

Cover Page

Order ID : P4258

Project ID : Perth Amboy

Client : Roman E&G Corp

Lab Sample Number

P4258-01
P4258-02
P4258-03
P4258-04

Client Sample Number

Chamberlain Ave
Chamberlain Ave
Chamberlain Ave
Chamberlain Ave

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : _____

Date: 10/16/2024

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CASE NARRATIVE

Roman E&G Corp

Project Name: Perth Amboy

Project # N/A

Chemtech Project # P4258

Test Name: EPH

A. Number of Samples and Date of Receipt:

4 Solid samples were received on 10/01/2024.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: Ammonia, Anions Group1, ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TS, COD, Corrosivity, EPH, GROWS Concrete, GROWS Concrete ASTM, GROWS Soil, GROWS Soil-Waste Class, Herbicide, Hexavalent Chromium, Ignitability, Mercury, Metals Group1, Metals ICP-Group1, Metals ICP-TAL, METALS-TAL, Oil and Grease, Paint Filter, PCB, Pesticide-TCL, pH, Reactive Cyanide, Reactive Sulfide, SVOC-TCL BNA -20, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Metals + Cu+Ni+Zn, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction, TCLP-FULL, TS, TVS and VOC-TCLVOA-10. This data package contains results for EPH.

C. Analytical Techniques:

The analysis were performed on instrument FID_C. The column is RXI-1MS which is 20 meters, 0.18mm ID, 0.18 um df, catalog 10224. The analyses were performed on instrument FID_D. The column is RXI-1MS which is 20 meters, 0.18mm ID, 0.18 um df, catalog 10224. The analysis of EPHs was based on method NJEPH and extraction was done based on method 3541.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Retention Times were acceptable for all samples.

The MS recoveries met the requirements for all compounds .

The MSD recoveries met the acceptable requirements .

The RPD met criteria .

The Blank Spike met requirements for all samples .

The Blank Spike Duplicate met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration met the requirements .



284 Sheffield Street, Mountainside, NJ 07092
Phone: 908 789 8900 Fax: 908 789 8922

E. Additional Comments:

The temperature of the samples at the time of receipt was 22.1°C, Lab notified this issue to the client. See the communication in shipping Document section.

The soil samples results are based on a dry weight basis.

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature_____

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following "Results Qualifiers" are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
ND	Indicates the analyte was analyzed for, but not detected
J	Indicates an estimated value. This flag is used: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others.
B	Indicates the analyte was found in the blank as well as the sample report as "12 B".
E	Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
P	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P".
N	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.
A	This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product.
Q	Indicates the LCS did not meet the control limits requirements

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: P4258

Completed

For thorough review, the report must have the following:

GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Custody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: SHREENA PATEL

Date: 10/16/2024

LAB CHRONICLE

OrderID:	P4258	OrderDate:	10/1/2024 1:21:00 PM
Client:	Roman E&G Corp	Project:	Perth Amboy
Contact:	Mark Mattheiss	Location:	H11,H51,K11,K21

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P4258-03	Chamberlain Ave	SOIL			10/01/24			10/01/24
			Herbicide	8151A		10/11/24	10/11/24	
			PCB	8082A		10/02/24	10/02/24	
			Pesticide-TCL	8081B		10/11/24	10/11/24	
			EPH	NJEPH		10/11/24	10/12/24	
P4258-04	Chamberlain Ave	TCLP			10/01/24			10/01/24
			TCLP Herbicide	8151A		10/03/24	10/04/24	
			TCLP Pesticide	8081B		10/03/24	10/03/24	



QC SUMMARY



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

SOIL EPH SURROGATE RECOVERY

Lab Name: CHEMTECH Contract: ROMA02
Lab Code: CHEM CASE No.: P4258 SAS No.: P4258 SDG No.: P4258
Run Number: FC101124AL

Client SAMPLE NO.	1-chlorooctadecane (SURR)			TOT OUT
Chamberlain Ave	79			0
Chamberlain AveMS	50			0
Chamberlain AveMSD	52			0
PB164054BL	74			0
PB164054BS	82			0
PB164054BSD	78			0

QC LIMITS

1-chlorooctadecane (SURR)

(40-140)

Column to be used to flag recovery values
* Values outside of contract required QC Limits
D Surrogate diluted out

SOIL EPH SURROGATE RECOVERY

Lab Name: CHEMTECH Contract: ROMA02
Lab Code: CHEM CASE No.: P4258 SAS No.: P4258 SDG No.: P4258
Run Number: FD101124AR

Client SAMPLE NO.	2-Bromonaphthalene (SURR)	2-Flurobiphenyl (SURR)	ortho-Terphenyl (SURR)	TOT OUT
Chamberlain Ave	101	102	65	0
Chamberlain AveMS	111	117	66	0
Chamberlain AveMSD	109	115	65	0
PB164054BL	114	120	93	0
PB164054BS	103	100	83	0
PB164054BSD	101	98	81	0

QC LIMITS

2-Bromonaphthalene (SURR) (40-140)
2-Flurobiphenyl (SURR) (40-140)
ortho-Terphenyl (SURR) (40-140)

Column to be used to flag recovery values
* Values outside of contract required QC Limits
D Surrogate diluted out

SOIL EPH SURROGATE RECOVERY

QC LIMITS

2-Bromonaphthalene (SURRE)

(40-140)

2-Fluorobiphenyl (SURRE)

(40-140)

ortho-Terphenyl (SURRE)

(40-140)

Column to be used to flag recovery values

* Values outside of contract required QC Limits

D Surrogate diluted out

SOLID EPH MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Roman E&G Corp
Lab Code: CHEM **Cas No:** P4258 **SAS No :** P4258 **SDG No:** P4258
Sample No : P4258-03MS **Datafile:** FC067417.D
Client ID : Chamberlain AveMS

COMPOUND	SPIKE ADDED mg/kg	SAMPLE CONCENTRATION mg/kg	MS/MSD CONCENTRATION mg/kg	% REC	Qual	QC LIMITS
Aliphatic C9-C12	11.6	0	6.78	58		(40-140)
Aliphatic C12-C16	7.7	0	5.58	72		(40-140)
Aliphatic C16-C21	11.6	0	8.85	76		(40-140)
Aliphatic C21-C28	15.5	0	11.8	76		(40-140)
Aliphatic C28-C40	23.2	0	21.0	90		(40-140)

SOLID EPH MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Roman E&G Corp
Lab Code: CHEM **Cas No:** P4258 **SAS No :** P4258 **SDG No:** P4258
Sample No : P4258-03MSD **Datafile:** FC067418.D
Client ID : Chamberlain AveMSD

COMPOUND	SPIKE ADDED mg/kg	SAMPLE CONCENTRATION mg/kg	MS/MSD CONCENTRATION mg/kg	% REC	Qual	RPD QC LIMITS QC Limit Of RPD
Aliphatic C9-C12	11.6	0	6.83	59		0.85 (40-140) 25
Aliphatic C12-C16	7.7	0	5.58	72		0.14 (40-140) 25
Aliphatic C16-C21	11.6	0	8.90	77		0.65 (40-140) 25
Aliphatic C21-C28	15.5	0	11.9	77		0.91 (40-140) 25
Aliphatic C28-C40	23.2	0	21.0	91		0.11 (40-140) 25

SOLID EPH MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Roman E&G Corp
Lab Code: CHEM **Cas No:** P4258 **SAS No :** P4258 **SDG No:** P4258
Sample No : P4258-03MS **Datafile:** FD048469.D
Client ID : Chamberlain AveMS

COMPOUND	SPIKE ADDED mg/kg	SAMPLE CONCENTRATION mg/kg	MS/MSD CONCENTRATION mg/kg	% REC	Qual	QC LIMITS
Aromatic C10-C12	7.7	0	6.55	85		(40-140)
Aromatic C12-C16	11.6	0	10.6	91		(40-140)
Aromatic C16-C21	19.3	0	20.9	108		(40-140)
Aromatic C21-C36	30.9	0	33.6	108		(40-140)

SOLID EPH MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Roman E&G Corp
Lab Code: CHEM **Cas No:** P4258 **SAS No :** P4258 **SDG No:** P4258
Sample No : P4258-03MSD **Datafile:** FD048470.D
Client ID : Chamberlain AveMSD

COMPOUND	SPIKE ADDED mg/kg	SAMPLE CONCENTRATION mg/kg	MS/MSD CONCENTRATION mg/kg	% REC	Qual	RPD QC LIMITS QC Limit Of RPD
Aromatic C10-C12	7.7	0	6.05	78		7.85 (40-140) 25
Aromatic C12-C16	11.6	0	10.4	90		1.88 (40-140) 25
Aromatic C16-C21	19.3	0	20.5	106		1.87 (40-140) 25
Aromatic C21-C36	30.9	0	33.0	106		1.87 (40-140) 25

SOLID EPH LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Roman E&G Corp
Lab Code: CHEM **Cas No:** P4258 **SAS No :** P4258 **SDG No:** P4258
Sample No : PB164054BS **Datafile:** FC067410.D
Client ID : PB164054BS

COMPOUND	SPIKE ADDED mg/kg	LCS/LCSD CONCENTRATION mg/kg	% REC	Qual	QC LIMITS
Aliphatic C9-C12	10.0	5.95	60		(40-140)
Aliphatic C12-C16	6.7	5.05	76		(40-140)
Aliphatic C16-C21	10.0	7.93	79		(40-140)
Aliphatic C21-C28	13.3	10.6	80		(40-140)
Aliphatic C28-C40	20.0	15.4	77		(40-140)

SOLID EPH LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Roman E&G Corp
Lab Code: CHEM **Cas No:** P4258 **SAS No :** P4258 **SDG No:** P4258
Sample No : PB164054BSD **Datafile:** FC067411.D
Client ID : PB164054BSD

COMPOUND	SPIKE ADDED mg/kg	LCS/LCSD CONCENTRATION mg/kg	% REC	Qual	RPD QC LIMITS	QC Limit Of RPD
Aliphatic C9-C12	10	5.97	60		0.43 (40-140)	50
Aliphatic C12-C16	6.7	5.08	76		0.62 (40-140)	50
Aliphatic C16-C21	10	7.94	80		0.22 (40-140)	50
Aliphatic C21-C28	13.3	10.6	80		0.09 (40-140)	50
Aliphatic C28-C40	20.0	15.5	78		0.74 (40-140)	50

SOLID EPH LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Roman E&G Corp
Lab Code: CHEM **Cas No:** P4258 **SAS No :** P4258 **SDG No:** P4258
Sample No : PB164054BS **Datafile:** FD048462.D
Client ID : PB164054BS

COMPOUND	SPIKE ADDED mg/kg	LCS/LCSD CONCENTRATION mg/kg	% REC	Qual	QC LIMITS
Aromatic C10-C12	6.7	4.69	70		(40-140)
Aromatic C12-C16	10.0	7.59	76		(40-140)
Aromatic C16-C21	16.7	14.5	87		(40-140)
Aromatic C21-C36	26.7	21.9	82		(40-140)

SOLID EPH LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Roman E&G Corp
Lab Code: CHEM **Cas No:** P4258 **SAS No :** P4258 **SDG No:** P4258
Sample No : PB164054BSD **Datafile:** FD048463.D
Client ID : PB164054BSD

COMPOUND	SPIKE ADDED mg/kg	LCS/LCSD CONCENTRATION mg/kg	% REC	Qual	RPD QC LIMITS	QC Limit Of RPD
Aromatic C10-C12	6.7	4.58	69		2.3 (40-140)	50
Aromatic C12-C16	10	7.43	74		2 (40-140)	50
Aromatic C16-C21	16.7	14.2	85		2 (40-140)	50
Aromatic C21-C36	26.6	21.6	81		1.4 (40-140)	50

4B
METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB164054BL

Lab Name: CHEMTECH

Contract: ROMA02

Lab Code: CHEM Case No.: P4258

SAS No.: P4258 SDG NO.: P4258

Instrument ID: FID_C

Lab Sample ID: PB164054BL

Matrix: (soil/water) Solid

Date Extracted: 10/11/2024 8:20:00

Level: (low/med) low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA SAMPLE NO.	LAB SAMPLE ID
PB164054BS	PB164054BS
PB164054BSD	PB164054BSD
CHAMBERLAIN AVE	P4258-03
CHAMBERLAIN AVEMS	P4258-03MS
CHAMBERLAIN AVEMSD	P4258-03MSD

COMMENTS: _____



SAMPLE DATA

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	10/01/24
Project:	Perth Amboy	Date Received:	10/01/24
Client Sample ID:	Chamberlain Ave	SDG No.:	P4258
Lab Sample ID:	P4258-03	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	86
Sample Wt/Vol:	30.04 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
10/11/24 08:00	10/12/24 0:35	PB164054

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	
TARGETS								
Aliphatic C9-C12	Aliphatic C9-C12	0.44	U	1	0.44	1.16	mg/kg	FC067415.D
Aliphatic C12-C16	Aliphatic C12-C16	0.28	U	1	0.28	0.77	mg/kg	FC067415.D
Aliphatic C16-C21	Aliphatic C16-C21	0.35	U	1	0.35	1.16	mg/kg	FC067415.D
Aliphatic C21-C28	Aliphatic C21-C28	0.93	U	1	0.93	1.55	mg/kg	FC067415.D
Aliphatic C28-C40	Aliphatic C28-C40	2.09	U	1	2.09	2.32	mg/kg	FC067415.D
Aromatic C10-C12	Aromatic C10-C12	0.35	U	1	0.35	0.77	mg/kg	FD048467.D
Aromatic C12-C16	Aromatic C12-C16	0.40	U	1	0.40	1.16	mg/kg	FD048467.D
Aromatic C16-C21	Aromatic C16-C21	1.11	U	1	1.11	1.94	mg/kg	FD048467.D
Aromatic C21-C36	Aromatic C21-C36	2.32	U	1	2.32	3.10	mg/kg	FD048467.D
Total AliphaticEPH	Total AliphaticEPH	4.09	U		4.09	6.96	mg/kg	
Total AromaticEPH	Total AromaticEPH	4.17	U		4.17	6.97	mg/kg	
Total EPH	Total EPH	8.26	U		8.26	13.9	mg/kg	

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	10/01/24
Project:	Perth Amboy	Date Received:	10/01/24
Client Sample ID:	Chamberlain Ave	SDG No.:	P4258
Lab Sample ID:	P4258-03	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	86
Sample Wt/Vol:	30.04 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC067415.D	1	10/11/24	10/12/24	PB164054

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C12	Aliphatic C9-C12	0.44	U	0.44	1.16	mg/kg
Aliphatic C12-C16	Aliphatic C12-C16	0.28	U	0.28	0.77	mg/kg
Aliphatic C16-C21	Aliphatic C16-C21	0.35	U	0.35	1.16	mg/kg
Aliphatic C21-C28	Aliphatic C21-C28	0.93	U	0.93	1.55	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	2.09	U	2.09	2.32	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	39.6		40 - 140	79%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	0.00		40 - 140	0%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	P4258-03	Acq On:	12 Oct 2024 00:35
Client Sample ID:	Chamberlain Ave	Operator:	YP/AJ
Data file:	FC067415.D	Misc:	
Instrument:	FID_C	ALS Vial:	24
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	3.175	6.457	56543	0.441	300	ug/ml
Aliphatic C12-C16	6.458	9.848	192435	1.469	200	ug/ml
Aliphatic C16-C21	9.849	13.207	0	0	300	ug/ml
Aliphatic C21-C28	13.208	16.862	155045	1.223	400	ug/ml
Aliphatic C28-C40	16.863	21.712	702470	6.676	600	ug/ml
Aliphatic EPH	3.175	21.712	1106493	9.809		ug/ml
ortho-Terphenyl (SURR)	0.000	0.000	0	0		ug/ml
1-chlorooctadecane (SURR)	12.942	12.942	4479449	39.57		ug/ml
Aliphatic C9-C28	3.175	16.862	404023	3.133	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC101124AL\
Data File : FC067415.D
Signal(s) : FID1A.ch
Acq On : 12 Oct 2024 00:35
Operator : YP/AJ
Sample : P4258-03
Misc :
ALS Vial : 24 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
Chamberlain Ave

Integration File: autoint1.e
Quant Time: Oct 14 03:26:10 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Quant Title : GC Extractables
QLast Update : Tue Oct 01 09:13:32 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
12) S 1-chlorooctadecane (S...	12.942	4479449	39.573 ug/ml
Spiked Amount	50.000	Recovery	= 79.15%

Target Compounds

(f)=RT Delta > 1/2 Window

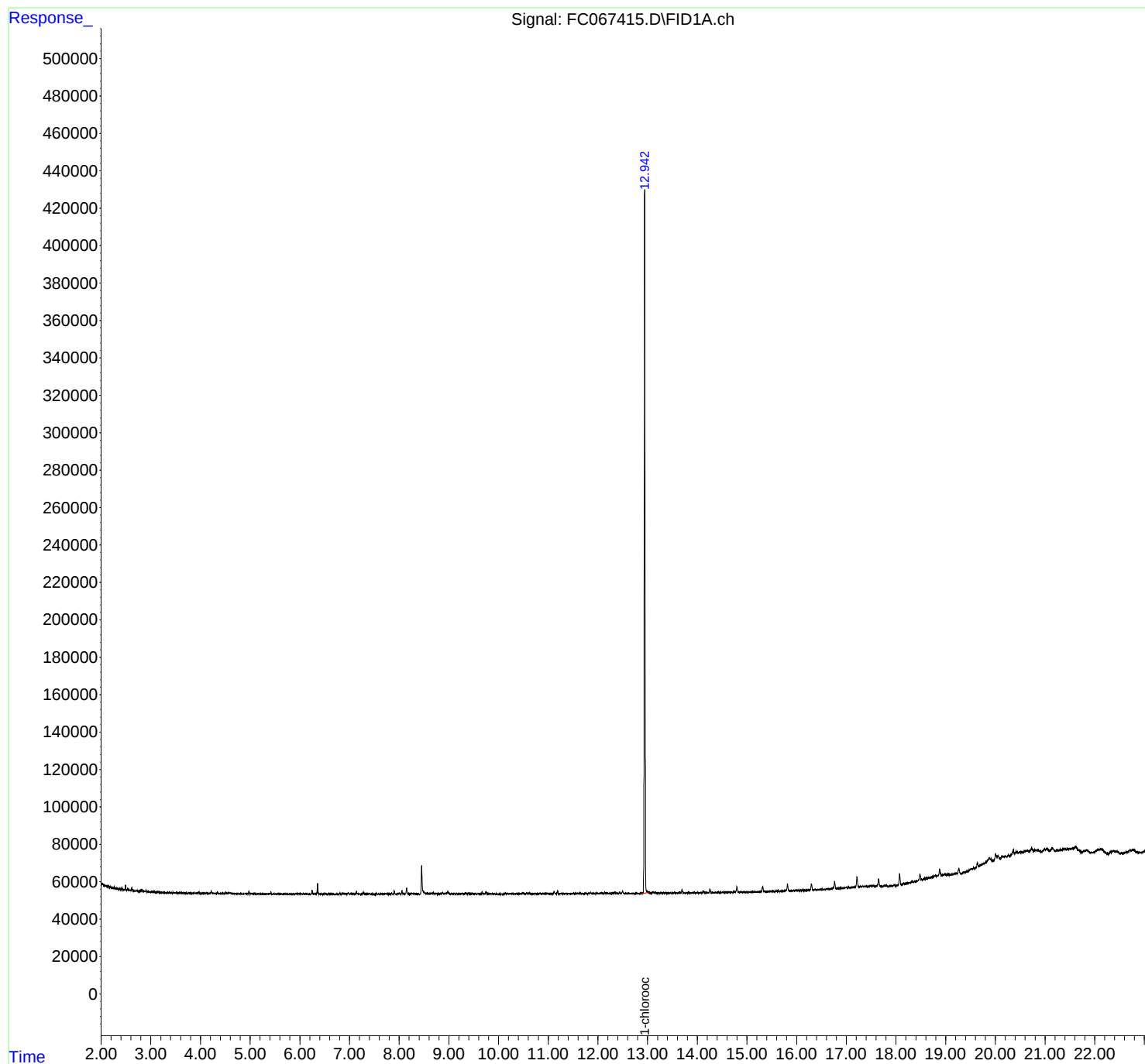
(m)=manual int.

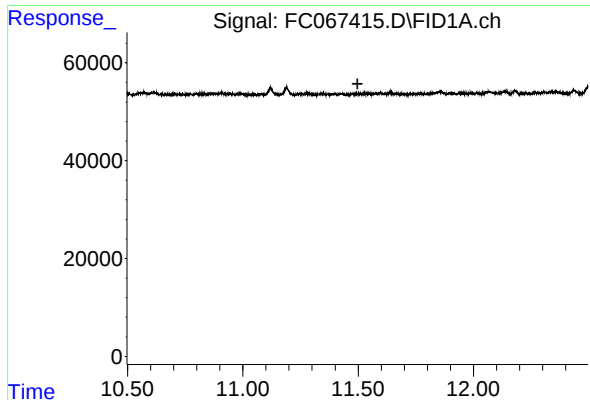
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC101124AL\
Data File : FC067415.D
Signal(s) : FID1A.ch
Acq On : 12 Oct 2024 00:35
Operator : YP/AJ
Sample : P4258-03
Misc :
ALS Vial : 24 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
Chamberlain Ave

Integration File: autoint1.e
Quant Time: Oct 14 03:26:10 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Quant Title : GC Extractables
QLast Update : Tue Oct 01 09:13:32 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

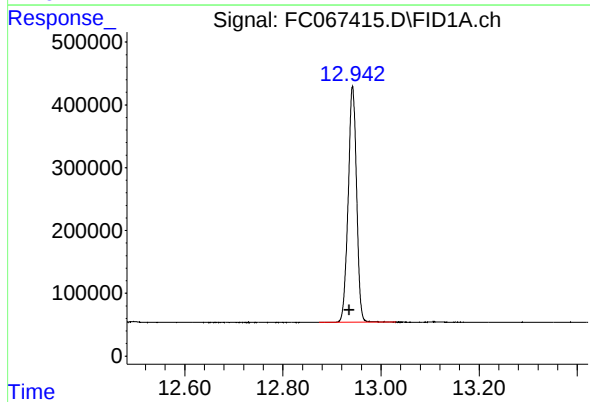




#9 ortho-Terphenyl (SURR)

R.T.: 0.000 min
Exp R.T.: 11.497 min
Response: 0
Conc: N.D.

Instrument :
FID_C
ClientSampleId :
Chamberlain Ave



#12 1-chlorooctadecane (SURR)

R.T.: 12.942 min
Delta R.T.: 0.006 min
Response: 4479449
Conc: 39.57 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC101124AL\
 Data File : FC067415.D
 Signal(s) : FID1A.ch
 Acq On : 12 Oct 2024 00:35
 Sample : P4258-03
 Misc :
 ALS Vial : 24 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
 Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	6.358	6.305	6.402	BB	5733	56543	1.26%	1.012%
2	8.453	8.402	8.524	BB	14972	192435	4.30%	3.445%
3	12.942	12.874	13.030	BB	375171	4479449	100.00%	80.191%
4	15.815	15.730	15.849	BB	3561	54015	1.21%	0.967%
5	16.297	16.249	16.329	BB	3429	47247	1.05%	0.846%
6	16.764	16.715	16.799	BB	3747	53783	1.20%	0.963%
7	17.214	17.159	17.259	BB	5354	76477	1.71%	1.369%
8	17.649	17.594	17.689	BB	3835	59018	1.32%	1.057%
9	18.072	18.012	18.104	BB	5869	83638	1.87%	1.497%
10	18.482	18.292	18.515	BB	3365	56824	1.27%	1.017%
11	18.879	18.765	18.920	BB	3339	56297	1.26%	1.008%
12	19.640	19.335	19.665	BV	2464	54822	1.22%	0.981%
13	20.005	19.665	20.039	VV	3087	236284	5.27%	4.230%
14	20.056	20.039	20.097	VB	1714	33320	0.74%	0.596%
15	20.360	20.294	20.385	BV	2305	45790	1.02%	0.820%

Sum of corrected areas: 5585941

Aliphatic EPH 100224.M Mon Oct 14 04:49:00 2024

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	10/01/24
Project:	Perth Amboy	Date Received:	10/01/24
Client Sample ID:	Chamberlain Ave	SDG No.:	P4258
Lab Sample ID:	P4258-03	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	86
Sample Wt/Vol:	30.04 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FD048467.D	1	10/11/24	10/12/24	PB164054

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aromatic C10-C12	Aromatic C10-C12	0.35	U	0.35	0.77	mg/kg
Aromatic C12-C16	Aromatic C12-C16	0.40	U	0.40	1.16	mg/kg
Aromatic C16-C21	Aromatic C16-C21	1.11	U	1.11	1.94	mg/kg
Aromatic C21-C36	Aromatic C21-C36	2.32	U	2.32	3.10	mg/kg
SURROGATES						
580-13-2	2-Bromonaphthalene (SURR)	50.6		40 - 140	101%	SPK: 50
321-60-8	2-Fluorobiphenyl (SURR)	51.2		40 - 140	102%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	32.6		40 - 140	65%	SPK: 50



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

Quantitation Report For Aromatic EPH Range.

Lab Sample ID:	P4258-03	Acq On:	12 Oct 2024 01:12
Client Sample ID:	Chamberlain Ave	Operator:	YP/AJ
Data file:	FD048467.D	Misc:	
Instrument:	FID_D	ALS Vial:	67
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aromatic C10-C12	4.100	5.818	0	0	200	ug/ml
Aromatic C12-C16	5.819	8.425	0	0	300	ug/ml
Aromatic C16-C21	8.426	12.687	1082056	6.054	500	ug/ml
Aromatic C21-C36	12.688	18.089	1847690	11.174	800	ug/ml
Aromatic EPH	4.100	18.089	2929746	17.228		ug/ml
2-Bromonaphthalene (SURRE)	7.379	7.379	8372339	50.57		ug/ml
2-Fluorobiphenyl (SURRE)	8.229	8.229	5312726	51.23		ug/ml
ortho-Terphenyl (SURRE)	11.264	11.264	6002682	32.62		ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD101124AR\
 Data File : FD048467.D
 Signal(s) : FID2B.ch
 Acq On : 12 Oct 2024 01:12
 Operator : YP/AJ
 Sample : P4258-03
 Misc :
 ALS Vial : 67 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 Chamberlain Ave

Integration File: autoint1.e
 Quant Time: Oct 14 04:59:31 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
 Quant Title : GC Extractables
 QLast Update : Mon Sep 30 14:17:34 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18µm

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
4) S 2-Bromonaphthalene (S...	7.379	8372339	50.567 ug/ml
Spiked Amount 50.000		Recovery =	101.13%
6) S 2-Fluorobiphenyl (SURR)	8.229	5312726	51.229 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	102.46%
11) S ortho-Terphenyl (SURR)	11.264	6002682	32.624 ug/ml
Spiked Amount 50.000		Recovery =	65.25%

Target Compounds

(f)=RT Delta > 1/2 Window

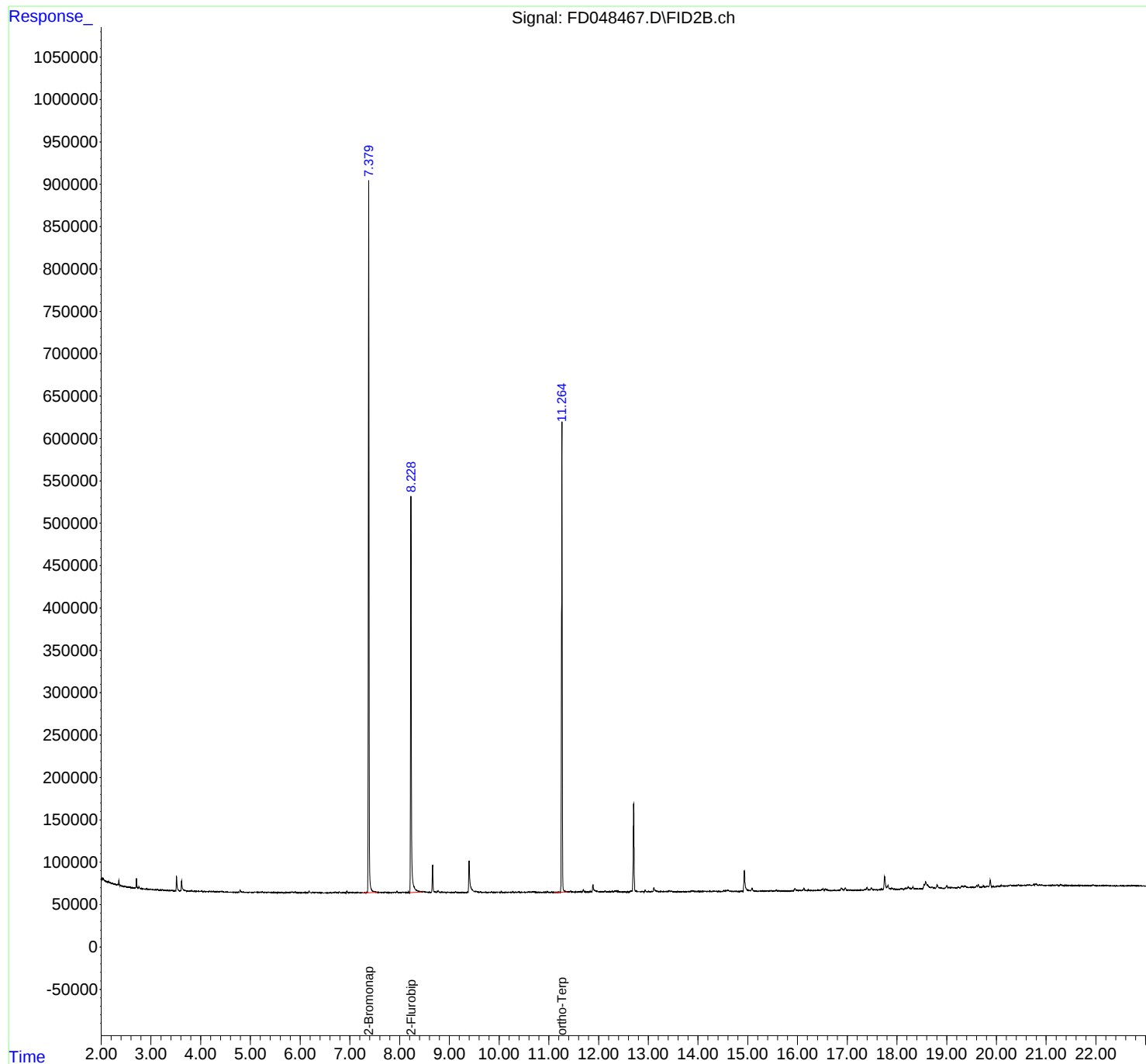
(m)=manual int.

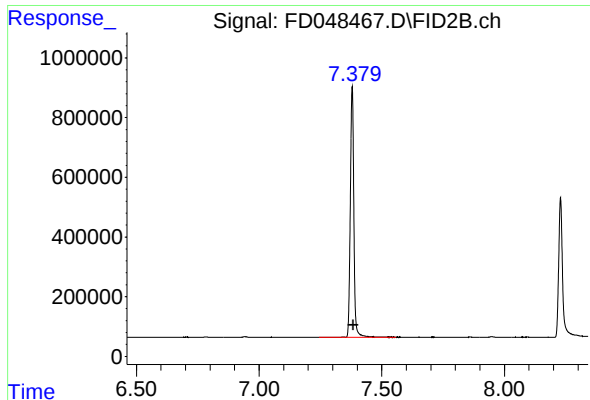
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD101124AR\
Data File : FD048467.D
Signal(s) : FID2B.ch
Acq On : 12 Oct 2024 01:12
Operator : YP/AJ
Sample : P4258-03
Misc :
ALS Vial : 67 Sample Multiplier: 1

Instrument :
FID_D
ClientSampleId :
Chamberlain Ave

Integration File: autoint1.e
Quant Time: Oct 14 04:59:31 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Quant Title : GC Extractables
QLast Update : Mon Sep 30 14:17:34 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

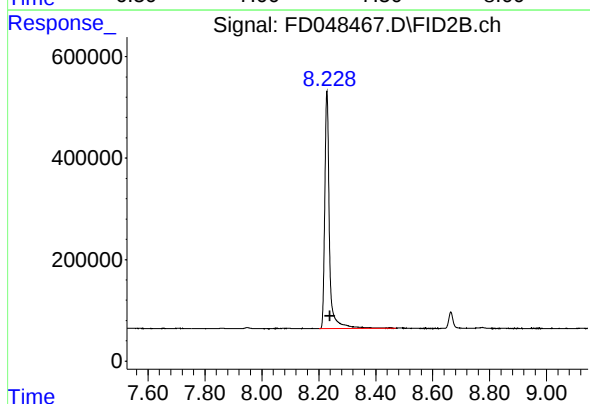




#4 2-Bromonaphthalene (SURR)

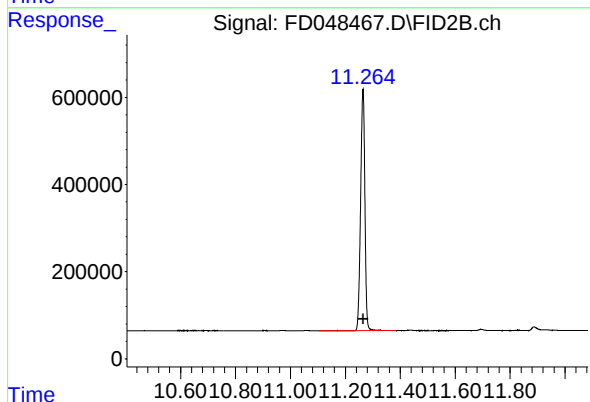
R.T.: 7.379 min
Delta R.T.: -0.005 min
Response: 8372339
Conc: 50.57 ug/ml

Instrument :
FID_D
ClientSampleId :
Chamberlain Ave



#6 2-Fluorobiphenyl (SURR)

R.T.: 8.229 min
Delta R.T.: -0.010 min
Response: 5312726
Conc: 51.23 ug/ml



#11 ortho-Terphenyl (SURR)

R.T.: 11.264 min
Delta R.T.: -0.001 min
Response: 6002682
Conc: 32.62 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD101124AR\
Data File : FD048467.D
Signal(s) : FID2B.ch
Acq On : 12 Oct 2024 01:12
Sample : P4258-03
Misc :
ALS Vial : 67 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Title : GC Extractables

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.708	2.651	2.738	BV	11491	97321	1.16%	0.423%
2	3.515	3.461	3.598	BV	17846	195436	2.34%	0.849%
3	3.615	3.598	3.721	VB	11973	175488	2.10%	0.762%
4	7.379	7.294	7.528	BB	835218	8361270	100.00%	36.327%
5	8.229	8.191	8.434	BB	466897	5272746	63.06%	22.908%
6	8.664	8.608	8.734	BB	32309	336065	4.02%	1.460%
7	9.398	9.328	9.521	BV	36806	622518	7.45%	2.705%
8	11.264	11.198	11.344	BB	557157	5984838	71.58%	26.002%
9	11.887	11.768	11.951	BB	8014	123473	1.48%	0.536%
10	12.705	12.678	12.784	BB	103539	1220287	14.59%	5.302%
11	14.930	14.818	15.051	BB	24205	413193	4.94%	1.795%
12	17.750	17.701	17.794	BV	14300	214210	2.56%	0.931%
Sum of corrected areas:						23016844		

Aromatic EPH 093024.M Mon Oct 14 06:26:25 2024



CALIBRATION SUMMARY

Initial Calibration Report for SequenceID : FC100224AL

AreaCount

Parameter Range	FC067312.D	FC067313.D	FC067314.D	FC067315.D	FC067316.D	
Aliphatic C9-C12	36157754.000	18468554.000	7796622.000	3912320.000	2066528.000	
Aliphatic C12-C16	24671572.000	12642565.000	5319639.000	2676246.000	1382016.000	
Aliphatic C16-C21	36539622.000	18852548.000	8005327.000	4100822.000	2096729.000	
Aliphatic C21-C28	47235980.000	24590379.000	10215208.000	5219473.000	2697991.000	
Aliphatic C28-C40	57341685.000	29822245.000	12674884.000	6440179.000	3544258.000	
Aliphatic EPH	201946613.000	104376291.000	44011680.000	22349040.000	11787522.000	

AVG Response Factor

Parameter Range	AVG RF	% RSD				
Aliphatic C9-C12	128354.4879996	5.284				
Aliphatic C12-C16	130957.677	4.567				
Aliphatic C16-C21	131476.1019996	5.732				
Aliphatic C21-C28	126823.664	5.15				
Aliphatic C28-C40	105215.848333	8.211				
Aliphatic EPH	121110.9372216	6.036				

Concentration

Parameter Range	FC067312.D	FC067313.D	FC067314.D	FC067315.D	FC067316.D	
Aliphatic C9-C12	300.000	150.000	60.000	30.000	15.000	
Aliphatic C12-C16	200.000	100.000	40.000	20.000	10.000	
Aliphatic C16-C21	300.000	150.000	60.000	30.000	15.000	
Aliphatic C21-C28	400.000	200.000	80.000	40.000	20.000	
Aliphatic C28-C40	600.000	300.000	120.000	60.000	30.000	
Aliphatic EPH	1800.000	900.000	360.000	180.000	90.000	

Response Factor

Parameter Range	FC067312.D	FC067313.D	FC067314.D	FC067315.D	FC067316.D	
Aliphatic C9-C12	120525.846666	123123.693333	129943.700000	130410.666666	137768.533333	
Aliphatic C12-C16	123357.860000	126425.650000	132990.975000	133812.300000	138201.600000	
Aliphatic C16-C21	121798.740000	125683.653333	133422.116666	136694.066666	139781.933333	

Initial Calibration Report for SequenceID : FC100224AL

Aliphatic C21-C28	118089.950000	122951.895000	127690.100000	130486.825000	134899.550000	
Aliphatic C28-C40	95569.475000	99407.483333	105624.033333	107336.316666	118141.933333	
Aliphatic EPH	112192.562777	115973.656666	122254.666666	124161.333333	130972.466666	

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\F100224AL\
 Data File : FC067312.D
 Signal(s) : FID1A.ch
 Acq On : 30 Sep 2024 10:32
 Operator : YP/AJ
 Sample : 100 PPM ALIPHATIC HC STD1
 Misc :
 ALS Vial : 11 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 100 PPM ALIPHATIC HC STD1

Integration File: autoint1.e
 Quant Time: Oct 01 09:09:41 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
 Quant Title : GC Extractables
 QLast Update : Tue Oct 01 09:07:31 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 ul
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.507	14031279	90.846 ug/ml
Spiked Amount 50.000		Recovery =	181.69%
12) S 1-chlorooctadecane (S...	12.944	10549566	91.667 ug/ml
Spiked Amount 50.000		Recovery =	183.33%
Target Compounds			
1) T n-Nonane (C9)	3.274	11861469	92.598 ug/ml
2) T n-Decane (C10)	4.341	12068578	92.595 ug/ml
3) T A~Naphthalene (C11.7)	5.920	13362934	92.860 ug/ml
4) T n-Dodecane (C12)	6.359	12227707	93.059 ug/ml
5) T A~2-methylnaphthalene...	6.977	13024556	93.287 ug/ml
6) T n-Tetradecane (C14)	8.152	12180763	93.109 ug/ml
7) T n-Hexadecane (C16)	9.752	12490809	92.415 ug/ml
8) T n-Octadecane (C18)	11.195	12572452	91.327 ug/ml
10) T n-Eicosane (C20)	12.501	12084501	91.351 ug/ml
11) T n-Heneicosane (C21)	13.112	11882669	91.183 ug/ml
13) T n-Docosane (C22)	13.698	11869877	91.916 ug/ml
14) T n-Tetracosane (C24)	14.799	11932581	92.694 ug/ml
15) T n-Hexacosane (C26)	15.819	11803866	93.014 ug/ml
16) T n-Octacosane (C28)	16.768	11629656	92.309 ug/ml
17) T n-Tricontane (C30)	17.655	11716937	91.007 ug/ml
18) T n-Dotriacontane (C32)	18.486	11186042	89.566 ug/ml
19) T n-Tetratriacontane (C34)	19.267	9833987	89.675 ug/ml
20) T n-Hexatriacontane (C36)	20.005	8551618	89.685 ug/ml
21) T n-Octatriacontane (C38)	20.730	8143888	91.977 ug/ml
22) T n-Tetracontane (C40)	21.618	7909213	91.385 ug/ml

(f)=RT Delta > 1/2 Window

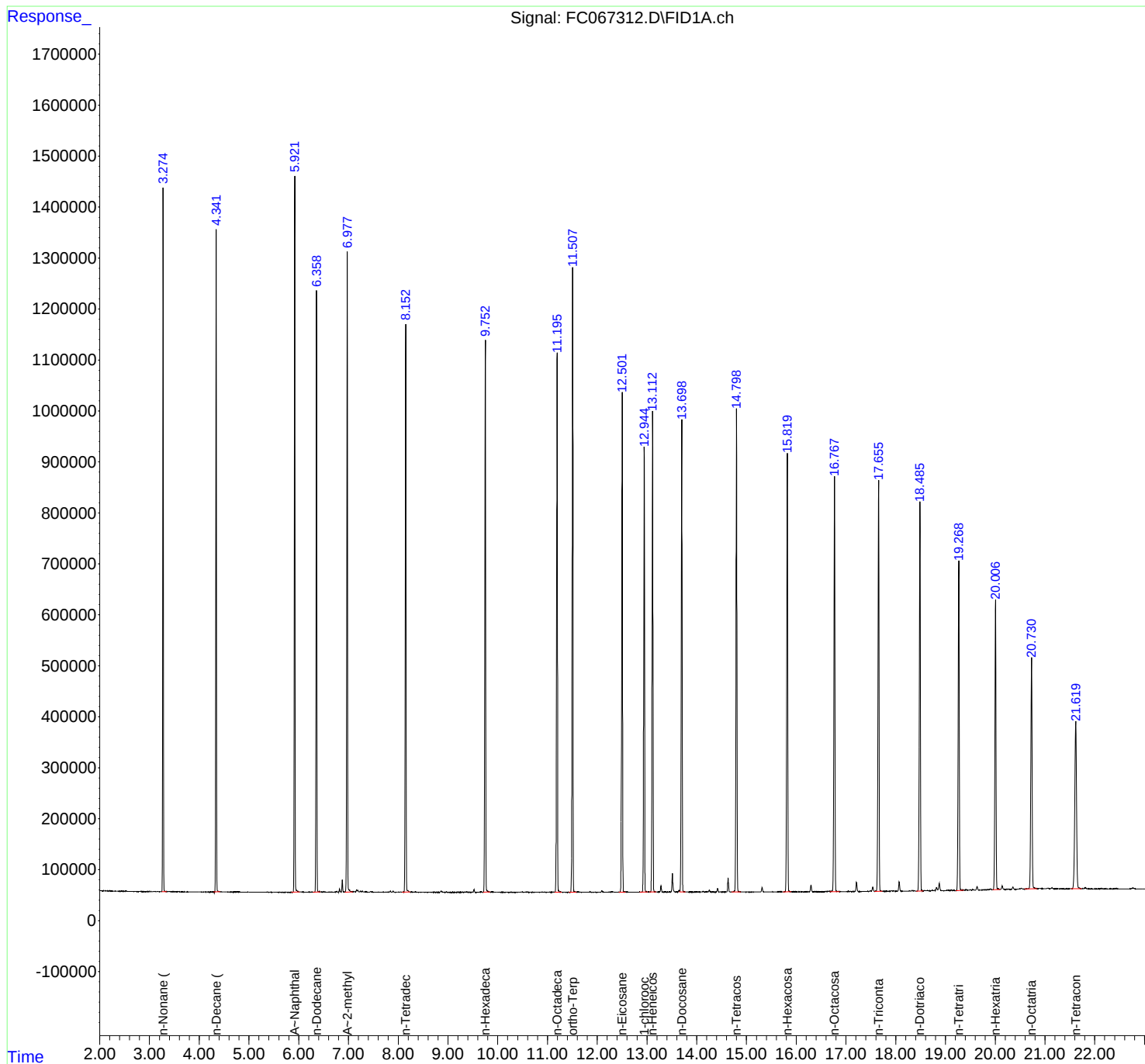
(m)=manual int.

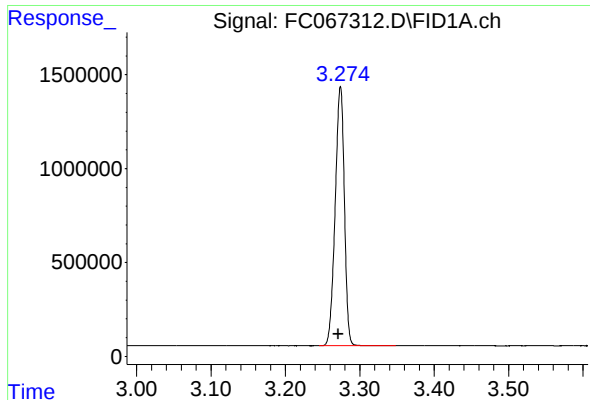
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC100224AL\
Data File : FC067312.D
Signal(s) : FID1A.ch
Acq On : 30 Sep 2024 10:32
Operator : YP/AJ
Sample : 100 PPM ALIPHATIC HC STD1
Misc :
ALS Vial : 11 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
100 PPM ALIPHATIC HC STD1

Integration File: autoint1.e
Quant Time: Oct 01 09:09:41 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Quant Title : GC Extractables
QLast Update : Tue Oct 01 09:07:31 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

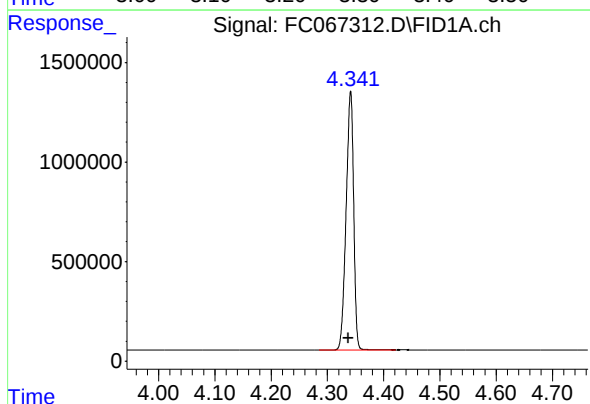




#1 n-Nonane (C9)

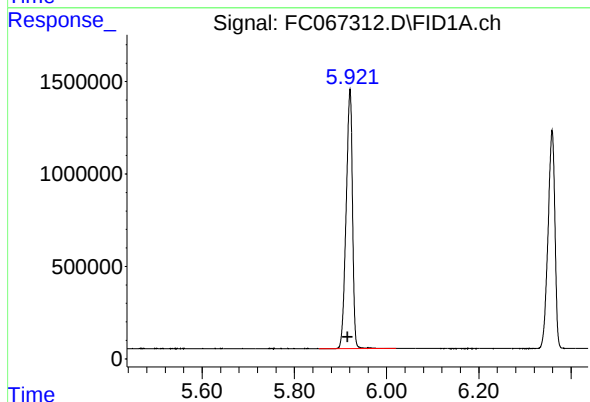
R.T.: 3.274 min
Delta R.T.: 0.003 min
Response: 11861469
Conc: 92.60 ug/ml

Instrument :
FID_C
ClientSampleId :
100 PPM ALIPHATIC HC STD1



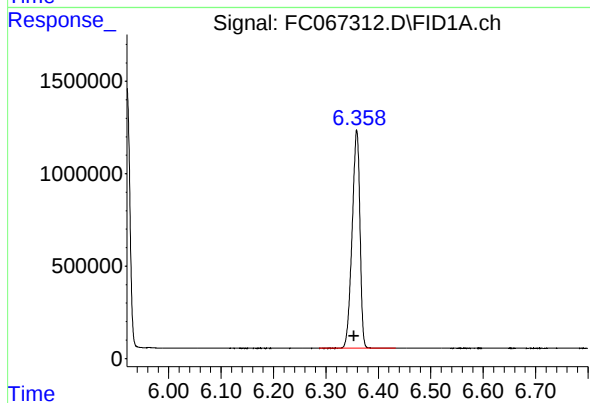
#2 n-Decane (C10)

R.T.: 4.341 min
Delta R.T.: 0.004 min
Response: 12068578
Conc: 92.59 ug/ml



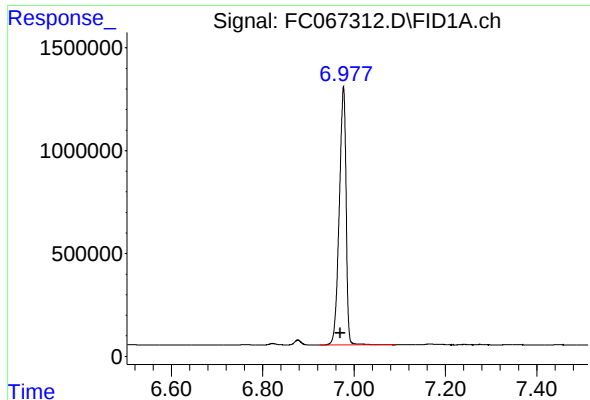
#3 A~Naphthalene (C11.7)

R.T.: 5.920 min
Delta R.T.: 0.005 min
Response: 13362934
Conc: 92.86 ug/ml



#4 n-Dodecane (C12)

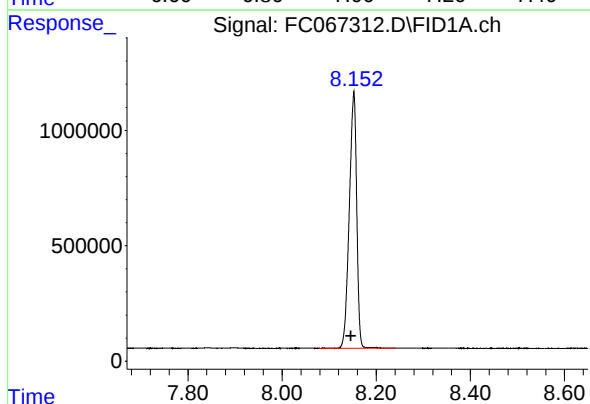
R.T.: 6.359 min
Delta R.T.: 0.005 min
Response: 12227707
Conc: 93.06 ug/ml



#5 A~2-methylnaphthalene (C12.89)

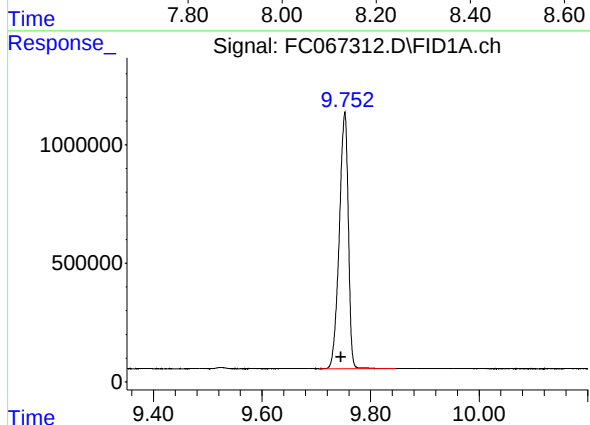
R.T.: 6.977 min
Delta R.T.: 0.007 min
Response: 13024556
Conc: 93.29 ug/ml

Instrument :
FID_C
ClientSampleId :
100 PPM ALIPHATIC HC STD1



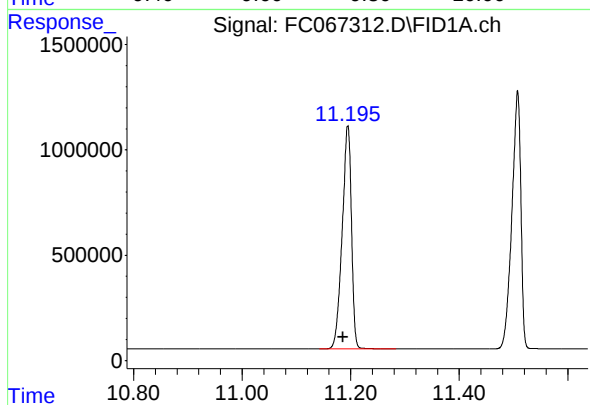
#6 n-Tetradecane (C14)

R.T.: 8.152 min
Delta R.T.: 0.006 min
Response: 12180763
Conc: 93.11 ug/ml



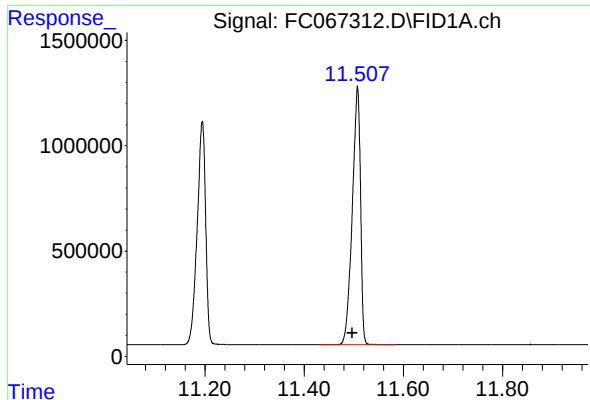
#7 n-Hexadecane (C16)

R.T.: 9.752 min
Delta R.T.: 0.007 min
Response: 12490809
Conc: 92.42 ug/ml



#8 n-Octadecane (C18)

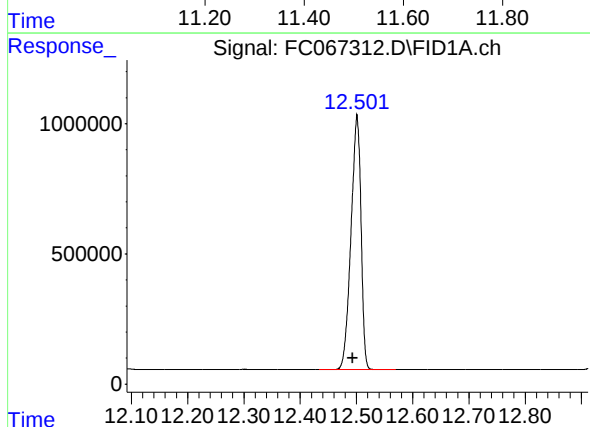
R.T.: 11.195 min
Delta R.T.: 0.008 min
Response: 12572452
Conc: 91.33 ug/ml



#9 ortho-Terphenyl (SURR)

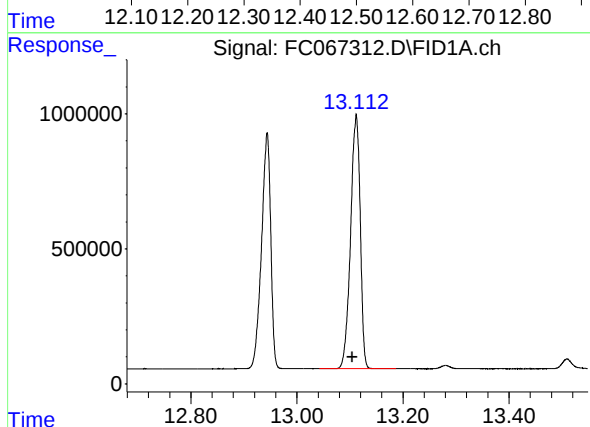
R.T.: 11.507 min
Delta R.T.: 0.010 min
Response: 14031279
Conc: 90.85 ug/ml

Instrument :
FID_C
ClientSampleId :
100 PPM ALIPHATIC HC STD1



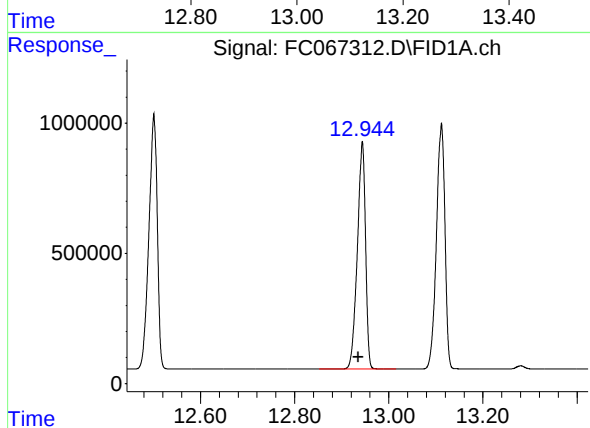
#10 n-Eicosane (C20)

R.T.: 12.501 min
Delta R.T.: 0.007 min
Response: 12084501
Conc: 91.35 ug/ml



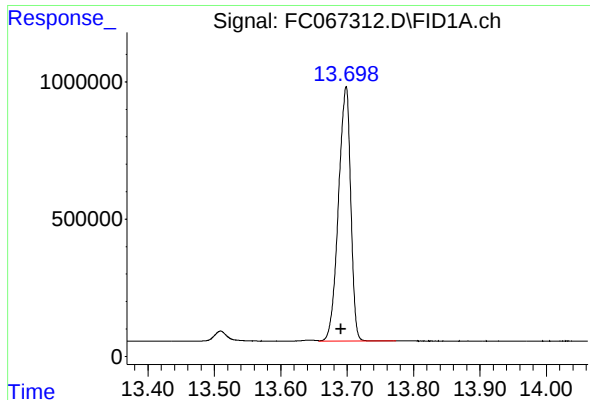
#11 n-Heneicosane (C21)

R.T.: 13.112 min
Delta R.T.: 0.007 min
Response: 11882669
Conc: 91.18 ug/ml



#12 1-chlorooctadecane (SURR)

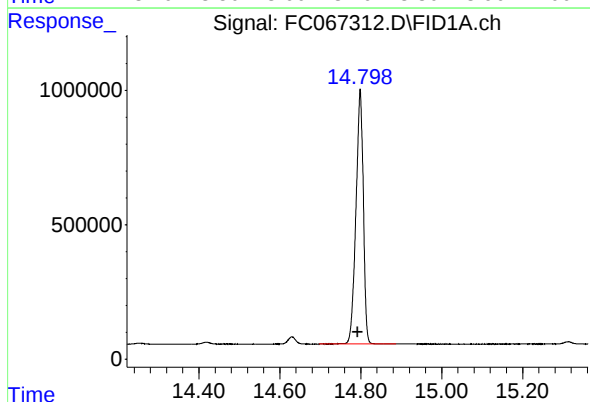
R.T.: 12.944 min
Delta R.T.: 0.008 min
Response: 10549566
Conc: 91.67 ug/ml



#13 n-Docosane (C22)

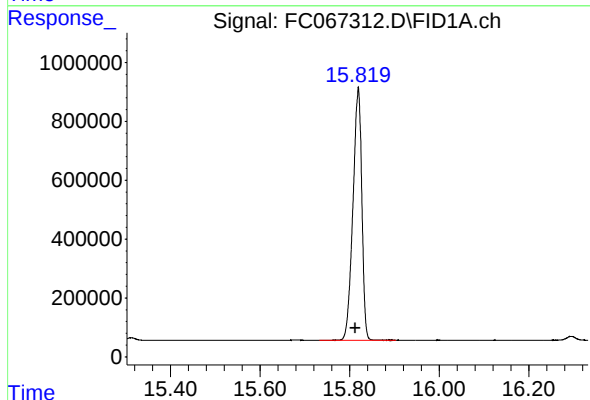
R.T.: 13.698 min
Delta R.T.: 0.007 min
Response: 11869877
Conc: 91.92 ug/ml

Instrument :
FID_C
ClientSampleId :
100 PPM ALIPHATIC HC STD1



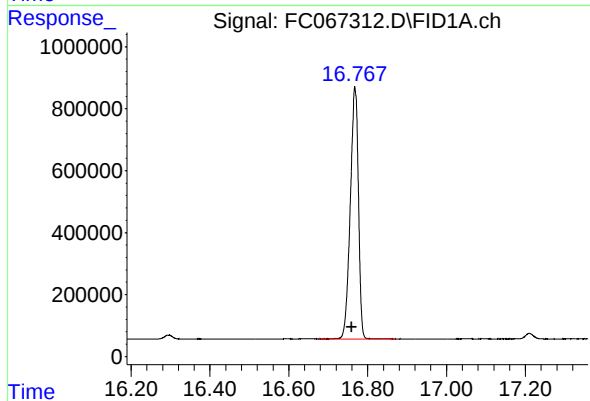
#14 n-Tetracosane (C24)

R.T.: 14.799 min
Delta R.T.: 0.007 min
Response: 11932581
Conc: 92.69 ug/ml



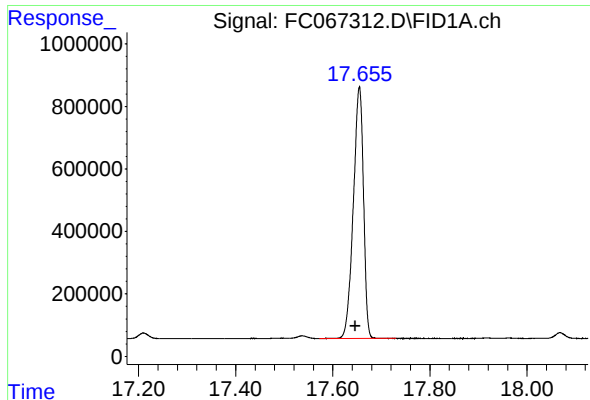
#15 n-Hexacosane (C26)

R.T.: 15.819 min
Delta R.T.: 0.007 min
Response: 11803866
Conc: 93.01 ug/ml



#16 n-Octacosane (C28)

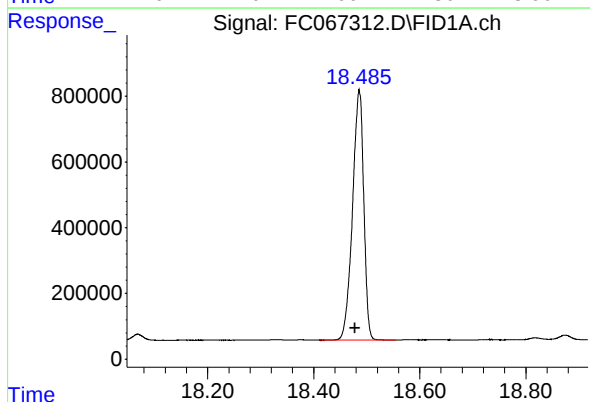
R.T.: 16.768 min
Delta R.T.: 0.008 min
Response: 11629656
Conc: 92.31 ug/ml



#17 n-Tricontane (C30)

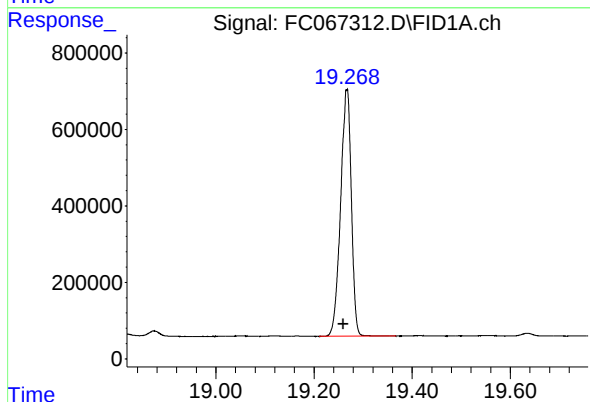
R.T.: 17.655 min
Delta R.T.: 0.009 min
Response: 11716937
Conc: 91.01 ug/ml

Instrument :
FID_C
ClientSampleId :
100 PPM ALIPHATIC HC STD1



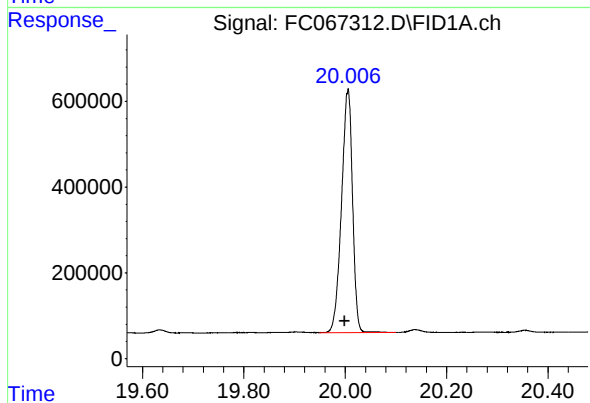
#18 n-Dotriacontane (C32)

R.T.: 18.486 min
Delta R.T.: 0.008 min
Response: 11186042
Conc: 89.57 ug/ml



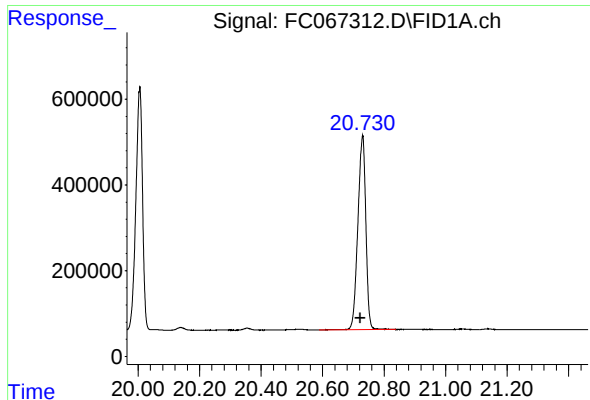
#19 n-Tetratriacontane (C34)

R.T.: 19.267 min
Delta R.T.: 0.007 min
Response: 9833987
Conc: 89.67 ug/ml



#20 n-Hexatriacontane (C36)

R.T.: 20.005 min
Delta R.T.: 0.006 min
Response: 8551618
Conc: 89.68 ug/ml



#21 n-Octatriacontane (C38)

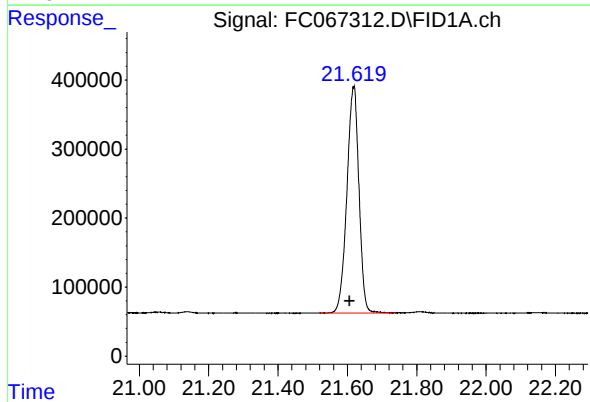
R.T.: 20.730 min
Delta R.T.: 0.007 min
Response: 8143888
Conc: 91.98 ug/ml

Instrument :

FID_C

ClientSampleId :

100 PPM ALIPHATIC HC STD1



#22 n-Tetracontane (C40)

R.T.: 21.618 min
Delta R.T.: 0.011 min
Response: 7909213
Conc: 91.39 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC100224AL\
 Data File : FC067312.D
 Signal(s) : FID1A.ch
 Acq On : 30 Sep 2024 10:32
 Sample : 100 PPM ALIPHATIC HC STD1
 Misc :
 ALS Vial : 11 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
 Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.274	3.245	3.348	BB	1383198	11861469	84.54%	4.690%
2	4.341	4.285	4.422	BB	1311158	12068578	86.01%	4.772%
3	5.920	5.853	6.020	BB	1395892	13362934	95.24%	5.284%
4	6.359	6.287	6.433	BB	1182095	12227707	87.15%	4.835%
5	6.977	6.923	7.092	BV	1262404	13024556	92.83%	5.150%
6	8.152	8.078	8.242	BB	1106375	12180763	86.81%	4.816%
7	9.752	9.705	9.847	BB	1075584	12490809	89.02%	4.939%
8	11.195	11.142	11.283	BB	1062471	12572452	89.60%	4.971%
9	11.507	11.430	11.585	BB	1222706	14031279	100.00%	5.548%
10	12.501	12.433	12.570	BB	971541	12084501	86.13%	4.778%
11	12.944	12.852	13.015	BB	876626	10549566	75.19%	4.171%
12	13.112	13.042	13.187	BB	943769	11882669	84.69%	4.698%
13	13.698	13.658	13.773	VB	931064	11869877	84.60%	4.693%
14	14.799	14.697	14.887	BB	947814	11932581	85.04%	4.718%
15	15.819	15.732	15.903	BB	851235	11803866	84.13%	4.667%
16	16.768	16.677	16.872	BB	807852	11629656	82.88%	4.598%
17	17.655	17.572	17.730	PB	806791	11716937	83.51%	4.633%
18	18.486	18.410	18.555	BV	761825	11186042	79.72%	4.423%
19	19.267	19.210	19.367	BB	643849	9833987	70.09%	3.888%
20	20.005	19.948	20.100	BB	565289	8551618	60.95%	3.381%
21	20.730	20.588	20.838	BV	454057	8143888	58.04%	3.220%
22	21.618	21.518	21.740	BB	326286	7909213	56.37%	3.127%
Sum of corrected areas:						252914944		

Aliphatic EPH 100224.M Tue Oct 01 09:20:12 2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC100224AL\
 Data File : FC067313.D
 Signal(s) : FID1A.ch
 Acq On : 30 Sep 2024 11:10
 Operator : YP/AJ
 Sample : 50 PPM ALIPHATIC HC STD2
 Misc :
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 50 PPM ALIPHATIC HC STD2

Integration File: autoint1.e
 Quant Time: Oct 01 09:10:44 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
 Quant Title : GC Extractables
 QLast Update : Tue Oct 01 09:07:31 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 ul
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.501	7231579	49.067 ug/ml
Spiked Amount 50.000		Recovery =	98.13%
12) S 1-chlorooctadecane (S...	12.939	5426500	49.202 ug/ml
Spiked Amount 50.000		Recovery =	98.40%
Target Compounds			
1) T n-Nonane (C9)	3.272	6059731	49.124 ug/ml
2) T n-Decane (C10)	4.338	6163543	49.107 ug/ml
3) T A~Naphthalene (C11.7)	5.917	6821781	49.160 ug/ml
4) T n-Dodecane (C12)	6.355	6245280	49.239 ug/ml
5) T A~2-methylnaphthalene...	6.972	6641948	49.224 ug/ml
6) T n-Tetradecane (C14)	8.149	6219770	49.240 ug/ml
7) T n-Hexadecane (C16)	9.748	6422795	49.393 ug/ml
8) T n-Octadecane (C18)	11.188	6493088	49.304 ug/ml
10) T n-Eicosane (C20)	12.497	6235508	49.267 ug/ml
11) T n-Heneicosane (C21)	13.107	6123952	49.160 ug/ml
13) T n-Docosane (C22)	13.693	6132673	49.489 ug/ml
14) T n-Tetracosane (C24)	14.795	6211203	50.079 ug/ml
15) T n-Hexacosane (C26)	15.814	6151165	50.225 ug/ml
16) T n-Octacosane (C28)	16.763	6095338	50.316 ug/ml
17) T n-Tricontane (C30)	17.650	6178045	50.245 ug/ml
18) T n-Dotriacontane (C32)	18.481	5889852	49.755 ug/ml
19) T n-Tetratriacontane (C34)	19.263	5143313	49.454 ug/ml
20) T n-Hexatriacontane (C36)	20.001	4380994	48.444 ug/ml
21) T n-Octatriacontane (C38)	20.724	4146667	48.790 ug/ml
22) T n-Tetracontane (C40)	21.611	4083374	49.304 ug/ml

(f)=RT Delta > 1/2 Window

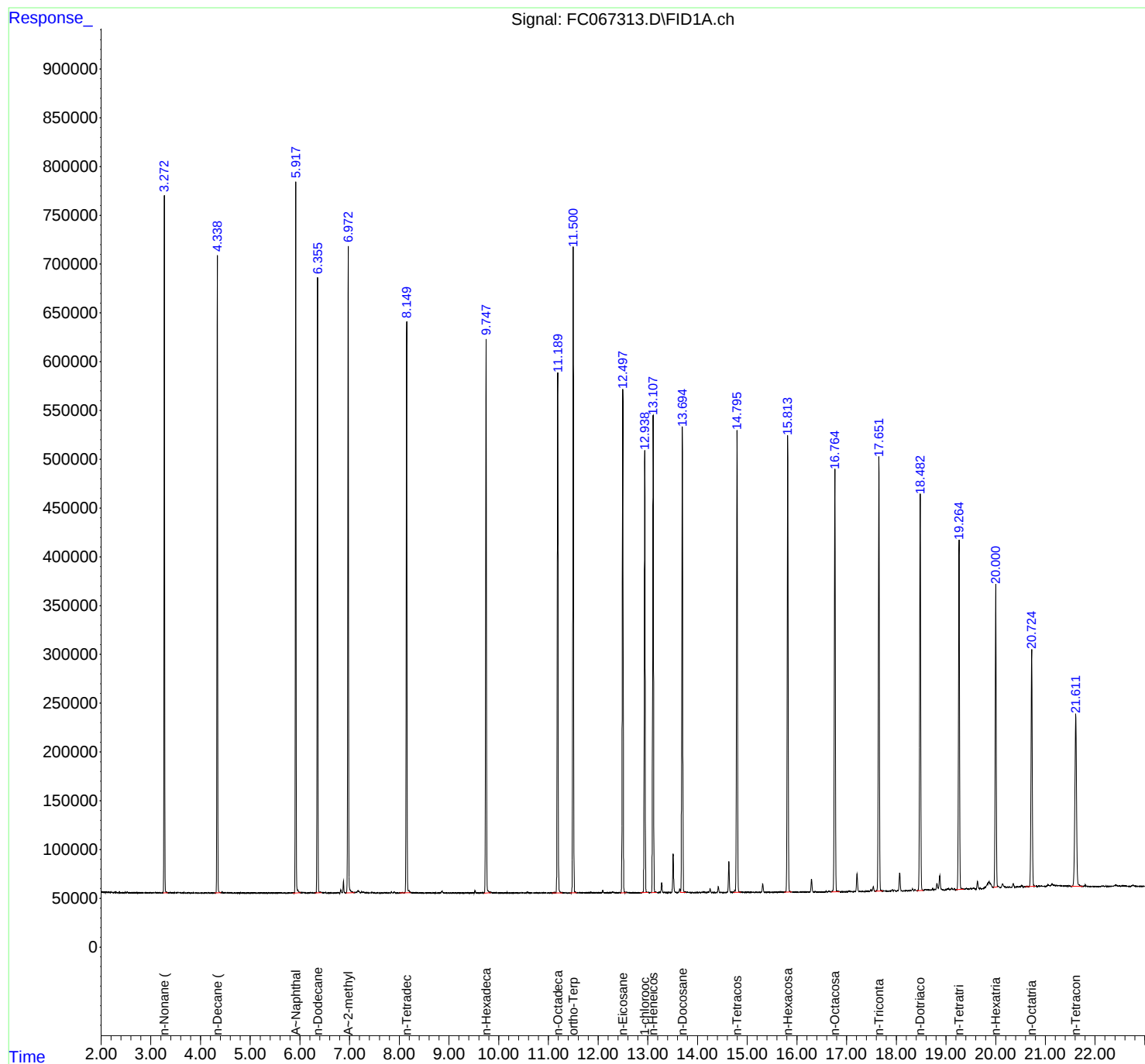
(m)=manual int.

