420090813S.D	BIH0457-BLK1	1	C1-Naphthalenes, C2-Naphthalenes, Perylene-d12,
2220	NT1420090819S.D	20H0199-17	1	C1-Naphthalenes, C4-Fluoranthenes/Pyrenes, C2-Naphthalenes, C3-Naphthalenes, C4-Naphthalenes, C1-Benzothiophen C1-Fluorenes, C2-Fluorenes, C3-Fluorenes, C1-Dibenzothiophenes, C2-Dibenzothiophenes, C3-Dibenzothioph C1-Phenanthrenes/Anthracenes, C2-Phenanthrenes/Anthracenes, C3-Phenanthrenes/Anthracenes, C4-Phenanthrenes/Ant
2308	NT1420090820S.D	20H0199-18	1	C1-Naphthalenes, C4-Fluoranthenes/Pyrenes, C2-Naphthalenes, C3-Naphthalenes, C4-Naphthalenes, C1-Benzothiophen C2-Benzothiophenes, C1-Fluorenes, C2-Fluorenes, C3-Fluorenes, C1-Dibenzothiophenes, C2-Dibenzothiophen C3-Dibenzothiophenes, C1-Phenanthrenes/Anthracenes, C2-Phenanthrenes/Anthracenes, C3-Phenanthrenes/Anthracenes
2356	NT1420090821S.D	20H0199-19	1	C1-Naphthalenes, C4-Fluoranthenes/Pyrenes, C2-Naphthalenes, C3-Naphthalenes, C4-Naphthalenes, C1-Benzothiophen C1-Fluorenes, C1-Dibenzothiophenes, C2-Dibenzothiophenes, C1-Phenanthrenes/Anthracenes, C2-Phenanthrenes/A C4-Phenanthrenes/Anthracenes, C1-Fluoranthenes/Pyrenes, C2-Fluoranthenes/Pyrenes, C3-Fluoranthenes/Pyrenes,
0044	NT1420090822S.D	20H0199-20	1	C1-Naphthalenes, C2-Naphthalenes, C3-Naphthalenes, C1-Benzothiophenes, C1-Fluorenes, C1-Phenanthrenes/Anthrace C2-Phenanthrenes/Anthracenes, C3-Phenanthrenes/Anthracenes, C1-Fluoranthenes/Pyrenes, C2-Fluoranthenes/Pyrenes
0132	NT1420090823S.D	20H0199-21	1	C1-Naphthalenes, C4-Fluoranthenes/Pyrenes, C2-Naphthalenes, C3-Naphthalenes, C4-Naphthalenes, C1-Benzothiophen C2-Benzothiophenes, C1-Fluorenes, C2-Fluorenes, C3-Fluorenes, C1-Dibenzothiophenes, C2-Dibenzothiophen C3-Dibenzothiophenes, C1-Phenanthrenes/Anthracenes, C2-Phenanthrenes/Anthracenes, C3-Phenanthrenes/Anthracenes
0220	NT1420090824S.D	20H0199-22	1	C1-Naphthalenes, C2-Naphthalenes, C3-Naphthalenes, C4-Naphthalenes, C1-Benzothiophenes, C1-Fluorenes, C2-Fluorenes, C3-Fluorenes, C1-Phenanthrenes/Anthracenes, C2-Phenanthrenes/Anthracenes, C3-Phenanthrenes/A C2-Fluoranthenes/Pyrenes, C1-Naphthobenzothiophenes, C1-Benzo(a)anthracenes/Chrysene, C1-Dibenzo(a)anthracenes
0308	NT1420090825S.D	20H0199-23	1	C1-Naphthalenes, C4-Fluoranthenes/Pyrenes, C2-Naphthalenes, C3-Naphthalenes, C4-Naphthalenes, C1-Benzothiophen C1-Fluorenes, C2-Fluorenes, C3-Fluorenes, C1-Dibenzothiophenes, C2-Dibenzothiophenes, C3-Dibenzothioph C1-Phenanthrenes/Anthracenes, C2-Phenanthrenes/Anthracenes, C3-Phenanthrenes/Anthracenes, C4-Phenanthrenes/Ant
0356	NT1420090826S.D	20H0199-24	1	C1-Naphthalenes, C2-Naphthalenes, C3-Naphthalenes, C1-Fluorenes, C1-Dibenzothiophenes, C2-Dibenzothiophenes, C1-Phenanthrenes/Anthracenes, C2-Phenanthrenes/Anthracenes, C3-Phenanthrenes/Anthracenes, C1-Fluoranthenes/Pyr

Security Status Report

Date: 12-Sep-2020 14:14

NT1420090802S.D	Data Locked	van, 12-Sep-2020 14:14
NT1420090813S.D	Data Locked	van, 12-Sep-2020 14:14
NT1420090819S.D	Data Locked	van, 12-Sep-2020 14:14
NT1420090820S.D	Data Locked	van, 12-Sep-2020 14:14
NT1420090821S.D	Data Locked	van, 12-Sep-2020 14:14
NT1420090822S.D	Data Locked	van, 12-Sep-2020 14:14
NT1420090823S.D	Data Locked	van, 12-Sep-2020 14:14
NT1420090824S.D	Data Locked	van, 12-Sep-2020 14:14
NT1420090825S.D	Data Locked	van, 12-Sep-2020 14:14
NT1420090826S.D	Data Locked	van, 12-Sep-2020 14:14

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIJ0085	Instrument:	NT14
		Calibration:	DJ00029

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SIJ0085-TUN1	NT1420100701.D	NA	10/07/20 10:11
PAH 2.5	SIJ0085-CAL4	NT1420100702.D	NA	10/07/20 10:24
PAH 10	SIJ0085-CAL6	NT1420100703.D	NA	10/07/20 11:48
PAH 0.1	SIJ0085-CAL1	NT1420100704.D	NA	10/07/20 12:38
PAH 5.0	SIJ0085-CAL5	NT1420100705.D	NA	10/07/20 13:26
PAH 0.25	SIJ0085-CAL2	NT1420100706.D	NA	10/07/20 14:17
PAH 0.5	SIJ0085-CAL3	NT1420100707.D	NA	10/07/20 15:08
Secondary Cal Check	SIJ0085-SCV1	NT1420100709.D	NA	10/07/20 16:45
Initial Cal Blank	SIJ0085-ICB1	NT1420100710.D	NA	10/07/20 17:33
Initial Cal Check	SIJ0085-ICV1	NT1420100711.D	NA	10/07/20 18:22
Instrument Blank	SIJ0085-IBL1	NT1420100712.D	NA	10/07/20 19:11
ZZZZZ	20I0231-01RE1	NT1420100713.D	Solid	10/07/20 19:59
ZZZZZ	20I0231-02RE1	NT1420100714.D	Solid	10/07/20 20:48
ZZZZZ	20I0231-03RE1	NT1420100715.D	Solid	10/07/20 21:36
ZZZZZ	20I0231-05RE1	NT1420100717.D	Solid	10/07/20 23:13
ZZZZZ	20I0231-07RE1	NT1420100719.D	Solid	10/08/20 00:49
ZZZZZ	20I0231-08RE1	NT1420100720.D	Solid	10/08/20 01:38
ZZZZZ	20I0231-09RE1	NT1420100721.D	Solid	10/08/20 02:26
ZZZZZ	20I0231-10RE1	NT1420100722.D	Solid	10/08/20 03:14
ZZZZZ	20I0231-11RE1	NT1420100723.D	Solid	10/08/20 04:03
Calibration Check	SIJ0085-CCV1	NT1420100724.D	NA	10/08/20 04:51

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Printed: 10/9/2020 11:03:26AM

ANALYSIS SEQUENCE

SIJ0085

Instrument: NT14 Element Column ID: I005863
Calibration ID: DI00026 Tune File: 200104.U
EM Voltage: 1847

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIJ0085-TUN1	MS Tune	QC		1	I007631		
SIJ0085-CAL4	PAH 2.5	QC		2	I007920	I007919	
SIJ0085-CAL6	PAH 10	QC		3	I007921	I007919	
SIJ0085-CAL1	PAH 0.1	QC		4	I007926	I007919	
SIJ0085-CAL5	PAH 5.0	QC		5	I007922	I007919	
SIJ0085-CAL3	PAH 0.5	QC		6	I007924	I007919	
SIJ0085-CAL2	PAH 0.25	QC		7	I007925	I007919	
SIJ0085-SCV1	Secondary Cal Check	QC		8	I009393	I007919	
SIJ0085-ICB1	Initial Cal Blank	QC		9	I008041	I007919	
SIJ0085-ICV1	Initial Cal Check	QC		10	I007920	I007919	
SIJ0085-IBL1	Instrument Blank	QC		11	I008041	I007919	
20I0231-01RE1	PDI-028SC-A-07-08-191003	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	12		I007919	Added 10/5/2020 by YZ
20I0231-02RE1	PDI-028SC-A-09-10-191003	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	13		I007919	Added 10/5/2020 by YZ
20I0231-03RE1	PDI-028SC-A-10-11-191003	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	14		I007919	Added 10/5/2020 by YZ
20I0231-05RE1	PDI-069SC-A-08-09-191016	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	15		I007919	Added 10/5/2020 by YZ
20I0231-07RE1	PDI-080SC-A-00-01-200506	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	16		I007919	Added 10/5/2020 by YZ
20I0231-08RE1	PDI-081SC-A-10-11-191002	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	17		I007919	Added 10/5/2020 by YZ
20I0231-09RE1	PDI-082SC-A-04-05-191002	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	18		I007919	Added 10/5/2020 by YZ
20I0231-10RE1	PDI-082SC-A-07-08-191002	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	19		I007919	Added 10/5/2020 by YZ
20I0231-11RE1	PDI-165SC-A-02-03-200426	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 02	20		I007919	Added 10/5/2020 by YZ
SIJ0085-CCV1	Calibration Check	QC		21	I007920	I007919	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201007.b

	Time	Filename	LabID	ClientId	DF	
1	1011	NT1420100701.D	SIJ0085-TUN1		1	|NO ISTDS FOUND||
2	1024	NT1420100702.D	SIJ0085-CAL4		1	|18.63 237050||22.07 216685||32.93 311824|
3	1148	NT1420100703.D	SIJ0085-CAL6		1	|18.64 243221||22.08 226778||32.94 315078|
4	1238	NT1420100704.D	SIJ0085-CAL1		1	|18.63 219599||22.07 199428||32.93 285553|
5	1326	NT1420100705.D	SIJ0085-CAL5		1	|18.63 221965||22.07 204432||32.93 290471|
6	1417	NT1420100706.D	SIJ0085-CAL2		1	|18.63 218460||22.07 197976||32.93 287017|
7	1508	NT1420100707.D	SIJ0085-CAL3		1	|18.63 217147||22.07 196660||32.93 281303|
8	1556	NT1420100708.D	SIJ0085-CAL4		1	|18.63 206259||22.07 189225||32.93 280633|
9	1645	NT1420100709.D	SIJ0085-SCV1		1	|18.63 189405||22.07 203362||32.93 288304|
10	1733	NT1420100710.D	SIJ0085-ICB1		1	|18.63 209569||22.07 195015||32.93 275049|
11	1822	NT1420100711.D	SIJ0085-ICV1		1	|18.63 209596||22.07 192407||32.93 274120|
12	1911	NT1420100712.D	SIJ0085-IBL1		1	|18.63 204918||22.07 190308||32.93 277914|
13	1959	NT1420100713.D	20I0231-01RE1		50	|18.63 216675||22.07 201347||32.93 283619|
14	2048	NT1420100714.D	20I0231-02RE1		50	|18.63 223226||22.07 210366||32.93 295832|
15	2136	NT1420100715.D	20I0231-03RE1		50	|18.63 220403||22.07 205010||32.93 294397|
16	2225	NT1420100716.D	20I0231-04RE1		50	|18.63 221665||22.07 207108||32.93 288287|
17	2313	NT1420100717.D	20I0231-05RE1		50	|18.63 213324||22.07 203945||32.93 287899|
18	0001	NT1420100718.D	20I0231-06RE1		50	|18.63 223960||22.07 210571||32.93 296494|
19	0049	NT1420100719.D	20I0231-07RE1		25	|18.63 219212||22.07 209445||32.93 289596|
20	0138	NT1420100720.D	20I0231-08RE1		100	|18.63 222098||22.07 213997||32.93 296812|

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201007.b

	Time	Filename	LabID	ClientId	DF						
21	0226	NT1420100721.D	20I0231-09RE1		50	18.63	230253	22.07	216448	32.93	299511
22	0314	NT1420100722.D	20I0231-10RE1		50	18.63	222736	22.07	211749	32.93	294827
23	0403	NT1420100723.D	20I0231-11RE1		100	18.63	220968	22.07	205977	32.93	288799
24	0451	NT1420100724.D	SIJ0085-CCV1		1	18.63	215012	22.07	198797	32.93	275539

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201007.b

Instrument: nt14.i Date: 07-OCT-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
1011	NT1420100701.D	SIJ0085-TUN1	1	NO MANUAL INTEGRATION
1024	NT1420100702.D	SIJ0085-CAL4	1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Total Benzofluoranthenes,
1148	NT1420100703.D	SIJ0085-CAL6	1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Benzo(j)fluoranthene,
1238	NT1420100704.D	SIJ0085-CAL1	1	Benzo(k)fluoranthene, cis-Decalin, Total Benzofluoranthenes, Phenanthrene-d10,
1326	NT1420100705.D	SIJ0085-CAL5	1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Total Benzofluoranthenes, Benzo(j)fluoranthene
1417	NT1420100706.D	SIJ0085-CAL2	1	Total Benzofluoranthenes,
1508	NT1420100707.D	SIJ0085-CAL3	1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Total Benzofluoranthenes, Benzo(j)fluoranthene
1556	NT1420100708.D	SIJ0085-CAL4	1	Total Benzofluoranthenes, Phenanthrene-d10,
1645	NT1420100709.D	SIJ0085-SCV1	1	Benzo(g,h,i)perylene, Total Benzofluoranthenes,
1733	NT1420100710.D	SIJ0085-ICB1	1	NO MANUAL INTEGRATION
1822	NT1420100711.D	SIJ0085-ICV1	1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Total Benzofluoranthen
1911	NT1420100712.D	SIJ0085-IBL1	1	NO MANUAL INTEGRATION
1959	NT1420100713.D	20I0231-01RE1	50	Acenaphthylene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, 2,6-Dimethylnaphthalene, Total Benzofluoranthenes, Perylene-d12,
2048	NT1420100714.D	20I0231-02RE1	50	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Total Benzofluoranthenes, Naphthalene-d8, Phenanthrene-d10, Perylene-d12,
2136	NT1420100715.D	20I0231-03RE1	50	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, 2,6-Dimethylnaphthalen Naphthalene-d8, Phenanthrene-d10, Perylene-d12,
2225	NT1420100716.D	20I0231-04RE1	50	NO MANUAL INTEGRATION
2313	NT1420100717.D	20I0231-05RE1	50	Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, 2,6-Dimethylnaphthalene, Total Benzofluoranthenes, Napht Acenaphthene-d10, Phenanthrene-d10, Perylene-d12,

Instrument: nt14.i Date: 08-OCT-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
0001	NT1420100718.D	20I0231-06RE1	50	NO MANUAL INTEGRATION
0049	NT1420100719.D	20I0231-07RE1	25	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Biphenyl, 2,6-Dimeth Total Benzofluoranthenes, Phenanthrene-d10, Perylene-d12,
0138	NT1420100720.D	20I0231-08RE1	100	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Biphenyl, 2,6-Dimethylnaphthalene, Total B Phenanthrene-d10, Perylene-d12,
0226	NT1420100721.D	20I0231-09RE1	50	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, 2,6-Dimethylnaphthalene, Benzo(b)thiophene, Total Benzofluoranthenes, Phenanthrene-d10, Perylene-d12,
0314	NT1420100722.D	20I0231-10RE1	50	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Biphenyl, 2,6-Dimeth Benzo(b)thiophere, Total Benzofluoranthenes, Phenanthrene-d10, Perylene-d12,
0403	NT1420100723.D	20I0231-11RE1	100	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Total Benzofluoranthenes, Phenanthrene-d10, Chrysene-d12, Perylene-d12,
0451	NT1420100724.D	SIJ0085-CCV1	1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Total Benzofluoranthenes, Benzo(j)fluoranthene

Security Status Report

Date: 09-Oct-2020 11:05

NT1420100701.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100702.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100703.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100704.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100705.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100706.D	Data Locked	van, 09-Oct-2020 11:05
NT1420100707.D	Data Locked	van, 09-Oct-2020 11:05
NT1420100708.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100709.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100710.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100711.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100712.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100713.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100714.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100715.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100716.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100717.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100718.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100719.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100720.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100721.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100722.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100723.D	Data Locked	van, 09-Oct-2020 08:47
NT1420100724.D	Data Locked	van, 09-Oct-2020 08:47

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

Sequence: SIJ0085
Analyst: VB Date: 10/7/2020

Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor
20I0231-1,2,3,4,5	10	DCM	490	50				
6, 9, 10								
20I0231 - 7	20	DCM	480	25				
20I0231-8, 11	5	DCM	495	100				

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0184	Instrument:	NT14
		Calibration:	DJ00029

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SIL0184-TUN1	NT1420121201.D	NA	12/12/20 11:13
Initial Cal Check	SIL0184-ICV1	NT1420121202.D	NA	12/12/20 11:50
ZZZZZ	BIK0386-BLK1	NT1420121204.D	Solid	12/12/20 13:36
ZZZZZ	BIK0386-BS1	NT1420121205.D	Solid	12/12/20 14:25
ZZZZZ	20K0075-10	NT1420121206.D	Solid	12/12/20 15:12
ZZZZZ	20K0075-12	NT1420121209.D	Solid	12/12/20 17:36
Blank	BIK0323-BLK1	NT1420121210.D	Solid	12/12/20 18:23
LCS	BIK0323-BS1	NT1420121211.D	Solid	12/12/20 19:11
ZZZZZ	20K0069-01	NT1420121212.D	Solid	12/12/20 19:59
ZZZZZ	20K0069-02	NT1420121213.D	Solid	12/12/20 20:47
USMPDI-046SC-A-00-01-201029	20K0073-01	NT1420121214.D	Solid	12/12/20 21:35
USMPDI-046SC-A-01-02-201029	20K0073-02	NT1420121215.D	Solid	12/12/20 22:23
Calibration Check	SIL0184-CCV1	NT1420121216.D	NA	12/12/20 23:11

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/14/2020 6:36:03PM

ANALYSIS SEQUENCE

SIL0184

Instrument: NT14 Element Column ID: i005863
Calibration ID: DJ00043 Tune File: 200104u
EM Voltage: 1906

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0184-TUN1	MS Tune	QC		1	I007631		
SIL0184-ICV1	Initial Cal Check	QC		2	I007920	I007919	
BIK0323-BLK1	Blank	QC		3		I007919	
BIK0323-BS1	LCS	QC		4		I007919	
BIK0323-MS1	Matrix Spike	QC		5		I007919	
BIK0323-MSD1	Matrix Spike Dup	QC		6		I007919	
20K0069-01	USMPDI-055SC-A-00-01-20102	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 01	7		I007919	
20K0069-02	USMPDI-055SC-A-01-02-20102	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 01	8		I007919	
20K0073-01	USMPDI-046SC-A-00-01-20102	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 01	9		I007919	
20K0073-02	USMPDI-046SC-A-01-02-20102	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 01	10		I007919	
BIK0386-BLK1	Blank	QC		11		I007919	
BIK0386-BS1	LCS	QC		12		I007919	
20K0075-10	USMPDI-047SC-A-00-01-20103	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 03	13		I007919	
20K0075-12	USMPDI-047SC-D-02-04-20103	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 03	14		I007919	
SIL0184-CCV1	Calibration Check	QC		15	I007920	I007919	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201212.b

	Time	Filename	LabID	ClientId	DF	
1	1113	NT1420121201.D	SIL0184-TUN1		1	|NO ISTDS FOUND||
2	1150	NT1420121202.D	SIL0184-ICV1		1	|18.63 219929||22.07 196749||32.95 249762|
3	1248	NT1420121203.D	SIL0184-LCV1		1	|18.63 255803||22.07 235756||32.95 261035|
4	1336	NT1420121204.D	BIK0386-BLK1		1	|18.62 252112||22.06 211690||32.94 232119|
5	1425	NT1420121205.D	BIK0386-BS1		1	|18.62 236923||22.06 203767||32.94 249671|
6	1512	NT1420121206.D	20K0075-10		5	|18.62 235360||22.07 202088||32.95 284658|
7	1600	NT1420121207.D	BIK0386-MS1		5	|18.62 231125||22.07 201098||32.95 285608|
8	1648	NT1420121208.D	BIK0386-MSD1		5	|18.62 230176||22.07 203455||32.95 288156|
9	1736	NT1420121209.D	20K0075-12		1	|18.63 190671||22.14 238360||32.98 335634|
10	1823	NT1420121210.D	BIK0323-BLK1		1	|18.62 236548||22.06 199797||32.94 249760|
11	1911	NT1420121211.D	BIK0323-BS1		1	|18.62 250272||22.06 206969||32.94 272196|
12	1959	NT1420121212.D	20K0069-01		1	|18.62 229440||22.07 199905||32.96 306059|
13	2047	NT1420121213.D	20K0069-02		1	|18.63 225895||22.11 216667||32.98 347672|
14	2135	NT1420121214.D	20K0073-01		1	|18.62 225108||22.06 201164||32.95 284594|
15	2223	NT1420121215.D	20K0073-02		1	|18.62 242697||22.06 202658||32.94 276746|
16	2311	NT1420121216.D	SIL0XXX-ICV1		1	|18.62 215231||22.06 196849||32.94 268559|

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201212.b

ARI Job No.: SIL0 Method: DFTPP8270E.m Instrument: nt14.i Date: 12-DEC-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1113	NT1420121201.D	SIL0184-TUN1		1	NO MANUAL INTEGRATION
1150	NT1420121202.D	SIL0184-ICV1		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Total Benz
1248	NT1420121203.D	SIL0184-LCV1		1	Total Benzofluoranthenes,
1336	NT1420121204.D	BIK0386-BLK1		1	Perylene-d12,
1425	NT1420121205.D	BIK0386-BS1		1	Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Total Benzofluoranthenes,
1512	NT1420121206.D	20K0075-10		5	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Total Benzofluoranthenes,
1600	NT1420121207.D	BIK0386-MS1		5	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Total Benzofluoranthenes,
1648	NT1420121208.D	BIK0386-MSD1		5	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Total Benzofluoranthenes,
1736	NT1420121209.D	20K0075-12		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Total Benzofluoranthenes,
1823	NT1420121210.D	BIK0323-BLK1		1	NO MANUAL INTEGRATION
1911	NT1420121211.D	BIK0323-BS1		1	Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Total Benzofluoranthenes,
1959	NT1420121212.D	20K0069-01		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Total Benzofluoranthenes,
2047	NT1420121213.D	20K0069-02		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Total Benzofluoranthenes,
2135	NT1420121214.D	20K0073-01		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Total Benzofluoranthenes,
2223	NT1420121215.D	20K0073-02		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Biphenyl, Total Benzofluoranthenes,
2311	NT1420121216.D	SIL0XXX-ICV1		1	NO MANUAL INTEGRATION

Security Status Report

Date: 14-Dec-2020 19:35

NT1420121201.D	Data Locked	yev, 14-
NT1420121202.D	Data Locked	yev, 14-
NT1420121203.D	Data Locked	yev, 14-
NT1420121204.D	Data Locked	yev, 14-
NT1420121205.D	Data Locked	yev, 14-
NT1420121206.D	Data Locked	yev, 14-
NT1420121207.D	Data Locked	yev, 14-
NT1420121208.D	Data Locked	yev, 14-
NT1420121209.D	Data Locked	yev, 14-
NT1420121210.D	Data Locked	yev, 14-
NT1420121211.D	Data Locked	yev, 14-
NT1420121212.D	Data Locked	yev, 14-
NT1420121213.D	Data Locked	yev, 14-
NT1420121214.D	Data Locked	yev, 14-
NT1420121215.D	Data Locked	yev, 14-
NT1420121216.D	Data Locked	yev, 14-

Analytical Resources, Incorporated
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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0186	Instrument:	NT14
		Calibration:	DI00041

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	BIK0386-BLK2	NT1420121204S.D	Solid	12/12/20 13:36
ZZZZZ	20K0075-10	NT1420121206S.D	Solid	12/12/20 15:12
ZZZZZ	20K0075-12	NT1420121209S.D	Solid	12/12/20 17:36
Blank	BIK0323-BLK2	NT1420121210S.D	Solid	12/12/20 18:23
ZZZZZ	20K0069-01	NT1420121212S.D	Solid	12/12/20 19:59
ZZZZZ	20K0069-02	NT1420121213S.D	Solid	12/12/20 20:47
USMPDI-046SC-A-00-01-201029	20K0073-01	NT1420121214S.D	Solid	12/12/20 21:35
USMPDI-046SC-A-01-02-201029	20K0073-02	NT1420121215S.D	Solid	12/12/20 22:23

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Printed: 12/15/2020 5:11:54PM

ANALYSIS SEQUENCE

SIL0186

Instrument: NT14 Element Column ID: i005863
Calibration ID: DJ00043 Tune File: 200104u
EM Voltage: 1906

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0186-ICV1	Initial Cal Check	QC		1	I008041	I007919	
BIK0323-BLK2	Blank	QC		2		I007919	
20K0069-01	USMPDI-055SC-A-00-01-20102	8270E-SIM Alkyl PAH (Range) Dual Scan	A 01	3		I007919	
20K0069-02	USMPDI-055SC-A-01-02-20102	8270E-SIM Alkyl PAH (Range) Dual Scan	A 01	4		I007919	
20K0073-01	USMPDI-046SC-A-00-01-20102	8270E-SIM Alkyl PAH (Range) Dual Scan	A 01	5		I007919	
20K0073-02	USMPDI-046SC-A-01-02-20102	8270E-SIM Alkyl PAH (Range) Dual Scan	A 01	6		I007919	
BIK0386-BLK2	Blank	QC		7		I007919	
20K0075-10	USMPDI-047SC-A-00-01-20103	8270E-SIM Alkyl PAH (Range) Dual Scan	A 04	8		I007919	
20K0075-12	USMPDI-047SC-D-02-04-20103	8270E-SIM Alkyl PAH (Range) Dual Scan	A 04	9		I007919	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201212.b\sim.b

	Time	Filename	LabID	ClientId	DF						
1	1150	NT1420121202.D	SIL0186-ICV1		1	|18.62	211292||22.06	219166||32.94	281561|		
2	1336	NT1420121204.D	BIK0386-BLK2		1	|18.61	233360||22.05	237820||32.94	259662|		
3	1425	NT1420121205.D	BIK0386-BS1		1	|18.61	227995||22.05	229668||32.94	277956|		
4	1512	NT1420121206.D	20K0075-10		5	|18.62	223318||22.06	228203||32.94	319499|		
5	1600	NT1420121207.D	BIK0386-MS1		5	|18.61	222532||22.06	225973||32.94	314614|		
6	1648	NT1420121208.D	BIK0386-MSD1		5	|18.62	221214||22.06	228076||32.94	322186|		
7	1736	NT1420121209.D	20K0075-12		1	|18.63	215081||22.13	229713||32.97	356925|		
8	1823	NT1420121210.D	BIK0323-BLK2		1	|18.61	223103||22.05	221666||32.94	281798|		
9	1911	NT1420121211.D	BIK0323-BS1		1	|18.61	234266||22.05	234521||32.94	304562|		
10	1959	NT1420121212.D	20K0069-01		1	|18.61	219097||22.07	227325||32.96	348405|		
11	2047	NT1420121213.D	20K0069-02		1	|18.62	222843||22.11	230102||32.98	382349|		
12	2135	NT1420121214.D	20K0073-01		1	|18.61	219994||22.06	224536||32.94	321691|		
13	2223	NT1420121215.D	20K0073-02		1	|18.61	231239||22.05	231706||32.93	309310|		

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201212.b\sim.b

ARI Job No.: SIL0 Method: sim.b\ALKYLRANGE.m Instrument: nt14.i Date: 12-DEC-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1150	NT1420121202.D	SIL0186-ICV1		1	Perylene-d12,
1336	NT1420121204.D	BIK0386-BLK2		1	NO MANUAL INTEGRATION
1425	NT1420121205.D	BIK0386-BS1		1	NO MANUAL INTEGRATION
1512	NT1420121206.D	20K0075-10		5	C2-Decalin, C3-Decalin, C4-Decalin, C1-Naphthalenes, C4-Naphthobenzothiophenes, C4-Fluoranthenes/Pyrenes, C2-Naphthalenes, C3-Naphthalenes, C4-Naphthalenes, C1-Benzothiophenes, C2-Benzothiophenes, C3_Benzothiophenes, C1-Fluorenes, C2-Fluorenes, C3-Fluorenes, C1-Dibenzothiophenes, C2-Dibenzothiophenes, C3-Dibenzothiophenes, C4-Dibenzothiophenes,
1600	NT1420121207.D	BIK0386-MS1		5	NO MANUAL INTEGRATION
1648	NT1420121208.D	BIK0386-MSD1		5	NO MANUAL INTEGRATION
1736	NT1420121209.D	20K0075-12		1	C1-Decalin, C2-Decalin, C3-Decalin, C4-Decalin, C1-Naphthalenes, C4-Naphthobenzothiophenes, C4-Fluoranthenes/Pyrenes, C2-Naphthalenes, C3-Naphthalenes, C4-Naphthalenes, C1-Benzothiophenes, C2-Benzothiophenes, C3_Benzothiophenes, C1-Fluorenes, C2-Fluorenes, C3-Fluorenes, C1-Dibenzothiophenes, C2-Dibenzothiophenes, C3-Dibenzothiophenes, C4
1823	NT1420121210.D	BIK0323-BLK2		1	NO MANUAL INTEGRATION
1911	NT1420121211.D	BIK0323-BS1		1	NO MANUAL INTEGRATION
1959	NT1420121212.D	20K0069-01		1	C1-Decalin, C2-Decalin, C3-Decalin, C4-Decalin, C1-Naphthalenes, C4-Naphthobenzothiophenes, C4-Fluoranthenes/Pyrenes, C2-Naphthalenes, C3-Naphthalenes, C4-Naphthalenes, C1-Benzothiophenes, C2-Benzothiophenes, C1-Fluorenes, C2-Fluorenes, C3-Fluorenes, C1-Dibenzothiophenes, C2-Dibenzothiophenes, C3-Dibenzothiophenes, C4-Dibenzothiophenes,
2047	NT1420121213.D	20K0069-02		1	C1-Decalin, C2-Decalin, C3-Decalin, C4-Decalin, C1-Naphthalenes, C4-Naphthobenzothiophenes, C4-Fluoranthenes/Pyrenes, C2-Naphthalenes, C3-Naphthalenes, C4-Naphthalenes, C1-Benzothiophenes, C2-Benzothiophenes, C3_Benzothiophenes, C1-Fluorenes, C2-Fluorenes, C3-Fluorenes, C1-Dibenzothiophenes, C2-Dibenzothiophenes, C3-Dibenzothiophenes, C4
2135	NT1420121214.D	20K0073-01		1	C2-Decalin, C3-Decalin, C4-Decalin, C1-Naphthalenes, C4-Naphthobenzothiophenes, C4-Fluoranthenes/Pyrenes, C2-Naphthalenes, C3-Naphthalenes, C4-Naphthalenes, C1-Benzothiophenes, C2-Benzothiophenes, C3_Benzothiophenes, C1-Fluorenes, C2-Fluorenes, C3-Fluorenes, C1-Dibenzothiophenes, C2-Dibenzothiophenes, C3-Dibenzothiophenes, C4-Dibenzothiophenes,
2223	NT1420121215.D	20K0073-02		1	C3-Decalin, C4-Decalin, C1-Naphthalenes, C4-Naphthobenzothiophenes, C4-Fluoranthenes/Pyrenes, C2-Naphthalenes, C3-Naphthalenes, C4-Naphthalenes, C1-Benzothiophenes, C1-Fluorenes, C2-Fluorenes, C3-Fluorenes, C1-Dibenzothiophenes, C2-Dibenzothiophenes, C3-Dibenzothiophenes, C4-Dibenzothiophenes, C1-Phenanthrenes/Anthracenes, C2-Phenanthr

Security Status Report

Date: 15-Dec-2020 17:18

NT1420121202.D	Data Locked	yev, 15-
NT1420121204.D	Data Locked	yev, 15-
NT1420121205.D	Data Locked	yev, 15-
NT1420121206.D	Data Locked	yev, 15-
NT1420121207.D	Data Locked	yev, 15-
NT1420121208.D	Data Locked	yev, 15-
NT1420121209.D	Data Locked	yev, 15-
NT1420121210.D	Data Locked	yev, 15-
NT1420121211.D	Data Locked	yev, 15-
NT1420121212.D	Data Locked	yev, 15-
NT1420121213.D	Data Locked	yev, 15-
NT1420121214.D	Data Locked	yev, 15-
NT1420121215.D	Data Locked	yev, 15-

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0233	Instrument:	NT14
		Calibration:	DJ00029

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Check	SIL0233-ICV1	NT1420121517ICV.D	NA	12/16/20 00:36
Low Cal Check	SIL0233-LCV1	NT1420121518.D	NA	12/16/20 01:24
Instrument Blank	SIL0233-IBL1	NT1420121519.D	NA	12/16/20 02:12
USMPDI-046SC-A-00-01-201029	20K0073-01RE1	NT1420121520.D	Solid	12/16/20 03:00
ZZZZZ	20K0102-21RE1	NT1420121521.D	Solid	12/16/20 03:48
ZZZZZ	20K0102-22RE1	NT1420121522.D	Solid	12/16/20 04:36
ZZZZZ	20K0102-24RE1	NT1420121523.D	Solid	12/16/20 05:24
ZZZZZ	20K0102-25RE1	NT1420121524.D	Solid	12/16/20 06:12
ZZZZZ	20K0102-26RE1	NT1420121525.D	Solid	12/16/20 07:00
ZZZZZ	20K0102-27RE1	NT1420121526.D	Solid	12/16/20 07:48
ZZZZZ	20K0102-28RE1	NT1420121527.D	Solid	12/16/20 08:36
ZZZZZ	20K0102-02RE1	NT1420121528.D	Solid	12/16/20 09:24
ZZZZZ	20K0102-04RE1	NT1420121529.D	Solid	12/16/20 10:12
ZZZZZ	20K0102-07RE1	NT1420121530.D	Solid	12/16/20 11:00
ZZZZZ	20K0102-11RE1	NT1420121531.D	Solid	12/16/20 11:49
Calibration Check	SIL0233-CCV1	NT1420121532.D	NA	12/16/20 12:37

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/16/2020 2:07:30PM

ANALYSIS SEQUENCE

SIL0233

Instrument: NT14 Element Column ID: I005863
Calibration ID: DJ00029 Tune File: 200104.U
EM Voltage: 1906

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0233-TUN1	MS Tune	QC		1	I007631		
SIL0233-ICV1	Initial Cal Check	QC		2	I007920	I007919	
SIL0233-LCV1	Low Cal Check	QC		3	I007926	I007919	
20K0073-01RE1	JSMPDI-046SC-A-00-01-20102	8270E-SIM Alkyl PAH (Parents) Dual Scar	A 01	4		I007919	Added 12/16/2020 by VTS
20K0102-21RE1	JSMPDI-048SC-A-00-01-20110	8270E-SIM Alkyl PAH (Parents) Dual Scar	A 03	5		I007919	Added 12/16/2020 by VTS
20K0102-22RE1	JSMPDI-048SC-A-12-13-20110	8270E-SIM Alkyl PAH (Parents) Dual Scar	A 03	6		I007919	Added 12/16/2020 by VTS
20K0102-24RE1	JSMPDI-048SC-B-02-04-20110	8270E-SIM Alkyl PAH (Parents) Dual Scar	A 03	7		I007919	Added 12/16/2020 by VTS
20K0102-25RE1	JSMPDI-048SC-B-04-06-20110	8270E-SIM Alkyl PAH (Parents) Dual Scar	A 03	8		I007919	Added 12/16/2020 by VTS
20K0102-26RE1	JSMPDI-048SC-B-06-08-20110	8270E-SIM Alkyl PAH (Parents) Dual Scar	A 03	9		I007919	Added 12/16/2020 by VTS
20K0102-27RE1	JSMPDI-048SC-B-08-10-20110	8270E-SIM Alkyl PAH (Parents) Dual Scar	A 03	10		I007919	Added 12/16/2020 by VTS
20K0102-28RE1	JSMPDI-048SC-B-10-12-20110	8270E-SIM Alkyl PAH (Parents) Dual Scar	A 03	11		I007919	Added 12/16/2020 by VTS
20K0102-02RE1	JSMPDI-038SC-A-11-12-20110	8270E-SIM Alkyl PAH (Parents) Dual Scar	A 03	12		I007919	Added 12/16/2020 by VTS
20K0102-04RE1	JSMPDI-038SC-B-02-04-20110	8270E-SIM Alkyl PAH (Parents) Dual Scar	A 03	13		I007919	Added 12/16/2020 by VTS
20K0102-07RE1	JSMPDI-038SC-B-08-10-20110	8270E-SIM Alkyl PAH (Parents) Dual Scar	A 03	14		I007919	Added 12/16/2020 by VTS
20K0102-11RE1	JSMPDI-040SC-A-00-01-20110	8270E-SIM Alkyl PAH (Parents) Dual Scar	A 03	15		I007919	Added 12/16/2020 by VTS
SIL0233-CCV1	Calibration Check	QC		16	I007920	I007919	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201215A.b

	Time	Filename	LabID	ClientId	DF						
1	0036	NT1420121517ICV.D	SIL0233-ICV1		1	18.61	244647	22.05	215002	32.93	290613
2	0124	NT1420121518.D	SIL0233-LCV1		1	18.62	279165	22.06	264738	32.93	343552
3	0212	NT1420121519.D	SIL0233-IBL1		1	18.62	213615	22.06	212311	32.93	261225
4	0300	NT1420121520.D	20K0073-01RE1		2	18.61	251018	22.05	211684	32.93	303234
5	0348	NT1420121521.D	20K0102-21RE1		20	18.61	247009	22.05	217600	32.93	297944
6	0436	NT1420121522.D	20K0102-22RE1		20	18.61	247746	22.05	218936	32.93	298495
7	0524	NT1420121523.D	20K0102-24RE1		50	18.61	242729	22.05	216826	32.93	288918
8	0612	NT1420121524.D	20K0102-25RE1		10	18.61	235183	22.05	216903	32.93	295624
9	0700	NT1420121525.D	20K0102-26RE1		10	18.61	245854	22.05	216741	32.93	292117
10	0748	NT1420121526.D	20K0102-27RE1		50	18.61	240473	22.05	212011	32.93	283009
11	0836	NT1420121527.D	20K0102-28RE1		50	18.61	240457	22.05	214071	32.93	276287
12	0924	NT1420121528.D	20K0102-02RE1		10	18.61	233428	22.05	217177	32.93	292219
13	1012	NT1420121529.D	20K0102-04RE1		2	18.61	249887	22.05	212567	32.93	302242
14	1100	NT1420121530.D	20K0102-07RE1		5	18.61	247552	22.05	214292	32.93	292071
15	1149	NT1420121531.D	20K0102-11RE1		5	18.61	256456	22.05	224007	32.93	303216
16	1237	NT1420121532.D	SIL0233-CCV1		1	18.61	258536	22.05	225535	32.93	301986

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201215A.b

Instrument: nt14.i Date: 16-DEC-2020

Time	Filename	LabID	DF	Manually Integrated Compounds
0036	NT1420121517ICV.D	SIL0233-ICV1	1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Total Benzofluoranthenes,
0124	NT1420121518.D	SIL0233-LCV1	1	Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Total Benzofluoranthen
0212	NT1420121519.D	SIL0233-IBL1	1	Chrysene-d12, Perylene-d12,
0300	NT1420121520.D	20K0073-01RE1	2	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Biphenyl, 2,6-Dimethylnaphthalene, Total B
0348	NT1420121521.D	20K0102-21RE1	20	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, 2,6-Dimethylnaphthalen
0436	NT1420121522.D	20K0102-22RE1	20	Naphthalene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo 2,6-Dimethylnaphthalene, Total Benzofluoranthenes, Phenanthrene-d10, Perylene-d12,
0524	NT1420121523.D	20K0102-24RE1	50	Naphthalene, 2-Methylnaphthalene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd) Dibenzo(a,h)anthracene, Perylene, Biphenyl, 2,6-Dimethylnaphthalene, Total Benzofluoranthenes, Phenant
0612	NT1420121524.D	20K0102-25RE1	10	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, 2,6-Dimethylnaphthalene, Total Benzofluoranthenes, Phenanthrene-d10, Perylene-d12,
0700	NT1420121525.D	20K0102-26RE1	10	Naphthalene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo Biphenyl, 2,6-Dimethylnaphthalene, Total Benzofluoranthenes, Phenanthrene-d10, Perylene-d12,
0748	NT1420121526.D	20K0102-27RE1	50	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Be Perylene, Biphenyl, 2,6-Dimethylnaphthalene, Total Benzofluoranthenes, Phenanthrene-d10, Perylene-d12,
0836	NT1420121527.D	20K0102-28RE1	50	Naphthalene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Biphenyl, 2,6-Dimethylnaphtha Total Benzofluoranthenes, Naphthalene-d8, Acenaphthene-d10, Phenanthrene-d10, Perylene-d12,
0924	NT1420121528.D	20K0102-02RE1	10	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, 2,6- Total Benzofluoranthenes, Phenanthrene-d10, Perylene-d12,
1012	NT1420121529.D	20K0102-04RE1	2	Dibenzofuran, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, 2,6-Dimethylnaphthalene, Tot
1100	NT1420121530.D	20K0102-07RE1	5	Naphthalene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo Biphenyl, 2,6-Dimethylnaphthalene, Total Benzofluoranthenes, Phenanthrene-d10,
1149	NT1420121531.D	20K0102-11RE1	5	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, 2,6-Dimethylnaphthalene, Total Benzofluoranthe
1237	NT1420121532.D	SIL0233-CCV1	1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene,

Security Status Report

Date: 16-Dec-2020 14:09

NT1420121517ICV.D	Data Locked	van, 16-Dec-2020 14:09
NT1420121518.D	Data Locked	van, 16-Dec-2020 14:09
NT1420121519.D	Data Locked	van, 16-Dec-2020 14:09
NT1420121520.D	Data Locked	van, 16-Dec-2020 14:09
NT1420121521.D	Data Locked	van, 16-Dec-2020 14:09
NT1420121522.D	Data Locked	van, 16-Dec-2020 14:09
NT1420121523.D	Data Locked	van, 16-Dec-2020 14:09
NT1420121524.D	Data Locked	van, 16-Dec-2020 14:09
NT1420121525.D	Data Locked	van, 16-Dec-2020 14:09
NT1420121526.D	Data Locked	van, 16-Dec-2020 14:09
NT1420121527.D	Data Locked	van, 16-Dec-2020 14:09
NT1420121528.D	Data Locked	van, 16-Dec-2020 14:09
NT1420121529.D	Data Locked	van, 16-Dec-2020 14:09
NT1420121530.D	Data Locked	van, 16-Dec-2020 14:09
NT1420121531.D	Data Locked	van, 16-Dec-2020 14:09
NT1420121532.D	Data Locked	van, 16-Dec-2020 14:09

Analytical Resources, Incorporated
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Extract Dilution Bench Sheet

Sequence: SIL0233
Analyst: VB Date: 12.15.2020

Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor	Extract Volume (uL)	Diluent ID	Diluent Volume (uL)	Dilution Factor
20K0073 -1, K0102-4	150	DCM	150	2				
20K0102 -21,22	25	DCM	475	20				
20K0102-24,27,28	10	DCM	490	50				
20K0102-25,26, 02	50	DCM	450	10				
20K0102 -07,11	100	DCM	400	5				

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0236	Instrument:	NT14
		Calibration:	DJ00029

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Check	SIL0236-ICV1	NT1420121216A.D	NA	12/12/20 23:11
Low Cal Check	SIL0236-LCV1	NT1420121217.D	NA	12/12/20 23:58
Instrument Blank	SIL0236-IBL1	NT1420121218.D	NA	12/13/20 00:46
USMPDI-046SC-A-01-02-201029	BIK0323-MS1	NT1420121219.D	Solid	12/13/20 01:34
USMPDI-046SC-A-01-02-201029	BIK0323-MSD1	NT1420121220.D	Solid	12/13/20 02:22
ZZZZZ	BIK0524-BLK1	NT1420121221.D	Solid	12/13/20 03:09
ZZZZZ	BIK0524-BS1	NT1420121222.D	Solid	12/13/20 03:57
ZZZZZ	20K0102-18	NT1420121223.D	Solid	12/13/20 04:45
ZZZZZ	20K0102-20	NT1420121224.D	Solid	12/13/20 05:33
ZZZZZ	20K0102-21	NT1420121225.D	Solid	12/13/20 06:21
ZZZZZ	20K0102-22	NT1420121226.D	Solid	12/13/20 07:08
ZZZZZ	20K0102-24	NT1420121227.D	Solid	12/13/20 07:56
ZZZZZ	20K0102-26	NT1420121230.D	Solid	12/13/20 10:20
Calibration Check	SIL0236-CCV1	NT1420121231.D	NA	12/13/20 11:08

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/16/2020 7:48:27AM

ANALYSIS SEQUENCE

SIL0236

Instrument: NT14 Element Column ID: I005863
Calibration ID: DJ00029 Tune File: 200104U
EM Voltage: 1906U

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0236-ICV1	Initial Cal Check	QC		1	I007920	I007919	
SIL0236-LCV1	Low Cal Check	QC		2	I007926	I007919	
SIL0236-IBL1	Instrument Blank	QC		3	I008041	I007919	
BIK0323-MS1	Matrix Spike	QC		4		I007919	
BIK0323-MSD1	Matrix Spike Dup	QC		5		I007919	
BIK0524-BLK1	Blank	QC		6		I007919	
BIK0524-BS1	LCS	QC		7		I007919	
BIK0524-MS1	Matrix Spike	QC		8		I007919	
BIK0524-MSD1	Matrix Spike Dup	QC		9		I007919	
20K0102-18	JSMPDI-040SC-B-10-12-201108	270E-SIM Alkyl PAH (Parents) Dual Scan	A 03	10		I007919	
20K0102-20	SMPDI-1040SC-B-10-12-2011	8270E-SIM Alkyl PAH (Parents) Dual Scan	A 03	11		I007919	
20K0102-21	JSMPDI-048SC-A-00-01-201108	270E-SIM Alkyl PAH (Parents) Dual Scan	A 03	12		I007919	
20K0102-22	JSMPDI-048SC-A-12-13-201108	270E-SIM Alkyl PAH (Parents) Dual Scan	A 03	13		I007919	
20K0102-24	JSMPDI-048SC-B-02-04-201108	270E-SIM Alkyl PAH (Parents) Dual Scan	A 03	14		I007919	
20K0102-26	JSMPDI-048SC-B-06-08-201108	270E-SIM Alkyl PAH (Parents) Dual Scan	A 03	15		I007919	
SIL0236-CCV1	Calibration Check	QC		16	I007920	I007919	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201212A.b

	Time	Filename	LabID	ClientId	DF						
1	2311	NT1420121216A.D	SIL0236-ICV1		1	18.62	215231	22.06	196849	32.94	268559
2	2358	NT1420121217.D	SIL0236-LCV1		1	18.62	245393	22.06	230235	32.94	287933
3	0046	NT1420121218.D	SIL0236-IBL1		1	18.62	207356	22.06	207816	32.94	242988
4	0134	NT1420121219.D	BIK0323-MS1		1	18.62	236016	22.06	201413	32.94	270331
5	0222	NT1420121220.D	BIK0323-MSD1		1	18.62	240654	22.06	201683	32.94	272640
6	0309	NT1420121221.D	BIK0524-BLK1		1	18.62	235561	22.06	209265	32.94	240621
7	0357	NT1420121222.D	BIK0524-BS1		1	18.61	230091	22.06	203913	32.93	257402
8	0445	NT1420121223.D	20K0102-18		1	18.61	231144	22.06	204896	32.93	243378
9	0533	NT1420121224.D	20K0102-20		1	18.61	231941	22.05	203827	32.93	248822
10	0621	NT1420121225.D	20K0102-21		1	18.61	227492	22.06	208242	32.94	301973
11	0708	NT1420121226.D	20K0102-22		1	18.62	226458	22.10	224196	32.94	289882
12	0756	NT1420121227.D	20K0102-24		1	18.63	225974	22.13	209705	32.96	305805
13	0844	NT1420121228.D	BIK0524-MS1		1	18.63	222915	22.12	212733	32.96	316605
14	0932	NT1420121229.D	BIK0524-MSD1		1	18.63	218713	22.12	214570	32.96	318055
15	1020	NT1420121230.D	20K0102-26		1	18.62	221569	22.08	213772	32.94	291649
16	1108	NT1420121231.D	SIK0236-CCV1		1	18.62	206546	22.06	188354	32.93	256976

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20201212A.b

ARI Job No.: SIL0 Method: ALKYLPNA.m Instrument: nt14.i Date: 12-DEC-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2311	NT1420121216A.D	SIL0236-ICV1		1	NO MANUAL INTEGRATION
2358	NT1420121217.D	SIL0236-LCV1		1	Benzo(k)fluoranthene, Total Benzofluoranthenes,
0046	NT1420121218.D	SIL0236-IBL1		1	NO MANUAL INTEGRATION
0134	NT1420121219.D	BIK0323-MS1		1	Total Benzofluoranthenes,
0222	NT1420121220.D	BIK0323-MSD1		1	Total Benzofluoranthenes,
0309	NT1420121221.D	BIK0524-BLK1		1	NO MANUAL INTEGRATION
0357	NT1420121222.D	BIK0524-BS1		1	Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene, Total Benzofluoranthenes,
0445	NT1420121223.D	20K0102-18		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Total Benzofluoranthenes,
0533	NT1420121224.D	20K0102-20		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Dibenzothiophene, Total Benzofluoranthenes,
0621	NT1420121225.D	20K0102-21		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Total Benzofluoranthenes,
0708	NT1420121226.D	20K0102-22		1	Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Total Benzofluoranthenes, Perylene-d12,
0756	NT1420121227.D	20K0102-24		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Biphenyl, Total Benzofluoranthenes,
0844	NT1420121228.D	BIK0524-MS1		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Total Benzofluoranthenes,
0932	NT1420121229.D	BIK0524-MSD1		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Total Benzofluoranthenes,
1020	NT1420121230.D	20K0102-26		1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, 1-methylnaphthalene, Biphenyl, Total Benzofluoranthenes,
1108	NT1420121231.D	SIK0236-CCV1		1	Carbazole, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene, Total Benzofluoranthenes, Benzo(j)fluoranth

Security Status Report

Date: 16-Dec-2020 07:42

NT1420121216A.D	Data Locked	yev, 16-
NT1420121217.D	Data Locked	yev, 16-
NT1420121218.D	Data Locked	yev, 16-
NT1420121219.D	Data Locked	yev, 16-
NT1420121220.D	Data Locked	yev, 16-
NT1420121221.D	Data Locked	yev, 16-
NT1420121222.D	Data Locked	yev, 16-
NT1420121223.D	Data Locked	yev, 16-
NT1420121224.D	Data Locked	yev, 16-
NT1420121225.D	Data Locked	yev, 16-
NT1420121226.D	Data Locked	yev, 16-
NT1420121227.D	Data Locked	yev, 16-
NT1420121228.D	Data Locked	yev, 16-
NT1420121229.D	Data Locked	yev, 16-
NT1420121230.D	Data Locked	yev, 16-
NT1420121231.D	Data Locked	yev, 16-

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIJ0085	Instrument:	NT14
Calibration:	DJ00029	Calibration Date:	10/07/2020

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIJ0085-ICB1 (Solid)			Lab File ID: NT1420100710.D				Analyzed: 10/07/20 17:33	
Naphthalene-d8	2.5000	105	30 - 160	11.641	11.64283	-0.0018	N/A	
Acenaphthene-d10	2.5000	98.6	30 - 160	17.103	17.10483	-0.0018	N/A	
Phenanthrene-d10	2.5000	110	30 - 160	21.963	21.96483	-0.0018	N/A	
Chrysene-d12	2.5000	106	30 - 160	29.974	29.9685	0.0055	N/A	
Perylene-d12	2.5000	103	30 - 160	33.263	33.26483	-0.0018	N/A	
SIJ0085-ICV1 (Solid)			Lab File ID: NT1420100711.D				Analyzed: 10/07/20 18:22	
Naphthalene-d8	2.5000	105	80 - 120	11.641	11.64283	-0.0018	N/A	
Acenaphthene-d10	2.5000	104	80 - 120	17.103	17.10483	-0.0018	N/A	
Phenanthrene-d10	2.5000	105	80 - 120	21.963	21.96483	-0.0018	N/A	
Chrysene-d12	2.5000	99.6	80 - 120	29.974	29.9685	0.0055	N/A	
Perylene-d12	2.5000	102	80 - 120	33.263	33.26483	-0.0018	N/A	
SIJ0085-CCV1 (Solid)			Lab File ID: NT1420100724.D				Analyzed: 10/08/20 04:51	
Naphthalene-d8	2.5000	105	50 - 150	11.641	11.64283	-0.0018	N/A	
Acenaphthene-d10	2.5000	102	50 - 150	17.103	17.10483	-0.0018	N/A	
Phenanthrene-d10	2.5000	103	50 - 150	21.952	21.96483	-0.0128	N/A	
Chrysene-d12	2.5000	101	50 - 150	29.963	29.9685	-0.0055	N/A	
Perylene-d12	2.5000	100	50 - 150	33.263	33.26483	-0.0018	N/A	

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0184	Instrument:	NT14
Calibration:	DJ00029	Calibration Date:	10/07/2020

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0184-ICV1 (Solid)			Lab File ID: NT1420121202.D				Analyzed: 12/12/20 11:50	
Naphthalene-d8	2.5000	123	80 - 120	11.63	11.64283	-0.0128	N/A	*
Acenaphthene-d10	2.5000	107	80 - 120	17.092	17.10483	-0.0128	N/A	
Phenanthrene-d10	2.5000	106	80 - 120	21.952	21.96483	-0.0128	N/A	
Chrysene-d12	2.5000	101	80 - 120	29.974	29.9685	0.0055	N/A	
Perylene-d12	2.5000	92.7	80 - 120	33.286	33.26483	0.0212	N/A	
BIK0323-BLK1 (Solid)			Lab File ID: NT1420121210.D				Analyzed: 12/12/20 18:23	
Naphthalene-d8	150.00	66.7	30 - 160	11.619	11.64283	-0.0238	N/A	
Acenaphthene-d10	150.00	66.9	30 - 160	17.092	17.10483	-0.0128	N/A	
Phenanthrene-d10	150.00	80.8	30 - 160	21.952	21.96483	-0.0128	N/A	
Chrysene-d12	150.00	84.6	30 - 160	29.974	29.9685	0.0055	N/A	
Perylene-d12	150.00	46.5	30 - 160	33.274	33.26483	0.0092	N/A	
BIK0323-BS1 (Solid)			Lab File ID: NT1420121211.D				Analyzed: 12/12/20 19:11	
Naphthalene-d8	150.00	62.6	30 - 160	11.619	11.64283	-0.0238	N/A	
Acenaphthene-d10	150.00	63.5	30 - 160	17.092	17.10483	-0.0128	N/A	
Phenanthrene-d10	150.00	80.0	30 - 160	21.952	21.96483	-0.0128	N/A	
Chrysene-d12	150.00	83.2	30 - 160	29.974	29.9685	0.0055	N/A	
Perylene-d12	150.00	58.6	30 - 160	33.274	33.26483	0.0092	N/A	
20K0073-01 (Solid)			Lab File ID: NT1420121214.D				Analyzed: 12/12/20 21:35	
Naphthalene-d8	149.83	69.3	30 - 160	11.619	11.64283	-0.0238	N/A	
Acenaphthene-d10	149.83	73.3	30 - 160	17.092	17.10483	-0.0128	N/A	
Phenanthrene-d10	149.83	80.8	30 - 160	21.952	21.96483	-0.0128	N/A	
Chrysene-d12	149.83	79.5	30 - 160	29.974	29.9685	0.0055	N/A	
Perylene-d12	149.83	64.5	30 - 160	33.274	33.26483	0.0092	N/A	
20K0073-02 (Solid)			Lab File ID: NT1420121215.D				Analyzed: 12/12/20 22:23	
Naphthalene-d8	149.64	61.5	30 - 160	11.619	11.64283	-0.0238	N/A	
Acenaphthene-d10	149.64	62.9	30 - 160	17.081	17.10483	-0.0238	N/A	
Phenanthrene-d10	149.64	76.6	30 - 160	21.941	21.96483	-0.0238	N/A	
Chrysene-d12	149.64	75.7	30 - 160	29.963	29.9685	-0.0055	N/A	
Perylene-d12	149.64	60.7	30 - 160	33.274	33.26483	0.0092	N/A	

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0184	Instrument:	NT14
Calibration:	DJ00029	Calibration Date:	10/07/2020

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0184-CCV1 (Solid)			Lab File ID: NT1420121216.D				Analyzed: 12/12/20 23:11	
Naphthalene-d8	2.5000	118	50 - 150	11.619	11.64283	-0.0238	N/A	
Acenaphthene-d10	2.5000	107	50 - 150	17.081	17.10483	-0.0238	N/A	
Phenanthrene-d10	2.5000	105	50 - 150	21.952	21.96483	-0.0128	N/A	
Chrysene-d12	2.5000	96.4	50 - 150	29.963	29.9685	-0.0055	N/A	
Perylene-d12	2.5000	93.8	50 - 150	33.274	33.26483	0.0092	N/A	

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0233	Instrument:	NT14
Calibration:	DJ00029	Calibration Date:	10/07/2020

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0233-ICV1 (Solid)			Lab File ID: NT1420121517ICV.D				Analyzed: 12/16/20 00:36	
Naphthalene-d8	2.5000	102	80 - 120	11.619	11.64283	-0.0238	N/A	
Acenaphthene-d10	2.5000	96.0	80 - 120	17.081	17.10483	-0.0238	N/A	
Phenanthrene-d10	2.5000	118	80 - 120	21.941	21.96483	-0.0238	N/A	
Chrysene-d12	2.5000	96.8	80 - 120	29.952	29.9685	-0.0165	N/A	
Perylene-d12	2.5000	94.6	80 - 120	33.263	33.26483	-0.0018	N/A	
SIL0233-LCV1 (Solid)			Lab File ID: NT1420121518.D				Analyzed: 12/16/20 01:24	
Naphthalene-d8	0.10000	99.2	0 - 200	11.63	11.64283	-0.0128	N/A	
Acenaphthene-d10	0.10000	102	0 - 200	17.092	17.10483	-0.0128	N/A	
Phenanthrene-d10	0.10000	103	0 - 200	21.941	21.96483	-0.0238	N/A	
Chrysene-d12	0.10000	101	0 - 200	29.963	29.9685	-0.0055	N/A	
Perylene-d12	0.10000	91.6	0 - 200	33.263	33.26483	-0.0018	N/A	
SIL0233-IBL1 (Solid)			Lab File ID: NT1420121519.D				Analyzed: 12/16/20 02:12	
Naphthalene-d8	2.5000	124	30 - 160	11.619	11.64283	-0.0238	N/A	
Acenaphthene-d10	2.5000	113	30 - 160	17.081	17.10483	-0.0238	N/A	
Phenanthrene-d10	2.5000	113	30 - 160	21.941	21.96483	-0.0238	N/A	
Chrysene-d12	2.5000	113	30 - 160	29.963	29.9685	-0.0055	N/A	
Perylene-d12	2.5000	105	30 - 160	33.263	33.26483	-0.0018	N/A	
20K0073-01RE1 (Solid)			Lab File ID: NT1420121520.D				Analyzed: 12/16/20 03:00	
Naphthalene-d8	149.83	60.9	30 - 160	11.608	11.64283	-0.0348	N/A	
Acenaphthene-d10	149.83	63.6	30 - 160	17.081	17.10483	-0.0238	N/A	
Phenanthrene-d10	149.83	84.4	30 - 160	21.93	21.96483	-0.0348	N/A	
Chrysene-d12	149.83	67.5	30 - 160	29.951	29.9685	-0.0175	N/A	
Perylene-d12	149.83	54.7	30 - 160	33.252	33.26483	-0.0128	N/A	
SIL0233-CCV1 (Solid)			Lab File ID: NT1420121532.D				Analyzed: 12/16/20 12:37	
Naphthalene-d8	2.5000	99.5	50 - 150	11.619	11.64283	-0.0238	N/A	
Acenaphthene-d10	2.5000	95.7	50 - 150	17.081	17.10483	-0.0238	N/A	
Phenanthrene-d10	2.5000	118	50 - 150	21.941	21.96483	-0.0238	N/A	
Chrysene-d12	2.5000	96.7	50 - 150	29.963	29.9685	-0.0055	N/A	
Perylene-d12	2.5000	92.7	50 - 150	33.263	33.26483	-0.0018	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0236	Instrument:	NT14
Calibration:	DJ00029	Calibration Date:	10/07/2020

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0236-ICV1 (Solid)			Lab File ID: NT1420121216A.D				Analyzed: 12/12/20 23:11	
Naphthalene-d8	2.5000	118	80 - 120	11.619	11.64283	-0.0238	N/A	
Acenaphthene-d10	2.5000	107	80 - 120	17.081	17.10483	-0.0238	N/A	
Phenanthrene-d10	2.5000	105	80 - 120	21.952	21.96483	-0.0128	N/A	
Chrysene-d12	2.5000	96.4	80 - 120	29.963	29.9685	-0.0055	N/A	
Perylene-d12	2.5000	93.8	80 - 120	33.274	33.26483	0.0092	N/A	
SIL0236-LCV1 (Solid)			Lab File ID: NT1420121217.D				Analyzed: 12/12/20 23:58	
Naphthalene-d8	0.10000	112	0 - 200	11.63	11.64283	-0.0128	N/A	
Acenaphthene-d10	0.10000	104	0 - 200	17.092	17.10483	-0.0128	N/A	
Phenanthrene-d10	0.10000	105	0 - 200	21.952	21.96483	-0.0128	N/A	
Chrysene-d12	0.10000	96.5	0 - 200	29.974	29.9685	0.0055	N/A	
Perylene-d12	0.10000	95.5	0 - 200	33.274	33.26483	0.0092	N/A	
SIL0236-IBL1 (Solid)			Lab File ID: NT1420121218.D				Analyzed: 12/13/20 00:46	
Naphthalene-d8	2.5000	129	30 - 160	11.619	11.64283	-0.0238	N/A	
Acenaphthene-d10	2.5000	113	30 - 160	17.092	17.10483	-0.0128	N/A	
Phenanthrene-d10	2.5000	114	30 - 160	21.952	21.96483	-0.0128	N/A	
Chrysene-d12	2.5000	110	30 - 160	29.963	29.9685	-0.0055	N/A	
Perylene-d12	2.5000	103	30 - 160	33.274	33.26483	0.0092	N/A	
BIK0323-MS1 (Solid)			Lab File ID: NT1420121219.D				Analyzed: 12/13/20 01:34	
Naphthalene-d8	150.04	61.9	30 - 160	11.619	11.64283	-0.0238	N/A	
Acenaphthene-d10	150.04	65.6	30 - 160	17.081	17.10483	-0.0238	N/A	
Phenanthrene-d10	150.04	81.3	30 - 160	21.941	21.96483	-0.0238	N/A	
Chrysene-d12	150.04	80.9	30 - 160	29.963	29.9685	-0.0055	N/A	
Perylene-d12	150.04	62.9	30 - 160	33.274	33.26483	0.0092	N/A	
BIK0323-MSD1 (Solid)			Lab File ID: NT1420121220.D				Analyzed: 12/13/20 02:22	
Naphthalene-d8	150.04	55.5	30 - 160	11.619	11.64283	-0.0238	N/A	
Acenaphthene-d10	150.04	57.8	30 - 160	17.081	17.10483	-0.0238	N/A	
Phenanthrene-d10	150.04	72.5	30 - 160	21.941	21.96483	-0.0238	N/A	
Chrysene-d12	150.04	73.3	30 - 160	29.963	29.9685	-0.0055	N/A	
Perylene-d12	150.04	56.9	30 - 160	33.274	33.26483	0.0092	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0236	Instrument:	NT14
Calibration:	DJ00029	Calibration Date:	10/07/2020

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0236-CCV1 (Solid)			Lab File ID: NT1420121231.D				Analyzed: 12/13/20 11:08	
Naphthalene-d8	2.5000	115	50 - 150	11.619	11.64283	-0.0238	N/A	
Acenaphthene-d10	2.5000	107	50 - 150	17.081	17.10483	-0.0238	N/A	
Phenanthrene-d10	2.5000	106	50 - 150	21.941	21.96483	-0.0238	N/A	
Chrysene-d12	2.5000	98.1	50 - 150	29.963	29.9685	-0.0055	N/A	
Perylene-d12	2.5000	93.7	50 - 150	33.274	33.26483	0.0092	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIJ0085	Instrument:	NT14
		Calibration:	DJ00029

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SIJ0085-SCV1)		(Solid)		Lab File ID: NT1420100709.D				Analyzed: 10/07/20 16:45	
Fluorene-d10	189405	18.632	237050	18.632	80	50 - 200	0.000	+/-0.50	
Anthracene-d10	203362	22.072	216685	22.072	94	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	288304	32.925	311824	32.925	92	50 - 200	0.000	+/-0.50	
Initial Cal Blank (SIJ0085-ICB1)		(Solid)		Lab File ID: NT1420100710.D				Analyzed: 10/07/20 17:33	
Fluorene-d10	209569	18.632	237050	18.632	88	50 - 200	0.000	+/-0.50	
Anthracene-d10	195015	22.073	216685	22.072	90	50 - 200	0.001	+/-0.50	
Benzo(e)pyrene-d12	275049	32.925	311824	32.925	88	50 - 200	0.000	+/-0.50	
Initial Cal Check (SIJ0085-ICV1)		(Solid)		Lab File ID: NT1420100711.D				Analyzed: 10/07/20 18:22	
Fluorene-d10	209596	18.632	237050	18.632	88	50 - 200	0.000	+/-0.50	
Anthracene-d10	192407	22.072	216685	22.072	89	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	274120	32.925	311824	32.925	88	50 - 200	0.000	+/-0.50	

Analytical Resources, Incorporated
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INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0184	Instrument:	NT14
		Calibration:	DJ00029

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SIL0184-ICV1)		(Solid)		Lab File ID: NT1420121202.D				Analyzed: 12/12/20 11:50	
Fluorene-d10	219929	18.632	219929	18.632	100	50 - 200	0.000	+/-0.50	
Anthracene-d10	196749	22.073	196749	22.073	100	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	249762	32.948	249762	32.948	100	50 - 200	0.000	+/-0.50	
Blank (BIK0323-BLK1)		(Solid)		Lab File ID: NT1420121210.D				Analyzed: 12/12/20 18:23	
Fluorene-d10	236548	18.621	219929	18.632	108	50 - 200	-0.011	+/-0.50	
Anthracene-d10	199797	22.062	196749	22.073	102	50 - 200	-0.011	+/-0.50	
Benzo(e)pyrene-d12	249760	32.936	249762	32.948	100	50 - 200	-0.012	+/-0.50	
LCS (BIK0323-BS1)		(Solid)		Lab File ID: NT1420121211.D				Analyzed: 12/12/20 19:11	
Fluorene-d10	250272	18.621	219929	18.632	114	50 - 200	-0.011	+/-0.50	
Anthracene-d10	206969	22.062	196749	22.073	105	50 - 200	-0.011	+/-0.50	
Benzo(e)pyrene-d12	272196	32.936	249762	32.948	109	50 - 200	-0.012	+/-0.50	
USMPDI-046SC-A-00-01-201029 (20K0073-01)		(Solid)		Lab File ID: NT1420121214.D				Analyzed: 12/12/20 21:35	
Fluorene-d10	225108	18.621	219929	18.632	102	50 - 200	-0.011	+/-0.50	
Anthracene-d10	201164	22.062	196749	22.073	102	50 - 200	-0.011	+/-0.50	
Benzo(e)pyrene-d12	284594	32.947	249762	32.948	114	50 - 200	-0.001	+/-0.50	
USMPDI-046SC-A-01-02-201029 (20K0073-02)		(Solid)		Lab File ID: NT1420121215.D				Analyzed: 12/12/20 22:23	
Fluorene-d10	242697	18.621	219929	18.632	110	50 - 200	-0.011	+/-0.50	
Anthracene-d10	202658	22.062	196749	22.073	103	50 - 200	-0.011	+/-0.50	
Benzo(e)pyrene-d12	276746	32.936	249762	32.948	111	50 - 200	-0.012	+/-0.50	

Analytical Resources, Incorporated
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INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0186	Instrument:	NT14
		Calibration:	DI00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (BIK0323-BLK2)		(Solid)	Lab File ID: NT1420121210S.D				Analyzed: 12/12/20 18:23		
Fluorene-d10	223103	18.611	211292	18.623	106	50 - 200		+/-0.50	
Anthracene-d10	221666	22.052	219166	22.063	101	50 - 200		+/-0.50	
Benzo(e)pyrene-d12	281798	32.938	281561	32.938	100	50 - 200		+/-0.50	
USMPDI-046SC-A-00-01-201029 (20K0073-01)		(Solid)	Lab File ID: NT1420121214S.D				Analyzed: 12/12/20 21:35		
Fluorene-d10	219994	18.611	211292	18.623	104	50 - 200		+/-0.50	
Anthracene-d10	224536	22.063	219166	22.063	102	50 - 200		+/-0.50	
Benzo(e)pyrene-d12	321691	32.938	281561	32.938	114	50 - 200		+/-0.50	
USMPDI-046SC-A-01-02-201029 (20K0073-02)		(Solid)	Lab File ID: NT1420121215S.D				Analyzed: 12/12/20 22:23		
Fluorene-d10	231239	18.611	211292	18.623	109	50 - 200		+/-0.50	
Anthracene-d10	231706	22.052	219166	22.063	106	50 - 200		+/-0.50	
Benzo(e)pyrene-d12	309310	32.927	281561	32.938	110	50 - 200		+/-0.50	

Analytical Resources, Incorporated
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INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0233	Instrument:	NT14
		Calibration:	DJ00029

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SIL0233-ICV1)		(Solid)	Lab File ID: NT1420121517ICV.D				Analyzed: 12/16/20 00:36		
Fluorene-d10	244647	18.61	244647	18.61	100	50 - 200	0.000	+/-0.50	
Anthracene-d10	215002	22.051	215002	22.051	100	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	290613	32.925	290613	32.925	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SIL0233-LCV1)		(Solid)	Lab File ID: NT1420121518.D				Analyzed: 12/16/20 01:24		
Fluorene-d10	279165	18.621	244647	18.61	114	50 - 200	0.011	+/-0.50	
Anthracene-d10	264738	22.062	215002	22.051	123	50 - 200	0.011	+/-0.50	
Benzo(e)pyrene-d12	343552	32.925	290613	32.925	118	50 - 200	0.000	+/-0.50	
Instrument Blank (SIL0233-IBL1)		(Solid)	Lab File ID: NT1420121519.D				Analyzed: 12/16/20 02:12		
Fluorene-d10	213615	18.621	244647	18.61	87	50 - 200	0.011	+/-0.50	
Anthracene-d10	212311	22.062	215002	22.051	99	50 - 200	0.011	+/-0.50	
Benzo(e)pyrene-d12	261225	32.925	290613	32.925	90	50 - 200	0.000	+/-0.50	
USMPDI-046SC-A-00-01-201029 (20K0073-01RE1		(Solid)	Lab File ID: NT1420121520.D				Analyzed: 12/16/20 03:00		
Fluorene-d10	251018	18.61	244647	18.61	103	50 - 200	0.000	+/-0.50	
Anthracene-d10	211684	22.051	215002	22.051	98	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	303234	32.925	290613	32.925	104	50 - 200	0.000	+/-0.50	

Analytical Resources, Incorporated
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INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0236	Instrument:	NT14
		Calibration:	DJ00029

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SIL0236-ICV1)		(Solid)	Lab File ID: NT1420121216A.D				Analyzed: 12/12/20 23:11		
Fluorene-d10	215231	18.621	215231	18.621	100	50 - 200	0.000	+/-0.50	
Anthracene-d10	196849	22.062	196849	22.062	100	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	268559	32.936	268559	32.936	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SIL0236-LCV1)		(Solid)	Lab File ID: NT1420121217.D				Analyzed: 12/12/20 23:58		
Fluorene-d10	245393	18.621	215231	18.621	114	50 - 200	0.000	+/-0.50	
Anthracene-d10	230235	22.061	196849	22.062	117	50 - 200	-0.001	+/-0.50	
Benzo(e)pyrene-d12	287933	32.936	268559	32.936	107	50 - 200	0.000	+/-0.50	
Instrument Blank (SIL0236-IBL1)		(Solid)	Lab File ID: NT1420121218.D				Analyzed: 12/13/20 00:46		
Fluorene-d10	207356	18.621	215231	18.621	96	50 - 200	0.000	+/-0.50	
Anthracene-d10	207816	22.062	196849	22.062	106	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	242988	32.936	268559	32.936	90	50 - 200	0.000	+/-0.50	
Matrix Spike (BIK0323-MS1)		(Solid)	Lab File ID: NT1420121219.D				Analyzed: 12/13/20 01:34		
Fluorene-d10	236016	18.621	215231	18.621	110	50 - 200	0.000	+/-0.50	
Anthracene-d10	201413	22.062	196849	22.062	102	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	270331	32.936	268559	32.936	101	50 - 200	0.000	+/-0.50	
Matrix Spike Dup (BIK0323-MSD1)		(Solid)	Lab File ID: NT1420121220.D				Analyzed: 12/13/20 02:22		
Fluorene-d10	240654	18.621	215231	18.621	112	50 - 200	0.000	+/-0.50	
Anthracene-d10	201683	22.062	196849	22.062	102	50 - 200	0.000	+/-0.50	
Benzo(e)pyrene-d12	272640	32.936	268559	32.936	102	50 - 200	0.000	+/-0.50	

Analytical Resources, Incorporated
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HOLDING TIME SUMMARY

Analysis: EPA 8270E-SIM

Laboratory: Analytical Resources, Inc. SDG: 20K0073

Client: Anchor QEA, LLC Project: Gasco Siltronic

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
USMPDI-046SC-A-00-01-201029 20K0073-01	10/29/20 10:40	11/03/20 11:32	11/11/20 13:05	13	14	12/12/20 21:35	31	40	
USMPDI-046SC-A-00-01-201029 20K0073-01	10/29/20 10:40	11/03/20 11:32	11/11/20 13:05	13	14	12/12/20 21:35	31	40	
USMPDI-046SC-A-00-01-201029 20K0073-01RE1	10/29/20 10:40	11/03/20 11:32	11/11/20 13:05	13	14	12/16/20 03:00	35	40	
USMPDI-046SC-A-01-02-201029 20K0073-02	10/29/20 10:40	11/03/20 11:32	11/11/20 13:05	13	14	12/12/20 22:23	31	40	
USMPDI-046SC-A-01-02-201029 20K0073-02	10/29/20 10:40	11/03/20 11:32	11/11/20 13:05	13	14	12/12/20 22:23	31	40	
Matrix Spike BIK0323-MS1	10/29/20 10:40	11/03/20 11:32	11/11/20 13:05	13	14	12/13/20 01:34	32	40	
Matrix Spike Dup BIK0323-MSD1	10/29/20 10:40	11/03/20 11:32	11/11/20 13:05	13	14	12/13/20 02:22	32	40	

* Indicates hold time exceedance.

Analytical Resources, Incorporated
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METHOD DETECTION AND REPORTING LIMITS

EPA 8270E-SIM

Laboratory: Analytical Resources, Inc. SDG: 20K0073

Client: Anchor QEA, LLC Project: Gasco Siltronic

Matrix: Solid Instrument: NT14

Analyte	MDL	RL	Units
trans-Decalin	0.03	5.0	ug/kg
cis-Decalin	0.5	5.0	ug/kg
Naphthalene	0.4	5.0	ug/kg
1-Methylnaphthalene	0.4	5.0	ug/kg
2-Methylnaphthalene	0.4	5.0	ug/kg
Biphenyl	0.3	5.0	ug/kg
2,6-Dimethylnaphthalene	0.4	5.0	ug/kg
Acenaphthylene	0.3	5.0	ug/kg
Acenaphthene	0.5	5.0	ug/kg
Dibenzofuran	0.4	5.0	ug/kg
2,3,5-Trimethylnaphthalene	0.4	5.0	ug/kg
Fluorene	0.5	5.0	ug/kg
Benzo(b)thiophene	0.4	5.0	ug/kg
Phenanthrene	0.9	5.0	ug/kg
Anthracene	0.05	5.0	ug/kg
Carbazole	0.7	5.0	ug/kg
1-Methylphenanthrene	0.5	5.0	ug/kg
Fluoranthene	1.4	5.0	ug/kg
Dibenzothiophene	0.7	5.0	ug/kg
Pyrene	1.0	5.0	ug/kg
Benzo(a)anthracene	1.4	5.0	ug/kg
Chrysene	0.7	5.0	ug/kg
Benzo(b)fluoranthene	0.8	5.0	ug/kg
Benzo(j)fluoranthene	0.7	5.0	ug/kg
Benzo(k)fluoranthene	0.8	5.0	ug/kg
Benzofluoranthenes, Total	3.0	10.0	ug/kg
Benzo(e)pyrene	0.6	5.0	ug/kg
Benzo(a)pyrene	1.0	5.0	ug/kg
Indeno(1,2,3-cd)pyrene	0.4	5.0	ug/kg
Dibenzo(a,h)anthracene	0.7	5.0	ug/kg
Benzo(g,h,i)perylene	0.5	5.0	ug/kg
Perylene	0.4	5.0	ug/kg
Benzo(b)naphtho(2,1-d)thiophene	5.0	5.0	ug/kg
C1-Decalins	0.5	5.0	ug/kg
C2-Decalins	0.5	5.0	ug/kg
C3-Decalins	0.5	5.0	ug/kg

Analytical Resources, Incorporated
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METHOD DETECTION AND REPORTING LIMITS

EPA 8270E-SIM

Laboratory: Analytical Resources, Inc. SDG: 20K0073

Client: Anchor QEA, LLC Project: Gasco Siltronic

Matrix: Solid Instrument: NT14

Analyte	MDL	RL	Units
C4-Decalins	0.5	5.0	ug/kg
C1-Naphthalenes	0.4	5.0	ug/kg
C2-Naphthalenes	0.4	5.0	ug/kg
C3-Naphthalenes	0.4	5.0	ug/kg
C4-Naphthalenes	0.4	5.0	ug/kg
C1-Fluorenes	0.5	5.0	ug/kg
C2-Fluorenes	0.5	5.0	ug/kg
C3-Fluorenes	0.5	5.0	ug/kg
C1-Dibenzothiophenes	0.7	5.0	ug/kg
C2-Dibenzothiophenes	0.7	5.0	ug/kg
C3-Dibenzothiophenes	0.7	5.0	ug/kg
C4-Dibenzothiophenes	0.7	5.0	ug/kg
C1-Phenanthrenes/Anthracenes	0.9	5.0	ug/kg
C2-Phenanthrenes/Anthracenes	0.9	5.0	ug/kg
C3-Phenanthrenes/Anthracenes	0.9	5.0	ug/kg
C4-Phenanthrenes/Anthracenes	0.9	5.0	ug/kg
C1-Fluoranthenes/Pyrenes	1.0	5.0	ug/kg
C2-Fluoranthenes/Pyrenes	1.0	5.0	ug/kg
C3-Fluoranthenes/Pyrenes	1.0	5.0	ug/kg
C4-Fluoranthenes/Pyrenes	1.0	5.0	ug/kg
C1-Benzo(a)anthracenes/Chrysenes	0.7	5.0	ug/kg
C2-Benzo(a)anthracenes/Chrysenes	0.7	5.0	ug/kg
C3-Benzo(a)anthracenes/Chrysenes	0.7	5.0	ug/kg
C4-Benzo(a)anthracenes/Chrysenes	0.7	5.0	ug/kg
C1-Benzothiophenes	0.4	5.0	ug/kg
C2-Benzothiophenes	0.4	5.0	ug/kg
C3-Benzothiophenes	0.4	5.0	ug/kg
C1-Naphthobenzothiophenes	2.5	5.0	ug/kg
C2-Naphthobenzothiophenes	2.5	5.0	ug/kg
C3-Naphthobenzothiophenes	2.5	5.0	ug/kg
C4-Naphthobenzothiopenes	2.5	5.0	ug/kg
C1-Dibenzo(a)anthracenes	0.7	5.0	ug/kg
C2-Dibenzo(a)anthracenes	0.7	5.0	ug/kg
C3-Dibenzo(a)anthracenes	0.7	5.0	ug/kg

Analytical Resources, Incorporated
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USMPDI-046SC-A-01-02-201029

Form I
ORGANIC ANALYSIS DATA SHEET
NWTPH-Dx
TPH (Extractables)

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-02 A	SDG:	20K0073
Sampled:	10/29/20 10:40	Prepared:	11/11/20 11:40	File ID:	420K1333.D
% Solids:	87.62	Preparation:	EPA 3546 (Microwave)	Analyzed:	11/13/20 19:47
Batch:	BIK0324	Sequence:	SIK0234	Initial/Final:	10.05 g Wet / 10 mL
Instrument:	FID4	Column:	RTX-1	Calibration:	DA00022

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg dry)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	56.8	U	23.1	56.8
RRO	Motor Oil Range Organics (C24-C38)	1	114	U	23.8	114

SURROGATES	ADDED: (mg/kg dry)	FOUND: (mg/kg dry)	% REC	QC LIMITS	Q
o-Terphenyl	63.878	62.7	98.1	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20201113.b\420K1333.D

Date : 13-NOV-2020 19:47

Client ID:

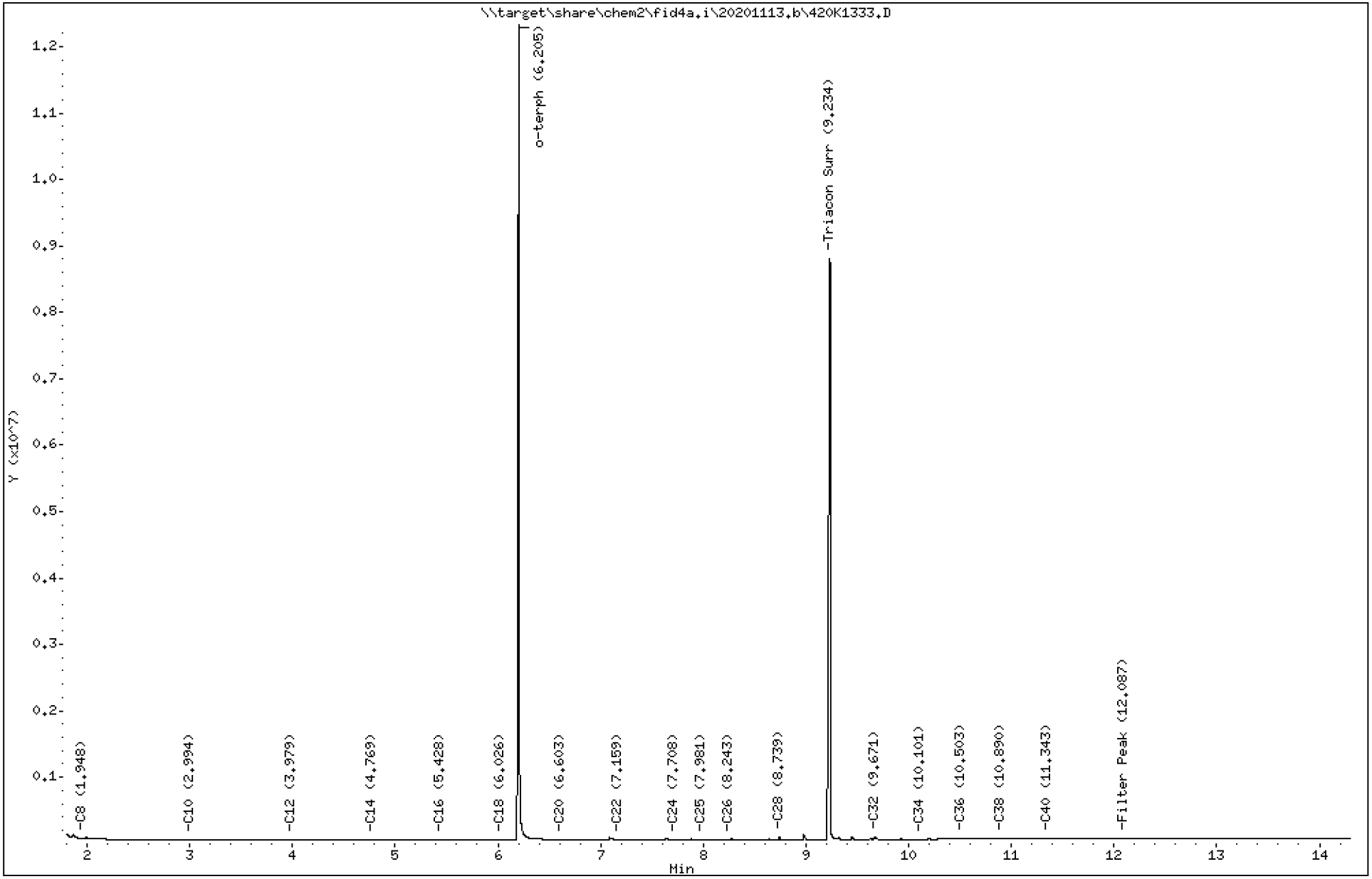
Instrument: fid4a.i

Sample Info: 20K0073-02

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201113.b/420K1333.D
Method: 20201113.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 11/24/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: 20K0073-02
Client ID:
Injection: 13-NOV-2020 19:47
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.948	0.025	22863	14807	WATPHD	(C12-C24)	616287	3.9
C10	2.994	-0.002	1761	602	WATPHM	(C24-C38)	1524858	15.1
C12	3.979	-0.002	1049	861	AK102	(C10-C25)	752860	3.9
C14	4.769	0.005	503	268	AK103	(C25-C36)	1078426	14.7
C16	5.428	-0.003	2428	1755	OR.DIES	(C10-C28)	921294	4.7
C18	6.026	-0.004	5554	9045				
C20	6.603	0.002	4774	7318	JET-A	(C10-C18)	274827	1.7
C22	7.159	-0.007	6037	3572				
C24	7.708	-0.007	4456	3262				
C25	7.981	-0.002	4218	4628				
C26	8.243	-0.002	3059	3103				
C28	8.739	-0.010	39175	49050				
C32	9.671	-0.007	36151	68946				
C34	10.101	-0.001	8988	7121				
Filter Peak	12.087	0.002	21703	8658	BUNKERC	(C10-C38)	2248752	57.0
C36	10.503	-0.002	13387	2668				
C38	10.890	-0.007	19462	16469				
C40	11.343	-0.002	21664	8647				
o-terph	6.205	-0.012	12275871	11293987				
Triacon Surr	9.234	-0.018	8749360	10082715	NAS DIES	(C10-C24)	723895	3.7

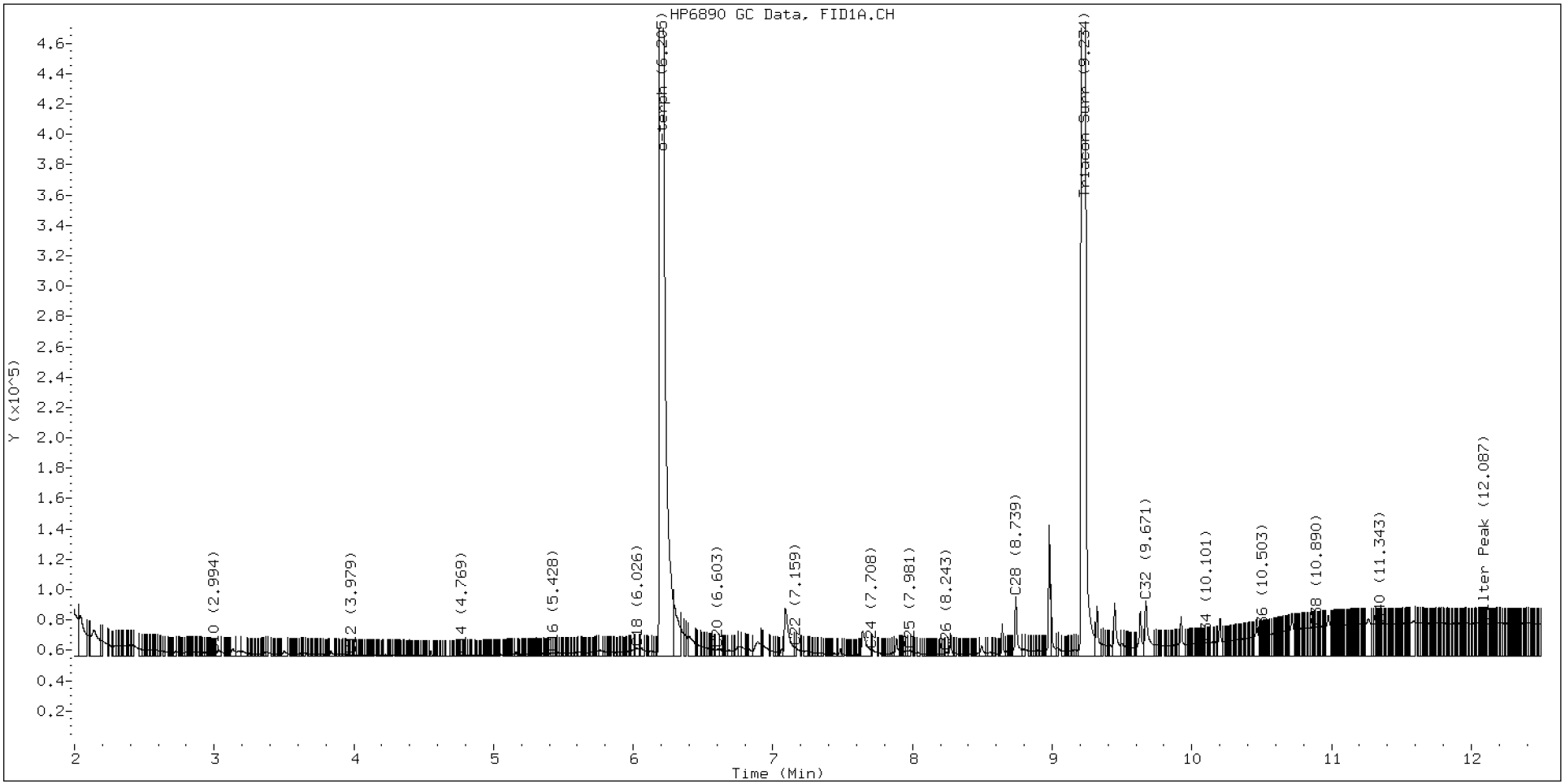
Range Times: NW Diesel(3.982 - 7.714) AK102(3.00 - 7.98) Jet A(3.00 - 6.03)
NW M.Oil(7.71 - 10.90) AK103(7.98 - 10.50) OR Diesel(3.00 - 8.75)

Surrogate	Area	Amount
o-Terphenyl	11293987	55.2
Triacontane	10082715	68.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201113.b/420K1333.D 20K0073-02



Analytical Resources, Incorporated
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.			SDG:	20K0073
Client:	Anchor QEA, LLC			Project:	Gasco Siltronic
Batch:	BIK0324	Batch Matrix:	Solid	Preparation:	EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
USMPDI-046SC-A-00-01-201029	20K0073-01	420K1330.D	11/11/20 11:40	
USMPDI-046SC-A-01-02-201029	20K0073-02	420K1333.D	11/11/20 11:40	
Blank	BIK0324-BLK1	420K1326.D	11/11/20 11:40	
LCS	BIK0324-BS1	420K1327.D	11/11/20 11:40	
USMPDI-046SC-A-00-01-201029	BIK0324-MS1	420K1331.D	11/11/20 11:40	
USMPDI-046SC-A-00-01-201029	BIK0324-MSD1	420K1332.D	11/11/20 11:40	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0324

Prepared using: EPA 3546 (Microwave)

TPH NW (Extractables) in Solid

Matrix: Solid **Date Prepared:** 11/11/20 **Balance ID:** B 139298002 **Set Up By:** CTO 11/11/20

Analysis: TPH NW (Extractables)

Lab Number & Container	Initial (g) Target Wet: 10 (Wet)	Actual	Acid C/U (1:10) (1mL) Y / N	Silica Gel C/U (1mL) Y / N	Final Effective Vol (mL)	Vol to Lab	Extraction Comments
20K0069-01 A	(10.000)	10.05	(1mL) Y / N	(1mL) Y / N	10	1.0	
20K0069-02 A	(10.000)	10.05	(1mL) Y / N	(1mL) Y / N	10	1.0	
20K0073-01 A	(10.000)	10.05	(1mL) Y / N	(1mL) Y / N	10	1.0	
20K0073-02 A	(10.000)	10.05	(1mL) Y / N	(1mL) Y / N	10	1.0	

Batch QC

Lab Number	Initial (g) Target Wet: 10 (Wet)	Actual	Acid C/U (1:10) (1mL) Y / N	Silica Gel C/U (1mL) Y / N	Final Effective Vol (mL)	Vol to Lab	Extraction Comments
BIK0324-BLK1	(10.000)	10.00	(1mL) Y / N	(1mL) Y / N	10	1.0	
BIK0324-BS1	(10.000)	10.00	(1mL) Y / N	(1mL) Y / N	10	1.0	
BIK0324-MS1	(10.000)	10.05	(1mL) Y / N	(1mL) Y / N	10	1.0	Use 20K0073-01
BIK0324-MSD1	(10.000)	10.05	(1mL) Y / N	(1mL) Y / N	10	1.0	Use 20K0073-01

DaP 11/11/20
Client ID verified By Date

Preparation Reviewed By Date

11/11/20 ~~11/4~~ 11:40
Extraction Date and Time 11/11/20

Printed: 11/11/2020 9:30:03AM

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Page 1 of 2

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0324

Prepared using: EPA 3546 (Microwave)

TPH NW (Extractables) in Solid

Prep Steps

Microwave	TurboVap	Vialing
1 2 3	1 2 3 4 5	
DAP 11/11/20	AP 11/11/20	AP 11/11/20
CT Analyst/Date	Analyst/Date	Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: CT/DAP Date: 11/11/20	
Methylene Chloride	I010361
Anhydrous Sodium Sulfate	I010324
Neutral Glass Wool	I006096
Vialing Analyst: AP Date: 11/11/20	
Methylene Chloride	I10361
~~Concentrated Sulfuric Acid~~	
~~60% Silica~~	

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 1125µg/mL	P I009824 Exp: 04/19/2021	500µL	DAP	CT
Spike 15000µg/mL	11 I009822 Exp: 04/20/2021	1000µL	DAP	CT

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

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0324

Prepared using: EPA 3546 (Microwave)

TPH NW (Extractables) in Solid

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh into 100mL beakers-dry with Sodium Sulfate. 2. Transfer to microwave vessel. 3. Add DCM to the vessel until the solvent is 1" above soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then let cool 15 min. in R-05. Re-homogenize while cool. 7. Collect into turbo tube with small funnel containing neutral glasswool and 1" sodium sulfate. 8. Add (2) 10mL DCM rinses to vessel and transfer to turbo tube. 9. TurboVap. 10. Acid/Silica Clean-up Y/N 11. TurboVap. 12. Vial in DCM. A. Need Total Solids Y/N B. Archive/Freeze Y/N	

Batch: BIK0324
Batch Comment: **NONE**
Project: Gasco Siltronic
Project Comments: <G> MS/MSD per 20 samples, please batch with other work orders, SM2540 Needed </G>
Work Order:20K0069
Work Order Comments: <G> MS/MSD per 20 samples, please batch with other work orders, SM2540 Needed </G>
Sample: 20K0069-02
Sample Comments: **NONE**
Sample: 20K0069-01
Sample Comments: **NONE**
Work Order:20K0073
Work Order Comments: <G> MS/MSD per 20 samples, please batch with other work orders, SM2540 Needed </G>
Sample: 20K0073-02
Sample Comments: **NONE**
Sample: 20K0073-01
Sample Comments: **NONE**

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: TPHD Extraction Batch BIK0324

Total Solids Batch: BIK0262 Work Order(s): 20K0069

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 01, 02 — 07	11/10/20
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples (Y) / N 01, 02 only	11/10/20
☒ Multiple Jars Y / (N)	11/10/20
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

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Revision 15
07/01/19

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: TPHD Extraction Batch BIK0324

Total Solids Batch: BIK0268 Work Order(s): 20K0073

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 01-13. 15-18.	NG 11/10/20
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= fuel odor 14.	NG 11/10/20
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples (Y) / N 01, 02 only	NG 11/10/20
☒ Multiple Jars (Y) / N 15 x 2	NG 11/10/20
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

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Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
METHOD BLANK DATA SHEET
NWTPH-Dx

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	20K0073
Client:	Anchor QEA, LLC			Project:	Gasco Siltronic
Matrix:	Solid	Laboratory ID:	BIK0324-BLK1	File ID:	420K1326.D
Sampled:	N/A	Prepared:	11/11/20 11:40	Analyzed:	11/13/20 17:24
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 10 mL
Batch:	BIK0324	Sequence:	SIK0234	Calibration:	DA00022
Instrument:	FID4	Column:	RTX-1		

CAS NO.	COMPOUND	DILUTION	CONC: (mg/kg wet)	Q	DL	RL
DRO	Diesel Range Organics (C12-C24)	1	50.0	U	20.3	50.0
RRO	Motor Oil Range Organics (C24-C38)	1	100	U	21.0	100

SURROGATES	ADDED: (mg/kg wet)	FOUND: (mg/kg wet)	% REC	QC LIMITS	Q
o-Terphenyl	56.250	58.9	105	50 - 150	

Data File: \\target\share\chem2\fid4a.i\20201113.b\420K1326.D

Date : 13-NOV-2020 17:24

Client ID:

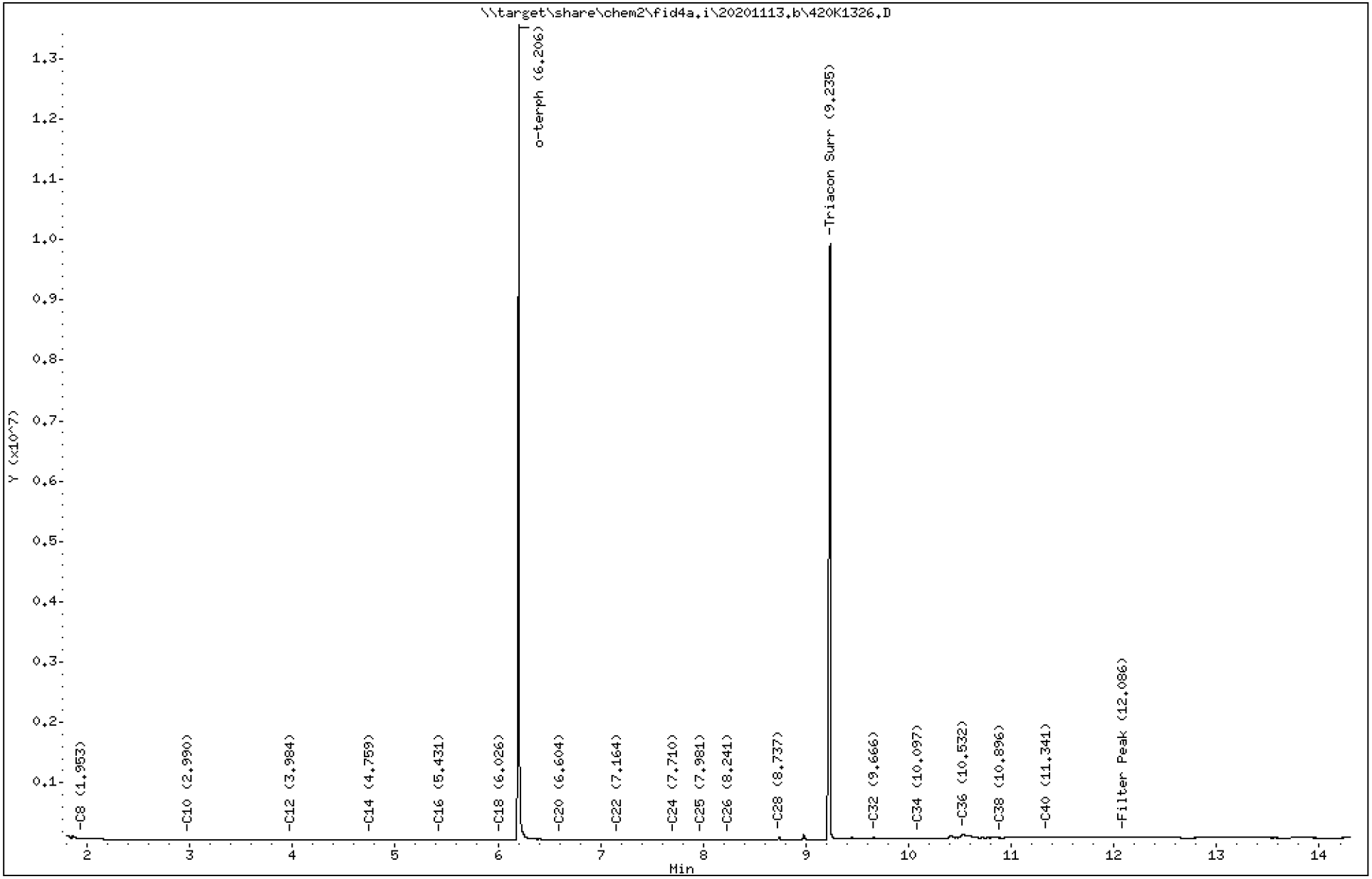
Instrument: fid4a.i

Sample Info: BIK0324-BLK1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201113.b/420K1326.D
Method: 20201113.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 11/24/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: BIK0324-BLK1
Client ID:
Injection: 13-NOV-2020 17:24
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.953	0.030	21685	6480	WATPHD	(C12-C24)	389361	2.4
C10	2.990	-0.007	1820	1408	WATPHM	(C24-C38)	3033869	30.0
C12	3.984	0.002	750	419	AK102	(C10-C25)	504581	2.6
C14	4.759	-0.005	476	229	AK103	(C25-C36)	2152492	29.4
C16	5.431	0.001	2045	998	OR.DIES	(C10-C28)	742220	3.8
C18	6.026	-0.004	2614	2673				
C20	6.604	0.002	4653	2953	JET-A	(C10-C18)	221707	1.3
C22	7.164	-0.002	3522	3526				
C24	7.710	-0.004	3641	2282				
C25	7.981	-0.001	3994	4059				
C26	8.241	-0.004	4367	6784				
C28	8.737	-0.012	47119	54281				
C32	9.666	-0.011	49373	96410				
C34	10.097	-0.004	16904	9273				
Filter Peak	12.086	0.001	35272	38635	BUNKERC	(C10-C38)	3518629	89.1
C36	10.532	0.027	89308	193240				
C38	10.896	-0.002	33733	28616				
C40	11.341	-0.004	36179	21671				
o-terph	6.206	-0.011	13508346	12067088				
Triacon Surr	9.235	-0.018	9883428	10787844	NAS DIES	(C10-C24)	484760	2.5

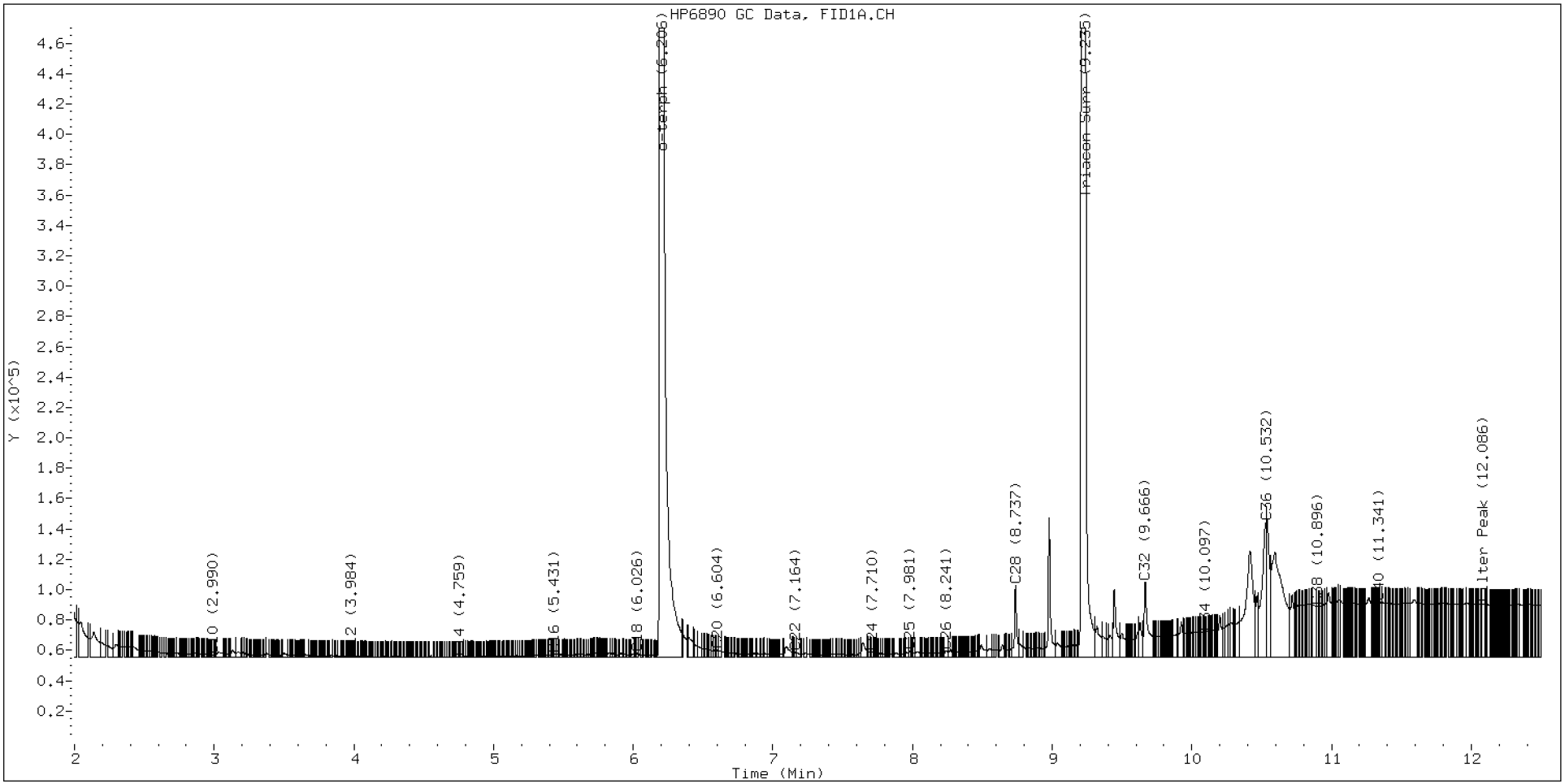
Range Times: NW Diesel(3.982 - 7.714) AK102(3.00 - 7.98) Jet A(3.00 - 6.03)
NW M.Oil(7.71 - 10.90) AK103(7.98 - 10.50) OR Diesel(3.00 - 8.75)

Surrogate	Area	Amount
o-Terphenyl	12067088	58.9
Triacontane	10787844	72.7

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

Datafile: FID4A, 20201113.b/420K1326.D BIK0324-BLK1



Analytical Resources, Incorporated
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Matrix:	Solid	Analyzed:	11/13/20 17:44
Batch:	BIK0324	Laboratory ID:	BIK0324-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	10 g / 10 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Diesel Range Organics (C12-C24)	1500	1640		109	63 - 120

* Indicates values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201113.b\420K1327.D

Date : 13-NOV-2020 17:44

Client ID:

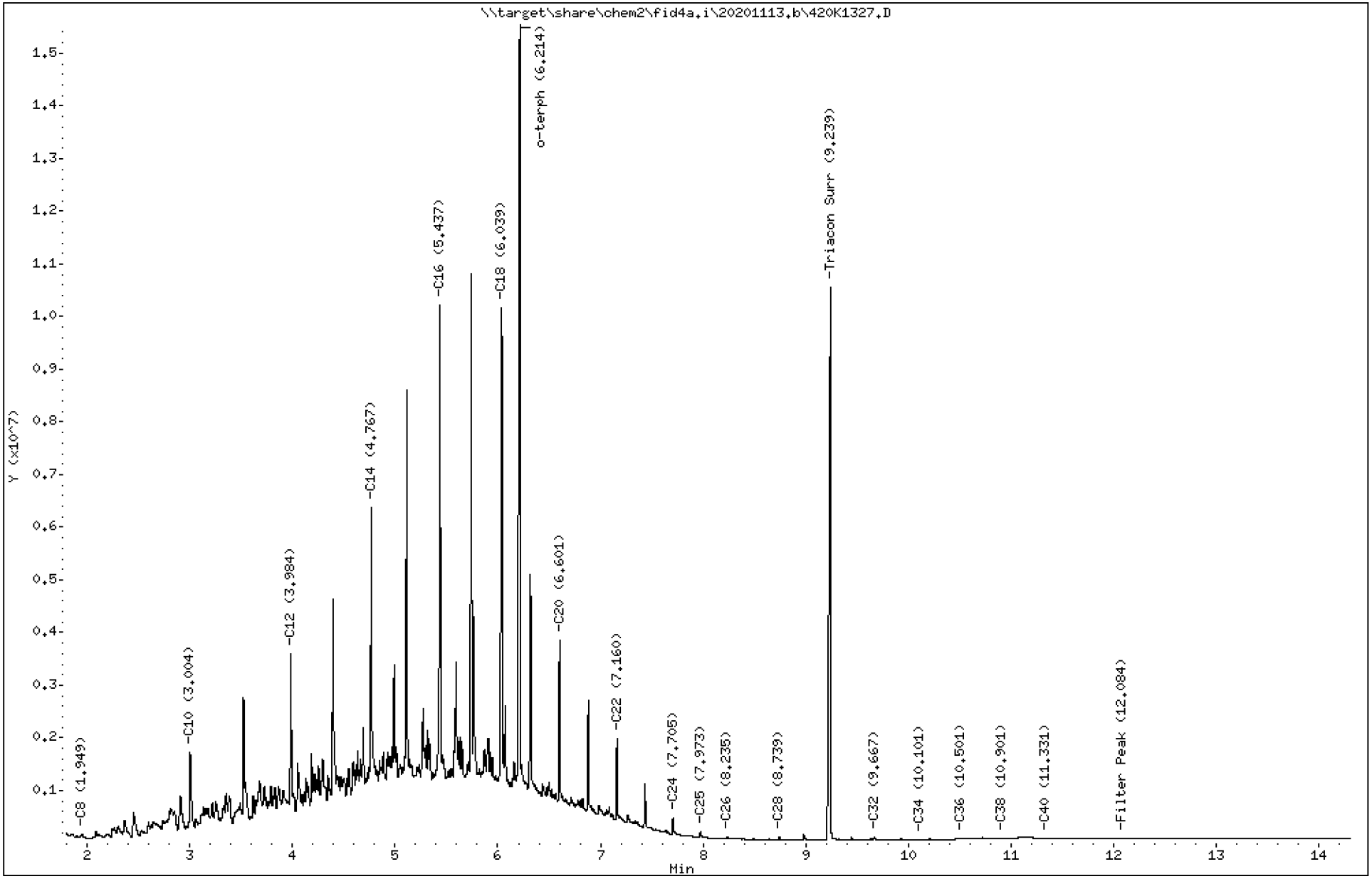
Instrument: fid4a.i

Sample Info: BIK0324-BS1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201113.b/420K1327.D
Method: 20201113.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 11/24/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: BIK0324-BS1
Client ID:
Injection: 13-NOV-2020 17:44
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.949	0.026	115494	280733	WATPHD	(C12-C24)	260673989	1636.0
C10	3.004	0.007	1668987	2520228	WATPHM	(C24-C38)	2997029	29.6
C12	3.984	0.002	3527025	3789483	AK102	(C10-C25)	305089719	1560.6
C14	4.767	0.003	6303016	5188024	AK103	(C25-C36)	1783156	24.4
C16	5.437	0.006	10157163	10706628	OR.DIES	(C10-C28)	306155918	1562.0
C18	6.039	0.009	10111818	11319412				
C20	6.601	-0.001	3788709	3396626	JET-A	(C10-C18)	237826448	1434.0
C22	7.160	-0.006	1933910	1919390				
C24	7.705	-0.009	424784	562442				
C25	7.973	-0.010	161028	251150				
C26	8.235	-0.009	62347	85796				
C28	8.739	-0.011	58292	57922				
C32	9.667	-0.011	41908	59230				
C34	10.101	-0.001	6665	6517				
Filter Peak	12.084	-0.001	23807	7129	BUNKERC	(C10-C38)	307352778	7785.6
C36	10.501	-0.004	14379	13503				
C38	10.901	0.004	22419	5593				
C40	11.331	-0.014	26466	11852				
o-terph	6.214	-0.002	14190284	13071745				
Triacon Surr	9.239	-0.014	10497159	11617398	NAS DIES	(C10-C24)	304355748	1559.6

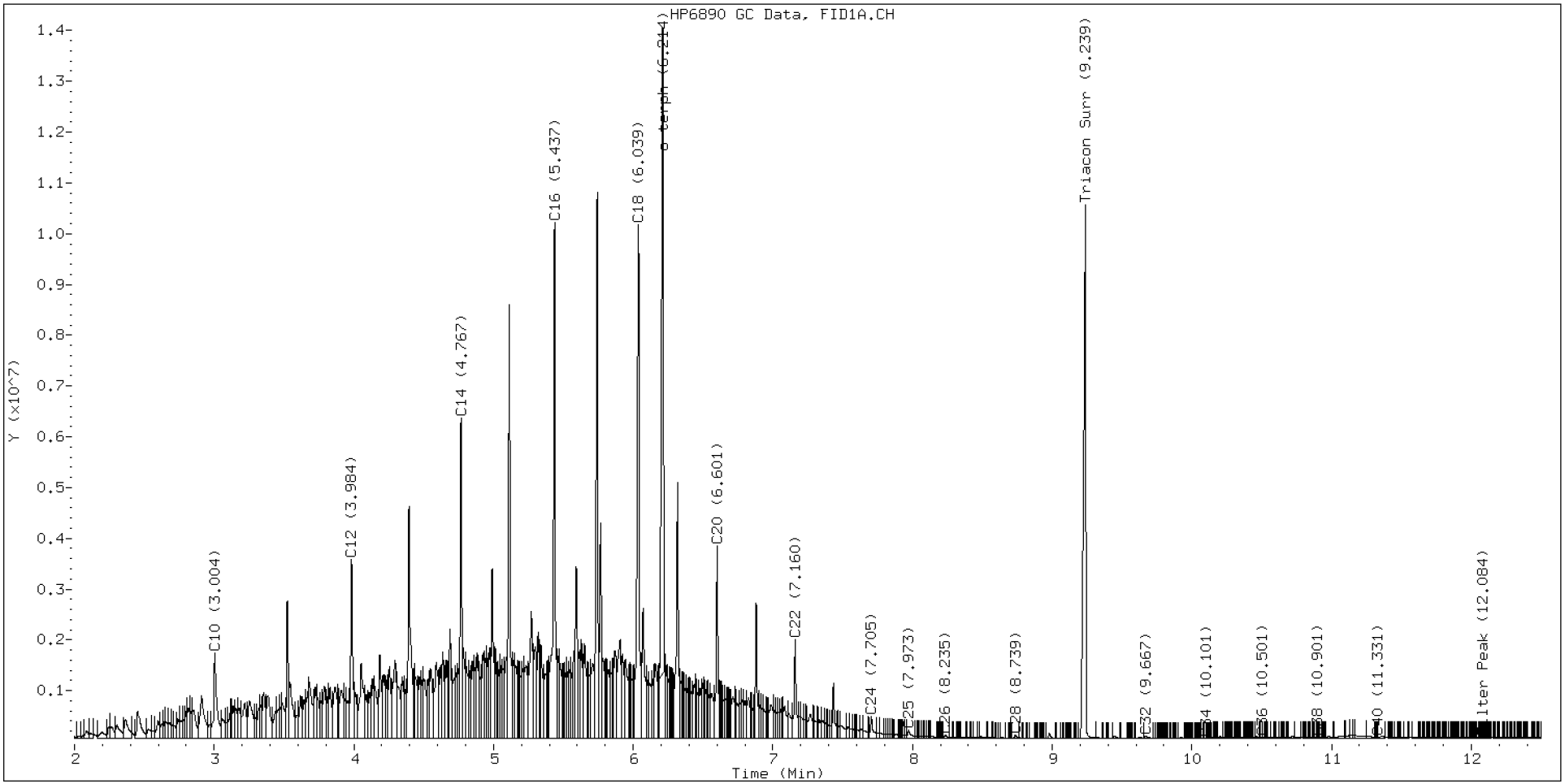
Range Times: NW Diesel(3.982 - 7.714) AK102(3.00 - 7.98) Jet A(3.00 - 6.03)
NW M.Oil(7.71 - 10.90) AK103(7.98 - 10.50) OR Diesel(3.00 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	13071745	63.9	M
Triacontane	11617398	78.3	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

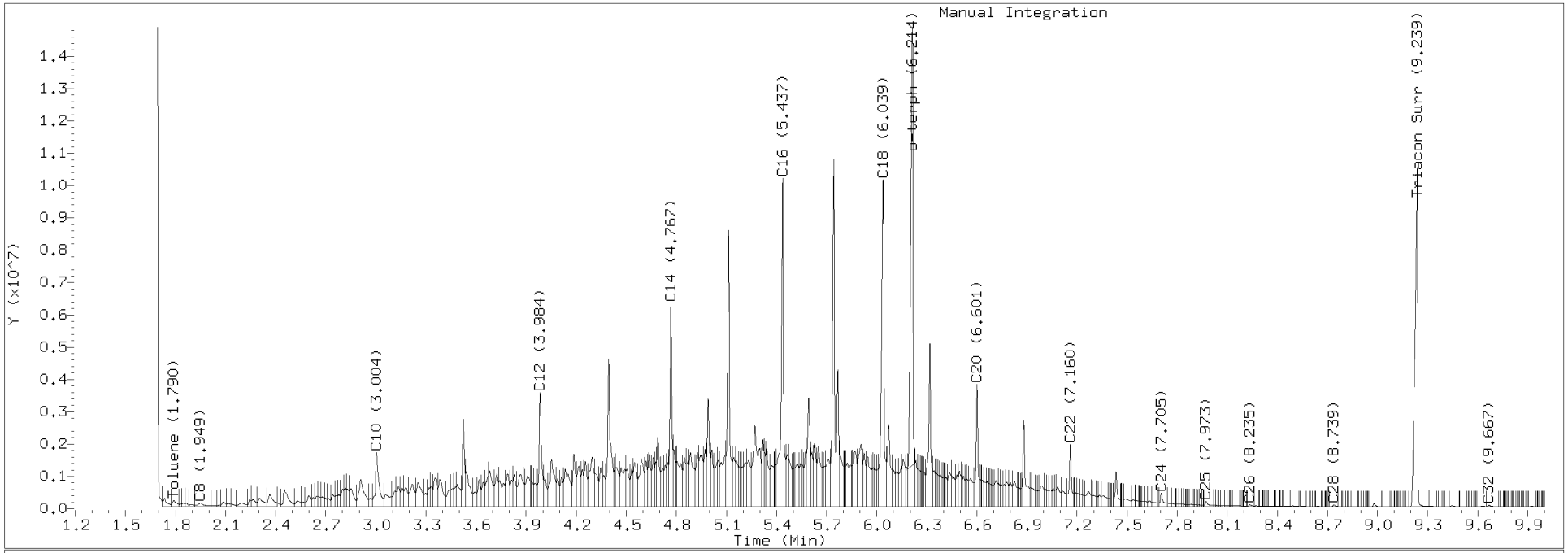
Datafile: FID4A, 20201113.b/420K1327.D BIK0324-BS1

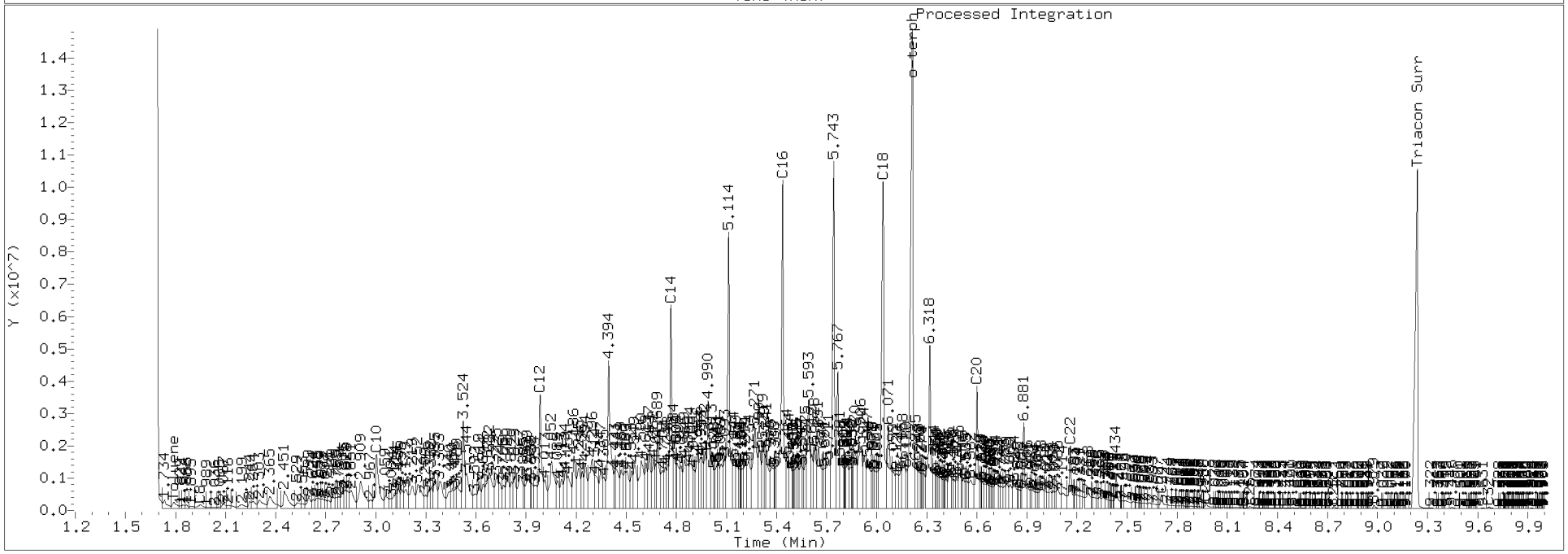


TPH Manual Integrations Report

Datafile: FID4A, 20201113.b/420K1327.D Injection: 13-NOV-2020 17:44

Lab ID:BIK0324-BS1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-A-00-01-201029

MS / MS DUPLICATE RECOVERY
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Matrix:	Solid	Analyzed:	11/13/20 19:06
Batch:	BIK0324	Laboratory ID:	BIK0324-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	10.05 g / 10 mL	Source Sample:	USMPDI-046SC-A-00-01-201029

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Diesel Range Organics (C12-C24)	1830	ND	U	1560		85.2	63 - 120

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-A-00-01-201029

MS / MS DUPLICATE RECOVERY
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Matrix:	Solid	Analyzed:	11/13/20 19:26
Batch:	BIK0324	Laboratory ID:	BIK0324-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	10.05 g / 10 mL	Source Sample:	USMPDI-046SC-A-00-01-201029

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Diesel Range Organics (C12-C24)	1830	1710		93.3	9.07	30	63 - 120

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20201113.b\420K1331.D

Date : 13-NOV-2020 19:06

Client ID:

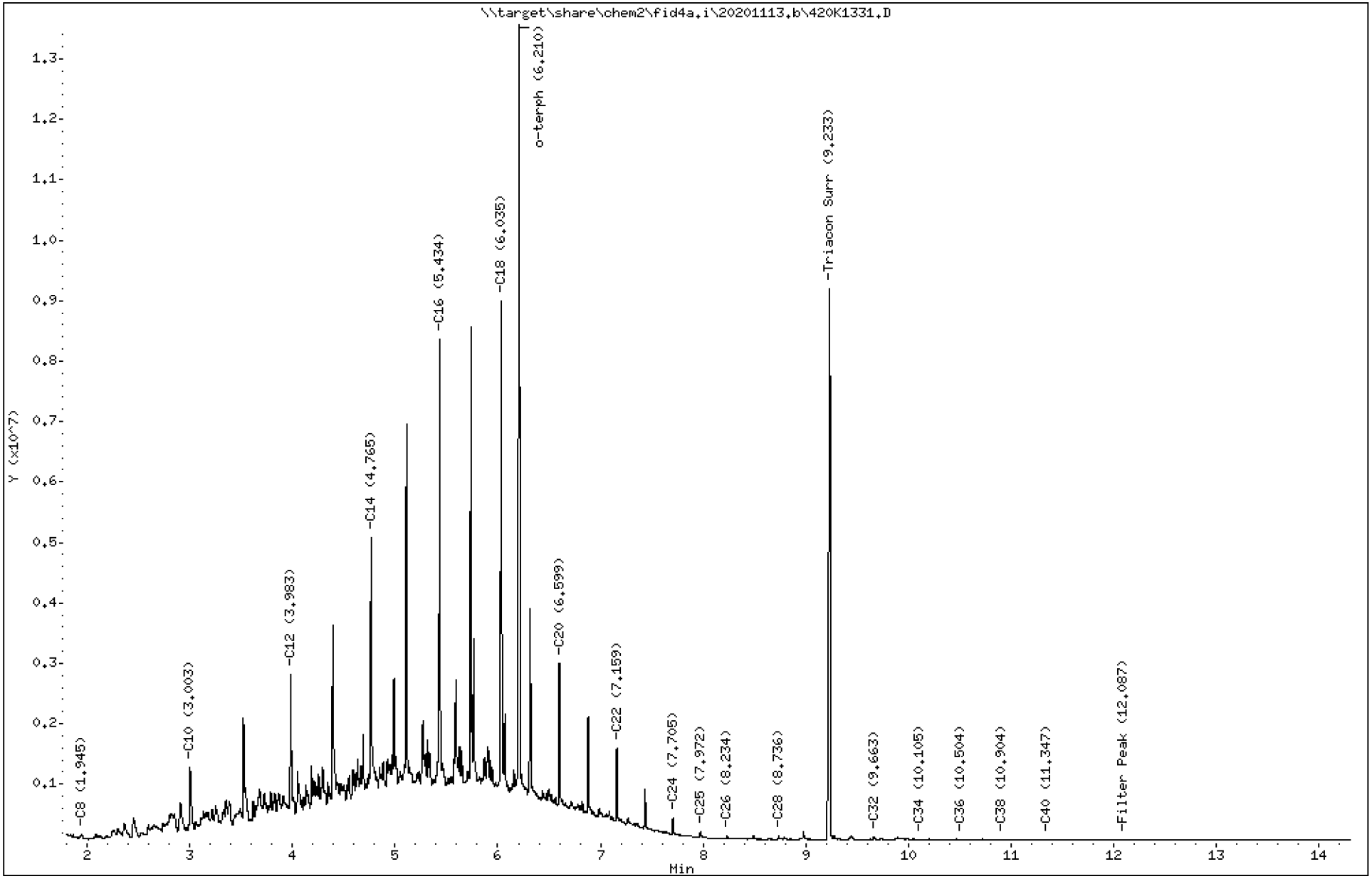
Instrument: fid4a.i

Sample Info: BIK0324-MS1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201113.b/420K1331.D
Method: 20201113.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 11/24/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: BIK0324-MS1
Client ID:
Injection: 13-NOV-2020 19:06
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.945	0.021	81787	168797	WATPHD	(C12-C24)	203654640	1278.1
C10	3.003	0.006	1188227	1729617	WATPHM	(C24-C38)	2938198	29.0
C12	3.983	0.001	2728874	2933487	AK102	(C10-C25)	237499490	1214.9
C14	4.765	0.001	4993742	4003687	AK103	(C25-C36)	2204212	30.1
C16	5.434	0.004	8283550	9062093	OR.DIES	(C10-C28)	238680363	1217.8
C18	6.035	0.005	8914966	8650235				
C20	6.599	-0.002	2914129	3043105	JET-A	(C10-C18)	183919988	1109.0
C22	7.159	-0.007	1513023	1428553				
C24	7.705	-0.009	365092	457920				
C25	7.972	-0.010	145552	200977				
C26	8.234	-0.010	57546	84260				
C28	8.736	-0.013	60130	60045				
C32	9.663	-0.015	50787	50659				
C34	10.105	0.003	5920	5306				
Filter Peak	12.087	0.002	1554	662	BUNKERC	(C10-C38)	239801024	6074.4
C36	10.504	-0.001	2886	702				
C38	10.904	0.006	4296	3577				
C40	11.347	0.002	3094	1832				
o-terph	6.210	-0.007	12508929	10193185				
Triacon Surr	9.233	-0.020	9123202	9057652	NAS DIES	(C10-C24)	236862826	1213.8

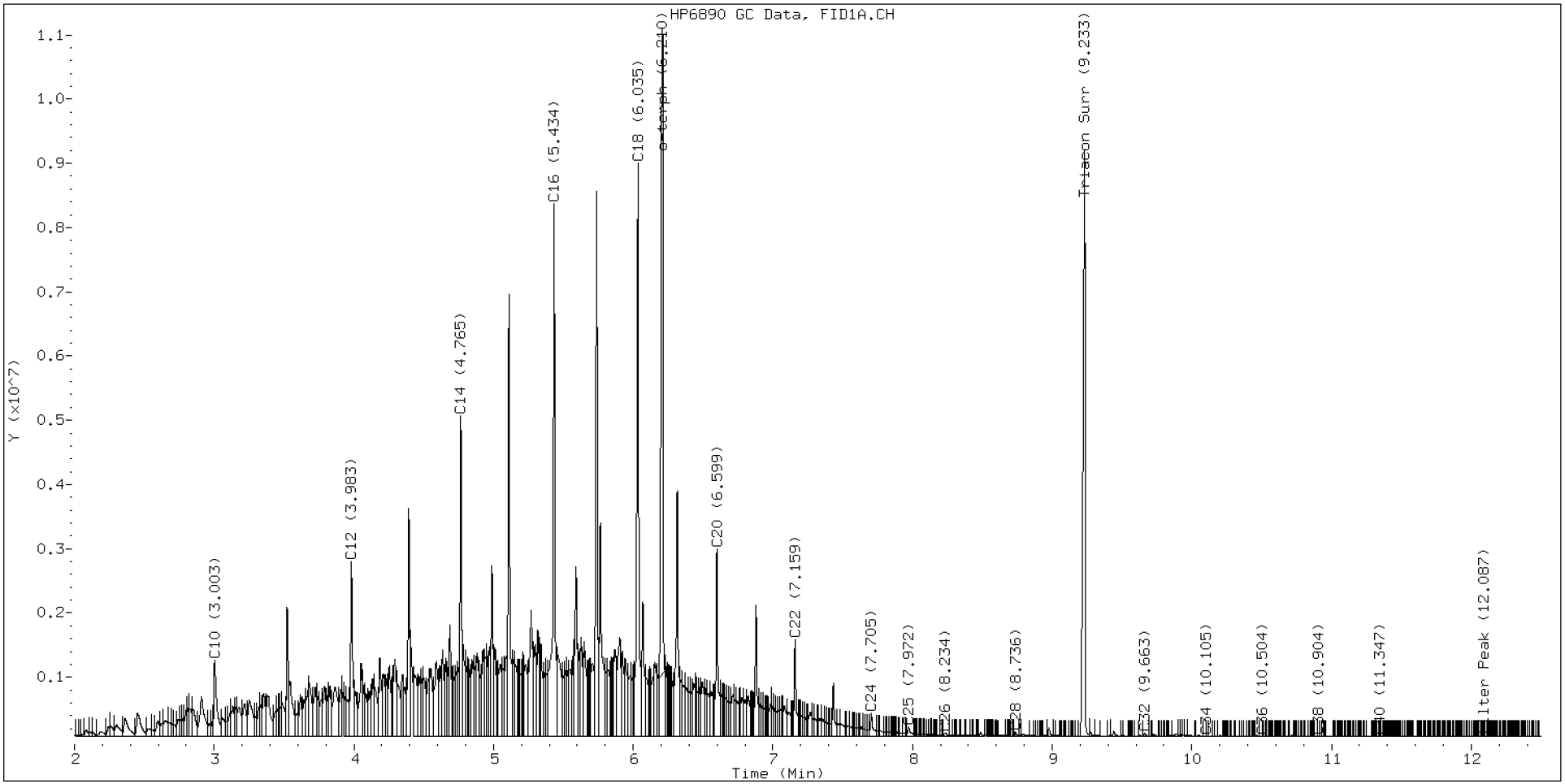
Range Times: NW Diesel(3.982 - 7.714) AK102(3.00 - 7.98) Jet A(3.00 - 6.03)
NW M.Oil(7.71 - 10.90) AK103(7.98 - 10.50) OR Diesel(3.00 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	10193185	49.8	M
Triacontane	9057652	61.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

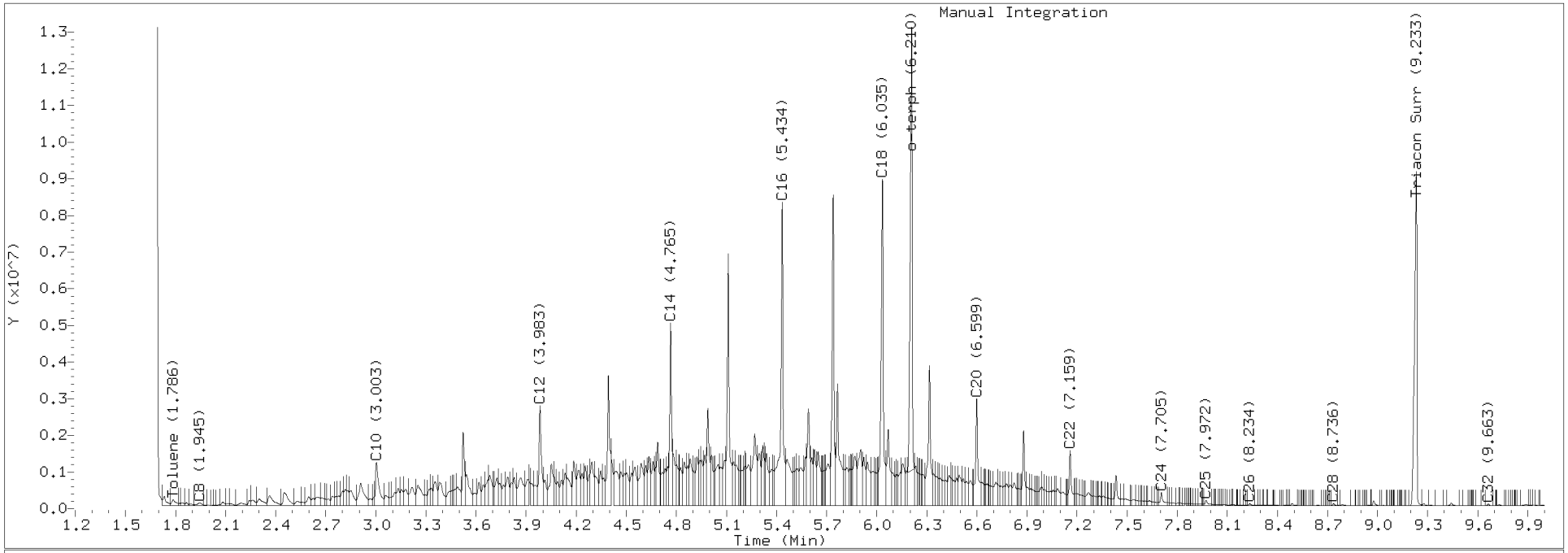
Datafile: FID4A, 20201113.b/420K1331.D BIK0324-MS1

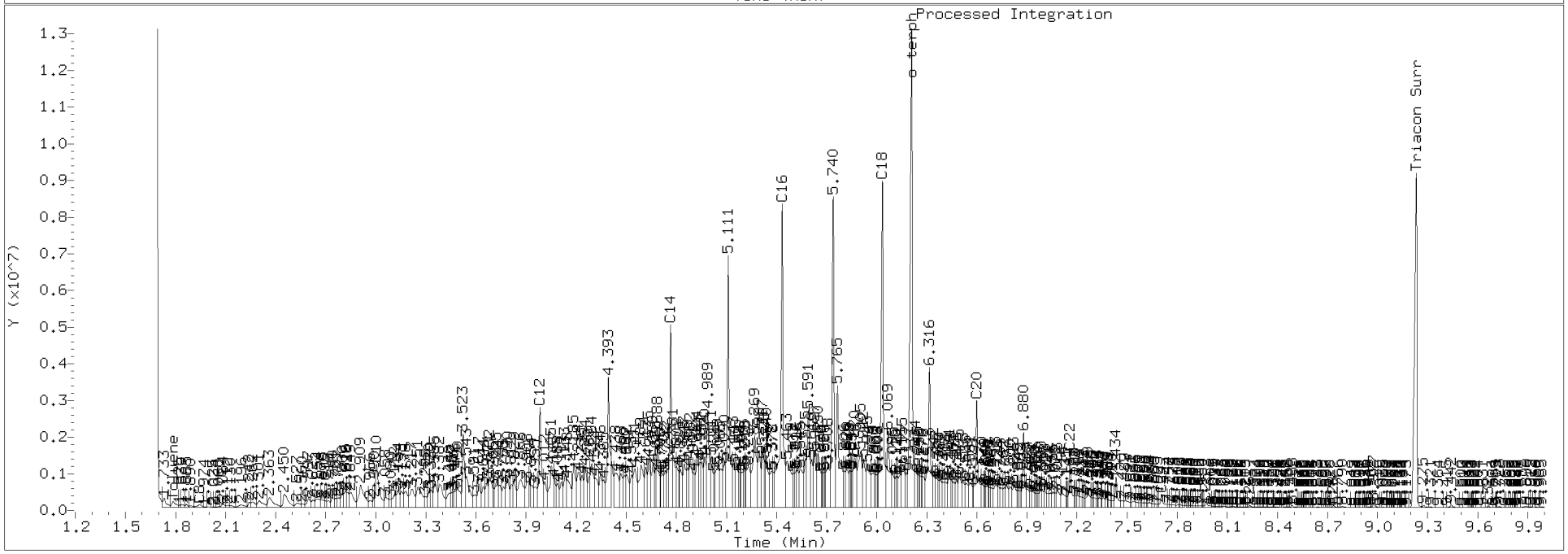


TPH Manual Integrations Report

Datafile: FID4A, 20201113.b/420K1331.D Injection: 13-NOV-2020 19:06

Lab ID:BIK0324-MS1





Data File: \\target\share\chem2\fid4a.i\20201113.b\420K1332.D

Date : 13-NOV-2020 19:26

Client ID:

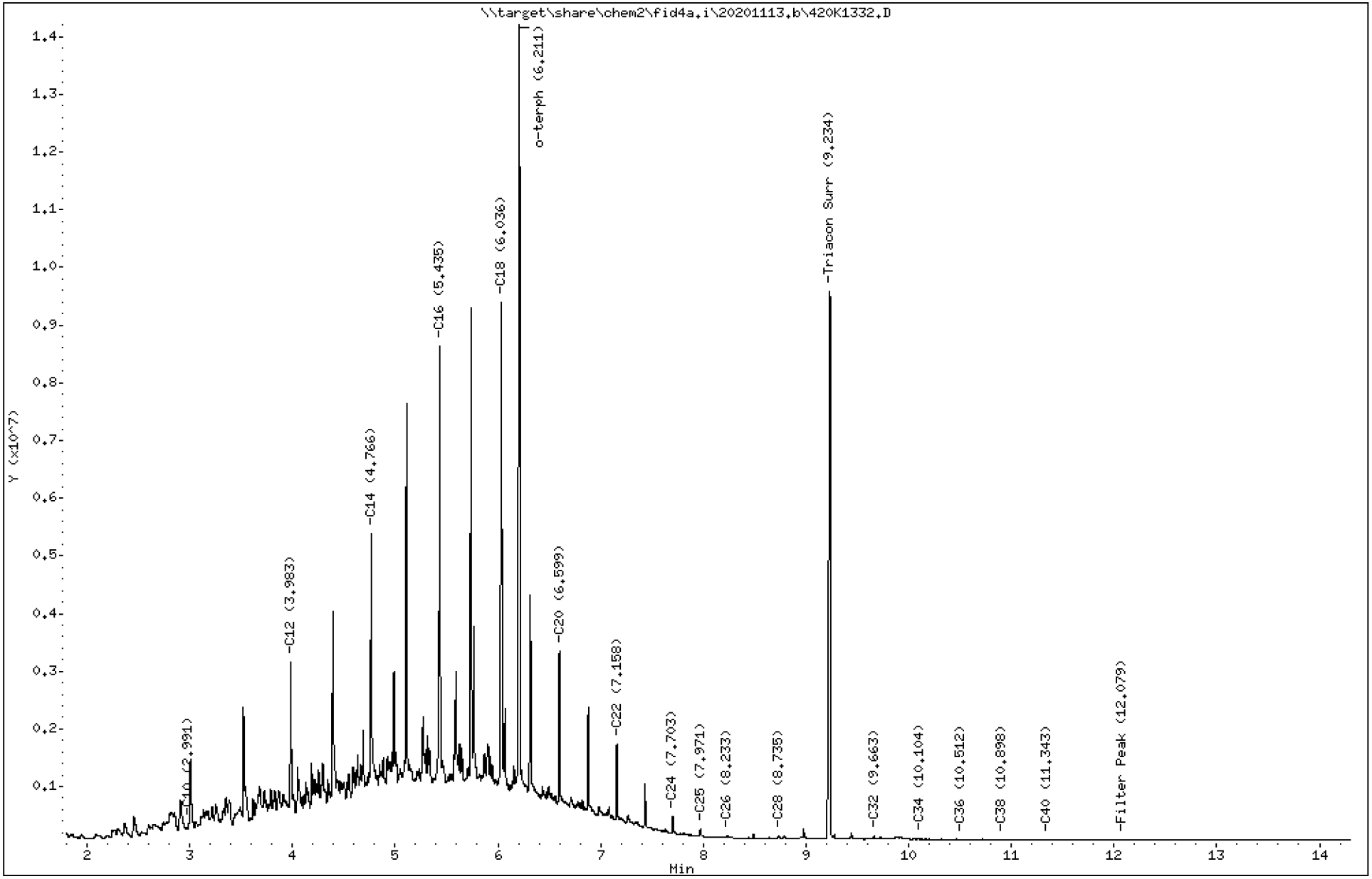
Instrument: fid4a.i

Sample Info: BIK0324-MSD1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20201113.b/420K1332.D
Method: 20201113.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 11/24/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: BIK0324-MSD1
Client ID:
Injection: 13-NOV-2020 19:26
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.921	-0.002	38666	29907	WATPHD	(C12-C24)	223004668	1399.6
C10	2.991	-0.006	275806	200253	WATPHM	(C24-C38)	4983331	49.3
C12	3.983	0.001	3083275	3260403	AK102	(C10-C25)	260768286	1333.9
C14	4.766	0.002	5305439	4422662	AK103	(C25-C36)	3962282	54.1
C16	5.435	0.004	8550084	9987801	OR.DIES	(C10-C28)	262770088	1340.7
C18	6.036	0.006	9322092	9906528				
C20	6.599	-0.002	3269348	3413946	JET-A	(C10-C18)	200658446	1209.9
C22	7.158	-0.007	1662083	1551306				
C24	7.703	-0.011	398159	463653				
C25	7.971	-0.011	178600	235732				
C26	8.233	-0.011	77161	112904				
C28	8.735	-0.014	80682	96438				
C32	9.663	-0.015	64676	89770				
C34	10.104	0.003	11999	9468				
Filter Peak	12.079	-0.006	665	123	BUNKERC	(C10-C38)	264847808	6708.9
C36	10.512	0.007	5886	3629				
C38	10.898	0.001	4810	1636				
C40	11.343	-0.002	2560	1196				
o-terph	6.211	-0.006	13019751	11039587				
Triacon Surr	9.234	-0.018	9496872	9802546	NAS DIES	(C10-C24)	259864477	1331.6

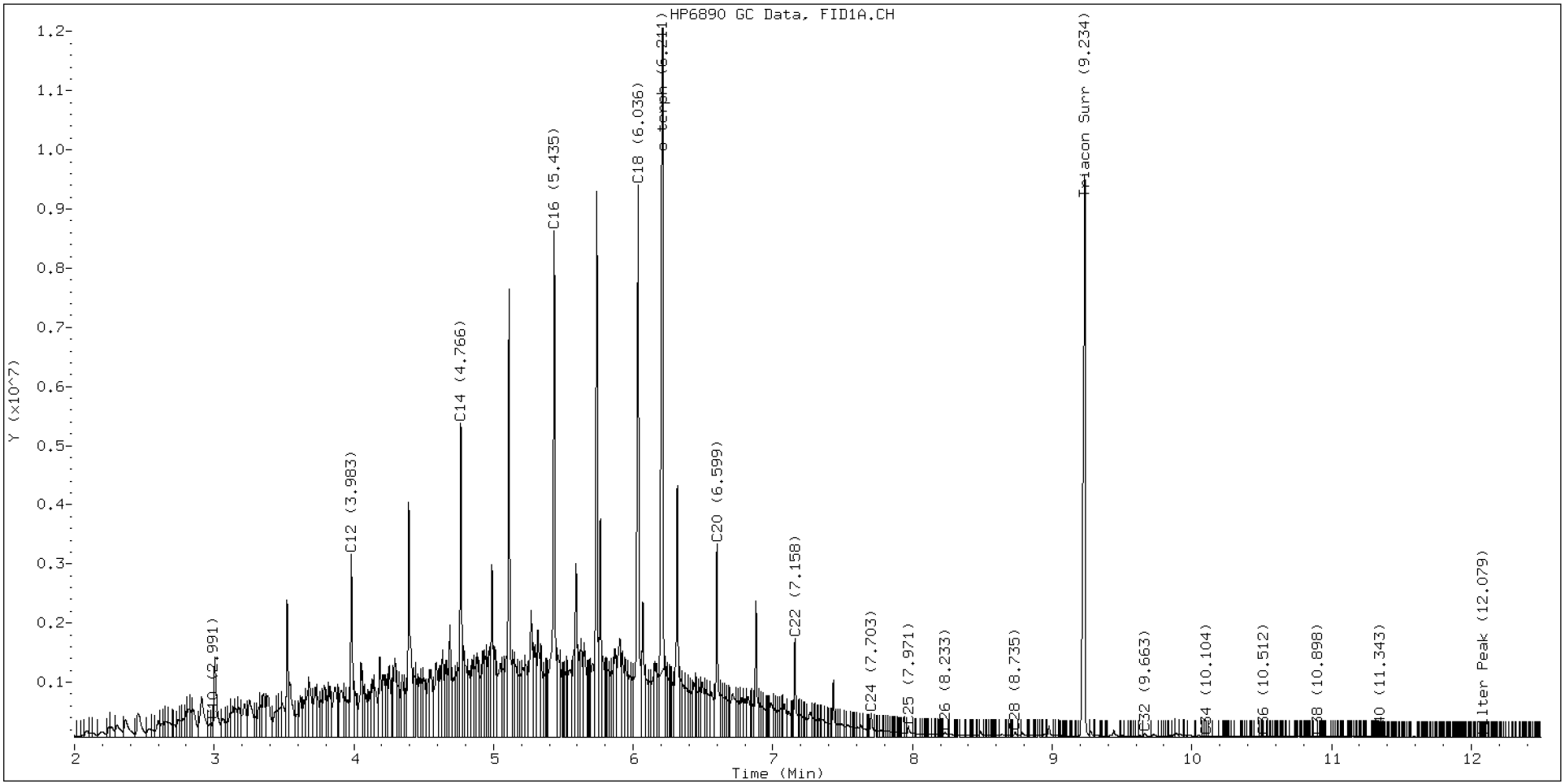
Range Times: NW Diesel(3.982 - 7.714) AK102(3.00 - 7.98) Jet A(3.00 - 6.03)
NW M.Oil(7.71 - 10.90) AK103(7.98 - 10.50) OR Diesel(3.00 - 8.75)

Surrogate	Area	Amount	
o-Terphenyl	11039587	53.9	M
Triacontane	9802546	66.1	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	39477.2	13-MAR-2020

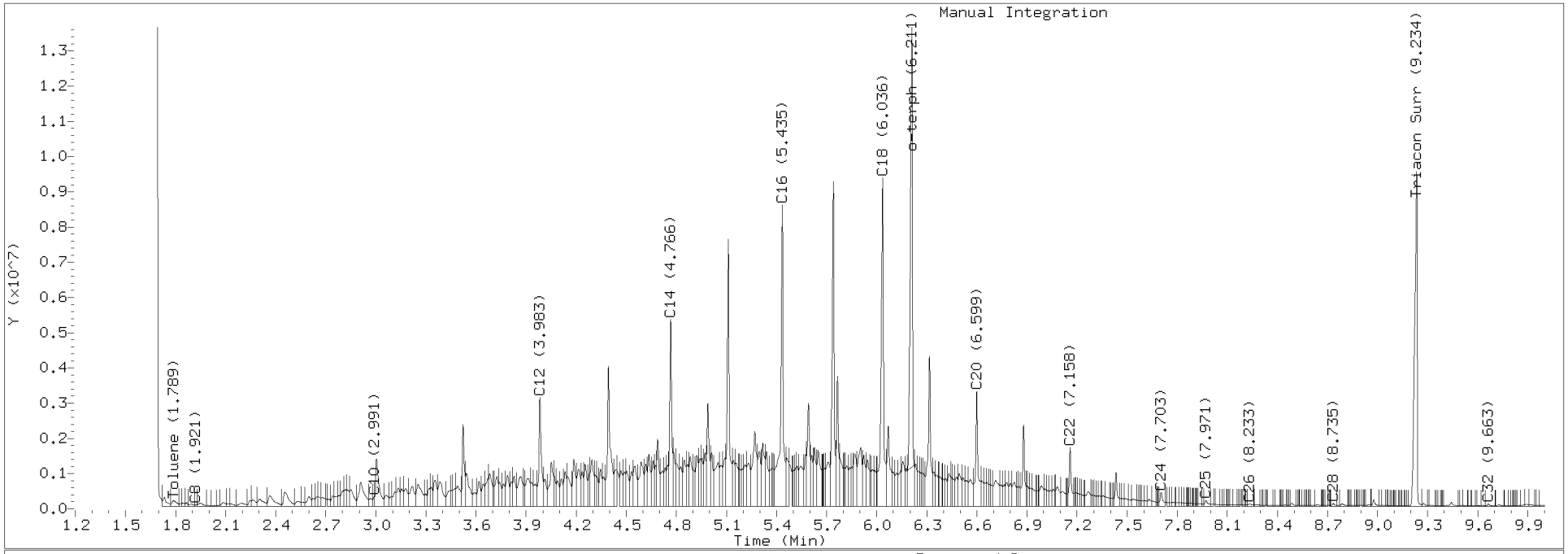
Datafile: FID4A, 20201113.b/420K1332.D BIK0324-MSD1

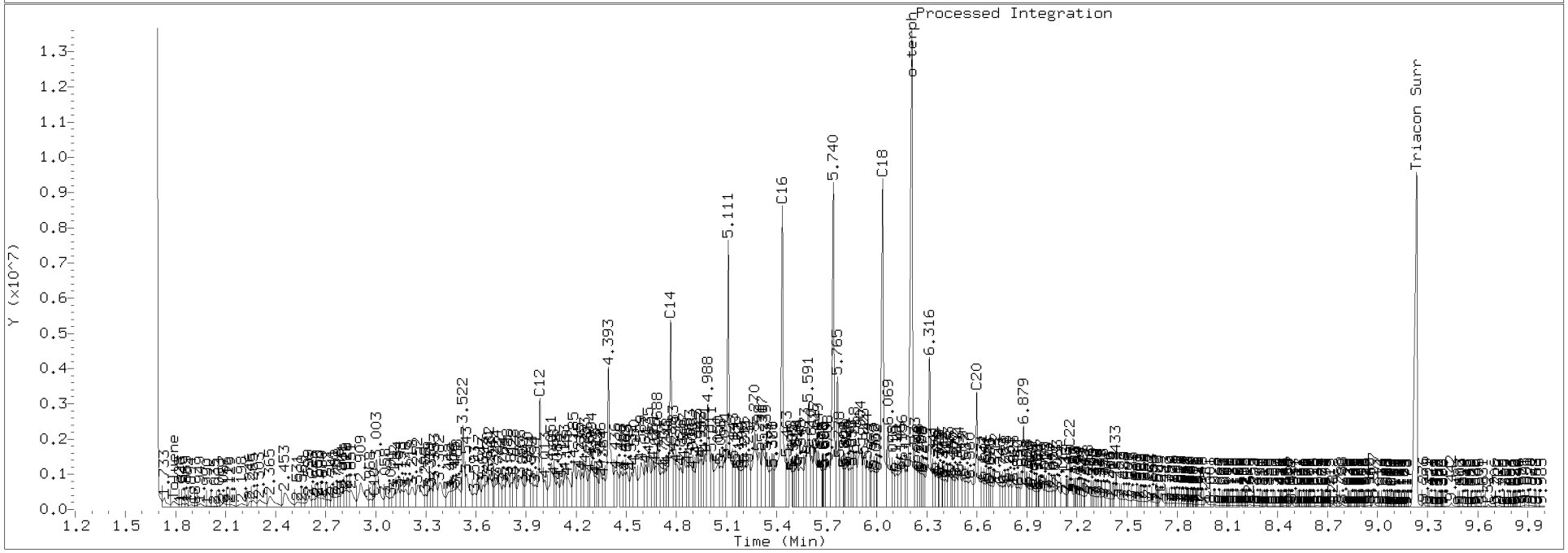


TPH Manual Integrations Report

Datafile: FID4A, 20201113.b/420K1332.D Injection: 13-NOV-2020 19:26

Lab ID:BIK0324-MSD1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	CJ00089	Instrument:	FID4
Calibration Date:	10/29/2019	Column (1):	RTX-1

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Diesel Range Organics (C12-C24)	50	182114.3	100	162168.4	250	151655.3	500	152220	1000	153066.8	2500	154795.4
o-Terphenyl	9	207237.8	18	202348.9	45	199293.8	90	202627.8	180	206915.5	450	209787.6

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	CJ00089	Instrument:	FID4
Calibration Date:	10/29/2019	Column (1):	RTX-1

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RF		RF		RF		RF		RF		RF
Motor Oil Range Organics (C24-C38)	100	135784.6	250	138615.1	500	128616.3	1000	130458.6	2500	132749.3	5000	129568.6

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	CJ00089	Instrument:	FID4
Calibration Date:	10/29/2019	Column (1):	RTX-1

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Diesel Range Organics (C12-C24)	159336.7	7.4			RSD (20)	
Motor Oil Range Organics (C24-C38)	132632.1	2.9			RSD (20)	
o-Terphenyl	204701.9	1.9			RSD (20)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 10/30/2019 7:24:06AM

ANALYSIS SEQUENCE

SHJ0406

Instrument: FID4 Element Column ID: G004925
Calibration ID: CJ00089

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SHJ0406-IBL1	Retention Time Standard	QC		1	H006806		
SHJ0406-IBL2	Instrument Blank	QC		2	H007457		
SHJ0406-CAL1	DIESEL 50	QC		3	H010495		
SHJ0406-CAL2	DIESEL 100	QC		4	H010496		
SHJ0406-CAL3	DIESEL 250	QC		5	H010497		
SHJ0406-CAL4	DIESEL 500	QC		6	H010498		
SHJ0406-CAL5	DIESEL 1000	QC		7	H010499		
SHJ0406-CAL6	DIESEL 2500	QC		8	H009367		
SHJ0406-SCV1	DIESEL SCV	QC		9	H008294		
SHJ0406-CAL7	MOIL 100	QC		10	H008395		
SHJ0406-CAL8	MOIL 250	QC		11	H008396		
SHJ0406-CAL9	MOIL 500	QC		12	H008397		
SHJ0406-CALA	MOIL 1000	QC		13	H007659		
SHJ0406-CALB	MOIL 2500	QC		14	H008398		
SHJ0406-CALC	MOIL 5000	QC		15	H007458		
SHJ0406-SCV2	MOIL SCV	QC		16	H008399		
SHJ0406-CALD	AK103 100	QC		17	H010478		
SHJ0406-CALE	AK103 250	QC		18	H010479		
SHJ0406-CALF	AK103 500	QC		19	H010480		
SHJ0406-CALG	AK103 1000	QC		20	H010481		
SHJ0406-CALH	AK103 2500	QC		21	H010482		
SHJ0406-CALI	AK103 5000	QC		22	H008608		

seq_ARI_GC_Data.rpt

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 10/30/2019 7:24:06AM

ANALYSIS SEQUENCE

SHJ0406

Instrument: FID4 Element Column ID: G004925
Calibration ID: CJ00089

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SHJ0406-SCV3	AK103 SCV	QC		23	H008400		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	25-OCT-2019 11:37	419J2501.D	1	RINSE	
2	25-OCT-2019 11:55	419J2502.D	1	RINSE	
3	25-OCT-2019 12:30	419J2503.D	1	RINSE	
4	25-OCT-2019 12:51	419J2504.D	1	RINSE	
5	25-OCT-2019 13:11	419J2505.D	1	SHJ0406-IBL1	
6	25-OCT-2019 13:31	419J2506.D	1	SHJ0406-IBL2	
7	25-OCT-2019 13:52	419J2507.D	1	SHJ0406-CAL1	
8	25-OCT-2019 14:12	419J2508.D	1	SHJ0406-CAL2	
9	25-OCT-2019 14:32	419J2509.D	1	SHJ0406-CAL3	
10	25-OCT-2019 14:53	419J2510.D	1	SHJ0406-CAL4	
11	25-OCT-2019 15:13	419J2511.D	1	SHJ0406-CAL5	
12	25-OCT-2019 15:32	419J2512.D	1	SHJ0406-CAL6	
13	25-OCT-2019 15:52	419J2513.D	1	SHJ0406-SCV1	
14	25-OCT-2019 16:12	419J2514.D	1	SHJ0406-CAL7	
15	25-OCT-2019 16:33	419J2515.D	1	SHJ0406-CAL8	
16	25-OCT-2019 16:53	419J2516.D	1	SHJ0406-CAL9	
17	25-OCT-2019 17:13	419J2517.D	1	SHJ0406-CALA	
18	25-OCT-2019 17:34	419J2518.D	1	SHJ0406-CALB	
19	25-OCT-2019 17:54	419J2519.D	1	SHJ0406-CALC	
20	25-OCT-2019 18:14	419J2520.D	1	SHJ0406-SCV2	
21	25-OCT-2019 18:35	419J2521.D	1	SHJ0406-CALD	
22	25-OCT-2019 18:55	419J2522.D	1	SHJ0406-CALE	
23	25-OCT-2019 19:15	419J2523.D	1	SHJ0406-CALF	
24	25-OCT-2019 19:34	419J2524.D	1	SHJ0406-CALG	
25	25-OCT-2019 19:54	419J2525.D	1	SHJ0406-CALH	
26	25-OCT-2019 20:15	419J2526.D	1	SHJ0406-CALI	
27	25-OCT-2019 20:35	419J2527.D	1	SHJ0406-SCV3	
28	25-OCT-2019 20:55	419J2528.D	1	SHJ0406-ICV1	
29	25-OCT-2019 21:16	419J2529.D	1	SHJ0406-ICV2	
30	25-OCT-2019 21:36	419J2530.D	1	BHJ0711-BLK1	
31	25-OCT-2019 21:56	419J2531.D	1	BHJ0711-BS1	
32	25-OCT-2019 22:16	419J2532.D	1	19J0373-01	
33	25-OCT-2019 22:35	419J2533.D	1	19J0373-02	
34	25-OCT-2019 22:55	419J2534.D	1	19J0373-03	
35	25-OCT-2019 23:16	419J2535.D	1	19J0373-04	
36	25-OCT-2019 23:36	419J2536.D	1	19J0373-05	
37	25-OCT-2019 23:57	419J2537.D	1	19J0373-06	
38	26-OCT-2019 00:17	419J2538.D	1	19J0373-07	
39	26-OCT-2019 00:37	419J2539.D	1	19J0373-08	
40	26-OCT-2019 00:58	419J2540.D	1	SHJ0406-CCV1	
41	26-OCT-2019 01:18	419J2541.D	1	SHJ0406-CCV2	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

ARI Job No.: RINS Method: FID4TPH.m Instrument: fid4a.i Date: 25-OCT-2019

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1137	419J2501.D	RINSE		1	NO MANUAL INTEGRATION
1155	419J2502.D	RINSE		1	NO MANUAL INTEGRATION
1230	419J2503.D	RINSE		1	NO MANUAL INTEGRATION
1251	419J2504.D	RINSE		1	NO MANUAL INTEGRATION
1311	419J2505.D	SHJ0406-IBL1		1	NO MANUAL INTEGRATION
1331	419J2506.D	SHJ0406-IBL2		1	NO MANUAL INTEGRATION
1352	419J2507.D	SHJ0406-CAL1		1	NO MANUAL INTEGRATION
1412	419J2508.D	SHJ0406-CAL2		1	o-terph,
1432	419J2509.D	SHJ0406-CAL3		1	NO MANUAL INTEGRATION
1453	419J2510.D	SHJ0406-CAL4		1	o-terph,
1513	419J2511.D	SHJ0406-CAL5		1	o-terph,
1532	419J2512.D	SHJ0406-CAL6		1	o-terph,
1552	419J2513.D	SHJ0406-SCV1		1	NO MANUAL INTEGRATION
1612	419J2514.D	SHJ0406-CAL7		1	Triacon Surr,
1633	419J2515.D	SHJ0406-CAL8		1	Triacon Surr,
1653	419J2516.D	SHJ0406-CAL9		1	Triacon Surr,
1713	419J2517.D	SHJ0406-CALA		1	Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1734	419J2518.D	SHJ0406-CALB		1	Triacon Surr,
1754	419J2519.D	SHJ0406-CALC		1	Triacon Surr,
1814	419J2520.D	SHJ0406-SCV2		1	Triacon Surr,
1835	419J2521.D	SHJ0406-CALD		1	Triacon Surr,
1855	419J2522.D	SHJ0406-CALE		1	Triacon Surr,
1915	419J2523.D	SHJ0406-CALF		1	Triacon Surr,
1934	419J2524.D	SHJ0406-CALG		1	Triacon Surr,
1954	419J2525.D	SHJ0406-CALH		1	Triacon Surr,
2015	419J2526.D	SHJ0406-CALI		1	Triacon Surr,
2035	419J2527.D	SHJ0406-SCV3		1	Triacon Surr,
2055	419J2528.D	SHJ0406-ICV1		1	o-terph,
2116	419J2529.D	SHJ0406-ICV2		1	Triacon Surr,
2136	419J2530.D	BHJ0711-BLK1		1	NO MANUAL INTEGRATION
2156	419J2531.D	BHJ0711-BS1		1	o-terph,
2216	419J2532.D	19J0373-01		1	Triacon Surr,
2235	419J2533.D	19J0373-02		1	NO MANUAL INTEGRATION
2255	419J2534.D	19J0373-03		1	Triacon Surr,
2316	419J2535.D	19J0373-04		1	Triacon Surr,

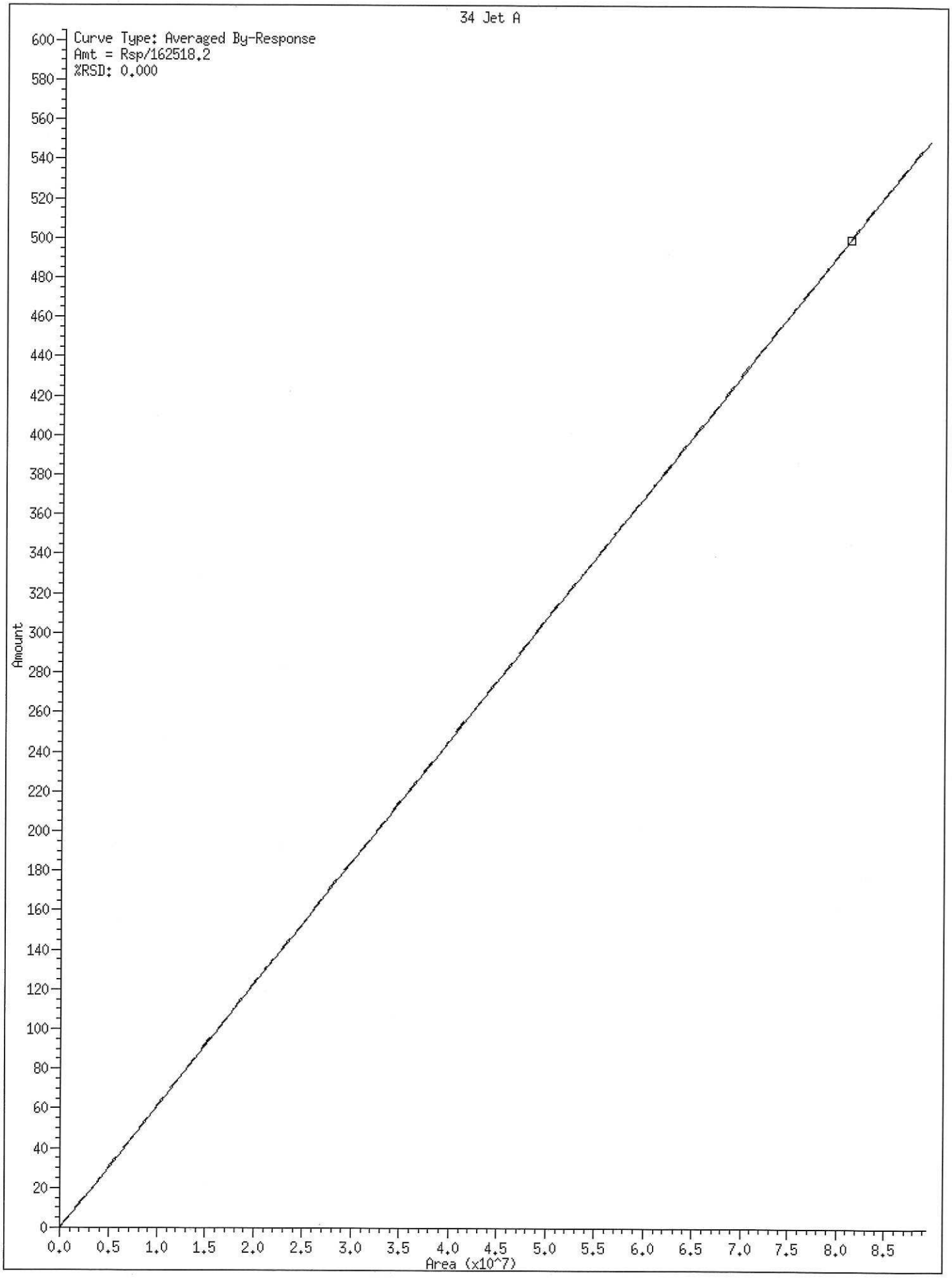
MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2336	419J2536.D	19J0373-05		1	o-terph, Triacon Surr,
2357	419J2537.D	19J0373-06		1	Triacon Surr,
0017	419J2538.D	19J0373-07		1	Triacon Surr,
0037	419J2539.D	19J0373-08		1	Triacon Surr,
0058	419J2540.D	SHJ0406-CCV1		1	o-terph,
0118	419J2541.D	SHJ0406-CCV2		1	Triacon Surr,

Security Status Report

Date: 30-Oct-2019 07:25

419J2507.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2508.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2509.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2510.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2511.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2512.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2513.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2514.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2515.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2516.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2517.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2518.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2519.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2520.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2521.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2522.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2523.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2524.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2525.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2526.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2527.D	Data Locked	jrains, 30-Oct-2019 07:20


34 Jet A
Curve Type: Averaged By-Response
Amt = Rsp/162518.2
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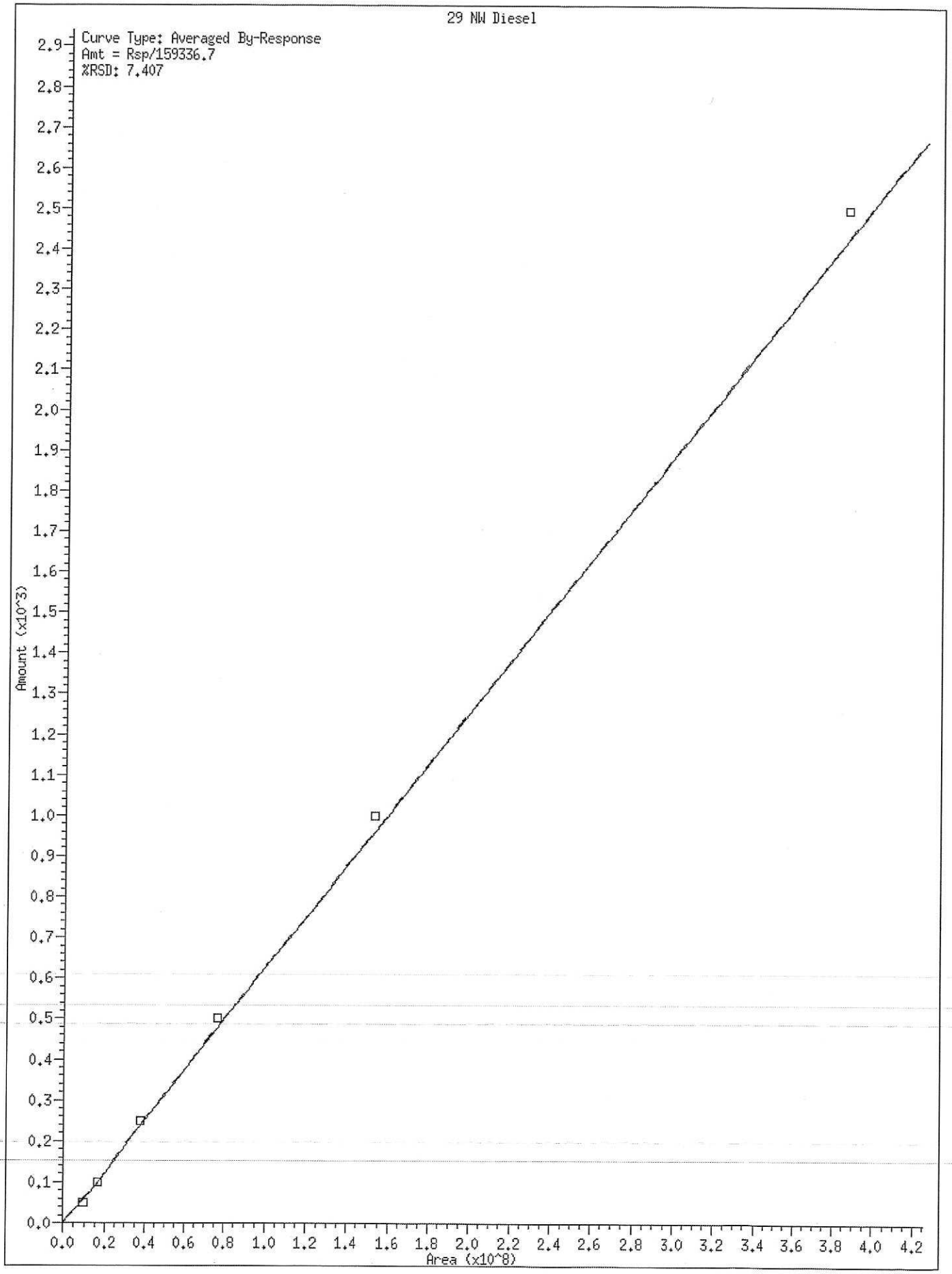
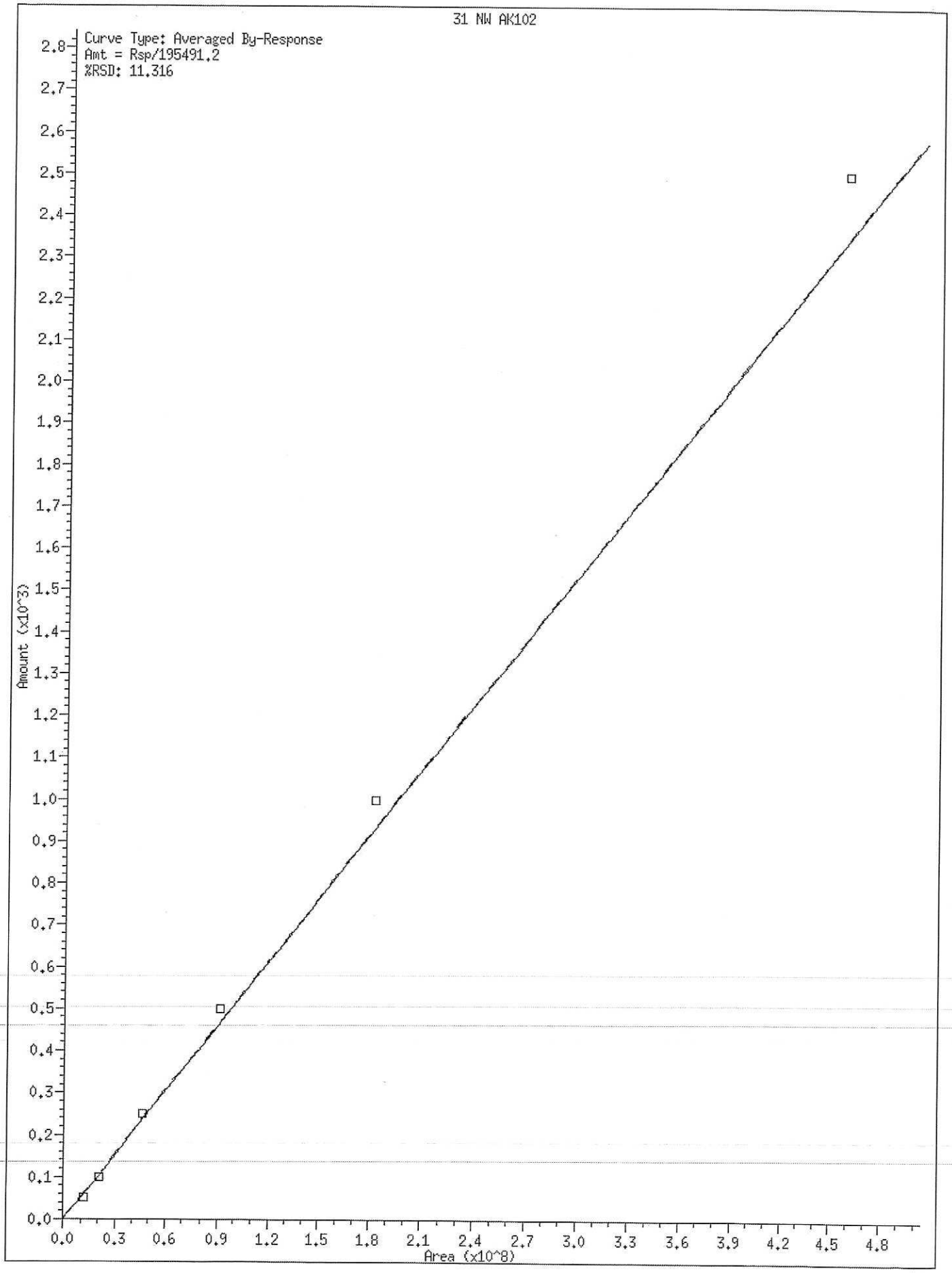
Area (x10^7)


29 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/159336.7
%RSD: 7.407
Amount (x10^3)
Area (x10^8)


31 NW AK102
Curve Type: Averaged By-Response
Amt = Rsp/195491.2
%RSD: 11.316
Amount (x10^3)
Area (x10^8)
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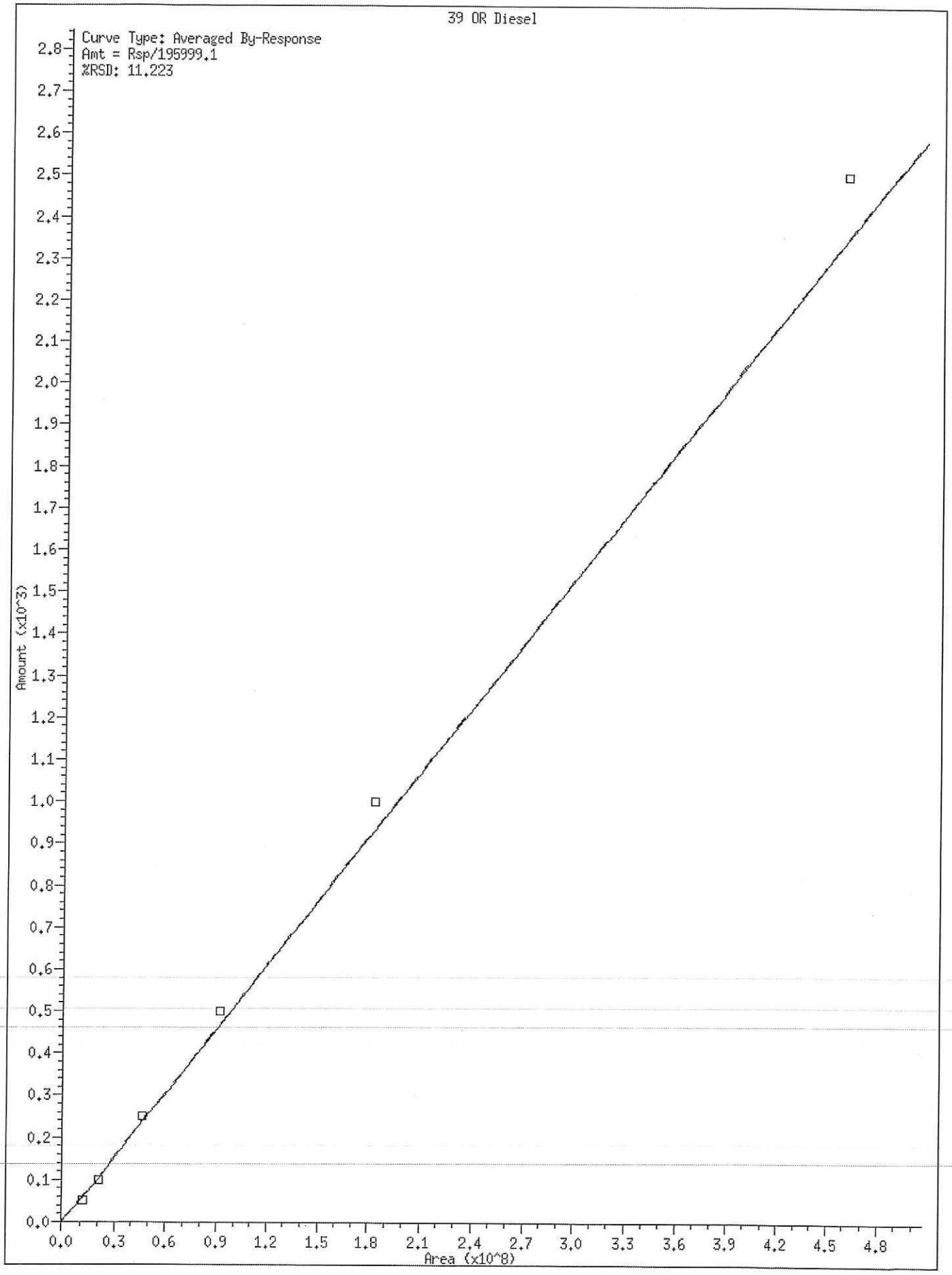
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8


39 OR Diesel
Curve Type: Averaged By-Response
Amt = Rsp/195999.1
%RSD: 11.223
Amount (x10^3)
Area (x10^8)
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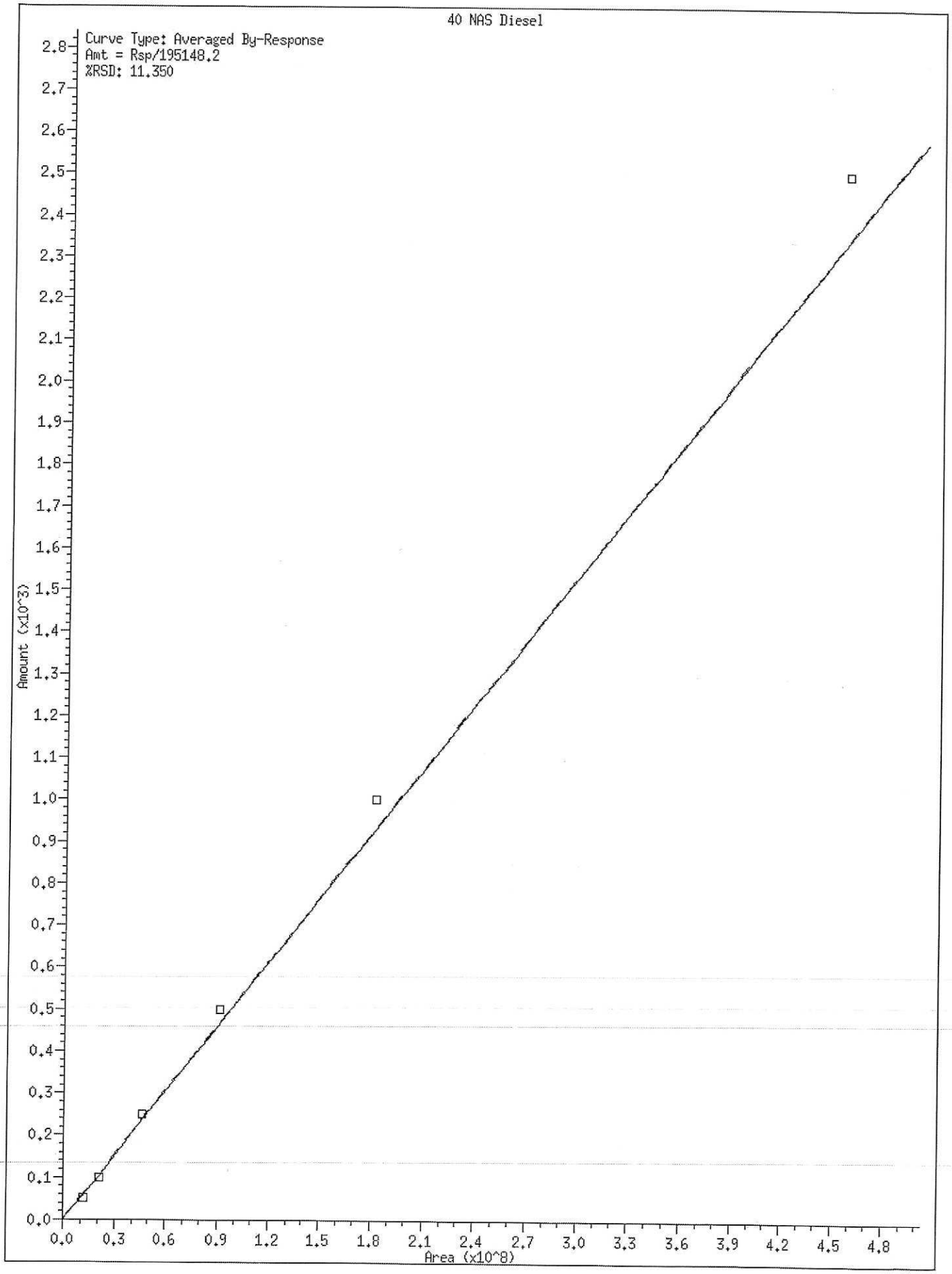
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8


40 NAS Diesel
Curve Type: Averaged By-Response
Amt = Rsp/195148.2
%RSD: 11.350
Amount (x10^3)
Area (x10^8)
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0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.3
0.6
0.9
1.2
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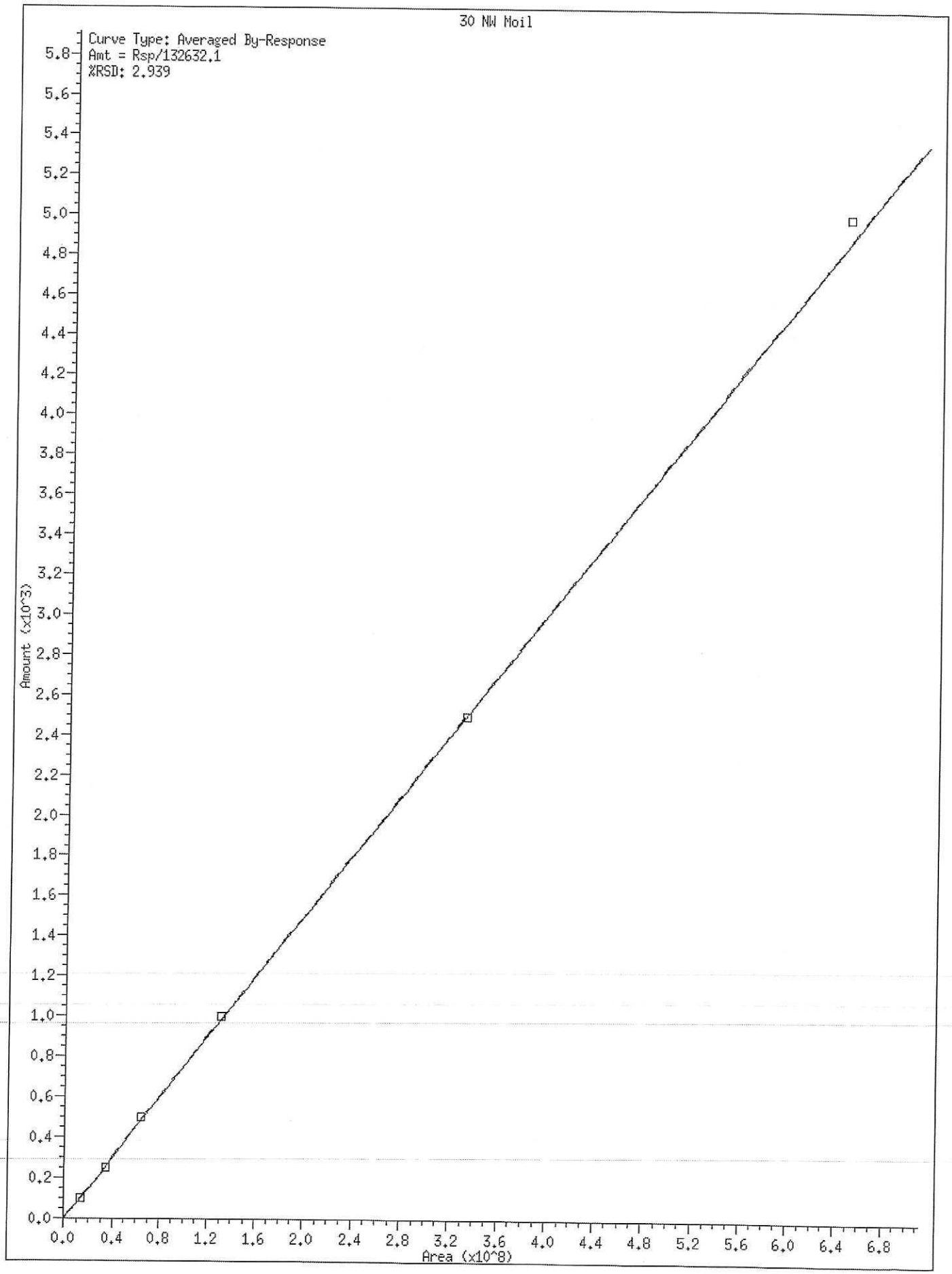
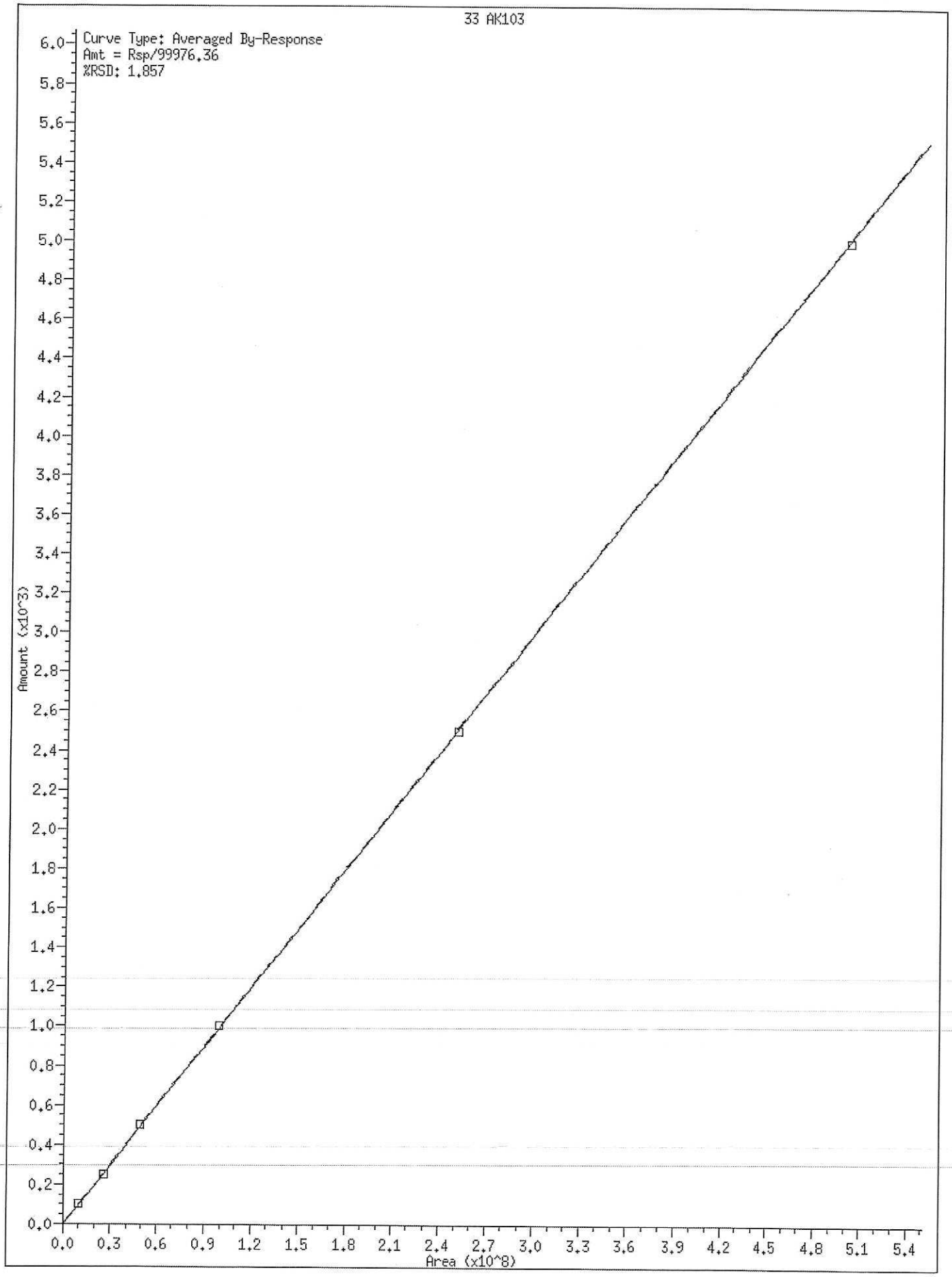

30 NW Moil
Curve Type: Averaged By-Response
Amt = Rsp/132632.1
%RSD: 2.939
Amount (x10^3)
Area (x10^8)


33 AK103
Curve Type: Averaged By-Response
Amt = Rsp/99976.36
%RSD: 1.857
Amount (x10^3)
Area (x10^8)
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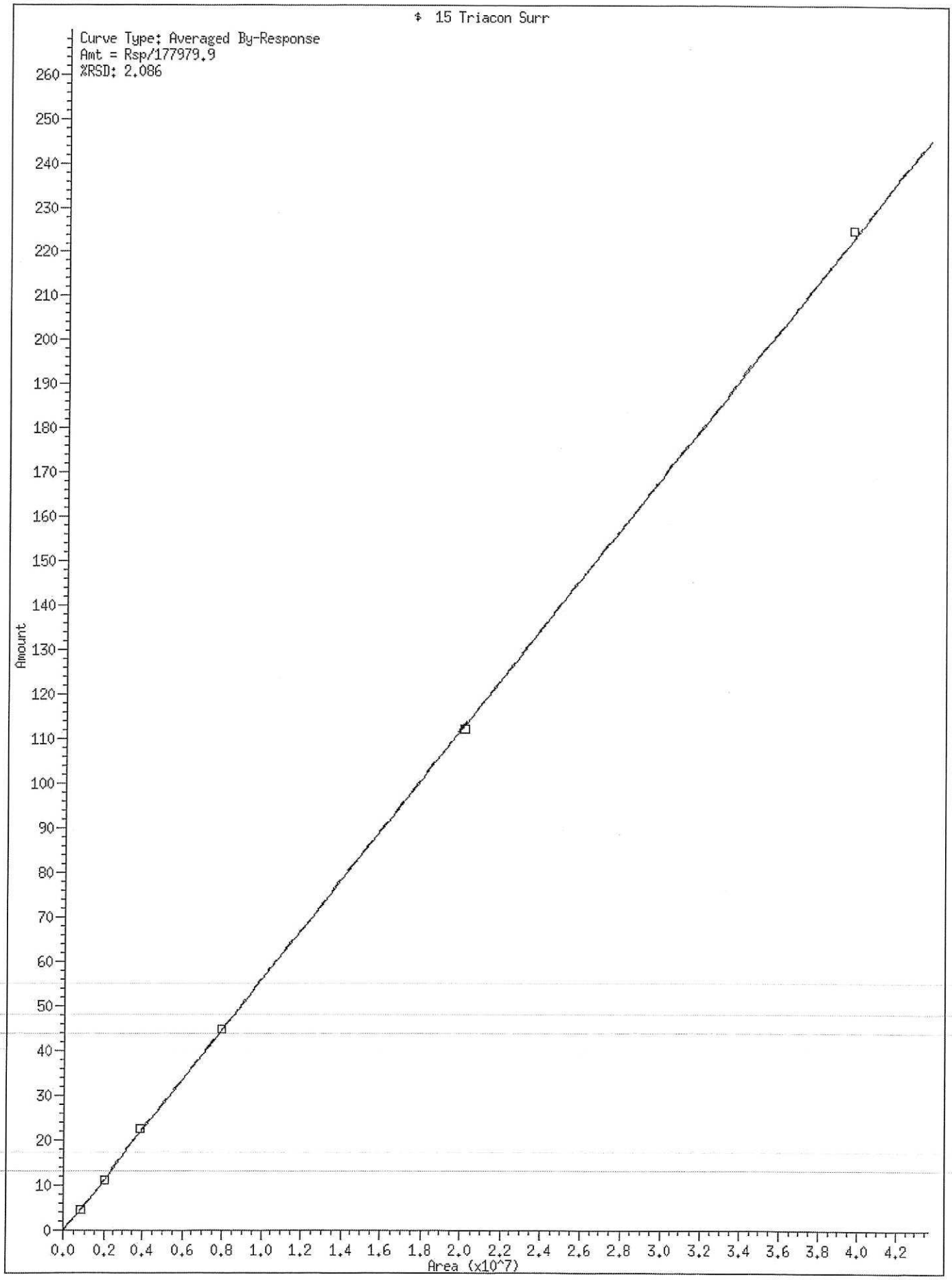
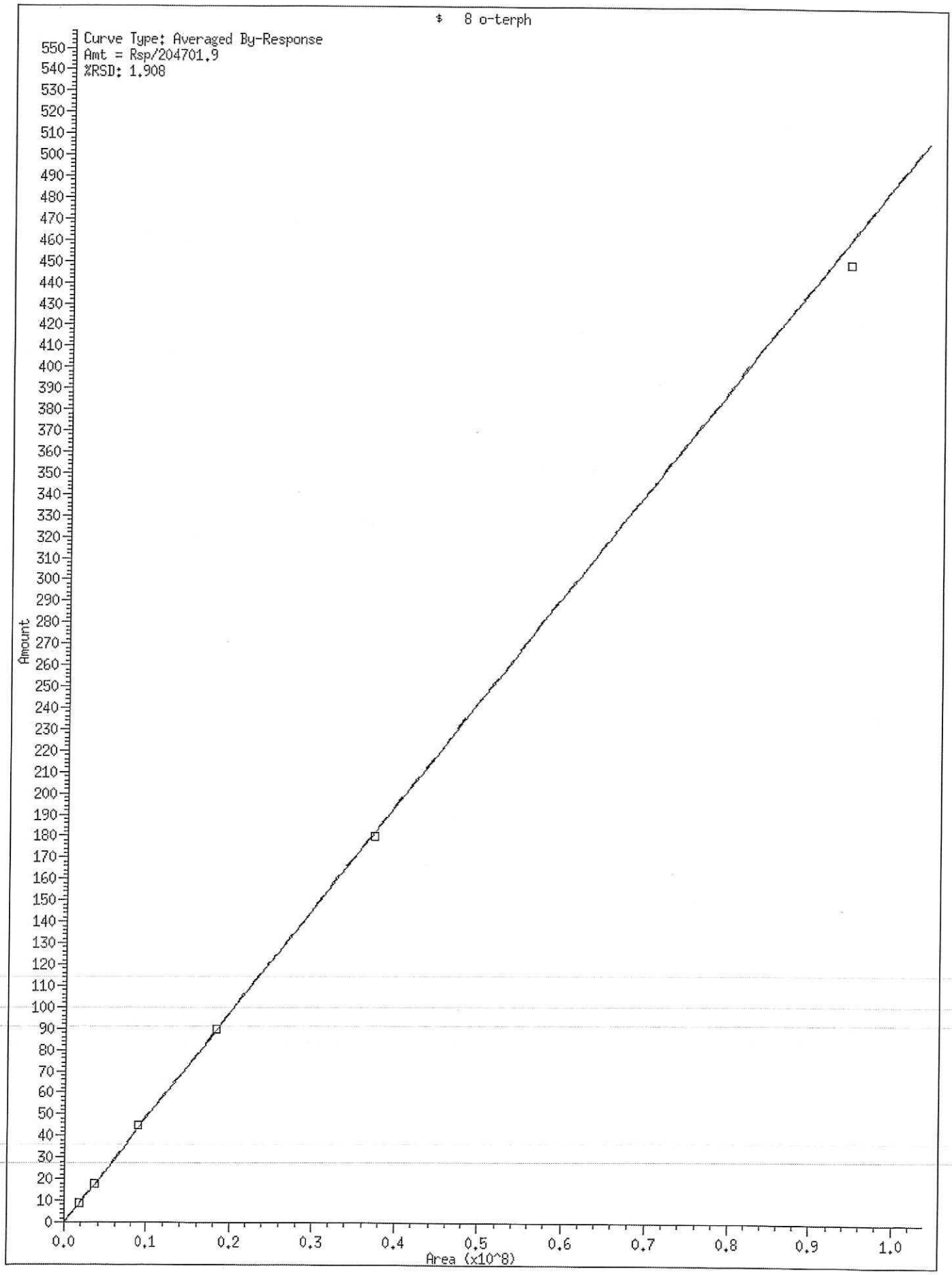
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8
5.1
5.4


$ 15 Triacon Surr
Curve Type: Averaged By-Response
Amt = Rsp/177979.9
%RSD: 2.086
Amount
Area (x10^7)

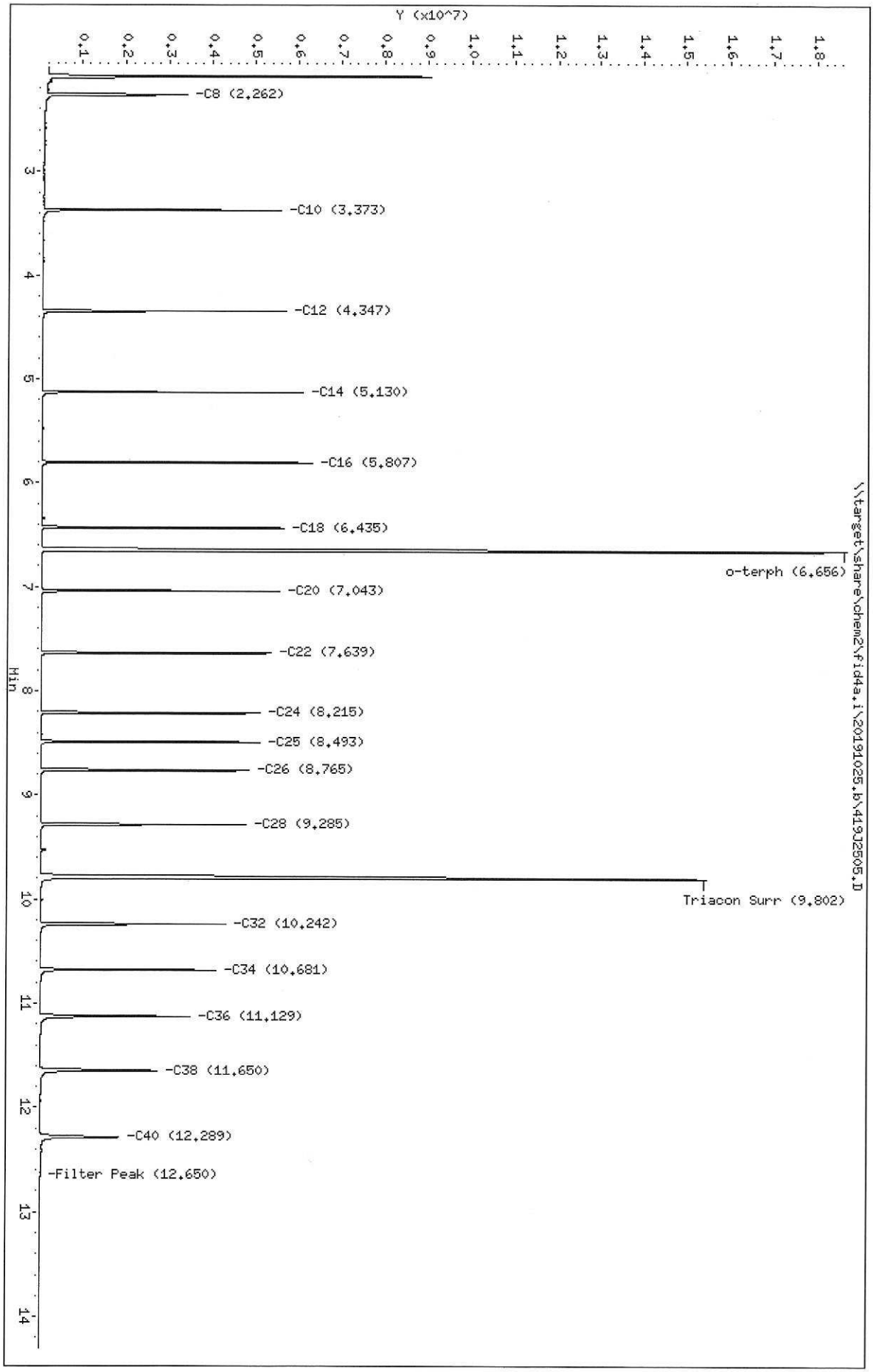

$ 8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/204701.9
%RSD: 1.908
Amount
Area (x10^8)

Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2505.D
Date : 25-OCT-2019 13:11
Client ID:
Sample Info: SHJ0406-IBL1

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Page 1

Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2505.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-IBL1
Client ID:
Injection: 25-OCT-2019 13:11
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.262	0.000	3356579	3932199	WATPHD	(C12-C24)	22628592	142.0
C10	3.373	0.000	5539104	3757340	WATPHM	(C24-C38)	26475519	199.6
C12	4.347	0.000	5663708	3683615	AK102	(C10-C25)	30812271	157.6
C14	5.130	0.000	6079967	3652238	AK103	(C25-C36)	22405219	224.1
C16	5.807	0.000	6277766	3707382	OR.DIES	(C10-C28)	41957167	214.1
C18	6.435	0.000	5635635	3612752				
C20	7.043	0.000	5539938	3702605				
C22	7.639	0.000	5339005	3727404				
C24	8.215	0.000	5097157	3674684				
C25	8.493	0.000	5111690	3698652				
C26	8.765	0.000	4851792	3662117				
C28	9.285	0.000	4782484	3718632				
C32	10.242	0.000	4326930	3643795				
C34	10.681	0.000	4092240	3584940				
Filter Peak	12.650	0.000	16931	63954	CREOSOT	(C12-C22)	18936204	4854.3
C36	11.129	0.000	3493562	3625484				
C38	11.650	0.000	2741525	3745220				
C40	12.289	0.000	1889635	2977724				
o-terph	6.656	0.000	18648694	20337624				
Triacon Surr	9.802	0.000	15433087	21196653	NAS DIES	(C10-C24)	30787335	157.8

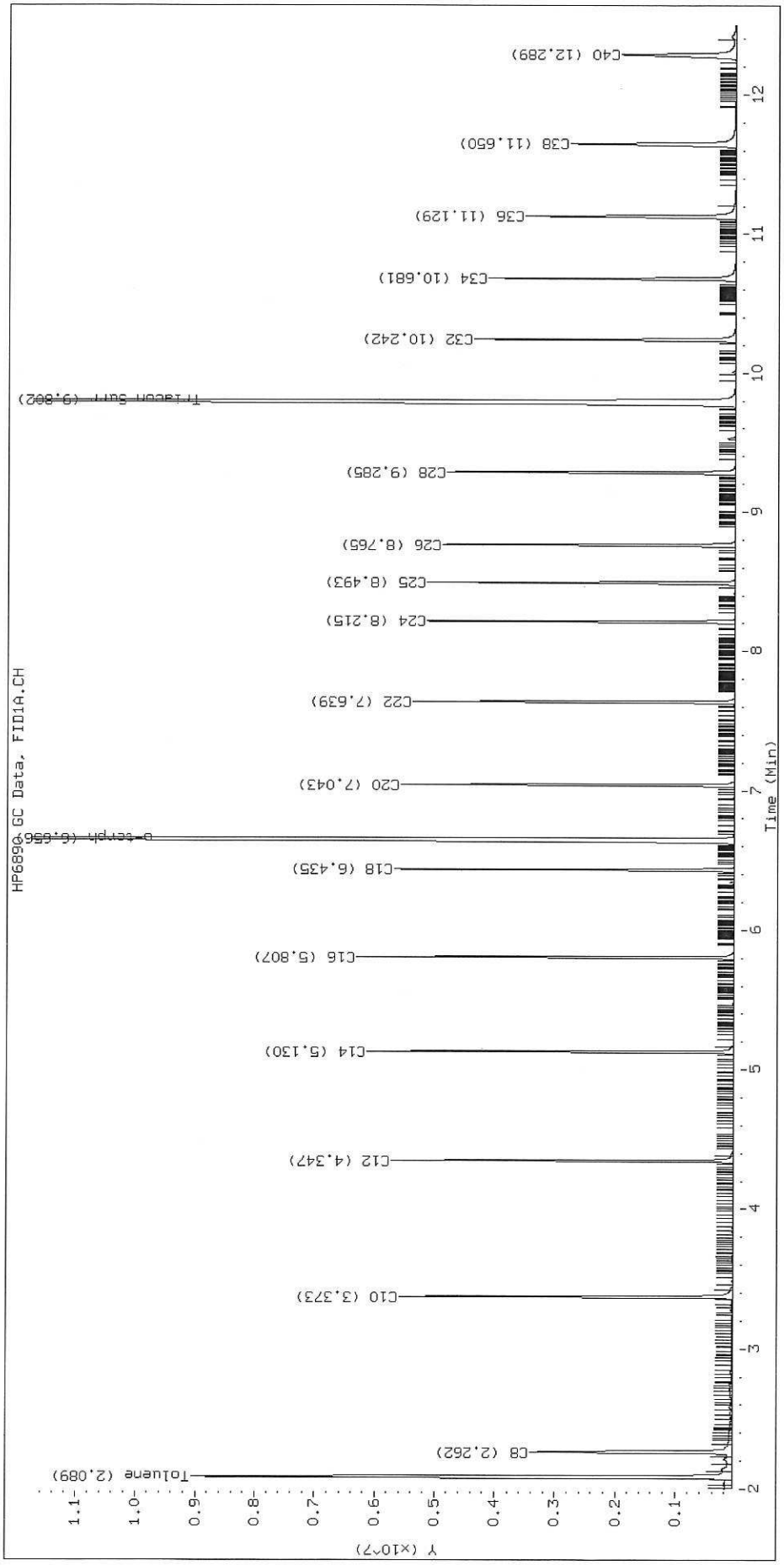
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	20337624	99.4
Triacontane	21196653	119.1

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2505.D SHJ0406-IBL1

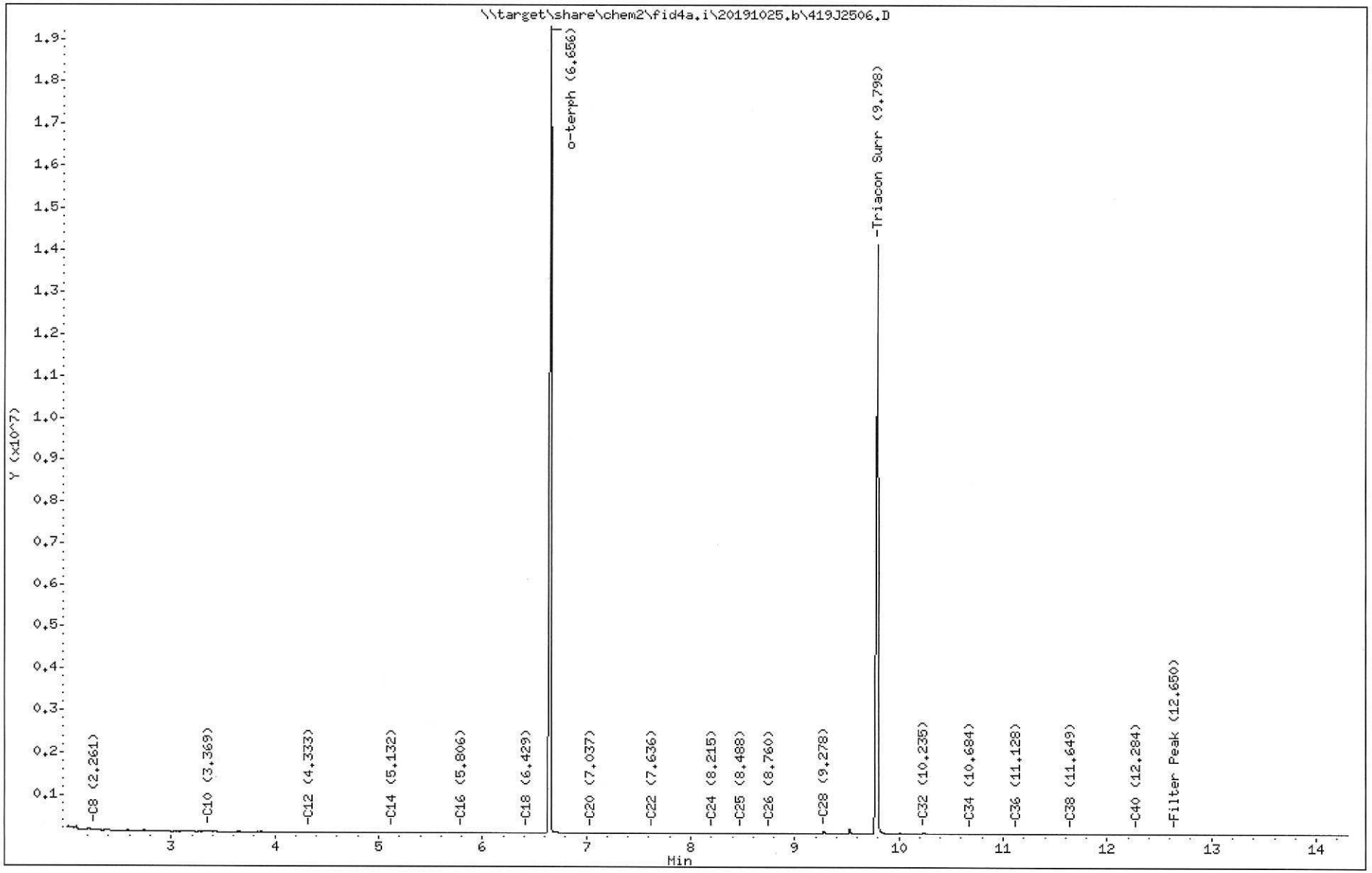


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2506.D
Date : 25-OCT-2019 13:31
Client ID:
Sample Info: SHJ0406-IBL2

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2506.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-IBL2
Client ID:
Injection: 25-OCT-2019 13:31
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.261	-0.001	72509	76139	WATPHD	(C12-C24)	658319	4.1
C10	3.369	-0.004	30567	51207	WATPHM	(C24-C38)	758430	5.7
C12	4.333	-0.014	10639	19318	AK102	(C10-C25)	1520072	7.8
C14	5.132	0.003	5359	3169	AK103	(C25-C36)	566941	5.7
C16	5.806	-0.002	4115	5242	OR.DIES	(C10-C28)	1655230	8.4
C18	6.429	-0.006	2667	2060				
C20	7.037	-0.006	2150	2136				
C22	7.636	-0.002	7003	7700				
C24	8.215	0.000	1821	532				
C25	8.488	-0.005	1855	1750				
C26	8.760	-0.005	1926	1661				
C28	9.278	-0.007	68571	64137				
C32	10.235	-0.007	43108	83259				
C34	10.684	0.003	2246	1101				
Filter Peak	12.650	-0.001	8815	2632	CREOSOT	(C12-C22)	608888	156.1
C36	11.128	-0.001	4708	2306				
C38	11.649	-0.001	6915	2738				
C40	12.284	-0.005	8323	7406				
o-terph	6.656	-0.001	19264239	20580998				
Triacon Surr	9.798	-0.004	14079902	17993211	NAS DIES	(C10-C24)	1505820	7.7

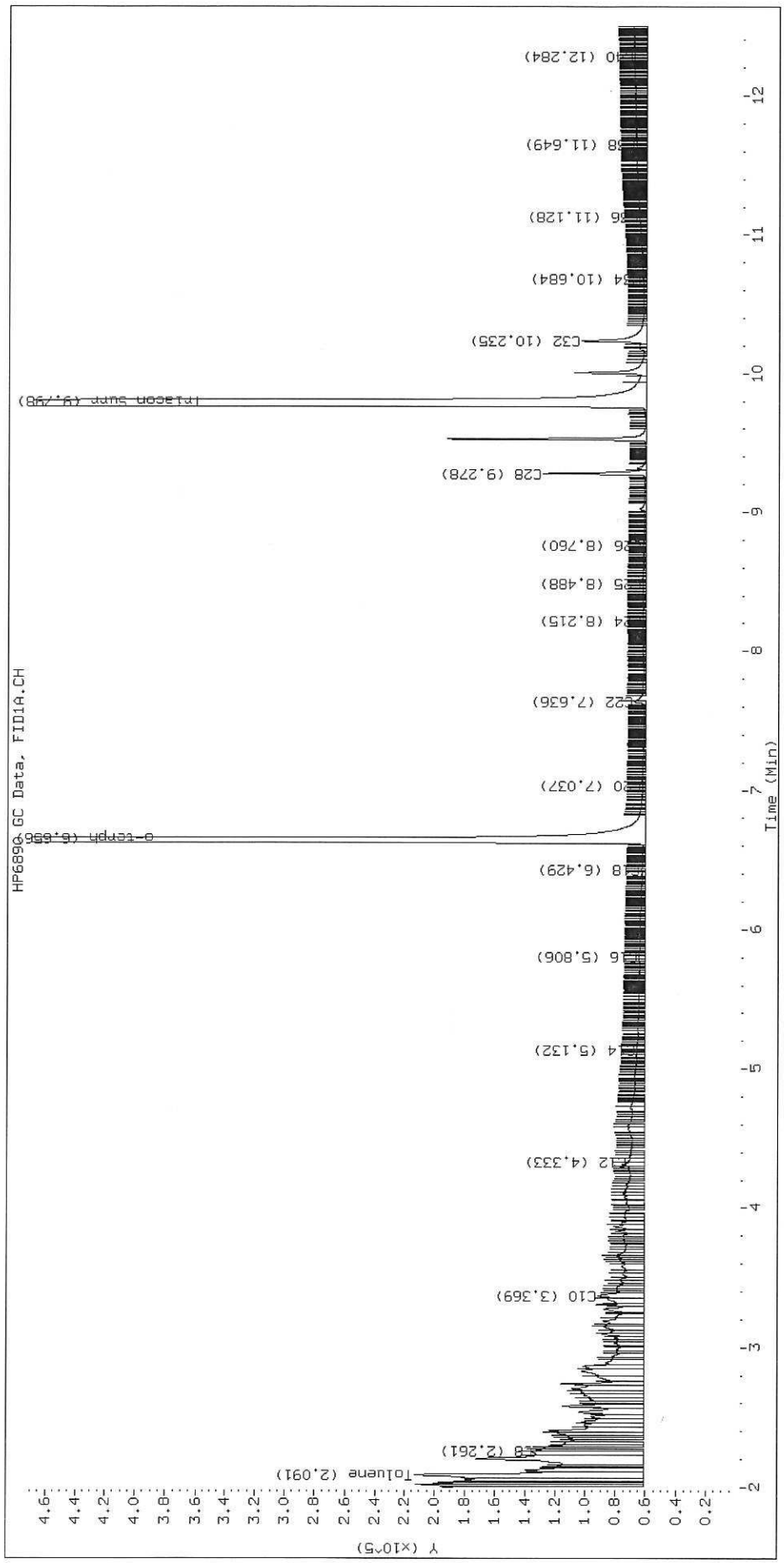
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	20580998	100.5
Triacontane	17993211	101.1

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2506.D SHJ0406-IBL2



Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2507.D

Date : 25-OCT-2019 13:52

Client ID:

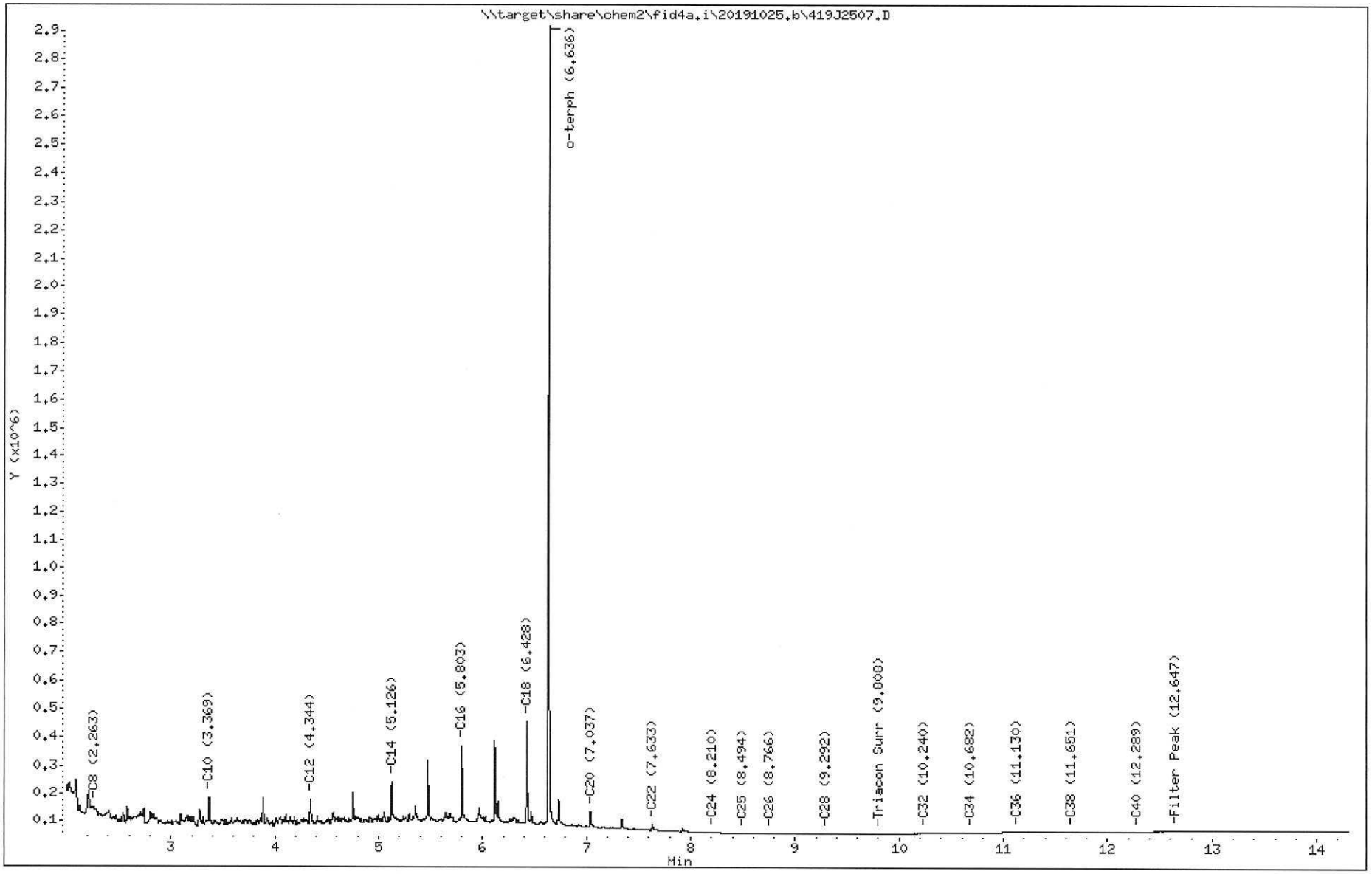
Sample Info: SHJ0406-CAL1

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2507.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL1
Client ID:
Injection: 25-OCT-2019 13:52
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.263	0.001	94181	68499	WATPHD	(C12-C24)	9105717	57.1
C10	3.369	-0.004	130777	159818	WATPHM	(C24-C38)	651398	4.9
C12	4.344	-0.003	124752	202412	AK102	(C10-C25)	11867629	60.7
C14	5.126	-0.003	188715	181186	AK103	(C25-C36)	363608	3.6
C16	5.803	-0.004	314329	331178	OR.DIES	(C10-C28)	11884580	60.6
C18	6.428	-0.007	400639	334718				
C20	7.037	-0.006	83282	126537				
C22	7.633	-0.006	34959	59242				
C24	8.210	-0.005	6227	12090				
C25	8.494	0.001	1850	2300				
C26	8.766	0.001	428	167				
C28	9.292	0.007	424	156				
C32	10.240	-0.002	2740	1341				
C34	10.682	0.001	5209	2827				
Filter Peak	12.647	-0.003	12268	7963	CREOSOT	(C12-C22)	8913896	2285.1
C36	11.130	0.001	8291	3309				
C38	11.651	0.001	10488	3653				
C40	12.289	0.000	11687	5838				
o-terph	6.636	-0.021	2823547	1865140				
Triacon Surr	9.808	0.006	1874	1287	NAS DIES	(C10-C24)	11851657	60.7

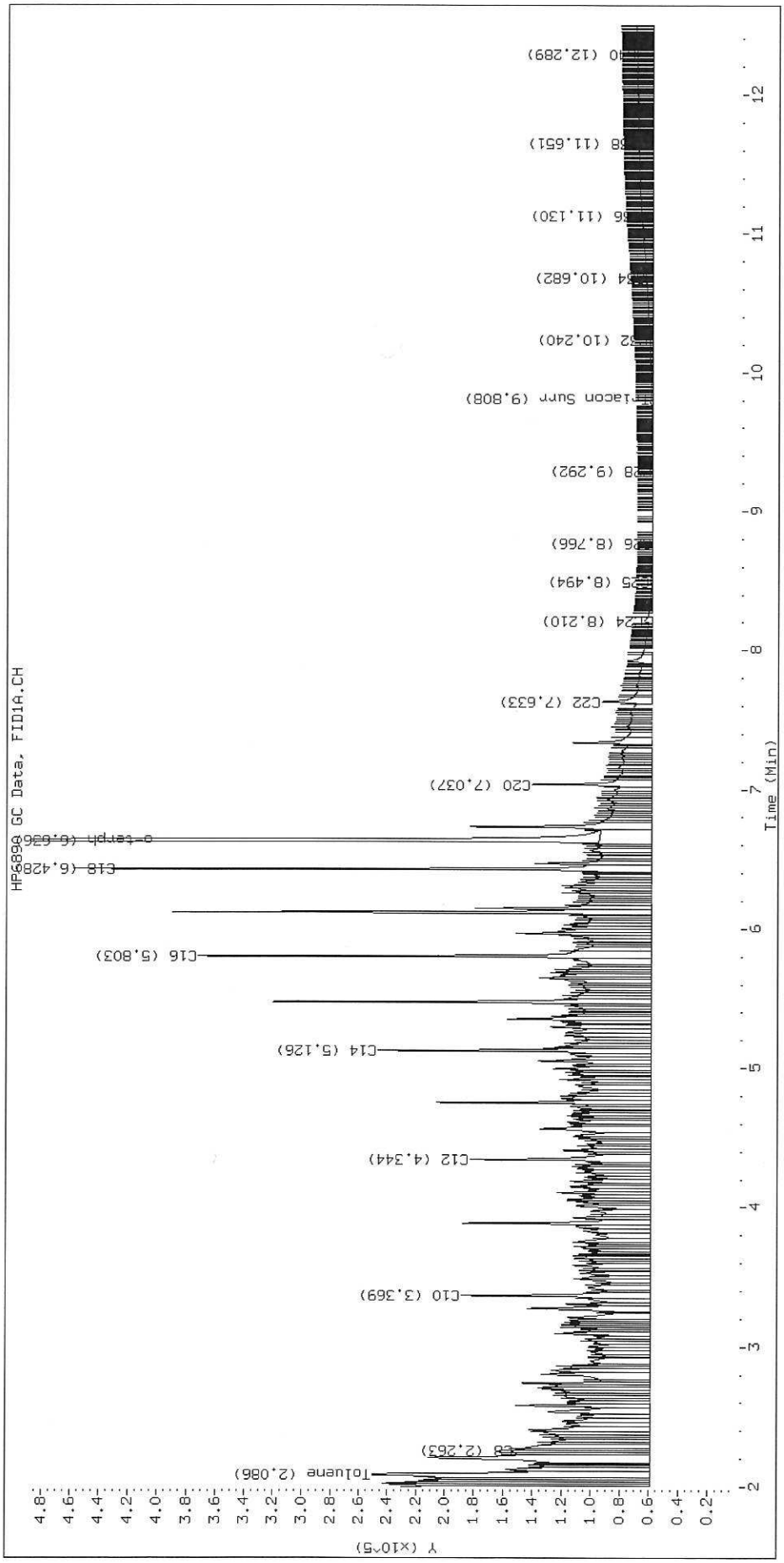
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	1865140	9.1
Triacontane	1287	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2507.D SHJ0406-CAL1



ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid4a.i\20191025.b\FID4TPH.m
Batch File: \\target\share\chem2\fid4a.i\20191025.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	419J2507	419J2508	419J2509	419J2510	419J2511	419J2512
INJ.DATE:	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019
INJ.TIME:	13:52	14:12	14:32	14:53	15:13	15:32

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	2.086	2.091	2.092	2.084	2.085	2.093	2.089	1.989-2.189	2.089	0.004
38 NewCpnd_31	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
41 Mineral Spirits	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
2 C8	2.263	2.252	2.253	2.254	2.254	2.254	2.262	2.162-2.362	2.255	0.004
3 C10	3.369	3.367	3.368	3.368	3.368	3.371	3.373	3.323-3.423	3.368	0.001
4 C12	4.344	4.344	4.344	4.344	4.346	4.351	4.347	4.297-4.397	4.345	0.003
5 C14	5.126	5.126	5.126	5.127	5.129	5.137	5.130	5.080-5.180	5.128	0.004
6 C16	5.803	5.802	5.803	5.805	5.809	5.818	5.807	5.757-5.857	5.807	0.006
7 C18	6.428	6.429	6.431	6.434	6.439	6.452	6.435	6.385-6.485	6.435	0.009
$ 8 o-terph	6.636	6.640	6.646	6.655	6.669	6.696	6.656	6.606-6.706	6.657	0.023
9 C20	7.037	7.036	7.036	7.037	7.040	7.047	7.043	6.993-7.093	7.039	0.004
10 C22	7.633	7.631	7.631	7.631	7.633	7.637	7.639	7.589-7.689	7.633	0.002
11 C24	8.210	8.209	8.208	8.207	8.207	8.207	8.215	8.165-8.265	8.208	0.001
12 C25	8.494	8.489	8.488	8.485	8.486	8.485	8.493	8.443-8.543	8.488	0.003
13 C26	8.766	8.762	8.761	8.759	8.758	8.756	8.765	8.715-8.815	8.760	0.004
14 C28	9.292	9.288	9.287	9.281	9.279	9.279	9.285	9.235-9.335	9.284	0.005

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid4a.i\20191025.b\FID4TPH.m
Batch File: \\target\share\chem2\fid4a.i\20191025.b
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 15 Triacon Surr	9.808	9.805	9.803	9.798	9.806	9.800	9.802	9.752-9.852	9.803	0.004
16 C32	10.240	10.242	10.248	10.245	10.243	10.242	10.242	10.192-10.292	10.243	0.003
17 C34	10.682	10.678	10.683	10.684	10.687	10.677	10.681	10.631-10.731	10.682	0.004
18 Filter Peak	12.647	12.646	12.650	12.646	12.649	12.650	12.650	12.550-12.750	12.648	0.002
19 C36	11.130	11.127	11.127	11.131	11.127	11.129	11.129	11.079-11.179	11.128	0.002
20 C38	11.651	11.646	11.648	11.653	11.653	11.651	11.650	11.600-11.700	11.650	0.003
21 C40	12.289	12.291	12.292	12.287	12.283	12.288	12.289	12.239-12.339	12.288	0.003
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 ACreosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++
39 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
40 NAS Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid4a.i\20191025.b\FID4TPH.m
Batch File: \\target\share\chem2\fid4a.i\20191025.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	419J2514	419J2515	419J2516	419J2517	419J2518	419J2519
INJ.DATE:	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019
INJ.TIME:	16:12	16:33	16:53	17:13	17:34	17:54

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	2.092	2.092	2.092	2.093	2.092	2.092	2.089	1.989-2.189	2.092	0.000
38 NewCpnd_31	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
41 Mineral Spirits	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
2 C8	2.263	2.262	2.263	2.263	2.250	2.251	2.262	2.162-2.362	2.259	0.007
3 C10	3.376	3.377	3.376	3.376	3.371	3.369	3.373	3.323-3.423	3.374	0.003
4 C12	4.368	4.332	4.334	4.333	4.343	4.344	4.347	4.297-4.397	4.342	0.014
5 C14	5.134	5.134	5.125	5.127	5.126	5.126	5.130	5.080-5.180	5.129	0.004
6 C16	5.805	5.808	5.805	5.803	5.802	5.802	5.807	5.757-5.857	5.804	0.002
7 C18	6.435	6.432	6.439	6.428	6.427	6.427	6.435	6.385-6.485	6.431	0.005
$ 8 o-terph	6.651	6.657	6.659	6.633	6.655	6.656	6.656	6.606-6.706	6.652	0.009
9 C20	7.038	7.038	7.036	7.048	7.051	7.035	7.043	6.993-7.093	7.041	0.006
10 C22	7.642	7.644	7.632	7.632	7.632	7.633	7.639	7.589-7.689	7.636	0.005
11 C24	8.214	8.212	8.215	8.217	8.215	8.219	8.215	8.165-8.265	8.215	0.002
12 C25	8.500	8.497	8.500	8.495	8.491	8.490	8.493	8.443-8.543	8.495	0.004
13 C26	8.760	8.767	8.760	8.769	8.765	8.770	8.765	8.715-8.815	8.765	0.005
14 C28	9.288	9.294	9.277	9.280	9.285	9.281	9.285	9.235-9.335	9.284	0.006

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid4a.i\20191025.b\FID4TPH.m
Batch File: \\target\share\chem2\fid4a.i\20191025.b
Inst ID: fid4a.i

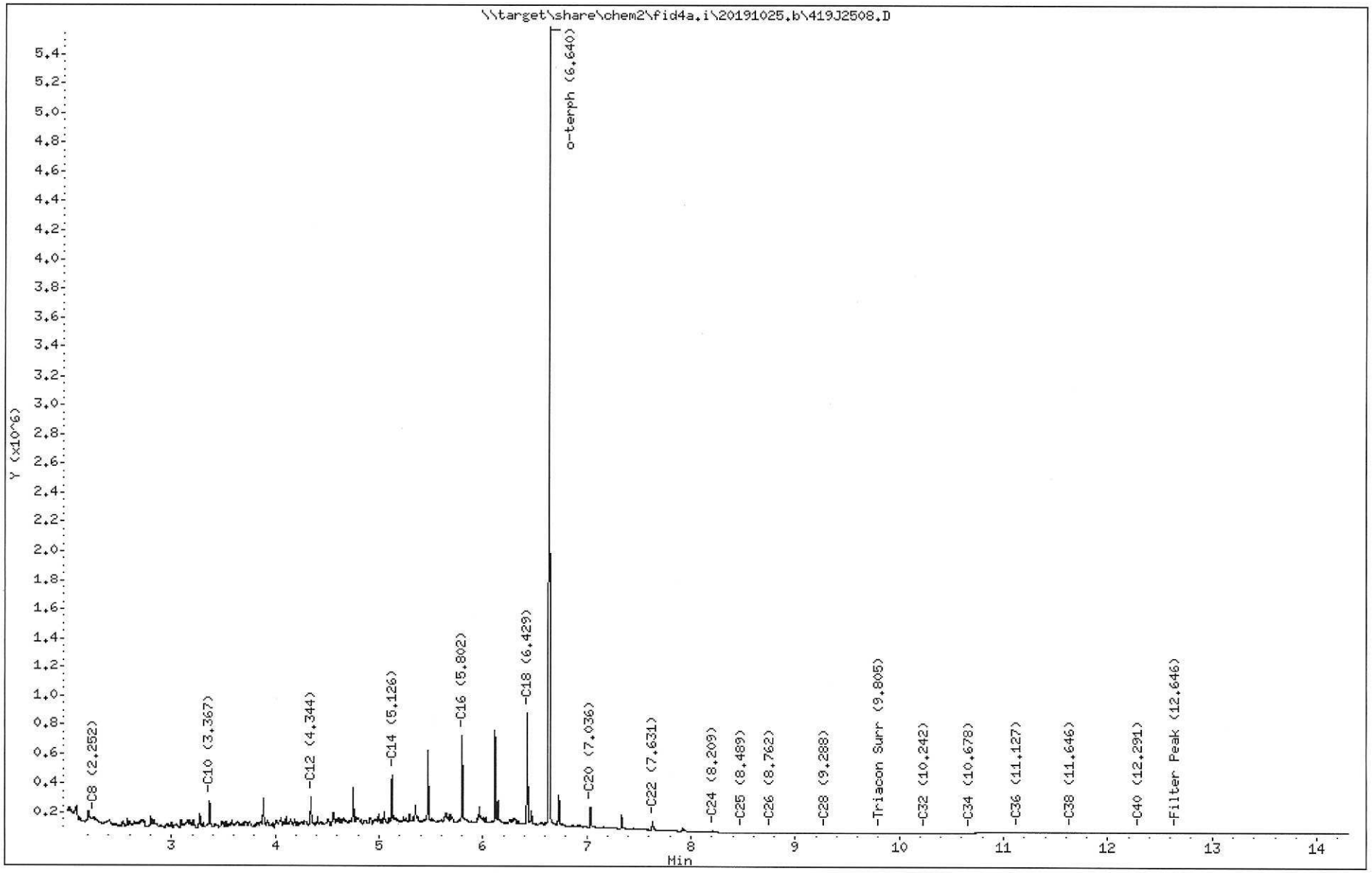
Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 15 Triacon Surr	9.771	9.775	9.781	9.790	9.809	9.836	9.802	9.752-9.852	9.794	0.025
16 C32	10.243	10.233	10.235	10.238	10.249	10.237	10.242	10.192-10.292	10.239	0.006
17 C34	10.679	10.680	10.682	10.681	10.679	10.683	10.681	10.631-10.731	10.681	0.002
18 Filter Peak	12.652	12.648	12.655	12.648	12.650	12.666	12.650	12.550-12.750	12.653	0.007
19 C36	11.126	11.134	11.129	11.132	11.125	11.132	11.129	11.079-11.179	11.129	0.004
20 C38	11.652	11.650	11.655	11.651	11.649	11.647	11.650	11.600-11.700	11.651	0.002
21 C40	12.297	12.292	12.291	12.291	12.289	12.283	12.289	12.239-12.339	12.291	0.005
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 ACreosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++
39 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
40 NAS Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2508.D
Date : 25-OCT-2019 14:12
Client ID:
Sample Info: SHJ0406-CAL2

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2508.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL2
Client ID:
Injection: 25-OCT-2019 14:12
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.252	-0.010	100789	199426	WATPHD	(C12-C24)	16216844	101.8
C10	3.367	-0.006	219354	239129	WATPHM	(C24-C38)	605463	4.6
C12	4.344	-0.003	250355	355289	AK102	(C10-C25)	20356499	104.1
C14	5.126	-0.004	400436	340538	AK103	(C25-C36)	329685	3.3
C16	5.802	-0.005	670430	513156	OR.DIES	(C10-C28)	20386032	104.0
C18	6.429	-0.006	830433	585845				
C20	7.036	-0.007	189557	206229				
C22	7.631	-0.007	81567	107164				
C24	8.209	-0.006	13975	32117				
C25	8.489	-0.004	4286	7117				
C26	8.762	-0.002	1237	1115				
C28	9.288	0.003	364	105				
C32	10.242	0.000	2184	855				
C34	10.678	-0.003	4506	5051				
Filter Peak	12.646	-0.005	11019	4947	CREOSOT	(C12-C22)	15825625	4056.9
C36	11.127	-0.002	7155	1771				
C38	11.646	-0.004	9240	6899				
C40	12.291	0.002	10430	5163				
o-terph	6.640	-0.017	5468385	3642280				
Triacon Surr	9.805	0.003	1078	368	NAS DIES	(C10-C24)	20331247	104.2

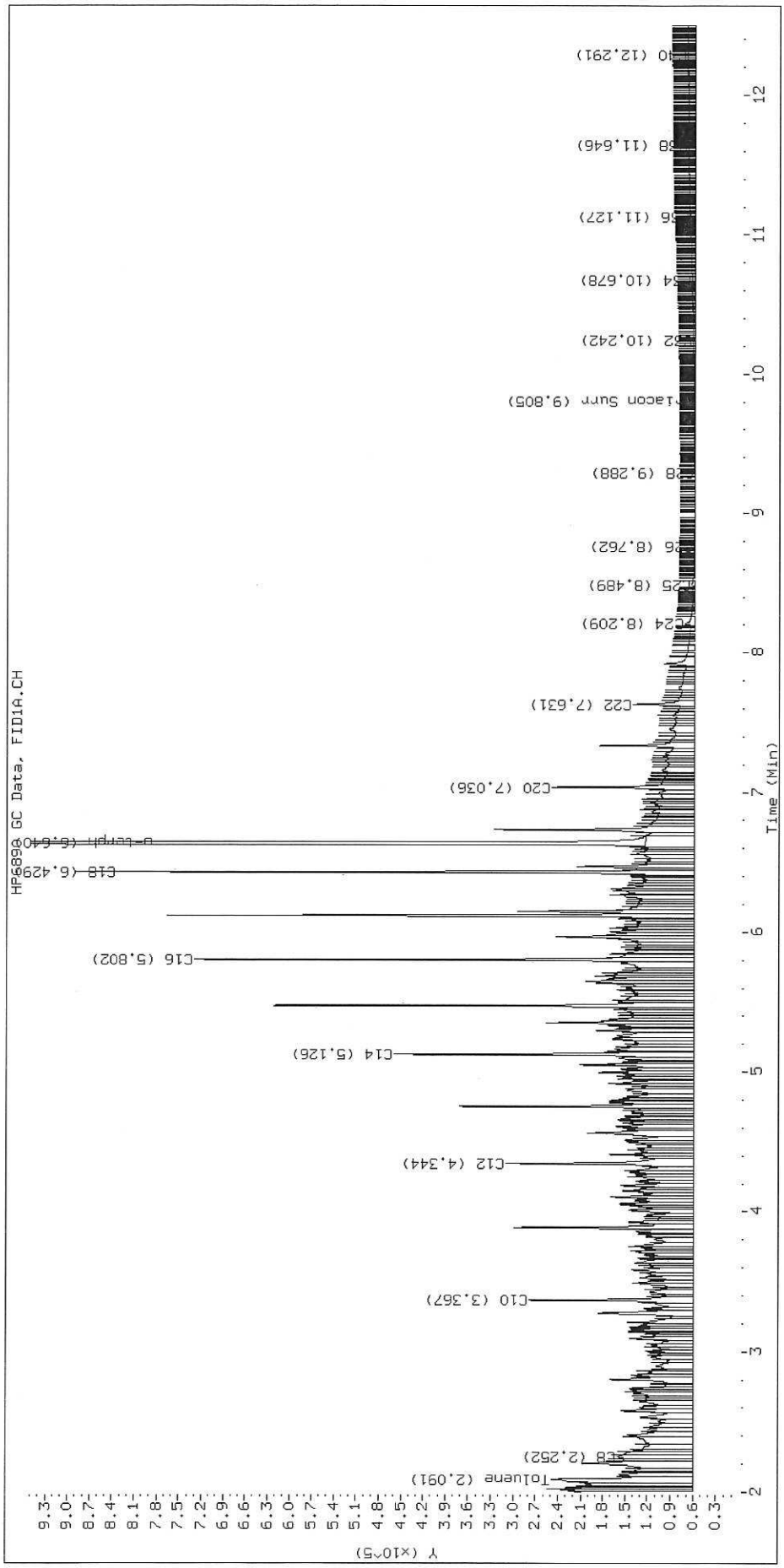
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	3642280	17.8	M
Triacontane	368	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

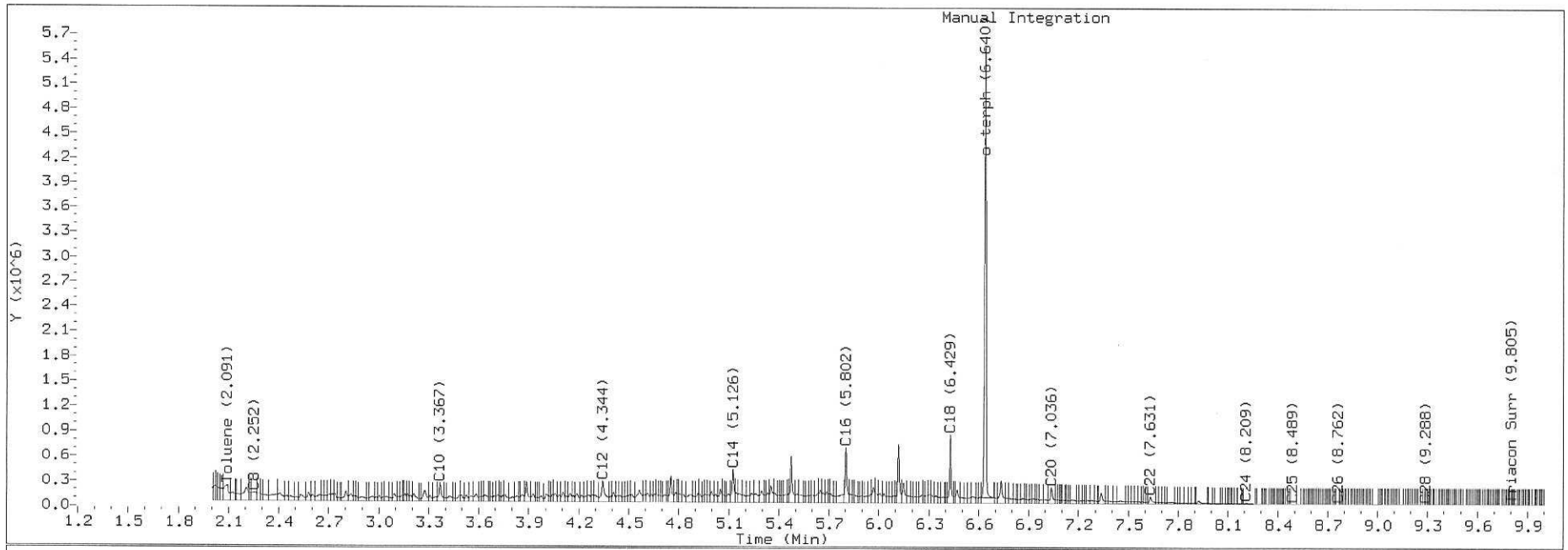
Datafile: FID4A, 20191025.b/419J2508.D SHJ0406-CAL2

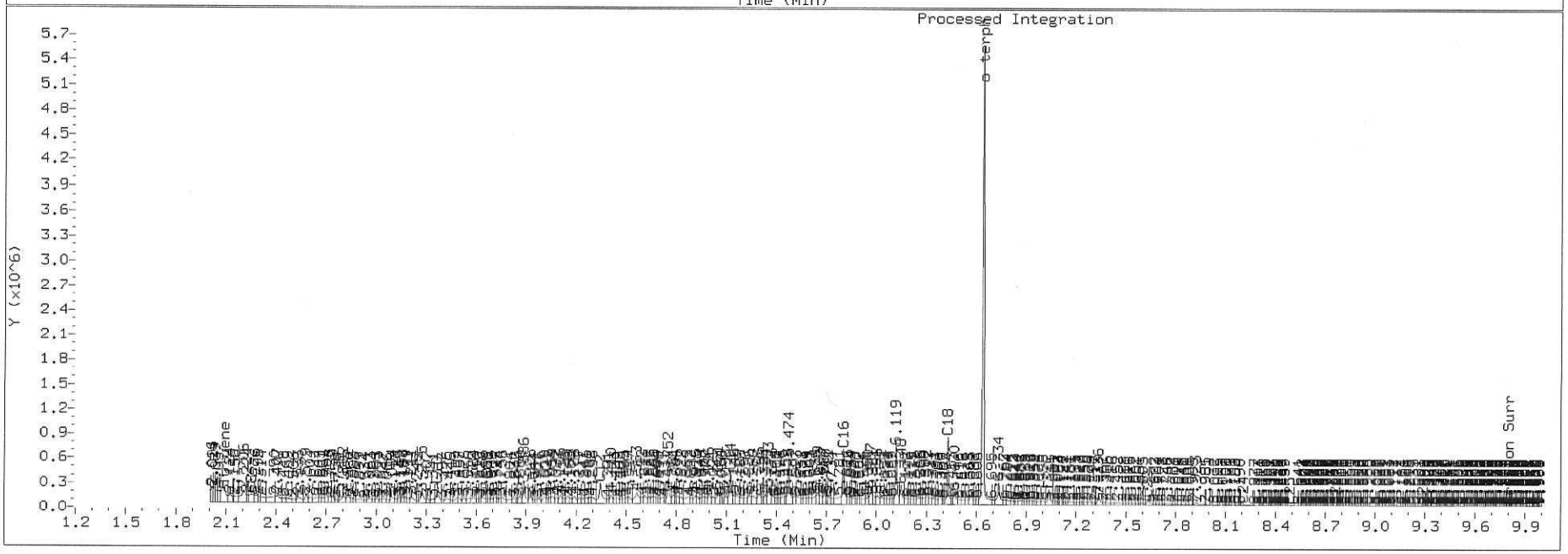


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2508.D Injection: 25-OCT-2019 14:12

Lab ID:SHJ0406-CAL2



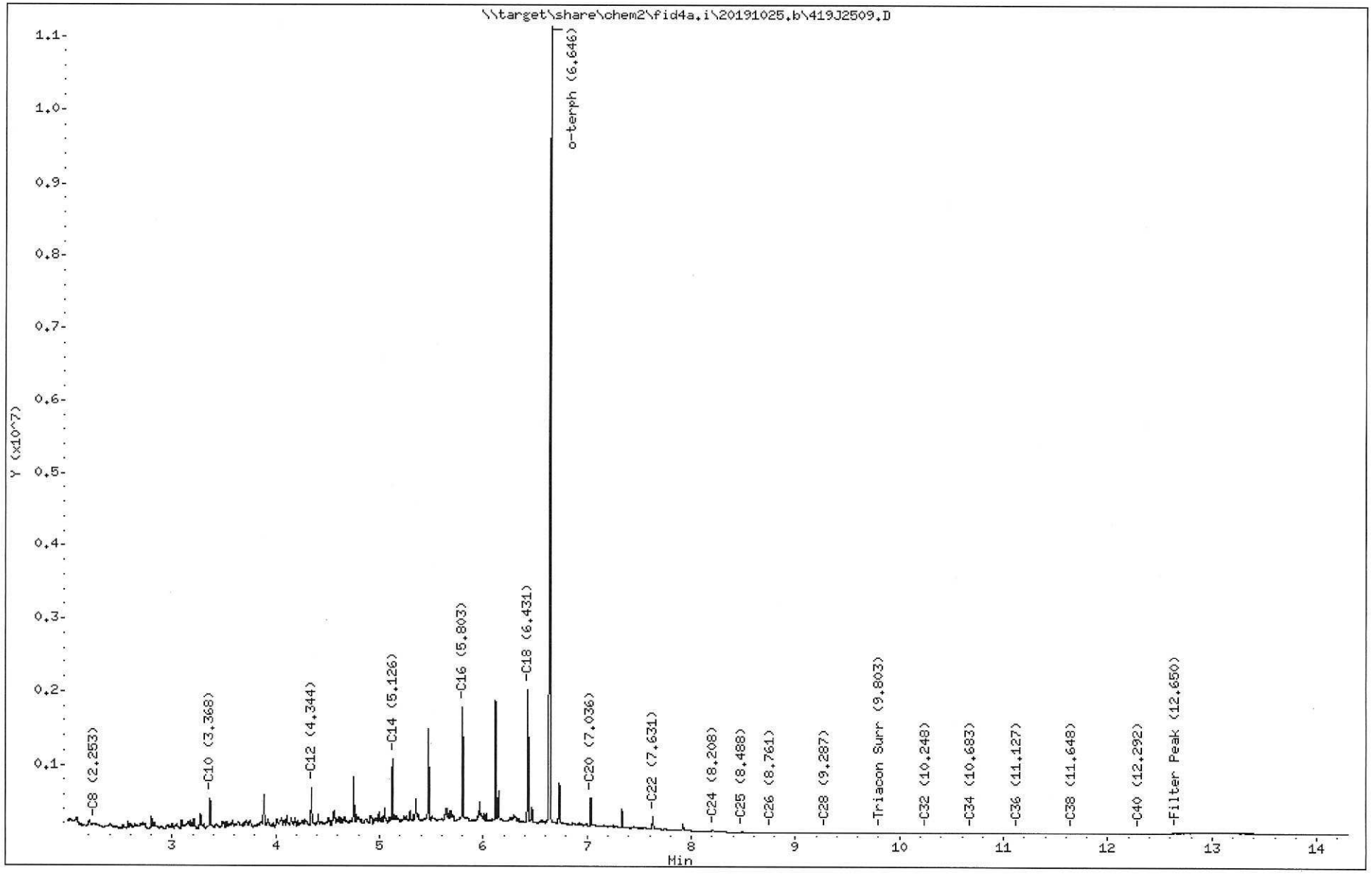


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2509.D
Date : 25-OCT-2019 14:32
Client ID:
Sample Info: SHJ0406-CAL3

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2509.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL3
Client ID:
Injection: 25-OCT-2019 14:32
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.253	-0.009	118722	240565	WATPHD	(C12-C24)	37913827	237.9
C10	3.368	-0.005	483544	476749	WATPHM	(C24-C38)	575858	4.3
C12	4.344	-0.003	627626	779062	AK102	(C10-C25)	46188702	236.3
C14	5.126	-0.004	1022309	790022	AK103	(C25-C36)	284914	2.8
C16	5.803	-0.004	1736531	1218478	OR.DIES	(C10-C28)	46284811	236.1
C18	6.431	-0.004	1970150	1409422				
C20	7.036	-0.007	509531	494893				
C22	7.631	-0.008	243435	281583				
C24	8.208	-0.007	43836	95774				
C25	8.488	-0.005	13614	32431				
C26	8.761	-0.004	4384	8919				
C28	9.287	0.001	605	214				
C32	10.248	0.006	1381	707				
C34	10.683	0.001	3151	1389				
Filter Peak	12.650	-0.000	9358	3271	CREOSOT	(C12-C22)	36811374	9436.7
C36	11.127	-0.002	5536	1099				
C38	11.648	-0.002	7679	4193				
C40	12.292	0.003	8799	4362				
o-terph	6.646	-0.010	10937727	8968221				
Triacon Surr	9.803	0.001	295	103	NAS DIES	(C10-C24)	46106144	236.3

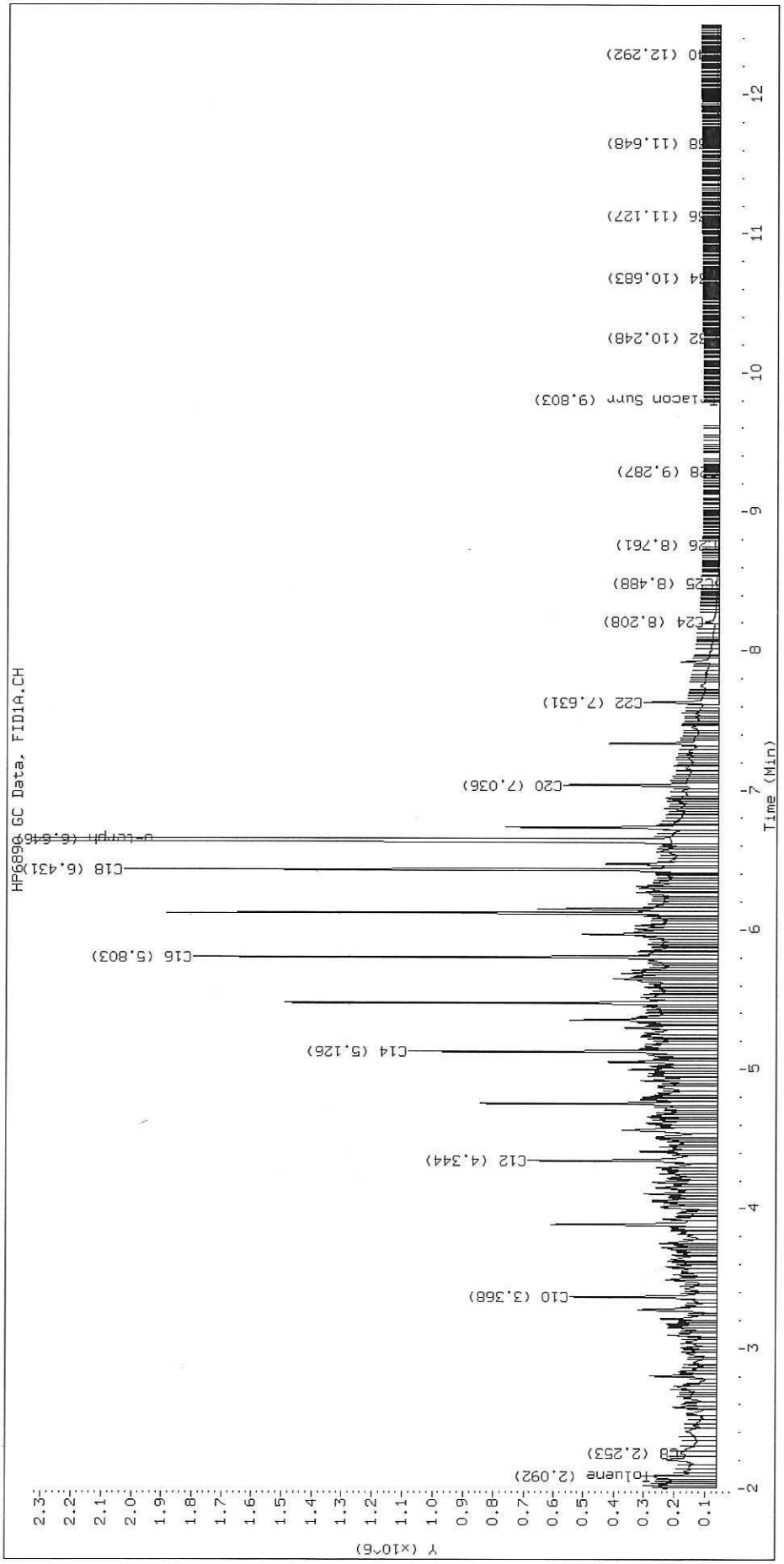
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	8968221	43.8
Triacontane	103	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2509.D SHJ0406-CAL3



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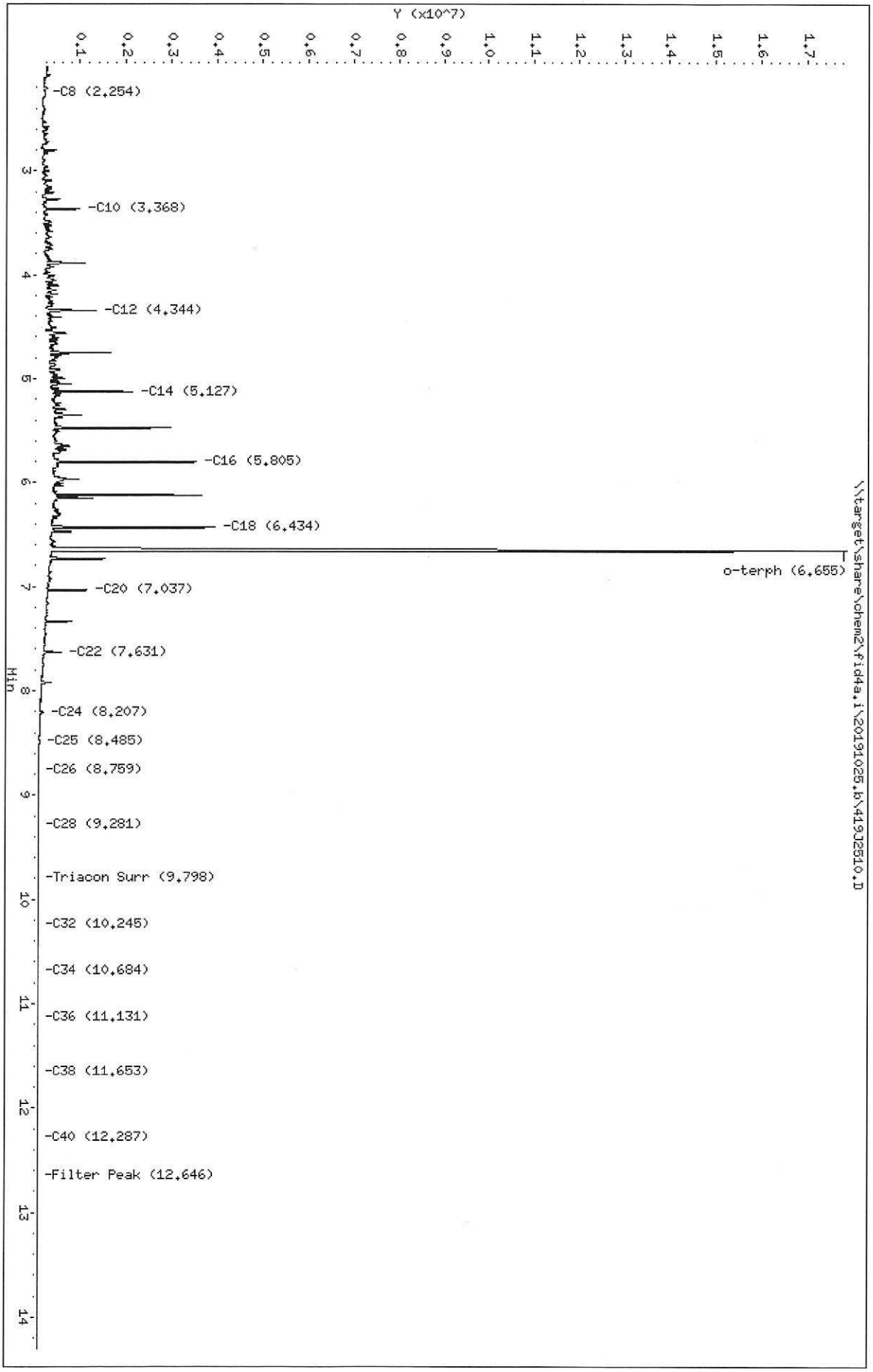
Date : 25-OCT-2019 14:53
Client ID:
Sample Info: SHJ0406-CAL4

Column phase: RTX-1

Instrument: fid4a.i
Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Page 1

Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2510.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL4
Client ID:
Injection: 25-OCT-2019 14:53
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.254	-0.009	133720	272365	WATPHD	(C12-C24)	76110005	477.7
C10	3.368	-0.005	913330	831182	WATPHM	(C24-C38)	747310	5.6
C12	4.344	-0.004	1278885	1502773	AK102	(C10-C25)	90903979	465.0
C14	5.127	-0.003	2082835	1580085	AK103	(C25-C36)	436439	4.4
C16	5.805	-0.002	3492654	2476612	OR.DIES	(C10-C28)	91160529	465.1
C18	6.434	-0.001	3902008	2902073				
C20	7.037	-0.006	1095165	935641				
C22	7.631	-0.008	544650	574105				
C24	8.207	-0.008	109625	202080				
C25	8.485	-0.008	35990	71794				
C26	8.759	-0.006	12661	25763				
C28	9.281	-0.004	1585	1856				
C32	10.245	0.003	1048	453				
C34	10.684	0.002	3071	1964				
Filter Peak	12.646	-0.004	3825	2093	CREOSOT	(C12-C22)	73861119	18934.4
C36	11.131	0.002	4915	3154				
C38	11.653	0.003	5457	2692				
C40	12.287	-0.002	4261	1483				
o-terph	6.655	-0.001	17508754	18236498				
Triacon Surr	9.798	-0.004	325	112	NAS DIES	(C10-C24)	90741143	465.0

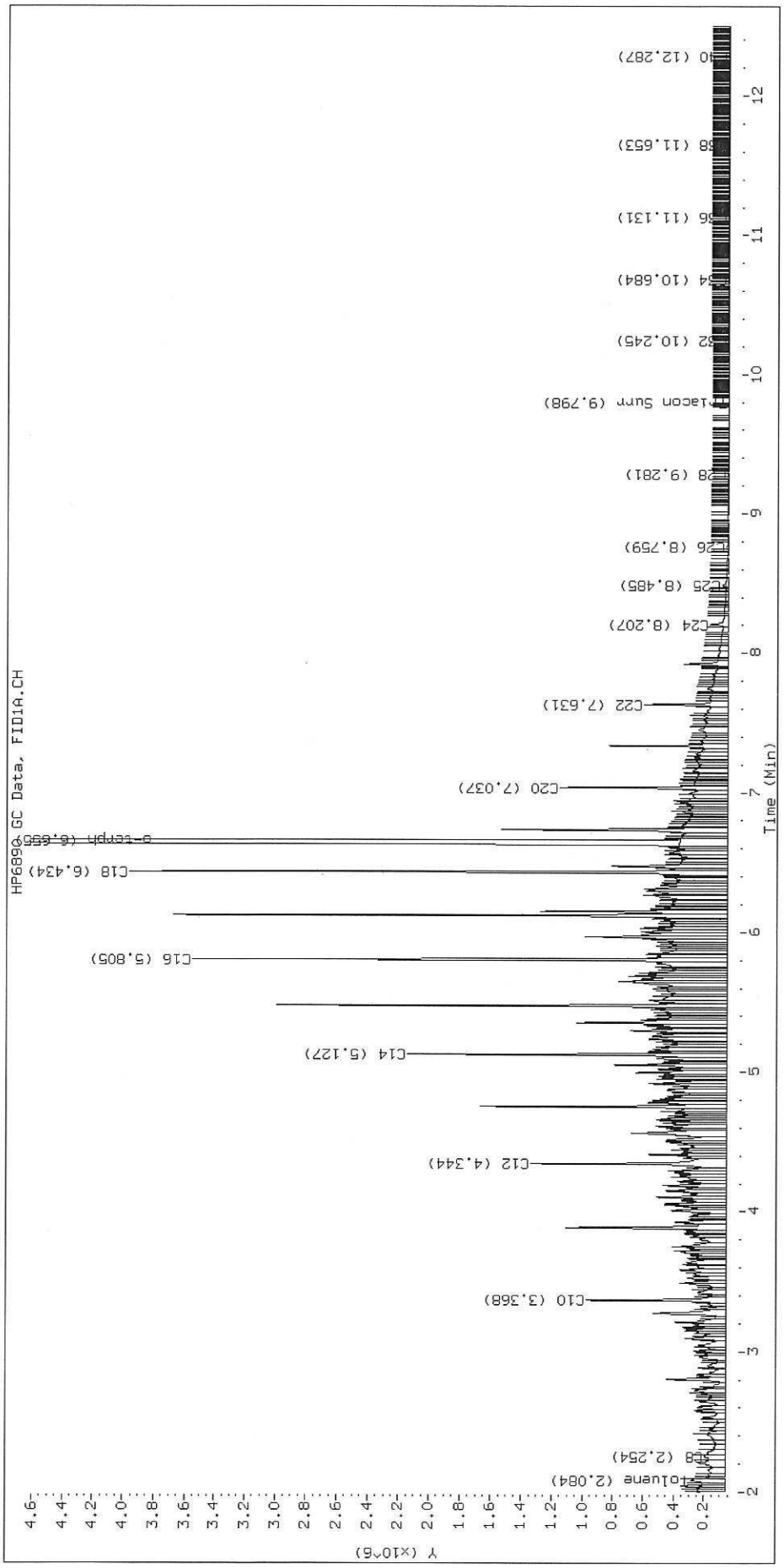
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	18236498	89.1	M
Triacontane	112	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

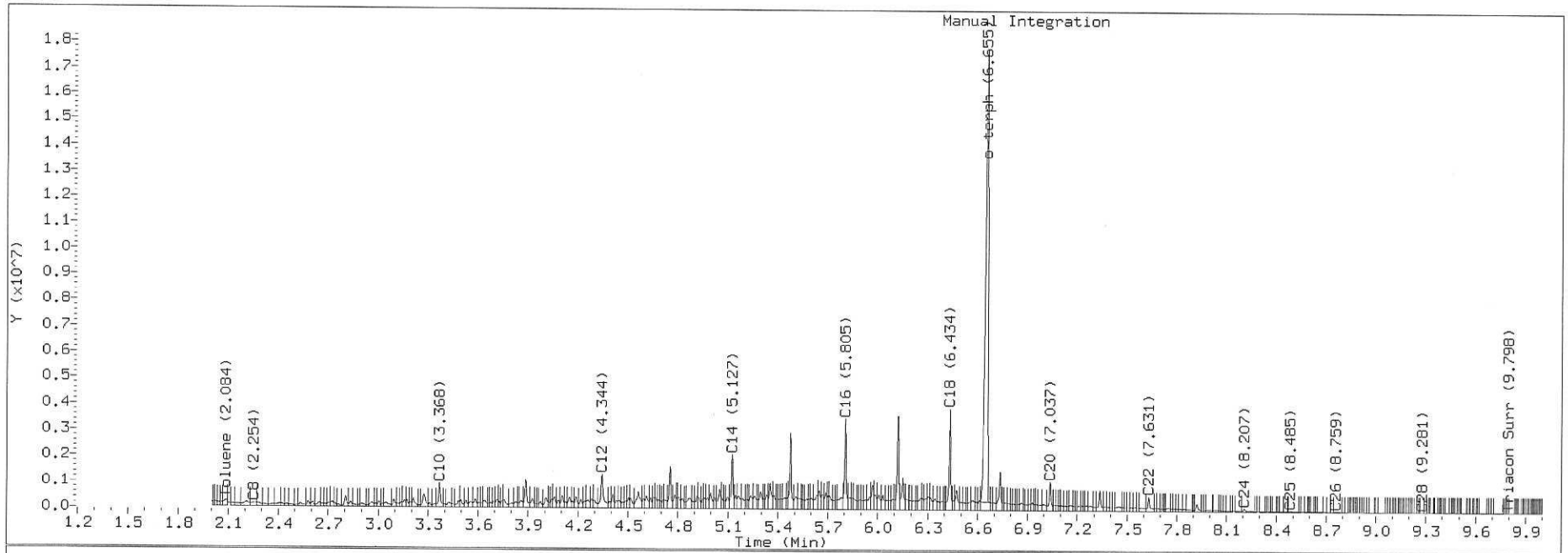
Datafile: FID4A, 20191025.b/419J2510.D SHJ0406-CAL4

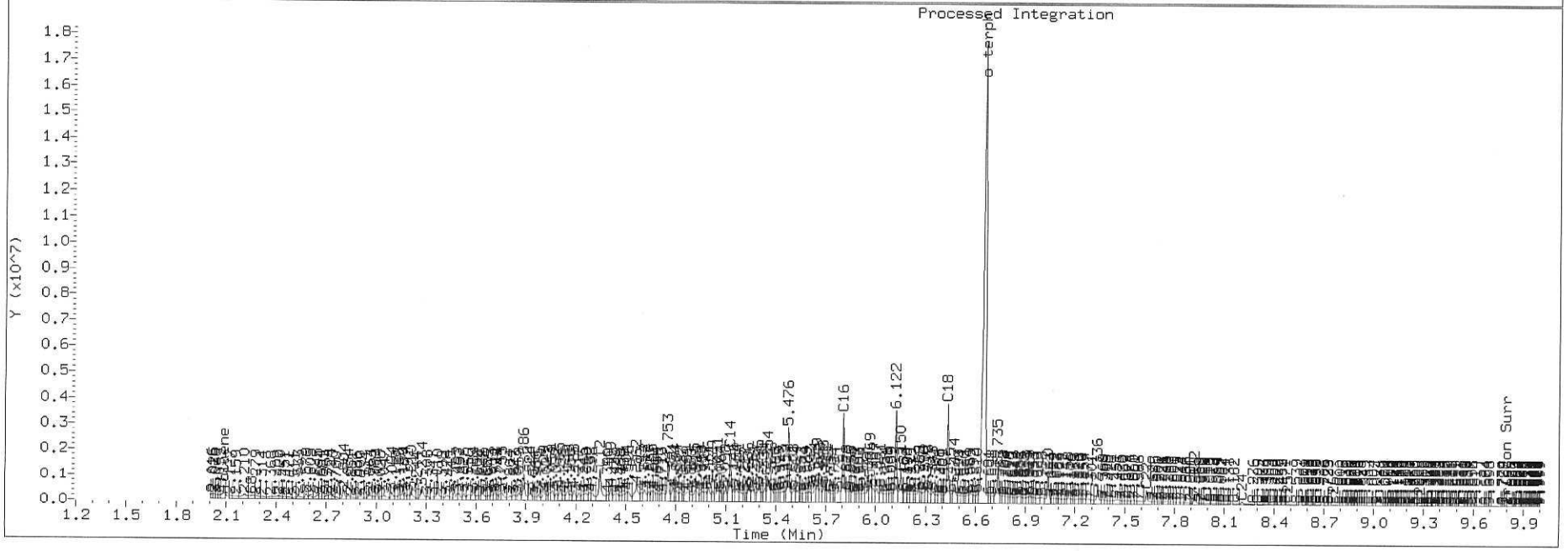


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2510.D Injection: 25-OCT-2019 14:53

Lab ID:SHJ0406-CAL4



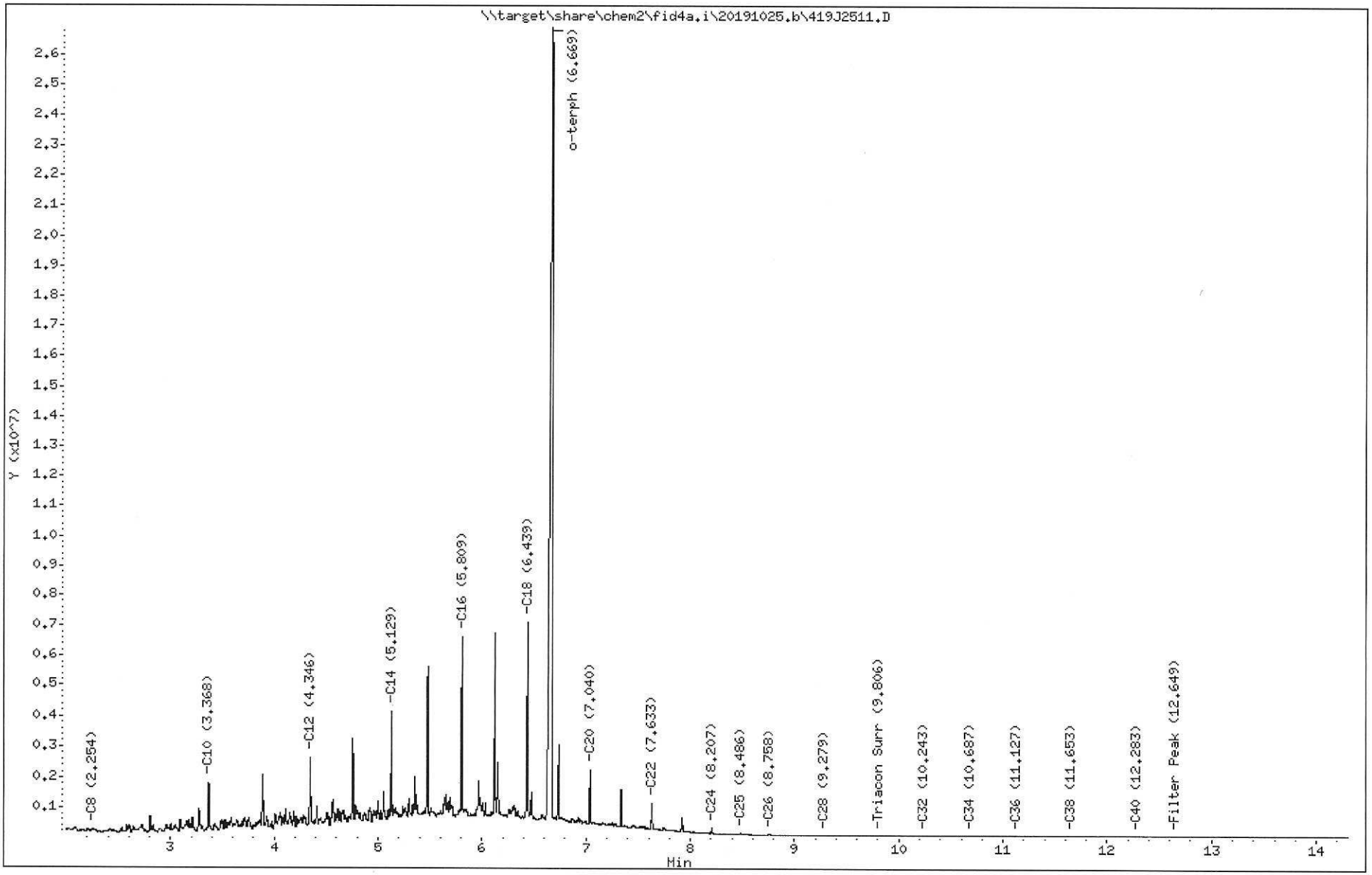


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2511.D
Date : 25-OCT-2019 15:13
Client ID:
Sample Info: SHJ0406-CAL5

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2511.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL5
Client ID:
Injection: 25-OCT-2019 15:13
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.254	-0.008	179896	310888	WATPHD	(C12-C24)	153066747	960.6
C10	3.368	-0.005	1739085	1592987	WATPHM	(C24-C38)	1270800	9.6
C12	4.346	-0.001	2582378	2992597	AK102	(C10-C25)	181956494	930.8
C14	5.129	-0.000	4119910	3175625	AK103	(C25-C36)	821445	8.2
C16	5.809	0.002	6560457	4974499	OR.DIES	(C10-C28)	182680399	932.0
C18	6.439	0.005	7062206	6028122				
C20	7.040	-0.003	2215368	1892870				
C22	7.633	-0.006	1144174	997771				
C24	8.207	-0.008	250003	385382				
C25	8.486	-0.007	89395	162170				
C26	8.758	-0.007	33365	80915				
C28	9.279	-0.006	6648	16116				
C32	10.243	0.001	219	113				
C34	10.687	0.005	471	169				
Filter Peak	12.649	-0.001	3299	1299	CREOSOT	(C12-C22)	148274267	38010.4
C36	11.127	-0.002	1506	512				
C38	11.653	0.003	2117	932				
C40	12.283	-0.006	2712	1056				
o-terph	6.669	0.013	26284682	37244787				
Triacon Surr	9.806	0.004	1398	1069	NAS DIES	(C10-C24)	181561688	930.4

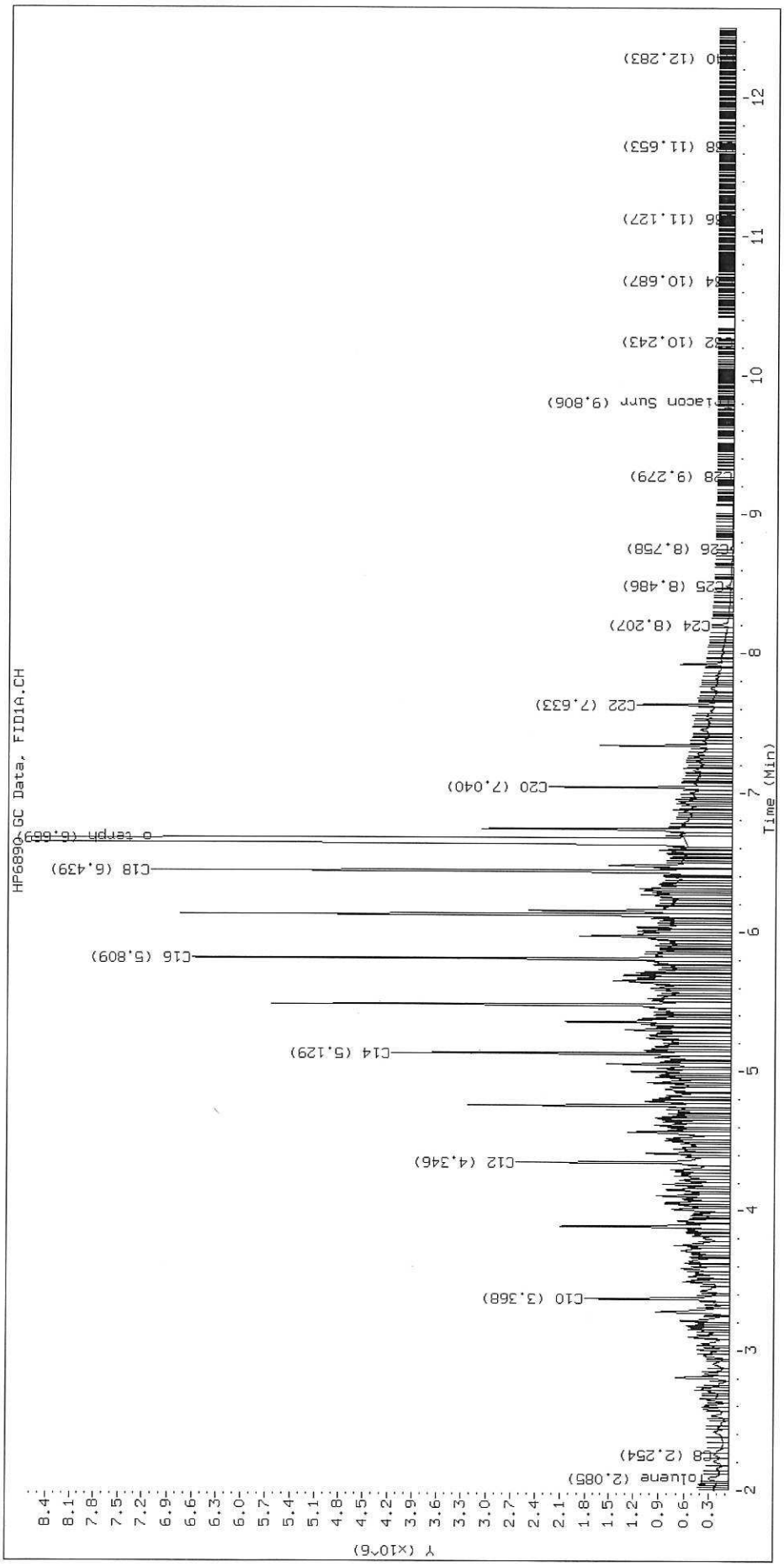
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	37244787	181.9	M
Triacontane	1069	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

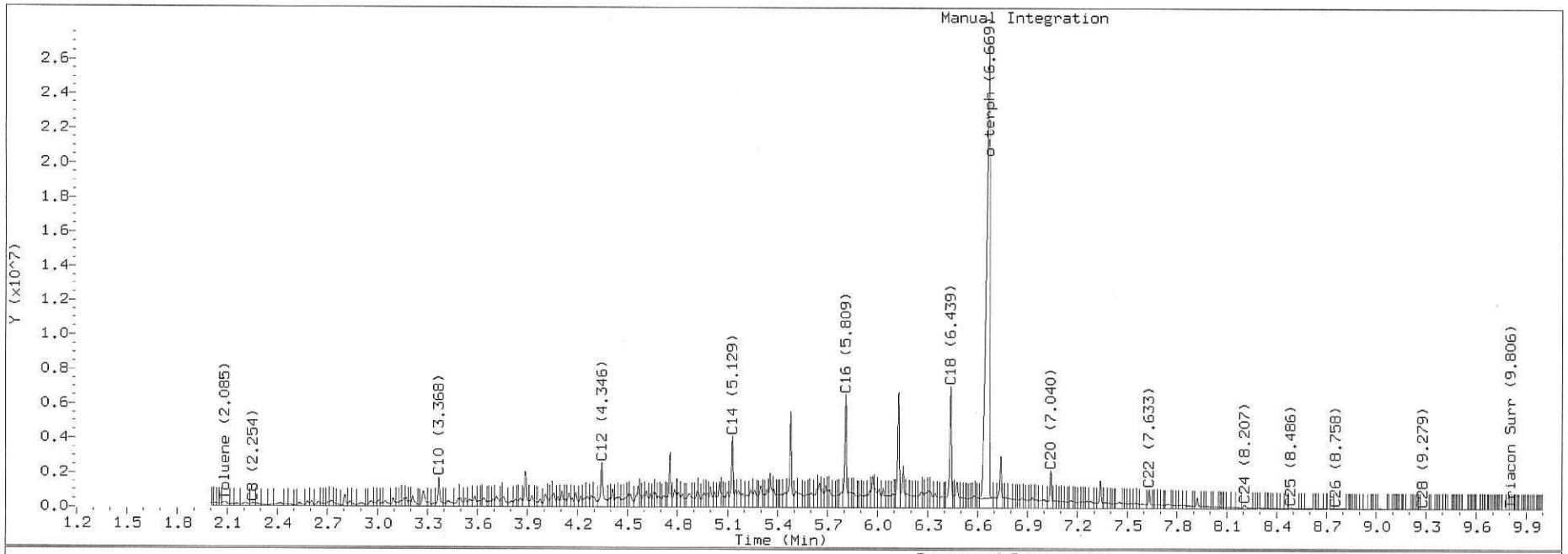
Datafile: FID4A, 20191025.b/419J2511.D SHJ0406-CAL5

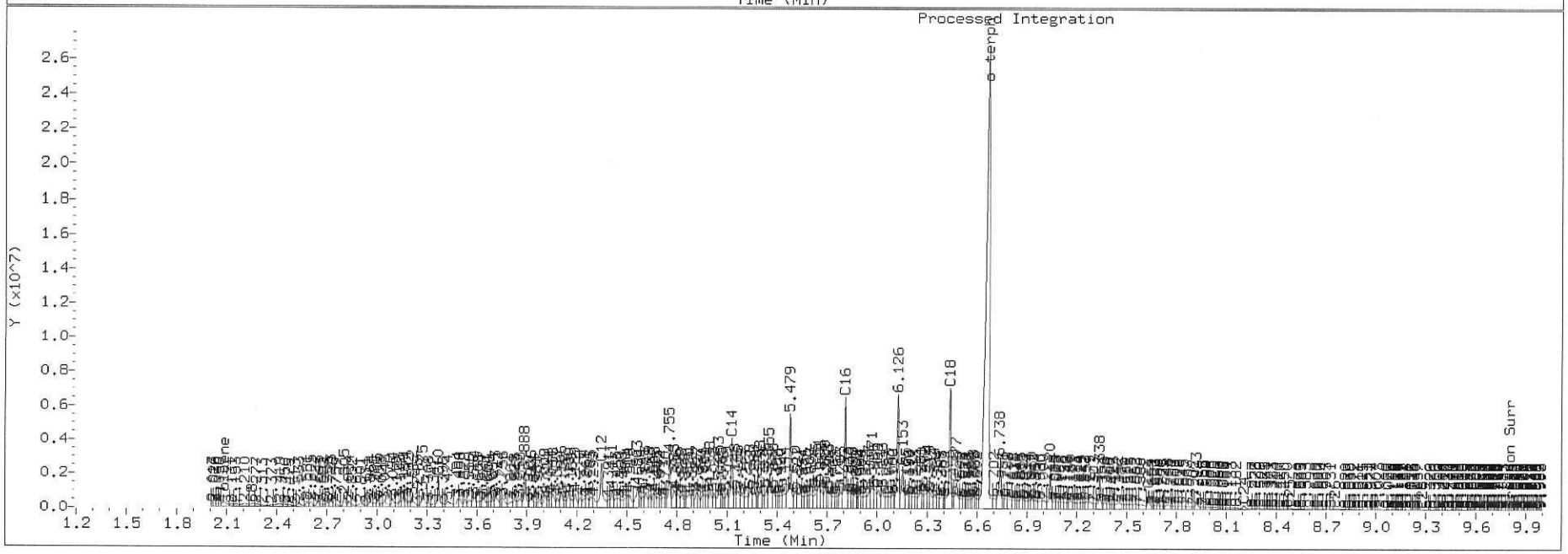


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2511.D Injection: 25-OCT-2019 15:13

Lab ID:SHJ0406-CAL5



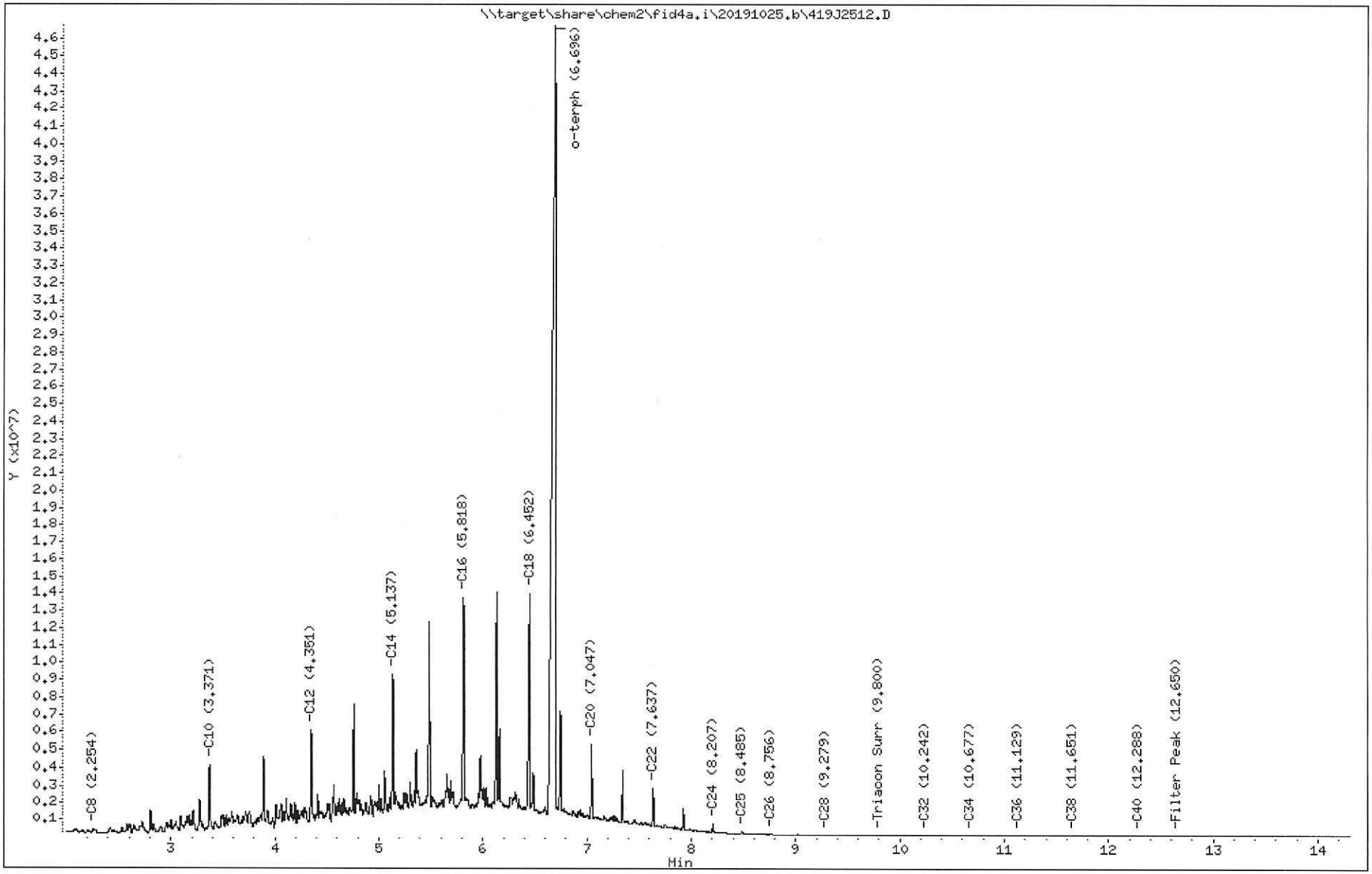


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2512.D
Date : 25-OCT-2019 15:32
Client ID:
Sample Info: SHJ0406-CAL6

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2512.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL6
Client ID:
Injection: 25-OCT-2019 15:32
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.254	-0.008	310597	486343	WATPHD	(C12-C24)	386988567	2428.7
C10	3.371	-0.002	4067321	3926897	WATPHM	(C24-C38)	3326156	25.1
C12	4.351	0.004	6051560	7536066	AK102	(C10-C25)	458776536	2346.8
C14	5.137	0.007	9257057	8197076	AK103	(C25-C36)	2148648	21.5
C16	5.818	0.011	13762212	12844924	OR.DIES	(C10-C28)	460755382	2350.8
C18	6.452	0.017	13977204	16316405				
C20	7.047	0.004	5292354	4776661				
C22	7.637	-0.002	2821591	2512756				
C24	8.207	-0.007	692936	731199				
C25	8.485	-0.008	261257	416815				
C26	8.756	-0.009	100686	191231				
C28	9.279	-0.006	17823	35082				
C32	10.242	-0.001	483	193				
C34	10.677	-0.004	847	428				
Filter Peak	12.650	-0.001	5215	3893	CREOSOT	(C12-C22)	374231679	95935.0
C36	11.129	0.000	2243	1721				
C38	11.651	0.001	3497	1043				
C40	12.288	-0.001	4517	2473				
o-terph	6.696	0.039	45134516	94404433				
Triacon Surr	9.800	-0.002	2320	892	NAS DIES	(C10-C24)	457687210	2345.3

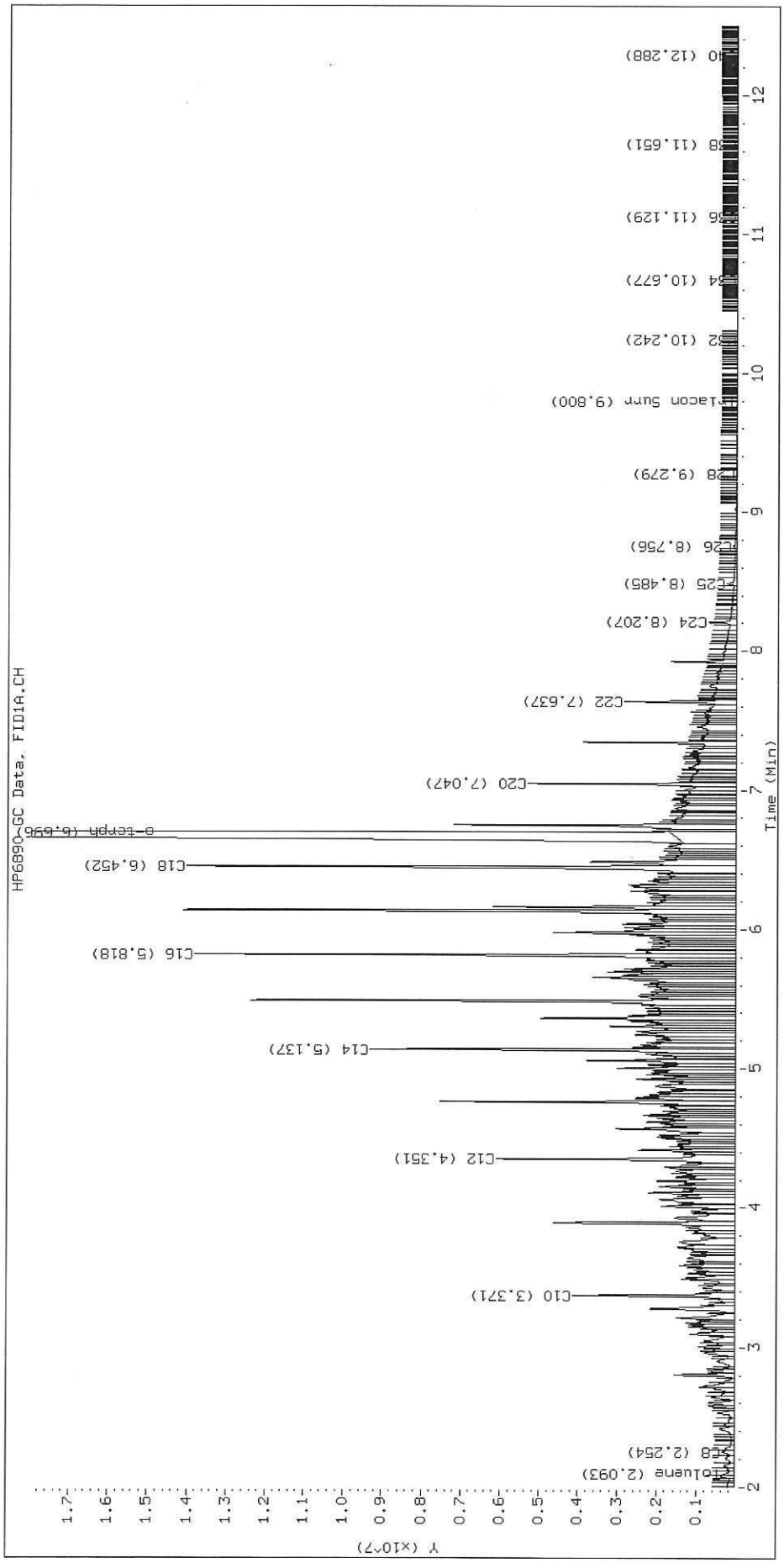
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	94404433	461.2	M
Triacontane	892	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

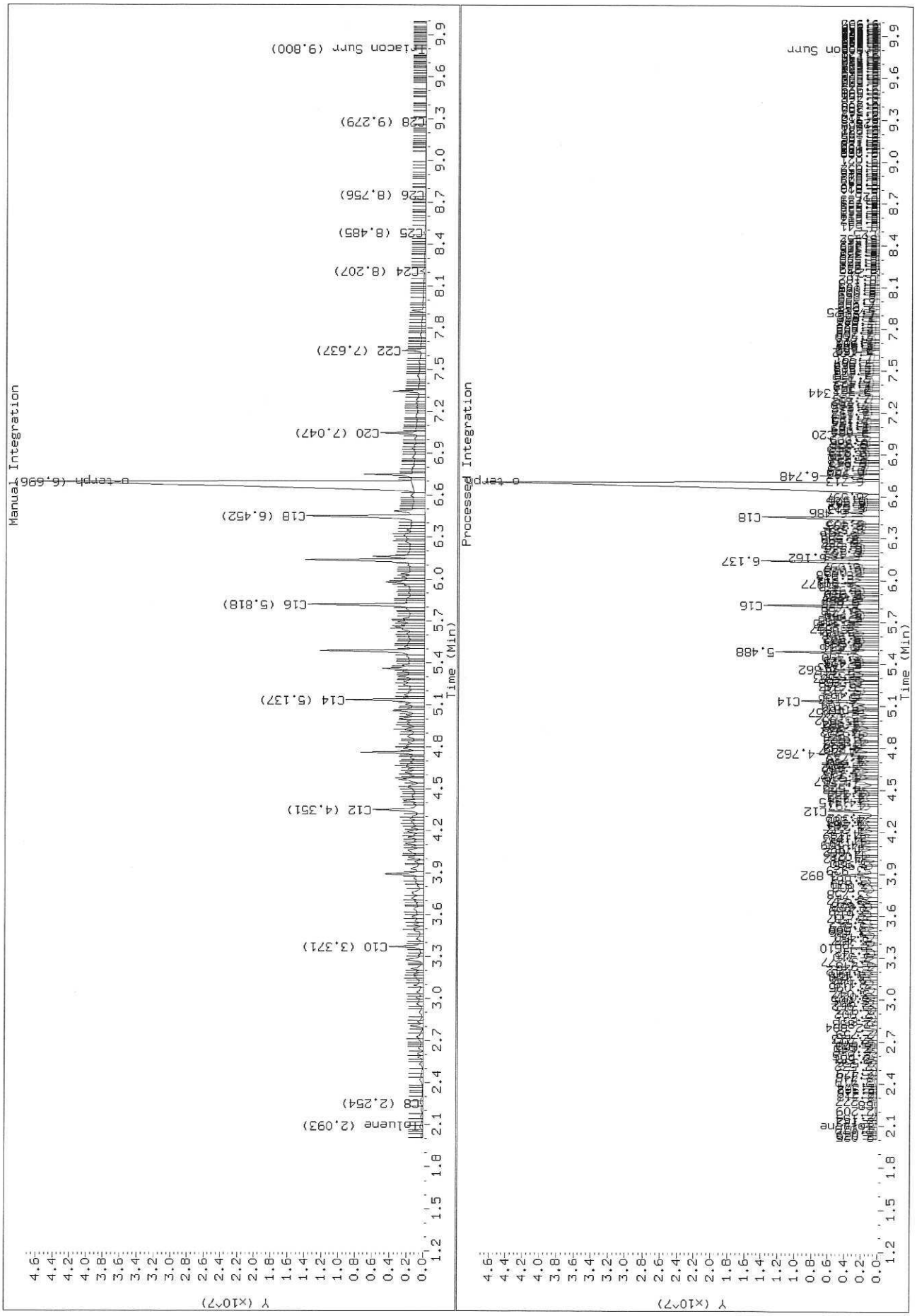
Datafile: FID4A, 20191025.b/419J2512.D SHJ0406-CAL6



TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2512.D Injection: 25-OCT-2019 15:32

Lab ID:SHJ0406-CAL6



Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2513.D

Date : 25-OCT-2019 15:52

Client ID:

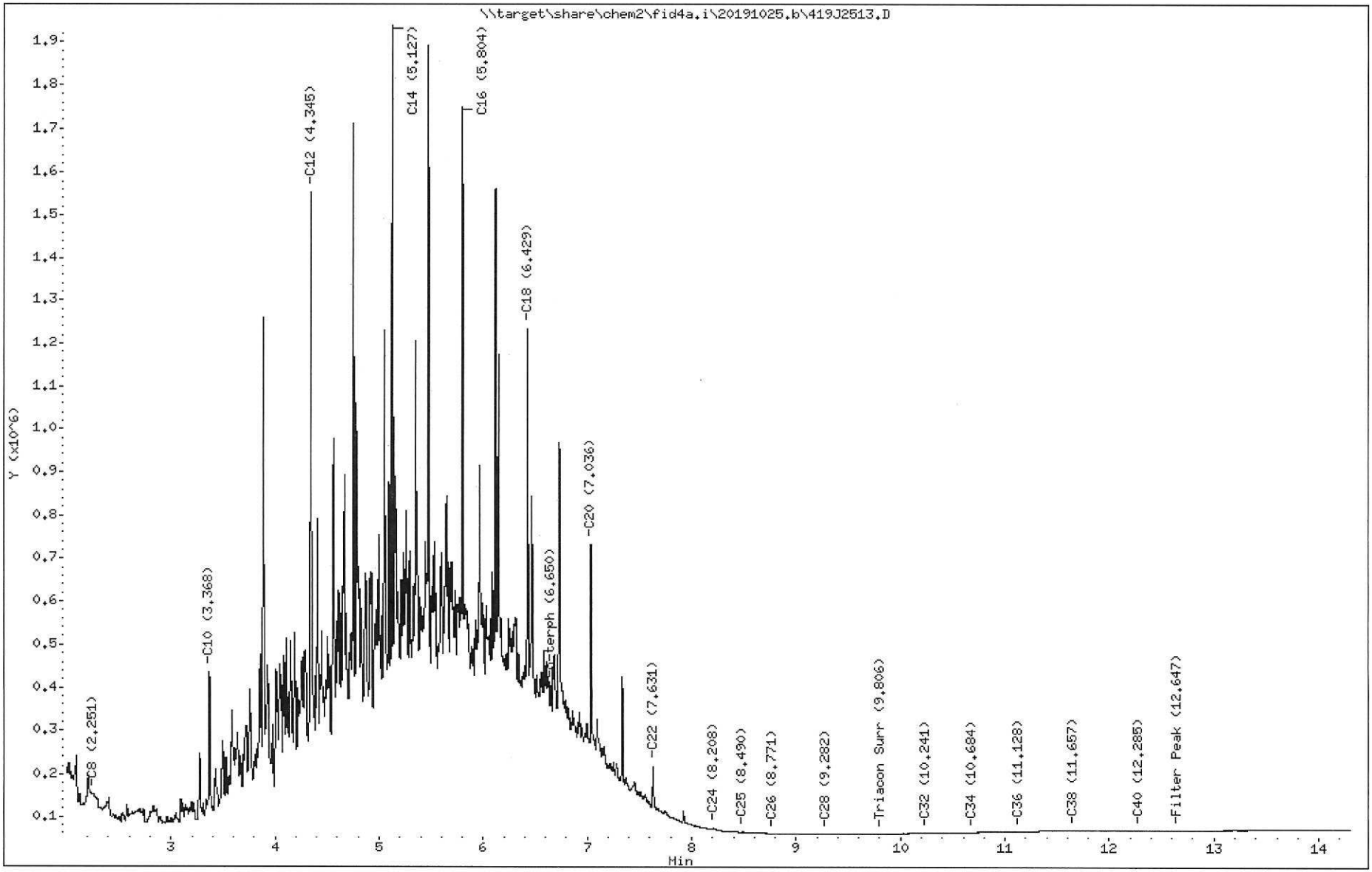
Sample Info: SHJ0406-SCV1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2513.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-SCV1
Client ID:
Injection: 25-OCT-2019 15:52
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.251	-0.011	94961	147864	WATPHD	(C12-C24)	81454017	511.2
C10	3.368	-0.005	379319	401979	WATPHM	(C24-C38)	639731	4.8
C12	4.345	-0.002	1496096	1990616	AK102	(C10-C25)	97704414	499.8
C14	5.127	-0.002	1881566	1510979	AK103	(C25-C36)	332991	3.3
C16	5.804	-0.003	1693335	1468242	OR.DIES	(C10-C28)	97755450	498.8
C18	6.429	-0.006	1178327	1173671				
C20	7.036	-0.007	676475	771884				
C22	7.631	-0.008	162529	245982				
C24	8.208	-0.007	16269	46701				
C25	8.490	-0.003	4835	8168				
C26	8.771	0.006	1378	465				
C28	9.282	-0.003	218	122				
C32	10.241	-0.001	2076	410				
C34	10.684	0.003	4334	2137				
Filter Peak	12.647	-0.003	10515	4189	CREOSOT	(C12-C22)	80554511	20650.3
C36	11.128	-0.001	6869	2744				
C38	11.657	0.008	8764	3056				
C40	12.285	-0.004	9988	4995				
o-terph	6.650	-0.007	347314	350999				
Triacon Surr	9.806	0.003	1146	388	NAS DIES	(C10-C24)	97645351	500.4

Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

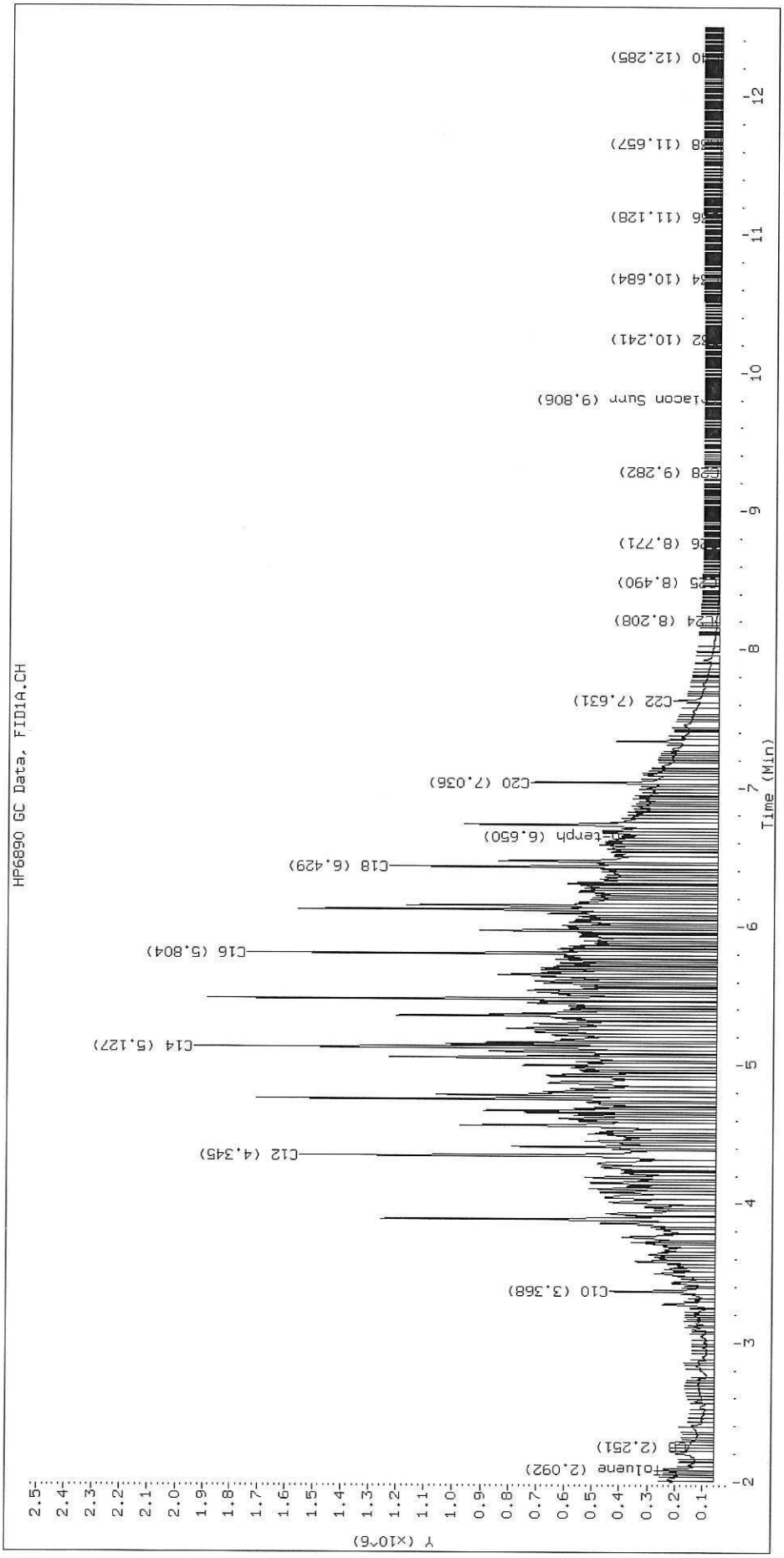
Surrogate	Area	Amount
o-Terphenyl	350999	1.7
Triacontane	388	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2513.D SHJ0406-SCV1

HP6890 GC Data, FID1A.CH

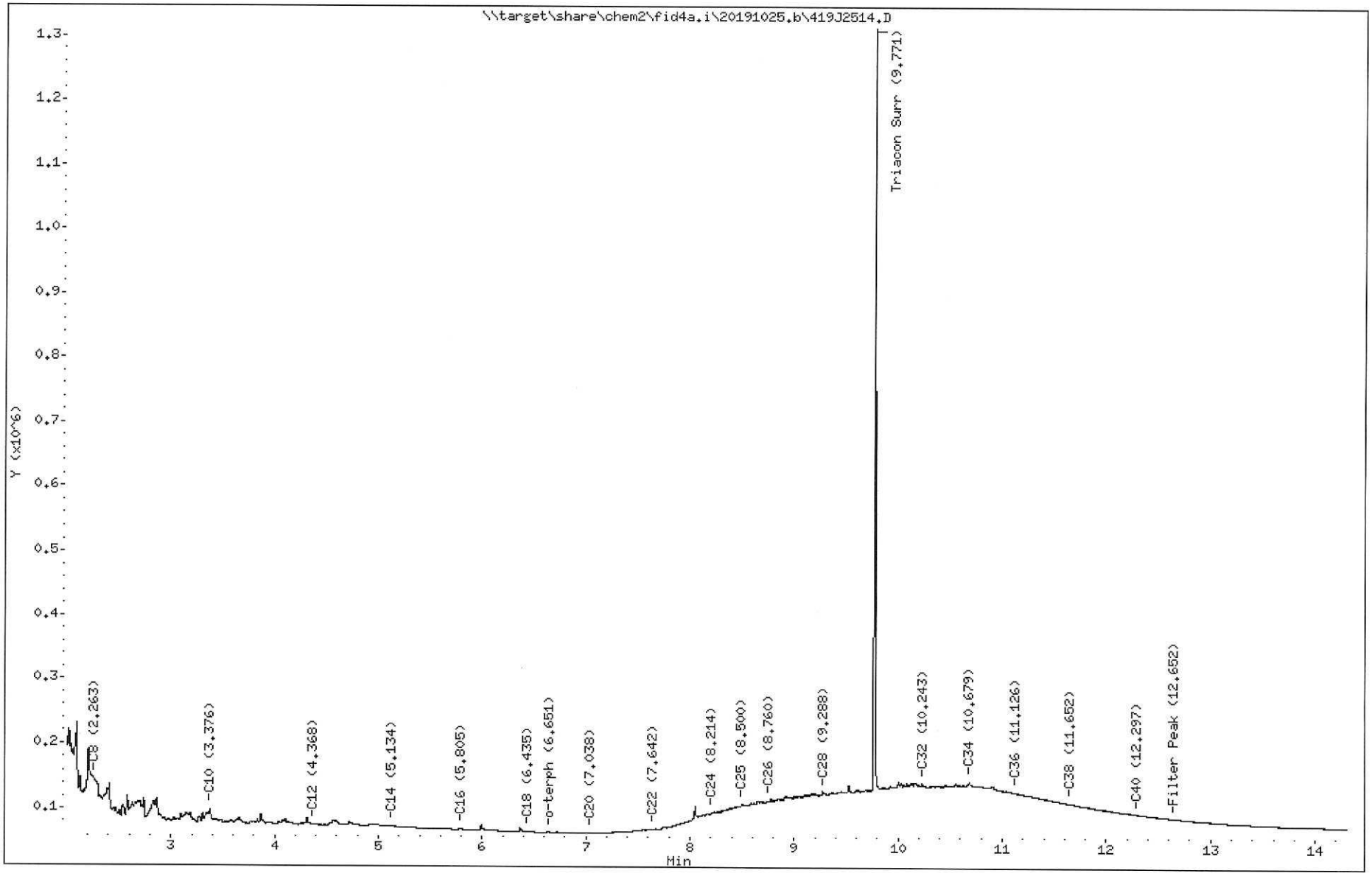


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2514.D
Date : 25-OCT-2019 16:12
Client ID:
Sample Info: SHJ0406-CAL7

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2514.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL7
Client ID:
Injection: 25-OCT-2019 16:12
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.263	0.001	85024	58523	WATPHD	(C12-C24)	1690231	10.6
C10	3.376	0.003	37002	76813	WATPHM	(C24-C38)	13578464	102.4
C12	4.368	0.021	13222	16848	AK102	(C10-C25)	3173344	16.2
C14	5.134	0.004	9789	3901	AK103	(C25-C36)	11330395	113.3
C16	5.805	-0.002	5337	2891	OR.DIES	(C10-C28)	6258620	31.9
C18	6.435	0.000	1861	887				
C20	7.038	-0.005	431	243				
C22	7.642	0.003	6248	1558				
C24	8.214	-0.001	36357	52641				
C25	8.500	0.007	49017	43098				
C26	8.760	-0.005	55671	27607				
C28	9.288	0.003	67768	33791				
C32	10.243	0.001	81940	56823				
C34	10.679	-0.002	85222	51016				
Filter Peak	12.652	0.002	27566	19236	CREOSOT	(C12-C22)	959454	246.0
C36	11.126	-0.003	69343	27714				
C38	11.652	0.002	52690	33941				
C40	12.297	0.009	34497	15508				
o-terph	6.651	-0.006	941	547				
Triacon Surr	9.771	-0.031	1179904	816812	NAS DIES	(C10-C24)	2749900	14.1

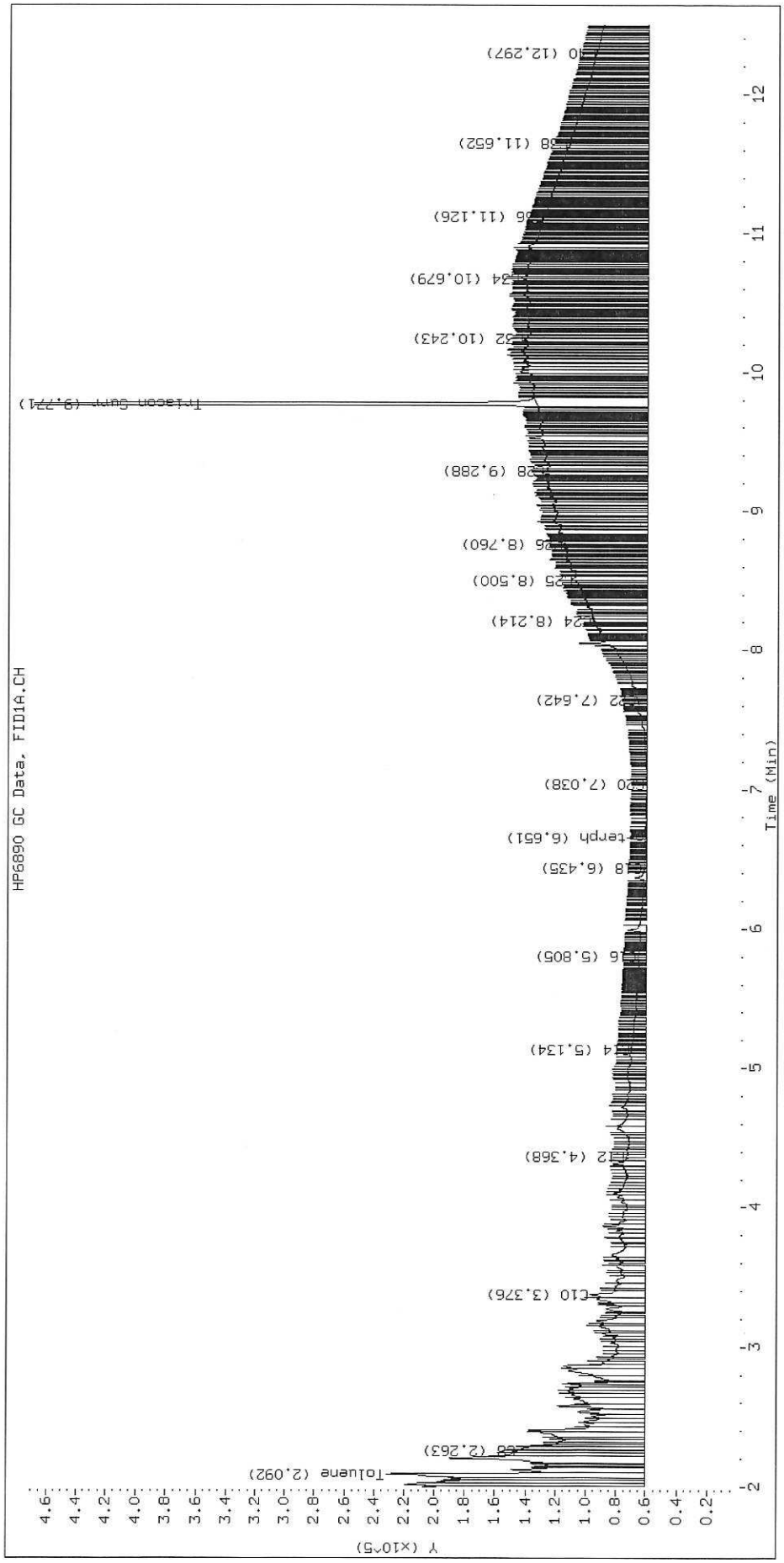
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	547	0.0
Triacontane	816812	4.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

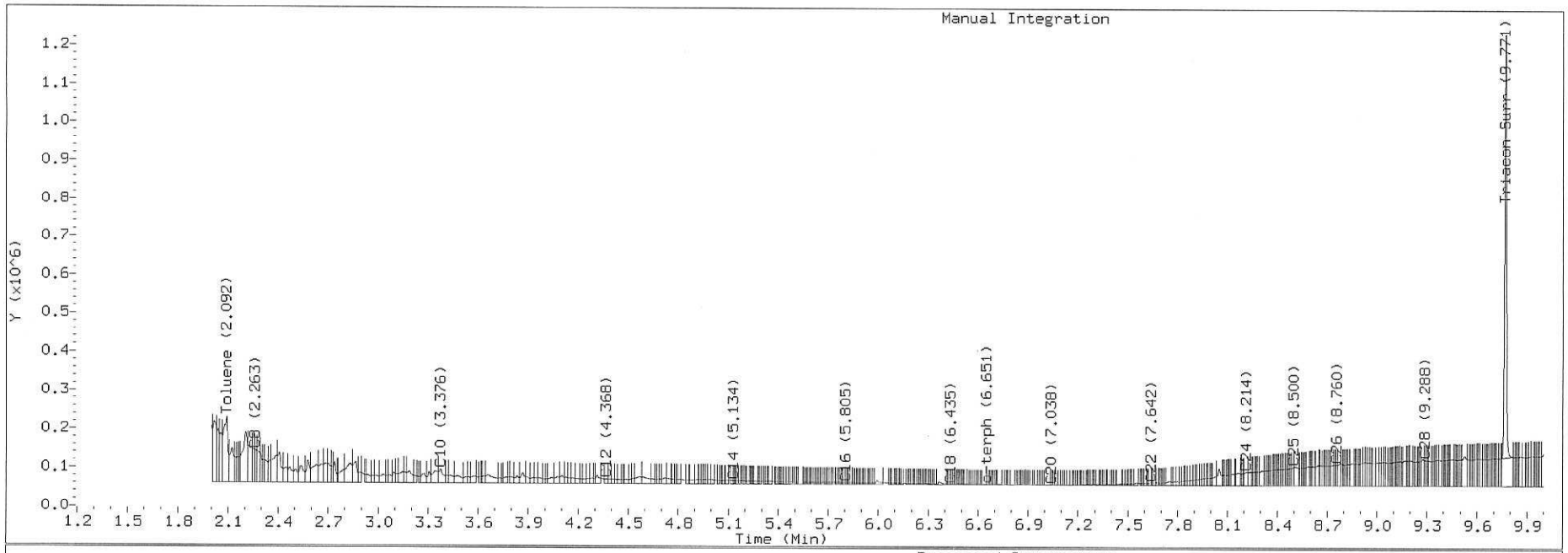
Datafile: FID4A, 20191025.b/419J2514.D SHJ0406-CAL7

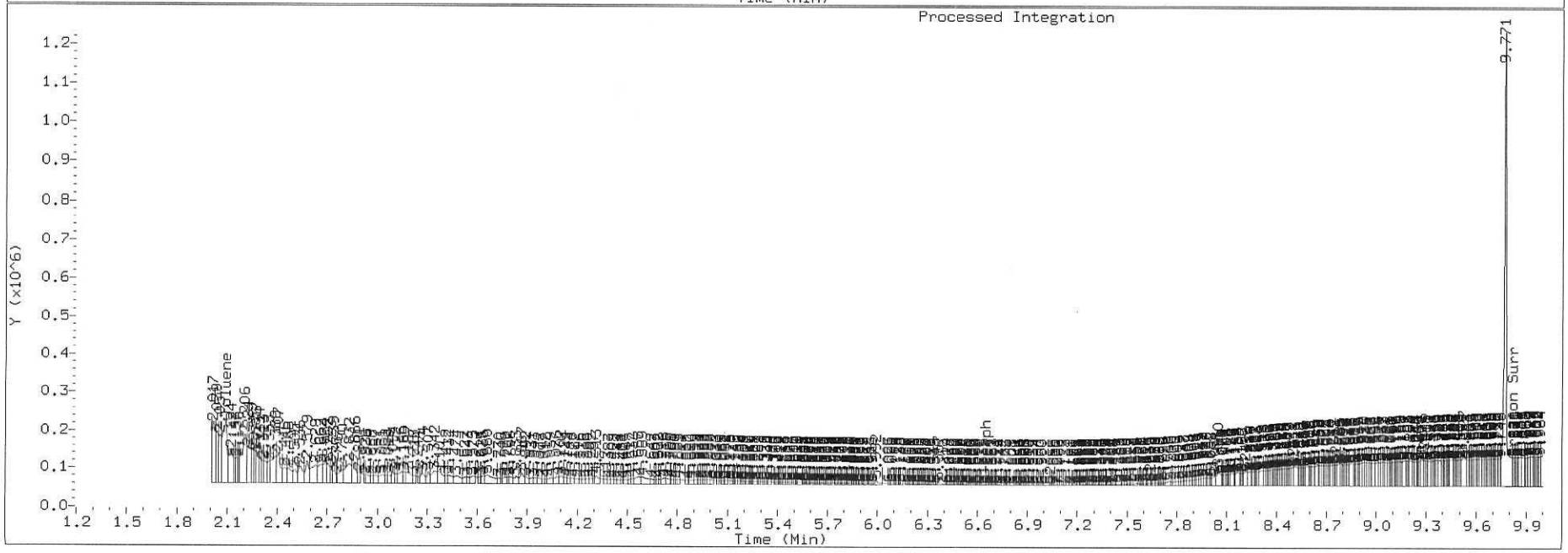


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2514.D Injection: 25-OCT-2019 16:12

Lab ID:SHJ0406-CAL7

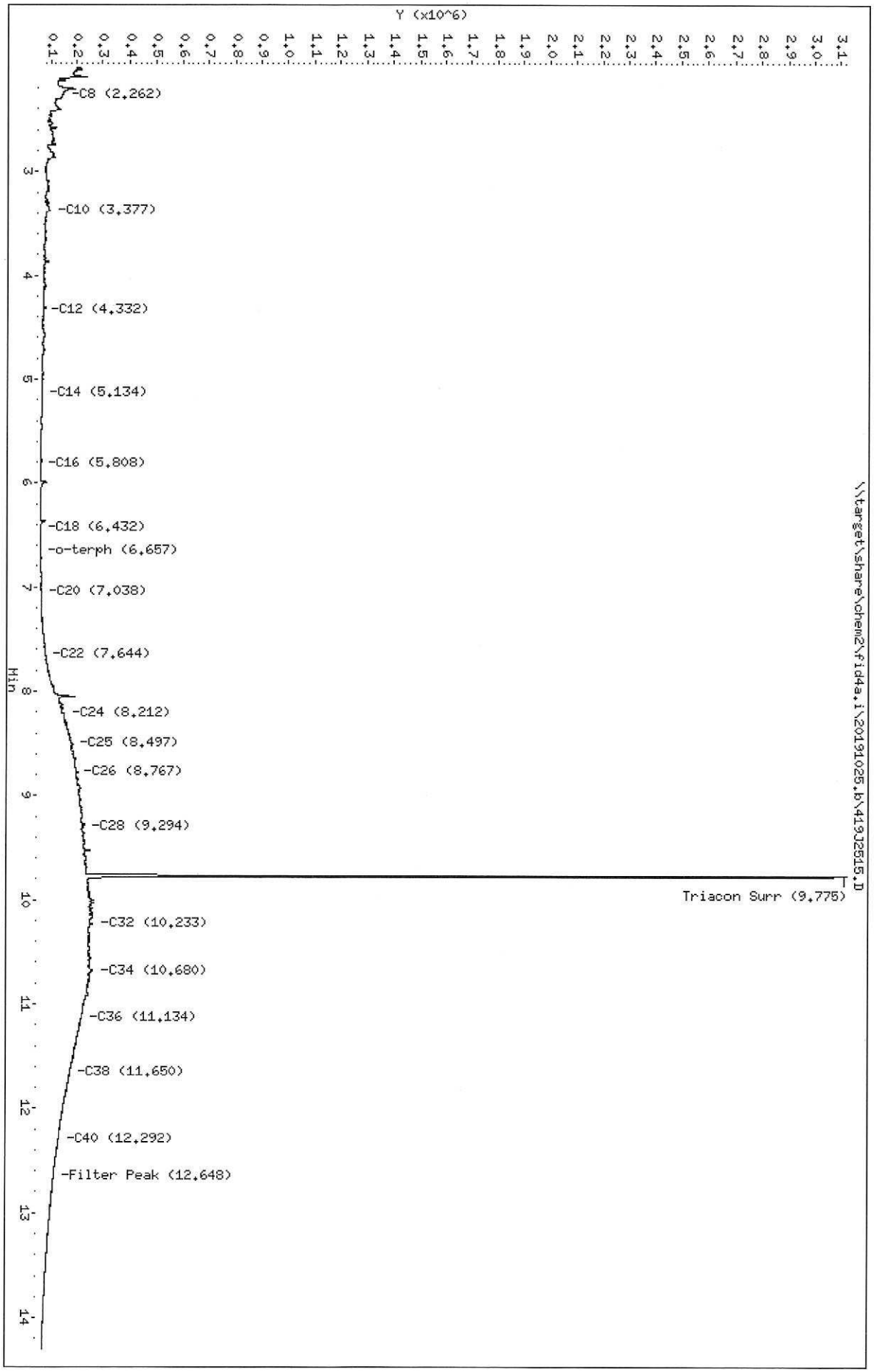




Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2515.D
Date : 25-OCT-2019 16:33
Client ID:
Sample Info: SHJ0406-CAL8

Column phase: RTX-1

Instrument: fid4a.i
Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Page 1

Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2515.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL8
Client ID:
Injection: 25-OCT-2019 16:33
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.262	0.000	86050	63363	WATPHD	(C12-C24)	2977110	18.7
C10	3.377	0.004	37018	79239	WATPHM	(C24-C38)	34653776	261.3
C12	4.332	-0.015	11427	15714	AK102	(C10-C25)	5054179	25.9
C14	5.134	0.004	5154	2057	AK103	(C25-C36)	29175058	291.8
C16	5.808	0.001	2486	1818	OR.DIES	(C10-C28)	13169508	67.2
C18	6.432	-0.002	1168	783				
C20	7.038	-0.005	3772	4551				
C22	7.644	0.005	20883	5211				
C24	8.212	-0.002	97111	92984				
C25	8.497	0.004	127743	100149				
C26	8.767	0.003	144937	36089				
C28	9.294	0.009	174099	155043				
C32	10.233	-0.009	209275	335982				
C34	10.680	-0.001	211521	464774				
Filter Peak	12.648	-0.002	60945	24237	CREOSOT	(C12-C22)	985245	252.6
C36	11.134	0.005	168788	75681				
C38	11.650	0.000	122780	30685				
C40	12.292	0.003	80017	15993				
o-terph	6.657	0.001	951	796				
Triacon Surr	9.775	-0.027	2879377	2052387	NAS DIES	(C10-C24)	3922564	20.1

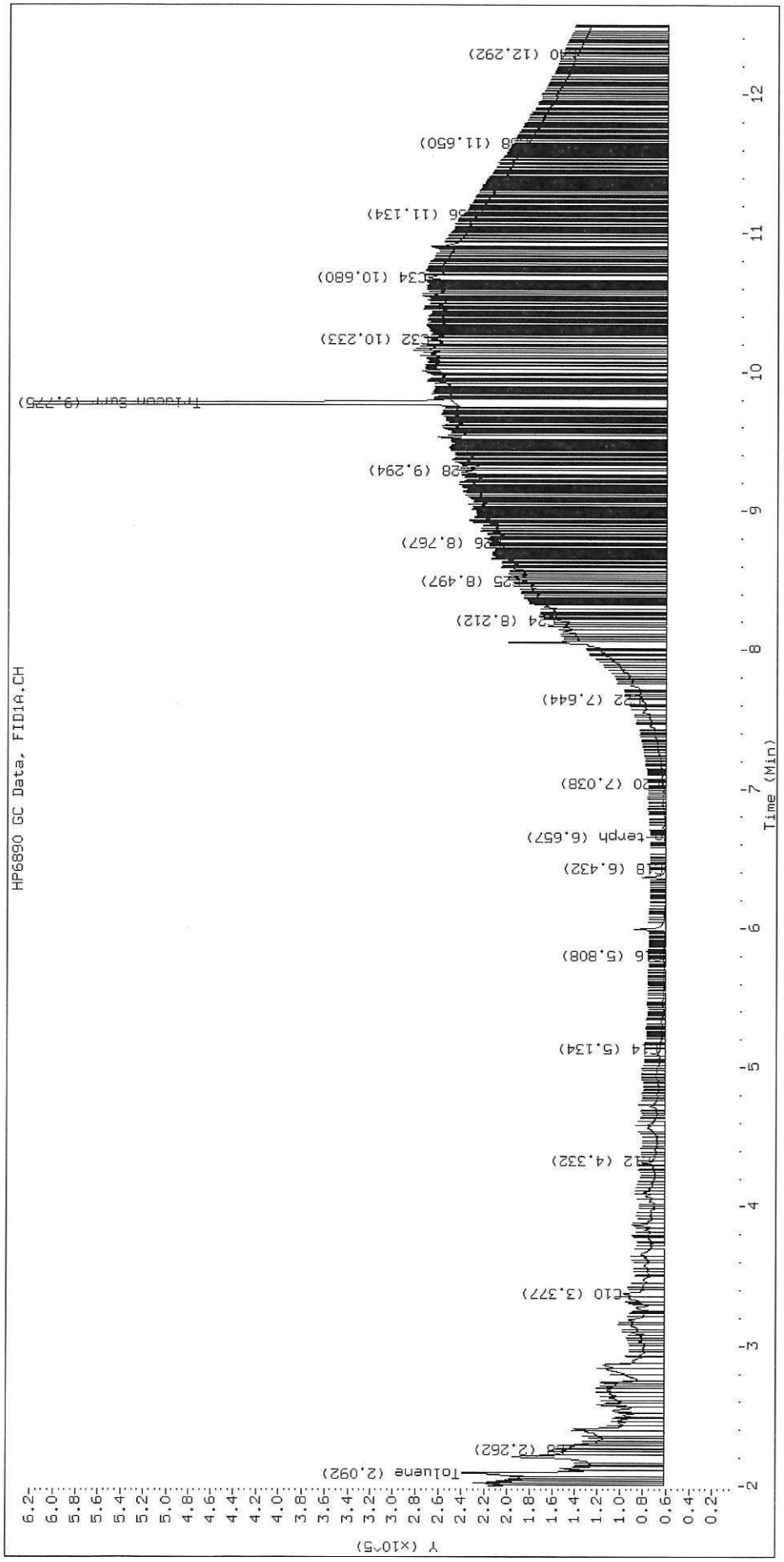
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	796	0.0	
Triacontane	2052387	11.5	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

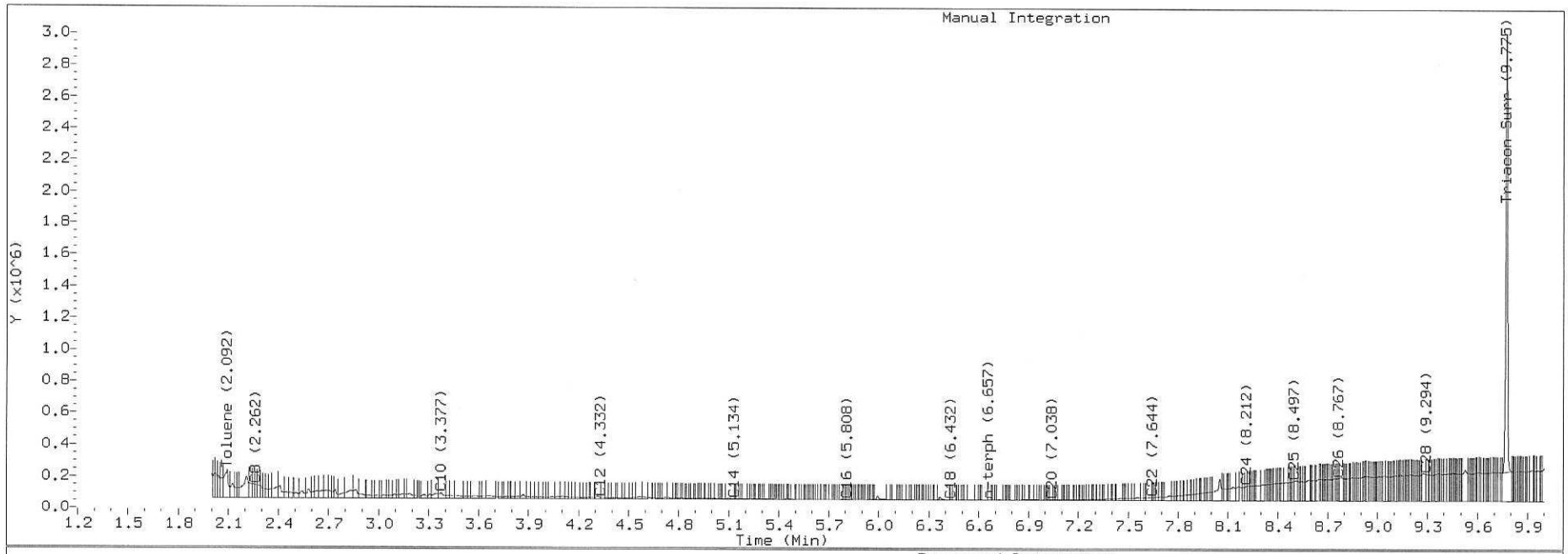
Datafile: FID4A, 20191025.b/419J2515.D SHJ0406-CAL8

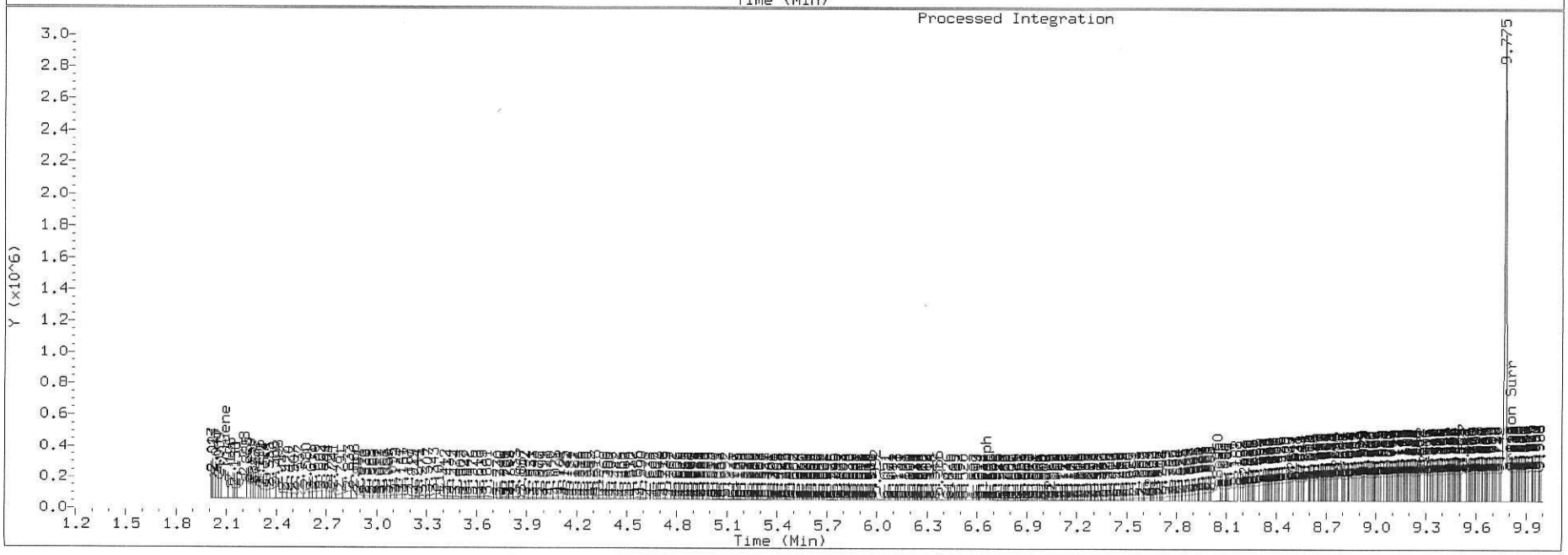


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2515.D Injection: 25-OCT-2019 16:33

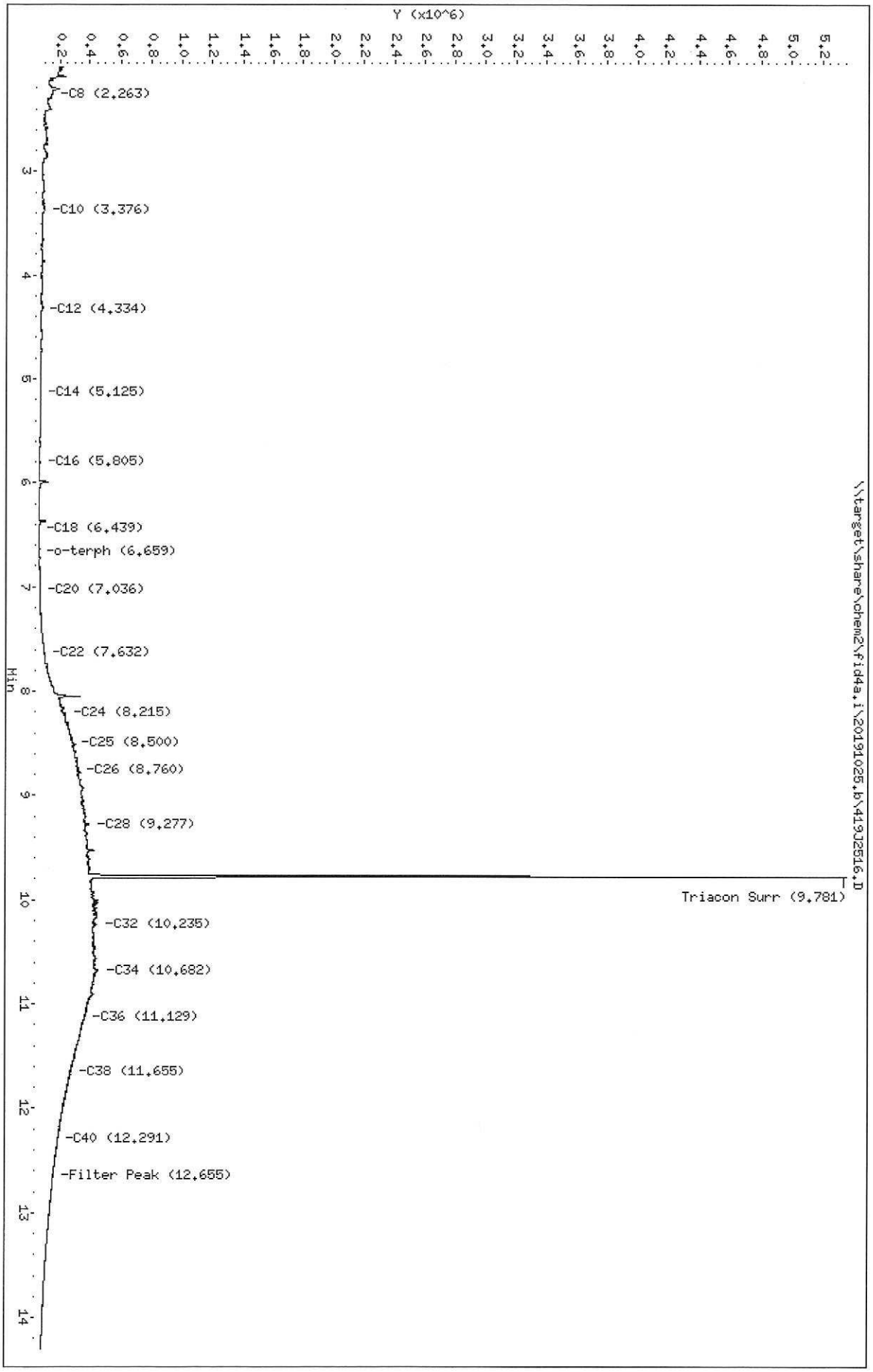
Lab ID:SHJ0406-CAL8





Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2516.D
Date : 25-OCT-2019 16:53
Client ID:
Sample Info: SHJ0406-CAL9
Column phase: RTX-1

Instrument: fid4a.i
Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Page 1

Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2516.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL9
Client ID:
Injection: 25-OCT-2019 16:53
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.263	0.001	85054	58529	WATPHD	(C12-C24)	5661873	35.5
C10	3.376	0.003	38337	74763	WATPHM	(C24-C38)	64308153	484.9
C12	4.334	-0.013	14490	20832	AK102	(C10-C25)	8794999	45.0
C14	5.125	-0.004	9491	6950	AK103	(C25-C36)	54037059	540.5
C16	5.805	-0.002	4594	3625	OR.DIES	(C10-C28)	23868061	121.8
C18	6.439	0.004	1696	642				
C20	7.036	-0.007	7504	9871				
C22	7.632	-0.007	42646	55918				
C24	8.215	0.001	187247	321321				
C25	8.500	0.007	242499	189952				
C26	8.760	-0.005	272862	175979				
C28	9.277	-0.008	344800	562248				
C32	10.235	-0.007	399681	717669				
C34	10.682	0.001	410565	682394				
Filter Peak	12.655	0.004	112959	178875	CREOSOT	(C12-C22)	1771420	454.1
C36	11.129	-0.000	318612	63696				
C38	11.655	0.005	227739	158292				
C40	12.291	0.002	146308	65396				
o-terph	6.659	0.002	1793	1646				
Triacon Surr	9.781	-0.021	4947832	3881047	NAS DIES	(C10-C24)	6718189	34.4

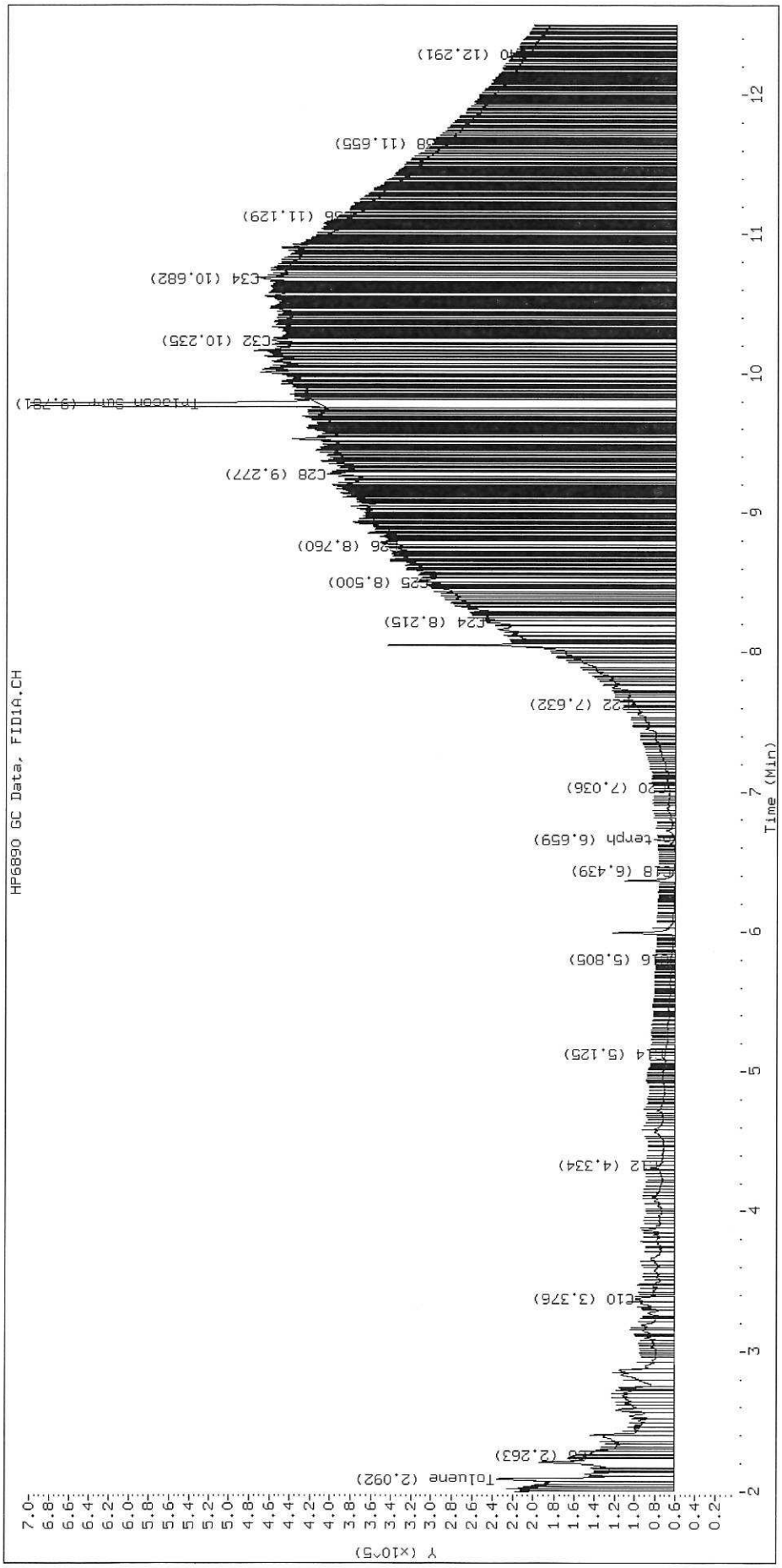
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	1646	0.0	
Triacontane	3881047	21.8	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

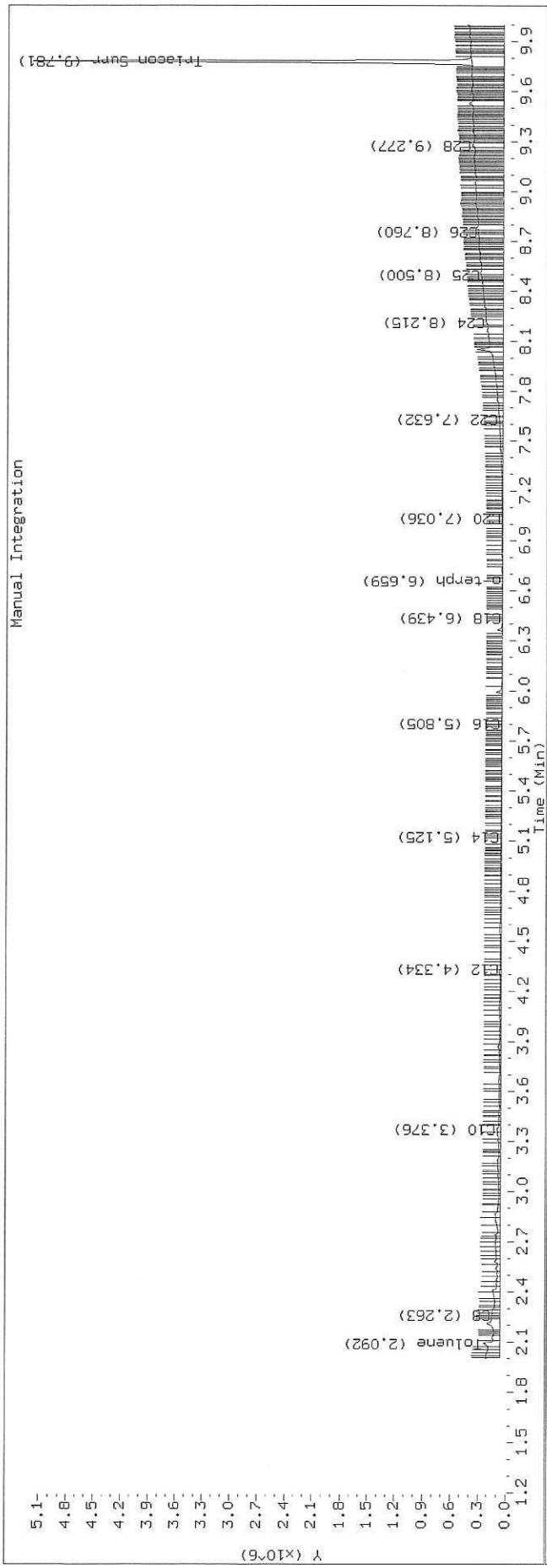
Datafile: FID4A, 20191025.b/419J2516.D SHJ0406-CAL9

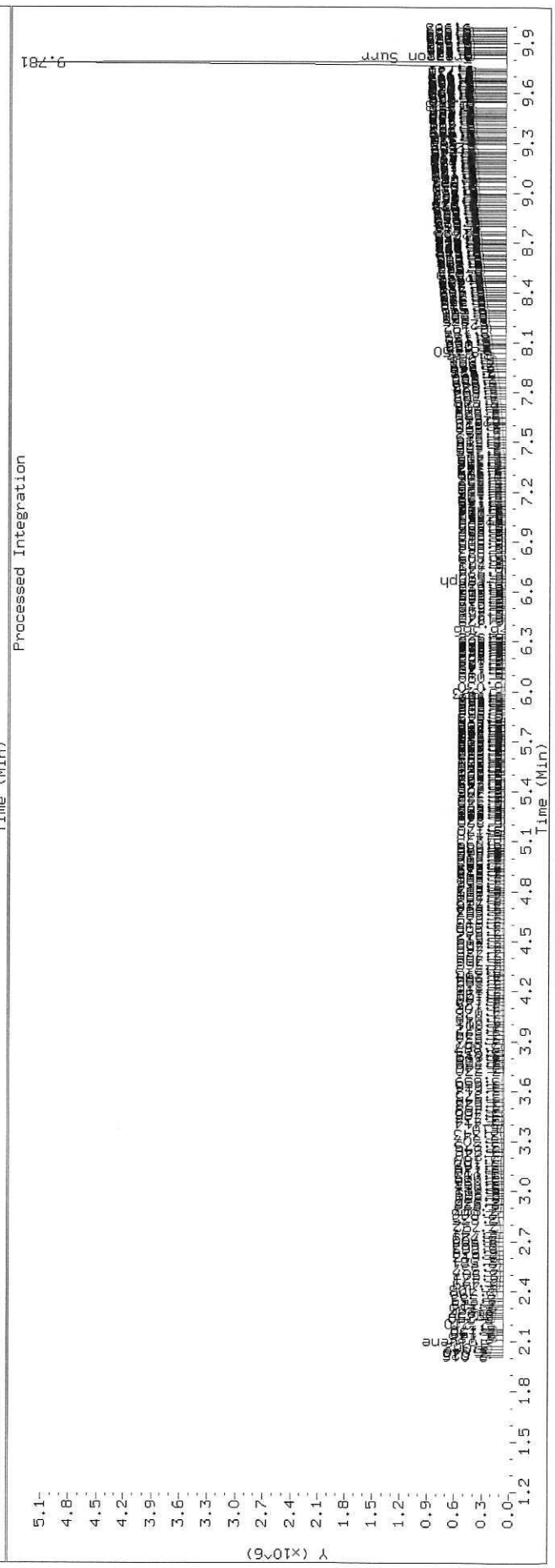


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2516.D Injection: 25-OCT-2019 16:53

Lab ID:SHJ0406-CAL9





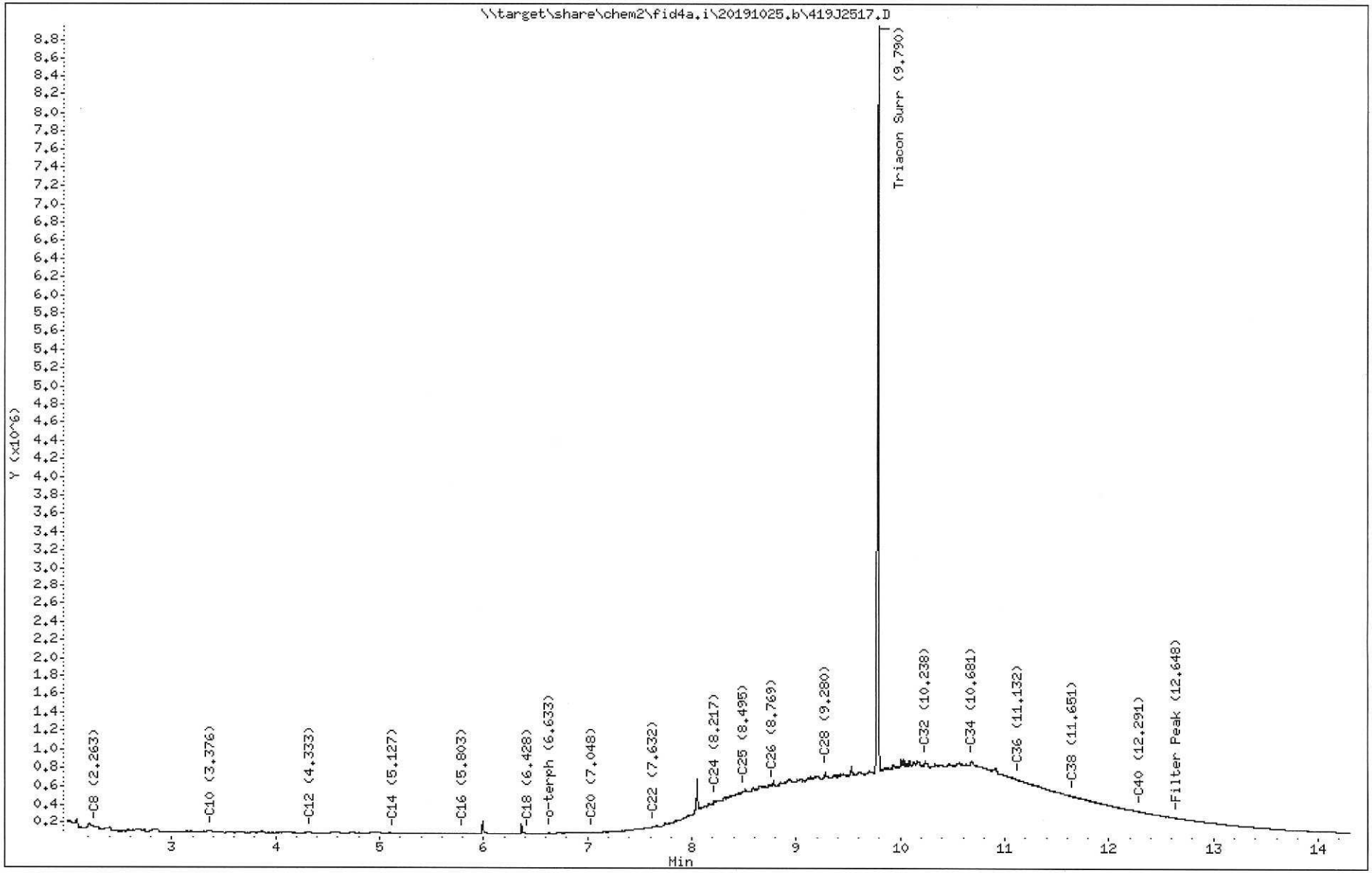
Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2517.D
Date : 25-OCT-2019 17:13
Client ID:
Sample Info: SHJ0406-CALA

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2517.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALA
Client ID:
Injection: 25-OCT-2019 17:13
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.263	0.001	78760	49973	WATPHD	(C12-C24)	11050301	69.4
C10	3.376	0.003	33282	53155	WATPHM	(C24-C38)	130458600	983.6
C12	4.333	-0.014	8330	11675	AK102	(C10-C25)	16134883	82.5
C14	5.127	-0.003	6869	8015	AK103	(C25-C36)	110338631	1103.6
C16	5.803	-0.004	4269	6183	OR.DIES	(C10-C28)	47155868	240.6
C18	6.428	-0.006	4035	4694				
C20	7.048	0.005	16630	12336				
C22	7.632	-0.007	93050	108452				
C24	8.217	0.002	386378	321791				
C25	8.495	0.002	491396	292213				
C26	8.769	0.005	557751	166690				
C28	9.280	-0.005	695698	804868				
C32	10.238	-0.005	823126	997439				
C34	10.681	-0.000	821771	761528				
Filter Peak	12.648	-0.002	202612	170825	CREOSOT	(C12-C22)	2854310	731.7
C36	11.132	0.003	625826	249171				
C38	11.651	0.001	444433	177367				
C40	12.291	0.002	276466	164427				
o-terph	6.633	-0.023	11730	15135				
Triacon Surr	9.790	-0.012	8190520	7927188	NAS DIES	(C10-C24)	11670623	59.8

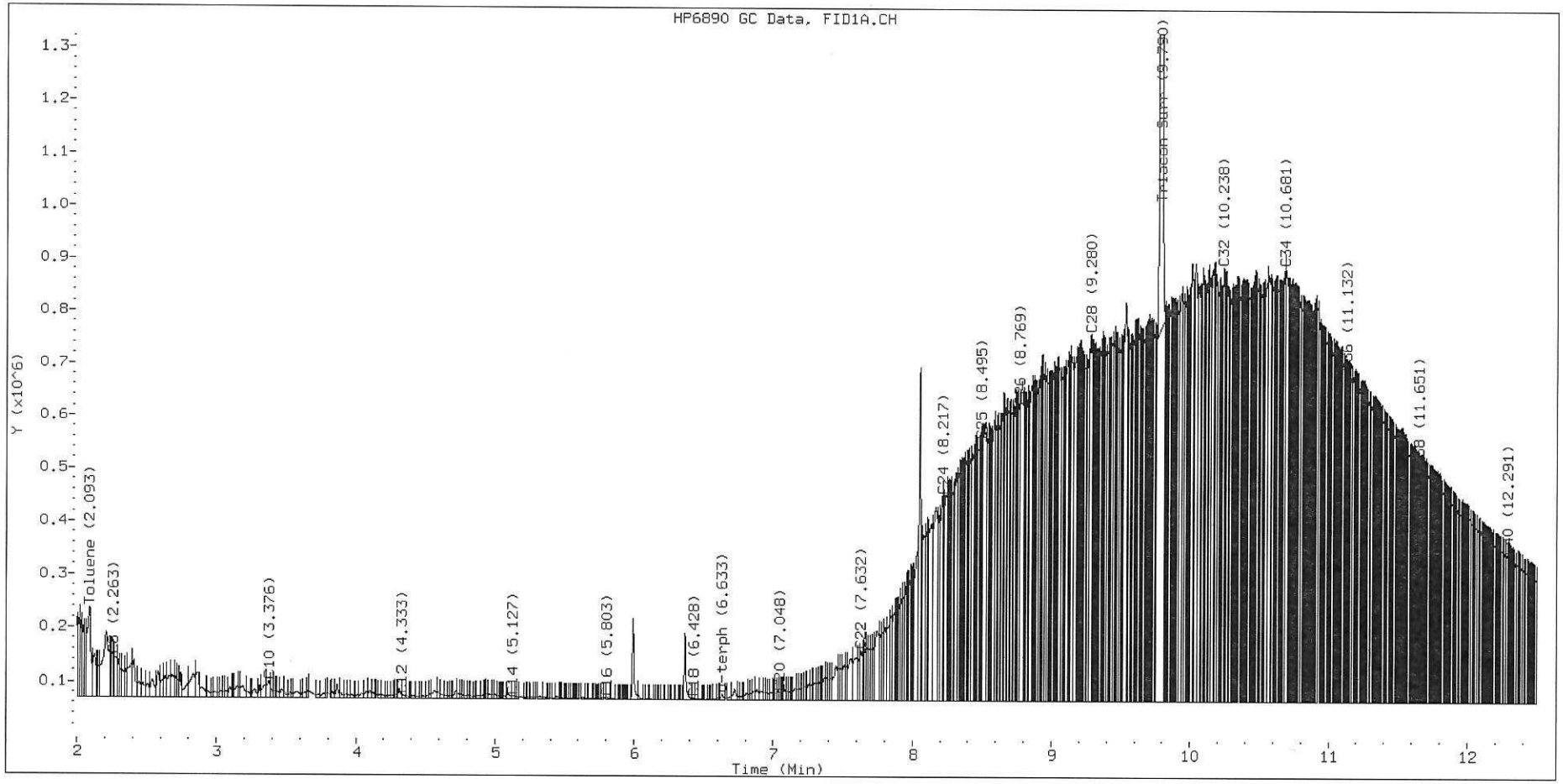
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	15135	0.1
Triacontane	7927188	44.5 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

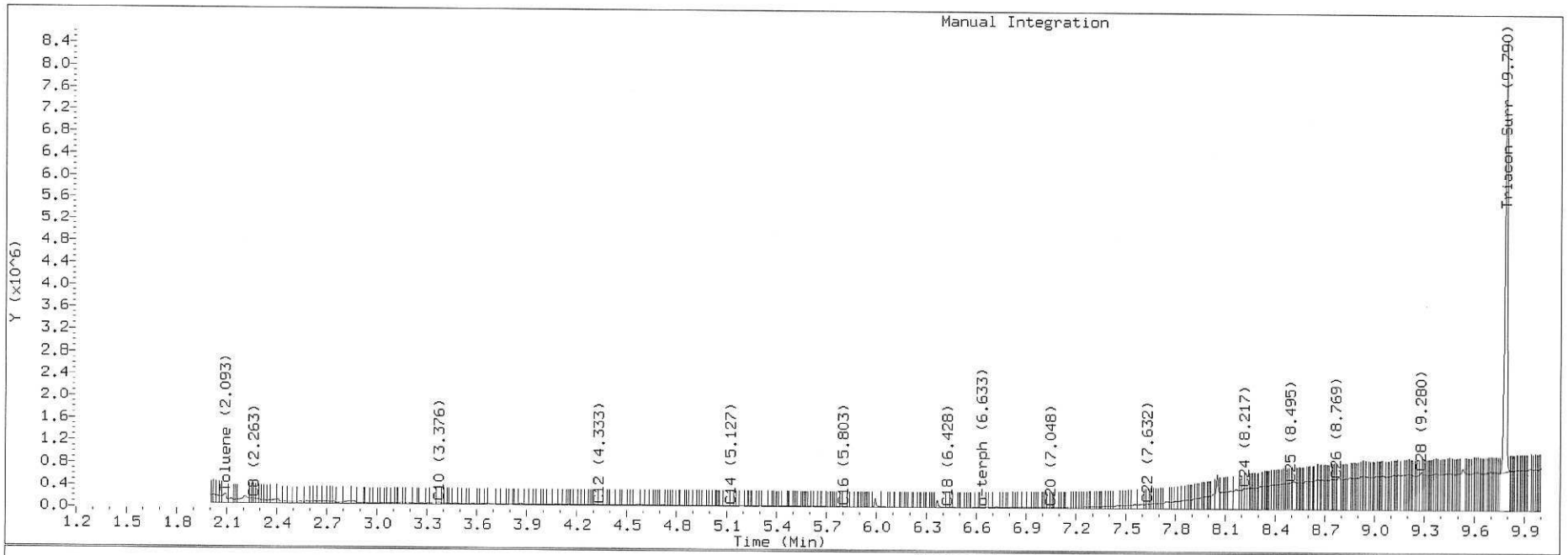
Datafile: FID4A, 20191025.b/419J2517.D SHJ0406-CALA

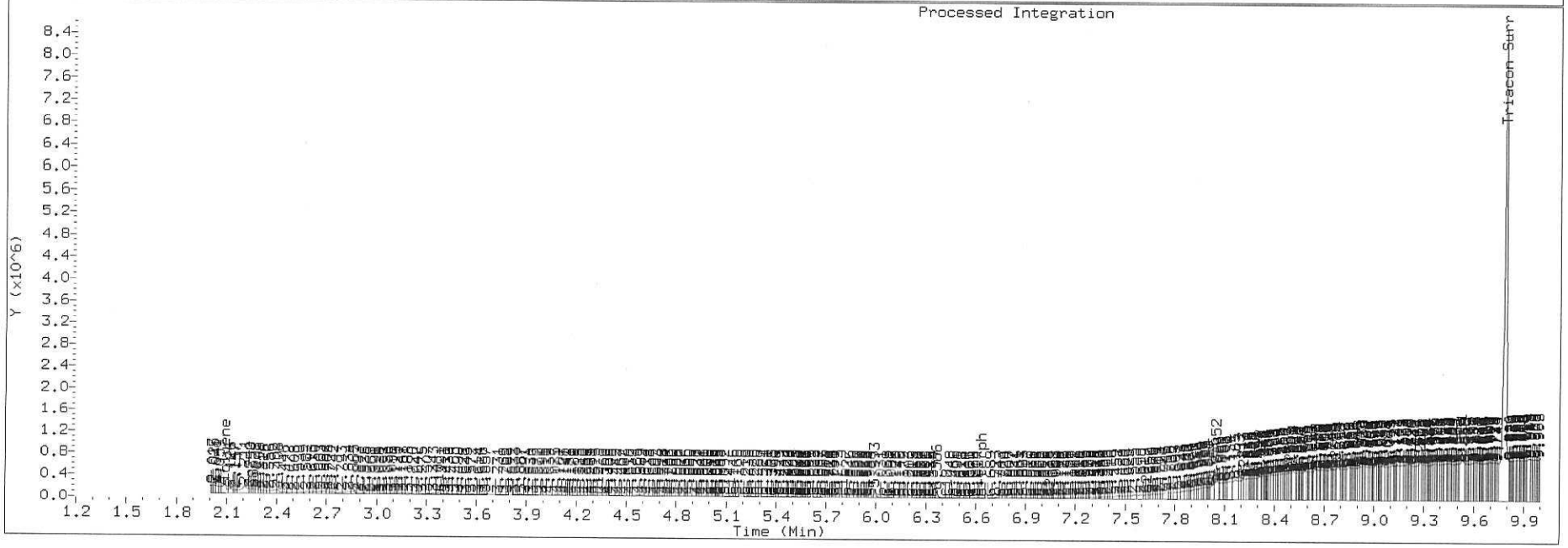


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2517.D Injection: 25-OCT-2019 17:13

Lab ID:SHJ0406-CALA



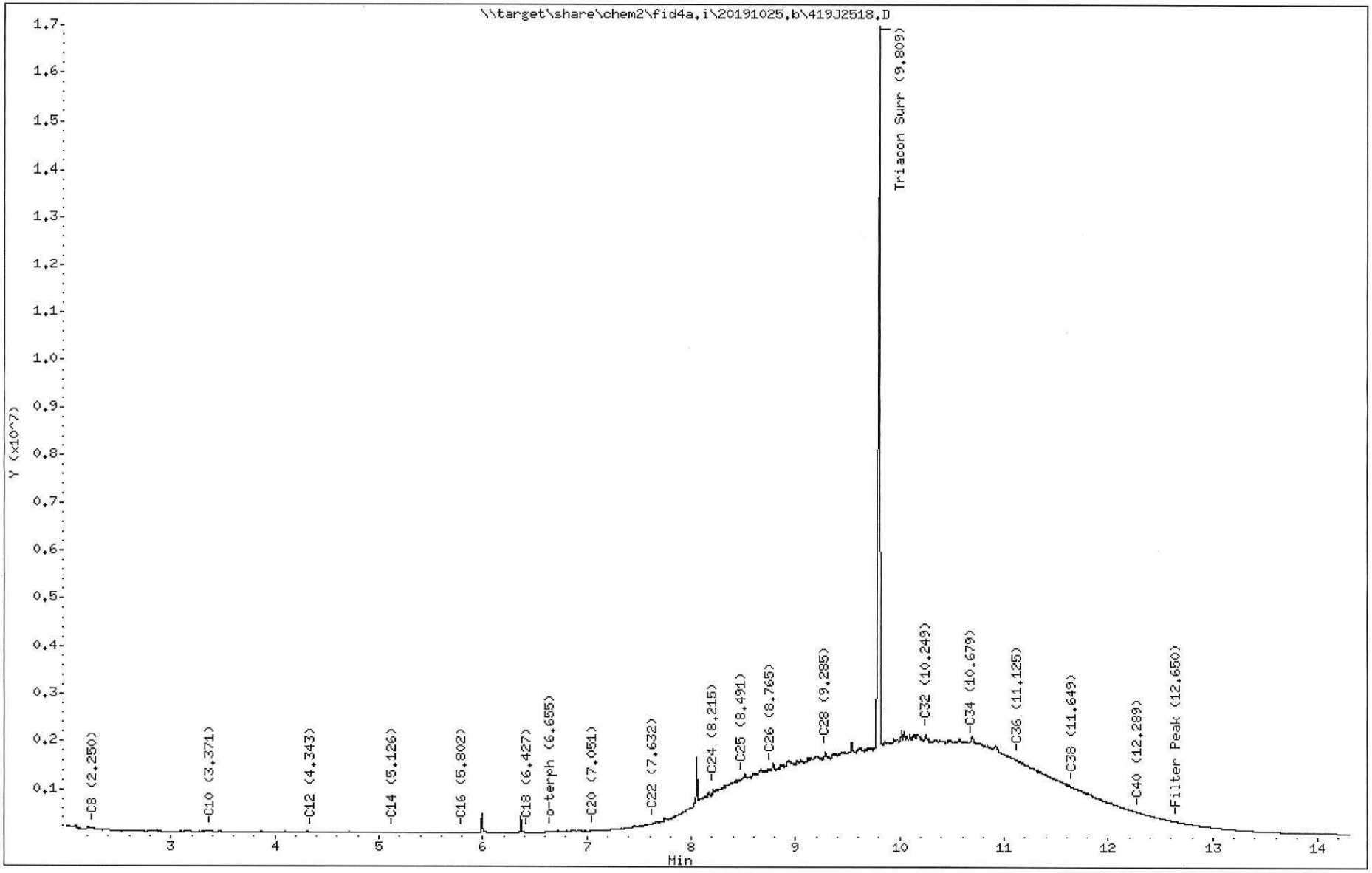


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2518.D
Date : 25-OCT-2019 17:34
Client ID:
Sample Info: SHJ0406-CALB

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2518.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALB
Client ID:
Injection: 25-OCT-2019 17:34
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.250	-0.012	77817	116710	WATPHD	(C12-C24)	27251753	171.0
C10	3.371	-0.002	31760	39598	WATPHM	(C24-C38)	331873325	2502.2
C12	4.343	-0.004	6520	6156	AK102	(C10-C25)	38872526	198.8
C14	5.126	-0.004	7874	9340	AK103	(C25-C36)	281447225	2815.1
C16	5.802	-0.005	7984	9771	OR.DIES	(C10-C28)	115893490	591.3
C18	6.427	-0.007	14076	14289				
C20	7.051	0.008	46537	34495				
C22	7.632	-0.007	235207	295349				
C24	8.215	0.000	955047	900361				
C25	8.491	-0.002	1184503	236628				
C26	8.765	0.000	1401067	1730192				
C28	9.285	-0.001	1743563	2775911				
C32	10.249	0.007	2106415	3055227				
C34	10.679	-0.002	1974576	1267121				
Filter Peak	12.650	-0.001	278159	124338	CREOSOT	(C12-C22)	6708937	1719.8
C36	11.125	-0.004	1581807	1021345				
C38	11.649	-0.001	1027941	256759				
C40	12.289	0.000	486929	193205				
o-terph	6.655	-0.002	18811	15731				
Triacon Surr	9.809	0.007	15056726	20120024	NAS DIES	(C10-C24)	27786026	142.4

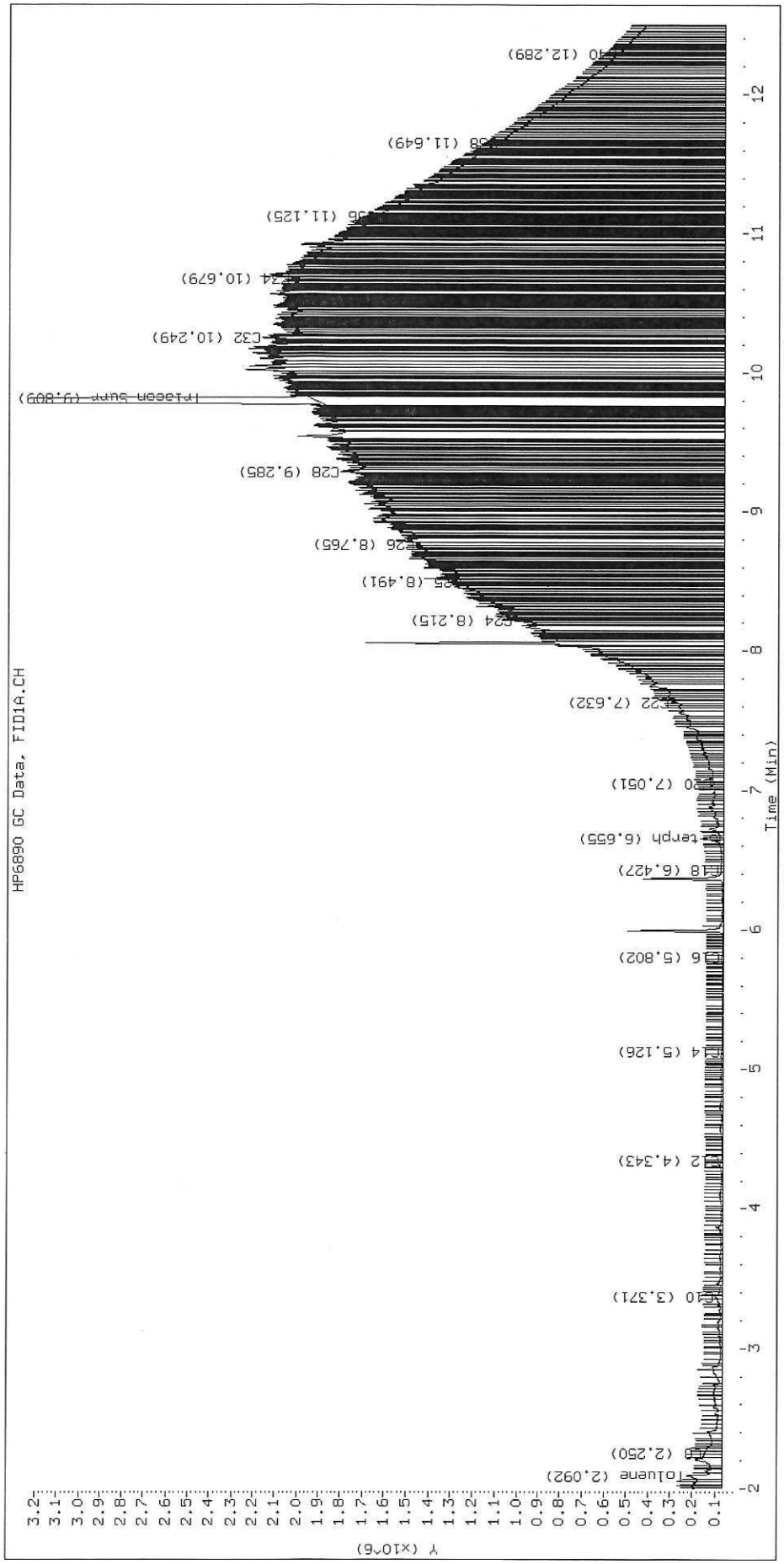
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	15731	0.1	
Triacontane	20120024	113.0	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

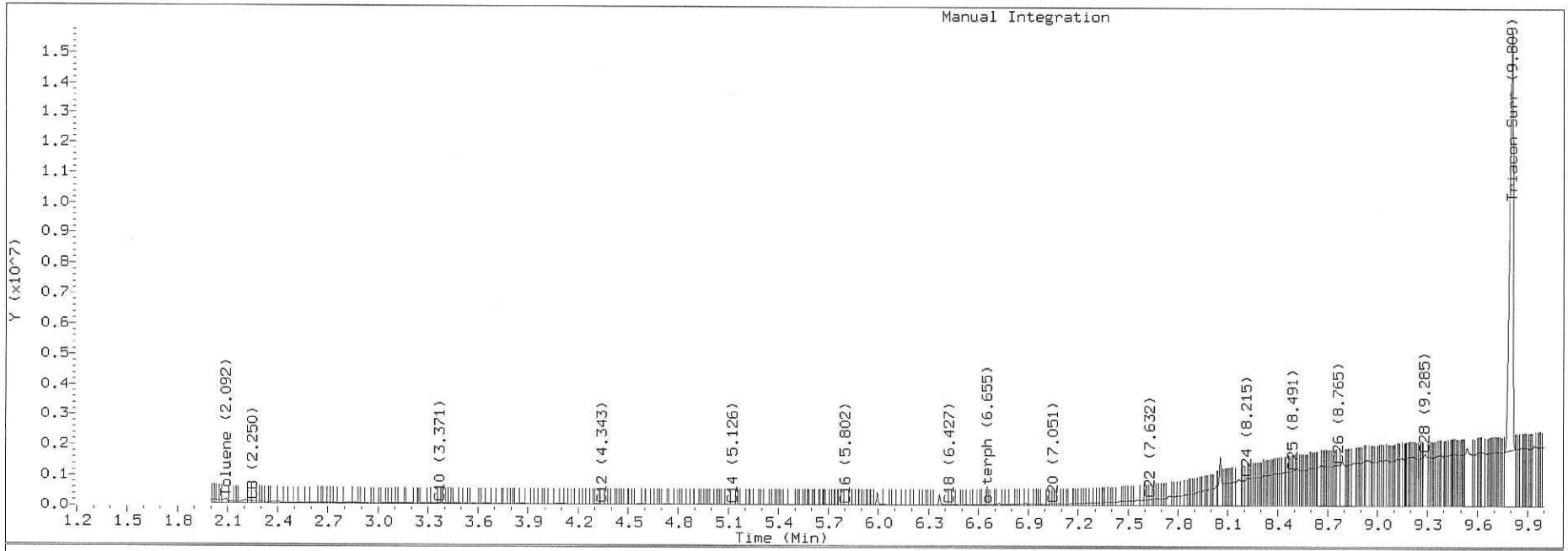
Datafile: FID4A, 20191025.b/419J2518.D SHJ0406-CALB

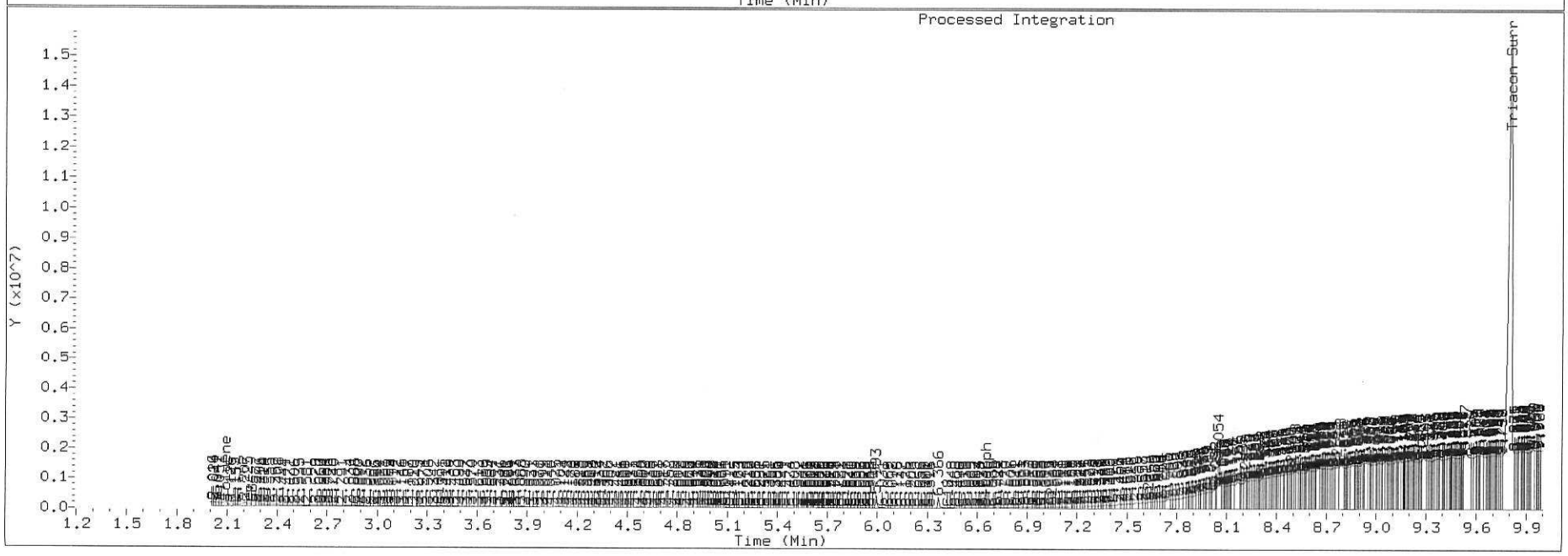


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2518.D Injection: 25-OCT-2019 17:34

Lab ID:SHJ0406-CALB



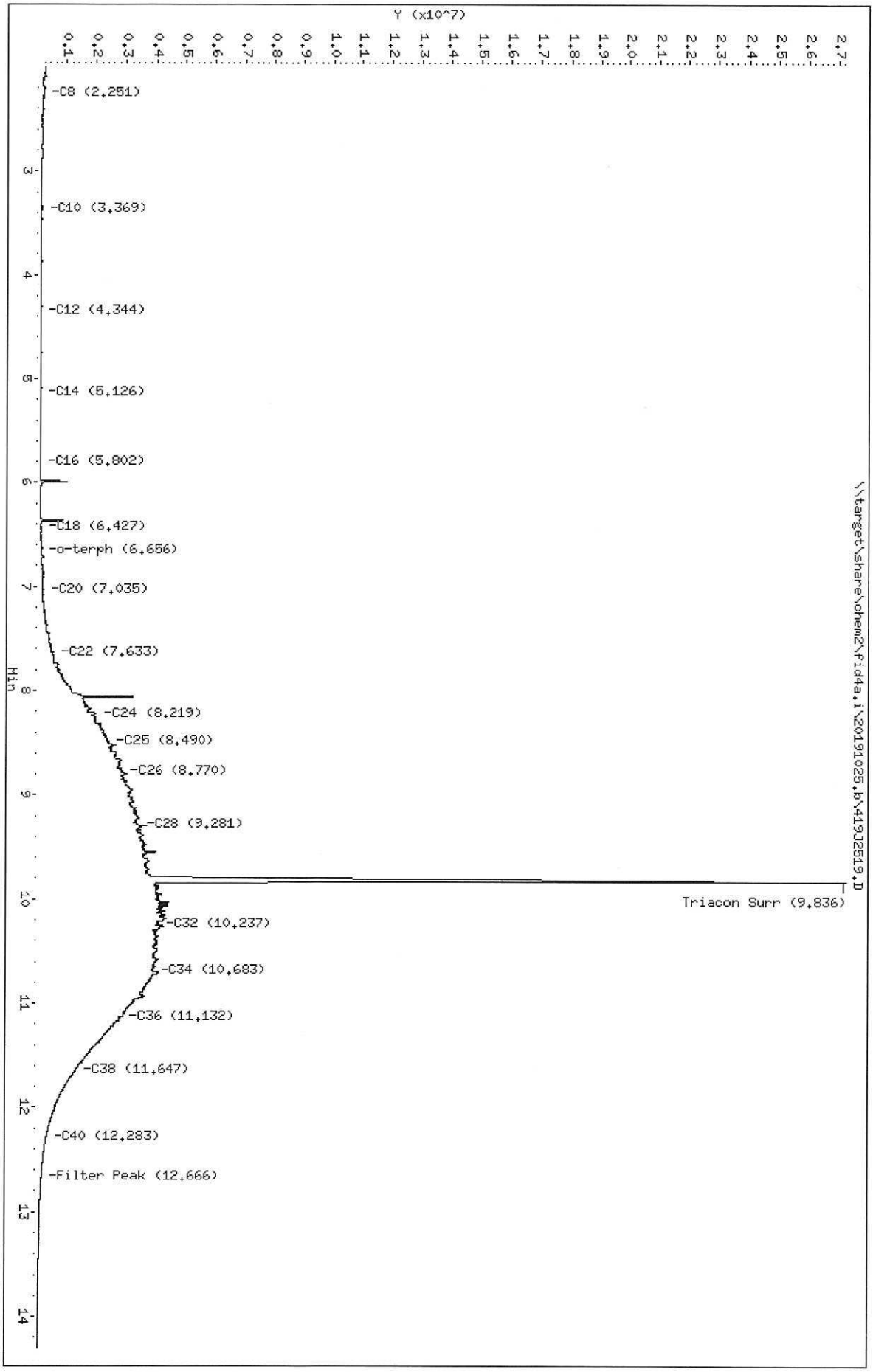


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2519.D
Date : 25-OCT-2019 17:54
Client ID:
Sample Info: SHJ0406-CALC

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2519.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALC
Client ID:
Injection: 25-OCT-2019 17:54
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.251	-0.011	83410	131526	WATPHD	(C12-C24)	54951988	344.9
C10	3.369	-0.004	40067	53627	WATPHM	(C24-C38)	647842842	4884.5
C12	4.344	-0.003	8504	8688	AK102	(C10-C25)	79702569	407.7
C14	5.126	-0.004	19567	26129	AK103	(C25-C36)	565644605	5657.8
C16	5.802	-0.006	21777	24178	OR.DIES	(C10-C28)	235116720	1199.6
C18	6.427	-0.008	35077	33036				
C20	7.035	-0.008	119620	119856				
C22	7.633	-0.006	481948	602675				
C24	8.219	0.004	1952483	1661789				
C25	8.490	-0.003	2383743	592688				
C26	8.770	0.005	2837167	1694204				
C28	9.281	-0.005	3377335	3333438				
C32	10.237	-0.006	4076731	3428537				
C34	10.683	0.002	3869795	1544856				
Filter Peak	12.666	0.015	116179	102746	CREOSOT	(C12-C22)	14260161	3655.6
C36	11.132	0.003	2846055	707761				
C38	11.647	-0.002	1313112	715795				
C40	12.283	-0.006	302346	281489				
o-terph	6.656	-0.001	43010	66343				
Triacon Surr	9.836	0.034	23293566	39698048	NAS DIES	(C10-C24)	55485985	284.3

Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

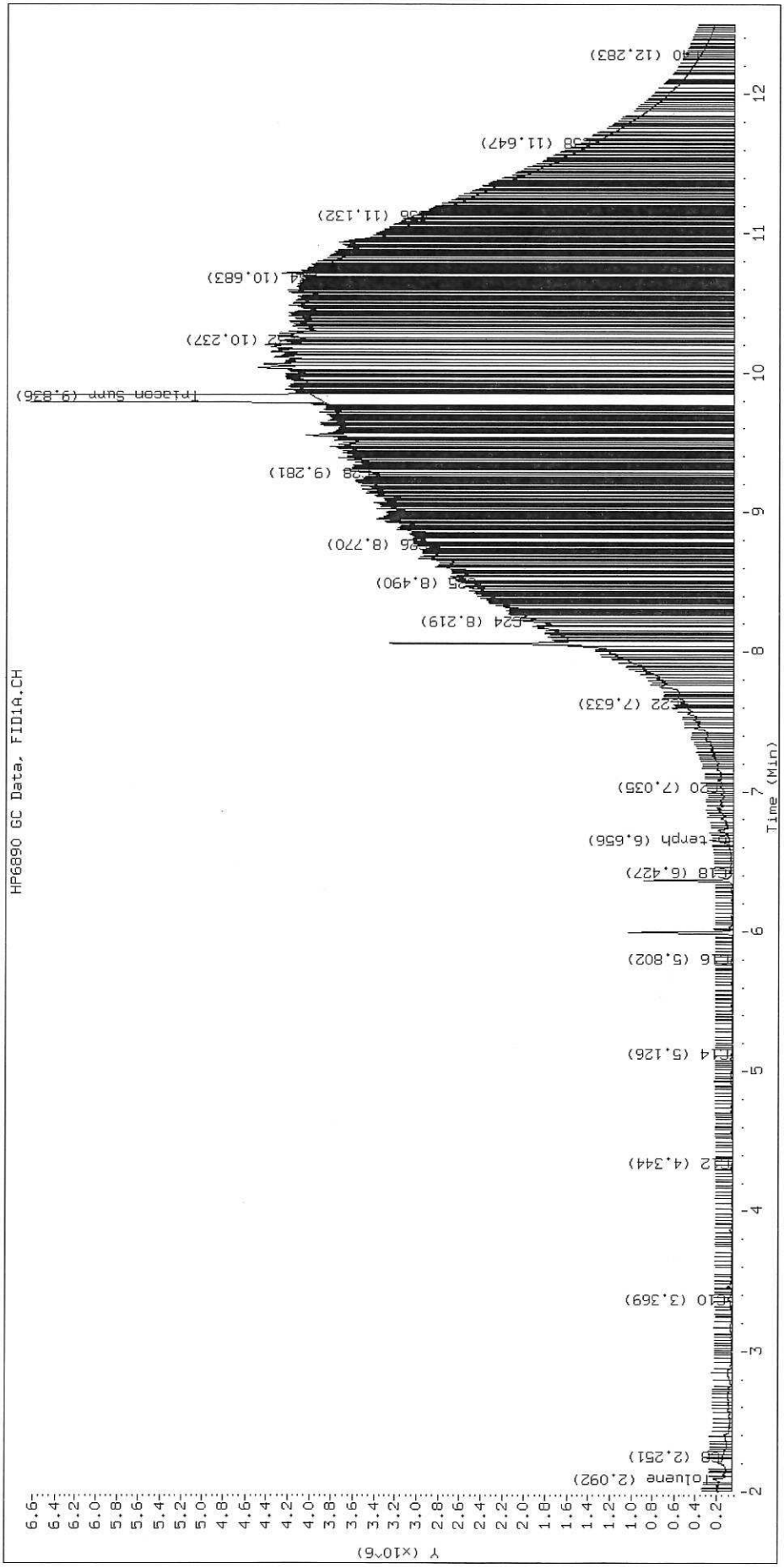
Surrogate	Area	Amount	
o-Terphenyl	66343	0.3	
Triacontane	39698048	223.0	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2519.D SHJ0406-CALC

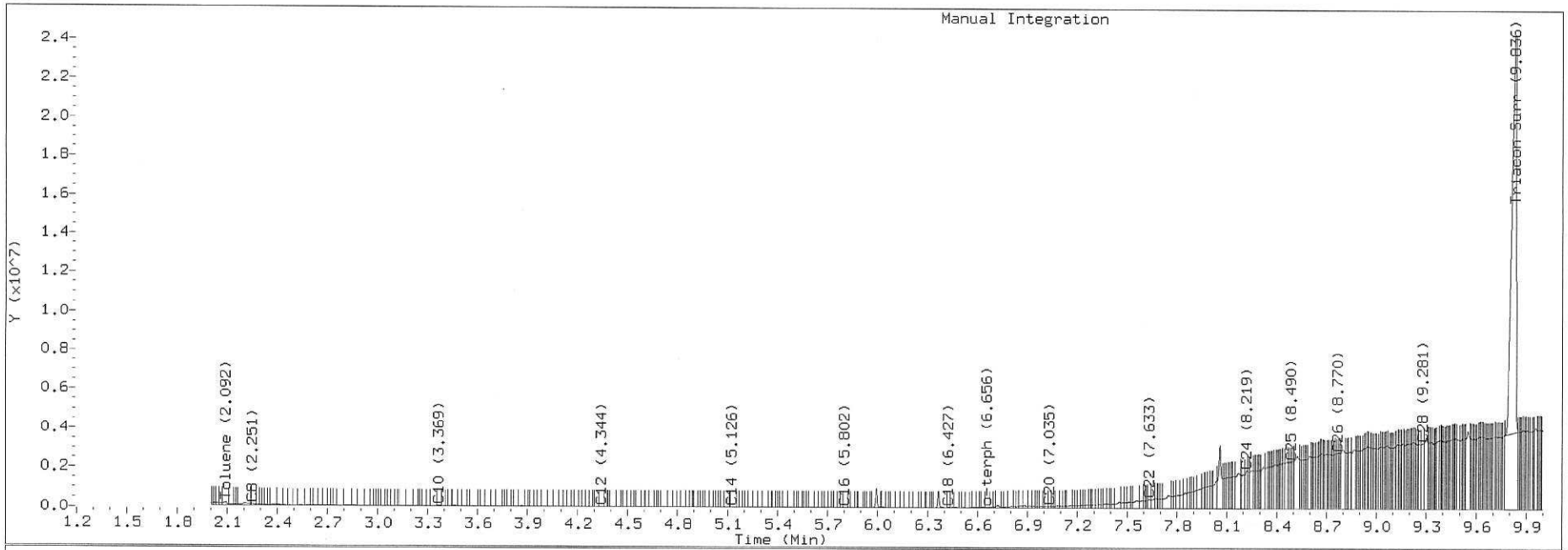
HP6890 GC Data, FID1A.CH

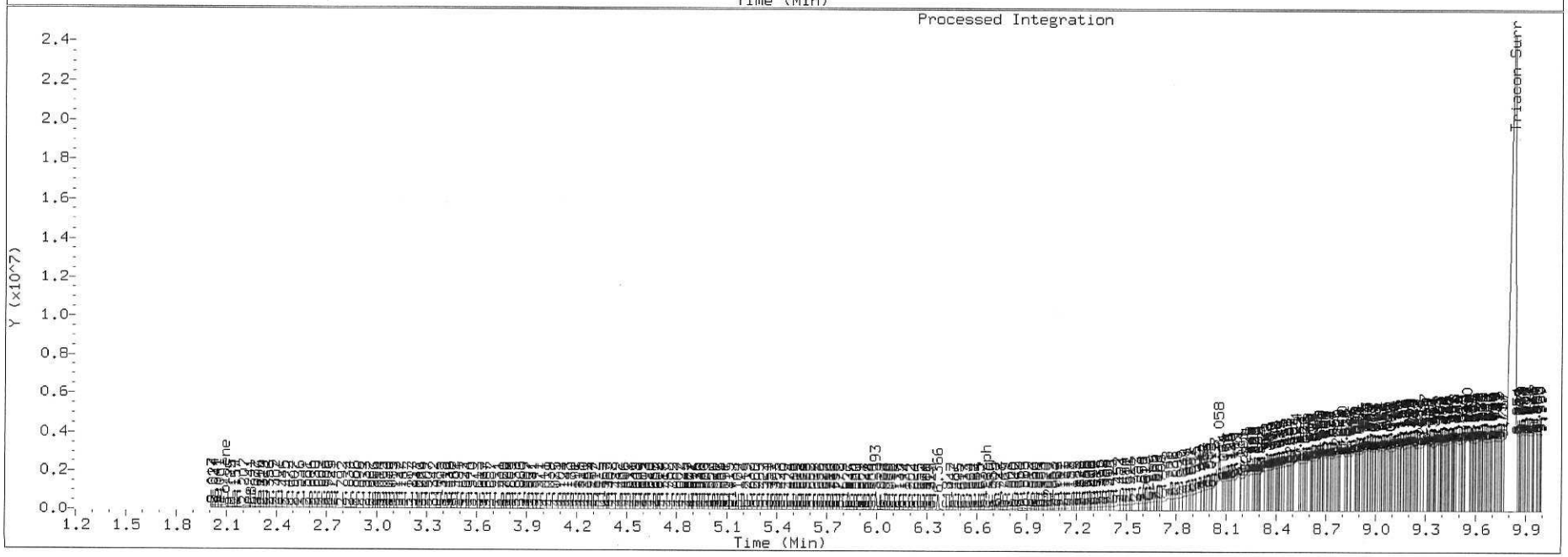


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2519.D Injection: 25-OCT-2019 17:54

Lab ID:SHJ0406-CALC





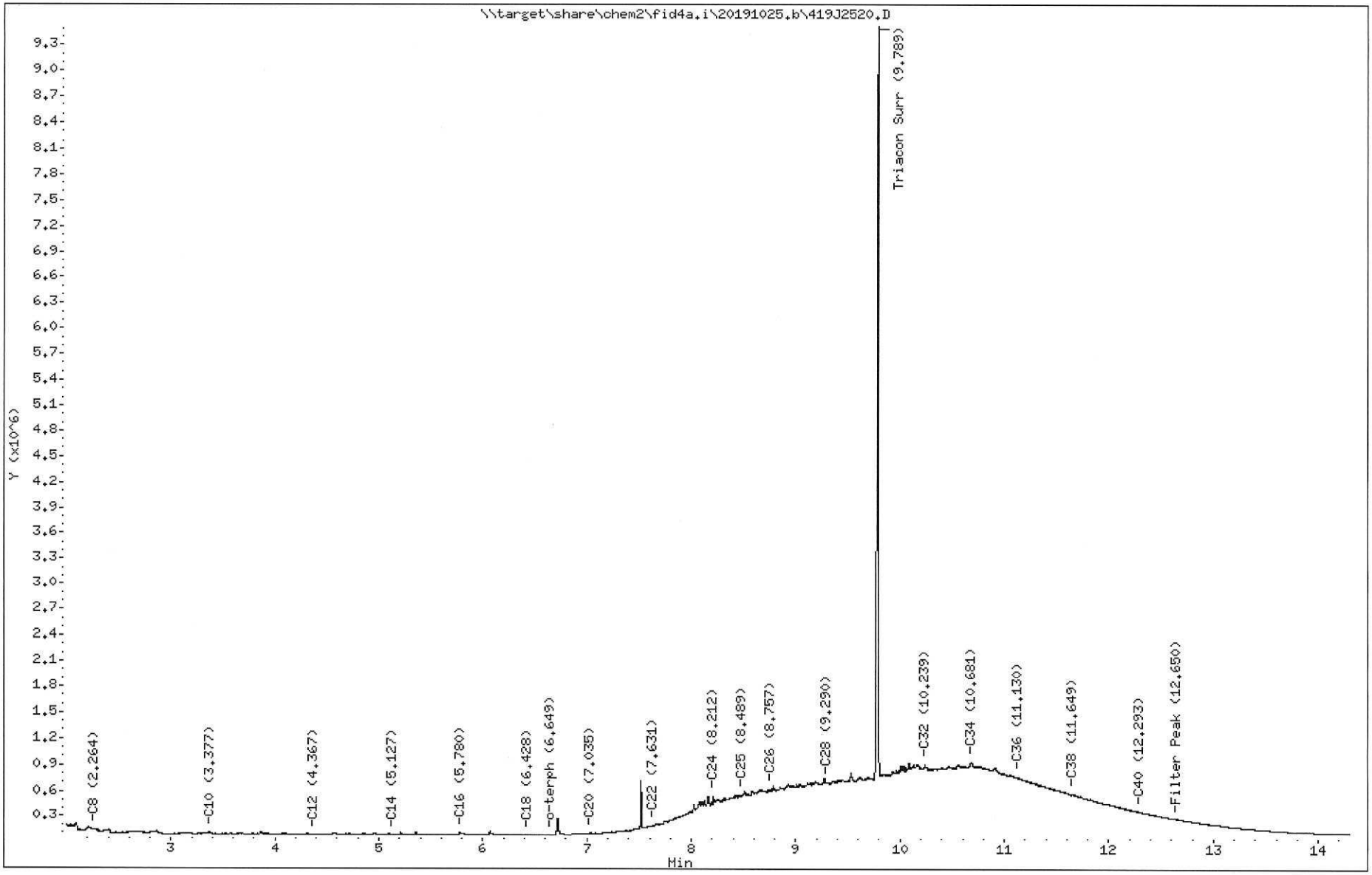
Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2520.D
Date : 25-OCT-2019 18:14
Client ID:
Sample Info: SHJ0406-SCV2

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2520.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-SCV2
Client ID:
Injection: 25-OCT-2019 18:14
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	61386	42202	WATPHD	(C12-C24)	14006466	87.9
C10	3.377	0.004	28038	52387	WATPHM	(C24-C38)	135195593	1019.3
C12	4.367	0.020	3146	3151	AK102	(C10-C25)	18822986	96.3
C14	5.127	-0.003	4143	4458	AK103	(C25-C36)	113030798	1130.6
C16	5.780	-0.027	35494	74348	OR.DIES	(C10-C28)	49340102	251.7
C18	6.428	-0.007	6156	6874				
C20	7.035	-0.008	26093	30304				
C22	7.631	-0.008	127794	247657				
C24	8.212	-0.003	471017	746279				
C25	8.489	-0.004	491516	98217				
C26	8.757	-0.008	557900	550938				
C28	9.290	0.005	640615	223711				
C32	10.239	-0.004	847729	1306304				
C34	10.681	-0.000	865603	764427				
Filter Peak	12.650	-0.000	213232	84835	CREOSOT	(C12-C22)	3605357	924.2
C36	11.130	0.001	692159	413129				
C38	11.649	-0.001	503231	200454				
C40	12.293	0.004	305287	287895				
o-terph	6.649	-0.008	4022	3699				
Triacon Surr	9.789	-0.013	8762887	8519530	NAS DIES	(C10-C24)	14444503	74.0

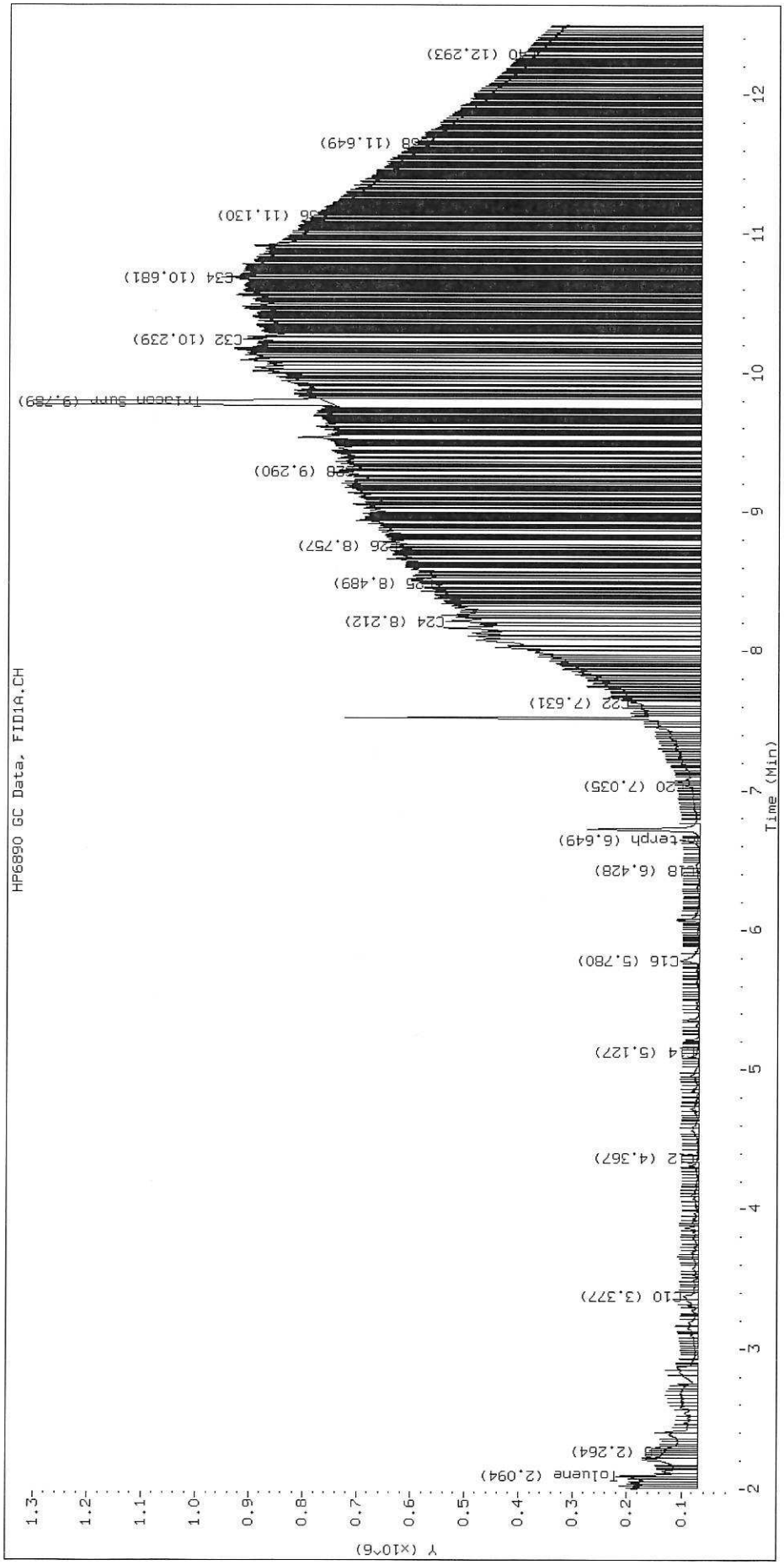
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	3699	0.0	
Triacontane	8519530	47.9	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

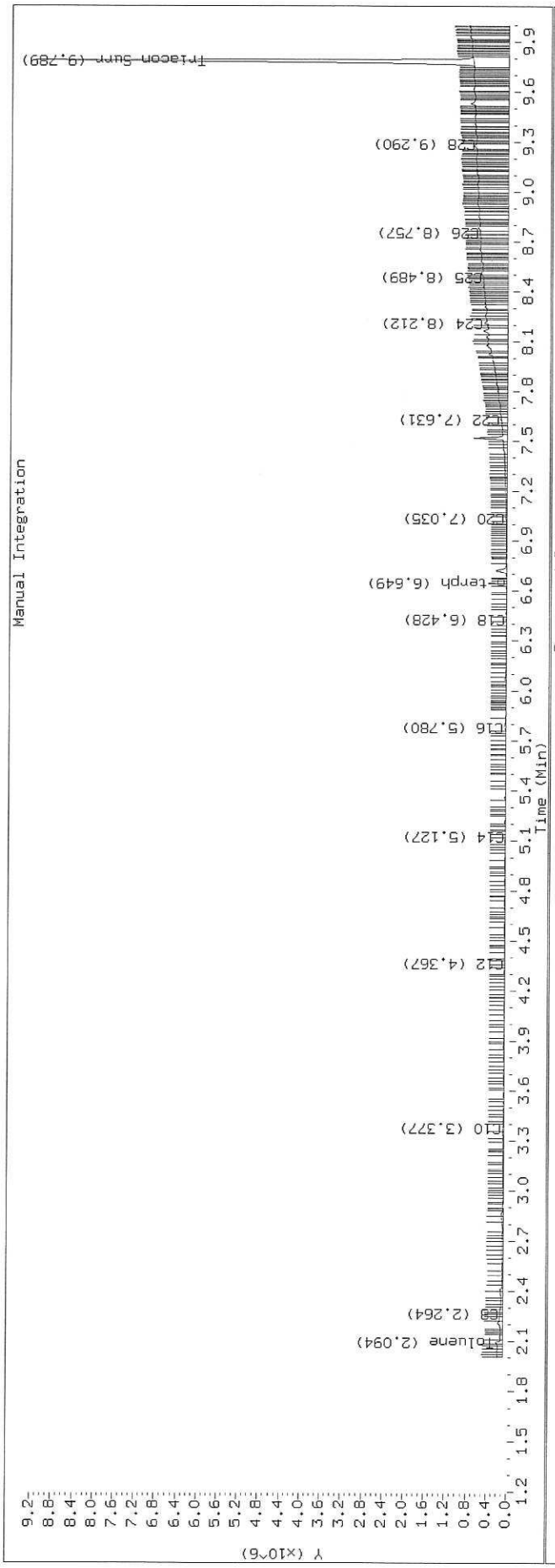
Datafile: FID4A, 20191025.b/419J2520.D SHJ0406-SCV2

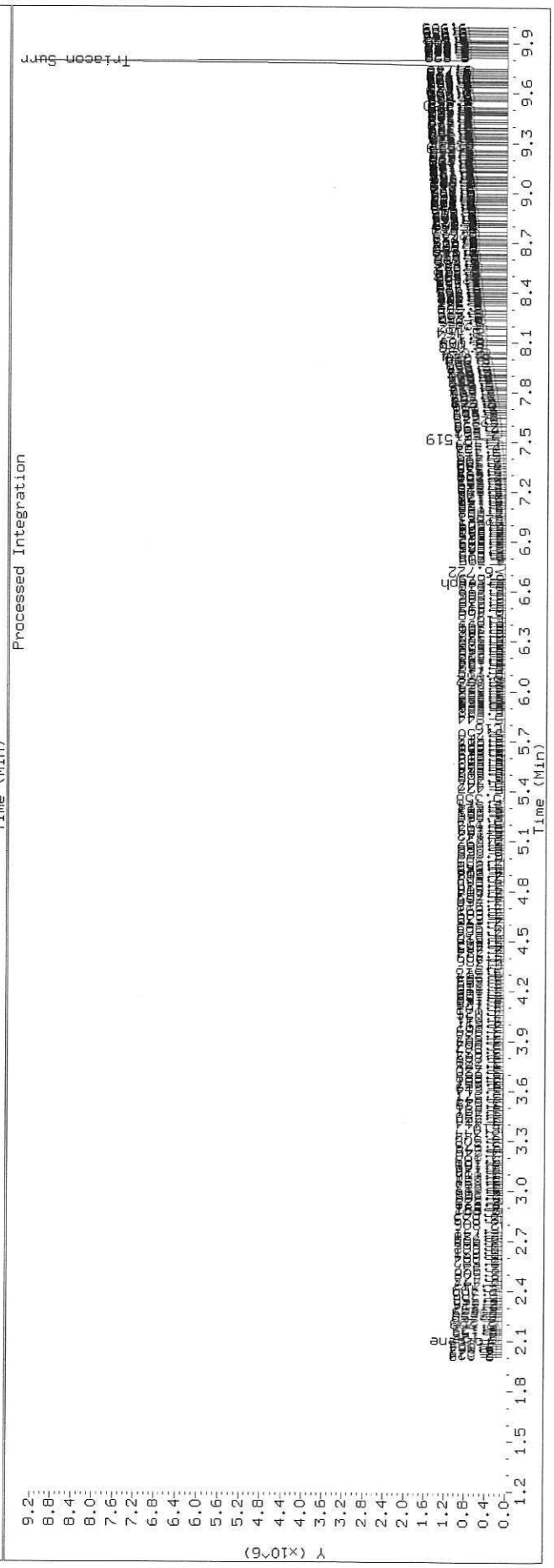


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2520.D Injection: 25-OCT-2019 18:14

Lab ID:SHJ0406-SCV2



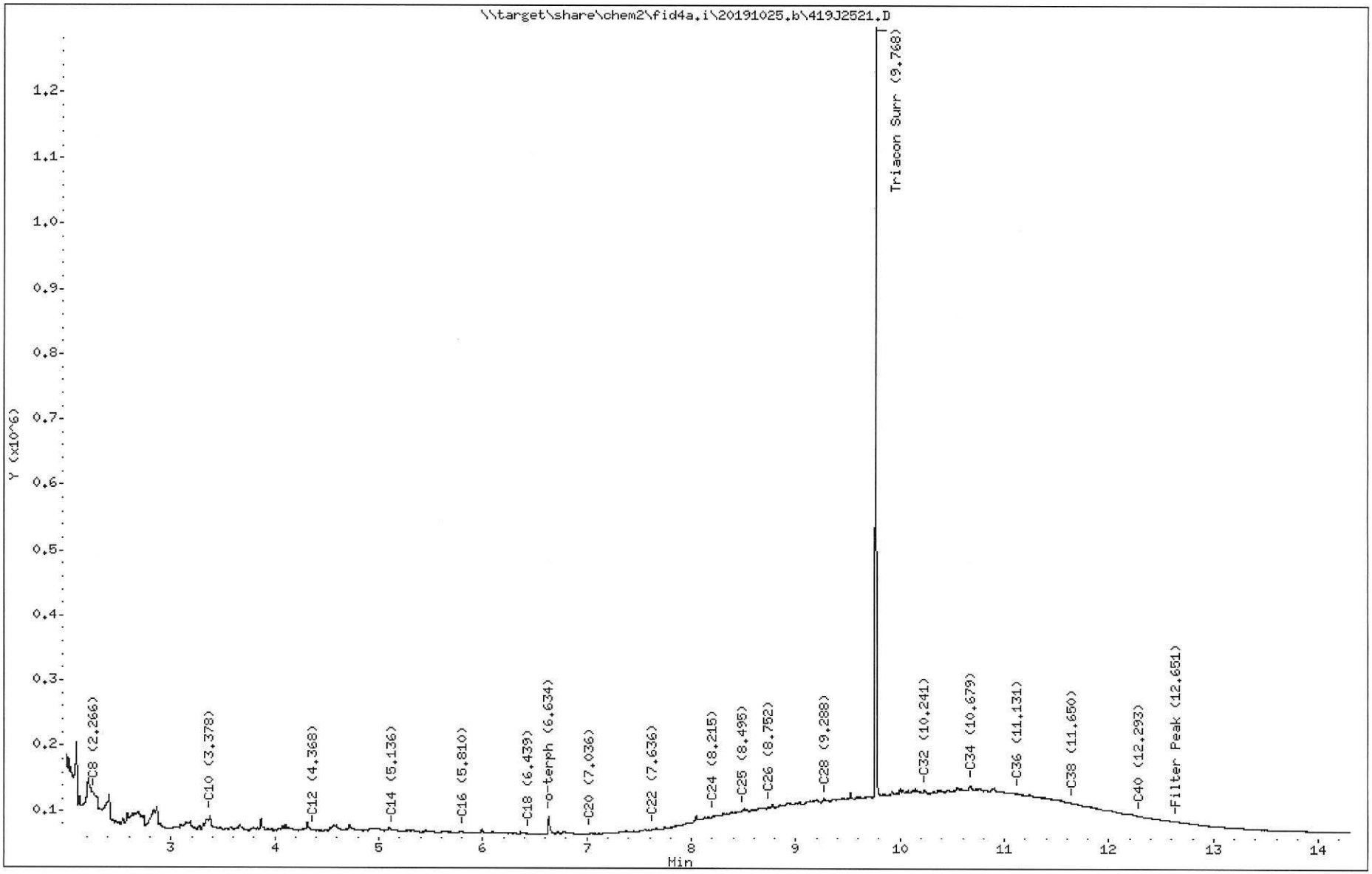


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2521.D
Date : 25-OCT-2019 18:35
Client ID:
Sample Info: SHJ0406-CALD

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2521.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALD
Client ID:
Injection: 25-OCT-2019 18:35
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.266	0.003	63130	43308	WATPHD	(C12-C24)	1323968	8.3
C10	3.378	0.005	28879	54645	WATPHM	(C24-C38)	12086307	91.1
C12	4.368	0.021	6558	8293	AK102	(C10-C25)	2265512	11.6
C14	5.136	0.007	6204	3069	AK103	(C25-C36)	9919700	99.2
C16	5.810	0.003	3258	3063	OR.DIES	(C10-C28)	4756055	24.3
C18	6.439	0.004	920	449				
C20	7.036	-0.007	1277	1180				
C22	7.636	-0.003	8777	15968				
C24	8.215	0.000	31726	51380				
C25	8.495	0.002	39977	33338				
C26	8.752	-0.012	45255	53640				
C28	9.288	0.003	56620	22552				
C32	10.241	-0.002	70490	38594				
C34	10.679	-0.002	78226	83978				
Filter Peak	12.651	0.000	22108	8817	CREOSOT	(C12-C22)	689259	176.7
C36	11.131	0.002	66508	16608				
C38	11.650	0.000	52851	23597				
C40	12.293	0.004	31673	31207				
o-terph	6.634	-0.022	28829	34405				
Triacon Surr	9.768	-0.034	1173387	818277	NAS DIES	(C10-C24)	1907173	9.8

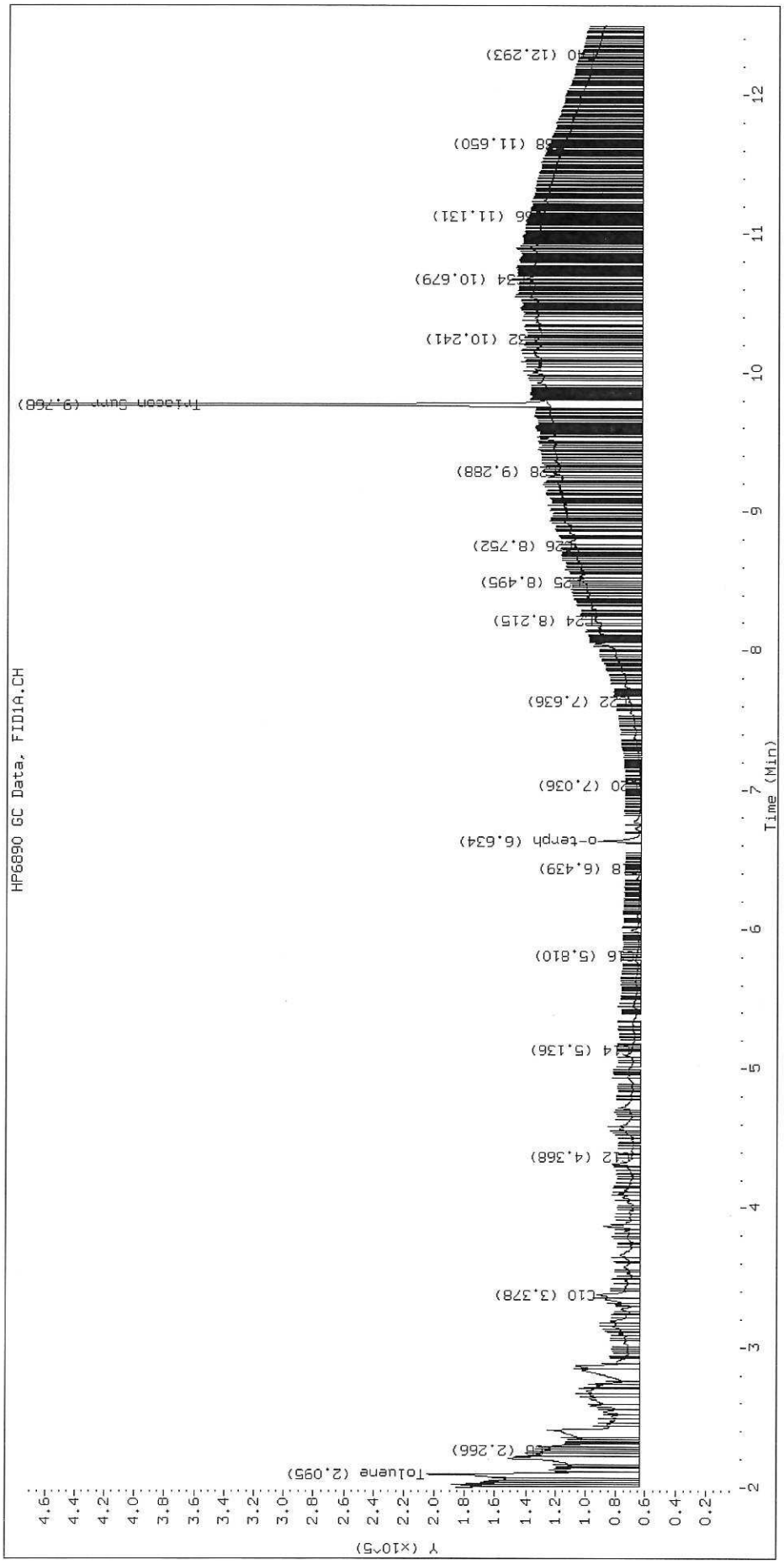
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	34405	0.2
Triacontane	818277	4.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

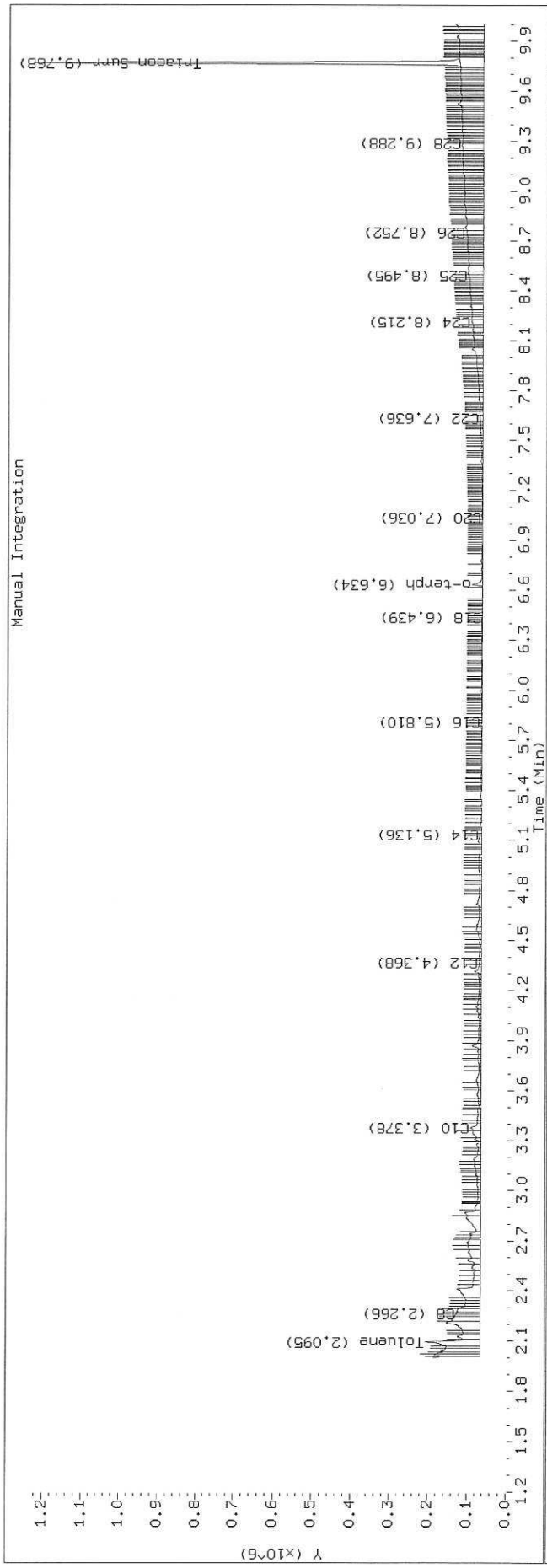
Datafile: FID4A, 20191025.b/419J2521.D SHJ0406-CALD

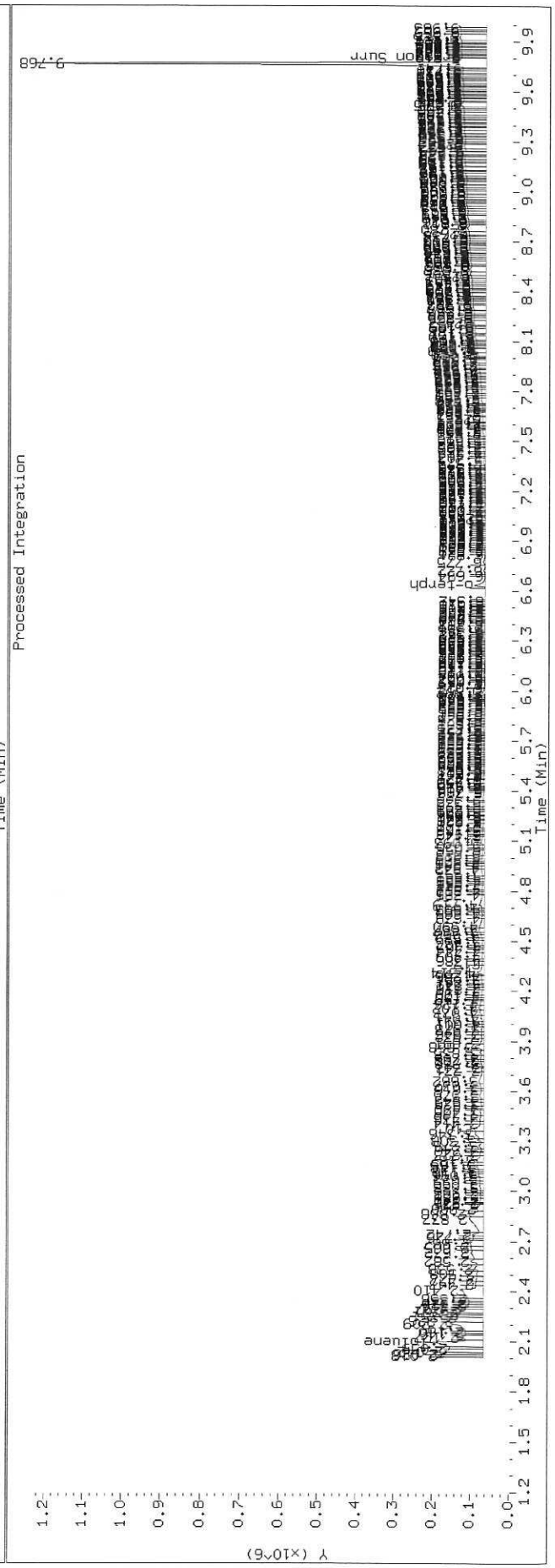


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2521.D Injection: 25-OCT-2019 18:35

Lab ID:SHJ0406-CALD



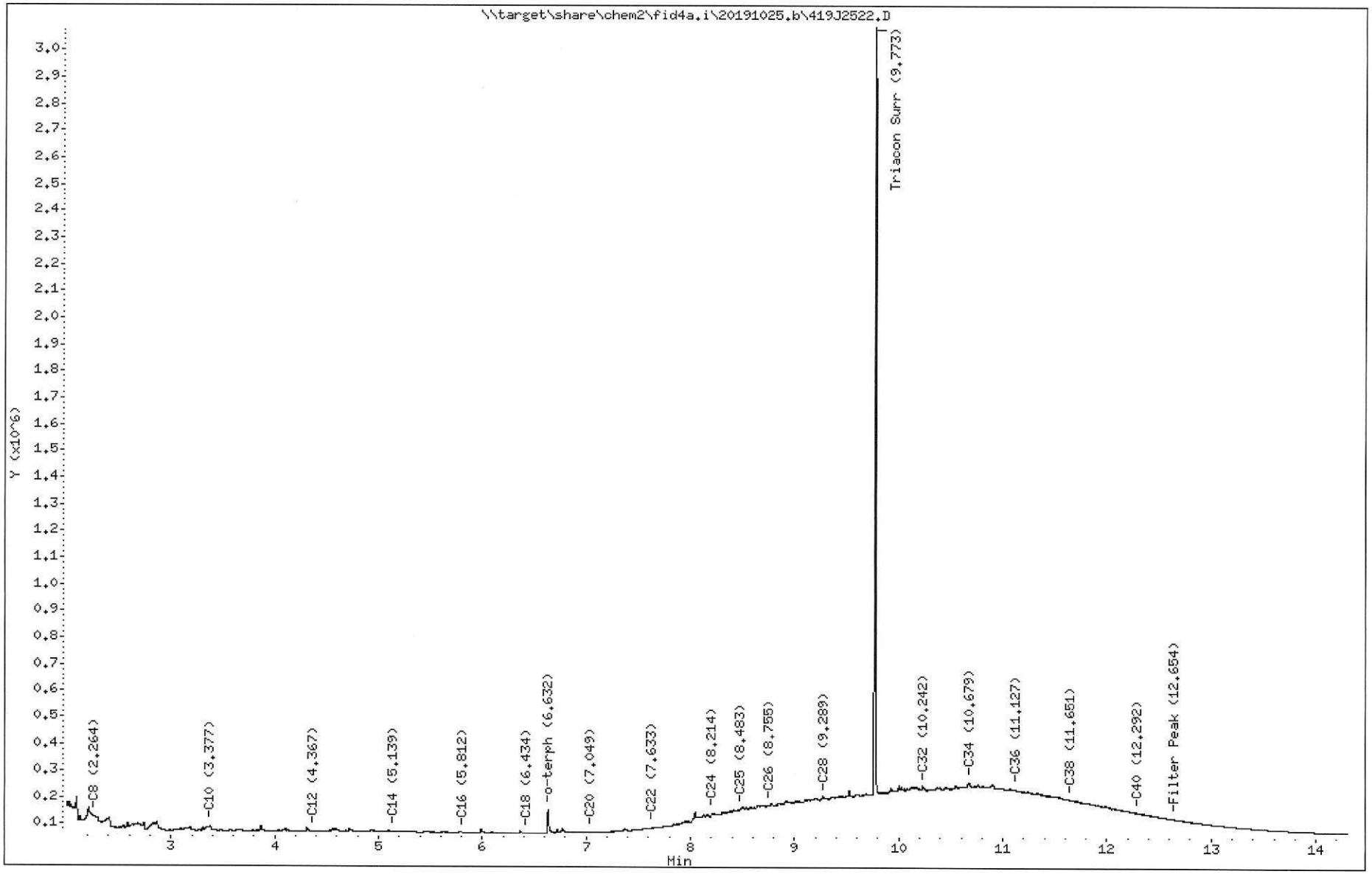


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2522.D
Date : 25-OCT-2019 18:55
Client ID:
Sample Info: SHJ0406-CALE

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2522.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALE
Client ID:
Injection: 25-OCT-2019 18:55
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	61078	41904	WATPHD	(C12-C24)	2795528	17.5
C10	3.377	0.004	26802	52996	WATPHM	(C24-C38)	31324226	236.2
C12	4.367	0.019	5459	4798	AK102	(C10-C25)	4178110	21.4
C14	5.139	0.010	4962	3160	AK103	(C25-C36)	25813764	258.2
C16	5.812	0.005	2520	1321	OR.DIES	(C10-C28)	10680396	54.5
C18	6.434	-0.000	1311	882				
C20	7.049	0.006	4759	2820				
C22	7.633	-0.005	24172	52812				
C24	8.214	-0.001	79717	62122				
C25	8.483	-0.010	96553	61766				
C26	8.755	-0.010	114382	67845				
C28	9.289	0.004	142997	64203				
C32	10.242	0.000	182878	81971				
C34	10.679	-0.002	200985	321864				
Filter Peak	12.654	0.004	63611	28452	CREOSOT	(C12-C22)	1041017	266.9
C36	11.127	-0.001	175707	78840				
C38	11.651	0.001	139085	55402				
C40	12.292	0.004	88908	61716				
o-terph	6.632	-0.024	91544	90689				
Triacon Surr	9.773	-0.029	2869605	2058184	NAS DIES	(C10-C24)	3295502	16.9

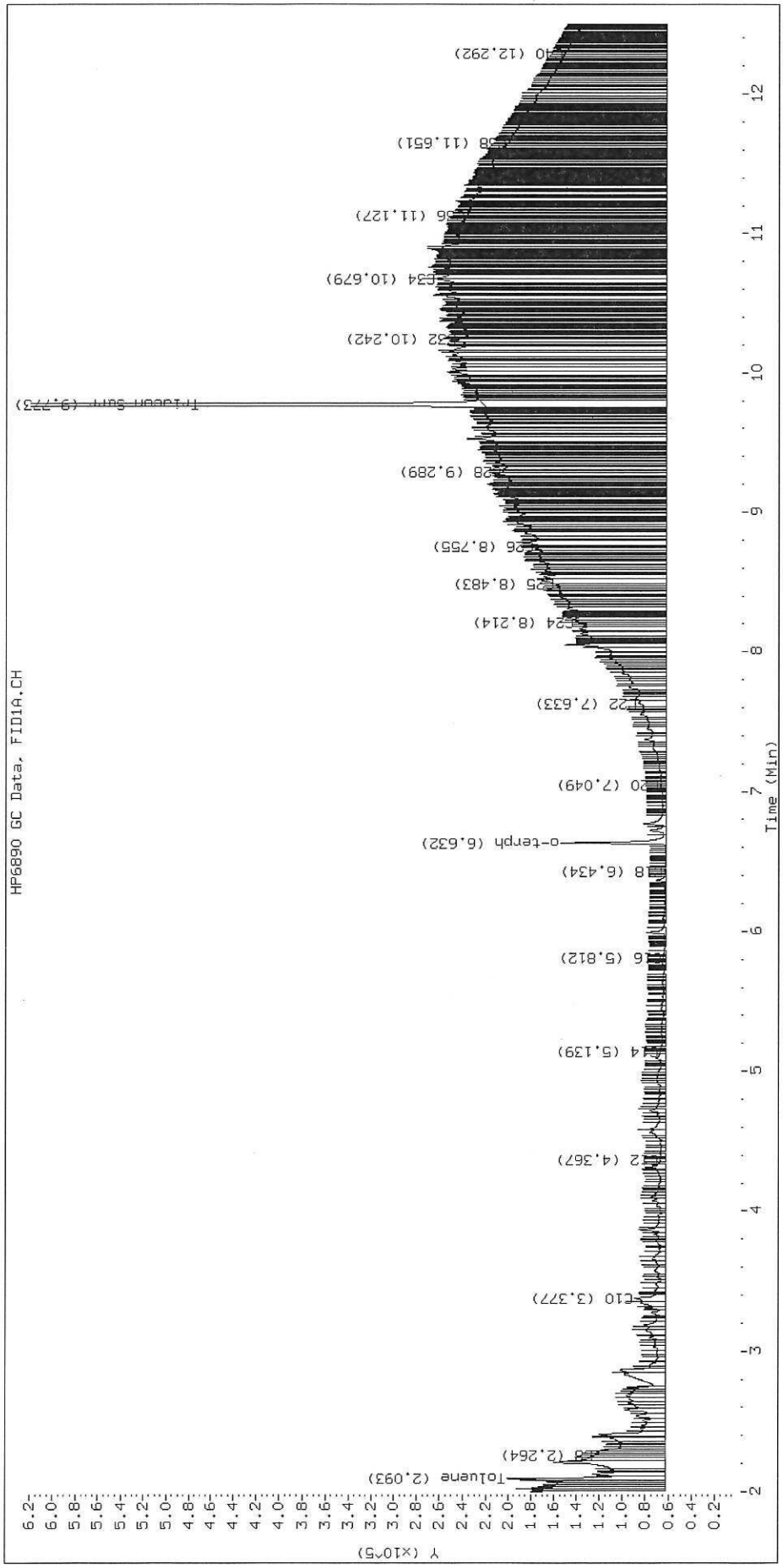
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	90689	0.4
Triacontane	2058184	11.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

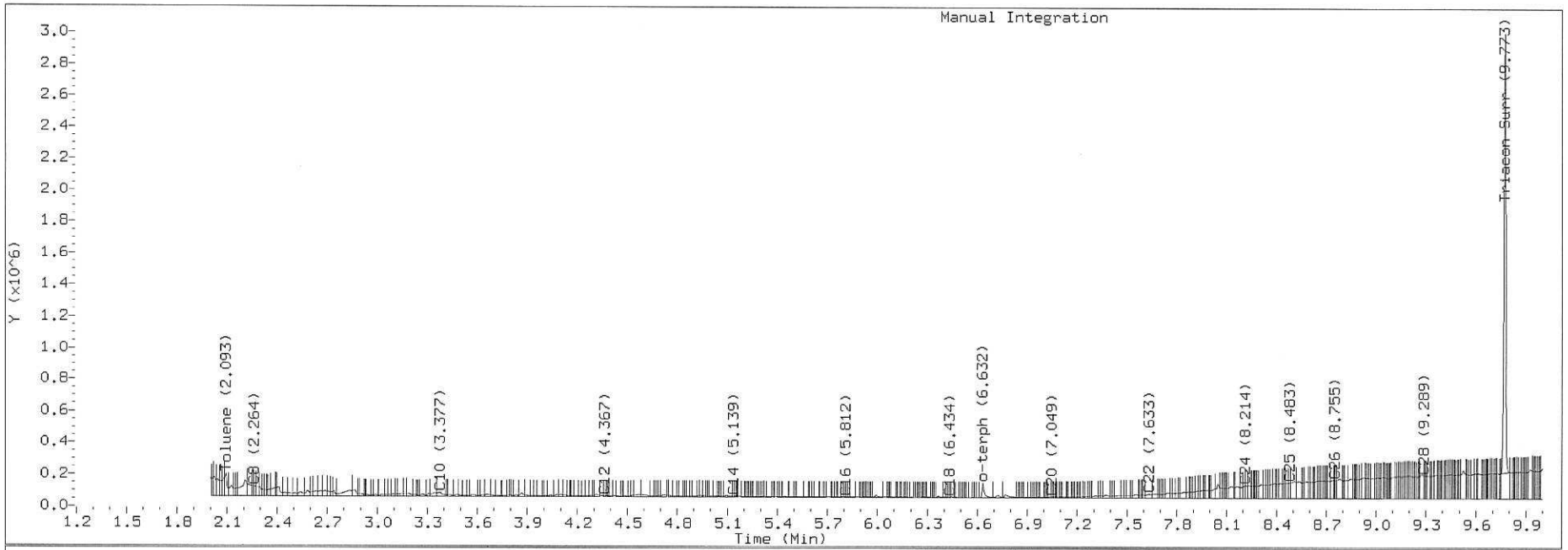
Datafile: FID4A, 20191025.b/419J2522.D SHJ0406-CALE

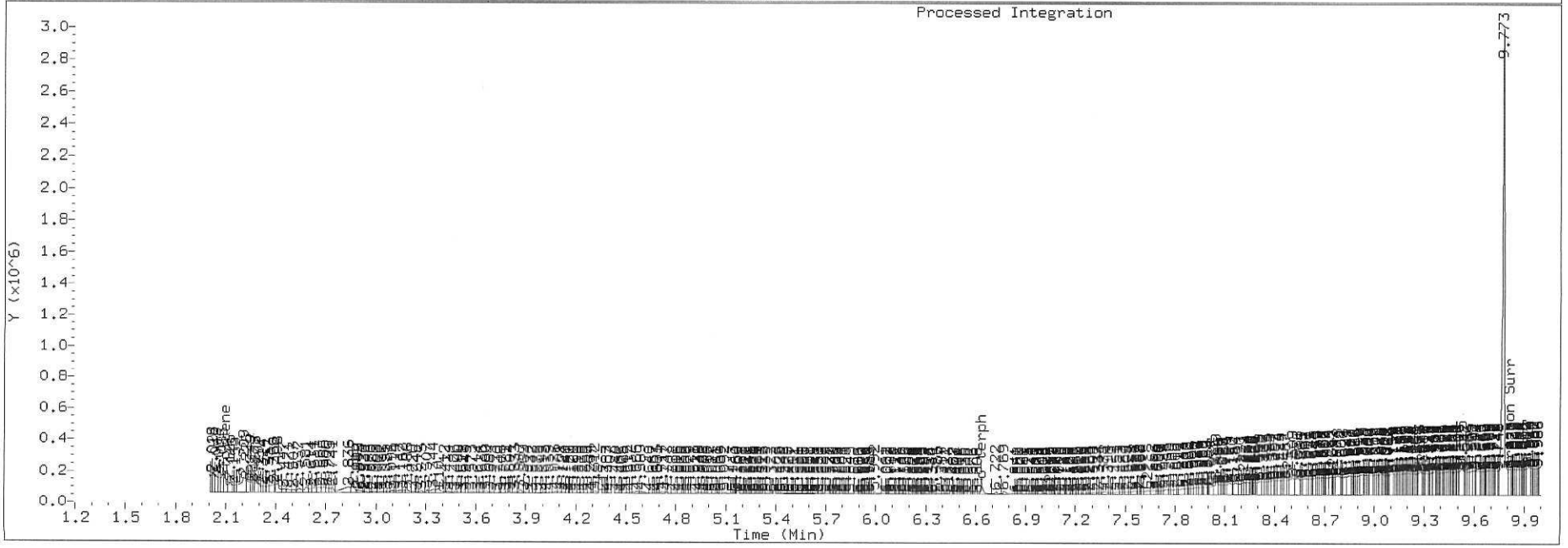


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2522.D Injection: 25-OCT-2019 18:55

Lab ID:SHJ0406-CALE





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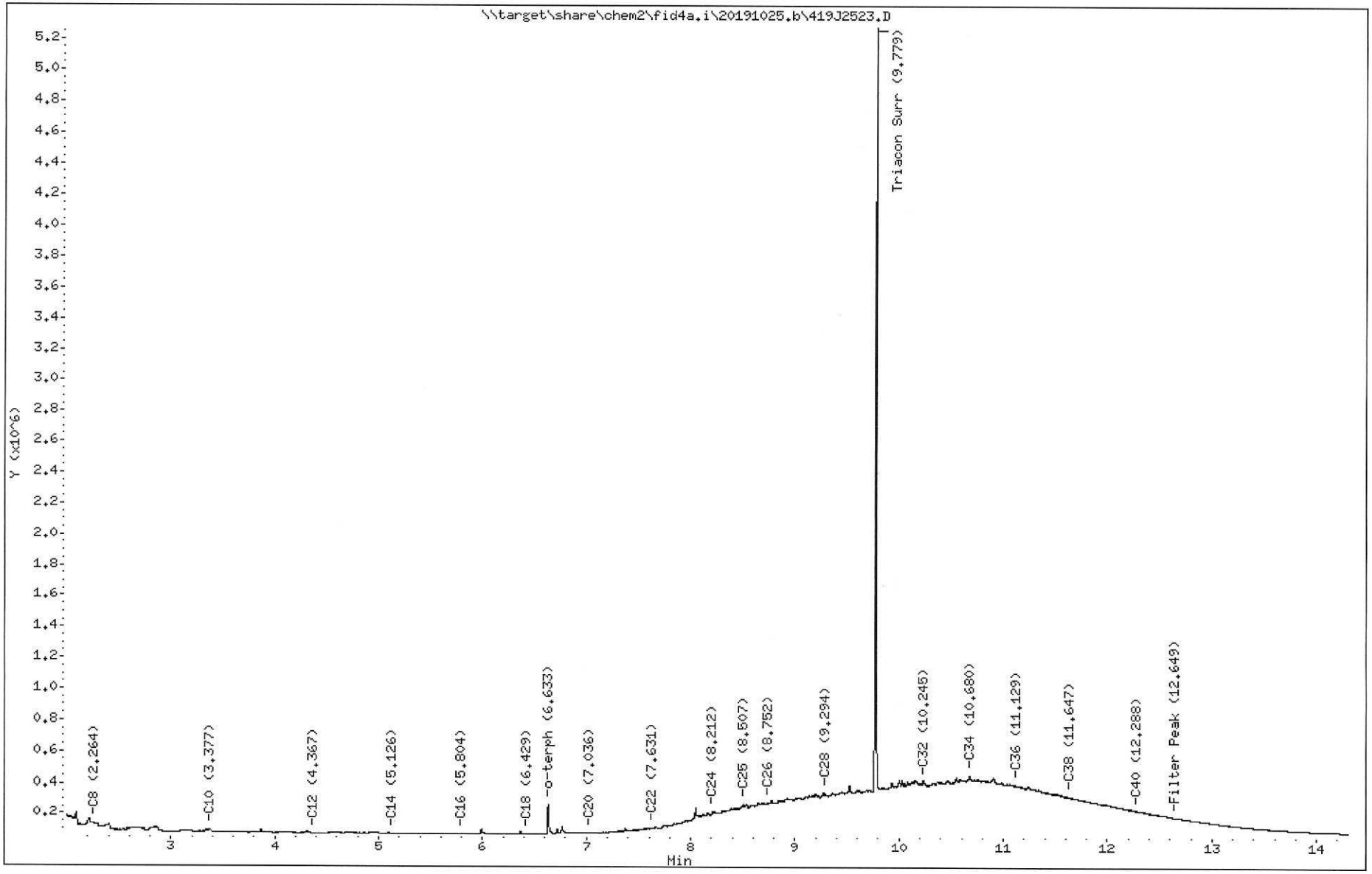
Date : 25-OCT-2019 19:15
Client ID:
Sample Info: SHJ0406-CALF

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2523.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALF
Client ID:
Injection: 25-OCT-2019 19:15
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	65663	48530	WATPHD	(C12-C24)	5014916	31.5
C10	3.377	0.004	28749	58345	WATPHM	(C24-C38)	59779944	450.7
C12	4.367	0.020	3969	3466	AK102	(C10-C25)	7200245	36.8
C14	5.126	-0.004	3228	1712	AK103	(C25-C36)	49058982	490.7
C16	5.804	-0.004	2893	3236	OR.DIES	(C10-C28)	19724552	100.6
C18	6.429	-0.005	2246	2256				
C20	7.036	-0.007	10796	11147				
C22	7.631	-0.008	48129	85760				
C24	8.212	-0.003	157019	245696				
C25	8.507	0.014	210068	574409				
C26	8.752	-0.013	221185	294582				
C28	9.294	0.008	276194	178596				
C32	10.245	0.003	351165	209719				
C34	10.680	-0.001	394703	898701				
Filter Peak	12.649	-0.002	125409	50077	CREOSOT	(C12-C22)	1560946	400.2
C36	11.129	-0.000	332260	99465				
C38	11.647	-0.003	258943	64646				
C40	12.288	-0.001	170438	84522				
o-terph	6.633	-0.024	198416	176995				
Triacon Surr	9.779	-0.024	4910254	3941895	NAS DIES	(C10-C24)	5534721	28.4

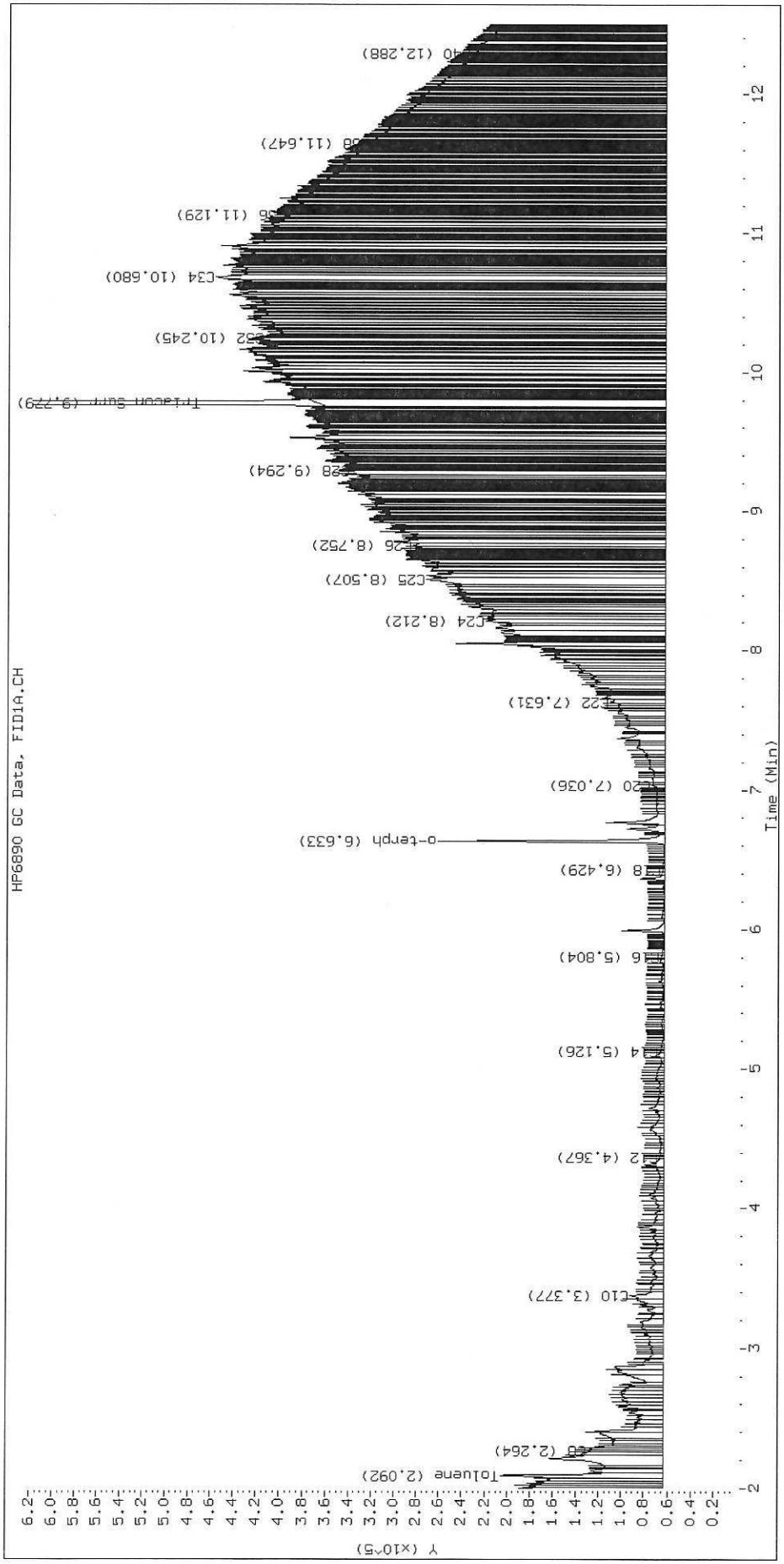
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	176995	0.9
Triacontane	3941895	22.1 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

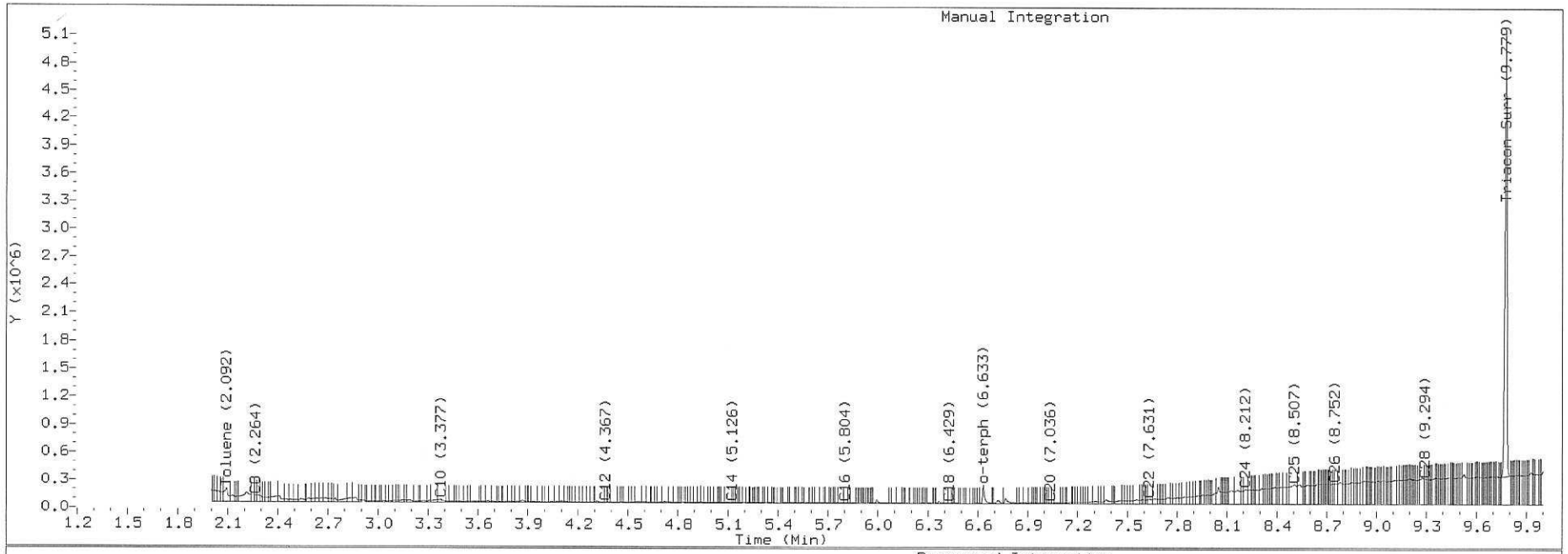
Datafile: FID4A, 20191025.b/419J2523.D SHJ0406-CALF

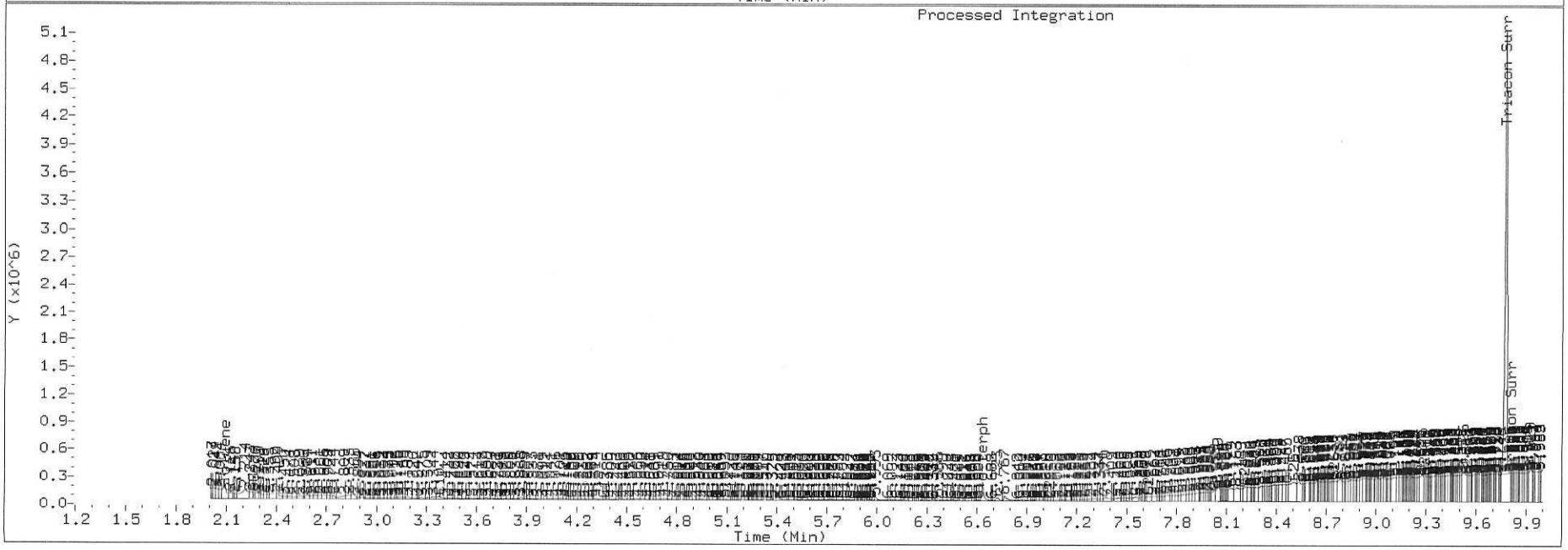


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2523.D Injection: 25-OCT-2019 19:15

Lab ID:SHJ0406-CALF



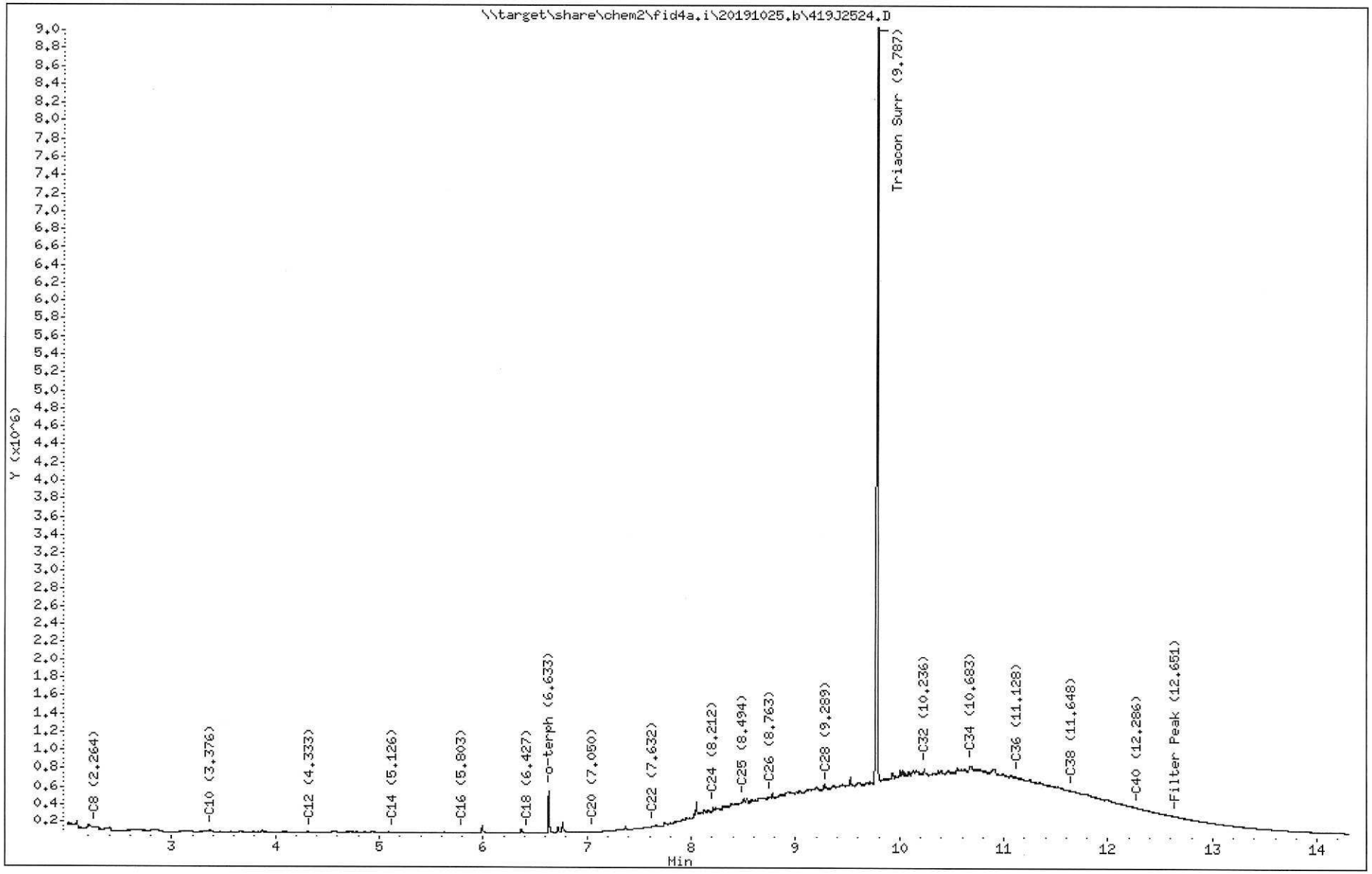


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2524.D
Date : 25-OCT-2019 19:34
Client ID:
Sample Info: SHJ0406-CALG

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2524.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALG
Client ID:
Injection: 25-OCT-2019 19:34
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	59182	43398	WATPHD	(C12-C24)	9693002	60.8
C10	3.376	0.003	26004	47549	WATPHM	(C24-C38)	119379277	900.1
C12	4.333	-0.015	5078	6418	AK102	(C10-C25)	13482675	69.0
C14	5.126	-0.004	4037	3451	AK103	(C25-C36)	98534931	985.6
C16	5.803	-0.004	5499	6876	OR.DIES	(C10-C28)	38197703	194.9
C18	6.427	-0.008	4829	4807				
C20	7.050	0.007	20128	16414				
C22	7.632	-0.007	95273	191460				
C24	8.212	-0.003	309198	497796				
C25	8.494	0.001	394056	249031				
C26	8.763	-0.001	429806	171737				
C28	9.289	0.004	544145	135929				
C32	10.236	-0.006	748503	1187882				
C34	10.683	0.001	785420	196129				
Filter Peak	12.651	0.000	222539	110925	CREOSOT	(C12-C22)	2913792	747.0
C36	11.128	-0.000	665475	297953				
C38	11.648	-0.001	517415	384389				
C40	12.286	-0.003	322103	175432				
o-terph	6.633	-0.024	489788	368237				
Triacon Surr	9.787	-0.015	8362676	7933666	NAS DIES	(C10-C24)	10069630	51.6

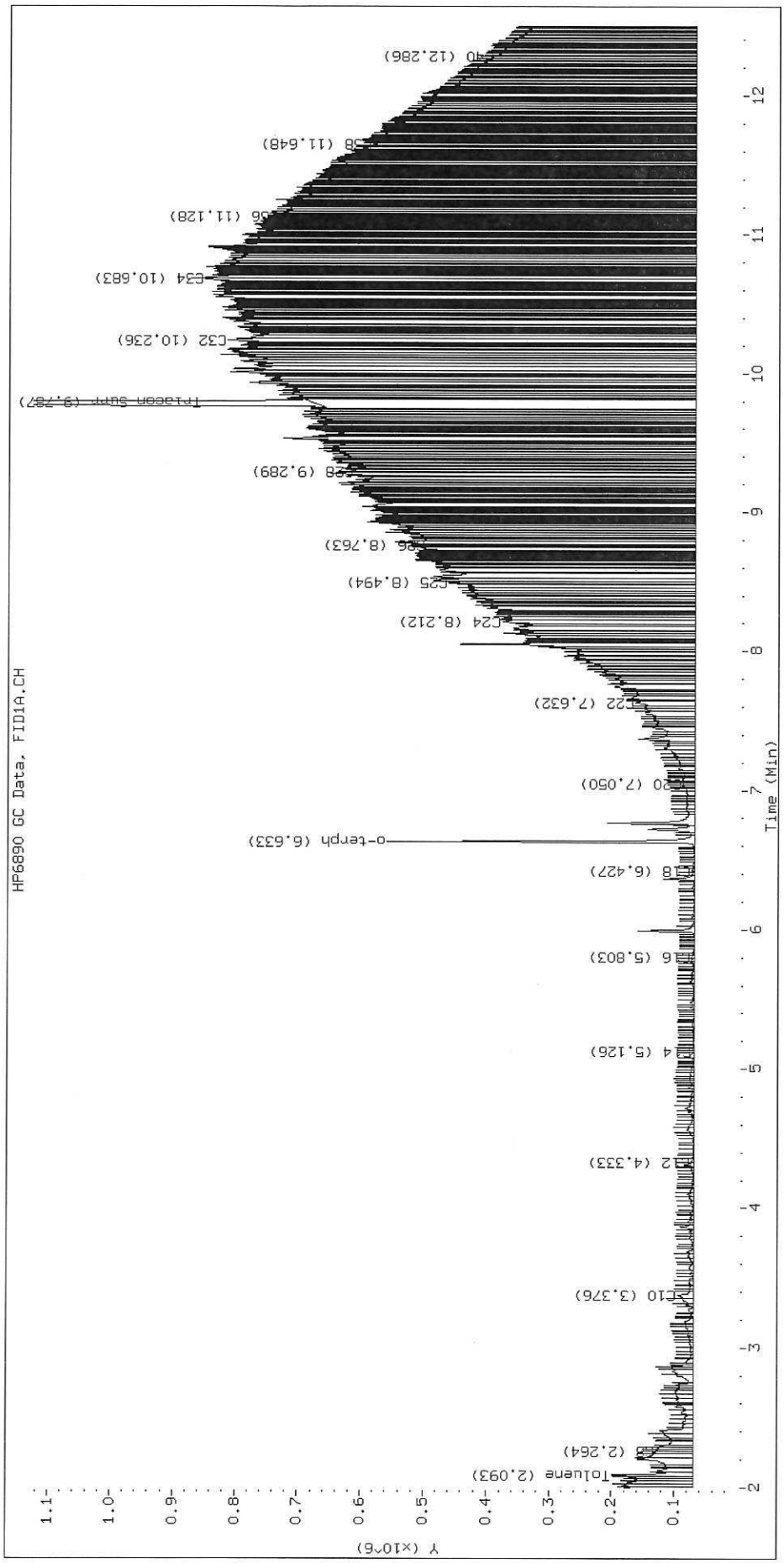
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	368237	1.8
Triacontane	7933666	44.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

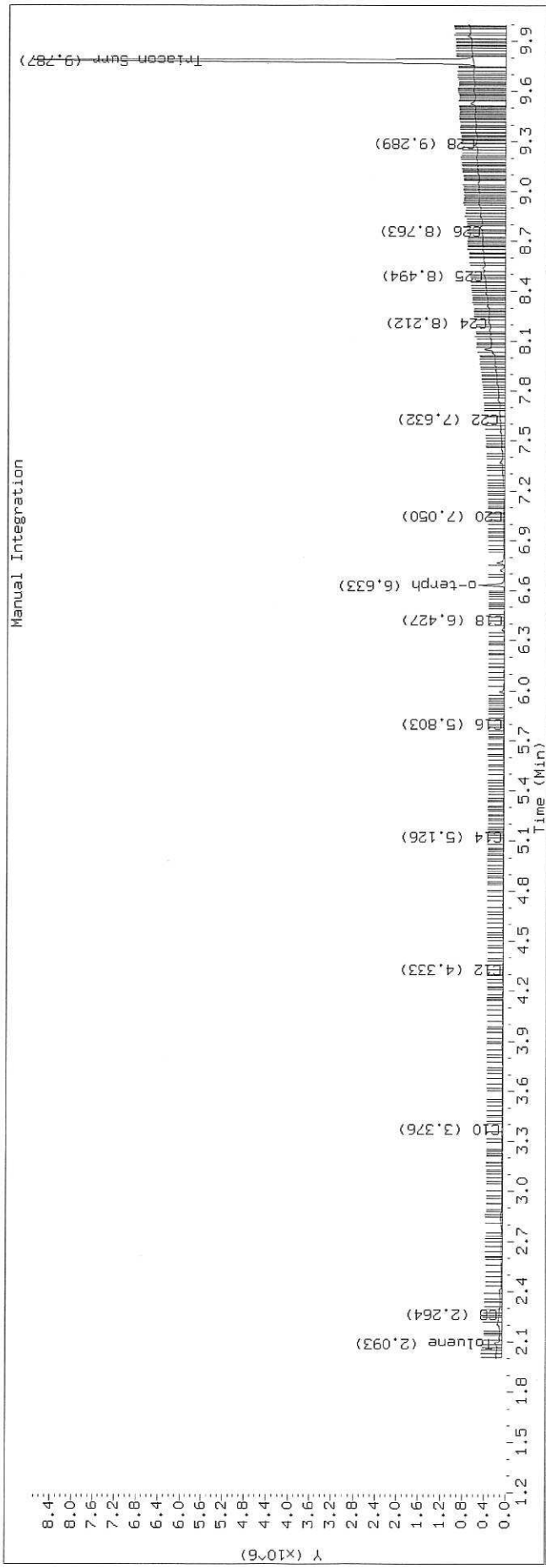
Datafile: FID4A, 20191025.b/419J2524.D SHJ0406-CALG

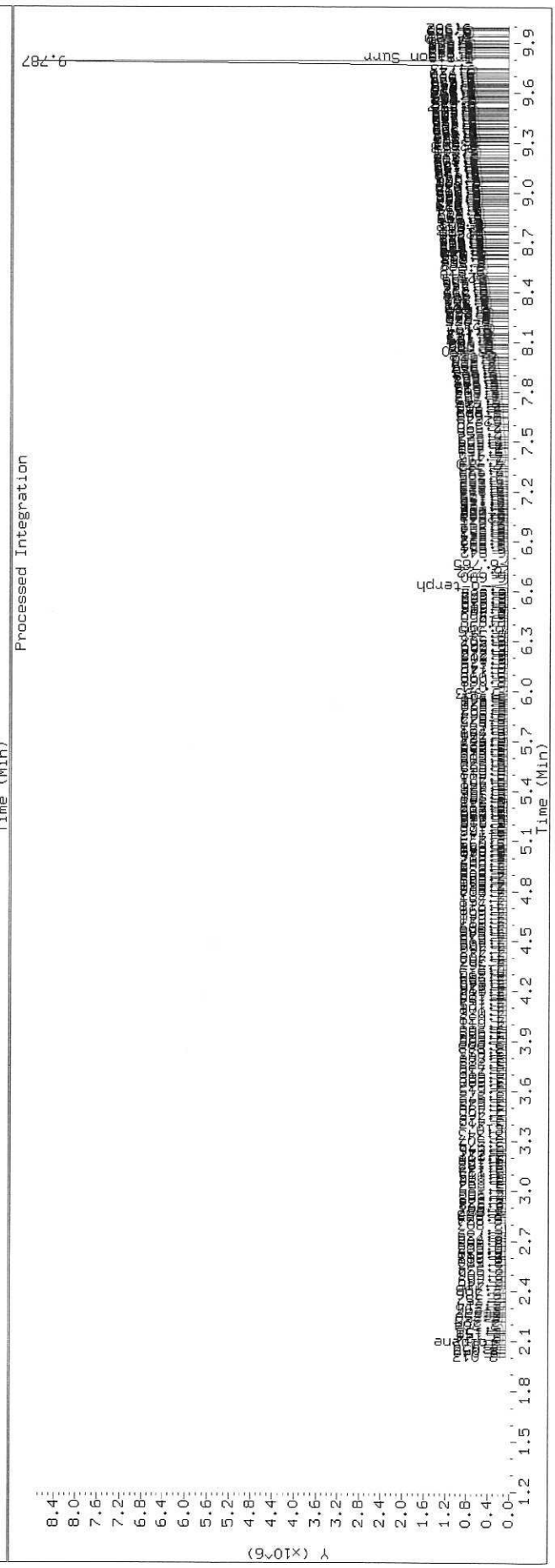


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2524.D Injection: 25-OCT-2019 19:34

Lab ID:SHJ0406-CALG



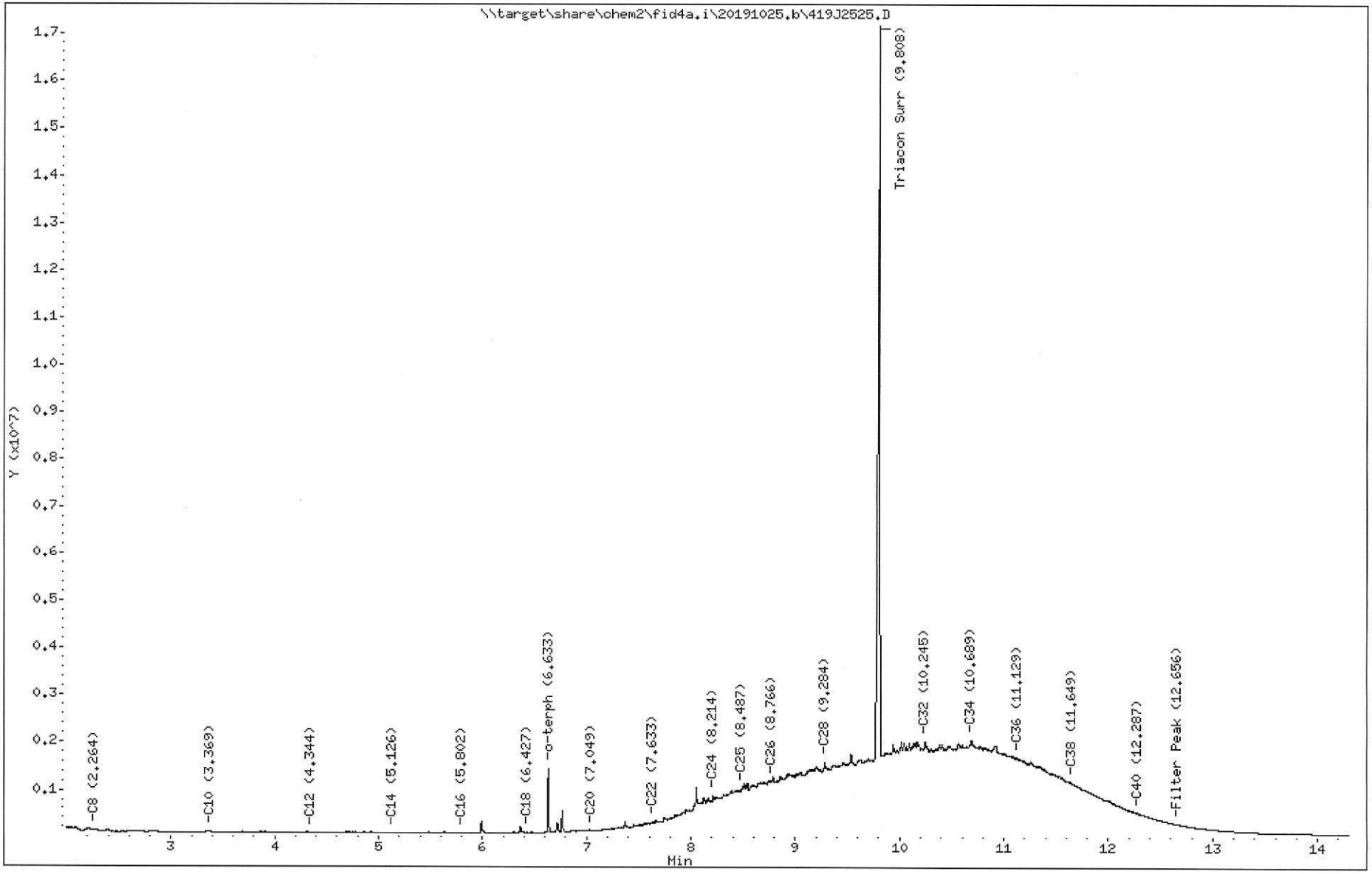


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2525.D
Date : 25-OCT-2019 19:54
Client ID:
Sample Info: SHJ0406-CALH