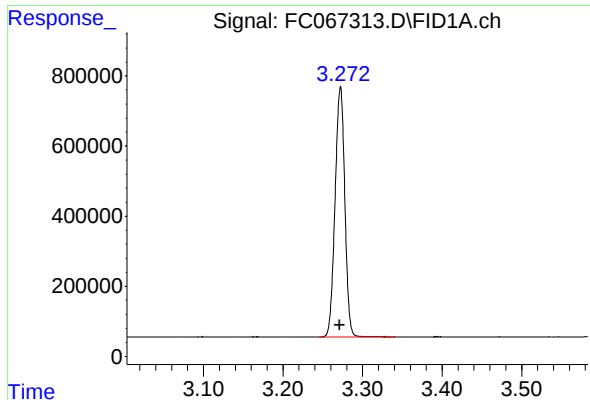
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC100224AL\
Data File : FC067313.D
Signal(s) : FID1A.ch
Acq On : 30 Sep 2024 11:10
Operator : YP/AJ
Sample : 50 PPM ALIPHATIC HC STD2
Misc :
ALS Vial : 12 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
50 PPM ALIPHATIC HC STD2

Integration File: autoint1.e
Quant Time: Oct 01 09:10:44 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Quant Title : GC Extractables
QLast Update : Tue Oct 01 09:07:31 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

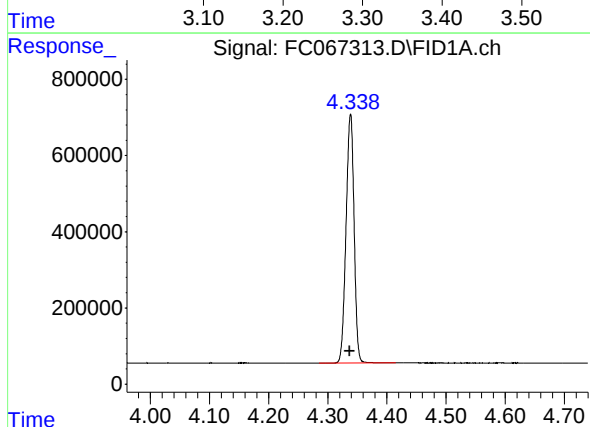




#1 n-Nonane (C9)

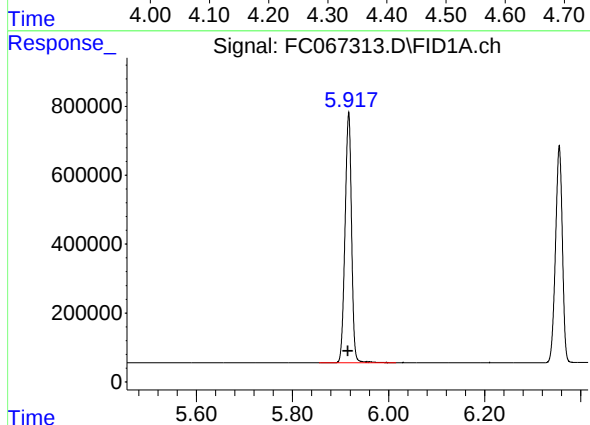
R.T.: 3.272 min
Delta R.T.: 0.001 min
Response: 6059731
Conc: 49.12 ug/ml

Instrument :
FID_C
ClientSampleId :
50 PPM ALIPHATIC HC STD2



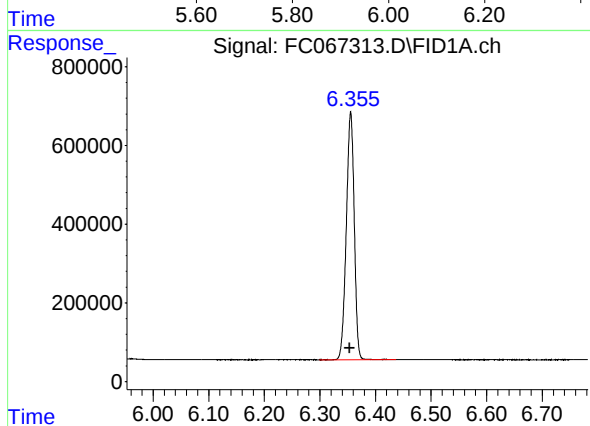
#2 n-Decane (C10)

R.T.: 4.338 min
Delta R.T.: 0.001 min
Response: 6163543
Conc: 49.11 ug/ml



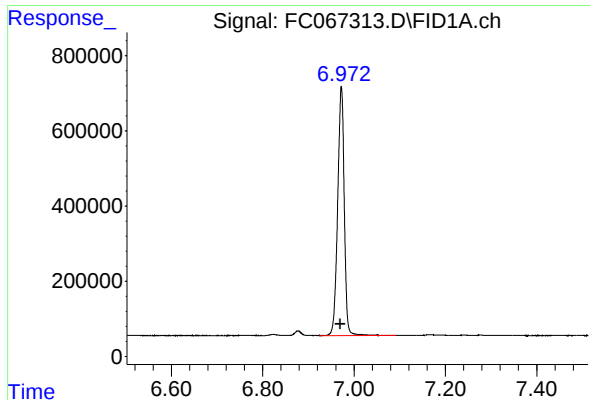
#3 A~Naphthalene (C11.7)

R.T.: 5.917 min
Delta R.T.: 0.002 min
Response: 6821781
Conc: 49.16 ug/ml



#4 n-Dodecane (C12)

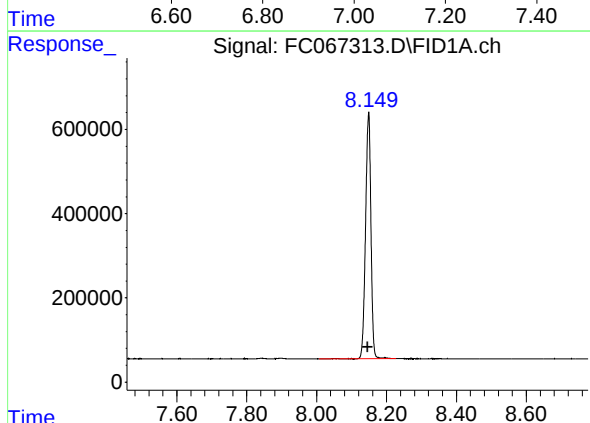
R.T.: 6.355 min
Delta R.T.: 0.002 min
Response: 6245280
Conc: 49.24 ug/ml



#5 A~2-methylnaphthalene (C12.89)

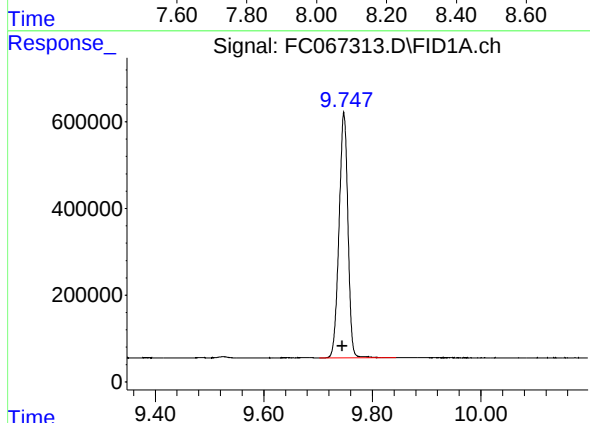
R.T.: 6.972 min
Delta R.T.: 0.002 min
Response: 6641948
Conc: 49.22 ug/ml

Instrument :
FID_C
ClientSampleId :
50 PPM ALIPHATIC HC STD2



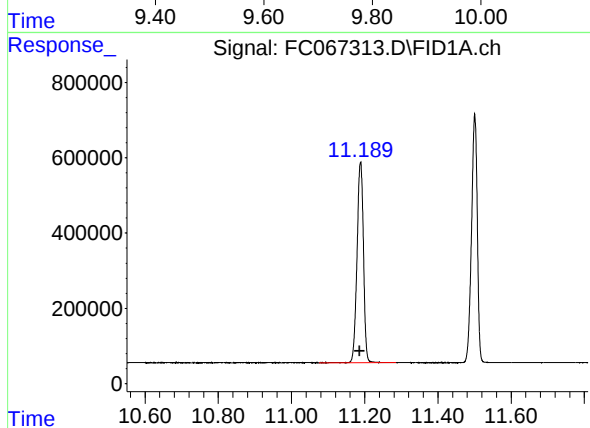
#6 n-Tetradecane (C14)

R.T.: 8.149 min
Delta R.T.: 0.002 min
Response: 6219770
Conc: 49.24 ug/ml



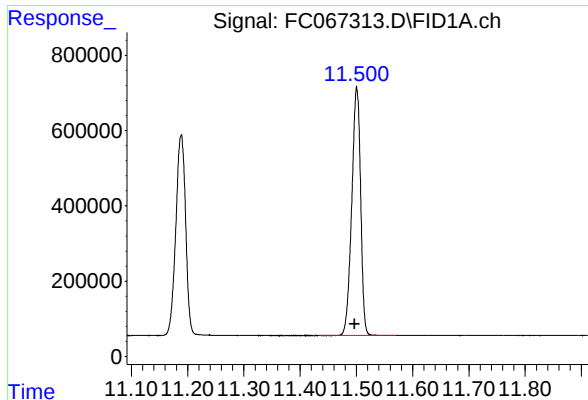
#7 n-Hexadecane (C16)

R.T.: 9.748 min
Delta R.T.: 0.003 min
Response: 6422795
Conc: 49.39 ug/ml



#8 n-Octadecane (C18)

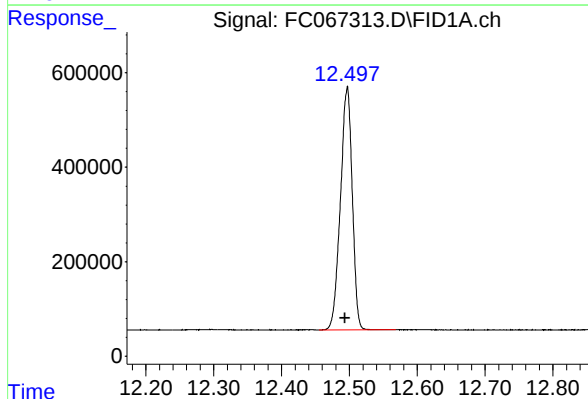
R.T.: 11.188 min
Delta R.T.: 0.002 min
Response: 6493088
Conc: 49.30 ug/ml



#9 ortho-Terphenyl (SURR)

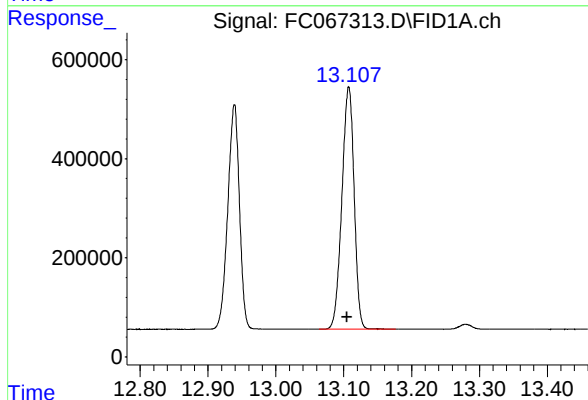
R.T.: 11.501 min
Delta R.T.: 0.004 min
Response: 7231579
Conc: 49.07 ug/ml

Instrument :
FID_C
ClientSampleId :
50 PPM ALIPHATIC HC STD2



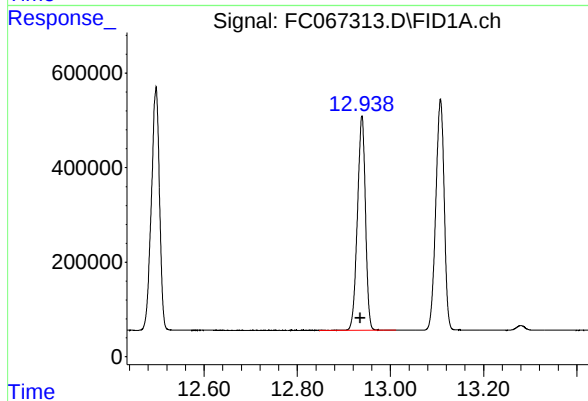
#10 n-Eicosane (C20)

R.T.: 12.497 min
Delta R.T.: 0.003 min
Response: 6235508
Conc: 49.27 ug/ml



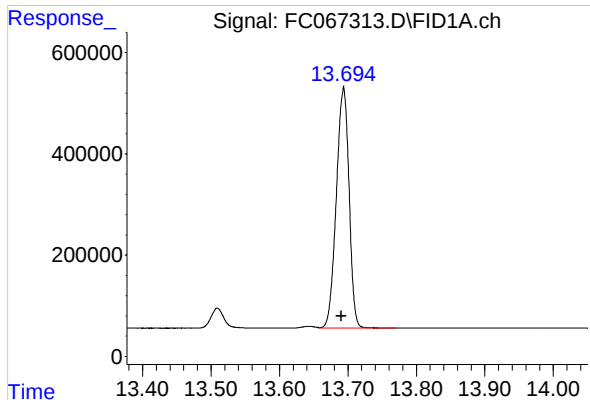
#11 n-Heneicosane (C21)

R.T.: 13.107 min
Delta R.T.: 0.003 min
Response: 6123952
Conc: 49.16 ug/ml



#12 1-chlorooctadecane (SURR)

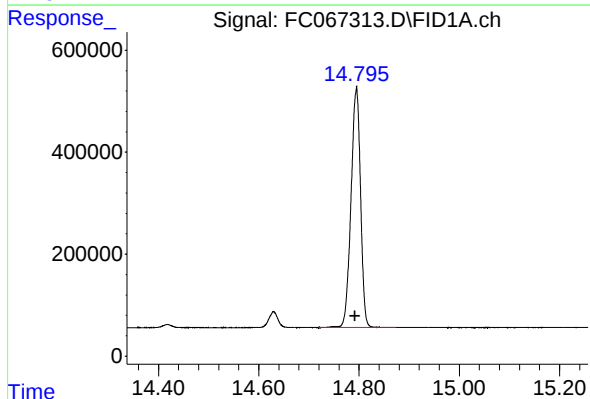
R.T.: 12.939 min
Delta R.T.: 0.003 min
Response: 5426500
Conc: 49.20 ug/ml



#13 n-Docosane (C22)

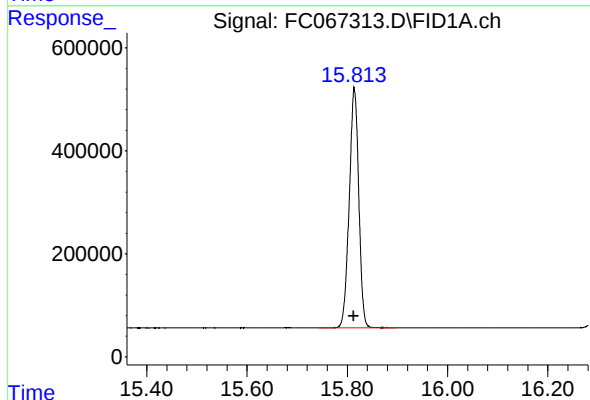
R.T.: 13.693 min
Delta R.T.: 0.003 min
Response: 6132673
Conc: 49.49 ug/ml

Instrument :
FID_C
ClientSampleId :
50 PPM ALIPHATIC HC STD2



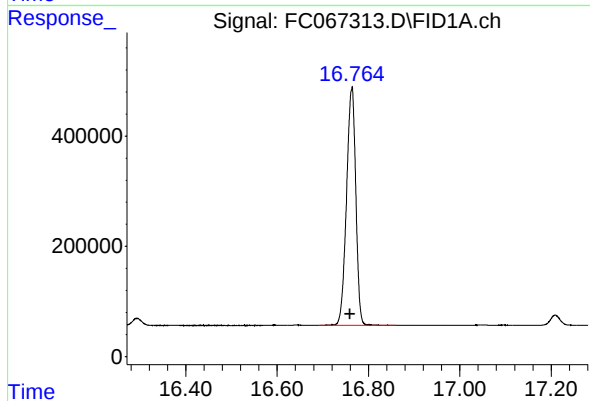
#14 n-Tetracosane (C24)

R.T.: 14.795 min
Delta R.T.: 0.003 min
Response: 6211203
Conc: 50.08 ug/ml



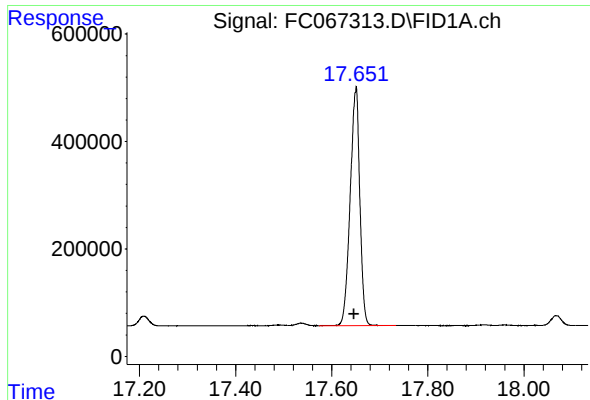
#15 n-Hexacosane (C26)

R.T.: 15.814 min
Delta R.T.: 0.002 min
Response: 6151165
Conc: 50.23 ug/ml



#16 n-Octacosane (C28)

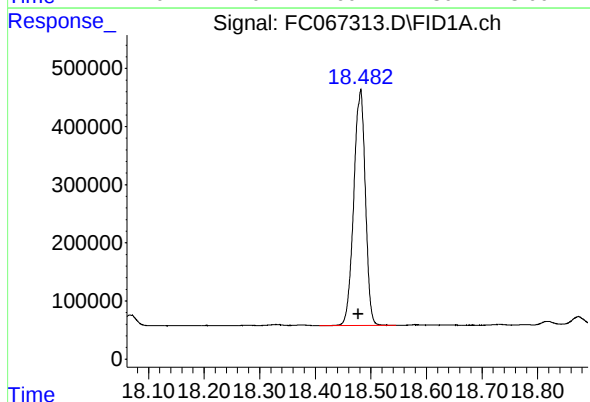
R.T.: 16.763 min
Delta R.T.: 0.004 min
Response: 6095338
Conc: 50.32 ug/ml



#17 n-Tricontane (C30)

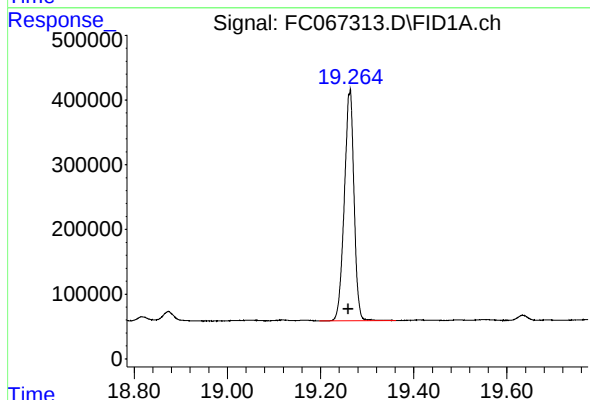
R.T.: 17.650 min
Delta R.T.: 0.004 min
Response: 6178045
Conc: 50.25 ug/ml

Instrument :
FID_C
ClientSampleId :
50 PPM ALIPHATIC HC STD2



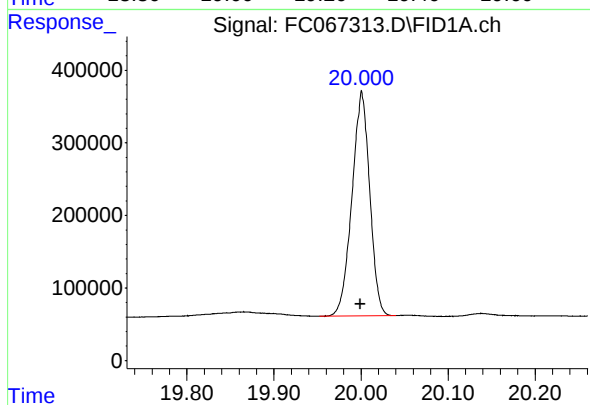
#18 n-Dotriacontane (C32)

R.T.: 18.481 min
Delta R.T.: 0.003 min
Response: 5889852
Conc: 49.76 ug/ml



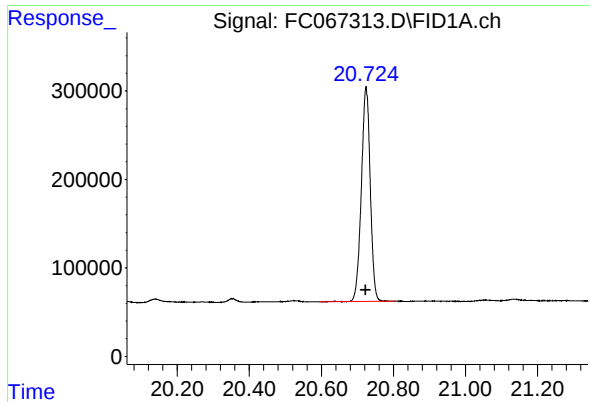
#19 n-Tetratriacontane (C34)

R.T.: 19.263 min
Delta R.T.: 0.003 min
Response: 5143313
Conc: 49.45 ug/ml



#20 n-Hexatriacontane (C36)

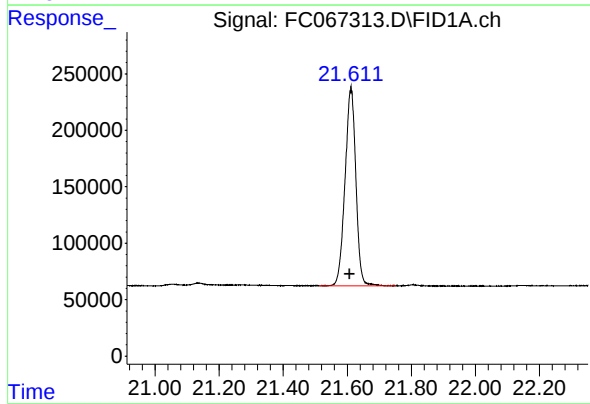
R.T.: 20.001 min
Delta R.T.: 0.002 min
Response: 4380994
Conc: 48.44 ug/ml



#21 n-Octatriacontane (C38)

R.T.: 20.724 min
Delta R.T.: 0.001 min
Response: 4146667
Conc: 48.79 ug/ml

Instrument :
FID_C
ClientSampleId :
50 PPM ALIPHATIC HC STD2



#22 n-Tetracontane (C40)

R.T.: 21.611 min
Delta R.T.: 0.004 min
Response: 4083374
Conc: 49.30 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC100224AL\
Data File : FC067313.D
Signal(s) : FID1A.ch
Acq On : 30 Sep 2024 11:10
Sample : 50 PPM ALIPHATIC HC STD2
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.272	3.245	3.342	BB	711248	6059731	83.80%	4.644%
2	4.338	4.285	4.415	BB	654161	6163543	85.23%	4.723%
3	5.917	5.855	6.015	BB	727635	6821781	94.33%	5.227%
4	6.355	6.299	6.437	BB	629757	6245280	86.36%	4.786%
5	6.972	6.924	7.092	BV	663765	6641948	91.85%	5.090%
6	8.149	8.007	8.227	BB	582329	6219770	86.01%	4.766%
7	9.748	9.702	9.844	BB	565794	6422795	88.82%	4.922%
8	11.189	11.075	11.285	BB	532485	6493088	89.79%	4.976%
9	11.501	11.434	11.570	BB	661071	7231579	100.00%	5.542%
10	12.497	12.455	12.569	BB	514506	6235508	86.23%	4.778%
11	12.939	12.847	13.012	BB	454745	5426500	75.04%	4.158%
12	13.107	13.064	13.177	BB	490056	6123952	84.68%	4.693%
13	13.693	13.658	13.770	VB	476110	6132673	84.80%	4.699%
14	14.795	14.720	14.874	BB	473209	6211203	85.89%	4.760%
15	15.814	15.744	15.897	BB	466583	6151165	85.06%	4.714%
16	16.763	16.692	16.860	BB	430820	6095338	84.29%	4.671%
17	17.650	17.574	17.734	PB	438958	6178045	85.43%	4.734%
18	18.481	18.407	18.545	BV	399853	5889852	81.45%	4.513%
19	19.263	19.197	19.362	BB	356265	5143313	71.12%	3.941%
20	20.001	19.952	20.040	PV	308867	4380994	60.58%	3.357%
21	20.724	20.594	20.807	BB	242057	4146667	57.34%	3.178%
22	21.611	21.512	21.752	BB	176788	4083374	56.47%	3.129%
Sum of corrected areas:						130498098		

Aliphatic EPH 100224.M Tue Oct 01 09:20:55 2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC100224AL\
 Data File : FC067314.D
 Signal(s) : FID1A.ch
 Acq On : 30 Sep 2024 11:48
 Operator : YP/AJ
 Sample : 20 PPM ALIPHATIC HC STD3
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 20 PPM ALIPHATIC HC STD3

Integration File: autoint1.e
 Quant Time: Oct 01 09:08:18 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
 Quant Title : GC Extractables
 QLast Update : Tue Oct 01 09:07:31 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 ul
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.497	3089013	20.000 ug/ml
Spiked Amount 50.000		Recovery =	40.00%
12) S 1-chlorooctadecane (S...	12.936	2301706	20.000 ug/ml
Spiked Amount 50.000		Recovery =	40.00%
Target Compounds			
1) T n-Nonane (C9)	3.271	2561935	20.000 ug/ml
2) T n-Decane (C10)	4.337	2606750	20.000 ug/ml
3) T A~Naphthalene (C11.7)	5.915	2878074	20.000 ug/ml
4) T n-Dodecane (C12)	6.353	2627937	20.000 ug/ml
5) T A~2-methylnaphthalene...	6.970	2792361	20.000 ug/ml
6) T n-Tetradecane (C14)	8.146	2616449	20.000 ug/ml
7) T n-Hexadecane (C16)	9.745	2703190	20.000 ug/ml
8) T n-Octadecane (C18)	11.186	2753269	20.000 ug/ml
10) T n-Eicosane (C20)	12.493	2645737	20.000 ug/ml
11) T n-Heneicosane (C21)	13.105	2606321	20.000 ug/ml
13) T n-Docosane (C22)	13.690	2582773	20.000 ug/ml
14) T n-Tetracosane (C24)	14.792	2574621	20.000 ug/ml
15) T n-Hexacosane (C26)	15.813	2538087	20.000 ug/ml
16) T n-Octacosane (C28)	16.760	2519727	20.000 ug/ml
17) T n-Tricontane (C30)	17.646	2574944	20.000 ug/ml
18) T n-Dotriacontane (C32)	18.478	2497831	20.000 ug/ml
19) T n-Tetratriacontane (C34)	19.260	2193263	20.000 ug/ml
20) T n-Hexatriacontane (C36)	19.999	1907034	20.000 ug/ml
21) T n-Octatriacontane (C38)	20.723	1770855	20.000 ug/ml
22) T n-Tetracontane (C40)	21.608	1730957	20.000 ug/ml

(f)=RT Delta > 1/2 Window

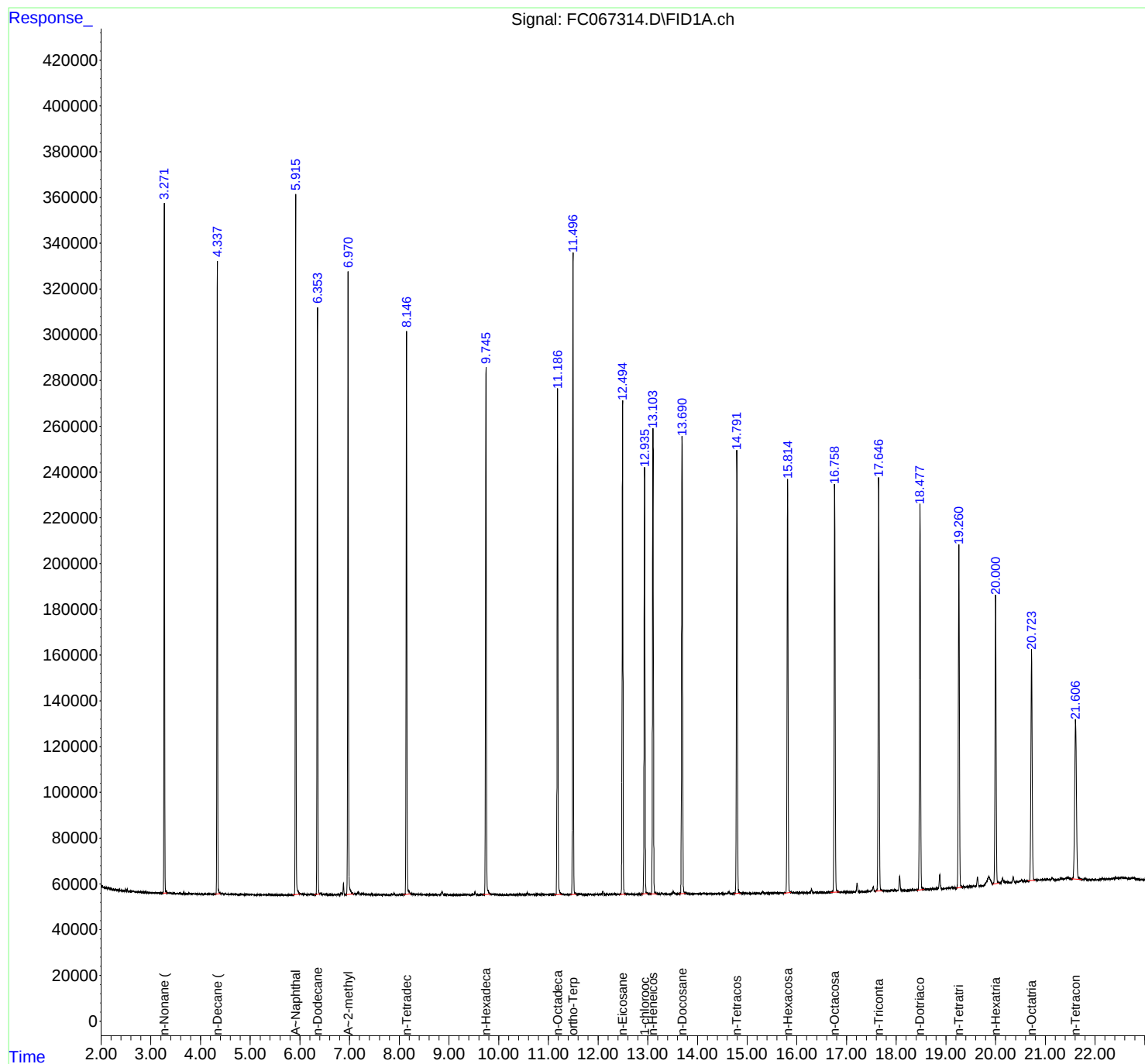
(m)=manual int.

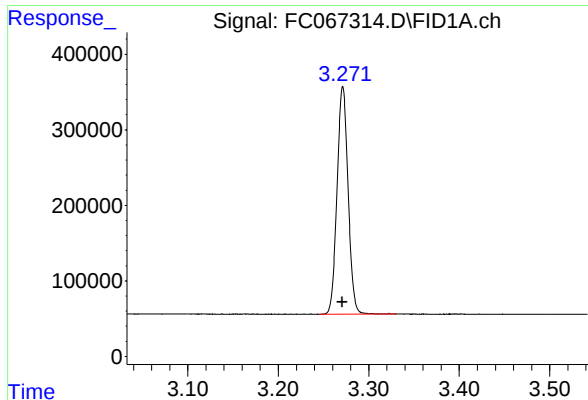
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC100224AL\
Data File : FC067314.D
Signal(s) : FID1A.ch
Acq On : 30 Sep 2024 11:48
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD3
Misc :
ALS Vial : 13 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD3

Integration File: autoint1.e
Quant Time: Oct 01 09:08:18 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Quant Title : GC Extractables
QLast Update : Tue Oct 01 09:07:31 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

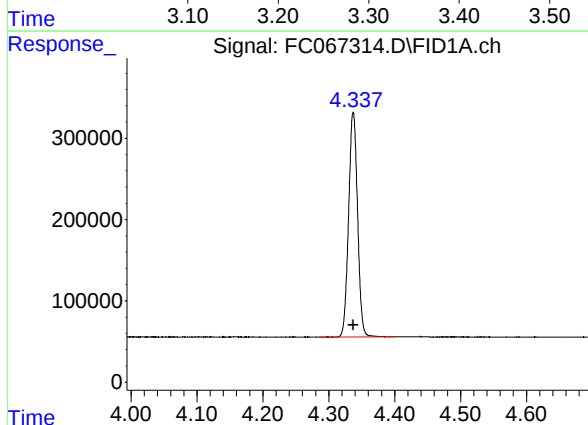




#1 n-Nonane (C9)

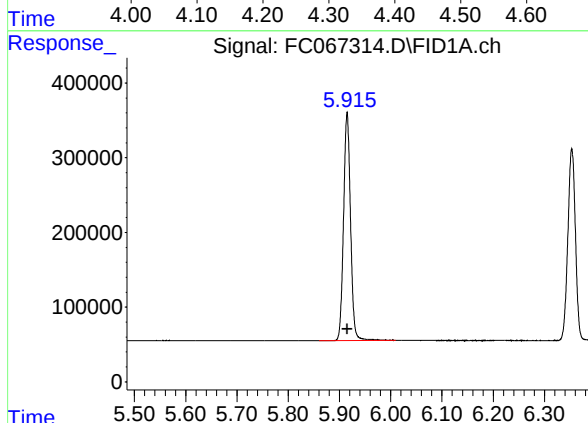
R.T.: 3.271 min
Delta R.T.: 0.000 min
Response: 2561935
Conc: 20.00 ug/ml

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD3



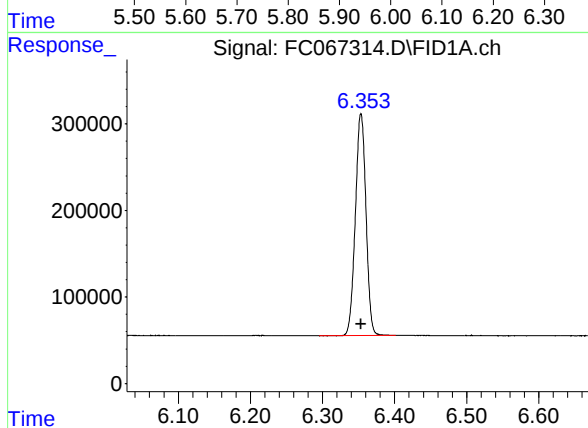
#2 n-Decane (C10)

R.T.: 4.337 min
Delta R.T.: 0.000 min
Response: 2606750
Conc: 20.00 ug/ml



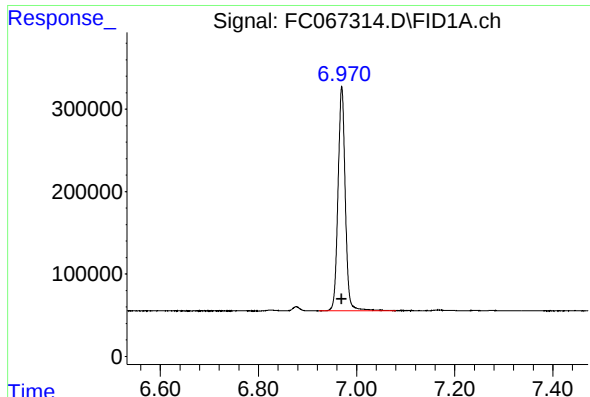
#3 A~Naphthalene (C11.7)

R.T.: 5.915 min
Delta R.T.: 0.000 min
Response: 2878074
Conc: 20.00 ug/ml



#4 n-Dodecane (C12)

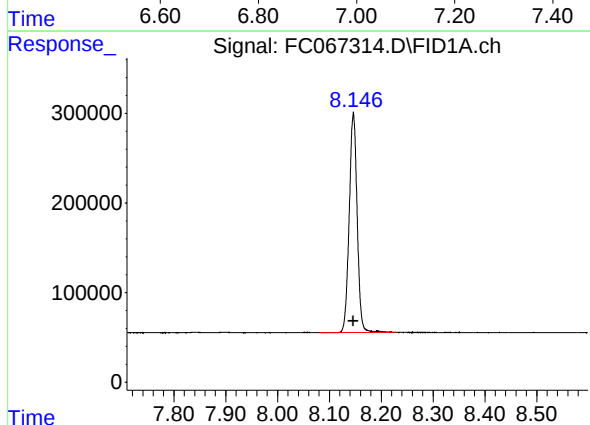
R.T.: 6.353 min
Delta R.T.: 0.000 min
Response: 2627937
Conc: 20.00 ug/ml



#5 A~2-methylnaphthalene (C12.89)

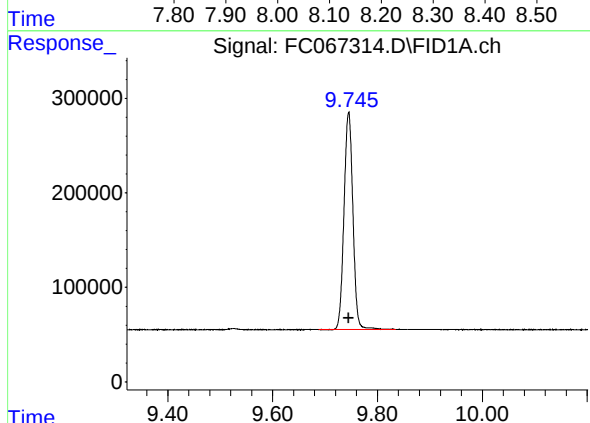
R.T.: 6.970 min
Delta R.T.: 0.000 min
Response: 2792361
Conc: 20.00 ug/ml

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD3



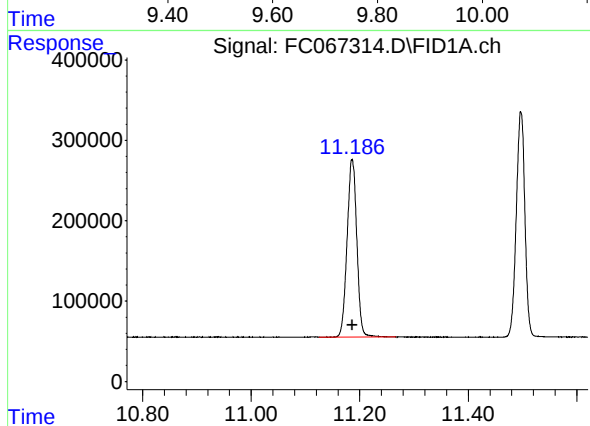
#6 n-Tetradecane (C14)

R.T.: 8.146 min
Delta R.T.: 0.000 min
Response: 2616449
Conc: 20.00 ug/ml



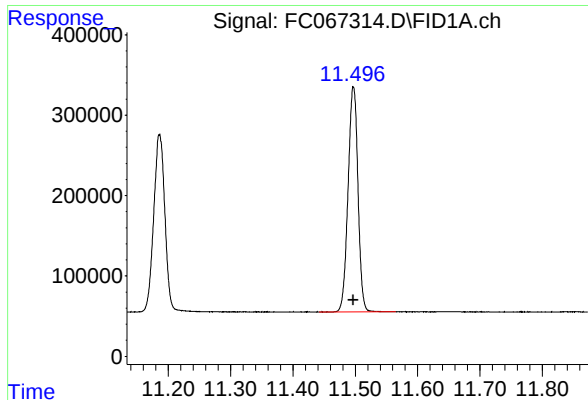
#7 n-Hexadecane (C16)

R.T.: 9.745 min
Delta R.T.: 0.000 min
Response: 2703190
Conc: 20.00 ug/ml



#8 n-Octadecane (C18)

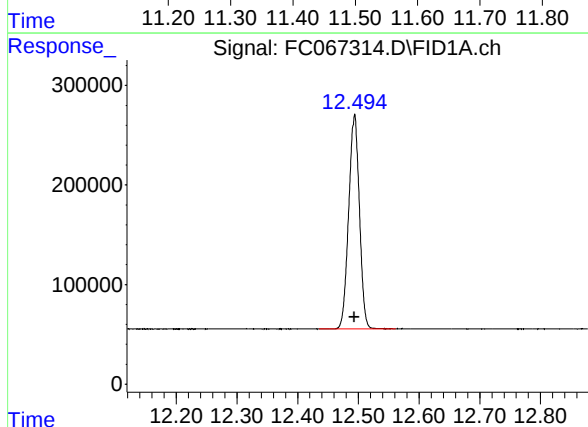
R.T.: 11.186 min
Delta R.T.: 0.000 min
Response: 2753269
Conc: 20.00 ug/ml



#9 ortho-Terphenyl (SURR)

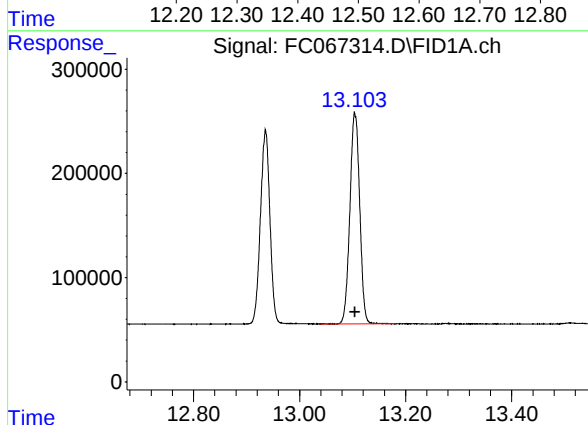
R.T.: 11.497 min
Delta R.T.: 0.000 min
Response: 3089013
Conc: 20.00 ug/ml

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD3



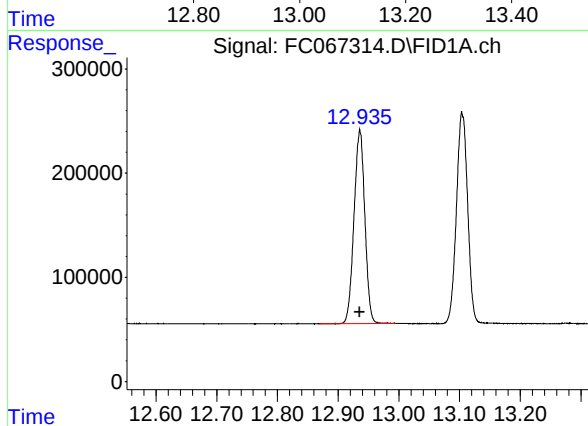
#10 n-Eicosane (C20)

R.T.: 12.493 min
Delta R.T.: 0.000 min
Response: 2645737
Conc: 20.00 ug/ml



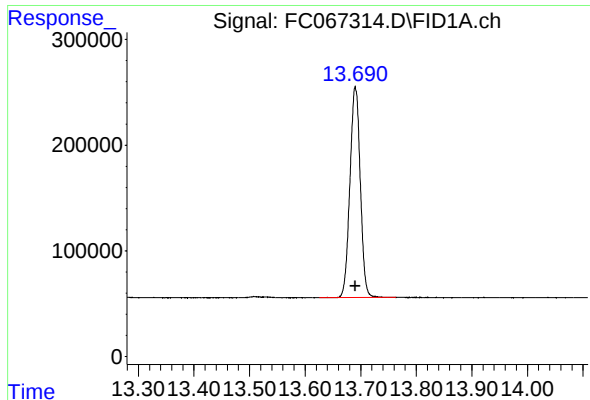
#11 n-Heneicosane (C21)

R.T.: 13.105 min
Delta R.T.: 0.000 min
Response: 2606321
Conc: 20.00 ug/ml



#12 1-chlorooctadecane (SURR)

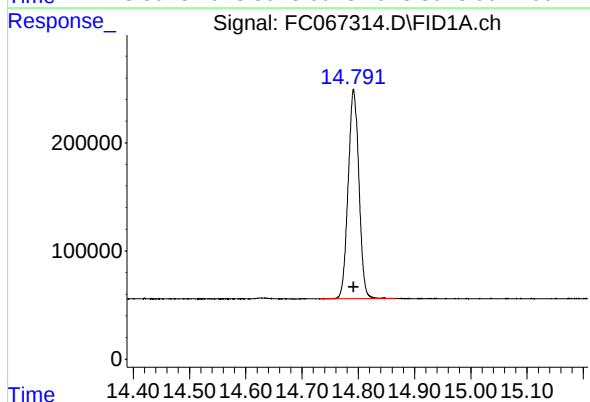
R.T.: 12.936 min
Delta R.T.: 0.000 min
Response: 2301706
Conc: 20.00 ug/ml



#13 n-Docosane (C22)

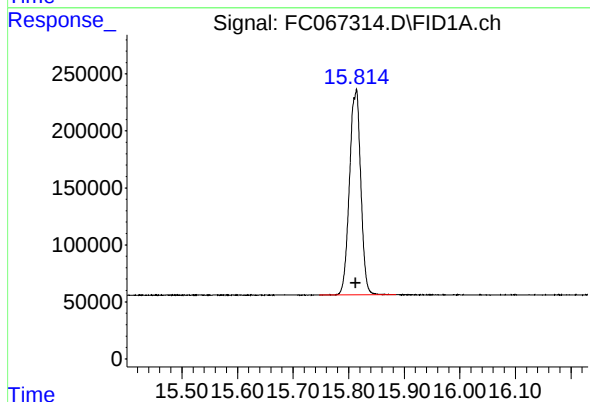
R.T.: 13.690 min
Delta R.T.: 0.000 min
Response: 2582773
Conc: 20.00 ug/ml

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD3



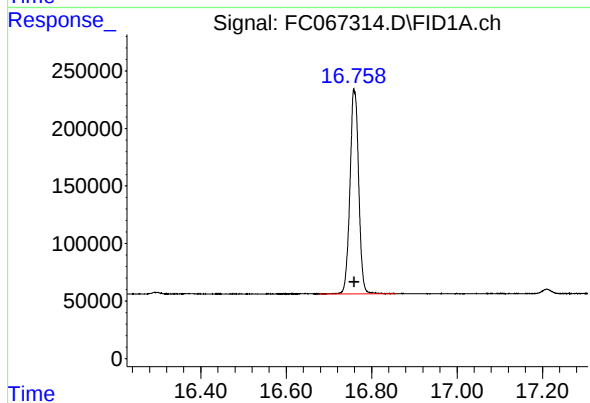
#14 n-Tetracosane (C24)

R.T.: 14.792 min
Delta R.T.: 0.000 min
Response: 2574621
Conc: 20.00 ug/ml



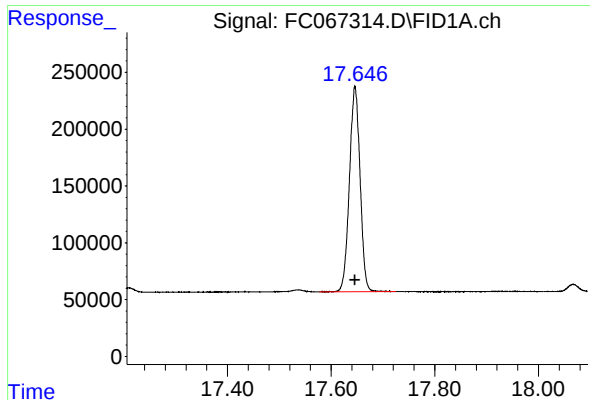
#15 n-Hexacosane (C26)

R.T.: 15.813 min
Delta R.T.: 0.000 min
Response: 2538087
Conc: 20.00 ug/ml



#16 n-Octacosane (C28)

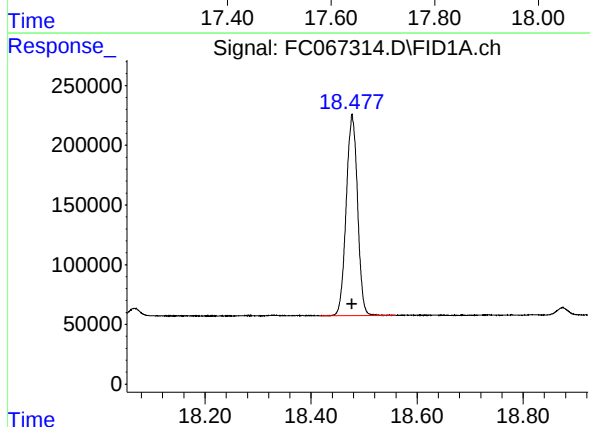
R.T.: 16.760 min
Delta R.T.: 0.000 min
Response: 2519727
Conc: 20.00 ug/ml



#17 n-Tricontane (C30)

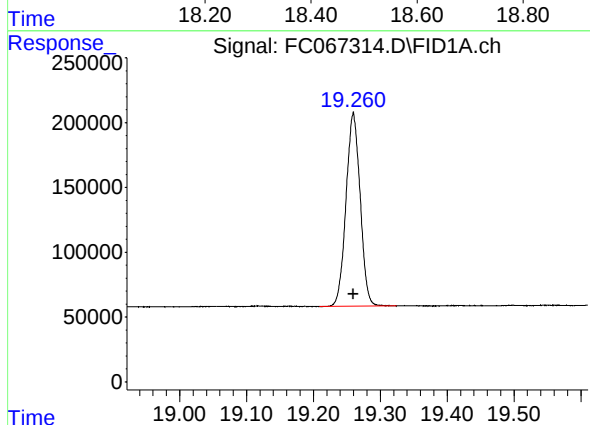
R.T.: 17.646 min
Delta R.T.: 0.000 min
Response: 2574944
Conc: 20.00 ug/ml

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD3



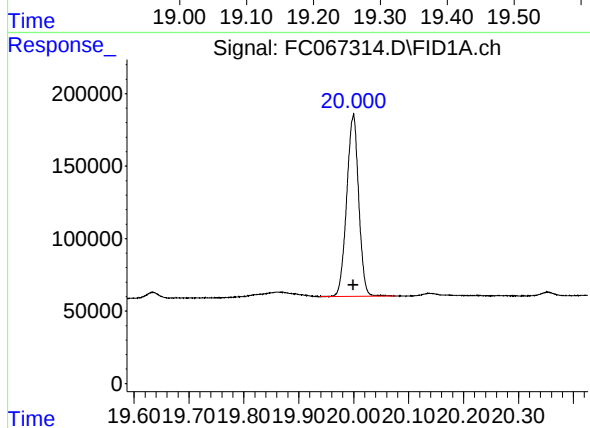
#18 n-Dotriacontane (C32)

R.T.: 18.478 min
Delta R.T.: 0.000 min
Response: 2497831
Conc: 20.00 ug/ml



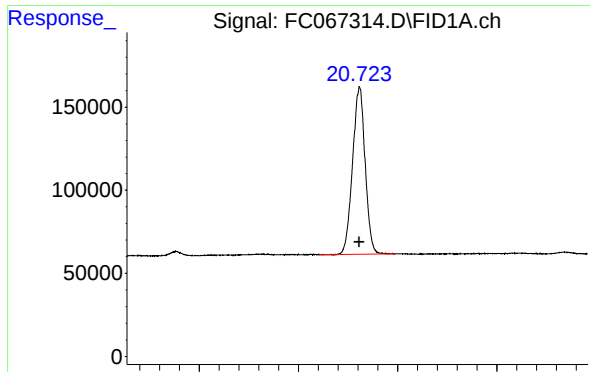
#19 n-Tetratriacontane (C34)

R.T.: 19.260 min
Delta R.T.: 0.000 min
Response: 2193263
Conc: 20.00 ug/ml



#20 n-Hexatriacontane (C36)

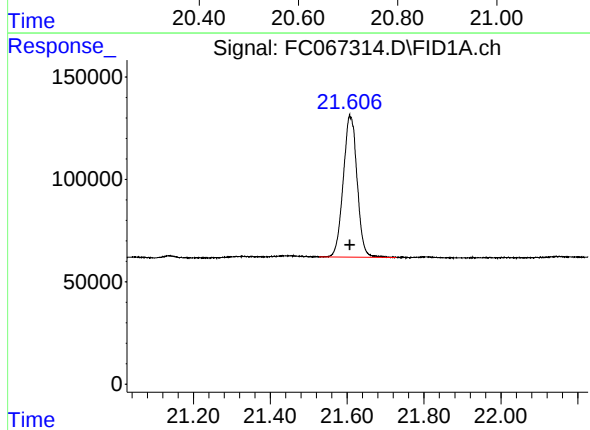
R.T.: 19.999 min
Delta R.T.: 0.000 min
Response: 1907034
Conc: 20.00 ug/ml



#21 n-Octatriacontane (C38)

R.T.: 20.723 min
Delta R.T.: 0.000 min
Response: 1770855
Conc: 20.00 ug/ml

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD3



#22 n-Tetracontane (C40)

R.T.: 21.608 min
Delta R.T.: 0.000 min
Response: 1730957
Conc: 20.00 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC100224AL\
 Data File : FC067314.D
 Signal(s) : FID1A.ch
 Acq On : 30 Sep 2024 11:48
 Sample : 20 PPM ALIPHATIC HC STD3
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
 Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.271	3.245	3.330	BB	301355	2561935	82.94%	4.652%
2	4.337	4.285	4.402	BB	276151	2606750	84.39%	4.733%
3	5.915	5.860	6.010	BB	306302	2878074	93.17%	5.226%
4	6.353	6.295	6.402	BB	256127	2627937	85.07%	4.772%
5	6.970	6.923	7.080	BB	272068	2792361	90.40%	5.070%
6	8.146	8.080	8.228	BB	246166	2616449	84.70%	4.751%
7	9.745	9.688	9.835	BB	229678	2703190	87.51%	4.908%
8	11.186	11.125	11.267	BB	220672	2753269	89.13%	4.999%
9	11.497	11.442	11.565	BB	280480	3089013	100.00%	5.609%
10	12.493	12.435	12.562	BB	214435	2645737	85.65%	4.804%
11	12.936	12.868	12.995	BB	185389	2301706	74.51%	4.179%
12	13.105	13.037	13.182	BB	199408	2606321	84.37%	4.732%
13	13.690	13.625	13.763	BB	199133	2582773	83.61%	4.690%
14	14.792	14.730	14.867	BB	192816	2574621	83.35%	4.675%
15	15.813	15.747	15.885	BB	175714	2538087	82.16%	4.609%
16	16.760	16.677	16.857	BB	174965	2519727	81.57%	4.575%
17	17.646	17.577	17.725	BB	180572	2574944	83.36%	4.676%
18	18.478	18.415	18.560	BB	168215	2497831	80.86%	4.536%
19	19.260	19.208	19.323	BB	149736	2193263	71.00%	3.982%
20	19.999	19.937	20.077	VB	124156	1907034	61.74%	3.463%
21	20.723	20.642	20.797	BB	100926	1770855	57.33%	3.215%
22	21.608	21.527	21.727	BB	68950	1730957	56.04%	3.143%
Sum of corrected areas:							55072832	

Aliphatic EPH 100224.M Tue Oct 01 09:21:20 2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC100224AL\
 Data File : FC067315.D
 Signal(s) : FID1A.ch
 Acq On : 30 Sep 2024 12:47
 Operator : YP/AJ
 Sample : 10 PPM ALIPHATIC HC STD4
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 10 PPM ALIPHATIC HC STD4

Integration File: autoint1.e
 Quant Time: Oct 01 09:11:43 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
 Quant Title : GC Extractables
 QLast Update : Tue Oct 01 09:07:31 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 ul
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.496	1571986	10.733 ug/ml
Spiked Amount 50.000		Recovery =	21.47%
12) S 1-chlorooctadecane (S...	12.936	1173605	10.698 ug/ml
Spiked Amount 50.000		Recovery =	21.40%
Target Compounds			
1) T n-Nonane (C9)	3.270	1286606	10.491 ug/ml
2) T n-Decane (C10)	4.336	1306831	10.474 ug/ml
3) T A~Naphthalene (C11.7)	5.915	1437407	10.417 ug/ml
4) T n-Dodecane (C12)	6.353	1318883	10.451 ug/ml
5) T A~2-methylnaphthalene...	6.970	1392618	10.375 ug/ml
6) T n-Tetradecane (C14)	8.146	1308417	10.411 ug/ml
7) T n-Hexadecane (C16)	9.745	1367829	10.562 ug/ml
8) T n-Octadecane (C18)	11.185	1404957	10.718 ug/ml
10) T n-Eicosane (C20)	12.493	1359651	10.795 ug/ml
11) T n-Heneicosane (C21)	13.104	1336214	10.787 ug/ml
13) T n-Docosane (C22)	13.689	1324859	10.728 ug/ml
14) T n-Tetracosane (C24)	14.791	1318090	10.622 ug/ml
15) T n-Hexacosane (C26)	15.811	1292438	10.537 ug/ml
16) T n-Octacosane (C28)	16.761	1284086	10.578 ug/ml
17) T n-Tricontane (C30)	17.647	1321139	10.727 ug/ml
18) T n-Dotriacontane (C32)	18.478	1282377	10.851 ug/ml
19) T n-Tetratriacontane (C34)	19.261	1119659	10.805 ug/ml
20) T n-Hexatriacontane (C36)	20.000	974156	10.885 ug/ml
21) T n-Octatriacontane (C38)	20.724	893961	10.604 ug/ml
22) T n-Tetracontane (C40)	21.611	848887	10.298 ug/ml

(f)=RT Delta > 1/2 Window

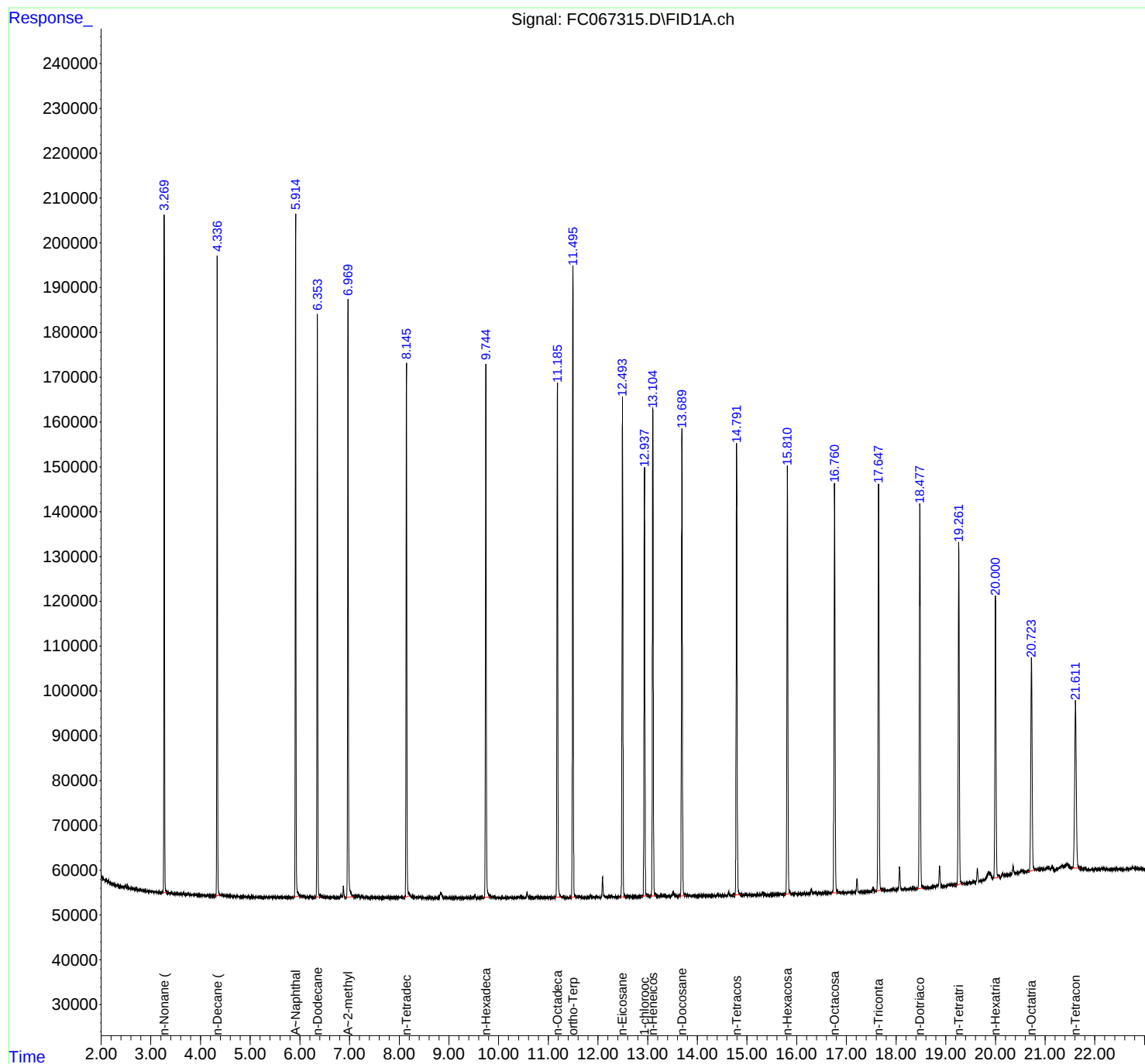
(m)=manual int.

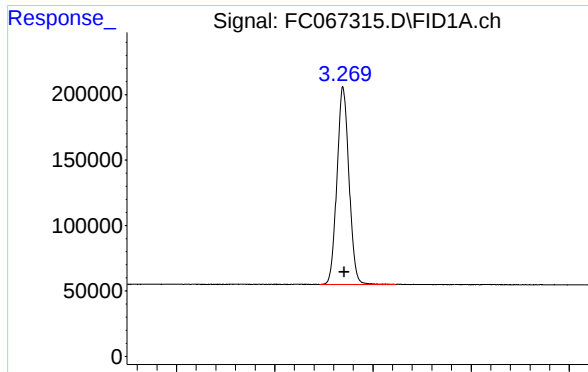
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC100224AL\
Data File : FC067315.D
Signal(s) : FID1A.ch
Acq On : 30 Sep 2024 12:47
Operator : YP/AJ
Sample : 10 PPM ALIPHATIC HC STD4
Misc :
ALS Vial : 14 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
10 PPM ALIPHATIC HC STD4

Integration File: autoint1.e
Quant Time: Oct 01 09:11:43 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Quant Title : GC Extractables
QLast Update : Tue Oct 01 09:07:31 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

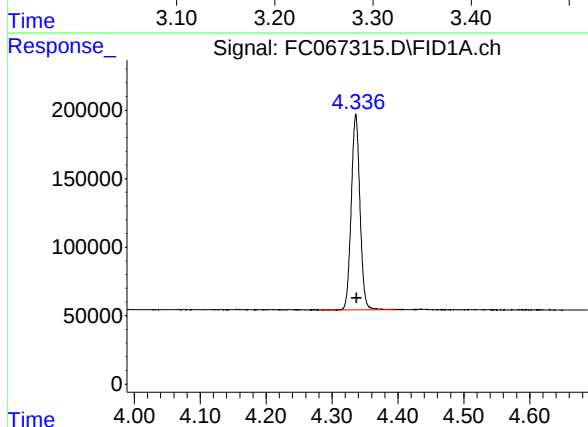




#1 n-Nonane (C9)

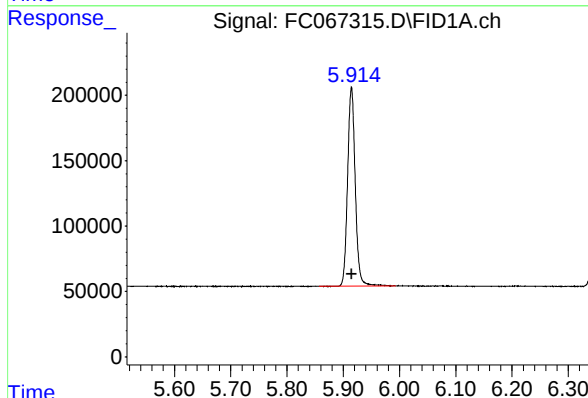
R.T.: 3.270 min
Delta R.T.: -0.001 min
Response: 1286606
Conc: 10.49 ug/ml

Instrument :
FID_C
ClientSampleId :
10 PPM ALIPHATIC HC STD4



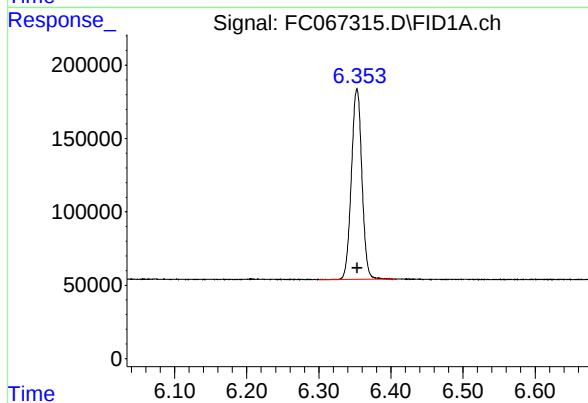
#2 n-Decane (C10)

R.T.: 4.336 min
Delta R.T.: -0.001 min
Response: 1306831
Conc: 10.47 ug/ml



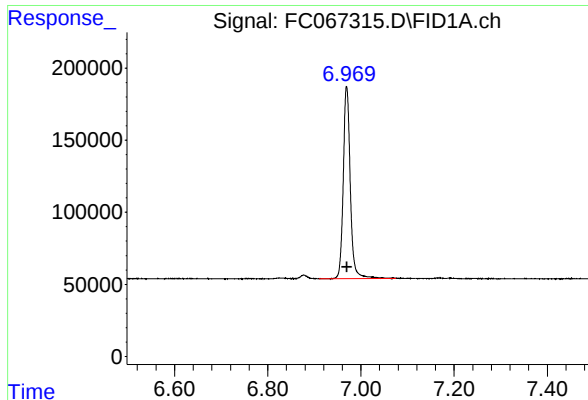
#3 A~Naphthalene (C11.7)

R.T.: 5.915 min
Delta R.T.: 0.000 min
Response: 1437407
Conc: 10.42 ug/ml



#4 n-Dodecane (C12)

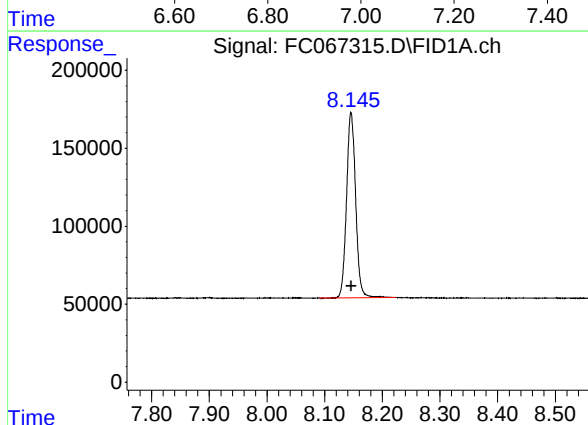
R.T.: 6.353 min
Delta R.T.: 0.000 min
Response: 1318883
Conc: 10.45 ug/ml



#5 A~2-methylnaphthalene (C12.89)

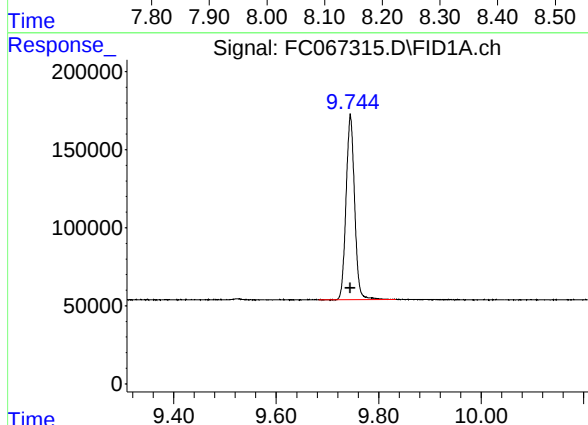
R.T.: 6.970 min
Delta R.T.: 0.000 min
Response: 1392618
Conc: 10.37 ug/ml

Instrument :
FID_C
ClientSampleId :
10 PPM ALIPHATIC HC STD4



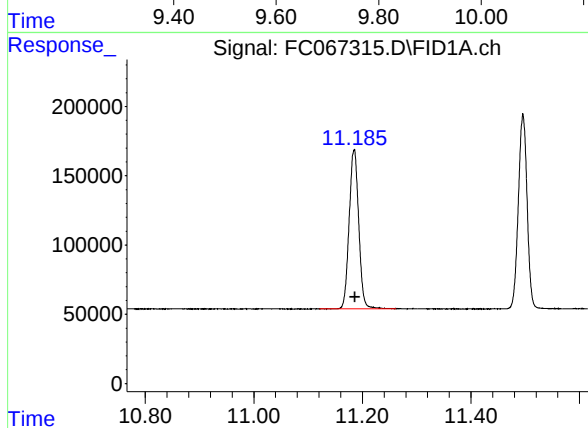
#6 n-Tetradecane (C14)

R.T.: 8.146 min
Delta R.T.: 0.000 min
Response: 1308417
Conc: 10.41 ug/ml



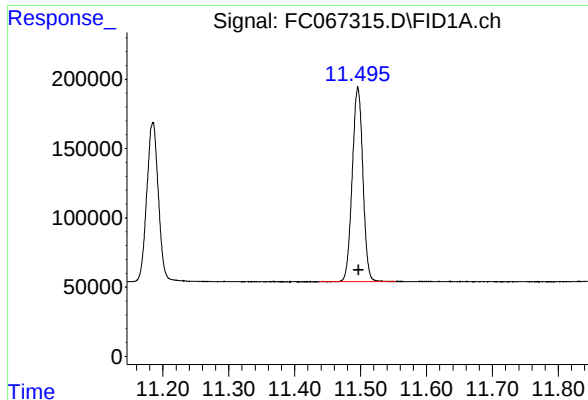
#7 n-Hexadecane (C16)

R.T.: 9.745 min
Delta R.T.: 0.000 min
Response: 1367829
Conc: 10.56 ug/ml



#8 n-Octadecane (C18)

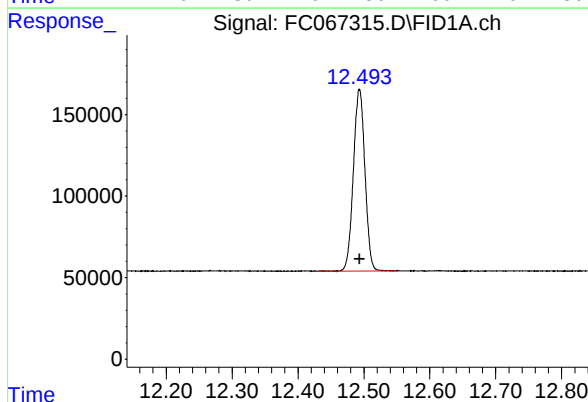
R.T.: 11.185 min
Delta R.T.: -0.001 min
Response: 1404957
Conc: 10.72 ug/ml



#9 ortho-Terphenyl (SURR)

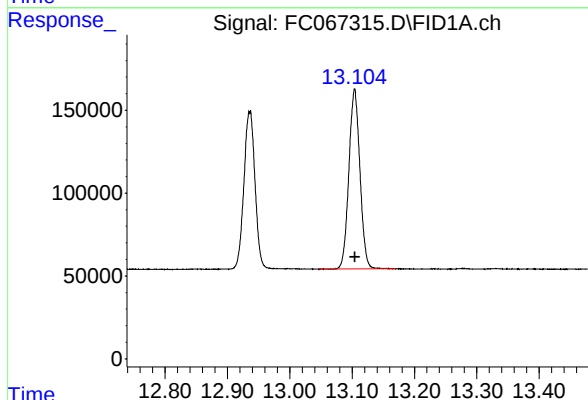
R.T.: 11.496 min
Delta R.T.: -0.001 min
Response: 1571986
Conc: 10.73 ug/ml

Instrument :
FID_C
ClientSampleId :
10 PPM ALIPHATIC HC STD4



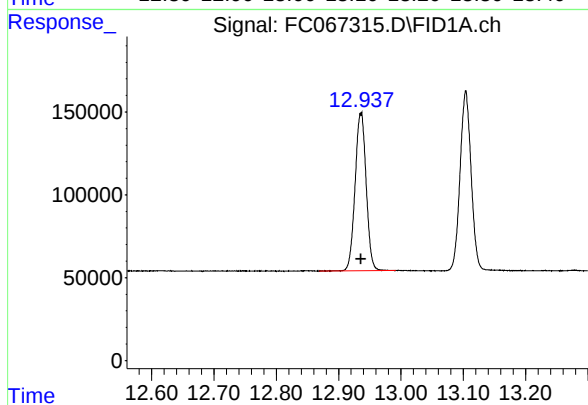
#10 n-Eicosane (C20)

R.T.: 12.493 min
Delta R.T.: 0.000 min
Response: 1359651
Conc: 10.80 ug/ml



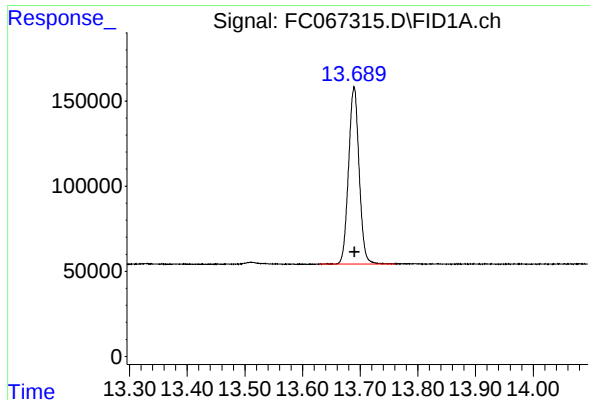
#11 n-Heneicosane (C21)

R.T.: 13.104 min
Delta R.T.: 0.000 min
Response: 1336214
Conc: 10.79 ug/ml



#12 1-chlorooctadecane (SURR)

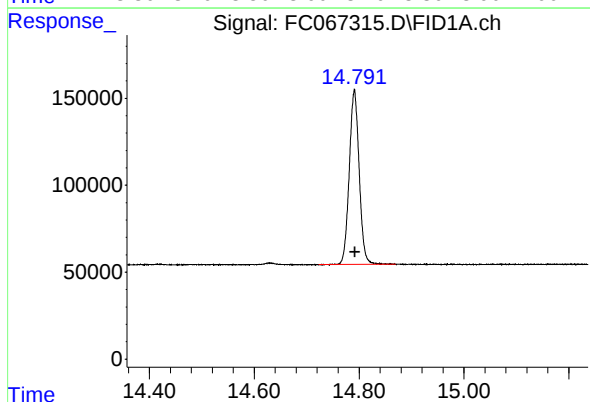
R.T.: 12.936 min
Delta R.T.: 0.000 min
Response: 1173605
Conc: 10.70 ug/ml



#13 n-Docosane (C22)

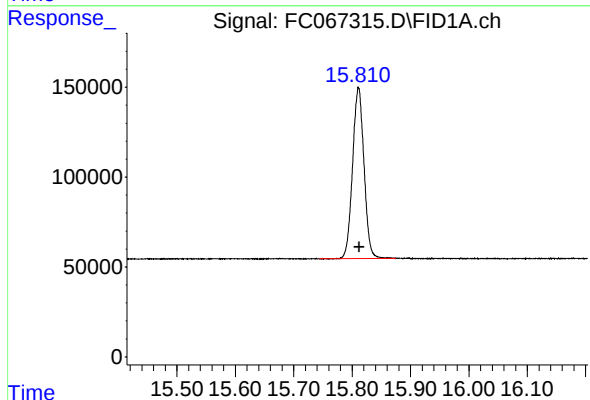
R.T.: 13.689 min
Delta R.T.: -0.001 min
Response: 1324859
Conc: 10.73 ug/ml

Instrument :
FID_C
ClientSampleId :
10 PPM ALIPHATIC HC STD4



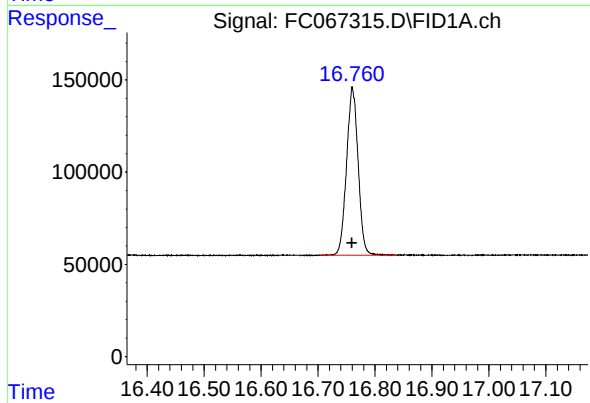
#14 n-Tetracosane (C24)

R.T.: 14.791 min
Delta R.T.: 0.000 min
Response: 1318090
Conc: 10.62 ug/ml



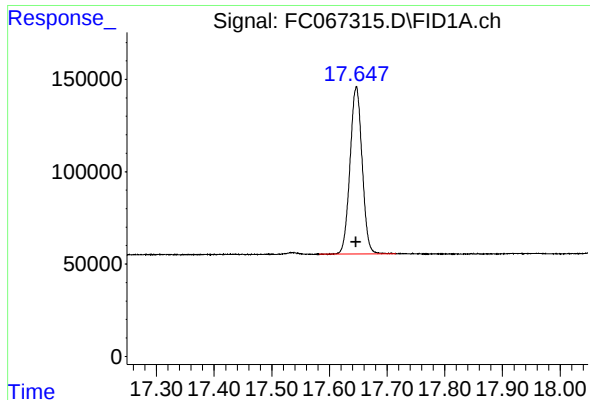
#15 n-Hexacosane (C26)

R.T.: 15.811 min
Delta R.T.: -0.002 min
Response: 1292438
Conc: 10.54 ug/ml



#16 n-Octacosane (C28)

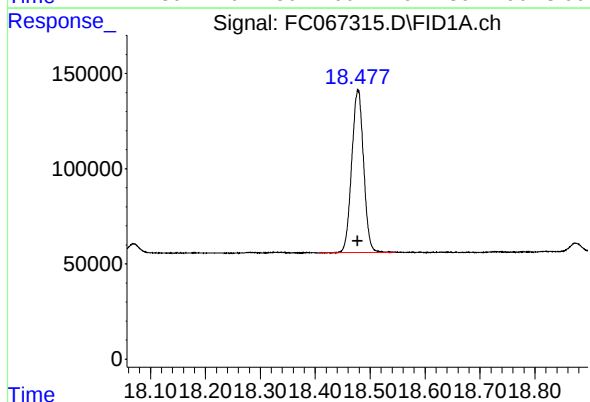
R.T.: 16.761 min
Delta R.T.: 0.000 min
Response: 1284086
Conc: 10.58 ug/ml



#17 n-Tricontane (C30)

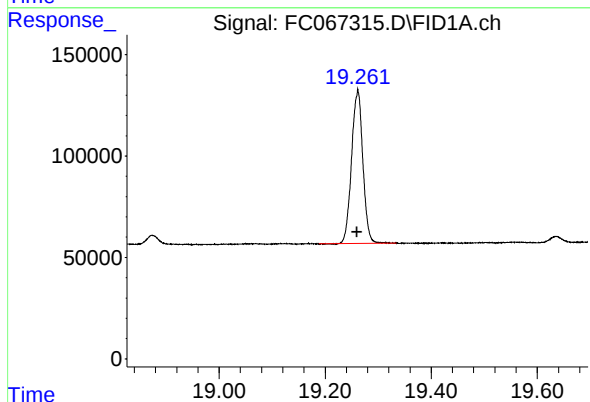
R.T.: 17.647 min
Delta R.T.: 0.000 min
Response: 1321139
Conc: 10.73 ug/ml

Instrument :
FID_C
ClientSampleId :
10 PPM ALIPHATIC HC STD4



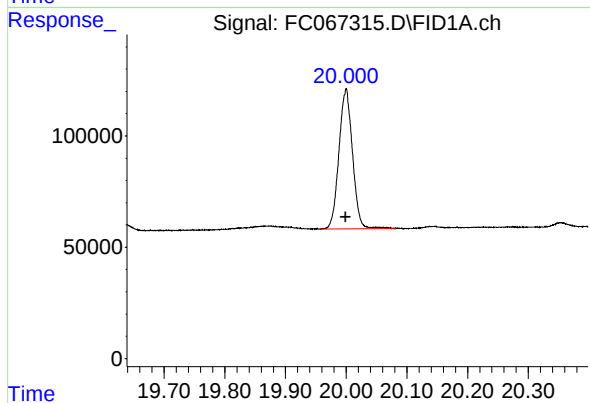
#18 n-Dotriacontane (C32)

R.T.: 18.478 min
Delta R.T.: 0.000 min
Response: 1282377
Conc: 10.85 ug/ml



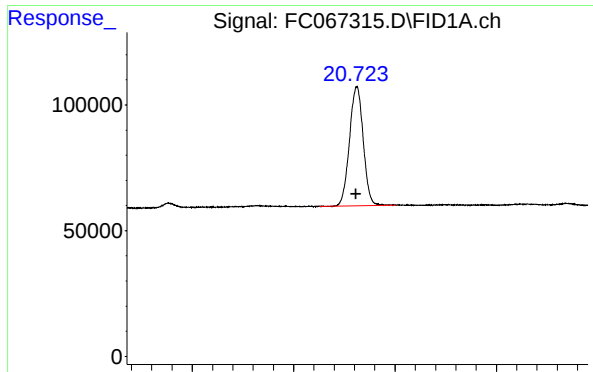
#19 n-Tetatriacontane (C34)

R.T.: 19.261 min
Delta R.T.: 0.002 min
Response: 1119659
Conc: 10.81 ug/ml



#20 n-Hexatriacontane (C36)

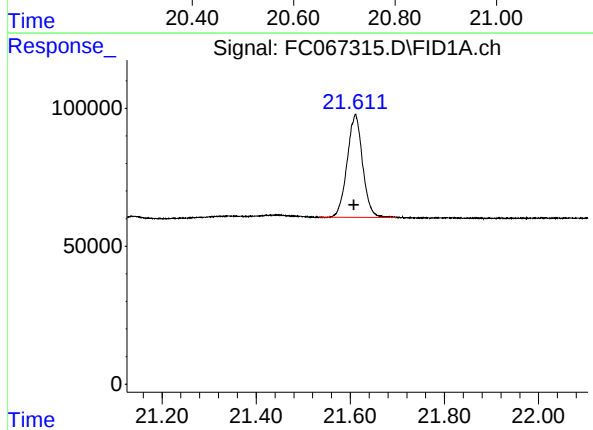
R.T.: 20.000 min
Delta R.T.: 0.000 min
Response: 974156
Conc: 10.88 ug/ml



#21 n-Octatriacontane (C38)

R.T.: 20.724 min
Delta R.T.: 0.001 min
Response: 893961
Conc: 10.60 ug/ml

Instrument :
FID_C
ClientSampleId :
10 PPM ALIPHATIC HC STD4



#22 n-Tetracontane (C40)

R.T.: 21.611 min
Delta R.T.: 0.003 min
Response: 848887
Conc: 10.30 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC100224AL\
Data File : FC067315.D
Signal(s) : FID1A.ch
Acq On : 30 Sep 2024 12:47
Sample : 10 PPM ALIPHATIC HC STD4
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.270	3.245	3.324	BB	149654	1286606	81.85%	4.607%
2	4.336	4.280	4.397	BB	143345	1306831	83.13%	4.680%
3	5.915	5.857	5.994	BB	152594	1437407	91.44%	5.147%
4	6.353	6.300	6.407	BB	129992	1318883	83.90%	4.723%
5	6.970	6.910	7.075	BB	132847	1392618	88.59%	4.987%
6	8.146	8.090	8.224	BB	118854	1308417	83.23%	4.686%
7	9.745	9.684	9.834	BB	118309	1367829	87.01%	4.898%
8	11.185	11.120	11.262	BB	115074	1404957	89.37%	5.031%
9	11.496	11.437	11.554	BB	139977	1571986	100.00%	5.629%
10	12.493	12.432	12.549	BB	111570	1359651	86.49%	4.869%
11	12.936	12.869	12.992	BB	94987	1173605	74.66%	4.203%
12	13.104	13.047	13.170	BB	108646	1336214	85.00%	4.785%
13	13.689	13.629	13.762	BB	103488	1324859	84.28%	4.744%
14	14.791	14.724	14.870	BB	99895	1318090	83.85%	4.720%
15	15.811	15.744	15.875	BB	95486	1292438	82.22%	4.628%
16	16.761	16.702	16.837	BB	90915	1284086	81.69%	4.598%
17	17.647	17.582	17.715	BB	90874	1321139	84.04%	4.731%
18	18.478	18.407	18.547	BB	85034	1282377	81.58%	4.592%
19	19.261	19.189	19.334	BB	76227	1119659	71.23%	4.010%
20	20.000	19.955	20.082	BB	63358	974156	61.97%	3.489%
21	20.724	20.650	20.802	BB	47317	893961	56.87%	3.201%
22	21.611	21.534	21.697	BB	37257	848887	54.00%	3.040%
Sum of corrected areas:							27924656	

Aliphatic EPH 100224.M Tue Oct 01 09:21:38 2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC100224AL\
 Data File : FC067316.D
 Signal(s) : FID1A.ch
 Acq On : 30 Sep 2024 13:35
 Operator : YP/AJ
 Sample : 5 PPM ALIPHATIC HC STD5
 Misc :
 ALS Vial : 15 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 5 PPM ALIPHATIC HC STD5

Integration File: autoint1.e
 Quant Time: Oct 01 09:12:40 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
 Quant Title : GC Extractables
 QLast Update : Tue Oct 01 09:07:31 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 ul
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.496	821094	5.505 ug/ml
Spiked Amount 50.000		Recovery =	11.01%
12) S 1-chlorooctadecane (S...	12.936	597484	5.353 ug/ml
Spiked Amount 50.000		Recovery =	10.71%
Target Compounds			
1) T n-Nonane (C9)	3.271	686146	5.527 ug/ml
2) T n-Decane (C10)	4.336	688670	5.455 ug/ml
3) T A~Naphthalene (C11.7)	5.915	757843	5.435 ug/ml
4) T n-Dodecane (C12)	6.352	691712	5.420 ug/ml
5) T A~2-methylnaphthalene...	6.970	719915	5.313 ug/ml
6) T n-Tetradecane (C14)	8.146	680596	5.360 ug/ml
7) T n-Hexadecane (C16)	9.745	701420	5.341 ug/ml
8) T n-Octadecane (C18)	11.185	721326	5.406 ug/ml
10) T n-Eicosane (C20)	12.493	695208	5.412 ug/ml
11) T n-Heneicosane (C21)	13.105	680195	5.385 ug/ml
13) T n-Docosane (C22)	13.690	677301	5.386 ug/ml
14) T n-Tetracosane (C24)	14.792	676857	5.371 ug/ml
15) T n-Hexacosane (C26)	15.811	666097	5.359 ug/ml
16) T n-Octacosane (C28)	16.759	677736	5.503 ug/ml
17) T n-Tricontane (C30)	17.647	712654	5.683 ug/ml
18) T n-Dotriacontane (C32)	18.478	709265	5.876 ug/ml
19) T n-Tetratriacontane (C34)	19.260	617762	5.844 ug/ml
20) T n-Hexatriacontane (C36)	20.000	533422	5.831 ug/ml
21) T n-Octatriacontane (C38)	20.724	480941	5.620 ug/ml
22) T n-Tetracontane (C40)	21.612	490214	5.903 ug/ml

(f)=RT Delta > 1/2 Window

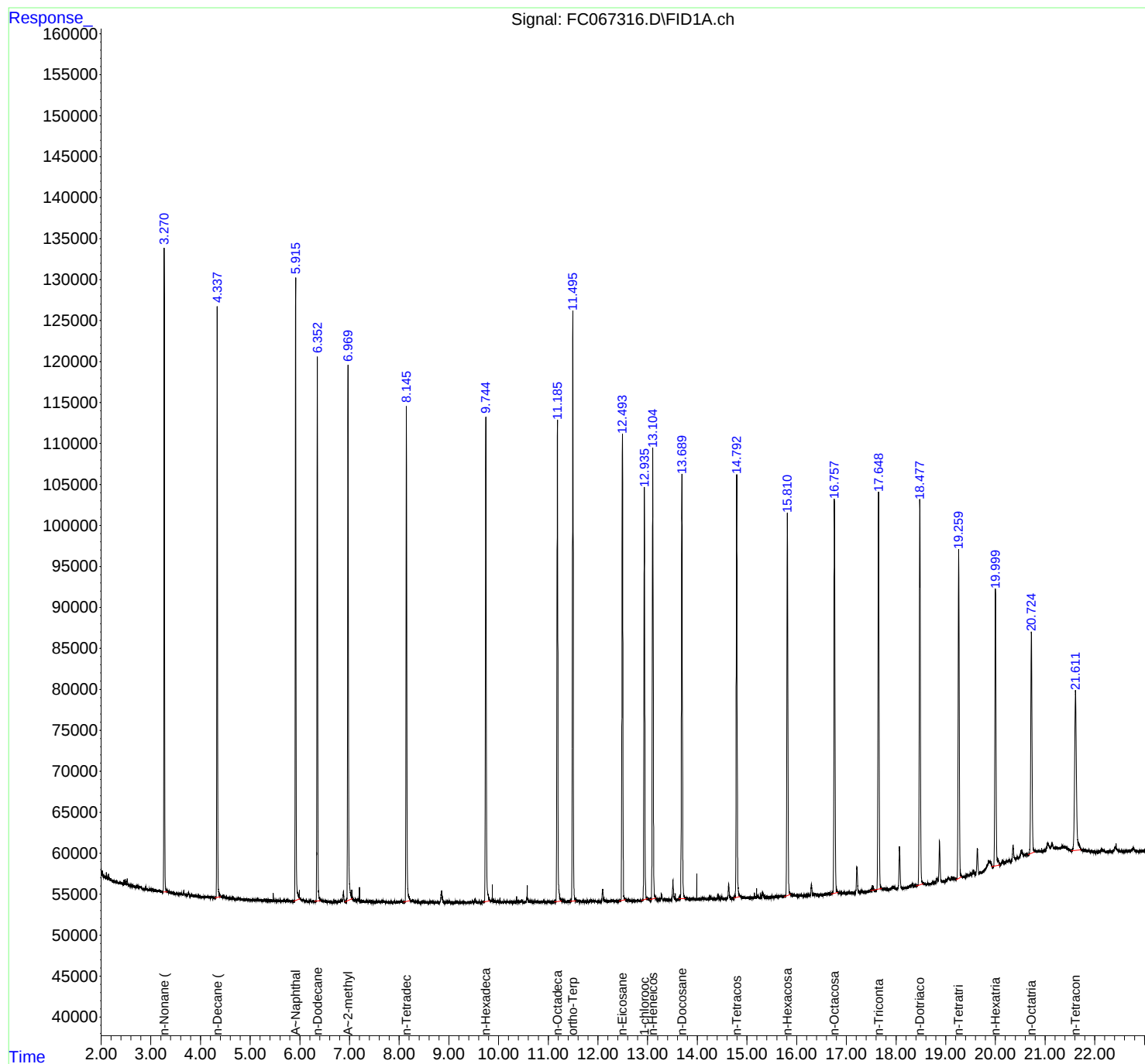
(m)=manual int.