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2525.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALH
Client ID:
Injection: 25-OCT-2019 19:54
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	56415	38567	WATPHD	(C12-C24)	26301815	165.1
C10	3.369	-0.003	27712	41157	WATPHM	(C24-C38)	301341214	2272.0
C12	4.344	-0.003	5882	6952	AK102	(C10-C25)	35690614	182.6
C14	5.126	-0.003	7507	9244	AK103	(C25-C36)	251232894	2512.9
C16	5.802	-0.005	13222	14374	OR.DIES	(C10-C28)	99037801	505.3
C18	6.427	-0.008	19180	20067				
C20	7.049	0.006	65385	59588				
C22	7.633	-0.006	263262	368137				
C24	8.214	-0.001	822366	1422767				
C25	8.487	-0.006	962652	426588				
C26	8.766	0.002	1133629	505360				
C28	9.284	-0.002	1509428	2436681				
C32	10.245	0.003	1957482	3059346				
C34	10.689	0.008	1976148	4422245				
Filter Peak	12.656	0.006	231984	148698	CREOSOT	(C12-C22)	8248980	2114.6
C36	11.129	-0.000	1621407	646645				
C38	11.649	-0.000	1113973	443976				
C40	12.287	-0.002	466123	386816				
o-terph	6.633	-0.024	1387955	962768				
Triacon Surr	9.808	0.006	15482951	20436973	NAS DIES	(C10-C24)	26712775	136.9

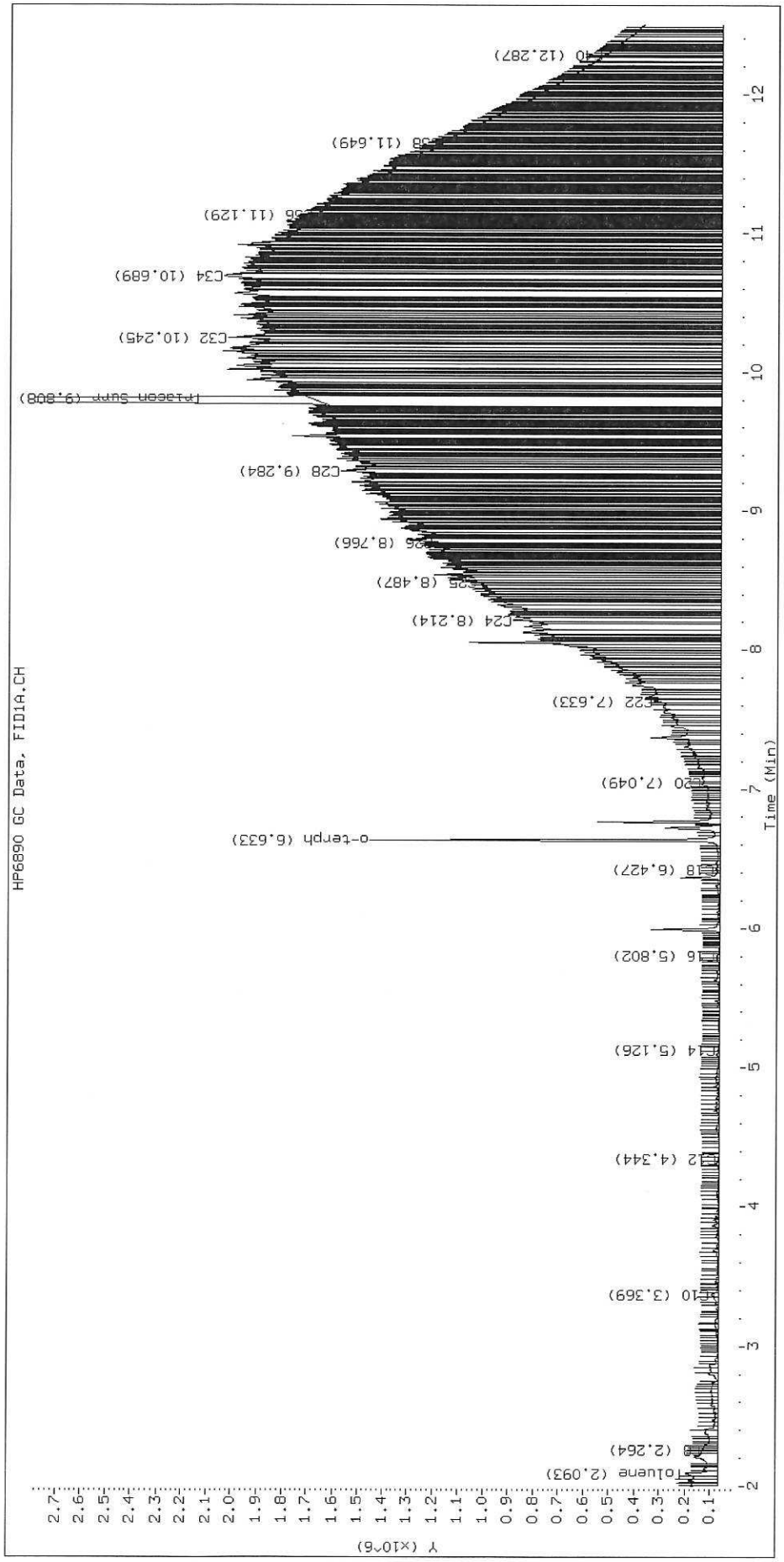
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	962768	4.7	
Triacontane	20436973	114.8	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

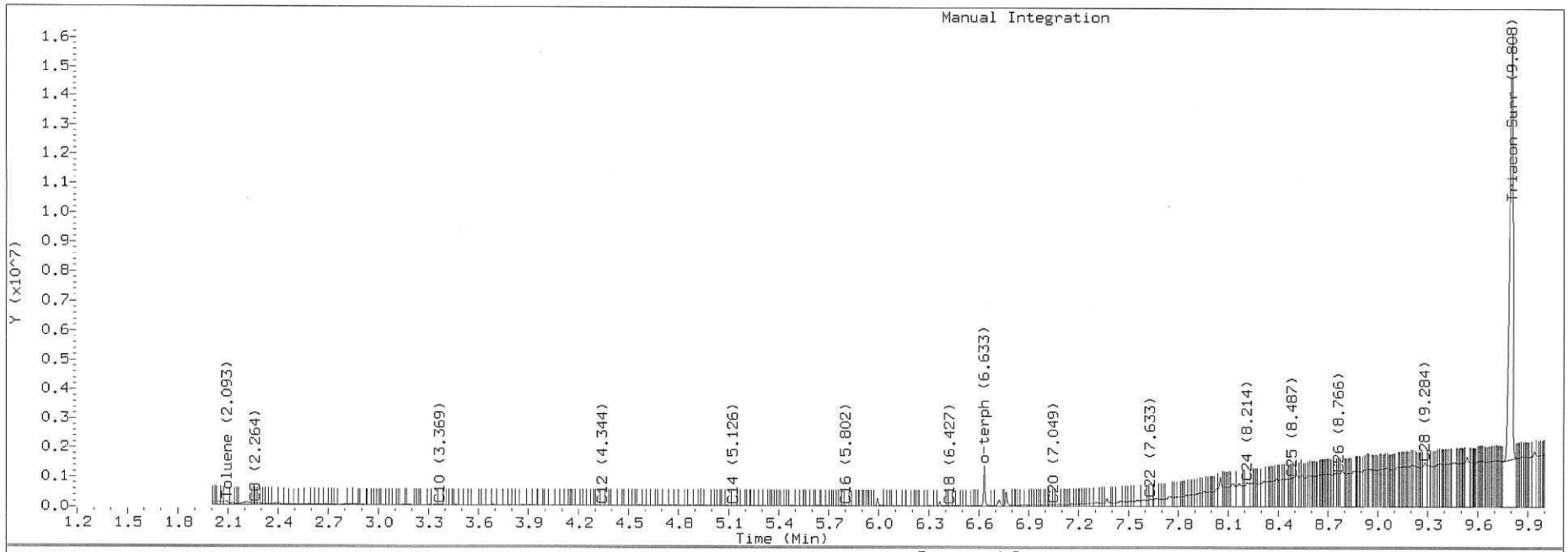
Datafile: FID4A, 20191025.b/419J2525.D SHJ0406-CALH

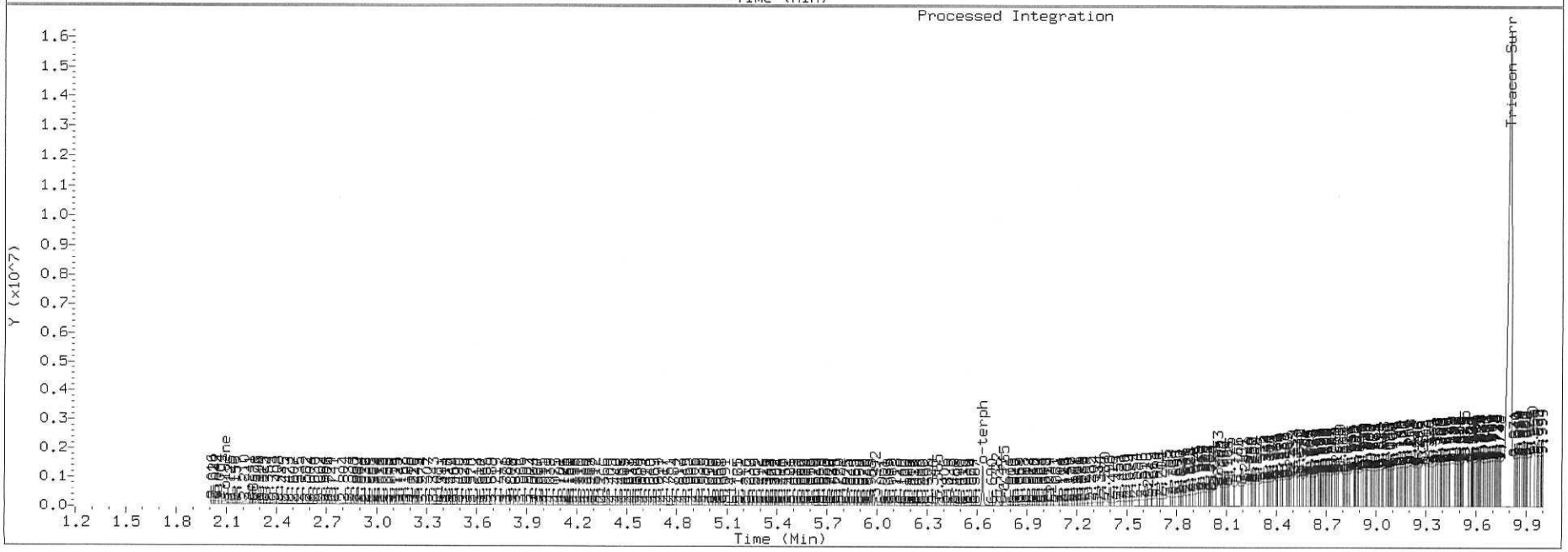


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2525.D Injection: 25-OCT-2019 19:54

Lab ID:SHJ0406-CALH



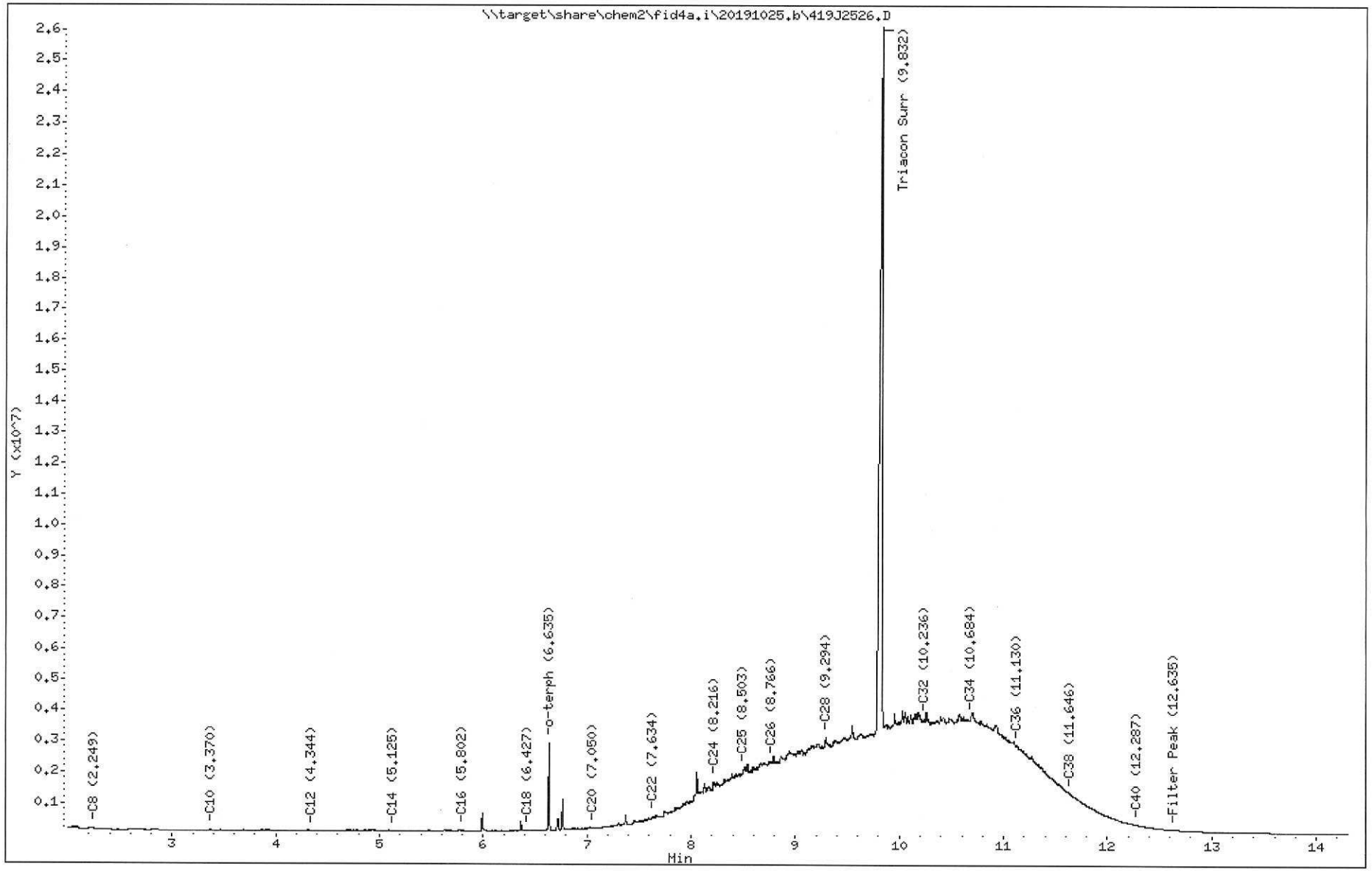


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2526.D
Date : 25-OCT-2019 20:15
Client ID:
Sample Info: SHJ0406-CALI

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2526.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALI
Client ID:
Injection: 25-OCT-2019 20:15
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.249	-0.013	68157	97437	WATPHD	(C12-C24)	53373864	335.0
C10	3.370	-0.003	37579	47410	WATPHM	(C24-C38)	579217404	4367.1
C12	4.344	-0.003	10600	10459	AK102	(C10-C25)	72516526	370.9
C14	5.125	-0.004	18160	20643	AK103	(C25-C36)	501300122	5014.2
C16	5.802	-0.005	31467	33333	OR.DIES	(C10-C28)	201523108	1028.2
C18	6.427	-0.008	46016	47297				
C20	7.050	0.007	139853	120986				
C22	7.634	-0.005	536997	729929				
C24	8.216	0.002	1657695	1800915				
C25	8.503	0.010	2055767	2566063				
C26	8.766	0.002	2309434	1601749				
C28	9.294	0.008	3108955	5845567				
C32	10.236	-0.006	3694253	3475497				
C34	10.684	0.002	3746349	1670889				
Filter Peak	12.635	-0.015	125409	273331	CREOSOT	(C12-C22)	16636154	4264.7
C36	11.130	0.002	2854299	995118				
C38	11.646	-0.003	1329722	1616024				
C40	12.287	-0.002	293577	286952				
o-terph	6.635	-0.022	2904255	1975795				
Triacon Surr	9.832	0.030	22638379	40251878	NAS DIES	(C10-C24)	53915002	276.3

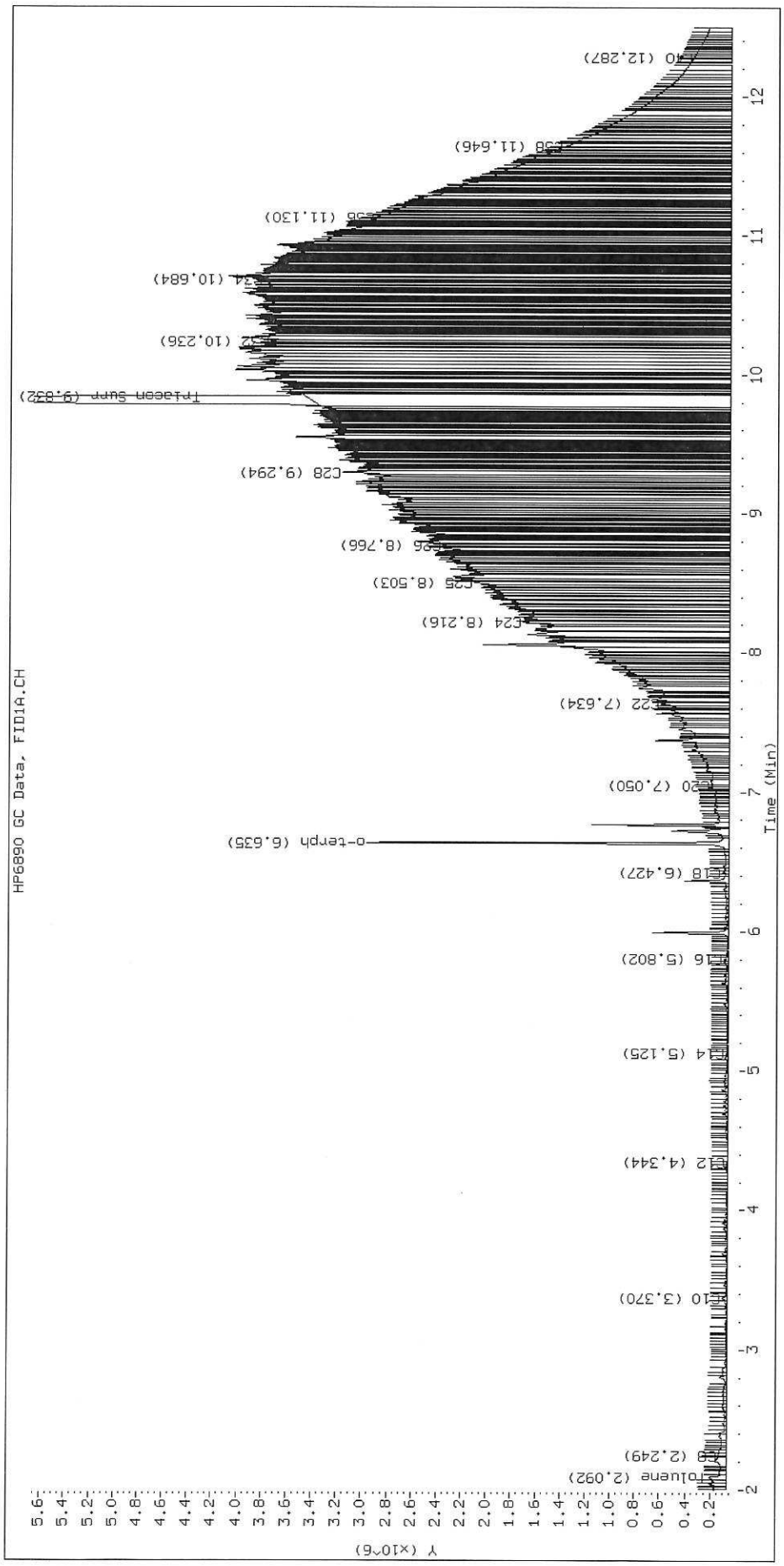
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	1975795	9.7	
Triacontane	40251878	226.2	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

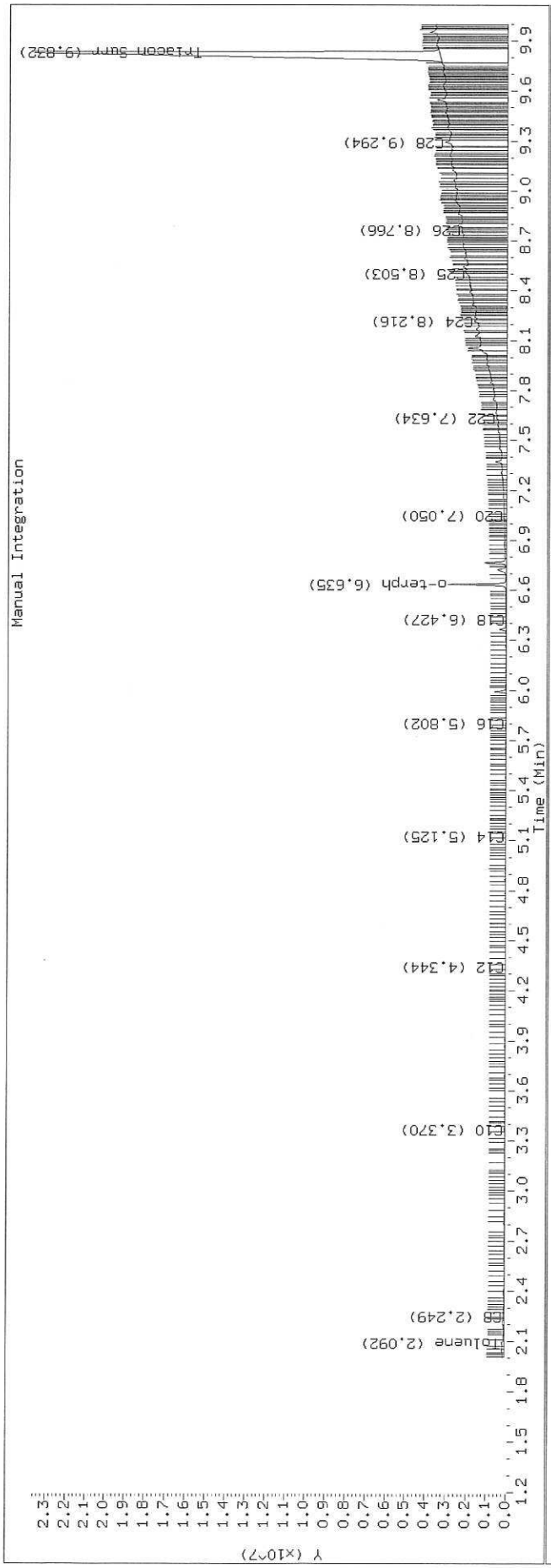
Datafile: FID4A, 20191025.b/419J2526.D SHJ0406-CALI

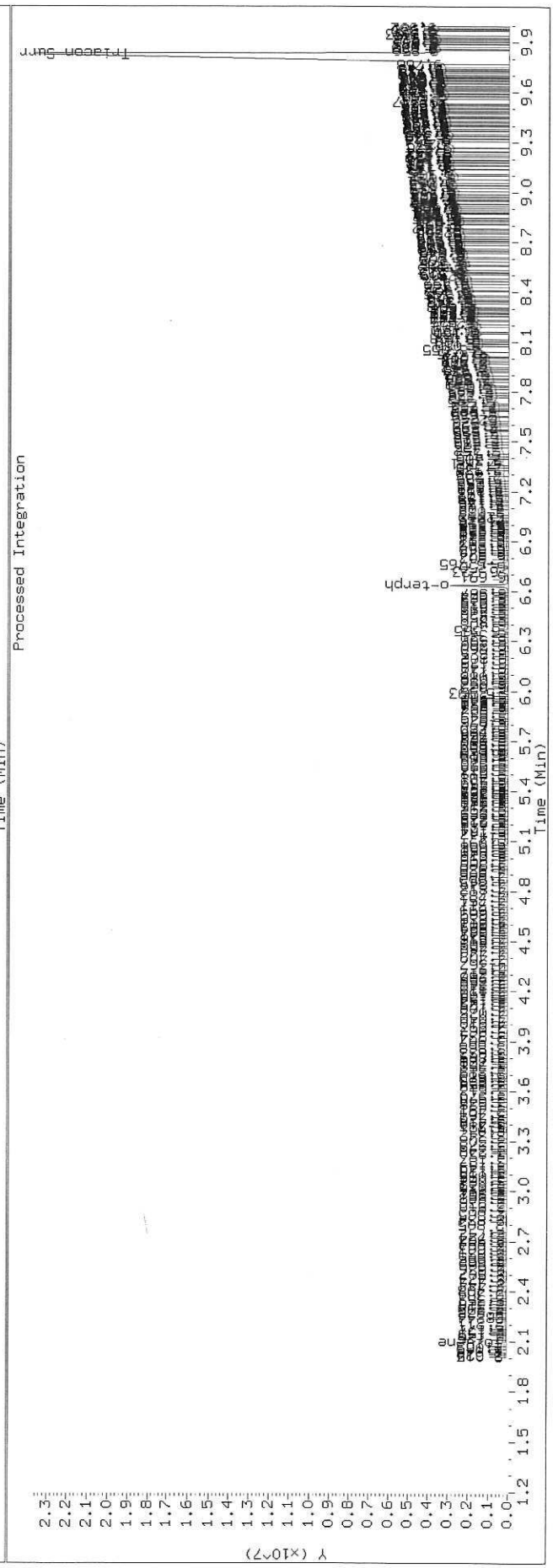


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2526.D Injection: 25-OCT-2019 20:15

Lab ID:SHJ0406-CALI



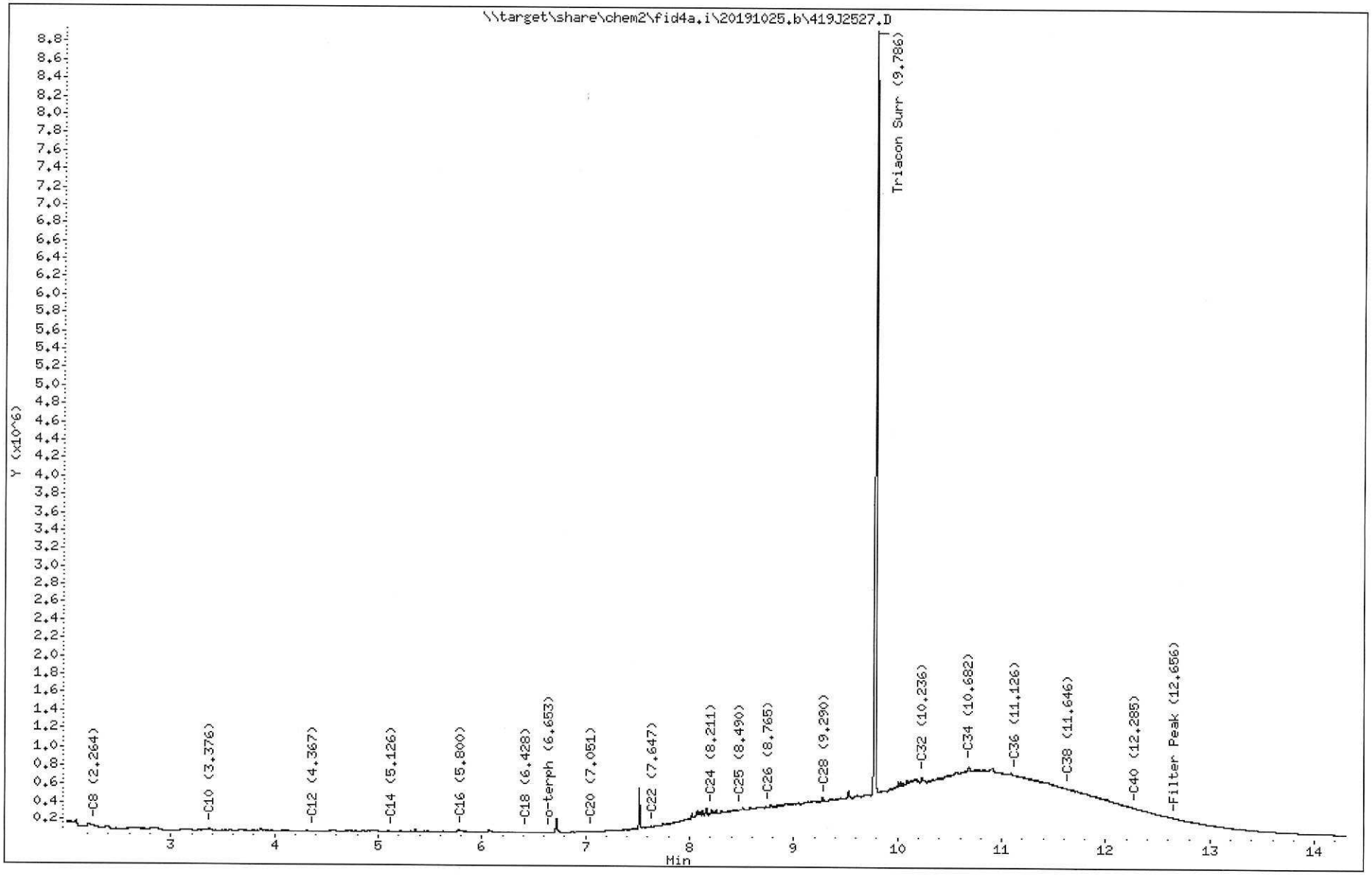


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2527.D
Date : 25-OCT-2019 20:35
Client ID:
Sample Info: SHJ0406-SCV3

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2527.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-SCV3
Client ID:
Injection: 25-OCT-2019 20:35
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	53471	36749	WATPHD	(C12-C24)	9151453	57.4
C10	3.376	0.003	25610	47191	WATPHM	(C24-C38)	105205257	793.2
C12	4.367	0.020	4177	4443	AK102	(C10-C25)	12217213	62.5
C14	5.126	-0.003	5782	7745	AK103	(C25-C36)	83900022	839.2
C16	5.800	-0.007	18027	25221	OR.DIES	(C10-C28)	30254236	154.4
C18	6.428	-0.007	5074	5462				
C20	7.051	0.008	15134	10036				
C22	7.647	0.008	76708	26745				
C24	8.211	-0.004	290822	446061				
C25	8.490	-0.003	283476	98752				
C26	8.765	0.000	315420	126036				
C28	9.290	0.004	395912	118500				
C32	10.236	-0.006	661365	1079458				
C34	10.682	0.001	769683	230477				
Filter Peak	12.656	0.006	214849	128159	CREOSOT	(C12-C22)	2946608	755.4
C36	11.126	-0.002	688686	308098				
C38	11.646	-0.004	543124	322331				
C40	12.285	-0.004	325522	178450				
o-terph	6.653	-0.003	2619	2570				
Triacon Surr	9.786	-0.016	8421327	7592281	NAS DIES	(C10-C24)	9621264	49.3

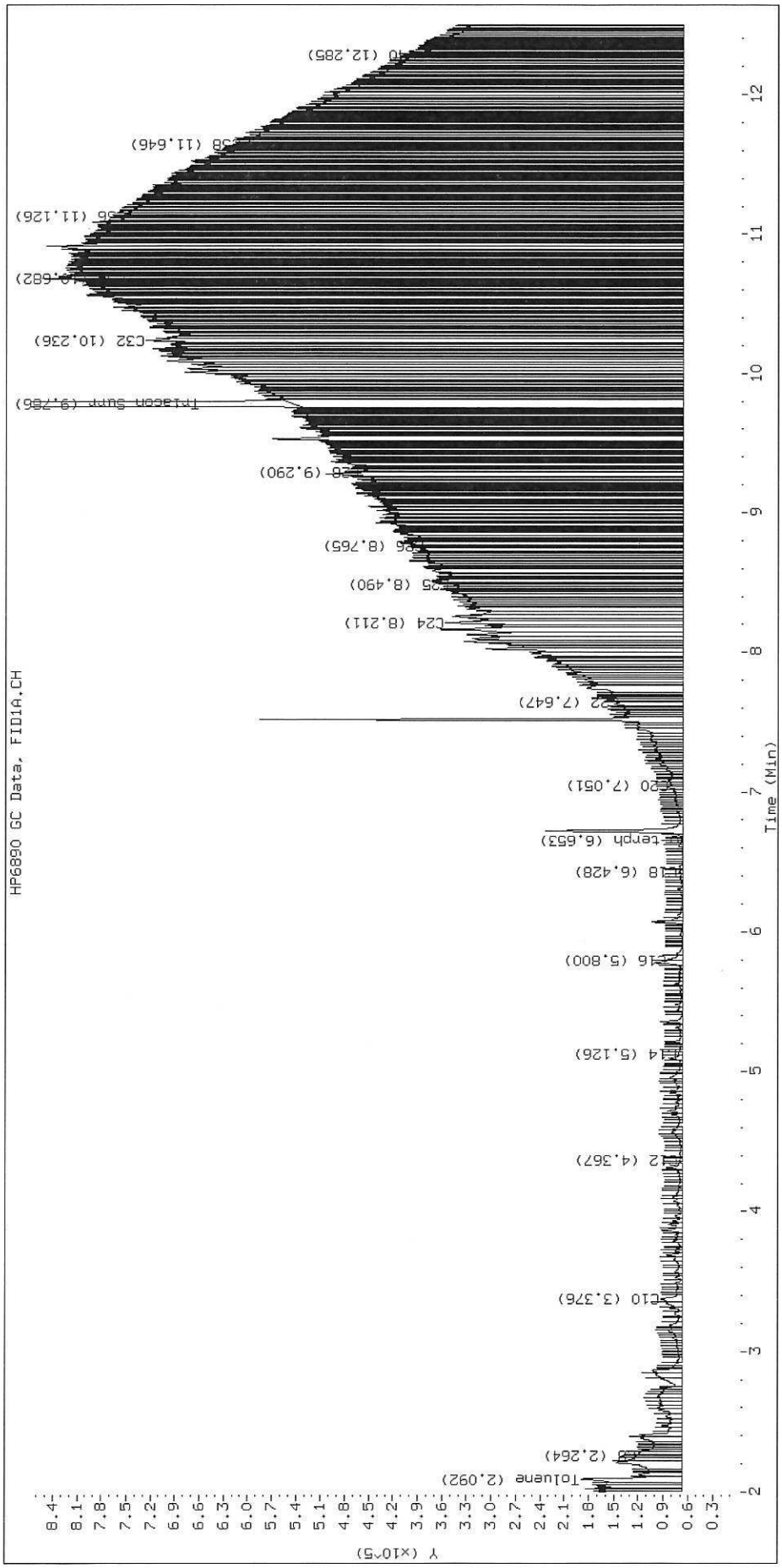
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	2570	0.0	
Triacontane	7592281	42.7	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

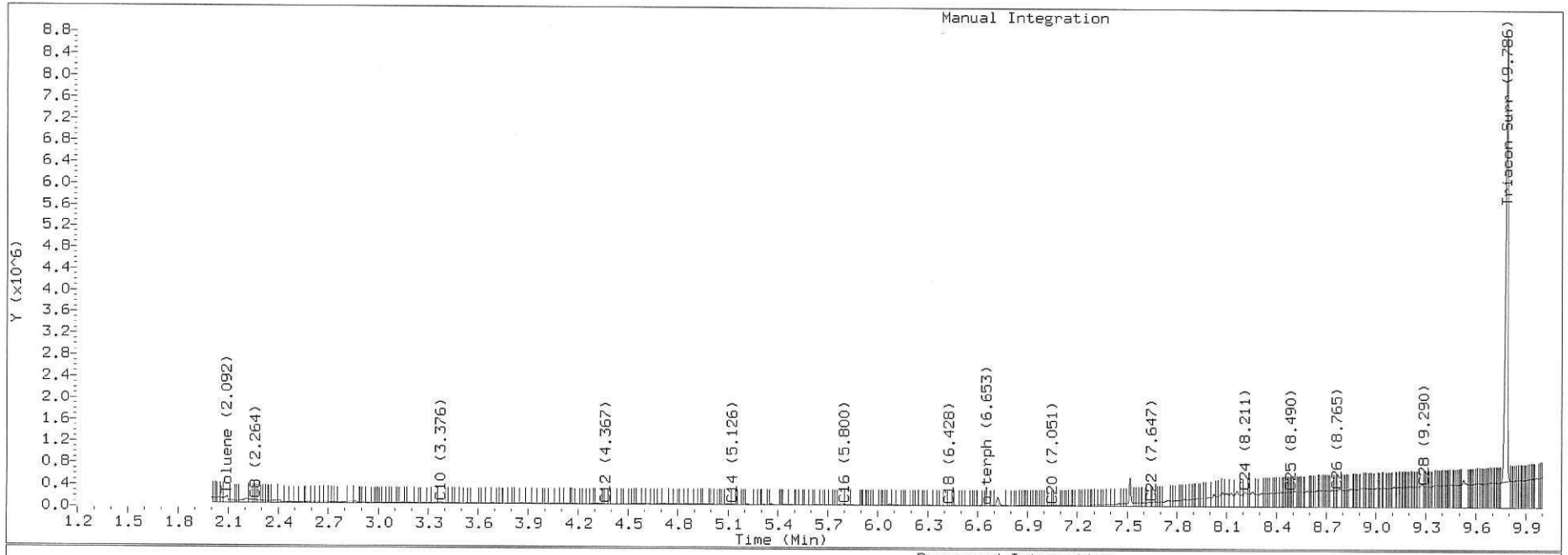
Datafile: FID4A, 20191025.b/419J2527.D SHJ0406-SCV3

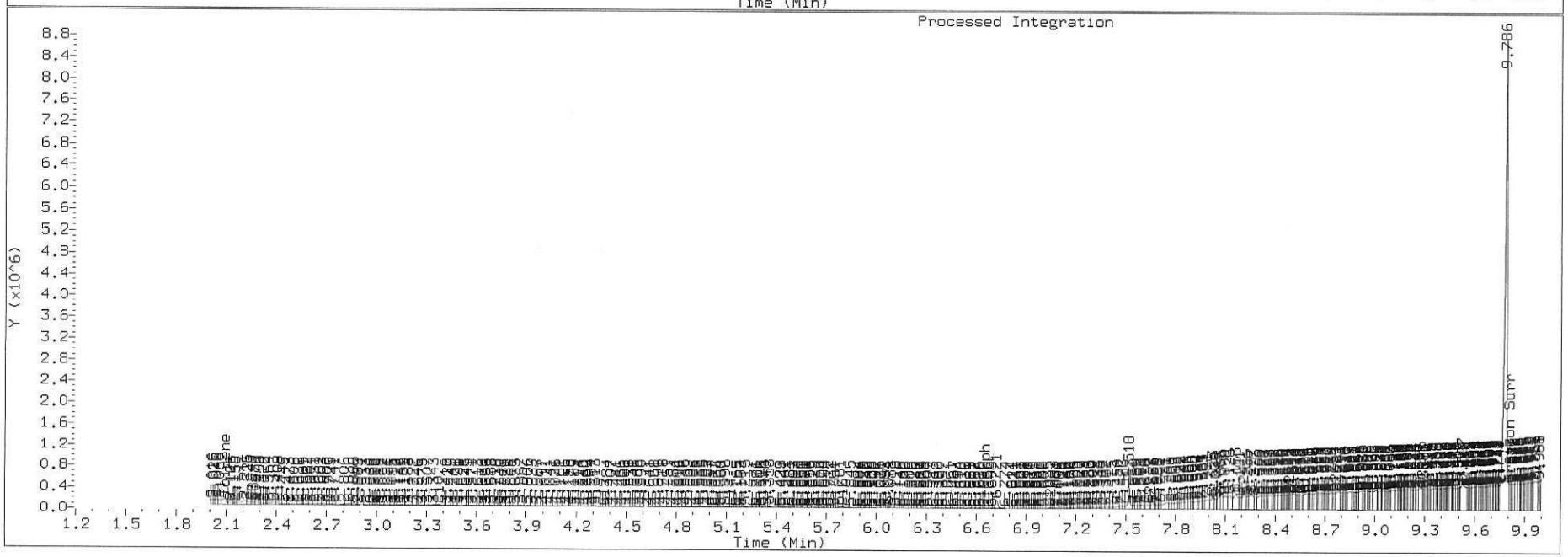


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2527.D Injection: 25-OCT-2019 20:35

Lab ID:SHJ0406-SCV3





Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191119.b/419K1907.D
Method: 20191119.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 11/20/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHK0260-ICV3
Client ID:
Injection: 19-NOV-2019 15:10
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.258	-0.008	251291	294712	WATPHD	(C12-C24)	42051010	263.9
C10	3.371	-0.003	4406335	3424876	WATPHM	(C24-C38)	496216	3.7
C12	4.346	-0.001	4634910	4478760	AK102	(C10-C25)	82254431	420.8
C14	5.126	-0.002	3015617	2044036	AK103	(C25-C36)	286196	2.9
C16	5.801	-0.005	604553	490104	OR.DIES	(C10-C28)	82288476	419.8
C18	6.426	-0.007	88855	83248				
C20	7.035	-0.006	27599	35934	JET-A	(C10-C18)	81259124	500.0
C22	7.631	-0.006	14833	25191				
C24	8.208	-0.005	6203	10027				
C25	8.490	-0.002	3298	4254				
C26	8.761	-0.002	1681	2107				
C28	9.291	0.006	225	122				
C32	10.242	0.000	1787	779				
C34	10.677	-0.003	4152	2235				
Filter Peak	12.648	0.002	7181	4285	CREOSOT	(C12-C22)	41927190	817.4
C36	11.126	0.000	5955	3830				
C38	11.639	-0.004	6373	4434				
C40	12.278	0.002	7499	4100				
o-terph	6.651	-0.002	16020002	16763037				
Triacon Surr	9.804	0.002	747	319	NAS DIES	(C10-C24)	82236143	421.4

Range Times: NW Diesel(4.346 - 8.213) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.64) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	16763037	81.9
Triacontane	319	0.0

M Indicates the peak was manually integrated

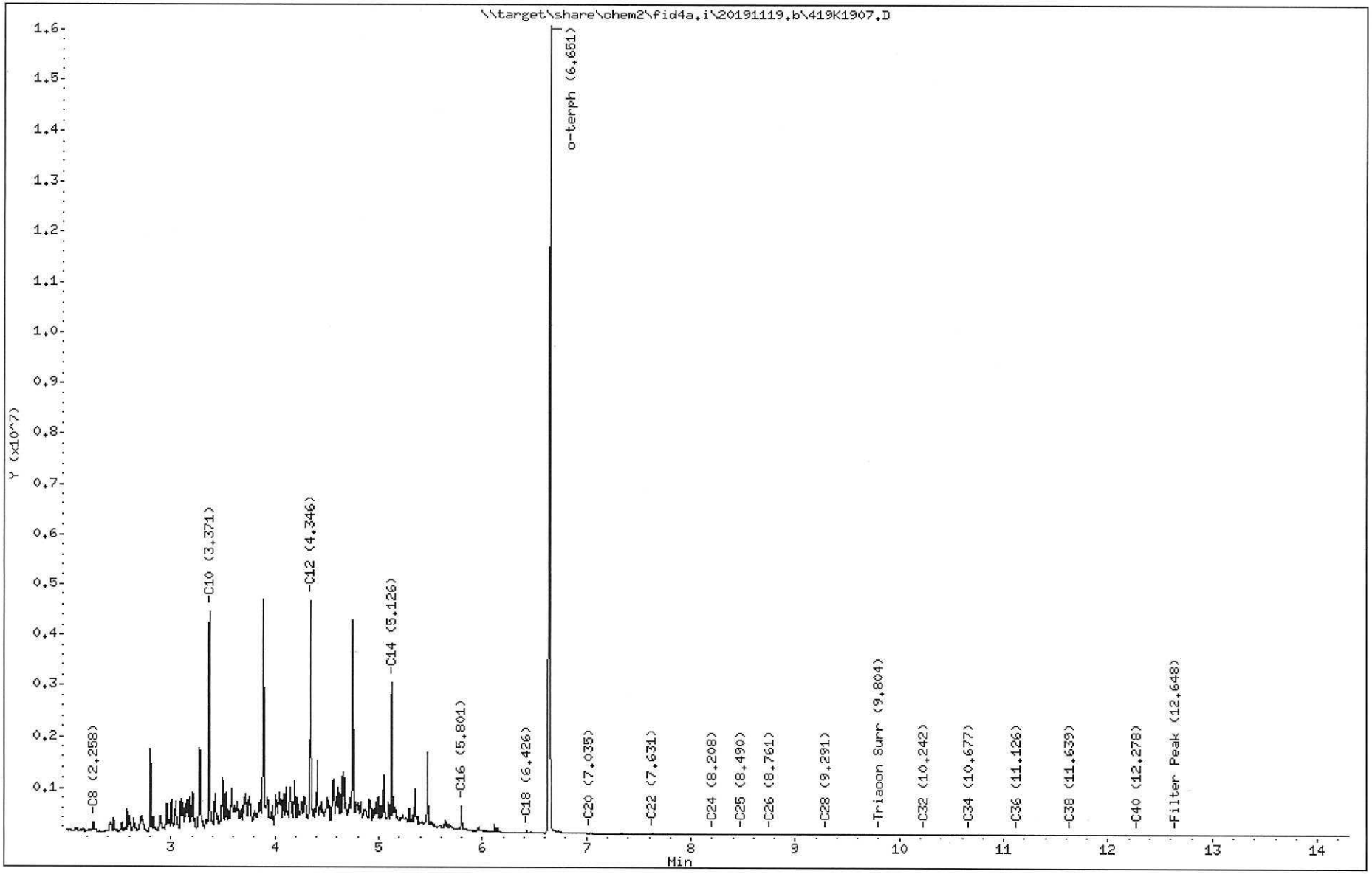
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	51292.5	15-NOV-2019

Data File: \\target\share\chem2\fid4a.i\20191119.b\419K1907.D
Date : 19-NOV-2019 15:10
Client ID:
Sample Info: SHK0260-ICV3

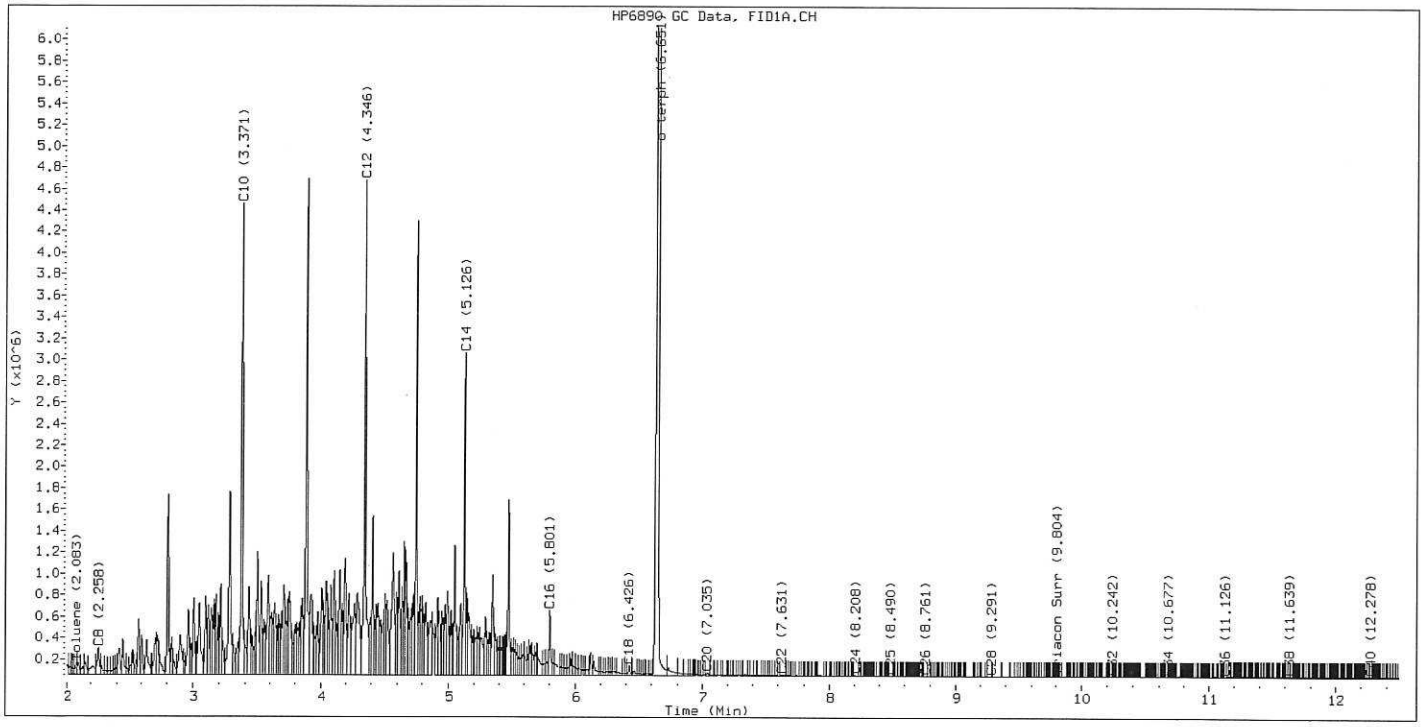
Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO
Column diameter: 0.25



Datafile: FID4A, 20191119.b/419K1907.D SHK0260-ICV3



Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	DA00022	Instrument:	FID4
Calibration Date:	10/25/2019	Column (1):	RTX-1

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Diesel Range Organics (C12-C24)	50	182114.3	100	162168.4	250	151655.3	500	152220	1000	153066.8	2500	154795.4
o-Terphenyl	9	207237.8	18	202348.9	45	199293.8	90	202627.8	180	206915.5	450	209787.6

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INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	DA00022	Instrument:	FID4
Calibration Date:	10/25/2019	Column (1):	RTX-1

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RF		RF		RF		RF		RF		RF
Diesel Range Organics (C12-C24)												
o-Terphenyl												

Analytical Resources, Incorporated
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INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	DA00022	Instrument:	FID4
Calibration Date:	10/25/2019	Column (1):	RTX-1

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
		RF		RF		RF		RF		RF		RF
Diesel Range Organics (C12-C24)												
Motor Oil Range Organics (C24-C38)	100	110475.2	250	98102.84	500	98974	1000	101521.1	2500	101127.1	5000	96795.9
o-Terphenyl												

Analytical Resources, Incorporated
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INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	DA00022	Instrument:	FID4
Calibration Date:	10/25/2019	Column (1):	RTX-1

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
		RF		RF		RF		RF		RF		RF
Diesel Range Organics (C12-C24)												

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	DA00022	Instrument:	FID4
Calibration Date:	10/25/2019	Column (1):	RTX-1

Compound	Level 25		Level 26		Level 27		Level 28		Level 29		Level 30	
		RF		RF		RF		RF		RF		RF
Diesel Range Organics (C12-C24)												

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	DA00022	Instrument:	FID4
Calibration Date:	10/25/2019	Column (1):	RTX-1

Compound	Level 31		Level 32		Level 33		Level 34		Level 35		Level 36	
		RF		RF		RF		RF		RF		RF
Diesel Range Organics (C12-C24)												

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	DA00022	Instrument:	FID4
Calibration Date:	10/25/2019	Column (1):	RTX-1

Compound	Level 37		Level 38		Level 39		Level 40		Level 41		Level 42	
		RF		RF		RF		RF		RF		RF
Diesel Range Organics (C12-C24)												

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INITIAL CALIBRATION DATA
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	DA00022	Instrument:	FID4
Calibration Date:	10/25/2019	Column (1):	RTX-1

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Diesel Range Organics (C12-C24)	159336.7	7.4			RSD (20)	
Diesel Range Organics (C12-C24)	159336.7	7.4			RSD (20)	
Motor Oil Range Organics (C24-C38)	101166	4.8			RSD (20)	
o-Terphenyl	204701.9	1.9			RSD (20)	

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ANALYSIS SEQUENCE

SHJ0406

Printed: 10/30/2019 7:24:06AM

Instrument: FID4 Element Column ID: G004925
Calibration ID: CJ00089

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SHJ0406-IBL1	Retention Time Standard	QC		1	H006806		
SHJ0406-IBL2	Instrument Blank	QC		2	H007457		
SHJ0406-CAL1	DIESEL 50	QC		3	H010495		
SHJ0406-CAL2	DIESEL 100	QC		4	H010496		
SHJ0406-CAL3	DIESEL 250	QC		5	H010497		
SHJ0406-CAL4	DIESEL 500	QC		6	H010498		
SHJ0406-CAL5	DIESEL 1000	QC		7	H010499		
SHJ0406-CAL6	DIESEL 2500	QC		8	H009367		
SHJ0406-SCV1	DIESEL SCV	QC		9	H008294		
SHJ0406-CAL7	MOIL 100	QC		10	H008395		
SHJ0406-CAL8	MOIL 250	QC		11	H008396		
SHJ0406-CAL9	MOIL 500	QC		12	H008397		
SHJ0406-CALA	MOIL 1000	QC		13	H007659		
SHJ0406-CALB	MOIL 2500	QC		14	H008398		
SHJ0406-CALC	MOIL 5000	QC		15	H007458		
SHJ0406-SCV2	MOIL SCV	QC		16	H008399		
SHJ0406-CALD	AK103 100	QC		17	H010478		
SHJ0406-CALE	AK103 250	QC		18	H010479		
SHJ0406-CALF	AK103 500	QC		19	H010480		
SHJ0406-CALG	AK103 1000	QC		20	H010481		
SHJ0406-CALH	AK103 2500	QC		21	H010482		
SHJ0406-CALI	AK103 5000	QC		22	H008608		

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Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SHJ0406

Printed: 10/30/2019 7:24:06AM

Instrument: FID4 Element Column ID: G004925
Calibration ID: CJ00089

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SHJ0406-SCV3	AK103 SCV	QC		23	H008400		

seq_ARI_GC_Data.rpt

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	25-OCT-2019 11:37	419J2501.D	1	RINSE	
2	25-OCT-2019 11:55	419J2502.D	1	RINSE	
3	25-OCT-2019 12:30	419J2503.D	1	RINSE	
4	25-OCT-2019 12:51	419J2504.D	1	RINSE	
5	25-OCT-2019 13:11	419J2505.D	1	SHJ0406-IBL1	
6	25-OCT-2019 13:31	419J2506.D	1	SHJ0406-IBL2	
7	25-OCT-2019 13:52	419J2507.D	1	SHJ0406-CAL1	
8	25-OCT-2019 14:12	419J2508.D	1	SHJ0406-CAL2	
9	25-OCT-2019 14:32	419J2509.D	1	SHJ0406-CAL3	
10	25-OCT-2019 14:53	419J2510.D	1	SHJ0406-CAL4	
11	25-OCT-2019 15:13	419J2511.D	1	SHJ0406-CAL5	
12	25-OCT-2019 15:32	419J2512.D	1	SHJ0406-CAL6	
13	25-OCT-2019 15:52	419J2513.D	1	SHJ0406-SCV1	
14	25-OCT-2019 16:12	419J2514.D	1	SHJ0406-CAL7	
15	25-OCT-2019 16:33	419J2515.D	1	SHJ0406-CAL8	
16	25-OCT-2019 16:53	419J2516.D	1	SHJ0406-CAL9	
17	25-OCT-2019 17:13	419J2517.D	1	SHJ0406-CALA	
18	25-OCT-2019 17:34	419J2518.D	1	SHJ0406-CALB	
19	25-OCT-2019 17:54	419J2519.D	1	SHJ0406-CALC	
20	25-OCT-2019 18:14	419J2520.D	1	SHJ0406-SCV2	
21	25-OCT-2019 18:35	419J2521.D	1	SHJ0406-CALD	
22	25-OCT-2019 18:55	419J2522.D	1	SHJ0406-CALE	
23	25-OCT-2019 19:15	419J2523.D	1	SHJ0406-CALF	
24	25-OCT-2019 19:34	419J2524.D	1	SHJ0406-CALG	
25	25-OCT-2019 19:54	419J2525.D	1	SHJ0406-CALH	
26	25-OCT-2019 20:15	419J2526.D	1	SHJ0406-CALI	
27	25-OCT-2019 20:35	419J2527.D	1	SHJ0406-SCV3	
28	25-OCT-2019 20:55	419J2528.D	1	SHJ0406-ICV1	
29	25-OCT-2019 21:16	419J2529.D	1	SHJ0406-ICV2	
30	25-OCT-2019 21:36	419J2530.D	1	BHJ0711-BLK1	
31	25-OCT-2019 21:56	419J2531.D	1	BHJ0711-BS1	
32	25-OCT-2019 22:16	419J2532.D	1	19J0373-01	
33	25-OCT-2019 22:35	419J2533.D	1	19J0373-02	
34	25-OCT-2019 22:55	419J2534.D	1	19J0373-03	
35	25-OCT-2019 23:16	419J2535.D	1	19J0373-04	
36	25-OCT-2019 23:36	419J2536.D	1	19J0373-05	
37	25-OCT-2019 23:57	419J2537.D	1	19J0373-06	
38	26-OCT-2019 00:17	419J2538.D	1	19J0373-07	
39	26-OCT-2019 00:37	419J2539.D	1	19J0373-08	
40	26-OCT-2019 00:58	419J2540.D	1	SHJ0406-CCV1	
41	26-OCT-2019 01:18	419J2541.D	1	SHJ0406-CCV2	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

ARI Job No.: RINS Method: FID4TPH.m Instrument: fid4a.i Date: 25-OCT-2019

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1137	419J2501.D		RINSE	1	NO MANUAL INTEGRATION
1155	419J2502.D		RINSE	1	NO MANUAL INTEGRATION
1230	419J2503.D		RINSE	1	NO MANUAL INTEGRATION
1251	419J2504.D		RINSE	1	NO MANUAL INTEGRATION
1311	419J2505.D		SHJ0406-IBL1	1	NO MANUAL INTEGRATION
1331	419J2506.D		SHJ0406-IBL2	1	NO MANUAL INTEGRATION
1352	419J2507.D		SHJ0406-CAL1	1	NO MANUAL INTEGRATION
1412	419J2508.D		SHJ0406-CAL2	1	o-terph,
1432	419J2509.D		SHJ0406-CAL3	1	NO MANUAL INTEGRATION
1453	419J2510.D		SHJ0406-CAL4	1	o-terph,
1513	419J2511.D		SHJ0406-CAL5	1	o-terph,
1532	419J2512.D		SHJ0406-CAL6	1	o-terph,
1552	419J2513.D		SHJ0406-SCV1	1	NO MANUAL INTEGRATION
1612	419J2514.D		SHJ0406-CAL7	1	Triacon Surr,
1633	419J2515.D		SHJ0406-CAL8	1	Triacon Surr,
1653	419J2516.D		SHJ0406-CAL9	1	Triacon Surr,
1713	419J2517.D		SHJ0406-CALA	1	Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1734	419J2518.D	SHJ0406-CALB		1	Triacon Surr,
1754	419J2519.D	SHJ0406-CALC		1	Triacon Surr,
1814	419J2520.D	SHJ0406-SCV2		1	Triacon Surr,
1835	419J2521.D	SHJ0406-CALD		1	Triacon Surr,
1855	419J2522.D	SHJ0406-CALE		1	Triacon Surr,
1915	419J2523.D	SHJ0406-CALF		1	Triacon Surr,
1934	419J2524.D	SHJ0406-CALG		1	Triacon Surr,
1954	419J2525.D	SHJ0406-CALH		1	Triacon Surr,
2015	419J2526.D	SHJ0406-CALI		1	Triacon Surr,
2035	419J2527.D	SHJ0406-SCV3		1	Triacon Surr,
2055	419J2528.D	SHJ0406-ICV1		1	o-terph,
2116	419J2529.D	SHJ0406-ICV2		1	Triacon Surr,
2136	419J2530.D	BHJ0711-BLK1		1	NO MANUAL INTEGRATION
2156	419J2531.D	BHJ0711-BS1		1	o-terph,
2216	419J2532.D	19J0373-01		1	Triacon Surr,
2235	419J2533.D	19J0373-02		1	NO MANUAL INTEGRATION
2255	419J2534.D	19J0373-03		1	Triacon Surr,
2316	419J2535.D	19J0373-04		1	Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2336	419J2536.D	19J0373-05		1	o-terph, Triacon Surr,
2357	419J2537.D	19J0373-06		1	Triacon Surr,
0017	419J2538.D	19J0373-07		1	Triacon Surr,
0037	419J2539.D	19J0373-08		1	Triacon Surr,
0058	419J2540.D	SHJ0406-CCV1		1	o-terph,
0118	419J2541.D	SHJ0406-CCV2		1	Triacon Surr,

Security Status Report

Date: 30-Oct-2019 07:25

419J2507.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2508.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2509.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2510.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2511.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2512.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2513.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2514.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2515.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2516.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2517.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2518.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2519.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2520.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2521.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2522.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2523.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2524.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2525.D	Data Locked	jrains, 30-Oct-2019 07:20
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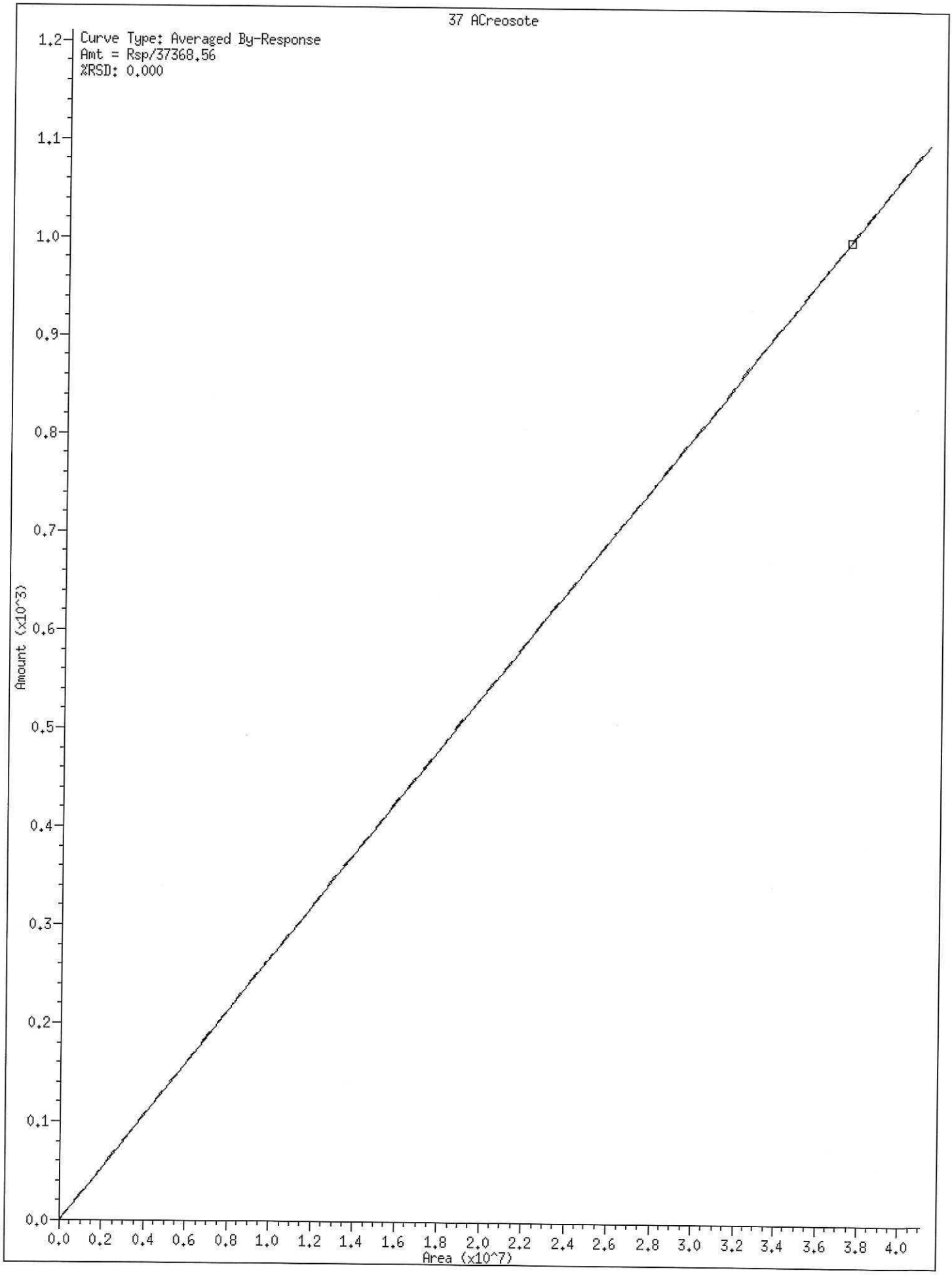
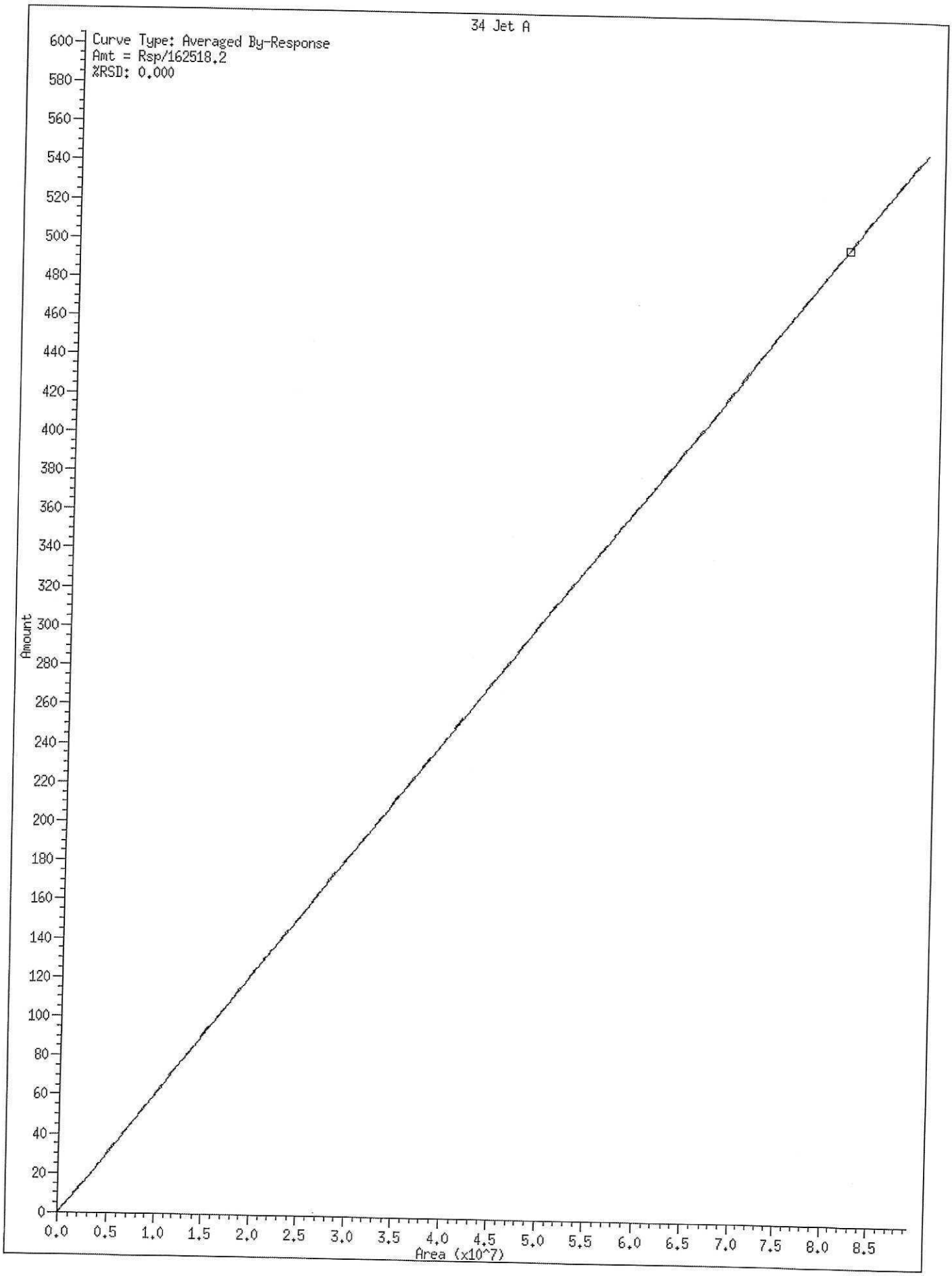
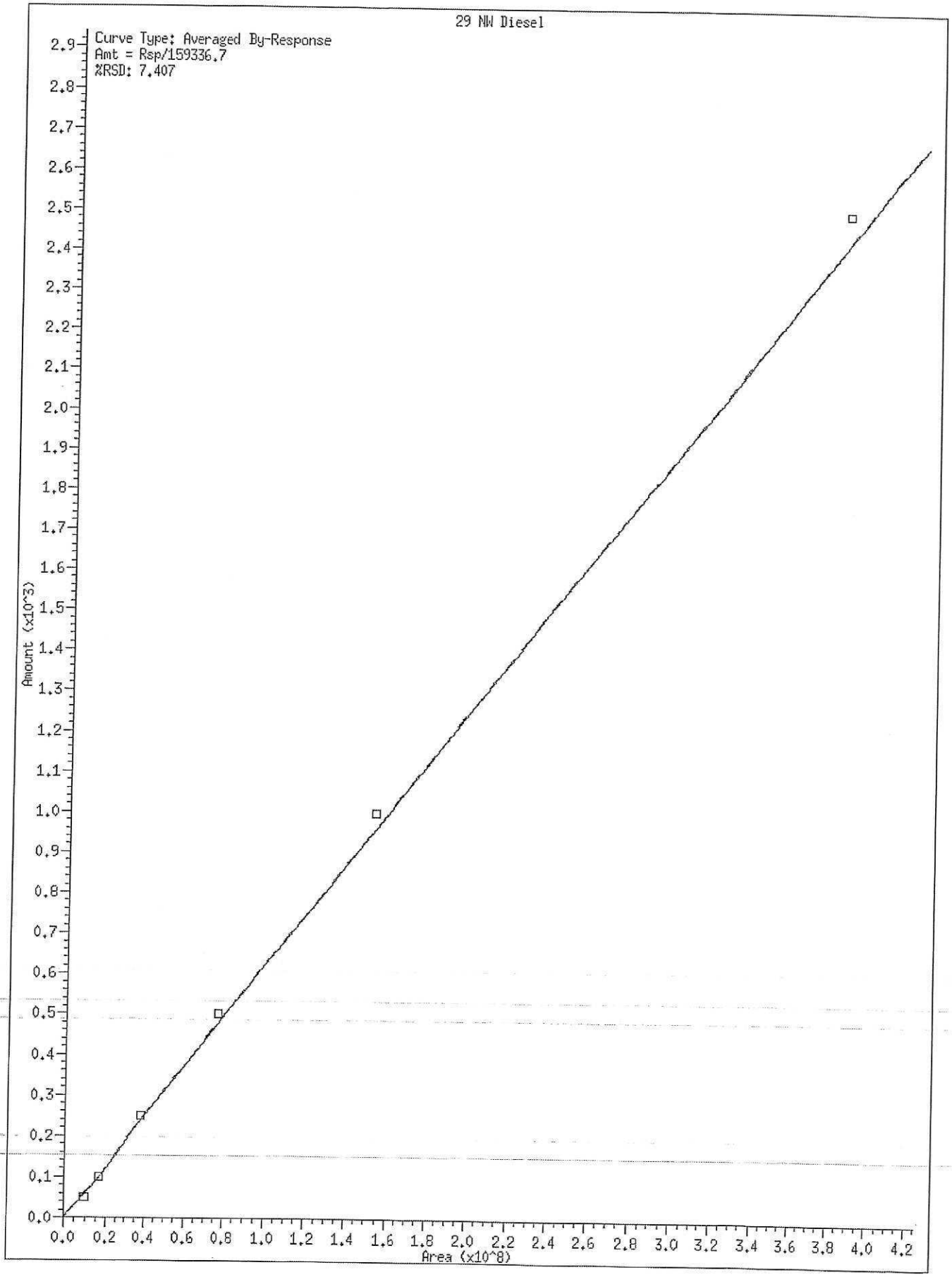
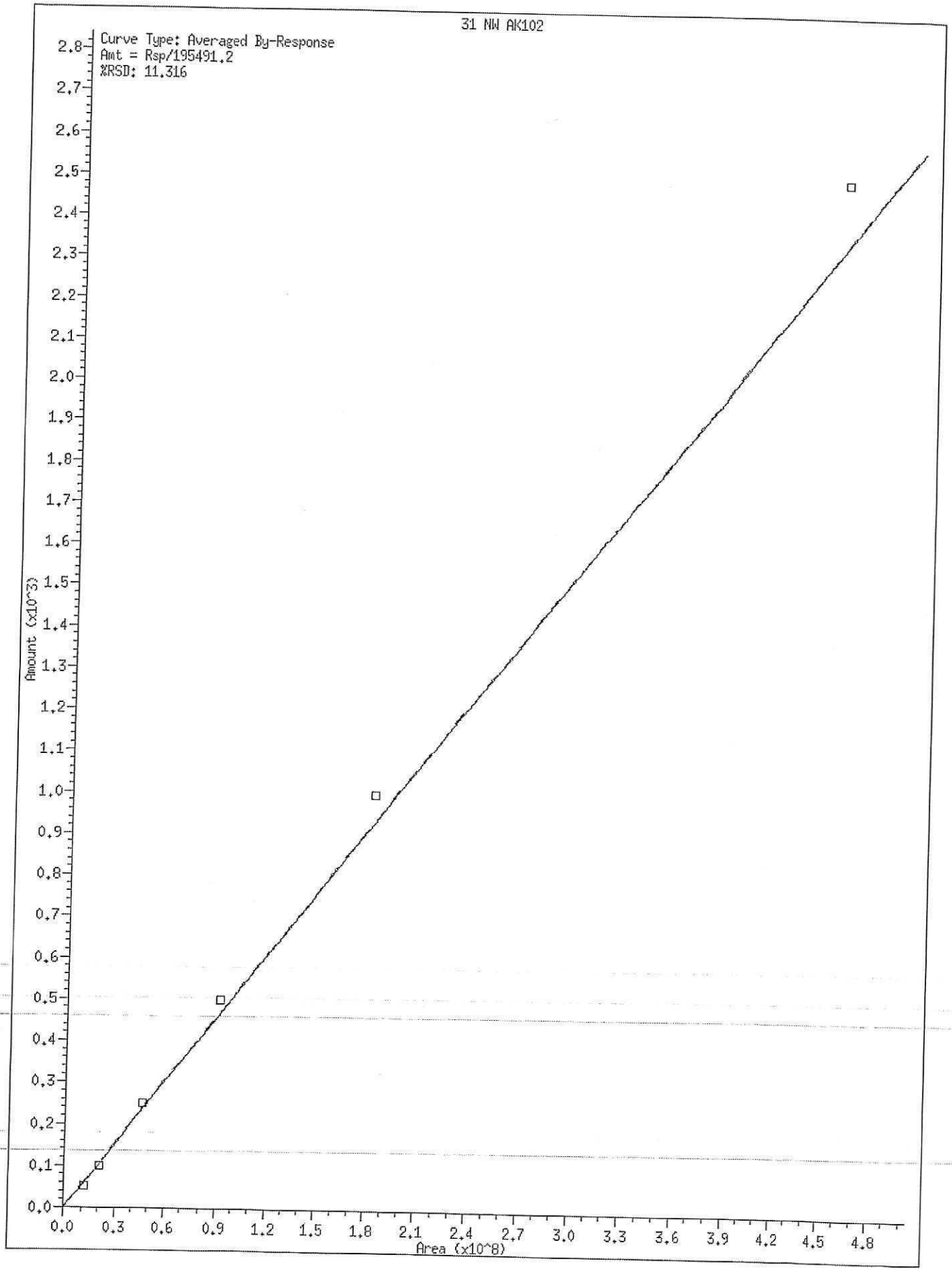
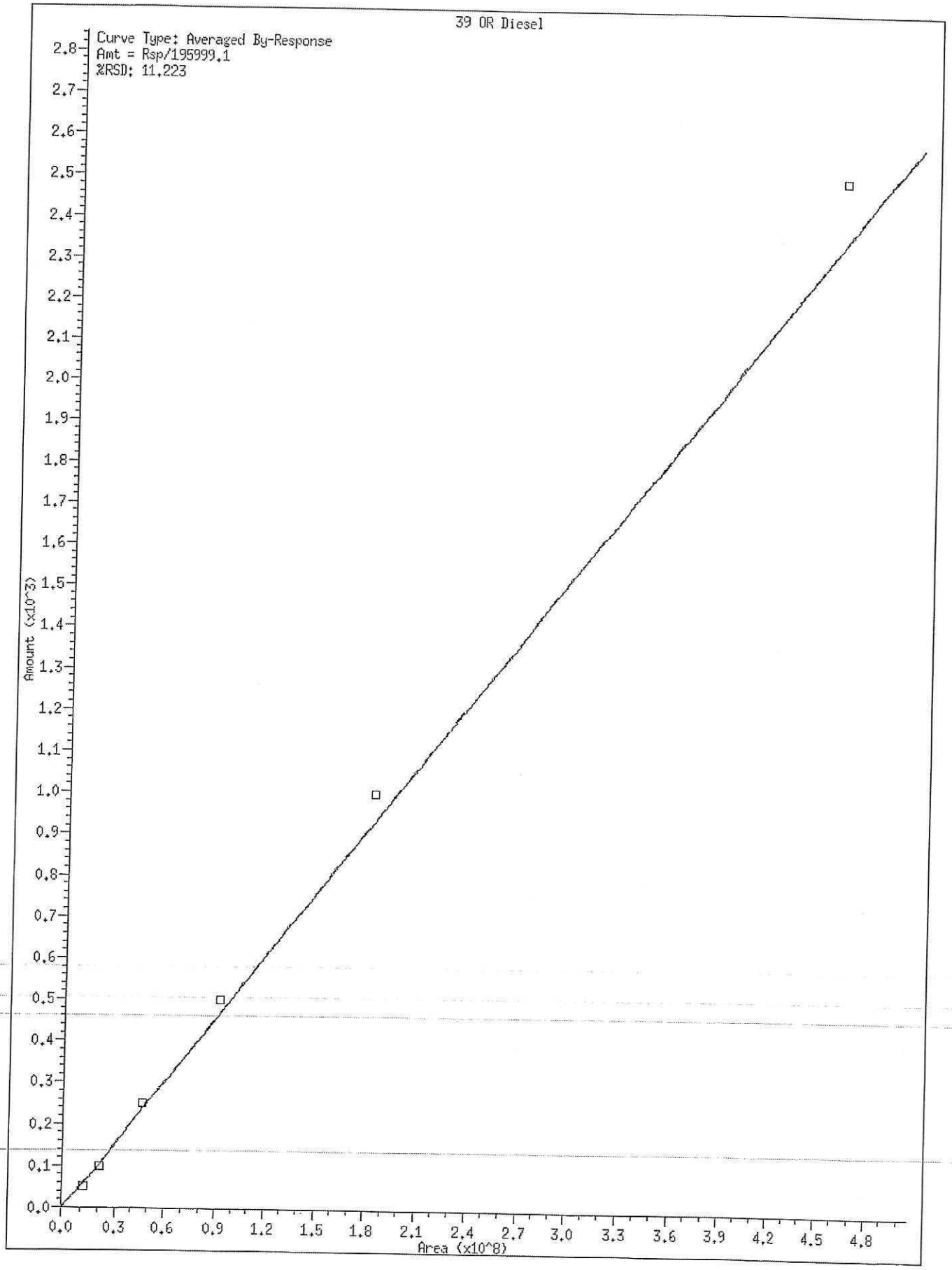
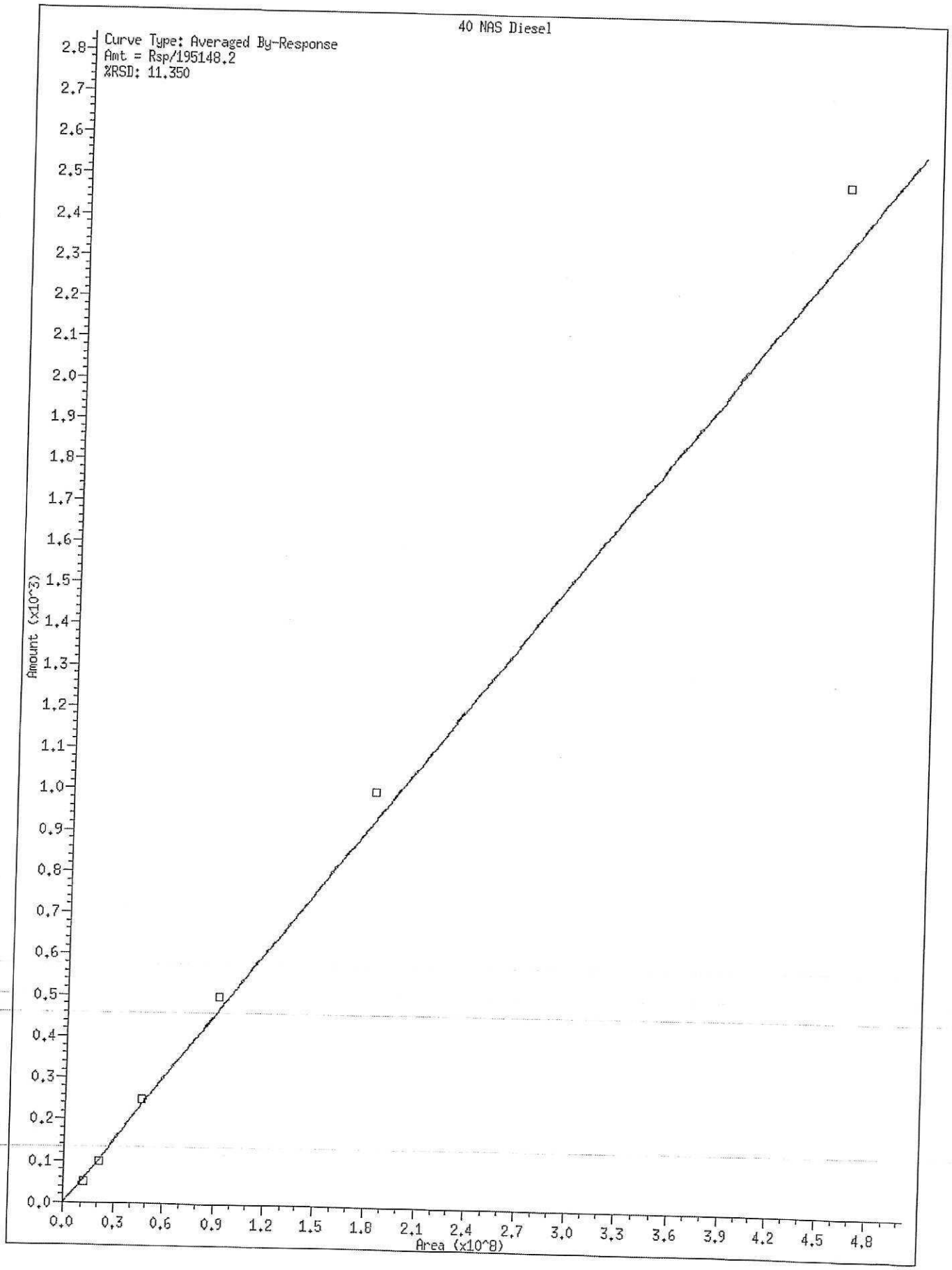

37 ACreosote
Curve Type: Averaged By-Response
Amt = Rsp/37368.56
%RSD: 0.000
Amount (x10^3)
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6 3.8 4.0


34 Jet A
Curve Type: Averaged By-Response
Amt = Rsp/162518.2
%RSD: 0.000
Amount
Area (x10^7)


29 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/159336.7
%RSD: 7.407
Amount (x10^3)
Area (x10^8)


31 NW AK102
Curve Type: Averaged By-Response
Amt = Rsp/195491.2
%RSD: 11.316
Amount (x10^3)
Area (x10^8)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8


39 OR Diesel
Curve Type: Averaged By-Response
Amt = Rsp/195999.1
%RSD: 11.223
Amount (x10^3)
Area (x10^8)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8


40 NAS Diesel
Curve Type: Averaged By-Response
Amt = Rsp/195148.2
%RSD: 11.350
Amount (x10^3)
Area (x10^8)
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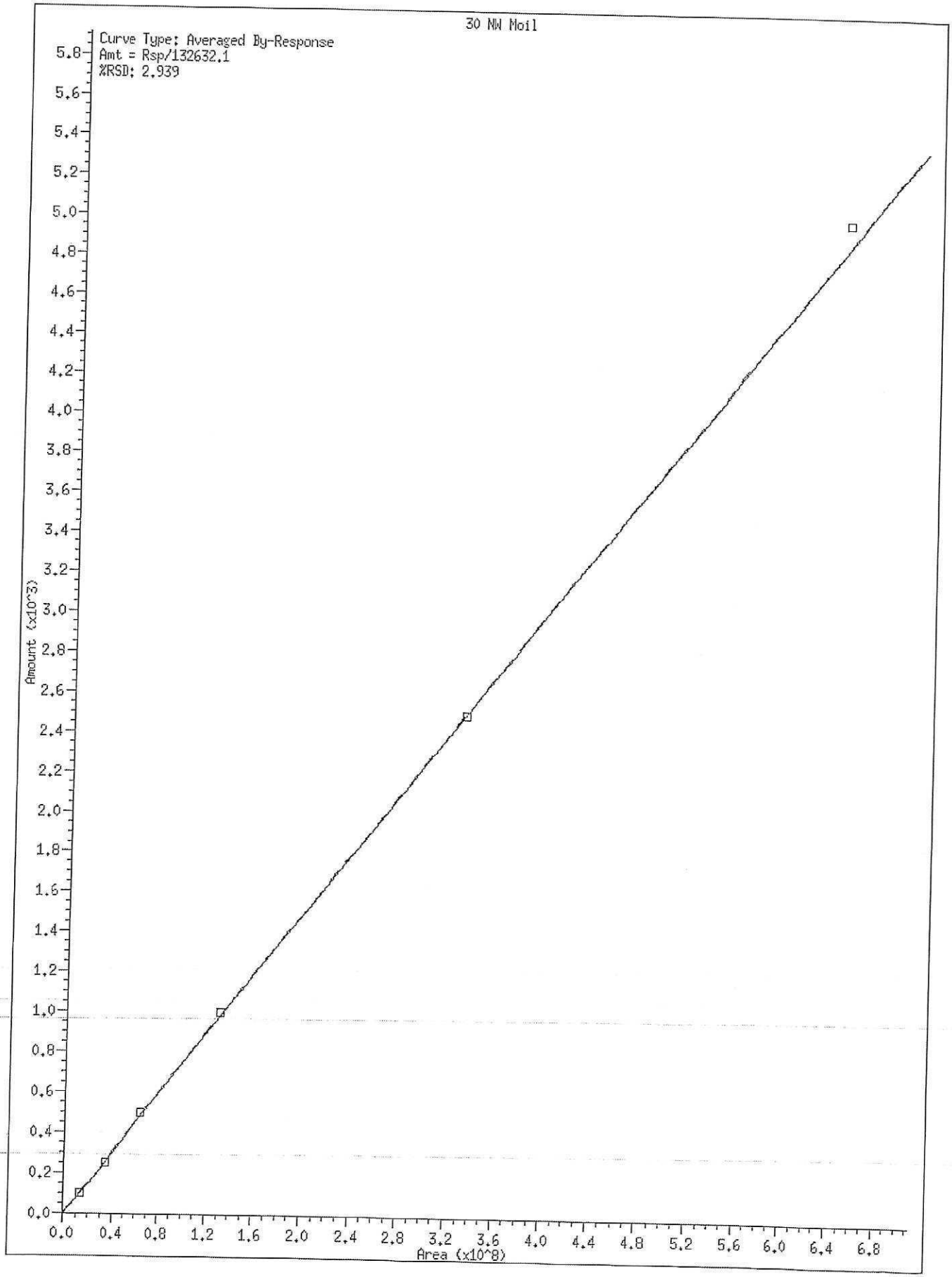
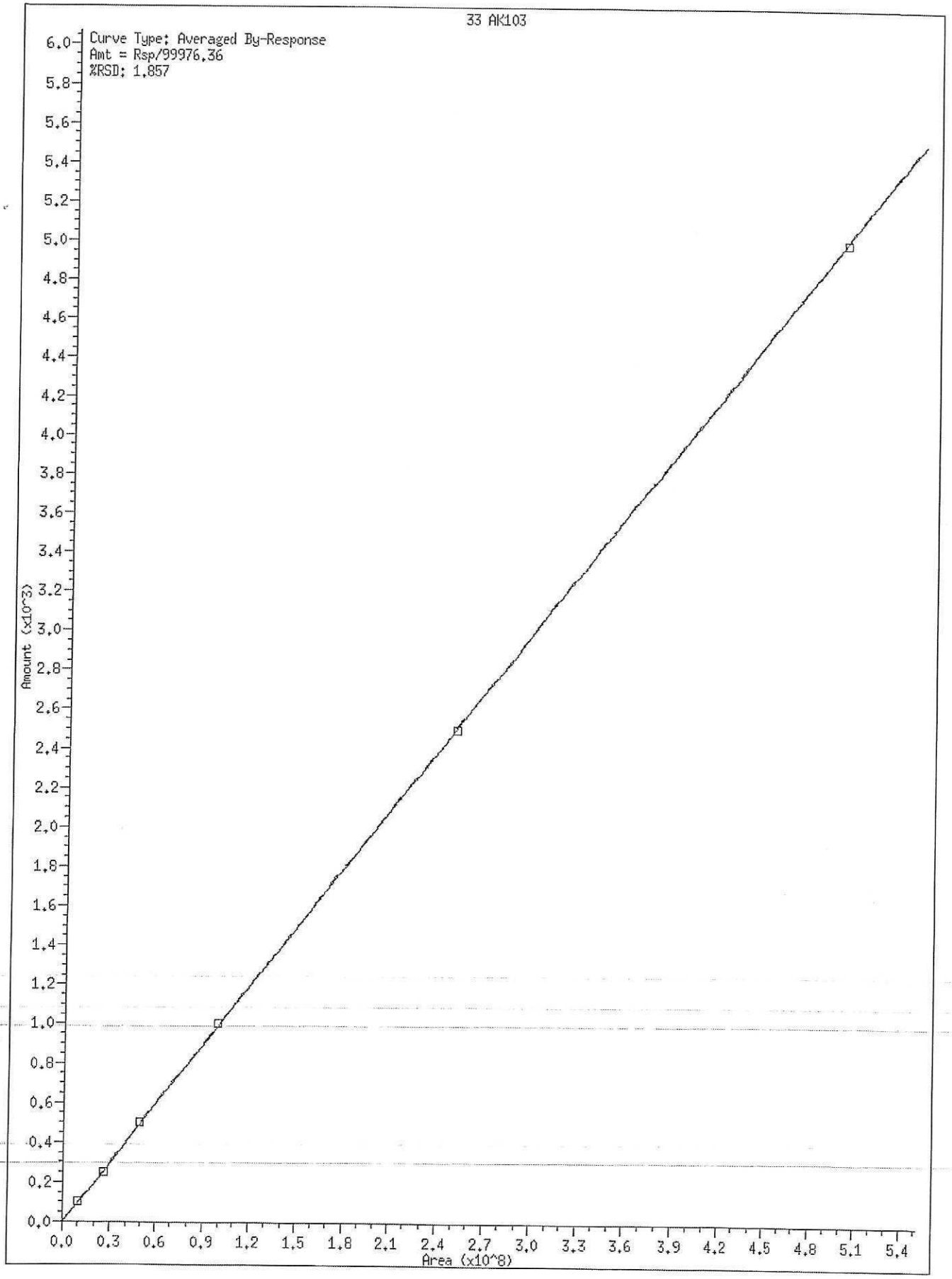
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8


30 NW Moil
Curve Type: Averaged By-Response
Amt = Rsp/132632.1
%RSD: 2.939
Amount (x10^3)
Area (x10^8)


33 AK103
Curve Type: Averaged By-Response
Amt = Rsp/99976.36
%RSD: 1.857
Amount (x10^3)
Area (x10^8)
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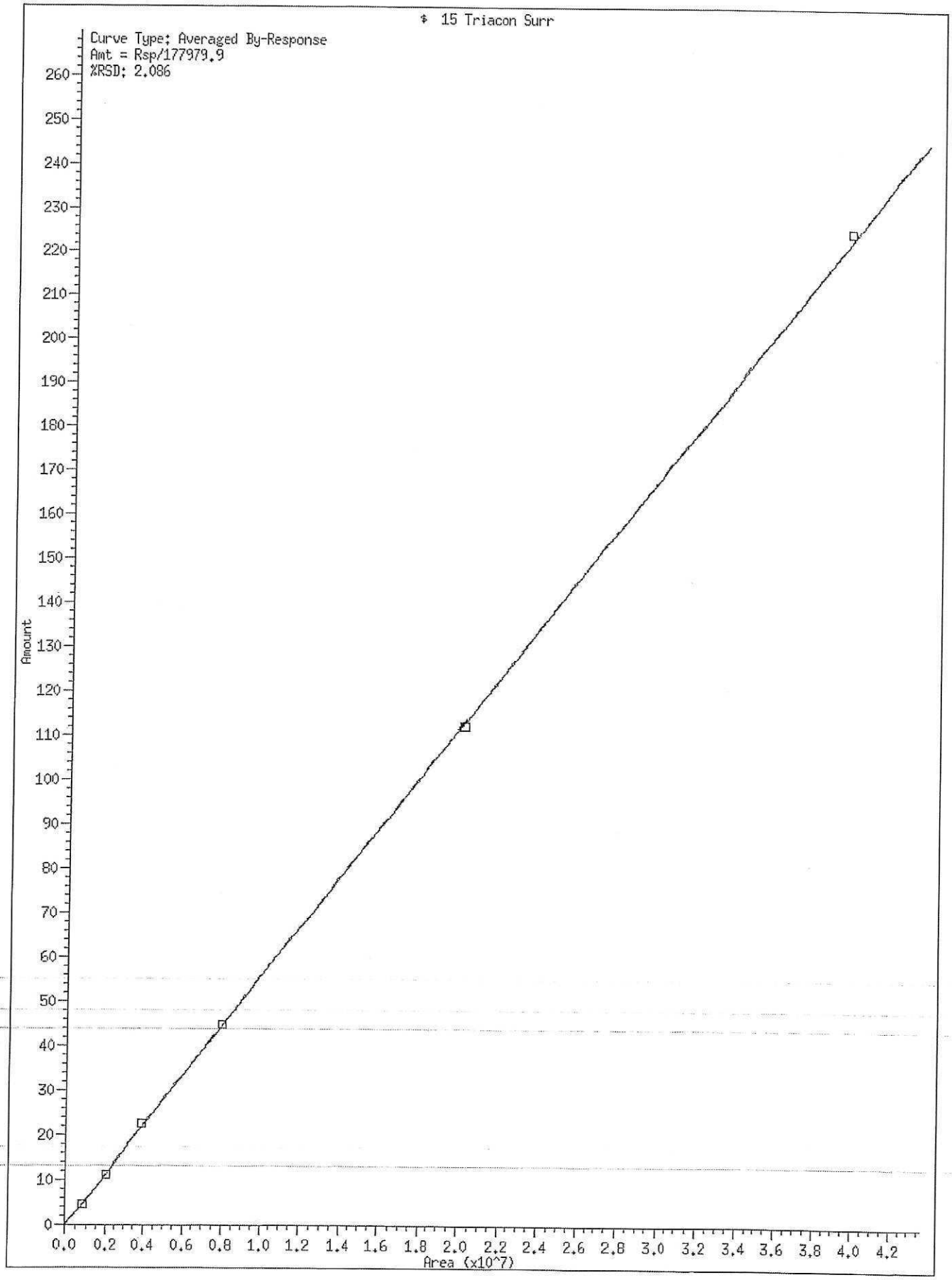
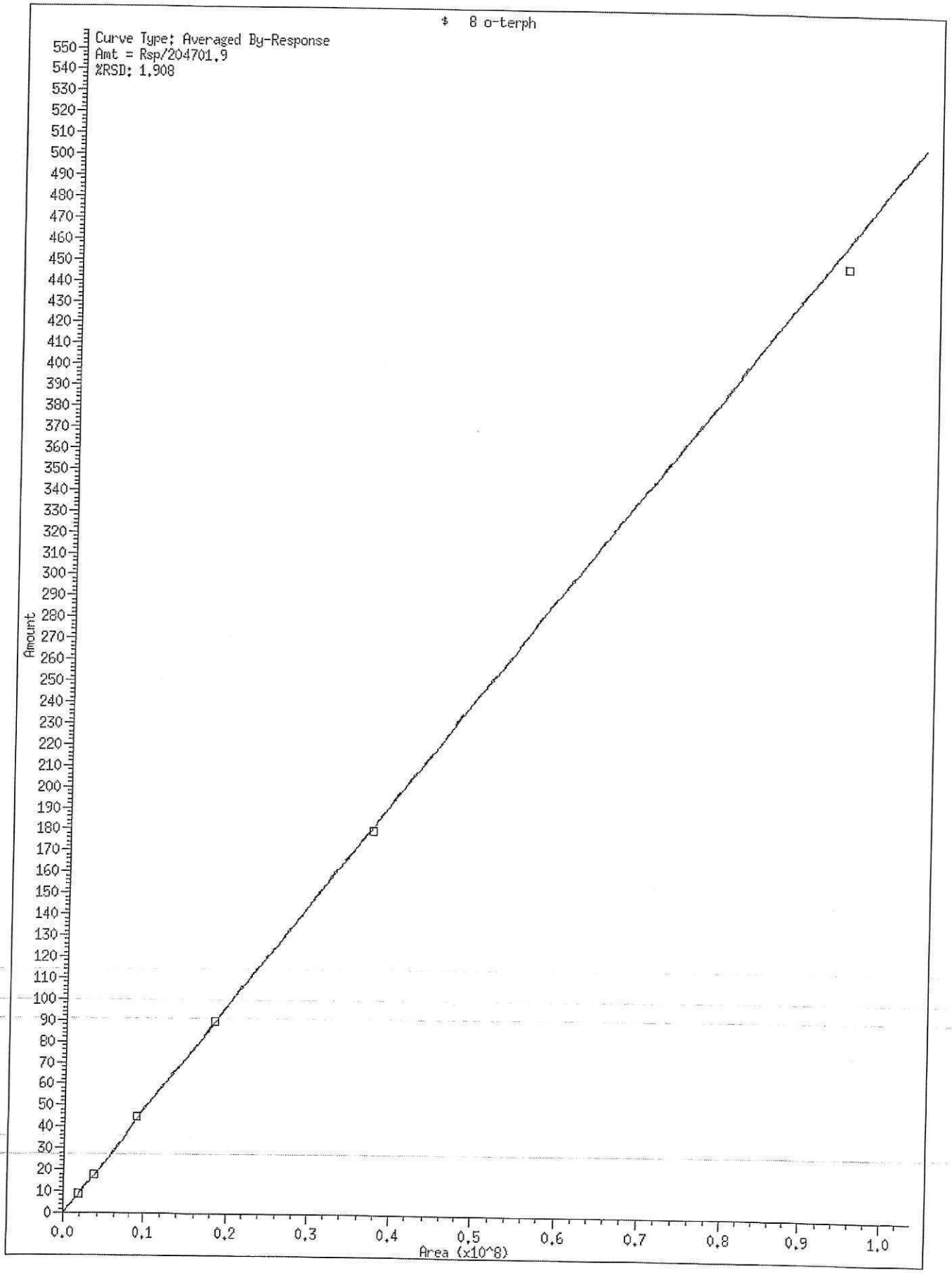
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
0.0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 2.7 3.0 3.3 3.6 3.9 4.2 4.5 4.8 5.1 5.4


15 Triacon Surr
Curve Type: Averaged By-Response
Amt = Rsp/177979.9
%RSD: 2.086
Amount
Area (x10^7)


$ 8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/204701.9
%RSD: 1.908
Amount
Area (x10^8)

Report Date : 30-Oct-2019 07:52

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid4a.i\20191025.b\FID4TPH.m
Batch File: \\target\share\chem2\fid4a.i\20191025.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	419J2507	419J2508	419J2509	419J2510	419J2511	419J2512
INJ.DATE:	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019
INJ.TIME:	13:52	14:12	14:32	14:53	15:13	15:32

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	2.086	2.091	2.092	2.084	2.085	2.093	2.089	1.989-2.189	2.089	0.004
38 NewCpnd_31	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
41 Mineral Spirits	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
2 C8	2.263	2.252	2.253	2.254	2.254	2.254	2.262	2.162-2.362	2.255	0.004
3 C10	3.369	3.367	3.368	3.368	3.368	3.371	3.373	3.323-3.423	3.368	0.001
4 C12	4.344	4.344	4.344	4.344	4.346	4.351	4.347	4.297-4.397	4.345	0.003
5 C14	5.126	5.126	5.126	5.127	5.129	5.137	5.130	5.080-5.180	5.128	0.004
6 C16	5.803	5.802	5.803	5.805	5.809	5.818	5.807	5.757-5.857	5.807	0.006
7 C18	6.428	6.429	6.431	6.434	6.439	6.452	6.435	6.385-6.485	6.435	0.009
$ 8 o-terph	6.636	6.640	6.646	6.655	6.669	6.696	6.656	6.606-6.706	6.657	0.023
9 C20	7.037	7.036	7.036	7.037	7.040	7.047	7.043	6.993-7.093	7.039	0.004
10 C22	7.633	7.631	7.631	7.631	7.633	7.637	7.639	7.589-7.689	7.633	0.002
11 C24	8.210	8.209	8.208	8.207	8.207	8.207	8.215	8.165-8.265	8.208	0.001
12 C25	8.494	8.489	8.488	8.485	8.486	8.485	8.493	8.443-8.543	8.488	0.003
13 C26	8.766	8.762	8.761	8.759	8.758	8.756	8.765	8.715-8.815	8.760	0.004
14 C28	9.292	9.288	9.287	9.281	9.279	9.279	9.285	9.235-9.335	9.284	0.005

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid4a.i\20191025.b\FID4TPH.m
Batch File: \\target\share\chem2\fid4a.i\20191025.b
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 15 Triacon Surr	9.808	9.805	9.803	9.798	9.806	9.800	9.802	9.752-9.852	9.803	0.004
16 C32	10.240	10.242	10.248	10.245	10.243	10.242	10.242	10.192-10.292	10.243	0.003
17 C34	10.682	10.678	10.683	10.684	10.687	10.677	10.681	10.631-10.731	10.682	0.004
18 Filter Peak	12.647	12.646	12.650	12.646	12.649	12.650	12.650	12.550-12.750	12.648	0.002
19 C36	11.130	11.127	11.127	11.131	11.127	11.129	11.129	11.079-11.179	11.128	0.002
20 C38	11.651	11.646	11.648	11.653	11.653	11.651	11.650	11.600-11.700	11.650	0.003
21 C40	12.289	12.291	12.292	12.287	12.283	12.288	12.289	12.239-12.339	12.288	0.003
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 ACreosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++
39 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
40 NAS Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

Report Date : 30-Oct-2019 07:53

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid4a.i\20191025.b\FID4TPH.m
Batch File: \\target\share\chem2\fid4a.i\20191025.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	419J2514	419J2515	419J2516	419J2517	419J2518	419J2519
INJ.DATE:	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019	25-OCT-2019
INJ.TIME:	16:12	16:33	16:53	17:13	17:34	17:54

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	2.092	2.092	2.092	2.093	2.092	2.092	2.089	1.989-2.189	2.092	0.000
	38 NewCpnd_31	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
	35 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.015	0.965-1.065	+++++	+++++
	41 Mineral Spirits	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
	2 C8	2.263	2.262	2.263	2.263	2.250	2.251	2.262	2.162-2.362	2.259	0.007
	3 C10	3.376	3.377	3.376	3.376	3.371	3.369	3.373	3.323-3.423	3.374	0.003
	4 C12	4.368	4.332	4.334	4.333	4.343	4.344	4.347	4.297-4.397	4.342	0.014
	5 C14	5.134	5.134	5.125	5.127	5.126	5.126	5.130	5.080-5.180	5.129	0.004
	6 C16	5.805	5.808	5.805	5.803	5.802	5.802	5.807	5.757-5.857	5.804	0.002
	7 C18	6.435	6.432	6.439	6.428	6.427	6.427	6.435	6.385-6.485	6.431	0.005
$	8 o-terph	6.651	6.657	6.659	6.633	6.655	6.656	6.656	6.606-6.706	6.652	0.009
	9 C20	7.038	7.038	7.036	7.048	7.051	7.035	7.043	6.993-7.093	7.041	0.006
	10 C22	7.642	7.644	7.632	7.632	7.632	7.633	7.639	7.589-7.689	7.636	0.005
	11 C24	8.214	8.212	8.215	8.217	8.215	8.219	8.215	8.165-8.265	8.215	0.002
	12 C25	8.500	8.497	8.500	8.495	8.491	8.490	8.493	8.443-8.543	8.495	0.004
	13 C26	8.760	8.767	8.760	8.769	8.765	8.770	8.765	8.715-8.815	8.765	0.005
	14 C28	9.288	9.294	9.277	9.280	9.285	9.281	9.285	9.235-9.335	9.284	0.006

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid4a.i\20191025.b\FID4TPH.m
Batch File: \\target\share\chem2\fid4a.i\20191025.b
Inst ID: fid4a.i

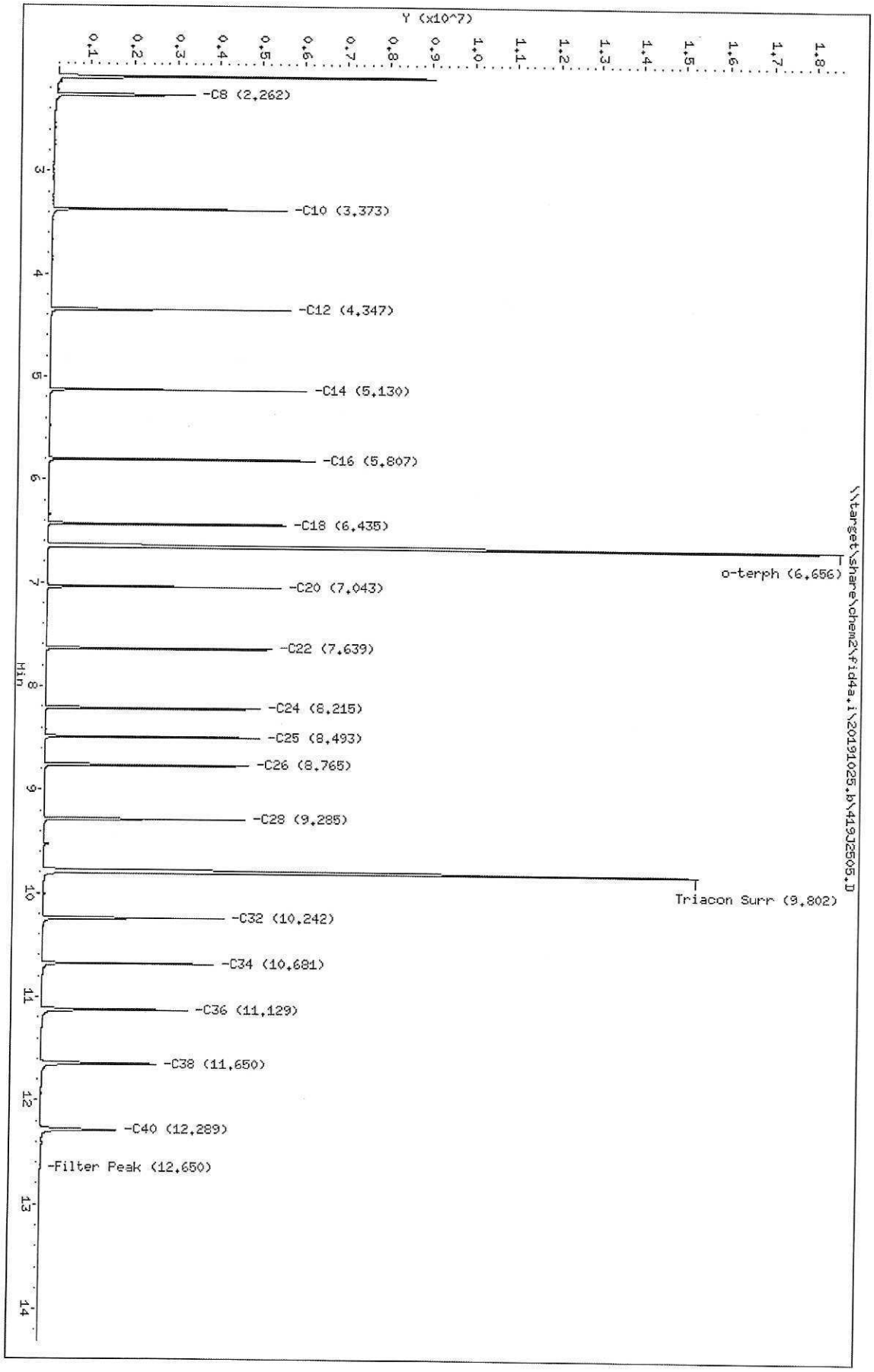
Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 15 Triacon Surr	9.771	9.775	9.781	9.790	9.809	9.836	9.802	9.752-9.852	9.794	0.025
16 C32	10.243	10.233	10.235	10.238	10.249	10.237	10.242	10.192-10.292	10.239	0.006
17 C34	10.679	10.680	10.682	10.681	10.679	10.683	10.681	10.631-10.731	10.681	0.002
18 Filter Peak	12.652	12.648	12.655	12.648	12.650	12.666	12.650	12.550-12.750	12.653	0.007
19 C36	11.126	11.134	11.129	11.132	11.125	11.132	11.129	11.079-11.179	11.129	0.004
20 C38	11.652	11.650	11.655	11.651	11.649	11.647	11.650	11.600-11.700	11.651	0.002
21 C40	12.297	12.292	12.291	12.291	12.289	12.283	12.289	12.239-12.339	12.291	0.005
29 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.899	0.849-0.949	+++++	+++++
37 ACreosote	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 Jet A	+++++	+++++	+++++	+++++	+++++	+++++	1.024	0.974-1.074	+++++	+++++
30 NW Moil	+++++	+++++	+++++	+++++	+++++	+++++	0.885	0.835-0.935	+++++	+++++
31 NW AK102	+++++	+++++	+++++	+++++	+++++	+++++	0.803	0.753-0.853	+++++	+++++
32 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.812	0.762-0.862	+++++	+++++
33 AK103	+++++	+++++	+++++	+++++	+++++	+++++	1.344	1.294-1.394	+++++	+++++
36 ABunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.985	0.935-1.035	+++++	+++++
39 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
40 NAS Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2505.D
Date : 25-OCT-2019 13:11
Client ID:
Sample Info: SHJ0406-IBL1

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Page 1

Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2505.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-IBL1
Client ID:
Injection: 25-OCT-2019 13:11
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.262	0.000	3356579	3932199	WATPHD	(C12-C24)	22628592	142.0
C10	3.373	0.000	5539104	3757340	WATPHM	(C24-C38)	26475519	199.6
C12	4.347	0.000	5663708	3683615	AK102	(C10-C25)	30812271	157.6
C14	5.130	0.000	6079967	3652238	AK103	(C25-C36)	22405219	224.1
C16	5.807	0.000	6277766	3707382	OR.DIES	(C10-C28)	41957167	214.1
C18	6.435	0.000	5635635	3612752				
C20	7.043	0.000	5539938	3702605				
C22	7.639	0.000	5339005	3727404				
C24	8.215	0.000	5097157	3674684				
C25	8.493	0.000	5111690	3698652				
C26	8.765	0.000	4851792	3662117				
C28	9.285	0.000	4782484	3718632				
C32	10.242	0.000	4326930	3643795				
C34	10.681	0.000	4092240	3584940				
Filter Peak	12.650	0.000	16931	63954	CREOSOT	(C12-C22)	18936204	4854.3
C36	11.129	0.000	3493562	3625484				
C38	11.650	0.000	2741525	3745220				
C40	12.289	0.000	1889635	2977724				
o-terph	6.656	0.000	18648694	20337624				
Triacon Surr	9.802	0.000	15433087	21196653	NAS DIES	(C10-C24)	30787335	157.8

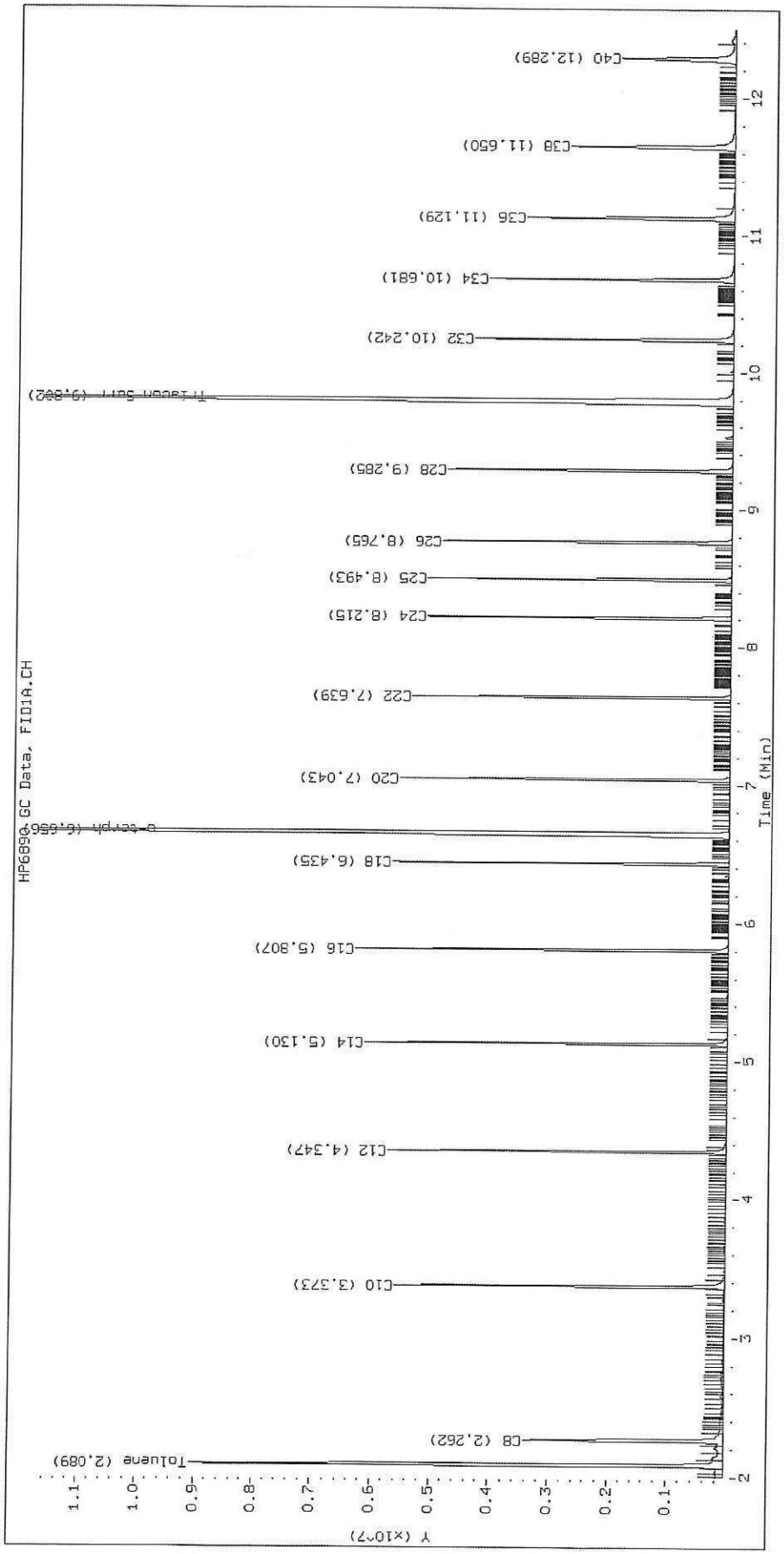
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	20337624	99.4
Triacontane	21196653	119.1

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2505.D SHJ0406-IBL1

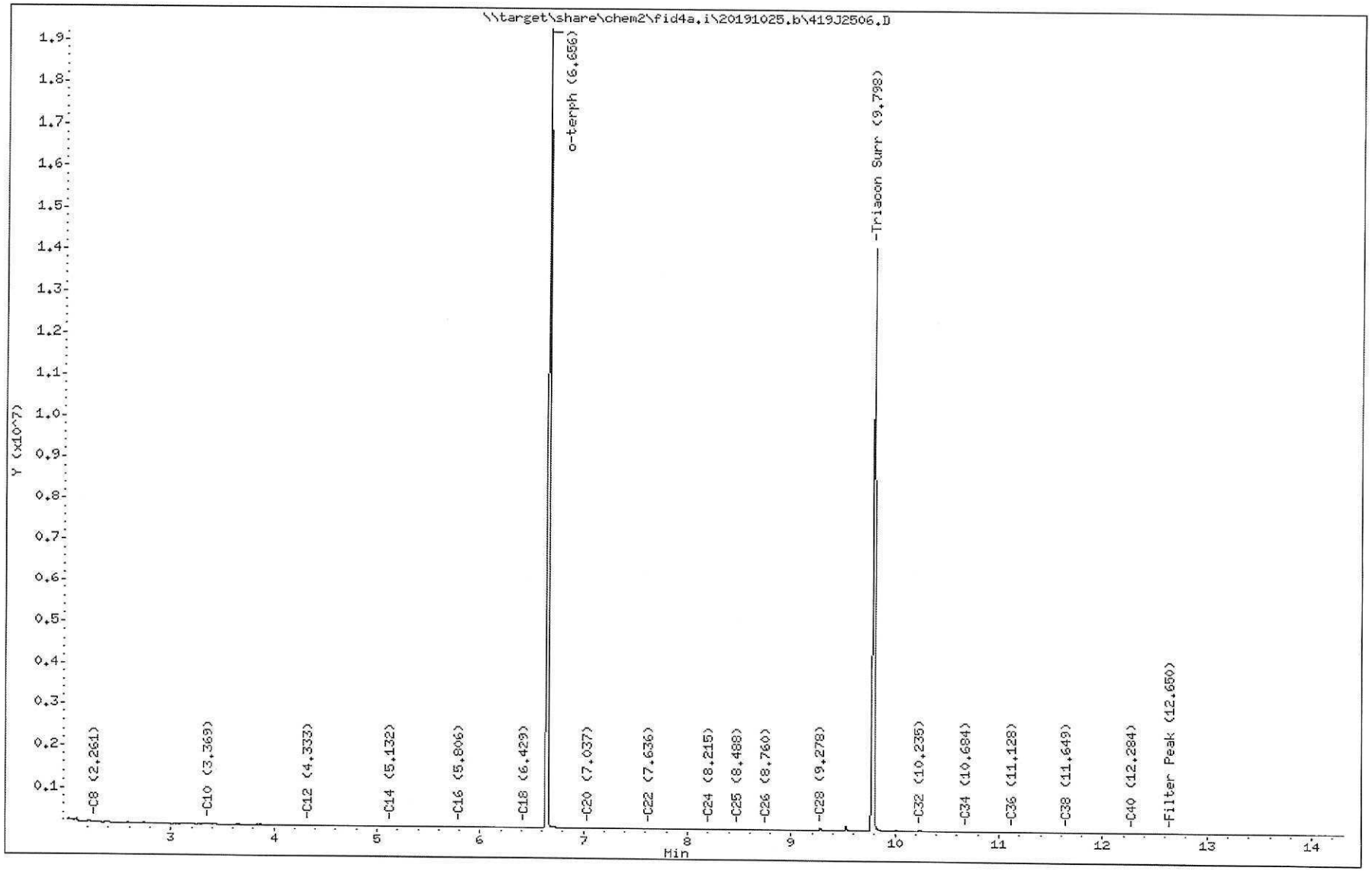


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2506.D
Date : 25-OCT-2019 13:31
Client ID:
Sample Info: SHJ0406-IBL2

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2506.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-IBL2
Client ID:
Injection: 25-OCT-2019 13:31
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.261	-0.001	72509	76139	WATPHD	(C12-C24)	658319	4.1
C10	3.369	-0.004	30567	51207	WATPHM	(C24-C38)	758430	5.7
C12	4.333	-0.014	10639	19318	AK102	(C10-C25)	1520072	7.8
C14	5.132	0.003	5359	3169	AK103	(C25-C36)	566941	5.7
C16	5.806	-0.002	4115	5242	OR.DIES	(C10-C28)	1655230	8.4
C18	6.429	-0.006	2667	2060				
C20	7.037	-0.006	2150	2136				
C22	7.636	-0.002	7003	7700				
C24	8.215	0.000	1821	532				
C25	8.488	-0.005	1855	1750				
C26	8.760	-0.005	1926	1661				
C28	9.278	-0.007	68571	64137				
C32	10.235	-0.007	43108	83259				
C34	10.684	0.003	2246	1101				
Filter Peak	12.650	-0.001	8815	2632	CREOSOT	(C12-C22)	608888	156.1
C36	11.128	-0.001	4708	2306				
C38	11.649	-0.001	6915	2738				
C40	12.284	-0.005	8323	7406				
o-terph	6.656	-0.001	19264239	20580998				
Triacon Surr	9.798	-0.004	14079902	17993211	NAS DIES	(C10-C24)	1505820	7.7

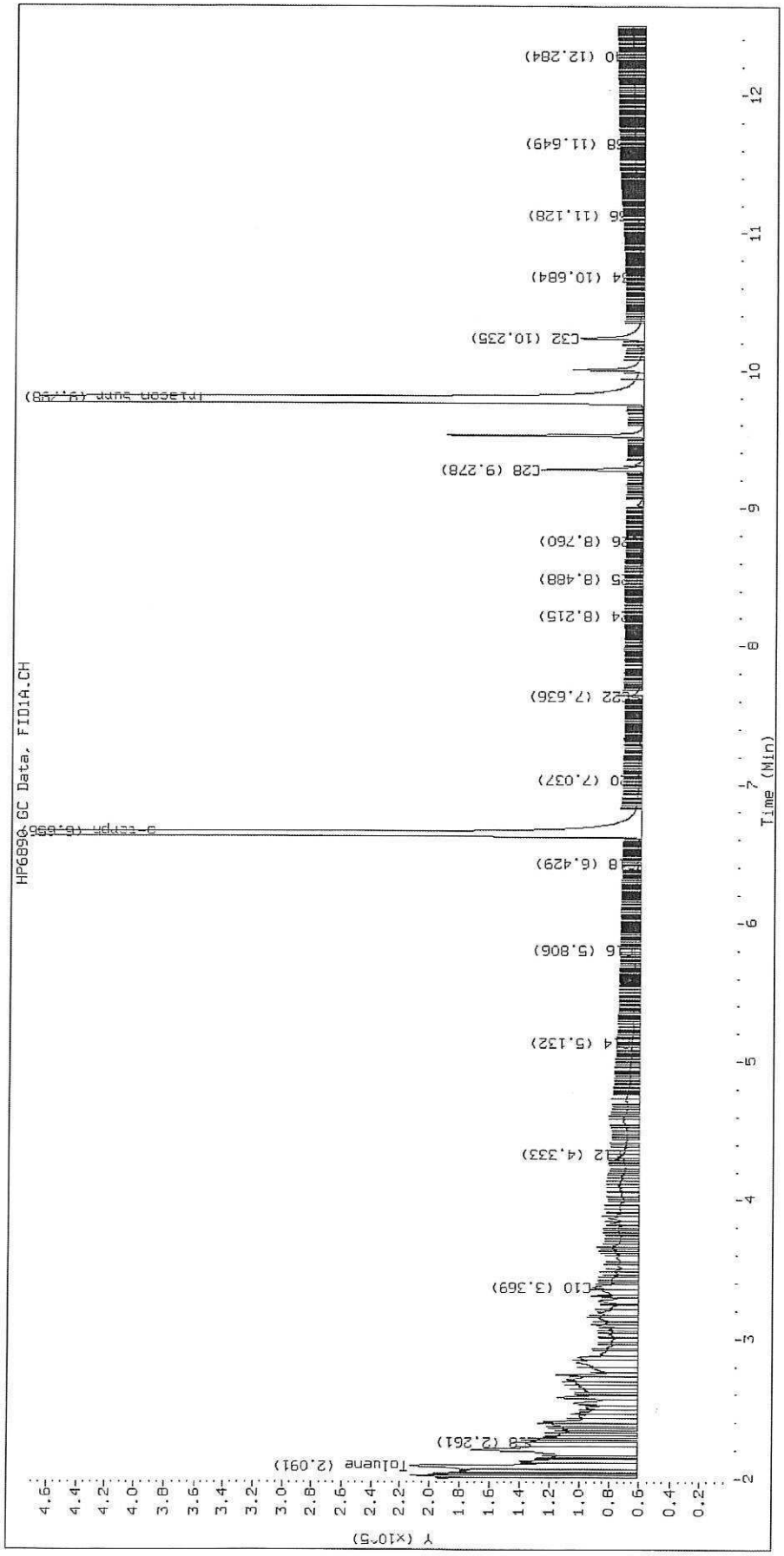
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	20580998	100.5
Triacontane	17993211	101.1

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2506.D SHJ0406-IBL2

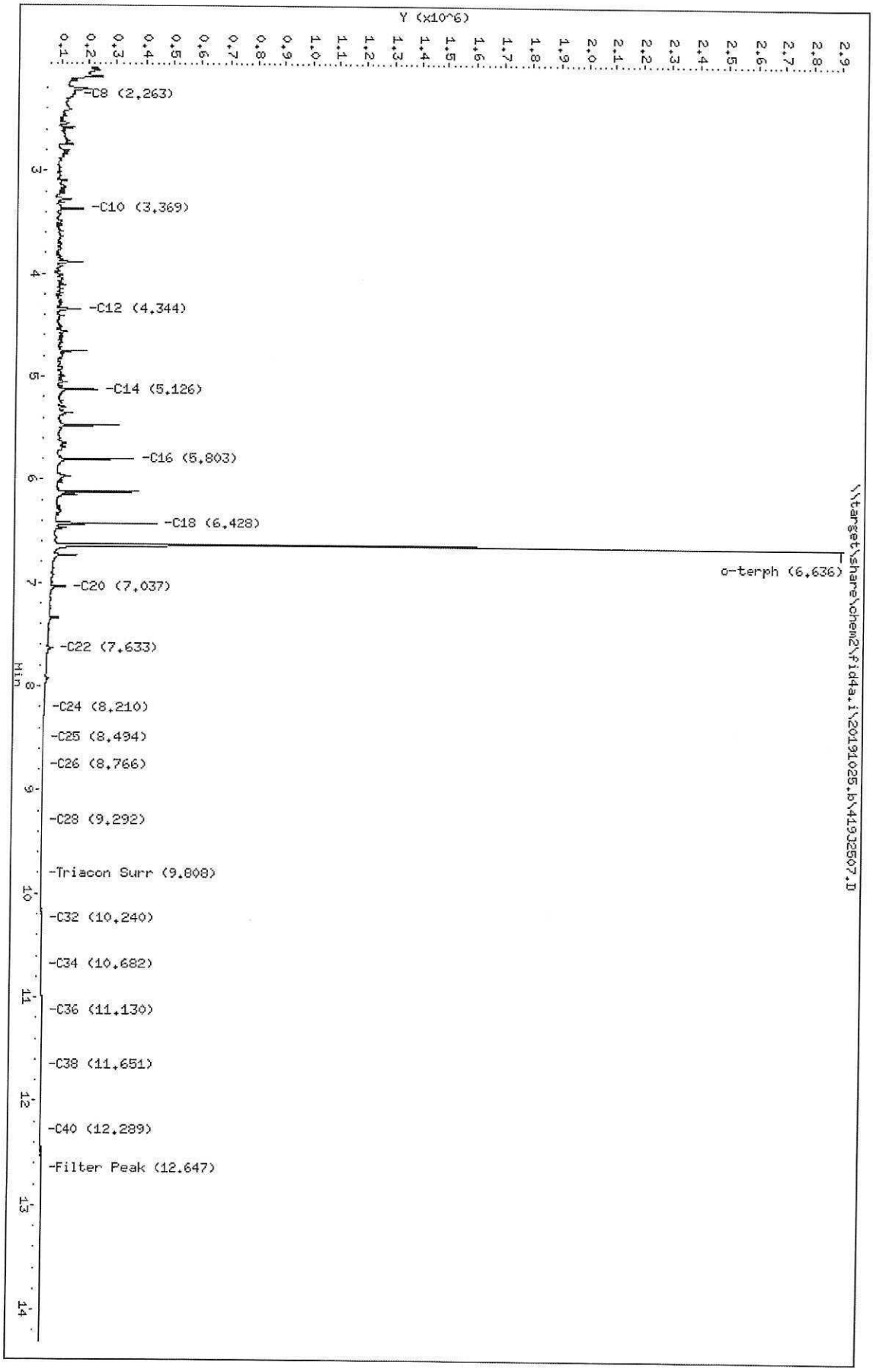


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2507.D
Date : 25-OCT-2019 13:52
Client ID:
Sample Info: SHJ0406-CAL1

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Page 1

Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2507.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL1
Client ID:
Injection: 25-OCT-2019 13:52
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.263	0.001	94181	68499	WATPHD	(C12-C24)	9105717	57.1
C10	3.369	-0.004	130777	159818	WATPHM	(C24-C38)	651398	4.9
C12	4.344	-0.003	124752	202412	AK102	(C10-C25)	11867629	60.7
C14	5.126	-0.003	188715	181186	AK103	(C25-C36)	363608	3.6
C16	5.803	-0.004	314329	331178	OR.DIES	(C10-C28)	11884580	60.6
C18	6.428	-0.007	400639	334718				
C20	7.037	-0.006	83282	126537				
C22	7.633	-0.006	34959	59242				
C24	8.210	-0.005	6227	12090				
C25	8.494	0.001	1850	2300				
C26	8.766	0.001	428	167				
C28	9.292	0.007	424	156				
C32	10.240	-0.002	2740	1341				
C34	10.682	0.001	5209	2827				
Filter Peak	12.647	-0.003	12268	7963	CREOSOT	(C12-C22)	8913896	2285.1
C36	11.130	0.001	8291	3309				
C38	11.651	0.001	10488	3653				
C40	12.289	0.000	11687	5838				
o-terph	6.636	-0.021	2823547	1865140				
Triacon Surr	9.808	0.006	1874	1287	NAS DIES	(C10-C24)	11851657	60.7

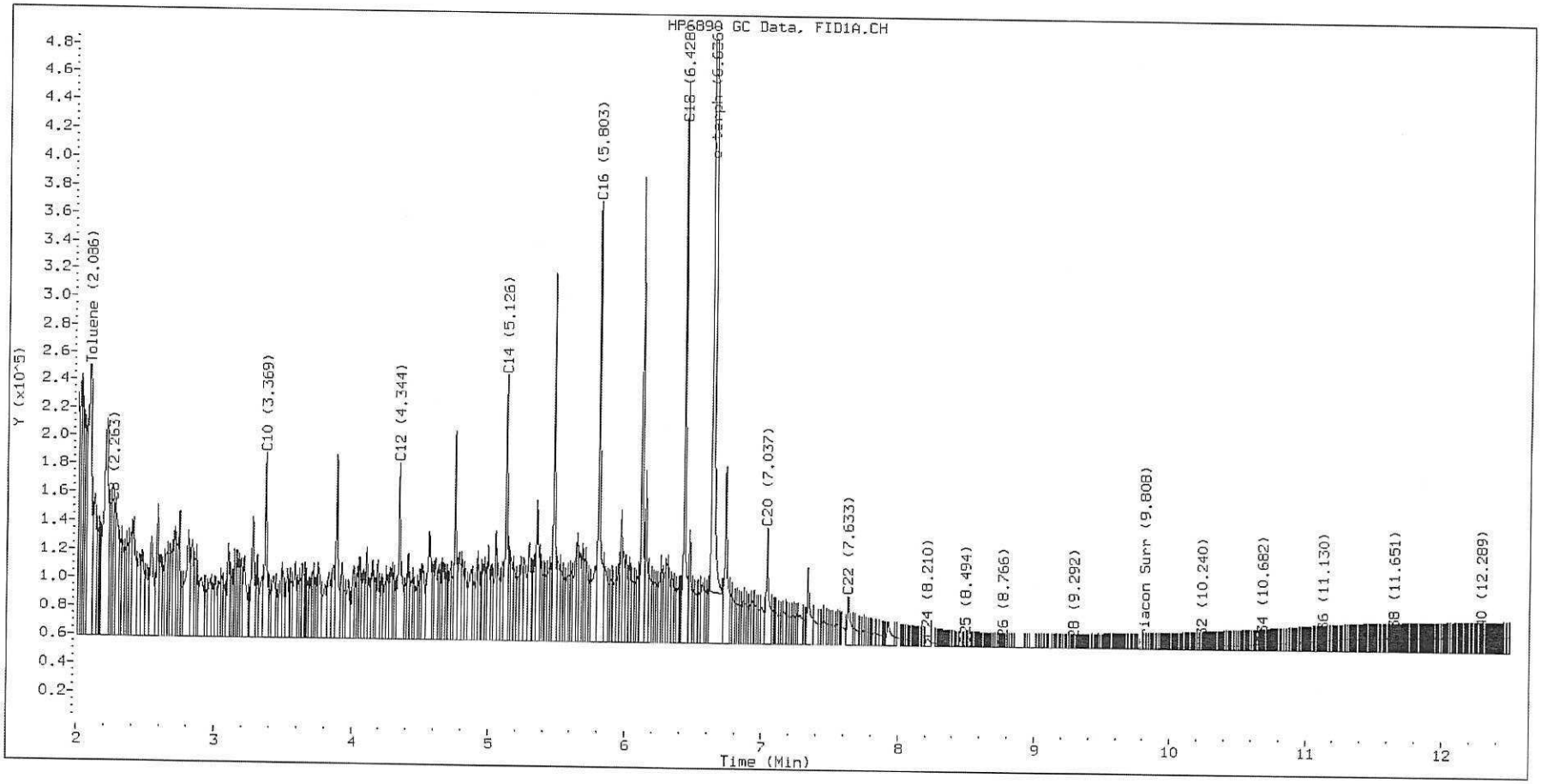
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	1865140	9.1
Triacontane	1287	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2507.D SHJ0406-CAL1

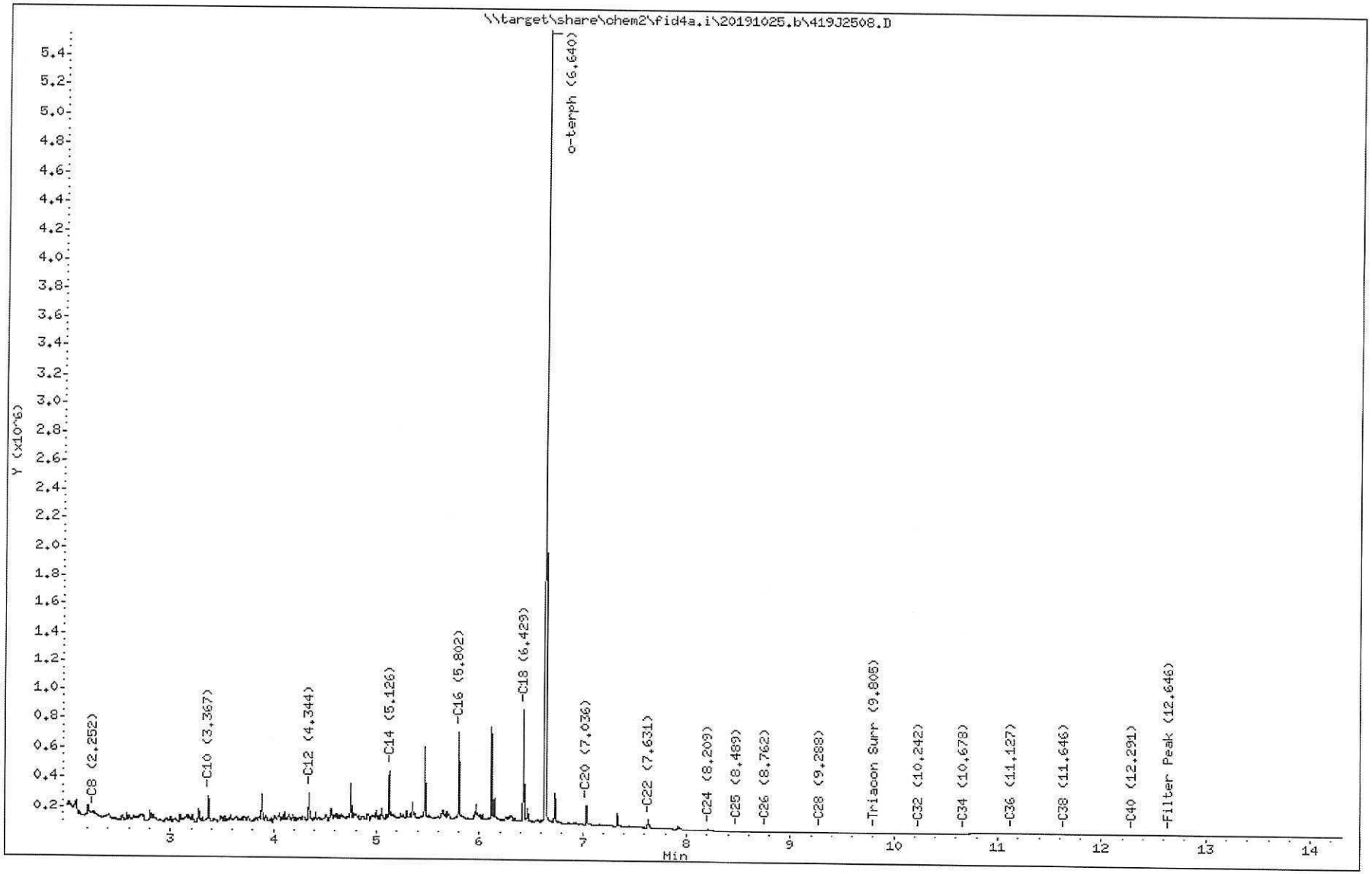


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2508.D
Date : 25-OCT-2019 14:12
Client ID:
Sample Info: SHJ0406-CAL2

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2508.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL2
Client ID:
Injection: 25-OCT-2019 14:12
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.252	-0.010	100789	199426	WATPHD	(C12-C24)	16216844	101.8
C10	3.367	-0.006	219354	239129	WATPHM	(C24-C38)	605463	4.6
C12	4.344	-0.003	250355	355289	AK102	(C10-C25)	20356499	104.1
C14	5.126	-0.004	400436	340538	AK103	(C25-C36)	329685	3.3
C16	5.802	-0.005	670430	513156	OR.DIES	(C10-C28)	20386032	104.0
C18	6.429	-0.006	830433	585845				
C20	7.036	-0.007	189557	206229				
C22	7.631	-0.007	81567	107164				
C24	8.209	-0.006	13975	32117				
C25	8.489	-0.004	4286	7117				
C26	8.762	-0.002	1237	1115				
C28	9.288	0.003	364	105				
C32	10.242	0.000	2184	855				
C34	10.678	-0.003	4506	5051				
Filter Peak	12.646	-0.005	11019	4947	CREOSOT	(C12-C22)	15825625	4056.9
C36	11.127	-0.002	7155	1771				
C38	11.646	-0.004	9240	6899				
C40	12.291	0.002	10430	5163				
o-terph	6.640	-0.017	5468385	3642280				
Triacon Surr	9.805	0.003	1078	368	NAS DIES	(C10-C24)	20331247	104.2

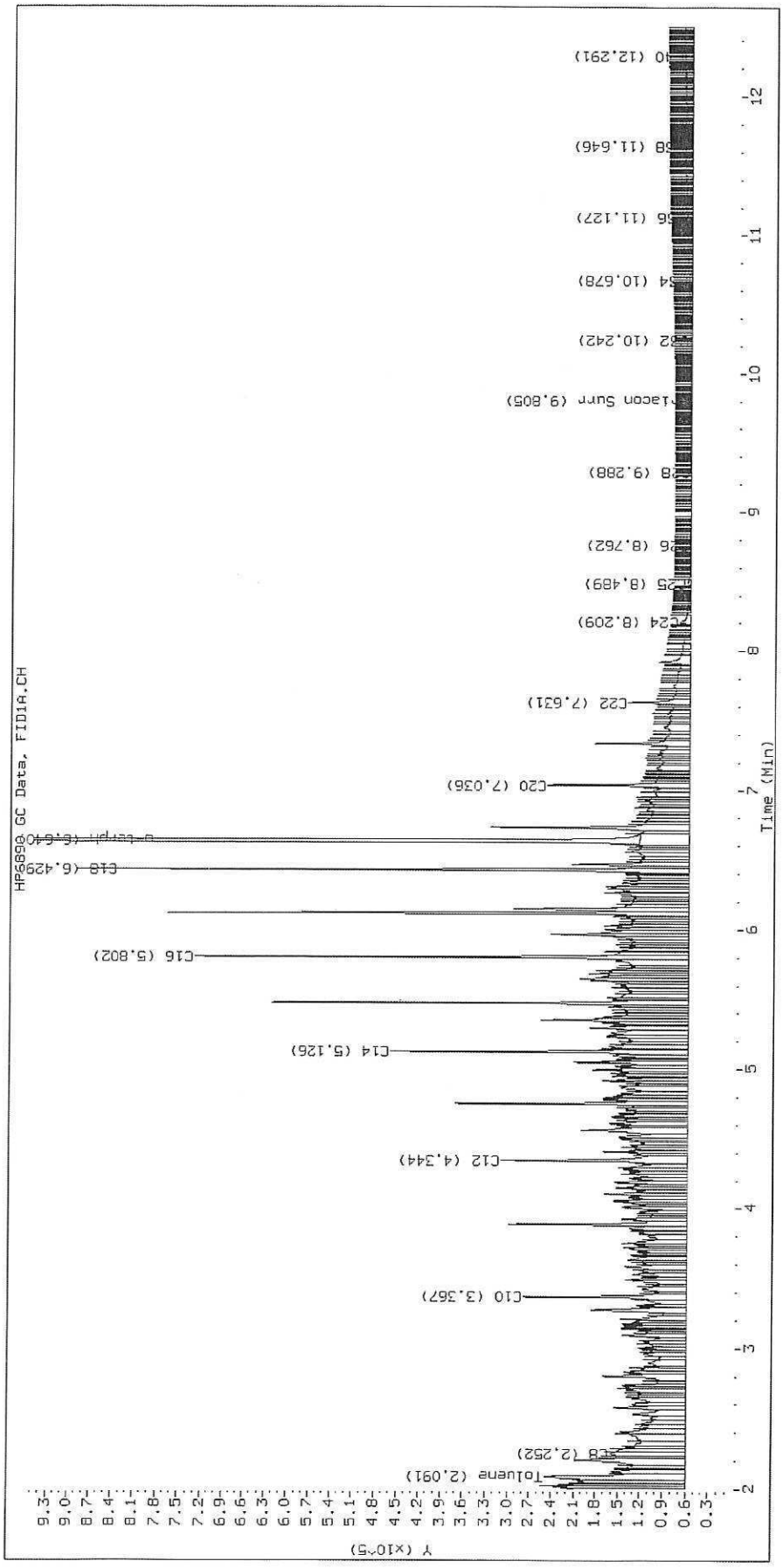
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	3642280	17.8	M
Triacontane	368	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

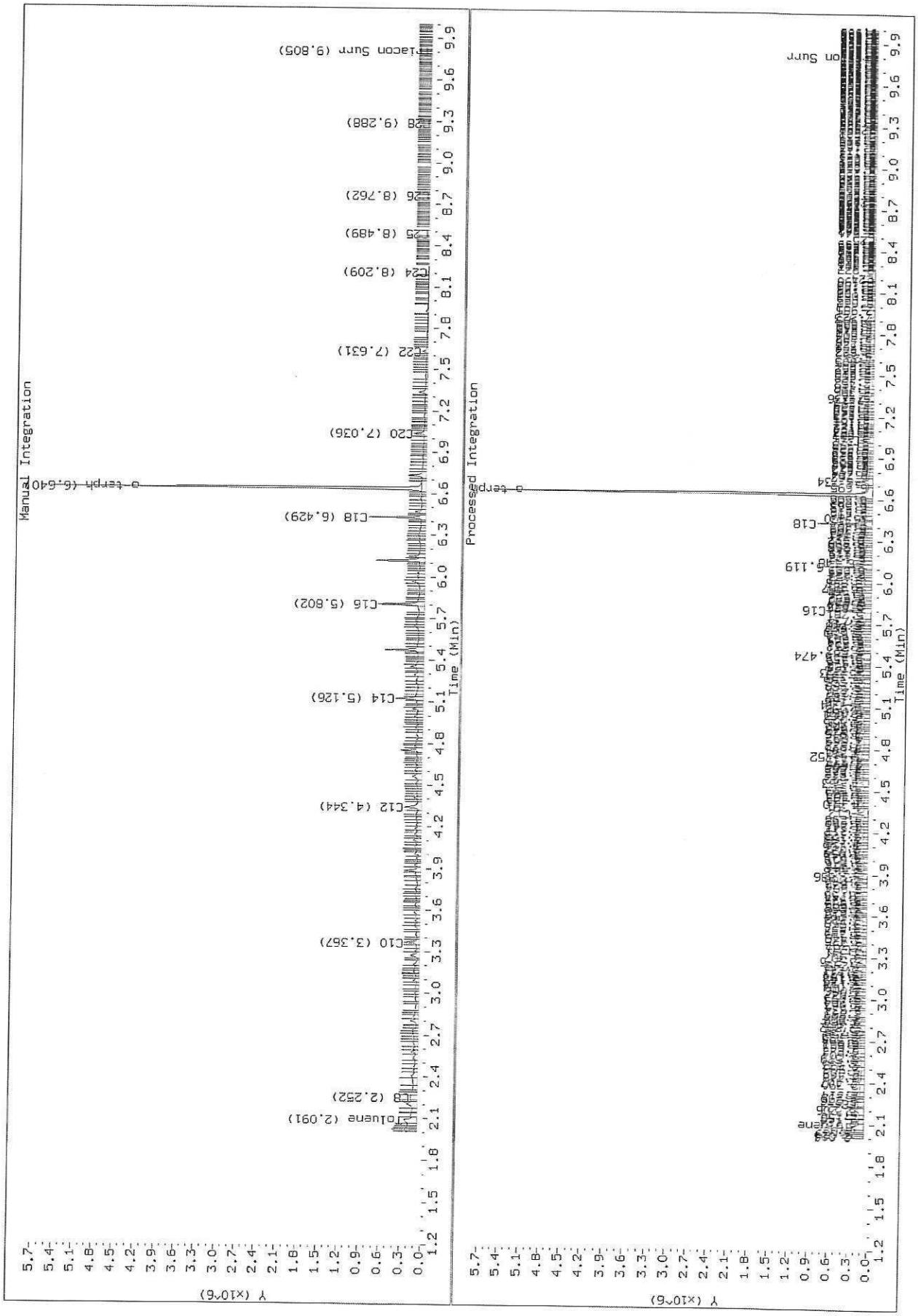
Datafile: FID4A, 20191025.b/419U2508.D SHJ0406-CAL2



TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2508.D Injection: 25-OCT-2019 14:12

Lab ID:SHJ0406-CAL2

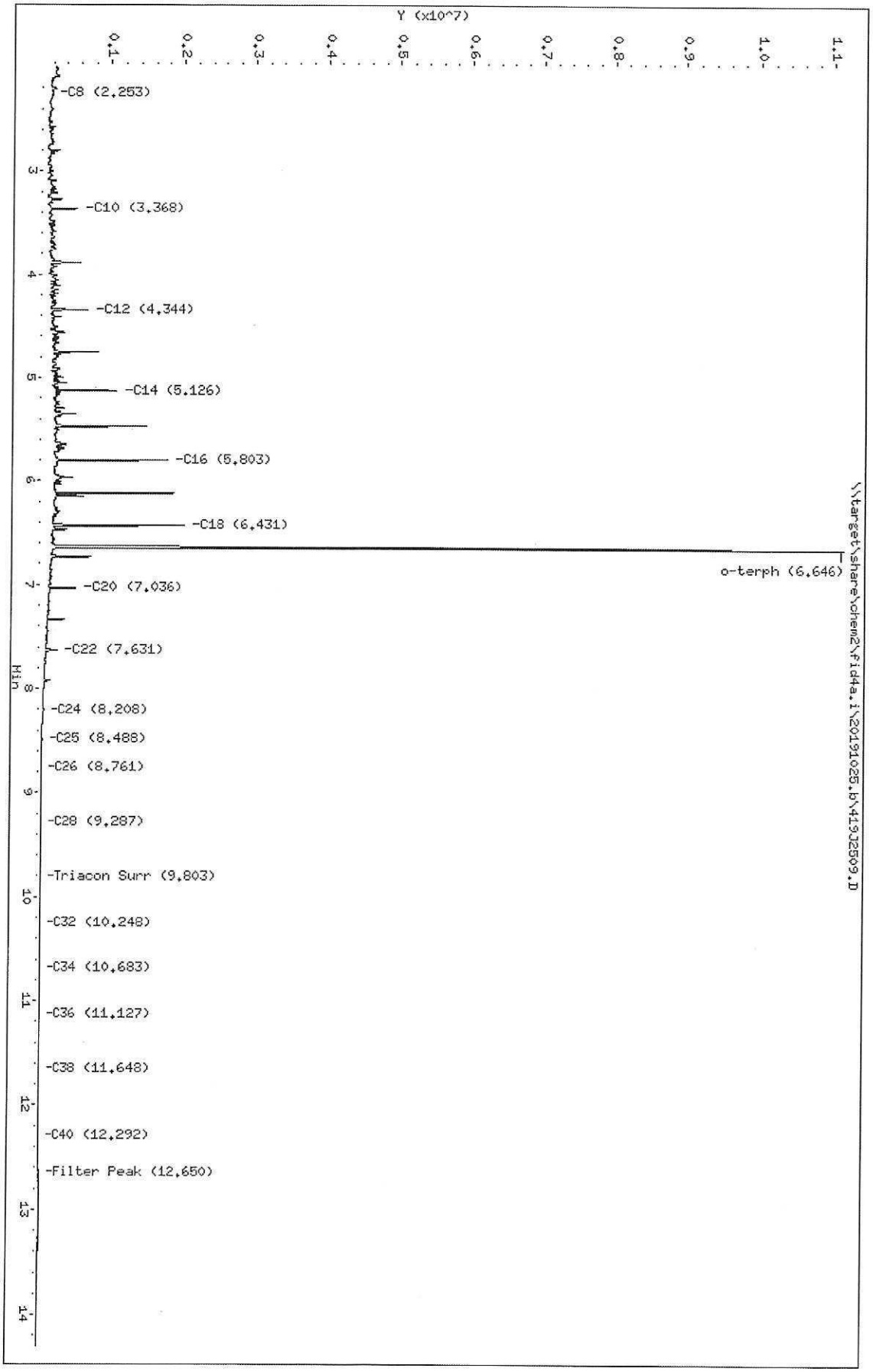


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2509.D
Date : 25-OCT-2019 14:32
Client ID:
Sample Info: SHJ0406-CAL3

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2509.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL3
Client ID:
Injection: 25-OCT-2019 14:32
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.253	-0.009	118722	240565	WATPHD	(C12-C24)	37913827	237.9
C10	3.368	-0.005	483544	476749	WATPHM	(C24-C38)	575858	4.3
C12	4.344	-0.003	627626	779062	AK102	(C10-C25)	46188702	236.3
C14	5.126	-0.004	1022309	790022	AK103	(C25-C36)	284914	2.8
C16	5.803	-0.004	1736531	1218478	OR.DIES	(C10-C28)	46284811	236.1
C18	6.431	-0.004	1970150	1409422				
C20	7.036	-0.007	509531	494893				
C22	7.631	-0.008	243435	281583				
C24	8.208	-0.007	43836	95774				
C25	8.488	-0.005	13614	32431				
C26	8.761	-0.004	4384	8919				
C28	9.287	0.001	605	214				
C32	10.248	0.006	1381	707				
C34	10.683	0.001	3151	1389				
Filter Peak	12.650	-0.000	9358	3271	CREOSOT	(C12-C22)	36811374	9436.7
C36	11.127	-0.002	5536	1099				
C38	11.648	-0.002	7679	4193				
C40	12.292	0.003	8799	4362				
o-terph	6.646	-0.010	10937727	8968221				
Triacon Surr	9.803	0.001	295	103	NAS DIES	(C10-C24)	46106144	236.3

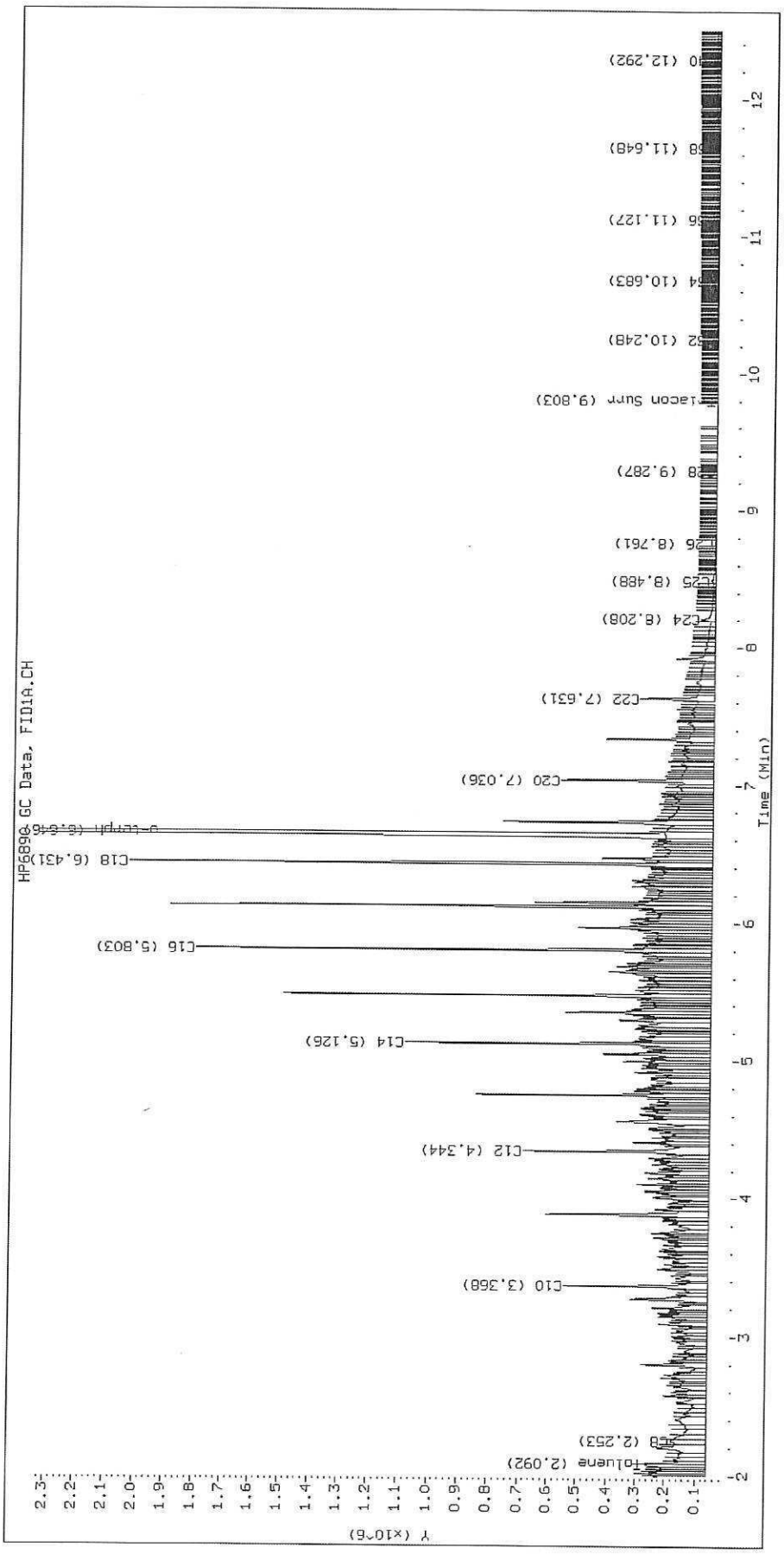
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	8968221	43.8
Triacontane	103	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2509.D SHJ0406-CAL3

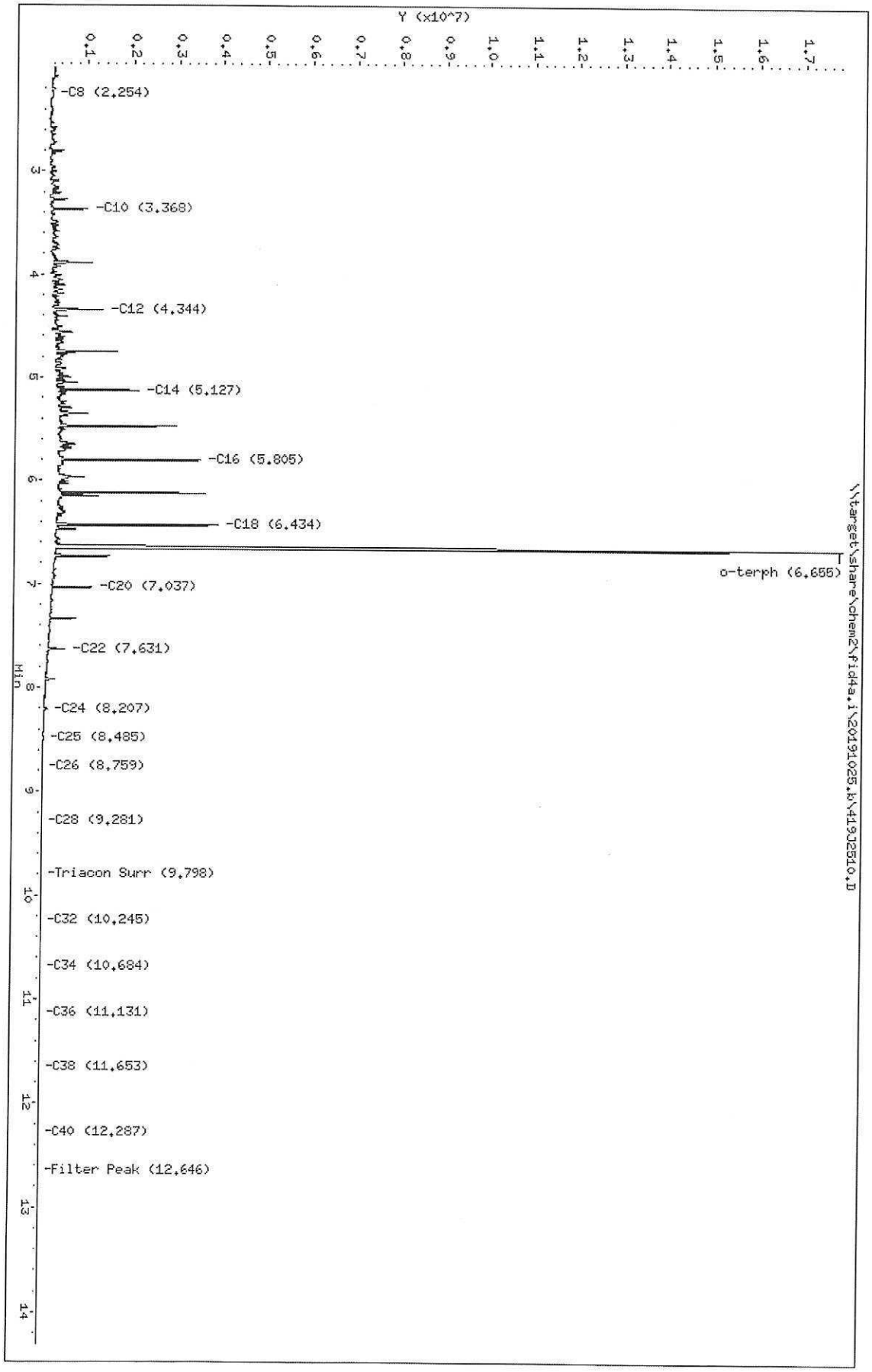


Data File: \\target\share\chem2\fid4a.i\20191025.b\41912510.D
Date : 25-OCT-2019 14:53
Client ID:
Sample Info: SH30406-CAL4

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



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Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2510.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL4
Client ID:
Injection: 25-OCT-2019 14:53
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.254	-0.009	133720	272365	WATPHD	(C12-C24)	76110005	477.7
C10	3.368	-0.005	913330	831182	WATPHM	(C24-C38)	747310	5.6
C12	4.344	-0.004	1278885	1502773	AK102	(C10-C25)	90903979	465.0
C14	5.127	-0.003	2082835	1580085	AK103	(C25-C36)	436439	4.4
C16	5.805	-0.002	3492654	2476612	OR.DIES	(C10-C28)	91160529	465.1
C18	6.434	-0.001	3902008	2902073				
C20	7.037	-0.006	1095165	935641				
C22	7.631	-0.008	544650	574105				
C24	8.207	-0.008	109625	202080				
C25	8.485	-0.008	35990	71794				
C26	8.759	-0.006	12661	25763				
C28	9.281	-0.004	1585	1856				
C32	10.245	0.003	1048	453				
C34	10.684	0.002	3071	1964				
Filter Peak	12.646	-0.004	3825	2093	CREOSOT	(C12-C22)	73861119	18934.4
C36	11.131	0.002	4915	3154				
C38	11.653	0.003	5457	2692				
C40	12.287	-0.002	4261	1483				
o-terph	6.655	-0.001	17508754	18236498				
Triacon Surr	9.798	-0.004	325	112	NAS DIES	(C10-C24)	90741143	465.0

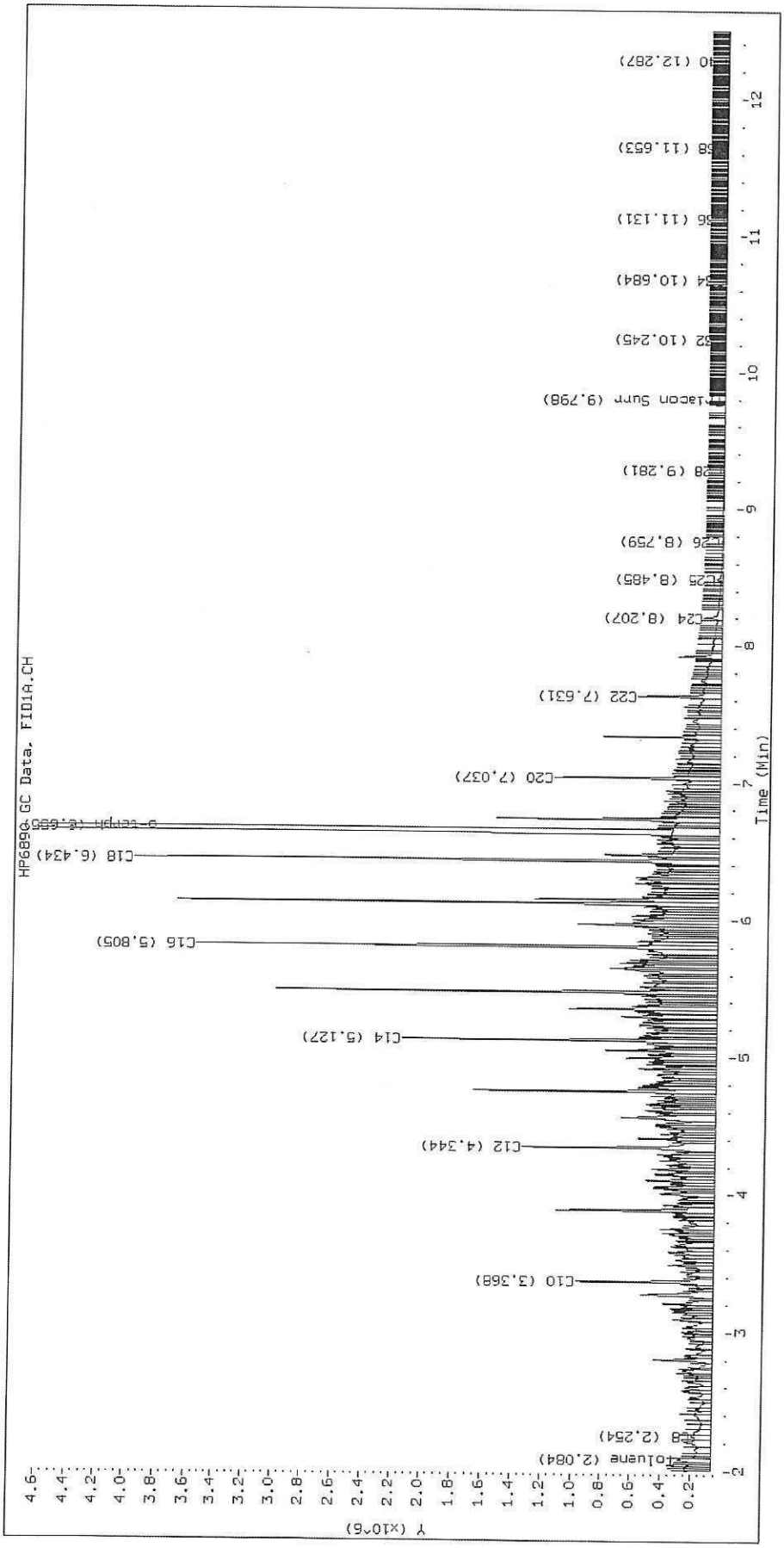
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	18236498	89.1	M
Triacontane	112	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

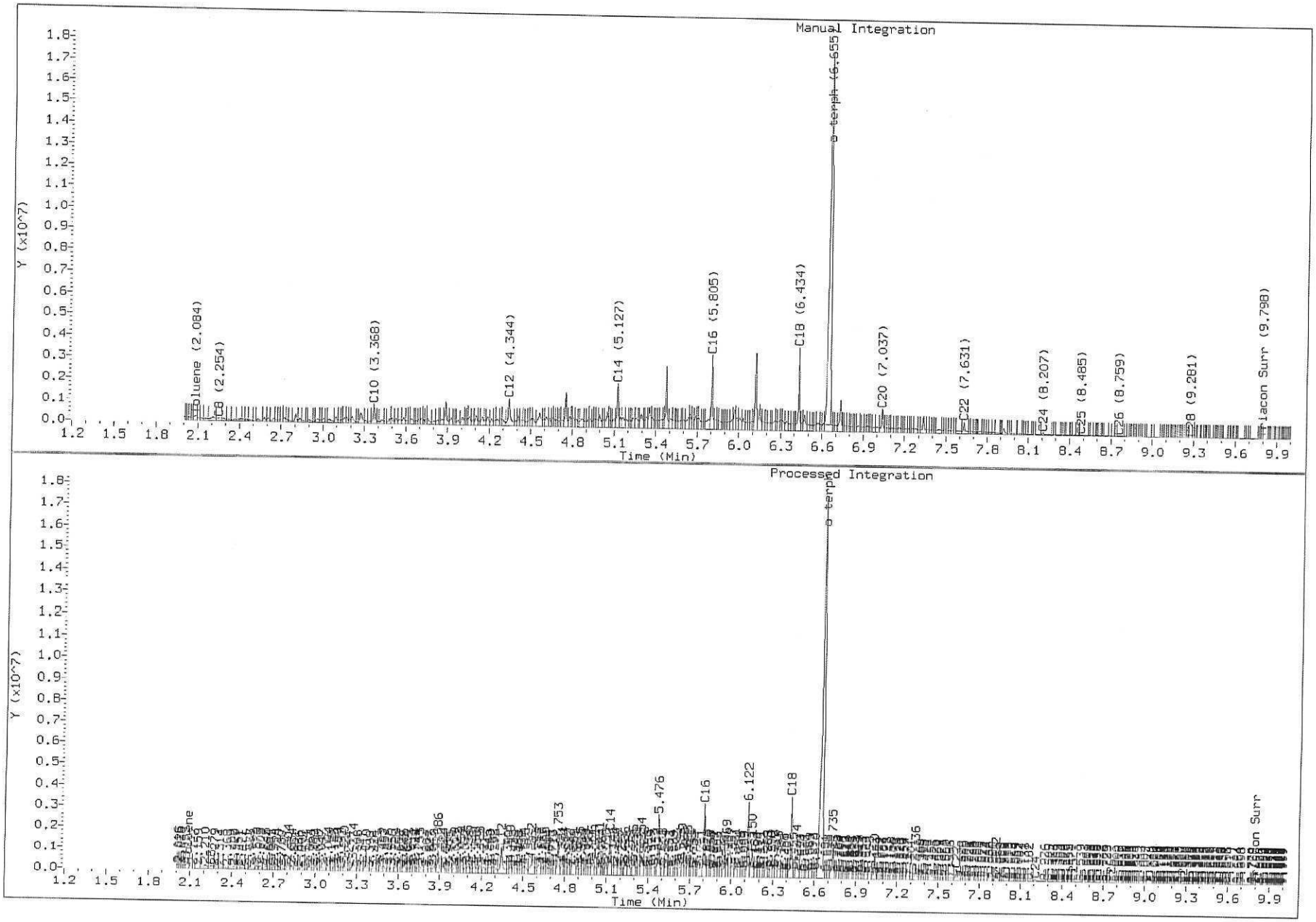
Datafile: FID4A, 20191025.b/419J2510.D SHJ0406-CAL4



TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2510.D Injection: 25-OCT-2019 14:53

Lab ID:SHJ0406-CAL4

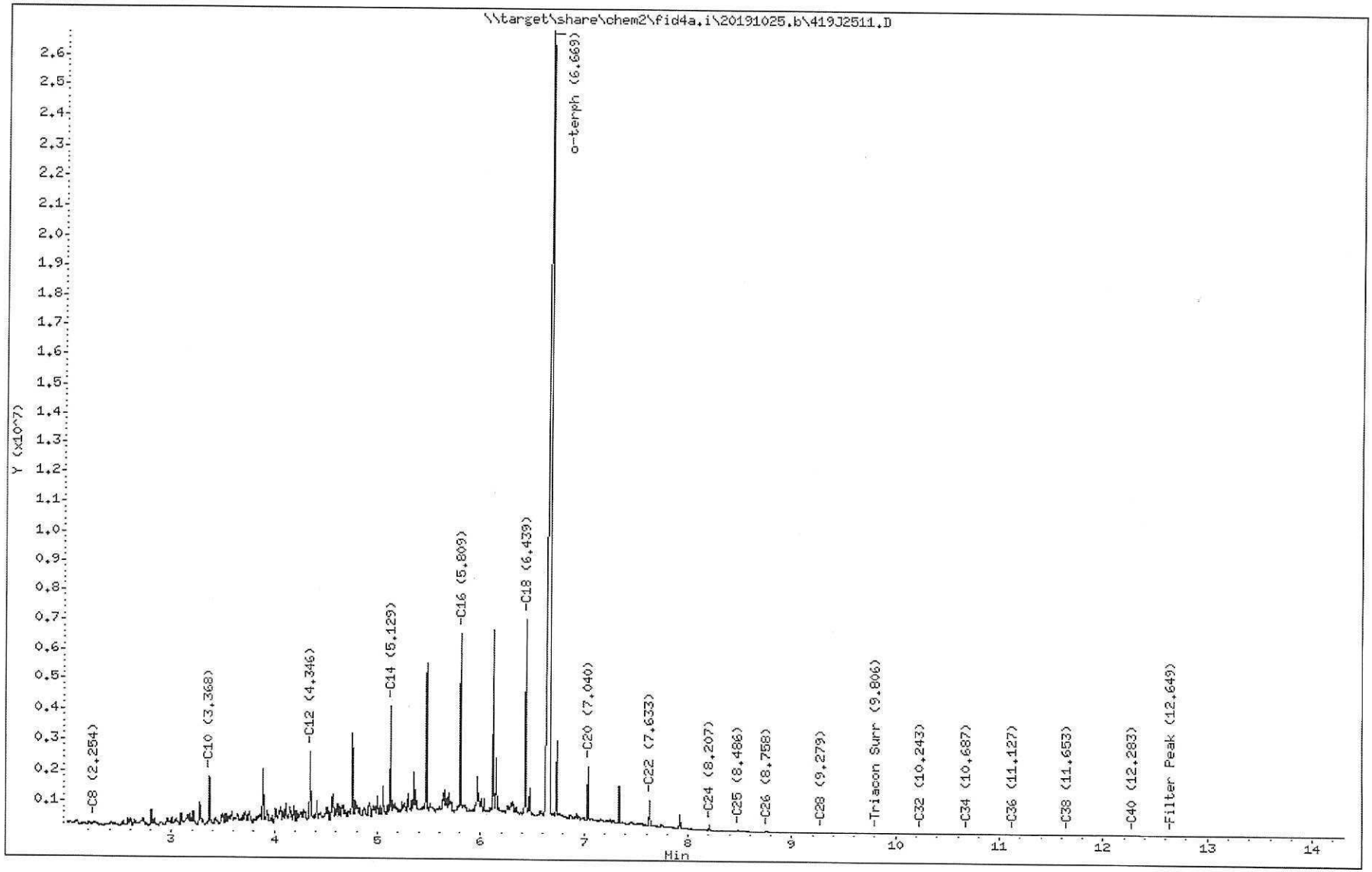


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2511.D
Date : 25-OCT-2019 15:13
Client ID:
Sample Info: SHJ0406-CAL5

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2511.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL5
Client ID:
Injection: 25-OCT-2019 15:13
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.254	-0.008	179896	310888	WATPHD	(C12-C24)	153066747	960.6
C10	3.368	-0.005	1739085	1592987	WATPHM	(C24-C38)	1270800	9.6
C12	4.346	-0.001	2582378	2992597	AK102	(C10-C25)	181956494	930.8
C14	5.129	-0.000	4119910	3175625	AK103	(C25-C36)	821445	8.2
C16	5.809	0.002	6560457	4974499	OR.DIES	(C10-C28)	182680399	932.0
C18	6.439	0.005	7062206	6028122				
C20	7.040	-0.003	2215368	1892870				
C22	7.633	-0.006	1144174	997771				
C24	8.207	-0.008	250003	385382				
C25	8.486	-0.007	89395	162170				
C26	8.758	-0.007	33365	80915				
C28	9.279	-0.006	6648	16116				
C32	10.243	0.001	219	113				
C34	10.687	0.005	471	169				
Filter Peak	12.649	-0.001	3299	1299	CREOSOT	(C12-C22)	148274267	38010.4
C36	11.127	-0.002	1506	512				
C38	11.653	0.003	2117	932				
C40	12.283	-0.006	2712	1056				
o-terph	6.669	0.013	26284682	37244787				
Triacon Surr	9.806	0.004	1398	1069	NAS DIES	(C10-C24)	181561688	930.4

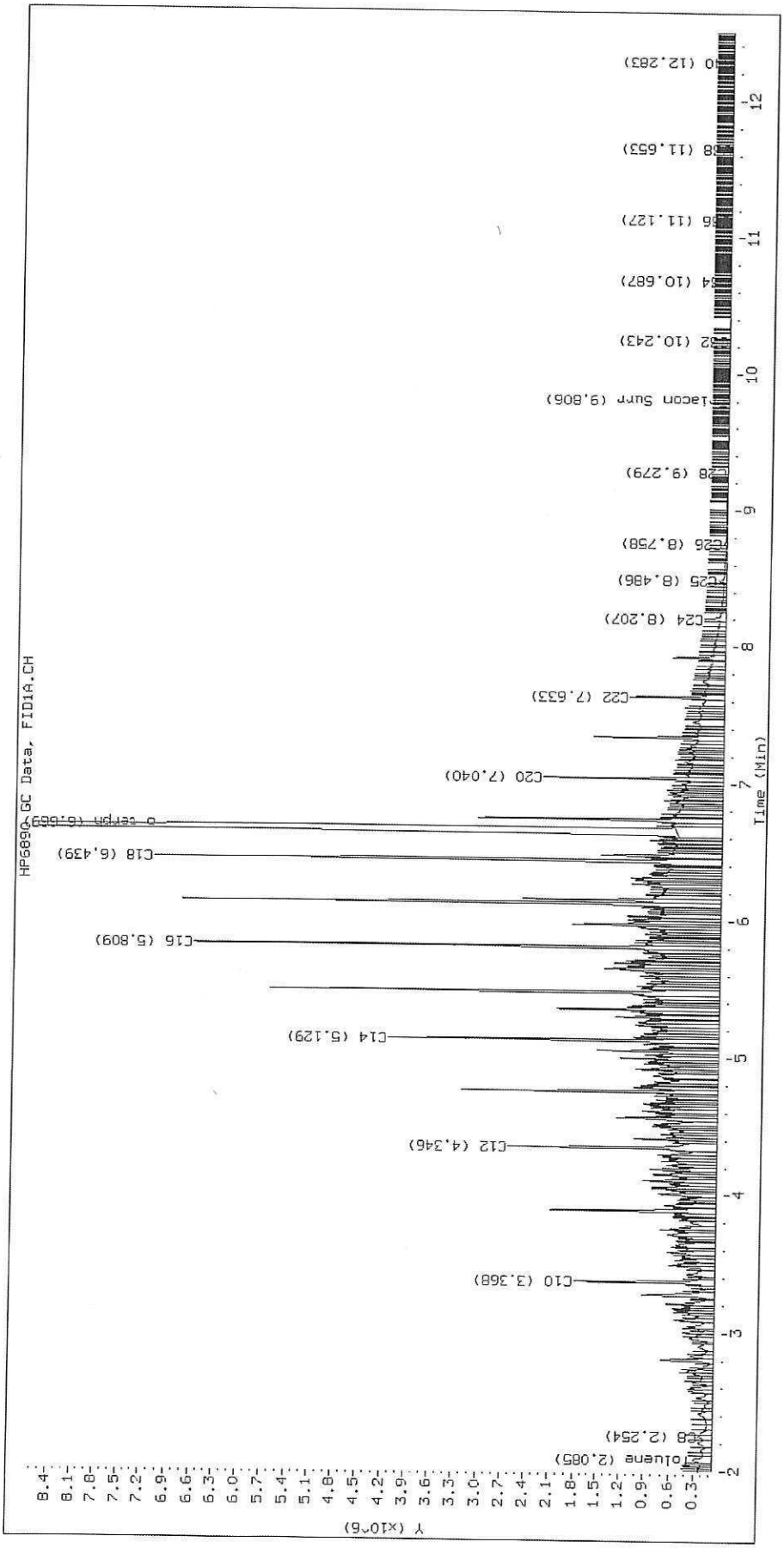
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	37244787	181.9	M
Triacontane	1069	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

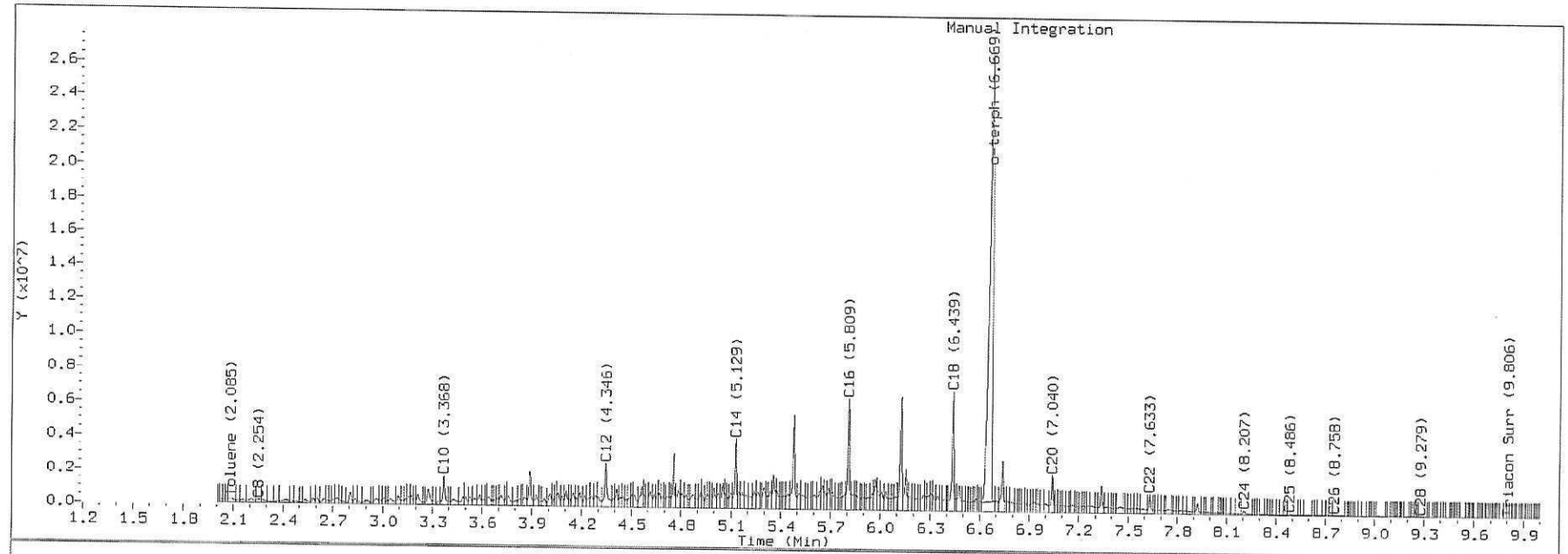
Datafile: FID4A, 20191025.b/419J2511.D SHJ0406-CAL5

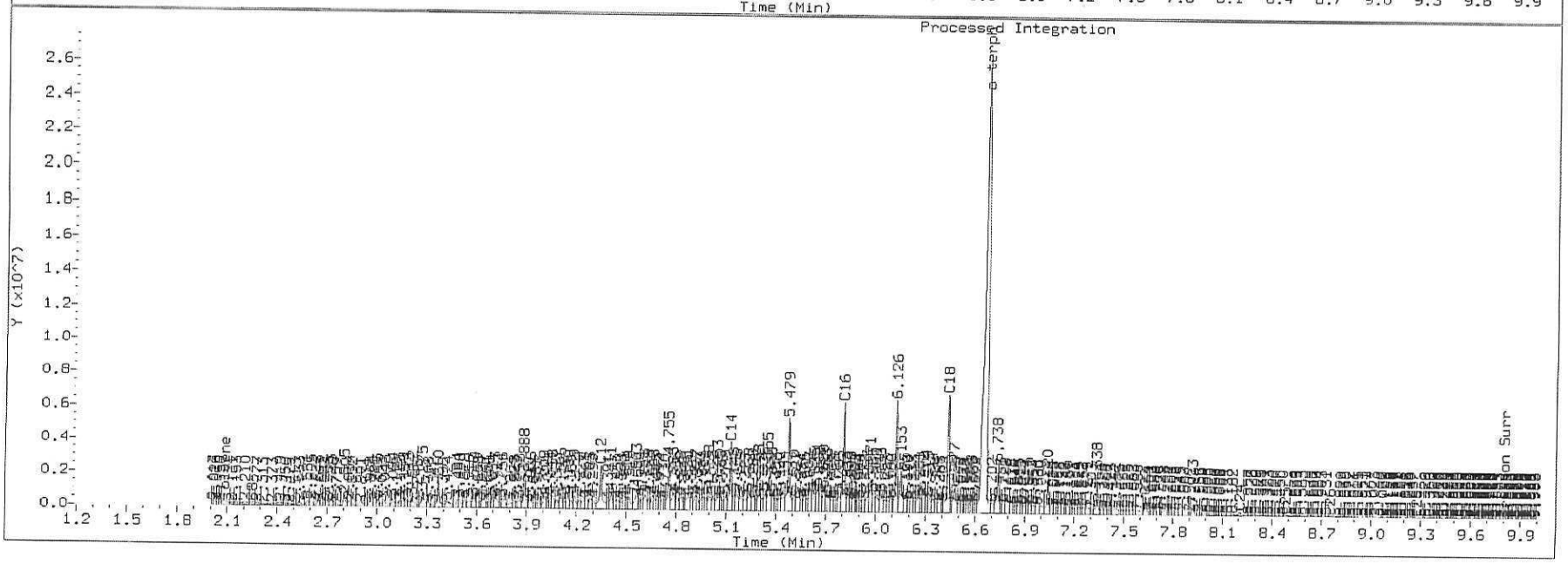


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2511.D Injection: 25-OCT-2019 15:13

Lab ID:SHJ0406-CAL5



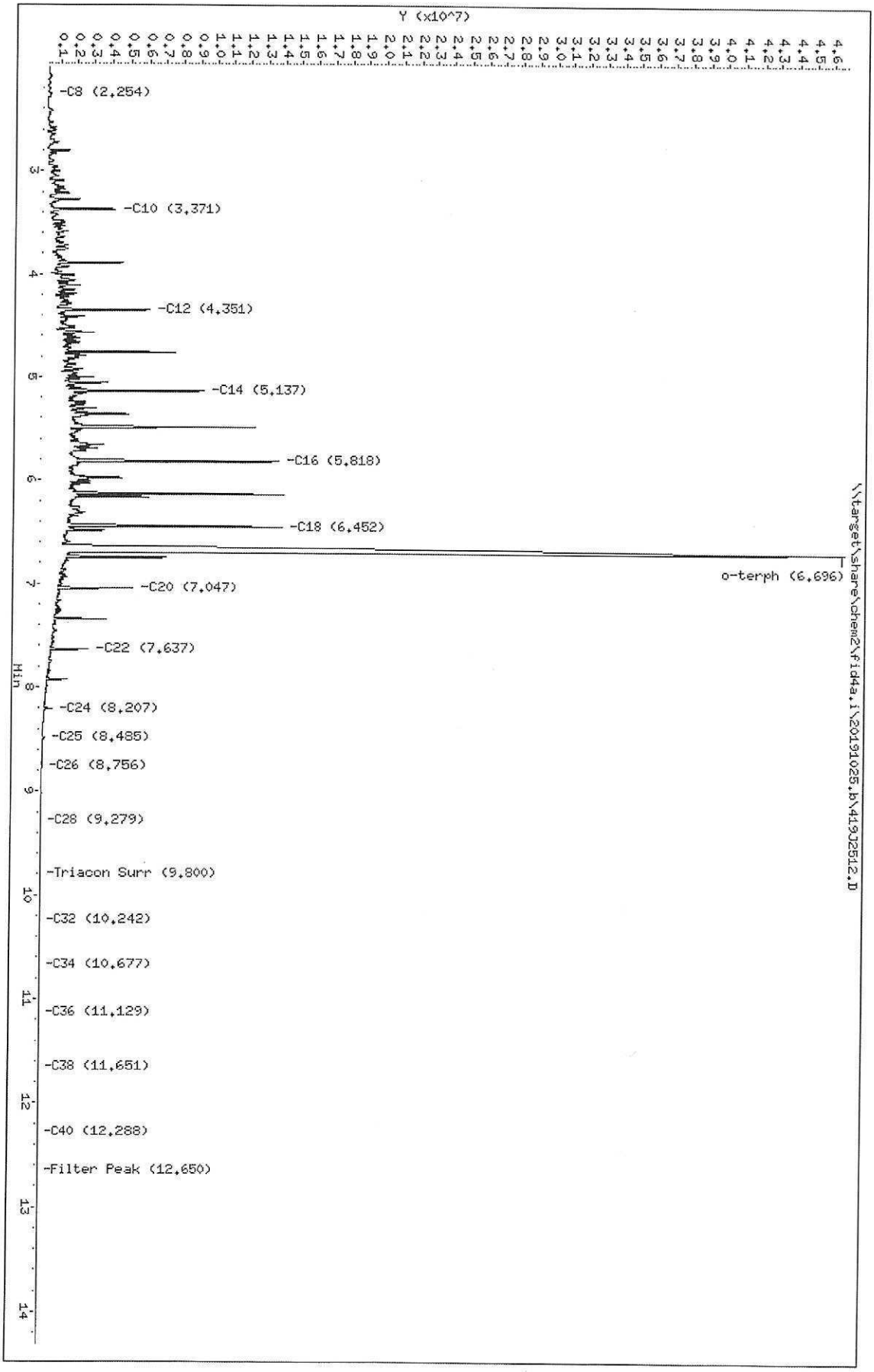


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2512.D
Date : 25-OCT-2019 15:32
Client ID:
Sample Info: SHJ0406-CAL6

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Page 1

Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2512.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL6
Client ID:
Injection: 25-OCT-2019 15:32
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.254	-0.008	310597	486343	WATPHD	(C12-C24)	386988567	2428.7
C10	3.371	-0.002	4067321	3926897	WATPHM	(C24-C38)	3326156	25.1
C12	4.351	0.004	6051560	7536066	AK102	(C10-C25)	458776536	2346.8
C14	5.137	0.007	9257057	8197076	AK103	(C25-C36)	2148648	21.5
C16	5.818	0.011	13762212	12844924	OR.DIES	(C10-C28)	460755382	2350.8
C18	6.452	0.017	13977204	16316405				
C20	7.047	0.004	5292354	4776661				
C22	7.637	-0.002	2821591	2512756				
C24	8.207	-0.007	692936	731199				
C25	8.485	-0.008	261257	416815				
C26	8.756	-0.009	100686	191231				
C28	9.279	-0.006	17823	35082				
C32	10.242	-0.001	483	193				
C34	10.677	-0.004	847	428				
Filter Peak	12.650	-0.001	5215	3893	CREOSOT	(C12-C22)	374231679	95935.0
C36	11.129	0.000	2243	1721				
C38	11.651	0.001	3497	1043				
C40	12.288	-0.001	4517	2473				
o-terph	6.696	0.039	45134516	94404433				
Triacon Surr	9.800	-0.002	2320	892	NAS DIES	(C10-C24)	457687210	2345.3

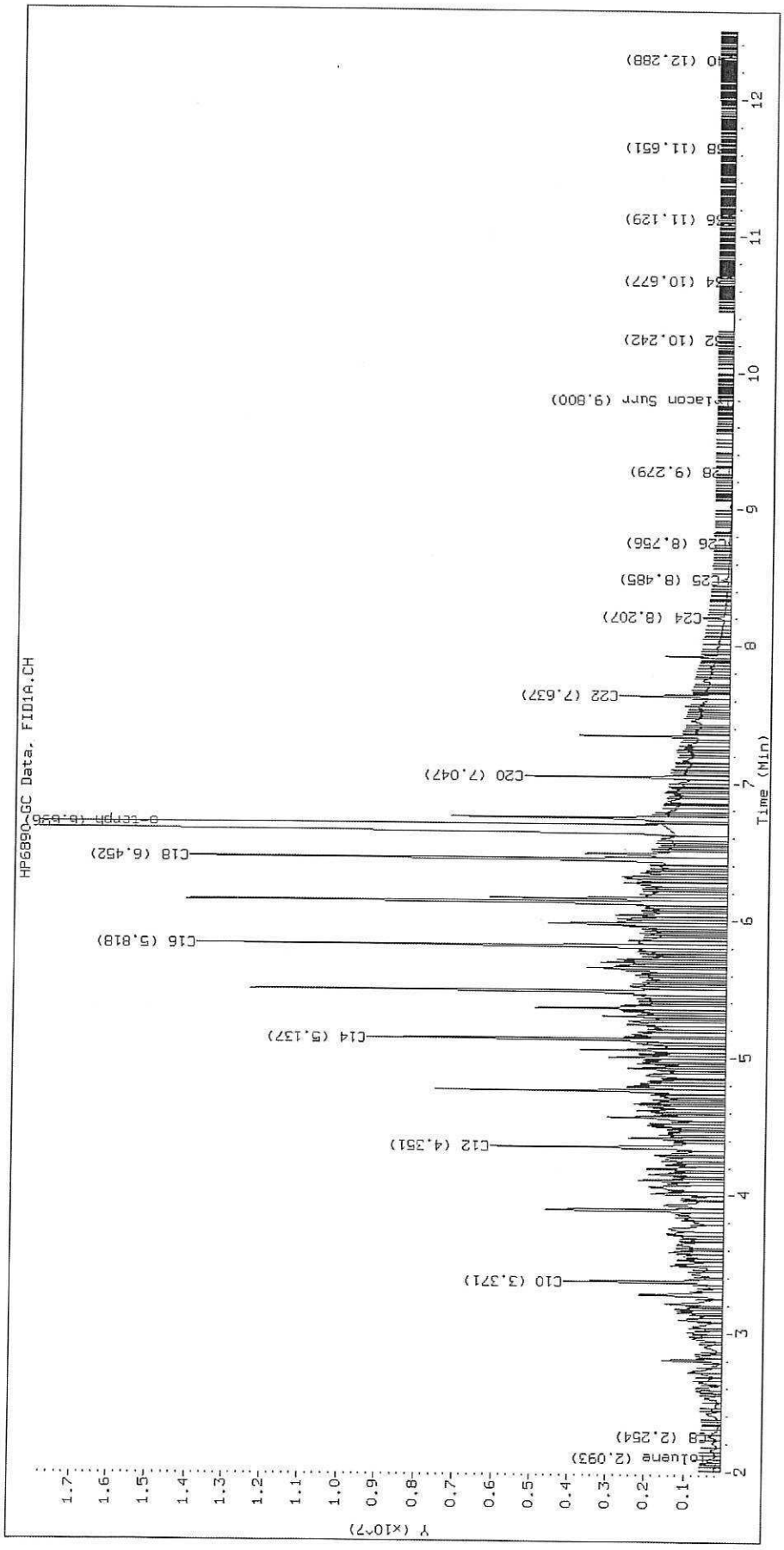
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	94404433	461.2	M
Triacontane	892	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

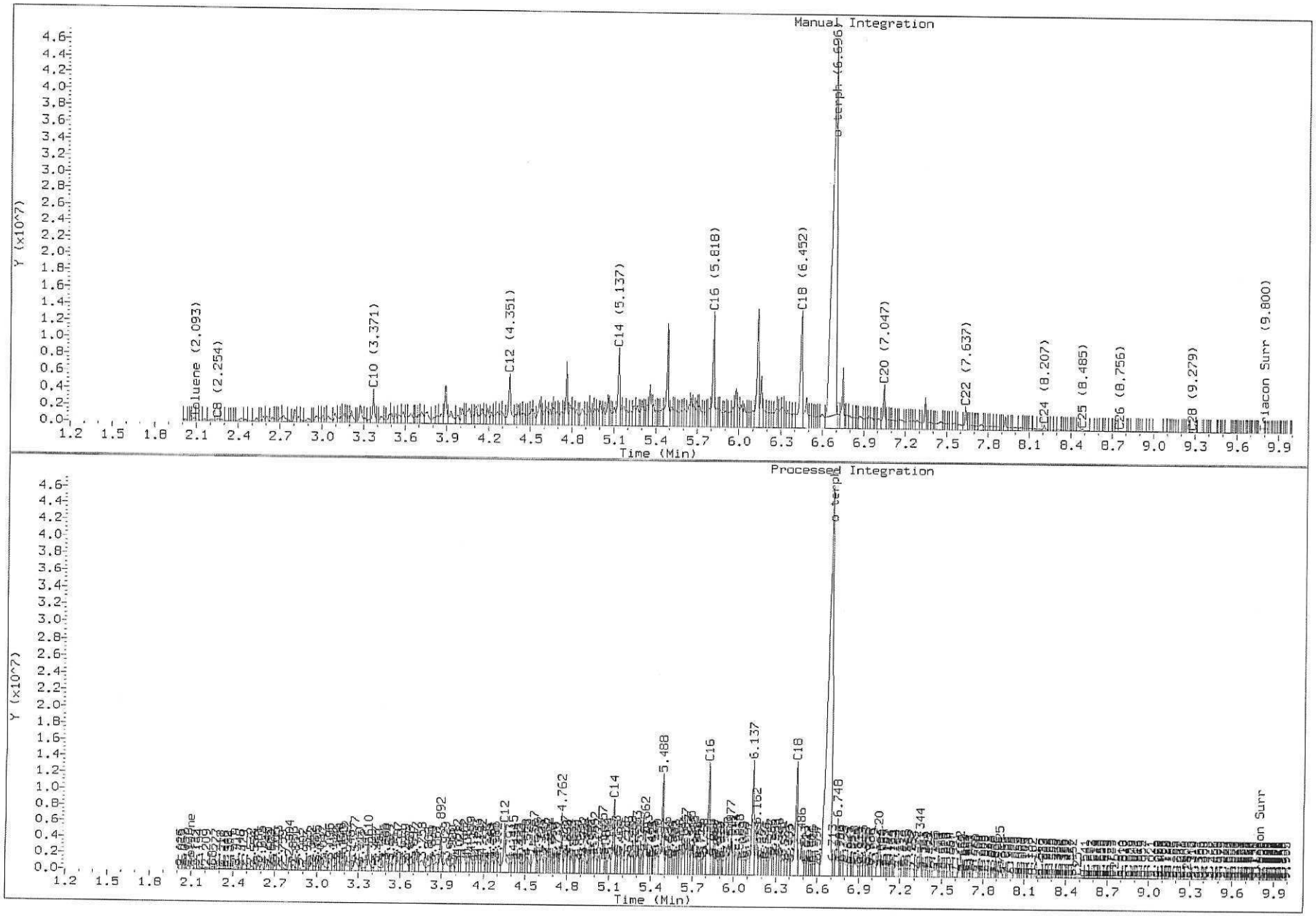
Datafile: FID4A, 20191025.b/419J2512.D SHJ0406-CAL6



TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2512.D Injection: 25-OCT-2019 15:32

Lab ID:SHJ0406-CAL6

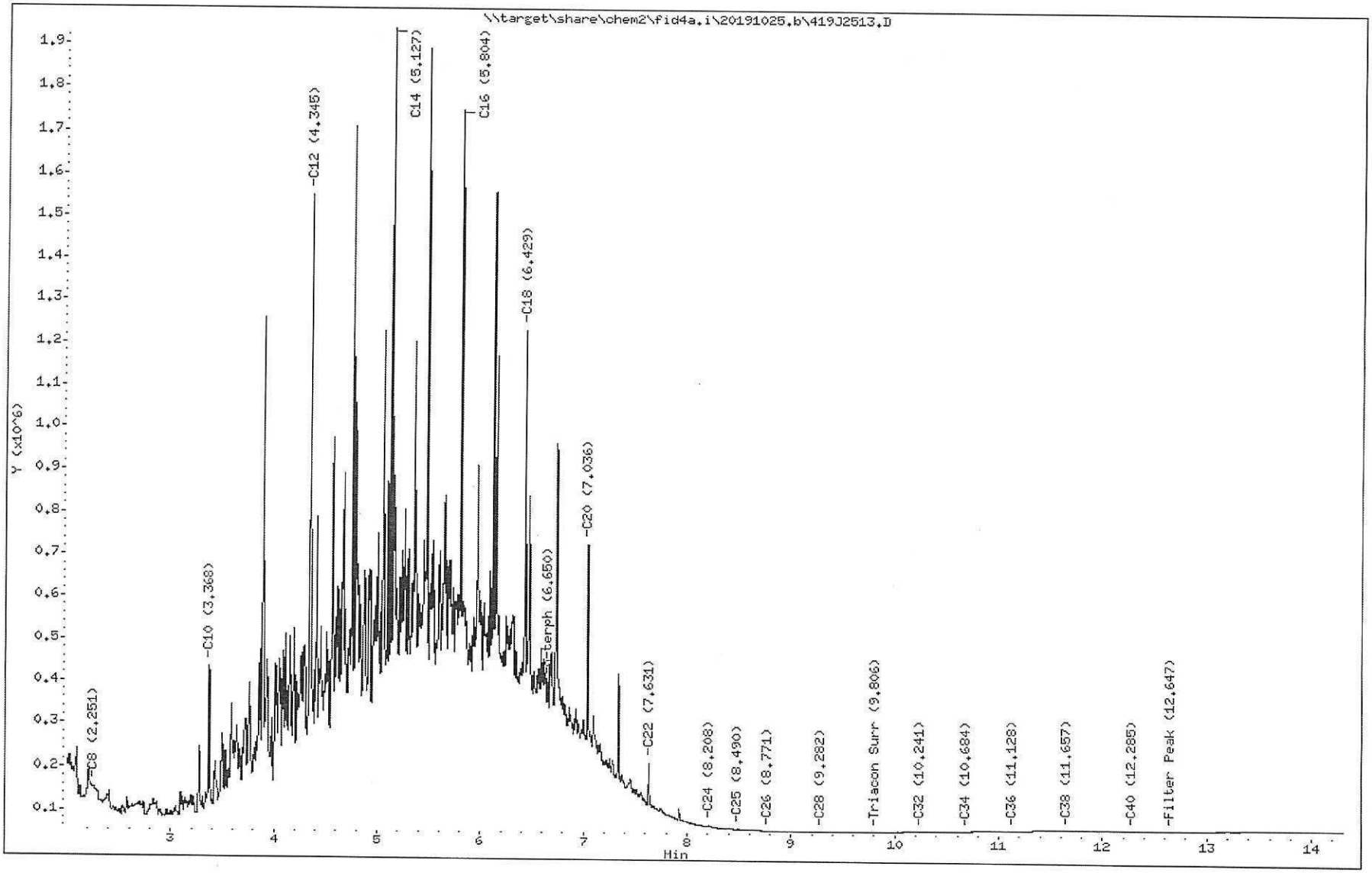


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2513.D
Date : 25-OCT-2019 15:52
Client ID:
Sample Info: SHJ0406-SCV1

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2513.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-SCV1
Client ID:
Injection: 25-OCT-2019 15:52
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.251	-0.011	94961	147864	WATPHD	(C12-C24)	81454017	511.2
C10	3.368	-0.005	379319	401979	WATPHM	(C24-C38)	639731	4.8
C12	4.345	-0.002	1496096	1990616	AK102	(C10-C25)	97704414	499.8
C14	5.127	-0.002	1881566	1510979	AK103	(C25-C36)	332991	3.3
C16	5.804	-0.003	1693335	1468242	OR.DIES	(C10-C28)	97755450	498.8
C18	6.429	-0.006	1178327	1173671				
C20	7.036	-0.007	676475	771884				
C22	7.631	-0.008	162529	245982				
C24	8.208	-0.007	16269	46701				
C25	8.490	-0.003	4835	8168				
C26	8.771	0.006	1378	465				
C28	9.282	-0.003	218	122				
C32	10.241	-0.001	2076	410				
C34	10.684	0.003	4334	2137				
Filter Peak	12.647	-0.003	10515	4189	CREOSOT	(C12-C22)	80554511	20650.3
C36	11.128	-0.001	6869	2744				
C38	11.657	0.008	8764	3056				
C40	12.285	-0.004	9988	4995				
o-terph	6.650	-0.007	347314	350999				
Triacon Surr	9.806	0.003	1146	388	NAS DIES	(C10-C24)	97645351	500.4

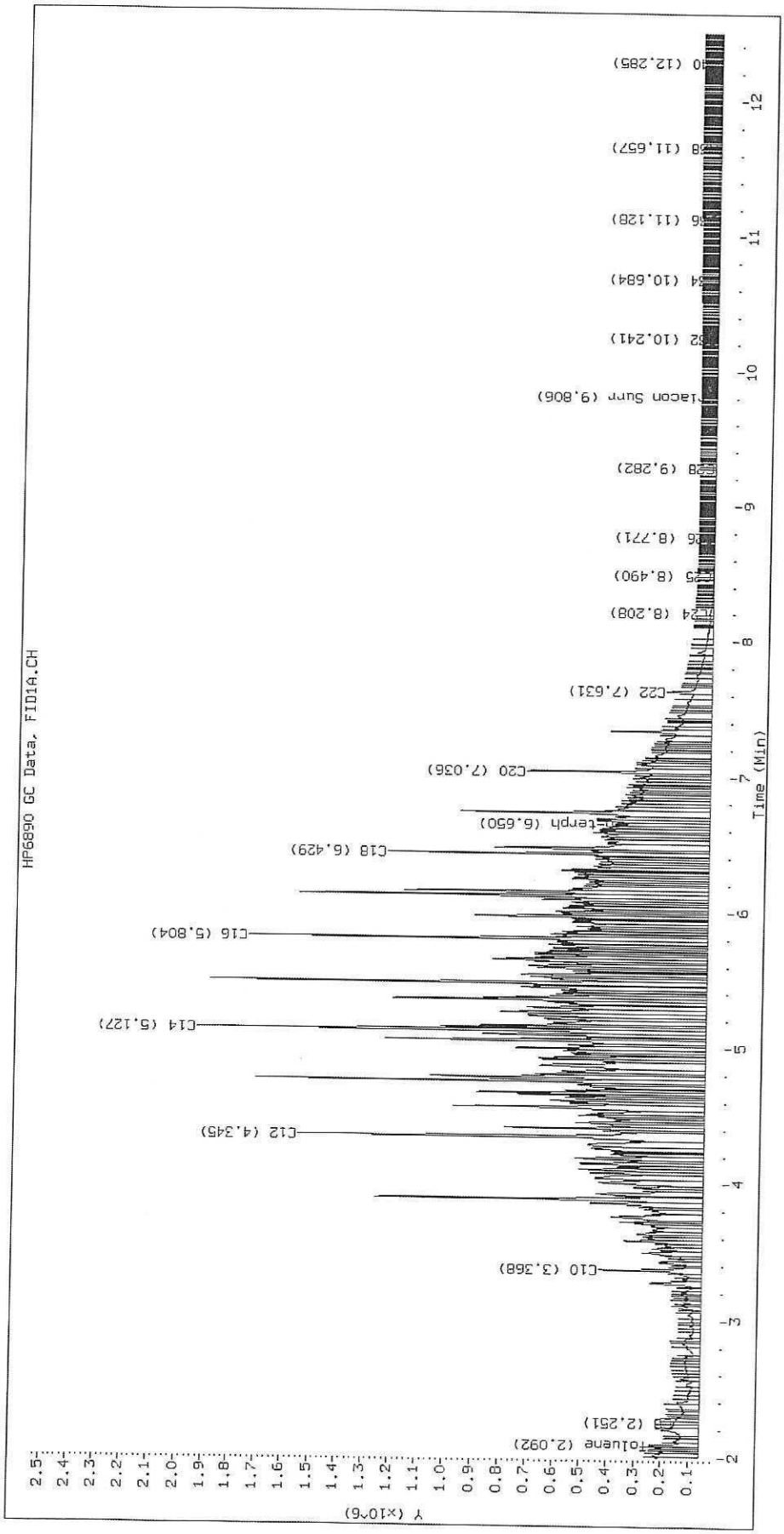
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	350999	1.7
Triacontane	388	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2513.D SHJ0406-SCV1

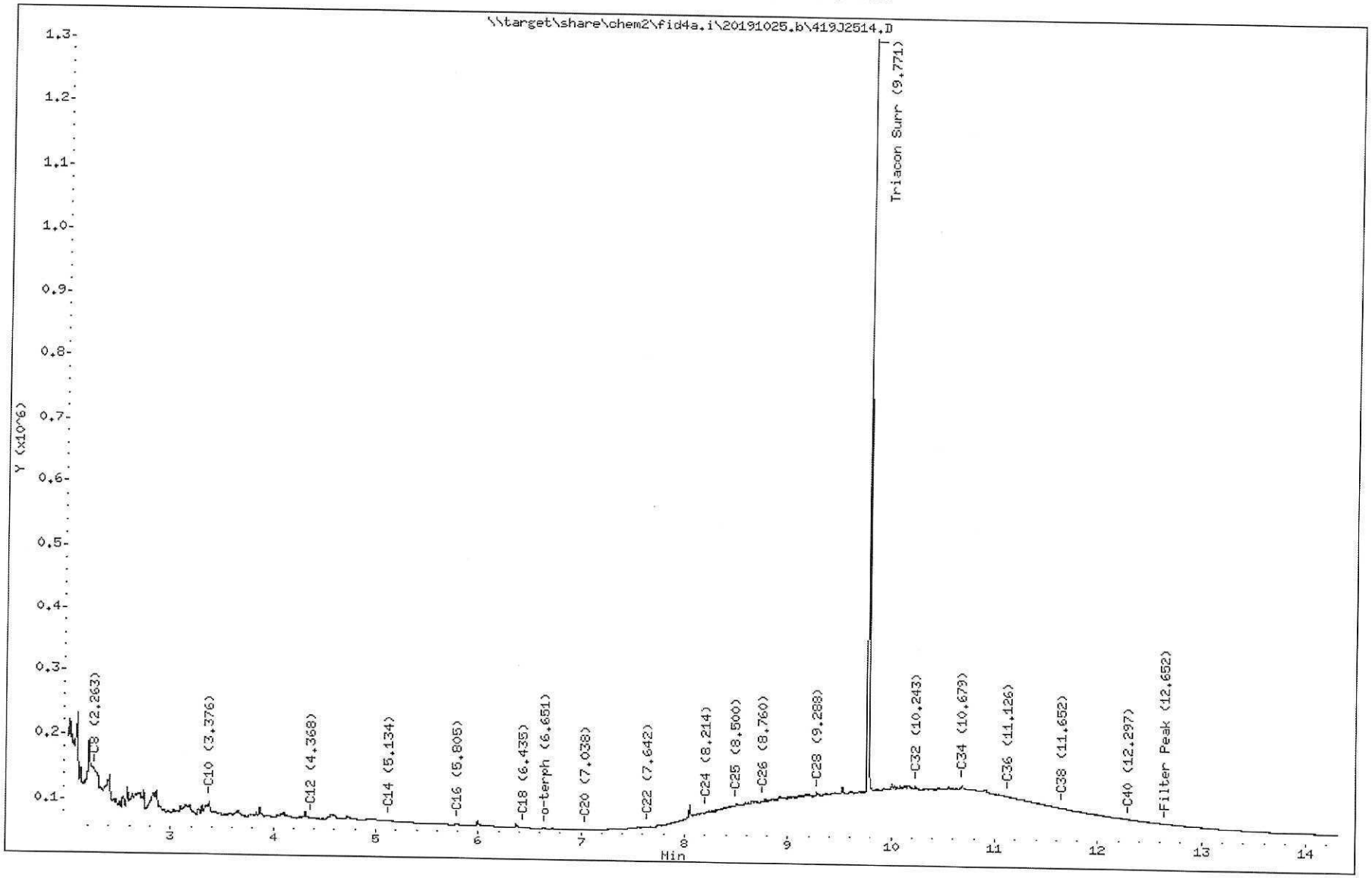


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2514.D
Date : 25-OCT-2019 16:12
Client ID:
Sample Info: SHJ0406-CAL7

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2514.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL7
Client ID:
Injection: 25-OCT-2019 16:12
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.263	0.001	85024	58523	WATPHD	(C12-C24)	1690231	10.6
C10	3.376	0.003	37002	76813	WATPHM	(C24-C38)	13578464	102.4
C12	4.368	0.021	13222	16848	AK102	(C10-C25)	3173344	16.2
C14	5.134	0.004	9789	3901	AK103	(C25-C36)	11330395	113.3
C16	5.805	-0.002	5337	2891	OR.DIES	(C10-C28)	6258620	31.9
C18	6.435	0.000	1861	887				
C20	7.038	-0.005	431	243				
C22	7.642	0.003	6248	1558				
C24	8.214	-0.001	36357	52641				
C25	8.500	0.007	49017	43098				
C26	8.760	-0.005	55671	27607				
C28	9.288	0.003	67768	33791				
C32	10.243	0.001	81940	56823				
C34	10.679	-0.002	85222	51016				
Filter Peak	12.652	0.002	27566	19236	CREOSOT	(C12-C22)	959454	246.0
C36	11.126	-0.003	69343	27714				
C38	11.652	0.002	52690	33941				
C40	12.297	0.009	34497	15508				
o-terph	6.651	-0.006	941	547				
Triacon Surr	9.771	-0.031	1179904	816812	NAS DIES	(C10-C24)	2749900	14.1

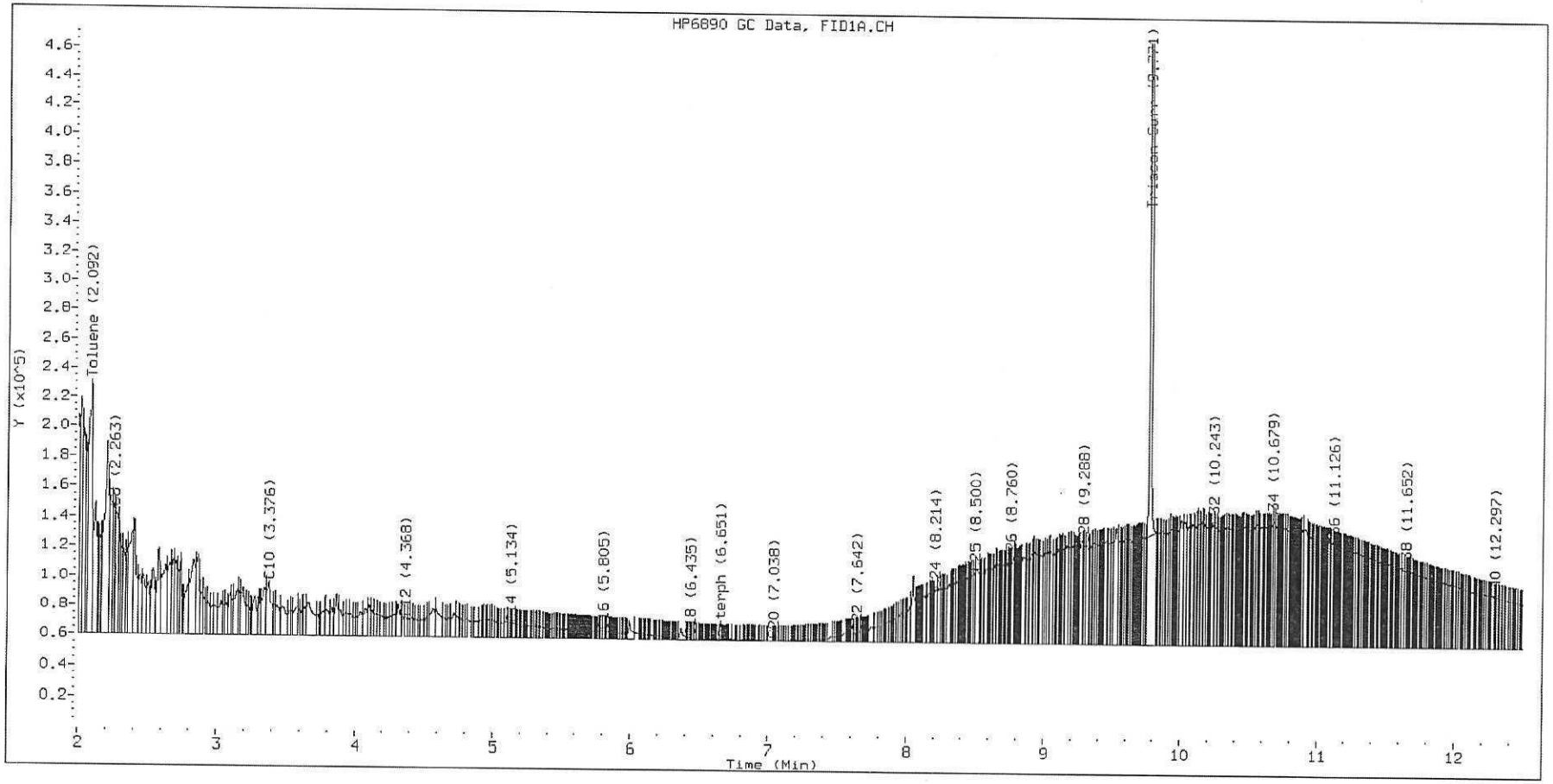
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	547	0.0
Triacontane	816812	4.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

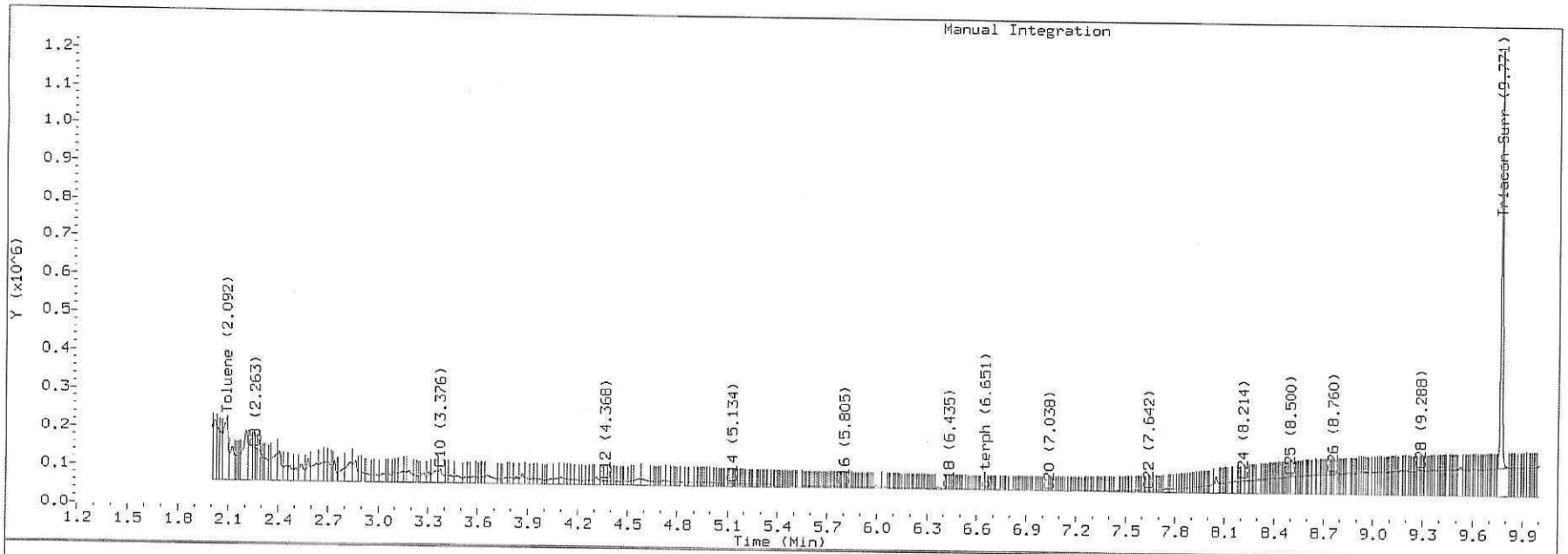
Datafile: FID4A, 20191025.b/419J2514.D SHJ0406-CAL7

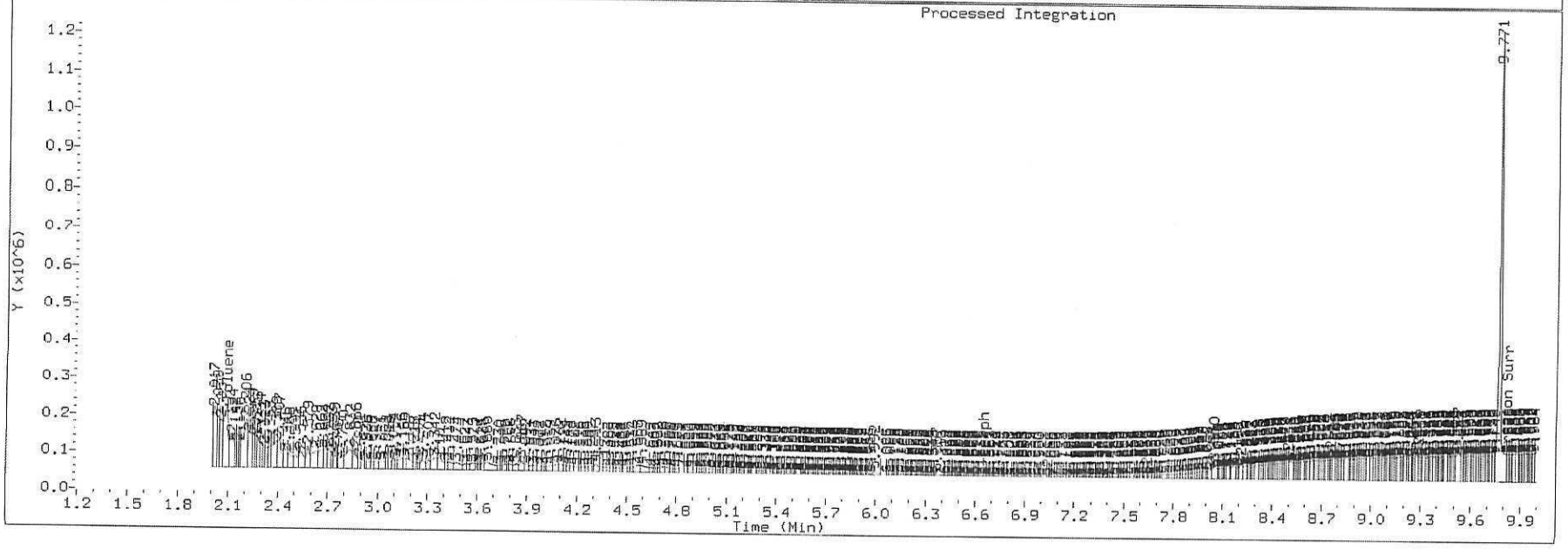


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2514.D Injection: 25-OCT-2019 16:12

Lab ID:SHJ0406-CAL7



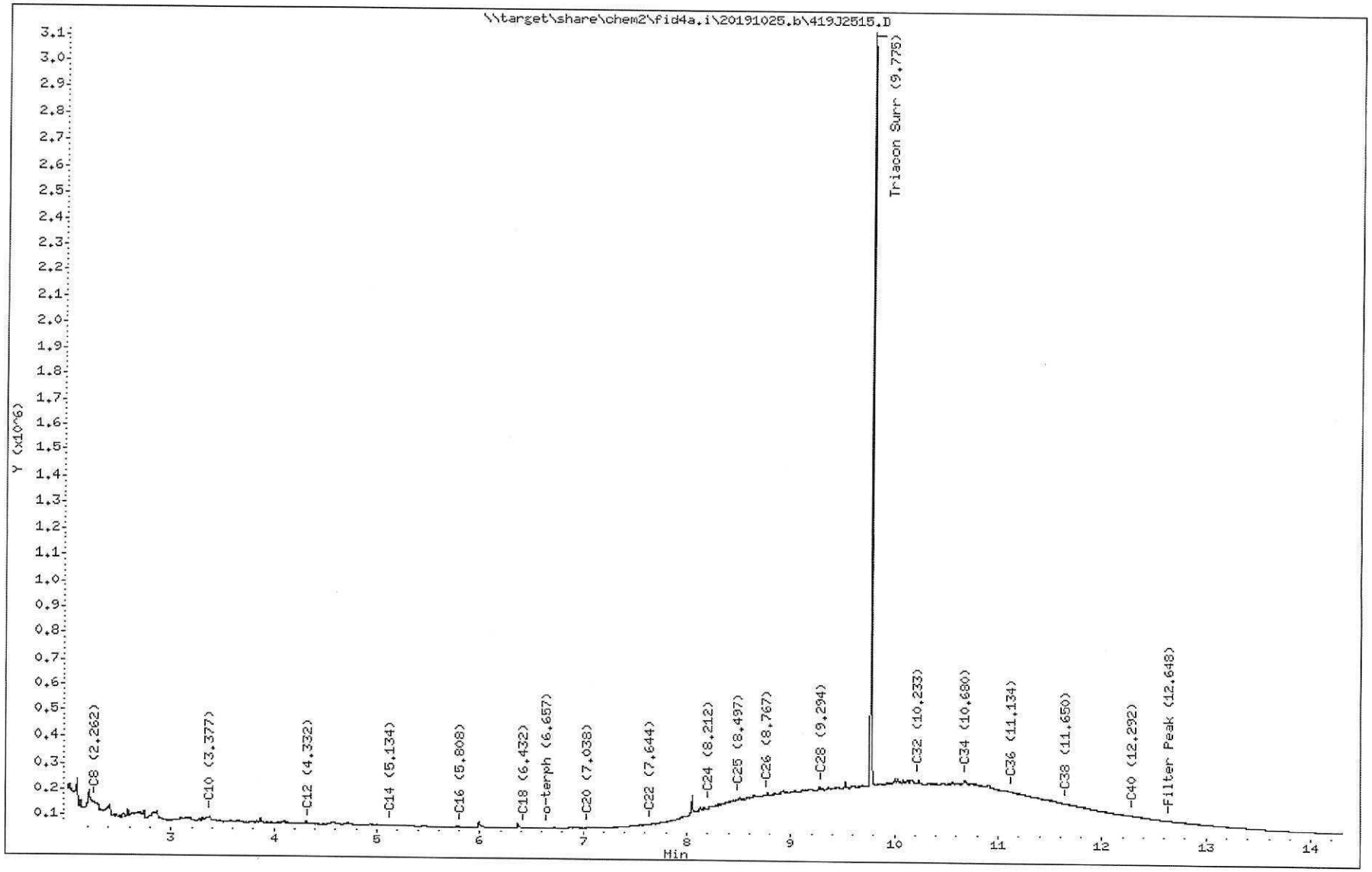


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2515.D
Date : 25-OCT-2019 16:33
Client ID:
Sample Info: SHJ0406-CAL8

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2515.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL8
Client ID:
Injection: 25-OCT-2019 16:33
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.262	0.000	86050	63363	WATPHD	(C12-C24)	2977110	18.7
C10	3.377	0.004	37018	79239	WATPHM	(C24-C38)	34653776	261.3
C12	4.332	-0.015	11427	15714	AK102	(C10-C25)	5054179	25.9
C14	5.134	0.004	5154	2057	AK103	(C25-C36)	29175058	291.8
C16	5.808	0.001	2486	1818	OR.DIES	(C10-C28)	13169508	67.2
C18	6.432	-0.002	1168	783				
C20	7.038	-0.005	3772	4551				
C22	7.644	0.005	20883	5211				
C24	8.212	-0.002	97111	92984				
C25	8.497	0.004	127743	100149				
C26	8.767	0.003	144937	36089				
C28	9.294	0.009	174099	155043				
C32	10.233	-0.009	209275	335982				
C34	10.680	-0.001	211521	464774				
Filter Peak	12.648	-0.002	60945	24237	CREOSOT	(C12-C22)	985245	252.6
C36	11.134	0.005	168788	75681				
C38	11.650	0.000	122780	30685				
C40	12.292	0.003	80017	15993				
o-terph	6.657	0.001	951	796				
Triacon Surr	9.775	-0.027	2879377	2052387	NAS DIES	(C10-C24)	3922564	20.1

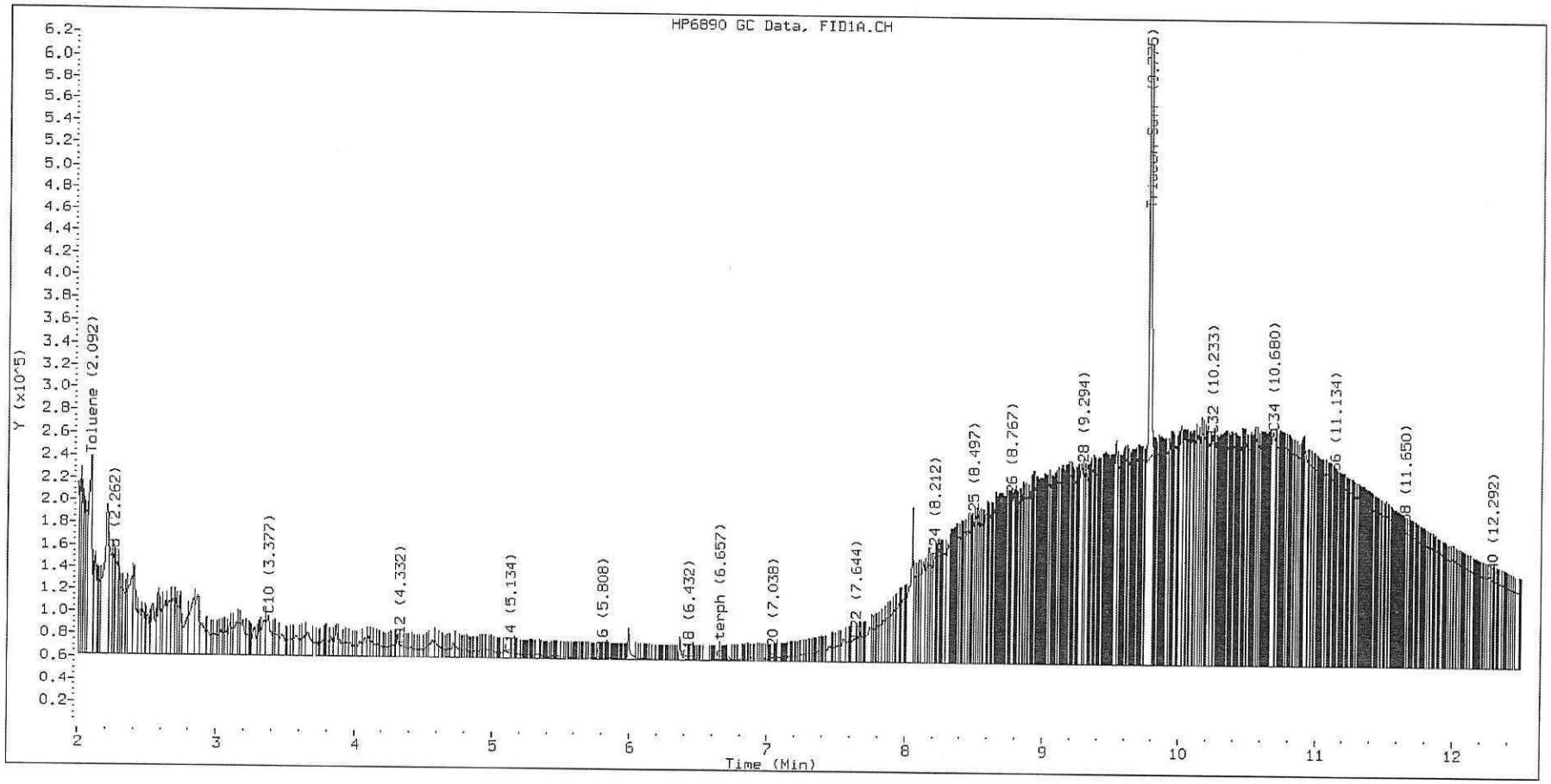
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	796	0.0
Triacontane	2052387	11.5 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

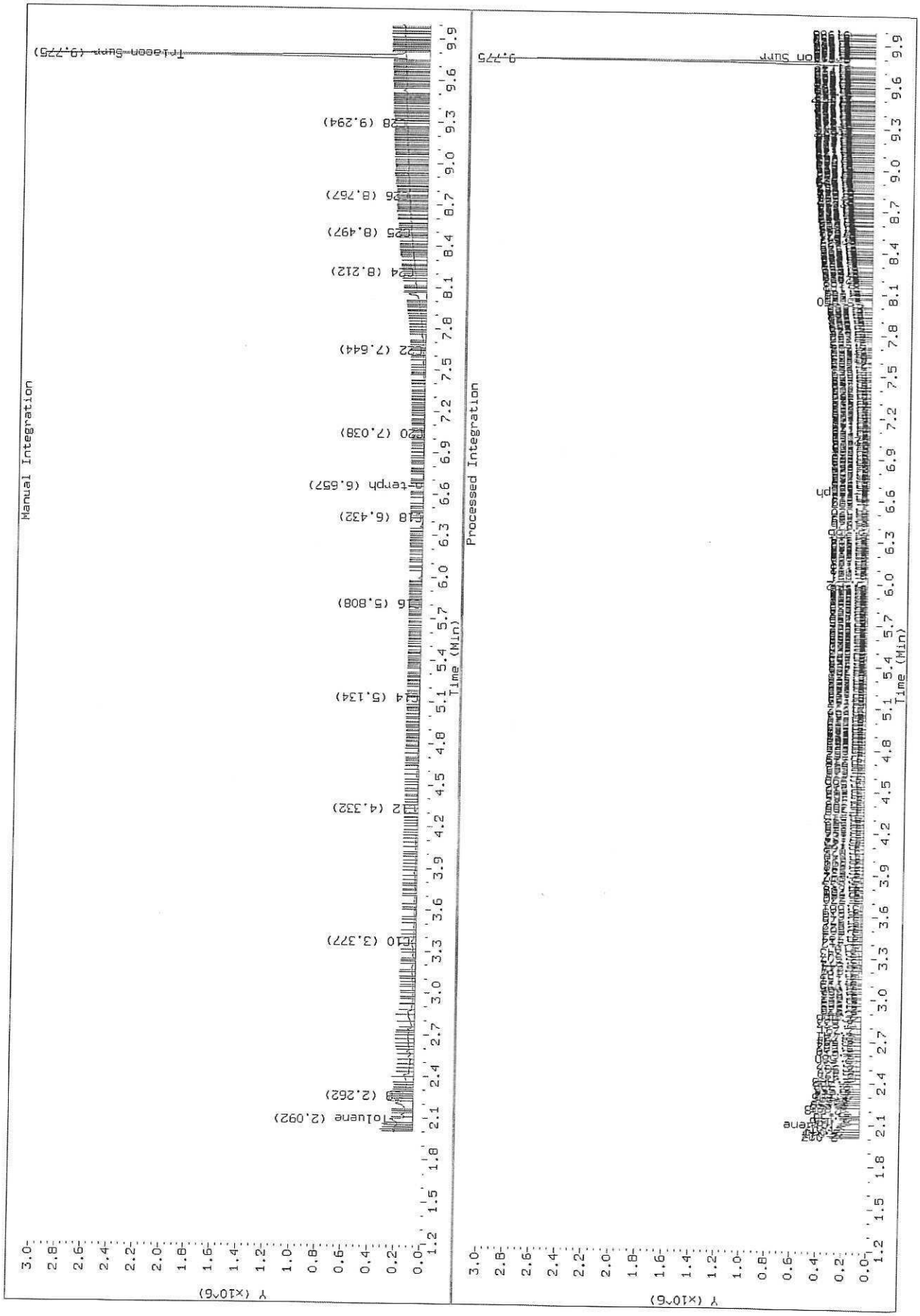
Datafile: FID4A, 20191025.b/419J2515.D SHJ0406-CAL8



TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2515.D Injection: 25-OCT-2019 16:33

Lab ID:SHJ0406-CAI8

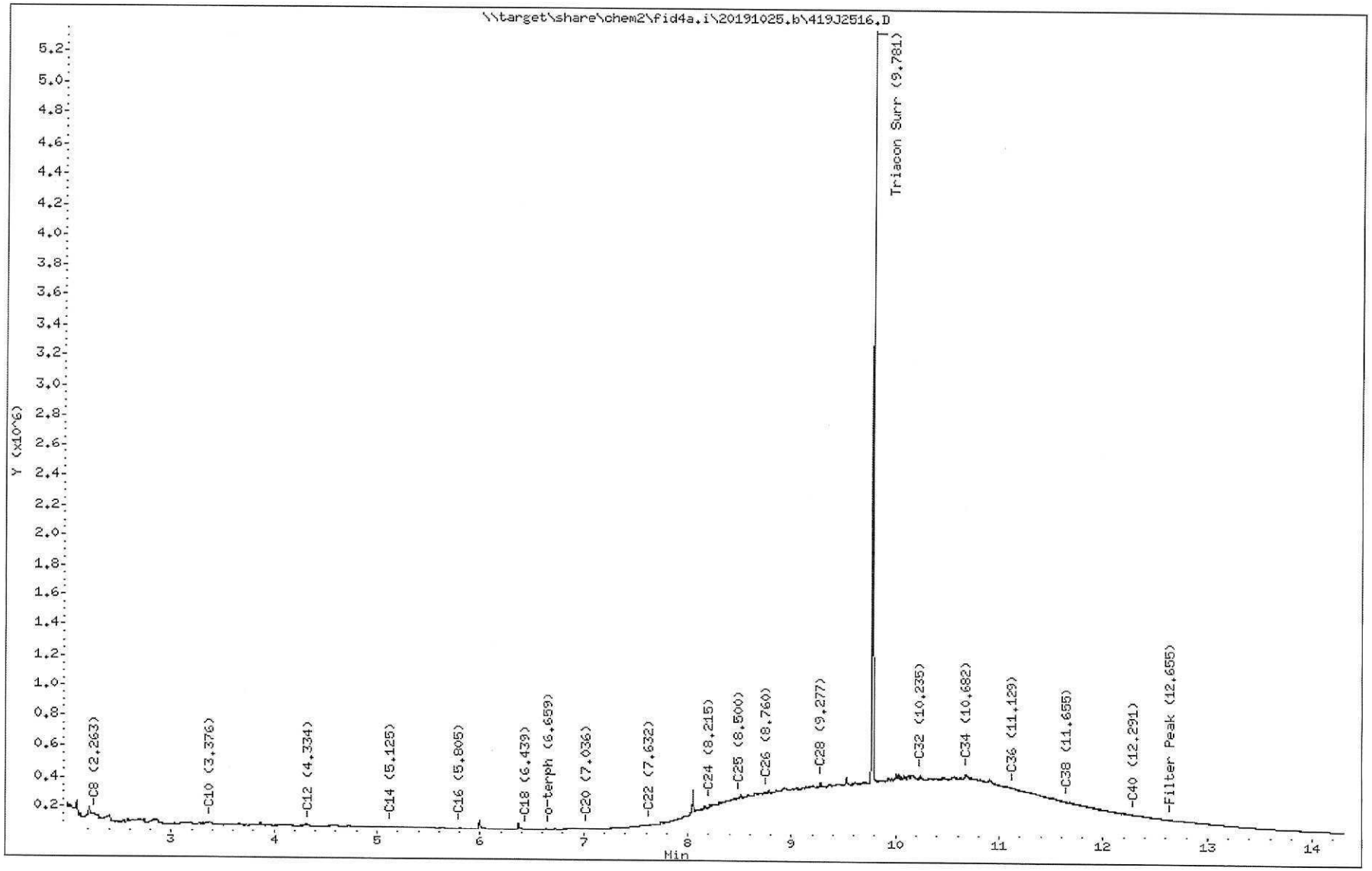


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2516.D
Date : 25-OCT-2019 16:53
Client ID:
Sample Info: SHJ0406-CAL9