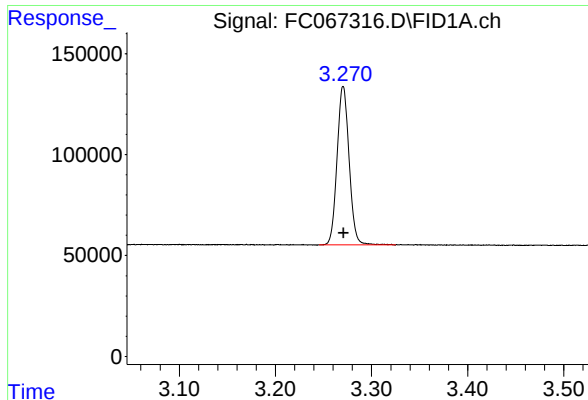
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC100224AL\
Data File : FC067316.D
Signal(s) : FID1A.ch
Acq On : 30 Sep 2024 13:35
Operator : YP/AJ
Sample : 5 PPM ALIPHATIC HC STD5
Misc :
ALS Vial : 15 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
5 PPM ALIPHATIC HC STD5

Integration File: autoint1.e
Quant Time: Oct 01 09:12:40 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Quant Title : GC Extractables
QLast Update : Tue Oct 01 09:07:31 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

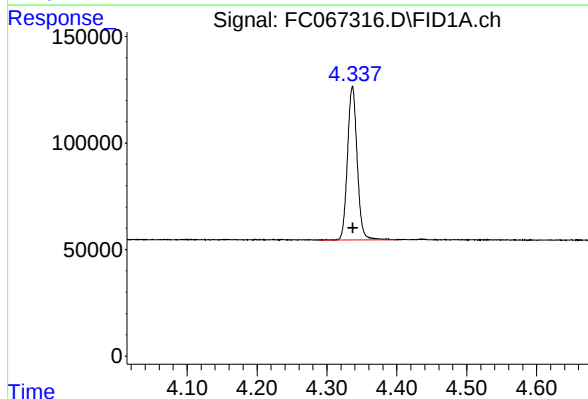




#1 n-Nonane (C9)

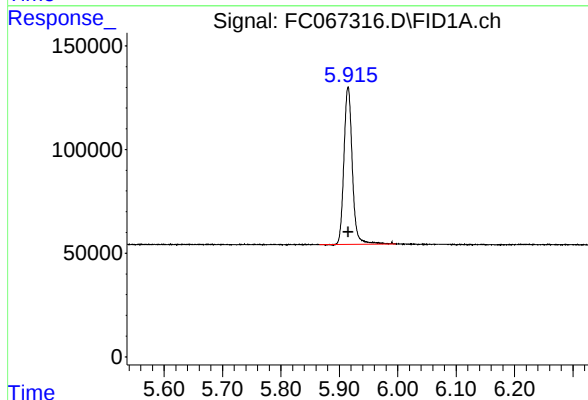
R.T.: 3.271 min
Delta R.T.: 0.000 min
Response: 686146
Conc: 5.53 ug/ml

Instrument :
FID_C
ClientSampleId :
5 PPM ALIPHATIC HC STD5



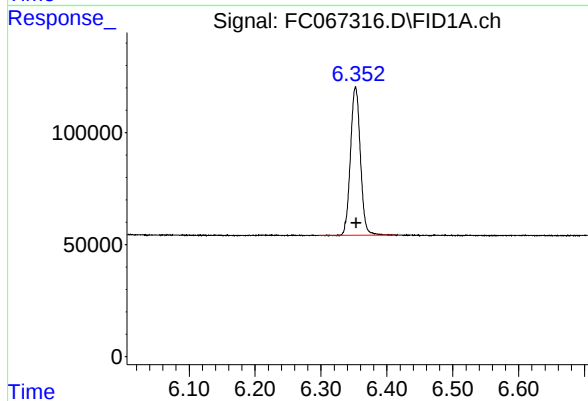
#2 n-Decane (C10)

R.T.: 4.336 min
Delta R.T.: 0.000 min
Response: 688670
Conc: 5.46 ug/ml



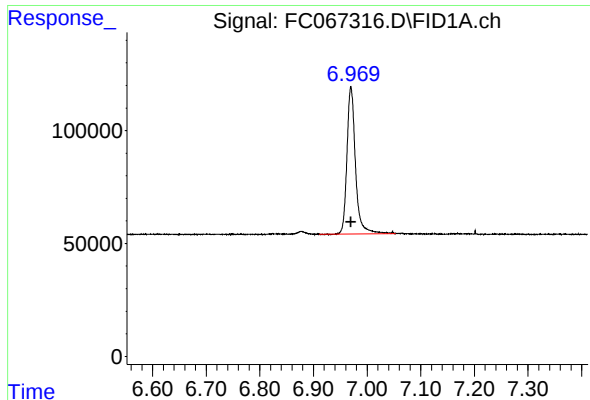
#3 A~Naphthalene (C11.7)

R.T.: 5.915 min
Delta R.T.: 0.000 min
Response: 757843
Conc: 5.44 ug/ml



#4 n-Dodecane (C12)

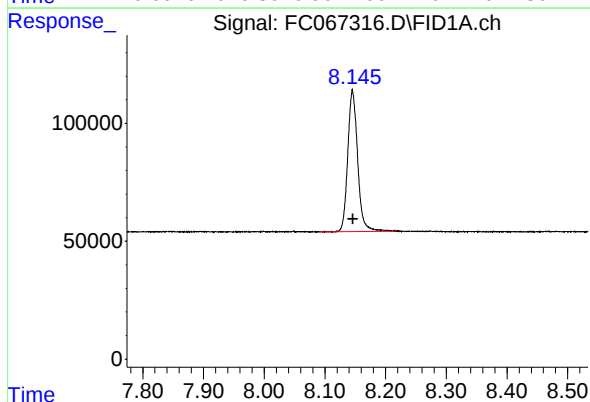
R.T.: 6.352 min
Delta R.T.: 0.000 min
Response: 691712
Conc: 5.42 ug/ml



#5 A~2-methylnaphthalene (C12.89)

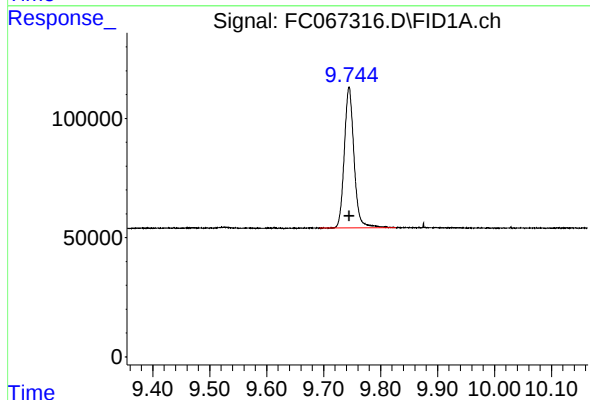
R.T.: 6.970 min
Delta R.T.: 0.000 min
Response: 719915
Conc: 5.31 ug/ml

Instrument :
FID_C
ClientSampleId :
5 PPM ALIPHATIC HC STD5



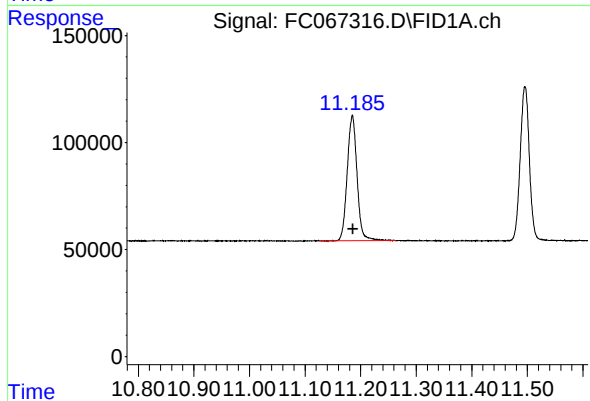
#6 n-Tetradecane (C14)

R.T.: 8.146 min
Delta R.T.: 0.000 min
Response: 680596
Conc: 5.36 ug/ml



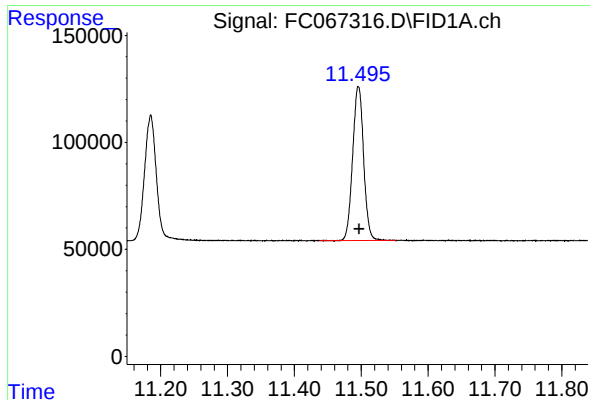
#7 n-Hexadecane (C16)

R.T.: 9.745 min
Delta R.T.: 0.000 min
Response: 701420
Conc: 5.34 ug/ml



#8 n-Octadecane (C18)

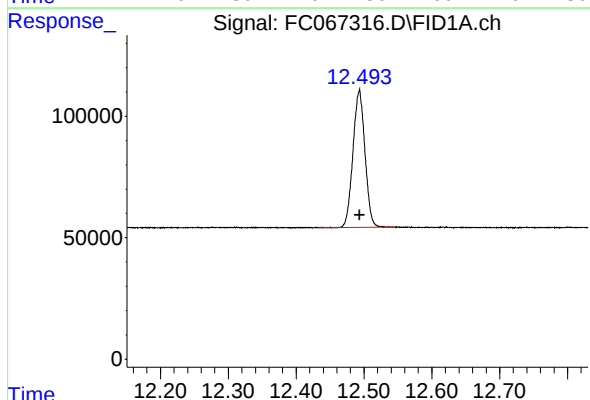
R.T.: 11.185 min
Delta R.T.: -0.001 min
Response: 721326
Conc: 5.41 ug/ml



#9 ortho-Terphenyl (SURR)

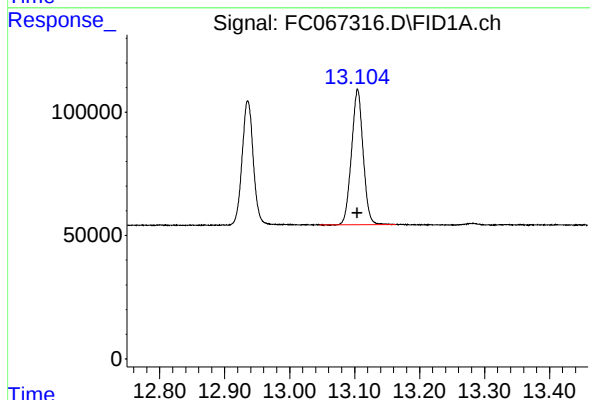
R.T.: 11.496 min
Delta R.T.: -0.001 min
Response: 821094
Conc: 5.51 ug/ml

Instrument :
FID_C
ClientSampleId :
5 PPM ALIPHATIC HC STD5



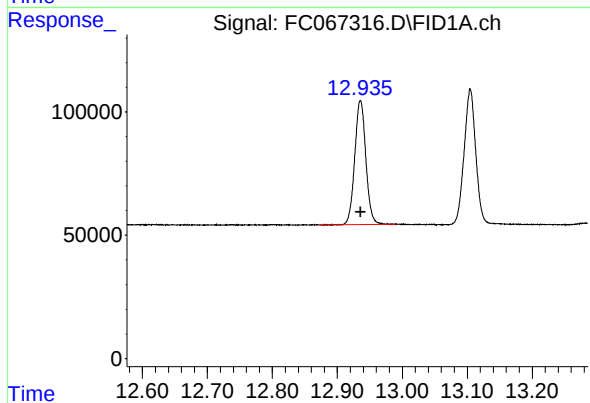
#10 n-Eicosane (C20)

R.T.: 12.493 min
Delta R.T.: 0.000 min
Response: 695208
Conc: 5.41 ug/ml



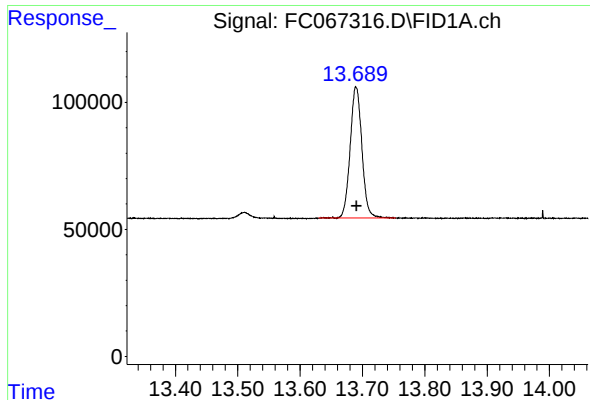
#11 n-Heneicosane (C21)

R.T.: 13.105 min
Delta R.T.: 0.000 min
Response: 680195
Conc: 5.39 ug/ml



#12 1-chlorooctadecane (SURR)

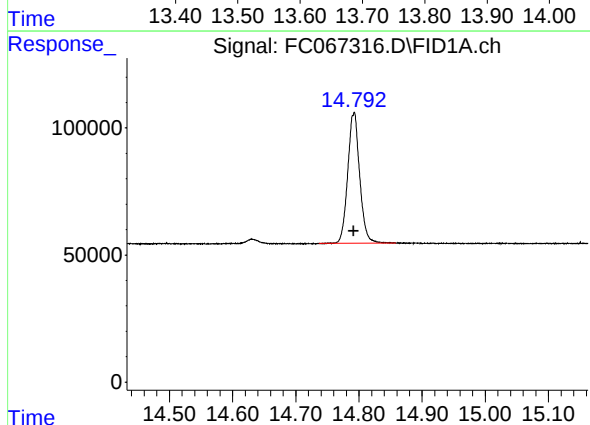
R.T.: 12.936 min
Delta R.T.: 0.000 min
Response: 597484
Conc: 5.35 ug/ml



#13 n-Docosane (C22)

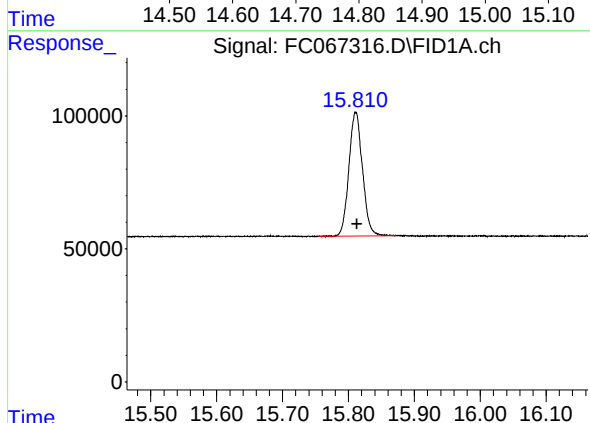
R.T.: 13.690 min
Delta R.T.: 0.000 min
Response: 677301
Conc: 5.39 ug/ml

Instrument :
FID_C
ClientSampleId :
5 PPM ALIPHATIC HC STD5



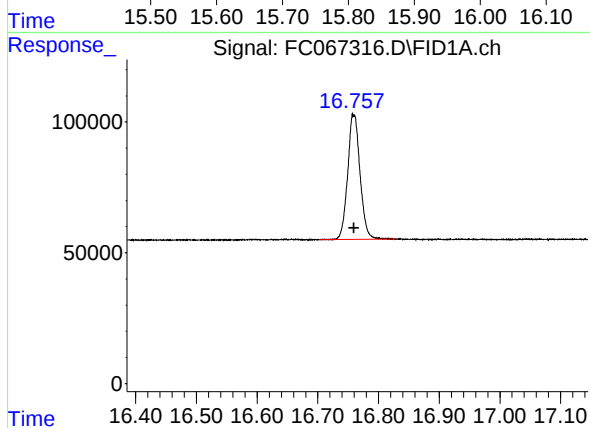
#14 n-Tetracosane (C24)

R.T.: 14.792 min
Delta R.T.: 0.000 min
Response: 676857
Conc: 5.37 ug/ml



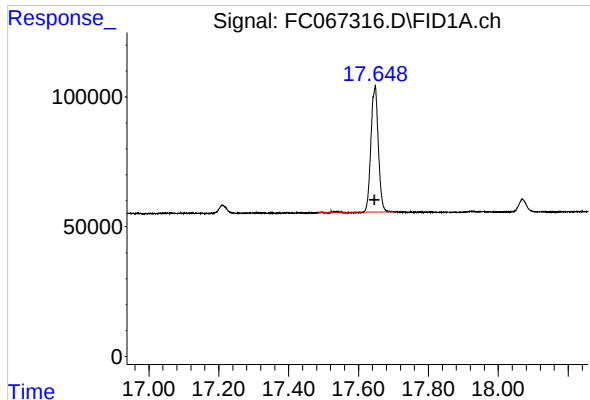
#15 n-Hexacosane (C26)

R.T.: 15.811 min
Delta R.T.: -0.002 min
Response: 666097
Conc: 5.36 ug/ml



#16 n-Octacosane (C28)

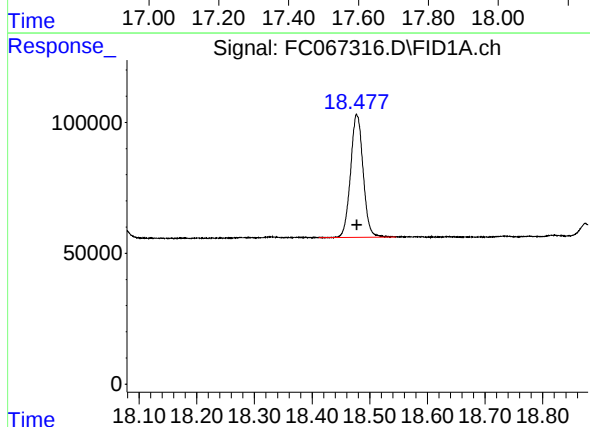
R.T.: 16.759 min
Delta R.T.: 0.000 min
Response: 677736
Conc: 5.50 ug/ml



#17 n-Tricontane (C30)

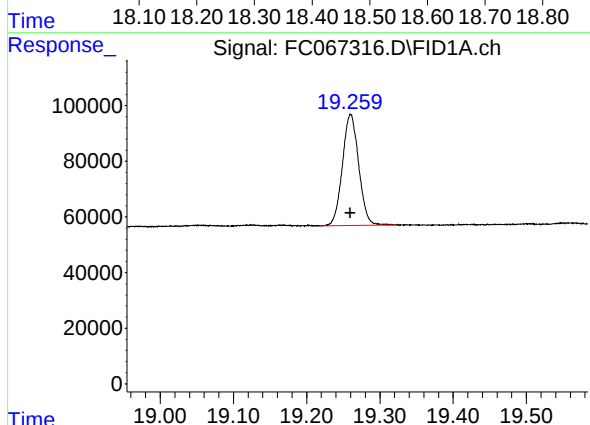
R.T.: 17.647 min
Delta R.T.: 0.000 min
Response: 712654
Conc: 5.68 ug/ml

Instrument :
FID_C
ClientSampleId :
5 PPM ALIPHATIC HC STD5



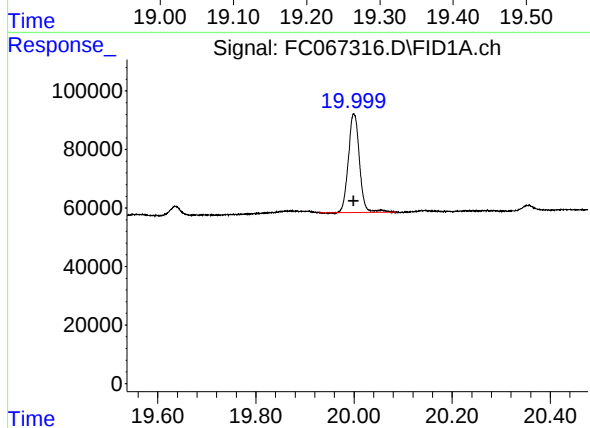
#18 n-Dotriacontane (C32)

R.T.: 18.478 min
Delta R.T.: 0.000 min
Response: 709265
Conc: 5.88 ug/ml



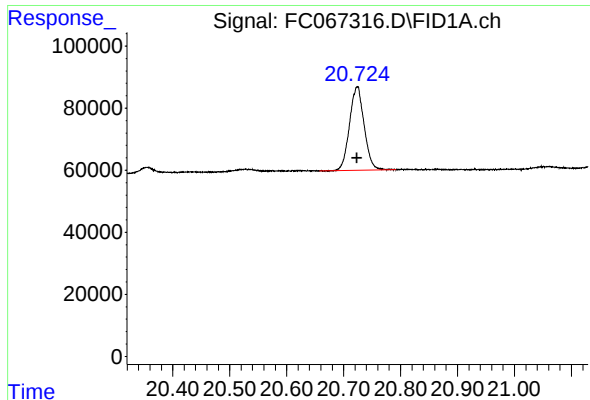
#19 n-Tetratriacontane (C34)

R.T.: 19.260 min
Delta R.T.: 0.000 min
Response: 617762
Conc: 5.84 ug/ml



#20 n-Hexatriacontane (C36)

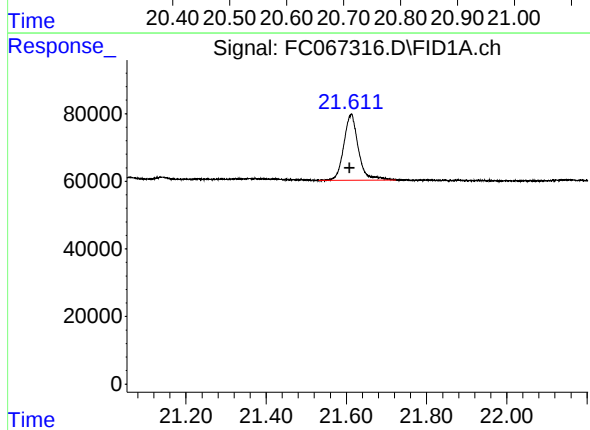
R.T.: 20.000 min
Delta R.T.: 0.000 min
Response: 533422
Conc: 5.83 ug/ml



#21 n-Octatriacontane (C38)

R.T.: 20.724 min
Delta R.T.: 0.000 min
Response: 480941
Conc: 5.62 ug/ml

Instrument :
FID_C
ClientSampleId :
5 PPM ALIPHATIC HC STD5



#22 n-Tetracontane (C40)

R.T.: 21.612 min
Delta R.T.: 0.004 min
Response: 490214
Conc: 5.90 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC100224AL\
Data File : FC067316.D
Signal(s) : FID1A.ch
Acq On : 30 Sep 2024 13:35
Sample : 5 PPM ALIPHATIC HC STD5
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.271	3.245	3.325	BB	78681	686146	83.56%	4.673%
2	4.336	4.289	4.399	BB	72152	688670	83.87%	4.690%
3	5.915	5.865	5.997	BB	76027	757843	92.30%	5.161%
4	6.352	6.297	6.414	BB	66053	691712	84.24%	4.711%
5	6.970	6.910	7.054	BB	65101	719915	87.68%	4.903%
6	8.146	8.090	8.217	BB	60011	680596	82.89%	4.635%
7	9.745	9.692	9.827	BB	59283	701420	85.42%	4.777%
8	11.185	11.125	11.264	BB	58904	721326	87.85%	4.912%
9	11.496	11.437	11.552	BB	72136	821094	100.00%	5.592%
10	12.493	12.434	12.547	BB	56965	695208	84.67%	4.735%
11	12.936	12.872	12.990	BB	50290	597484	72.77%	4.069%
12	13.105	13.045	13.164	BB	54789	680195	82.84%	4.632%
13	13.690	13.630	13.754	BB	51352	677301	82.49%	4.613%
14	14.792	14.737	14.859	BB	51124	676857	82.43%	4.610%
15	15.811	15.755	15.872	BB	46744	666097	81.12%	4.536%
16	16.759	16.702	16.829	BB	47167	677736	82.54%	4.616%
17	17.647	17.487	17.707	BB	48207	712654	86.79%	4.853%
18	18.478	18.412	18.545	BB	46869	709265	86.38%	4.830%
19	19.260	19.217	19.322	BB	39937	617762	75.24%	4.207%
20	20.000	19.929	20.085	BB	33595	533422	64.96%	3.633%
21	20.724	20.657	20.792	BB	26905	480941	58.57%	3.275%
22	21.612	21.532	21.724	BB	19525	490214	59.70%	3.338%
Sum of corrected areas:							14683859	

Aliphatic EPH 100224.M Tue Oct 01 09:21:54 2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC100224AL\
 Data File : FC067317.D
 Signal(s) : FID1A.ch
 Acq On : 30 Sep 2024 14:29
 Operator : YP/AJ
 Sample : 20 PPM ALIPHATIC HC STD ICV
 Misc :
 ALS Vial : 16 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 20 PPM ALIPHATIC HC STD ICV

Integration File: autoint1.e
 Quant Time: Oct 01 09:15:12 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
 Quant Title : GC Extractables
 QLast Update : Tue Oct 01 09:13:32 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 ul
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.498	2856514	18.773 ug/ml
Spiked Amount 50.000		Recovery =	37.55%
12) S 1-chlorooctadecane (S...	12.936	2133568	18.849 ug/ml
Spiked Amount 50.000		Recovery =	37.70%
Target Compounds			
1) T n-Nonane (C9)	3.270	2407553	18.993 ug/ml
2) T n-Decane (C10)	4.336	2442213	18.999 ug/ml
3) T A~Naphthalene (C11.7)	5.915	2689038	18.956 ug/ml
4) T n-Dodecane (C12)	6.353	2456420	18.930 ug/ml
5) T A~2-methylnaphthalene...	6.970	2597570	18.934 ug/ml
6) T n-Tetradecane (C14)	8.146	2450775	19.028 ug/ml
7) T n-Hexadecane (C16)	9.746	2523898	18.960 ug/ml
8) T n-Octadecane (C18)	11.186	2573183	18.976 ug/ml
10) T n-Eicosane (C20)	12.494	2485014	19.032 ug/ml
11) T n-Heneicosane (C21)	13.105	2426455	18.919 ug/ml
13) T n-Docosane (C22)	13.691	2465913	19.312 ug/ml
14) T n-Tetracosane (C24)	14.792	2609769	20.406 ug/ml
15) T n-Hexacosane (C26)	15.813	2600091	20.622 ug/ml
16) T n-Octacosane (C28)	16.762	2654837	21.132 ug/ml
17) T n-Tricontane (C30)	17.647	2708550	21.025 ug/ml
18) T n-Dotriacontane (C32)	18.478	2596492	20.784 ug/ml
19) T n-Tetratriacontane (C34)	19.261	2217081	20.289 ug/ml
20) T n-Hexatriacontane (C36)	20.000	1805047	19.097 ug/ml
21) T n-Octatriacontane (C38)	20.724	1666956	19.008 ug/ml
22) T n-Tetracontane (C40)	21.608	1643254	19.097 ug/ml

(f)=RT Delta > 1/2 Window

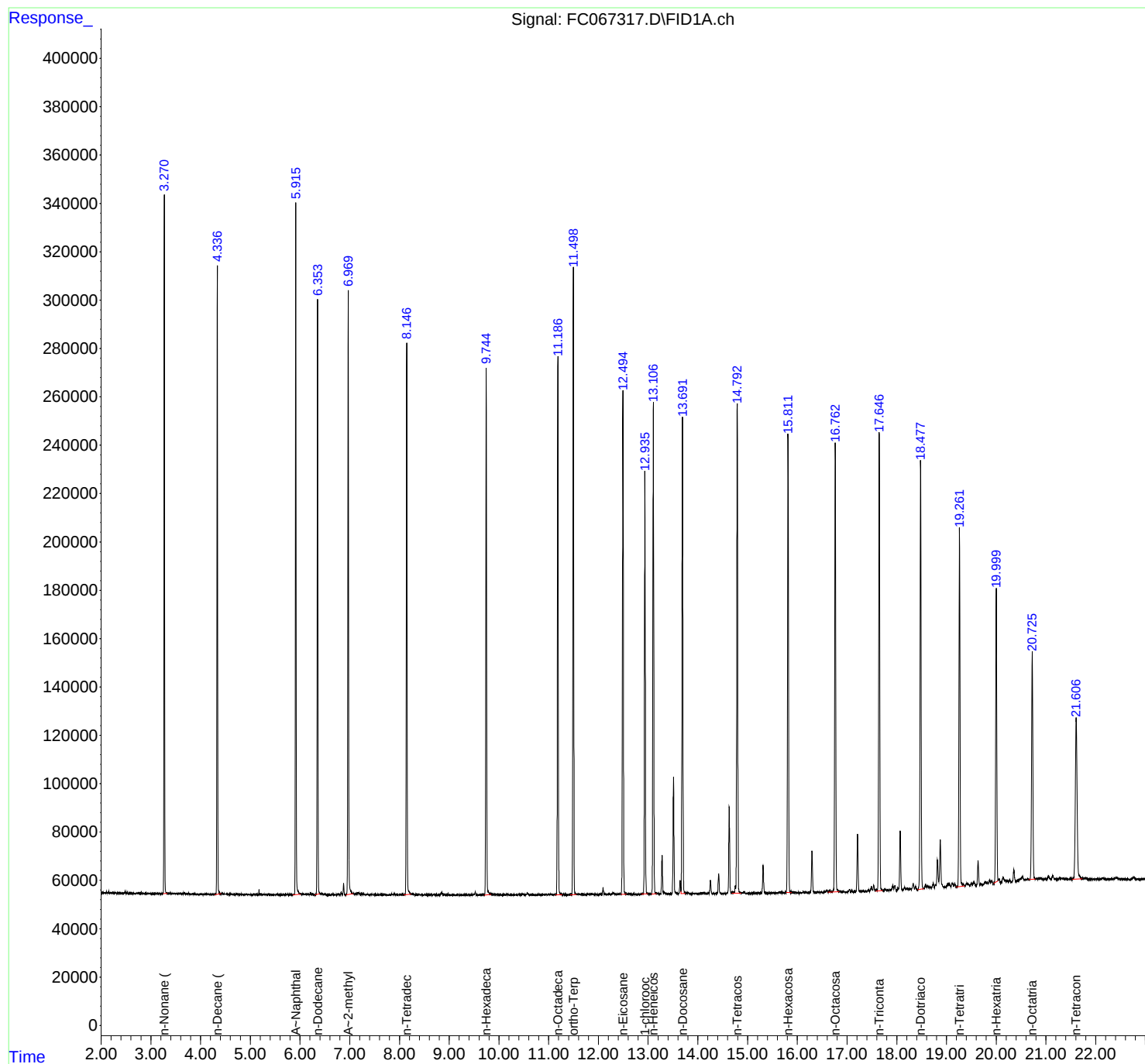
(m)=manual int.

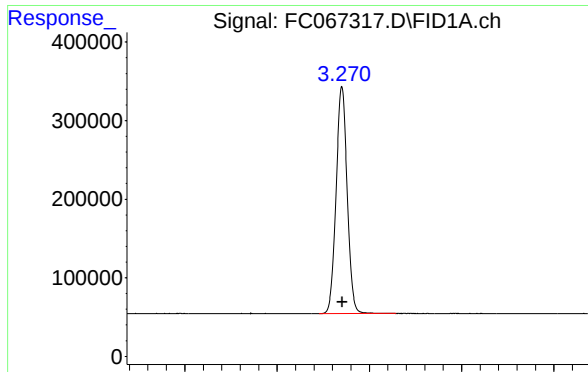
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC100224AL\
Data File : FC067317.D
Signal(s) : FID1A.ch
Acq On : 30 Sep 2024 14:29
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD ICV
Misc :
ALS Vial : 16 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD ICV

Integration File: autoint1.e
Quant Time: Oct 01 09:15:12 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Quant Title : GC Extractables
QLast Update : Tue Oct 01 09:13:32 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um





#1 n-Nonane (C9)

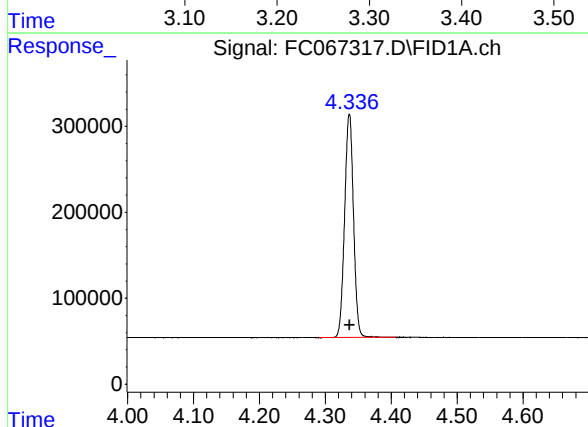
R.T.: 3.270 min
Delta R.T.: 0.000 min
Response: 2407553
Conc: 18.99 ug/ml

Instrument :

FID_C

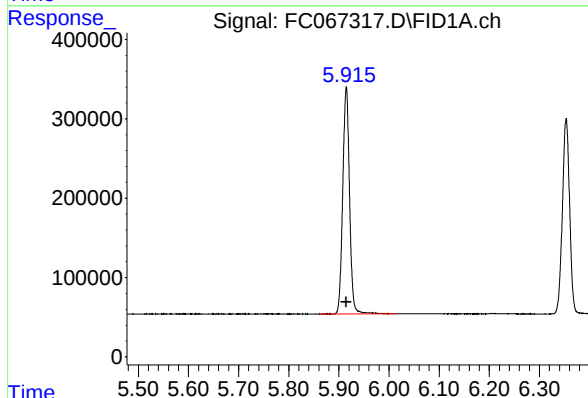
ClientSampleId :

20 PPM ALIPHATIC HC STD ICV



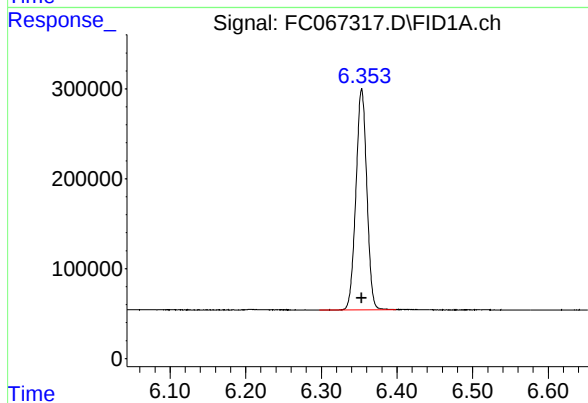
#2 n-Decane (C10)

R.T.: 4.336 min
Delta R.T.: 0.000 min
Response: 2442213
Conc: 19.00 ug/ml



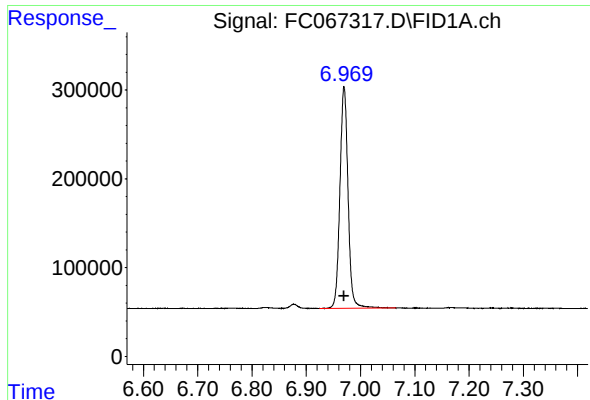
#3 A~Naphthalene (C11.7)

R.T.: 5.915 min
Delta R.T.: 0.000 min
Response: 2689038
Conc: 18.96 ug/ml



#4 n-Dodecane (C12)

R.T.: 6.353 min
Delta R.T.: 0.000 min
Response: 2456420
Conc: 18.93 ug/ml



#5 A~2-methylnaphthalene (C12.89)

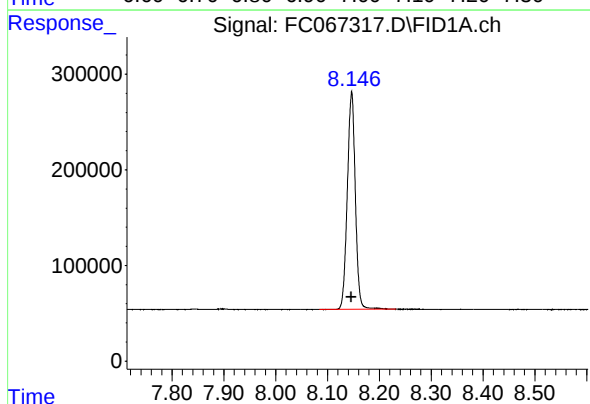
R.T.: 6.970 min
Delta R.T.: 0.000 min
Response: 2597570
Conc: 18.93 ug/ml

Instrument :

FID_C

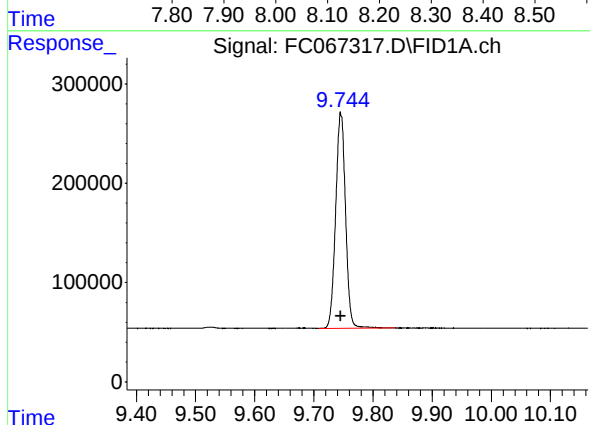
ClientSampleId :

20 PPM ALIPHATIC HC STD ICV



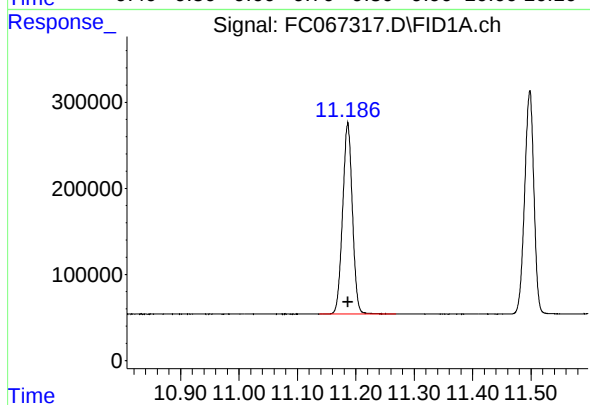
#6 n-Tetradecane (C14)

R.T.: 8.146 min
Delta R.T.: 0.000 min
Response: 2450775
Conc: 19.03 ug/ml



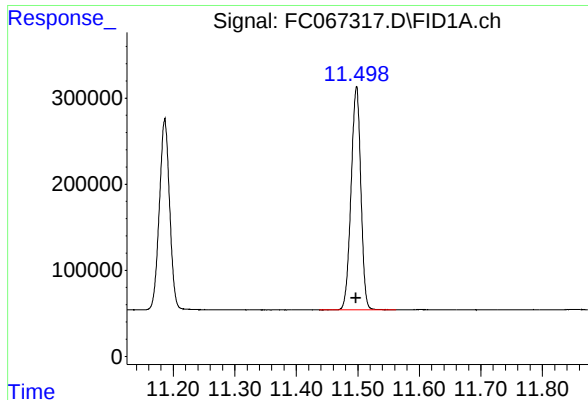
#7 n-Hexadecane (C16)

R.T.: 9.746 min
Delta R.T.: 0.000 min
Response: 2523898
Conc: 18.96 ug/ml



#8 n-Octadecane (C18)

R.T.: 11.186 min
Delta R.T.: 0.000 min
Response: 2573183
Conc: 18.98 ug/ml



#9 ortho-Terphenyl (SURR)

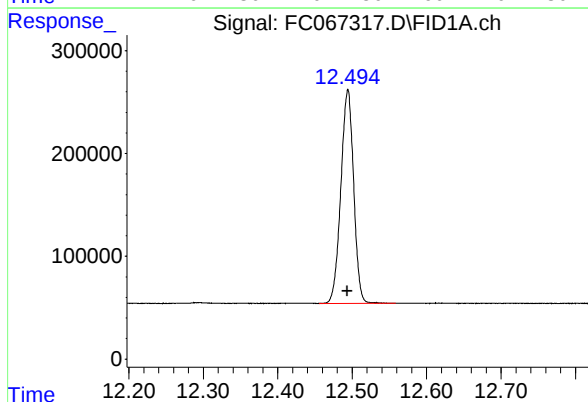
R.T.: 11.498 min
Delta R.T.: 0.000 min
Response: 2856514
Conc: 18.77 ug/ml

Instrument :

FID_C

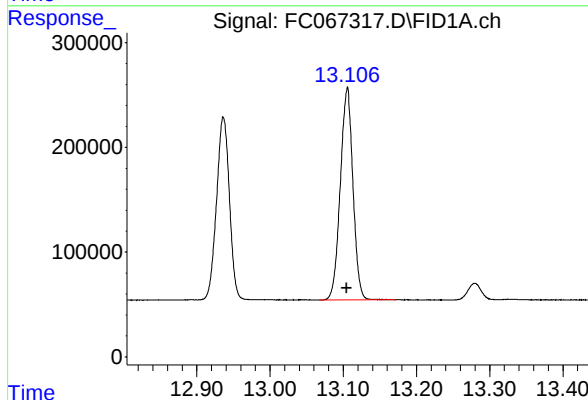
ClientSampleId :

20 PPM ALIPHATIC HC STD ICV



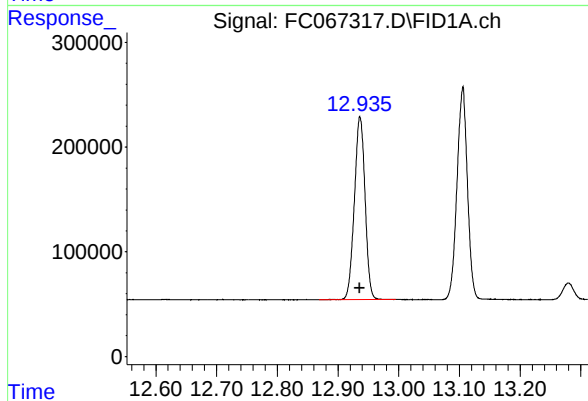
#10 n-Eicosane (C20)

R.T.: 12.494 min
Delta R.T.: 0.000 min
Response: 2485014
Conc: 19.03 ug/ml



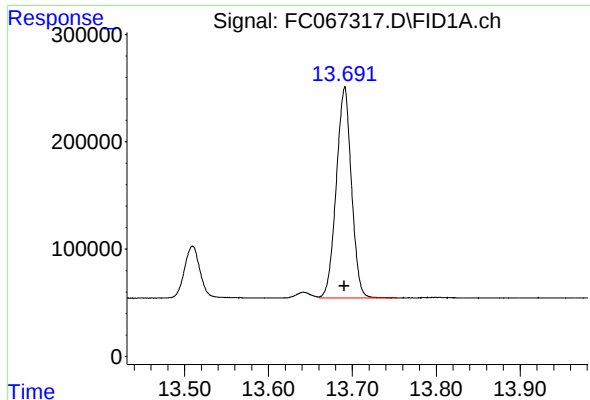
#11 n-Heneicosane (C21)

R.T.: 13.105 min
Delta R.T.: 0.000 min
Response: 2426455
Conc: 18.92 ug/ml



#12 1-chlorooctadecane (SURR)

R.T.: 12.936 min
Delta R.T.: 0.000 min
Response: 2133568
Conc: 18.85 ug/ml



#13 n-Docosane (C22)

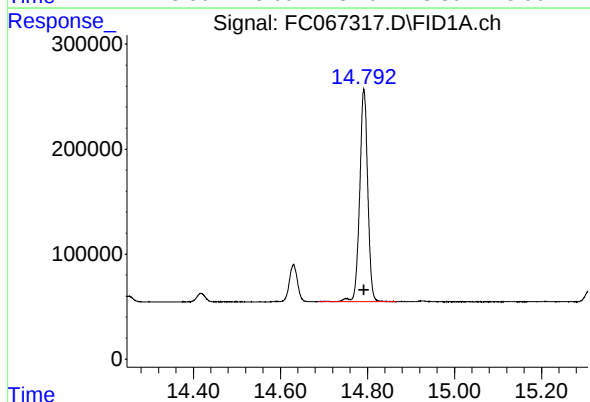
R.T.: 13.691 min
Delta R.T.: 0.000 min
Response: 2465913
Conc: 19.31 ug/ml

Instrument :

FID_C

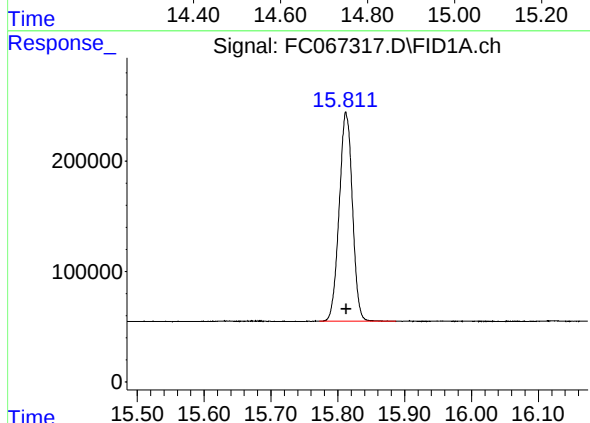
ClientSampleId :

20 PPM ALIPHATIC HC STD ICV



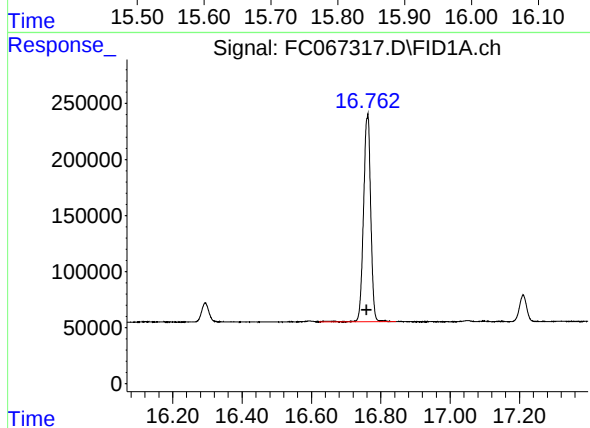
#14 n-Tetracosane (C24)

R.T.: 14.792 min
Delta R.T.: 0.000 min
Response: 2609769
Conc: 20.41 ug/ml



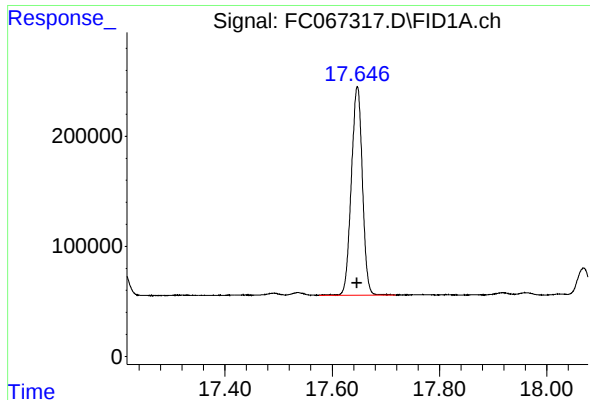
#15 n-Hexacosane (C26)

R.T.: 15.813 min
Delta R.T.: 0.000 min
Response: 2600091
Conc: 20.62 ug/ml



#16 n-Octacosane (C28)

R.T.: 16.762 min
Delta R.T.: 0.002 min
Response: 2654837
Conc: 21.13 ug/ml



#17 n-Tricontane (C30)

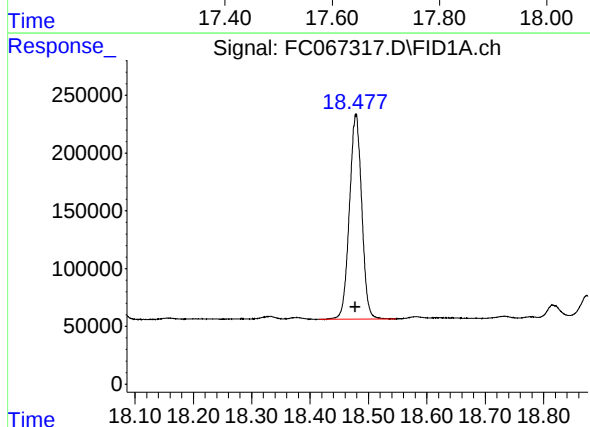
R.T.: 17.647 min
Delta R.T.: 0.000 min
Response: 2708550
Conc: 21.03 ug/ml

Instrument :

FID_C

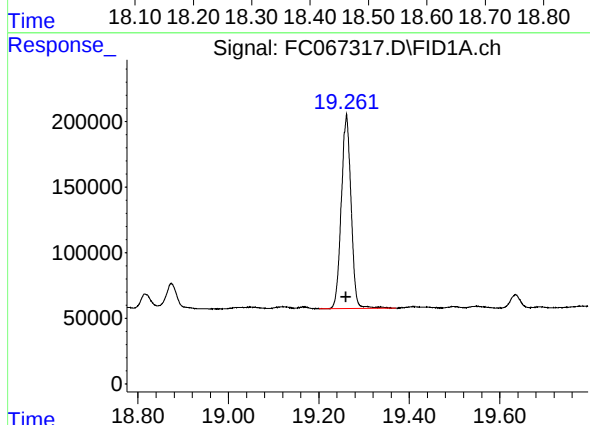
ClientSampleId :

20 PPM ALIPHATIC HC STD ICV



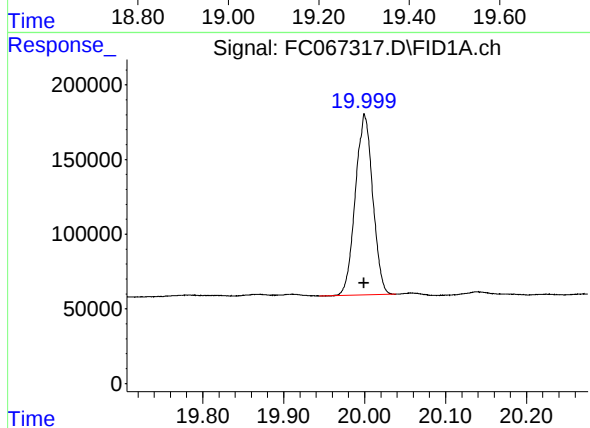
#18 n-Dotriacontane (C32)

R.T.: 18.478 min
Delta R.T.: 0.000 min
Response: 2596492
Conc: 20.78 ug/ml



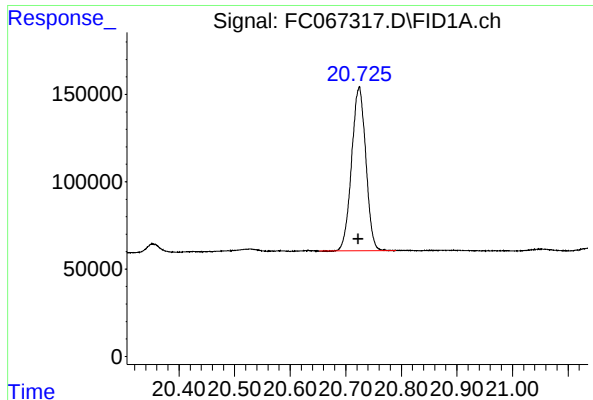
#19 n-Tetratriacontane (C34)

R.T.: 19.261 min
Delta R.T.: 0.001 min
Response: 2217081
Conc: 20.29 ug/ml



#20 n-Hexatriacontane (C36)

R.T.: 20.000 min
Delta R.T.: 0.000 min
Response: 1805047
Conc: 19.10 ug/ml



#21 n-Octatriacontane (C38)

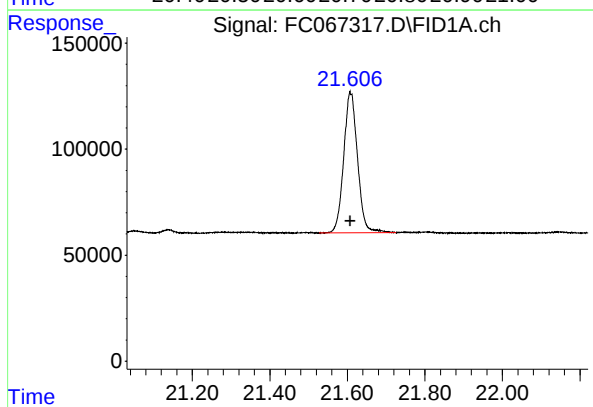
R.T.: 20.724 min
Delta R.T.: 0.000 min
Response: 1666956
Conc: 19.01 ug/ml

Instrument :

FID_C

ClientSampleId :

20 PPM ALIPHATIC HC STD ICV



#22 n-Tetracontane (C40)

R.T.: 21.608 min
Delta R.T.: 0.000 min
Response: 1643254
Conc: 19.10 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC100224AL\
Data File : FC067317.D
Signal(s) : FID1A.ch
Acq On : 30 Sep 2024 14:29
Sample : 20 PPM ALIPHATIC HC STD ICV
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.270	3.245	3.329	BB	288931	2407553	84.28%	4.542%
2	4.336	4.290	4.407	BB	261348	2442213	85.50%	4.607%
3	5.915	5.860	6.014	BB	287508	2689038	94.14%	5.073%
4	6.353	6.297	6.399	BB	245767	2456420	85.99%	4.634%
5	6.970	6.924	7.065	BB	249458	2597570	90.93%	4.900%
6	8.146	8.084	8.232	BB	228794	2450775	85.80%	4.623%
7	9.746	9.709	9.839	BB	216843	2523898	88.36%	4.761%
8	11.186	11.137	11.269	BB	220536	2573183	90.08%	4.854%
9	11.498	11.437	11.562	BB	258215	2856514	100.00%	5.389%
10	12.494	12.455	12.559	BB	207733	2485014	86.99%	4.688%
11	12.936	12.869	12.995	BB	173785	2133568	74.69%	4.025%
12	13.105	13.067	13.172	BB	202480	2426455	84.94%	4.577%
13	13.691	13.660	13.752	VB	195897	2465913	86.33%	4.652%
14	14.792	14.689	14.865	BB	201649	2609769	91.36%	4.923%
15	15.813	15.772	15.887	BB	189215	2600091	91.02%	4.905%
16	16.762	16.622	16.844	BB	184812	2654837	92.94%	5.008%
17	17.647	17.575	17.719	BB	189586	2708550	94.82%	5.109%
18	18.478	18.415	18.547	BV	176605	2596492	90.90%	4.898%
19	19.261	19.200	19.370	BB	146116	2217081	77.61%	4.182%
20	20.000	19.944	20.039	BV	119921	1805047	63.19%	3.405%
21	20.724	20.652	20.790	BB	93568	1666956	58.36%	3.145%
22	21.608	21.527	21.725	BB	65123	1643254	57.53%	3.100%
Sum of corrected areas:							53010189	

Aliphatic EPH 100224.M Tue Oct 01 09:22:28 2024

Initial Calibration Report for SequenceID : FD093024AR

AreaCount

Parameter Range	FD048398.D	FD048399.D	FD048400.D	FD048401.D	FD048402.D	
Aromatic C10-C12	34648059.000	18252378.000	7283031.000	3571721.000	1884983.000	
Aromatic C12-C16	52772389.000	27987173.000	11349711.000	5750614.000	3099577.000	
Aromatic C16-C21	67557629.000	35880273.000	14451391.000	7136049.000	3726042.000	
Aromatic C21-C36	141518244.000	74756685.000	30035782.000	14897193.000	7697046.000	
Aromatic EPH	296496321.000	156876509.000	63119915.000	31355577.000	16407648.000	

AVG Response Factor

Parameter Range	AVG RF	% RSD				
Aromatic C10-C12	180984.84	3.098				
Aromatic C12-C16	189995.313333	5.829				
Aromatic C16-C21	178728.23	3.52				
Aromatic C21-C36	165360.7497772	3.04				
Aromatic EPH	174173.0715554	3.596				

Concentration

Parameter Range	FD048398.D	FD048399.D	FD048400.D	FD048401.D	FD048402.D	
Aromatic C10-C12	200.000	100.000	40.000	20.000	10.000	
Aromatic C12-C16	300.000	150.000	60.000	30.000	15.000	
Aromatic C16-C21	400.000	200.000	80.000	40.000	20.000	
Aromatic C21-C36	900.000	450.000	180.000	90.000	45.000	
Aromatic EPH	1800.000	900.000	360.000	180.000	90.000	

Response Factor

Parameter Range	FD048398.D	FD048399.D	FD048400.D	FD048401.D	FD048402.D	
Aromatic C10-C12	173240.295000	182523.780000	182075.775000	178586.050000	188498.300000	
Aromatic C12-C16	175907.963333	186581.153333	189161.850000	191687.133333	206638.466666	
Aromatic C16-C21	168894.072500	179401.365000	180642.387500	178401.225000	186302.100000	
Aromatic C21-C36	157242.493333	166125.966666	166865.455555	165524.366666	171045.466666	
Aromatic EPH	164720.178333	174307.232222	175333.097222	174197.650000	182307.200000	

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
 Data File : FD048398.D
 Signal(s) : FID2B.ch
 Acq On : 30 Sep 2024 10:32
 Operator : YP/AJ
 Sample : 100 PPM AROMATIC HC STD1
 Misc :
 ALS Vial : 61 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 100 PPM AROMATIC HC STD1

Integration File: autoint1.e
 Quant Time: Sep 30 12:32:39 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
 Quant Title : GC Extractables
 QLast Update : Mon Sep 30 12:29:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18µm

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
4) S 2-Bromonaphthalene (S...	7.387	15133598	96.497 ug/ml
Spiked Amount 50.000		Recovery =	192.99%
6) S 2-Fluorobiphenyl (SURR)	8.238	10225240	98.366 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	196.73%#
11) S ortho-Terphenyl (SURR)	11.276	17090754	95.957 ug/ml
Spiked Amount 50.000		Recovery =	191.91%
Target Compounds			
1) T 1,2,3-Trimethylbenzen...	4.207	16849228	97.651 ug/ml
2) T Naphthalene (C11.7)	5.727	17798831	97.384 ug/ml
3) T 2-Methylnaphthalene (...)	6.776	17826888	97.043 ug/ml
5) T Acenaphthylene (C15.06)	8.042	17456164	95.975 ug/ml
7) T Acenaphthene (C15.5)	8.339	17489337	96.084 ug/ml
8) T Fluorene (C16.55)	9.117	17164502	96.742 ug/ml
9) T Phenanthrene (C19.36)	10.505	17038003	97.268 ug/ml
10) T Anthracene (C19.43)	10.582	16550190	96.030 ug/ml
12) T Fluoranthene (C21.85)	12.312	16931938	96.606 ug/ml
13) T Pyrene (C20.8)	12.605	16804934	96.504 ug/ml
14) T Benzo[a]anthracene (C...	14.474	16142668	98.545 ug/ml
15) T Chrysene (C27.41)	14.521	16511891	94.840 ug/ml
16) T benzo[b]fluoranthene ...	16.024	16340653	97.826 ug/ml
17) T Bnezo[k]fluoranthene ...	16.062	15204824	95.933 ug/ml
18) T Benzo[a]pyrene (C31.34)	16.403	15774557	97.005 ug/ml
19) T Indeno[1,2,3-cd]pyren...	17.769	14738374	104.652 ug/ml
20) T Dibenz[a,h]anthracene...	17.808	14680138	92.545 ug/ml
21) T Benzo[g,h,i]perylene ...	18.026	15193201	96.345 ug/ml

(f)=RT Delta > 1/2 Window

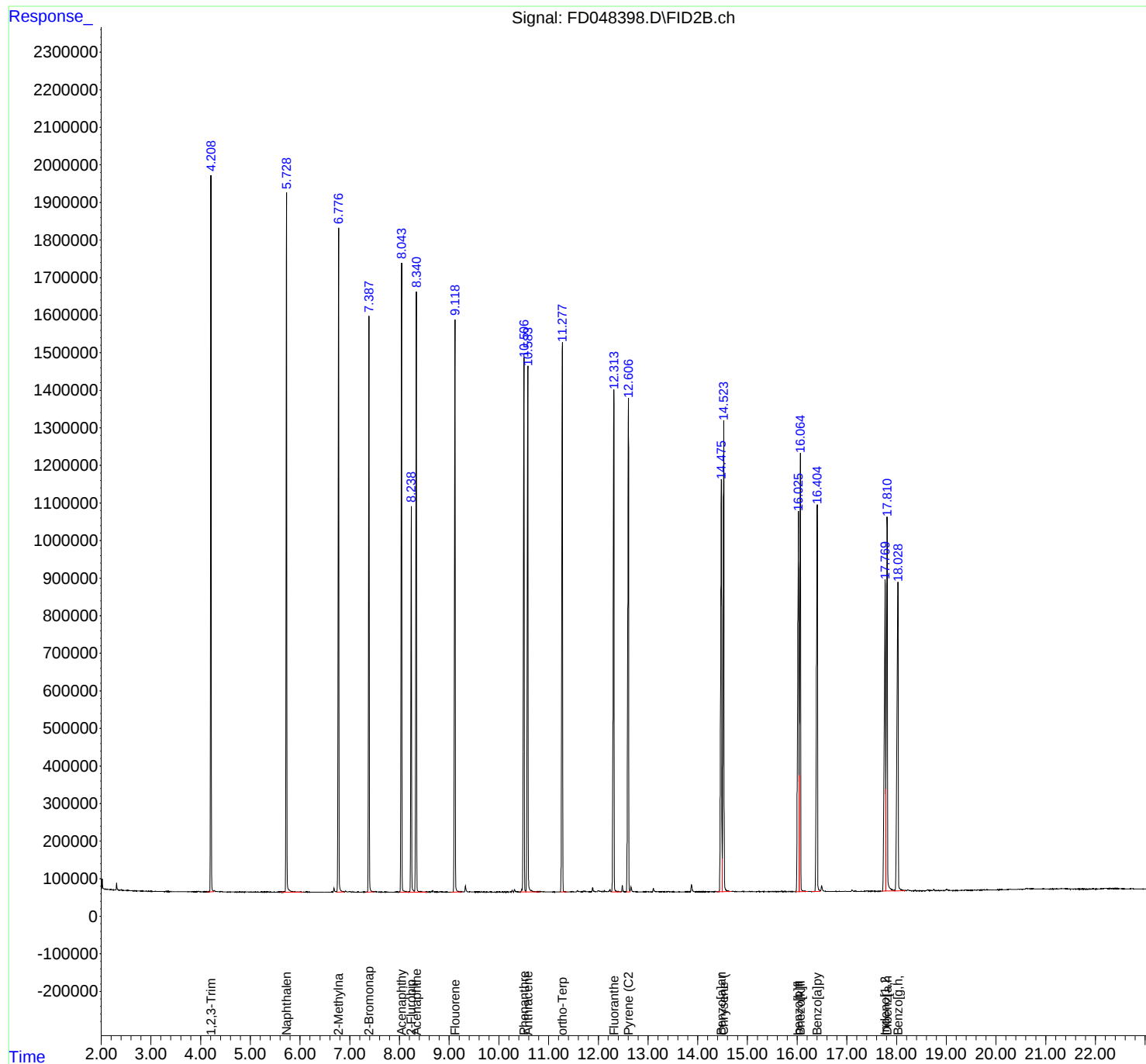
(m)=manual int.

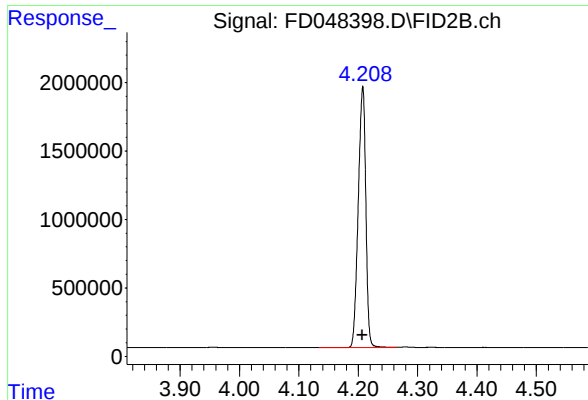
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
Data File : FD048398.D
Signal(s) : FID2B.ch
Acq On : 30 Sep 2024 10:32
Operator : YP/AJ
Sample : 100 PPM AROMATIC HC STD1
Misc :
ALS Vial : 61 Sample Multiplier: 1

Instrument :
FID_D
ClientSampleId :
100 PPM AROMATIC HC STD1

Integration File: autoint1.e
Quant Time: Sep 30 12:32:39 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Quant Title : GC Extractables
QLast Update : Mon Sep 30 12:29:39 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm





#1 1,2,3-Trimethylbenzene (C10.1)

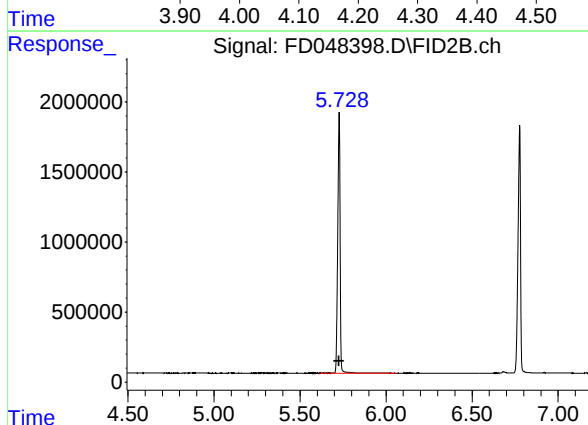
R.T.: 4.207 min
Delta R.T.: 0.000 min
Response: 16849228
Conc: 97.65 ug/ml

Instrument :

FID_D

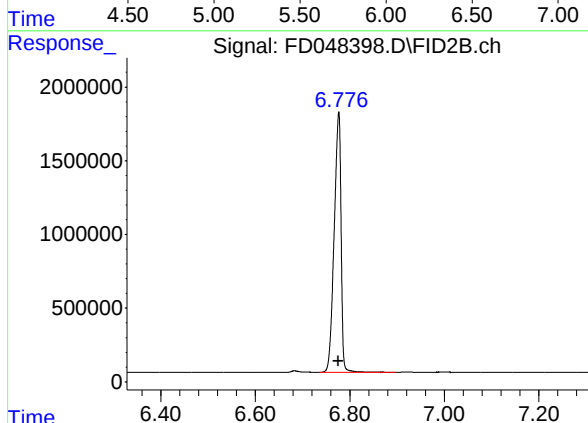
ClientSampleId :

100 PPM AROMATIC HC STD1



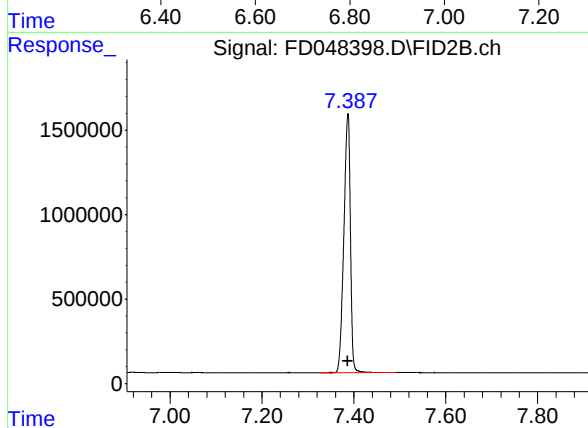
#2 Naphthalene (C11.7)

R.T.: 5.727 min
Delta R.T.: 0.000 min
Response: 17798831
Conc: 97.38 ug/ml



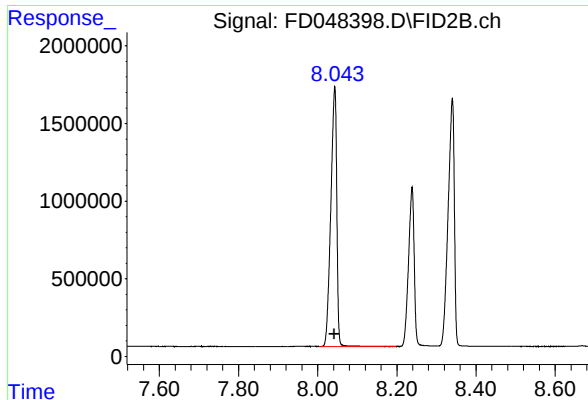
#3 2-Methylnaphthalene (C12.89)

R.T.: 6.776 min
Delta R.T.: 0.000 min
Response: 17826888
Conc: 97.04 ug/ml



#4 2-Bromonaphthalene (SURR)

R.T.: 7.387 min
Delta R.T.: 0.000 min
Response: 15133598
Conc: 96.50 ug/ml



#5 Acenaphthylene (C15.06)

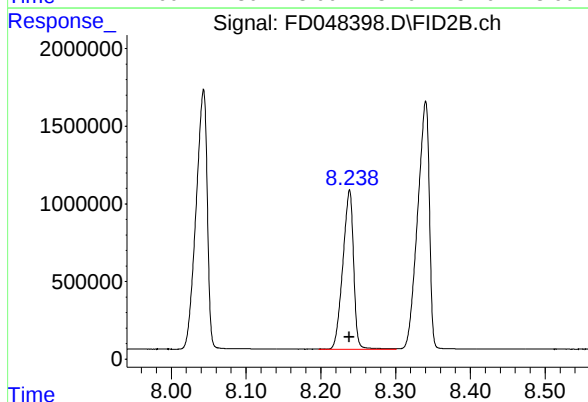
R.T.: 8.042 min
Delta R.T.: 0.000 min
Response: 17456164
Conc: 95.98 ug/ml

Instrument :

FID_D

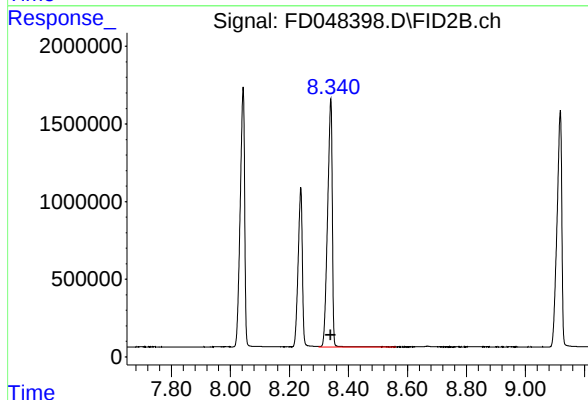
ClientSampleId :

100 PPM AROMATIC HC STD1



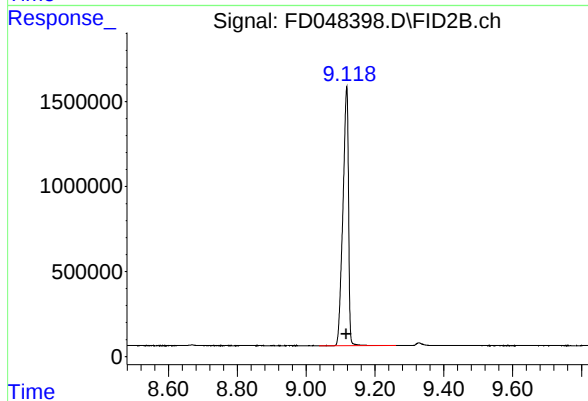
#6 2-Fluorobiphenyl (SURR)

R.T.: 8.238 min
Delta R.T.: 0.000 min
Response: 10225240
Conc: 98.37 ug/ml



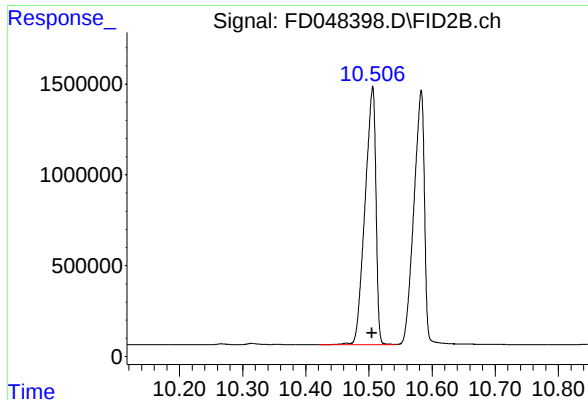
#7 Acenaphthene (C15.5)

R.T.: 8.339 min
Delta R.T.: 0.000 min
Response: 17489337
Conc: 96.08 ug/ml



#8 Fluorene (C16.55)

R.T.: 9.117 min
Delta R.T.: 0.000 min
Response: 17164502
Conc: 96.74 ug/ml



#9 Phenanthrene (C19.36)

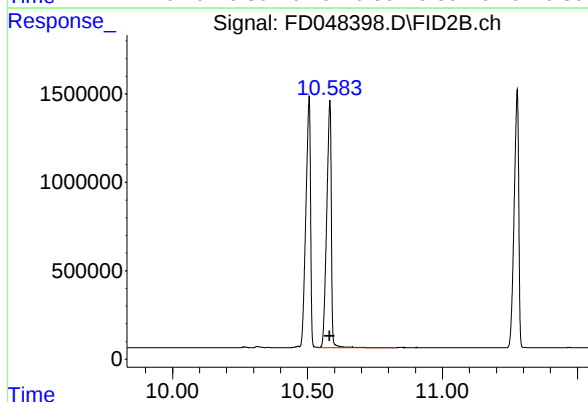
R.T.: 10.505 min
Delta R.T.: 0.000 min
Response: 17038003
Conc: 97.27 ug/ml

Instrument :

FID_D

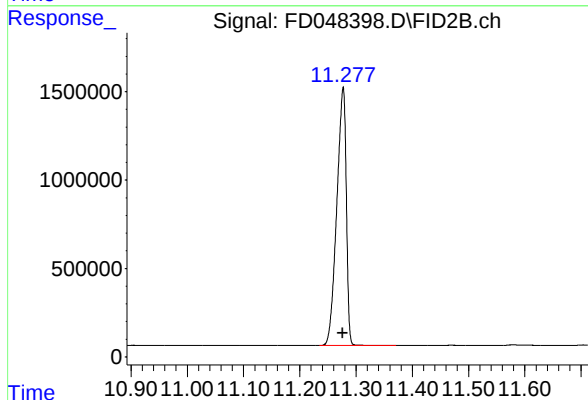
ClientSampleId :

100 PPM AROMATIC HC STD1



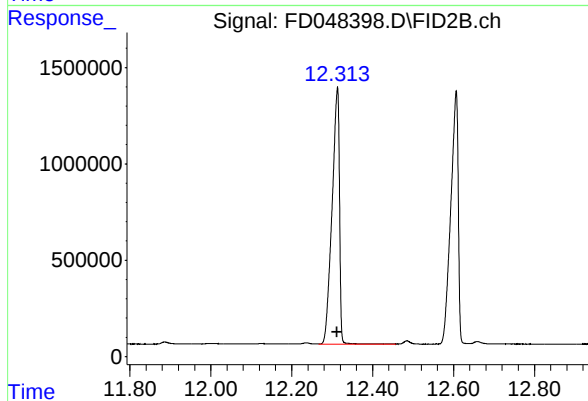
#10 Anthracene (C19.43)

R.T.: 10.582 min
Delta R.T.: 0.000 min
Response: 16550190
Conc: 96.03 ug/ml



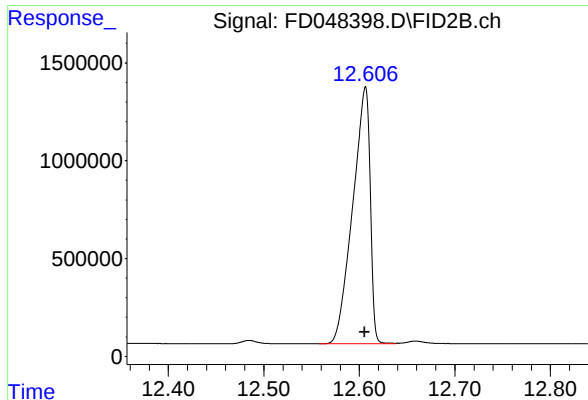
#11 ortho-Terphenyl (SURR)

R.T.: 11.276 min
Delta R.T.: 0.000 min
Response: 17090754
Conc: 95.96 ug/ml



#12 Fluoranthene (C21.85)

R.T.: 12.312 min
Delta R.T.: 0.000 min
Response: 16931938
Conc: 96.61 ug/ml



#13 Pyrene (C20.8)

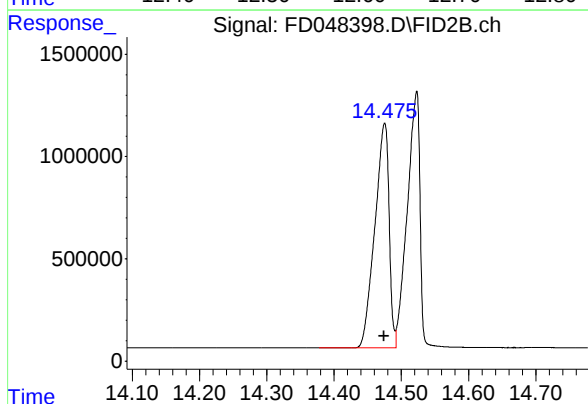
R.T.: 12.605 min
Delta R.T.: 0.000 min
Response: 16804934
Conc: 96.50 ug/ml

Instrument :

FID_D

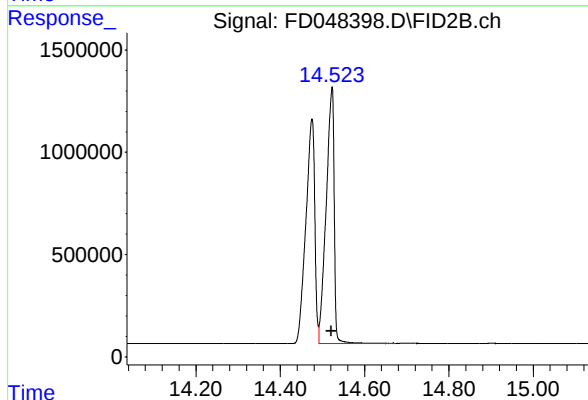
ClientSampleId :

100 PPM AROMATIC HC STD1



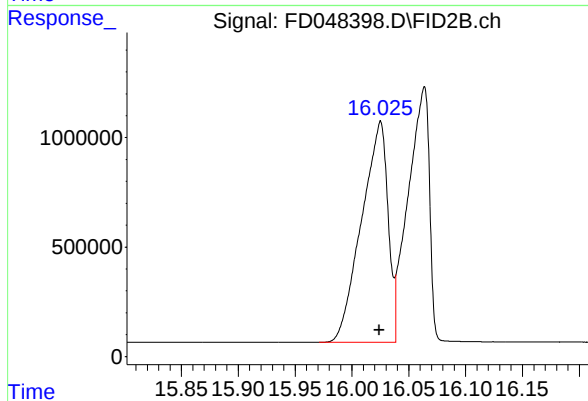
#14 Benzo[a]anthracene (C26.37)

R.T.: 14.474 min
Delta R.T.: 0.000 min
Response: 16142668
Conc: 98.54 ug/ml



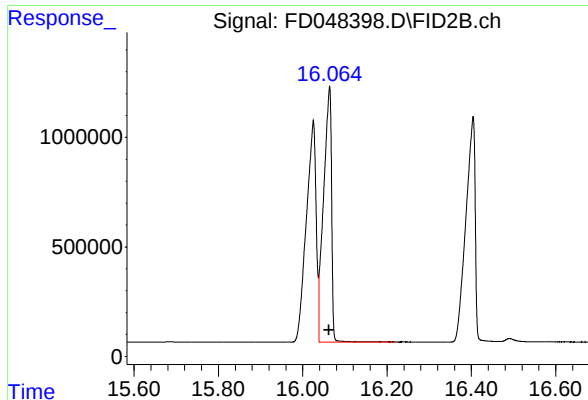
#15 Chrysene (C27.41)

R.T.: 14.521 min
Delta R.T.: 0.000 min
Response: 16511891
Conc: 94.84 ug/ml



#16 benzo[b]fluoranthene (C30.41)

R.T.: 16.024 min
Delta R.T.: 0.000 min
Response: 16340653
Conc: 97.83 ug/ml



#17 Bnezo[k]fluoranthene (C30.14)

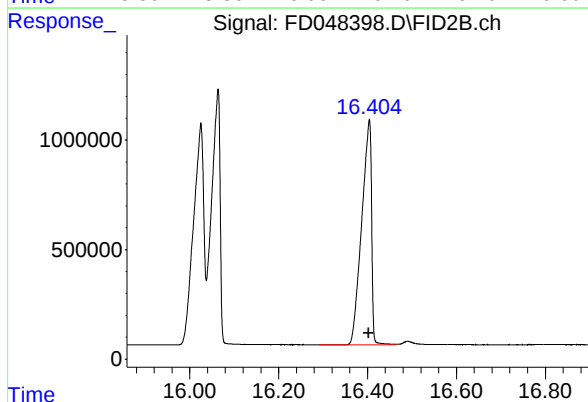
R.T.: 16.062 min
Delta R.T.: 0.000 min
Response: 15204824
Conc: 95.93 ug/ml

Instrument :

FID_D

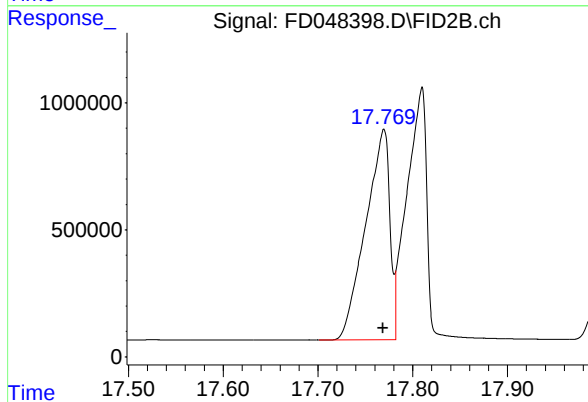
ClientSampleId :

100 PPM AROMATIC HC STD1



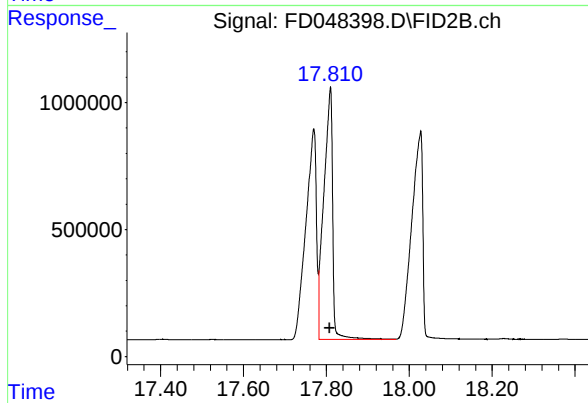
#18 Benzo[a]pyrene (C31.34)

R.T.: 16.403 min
Delta R.T.: 0.000 min
Response: 15774557
Conc: 97.01 ug/ml



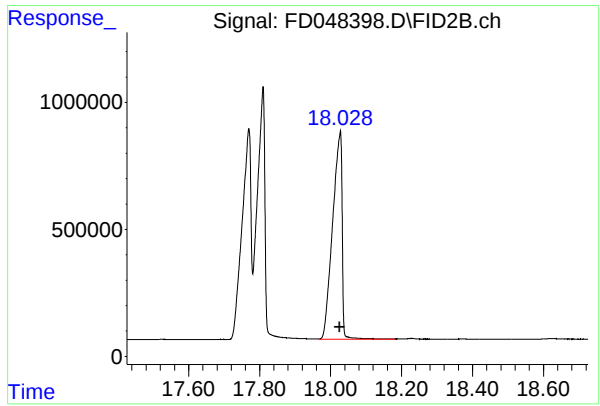
#19 Indeno[1,2,3-cd]pyrene (C35.01)

R.T.: 17.769 min
Delta R.T.: 0.000 min
Response: 14738374
Conc: 104.65 ug/ml



#20 Dibenz[a,h]anthracene (C30.36)

R.T.: 17.808 min
Delta R.T.: 0.000 min
Response: 14680138
Conc: 92.54 ug/ml



#21 Benzo[g,h,i]perylene (C34.01)

R.T.: 18.026 min
Delta R.T.: 0.000 min
Response: 15193201
Conc: 96.34 ug/ml

Instrument :

FID_D

ClientSampleId :

100 PPM AROMATIC HC STD1

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
Data File : FD048398.D
Signal(s) : FID2B.ch
Acq On : 30 Sep 2024 10:32
Sample : 100 PPM AROMATIC HC STD1
Misc :
ALS Vial : 61 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Title : GC Extractables

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.207	4.164	4.263	BV	1915723	16808820	94.42%	4.964%
2	5.727	5.664	5.941	BB	1872447	17729732	99.59%	5.236%
3	6.776	6.735	6.897	VV	1717584	17802071	100.00%	5.257%
4	7.387	7.288	7.492	BV	1560603	15119127	84.93%	4.465%
5	8.042	8.003	8.198	PB	1635352	17444290	97.99%	5.152%
6	8.238	8.198	8.300	BV	1016626	10212063	57.36%	3.016%
7	8.339	8.300	8.481	VB	1641134	17443576	97.99%	5.152%
8	9.117	8.988	9.261	BV	1531823	17126947	96.21%	5.058%
9	10.505	10.421	10.543	BV	1397756	17035396	95.69%	5.031%
10	10.582	10.543	10.784	VB	1374690	16525531	92.83%	4.880%
11	11.276	11.074	11.371	BB	1486072	17092393	96.01%	5.048%
12	12.312	12.268	12.458	VV	1302464	16901440	94.94%	4.991%
13	12.605	12.558	12.638	BV	1285020	16803834	94.39%	4.963%
14	14.474	14.301	14.492	BV	1097241	16141236	90.67%	4.767%
15	14.521	14.492	14.674	VV	1228449	16510593	92.75%	4.876%
16	16.024	15.971	16.039	BV	1003738	16339021	91.78%	4.825%
17	16.062	16.039	16.184	VB	1128407	15185368	85.30%	4.485%
18	16.403	16.291	16.464	BV	1053085	15772391	88.60%	4.658%
19	17.769	17.701	17.782	BV	822737	14738374	82.79%	4.353%
20	17.808	17.782	17.968	VV	969287	14680138	82.46%	4.335%
21	18.026	17.968	18.184	VV	801967	15193201	85.35%	4.487%
Sum of corrected areas:						338605545		

Aromatic EPH 093024.M Tue Oct 01 01:47:33 2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
 Data File : FD048399.D
 Signal(s) : FID2B.ch
 Acq On : 30 Sep 2024 11:10
 Operator : YP/AJ
 Sample : 50 PPM AROMATIC HC STD2
 Misc :
 ALS Vial : 62 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 50 PPM AROMATIC HC STD2

Integration File: autoint1.e
 Quant Time: Sep 30 12:34:15 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
 Quant Title : GC Extractables
 QLast Update : Mon Sep 30 12:29:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18µm

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
4) S 2-Bromonaphthalene (S...	7.383	8053284	50.892 ug/ml
Spiked Amount 50.000		Recovery =	101.78%
6) S 2-Fluorobiphenyl (SURR)	8.233	5363905	51.056 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	102.11%
11) S ortho-Terphenyl (SURR)	11.270	9118209	50.790 ug/ml
Spiked Amount 50.000		Recovery =	101.58%
Target Compounds			
1) T 1,2,3-Trimethylbenzen...	4.204	8896963	51.031 ug/ml
2) T Naphthalene (C11.7)	5.723	9355415	50.785 ug/ml
3) T 2-Methylnaphthalene (...)	6.771	9401412	50.779 ug/ml
5) T Acenaphthylene (C15.06)	8.037	9277174	50.667 ug/ml
7) T Acenaphthene (C15.5)	8.333	9308587	50.754 ug/ml
8) T Fluorene (C16.55)	9.111	9110768	50.892 ug/ml
9) T Phenanthrene (C19.36)	10.498	9022332	50.995 ug/ml
10) T Anthracene (C19.43)	10.574	8792165	50.672 ug/ml
12) T Fluoranthene (C21.85)	12.304	9031075	51.008 ug/ml
13) T Pyrene (C20.8)	12.597	8955008	50.941 ug/ml
14) T Benzo[a]anthracene (C...	14.466	8534836	51.382 ug/ml
15) T Chrysene (C27.41)	14.509	8851759	50.558 ug/ml
16) T benzo[b]fluoranthene ...	16.013	8576544	50.889 ug/ml
17) T Bnezo[k]fluoranthene ...	16.048	8089512	50.688 ug/ml
18) T Benzo[a]pyrene (C31.34)	16.390	8357472	50.921 ug/ml
19) T Indeno[1,2,3-cd]pyren...	17.754	7322210	51.311 ug/ml
20) T Dibenz[a,h]anthracene...	17.793	8013212	50.343 ug/ml
21) T Benzo[g,h,i]perylene ...	18.008	7980065	50.401 ug/ml

(f)=RT Delta > 1/2 Window

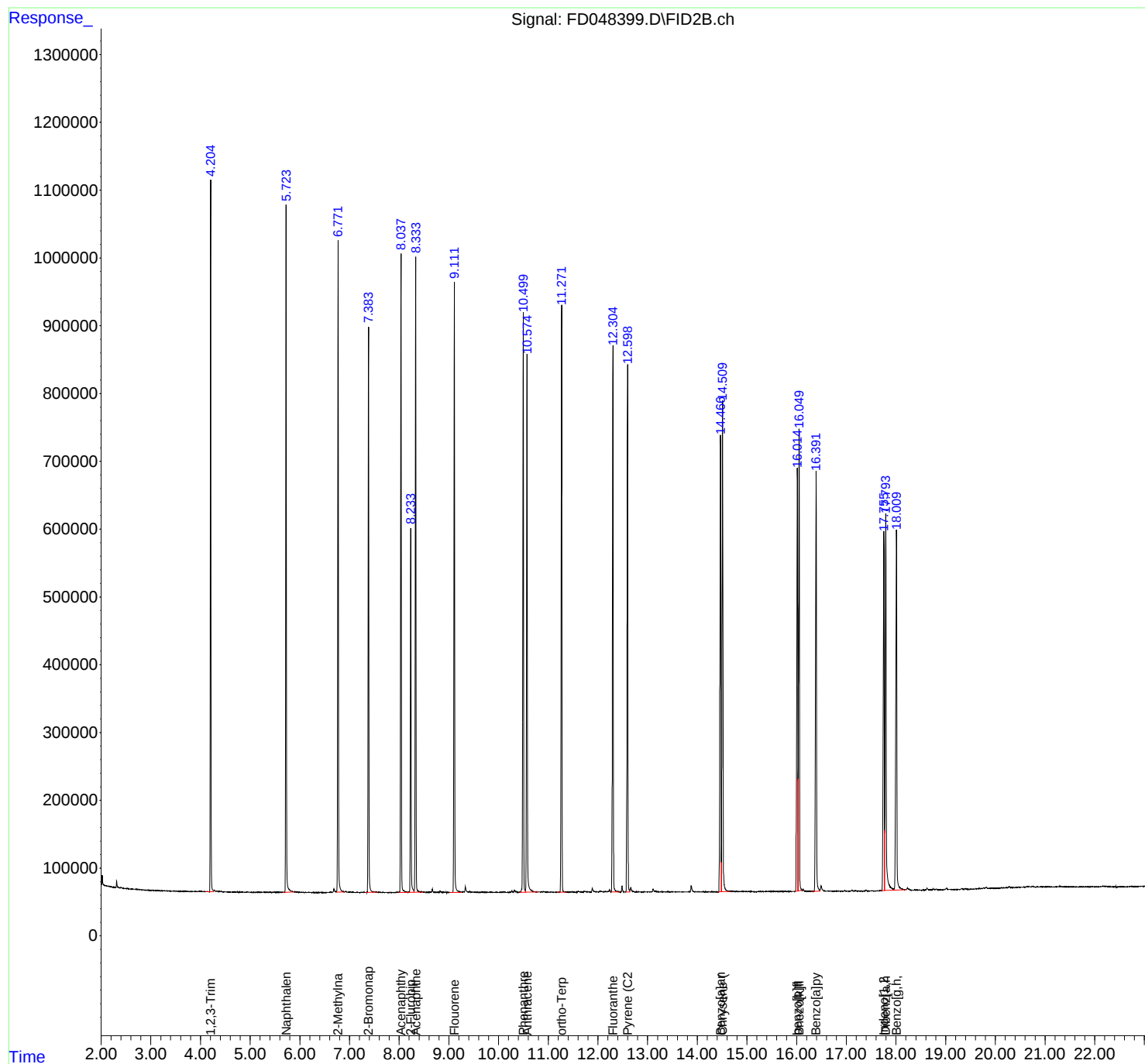
(m)=manual int.