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2516.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CAL9
Client ID:
Injection: 25-OCT-2019 16:53
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.263	0.001	85054	58529	WATPHD	(C12-C24)	5661873	35.5
C10	3.376	0.003	38337	74763	WATPHM	(C24-C38)	64308153	484.9
C12	4.334	-0.013	14490	20832	AK102	(C10-C25)	8794999	45.0
C14	5.125	-0.004	9491	6950	AK103	(C25-C36)	54037059	540.5
C16	5.805	-0.002	4594	3625	OR.DIES	(C10-C28)	23868061	121.8
C18	6.439	0.004	1696	642				
C20	7.036	-0.007	7504	9871				
C22	7.632	-0.007	42646	55918				
C24	8.215	0.001	187247	321321				
C25	8.500	0.007	242499	189952				
C26	8.760	-0.005	272862	175979				
C28	9.277	-0.008	344800	562248				
C32	10.235	-0.007	399681	717669				
C34	10.682	0.001	410565	682394				
Filter Peak	12.655	0.004	112959	178875	CREOSOT	(C12-C22)	1771420	454.1
C36	11.129	-0.000	318612	63696				
C38	11.655	0.005	227739	158292				
C40	12.291	0.002	146308	65396				
o-terph	6.659	0.002	1793	1646				
Triacon Surr	9.781	-0.021	4947832	3881047	NAS DIES	(C10-C24)	6718189	34.4

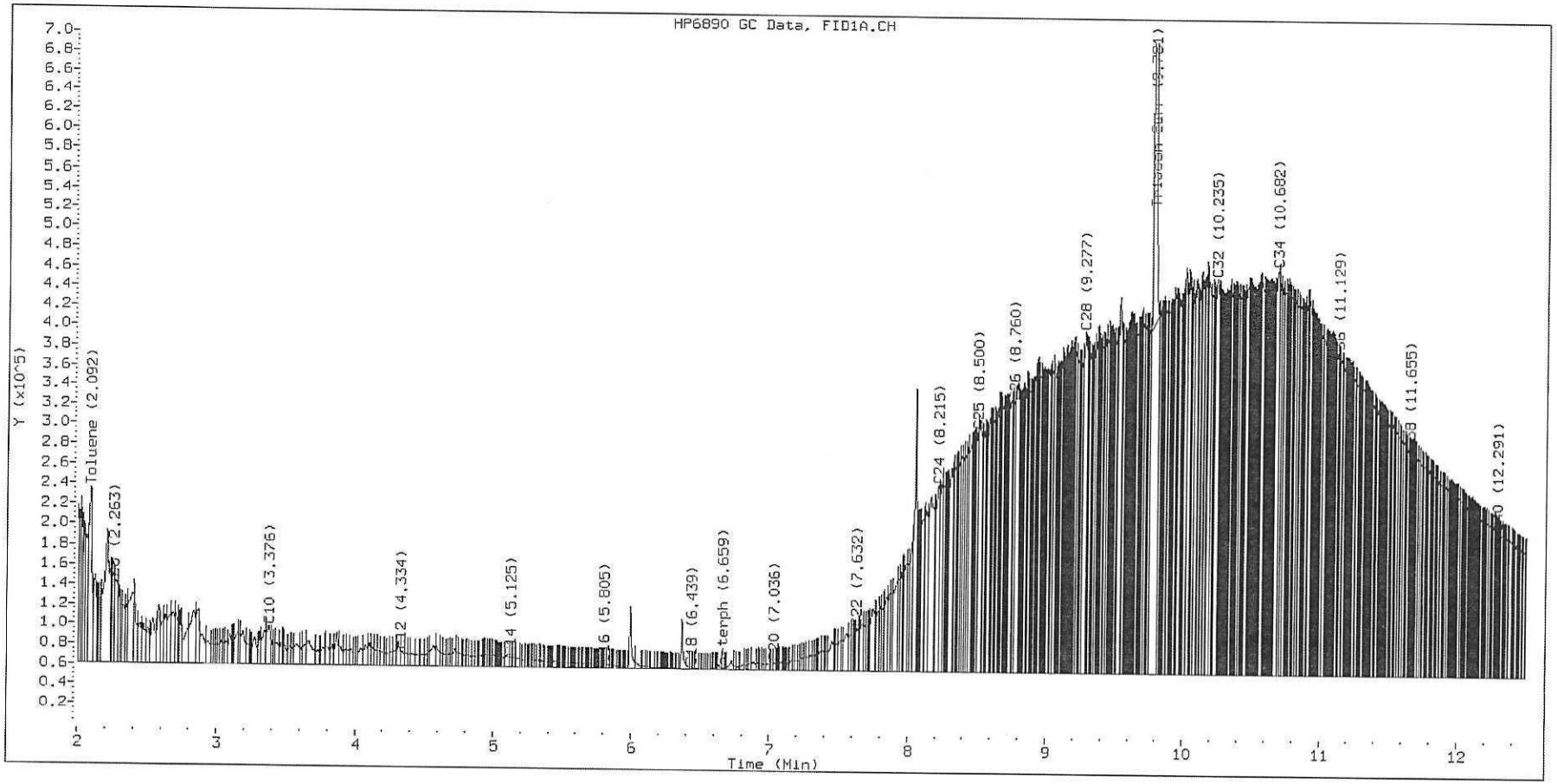
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	1646	0.0
Triacontane	3881047	21.8 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

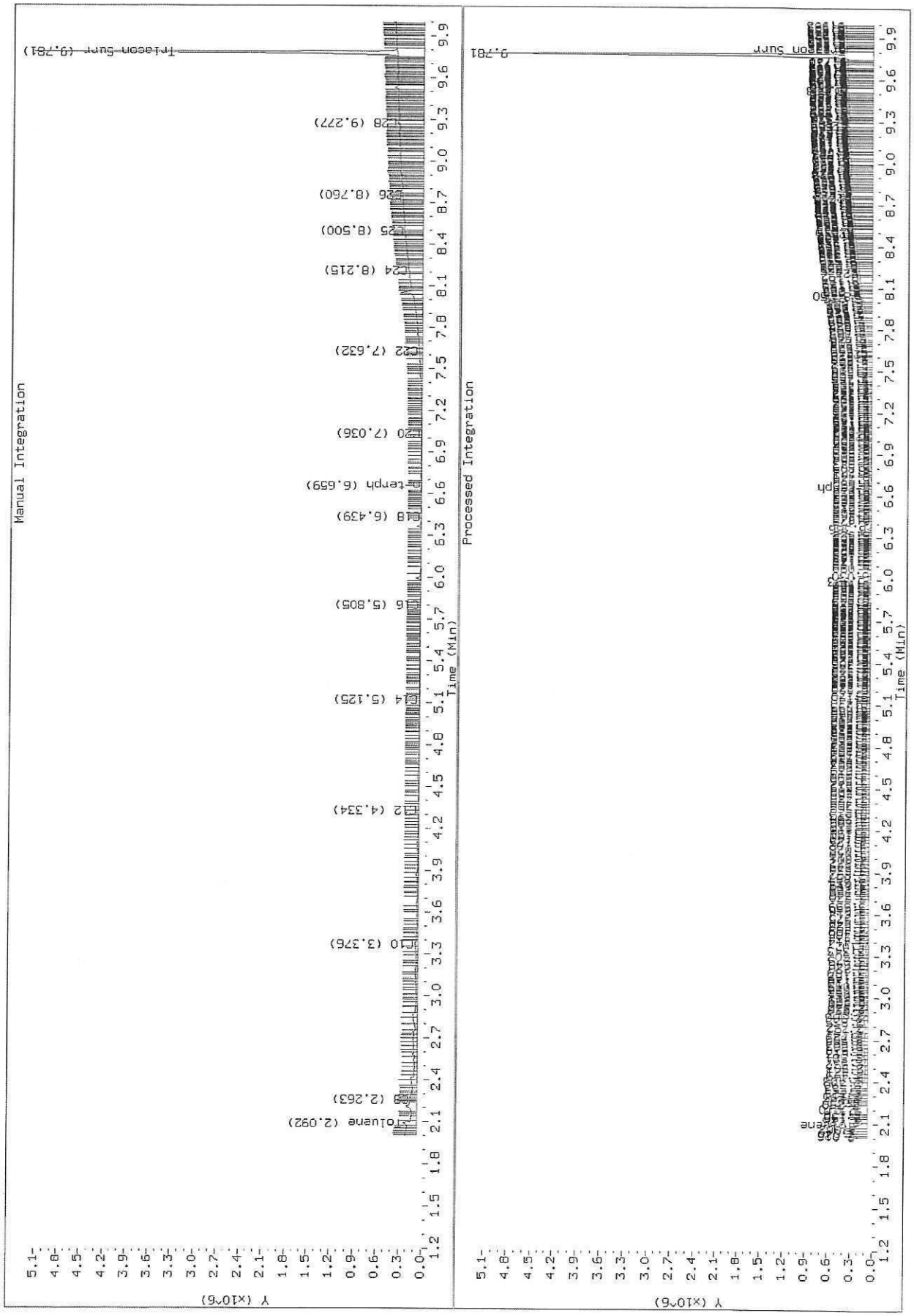
Datafile: FID4A, 20191025.b/419J2516.D SHJ0406-CAL9



TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2516.D Injection: 25-OCT-2019 16:53

Lab ID:SHJ0406-CAL9

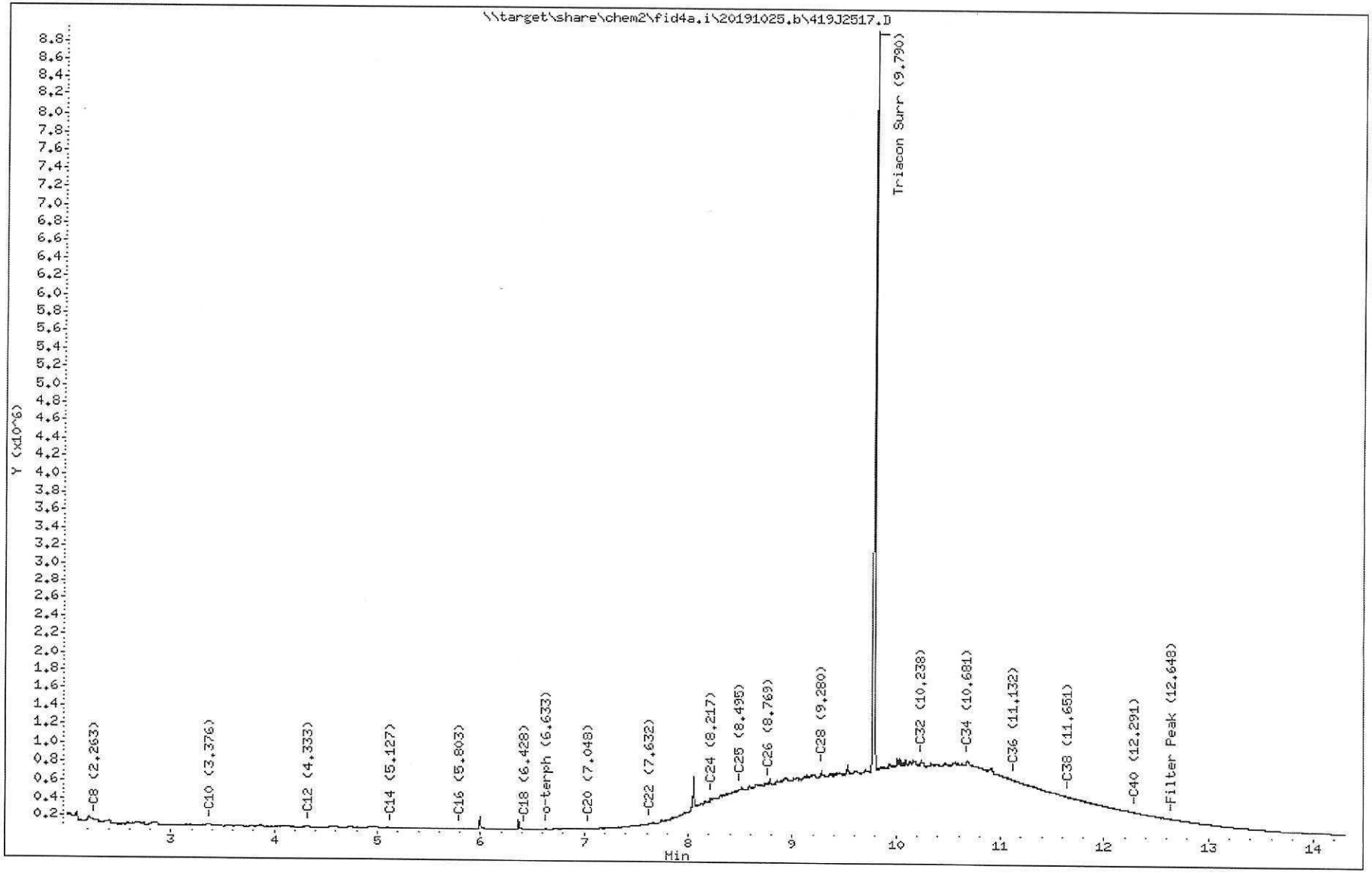


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2517.D
Date : 25-OCT-2019 17:13
Client ID:
Sample Info: SHJ0406-CALA

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2517.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALA
Client ID:
Injection: 25-OCT-2019 17:13
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.263	0.001	78760	49973	WATPHD	(C12-C24)	11050301	69.4
C10	3.376	0.003	33282	53155	WATPHM	(C24-C38)	130458600	983.6
C12	4.333	-0.014	8330	11675	AK102	(C10-C25)	16134883	82.5
C14	5.127	-0.003	6869	8015	AK103	(C25-C36)	110338631	1103.6
C16	5.803	-0.004	4269	6183	OR.DIES	(C10-C28)	47155868	240.6
C18	6.428	-0.006	4035	4694				
C20	7.048	0.005	16630	12336				
C22	7.632	-0.007	93050	108452				
C24	8.217	0.002	386378	321791				
C25	8.495	0.002	491396	292213				
C26	8.769	0.005	557751	166690				
C28	9.280	-0.005	695698	804868				
C32	10.238	-0.005	823126	997439				
C34	10.681	-0.000	821771	761528				
Filter Peak	12.648	-0.002	202612	170825	CREOSOT	(C12-C22)	2854310	731.7
C36	11.132	0.003	625826	249171				
C38	11.651	0.001	444433	177367				
C40	12.291	0.002	276466	164427				
o-terph	6.633	-0.023	11730	15135				
Triacon Surr	9.790	-0.012	8190520	7927188	NAS DIES	(C10-C24)	11670623	59.8

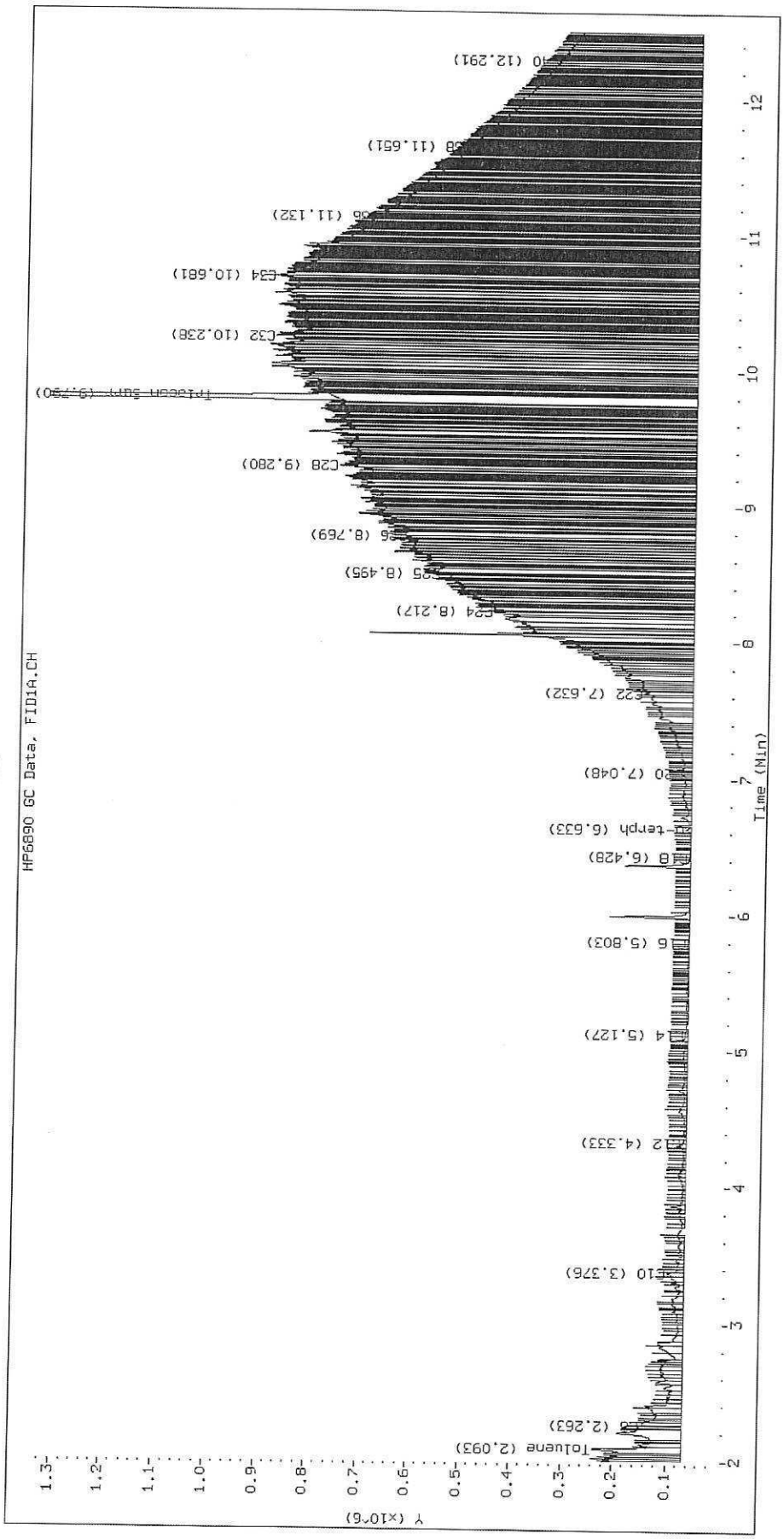
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	15135	0.1
Triacontane	7927188	44.5 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

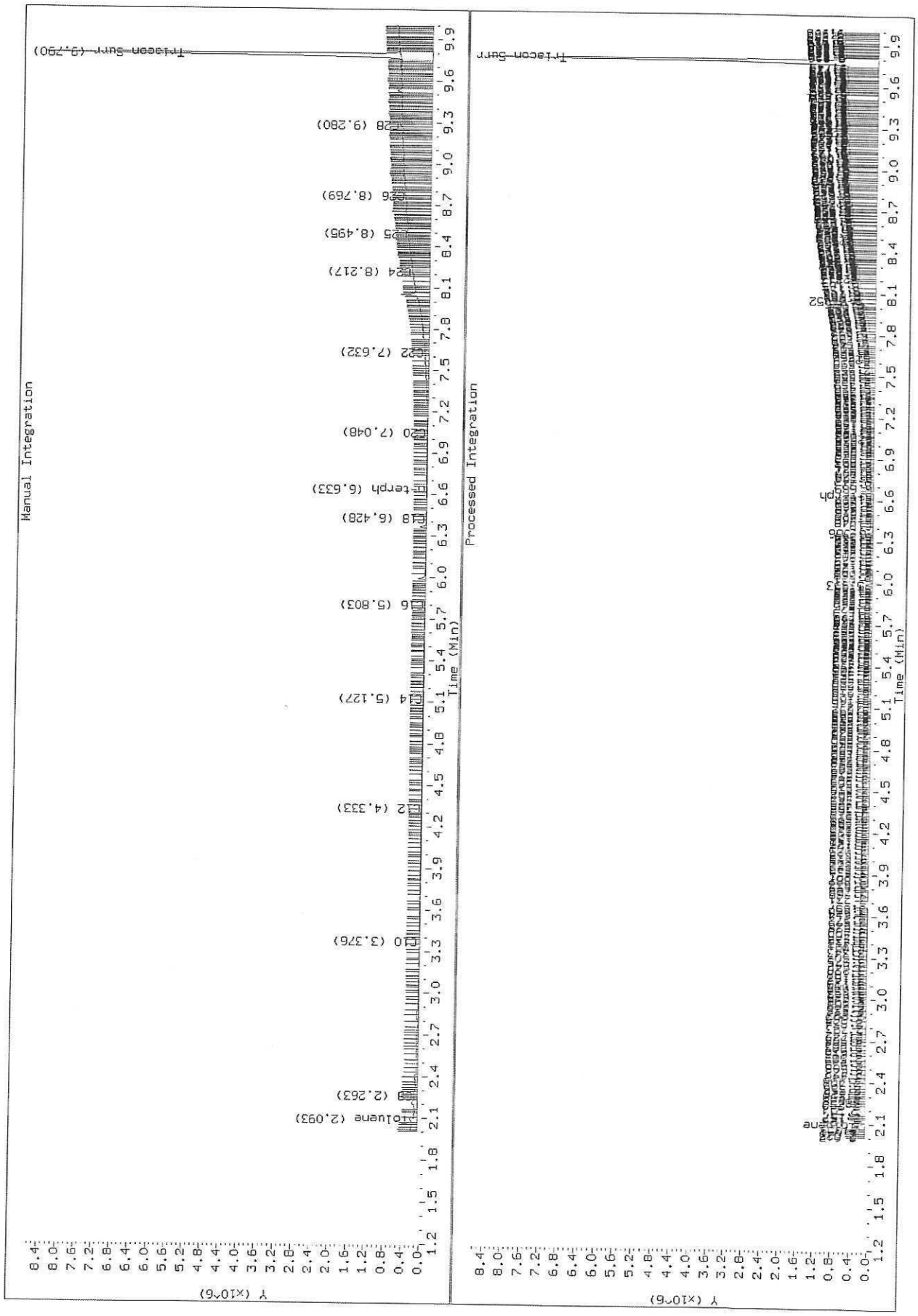
Datafile: FID4A, 20191025.b/419J2517.D SHJ0406-CALA



TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2517.D Injection: 25-OCT-2019 17:13

Lab ID:SHJ0406-CALA

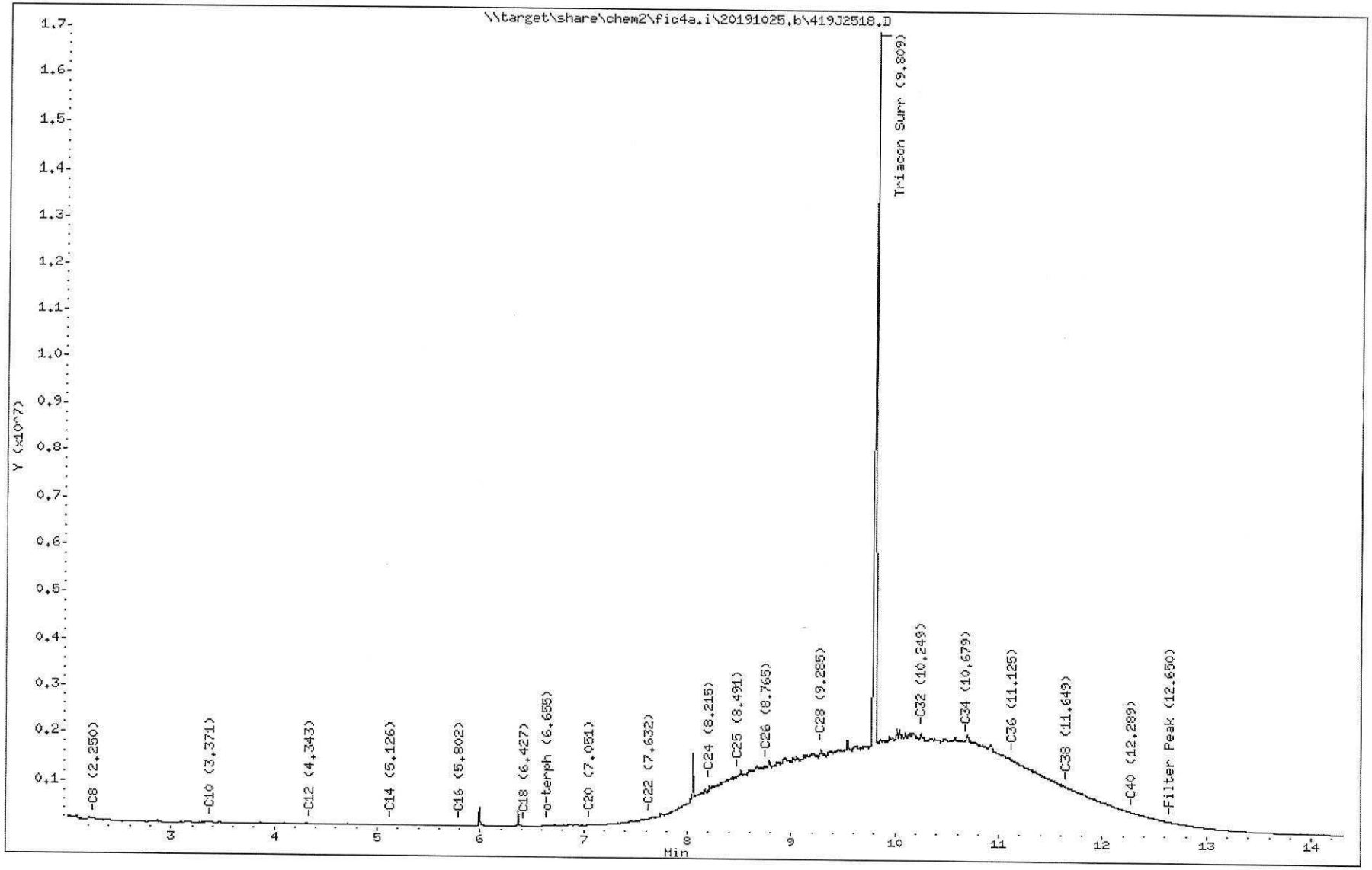


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2518.D
Date : 25-OCT-2019 17:34
Client ID:
Sample Info: SHJ0406-CALB

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2518.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALB
Client ID:
Injection: 25-OCT-2019 17:34
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.250	-0.012	77817	116710	WATPHD	(C12-C24)	27251753	171.0
C10	3.371	-0.002	31760	39598	WATPHM	(C24-C38)	331873325	2502.2
C12	4.343	-0.004	6520	6156	AK102	(C10-C25)	38872526	198.8
C14	5.126	-0.004	7874	9340	AK103	(C25-C36)	281447225	2815.1
C16	5.802	-0.005	7984	9771	OR.DIES	(C10-C28)	115893490	591.3
C18	6.427	-0.007	14076	14289				
C20	7.051	0.008	46537	34495				
C22	7.632	-0.007	235207	295349				
C24	8.215	0.000	955047	900361				
C25	8.491	-0.002	1184503	236628				
C26	8.765	0.000	1401067	1730192				
C28	9.285	-0.001	1743563	2775911				
C32	10.249	0.007	2106415	3055227				
C34	10.679	-0.002	1974576	1267121				
Filter Peak	12.650	-0.001	278159	124338	CREOSOT	(C12-C22)	6708937	1719.8
C36	11.125	-0.004	1581807	1021345				
C38	11.649	-0.001	1027941	256759				
C40	12.289	0.000	486929	193205				
o-terph	6.655	-0.002	18811	15731				
Triacon Surr	9.809	0.007	15056726	20120024	NAS DIES	(C10-C24)	27786026	142.4

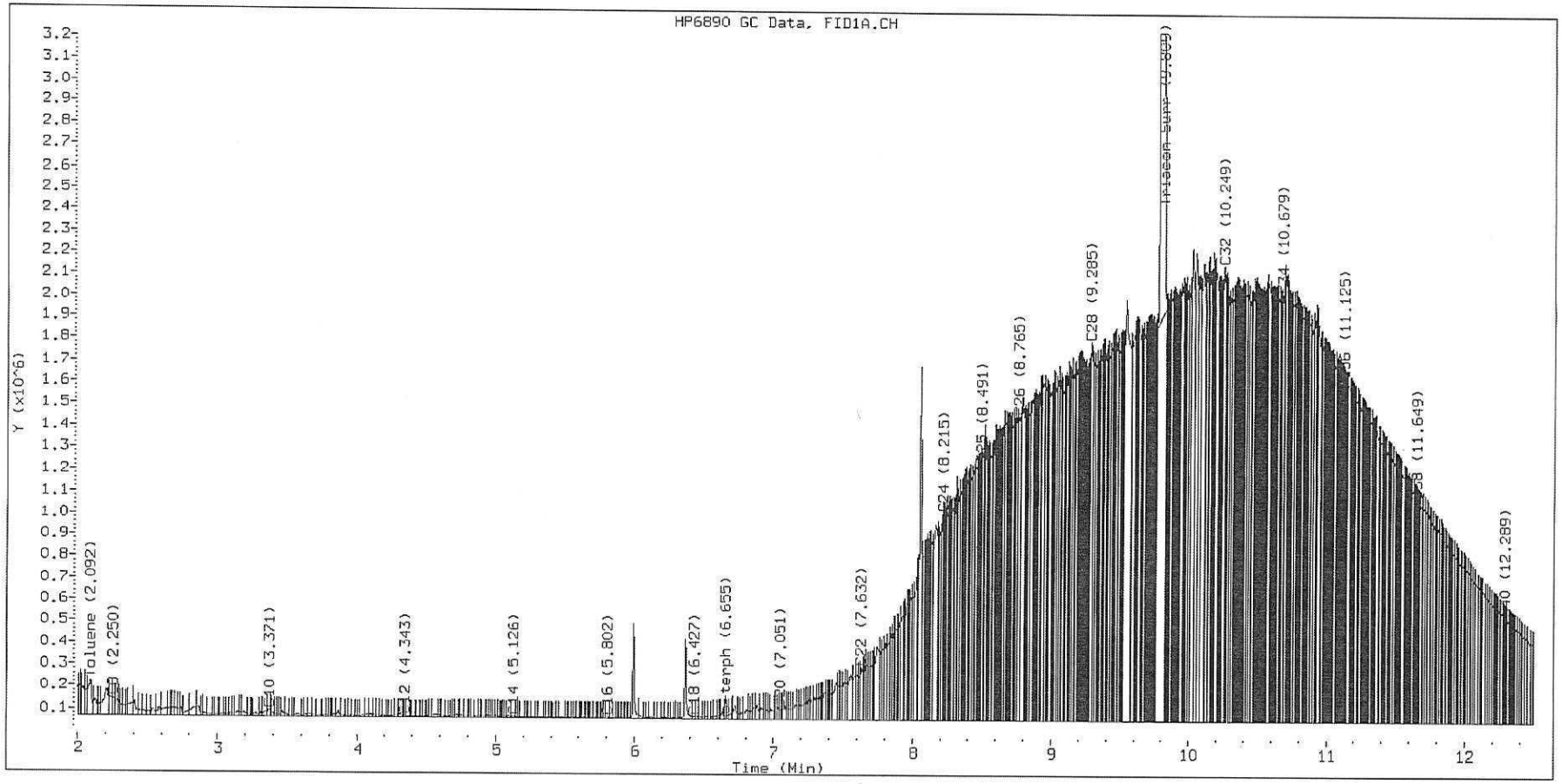
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	15731	0.1	
Triacontane	20120024	113.0	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

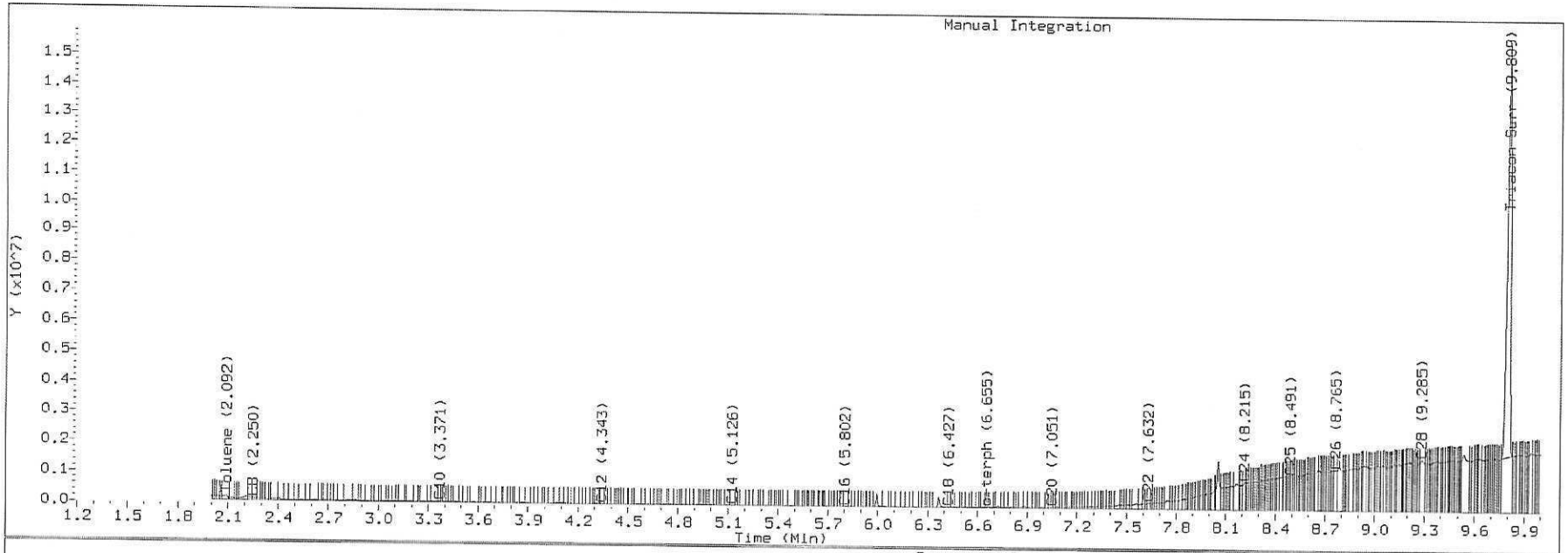
Datafile: FID4A, 20191025.b/419J2518.D SHJ0406-CALB

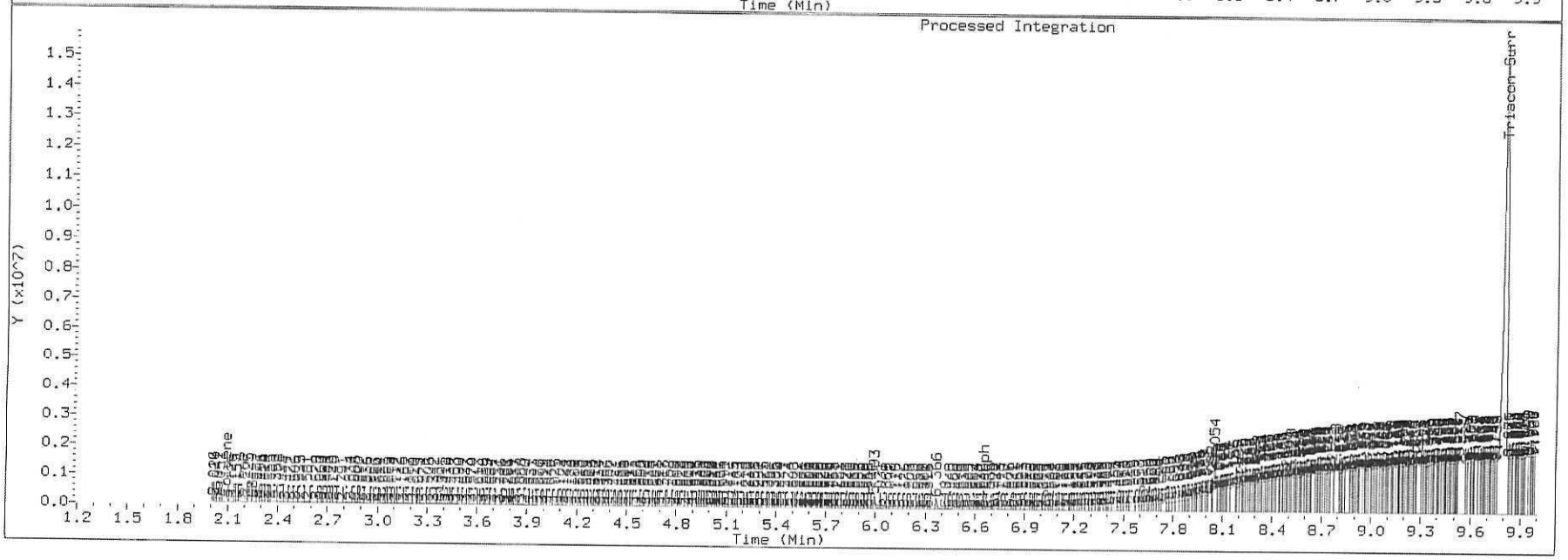


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2518.D Injection: 25-OCT-2019 17:34

Lab ID:SHJ0406-CALB



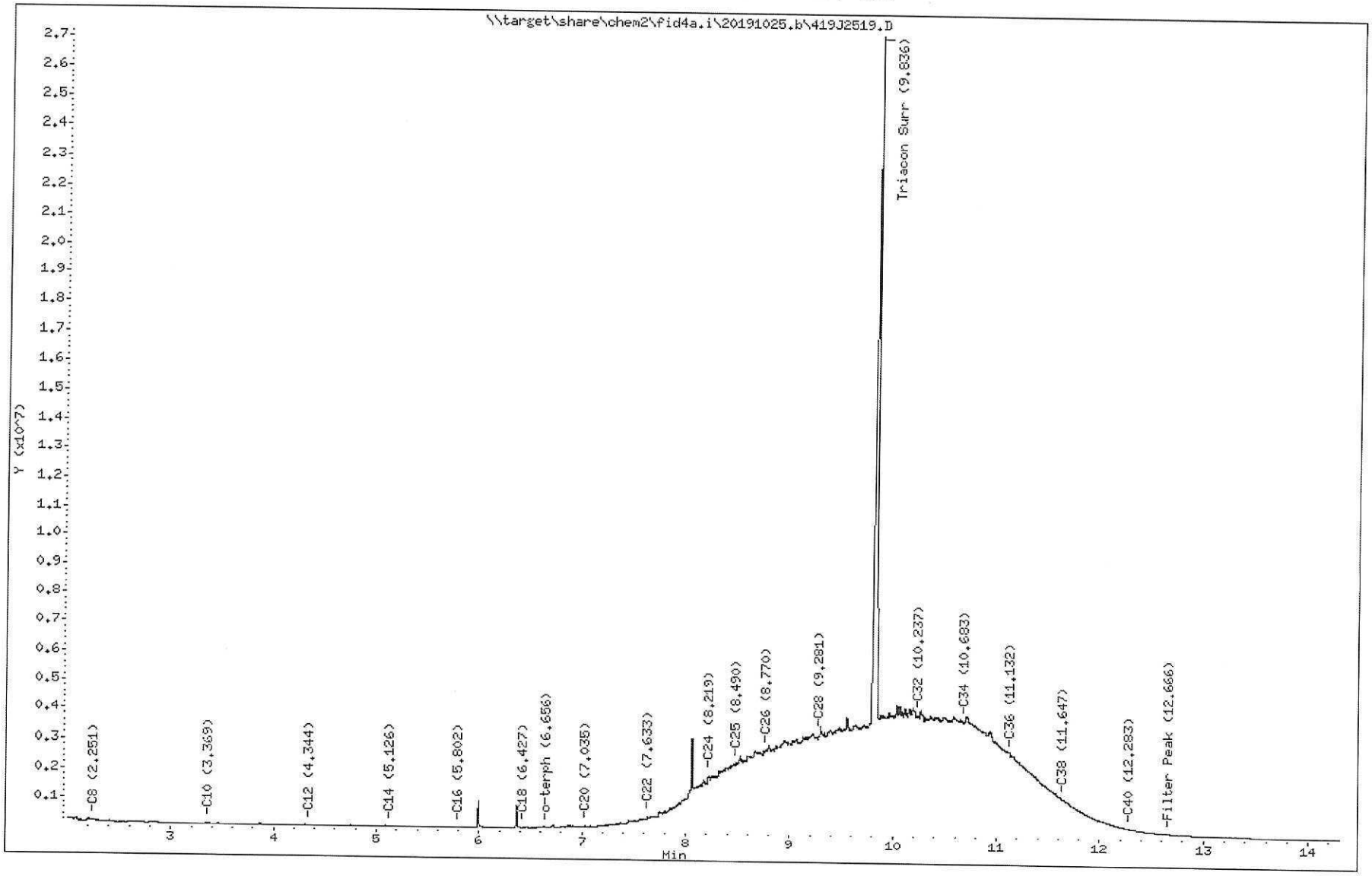


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2519.D
Date : 25-OCT-2019 17:54
Client ID:
Sample Info: SHJ0406-CALC

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2519.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALC
Client ID:
Injection: 25-OCT-2019 17:54
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.251	-0.011	83410	131526	WATPHD	(C12-C24)	54951988	344.9
C10	3.369	-0.004	40067	53627	WATPHM	(C24-C38)	647842842	4884.5
C12	4.344	-0.003	8504	8688	AK102	(C10-C25)	79702569	407.7
C14	5.126	-0.004	19567	26129	AK103	(C25-C36)	565644605	5657.8
C16	5.802	-0.006	21777	24178	OR.DIES	(C10-C28)	235116720	1199.6
C18	6.427	-0.008	35077	33036				
C20	7.035	-0.008	119620	119856				
C22	7.633	-0.006	481948	602675				
C24	8.219	0.004	1952483	1661789				
C25	8.490	-0.003	2383743	592688				
C26	8.770	0.005	2837167	1694204				
C28	9.281	-0.005	3377335	3333438				
C32	10.237	-0.006	4076731	3428537				
C34	10.683	0.002	3869795	1544856				
Filter Peak	12.666	0.015	116179	102746	CREOSOT	(C12-C22)	14260161	3655.6
C36	11.132	0.003	2846055	707761				
C38	11.647	-0.002	1313112	715795				
C40	12.283	-0.006	302346	281489				
o-terph	6.656	-0.001	43010	66343				
Triacon Surr	9.836	0.034	23293566	39698048	NAS DIES	(C10-C24)	55485985	284.3

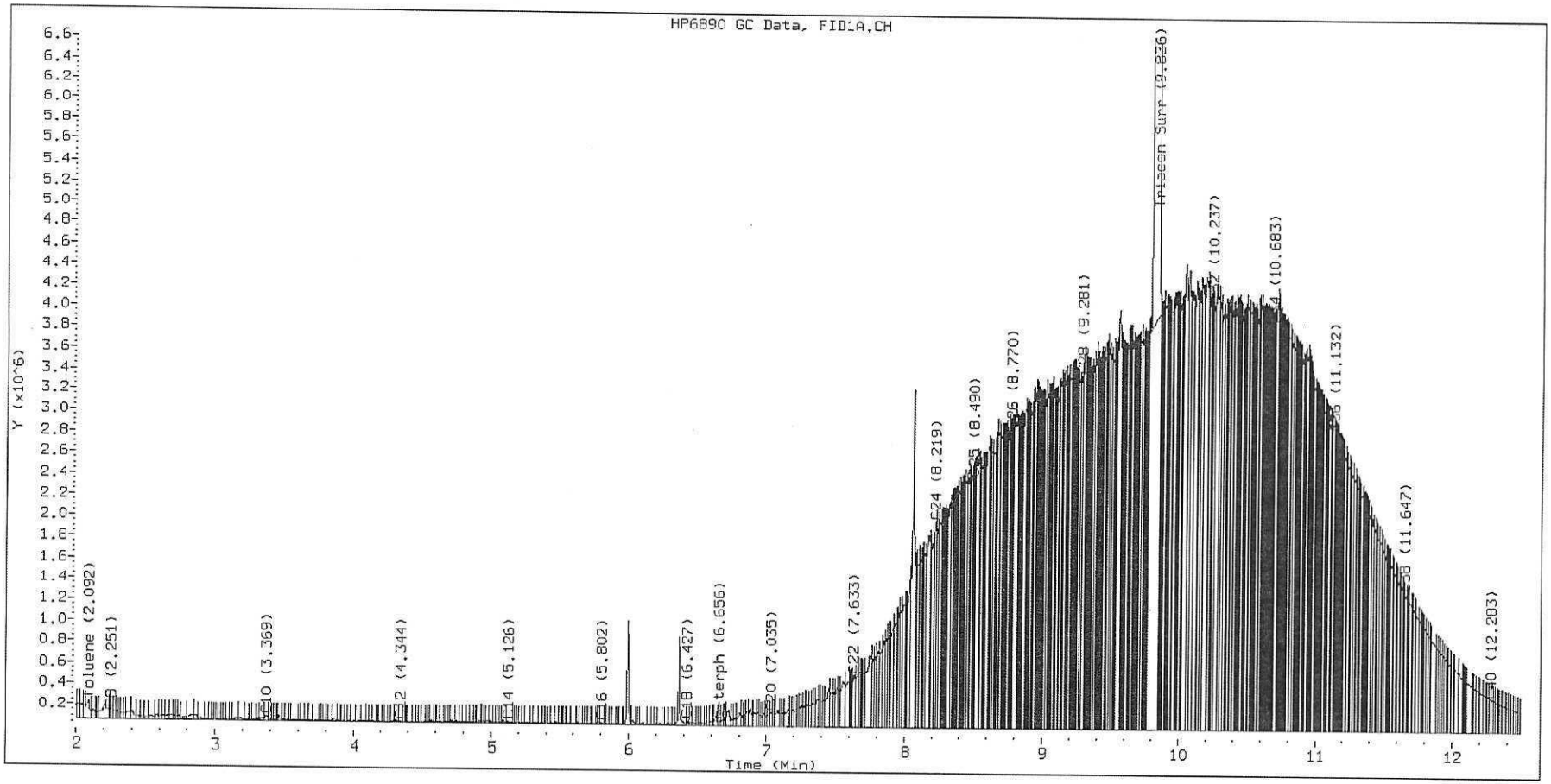
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	66343	0.3	
Triacontane	39698048	223.0	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

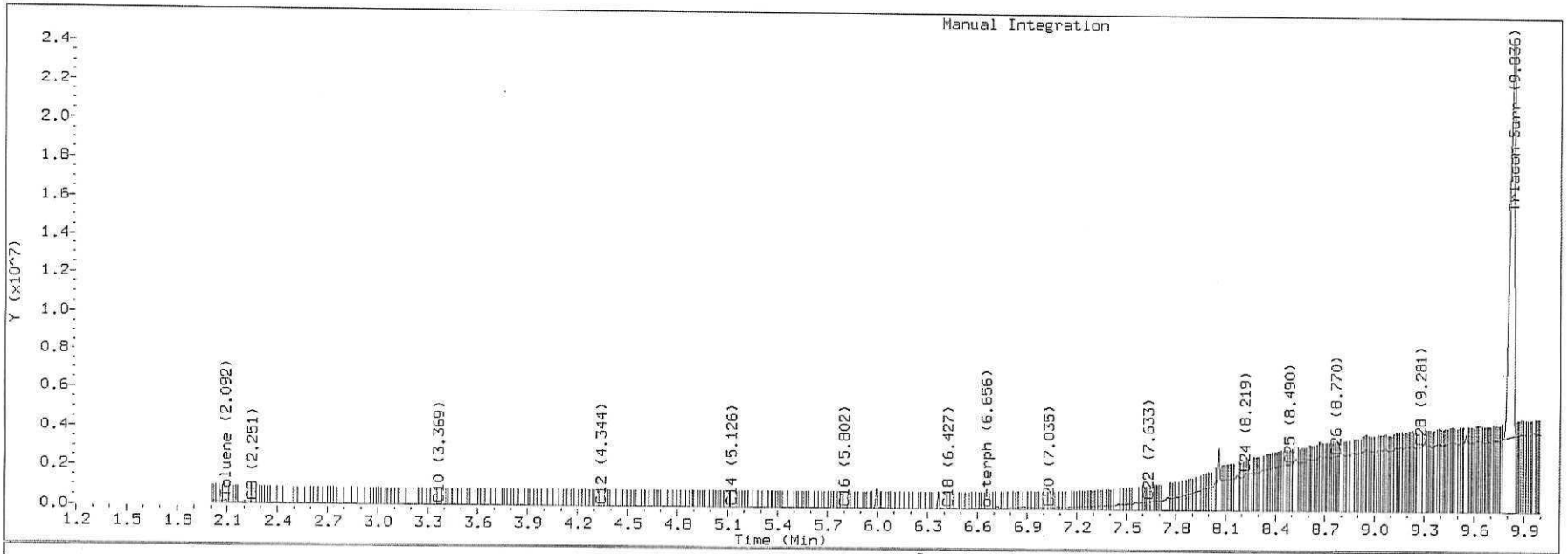
Datafile: FID4A, 20191025.b/419J2519.D SHJ0406-CALC

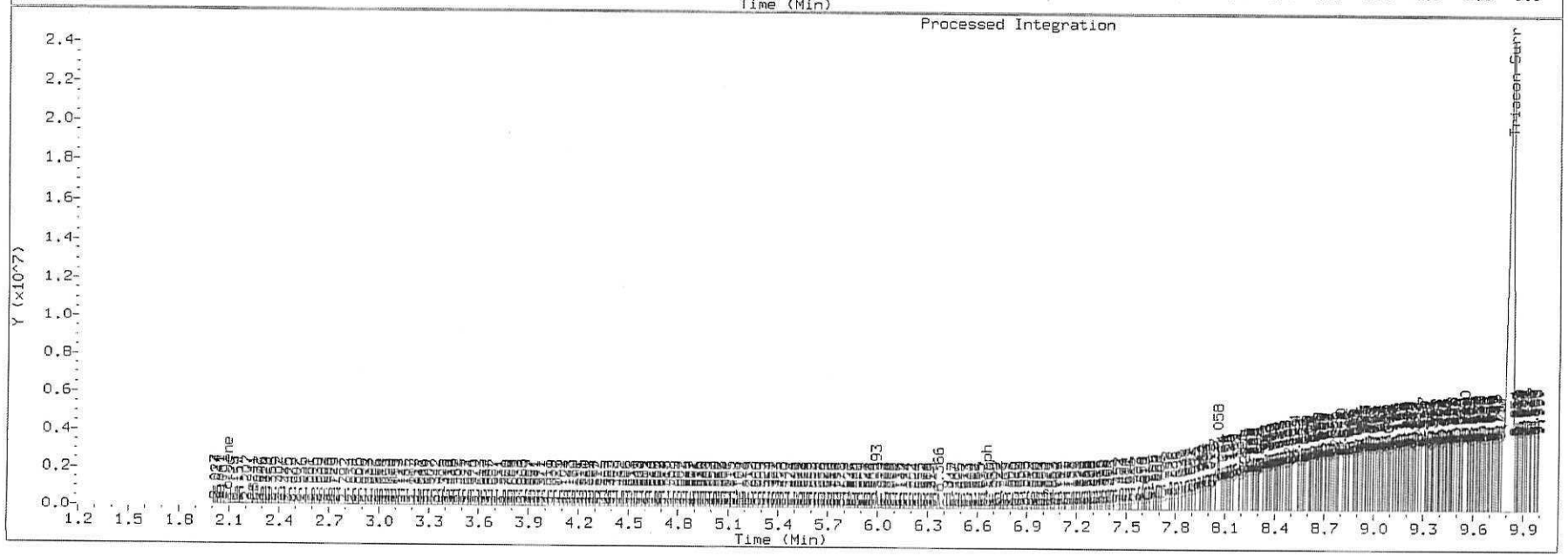


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2519.D Injection: 25-OCT-2019 17:54

Lab ID:SHJ0406-CALC



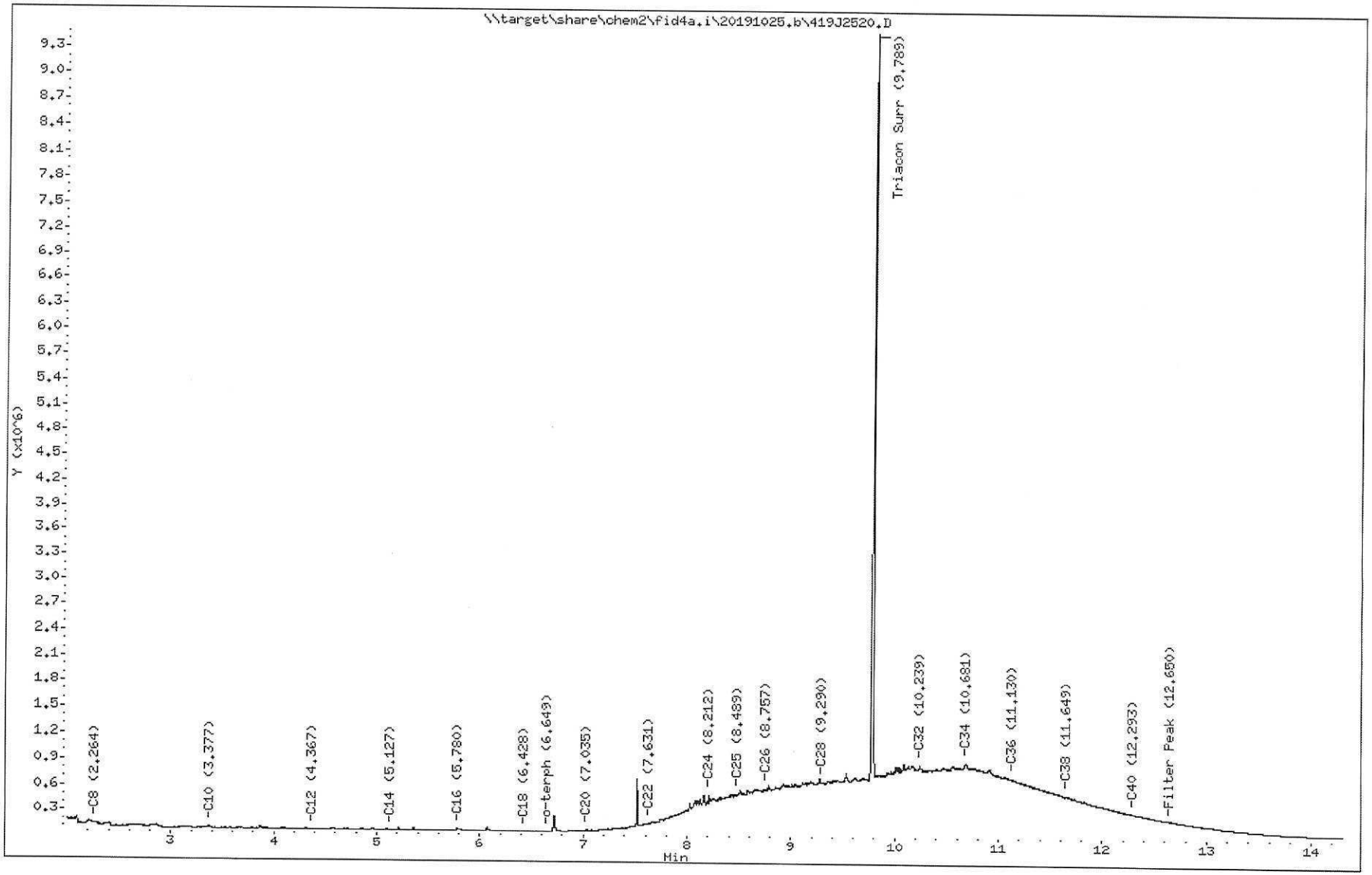


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2520.D
Date : 25-OCT-2019 18:14
Client ID:
Sample Info: SHJ0406-SCV2

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2520.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-SCV2
Client ID:
Injection: 25-OCT-2019 18:14
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	61386	42202	WATPHD	(C12-C24)	14006466	87.9
C10	3.377	0.004	28038	52387	WATPHM	(C24-C38)	135195593	1019.3
C12	4.367	0.020	3146	3151	AK102	(C10-C25)	18822986	96.3
C14	5.127	-0.003	4143	4458	AK103	(C25-C36)	113030798	1130.6
C16	5.780	-0.027	35494	74348	OR.DIES	(C10-C28)	49340102	251.7
C18	6.428	-0.007	6156	6874				
C20	7.035	-0.008	26093	30304				
C22	7.631	-0.008	127794	247657				
C24	8.212	-0.003	471017	746279				
C25	8.489	-0.004	491516	98217				
C26	8.757	-0.008	557900	550938				
C28	9.290	0.005	640615	223711				
C32	10.239	-0.004	847729	1306304				
C34	10.681	-0.000	865603	764427				
Filter Peak	12.650	-0.000	213232	84835	CREOSOT	(C12-C22)	3605357	924.2
C36	11.130	0.001	692159	413129				
C38	11.649	-0.001	503231	200454				
C40	12.293	0.004	305287	287895				
o-terph	6.649	-0.008	4022	3699				
Triacon Surr	9.789	-0.013	8762887	8519530	NAS DIES	(C10-C24)	14444503	74.0

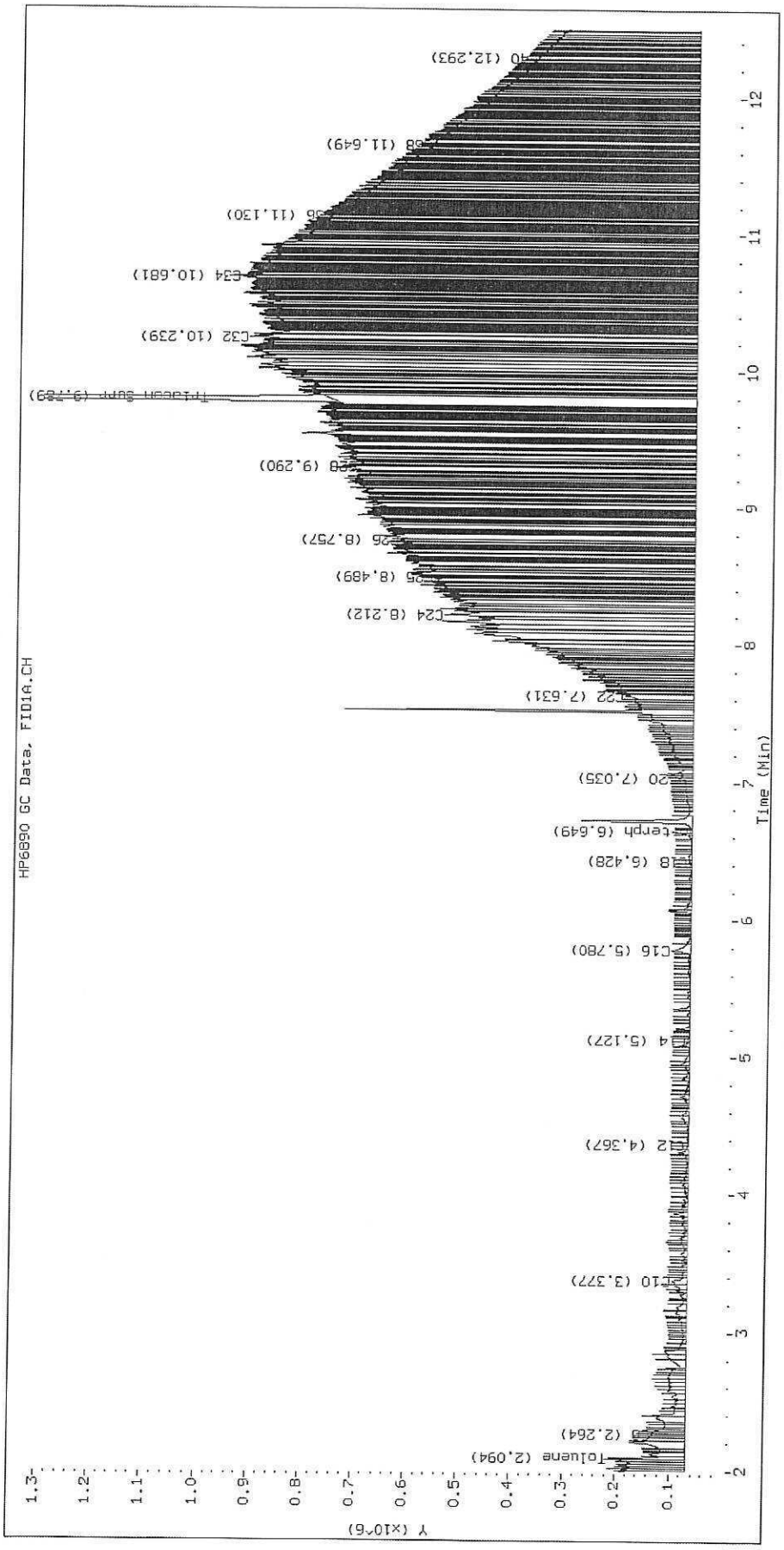
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	3699	0.0	
Triacontane	8519530	47.9	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

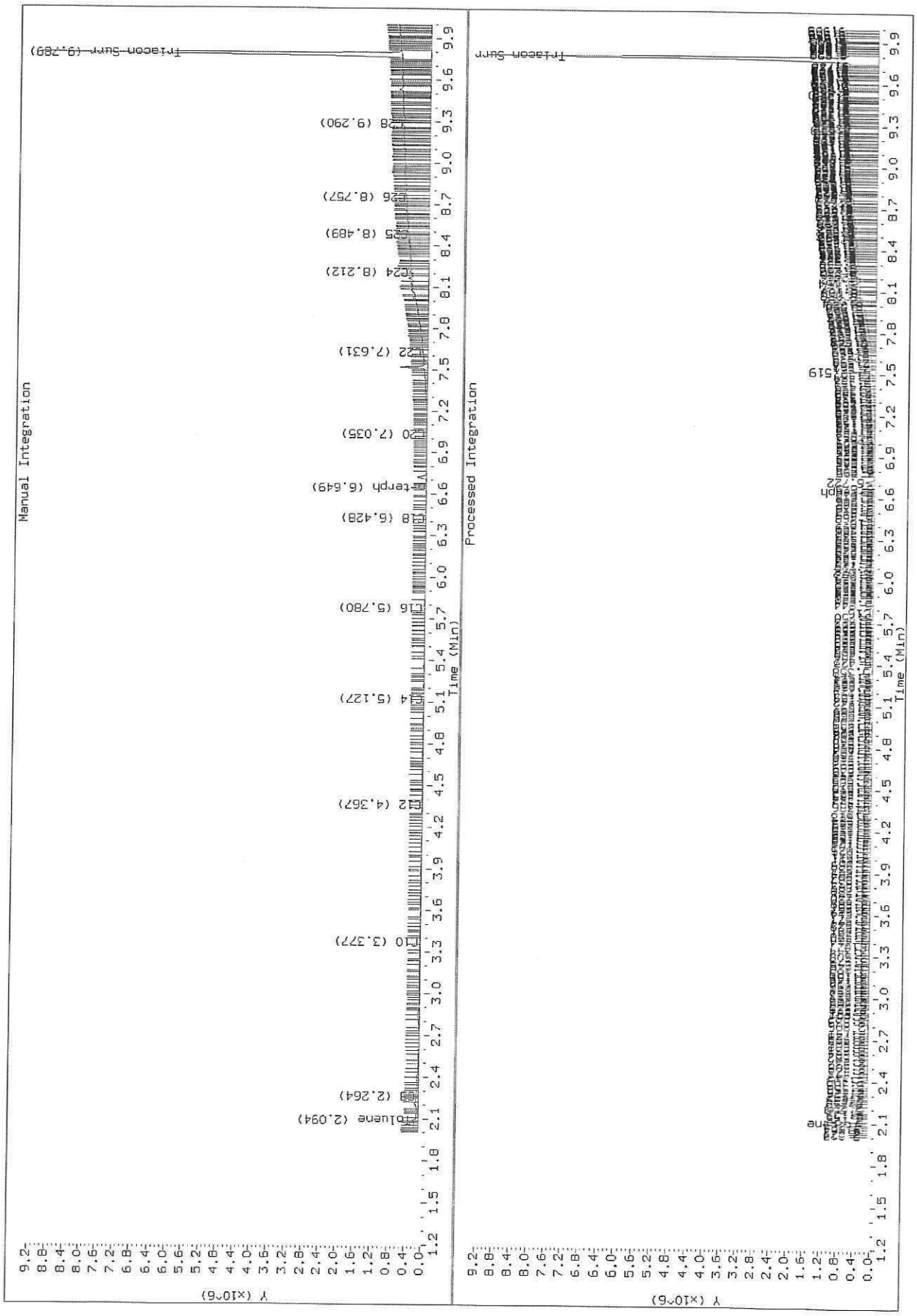
Datafile: FID4A, 20191025.b/419J2520.D SHJ0406-SCV2



TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2520.D Injection: 25-OCT-2019 18:14

Lab ID:SHJ0406-SCV2

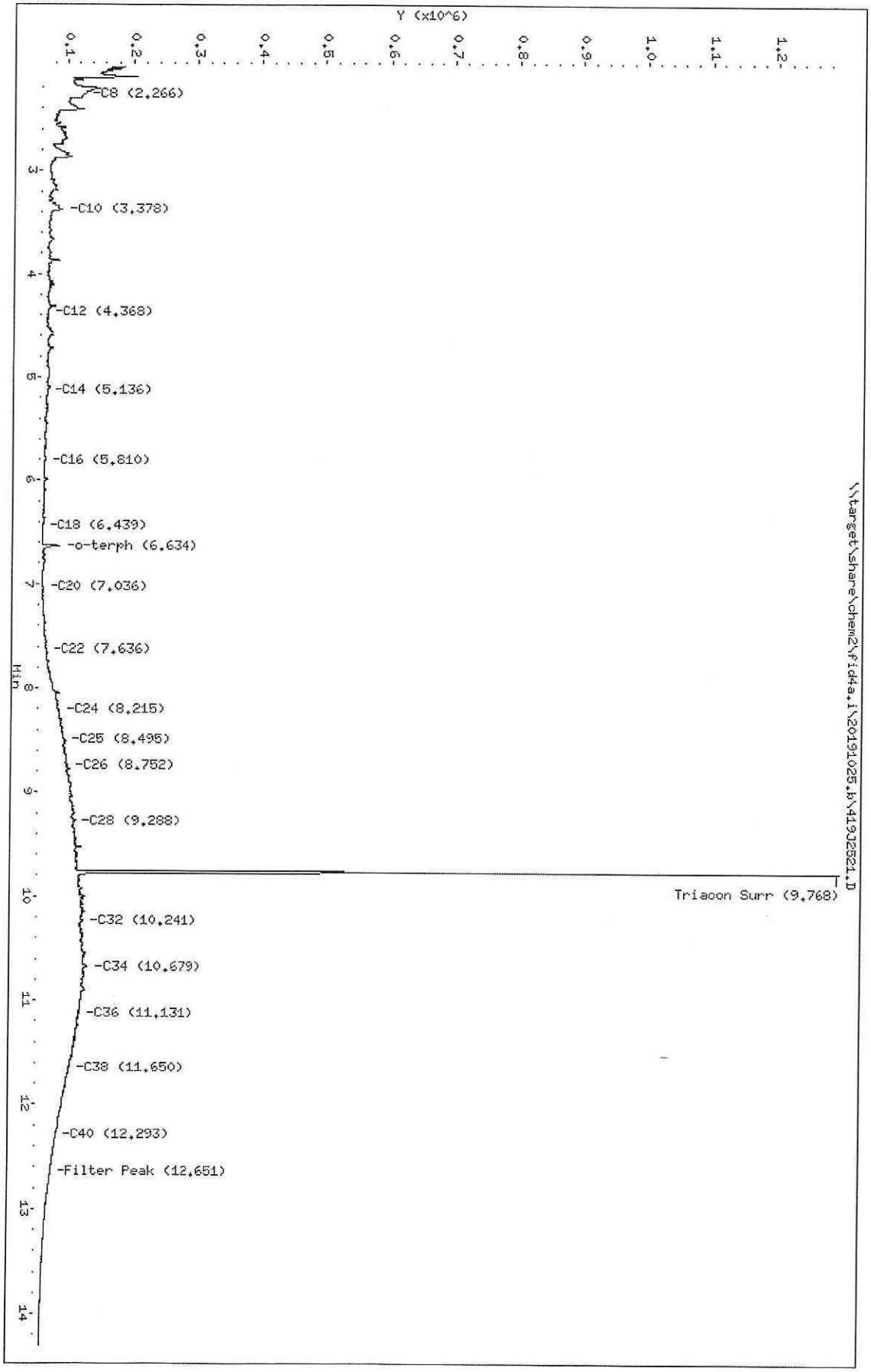


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2521.D
Date : 25-OCT-2019 18:35
Client ID:
Sample Info: SHJ0406-CALD

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2521.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALD
Client ID:
Injection: 25-OCT-2019 18:35
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.266	0.003	63130	43308	WATPHD	(C12-C24)	1323968	8.3
C10	3.378	0.005	28879	54645	WATPHM	(C24-C38)	12086307	91.1
C12	4.368	0.021	6558	8293	AK102	(C10-C25)	2265512	11.6
C14	5.136	0.007	6204	3069	AK103	(C25-C36)	9919700	99.2
C16	5.810	0.003	3258	3063	OR.DIES	(C10-C28)	4756055	24.3
C18	6.439	0.004	920	449				
C20	7.036	-0.007	1277	1180				
C22	7.636	-0.003	8777	15968				
C24	8.215	0.000	31726	51380				
C25	8.495	0.002	39977	33338				
C26	8.752	-0.012	45255	53640				
C28	9.288	0.003	56620	22552				
C32	10.241	-0.002	70490	38594				
C34	10.679	-0.002	78226	83978				
Filter Peak	12.651	0.000	22108	8817	CREOSOT	(C12-C22)	689259	176.7
C36	11.131	0.002	66508	16608				
C38	11.650	0.000	52851	23597				
C40	12.293	0.004	31673	31207				
o-terph	6.634	-0.022	28829	34405				
Triacon Surr	9.768	-0.034	1173387	818277	NAS DIES	(C10-C24)	1907173	9.8

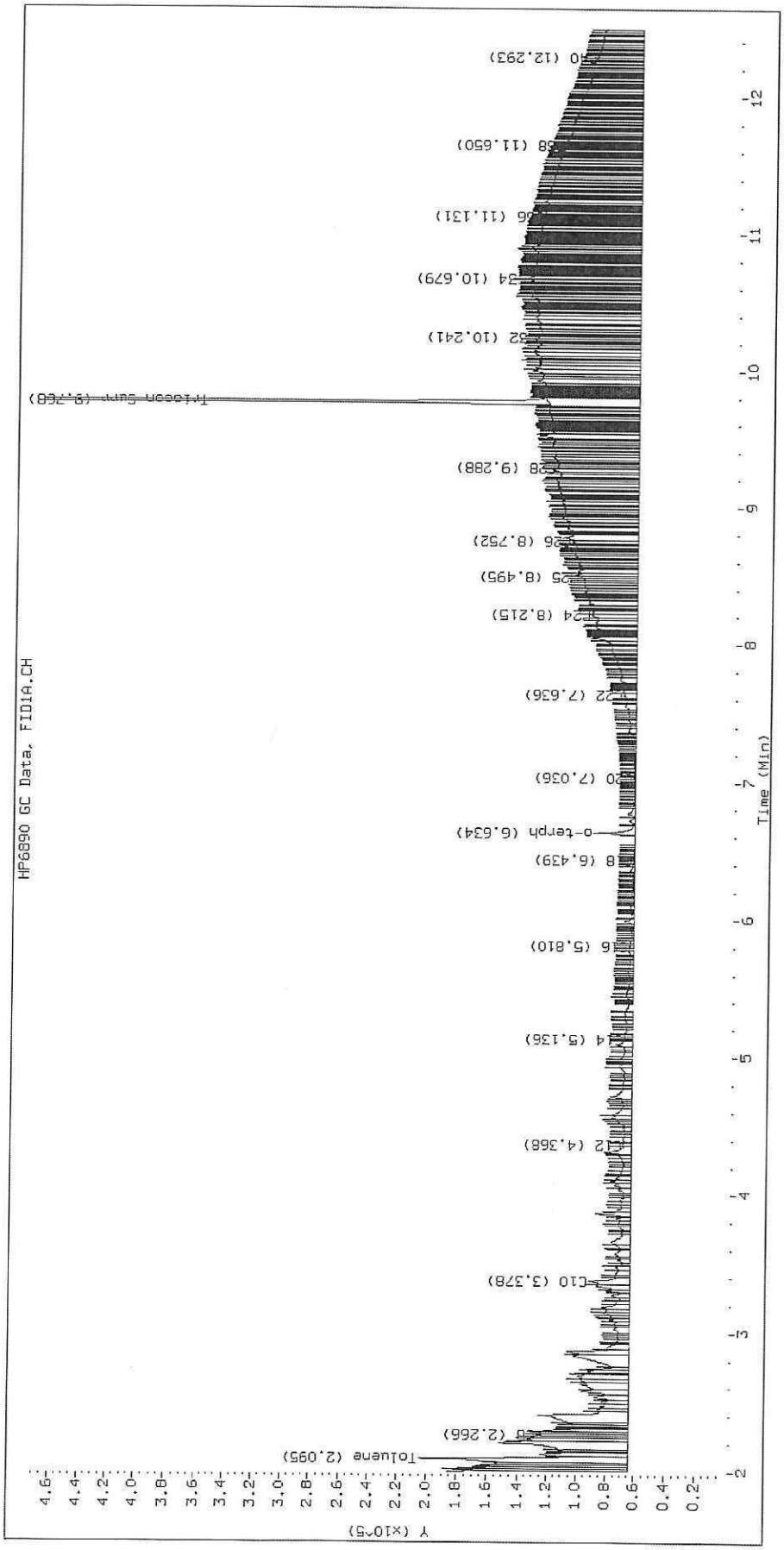
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	34405	0.2
Triacontane	818277	4.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

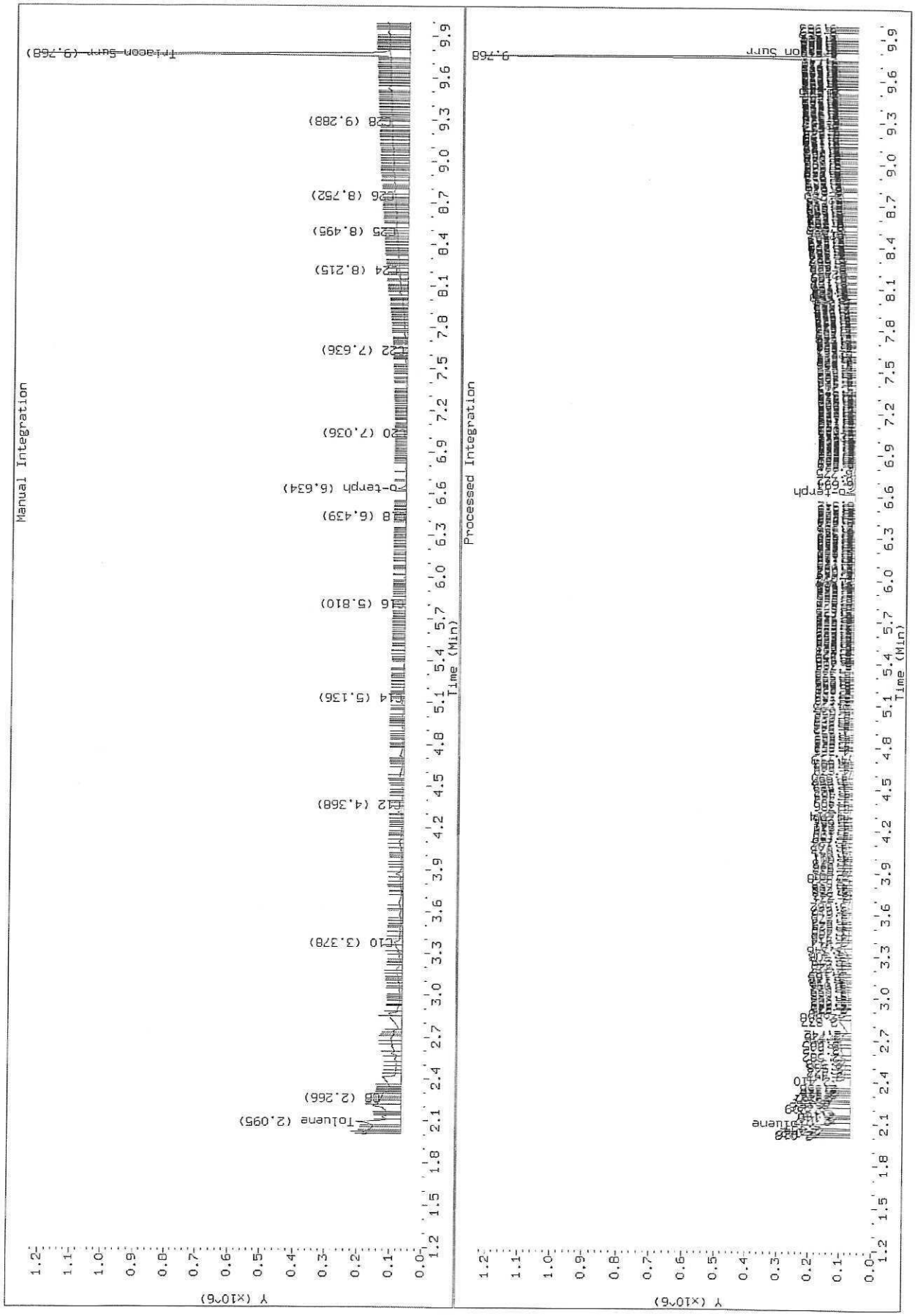
Datafile: FID4A, 20191025.b/419J2521.D SHJ0406-CALD



TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2521.D Injection: 25-OCT-2019 18:35

Lab ID:SHJ0406-CALD

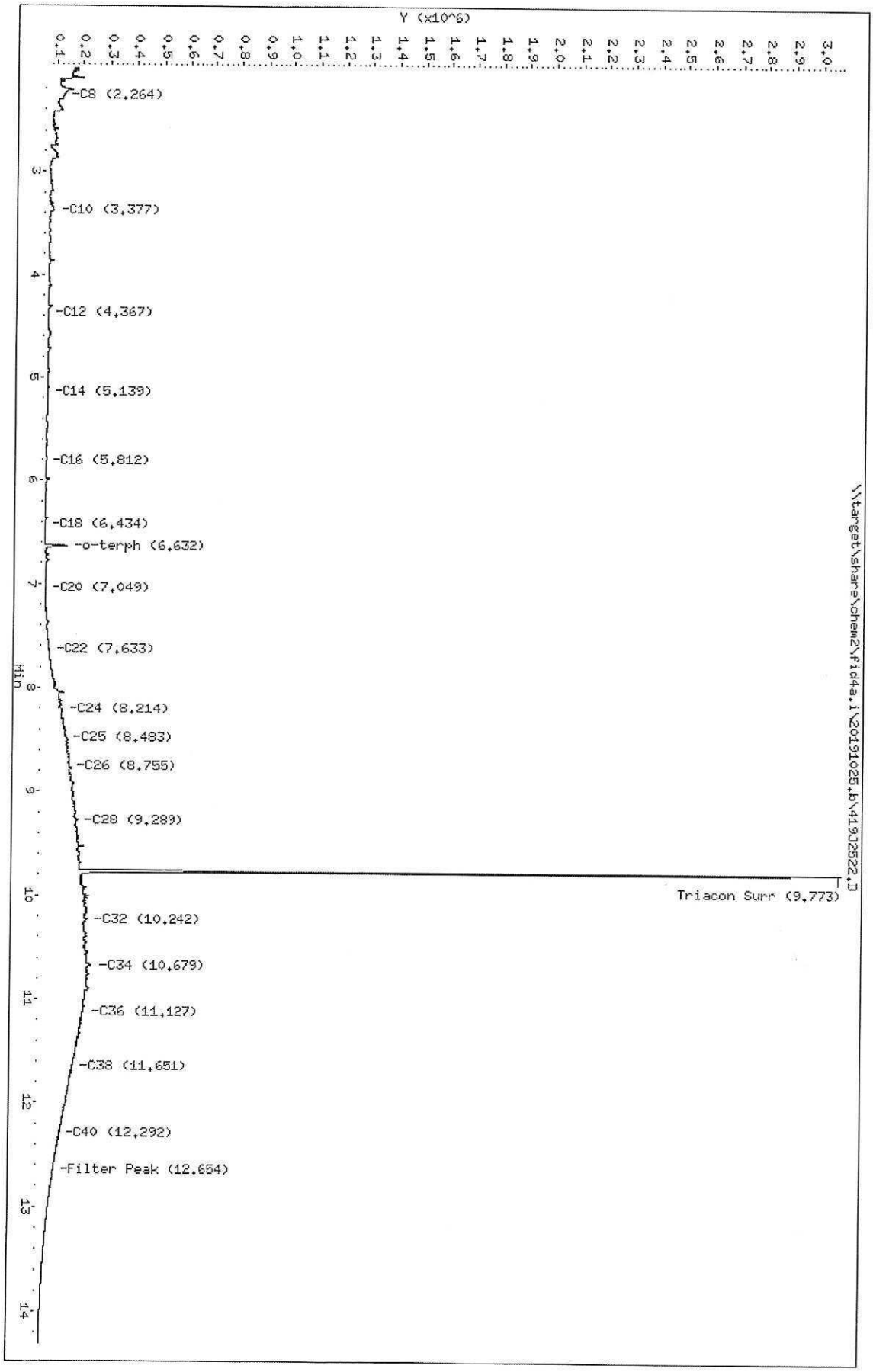


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2522.D
Date : 25-OCT-2019 18:55
Client ID:
Sample Info: SHJ0406-CALE

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Page 1

Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2522.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALE
Client ID:
Injection: 25-OCT-2019 18:55
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	61078	41904	WATPHD	(C12-C24)	2795528	17.5
C10	3.377	0.004	26802	52996	WATPHM	(C24-C38)	31324226	236.2
C12	4.367	0.019	5459	4798	AK102	(C10-C25)	4178110	21.4
C14	5.139	0.010	4962	3160	AK103	(C25-C36)	25813764	258.2
C16	5.812	0.005	2520	1321	OR.DIES	(C10-C28)	10680396	54.5
C18	6.434	-0.000	1311	882				
C20	7.049	0.006	4759	2820				
C22	7.633	-0.005	24172	52812				
C24	8.214	-0.001	79717	62122				
C25	8.483	-0.010	96553	61766				
C26	8.755	-0.010	114382	67845				
C28	9.289	0.004	142997	64203				
C32	10.242	0.000	182878	81971				
C34	10.679	-0.002	200985	321864				
Filter Peak	12.654	0.004	63611	28452	CREOSOT	(C12-C22)	1041017	266.9
C36	11.127	-0.001	175707	78840				
C38	11.651	0.001	139085	55402				
C40	12.292	0.004	88908	61716				
o-terph	6.632	-0.024	91544	90689				
Triacon Surr	9.773	-0.029	2869605	2058184	NAS DIES	(C10-C24)	3295502	16.9

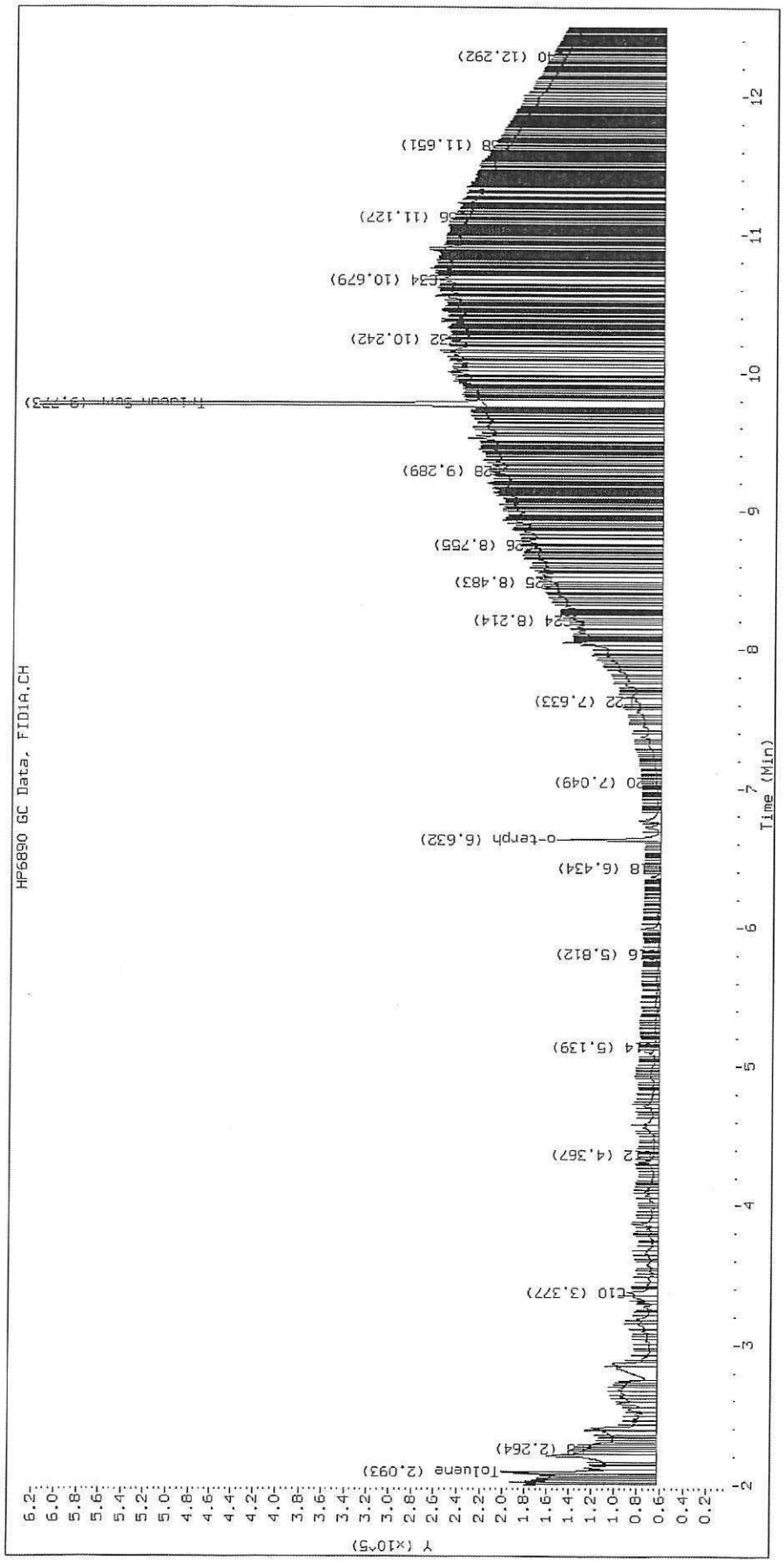
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	90689	0.4
Triacontane	2058184	11.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

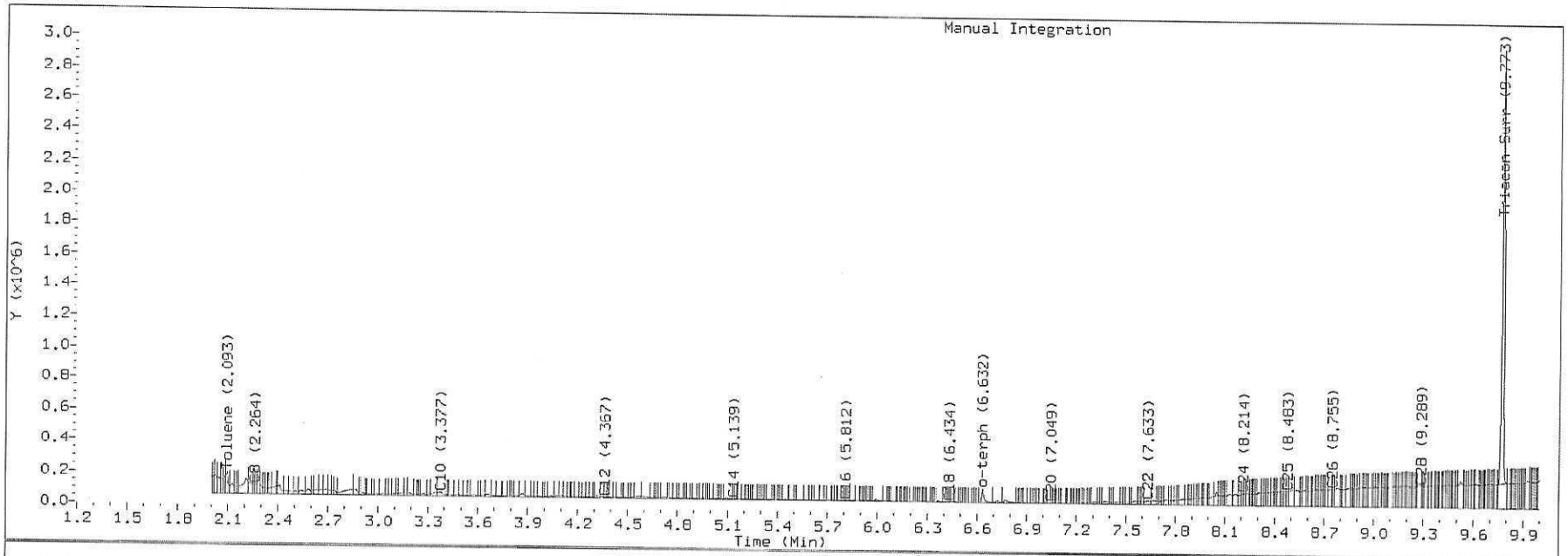
Datafile: FID4A, 20191025.b/419J2522.D SHJ0406-CALE

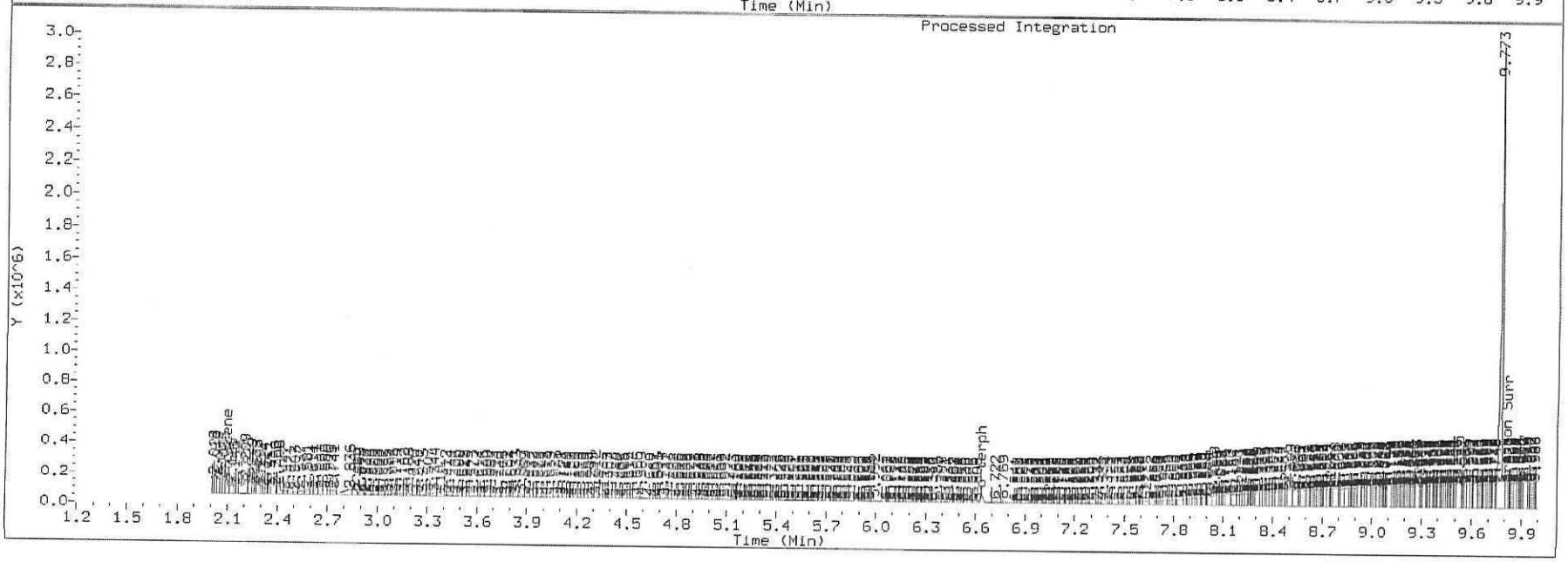


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2522.D Injection: 25-OCT-2019 18:55

Lab ID:SHJ0406-CALE





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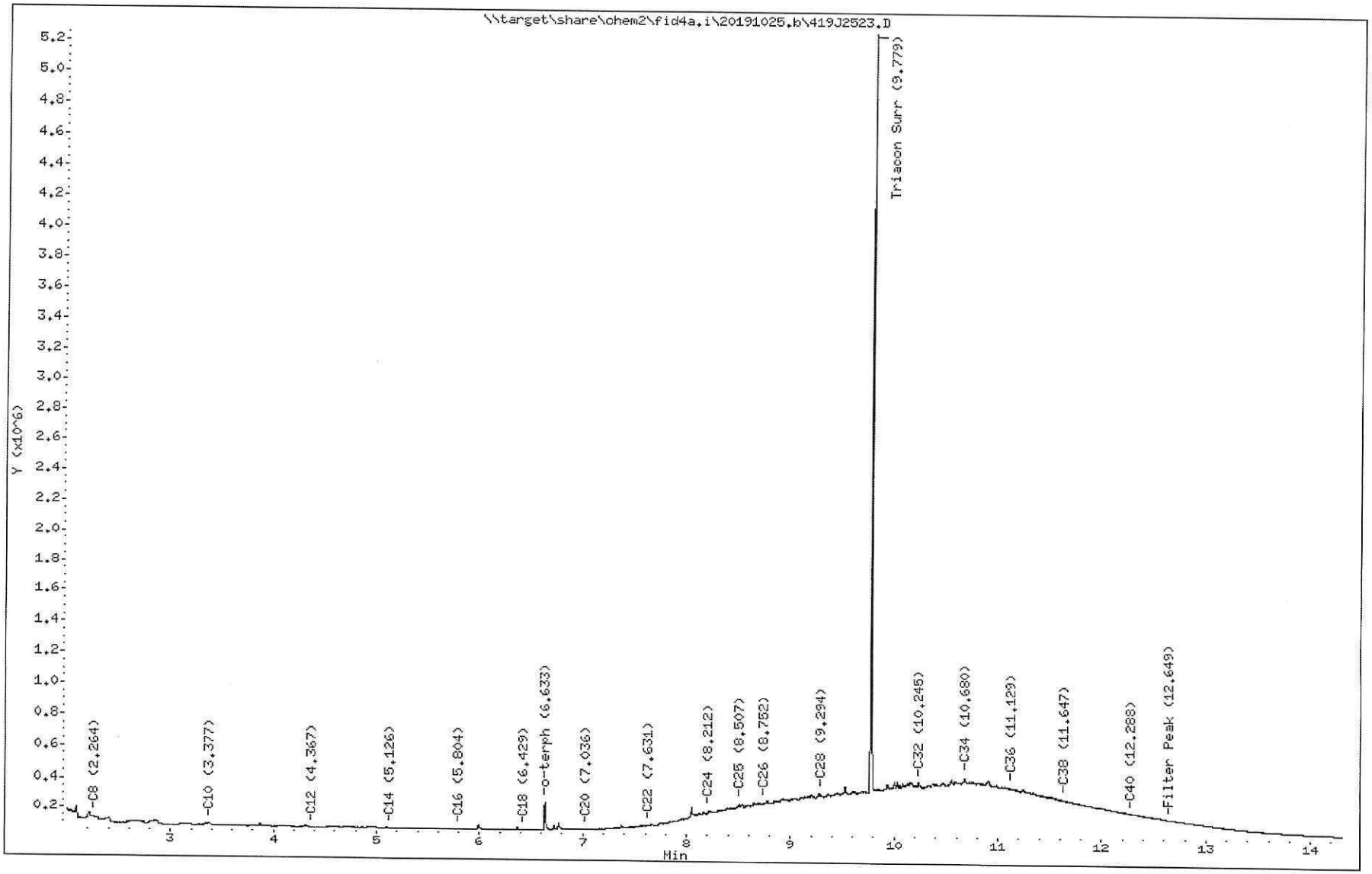
Date : 25-OCT-2019 19:15
Client ID:
Sample Info: SHJ0406-CALF

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2523.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALF
Client ID:
Injection: 25-OCT-2019 19:15
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	65663	48530	WATPHD	(C12-C24)	5014916	31.5
C10	3.377	0.004	28749	58345	WATPHM	(C24-C38)	59779944	450.7
C12	4.367	0.020	3969	3466	AK102	(C10-C25)	7200245	36.8
C14	5.126	-0.004	3228	1712	AK103	(C25-C36)	49058982	490.7
C16	5.804	-0.004	2893	3236	OR.DIES	(C10-C28)	19724552	100.6
C18	6.429	-0.005	2246	2256				
C20	7.036	-0.007	10796	11147				
C22	7.631	-0.008	48129	85760				
C24	8.212	-0.003	157019	245696				
C25	8.507	0.014	210068	574409				
C26	8.752	-0.013	221185	294582				
C28	9.294	0.008	276194	178596				
C32	10.245	0.003	351165	209719				
C34	10.680	-0.001	394703	898701				
Filter Peak	12.649	-0.002	125409	50077	CREOSOT	(C12-C22)	1560946	400.2
C36	11.129	-0.000	332260	99465				
C38	11.647	-0.003	258943	64646				
C40	12.288	-0.001	170438	84522				
o-terph	6.633	-0.024	198416	176995				
Triacon Surr	9.779	-0.024	4910254	3941895	NAS DIES	(C10-C24)	5534721	28.4

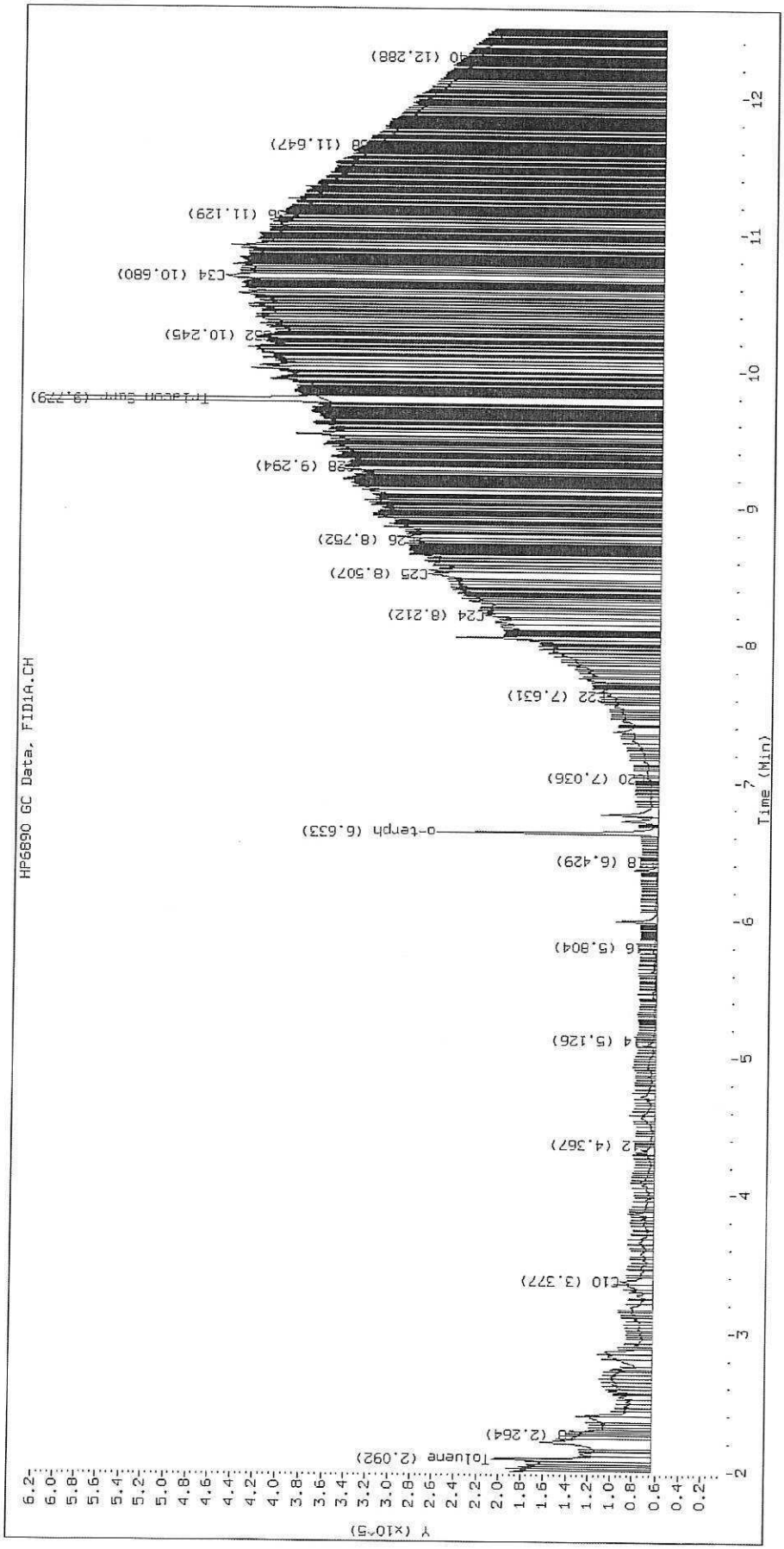
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	176995	0.9	
Triacontane	3941895	22.1	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

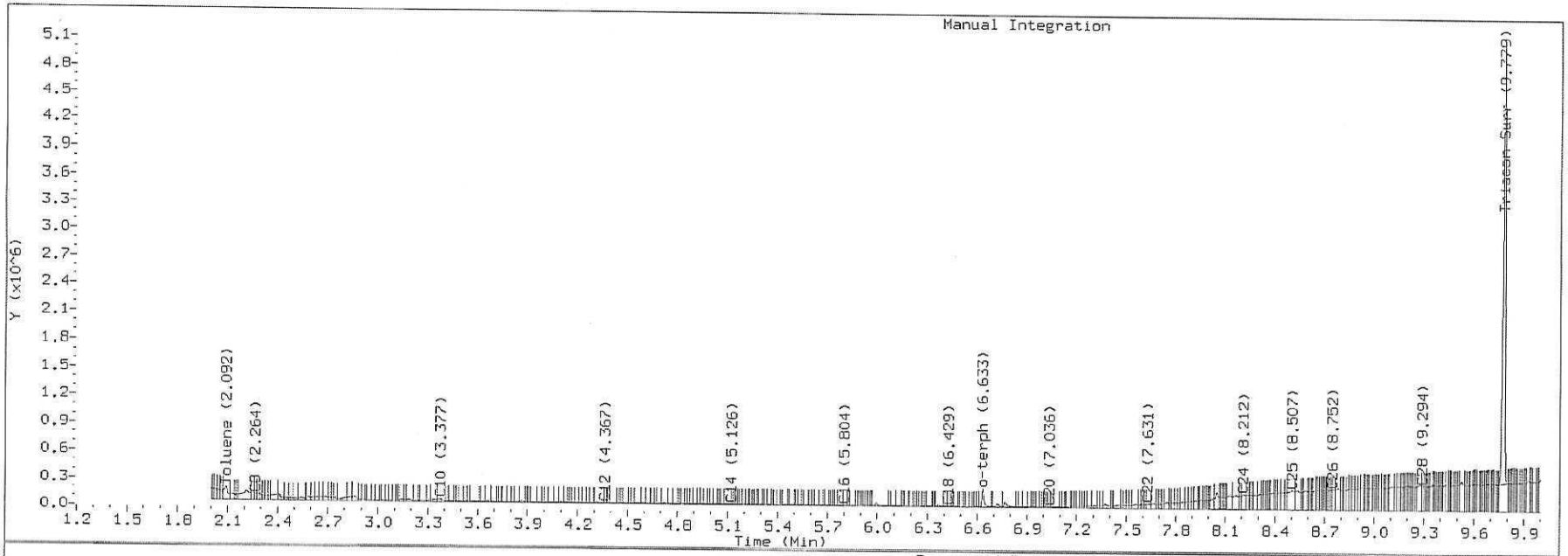
Datafile: FID4A, 20191025.b/419J2523.D SHJ0406-CALF

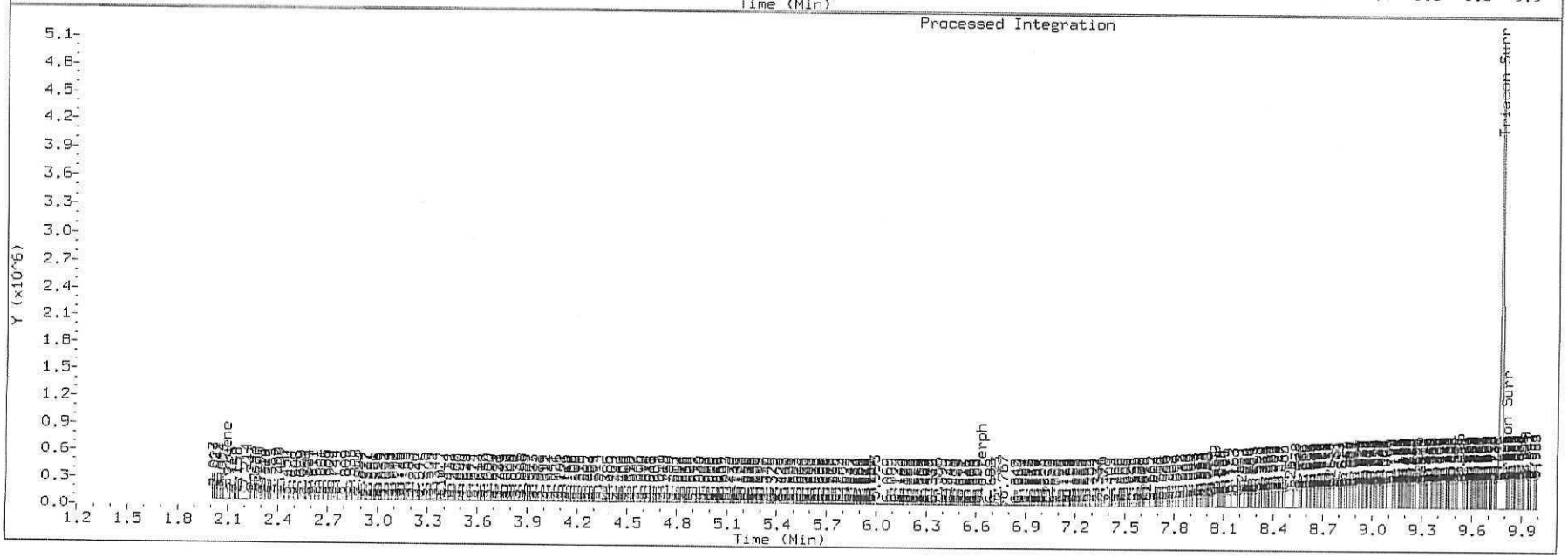


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2523.D Injection: 25-OCT-2019 19:15

Lab ID:SHJ0406-CALF





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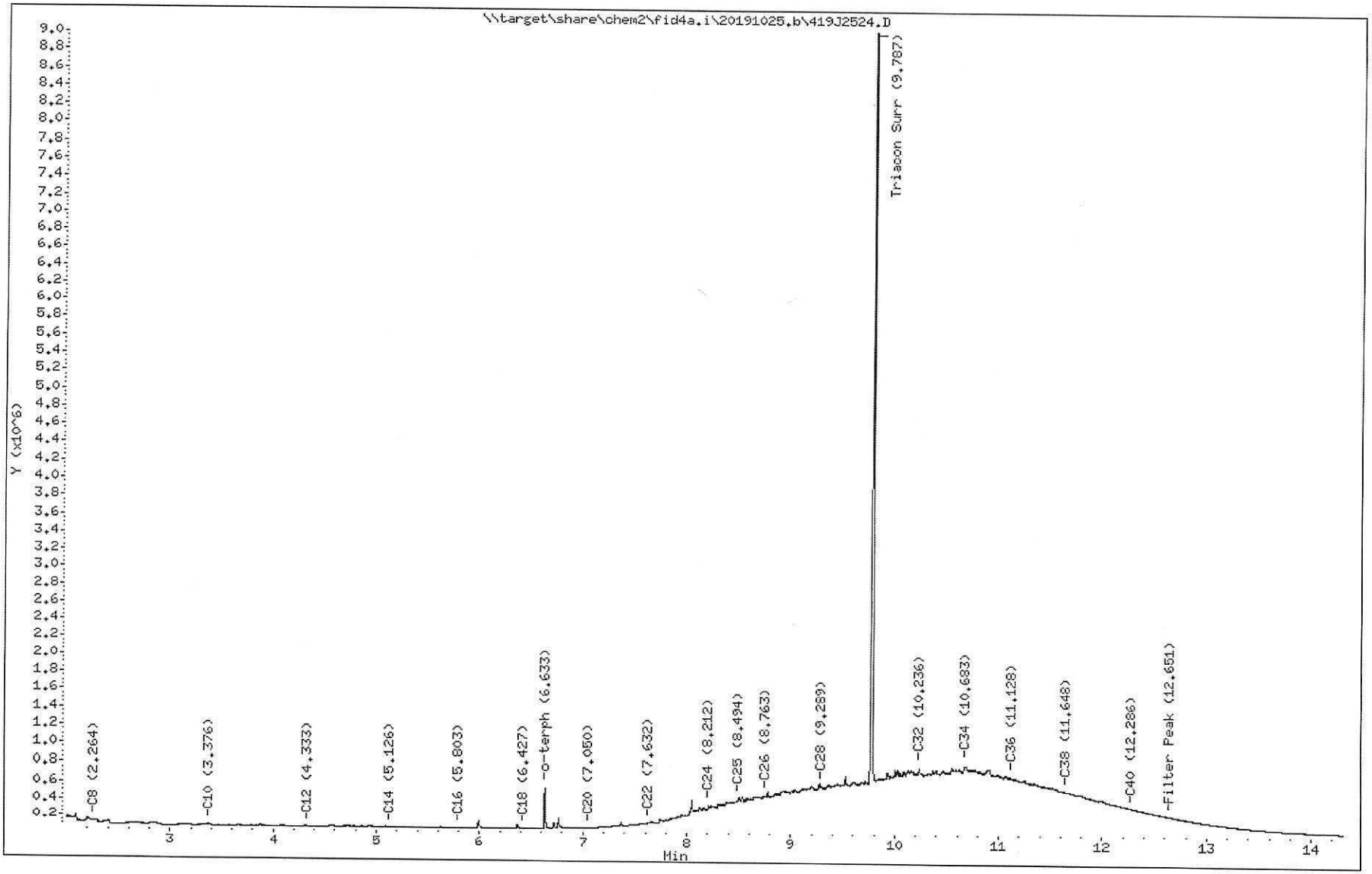
Date : 25-OCT-2019 19:34
Client ID:
Sample Info: SHJ0406-CALG

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2524.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALG
Client ID:
Injection: 25-OCT-2019 19:34
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	59182	43398	WATPHD	(C12-C24)	9693002	60.8
C10	3.376	0.003	26004	47549	WATPHM	(C24-C38)	119379277	900.1
C12	4.333	-0.015	5078	6418	AK102	(C10-C25)	13482675	69.0
C14	5.126	-0.004	4037	3451	AK103	(C25-C36)	98534931	985.6
C16	5.803	-0.004	5499	6876	OR.DIES	(C10-C28)	38197703	194.9
C18	6.427	-0.008	4829	4807				
C20	7.050	0.007	20128	16414				
C22	7.632	-0.007	95273	191460				
C24	8.212	-0.003	309198	497796				
C25	8.494	0.001	394056	249031				
C26	8.763	-0.001	429806	171737				
C28	9.289	0.004	544145	135929				
C32	10.236	-0.006	748503	1187882				
C34	10.683	0.001	785420	196129				
Filter Peak	12.651	0.000	222539	110925	CREOSOT	(C12-C22)	2913792	747.0
C36	11.128	-0.000	665475	297953				
C38	11.648	-0.001	517415	384389				
C40	12.286	-0.003	322103	175432				
o-terph	6.633	-0.024	489788	368237				
Triacon Surr	9.787	-0.015	8362676	7933666	NAS DIES	(C10-C24)	10069630	51.6

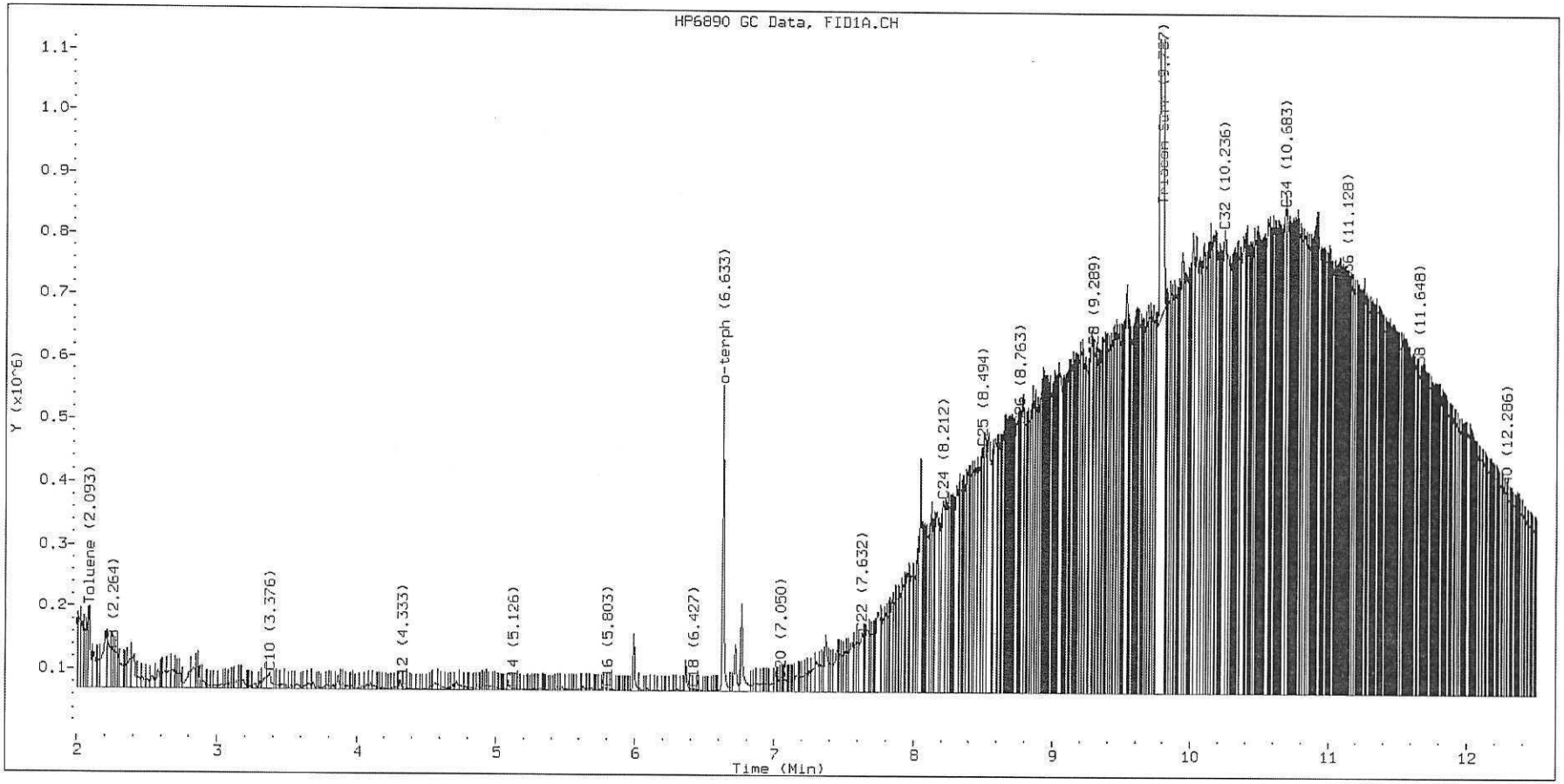
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	368237	1.8
Triacontane	7933666	44.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

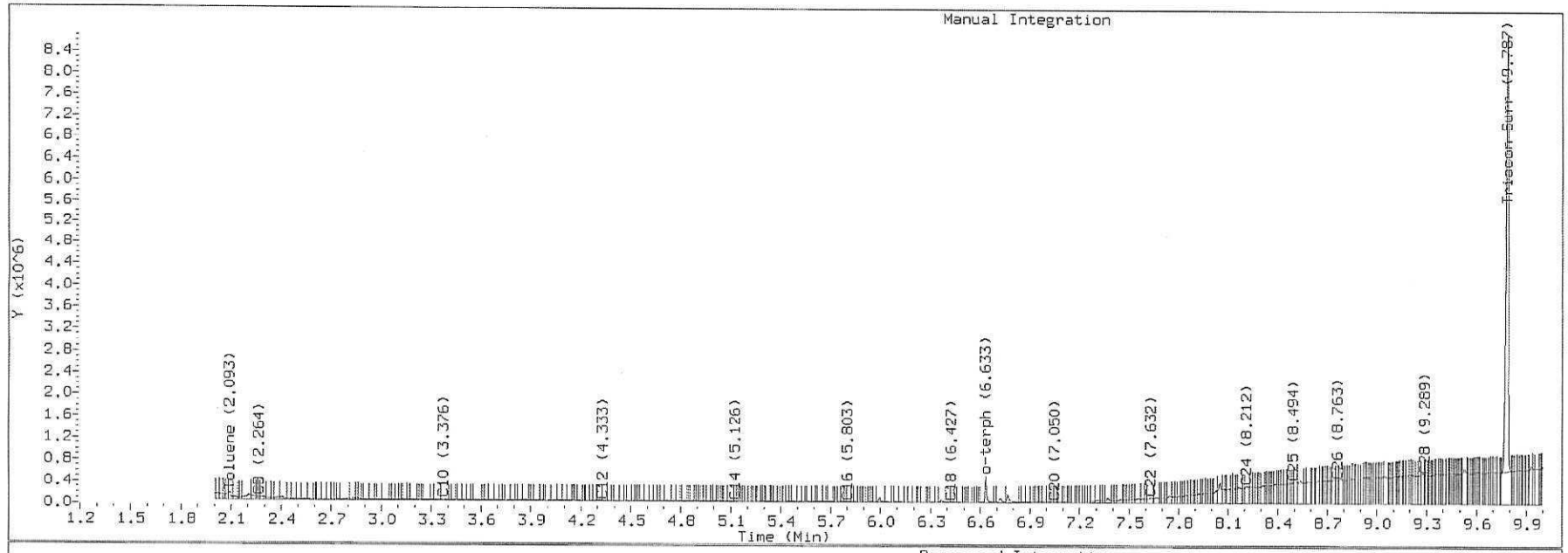
Datafile: FID4A, 20191025.b/419J2524.D SHJ0406-CALG

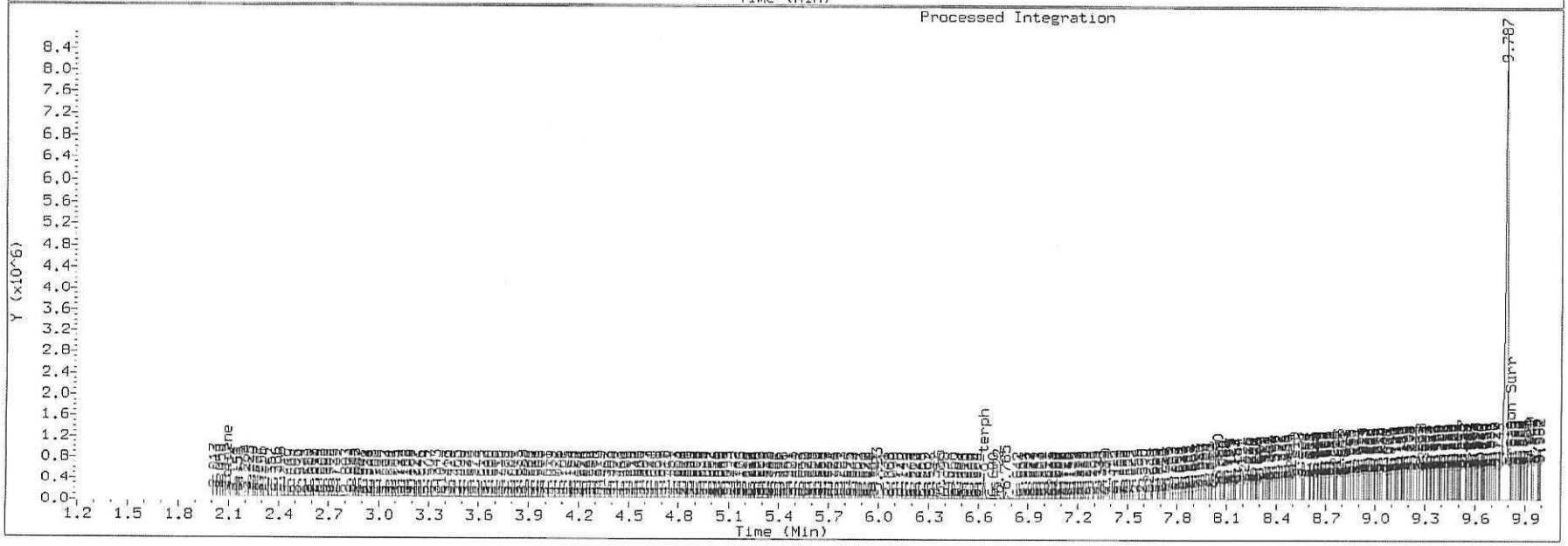


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2524.D Injection: 25-OCT-2019 19:34

Lab ID:SHJ0406-CALG





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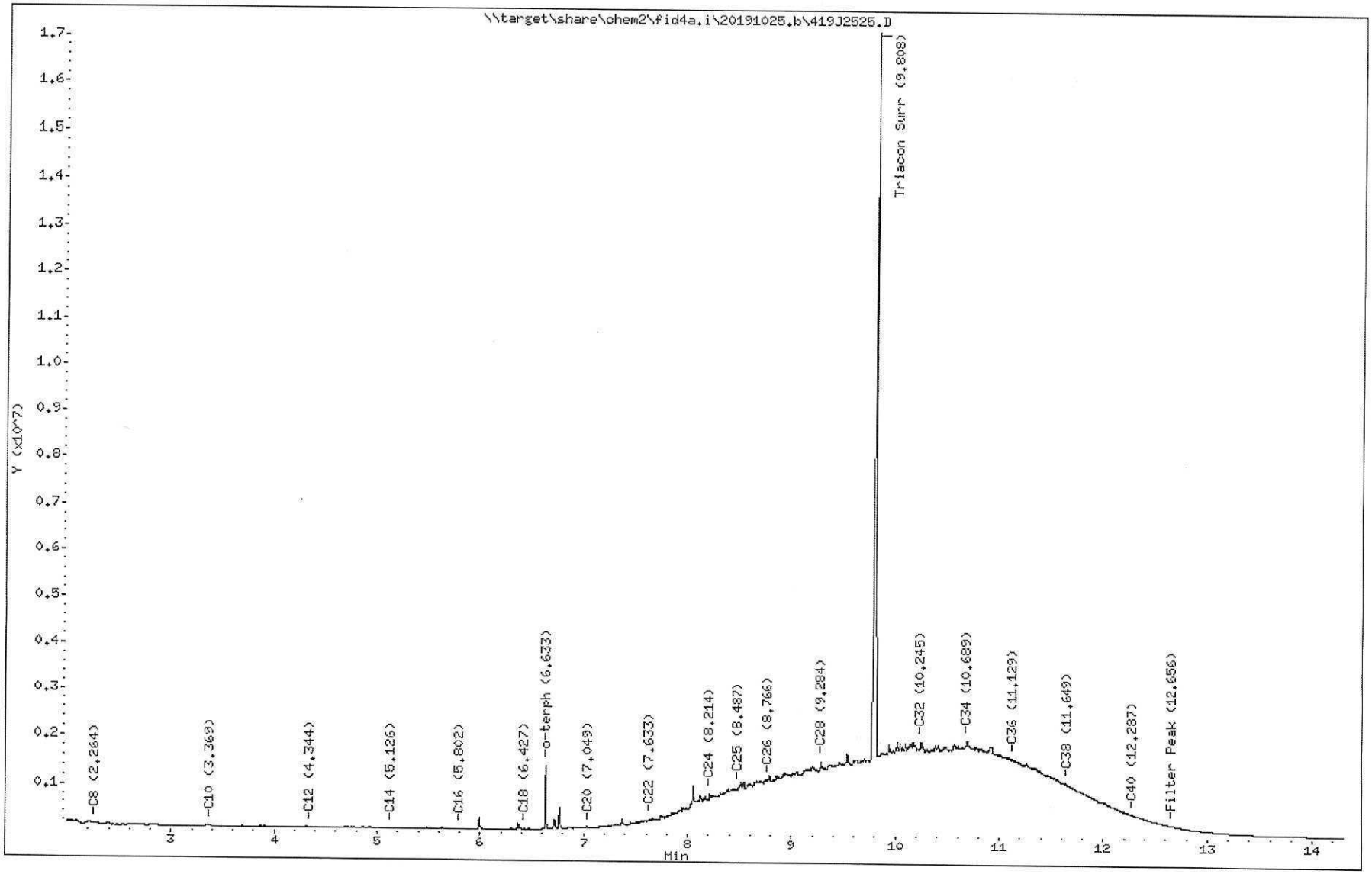
Date : 25-OCT-2019 19:54
Client ID:
Sample Info: SHJ0406-CALH

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2525.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALH
Client ID:
Injection: 25-OCT-2019 19:54
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	56415	38567	WATPHD	(C12-C24)	26301815	165.1
C10	3.369	-0.003	27712	41157	WATPHM	(C24-C38)	301341214	2272.0
C12	4.344	-0.003	5882	6952	AK102	(C10-C25)	35690614	182.6
C14	5.126	-0.003	7507	9244	AK103	(C25-C36)	251232894	2512.9
C16	5.802	-0.005	13222	14374	OR.DIES	(C10-C28)	99037801	505.3
C18	6.427	-0.008	19180	20067				
C20	7.049	0.006	65385	59588				
C22	7.633	-0.006	263262	368137				
C24	8.214	-0.001	822366	1422767				
C25	8.487	-0.006	962652	426588				
C26	8.766	0.002	1133629	505360				
C28	9.284	-0.002	1509428	2436681				
C32	10.245	0.003	1957482	3059346				
C34	10.689	0.008	1976148	4422245				
Filter Peak	12.656	0.006	231984	148698	CREOSOT	(C12-C22)	8248980	2114.6
C36	11.129	-0.000	1621407	646645				
C38	11.649	-0.000	1113973	443976				
C40	12.287	-0.002	466123	386816				
o-terph	6.633	-0.024	1387955	962768				
Triacon Surr	9.808	0.006	15482951	20436973	NAS DIES	(C10-C24)	26712775	136.9

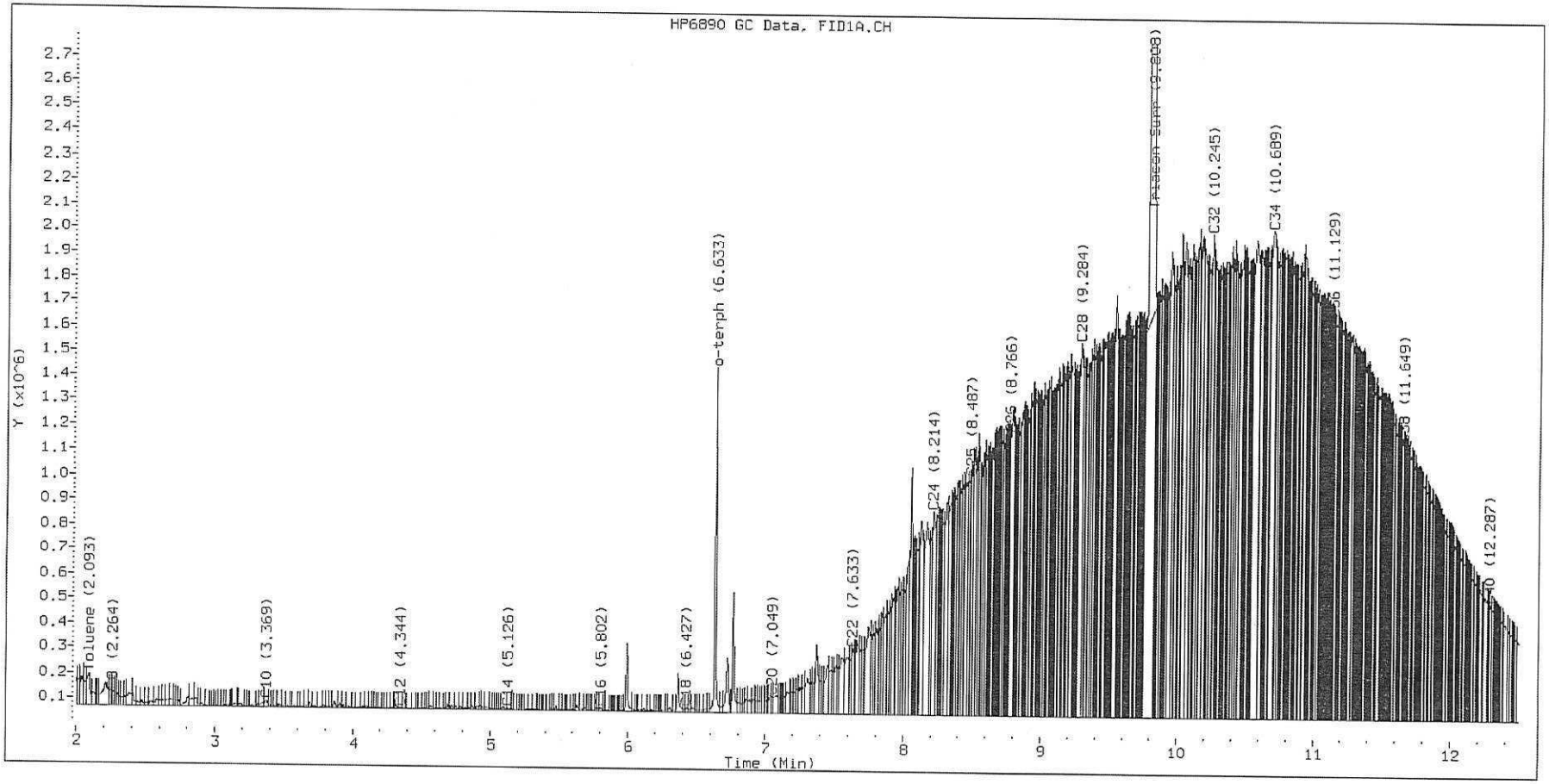
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	962768	4.7	
Triacontane	20436973	114.8	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

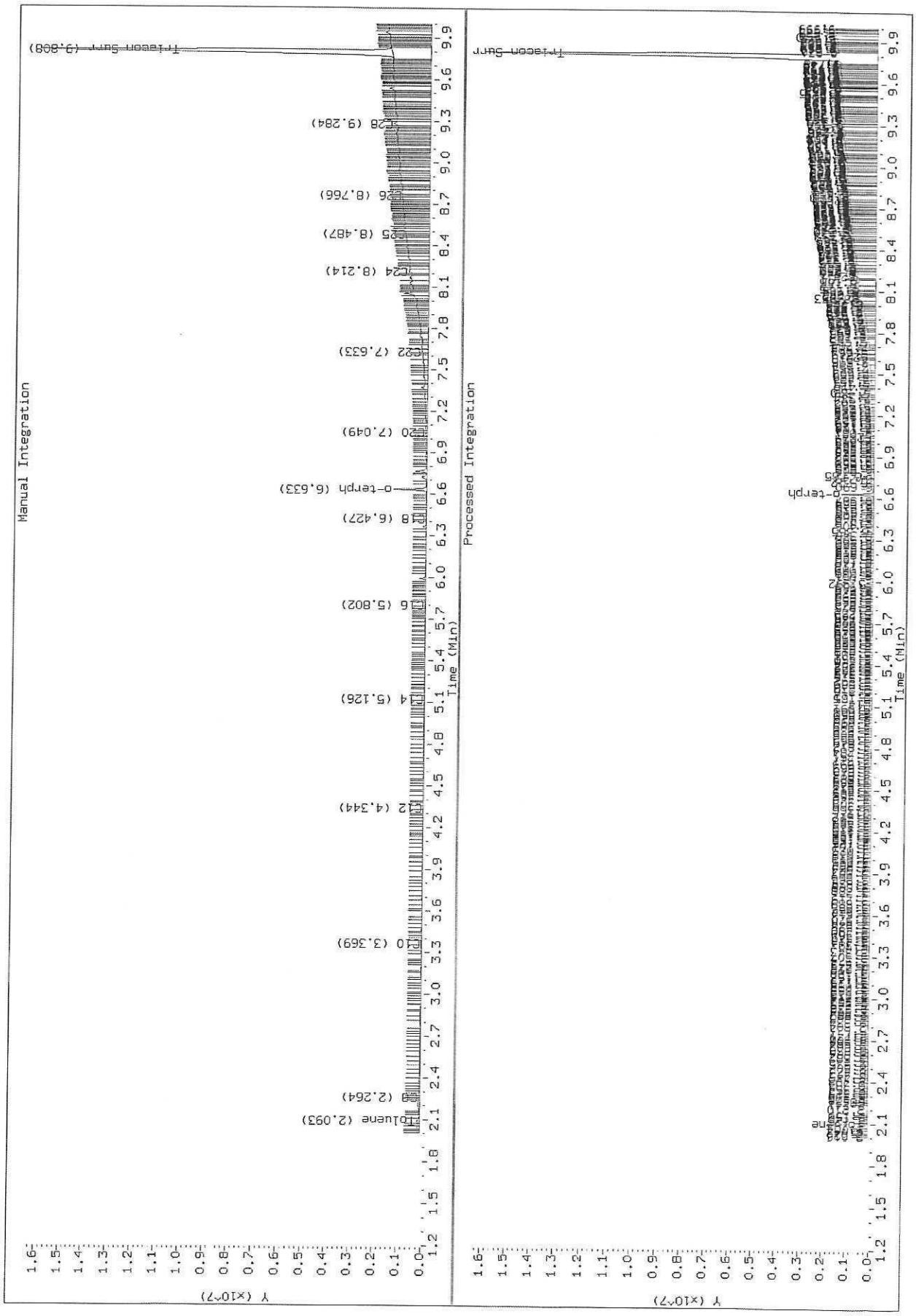
Datafile: FID4A, 20191025.b/419J2525.D SHJ0406-CALH



TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2525.D Injection: 25-OCT-2019 19:54

Lab ID:SHJ0406-CALH

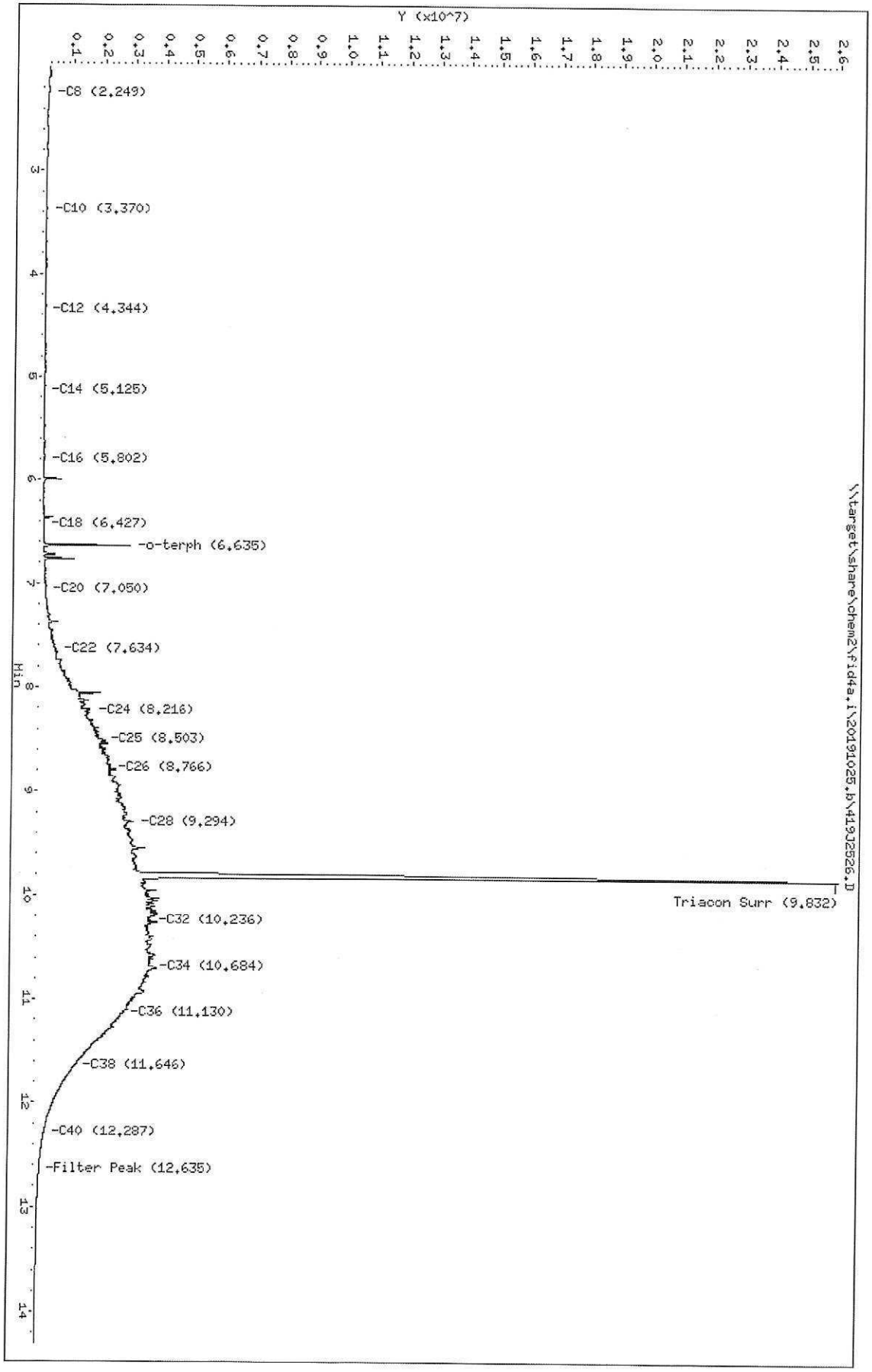


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2526.D
Date : 25-OCT-2019 20:15
Client ID:
Sample Info: SHJ0406-CALI

Column phase: RTX-1

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25

Instrument: fid4a.i



Page 1

Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2526.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-CALI
Client ID:
Injection: 25-OCT-2019 20:15
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.249	-0.013	68157	97437	WATPHD	(C12-C24)	53373864	335.0
C10	3.370	-0.003	37579	47410	WATPHM	(C24-C38)	579217404	4367.1
C12	4.344	-0.003	10600	10459	AK102	(C10-C25)	72516526	370.9
C14	5.125	-0.004	18160	20643	AK103	(C25-C36)	501300122	5014.2
C16	5.802	-0.005	31467	33333	OR.DIES	(C10-C28)	201523108	1028.2
C18	6.427	-0.008	46016	47297				
C20	7.050	0.007	139853	120986				
C22	7.634	-0.005	536997	729929				
C24	8.216	0.002	1657695	1800915				
C25	8.503	0.010	2055767	2566063				
C26	8.766	0.002	2309434	1601749				
C28	9.294	0.008	3108955	5845567				
C32	10.236	-0.006	3694253	3475497				
C34	10.684	0.002	3746349	1670889				
Filter Peak	12.635	-0.015	125409	273331	CREOSOT	(C12-C22)	16636154	4264.7
C36	11.130	0.002	2854299	995118				
C38	11.646	-0.003	1329722	1616024				
C40	12.287	-0.002	293577	286952				
o-terph	6.635	-0.022	2904255	1975795				
Triacon Surr	9.832	0.030	22638379	40251878	NAS DIES	(C10-C24)	53915002	276.3

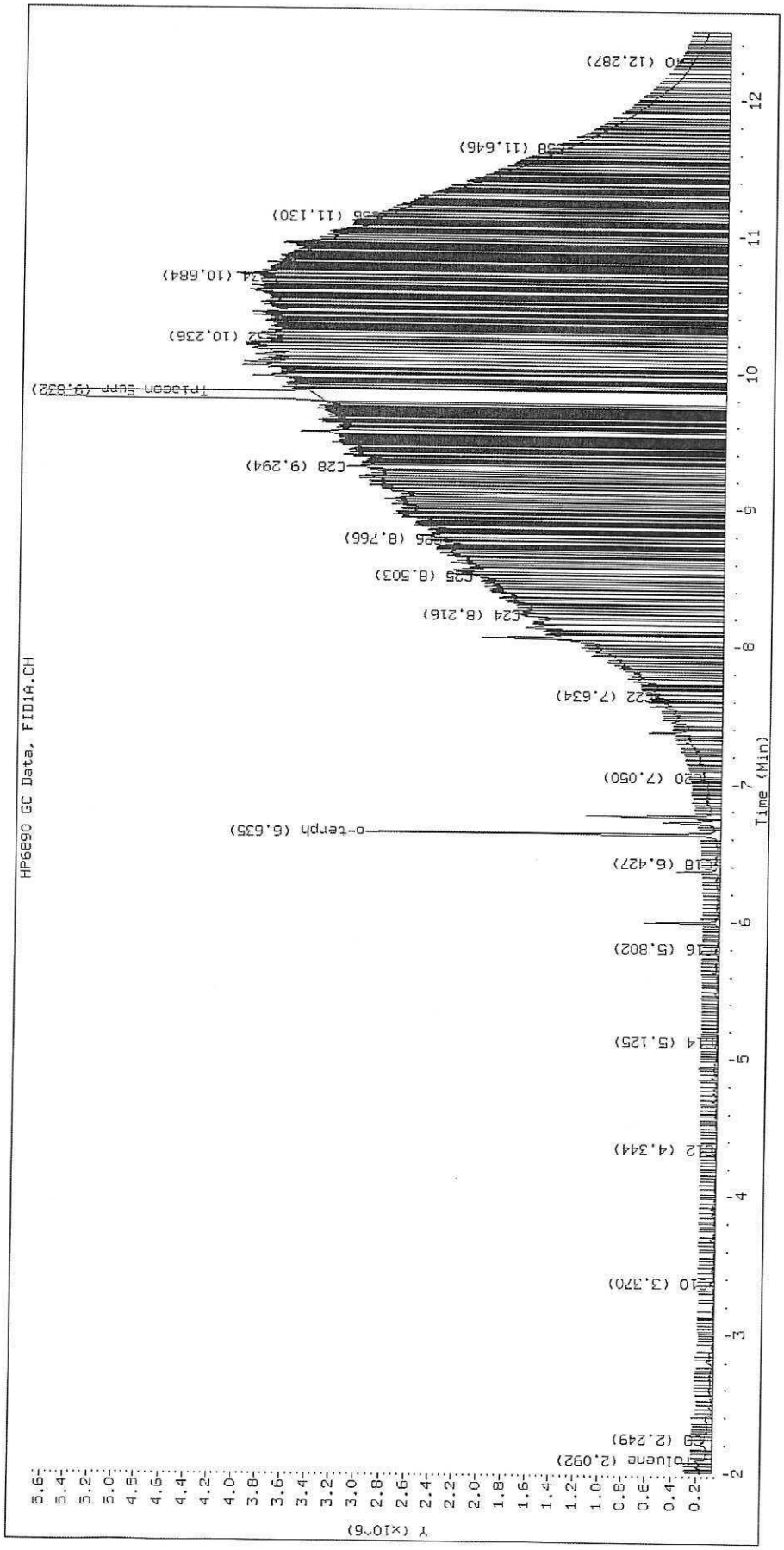
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	1975795	9.7	
Triacontane	40251878	226.2	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

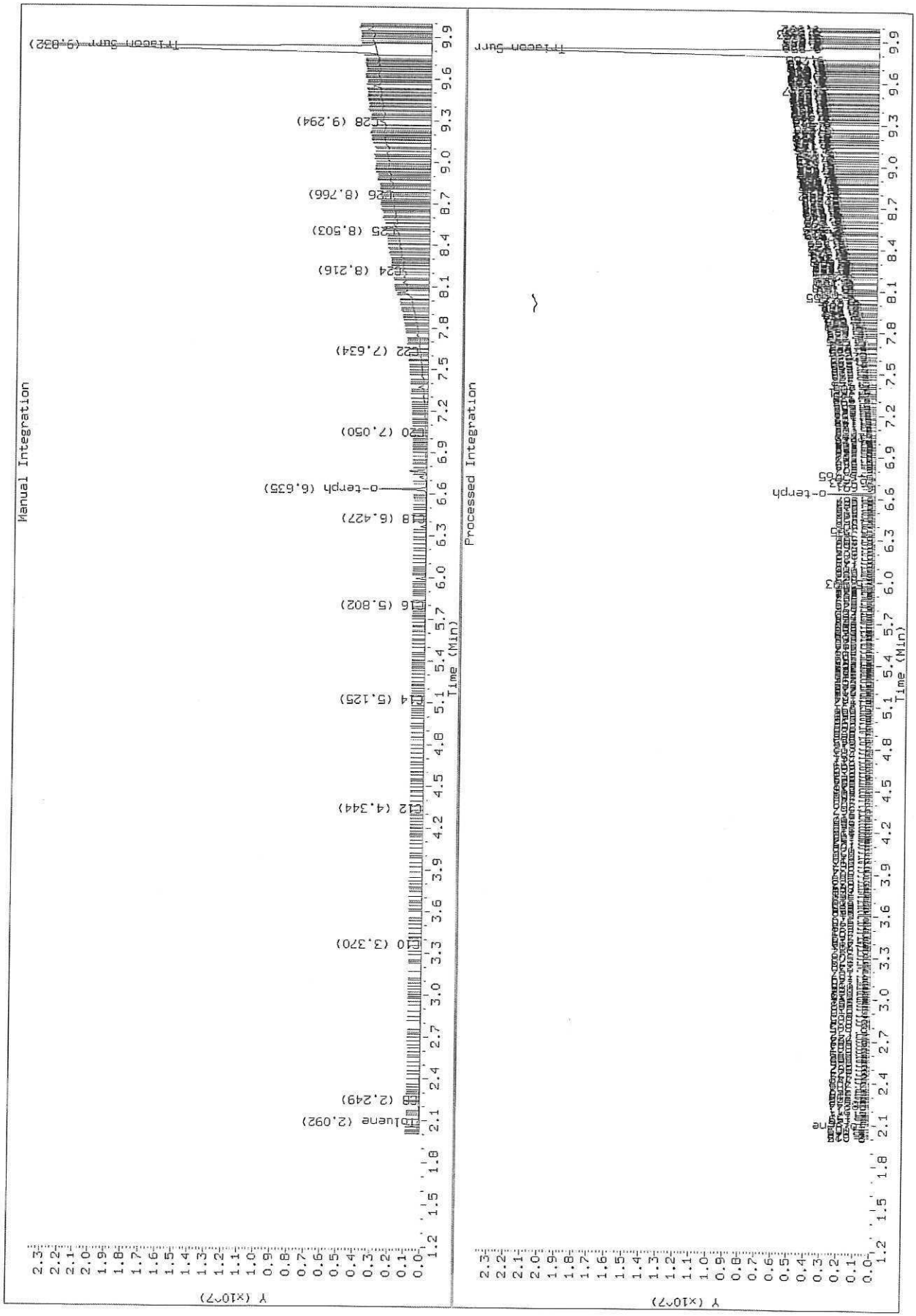
Datafile: FID4A, 20191025.b/419J2526.D SHJ0406-CALI



TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2526.D Injection: 25-OCT-2019 20:15

Lab ID:SHJ0406-CALI

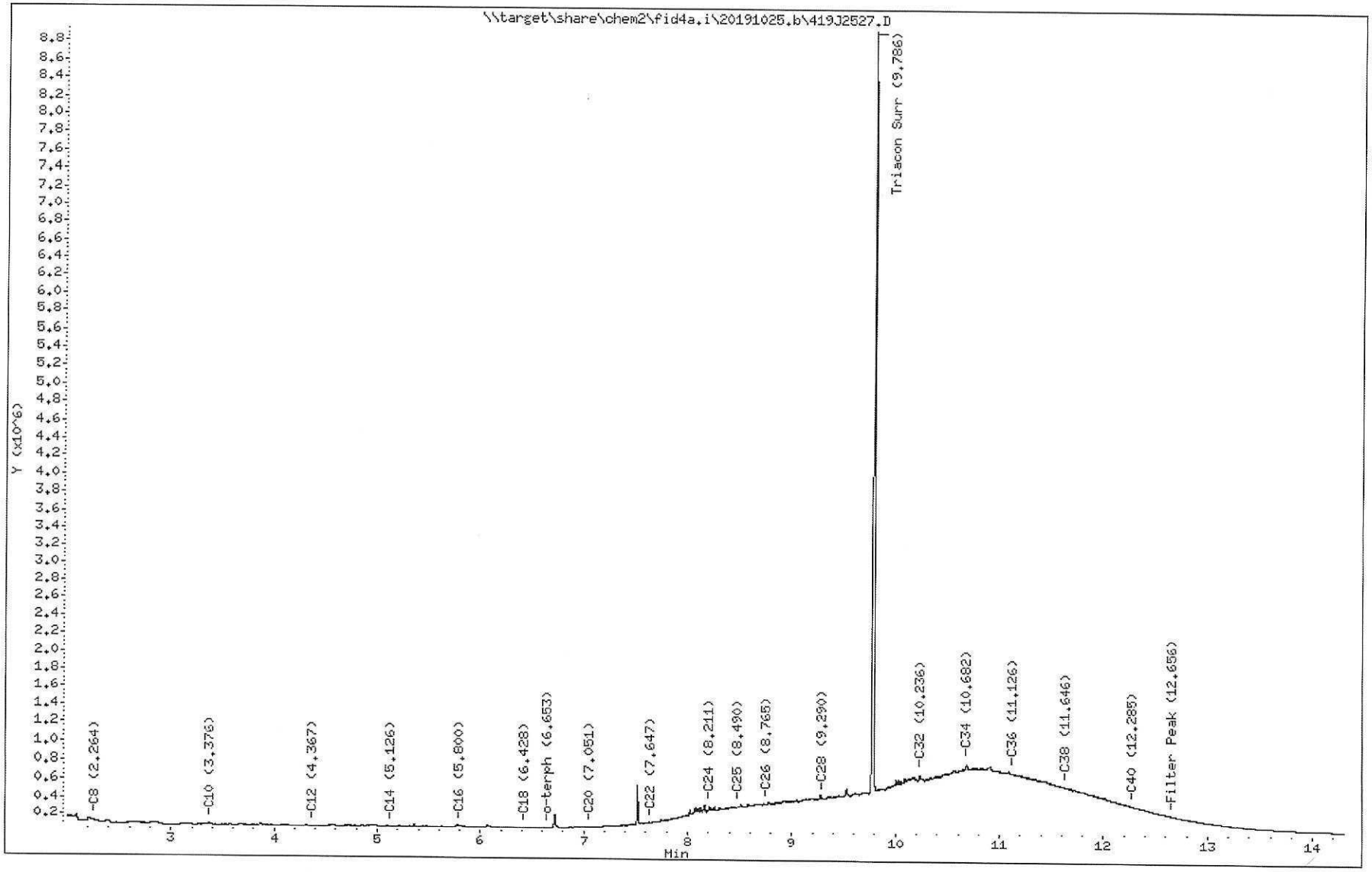


Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2527.D
Date : 25-OCT-2019 20:35
Client ID:
Sample Info: SHJ0406-SCV3

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2527.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-SCV3
Client ID:
Injection: 25-OCT-2019 20:35
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	53471	36749	WATPHD	(C12-C24)	9151453	57.4
C10	3.376	0.003	25610	47191	WATPHM	(C24-C38)	105205257	793.2
C12	4.367	0.020	4177	4443	AK102	(C10-C25)	12217213	62.5
C14	5.126	-0.003	5782	7745	AK103	(C25-C36)	83900022	839.2
C16	5.800	-0.007	18027	25221	OR.DIES	(C10-C28)	30254236	154.4
C18	6.428	-0.007	5074	5462				
C20	7.051	0.008	15134	10036				
C22	7.647	0.008	76708	26745				
C24	8.211	-0.004	290822	446061				
C25	8.490	-0.003	283476	98752				
C26	8.765	0.000	315420	126036				
C28	9.290	0.004	395912	118500				
C32	10.236	-0.006	661365	1079458				
C34	10.682	0.001	769683	230477				
Filter Peak	12.656	0.006	214849	128159	CREOSOT	(C12-C22)	2946608	755.4
C36	11.126	-0.002	688686	308098				
C38	11.646	-0.004	543124	322331				
C40	12.285	-0.004	325522	178450				
o-terph	6.653	-0.003	2619	2570				
Triacon Surr	9.786	-0.016	8421327	7592281	NAS DIES	(C10-C24)	9621264	49.3

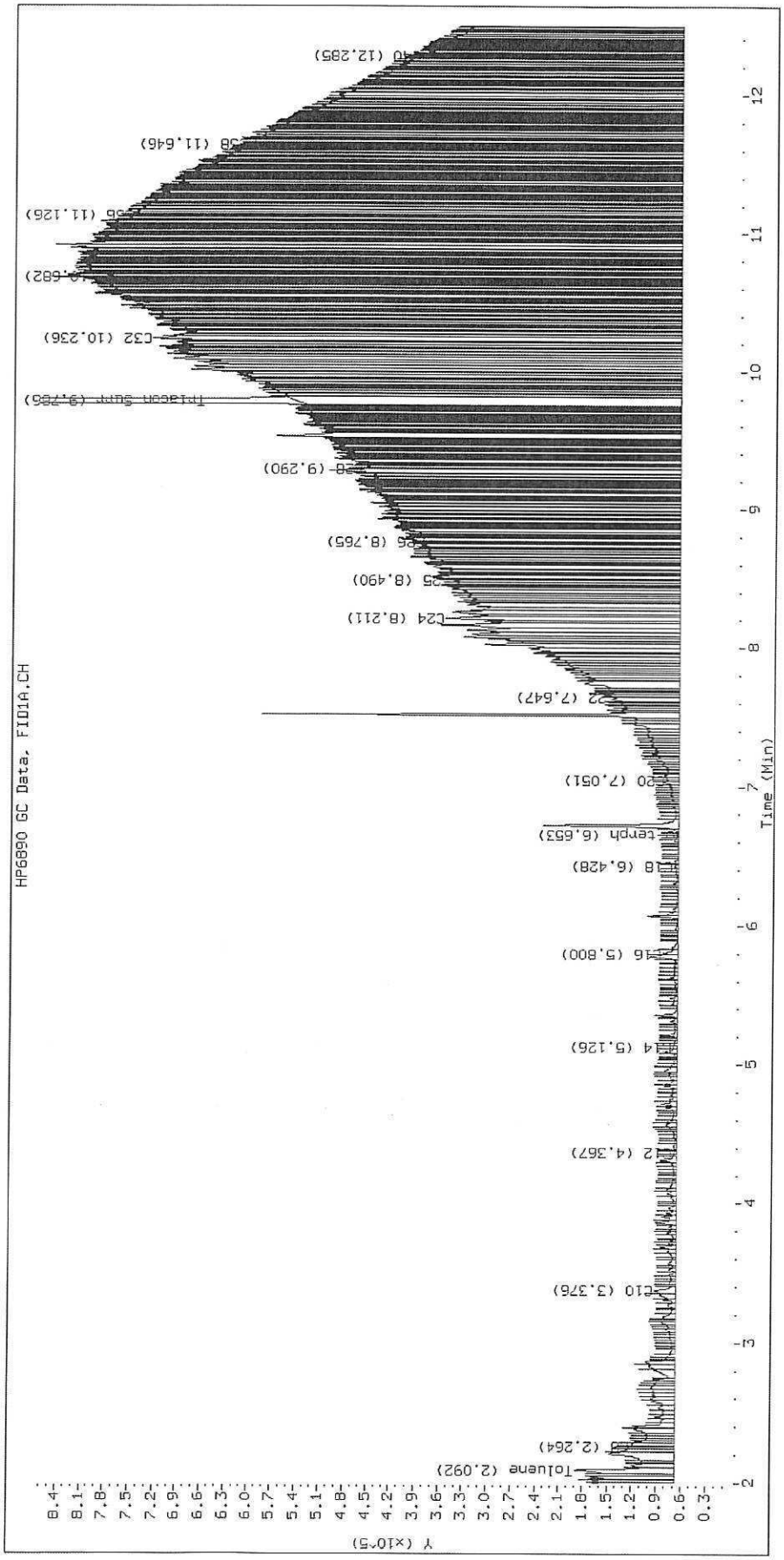
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	2570	0.0	
Triacontane	7592281	42.7	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

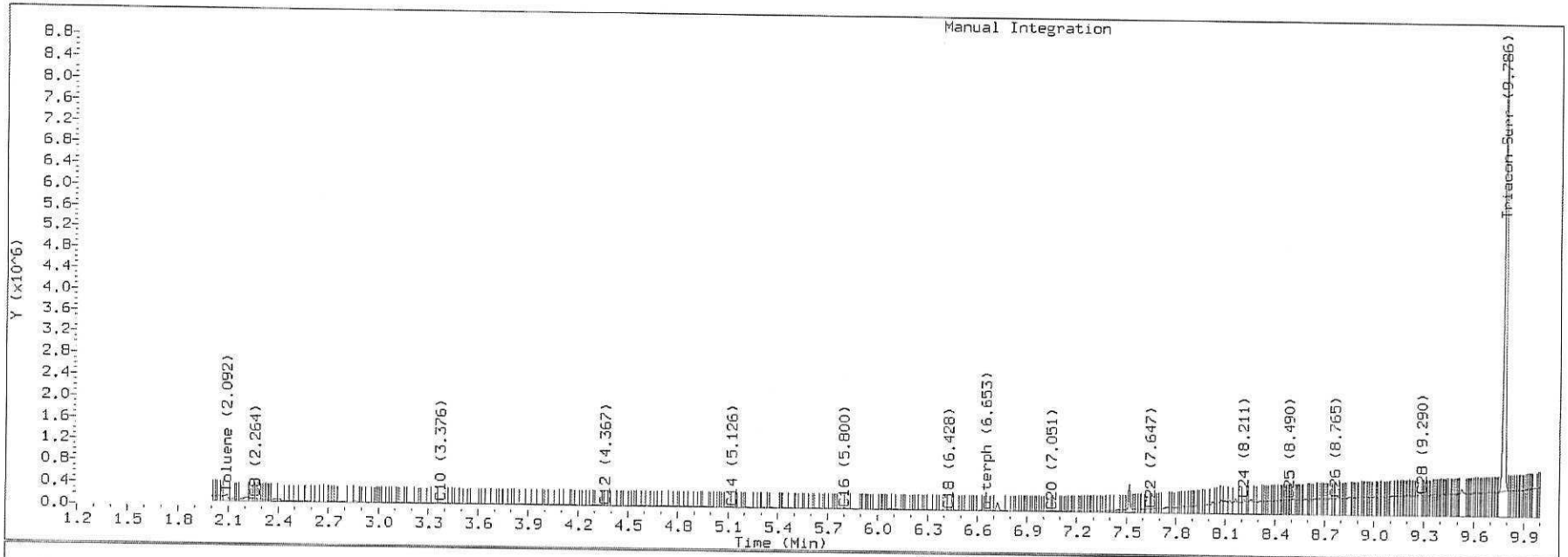
Datafile: FID4A, 20191025.b/419J2527.D SHJ0406-SCV3

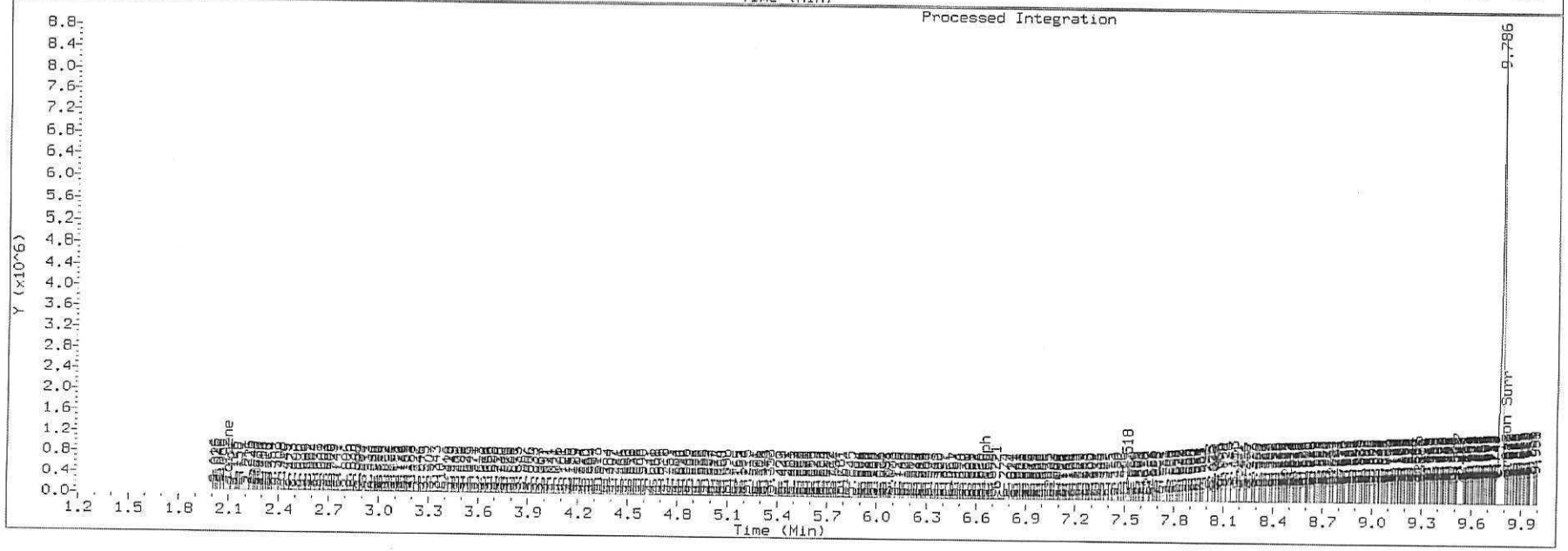


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2527.D Injection: 25-OCT-2019 20:35

Lab ID:SHJ0406-SCV3





Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191119.b/419K1907.D
Method: 20191119.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 11/20/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHK0260-ICV3
Client ID:
Injection: 19-NOV-2019 15:10
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.258	-0.008	251291	294712	WATPHD	(C12-C24)	42051010	263.9
C10	3.371	-0.003	4406335	3424876	WATPHM	(C24-C38)	496216	3.7
C12	4.346	-0.001	4634910	4478760	AK102	(C10-C25)	82254431	420.8
C14	5.126	-0.002	3015617	2044036	AK103	(C25-C36)	286196	2.9
C16	5.801	-0.005	604553	490104	OR.DIES	(C10-C28)	82288476	419.8
C18	6.426	-0.007	88855	83248				
C20	7.035	-0.006	27599	35934	JET-A	(C10-C18)	81259124	500.0
C22	7.631	-0.006	14833	25191				
C24	8.208	-0.005	6203	10027				
C25	8.490	-0.002	3298	4254				
C26	8.761	-0.002	1681	2107				
C28	9.291	0.006	225	122				
C32	10.242	0.000	1787	779				
C34	10.677	-0.003	4152	2235				
Filter Peak	12.648	0.002	7181	4285	CREOSOT	(C12-C22)	41927190	817.4
C36	11.126	0.000	5955	3830				
C38	11.639	-0.004	6373	4434				
C40	12.278	0.002	7499	4100				
o-terph	6.651	-0.002	16020002	16763037				
Triacon Surr	9.804	0.002	747	319	NAS DIES	(C10-C24)	82236143	421.4

Range Times: NW Diesel(4.346 - 8.213) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.64) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	16763037	81.9
Triacontane	319	0.0

M Indicates the peak was manually integrated

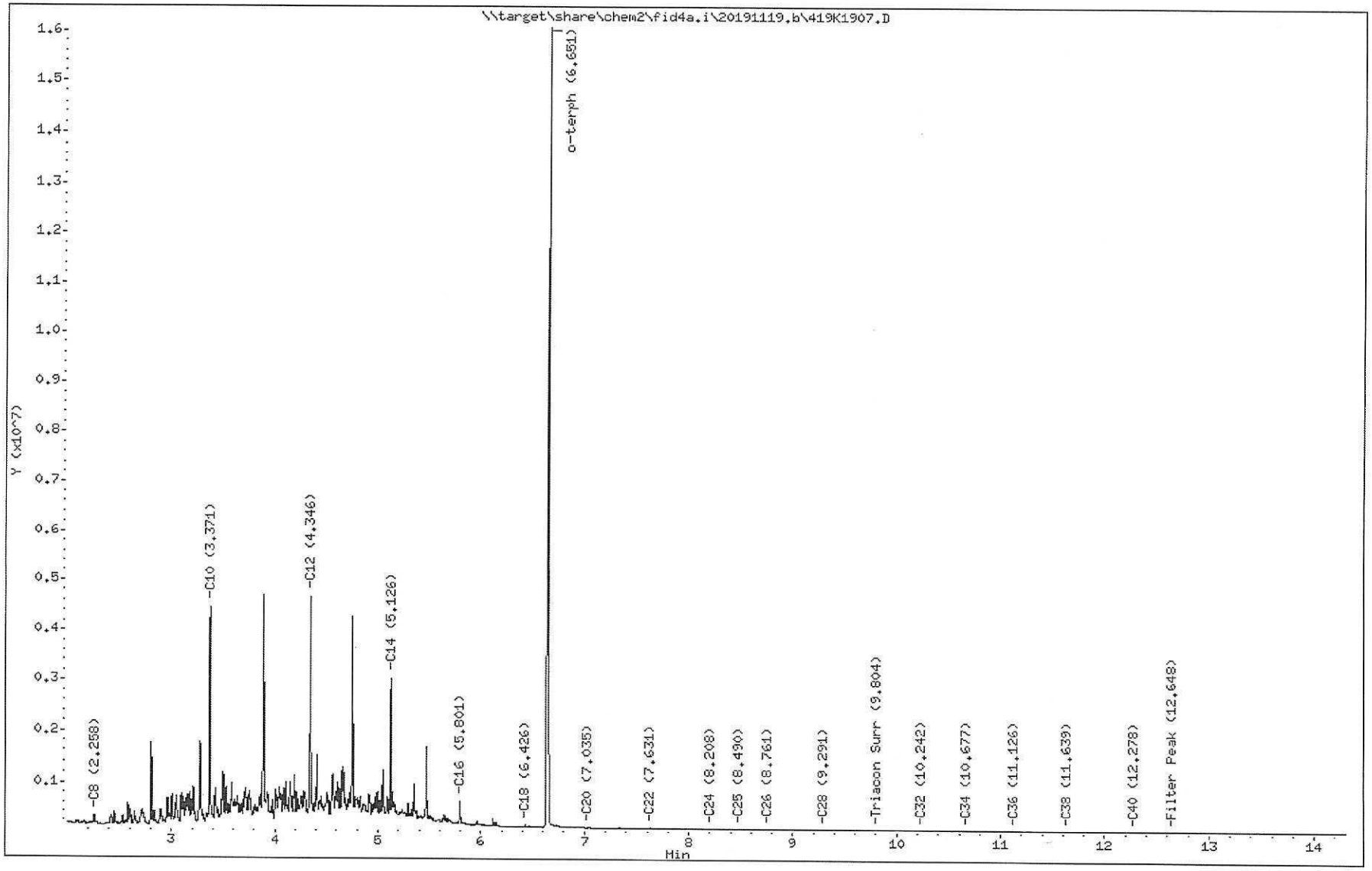
Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	51292.5	15-NOV-2019

Data File: \\target\share\chem2\fid4a.i\20191119.b\419K1907.D
Date : 19-NOV-2019 15:10
Client ID:
Sample Info: SHK0260-ICV3

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO
Column diameter: 0.25



Data File: \\target\share\chem2\fid4a.i\20200107.b\420A0707.D

Date : 07-JAN-2020 10:42

Client ID:

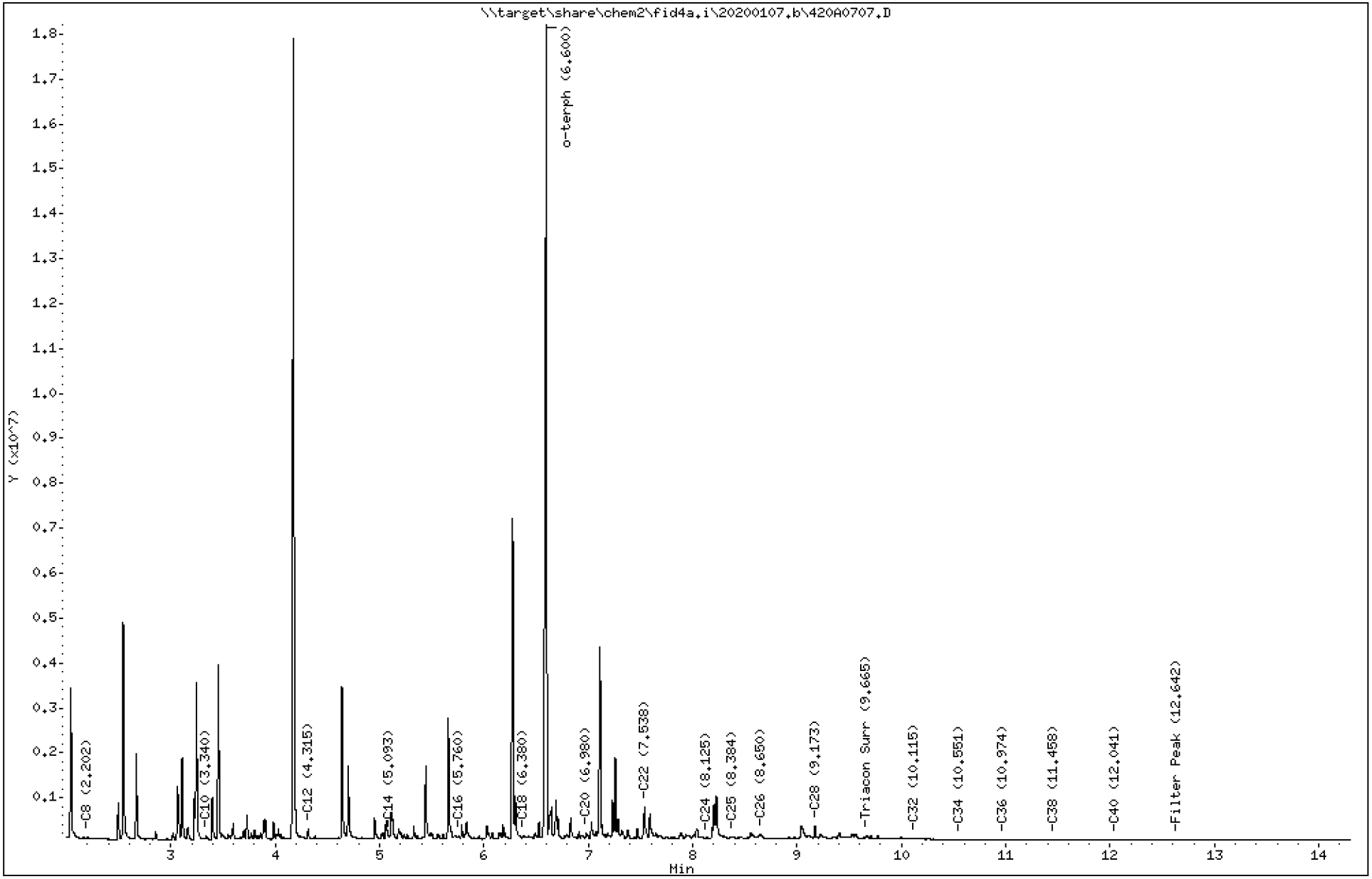
Instrument: fid4a.i

Sample Info: SIA0065-ICV3

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200107.b/420A0707.D
Method: 20200107.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 01/08/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIA0065-ICV3
Client ID:
Injection: 07-JAN-2020 10:42
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.202	-0.016	48618	163148	WATPHD	(C12-C24)	39749068	249.5
C10	3.340	-0.003	90097	100393	WATPHM	(C24-C38)	8921905	67.3
C12	4.315	-0.003	247325	289347	AK102	(C10-C25)	67305313	344.3
C14	5.093	-0.003	88277	57691	AK103	(C25-C36)	6259973	62.6
C16	5.760	-0.005	76989	75637	OR.DIES	(C10-C28)	70713708	360.8
C18	6.380	-0.002	84390	113269				
C20	6.980	0.003	144985	120115	JET-A	(C10-C18)	47725210	293.7
C22	7.538	-0.024	728303	910269				
C24	8.125	-0.002	43865	44718				
C25	8.384	-0.017	65153	88015				
C26	8.650	-0.017	124266	355575				
C28	9.173	-0.007	310713	322767				
C32	10.115	-0.005	18488	10140				
C34	10.551	-0.003	12121	8350				
Filter Peak	12.642	-0.014	5310	3162	CREOSOT	(C12-C22)	37368560	1000.0
C36	10.974	-0.004	10765	7465				
C38	11.458	0.001	10672	2663				
C40	12.041	-0.000	6716	3626				
o-terph	6.600	0.002	18150486	20216219				
Triacon Surr	9.665	-0.021	100173	177367	NAS DIES	(C10-C24)	64884221	332.5

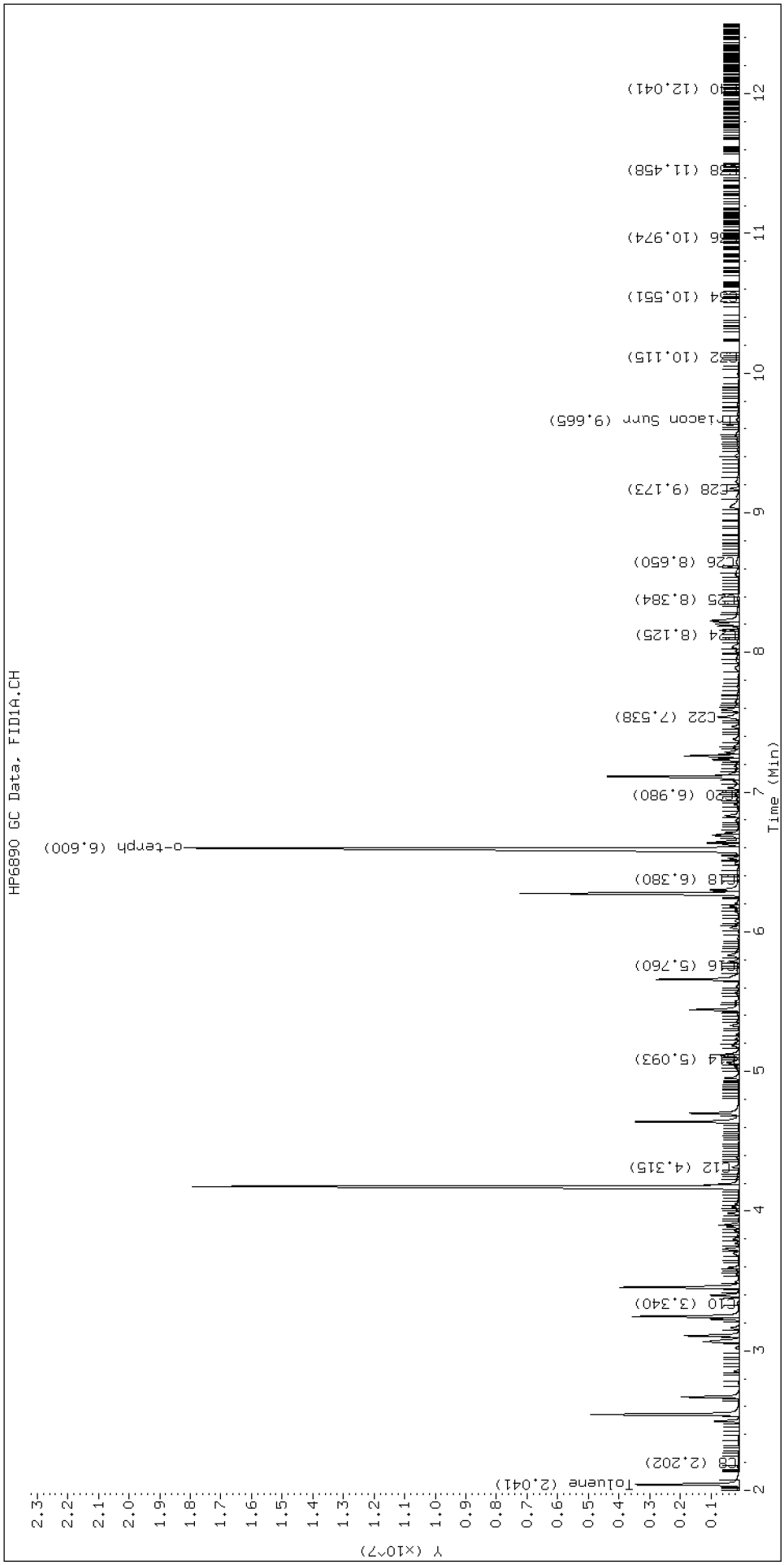
Range Times: NW Diesel(4.318 - 8.127) AK102(3.34 - 8.40) Jet A(3.34 - 6.38)
NW M.Oil(8.13 - 11.46) AK103(8.40 - 10.98) OR Diesel(3.34 - 9.18)

Surrogate	Area	Amount
o-Terphenyl	20216219	98.8
Triacontane	177367	1.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	37368.6	15-NOV-2019

Datafile: FID4A, 20200107.b/420A0707.D SIA0065-ICV3



Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIC0179

Instrument: FID4
Calibration ID: DA00022

Printed: 3/16/2020 10:35:50AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SIC0179-IBL1	QC		1		H010802			
SIC0179-IBL2	QC		2		I000651			
SIC0179-CAL1	QC		3		H009812			
SIC0179-CAL2	QC		4		H009811			
SIC0179-CAL3	QC		5		H009810			
SIC0179-CAL4	QC		6		H009809			
SIC0179-CAL5	QC		7		H009808			
SIC0179-CAL6	QC		8		H009807			
SIC0179-SCV1	QC		9		H009809			

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200313b.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	13-MAR-2020 13:19	420C1310.D	1	RINSE	
2	13-MAR-2020 13:38	420C1311.D	1	RINSE	
3	13-MAR-2020 13:58	420C1312.D	1	SEQ-IBL1	
4	13-MAR-2020 14:17	420C1313.D	1	SEQ-IBL2	
5	13-MAR-2020 14:37	420C1314.D	1	SEQ-CAL1	
6	13-MAR-2020 14:56	420C1315.D	1	SEQ-CAL2	
7	13-MAR-2020 15:15	420C1316.D	1	SEQ-CAL3	
8	13-MAR-2020 15:35	420C1317.D	1	SEQ-CAL4	
9	13-MAR-2020 15:54	420C1318.D	1	SEQ-CAL5	
10	13-MAR-2020 16:13	420C1319.D	1	SEQ-CAL6	
11	13-MAR-2020 16:33	420C1320.D	1	SEQ-SCV1	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200313b.b

ARI Job No.: RINS Method: b\FID4TPH.m Instrument: fid4a.i Date: 13-MAR-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1319	420C1310.D	RINSE		1	NO MANUAL INTEGRATION
1338	420C1311.D	RINSE		1	NO MANUAL INTEGRATION
1358	420C1312.D	SEQ-IBL1		1	C14, C16, C40,
1417	420C1313.D	SEQ-IBL2		1	NO MANUAL INTEGRATION
1437	420C1314.D	SEQ-CAL1		1	C20, o-terph,
1456	420C1315.D	SEQ-CAL2		1	o-terph,
1515	420C1316.D	SEQ-CAL3		1	o-terph,
1535	420C1317.D	SEQ-CAL4		1	o-terph,
1554	420C1318.D	SEQ-CAL5		1	o-terph,
1613	420C1319.D	SEQ-CAL6		1	o-terph,
1633	420C1320.D	SEQ-SCV1		1	o-terph,

Security Status Report

Date: 16-Mar-2020 10:37

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420C1311.D	Data Locked	christopher, 16-Mar-2020 10:37
420C1312.D	Data Locked	christopher, 16-Mar-2020 10:37
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420C1315.D	Data Locked	christopher, 16-Mar-2020 10:37
420C1316.D	Data Locked	christopher, 16-Mar-2020 10:37
420C1317.D	Data Locked	christopher, 16-Mar-2020 10:37
420C1318.D	Data Locked	christopher, 16-Mar-2020 10:37
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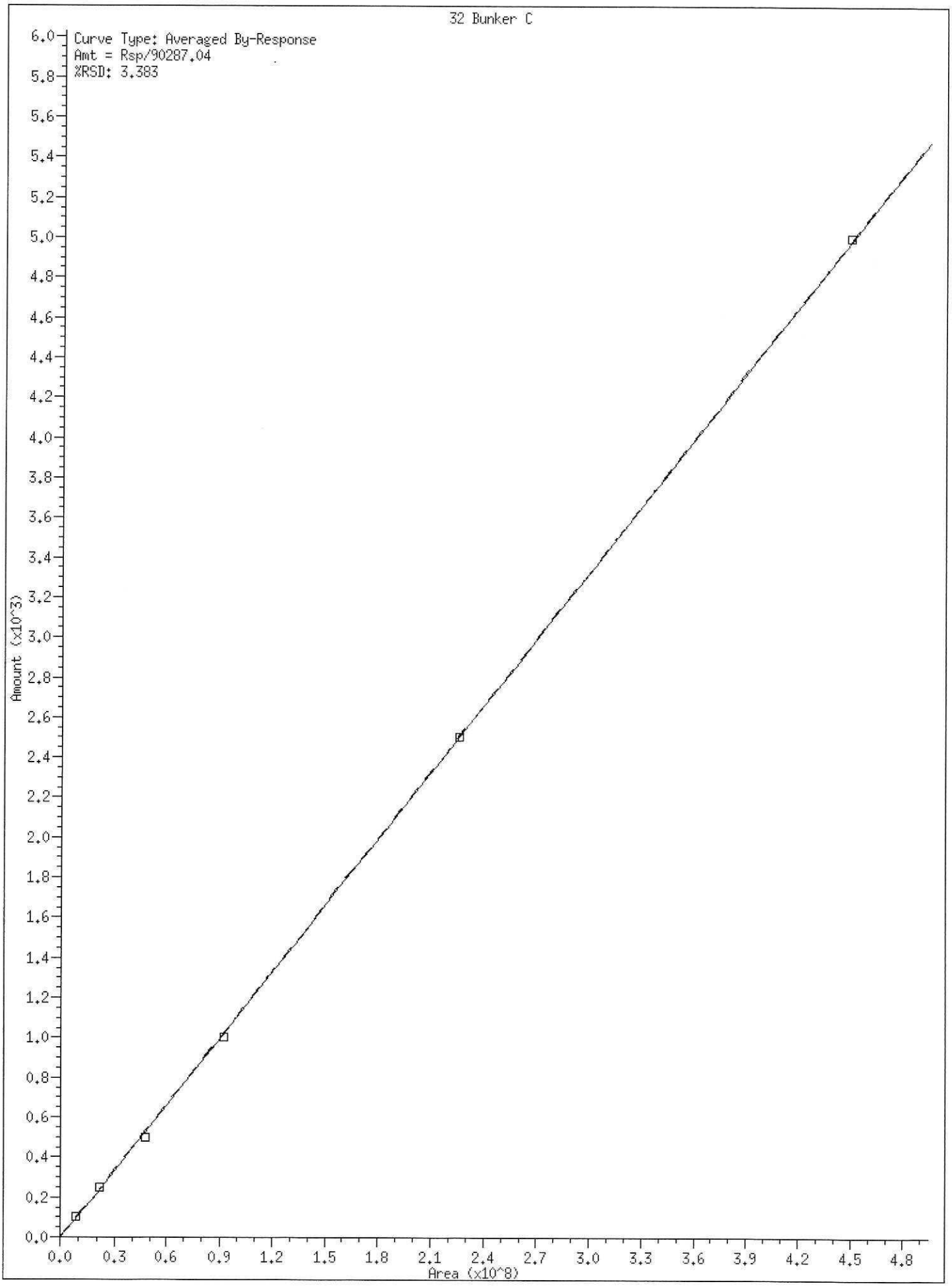
420C1320.D	Data Locked	christopher, 16-Mar-2020 10:37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Area (x10^8)
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0.4
0.6
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1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
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4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
0.0
0.3
0.6
0.9
1.2
1.5
1.8
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3.3
3.6
3.9
4.2
4.5
4.8

Data File: \\target\share\chem2\fid4a.i\20200313b.b\420C1312.D

Date : 13-MAR-2020 13:58

Client ID:

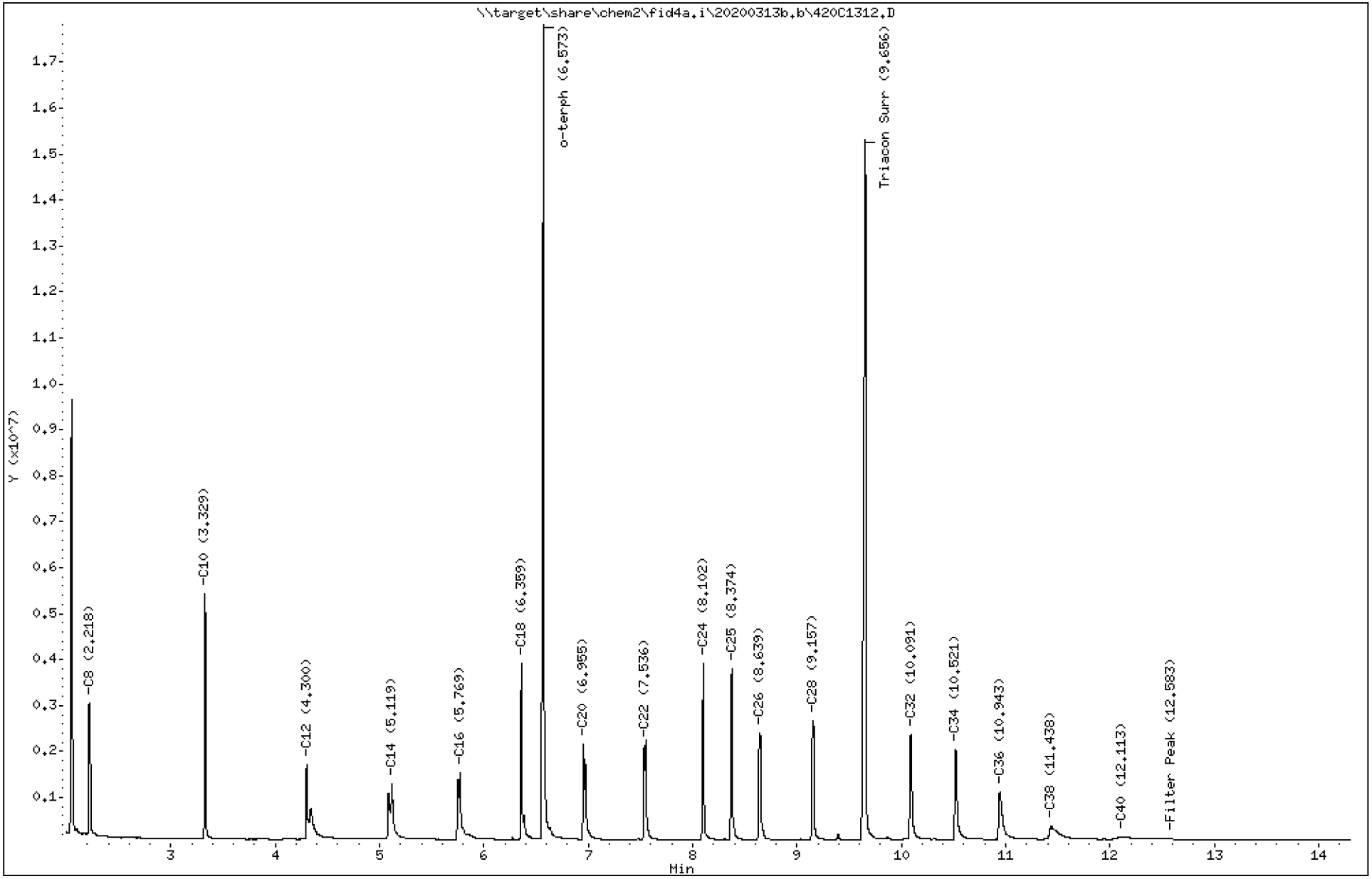
Instrument: fid4a.i

Sample Info: SEQ-IBL1

Operator: JGR/CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200313b.b/420C1312.D
Method: 20200313b.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO
Report Date: 03/16/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-IBL1
Client ID:
Injection: 13-MAR-2020 13:58
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.218	0.000	2976230	4258439	WATPHD	(C12-C24)	25653686	161.0
C10	3.329	0.000	5344126	3820334	WATPHM	(C24-C38)	24648964	185.8
C12	4.300	0.000	1627839	1465465	AK102	(C10-C25)	33671106	172.2
C14	5.119	0.000	1211179	2316863	AK103	(C25-C36)	22381765	223.9
C16	5.769	0.000	1467779	2055226	OR.DIES	(C10-C28)	45134921	230.3
C18	6.359	0.000	3826171	2734269				
C20	6.955	0.000	2088529	1719914	JET-A	(C10-C18)	20940040	128.8
C22	7.536	0.000	2056324	1623779				
C24	8.102	0.000	3838521	3671153				
C25	8.374	0.000	3714467	3687728				
C26	8.639	0.000	2319360	1780980				
C28	9.157	0.000	2575228	1984332				
C32	10.091	0.000	2278132	3706147				
C34	10.521	0.000	1957102	3424532				
Filter Peak	12.583	0.000	15498	11459	BUNKERC	(C10-C38)	58214945	644.8
C36	10.943	0.000	1054808	3160882				
C38	11.438	0.000	297596	868760				
C40	12.113	0.000	42933	427810				
o-terph	6.573	0.000	17734649	19762248				
Triacon Surr	9.656	0.000	15228657	21480068	NAS DIES	(C10-C24)	33565981	172.0

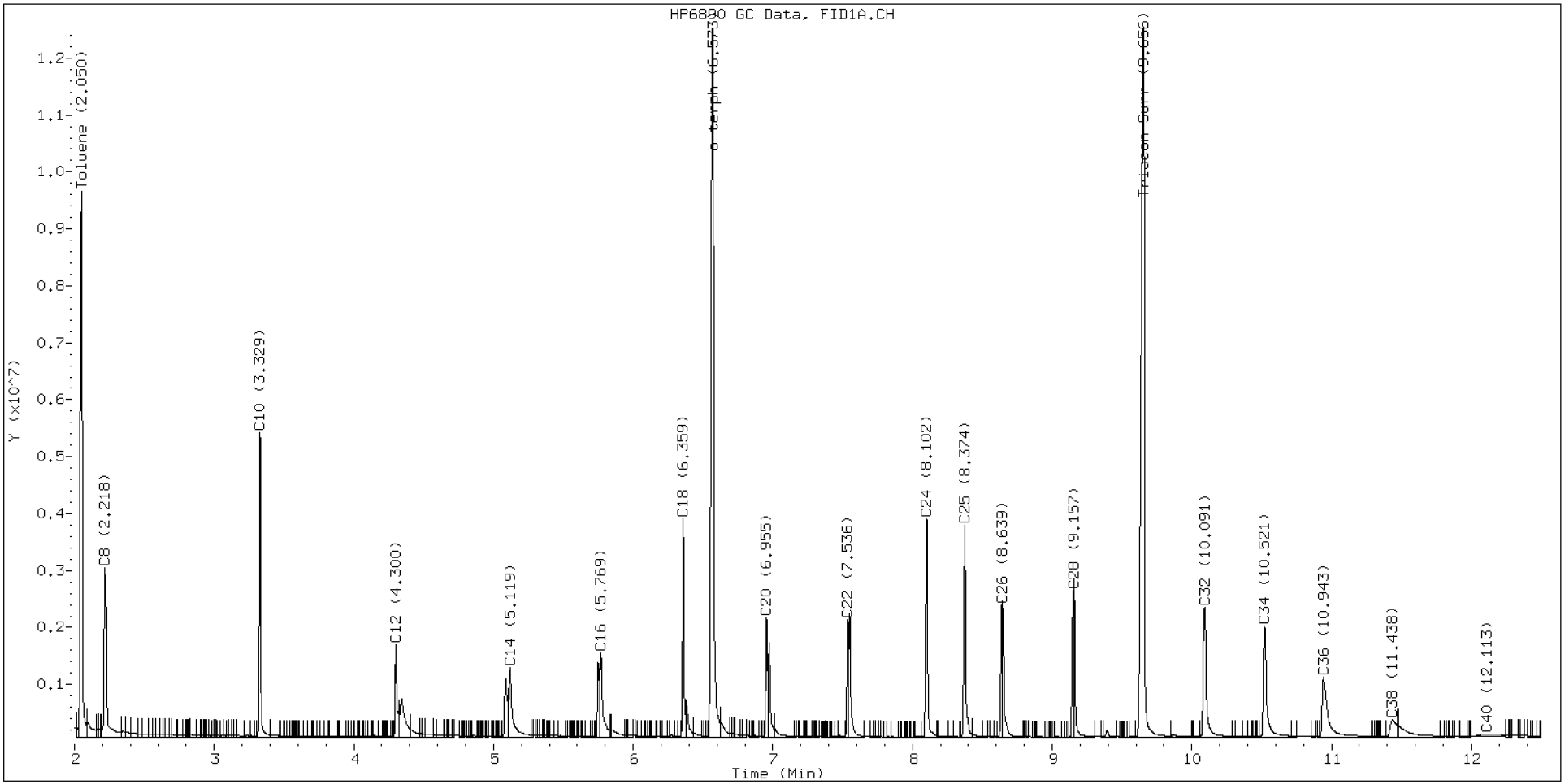
Range Times: NW Diesel(4.300 - 8.102) AK102(3.33 - 8.37) Jet A(3.33 - 6.36)
NW M.Oil(8.10 - 11.44) AK103(8.37 - 10.94) OR Diesel(3.33 - 9.16)

Surrogate	Area	Amount
o-Terphenyl	19762248	96.5
Triacontane	21480068	120.7

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	90287.0	13-MAR-2020

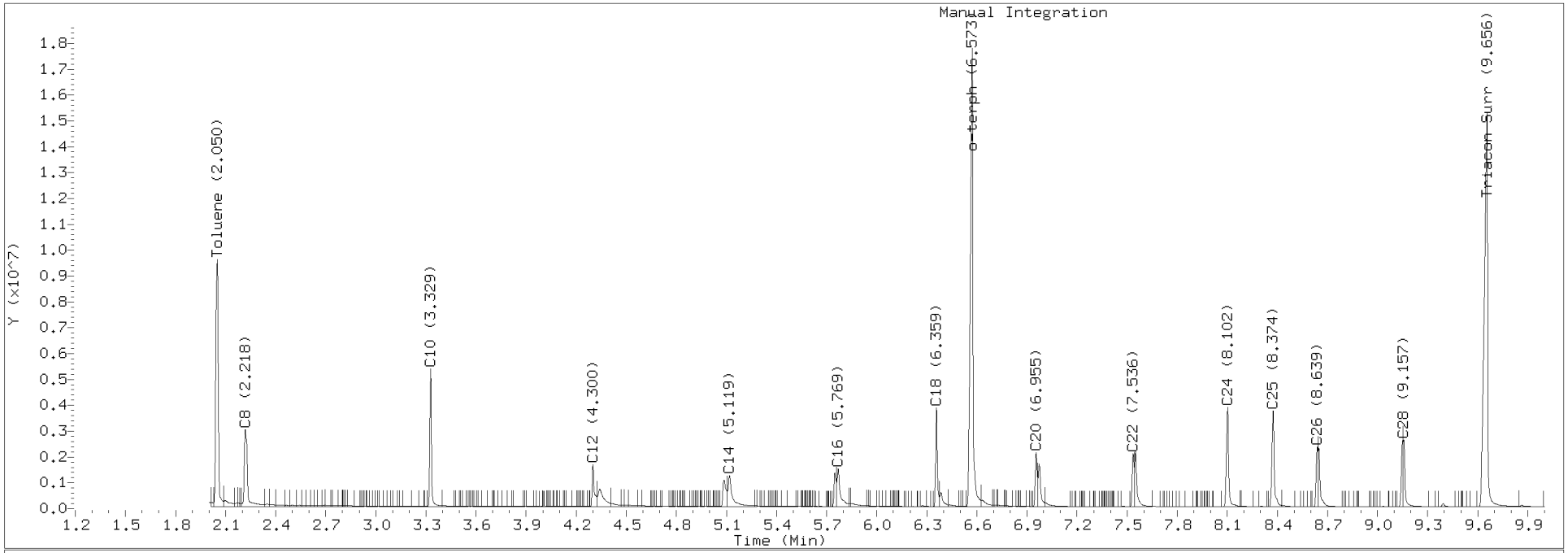
Datafile: FID4A, 20200313b.b/420C1312.D SEQ-IBL1

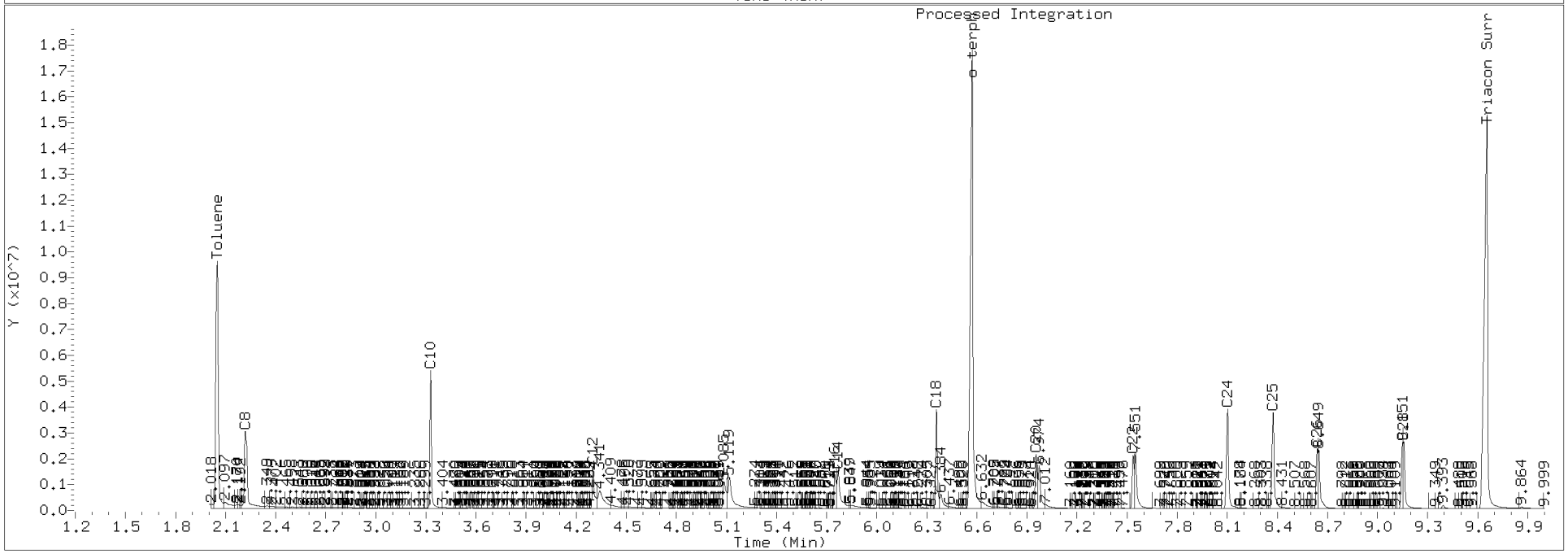


TPH Manual Integrations Report

Datafile: FID4A, 20200313b.b/420C1312.D Injection: 13-MAR-2020 13:58

Lab ID:SEQ-IBL1





Data File: \\target\share\chem2\fid4a.i\20200313b.b\420C1313.D

Date : 13-MAR-2020 14:17

Client ID:

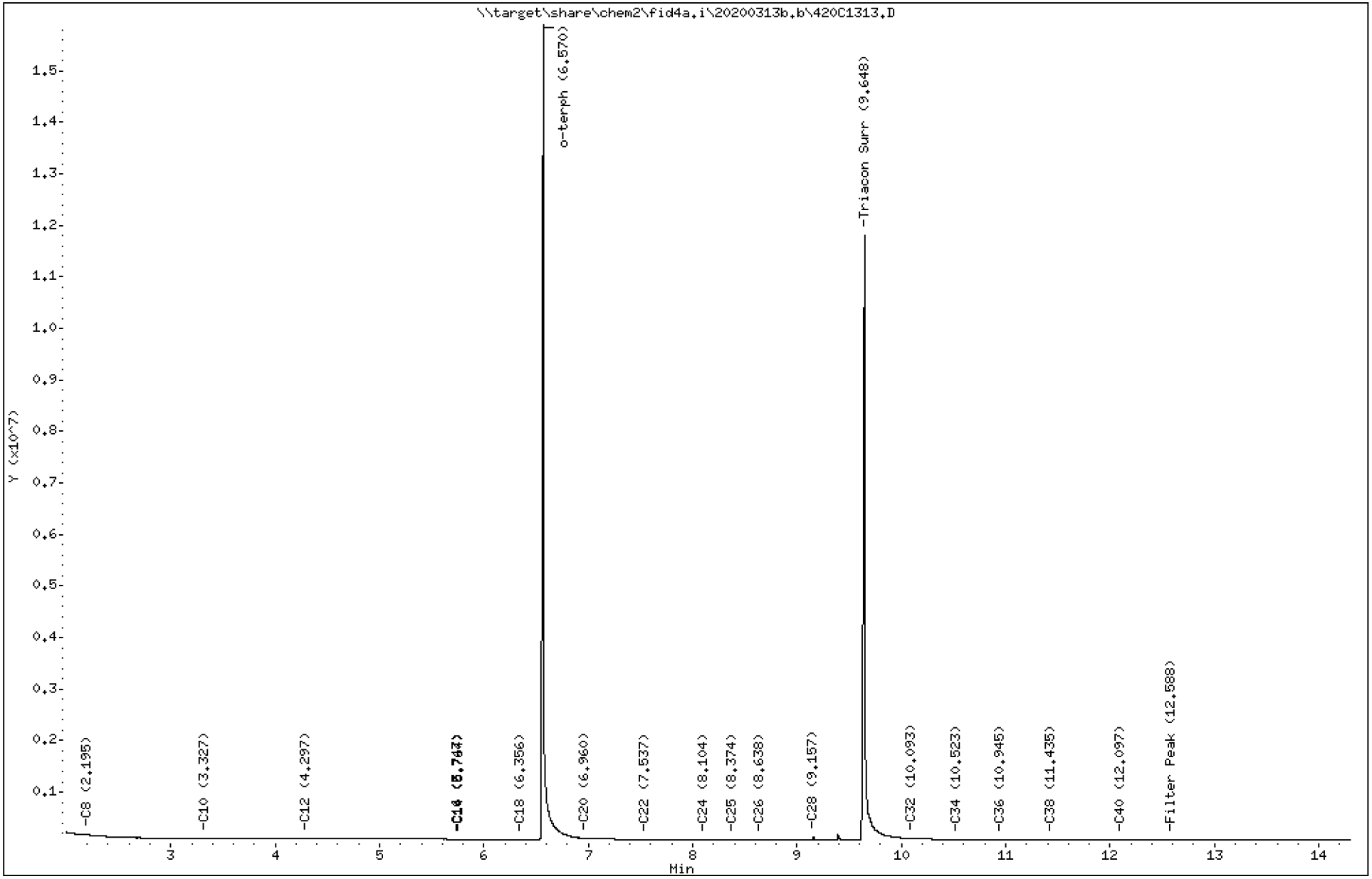
Instrument: fid4a.i

Sample Info: SEQ-IBL2

Operator: JGR/CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200313b.b/420C1313.D
Method: 20200313b.b\FID4TPH.m
Instrument: fid4a.i, JGR/CTO
Report Date: 03/16/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-IBL2
Client ID:
Injection: 13-MAR-2020 14:17
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.195	-0.023	101964	220885	WATPHD	(C12-C24)	4394210	27.6
C10	3.327	-0.002	23471	39087	WATPHM	(C24-C38)	1967673	14.8
C12	4.297	-0.003	21590	18255	AK102	(C10-C25)	5527366	28.3
C14	5.764	0.646	12422	5561	AK103	(C25-C36)	1745508	17.5
C16	5.747	-0.023	12369	2467	OR.DIES	(C10-C28)	5623934	28.7
C18	6.356	-0.003	8501	4208				
C20	6.960	0.005	31175	16901	JET-A	(C10-C18)	2939860	18.1
C22	7.537	0.001	5711	4529				
C24	8.104	0.002	2800	1652				
C25	8.374	-0.000	1751	510				
C26	8.638	-0.001	937	696				
C28	9.157	-0.000	47642	54613				
C32	10.093	0.002	26114	21739				
C34	10.523	0.002	10438	2073				
Filter Peak	12.588	0.006	5962	3842	BUNKERC	(C10-C38)	7477104	82.8
C36	10.945	0.002	7658	3422				
C38	11.435	-0.003	7168	3926				
C40	12.097	-0.015	6296	3463				
o-terph	6.570	-0.003	15826099	17209481				
Triacon Surr	9.648	-0.008	11725247	15722765	NAS DIES	(C10-C24)	5509432	28.2

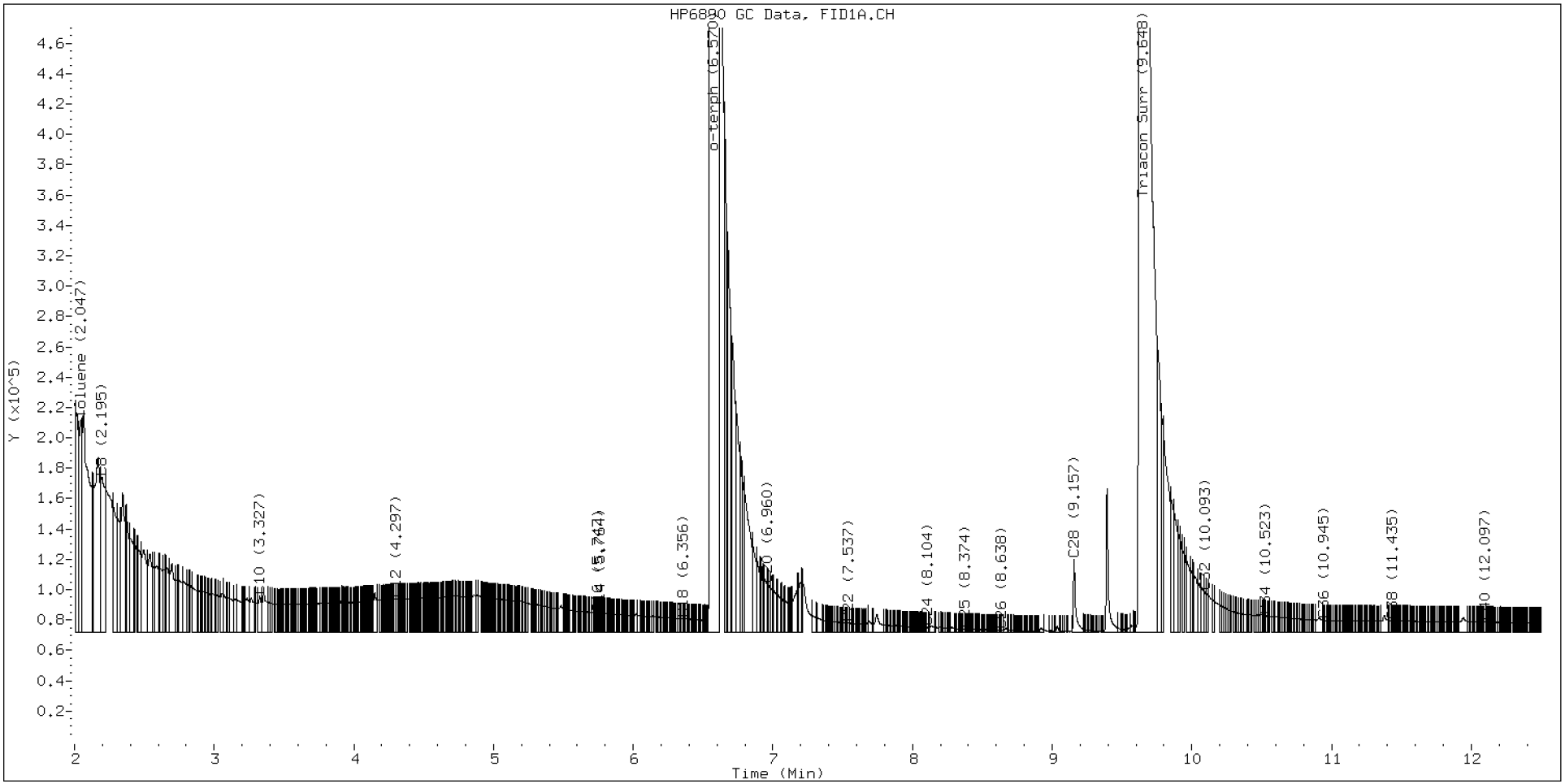
Range Times: NW Diesel(4.300 - 8.102) AK102(3.33 - 8.37) Jet A(3.33 - 6.36)
NW M.Oil(8.10 - 11.44) AK103(8.37 - 10.94) OR Diesel(3.33 - 9.16)

Surrogate	Area	Amount
o-Terphenyl	17209481	84.1
Triacontane	15722765	88.3

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	90287.0	13-MAR-2020

Datafile: FID4A, 20200313b.b/420C1313.D SEQ-IBL2



Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SID0108

Instrument: FID4
Calibration ID: DA00022

Printed: 4/20/2020 7:51:03AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SID0108-IBL1	QC		1		H010802			
SID0108-IBL2	QC		2		I000651			
SID0108-CAL1	QC		3		I003251			
SID0108-CAL2	QC		4		I003252			
SID0108-CAL3	QC		5		I003253			
SID0108-CAL4	QC		6		I003254			
SID0108-CAL5	QC		7		I003255			
SID0108-CAL6	QC		8		I003037			
SID0108-SCV1	QC		9		I003274			

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200408.b

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2	08-APR-2020 08:37	420D0802.D	1	RINSE	
3	08-APR-2020 08:56	420D0803.D	1	RINSE	
4	08-APR-2020 09:16	420D0804.D	1	RINSE	
5	08-APR-2020 09:35	420D0805.D	1	SEQ-IBL1	
6	08-APR-2020 09:54	420D0806.D	1	SEQ-IBL2	
7	08-APR-2020 10:14	420D0807.D	1	SEQ-CAL1	
8	08-APR-2020 10:33	420D0808.D	1	SEQ-CAL2	
9	08-APR-2020 10:53	420D0809.D	1	SEQ-CAL3	
10	08-APR-2020 11:12	420D0810.D	1	SEQ-CAL4	
11	08-APR-2020 11:32	420D0811.D	1	SEQ-CAL5	
12	08-APR-2020 11:51	420D0812.D	1	SEQ-CAL6	
13	08-APR-2020 12:11	420D0813.D	1	SEQ-SCV1	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200408.b

ARI Job No.: RINS Method: FID4TPH.m Instrument: fid4a.i Date: 08-APR-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0818	420D0801.D	RINSE		1	NO MANUAL INTEGRATION
0837	420D0802.D	RINSE		1	NO MANUAL INTEGRATION
0856	420D0803.D	RINSE		1	NO MANUAL INTEGRATION
0916	420D0804.D	RINSE		1	NO MANUAL INTEGRATION
0935	420D0805.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
0954	420D0806.D	SEQ-IBL2		1	NO MANUAL INTEGRATION
1014	420D0807.D	SEQ-CAL1		1	Triacon Surr,
1033	420D0808.D	SEQ-CAL2		1	Triacon Surr,
1053	420D0809.D	SEQ-CAL3		1	Triacon Surr,
1112	420D0810.D	SEQ-CAL4		1	Triacon Surr,
1132	420D0811.D	SEQ-CAL5		1	Triacon Surr,
1151	420D0812.D	SEQ-CAL6		1	Triacon Surr,
1211	420D0813.D	SEQ-SCV1		1	Triacon Surr,

Security Status Report

Date: 20-Apr-2020 07:47

420D0801.D	Data Locked	christopher, 20-Apr-2020 07:45
420D0802.D	Data Locked	christopher, 20-Apr-2020 07:45
420D0803.D	Data Locked	christopher, 20-Apr-2020 07:45
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33 AK103
Curve Type: Averaged By-Response
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Amount (x10^3)
Area (x10^8)
FID4
4/8/20

Data File: \\target\share\chem2\fid4a.i\20200408.b\420D0805.D

Date : 08-APR-2020 09:35

Client ID:

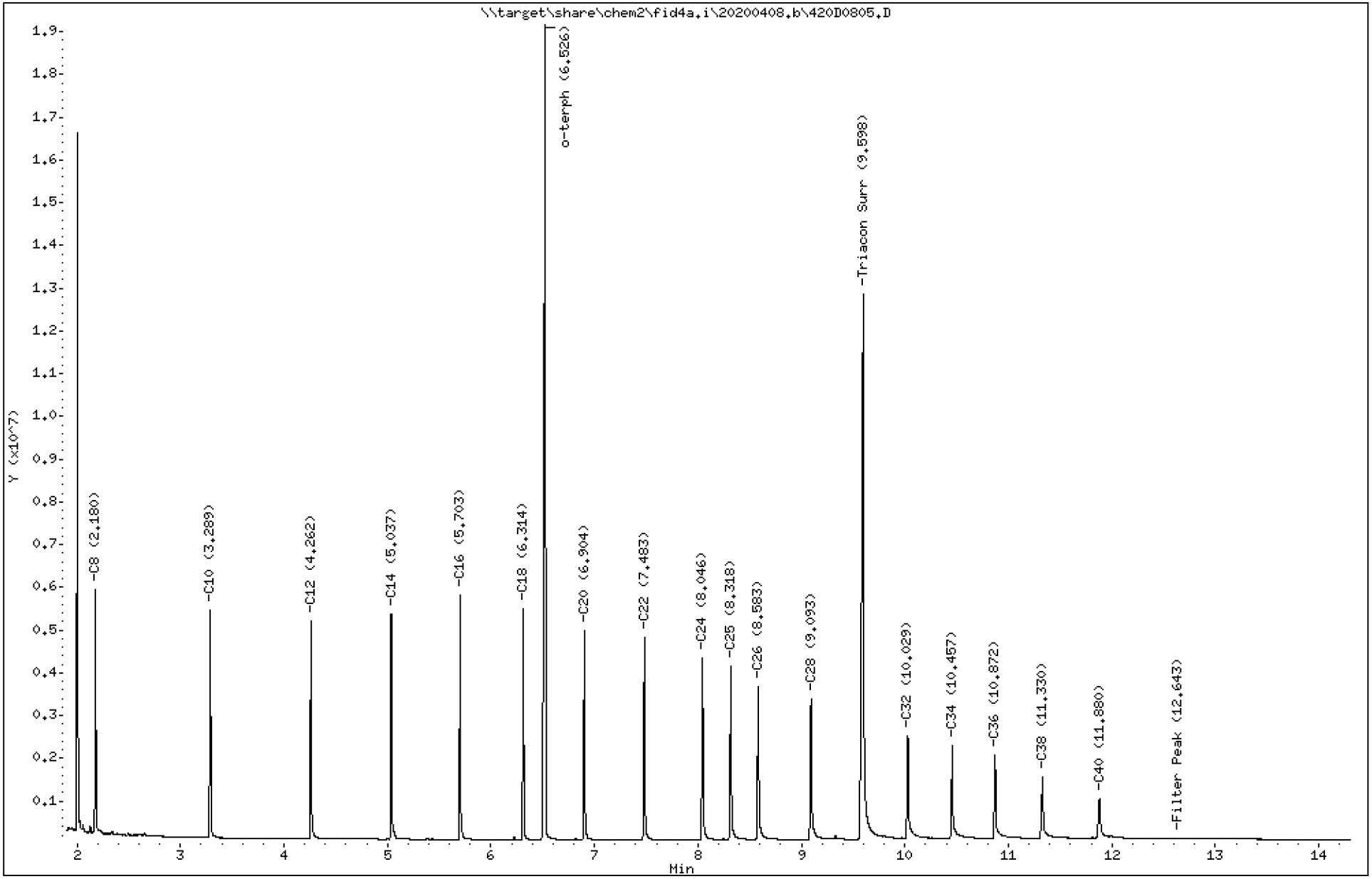
Instrument: fid4a.i

Sample Info: SEQ-IBL1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200408.b/420D0805.D
Method: 20200408.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 04/20/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-IBL1
Client ID:
Injection: 08-APR-2020 09:35
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.180	0.000	5854578	3880900	WATPHD	(C12-C24)	23844320	149.6
C10	3.289	0.000	5366559	4126403	WATPHM	(C24-C38)	25592918	193.0
C12	4.262	0.000	5124561	3862358	AK102	(C10-C25)	33609761	171.9
C14	5.037	0.000	5288886	3763422	AK103	(C25-C36)	22232777	303.7
C16	5.703	0.000	5732523	3728447	OR.DIES	(C10-C28)	44736298	228.2
C18	6.314	0.000	5411782	3657526				
C20	6.904	0.000	4900797	3740470	JET-A	(C10-C18)	22288154	137.1
C22	7.483	0.000	4744655	3709257				
C24	8.046	0.000	4260497	3629044				
C25	8.318	0.000	4069494	3709557				
C26	8.583	0.000	3584730	3671884				
C28	9.093	0.000	3305135	3592573				
C32	10.029	0.000	2427612	3418058				
C34	10.457	0.000	2206236	2535109				
Filter Peak	12.643	0.000	24370	14568	CREOSOT	(C12-C22)	20184280	489.5
C36	10.872	0.000	1991705	2941804				
C38	11.330	0.000	1466266	2825666				
C40	11.880	0.000	962855	1921380				
o-terph	6.526	0.000	19078927	20504006				
Triacon Surr	9.598	0.000	12764177	20099945	NAS DIES	(C10-C24)	33554764	171.9

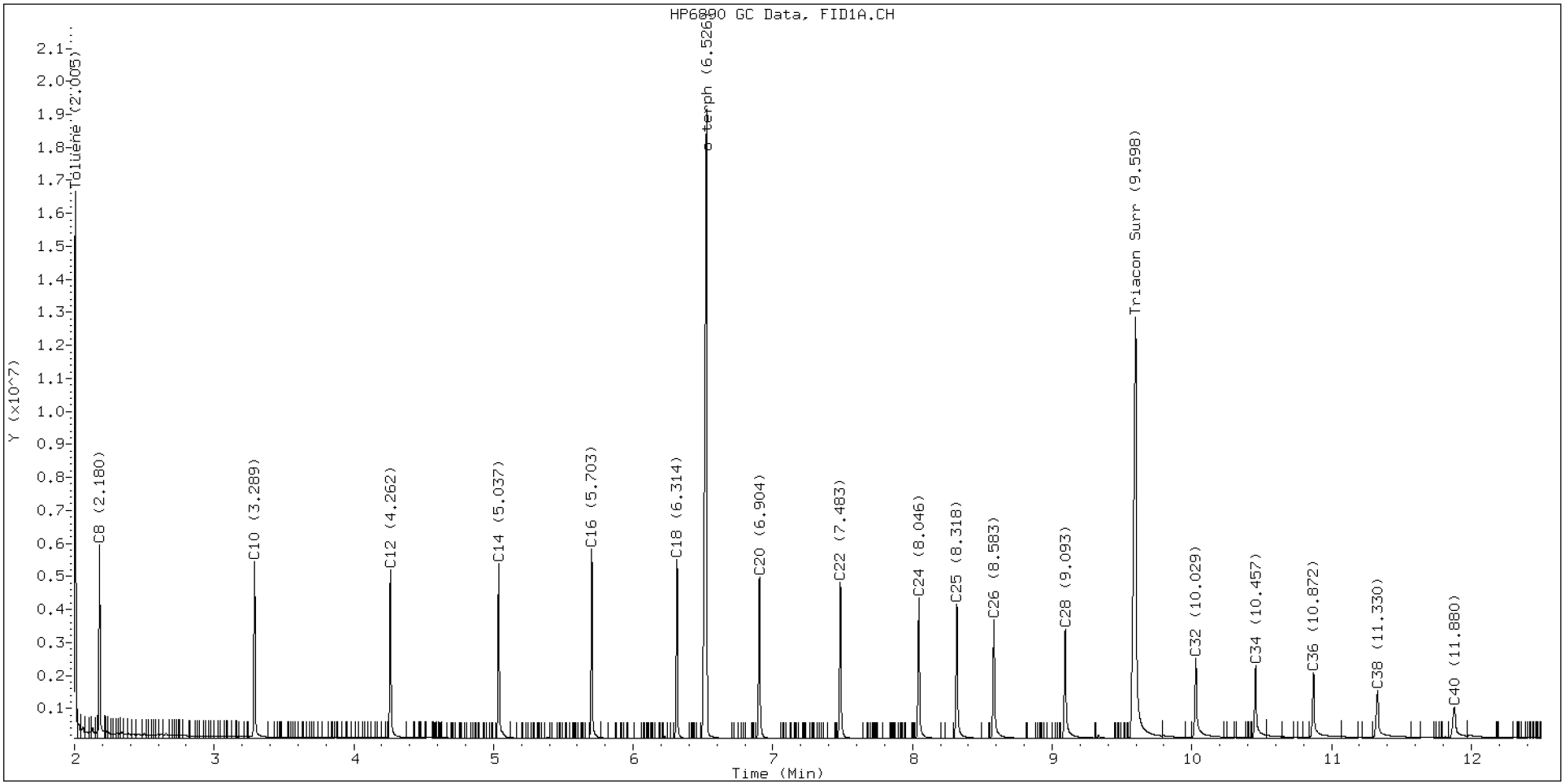
Range Times: NW Diesel(4.262 - 8.046) AK102(3.29 - 8.32) Jet A(3.29 - 6.31)
NW M.Oil(8.05 - 11.33) AK103(8.32 - 10.87) OR Diesel(3.29 - 9.09)

Surrogate	Area	Amount
o-Terphenyl	20504006	100.2
Triacontane	20099945	112.9

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200408.b/420D0805.D SEQ-IBL1



Data File: \\target\share\chem2\fid4a.i\20200408.b\420D0806.D

Date : 08-APR-2020 09:54

Client ID:

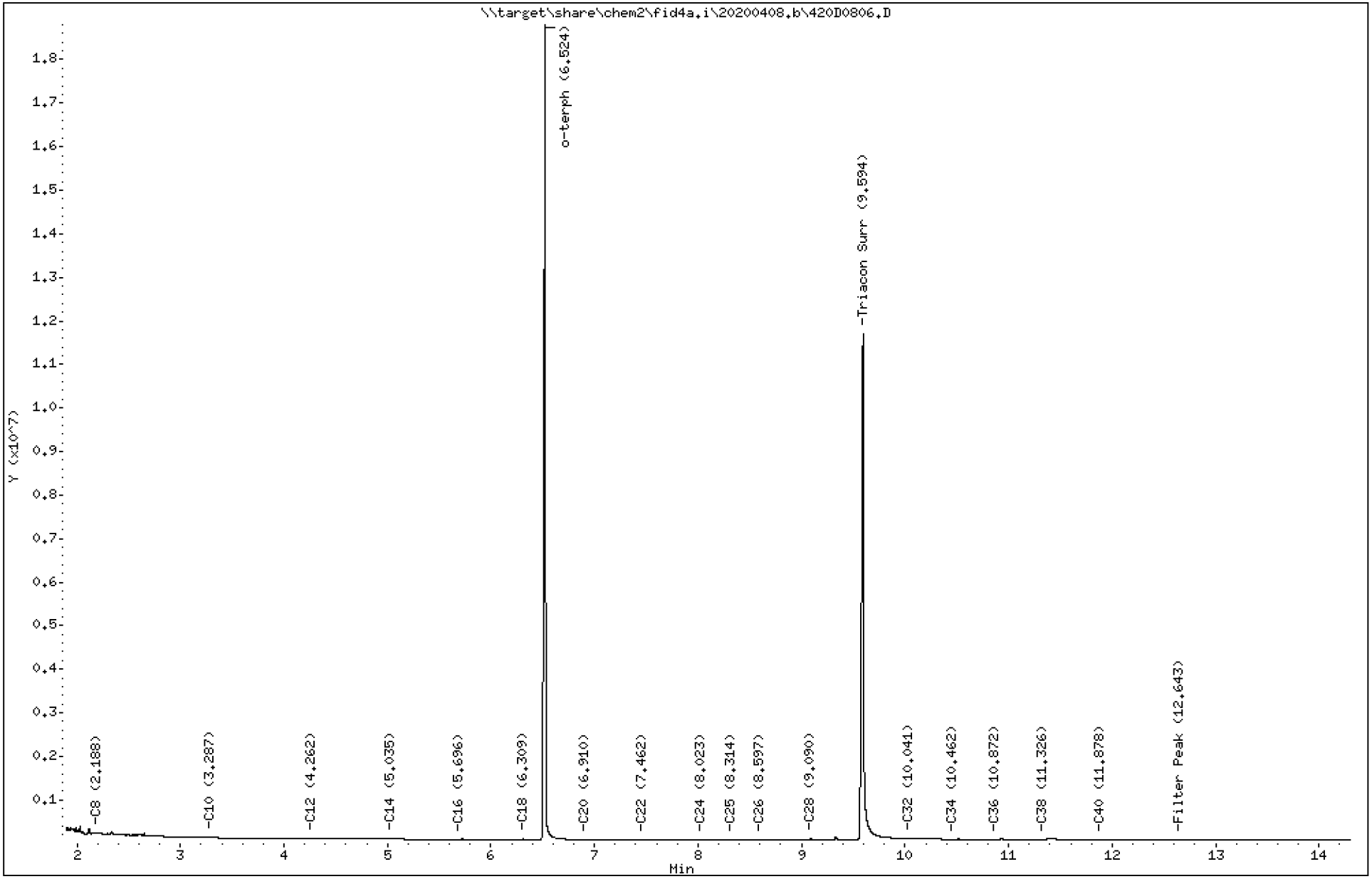
Instrument: fid4a.i

Sample Info: SEQ-IBL2

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200408.b/420D0806.D
Method: 20200408.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 04/20/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-IBL2
Client ID:
Injection: 08-APR-2020 09:54
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.188	0.008	156546	216359	WATPHD	(C12-C24)	2059708	12.9
C10	3.287	-0.002	70586	177016	WATPHM	(C24-C38)	2023092	15.3
C12	4.262	-0.001	31694	27721	AK102	(C10-C25)	4136621	21.2
C14	5.035	-0.002	17658	7042	AK103	(C25-C36)	1615485	22.1
C16	5.696	-0.007	12809	8245	OR.DIES	(C10-C28)	4264948	21.8
C18	6.309	-0.005	24517	27940				
C20	6.910	0.006	6999	5164	JET-A	(C10-C18)	3753376	23.1
C22	7.462	-0.022	4699	4900				
C24	8.023	-0.022	2331	3320				
C25	8.314	-0.004	531	126				
C26	8.597	0.013	9349	6545				
C28	9.090	-0.003	44536	62849				
C32	10.041	0.012	33011	55502				
C34	10.462	0.005	14086	9836				
Filter Peak	12.643	0.000	14153	3524	CREOSOT	(C12-C22)	1999313	48.5
C36	10.872	0.000	14385	7864				
C38	11.326	-0.004	15213	8324				
C40	11.878	-0.002	14557	10126				
o-terph	6.524	-0.002	18718308	20250783				
Triacon Surr	9.594	-0.004	11617864	16294307	NAS DIES	(C10-C24)	4126955	21.1

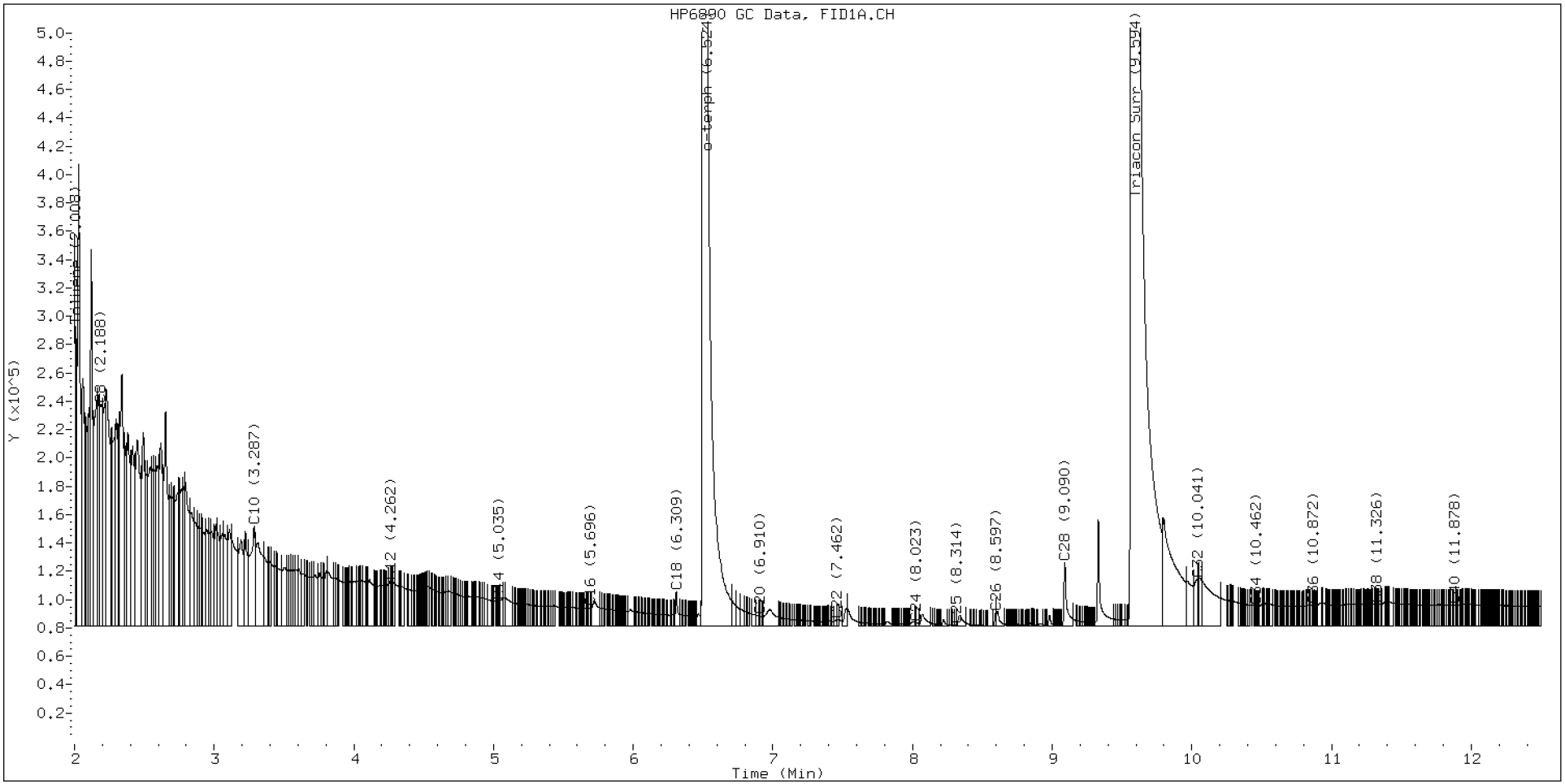
Range Times: NW Diesel(4.262 - 8.046) AK102(3.29 - 8.32) Jet A(3.29 - 6.31)
NW M.Oil(8.05 - 11.33) AK103(8.32 - 10.87) OR Diesel(3.29 - 9.09)

Surrogate	Area	Amount
o-Terphenyl	20250783	98.9
Triacontane	16294307	91.6

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200408.b/420D0806.D SEQ-IBL2



Data File: \\target\share\chem2\fid4a.i\20200408.b\420D0807.D

Date : 08-APR-2020 10:14

Client ID:

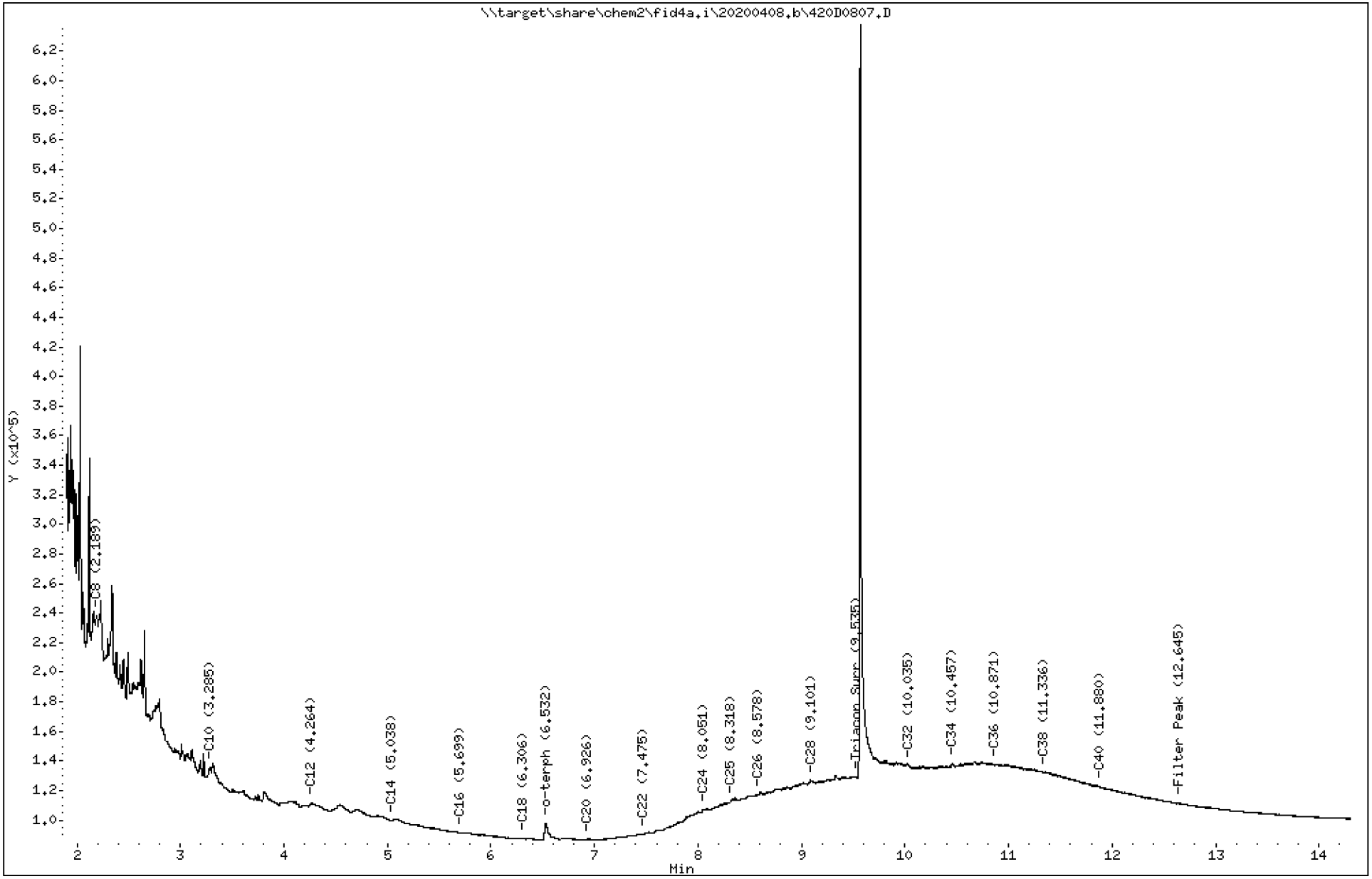
Instrument: fid4a.i

Sample Info: SEQ-CAL1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200408.b/420D0807.D
Method: 20200408.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 04/20/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL1
Client ID:
Injection: 08-APR-2020 10:14
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.189	0.009	152083	238009	WATPHD	(C12-C24)	1535455	9.6
C10	3.285	-0.004	49113	104559	WATPHM	(C24-C38)	8187148	61.7
C12	4.264	0.002	24631	8600	AK102	(C10-C25)	3445901	17.6
C14	5.038	0.001	13117	3929	AK103	(C25-C36)	6705828	91.6
C16	5.699	-0.004	4845	2404	OR.DIES	(C10-C28)	5120557	26.1
C18	6.306	-0.008	853	562				
C20	6.926	0.022	403	144	JET-A	(C10-C18)	2755712	17.0
C22	7.475	-0.008	3796	753				
C24	8.051	0.006	20077	24027				
C25	8.318	-0.000	26103	25417				
C26	8.578	-0.005	30795	28994				
C28	9.101	0.007	39800	29577				
C32	10.035	0.006	50014	24947				
C34	10.457	-0.000	51363	30680				
Filter Peak	12.645	0.002	24706	12307	CREOSOT	(C12-C22)	1140595	27.7
C36	10.871	-0.000	50437	10078				
C38	11.336	0.007	45528	18190				
C40	11.880	-0.000	36310	26801				
o-terph	6.532	0.007	11031	27133				
Triacon Surr	9.568	-0.030	508463	647323	NAS DIES	(C10-C24)	3228669	16.5

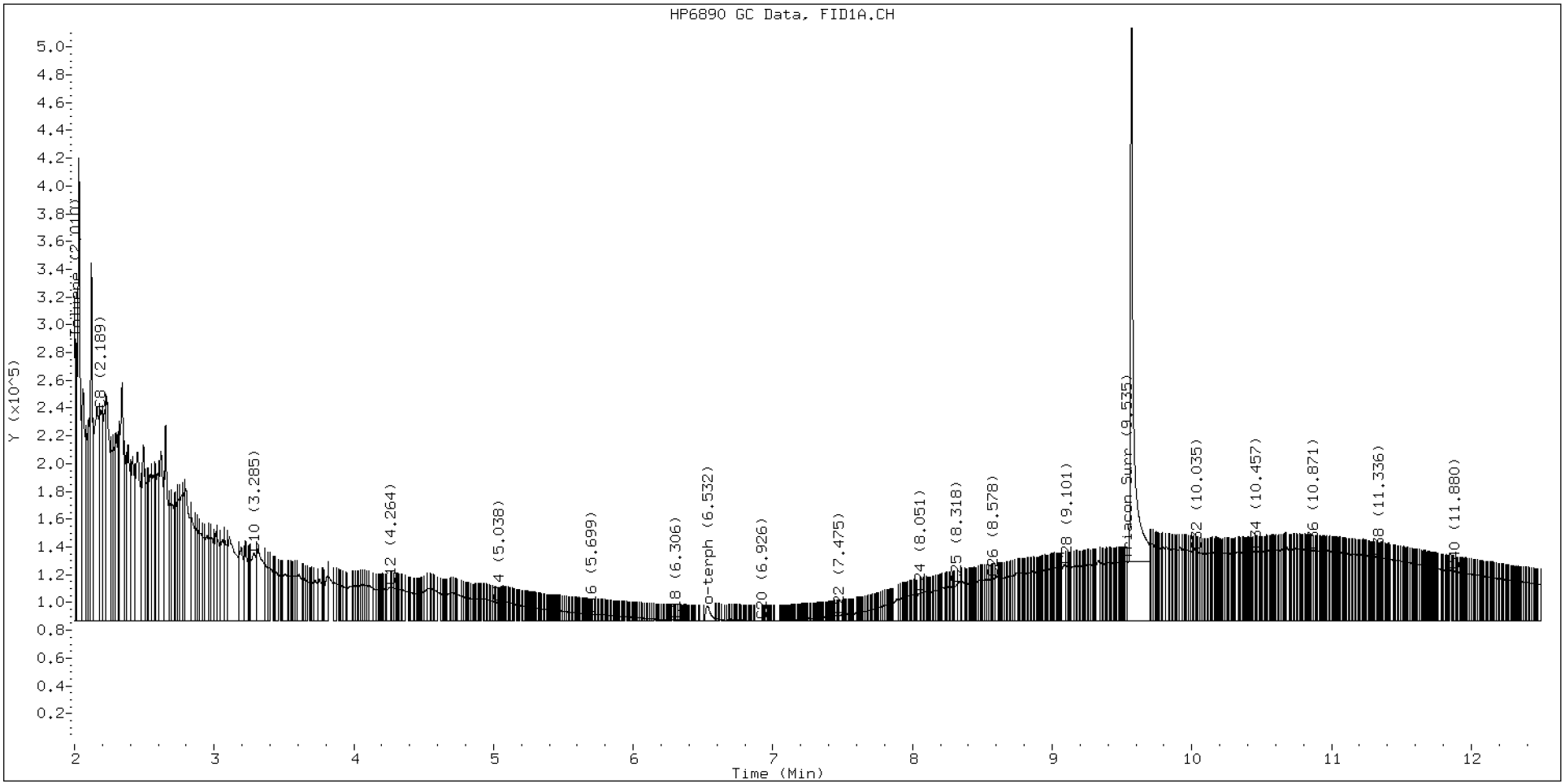
Range Times: NW Diesel(4.262 - 8.046) AK102(3.29 - 8.32) Jet A(3.29 - 6.31)
NW M.Oil(8.05 - 11.33) AK103(8.32 - 10.87) OR Diesel(3.29 - 9.09)

Surrogate	Area	Amount	
o-Terphenyl	27133	0.1	
Triacontane	647323	3.6	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

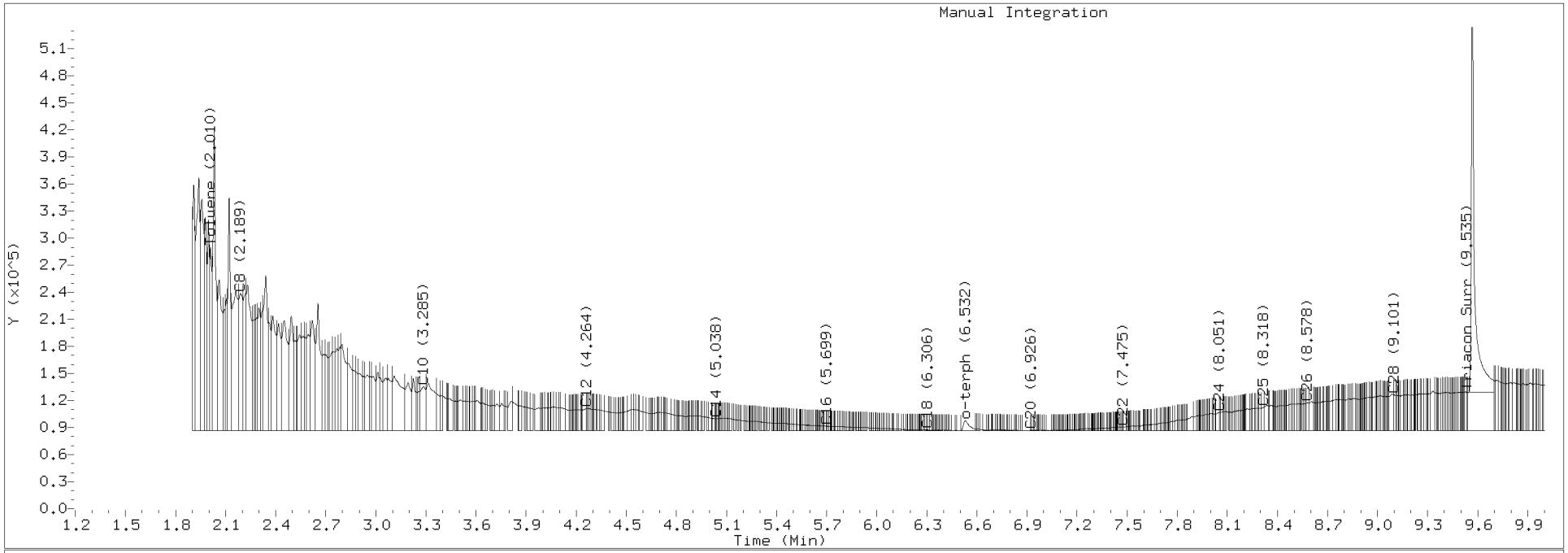
Datafile: FID4A, 20200408.b/420D0807.D SEQ-CAL1

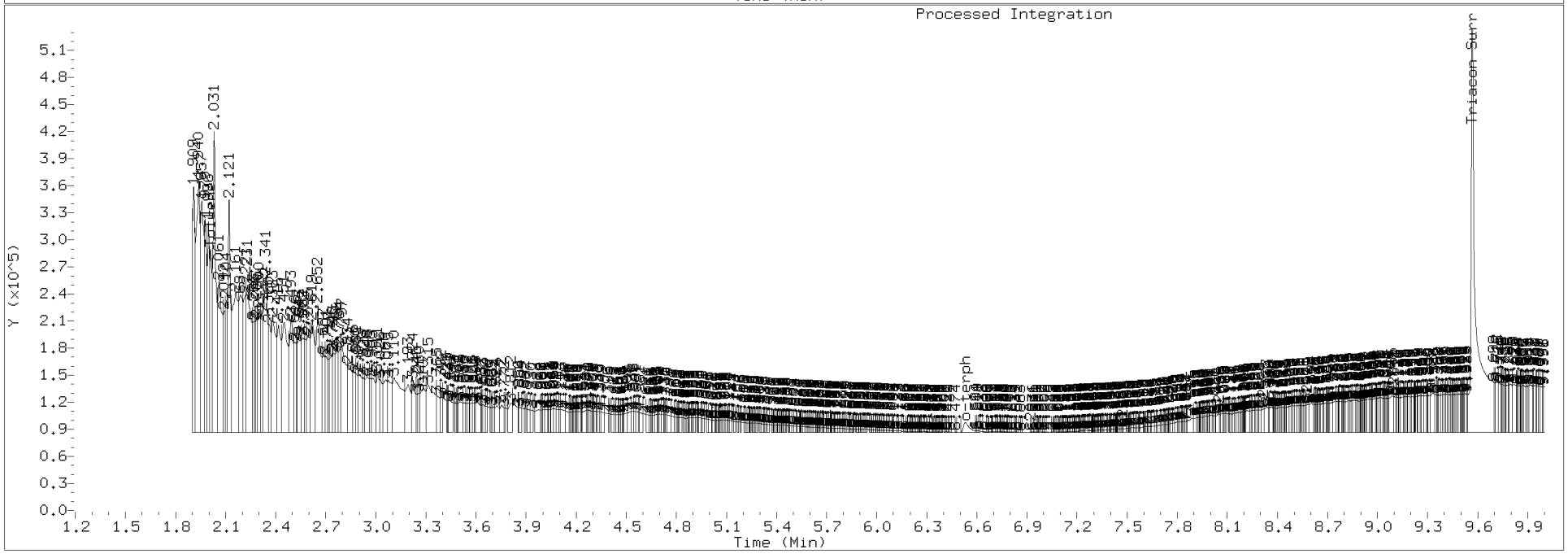


TPH Manual Integrations Report

Datafile: FID4A, 20200408.b/420D0807.D Injection: 08-APR-2020 10:14

Lab ID:SEQ-CAL1





Data File: \\target\share\chem2\fid4a.i\20200408.b\420D0808.D

Date : 08-APR-2020 10:33

Client ID:

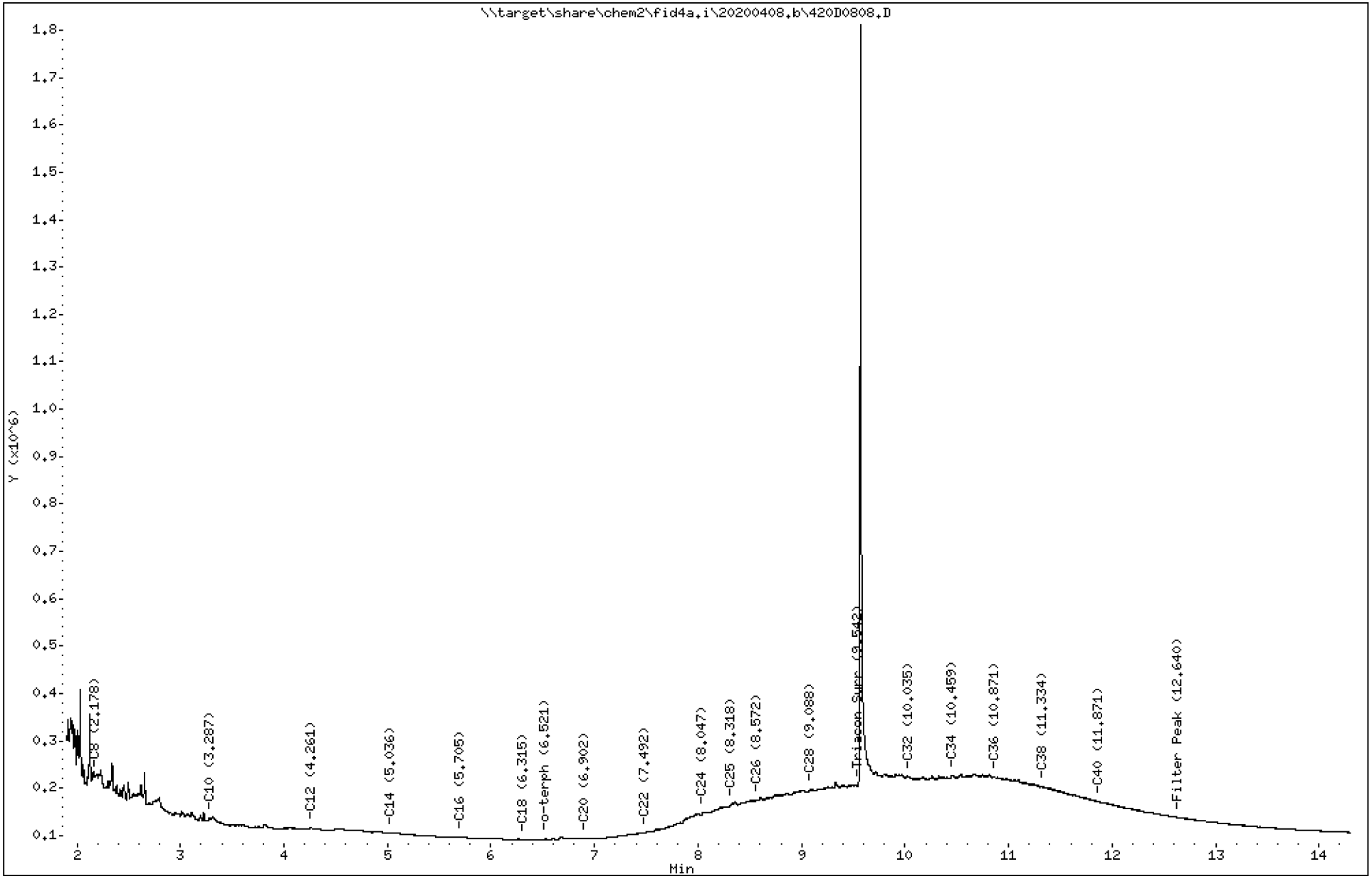
Instrument: fid4a.i

Sample Info: SEQ-CAL2

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200408.b/420D0808.D
Method: 20200408.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 04/20/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL2
Client ID:
Injection: 08-APR-2020 10:33
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.178	-0.002	134647	73580	WATPHD	(C12-C24)	2623184	16.5
C10	3.287	-0.002	46105	122146	WATPHM	(C24-C38)	21976708	165.7
C12	4.261	-0.002	24803	7411	AK102	(C10-C25)	4928461	25.2
C14	5.036	-0.002	13595	4064	AK103	(C25-C36)	18150509	247.9
C16	5.705	0.002	4392	1091	OR.DIES	(C10-C28)	9615128	49.1
C18	6.315	0.001	704	324				
C20	6.902	-0.002	1947	564	JET-A	(C10-C18)	2725859	16.8
C22	7.492	0.008	15580	19522				
C24	8.047	0.001	58155	84697				
C25	8.318	-0.001	74518	58671				
C26	8.572	-0.012	84650	75814				
C28	9.088	-0.006	107472	173683				
C32	10.035	0.006	132361	33044				
C34	10.459	0.002	134858	26944				
Filter Peak	12.640	-0.003	47344	30546	CREOSOT	(C12-C22)	1399069	33.9
C36	10.871	-0.001	131911	72256				
C38	11.334	0.004	111289	44355				
C40	11.871	-0.009	81830	69040				
o-terph	6.521	-0.005	2000	1847				
Triacon Surr	9.571	-0.027	1605783	1635426	NAS DIES	(C10-C24)	4280523	21.9

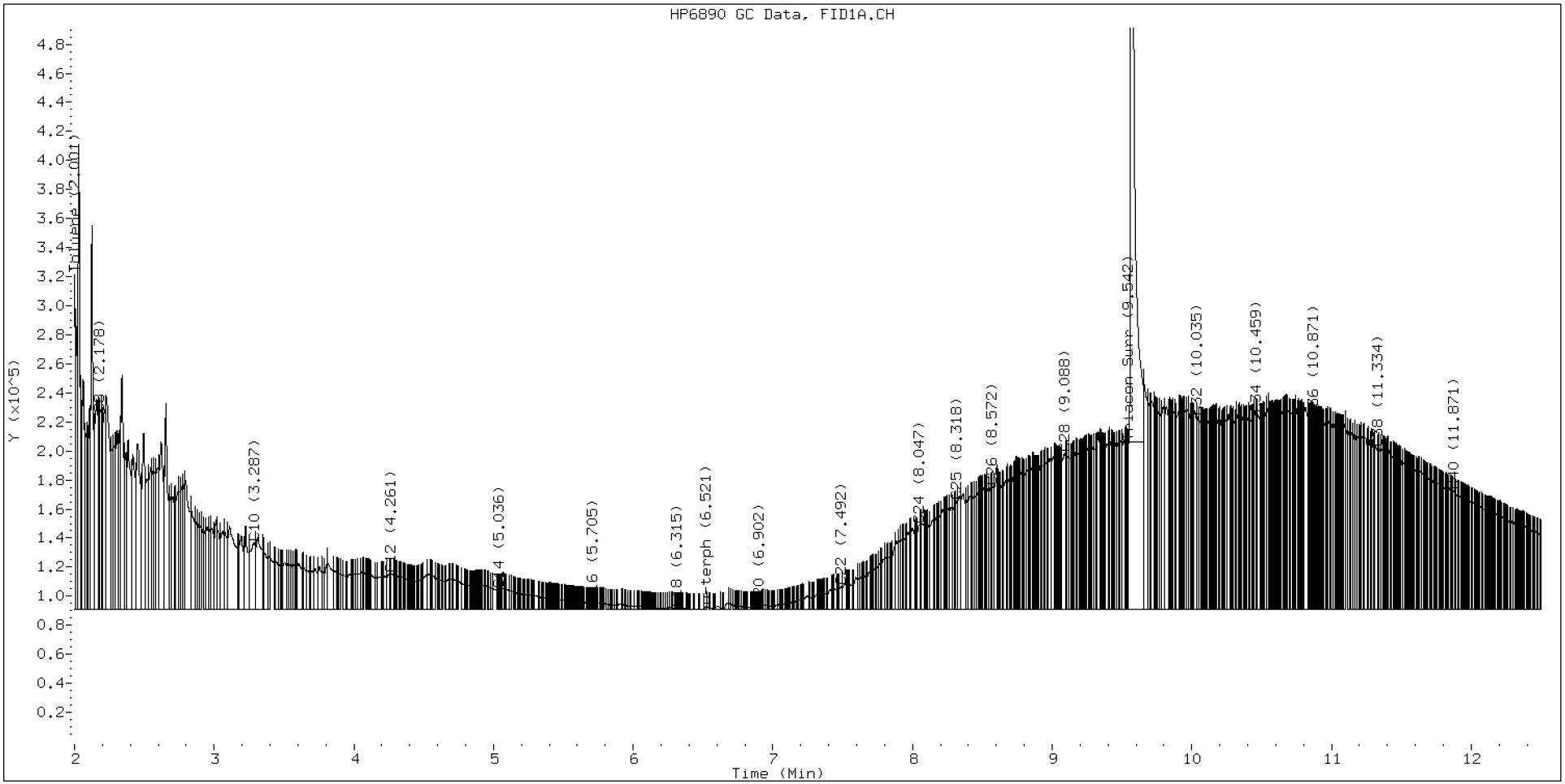
Range Times: NW Diesel(4.262 - 8.046) AK102(3.29 - 8.32) Jet A(3.29 - 6.31)
NW M.Oil(8.05 - 11.33) AK103(8.32 - 10.87) OR Diesel(3.29 - 9.09)

Surrogate	Area	Amount	
o-Terphenyl	1847	0.0	
Triacontane	1635426	9.2	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

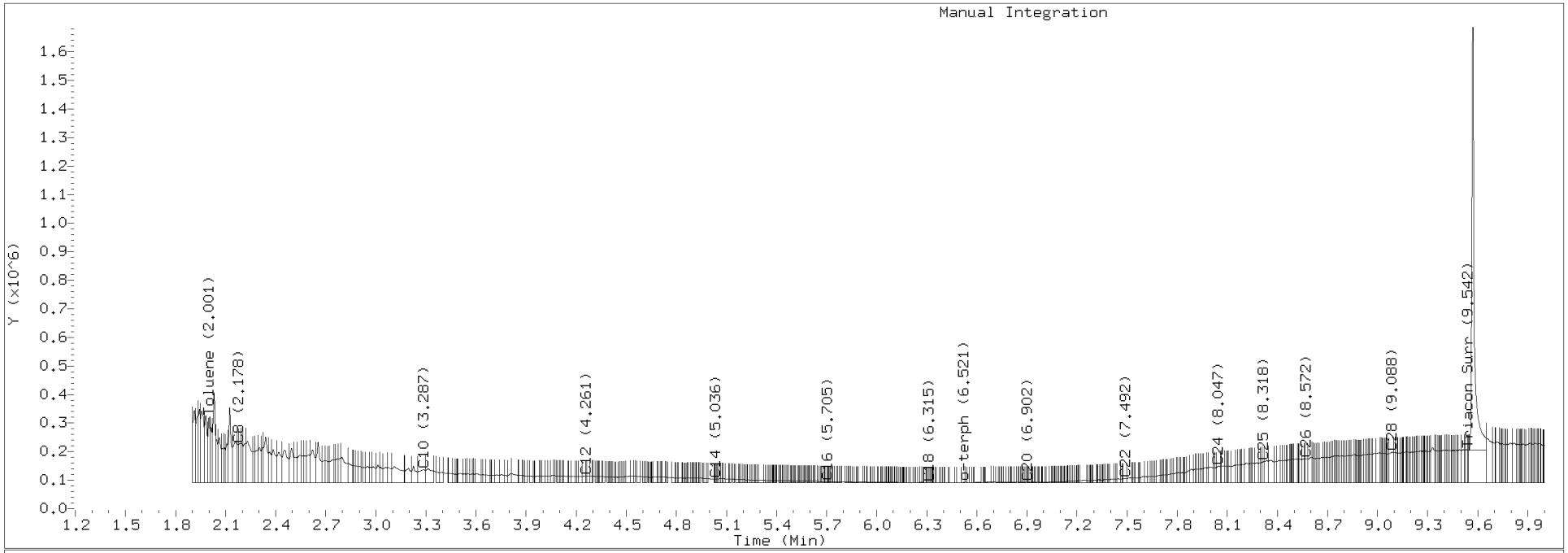
Datafile: FID4A, 20200408.b/420D0808.D SEQ-CAL2

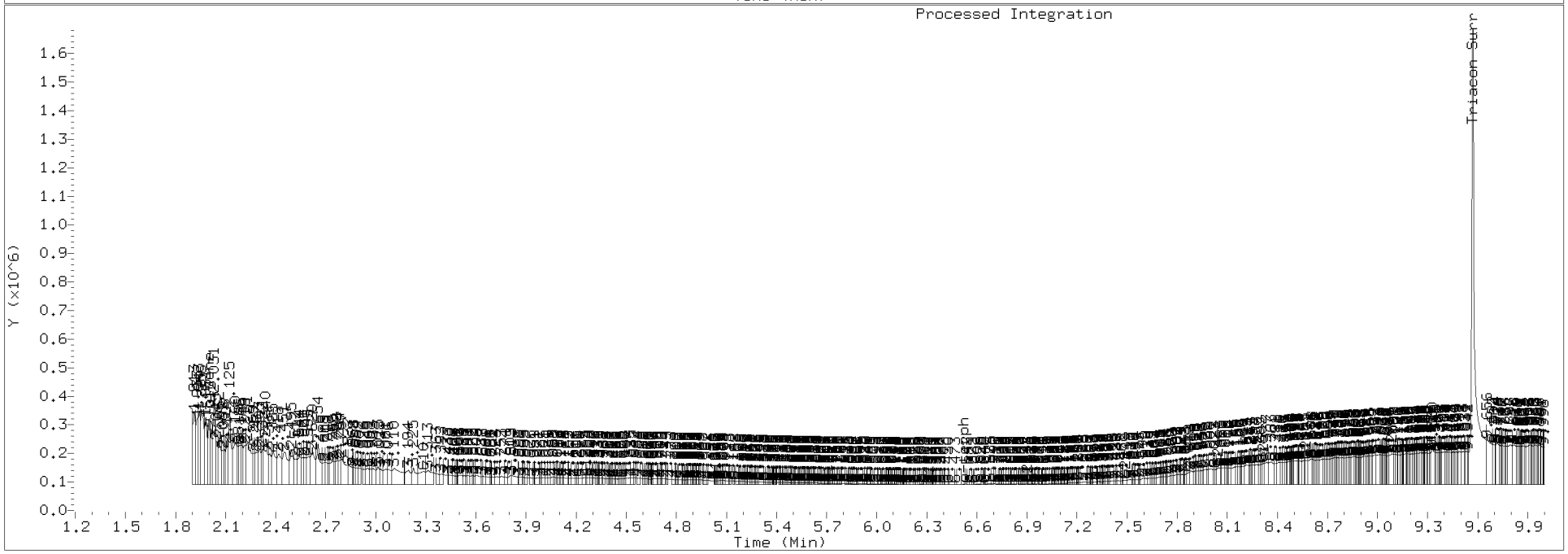


TPH Manual Integrations Report

Datafile: FID4A, 20200408.b/420D0808.D Injection: 08-APR-2020 10:33

Lab ID:SEQ-CAL2





Data File: \\target\share\chem2\fid4a.i\20200408.b\420D0809.D

Date : 08-APR-2020 10:53

Client ID:

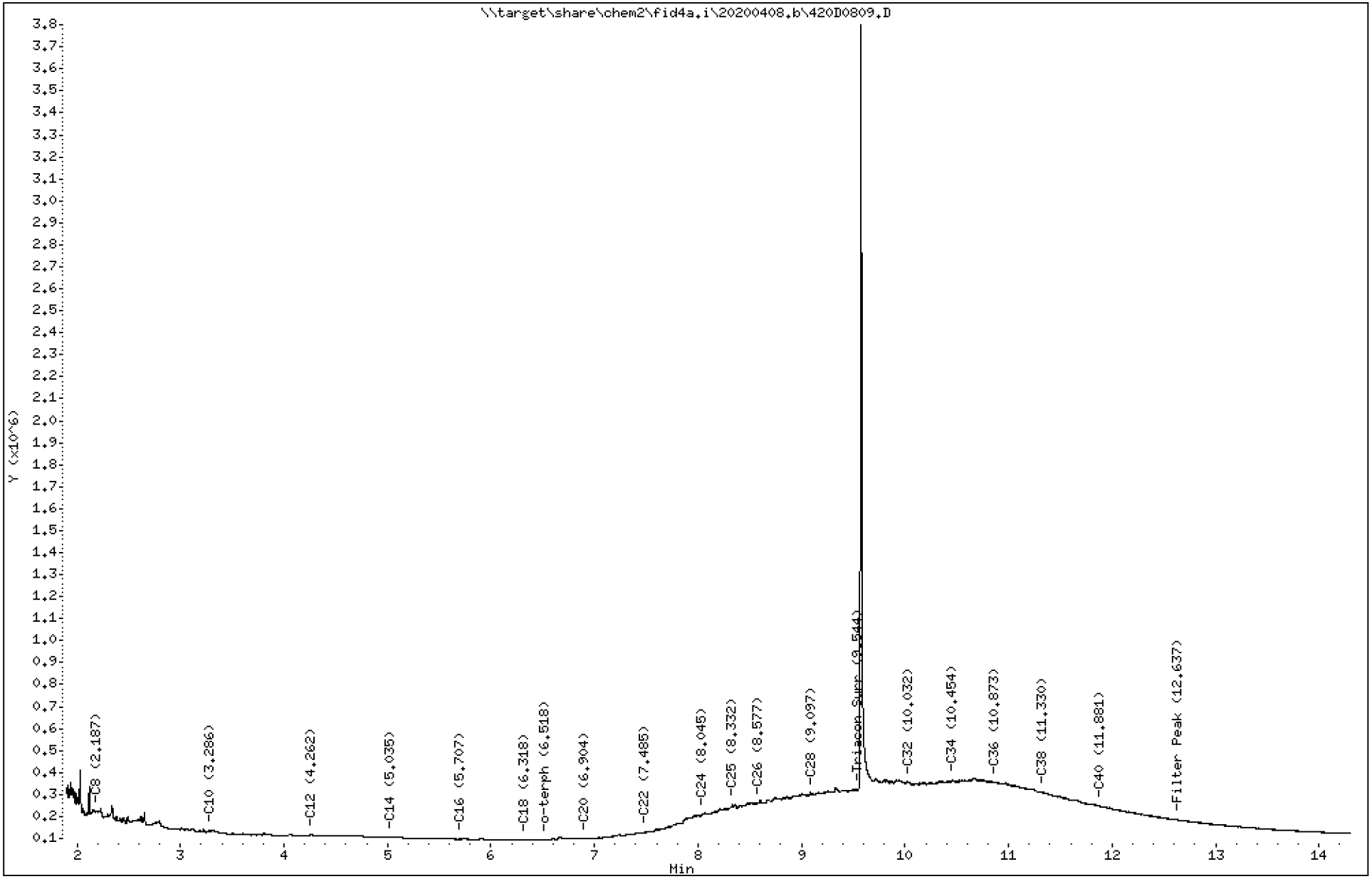
Instrument: fid4a.i

Sample Info: SEQ-CAL3

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200408.b/420D0809.D
Method: 20200408.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 04/20/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL3
Client ID:
Injection: 08-APR-2020 10:53
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.187	0.008	132882	207304	WATPHD	(C12-C24)	4342009	27.3
C10	3.286	-0.003	42399	113652	WATPHM	(C24-C38)	43844245	330.6
C12	4.262	-0.001	22449	12283	AK102	(C10-C25)	7087402	36.3
C14	5.035	-0.002	11190	3340	AK103	(C25-C36)	36073165	492.8
C16	5.707	0.004	3267	2527	OR.DIES	(C10-C28)	16362271	83.5
C18	6.318	0.004	681	133				
C20	6.904	0.000	6652	3976	JET-A	(C10-C18)	2369101	14.6
C22	7.485	0.002	34909	34936				
C24	8.045	-0.001	120276	161719				
C25	8.332	0.013	159437	386100				
C26	8.577	-0.007	169330	100501				
C28	9.097	0.003	209523	62632				
C32	10.032	0.003	261757	91098				
C34	10.454	-0.003	275210	390226				
Filter Peak	12.637	-0.006	90381	62764	CREOSOT	(C12-C22)	1706405	41.4
C36	10.873	0.002	261055	143153				
C38	11.330	0.000	214958	53639				
C40	11.881	0.001	152861	45740				
o-terph	6.518	-0.007	2459	1835				
Triacon Surr	9.577	-0.022	3480038	3443389	NAS DIES	(C10-C24)	5836700	29.9

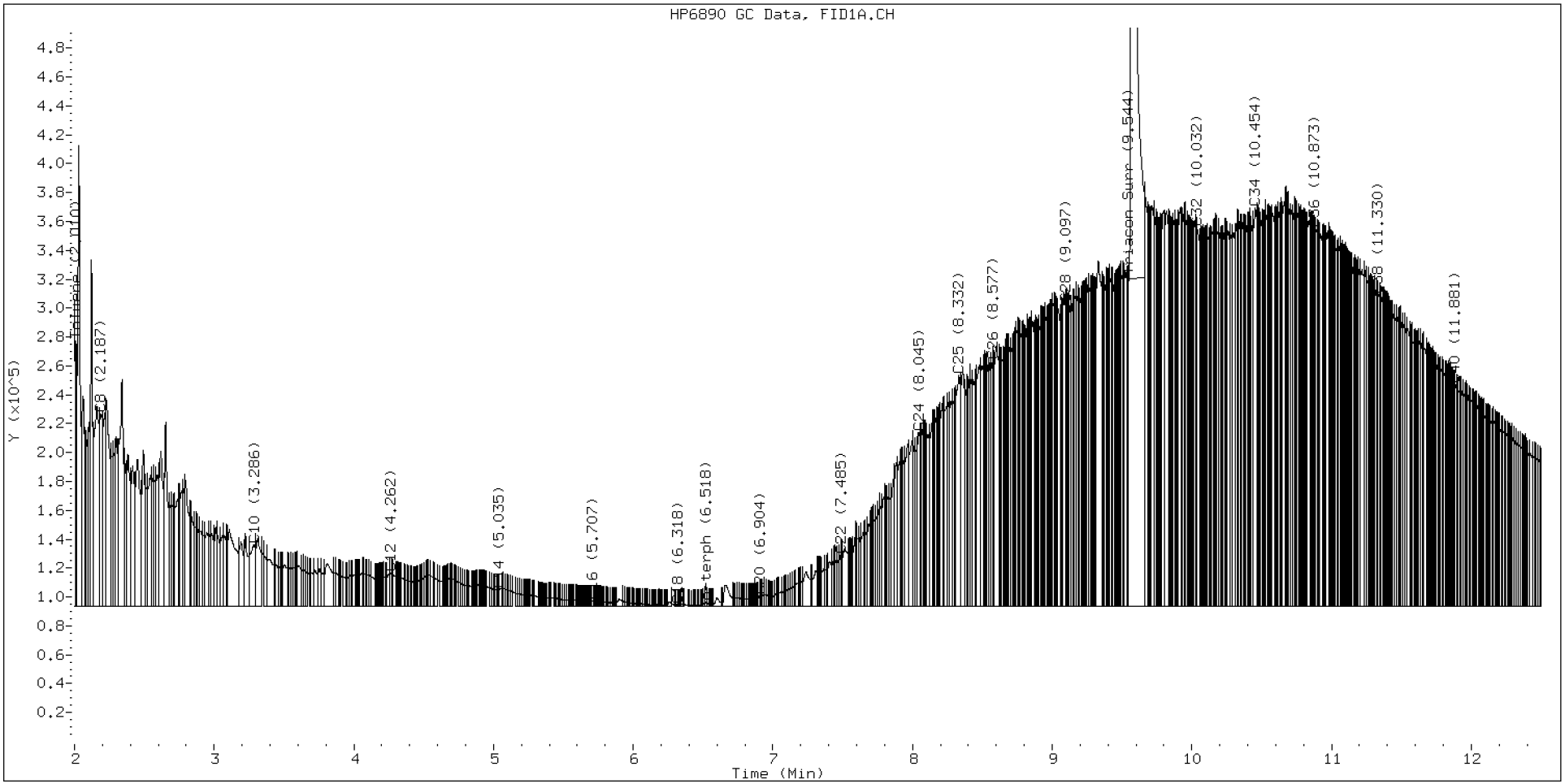
Range Times: NW Diesel(4.262 - 8.046) AK102(3.29 - 8.32) Jet A(3.29 - 6.31)
NW M.Oil(8.05 - 11.33) AK103(8.32 - 10.87) OR Diesel(3.29 - 9.09)

Surrogate	Area	Amount	
o-Terphenyl	1835	0.0	
Triacontane	3443389	19.3	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

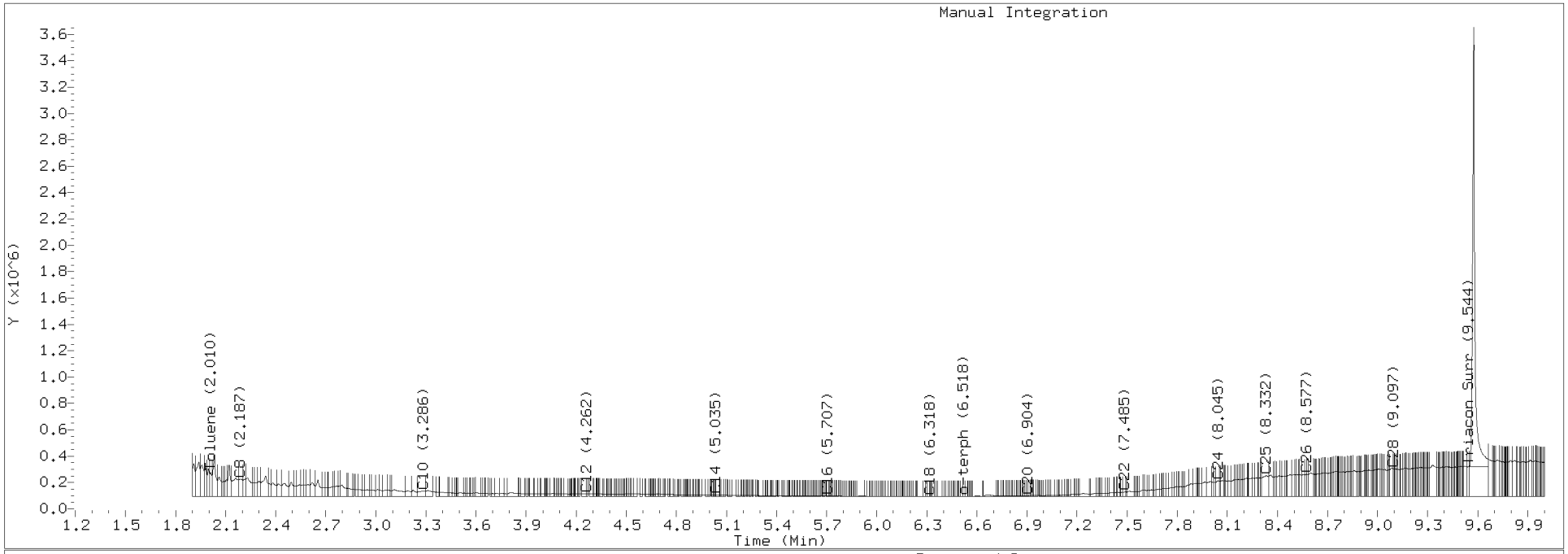
Datafile: FID4A, 20200408.b/420D0809.D SEQ-CAL3

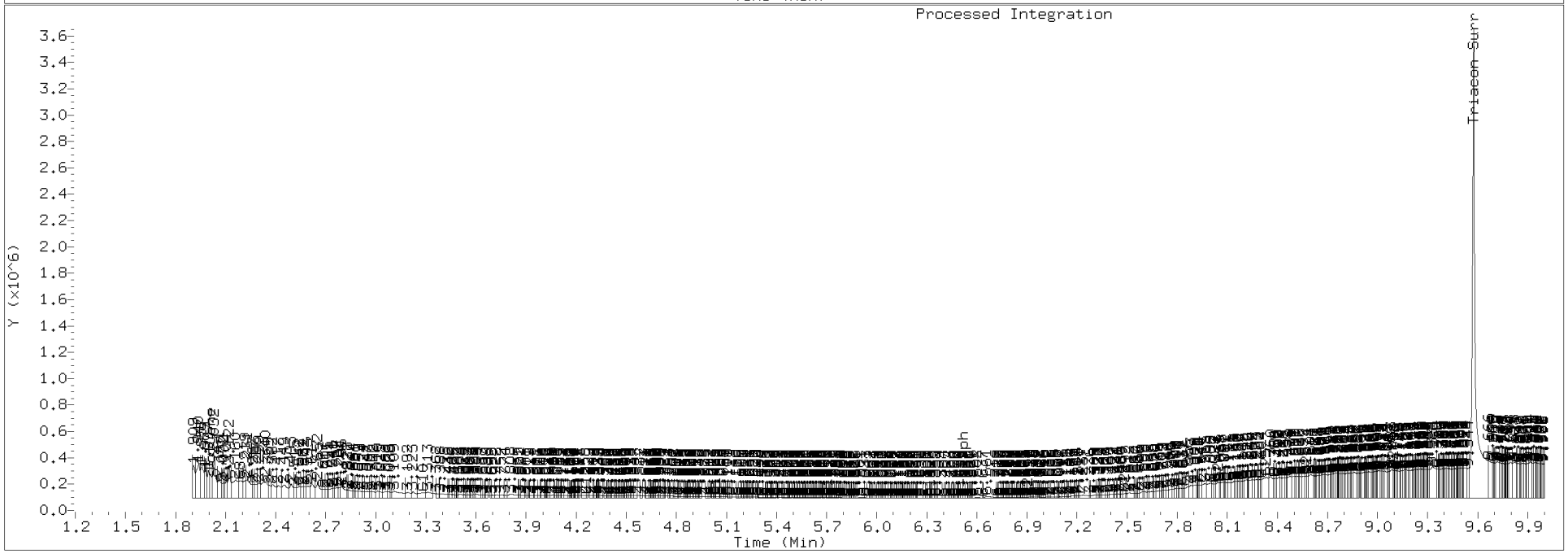


TPH Manual Integrations Report

Datafile: FID4A, 20200408.b/420D0809.D Injection: 08-APR-2020 10:53

Lab ID:SEQ-CAL3





Data File: \\target\share\chem2\fid4a.i\20200408.b\420D0810.D

Date : 08-APR-2020 11:12

Client ID:

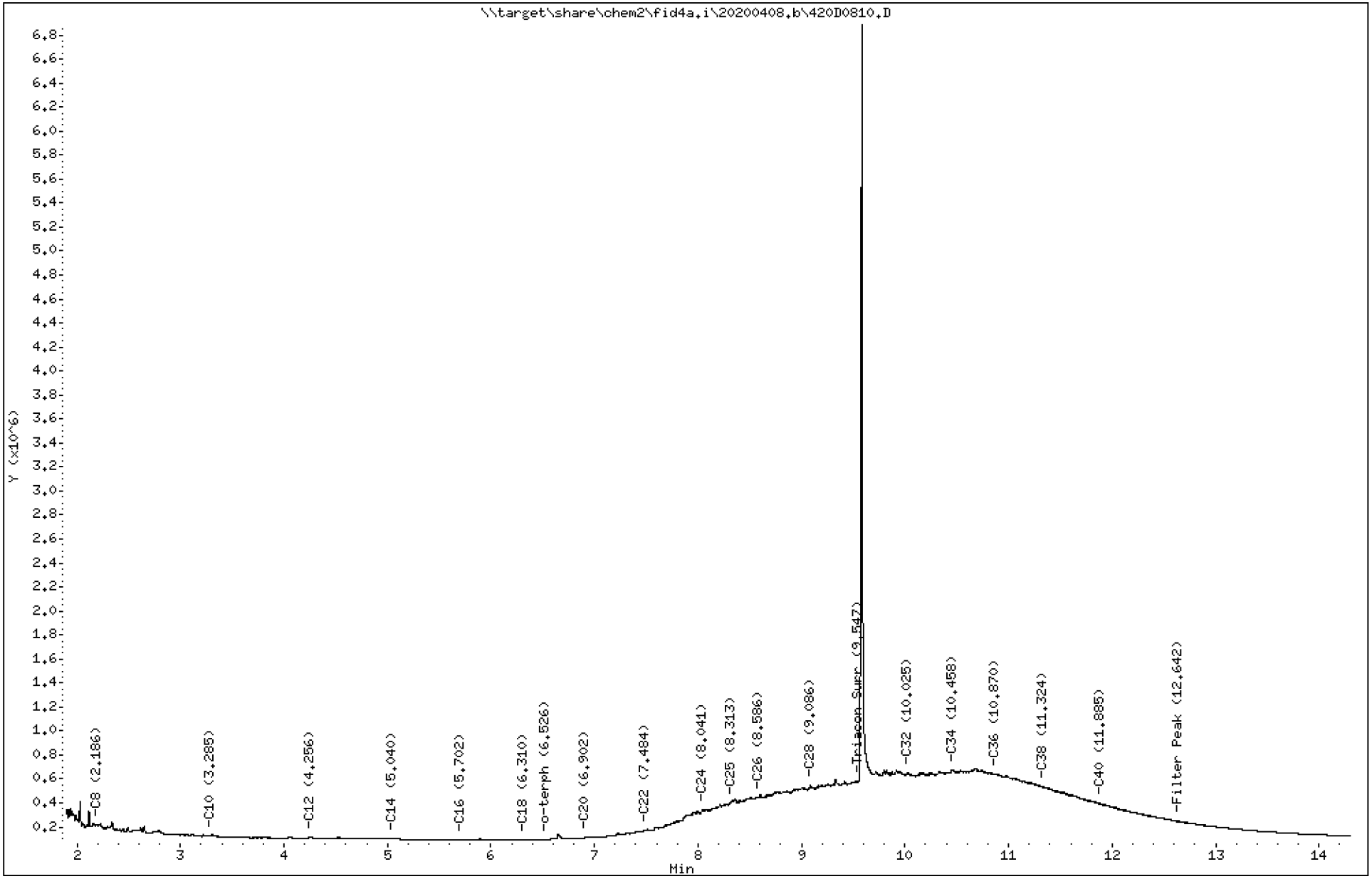
Instrument: fid4a.i

Sample Info: SEQ-CAL4

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200408.b/420D0810.D
Method: 20200408.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 04/20/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL4
Client ID:
Injection: 08-APR-2020 11:12
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.186	0.006	128234	148626	WATPHD	(C12-C24)	7988871	50.1
C10	3.285	-0.004	38172	74427	WATPHM	(C24-C38)	91762086	691.9
C12	4.256	-0.006	19290	11388	AK102	(C10-C25)	11765512	60.2
C14	5.040	0.003	8973	3968	AK103	(C25-C36)	75818758	1035.7
C16	5.702	-0.001	2111	1115	OR.DIES	(C10-C28)	31382092	160.1
C18	6.310	-0.004	1425	541				
C20	6.902	-0.002	17908	16066	JET-A	(C10-C18)	1797246	11.1
C22	7.484	0.001	76596	83679				
C24	8.041	-0.004	252638	326752				
C25	8.313	-0.005	310545	242222				
C26	8.586	0.003	355023	176377				
C28	9.086	-0.007	458742	774018				
C32	10.025	-0.004	563176	363288				
C34	10.458	0.001	584411	838839				
Filter Peak	12.642	-0.001	154787	92080	CREOSOT	(C12-C22)	2517795	61.1
C36	10.870	-0.001	551148	355915				
C38	11.324	-0.006	444543	374976				
C40	11.885	0.005	302889	255171				
o-terph	6.526	0.001	3457	1149				
Triacon Surr	9.585	-0.014	6299099	7009097	NAS DIES	(C10-C24)	9175138	47.0

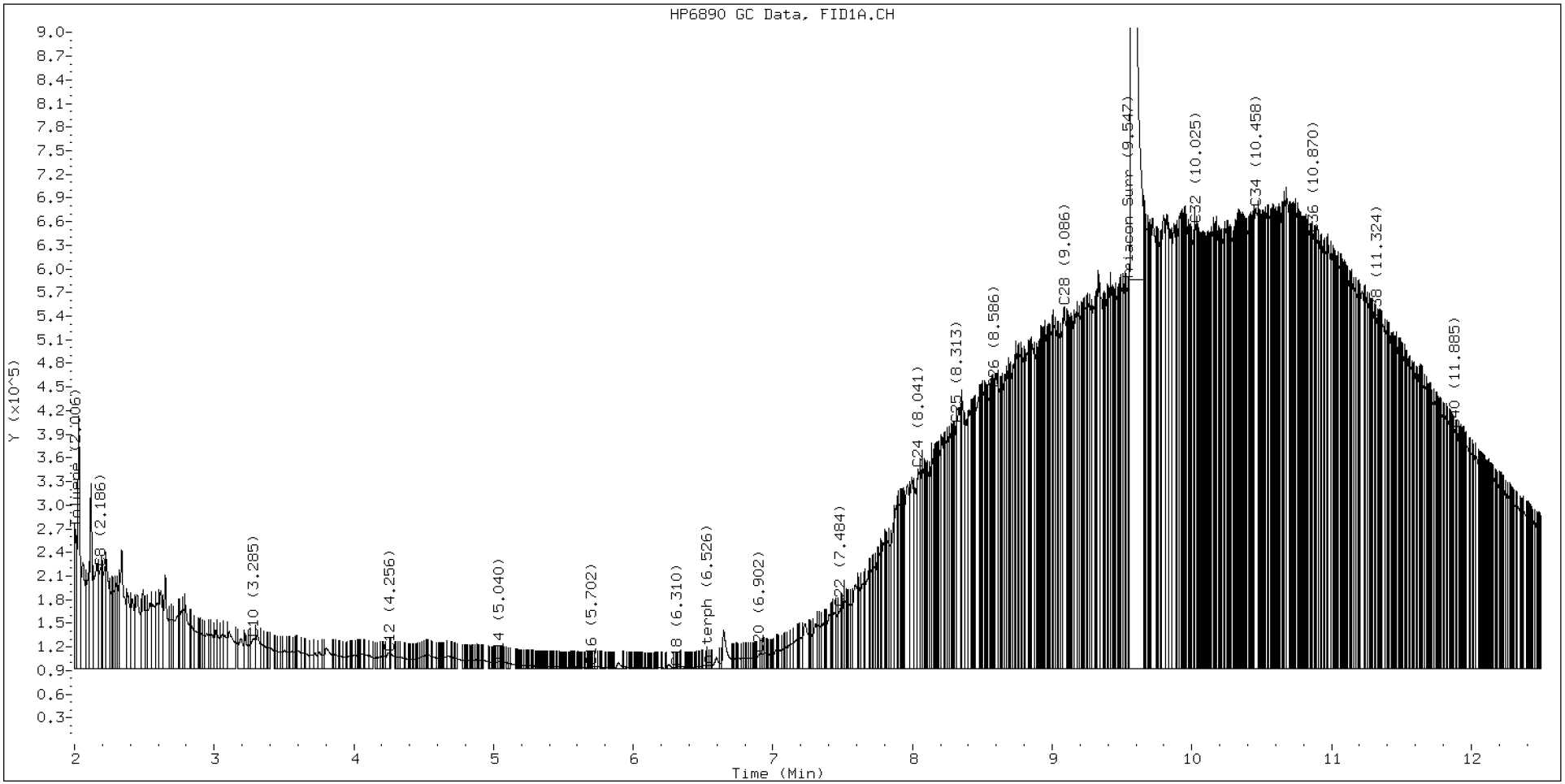
Range Times: NW Diesel(4.262 - 8.046) AK102(3.29 - 8.32) Jet A(3.29 - 6.31)
NW M.Oil(8.05 - 11.33) AK103(8.32 - 10.87) OR Diesel(3.29 - 9.09)

Surrogate	Area	Amount	
o-Terphenyl	1149	0.0	
Triacontane	7009097	39.4	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

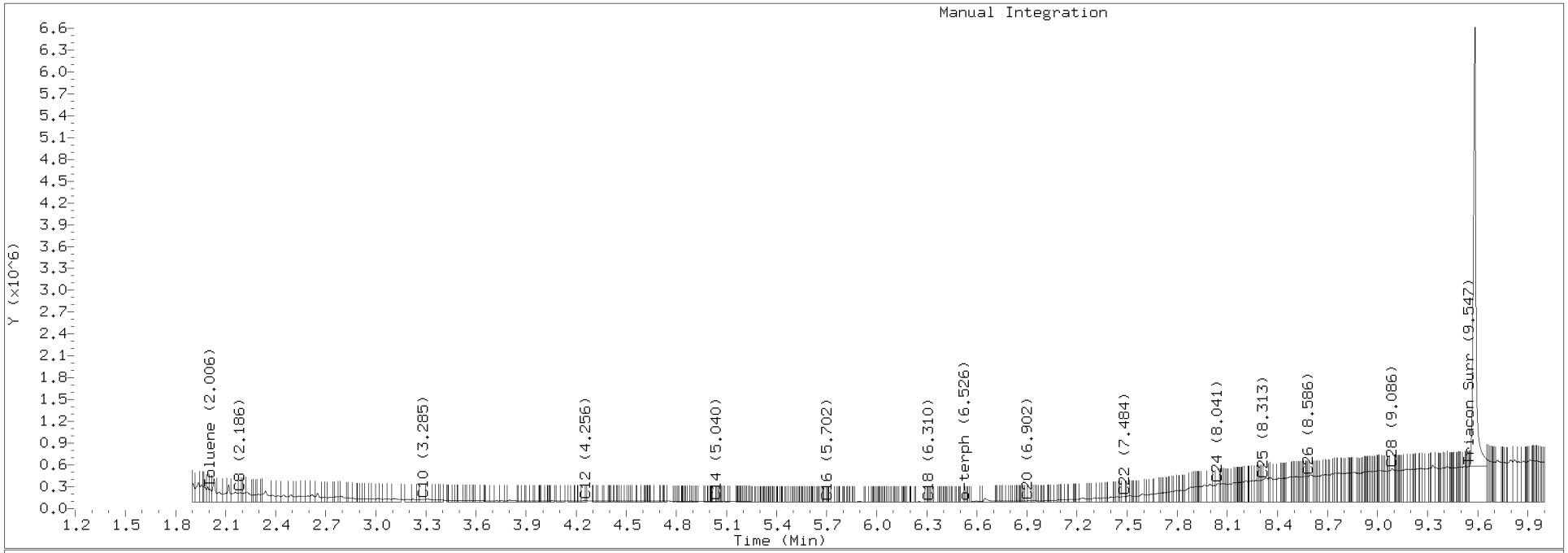
Datafile: FID4A, 20200408.b/420D0810.D SEQ-CAL4

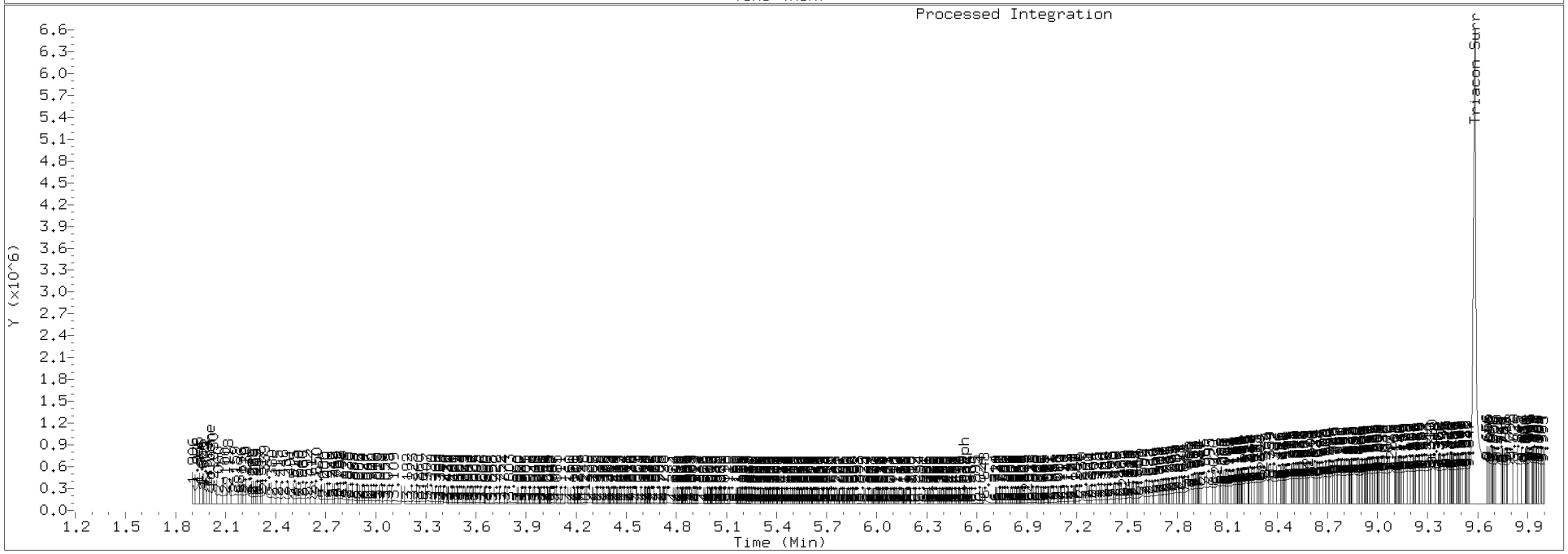


TPH Manual Integrations Report

Datafile: FID4A, 20200408.b/420D0810.D Injection: 08-APR-2020 11:12

Lab ID:SEQ-CAL4



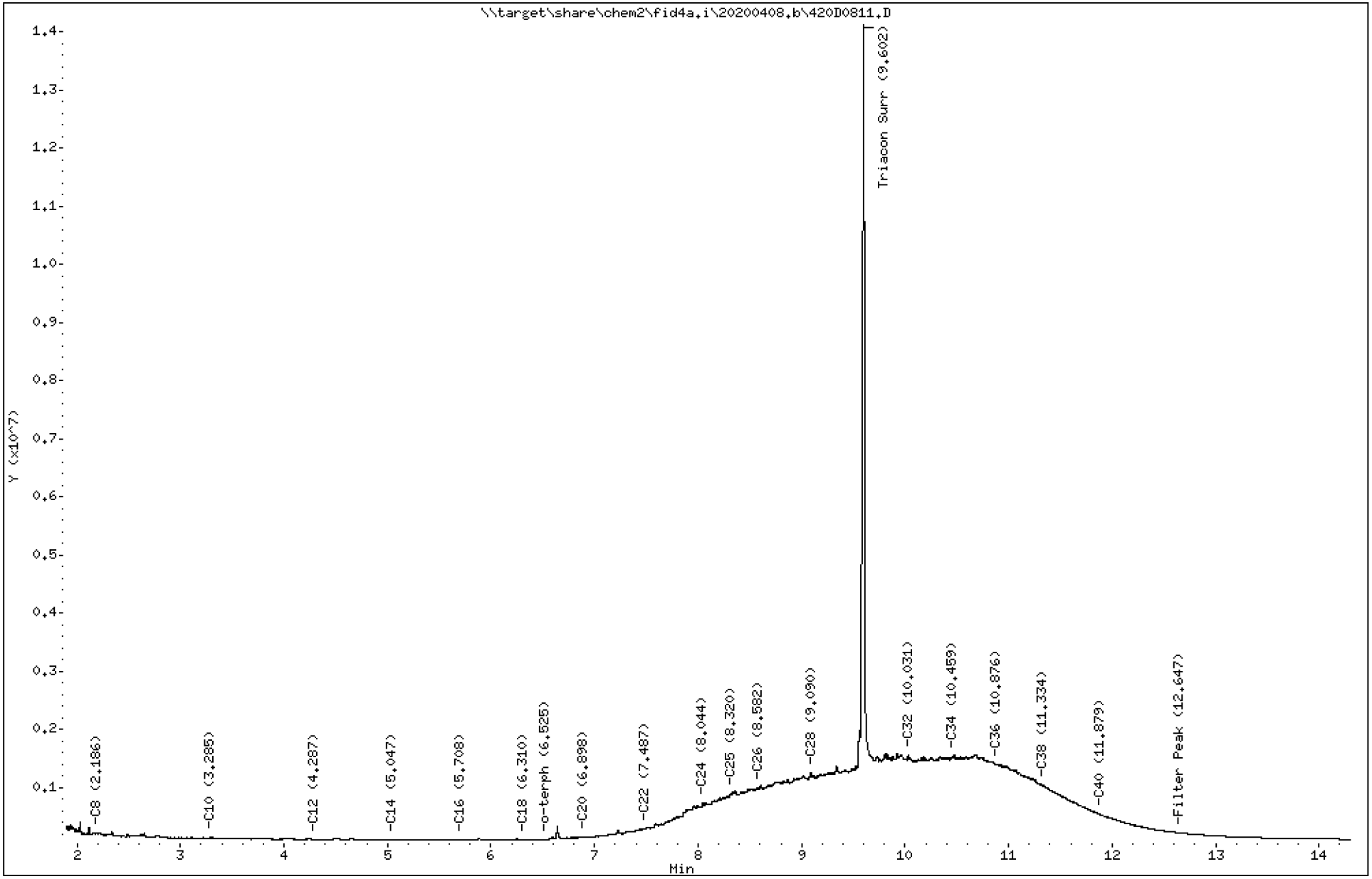


Data File: \\target\share\chem2\fid4a.i\20200408.b\420D0811.D
Date : 08-APR-2020 11:32
Client ID:
Sample Info: SEQ-CAL5

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200408.b/420D0811.D
Method: 20200408.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 04/20/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL5
Client ID:
Injection: 08-APR-2020 11:32
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.186	0.006	113560	125040	WATPHD	(C12-C24)	19771771	124.1
C10	3.285	-0.004	36541	95337	WATPHM	(C24-C38)	227849225	1717.9
C12	4.287	0.024	10394	7178	AK102	(C10-C25)	27372288	140.0
C14	5.047	0.009	4777	3830	AK103	(C25-C36)	191958289	2622.1
C16	5.708	0.004	6173	14774	OR.DIES	(C10-C28)	76383536	389.7
C18	6.310	-0.004	7574	8190				
C20	6.898	-0.006	50377	68943	JET-A	(C10-C18)	1465725	9.0
C22	7.487	0.004	195618	285006				
C24	8.044	-0.002	633495	967446				
C25	8.320	0.002	789714	921627				
C26	8.582	-0.001	892143	574635				
C28	9.090	-0.003	1146036	1667580				
C32	10.031	0.002	1460342	1849029				
C34	10.459	0.001	1442041	715490				
Filter Peak	12.647	0.004	121440	172075	CREOSOT	(C12-C22)	5678297	137.7
C36	10.876	0.004	1305970	520950				
C38	11.334	0.004	930225	554909				
C40	11.879	-0.001	446132	330870				
o-terph	6.525	-0.001	10861	10718				
Triacon Surr	9.602	0.004	12555669	16658090	NAS DIES	(C10-C24)	20733131	106.2

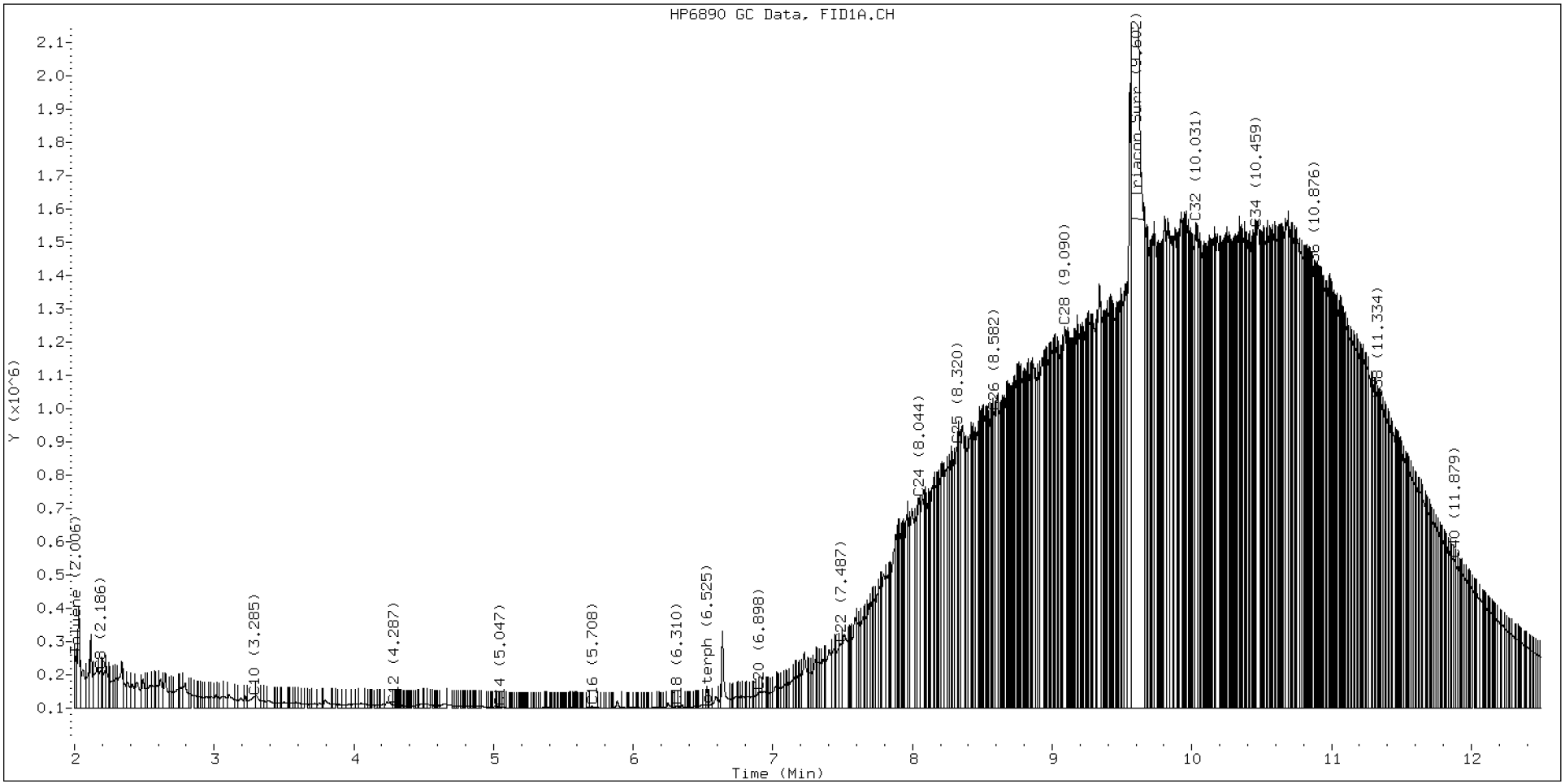
Range Times: NW Diesel(4.262 - 8.046) AK102(3.29 - 8.32) Jet A(3.29 - 6.31)
NW M.Oil(8.05 - 11.33) AK103(8.32 - 10.87) OR Diesel(3.29 - 9.09)

Surrogate	Area	Amount	
o-Terphenyl	10718	0.1	
Triacontane	16658090	93.6	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

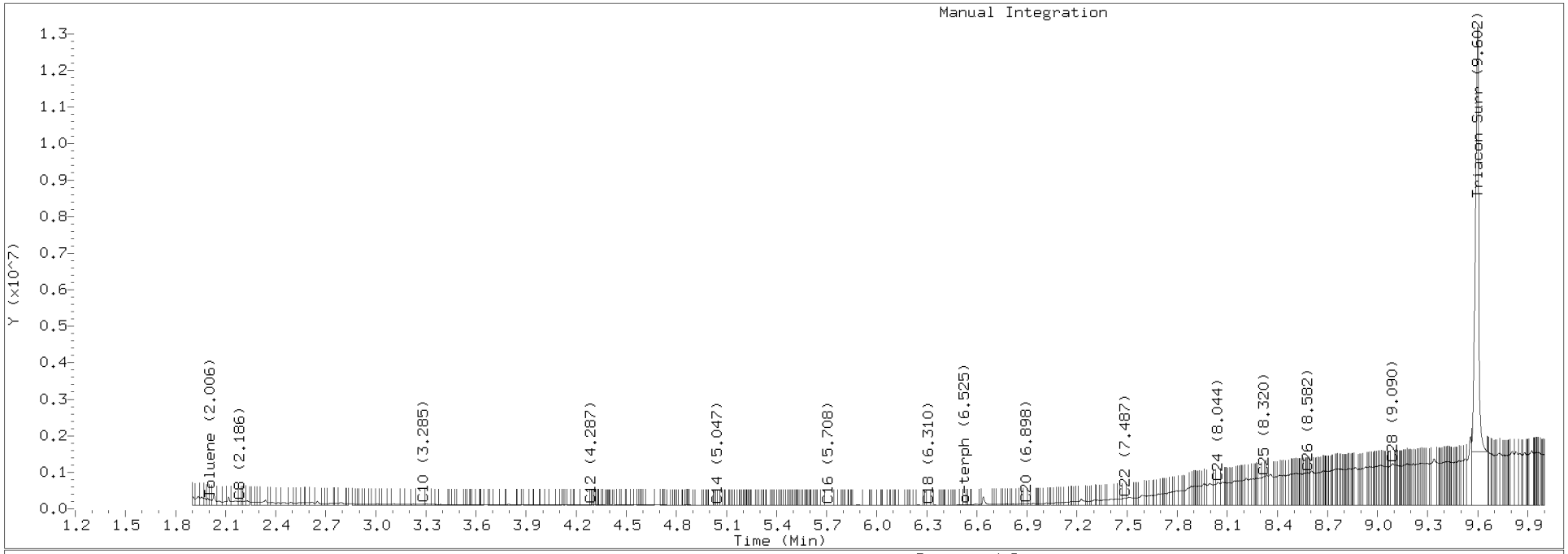
Datafile: FID4A, 20200408.b/420D0811.D SEQ-CAL5

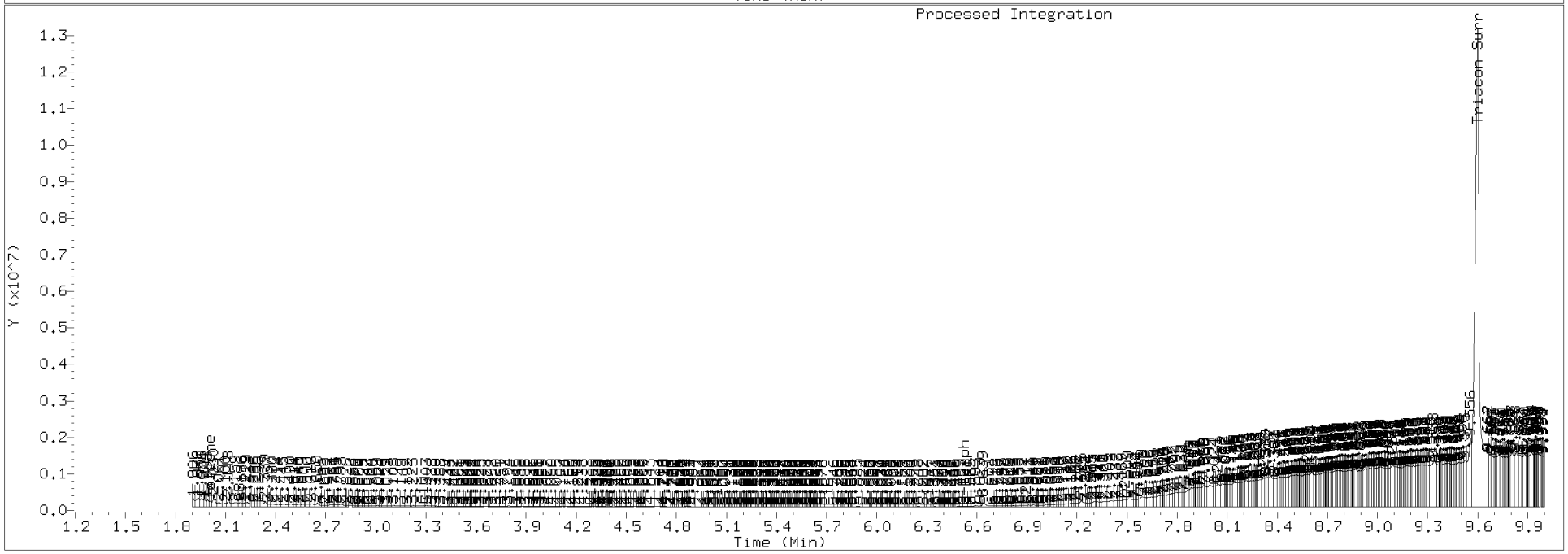


TPH Manual Integrations Report

Datafile: FID4A, 20200408.b/420D0811.D Injection: 08-APR-2020 11:32

Lab ID:SEQ-CAL5



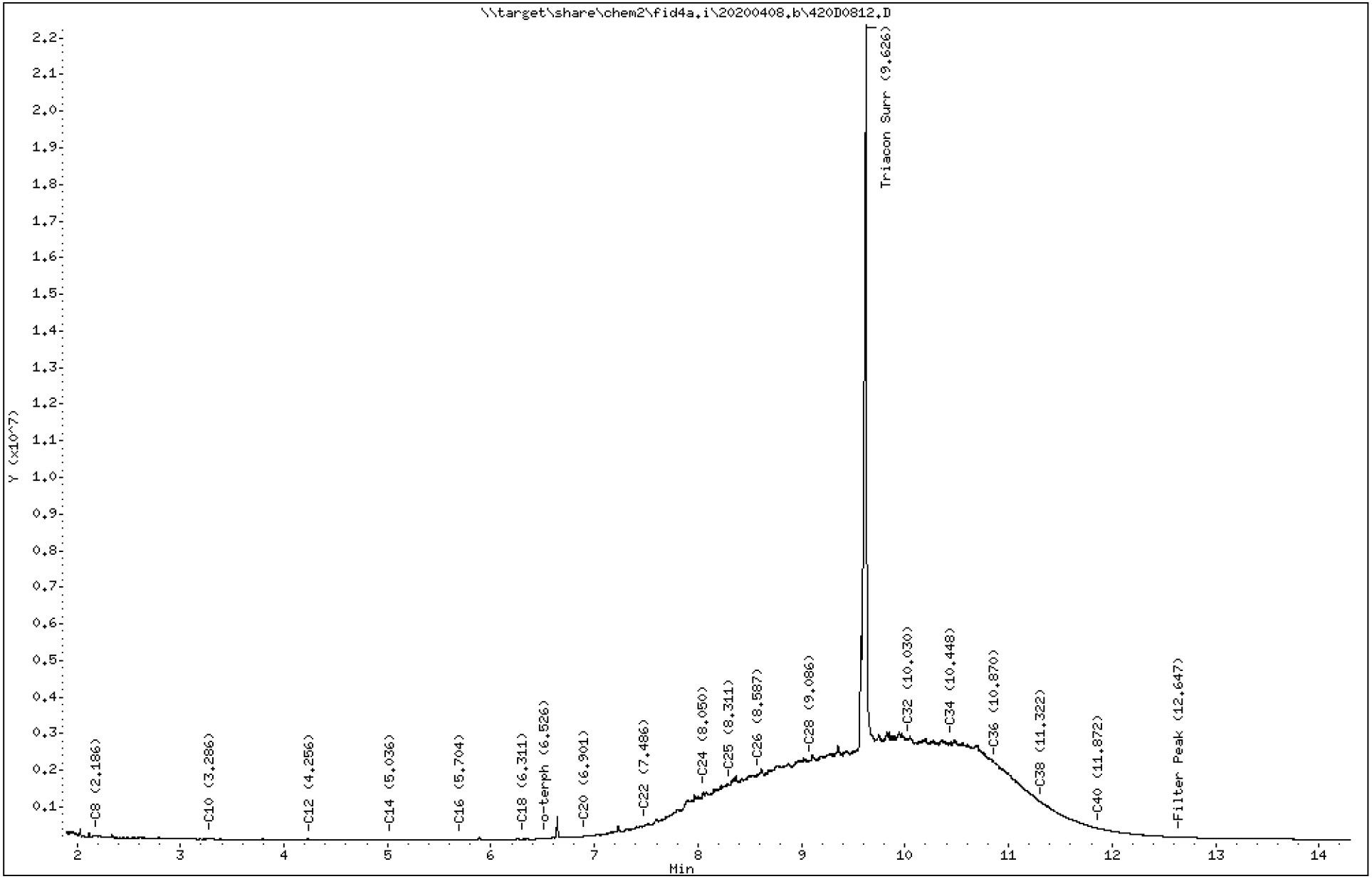


Data File: \\target\share\chem2\fid4a.i\20200408.b\420D0812.D
Date : 08-APR-2020 11:51
Client ID:
Sample Info: SEQ-CAL6

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200408.b/420D0812.D
Method: 20200408.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 04/20/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL6
Client ID:
Injection: 08-APR-2020 11:51
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.186	0.006	104064	109223	WATPHD	(C12-C24)	40416857	253.7
C10	3.286	-0.003	36956	80325	WATPHM	(C24-C38)	424850865	3203.2
C12	4.256	-0.007	12507	16346	AK102	(C10-C25)	54410917	278.3
C14	5.036	-0.001	8003	15931	AK103	(C25-C36)	374151503	5110.9
C16	5.704	0.001	16810	29811	OR.DIES	(C10-C28)	152172505	776.4
C18	6.311	-0.003	24372	26022				
C20	6.901	-0.003	112613	157357	JET-A	(C10-C18)	1722106	10.6
C22	7.486	0.002	399638	286806				
C24	8.050	0.004	1290743	1158755				
C25	8.311	-0.007	1510553	527958				
C26	8.587	0.004	1796919	714430				
C28	9.086	-0.007	2157837	862033				
C32	10.030	0.001	2725510	951638				
C34	10.448	-0.009	2673996	2899255				
Filter Peak	12.647	0.004	73309	79546	CREOSOT	(C12-C22)	11787364	285.8
C36	10.870	-0.002	2091703	1355589				
C38	11.322	-0.008	1014606	947975				
C40	11.872	-0.008	311238	395324				
o-terph	6.526	0.001	31009	30512				
Triacon Surr	9.626	0.028	19358318	32512150	NAS DIES	(C10-C24)	41151308	210.9

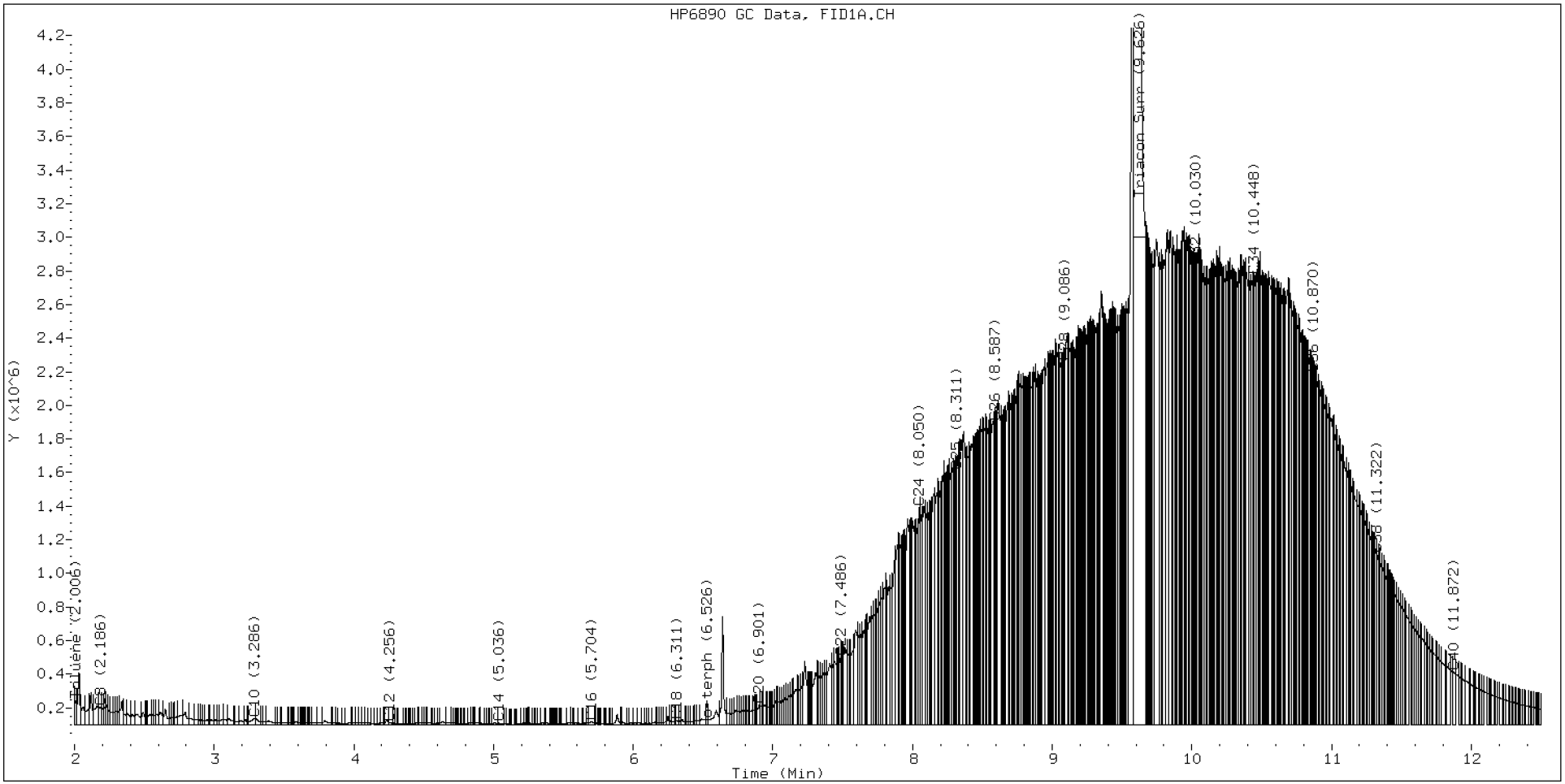
Range Times: NW Diesel(4.262 - 8.046) AK102(3.29 - 8.32) Jet A(3.29 - 6.31)
NW M.Oil(8.05 - 11.33) AK103(8.32 - 10.87) OR Diesel(3.29 - 9.09)

Surrogate	Area	Amount	
o-Terphenyl	30512	0.1	
Triacontane	32512150	182.7	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	162518.2	20-NOV-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

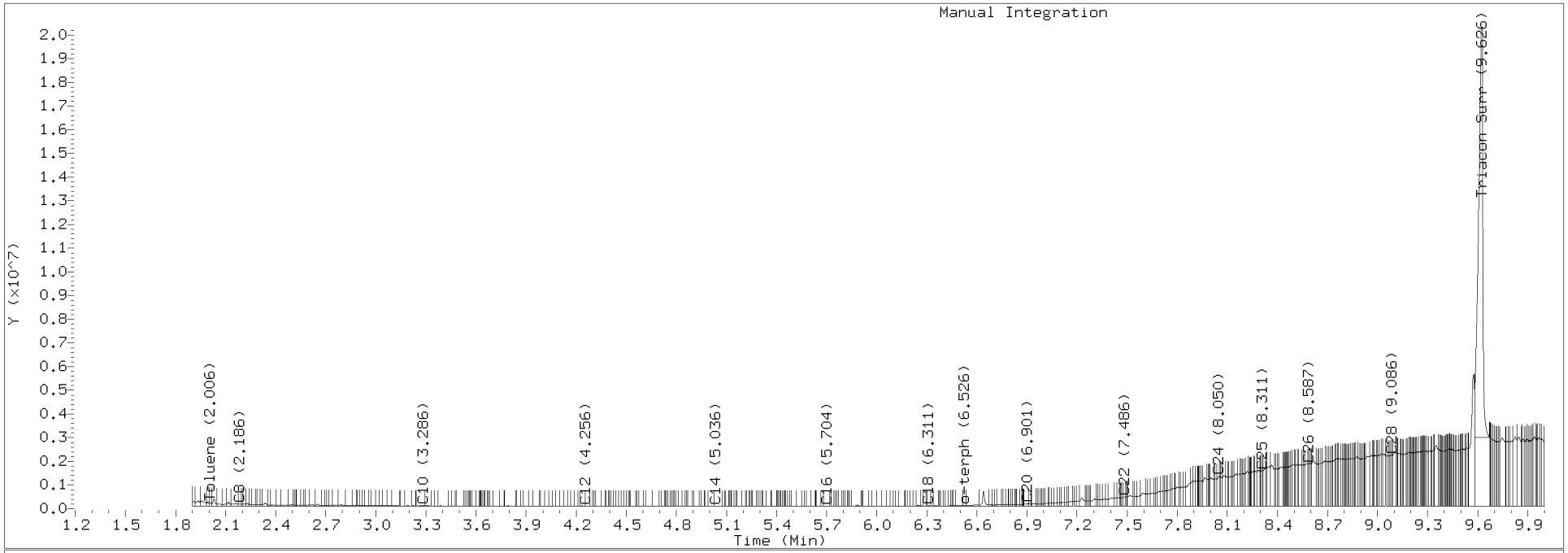
Datafile: FID4A, 20200408.b/420D0812.D SEQ-CAL6

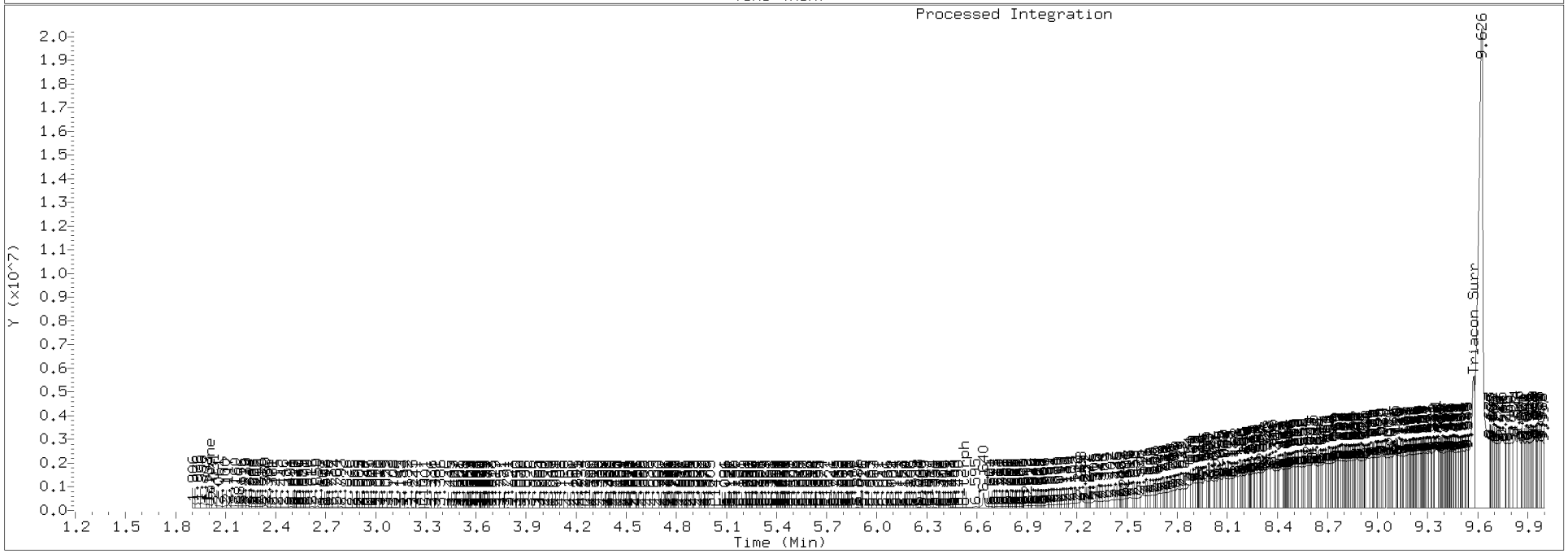


TPH Manual Integrations Report

Datafile: FID4A, 20200408.b/420D0812.D Injection: 08-APR-2020 11:51

Lab ID:SEQ-CAL6





Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIE0162

Instrument: FID4
Calibration ID: DA00022

Printed: 5/20/2020 8:39:25AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SIE0162-IBL1	QC		1		H010802			
SIE0162-IBL2	QC		2		I000651			
SIE0162-ICV1	QC		3		I002687			
SIE0162-ICV2	QC		4		H010706			
BIE0305-BLK1	QC		5					
BIE0305-BS1	QC		6					
BIE0305-BSD1	QC		7					
20E0185-01	PH NW (Extractables) low lev	A 02	8				The Boeing Company [Auburn]	
SIE0162-CCV1	QC		9		I002687			
SIE0162-CCV2	QC		10		H010706			
SIE0162-CAL1	QC		11		H011231			
BIE0254-BLK1	QC		12					
BIE0254-BS1	QC		13					
BIE0254-BSD1	QC		14					
20E0096-02	PH NW (Extractables) low lev	A 01	15				The Boeing Company	
20E0096-04	PH NW (Extractables) low lev	A 01	16				The Boeing Company	
20E0096-06	PH NW (Extractables) low lev	A 01	17				The Boeing Company	
20E0096-08	PH NW (Extractables) low lev	A 01	18				The Boeing Company	
20E0096-10	PH NW (Extractables) low lev	A 01	19				The Boeing Company	
20E0096-12	PH NW (Extractables) low lev	A 01	20				The Boeing Company	
20E0096-14	PH NW (Extractables) low lev	A 01	21				The Boeing Company	

Samples Loaded By Date

Data Processed By Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIE0162

Instrument: FID4
Calibration ID: DA00022

Printed: 5/20/2020 8:39:25AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
20E0096-16	PH NW (Extractables) low lev	A 01	22				The Boeing Company	
BIE0254-MS1	QC		23					
BIE0254-MSD1	QC		24					
SIE0162-CCV3	QC		25		I002687			
SIE0162-CCV4	QC		26		H010706			
SIE0162-CCV5	QC		27		H011231			
20E0096-18	PH NW (Extractables) low lev	A 01	28				The Boeing Company	
20E0096-20	PH NW (Extractables) low lev	A 01	29				The Boeing Company	
20E0096-22	PH NW (Extractables) low lev	A 01	30				The Boeing Company	
BIE0248-BLK1	QC		31					
BIE0248-BS1	QC		32					
BIE0248-BSD1	QC		33					
20E0096-01	PH NW (Extractables) low lev	A 01	34				The Boeing Company	
20E0096-03	PH NW (Extractables) low lev	A 01	35				The Boeing Company	
20E0096-05	PH NW (Extractables) low lev	A 01	36				The Boeing Company	
20E0096-07	PH NW (Extractables) low lev	A 01	37				The Boeing Company	
20E0096-09	PH NW (Extractables) low lev	A 01	38				The Boeing Company	
SIE0162-CCV6	QC		39		I002687			
SIE0162-CCV7	QC		40		H010706			
SIE0162-CCV8	QC		41		H011231			
20E0096-11	PH NW (Extractables) low lev	A 01	42				The Boeing Company	

Samples Loaded By Date

Data Processed By Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIE0162

Instrument: FID4
Calibration ID: DA00022

Printed: 5/20/2020 8:39:25AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
20E0096-13	PH NW (Extractables) low lev	A 01	43				The Boeing Company	
20E0096-15	PH NW (Extractables) low lev	A 01	44				The Boeing Company	
BIE0248-MS1	QC		45					
BIE0248-MSD1	QC		46					
20E0096-17	PH NW (Extractables) low lev	B 01	47				The Boeing Company	
20E0096-19	PH NW (Extractables) low lev	A 01	48				The Boeing Company	
20E0096-21	PH NW (Extractables) low lev	A 01	49				The Boeing Company	
BIE0282-BLK1	QC		50					
BIE0282-BS1	QC		51					
BIE0282-BSD1	QC		52					
20E0151-01	PH NW (Extractables) low lev	F 01	53				The Boeing Company [North Boeing Field]	
20E0160-01	PH NW (Extractables) low lev	C 01	54				Davis Wire Corporation	
SIE0162-CCV9	QC		55		I002687			
SIE0162-CCVA	QC		56		H010706			
SIE0162-CCVB	QC		57		H011231			

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200519.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	19-MAY-2020 06:44	420E1901.D	1	RINSE	
2	19-MAY-2020 07:03	420E1902.D	1	RINSE	
3	19-MAY-2020 07:23	420E1903.D	1	SIE0162-IBL1	
4	19-MAY-2020 07:42	420E1904.D	1	SIE0162-IBL2	
5	19-MAY-2020 08:02	420E1905.D	1	SIE0162-ICV1	
6	19-MAY-2020 08:21	420E1906.D	1	SIE0162-ICV2	
7	19-MAY-2020 08:41	420E1907.D	1	BIE0305-BLK1	
8	19-MAY-2020 09:00	420E1908.D	1	BIE0305-BS1	
9	19-MAY-2020 09:20	420E1909.D	1	BIE0305-BSD1	
10	19-MAY-2020 09:39	420E1910.D	1	20E0185-01	
11	19-MAY-2020 09:59	420E1911.D	1	SIE0162-CCV1	
12	19-MAY-2020 10:19	420E1912.D	1	SIE0162-CCV2	
13	19-MAY-2020 11:05	420E1913.D	1	SIE0162-CAL1	
14	19-MAY-2020 11:24	420E1914.D	1	BIE0254-BLK1	
15	19-MAY-2020 11:44	420E1915.D	1	BIE0254-BS1	
16	19-MAY-2020 12:03	420E1916.D	1	BIE0254-BSD1	
17	19-MAY-2020 12:23	420E1917.D	1	20E0096-02	
18	19-MAY-2020 12:43	420E1918.D	1	20E0096-04	
19	19-MAY-2020 13:02	420E1919.D	1	20E0096-06	
20	19-MAY-2020 13:22	420E1920.D	1	20E0096-08	
21	19-MAY-2020 13:42	420E1921.D	1	20E0096-10	
22	19-MAY-2020 14:01	420E1922.D	1	20E0096-12	
23	19-MAY-2020 14:21	420E1923.D	1	20E0096-14	
24	19-MAY-2020 14:41	420E1924.D	1	20E0096-16	
25	19-MAY-2020 15:00	420E1925.D	1	BIE0254-MS1	
26	19-MAY-2020 15:20	420E1926.D	1	BIE0254-MSD1	
27	19-MAY-2020 15:40	420E1927.D	1	SIE0162-CCV3	
28	19-MAY-2020 15:59	420E1928.D	1	SIE0162-CCV4	
29	19-MAY-2020 16:19	420E1929.D	1	SIE0162-CCV5	
30	19-MAY-2020 16:39	420E1930.D	1	20E0096-18	
31	19-MAY-2020 16:58	420E1931.D	1	20E0096-20	
32	19-MAY-2020 17:18	420E1932.D	1	20E0096-22	
33	19-MAY-2020 17:37	420E1933.D	1	BIE0248-BLK1	
34	19-MAY-2020 17:57	420E1934.D	1	BIE0248-BS1	
35	19-MAY-2020 18:16	420E1935.D	1	BIE0248-BSD1	
36	19-MAY-2020 18:36	420E1936.D	1	20E0096-01	
37	19-MAY-2020 18:55	420E1937.D	1	20E0096-03	
38	19-MAY-2020 19:15	420E1938.D	1	20E0096-05	
39	19-MAY-2020 19:34	420E1939.D	1	20E0096-07	
40	19-MAY-2020 19:54	420E1940.D	1	20E0096-09	
41	19-MAY-2020 20:13	420E1941.D	1	SIE0162-CCV6	
42	19-MAY-2020 20:33	420E1942.D	1	SIE0162-CCV7	
43	19-MAY-2020 20:52	420E1943.D	1	SIE0162-CCV8	
44	19-MAY-2020 21:12	420E1944.D	1	20E0096-11	
45	19-MAY-2020 21:31	420E1945.D	1	20E0096-13	
46	19-MAY-2020 21:50	420E1946.D	1	20E0096-15	
47	19-MAY-2020 22:10	420E1947.D	1	BIE0248-MS1	
48	19-MAY-2020 22:29	420E1948.D	1	BIE0248-MSD1	
49	19-MAY-2020 22:49	420E1949.D	1	20E0096-17	
50	20-MAY-2020 23:08	420E1950.D	1	20E0096-19	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200519.b

	Inject Date/Time	Filename	DF	LabID	ClientID
51	20-MAY-2020 23:28	420E1951.D	1	20E0096-21	
52	20-MAY-2020 23:47	420E1952.D	1	BIE0282-BLK1	
53	20-MAY-2020 00:07	420E1953.D	1	BIE0282-BS1	
54	20-MAY-2020 00:26	420E1954.D	1	BIE0282-BSD1	
55	20-MAY-2020 00:46	420E1955.D	1	20E0151-01	
56	20-MAY-2020 01:05	420E1956.D	1	20E0160-01	
57	20-MAY-2020 01:25	420E1957.D	1	SIE0162-CCV9	
58	20-MAY-2020 01:44	420E1958.D	1	SIE0162-CCVA	
59	20-MAY-2020 02:03	420E1959.D	1	SIE0162-CCVB	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200519.b

ARI Job No.: RINS Method: FID4TPH.m Instrument: fid4a.i Date: 19-MAY-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0644	420E1901.D	RINSE		1	o-terph,
0703	420E1902.D	RINSE		1	Triacon Surr,
0723	420E1903.D	SIE0162-IBL1		1	NO MANUAL INTEGRATION
0742	420E1904.D	SIE0162-IBL2		1	NO MANUAL INTEGRATION
0802	420E1905.D	SIE0162-ICV1		1	o-terph,
0821	420E1906.D	SIE0162-ICV2		1	Triacon Surr,
0841	420E1907.D	BIE0305-BLK1		1	NO MANUAL INTEGRATION
0900	420E1908.D	BIE0305-BS1		1	o-terph,
0920	420E1909.D	BIE0305-BSD1		1	o-terph,
0939	420E1910.D	20E0185-01		1	NO MANUAL INTEGRATION
0959	420E1911.D	SIE0162-CCV1		1	o-terph,
1019	420E1912.D	SIE0162-CCV2		1	Triacon Surr,
1105	420E1913.D	SIE0162-CAL1		1	NO MANUAL INTEGRATION
1124	420E1914.D	BIE0254-BLK1		1	NO MANUAL INTEGRATION
1144	420E1915.D	BIE0254-BS1		1	o-terph,
1203	420E1916.D	BIE0254-BSD1		1	o-terph,
1223	420E1917.D	20E0096-02		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200519.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1243	420E1918.D	20E0096-04		1	NO MANUAL INTEGRATION
1302	420E1919.D	20E0096-06		1	NO MANUAL INTEGRATION
1322	420E1920.D	20E0096-08		1	NO MANUAL INTEGRATION
1342	420E1921.D	20E0096-10		1	NO MANUAL INTEGRATION
1401	420E1922.D	20E0096-12		1	o-terph,
1421	420E1923.D	20E0096-14		1	NO MANUAL INTEGRATION
1441	420E1924.D	20E0096-16		1	NO MANUAL INTEGRATION
1500	420E1925.D	BIE0254-MS1		1	o-terph,
1520	420E1926.D	BIE0254-MSD1		1	o-terph,
1540	420E1927.D	SIE0162-CCV3		1	o-terph,
1559	420E1928.D	SIE0162-CCV4		1	Triacon Surr,
1619	420E1929.D	SIE0162-CCV5		1	NO MANUAL INTEGRATION
1639	420E1930.D	20E0096-18		1	NO MANUAL INTEGRATION
1658	420E1931.D	20E0096-20		1	NO MANUAL INTEGRATION
1718	420E1932.D	20E0096-22		1	NO MANUAL INTEGRATION
1737	420E1933.D	BIE0248-BLK1		1	NO MANUAL INTEGRATION
1757	420E1934.D	BIE0248-BS1		1	o-terph,
1816	420E1935.D	BIE0248-BSD1		1	o-terph,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200519.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1836	420E1936.D	20E0096-01		1	NO MANUAL INTEGRATION
1855	420E1937.D	20E0096-03		1	NO MANUAL INTEGRATION
1915	420E1938.D	20E0096-05		1	o-terph,
1934	420E1939.D	20E0096-07		1	NO MANUAL INTEGRATION
1954	420E1940.D	20E0096-09		1	NO MANUAL INTEGRATION
2013	420E1941.D	SIE0162-CCV6		1	o-terph,
2033	420E1942.D	SIE0162-CCV7		1	Triacon Surr,
2052	420E1943.D	SIE0162-CCV8		1	NO MANUAL INTEGRATION
2112	420E1944.D	20E0096-11		1	o-terph,
2131	420E1945.D	20E0096-13		1	NO MANUAL INTEGRATION
2150	420E1946.D	20E0096-15		1	NO MANUAL INTEGRATION
2210	420E1947.D	BIE0248-MS1		1	o-terph,
2229	420E1948.D	BIE0248-MSD1		1	o-terph,
2249	420E1949.D	20E0096-17		1	NO MANUAL INTEGRATION
2308	420E1950.D	20E0096-19		1	o-terph,
2328	420E1951.D	20E0096-21		1	NO MANUAL INTEGRATION
2347	420E1952.D	BIE0282-BLK1		1	NO MANUAL INTEGRATION
0007	420E1953.D	BIE0282-BS1		1	o-terph,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200519.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0026	420E1954.D	BIE0282-BSD1		1	o-terph,
0046	420E1955.D	20E0151-01		1	NO MANUAL INTEGRATION
0105	420E1956.D	20E0160-01		1	o-terph,
0125	420E1957.D	SIE0162-CCV9		1	o-terph,
0144	420E1958.D	SIE0162-CCVA		1	Triacon Surr,
0203	420E1959.D	SIE0162-CCVB		1	NO MANUAL INTEGRATION

Security Status Report

Date: 20-May-2020 08:42

420E1901.D	Data Locked	christopher, 19-May-2020 11:37
420E1902.D	Data Locked	christopher, 19-May-2020 11:37
420E1903.D	Data Locked	christopher, 20-May-2020 08:20
420E1904.D	Data Locked	christopher, 19-May-2020 11:37
420E1905.D	Data Locked	christopher, 19-May-2020 11:37
420E1906.D	Data Locked	christopher, 19-May-2020 11:37
420E1907.D	Data Locked	christopher, 19-May-2020 11:37
420E1908.D	Data Locked	christopher, 19-May-2020 11:37
420E1909.D	Data Locked	christopher, 19-May-2020 11:37
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420E1911.D	Data Locked	christopher, 19-May-2020 11:37
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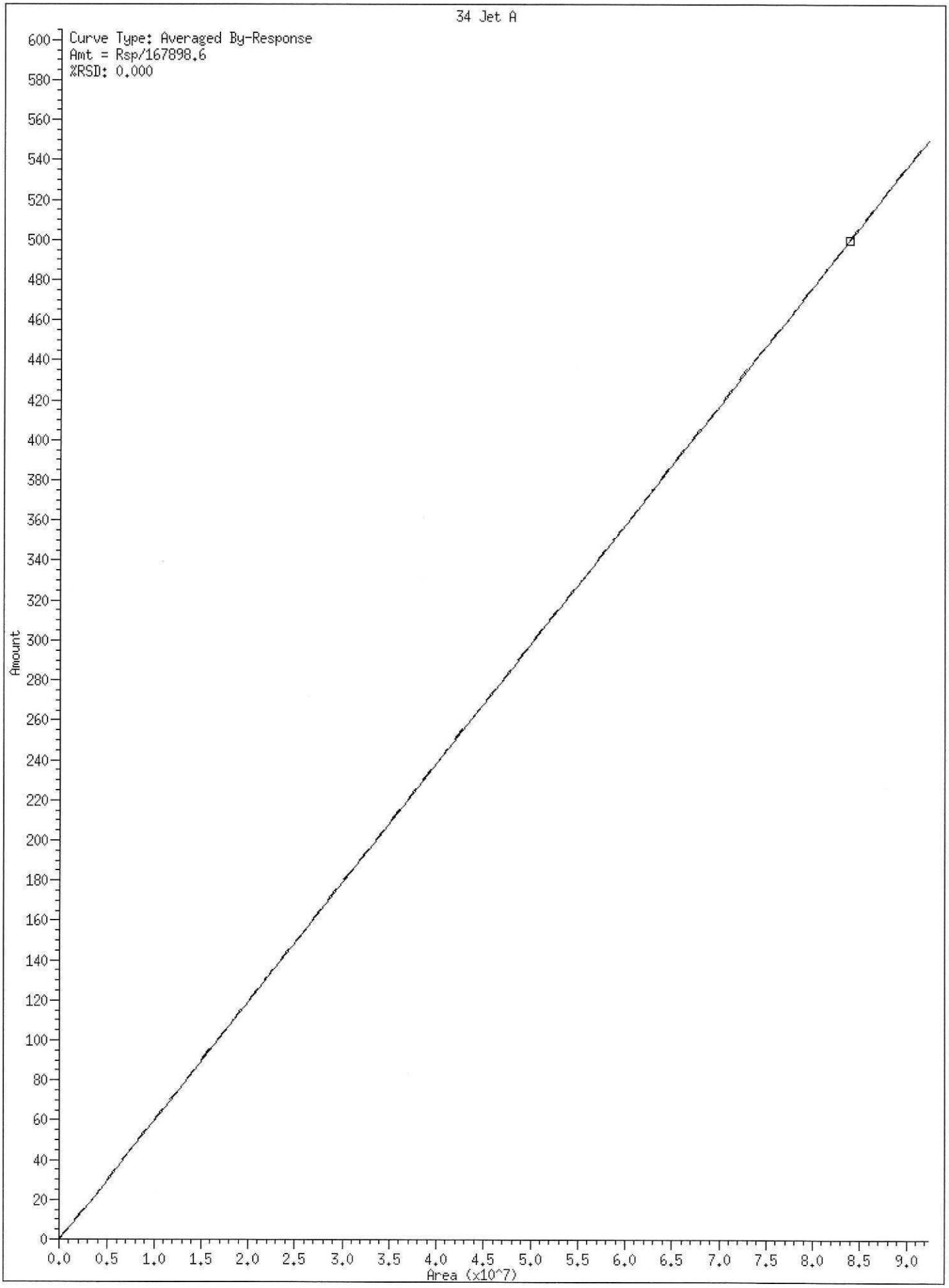
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Amount
Area (x10^7)

Data File: \\target\share\chem2\fid4a.i\20200519.b\420E1913.D

Date : 19-MAY-2020 11:05

Client ID:

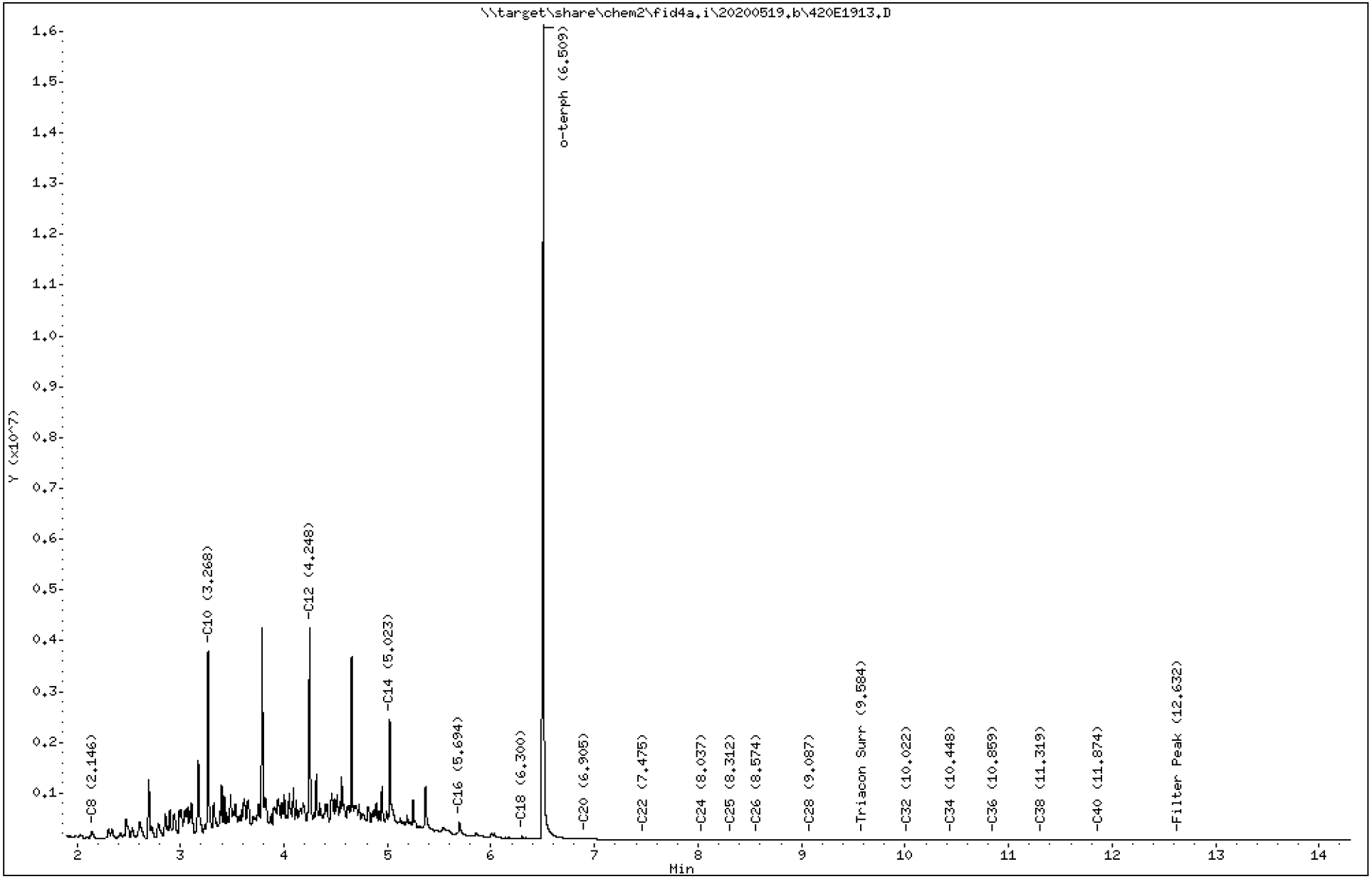
Instrument: fid4a.i

Sample Info: SIE0162-CAL1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200519.b/420E1913.D
Method: 20200519.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 05/20/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIE0162-CAL1
Client ID:
Injection: 19-MAY-2020 11:05
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.146	-0.014	162537	351667	WATPHD	(C12-C24)	43793314	274.8
C10	3.268	-0.006	3727060	3670074	WATPHM	(C24-C38)	298844	2.3
C12	4.248	-0.001	4175422	4596909	AK102	(C10-C25)	84977552	434.7
C14	5.023	-0.002	2366943	3478731	AK103	(C25-C36)	181563	2.5
C16	5.694	0.002	346661	872220	OR.DIES	(C10-C28)	85015601	433.8
C18	6.300	-0.002	67502	81701				
C20	6.905	0.012	18076	12457	JET-A	(C10-C18)	83949325	500.0
C22	7.475	0.003	7015	3124				
C24	8.037	0.002	2567	632				
C25	8.312	0.005	1720	641				
C26	8.574	0.002	577	179				
C28	9.087	0.004	278	137				
C32	10.022	0.002	985	413				
C34	10.448	-0.000	2249	1187				
Filter Peak	12.632	0.002	3646	2855	CREOSOT	(C12-C22)	43649163	1058.5
C36	10.859	-0.001	3434	1815				
C38	11.319	0.004	4203	2291				
C40	11.874	0.007	4118	1219				
o-terph	6.509	-0.003	16049011	17223619				
Triacon Surr	9.584	-0.003	924	375	NAS DIES	(C10-C24)	84956580	435.3

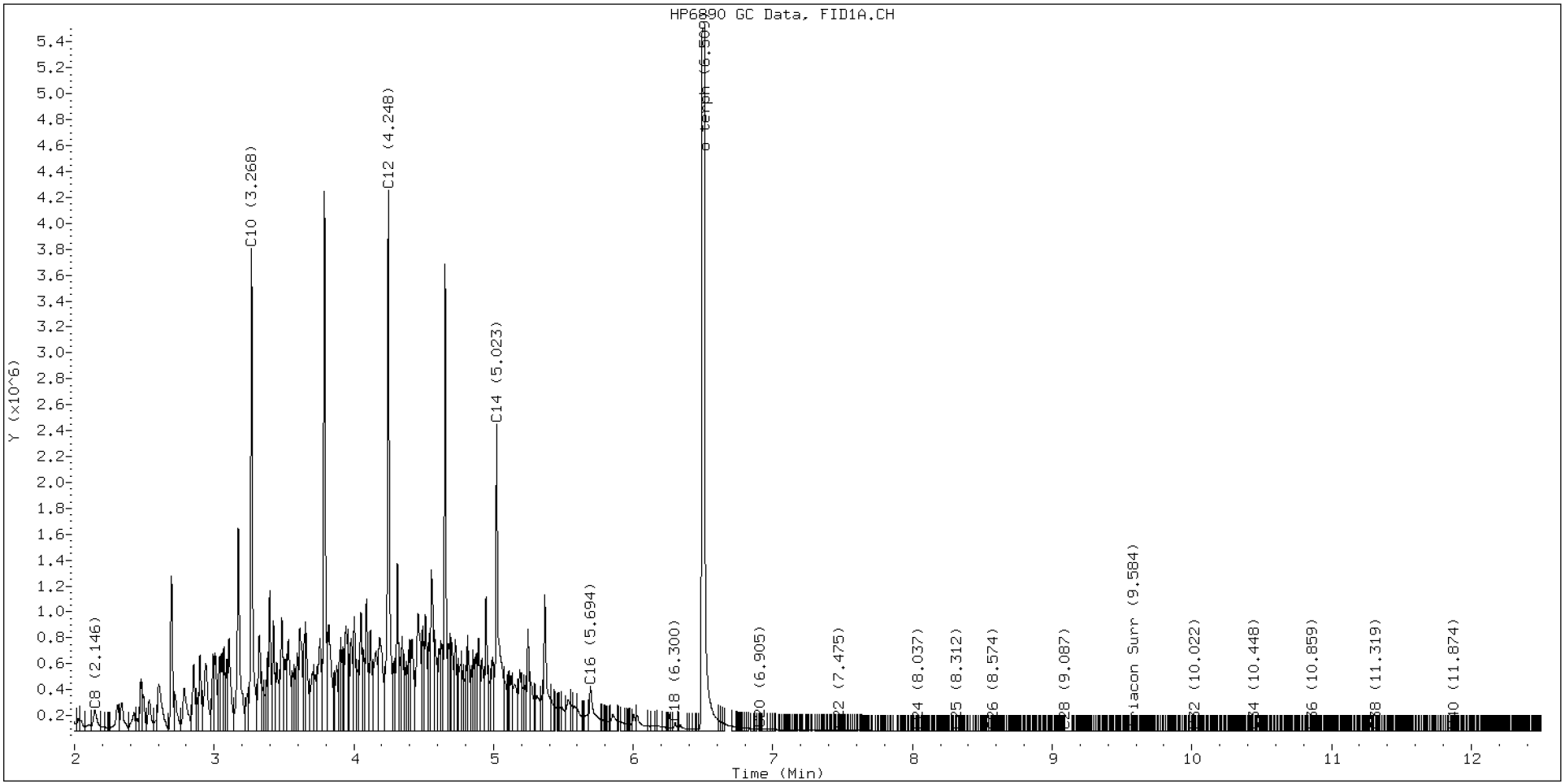
Range Times: NW Diesel(4.249 - 8.035) AK102(3.27 - 8.31) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.32) AK103(8.31 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount
o-Terphenyl	17223619	84.1
Triacontane	375	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200519.b/420E1913.D SIE0162-CAL1



Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIF0018

Instrument: FID4
Calibration ID: DA00022

Printed: 6/2/2020 12:49:08PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SIF0018-IBL1	QC		1		H010802			
SIF0018-IBL2	QC		2		I000651			
SIF0018-CAL1	QC		3		I004752			
SIF0018-CAL2	QC		4		I004753			
SIF0018-CAL3	QC		5		I004754			
SIF0018-CAL4	QC		6		I004755			
SIF0018-CAL5	QC		7		I004756			
SIF0018-CAL6	QC		8		I003778			
SIF0018-SCV1	QC		9		I004757			

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200602.b

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2	02-JUN-2020 07:59	420F0202.D	1	RINSE	
3	02-JUN-2020 08:19	420F0203.D	1	SIF0018-IBL1	
4	02-JUN-2020 08:38	420F0204.D	1	SIF0018-IBL2	
5	02-JUN-2020 08:58	420F0205.D	1	SIF0018-CAL1	
6	02-JUN-2020 09:17	420F0206.D	1	SIF0018-CAL2	
7	02-JUN-2020 09:37	420F0207.D	1	SIF0018-CAL3	
8	02-JUN-2020 09:56	420F0208.D	1	SIF0018-CAL4	
9	02-JUN-2020 10:16	420F0209.D	1	SIF0018-CAL5	
10	02-JUN-2020 10:36	420F0210.D	1	SIF0018-CAL6	
11	02-JUN-2020 10:55	420F0211.D	1	SIF0018-SCV1	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200602.b

ARI Job No.: RINS Method: FID4TPH.m Instrument: fid4a.i Date: 02-JUN-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0740	420F0201.D	RINSE		1	NO MANUAL INTEGRATION
0759	420F0202.D	RINSE		1	NO MANUAL INTEGRATION
0819	420F0203.D	SIF0018-IBL1		1	NO MANUAL INTEGRATION
0838	420F0204.D	SIF0018-IBL2		1	NO MANUAL INTEGRATION
0858	420F0205.D	SIF0018-CAL1		1	Triacon Surr,
0917	420F0206.D	SIF0018-CAL2		1	Triacon Surr,
0937	420F0207.D	SIF0018-CAL3		1	Triacon Surr,
0956	420F0208.D	SIF0018-CAL4		1	Triacon Surr,
1016	420F0209.D	SIF0018-CAL5		1	Triacon Surr,
1036	420F0210.D	SIF0018-CAL6		1	Triacon Surr,
1055	420F0211.D	SIF0018-SCV1		1	Triacon Surr,

Security Status Report

Date: 02-Jun-2020 12:52

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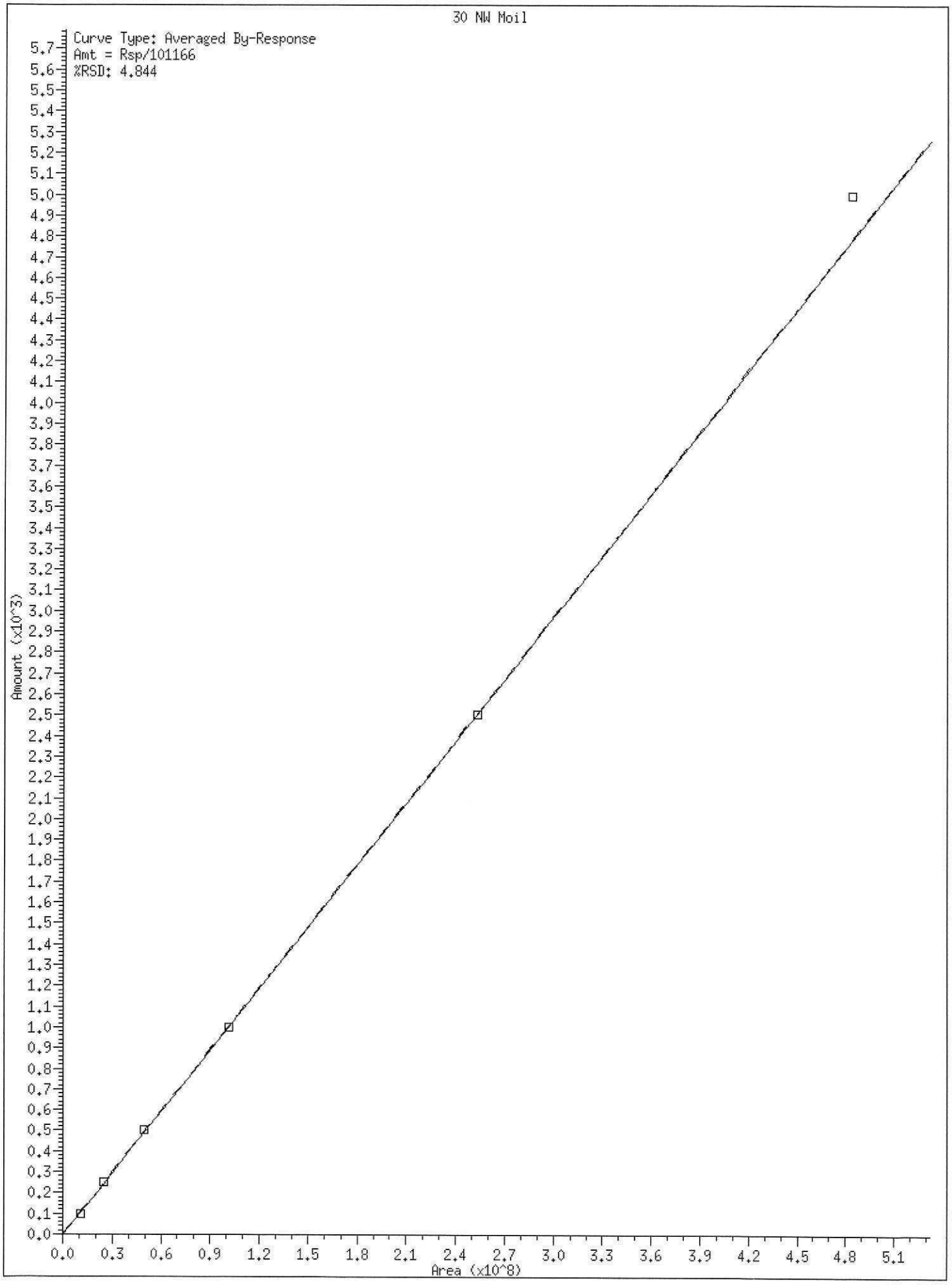
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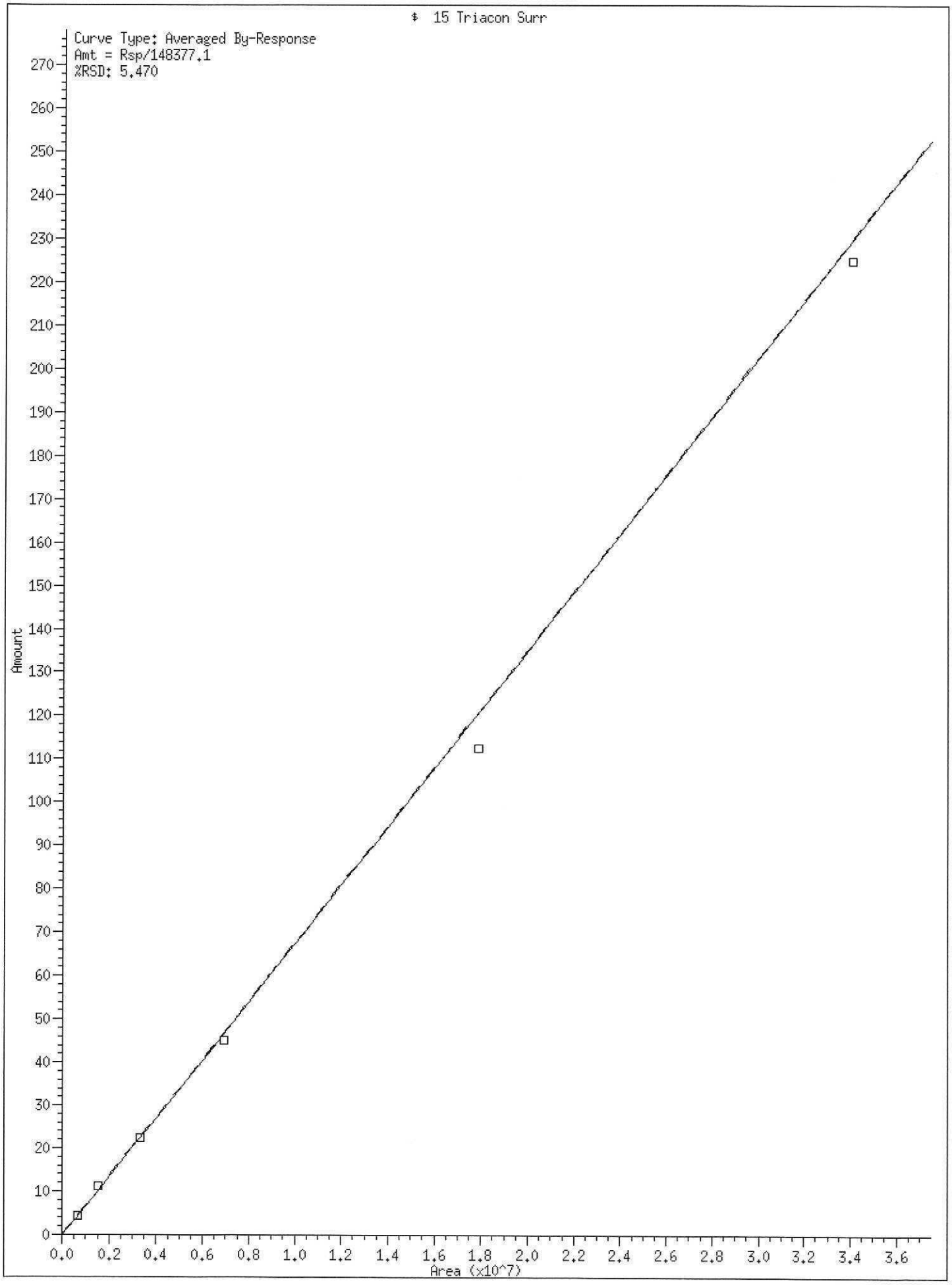
Area (x10^8)


$ 15 Triacon Surr
Curve Type: Averaged By-Response
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%RSD: 5.470
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Area (x10^7)

Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0203.D

Date : 02-JUN-2020 08:19

Client ID:

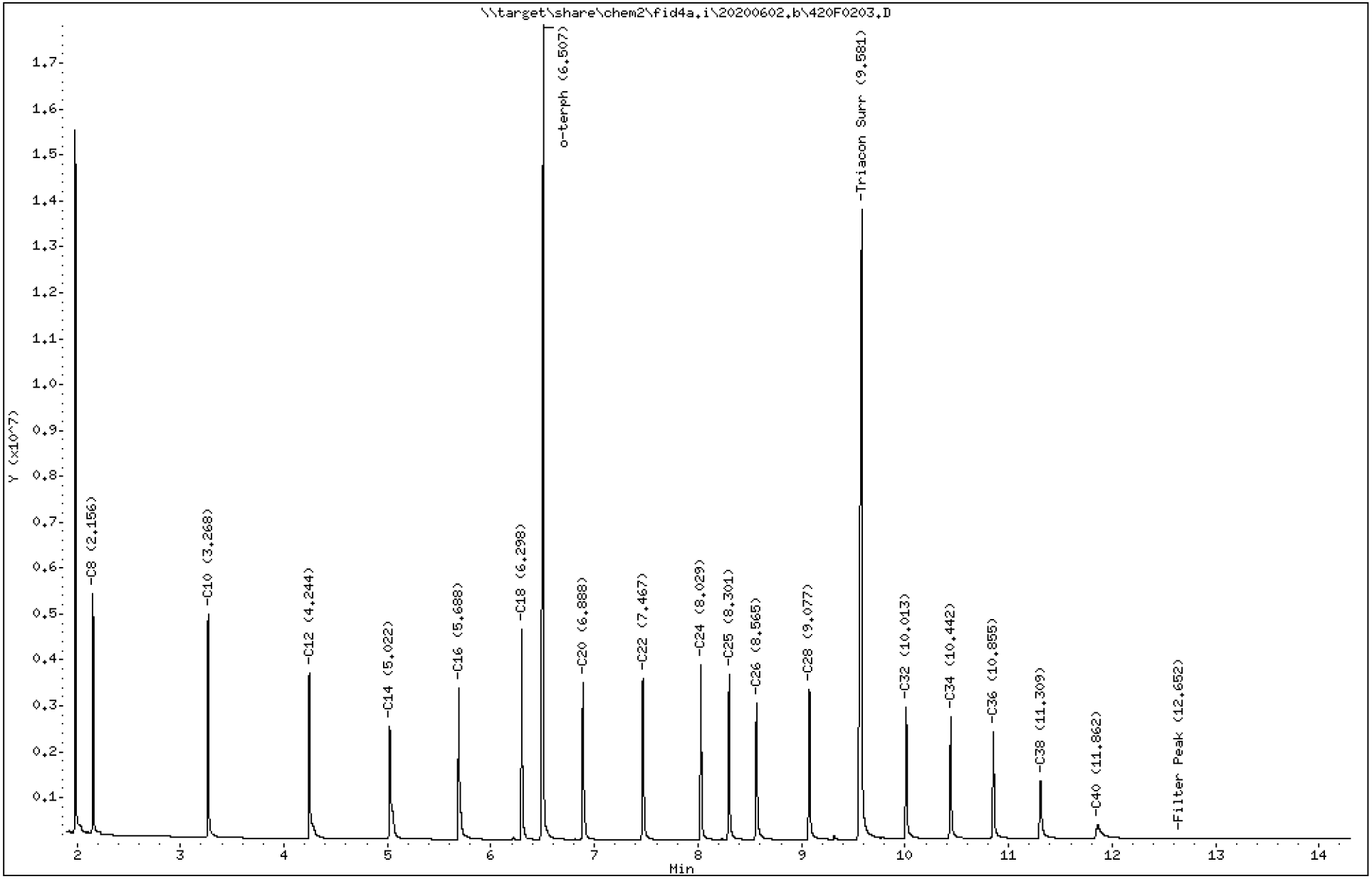
Instrument: fid4a.i

Sample Info: SIF0018-IBL1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0203.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-IBL1
Client ID:
Injection: 02-JUN-2020 08:19
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.156	0.000	5355192	4028421	WATPHD	(C12-C24)	22818714	143.2
C10	3.268	0.000	4929332	4012342	WATPHM	(C24-C38)	23499770	232.3
C12	4.244	0.000	3648375	2898492	AK102	(C10-C25)	32299571	165.2
C14	5.022	0.000	2469047	2611753	AK103	(C25-C36)	20714599	283.0
C16	5.688	0.000	3293885	3376329	OR.DIES	(C10-C28)	42576768	217.2
C18	6.298	0.000	4585796	3403299				
C20	6.888	0.000	3419868	3390012	JET-A	(C10-C18)	21587777	128.6
C22	7.467	0.000	3501351	3461600				
C24	8.029	0.000	3816488	3373518				
C25	8.301	0.000	3598800	3438765				
C26	8.565	0.000	2983968	3399421				
C28	9.077	0.000	3266476	3362299				
C32	10.013	0.000	2880768	3301828				
C34	10.442	0.000	2669792	3096709				
Filter Peak	12.652	0.000	21186	7385	CREOSOT	(C12-C22)	19416290	470.8
C36	10.855	0.000	2366492	3017794				
C38	11.309	0.000	1282280	2537029				
C40	11.862	0.000	332084	1739109				
o-terph	6.507	0.000	17759087	19250772				
Triacon Surr	9.581	0.000	13722128	19528338	NAS DIES	(C10-C24)	32267307	165.3

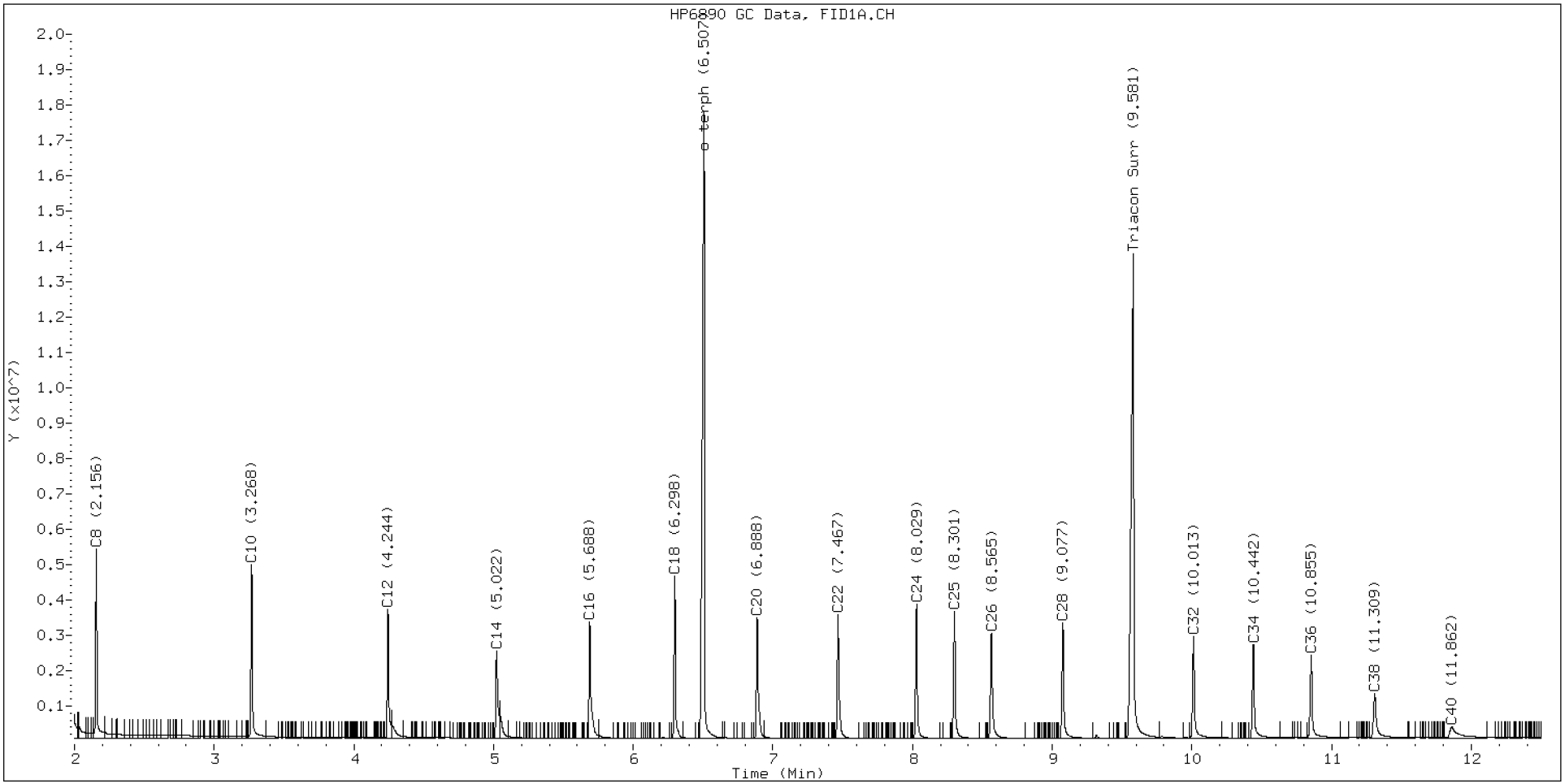
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount
o-Terphenyl	19250772	94.0
Triacontane	19528338	131.6

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200602.b/420F0203.D SIF0018-IBL1

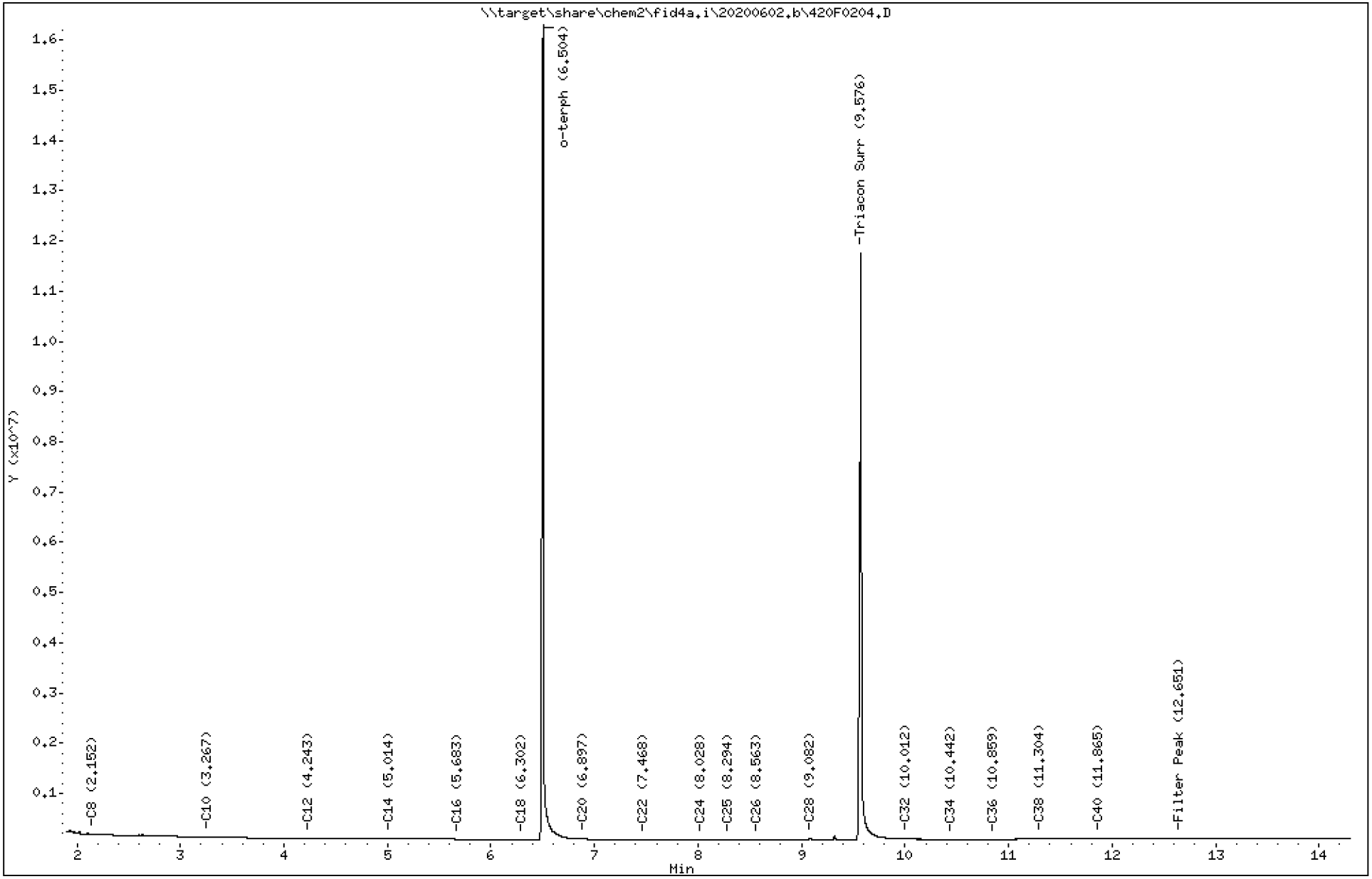


Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0204.D
Date : 02-JUN-2020 08:38
Client ID:
Sample Info: SIF0018-IBL2

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0204.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-IBL2
Client ID:
Injection: 02-JUN-2020 08:38
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.152	-0.003	116720	322381	WATPHD	(C12-C24)	3533716	22.2
C10	3.267	-0.001	56124	109426	WATPHM	(C24-C38)	1474603	14.6
C12	4.243	-0.001	30150	13517	AK102	(C10-C25)	5497571	28.1
C14	5.014	-0.008	22108	20838	AK103	(C25-C36)	1111901	15.2
C16	5.683	-0.005	13417	7376	OR.DIES	(C10-C28)	5561088	28.4
C18	6.302	0.004	8282	6554				
C20	6.897	0.008	15268	9037	JET-A	(C10-C18)	3852356	22.9
C22	7.468	0.002	3677	2659				
C24	8.028	-0.001	1288	376				
C25	8.294	-0.007	805	727				
C26	8.563	-0.002	378	139				
C28	9.082	0.005	31186	44237				
C32	10.012	-0.001	16600	15536				
C34	10.442	-0.000	10597	4224				
Filter Peak	12.651	-0.001	16079	8841	CREOSOT	(C12-C22)	3469521	84.1
C36	10.859	0.004	12136	4837				
C38	11.304	-0.005	14999	9721				
C40	11.865	0.003	15845	9483				
o-terph	6.504	-0.003	16231603	17734069				
Triacon Surr	9.576	-0.005	11669958	15560412	NAS DIES	(C10-C24)	5488260	28.1

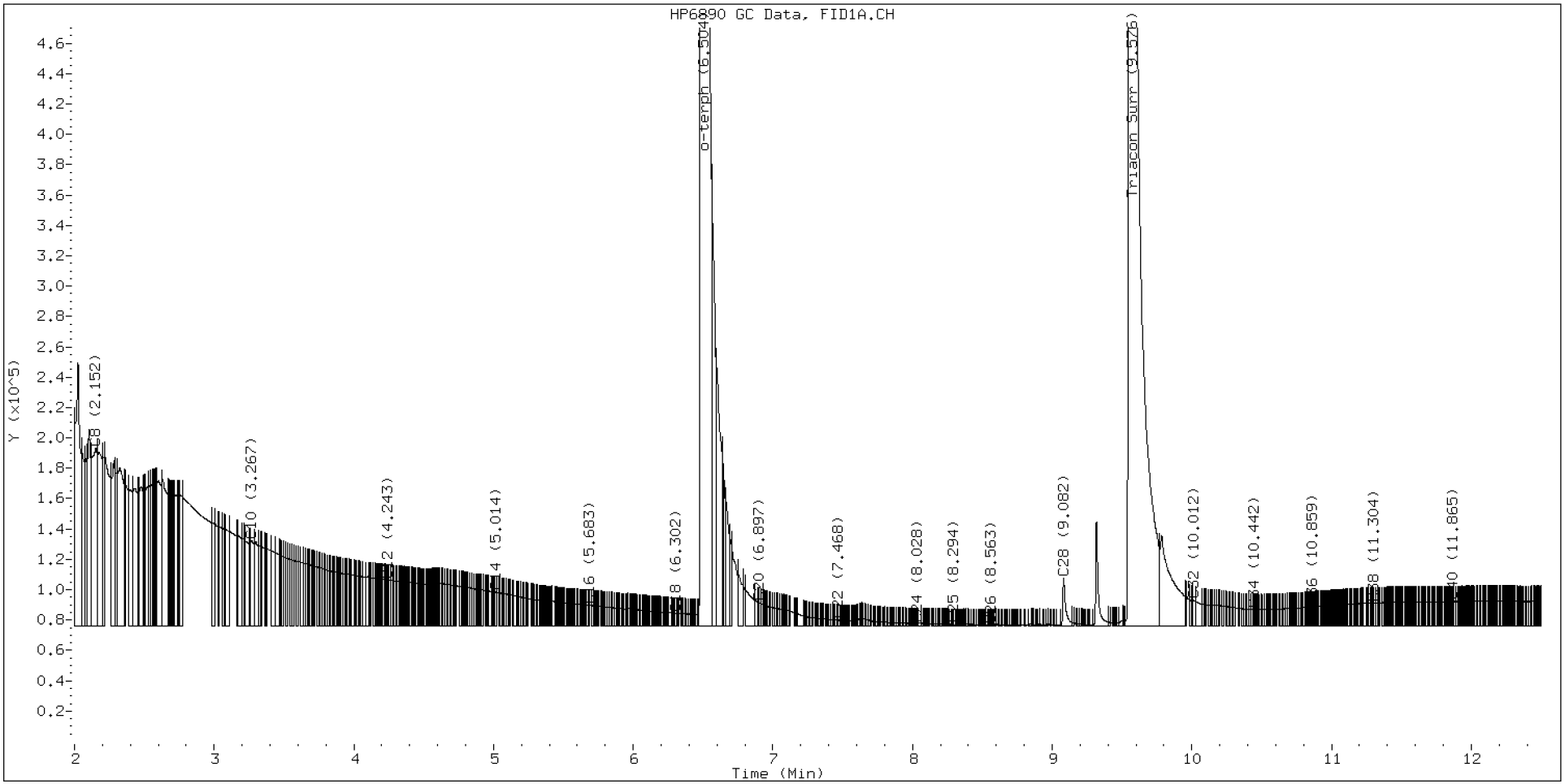
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount
o-Terphenyl	17734069	86.6
Triacontane	15560412	104.9

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200602.b/420F0204.D SIF0018-IBL2



Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0205.D

Date : 02-JUN-2020 08:58

Client ID:

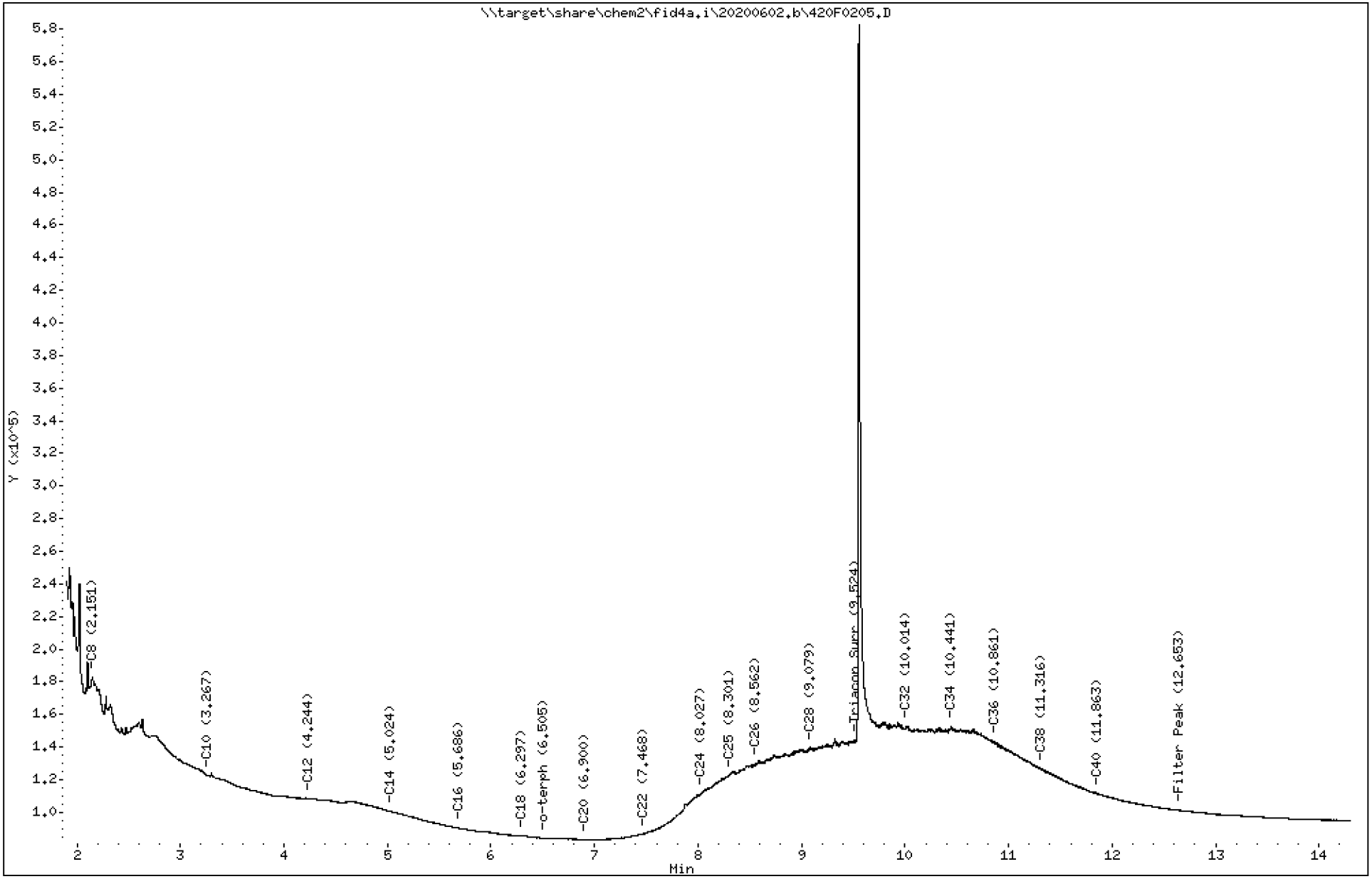
Instrument: fid4a.i

Sample Info: SIF0018-CAL1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0205.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-CAL1
Client ID:
Injection: 02-JUN-2020 08:58
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.151	-0.005	99980	217759	WATPHD	(C12-C24)	2058424	12.9
C10	3.267	-0.001	39589	29601	WATPHM	(C24-C38)	11047515	109.2
C12	4.244	-0.001	25508	17793	AK102	(C10-C25)	4072327	20.8
C14	5.024	0.003	17563	10459	AK103	(C25-C36)	9356465	127.8
C16	5.686	-0.002	7220	3247	OR.DIES	(C10-C28)	6554980	33.4
C18	6.297	-0.001	2600	2106				
C20	6.900	0.012	302	196	JET-A	(C10-C18)	3118295	18.6
C22	7.468	0.001	3759	1459				
C24	8.027	-0.002	28105	24801				
C25	8.301	0.000	39391	25449				
C26	8.562	-0.003	47032	11725				
C28	9.079	0.003	56481	28105				
C32	10.014	0.002	69879	38102				
C34	10.441	-0.001	69476	34247				
Filter Peak	12.653	0.001	18229	12666	CREOSOT	(C12-C22)	1520804	36.9
C36	10.861	0.006	60542	41919				
C38	11.316	0.007	43480	28015				
C40	11.863	0.001	28191	8434				
o-terph	6.505	-0.001	1238	750				
Triacon Surr	9.554	-0.026	438731	632528	NAS DIES	(C10-C24)	3725496	19.1

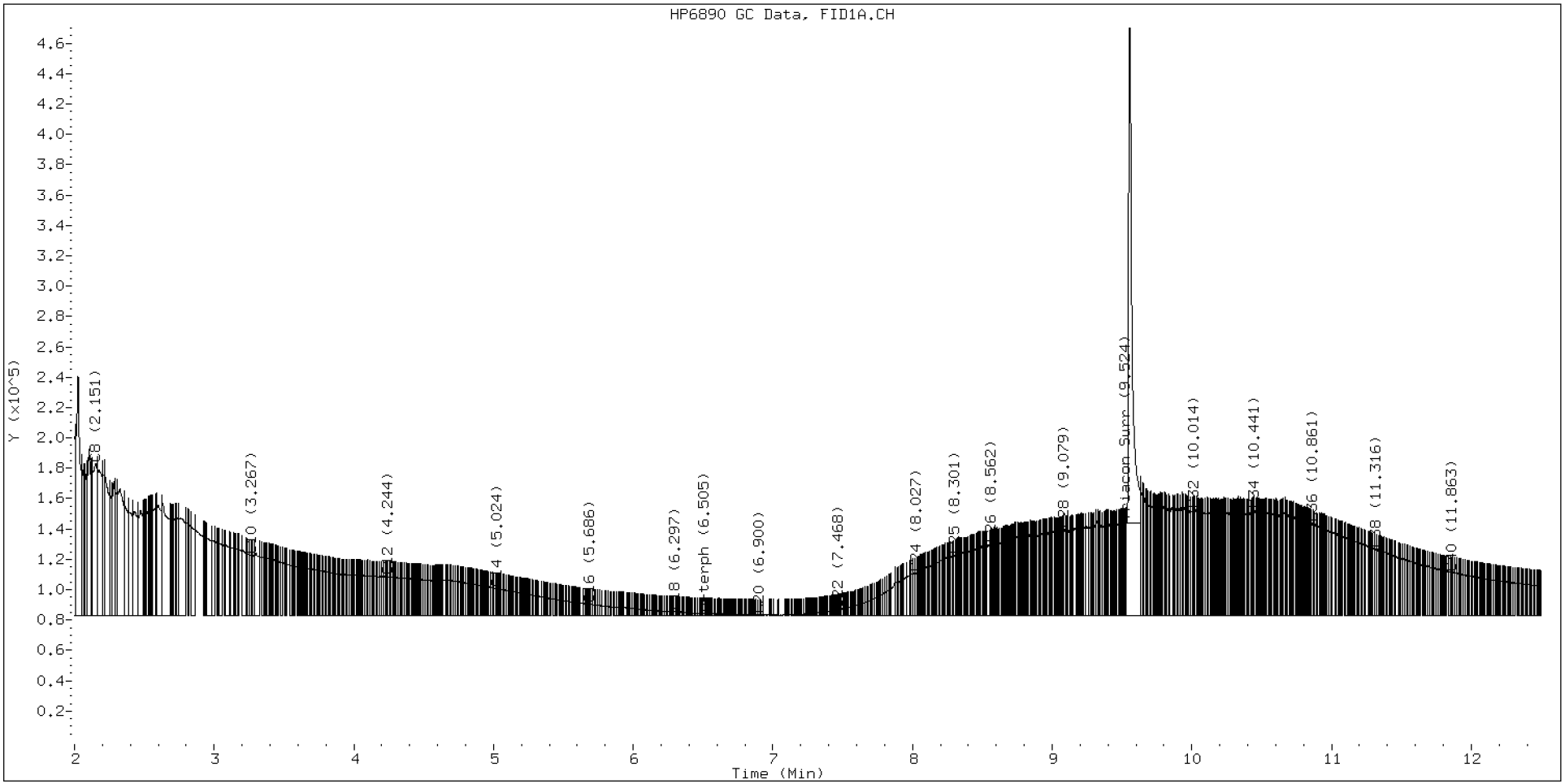
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount	
o-Terphenyl	750	0.0	
Triacontane	632528	4.3	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

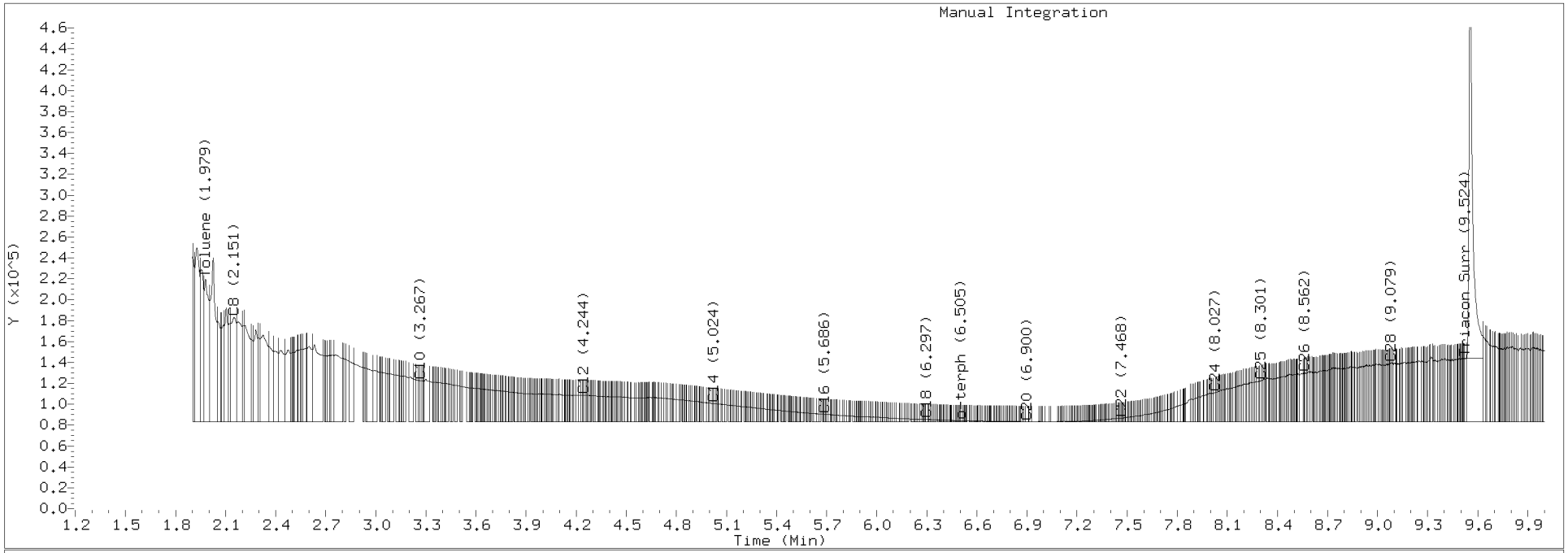
Datafile: FID4A, 20200602.b/420F0205.D SIF0018-CAL1

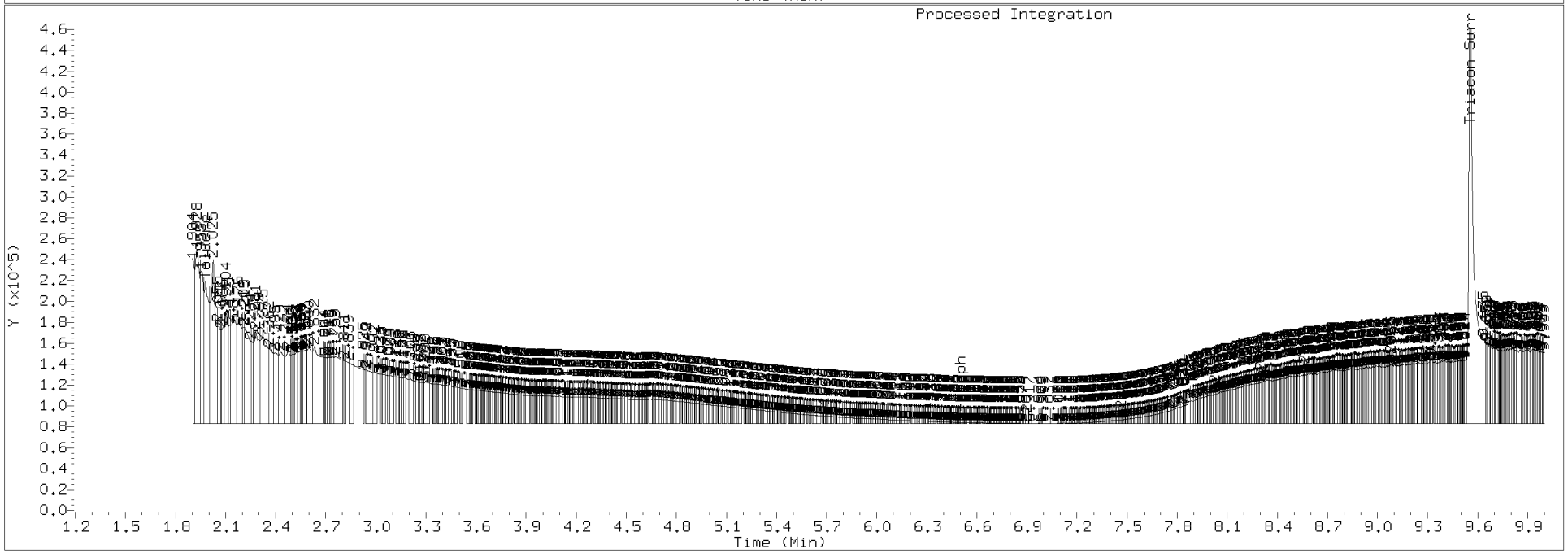


TPH Manual Integrations Report

Datafile: FID4A, 20200602.b/420F0205.D Injection: 02-JUN-2020 08:58

Lab ID:SIF0018-CAL1





Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0206.D

Date : 02-JUN-2020 09:17

Client ID:

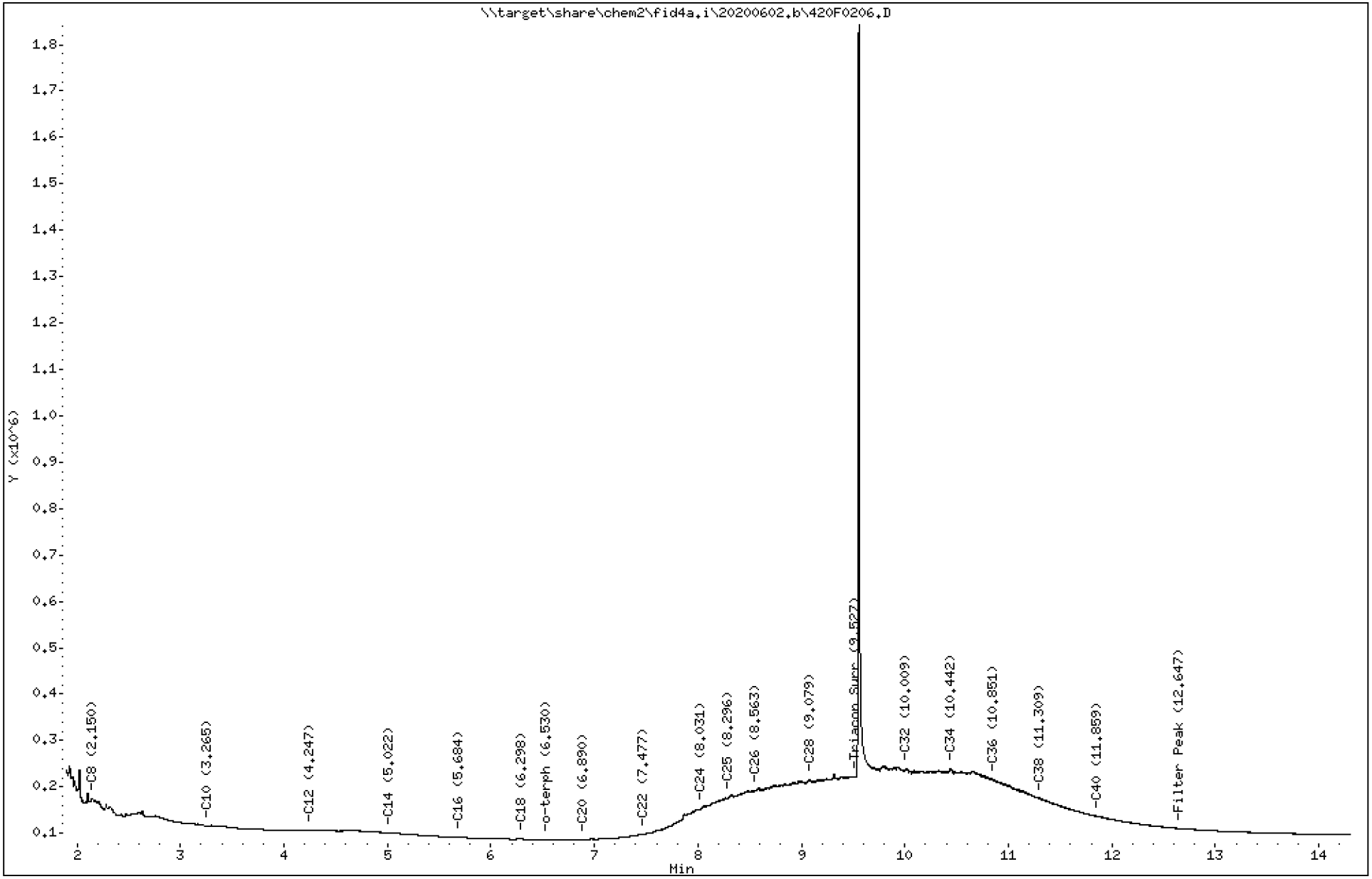
Instrument: fid4a.i

Sample Info: SIF0018-CAL2

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0206.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-CAL2
Client ID:
Injection: 02-JUN-2020 09:17
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.150	-0.006	89858	185422	WATPHD	(C12-C24)	2712070	17.0
C10	3.265	-0.003	30146	13534	WATPHM	(C24-C38)	24525710	242.4
C12	4.247	0.002	20913	5217	AK102	(C10-C25)	4830477	24.7
C14	5.022	0.000	14927	5202	AK103	(C25-C36)	21012310	287.0
C16	5.684	-0.004	5316	3160	OR.DIES	(C10-C28)	10587317	54.0
C18	6.298	-0.001	1804	867				
C20	6.890	0.002	868	325	JET-A	(C10-C18)	2431354	14.5
C22	7.477	0.010	11963	10299				
C24	8.031	0.002	68912	56553				
C25	8.296	-0.005	90908	49681				
C26	8.563	-0.002	106529	37089				
C28	9.079	0.002	128296	51107				
C32	10.009	-0.003	153736	84024				
C34	10.442	0.000	152153	67959				
Filter Peak	12.647	-0.005	24724	15926	CREOSOT	(C12-C22)	1339051	32.5
C36	10.851	-0.004	129949	77218				
C38	11.309	0.000	88878	57220				
C40	11.859	-0.002	51003	42869				
o-terph	6.530	0.023	286	110				
Triacon Surr	9.553	-0.027	1618248	1548362	NAS DIES	(C10-C24)	4003518	20.5

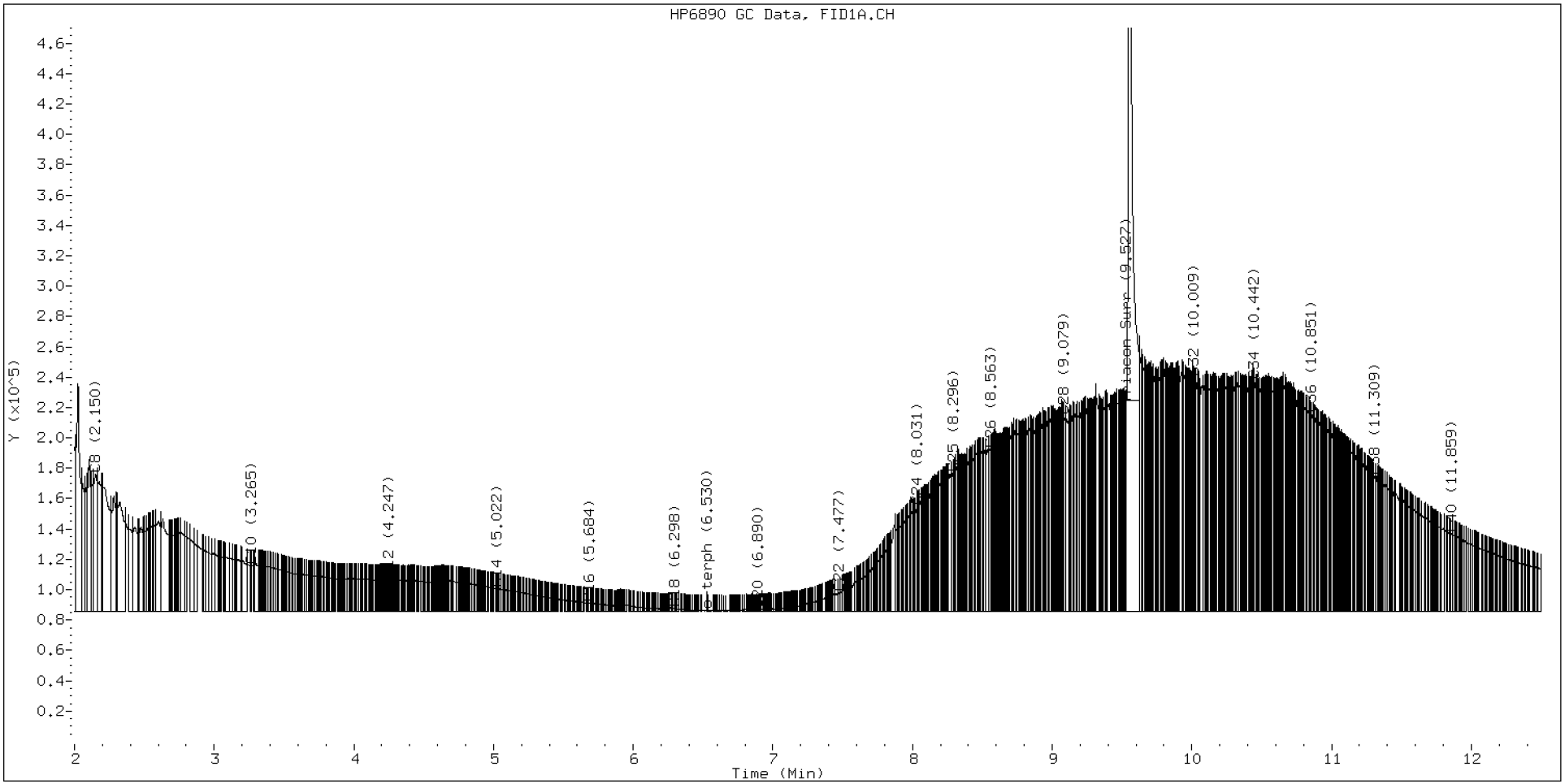
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount	
o-Terphenyl	110	0.0	
Triacontane	1548362	10.4	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

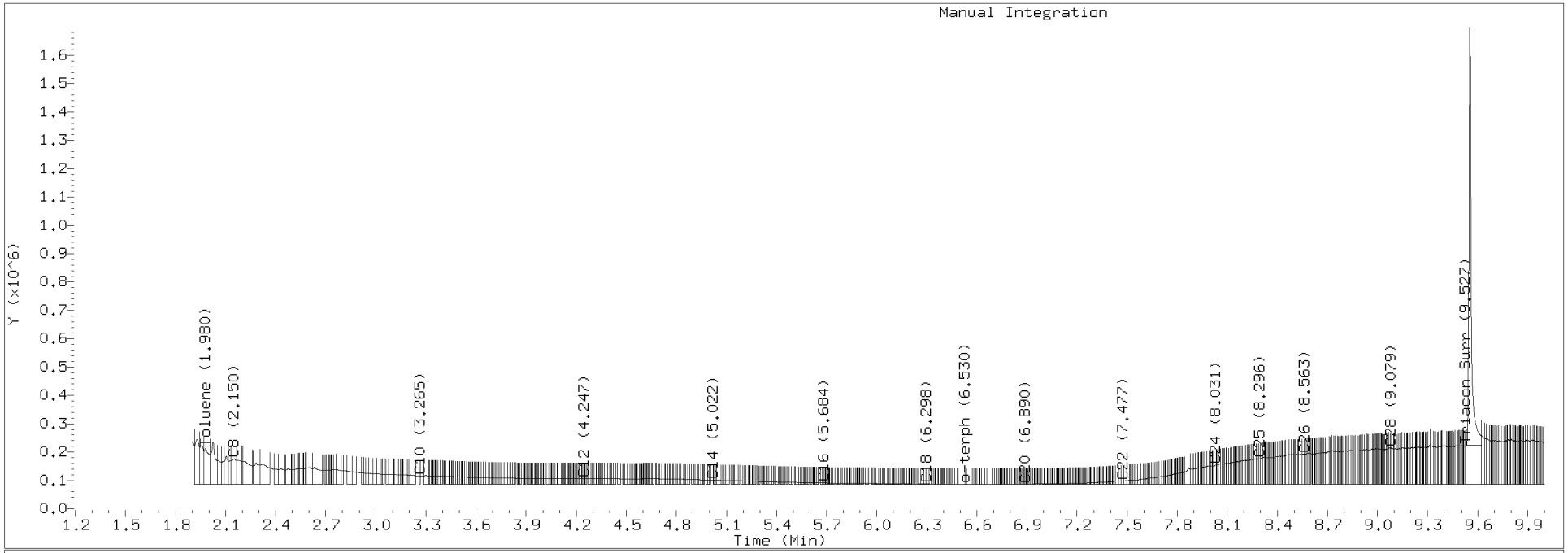
Datafile: FID4A, 20200602.b/420F0206.D SIF0018-CAL2

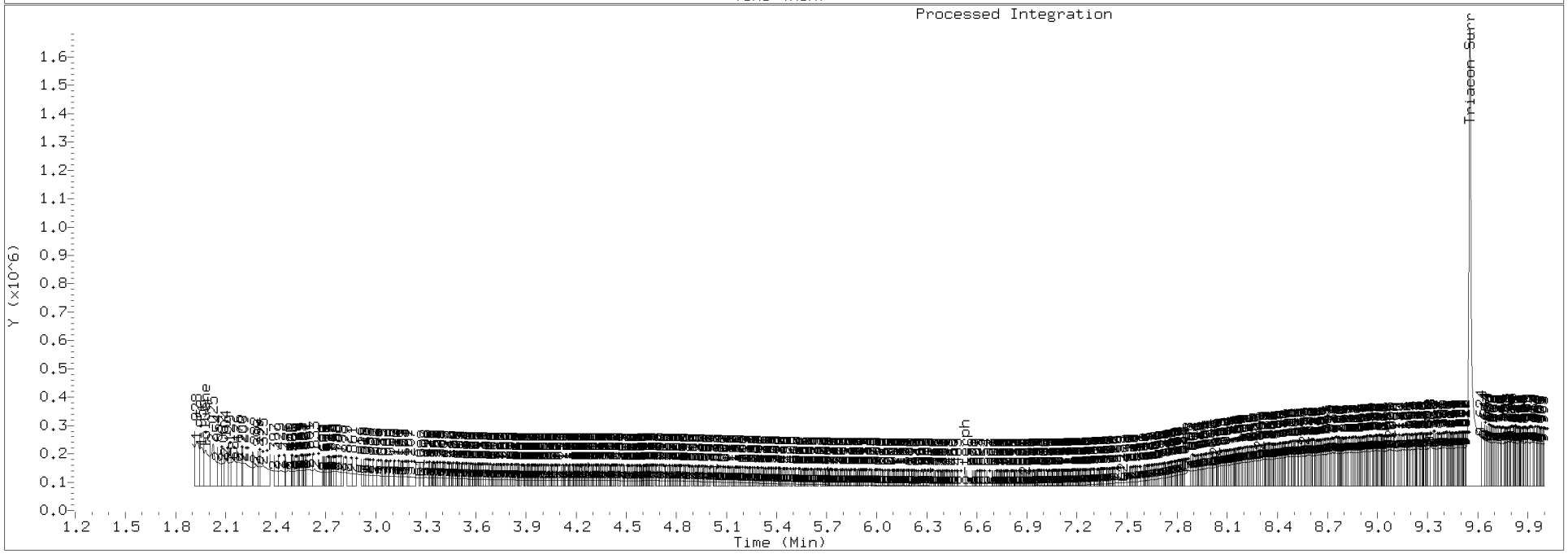


TPH Manual Integrations Report

Datafile: FID4A, 20200602.b/420F0206.D Injection: 02-JUN-2020 09:17

Lab ID:SIF0018-CAL2



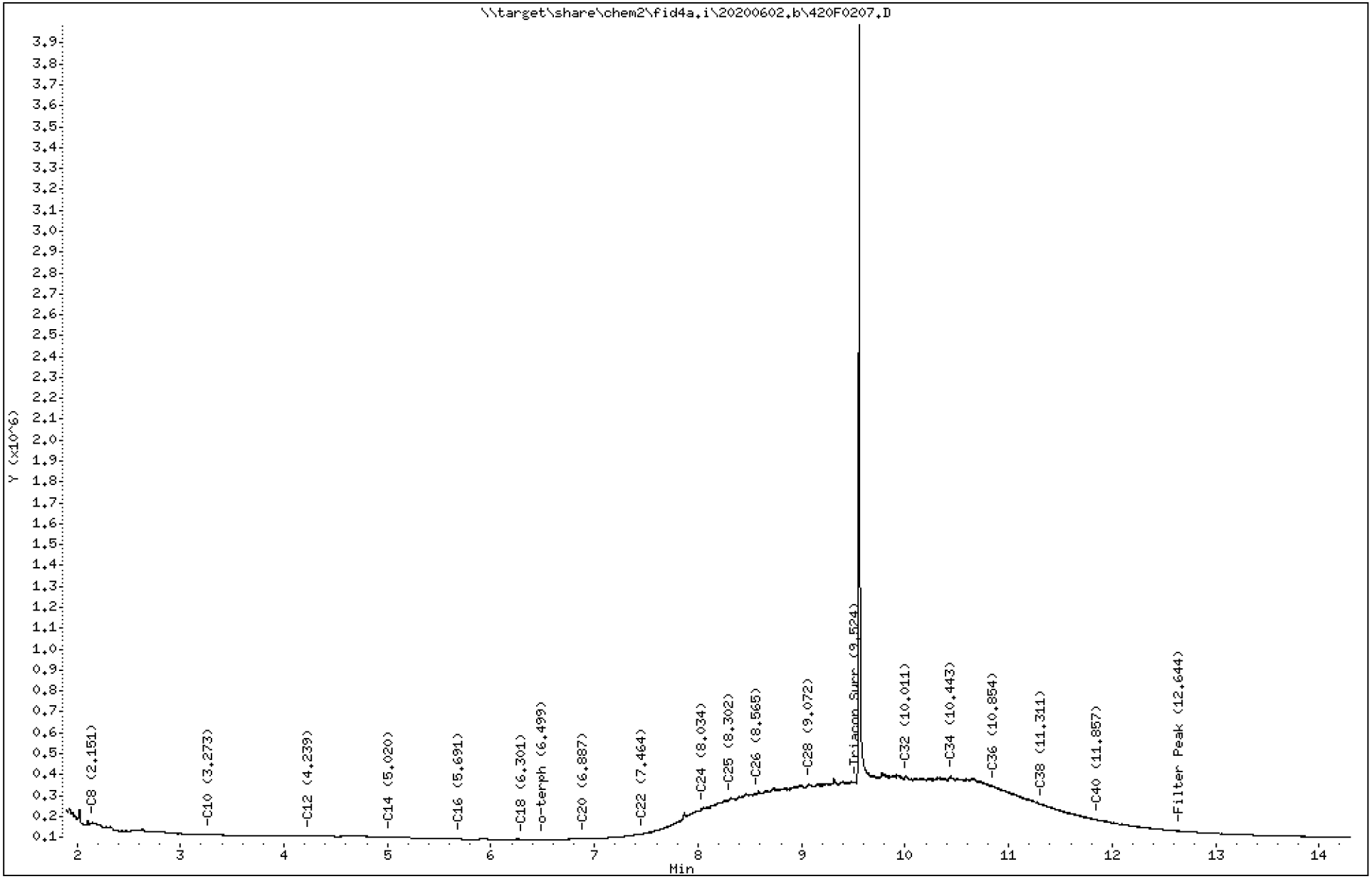


Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0207.D
Date : 02-JUN-2020 09:37
Client ID:
Sample Info: SIF0018-CAL3

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0207.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-CAL3
Client ID:
Injection: 02-JUN-2020 09:37
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.151	-0.005	83340	181737	WATPHD	(C12-C24)	4669475	29.3
C10	3.273	0.004	24124	29803	WATPHM	(C24-C38)	49486995	489.2
C12	4.239	-0.005	17851	9766	AK102	(C10-C25)	7430681	38.0
C14	5.020	-0.001	13143	9087	AK103	(C25-C36)	42295515	577.8
C16	5.691	0.003	3577	1419	OR.DIES	(C10-C28)	19434570	99.2
C18	6.301	0.003	1747	1733				
C20	6.887	-0.001	3928	772	JET-A	(C10-C18)	2089833	12.4
C22	7.464	-0.003	28742	14145				
C24	8.034	0.005	150683	195060				
C25	8.302	0.001	193725	142733				
C26	8.565	0.000	222104	154233				
C28	9.072	-0.005	269216	379539				
C32	10.011	-0.001	303243	166080				
C34	10.443	0.001	305814	210777				
Filter Peak	12.644	-0.008	43077	59185	CREOSOT	(C12-C22)	1595428	38.7
C36	10.854	-0.001	253799	113868				
C38	11.311	0.002	172045	186385				
C40	11.857	-0.005	96077	71008				
o-terph	6.499	-0.008	250	102				
Triacon Surr	9.559	-0.022	3627992	3323417	NAS DIES	(C10-C24)	5759449	29.5

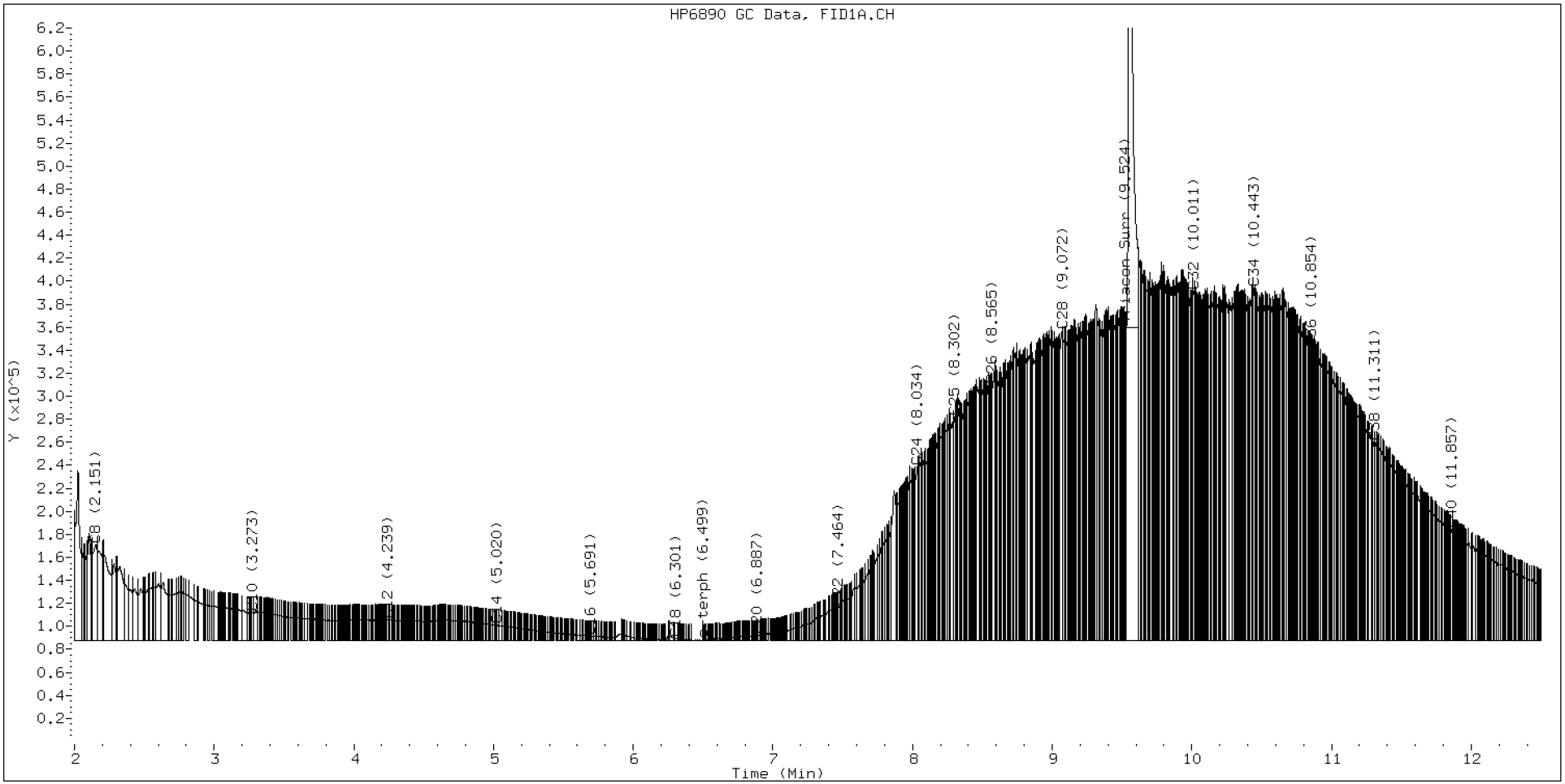
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount	
o-Terphenyl	102	0.0	
Triacontane	3323417	22.4	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

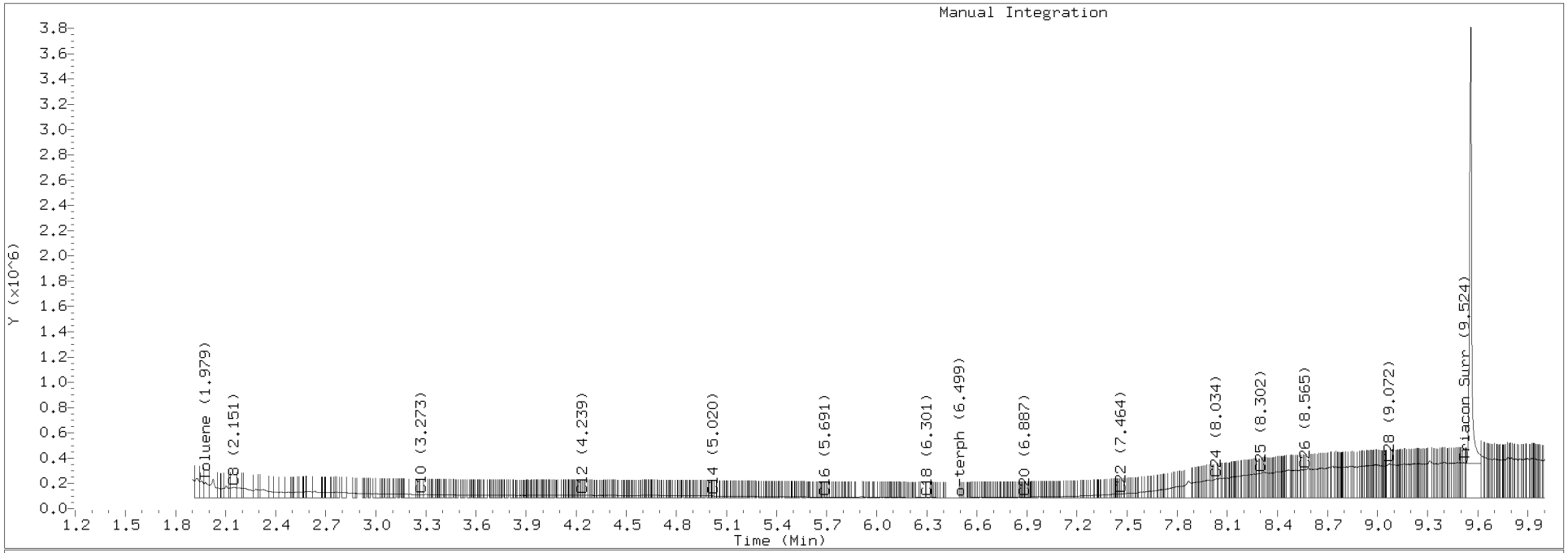
Datafile: FID4A, 20200602.b/420F0207.D SIF0018-CAL3

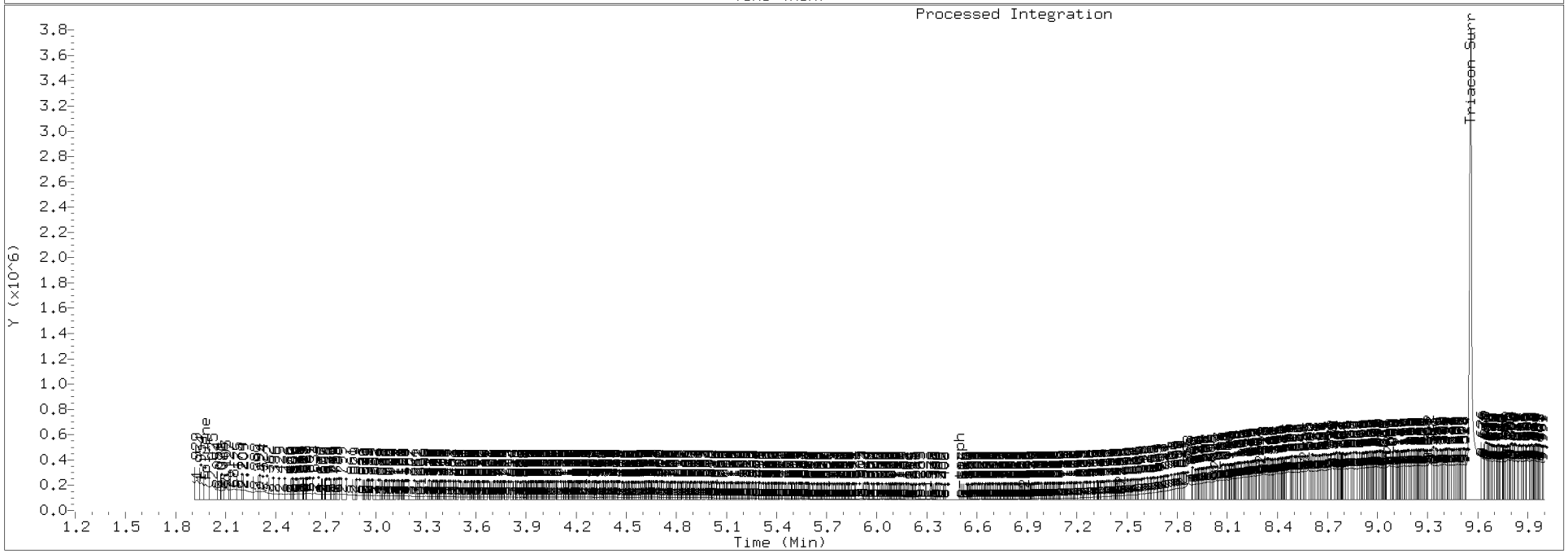


TPH Manual Integrations Report

Datafile: FID4A, 20200602.b/420F0207.D Injection: 02-JUN-2020 09:37

Lab ID:SIF0018-CAL3





Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0208.D

Date : 02-JUN-2020 09:56

Client ID:

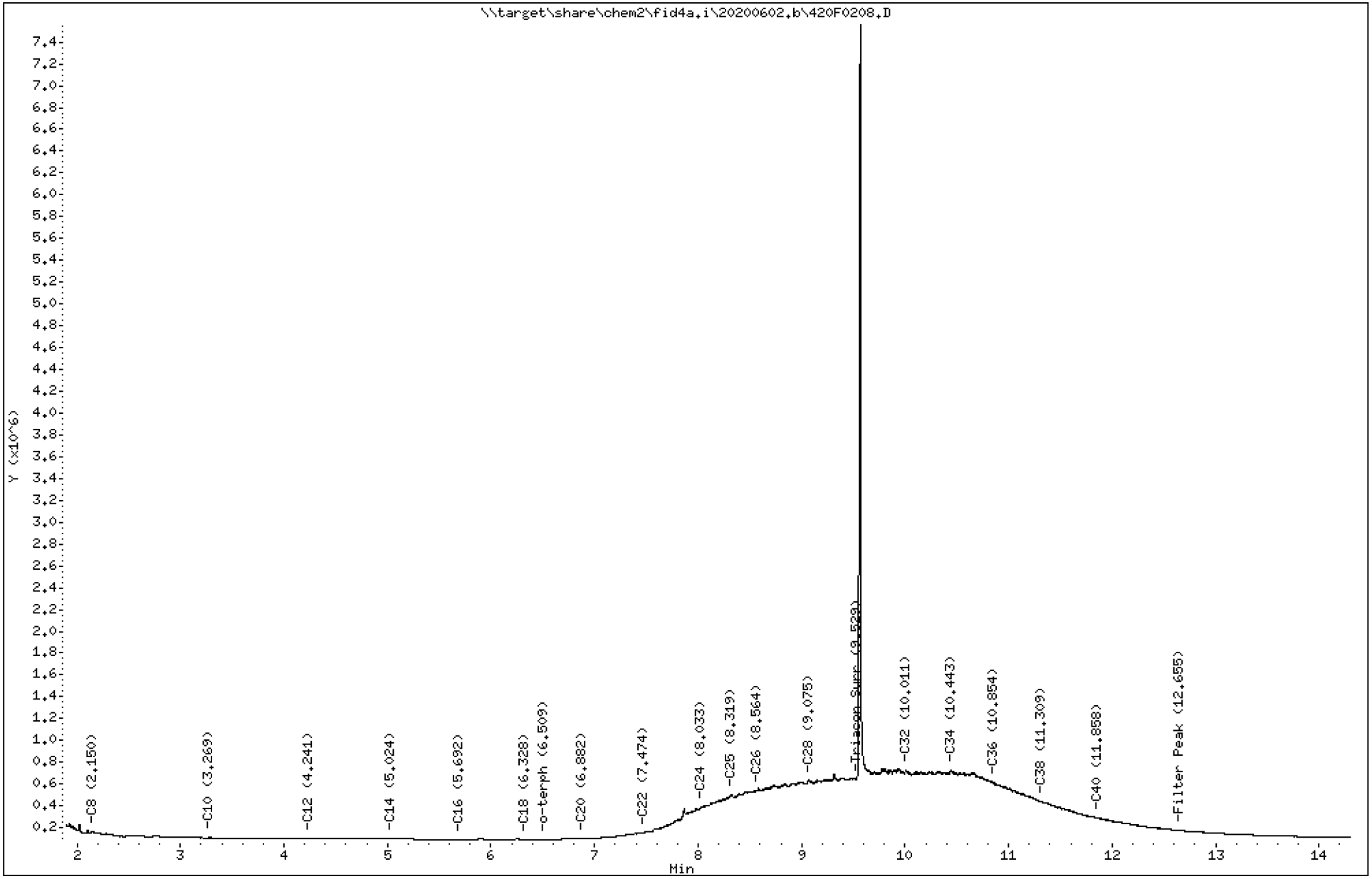
Instrument: fid4a.i

Sample Info: SIF0018-CAL4

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0208.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-CAL4
Client ID:
Injection: 02-JUN-2020 09:56
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.150	-0.006	74771	134338	WATPHD	(C12-C24)	8555448	53.7
C10	3.269	0.001	18936	30862	WATPHM	(C24-C38)	101521093	1003.5
C12	4.241	-0.003	13823	8198	AK102	(C10-C25)	12841862	65.7
C14	5.024	0.002	10299	9083	AK103	(C25-C36)	86804393	1185.7
C16	5.692	0.004	1790	930	OR.DIES	(C10-C28)	37125765	189.4
C18	6.328	0.029	1582	935				
C20	6.882	-0.006	11147	11817	JET-A	(C10-C18)	1615268	9.6
C22	7.474	0.008	67672	77092				
C24	8.033	0.004	306185	439125				
C25	8.319	0.018	416111	1127058				
C26	8.564	-0.001	451269	313667				
C28	9.075	-0.001	539909	295930				
C32	10.011	-0.001	639854	440607				
C34	10.443	0.001	639844	540147				
Filter Peak	12.655	0.004	86624	68681	CREOSOT	(C12-C22)	2251661	54.6
C36	10.854	-0.001	524868	130805				
C38	11.309	-0.001	353422	105615				
C40	11.858	-0.004	204852	161643				
o-terph	6.509	0.002	1937	664				
Triacon Surr	9.567	-0.014	6918042	6925867	NAS DIES	(C10-C24)	9387862	48.1

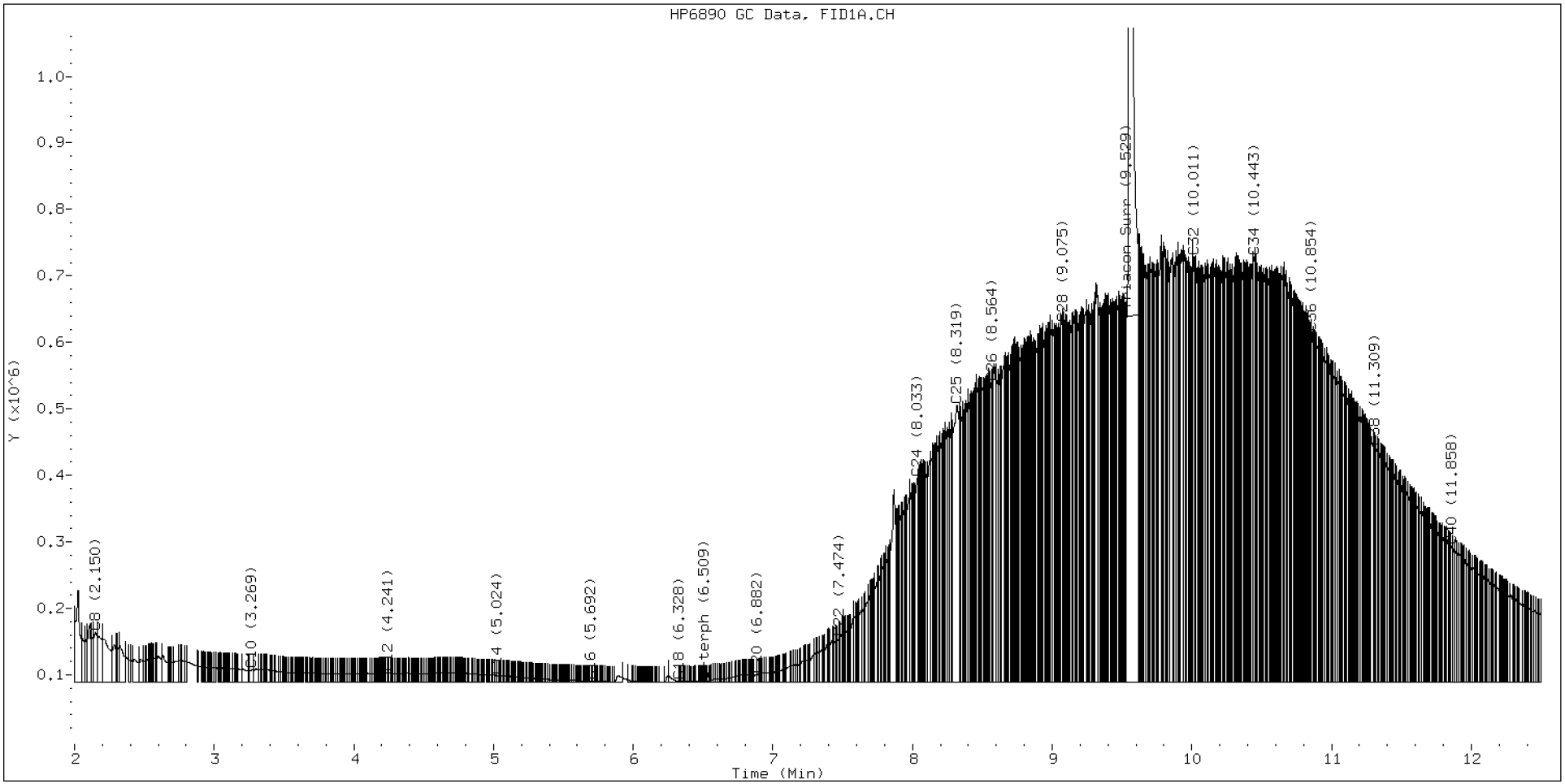
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount	
o-Terphenyl	664	0.0	
Triacontane	6925867	46.7	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

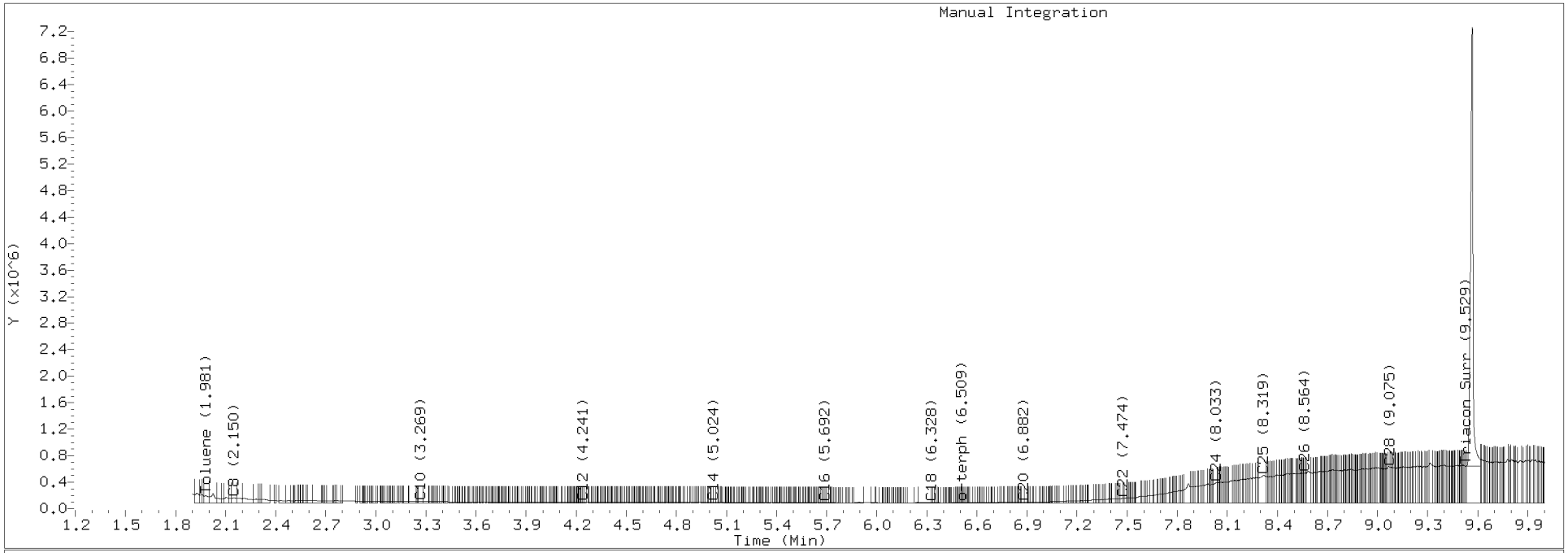
Datafile: FID4A, 20200602.b/420F0208.D SIF0018-CAL4

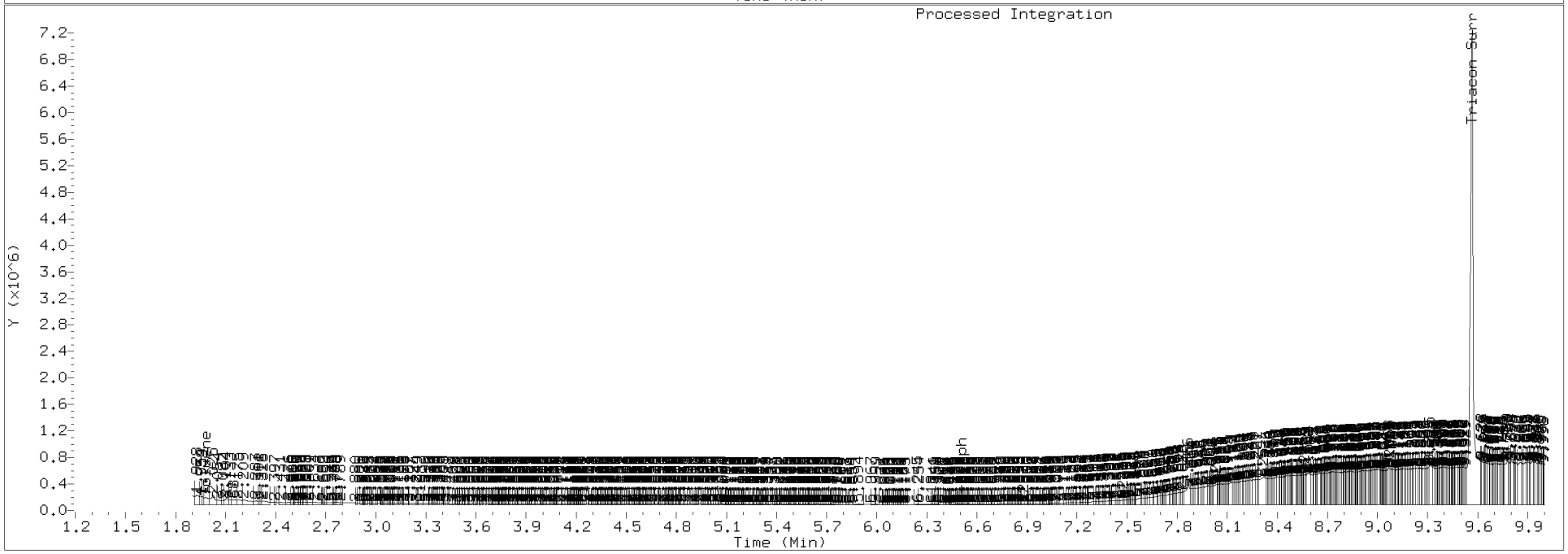


TPH Manual Integrations Report

Datafile: FID4A, 20200602.b/420F0208.D Injection: 02-JUN-2020 09:56

Lab ID:SIF0018-CAL4





Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0209.D

Date : 02-JUN-2020 10:16

Client ID:

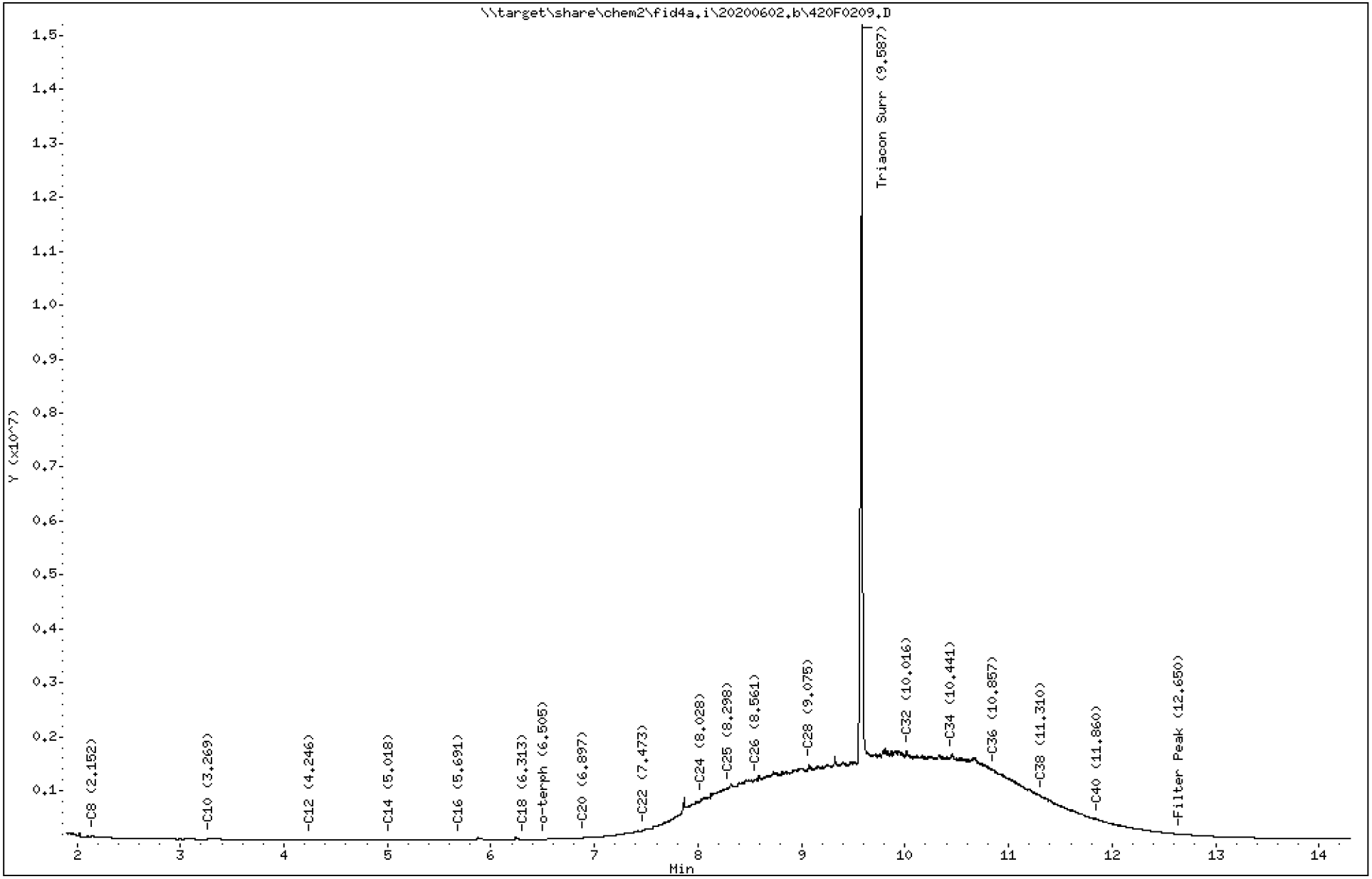
Instrument: fid4a.i

Sample Info: SIF0018-CAL5

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0209.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-CAL5
Client ID:
Injection: 02-JUN-2020 10:16
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.152	-0.004	67731	187221	WATPHD	(C12-C24)	20822485	130.7
C10	3.269	0.000	15304	22992	WATPHM	(C24-C38)	252817754	2499.0
C12	4.246	0.002	8746	2596	AK102	(C10-C25)	30167989	154.3
C14	5.018	-0.004	7386	6763	AK103	(C25-C36)	216864710	2962.4
C16	5.691	0.003	1016	400	OR.DIES	(C10-C28)	91347766	466.1
C18	6.313	0.015	5888	3404				
C20	6.897	0.009	42706	72168	JET-A	(C10-C18)	1226841	7.3
C22	7.473	0.006	175100	153872				
C24	8.028	-0.001	763007	660412				
C25	8.298	-0.003	971912	386849				
C26	8.561	-0.004	1127303	613889				
C28	9.075	-0.002	1382437	951882				
C32	10.016	0.004	1653735	2165722				
C34	10.441	-0.000	1559614	615531				
Filter Peak	12.650	-0.001	105709	42002	CREOSOT	(C12-C22)	4802696	116.5
C36	10.857	0.002	1298073	1024006				
C38	11.310	0.001	808749	281747				
C40	11.860	-0.001	376098	494366				
o-terph	6.505	-0.001	10128	3504				
Triacon Surr	9.587	0.006	13686611	17883640	NAS DIES	(C10-C24)	21349343	109.4

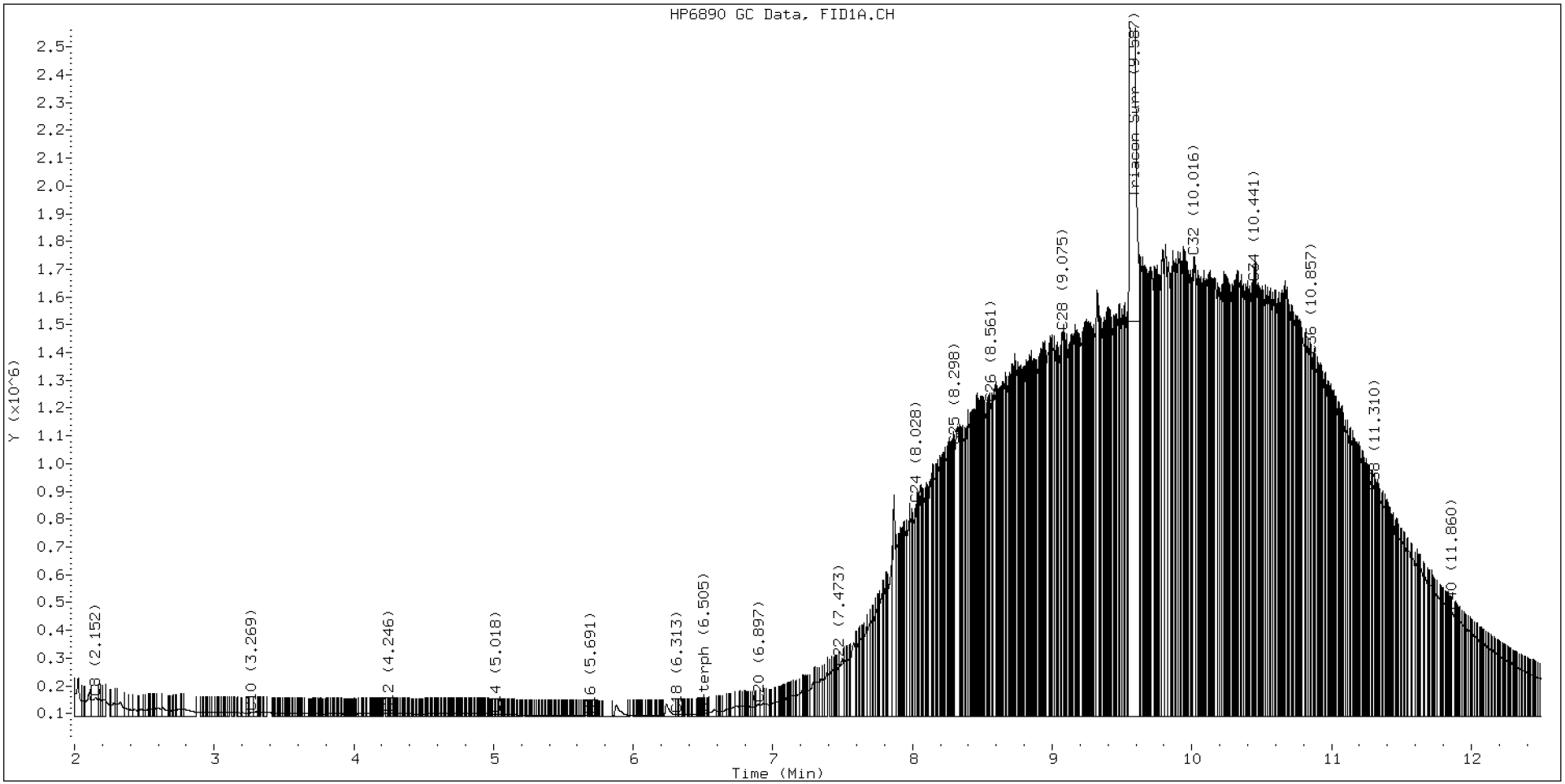
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount	
o-Terphenyl	3504	0.0	
Triacontane	17883640	120.5	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

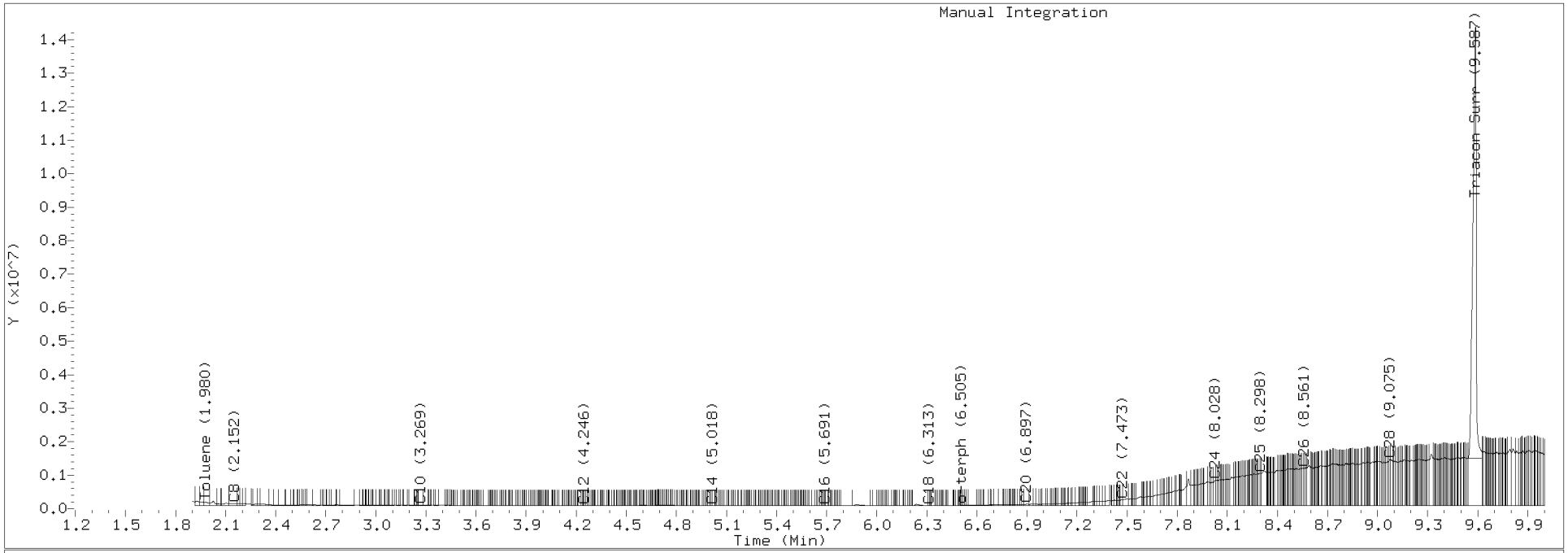
Datafile: FID4A, 20200602.b/420F0209.D SIF0018-CAL5

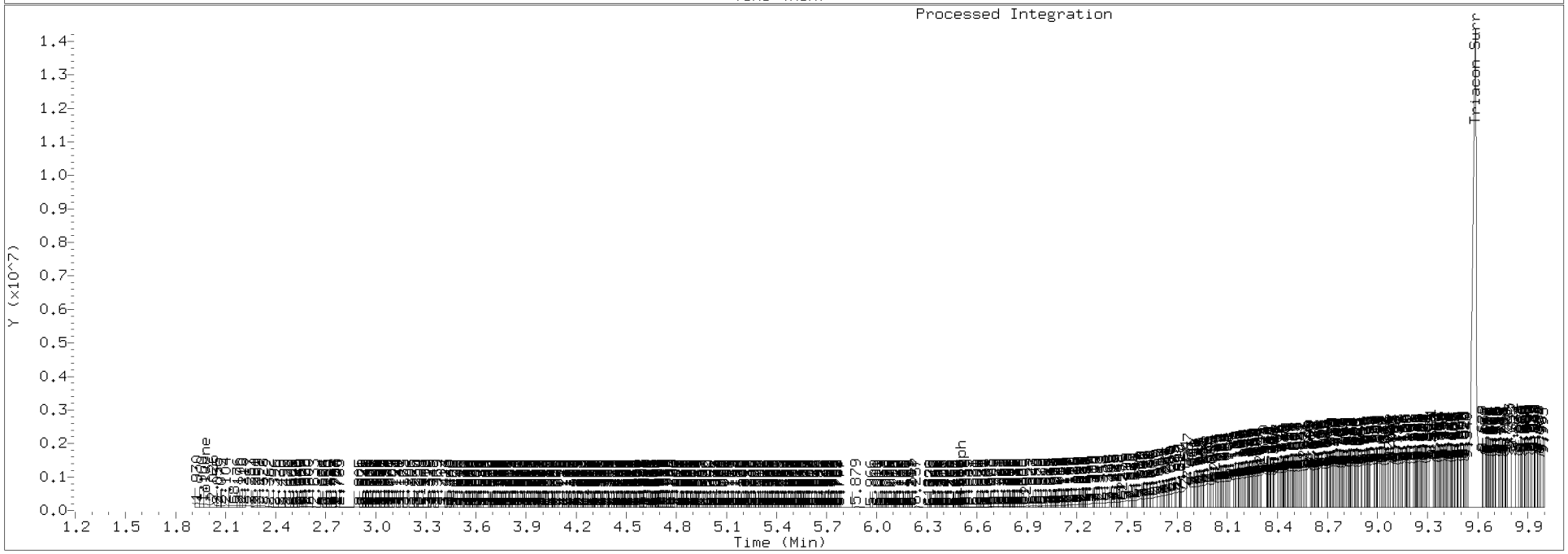


TPH Manual Integrations Report

Datafile: FID4A, 20200602.b/420F0209.D Injection: 02-JUN-2020 10:16

Lab ID:SIF0018-CAL5





Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0210.D

Date : 02-JUN-2020 10:36

Client ID:

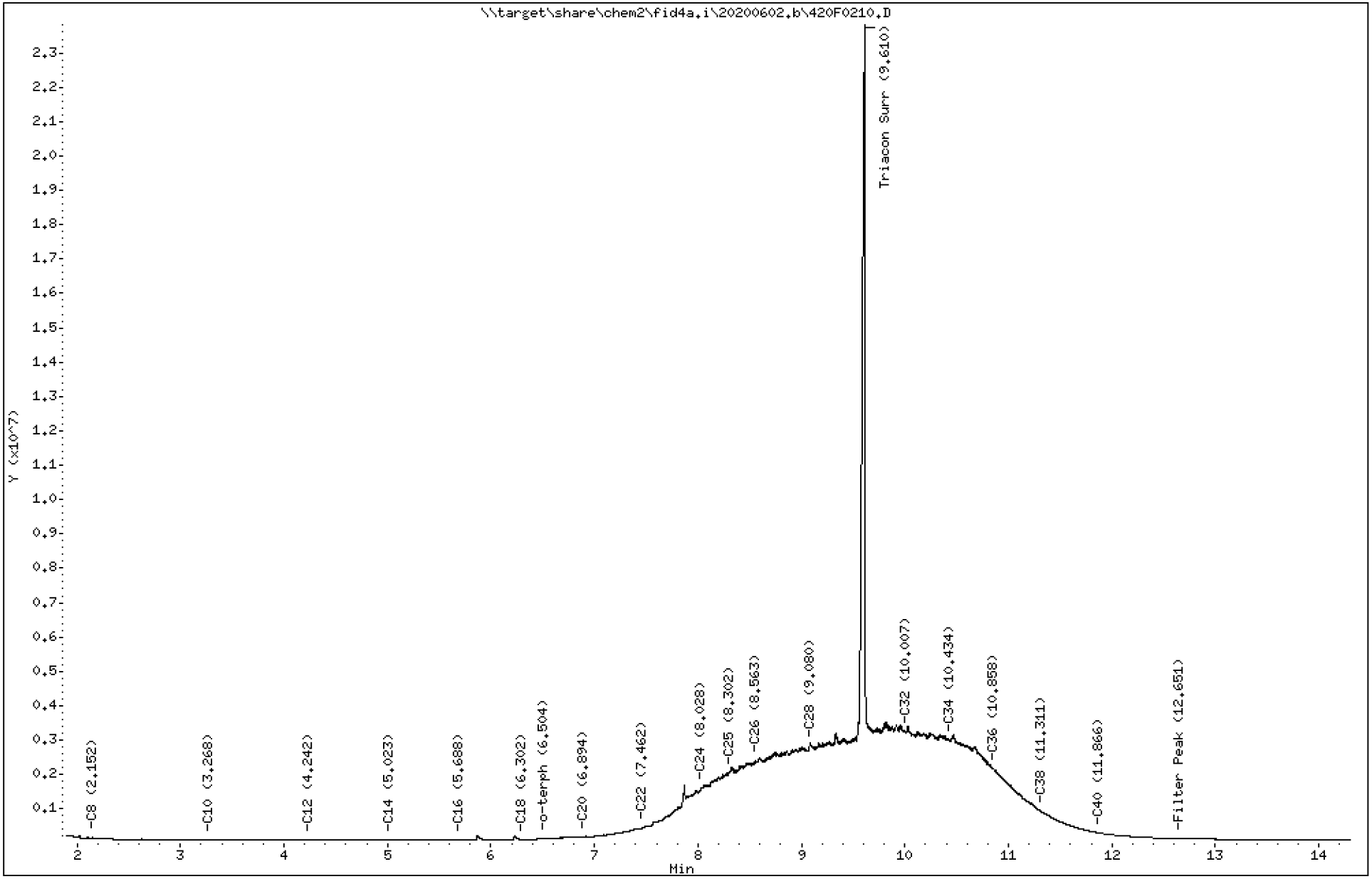
Instrument: fid4a.i

Sample Info: SIF0018-CAL6

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0210.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-CAL6
Client ID:
Injection: 02-JUN-2020 10:36
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.152	-0.004	59759	152130	WATPHD	(C12-C24)	42097067	264.2
C10	3.268	-0.000	10906	13309	WATPHM	(C24-C38)	483979490	4784.0
C12	4.242	-0.002	3837	2144	AK102	(C10-C25)	60128324	307.6
C14	5.023	0.001	5263	2575	AK103	(C25-C36)	432878704	5913.1
C16	5.688	-0.000	5016	3894	OR.DIES	(C10-C28)	184154148	939.6
C18	6.302	0.004	14889	15133				
C20	6.894	0.006	90358	170510	JET-A	(C10-C18)	1118951	6.7
C22	7.462	-0.004	348837	170286				
C24	8.028	-0.001	1514675	949832				
C25	8.302	0.001	1962082	1344009				
C26	8.563	-0.002	2289043	1251416				
C28	9.080	0.003	2750480	953261				
C32	10.007	-0.005	3143736	1251600				
C34	10.434	-0.008	2911308	1732712				
Filter Peak	12.651	-0.000	36927	34124	CREOSOT	(C12-C22)	10157950	246.3
C36	10.858	0.003	2076086	2039708				
C38	11.311	0.001	852892	501049				
C40	11.866	0.004	208322	233733				
o-terph	6.504	-0.003	25014	7430				
Triacon Surr	9.610	0.029	20463550	34084629	NAS DIES	(C10-C24)	42231077	216.4

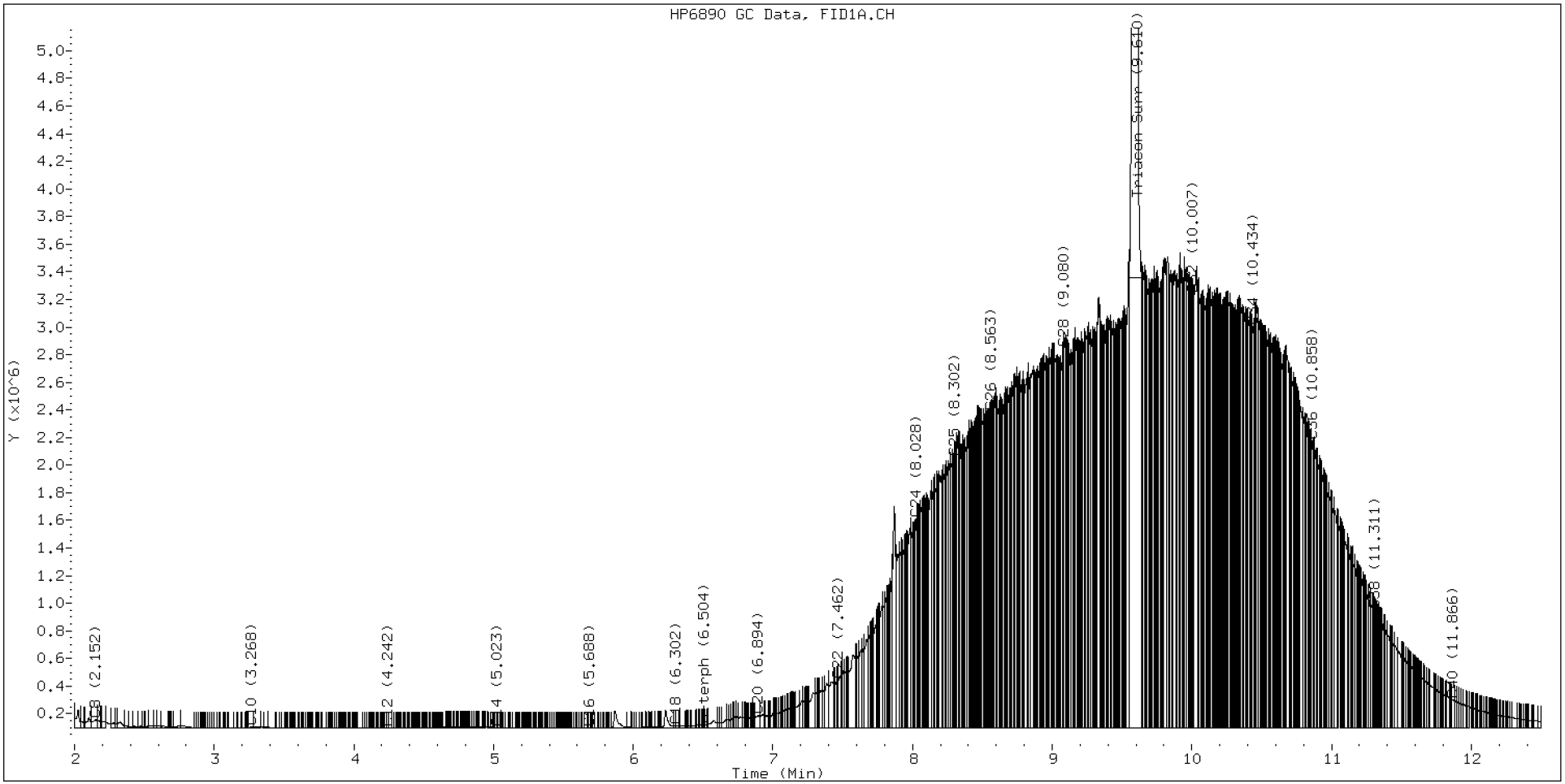
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount	
o-Terphenyl	7430	0.0	
Triacontane	34084629	229.7	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

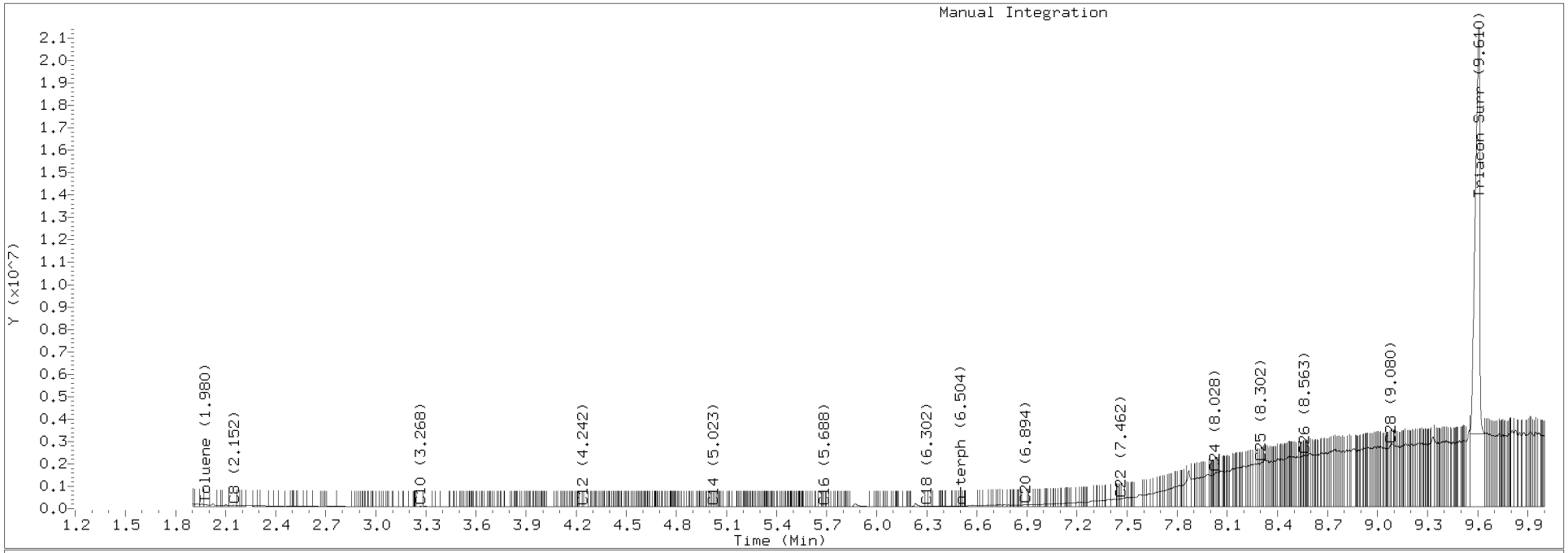
Datafile: FID4A, 20200602.b/420F0210.D SIF0018-CAL6

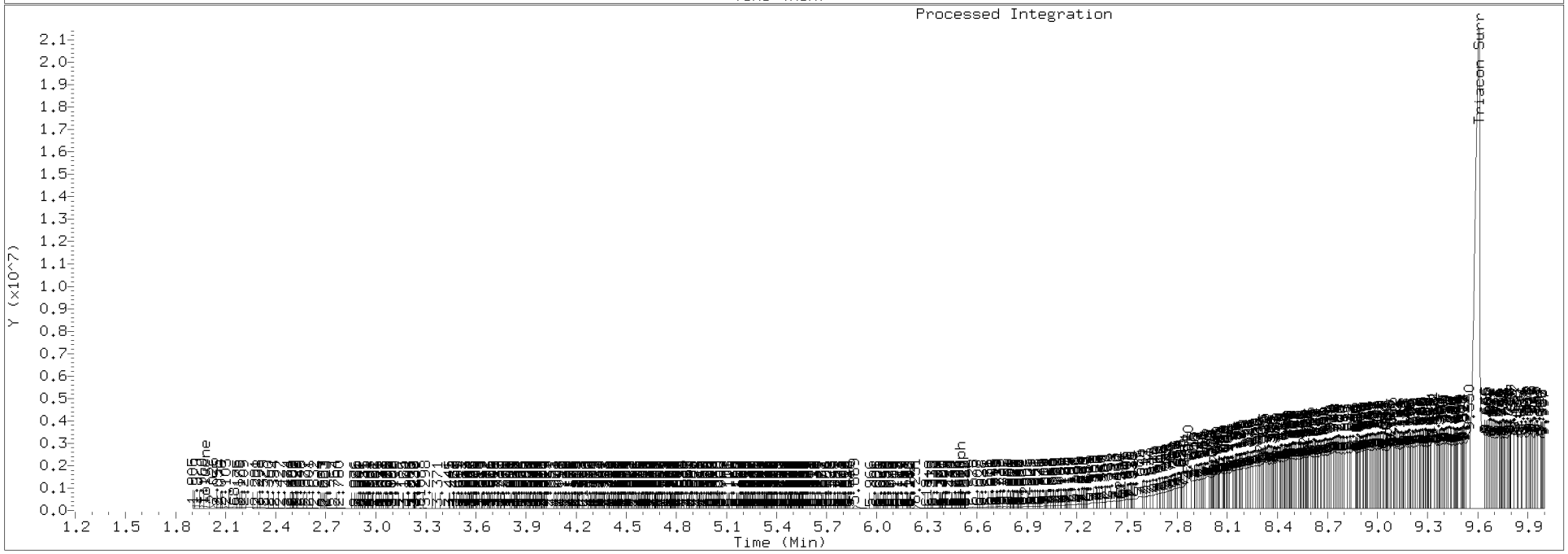


TPH Manual Integrations Report

Datafile: FID4A, 20200602.b/420F0210.D Injection: 02-JUN-2020 10:36

Lab ID:SIF0018-CAL6





Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0211.D

Date : 02-JUN-2020 10:55

Client ID:

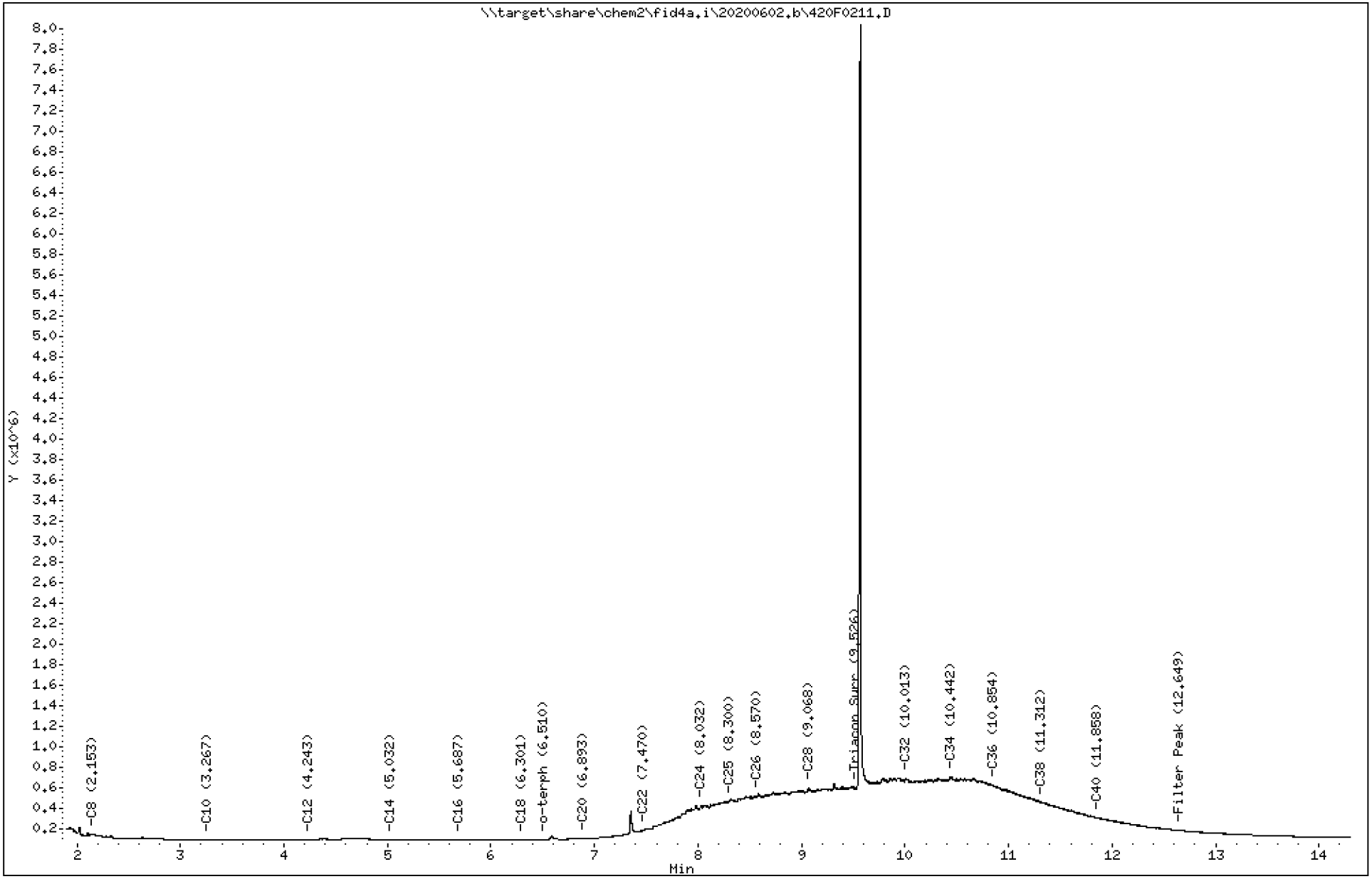
Instrument: fid4a.i

Sample Info: SIF0018-SCV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0211.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-SCV1
Client ID:
Injection: 02-JUN-2020 10:55
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.153	-0.003	53793	112352	WATPHD	(C12-C24)	10130617	63.6
C10	3.267	-0.001	3184	1798	WATPHM	(C24-C38)	96339891	952.3
C12	4.243	-0.001	6309	3433	AK102	(C10-C25)	13696411	70.1
C14	5.032	0.010	5041	1965	AK103	(C25-C36)	81704578	1116.1
C16	5.687	-0.002	418	225	OR.DIES	(C10-C28)	36730595	187.4
C18	6.301	0.002	1584	1331				
C20	6.893	0.005	13152	18749	JET-A	(C10-C18)	637720	3.8
C22	7.470	0.003	92369	58795				
C24	8.032	0.002	330875	354349				
C25	8.300	-0.001	376891	169098				
C26	8.570	0.005	421264	147085				
C28	9.068	-0.008	508527	807405				
C32	10.013	0.001	600890	237363				
C34	10.442	0.001	608272	242751				
Filter Peak	12.649	-0.003	94447	119849	CREOSOT	(C12-C22)	2566539	62.2
C36	10.854	-0.001	530087	263622				
C38	11.312	0.002	366594	183102				
C40	11.858	-0.003	220172	173259				
o-terph	6.510	0.003	2949	1966				
Triacon Surr	9.567	-0.013	7460477	7161172	NAS DIES	(C10-C24)	10346316	53.0