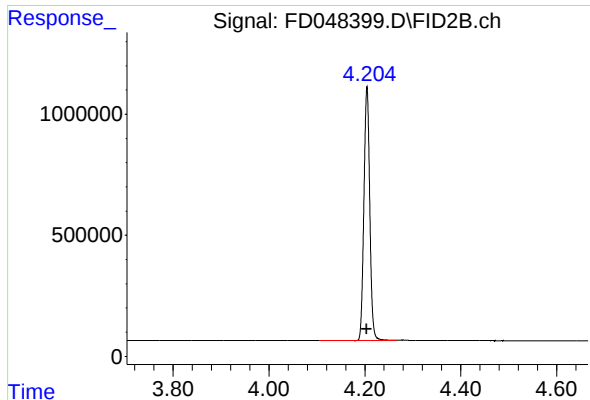
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
Data File : FD048399.D
Signal(s) : FID2B.ch
Acq On : 30 Sep 2024 11:10
Operator : YP/AJ
Sample : 50 PPM AROMATIC HC STD2
Misc :
ALS Vial : 62 Sample Multiplier: 1

Instrument :
FID_D
ClientSampleId :
50 PPM AROMATIC HC STD2

Integration File: autoint1.e
Quant Time: Sep 30 12:34:15 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Quant Title : GC Extractables
QLast Update : Mon Sep 30 12:29:39 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

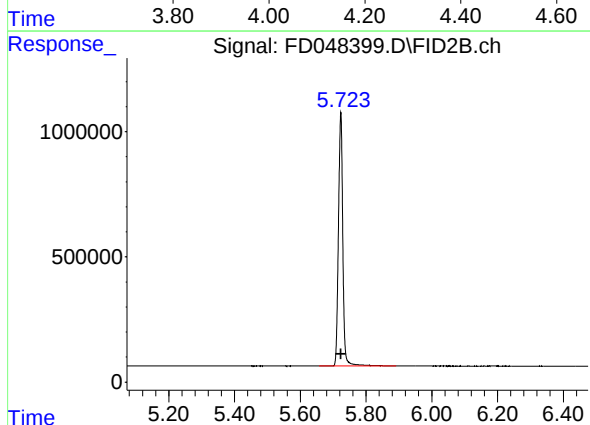




#1 1,2,3-Trimethylbenzene (C10.1)

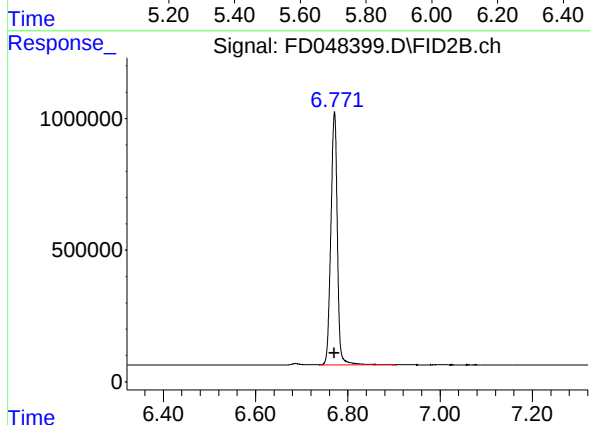
R.T.: 4.204 min
Delta R.T.: 0.000 min
Response: 8896963
Conc: 51.03 ug/ml

Instrument :
FID_D
ClientSampleId :
50 PPM AROMATIC HC STD2



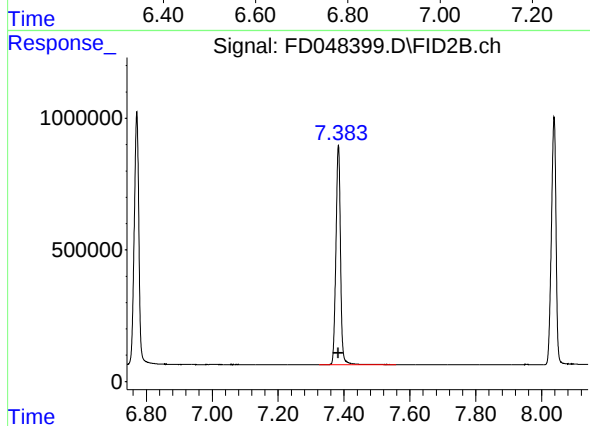
#2 Naphthalene (C11.7)

R.T.: 5.723 min
Delta R.T.: 0.000 min
Response: 9355415
Conc: 50.78 ug/ml



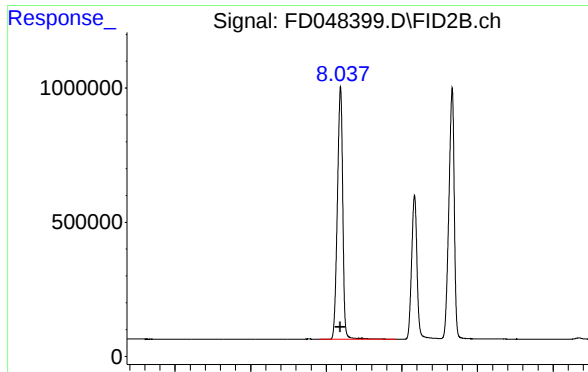
#3 2-Methylnaphthalene (C12.89)

R.T.: 6.771 min
Delta R.T.: 0.000 min
Response: 9401412
Conc: 50.78 ug/ml



#4 2-Bromonaphthalene (SURR)

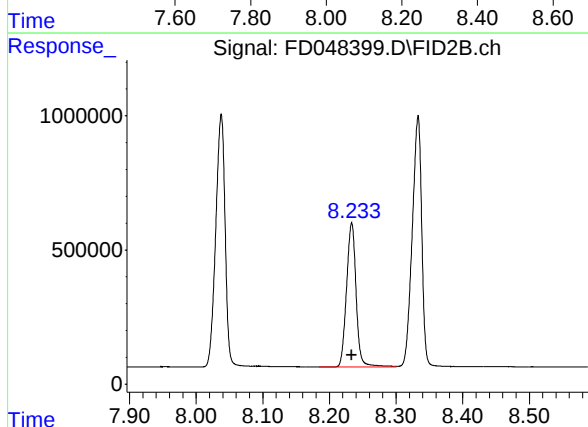
R.T.: 7.383 min
Delta R.T.: 0.000 min
Response: 8053284
Conc: 50.89 ug/ml



#5 Acenaphthylene (C15.06)

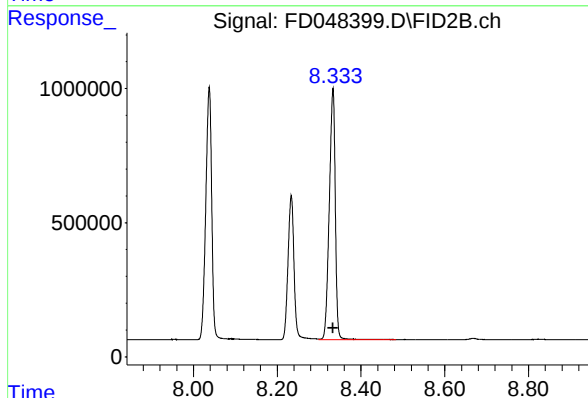
R.T.: 8.037 min
Delta R.T.: 0.000 min
Response: 9277174
Conc: 50.67 ug/ml

Instrument :
FID_D
ClientSampleId :
50 PPM AROMATIC HC STD2



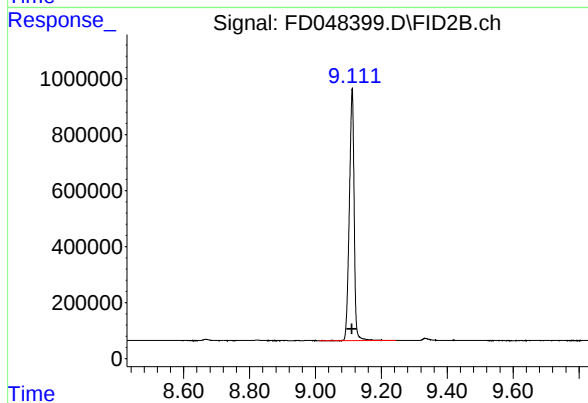
#6 2-Fluorobiphenyl (SURR)

R.T.: 8.233 min
Delta R.T.: 0.000 min
Response: 5363905
Conc: 51.06 ug/ml



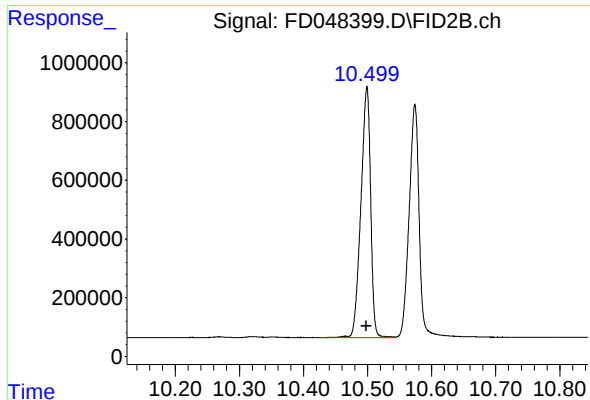
#7 Acenaphthene (C15.5)

R.T.: 8.333 min
Delta R.T.: 0.000 min
Response: 9308587
Conc: 50.75 ug/ml



#8 Flouorene (C16.55)

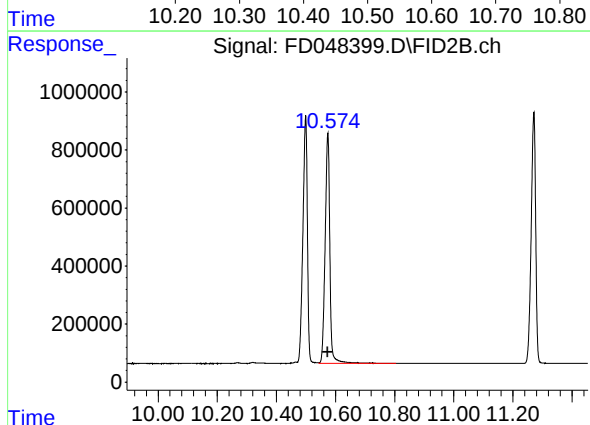
R.T.: 9.111 min
Delta R.T.: 0.000 min
Response: 9110768
Conc: 50.89 ug/ml



#9 Phenanthrene (C19.36)

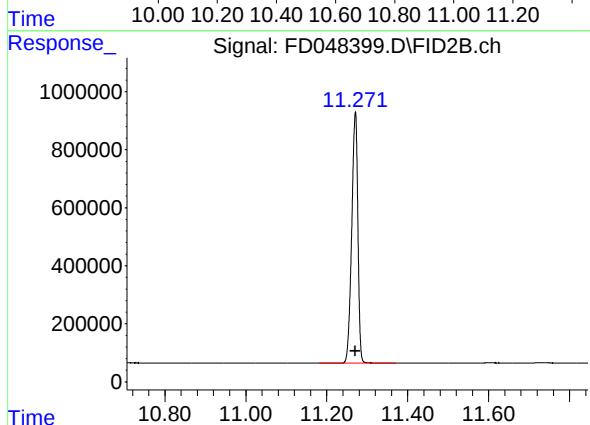
R.T.: 10.498 min
Delta R.T.: 0.000 min
Response: 9022332
Conc: 51.00 ug/ml

Instrument :
FID_D
ClientSampleId :
50 PPM AROMATIC HC STD2



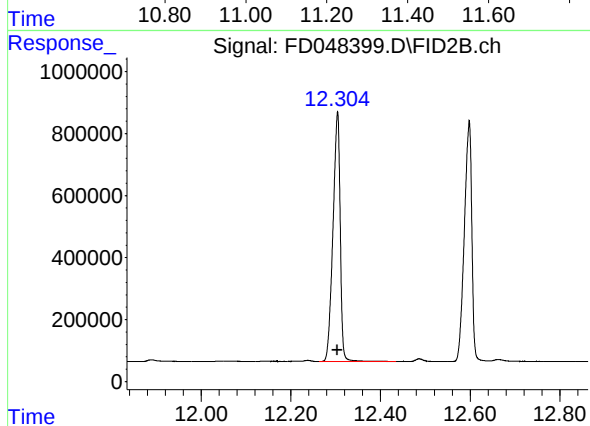
#10 Anthracene (C19.43)

R.T.: 10.574 min
Delta R.T.: 0.000 min
Response: 8792165
Conc: 50.67 ug/ml



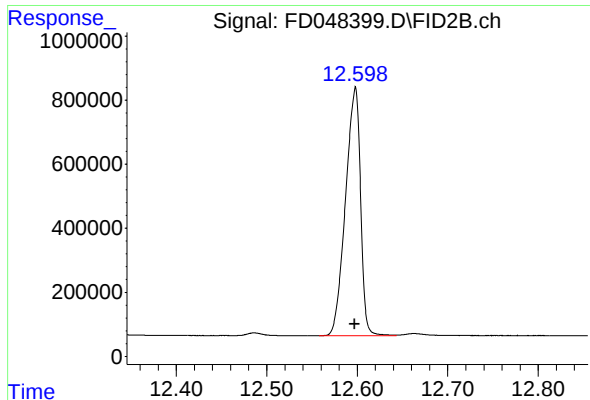
#11 ortho-Terphenyl (SURRE)

R.T.: 11.270 min
Delta R.T.: 0.000 min
Response: 9118209
Conc: 50.79 ug/ml



#12 Fluoranthene (C21.85)

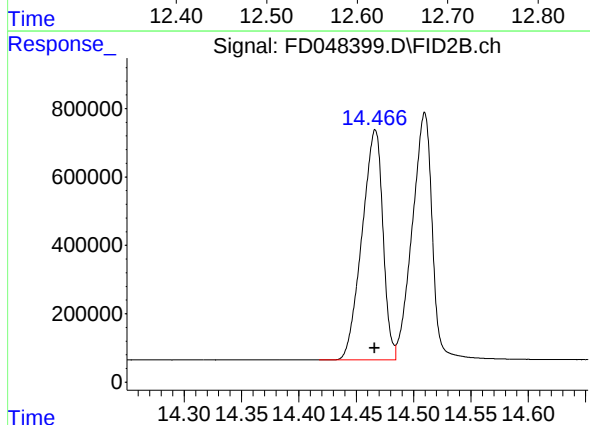
R.T.: 12.304 min
Delta R.T.: 0.000 min
Response: 9031075
Conc: 51.01 ug/ml



#13 Pyrene (C20.8)

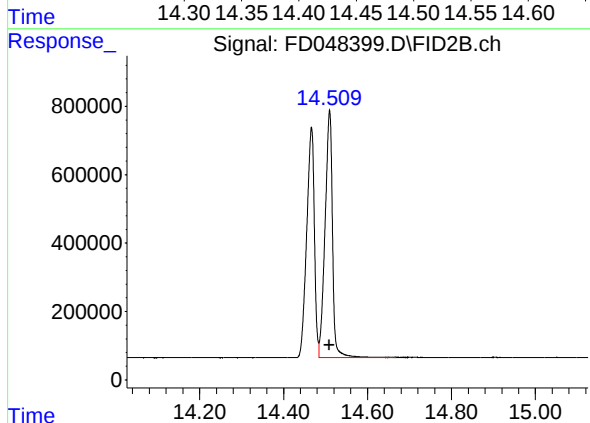
R.T.: 12.597 min
Delta R.T.: 0.000 min
Response: 8955008
Conc: 50.94 ug/ml

Instrument :
FID_D
ClientSampleId :
50 PPM AROMATIC HC STD2



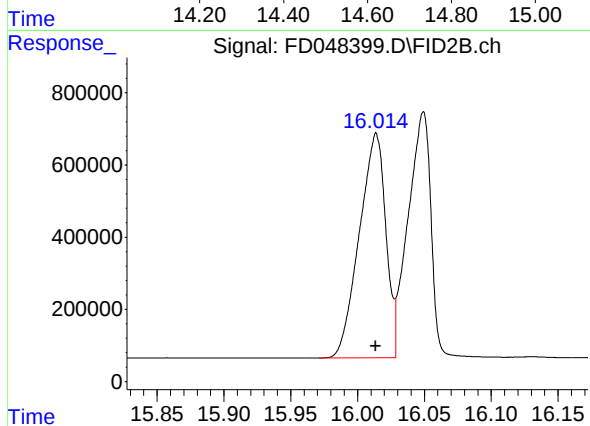
#14 Benzo[a]anthracene (C26.37)

R.T.: 14.466 min
Delta R.T.: 0.000 min
Response: 8534836
Conc: 51.38 ug/ml



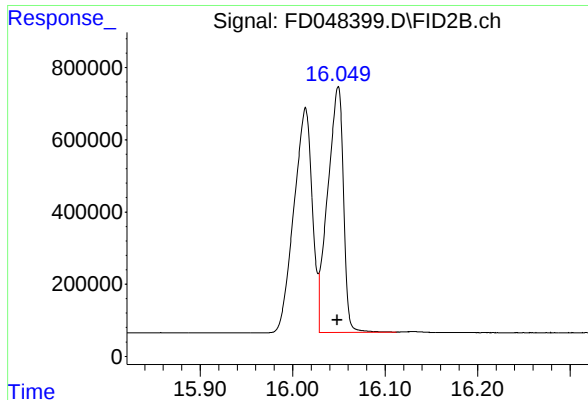
#15 Chrysene (C27.41)

R.T.: 14.509 min
Delta R.T.: 0.000 min
Response: 8851759
Conc: 50.56 ug/ml



#16 benzo[b]fluoranthene (C30.41)

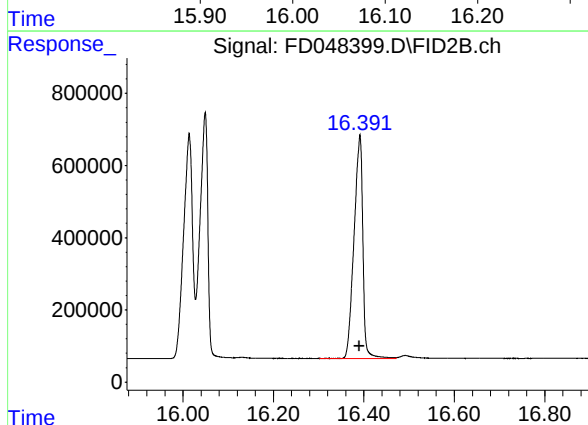
R.T.: 16.013 min
Delta R.T.: 0.000 min
Response: 8576544
Conc: 50.89 ug/ml



#17 Bnezo[k]fluoranthene (C30.14)

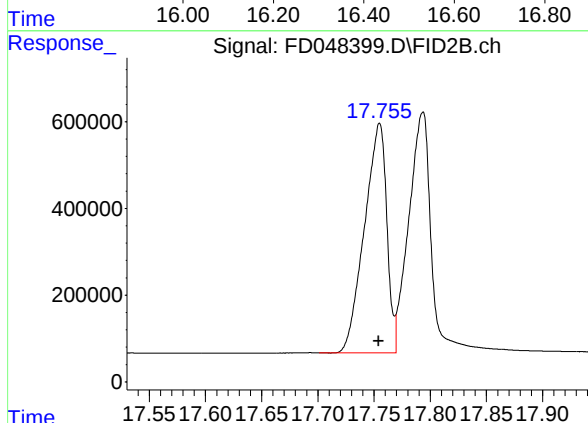
R.T.: 16.048 min
Delta R.T.: 0.000 min
Response: 8089512
Conc: 50.69 ug/ml

Instrument :
FID_D
ClientSampleId :
50 PPM AROMATIC HC STD2



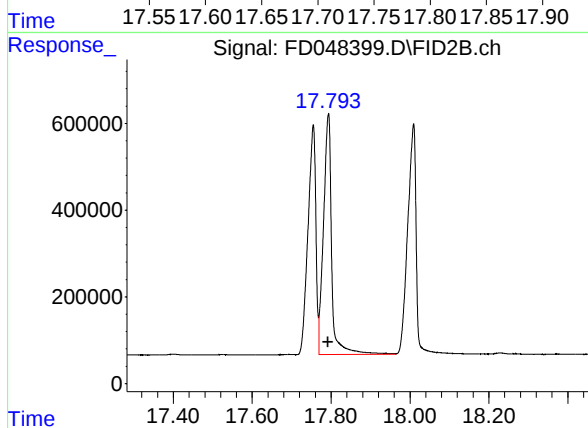
#18 Benzo[a]pyrene (C31.34)

R.T.: 16.390 min
Delta R.T.: 0.000 min
Response: 8357472
Conc: 50.92 ug/ml



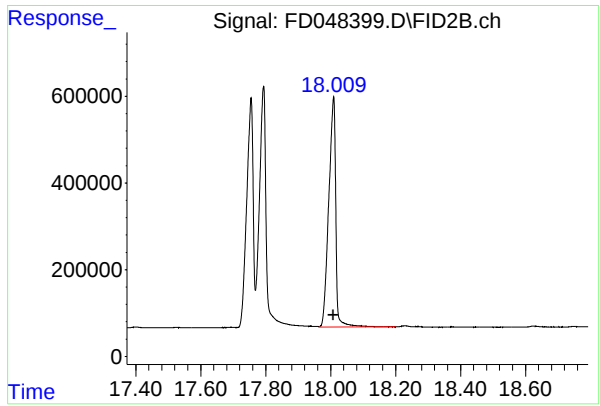
#19 Indeno[1,2,3-cd]pyrene (C35.01)

R.T.: 17.754 min
Delta R.T.: 0.000 min
Response: 7322210
Conc: 51.31 ug/ml



#20 Dibenz[a,h]anthracene (C30.36)

R.T.: 17.793 min
Delta R.T.: 0.000 min
Response: 8013212
Conc: 50.34 ug/ml



#21 Benzo[g,h,i]perylene (C34.01)

R.T.: 18.008 min
Delta R.T.: 0.000 min
Response: 7980065
Conc: 50.40 ug/ml

Instrument :
FID_D
ClientSampleId :
50 PPM AROMATIC HC STD2

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
Data File : FD048399.D
Signal(s) : FID2B.ch
Acq On : 30 Sep 2024 11:10
Sample : 50 PPM AROMATIC HC STD2
Misc :
ALS Vial : 62 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Title : GC Extractables

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.204	4.138	4.265	BV	1045239	8844267	94.06%	4.936%
2	5.723	5.658	5.891	BV	1020976	9343668	99.37%	5.215%
3	6.771	6.738	6.904	VV	960640	9403190	100.00%	5.248%
4	7.383	7.275	7.528	PB	837974	8028291	85.38%	4.480%
5	8.037	7.981	8.168	VB	944306	9271271	98.60%	5.174%
6	8.233	8.178	8.300	BV	539343	5360312	57.01%	2.991%
7	8.333	8.300	8.481	VB	915788	9306766	98.97%	5.194%
8	9.111	9.021	9.244	BV	895204	9076333	96.52%	5.065%
9	10.498	10.398	10.544	BV	844446	9014676	95.87%	5.031%
10	10.574	10.544	10.781	VB	797965	8775430	93.32%	4.897%
11	11.270	11.184	11.371	BV	872834	9112859	96.91%	5.086%
12	12.304	12.263	12.434	PB	812257	8998589	95.70%	5.022%
13	12.597	12.558	12.643	BV	778213	8954963	95.23%	4.998%
14	14.466	14.318	14.485	BV	683059	8526273	90.67%	4.758%
15	14.509	14.485	14.668	VB	714287	8844035	94.05%	4.936%
16	16.013	15.971	16.029	BV	624297	8576544	91.21%	4.786%
17	16.048	16.029	16.112	VV	674122	8089512	86.03%	4.515%
18	16.390	16.204	16.471	BV	618316	8343619	88.73%	4.656%
19	17.754	17.701	17.769	BV	530824	7322210	77.87%	4.086%
20	17.793	17.769	17.964	VV	549809	8013212	85.22%	4.472%
21	18.008	17.964	18.201	VBA	525536	7980065	84.87%	4.454%
Sum of corrected areas:						179186086		

Aromatic EPH 093024.M Tue Oct 01 01:48:30 2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
 Data File : FD048400.D
 Signal(s) : FID2B.ch
 Acq On : 30 Sep 2024 11:48
 Operator : YP/AJ
 Sample : 20 PPM AROMATIC HC STD3
 Misc :
 ALS Vial : 63 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 20 PPM AROMATIC HC STD3

Integration File: autoint1.e
 Quant Time: Sep 30 12:30:02 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
 Quant Title : GC Extractables
 QLast Update : Mon Sep 30 12:29:39 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18µm

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
4) S 2-Bromonaphthalene (S...	7.382	3246497	20.000 ug/ml
Spiked Amount 50.000		Recovery =	40.00%
6) S 2-Fluorobiphenyl (SURR)	8.232	2113006	20.000 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	40.00%
11) S ortho-Terphenyl (SURR)	11.267	3706162	20.000 ug/ml
Spiked Amount 50.000		Recovery =	40.00%
Target Compounds			
1) T 1,2,3-Trimethylbenzen...	4.204	3531993	20.000 ug/ml
2) T Naphthalene (C11.7)	5.722	3751038	20.000 ug/ml
3) T 2-Methylnaphthalene (...)	6.769	3782649	20.000 ug/ml
5) T Acenaphthylene (C15.06)	8.034	3784046	20.000 ug/ml
7) T Acenaphthene (C15.5)	8.328	3783016	20.000 ug/ml
8) T Fluorene (C16.55)	9.107	3664123	20.000 ug/ml
9) T Phenanthrene (C19.36)	10.494	3599000	20.000 ug/ml
10) T Anthracene (C19.43)	10.569	3583756	20.000 ug/ml
12) T Fluoranthene (C21.85)	12.298	3624323	20.000 ug/ml
13) T Pyrene (C20.8)	12.591	3604512	20.000 ug/ml
14) T Benzo[a]anthracene (C...	14.460	3323894	20.000 ug/ml
15) T Chrysene (C27.41)	14.501	3661741	20.000 ug/ml
16) T benzo[b]fluoranthene ...	16.005	3413368	20.000 ug/ml
17) T Bnezo[k]fluoranthene ...	16.037	3298832	20.000 ug/ml
18) T Benzo[a]pyrene (C31.34)	16.380	3349724	20.000 ug/ml
19) T Indeno[1,2,3-cd]pyren...	17.743	2685595	20.000 ug/ml
20) T Dibenz[a,h]anthracene...	17.784	3409082	20.000 ug/ml
21) T Benzo[g,h,i]perylene ...	17.993	3269223	20.000 ug/ml

(f)=RT Delta > 1/2 Window

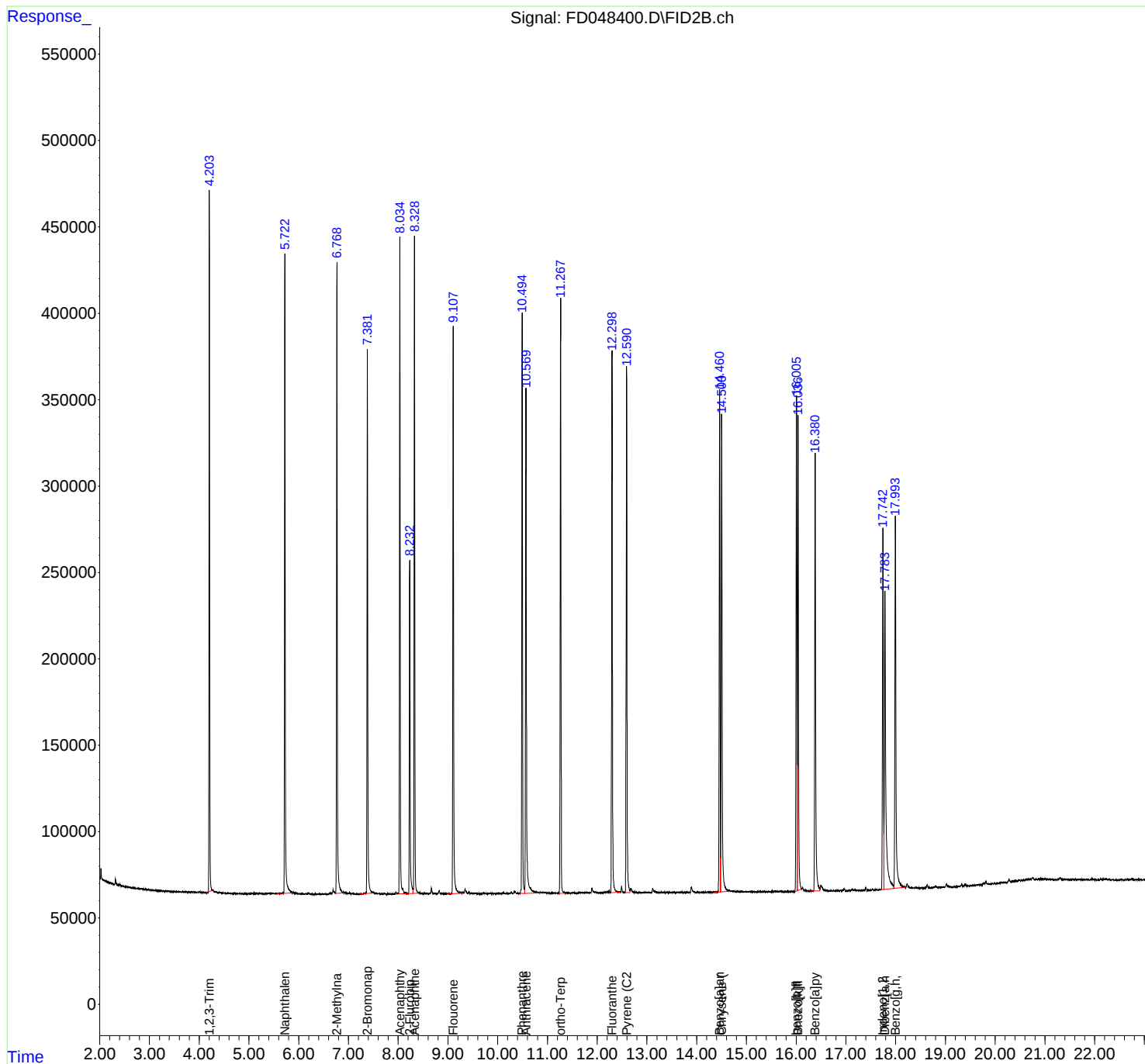
(m)=manual int.

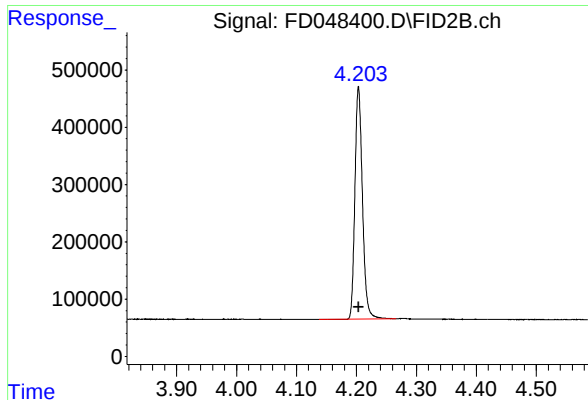
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
Data File : FD048400.D
Signal(s) : FID2B.ch
Acq On : 30 Sep 2024 11:48
Operator : YP/AJ
Sample : 20 PPM AROMATIC HC STD3
Misc :
ALS Vial : 63 Sample Multiplier: 1

Instrument :
FID_D
ClientSampleId :
20 PPM AROMATIC HC STD3

Integration File: autoint1.e
Quant Time: Sep 30 12:30:02 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Quant Title : GC Extractables
QLast Update : Mon Sep 30 12:29:39 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

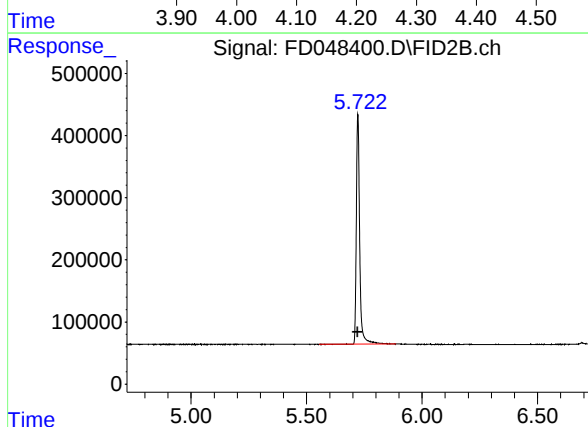




#1 1,2,3-Trimethylbenzene (C10.1)

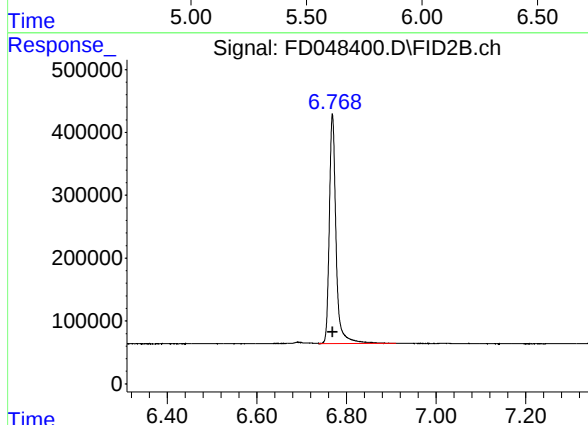
R.T.: 4.204 min
Delta R.T.: 0.000 min
Response: 3531993
Conc: 20.00 ug/ml

Instrument :
FID_D
ClientSampleId :
20 PPM AROMATIC HC STD3



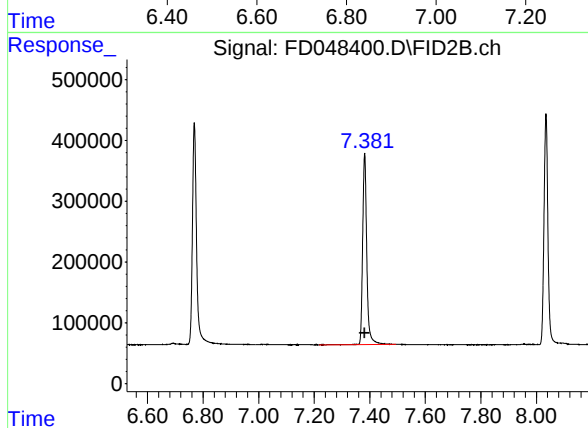
#2 Naphthalene (C11.7)

R.T.: 5.722 min
Delta R.T.: 0.000 min
Response: 3751038
Conc: 20.00 ug/ml



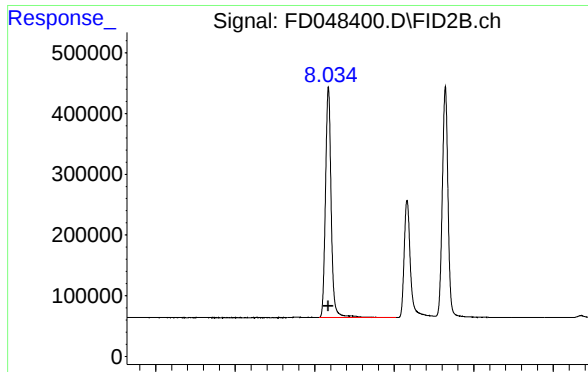
#3 2-Methylnaphthalene (C12.89)

R.T.: 6.769 min
Delta R.T.: 0.000 min
Response: 3782649
Conc: 20.00 ug/ml



#4 2-Bromonaphthalene (SURR)

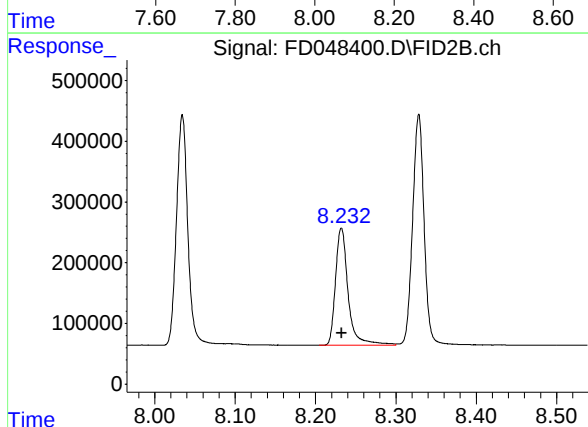
R.T.: 7.382 min
Delta R.T.: 0.000 min
Response: 3246497
Conc: 20.00 ug/ml



#5 Acenaphthylene (C15.06)

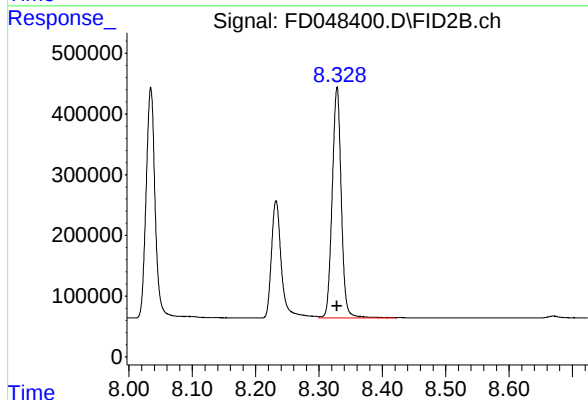
R.T.: 8.034 min
Delta R.T.: 0.000 min
Response: 3784046
Conc: 20.00 ug/ml

Instrument :
FID_D
ClientSampleId :
20 PPM AROMATIC HC STD3



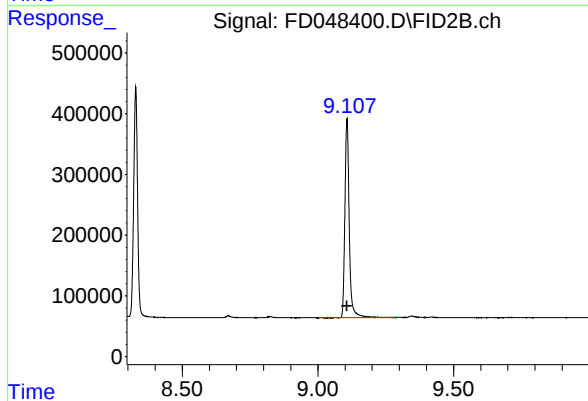
#6 2-Fluorobiphenyl (SURR)

R.T.: 8.232 min
Delta R.T.: 0.000 min
Response: 2113006
Conc: 20.00 ug/ml



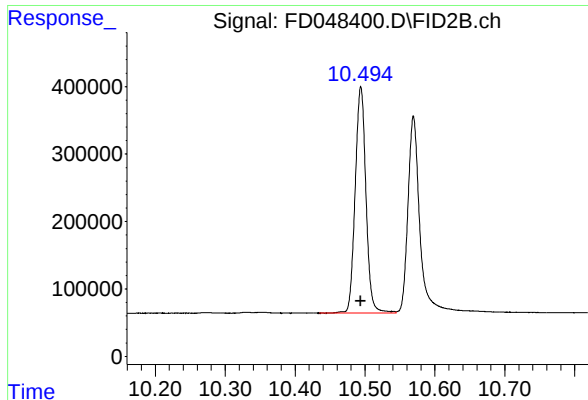
#7 Acenaphthene (C15.5)

R.T.: 8.328 min
Delta R.T.: 0.000 min
Response: 3783016
Conc: 20.00 ug/ml



#8 Flouorene (C16.55)

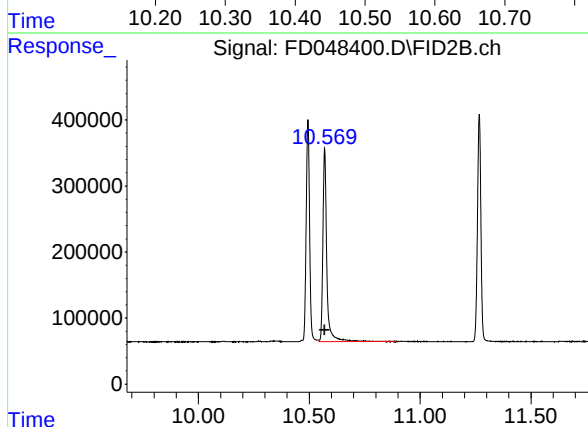
R.T.: 9.107 min
Delta R.T.: 0.000 min
Response: 3664123
Conc: 20.00 ug/ml



#9 Phenanthrene (C19.36)

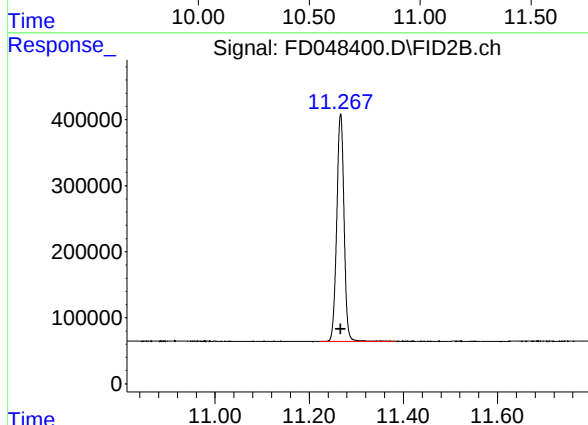
R.T.: 10.494 min
Delta R.T.: 0.000 min
Response: 3599000
Conc: 20.00 ug/ml

Instrument :
FID_D
ClientSampleId :
20 PPM AROMATIC HC STD3



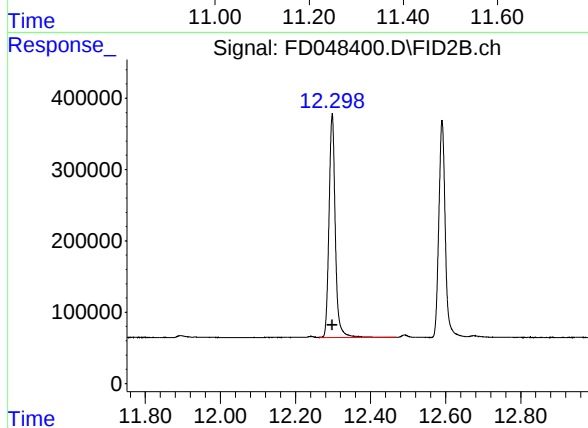
#10 Anthracene (C19.43)

R.T.: 10.569 min
Delta R.T.: 0.000 min
Response: 3583756
Conc: 20.00 ug/ml



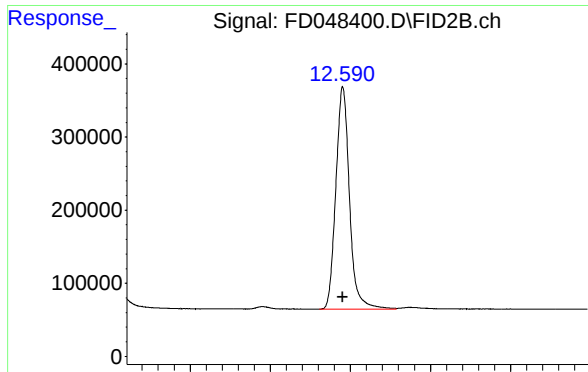
#11 ortho-Terphenyl (SURRE)

R.T.: 11.267 min
Delta R.T.: 0.000 min
Response: 3706162
Conc: 20.00 ug/ml



#12 Fluoranthene (C21.85)

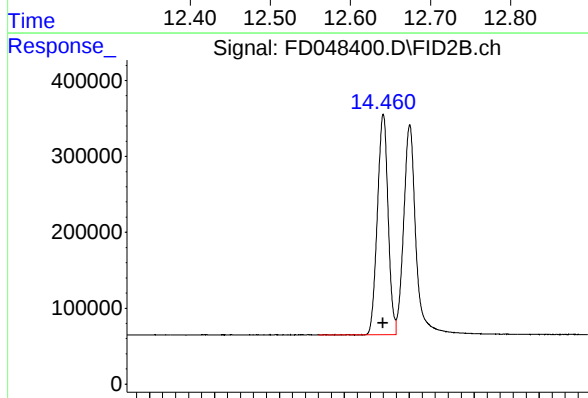
R.T.: 12.298 min
Delta R.T.: 0.000 min
Response: 3624323
Conc: 20.00 ug/ml



#13 Pyrene (C20.8)

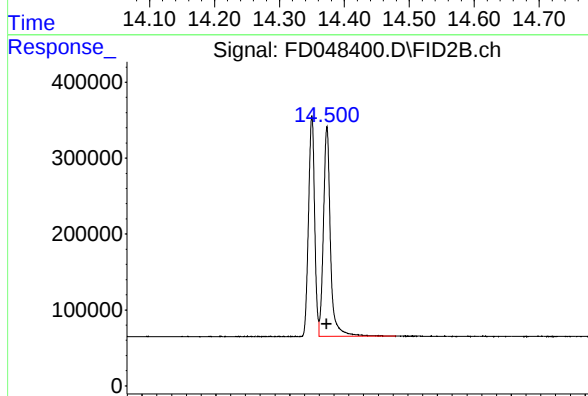
R.T.: 12.591 min
Delta R.T.: 0.000 min
Response: 3604512
Conc: 20.00 ug/ml

Instrument :
FID_D
ClientSampleId :
20 PPM AROMATIC HC STD3



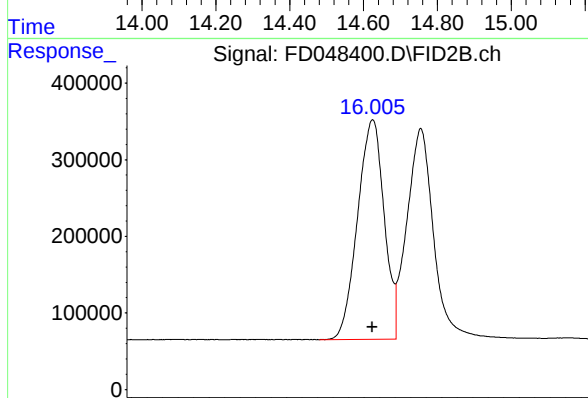
#14 Benzo[a]anthracene (C26.37)

R.T.: 14.460 min
Delta R.T.: 0.000 min
Response: 3323894
Conc: 20.00 ug/ml



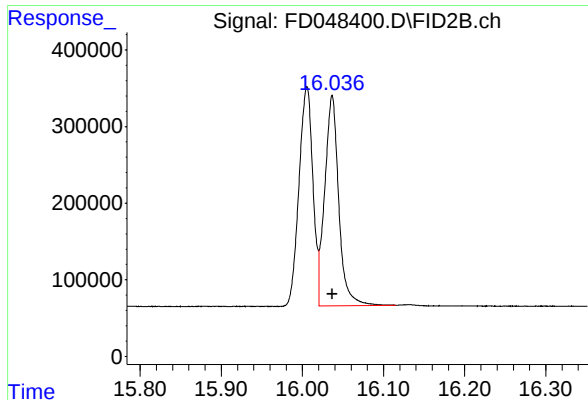
#15 Chrysene (C27.41)

R.T.: 14.501 min
Delta R.T.: 0.000 min
Response: 3661741
Conc: 20.00 ug/ml



#16 benzo[b]fluoranthene (C30.41)

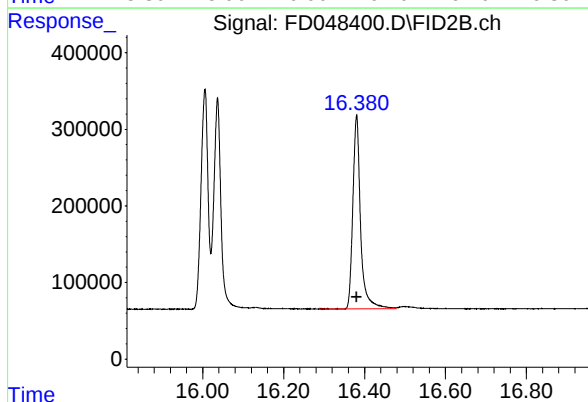
R.T.: 16.005 min
Delta R.T.: 0.000 min
Response: 3413368
Conc: 20.00 ug/ml



#17 Bnezo[k]fluoranthene (C30.14)

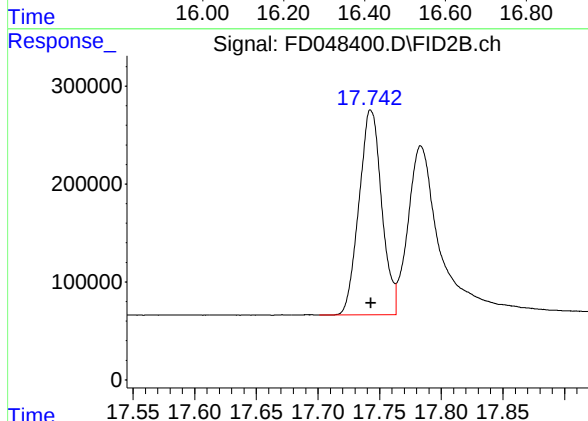
R.T.: 16.037 min
Delta R.T.: 0.000 min
Response: 3298832
Conc: 20.00 ug/ml

Instrument :
FID_D
ClientSampleId :
20 PPM AROMATIC HC STD3



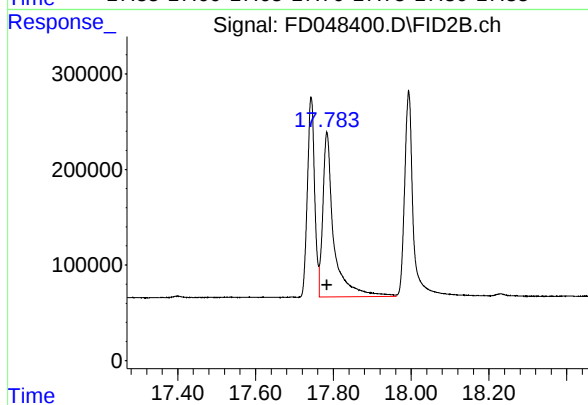
#18 Benzo[a]pyrene (C31.34)

R.T.: 16.380 min
Delta R.T.: 0.000 min
Response: 3349724
Conc: 20.00 ug/ml



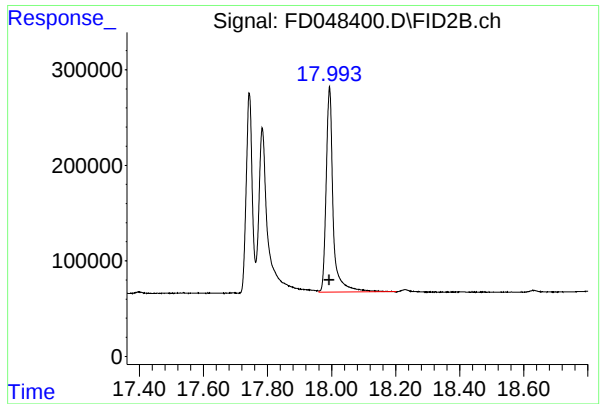
#19 Indeno[1,2,3-cd]pyrene (C35.01)

R.T.: 17.743 min
Delta R.T.: 0.000 min
Response: 2685595
Conc: 20.00 ug/ml



#20 Dibenz[a,h]anthracene (C30.36)

R.T.: 17.784 min
Delta R.T.: 0.000 min
Response: 3409082
Conc: 20.00 ug/ml



#21 Benzo[g,h,i]perylene (C34.01)

R.T.: 17.993 min
Delta R.T.: 0.000 min
Response: 3269223
Conc: 20.00 ug/ml

Instrument :
FID_D
ClientSampleId :
20 PPM AROMATIC HC STD3

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
Data File : FD048400.D
Signal(s) : FID2B.ch
Acq On : 30 Sep 2024 11:48
Sample : 20 PPM AROMATIC HC STD3
Misc :
ALS Vial : 63 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Title : GC Extractables

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.204	4.151	4.266	BV	400376	3537815	93.04%	4.912%
2	5.722	5.581	5.888	BV	369307	3754770	98.74%	5.213%
3	6.769	6.739	6.911	VB	364360	3783797	99.50%	5.253%
4	7.382	7.114	7.574	BB	313593	3296950	86.70%	4.577%
5	8.034	7.984	8.204	BB	379343	3765462	99.02%	5.228%
6	8.232	8.204	8.300	BV	193436	2116292	55.65%	2.938%
7	8.328	8.300	8.468	VB	378708	3802634	100.00%	5.279%
8	9.107	9.038	9.264	BB	327878	3643058	95.80%	5.058%
9	10.494	10.401	10.544	BV	335819	3590326	94.42%	4.985%
10	10.569	10.544	10.798	VB	289199	3544937	93.22%	4.921%
11	11.267	11.181	11.384	BB	345260	3694652	97.16%	5.129%
12	12.298	12.263	12.444	PB	312362	3617732	95.14%	5.023%
13	12.591	12.531	12.657	BV	303618	3561567	93.66%	4.945%
14	14.460	14.388	14.479	BV	292456	3322945	87.39%	4.613%
15	14.501	14.479	14.684	VB	276578	3655582	96.13%	5.075%
16	16.005	15.971	16.021	BV	284955	3413368	89.76%	4.739%
17	16.037	16.021	16.115	VV	275555	3298832	86.75%	4.580%
18	16.380	16.284	16.478	BV	253350	3265182	85.87%	4.533%
19	17.743	17.701	17.763	BV	209613	2685595	70.62%	3.728%
20	17.784	17.763	17.961	VV	171664	3409082	89.65%	4.733%
21	17.993	17.961	18.201	VBA	216275	3269223	85.97%	4.539%
Sum of corrected areas:							72029803	

Aromatic EPH 093024.M Tue Oct 01 01:49:11 2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
 Data File : FD048401.D
 Signal(s) : FID2B.ch
 Acq On : 30 Sep 2024 12:47
 Operator : YP/AJ
 Sample : 10 PPM AROMATIC HC STD4
 Misc :
 ALS Vial : 64 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 10 PPM AROMATIC HC STD4

Integration File: autoint1.e
 Quant Time: Sep 30 13:23:11 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
 Quant Title : GC Extractables
 QLast Update : Mon Sep 30 13:23:03 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18µm

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
4) S 2-Bromonaphthalene (S...	7.381	1605451	10.109 ug/ml
Spiked Amount 50.000		Recovery =	20.22%
6) S 2-Fluorobiphenyl (SURR)	8.233	1016463	9.754 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	19.51%
11) S ortho-Terphenyl (SURR)	11.265	1833921	10.161 ug/ml
Spiked Amount 50.000		Recovery =	20.32%
Target Compounds			
1) T 1,2,3-Trimethylbenzen...	4.202	1731147	9.947 ug/ml
2) T Naphthalene (C11.7)	5.721	1840574	9.994 ug/ml
3) T 2-Methylnaphthalene (...)	6.768	1908614	10.230 ug/ml
5) T Acenaphthylene (C15.06)	8.033	1960832	10.522 ug/ml
7) T Acenaphthene (C15.5)	8.326	1881168	10.191 ug/ml
8) T Fluorene (C16.55)	9.107	1798234	10.034 ug/ml
9) T Phenanthrene (C19.36)	10.493	1754425	9.937 ug/ml
10) T Anthracene (C19.43)	10.570	1840011	10.447 ug/ml
12) T Fluoranthene (C21.85)	12.298	1804434	10.143 ug/ml
13) T Pyrene (C20.8)	12.590	1743379	9.938 ug/ml
14) T Benzo[a]anthracene (C...	14.458	1549123	9.486 ug/ml
15) T Chrysene (C27.41)	14.499	1921102	10.712 ug/ml
16) T benzo[b]fluoranthene ...	16.003	1647278	9.830 ug/ml
17) T Bnezo[k]fluoranthene ...	16.034	1761068	10.756 ug/ml
18) T Benzo[a]pyrene (C31.34)	16.384	1649795	10.039 ug/ml
19) T Indeno[1,2,3-cd]pyren...	17.747	1182778	8.659 ug/ml
20) T Dibenz[a,h]anthracene...	17.791	1747599	10.717 ug/ml
21) T Benzo[g,h,i]perylene ...	17.994	1634016	10.238 ug/ml

(f)=RT Delta > 1/2 Window

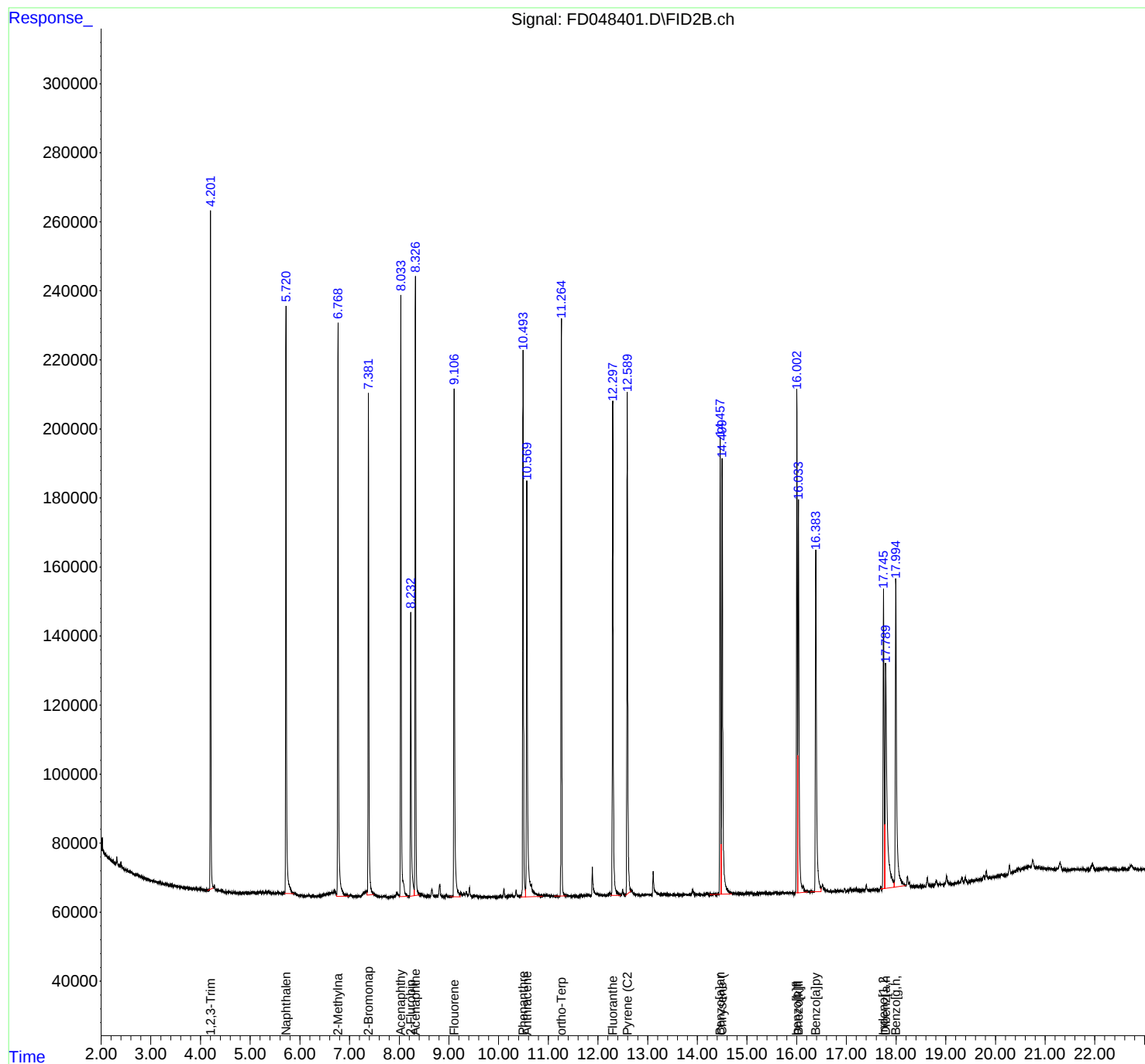
(m)=manual int.

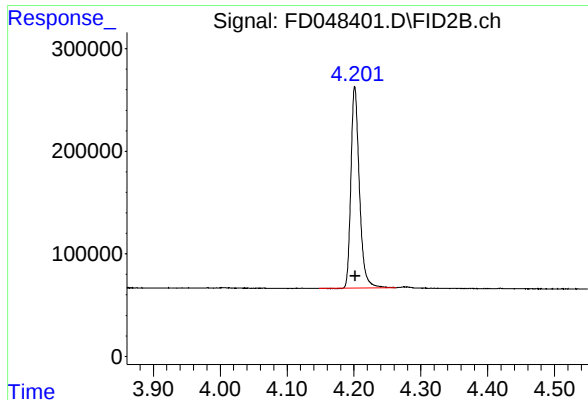
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
Data File : FD048401.D
Signal(s) : FID2B.ch
Acq On : 30 Sep 2024 12:47
Operator : YP/AJ
Sample : 10 PPM AROMATIC HC STD4
Misc :
ALS Vial : 64 Sample Multiplier: 1

Instrument :
FID_D
ClientSampleId :
10 PPM AROMATIC HC STD4

Integration File: autoint1.e
Quant Time: Sep 30 13:23:11 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Quant Title : GC Extractables
QLast Update : Mon Sep 30 13:23:03 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

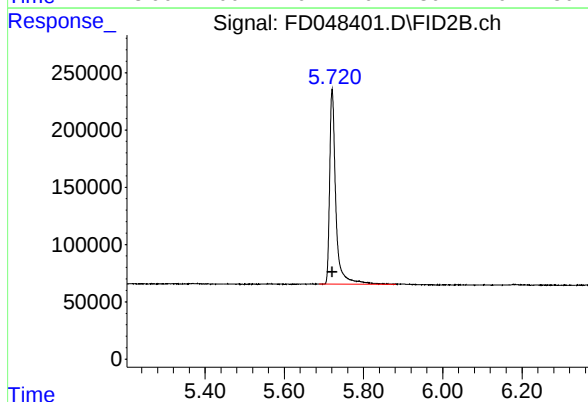




#1 1,2,3-Trimethylbenzene (C10.1)

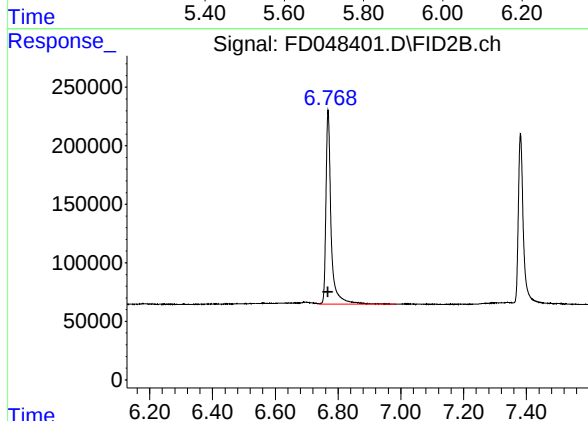
R.T.: 4.202 min
Delta R.T.: 0.000 min
Response: 1731147
Conc: 9.95 ug/ml

Instrument :
FID_D
ClientSampleId :
10 PPM AROMATIC HC STD4



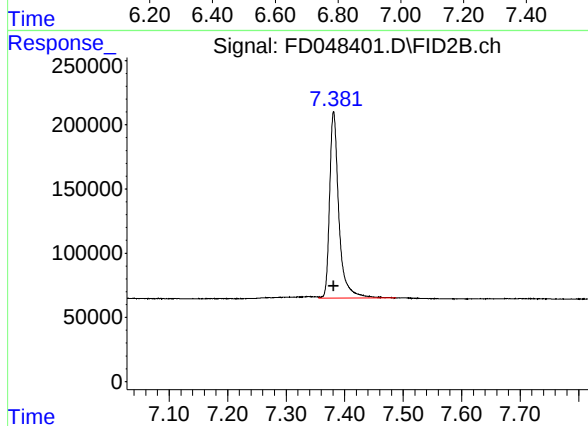
#2 Naphthalene (C11.7)

R.T.: 5.721 min
Delta R.T.: 0.000 min
Response: 1840574
Conc: 9.99 ug/ml



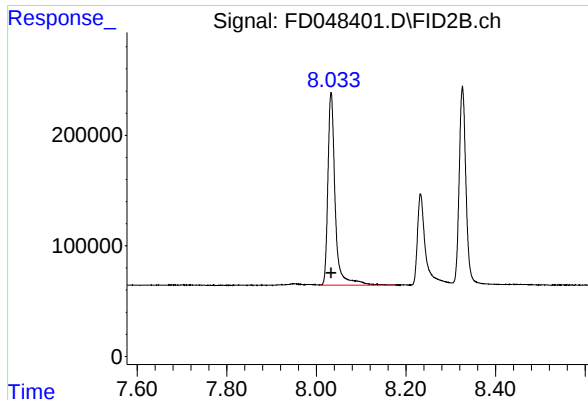
#3 2-Methylnaphthalene (C12.89)

R.T.: 6.768 min
Delta R.T.: 0.000 min
Response: 1908614
Conc: 10.23 ug/ml



#4 2-Bromonaphthalene (SURR)

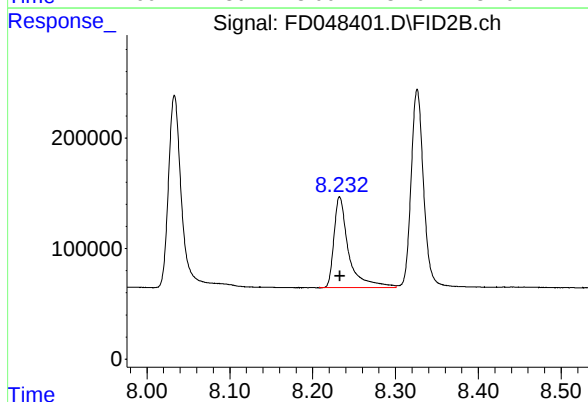
R.T.: 7.381 min
Delta R.T.: 0.000 min
Response: 1605451
Conc: 10.11 ug/ml



#5 Acenaphthylene (C15.06)

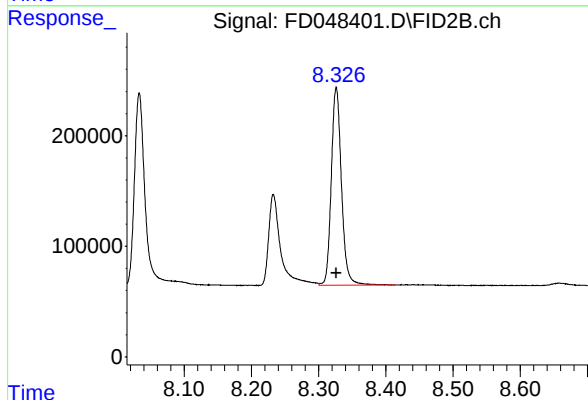
R.T.: 8.033 min
Delta R.T.: 0.000 min
Response: 1960832
Conc: 10.52 ug/ml

Instrument :
FID_D
ClientSampleId :
10 PPM AROMATIC HC STD4



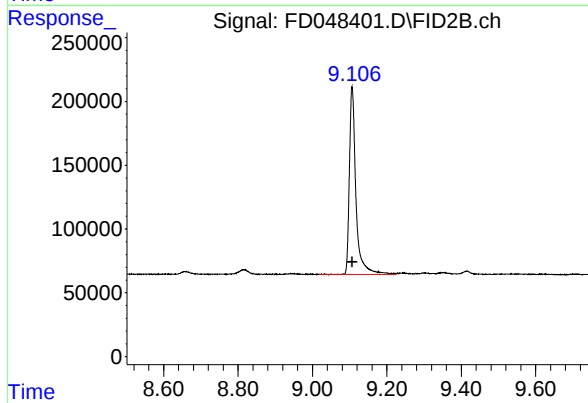
#6 2-Fluorobiphenyl (SURR)

R.T.: 8.233 min
Delta R.T.: 0.000 min
Response: 1016463
Conc: 9.75 ug/ml



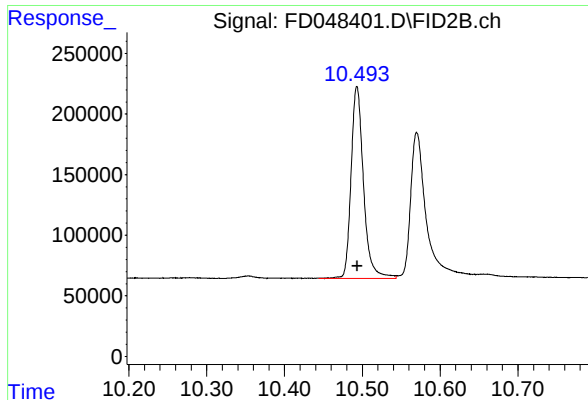
#7 Acenaphthene (C15.5)

R.T.: 8.326 min
Delta R.T.: 0.000 min
Response: 1881168
Conc: 10.19 ug/ml



#8 Flouorene (C16.55)

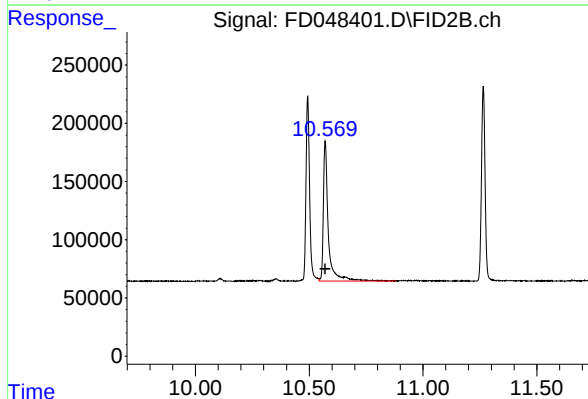
R.T.: 9.107 min
Delta R.T.: 0.000 min
Response: 1798234
Conc: 10.03 ug/ml



#9 Phenanthrene (C19.36)

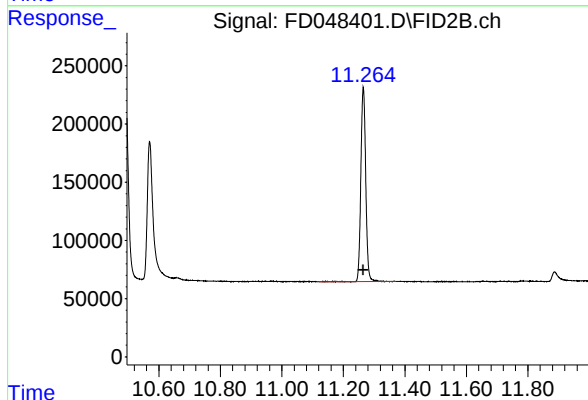
R.T.: 10.493 min
Delta R.T.: 0.000 min
Response: 1754425
Conc: 9.94 ug/ml

Instrument :
FID_D
ClientSampleId :
10 PPM AROMATIC HC STD4



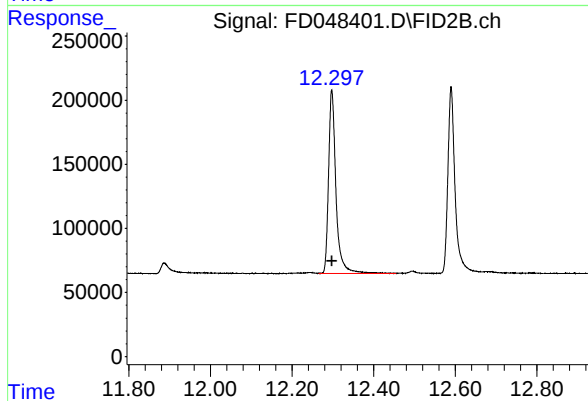
#10 Anthracene (C19.43)

R.T.: 10.570 min
Delta R.T.: 0.000 min
Response: 1840011
Conc: 10.45 ug/ml



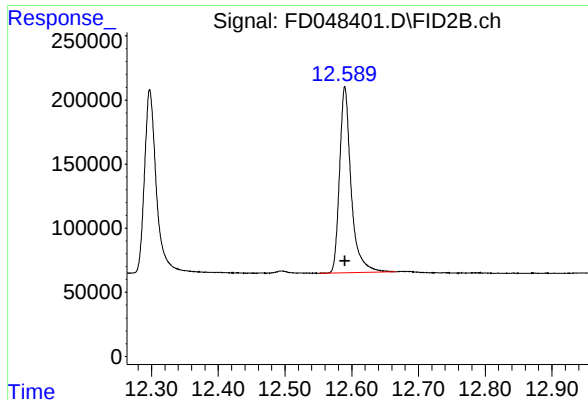
#11 ortho-Terphenyl (SURR)

R.T.: 11.265 min
Delta R.T.: 0.000 min
Response: 1833921
Conc: 10.16 ug/ml



#12 Fluoranthene (C21.85)

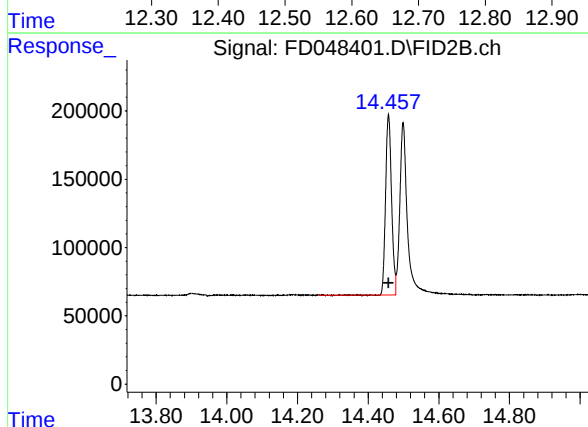
R.T.: 12.298 min
Delta R.T.: 0.000 min
Response: 1804434
Conc: 10.14 ug/ml



#13 Pyrene (C20.8)

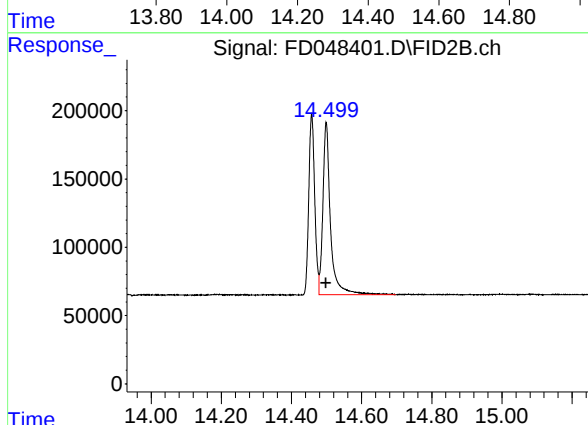
R.T.: 12.590 min
Delta R.T.: 0.000 min
Response: 1743379
Conc: 9.94 ug/ml

Instrument :
FID_D
ClientSampleId :
10 PPM AROMATIC HC STD4



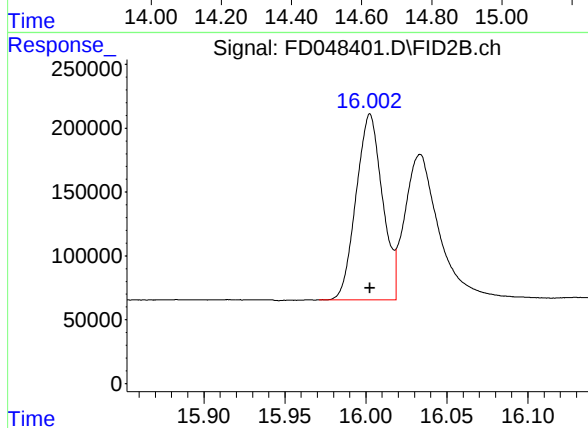
#14 Benzo[a]anthracene (C26.37)

R.T.: 14.458 min
Delta R.T.: 0.000 min
Response: 1549123
Conc: 9.49 ug/ml



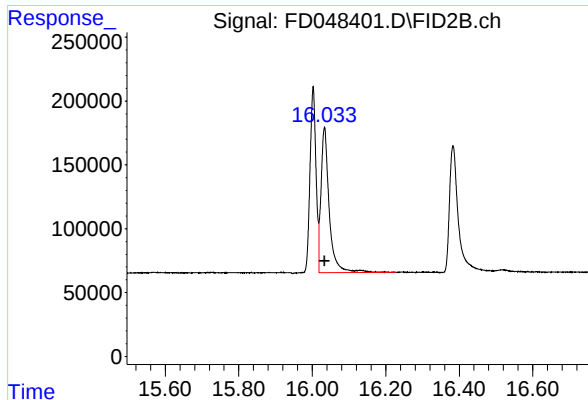
#15 Chrysene (C27.41)

R.T.: 14.499 min
Delta R.T.: 0.000 min
Response: 1921102
Conc: 10.71 ug/ml



#16 benzo[b]fluoranthene (C30.41)

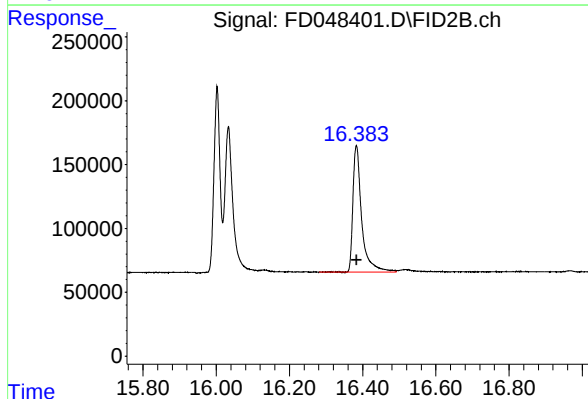
R.T.: 16.003 min
Delta R.T.: 0.000 min
Response: 1647278
Conc: 9.83 ug/ml



#17 Bnezo[k]fluoranthene (C30.14)

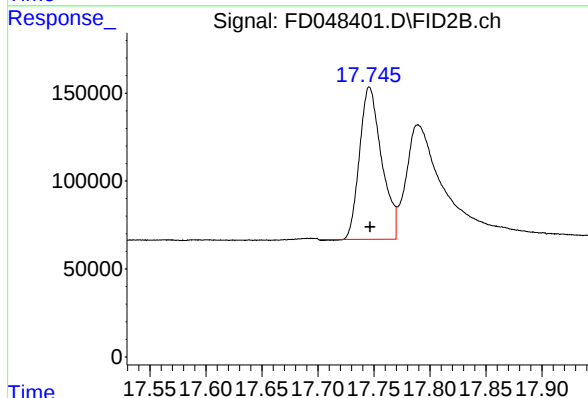
R.T.: 16.034 min
Delta R.T.: 0.000 min
Response: 1761068
Conc: 10.76 ug/ml

Instrument :
FID_D
ClientSampleId :
10 PPM AROMATIC HC STD4



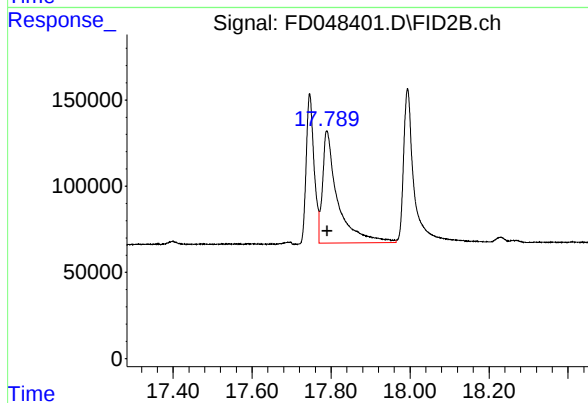
#18 Benzo[a]pyrene (C31.34)

R.T.: 16.384 min
Delta R.T.: 0.000 min
Response: 1649795
Conc: 10.04 ug/ml



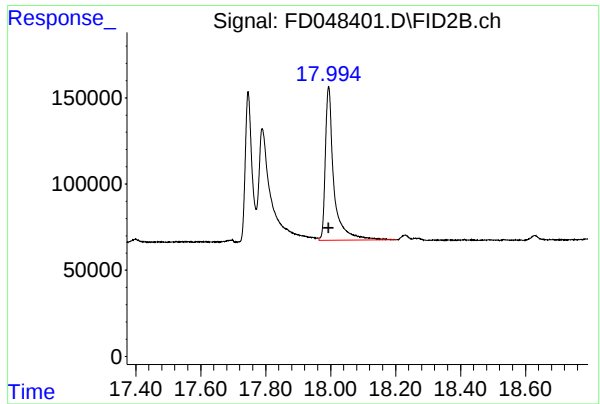
#19 Indeno[1,2,3-cd]pyrene (C35.01)

R.T.: 17.747 min
Delta R.T.: 0.000 min
Response: 1182778
Conc: 8.66 ug/ml



#20 Dibenz[a,h]anthracene (C30.36)

R.T.: 17.791 min
Delta R.T.: 0.000 min
Response: 1747599
Conc: 10.72 ug/ml



#21 Benzo[g,h,i]perylene (C34.01)

R.T.: 17.994 min
Delta R.T.: 0.000 min
Response: 1634016
Conc: 10.24 ug/ml

Instrument :
FID_D
ClientSampleId :
10 PPM AROMATIC HC STD4

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
Data File : FD048401.D
Signal(s) : FID2B.ch
Acq On : 30 Sep 2024 12:47
Sample : 10 PPM AROMATIC HC STD4
Misc :
ALS Vial : 64 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Title : GC Extractables

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.202	4.138	4.263	BV	195850	1727884	88.39%	4.846%
2	5.721	5.631	5.941	BB	169208	1881784	96.26%	5.278%
3	6.768	6.740	6.918	VB	165020	1866265	95.46%	5.234%
4	7.381	7.356	7.488	VV	144807	1606006	82.15%	4.504%
5	8.033	8.011	8.178	BB	173492	1954924	100.00%	5.483%
6	8.233	8.191	8.301	BV	81005	1014853	51.91%	2.846%
7	8.326	8.301	8.414	VB	178121	1880303	96.18%	5.274%
8	9.107	9.034	9.224	BV	145407	1763617	90.21%	4.947%
9	10.493	10.404	10.543	BV	157368	1740277	89.02%	4.881%
10	10.570	10.543	10.764	VB	119507	1763147	90.19%	4.945%
11	11.265	11.188	11.371	BB	166999	1838895	94.06%	5.158%
12	12.298	12.268	12.454	VB	142765	1797355	91.94%	5.041%
13	12.590	12.531	12.731	BB	144505	1794544	91.80%	5.033%
14	14.458	14.381	14.479	BV	131788	1551742	79.38%	4.352%
15	14.499	14.479	14.698	VB	126126	1922381	98.34%	5.392%
16	16.003	15.971	16.019	BV	143982	1646846	84.24%	4.619%
17	16.034	16.019	16.188	VB	113857	1748508	89.44%	4.904%
18	16.384	16.301	16.491	BV	97799	1590023	81.33%	4.460%
19	17.747	17.701	17.770	BV	85150	1182778	60.50%	3.317%
20	17.791	17.770	17.964	VV	64132	1747599	89.39%	4.902%
21	17.994	17.964	18.201	VBA	88993	1634016	83.58%	4.583%
Sum of corrected areas:							35653748	

Aromatic EPH 093024.M Tue Oct 01 01:49:52 2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
 Data File : FD048402.D
 Signal(s) : FID2B.ch
 Acq On : 30 Sep 2024 13:35
 Operator : YP/AJ
 Sample : 5 PPM AROMATIC HC STD5
 Misc :
 ALS Vial : 65 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 5 PPM AROMATIC HC STD5

Integration File: autoint1.e
 Quant Time: Sep 30 14:16:46 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
 Quant Title : GC Extractables
 QLast Update : Mon Sep 30 14:16:33 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18µm

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
4) S 2-Bromonaphthalene (S...	7.384	962842	5.815 ug/ml
Spiked Amount 50.000		Recovery =	11.63%
6) S 2-Fluorobiphenyl (SURR)	8.239	508479	4.903 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	9.81%
11) S ortho-Terphenyl (SURR)	11.266	990050	5.381 ug/ml
Spiked Amount 50.000		Recovery =	10.76%
Target Compounds			
1) T 1,2,3-Trimethylbenzen...	4.204	900690	5.139 ug/ml
2) T Naphthalene (C11.7)	5.725	984293	5.272 ug/ml
3) T 2-Methylnaphthalene (...)	6.772	993261	5.256 ug/ml
5) T Acenaphthylene (C15.06)	8.035	1069085	5.573 ug/ml
7) T Acenaphthene (C15.5)	8.328	1037231	5.483 ug/ml
8) T Fluorene (C16.55)	9.111	932385	5.161 ug/ml
9) T Phenanthrene (C19.36)	10.497	899656	5.076 ug/ml
10) T Anthracene (C19.43)	10.575	925856	5.203 ug/ml
12) T Fluoranthene (C21.85)	12.301	963834	5.329 ug/ml
13) T Pyrene (C20.8)	12.593	968145	5.407 ug/ml
14) T Benzo[a]anthracene (C...	14.464	729221	4.563 ug/ml
15) T Chrysene (C27.41)	14.502	1076419	5.771 ug/ml
16) T benzo[b]fluoranthene ...	16.008	811870	4.875 ug/ml
17) T Bnezo[k]fluoranthene ...	16.040	969266	5.710 ug/ml
18) T Benzo[a]pyrene (C31.34)	16.393	799268	4.890 ug/ml
19) T Indeno[1,2,3-cd]pyren...	17.760	556571	4.231 ug/ml
20) T Dibenz[a,h]anthracene...	17.806	921954	5.510 ug/ml
21) T Benzo[g,h,i]perylene ...	18.001	868643	5.348 ug/ml

(f)=RT Delta > 1/2 Window

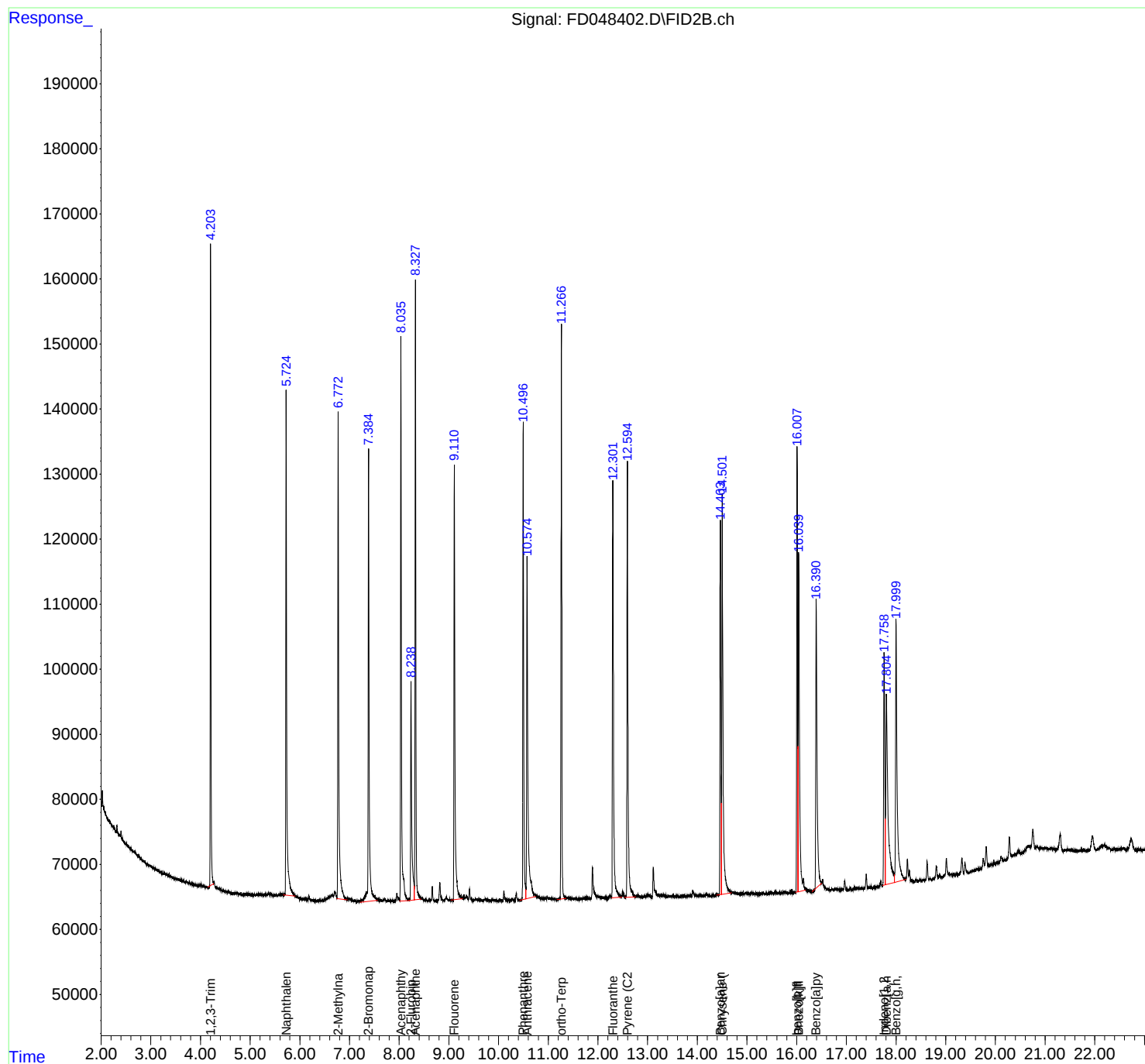
(m)=manual int.

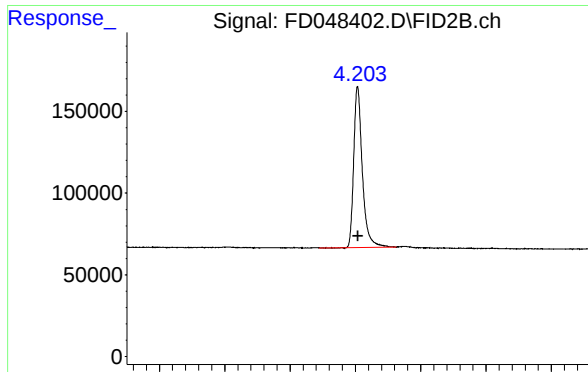
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
Data File : FD048402.D
Signal(s) : FID2B.ch
Acq On : 30 Sep 2024 13:35
Operator : YP/AJ
Sample : 5 PPM AROMATIC HC STD5
Misc :
ALS Vial : 65 Sample Multiplier: 1

Instrument :
FID_D
ClientSampleId :
5 PPM AROMATIC HC STD5

Integration File: autoint1.e
Quant Time: Sep 30 14:16:46 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Quant Title : GC Extractables
QLast Update : Mon Sep 30 14:16:33 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

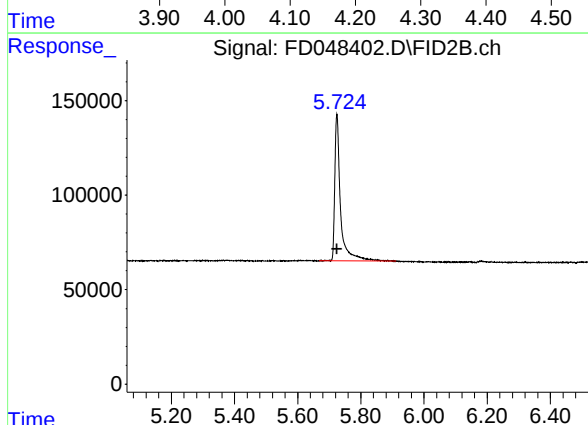




#1 1,2,3-Trimethylbenzene (C10.1)

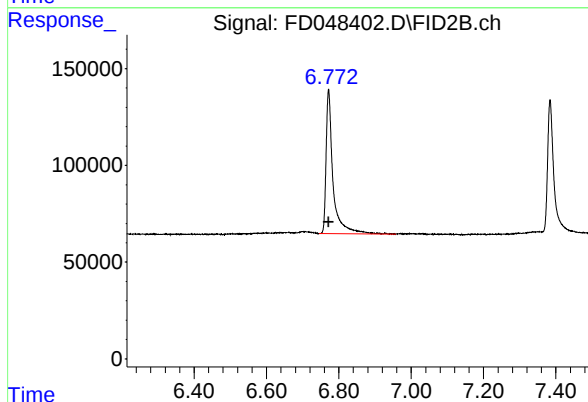
R.T.: 4.204 min
Delta R.T.: 0.000 min
Response: 900690
Conc: 5.14 ug/ml

Instrument :
FID_D
ClientSampleId :
5 PPM AROMATIC HC STD5



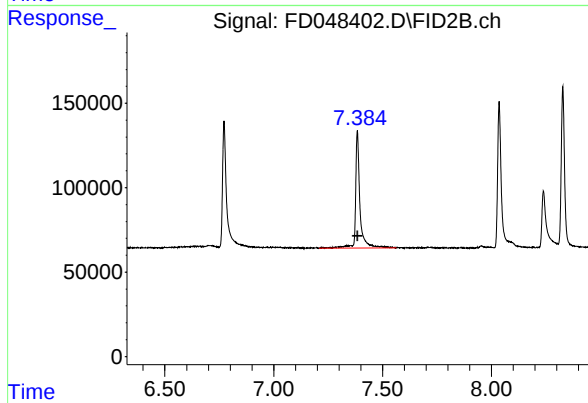
#2 Naphthalene (C11.7)

R.T.: 5.725 min
Delta R.T.: 0.000 min
Response: 984293
Conc: 5.27 ug/ml



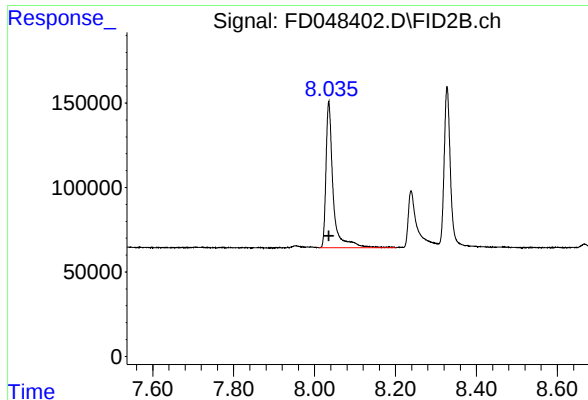
#3 2-Methylnaphthalene (C12.89)

R.T.: 6.772 min
Delta R.T.: 0.000 min
Response: 993261
Conc: 5.26 ug/ml



#4 2-Bromonaphthalene (SURR)

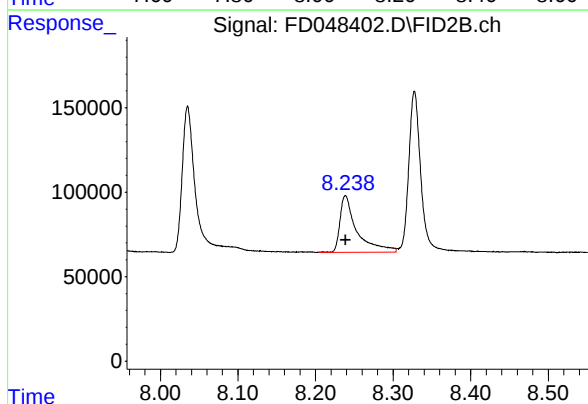
R.T.: 7.384 min
Delta R.T.: 0.000 min
Response: 962842
Conc: 5.82 ug/ml



#5 Acenaphthylene (C15.06)

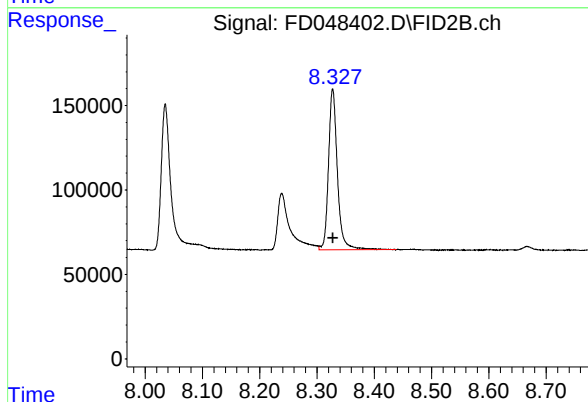
R.T.: 8.035 min
Delta R.T.: 0.000 min
Response: 1069085
Conc: 5.57 ug/ml

Instrument :
FID_D
ClientSampleId :
5 PPM AROMATIC HC STD5



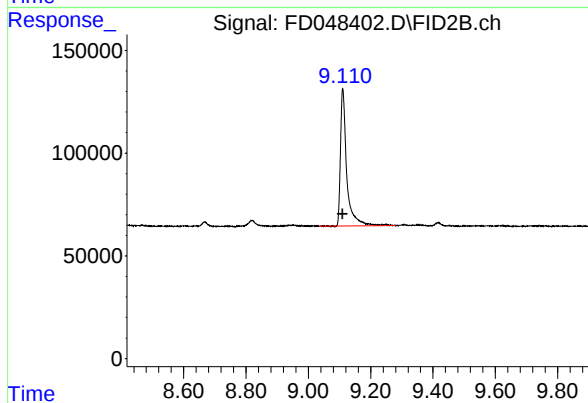
#6 2-Fluorobiphenyl (SURR)

R.T.: 8.239 min
Delta R.T.: 0.000 min
Response: 508479
Conc: 4.90 ug/ml



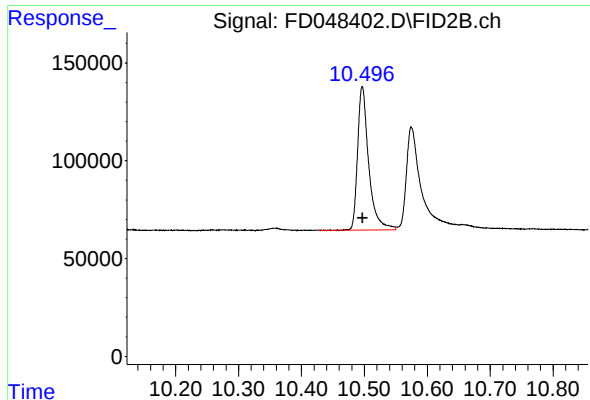
#7 Acenaphthene (C15.5)

R.T.: 8.328 min
Delta R.T.: 0.000 min
Response: 1037231
Conc: 5.48 ug/ml



#8 Flouorene (C16.55)

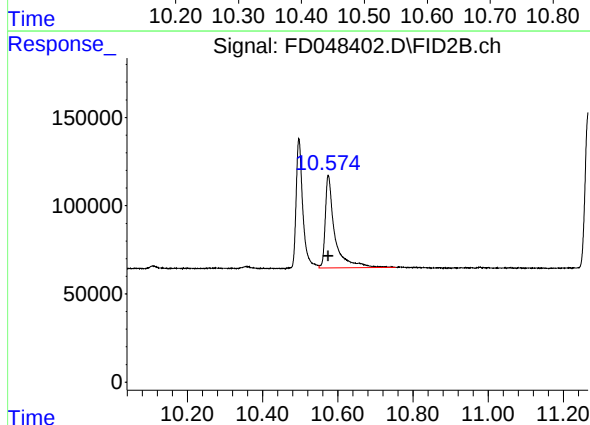
R.T.: 9.111 min
Delta R.T.: 0.000 min
Response: 932385
Conc: 5.16 ug/ml



#9 Phenanthrene (C19.36)

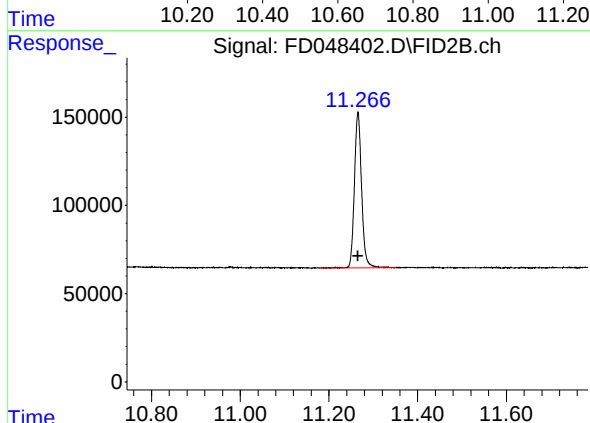
R.T.: 10.497 min
Delta R.T.: 0.000 min
Response: 899656
Conc: 5.08 ug/ml

Instrument :
FID_D
ClientSampleId :
5 PPM AROMATIC HC STD5



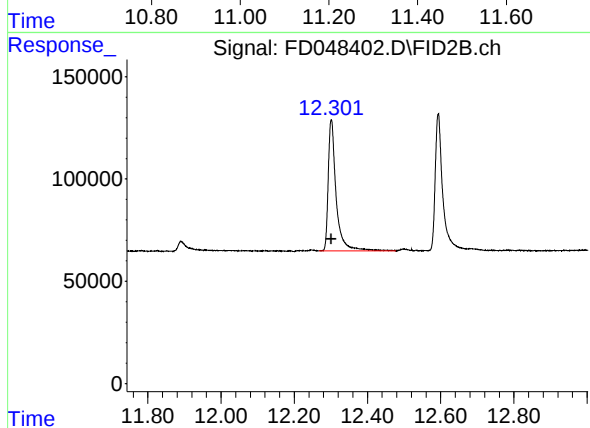
#10 Anthracene (C19.43)

R.T.: 10.575 min
Delta R.T.: 0.000 min
Response: 925856
Conc: 5.20 ug/ml



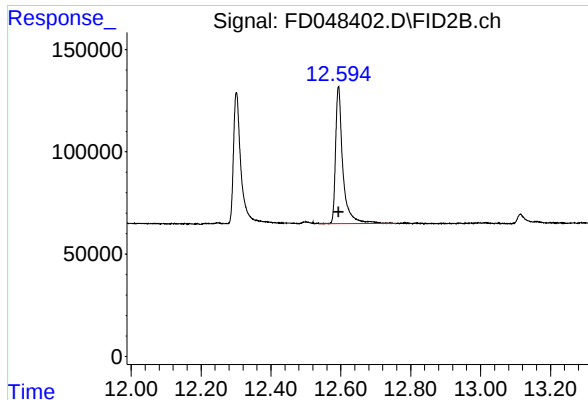
#11 ortho-Terphenyl (SURR)

R.T.: 11.266 min
Delta R.T.: 0.000 min
Response: 990050
Conc: 5.38 ug/ml



#12 Fluoranthene (C21.85)

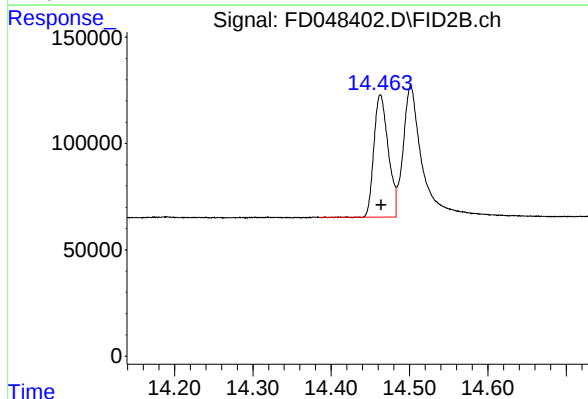
R.T.: 12.301 min
Delta R.T.: 0.000 min
Response: 963834
Conc: 5.33 ug/ml



#13 Pyrene (C20.8)

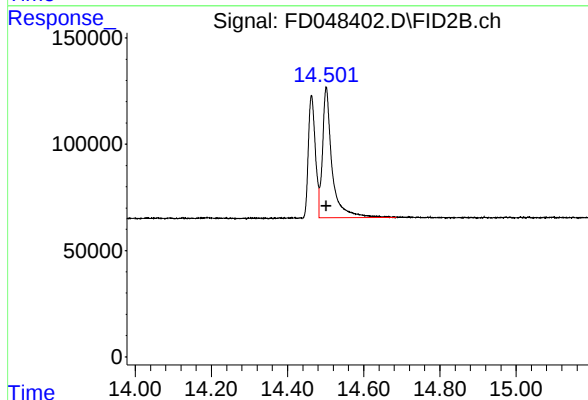
R.T.: 12.593 min
Delta R.T.: 0.000 min
Response: 968145
Conc: 5.41 ug/ml

Instrument :
FID_D
ClientSampleId :
5 PPM AROMATIC HC STD5



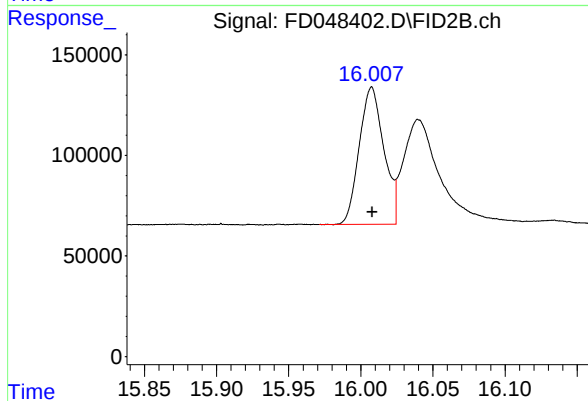
#14 Benzo[a]anthracene (C26.37)

R.T.: 14.464 min
Delta R.T.: 0.000 min
Response: 729221
Conc: 4.56 ug/ml



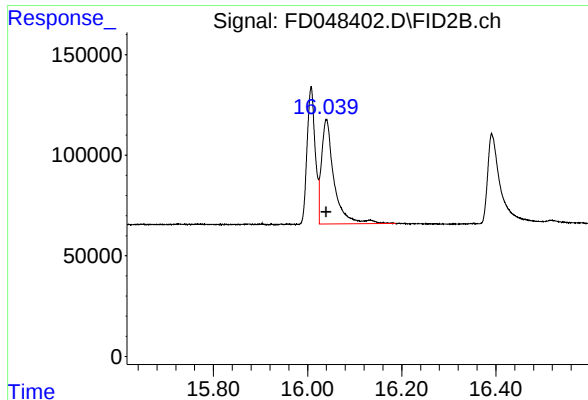
#15 Chrysene (C27.41)

R.T.: 14.502 min
Delta R.T.: 0.000 min
Response: 1076419
Conc: 5.77 ug/ml



#16 benzo[b]fluoranthene (C30.41)

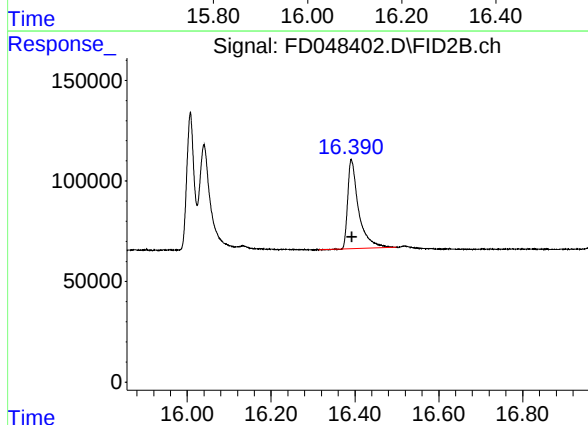
R.T.: 16.008 min
Delta R.T.: 0.000 min
Response: 811870
Conc: 4.87 ug/ml



#17 Bnezo[k]fluoranthene (C30.14)

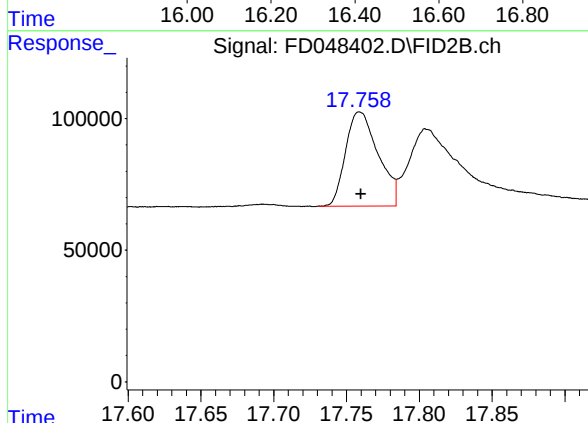
R.T.: 16.040 min
Delta R.T.: 0.000 min
Response: 969266
Conc: 5.71 ug/ml

Instrument :
FID_D
ClientSampleId :
5 PPM AROMATIC HC STD5



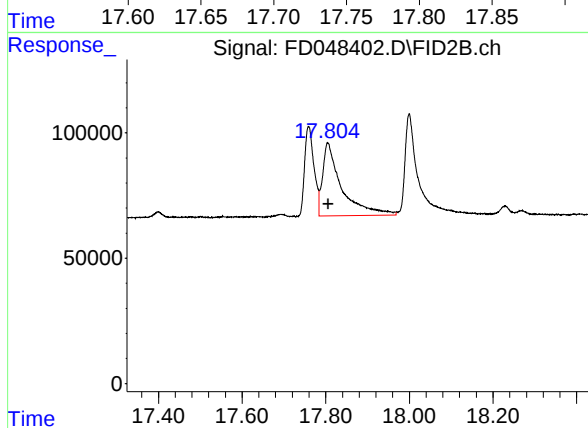
#18 Benzo[a]pyrene (C31.34)

R.T.: 16.393 min
Delta R.T.: 0.000 min
Response: 799268
Conc: 4.89 ug/ml



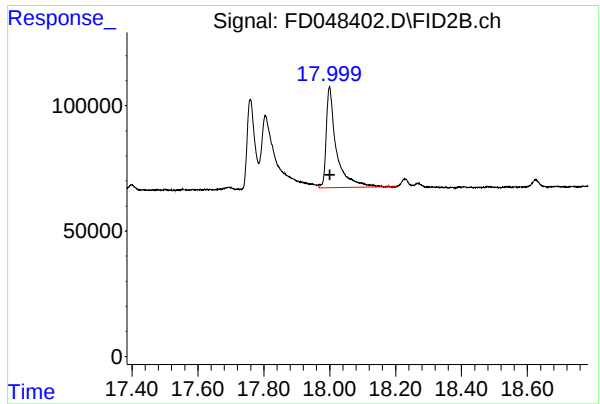
#19 Indeno[1,2,3-cd]pyrene (C35.01)

R.T.: 17.760 min
Delta R.T.: 0.000 min
Response: 556571
Conc: 4.23 ug/ml



#20 Dibenz[a,h]anthracene (C30.36)

R.T.: 17.806 min
Delta R.T.: 0.000 min
Response: 921954
Conc: 5.51 ug/ml



#21 Benzo[g,h,i]perylene (C34.01)

R.T.: 18.001 min
Delta R.T.: 0.000 min
Response: 868643
Conc: 5.35 ug/ml

Instrument :

FID_D

ClientSampleId :

5 PPM AROMATIC HC STD5

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
Data File : FD048402.D
Signal(s) : FID2B.ch
Acq On : 30 Sep 2024 13:35
Sample : 5 PPM AROMATIC HC STD5
Misc :
ALS Vial : 65 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Title : GC Extractables

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.204	4.144	4.262	BV	97231	900690	83.67%	4.797%
2	5.725	5.668	5.911	BB	77378	984293	91.44%	5.242%
3	6.772	6.745	6.958	PB	74354	993261	92.27%	5.290%
4	7.384	7.208	7.561	PB	69110	962842	89.45%	5.128%
5	8.035	8.011	8.201	VB	86238	1069085	99.32%	5.693%
6	8.239	8.204	8.304	BV	33580	508479	47.24%	2.708%
7	8.328	8.304	8.438	VB	95153	1037231	96.36%	5.524%
8	9.111	9.034	9.281	BB	66500	932385	86.62%	4.965%
9	10.497	10.428	10.550	BV	72885	899656	83.58%	4.791%
10	10.575	10.550	10.754	VB	52531	925856	86.01%	4.931%
11	11.266	11.178	11.351	BB	87312	990050	91.98%	5.273%
12	12.301	12.268	12.478	VV	64148	963834	89.54%	5.133%
13	12.593	12.538	12.758	BB	67056	968145	89.94%	5.156%
14	14.464	14.384	14.483	BV	56526	729221	67.75%	3.884%
15	14.502	14.483	14.684	VB	61254	1076419	100.00%	5.733%
16	16.008	15.971	16.024	BV	67889	811870	75.42%	4.324%
17	16.040	16.024	16.188	VB	51872	969266	90.05%	5.162%
18	16.393	16.314	16.498	BV	42523	799268	74.25%	4.257%
19	17.760	17.701	17.784	BV	34912	529921	49.23%	2.822%
20	17.806	17.784	17.968	VV	28206	877691	81.54%	4.674%
21	18.001	17.968	18.201	VBA	39468	847929	78.77%	4.516%
Sum of corrected areas:						18777392		

Aromatic EPH 093024.M Tue Oct 01 01:50:24 2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
 Data File : FD048403.D
 Signal(s) : FID2B.ch
 Acq On : 30 Sep 2024 14:29
 Operator : YP/AJ
 Sample : 20 PPM AROMATIC HC STD ICV
 Misc :
 ALS Vial : 66 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 20 PPM AROMATIC HC STD ICV

Integration File: autoint1.e
 Quant Time: Sep 30 17:02:16 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
 Quant Title : GC Extractables
 QLast Update : Mon Sep 30 14:17:34 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18µm

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
4) S 2-Bromonaphthalene (S...	7.381	3368404	20.345 ug/ml
Spiked Amount 50.000		Recovery =	40.69%
6) S 2-Fluorobiphenyl (SURR)	8.232	2141410	20.649 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	41.30%
11) S ortho-Terphenyl (SURR)	11.266	3698580	20.101 ug/ml
Spiked Amount 50.000		Recovery =	40.20%
Target Compounds			
1) T 1,2,3-Trimethylbenzen...	4.201	3521081	20.091 ug/ml
2) T Naphthalene (C11.7)	5.720	3788301	20.289 ug/ml
3) T 2-Methylnaphthalene (...)	6.767	3802093	20.118 ug/ml
5) T Acenaphthylene (C15.06)	8.033	3842612	20.030 ug/ml
7) T Acenaphthene (C15.5)	8.328	3785313	20.012 ug/ml
8) T Fluorene (C16.55)	9.106	3658929	20.252 ug/ml
9) T Phenanthrene (C19.36)	10.493	3597204	20.297 ug/ml
10) T Anthracene (C19.43)	10.569	3532678	19.853 ug/ml
12) T Fluoranthene (C21.85)	12.298	3625812	20.046 ug/ml
13) T Pyrene (C20.8)	12.590	3567943	19.925 ug/ml
14) T Benzo[a]anthracene (C...	14.459	3346833	20.942 ug/ml
15) T Chrysene (C27.41)	14.500	3657712	19.610 ug/ml
16) T benzo[b]fluoranthene ...	16.006	3457542	20.761 ug/ml
17) T Bnezo[k]fluoranthene ...	16.036	3379645	19.910 ug/ml
18) T Benzo[a]pyrene (C31.34)	16.381	3303676	20.213 ug/ml
19) T Indeno[1,2,3-cd]pyren...	17.744	2730501	20.758 ug/ml
20) T Dibenz[a,h]anthracene...	17.785	3415613	20.412 ug/ml
21) T Benzo[g,h,i]perylene ...	17.994	3278515	20.185 ug/ml

(f)=RT Delta > 1/2 Window

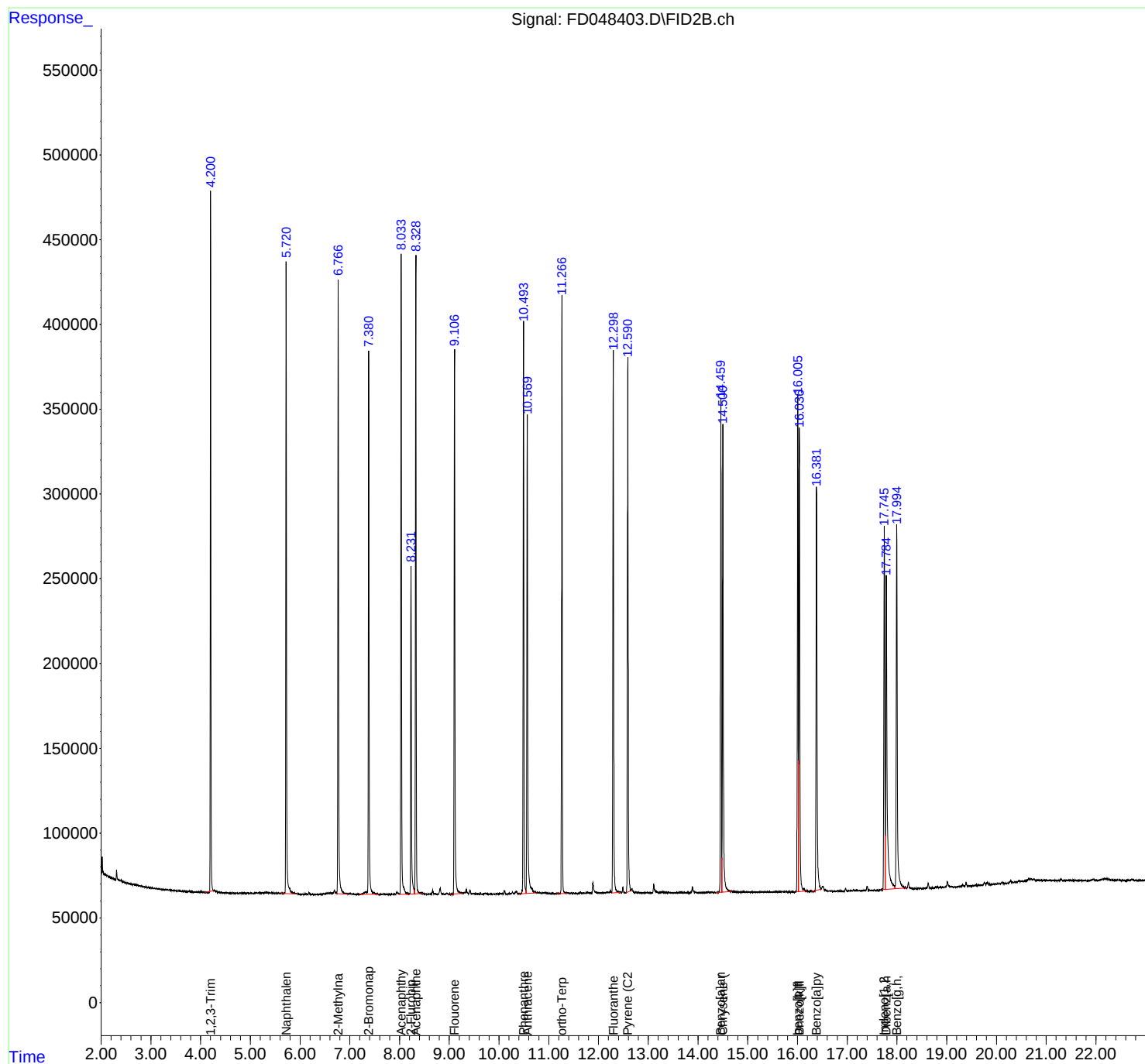
(m)=manual int.

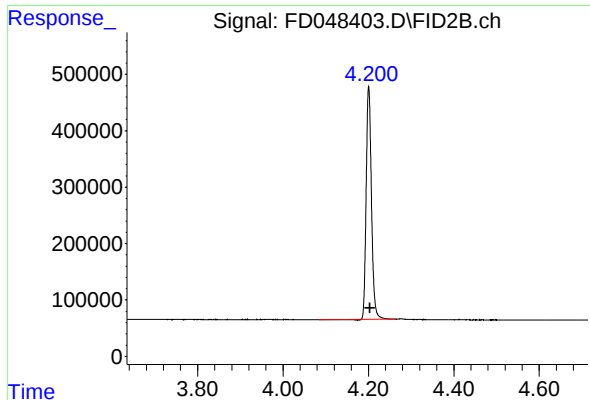
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
Data File : FD048403.D
Signal(s) : FID2B.ch
Acq On : 30 Sep 2024 14:29
Operator : YP/AJ
Sample : 20 PPM AROMATIC HC STD ICV
Misc :
ALS Vial : 66 Sample Multiplier: 1

Instrument :
FID_D
ClientSampleId :
20 PPM AROMATIC HC STD ICV

Integration File: autoint1.e
Quant Time: Sep 30 17:02:16 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Quant Title : GC Extractables
QLast Update : Mon Sep 30 14:17:34 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm





#1 1,2,3-Trimethylbenzene (C10.1)

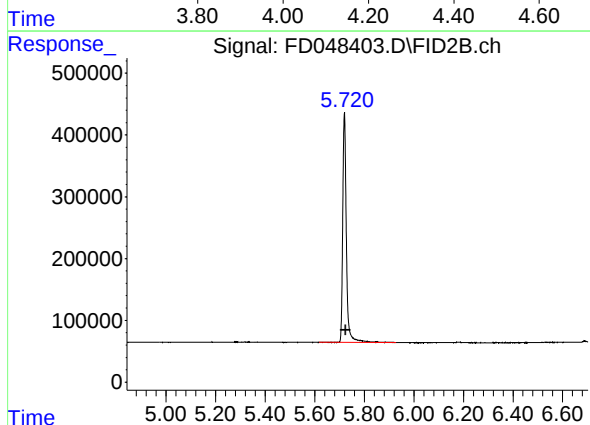
R.T.: 4.201 min
Delta R.T.: -0.003 min
Response: 3521081
Conc: 20.09 ug/ml

Instrument :

FID_D

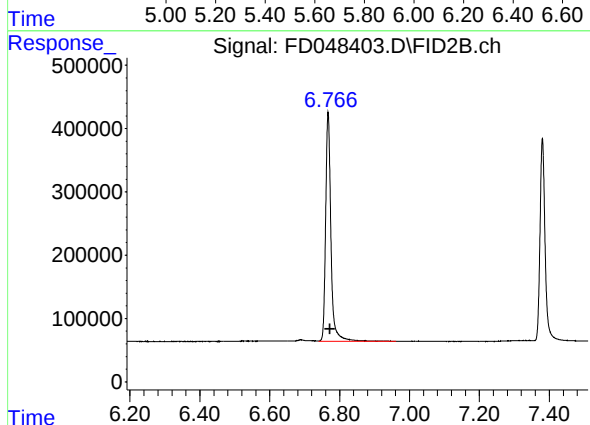
ClientSampleId :

20 PPM AROMATIC HC STD ICV



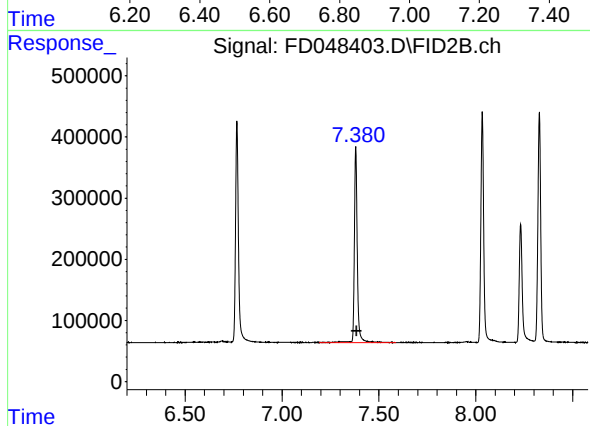
#2 Naphthalene (C11.7)

R.T.: 5.720 min
Delta R.T.: -0.004 min
Response: 3788301
Conc: 20.29 ug/ml



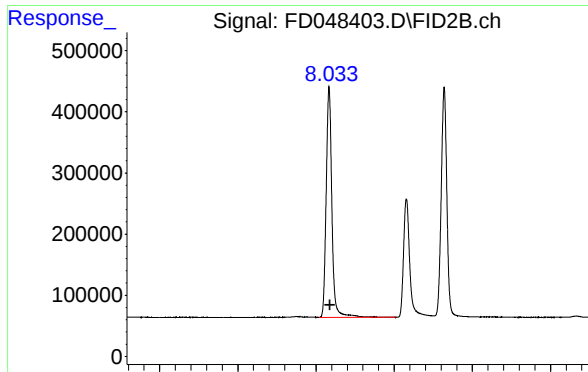
#3 2-Methylnaphthalene (C12.89)

R.T.: 6.767 min
Delta R.T.: -0.005 min
Response: 3802093
Conc: 20.12 ug/ml



#4 2-Bromonaphthalene (SURR)

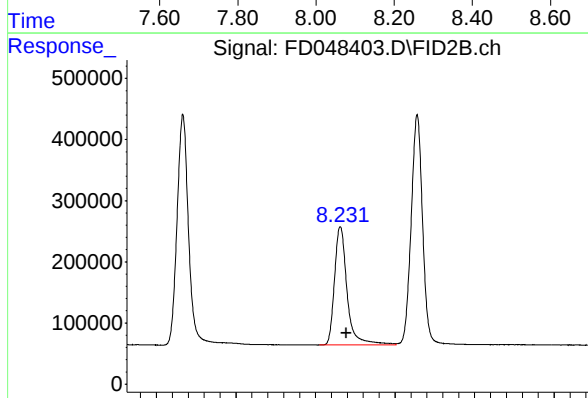
R.T.: 7.381 min
Delta R.T.: -0.004 min
Response: 3368404
Conc: 20.34 ug/ml



#5 Acenaphthylene (C15.06)

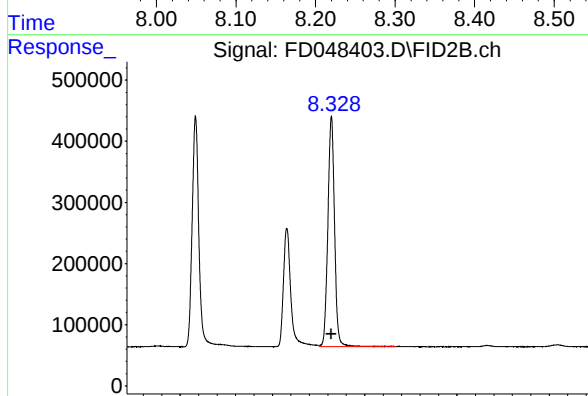
R.T.: 8.033 min
Delta R.T.: -0.002 min
Response: 3842612
Conc: 20.03 ug/ml

Instrument :
FID_D
ClientSampleId :
20 PPM AROMATIC HC STD ICV



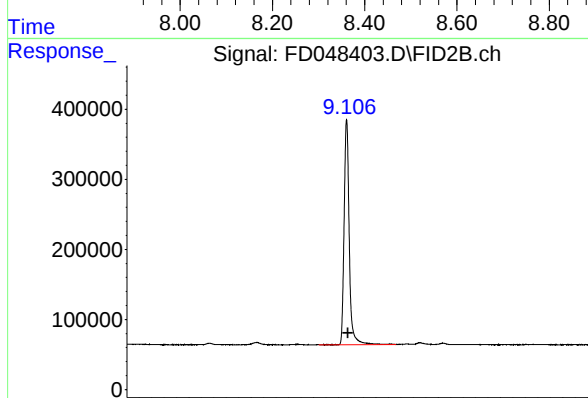
#6 2-Fluorobiphenyl (SURR)

R.T.: 8.232 min
Delta R.T.: -0.007 min
Response: 2141410
Conc: 20.65 ug/ml



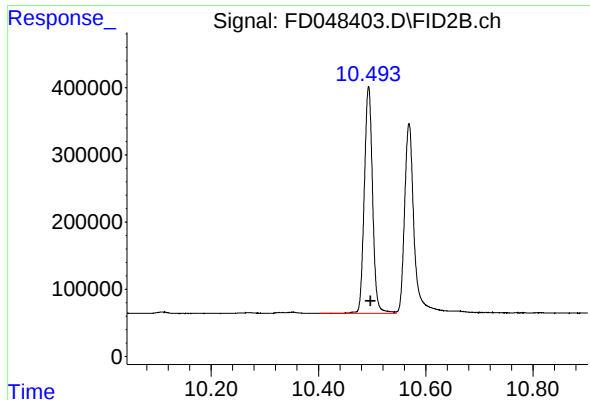
#7 Acenaphthene (C15.5)

R.T.: 8.328 min
Delta R.T.: 0.000 min
Response: 3785313
Conc: 20.01 ug/ml



#8 Flouorene (C16.55)

R.T.: 9.106 min
Delta R.T.: -0.005 min
Response: 3658929
Conc: 20.25 ug/ml



#9 Phenanthrene (C19.36)

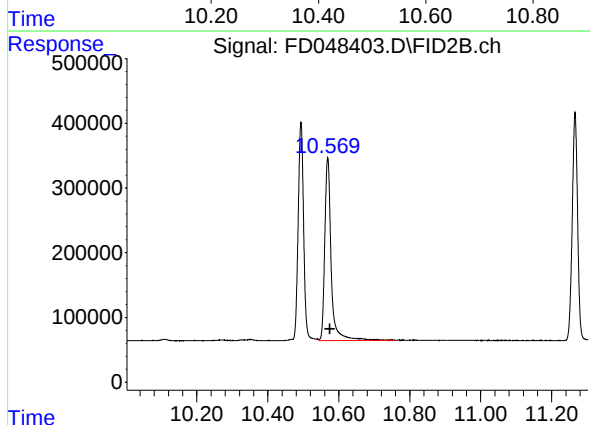
R.T.: 10.493 min
Delta R.T.: -0.004 min
Response: 3597204
Conc: 20.30 ug/ml

Instrument :

FID_D

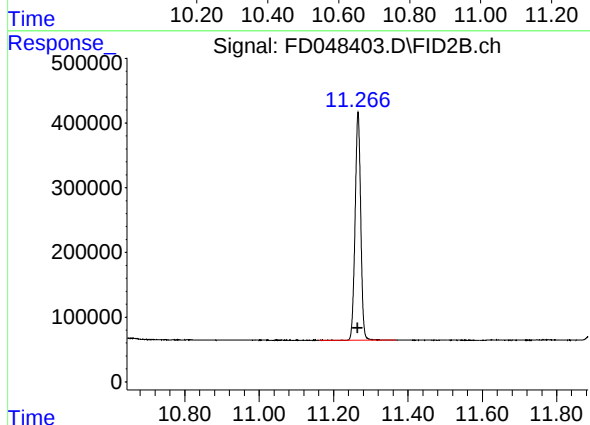
ClientSampleId :

20 PPM AROMATIC HC STD ICV



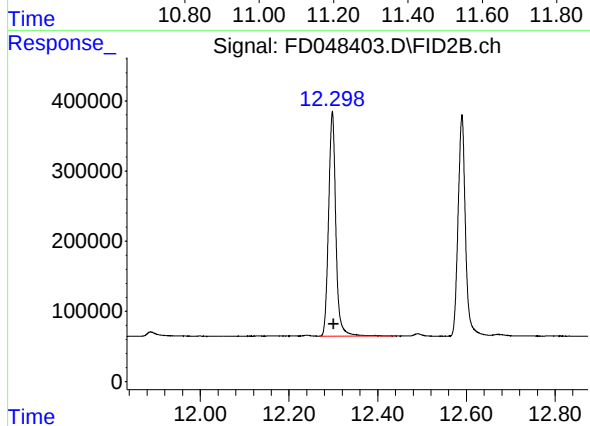
#10 Anthracene (C19.43)

R.T.: 10.569 min
Delta R.T.: -0.006 min
Response: 3532678
Conc: 19.85 ug/ml



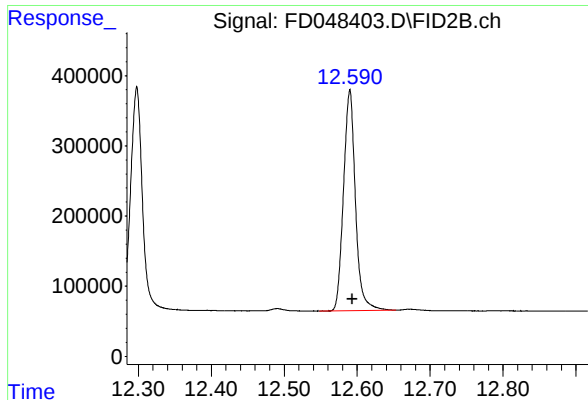
#11 ortho-Terphenyl (SURR)

R.T.: 11.266 min
Delta R.T.: 0.000 min
Response: 3698580
Conc: 20.10 ug/ml



#12 Fluoranthene (C21.85)

R.T.: 12.298 min
Delta R.T.: -0.004 min
Response: 3625812
Conc: 20.05 ug/ml



#13 Pyrene (C20.8)

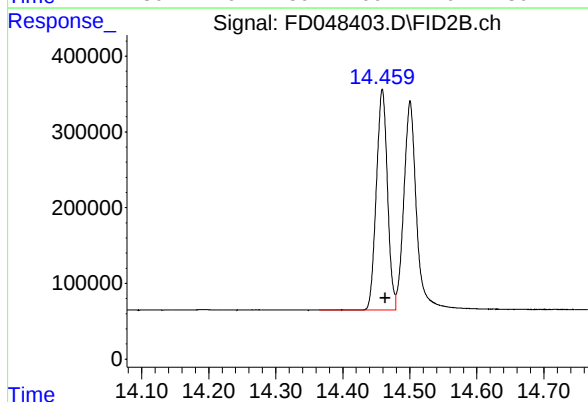
R.T.: 12.590 min
Delta R.T.: -0.004 min
Response: 3567943
Conc: 19.93 ug/ml

Instrument :

FID_D

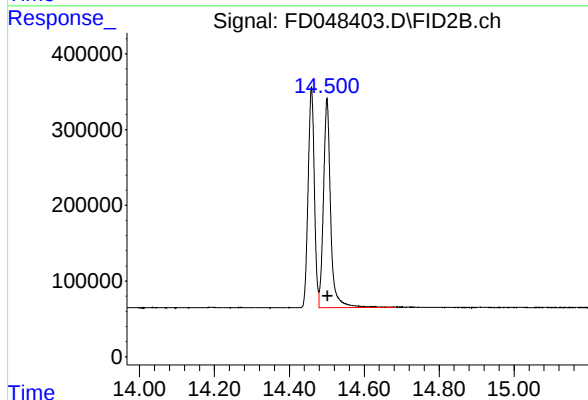
ClientSampleId :

20 PPM AROMATIC HC STD ICV



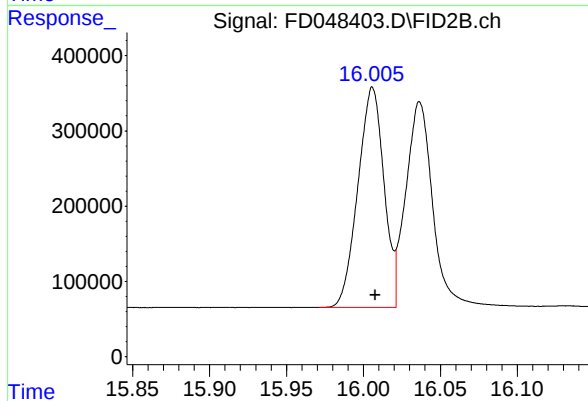
#14 Benzo[a]anthracene (C26.37)

R.T.: 14.459 min
Delta R.T.: -0.005 min
Response: 3346833
Conc: 20.94 ug/ml



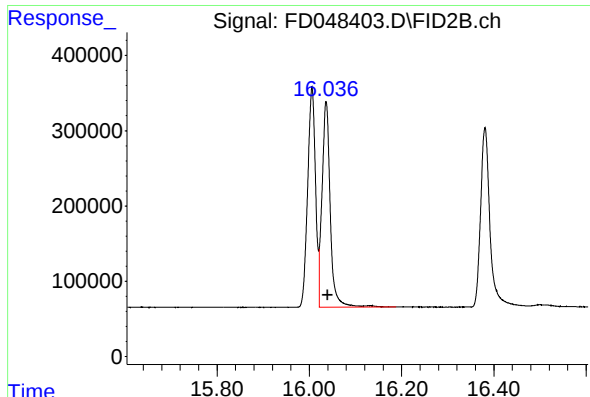
#15 Chrysene (C27.41)

R.T.: 14.500 min
Delta R.T.: -0.002 min
Response: 3657712
Conc: 19.61 ug/ml



#16 benzo[b]fluoranthene (C30.41)

R.T.: 16.006 min
Delta R.T.: -0.002 min
Response: 3457542
Conc: 20.76 ug/ml



#17 Bnezo[k]fluoranthene (C30.14)

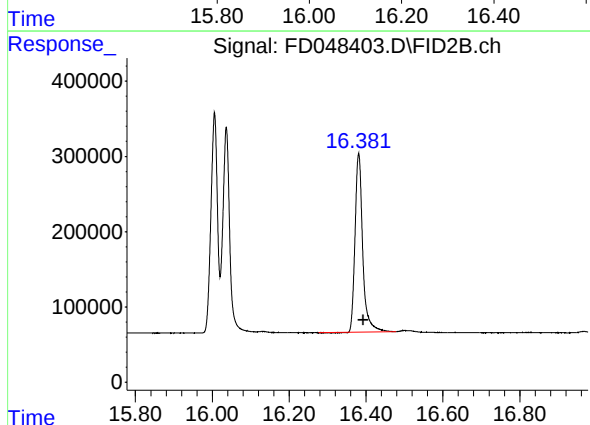
R.T.: 16.036 min
Delta R.T.: -0.004 min
Response: 3379645
Conc: 19.91 ug/ml

Instrument :

FID_D

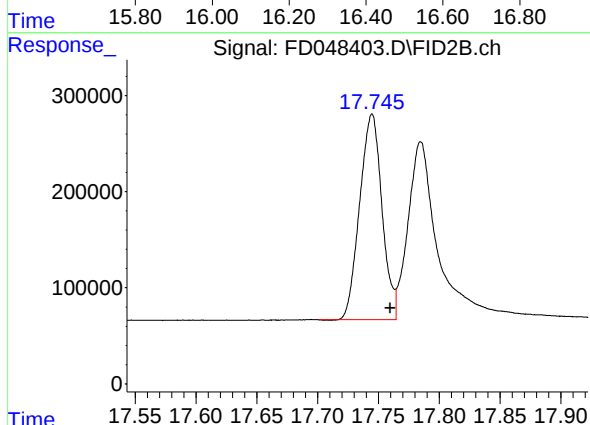
ClientSampleId :

20 PPM AROMATIC HC STD ICV



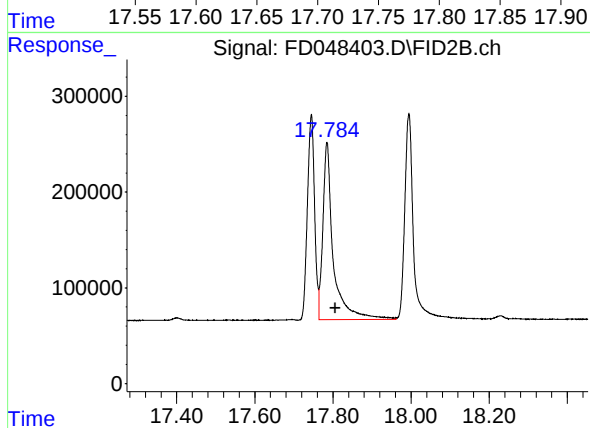
#18 Benzo[a]pyrene (C31.34)

R.T.: 16.381 min
Delta R.T.: -0.012 min
Response: 3303676
Conc: 20.21 ug/ml



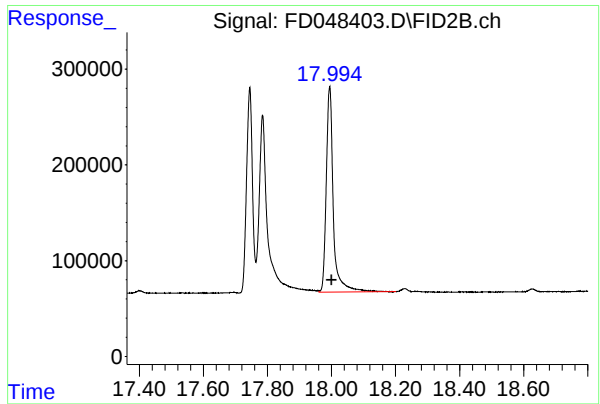
#19 Indeno[1,2,3-cd]pyrene (C35.01)

R.T.: 17.744 min
Delta R.T.: -0.016 min
Response: 2730501
Conc: 20.76 ug/ml



#20 Dibenz[a,h]anthracene (C30.36)

R.T.: 17.785 min
Delta R.T.: -0.022 min
Response: 3415613
Conc: 20.41 ug/ml



#21 Benzo[g,h,i]perylene (C34.01)

R.T.: 17.994 min

Delta R.T.: -0.007 min

Response: 3278515

Conc: 20.18 ug/ml

Instrument :

FID_D

ClientSampleId :

20 PPM AROMATIC HC STD ICV

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD093024AR\
Data File : FD048403.D
Signal(s) : FID2B.ch
Acq On : 30 Sep 2024 14:29
Sample : 20 PPM AROMATIC HC STD ICV
Misc :
ALS Vial : 66 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Title : GC Extractables

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.201	4.085	4.265	BV	411728	3521081	91.63%	4.857%
2	5.720	5.618	5.928	BB	370028	3788301	98.59%	5.225%
3	6.767	6.741	6.961	VB	359837	3802093	98.95%	5.244%
4	7.381	7.191	7.588	BB	318926	3368404	87.66%	4.646%
5	8.033	8.008	8.205	PV	376973	3842612	100.00%	5.300%
6	8.232	8.205	8.301	PV	192929	2141410	55.73%	2.954%
7	8.328	8.301	8.468	VB	377334	3785313	98.51%	5.221%
8	9.106	9.018	9.265	BB	320863	3658929	95.22%	5.047%
9	10.493	10.401	10.545	BV	339349	3597204	93.61%	4.962%
10	10.569	10.545	10.761	VB	281554	3532678	91.93%	4.873%
11	11.266	11.161	11.368	BB	349437	3698580	96.25%	5.101%
12	12.298	12.268	12.441	PB	319741	3625812	94.36%	5.001%
13	12.590	12.548	12.653	PV	318445	3567943	92.85%	4.921%
14	14.459	14.365	14.479	BV	290579	3346833	87.10%	4.616%
15	14.500	14.479	14.685	VB	276082	3657712	95.19%	5.045%
16	16.006	15.971	16.021	BV	290942	3457542	89.98%	4.769%
17	16.036	16.021	16.188	VB	275149	3379645	87.95%	4.662%
18	16.381	16.278	16.478	BV	237513	3303676	85.97%	4.557%
19	17.744	17.701	17.764	BV	214980	2730501	71.06%	3.766%
20	17.785	17.764	17.961	VV	185327	3415613	88.89%	4.711%
21	17.994	17.961	18.201	VBA	215211	3278515	85.32%	4.522%
Sum of corrected areas:							72500396	

Aromatic EPH 093024.M Tue Oct 01 01:51:11 2024

Continuing Calibration Report for SequenceID : FC101124AL

Parameter	AreaCount	Conc.	RT_Min	RT_Max	Response Factor	AVGRF	%DEV
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File ID : FC067408.D

Aliphatic C9-C12	7676829.000	60.000	3.175	6.457	127947.150	128354.488	0.317
Aliphatic C12-C16	4998555.000	40.000	6.458	9.848	124963.875	130957.677	4.577
Aliphatic C16-C21	7249603.000	60.000	9.849	13.207	120826.717	131476.102	8.100
Aliphatic C21-C28	9222288.000	80.000	13.208	16.862	115278.600	126823.664	9.103
Aliphatic C28-C40	12019967.000	120.000	16.863	21.712	100166.392	105215.848	4.799
Aliphatic EPH	41167242.000	360.000	3.175	21.712	114353.450	121110.937	5.580

Lab Sample ID:	20 PPM ALIPHATIC HC 9	Acq On:	11 Oct 2024 19:42
Client Sample ID:		Operator:	YP/AJ
Data file:	FC067408.D	Misc:	
Instrument:	FID_C	ALS Vial:	2
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	Units
Aliphatic C9-C12	3.175	6.457	7676829.000	60.000	ug/ml
Aliphatic C12-C16	6.458	9.848	4998555.000	40.000	ug/ml
Aliphatic C16-C21	9.849	13.207	7249603.000	60.000	ug/ml
Aliphatic C21-C28	13.208	16.862	9222288.000	80.000	ug/ml
Aliphatic C28-C40	16.863	21.712	12019967.000	120.000	ug/ml
Aliphatic EPH	3.175	21.712	41167242.000	360.000	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\F101124AL\
 Data File : FC067408.D
 Signal(s) : FID1A.ch
 Acq On : 11 Oct 2024 19:42
 Operator : YP/AJ
 Sample : 20 PPM ALIPHATIC HC STD
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 20 PPM ALIPHATIC HC STD

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 10/14/2024
 Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e
 Quant Time: Oct 14 03:24:57 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
 Quant Title : GC Extractables
 QLast Update : Tue Oct 01 09:13:32 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 ul
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.503	2784624	18.300 ug/ml
Spiked Amount 50.000		Recovery =	36.60%
12) S 1-chlorooctadecane (S...	12.942	2070747	18.294 ug/ml
Spiked Amount 50.000		Recovery =	36.59%
Target Compounds			
1) T n-Nonane (C9)	3.276	2538045	20.023 ug/ml
2) T n-Decane (C10)	4.342	2575570	20.037 ug/ml
3) T A~Naphthalene (C11.7)	5.922	2829476	19.946 ug/ml
4) T n-Dodecane (C12)	6.359	2563214	19.753 ug/ml
5) T A~2-methylnaphthalene...	6.978	2707060	19.732 ug/ml
6) T n-Tetradecane (C14)	8.152	2485758	19.300 ug/ml
7) T n-Hexadecane (C16)	9.751	2512797	18.876 ug/ml
8) T n-Octadecane (C18)	11.191	2503828	18.465 ug/ml
10) T n-Eicosane (C20)	12.500	2393955	18.335 ug/ml
11) T n-Heneicosane (C21)	13.111	2351820	18.337 ug/ml
13) T n-Docosane (C22)	13.696	2333543	18.275 ug/ml
14) T n-Tetracosane (C24)	14.797	2324447	18.175 ug/ml
15) T n-Hexacosane (C26)	15.817	2290559	18.167 ug/ml
16) T n-Octacosane (C28)	16.765	2273739	18.099 ug/mlm
17) T n-Tricontane (C30)	17.652	2314557	17.967 ug/ml
18) T n-Dotriacontane (C32)	18.483	2294898	18.370 ug/mlm
19) T n-Tetratriacontane (C34)	19.267	2025443	18.535 ug/mlm
20) T n-Hexatriacontane (C36)	20.005	1749945	18.515 ug/mlm
21) T n-Octatriacontane (C38)	20.731	1876713	21.399 ug/mlm
22) T n-Tetracontane (C40)	21.618	1758411	20.435 ug/mlm

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC101124AL\
Data File : FC067408.D
Signal(s) : FID1A.ch
Acq On : 11 Oct 2024 19:42
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 2 Sample Multiplier: 1

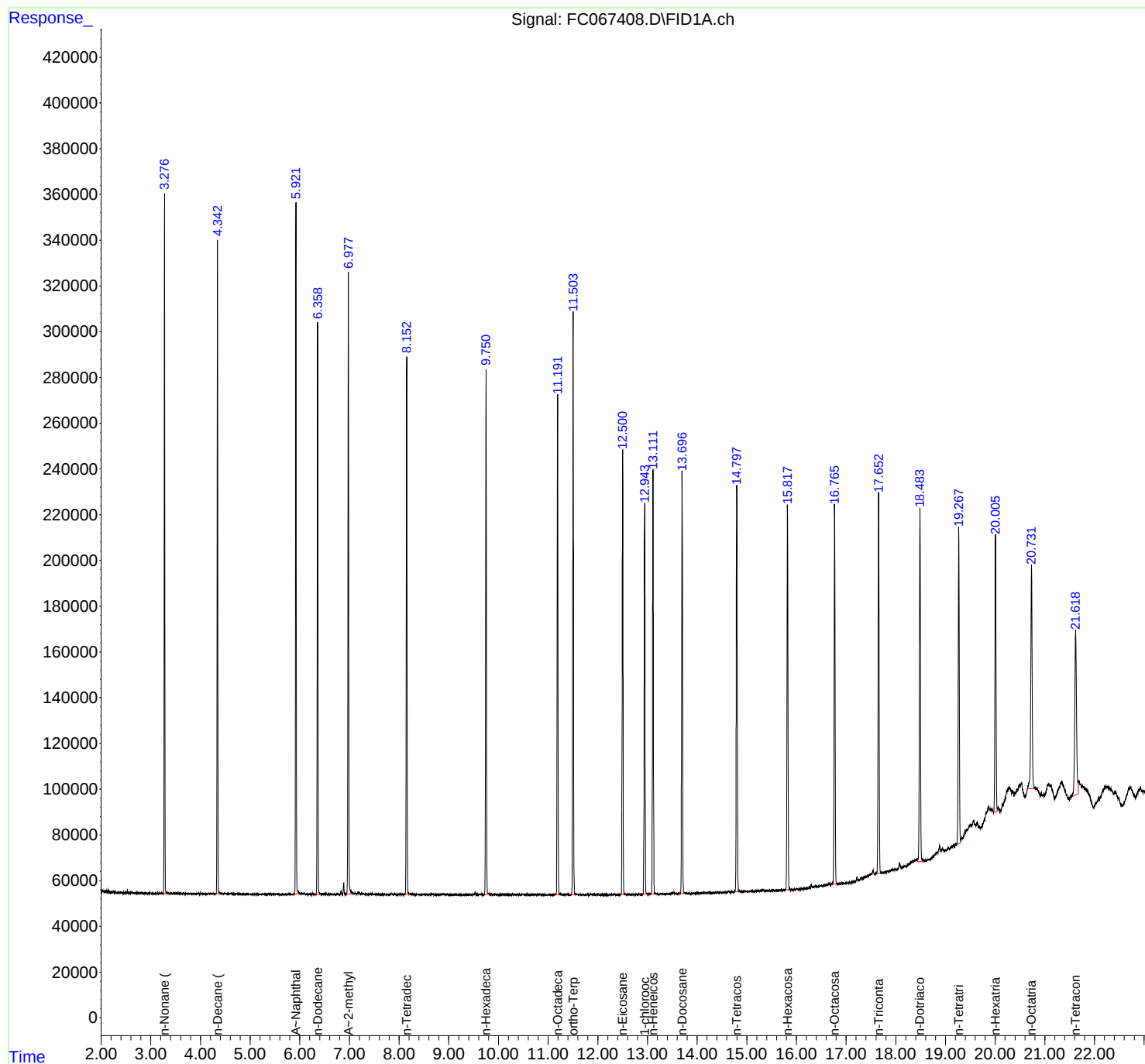
Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 10/14/2024
Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e
Quant Time: Oct 14 03:24:57 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Quant Title : GC Extractables
QLast Update : Tue Oct 01 09:13:32 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um



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Instrument :
FID_C
LabSampleId :
20 PPM ALIPHATIC HC STD
Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC10112
Data File : FC067408.D
Signal(s) : FID1A.ch
Acq On : 11 Oct 2024 19:42
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 2 Sample Multiplier: 1

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 10/14/2024
Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.276	3.245	3.325	BB	307227	2538045	89.70%	4.939%
2	4.342	4.288	4.400	BB	285124	2575570	91.03%	5.013%
3	5.922	5.867	6.002	BB	301685	2829476	100.00%	5.507%
4	6.359	6.295	6.420	BB	250379	2563214	90.59%	4.988%
5	6.978	6.930	7.068	BB	269936	2707060	95.67%	5.268%
6	8.152	8.095	8.212	BB	235413	2485758	87.85%	4.838%
7	9.751	9.692	9.805	BB	226431	2512797	88.81%	4.890%
8	11.191	11.133	11.243	BB	218394	2503828	88.49%	4.873%
9	11.503	11.435	11.553	BB	255220	2784624	98.41%	5.419%
10	12.500	12.440	12.553	BB	194227	2393955	84.61%	4.659%
11	12.942	12.877	12.995	BB	169582	2070747	73.18%	4.030%
12	13.111	13.052	13.168	BB	185808	2351820	83.12%	4.577%
13	13.696	13.628	13.760	BB	184911	2333543	82.47%	4.541%
14	14.797	14.732	14.857	BB	177718	2324447	82.15%	4.524%
15	15.817	15.777	15.877	BB	166747	2290559	80.95%	4.458%
16	16.766	16.608	16.825	BB	164367	2273028	80.33%	4.424%
17	17.652	17.600	17.702	BB	166338	2314557	81.80%	4.505%
18	18.483	18.446	18.540	M	154640	2287088	80.83%	4.451%
19	19.267	19.227	19.308	M	138149	2003873	70.82%	3.900%
20	20.005	19.967	20.042	M	121150	1740826	61.52%	3.388%
21	20.731	20.659	20.791	M	97265	1819697	64.31%	3.541%
22	21.619	21.465	21.668	PV	70869	1678269	59.31%	3.266%
Sum of corrected areas:						51382784		

Aliphatic EPH 100224.M Mon Oct 14 04:41:52 2024

Continuing Calibration Report for SequenceID : FC101124AL

Parameter	AreaCount	Conc.	RT_Min	RT_Max	Response Factor	AVGRF	%DEV
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File ID : FC067420.D

Aliphatic C9-C12	7672816.000	60.000	3.175	6.457	127880.267	128354.488	0.369
Aliphatic C12-C16	5034510.000	40.000	6.458	9.848	125862.750	130957.677	3.891
Aliphatic C16-C21	7291288.000	60.000	9.849	13.207	121521.467	131476.102	7.571
Aliphatic C21-C28	9260604.000	80.000	13.208	16.862	115757.550	126823.664	8.726
Aliphatic C28-C40	11796013.000	120.000	16.863	21.712	98300.108	105215.848	6.573
Aliphatic EPH	41055231.000	360.000	3.175	21.712	114042.308	121110.937	5.836

Lab Sample ID:	20 PPM ALIPHATIC HC 9	Acq On:	12 Oct 2024 03:41
Client Sample ID:		Operator:	YP/AJ
Data file:	FC067420.D	Misc:	
Instrument:	FID_C	ALS Vial:	2
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	Units
Aliphatic C9-C12	3.175	6.457	7672816.000	60.000	ug/ml
Aliphatic C12-C16	6.458	9.848	5034510.000	40.000	ug/ml
Aliphatic C16-C21	9.849	13.207	7291288.000	60.000	ug/ml
Aliphatic C21-C28	13.208	16.862	9260604.000	80.000	ug/ml
Aliphatic C28-C40	16.863	21.712	11796013.000	120.000	ug/ml
Aliphatic EPH	3.175	21.712	41055231.000	360.000	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC101124AL\
 Data File : FC067420.D
 Signal(s) : FID1A.ch
 Acq On : 12 Oct 2024 03:41
 Operator : YP/AJ
 Sample : 20 PPM ALIPHATIC HC STD
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 20 PPM ALIPHATIC HC STD