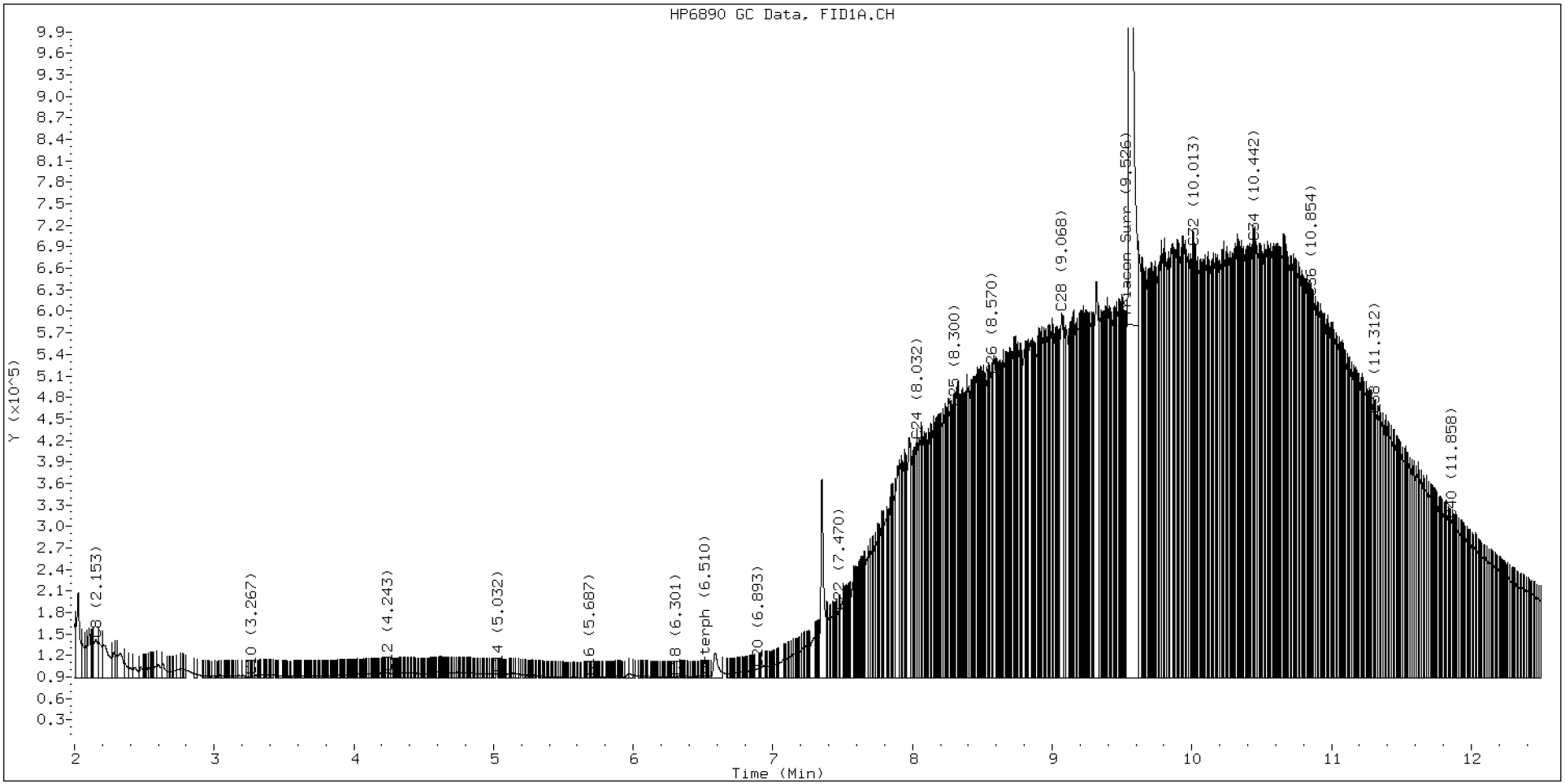
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount	
o-Terphenyl	1966	0.0	
Triacontane	7161172	48.3	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

Datafile: FID4A, 20200602.b/420F0211.D SIF0018-SCV1



TPH Manual Integrations Report

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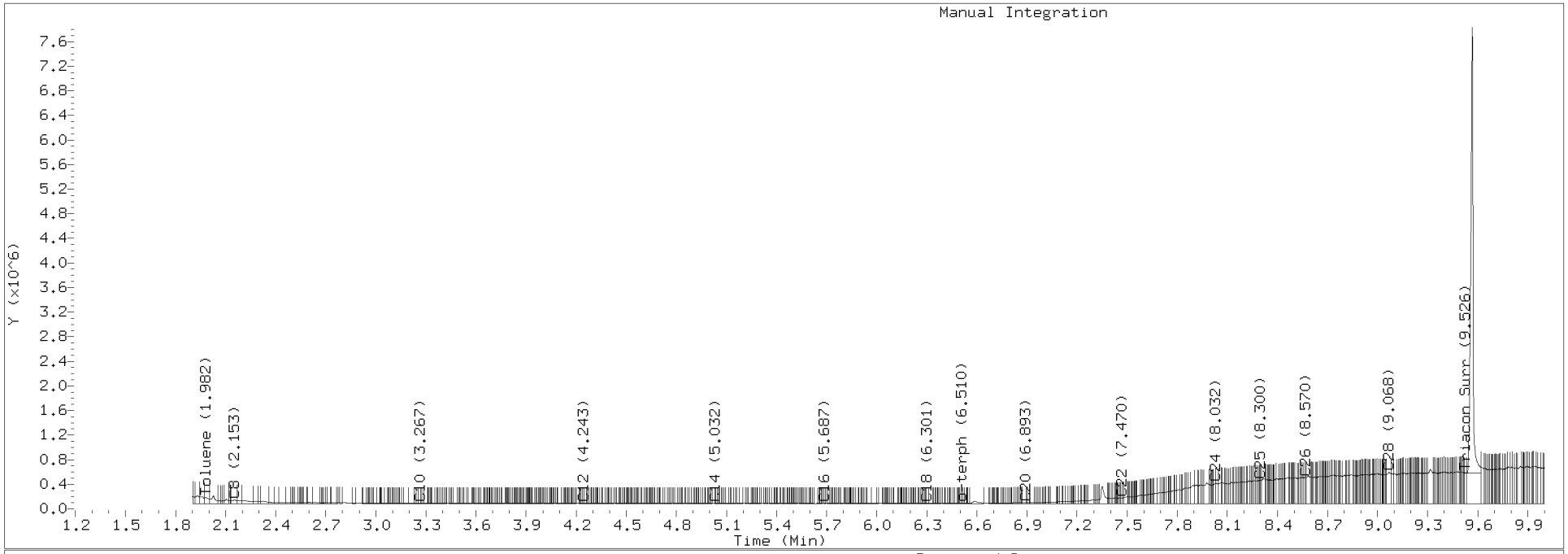
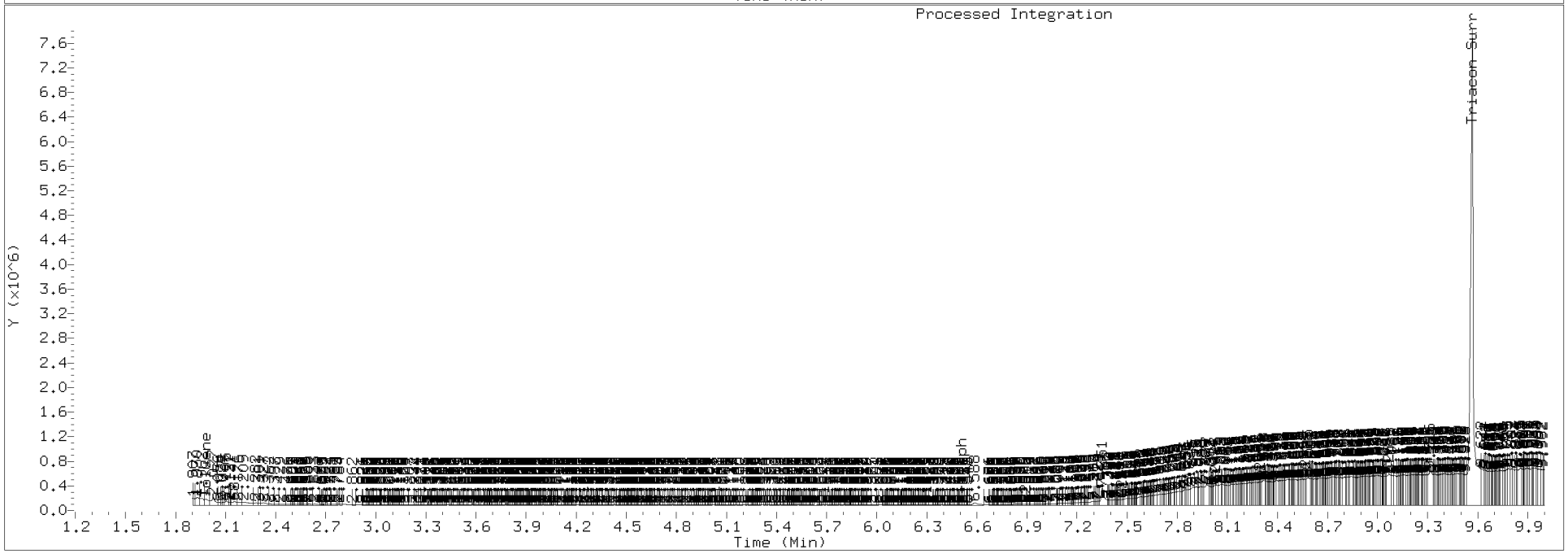
Lab ID:SIF0018-SCV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIH0092

Instrument: FID4
Calibration ID: DA00022

Printed: 8/10/2020 2:51:30PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SIH0092-IBL1	QC		1		I006239			
SIH0092-IBL2	QC		2		I006241			
SIH0092-CAL1	QC		3		I006988			
SIH0092-CAL2	QC		4		I006987			
SIH0092-CAL3	QC		5		I006986			
SIH0092-CAL4	QC		6		I006985			
SIH0092-CAL5	QC		7		I006984			
SIH0092-CAL6	QC		8		I006965			

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200810.b

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1	10-AUG-2020 08:11	420H1001.D	1	RINSE	
2	10-AUG-2020 08:30	420H1002.D	1	RINSE	
3	10-AUG-2020 08:50	420H1003.D	1	SEQ-IBL1	
4	10-AUG-2020 09:10	420H1004.D	1	SEQ-IBL2	
5	10-AUG-2020 09:30	420H1005.D	1	SEQ-ICV1	
6	10-AUG-2020 09:49	420H1006.D	1	SEQ-ICV2	
7	10-AUG-2020 10:09	420H1007.D	1	I006965	
8	10-AUG-2020 11:44	420H1008.D	1	SEQ-CAL1	
9	10-AUG-2020 12:03	420H1009.D	1	SEQ-CAL2	
10	10-AUG-2020 12:23	420H1010.D	1	SEQ-CAL3	
11	10-AUG-2020 12:43	420H1011.D	1	SEQ-CAL4	
12	10-AUG-2020 13:02	420H1012.D	1	SEQ-CAL5	
13	10-AUG-2020 13:22	420H1013.D	1	SEQ-CAL6	
14	10-AUG-2020 15:15	420H1014.D	1	BIH0129-BLK1	
15	10-AUG-2020 15:34	420H1015.D	1	BIH0129-BS1	
16	10-AUG-2020 15:54	420H1016.D	1	20H0053-01	
17	10-AUG-2020 16:14	420H1017.D	1	20H0058-01	
18	10-AUG-2020 16:34	420H1018.D	1	20H0058-02	
19	10-AUG-2020 16:53	420H1019.D	1	20H0058-03	
20	10-AUG-2020 17:13	420H1020.D	1	20H0060-01	
21	10-AUG-2020 17:33	420H1021.D	1	20H0060-02	
22	10-AUG-2020 17:52	420H1022.D	1	20H0060-03	
23	10-AUG-2020 18:12	420H1023.D	1	BIH0058-BLK1	
24	10-AUG-2020 18:32	420H1024.D	1	BIH0058-BS1	
25	10-AUG-2020 18:52	420H1025.D	1	20G0289-03	
26	10-AUG-2020 19:11	420H1026.D	1	20G0291-01	
27	10-AUG-2020 19:31	420H1027.D	1	SEQ-CCV1	
28	10-AUG-2020 19:51	420H1028.D	1	SEQ-CCV2	
29	10-AUG-2020 20:11	420H1029.D	1	SEQ-ICV3	
30	10-AUG-2020 20:30	420H1030.D	1	BIH0100-BLK1	
31	10-AUG-2020 20:50	420H1031.D	1	BIH0100-BS1	
32	10-AUG-2020 21:10	420H1032.D	1	BIH0100-BSD1	
33	10-AUG-2020 21:29	420H1033.D	1	20G0287-01	
34	10-AUG-2020 21:49	420H1034.D	1	BIH0100-MS1	
35	10-AUG-2020 22:09	420H1035.D	1	BIH0100-MSD1	
36	10-AUG-2020 22:28	420H1036.D	1	BIH0113-BLK1	
37	10-AUG-2020 22:48	420H1037.D	1	BIH0113-BS1	
38	10-AUG-2020 23:08	420H1038.D	1	BIH0113-BSD1	
39	10-AUG-2020 23:27	420H1039.D	1	20H0047-01	
40	10-AUG-2020 23:47	420H1040.D	1	20H0047-02	
41	11-AUG-2020 00:06	420H1041.D	1	20H0047-03	
42	11-AUG-2020 00:26	420H1042.D	1	SEQ-CCV3	
43	11-AUG-2020 00:46	420H1043.D	1	SEQ-CCV4	
44	11-AUG-2020 01:05	420H1044.D	1	SEQ-CCV5	
45	11-AUG-2020 01:25	420H1045.D	1	BIH0166-BLK1	
46	11-AUG-2020 01:44	420H1046.D	1	BIH0166-BS1	
47	11-AUG-2020 02:04	420H1047.D	1	BIH0166-BSD1	
48	11-AUG-2020 02:23	420H1048.D	1	20H0082-01	
49	11-AUG-2020 02:43	420H1049.D	1	BIH0166-MS1	
50	11-AUG-2020 03:03	420H1050.D	1	BIH0166-MSD1	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200810.b

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52	11-AUG-2020 03:42	420H1052.D	1	20H0082-03	
53	11-AUG-2020 04:01	420H1053.D	1	20H0082-04	
54	11-AUG-2020 04:21	420H1054.D	1	20H0082-05	
55	11-AUG-2020 04:40	420H1055.D	1	20H0082-06	
56	11-AUG-2020 05:00	420H1056.D	1	20H0082-07	
57	11-AUG-2020 05:19	420H1057.D	1	20H0082-08	
58	11-AUG-2020 05:39	420H1058.D	1	20H0082-09	
59	11-AUG-2020 05:58	420H1059.D	1	SEQ-CCV6	
60	11-AUG-2020 06:18	420H1060.D	1	SEQ-CCV7	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200810.b

ARI Job No.: RINS Method: FID4TPH.m Instrument: fid4a.i Date: 10-AUG-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0811	420H1001.D	RINSE		1	NO MANUAL INTEGRATION
0830	420H1002.D	RINSE		1	NO MANUAL INTEGRATION
0850	420H1003.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
0910	420H1004.D	SEQ-IBL2		1	NO MANUAL INTEGRATION
0930	420H1005.D	SEQ-ICV1		1	NO MANUAL INTEGRATION
0949	420H1006.D	SEQ-ICV2		1	NO MANUAL INTEGRATION
1009	420H1007.D	I006965		1	NO MANUAL INTEGRATION
1144	420H1008.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
1203	420H1009.D	SEQ-CAL2		1	o-terph,
1223	420H1010.D	SEQ-CAL3		1	o-terph,
1243	420H1011.D	SEQ-CAL4		1	o-terph,
1302	420H1012.D	SEQ-CAL5		1	o-terph,
1322	420H1013.D	SEQ-CAL6		1	o-terph,

Security Status Report

Date: 10-Aug-2020 15:38

420H1001.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1002.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1003.D	Data Locked	christopher, 10-Aug-2020 15:38
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420H1011.D	Data Locked	christopher, 10-Aug-2020 15:38
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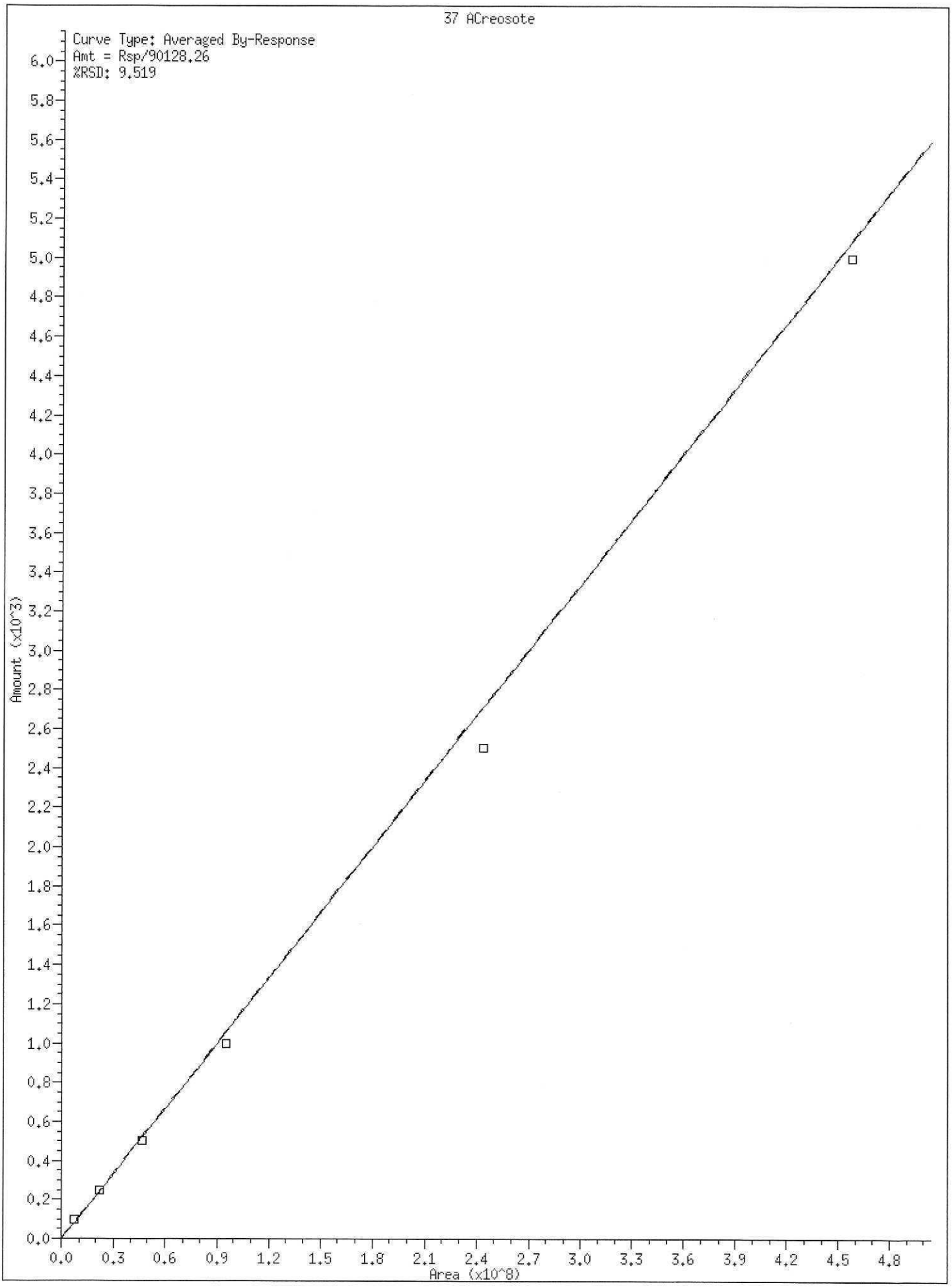
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Area (x10^8)
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0.4
0.6
0.8
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1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
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3.8
4.0
4.2
4.4
4.6
4.8
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5.4
5.6
5.8
6.0
0.0
0.3
0.6
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1.2
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Data File: \\target\share\chem2\fid4a.i\20200810.b\420H1003.D

Date : 10-AUG-2020 08:50

Client ID:

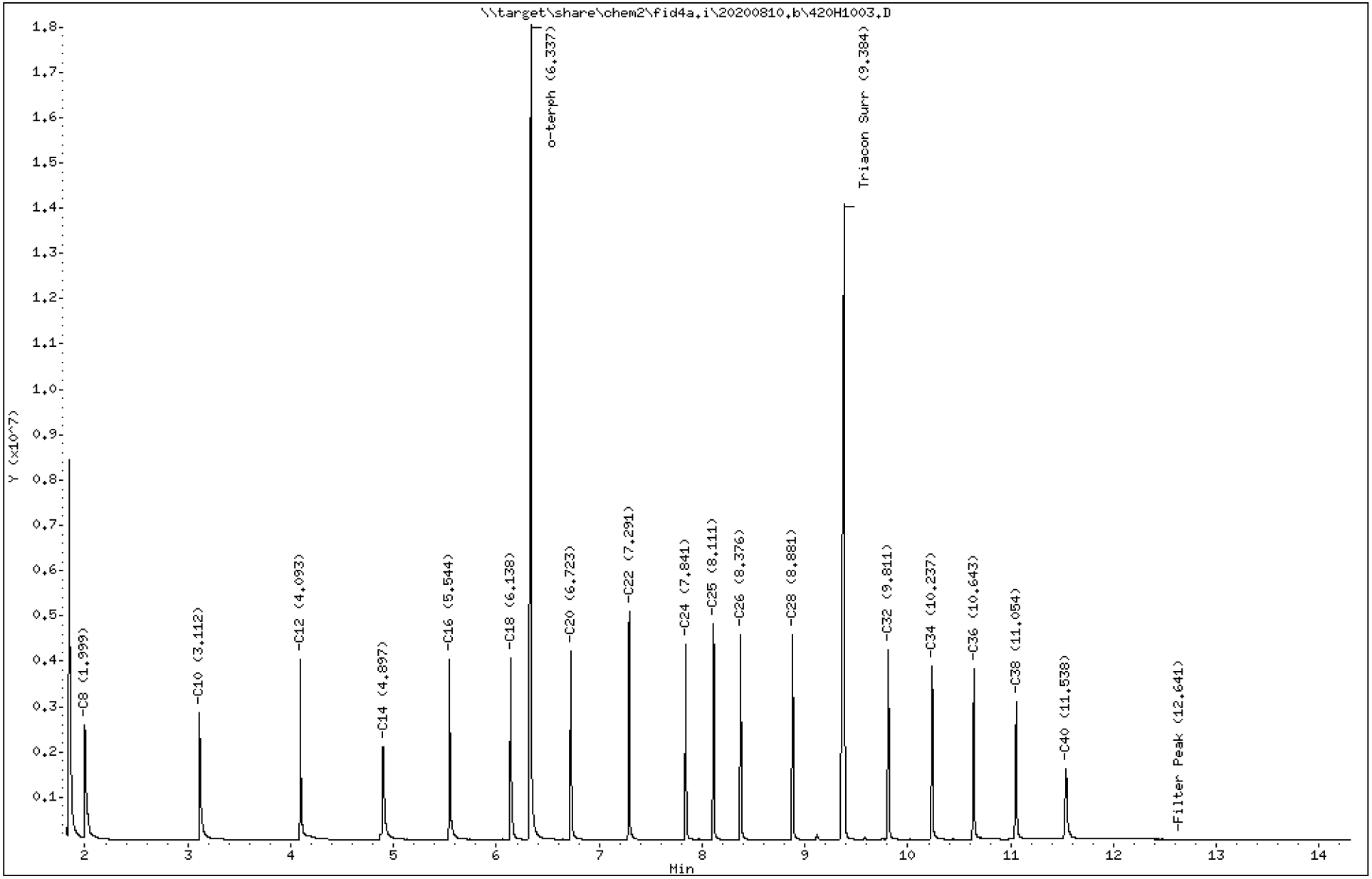
Instrument: fid4a.i

Sample Info: SEQ-IBL1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200810.b/420H1003.D
Method: 20200810.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/10/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-IBL1
Client ID:
Injection: 10-AUG-2020 08:50
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.999	0.000	2540721	3264726	WATPHD	(C12-C24)	22306304	140.0
C10	3.112	0.000	2810194	3442755	WATPHM	(C24-C38)	26298631	260.0
C12	4.093	0.000	3978222	2976186	AK102	(C10-C25)	29087658	148.8
C14	4.897	0.000	2063035	3357028	AK103	(C25-C36)	22563075	308.2
C16	5.544	0.000	3983822	3466435	OR.DIES	(C10-C28)	40321674	205.7
C18	6.138	0.000	4016286	3502383				
C20	6.723	0.000	4164481	3619197	JET-A	(C10-C18)	18085569	107.7
C22	7.291	0.000	5031917	3645250				
C24	7.841	0.000	4315294	3204971				
C25	8.111	0.000	4771856	3679162				
C26	8.376	0.000	4526404	3716371				
C28	8.881	0.000	4514102	3764243				
C32	9.811	0.000	4195592	3775835				
C34	10.237	0.000	3847931	3544071				
Filter Peak	12.641	0.000	14794	6644	CREOSOT	(C12-C22)	19024422	211.1
C36	10.643	0.000	3772310	3456667				
C38	11.054	0.000	3044407	3312686				
C40	11.538	0.000	1563052	2782086				
o-terph	6.337	0.000	17989088	19759793				
Triacon Surr	9.384	0.000	14032526	21215524	NAS DIES	(C10-C24)	28998485	148.6

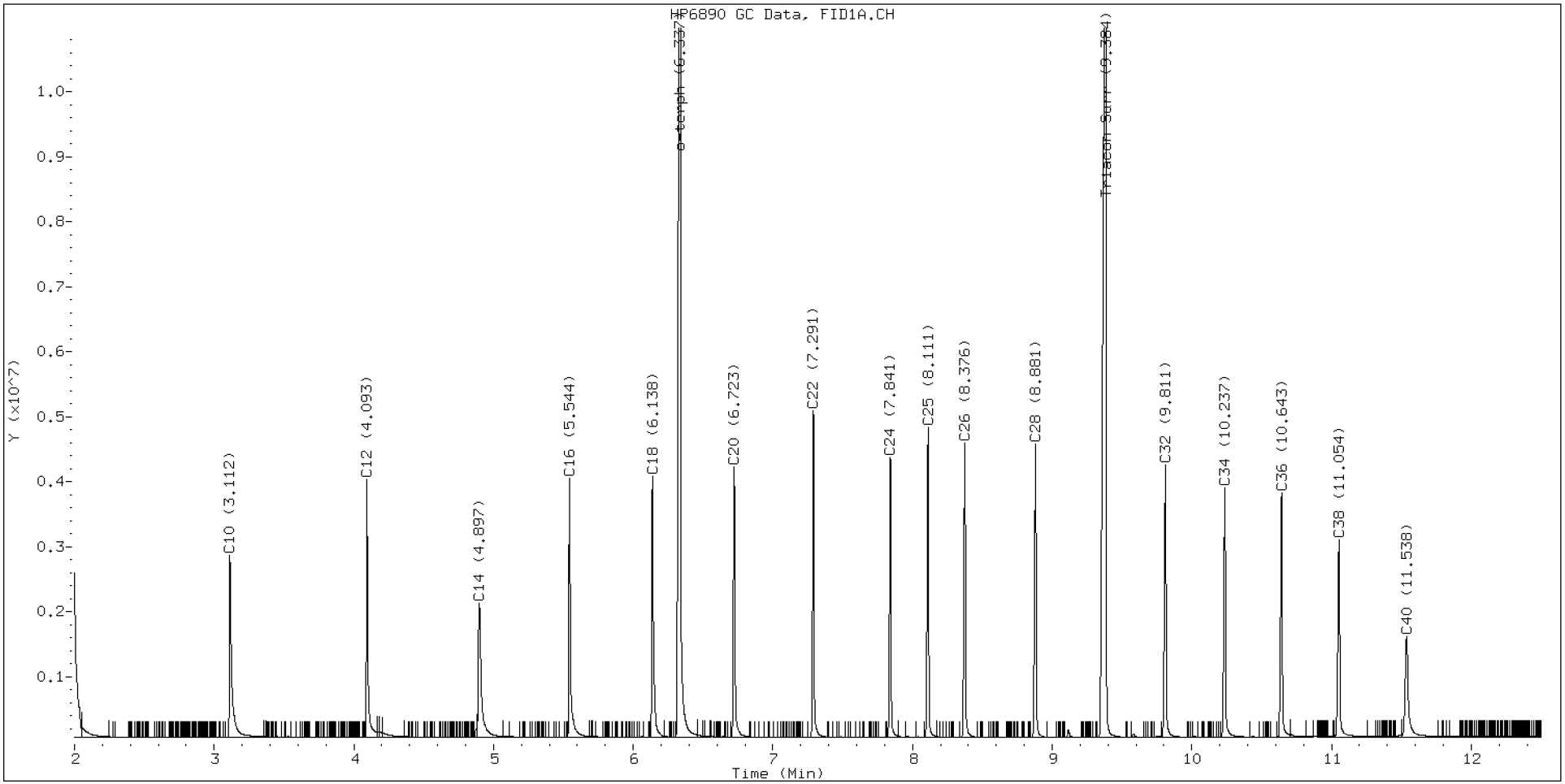
Range Times: NW Diesel(4.093 - 7.841) AK102(3.11 - 8.11) Jet A(3.11 - 6.14)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount
o-Terphenyl	19759793	96.5
Triacontane	21215524	143.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

Datafile: FID4A, 20200810.b/420H1003.D SEQ-IBL1



Data File: \\target\share\chem2\fid4a.i\20200810.b\420H1004.D

Date : 10-AUG-2020 09:10

Client ID:

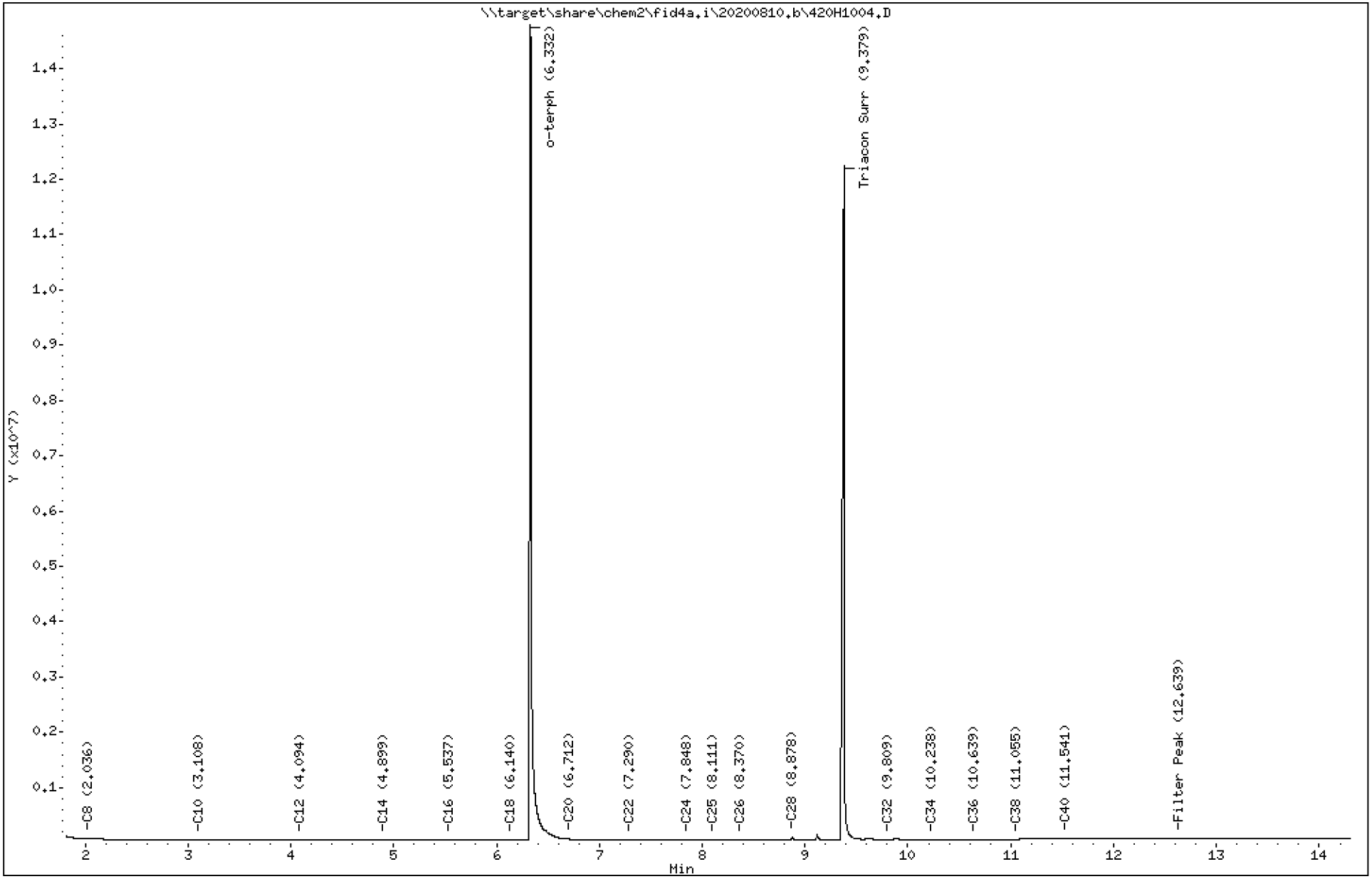
Instrument: fid4a.i

Sample Info: SEQ-IBL2

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200810.b/420H1004.D
Method: 20200810.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/10/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-IBL2
Client ID:
Injection: 10-AUG-2020 09:10
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.036	0.037	17008	10175	WATPHD	(C12-C24)	1331558	8.4
C10	3.108	-0.005	5021	2233	WATPHM	(C24-C38)	996053	9.8
C12	4.094	0.001	7426	3680	AK102	(C10-C25)	1724501	8.8
C14	4.899	0.001	4565	910	AK103	(C25-C36)	714743	9.8
C16	5.537	-0.007	2052	1468	OR.DIES	(C10-C28)	1799717	9.2
C18	6.140	0.002	1105	606				
C20	6.712	-0.011	12436	11107	JET-A	(C10-C18)	777990	4.6
C22	7.290	-0.000	2229	1416				
C24	7.848	0.006	1012	430				
C25	8.111	-0.000	658	573				
C26	8.370	-0.005	358	107				
C28	8.878	-0.004	40640	60459				
C32	9.809	-0.001	5465	5260				
C34	10.238	0.000	5599	2503				
Filter Peak	12.639	-0.001	14778	9572	CREOSOT	(C12-C22)	1289747	14.3
C36	10.639	-0.005	9656	22858				
C38	11.055	0.001	12241	5462				
C40	11.541	0.003	14617	10157				
o-terph	6.332	-0.005	14738078	18875440				
Triacon Surr	9.379	-0.005	12182512	16667134	NAS DIES	(C10-C24)	1715942	8.8

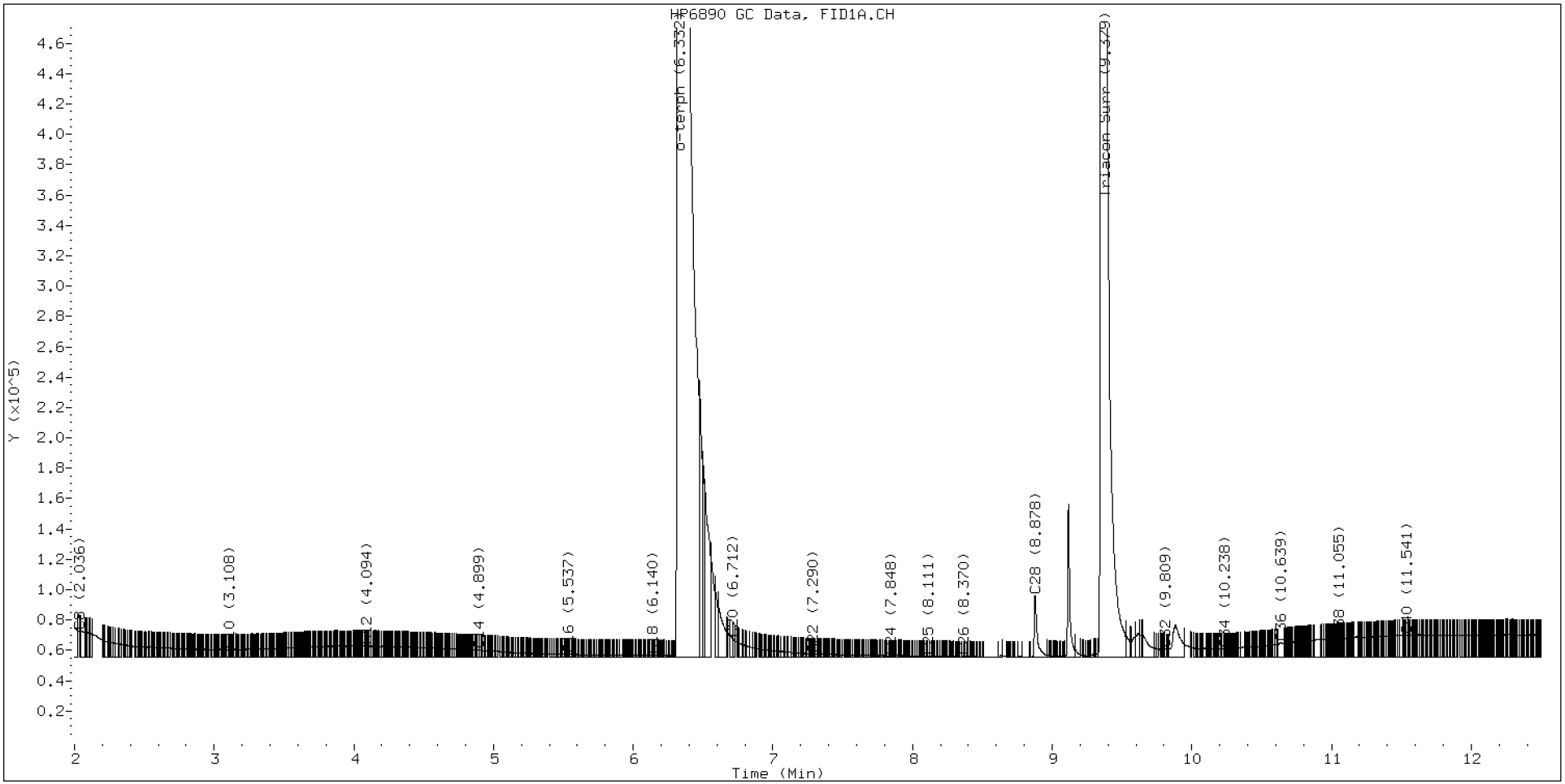
Range Times: NW Diesel(4.093 - 7.841) AK102(3.11 - 8.11) Jet A(3.11 - 6.14)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount
o-Terphenyl	18875440	92.2
Triacontane	16667134	112.3

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

Datafile: FID4A, 20200810.b/420H1004.D SEQ-IBL2



Data File: \\target\share\chem2\fid4a.i\20200810.b\420H1008.D

Date : 10-AUG-2020 11:44

Client ID:

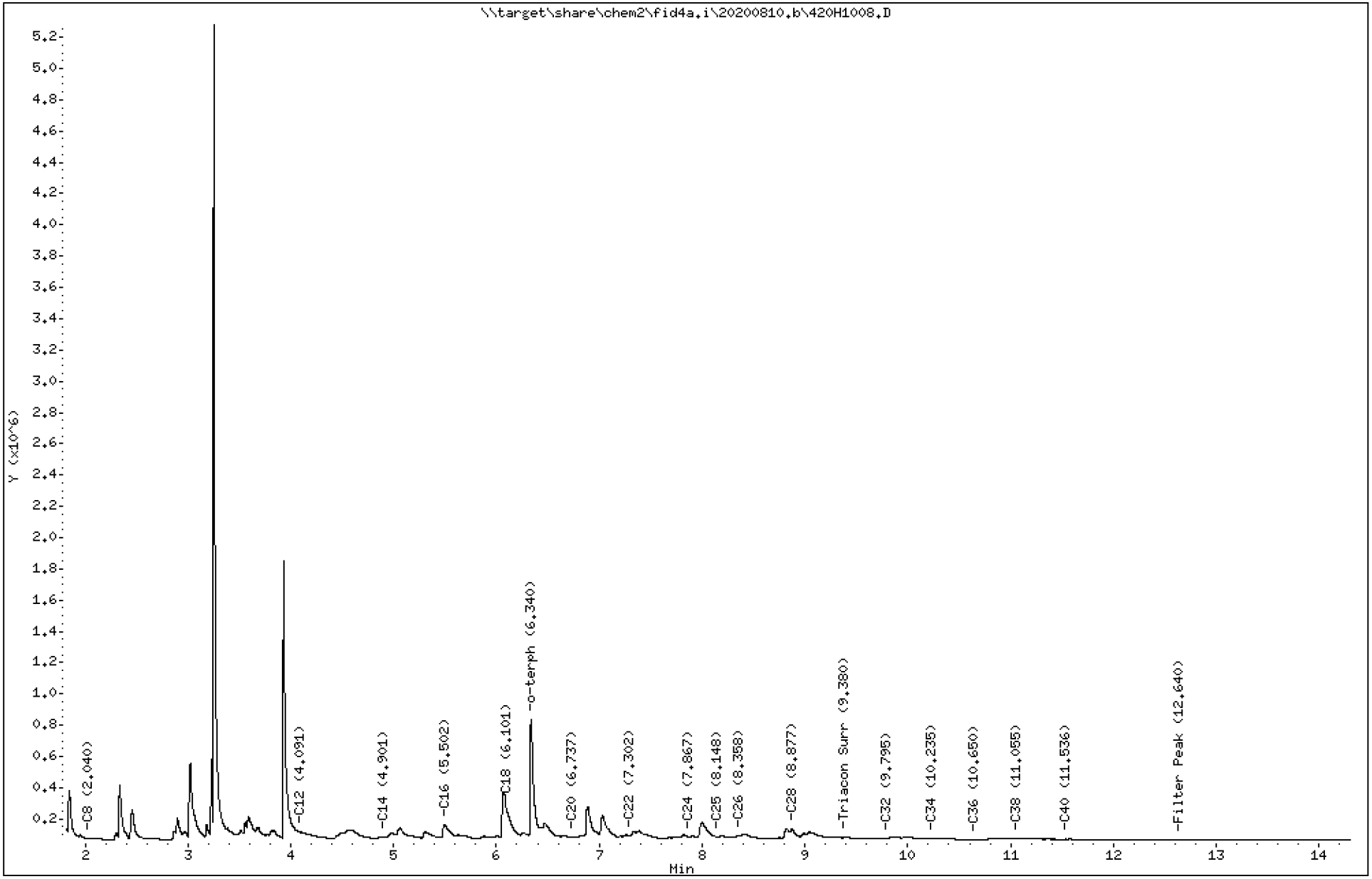
Instrument: fid4a.i

Sample Info: SEQ-CAL1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200810.b/420H1008.D
Method: 20200810.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/10/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL1
Client ID:
Injection: 10-AUG-2020 11:44
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.040	0.041	9503	2838	WATPHD	(C12-C24)	8080791	50.7
C10	----				WATPHM	(C24-C38)	2579077	25.5
C12	4.091	-0.003	48194	23669	AK102	(C10-C25)	19525938	99.9
C14	4.901	0.004	17148	14774	AK103	(C25-C36)	2056688	28.1
C16	5.502	-0.042	98467	314876	OR.DIES	(C10-C28)	20511038	104.6
C18	6.101	-0.037	189826	593277				
C20	6.737	0.014	14982	5936	JET-A	(C10-C18)	15329343	91.3
C22	7.302	0.012	27302	26565				
C24	7.867	0.026	21147	7324				
C25	8.148	0.037	19796	7876				
C26	8.358	-0.018	27281	17420				
C28	8.877	-0.004	67902	107454				
C32	9.795	-0.016	12040	22767				
C34	10.235	-0.003	7524	8634				
Filter Peak	12.640	-0.001	3106	1077	CREOSOT	(C12-C22)	7382186	81.9
C36	10.650	0.007	3324	1958				
C38	11.055	0.001	5084	2761				
C40	11.536	-0.002	4406	4074				
o-terph	6.340	0.002	772053	1761409				
Triacon Surr	9.380	-0.004	14077	10247	NAS DIES	(C10-C24)	19109345	97.9

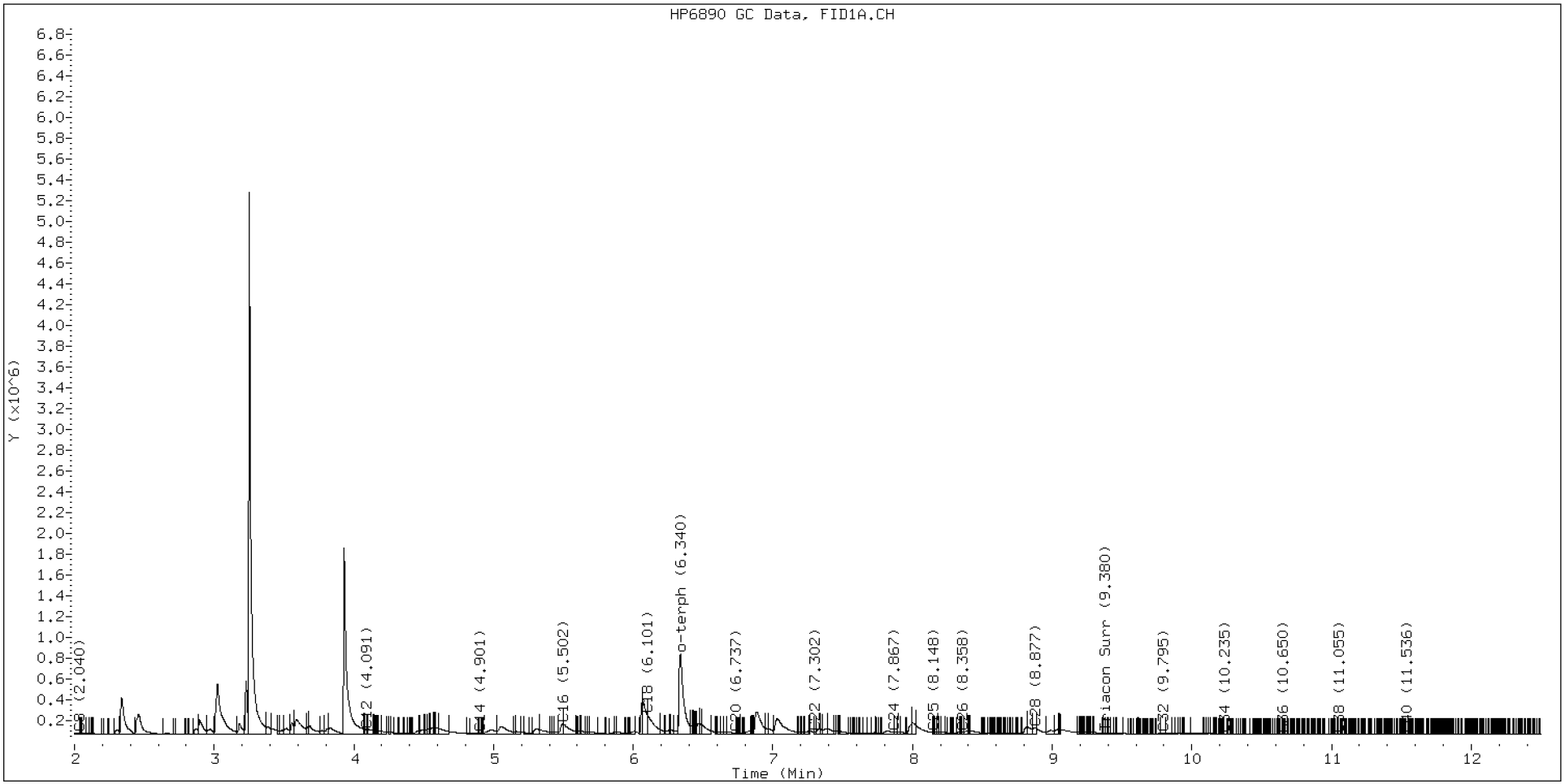
Range Times: NW Diesel(4.093 - 7.841) AK102(3.11 - 8.11) Jet A(3.11 - 6.14)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount
o-Terphenyl	1761409	8.6
Triacontane	10247	0.1

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

Datafile: FID4A, 20200810.b/420H1008.D SEQ-CAL1

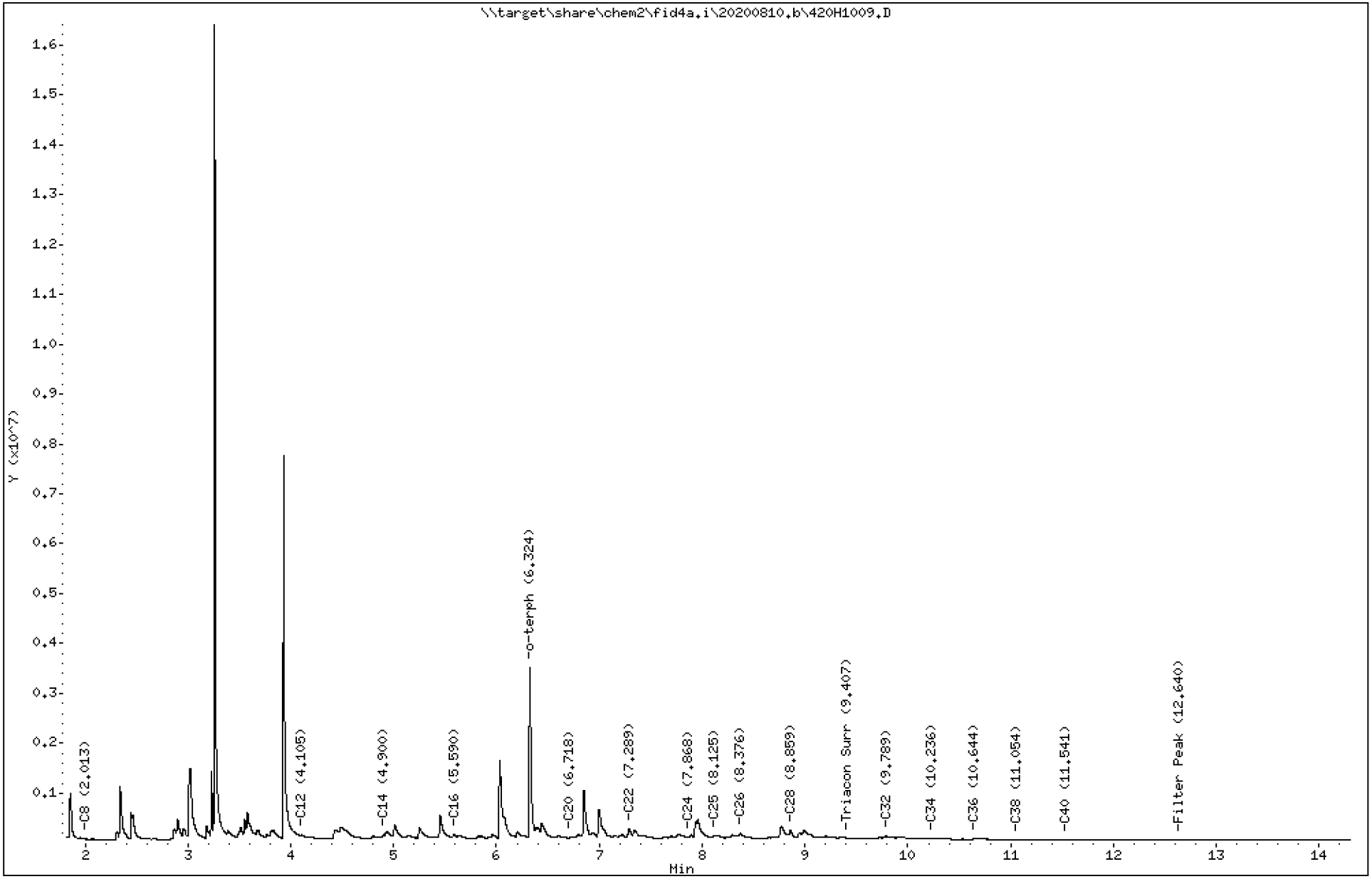


Data File: \\target\share\chem2\fid4a.i\20200810.b\420H1009.D
Date : 10-AUG-2020 12:03
Client ID:
Sample Info: SEQ-CAL2

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200810.b/420H1009.D
Method: 20200810.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/10/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL2
Client ID:
Injection: 10-AUG-2020 12:03
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.013	0.014	13752	23396	WATPHD	(C12-C24)	24094230	151.2
C10	----				WATPHM	(C24-C38)	9822291	97.1
C12	4.105	0.012	97213	295971	AK102	(C10-C25)	55662092	284.7
C14	4.900	0.003	96654	172578	AK103	(C25-C36)	7689863	105.0
C16	5.590	0.046	100512	127761	OR.DIES	(C10-C28)	59384249	303.0
C18	----							
C20	6.718	-0.005	43007	69493	JET-A	(C10-C18)	42803912	254.9
C22	7.289	-0.001	213953	504363				
C24	7.868	0.026	51518	25580				
C25	8.125	0.014	87057	179953				
C26	8.376	0.000	125029	524631				
C28	8.859	-0.023	181002	435693				
C32	9.789	-0.022	68586	223761				
C34	10.236	-0.001	21356	24080				
Filter Peak	12.640	-0.000	3549	1227	CREOSOT	(C12-C22)	22100398	245.2
C36	10.644	0.001	13989	3478				
C38	11.054	-0.000	9429	6073				
C40	11.541	0.003	5623	1672				
o-terph	6.324	-0.013	3394533	4330623				
Triacon Surr	9.407	0.023	36620	30128	NAS DIES	(C10-C24)	53743053	275.4

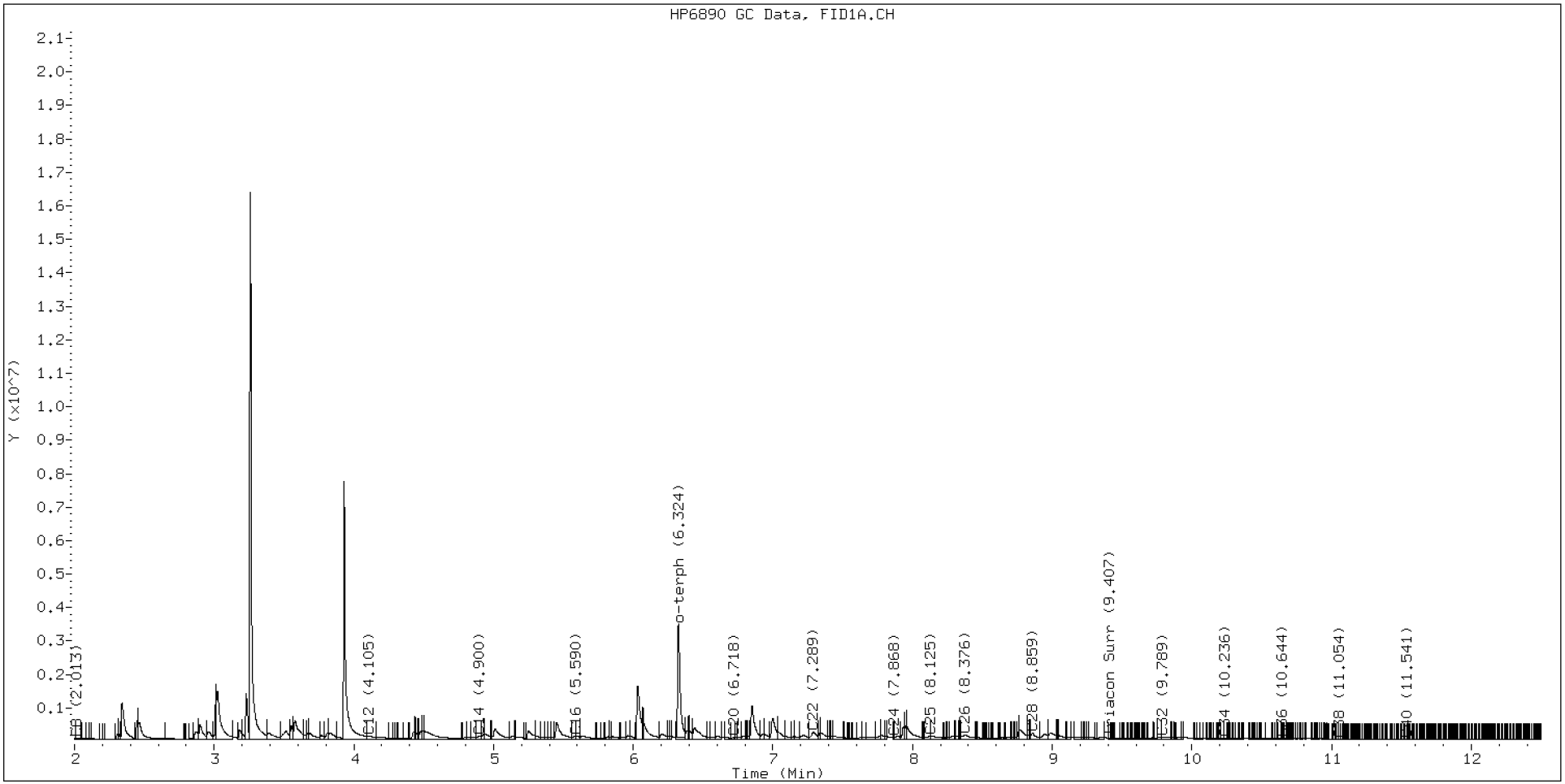
Range Times: NW Diesel(4.093 - 7.841) AK102(3.11 - 8.11) Jet A(3.11 - 6.14)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount	
o-Terphenyl	4330623	21.2	M
Triacontane	30128	0.2	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

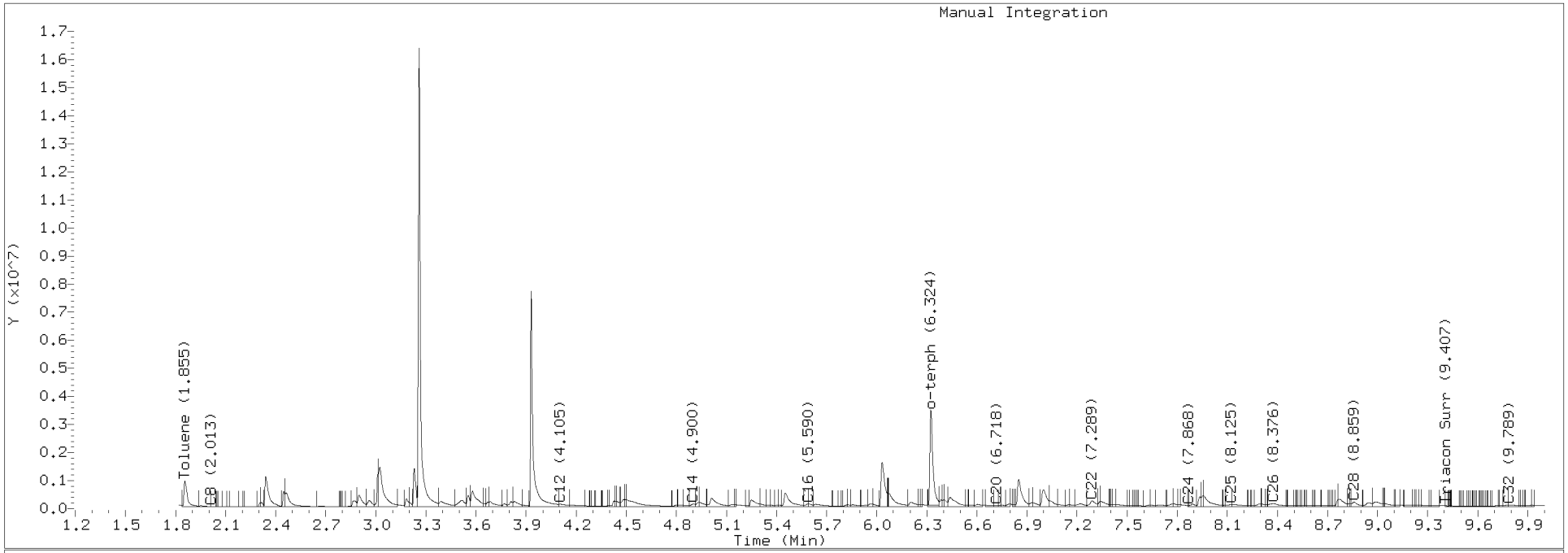
Datafile: FID4A, 20200810.b/420H1009.D SEQ-CAL2

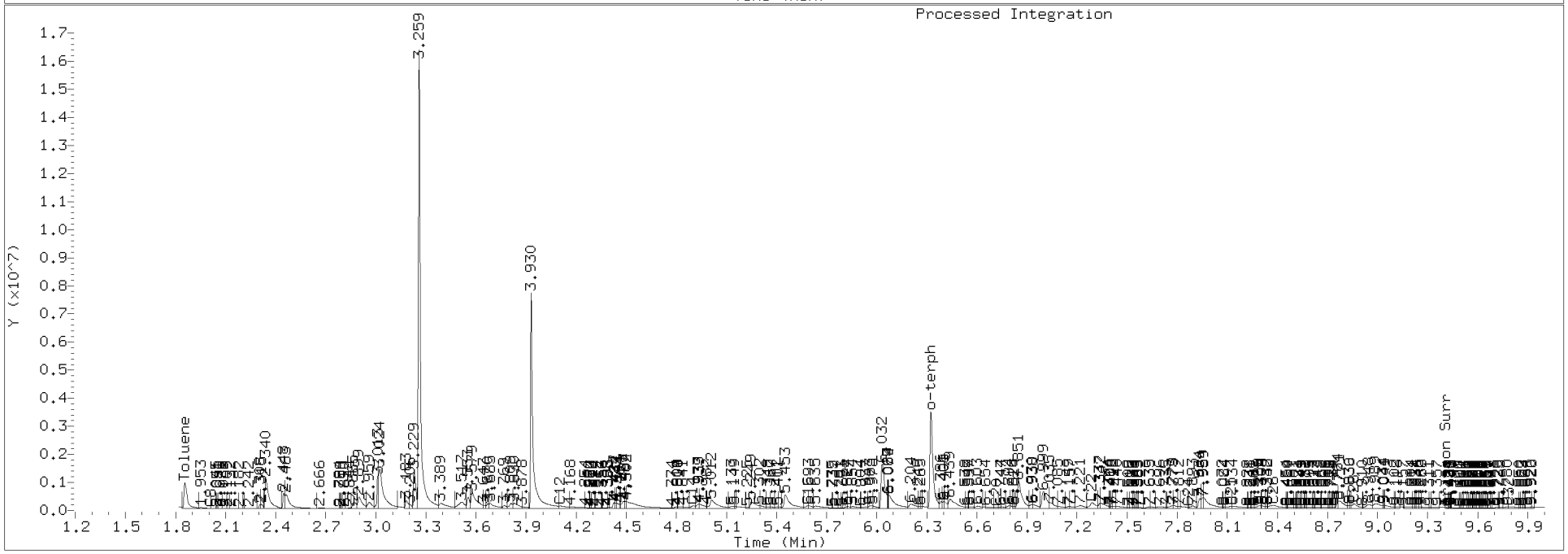


TPH Manual Integrations Report

Datafile: FID4A, 20200810.b/420H1009.D Injection: 10-AUG-2020 12:03

Lab ID:SEQ-CAL2





Data File: \\target\share\chem2\fid4a.i\20200810.b\420H1010.D

Date : 10-AUG-2020 12:23

Client ID:

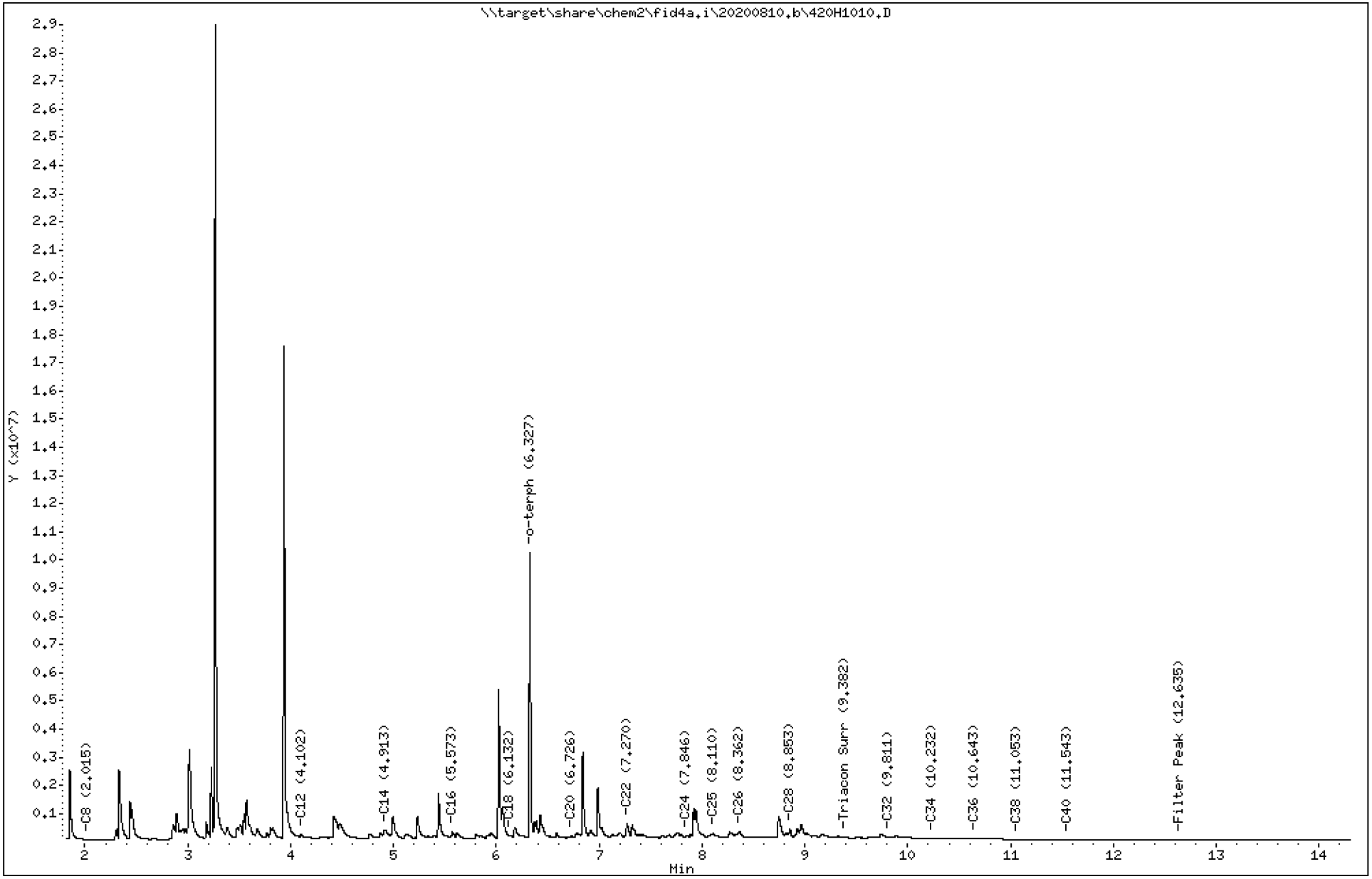
Instrument: fid4a.i

Sample Info: SEQ-CAL3

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200810.b/420H1010.D
Method: 20200810.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/10/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL3
Client ID:
Injection: 10-AUG-2020 12:23
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.015	0.016	17846	36273	WATPHD	(C12-C24)	51259340	321.7
C10	----				WATPHM	(C24-C38)	22066522	218.1
C12	4.102	0.009	179685	448519	AK102	(C10-C25)	116587134	596.4
C14	4.913	0.016	356259	456272	AK103	(C25-C36)	17746552	242.4
C16	5.573	0.029	271020	584987	OR.DIES	(C10-C28)	125538937	640.5
C18	6.132	-0.006	140882	269530				
C20	6.726	0.003	136775	134046	JET-A	(C10-C18)	90127540	536.8
C22	7.270	-0.021	606173	1140185				
C24	7.846	0.004	128041	176452				
C25	8.110	-0.001	221035	545483				
C26	8.362	-0.014	297442	1027684				
C28	8.853	-0.028	403064	641655				
C32	9.811	0.000	99788	29846				
C34	10.232	-0.006	46152	43534				
Filter Peak	12.635	-0.006	3882	1909	CREOSOT	(C12-C22)	47014203	521.6
C36	10.643	0.000	38763	9675				
C38	11.053	-0.001	17467	8707				
C40	11.543	0.005	8291	3696				
o-terph	6.327	-0.010	10095175	9317090				
Triacon Surr	9.382	-0.002	75592	22548	NAS DIES	(C10-C24)	112694191	577.5

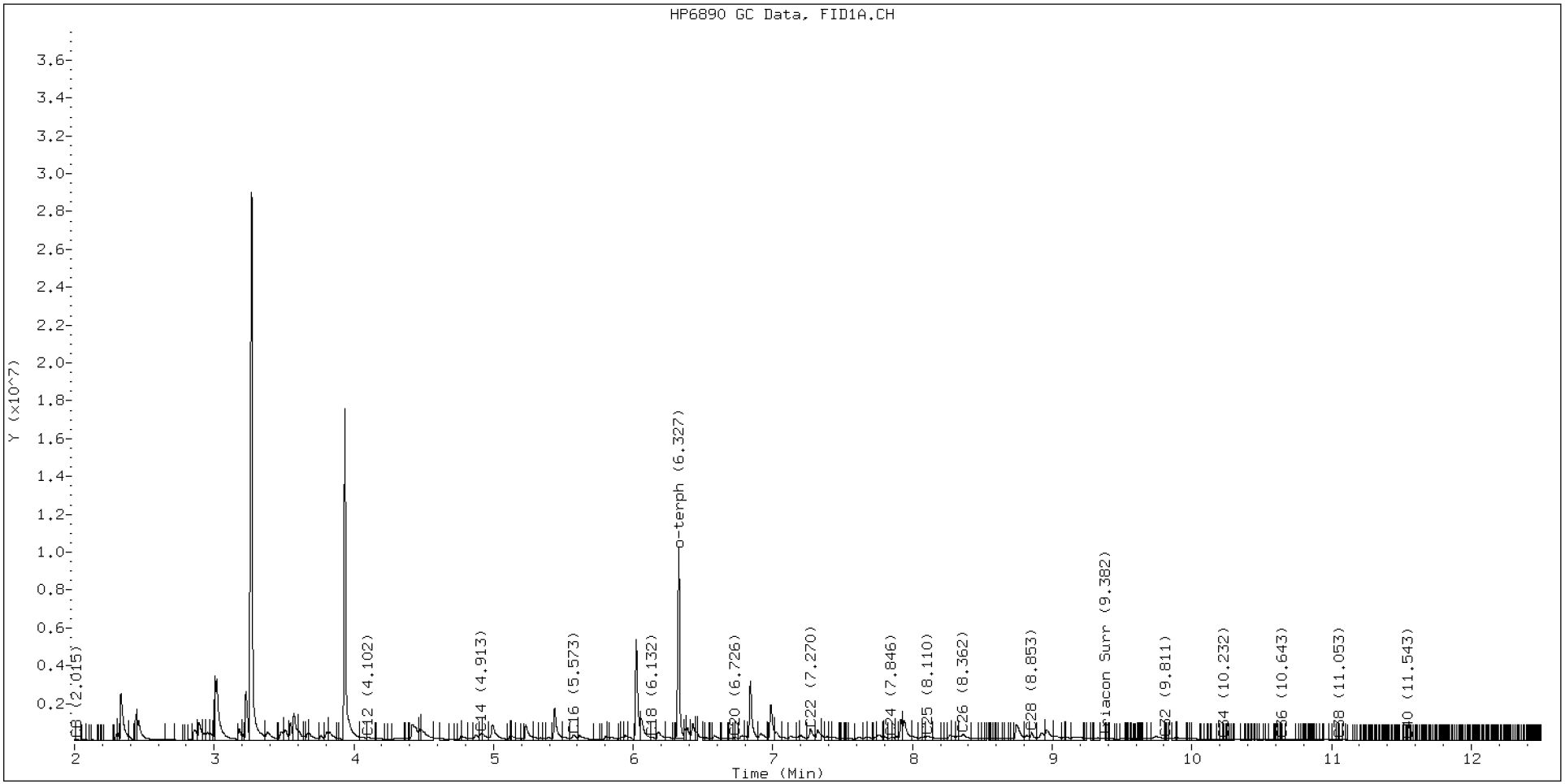
Range Times: NW Diesel(4.093 - 7.841) AK102(3.11 - 8.11) Jet A(3.11 - 6.14)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount	
o-Terphenyl	9317090	45.5	M
Triacontane	22548	0.2	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

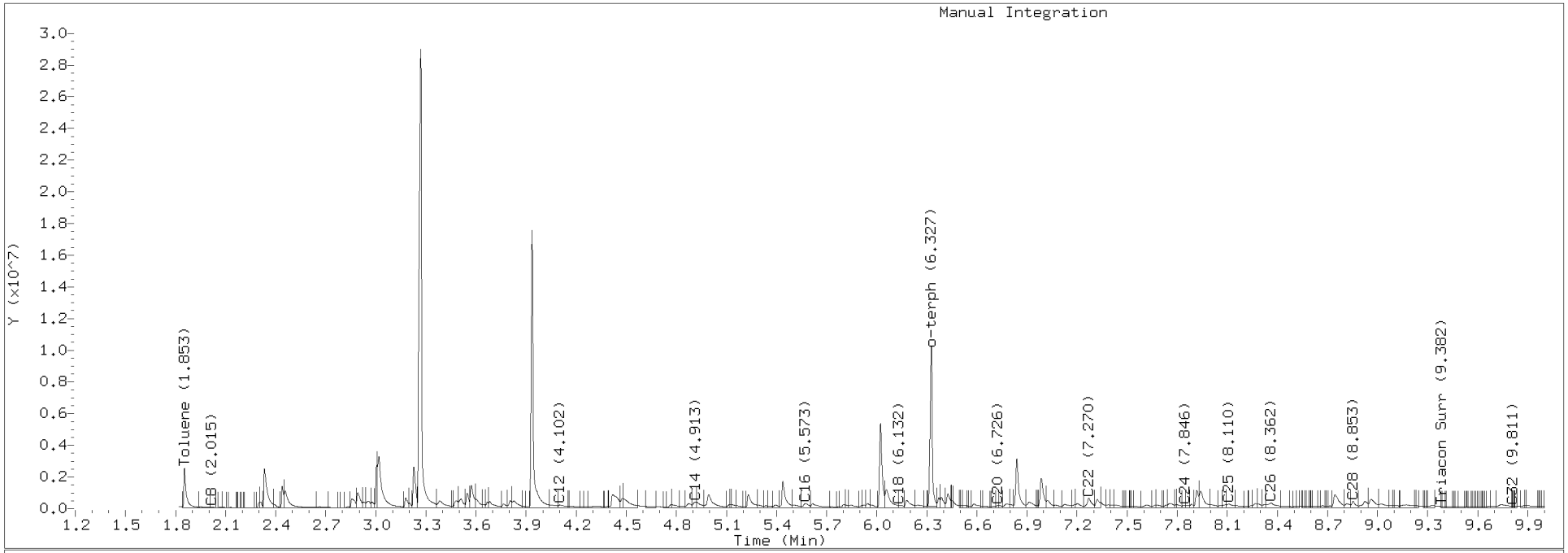
Datafile: FID4A, 20200810.b/420H1010.D SEQ-CAL3

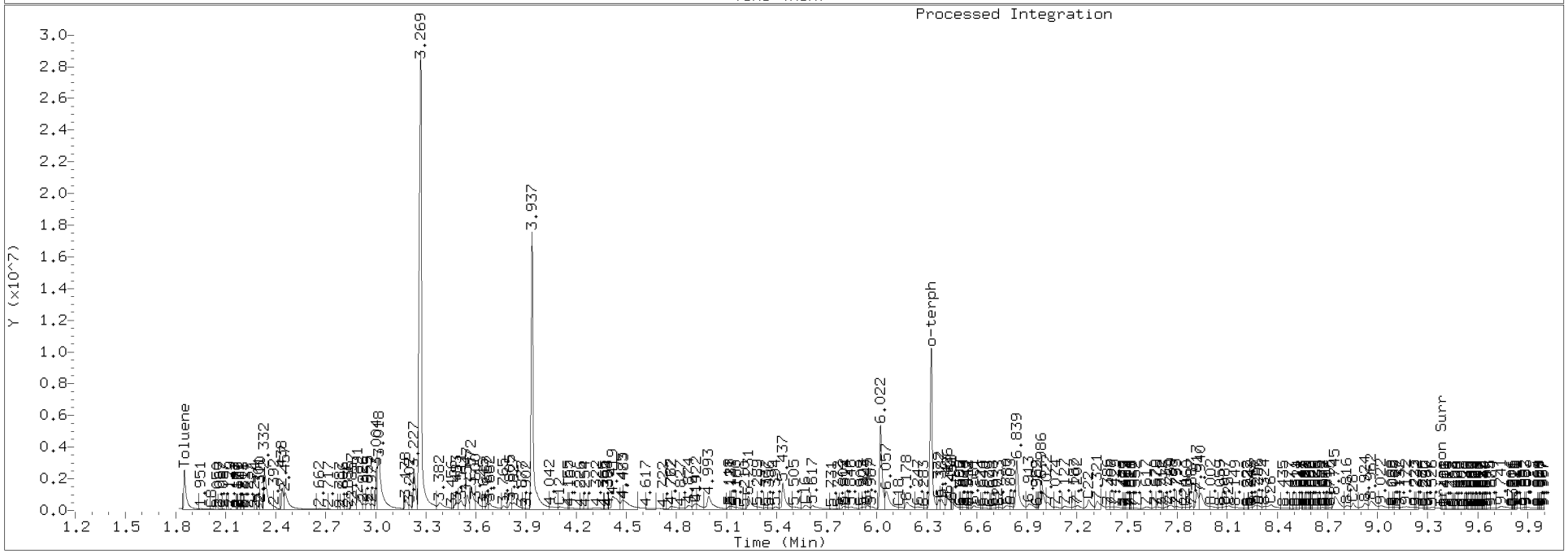


TPH Manual Integrations Report

Datafile: FID4A, 20200810.b/420H1010.D Injection: 10-AUG-2020 12:23

Lab ID:SEQ-CAL3





Data File: \\target\share\chem2\fid4a.i\20200810.b\420H1011.D

Date : 10-AUG-2020 12:43

Client ID:

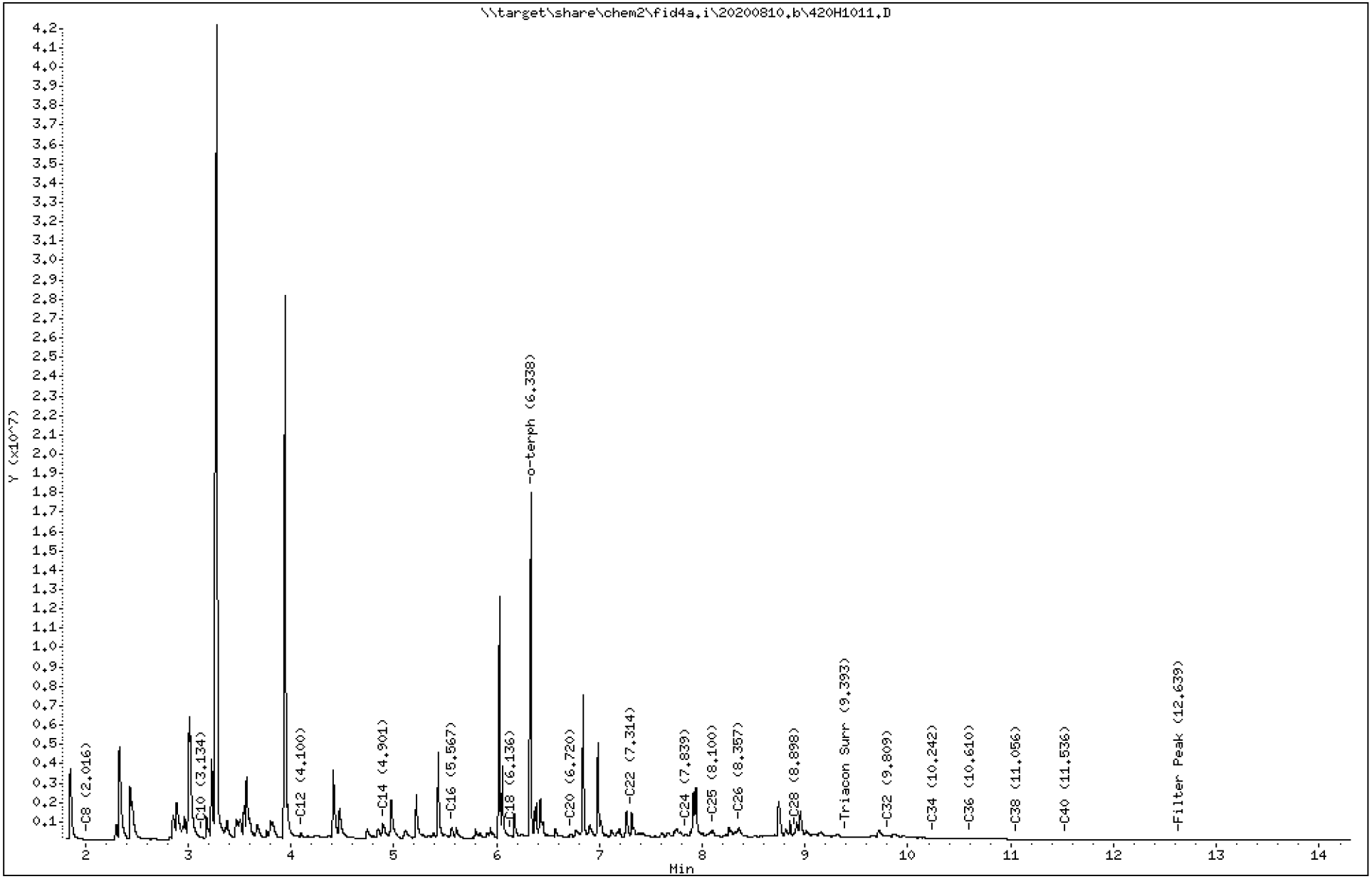
Instrument: fid4a.i

Sample Info: SEQ-CAL4

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200810.b/420H1011.D
Method: 20200810.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/10/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL4
Client ID:
Injection: 10-AUG-2020 12:43
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.016	0.017	24926	59167	WATPHD	(C12-C24)	103926698	652.2
C10	3.134	0.022	150444	235035	WATPHM	(C24-C38)	45820283	452.9
C12	4.100	0.007	374328	737397	AK102	(C10-C25)	235546622	1204.9
C14	4.901	0.004	751227	1307415	AK103	(C25-C36)	37291444	509.4
C16	5.567	0.023	643749	1189010	OR.DIES	(C10-C28)	254051179	1296.2
C18	6.136	-0.002	231616	350832				
C20	6.720	-0.003	299567	566605	JET-A	(C10-C18)	181572311	1081.4
C22	7.314	0.023	1420953	1498483				
C24	7.839	-0.003	259197	166369				
C25	8.100	-0.011	495518	989810				
C26	8.357	-0.019	638808	1623602				
C28	8.898	0.016	333560	331673				
C32	9.809	-0.002	229023	124533				
C34	10.242	0.005	88773	91037				
Filter Peak	12.639	-0.001	2788	1651	CREOSOT	(C12-C22)	95404139	1058.5
C36	10.610	-0.033	86162	550400				
C38	11.056	0.002	27157	25166				
C40	11.536	-0.002	10651	4226				
o-terph	6.338	0.001	17707002	18789469				
Triacon Surr	9.393	0.009	169162	447494	NAS DIES	(C10-C24)	227630229	1166.4

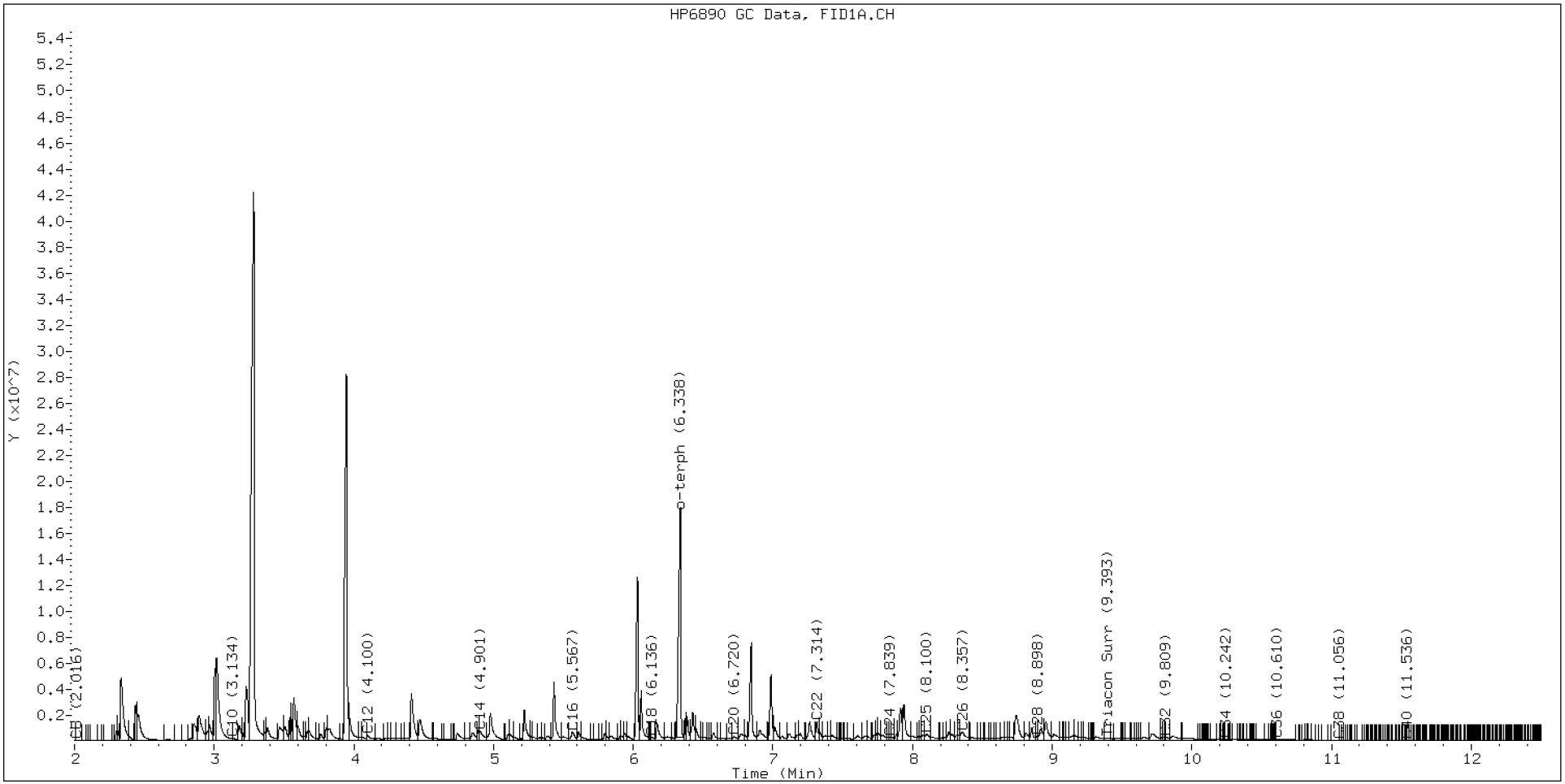
Range Times: NW Diesel(4.093 - 7.841) AK102(3.11 - 8.11) Jet A(3.11 - 6.14)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount	
o-Terphenyl	18789469	91.8	M
Triacontane	447494	3.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

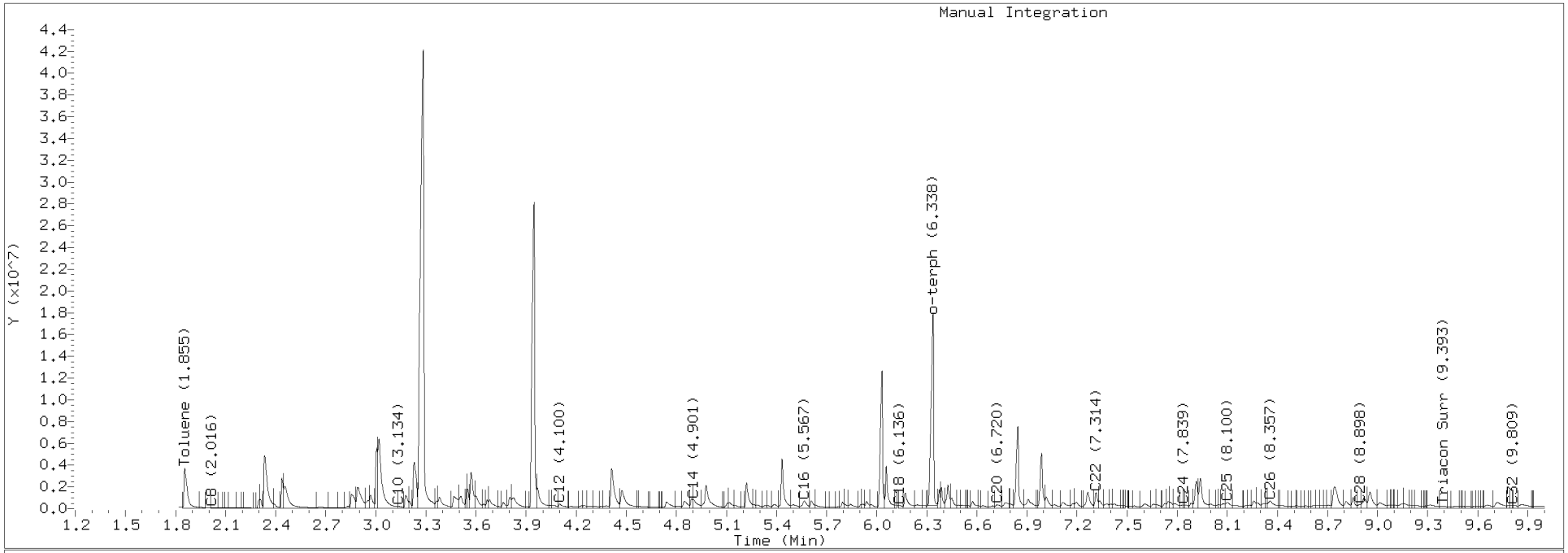
Datafile: FID4A, 20200810.b/420H1011.D SEQ-CAL4

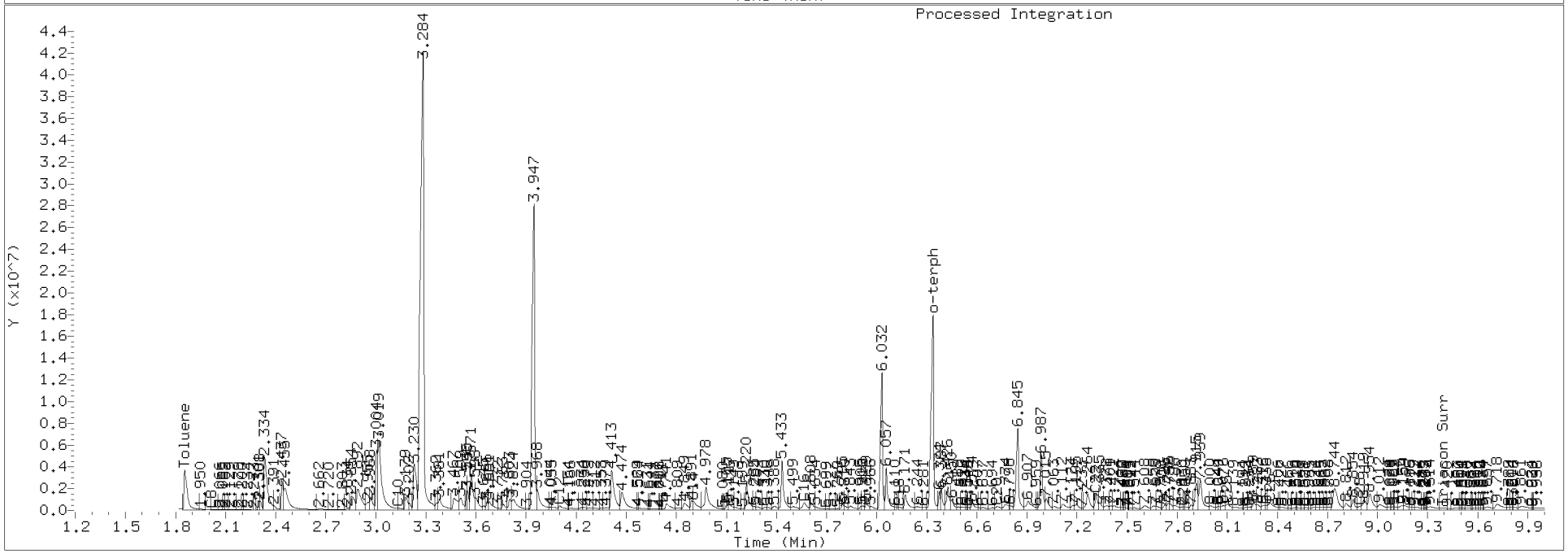


TPH Manual Integrations Report

Datafile: FID4A, 20200810.b/420H1011.D Injection: 10-AUG-2020 12:43

Lab ID:SEQ-CAL4





Data File: \\target\share\chem2\fid4a.i\20200810.b\420H1012.D

Date : 10-AUG-2020 13:02

Client ID:

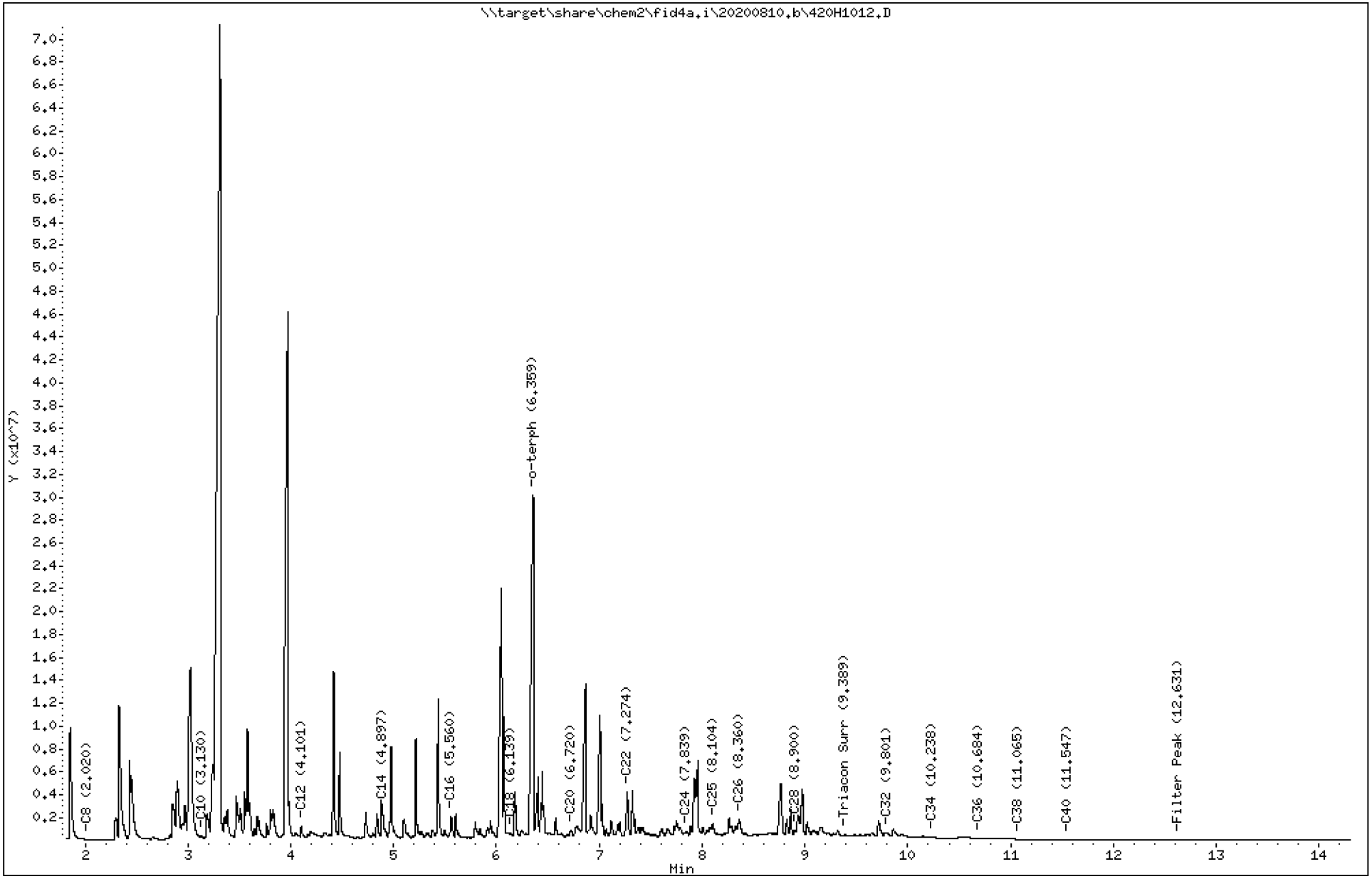
Instrument: fid4a.i

Sample Info: SEQ-CAL5

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200810.b/420H1012.D
Method: 20200810.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/10/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL5
Client ID:
Injection: 10-AUG-2020 13:02
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.020	0.021	52370	125836	WATPHD	(C12-C24)	268023483	1682.1
C10	3.130	0.018	317129	695453	WATPHM	(C24-C38)	117269407	1159.2
C12	4.101	0.008	1186747	1663447	AK102	(C10-C25)	600790147	3073.2
C14	4.897	-0.000	2168738	2784429	AK103	(C25-C36)	95264608	1301.3
C16	5.560	0.016	1984017	3122013	OR.DIES	(C10-C28)	644811716	3289.9
C18	6.139	0.001	562391	706347				
C20	6.720	-0.003	826278	1411340	JET-A	(C10-C18)	461462580	2748.5
C22	7.274	-0.017	4123124	6213742				
C24	7.839	-0.003	669495	624603				
C25	8.104	-0.008	1393399	2367433				
C26	8.360	-0.016	1824142	4074782				
C28	8.900	0.018	833163	754960				
C32	9.801	-0.009	606450	1103529				
C34	10.238	0.001	193616	76806				
Filter Peak	12.631	-0.009	7657	6760	CREOSOT	(C12-C22)	243658159	2703.5
C36	10.684	0.041	121011	48208				
C38	11.065	0.011	57098	25623				
C40	11.547	0.009	26888	36992				
o-terph	6.359	0.021	29618277	48519579				
Triacon Surr	9.389	0.005	451742	414470	NAS DIES	(C10-C24)	580343650	2973.9

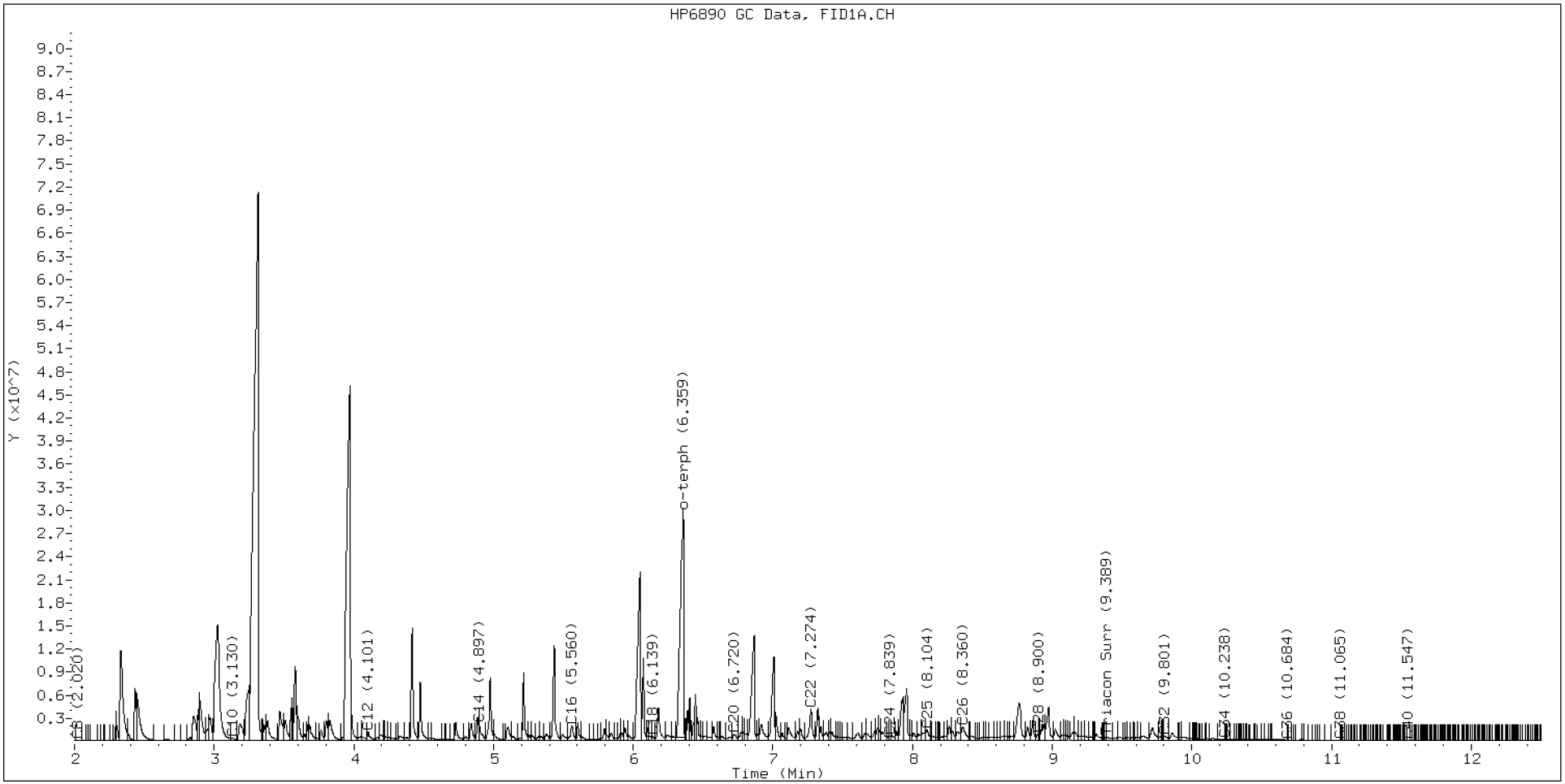
Range Times: NW Diesel(4.093 - 7.841) AK102(3.11 - 8.11) Jet A(3.11 - 6.14)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount	
o-Terphenyl	48519579	237.0	M
Triacontane	414470	2.8	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

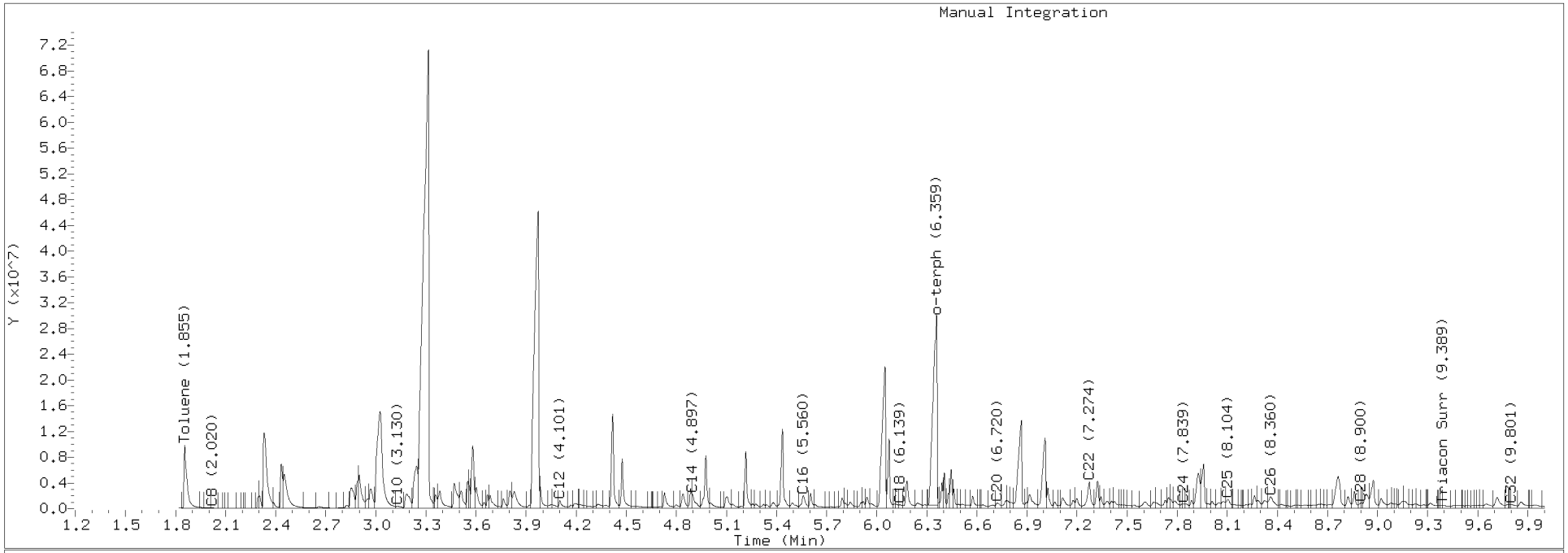
Datafile: FID4A, 20200810.b/420H1012.D SEQ-CAL5

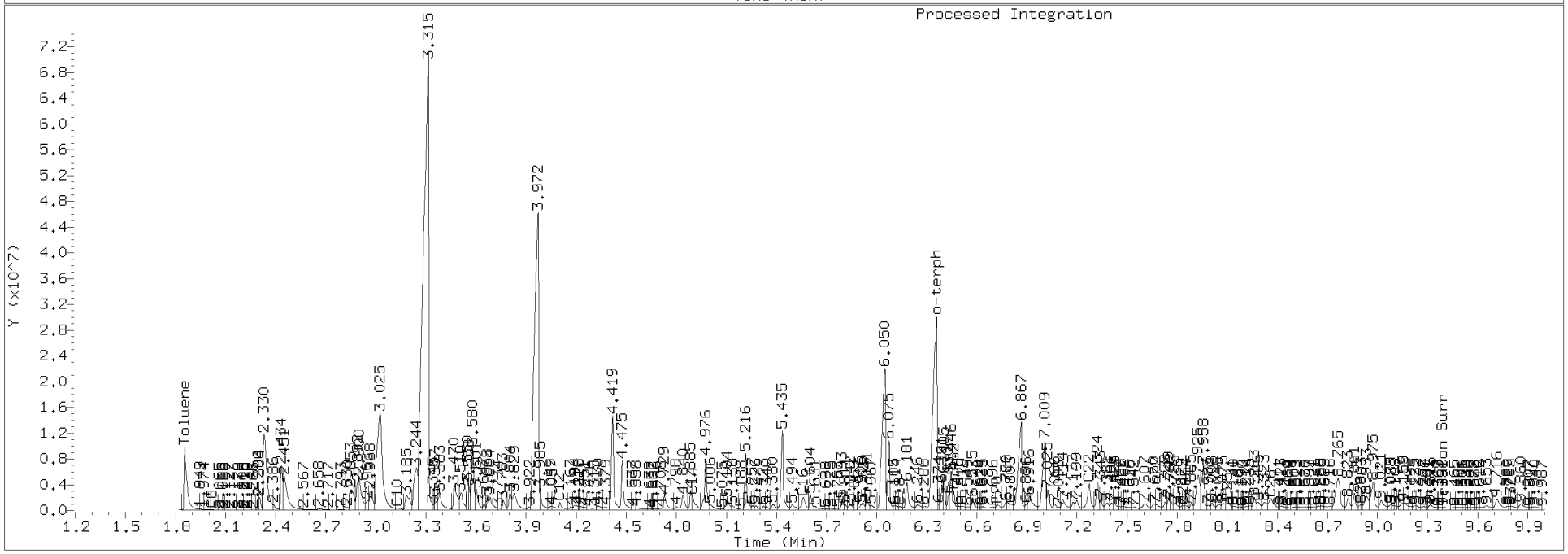


TPH Manual Integrations Report

Datafile: FID4A, 20200810.b/420H1012.D Injection: 10-AUG-2020 13:02

Lab ID:SEQ-CAL5





Data File: \\target\share\chem2\fid4a.i\20200810.b\420H1013.D

Date : 10-AUG-2020 13:22

Client ID:

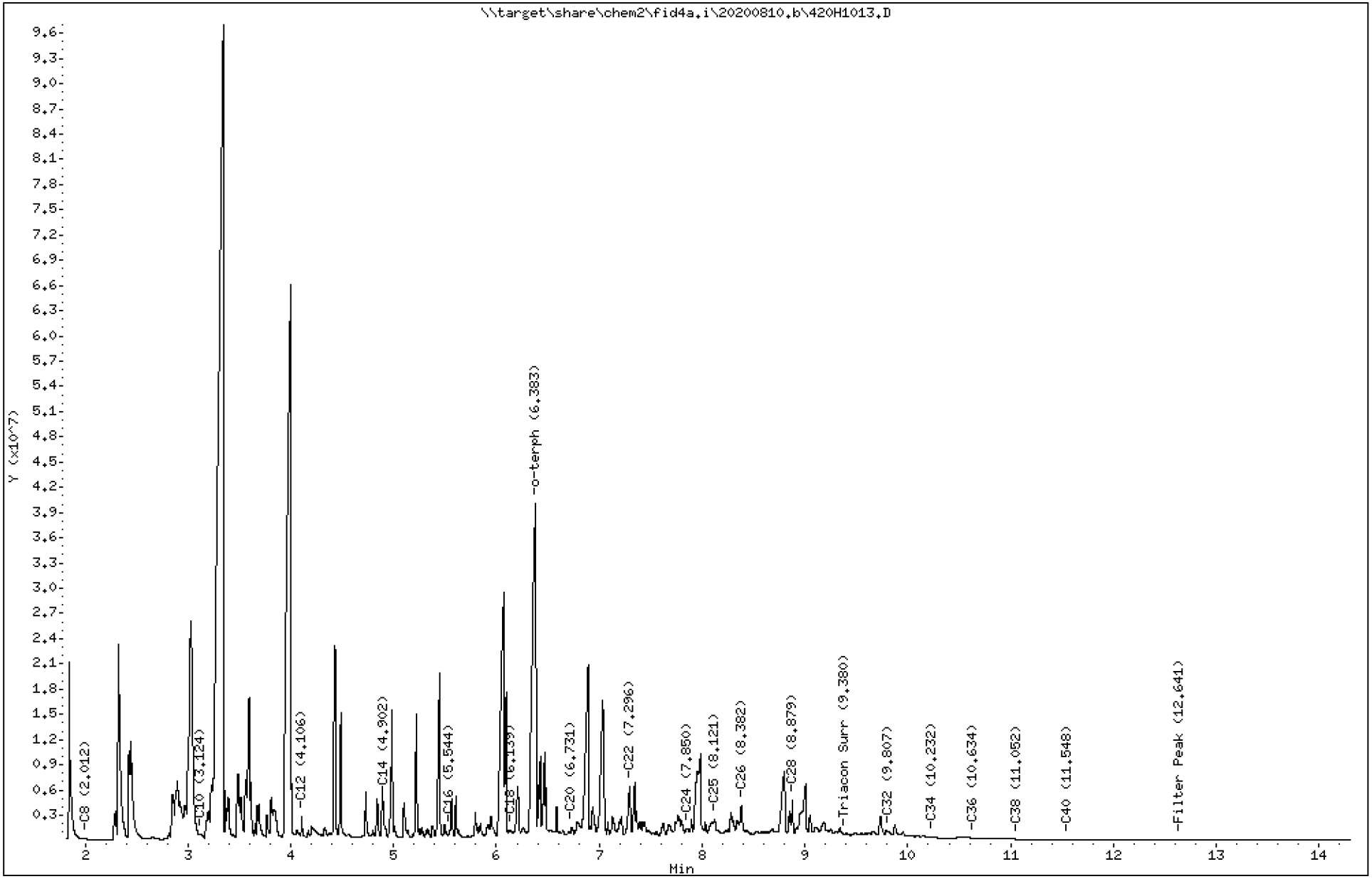
Instrument: fid4a.i

Sample Info: SEQ-CAL6

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200810.b/420H1013.D
Method: 20200810.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/10/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CAL6
Client ID:
Injection: 10-AUG-2020 13:22
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.012	0.013	95463	213698	WATPHD	(C12-C24)	510718478	3205.3
C10	3.124	0.012	658048	1310273	WATPHM	(C24-C38)	217018558	2145.2
C12	4.106	0.013	2689100	3210487	AK102	(C10-C25)	1154977604	5908.1
C14	4.902	0.005	4529096	3169210	AK103	(C25-C36)	174815307	2388.0
C16	5.544	0.000	1186254	882489	OR.DIES	(C10-C28)	1241149517	6332.4
C18	6.139	0.000	1097209	1614733				
C20	6.731	0.008	1395502	2758564	JET-A	(C10-C18)	878617104	5233.0
C22	7.296	0.005	6358775	11740148				
C24	7.850	0.009	1319296	1273820				
C25	8.121	0.010	2507724	4067646				
C26	8.382	0.006	4064229	7597038				
C28	8.879	-0.003	4657449	5361411				
C32	9.807	-0.004	1046694	2394813				
C34	10.232	-0.005	290793	72598				
Filter Peak	12.641	0.000	7890	3140	CREOSOT	(C12-C22)	458251561	5084.4
C36	10.634	-0.009	213530	321534				
C38	11.052	-0.002	80686	94358				
C40	11.548	0.010	35419	22895				
o-terph	6.383	0.045	38995622	94112864				
Triacon Surr	9.380	-0.004	670067	426371	NAS DIES	(C10-C24)	1115021496	5713.7

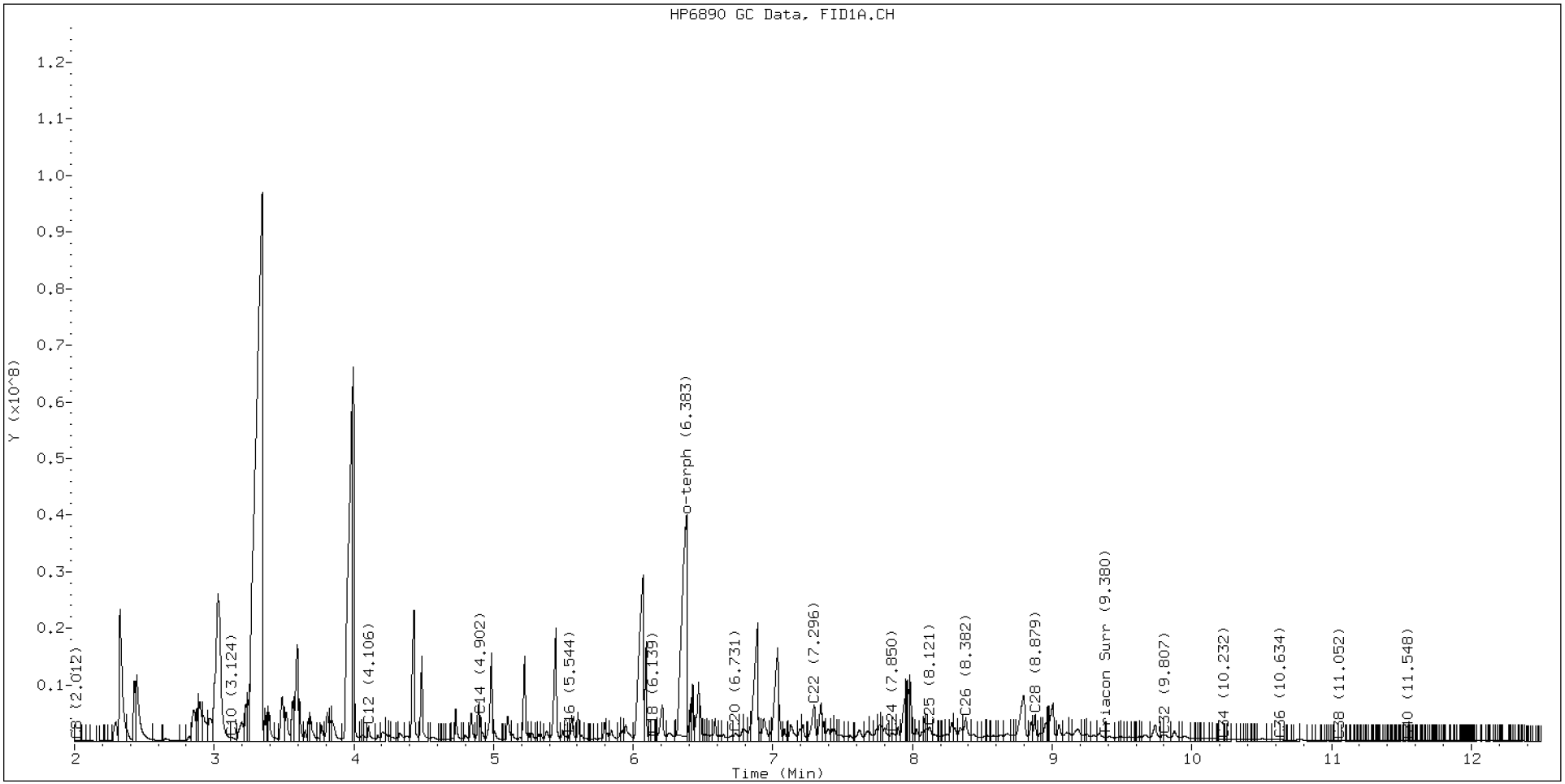
Range Times: NW Diesel(4.093 - 7.841) AK102(3.11 - 8.11) Jet A(3.11 - 6.14)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount	
o-Terphenyl	94112864	459.8	M
Triacontane	426371	2.9	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

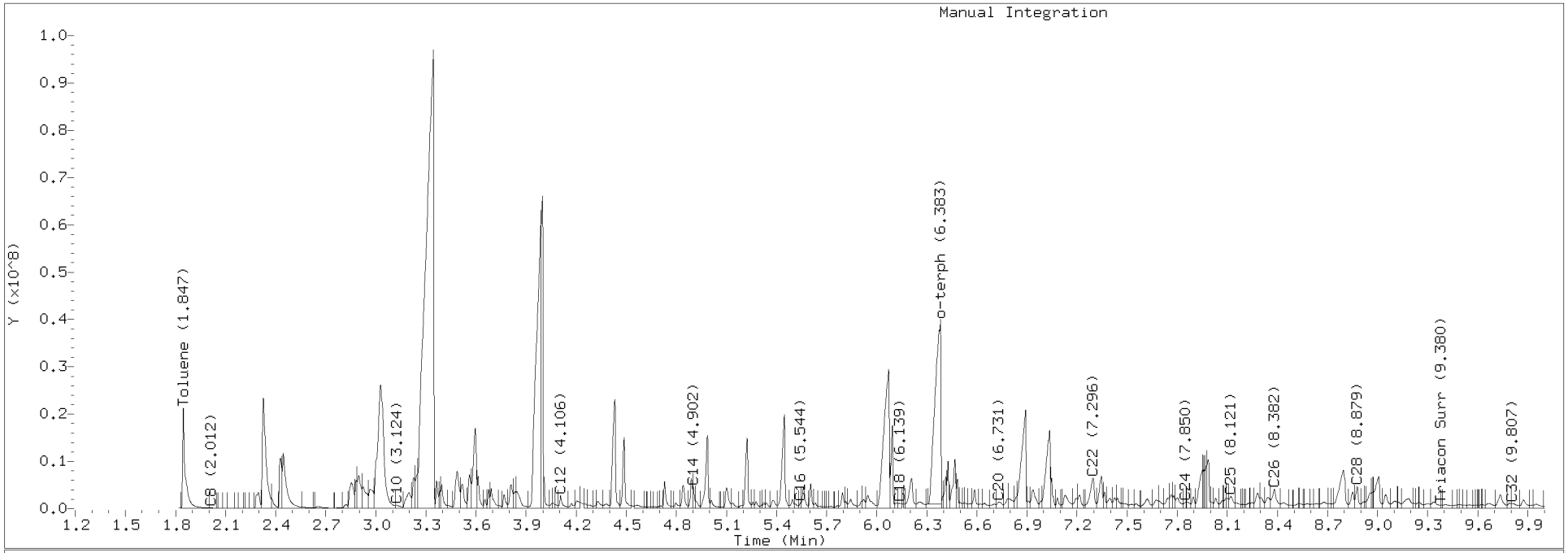
Datafile: FID4A, 20200810.b/420H1013.D SEQ-CAL6

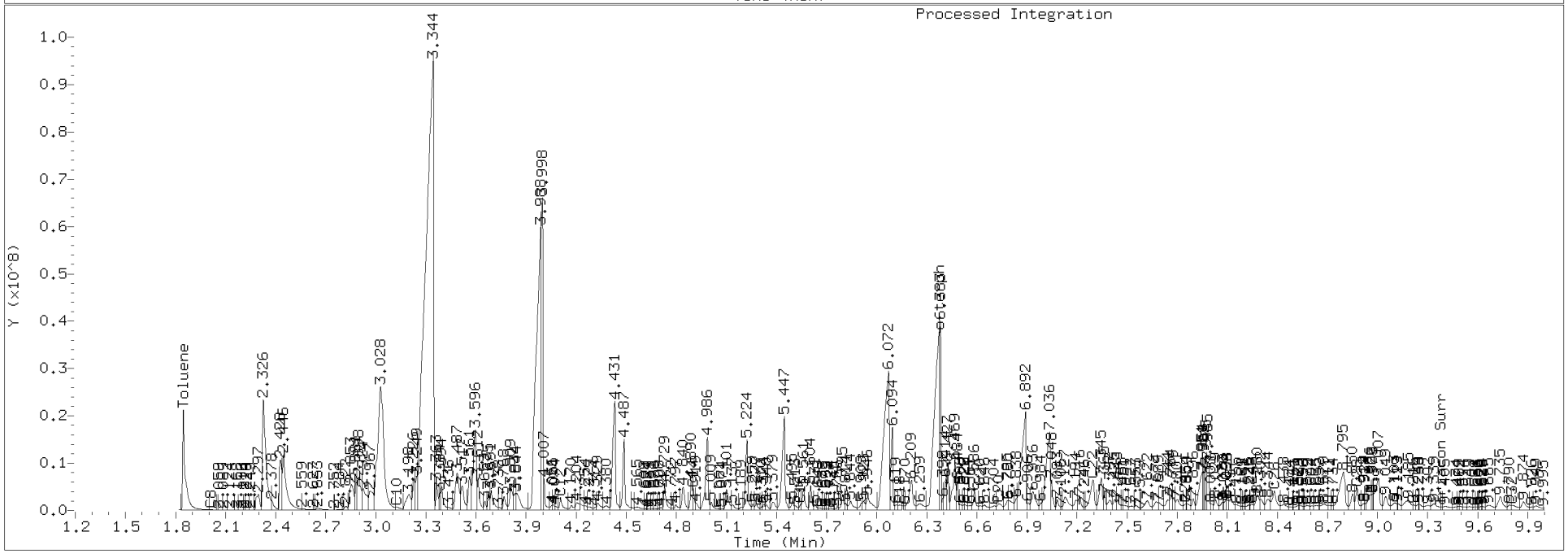


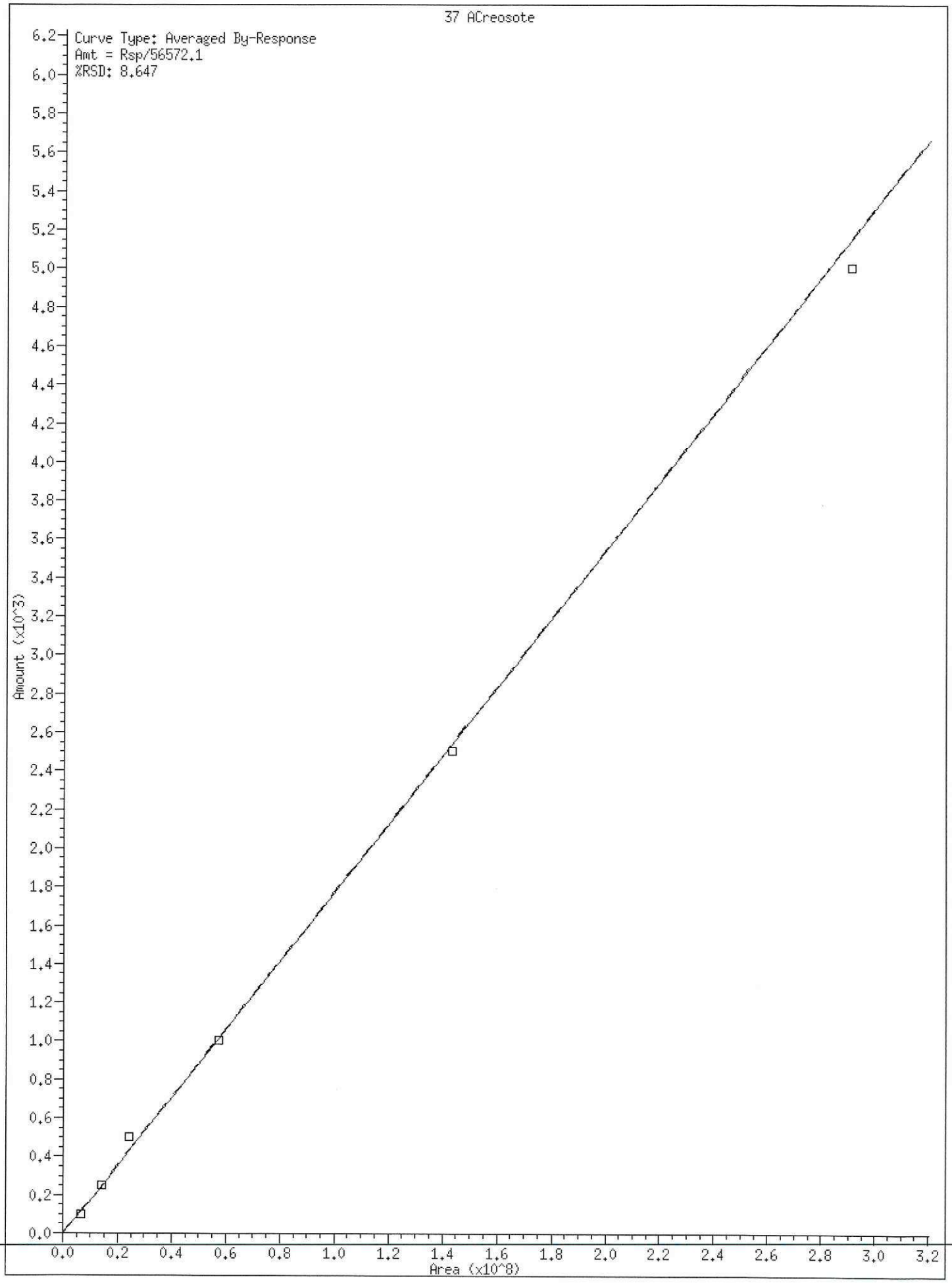
TPH Manual Integrations Report

Datafile: FID4A, 20200810.b/420H1013.D Injection: 10-AUG-2020 13:22

Lab ID:SEQ-CAL6






37 ACreosote
Curve Type: Averaged By-Response
Amt = Rsp/56572.1
%RSD: 8.647
Amount (x10^3)
Area (x10^8)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
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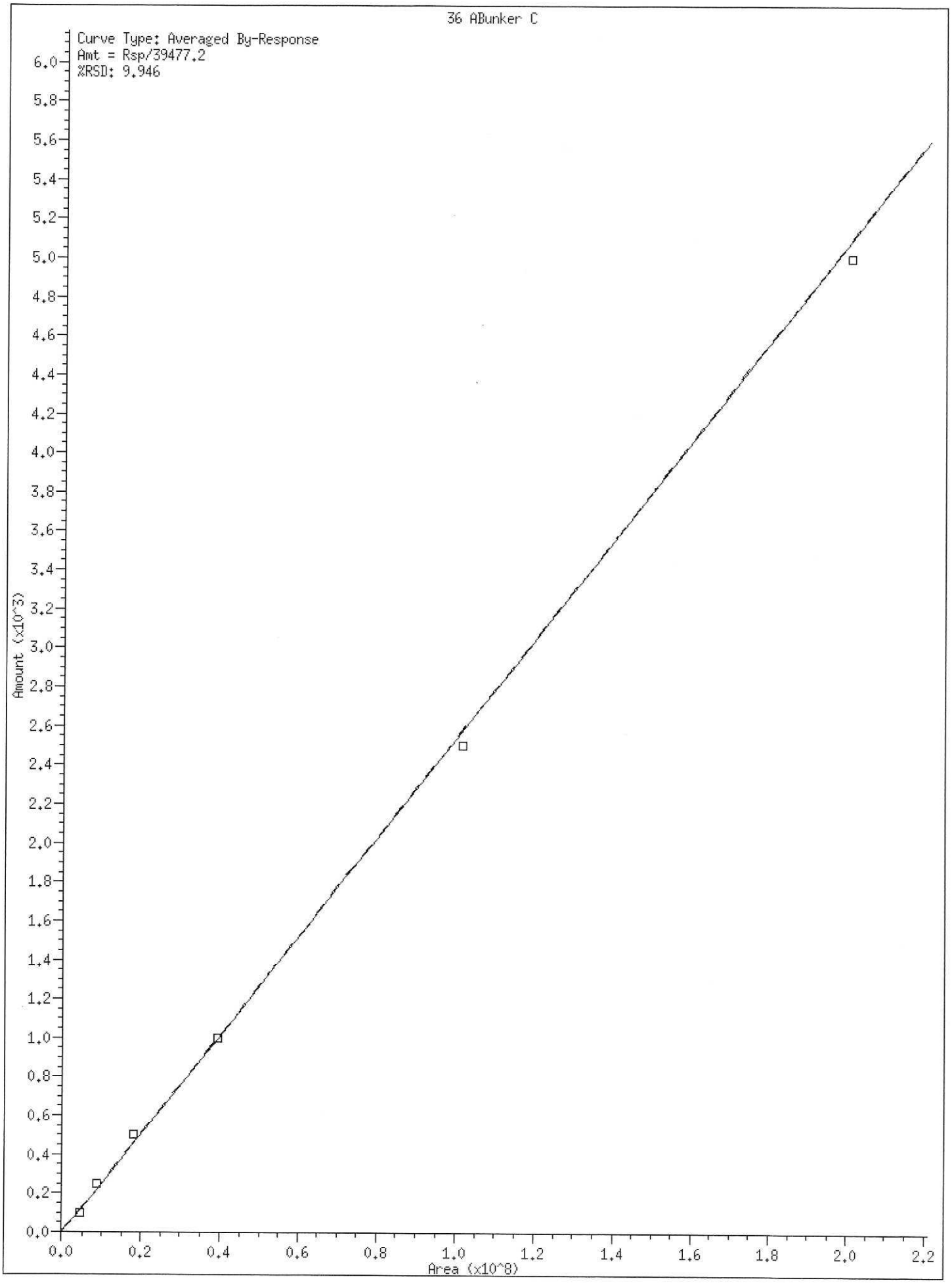
5.2
5.4
5.6
5.8
6.0
6.2


36 ABunker C
Curve Type: Averaged By-Response
Amt = Rsp/39477.2
%RSD: 9.946
Amount (x10^3)
Area (x10^8)
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0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
Client: Anchor QEA, LLC
Calibration: CJ00089
Sequence: SHJ0406

SDG: 20K0073
Project: Gasco Siltronic
Laboratory ID: SHJ0406-SCV1
Sequence Name: DIESEL SCV
Standard ID: H008294

ANALYTE	EXPECTED (mg/L)	FOUND (mg/L)	% DRIFT	QC LIMIT
Diesel Range Organics (C12-C24)	500.00	511	2.2	30.00

* Indicates values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2513.D

Date : 25-OCT-2019 15:52

Client ID:

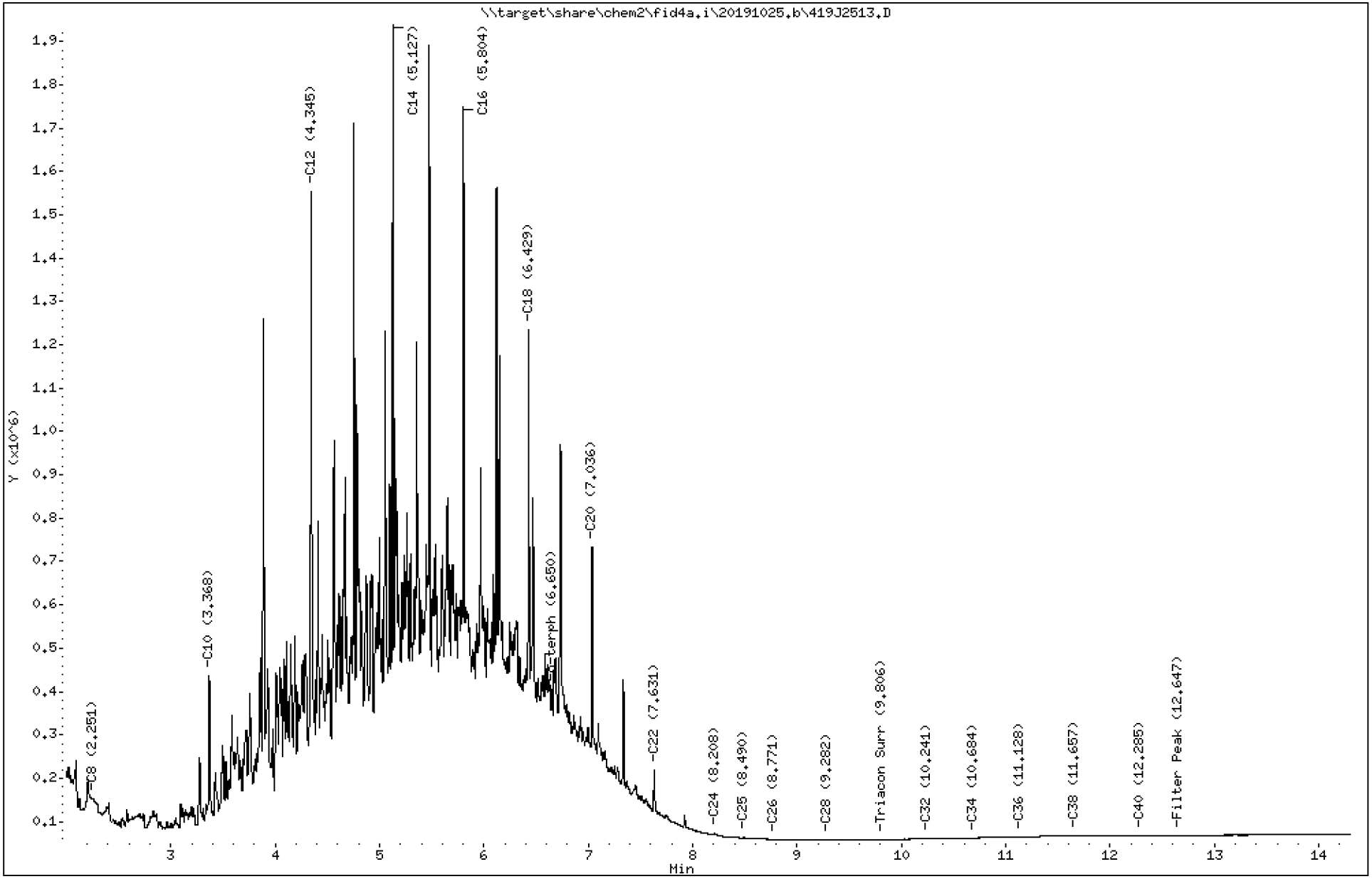
Instrument: fid4a.i

Sample Info: SHJ0406-SCV1

Operator: CTO/SH/VTS/JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2513.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-SCV1
Client ID:
Injection: 25-OCT-2019 15:52
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.251	-0.011	94961	147864	WATPHD	(C12-C24)	81454017	511.2
C10	3.368	-0.005	379319	401979	WATPHM	(C24-C38)	639731	4.8
C12	4.345	-0.002	1496096	1990616	AK102	(C10-C25)	97704414	499.8
C14	5.127	-0.002	1881566	1510979	AK103	(C25-C36)	332991	3.3
C16	5.804	-0.003	1693335	1468242	OR.DIES	(C10-C28)	97755450	498.8
C18	6.429	-0.006	1178327	1173671				
C20	7.036	-0.007	676475	771884				
C22	7.631	-0.008	162529	245982				
C24	8.208	-0.007	16269	46701				
C25	8.490	-0.003	4835	8168				
C26	8.771	0.006	1378	465				
C28	9.282	-0.003	218	122				
C32	10.241	-0.001	2076	410				
C34	10.684	0.003	4334	2137				
Filter Peak	12.647	-0.003	10515	4189	CREOSOT	(C12-C22)	80554511	20650.3
C36	11.128	-0.001	6869	2744				
C38	11.657	0.008	8764	3056				
C40	12.285	-0.004	9988	4995				
o-terph	6.650	-0.007	347314	350999				
Triacon Surr	9.806	0.003	1146	388	NAS DIES	(C10-C24)	97645351	500.4

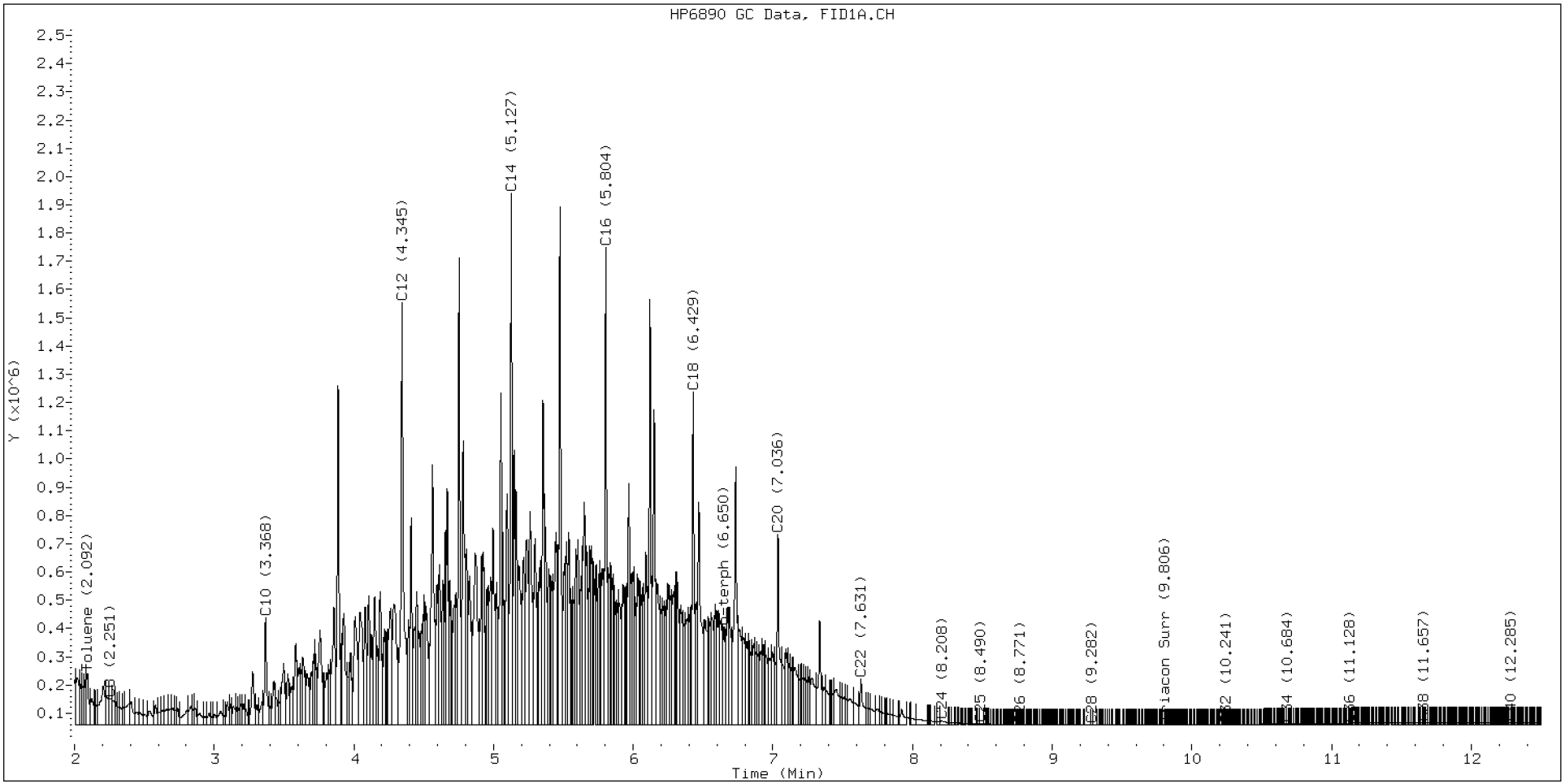
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount
o-Terphenyl	350999	1.7
Triacontane	388	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

Datafile: FID4A, 20191025.b/419J2513.D SHJ0406-SCV1



Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
Client: Anchor QEA, LLC
Calibration: CJ00089
Sequence: SHJ0406

SDG: 20K0073
Project: Gasco Siltronic
Laboratory ID: SHJ0406-SCV2
Sequence Name: MOIL SCV
Standard ID: H008399

ANALYTE	EXPECTED (mg/L)	FOUND (mg/L)	% DRIFT	QC LIMIT
Motor Oil Range Organics (C24-C38)	1000.0	1020	1.9	30.00

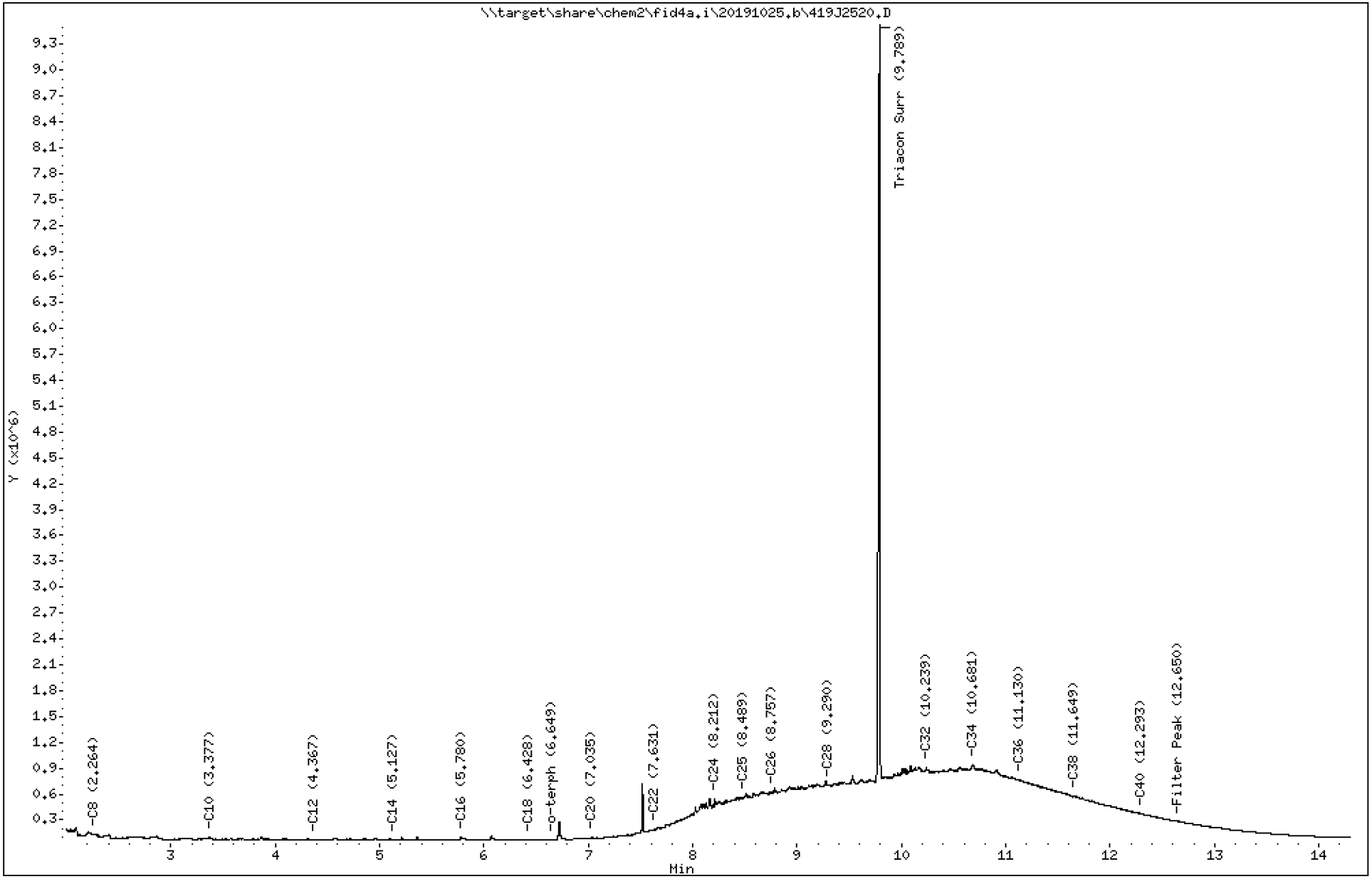
* Indicates values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20191025.b\419J2520.D
Date : 25-OCT-2019 18:14
Client ID:
Sample Info: SHJ0406-SCV2

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO/SH/VTS/JGR
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20191025.b/419J2520.D
Method: 20191025.b\FID4TPH.m
Instrument: fid4a.i, CTO/SH/VTS/JGR
Report Date: 10/30/2019
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SHJ0406-SCV2
Client ID:
Injection: 25-OCT-2019 18:14
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.264	0.002	61386	42202	WATPHD	(C12-C24)	14006466	87.9
C10	3.377	0.004	28038	52387	WATPHM	(C24-C38)	135195593	1019.3
C12	4.367	0.020	3146	3151	AK102	(C10-C25)	18822986	96.3
C14	5.127	-0.003	4143	4458	AK103	(C25-C36)	113030798	1130.6
C16	5.780	-0.027	35494	74348	OR.DIES	(C10-C28)	49340102	251.7
C18	6.428	-0.007	6156	6874				
C20	7.035	-0.008	26093	30304				
C22	7.631	-0.008	127794	247657				
C24	8.212	-0.003	471017	746279				
C25	8.489	-0.004	491516	98217				
C26	8.757	-0.008	557900	550938				
C28	9.290	0.005	640615	223711				
C32	10.239	-0.004	847729	1306304				
C34	10.681	-0.000	865603	764427				
Filter Peak	12.650	-0.000	213232	84835	CREOSOT	(C12-C22)	3605357	924.2
C36	11.130	0.001	692159	413129				
C38	11.649	-0.001	503231	200454				
C40	12.293	0.004	305287	287895				
o-terph	6.649	-0.008	4022	3699				
Triacon Surr	9.789	-0.013	8762887	8519530	NAS DIES	(C10-C24)	14444503	74.0

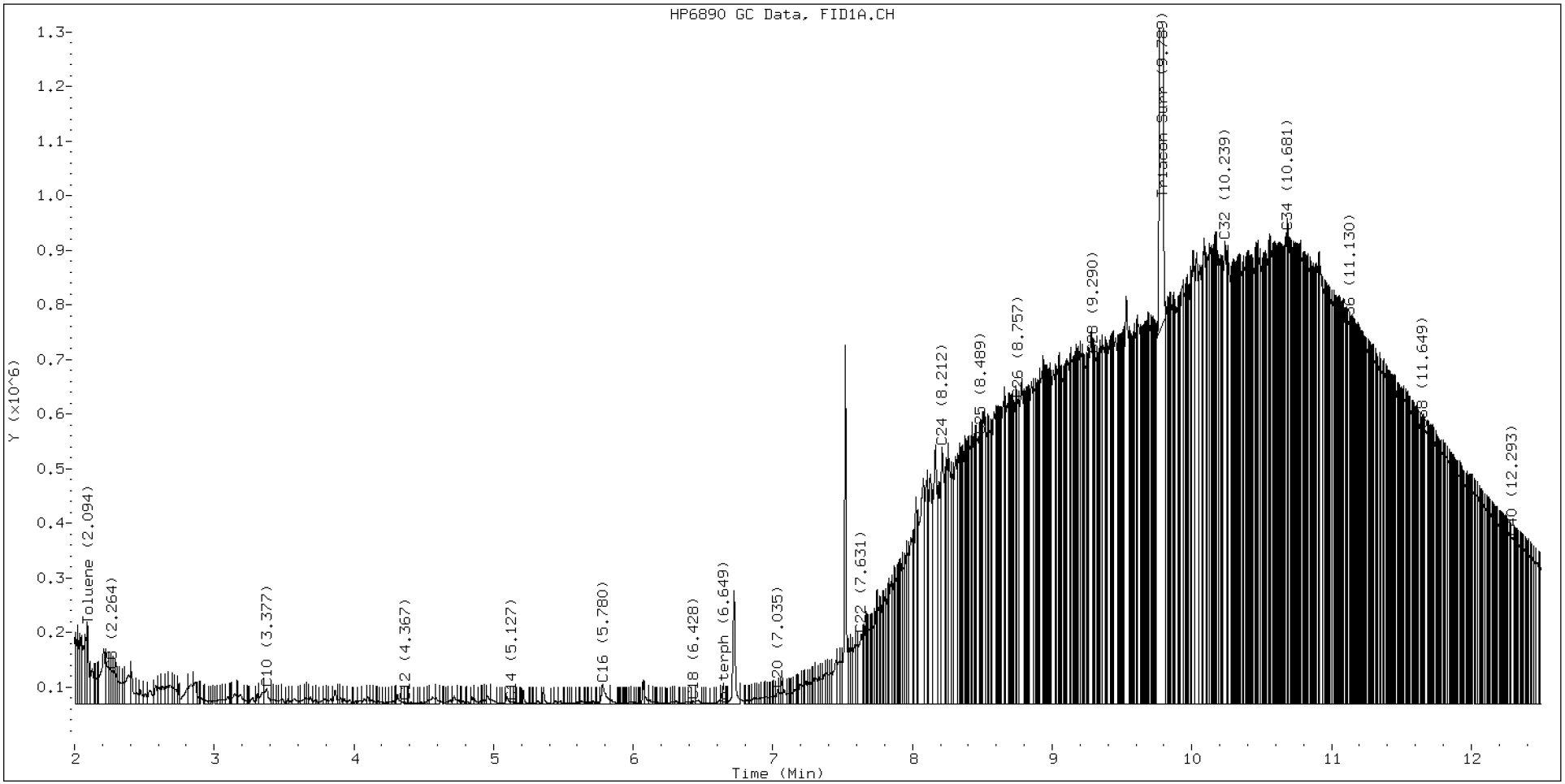
Range Times: NW Diesel(4.347 - 8.215) AK102(3.37 - 8.49) Jet A(3.37 - 6.43)
NW M.Oil(8.21 - 11.65) AK103(8.49 - 11.13) OR Diesel(3.37 - 9.29)

Surrogate	Area	Amount	
o-Terphenyl	3699	0.0	
Triacontane	8519530	47.9	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	177979.9	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	132632.1	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	99976.4	25-OCT-2019
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Bunker C	6149.8	07-OCT-2019
Creosote	3900.9	08-OCT-2019

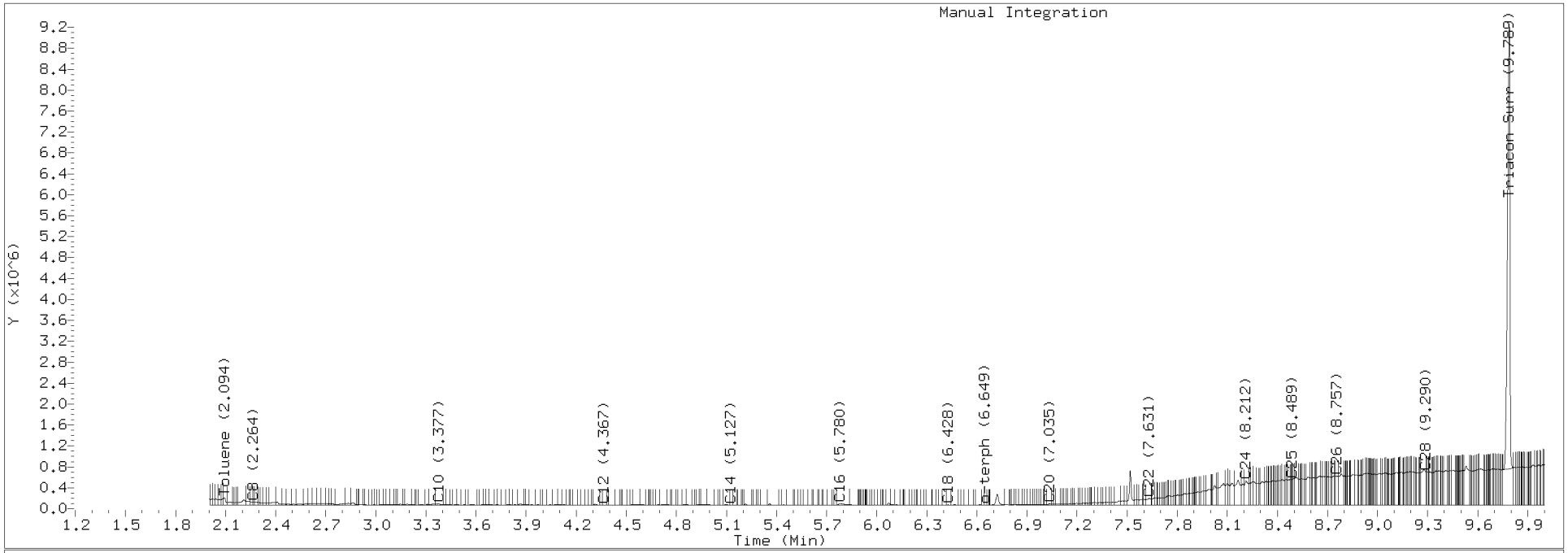
Datafile: FID4A, 20191025.b/419J2520.D SHJ0406-SCV2

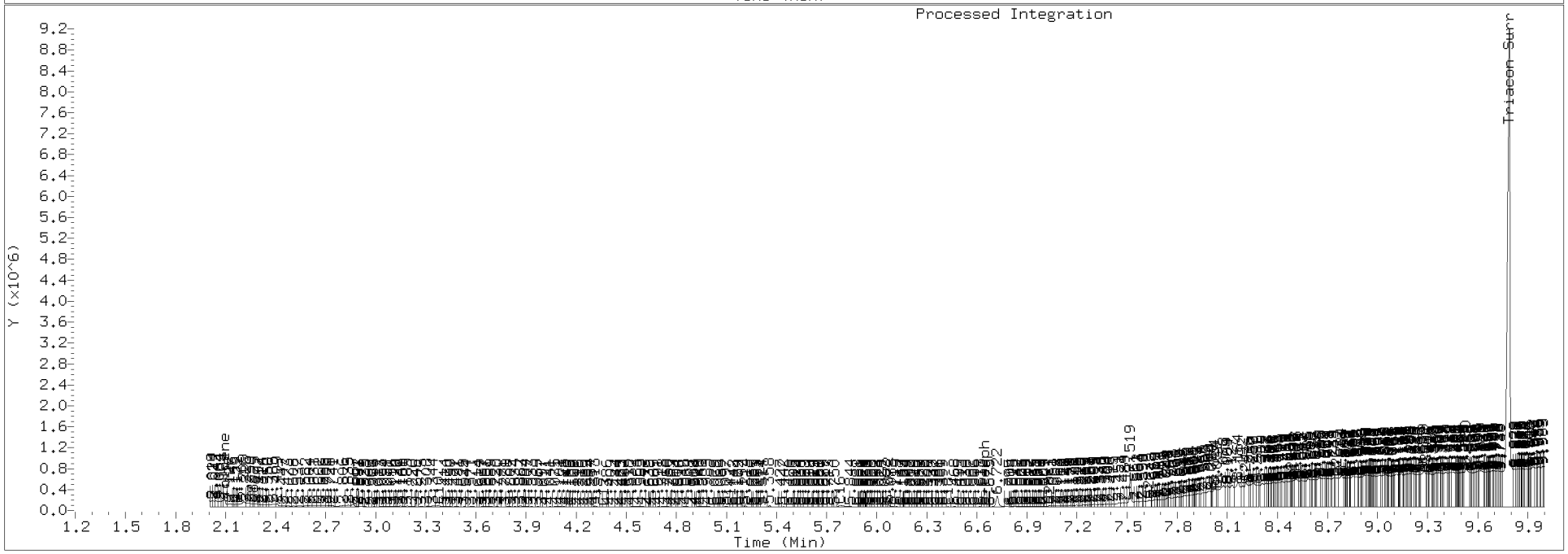


TPH Manual Integrations Report

Datafile: FID4A, 20191025.b/419J2520.D Injection: 25-OCT-2019 18:14

Lab ID:SHJ0406-SCV2





Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
Client: Anchor QEA, LLC
Calibration: DA00022
Sequence: SIF0018

SDG: 20K0073
Project: Gasco Siltronic
Laboratory ID: SIF0018-SCV1
Sequence Name: MOIL SCV
Standard ID: I004757

ANALYTE	EXPECTED (mg/L)	FOUND (mg/L)	% DRIFT	QC LIMIT
Motor Oil Range Organics (C24-C38)	1000.0	952	-4.8	30.00

* Indicates values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0211.D

Date : 02-JUN-2020 10:55

Client ID:

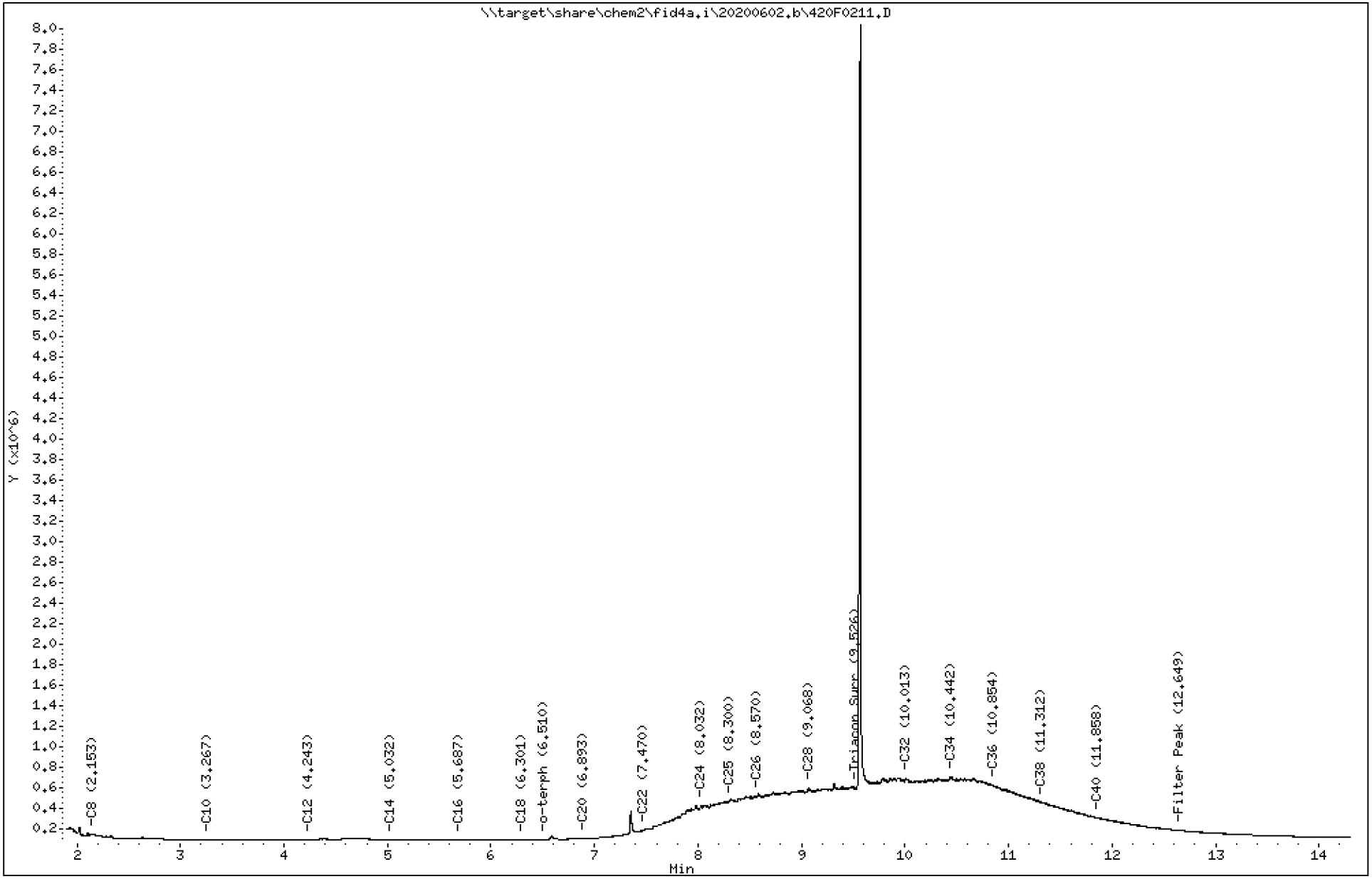
Instrument: fid4a.i

Sample Info: SIF0018-SCV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0211.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-SCV1
Client ID:
Injection: 02-JUN-2020 10:55
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.153	-0.003	53793	112352	WATPHD	(C12-C24)	10130617	63.6
C10	3.267	-0.001	3184	1798	WATPHM	(C24-C38)	96339891	952.3
C12	4.243	-0.001	6309	3433	AK102	(C10-C25)	13696411	70.1
C14	5.032	0.010	5041	1965	AK103	(C25-C36)	81704578	1116.1
C16	5.687	-0.002	418	225	OR.DIES	(C10-C28)	36730595	187.4
C18	6.301	0.002	1584	1331				
C20	6.893	0.005	13152	18749	JET-A	(C10-C18)	637720	3.8
C22	7.470	0.003	92369	58795				
C24	8.032	0.002	330875	354349				
C25	8.300	-0.001	376891	169098				
C26	8.570	0.005	421264	147085				
C28	9.068	-0.008	508527	807405				
C32	10.013	0.001	600890	237363				
C34	10.442	0.001	608272	242751				
Filter Peak	12.649	-0.003	94447	119849	CREOSOT	(C12-C22)	2566539	62.2
C36	10.854	-0.001	530087	263622				
C38	11.312	0.002	366594	183102				
C40	11.858	-0.003	220172	173259				
o-terph	6.510	0.003	2949	1966				
Triacon Surr	9.567	-0.013	7460477	7161172	NAS DIES	(C10-C24)	10346316	53.0

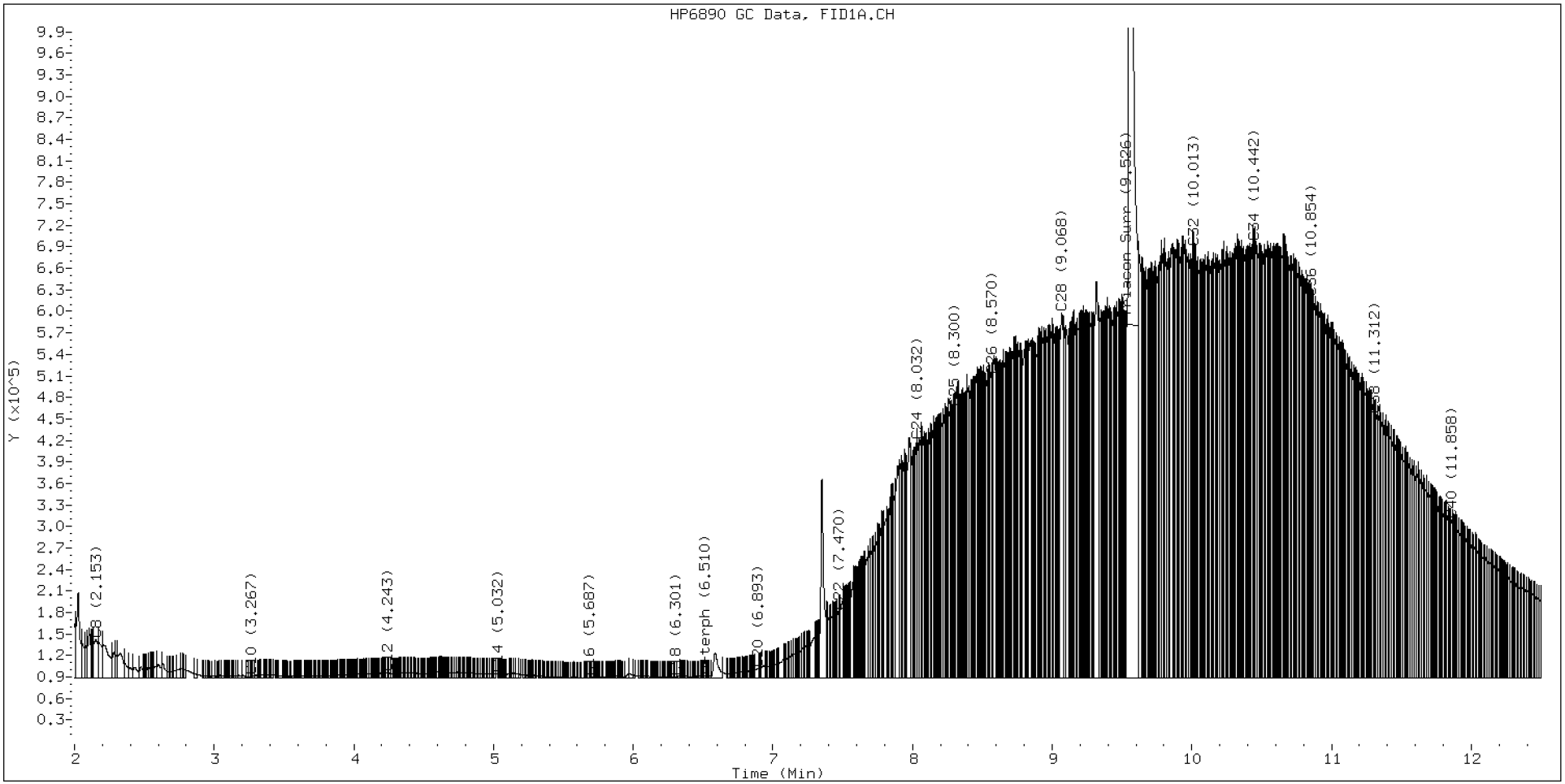
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount	
o-Terphenyl	1966	0.0	
Triacontane	7161172	48.3	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

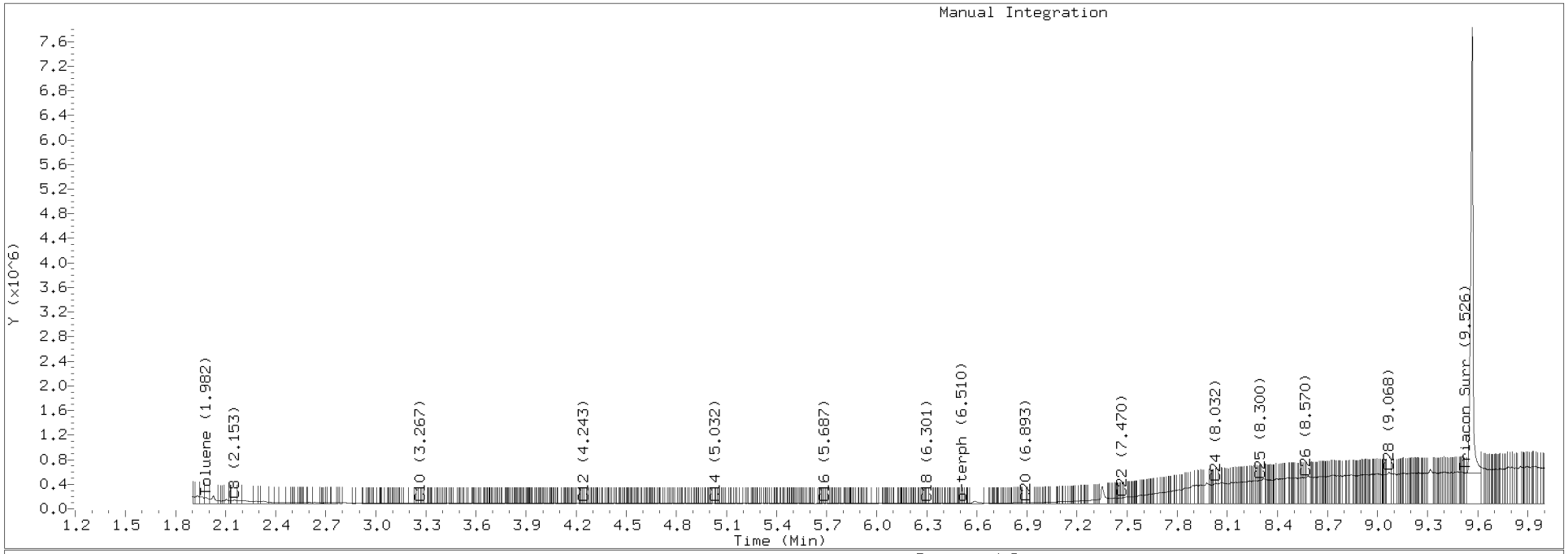
Datafile: FID4A, 20200602.b/420F0211.D SIF0018-SCV1

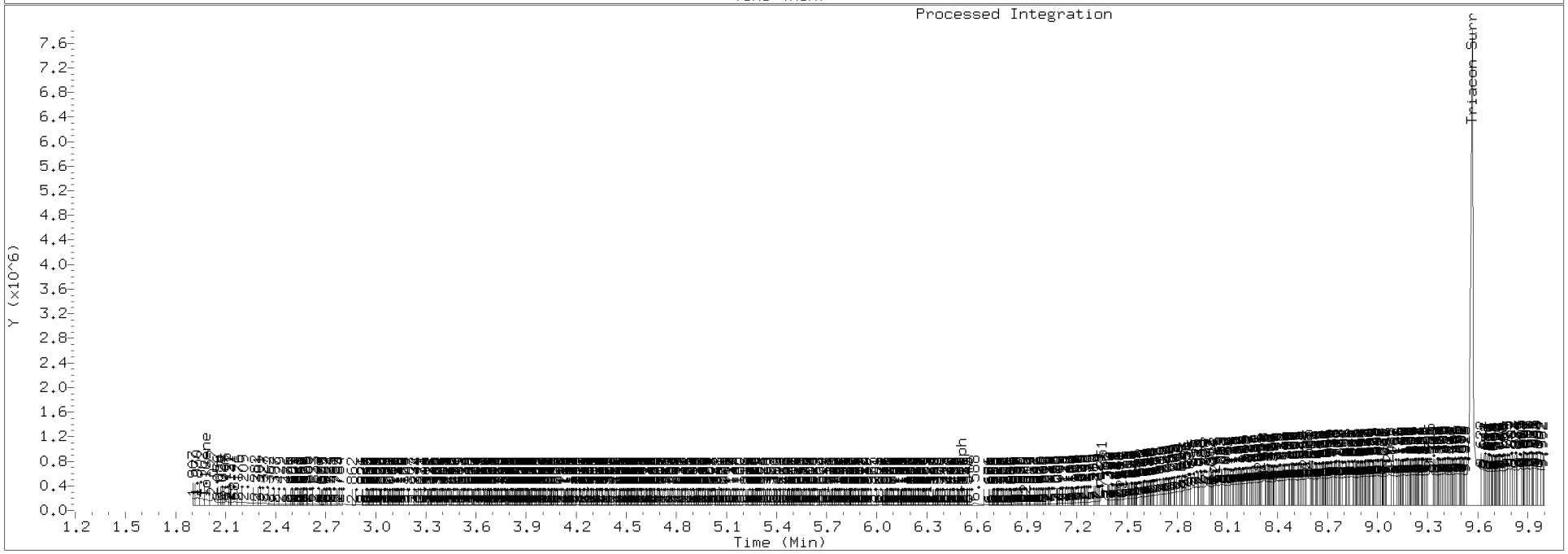


TPH Manual Integrations Report

Datafile: FID4A, 20200602.b/420F0211.D Injection: 02-JUN-2020 10:55

Lab ID:SIF0018-SCV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420H1405.D	Calibration Date:	10/25/2019
Sequence:	SIH0165	Injection Date:	08/14/20
Lab Sample ID:	SIH0165-ICV1	Injection Time:	09:22
Sequence Name:	DIESEL ICV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	452	159336.7000	143929.7000		-9.7	+/-15
o-Terphenyl	A	90.000	79.7	204701.9000	181200.4000		-11.4	+/-15

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20200814.b\420H1405.D

Date : 14-AUG-2020 09:22

Client ID:

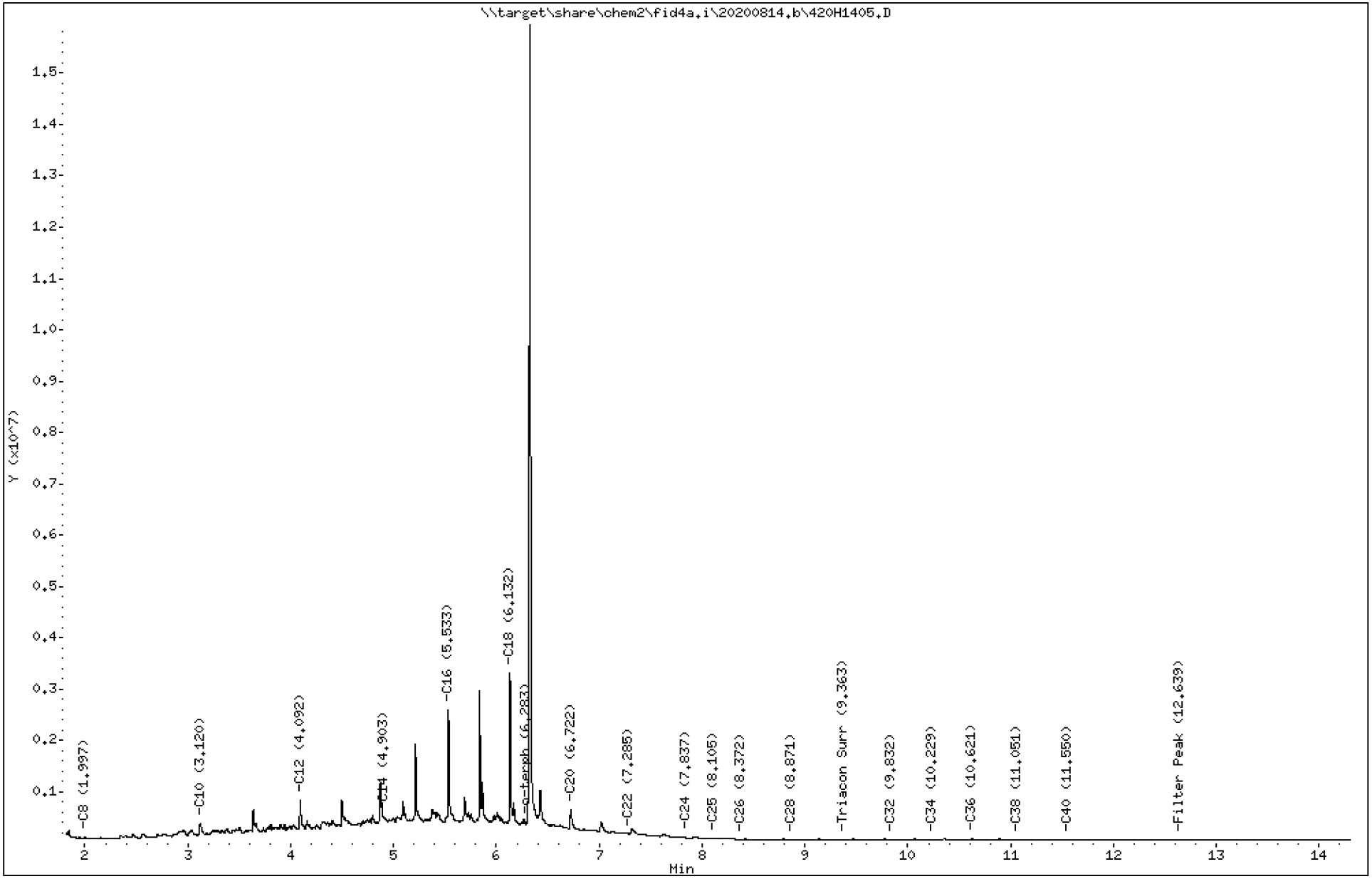
Instrument: fid4a.i

Sample Info: SEQ-ICV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200814.b/420H1405.D
Method: 20200814.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/24/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-ICV1
Client ID:
Injection: 14-AUG-2020 09:22
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.997	0.005	40843	33627	WATPHD	(C12-C24)	71964855	451.7
C10	3.120	0.014	325072	797990	WATPHM	(C24-C38)	1266216	12.5
C12	4.092	0.004	762319	1032736	AK102	(C10-C25)	85535496	437.5
C14	4.903	0.007	433964	108282	AK103	(C25-C36)	721257	9.9
C16	5.533	-0.006	2534947	2843734	OR.DIES	(C10-C28)	85979845	438.7
C18	6.132	-0.001	3241659	3021147				
C20	6.722	0.001	579946	1361381	JET-A	(C10-C18)	66259303	399.5
C22	7.285	-0.002	118208	75763				
C24	7.837	0.000	40860	41994				
C25	8.105	-0.002	21635	11645				
C26	8.372	0.002	11121	7081				
C28	8.871	-0.006	3180	2563				
C32	9.832	0.024	787	464				
C34	10.229	-0.003	1539	966				
Filter Peak	12.639	0.003	9157	2736	CREOSOT	(C12-C22)	70189113	778.8
C36	10.621	-0.016	16397	34426				
C38	11.051	-0.001	7695	3810				
C40	11.550	0.003	9095	2723				
o-terph	6.329	-0.001	15571273	16308043				
Triacon Surr	9.363	-0.016	1148	1070	NAS DIES	(C10-C24)	85166215	436.4

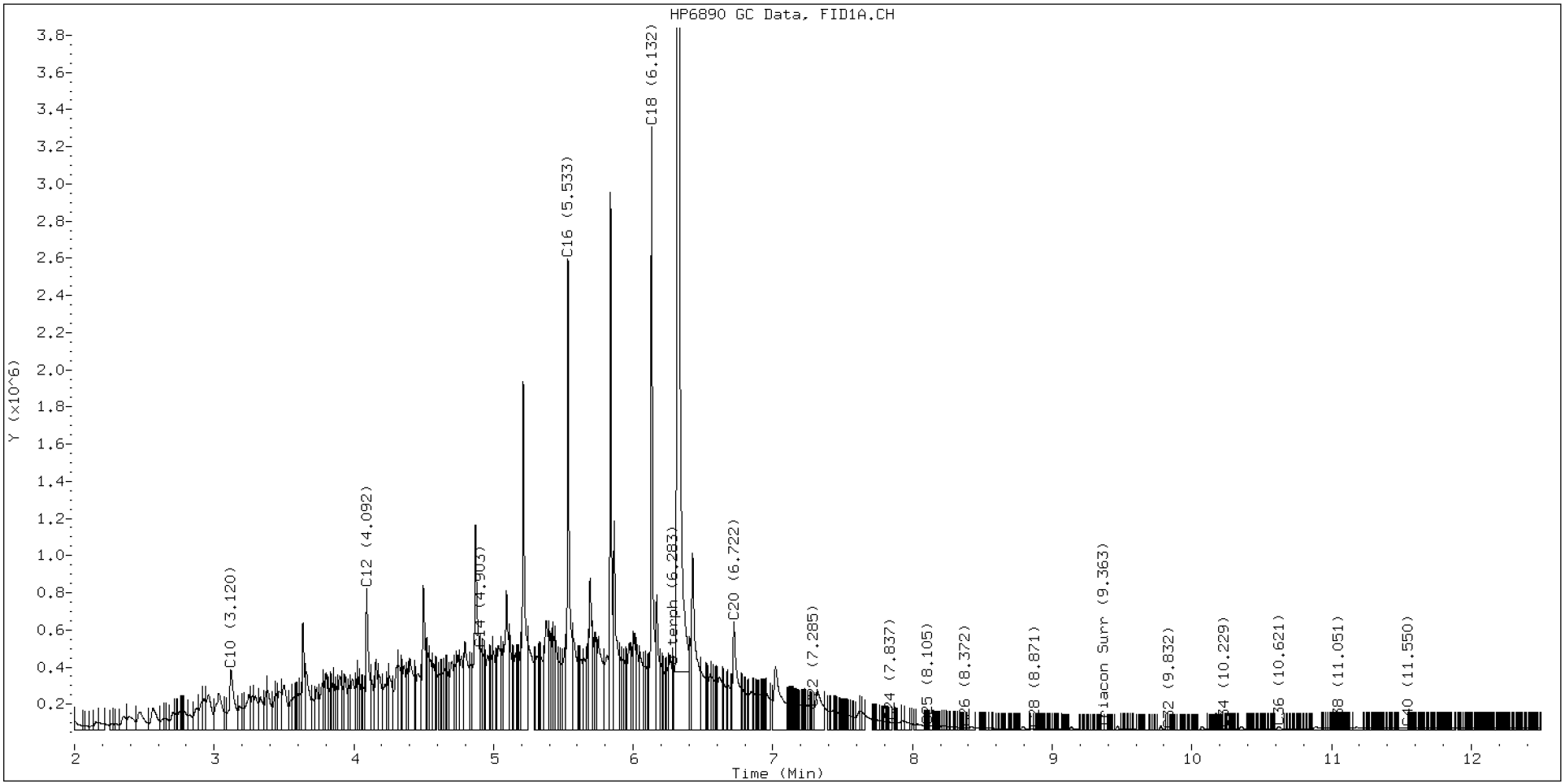
Range Times: NW Diesel(4.087 - 7.837) AK102(3.11 - 8.11) Jet A(3.11 - 6.13)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount	
o-Terphenyl	16308043	79.7	M
Triacontane	1070	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

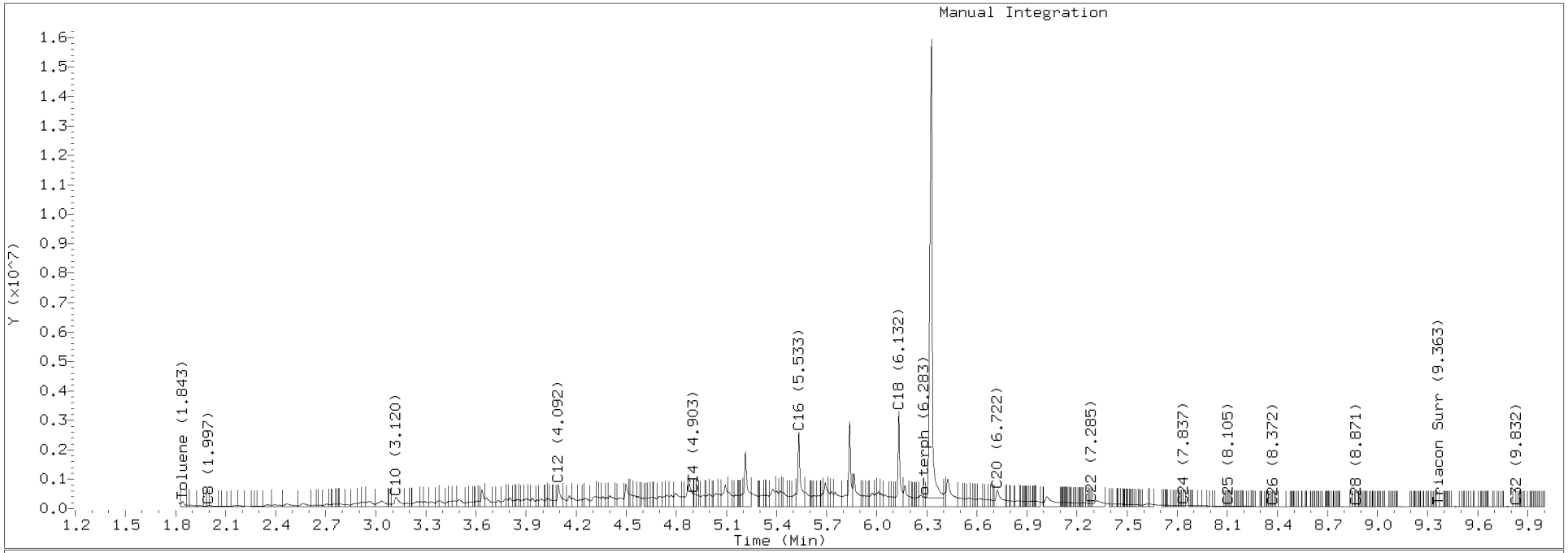
Datafile: FID4A, 20200814.b/420H1405.D SEQ-ICV1

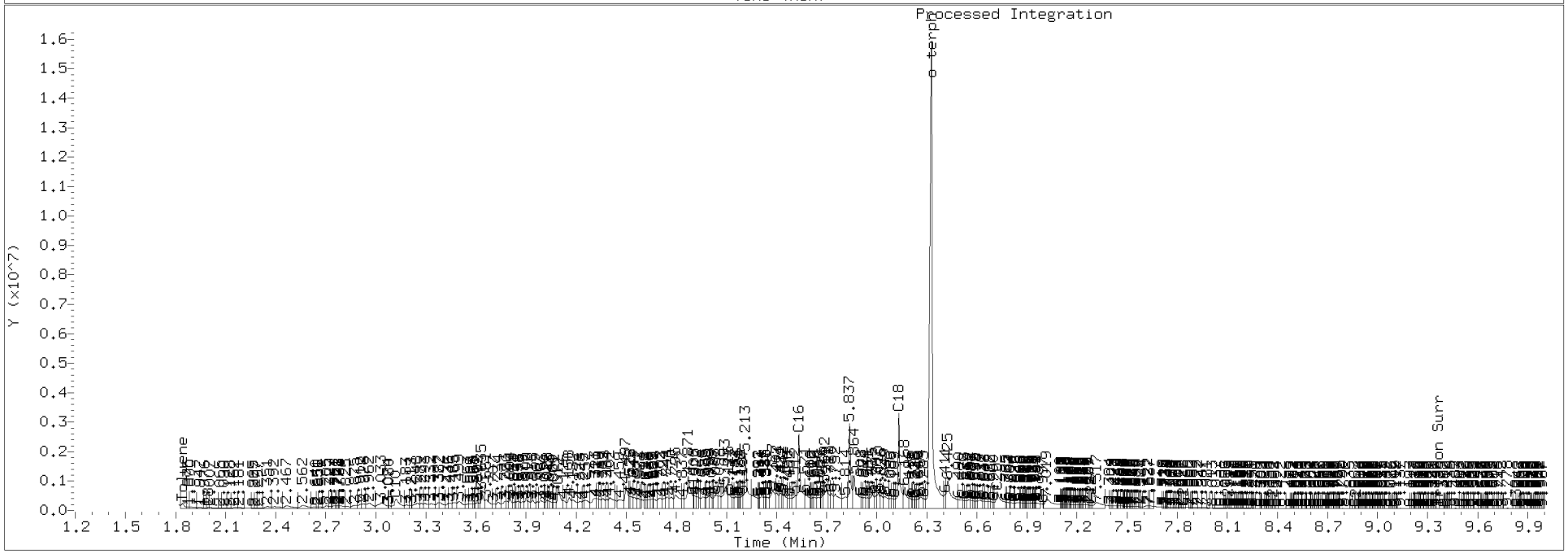


TPH Manual Integrations Report

Datafile: FID4A, 20200814.b/420H1405.D Injection: 14-AUG-2020 09:22

Lab ID:SEQ-ICV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420H1406.D	Calibration Date:	10/25/2019
Sequence:	SIH0165	Injection Date:	08/14/20
Lab Sample ID:	SIH0165-ICV2	Injection Time:	09:42
Sequence Name:	MOIL ICV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	949	101166.0000	95960.3100		-5.2	+/-15

* Values outside of QC limits

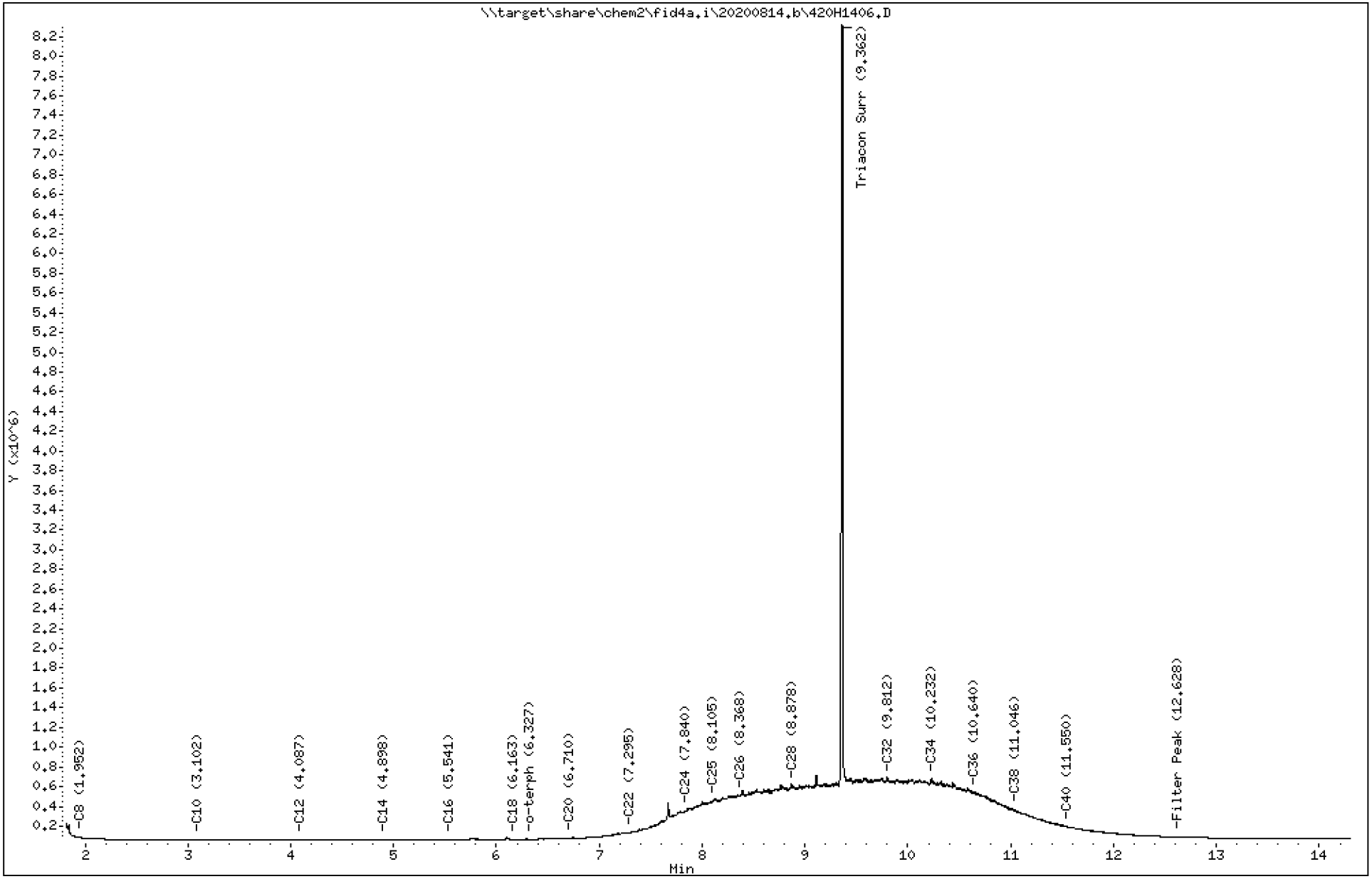
* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20200814.b\420H1406.D
Date : 14-AUG-2020 09:42
Client ID:
Sample Info: SEQ-ICV2

Column phase: RTX-1

Instrument: fid4a.i

Operator: CTO
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200814.b/420H1406.D
Method: 20200814.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/24/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-ICV2
Client ID:
Injection: 14-AUG-2020 09:42
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.952	-0.040	27354	110814	WATPHD	(C12-C24)	8523012	53.5
C10	3.102	-0.003	255	112	WATPHM	(C24-C38)	95960311	948.5
C12	4.087	0.000	2131	1346	AK102	(C10-C25)	11966648	61.2
C14	4.898	0.002	3194	2177	AK103	(C25-C36)	83706743	1143.4
C16	5.541	0.002	1038	632	OR.DIES	(C10-C28)	36398609	185.7
C18	6.163	0.030	4516	2215				
C20	6.710	-0.011	14096	9040	JET-A	(C10-C18)	432804	2.6
C22	7.295	0.008	75479	100922				
C24	7.840	0.003	297736	162736				
C25	8.105	-0.002	394411	214332				
C26	8.368	-0.002	447994	199611				
C28	8.878	0.002	535084	186033				
C32	9.812	0.005	605145	418061				
C34	10.232	0.000	604345	298395				
Filter Peak	12.628	-0.008	28457	21262	CREOSOT	(C12-C22)	2078742	23.1
C36	10.640	0.003	472588	118020				
C38	11.046	-0.006	299292	202630				
C40	11.550	0.003	130300	25939				
o-terph	6.327	-0.002	4981	3653				
Triacon Surr	9.362	-0.017	7713313	6999831	NAS DIES	(C10-C24)	8620055	44.2

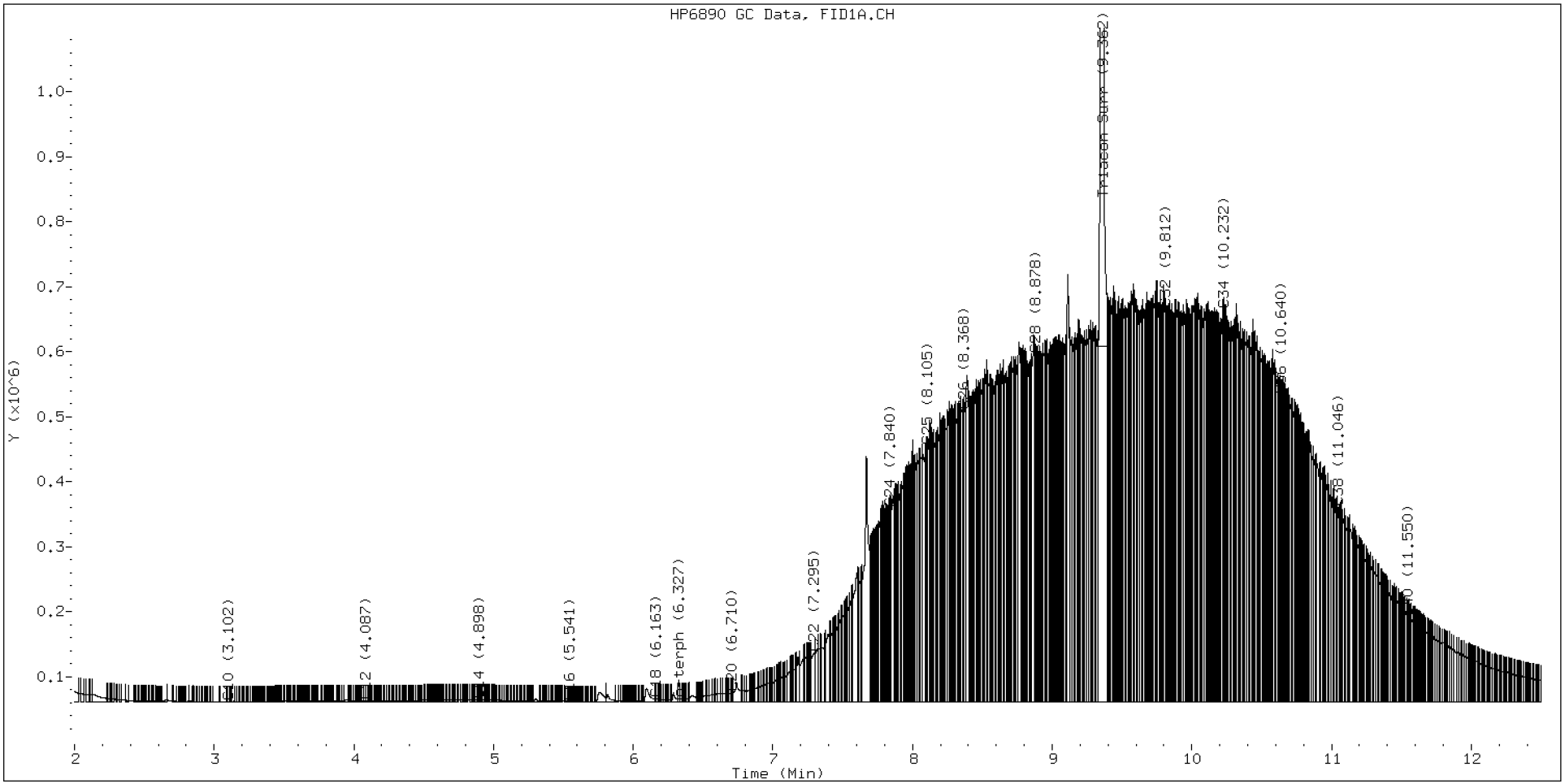
Range Times: NW Diesel(4.087 - 7.837) AK102(3.11 - 8.11) Jet A(3.11 - 6.13)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount	
o-Terphenyl	3653	0.0	
Triacontane	6999831	47.2	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

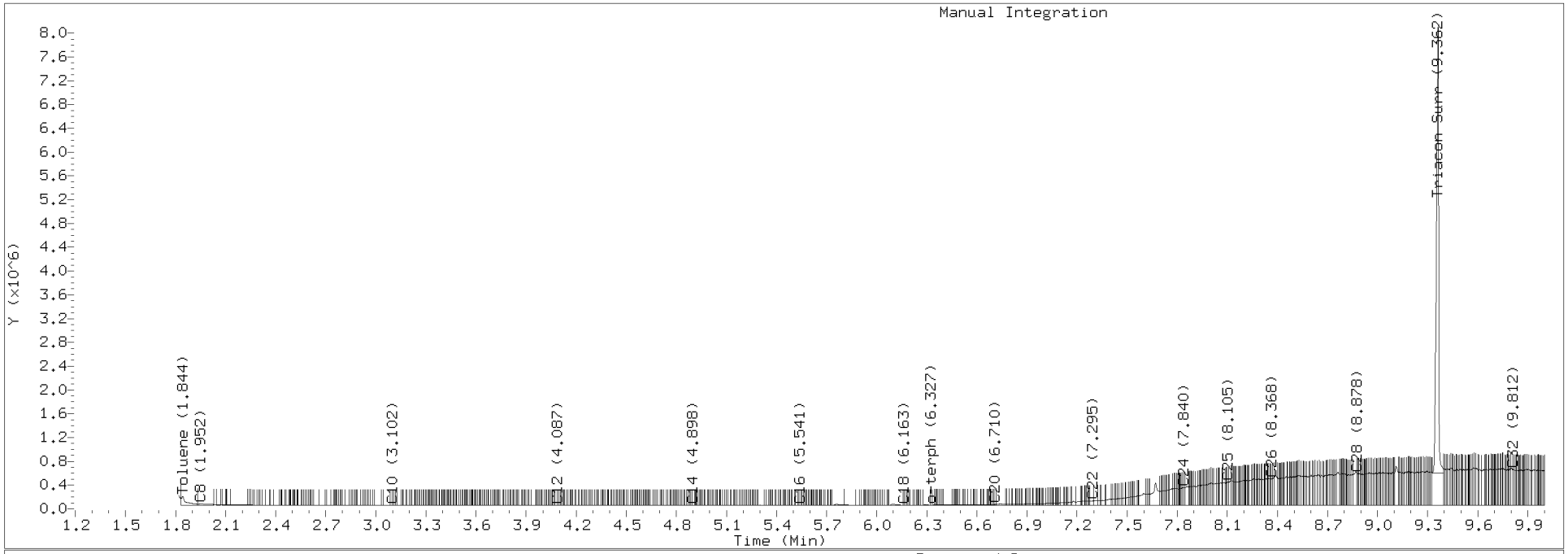
Datafile: FID4A, 20200814.b/420H1406.D SEQ-ICV2

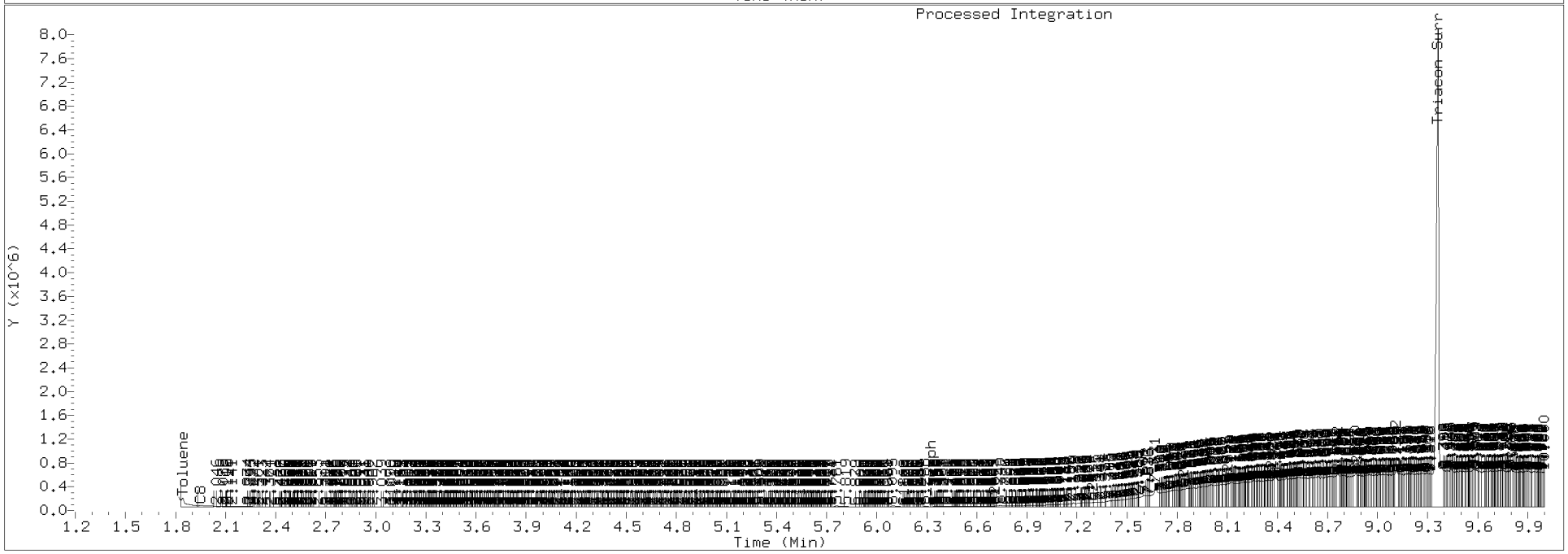


TPH Manual Integrations Report

Datafile: FID4A, 20200814.b/420H1406.D Injection: 14-AUG-2020 09:42

Lab ID:SEQ-ICV2





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420H1407.D	Calibration Date:	10/25/2019
Sequence:	SIH0165	Injection Date:	08/14/20
Lab Sample ID:	SIH0165-ICV3	Injection Time:	10:01
Sequence Name:	CREOSOTE ICV		

COMPOUND	TYPE	CONC. (mg/L)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
o-Terphenyl	A	90.000	87.4	204701.9000	198864.8000		-2.9	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20200814.b\420H1407.D

Date : 14-AUG-2020 10:01

Client ID:

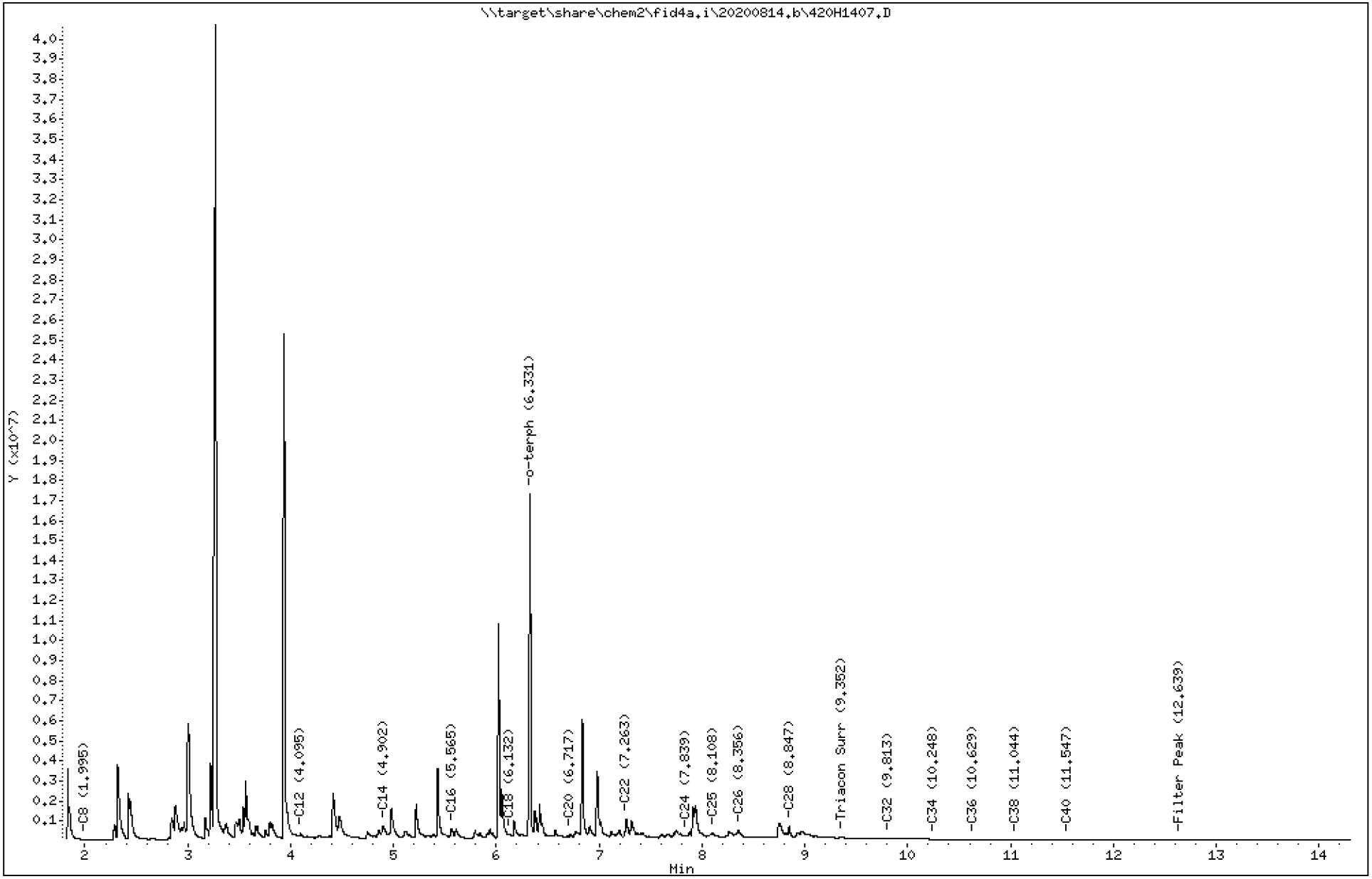
Instrument: fid4a.i

Sample Info: SEQ-ICV3

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200814.b/420H1407.D
Method: 20200814.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/24/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-ICV3
Client ID:
Injection: 14-AUG-2020 10:01
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.995	0.003	22887	55158	WATPHD	(C12-C24)	92828242	582.6
C10	----				WATPHM	(C24-C38)	26861032	265.5
C12	4.095	0.008	349995	800879	AK102	(C10-C25)	210603257	1077.3
C14	4.902	0.005	666284	1890511	AK103	(C25-C36)	20444376	279.3
C16	5.565	0.025	549111	1124692	OR.DIES	(C10-C28)	222677683	1136.1
C18	6.132	-0.001	250901	386399				
C20	6.717	-0.004	257524	297197	JET-A	(C10-C18)	164715487	993.2
C22	7.263	-0.024	1047046	2032919				
C24	7.839	0.002	208540	262238				
C25	8.108	0.001	320836	813365				
C26	8.356	-0.015	466637	1653208				
C28	8.847	-0.029	666562	1184662				
C32	9.813	0.006	83137	231165				
C34	10.248	0.016	30043	17822				
Filter Peak	12.639	0.003	3214	1594	CREOSOT	(C12-C22)	86419480	958.8
C36	10.629	-0.008	16478	42743				
C38	11.044	-0.007	11170	9935				
C40	11.547	-0.000	6136	2129				
o-terph	6.331	0.001	17243823	17897827				
Triacon Surr	9.352	-0.026	119154	254054	NAS DIES	(C10-C24)	204463147	1047.7

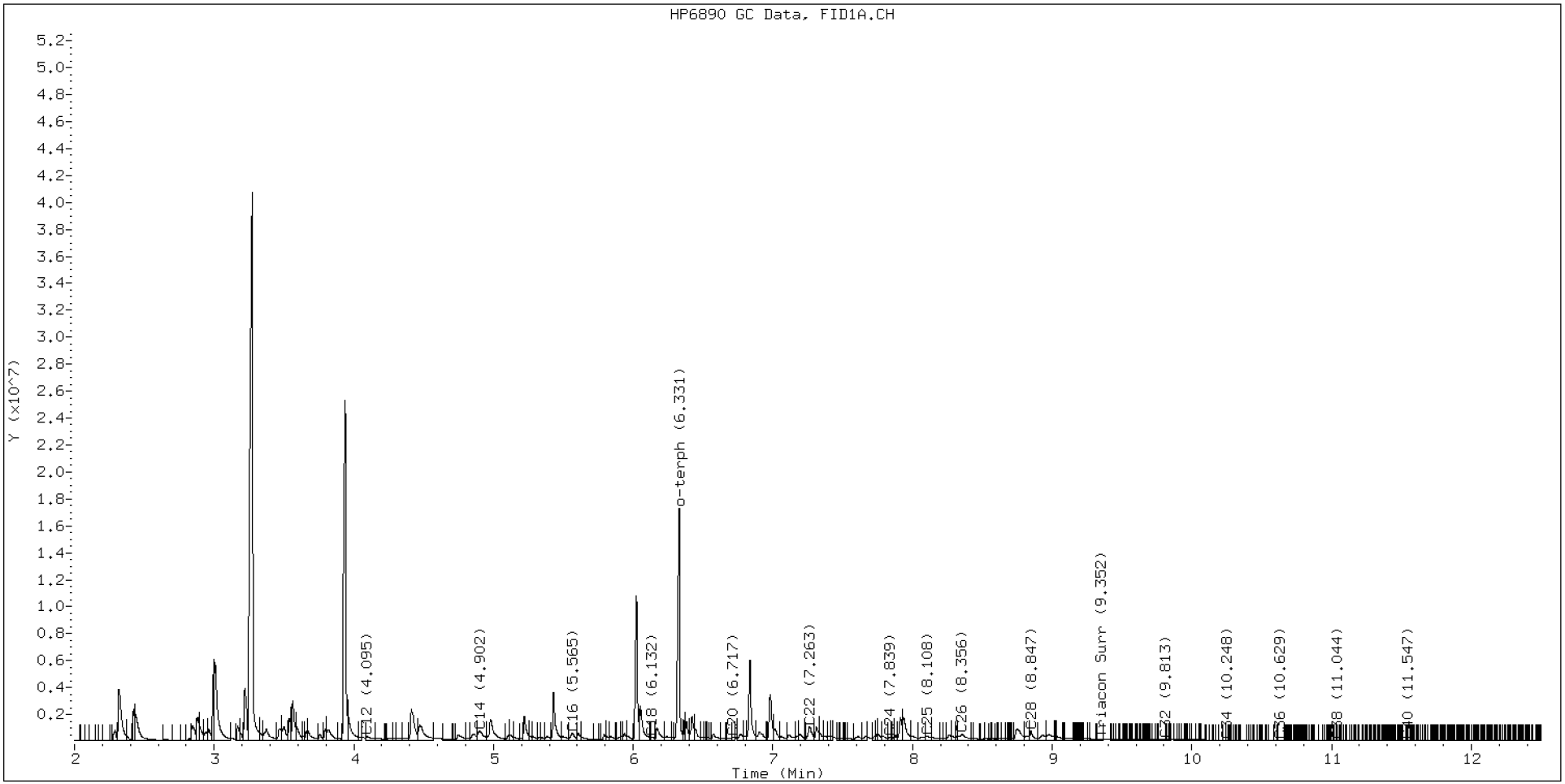
Range Times: NW Diesel(4.087 - 7.837) AK102(3.11 - 8.11) Jet A(3.11 - 6.13)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount
o-Terphenyl	17897827	87.4
Triacontane	254054	1.7

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

Datafile: FID4A, 20200814.b/420H1407.D SEQ-ICV3



Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420F0211.D	Calibration Date:	10/25/2019
Sequence:	SIF0018	Injection Date:	06/02/20
Lab Sample ID:	SIF0018-SCV1	Injection Time:	10:55
Sequence Name:	MOIL SCV		

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Motor Oil Range Organics (C24-C38)	A	1000.0	952	101166	96339.89		-4.8	+/-30

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20200602.b\420F0211.D

Date : 02-JUN-2020 10:55

Client ID:

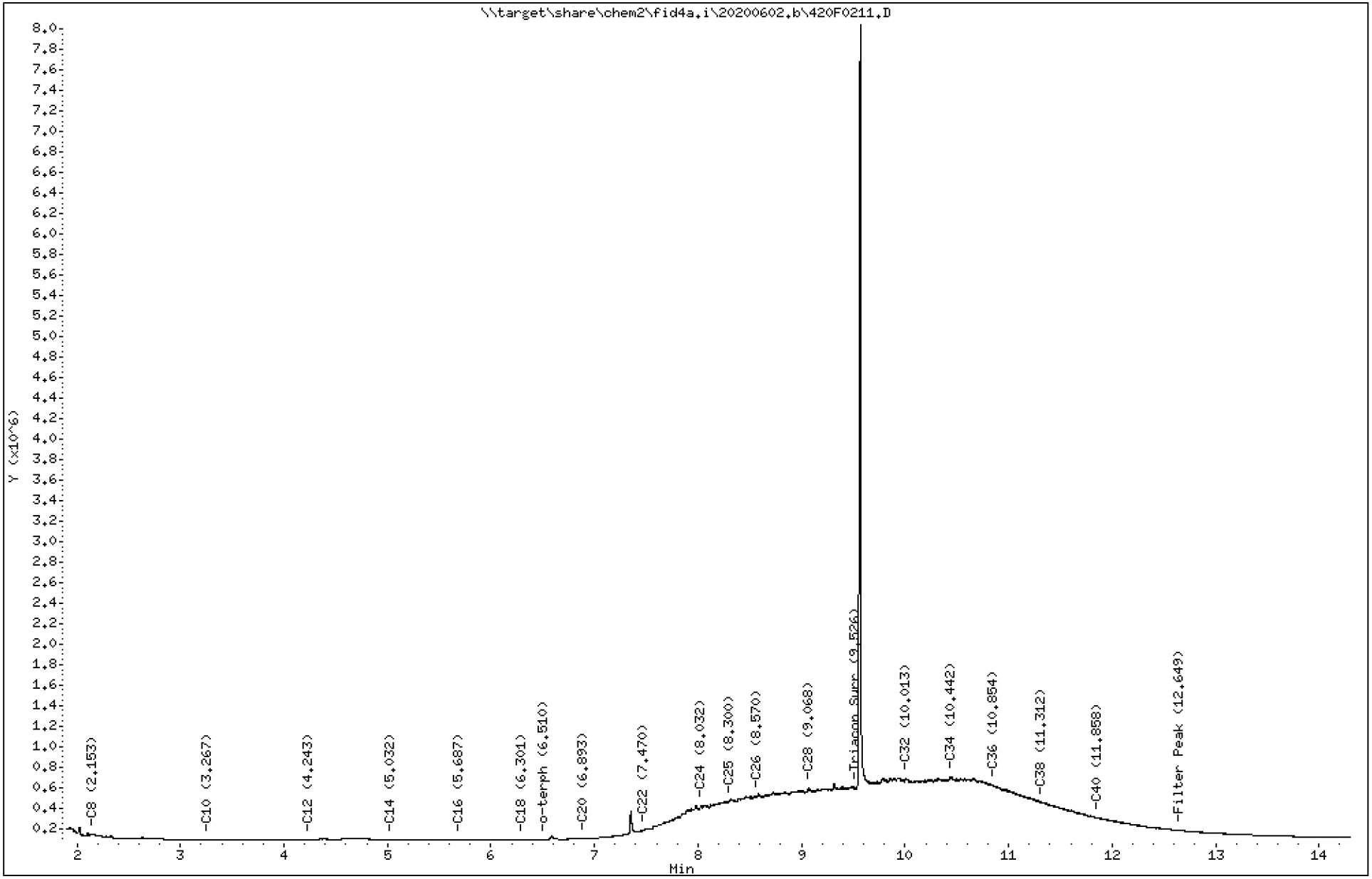
Instrument: fid4a.i

Sample Info: SIF0018-SCV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200602.b/420F0211.D
Method: 20200602.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 06/02/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SIF0018-SCV1
Client ID:
Injection: 02-JUN-2020 10:55
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	2.153	-0.003	53793	112352	WATPHD	(C12-C24)	10130617	63.6
C10	3.267	-0.001	3184	1798	WATPHM	(C24-C38)	96339891	952.3
C12	4.243	-0.001	6309	3433	AK102	(C10-C25)	13696411	70.1
C14	5.032	0.010	5041	1965	AK103	(C25-C36)	81704578	1116.1
C16	5.687	-0.002	418	225	OR.DIES	(C10-C28)	36730595	187.4
C18	6.301	0.002	1584	1331				
C20	6.893	0.005	13152	18749	JET-A	(C10-C18)	637720	3.8
C22	7.470	0.003	92369	58795				
C24	8.032	0.002	330875	354349				
C25	8.300	-0.001	376891	169098				
C26	8.570	0.005	421264	147085				
C28	9.068	-0.008	508527	807405				
C32	10.013	0.001	600890	237363				
C34	10.442	0.001	608272	242751				
Filter Peak	12.649	-0.003	94447	119849	CREOSOT	(C12-C22)	2566539	62.2
C36	10.854	-0.001	530087	263622				
C38	11.312	0.002	366594	183102				
C40	11.858	-0.003	220172	173259				
o-terph	6.510	0.003	2949	1966				
Triacon Surr	9.567	-0.013	7460477	7161172	NAS DIES	(C10-C24)	10346316	53.0

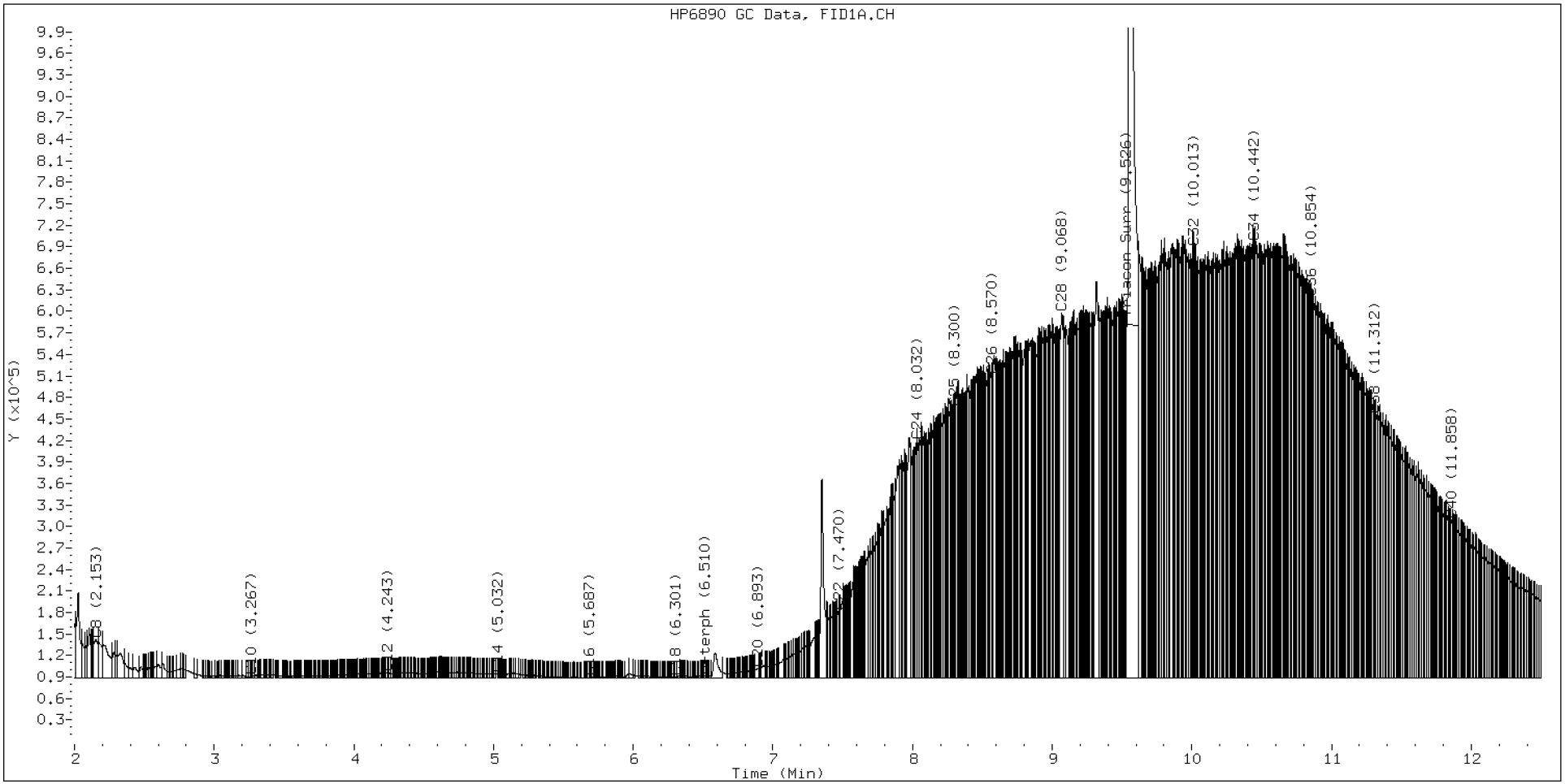
Range Times: NW Diesel(4.244 - 8.029) AK102(3.27 - 8.30) Jet A(3.27 - 6.30)
NW M.Oil(8.03 - 11.31) AK103(8.30 - 10.86) OR Diesel(3.27 - 9.08)

Surrogate	Area	Amount	
o-Terphenyl	1966	0.0	
Triacontane	7161172	48.3	M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	167898.6	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	41237.8	30-MAR-2020

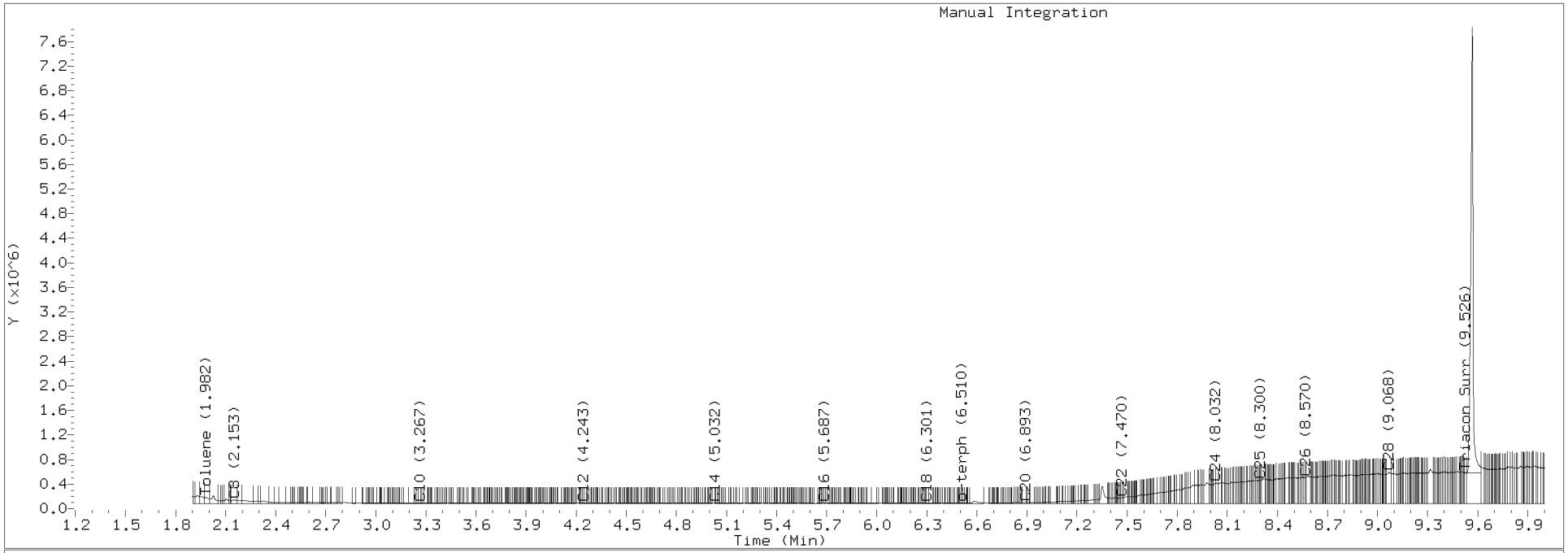
Datafile: FID4A, 20200602.b/420F0211.D SIF0018-SCV1

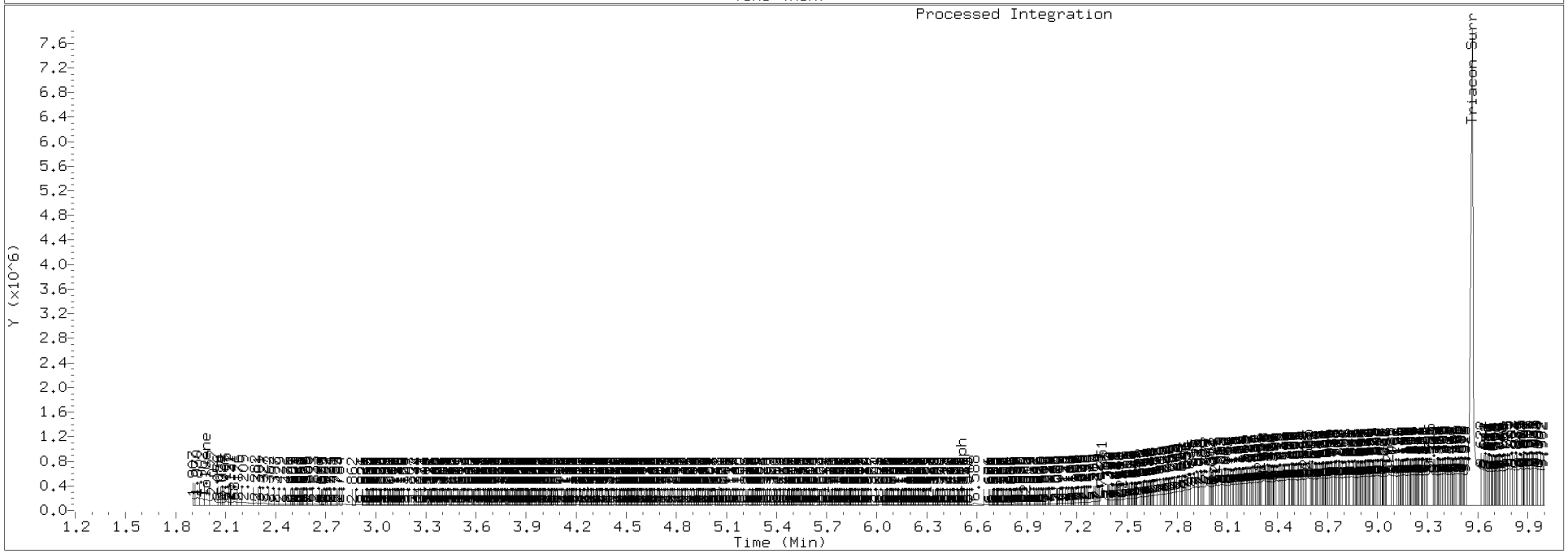


TPH Manual Integrations Report

Datafile: FID4A, 20200602.b/420F0211.D Injection: 02-JUN-2020 10:55

Lab ID:SIF0018-SCV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	FID4	Calibration:	DA00022
Lab File ID:	420H1413.D	Calibration Date:	10/25/2019
Sequence:	SIH0165	Injection Date:	08/14/20
Lab Sample ID:	SIH0165-CCV1	Injection Time:	11:59
Sequence Name:	DIESEL CCV		

		CONC. (mg/L)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Diesel Range Organics (C12-C24)	A	500.00	481	159336.7	153209.9		-3.8	+/-15
o-Terphenyl	A	90.000	79.3	204701.9	180393.1		-11.9	+/-15

* Values outside of QC limits

Data File: \\target\share\chem2\fid4a.i\20200814.b\420H1413.D

Date : 14-AUG-2020 11:59

Client ID:

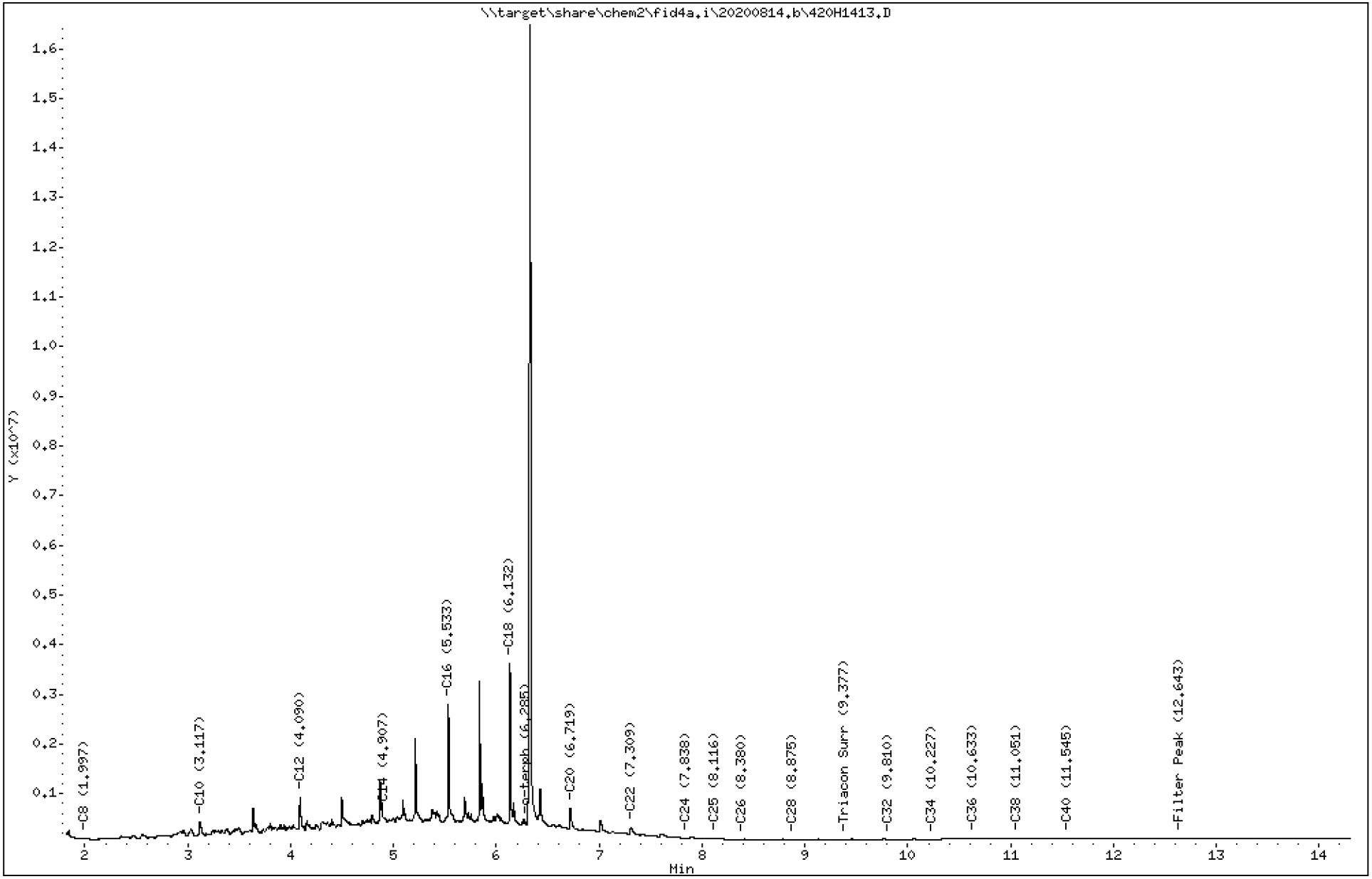
Instrument: fid4a.i

Sample Info: SEQ-CCV1

Operator: CTO

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: 20200814.b/420H1413.D
Method: 20200814.b\FID4TPH.m
Instrument: fid4a.i, CTO
Report Date: 08/24/2020
Macro: 09-SEP-2019
Calibration Dates: Gas:XX-XXX-XXXX Diesel:25-OCT-2019 M.Oil:25-OCT-2019

ARI ID: SEQ-CCV1
Client ID:
Injection: 14-AUG-2020 11:59
Dilution Factor: 1
RT Std: 419H1603.D

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc(mg/L)
C8	1.997	0.005	33555	26527	WATPHD	(C12-C24)	76604959	480.8
C10	3.117	0.011	360980	800884	WATPHM	(C24-C38)	2087736	20.6
C12	4.090	0.003	858002	1109180	AK102	(C10-C25)	90098220	460.9
C14	4.907	0.011	444696	641926	AK103	(C25-C36)	1192714	16.3
C16	5.533	-0.006	2733195	3097613	OR.DIES	(C10-C28)	90414159	461.3
C18	6.132	-0.001	3552120	3129904				
C20	6.719	-0.001	636483	1325665	JET-A	(C10-C18)	69968294	421.9
C22	7.309	0.022	248019	872467				
C24	7.838	0.001	39892	19883				
C25	8.116	0.009	16354	7274				
C26	8.380	0.009	7066	4723				
C28	8.875	-0.001	410	108				
C32	9.810	0.003	6271	1564				
C34	10.227	-0.005	10941	7550				
Filter Peak	12.643	0.007	25373	20242	CREOSOT	(C12-C22)	74914962	831.2
C36	10.633	-0.004	19294	9569				
C38	11.051	-0.001	25145	5023				
C40	11.545	-0.002	23988	7180				
o-terph	6.330	0.000	15978088	16235384				
Triacon Surr	9.377	-0.001	1405	784	NAS DIES	(C10-C24)	89766551	460.0