Manual Integrations APPROVED

Reviewed By :Yogesh Patel 10/14/2024
 Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e
 Quant Time: Oct 14 03:27:00 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
 Quant Title : GC Extractables
 QLast Update : Tue Oct 01 09:13:32 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 ul
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.502	2783627	18.294 ug/ml
Spiked Amount 50.000		Recovery =	36.59%
12) S 1-chlorooctadecane (S...	12.940	2075097	18.332 ug/ml
Spiked Amount 50.000		Recovery =	36.66%
Target Compounds			
1) T n-Nonane (C9)	3.275	2529293	19.954 ug/ml
2) T n-Decane (C10)	4.341	2570210	19.995 ug/ml
3) T A~Naphthalene (C11.7)	5.920	2825016	19.915 ug/ml
4) T n-Dodecane (C12)	6.358	2573313	19.831 ug/ml
5) T A~2-methylnaphthalene...	6.976	2713745	19.781 ug/ml
6) T n-Tetradecane (C14)	8.151	2504388	19.444 ug/ml
7) T n-Hexadecane (C16)	9.750	2530122	19.007 ug/ml
8) T n-Octadecane (C18)	11.190	2519673	18.581 ug/ml
10) T n-Eicosane (C20)	12.497	2408559	18.447 ug/ml
11) T n-Heneicosane (C21)	13.109	2363056	18.424 ug/ml
13) T n-Docosane (C22)	13.694	2348236	18.391 ug/ml
14) T n-Tetracosane (C24)	14.797	2333056	18.242 ug/ml
15) T n-Hexacosane (C26)	15.816	2303623	18.270 ug/ml
16) T n-Octacosane (C28)	16.765	2275689	18.114 ug/ml
17) T n-Tricontane (C30)	17.651	2320514	18.013 ug/ml
18) T n-Dotriacontane (C32)	18.482	2265647	18.136 ug/ml
19) T n-Tetratriacontane (C34)	19.265	2017160	18.459 ug/ml
20) T n-Hexatriacontane (C36)	20.003	1791495	18.954 ug/mlm
21) T n-Octatriacontane (C38)	20.728	1702883	19.417 ug/ml
22) T n-Tetracontane (C40)	21.617	1698314	19.737 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC101124AL\
Data File : FC067420.D
Signal(s) : FID1A.ch
Acq On : 12 Oct 2024 03:41
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 2 Sample Multiplier: 1

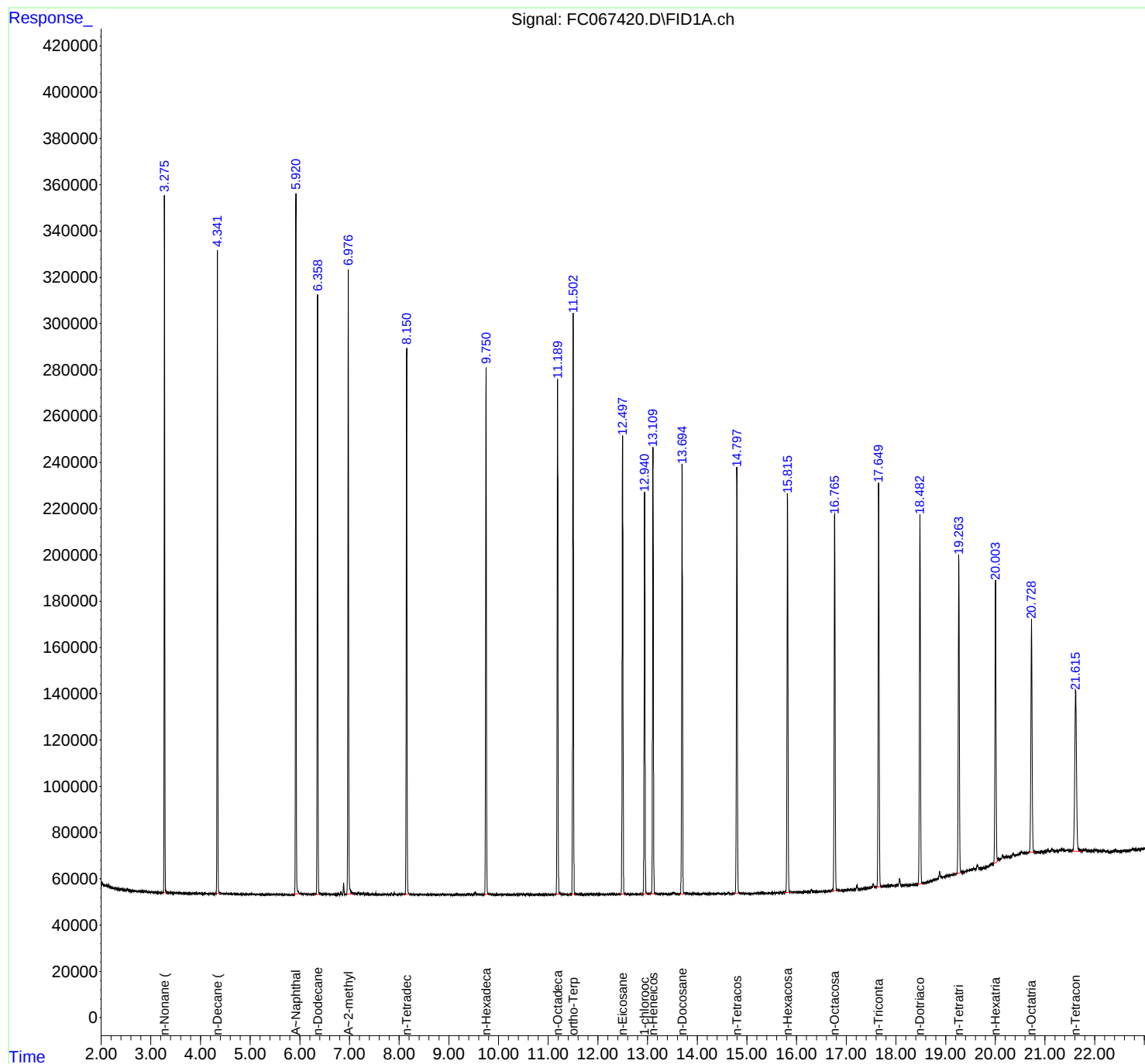
Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 10/14/2024
Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e
Quant Time: Oct 14 03:27:00 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Quant Title : GC Extractables
QLast Update : Tue Oct 01 09:13:32 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um



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Instrument :
FID_C
LabSampleId :
20 PPM ALIPHATIC HC STD
Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC10112
Data File : FC067420.D
Signal(s) : FID1A.ch
Acq On : 12 Oct 2024 03:41
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 2 Sample Multiplier: 1

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 10/14/2024
Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.275	3.245	3.324	BB	300660	2529293	89.53%	4.917%
2	4.341	4.290	4.399	BB	277546	2570210	90.98%	4.997%
3	5.920	5.859	5.997	BB	301908	2825016	100.00%	5.492%
4	6.358	6.302	6.422	BB	260312	2573313	91.09%	5.003%
5	6.976	6.929	7.085	BB	270223	2713745	96.06%	5.276%
6	8.151	8.085	8.214	BB	235258	2504388	88.65%	4.869%
7	9.750	9.694	9.817	BB	227744	2530122	89.56%	4.919%
8	11.190	11.124	11.249	BB	220845	2519673	89.19%	4.899%
9	11.502	11.435	11.555	BB	251385	2783627	98.53%	5.412%
10	12.497	12.439	12.557	BB	198607	2408559	85.26%	4.683%
11	12.940	12.877	13.002	BB	173708	2075097	73.45%	4.034%
12	13.109	13.044	13.162	BB	192059	2363056	83.65%	4.594%
13	13.694	13.624	13.750	BB	184104	2348236	83.12%	4.565%
14	14.797	14.729	14.845	BB	183136	2333056	82.59%	4.536%
15	15.816	15.750	15.879	BB	171240	2303623	81.54%	4.479%
16	16.765	16.690	16.829	BB	162151	2275689	80.55%	4.424%
17	17.651	17.577	17.705	BB	172022	2320514	82.14%	4.511%
18	18.482	18.434	18.545	BB	159306	2265647	80.20%	4.405%
19	19.265	19.190	19.312	BB	133523	2017160	71.40%	3.922%
20	20.004	19.822	20.044	BV	121334	1774798	62.82%	3.450%
21	20.728	20.672	20.802	BB	100652	1702883	60.28%	3.311%
22	21.617	21.527	21.740	BB	68743	1698314	60.12%	3.302%
Sum of corrected areas:						51436020		

Aliphatic EPH 100224.M Mon Oct 14 04:50:05 2024

Continuing Calibration Report for SequenceID : FD101124AR

Parameter	AreaCount	Conc.	RT_Min	RT_Max	Response Factor	AVGRF	%DEV
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File ID : FD048460.D

Aromatic C10-C12	7064482.000	40.000	4.100	5.818	176612.050	180984.840	2.416
Aromatic C12-C16	10873476.000	60.000	5.819	8.425	181224.600	189995.313	4.616
Aromatic C16-C21	13241236.000	80.000	8.426	12.687	165515.450	178728.230	7.393
Aromatic C21-C36	26858279.000	180.000	12.688	18.089	149212.661	165360.750	9.765
Aromatic EPH	58037473.000	360.000	4.100	18.089	161215.203	174173.072	7.440

Lab Sample ID:	20 PPM AROMATIC HC	Acq On:	11 Oct 2024 19:42
Client Sample ID:		Operator:	YP/AJ
Data file:	FD048460.D	Misc:	
Instrument:	FID_D	ALS Vial:	52
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	Units
Aromatic C10-C12	4.100	5.818	7064482.000	40.000	ug/ml
Aromatic C12-C16	5.819	8.425	10873476.000	60.000	ug/ml
Aromatic C16-C21	8.426	12.687	13241236.000	80.000	ug/ml
Aromatic C21-C36	12.688	18.089	26858279.000	180.000	ug/ml
Aromatic EPH	4.100	18.089	58037473.000	360.000	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD101124AR\
 Data File : FD048460.D
 Signal(s) : FID2B.ch
 Acq On : 11 Oct 2024 19:42
 Operator : YP/AJ
 Sample : 20 PPM AROMATIC HC STD
 Misc :
 ALS Vial : 52 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 20 PPM AROMATIC HC STD

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 10/14/2024
 Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e
 Quant Time: Oct 14 04:58:23 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
 Quant Title : GC Extractables
 QLast Update : Mon Sep 30 14:17:34 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18µm

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
4) S 2-Bromonaphthalene (S...	7.378	3098550	18.715 ug/ml
Spiked Amount 50.000		Recovery =	37.43%
6) S 2-Fluorobiphenyl (SURR)	8.229	1970958	19.006 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	38.01%
11) S ortho-Terphenyl (SURR)	11.263	3418103	18.577 ug/ml
Spiked Amount 50.000		Recovery =	37.15%
Target Compounds			
1) T 1,2,3-Trimethylbenzen...	4.200	3485645	19.889 ug/ml
2) T Naphthalene (C11.7)	5.718	3578837	19.168 ug/ml
3) T 2-Methylnaphthalene (...)	6.765	3668554	19.412 ug/ml
5) T Acenaphthylene (C15.06)	8.031	3562128	18.568 ug/ml
7) T Acenaphthene (C15.5)	8.324	3642794	19.258 ug/ml
8) T Fluorene (C16.55)	9.104	3436344	19.020 ug/ml
9) T Phenanthrene (C19.36)	10.490	3329321	18.785 ug/ml
10) T Anthracene (C19.43)	10.566	3227498	18.138 ug/ml
12) T Fluoranthene (C21.85)	12.294	3309332	18.296 ug/ml
13) T Pyrene (C20.8)	12.587	3248073	18.139 ug/ml
14) T Benzo[a]anthracene (C...	14.455	2903158	18.166 ug/ml
15) T Chrysene (C27.41)	14.496	3338538	17.898 ug/ml
16) T benzo[b]fluoranthene ...	16.001	2949344	17.709 ug/mlm
17) T Bnezo[k]fluoranthene ...	16.032	3018449	17.782 ug/mlm
18) T Benzo[a]pyrene (C31.34)	16.377	2913366	17.825 ug/ml
19) T Indeno[1,2,3-cd]pyren...	17.740	2355024	17.903 ug/ml
20) T Dibenz[a,h]anthracene...	17.782	3096081	18.502 ug/ml
21) T Benzo[g,h,i]perylene ...	17.990	2974987	18.316 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD101124AR\
Data File : FD048460.D
Signal(s) : FID2B.ch
Acq On : 11 Oct 2024 19:42
Operator : YP/AJ
Sample : 20 PPM AROMATIC HC STD
Misc :
ALS Vial : 52 Sample Multiplier: 1

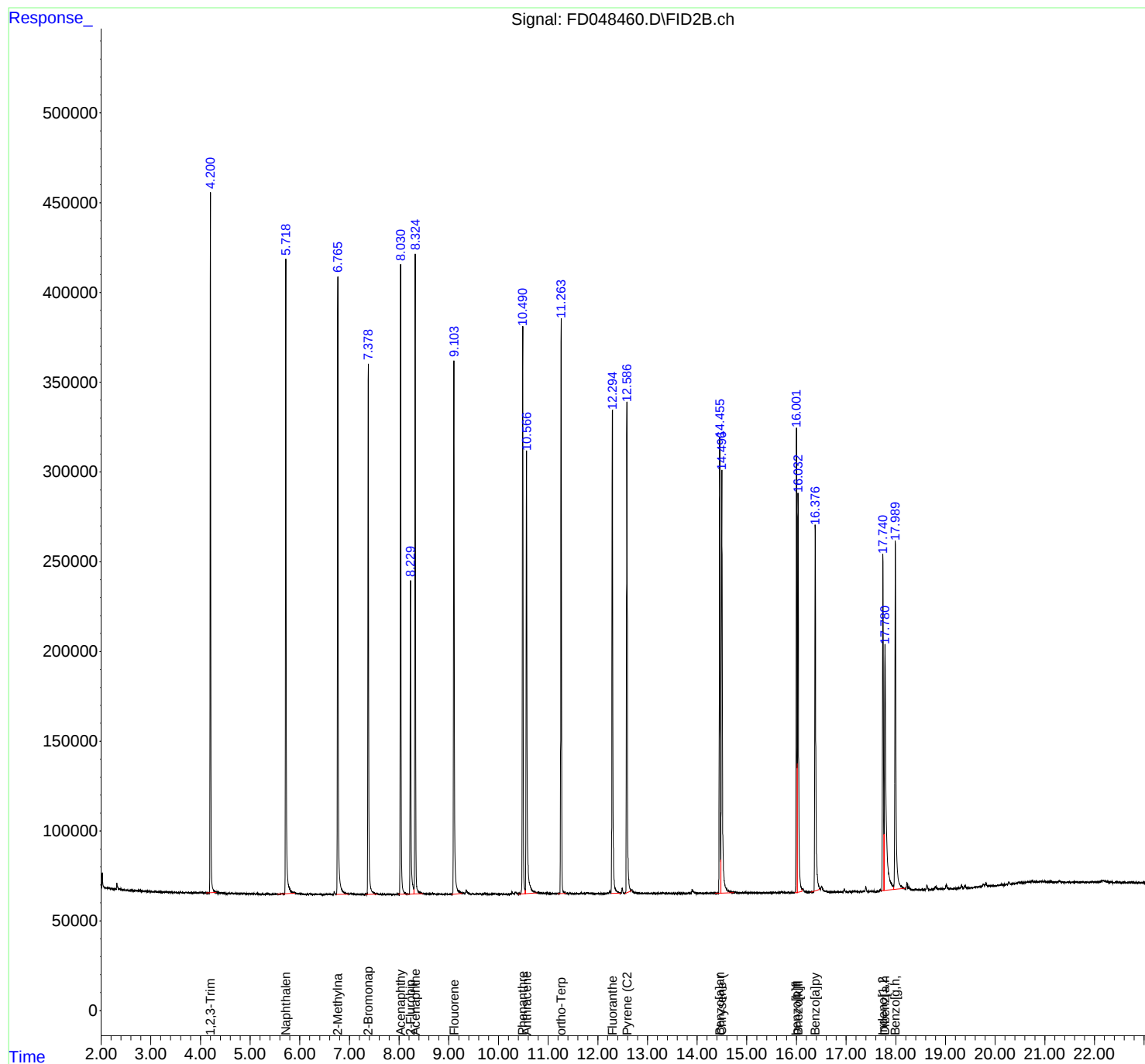
Instrument :
FID_D
ClientSampleId :
20 PPM AROMATIC HC STD

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 10/14/2024
Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e
Quant Time: Oct 14 04:58:23 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Quant Title : GC Extractables
QLast Update : Mon Sep 30 14:17:34 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm



Instrument :
FID_D
LabSampleId :
20 PPM AROMATIC HC STD
Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 10/14/2024
Supervised By :Ankita Jodhani 10/14/2024

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Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD10112
Data File : FD048460.D
Signal(s) : FID2B.ch
Acq On : 11 Oct 2024 19:42
Sample : 20 PPM AROMATIC HC STD
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Title : GC Extractables

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.200	4.148	4.308	BB	386807	3489920	95.79%	5.262%
2	5.718	5.664	5.871	BB	352939	3571046	98.02%	5.384%
3	6.765	6.738	6.941	BB	342204	3643210	100.00%	5.493%
4	7.378	7.324	7.518	BB	294127	3080135	84.54%	4.644%
5	8.031	7.904	8.134	BB	349819	3544905	97.30%	5.345%
6	8.229	8.178	8.301	BV	174514	1956275	53.70%	2.950%
7	8.324	8.301	8.424	VB	354483	3600359	98.82%	5.429%
8	9.104	9.041	9.261	BB	296048	3422546	93.94%	5.161%
9	10.490	10.401	10.539	BV	315083	3321252	91.16%	5.008%
10	10.566	10.539	10.741	VB	245666	3190821	87.58%	4.811%
11	11.263	11.184	11.348	BB	318816	3410502	93.61%	5.142%
12	12.294	12.258	12.431	VB	269158	3298592	90.54%	4.974%
13	12.587	12.541	12.670	BV	272991	3243747	89.04%	4.891%
14	14.455	14.378	14.476	BV	253303	2903966	79.71%	4.379%
15	14.496	14.476	14.678	VB	234793	3297412	90.51%	4.972%
16	16.001	15.971	16.016	M	259020	3047363	83.64%	4.595%
17	16.032	16.016	16.104	M	222311	2944831	80.83%	4.440%
18	16.377	16.288	16.481	BV	204862	2911681	79.92%	4.390%
19	17.740	17.701	17.761	BV	187764	2355286	64.65%	3.551%
20	17.782	17.761	17.958	VV	135606	3100661	85.11%	4.675%
21	17.990	17.958	18.178	VB	195091	2986609	81.98%	4.503%
Sum of corrected areas:						66321118		

Aromatic EPH 093024.M Mon Oct 14 06:22:26 2024

Continuing Calibration Report for SequenceID : FD101124AR

Parameter	AreaCount	Conc.	RT_Min	RT_Max	Response Factor	AVGRF	%DEV
-----------	-----------	-------	--------	--------	-----------------	-------	------

File ID : FD048472.D

Aromatic C10-C12	7272361.000	40.000	4.100	5.818	181809.025	180984.840	-0.455
Aromatic C12-C16	10992353.000	60.000	5.819	8.425	183205.883	189995.313	3.573
Aromatic C16-C21	13410430.000	80.000	8.426	12.687	167630.375	178728.230	6.209
Aromatic C21-C36	27444861.000	180.000	12.688	18.089	152471.450	165360.750	7.795
Aromatic EPH	59120005.000	360.000	4.100	18.089	164222.236	174173.072	5.713

Lab Sample ID:	20 PPM AROMATIC HC	Acq On:	12 Oct 2024 04:18
Client Sample ID:		Operator:	YP/AJ
Data file:	FD048472.D	Misc:	
Instrument:	FID_D	ALS Vial:	52
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	Units
Aromatic C10-C12	4.100	5.818	7272361.000	40.000	ug/ml
Aromatic C12-C16	5.819	8.425	10992353.000	60.000	ug/ml
Aromatic C16-C21	8.426	12.687	13410430.000	80.000	ug/ml
Aromatic C21-C36	12.688	18.089	27444861.000	180.000	ug/ml
Aromatic EPH	4.100	18.089	59120005.000	360.000	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD101124AR\
 Data File : FD048472.D
 Signal(s) : FID2B.ch
 Acq On : 12 Oct 2024 04:18
 Operator : YP/AJ
 Sample : 20 PPM AROMATIC HC STD
 Misc :
 ALS Vial : 52 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 20 PPM AROMATIC HC STD

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 10/14/2024
 Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e
 Quant Time: Oct 14 05:00:15 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
 Quant Title : GC Extractables
 QLast Update : Mon Sep 30 14:17:34 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 µl
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18µm

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
4) S 2-Bromonaphthalene (S...	7.378	3167030	19.128 ug/ml
Spiked Amount 50.000		Recovery =	38.26%
6) S 2-Fluorobiphenyl (SURR)	8.228	2037049	19.643 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	39.29%
11) S ortho-Terphenyl (SURR)	11.262	3445618	18.727 ug/ml
Spiked Amount 50.000		Recovery =	37.45%
Target Compounds			
1) T 1,2,3-Trimethylbenzen...	4.199	3567317	20.355 ug/ml
2) T Naphthalene (C11.7)	5.718	3705044	19.844 ug/ml
3) T 2-Methylnaphthalene (...)	6.765	3705287	19.606 ug/ml
5) T Acenaphthylene (C15.06)	8.030	3623007	18.885 ug/ml
7) T Acenaphthene (C15.5)	8.324	3664059	19.371 ug/ml
8) T Fluorene (C16.55)	9.103	3485590	19.292 ug/ml
9) T Phenanthrene (C19.36)	10.490	3388884	19.121 ug/ml
10) T Anthracene (C19.43)	10.565	3284113	18.456 ug/ml
12) T Fluoranthene (C21.85)	12.293	3342662	18.481 ug/ml
13) T Pyrene (C20.8)	12.586	3251843	18.160 ug/ml
14) T Benzo[a]anthracene (C...	14.456	2976501	18.625 ug/ml
15) T Chrysene (C27.41)	14.497	3310021	17.746 ug/ml
16) T benzo[b]fluoranthene ...	16.002	3061041	18.380 ug/ml
17) T Bnezo[k]fluoranthene ...	16.033	2975463	17.529 ug/ml
18) T Benzo[a]pyrene (C31.34)	16.378	3032746	18.555 ug/mlm
19) T Indeno[1,2,3-cd]pyren...	17.741	2521657	19.170 ug/ml
20) T Dibenz[a,h]anthracene...	17.782	3192710	19.080 ug/ml
21) T Benzo[g,h,i]perylene ...	17.991	3032060	18.667 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD101124AR\
Data File : FD048472.D
Signal(s) : FID2B.ch
Acq On : 12 Oct 2024 04:18
Operator : YP/AJ
Sample : 20 PPM AROMATIC HC STD
Misc :
ALS Vial : 52 Sample Multiplier: 1

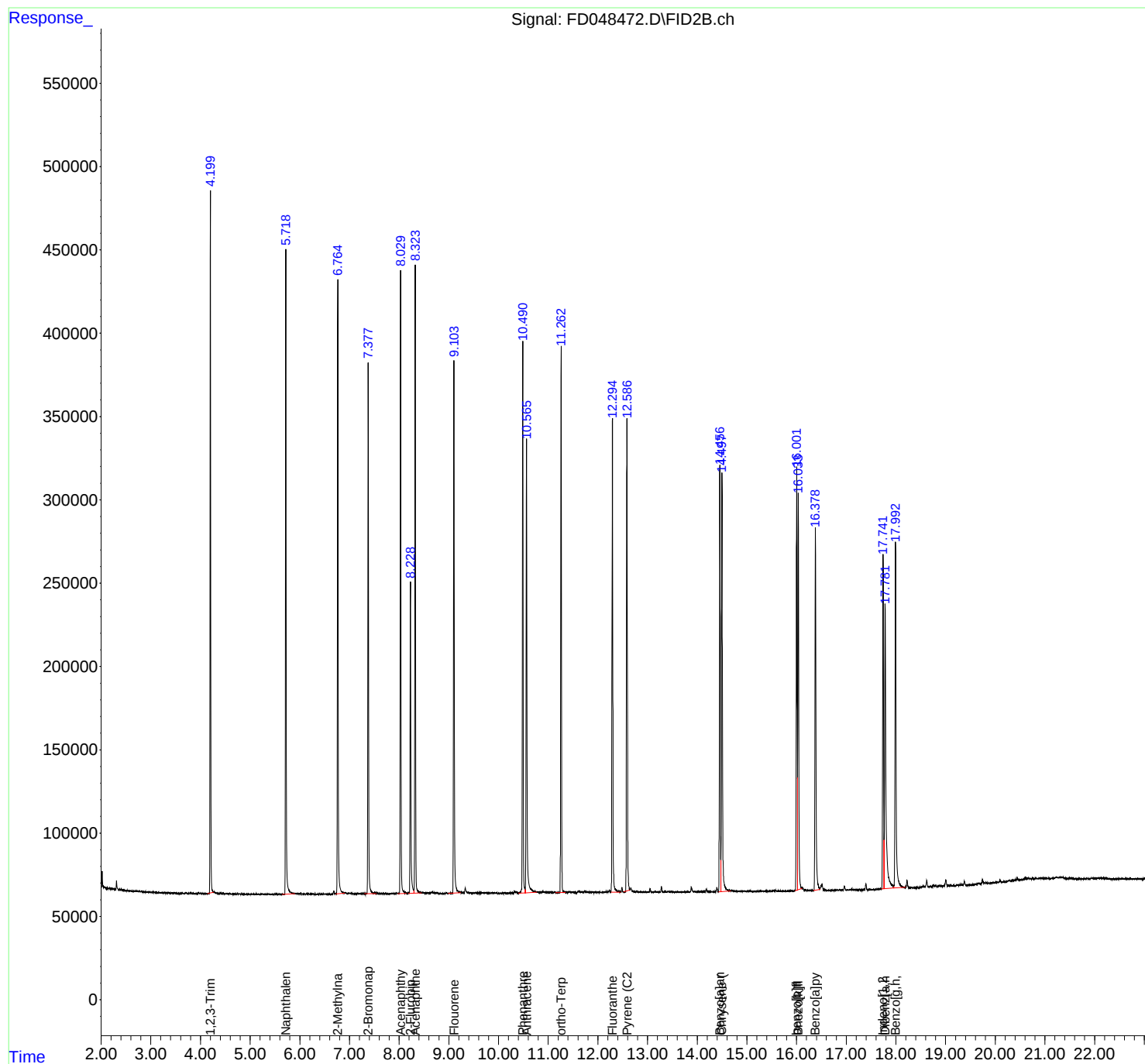
Instrument :
FID_D
ClientSampleId :
20 PPM AROMATIC HC STD

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 10/14/2024
Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e
Quant Time: Oct 14 05:00:15 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Quant Title : GC Extractables
QLast Update : Mon Sep 30 14:17:34 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm



riteres

Instrument :
FID_D
LabSampleId :
20 PPM AROMATIC HC STD
Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD10112
Data File : FD048472.D
Signal(s) : FID2B.ch
Acq On : 12 Oct 2024 04:18
Sample : 20 PPM AROMATIC HC STD
Misc :
ALS Vial : 52 Sample Multiplier: 1

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 10/14/2024
Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 093024.M
Title : GC Extractables

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.199	4.138	4.291	BB	412641	3601142	97.28%	5.334%
2	5.718	5.654	5.868	BB	386217	3695739	99.84%	5.474%
3	6.765	6.718	6.894	BB	367823	3701668	100.00%	5.483%
4	7.378	7.308	7.484	BB	318036	3141563	84.87%	4.653%
5	8.030	7.891	8.128	BB	373685	3599180	97.23%	5.331%
6	8.228	8.171	8.296	BV	186455	2021807	54.62%	2.994%
7	8.324	8.296	8.418	VB	376397	3642391	98.40%	5.395%
8	9.103	9.031	9.228	BB	321858	3469128	93.72%	5.138%
9	10.490	10.394	10.537	BV	332076	3367481	90.97%	4.988%
10	10.565	10.537	10.698	VB	271564	3217312	86.92%	4.765%
11	11.262	11.178	11.341	BB	326234	3445534	93.08%	5.103%
12	12.293	12.261	12.404	BB	285219	3307612	89.35%	4.899%
13	12.586	12.521	12.646	BV	279804	3252883	87.88%	4.818%
14	14.456	14.428	14.476	PV	255031	2976102	80.40%	4.408%
15	14.497	14.476	14.648	VB	250729	3300399	89.16%	4.888%
16	16.002	15.971	16.017	BV	253962	3060967	82.69%	4.534%
17	16.033	16.017	16.108	VV	237686	2974881	80.37%	4.406%
18	16.378	16.298	16.464	BV	217265	2990658	80.79%	4.429%
19	17.741	17.701	17.761	BV	200210	2521736	68.12%	3.735%
20	17.782	17.761	17.954	VV	171367	3194053	86.29%	4.731%
21	17.991	17.954	18.171	VB	208311	3035539	82.00%	4.496%
Sum of corrected areas:						67517773		

Aromatic EPH 093024.M Mon Oct 14 06:27:27 2024



QC SAMPLE DATA

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	
Project:	Perth Amboy	Date Received:	
Client Sample ID:	PB164054BL	SDG No.:	P4258
Lab Sample ID:	PB164054BL	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.03 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
10/11/24 08:20	10/11/24 20:55	PB164054

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS							
Total AliphaticEPH	Total AliphaticEPH	3.52	U		3.52	5.99	mg/kg
Total AromaticEPH	Total AromaticEPH	3.60	U		3.60	6.00	mg/kg
Total EPH	Total EPH	7.12	U		7.12	12.0	mg/kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	
Project:	Perth Amboy	Date Received:	
Client Sample ID:	PB164054BL	SDG No.:	P4258
Lab Sample ID:	PB164054BL	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.03 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
10/11/24 08:20	10/11/24 20:55	PB164054

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	
TARGETS								
Aliphatic C9-C12	Aliphatic C9-C12	0.38	U	1	0.38	1.00	mg/kg	FC067409.D
Aliphatic C12-C16	Aliphatic C12-C16	0.24	U	1	0.24	0.67	mg/kg	FC067409.D
Aliphatic C16-C21	Aliphatic C16-C21	0.30	U	1	0.30	1.00	mg/kg	FC067409.D
Aliphatic C21-C28	Aliphatic C21-C28	0.80	U	1	0.80	1.33	mg/kg	FC067409.D
Aliphatic C28-C40	Aliphatic C28-C40	1.80	U	1	1.80	2.00	mg/kg	FC067409.D
Aromatic C10-C12	Aromatic C10-C12	0.30	U	1	0.30	0.67	mg/kg	FD048461.D
Aromatic C12-C16	Aromatic C12-C16	0.34	U	1	0.34	1.00	mg/kg	FD048461.D
Aromatic C16-C21	Aromatic C16-C21	0.96	U	1	0.96	1.67	mg/kg	FD048461.D
Aromatic C21-C36	Aromatic C21-C36	2.00	U	1	2.00	2.66	mg/kg	FD048461.D
Total AliphaticEPH	Total AliphaticEPH	3.52	U		3.52	5.99	mg/kg	
Total AromaticEPH	Total AromaticEPH	3.60	U		3.60	6.00	mg/kg	
Total EPH	Total EPH	7.12	U		7.12	12.0	mg/kg	

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	
Project:	Perth Amboy	Date Received:	
Client Sample ID:	PB164054BL	SDG No.:	P4258
Lab Sample ID:	PB164054BL	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.03 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC067409.D	1	10/11/24	10/11/24	PB164054

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C12	Aliphatic C9-C12	0.38	U	0.38	1.00	mg/kg
Aliphatic C12-C16	Aliphatic C12-C16	0.24	U	0.24	0.67	mg/kg
Aliphatic C16-C21	Aliphatic C16-C21	0.30	U	0.30	1.00	mg/kg
Aliphatic C21-C28	Aliphatic C21-C28	0.80	U	0.80	1.33	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	1.80	U	1.80	2.00	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	36.8		40 - 140	74%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	0.00		40 - 140	0%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	PB164054BL	Acq On:	11 Oct 2024 20:55
Client Sample ID:	PB164054BL	Operator:	YP/AJ
Data file:	FC067409.D	Misc:	
Instrument:	FID_C	ALS Vial:	18
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	3.175	6.457	0	0	300	ug/ml
Aliphatic C12-C16	6.458	9.848	0	0	200	ug/ml
Aliphatic C16-C21	9.849	13.207	0	0	300	ug/ml
Aliphatic C21-C28	13.208	16.862	0	0	400	ug/ml
Aliphatic C28-C40	16.863	21.712	0	0	600	ug/ml
Aliphatic EPH	3.175	21.712	0	0		ug/ml
ortho-Terphenyl (SURR)	0.000	0.000	0	0		ug/ml
1-chlorooctadecane (SURR)	12.943	12.943	4160735	36.76		ug/ml
Aliphatic C9-C28	3.175	16.862	0	0	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC101124AL\
Data File : FC067409.D
Signal(s) : FID1A.ch
Acq On : 11 Oct 2024 20:55
Operator : YP/AJ
Sample : PB164054BL
Misc :
ALS Vial : 18 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
PB164054BL

Integration File: autoint1.e
Quant Time: Oct 14 03:25:08 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Quant Title : GC Extractables
QLast Update : Tue Oct 01 09:13:32 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
12) S 1-chlorooctadecane (S...	12.943	4160735	36.758 ug/ml
Spiked Amount	50.000	Recovery	= 73.52%

Target Compounds

(f)=RT Delta > 1/2 Window

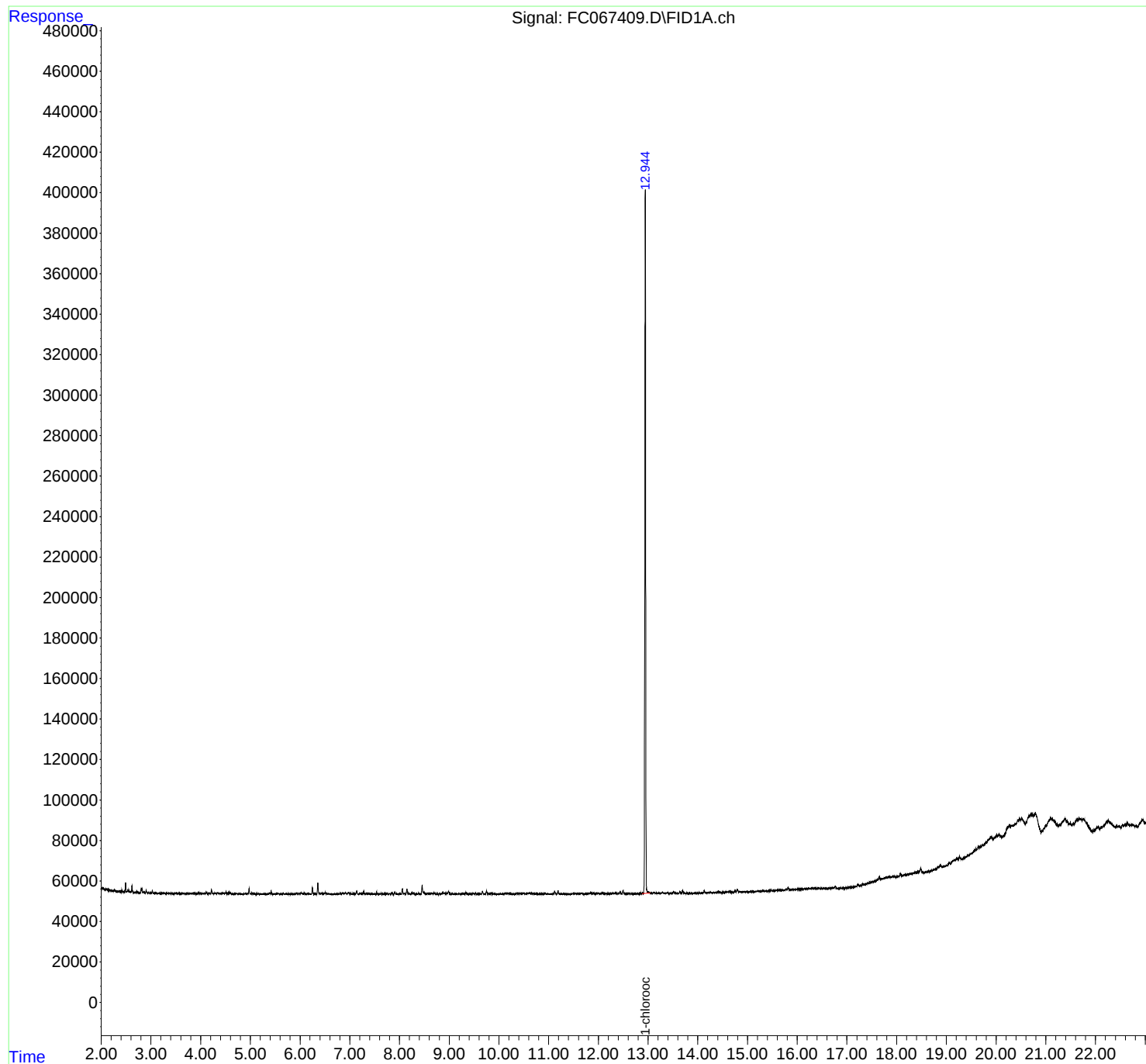
(m)=manual int.

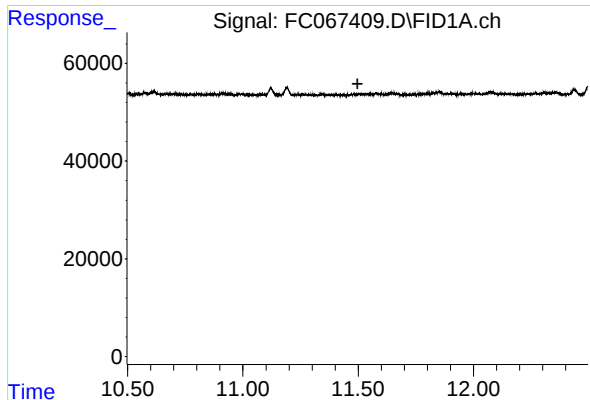
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC101124AL\
Data File : FC067409.D
Signal(s) : FID1A.ch
Acq On : 11 Oct 2024 20:55
Operator : YP/AJ
Sample : PB164054BL
Misc :
ALS Vial : 18 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
PB164054BL

Integration File: autoint1.e
Quant Time: Oct 14 03:25:08 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Quant Title : GC Extractables
QLast Update : Tue Oct 01 09:13:32 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

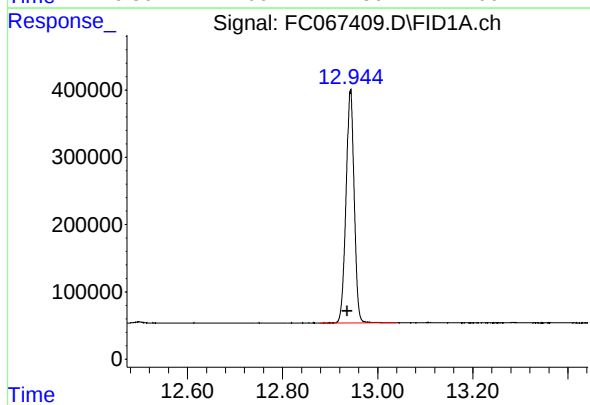




#9 ortho-Terphenyl (SURR)

R.T.: 0.000 min
Exp R.T.: 11.497 min
Response: 0
Conc: N.D.

Instrument :
FID_C
ClientSampleId :
PB164054BL



#12 1-chlorooctadecane (SURR)

R.T.: 12.943 min
Delta R.T.: 0.007 min
Response: 4160735
Conc: 36.76 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC101124AL\
Data File : FC067409.D
Signal(s) : FID1A.ch
Acq On : 11 Oct 2024 20:55
Sample : PB164054BL
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	12.943	12.877	13.038	BB	346969	4160735	100.00%	100.000%
Sum of corrected areas:						4160735		

Aliphatic EPH 100224.M Mon Oct 14 04:42:07 2024

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	
Project:	Perth Amboy	Date Received:	
Client Sample ID:	PB164054BS	SDG No.:	P4258
Lab Sample ID:	PB164054BS	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.01 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
10/11/24 08:20	10/11/24 21:31	PB164054

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS							
Total AliphaticEPH	Total AliphaticEPH	44.9			3.52	6.00	mg/kg
Total AromaticEPH	Total AromaticEPH	48.7			3.60	6.01	mg/kg
Total EPH	Total EPH	93.6			7.12	12.0	mg/kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	
Project:	Perth Amboy	Date Received:	
Client Sample ID:	PB164054BS	SDG No.:	P4258
Lab Sample ID:	PB164054BS	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.01 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
10/11/24 08:20	10/11/24 21:31	PB164054

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS							
Aliphatic C9-C12	Aliphatic C9-C12	5.95		1	0.38	1.00	mg/kg FC067410.D
Aliphatic C12-C16	Aliphatic C12-C16	5.05		1	0.24	0.67	mg/kg FC067410.D
Aliphatic C16-C21	Aliphatic C16-C21	7.93		1	0.30	1.00	mg/kg FC067410.D
Aliphatic C21-C28	Aliphatic C21-C28	10.6		1	0.80	1.33	mg/kg FC067410.D
Aliphatic C28-C40	Aliphatic C28-C40	15.4		1	1.80	2.00	mg/kg FC067410.D
Aromatic C10-C12	Aromatic C10-C12	4.69		1	0.30	0.67	mg/kg FD048462.D
Aromatic C12-C16	Aromatic C12-C16	7.59		1	0.34	1.00	mg/kg FD048462.D
Aromatic C16-C21	Aromatic C16-C21	14.5		1	0.96	1.67	mg/kg FD048462.D
Aromatic C21-C36	Aromatic C21-C36	21.9		1	2.00	2.67	mg/kg FD048462.D
Total AliphaticEPH	Total AliphaticEPH	44.9			3.52	6.00	mg/kg
Total AromaticEPH	Total AromaticEPH	48.7			3.60	6.01	mg/kg
Total EPH	Total EPH	93.6			7.12	12.0	mg/kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	
Project:	Perth Amboy	Date Received:	
Client Sample ID:	PB164054BS	SDG No.:	P4258
Lab Sample ID:	PB164054BS	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.01 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:		Test:	EPH
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC067410.D	1	10/11/24	10/11/24	PB164054

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C12	Aliphatic C9-C12	5.95		0.38	1.00	mg/kg
Aliphatic C12-C16	Aliphatic C12-C16	5.05		0.24	0.67	mg/kg
Aliphatic C16-C21	Aliphatic C16-C21	7.93		0.30	1.00	mg/kg
Aliphatic C21-C28	Aliphatic C21-C28	10.6		0.80	1.33	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	15.4		1.80	2.00	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	41.0		40 - 140	82%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	0.00		40 - 140	0%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	PB164054BS	Acq On:	11 Oct 2024 21:31
Client Sample ID:	PB164054BS	Operator:	YP/AJ
Data file:	FC067410.D	Misc:	
Instrument:	FID_C	ALS Vial:	19
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	3.175	6.457	11465632	89.328	300	ug/ml
Aliphatic C12-C16	6.458	9.848	9918535	75.738	200	ug/ml
Aliphatic C16-C21	9.849	13.207	15643745	118.985	300	ug/ml
Aliphatic C21-C28	13.208	16.862	20179814	159.117	400	ug/ml
Aliphatic C28-C40	16.863	21.712	24315542	231.102	600	ug/ml
Aliphatic EPH	3.175	21.712	81523268	674.27		ug/ml
ortho-Terphenyl (SURR)	0.000	0.000	0	0		ug/ml
1-chlorooctadecane (SURR)	12.943	12.943	4641045	41		ug/ml
Aliphatic C9-C28	3.175	16.862	57207726	443.168	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\F101124AL\
 Data File : FC067410.D
 Signal(s) : FID1A.ch
 Acq On : 11 Oct 2024 21:31
 Operator : YP/AJ
 Sample : PB164054BS
 Misc :
 ALS Vial : 19 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 PB164054BS

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 10/14/2024
 Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e
 Quant Time: Oct 14 03:25:17 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
 Quant Title : GC Extractables
 QLast Update : Tue Oct 01 09:13:32 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 ul
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
12) S 1-chlorooctadecane (S...	12.943	4641045	41.001 ug/ml
Spiked Amount 50.000		Recovery =	82.00%
Target Compounds			
1) T n-Nonane (C9)	3.277	2975519	23.474 ug/ml
2) T n-Decane (C10)	4.343	3874396	30.141 ug/ml
4) T n-Dodecane (C12)	6.360	4615717	35.571 ug/ml
6) T n-Tetradecane (C14)	8.153	4909470	38.118 ug/ml
7) T n-Hexadecane (C16)	9.752	5009065	37.629 ug/ml
8) T n-Octadecane (C18)	11.192	5168448	38.115 ug/ml
10) T n-Eicosane (C20)	12.501	5332746	40.842 ug/ml
11) T n-Heneicosane (C21)	13.112	5142551	40.096 ug/ml
13) T n-Docosane (C22)	13.697	5136082	40.224 ug/ml
14) T n-Tetracosane (C24)	14.799	5076544	39.694 ug/ml
15) T n-Hexacosane (C26)	15.819	5007723	39.717 ug/ml
16) T n-Octacosane (C28)	16.768	4959465	39.477 ug/ml
17) T n-Tricontane (C30)	17.655	4996459	38.785 ug/ml
18) T n-Dotriacontane (C32)	18.487	4921707	39.396 ug/ml
19) T n-Tetratriacontane (C34)	19.267	4459054	40.805 ug/mlm
20) T n-Hexatriacontane (C36)	20.007	3825406	40.473 ug/ml
21) T n-Octatriacontane (C38)	20.733	3268106	37.265 ug/mlm
22) T n-Tetracontane (C40)	21.620	2932870	34.084 ug/mlm

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC101124AL\
Data File : FC067410.D
Signal(s) : FID1A.ch
Acq On : 11 Oct 2024 21:31
Operator : YP/AJ
Sample : PB164054BS
Misc :
ALS Vial : 19 Sample Multiplier: 1

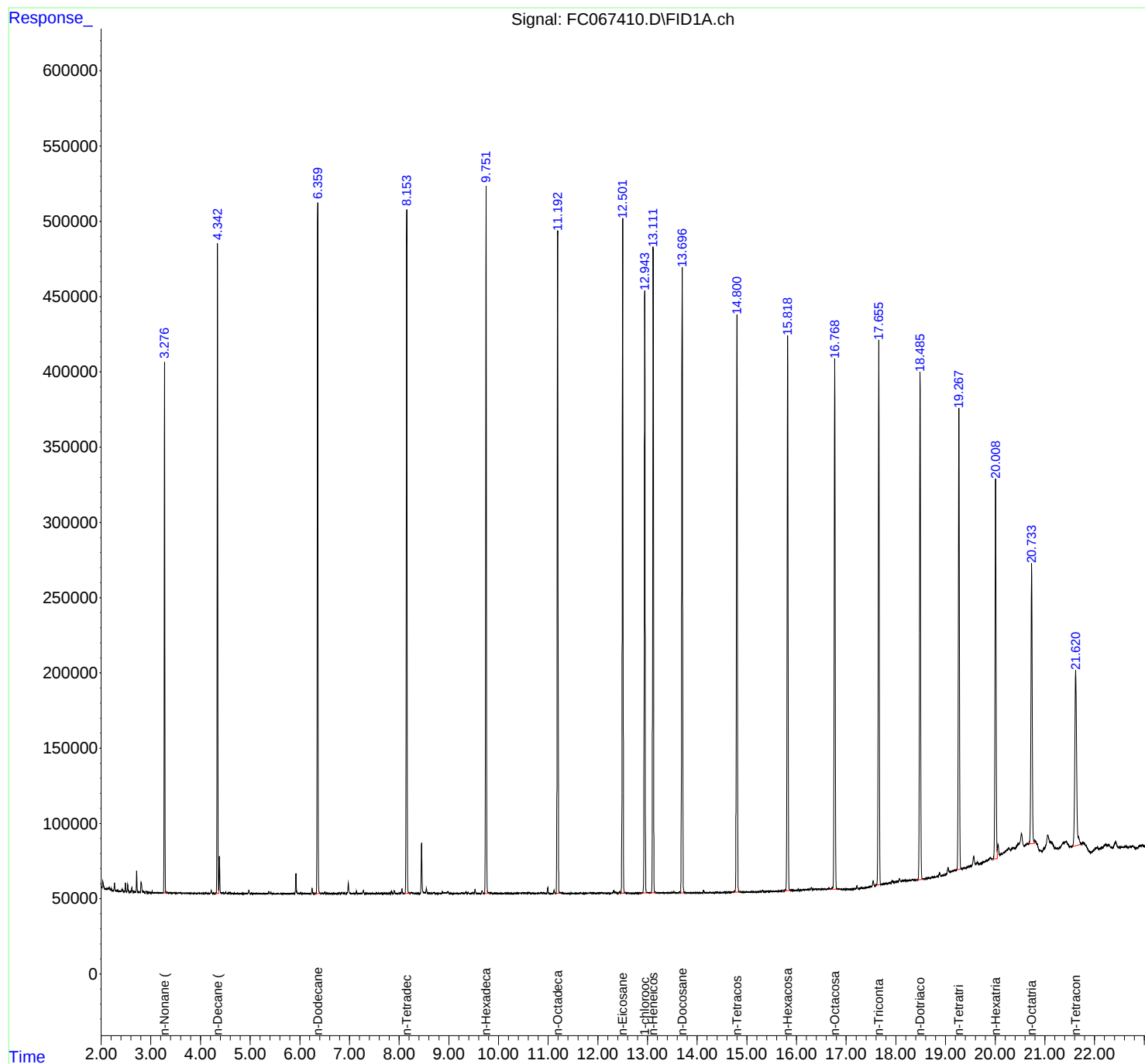
Instrument :
FID_C
ClientSampleId :
PB164054BS

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 10/14/2024
Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e
Quant Time: Oct 14 03:25:17 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Quant Title : GC Extractables
QLast Update : Tue Oct 01 09:13:32 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um



rteres

Instrument :

FID_C

ClientSampleId :

PB164054BS

Area Percent Report

Manual IntegrationsAPPROVED

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC10112

Data File : FC067410.D

Signal(s) : FID1A.ch

Acq On : 11 Oct 2024 21:31

Sample : PB164054BS

Misc :

ALS Vial : 19 Sample Multiplier: 1

Reviewed By :Yogesh Patel 10/14/2024

Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M

Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.277	3.245	3.332	BB	352951	2975519	55.80%	3.453%
2	4.343	4.285	4.367	BV	432790	3874396	72.65%	4.497%
3	6.360	6.294	6.424	BB	458870	4615717	86.55%	5.357%
4	8.153	8.087	8.230	BB	456613	4909470	92.06%	5.698%
5	9.752	9.714	9.810	BB	470395	5009065	93.93%	5.813%
6	11.192	11.154	11.252	BB	439634	5168448	96.92%	5.998%
7	12.501	12.457	12.559	PB	443099	5332746	100.00%	6.189%
8	12.943	12.880	12.992	BB	397920	4641045	87.03%	5.386%
9	13.112	13.045	13.169	BB	427885	5142551	96.43%	5.968%
10	13.697	13.659	13.759	VB	416380	5136082	96.31%	5.961%
11	14.799	14.705	14.859	BB	379054	5076544	95.20%	5.892%
12	15.819	15.730	15.887	BB	367996	5007723	93.91%	5.812%
13	16.768	16.684	16.829	BB	347615	4959465	93.00%	5.756%
14	17.655	17.587	17.694	BB	361768	4996459	93.69%	5.799%
15	18.487	18.404	18.560	BB	333173	4921707	92.29%	5.712%
16	19.267	19.220	19.309	M	306520	4454784	83.54%	5.170%
17	20.007	19.959	20.040	BV	250982	3825406	71.73%	4.440%
18	20.733	20.684	20.775	M	185260	3205167	60.10%	3.720%
19	21.620	21.561	21.740	M	116467	2912019	54.61%	3.380%
Sum of corrected areas:						86164313		

Aliphatic EPH 100224.M Mon Oct 14 04:43:04 2024

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	
Project:	Perth Amboy	Date Received:	
Client Sample ID:	PB164054BSD	SDG No.:	P4258
Lab Sample ID:	PB164054BSD	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.03 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
10/11/24 08:20	10/11/24 22:07	PB164054

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS							
Total AliphaticEPH	Total AliphaticEPH	45.1			3.52	5.99	mg/kg
Total AromaticEPH	Total AromaticEPH	47.8			3.60	6.00	mg/kg
Total EPH	Total EPH	92.9			7.12	12.0	mg/kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	
Project:	Perth Amboy	Date Received:	
Client Sample ID:	PB164054BSD	SDG No.:	P4258
Lab Sample ID:	PB164054BSD	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.03 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
10/11/24 08:20	10/11/24 22:07	PB164054

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS							
Aliphatic C9-C12	Aliphatic C9-C12	5.97		1	0.38	1.00	mg/kg FC067411.D
Aliphatic C12-C16	Aliphatic C12-C16	5.08		1	0.24	0.67	mg/kg FC067411.D
Aliphatic C16-C21	Aliphatic C16-C21	7.94		1	0.30	1.00	mg/kg FC067411.D
Aliphatic C21-C28	Aliphatic C21-C28	10.6		1	0.80	1.33	mg/kg FC067411.D
Aliphatic C28-C40	Aliphatic C28-C40	15.5		1	1.80	2.00	mg/kg FC067411.D
Aromatic C10-C12	Aromatic C10-C12	4.58		1	0.30	0.67	mg/kg FD048463.D
Aromatic C12-C16	Aromatic C12-C16	7.43		1	0.34	1.00	mg/kg FD048463.D
Aromatic C16-C21	Aromatic C16-C21	14.2		1	0.96	1.67	mg/kg FD048463.D
Aromatic C21-C36	Aromatic C21-C36	21.6		1	2.00	2.66	mg/kg FD048463.D
Total AliphaticEPH	Total AliphaticEPH	45.1			3.52	5.99	mg/kg
Total AromaticEPH	Total AromaticEPH	47.8			3.60	6.00	mg/kg
Total EPH	Total EPH	92.9			7.12	12.0	mg/kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	
Project:	Perth Amboy	Date Received:	
Client Sample ID:	PB164054BSD	SDG No.:	P4258
Lab Sample ID:	PB164054BSD	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.03 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:		Test:	EPH
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC067411.D	1	10/11/24	10/11/24	PB164054

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C12	Aliphatic C9-C12	5.97		0.38	1.00	mg/kg
Aliphatic C12-C16	Aliphatic C12-C16	5.08		0.24	0.67	mg/kg
Aliphatic C16-C21	Aliphatic C16-C21	7.94		0.30	1.00	mg/kg
Aliphatic C21-C28	Aliphatic C21-C28	10.6		0.80	1.33	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	15.5		1.80	2.00	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	38.8		40 - 140	78%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	0.00		40 - 140	0%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	PB164054BSD	Acq On:	11 Oct 2024 22:07
Client Sample ID:	PB164054BSD	Operator:	YP/AJ
Data file:	FC067411.D	Misc:	
Instrument:	FID_C	ALS Vial:	20
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	3.175	6.457	11514355	89.707	300	ug/ml
Aliphatic C12-C16	6.458	9.848	9982342	76.226	200	ug/ml
Aliphatic C16-C21	9.849	13.207	15666132	119.156	300	ug/ml
Aliphatic C21-C28	13.208	16.862	20204170	159.309	400	ug/ml
Aliphatic C28-C40	16.863	21.712	24415644	232.053	600	ug/ml
Aliphatic EPH	3.175	21.712	81782643	676.451		ug/ml
ortho-Terphenyl (SURR)	0.000	0.000	0	0		ug/ml
1-chlorooctadecane (SURR)	12.944	12.944	4391796	38.8		ug/ml
Aliphatic C9-C28	3.175	16.862	57366999	444.398	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\F101124AL\
 Data File : FC067411.D
 Signal(s) : FID1A.ch
 Acq On : 11 Oct 2024 22:07
 Operator : YP/AJ
 Sample : PB164054BSD
 Misc :
 ALS Vial : 20 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 PB164054BSD

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 10/14/2024
 Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e
 Quant Time: Oct 14 03:25:28 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
 Quant Title : GC Extractables
 QLast Update : Tue Oct 01 09:13:32 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 ul
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
12) S 1-chlorooctadecane (S...	12.944	4391796	38.799 ug/ml
Spiked Amount 50.000		Recovery =	77.60%
Target Compounds			
1) T n-Nonane (C9)	3.276	2973066	23.454 ug/ml
2) T n-Decane (C10)	4.342	3889911	30.262 ug/ml
4) T n-Dodecane (C12)	6.360	4651378	35.845 ug/ml
6) T n-Tetradecane (C14)	8.153	4944243	38.388 ug/ml
7) T n-Hexadecane (C16)	9.752	5038099	37.847 ug/ml
8) T n-Octadecane (C18)	11.192	5183054	38.223 ug/ml
10) T n-Eicosane (C20)	12.501	5336780	40.873 ug/ml
11) T n-Heneicosane (C21)	13.112	5146298	40.125 ug/ml
13) T n-Docosane (C22)	13.697	5129946	40.176 ug/ml
14) T n-Tetracosane (C24)	14.799	5076550	39.694 ug/ml
15) T n-Hexacosane (C26)	15.819	5013846	39.765 ug/ml
16) T n-Octacosane (C28)	16.768	4983828	39.671 ug/ml
17) T n-Tricontane (C30)	17.654	5024232	39.001 ug/ml
18) T n-Dotriacontane (C32)	18.486	4911329	39.313 ug/ml
19) T n-Tetratriacontane (C34)	19.266	4506135	41.236 ug/mlm
20) T n-Hexatriacontane (C36)	20.005	3794924	40.150 ug/mlm
21) T n-Octatriacontane (C38)	20.732	3287683	37.488 ug/mlm
22) T n-Tetracontane (C40)	21.622	2949828	34.281 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC101124AL\
Data File : FC067411.D
Signal(s) : FID1A.ch
Acq On : 11 Oct 2024 22:07
Operator : YP/AJ
Sample : PB164054BSD
Misc :
ALS Vial : 20 Sample Multiplier: 1

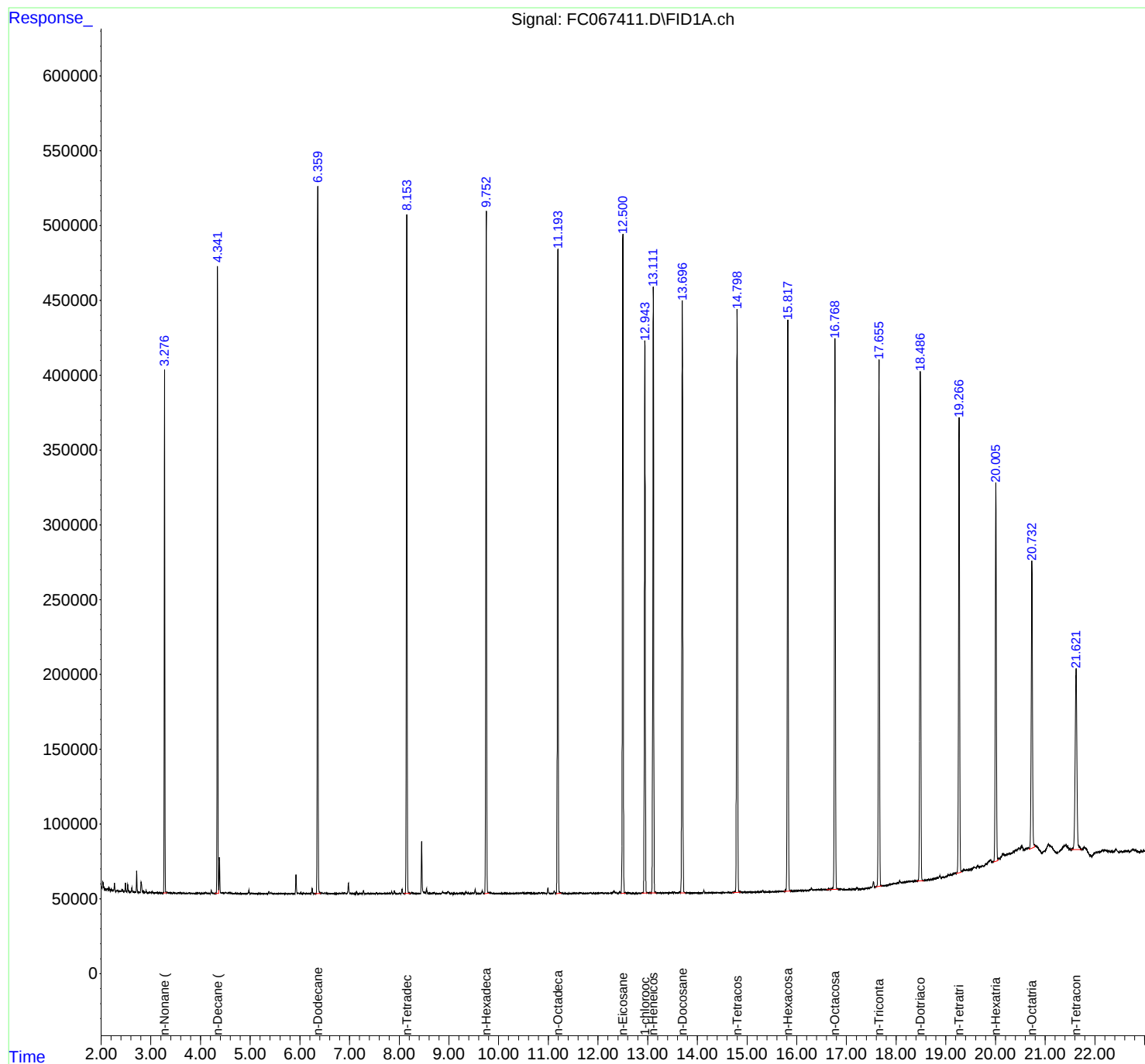
Instrument :
FID_C
ClientSampleId :
PB164054BSD

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 10/14/2024
Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e
Quant Time: Oct 14 03:25:28 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Quant Title : GC Extractables
QLast Update : Tue Oct 01 09:13:32 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um



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Instrument :

FID_C

ClientSampleId :

PB164054BSD

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 10/14/2024

Supervised By :Ankita Jodhani 10/14/2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC10112
Data File : FC067411.D
Signal(s) : FID1A.ch
Acq On : 11 Oct 2024 22:07
Sample : PB164054BSD
Misc :
ALS Vial : 20 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.276	3.245	3.328	BB	349521	2973066	55.71%	3.450%
2	4.342	4.285	4.366	BV	420386	3889911	72.89%	4.514%
3	6.360	6.293	6.420	BB	472429	4651378	87.16%	5.398%
4	8.153	8.090	8.222	BB	455558	4944243	92.64%	5.737%
5	9.752	9.713	9.807	BB	455639	5038099	94.40%	5.846%
6	11.192	11.153	11.260	BB	431020	5183054	97.12%	6.015%
7	12.501	12.462	12.558	PB	437914	5336780	100.00%	6.193%
8	12.944	12.880	13.002	BB	368911	4391796	82.29%	5.096%
9	13.112	13.043	13.173	BB	405193	5146298	96.43%	5.972%
10	13.697	13.660	13.762	VB	393528	5129946	96.12%	5.953%
11	14.799	14.708	14.870	BB	389944	5076550	95.12%	5.891%
12	15.819	15.735	15.887	BB	376315	5013846	93.95%	5.818%
13	16.768	16.597	16.838	BB	367579	4983828	93.39%	5.783%
14	17.654	17.588	17.718	BB	351220	5024232	94.14%	5.830%
15	18.486	18.415	18.557	BB	338726	4911329	92.03%	5.699%
16	19.266	19.217	19.309	M	304136	4496904	84.26%	5.218%
17	20.005	19.958	20.033	M	252209	3745599	70.18%	4.347%
18	20.732	20.672	20.793	M	192144	3287752	61.61%	3.815%
19	21.622	21.520	21.738	BV	121379	2949828	55.27%	3.423%
Sum of corrected areas:						86174438		

Aliphatic EPH 100224.M Mon Oct 14 04:43:45 2024

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	
Project:	Perth Amboy	Date Received:	
Client Sample ID:	Chamberlain AveMS	SDG No.:	P4258
Lab Sample ID:	P4258-03MS	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	86
Sample Wt/Vol:	30.07 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
10/11/24 08:20	10/12/24 1:50	PB164054

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS							
Total AliphaticEPH	Total AliphaticEPH	54.0			4.08	6.96	mg/kg
Total AromaticEPH	Total AromaticEPH	71.7			4.17	6.95	mg/kg
Total EPH	Total EPH	126			8.26	13.9	mg/kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	
Project:	Perth Amboy	Date Received:	
Client Sample ID:	Chamberlain AveMS	SDG No.:	P4258
Lab Sample ID:	P4258-03MS	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	86
Sample Wt/Vol:	30.07 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
10/11/24 08:20	10/12/24 1:50	PB164054

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS							
Aliphatic C9-C12	Aliphatic C9-C12	6.78		1	0.44	1.16	mg/kg FC067417.D
Aliphatic C12-C16	Aliphatic C12-C16	5.58		1	0.28	0.77	mg/kg FC067417.D
Aliphatic C16-C21	Aliphatic C16-C21	8.85		1	0.35	1.16	mg/kg FC067417.D
Aliphatic C21-C28	Aliphatic C21-C28	11.8		1	0.93	1.55	mg/kg FC067417.D
Aliphatic C28-C40	Aliphatic C28-C40	21.0		1	2.09	2.32	mg/kg FC067417.D
Aromatic C10-C12	Aromatic C10-C12	6.55		1	0.35	0.77	mg/kg FD048469.D
Aromatic C12-C16	Aromatic C12-C16	10.6		1	0.39	1.16	mg/kg FD048469.D
Aromatic C16-C21	Aromatic C16-C21	20.9		1	1.11	1.93	mg/kg FD048469.D
Aromatic C21-C36	Aromatic C21-C36	33.6		1	2.32	3.09	mg/kg FD048469.D
Total AliphaticEPH	Total AliphaticEPH	54.0			4.08	6.96	mg/kg
Total AromaticEPH	Total AromaticEPH	71.7			4.17	6.95	mg/kg
Total EPH	Total EPH	126			8.26	13.9	mg/kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	
Project:	Perth Amboy	Date Received:	
Client Sample ID:	Chamberlain AveMS	SDG No.:	P4258
Lab Sample ID:	P4258-03MS	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	86
Sample Wt/Vol:	30.07 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC067417.D	1	10/11/24	10/12/24	PB164054

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C12	Aliphatic C9-C12	6.78		0.44	1.16	mg/kg
Aliphatic C12-C16	Aliphatic C12-C16	5.58		0.28	0.77	mg/kg
Aliphatic C16-C21	Aliphatic C16-C21	8.85		0.35	1.16	mg/kg
Aliphatic C21-C28	Aliphatic C21-C28	11.8		0.93	1.55	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	21.0		2.09	2.32	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	25.0		40 - 140	50%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	0.00		40 - 140	0%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	P4258-03MS	Acq On:	12 Oct 2024 01:50
Client Sample ID:	P4258-03MS	Operator:	YP/AJ
Data file:	FC067417.D	Misc:	
Instrument:	FID_C	ALS Vial:	26
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	3.175	6.457	11259049	87.718	300	ug/ml
Aliphatic C12-C16	6.458	9.848	9442477	72.103	200	ug/ml
Aliphatic C16-C21	9.849	13.207	15043294	114.418	300	ug/ml
Aliphatic C21-C28	13.208	16.862	19405623	153.013	400	ug/ml
Aliphatic C28-C40	16.863	21.712	28582430	271.655	600	ug/ml
Aliphatic EPH	3.175	21.712	83732873	698.908		ug/ml
ortho-Terphenyl (SURR)	0.000	0.000	0	0		ug/ml
1-chlorooctadecane (SURR)	12.942	12.942	2825735	24.96		ug/ml
Aliphatic C9-C28	3.175	16.862	55150443	427.252	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\F101124AL\
 Data File : FC067417.D
 Signal(s) : FID1A.ch
 Acq On : 12 Oct 2024 01:50
 Operator : YP/AJ
 Sample : P4258-03MS
 Misc :
 ALS Vial : 26 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 Chamberlain AveMS

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 10/14/2024
 Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e
 Quant Time: Oct 14 03:26:29 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
 Quant Title : GC Extractables
 QLast Update : Tue Oct 01 09:13:32 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 ul
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
12) S 1-chlorooctadecane (S...	12.942	2825735	24.964 ug/ml
Spiked Amount 50.000		Recovery =	49.93%
Target Compounds			
1) T n-Nonane (C9)	3.276	3119774	24.612 ug/ml
2) T n-Decane (C10)	4.342	3814667	29.676 ug/ml
4) T n-Dodecane (C12)	6.359	4281840	32.998 ug/ml
6) T n-Tetradecane (C14)	8.153	4550664	35.332 ug/ml
7) T n-Hexadecane (C16)	9.752	4788294	35.970 ug/ml
8) T n-Octadecane (C18)	11.192	5001743	36.885 ug/ml
10) T n-Eicosane (C20)	12.500	5089832	38.982 ug/ml
11) T n-Heneicosane (C21)	13.112	4907863	38.266 ug/ml
13) T n-Docosane (C22)	13.697	4895767	38.342 ug/ml
14) T n-Tetracosane (C24)	14.799	4852829	37.945 ug/ml
15) T n-Hexacosane (C26)	15.818	4810559	38.153 ug/ml
16) T n-Octacosane (C28)	16.768	4785460	38.092 ug/ml
17) T n-Tricontane (C30)	17.653	4856449	37.698 ug/ml
18) T n-Dotriacontane (C32)	18.485	4822889	38.605 ug/mlm
19) T n-Tetratriacontane (C34)	19.267	4790118	43.834 ug/mlm
20) T n-Hexatriacontane (C36)	20.008	4660090	49.304 ug/ml
21) T n-Octatriacontane (C38)	20.733	4480511	51.089 ug/mlm
22) T n-Tetracontane (C40)	21.623	4338434	50.419 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC101124AL\
Data File : FC067417.D
Signal(s) : FID1A.ch
Acq On : 12 Oct 2024 01:50
Operator : YP/AJ
Sample : P4258-03MS
Misc :
ALS Vial : 26 Sample Multiplier: 1

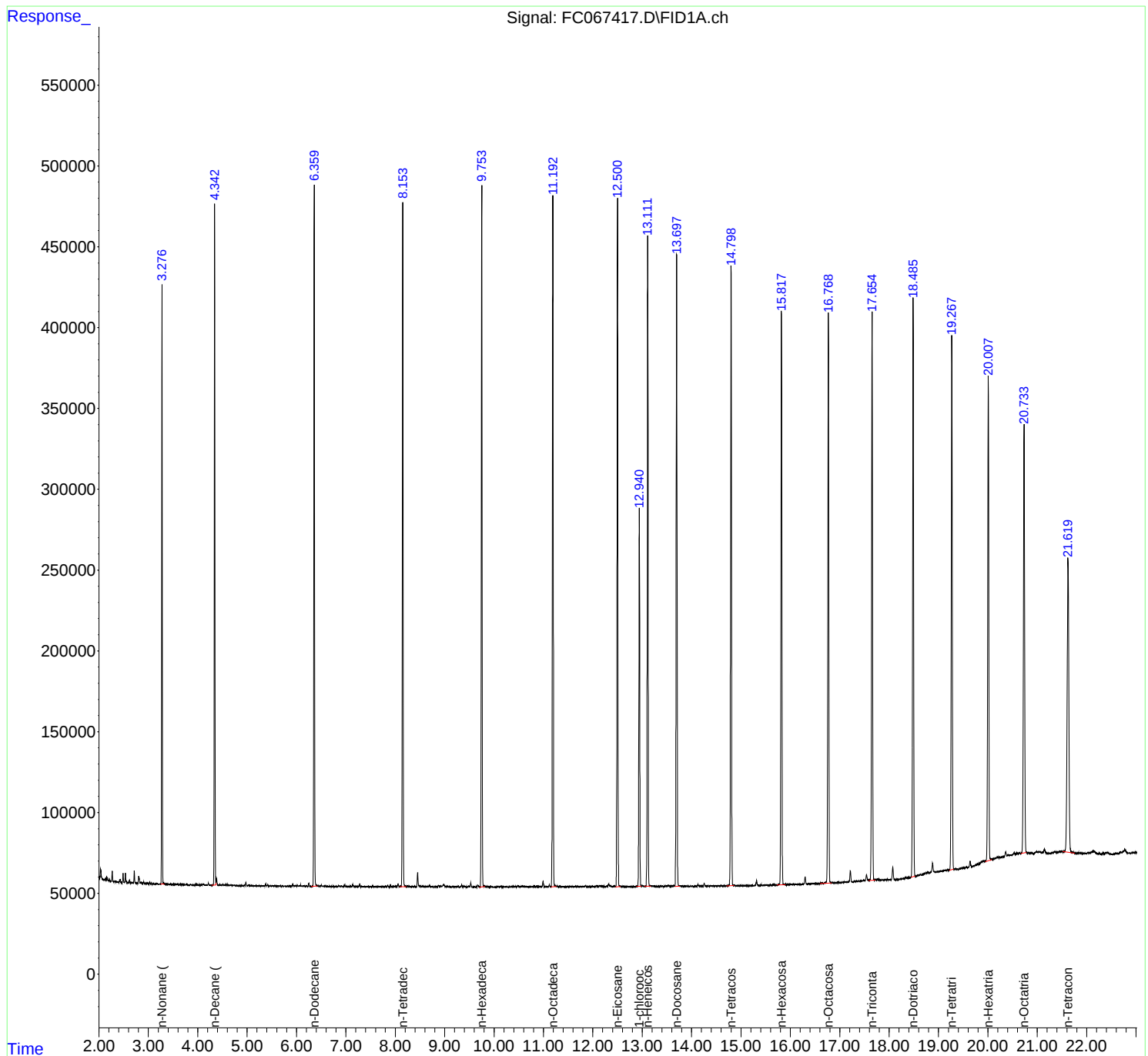
Instrument :
FID_C
ClientSampleId :
Chamberlain AveMS

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 10/14/2024
Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e
Quant Time: Oct 14 03:26:29 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Quant Title : GC Extractables
QLast Update : Tue Oct 01 09:13:32 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um



rters

Instrument :

FID_C

ClientSampleId :

Chamberlain AveMS

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 10/14/2024

Supervised By :Ankita Jodhani 10/14/2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC10112
Data File : FC067417.D
Signal(s) : FID1A.ch
Acq On : 12 Oct 2024 01:50
Sample : P4258-03MS
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.276	3.245	3.327	BB	371030	3119774	61.29%	3.604%
2	4.342	4.282	4.370	BV	420712	3814667	74.95%	4.407%
3	4.382	4.370	4.422	VB	4233	42768	0.84%	0.049%
4	6.359	6.294	6.427	BB	430947	4281840	84.13%	4.947%
5	8.153	8.089	8.229	BB	422478	4550664	89.41%	5.257%
6	8.454	8.400	8.520	BB	8671	103519	2.03%	0.120%
7	9.752	9.709	9.817	BB	433770	4788294	94.08%	5.532%
8	10.993	10.937	11.034	BB	3582	43856	0.86%	0.051%
9	11.192	11.152	11.264	BB	427535	5001743	98.27%	5.778%
10	12.500	12.464	12.562	PB	425791	5089832	100.00%	5.880%
11	12.942	12.884	12.984	BB	232595	2825735	55.52%	3.265%
12	13.112	13.040	13.175	BB	401982	4907863	96.42%	5.670%
13	13.697	13.660	13.765	PB	390438	4895767	96.19%	5.656%
14	14.799	14.705	14.860	BB	381500	4852829	95.34%	5.606%
15	15.818	15.725	15.894	BB	353231	4810559	94.51%	5.558%
16	16.297	16.244	16.330	BB	4619	61008	1.20%	0.070%
17	16.768	16.597	16.839	BB	354086	4785460	94.02%	5.529%
18	17.214	17.157	17.255	BB	6910	97452	1.91%	0.113%
19	17.541	17.487	17.574	BB	3604	48975	0.96%	0.057%
20	17.653	17.587	17.720	BB	350903	4856449	95.41%	5.611%
21	18.073	18.014	18.105	BB	7734	111520	2.19%	0.129%
22	18.485	18.295	18.534	BB	359733	4816673	94.63%	5.565%
23	18.879	18.594	18.927	BB	5989	147780	2.90%	0.171%
24	19.268	19.089	19.325	BB	326863	4808840	94.48%	5.556%
25	19.640	19.387	19.669	BB	3492	51196	1.01%	0.059%
26	19.909	19.699	19.939	BB	1052	35859	0.70%	0.041%
27	20.008	19.955	20.082	BB	297878	4660090	91.56%	5.384%
28	20.359	20.104	20.385	BB	2633	68456	1.34%	0.079%
29	20.732	20.554	20.802	VB	264044	4540706	89.21%	5.246%
30	21.623	21.510	21.760	BB	179663	4338434	85.24%	5.012%

Sum of corrected areas: 86558607

Aliphatic EPH 100224.M Mon Oct 14 04:49:19 2024

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	
Project:	Perth Amboy	Date Received:	
Client Sample ID:	Chamberlain AveMSD	SDG No.:	P4258
Lab Sample ID:	P4258-03MSD	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	86
Sample Wt/Vol:	30.09 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
10/11/24 08:20	10/12/24 2:27	PB164054

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS							
Total AliphaticEPH	Total AliphaticEPH	54.2			4.08	6.96	mg/kg
Total AromaticEPH	Total AromaticEPH	70.0			4.17	6.95	mg/kg
Total EPH	Total EPH	124			8.26	13.9	mg/kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	
Project:	Perth Amboy	Date Received:	
Client Sample ID:	Chamberlain AveMSD	SDG No.:	P4258
Lab Sample ID:	P4258-03MSD	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	86
Sample Wt/Vol:	30.09 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
10/11/24 08:20	10/12/24 2:27	PB164054

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS							
Aliphatic C9-C12	Aliphatic C9-C12	6.83		1	0.44	1.16	mg/kg FC067418.D
Aliphatic C12-C16	Aliphatic C12-C16	5.58		1	0.28	0.77	mg/kg FC067418.D
Aliphatic C16-C21	Aliphatic C16-C21	8.90		1	0.35	1.16	mg/kg FC067418.D
Aliphatic C21-C28	Aliphatic C21-C28	11.9		1	0.93	1.55	mg/kg FC067418.D
Aliphatic C28-C40	Aliphatic C28-C40	21.0		1	2.09	2.32	mg/kg FC067418.D
Aromatic C10-C12	Aromatic C10-C12	6.05		1	0.35	0.77	mg/kg FD048470.D
Aromatic C12-C16	Aromatic C12-C16	10.4		1	0.39	1.16	mg/kg FD048470.D
Aromatic C16-C21	Aromatic C16-C21	20.5		1	1.11	1.93	mg/kg FD048470.D
Aromatic C21-C36	Aromatic C21-C36	33.0		1	2.32	3.09	mg/kg FD048470.D
Total AliphaticEPH	Total AliphaticEPH	54.2			4.08	6.96	mg/kg
Total AromaticEPH	Total AromaticEPH	70.0			4.17	6.95	mg/kg
Total EPH	Total EPH	124			8.26	13.9	mg/kg

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

Report of Analysis

Client:	Roman E&G Corp	Date Collected:	
Project:	Perth Amboy	Date Received:	
Client Sample ID:	Chamberlain AveMSD	SDG No.:	P4258
Lab Sample ID:	P4258-03MSD	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	86
Sample Wt/Vol:	30.09 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC067418.D	1	10/11/24	10/12/24	PB164054

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C12	Aliphatic C9-C12	6.83		0.44	1.16	mg/kg
Aliphatic C12-C16	Aliphatic C12-C16	5.58		0.28	0.77	mg/kg
Aliphatic C16-C21	Aliphatic C16-C21	8.90		0.35	1.16	mg/kg
Aliphatic C21-C28	Aliphatic C21-C28	11.9		0.93	1.55	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	21.0		2.09	2.32	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	26.0		40 - 140	52%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	0.00		40 - 140	0%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	P4258-03MSD	Acq On:	12 Oct 2024 02:27
Client Sample ID:	P4258-03MSD	Operator:	YP/AJ
Data file:	FC067418.D	Misc:	
Instrument:	FID_C	ALS Vial:	27
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	3.175	6.457	11335119	88.311	300	ug/ml
Aliphatic C12-C16	6.458	9.848	9463249	72.262	200	ug/ml
Aliphatic C16-C21	9.849	13.207	15147847	115.214	300	ug/ml
Aliphatic C21-C28	13.208	16.862	19600942	154.553	400	ug/ml
Aliphatic C28-C40	16.863	21.712	28641624	272.218	600	ug/ml
Aliphatic EPH	3.175	21.712	84188781	702.557		ug/ml
ortho-Terphenyl (SURR)	0.000	0.000	0	0		ug/ml
1-chlorooctadecane (SURR)	12.941	12.941	2940829	25.98		ug/ml
Aliphatic C9-C28	3.175	16.862	55547157	430.34	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\F101124AL\
 Data File : FC067418.D
 Signal(s) : FID1A.ch
 Acq On : 12 Oct 2024 02:27
 Operator : YP/AJ
 Sample : P4258-03MSD
 Misc :
 ALS Vial : 27 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 Chamberlain AveMSD

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 10/14/2024
 Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e
 Quant Time: Oct 14 03:26:40 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
 Quant Title : GC Extractables
 QLast Update : Tue Oct 01 09:13:32 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1 ul
 Signal Phase : Rxi-1ms
 Signal Info : 20M x 0.18mm x 0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
12) S 1-chlorooctadecane (S...	12.941	2940829	25.981 ug/ml
Spiked Amount 50.000		Recovery =	51.96%
Target Compounds			
1) T n-Nonane (C9)	3.276	3148648	24.840 ug/ml
2) T n-Decane (C10)	4.342	3838839	29.864 ug/ml
4) T n-Dodecane (C12)	6.359	4304922	33.176 ug/ml
6) T n-Tetradecane (C14)	8.153	4571910	35.497 ug/ml
7) T n-Hexadecane (C16)	9.751	4810404	36.136 ug/ml
8) T n-Octadecane (C18)	11.192	5031659	37.106 ug/ml
10) T n-Eicosane (C20)	12.500	5127221	39.268 ug/ml
11) T n-Heneicosane (C21)	13.111	4946452	38.567 ug/ml
13) T n-Docosane (C22)	13.696	4939391	38.683 ug/ml
14) T n-Tetracosane (C24)	14.798	4904695	38.350 ug/ml
15) T n-Hexacosane (C26)	15.817	4867369	38.604 ug/ml
16) T n-Octacosane (C28)	16.766	4829786	38.445 ug/ml
17) T n-Tricontane (C30)	17.654	4880170	37.882 ug/ml
18) T n-Dotriacontane (C32)	18.486	4843435	38.770 ug/ml
19) T n-Tetratriacontane (C34)	19.268	4805984	43.980 ug/ml
20) T n-Hexatriacontane (C36)	20.007	4692072	49.642 ug/ml
21) T n-Octatriacontane (C38)	20.731	4521166	51.553 ug/mlm
22) T n-Tetracontane (C40)	21.622	4337947	50.413 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC101124AL\
Data File : FC067418.D
Signal(s) : FID1A.ch
Acq On : 12 Oct 2024 02:27
Operator : YP/AJ
Sample : P4258-03MSD
Misc :
ALS Vial : 27 Sample Multiplier: 1

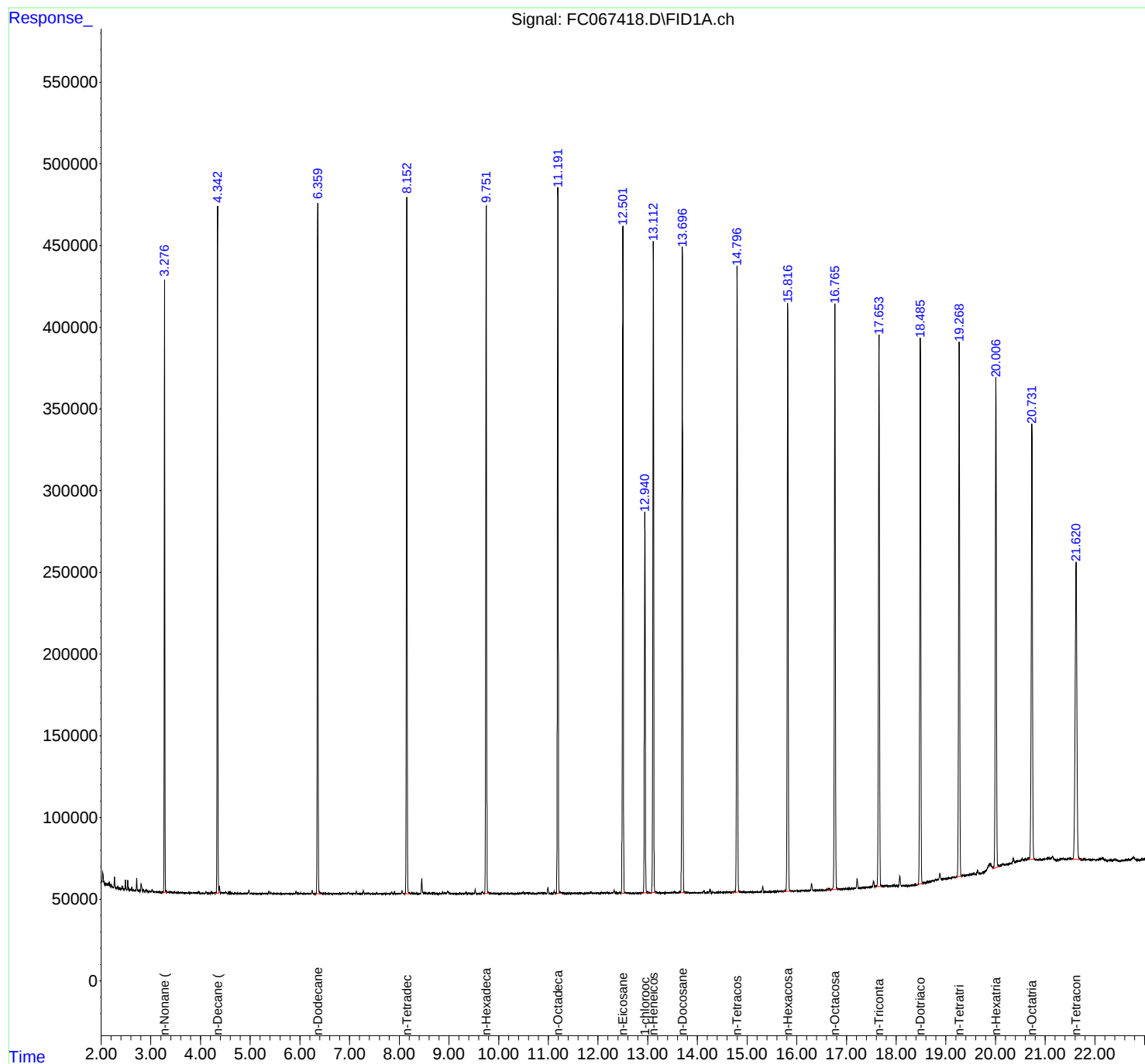
Instrument :
FID_C
ClientSampleId :
Chamberlain AveMSD

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 10/14/2024
Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e
Quant Time: Oct 14 03:26:40 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M
Quant Title : GC Extractables
QLast Update : Tue Oct 01 09:13:32 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um



Instrument :

FID_C

ClientSampleId :

Chamberlain AveMSD

rteres

Area Percent Report

Manual IntegrationsAPPROVED

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC10112

Data File : FC067418.D

Signal(s) : FID1A.ch

Acq On : 12 Oct 2024 02:27

Sample : P4258-03MSD

Misc :

ALS Vial : 27 Sample Multiplier: 1

Reviewed By :Yogesh Patel 10/14/2024

Supervised By :Ankita Jodhani 10/14/2024

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 100224.M

Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.276	3.245	3.334	BB	374259	3148648	61.41%	3.614%
2	4.342	4.284	4.370	BV	418755	3838839	74.87%	4.406%
3	4.382	4.370	4.412	VB	4236	42710	0.83%	0.049%
4	6.359	6.294	6.429	BB	422557	4304922	83.96%	4.941%
5	8.153	8.089	8.219	BB	426277	4571910	89.17%	5.247%
6	8.454	8.344	8.492	BB	8512	80935	1.58%	0.093%
7	9.751	9.707	9.807	BB	421991	4810404	93.82%	5.521%
8	10.993	10.944	11.029	BB	3773	42515	0.83%	0.049%
9	11.192	11.154	11.259	BB	429944	5031659	98.14%	5.775%
10	12.500	12.464	12.559	PB	404869	5127221	100.00%	5.885%
11	12.941	12.870	13.004	BB	232586	2940829	57.36%	3.375%
12	13.111	13.044	13.174	BB	399827	4946452	96.47%	5.677%
13	13.696	13.659	13.762	PB	395523	4939391	96.34%	5.669%
14	14.798	14.705	14.857	BB	381262	4904695	95.66%	5.629%
15	15.817	15.725	15.889	BB	359791	4867369	94.93%	5.586%
16	16.296	16.237	16.329	BB	4340	59701	1.16%	0.069%
17	16.766	16.609	16.832	BB	357118	4829786	94.20%	5.543%
18	17.214	17.160	17.257	BB	5673	82516	1.61%	0.095%
19	17.542	17.487	17.574	BB	3577	48642	0.95%	0.056%
20	17.654	17.589	17.715	BB	334935	4880170	95.18%	5.601%
21	18.072	18.019	18.107	BB	5958	82120	1.60%	0.094%
22	18.486	18.412	18.547	BB	333421	4843435	94.47%	5.559%
23	18.879	18.757	18.920	BB	3640	64730	1.26%	0.074%
24	19.268	19.192	19.327	BB	327271	4805984	93.73%	5.516%
25	19.885	19.705	19.942	BV	3530	175020	3.41%	0.201%
26	20.007	19.942	20.085	VB	298924	4692072	91.51%	5.385%
27	20.358	20.087	20.394	BB	2532	50141	0.98%	0.058%
28	20.732	20.560	20.817	BB	265727	4578847	89.30%	5.255%
29	21.622	21.525	21.744	BB	181263	4337947	84.61%	4.979%
Sum of corrected areas:						87129611		

Aliphatic EPH 100224.M Mon Oct 14 04:49:32 2024



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

Manual Integration Report

Sequence:

FC100224AL

Instrument

FID_c

Sample ID

File ID

Parameter

Review By

Review On

Supervised
By

Supervised On

Reason

Manual Integration Report

Sequence:	FC101124AL	Instrument	FID_c
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
P4376-01	FC067403.D	ortho-Terphenyl (SURR)	yogesh	10/14/2024 8:48:43 AM	Ankita	10/14/2024 9:12:28	Peak Integrated by Software
P4376-01D	FC067404.D	ortho-Terphenyl (SURR)	yogesh	10/14/2024 8:48:45 AM	Ankita	10/14/2024 9:12:29	Peak Integrated by Software
P4376-01MS	FC067405.D	A~Naphthalene (C11.7)	yogesh	10/14/2024 8:48:48 AM	Ankita	10/14/2024 9:12:31	Peak Integrated by Software
P4376-01MS	FC067405.D	n-Dotriacontane (C32)	yogesh	10/14/2024 8:48:48 AM	Ankita	10/14/2024 9:12:31	Peak Integrated by Software
P4376-01MS	FC067405.D	n-Hexatriacontane (C36)	yogesh	10/14/2024 8:48:48 AM	Ankita	10/14/2024 9:12:31	Peak Integrated by Software
P4376-01MS	FC067405.D	n-Octacosane (C28)	yogesh	10/14/2024 8:48:48 AM	Ankita	10/14/2024 9:12:31	Peak Integrated by Software
P4376-01MS	FC067405.D	n-Octatriacontane (C38)	yogesh	10/14/2024 8:48:48 AM	Ankita	10/14/2024 9:12:31	Peak Integrated by Software
P4376-01MS	FC067405.D	n-Tetracontane (C40)	yogesh	10/14/2024 8:48:48 AM	Ankita	10/14/2024 9:12:31	Peak Integrated by Software
P4376-01MS	FC067405.D	n-Tetratriacontane (C34)	yogesh	10/14/2024 8:48:48 AM	Ankita	10/14/2024 9:12:31	Peak Integrated by Software
P4376-01MS	FC067405.D	n-Tricontane (C30)	yogesh	10/14/2024 8:48:48 AM	Ankita	10/14/2024 9:12:31	Peak Integrated by Software
P4376-01MS	FC067405.D	ortho-Terphenyl (SURR)	yogesh	10/14/2024 8:48:48 AM	Ankita	10/14/2024 9:12:31	Peak Integrated by Software
P4376-01MSD	FC067406.D	A~Naphthalene (C11.7)	yogesh	10/14/2024 8:48:50 AM	Ankita	10/14/2024 9:12:32	Peak Integrated by Software
P4376-01MSD	FC067406.D	n-Dotriacontane (C32)	yogesh	10/14/2024 8:48:50 AM	Ankita	10/14/2024 9:12:32	Peak Integrated by Software

Manual Integration Report

Sequence:	FC101124AL	Instrument	FID_c
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
P4376-01MSD	FC067406.D	n-Hexatriacontane (C36)	yogesh	10/14/2024 8:48:50 AM	Ankita	10/14/2024 9:12:32	Peak Integrated by Software
P4376-01MSD	FC067406.D	n-Octacosane (C28)	yogesh	10/14/2024 8:48:50 AM	Ankita	10/14/2024 9:12:32	Peak Integrated by Software
P4376-01MSD	FC067406.D	n-Octatriacontane (C38)	yogesh	10/14/2024 8:48:50 AM	Ankita	10/14/2024 9:12:32	Peak Integrated by Software
P4376-01MSD	FC067406.D	n-Tetracontane (C40)	yogesh	10/14/2024 8:48:50 AM	Ankita	10/14/2024 9:12:32	Peak Integrated by Software
P4376-01MSD	FC067406.D	n-Tetratriacontane (C34)	yogesh	10/14/2024 8:48:50 AM	Ankita	10/14/2024 9:12:32	Peak Integrated by Software
P4376-01MSD	FC067406.D	n-Tricontane (C30)	yogesh	10/14/2024 8:48:50 AM	Ankita	10/14/2024 9:12:32	Peak Integrated by Software
P4376-01MSD	FC067406.D	ortho-Terphenyl (SURR)	yogesh	10/14/2024 8:48:50 AM	Ankita	10/14/2024 9:12:32	Peak Integrated by Software
20 PPM ALIPHATIC HC	FC067408.D	n-Dotriacontane (C32)	yogesh	10/14/2024 8:48:52 AM	Ankita	10/14/2024 9:12:34	Peak Integrated by Software
20 PPM ALIPHATIC HC	FC067408.D	n-Hexatriacontane (C36)	yogesh	10/14/2024 8:48:52 AM	Ankita	10/14/2024 9:12:34	Peak Integrated by Software
20 PPM ALIPHATIC HC	FC067408.D	n-Octacosane (C28)	yogesh	10/14/2024 8:48:52 AM	Ankita	10/14/2024 9:12:34	Peak Integrated by Software
20 PPM ALIPHATIC HC	FC067408.D	n-Octatriacontane (C38)	yogesh	10/14/2024 8:48:52 AM	Ankita	10/14/2024 9:12:34	Peak Integrated by Software
20 PPM ALIPHATIC HC	FC067408.D	n-Tetracontane (C40)	yogesh	10/14/2024 8:48:52 AM	Ankita	10/14/2024 9:12:34	Peak Integrated by Software
20 PPM ALIPHATIC HC	FC067408.D	n-Tetratriacontane (C34)	yogesh	10/14/2024 8:48:52 AM	Ankita	10/14/2024 9:12:34	Peak Integrated by Software

Manual Integration Report

Sequence:	FC101124AL	Instrument	FID_c
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
PB164054BS	FC067410.D	n-Octatriacontane (C38)	yogesh	10/14/2024 8:48:54 AM	Ankita	10/14/2024 9:12:36	Peak Integrated by Software
PB164054BS	FC067410.D	n-Tetracontane (C40)	yogesh	10/14/2024 8:48:54 AM	Ankita	10/14/2024 9:12:36	Peak Integrated by Software
PB164054BS	FC067410.D	n-Tetratriacontane (C34)	yogesh	10/14/2024 8:48:54 AM	Ankita	10/14/2024 9:12:36	Peak Integrated by Software
PB164054BSD	FC067411.D	n-Hexatriacontane (C36)	yogesh	10/14/2024 8:48:56 AM	Ankita	10/14/2024 9:12:37	Peak Integrated by Software
PB164054BSD	FC067411.D	n-Octatriacontane (C38)	yogesh	10/14/2024 8:48:56 AM	Ankita	10/14/2024 9:12:37	Peak Integrated by Software
PB164054BSD	FC067411.D	n-Tetratriacontane (C34)	yogesh	10/14/2024 8:48:56 AM	Ankita	10/14/2024 9:12:37	Peak Integrated by Software
P4368-01	FC067412.D	n-Decane (C10)	yogesh	10/14/2024 8:48:58 AM	Ankita	10/14/2024 9:12:39	Peak Integrated by Software
P4368-01	FC067412.D	n-Hexatriacontane (C36)	yogesh	10/14/2024 8:48:58 AM	Ankita	10/14/2024 9:12:39	Peak Integrated by Software
P4368-01	FC067412.D	n-Octatriacontane (C38)	yogesh	10/14/2024 8:48:58 AM	Ankita	10/14/2024 9:12:39	Peak Integrated by Software
P4368-01	FC067412.D	n-Tetracontane (C40)	yogesh	10/14/2024 8:48:58 AM	Ankita	10/14/2024 9:12:39	Peak Integrated by Software
P4368-01	FC067412.D	n-Tetracosane (C24)	yogesh	10/14/2024 8:48:58 AM	Ankita	10/14/2024 9:12:39	Peak Integrated by Software
P4368-01	FC067412.D	n-Tetratriacontane (C34)	yogesh	10/14/2024 8:48:58 AM	Ankita	10/14/2024 9:12:39	Peak Integrated by Software
P4368-01	FC067413.D	n-Decane (C10)	yogesh	10/14/2024 8:48:59 AM	Ankita	10/14/2024 9:12:40	Peak Integrated by Software

Manual Integration Report

Sequence:	FC101124AL	Instrument	FID_c
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
P4368-01	FC067413.D	n-Hexatriacontane (C36)	yogesh	10/14/2024 8:48:59 AM	Ankita	10/14/2024 9:12:40	Peak Integrated by Software
P4368-01	FC067413.D	n-Octatriacontane (C38)	yogesh	10/14/2024 8:48:59 AM	Ankita	10/14/2024 9:12:40	Peak Integrated by Software
P4368-01	FC067413.D	n-Tetracontane (C40)	yogesh	10/14/2024 8:48:59 AM	Ankita	10/14/2024 9:12:40	Peak Integrated by Software
P4368-01	FC067413.D	n-Tetracosane (C24)	yogesh	10/14/2024 8:48:59 AM	Ankita	10/14/2024 9:12:40	Peak Integrated by Software
P4368-01	FC067413.D	n-Tetratriacontane (C34)	yogesh	10/14/2024 8:48:59 AM	Ankita	10/14/2024 9:12:40	Peak Integrated by Software
P4368-02	FC067414.D	n-Decane (C10)	yogesh	10/14/2024 8:49:01 AM	Ankita	10/14/2024 9:12:41	Peak Integrated by Software
P4368-02	FC067414.D	n-Hexacosane (C26)	yogesh	10/14/2024 8:49:01 AM	Ankita	10/14/2024 9:12:41	Peak Integrated by Software
P4368-02	FC067414.D	n-Hexatriacontane (C36)	yogesh	10/14/2024 8:49:01 AM	Ankita	10/14/2024 9:12:41	Peak Integrated by Software
P4368-02	FC067414.D	n-Tetracontane (C40)	yogesh	10/14/2024 8:49:01 AM	Ankita	10/14/2024 9:12:41	Peak Integrated by Software
P4368-02	FC067414.D	n-Tetracosane (C24)	yogesh	10/14/2024 8:49:01 AM	Ankita	10/14/2024 9:12:41	Peak Integrated by Software
P4368-02	FC067414.D	n-Tricontane (C30)	yogesh	10/14/2024 8:49:01 AM	Ankita	10/14/2024 9:12:41	Peak Integrated by Software
P4258-03MS	FC067417.D	n-Dotriacontane (C32)	yogesh	10/14/2024 8:49:02 AM	Ankita	10/14/2024 9:12:57	Peak Integrated by Software
P4258-03MS	FC067417.D	n-Octatriacontane (C38)	yogesh	10/14/2024 8:49:02 AM	Ankita	10/14/2024 9:12:57	Peak Integrated by Software

Manual Integration Report

Sequence:	FC101124AL	Instrument	FID_c
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
P4258-03MS	FC067417.D	n-Tetratriacontane (C34)	yogesh	10/14/2024 8:49:02 AM	Ankita	10/14/2024 9:12:57	Peak Integrated by Software
P4258-03MSD	FC067418.D	n-Octatriacontane (C38)	yogesh	10/14/2024 8:49:04 AM	Ankita	10/14/2024 9:13:00	Peak Integrated by Software
20 PPM ALIPHATIC HC	FC067420.D	n-Hexatriacontane (C36)	yogesh	10/14/2024 8:49:05 AM	Ankita	10/14/2024 9:13:02	Peak Integrated by Software
P4368-07	FC067422.D	n-Decane (C10)	yogesh	10/14/2024 8:49:07 AM	Ankita	10/14/2024 9:13:03	Peak Integrated by Software
P4368-07	FC067422.D	n-Hexacosane (C26)	yogesh	10/14/2024 8:49:07 AM	Ankita	10/14/2024 9:13:03	Peak Integrated by Software
P4368-07	FC067422.D	n-Hexatriacontane (C36)	yogesh	10/14/2024 8:49:07 AM	Ankita	10/14/2024 9:13:03	Peak Integrated by Software
P4368-07	FC067422.D	n-Tetracontane (C40)	yogesh	10/14/2024 8:49:07 AM	Ankita	10/14/2024 9:13:03	Peak Integrated by Software
P4368-07	FC067422.D	n-Tetracosane (C24)	yogesh	10/14/2024 8:49:07 AM	Ankita	10/14/2024 9:13:03	Peak Integrated by Software
P4368-07	FC067423.D	n-Decane (C10)	yogesh	10/14/2024 8:49:09 AM	Ankita	10/14/2024 9:13:04	Peak Integrated by Software
P4368-07	FC067423.D	n-Octatriacontane (C38)	yogesh	10/14/2024 8:49:09 AM	Ankita	10/14/2024 9:13:04	Peak Integrated by Software
P4368-07	FC067423.D	n-Tetracosane (C24)	yogesh	10/14/2024 8:49:09 AM	Ankita	10/14/2024 9:13:04	Peak Integrated by Software
P4368-08	FC067424.D	n-Tetracontane (C40)	yogesh	10/14/2024 8:49:11 AM	Ankita	10/14/2024 9:13:06	Peak Integrated by Software
P4368-08	FC067424.D	n-Tetracosane (C24)	yogesh	10/14/2024 8:49:11 AM	Ankita	10/14/2024 9:13:06	Peak Integrated by Software

Manual Integration Report

Sequence:	FC101124AL	Instrument	FID_c
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
20 PPM ALIPHATIC HC	FC067426.D	n-Tetratriacontane (C34)	yogesh	10/14/2024 8:49:13 AM	Ankita	10/14/2024 9:13:07	Peak Integrated by Software



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

Manual Integration Report

Sequence:

FD093024AR

Instrument

FID_d

Sample ID

File ID

Parameter

Review By

Review On

Supervised
By

Supervised On

Reason

Manual Integration Report

Sequence:	FD101124AR	Instrument	FID_d
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
20 PPM AROMATIC HC	FD048454.D	benzo[b]fluoranthene (C30.41)	yogesh	10/14/2024 8:52:05 AM	Ankita	10/14/2024 9:14:43	Peak Integrated by Software
20 PPM AROMATIC HC	FD048454.D	Bnezo[k]fluoranthene (C30.14)	yogesh	10/14/2024 8:52:05 AM	Ankita	10/14/2024 9:14:43	Peak Integrated by Software
P4368-07	FD048456.D	Anthracene (C19.43)	yogesh	10/14/2024 8:52:07 AM	Ankita	10/14/2024 9:14:44	Peak Integrated by Software
P4368-07	FD048456.D	Benzo[a]pyrene (C31.34)	yogesh	10/14/2024 8:52:07 AM	Ankita	10/14/2024 9:14:44	Peak Integrated by Software
P4368-07	FD048456.D	benzo[b]fluoranthene (C30.41)	yogesh	10/14/2024 8:52:07 AM	Ankita	10/14/2024 9:14:44	Peak Integrated by Software
P4368-07	FD048456.D	Bnezo[k]fluoranthene (C30.14)	yogesh	10/14/2024 8:52:07 AM	Ankita	10/14/2024 9:14:44	Peak Integrated by Software
P4368-07	FD048456.D	Chrysene (C27.41)	yogesh	10/14/2024 8:52:07 AM	Ankita	10/14/2024 9:14:44	Peak Integrated by Software
P4368-07	FD048456.D	Dibenz[a,h]anthracene (C30.36)	yogesh	10/14/2024 8:52:07 AM	Ankita	10/14/2024 9:14:44	Peak Integrated by Software
P4368-07	FD048456.D	Naphthalene (C11.7)	yogesh	10/14/2024 8:52:07 AM	Ankita	10/14/2024 9:14:44	Peak Integrated by Software
P4368-07	FD048456.D	Phenanthrene (C19.36)	yogesh	10/14/2024 8:52:07 AM	Ankita	10/14/2024 9:14:44	Peak Integrated by Software
P4368-07	FD048457.D	Anthracene (C19.43)	yogesh	10/14/2024 8:52:08 AM	Ankita	10/14/2024 9:14:46	Peak Integrated by Software
P4368-07	FD048457.D	Benzo[a]pyrene (C31.34)	yogesh	10/14/2024 8:52:08 AM	Ankita	10/14/2024 9:14:46	Peak Integrated by Software
P4368-07	FD048457.D	benzo[b]fluoranthene (C30.41)	yogesh	10/14/2024 8:52:08 AM	Ankita	10/14/2024 9:14:46	Peak Integrated by Software

Manual Integration Report

Sequence:	FD101124AR	Instrument	FID_d
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
P4368-07	FD048457.D	Bnezo[k]fluoranthene (C30.14)	yogesh	10/14/2024 8:52:08 AM	Ankita	10/14/2024 9:14:46	Peak Integrated by Software
P4368-07	FD048457.D	Indeno[1,2,3-cd]pyrene (C35.01)	yogesh	10/14/2024 8:52:08 AM	Ankita	10/14/2024 9:14:46	Peak Integrated by Software
P4368-07	FD048457.D	Naphthalene (C11.7)	yogesh	10/14/2024 8:52:08 AM	Ankita	10/14/2024 9:14:46	Peak Integrated by Software
P4368-07	FD048457.D	Phenanthrene (C19.36)	yogesh	10/14/2024 8:52:08 AM	Ankita	10/14/2024 9:14:46	Peak Integrated by Software
P4368-08	FD048458.D	Benzo[a]anthracene (C26.37)	yogesh	10/14/2024 8:52:10 AM	Ankita	10/14/2024 9:14:48	Peak Integrated by Software
P4368-08	FD048458.D	benzo[b]fluoranthene (C30.41)	yogesh	10/14/2024 8:52:10 AM	Ankita	10/14/2024 9:14:48	Peak Integrated by Software
P4368-08	FD048458.D	Bnezo[k]fluoranthene (C30.14)	yogesh	10/14/2024 8:52:10 AM	Ankita	10/14/2024 9:14:48	Peak Integrated by Software
P4368-08	FD048458.D	Fluoranthene (C21.85)	yogesh	10/14/2024 8:52:10 AM	Ankita	10/14/2024 9:14:48	Peak Integrated by Software
P4368-08	FD048458.D	Indeno[1,2,3-cd]pyrene (C35.01)	yogesh	10/14/2024 8:52:10 AM	Ankita	10/14/2024 9:14:48	Peak Integrated by Software
20 PPM AROMATIC HC	FD048460.D	benzo[b]fluoranthene (C30.41)	yogesh	10/14/2024 8:52:12 AM	Ankita	10/14/2024 9:14:50	Peak Integrated by Software
20 PPM AROMATIC HC	FD048460.D	Bnezo[k]fluoranthene (C30.14)	yogesh	10/14/2024 8:52:12 AM	Ankita	10/14/2024 9:14:50	Peak Integrated by Software
PB164054BS	FD048462.D	Fluoranthene (C21.85)	yogesh	10/14/2024 8:52:13 AM	Ankita	10/14/2024 9:14:51	Peak Integrated by Software
PB164054BSD	FD048463.D	Fluoranthene (C21.85)	yogesh	10/14/2024 8:52:15 AM	Ankita	10/14/2024 9:14:53	Peak Integrated by Software

Manual Integration Report

Sequence:	FD101124AR	Instrument	FID_d
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
P4368-01	FD048464.D	Benzo[a]anthracene (C26.37)	yogesh	10/14/2024 8:52:17 AM	Ankita	10/14/2024 9:15:08	Peak Integrated by Software
P4368-01	FD048464.D	Benzo[a]pyrene (C31.34)	yogesh	10/14/2024 8:52:17 AM	Ankita	10/14/2024 9:15:08	Peak Integrated by Software
P4368-01	FD048464.D	benzo[b]fluoranthene (C30.41)	yogesh	10/14/2024 8:52:17 AM	Ankita	10/14/2024 9:15:08	Peak Integrated by Software
P4368-01	FD048464.D	Bnezo[k]fluoranthene (C30.14)	yogesh	10/14/2024 8:52:17 AM	Ankita	10/14/2024 9:15:08	Peak Integrated by Software
P4368-01	FD048464.D	Chrysene (C27.41)	yogesh	10/14/2024 8:52:17 AM	Ankita	10/14/2024 9:15:08	Peak Integrated by Software
P4368-01	FD048464.D	Dibenz[a,h]anthracene (C30.36)	yogesh	10/14/2024 8:52:17 AM	Ankita	10/14/2024 9:15:08	Peak Integrated by Software
P4368-01	FD048464.D	Indeno[1,2,3-cd]pyrene (C35.01)	yogesh	10/14/2024 8:52:17 AM	Ankita	10/14/2024 9:15:08	Peak Integrated by Software
P4368-01	FD048465.D	1,2,3-Trimethylbenzene (C10.1)	yogesh	10/14/2024 8:52:19 AM	Ankita	10/14/2024 9:15:10	Peak Integrated by Software
P4368-01	FD048465.D	Benzo[a]anthracene (C26.37)	yogesh	10/14/2024 8:52:19 AM	Ankita	10/14/2024 9:15:10	Peak Integrated by Software
P4368-01	FD048465.D	benzo[b]fluoranthene (C30.41)	yogesh	10/14/2024 8:52:19 AM	Ankita	10/14/2024 9:15:10	Peak Integrated by Software
P4368-01	FD048465.D	Bnezo[k]fluoranthene (C30.14)	yogesh	10/14/2024 8:52:19 AM	Ankita	10/14/2024 9:15:10	Peak Integrated by Software
P4368-01	FD048465.D	Naphthalene (C11.7)	yogesh	10/14/2024 8:52:19 AM	Ankita	10/14/2024 9:15:10	Peak Integrated by Software
P4368-02	FD048466.D	Bnezo[k]fluoranthene (C30.14)	yogesh	10/14/2024 8:52:21 AM	Ankita	10/14/2024 9:15:11	Peak Integrated by Software

Manual Integration Report

Sequence:

FD101124AR

Instrument

FID_d

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
P4368-02	FD048466.D	Chrysene (C27.41)	yogesh	10/14/2024 8:52:21 AM	Ankita	10/14/2024 9:15:11	Peak Integrated by Software
P4368-02	FD048466.D	Fluoranthene (C21.85)	yogesh	10/14/2024 8:52:21 AM	Ankita	10/14/2024 9:15:11	Peak Integrated by Software
P4368-02	FD048466.D	Indeno[1,2,3-cd]pyrene (C35.01)	yogesh	10/14/2024 8:52:21 AM	Ankita	10/14/2024 9:15:11	Peak Integrated by Software
P4368-02	FD048466.D	Phenanthrene (C19.36)	yogesh	10/14/2024 8:52:21 AM	Ankita	10/14/2024 9:15:11	Peak Integrated by Software
P4368-02	FD048466.D	Pyrene (C20.8)	yogesh	10/14/2024 8:52:21 AM	Ankita	10/14/2024 9:15:11	Peak Integrated by Software
P4258-03MS	FD048469.D	Fluoranthene (C21.85)	yogesh	10/14/2024 8:52:22 AM	Ankita	10/14/2024 9:15:13	Peak Integrated by Software
P4258-03MSD	FD048470.D	Fluoranthene (C21.85)	yogesh	10/14/2024 8:52:24 AM	Ankita	10/14/2024 9:15:15	Peak Integrated by Software
20 PPM AROMATIC HC	FD048472.D	Benzo[a]pyrene (C31.34)	yogesh	10/14/2024 8:52:26 AM	Ankita	10/14/2024 9:15:16	Peak Integrated by Software

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC100224AL

Review By	yogesh	Review On	10/1/2024 9:33:02 AM
Supervise By	Ankita	Supervise On	10/1/2024 10:31:51 AM
SubDirectory	FC100224AL	HP Acquire Method	HP Processing Method FC100224AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP23644,PP23646,PP23647,PP23648,PP23649		
CCC Internal Standard/PEM	PP23647		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP23645,PP23650		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FC067310.D	30 Sep 2024 09:18	YP/AJ	Ok
2	I.BLK	FC067311.D	30 Sep 2024 09:55	YP/AJ	Ok
3	100 PPM ALIPHATIC HC STD1	FC067312.D	30 Sep 2024 10:32	YP/AJ	Ok
4	50 PPM ALIPHATIC HC STD2	FC067313.D	30 Sep 2024 11:10	YP/AJ	Ok
5	20 PPM ALIPHATIC HC STD3	FC067314.D	30 Sep 2024 11:48	YP/AJ	Ok
6	10 PPM ALIPHATIC HC STD4	FC067315.D	30 Sep 2024 12:47	YP/AJ	Ok
7	5 PPM ALIPHATIC HC STD5	FC067316.D	30 Sep 2024 13:35	YP/AJ	Ok
8	20 PPM ALIPHATIC HC STD ICV	FC067317.D	30 Sep 2024 14:29	YP/AJ	Ok
9	I.BLK	FC067318.D	30 Sep 2024 15:06	YP/AJ	Ok
10	20 PPM ALIPHATIC HC STD	FC067319.D	30 Sep 2024 15:49	YP/AJ	Ok

M : Manual Integration

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC101124AL

Review By	yogesh	Review On	10/11/2024 12:39:06 PM
Supervise By	Ankita	Supervise On	10/14/2024 9:13:11 AM
SubDirectory	FC101124AL	HP Acquire Method	HP Processing Method FC100224AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP23644,PP23646,PP23647,PP23648,PP23649		
CCC Internal Standard/PEM	PP23647		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP23645,PP23650		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FC067397.D	11 Oct 2024 09:28	YP/AJ	Ok
2	I.BLK	FC067398.D	11 Oct 2024 10:04	YP/AJ	Ok
3	20 PPM ALIPHATIC HC STD	FC067399.D	11 Oct 2024 12:04	YP/AJ	Ok
4	PB164070BL	FC067400.D	11 Oct 2024 14:12	YP/AJ	Ok
5	PB164070BS	FC067401.D	11 Oct 2024 14:49	YP/AJ	Ok
6	PB164070BSD	FC067402.D	11 Oct 2024 15:25	YP/AJ	Ok
7	P4376-01	FC067403.D	11 Oct 2024 16:02	YP/AJ	Ok,M
8	P4376-01D	FC067404.D	11 Oct 2024 16:39	YP/AJ	Ok,M
9	P4376-01MS	FC067405.D	11 Oct 2024 17:15	YP/AJ	Ok,M
10	P4376-01MSD	FC067406.D	11 Oct 2024 17:52	YP/AJ	Ok,M
11	I.BLK	FC067407.D	11 Oct 2024 19:06	YP/AJ	Ok
12	20 PPM ALIPHATIC HC STD	FC067408.D	11 Oct 2024 19:42	YP/AJ	Ok,M
13	PB164054BL	FC067409.D	11 Oct 2024 20:55	YP/AJ	Ok
14	PB164054BS	FC067410.D	11 Oct 2024 21:31	YP/AJ	Ok,M
15	PB164054BSD	FC067411.D	11 Oct 2024 22:07	YP/AJ	Ok,M
16	P4368-01	FC067412.D	11 Oct 2024 22:44	YP/AJ	Ok,M
17	P4368-01	FC067413.D	11 Oct 2024 23:21	YP/AJ	Ok,M
18	P4368-02	FC067414.D	11 Oct 2024 23:58	YP/AJ	Ok,M
19	P4258-03	FC067415.D	12 Oct 2024 00:35	YP/AJ	Ok
20	P4258-03D	FC067416.D	12 Oct 2024 01:12	YP/AJ	Ok
21	P4258-03MS	FC067417.D	12 Oct 2024 01:50	YP/AJ	Ok,M

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC101124AL

Review By	yogesh	Review On	10/11/2024 12:39:06 PM
Supervise By	Ankita	Supervise On	10/14/2024 9:13:11 AM
SubDirectory	FC101124AL	HP Acquire Method	HP Processing Method FC100224AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP23644,PP23646,PP23647,PP23648,PP23649		
CCC Internal Standard/PEM	PP23647		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP23645,PP23650		

22	P4258-03MSD	FC067418.D	12 Oct 2024 02:27	YP/AJ	Ok,M
23	I.BLK	FC067419.D	12 Oct 2024 03:04	YP/AJ	Ok
24	20 PPM ALIPHATIC HC STD	FC067420.D	12 Oct 2024 03:41	YP/AJ	Ok,M
25	PB164057BL	FC067421.D	12 Oct 2024 04:55	YP/AJ	Ok
26	P4368-07	FC067422.D	12 Oct 2024 05:31	YP/AJ	Ok,M
27	P4368-07	FC067423.D	12 Oct 2024 06:08	YP/AJ	Ok,M
28	P4368-08	FC067424.D	12 Oct 2024 06:45	YP/AJ	Ok,M
29	I.BLK	FC067425.D	12 Oct 2024 07:22	YP/AJ	Ok
30	20 PPM ALIPHATIC HC STD	FC067426.D	12 Oct 2024 07:59	YP/AJ	Ok,M

M : Manual Integration

Instrument ID: FID_D

Daily Analysis Runlog For Sequence/QC Batch ID # FD093024AR

Review By	yogesh	Review On	9/30/2024 3:32:01 PM
Supervise By	Ankita	Supervise On	10/1/2024 10:34:21 AM
SubDirectory	FD093024AR	HP Acquire Method	HP Processing Method FD093024AR
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP23429,PP23519,PP23520,PP23521,PP23522		
CCC Internal Standard/PEM	PP23520		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP23430,PP23523		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FD048396.D	30 Sep 2024 09:18	YP/AJ	Ok
2	I.BLK	FD048397.D	30 Sep 2024 09:55	YP/AJ	Ok
3	100 PPM AROMATIC HC STD1	FD048398.D	30 Sep 2024 10:32	YP/AJ	Ok
4	50 PPM AROMATIC HC STD2	FD048399.D	30 Sep 2024 11:10	YP/AJ	Ok
5	20 PPM AROMATIC HC STD3	FD048400.D	30 Sep 2024 11:48	YP/AJ	Ok
6	10 PPM AROMATIC HC STD4	FD048401.D	30 Sep 2024 12:47	YP/AJ	Ok
7	5 PPM AROMATIC HC STD5	FD048402.D	30 Sep 2024 13:35	YP/AJ	Ok
8	20 PPM AROMATIC HC STD ICV	FD048403.D	30 Sep 2024 14:29	YP/AJ	Ok
9	I.BLK	FD048404.D	30 Sep 2024 15:06	YP/AJ	Ok
10	20 PPM AROMATIC HC STD	FD048405.D	30 Sep 2024 15:49	YP/AJ	Ok

M : Manual Integration

Instrument ID: FID_D

Daily Analysis Runlog For Sequence/QC Batch ID # FD101124AR

Review By	yogesh	Review On	10/11/2024 2:58:03 PM
Supervise By	Ankita	Supervise On	10/14/2024 9:15:29 AM
SubDirectory	FD101124AR	HP Acquire Method	HP Processing Method FD093024AR
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP23429,PP23519,PP23520,PP23521,PP23522		
CCC Internal Standard/PEM	PP23520		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP23430,PP23523		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FD048452.D	11 Oct 2024 09:28	YP/AJ	Ok
2	I.BLK	FD048453.D	11 Oct 2024 10:04	YP/AJ	Ok
3	20 PPM AROMATIC HC STD	FD048454.D	11 Oct 2024 12:04	YP/AJ	Ok,M
4	PB164057BL	FD048455.D	11 Oct 2024 16:39	YP/AJ	Ok
5	P4368-07	FD048456.D	11 Oct 2024 17:15	YP/AJ	Ok,M
6	P4368-07	FD048457.D	11 Oct 2024 17:52	YP/AJ	Ok,M
7	P4368-08	FD048458.D	11 Oct 2024 18:29	YP/AJ	Ok,M
8	I.BLK	FD048459.D	11 Oct 2024 19:06	YP/AJ	Ok
9	20 PPM AROMATIC HC STD	FD048460.D	11 Oct 2024 19:42	YP/AJ	Ok,M
10	PB164054BL	FD048461.D	11 Oct 2024 21:31	YP/AJ	Ok
11	PB164054BS	FD048462.D	11 Oct 2024 22:07	YP/AJ	Ok,M
12	PB164054BSD	FD048463.D	11 Oct 2024 22:44	YP/AJ	Ok,M
13	P4368-01	FD048464.D	11 Oct 2024 23:21	YP/AJ	Ok,M
14	P4368-01	FD048465.D	11 Oct 2024 23:58	YP/AJ	Ok,M
15	P4368-02	FD048466.D	12 Oct 2024 00:35	YP/AJ	Ok,M
16	P4258-03	FD048467.D	12 Oct 2024 01:12	YP/AJ	Ok
17	P4258-03D	FD048468.D	12 Oct 2024 01:50	YP/AJ	Ok
18	P4258-03MS	FD048469.D	12 Oct 2024 02:27	YP/AJ	Ok,M
19	P4258-03MSD	FD048470.D	12 Oct 2024 03:04	YP/AJ	Ok,M
20	I.BLK	FD048471.D	12 Oct 2024 03:41	YP/AJ	Ok
21	20 PPM AROMATIC HC STD	FD048472.D	12 Oct 2024 04:18	YP/AJ	Ok,M

M : Manual Integration

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC100224AL

Review By	yogesh	Review On	10/1/2024 9:33:02 AM
Supervise By	Ankita	Supervise On	10/1/2024 10:31:51 AM
SubDirectory	FC100224AL	HP Acquire Method	HP Processing Method FC100224AL

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	PP23644,PP23646,PP23647,PP23648,PP23649
CCC Internal Standard/PEM	PP23647
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP23645,PP23650

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2	MECL2	FC067310.D	30 Sep 2024 09:18		YP/AJ	Ok
2	I.BLK	I.BLK	FC067311.D	30 Sep 2024 09:55		YP/AJ	Ok
3	100 PPM ALIPHATIC HC	100 PPM ALIPHATIC HC	FC067312.D	30 Sep 2024 10:32		YP/AJ	Ok
4	50 PPM ALIPHATIC HC	50 PPM ALIPHATIC HC	FC067313.D	30 Sep 2024 11:10		YP/AJ	Ok
5	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC067314.D	30 Sep 2024 11:48		YP/AJ	Ok
6	10 PPM ALIPHATIC HC	10 PPM ALIPHATIC HC	FC067315.D	30 Sep 2024 12:47		YP/AJ	Ok
7	5 PPM ALIPHATIC HC	5 PPM ALIPHATIC HC	FC067316.D	30 Sep 2024 13:35		YP/AJ	Ok
8	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC067317.D	30 Sep 2024 14:29		YP/AJ	Ok
9	I.BLK	I.BLK	FC067318.D	30 Sep 2024 15:06		YP/AJ	Ok
10	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC067319.D	30 Sep 2024 15:49		YP/AJ	Ok

M : Manual Integration

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC101124AL

Review By	yogesh	Review On	10/11/2024 12:39:06 PM
Supervise By	Ankita	Supervise On	10/14/2024 9:13:11 AM
SubDirectory	FC101124AL	HP Acquire Method	HP Processing Method FC100224AL

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	PP23644,PP23646,PP23647,PP23648,PP23649
CCC Internal Standard/PEM	PP23647
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP23645,PP23650

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2	MECL2	FC067397.D	11 Oct 2024 09:28		YP/AJ	Ok
2	I.BLK	I.BLK	FC067398.D	11 Oct 2024 10:04		YP/AJ	Ok
3	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC067399.D	11 Oct 2024 12:04		YP/AJ	Ok
4	PB164070BL	PB164070BL	FC067400.D	11 Oct 2024 14:12		YP/AJ	Ok
5	PB164070BS	PB164070BS	FC067401.D	11 Oct 2024 14:49		YP/AJ	Ok
6	PB164070BSD	PB164070BSD	FC067402.D	11 Oct 2024 15:25		YP/AJ	Ok
7	P4376-01	OR-02-100924	FC067403.D	11 Oct 2024 16:02		YP/AJ	Ok,M
8	P4376-01D	P4376-01D	FC067404.D	11 Oct 2024 16:39		YP/AJ	Ok,M
9	P4376-01MS	OR-02-100924MS	FC067405.D	11 Oct 2024 17:15	FC067403.D	YP/AJ	Ok,M
10	P4376-01MSD	OR-02-100924MSD	FC067406.D	11 Oct 2024 17:52	FC067403.D!FC067405.D	YP/AJ	Ok,M
11	I.BLK	I.BLK	FC067407.D	11 Oct 2024 19:06		YP/AJ	Ok
12	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC067408.D	11 Oct 2024 19:42		YP/AJ	Ok,M
13	PB164054BL	PB164054BL	FC067409.D	11 Oct 2024 20:55		YP/AJ	Ok
14	PB164054BS	PB164054BS	FC067410.D	11 Oct 2024 21:31		YP/AJ	Ok,M
15	PB164054BSD	PB164054BSD	FC067411.D	11 Oct 2024 22:07		YP/AJ	Ok,M
16	P4368-01	LOD-MDL-SOIL-01-QT	FC067412.D	11 Oct 2024 22:44	2.5 PPM SOIL LOD	YP/AJ	Ok,M
17	P4368-01	LOD-MDL-SOIL-01-QT	FC067413.D	11 Oct 2024 23:21	4 PPM SOIL LOD	YP/AJ	Ok,M
18	P4368-02	LOQ-SOIL-02-QT4-202	FC067414.D	11 Oct 2024 23:58	5 PPM SOIL LOQ	YP/AJ	Ok,M

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC101124AL

Review By	yogesh	Review On	10/11/2024 12:39:06 PM
Supervise By	Ankita	Supervise On	10/14/2024 9:13:11 AM
SubDirectory	FC101124AL	HP Acquire Method	HP Processing Method FC100224AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP23644,PP23646,PP23647,PP23648,PP23649		
CCC	PP23647		
Internal Standard/PEM			
ICV/I.BLK	PP23645,PP23650		
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

19	P4258-03	Chamberlain Ave	FC067415.D	12 Oct 2024 00:35		YP/AJ	Ok
20	P4258-03D	P4258-03D	FC067416.D	12 Oct 2024 01:12		YP/AJ	Ok
21	P4258-03MS	Chamberlain AveMS	FC067417.D	12 Oct 2024 01:50	FC067415.D	YP/AJ	Ok,M
22	P4258-03MSD	Chamberlain AveMSD	FC067418.D	12 Oct 2024 02:27	FC067415.D!FC067417.D	YP/AJ	Ok,M
23	I.BLK	I.BLK	FC067419.D	12 Oct 2024 03:04		YP/AJ	Ok
24	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC067420.D	12 Oct 2024 03:41		YP/AJ	Ok,M
25	PB164057BL	PB164057BL	FC067421.D	12 Oct 2024 04:55		YP/AJ	Ok
26	P4368-07	LOD-MDL-WATER-01-0	FC067422.D	12 Oct 2024 05:31	2.5 PPM WATER LOD	YP/AJ	Ok,M
27	P4368-07	LOD-MDL-WATER-01-0	FC067423.D	12 Oct 2024 06:08	4 PPM WATER LOD	YP/AJ	Ok,M
28	P4368-08	LOQ-WATER-02-QT4-2	FC067424.D	12 Oct 2024 06:45	5 PPM WATER LOQ	YP/AJ	Ok,M
29	I.BLK	I.BLK	FC067425.D	12 Oct 2024 07:22		YP/AJ	Ok
30	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC067426.D	12 Oct 2024 07:59		YP/AJ	Ok,M

M : Manual Integration

Instrument ID: FID_D

Daily Analysis Runlog For Sequence/QC Batch ID # FD093024AR

Review By	yogesh	Review On	9/30/2024 3:32:01 PM
Supervise By	Ankita	Supervise On	10/1/2024 10:34:21 AM
SubDirectory	FD093024AR	HP Acquire Method	HP Processing Method FD093024AR

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	PP23429,PP23519,PP23520,PP23521,PP23522
CCC	PP23520
Internal Standard/PEM	
ICV/I.BLK	PP23430,PP23523
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2	MECL2	FD048396.D	30 Sep 2024 09:18		YP/AJ	Ok
2	I.BLK	I.BLK	FD048397.D	30 Sep 2024 09:55		YP/AJ	Ok
3	100 PPM AROMATIC HC	100 PPM AROMATIC HC	FD048398.D	30 Sep 2024 10:32		YP/AJ	Ok
4	50 PPM AROMATIC HC	50 PPM AROMATIC HC	FD048399.D	30 Sep 2024 11:10		YP/AJ	Ok
5	20 PPM AROMATIC HC	20 PPM AROMATIC HC	FD048400.D	30 Sep 2024 11:48		YP/AJ	Ok
6	10 PPM AROMATIC HC	10 PPM AROMATIC HC	FD048401.D	30 Sep 2024 12:47		YP/AJ	Ok
7	5 PPM AROMATIC HC	5 PPM AROMATIC HC	FD048402.D	30 Sep 2024 13:35		YP/AJ	Ok
8	20 PPM AROMATIC HC	20 PPM AROMATIC HC	FD048403.D	30 Sep 2024 14:29		YP/AJ	Ok
9	I.BLK	I.BLK	FD048404.D	30 Sep 2024 15:06		YP/AJ	Ok
10	20 PPM AROMATIC HC	20 PPM AROMATIC HC	FD048405.D	30 Sep 2024 15:49		YP/AJ	Ok

M : Manual Integration

Instrument ID: FID_D

Daily Analysis Runlog For Sequence/QC Batch ID # FD101124AR

Review By	yogesh	Review On	10/11/2024 2:58:03 PM
Supervise By	Ankita	Supervise On	10/14/2024 9:15:29 AM
SubDirectory	FD101124AR	HP Acquire Method	HP Processing Method
			FD093024AR

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	PP23429,PP23519,PP23520,PP23521,PP23522
CCC	PP23520
Internal Standard/PEM	
ICV/I.BLK	PP23430,PP23523
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2	MECL2	FD048452.D	11 Oct 2024 09:28		YP/AJ	Ok
2	I.BLK	I.BLK	FD048453.D	11 Oct 2024 10:04		YP/AJ	Ok
3	20 PPM AROMATIC HC	20 PPM AROMATIC HC	FD048454.D	11 Oct 2024 12:04		YP/AJ	Ok,M
4	PB164057BL	PB164057BL	FD048455.D	11 Oct 2024 16:39		YP/AJ	Ok
5	P4368-07	LOD-MDL-WATER-01-Q	FD048456.D	11 Oct 2024 17:15	2.5 PPM WATER LOD	YP/AJ	Ok,M
6	P4368-07	LOD-MDL-WATER-01-Q	FD048457.D	11 Oct 2024 17:52	4 PPM WATER LOD	YP/AJ	Ok,M
7	P4368-08	LOQ-WATER-02-QT4-2	FD048458.D	11 Oct 2024 18:29	5 PPM WATER LOQ	YP/AJ	Ok,M
8	I.BLK	I.BLK	FD048459.D	11 Oct 2024 19:06		YP/AJ	Ok
9	20 PPM AROMATIC HC	20 PPM AROMATIC HC	FD048460.D	11 Oct 2024 19:42		YP/AJ	Ok,M
10	PB164054BL	PB164054BL	FD048461.D	11 Oct 2024 21:31		YP/AJ	Ok
11	PB164054BS	PB164054BS	FD048462.D	11 Oct 2024 22:07		YP/AJ	Ok,M
12	PB164054BSD	PB164054BSD	FD048463.D	11 Oct 2024 22:44		YP/AJ	Ok,M
13	P4368-01	LOD-MDL-SOIL-01-QT	FD048464.D	11 Oct 2024 23:21	2.5 PPM SOIL LOD	YP/AJ	Ok,M
14	P4368-01	LOD-MDL-SOIL-01-QT	FD048465.D	11 Oct 2024 23:58	4 PPM SOIL LOD	YP/AJ	Ok,M
15	P4368-02	LOQ-SOIL-02-QT4-202	FD048466.D	12 Oct 2024 00:35	5 PPM SOIL LOQ	YP/AJ	Ok,M
16	P4258-03	Chamberlain Ave	FD048467.D	12 Oct 2024 01:12		YP/AJ	Ok
17	P4258-03D	P4258-03D	FD048468.D	12 Oct 2024 01:50		YP/AJ	Ok
18	P4258-03MS	Chamberlain AveMS	FD048469.D	12 Oct 2024 02:27	FD048467.D	YP/AJ	Ok,M

Instrument ID: FID_D

Daily Analysis Runlog For Sequence/QC Batch ID # FD101124AR

Review By	yogesh	Review On	10/11/2024 2:58:03 PM					
Supervise By	Ankita	Supervise On	10/14/2024 9:15:29 AM					
SubDirectory	FD101124AR	HP Acquire Method	HP Processing Method		FD093024AR			
STD. NAME		STD REF.#						
Tune/Reschk Initial Calibration Stds		PP23429,PP23519,PP23520,PP23521,PP23522						
CCC		PP23520						
Internal Standard/PEM								
ICV/I.BLK		PP23430,PP23523						
Surrogate Standard								
MS/MSD Standard								
LCS Standard								

19	P4258-03MSD	Chamberlain AveMSD	FD048470.D	12 Oct 2024 03:04	FD048467.D!FD048469.D	YP/AJ	Ok,M
20	I.BLK	I.BLK	FD048471.D	12 Oct 2024 03:41		YP/AJ	Ok
21	20 PPM AROMATIC HC	20 PPM AROMATIC HC	FD048472.D	12 Oct 2024 04:18		YP/AJ	Ok,M

M : Manual Integration



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 10/2/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 16:35
In Date: 10/01/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:14
Out Date: 10/02/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB132680

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
P4242-01	TP-Q	1	1.15	8.81	9.96	9.47	94.4	
P4242-02	TP-Q-EPH	2	1.19	8.66	9.85	9.09	91.2	
P4242-03	TP-Q-VOC	3	1.17	8.58	9.75	8.97	90.9	
P4249-01	RV-25 (4-4.5)	4	1.18	8.54	9.72	9.4	96.3	
P4249-02	RV-26 (2-2.5)	5	1.14	8.84	9.98	9.08	89.8	
P4249-03	RV-27 (2-2.5)	6	1.15	8.35	9.5	8.72	90.7	
P4249-04	RV-28 (2-2.5)	7	1.18	8.64	9.82	8.58	85.6	
P4254-01	MH-147-SLUDGE	8	1.13	8.60	9.73	4.39	37.9	sludge sample
P4254-02	MH-147-SLUDGE-VOC	9	1.15	8.81	9.96	4.56	38.7	sludge sample
P4254-03	MH-147-SLUDGE-E2	10	1.14	8.82	9.96	4.13	33.9	sludge sample
P4255-01	OR-03-100124	11	1.14	8.43	9.57	8.57	88.1	
P4255-02	OR-03-100124-E2	12	1.15	8.71	9.86	8.97	89.8	
P4256-01	585	13	1.19	8.49	9.68	7.19	70.7	
P4256-02	31480	14	1.00	1.00	2.00	2.00	100.0	debris
P4257-01	VNJ-240	15	1.12	8.50	9.62	9.03	93.1	
P4257-02	VNJ-240	16	1.14	8.80	9.94	9.18	91.4	
P4258-01	Chamberlain Ave	17	1.17	8.57	9.74	8.54	86.0	
P4258-03	Chamberlain Ave	18	1.17	8.57	9.74	8.54	86.0	

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

132680

WorkList Name : %100124 WorkList ID : 183974 Department : Wet-Chemistry Date : 10-01-2024 08:04:15

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4242-01	TP-Q	Solid	Percent Solids	Cool 4 deg C	PSEG03	J51	10/01/2024	Chemtech -SO
P4242-02	TP-Q-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	J51	10/01/2024	Chemtech -SO
P4242-03	TP-Q-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	J51	10/01/2024	Chemtech -SO
P4249-01	RV-25(4-4.5)	Solid	Percent Solids	Cool 4 deg C	MATR02	J51	10/01/2024	Chemtech -SO
P4249-02	RV-26(2-2.5)	Solid	Percent Solids	Cool 4 deg C	MATR02	J51	10/01/2024	Chemtech -SO
P4249-03	RV-27(2-2.5)	Solid	Percent Solids	Cool 4 deg C	MATR02	J51	10/01/2024	Chemtech -SO
P4249-04	RV-28(2-2.5)	Solid	Percent Solids	Cool 4 deg C	MATR02	J51	10/01/2024	Chemtech -SO
P4254-01	MH-147-SLUDGE	Solid	Percent Solids	Cool 4 deg C	PSEG03	J51	10/01/2024	Chemtech -SO
P4254-02	MH-147-SLUDGE-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	J51	10/01/2024	Chemtech -SO
P4254-03	MH-147-SLUDGE-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	J51	10/01/2024	Chemtech -SO
P4255-01	OR-03-100124	Solid	Percent Solids	Cool 4 deg C	PSEG05	J51	10/01/2024	Chemtech -SO
P4255-02	OR-03-100124-E2	Solid	Percent Solids	Cool 4 deg C	PSEG05	J51	10/01/2024	Chemtech -SO
P4256-01	585	Solid	Percent Solids	Cool 4 deg C	PSEG03	J51	10/01/2024	Chemtech -SO
P4256-02	31480	Solid	Percent Solids	Cool 4 deg C	PSEG03	J51	10/01/2024	Chemtech -SO
P4257-01	VNJ-240	Solid	Percent Solids	Cool 4 deg C	PSEG03	J51	10/01/2024	Chemtech -SO
P4257-02	VNJ-240	Solid	Percent Solids	Cool 4 deg C	PSEG03	J51	10/01/2024	Chemtech -SO
P4258-01	Chamberlain Ave	Solid	Percent Solids	Cool 4 deg C	ROMA02	H11	10/01/2024	Chemtech -SO
P4258-03	Chamberlain Ave	Solid	Percent Solids	Cool 4 deg C	ROMA02	H51	10/01/2024	Chemtech -SO

Date/Time 10/01/24 15:25
Raw Sample Received by: [Signature]
Raw Sample Relinquished by: [Signature]

Date/Time 10/01/24 17:00
Raw Sample Received by: [Signature]
Raw Sample Relinquished by: [Signature]

SOP ID: MNJDEP-EPH-7

Clean Up SOP #: N/A

Matrix: Solid

Welgh By: EH

Balance check: RJ

Balance ID: EX-SC-2

pH Strip Lot#: N/A

Extraction By: RJ

Filter By: RJ

pH Meter ID: N/A

Hood ID: 3,7

Extraction Start Date: 10/11/2024

Extraction Start Time: 08:20

Extraction End Date: 10/11/2024

Extraction End Time: 16:00

Concentration By: EH

Supervisor By: rajesh

Extraction Method: ☐ Separatory Funnel ☐ Continous Liquid/Liquid ☐ Sonication ☐ Waste Dilution ☒ Soxhlet

Standarded Name	MLS USED	Concentration ug/mL	STD REF. # FROM LOG
Spike Sol 1	1.0ML	100 PPM	PP23712
Surrogate	1.0ML	100 PPM	PP23706
Fractionation Surrogate	1.0ML	100 PPM	PP23704
LOD	0.25ML/0.4ML	20 PPM	PP23539
LOQ	0.5ML	20 PPM	PP23539

Chemical Used	ML/SAMPLE USED	Lot Number
MeCl2/Acetone/1:1	N/A	EP2538
Baked Na2SO4	N/A	EP2543
Sand	N/A	E2865
Hexane	N/A	E3816
Methylene Chloride	N/A	E3817
EPH Cartridge	N/A	E3757
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

1.5ML Vial Lot # 2210673.

KD Bath ID: N/A

KD Bath Temperature: N/A

Envap ID: NE VAP-02

Envap Temperature: 40 °C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
10/11/24 16:05	RP (Est. 125)	Y-P-pestip43.
	Preparation Group	Analysis Group

Analytical Method: MNJDEP-EPH-7

Concentration Date: 10/11/2024

Sample ID	Client Sample ID	Test	g / mL	PH	Surr/Spike By:		Final Vol. (mL)	JarID	Comments	Prep Pos
					AddedBy	VerifiedBy				
PB164054BL	PB164054BL	EPH	30.03	N/A	ritesh	Evelyn	2			U5-1
PB164054BS	PB164054BS	EPH	30.01	N/A	ritesh	Evelyn	2			2
PB164054BSD	PB164054BSD	EPH	30.03	N/A	ritesh	Evelyn	2			3
P4258-03	CHAMBERLAIN AVE	EPH	30.04	N/A	ritesh	Evelyn	2	A		4
P4258-03DUP	CHAMBERLAIN AVEDUP	EPH	30.02	N/A	ritesh	Evelyn	2	A		5
P4258-03MS	CHAMBERLAIN AVEMS	EPH	30.07	N/A	ritesh	Evelyn	2	A		6
P4258-03MS D	CHAMBERLAIN AVEMSD	EPH	30.09	N/A	ritesh	Evelyn	2	A		U6-1
P4368-01	LOD-MDL-SOIL-01-QT4-2 024 0.25 ML	EPH	30.01	N/A	ritesh	Evelyn	2			2
P4368-02	LOQ-SOIL-02-QT4-2024 0.5 ML	EPH	30.03	N/A	ritesh	Evelyn	2			3
	LOD 0.6 ML						2			4

* Extracts relinquished on the same date as received.

10/11/24

104053
29-20

WORKLIST(Hardcopy Internal Chain)

Worklist Name : P4258E Worklist ID : 184333 Department : Extraction Date : 10-11-2024 08:09:17

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4258-03	Chamberlain Ave	Solid	EPH	Cool 4 deg C	ROMA02	K21	10/01/2024	NJEPH
P4368-01	LOD-MDL-SOIL-01-QT4-2024	Solid	EPH	Cool 4 deg C	CHEM02	QA Of	10/09/2024	NJEPH
P4368-02	LOQ-SOIL-02-QT4-2024	Solid	EPH	Cool 4 deg C	CHEM02	QA Of	10/09/2024	NJEPH

Date/Time 10/11/24 8:15
Raw Sample Received by: PJ Perley
Raw Sample Relinquished by: SDCSM

Date/Time 10/11/24 8:40
Raw Sample Received by: SDCSM
Raw Sample Relinquished by: PJ Perley

Prep Standard - Chemical Standard Summary

Order ID : P4258

Test : EPH

Prepbatch ID : PB164054,

Sequence ID/Qc Batch ID: FC101124AL,FD101124AR,

Standard ID :

EP2538,EP2543,PP23429,PP23430,PP23519,PP23520,PP23521,PP23522,PP23523,PP23534,PP23538,PP23539,PP23644,PP23645,PP23646,PP23647,PP23648,PP23649,PP23650,PP23704,PP23706,PP23712,

Chemical ID :

E2865,E3551,E3743,E3768,E3788,E3789,E3793,E3794,E3816,E3817,P10259,P11137,P11263,P12362,P12885,P12972,P13004,P13005,P13017,P13018,P13019,P13020,P13022,P13044,P13045,P13047,P13048,P13094,P13096,P13142,P13258,P13259,P13278,P13424,P13430,P13431,P13432,P13433,P13434,P13435,P13436,P13442,P13444,P13447,P13448,P13451,P13452,P13453,P13454,P13455,P13456,P9826,V11252,V14143,W3112,

Extractions STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3868	METHELENE CHLORIDE+ACETONE	EP2538	09/17/2024	03/11/2025	Rajesh Parikh	None	None	RUPESHKUMAR SHAH 09/17/2024

FROM 8000.00000ml of E3793 + 8000.00000ml of E3794 = Final Quantity: 1600.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3923	Baked Sodium Sulfate	EP2543	10/04/2024	01/03/2025	RUPESHKUMAR SHAH	Extraction_SC ALE_2 (EX-SC-2)	None	Rajesh Parikh 10/04/2024

FROM 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
782	100 PPM Aromatic HC Working STD	PP23429	05/21/2024	11/16/2024	Yogesh Patel	None	None	Ankita Jodhani
05/24/2024								

FROM 0.25000ml of P13004 + 0.62500ml of P13259 + 1.25000ml of P10259 + 22.87500ml of E3743 = Final Quantity: 25.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2945	100 PPM Aromatic HC Working STD (Absolute)	PP23430	05/21/2024	11/16/2024	Yogesh Patel	None	None	Ankita Jodhani
05/24/2024								

FROM 0.25000ml of P13005 + 0.62500ml of P13258 + 1.25000ml of P11137 + 22.87500ml of E3743 = Final Quantity: 25.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
787	50 PPM Aromatic HC STD	PP23519	07/15/2024	11/16/2024	Yogesh Patel	None	None	Ankita Jodhani
07/16/2024								

FROM 0.50000ml of E3768 + 0.50000ml of PP23429 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
788	20 PPM Aromatic HC STD	PP23520	07/15/2024	11/16/2024	Yogesh Patel	None	None	Ankita Jodhani
07/16/2024								

FROM 0.80000ml of E3768 + 0.20000ml of PP23429 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
789	10 PPM Aromatic HC STD	PP23521	07/15/2024	11/16/2024	Yogesh Patel	None	None	Ankita Jodhani
								07/16/2024

FROM 0.90000ml of E3768 + 0.10000ml of PP23429 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
790	5 PPM Aromatic HC STD	PP23522	07/15/2024	11/16/2024	Yogesh Patel	None	None	Ankita Jodhani
								07/16/2024

FROM 0.90000ml of E3768 + 0.10000ml of PP23519 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2946	20 PPM Aromatic HC STD ICV (Absolute)	PP23523	07/15/2024	11/16/2024	Yogesh Patel	None	None	Ankita Jodhani
								07/16/2024

FROM 0.80000ml of E3768 + 0.20000ml of PP23430 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
231	10 PPM GRO STD 1ST SOURCE	PP23534	07/29/2024	01/22/2025	Yogesh Patel	None	None	Ankita Jodhani
								07/30/2024

FROM 0.11100ml of P9826 + 9.89000ml of V14143 = Final Quantity: 10.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3619	25 PPM AAA-TFT Surg	PP23538	07/29/2024	01/22/2025	Yogesh Patel	None	None	Ankita Jodhani
07/30/2024								

FROM 0.10000ml of V11252 + 9.90000ml of V14143 = Final Quantity: 10.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2589	20 PPM NJ EPH SPIKE for LOD-LOQ	PP23539	07/29/2024	11/13/2024	Yogesh Patel	None	None	Ankita Jodhani
07/30/2024								

FROM 1.00000ml of P12885 + 1.00000ml of P13142 + 8.00000ml of P11263 = Final Quantity: 10.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
781	100 PPM Aliphatic HC Working STD (Restek)	PP23644	09/09/2024	02/13/2025	Yogesh Patel	None	None	Ankita Jodhani
								09/10/2024

FROM 0.25000ml of P12972 + 0.25000ml of P13017 + 1.25000ml of P12362 + 23.25000ml of E3789 = Final Quantity: 25.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2900	100 PPM Aliphatic HC STD (Absolute)	PP23645	09/09/2024	02/13/2025	Yogesh Patel	None	None	Ankita Jodhani
								09/10/2024

FROM 0.25000ml of P12972 + 0.25000ml of P13017 + 2.50000ml of P13278 + 22.00000ml of E3789 = Final Quantity: 25.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
783	50 PPM Aliphatic HC STD	PP23646	09/09/2024	02/13/2025	Yogesh Patel	None	None	Ankita Jodhani
								09/10/2024

FROM 0.50000ml of E3789 + 0.50000ml of PP23644 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
784	20 PPM Aliphatic HC STD	PP23647	09/09/2024	02/13/2025	Yogesh Patel	None	None	Ankita Jodhani
								09/10/2024

FROM 0.80000ml of E3789 + 0.20000ml of PP23644 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
785	10 PPM Aliphatic HC STD	PP23648	09/09/2024	02/13/2025	Yogesh Patel	None	None	Ankita Jodhani
09/10/2024								

FROM 0.90000ml of E3789 + 0.10000ml of PP23644 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
786	5 PPM Aliphatic HC STD	PP23649	09/09/2024	02/13/2025	Yogesh Patel	None	None	Ankita Jodhani
09/10/2024								

FROM 0.90000ml of E3789 + 0.10000ml of PP23646 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2901	20 PPM Aliphatic HC STD ICV (Absolute)	PP23650	09/09/2024	02/13/2025	Yogesh Patel	None	None	Ankita Jodhani
								09/10/2024

FROM 0.80000ml of E3789 + 0.20000ml of PP23645 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
234	100 PPB ICC GRO STD	PP23704	09/24/2024	01/22/2025	Yogesh Patel	None	None	Ankita Jodhani
								10/01/2024

FROM 5.00000ml of W3112 + 0.02000ml of PP23538 + 0.05000ml of PP23534 = Final Quantity: 5.070 ml



Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1339	100 PPM NJEPH Surrogate Spike	PP23706	09/26/2024	02/13/2025	Yogesh Patel	None	None	Ankita Jodhani 10/01/2024

FROM 1.25000ml of P13018 + 1.25000ml of P13019 + 1.25000ml of P13020 + 1.25000ml of P13022 + 1.25000ml of P13044 + 1.25000ml of P13045 + 1.25000ml of P13047 + 1.25000ml of P13048 + 490.00000ml of E3788 = Final Quantity: 500.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1330	100 PPM NJEPH Spike Solution	PP23712	09/30/2024	03/30/2025	Yogesh Patel	None	None	Ankita Jodhani 10/01/2024

FROM 5.00000ml of P13094 + 5.00000ml of P13096 + 5.00000ml of P13424 + 5.00000ml of P13430 + 5.00000ml of P13431 + 5.00000ml of P13432 + 5.00000ml of P13433 + 5.00000ml of P13434 + 5.00000ml of P13435 + 5.00000ml of P13436 + 5.00000ml of P13442 + 5.00000ml of P13444 + 5.00000ml of P13447 + 5.00000ml of P13448 + 5.00000ml of P13451 + 5.00000ml of P13452 + 5.00000ml of P13453 + 5.00000ml of P13454 + 5.00000ml of P13455 + 5.00000ml of P13456 = Final
Quantity: 100.000 ml

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3382-05 / Sand, Purified (cs/4x2.5kg)	0000243821	12/31/2024	04/30/2020 / RAJESH	04/28/2020 / RAJESH	E2865

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1	313201	01/03/2025	01/03/2024 / Rajesh	07/20/2023 / Rajesh	E3551

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	24C0162011	11/16/2024	05/16/2024 / Rajesh	04/26/2024 / Rajesh	E3743

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	24E2462004	01/08/2025	07/08/2024 / Rajesh	06/21/2024 / Rajesh	E3768

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	23H1462005	04/01/2025	08/13/2024 / Rajesh	08/13/2024 / Rajesh	E3788

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	24C1862008	02/13/2025	08/13/2024 / Rajesh	08/13/2024 / Rajesh	E3789

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	9005-05 / Acetone Ultra (cs/4x4L)	24E0761004	03/11/2025	09/12/2024 / Rajesh	09/11/2024 / Rajesh	E3793

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	24G2362009	03/17/2025	09/17/2024 / Rajesh	09/03/2024 / Rajesh	E3794

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	24G1962003	04/10/2025	10/10/2024 / Rajesh	10/04/2024 / Rajesh	E3816

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	24H2762011	04/09/2025	10/09/2024 / Rajesh	10/09/2024 / Rajesh	E3817

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30541 / Custom NJEPH Aromatics Calibration Standard	A0165529	11/21/2024	05/21/2024 / yogesh	01/26/2021 / dhaval	P10259

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	95709 / NJ EPH Aromatic Hydrocarbons, 2000 PPM	060420	07/08/2024	01/08/2024 / yogesh	10/29/2021 / Abdul	P11137

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	HP782 / Pentane, 1L	21080835	11/13/2024	12/16/2021 / Ankita	12/16/2021 / Ankita	P11263

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30540 / Custom NJEPH Aliphatics Calibration Standard	A0190424	03/09/2025	09/09/2024 / yogesh	03/16/2023 / Yogesh	P12362

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0200008	01/29/2025	07/29/2024 / yogesh	10/17/2023 / Yogesh	P12885

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0204989	03/09/2025	09/09/2024 / yogesh	12/20/2023 / Yogesh	P12972

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0204177	11/21/2024	05/21/2024 / yogesh	12/21/2023 / Yogesh	P13004

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0204177	11/21/2024	05/21/2024 / yogesh	12/21/2023 / Yogesh	P13005

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0204177	03/09/2025	09/09/2024 / yogesh	12/21/2023 / Yogesh	P13017

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0204177	03/26/2025	09/26/2024 / yogesh	12/21/2023 / Yogesh	P13018

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0204177	03/26/2025	09/26/2024 / yogesh	12/21/2023 / Yogesh	P13019

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0204177	03/26/2025	09/26/2024 / yogesh	12/21/2023 / Yogesh	P13020

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0204177	03/26/2025	09/26/2024 / yogesh	12/21/2023 / Yogesh	P13022

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0200707	03/26/2025	09/26/2024 / yogesh	12/26/2023 / Yogesh	P13044

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0200707	03/26/2025	09/26/2024 / yogesh	12/26/2023 / Yogesh	P13045

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0200707	03/26/2025	09/26/2024 / yogesh	12/26/2023 / Yogesh	P13047

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0200707	03/26/2025	09/26/2024 / yogesh	12/26/2023 / Yogesh	P13048

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0203911	03/30/2025	09/30/2024 / yogesh	01/12/2024 / Yogesh	P13094

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0203911	03/30/2025	09/30/2024 / yogesh	01/12/2024 / Yogesh	P13096

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0204020	01/29/2025	07/29/2024 / yogesh	01/12/2024 / Yogesh	P13142

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31480 / MA Fractionation Surrogate Spike Mix	A0206496	11/21/2024	05/21/2024 / yogesh	02/20/2024 / yogesh	P13258

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31480 / MA Fractionation Surrogate Spike Mix	A0206496	11/21/2024	05/21/2024 / yogesh	02/20/2024 / yogesh	P13259

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	95899 / NJ EPH Aliphatic n-Hydrocarbons-Revised, 1000 PPM	040524	03/09/2025	09/09/2024 / yogesh	04/11/2024 / yogesh	P13278

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0207239	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13424

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0211112	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13430

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0211112	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13431

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0211112	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13432

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0211112	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13433

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0211112	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13434

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0211112	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13435

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0211112	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13436

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0211254	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13442

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0211254	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13444

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0211254	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13447

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0211254	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13448

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0211254	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13451

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0211254	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13452

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0207019	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13453

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0207019	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13454

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0207019	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13455

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0207019	03/30/2025	09/30/2024 / yogesh	07/16/2024 / Yogesh	P13456

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30065 / GRO Mix (EPA)	A0155991	01/25/2025	07/25/2024 / yogesh	09/11/2020 / DHAVAL	P9826

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30068 / VOA Mix, a, a, a-trifluorotoluene 2500uq/ml, P&T methanol, 1ml	A0158026	05/31/2028	11/27/2023 / yogesh	09/11/2020 / DHAVAL	V11252

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	22L0562016	01/22/2025	07/22/2024 / SAM	02/06/2024 / SAM	V14143

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / lwona	07/03/2024 / lwona	W3112



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

DD
06/17/2021

Catalog No. : 30541 **Lot No.:** A0172403

Description : NJEPH Aromatics Calibration Standard

NJEPH Aromatics Calibration Standard 2,000µg/mL, Methylene Chloride, 1mL/ampul

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

Expiration Date : April 30, 2027 **Storage:** 10°C or colder

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

P10758
TO
P10762
- (S)

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene CAS # 526-73-8 (Lot 8776.10-36) Purity 98%	2,010.0 µg/mL	+/- 11.7957 µg/mL Gravimetric +/- 90.5449 µg/mL Unstressed +/- 100.4678 µg/mL Stressed
2	Naphthalene CAS # 91-20-3 (Lot MKBZ8680V) Purity 99%	2,006.0 µg/mL	+/- 11.7723 µg/mL Gravimetric +/- 90.3656 µg/mL Unstressed +/- 100.2689 µg/mL Stressed
3	2-Methylnaphthalene CAS # 91-57-6 (Lot STBG8884) Purity 99%	2,008.0 µg/mL	+/- 11.7841 µg/mL Gravimetric +/- 90.4557 µg/mL Unstressed +/- 100.3688 µg/mL Stressed
4	Acenaphthylene CAS # 208-96-8 (Lot N19U) Purity 95%	2,002.6 µg/mL	+/- 11.7524 µg/mL Gravimetric +/- 90.2125 µg/mL Unstressed +/- 100.0989 µg/mL Stressed
5	Acenaphthene CAS # 83-32-9 (Lot MKCN0610) Purity 99%	2,000.0 µg/mL	+/- 11.7371 µg/mL Gravimetric +/- 90.0953 µg/mL Unstressed +/- 99.9689 µg/mL Stressed
6	Fluorene CAS # 86-73-7 (Lot 10217947) Purity 99%	2,016.0 µg/mL	+/- 11.8310 µg/mL Gravimetric +/- 90.8161 µg/mL Unstressed +/- 100.7687 µg/mL Stressed
7	Phenanthrene CAS # 85-01-8 (Lot MKCL7390) Purity 99%	2,012.0 µg/mL	+/- 11.8075 µg/mL Gravimetric +/- 90.6359 µg/mL Unstressed +/- 100.5688 µg/mL Stressed

8	Anthracene			2,002.0	µg/mL	+/-	11.7489	µg/mL	Gravimetric
	CAS #	120-12-7	(Lot MKCM0015)			+/-	90.1854	µg/mL	Unstressed
	Purity	99%				+/-	100.0689	µg/mL	Stressed
9	Fluoranthene			2,003.0	µg/mL	+/-	11.7547	µg/mL	Gravimetric
	CAS #	206-44-0	(Lot MKCF7378)			+/-	90.2305	µg/mL	Unstressed
	Purity	99%				+/-	100.1189	µg/mL	Stressed
10	Pyrene			2,011.0	µg/mL	+/-	11.8017	µg/mL	Gravimetric
	CAS #	129-00-0	(Lot BCCB9880)			+/-	90.5909	µg/mL	Unstressed
	Purity	99%				+/-	100.5188	µg/mL	Stressed
11	Benz(a)anthracene			2,011.0	µg/mL	+/-	11.8014	µg/mL	Gravimetric
	CAS #	56-55-3	(Lot P0022018-0505)			+/-	90.5890	µg/mL	Unstressed
	Purity	98%				+/-	100.5168	µg/mL	Stressed
12	Chrysene			2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS #	218-01-9	(Lot STBJ8094)			+/-	90.0953	µg/mL	Unstressed
	Purity	99%				+/-	99.9689	µg/mL	Stressed
13	Benzo(b)fluoranthene			2,006.0	µg/mL	+/-	11.7721	µg/mL	Gravimetric
	CAS #	205-99-2	(Lot 012012B)			+/-	90.3638	µg/mL	Unstressed
	Purity	97%				+/-	100.2669	µg/mL	Stressed
14	Benzo(k)fluoranthene			2,010.0	µg/mL	+/-	11.7958	µg/mL	Gravimetric
	CAS #	207-08-9	(Lot 012019K)			+/-	90.5458	µg/mL	Unstressed
	Purity	99%				+/-	100.4688	µg/mL	Stressed
15	Benzo(a)pyrene			2,004.0	µg/mL	+/-	11.7606	µg/mL	Gravimetric
	CAS #	50-32-8	(Lot RP210113)			+/-	90.2755	µg/mL	Unstressed
	Purity	99%				+/-	100.1689	µg/mL	Stressed
16	Indeno(1,2,3-cd)pyrene			2,010.0	µg/mL	+/-	11.7958	µg/mL	Gravimetric
	CAS #	193-39-5	(Lot 1-RAK-33-4)			+/-	90.5458	µg/mL	Unstressed
	Purity	99%				+/-	100.4688	µg/mL	Stressed
17	Dibenz(a,h)anthracene			2,017.0	µg/mL	+/-	11.8369	µg/mL	Gravimetric
	CAS #	53-70-3	(Lot ER032211-01)			+/-	90.8611	µg/mL	Unstressed
	Purity	99%				+/-	100.8187	µg/mL	Stressed
18	Benzo(g,h,i)perylene			2,003.0	µg/mL	+/-	11.7547	µg/mL	Gravimetric
	CAS #	191-24-2	(Lot 8GFYJ)			+/-	90.2305	µg/mL	Unstressed
	Purity	99%				+/-	100.1189	µg/mL	Stressed
Solvent:	Methylene chloride								
	CAS #	75-09-2							
	Purity	99%							

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

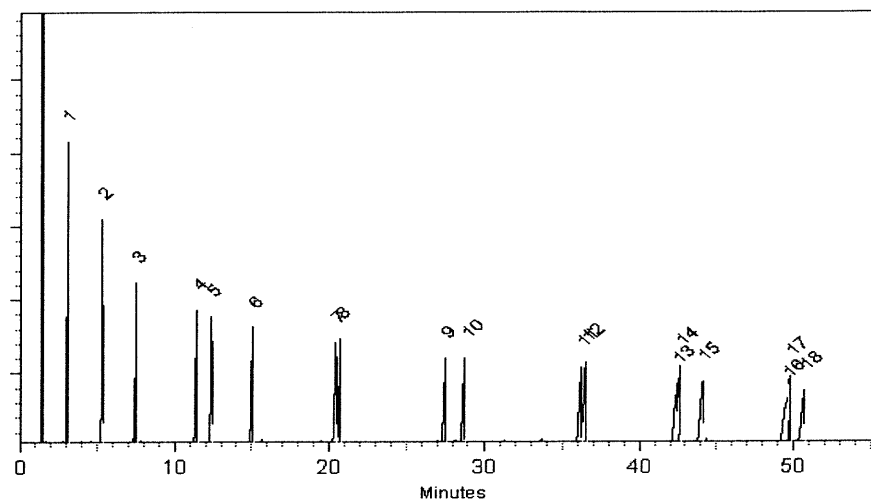
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

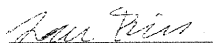
Inj. Temp:
250°C

Det. Temp:
330°C

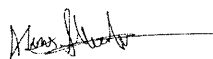
Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Lane Kibe - Mix Technician

Date Mixed: 14-May-2021 Balance: B345965662


Alexis Shelow - Operations Tech I

Date Passed: 18-May-2021

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Sand
Purified
Washed and Ignited



Material No.: 3382-05
Batch No.: 0000243821
Manufactured Date: 2018/04/09
Retest Date: 2025/04/07
Revision No: 1

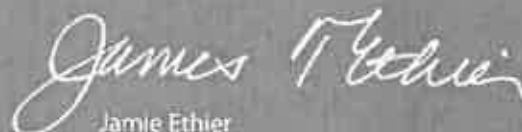
Certificate of Analysis

Test	Specification	Result
Substances Soluble in HCl	$\leq 0.16\%$	0.01

For Laboratory, Research or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC

E 2865


Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700



**PRODUCTOS
QUÍMICOS
MONTERREY, S.A. DE C.V.**

MIRADOR 201, COL. MIRADOR
MONTERREY, N.L. MEXICO
CP 64070
TEL +52 81 13 52 57 57
www.pqm.com.mx

CERTIFICATE OF ANALYSIS

PRODUCT :	SODIUM SULFATE CRYSTALS ANHYDROUS		
QUALITY :	ACS (CODE RMB3375)	FORMULA :	Na ₂ SO ₄
SPECIFICATION NUMBER :	6399	RELEASE DATE:	ABR/21/2023
LOT NUMBER :	313201		

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na ₂ SO ₄)	Min. 99.0%	99.7 %
pH of a 5% solution at 25°C	5.2 - 9.2	6.1
Insoluble matter	Max. 0.01%	0.005 %
Loss on ignition	Max. 0.5%	0.1 %
Chloride (Cl)	Max. 0.001%	<0.001 %
Nitrogen compounds (as N)	Max. 5 ppm	<5 ppm
Phosphate (PO ₄)	Max. 0.001%	<0.001 %
Heavy metals (as Pb)	Max. 5 ppm	<5 ppm
Iron (Fe)	Max. 0.001%	<0.001 %
Calcium (Ca)	Max. 0.01%	0.002 %
Magnesium (Mg)	Max. 0.005%	0.001 %
Potassium (K)	Max. 0.008%	0.003 %
Extraction-concentration suitability	Passes test	Passes test
Appearance	Passes test	Passes test
Identification	Passes test	Passes test
Solubility and foreign matter	Passes test	Passes test
Retained on US Standard No. 10 sieve	Max. 1%	0.1 %
Retained on US Standard No. 60 sieve	Min. 94%	97.3 %
Through US Standard No. 60 sieve	Max. 5%	2.5 %
Through US Standard No. 100 sieve	Max. 10%	0.1 %

COMMENTS

QC: PhC Irma Belmares

If you need further details, please call our factory or contact our local distributor.