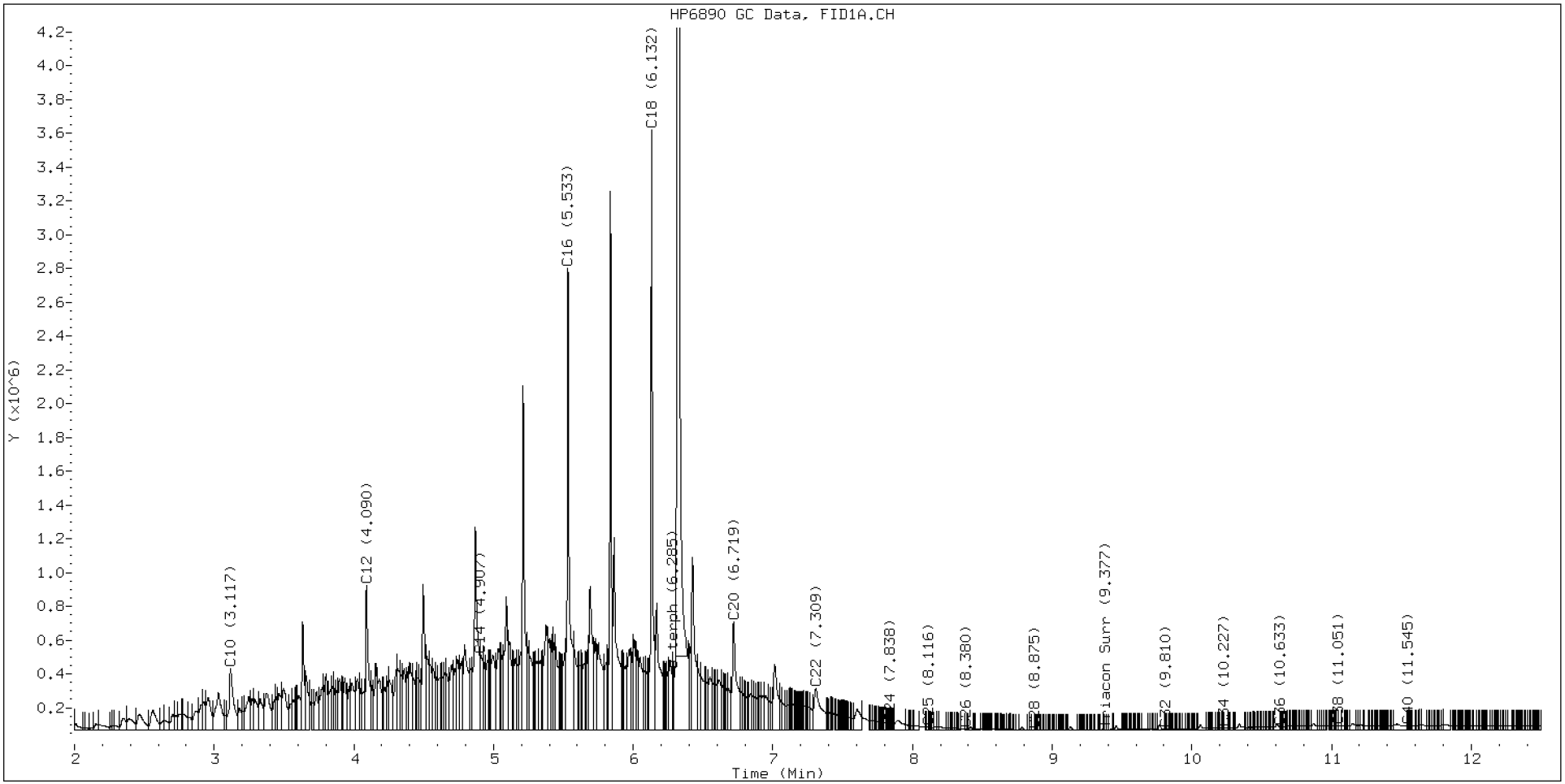
Range Times: NW Diesel(4.087 - 7.837) AK102(3.11 - 8.11) Jet A(3.11 - 6.13)
NW M.Oil(7.84 - 11.05) AK103(8.11 - 10.64) OR Diesel(3.11 - 8.88)

Surrogate	Area	Amount	
o-Terphenyl	16235384	79.3	M
Triacontane	784	0.0	

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	204701.9	25-OCT-2019
Triacon Surr	148377.1	25-OCT-2019
Gas	15000.0	XX-XXX-XXXX
Diesel	159336.7	25-OCT-2019
Motor Oil	101166.0	25-OCT-2019
AK102	195491.2	25-OCT-2019
AK103	73206.5	25-OCT-2019
JetA	165849.0	20-MAY-2020
OR Diesel	195999.1	25-OCT-2019
NAS Diesel	195148.2	25-OCT-2019
Creosote	90128.3	30-MAR-2020

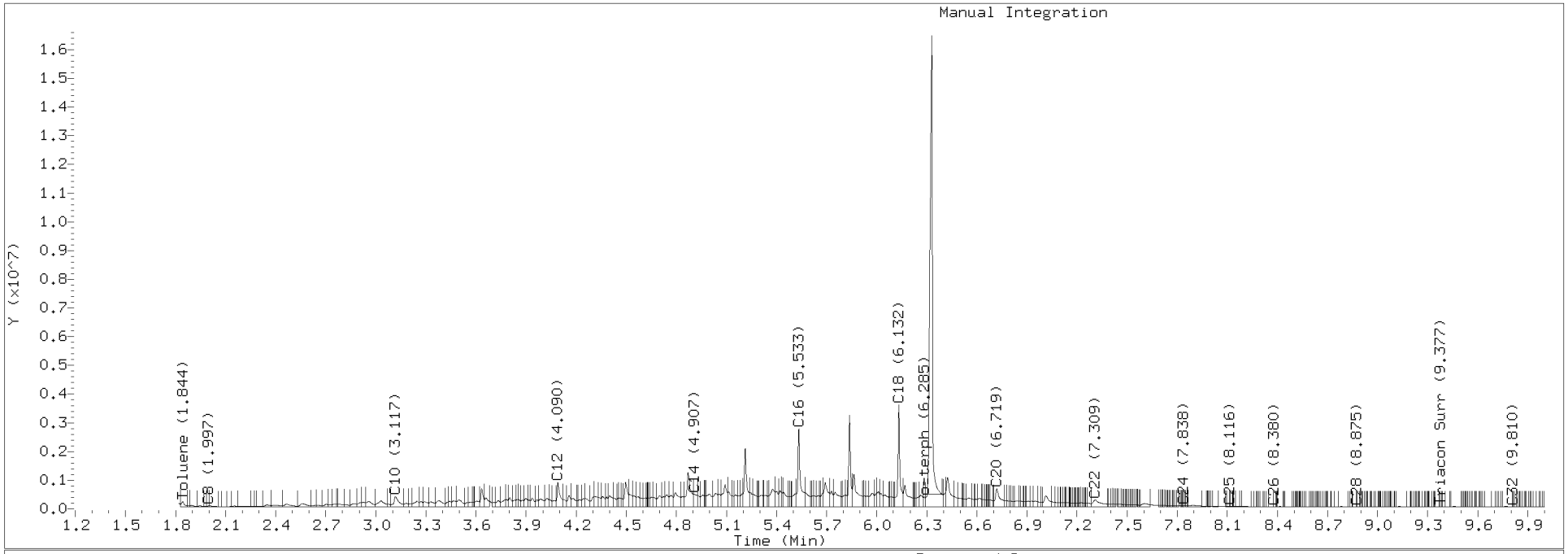
Datafile: FID4A, 20200814.b/420H1413.D SEQ-CCV1

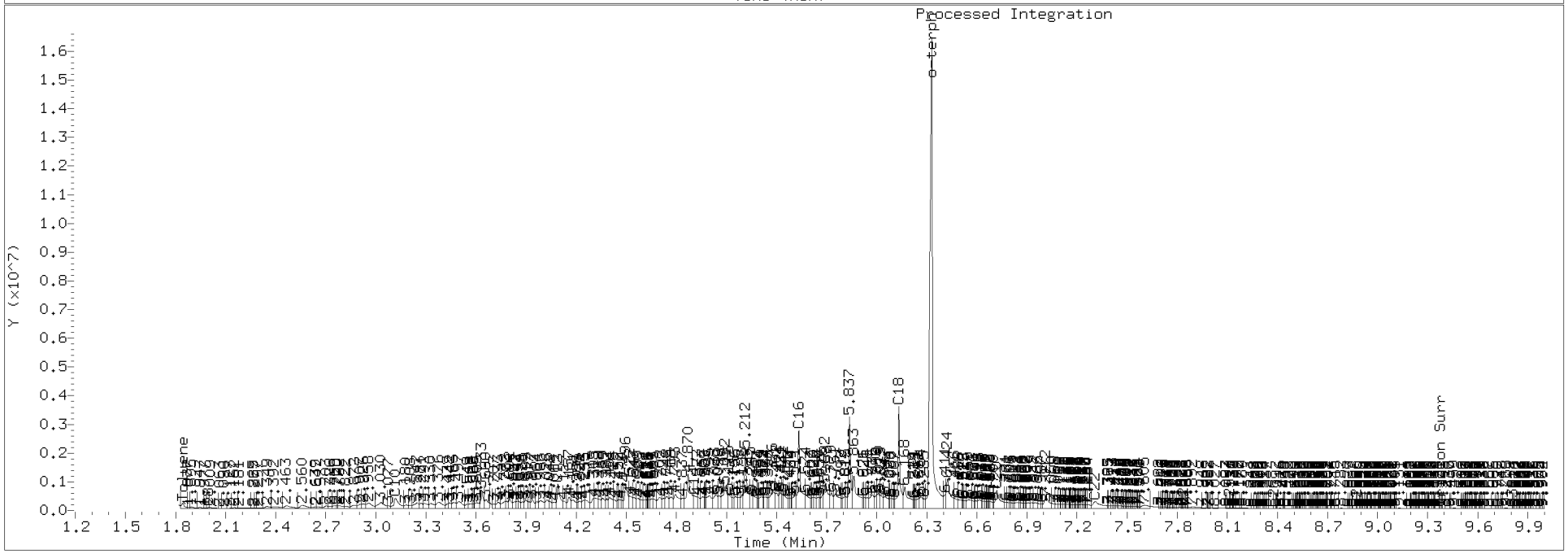


TPH Manual Integrations Report

Datafile: FID4A, 20200814.b/420H1413.D Injection: 14-AUG-2020 11:59

Lab ID:SEQ-CCV1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SHJ0406	Instrument:	FID4
		Calibration:	CJ00089

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SHJ0406-IBL1	419J2505.D	NA	10/25/19 13:11
Instrument Blank	SHJ0406-IBL2	419J2506.D	NA	10/25/19 13:31
DIESEL 50	SHJ0406-CAL1	419J2507.D	NA	10/25/19 13:52
DIESEL 100	SHJ0406-CAL2	419J2508.D	NA	10/25/19 14:12
DIESEL 250	SHJ0406-CAL3	419J2509.D	NA	10/25/19 14:32
DIESEL 500	SHJ0406-CAL4	419J2510.D	NA	10/25/19 14:53
DIESEL 1000	SHJ0406-CAL5	419J2511.D	NA	10/25/19 15:13
DIESEL 2500	SHJ0406-CAL6	419J2512.D	NA	10/25/19 15:32
DIESEL SCV	SHJ0406-SCV1	419J2513.D	NA	10/25/19 15:52
MOIL 100	SHJ0406-CAL7	419J2514.D	NA	10/25/19 16:12
MOIL 250	SHJ0406-CAL8	419J2515.D	NA	10/25/19 16:33
MOIL 500	SHJ0406-CAL9	419J2516.D	NA	10/25/19 16:53
MOIL 1000	SHJ0406-CALA	419J2517.D	NA	10/25/19 17:13
MOIL 2500	SHJ0406-CALB	419J2518.D	NA	10/25/19 17:34
MOIL 5000	SHJ0406-CALC	419J2519.D	NA	10/25/19 17:54
MOIL SCV	SHJ0406-SCV2	419J2520.D	NA	10/25/19 18:14

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 10/30/2019 7:24:06AM

ANALYSIS SEQUENCE

SHJ0406

Instrument: FID4 Element Column ID: G004925
Calibration ID: CJ00089

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SHJ0406-IBL1	Retention Time Standard	QC		1	H006806		
SHJ0406-IBL2	Instrument Blank	QC		2	H007457		
SHJ0406-CAL1	DIESEL 50	QC		3	H010495		
SHJ0406-CAL2	DIESEL 100	QC		4	H010496		
SHJ0406-CAL3	DIESEL 250	QC		5	H010497		
SHJ0406-CAL4	DIESEL 500	QC		6	H010498		
SHJ0406-CAL5	DIESEL 1000	QC		7	H010499		
SHJ0406-CAL6	DIESEL 2500	QC		8	H009367		
SHJ0406-SCV1	DIESEL SCV	QC		9	H008294		
SHJ0406-CAL7	MOIL 100	QC		10	H008395		
SHJ0406-CAL8	MOIL 250	QC		11	H008396		
SHJ0406-CAL9	MOIL 500	QC		12	H008397		
SHJ0406-CALA	MOIL 1000	QC		13	H007659		
SHJ0406-CALB	MOIL 2500	QC		14	H008398		
SHJ0406-CALC	MOIL 5000	QC		15	H007458		
SHJ0406-SCV2	MOIL SCV	QC		16	H008399		
SHJ0406-CALD	AK103 100	QC		17	H010478		
SHJ0406-CALE	AK103 250	QC		18	H010479		
SHJ0406-CALF	AK103 500	QC		19	H010480		
SHJ0406-CALG	AK103 1000	QC		20	H010481		
SHJ0406-CALH	AK103 2500	QC		21	H010482		
SHJ0406-CALI	AK103 5000	QC		22	H008608		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 10/30/2019 7:24:06AM

ANALYSIS SEQUENCE

SHJ0406

Instrument: FID4 Element Column ID: G004925
Calibration ID: CJ00089

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SHJ0406-SCV3	AK103 SCV	QC		23	H008400		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	25-OCT-2019 11:37	419J2501.D	1	RINSE	
2	25-OCT-2019 11:55	419J2502.D	1	RINSE	
3	25-OCT-2019 12:30	419J2503.D	1	RINSE	
4	25-OCT-2019 12:51	419J2504.D	1	RINSE	
5	25-OCT-2019 13:11	419J2505.D	1	SHJ0406-IBL1	
6	25-OCT-2019 13:31	419J2506.D	1	SHJ0406-IBL2	
7	25-OCT-2019 13:52	419J2507.D	1	SHJ0406-CAL1	
8	25-OCT-2019 14:12	419J2508.D	1	SHJ0406-CAL2	
9	25-OCT-2019 14:32	419J2509.D	1	SHJ0406-CAL3	
10	25-OCT-2019 14:53	419J2510.D	1	SHJ0406-CAL4	
11	25-OCT-2019 15:13	419J2511.D	1	SHJ0406-CAL5	
12	25-OCT-2019 15:32	419J2512.D	1	SHJ0406-CAL6	
13	25-OCT-2019 15:52	419J2513.D	1	SHJ0406-SCV1	
14	25-OCT-2019 16:12	419J2514.D	1	SHJ0406-CAL7	
15	25-OCT-2019 16:33	419J2515.D	1	SHJ0406-CAL8	
16	25-OCT-2019 16:53	419J2516.D	1	SHJ0406-CAL9	
17	25-OCT-2019 17:13	419J2517.D	1	SHJ0406-CALA	
18	25-OCT-2019 17:34	419J2518.D	1	SHJ0406-CALB	
19	25-OCT-2019 17:54	419J2519.D	1	SHJ0406-CALC	
20	25-OCT-2019 18:14	419J2520.D	1	SHJ0406-SCV2	
21	25-OCT-2019 18:35	419J2521.D	1	SHJ0406-CALD	
22	25-OCT-2019 18:55	419J2522.D	1	SHJ0406-CALE	
23	25-OCT-2019 19:15	419J2523.D	1	SHJ0406-CALF	
24	25-OCT-2019 19:34	419J2524.D	1	SHJ0406-CALG	
25	25-OCT-2019 19:54	419J2525.D	1	SHJ0406-CALH	
26	25-OCT-2019 20:15	419J2526.D	1	SHJ0406-CALI	
27	25-OCT-2019 20:35	419J2527.D	1	SHJ0406-SCV3	
28	25-OCT-2019 20:55	419J2528.D	1	SHJ0406-ICV1	
29	25-OCT-2019 21:16	419J2529.D	1	SHJ0406-ICV2	
30	25-OCT-2019 21:36	419J2530.D	1	BHJ0711-BLK1	
31	25-OCT-2019 21:56	419J2531.D	1	BHJ0711-BS1	
32	25-OCT-2019 22:16	419J2532.D	1	19J0373-01	
33	25-OCT-2019 22:35	419J2533.D	1	19J0373-02	
34	25-OCT-2019 22:55	419J2534.D	1	19J0373-03	
35	25-OCT-2019 23:16	419J2535.D	1	19J0373-04	
36	25-OCT-2019 23:36	419J2536.D	1	19J0373-05	
37	25-OCT-2019 23:57	419J2537.D	1	19J0373-06	
38	26-OCT-2019 00:17	419J2538.D	1	19J0373-07	
39	26-OCT-2019 00:37	419J2539.D	1	19J0373-08	
40	26-OCT-2019 00:58	419J2540.D	1	SHJ0406-CCV1	
41	26-OCT-2019 01:18	419J2541.D	1	SHJ0406-CCV2	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

ARI Job No.: RINS Method: FID4TPH.m Instrument: fid4a.i Date: 25-OCT-2019

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1137	419J2501.D	RINSE		1	NO MANUAL INTEGRATION
1155	419J2502.D	RINSE		1	NO MANUAL INTEGRATION
1230	419J2503.D	RINSE		1	NO MANUAL INTEGRATION
1251	419J2504.D	RINSE		1	NO MANUAL INTEGRATION
1311	419J2505.D	SHJ0406-IBL1		1	NO MANUAL INTEGRATION
1331	419J2506.D	SHJ0406-IBL2		1	NO MANUAL INTEGRATION
1352	419J2507.D	SHJ0406-CAL1		1	NO MANUAL INTEGRATION
1412	419J2508.D	SHJ0406-CAL2		1	o-terph,
1432	419J2509.D	SHJ0406-CAL3		1	NO MANUAL INTEGRATION
1453	419J2510.D	SHJ0406-CAL4		1	o-terph,
1513	419J2511.D	SHJ0406-CAL5		1	o-terph,
1532	419J2512.D	SHJ0406-CAL6		1	o-terph,
1552	419J2513.D	SHJ0406-SCV1		1	NO MANUAL INTEGRATION
1612	419J2514.D	SHJ0406-CAL7		1	Triacon Surr,
1633	419J2515.D	SHJ0406-CAL8		1	Triacon Surr,
1653	419J2516.D	SHJ0406-CAL9		1	Triacon Surr,
1713	419J2517.D	SHJ0406-CALA		1	Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1734	419J2518.D	SHJ0406-CALB		1	Triacon Surr,
1754	419J2519.D	SHJ0406-CALC		1	Triacon Surr,
1814	419J2520.D	SHJ0406-SCV2		1	Triacon Surr,
1835	419J2521.D	SHJ0406-CALD		1	Triacon Surr,
1855	419J2522.D	SHJ0406-CALE		1	Triacon Surr,
1915	419J2523.D	SHJ0406-CALF		1	Triacon Surr,
1934	419J2524.D	SHJ0406-CALG		1	Triacon Surr,
1954	419J2525.D	SHJ0406-CALH		1	Triacon Surr,
2015	419J2526.D	SHJ0406-CALI		1	Triacon Surr,
2035	419J2527.D	SHJ0406-SCV3		1	Triacon Surr,
2055	419J2528.D	SHJ0406-ICV1		1	o-terph,
2116	419J2529.D	SHJ0406-ICV2		1	Triacon Surr,
2136	419J2530.D	BHJ0711-BLK1		1	NO MANUAL INTEGRATION
2156	419J2531.D	BHJ0711-BS1		1	o-terph,
2216	419J2532.D	19J0373-01		1	Triacon Surr,
2235	419J2533.D	19J0373-02		1	NO MANUAL INTEGRATION
2255	419J2534.D	19J0373-03		1	Triacon Surr,
2316	419J2535.D	19J0373-04		1	Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20191025.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2336	419J2536.D	19J0373-05		1	o-terph, Triacon Surr,
2357	419J2537.D	19J0373-06		1	Triacon Surr,
0017	419J2538.D	19J0373-07		1	Triacon Surr,
0037	419J2539.D	19J0373-08		1	Triacon Surr,
0058	419J2540.D	SHJ0406-CCV1		1	o-terph,
0118	419J2541.D	SHJ0406-CCV2		1	Triacon Surr,

Security Status Report

Date: 30-Oct-2019 07:25

419J2507.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2508.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2509.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2510.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2511.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2512.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2513.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2514.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2515.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2516.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2517.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2518.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2519.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2520.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2521.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2522.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2523.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2524.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2525.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2526.D	Data Locked	jrains, 30-Oct-2019 07:20
419J2527.D	Data Locked	jrains, 30-Oct-2019 07:20

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIF0018	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SIF0018-IBL1	420F0203.D	NA	06/02/20 08:19
Instrument Blank	SIF0018-IBL2	420F0204.D	NA	06/02/20 08:38
MOIL 100	SIF0018-CAL1	420F0205.D	NA	06/02/20 08:58
MOIL 250	SIF0018-CAL2	420F0206.D	NA	06/02/20 09:17
MOIL 500	SIF0018-CAL3	420F0207.D	NA	06/02/20 09:37
MOIL 1000	SIF0018-CAL4	420F0208.D	NA	06/02/20 09:56
MOIL 2500	SIF0018-CAL5	420F0209.D	NA	06/02/20 10:16
MOIL 5000	SIF0018-CAL6	420F0210.D	NA	06/02/20 10:36
MOIL SCV	SIF0018-SCV1	420F0211.D	NA	06/02/20 10:55

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIF0018

Instrument: FID4
Calibration ID: DA00022

Printed: 6/2/2020 12:49:08PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SIF0018-IBL1	QC		1		H010802			
SIF0018-IBL2	QC		2		I000651			
SIF0018-CAL1	QC		3		I004752			
SIF0018-CAL2	QC		4		I004753			
SIF0018-CAL3	QC		5		I004754			
SIF0018-CAL4	QC		6		I004755			
SIF0018-CAL5	QC		7		I004756			
SIF0018-CAL6	QC		8		I003778			
SIF0018-SCV1	QC		9		I004757			

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200602.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	02-JUN-2020 07:40	420F0201.D	1	RINSE	
2	02-JUN-2020 07:59	420F0202.D	1	RINSE	
3	02-JUN-2020 08:19	420F0203.D	1	SIF0018-IBL1	
4	02-JUN-2020 08:38	420F0204.D	1	SIF0018-IBL2	
5	02-JUN-2020 08:58	420F0205.D	1	SIF0018-CAL1	
6	02-JUN-2020 09:17	420F0206.D	1	SIF0018-CAL2	
7	02-JUN-2020 09:37	420F0207.D	1	SIF0018-CAL3	
8	02-JUN-2020 09:56	420F0208.D	1	SIF0018-CAL4	
9	02-JUN-2020 10:16	420F0209.D	1	SIF0018-CAL5	
10	02-JUN-2020 10:36	420F0210.D	1	SIF0018-CAL6	
11	02-JUN-2020 10:55	420F0211.D	1	SIF0018-SCV1	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200602.b

ARI Job No.: RINS Method: FID4TPH.m Instrument: fid4a.i Date: 02-JUN-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0740	420F0201.D	RINSE		1	NO MANUAL INTEGRATION
0759	420F0202.D	RINSE		1	NO MANUAL INTEGRATION
0819	420F0203.D	SIF0018-IBL1		1	NO MANUAL INTEGRATION
0838	420F0204.D	SIF0018-IBL2		1	NO MANUAL INTEGRATION
0858	420F0205.D	SIF0018-CAL1		1	Triacon Surr,
0917	420F0206.D	SIF0018-CAL2		1	Triacon Surr,
0937	420F0207.D	SIF0018-CAL3		1	Triacon Surr,
0956	420F0208.D	SIF0018-CAL4		1	Triacon Surr,
1016	420F0209.D	SIF0018-CAL5		1	Triacon Surr,
1036	420F0210.D	SIF0018-CAL6		1	Triacon Surr,
1055	420F0211.D	SIF0018-SCV1		1	Triacon Surr,

Security Status Report

Date: 02-Jun-2020 12:52

420F0201.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0202.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0203.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0204.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0205.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0206.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0207.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0208.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0209.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0210.D	Data Locked	christopher, 02-Jun-2020 12:51
420F0211.D	Data Locked	christopher, 02-Jun-2020 12:51

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIH0092	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SIH0092-IBL1	420H1003B.D	NA	08/10/20 08:50
Instrument Blank	SIH0092-IBL2	420H1004B.D	NA	08/10/20 09:10
CREOSOTE 100	SIH0092-CAL1	420H1008.D	NA	08/10/20 11:44
CREOSOTE 250	SIH0092-CAL2	420H1009.D	NA	08/10/20 12:03
CREOSOTE 500	SIH0092-CAL3	420H1010.D	NA	08/10/20 12:23
CREOSOTE 1000	SIH0092-CAL4	420H1011.D	NA	08/10/20 12:43
CREOSOTE 2500	SIH0092-CAL5	420H1012.D	NA	08/10/20 13:02
CREOSOTE 5000	SIH0092-CAL6	420H1013.D	NA	08/10/20 13:22

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIH0092

Instrument: FID4
Calibration ID: DA00022

Printed: 8/10/2020 2:51:30PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SIH0092-IBL1	QC		1		I006239			
SIH0092-IBL2	QC		2		I006241			
SIH0092-CAL1	QC		3		I006988			
SIH0092-CAL2	QC		4		I006987			
SIH0092-CAL3	QC		5		I006986			
SIH0092-CAL4	QC		6		I006985			
SIH0092-CAL5	QC		7		I006984			
SIH0092-CAL6	QC		8		I006965			

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200810.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	10-AUG-2020 08:11	420H1001.D	1	RINSE	
2	10-AUG-2020 08:30	420H1002.D	1	RINSE	
3	10-AUG-2020 08:50	420H1003.D	1	SEQ-IBL1	
4	10-AUG-2020 09:10	420H1004.D	1	SEQ-IBL2	
5	10-AUG-2020 09:30	420H1005.D	1	SEQ-ICV1	
6	10-AUG-2020 09:49	420H1006.D	1	SEQ-ICV2	
7	10-AUG-2020 10:09	420H1007.D	1	I006965	
8	10-AUG-2020 11:44	420H1008.D	1	SEQ-CAL1	
9	10-AUG-2020 12:03	420H1009.D	1	SEQ-CAL2	
10	10-AUG-2020 12:23	420H1010.D	1	SEQ-CAL3	
11	10-AUG-2020 12:43	420H1011.D	1	SEQ-CAL4	
12	10-AUG-2020 13:02	420H1012.D	1	SEQ-CAL5	
13	10-AUG-2020 13:22	420H1013.D	1	SEQ-CAL6	
14	10-AUG-2020 15:15	420H1014.D	1	BIH0129-BLK1	
15	10-AUG-2020 15:34	420H1015.D	1	BIH0129-BS1	
16	10-AUG-2020 15:54	420H1016.D	1	20H0053-01	
17	10-AUG-2020 16:14	420H1017.D	1	20H0058-01	
18	10-AUG-2020 16:34	420H1018.D	1	20H0058-02	
19	10-AUG-2020 16:53	420H1019.D	1	20H0058-03	
20	10-AUG-2020 17:13	420H1020.D	1	20H0060-01	
21	10-AUG-2020 17:33	420H1021.D	1	20H0060-02	
22	10-AUG-2020 17:52	420H1022.D	1	20H0060-03	
23	10-AUG-2020 18:12	420H1023.D	1	BIH0058-BLK1	
24	10-AUG-2020 18:32	420H1024.D	1	BIH0058-BS1	
25	10-AUG-2020 18:52	420H1025.D	1	20G0289-03	
26	10-AUG-2020 19:11	420H1026.D	1	20G0291-01	
27	10-AUG-2020 19:31	420H1027.D	1	SEQ-CCV1	
28	10-AUG-2020 19:51	420H1028.D	1	SEQ-CCV2	
29	10-AUG-2020 20:11	420H1029.D	1	SEQ-ICV3	
30	10-AUG-2020 20:30	420H1030.D	1	BIH0100-BLK1	
31	10-AUG-2020 20:50	420H1031.D	1	BIH0100-BS1	
32	10-AUG-2020 21:10	420H1032.D	1	BIH0100-BSD1	
33	10-AUG-2020 21:29	420H1033.D	1	20G0287-01	
34	10-AUG-2020 21:49	420H1034.D	1	BIH0100-MS1	
35	10-AUG-2020 22:09	420H1035.D	1	BIH0100-MSD1	
36	10-AUG-2020 22:28	420H1036.D	1	BIH0113-BLK1	
37	10-AUG-2020 22:48	420H1037.D	1	BIH0113-BS1	
38	10-AUG-2020 23:08	420H1038.D	1	BIH0113-BSD1	
39	10-AUG-2020 23:27	420H1039.D	1	20H0047-01	
40	10-AUG-2020 23:47	420H1040.D	1	20H0047-02	
41	11-AUG-2020 00:06	420H1041.D	1	20H0047-03	
42	11-AUG-2020 00:26	420H1042.D	1	SEQ-CCV3	
43	11-AUG-2020 00:46	420H1043.D	1	SEQ-CCV4	
44	11-AUG-2020 01:05	420H1044.D	1	SEQ-CCV5	
45	11-AUG-2020 01:25	420H1045.D	1	BIH0166-BLK1	
46	11-AUG-2020 01:44	420H1046.D	1	BIH0166-BS1	
47	11-AUG-2020 02:04	420H1047.D	1	BIH0166-BSD1	
48	11-AUG-2020 02:23	420H1048.D	1	20H0082-01	
49	11-AUG-2020 02:43	420H1049.D	1	BIH0166-MS1	
50	11-AUG-2020 03:03	420H1050.D	1	BIH0166-MSD1	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200810.b

	Inject Date/Time	Filename	DF	LabID	ClientID
51	11-AUG-2020 03:22	420H1051.D	1	20H0082-02	
52	11-AUG-2020 03:42	420H1052.D	1	20H0082-03	
53	11-AUG-2020 04:01	420H1053.D	1	20H0082-04	
54	11-AUG-2020 04:21	420H1054.D	1	20H0082-05	
55	11-AUG-2020 04:40	420H1055.D	1	20H0082-06	
56	11-AUG-2020 05:00	420H1056.D	1	20H0082-07	
57	11-AUG-2020 05:19	420H1057.D	1	20H0082-08	
58	11-AUG-2020 05:39	420H1058.D	1	20H0082-09	
59	11-AUG-2020 05:58	420H1059.D	1	SEQ-CCV6	
60	11-AUG-2020 06:18	420H1060.D	1	SEQ-CCV7	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200810.b

ARI Job No.: RINS Method: FID4TPH.m Instrument: fid4a.i Date: 10-AUG-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0811	420H1001.D	RINSE		1	NO MANUAL INTEGRATION
0830	420H1002.D	RINSE		1	NO MANUAL INTEGRATION
0850	420H1003.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
0910	420H1004.D	SEQ-IBL2		1	NO MANUAL INTEGRATION
0930	420H1005.D	SEQ-ICV1		1	NO MANUAL INTEGRATION
0949	420H1006.D	SEQ-ICV2		1	NO MANUAL INTEGRATION
1009	420H1007.D	I006965		1	NO MANUAL INTEGRATION
1144	420H1008.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
1203	420H1009.D	SEQ-CAL2		1	o-terph,
1223	420H1010.D	SEQ-CAL3		1	o-terph,
1243	420H1011.D	SEQ-CAL4		1	o-terph,
1302	420H1012.D	SEQ-CAL5		1	o-terph,
1322	420H1013.D	SEQ-CAL6		1	o-terph,

Security Status Report

Date: 10-Aug-2020 15:38

420H1001.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1002.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1003.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1004.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1005.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1006.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1007.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1008.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1009.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1010.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1011.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1012.D	Data Locked	christopher, 10-Aug-2020 15:38
420H1013.D	Data Locked	christopher, 10-Aug-2020 15:38

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIH0165	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Retention Time Standard	SIH0165-IBL1	420H1403.D	NA	08/14/20 08:43
Instrument Blank	SIH0165-IBL2	420H1404.D	NA	08/14/20 09:03
DIESEL ICV	SIH0165-ICV1	420H1405.D	NA	08/14/20 09:22
MOIL ICV	SIH0165-ICV2	420H1406.D	NA	08/14/20 09:42
CREOSOTE ICV	SIH0165-ICV3	420H1407.D	NA	08/14/20 10:01
ZZZZZ	BIH0223-BLK1	420H1408.D	Solid	08/14/20 10:21
ZZZZZ	BIH0223-BS1	420H1409.D	Solid	08/14/20 10:41
ZZZZZ	20H0120-01	420H1410.D	Solid	08/14/20 11:00
ZZZZZ	20H0120-02	420H1411.D	Solid	08/14/20 11:20
ZZZZZ	20H0120-03	420H1412.D	Solid	08/14/20 11:39
DIESEL CCV	SIH0165-CCV1	420H1413.D	NA	08/14/20 11:59
MOIL CCV	SIH0165-CCV2	420H1414.D	NA	08/14/20 12:18
CREOSOTE CCV	SIH0165-CCV3	420H1415.D	NA	08/14/20 12:38
ZZZZZ	20H0139-03	420H1420.D	Water	08/14/20 14:16
ZZZZZ	20H0139-04	420H1421.D	Water	08/14/20 14:36
ZZZZZ	20H0139-05	420H1422.D	Water	08/14/20 14:55
ZZZZZ	20H0142-01	420H1423.D	Water	08/14/20 15:15
ZZZZZ	20H0099-01	420H1427.D	Water	08/14/20 16:33
ZZZZZ	20H0099-02	420H1428.D	Water	08/14/20 16:53
ZZZZZ	20H0099-03	420H1429.D	Water	08/14/20 17:13
ZZZZZ	20H0099-04	420H1430.D	Water	08/14/20 17:32
DIESEL CCV	SIH0165-CCV4	420H1431.D	NA	08/14/20 17:52
MOIL CCV	SIH0165-CCV5	420H1432.D	NA	08/14/20 18:11
JETA CCV	SIH0165-CCV6	420H1433.D	NA	08/14/20 18:31
ZZZZZ	20H0114-01	420H1437.D	Water	08/14/20 19:49
ZZZZZ	20H0114-02	420H1438.D	Water	08/14/20 20:09
ZZZZZ	20H0085-01	420H1441.D	Solid	08/14/20 21:08
ZZZZZ	20H0085-02	420H1442.D	Solid	08/14/20 21:27
ZZZZZ	20H0085-03	420H1443.D	Solid	08/14/20 21:47
ZZZZZ	20H0085-04	420H1444.D	Solid	08/14/20 22:06

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIH0165	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
DIESEL CCV	SIH0165-CCV7	420H1445.D	NA	08/14/20 22:26
MOIL CCV	SIH0165-CCV8	420H1446.D	NA	08/14/20 22:45

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SIH0165

Instrument: NT8
Calibration ID: DG00082

Printed: 8/14/2020 2:00:25PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SIH0165-IBL1	QC		1		I006239			
SIH0165-IBL2	QC		2		I006241			
SIH0165-ICV1	QC		3		I002687			
SIH0165-ICV2	QC		4		I004755			
SIH0165-ICV3	QC		5		I006985			
BIH0223-BLK1	QC		6					
BIH0223-BS1	QC		7					
20H0120-01	TPH NW (Extractables)	A 01	8				Flatiron Corporation	Version
20H0120-02	TPH NW (Extractables)	A 01	9				Flatiron Corporation	Version
20H0120-03	TPH NW (Extractables)	A 01	10				Flatiron Corporation	Version
SIH0165-CCV1	QC		11		I002687			
SIH0165-CCV2	QC		12		I004755			
SIH0165-CCV3	QC		13		I006985			

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200814.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	14-AUG-2020 08:04	420H1401.D	1	RINSE	
2	14-AUG-2020 08:23	420H1402.D	1	RINSE	
3	14-AUG-2020 08:43	420H1403.D	1	SEQ-IBL1	
4	14-AUG-2020 09:03	420H1404.D	1	SEQ-IBL2	
5	14-AUG-2020 09:22	420H1405.D	1	SEQ-ICV1	
6	14-AUG-2020 09:42	420H1406.D	1	SEQ-ICV2	
7	14-AUG-2020 10:01	420H1407.D	1	SEQ-ICV3	
8	14-AUG-2020 10:21	420H1408.D	1	BIH0223-BLK1	
9	14-AUG-2020 10:41	420H1409.D	1	BIH0223-BS1	
10	14-AUG-2020 11:00	420H1410.D	1	20H0120-01	
11	14-AUG-2020 11:20	420H1411.D	1	20H0120-02	
12	14-AUG-2020 11:39	420H1412.D	1	20H0120-03	
13	14-AUG-2020 11:59	420H1413.D	1	SEQ-CCV1	
14	14-AUG-2020 12:18	420H1414.D	1	SEQ-CCV2	
15	14-AUG-2020 12:38	420H1415.D	1	SEQ-CCV3	
16	14-AUG-2020 12:58	420H1416.D	1	SEQ-ICV4	
17	14-AUG-2020 13:17	420H1417.D	1	BIH0255-BLK1	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid4a.i\20200814.b

ARI Job No.: RINS Method: FID4TPH.m Instrument: fid4a.i Date: 14-AUG-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0804	420H1401.D	RINSE		1	NO MANUAL INTEGRATION
0823	420H1402.D	RINSE		1	NO MANUAL INTEGRATION
0843	420H1403.D	SEQ-IBL1		1	C40,
0903	420H1404.D	SEQ-IBL2		1	NO MANUAL INTEGRATION
0922	420H1405.D	SEQ-ICV1		1	o-terph,
0942	420H1406.D	SEQ-ICV2		1	Triacon Surr,
1001	420H1407.D	SEQ-ICV3		1	NO MANUAL INTEGRATION
1021	420H1408.D	BIH0223-BLK1		1	o-terph,
1041	420H1409.D	BIH0223-BS1		1	NO MANUAL INTEGRATION
1100	420H1410.D	20H0120-01		1	o-terph, Triacon Surr,
1120	420H1411.D	20H0120-02		1	o-terph, Triacon Surr,
1139	420H1412.D	20H0120-03		1	o-terph, Triacon Surr,
1159	420H1413.D	SEQ-CCV1		1	o-terph,
1218	420H1414.D	SEQ-CCV2		1	Triacon Surr,
1238	420H1415.D	SEQ-CCV3		1	NO MANUAL INTEGRATION

Security Status Report

Date: 14-Aug-2020 13:57

420H1401.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1402.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1403.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1404.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1405.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1406.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1407.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1408.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1409.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1410.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1411.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1412.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1413.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1414.D	Data Locked	christopher, 14-Aug-2020 13:52
420H1415.D	Data Locked	christopher, 14-Aug-2020 13:52

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIK0234	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20J0410-01	420K1309.D	Solid	11/13/20 11:36
ZZZZZ	20J0410-04	420K1312.D	Solid	11/13/20 12:38
ZZZZZ	20J0410-06	420K1313.D	Solid	11/13/20 12:58
ZZZZZ	20J0410-09	420K1314.D	Solid	11/13/20 13:18
ZZZZZ	20J0410-11	420K1315.D	Solid	11/13/20 13:39
ZZZZZ	20J0410-15	420K1316.D	Solid	11/13/20 14:00
ZZZZZ	20J0410-17	420K1317.D	Solid	11/13/20 14:20
ZZZZZ	20J0410-21	420K1318.D	Solid	11/13/20 14:41
ZZZZZ	20J0410-23	420K1319.D	Solid	11/13/20 15:01
ZZZZZ	20J0410-27	420K1320.D	Solid	11/13/20 15:22
ZZZZZ	20J0410-29	420K1323.D	Solid	11/13/20 16:23
ZZZZZ	20J0410-36	420K1324.D	Solid	11/13/20 16:43
ZZZZZ	20J0410-37	420K1325.D	Solid	11/13/20 17:04
Blank	BIK0324-BLK1	420K1326.D	Solid	11/13/20 17:24
LCS	BIK0324-BS1	420K1327.D	Solid	11/13/20 17:44
ZZZZZ	20K0069-01	420K1328.D	Solid	11/13/20 18:05
ZZZZZ	20K0069-02	420K1329.D	Solid	11/13/20 18:25
USMPDI-046SC-A-00-01-201029	20K0073-01	420K1330.D	Solid	11/13/20 18:46
USMPDI-046SC-A-00-01-201029	BIK0324-MS1	420K1331.D	Solid	11/13/20 19:06
USMPDI-046SC-A-00-01-201029	BIK0324-MSD1	420K1332.D	Solid	11/13/20 19:26
USMPDI-046SC-A-01-02-201029	20K0073-02	420K1333.D	Solid	11/13/20 19:47
ZZZZZ	20J0424-11	420K1337.D	Solid	11/13/20 21:08
ZZZZZ	20J0424-12	420K1338.D	Solid	11/13/20 21:28
ZZZZZ	20J0424-13	420K1339.D	Solid	11/13/20 21:49
ZZZZZ	20J0424-14	420K1342.D	Solid	11/13/20 22:49
ZZZZZ	20J0424-15	420K1343.D	Solid	11/13/20 23:10
ZZZZZ	20J0424-16	420K1344.D	Solid	11/13/20 23:30
ZZZZZ	20J0424-17	420K1345.D	Solid	11/13/20 23:50
ZZZZZ	20J0424-18	420K1346.D	Solid	11/14/20 00:10
ZZZZZ	20J0424-20	420K1348.D	Solid	11/14/20 00:51

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIK0234	Instrument:	FID4
		Calibration:	DA00022

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20J0424-21	420K1349.D	Solid	11/14/20 01:11

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIH0165	Instrument:	FID4
Calibration:	DA00022	Calibration Date:	10/25/2019

Surrogate Compound	Spike Level mg/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIH0165-ICV1 (Solid)			Lab File ID: 420H1405.D				Analyzed: 08/14/20 09:22	
o-Terphenyl	90.000	88.6	85 - 115	6.33	6.66	-0.3300	N/A	
SIH0165-ICV3 (Solid)			Lab File ID: 420H1407.D				Analyzed: 08/14/20 10:01	
o-Terphenyl	90.000	97.1	85 - 115	6.33	6.66	-0.3300	N/A	
SIH0165-CCV1 (Solid)			Lab File ID: 420H1413.D				Analyzed: 08/14/20 11:59	
o-Terphenyl	90.000	88.1	85 - 115	6.33	6.66	-0.3300	N/A	

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIK0234	Instrument:	FID4
Calibration:	DA00022	Calibration Date:	08/14/2020

Surrogate Compound	Spike Level mg/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BIK0324-BLK1 (Solid)			Lab File ID: 420K1326.D				Analyzed: 11/13/20 17:24	
o-Terphenyl	56.250	105	50 - 150	6.21	6.66	-0.4500	N/A	
BIK0324-BS1 (Solid)			Lab File ID: 420K1327.D				Analyzed: 11/13/20 17:44	
o-Terphenyl	56.250	114	50 - 150	6.21	6.66	-0.4500	N/A	
20K0073-01 (Solid)			Lab File ID: 420K1330.D				Analyzed: 11/13/20 18:46	
o-Terphenyl	68.709	96.2	50 - 150	6.21	6.66	-0.4500	N/A	
BIK0324-MS1 (Solid)			Lab File ID: 420K1331.D				Analyzed: 11/13/20 19:06	
o-Terphenyl	68.709	88.5	50 - 150	6.21	6.66	-0.4500	N/A	
BIK0324-MSD1 (Solid)			Lab File ID: 420K1332.D				Analyzed: 11/13/20 19:26	
o-Terphenyl	68.709	95.8	50 - 150	6.21	6.66	-0.4500	N/A	
20K0073-02 (Solid)			Lab File ID: 420K1333.D				Analyzed: 11/13/20 19:47	
o-Terphenyl	63.878	98.1	50 - 150	6.21	6.66	-0.4500	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HOLDING TIME SUMMARY

Analysis: NWTPH-Dx

Laboratory: Analytical Resources, Inc. SDG: 20K0073

Client: Anchor QEA, LLC Project: Gasco Siltronic

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
USMPDI-046SC-A-00-01-201029 20K0073-01	10/29/20 10:40	11/03/20 11:32	11/11/20 11:40	13	14	11/13/20 18:46	2	40	
USMPDI-046SC-A-01-02-201029 20K0073-02	10/29/20 10:40	11/03/20 11:32	11/11/20 11:40	13	14	11/13/20 19:47	2	40	
Matrix Spike BIK0324-MS1	10/29/20 10:40	11/03/20 11:32	11/11/20 11:40	13	14	11/13/20 19:06	2	40	
Matrix Spike Dup BIK0324-MSD1	10/29/20 10:40	11/03/20 11:32	11/11/20 11:40	13	14	11/13/20 19:26	2	40	

* Indicates hold time exceedance.

Analytical Resources, Incorporated
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METHOD DETECTION AND REPORTING LIMITS

NWTPH-Dx

Laboratory: Analytical Resources, Inc.
SDG: 20K0073
Client: Anchor QEA, LLC
Project: Gasco Siltronic
Matrix: Solid
Instrument: FID4

Analyte	MDL	RL	Units
Diesel Range Organics (C12-C24)	20.3	50.0	mg/kg
Motor Oil Range Organics (C24-C38)	21.0	100	mg/kg

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SMPDI-046SC-B-11.8-13.8-20102

Form I
ORGANIC ANALYSIS DATA SHEET
WA EPH
WA EPH-Aliphatics

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-03 A	SDG:	20K0073
Sampled:	10/29/20 10:30	Prepared:	11/12/20 19:42	File ID:	820L1007.D
% Solids:	90.18	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/10/20 23:00
Batch:	BIK0336	Sequence:	SIL0284	Initial/Final:	10.14 g Wet / 1 mL
Instrument:	FID8	Column:	ZB5	Calibration:	DJ00015
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
ALI-C10-C12	C10-C12 Aliphatics	1	2190	U		2190

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
1-Chloro-octadecane	16404	10900	66.3	30 - 160	

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1007.D

Date : 10-DEC-2020 23:00

Client ID:

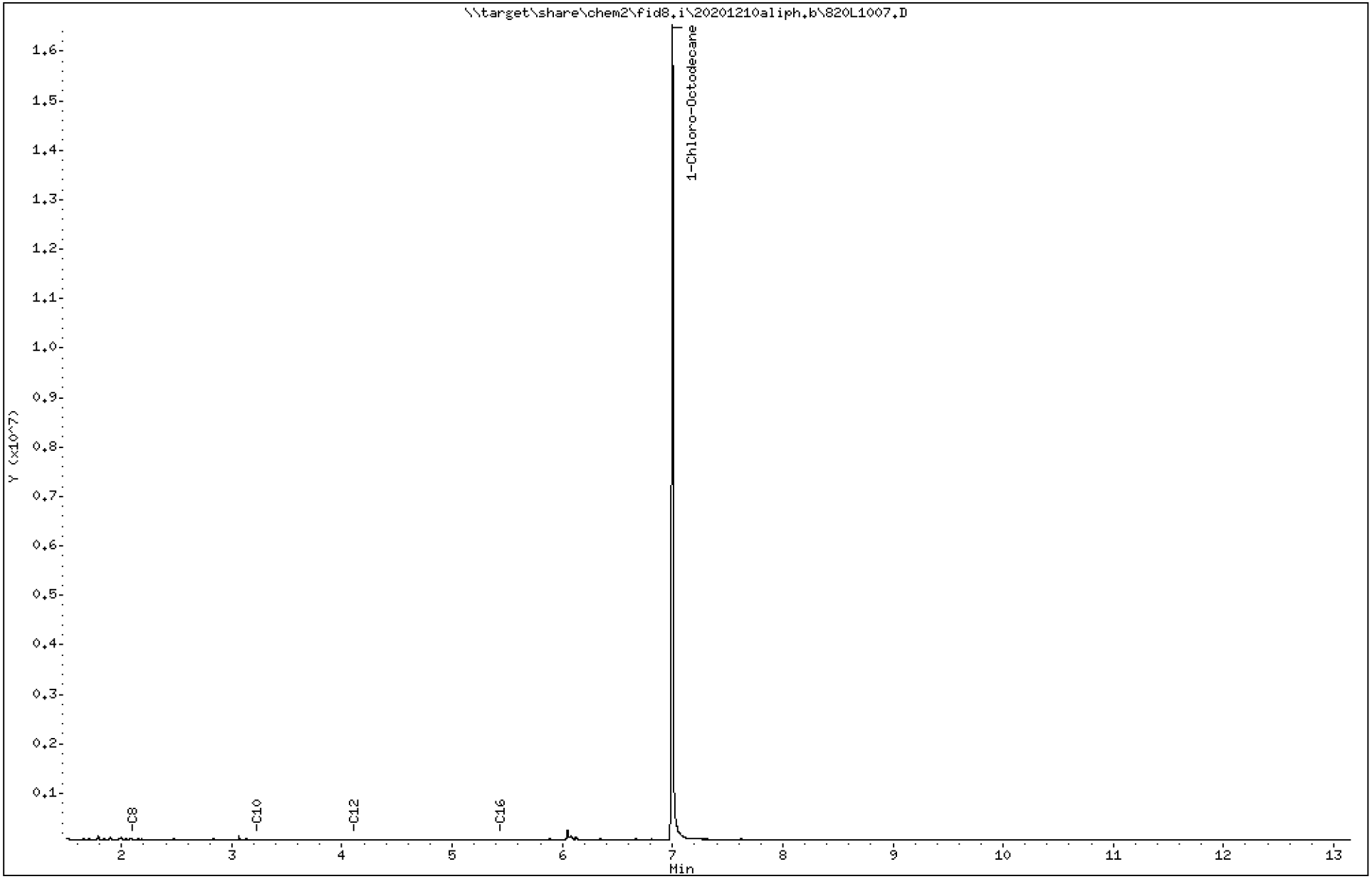
Instrument: fid8.i

Sample Info: 20K0073-03

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1007.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: 20K0073-03
Client ID:
Injection: 10-DEC-2020 23:00
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	507268	2.6	(2.006 - 3.349)
C10-C12	Aliph.	92780	0.5	(3.349 - 4.191)
C12-C16	Aliph.	126408	0.6	(4.191 - 5.531)
C16-C21	Aliph.	876866	4.5	(5.531 - 7.137)
C21-C34	Aliph.	509052	2.8	(7.137 - 10.752)

Surrogate Rec: 66.3% 99.4 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SMPDI-046SC-B-13.8-15.8-20102

Form I
ORGANIC ANALYSIS DATA SHEET
WA EPH
WA EPH-Aliphatics

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-04 A	SDG:	20K0073
Sampled:	10/29/20 10:30	Prepared:	11/12/20 19:42	File ID:	820L1008.D
% Solids:	82.60	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/10/20 23:24
Batch:	BIK0336	Sequence:	SIL0284	Initial/Final:	10.03 g Wet / 1 mL
Instrument:	FID8	Column:	ZB5	Calibration:	DJ00015
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
ALI-C10-C12	C10-C12 Aliphatics	1	2410	U		2410

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
1-Chloro-octadecane	18105	10400	57.2	30 - 160	

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1008.D

Date : 10-DEC-2020 23:24

Client ID:

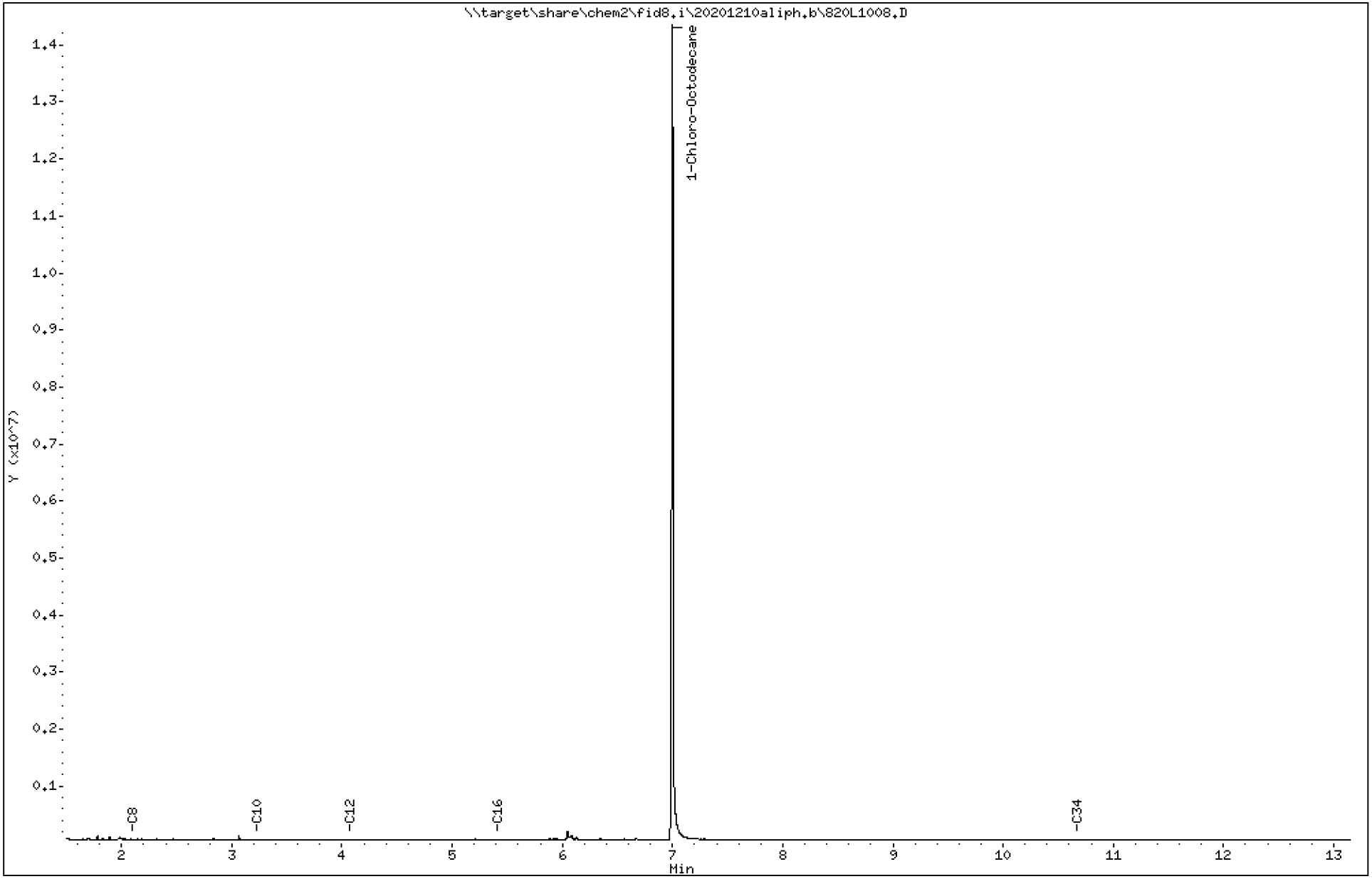
Instrument: fid8.i

Sample Info: 20K0073-04

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1008.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: 20K0073-04
Client ID:
Injection: 10-DEC-2020 23:24
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	465244	2.4	(2.006 - 3.349)
C10-C12	Aliph.	141524	0.7	(3.349 - 4.191)
C12-C16	Aliph.	169560	0.8	(4.191 - 5.531)
C16-C21	Aliph.	803685	4.1	(5.531 - 7.137)
C21-C34	Aliph.	274491	1.5	(7.137 - 10.752)

Surrogate Rec: 57.2% 85.8 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SMPDI-046SC-B-15.8-17.8-20102

Form I
ORGANIC ANALYSIS DATA SHEET
WA EPH
WA EPH-Aliphatics

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-05 A	SDG:	20K0073
Sampled:	10/29/20 10:30	Prepared:	11/12/20 19:42	File ID:	820L1009.D
% Solids:	81.56	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/10/20 23:49
Batch:	BIK0336	Sequence:	SIL0284	Initial/Final:	10.05 g Wet / 1 mL
Instrument:	FID8	Column:	ZB5	Calibration:	DJ00015
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
ALI-C10-C12	C10-C12 Aliphatics	1	2440	U		2440

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
1-Chloro-octadecane	18300	11600	63.1	30 - 160	

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1009.D

Date : 10-DEC-2020 23:49

Client ID:

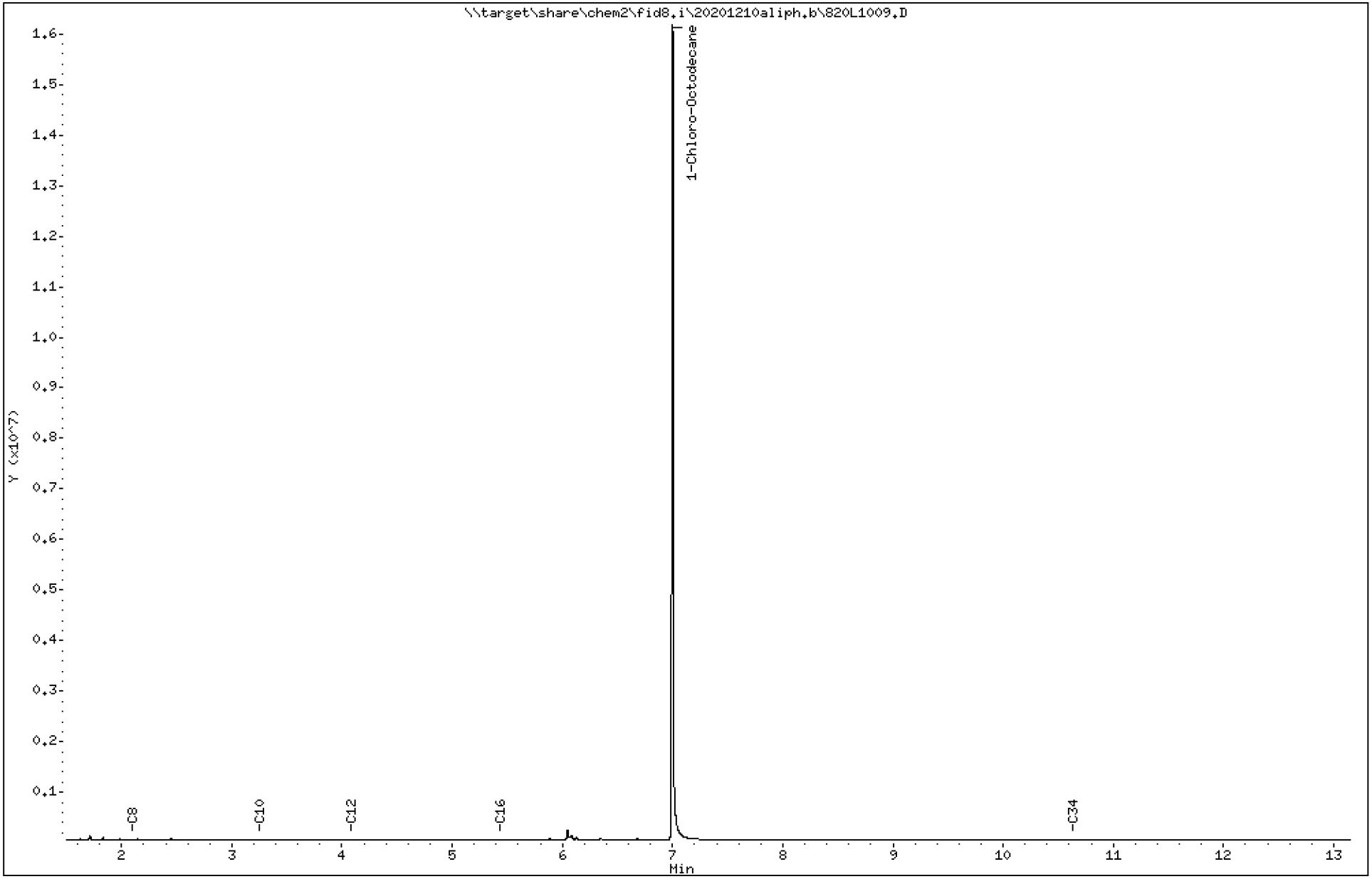
Instrument: fid8.i

Sample Info: 20K0073-05

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1009.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: 20K0073-05
Client ID:
Injection: 10-DEC-2020 23:49
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	241618	1.3	(2.006 - 3.349)
C10-C12	Aliph.	123430	0.6	(3.349 - 4.191)
C12-C16	Aliph.	116617	0.6	(4.191 - 5.531)
C16-C21	Aliph.	775977	4.0	(5.531 - 7.137)
C21-C34	Aliph.	398392	2.2	(7.137 - 10.752)

Surrogate Rec: 63.2% 94.7 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-B-3.8-5.8-201029

Form I
ORGANIC ANALYSIS DATA SHEET
WA EPH
WA EPH-Aliphatics

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-06 A	SDG:	20K0073
Sampled:	10/29/20 10:30	Prepared:	11/12/20 19:42	File ID:	820L1010.D
% Solids:	89.60	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/11/20 00:13
Batch:	BIK0336	Sequence:	SIL0284	Initial/Final:	10.04 g Wet / 1 mL
Instrument:	FID8	Column:	ZB5	Calibration:	DJ00015
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
ALI-C10-C12	C10-C12 Aliphatics	1	2220	U		2220

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
1-Chloro-octadecane	16674	9600	57.6	30 - 160	

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1010.D

Date : 11-DEC-2020 00:13

Client ID:

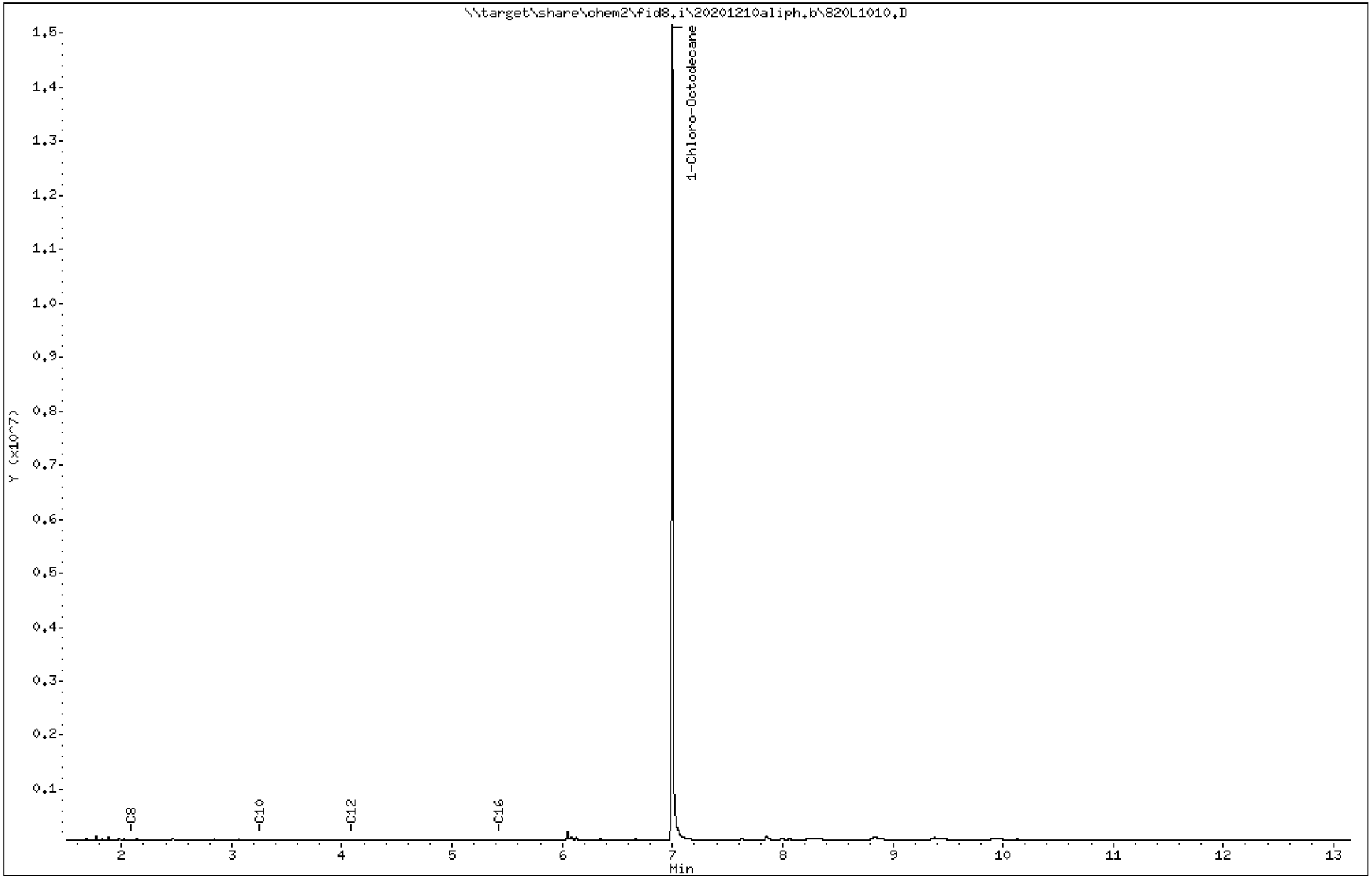
Instrument: fid8.i

Sample Info: 20K0073-06

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1010.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: 20K0073-06
Client ID:
Injection: 11-DEC-2020 00:13
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	314366	1.6	(2.006 - 3.349)
C10-C12	Aliph.	120632	0.6	(3.349 - 4.191)
C12-C16	Aliph.	118293	0.6	(4.191 - 5.531)
C16-C21	Aliph.	500533	2.6	(5.531 - 7.137)
C21-C34	Aliph.	1497814	8.4	(7.137 - 10.752)

Surrogate Rec: 57.6% 86.4 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-B-5.8-7.8-201029

Form I
ORGANIC ANALYSIS DATA SHEET
WA EPH
WA EPH-Aliphatics

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-07 A	SDG:	20K0073
Sampled:	10/29/20 10:30	Prepared:	11/12/20 19:42	File ID:	820L1011.D
% Solids:	81.77	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/11/20 00:37
Batch:	BIK0336	Sequence:	SIL0284	Initial/Final:	10.07 g Wet / 1 mL
Instrument:	FID8	Column:	ZB5	Calibration:	DJ00015
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
ALI-C10-C12	C10-C12 Aliphatics	1	2430	U		2430

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
1-Chloro-octadecane	18217	11700	64.3	30 - 160	

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1011.D

Date : 11-DEC-2020 00:37

Client ID:

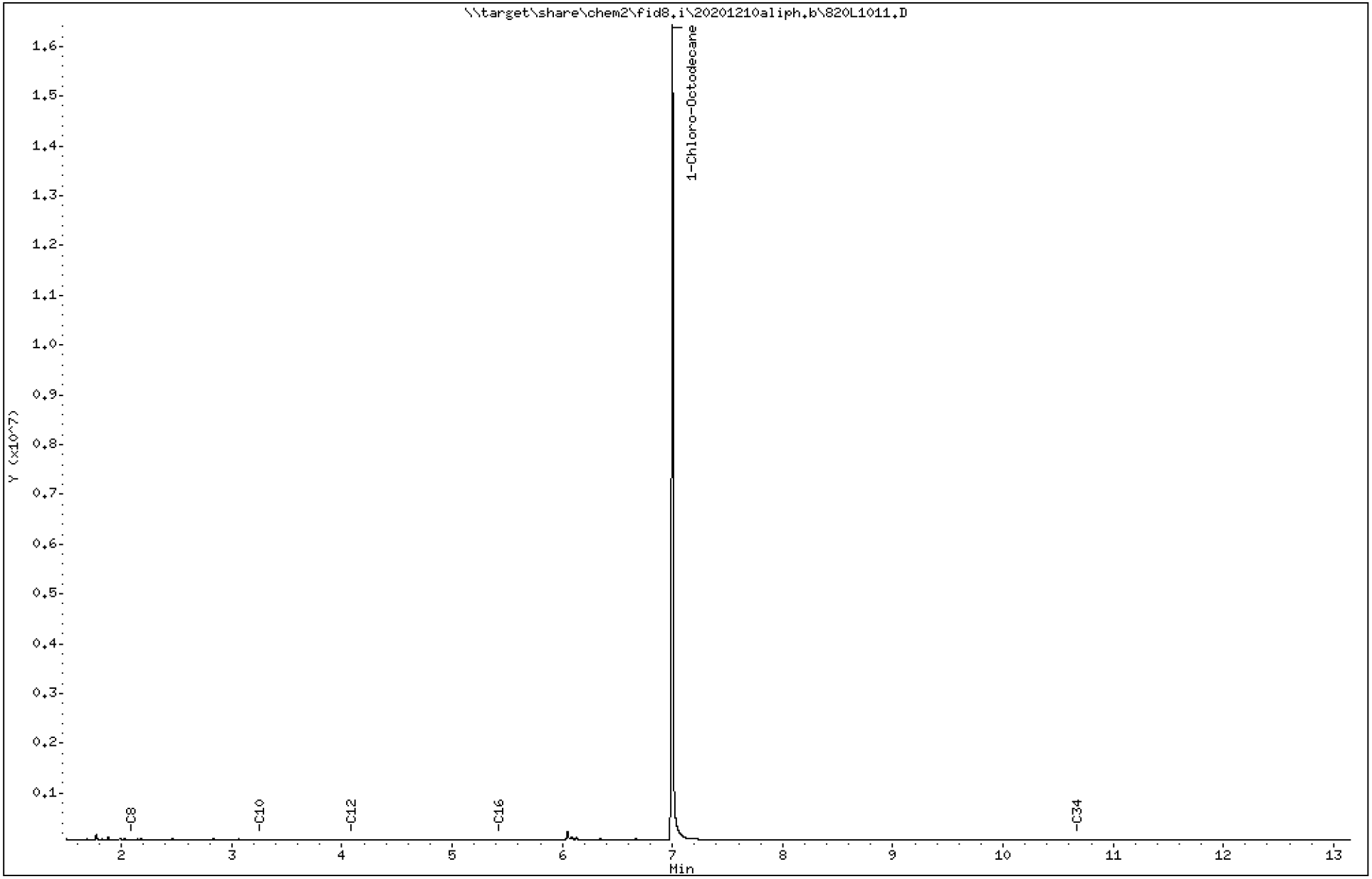
Instrument: fid8.i

Sample Info: 20K0073-07

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1011.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: 20K0073-07
Client ID:
Injection: 11-DEC-2020 00:37
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	365830	1.9	(2.006 - 3.349)
C10-C12	Aliph.	130020	0.6	(3.349 - 4.191)
C12-C16	Aliph.	102900	0.5	(4.191 - 5.531)
C16-C21	Aliph.	718961	3.7	(5.531 - 7.137)
C21-C34	Aliph.	318698	1.8	(7.137 - 10.752)

Surrogate Rec: 64.2% 96.4 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-B-7.8-9.8-201029

Form I
ORGANIC ANALYSIS DATA SHEET
WA EPH
WA EPH-Aliphatics

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-08 A	SDG:	20K0073
Sampled:	10/29/20 10:30	Prepared:	11/12/20 19:42	File ID:	820L1012.D
% Solids:	90.49	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/11/20 01:02
Batch:	BIK0336	Sequence:	SIL0284	Initial/Final:	10.01 g Wet / 1 mL
Instrument:	FID8	Column:	ZB5	Calibration:	DJ00015
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
ALI-C10-C12	C10-C12 Aliphatics	1	2210	U		2210

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
1-Chloro-octadecane	16560	9980	60.3	30 - 160	

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1012.D

Date : 11-DEC-2020 01:02

Client ID:

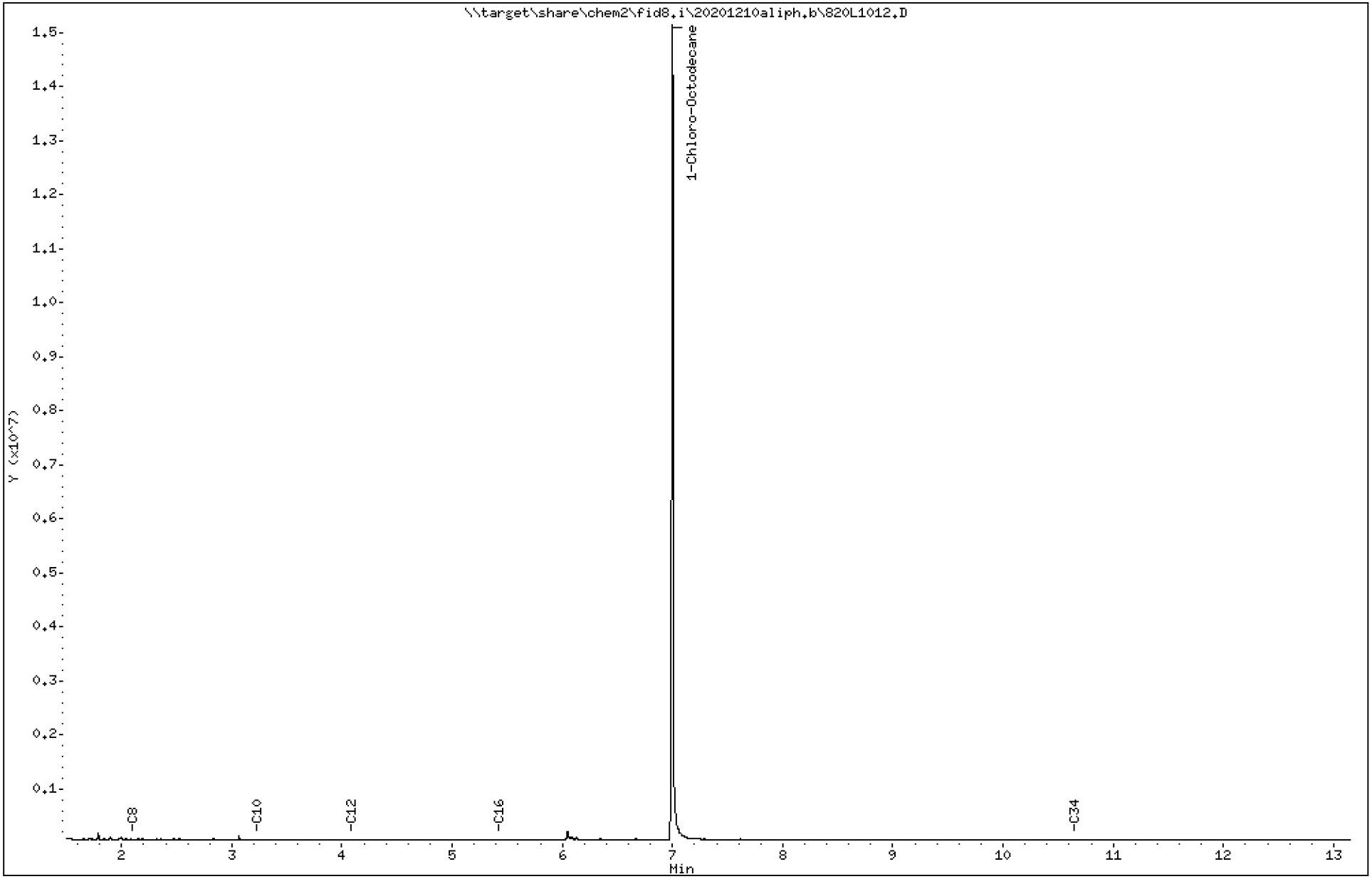
Instrument: fid8.i

Sample Info: 20K0073-08

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1012.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: 20K0073-08
Client ID:
Injection: 11-DEC-2020 01:02
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	632224	3.3	(2.006 - 3.349)
C10-C12	Aliph.	202158	1.0	(3.349 - 4.191)
C12-C16	Aliph.	106339	0.5	(4.191 - 5.531)
C16-C21	Aliph.	591485	3.0	(5.531 - 7.137)
C21-C34	Aliph.	389947	2.2	(7.137 - 10.752)

Surrogate Rec: 60.3% 90.4 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-046SC-B-9.8-11.8-201029

Form I
ORGANIC ANALYSIS DATA SHEET
WA EPH
WA EPH-Aliphatics

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-09 A	SDG:	20K0073
Sampled:	10/29/20 10:30	Prepared:	11/12/20 19:42	File ID:	820L1013.D
% Solids:	82.97	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/11/20 01:26
Batch:	BIK0336	Sequence:	SIL0284	Initial/Final:	10.02 g Wet / 1 mL
Instrument:	FID8	Column:	ZB5	Calibration:	DJ00015
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
ALI-C10-C12	C10-C12 Aliphatics	1	2410	U		2410

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
1-Chloro-octadecane	18043	15800	87.7	30 - 160	

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1013.D

Date : 11-DEC-2020 01:26

Client ID:

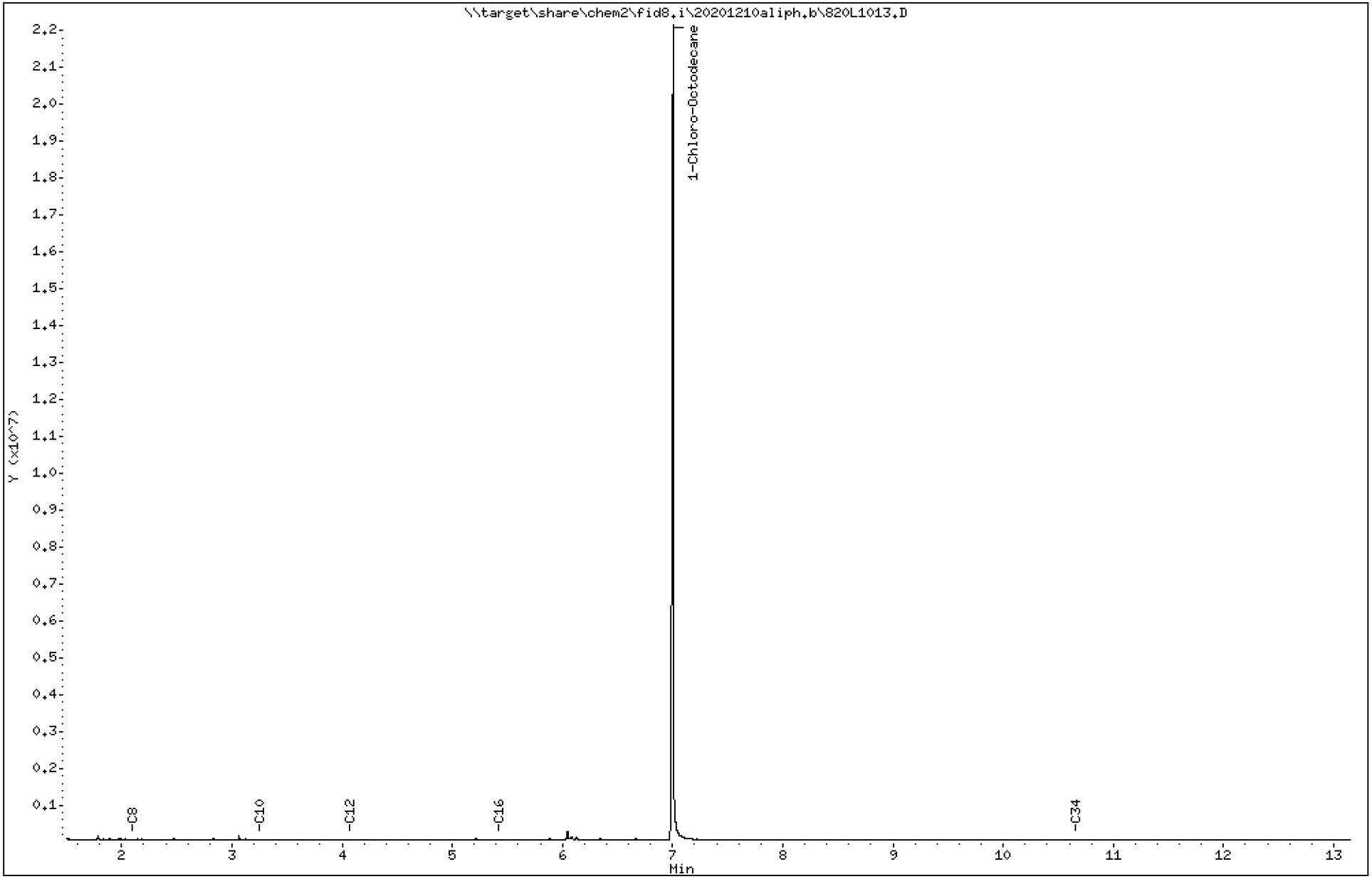
Instrument: fid8.i

Sample Info: 20K0073-09

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1013.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: 20K0073-09
Client ID:
Injection: 11-DEC-2020 01:26
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	485084	2.5	(2.006 - 3.349)
C10-C12	Aliph.	183060	0.9	(3.349 - 4.191)
C12-C16	Aliph.	233906	1.2	(4.191 - 5.531)
C16-C21	Aliph.	972632	5.0	(5.531 - 7.137)
C21-C34	Aliph.	584322	3.3	(7.137 - 10.752)

Surrogate Rec: 87.6% 131.5 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SMPDI-1046SC-B-9.8-11.8-20102

Form I
ORGANIC ANALYSIS DATA SHEET
WA EPH
WA EPH-Aliphatics

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-10 A	SDG:	20K0073
Sampled:	10/29/20 00:00	Prepared:	11/12/20 19:42	File ID:	820L1205.D
% Solids:	86.61	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/12/20 19:17
Batch:	BIK0336	Sequence:	SIL0285	Initial/Final:	10.05 g Wet / 1 mL
Instrument:	FID8	Column:	ZB5	Calibration:	DJ00015
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
ALI-C10-C12	C10-C12 Aliphatics	1	2300	U		2300

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
1-Chloro-octadecane	17233	8670	50.3	30 - 160	

Data File: \\target\share\chem2\fid8.i\20201212aliph.b\820L1205.D

Date : 12-DEC-2020 19:17

Client ID:

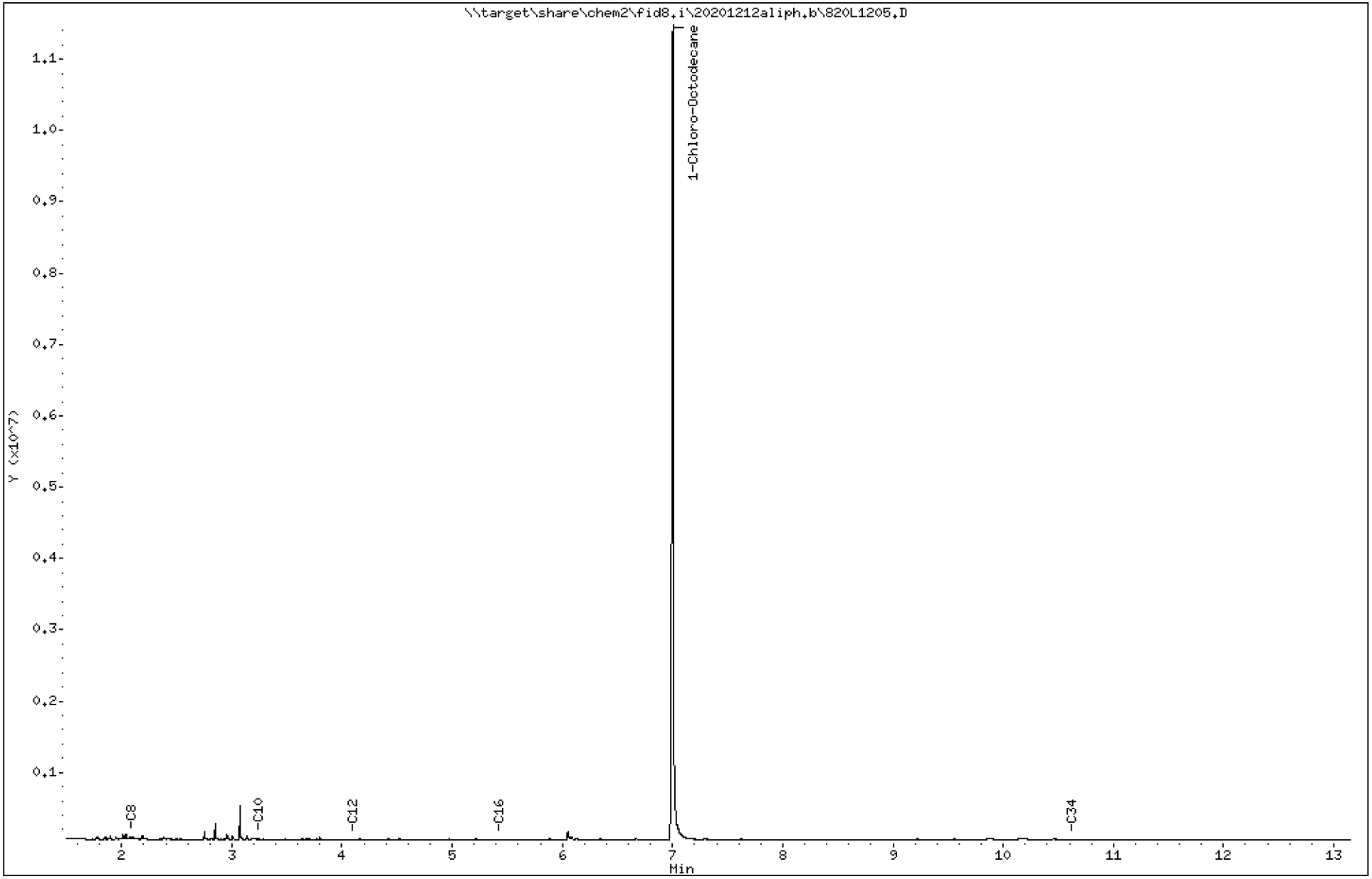
Instrument: fid8.i

Sample Info: 20K0073-10

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201212aliph.b/820L1205.D
Method: 20201212aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: 20K0073-10
Client ID:
Injection: 12-DEC-2020 19:17
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	1384308	7.2	(1.987 - 3.345)
C10-C12	Aliph.	310100	1.5	(3.345 - 4.190)
C12-C16	Aliph.	350402	1.7	(4.190 - 5.530)
C16-C21	Aliph.	380670	2.0	(5.530 - 7.136)
C21-C34	Aliph.	556252	3.1	(7.136 - 10.754)

Surrogate Rec: 50.3% 75.5 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-054SC-D-00-02-201029

Form I
ORGANIC ANALYSIS DATA SHEET
WA EPH
WA EPH-Aliphatics

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-11 A	SDG:	20K0073
Sampled:	10/29/20 14:00	Prepared:	11/12/20 19:42	File ID:	820L1016.D
% Solids:	50.19	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/11/20 02:39
Batch:	BIK0336	Sequence:	SIL0284	Initial/Final:	10.05 g Wet / 1 mL
Instrument:	FID8	Column:	ZB5	Calibration:	DJ00015
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
ALI-C10-C12	C10-C12 Aliphatics	1	3970	U		3970

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
1-Chloro-octadecane	29738	21300	71.6	30 - 160	

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1016.D

Date : 11-DEC-2020 02:39

Client ID:

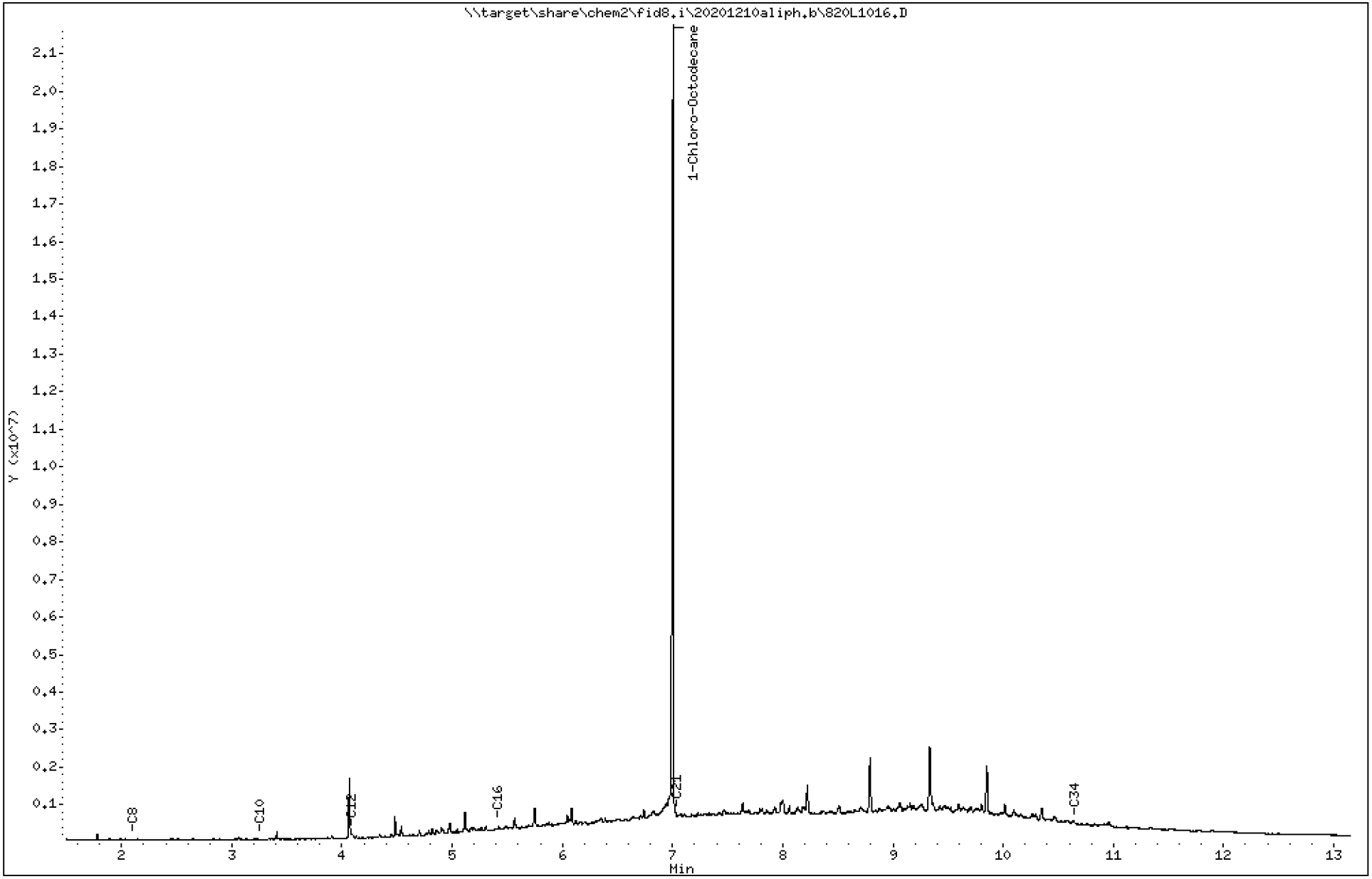
Instrument: fid8.i

Sample Info: 20K0073-11

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1016.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: 20K0073-11
Client ID:
Injection: 11-DEC-2020 02:39
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

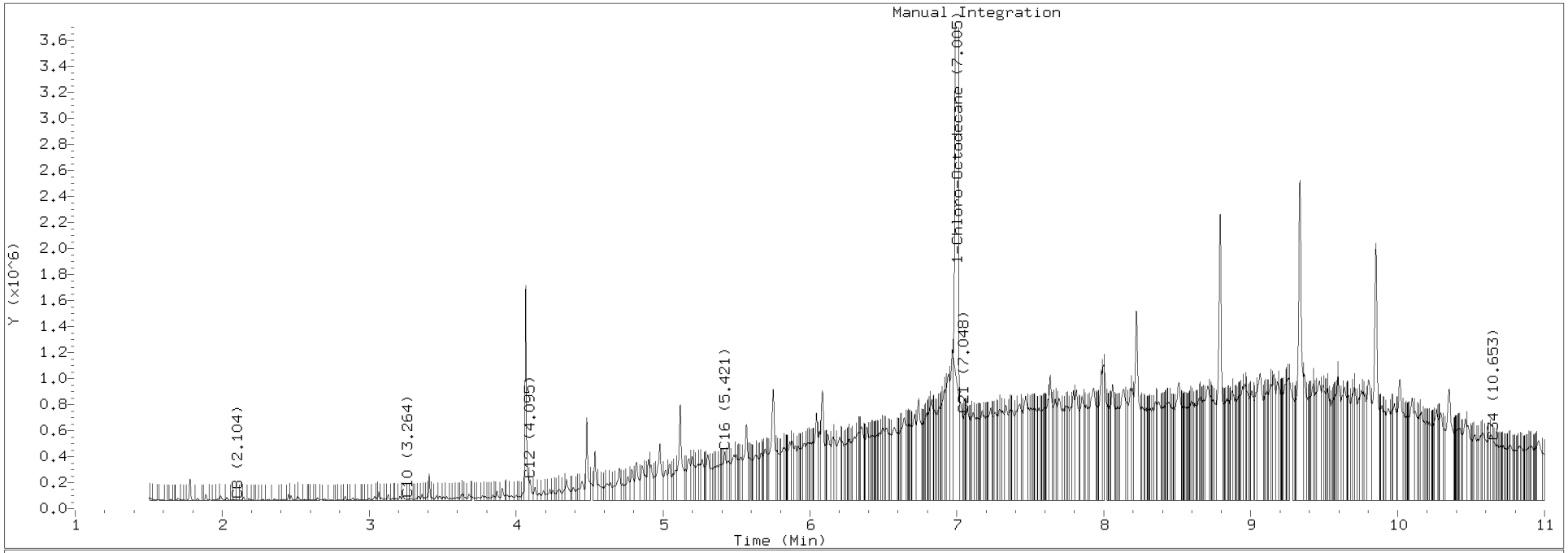
Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	700969	3.6	(2.006 - 3.349)
C10-C12	Aliph.	2786367	13.6	(3.349 - 4.191)
C12-C16	Aliph.	15754741	77.8	(4.191 - 5.531)
C16-C21	Aliph.	51621888	264.7	(5.531 - 7.137)
C21-C34	Aliph.	159607935	891.5	(7.137 - 10.752)

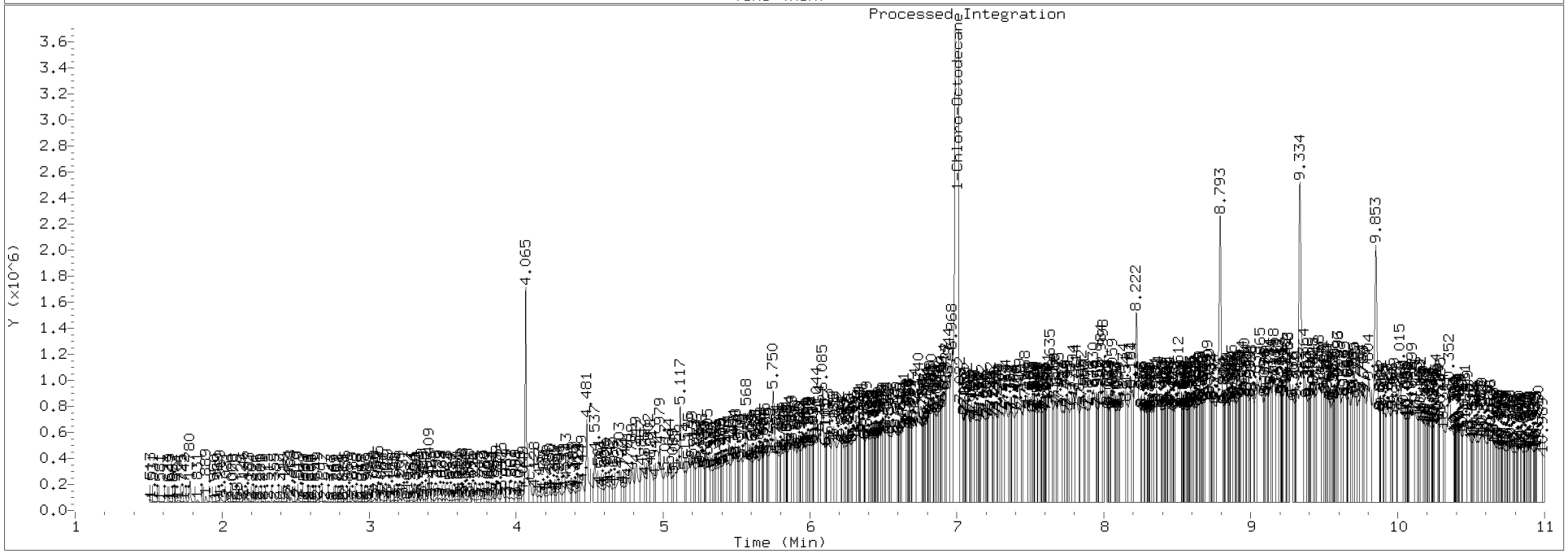
Surrogate Rec: 71.6% 107.4 ug/mL

EPH Aliphatics Manual Integrations Report

Datafile: FID8, 20201210aliph.b/820L1016.D Injection: 11-DEC-2020 02:39

Lab ID:20K0073-11





Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-054SC-D-02-04-201029

Form I
ORGANIC ANALYSIS DATA SHEET
WA EPH
WA EPH-Aliphatics

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-12 A	SDG:	20K0073
Sampled:	10/29/20 14:00	Prepared:	11/12/20 19:42	File ID:	820L1017.D
% Solids:	57.29	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/11/20 03:04
Batch:	BIK0336	Sequence:	SIL0284	Initial/Final:	10.12 g Wet / 1 mL
Instrument:	FID8	Column:	ZB5	Calibration:	DJ00015
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
ALI-C10-C12	C10-C12 Aliphatics	1	3450	U		3450

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
1-Chloro-octadecane	25872	12100	46.9	30 - 160	

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1017.D

Date : 11-DEC-2020 03:04

Client ID:

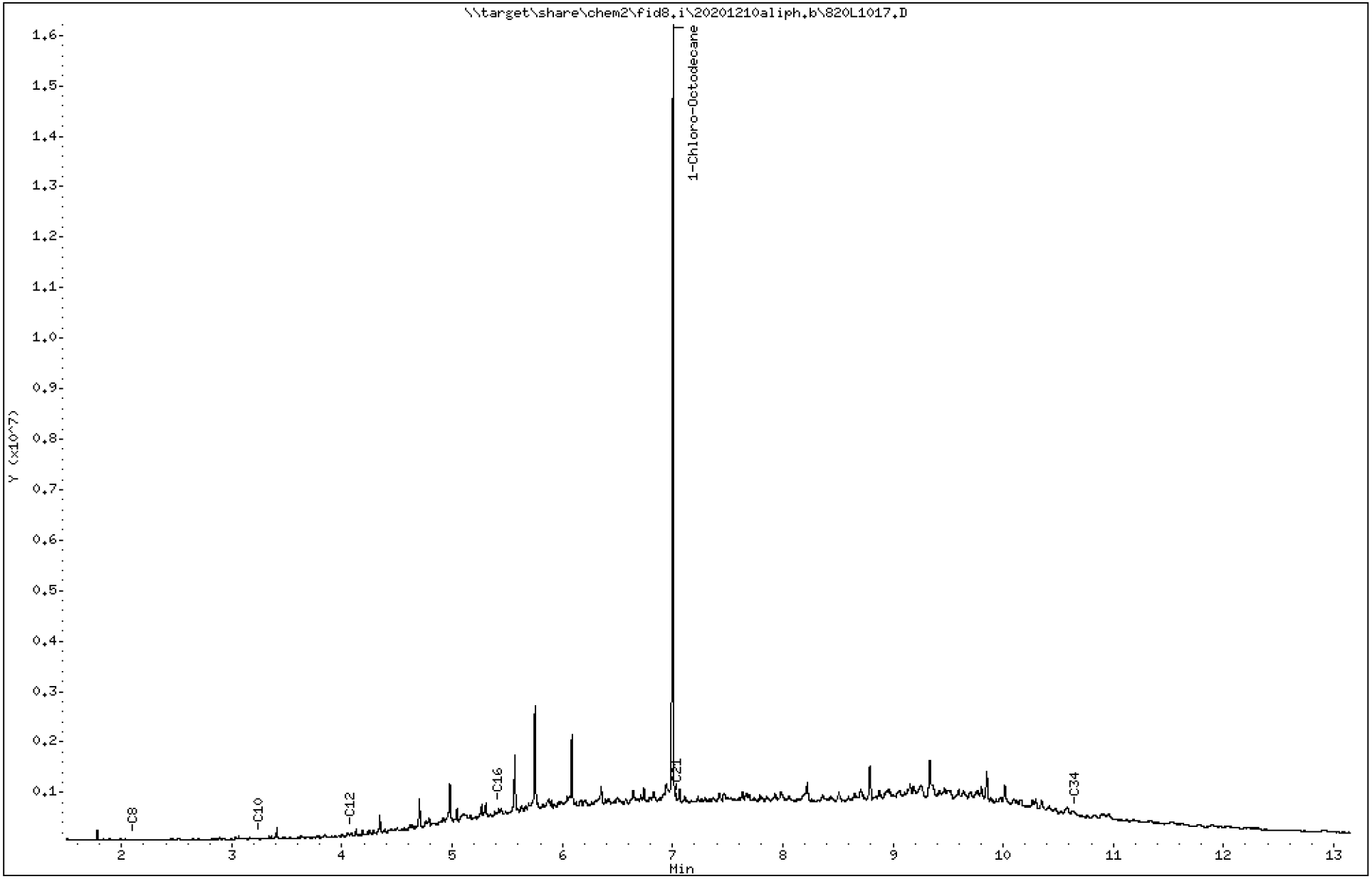
Instrument: fid8.i

Sample Info: 20K0073-12

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1017.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: 20K0073-12
Client ID:
Injection: 11-DEC-2020 03:04
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

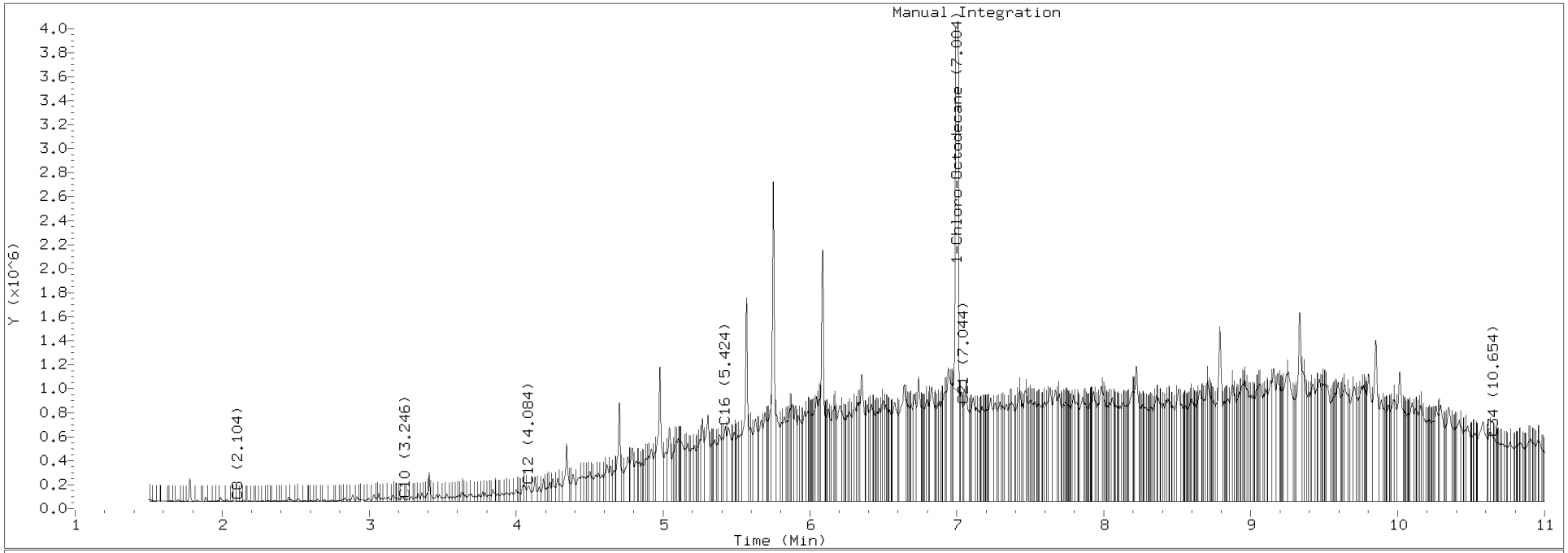
Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	978128	5.1	(2.006 - 3.349)
C10-C12	Aliph.	3254400	15.9	(3.349 - 4.191)
C12-C16	Aliph.	28910420	142.8	(4.191 - 5.531)
C16-C21	Aliph.	76974225	394.6	(5.531 - 7.137)
C21-C34	Aliph.	175852529	982.3	(7.137 - 10.752)

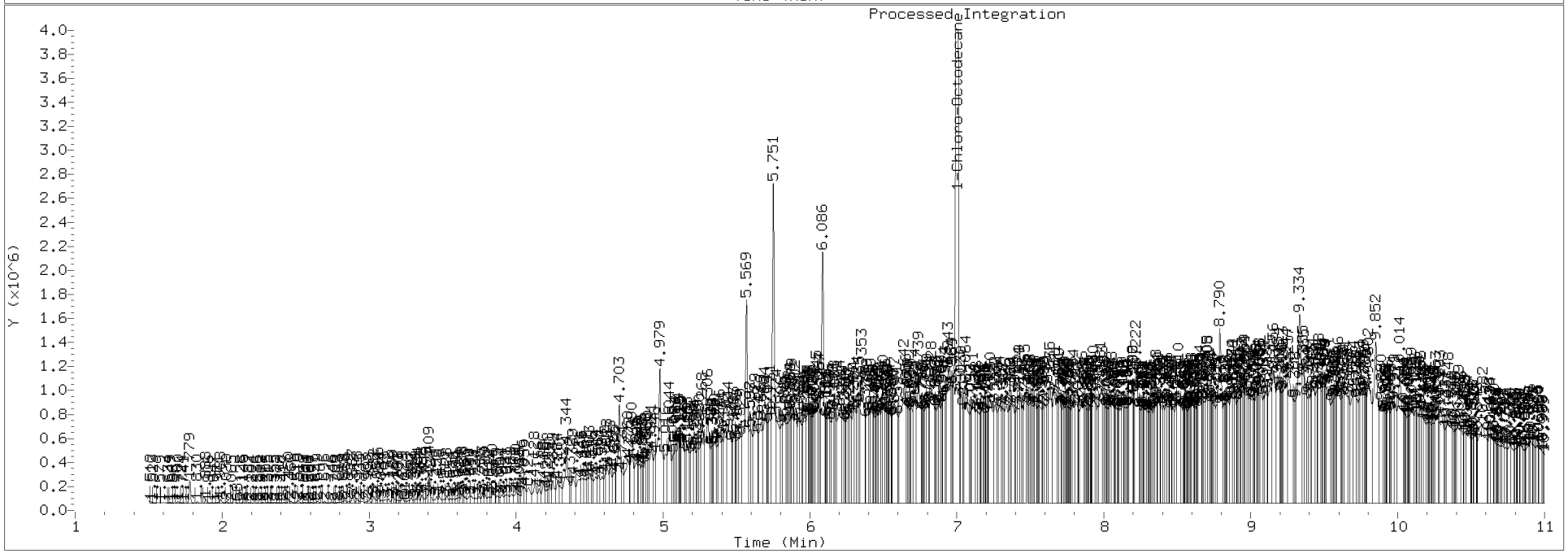
Surrogate Rec: 47.0% 70.4 ug/mL

EPH Aliphatics Manual Integrations Report

Datafile: FID8, 20201210aliph.b/820L1017.D Injection: 11-DEC-2020 03:04

Lab ID:20K0073-12





Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-054SC-D-04-06-201029

Form I
ORGANIC ANALYSIS DATA SHEET
WA EPH
WA EPH-Aliphatics

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-13 A	SDG:	20K0073
Sampled:	10/29/20 14:00	Prepared:	11/12/20 19:42	File ID:	820L1018.D
% Solids:	66.97	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/11/20 03:28
Batch:	BIK0336	Sequence:	SIL0284	Initial/Final:	10.03 g Wet / 1 mL
Instrument:	FID8	Column:	ZB5	Calibration:	DJ00015
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
ALI-C10-C12	C10-C12 Aliphatics	1	11600			2980

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
1-Chloro-octadecane	22331	15300	68.5	30 - 160	

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1018.D

Date : 11-DEC-2020 03:28

Client ID:

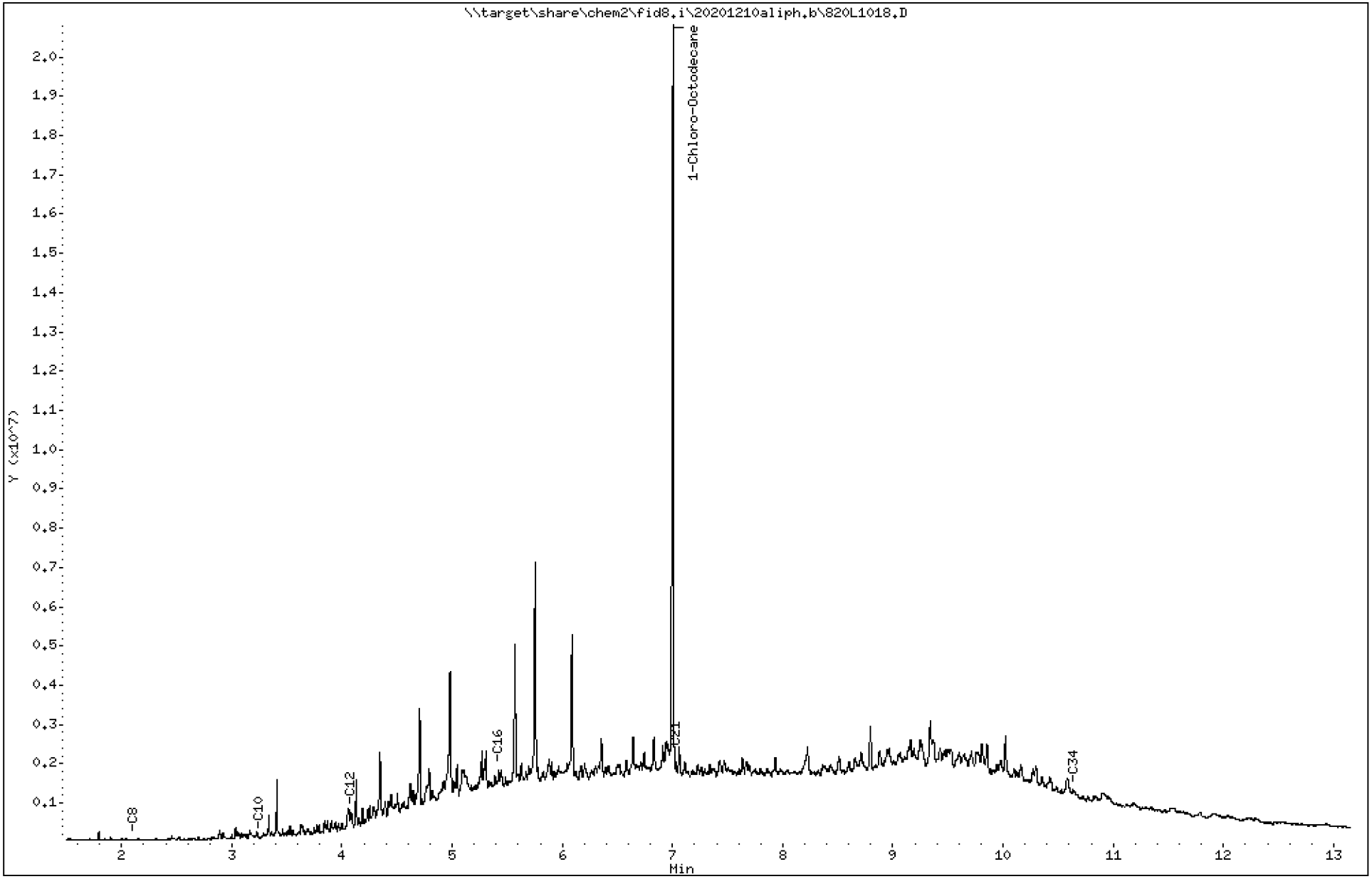
Instrument: fid8.i

Sample Info: 20K0073-13

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1018.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: 20K0073-13
Client ID:
Injection: 11-DEC-2020 03:28
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

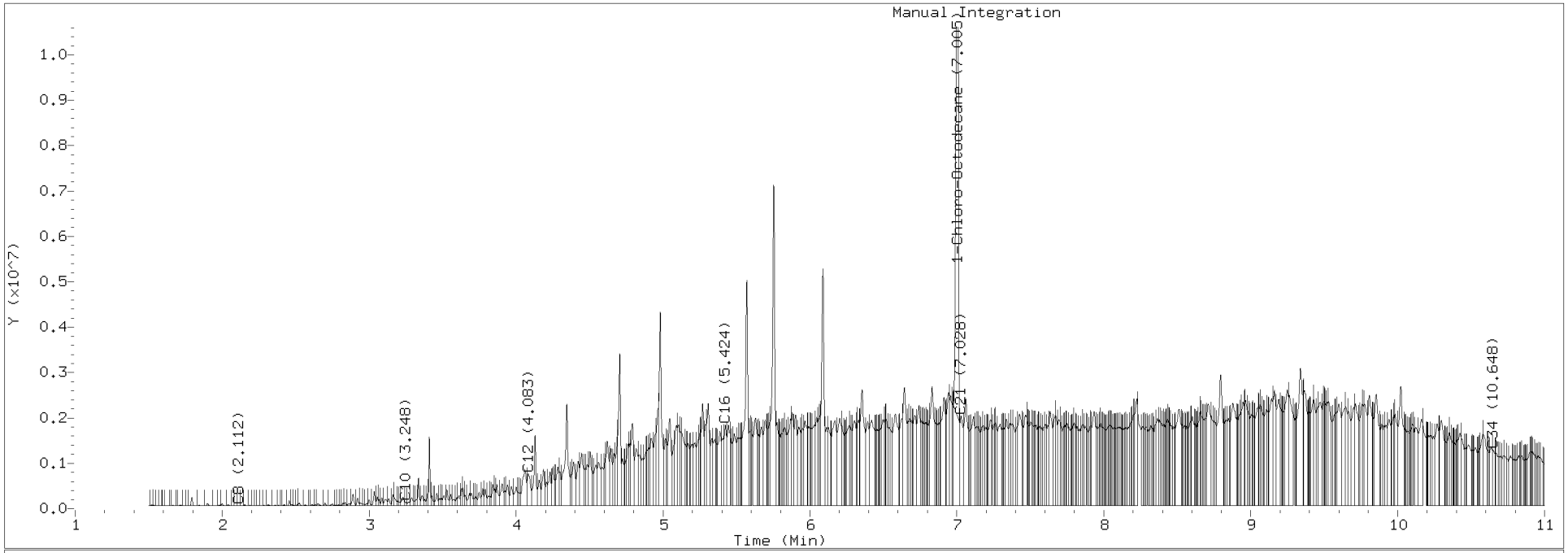
Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	3947852	20.5	(2.006 - 3.349)
C10-C12	Aliph.	15936838	77.6	(3.349 - 4.191)
C12-C16	Aliph.	100560265	496.7	(4.191 - 5.531)
C16-C21	Aliph.	182932968	937.9	(5.531 - 7.137)
C21-C34	Aliph.	386482321	2158.8	(7.137 - 10.752)

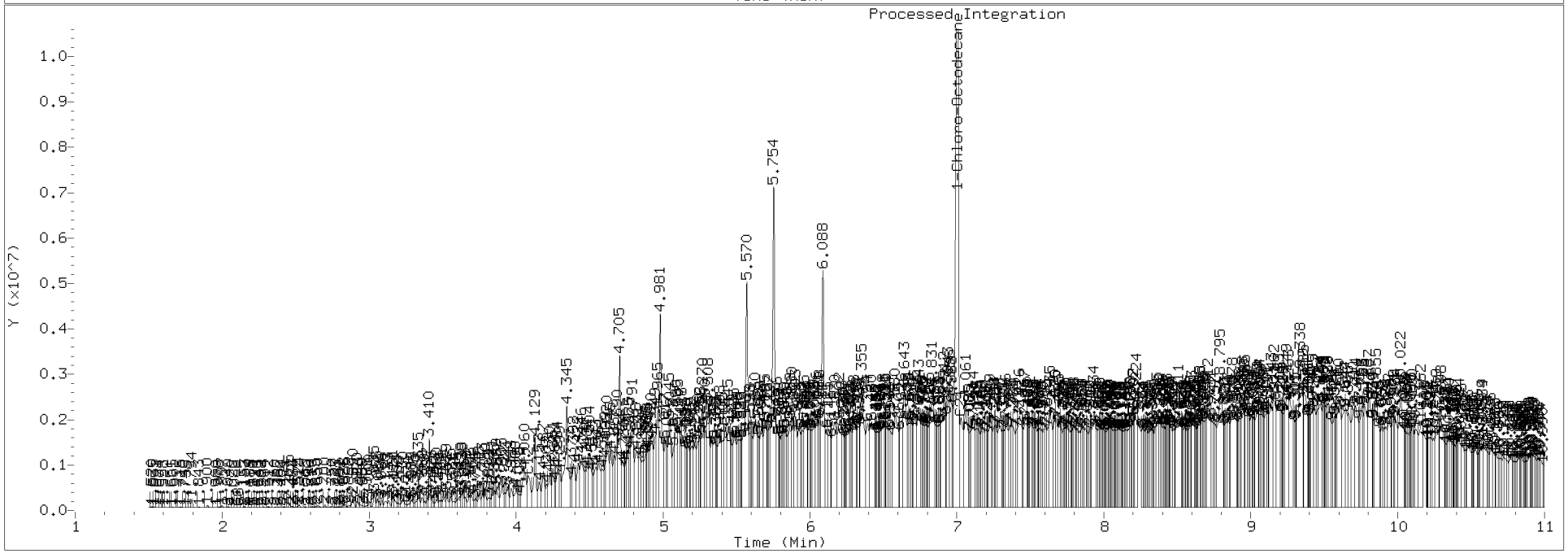
Surrogate Rec: 68.5% 102.8 ug/mL

EPH Aliphatics Manual Integrations Report

Datafile: FID8, 20201210aliph.b/820L1018.D Injection: 11-DEC-2020 03:28

Lab ID:20K0073-13





Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-054SC-D-06-08-201029

Form I
ORGANIC ANALYSIS DATA SHEET
WA EPH
WA EPH-Aliphatics

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-14 A	SDG:	20K0073
Sampled:	10/29/20 14:00	Prepared:	11/12/20 19:42	File ID:	820L1019.D
% Solids:	71.49	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/11/20 03:52
Batch:	BIK0336	Sequence:	SIL0284	Initial/Final:	10.03 g Wet / 1 mL
Instrument:	FID8	Column:	ZB5	Calibration:	DJ00015
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
ALI-C10-C12	C10-C12 Aliphatics	1	2790	U		2790

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
1-Chloro-octadecane	20919	11100	53.1	30 - 160	

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1019.D

Date : 11-DEC-2020 03:52

Client ID:

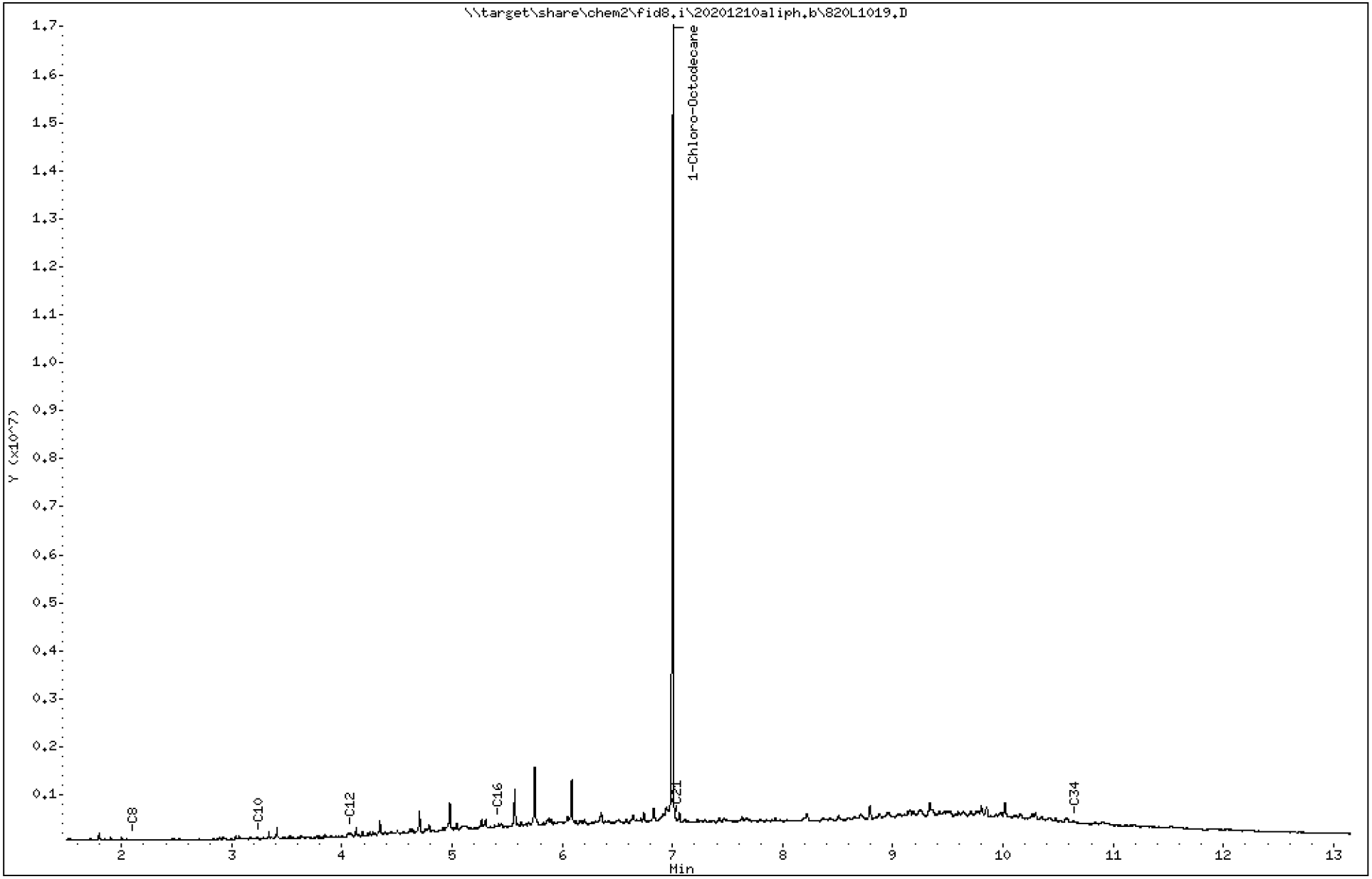
Instrument: fid8.i

Sample Info: 20K0073-14

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1019.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: 20K0073-14
Client ID:
Injection: 11-DEC-2020 03:52
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

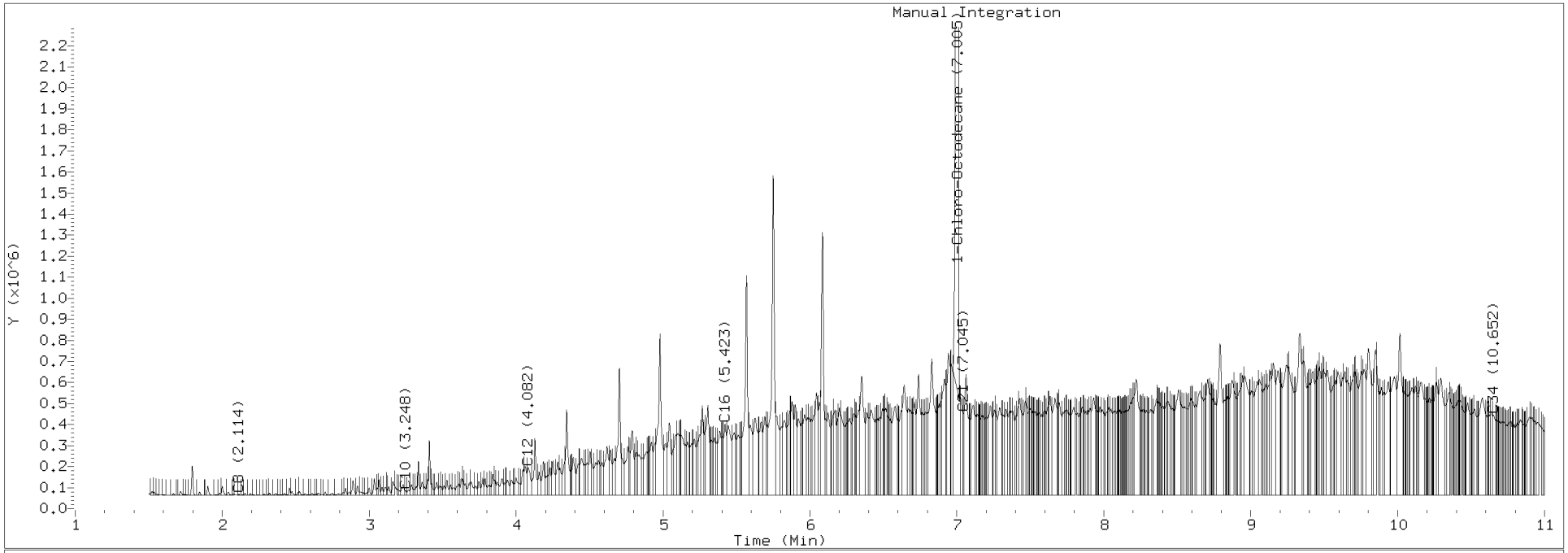
Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	1117572	5.8	(2.006 - 3.349)
C10-C12	Aliph.	3230846	15.7	(3.349 - 4.191)
C12-C16	Aliph.	17697550	87.4	(4.191 - 5.531)
C16-C21	Aliph.	39731513	203.7	(5.531 - 7.137)
C21-C34	Aliph.	98201719	548.5	(7.137 - 10.752)

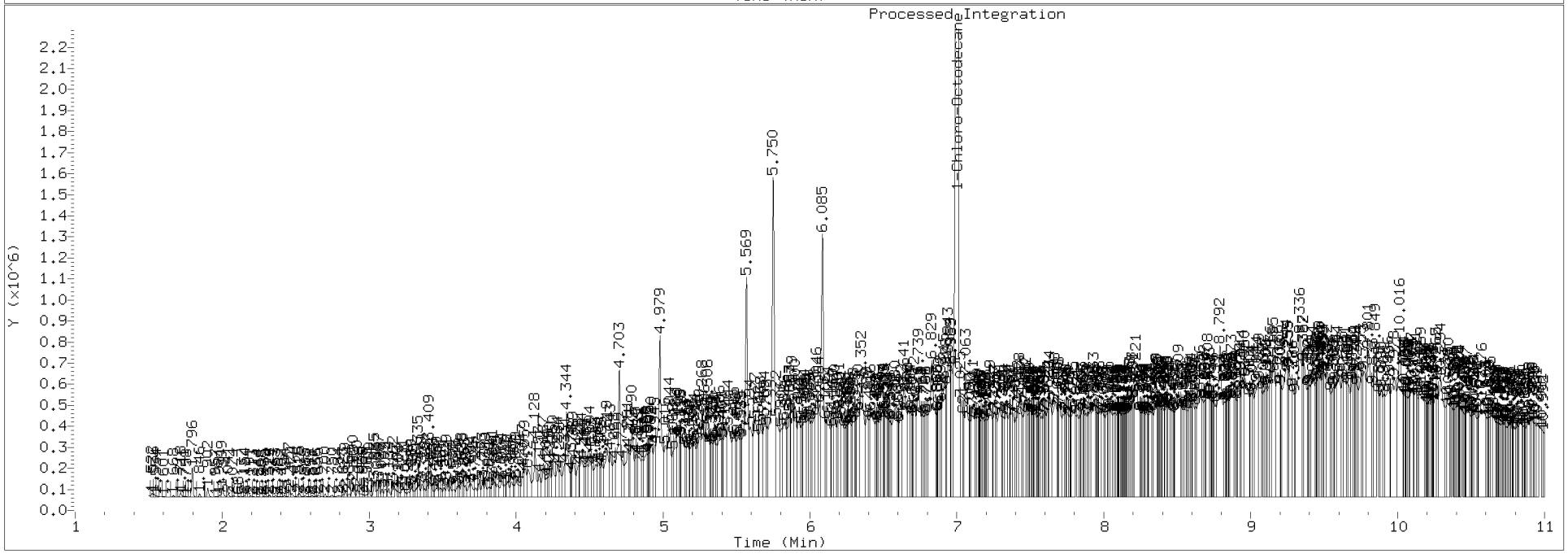
Surrogate Rec: 53.1% 79.7 ug/mL

EPH Aliphatics Manual Integrations Report

Datafile: FID8, 20201210aliph.b/820L1019.D Injection: 11-DEC-2020 03:52

Lab ID:20K0073-14





Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-054SC-D-08-10-201029

Form I
ORGANIC ANALYSIS DATA SHEET
WA EPH
WA EPH-Aliphatics

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-15 A	SDG:	20K0073
Sampled:	10/29/20 14:00	Prepared:	11/12/20 19:42	File ID:	820L1020.D
% Solids:	88.84	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/11/20 04:17
Batch:	BIK0336	Sequence:	SIL0284	Initial/Final:	10.06 g Wet / 1 mL
Instrument:	FID8	Column:	ZB5	Calibration:	DJ00015
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
ALI-C10-C12	C10-C12 Aliphatics	1	2240	U		2240

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
1-Chloro-octadecane	16784	13500	80.6	30 - 160	

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1020.D

Date : 11-DEC-2020 04:17

Client ID:

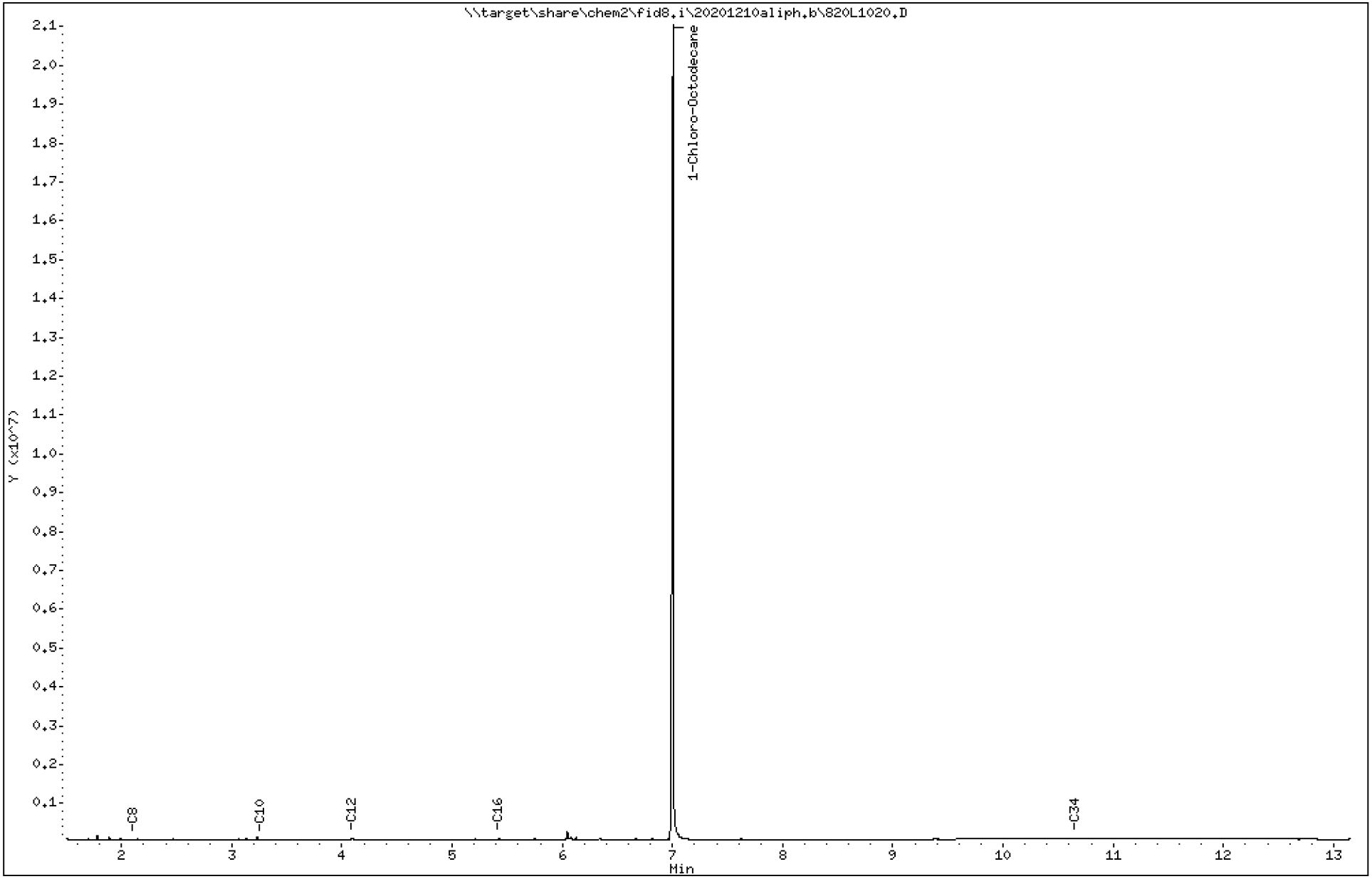
Instrument: fid8.i

Sample Info: 20K0073-15

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1020.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: 20K0073-15
Client ID:
Injection: 11-DEC-2020 04:17
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	414895	2.2	(2.006 - 3.349)
C10-C12	Aliph.	187155	0.9	(3.349 - 4.191)
C12-C16	Aliph.	224490	1.1	(4.191 - 5.531)
C16-C21	Aliph.	774037	4.0	(5.531 - 7.137)
C21-C34	Aliph.	2052842	11.5	(7.137 - 10.752)

Surrogate Rec: 80.6% 120.9 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-054SC-D-10-12-201029

Form I
ORGANIC ANALYSIS DATA SHEET
WA EPH
WA EPH-Aliphatics

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-16 A	SDG:	20K0073
Sampled:	10/29/20 14:00	Prepared:	11/12/20 19:42	File ID:	820L1023.D
% Solids:	80.04	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/11/20 05:30
Batch:	BIK0336	Sequence:	SIL0284	Initial/Final:	10.01 g Wet / 1 mL
Instrument:	FID8	Column:	ZB5	Calibration:	DJ00015
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
ALI-C10-C12	C10-C12 Aliphatics	1	2500	U		2500

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
1-Chloro-octadecane	18722	12300	65.8	30 - 160	

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1023.D

Date : 11-DEC-2020 05:30

Client ID:

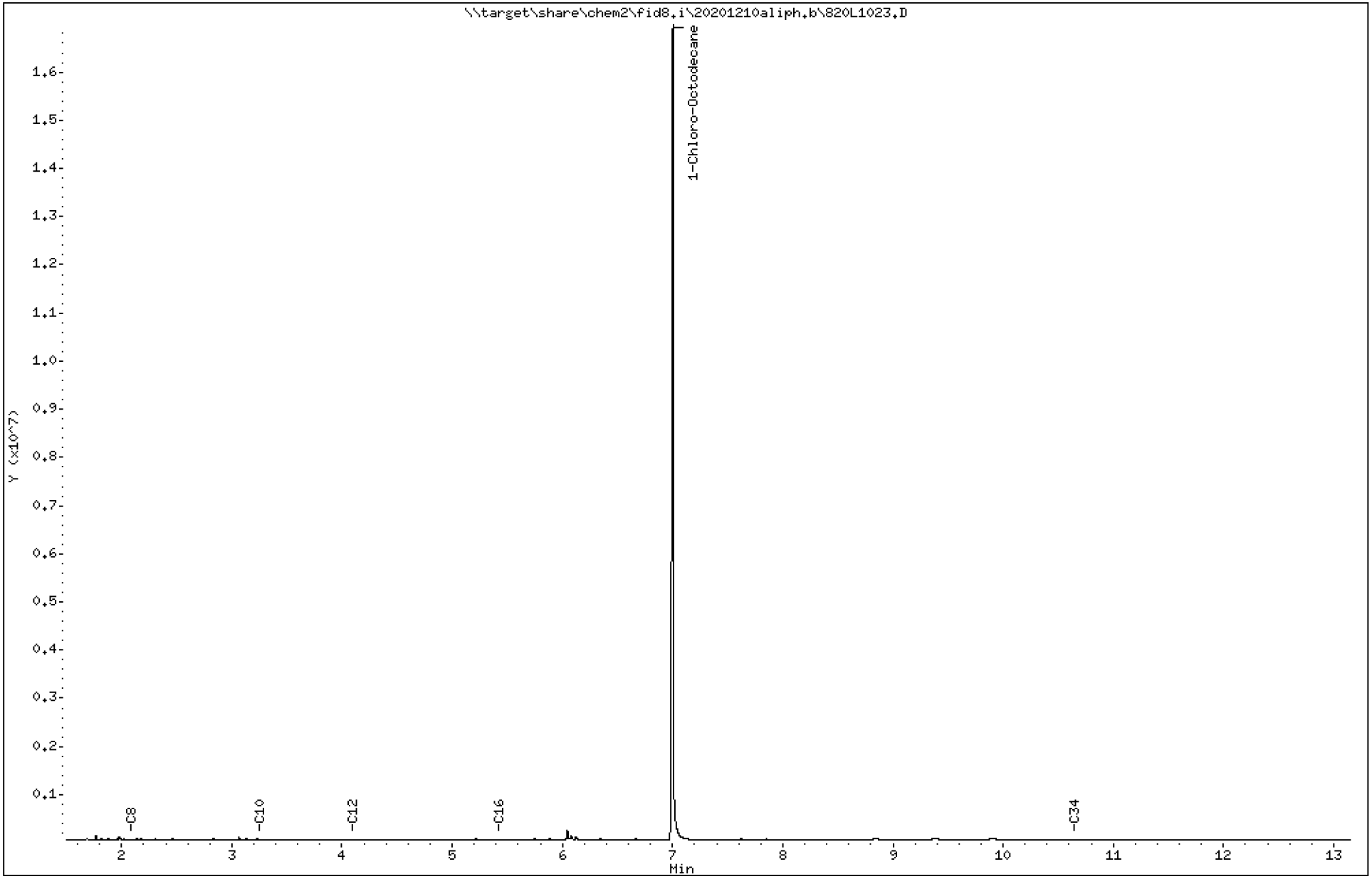
Instrument: fid8.i

Sample Info: 20K0073-16

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1023.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: 20K0073-16
Client ID:
Injection: 11-DEC-2020 05:30
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	514240	2.7	(2.006 - 3.349)
C10-C12	Aliph.	214189	1.0	(3.349 - 4.191)
C12-C16	Aliph.	347514	1.7	(4.191 - 5.531)
C16-C21	Aliph.	694117	3.6	(5.531 - 7.137)
C21-C34	Aliph.	969414	5.4	(7.137 - 10.752)

Surrogate Rec: 65.8% 98.7 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-054SC-D-12-14-201029

Form I
ORGANIC ANALYSIS DATA SHEET
WA EPH
WA EPH-Aliphatics

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-17 A	SDG:	20K0073
Sampled:	10/29/20 14:00	Prepared:	11/12/20 19:42	File ID:	820L1024.D
% Solids:	78.91	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/11/20 05:55
Batch:	BIK0336	Sequence:	SIL0284	Initial/Final:	10.07 g Wet / 1 mL
Instrument:	FID8	Column:	ZB5	Calibration:	DJ00015
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
ALI-C10-C12	C10-C12 Aliphatics	1	2520	U		2520

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
1-Chloro-octadecane	18877	16200	86.1	30 - 160	

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1024.D

Date : 11-DEC-2020 05:55

Client ID:

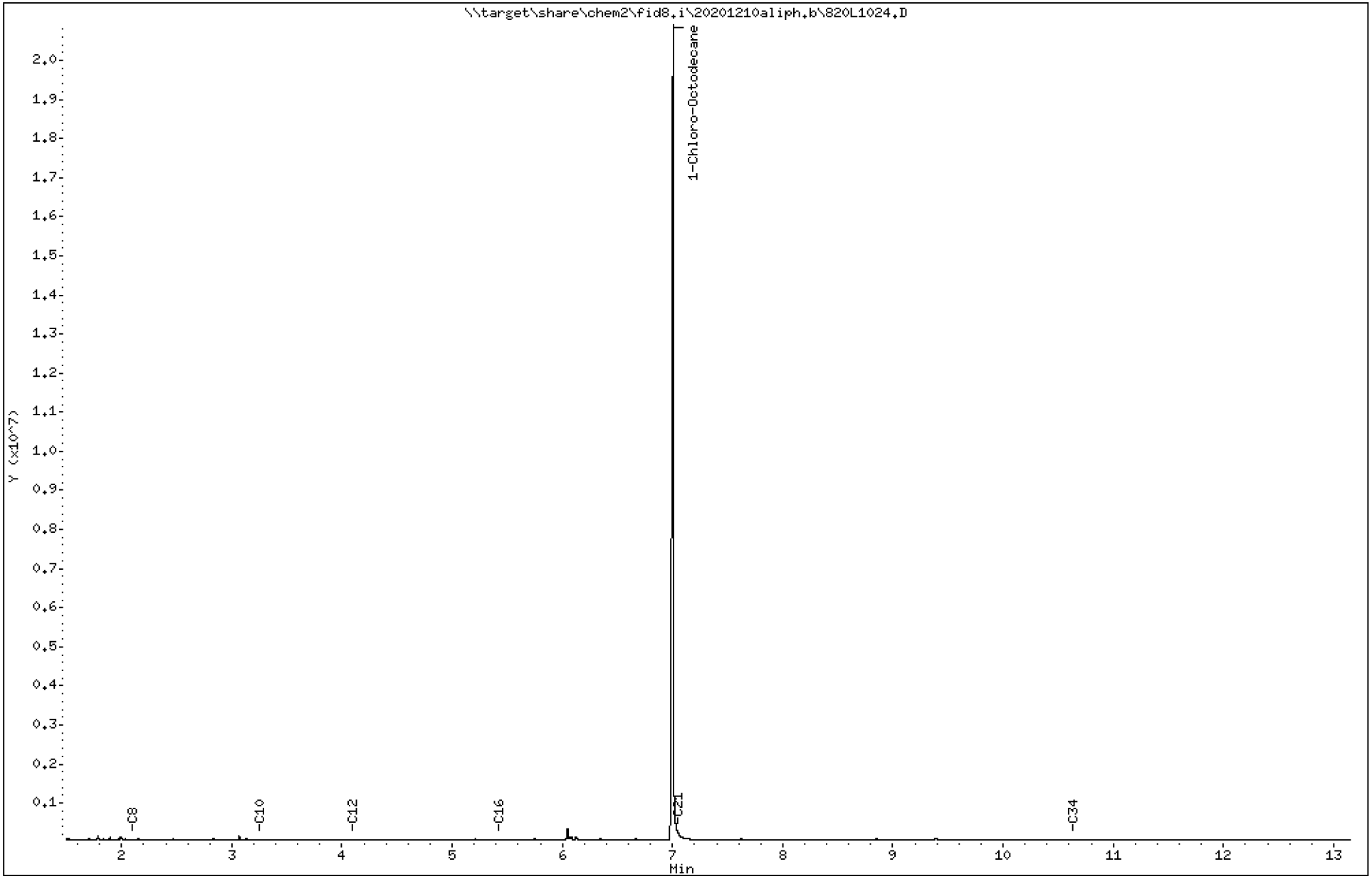
Instrument: fid8.i

Sample Info: 20K0073-17

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1024.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: 20K0073-17
Client ID:
Injection: 11-DEC-2020 05:55
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	511289	2.7	(2.006 - 3.349)
C10-C12	Aliph.	159916	0.8	(3.349 - 4.191)
C12-C16	Aliph.	225743	1.1	(4.191 - 5.531)
C16-C21	Aliph.	1122603	5.8	(5.531 - 7.137)
C21-C34	Aliph.	884355	4.9	(7.137 - 10.752)

Surrogate Rec: 86.1% 129.1 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-054SC-D-14-16-201029

Form I
ORGANIC ANALYSIS DATA SHEET
WA EPH
WA EPH-Aliphatics

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-18 A	SDG:	20K0073
Sampled:	10/29/20 14:00	Prepared:	11/12/20 19:42	File ID:	820L1025.D
% Solids:	75.34	Preparation:	EPA 3546 (Microwave)	Analyzed:	12/11/20 06:19
Batch:	BIK0336	Sequence:	SIL0284	Initial/Final:	10.09 g Wet / 1 mL
Instrument:	FID8	Column:	ZB5	Calibration:	DJ00015
Cleanups:	Silica Gel				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
ALI-C10-C12	C10-C12 Aliphatics	1	2630	U		2630

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
1-Chloro-octadecane	19732	14800	74.9	30 - 160	

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1025.D

Date : 11-DEC-2020 06:19

Client ID:

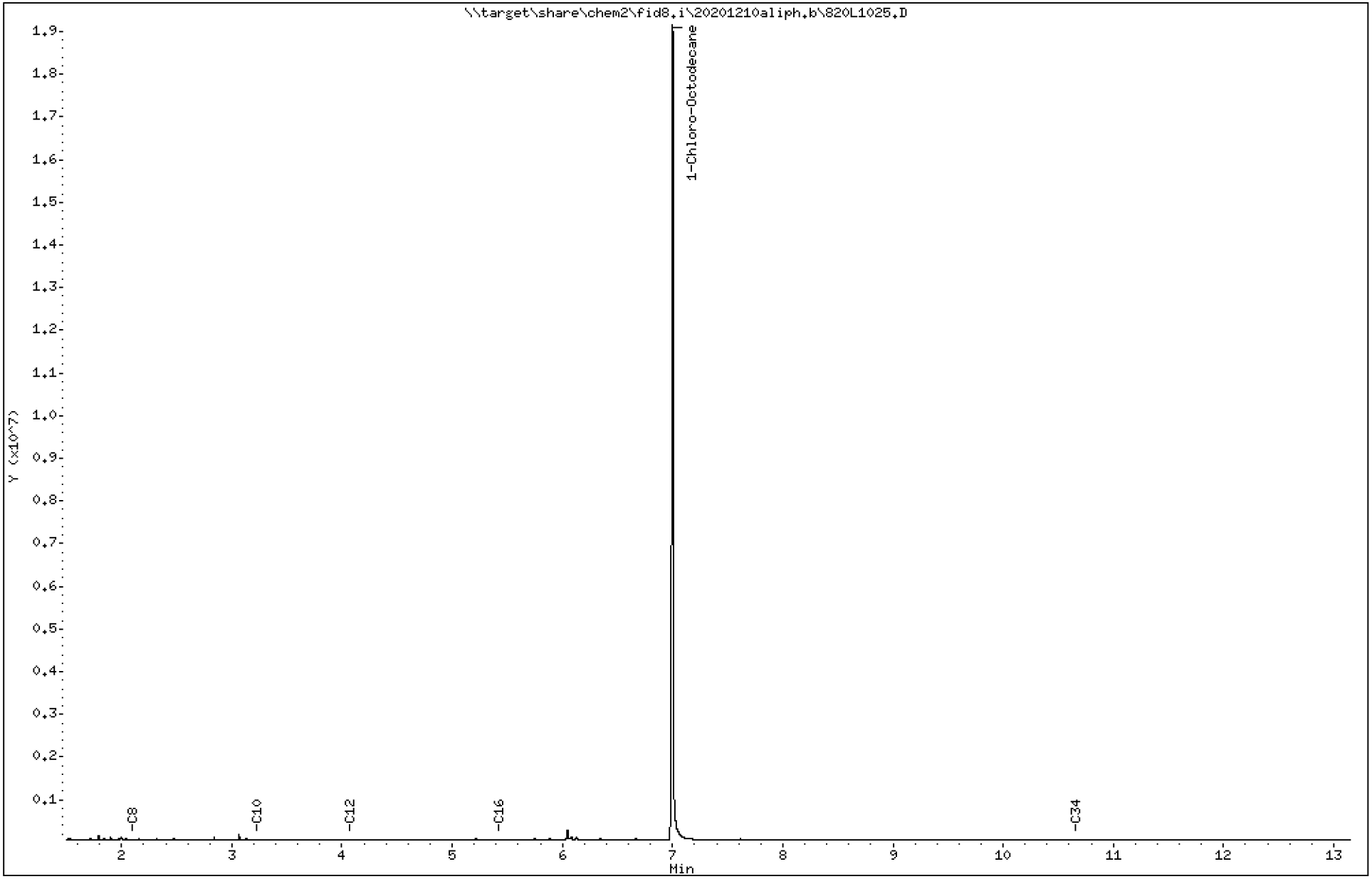
Instrument: fid8.i

Sample Info: 20K0073-18

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1025.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: 20K0073-18
Client ID:
Injection: 11-DEC-2020 06:19
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	467984	2.4	(2.006 - 3.349)
C10-C12	Aliph.	116747	0.6	(3.349 - 4.191)
C12-C16	Aliph.	214011	1.1	(4.191 - 5.531)
C16-C21	Aliph.	694702	3.6	(5.531 - 7.137)
C21-C34	Aliph.	506686	2.8	(7.137 - 10.752)

Surrogate Rec: 74.9% 112.3 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

WA EPH

Laboratory: Analytical Resources, Inc. SDG: 20K0073

Client: Anchor QEA, LLC Project: Gasco Siltronic

Batch: BIK0336 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
USMPDI-046SC-B-11.8-13.8-20102	20K0073-03	820L1007.D	11/12/20 19:42	
USMPDI-046SC-B-13.8-15.8-20102	20K0073-04	820L1008.D	11/12/20 19:42	
USMPDI-046SC-B-15.8-17.8-20102	20K0073-05	820L1009.D	11/12/20 19:42	
USMPDI-046SC-B-3.8-5.8-201029	20K0073-06	820L1010.D	11/12/20 19:42	
USMPDI-046SC-B-5.8-7.8-201029	20K0073-07	820L1011.D	11/12/20 19:42	
USMPDI-046SC-B-7.8-9.8-201029	20K0073-08	820L1012.D	11/12/20 19:42	
USMPDI-046SC-B-9.8-11.8-201029	20K0073-09	820L1013.D	11/12/20 19:42	
USMPDI-1046SC-B-9.8-11.8-20102	20K0073-10	820L1205.D	11/12/20 19:42	
USMPDI-054SC-D-00-02-201029	20K0073-11	820L1016.D	11/12/20 19:42	
USMPDI-054SC-D-02-04-201029	20K0073-12	820L1017.D	11/12/20 19:42	
USMPDI-054SC-D-04-06-201029	20K0073-13	820L1018.D	11/12/20 19:42	
USMPDI-054SC-D-06-08-201029	20K0073-14	820L1019.D	11/12/20 19:42	
USMPDI-054SC-D-08-10-201029	20K0073-15	820L1020.D	11/12/20 19:42	
USMPDI-054SC-D-10-12-201029	20K0073-16	820L1023.D	11/12/20 19:42	
USMPDI-054SC-D-12-14-201029	20K0073-17	820L1024.D	11/12/20 19:42	
USMPDI-054SC-D-14-16-201029	20K0073-18	820L1025.D	11/12/20 19:42	
Blank	BIK0336-BLK1	820L1005.D	11/12/20 19:42	
LCS	BIK0336-BS1	820L1006.D	11/12/20 19:42	
USMPDI-054SC-D-08-10-201029	BIK0336-MS1	820L1021.D	11/12/20 19:42	
USMPDI-054SC-D-08-10-201029	BIK0336-MSD1	820L1022.D	11/12/20 19:42	

ANY HEXANE USE MUST BE PEST GRADE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0336

Prepared using: EPA 3546 (Microwave)
WA EPH Aliphatic C10-C12 mod in Solid

Matrix: Solid **Date Prepared:** 11/12/20 **Balance ID:** B334705934 **Set Up By:** CTO 11/11/20

The following standards may be missing from this batch!

Designator	Description
QLS 22	QLS Spike

Analysis: WA EPH Aliphatic C10-C12 mod

Lab Number & Container	Initial (g) Target Wet: 10 (Wet)	Actual	Fractionate Aromatic/ Aliphatic (1:1)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
20K0073-03 A	(10.00)	10.14	(1:1) 1mL	1	1.0	
20K0073-04 A	(10.00)	10.03	(1:1) 1mL	1	1.0	
20K0073-05 A	(10.00)	10.05	(1:1) 1mL	1	1.0	
20K0073-06 A	(10.00)	10.04	(1:1) 1mL	1	1.0	
20K0073-07 A	(10.00)	10.07	(1:1) 1mL	1	1.0	
20K0073-08 A	(10.00)	10.01	(1:1) 1mL	1	1.0	
20K0073-09 A	(10.00)	10.02	(1:1) 1mL	1	1.0	
20K0073-10 A	(10.00)	10.05	(1:1) 1mL	1	1.0	
20K0073-11 A	(10.00)	10.05	(1:1) 1mL	1	1.0	
20K0073-12 A	(10.00)	10.12	(1:1) 1mL	1	1.0	
20K0073-13 A	(10.00)	10.03	(1:1) 1mL	1	1.0	
20K0073-14 A	(10.00)	10.03	(1:1) 1mL	1	1.0	
20K0073-15 A	(10.00)	10.06	(1:1) 1mL	1	1.0	
20K0073-16 A	(10.00)	10.01	(1:1) 1mL	1	1.0	
20K0073-17 A	(10.00)	10.07	(1:1) 1mL	1	1.0	
20K0073-18 A	(10.00)	10.09	(1:1) 1mL	1	1.0	

Batch QC

Lab Number	Initial (g) Target Wet: 10 (Wet)	Actual	Fractionate Aromatic/ Aliphatic (1:1)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BIK0336-BLK1	(10.00)	10.00	(1:1) 1mL	1	1.0	
BIK0336-BS1	(10.00)	10.00	(1:1) 1mL	1	1.0	
BIK0336-MS1	(10.00)	10.05	(1:1) 1mL	1	1.0	Use 20K0073-15
BIK0336-MSD1	(10.00)	10.02	(1:1) 1mL	1	1.0	Use 20K0073-15

BT 11/12/20
Client ID verified By Date

DM 12-9-20
Preparation Reviewed By Date

11/12/20 19:42
Extraction Date and Time

Printed: 11/11/2020 10:59:38AM

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0336

Prepared using: EPA 3546 (Microwave)
WA EPH Aliphatic C10-C12 mod in Solid

Prep Steps

KD 80 - 85°C to 1 mL Exchange with 50mL Hexane then 50mL Pentane 100°C to 1 mL

1 2 3 4 5 6

TWC/VLB 12/3/20
Analyst/Date

TurboVap Pre Fractionation

1 2 3 4 5

12-9-20
DM Analyst/Date

TurboVap Post Fractionation

1 2 3 4 5 6

12-9-20
DM Analyst/Date

Vialing

12-9-20
DM Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: SH Date: 11/12/20	
Neutral Glass Wool	I010014
Neutral Sodium Sulfate	I010438
Methylene Chloride	I010361
KD Analyst: TWC/VLB Date: 12/3/2020	
Methylene Chloride	I011119
Pentane	I008492
Hexane	I009056
Vialing Analyst: DM Date: 12-9-20	
Methylene Chloride	I011119
Hexane	I009056
0% Silica Gel Dart (EPH)	I006350

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 1500µg/mL	M 1007754 Exp. 12/05/2021	100µL	SH	BT
Spike 750µg/mL	5 1009355 Exp. 10/08/2021	200µL	SH	BT

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

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BIK0336

Prepared using: EPA 3546 (Microwave)

WA EPH Aliphatic C10-C12 mod in Solid

Prep Instructions	
SPECIAL INSTRUCTIONS: Note: Must use Pesticide Grade Hexane! 1. Weigh into 100 mL beakers. 2. Dry with neutral sodium sulfate. 3. Transfer to Microwave vessel. 4. Add DCM to the vessels until solvent is 3" above soil layer after homogenization. 5. Add surr/spike. 6. After microwave-Re-homogenize while hot then cool vessels in R-05 for 15 minutes. Re-homogenize while cool. 7. Decant DCM into 250 mL flask with neutral glasswool. NO SODIUM SULFATE. 8. Microwave a 2nd time using DCM. 9. Let cool and decant solvent then empty the soil into the funnel and rinse with DCM. 10. Add 5mL of Hexane to KD with sample. KD to no more than 1 mL at 80°C 11. Exchange with 50mL Pentane. 12. KD to no more than 1 mL at 100°C 13. Exchange a second time with 50mL Hexane and concentrate to 1mL again. 14. Cool KDs in R-05 for 15 min prior to decanting to prevent losses (After cooling volume should be 5 mL) 15. Transfer to TurboTube in Hexane. 16. Turbovap to 3 mL then exchange with 10 mL of Hexane. Once exchanged turbovap to 1mL for SPE. 17. Transfer to SPE culture tube to 1 mL using Hexane. 18. Fractionate Aromatic/Aliphatic by SPE. 19. Turbovap Each Fraction to 1 mL 20. Vial the Aliphatics fraction in Hexane and the Aromatics fraction in DCM. A. Need Total Solids Y / N B. Archive/Freeze Y / N	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

CTO 11/11/20

Extraction Parameter: ~~TPH~~ EPH

Extraction Batch ~~BIK0324~~ BIK0336

Total Solids Batch: BK0268

Work Order(s): 20K0073

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)=01-13. 15-18.	NJ 11/10/20
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= fuel odor = 14.	NJ 11/10/20
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions).	
Noticed spike bottle contained crystals after spiking BS, MS, and MSD	SH 11/2/20
Filtered Samples - BLK1, BS1, 11, 12, 13, 14	DM 12-9-20
☒ Share Samples (Y) / N 01, 02 only	NJ 11/10/20
☒ Multiple Jars (Y) / N 15 x 2	NJ 11/10/20
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

3056F

Batch: BIK0336
Batch Comment: **NONE**
Project: Gasco Siltronic
Project Comments: <G> MS/MSD per 20 samples, please batch with other work orders, SM2540 Needed </G>
Work Order:20K0073
Work Order Comments: <G> MS/MSD per 20 samples, please batch with other work orders, SM2540 Needed </G>
Sample: 20K0073-03
Sample Comments: **NONE**
Sample: 20K0073-04
Sample Comments: **NONE**
Sample: 20K0073-05
Sample Comments: **NONE**
Sample: 20K0073-06
Sample Comments: **NONE**
Sample: 20K0073-07
Sample Comments: **NONE**
Sample: 20K0073-08
Sample Comments: **NONE**
Sample: 20K0073-09
Sample Comments: **NONE**
Sample: 20K0073-10
Sample Comments: **NONE**
Sample: 20K0073-11
Sample Comments: **NONE**
Sample: 20K0073-12
Sample Comments: **NONE**
Sample: 20K0073-13
Sample Comments: **NONE**
Sample: 20K0073-14
Sample Comments: **NONE**
Sample: 20K0073-15
Sample Comments: **NONE**
Sample: 20K0073-16
Sample Comments: **NONE**
Sample: 20K0073-17
Sample Comments: **NONE**
Sample: 20K0073-18
Sample Comments: **NONE**

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Cleanup Batch:	CIL0101	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup	Analysis:	WA EPH

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
USMPDI-054SC-D-06-08-201029	20K0073-14	820L1019.D	12/09/2020	
USMPDI-046SC-B-9.8-11.8-20102	20K0073-09	820L1013.D	12/09/2020	
USMPDI-046SC-B-13.8-15.8-2010	20K0073-04	820L1008.D	12/09/2020	
USMPDI-046SC-B-15.8-17.8-2010	20K0073-05	820L1009.D	12/09/2020	
USMPDI-046SC-B-3.8-5.8-201029	20K0073-06	820L1010.D	12/09/2020	
USMPDI-046SC-B-5.8-7.8-201029	20K0073-07	820L1011.D	12/09/2020	
USMPDI-046SC-B-7.8-9.8-201029	20K0073-08	820L1012.D	12/09/2020	
USMPDI-046SC-B-11.8-13.8-2010	20K0073-03	820L1007.D	12/09/2020	
USMPDI-054SC-D-08-10-201029	20K0073-15	820L1020.D	12/09/2020	
USMPDI-054SC-D-02-04-201029	20K0073-12	820L1017.D	12/09/2020	
USMPDI-054SC-D-04-06-201029	20K0073-13	820L1018.D	12/09/2020	
Matrix Spike Dup	BIK0336-MSD1	820L1022.D	12/09/2020	
USMPDI-054SC-D-10-12-201029	20K0073-16	820L1023.D	12/09/2020	
USMPDI-054SC-D-12-14-201029	20K0073-17	820L1024.D	12/09/2020	
USMPDI-054SC-D-14-16-201029	20K0073-18	820L1025.D	12/09/2020	
USMPDI-1046SC-B-9.8-11.8-2010	20K0073-10	820L1205.D	12/09/2020	
Blank	BIK0336-BLK1	820L1005.D	12/09/2020	
LCS	BIK0336-BS1	820L1006.D	12/09/2020	
Matrix Spike	BIK0336-MS1	820L1021.D	12/09/2020	
USMPDI-054SC-D-00-02-201029	20K0073-11	820L1016.D	12/09/2020	

Analytical Resources, Incorporated
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CLEANUP BENCH SHEET

CIL0101

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup** **Printed: 12/9/2020 11:52:44AM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
20K0073-18	A	USMPDI-054SC-D-14-16-20 1029	A 01	1	1	WA EPH Aliphatic C10-C12 mod	12/9/2020	DDM	
20K0073-17	A	USMPDI-054SC-D-12-14-20 1029	A 01	1	1	WA EPH Aliphatic C10-C12 mod	12/9/2020	DDM	
20K0073-13	A	USMPDI-054SC-D-04-06-20 1029	A 01	1	1	WA EPH Aliphatic C10-C12 mod	12/9/2020	DDM	
20K0073-14	A	USMPDI-054SC-D-06-08-20 1029	A 01	1	1	WA EPH Aliphatic C10-C12 mod	12/9/2020	DDM	
20K0073-15	A	USMPDI-054SC-D-08-10-20 1029	A 01	1	1	WA EPH Aliphatic C10-C12 mod	12/9/2020	DDM	
20K0073-16	A	USMPDI-054SC-D-10-12-20 1029	A 01	1	1	WA EPH Aliphatic C10-C12 mod	12/9/2020	DDM	
20K0073-05	A	USMPDI-046SC-B-15.8-17.8 -201029	A 01	1	1	WA EPH Aliphatic C10-C12 mod	12/9/2020	DDM	
20K0073-06	A	USMPDI-046SC-B-3.8-5.8-2 01029	A 01	1	1	WA EPH Aliphatic C10-C12 mod	12/9/2020	DDM	
20K0073-07	A	USMPDI-046SC-B-5.8-7.8-2 01029	A 01	1	1	WA EPH Aliphatic C10-C12 mod	12/9/2020	DDM	
20K0073-08	A	USMPDI-046SC-B-7.8-9.8-2 01029	A 01	1	1	WA EPH Aliphatic C10-C12 mod	12/9/2020	DDM	
20K0073-09	A	USMPDI-046SC-B-9.8-11.8- 201029	A 01	1	1	WA EPH Aliphatic C10-C12 mod	12/9/2020	DDM	
20K0073-10	A	USMPDI-1046SC-B-9.8-11.8 -201029	A 01	1	1	WA EPH Aliphatic C10-C12 mod	12/9/2020	DDM	
20K0073-11	A	USMPDI-054SC-D-00-02-20 1029	A 01	1	1	WA EPH Aliphatic C10-C12 mod	12/9/2020	DDM	
20K0073-12	A	USMPDI-054SC-D-02-04-20 1029	A 01	1	1	WA EPH Aliphatic C10-C12 mod	12/9/2020	DDM	
20K0073-03	A	USMPDI-046SC-B-11.8-13.8 -201029	A 01	1	1	WA EPH Aliphatic C10-C12 mod	12/9/2020	DDM	
20K0073-04	A	USMPDI-046SC-B-13.8-15.8 -201029	A 01	1	1	WA EPH Aliphatic C10-C12 mod	12/9/2020	DDM	
BIK0336-MSD1	-	Matrix Spike Dup	-	1	1	-	12/9/2020	DDM	
BIK0336-MS1	-	Matrix Spike	-	1	1	-	12/9/2020	DDM	
BIK0336-BLK1	-	Blank	-	1	1	-	12/9/2020	DDM	
BIK0336-BS1	-	LCS	-	1	1	-	12/9/2020	DDM	

Analytical Resources, Incorporated
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Form I
METHOD BLANK DATA SHEET
WA EPH

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	20K0073
Client:	Anchor QEA, LLC			Project:	Gasco Siltronic
Matrix:	Solid	Laboratory ID:	BIK0336-BLK1	File ID:	820L1005.D
Sampled:	N/A	Prepared:	11/12/20 19:42	Analyzed:	12/10/20 22:11
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 1 mL
Batch:	BIK0336	Sequence:	SIL0284	Calibration:	DJ00015
Instrument:	FID8	Column:	ZB5	Cleanups:	Silica Gel

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
ALI-C10-C12	C10-C12 Aliphatics	1	2000	U		2000

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
1-Chloro-octadecane	15000	8760	58.4	30 - 160	

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1005.D

Date : 10-DEC-2020 22:11

Client ID:

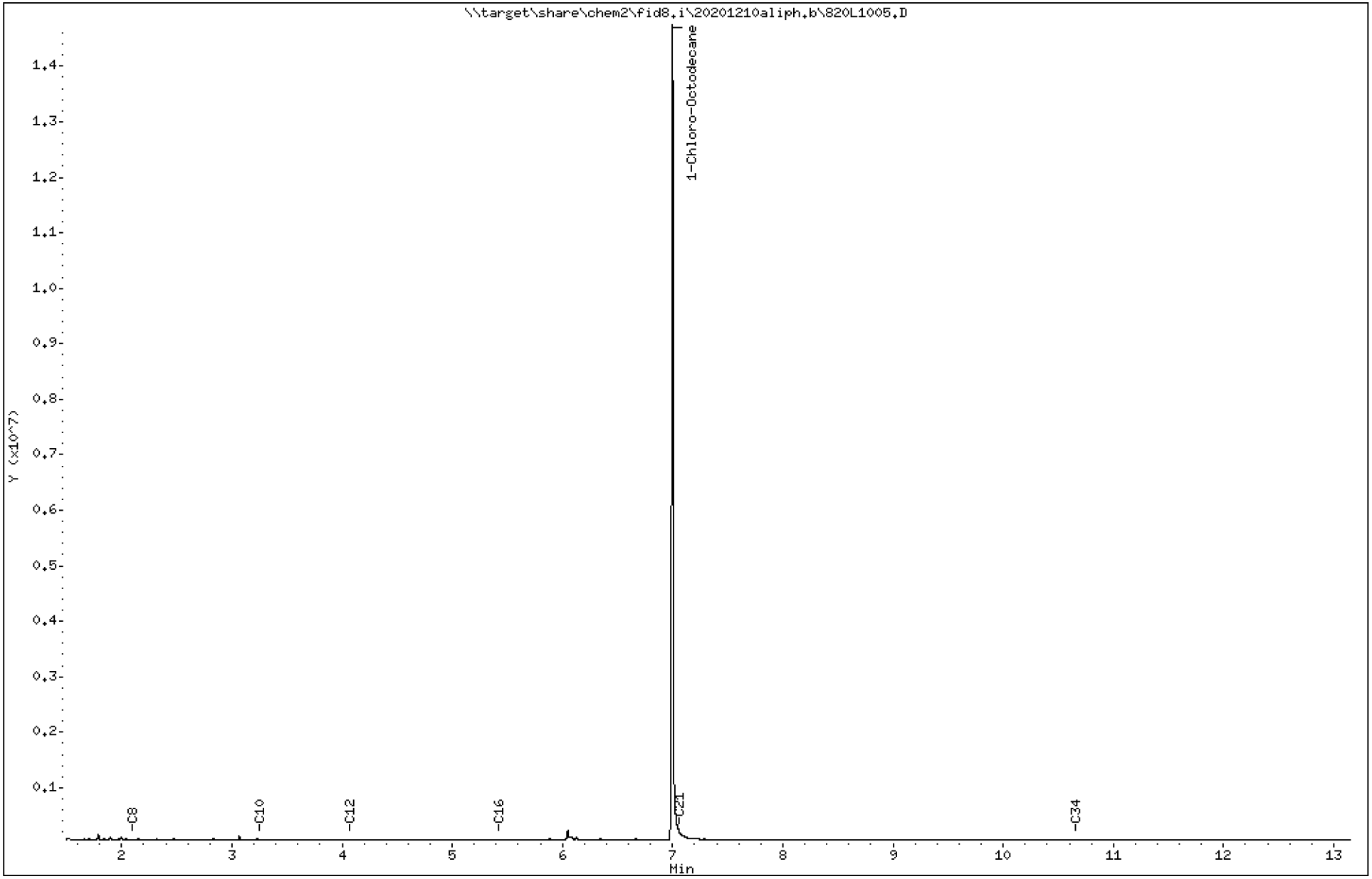
Instrument: fid8.i

Sample Info: BIK0336-BLK1

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1005.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: BIK0336-BLK1
Client ID:
Injection: 10-DEC-2020 22:11
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	383442	2.0	(2.006 - 3.349)
C10-C12	Aliph.	106816	0.5	(3.349 - 4.191)
C12-C16	Aliph.	150188	0.7	(4.191 - 5.531)
C16-C21	Aliph.	828345	4.2	(5.531 - 7.137)
C21-C34	Aliph.	302836	1.7	(7.137 - 10.752)

Surrogate Rec: 58.4% 87.6 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

LCS / LCS DUPLICATE RECOVERY
WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Matrix:	Solid	Analyzed:	12/10/20 22:35
Batch:	BIK0336	Laboratory ID:	BIK0336-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	10 g / 1 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
C10-C12 Aliphatics	15000	5750		38.3	30 - 160

* Indicates values outside of QC limits

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1006.D

Date : 10-DEC-2020 22:35

Client ID:

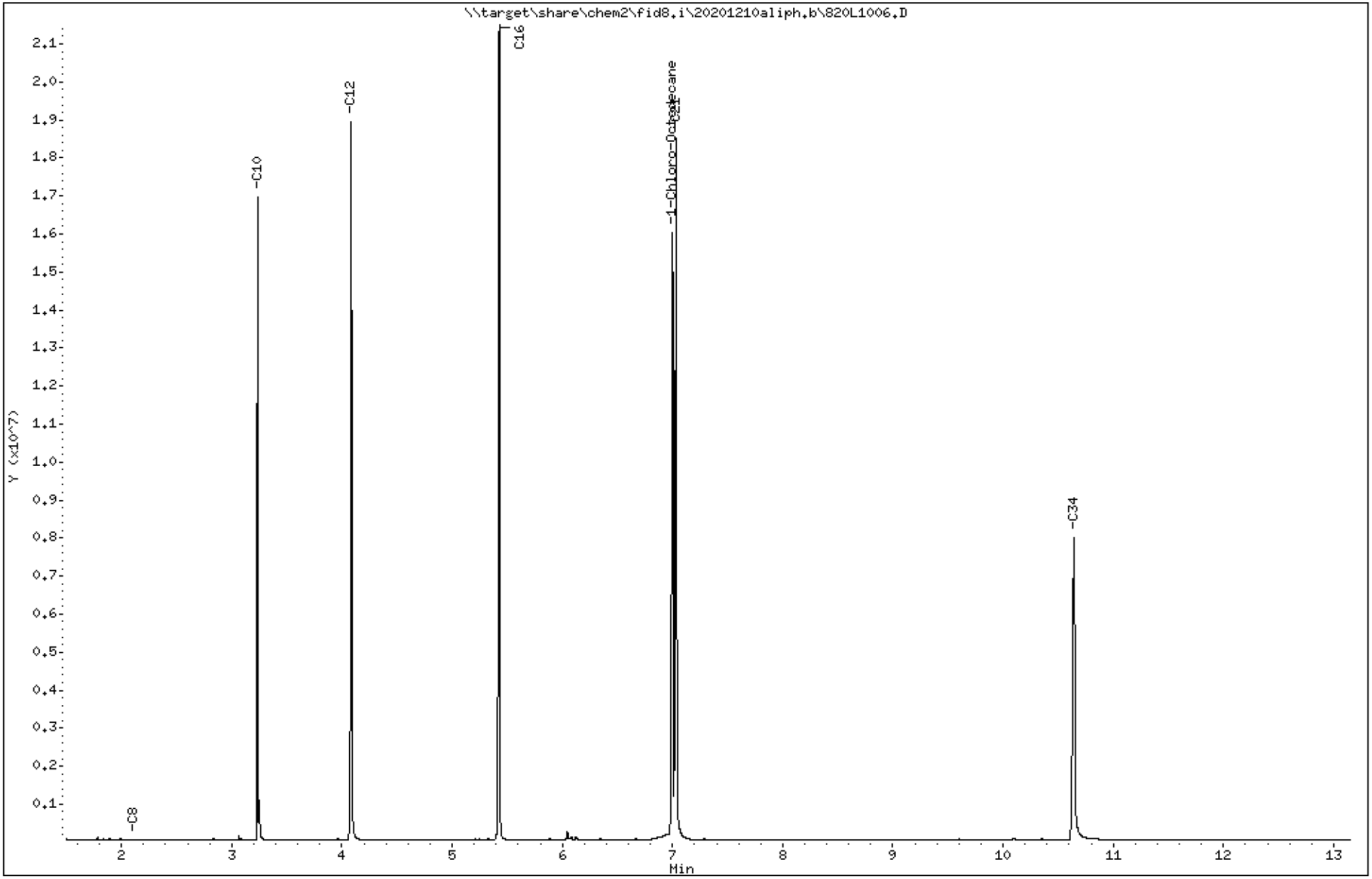
Instrument: fid8.i

Sample Info: BIK0336-BS1

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1006.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: BIK0336-BS1
Client ID:
Injection: 10-DEC-2020 22:35
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

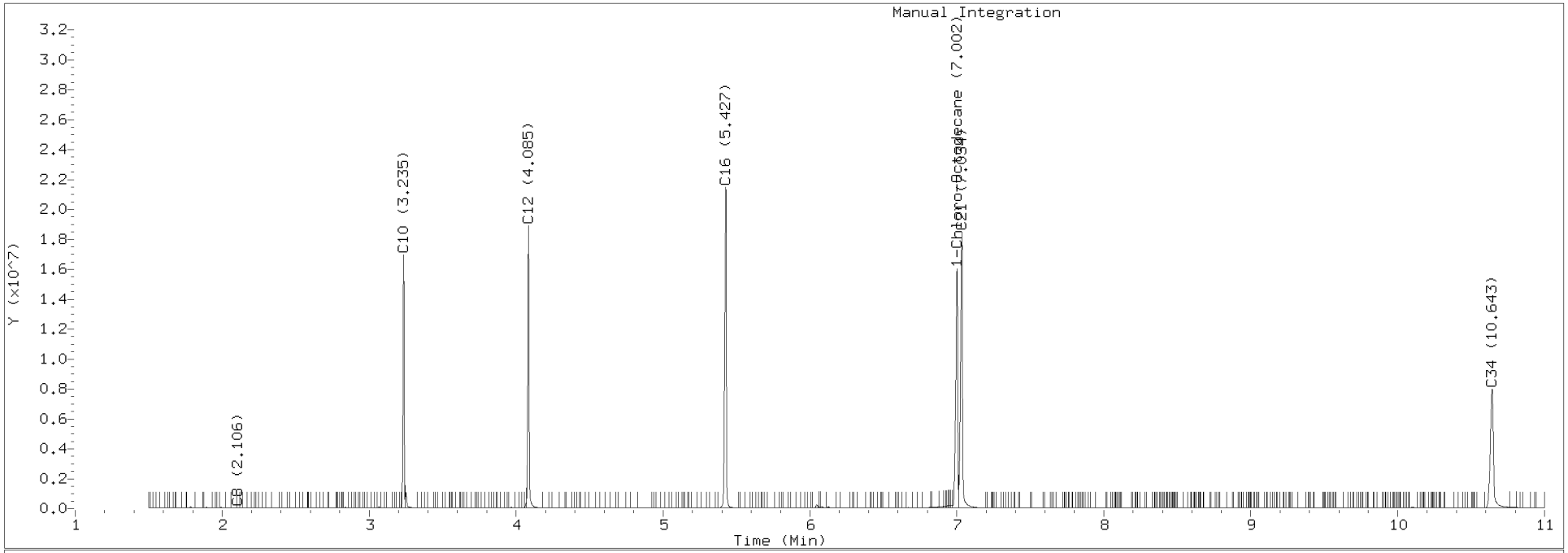
Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	10167783	52.8	(2.006 - 3.349)
C10-C12	Aliph.	11804978	57.5	(3.349 - 4.191)
C12-C16	Aliph.	16656908	82.3	(4.191 - 5.531)
C16-C21	Aliph.	19369801	99.3	(5.531 - 7.137)
C21-C34	Aliph.	13316352	74.4	(7.137 - 10.752)

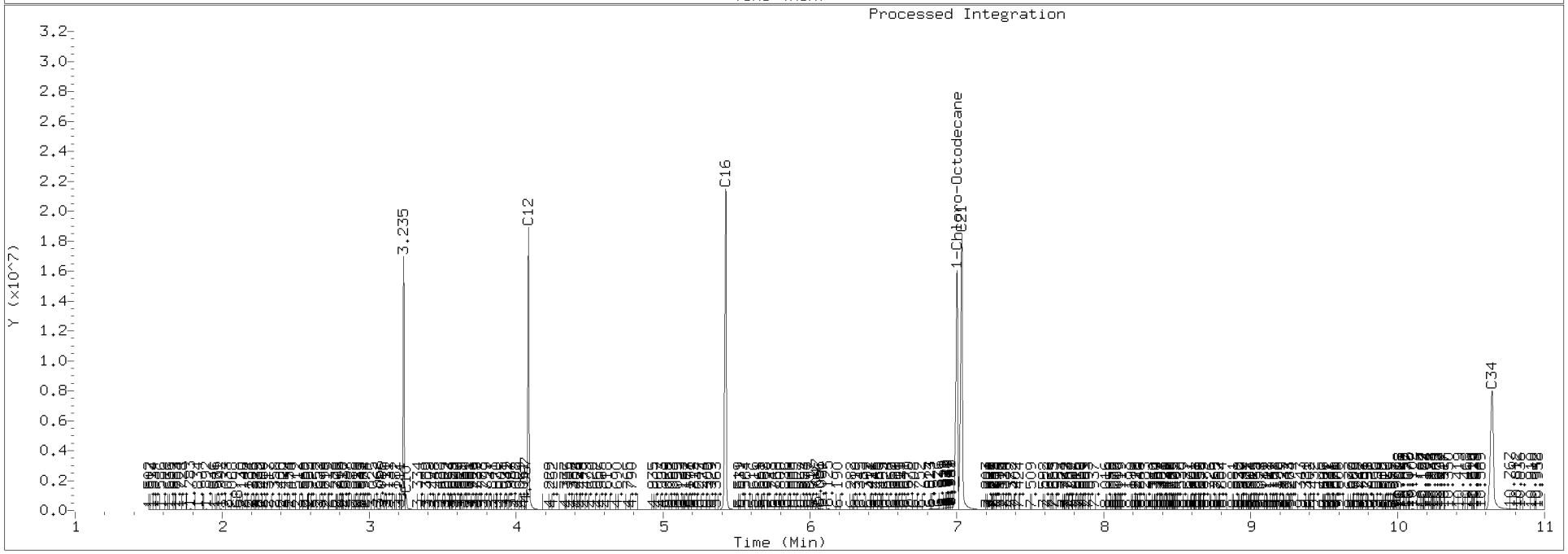
Surrogate Rec: 57.1% 85.7 ug/mL

EPH Aliphatics Manual Integrations Report

Datafile: FID8, 20201210aliph.b/820L1006.D Injection: 10-DEC-2020 22:35

Lab ID:BIK0336-BS1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-054SC-D-08-10-201029

MS / MS DUPLICATE RECOVERY
WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Matrix:	Solid	Analyzed:	12/11/20 04:41
Batch:	BIK0336	Laboratory ID:	BIK0336-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	10.05 g / 1 mL	Source Sample:	USMPDI-054SC-D-08-10-201029

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
C10-C12 Aliphatics	16800	ND	U	9350		55.1	30 - 160

* Values outside of QC limits

Analytical Resources, Incorporated
Analytical Chemists and Consultants

USMPDI-054SC-D-08-10-201029

MS / MS DUPLICATE RECOVERY
WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Matrix:	Solid	Analyzed:	12/11/20 05:05
Batch:	BIK0336	Laboratory ID:	BIK0336-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	10.02 g / 1 mL	Source Sample:	USMPDI-054SC-D-08-10-201029

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
C10-C12 Aliphatics	16900	6930		40.5	29.7	30	30 - 160

* Values outside of QC limits

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1021.D

Date : 11-DEC-2020 04:41

Client ID:

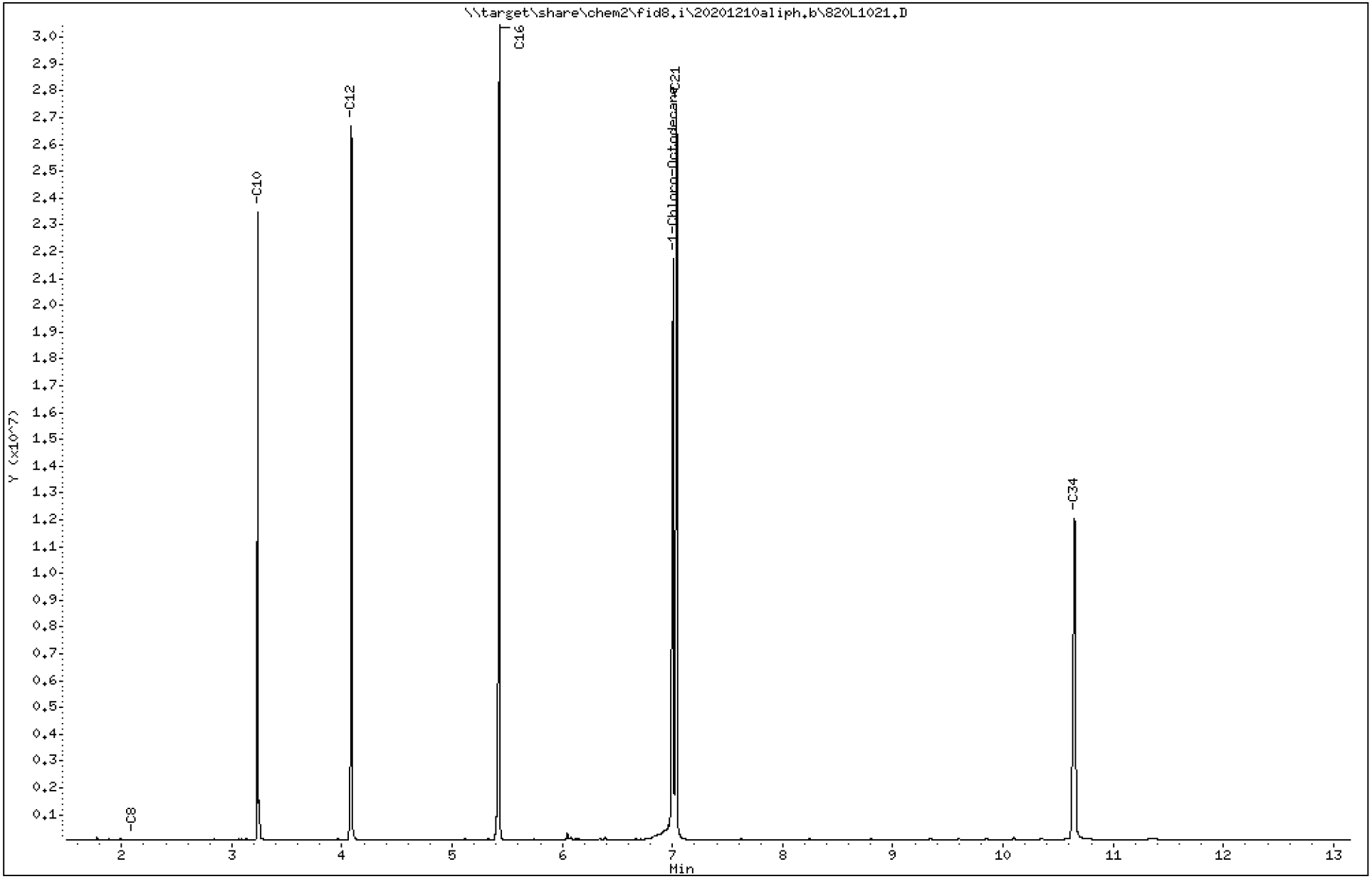
Instrument: fid8.i

Sample Info: BIK0336-MS1

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1021.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: BIK0336-MS1
Client ID:
Injection: 11-DEC-2020 04:41
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

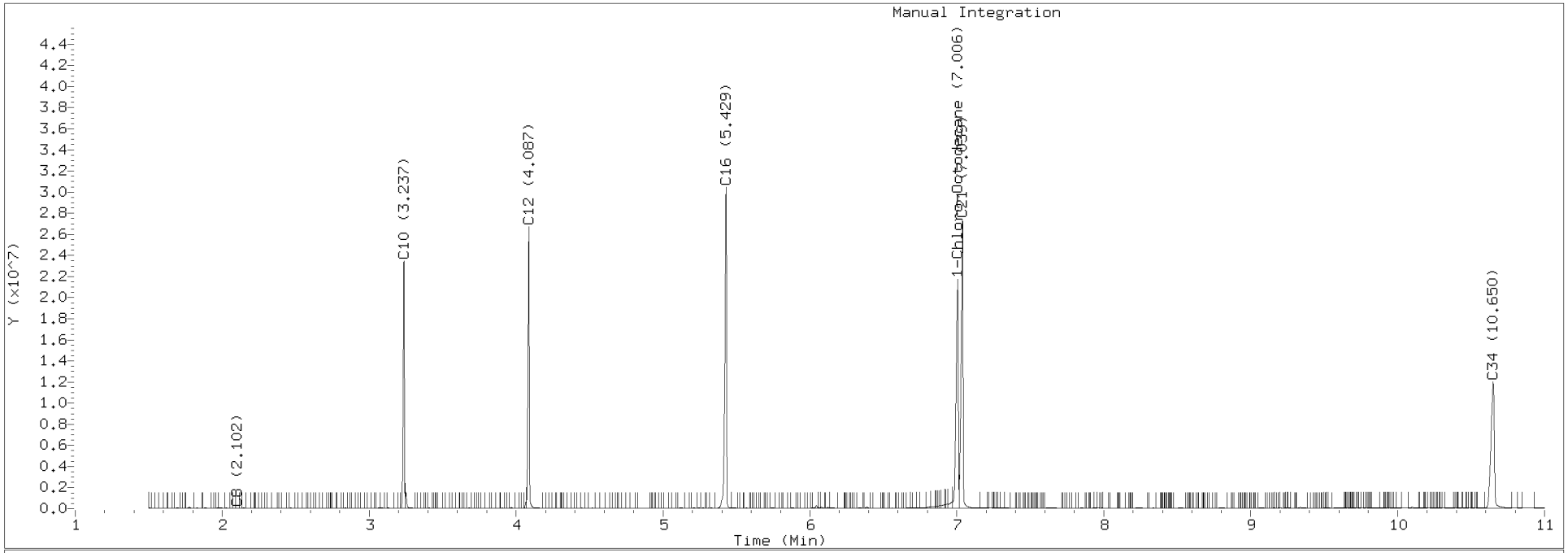
Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	14798582	76.9	(2.006 - 3.349)
C10-C12	Aliph.	17146339	83.5	(3.349 - 4.191)
C12-C16	Aliph.	24460036	120.8	(4.191 - 5.531)
C16-C21	Aliph.	28953433	148.4	(5.531 - 7.137)
C21-C34	Aliph.	21780448	121.7	(7.137 - 10.752)

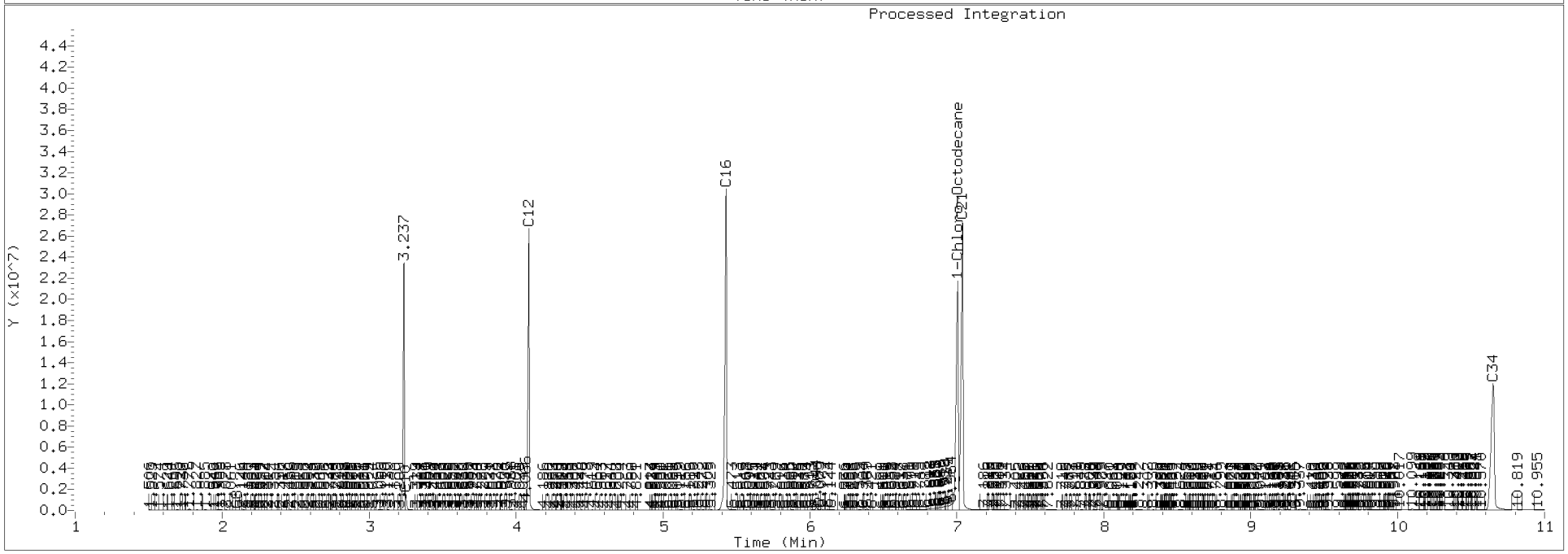
Surrogate Rec: 89.3% 134.0 ug/mL

EPH Aliphatics Manual Integrations Report

Datafile: FID8, 20201210aliph.b/820L1021.D Injection: 11-DEC-2020 04:41

Lab ID:BIK0336-MS1





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Date : 11-DEC-2020 05:05

Client ID:

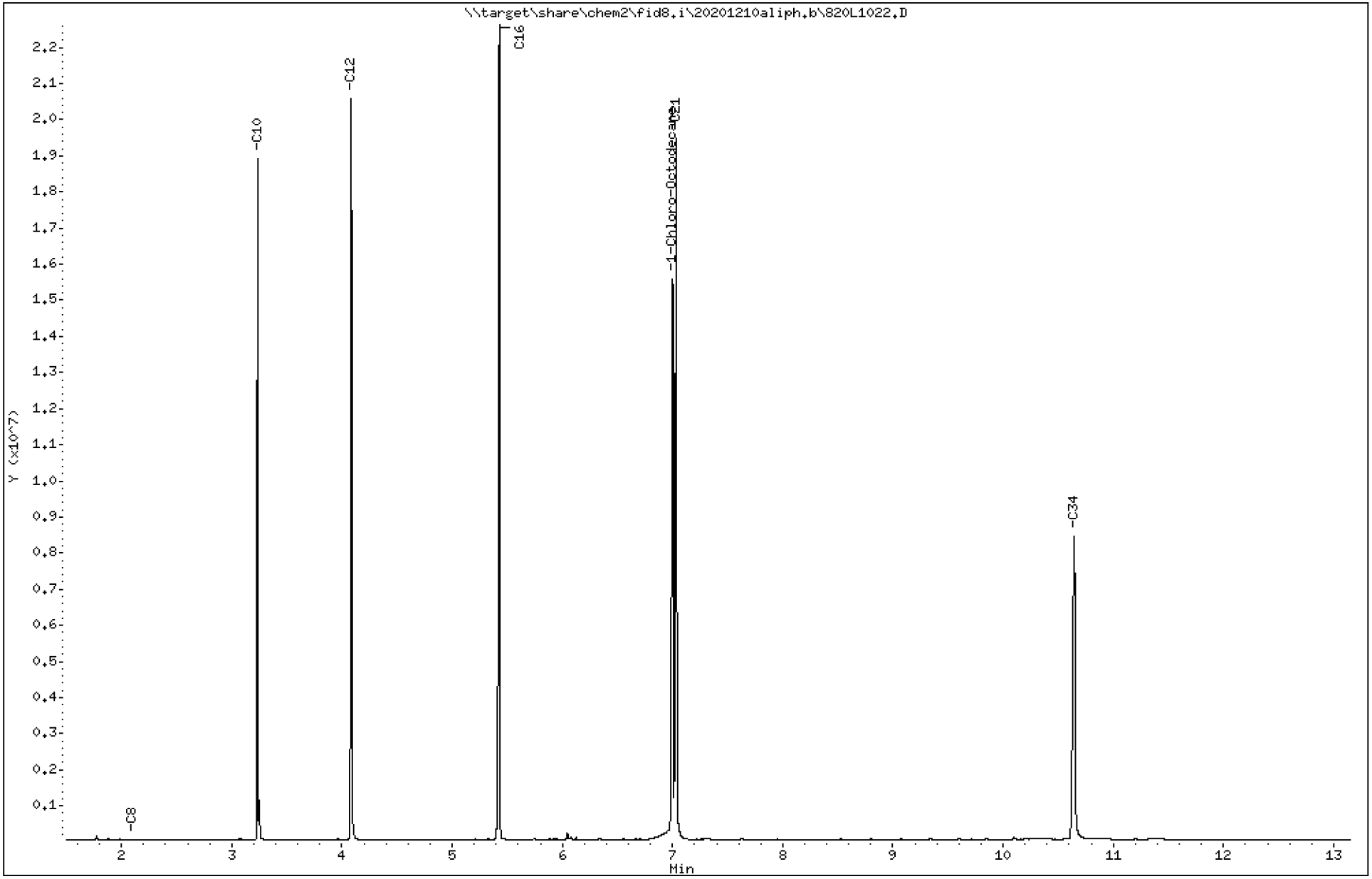
Instrument: fid8.i

Sample Info: BIK0336-MSD1

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1022.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: BIK0336-MSD1
Client ID:
Injection: 11-DEC-2020 05:05
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

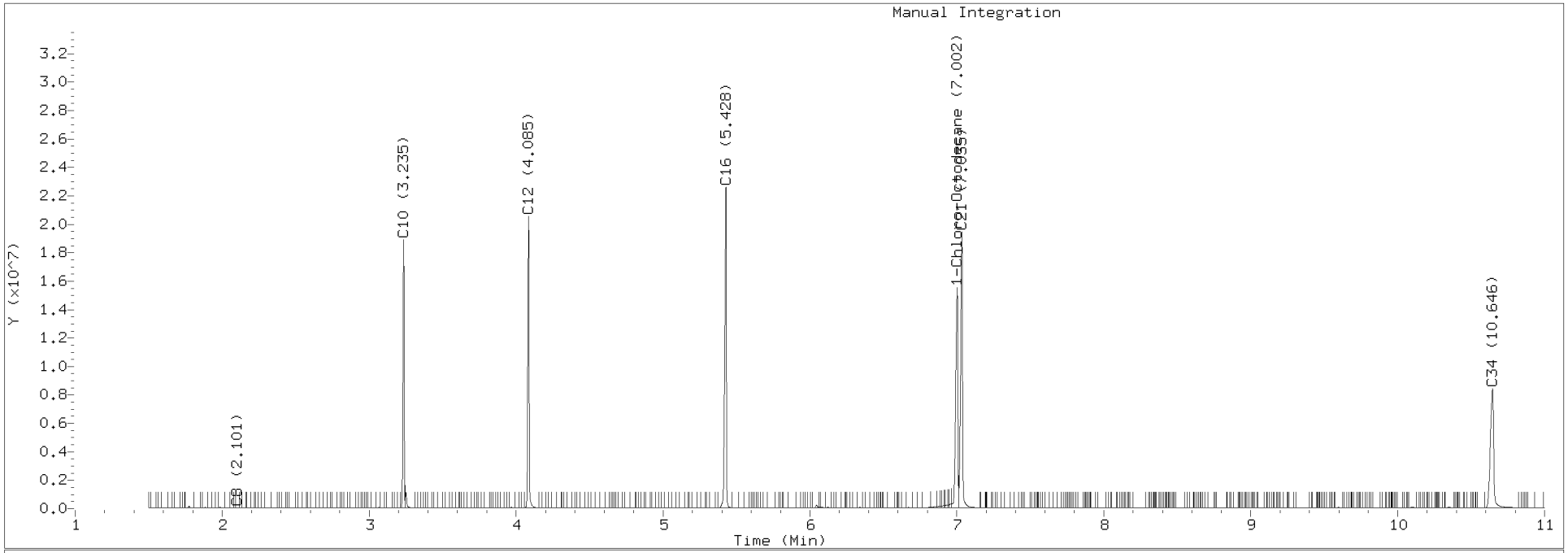
Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	11135301	57.8	(2.006 - 3.349)
C10-C12	Aliph.	12670080	61.7	(3.349 - 4.191)
C12-C16	Aliph.	17328112	85.6	(4.191 - 5.531)
C16-C21	Aliph.	20178379	103.5	(5.531 - 7.137)
C21-C34	Aliph.	16082830	89.8	(7.137 - 10.752)

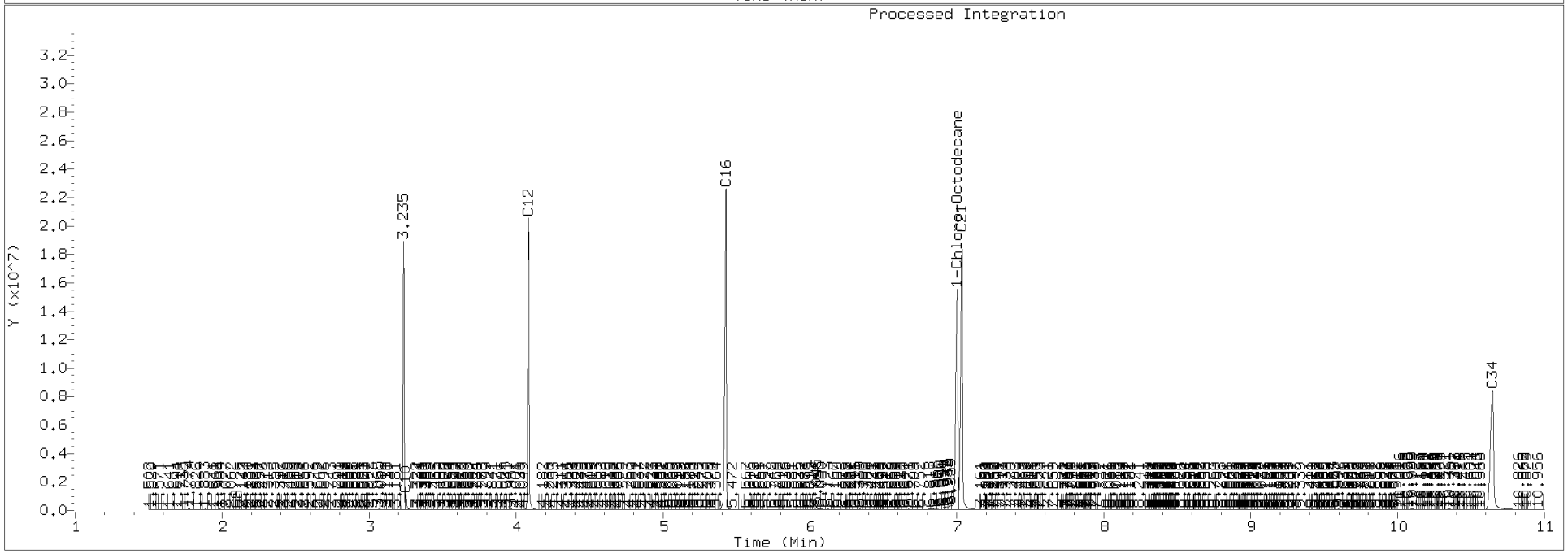
Surrogate Rec: 61.7% 92.6 ug/mL

EPH Aliphatics Manual Integrations Report

Datafile: FID8, 20201210aliph.b/820L1022.D Injection: 11-DEC-2020 05:05

Lab ID:BIK0336-MSD1





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	DJ00015	Instrument:	FID8
Calibration Date:	10/01/2020	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
		RF		RF		RF		RF		RF		RF
C10-C12 Aliphatics	20	195247.2	50	190901.5	100	206966.6	125	204131.5	150	217695.5	200	216877
1-Chloro-octadecane	20	132313.3	50	153398.8	100	174966.8	125	173349	150	185446.5	200	188647.6

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA
WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Calibration:	DJ00015	Instrument:	FID8
Calibration Date:	10/01/2020	Column (1):	ZB5

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
C10-C12 Aliphatics	205303.2	5.3			RSD (20)	
1-Chloro-octadecane	168020.3	12.7			RSD (20)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 10/5/2020 5:49:00PM

ANALYSIS SEQUENCE

SIJ0055

Instrument: FID8 Element Column ID: d002555
Calibration ID: DJ00015

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIJ0055-CAL1	AROM 20PPM	QC		1	I009169		
SIJ0055-CAL2	AROM 50PPM	QC		2	I009168		
SIJ0055-CAL3	AROM 100PPM	QC		3	I009167		
SIJ0055-CAL4	AROM 125PPM	QC		4	I009166		
SIJ0055-CAL5	AROM 150PPM	QC		5	I009165		
SIJ0055-CAL6	AROM 200PPM	QC		6	I009164		
SIJ0055-SCV1	AROM SCV	QC		7	I005685		
SIJ0055-CAL7	ALIPH 20PPM	QC		8	I009163		
SIJ0055-CAL8	ALIPH 50PPM	QC		9	I009160		
SIJ0055-CAL9	ALIPH 100PPM	QC		10	I009157		
SIJ0055-CALA	ALIPH 125PPM	QC		11	I009154		
SIJ0055-CALB	ALIPH 150PPM	QC		12	I009151		
SIJ0055-CALC	ALIPH 200PPM	QC		13	I009150		
SIJ0055-SCV2	ALIPH SCV	QC		14	I005686		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001aliph.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	01-OCT-2020 20:50	820J0107.D	1	ALIB	
2	02-OCT-2020 00:13	820J0115.D	1	20ALIPH	
3	02-OCT-2020 00:39	820J0116.D	1	50ALPIH	
4	02-OCT-2020 01:04	820J0117.D	1	100ALIPH	
5	02-OCT-2020 01:29	820J0118.D	1	125ALIPH	
6	02-OCT-2020 01:54	820J0119.D	1	150ALIPH	
7	02-OCT-2020 02:19	820J0120.D	1	200ALIPH	
8	02-OCT-2020 02:45	820J0121.D	1	ALIPHSC2	
9	02-OCT-2020 12:28	820J0144.D	1	ALIPHICV2	
10	02-OCT-2020 12:54	820J0145.D	1	BII0795-BLK1	
11	02-OCT-2020 13:20	820J0146.D	1	BII0795-BS1	
12	02-OCT-2020 13:46	820J0147.D	1	20I0109-02	
13	02-OCT-2020 14:12	820J0148.D	1	20I0109-03	
14	02-OCT-2020 14:38	820J0149.D	1	20I0109-05	
15	02-OCT-2020 15:04	820J0150.D	1	20I0109-07	
16	02-OCT-2020 15:29	820J0151.D	1	20I0109-08	
17	02-OCT-2020 15:55	820J0152.D	1	20I0109-09	
18	02-OCT-2020 16:21	820J0153.D	1	20I0109-10	
19	02-OCT-2020 16:46	820J0154.D	1	BII0795-MS1	
20	02-OCT-2020 17:12	820J0155.D	1	BII0795-MSD1	
21	02-OCT-2020 17:38	820J0156.D	1	ALIPHCCV3	
22	02-OCT-2020 18:03	820J0157.D	1	20I0109-11	
23	02-OCT-2020 18:29	820J0158.D	1	20I0149-01	
24	02-OCT-2020 18:54	820J0159.D	1	20I0149-02	
25	02-OCT-2020 19:20	820J0160.D	1	20I0149-05	
26	02-OCT-2020 19:45	820J0161.D	1	20I0149-07	
27	02-OCT-2020 20:10	820J0162.D	1	20I0149-08	
28	02-OCT-2020 20:36	820J0163.D	1	20I0149-09	
29	02-OCT-2020 21:01	820J0164.D	1	20I0149-10	
30	02-OCT-2020 21:27	820J0165.D	1	ALIPHCCV4	
31	02-OCT-2020 22:17	820J0167.D	1	BII0478-BLK1	
32	02-OCT-2020 22:42	820J0168.D	1	BII0478-BS1	
33	02-OCT-2020 23:08	820J0169.D	1	BII0478-BSD1	
34	02-OCT-2020 23:33	820J0170.D	1	20I0212-03	
35	02-OCT-2020 23:58	820J0171.D	1	BII0481-BLK1	
36	03-OCT-2020 00:23	820J0172.D	1	BII0481-BS1	
37	03-OCT-2020 00:49	820J0173.D	1	BII0481-BSD1	
38	03-OCT-2020 01:14	820J0174.D	1	20I0212-06	
39	03-OCT-2020 01:39	820J0175.D	1	20I0212-24	
40	03-OCT-2020 05:52	820J0185.D	1	ALIPHCCV6	
41	03-OCT-2020 06:42	820J0187.D	1	BII0585-BLK1	
42	03-OCT-2020 07:07	820J0188.D	1	BII0585-BS1	
43	03-OCT-2020 07:32	820J0189.D	1	BII0585-BSD1	
44	03-OCT-2020 07:57	820J0190.D	1	20I0267-08	
45	03-OCT-2020 08:21	820J0191.D	1	20I0267-16	
46	03-OCT-2020 10:51	820J0197.D	1	ALIPHCCV8	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001arom.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	01-OCT-2020 17:18	820J0101.D	1	RINSE	
2	01-OCT-2020 18:00	820J0102.D	1	RINSE	
3	01-OCT-2020 18:25	820J0103.D	1	RINSE	
4	01-OCT-2020 19:34	820J0104.D	1	RINSE	
5	01-OCT-2020 19:59	820J0105.D	1	RINSE	
6	01-OCT-2020 20:25	820J0106.D	1	ARIB	
7	01-OCT-2020 21:16	820J0108.D	1	20AROM	
8	01-OCT-2020 21:41	820J0109.D	1	50AROM	
9	01-OCT-2020 22:07	820J0110.D	1	100AROM	
10	01-OCT-2020 22:32	820J0111.D	1	125AROM	
11	01-OCT-2020 22:57	820J0112.D	1	150AROM	
12	01-OCT-2020 23:23	820J0113.D	1	200AROM	
13	01-OCT-2020 23:48	820J0114.D	1	AROMSCV1	
14	02-OCT-2020 03:10	820J0122.D	1	AROMICV1	
15	02-OCT-2020 03:36	820J0123.D	1	BII0795-BLK2	
16	02-OCT-2020 04:01	820J0124.D	1	BII0795-BS2	
17	02-OCT-2020 04:27	820J0125.D	1	20I0109-02	
18	02-OCT-2020 04:52	820J0126.D	1	20I0109-03	
19	02-OCT-2020 05:18	820J0127.D	1	20I0109-05	
20	02-OCT-2020 05:43	820J0128.D	1	20I0109-07	
21	02-OCT-2020 06:09	820J0129.D	1	20I0109-08	
22	02-OCT-2020 06:34	820J0130.D	1	20I0109-09	
23	02-OCT-2020 06:59	820J0131.D	1	20I0109-10	
24	02-OCT-2020 07:24	820J0132.D	1	BII0795-MS2	
25	02-OCT-2020 07:49	820J0133.D	1	BII0795-MSD2	
26	02-OCT-2020 08:14	820J0134.D	1	20I0109-11	
27	02-OCT-2020 08:39	820J0135.D	1	20I0149-01	
28	02-OCT-2020 09:05	820J0136.D	1	AROMCCV1	
29	02-OCT-2020 09:30	820J0137.D	1	20I0149-02	
30	02-OCT-2020 09:55	820J0138.D	1	20I0149-05	
31	02-OCT-2020 10:21	820J0139.D	1	20I0149-07	
32	02-OCT-2020 10:46	820J0140.D	1	20I0149-08	
33	02-OCT-2020 11:12	820J0141.D	1	20I0149-09	
34	02-OCT-2020 11:37	820J0142.D	1	20I0149-10	
35	02-OCT-2020 12:03	820J0143.D	1	AROMCCV2	
36	02-OCT-2020 21:52	820J0166.D	1	AROMCCV5	
37	03-OCT-2020 02:05	820J0176.D	1	BII0478-BLK2	
38	03-OCT-2020 02:30	820J0177.D	1	BII0478-BS2	
39	03-OCT-2020 02:55	820J0178.D	1	BII0478-BSD2	
40	03-OCT-2020 03:20	820J0179.D	1	20I0212-03	
41	03-OCT-2020 03:46	820J0180.D	1	BII0481-BLK2	
42	03-OCT-2020 04:11	820J0181.D	1	BII0481-BS2	
43	03-OCT-2020 04:36	820J0182.D	1	BII0481-BSD2	
44	03-OCT-2020 05:01	820J0183.D	1	20I0212-06	
45	03-OCT-2020 05:26	820J0184.D	1	20I0212-24	
46	03-OCT-2020 06:17	820J0186.D	1	AROMCCV7	
47	03-OCT-2020 08:46	820J0192.D	1	BII0585-BLK2	
48	03-OCT-2020 09:11	820J0193.D	1	BII0585-BS2	
49	03-OCT-2020 09:35	820J0194.D	1	BII0585-BSD2	
50	03-OCT-2020 10:01	820J0195.D	1	20I0267-08	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001arom.b

	Inject Date/Time	Filename	DF	LabID	ClientID
51	03-OCT-2020 10:26	820J0196.D	1	20I0267-16	
52	03-OCT-2020 11:16	820J0198.D	1	AROMCCV9	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001arom.b

ARI Job No.: RINS Method: EPHArom.m Instrument: fid8.i Date: 01-OCT-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1718	820J0101.D	RINSE		1	NO MANUAL INTEGRATION
1800	820J0102.D	RINSE		1	NO MANUAL INTEGRATION
1825	820J0103.D	RINSE		1	NO MANUAL INTEGRATION
1934	820J0104.D	RINSE		1	NO MANUAL INTEGRATION
1959	820J0105.D	RINSE		1	NO MANUAL INTEGRATION
2025	820J0106.D	ARIB		1	NO MANUAL INTEGRATION
2116	820J0108.D	20AROM		1	1,2,3-Trimetben, Benzo-ghi-per,
2141	820J0109.D	50AROM		1	NO MANUAL INTEGRATION
2207	820J0110.D	100AROM		1	Benzo-ghi-per,
2232	820J0111.D	125AROM		1	NO MANUAL INTEGRATION
2257	820J0112.D	150AROM		1	NO MANUAL INTEGRATION
2323	820J0113.D	200AROM		1	Benzo-ghi-per,
2348	820J0114.D	AROMSCV1		1	NO MANUAL INTEGRATION
0310	820J0122.D	AROMICV1		1	NO MANUAL INTEGRATION
0336	820J0123.D	BII0795-BLK2		1	NO MANUAL INTEGRATION
0401	820J0124.D	BII0795-BS2		1	NO MANUAL INTEGRATION
0427	820J0125.D	20I0109-02		1	1-chlorooctodecane(AROMATIC),

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001arom.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0452	820J0126.D	20I0109-03		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
0518	820J0127.D	20I0109-05		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
0543	820J0128.D	20I0109-07		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
0609	820J0129.D	20I0109-08		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
0634	820J0130.D	20I0109-09		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
0659	820J0131.D	20I0109-10		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
0724	820J0132.D	BII0795-MS2		1	Benzo-ghi-per, 1-chlorooctodecane(AROMATIC), o-Terph Surr,
0749	820J0133.D	BII0795-MSD2		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
0814	820J0134.D	20I0109-11		1	NO MANUAL INTEGRATION
0839	820J0135.D	20I0149-01		1	NO MANUAL INTEGRATION
0905	820J0136.D	AROMCCV1		1	NO MANUAL INTEGRATION
0930	820J0137.D	20I0149-02		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
0955	820J0138.D	20I0149-05		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
1021	820J0139.D	20I0149-07		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
1046	820J0140.D	20I0149-08		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
1112	820J0141.D	20I0149-09		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
1137	820J0142.D	20I0149-10		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
1203	820J0143.D	AROMCCV2		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001arom.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2152	820J0166.D	AROMCCV5		1	Benzo-ghi-per,
0205	820J0176.D	BII0478-BLK2		1	NO MANUAL INTEGRATION
0230	820J0177.D	BII0478-BS2		1	NO MANUAL INTEGRATION
0255	820J0178.D	BII0478-BSD2		1	NO MANUAL INTEGRATION
0320	820J0179.D	20I0212-03		1	NO MANUAL INTEGRATION
0346	820J0180.D	BII0481-BLK2		1	NO MANUAL INTEGRATION
0411	820J0181.D	BII0481-BS2		1	NO MANUAL INTEGRATION
0436	820J0182.D	BII0481-BSD2		1	NO MANUAL INTEGRATION
0501	820J0183.D	20I0212-06		1	NO MANUAL INTEGRATION
0526	820J0184.D	20I0212-24		1	NO MANUAL INTEGRATION
0617	820J0186.D	AROMCCV7		1	NO MANUAL INTEGRATION
0846	820J0192.D	BII0585-BLK2		1	NO MANUAL INTEGRATION
0911	820J0193.D	BII0585-BS2		1	NO MANUAL INTEGRATION
0935	820J0194.D	BII0585-BSD2		1	NO MANUAL INTEGRATION
1001	820J0195.D	20I0267-08		1	NO MANUAL INTEGRATION
1026	820J0196.D	20I0267-16		1	NO MANUAL INTEGRATION
1116	820J0198.D	AROMCCV9		1	Benzo-ghi-per,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001aliph.b

ARI Job No.: ALIB Method: EPHAliph.m Instrument: fid8.i Date: 01-OCT-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2050	820J0107.D	ALIB		1	NO MANUAL INTEGRATION
0013	820J0115.D	20ALIPH		1	C10,
0039	820J0116.D	50ALPIH		1	C10,
0104	820J0117.D	100ALIPH		1	NO MANUAL INTEGRATION
0129	820J0118.D	125ALIPH		1	NO MANUAL INTEGRATION
0154	820J0119.D	150ALIPH		1	NO MANUAL INTEGRATION
0219	820J0120.D	200ALIPH		1	NO MANUAL INTEGRATION
0245	820J0121.D	ALIPHSC2		1	C8,
1228	820J0144.D	ALIPHICV2		1	NO MANUAL INTEGRATION
1254	820J0145.D	BII0795-BLK1		1	NO MANUAL INTEGRATION
1320	820J0146.D	BII0795-BS1		1	C10,
1346	820J0147.D	20I0109-02		1	1-Chloro-Octodecane,
1412	820J0148.D	20I0109-03		1	1-Chloro-Octodecane,
1438	820J0149.D	20I0109-05		1	1-Chloro-Octodecane,
1504	820J0150.D	20I0109-07		1	1-Chloro-Octodecane,
1529	820J0151.D	20I0109-08		1	1-Chloro-Octodecane,
1555	820J0152.D	20I0109-09		1	1-Chloro-Octodecane,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001aliph.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1621	820J0153.D	20I0109-10		1	1-Chloro-Octodecane,
1646	820J0154.D	BII0795-MS1		1	C10, 1-Chloro-Octodecane,
1712	820J0155.D	BII0795-MSD1		1	C10, 1-Chloro-Octodecane,
1738	820J0156.D	ALIPHCCV3		1	NO MANUAL INTEGRATION
1803	820J0157.D	20I0109-11		1	NO MANUAL INTEGRATION
1829	820J0158.D	20I0149-01		1	1-Chloro-Octodecane,
1854	820J0159.D	20I0149-02		1	1-Chloro-Octodecane,
1920	820J0160.D	20I0149-05		1	1-Chloro-Octodecane,
1945	820J0161.D	20I0149-07		1	1-Chloro-Octodecane,
2010	820J0162.D	20I0149-08		1	1-Chloro-Octodecane,
2036	820J0163.D	20I0149-09		1	1-Chloro-Octodecane,
2101	820J0164.D	20I0149-10		1	1-Chloro-Octodecane,
2127	820J0165.D	ALIPHCCV4		1	C10,
2217	820J0167.D	BII0478-BLK1		1	NO MANUAL INTEGRATION
2242	820J0168.D	BII0478-BS1		1	C10,
2308	820J0169.D	BII0478-BSD1		1	C10,
2333	820J0170.D	20I0212-03		1	NO MANUAL INTEGRATION
2358	820J0171.D	BII0481-BLK1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001aliph.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0023	820J0172.D	BII0481-BS1		1	C10,
0049	820J0173.D	BII0481-BSD1		1	C10,
0114	820J0174.D	20I0212-06		1	NO MANUAL INTEGRATION
0139	820J0175.D	20I0212-24		1	NO MANUAL INTEGRATION
0552	820J0185.D	ALIPHCCV6		1	NO MANUAL INTEGRATION
0642	820J0187.D	BII0585-BLK1		1	NO MANUAL INTEGRATION
0707	820J0188.D	BII0585-BS1		1	C10,
0732	820J0189.D	BII0585-BSD1		1	C10,
0757	820J0190.D	20I0267-08		1	NO MANUAL INTEGRATION
0821	820J0191.D	20I0267-16		1	NO MANUAL INTEGRATION
1051	820J0197.D	ALIPHCCV8		1	NO MANUAL INTEGRATION

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-OCT-2020 21:16
End Cal Date : 01-OCT-2020 23:23
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\target\share\chem2\fid8.i\20201001arom.b\EPHArom.m
Last Edit : 03-Oct-2020 16:14 jrains
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem2\fid8.i\20201001arom.b\820J0108.D
Level 2: \\target\share\chem2\fid8.i\20201001arom.b\820J0109.D
Level 3: \\target\share\chem2\fid8.i\20201001arom.b\820J0110.D
Level 4: \\target\share\chem2\fid8.i\20201001arom.b\820J0111.D
Level 5: \\target\share\chem2\fid8.i\20201001arom.b\820J0112.D
Level 6: \\target\share\chem2\fid8.i\20201001arom.b\820J0113.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	150.000 Level 4	200.000 Level 5	0.000e+00 Level 6	RRF	% RSD
2 Toluene	202541	200103	210181	206834	218140	220027	209638	3.873
75 1-chlorooctodecane(AROMATIC)	132313	153399	174967	173349	185447	188648	168020	12.750
3 1,2,3-Trimetben	191434	197193	228204	223881	237337	237890	219323	9.202
4 Naphthalene	213238	216541	229212	224164	240841	240261	227376	5.122
7 Acenaphthene	199093	205855	221749	218129	235859	234173	219143	6.743
13 Pyrene	184602	191251	203229	197225	214605	207275	199698	5.474
21 Benzo-ghi-per	178290	180537	192963	187635	203195	198613	190205	5.200
$ 11 o-Terph Surr	201436	208092	221843	218933	236273	231635	219702	6.075

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 02-OCT-2020 00:13
End Cal Date : 02-OCT-2020 02:19
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\target\share\chem2\fid8.i\20201001aliph.b\EPHAliph.m
Last Edit : 02-Oct-2020 15:45 jrains
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem2\fid8.i\20201001aliph.b\820J0115.D
Level 2: \\target\share\chem2\fid8.i\20201001aliph.b\820J0116.D
Level 3: \\target\share\chem2\fid8.i\20201001aliph.b\820J0117.D
Level 4: \\target\share\chem2\fid8.i\20201001aliph.b\820J0118.D
Level 5: \\target\share\chem2\fid8.i\20201001aliph.b\820J0119.D
Level 6: \\target\share\chem2\fid8.i\20201001aliph.b\820J0120.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	150.000 Level 4	200.000 Level 5	0.000e+00 Level 6	RRF	% RSD
1 C8	176338	175062	188683	191276	198627	194095	187347	5.131
2 C10	176420	177478	200312	204928	214702	212340	197697	8.537
3 C12	195247	190902	206967	204132	217696	216877	205303	5.337
4 C16	187421	187647	206440	200811	216724	215676	202453	6.411
6 C21	202391	188336	194246	190241	200304	194799	195053	2.812
7 C34	166616	167083	182209	181067	186280	190891	179024	5.610
$ 5 1-Chloro-Octodecane	132313	153399	174967	173349	185447	188648	168020	12.750

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid8.i\20201001arom.b\EPHArom.m
Batch File: \\target\share\chem2\fid8.i\20201001arom.b
Inst ID: fid8.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	820J0108	820J0109	820J0110	820J0111	820J0112	820J0113
INJ.DATE:	01-OCT-2020	01-OCT-2020	01-OCT-2020	01-OCT-2020	01-OCT-2020	01-OCT-2020
INJ.TIME:	21:16	21:41	22:07	22:32	22:57	23:23

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
2 Toluene	1.881	1.886	1.889	1.889	1.892	1.895	1.889	1.839-1.939	1.889	0.005
75 1-chlorooctodecane(ARO	6.978	7.003	7.003	7.006	6.973	6.974	7.002	6.952-7.052	6.990	0.016
3 1,2,3-Trimetben	3.357	3.360	3.364	3.365	3.367	3.371	3.357	3.307-3.407	3.364	0.005
4 Naphthalene	4.074	4.076	4.081	4.083	4.085	4.088	4.086	4.036-4.136	4.081	0.005
7 Acenaphthene	5.124	5.126	5.130	5.133	5.135	5.138	5.137	5.087-5.187	5.131	0.005
$ 11 o-Terph Surr	6.397	6.397	6.403	6.405	6.408	6.412	6.410	6.360-6.460	6.404	0.006
13 Pyrene	7.182	7.184	7.193	7.196	7.200	7.205	7.204	7.154-7.254	7.193	0.009
21 Benzo-ghi-per	10.312	10.323	10.342	10.350	10.359	10.371	10.353	10.303-10.403	10.343	0.022

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem2\fid8.i\20201001aliph.b\EPHAliph.m
Batch File: \\target\share\chem2\fid8.i\20201001aliph.b
Inst ID: fid8.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	820J0115	820J0116	820J0117	820J0118	820J0119	820J0120
INJ.DATE:	02-OCT-2020	02-OCT-2020	02-OCT-2020	02-OCT-2020	02-OCT-2020	02-OCT-2020
INJ.TIME:	00:13	00:39	01:04	01:29	01:54	02:19

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 C8	2.105	2.106	2.112	2.113	2.114	2.118	2.118	2.068-2.168	2.111	0.005
2 C10	3.245	3.249	3.253	3.254	3.256	3.259	3.259	3.209-3.309	3.253	0.005
3 C12	4.088	4.090	4.093	4.095	4.097	4.099	4.099	4.050-4.150	4.094	0.004
4 C16	5.428	5.429	5.433	5.435	5.437	5.438	5.438	5.388-5.488	5.433	0.004
$ 5 1-Chloro-Octodecane	7.000	7.001	7.006	7.009	7.011	7.014	7.014	6.964-7.064	7.007	0.006
6 C21	7.032	7.034	7.039	7.041	7.045	7.047	7.047	6.997-7.097	7.040	0.006
7 C34	10.644	10.644	10.652	10.658	10.659	10.669	10.669	10.619-10.719	10.654	0.010

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

Security Status Report

Date: 05-Oct-2020 17:34

820J0107.D	Data Locked	jrains, 05-Oct-2020 17:34
820J0115.D	Data Locked	jrains, 05-Oct-2020 17:34
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Security Status Report

Date: 05-Oct-2020 17:40

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Data File: \\target\share\chem2\fid8.i\20201001aliph.b\820J0107.D

Date : 01-OCT-2020 20:50

Client ID:

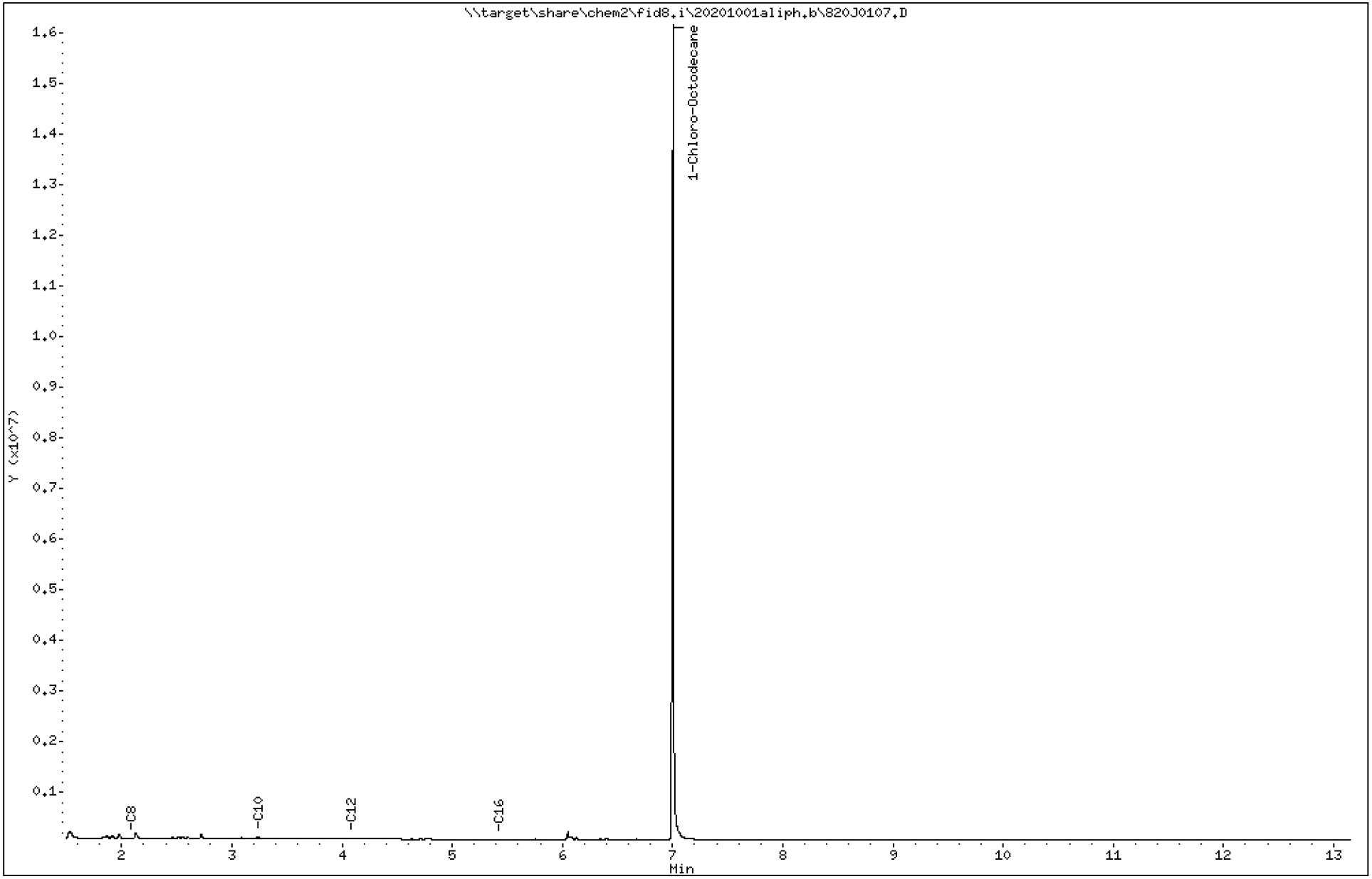
Instrument: fid8.i

Sample Info: ALIB

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201001aliph.b/820J0107.D
Method: 20201001aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: ALIB
Client ID:
Injection: 01-OCT-2020 20:50
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	2241826	11.6	(2.018 - 3.359)
C10-C12	Aliph.	762525	3.7	(3.359 - 4.199)
C12-C16	Aliph.	509118	2.5	(4.199 - 5.538)
C16-C21	Aliph.	608631	3.1	(5.538 - 7.147)
C21-C34	Aliph.	161111	0.9	(7.147 - 10.769)

Surrogate Rec: 61.1% 91.6 ug/mL

Data File: \\target\share\chem2\fid8.i\20201001arom.b\820J0108.D

Date : 01-OCT-2020 21:16

Client ID:

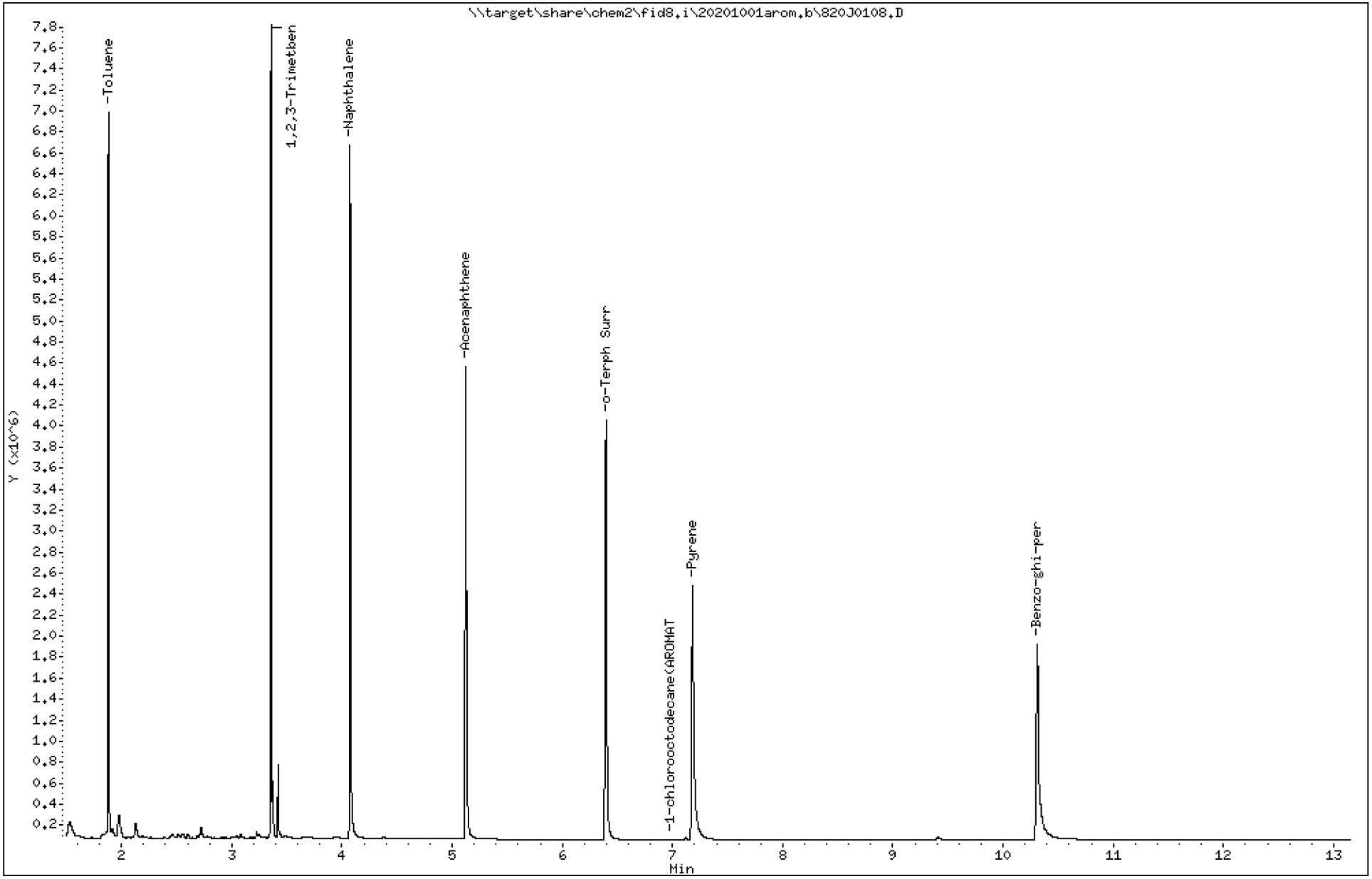
Instrument: fid8.i

Sample Info: 20AROM

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



EPH AROMATIC CALIBRATION REPORT

Lab Name: ANALYTICAL RESOURCES, INC. Lab ID: 20AROM

ICal Date: 01-OCT-2020 Instrument: FID8.I

Analysis Time: 21:16 Lab File Name: 820J0108.D

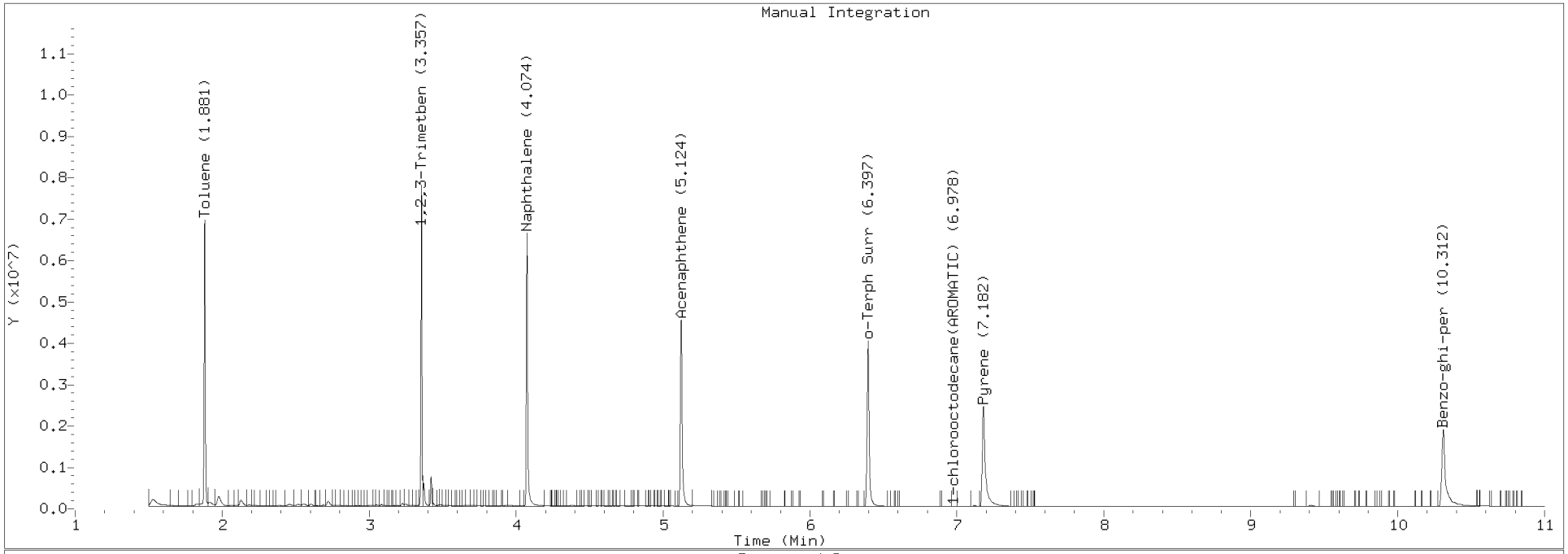
Quant Range		Area*	Conc
C8-C10	Arom.	7879500	36.8
C10-C12	Arom.	4264763	18.8
C12-C16	Arom.	3981855	18.2
C16-C21	Arom.	3692046	18.5
C21-C34	Arom.	3565794	18.7
Surrogate		4028722	18.3

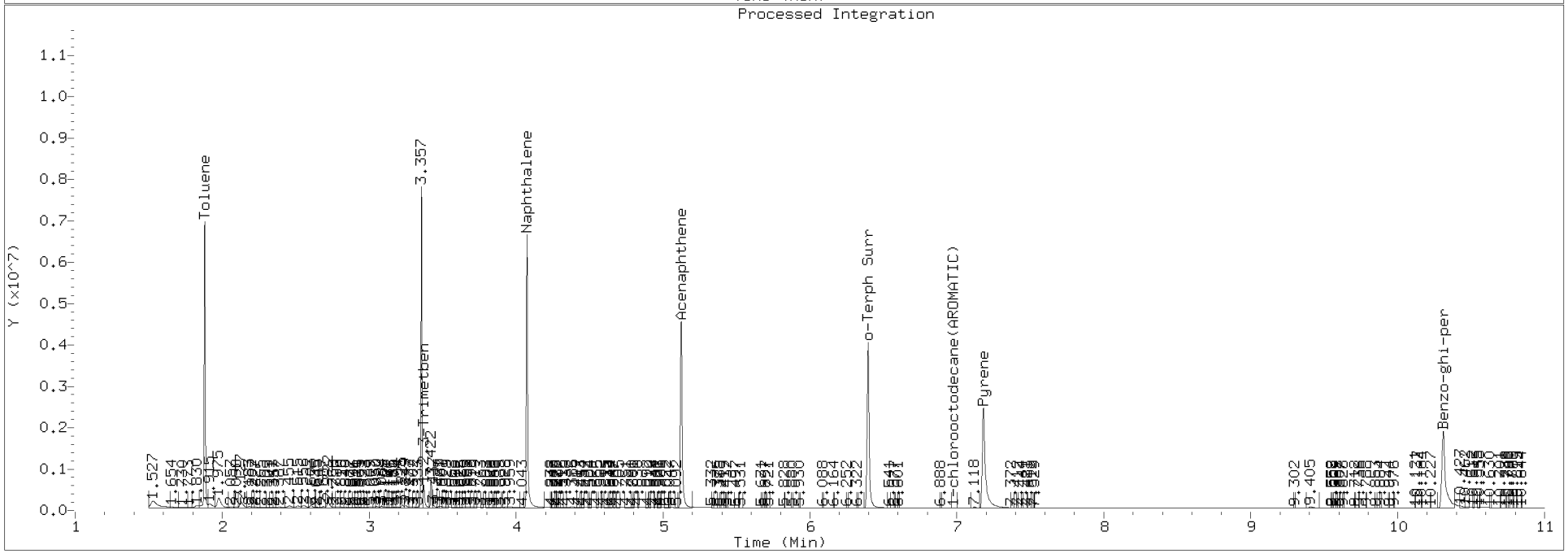
* From Range Reference Peak(s)

EPH Aromatics Manual Integrations Report

Datafile: FID8, 20201001arom.b/820J0108.D Injection: 01-OCT-2020 21:16

Lab ID:20AROM





Data File: \\target\share\chem2\fid8.i\20201001arom.b\820J0109.D

Date : 01-OCT-2020 21:41

Client ID:

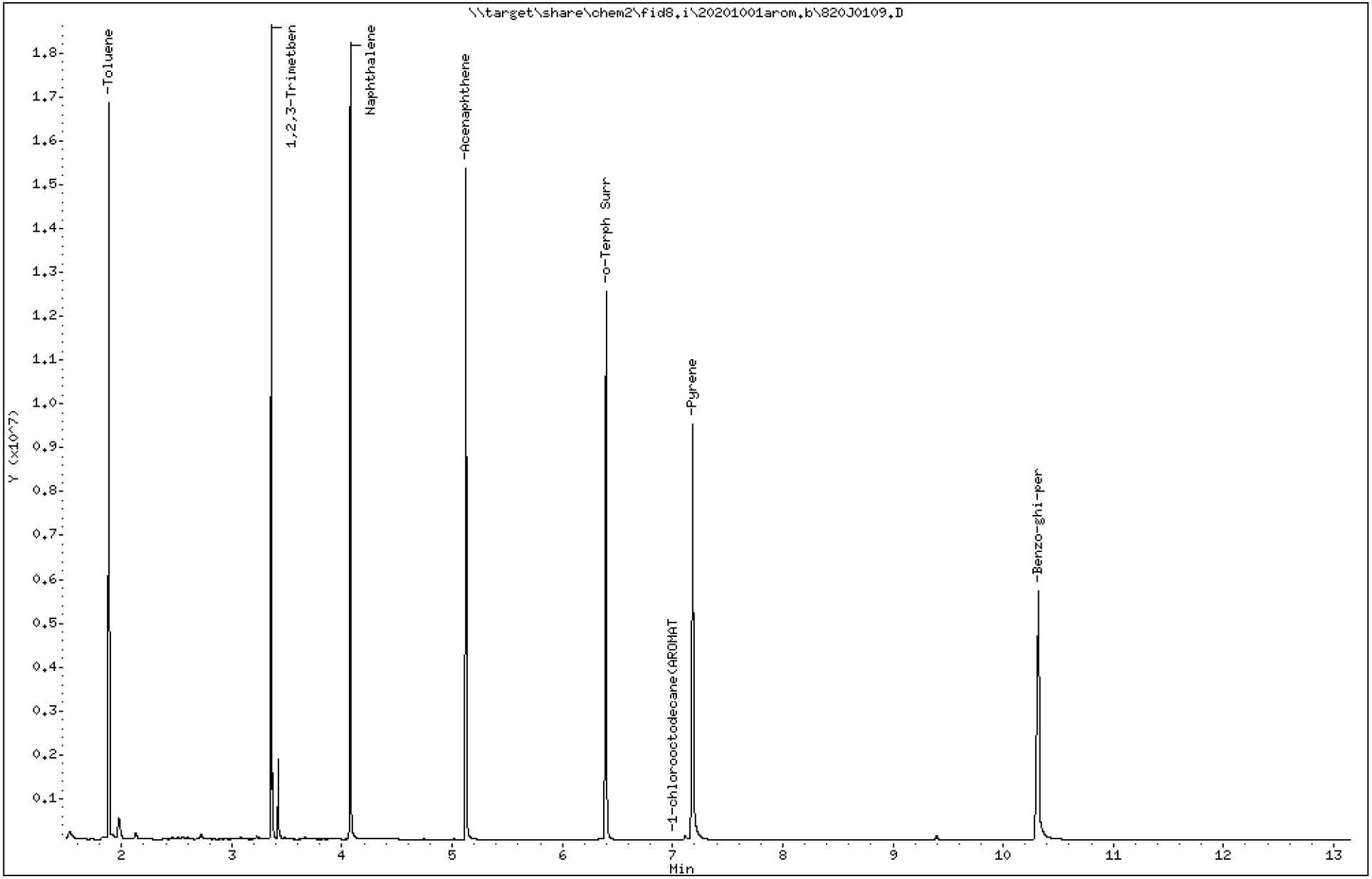
Instrument: fid8.i

Sample Info: 50AROM

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



EPH AROMATIC CALIBRATION REPORT

Lab Name: ANALYTICAL RESOURCES, INC. Lab ID: 50AROM

ICal Date: 01-OCT-2020 Instrument: FID8.I

Analysis Time: 21:41 Lab File Name: 820J0109.D

Quant Range		Area*	Conc
C8-C10	Arom.	19864827	92.7
C10-C12	Arom.	10827055	47.6
C12-C16	Arom.	10292755	47.0
C16-C21	Arom.	9562568	47.9
C21-C34	Arom.	9026865	47.5
Surrogate		10404619	47.4

* From Range Reference Peak(s)

Data File: \\target\share\chem2\fid8.i\20201001arom.b\820J0110.D

Date : 01-OCT-2020 22:07

Client ID:

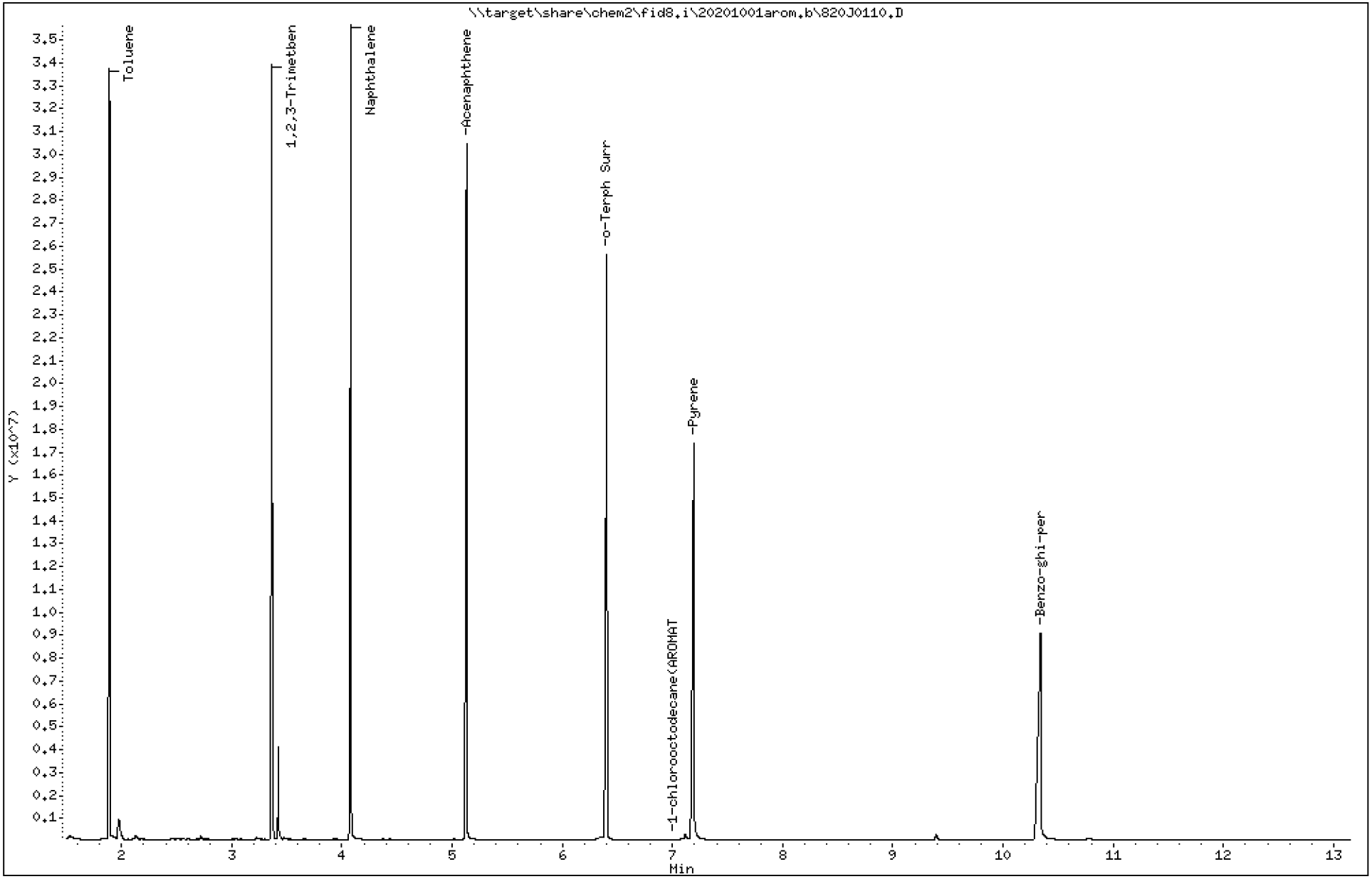
Instrument: fid8.i

Sample Info: 100AROM

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



EPH AROMATIC CALIBRATION REPORT

Lab Name: ANALYTICAL RESOURCES, INC. Lab ID: 100AROM

ICal Date: 01-OCT-2020 Instrument: FID8.I

Analysis Time: 22:07 Lab File Name: 820J0110.D

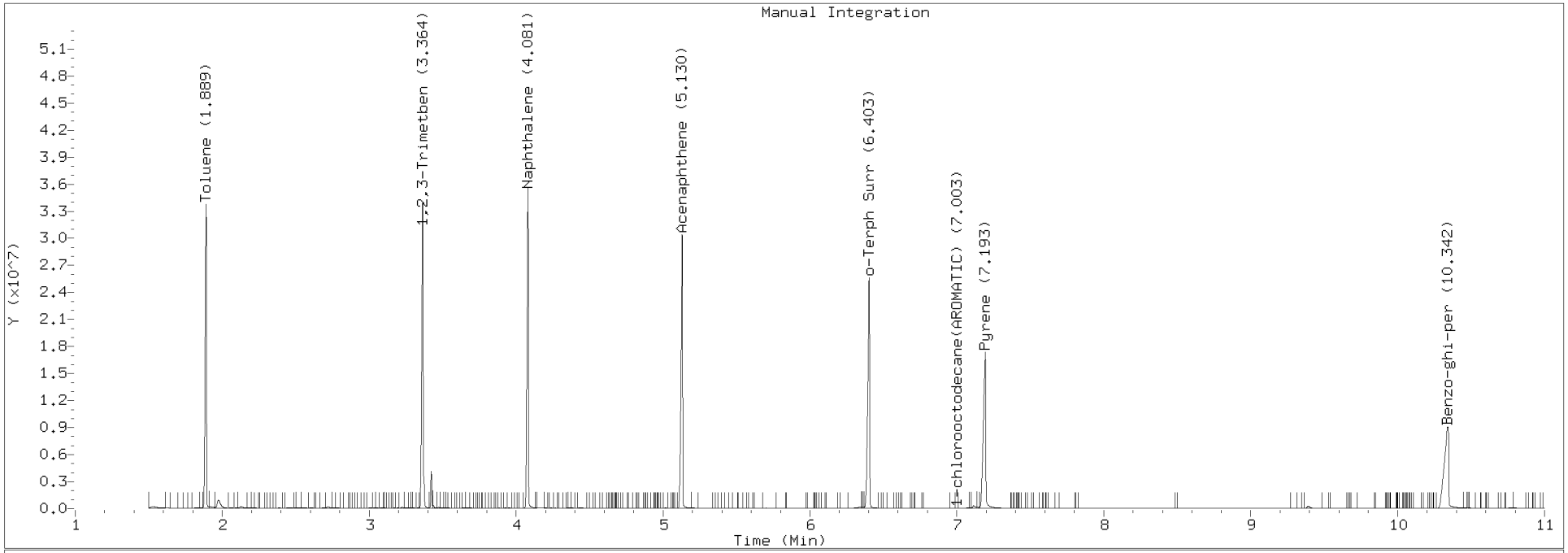
Quant Range		Area*	Conc
C8-C10	Arom.	43838545	204.3
C10-C12	Arom.	22921214	100.8
C12-C16	Arom.	22174890	101.2
C16-C21	Arom.	20322928	101.8
C21-C34	Arom.	19296272	101.4
Surrogate		22184280	101.0

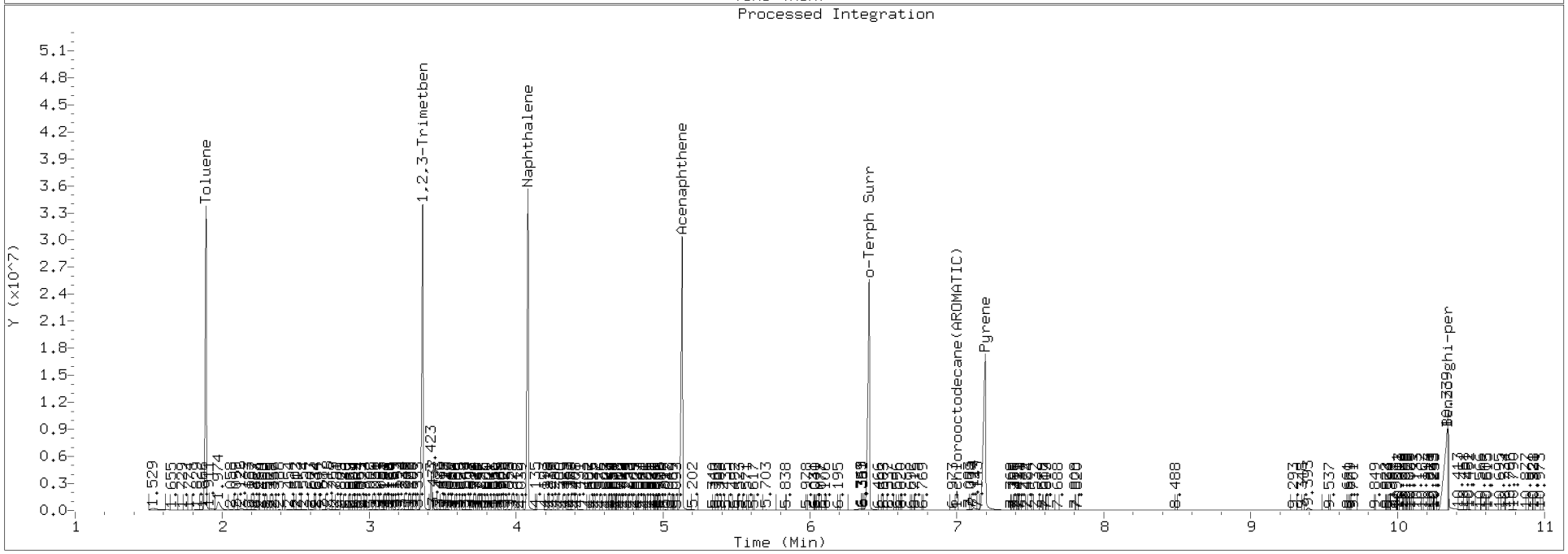
* From Range Reference Peak(s)

EPH Aromatics Manual Integrations Report

Datafile: FID8, 20201001arom.b/820J0110.D Injection: 01-OCT-2020 22:07

Lab ID:100AROM





Data File: \\target\share\chem2\fid8.i\20201001arom.b\820J0111.D

Date : 01-OCT-2020 22:32

Client ID:

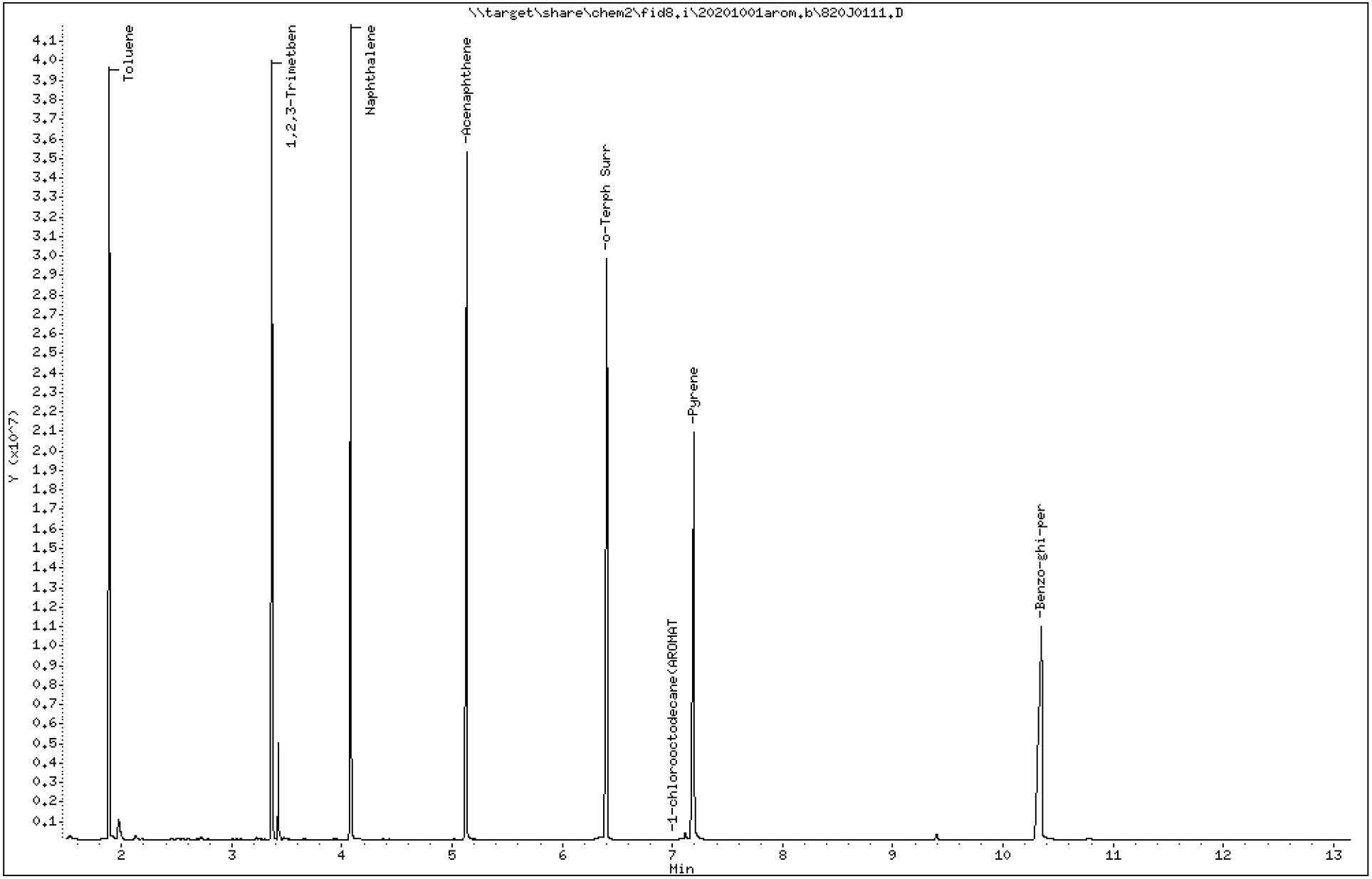
Instrument: fid8.i

Sample Info: 125AROM

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



EPH AROMATIC CALIBRATION REPORT

Lab Name: ANALYTICAL RESOURCES, INC. Lab ID: 125AROM

ICal Date: 01-OCT-2020 Instrument: FID8.I

Analysis Time: 22:32 Lab File Name: 820J0111.D

Quant Range		Area*	Conc
C8-C10	Arom.	53839388	250.9
C10-C12	Arom.	28020461	123.2
C12-C16	Arom.	27266098	124.4
C16-C21	Arom.	24653071	123.5
C21-C34	Arom.	23454396	123.3
Surrogate		27366622	124.6

* From Range Reference Peak(s)

Data File: \\target\share\chem2\fid8.i\20201001arom.b\820J0112.D

Date : 01-OCT-2020 22:57

Client ID:

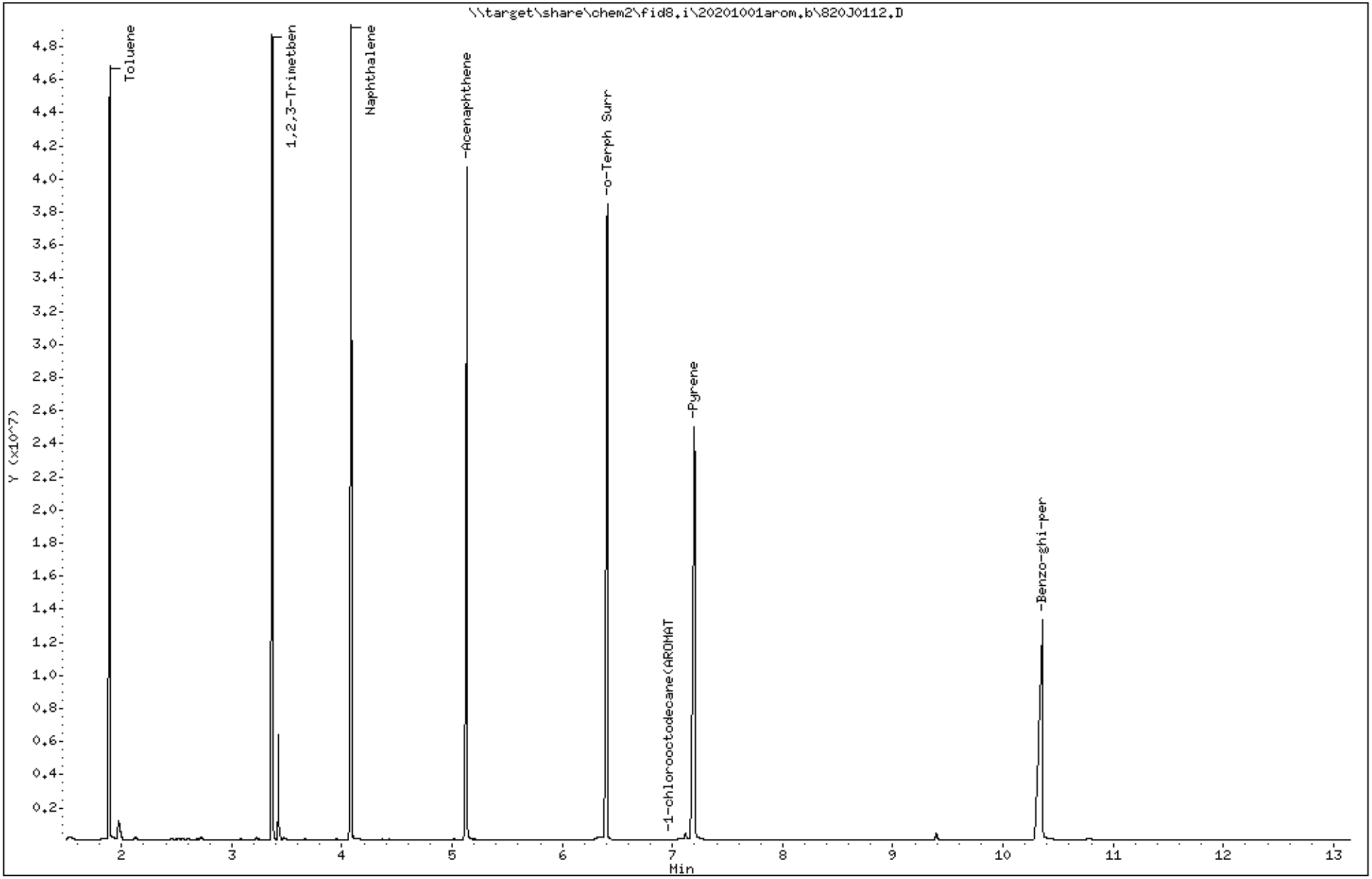
Instrument: fid8.i

Sample Info: 150AROM

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



EPH AROMATIC CALIBRATION REPORT

Lab Name: ANALYTICAL RESOURCES, INC. Lab ID: 150AROM

ICal Date: 01-OCT-2020 Instrument: FID8.I

Analysis Time: 22:57 Lab File Name: 820J0112.D

Quant Range		Area*	Conc
C8-C10	Arom.	68321514	318.4
C10-C12	Arom.	36126191	158.9
C12-C16	Arom.	35378805	161.4
C16-C21	Arom.	32190721	161.2
C21-C34	Arom.	30479246	160.2
Surrogate		35440907	161.3

* From Range Reference Peak(s)

Data File: \\target\share\chem2\fid8.i\20201001arom.b\820J0113.D

Date : 01-OCT-2020 23:23

Client ID:

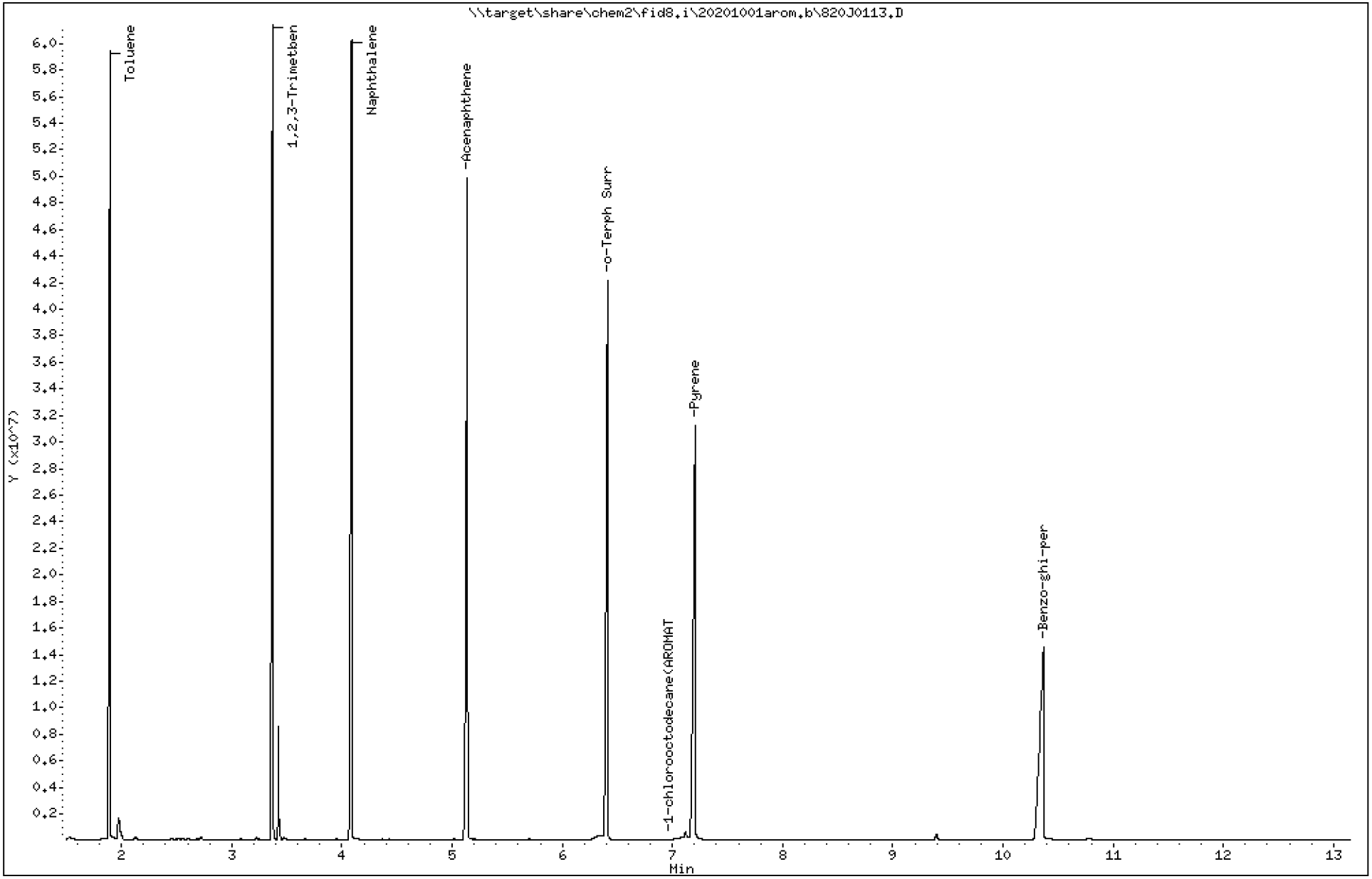
Instrument: fid8.i

Sample Info: 200AROM

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



EPH AROMATIC CALIBRATION REPORT

Lab Name: ANALYTICAL RESOURCES, INC. Lab ID: 200AROM

ICal Date: 01-OCT-2020 Instrument: FID8.I

Analysis Time: 23:23 Lab File Name: 820J0113.D

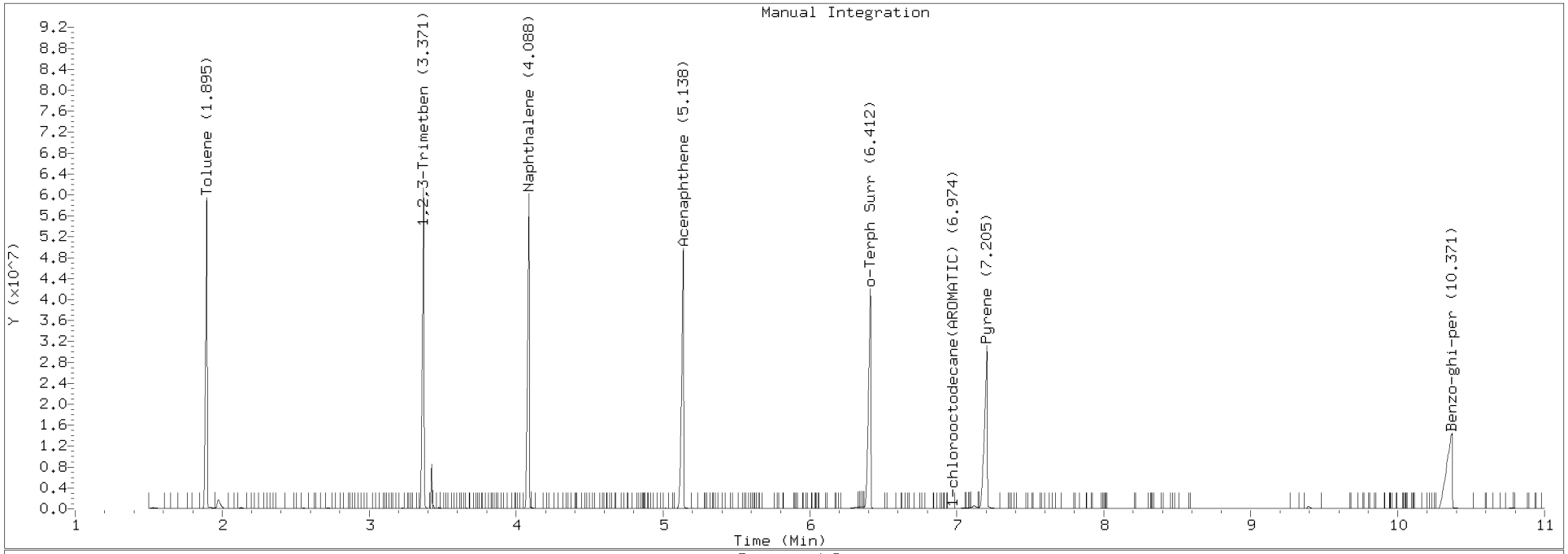
Quant Range		Area*	Conc
C8-C10	Arom.	91583324	426.8
C10-C12	Arom.	48052127	211.3
C12-C16	Arom.	46834541	213.7
C16-C21	Arom.	41455089	207.6
C21-C34	Arom.	39722566	208.8
Surrogate		46327076	210.9

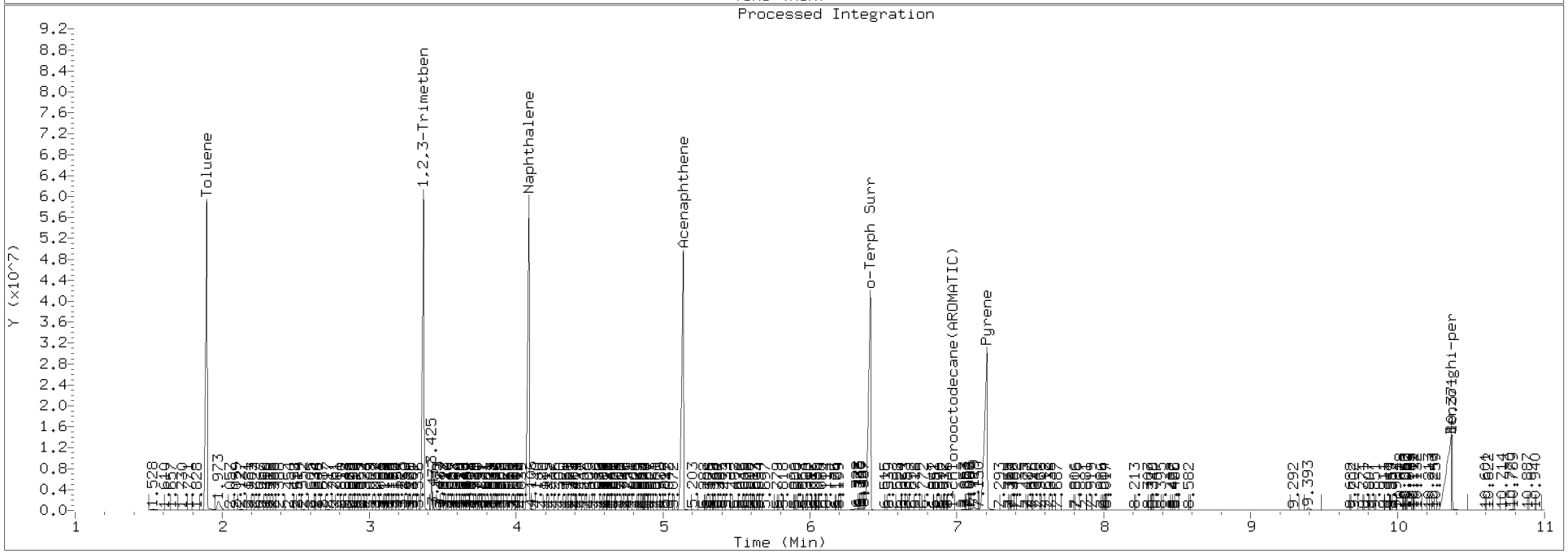
* From Range Reference Peak(s)

EPH Aromatics Manual Integrations Report

Datafile: FID8, 20201001arom.b/820J0113.D Injection: 01-OCT-2020 23:23

Lab ID:200AROM





Data File: \\target\share\chem2\fid8.i\20201001arom.b\820J0114.D

Date : 01-OCT-2020 23:48

Client ID:

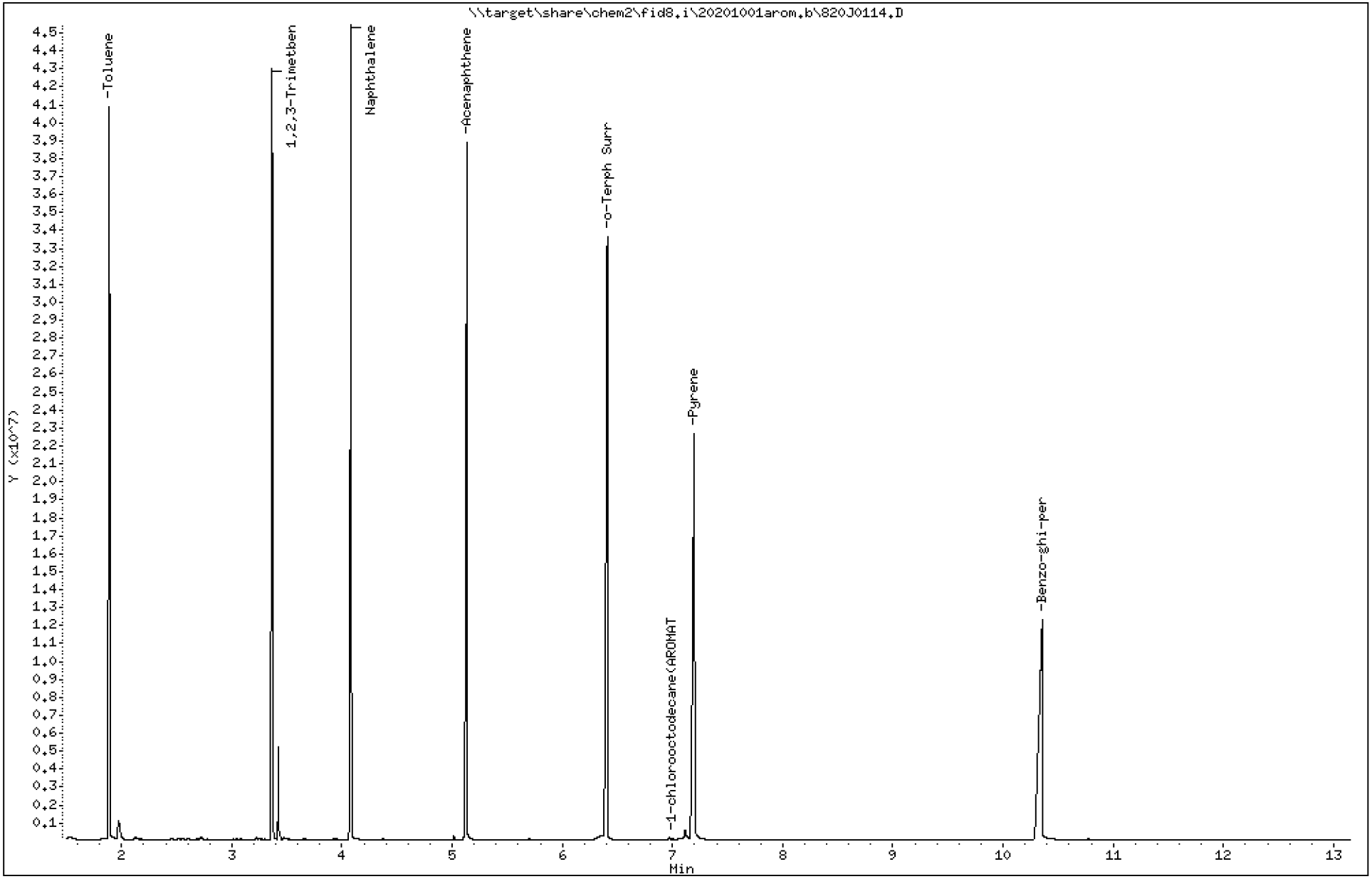
Instrument: fid8.i

Sample Info: AROMSCV1

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA-EPH Aromatics Report

Data file: 20201001arom.b/820J0114.D
Method: 20201001arom.b\EPHArom.m
Instrument: fid8.i
Operator: JGR
Report Date: 10/05/2020
Macro: AROM120911FID8

ARI ID: AROMSCV1
Client ID:
Injection: 01-OCT-2020 23:48
Matrix: NONE
Dilution Factor: 1

EPH-AROMATIC RESULTS

Quant Range		RF	Area	Conc	Time Range
C8-C10	Arom.	214480	64104813	298.9	(1.789 - 3.457)
C10-C12	Arom.	227376	32593872	143.3	(3.457 - 4.186)
C12-C16	Arom.	219143	31578494	144.1	(4.186 - 5.237)
C16-C21	Arom.	199698	30919014	154.8	(5.237 - 7.304)
C21-C34	Arom.	190205	27644405	145.3	(7.304 - 10.453)

Surrogate Rec: 104.4% 156.6 ug/mL

Data File: \\target\share\chem2\fid8.i\20201001aliph.b\820J0115.D

Date : 02-OCT-2020 00:13

Client ID:

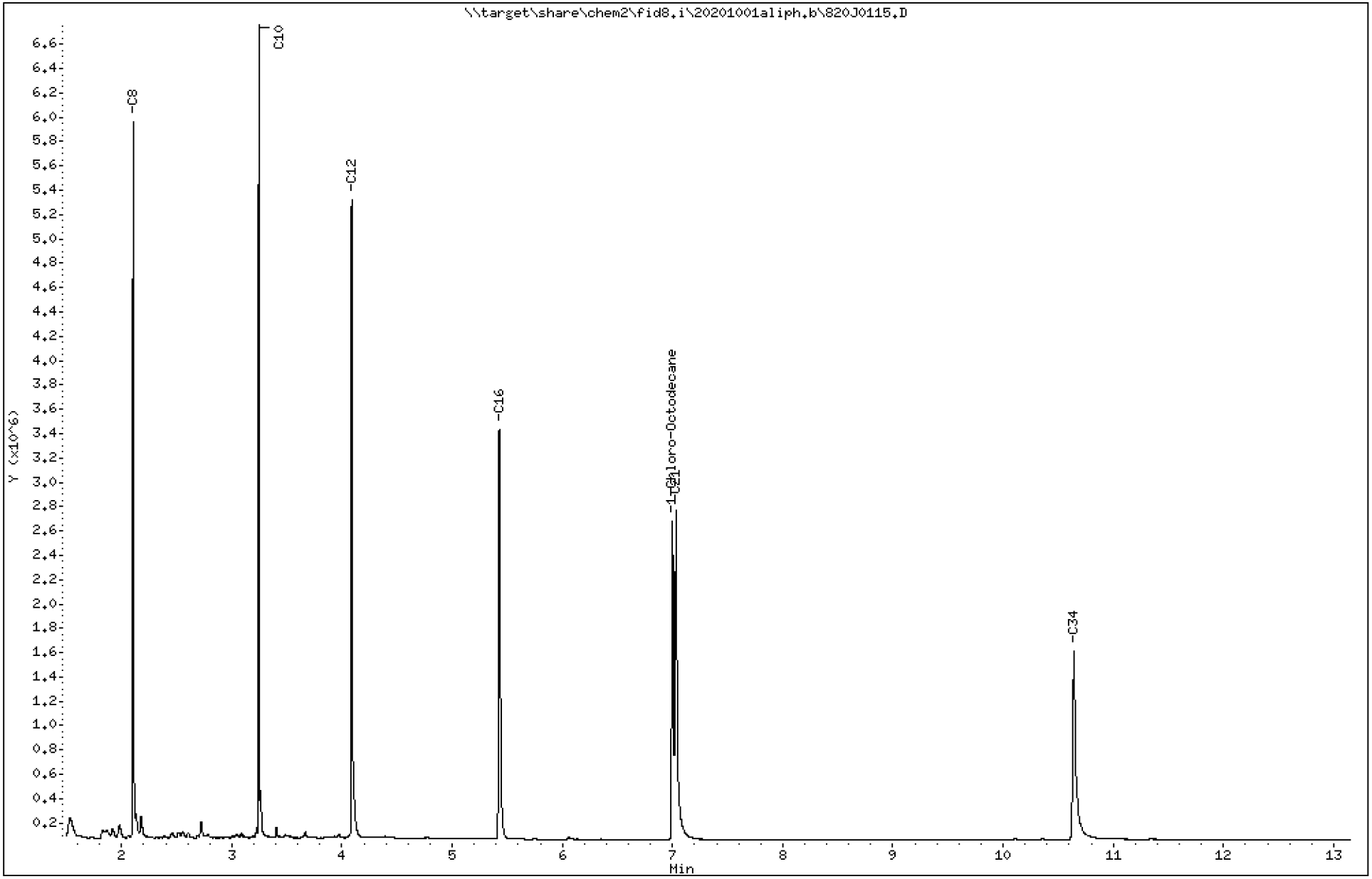
Instrument: fid8.i

Sample Info: 20ALIPH

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



EPH ALIPHATIC CALIBRATION REPORT

Lab Name: ANALYTICAL RESOURCES, INC. Lab ID: 20ALIPH

ICal Date: 02-OCT-2020 Instrument: FID8.I

Analysis Time: 00:13 Lab File Name: 820J0115.D

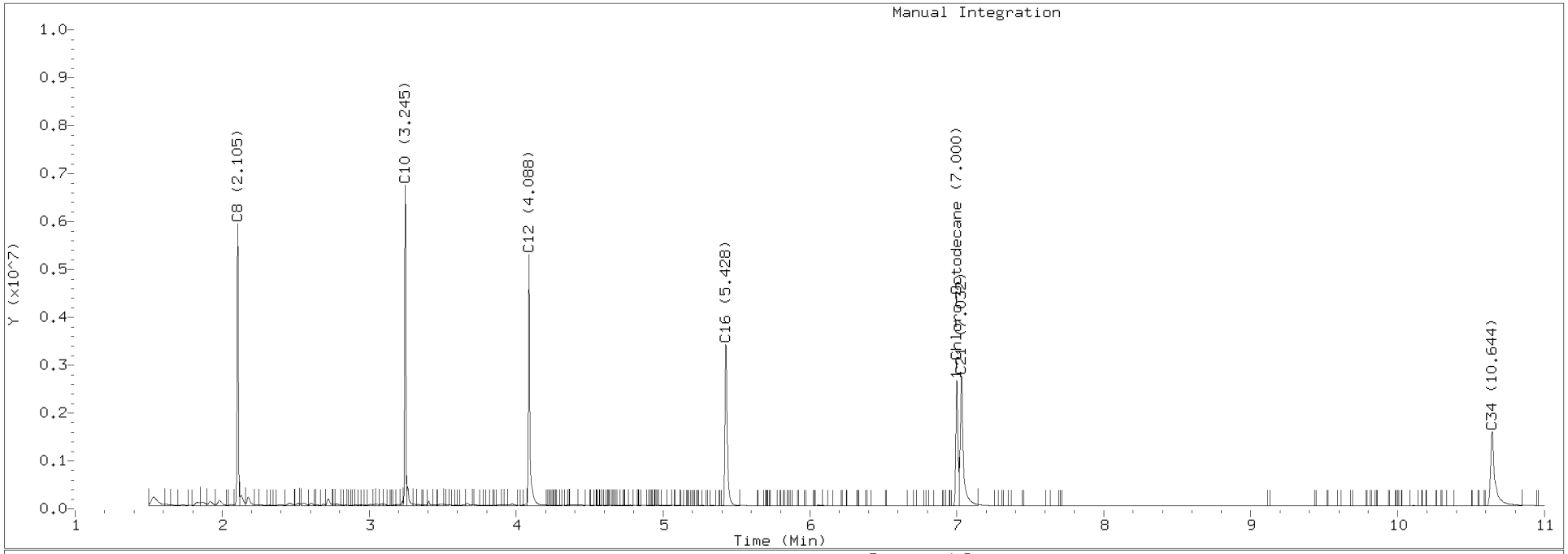
Quant Range		Area*	Conc
C8-C10	Aliph.	7055161	36.7
C10-C12	Aliph.	3904943	19.0
C12-C16	Aliph.	3748415	18.5
C16-C21	Aliph.	4047810	20.8
C21-C34	Aliph.	3332321	18.6
Surrogate		2646266	15.7

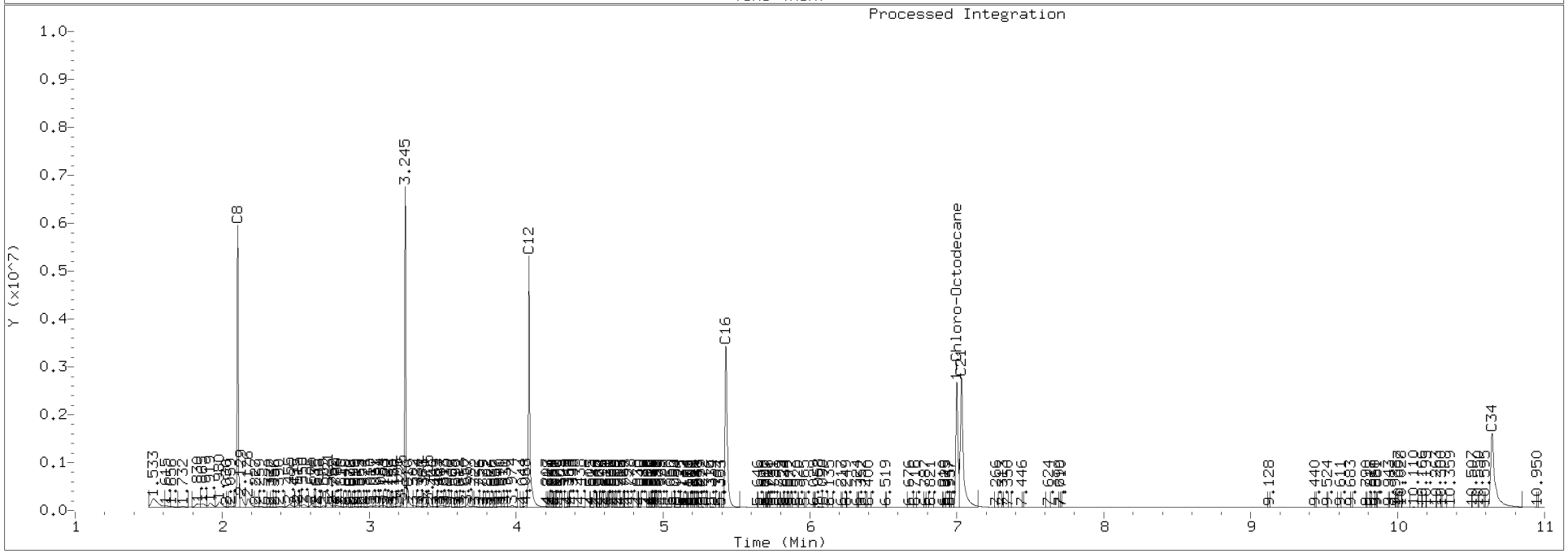
* From Range Reference Peak(s)

EPH Aliphatics Manual Integrations Report

Datafile: FID8, 20201001aliph.b/820J0115.D Injection: 02-OCT-2020 00:13

Lab ID:20ALIPH





Data File: \\target\share\chem2\fid8.i\20201001aliph.b\820J0116.D

Date : 02-OCT-2020 00:39

Client ID:

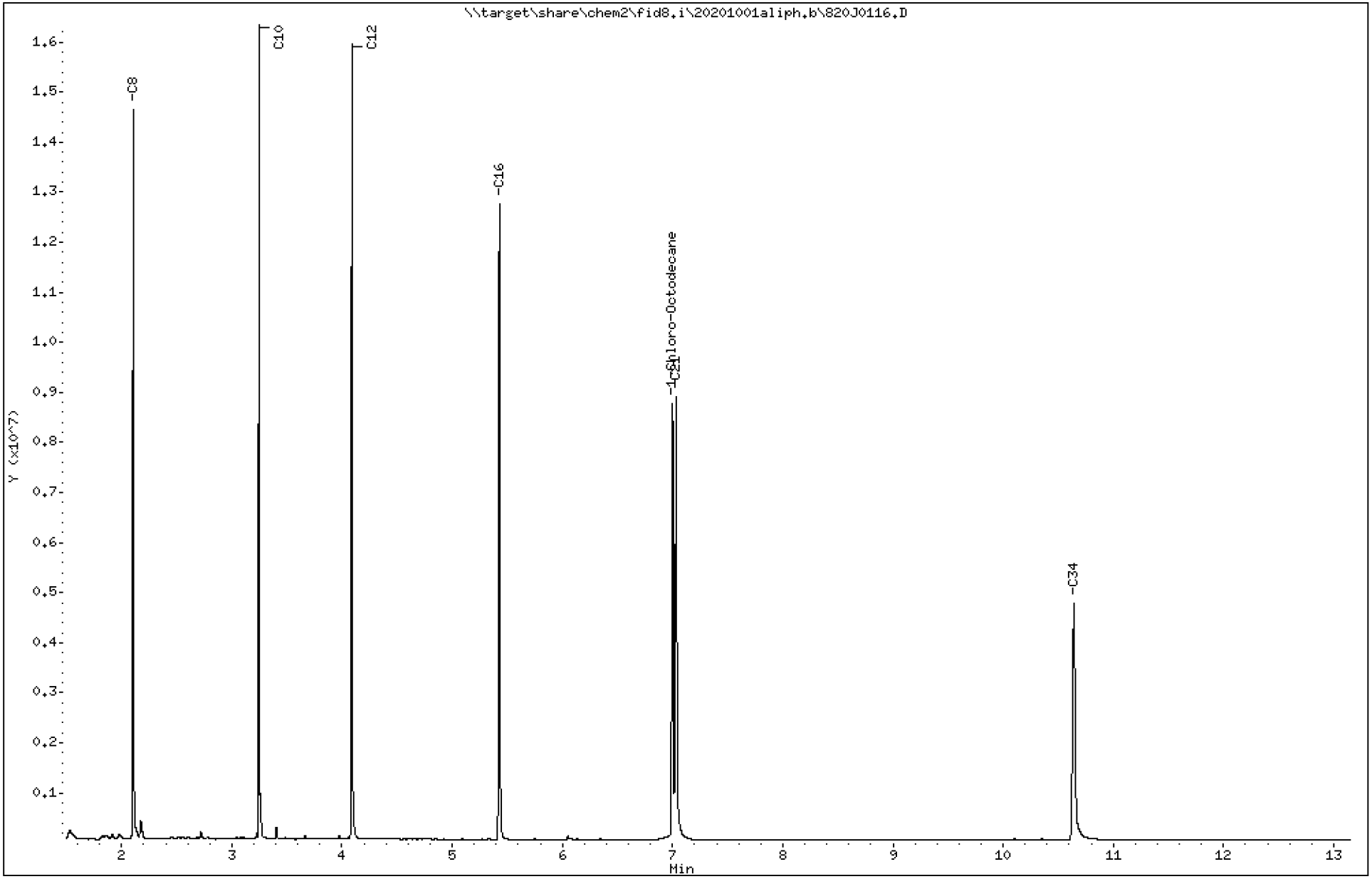
Instrument: fid8.i

Sample Info: 50ALPIH

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



EPH ALIPHATIC CALIBRATION REPORT

Lab Name: ANALYTICAL RESOURCES, INC. Lab ID: 50ALPIH

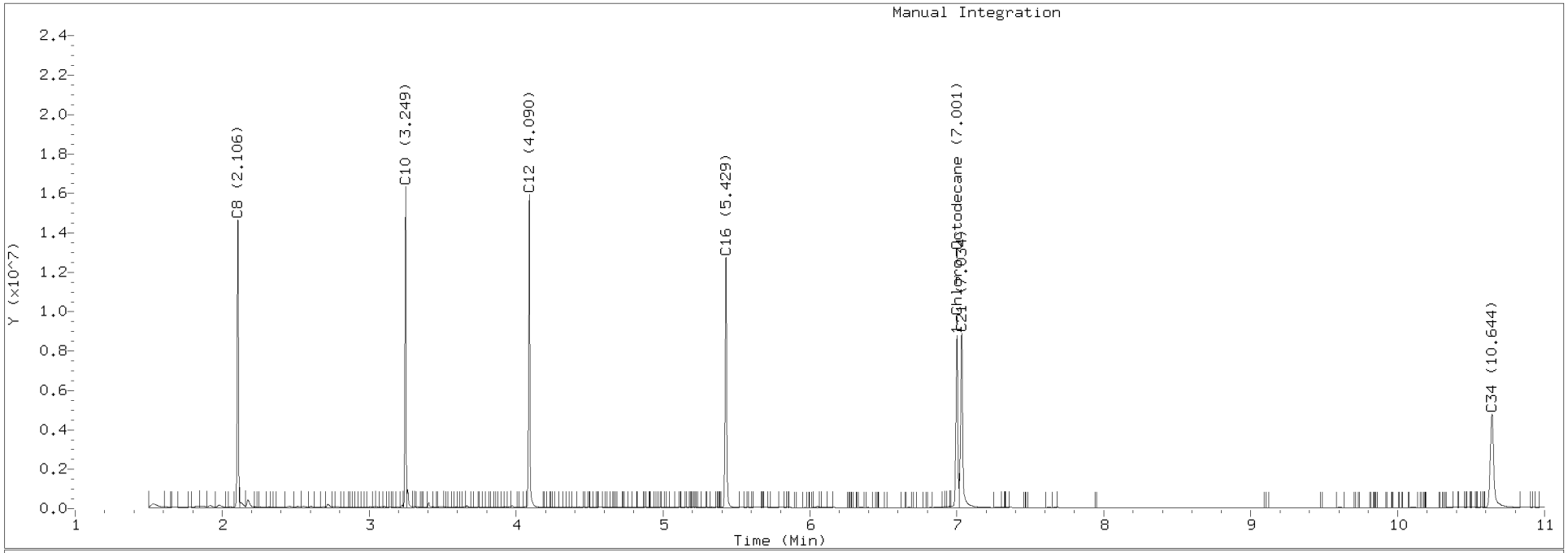
ICal Date: 02-OCT-2020 Instrument: FID8.I

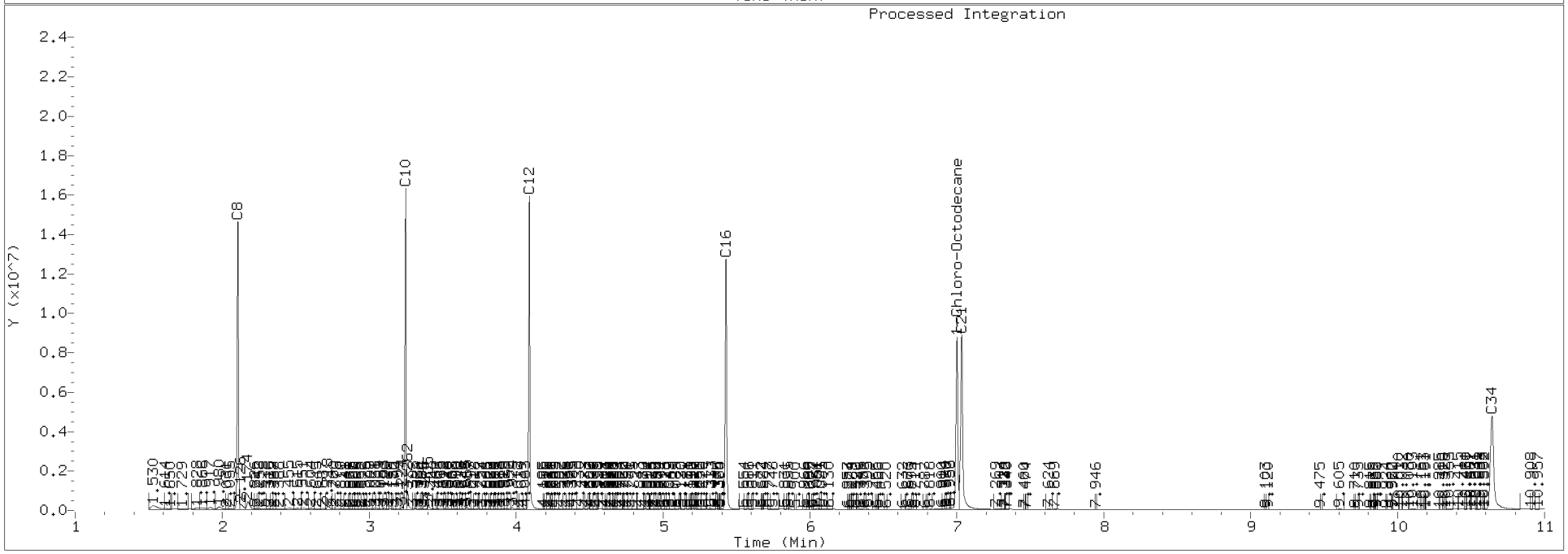
Analysis Time: 00:39 Lab File Name: 820J0116.D

Quant Range		Area*	Conc
C8-C10	Aliph.	17627010	91.6
C10-C12	Aliph.	9545076	46.5
C12-C16	Aliph.	9382326	46.3
C16-C21	Aliph.	9416813	48.3
C21-C34	Aliph.	8354165	46.7
Surrogate		7669940	45.6

* From Range Reference Peak(s)

EPH Aliphatics Manual Integrations Report
Datafile: FID8, 20201001aliph.b/820J0116.D Injection: 02-OCT-2020 00:39
Lab ID:50ALPIH





Data File: \\target\share\chem2\fid8.i\20201001aliph.b\820J0117.D

Date : 02-OCT-2020 01:04

Client ID:

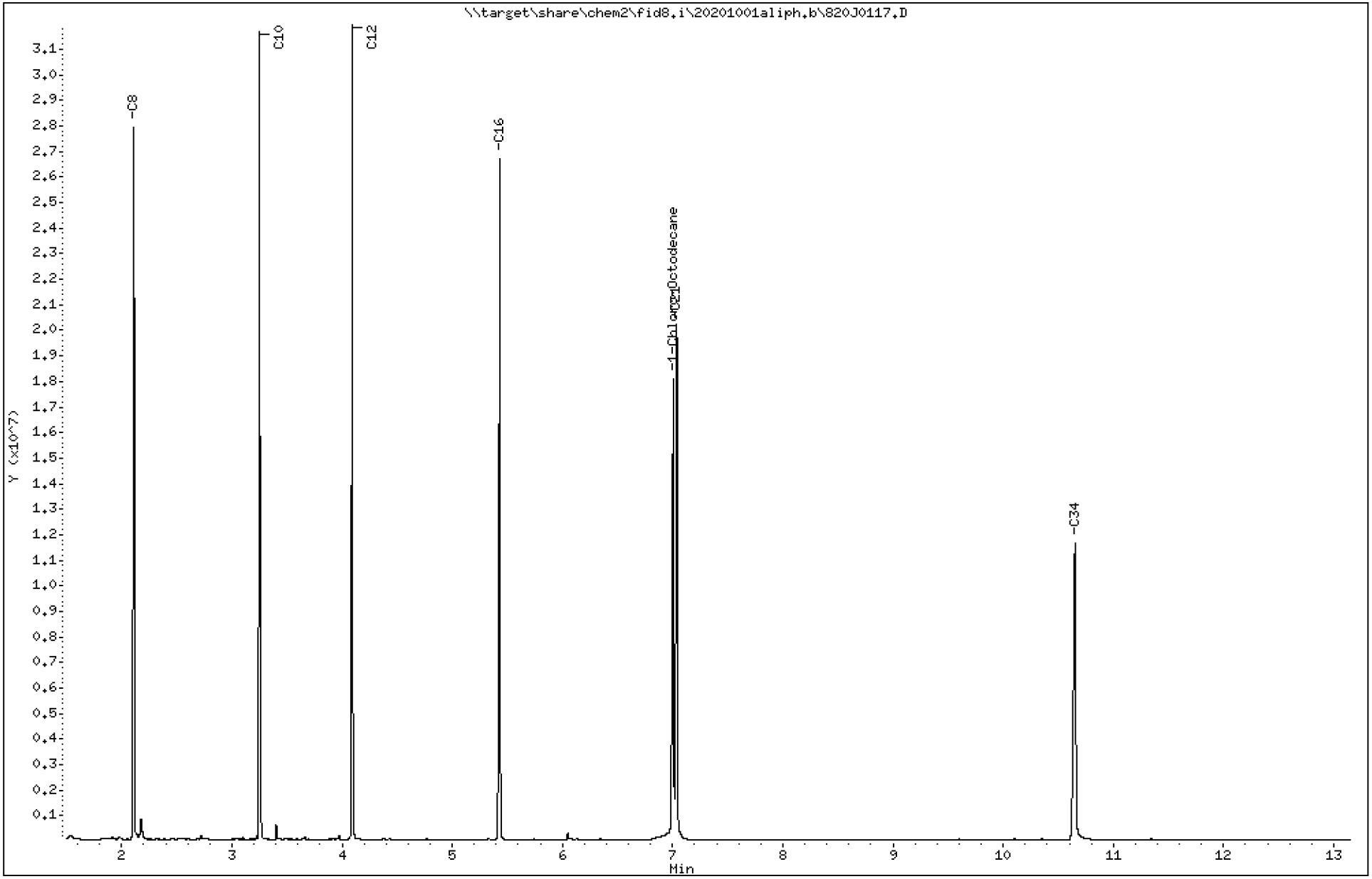
Instrument: fid8.i

Sample Info: 100ALIPH

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



EPH ALIPHATIC CALIBRATION REPORT

Lab Name: ANALYTICAL RESOURCES, INC. Lab ID: 100ALIPH

ICal Date: 02-OCT-2020 Instrument: FID8.I

Analysis Time: 01:04 Lab File Name: 820J0117.D

Quant Range		Area*	Conc
C8-C10	Aliph.	38899569	202.0
C10-C12	Aliph.	20696656	100.8
C12-C16	Aliph.	20643972	102.0
C16-C21	Aliph.	19424591	99.6
C21-C34	Aliph.	18220942	101.8
Surrogate		17496683	104.1

* From Range Reference Peak(s)

Data File: \\target\share\chem2\fid8.i\20201001aliph.b\820J0118.D

Date : 02-OCT-2020 01:29

Client ID:

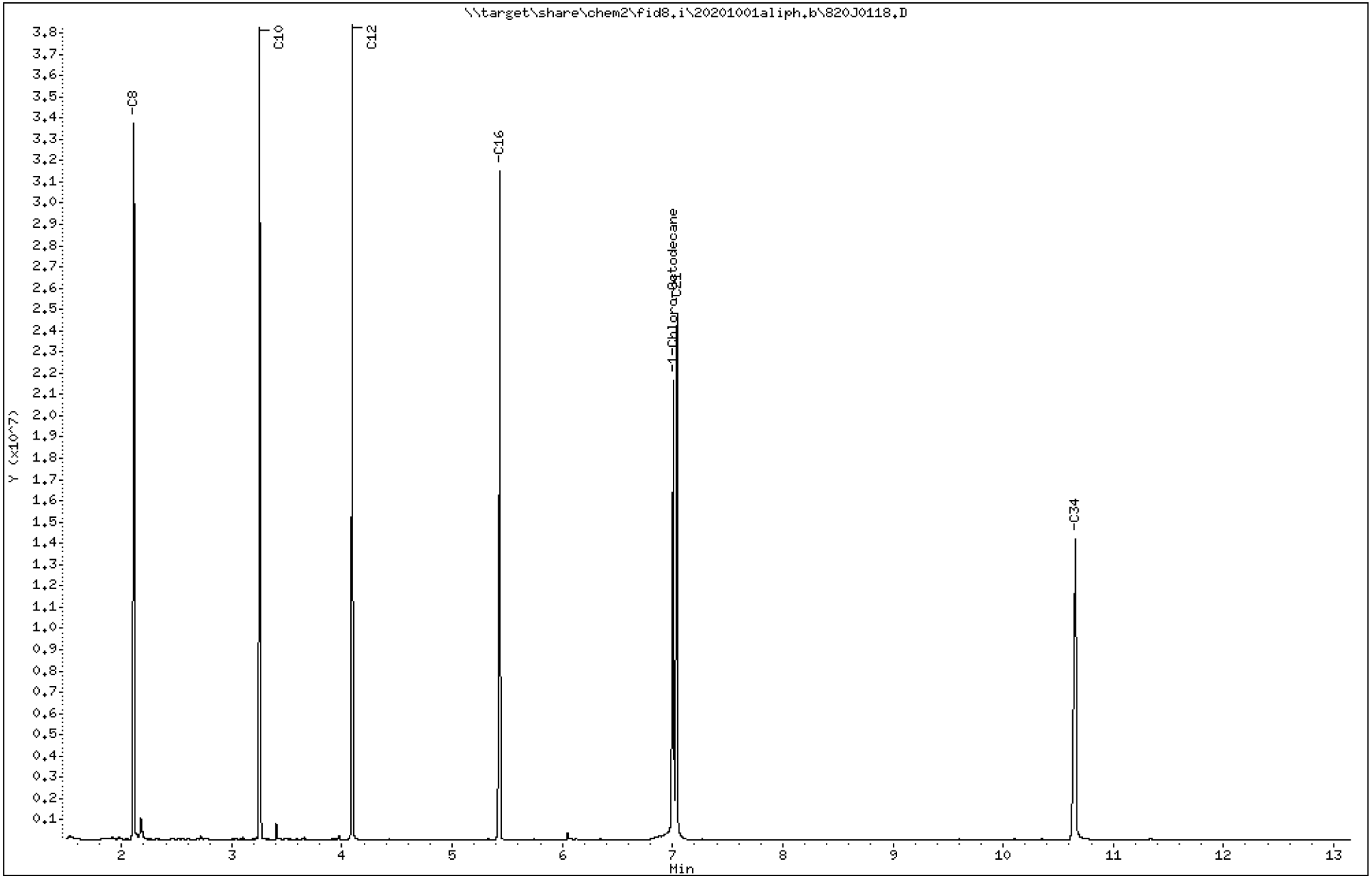
Instrument: fid8.i

Sample Info: 125ALIPH

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



EPH ALIPHATIC CALIBRATION REPORT

Lab Name: ANALYTICAL RESOURCES, INC. Lab ID: 125ALIPH

ICal Date: 02-OCT-2020 Instrument: FID8.I

Analysis Time: 01:29 Lab File Name: 820J0118.D

Quant Range		Area*	Conc
C8-C10	Aliph.	49525474	257.2
C10-C12	Aliph.	25516440	124.3
C12-C16	Aliph.	25101340	124.0
C16-C21	Aliph.	23780069	121.9
C21-C34	Aliph.	22633357	126.4
Surrogate		21668625	129.0

* From Range Reference Peak(s)

Data File: \\target\share\chem2\fid8.i\20201001aliph.b\820J0119.D

Date : 02-OCT-2020 01:54

Client ID:

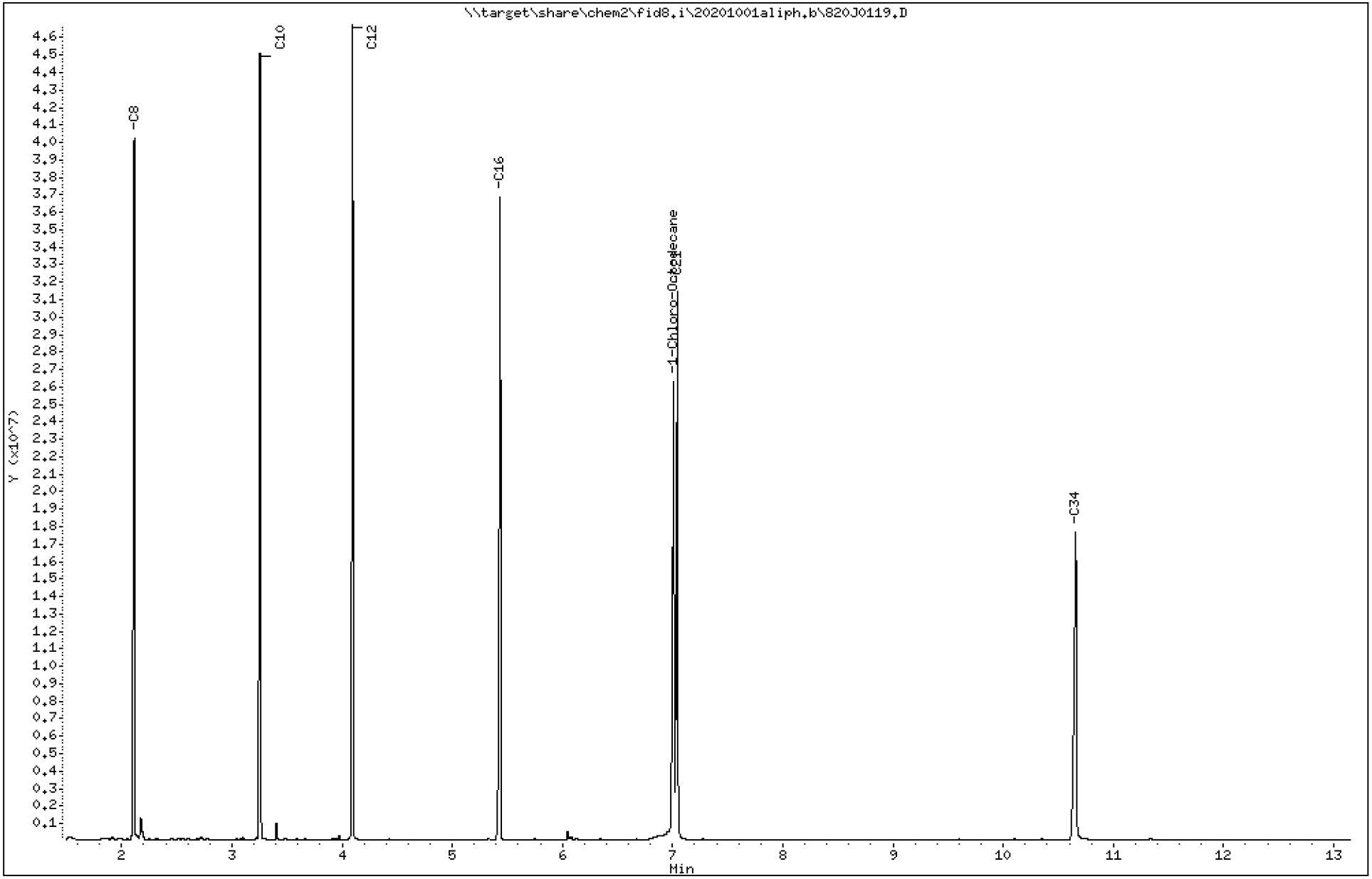
Instrument: fid8.i

Sample Info: 150ALIPH

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



EPH ALIPHATIC CALIBRATION REPORT

Lab Name: ANALYTICAL RESOURCES, INC. Lab ID: 150ALIPH

ICal Date: 02-OCT-2020 Instrument: FID8.I

Analysis Time: 01:54 Lab File Name: 820J0119.D

Quant Range		Area*	Conc
C8-C10	Aliph.	61999370	321.9
C10-C12	Aliph.	32654331	159.1
C12-C16	Aliph.	32508557	160.6
C16-C21	Aliph.	30045631	154.0
C21-C34	Aliph.	27941927	156.1
Surrogate		27816978	165.6

* From Range Reference Peak(s)

Data File: \\target\share\chem2\fid8.i\20201001aliph.b\820J0120.D

Date : 02-OCT-2020 02:19

Client ID:

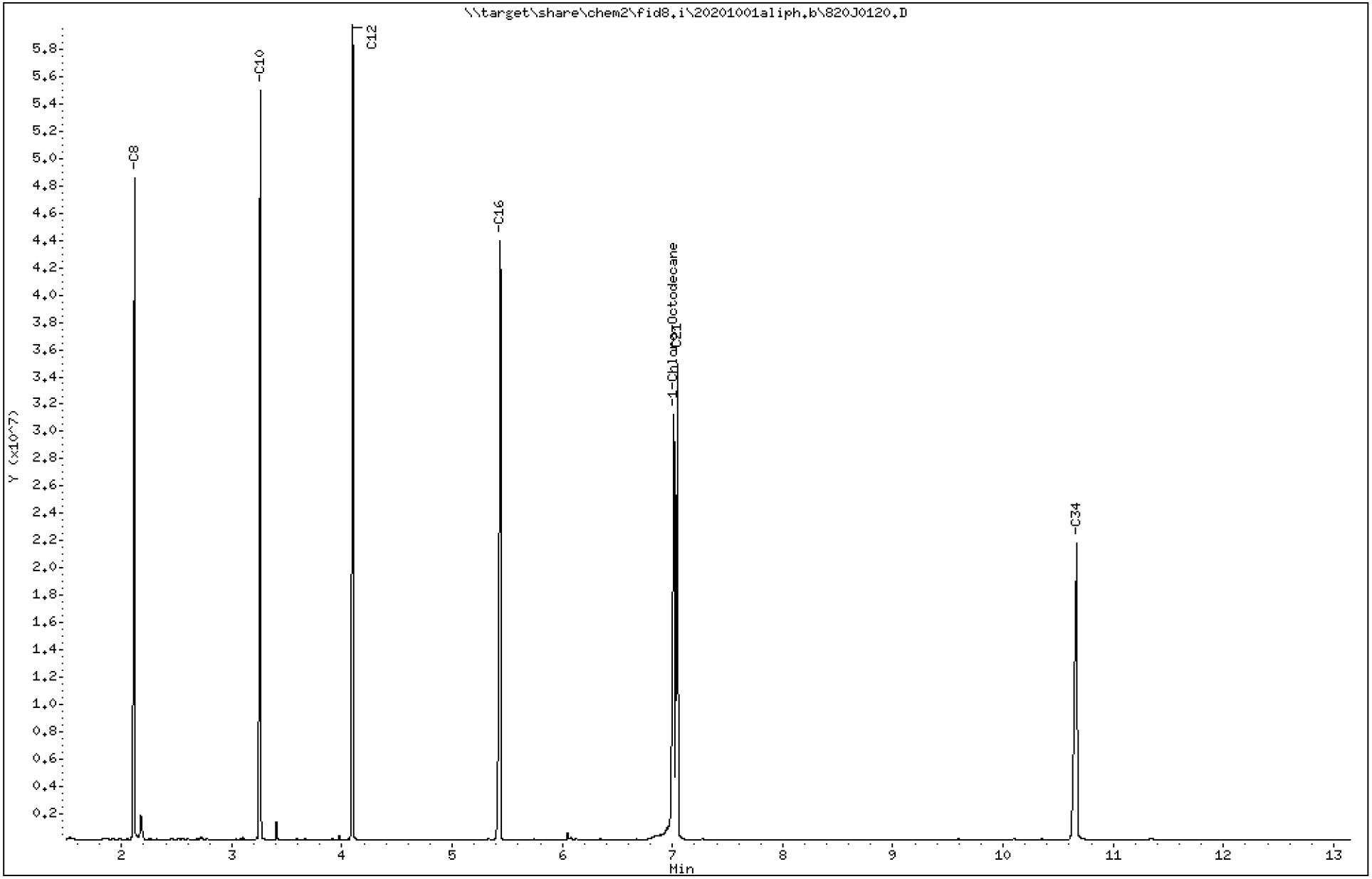
Instrument: fid8.i

Sample Info: 200ALIPH

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



EPH ALIPHATIC CALIBRATION REPORT

Lab Name: ANALYTICAL RESOURCES, INC. Lab ID: 200ALIPH

ICal Date: 02-OCT-2020 Instrument: FID8.I

Analysis Time: 02:19 Lab File Name: 820J0120.D

Quant Range		Area*	Conc
C8-C10	Aliph.	81286980	422.0
C10-C12	Aliph.	43375398	211.3
C12-C16	Aliph.	43135136	213.1
C16-C21	Aliph.	38959755	199.7
C21-C34	Aliph.	38178185	213.3
Surrogate		37729526	224.6

* From Range Reference Peak(s)

Data File: \\target\share\chem2\fid8.i\20201001aliph.b\820J0121.D

Date : 02-OCT-2020 02:45

Client ID:

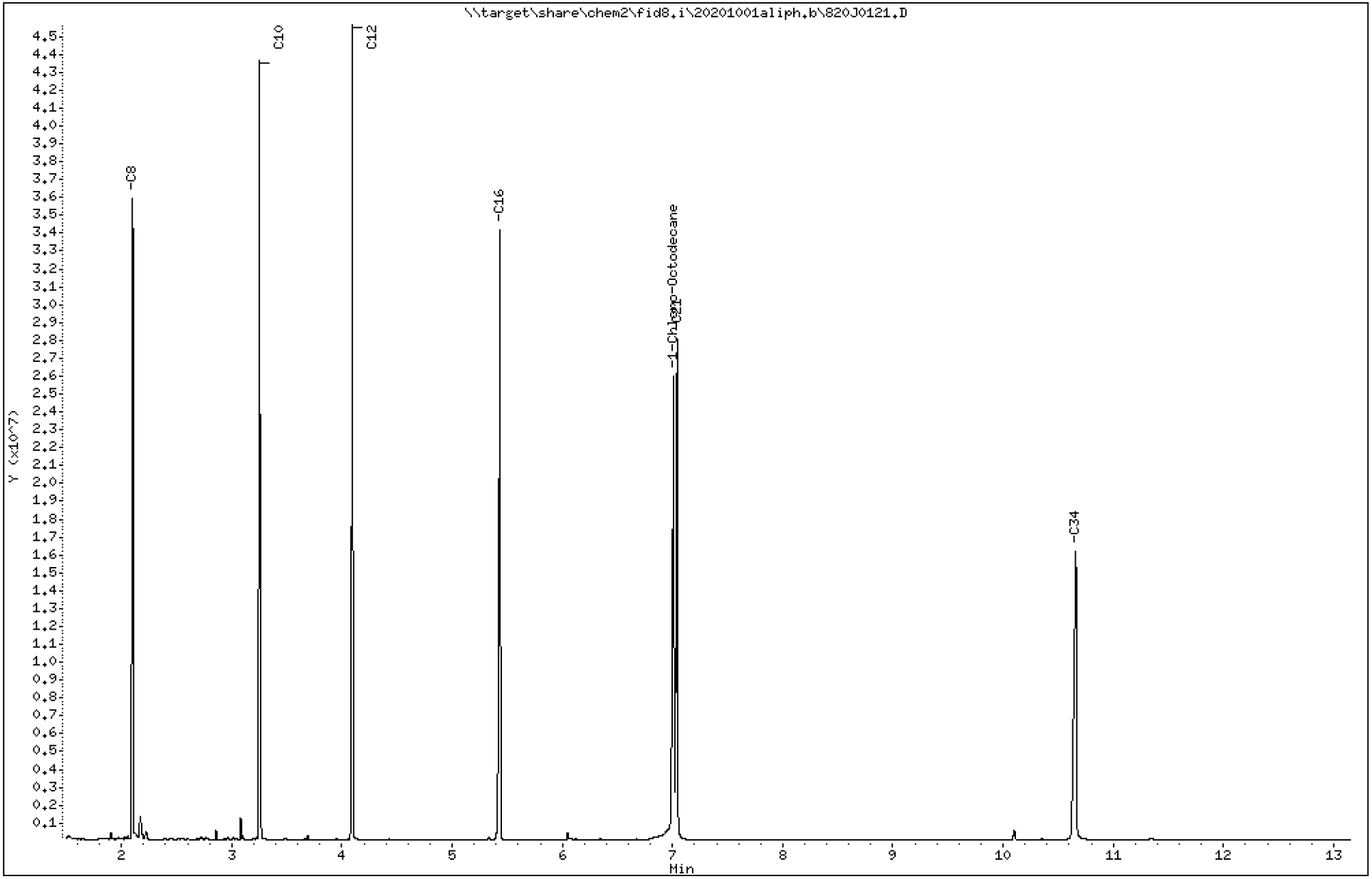
Instrument: fid8.i

Sample Info: ALIPHSC2

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201001aliph.b/820J0121.D
Method: 20201001aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: ALIPHSC2
Client ID:
Injection: 02-OCT-2020 02:45
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

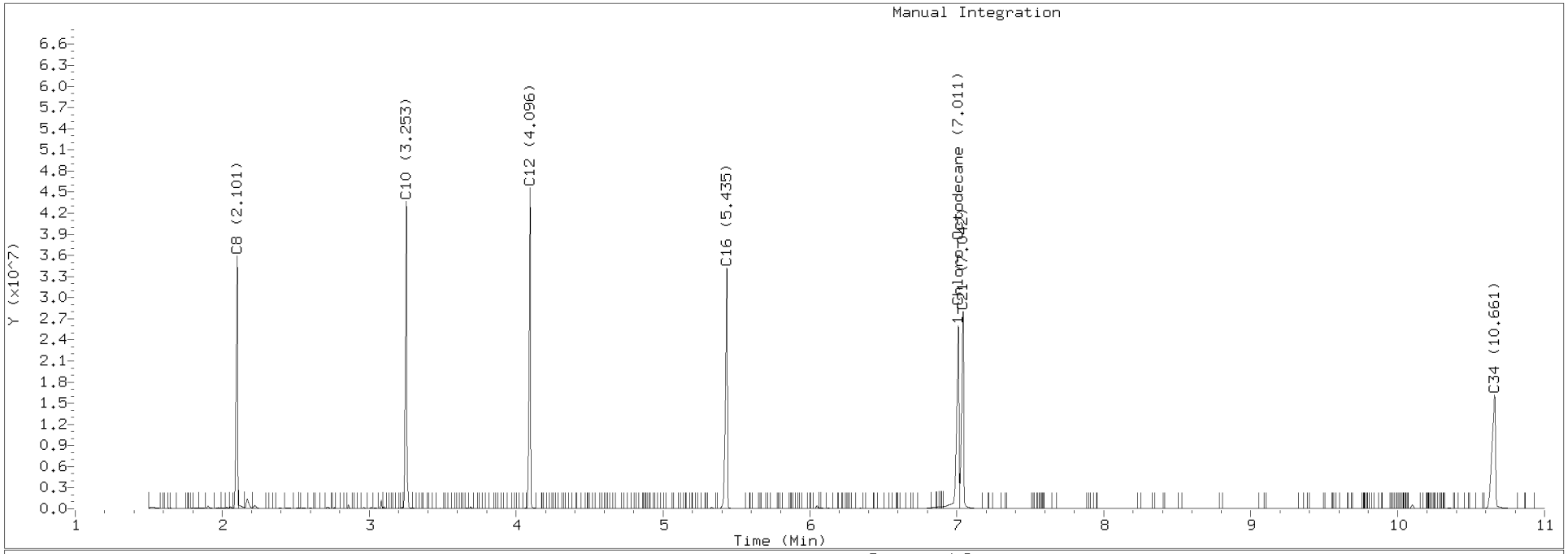
Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	61966510	321.9	(2.018 - 3.359)
C10-C12	Aliph.	31342373	152.7	(3.359 - 4.199)
C12-C16	Aliph.	31575101	156.0	(4.199 - 5.538)
C16-C21	Aliph.	29727101	152.4	(5.538 - 7.147)
C21-C34	Aliph.	28321380	158.2	(7.147 - 10.769)

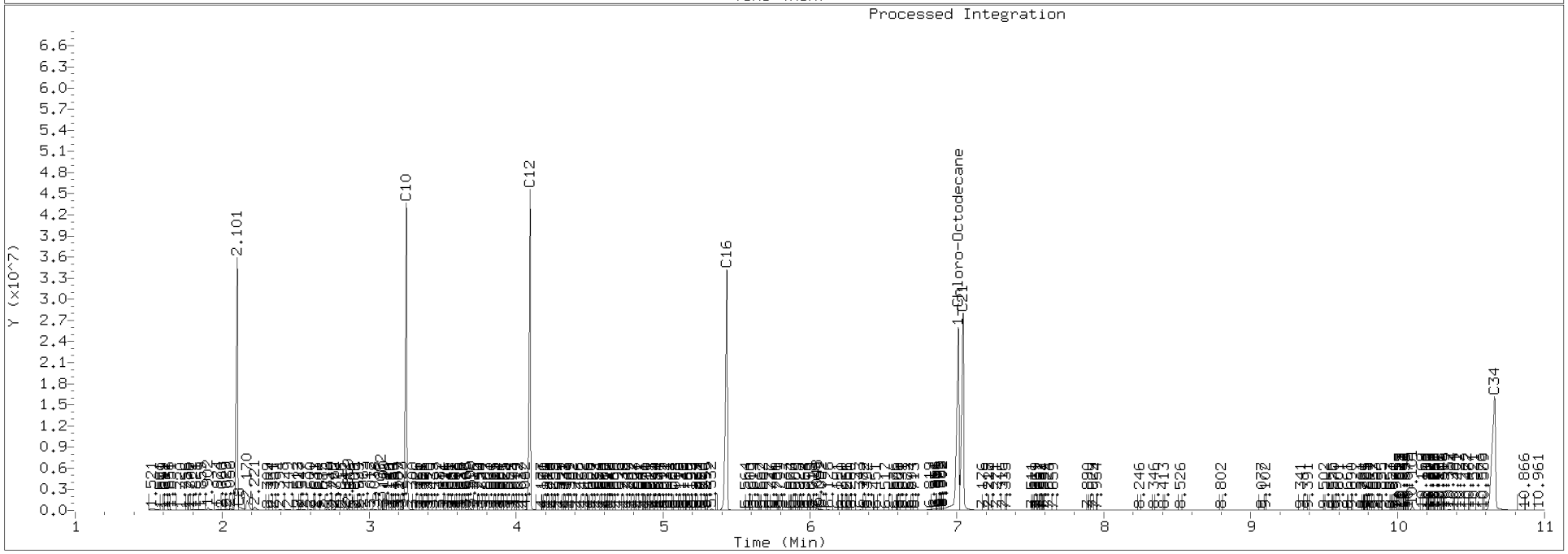
Surrogate Rec: 116.1% 174.2 ug/mL

EPH Aliphatics Manual Integrations Report

Datafile: FID8, 20201001aliph.b/820J0121.D Injection: 02-OCT-2020 02:45

Lab ID:ALIPHSC2





Analytical Resources, Incorporated
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

WA EPH

Laboratory: Analytical Resources, Inc.
Client: Anchor QEA, LLC
Calibration: DJ00015
Sequence: SIJ0055

SDG: 20K0073
Project: Gasco Siltronic
Laboratory ID: SIJ0055-SCV2
Sequence Name: ALIPH SCV
Standard ID: I005686

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
C10-C12 Aliphatics	125.00	153	22.2	30.00
1-Chloro-octadecane	125.00	174	39.4 *	30.00

* Indicates values outside of QC limits

Data File: \\target\share\chem2\fid8.i\20201001aliph.b\820J0121.D

Date : 02-OCT-2020 02:45

Client ID:

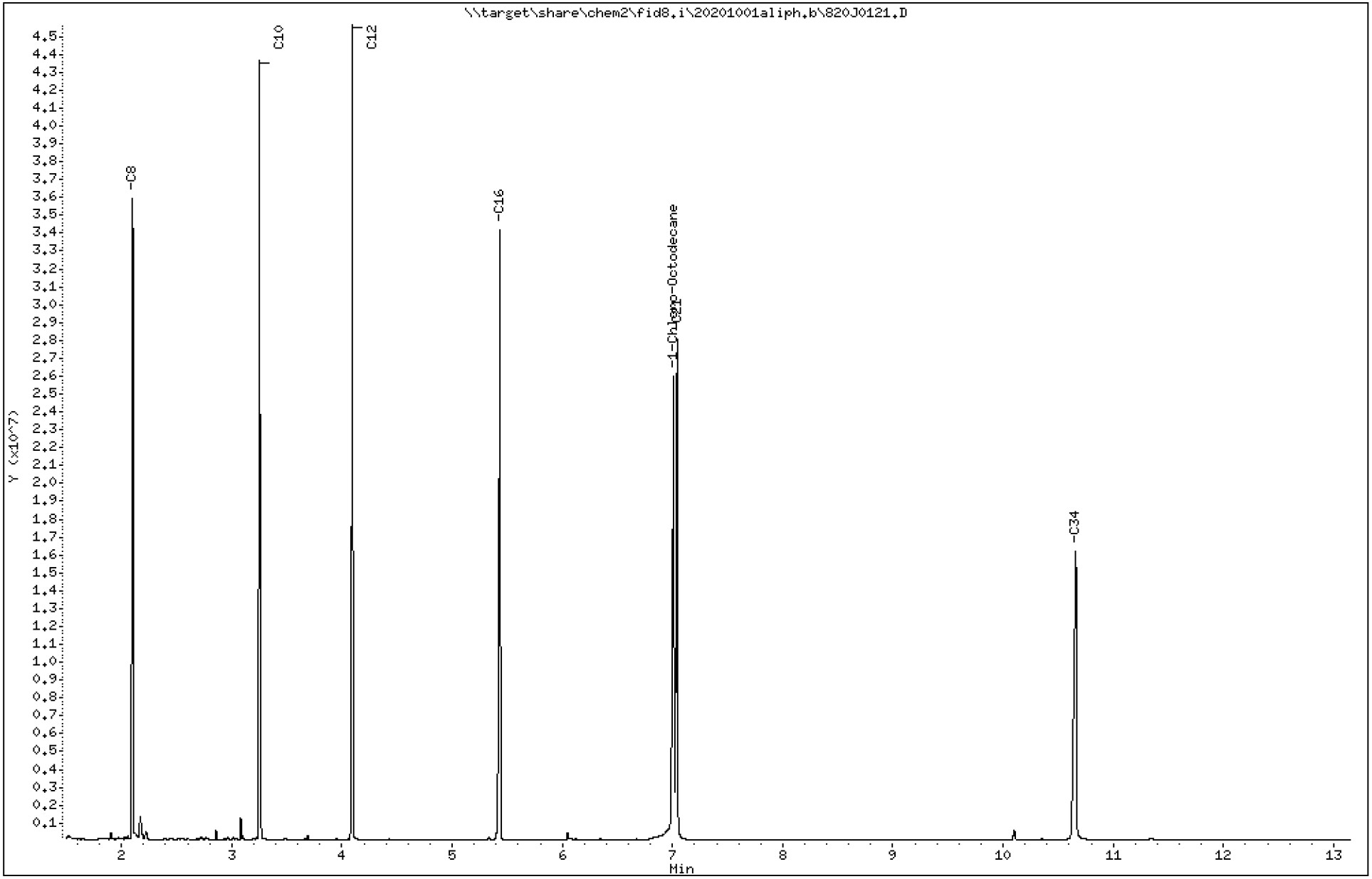
Instrument: fid8.i

Sample Info: ALIPHSC2

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201001aliph.b/820J0121.D
Method: 20201001aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: ALIPHSC2
Client ID:
Injection: 02-OCT-2020 02:45
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

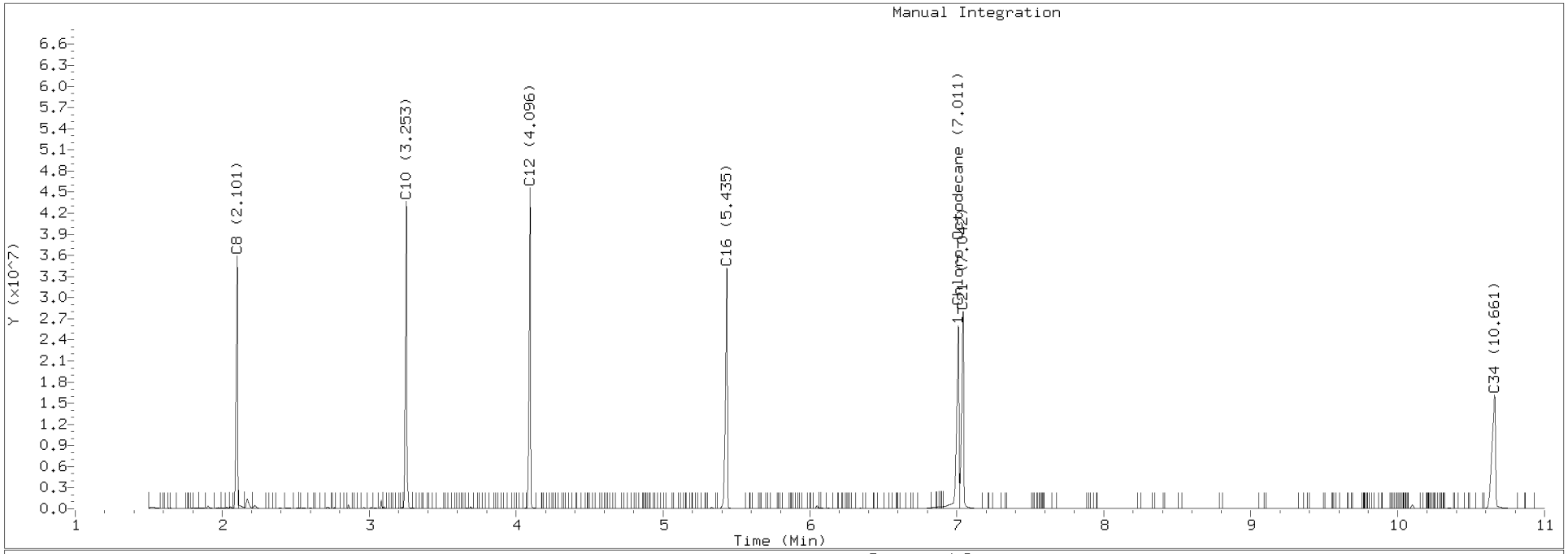
Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	61966510	321.9	(2.018 - 3.359)
C10-C12	Aliph.	31342373	152.7	(3.359 - 4.199)
C12-C16	Aliph.	31575101	156.0	(4.199 - 5.538)
C16-C21	Aliph.	29727101	152.4	(5.538 - 7.147)
C21-C34	Aliph.	28321380	158.2	(7.147 - 10.769)

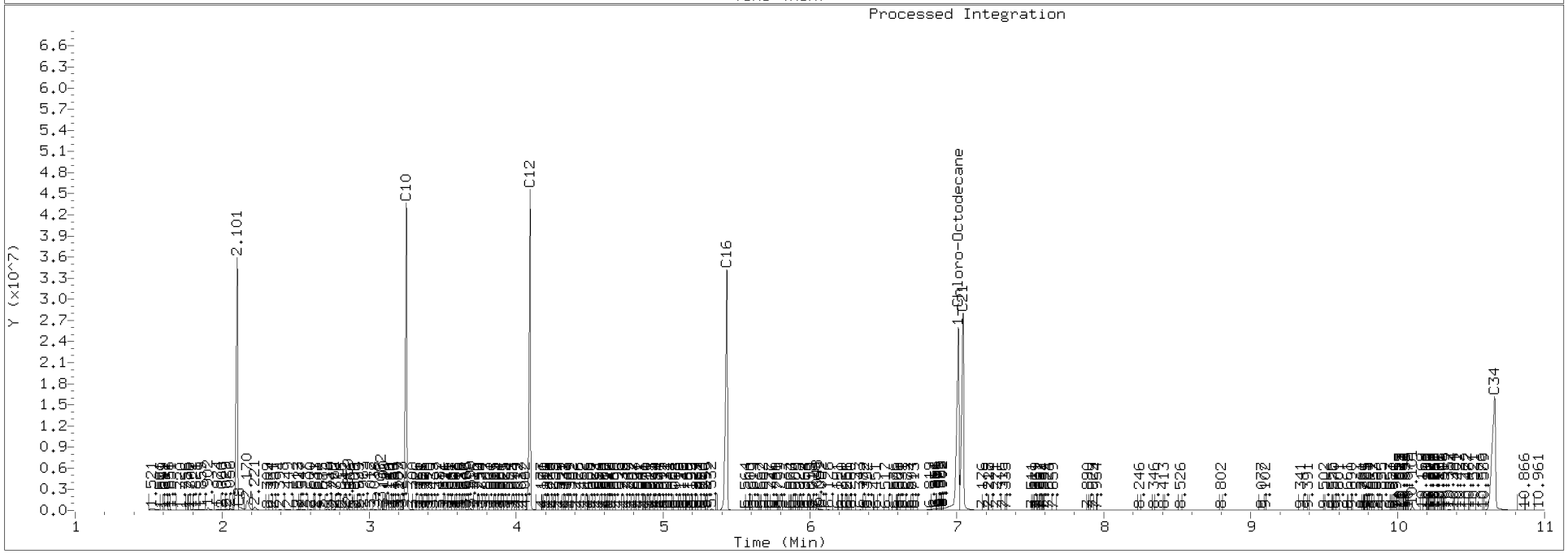
Surrogate Rec: 116.1% 174.2 ug/mL

EPH Aliphatics Manual Integrations Report

Datafile: FID8, 20201001aliph.b/820J0121.D Injection: 02-OCT-2020 02:45

Lab ID:ALIPHSC2





Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	FID8	Calibration:	DJ00015
Lab File ID:	820L1004.D	Calibration Date:	10/01/2020
Sequence:	SIL0284	Injection Date:	12/10/20
Lab Sample ID:	SIL0284-ICV1	Injection Time:	21:46
Sequence Name:	ALIPHATICS		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
C10-C12 Aliphatics	A	125.00	114	205303.2000	187793.4000		-8.6	+/-20
1-Chloro-octadecane	A	125.00	113	168020.3000	151342.6000		-9.9	+/-20

* Values outside of QC limits

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1004.D

Date : 10-DEC-2020 21:46

Client ID:

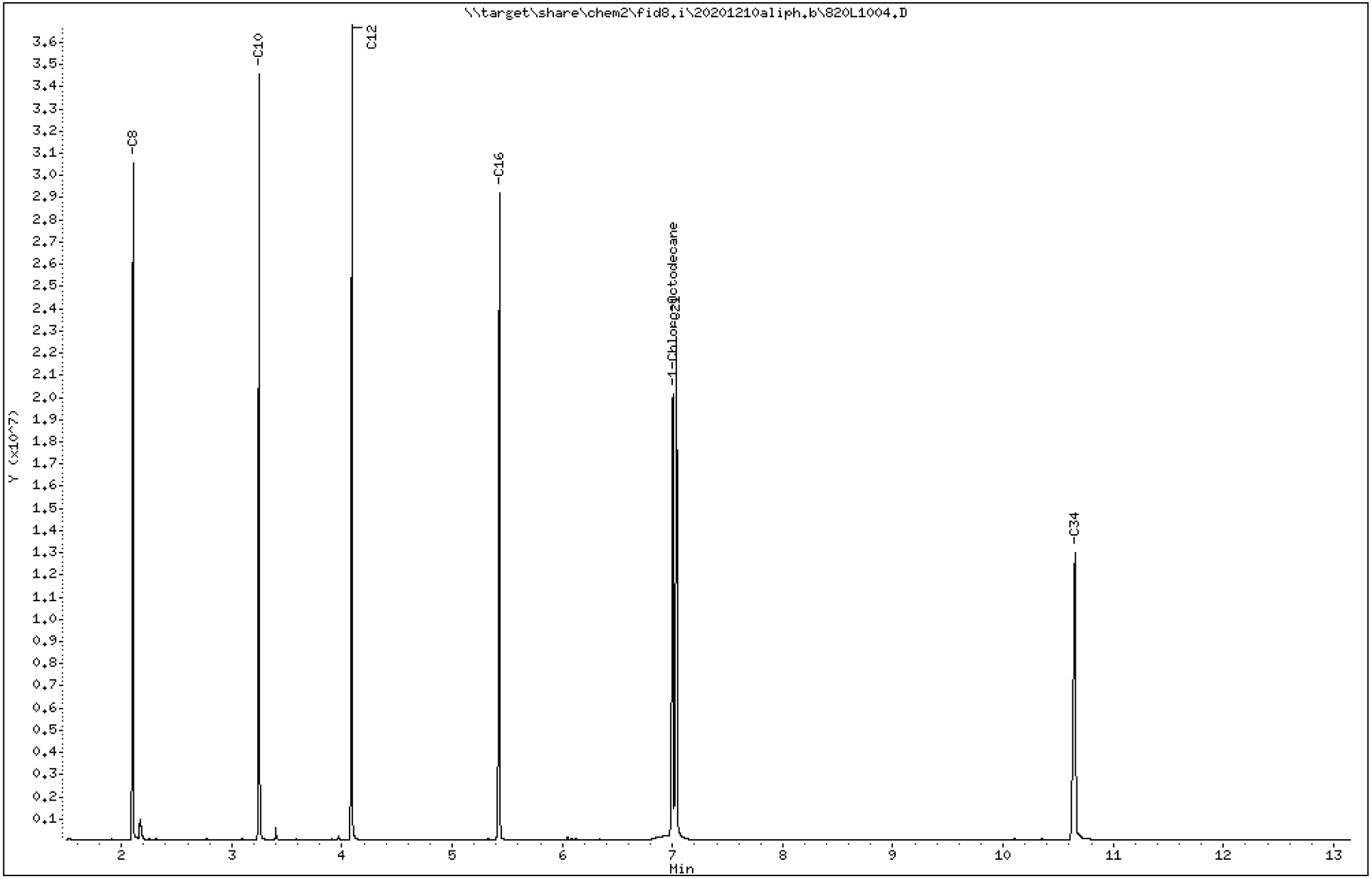
Instrument: fid8.i

Sample Info: ALIPHICV1

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1004.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: ALIPHICV1
Client ID:
Injection: 10-DEC-2020 21:46
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	45294418	235.3	(2.006 - 3.349)
C10-C12	Aliph.	23474184	114.3	(3.349 - 4.191)
C12-C16	Aliph.	22762366	112.4	(4.191 - 5.531)
C16-C21	Aliph.	23412943	120.0	(5.531 - 7.137)
C21-C34	Aliph.	21146452	118.1	(7.137 - 10.752)

Surrogate Rec: 75.1% 112.6 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK

WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	FID8	Calibration:	DJ00015
Lab File ID:	820L1204.D	Calibration Date:	10/01/2020
Sequence:	SIL0285	Injection Date:	12/12/20
Lab Sample ID:	SIL0285-ICV1	Injection Time:	18:26
Sequence Name:	ALIPHATICS		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
C10-C12 Aliphatics	A	125.00	115	205303.2000	189120.3000		-7.9	+/-20
1-Chloro-octadecane	A	125.00	114	168020.3000	152857.7000		-9.0	+/-20

* Values outside of QC limits

Data File: \\target\share\chem2\fid8.i\20201212aliph.b\820L1204.D

Date : 12-DEC-2020 18:26

Client ID:

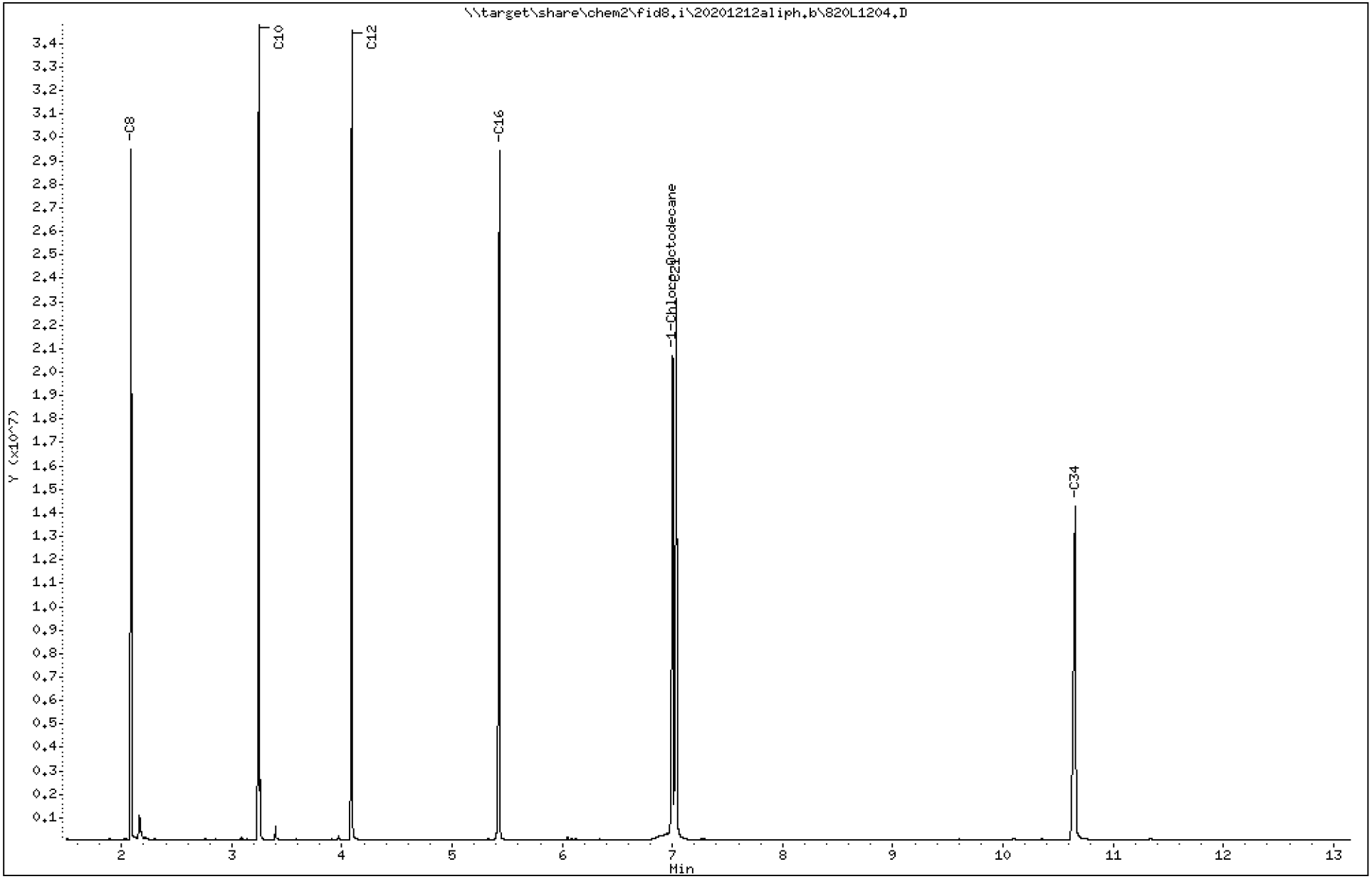
Instrument: fid8.i

Sample Info: ALIPHICV1

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201212aliph.b/820L1204.D
Method: 20201212aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: ALIPHICV1
Client ID:
Injection: 12-DEC-2020 18:26
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	44676635	232.1	(1.987 - 3.345)
C10-C12	Aliph.	23640043	115.1	(3.345 - 4.190)
C12-C16	Aliph.	22871723	113.0	(4.190 - 5.530)
C16-C21	Aliph.	23416803	120.1	(5.530 - 7.136)
C21-C34	Aliph.	21804248	121.8	(7.136 - 10.754)

Surrogate Rec: 75.8% 113.7 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	FID8	Calibration:	DJ00015
Lab File ID:	820L1015.D	Calibration Date:	10/01/2020
Sequence:	SIL0284	Injection Date:	12/11/20
Lab Sample ID:	SIL0284-CCV1	Injection Time:	02:15
Sequence Name:	ALIPHATICS		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
C10-C12 Aliphatics	A	125.00	116	205303.2	190341.9		-7.3	+/-20
1-Chloro-octadecane	A	125.00	117	168020.3	156732.2		-6.7	+/-20

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1015.D

Date : 11-DEC-2020 02:15

Client ID:

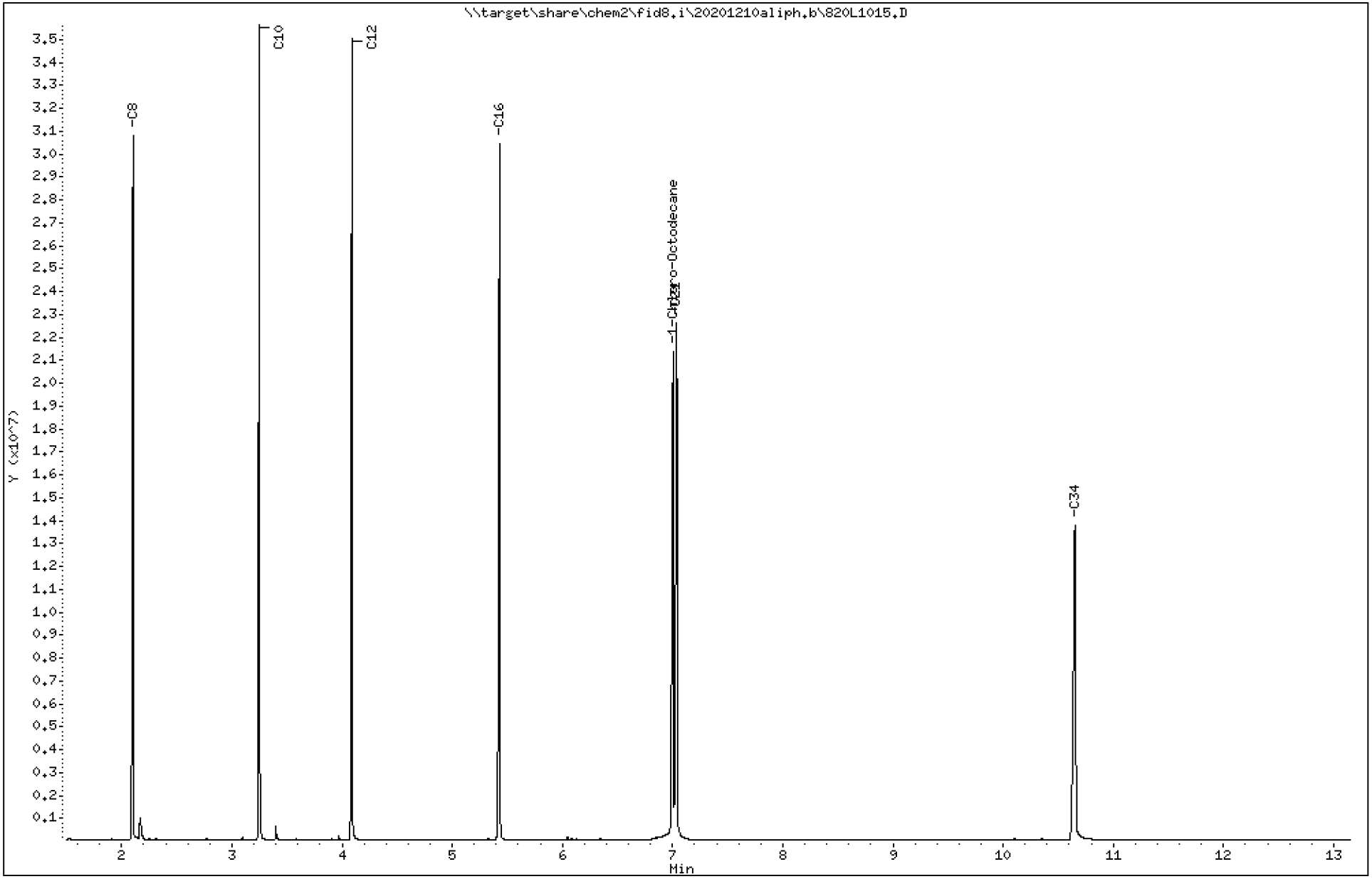
Instrument: fid8.i

Sample Info: ALIPHCCV1

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1015.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: ALIPHCCV1
Client ID:
Injection: 11-DEC-2020 02:15
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	45660601	237.2	(2.006 - 3.349)
C10-C12	Aliph.	23792743	115.9	(3.349 - 4.191)
C12-C16	Aliph.	23127728	114.2	(4.191 - 5.531)
C16-C21	Aliph.	23690533	121.5	(5.531 - 7.137)
C21-C34	Aliph.	21447425	119.8	(7.137 - 10.752)

Surrogate Rec: 77.7% 116.6 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	FID8	Calibration:	DJ00015
Lab File ID:	820L1026.D	Calibration Date:	10/01/2020
Sequence:	SIL0284	Injection Date:	12/11/20
Lab Sample ID:	SIL0284-CCV2	Injection Time:	06:44
Sequence Name:	ALIPHATICS		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
C10-C12 Aliphatics	A	125.00	116	205303.2	190709.9		-7.1	+/-20
1-Chloro-octadecane	A	125.00	116	168020.3	156174.7		-7.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1026.D

Date : 11-DEC-2020 06:44

Client ID:

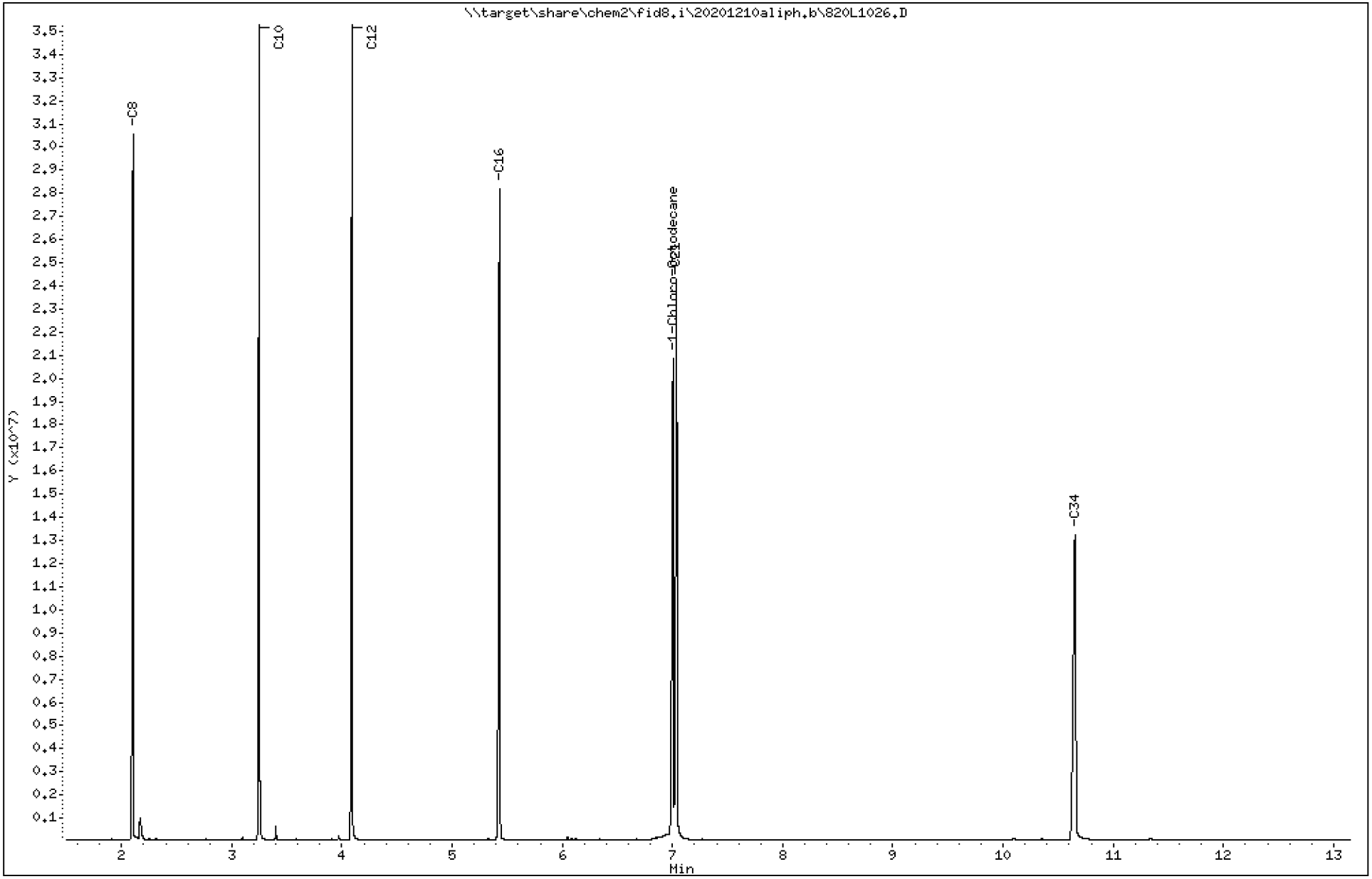
Instrument: fid8.i

Sample Info: ALIPHCCV2

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1026.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: ALIPHCCV2
Client ID:
Injection: 11-DEC-2020 06:44
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	45081578	234.2	(2.006 - 3.349)
C10-C12	Aliph.	23838742	116.1	(3.349 - 4.191)
C12-C16	Aliph.	23272055	115.0	(4.191 - 5.531)
C16-C21	Aliph.	24033929	123.2	(5.531 - 7.137)
C21-C34	Aliph.	22601341	126.2	(7.137 - 10.752)

Surrogate Rec: 77.5% 116.2 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	FID8	Calibration:	DJ00015
Lab File ID:	820L1036.D	Calibration Date:	10/01/2020
Sequence:	SIL0284	Injection Date:	12/11/20
Lab Sample ID:	SIL0284-CCV3	Injection Time:	10:51
Sequence Name:	ALIPHATICS		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
C10-C12 Aliphatics	A	125.00	116	205303.2	190889		-7.0	+/-20
1-Chloro-octadecane	A	125.00	116	168020.3	156040.6		-7.1	+/-20

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1036.D

Date : 11-DEC-2020 10:51

Client ID:

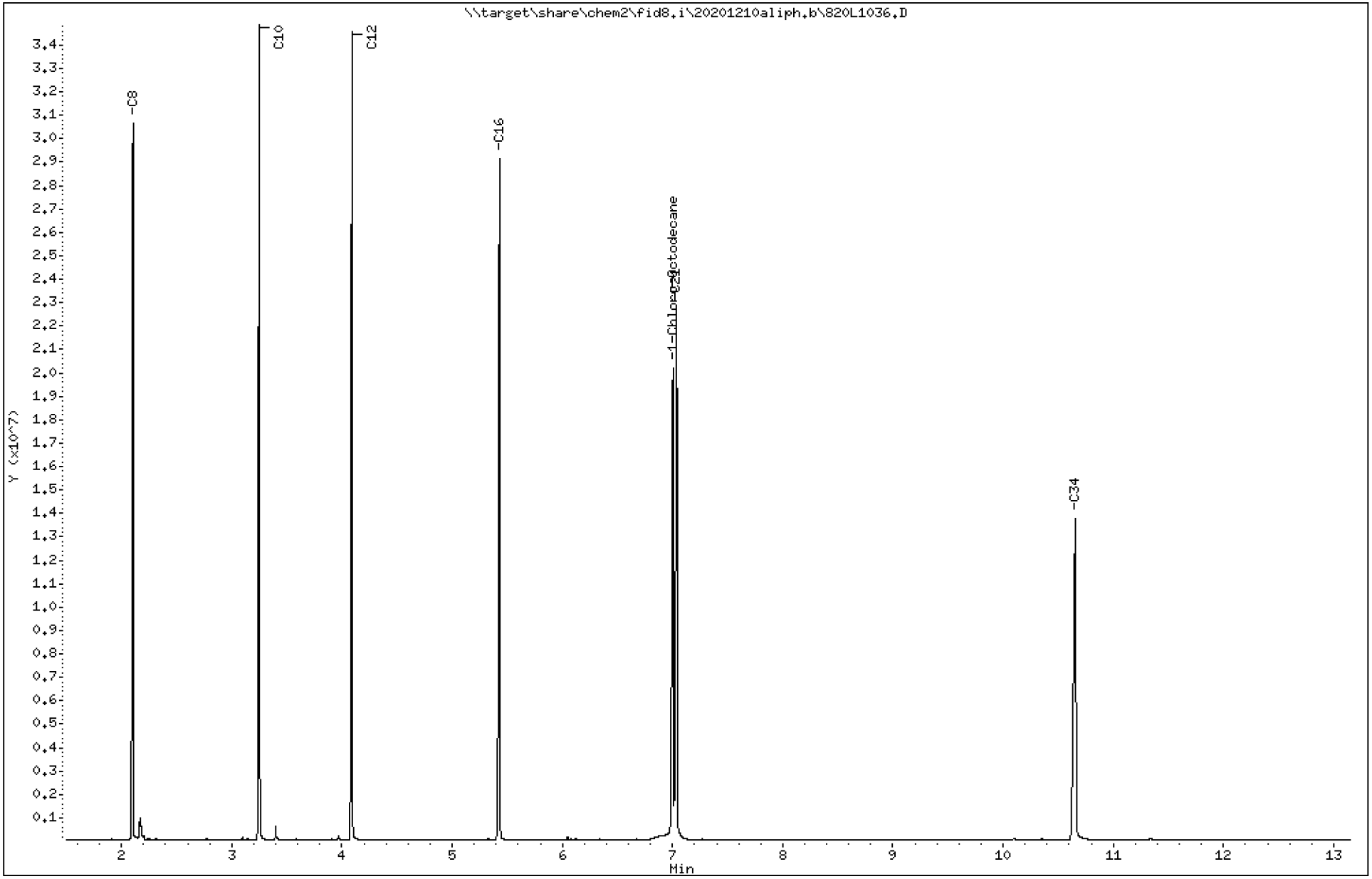
Instrument: fid8.i

Sample Info: ALIPHCCV3

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1036.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: ALIPHCCV3
Client ID:
Injection: 11-DEC-2020 10:51
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	45810337	237.9	(2.006 - 3.349)
C10-C12	Aliph.	23861122	116.2	(3.349 - 4.191)
C12-C16	Aliph.	23235151	114.8	(4.191 - 5.531)
C16-C21	Aliph.	23845413	122.3	(5.531 - 7.137)
C21-C34	Aliph.	22220426	124.1	(7.137 - 10.752)

Surrogate Rec: 77.4% 116.1 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	FID8	Calibration:	DJ00015
Lab File ID:	820L1044.D	Calibration Date:	10/01/2020
Sequence:	SIL0284	Injection Date:	12/11/20
Lab Sample ID:	SIL0284-CCV4	Injection Time:	14:10
Sequence Name:	ALIPHATICS		

		CONC. (ug/mL)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
C10-C12 Aliphatics	A	125.00	117	205303.2	191362		-6.8	+/-20
1-Chloro-octadecane	A	125.00	116	168020.3	156396.7		-6.9	+/-20

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1044.D

Date : 11-DEC-2020 14:10

Client ID:

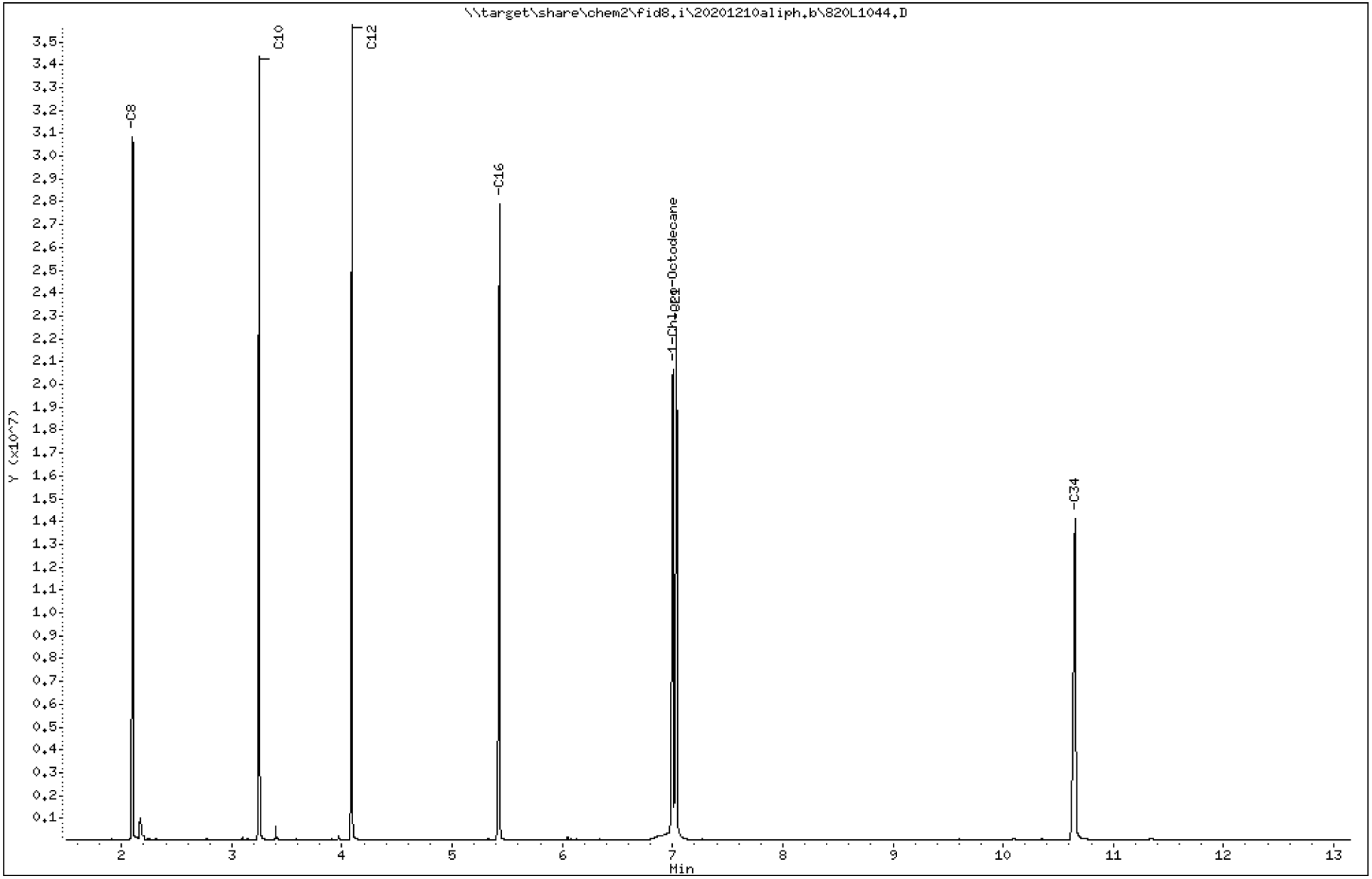
Instrument: fid8.i

Sample Info: ALIPHCCV4

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1044.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: ALIPHCCV4
Client ID:
Injection: 11-DEC-2020 14:10
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	45572042	236.7	(2.006 - 3.349)
C10-C12	Aliph.	23920248	116.5	(3.349 - 4.191)
C12-C16	Aliph.	23232015	114.8	(4.191 - 5.531)
C16-C21	Aliph.	24016245	123.1	(5.531 - 7.137)
C21-C34	Aliph.	22784833	127.3	(7.137 - 10.752)

Surrogate Rec: 77.6% 116.4 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	FID8	Calibration:	DJ00015
Lab File ID:	820L1052.D	Calibration Date:	10/01/2020
Sequence:	SIL0284	Injection Date:	12/11/20
Lab Sample ID:	SIL0284-CCV5	Injection Time:	17:29
Sequence Name:	ALIPHATICS		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
C10-C12 Aliphatics	A	125.00	122	205303.2	199686.7		-2.7	+/-20
1-Chloro-octadecane	A	125.00	124	168020.3	166214.1		-1.0	+/-20

* Values outside of QC limits

Data File: \\target\share\chem2\fid8.i\20201210aliph.b\820L1052.D

Date : 11-DEC-2020 17:29

Client ID:

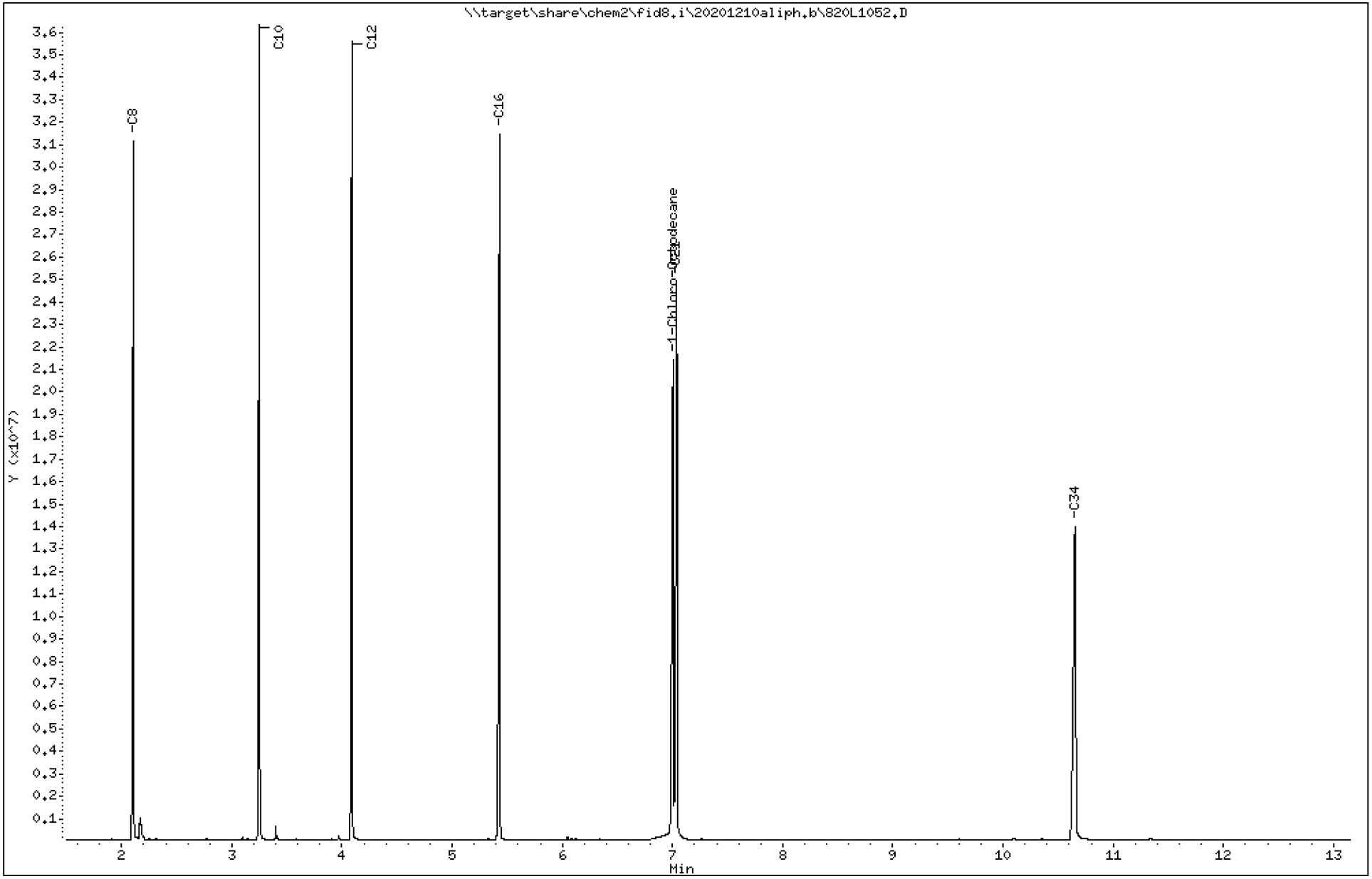
Instrument: fid8.i

Sample Info: ALIPHCCV5

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201210aliph.b/820L1052.D
Method: 20201210aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: ALIPHCCV5
Client ID:
Injection: 11-DEC-2020 17:29
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	47107117	244.7	(2.006 - 3.349)
C10-C12	Aliph.	24960837	121.6	(3.349 - 4.191)
C12-C16	Aliph.	24491382	121.0	(4.191 - 5.531)
C16-C21	Aliph.	25287677	129.6	(5.531 - 7.137)
C21-C34	Aliph.	23574438	131.7	(7.137 - 10.752)

Surrogate Rec: 82.4% 123.7 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	FID8	Calibration:	DJ00015
Lab File ID:	820L1213.D	Calibration Date:	10/01/2020
Sequence:	SIL0285	Injection Date:	12/12/20
Lab Sample ID:	SIL0285-CCV1	Injection Time:	22:33
Sequence Name:	ALIPHATICS		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
C10-C12 Aliphatics	A	125.00	115	205303.2	189450.3		-7.8	+/-20
1-Chloro-octadecane	A	125.00	114	168020.3	153552		-8.6	+/-20

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid8.i\20201212aliph.b\820L1213.D

Date : 12-DEC-2020 22:33

Client ID:

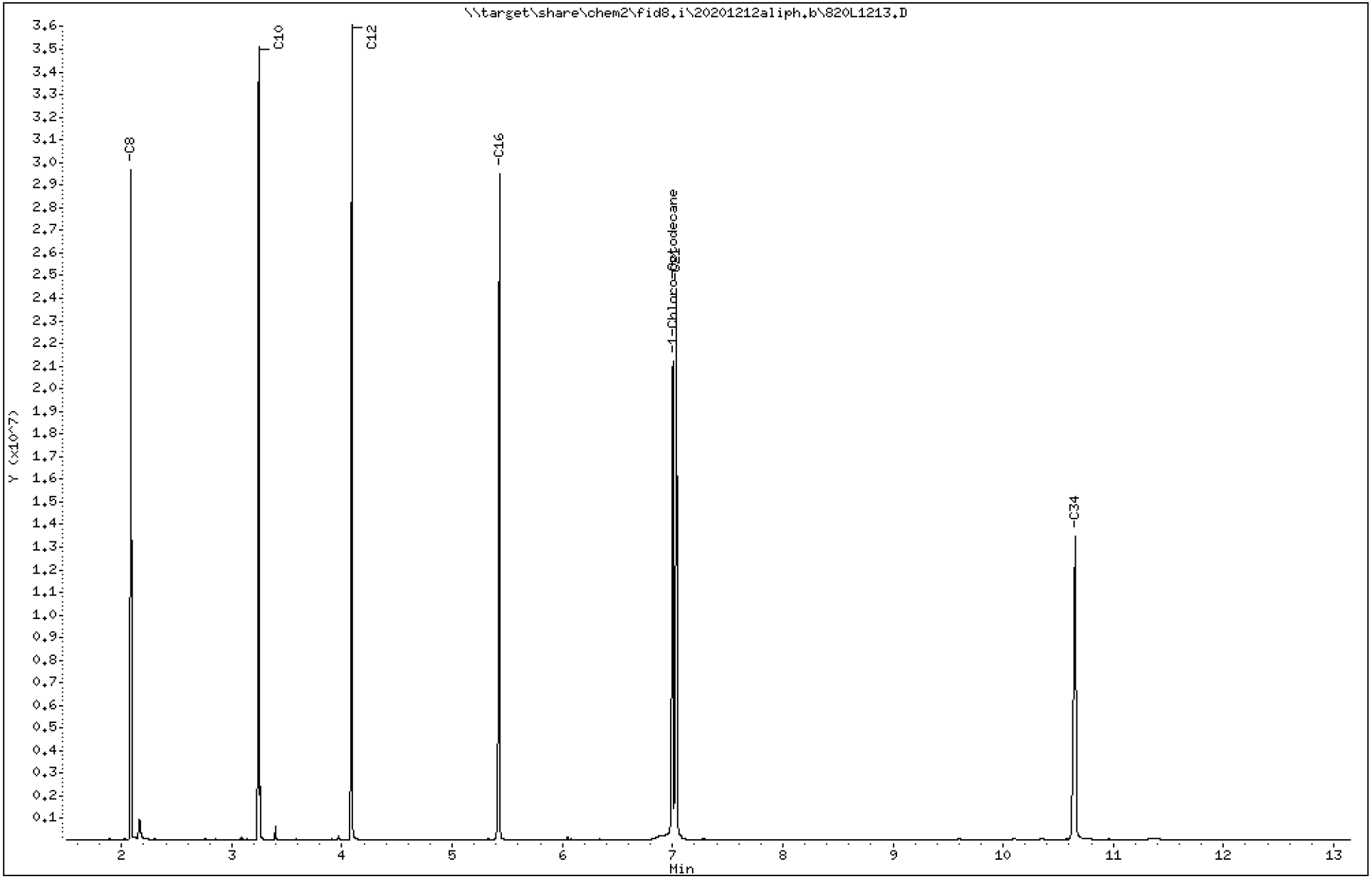
Instrument: fid8.i

Sample Info: ALIPHCCV1

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201212aliph.b/820L1213.D
Method: 20201212aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: ALIPHCCV1
Client ID:
Injection: 12-DEC-2020 22:33
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	45029510	233.9	(1.987 - 3.345)
C10-C12	Aliph.	23681290	115.3	(3.345 - 4.190)
C12-C16	Aliph.	22985102	113.5	(4.190 - 5.530)
C16-C21	Aliph.	23374861	119.8	(5.530 - 7.136)
C21-C34	Aliph.	23461491	131.1	(7.136 - 10.754)

Surrogate Rec: 76.2% 114.2 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	FID8	Calibration:	DJ00015
Lab File ID:	820L1221.D	Calibration Date:	10/01/2020
Sequence:	SIL0285	Injection Date:	12/13/20
Lab Sample ID:	SIL0285-CCV2	Injection Time:	01:49
Sequence Name:	ALIPHATICS		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
C10-C12 Aliphatics	A	125.00	117	205303.2	192559.4		-6.2	+/-20
1-Chloro-octadecane	A	125.00	118	168020.3	159052.9		-5.4	+/-20

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid8.i\20201212aliph.b\820L1221.D

Date : 13-DEC-2020 01:49

Client ID:

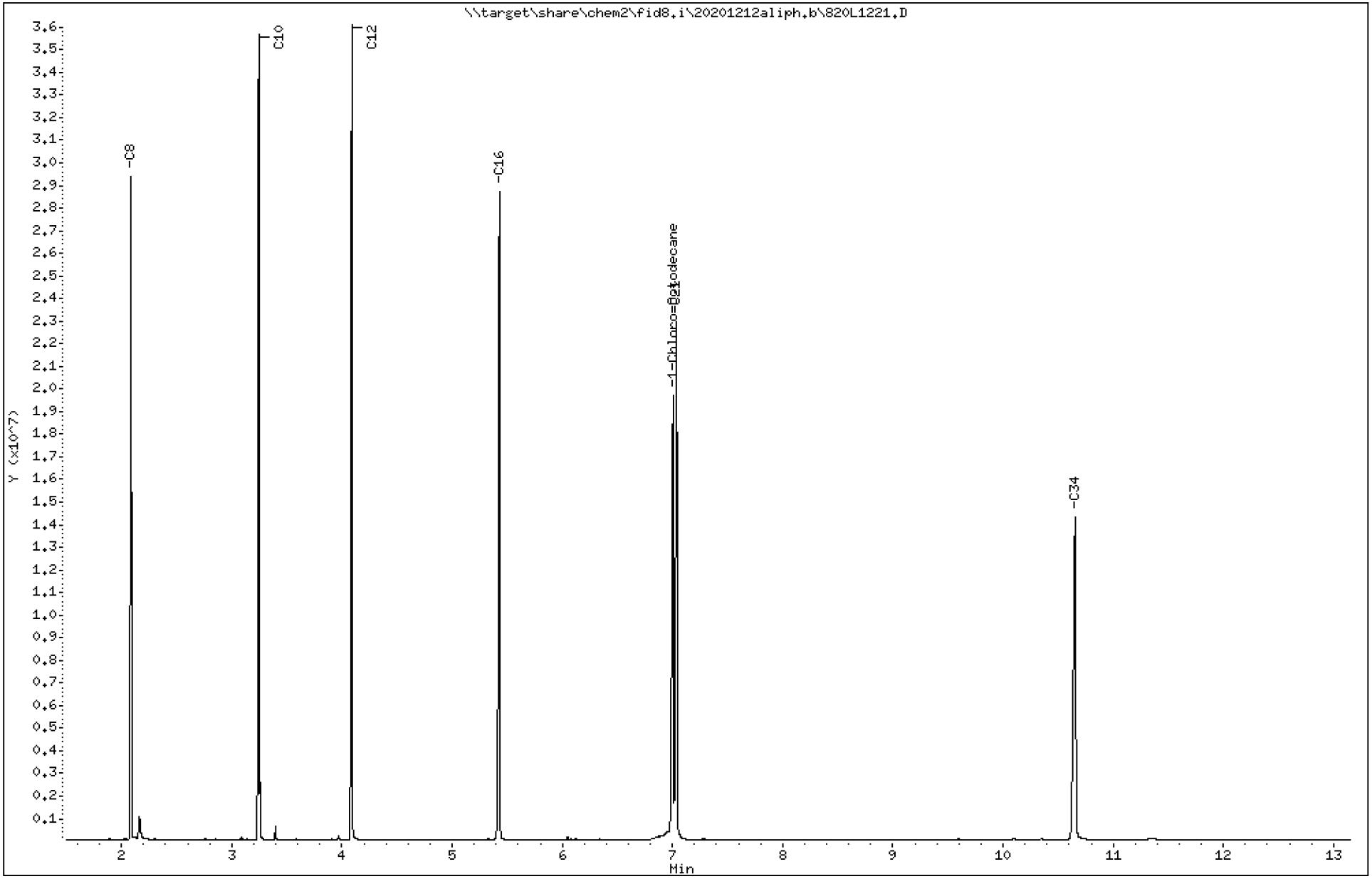
Instrument: fid8.i

Sample Info: ALIPHCCV2

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201212aliph.b/820L1221.D
Method: 20201212aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: ALIPHCCV2
Client ID:
Injection: 13-DEC-2020 01:49
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	45574614	236.7	(1.987 - 3.345)
C10-C12	Aliph.	24069933	117.2	(3.345 - 4.190)
C12-C16	Aliph.	23360209	115.4	(4.190 - 5.530)
C16-C21	Aliph.	23911533	122.6	(5.530 - 7.136)
C21-C34	Aliph.	22902949	127.9	(7.136 - 10.754)

Surrogate Rec: 78.9% 118.3 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	FID8	Calibration:	DJ00015
Lab File ID:	820L1230.D	Calibration Date:	10/01/2020
Sequence:	SIL0285	Injection Date:	12/13/20
Lab Sample ID:	SIL0285-CCV3	Injection Time:	05:28
Sequence Name:	ALIPHATICS		

COMPOUND	TYPE	CONC. (ug/mL)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
		STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
C10-C12 Aliphatics	A	125.00	122	205303.2	200425		-2.4	+/-20
1-Chloro-octadecane	A	125.00	124	168020.3	165947.8		-1.2	+/-20

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem2\fid8.i\20201212aliph.b\820L1230.D

Date : 13-DEC-2020 05:28

Client ID:

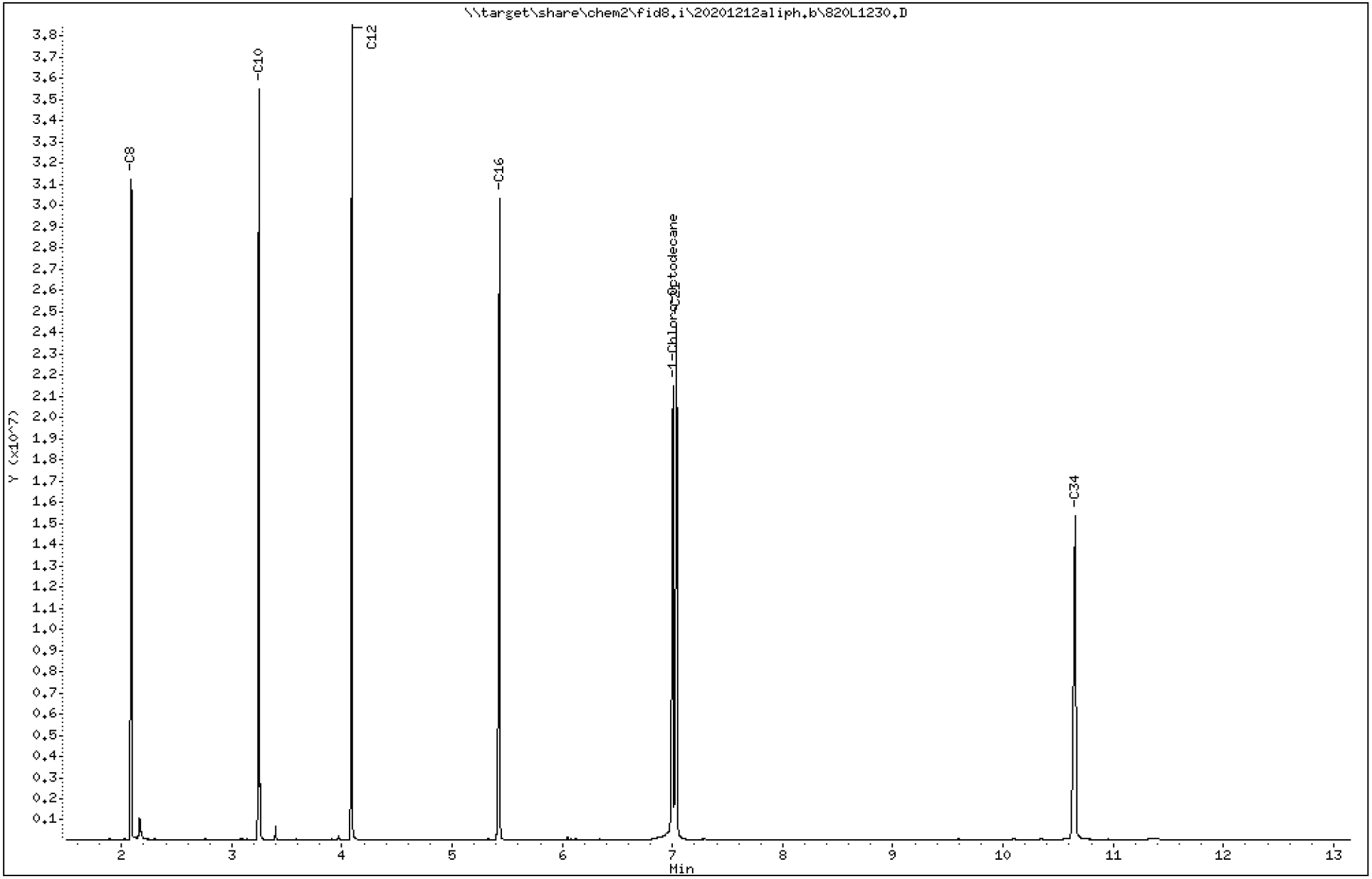
Instrument: fid8.i

Sample Info: ALIPHCCV3

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201212aliph.b/820L1230.D
Method: 20201212aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: ALIPHCCV3
Client ID:
Injection: 13-DEC-2020 05:28
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	47174605	245.0	(1.987 - 3.345)
C10-C12	Aliph.	25053121	122.0	(3.345 - 4.190)
C12-C16	Aliph.	24275852	119.9	(4.190 - 5.530)
C16-C21	Aliph.	24764726	127.0	(5.530 - 7.136)
C21-C34	Aliph.	24839847	138.8	(7.136 - 10.754)

Surrogate Rec: 82.3% 123.5 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Instrument ID:	FID8	Calibration:	DJ00015
Lab File ID:	820L1239.D	Calibration Date:	10/01/2020
Sequence:	SIL0285	Injection Date:	12/13/20
Lab Sample ID:	SIL0285-CCV4	Injection Time:	09:09
Sequence Name:	ALIPHATICS		

		CONC. (ug/mL)		RESPONSE FACTOR (RF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
C10-C12 Aliphatics	A	125.00	124	205303.2	203258.6		-1.0	+/-20
1-Chloro-octadecane	A	125.00	123	168020.3	164857		-1.9	+/-20

* Values outside of QC limits

Data File: \\target\share\chem2\fid8.i\20201212aliph.b\820L1239.D

Date : 13-DEC-2020 09:09

Client ID:

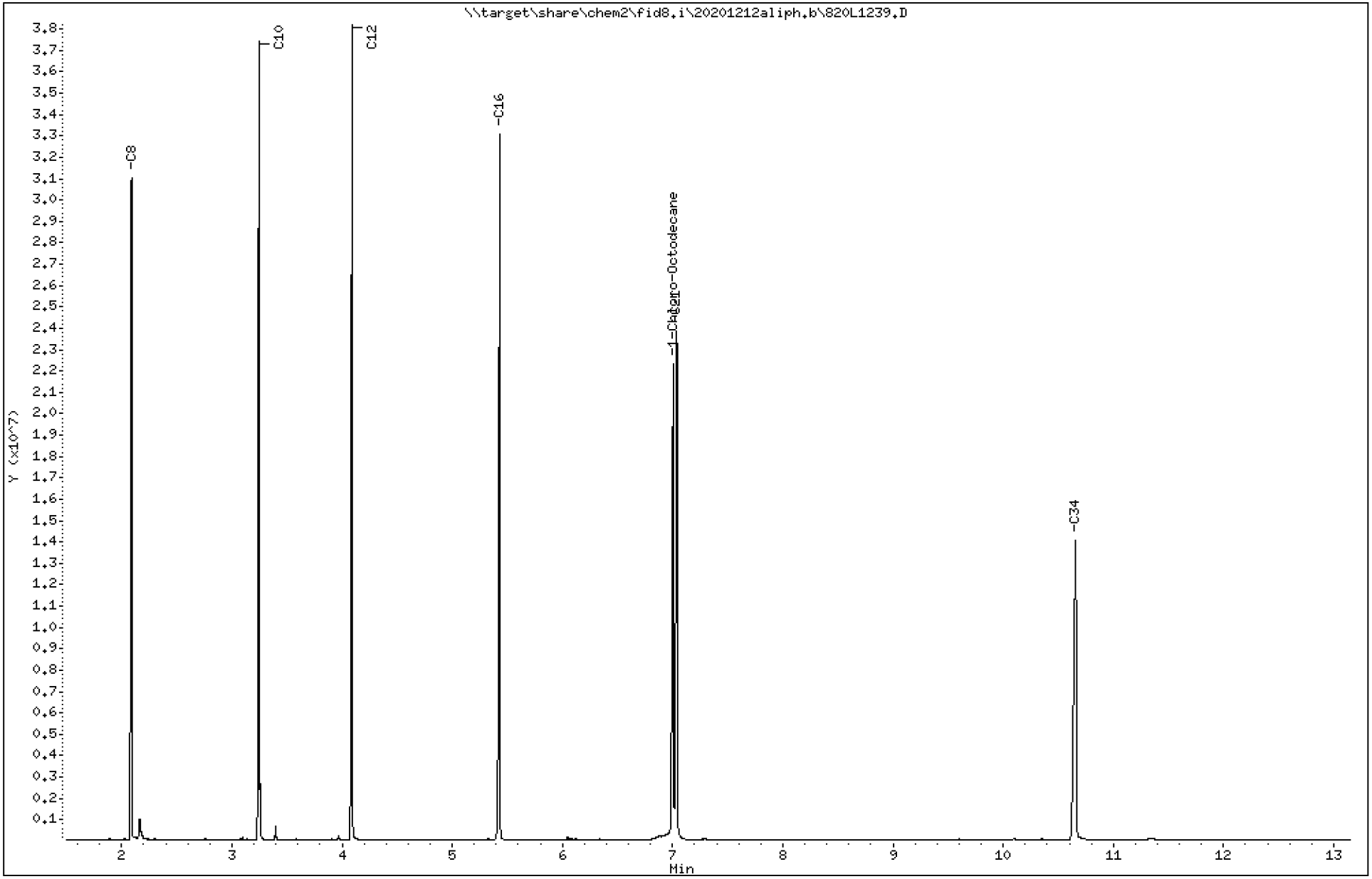
Instrument: fid8.i

Sample Info: ALIPHCCV4

Operator: JGR

Column phase: RTX-1

Column diameter: 0.25



Analytical Resources Inc.
WA. EPH Aliphatics Report

Data file: 20201212aliph.b/820L1239.D
Method: 20201212aliph.b\EPHAliph.m
Instrument: fid8.i
Operator: JGR
Macro: ALIPH020217FID8

ARI ID: ALIPHCCV4
Client ID:
Injection: 13-DEC-2020 09:09
Matrix: NONE
Dilution Factor: 1

EPH-ALIPHATIC RESULTS

Quant Range		Area	Conc	Time Range
C8-C10	Aliph.	47743671	248.0	(1.987 - 3.345)
C10-C12	Aliph.	25407326	123.8	(3.345 - 4.190)
C12-C16	Aliph.	24741253	122.2	(4.190 - 5.530)
C16-C21	Aliph.	25549148	131.0	(5.530 - 7.136)
C21-C34	Aliph.	24230294	135.3	(7.136 - 10.754)

Surrogate Rec: 81.8% 122.6 ug/mL

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIJ0055	Instrument:	FID8
		Calibration:	DJ00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ALIPH 20PPM	SIJ0055-CAL7	820J0115.D	NA	10/02/20 00:13
ALIPH 50PPM	SIJ0055-CAL8	820J0116.D	NA	10/02/20 00:39
ALIPH 100PPM	SIJ0055-CAL9	820J0117.D	NA	10/02/20 01:04
ALIPH 125PPM	SIJ0055-CALA	820J0118.D	NA	10/02/20 01:29
ALIPH 150PPM	SIJ0055-CALB	820J0119.D	NA	10/02/20 01:54
ALIPH 200PPM	SIJ0055-CALC	820J0120.D	NA	10/02/20 02:19
ALIPH SCV	SIJ0055-SCV2	820J0121.D	NA	10/02/20 02:45

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 10/5/2020 5:49:00PM

ANALYSIS SEQUENCE

SIJ0055

Instrument: FID8 Element Column ID: d002555
Calibration ID: DJ00015

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIJ0055-CAL1	AROM 20PPM	QC		1	I009169		
SIJ0055-CAL2	AROM 50PPM	QC		2	I009168		
SIJ0055-CAL3	AROM 100PPM	QC		3	I009167		
SIJ0055-CAL4	AROM 125PPM	QC		4	I009166		
SIJ0055-CAL5	AROM 150PPM	QC		5	I009165		
SIJ0055-CAL6	AROM 200PPM	QC		6	I009164		
SIJ0055-SCV1	AROM SCV	QC		7	I005685		
SIJ0055-CAL7	ALIPH 20PPM	QC		8	I009163		
SIJ0055-CAL8	ALIPH 50PPM	QC		9	I009160		
SIJ0055-CAL9	ALIPH 100PPM	QC		10	I009157		
SIJ0055-CALA	ALIPH 125PPM	QC		11	I009154		
SIJ0055-CALB	ALIPH 150PPM	QC		12	I009151		
SIJ0055-CALC	ALIPH 200PPM	QC		13	I009150		
SIJ0055-SCV2	ALIPH SCV	QC		14	I005686		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001aliph.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	01-OCT-2020 20:50	820J0107.D	1	ALIB	
2	02-OCT-2020 00:13	820J0115.D	1	20ALIPH	
3	02-OCT-2020 00:39	820J0116.D	1	50ALPIH	
4	02-OCT-2020 01:04	820J0117.D	1	100ALIPH	
5	02-OCT-2020 01:29	820J0118.D	1	125ALIPH	
6	02-OCT-2020 01:54	820J0119.D	1	150ALIPH	
7	02-OCT-2020 02:19	820J0120.D	1	200ALIPH	
8	02-OCT-2020 02:45	820J0121.D	1	ALIPHSC2	
9	02-OCT-2020 12:28	820J0144.D	1	ALIPHICV2	
10	02-OCT-2020 12:54	820J0145.D	1	BII0795-BLK1	
11	02-OCT-2020 13:20	820J0146.D	1	BII0795-BS1	
12	02-OCT-2020 13:46	820J0147.D	1	20I0109-02	
13	02-OCT-2020 14:12	820J0148.D	1	20I0109-03	
14	02-OCT-2020 14:38	820J0149.D	1	20I0109-05	
15	02-OCT-2020 15:04	820J0150.D	1	20I0109-07	
16	02-OCT-2020 15:29	820J0151.D	1	20I0109-08	
17	02-OCT-2020 15:55	820J0152.D	1	20I0109-09	
18	02-OCT-2020 16:21	820J0153.D	1	20I0109-10	
19	02-OCT-2020 16:46	820J0154.D	1	BII0795-MS1	
20	02-OCT-2020 17:12	820J0155.D	1	BII0795-MSD1	
21	02-OCT-2020 17:38	820J0156.D	1	ALIPHCCV3	
22	02-OCT-2020 18:03	820J0157.D	1	20I0109-11	
23	02-OCT-2020 18:29	820J0158.D	1	20I0149-01	
24	02-OCT-2020 18:54	820J0159.D	1	20I0149-02	
25	02-OCT-2020 19:20	820J0160.D	1	20I0149-05	
26	02-OCT-2020 19:45	820J0161.D	1	20I0149-07	
27	02-OCT-2020 20:10	820J0162.D	1	20I0149-08	
28	02-OCT-2020 20:36	820J0163.D	1	20I0149-09	
29	02-OCT-2020 21:01	820J0164.D	1	20I0149-10	
30	02-OCT-2020 21:27	820J0165.D	1	ALIPHCCV4	
31	02-OCT-2020 22:17	820J0167.D	1	BII0478-BLK1	
32	02-OCT-2020 22:42	820J0168.D	1	BII0478-BS1	
33	02-OCT-2020 23:08	820J0169.D	1	BII0478-BSD1	
34	02-OCT-2020 23:33	820J0170.D	1	20I0212-03	
35	02-OCT-2020 23:58	820J0171.D	1	BII0481-BLK1	
36	03-OCT-2020 00:23	820J0172.D	1	BII0481-BS1	
37	03-OCT-2020 00:49	820J0173.D	1	BII0481-BSD1	
38	03-OCT-2020 01:14	820J0174.D	1	20I0212-06	
39	03-OCT-2020 01:39	820J0175.D	1	20I0212-24	
40	03-OCT-2020 05:52	820J0185.D	1	ALIPHCCV6	
41	03-OCT-2020 06:42	820J0187.D	1	BII0585-BLK1	
42	03-OCT-2020 07:07	820J0188.D	1	BII0585-BS1	
43	03-OCT-2020 07:32	820J0189.D	1	BII0585-BSD1	
44	03-OCT-2020 07:57	820J0190.D	1	20I0267-08	
45	03-OCT-2020 08:21	820J0191.D	1	20I0267-16	
46	03-OCT-2020 10:51	820J0197.D	1	ALIPHCCV8	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001aliph.b

ARI Job No.: ALIB Method: EPHAliph.m Instrument: fid8.i Date: 01-OCT-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2050	820J0107.D	ALIB		1	NO MANUAL INTEGRATION
0013	820J0115.D	20ALIPH		1	C10,
0039	820J0116.D	50ALPIH		1	C10,
0104	820J0117.D	100ALIPH		1	NO MANUAL INTEGRATION
0129	820J0118.D	125ALIPH		1	NO MANUAL INTEGRATION
0154	820J0119.D	150ALIPH		1	NO MANUAL INTEGRATION
0219	820J0120.D	200ALIPH		1	NO MANUAL INTEGRATION
0245	820J0121.D	ALIPHSC2		1	C8,
1228	820J0144.D	ALIPHICV2		1	NO MANUAL INTEGRATION
1254	820J0145.D	BII0795-BLK1		1	NO MANUAL INTEGRATION
1320	820J0146.D	BII0795-BS1		1	C10,
1346	820J0147.D	20I0109-02		1	1-Chloro-Octodecane,
1412	820J0148.D	20I0109-03		1	1-Chloro-Octodecane,
1438	820J0149.D	20I0109-05		1	1-Chloro-Octodecane,
1504	820J0150.D	20I0109-07		1	1-Chloro-Octodecane,
1529	820J0151.D	20I0109-08		1	1-Chloro-Octodecane,
1555	820J0152.D	20I0109-09		1	1-Chloro-Octodecane,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001aliph.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1621	820J0153.D	20I0109-10		1	1-Chloro-Octodecane,
1646	820J0154.D	BII0795-MS1		1	C10, 1-Chloro-Octodecane,
1712	820J0155.D	BII0795-MSD1		1	C10, 1-Chloro-Octodecane,
1738	820J0156.D	ALIPHCCV3		1	NO MANUAL INTEGRATION
1803	820J0157.D	20I0109-11		1	NO MANUAL INTEGRATION
1829	820J0158.D	20I0149-01		1	1-Chloro-Octodecane,
1854	820J0159.D	20I0149-02		1	1-Chloro-Octodecane,
1920	820J0160.D	20I0149-05		1	1-Chloro-Octodecane,
1945	820J0161.D	20I0149-07		1	1-Chloro-Octodecane,
2010	820J0162.D	20I0149-08		1	1-Chloro-Octodecane,
2036	820J0163.D	20I0149-09		1	1-Chloro-Octodecane,
2101	820J0164.D	20I0149-10		1	1-Chloro-Octodecane,
2127	820J0165.D	ALIPHCCV4		1	C10,
2217	820J0167.D	BII0478-BLK1		1	NO MANUAL INTEGRATION
2242	820J0168.D	BII0478-BS1		1	C10,
2308	820J0169.D	BII0478-BSD1		1	C10,
2333	820J0170.D	20I0212-03		1	NO MANUAL INTEGRATION
2358	820J0171.D	BII0481-BLK1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001aliph.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0023	820J0172.D	BII0481-BS1		1	C10,
0049	820J0173.D	BII0481-BSD1		1	C10,
0114	820J0174.D	20I0212-06		1	NO MANUAL INTEGRATION
0139	820J0175.D	20I0212-24		1	NO MANUAL INTEGRATION
0552	820J0185.D	ALIPHCCV6		1	NO MANUAL INTEGRATION
0642	820J0187.D	BII0585-BLK1		1	NO MANUAL INTEGRATION
0707	820J0188.D	BII0585-BS1		1	C10,
0732	820J0189.D	BII0585-BSD1		1	C10,
0757	820J0190.D	20I0267-08		1	NO MANUAL INTEGRATION
0821	820J0191.D	20I0267-16		1	NO MANUAL INTEGRATION
1051	820J0197.D	ALIPHCCV8		1	NO MANUAL INTEGRATION

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001arom.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	01-OCT-2020 17:18	820J0101.D	1	RINSE	
2	01-OCT-2020 18:00	820J0102.D	1	RINSE	
3	01-OCT-2020 18:25	820J0103.D	1	RINSE	
4	01-OCT-2020 19:34	820J0104.D	1	RINSE	
5	01-OCT-2020 19:59	820J0105.D	1	RINSE	
6	01-OCT-2020 20:25	820J0106.D	1	ARIB	
7	01-OCT-2020 21:16	820J0108.D	1	20AROM	
8	01-OCT-2020 21:41	820J0109.D	1	50AROM	
9	01-OCT-2020 22:07	820J0110.D	1	100AROM	
10	01-OCT-2020 22:32	820J0111.D	1	125AROM	
11	01-OCT-2020 22:57	820J0112.D	1	150AROM	
12	01-OCT-2020 23:23	820J0113.D	1	200AROM	
13	01-OCT-2020 23:48	820J0114.D	1	AROMSCV1	
14	02-OCT-2020 03:10	820J0122.D	1	AROMICV1	
15	02-OCT-2020 03:36	820J0123.D	1	BII0795-BLK2	
16	02-OCT-2020 04:01	820J0124.D	1	BII0795-BS2	
17	02-OCT-2020 04:27	820J0125.D	1	20I0109-02	
18	02-OCT-2020 04:52	820J0126.D	1	20I0109-03	
19	02-OCT-2020 05:18	820J0127.D	1	20I0109-05	
20	02-OCT-2020 05:43	820J0128.D	1	20I0109-07	
21	02-OCT-2020 06:09	820J0129.D	1	20I0109-08	
22	02-OCT-2020 06:34	820J0130.D	1	20I0109-09	
23	02-OCT-2020 06:59	820J0131.D	1	20I0109-10	
24	02-OCT-2020 07:24	820J0132.D	1	BII0795-MS2	
25	02-OCT-2020 07:49	820J0133.D	1	BII0795-MSD2	
26	02-OCT-2020 08:14	820J0134.D	1	20I0109-11	
27	02-OCT-2020 08:39	820J0135.D	1	20I0149-01	
28	02-OCT-2020 09:05	820J0136.D	1	AROMCCV1	
29	02-OCT-2020 09:30	820J0137.D	1	20I0149-02	
30	02-OCT-2020 09:55	820J0138.D	1	20I0149-05	
31	02-OCT-2020 10:21	820J0139.D	1	20I0149-07	
32	02-OCT-2020 10:46	820J0140.D	1	20I0149-08	
33	02-OCT-2020 11:12	820J0141.D	1	20I0149-09	
34	02-OCT-2020 11:37	820J0142.D	1	20I0149-10	
35	02-OCT-2020 12:03	820J0143.D	1	AROMCCV2	
36	02-OCT-2020 21:52	820J0166.D	1	AROMCCV5	
37	03-OCT-2020 02:05	820J0176.D	1	BII0478-BLK2	
38	03-OCT-2020 02:30	820J0177.D	1	BII0478-BS2	
39	03-OCT-2020 02:55	820J0178.D	1	BII0478-BSD2	
40	03-OCT-2020 03:20	820J0179.D	1	20I0212-03	
41	03-OCT-2020 03:46	820J0180.D	1	BII0481-BLK2	
42	03-OCT-2020 04:11	820J0181.D	1	BII0481-BS2	
43	03-OCT-2020 04:36	820J0182.D	1	BII0481-BSD2	
44	03-OCT-2020 05:01	820J0183.D	1	20I0212-06	
45	03-OCT-2020 05:26	820J0184.D	1	20I0212-24	
46	03-OCT-2020 06:17	820J0186.D	1	AROMCCV7	
47	03-OCT-2020 08:46	820J0192.D	1	BII0585-BLK2	
48	03-OCT-2020 09:11	820J0193.D	1	BII0585-BS2	
49	03-OCT-2020 09:35	820J0194.D	1	BII0585-BSD2	
50	03-OCT-2020 10:01	820J0195.D	1	20I0267-08	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001arom.b

	Inject Date/Time	Filename	DF	LabID	ClientID
51	03-OCT-2020 10:26	820J0196.D	1	20I0267-16	
52	03-OCT-2020 11:16	820J0198.D	1	AROMCCV9	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001arom.b

ARI Job No.: RINS Method: EPHArom.m Instrument: fid8.i Date: 01-OCT-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1718	820J0101.D	RINSE		1	NO MANUAL INTEGRATION
1800	820J0102.D	RINSE		1	NO MANUAL INTEGRATION
1825	820J0103.D	RINSE		1	NO MANUAL INTEGRATION
1934	820J0104.D	RINSE		1	NO MANUAL INTEGRATION
1959	820J0105.D	RINSE		1	NO MANUAL INTEGRATION
2025	820J0106.D	ARIB		1	NO MANUAL INTEGRATION
2116	820J0108.D	20AROM		1	1,2,3-Trimetben, Benzo-ghi-per,
2141	820J0109.D	50AROM		1	NO MANUAL INTEGRATION
2207	820J0110.D	100AROM		1	Benzo-ghi-per,
2232	820J0111.D	125AROM		1	NO MANUAL INTEGRATION
2257	820J0112.D	150AROM		1	NO MANUAL INTEGRATION
2323	820J0113.D	200AROM		1	Benzo-ghi-per,
2348	820J0114.D	AROMSCV1		1	NO MANUAL INTEGRATION
0310	820J0122.D	AROMICV1		1	NO MANUAL INTEGRATION
0336	820J0123.D	BII0795-BLK2		1	NO MANUAL INTEGRATION
0401	820J0124.D	BII0795-BS2		1	NO MANUAL INTEGRATION
0427	820J0125.D	20I0109-02		1	1-chlorooctodecane(AROMATIC),

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001arom.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0452	820J0126.D	20I0109-03		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
0518	820J0127.D	20I0109-05		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
0543	820J0128.D	20I0109-07		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
0609	820J0129.D	20I0109-08		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
0634	820J0130.D	20I0109-09		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
0659	820J0131.D	20I0109-10		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
0724	820J0132.D	BII0795-MS2		1	Benzo-ghi-per, 1-chlorooctodecane(AROMATIC), o-Terph Surr,
0749	820J0133.D	BII0795-MSD2		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
0814	820J0134.D	20I0109-11		1	NO MANUAL INTEGRATION
0839	820J0135.D	20I0149-01		1	NO MANUAL INTEGRATION
0905	820J0136.D	AROMCCV1		1	NO MANUAL INTEGRATION
0930	820J0137.D	20I0149-02		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
0955	820J0138.D	20I0149-05		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
1021	820J0139.D	20I0149-07		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
1046	820J0140.D	20I0149-08		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
1112	820J0141.D	20I0149-09		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
1137	820J0142.D	20I0149-10		1	1-chlorooctodecane(AROMATIC), o-Terph Surr,
1203	820J0143.D	AROMCCV2		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201001arom.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2152	820J0166.D	AROMCCV5		1	Benzo-ghi-per,
0205	820J0176.D	BII0478-BLK2		1	NO MANUAL INTEGRATION
0230	820J0177.D	BII0478-BS2		1	NO MANUAL INTEGRATION
0255	820J0178.D	BII0478-BSD2		1	NO MANUAL INTEGRATION
0320	820J0179.D	20I0212-03		1	NO MANUAL INTEGRATION
0346	820J0180.D	BII0481-BLK2		1	NO MANUAL INTEGRATION
0411	820J0181.D	BII0481-BS2		1	NO MANUAL INTEGRATION
0436	820J0182.D	BII0481-BSD2		1	NO MANUAL INTEGRATION
0501	820J0183.D	20I0212-06		1	NO MANUAL INTEGRATION
0526	820J0184.D	20I0212-24		1	NO MANUAL INTEGRATION
0617	820J0186.D	AROMCCV7		1	NO MANUAL INTEGRATION
0846	820J0192.D	BII0585-BLK2		1	NO MANUAL INTEGRATION
0911	820J0193.D	BII0585-BS2		1	NO MANUAL INTEGRATION
0935	820J0194.D	BII0585-BSD2		1	NO MANUAL INTEGRATION
1001	820J0195.D	20I0267-08		1	NO MANUAL INTEGRATION
1026	820J0196.D	20I0267-16		1	NO MANUAL INTEGRATION
1116	820J0198.D	AROMCCV9		1	Benzo-ghi-per,

Security Status Report

Date: 05-Oct-2020 17:34

820J0107.D	Data Locked	jrains, 05-Oct-2020 17:34
820J0115.D	Data Locked	jrains, 05-Oct-2020 17:34
820J0116.D	Data Locked	jrains, 05-Oct-2020 17:34
820J0117.D	Data Locked	jrains, 05-Oct-2020 17:34
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820J0120.D	Data Locked	jrains, 05-Oct-2020 17:34
820J0121.D	Data Locked	jrains, 05-Oct-2020 17:34
820J0144.D	Data Locked	jrains, 05-Oct-2020 17:34
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820J0174.D	Data Locked	jrains, 05-Oct-2020 17:34
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820J0197.D	Data Locked	jrains, 05-Oct-2020 17:34

Security Status Report

Date: 05-Oct-2020 17:40

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820J0195.D	Data Locked	jrains, 05-Oct-2020 17:40
820J0196.D	Data Locked	jrains, 05-Oct-2020 17:40
820J0198.D	Data Locked	jrains, 05-Oct-2020 17:40

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0284	Instrument:	FID8
		Calibration:	DJ00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ALIPHATICS	SIL0284-ICV1	820L1004.D	NA	12/10/20 21:46
Blank	BIK0336-BLK1	820L1005.D	Solid	12/10/20 22:11
LCS	BIK0336-BS1	820L1006.D	Solid	12/10/20 22:35
USMPDI-046SC-B-11.8-13.8-201029	20K0073-03	820L1007.D	Solid	12/10/20 23:00
USMPDI-046SC-B-13.8-15.8-201029	20K0073-04	820L1008.D	Solid	12/10/20 23:24
USMPDI-046SC-B-15.8-17.8-201029	20K0073-05	820L1009.D	Solid	12/10/20 23:49
USMPDI-046SC-B-3.8-5.8-201029	20K0073-06	820L1010.D	Solid	12/11/20 00:13
USMPDI-046SC-B-5.8-7.8-201029	20K0073-07	820L1011.D	Solid	12/11/20 00:37
USMPDI-046SC-B-7.8-9.8-201029	20K0073-08	820L1012.D	Solid	12/11/20 01:02
USMPDI-046SC-B-9.8-11.8-201029	20K0073-09	820L1013.D	Solid	12/11/20 01:26
ALIPHATICS	SIL0284-CCV1	820L1015.D	NA	12/11/20 02:15
USMPDI-054SC-D-00-02-201029	20K0073-11	820L1016.D	Solid	12/11/20 02:39
USMPDI-054SC-D-02-04-201029	20K0073-12	820L1017.D	Solid	12/11/20 03:04
USMPDI-054SC-D-04-06-201029	20K0073-13	820L1018.D	Solid	12/11/20 03:28
USMPDI-054SC-D-06-08-201029	20K0073-14	820L1019.D	Solid	12/11/20 03:52
USMPDI-054SC-D-08-10-201029	20K0073-15	820L1020.D	Solid	12/11/20 04:17
USMPDI-054SC-D-08-10-201029	BIK0336-MS1	820L1021.D	Solid	12/11/20 04:41
USMPDI-054SC-D-08-10-201029	BIK0336-MSD1	820L1022.D	Solid	12/11/20 05:05
USMPDI-054SC-D-10-12-201029	20K0073-16	820L1023.D	Solid	12/11/20 05:30
USMPDI-054SC-D-12-14-201029	20K0073-17	820L1024.D	Solid	12/11/20 05:55
USMPDI-054SC-D-14-16-201029	20K0073-18	820L1025.D	Solid	12/11/20 06:19
ALIPHATICS	SIL0284-CCV2	820L1026.D	NA	12/11/20 06:44
ZZZZZ	BIK0385-BLK1	820L1027.D	Solid	12/11/20 07:09
ZZZZZ	BIK0385-BS1	820L1028.D	Solid	12/11/20 07:33
ZZZZZ	20K0075-01	820L1029.D	Solid	12/11/20 07:58
ZZZZZ	20K0075-02	820L1030.D	Solid	12/11/20 08:23
ZZZZZ	20K0075-03	820L1031.D	Solid	12/11/20 08:47
ZZZZZ	20K0075-04	820L1032.D	Solid	12/11/20 09:12
ZZZZZ	20K0075-05	820L1033.D	Solid	12/11/20 09:37
ALIPHATICS	SIL0284-CCV3	820L1036.D	NA	12/11/20 10:51

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0284	Instrument:	FID8
		Calibration:	DJ00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20K0075-06	820L1037.D	Solid	12/11/20 11:16
ZZZZZ	20K0075-07	820L1038.D	Solid	12/11/20 11:41
ZZZZZ	20K0075-08	820L1039.D	Solid	12/11/20 12:05
ZZZZZ	20K0075-09	820L1040.D	Solid	12/11/20 12:30
ZZZZZ	20K0075-11	820L1041.D	Solid	12/11/20 12:55
ZZZZZ	20K0075-12	820L1042.D	Solid	12/11/20 13:20
ZZZZZ	20K0075-13	820L1043.D	Solid	12/11/20 13:45
ALIPHATICS	SIL0284-CCV4	820L1044.D	NA	12/11/20 14:10
ZZZZZ	20K0075-14	820L1045.D	Solid	12/11/20 14:35
ZZZZZ	20K0075-15	820L1046.D	Solid	12/11/20 15:00
ZZZZZ	20K0075-16	820L1047.D	Solid	12/11/20 15:25
ZZZZZ	20K0075-17	820L1048.D	Solid	12/11/20 15:50
ZZZZZ	20K0075-18	820L1049.D	Solid	12/11/20 16:15
ZZZZZ	20K0075-19	820L1050.D	Solid	12/11/20 16:40
ZZZZZ	20K0075-20	820L1051.D	Solid	12/11/20 17:04
ALIPHATICS	SIL0284-CCV5	820L1052.D	NA	12/11/20 17:29

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/18/2020 8:59:05AM

ANALYSIS SEQUENCE

SIL0284

Instrument: FID8 Element Column ID: d002555
Calibration ID: DJ00015

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0284-ICV1	ALIPHATICS	QC		1	I009827		
BIK0336-BLK1	Blank	QC		2			
BIK0336-BS1	LCS	QC		3			
20K0073-03	MPDI-046SC-B-11.8-13.8-2010	WA EPH Aliphatic C10-C12 mod	A 01	4			
20K0073-04	MPDI-046SC-B-13.8-15.8-2010	WA EPH Aliphatic C10-C12 mod	A 01	5			
20K0073-05	MPDI-046SC-B-15.8-17.8-2010	WA EPH Aliphatic C10-C12 mod	A 01	6			
20K0073-06	SMPDI-046SC-B-3.8-5.8-20102	WA EPH Aliphatic C10-C12 mod	A 01	7			
20K0073-07	SMPDI-046SC-B-5.8-7.8-20102	WA EPH Aliphatic C10-C12 mod	A 01	8			
20K0073-08	SMPDI-046SC-B-7.8-9.8-20102	WA EPH Aliphatic C10-C12 mod	A 01	9			
20K0073-09	SMPDI-046SC-B-9.8-11.8-2010	WA EPH Aliphatic C10-C12 mod	A 01	10			
SIL0284-CCV1	ALIPHATICS	QC		11	I009827		
20K0073-11	JSMPDI-054SC-D-00-02-20102	WA EPH Aliphatic C10-C12 mod	A 01	12			
20K0073-12	JSMPDI-054SC-D-02-04-20102	WA EPH Aliphatic C10-C12 mod	A 01	13			
20K0073-13	JSMPDI-054SC-D-04-06-20102	WA EPH Aliphatic C10-C12 mod	A 01	14			
20K0073-14	JSMPDI-054SC-D-06-08-20102	WA EPH Aliphatic C10-C12 mod	A 01	15			
20K0073-15	JSMPDI-054SC-D-08-10-20102	WA EPH Aliphatic C10-C12 mod	A 01	16			
BIK0336-MS1	Matrix Spike	QC		17			
BIK0336-MSD1	Matrix Spike Dup	QC		18			
20K0073-16	JSMPDI-054SC-D-10-12-20102	WA EPH Aliphatic C10-C12 mod	A 01	19			
20K0073-17	JSMPDI-054SC-D-12-14-20102	WA EPH Aliphatic C10-C12 mod	A 01	20			
20K0073-18	JSMPDI-054SC-D-14-16-20102	WA EPH Aliphatic C10-C12 mod	A 01	21			
SIL0284-CCV2	ALIPHATICS	QC		22	I009827		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

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ANALYSIS SEQUENCE

SIL0284

Instrument: FID8 Element Column ID: d002555
Calibration ID: DJ00015

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
BIK0385-BLK1	Blank	QC		23			
BIK0385-BS1	LCS	QC		24			
20K0075-01	JSMPDI-045SC-B-00-02-20103	WA EPH Aliphatic C10-C12 mod	A 02	25			
20K0075-02	JSMPDI-045SC-B-02-04-20103	WA EPH Aliphatic C10-C12 mod	A 02	26			
20K0075-03	JSMPDI-045SC-B-04-06-20103	WA EPH Aliphatic C10-C12 mod	A 02	27			
20K0075-04	JSMPDI-045SC-B-06-08-20103	WA EPH Aliphatic C10-C12 mod	A 02	28			
20K0075-05	JSMPDI-045SC-B-08-10-20103	WA EPH Aliphatic C10-C12 mod	A 02	29			
BIK0385-MS1	Matrix Spike	QC		30			
BIK0385-MSD1	Matrix Spike Dup	QC		31			
SIL0284-CCV3	ALIPHATICS	QC		32	I009827		
20K0075-06	JSMPDI-045SC-B-10-12-20103	WA EPH Aliphatic C10-C12 mod	A 02	33			
20K0075-07	JSMPDI-045SC-B-12-14-20103	WA EPH Aliphatic C10-C12 mod	A 02	34			
20K0075-08	JSMPDI-045SC-B-14-16-20103	WA EPH Aliphatic C10-C12 mod	A 02	35			
20K0075-09	SMPDI-045SC-B-16-17.4-2010	WA EPH Aliphatic C10-C12 mod	A 02	36			
20K0075-11	JSMPDI-047SC-D-00-02-20103	WA EPH Aliphatic C10-C12 mod	A 02	37			
20K0075-12	JSMPDI-047SC-D-02-04-20103	WA EPH Aliphatic C10-C12 mod	A 02	38			
20K0075-13	JSMPDI-047SC-D-04-06-20103	WA EPH Aliphatic C10-C12 mod	A 02	39			
SIL0284-CCV4	ALIPHATICS	QC		40	I009827		
20K0075-14	JSMPDI-047SC-D-06-08-20103	WA EPH Aliphatic C10-C12 mod	A 02	41			
20K0075-15	JSMPDI-047SC-D-08-10-20103	WA EPH Aliphatic C10-C12 mod	A 02	42			
20K0075-16	JSMPDI-047SC-D-10-12-20103	WA EPH Aliphatic C10-C12 mod	A 02	43			
20K0075-17	JSMPDI-047SC-D-12-14-20103	WA EPH Aliphatic C10-C12 mod	A 02	44			

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Analytical Chemists and Consultants

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ANALYSIS SEQUENCE

SIL0284

Instrument: FID8 Element Column ID: d002555
Calibration ID: DJ00015

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
20K0075-18	USMPDI-047SC-D-14-16-20103	WA EPH Aliphatic C10-C12 mod	A 02	45			
20K0075-19	SMPDI-047SC-D-16-17.7-2010	WA EPH Aliphatic C10-C12 mod	A 02	46			
20K0075-20	SMPDI-1047SC-D-12-14-2010	WA EPH Aliphatic C10-C12 mod	A 02	47			
SIL0284-CCV5	ALIPHATICS	QC		48	I009827		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201210.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	10-DEC-2020 20:33	820L1001.D	1	RINSE	
2	10-DEC-2020 20:57	820L1002.D	1	RINSE	
3	10-DEC-2020 21:22	820L1003.D	1	RINSE	
4	10-DEC-2020 21:46	820L1004.D	1	ALIPHICV1	
5	10-DEC-2020 22:11	820L1005.D	1	BIK0336-BLK1	
6	10-DEC-2020 22:35	820L1006.D	1	BIK0336-BS1	
7	10-DEC-2020 23:00	820L1007.D	1	20K0073-03	
8	10-DEC-2020 23:24	820L1008.D	1	20K0073-04	
9	10-DEC-2020 23:49	820L1009.D	1	20K0073-05	
10	11-DEC-2020 00:13	820L1010.D	1	20K0073-06	
11	11-DEC-2020 00:37	820L1011.D	1	20K0073-07	
12	11-DEC-2020 01:02	820L1012.D	1	20K0073-08	
13	11-DEC-2020 01:26	820L1013.D	1	20K0073-09	
14	11-DEC-2020 01:51	820L1014.D	1	20K0073-10	
15	11-DEC-2020 02:15	820L1015.D	1	ALIPHCCV1	
16	11-DEC-2020 02:39	820L1016.D	1	20K0073-11	
17	11-DEC-2020 03:04	820L1017.D	1	20K0073-12	
18	11-DEC-2020 03:28	820L1018.D	1	20K0073-13	
19	11-DEC-2020 03:52	820L1019.D	1	20K0073-14	
20	11-DEC-2020 04:17	820L1020.D	1	20K0073-15	
21	11-DEC-2020 04:41	820L1021.D	1	BIK0336-MS1	
22	11-DEC-2020 05:05	820L1022.D	1	BIK0336-MSD1	
23	11-DEC-2020 05:30	820L1023.D	1	20K0073-16	
24	11-DEC-2020 05:55	820L1024.D	1	20K0073-17	
25	11-DEC-2020 06:19	820L1025.D	1	20K0073-18	
26	11-DEC-2020 06:44	820L1026.D	1	ALIPHCCV2	
27	11-DEC-2020 07:09	820L1027.D	1	BIK0385-BLK1	
28	11-DEC-2020 07:33	820L1028.D	1	BIK0385-BS1	
29	11-DEC-2020 07:58	820L1029.D	1	20K0075-01	
30	11-DEC-2020 08:23	820L1030.D	1	20K0075-02	
31	11-DEC-2020 08:47	820L1031.D	1	20K0075-03	
32	11-DEC-2020 09:12	820L1032.D	1	20K0075-04	
33	11-DEC-2020 09:37	820L1033.D	1	20K0075-05	
34	11-DEC-2020 10:02	820L1034.D	1	BIK0385-MS1	
35	11-DEC-2020 10:26	820L1035.D	1	BIK0385-MSD1	
36	11-DEC-2020 10:51	820L1036.D	1	ALIPHCCV3	
37	11-DEC-2020 11:16	820L1037.D	1	20K0075-06	
38	11-DEC-2020 11:41	820L1038.D	1	20K0075-07	
39	11-DEC-2020 12:05	820L1039.D	1	20K0075-08	
40	11-DEC-2020 12:30	820L1040.D	1	20K0075-09	
41	11-DEC-2020 12:55	820L1041.D	1	20K0075-11	
42	11-DEC-2020 13:20	820L1042.D	1	20K0075-12	
43	11-DEC-2020 13:45	820L1043.D	1	20K0075-13	
44	11-DEC-2020 14:10	820L1044.D	1	ALIPHCCV4	
45	11-DEC-2020 14:35	820L1045.D	1	20K0075-14	
46	11-DEC-2020 15:00	820L1046.D	1	20K0075-15	
47	11-DEC-2020 15:25	820L1047.D	1	20K0075-16	
48	11-DEC-2020 15:50	820L1048.D	1	20K0075-17	
49	11-DEC-2020 16:15	820L1049.D	1	20K0075-18	
50	11-DEC-2020 16:40	820L1050.D	1	20K0075-19	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201210.b p

	Inject Date/Time	Filename	DF	LabID	ClientID
51	11-DEC-2020 17:04	820L1051.D	1	20K0075-20	
52	11-DEC-2020 17:29	820L1052.D	1	ALIPHCCV5	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201210aliph.b

ARI Job No.: RINS Method: EPHAliph.m Instrument: fid8.i Date: 10-DEC-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2033	820L1001.D	RINSE		1	NO MANUAL INTEGRATION
2057	820L1002.D	RINSE		1	NO MANUAL INTEGRATION
2122	820L1003.D	RINSE		1	NO MANUAL INTEGRATION
2146	820L1004.D	ALIPHICV1		1	NO MANUAL INTEGRATION
2211	820L1005.D	BIK0336-BLK1		1	NO MANUAL INTEGRATION
2235	820L1006.D	BIK0336-BS1		1	C10,
2300	820L1007.D	20K0073-03		1	NO MANUAL INTEGRATION
2324	820L1008.D	20K0073-04		1	NO MANUAL INTEGRATION
2349	820L1009.D	20K0073-05		1	NO MANUAL INTEGRATION
0013	820L1010.D	20K0073-06		1	NO MANUAL INTEGRATION
0037	820L1011.D	20K0073-07		1	NO MANUAL INTEGRATION
0102	820L1012.D	20K0073-08		1	NO MANUAL INTEGRATION
0126	820L1013.D	20K0073-09		1	NO MANUAL INTEGRATION
0151	820L1014.D	20K0073-10		1	NO MANUAL INTEGRATION
0215	820L1015.D	ALIPHCCV1		1	NO MANUAL INTEGRATION
0239	820L1016.D	20K0073-11		1	1-Chloro-Octodecane,
0304	820L1017.D	20K0073-12		1	1-Chloro-Octodecane,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201210aliph.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0328	820L1018.D	20K0073-13		1	1-Chloro-Octodecane,
0352	820L1019.D	20K0073-14		1	1-Chloro-Octodecane,
0417	820L1020.D	20K0073-15		1	NO MANUAL INTEGRATION
0441	820L1021.D	BIK0336-MS1		1	C10,
0505	820L1022.D	BIK0336-MSD1		1	C10,
0530	820L1023.D	20K0073-16		1	NO MANUAL INTEGRATION
0555	820L1024.D	20K0073-17		1	NO MANUAL INTEGRATION
0619	820L1025.D	20K0073-18		1	NO MANUAL INTEGRATION
0644	820L1026.D	ALIPHCCV2		1	NO MANUAL INTEGRATION
0709	820L1027.D	BIK0385-BLK1		1	NO MANUAL INTEGRATION
0733	820L1028.D	BIK0385-BS1		1	C10,
0758	820L1029.D	20K0075-01		1	1-Chloro-Octodecane,
0823	820L1030.D	20K0075-02		1	1-Chloro-Octodecane,
0847	820L1031.D	20K0075-03		1	NO MANUAL INTEGRATION
0912	820L1032.D	20K0075-04		1	NO MANUAL INTEGRATION
0937	820L1033.D	20K0075-05		1	NO MANUAL INTEGRATION
1002	820L1034.D	BIK0385-MS1		1	C10,
1026	820L1035.D	BIK0385-MSD1		1	C10,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201210aliph.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1051	820L1036.D	ALIPHCCV3		1	NO MANUAL INTEGRATION
1116	820L1037.D	20K0075-06		1	NO MANUAL INTEGRATION
1141	820L1038.D	20K0075-07		1	NO MANUAL INTEGRATION
1205	820L1039.D	20K0075-08		1	NO MANUAL INTEGRATION
1230	820L1040.D	20K0075-09		1	NO MANUAL INTEGRATION
1255	820L1041.D	20K0075-11		1	1-Chloro-Octodecane,
1320	820L1042.D	20K0075-12		1	1-Chloro-Octodecane,
1345	820L1043.D	20K0075-13		1	NO MANUAL INTEGRATION
1410	820L1044.D	ALIPHCCV4		1	NO MANUAL INTEGRATION
1435	820L1045.D	20K0075-14		1	NO MANUAL INTEGRATION
1500	820L1046.D	20K0075-15		1	NO MANUAL INTEGRATION
1525	820L1047.D	20K0075-16		1	NO MANUAL INTEGRATION
1550	820L1048.D	20K0075-17		1	NO MANUAL INTEGRATION
1615	820L1049.D	20K0075-18		1	NO MANUAL INTEGRATION
1640	820L1050.D	20K0075-19		1	NO MANUAL INTEGRATION
1704	820L1051.D	20K0075-20		1	NO MANUAL INTEGRATION
1729	820L1052.D	ALIPHCCV5		1	NO MANUAL INTEGRATION

Security Status Report

Date: 18-Dec-2020 08:59

820L1001.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1002.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1003.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1004.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1005.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1006.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1007.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1008.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1009.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1010.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1011.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1012.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1013.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1014.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1015.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1016.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1017.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1018.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1019.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1020.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1021.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1022.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1023.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1024.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1025.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1026.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1027.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1028.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1029.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1030.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1031.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1032.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1033.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1034.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1035.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1036.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1037.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1038.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1039.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1040.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1041.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1042.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1043.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1044.D	Data Locked	jrains, 18-Dec-2020 08:59

820L1045.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1046.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1047.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1048.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1049.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1050.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1051.D	Data Locked	jrains, 18-Dec-2020 08:59
820L1052.D	Data Locked	jrains, 18-Dec-2020 08:59

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0285	Instrument:	FID8
		Calibration:	DJ00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ALIPHATICS	SIL0285-ICV1	820L1204.D	NA	12/12/20 18:26
USMPDI-1046SC-B-9.8-11.8-201029	20K0073-10	820L1205.D	Solid	12/12/20 19:17
ZZZZZ	BIK0498-BLK1	820L1206.D	Solid	12/12/20 19:41
ZZZZZ	BIK0498-BS1	820L1207.D	Solid	12/12/20 20:05
ZZZZZ	20K0102-03	820L1208.D	Solid	12/12/20 20:30
ZZZZZ	20K0102-04	820L1209.D	Solid	12/12/20 20:54
ZZZZZ	20K0102-05	820L1210.D	Solid	12/12/20 21:19
ZZZZZ	20K0102-06	820L1211.D	Solid	12/12/20 21:44
ZZZZZ	20K0102-07	820L1212.D	Solid	12/12/20 22:08
ALIPHATICS	SIL0285-CCV1	820L1213.D	NA	12/12/20 22:33
ZZZZZ	20K0102-08	820L1214.D	Solid	12/12/20 22:57
ZZZZZ	20K0102-09	820L1215.D	Solid	12/12/20 23:22
ZZZZZ	20K0102-10	820L1216.D	Solid	12/12/20 23:46
ZZZZZ	20K0102-13	820L1217.D	Solid	12/13/20 00:11
ZZZZZ	20K0102-14	820L1218.D	Solid	12/13/20 00:35
ZZZZZ	20K0102-15	820L1219.D	Solid	12/13/20 01:00
ZZZZZ	20K0102-16	820L1220.D	Solid	12/13/20 01:24
ALIPHATICS	SIL0285-CCV2	820L1221.D	NA	12/13/20 01:49
ZZZZZ	20K0102-17	820L1222.D	Solid	12/13/20 02:13
ZZZZZ	20K0102-18	820L1223.D	Solid	12/13/20 02:37
ZZZZZ	20K0102-19	820L1224.D	Solid	12/13/20 03:02
ZZZZZ	20K0102-20	820L1225.D	Solid	12/13/20 03:26
ZZZZZ	20K0102-23	820L1226.D	Solid	12/13/20 03:51
ZZZZZ	20K0102-24	820L1227.D	Solid	12/13/20 04:15
ALIPHATICS	SIL0285-CCV3	820L1230.D	NA	12/13/20 05:28
ZZZZZ	20K0102-25	820L1231.D	Solid	12/13/20 05:53
ZZZZZ	20K0102-26	820L1232.D	Solid	12/13/20 06:17
ZZZZZ	20K0102-27	820L1233.D	Solid	12/13/20 06:42
ZZZZZ	20K0102-28	820L1234.D	Solid	12/13/20 07:06
ZZZZZ	20K0102-29	820L1237.D	Solid	12/13/20 08:20

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0285	Instrument:	FID8
		Calibration:	DJ00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	20K0102-30	820L1238.D	Solid	12/13/20 08:45
ALIPHATICS	SIL0285-CCV4	820L1239.D	NA	12/13/20 09:09

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/18/2020 11:12:35AM

ANALYSIS SEQUENCE

SIL0285

Instrument: FID8 Element Column ID: d002555
Calibration ID: DJ00015

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SIL0285-ICV1	ALIPHATICS	QC		1	I009827		
20K0073-10	MPDI-1046SC-B-9.8-11.8-201	WA EPH Aliphatic C10-C12 mod	A 01	2			
BIK0498-BLK1	Blank	QC		3			
BIK0498-BS1	LCS	QC		4			
20K0102-03	JSMPDI-038SC-B-00-02-20110	WA EPH Aliphatic C10-C12 mod	A 02	5			
20K0102-04	JSMPDI-038SC-B-02-04-20110	WA EPH Aliphatic C10-C12 mod	A 02	6			
20K0102-05	JSMPDI-038SC-B-04-06-20110	WA EPH Aliphatic C10-C12 mod	A 02	7			
20K0102-06	JSMPDI-038SC-B-06-08-20110	WA EPH Aliphatic C10-C12 mod	A 02	8			
20K0102-07	JSMPDI-038SC-B-08-10-20110	WA EPH Aliphatic C10-C12 mod	A 02	9			
SIL0285-CCV1	ALIPHATICS	QC		10	I009827		
20K0102-08	JSMPDI-038SC-B-10-12-20110	WA EPH Aliphatic C10-C12 mod	A 02	11			
20K0102-09	JSMPDI-038SC-B-12-14-20110	WA EPH Aliphatic C10-C12 mod	A 02	12			
20K0102-10	SMPDI-038SC-B-14-15.3-2011	WA EPH Aliphatic C10-C12 mod	A 02	13			
20K0102-13	JSMPDI-040SC-B-00-02-20110	WA EPH Aliphatic C10-C12 mod	A 02	14			
20K0102-14	JSMPDI-040SC-B-02-04-20110	WA EPH Aliphatic C10-C12 mod	A 02	15			
20K0102-15	JSMPDI-040SC-B-04-06-20110	WA EPH Aliphatic C10-C12 mod	A 02	16			
20K0102-16	JSMPDI-040SC-B-06-08-20110	WA EPH Aliphatic C10-C12 mod	A 02	17			
SIL0285-CCV2	ALIPHATICS	QC		18	I009827		
20K0102-17	JSMPDI-040SC-B-08-10-20110	WA EPH Aliphatic C10-C12 mod	A 02	19			
20K0102-18	JSMPDI-040SC-B-10-12-20110	WA EPH Aliphatic C10-C12 mod	A 02	20			
20K0102-19	JSMPDI-040SC-B-12-14-20110	WA EPH Aliphatic C10-C12 mod	A 02	21			
20K0102-20	SMPDI-1040SC-B-10-12-2011	WA EPH Aliphatic C10-C12 mod	A 02	22			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Printed: 12/18/2020 11:12:35AM

ANALYSIS SEQUENCE

SIL0285

Instrument: FID8 Element Column ID: d002555
Calibration ID: DJ00015

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
20K0102-23	USMPDI-048SC-B-00-02-20110	WA EPH Aliphatic C10-C12 mod	A 02	23			
20K0102-24	USMPDI-048SC-B-02-04-20110	WA EPH Aliphatic C10-C12 mod	A 02	24			
BIK0498-MS1	Matrix Spike	QC		25			
BIK0498-MSD1	Matrix Spike Dup	QC		26			
SIL0285-CCV3	ALIPHATICS	QC		27	I009827		
20K0102-25	USMPDI-048SC-B-04-06-20110	WA EPH Aliphatic C10-C12 mod	A 02	28			
20K0102-26	USMPDI-048SC-B-06-08-20110	WA EPH Aliphatic C10-C12 mod	A 02	29			
20K0102-27	USMPDI-048SC-B-08-10-20110	WA EPH Aliphatic C10-C12 mod	A 02	30			
20K0102-28	USMPDI-048SC-B-10-12-20110	WA EPH Aliphatic C10-C12 mod	A 02	31			
BIK0498-MS2	Matrix Spike	QC		32			
BIK0498-MSD2	Matrix Spike Dup	QC		33			
20K0102-29	USMPDI-048SC-B-12-14-20110	WA EPH Aliphatic C10-C12 mod	A 01	34			
20K0102-30	USMPDI-048SC-B-14-16-20110	WA EPH Aliphatic C10-C12 mod	A 01	35			
SIL0285-CCV4	ALIPHATICS	QC		36	I009827		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201212aliph.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	12-DEC-2020 17:13	820L1201.D	1	RINSE	
2	12-DEC-2020 17:37	820L1202.D	1	RINSE	
3	12-DEC-2020 18:01	820L1203.D	1	RINSE	
4	12-DEC-2020 18:26	820L1204.D	1	ALIPHICV1	
5	12-DEC-2020 19:17	820L1205.D	1	20K0073-10	
6	12-DEC-2020 19:41	820L1206.D	1	BIK0498-BLK1	
7	12-DEC-2020 20:05	820L1207.D	1	BIK0498-BS1	
8	12-DEC-2020 20:30	820L1208.D	1	20K0102-03	
9	12-DEC-2020 20:54	820L1209.D	1	20K0102-04	
10	12-DEC-2020 21:19	820L1210.D	1	20K0102-05	
11	12-DEC-2020 21:44	820L1211.D	1	20K0102-06	
12	12-DEC-2020 22:08	820L1212.D	1	20K0102-07	
13	12-DEC-2020 22:33	820L1213.D	1	ALIPHCCV1	
14	12-DEC-2020 22:57	820L1214.D	1	20K0102-08	
15	12-DEC-2020 23:22	820L1215.D	1	20K0102-09	
16	12-DEC-2020 23:46	820L1216.D	1	20K0102-10	
17	13-DEC-2020 00:11	820L1217.D	1	20K0102-13	
18	13-DEC-2020 00:35	820L1218.D	1	20K0102-14	
19	13-DEC-2020 01:00	820L1219.D	1	20K0102-15	
20	13-DEC-2020 01:24	820L1220.D	1	20K0102-16	
21	13-DEC-2020 01:49	820L1221.D	1	ALIPHCCV2	
22	13-DEC-2020 02:13	820L1222.D	1	20K0102-17	
23	13-DEC-2020 02:37	820L1223.D	1	20K0102-18	
24	13-DEC-2020 03:02	820L1224.D	1	20K0102-19	
25	13-DEC-2020 03:26	820L1225.D	1	20K0102-20	
26	13-DEC-2020 03:51	820L1226.D	1	20K0102-23	
27	13-DEC-2020 04:15	820L1227.D	1	20K0102-24	
28	13-DEC-2020 04:39	820L1228.D	1	BIK0498-MS1	
29	13-DEC-2020 05:04	820L1229.D	1	BIK0498-MSD1	
30	13-DEC-2020 05:28	820L1230.D	1	ALIPHCCV3	
31	13-DEC-2020 05:53	820L1231.D	1	20K0102-25	
32	13-DEC-2020 06:17	820L1232.D	1	20K0102-26	
33	13-DEC-2020 06:42	820L1233.D	1	20K0102-27	
34	13-DEC-2020 07:06	820L1234.D	1	20K0102-28	
35	13-DEC-2020 07:31	820L1235.D	1	BIK0498-MS2	
36	13-DEC-2020 07:55	820L1236.D	1	BIK0498-MSD2	
37	13-DEC-2020 08:20	820L1237.D	1	20K0102-29	
38	13-DEC-2020 08:45	820L1238.D	1	20K0102-30	
39	13-DEC-2020 09:09	820L1239.D	1	ALIPHCCV4	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201212aliph.b

ARI Job No.: RINS Method: EPHAliph.m Instrument: fid8.i Date: 12-DEC-2020

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1713	820L1201.D	RINSE		1	NO MANUAL INTEGRATION
1737	820L1202.D	RINSE		1	NO MANUAL INTEGRATION
1801	820L1203.D	RINSE		1	NO MANUAL INTEGRATION
1826	820L1204.D	ALIPHICV1		1	NO MANUAL INTEGRATION
1917	820L1205.D	20K0073-10		1	NO MANUAL INTEGRATION
1941	820L1206.D	BIK0498-BLK1		1	NO MANUAL INTEGRATION
2005	820L1207.D	BIK0498-BS1		1	C10,
2030	820L1208.D	20K0102-03		1	NO MANUAL INTEGRATION
2054	820L1209.D	20K0102-04		1	1-Chloro-Octodecane,
2119	820L1210.D	20K0102-05		1	1-Chloro-Octodecane,
2144	820L1211.D	20K0102-06		1	1-Chloro-Octodecane,
2208	820L1212.D	20K0102-07		1	1-Chloro-Octodecane,
2233	820L1213.D	ALIPHCCV1		1	NO MANUAL INTEGRATION
2257	820L1214.D	20K0102-08		1	1-Chloro-Octodecane,
2322	820L1215.D	20K0102-09		1	1-Chloro-Octodecane,
2346	820L1216.D	20K0102-10		1	1-Chloro-Octodecane,
0011	820L1217.D	20K0102-13		1	1-Chloro-Octodecane,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201212aliph.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0035	820L1218.D	20K0102-14		1	1-Chloro-Octodecane,
0100	820L1219.D	20K0102-15		1	1-Chloro-Octodecane,
0124	820L1220.D	20K0102-16		1	1-Chloro-Octodecane,
0149	820L1221.D	ALIPHCCV2		1	NO MANUAL INTEGRATION
0213	820L1222.D	20K0102-17		1	1-Chloro-Octodecane,
0237	820L1223.D	20K0102-18		1	NO MANUAL INTEGRATION
0302	820L1224.D	20K0102-19		1	NO MANUAL INTEGRATION
0326	820L1225.D	20K0102-20		1	NO MANUAL INTEGRATION
0351	820L1226.D	20K0102-23		1	1-Chloro-Octodecane,
0415	820L1227.D	20K0102-24		1	1-Chloro-Octodecane,
0439	820L1228.D	BIK0498-MS1		1	1-Chloro-Octodecane,
0504	820L1229.D	BIK0498-MSD1		1	1-Chloro-Octodecane,
0528	820L1230.D	ALIPHCCV3		1	NO MANUAL INTEGRATION
0553	820L1231.D	20K0102-25		1	1-Chloro-Octodecane,
0617	820L1232.D	20K0102-26		1	1-Chloro-Octodecane,
0642	820L1233.D	20K0102-27		1	1-Chloro-Octodecane,
0706	820L1234.D	20K0102-28		1	1-Chloro-Octodecane,
0731	820L1235.D	BIK0498-MS2		1	C10, 1-Chloro-Octodecane,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem2\fid8.i\20201212aliph.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0755	820L1236.D	BIK0498-MSD2		1	C10, 1-Chloro-Octodecane,
0820	820L1237.D	20K0102-29		1	1-Chloro-Octodecane,
0845	820L1238.D	20K0102-30		1	NO MANUAL INTEGRATION
0909	820L1239.D	ALIPHCCV4		1	NO MANUAL INTEGRATION

Security Status Report

Date: 18-Dec-2020 11:13

820L1201.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1202.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1203.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1204.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1205.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1206.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1207.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1208.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1209.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1210.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1211.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1212.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1213.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1214.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1215.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1216.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1217.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1218.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1219.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1220.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1221.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1222.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1223.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1224.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1225.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1226.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1227.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1228.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1229.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1230.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1231.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1232.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1233.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1234.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1235.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1236.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1237.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1238.D	Data Locked	jrains, 18-Dec-2020 11:13
820L1239.D	Data Locked	jrains, 18-Dec-2020 11:13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

WA EPH

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIJ0055	Instrument:	FID8
Calibration:	DJ00015	Calibration Date:	10/02/2020

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIJ0055-SCV2 (Water)				Lab File ID: 820J0121.D			Analyzed: 10/02/20 02:45	
1-Chloro-octadecane	125.00	139	70 - 130	7.01	7.01	0.0000	N/A	*

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

WA EPH

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0284	Instrument:	FID8
Calibration:	DJ00015	Calibration Date:	10/02/2020

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0284-ICV1 (Solid)			Lab File ID: 820L1004.D				Analyzed: 12/10/20 21:46	
1-Chloro-octadecane	125.00	90.1	80 - 120	7	7.01	-0.0100	N/A	
BIK0336-BLK1 (Solid)			Lab File ID: 820L1005.D				Analyzed: 12/10/20 22:11	
1-Chloro-octadecane	15000	58.4	30 - 160	7	7.01	-0.0100	N/A	
BIK0336-BS1 (Solid)			Lab File ID: 820L1006.D				Analyzed: 12/10/20 22:35	
1-Chloro-octadecane	15000	57.1	30 - 160	7	7.01	-0.0100	N/A	
20K0073-03 (Solid)			Lab File ID: 820L1007.D				Analyzed: 12/10/20 23:00	
1-Chloro-octadecane	16404	66.3	30 - 160	7	7.01	-0.0100	N/A	
20K0073-04 (Solid)			Lab File ID: 820L1008.D				Analyzed: 12/10/20 23:24	
1-Chloro-octadecane	18105	57.2	30 - 160	7	7.01	-0.0100	N/A	
20K0073-05 (Solid)			Lab File ID: 820L1009.D				Analyzed: 12/10/20 23:49	
1-Chloro-octadecane	18300	63.1	30 - 160	7	7.01	-0.0100	N/A	
20K0073-06 (Solid)			Lab File ID: 820L1010.D				Analyzed: 12/11/20 00:13	
1-Chloro-octadecane	16674	57.6	30 - 160	7	7.01	-0.0100	N/A	
20K0073-07 (Solid)			Lab File ID: 820L1011.D				Analyzed: 12/11/20 00:37	
1-Chloro-octadecane	18217	64.3	30 - 160	7	7.01	-0.0100	N/A	
20K0073-08 (Solid)			Lab File ID: 820L1012.D				Analyzed: 12/11/20 01:02	
1-Chloro-octadecane	16560	60.3	30 - 160	7	7.01	-0.0100	N/A	
20K0073-09 (Solid)			Lab File ID: 820L1013.D				Analyzed: 12/11/20 01:26	
1-Chloro-octadecane	18043	87.7	30 - 160	7	7.01	-0.0100	N/A	
SIL0284-CCV1 (Solid)			Lab File ID: 820L1015.D				Analyzed: 12/11/20 02:15	
1-Chloro-octadecane	125.00	93.3	80 - 120	7	7.01	-0.0100	N/A	
20K0073-11 (Solid)			Lab File ID: 820L1016.D				Analyzed: 12/11/20 02:39	
1-Chloro-octadecane	29738	71.6	30 - 160	7.01	7.01	0.0000	N/A	
20K0073-12 (Solid)			Lab File ID: 820L1017.D				Analyzed: 12/11/20 03:04	
1-Chloro-octadecane	25872	46.9	30 - 160	7	7.01	-0.0100	N/A	

Analytical Resources, Incorporated
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SURROGATE RECOVERY AND RT SUMMARY

WA EPH

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0284	Instrument:	FID8
Calibration:	DJ00015	Calibration Date:	10/02/2020

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
20K0073-13 (Solid)				Lab File ID: 820L1018.D			Analyzed: 12/11/20 03:28	
1-Chloro-octadecane	22331	68.5	30 - 160	7.01	7.01	0.0000	N/A	
20K0073-14 (Solid)				Lab File ID: 820L1019.D			Analyzed: 12/11/20 03:52	
1-Chloro-octadecane	20919	53.1	30 - 160	7.01	7.01	0.0000	N/A	
20K0073-15 (Solid)				Lab File ID: 820L1020.D			Analyzed: 12/11/20 04:17	
1-Chloro-octadecane	16784	80.6	30 - 160	7	7.01	-0.0100	N/A	
BIK0336-MS1 (Solid)				Lab File ID: 820L1021.D			Analyzed: 12/11/20 04:41	
1-Chloro-octadecane	16800	89.3	30 - 160	7.01	7.01	0.0000	N/A	
BIK0336-MSD1 (Solid)				Lab File ID: 820L1022.D			Analyzed: 12/11/20 05:05	
1-Chloro-octadecane	16851	61.7	30 - 160	7	7.01	-0.0100	N/A	
20K0073-16 (Solid)				Lab File ID: 820L1023.D			Analyzed: 12/11/20 05:30	
1-Chloro-octadecane	18722	65.8	30 - 160	7	7.01	-0.0100	N/A	
20K0073-17 (Solid)				Lab File ID: 820L1024.D			Analyzed: 12/11/20 05:55	
1-Chloro-octadecane	18877	86.1	30 - 160	7	7.01	-0.0100	N/A	
20K0073-18 (Solid)				Lab File ID: 820L1025.D			Analyzed: 12/11/20 06:19	
1-Chloro-octadecane	19732	74.9	30 - 160	7	7.01	-0.0100	N/A	
SIL0284-CCV2 (Solid)				Lab File ID: 820L1026.D			Analyzed: 12/11/20 06:44	
1-Chloro-octadecane	125.00	93.0	80 - 120	7	7.01	-0.0100	N/A	
SIL0284-CCV3 (Solid)				Lab File ID: 820L1036.D			Analyzed: 12/11/20 10:51	
1-Chloro-octadecane	125.00	92.9	80 - 120	7	7.01	-0.0100	N/A	
SIL0284-CCV4 (Solid)				Lab File ID: 820L1044.D			Analyzed: 12/11/20 14:10	
1-Chloro-octadecane	125.00	93.1	80 - 120	7	7.01	-0.0100	N/A	
SIL0284-CCV5 (Solid)				Lab File ID: 820L1052.D			Analyzed: 12/11/20 17:29	
1-Chloro-octadecane	125.00	99.0	80 - 120	7	7.01	-0.0100	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

WA EPH

Laboratory:	Analytical Resources, Inc.	SDG/WO:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Sequence:	SIL0285	Instrument:	FID8
Calibration:	DJ00015	Calibration Date:	10/02/2020

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SIL0285-ICV1 (Solid)			Lab File ID: 820L1204.D				Analyzed: 12/12/20 18:26	
1-Chloro-octadecane	125.00	91.0	80 - 120	7	7.01	-0.0100	N/A	
20K0073-10 (Solid)			Lab File ID: 820L1205.D				Analyzed: 12/12/20 19:17	
1-Chloro-octadecane	17233	50.3	30 - 160	7	7.01	-0.0100	N/A	
SIL0285-CCV1 (Solid)			Lab File ID: 820L1213.D				Analyzed: 12/12/20 22:33	
1-Chloro-octadecane	125.00	91.4	80 - 120	7	7.01	-0.0100	N/A	
SIL0285-CCV2 (Solid)			Lab File ID: 820L1221.D				Analyzed: 12/13/20 01:49	
1-Chloro-octadecane	125.00	94.6	80 - 120	7	7.01	-0.0100	N/A	
SIL0285-CCV3 (Solid)			Lab File ID: 820L1230.D				Analyzed: 12/13/20 05:28	
1-Chloro-octadecane	125.00	98.8	80 - 120	7	7.01	-0.0100	N/A	
SIL0285-CCV4 (Solid)			Lab File ID: 820L1239.D				Analyzed: 12/13/20 09:09	
1-Chloro-octadecane	125.00	98.1	80 - 120	7.01	7.01	0.0000	N/A	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

HOLDING TIME SUMMARY

Analysis: WA EPH

Laboratory: Analytical Resources, Inc. SDG: 20K0073

Client: Anchor QEA, LLC Project: Gasco Siltronic

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
USMPDI-046SC-B-11.8-13.8-201029 20K0073-03	10/29/20 10:30	11/03/20 11:32	11/12/20 19:42	14	14	12/10/20 23:00	28	40	
USMPDI-046SC-B-13.8-15.8-201029 20K0073-04	10/29/20 10:30	11/03/20 11:32	11/12/20 19:42	14	14	12/10/20 23:24	28	40	
USMPDI-046SC-B-15.8-17.8-201029 20K0073-05	10/29/20 10:30	11/03/20 11:32	11/12/20 19:42	14	14	12/10/20 23:49	28	40	
USMPDI-046SC-B-3.8-5.8-201029 20K0073-06	10/29/20 10:30	11/03/20 11:32	11/12/20 19:42	14	14	12/11/20 00:13	28	40	
USMPDI-046SC-B-5.8-7.8-201029 20K0073-07	10/29/20 10:30	11/03/20 11:32	11/12/20 19:42	14	14	12/11/20 00:37	28	40	
USMPDI-046SC-B-7.8-9.8-201029 20K0073-08	10/29/20 10:30	11/03/20 11:32	11/12/20 19:42	14	14	12/11/20 01:02	28	40	
USMPDI-046SC-B-9.8-11.8-201029 20K0073-09	10/29/20 10:30	11/03/20 11:32	11/12/20 19:42	14	14	12/11/20 01:26	28	40	
USMPDI-1046SC-B-9.8-11.8-201029 20K0073-10	10/29/20 00:00	11/03/20 11:32	11/12/20 19:42	14	14	12/12/20 19:17	30	40	
USMPDI-054SC-D-00-02-201029 20K0073-11	10/29/20 14:00	11/03/20 11:32	11/12/20 19:42	14	14	12/11/20 02:39	28	40	
USMPDI-054SC-D-02-04-201029 20K0073-12	10/29/20 14:00	11/03/20 11:32	11/12/20 19:42	14	14	12/11/20 03:04	28	40	
USMPDI-054SC-D-04-06-201029 20K0073-13	10/29/20 14:00	11/03/20 11:32	11/12/20 19:42	14	14	12/11/20 03:28	28	40	
USMPDI-054SC-D-06-08-201029 20K0073-14	10/29/20 14:00	11/03/20 11:32	11/12/20 19:42	14	14	12/11/20 03:52	28	40	
USMPDI-054SC-D-08-10-201029 20K0073-15	10/29/20 14:00	11/03/20 11:32	11/12/20 19:42	14	14	12/11/20 04:17	28	40	
USMPDI-054SC-D-10-12-201029 20K0073-16	10/29/20 14:00	11/03/20 11:32	11/12/20 19:42	14	14	12/11/20 05:30	28	40	
USMPDI-054SC-D-12-14-201029 20K0073-17	10/29/20 14:00	11/03/20 11:32	11/12/20 19:42	14	14	12/11/20 05:55	28	40	
USMPDI-054SC-D-14-16-201029 20K0073-18	10/29/20 14:00	11/03/20 11:32	11/12/20 19:42	14	14	12/11/20 06:19	28	40	
Matrix Spike BIK0336-MS1	10/29/20 14:00	11/03/20 11:32	11/12/20 19:42	14	14	12/11/20 04:41	28	40	
Matrix Spike Dup BIK0336-MSD1	10/29/20 14:00	11/03/20 11:32	11/12/20 19:42	14	14	12/11/20 05:05	28	40	

* Indicates hold time exceedance.

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METHOD DETECTION AND REPORTING LIMITS

WA EPH

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Matrix:	Solid	Instrument:	FID8

Analyte	MDL	RL	Units
C10-C12 Aliphatics		2000	ug/kg

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METHOD DETECTION AND REPORTING LIMITS

WA EPH

Laboratory: Analytical Resources, Inc.
SDG: 20K0073
Client: Anchor QEA, LLC
Project: Gasco Siltronic
Matrix: Water
Instrument: FID8

Analyte	MDL	RL	Units
C10-C12 Aliphatics		20	ug/L

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Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

USMPDI-046SC-A-00-01-201029

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-01 A	SDG:	20K0073
Sampled:	10/29/20 10:40	Prepared:	11/08/20 09:10	File ID:	
% Solids:	87.91	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	87.91	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
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USMPDI-046SC-A-01-02-201029

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-02 A	SDG:	20K0073
Sampled:	10/29/20 10:40	Prepared:	11/08/20 09:10	File ID:	
% Solids:	81.84	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	81.84	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
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SMPDI-046SC-B-11.8-13.8-20102

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-03 A	SDG:	20K0073
Sampled:	10/29/20 10:30	Prepared:	11/08/20 09:10	File ID:	
% Solids:	89.71	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	89.71	1	0.04	0.04	

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INORGANIC ANALYSIS DATA SHEET
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SMPDI-046SC-B-13.8-15.8-20102

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-04 A	SDG:	20K0073
Sampled:	10/29/20 10:30	Prepared:	11/08/20 09:10	File ID:	
% Solids:	81.05	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	81.05	1	0.04	0.04	

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SMPDI-046SC-B-15.8-17.8-20102

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-05 A	SDG:	20K0073
Sampled:	10/29/20 10:30	Prepared:	11/08/20 09:10	File ID:	
% Solids:	80.82	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	80.82	1	0.04	0.04	

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USMPDI-046SC-B-3.8-5.8-201029

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-06 A	SDG:	20K0073
Sampled:	10/29/20 10:30	Prepared:	11/08/20 09:10	File ID:	
% Solids:	88.91	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	88.91	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
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USMPDI-046SC-B-5.8-7.8-201029

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-07 A	SDG:	20K0073
Sampled:	10/29/20 10:30	Prepared:	11/08/20 09:10	File ID:	
% Solids:	81.45	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	81.45	1	0.04	0.04	

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USMPDI-046SC-B-7.8-9.8-201029

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-08 A	SDG:	20K0073
Sampled:	10/29/20 10:30	Prepared:	11/08/20 09:10	File ID:	
% Solids:	90.43	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	90.43	1	0.04	0.04	

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INORGANIC ANALYSIS DATA SHEET
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USMPDI-046SC-B-9.8-11.8-201029

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-09 A	SDG:	20K0073
Sampled:	10/29/20 10:30	Prepared:	11/08/20 09:10	File ID:	
% Solids:	81.76	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	81.76	1	0.04	0.04	

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INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

SMPDI-1046SC-B-9.8-11.8-20102

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-10 A	SDG:	20K0073
Sampled:	10/29/20 00:00	Prepared:	11/08/20 09:10	File ID:	
% Solids:	82.30	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	82.30	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
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USMPDI-054SC-D-00-02-201029

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-11 A	SDG:	20K0073
Sampled:	10/29/20 14:00	Prepared:	11/08/20 09:10	File ID:	
% Solids:	50.56	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	50.56	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

USMPDI-054SC-D-02-04-201029

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-12 A	SDG:	20K0073
Sampled:	10/29/20 14:00	Prepared:	11/08/20 09:10	File ID:	
% Solids:	56.91	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	56.91	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
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USMPDI-054SC-D-04-06-201029

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-13 A	SDG:	20K0073
Sampled:	10/29/20 14:00	Prepared:	11/08/20 09:10	File ID:	
% Solids:	66.26	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	66.26	1	0.04	0.04	

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INORGANIC ANALYSIS DATA SHEET
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USMPDI-054SC-D-06-08-201029

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-14 A	SDG:	20K0073
Sampled:	10/29/20 14:00	Prepared:	11/08/20 09:10	File ID:	
% Solids:	71.20	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	71.20	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

USMPDI-054SC-D-08-10-201029

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-15 A	SDG:	20K0073
Sampled:	10/29/20 14:00	Prepared:	11/08/20 09:10	File ID:	
% Solids:	88.83	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	88.83	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
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USMPDI-054SC-D-10-12-201029

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-16 A	SDG:	20K0073
Sampled:	10/29/20 14:00	Prepared:	11/08/20 09:10	File ID:	
% Solids:	80.31	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	80.31	1	0.04	0.04	

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Form I
INORGANIC ANALYSIS DATA SHEET
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USMPDI-054SC-D-12-14-201029

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-17 A	SDG:	20K0073
Sampled:	10/29/20 14:00	Prepared:	11/08/20 09:10	File ID:	
% Solids:	78.71	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	78.71	1	0.04	0.04	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

USMPDI-054SC-D-14-16-201029

Laboratory:	Analytical Resources, Inc.				
Client:	Anchor QEA, LLC				
Project:	Gasco Siltronic				
Matrix:	Sediment	Laboratory ID:	20K0073-18 A	SDG:	20K0073
Sampled:	10/29/20 14:00	Prepared:	11/08/20 09:10	File ID:	
% Solids:	75.02	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Batch:	BIK0206	Sequence:		Initial/Final:	10 g Wet / 10 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	75.02	1	0.04	0.04	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

PREPARATION BATCH SUMMARY

SM 2540 G-97

Laboratory:	Analytical Resources, Inc.	SDG:	20K0073
Client:	Anchor QEA, LLC	Project:	Gasco Siltronic
Batch:	BIK0206 Batch Matrix: Solid	Preparation:	No Prep Wet Chem

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
USMPDI-046SC-A-00-01-201029	20K0073-01		11/08/20 09:10	
USMPDI-046SC-A-01-02-201029	20K0073-02		11/08/20 09:10	
USMPDI-046SC-B-11.8-13.8-20102	20K0073-03		11/08/20 09:10	
USMPDI-046SC-B-13.8-15.8-20102	20K0073-04		11/08/20 09:10	
USMPDI-046SC-B-15.8-17.8-20102	20K0073-05		11/08/20 09:10	
USMPDI-046SC-B-3.8-5.8-201029	20K0073-06		11/08/20 09:10	
USMPDI-046SC-B-5.8-7.8-201029	20K0073-07		11/08/20 09:10	
USMPDI-046SC-B-7.8-9.8-201029	20K0073-08		11/08/20 09:10	
USMPDI-046SC-B-9.8-11.8-201029	20K0073-09		11/08/20 09:10	
USMPDI-1046SC-B-9.8-11.8-20102	20K0073-10		11/08/20 09:10	
USMPDI-054SC-D-00-02-201029	20K0073-11		11/08/20 09:10	
USMPDI-054SC-D-02-04-201029	20K0073-12		11/08/20 09:10	
USMPDI-054SC-D-04-06-201029	20K0073-13		11/08/20 09:10	
USMPDI-054SC-D-06-08-201029	20K0073-14		11/08/20 09:10	
USMPDI-054SC-D-08-10-201029	20K0073-15		11/08/20 09:10	
USMPDI-054SC-D-10-12-201029	20K0073-16		11/08/20 09:10	
USMPDI-054SC-D-12-14-201029	20K0073-17		11/08/20 09:10	
USMPDI-054SC-D-14-16-201029	20K0073-18		11/08/20 09:10	
Blank	BIK0206-BLK1		11/08/20 09:10	
USMPDI-054SC-D-08-10-201029	BIK0206-DUP1		11/08/20 09:10	

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET for Solid samples

Method: PSEP 1986, SM2540, EPA 160.1

(dry at 104 (12-24 hr) then combust at 550 (30 min))

Batch:	BIK0206
Date:	11/8/2020 9:42
Analyst:	KLE

Instrumentation

Drying Ovens:	12	**Analytical Balance:**	BAL2
Muffle Furnace:	N / A		

Batch drying time

record times as mm/dd/yy hh:mm

date/time in oven:	11/8/2020 9:42	
date/time out:	11/9/2020 5:44	
elapsed hrs =	20.0	OK

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000
if ash wt > dry wt, "Chk for Err"
if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000

Balance Calibration Check

Record weights to 4 places

Cal Weight ID:		CV-02	CV-02	CV-02	CV-02	CV-02		CV-02	CV-02	CV-02
Date & Time:		11/8/20 9:12	11/8/20 9;22	11/9/20 6:04						
Cal Wt (g):	10.0000	9.9999	9.9999	9.9999						
		Cal OK!	Cal OK!	Cal OK!						

Sample ID	Dish #	Tare Wt. (g)	Dish & Sample (g)	Dry Wt 104C (grams) 1	2	3	dry Wt (g)	TS (%)	Notes	ASH WT 550C (grams) 1	2	3	Ash Wt (g)	TVS (mg/kg)	(%)	Notes
BIK0206-BLK1	1	0.7945	0.0000	0.7945			0.0000	0.00%								
20K0073-01	2	0.7782	6.5442	5.8471			5.0689	87.91%								
20K0073-02	3	0.8056	6.3945	5.3797			4.5741	81.84%								
20K0073-03	4	0.8061	6.4413	5.8616			5.0555	89.71%								
20K0073-04	5	0.8070	6.8471	5.7023			4.8953	81.05%								
20K0073-05	6	0.8062	6.6068	5.4944			4.6882	80.82%								
20K0073-06	7	0.7779	6.8764	6.1998			5.4219	88.91%								
20K0073-07	8	0.7872	6.8606	5.7338			4.9466	81.45%								
20K0073-08	9	0.7931	6.5289	5.9798			5.1867	90.43%								
20K0073-09	10	0.7908	6.6707	5.5984			4.8076	81.76%								
20K0073-10	11	0.7763	6.6395	5.6017			4.8254	82.30%								
20K0073-11	12	0.8038	6.2659	3.5652			2.7614	50.56%								
20K0073-12	13	0.7900	6.4400	4.0055			3.2155	56.91%								
20K0073-13	14	0.7838	8.3209	5.7776			4.9938	66.26%								
20K0073-14	15	0.7798	7.6792	5.6921			4.9123	71.20%								
20K0073-15	16	0.7827	6.6906	6.0306			5.2479	88.83%								
BIK0206-DUP1	17	0.7931	6.6897	6.0457			5.2526	89.08%	RPD=0.3							
20K0073-16	18	0.8036	6.4467	5.3356			4.5320	80.31%								
20K0073-17	19	0.7958	7.8797	6.3715			5.5757	78.71%								
20K0073-18	20	0.8081	6.4885	5.0693			4.2612	75.02%								

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Form I

METHOD BLANK DATA SHEET

SM 2540 G-97

TotalAnalytes

Blank

Laboratory:	Analytical Resources, Inc.			SDG:	20K0073
Client:	Anchor QEA, LLC			Project:	Gasco Siltronic
Batch:	BIK0206	Laboratory ID:	BIK0206-BLK1	Prepared:	11/08/20 09:10
Matrix:	Solid	Preparation:	No Prep Wet Chem	Analyzed:	11/08/20 09:42
Sequence:		Calibration:		Instrument:	BAL2

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	ND	1	0.04	0.04	U

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USMPDI-054SC-D-08-10-201029

DUPLICATES
SM 2540 G-97

Laboratory: Analytical Resources, Inc.
SDG: 20K0073
Client: Anchor QEA, LLC
Project: Gasco Siltronic
Matrix: Solid
Laboratory ID: BIK0206-DUP1
Batch: BIK0206
Lab Source ID: 20K0073-15
Preparation: No Prep Wet Chem
Initial/Final: 10 g / 10 g
Source Sample Name: USMPDI-054SC-D-08-10-201029
% Solids: 88.83

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (%)	C	DUPLICATE CONCENTRATION (%)	C	RPD %	Q
Total Solids	20	88.83		89.08		0.281	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

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HOLDING TIME SUMMARY

Analysis: SM 2540 G-97

Laboratory: Analytical Resources, Inc. SDG: 20K0073

Client: Anchor QEA, LLC Project: Gasco Siltronic

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
USMPDI-046SC-A-00-01-201029 20K0073-01	10/29/20 10:40	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	
USMPDI-046SC-A-01-02-201029 20K0073-02	10/29/20 10:40	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	
USMPDI-046SC-B-11.8-13.8-201029 20K0073-03	10/29/20 10:30	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	
USMPDI-046SC-B-13.8-15.8-201029 20K0073-04	10/29/20 10:30	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	
USMPDI-046SC-B-15.8-17.8-201029 20K0073-05	10/29/20 10:30	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	
USMPDI-046SC-B-3.8-5.8-201029 20K0073-06	10/29/20 10:30	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	
USMPDI-046SC-B-5.8-7.8-201029 20K0073-07	10/29/20 10:30	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	
USMPDI-046SC-B-7.8-9.8-201029 20K0073-08	10/29/20 10:30	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	
USMPDI-046SC-B-9.8-11.8-201029 20K0073-09	10/29/20 10:30	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	
USMPDI-1046SC-B-9.8-11.8-201029 20K0073-10	10/29/20 00:00	11/03/20 11:32	11/08/20 09:10	10	28	11/08/20 09:42	10	28	
USMPDI-054SC-D-00-02-201029 20K0073-11	10/29/20 14:00	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	
USMPDI-054SC-D-02-04-201029 20K0073-12	10/29/20 14:00	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	
USMPDI-054SC-D-04-06-201029 20K0073-13	10/29/20 14:00	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	
USMPDI-054SC-D-06-08-201029 20K0073-14	10/29/20 14:00	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	
USMPDI-054SC-D-08-10-201029 20K0073-15	10/29/20 14:00	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	
USMPDI-054SC-D-10-12-201029 20K0073-16	10/29/20 14:00	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	
USMPDI-054SC-D-12-14-201029 20K0073-17	10/29/20 14:00	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	
USMPDI-054SC-D-14-16-201029 20K0073-18	10/29/20 14:00	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	
Duplicate BIK0206-DUP1	10/29/20 14:00	11/03/20 11:32	11/08/20 09:10	9	28	11/08/20 09:42	10	28	

* Indicates hold time exceedance.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

METHOD DETECTION AND REPORTING LIMITS

SM 2540 G-97

Laboratory: Analytical Resources, Inc.
SDG: 20K0073
Client: Anchor QEA, LLC
Project: Gasco Siltronic
Matrix: Solid
Instrument:

Analyte	MDL	RL	Units
Total Solids	0.04	0.04	%

TOTAL SOLIDS BENCHSHEET		
Method: PSEP 1986	Batch:	BIK0268
(dry at 103-105 C)	Date:	11/10/2020 9:03
	Analyst:	YL
Instrumentation	Drying Oven:	15
	Analytical Balance:	B139298002

Batch drying time		
record times as mm/dd/yy hh:mm		
date/time in oven:	11/10/2020 16:25	
date/time out:	11/11/2020 8:10	
elapsed hrs:	15.8	

TS (%) calculated as:

Final dry wt (g) = (Dry Wt - Tare Wt)

TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
20K0073-01	0.7900	11.2000	9.2700	8.48	**81.46%**	No
20K0073-02	0.8000	11.5400	10.2100	9.41	**87.62%**	No
20K0073-03	0.8000	11.0900	10.0800	9.28	**90.18%**	No
20K0073-04	0.8000	11.8900	9.9600	9.16	**82.60%**	No
20K0073-05	0.8100	11.7500	9.7330	8.92	**81.56%**	No
20K0073-06	0.7900	11.5600	10.4400	9.65	**89.60%**	No
20K0073-07	0.8000	11.4400	9.5000	8.70	**81.77%**	No
20K0073-08	0.8000	11.6300	10.6000	9.80	**90.49%**	No
20K0073-09	0.7900	11.7700	9.9000	9.11	**82.97%**	No
20K0073-10	0.8000	12.0000	10.5000	9.70	**86.61%**	No
20K0073-11	0.8000	11.3200	6.0800	5.28	**50.19%**	No
20K0073-12	0.8000	11.3600	6.8500	6.05	**57.29%**	No
20K0073-13	0.8000	11.8800	8.2200	7.42	**66.97%**	No
20K0073-14	0.8000	11.6400	8.5500	7.75	**71.49%**	No
20K0073-15	0.8000	11.9100	10.6700	9.87	**88.84%**	No
20K0073-16	0.8000	12.0200	9.7800	8.98	**80.04%**	No
20K0073-17	0.8000	11.2300	9.0300	8.23	**78.91%**	No
20K0073-18	0.8000	11.8300	9.1100	8.31	**75.34%**	No