Recd. by R3 on 7/24/23 E 3551

RC-02-01, Ed. 3

Material No.: 92E
Batch No.: 24C016
Manufactured Date: 2024-C
Expiration Date: 2025-C
Revision I

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	< 1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	2
Assay (CH ₂ Cl ₂) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8 \%$	100.0 %
Color (APHA)	≤ 10	10
Residue after Evaporation	≤ 1.0 ppm	0.2 ppm
Titration Acid (μ eq/g)	≤ 0.3	< 0.1
Chloride (Cl)	≤ 10 ppm	< 5 ppm
Water (by KF, coulometric)	$\leq 0.02 \%$	< 0.01 %

For Laboratory, Research, or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC
Manufacturer source batch: MG24A04224

E 3743


Ken Koehnlein
Sr. Manager, Quality Assurance

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087, U.S.A. Phone 610.386.1700
Page 1 of 1

Methylene Chloride
ULTRA RESI-ANALYZED
For Organic Residue Analysis
(dichloromethane)



Material No.: 9266-A4
Batch No.: 24E2462004
Manufactured Date: 2024-04-10
Expiration Date: 2025-07-10
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	3
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	3
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8 \%$	100.0 %
Color (APHA)	≤ 10	5
Residue after Evaporation	$\leq 1.0 \text{ ppm}$	0.1 ppm
Titration Acid ($\mu\text{eq/g}$)	≤ 0.3	< 0.1
Chloride (Cl)	$\leq 10 \text{ ppm}$	5 ppm
Water (by KF, coulometric)	$\leq 0.02 \%$	< 0.01 %

For Laboratory, Research, or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC
Manufacturer source batch: MG24D10725

E 3768

Jamie Croak
Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087, U.S.A. Phone 610.386.1700

Acetone

BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

Avantor™



Material No.: 9254-03
Batch No.: 23H1462005
Manufactured Date: 2023-07-26
Expiration Date: 2026-07-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	≥ 99.4 %	99.7 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (μeq/g)	≤ 0.3	0.1
Titration Base (μeq/g)	≤ 0.6	< 0.1
Water (H ₂ O)	≤ 0.5 %	0.3 %
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	< 1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	1

For Laboratory, Research, or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd by RP on 8/13/24

E 3788

Ken Koehnlein
Sr. Manager, Quality Assurance

Material No.: 926
Batch No.: 24C186
Manufactured Date: 2024-0
Expiration Date: 2025-0
Revision N

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	< 1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	1
ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL)	≤ 5	1
Assay (Total Saturated C ₆ Isomers) (by GC, corrected for water)	≥ 99.5 %	99.7 %
Assay (as n-Hexane) (by GC, corrected for water)	≥ 95 %	98 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.4 ppm
Substances Darkened by H ₂ SO ₄	Passes Test	Passes Test
Water (by KF, coulometric)	≤ 0.05 %	< 0.01 %

For Laboratory, Research, or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd. by RP on 8/13/24

E 3789



Jamie Croak
Director Quality Operations, Bioscience Products

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087, U.S.A. Phone 610.386.1700

Acetone
CMOS



Material No.: 9005-05
Batch No.: 24E0761004
Manufactured Date: 2024-05-02
Retest Date: 2029-05-01
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	≥ 99.5 %	99.8 %
Color (APHA)	≤ 10	< 5
Residue after Evaporation	≤ 5 ppm	< 1 ppm
Titration Acid (μeq/g)	≤ 0.3	0.1
Titration Base (μeq/g)	≤ 0.5	0.1
Water (H ₂ O)	≤ 0.5 %	0.1 %
Solubility in H ₂ O	Passes Test	Passes Test
Chloride (Cl)	≤ 0.2 ppm	< 0.2 ppm
Phosphate (PO ₄)	≤ 0.05 ppm	< 0.05 ppm
Trace Impurities – Aluminum (Al)	≤ 50.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 5.0 ppb
Trace Impurities – Barium (Ba)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Calcium (Ca)	≤ 25.0 ppb	3.6 ppb
Trace Impurities – Chromium (Cr)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Germanium (Ge)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 5 ppb
Trace Impurities – Iron (Fe)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Lead (Pb)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb

>>> Continued on page 2 >>>

Recd. by RP on 9/11/24

E3793

Acetone
CMOS



Material No.: 9005-05
Batch No.: 24E0761004

Test	Specification	Result
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Nickel (Ni)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Strontium (Sr)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 50.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	7.9 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater (Rion KS42AF)	≤ 100 par/ml	8 par/ml
Particle Count – 1.0 µm and greater (Rion KS42AF)	≤ 8 par/ml	2 par/ml

>>> Continued on page 3 >>>

Acetone
CMOS



Material No.: 9005-05
Batch No.: 24E0761004

Test	Specification	Result
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For Microelectronic Use
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

Michelle Bales
Sr. Manager, Quality Assurance

n-Hexane 95%
ULTRA RESI-ANALYZED
For Organic Residue Analysis



Material No.: 9262-03
Batch No.: 24G1962003
Manufactured Date: 2024-05-23
Expiration Date: 2025-08-22
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	3
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	1
ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL)	≤ 5	1
Assay (Total Saturated C ₆ Isomers) (by GC, corrected for water)	$\geq 99.5 \%$	99.7 %
Assay (as n-Hexane) (by GC, corrected for water)	$\geq 95 \%$	98 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.1 ppm
Substances Darkened by H ₂ SO ₄	Passes Test	Passes Test
Water (by KF, coulometric)	$\leq 0.05 \%$	< 0.01 %

For Laboratory, Research, or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

E3816

Rec'd by RP on 10/4/24

Jamie Croak
Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Page 1 of 1

Methylene Chloride
ULTRA RESI-ANALYZED
For Organic Residue Analysis
(dichloromethane)



Material No.: 9266-A4

Batch No.: 24H2762011

Manufactured Date: 2024-06-05

Expiration Date: 2025-09-04

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	2
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	≤ 10	5
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8\%$	100.0 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Titration Acid ($\mu\text{eq/g}$)	≤ 0.3	< 0.1
Chloride (Cl)	≤ 10 ppm	< 5 ppm
Water (by KF, coulometric)	$\leq 0.02\%$	$< 0.01\%$

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E 3817

Jamie Croak
Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials LLC

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis



Material No.: 9077-02
Batch No.: 22L0562016
Manufactured Date: 2022-10-26
Expiration Date: 2025-10-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (CH ₃ OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.2 ppm
Titration Acid (μeq/g)	≤ 0.3	0.2
Titration Base (μeq/g)	≤ 0.10	0.03
Water (by KF, coulometric)	≤ 0.08 %	< 0.01 %
Volatile Organic Trace Analysis - Below EPA 8260B CRQL	Conforms	Conforms

For Laboratory, Research, or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Ethier
Vice President Global Quality



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT

Part Number: 95709
Lot Number: 060420
Description: NJ EPH Aromatic Hydrocarbons
18 components
Expiration Date: 060425
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 2000
NIST Test ID#: 23060
Weight(s) shown below were combined and diluted to (mL): 500.0
Balance Uncertainty: 5E-05
Flask Uncertainty: 0.058

Solvent(s): Methylene chloride
Lot# 104923

Formulated By:	Benson Chan	060420
Reviewed By:	Pedro L. Renteria	060420
		DATE

Compound	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (±) (µg/mL)	CAS#	SDS Information (Solvent Safety Info. On Attached pg.)	LD50
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1. Acenaphthene	1	MKB14871V	2000	99	0.2	1.01003	1.01010	2000.1	8.1	83-32-9	N/A	ip-tral 600mg/kg
2. Acenaphthylene	3	012014	2000	98	0.2	1.02033	1.02053	2000.4	8.2	208-96-6	N/A	N/A
3. Anthracene	13	A0210580	2000	99	0.2	1.01003	1.01009	2000.1	8.1	120-12-7	0.2mg/m3 (8h)	ip-trus 430mg/kg
4. Benz(a)anthracene	28	JY2TD-JT	2000	98	0.2	1.02033	1.02051	2000.3	8.2	56-55-3	N/A	N/A
5. Benz(e)pyrene	30	012012	2000	99.5	0.2	1.00495	1.00511	2000.3	8.1	50-32-8	0.2mg/m3 (8h)	scu-tral 50mg/kg
6. Benz(b)fluoranthene	31	012012b	2000	99	0.2	1.01003	1.01012	2000.2	8.1	205-99-2	N/A	N/A
7. Benz(k)fluoranthene	33	012012k	2000	99	0.2	1.01003	1.01018	2000.3	8.1	207-08-9	N/A	N/A
8. Benz(g,h,i)perylene	32	012018	2000	99	0.2	1.01003	1.01019	2000.3	8.1	191-24-2	N/A	N/A
9. Chrysene	91	012015	2000	98	0.2	1.02033	1.02040	2000.1	8.2	218-01-9	0.2mg/m3	N/A
10. Dibenzo(a,h)anthracene	112	012011	2000	98	0.2	1.02033	1.02050	2000.3	8.2	53-70-3	0.2mg/m3	N/A
11. Fluoranthene	183	04221PV	2000	98	0.2	1.02033	1.02050	2000.3	8.2	206-44-0	N/A	of-tral 2000mg/kg
12. Fluorene	184	07211MV	2000	98	0.2	1.02033	1.02047	2000.3	8.2	86-73-7	N/A	ip-trus 2 g/kg
13. Indeno(1,2,3-cd)pyrene	202	012014	2000	99.9	0.2	1.00093	1.00119	2000.5	8.0	193-39-5	N/A	N/A
14. 2-Methylnaphthalene	214	MKB13783V	2000	97	0.2	1.03085	1.03090	2000.1	8.3	91-57-6	N/A	of-tral 1630mg/kg
15. Naphthalene	222	MKB28690V	2000	100	0.2	0.99993	0.99999	2000.1	8.0	91-20-3	10 ppm (50mg/m3/8h)	of-tral 490mg/kg
16. Phenanthrene	248	03410PV	2000	99	0.2	1.01003	1.01030	2000.5	8.1	85-01-8	0.2mg/m3/8h	of-trus 700mg/kg
17. Pyrene	259	010197	2000	98	0.2	1.02033	1.02042	2000.2	8.2	129-00-0	0.2mg/m3/8h	of-tral 2700mg/kg
18. 1,2,3-Trimethylbenzene	944	031097	2000	99	0.2	1.01003	1.01025	2000.4	8.1	526-73-8	N/A	N/A

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certified (±) 0.5% of the stated value, unless otherwise stated.
* All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.F., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

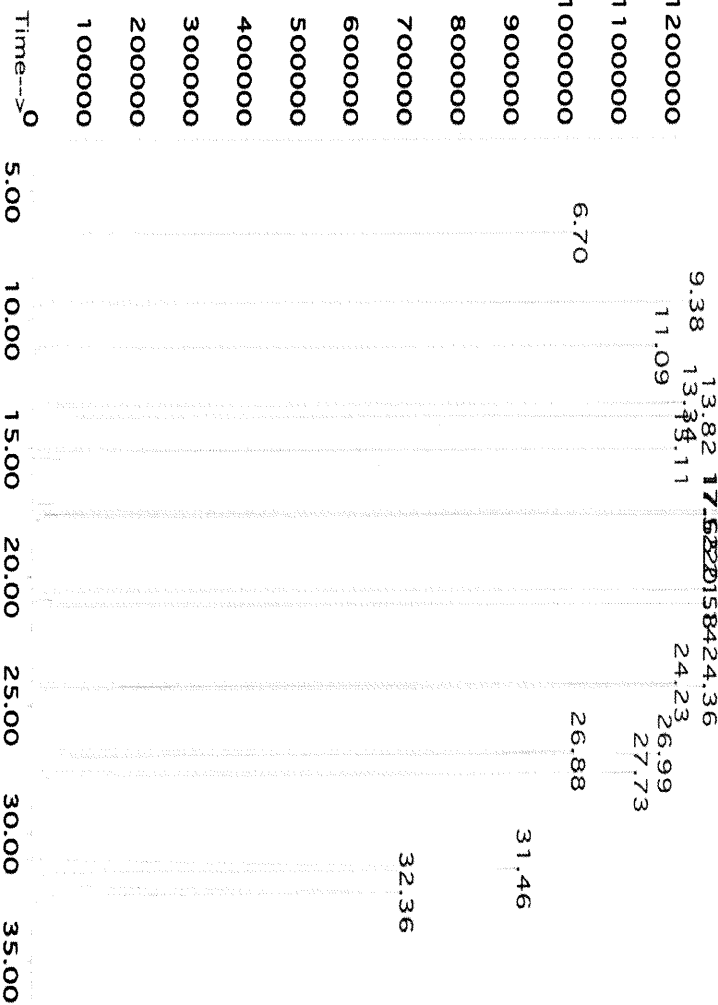
P11137
P11141
11/10/21



Method GC8MSD-2.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (14min.), Rate = 10°C/min., Injector B= 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Melissa Stonier.

Abundance

TIC: 95709.D



Peak No.	Name	MSD RT (min.)
1	1,2,3-Trimethylbenzene	6.70
2	Naphthalene	9.38
3	2-Methylnaphthalene	11.09
4	Acenaphthylene	13.34
5	Acenaphthene	13.82
6	Fluorene	15.11
7	Phenanthrene	17.52
8	Anthracene	17.65
9	Fluoranthene	20.58
10	Pyrene	21.14
11	Chrysene	24.23
12	Benzo(a)anthracene	24.36
13	Benzo(b)fluoranthene/Benzo(k)fluoranthene	26.98
14	Benzo(a)pyrene	27.73
15	Indeno(1,2,3-cd)pyrene/Dibenzo(a,h)anthracene	31.46
16	Benzo(g,h,i)perylene	32.36



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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30540 **Lot No.:** A0190424

Description : NJEPH Aliphatics Calibration Standard

Aliphatics Calibration Standard 2000µg/mL, Hexane/Carbon Disulfide (80:20), 1mL/ampul

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

Expiration Date : November 30, 2029 **Storage:** 25°C nominal

Handling: Sonicate prior to use. **Ship:** Ambient

P12361
↓
P12370 } Y.P.
031/6/23

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	n-Nonane (C9) CAS # 111-84-2 Purity 99% (Lot SHBN5361)	2,014.0 µg/mL	+/- 11.8193 +/- 50.0027 +/- 59.9491	µg/mL Gravimetric Unstressed Stressed
2	n-Decane (C10) CAS # 124-18-5 Purity 99% (Lot SHBN8619)	2,014.7 µg/mL	+/- 11.8232 +/- 50.0193 +/- 59.9689	µg/mL Gravimetric Unstressed Stressed
3	Naphthalene CAS # 91-20-3 Purity 99% (Lot MKCH0219)	2,015.3 µg/mL	+/- 11.8271 +/- 50.0358 +/- 59.9888	µg/mL Gravimetric Unstressed Stressed
4	n-Dodecane (C12) CAS # 112-40-3 Purity 99% (Lot SHBN7174)	2,008.0 µg/mL	+/- 11.7841 +/- 49.8538 +/- 59.7705	µg/mL Gravimetric Unstressed Stressed
5	2-Methylnaphthalene CAS # 91-57-6 Purity 96% (Lot STBK0259)	2,007.0 µg/mL	+/- 11.7784 +/- 49.8299 +/- 59.7419	µg/mL Gravimetric Unstressed Stressed
6	n-Tetradecane (C14) CAS # 629-59-4 Purity 99% (Lot STBK2282)	2,016.7 µg/mL	+/- 11.8349 +/- 50.0689 +/- 60.0284	µg/mL Gravimetric Unstressed Stressed
7	n-Hexadecane (C16) CAS # 544-76-3 Purity 98% (Lot SHBM4146)	2,014.9 µg/mL	+/- 11.8244 +/- 50.0246 +/- 59.9753	µg/mL Gravimetric Unstressed Stressed

8	n-Octadecane (C18) CAS # 593-45-3 Purity 97%	(Lot VZKOJ)	2,004.7 µg/mL	+/-	11.7645	µg/mL	Gravimetric
				+/-	49.7710	µg/mL	Unstressed
				+/-	59.6712	µg/mL	Stressed
9	n-Eicosane (C20) CAS # 112-95-8 Purity 99%	(Lot MKCF7888)	2,018.0 µg/mL	+/-	11.8428	µg/mL	Gravimetric
				+/-	50.1020	µg/mL	Unstressed
				+/-	60.0681	µg/mL	Stressed
10	n-Heneicosane (C21) CAS # 629-94-7 Purity 99%	(Lot MKCL3226)	2,000.7 µg/mL	+/-	11.7410	µg/mL	Gravimetric
				+/-	49.6717	µg/mL	Unstressed
				+/-	59.5522	µg/mL	Stressed
11	n-Docosane (C22) CAS # 629-97-0 Purity 99%	(Lot MKCL8918)	2,005.3 µg/mL	+/-	11.7684	µg/mL	Gravimetric
				+/-	49.7876	µg/mL	Unstressed
				+/-	59.6911	µg/mL	Stressed
12	n-Tetracosane (C24) CAS # 646-31-1 Purity 99%	(Lot MKCN2863)	2,018.0 µg/mL	+/-	11.8428	µg/mL	Gravimetric
				+/-	50.1020	µg/mL	Unstressed
				+/-	60.0681	µg/mL	Stressed
13	n-Hexacosane (C26) CAS # 630-01-3 Purity 99%	(Lot MKCD4540)	2,014.0 µg/mL	+/-	11.8193	µg/mL	Gravimetric
				+/-	50.0027	µg/mL	Unstressed
				+/-	59.9491	µg/mL	Stressed
14	n-Octacosane (C28) CAS # 630-02-4 Purity 99%	(Lot BCCG0084)	2,002.0 µg/mL	+/-	11.7489	µg/mL	Gravimetric
				+/-	49.7048	µg/mL	Unstressed
				+/-	59.5919	µg/mL	Stressed
15	n-Triacontane (C30) CAS # 638-68-6 Purity 97%	(Lot MKCQ9436)	2,011.1 µg/mL	+/-	11.8025	µg/mL	Gravimetric
				+/-	49.9316	µg/mL	Unstressed
				+/-	59.8637	µg/mL	Stressed
16	n-Dotriacontane (C32) CAS # 544-85-4 Purity 99%	(Lot BCBW0661)	2,012.0 µg/mL	+/-	11.8075	µg/mL	Gravimetric
				+/-	49.9531	µg/mL	Unstressed
				+/-	59.8895	µg/mL	Stressed
17	n-Tetratriacontane (C34) CAS # 14167-59-0 Purity 99%	(Lot OML4N)	2,006.7 µg/mL	+/-	11.7762	µg/mL	Gravimetric
				+/-	49.8207	µg/mL	Unstressed
				+/-	59.7308	µg/mL	Stressed
18	n-Hexatriacontane (C36) CAS # 630-06-8 Purity 99%	(Lot Z27H018)	2,017.3 µg/mL	+/-	11.8388	µg/mL	Gravimetric
				+/-	50.0855	µg/mL	Unstressed
				+/-	60.0483	µg/mL	Stressed
19	n-Octatriacontane (C38) CAS # 7194-85-6 Purity 96%	(Lot 0000145137)	2,017.3 µg/mL	+/-	11.8385	µg/mL	Gravimetric
				+/-	50.0842	µg/mL	Unstressed
				+/-	60.0467	µg/mL	Stressed
20	n-Tetracontane (C40) CAS # 4181-95-7 Purity 99%	(Lot BSBME)	2,008.7 µg/mL	+/-	11.7880	µg/mL	Gravimetric
				+/-	49.8703	µg/mL	Unstressed
				+/-	59.7903	µg/mL	Stressed
Solvent: Hexane/Carbon disulfide (80:20)							
	CAS # 110-54-3/75-15-0						
	Purity 99%						

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

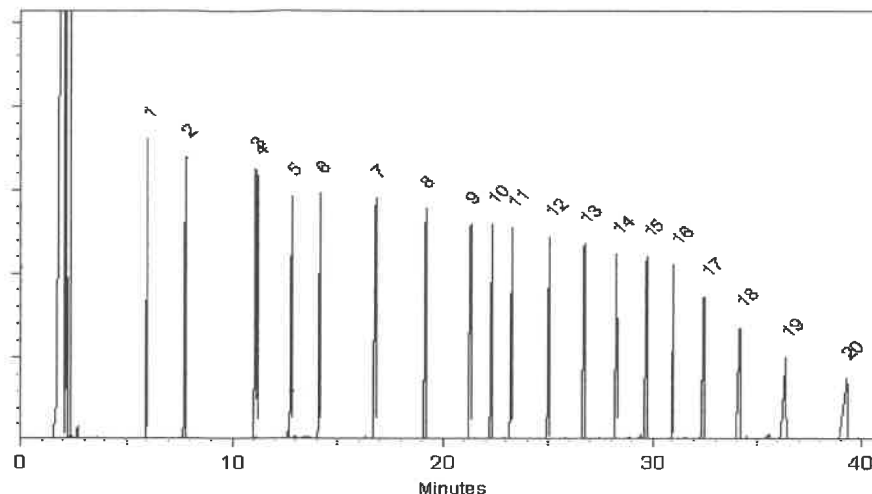
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Morgan Craighead - Mix Technician

Date Mixed: 10-Oct-2022 Balance: 1128360905


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 20-Oct-2022

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.



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Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30542 Lot No.: A0200008
Description : NJEPH Aliphatics Matrix Spike Mix
NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul
Container Size : 5 mL Pkg Amt: > 5 mL
Expiration Date : August 31, 2030 Storage: 10°C or colder
Handling: Sonicate prior to use. Ship: Ambient

P12856
↓
P12855 } Y.P.
10/17/23

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	201.7 µg/mL	+/- 5.2098
2	n-Decane (C10)	124-18-5	SHBP4427	99%	201.3 µg/mL	+/- 5.2012
3	n-Dodecane (C12)	112-40-3	SHBN7174	99%	200.7 µg/mL	+/- 5.1839
4	n-Tetradecane (C14)	629-59-4	STBK5437	99%	201.0 µg/mL	+/- 5.1926
5	n-Hexadecane (C16)	544-76-3	SHBP8192	99%	201.7 µg/mL	+/- 5.2098
6	n-Octadecane (C18)	593-45-3	UE5NG	98%	201.2 µg/mL	+/- 5.1984
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	201.4 µg/mL	+/- 5.2038
8	n-Heneicosane (C21)	629-94-7	MKCL3226	99%	201.3 µg/mL	+/- 5.2012
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	201.3 µg/mL	+/- 5.2012
10	n-Tetracosane (C24)	646-31-1	MKCQ8345	99%	201.3 µg/mL	+/- 5.2012
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	201.7 µg/mL	+/- 5.2098
12	n-Octacosane (C28)	630-02-4	BCCG0084	99%	201.0 µg/mL	+/- 5.1926
13	n-Triacontane (C30)	638-68-6	MKCQ9436	97%	200.5 µg/mL	+/- 5.1788
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	201.3 µg/mL	+/- 5.2012
15	n-Tetratriacontane (C34)	14167-59-0	D3MZN	99%	200.7 µg/mL	+/- 5.1839
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	201.0 µg/mL	+/- 5.1926
17	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	201.3 µg/mL	+/- 5.1998

18 n-Tetracontane (C40) 4181-95-7 4LJYN 98% 200.6 µg/mL +/- 5.1815

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane
CAS # 109-66-0
Purity 99%

Quality Confirmation Test

Column:

30m x 0.25mm x 0.25µm
Rtx-S (cat.#10223)

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

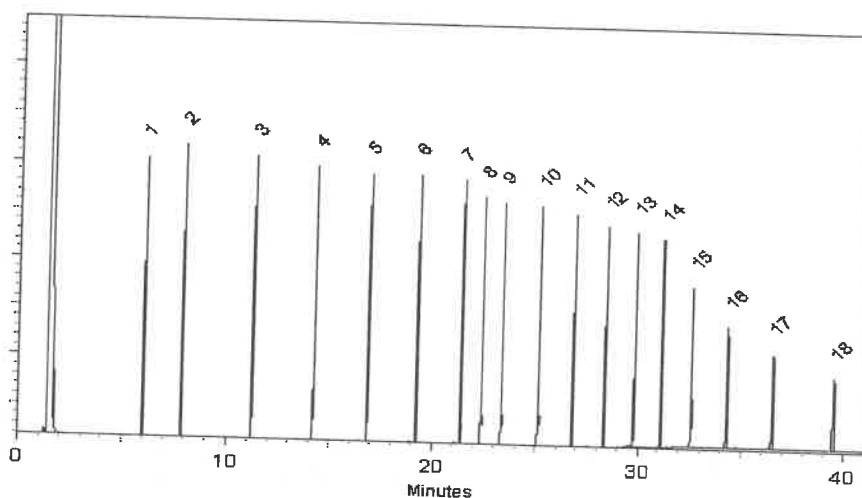
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

John Friedline
John Friedline - Operations Technician I

Date Mixed: 18-Jul-2023

Balance Serial # 1127510105

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 21-Jul-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 31098 **Lot No.:** A0204989

Description: 1-Chlorooctadecane Standard

1-Chlorooctadecane Standard 10,000µg/mL, Methylene Chloride, 1mL/ampul

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

Expiration Date: January 31, 2031 **Storage:** 10°C or colder

Ship: Ambient

P12960
↓
P12991 } Y.P.
12/21/2023

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1-Chlorooctadecane	3386-33-2	14738400	99%	10,097.3 µg/mL	+/- 567.2675

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

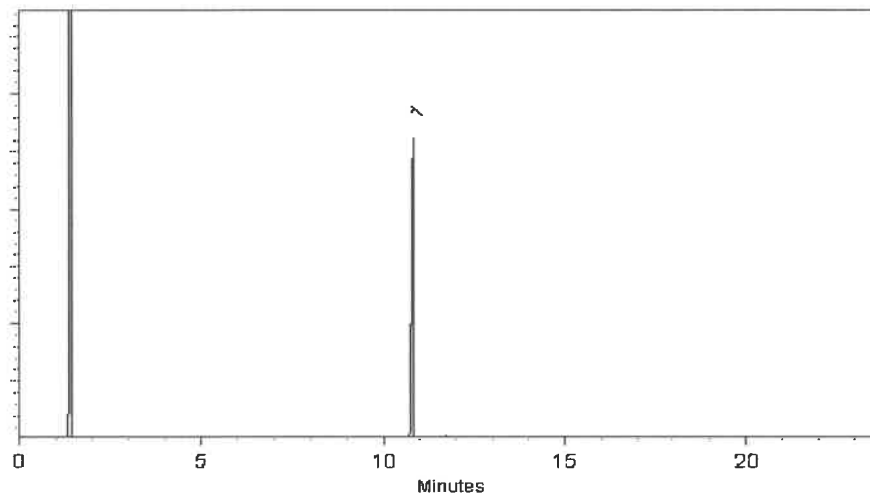
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Peter Robbins - Operations Technician I

Date Mixed: 02-Dec-2023

Balance Serial # B345965662

Christie Mills - Operations Lead Tech - ARM QC

Date Passed: 08-Dec-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 31097 Lot No.: A0204177

Description: o-Terphenyl Standard

o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul

Container Size: 2 mL Pkg Amt: > 1 mL

Expiration Date: June 30, 2027 Storage: 10°C or colder

Handling: Sonicate prior to use. Ship: Ambient

P12992 } Y.P.
↓
P13031 } 12/21/2023

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	o-Terphenyl	84-15-1	GKSSA	99%	10,000.5 µg/mL	+/- 450.4278

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

* Expanded Uncertainty displayed in same units as Grav. Conc.

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

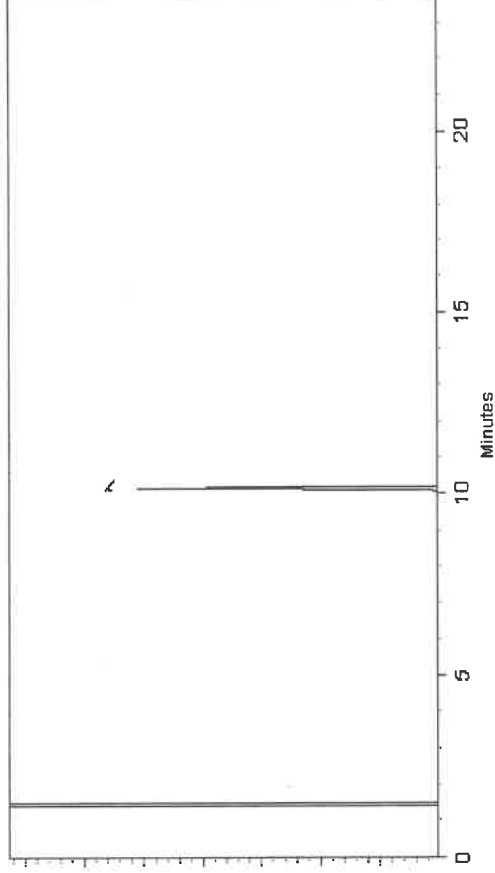
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
10 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.



Laith Clemente - Operations Technician I

Date Mixed: 07-Nov-2023 **Balance Serial #** 1128360905



Dillian Murphy - Operations Technician I

Date Passed: 09-Nov-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



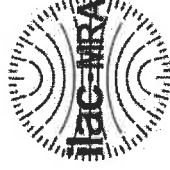
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 31097 **Lot No.:** A0204177

Description: o-Terphenyl Standard

o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul

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

Expiration Date: June 30, 2027 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

P12992 } Y.P.
↓
P13031 } 12/21/2023

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	o-Terphenyl	84-15-1	GKSSA	99%	10,000.5 µg/mL	+/- 450.4278

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

* Expanded Uncertainty displayed in same units as Grav. Conc.

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

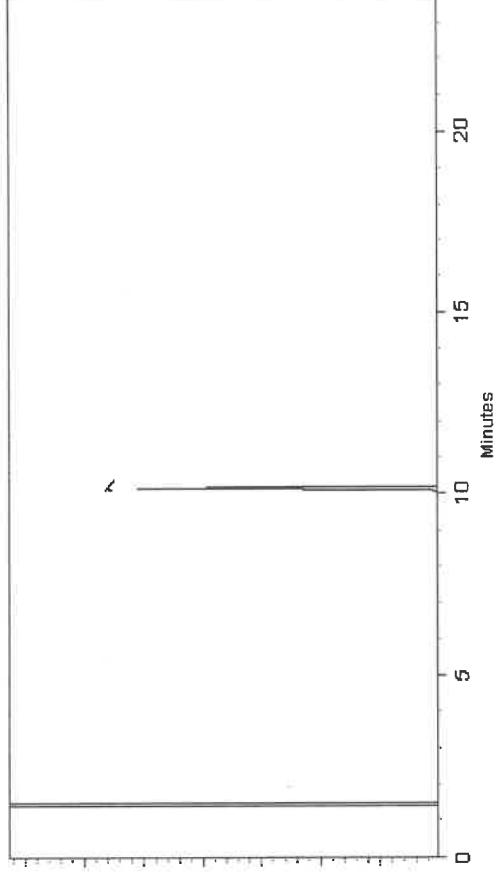
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
10 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Laith Clemente - Operations Technician I

Date Mixed: 07-Nov-2023 **Balance Serial #** 1128360905


Dillian Murphy - Operations Technician I

Date Passed: 09-Nov-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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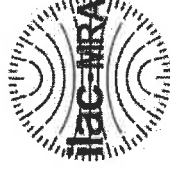
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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 31097 Lot No.: A0204177

Description: o-Terphenyl Standard

o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul

Container Size: 2 mL Pkg Amt: > 1 mL

Expiration Date: June 30, 2027 Storage: 10°C or colder

Handling: Sonicate prior to use. Ship: Ambient

P12992 } Y.P.
↓
P13031 } 12/21/2023

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	o-Terphenyl	84-15-1	GKSSA	99%	10,000.5 µg/mL	+/- 450.4278

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

* Expanded Uncertainty displayed in same units as Grav. Conc.

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

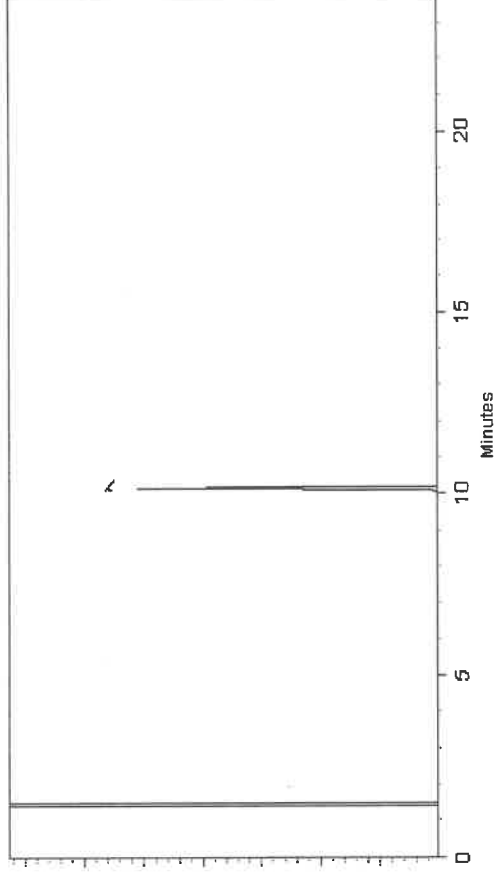
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
10 ml/min.

Inj. Vol
1µl



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Laith Clemente - Operations Technician I

Date Mixed: 07-Nov-2023 **Balance Serial #** 1128360905



Dillian Murphy - Operations Technician I

Date Passed: 09-Nov-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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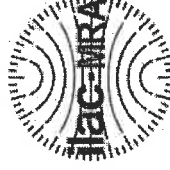
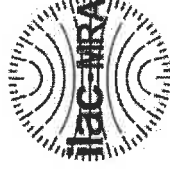
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 31097 **Lot No.:** A0204177

Description: o-Terphenyl Standard

o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul

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

Expiration Date: June 30, 2027 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

P12992 } Y.P.
↓
P13031 } 12/21/2023

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	o-Terphenyl	84-15-1	GKSSA	99%	10,000.5 µg/mL	+/- 450.4278

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

* Expanded Uncertainty displayed in same units as Grav. Conc.

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

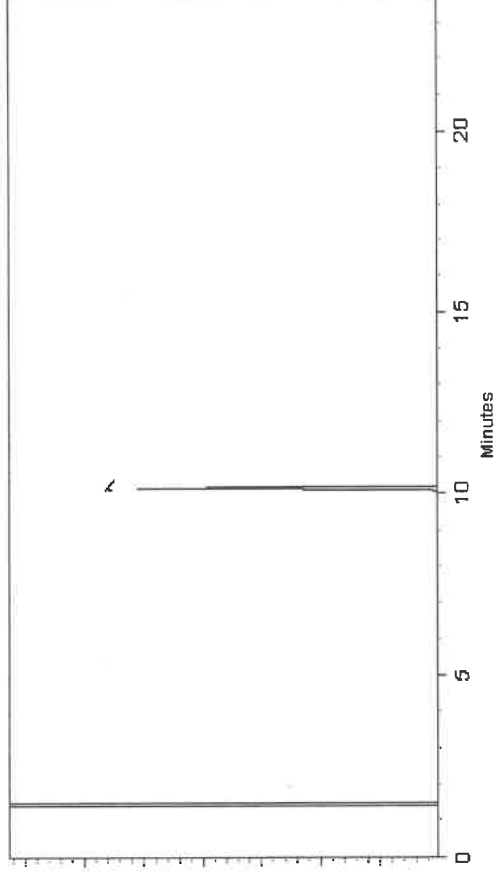
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
10 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Laith Clemente - Operations Technician I

Date Mixed: 07-Nov-2023 **Balance Serial #** 1128360905


Dillian Murphy - Operations Technician I

Date Passed: 09-Nov-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

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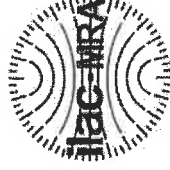
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 31097 **Lot No.:** A0204177

Description: o-Terphenyl Standard

o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul

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

Expiration Date: June 30, 2027 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

P12992 } Y.P.
↓
P13031 } 12/21/2023

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	o-Terphenyl	84-15-1	GKSSA	99%	10,000.5 µg/mL	+/- 450.4278

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

* Expanded Uncertainty displayed in same units as Grav. Conc.

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

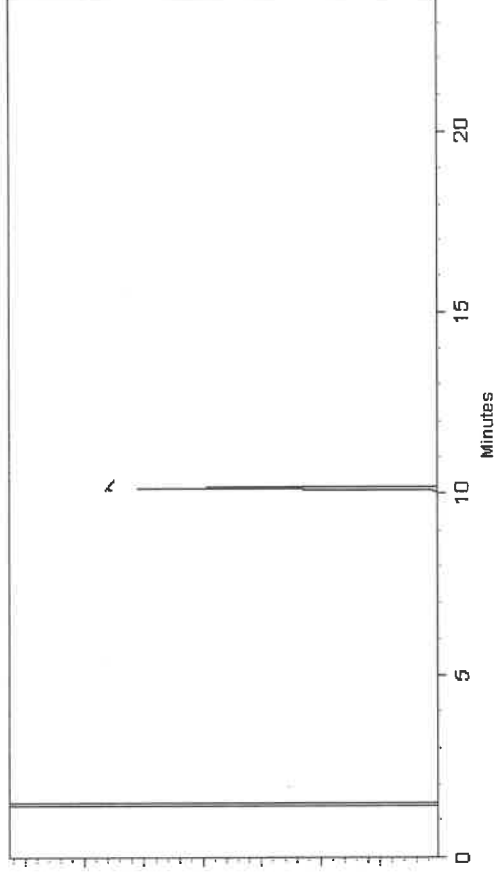
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
10 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Laith Clemente - Operations Technician I

Date Mixed: 07-Nov-2023 **Balance Serial #** 1128360905


Dillian Murphy - Operations Technician I

Date Passed: 09-Nov-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
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Certified Uncertainty Value Notes:

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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

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Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 31097 Lot No.: A0204177

Description: o-Terphenyl Standard

o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul

Container Size: 2 mL Pkg Amt: > 1 mL

Expiration Date: June 30, 2027 Storage: 10°C or colder

Handling: Sonicate prior to use. Ship: Ambient

P12992 } Y.P.
↓
P13031 } 12/21/2023

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	o-Terphenyl	84-15-1	GKSSA	99%	10,000.5 µg/mL	+/- 450.4278

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

* Expanded Uncertainty displayed in same units as Grav. Conc.

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

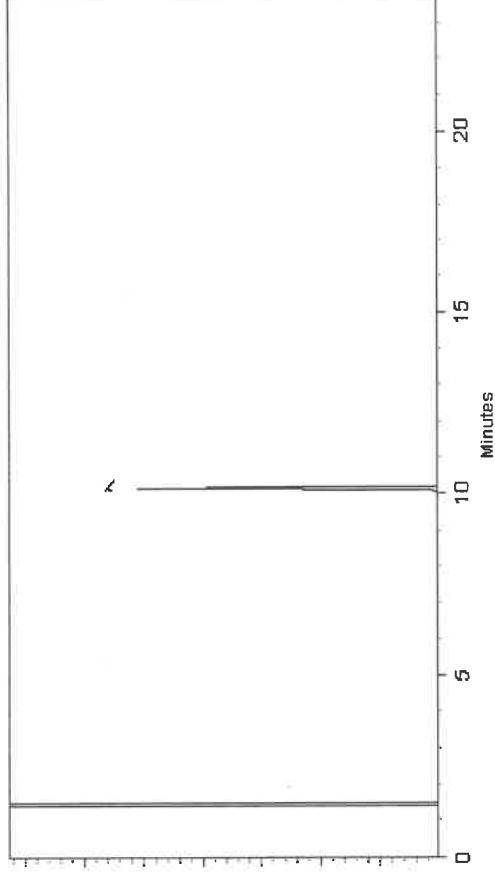
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
10 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Laith Clemente - Operations Technician I

Date Mixed: 07-Nov-2023 **Balance Serial #** 1128360905


Dillian Murphy - Operations Technician I

Date Passed: 09-Nov-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

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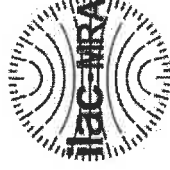
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Catalog No.: 31097 **Lot No.:** A0204177

Description: o-Terphenyl Standard

o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul

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

Expiration Date: June 30, 2027 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

P12992 } Y.P.
↓
P13031 } 12/21/2023

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	o-Terphenyl	84-15-1	GKSSA	99%	10,000.5 µg/mL	+/- 450.4278

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

* Expanded Uncertainty displayed in same units as Grav. Conc.

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

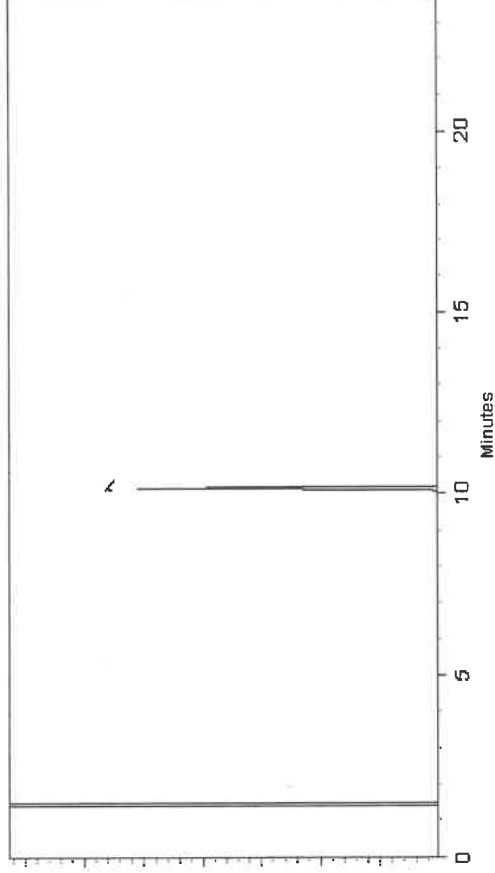
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
10 ml/min.

Inj. Vol
1µl



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Laith Clemente - Operations Technician I

Date Mixed: 07-Nov-2023 **Balance Serial #** 1128360905



Dillian Murphy - Operations Technician I

Date Passed: 09-Nov-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

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- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31098 **Lot No.:** A0200707

Description : 1-Chlorooctadecane Standard

1-Chlorooctadecane Standard 10,000µg/mL, Methylene Chloride, 1mL/ampul

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

Expiration Date : September 30, 2030 **Storage:** 10°C or colder

Ship: Ambient

P130hh
↓
P13051 } Y.B.
12/26/23

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1-Chlorooctadecane	3386-33-2	E230426RSRB	99%	10,018.0 µg/mL	+/- 562.8106

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

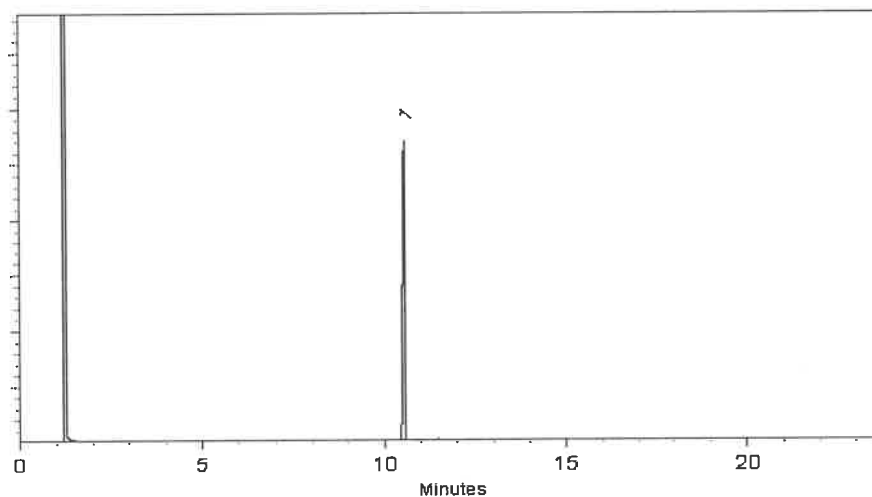
FID

Split Vent:

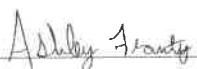
10 ml/min.

Inj. Vol

1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Ashley Frantz - Quoting Technician

Date Mixed: 07-Aug-2023

Balance Serial # 1128360905


Dillan Murphy - Operations Technician I

Date Passed: 10-Aug-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397



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Catalog No. : 31098 **Lot No.:** A0200707

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1-Chlorooctadecane Standard 10,000µg/mL, Methylene Chloride, 1mL/ampul

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

Expiration Date : September 30, 2030 **Storage:** 10°C or colder

Ship: Ambient

P130hh
2
P13051 } Y.B.
12/26/23

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
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Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

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Rtx-5 (cat.#10223)

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

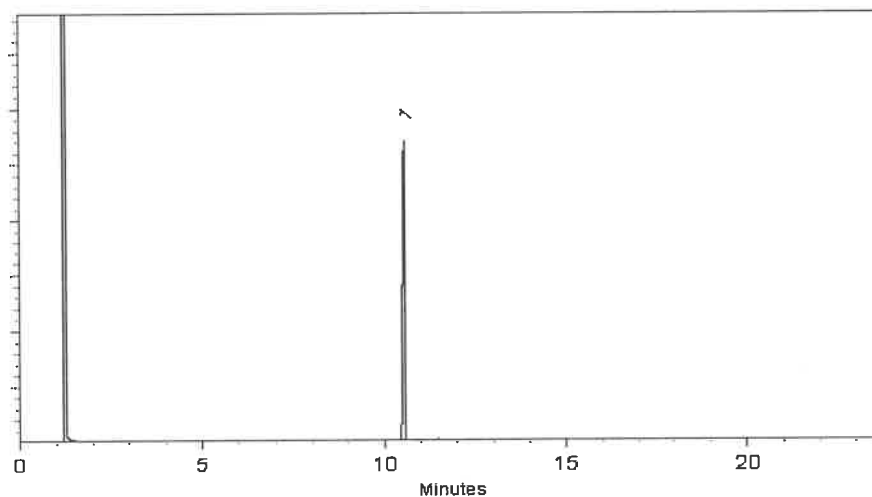
FID

Split Vent:

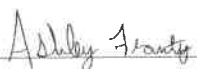
10 ml/min.

Inj. Vol

1µl



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Ashley Frantz - Quoting Technician

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1-Chlorooctadecane Standard 10,000µg/mL, Methylene Chloride, 1mL/ampul

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

Expiration Date : September 30, 2030 **Storage:** 10°C or colder

Ship: Ambient

P130hh
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P13051 } Y.B.
12/26/23

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
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* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

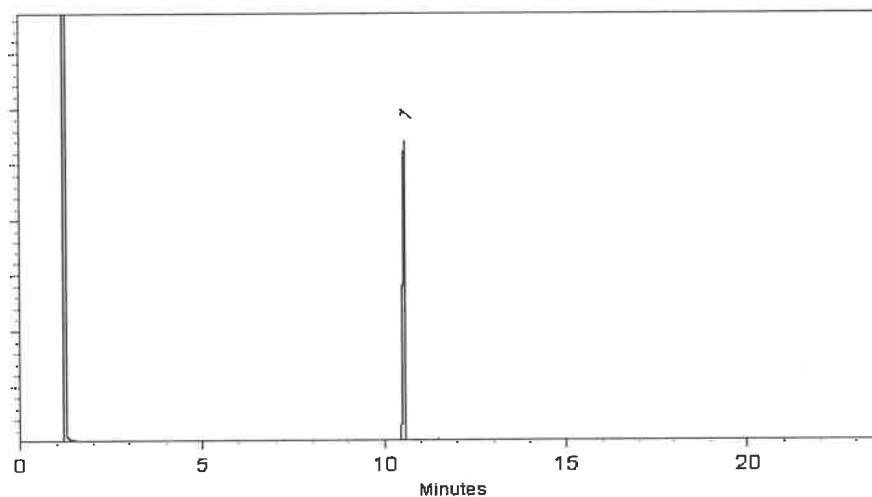
FID

Split Vent:

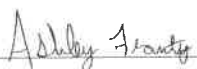
10 ml/min.

Inj. Vol

1µl



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Ashley Frantz - Quoting Technician

Date Mixed: 07-Aug-2023

Balance Serial # 1128360905


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Date Passed: 10-Aug-2023

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Catalog No. : 31098 **Lot No.:** A0200707

Description : 1-Chlorooctadecane Standard

1-Chlorooctadecane Standard 10,000µg/mL, Methylene Chloride, 1mL/ampul

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

Expiration Date : September 30, 2030 **Storage:** 10°C or colder

Ship: Ambient

P130hh
2
P13051 } Y.B.
12/26/23

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
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* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

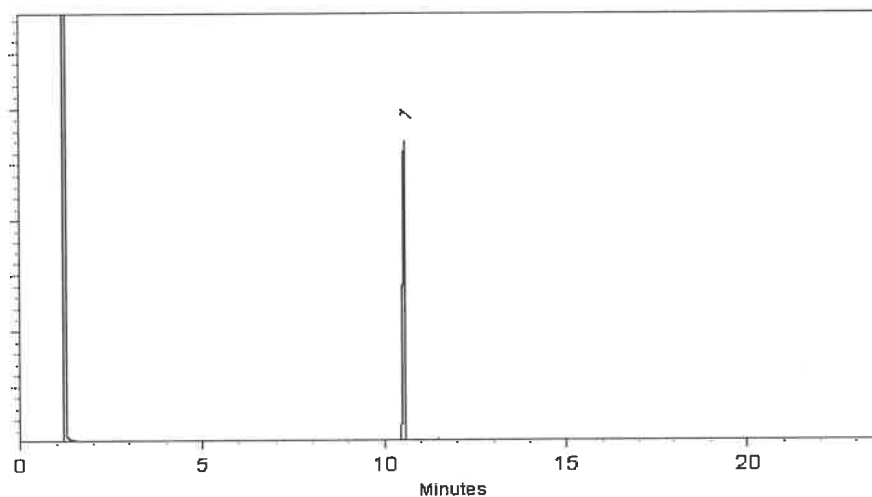
FID

Split Vent:

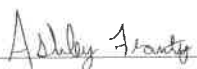
10 ml/min.

Inj. Vol

1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Ashley Frantz - Quoting Technician

Date Mixed: 07-Aug-2023

Balance Serial # 1128360905


Dillan Murphy - Operations Technician I

Date Passed: 10-Aug-2023

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30542 **Lot No.:** A0203911

Description : NJEPH Aliphatics Matrix Spike Mix
NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : November 30, 2030 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

P13053 } Y.P.
↓
P13099 } 01/12/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.0 µg/mL	+/- 5.1667
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	200.0 µg/mL	+/- 5.1667
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.7 µg/mL	+/- 5.1839
4	n-Tetradecane (C14)	629-59-4	STBK5437	99%	200.7 µg/mL	+/- 5.1839
5	n-Hexadecane (C16)	544-76-3	SHBP8192	99%	200.3 µg/mL	+/- 5.1753
6	n-Octadecane (C18)	593-45-3	UE5NG	98%	200.6 µg/mL	+/- 5.1815
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.1 µg/mL	+/- 5.1704
8	n-Heneicosane (C21)	629-94-7	MKCL8682	99%	200.3 µg/mL	+/- 5.1753
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.0 µg/mL	+/- 5.1667
10	n-Tetracosane (C24)	646-31-1	MKCQ8345	99%	200.3 µg/mL	+/- 5.1753
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.0 µg/mL	+/- 5.1667
12	n-Octacosane (C28)	630-02-4	BCCG0084	99%	200.3 µg/mL	+/- 5.1753
13	n-Triacontane (C30)	638-68-6	MKCQ9436	97%	200.5 µg/mL	+/- 5.1788
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.0 µg/mL	+/- 5.1667
15	n-Tetratriacontane (C34)	14167-59-0	D3MZN	99%	200.0 µg/mL	+/- 5.1667
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.0 µg/mL	+/- 5.1667
17	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	200.0 µg/mL	+/- 5.1667

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane
CAS # 109-66-0
Purity 99%

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

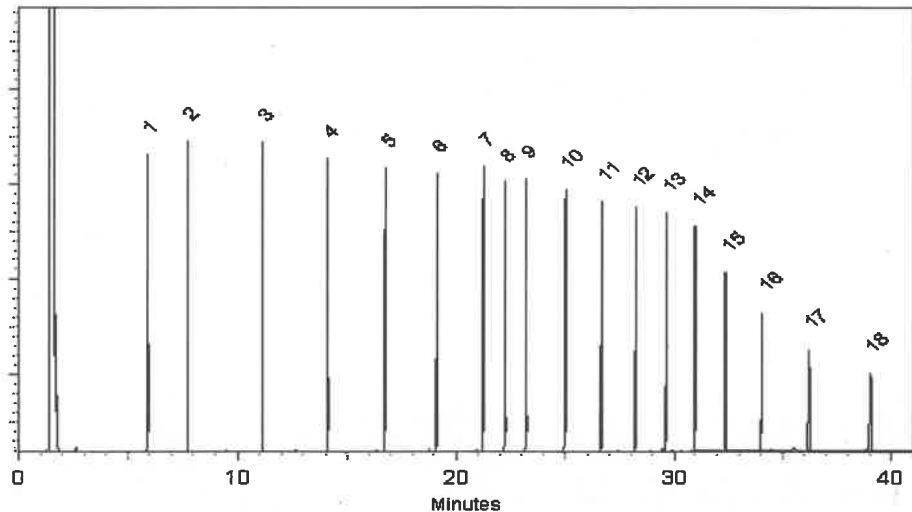
FID

Split Vent:

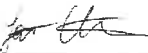
2 ml/min.

Inj. Vol

1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Laith Clemente - Operations Technician I

Date Mixed: 31-Oct-2023

Balance Serial # B345965662


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 06-Nov-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30542 **Lot No.:** A0203911

Description : NJEPH Aliphatics Matrix Spike Mix
NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : November 30, 2030 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

P13053 } Y.P.
↓
P13099 } 01/12/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.0 µg/mL	+/- 5.1667
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	200.0 µg/mL	+/- 5.1667
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.7 µg/mL	+/- 5.1839
4	n-Tetradecane (C14)	629-59-4	STBK5437	99%	200.7 µg/mL	+/- 5.1839
5	n-Hexadecane (C16)	544-76-3	SHBP8192	99%	200.3 µg/mL	+/- 5.1753
6	n-Octadecane (C18)	593-45-3	UE5NG	98%	200.6 µg/mL	+/- 5.1815
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.1 µg/mL	+/- 5.1704
8	n-Heneicosane (C21)	629-94-7	MKCL8682	99%	200.3 µg/mL	+/- 5.1753
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.0 µg/mL	+/- 5.1667
10	n-Tetracosane (C24)	646-31-1	MKCQ8345	99%	200.3 µg/mL	+/- 5.1753
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.0 µg/mL	+/- 5.1667
12	n-Octacosane (C28)	630-02-4	BCCG0084	99%	200.3 µg/mL	+/- 5.1753
13	n-Triacontane (C30)	638-68-6	MKCQ9436	97%	200.5 µg/mL	+/- 5.1788
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.0 µg/mL	+/- 5.1667
15	n-Tetratriacontane (C34)	14167-59-0	D3MZN	99%	200.0 µg/mL	+/- 5.1667
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.0 µg/mL	+/- 5.1667
17	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	200.0 µg/mL	+/- 5.1667

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane
CAS # 109-66-0
Purity 99%

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

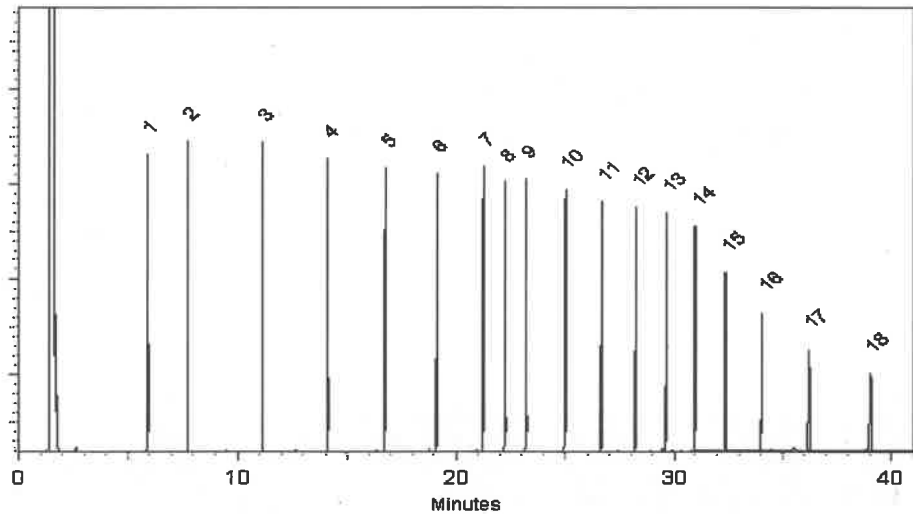
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



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Laith Clemente
Laith Clemente - Operations Technician I

Date Mixed: 31-Oct-2023

Balance Serial # B345965662

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 06-Nov-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

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Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

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- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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chromatographic plus



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Catalog No. : 30543

Lot No.: A0200091

Description : NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

Container Size : 5 mL

Pkg Amt: > 5 mL

Expiration Date : June 30, 2029

Storage: 10°C or colder

Handling: Sonication required. Mix is photosensitive.

Ship: Ambient

P13113 } Y.P.
↓
P13121 } 01/12/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-36	98%	200.7 µg/mL	+/- 9.0431
2	Naphthalene	91-20-3	MKCH0219	99%	200.8 µg/mL	+/- 9.0474
3	2-Methylnaphthalene	91-57-6	STBK0259	96%	200.8 µg/mL	+/- 9.0489
4	Acenaphthylene	208-96-8	L10L	95%	201.0 µg/mL	+/- 9.0574
5	Acenaphthene	83-32-9	MKCR7169	99%	201.0 µg/mL	+/- 9.0565
6	Fluorene	86-73-7	10236068	99%	201.0 µg/mL	+/- 9.0547
7	Phenanthrene	85-01-8	MKCQ2033	99%	200.8 µg/mL	+/- 9.0492
8	Anthracene	120-12-7	MKCR0570	99%	201.1 µg/mL	+/- 9.0601
9	Fluoranthene	206-44-0	MKCF7378	99%	201.0 µg/mL	+/- 9.0583
10	Pyrene	129-00-0	BCCG8479	98%	201.0 µg/mL	+/- 9.0572
11	Benz(a)anthracene	56-55-3	0012022BAA	99%	201.0 µg/mL	+/- 9.0583
12	Chrysene	218-01-9	RP230512B	99%	200.8 µg/mL	+/- 9.0474
13	Benzo(b)fluoranthene	205-99-2	022013B	99%	200.8 µg/mL	+/- 9.0492
14	Benzo(k)fluoranthene	207-08-9	022022K	99%	200.9 µg/mL	+/- 9.0510
15	Benzo(a)pyrene	50-32-8	RP230525	99%	200.8 µg/mL	+/- 9.0474
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	200.9 µg/mL	+/- 9.0522

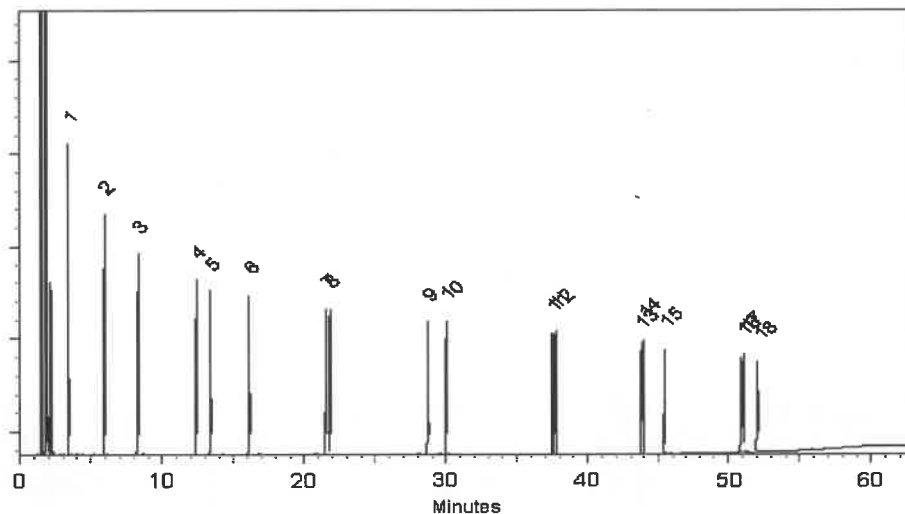
17	Dibenz(a,h)anthracene	53-70-3	ER032211-01	99%	200.8 µg/mL	+/- 9.0474
18	Benzo(g,h,i)perylene	191-24-2	RP230511B	98%	200.9 µg/mL	+/- 9.0519

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Acetone/Toluene (50:50)
CAS # 67-64-1/108-88-3
Purity 99%

Quality Confirmation Test

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)
Carrier Gas:
hydrogen-constant pressure 10 psi.
Temp. Program:
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)
Inj. Temp:
250°C
Det. Temp:
330°C
Det. Type:
FID
Split Vent:
20 ml/min.
Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Nick Yaw
Nick Yaw - Operations Tech I

Date Mixed: 19-Jul-2023 **Balance Serial #** 1128353505

Christie Mills
Christie Mills - Operations Lead Tech - ARM QC

Date Passed: 25-Jul-2023

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31480 **Lot No.:** A0206496

Description : MA Fractionation Surrogate Spike Mix
MA Fractionation Surrogate Spike Mix 4000µg/mL, Hexane, 1mL/ampul

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

Expiration Date : December 31, 2029 **Storage:** 10°C or colder

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

P13258 } 7-P.
↓
P13277 } 02/20/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	2-Fluorobiphenyl	321-60-8	00021384	99%	4,008.5 µg/mL	+/- 180.5736
2	2-Bromonaphthalene	580-13-2	STBC5362V	99%	4,001.5 µg/mL	+/- 180.2582

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

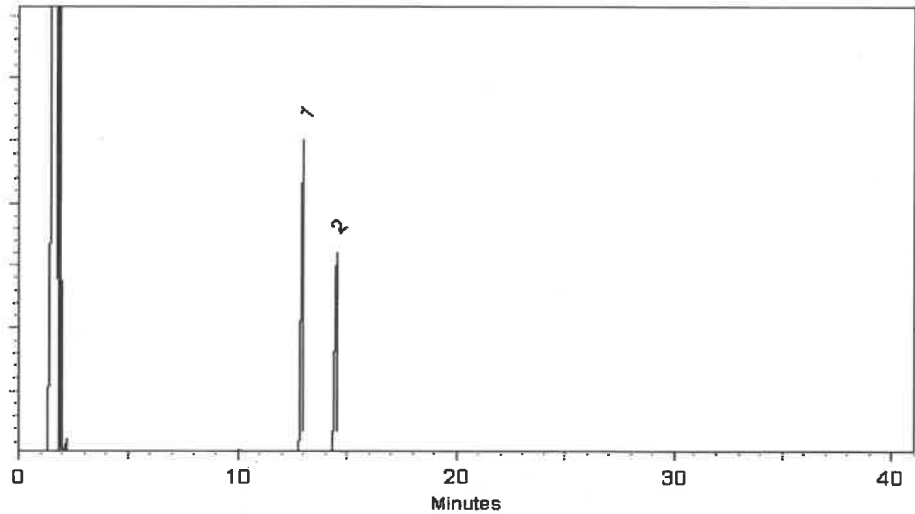
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Rebecca Gingerich

Rebecca Gingerich - Operations Tech II

Date Mixed: 11-Jan-2024

Balance Serial # B345965662

Dylan Murphy

Dylan Murphy - Operations Technician I

Date Passed: 15-Jan-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31480 **Lot No.:** A0206496

Description : MA Fractionation Surrogate Spike Mix
MA Fractionation Surrogate Spike Mix 4000µg/mL, Hexane, 1mL/ampul

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

Expiration Date : December 31, 2029 **Storage:** 10°C or colder

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

P13258 } 7-P.
↓
P13277 } 02/20/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	2-Fluorobiphenyl	321-60-8	00021384	99%	4,008.5 µg/mL	+/- 180.5736
2	2-Bromonaphthalene	580-13-2	STBC5362V	99%	4,001.5 µg/mL	+/- 180.2582

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Hexane
CAS # 110-54-3
Purity 99%

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

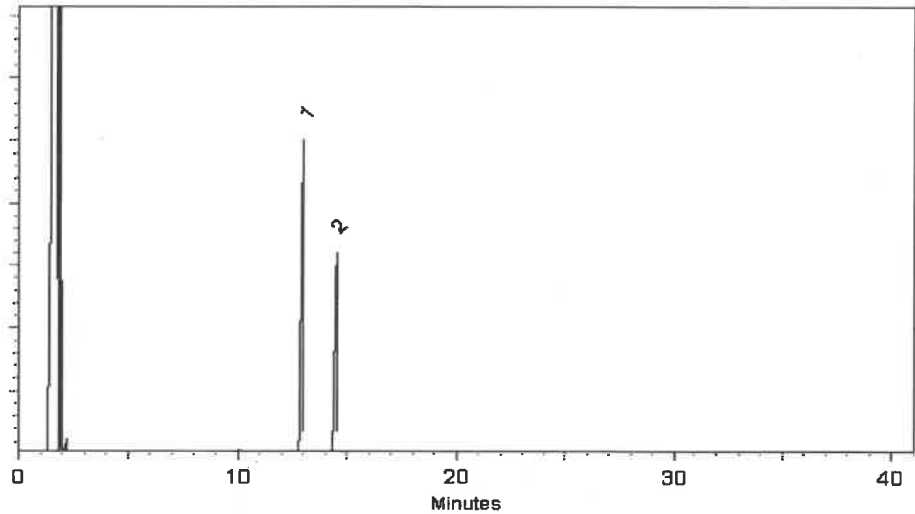
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Rebecca Gingerich

Rebecca Gingerich - Operations Tech II

Date Mixed: 11-Jan-2024

Balance Serial # B345965662

Dylan Murphy

Dylan Murphy - Operations Technician I

Date Passed: 15-Jan-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

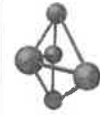
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



CERTIFIED WEIGHT REPORT

Part Number: 95999

Lot Number: 040524

Description: NJ EPH Aliphatic n-Hydrocarbons - Revised
20 components

Expiration Date: 040534

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 1000

NIST Test ID#: 6UTB

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

CAUTION: Sonicate Before Use

Solvent(s):
Cyclohexane

Lot#
28930

P13278
2
P13287
Y.P.
04/11/24

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

Formulated By:	Anthony Mahoney	040524	DATE
Reviewed By:	Pedro L. Rentas	040524	DATE

Compound		Part Number	(RM#)	Lot Number	DIL Factor	Initial Vol. (mL)	Initial Conc (µg/mL)	Nominal Conc (µg/mL)	Purity (%)	Purity Uncertainty	Pipette	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)		
																CAS#	OSHA PEL (TWA)	LD50
1.	2-Methylnaphthalene	(0214)	MKBF3783V	NA	NA	NA	NA	1000	97	0.2	NA	0.02579	0.02594	1005.7	5.7	91-57-6	N/A	or-rat 1630mg/kg
2.	Naphthalene	(0222)	MKB28680V	NA	NA	NA	NA	1000	100	0.2	NA	0.02502	0.02511	1003.7	5.7	91-20-3	10 ppm (50mg/m ³ /8H)	or-rat 490mg/kg
3.	n-Nonane	95708	120222	1.00	25.00	1000.7	1000	1000	NA	0.013	NA	NA	NA	1000.0	4.2	111-84-2	200 ppm (1050mg/m ³ /8H)	ivn-mus 218mg/kg
4.	n-Decane	95708	120222	1.00	25.00	1000.9	1000	1000	NA	0.013	NA	NA	NA	1000.2	4.2	124-18-5	N/A	N/A
5.	n-Dodecane	95708	120222	1.00	25.00	1000.7	1000	1000	NA	0.013	NA	NA	NA	1000.0	4.2	112-40-3	N/A	ivn-mus 3494mg/kg
6.	n-Tetradecane	95708	120222	1.00	25.00	1002.1	1000	1000	NA	0.013	NA	NA	NA	1001.3	4.2	629-59-4	N/A	N/A
7.	n-Hexadecane	95708	120222	1.00	25.00	1000.5	1000	1000	NA	0.013	NA	NA	NA	999.7	4.2	544-76-3	N/A	N/A
8.	n-Octadecane	95708	120222	1.00	25.00	1001.0	1000	1000	NA	0.013	NA	NA	NA	1000.3	4.1	583-45-3	N/A	N/A
9.	n-Eicosane	95708	120222	1.00	25.00	1001.0	1000	1000	NA	0.013	NA	NA	NA	1000.3	4.2	112-95-8	N/A	N/A
10.	n-Henicosane	95708	120222	1.00	25.00	1002.4	1000	1000	NA	0.013	NA	NA	NA	1001.6	4.2	629-94-7	N/A	N/A
11.	n-Docosane	95708	120222	1.00	25.00	1001.9	1000	1000	NA	0.013	NA	NA	NA	1001.2	4.2	629-97-0	N/A	N/A
12.	n-Tetracosane	95708	120222	1.00	25.00	1000.8	1000	1000	NA	0.013	NA	NA	NA	1000.1	4.2	646-31-1	N/A	N/A
13.	n-Hexacosane	95708	120222	1.00	25.00	1001.2	1000	1000	NA	0.013	NA	NA	NA	1000.4	4.2	630-01-3	N/A	N/A
14.	n-Octacosane	95708	120222	1.00	25.00	1000.5	1000	1000	NA	0.013	NA	NA	NA	999.8	4.2	630-02-4	N/A	N/A
15.	n-Triacontane	95708	120222	1.00	25.00	1000.5	1000	1000	NA	0.013	NA	NA	NA	999.8	4.2	638-68-6	N/A	N/A
16.	n-Dotriacontane	95708	120222	1.00	25.00	1000.5	1000	1000	NA	0.013	NA	NA	NA	999.8	4.3	544-85-4	N/A	ivn-mus 100mg/kg
17.	n-Tetracontane	95708	120222	1.00	25.00	1000.4	1000	1000	NA	0.013	NA	NA	NA	999.7	4.2	14167-59-0	N/A	N/A
18.	n-Hexatriacontane	95708	120222	1.00	25.00	1001.5	1000	1000	NA	0.013	NA	NA	NA	1000.8	4.2	630-08-8	N/A	N/A
19.	n-Octatriacontane	95708	120222	1.00	25.00	1000.3	1000	1000	NA	0.013	NA	NA	NA	999.6	4.3	7184-86-6	N/A	N/A
20.	n-Tetracontane	95708	120222	1.00	25.00	1000.6	1000	1000	NA	0.013	NA	NA	NA	999.9	4.3	4181-95-7	N/A	N/A

• The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
• Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
• Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
• All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
• Uncertainty Reference: Taylor, B.N. and Kuyal, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).



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Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30542 **Lot No.:** A0207239

Description : NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : February 28, 2031 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

P13h17 } Y-P.
2 }
P13h29 } 07/11/24.

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	201.0 µg/mL	+/- 5.1926
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	200.7 µg/mL	+/- 5.1839
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.7 µg/mL	+/- 5.1839
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	200.7 µg/mL	+/- 5.1839
5	n-Hexadecane (C16)	544-76-3	SHBM4146	98%	200.6 µg/mL	+/- 5.1815
6	n-Octadecane (C18)	593-45-3	UE5NG	98%	199.9 µg/mL	+/- 5.1647
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	199.8 µg/mL	+/- 5.1621
8	n-Heneicosane (C21)	629-94-7	MKCL8682	99%	200.7 µg/mL	+/- 5.1839
9	n-Docosane (C22)	629-97-0	MKQC3882	99%	200.0 µg/mL	+/- 5.1667
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.7 µg/mL	+/- 5.1839
11	n-Hexacosane (C26)	630-01-3	MKQC4814	99%	200.3 µg/mL	+/- 5.1753
12	n-Octacosane (C28)	630-02-4	BCCG0084	99%	200.3 µg/mL	+/- 5.1753
13	n-Triacontane (C30)	638-68-6	MKQC9436	97%	199.8 µg/mL	+/- 5.1621
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	201.0 µg/mL	+/- 5.1926
15	n-Tetratriacontane (C34)	14167-59-0	OML4N	99%	200.7 µg/mL	+/- 5.1839
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.0 µg/mL	+/- 5.1667
17	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	201.0 µg/mL	+/- 5.1915

18	n-Tetracontane (C40)	4181-95-7	OKEGA	99%	200.3 µg/mL	+/- 5.1753
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* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane
CAS # 109-66-0
Purity 99%

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

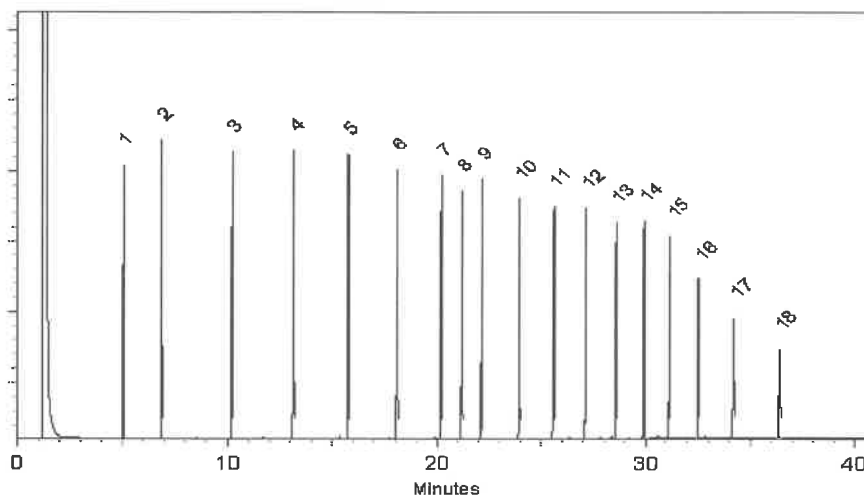
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Matt Fraga
Matt Fragaesi - Mix Technician

Date Mixed: 31-Jan-2024 **Balance Serial #** 1128353505

Dylan Murphy
Dylan Murphy - Operations Technician I

Date Passed: 02-Feb-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30542 **Lot No.:** A0211112

Description : NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2031 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

P13430 } Y-8.
↓
P13436 } 67116124

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.9 µg/mL	+/- 5.1891
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	200.7 µg/mL	+/- 5.1857
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.4 µg/mL	+/- 5.1771
4	n-Tetradecane (C14)	629-59-4	STBK5437	99%	200.7 µg/mL	+/- 5.1839
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.6 µg/mL	+/- 5.1822
6	n-Octadecane (C18)	593-45-3	UE5NG	98%	200.4 µg/mL	+/- 5.1782
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.4 µg/mL	+/- 5.1771
8	n-Heneicosane (C21)	629-94-7	MKCL3226	99%	200.5 µg/mL	+/- 5.1796
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.6 µg/mL	+/- 5.1814
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.5 µg/mL	+/- 5.1805
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCG0084	99%	200.5 µg/mL	+/- 5.1796
13	n-Triacontane (C30)	638-68-6	MKCQ9436	97%	200.4 µg/mL	+/- 5.1763
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.4 µg/mL	+/- 5.1779
15	n-Tetratriacontane (C34)	14167-59-0	D3MZN	99%	200.5 µg/mL	+/- 5.1805
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	200.5 µg/mL	+/- 5.1808

18	n-Tetracontane (C40)	4181-95-7	OKEGA	99%	200.5 µg/mL	+/- 5.1805
----	----------------------	-----------	-------	-----	-------------	------------

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane
CAS # 109-66-0
Purity 99%

Quality Confirmation Test

Column:
30m x 0.25mm x 0.25µm
Rtx-S (cat.#10223)
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

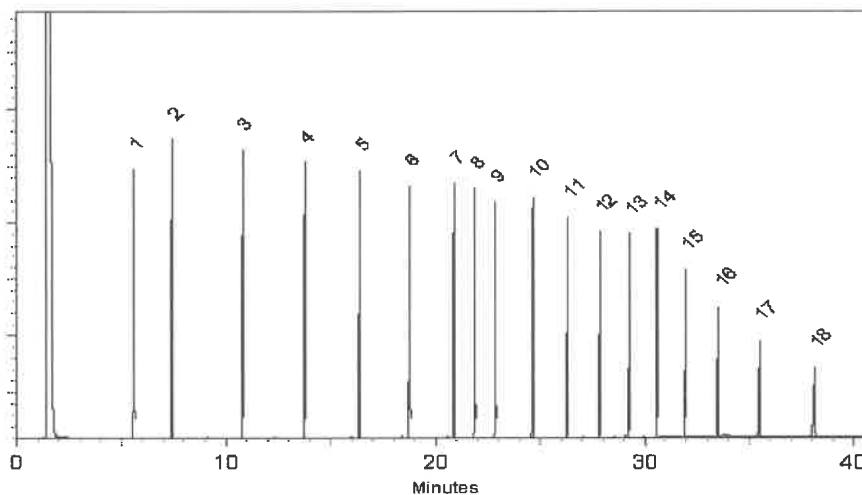
Inj. Temp:
250°C

Det. Temp:
330°C

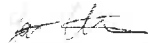
Det. Type:
FID

Split Vent:
2 ml/min.

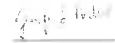
Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Laith Clemente - Operations Technician I

Date Mixed: 07-May-2024 **Balance Serial #** 1128360905


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 09-May-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30542 **Lot No.:** A0211112

Description : NJEPH Aliphatics Matrix Spike Mix
NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2031 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

P13430 } Y-8.
↓
P13436 } 67116124

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.9 µg/mL	+/- 5.1891
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	200.7 µg/mL	+/- 5.1857
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.4 µg/mL	+/- 5.1771
4	n-Tetradecane (C14)	629-59-4	STBK5437	99%	200.7 µg/mL	+/- 5.1839
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.6 µg/mL	+/- 5.1822
6	n-Octadecane (C18)	593-45-3	UE5NG	98%	200.4 µg/mL	+/- 5.1782
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.4 µg/mL	+/- 5.1771
8	n-Heneicosane (C21)	629-94-7	MKCL3226	99%	200.5 µg/mL	+/- 5.1796
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.6 µg/mL	+/- 5.1814
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.5 µg/mL	+/- 5.1805
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCG0084	99%	200.5 µg/mL	+/- 5.1796
13	n-Triacontane (C30)	638-68-6	MKCQ9436	97%	200.4 µg/mL	+/- 5.1763
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.4 µg/mL	+/- 5.1779
15	n-Tetratriacontane (C34)	14167-59-0	D3MZN	99%	200.5 µg/mL	+/- 5.1805
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	200.5 µg/mL	+/- 5.1808

18	n-Tetracontane (C40)	4181-95-7	OKEGA	99%	200.5 µg/mL	+/- 5.1805
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* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane
CAS # 109-66-0
Purity 99%

Quality Confirmation Test

Column:
30m x 0.25mm x 0.25µm
Rtx-S (cat.#10223)
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

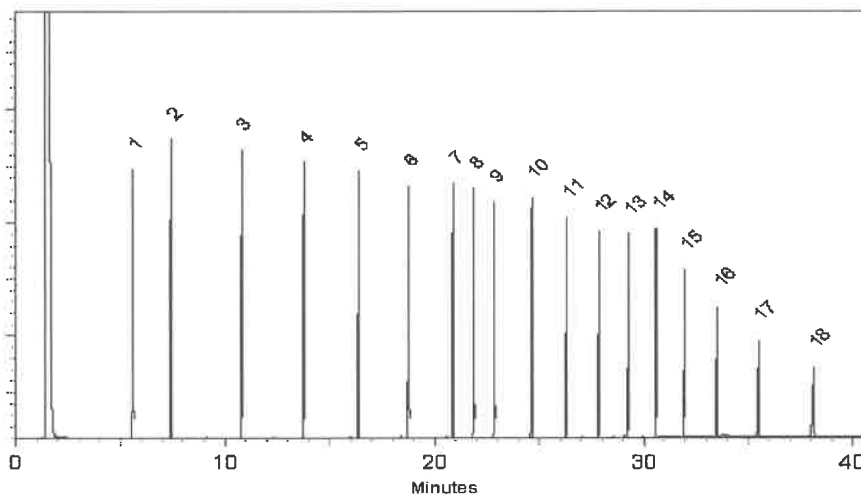
Inj. Temp:
250°C

Det. Temp:
330°C

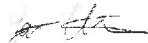
Det. Type:
FID

Split Vent:
2 ml/min.

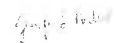
Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Laith Clemente - Operations Technician I

Date Mixed: 07-May-2024 **Balance Serial #** 1128360905


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 09-May-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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Certificate of Analysis

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30542 **Lot No.:** A0211112

Description : NJEPH Aliphatics Matrix Spike Mix
NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2031 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

P13430 } Y-8.
↓
P13436 } 67116124

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.9 µg/mL	+/- 5.1891
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	200.7 µg/mL	+/- 5.1857
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.4 µg/mL	+/- 5.1771
4	n-Tetradecane (C14)	629-59-4	STBK5437	99%	200.7 µg/mL	+/- 5.1839
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.6 µg/mL	+/- 5.1822
6	n-Octadecane (C18)	593-45-3	UE5NG	98%	200.4 µg/mL	+/- 5.1782
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.4 µg/mL	+/- 5.1771
8	n-Heneicosane (C21)	629-94-7	MKCL3226	99%	200.5 µg/mL	+/- 5.1796
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.6 µg/mL	+/- 5.1814
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.5 µg/mL	+/- 5.1805
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCG0084	99%	200.5 µg/mL	+/- 5.1796
13	n-Triacontane (C30)	638-68-6	MKCQ9436	97%	200.4 µg/mL	+/- 5.1763
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.4 µg/mL	+/- 5.1779
15	n-Tetratriacontane (C34)	14167-59-0	D3MZN	99%	200.5 µg/mL	+/- 5.1805
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	200.5 µg/mL	+/- 5.1808

18	n-Tetracontane (C40)	4181-95-7	OKEGA	99%	200.5 µg/mL	+/- 5.1805
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* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane
CAS # 109-66-0
Purity 99%

Quality Confirmation Test

Column:
30m x 0.25mm x 0.25µm
Rtx-S (cat.#10223)
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

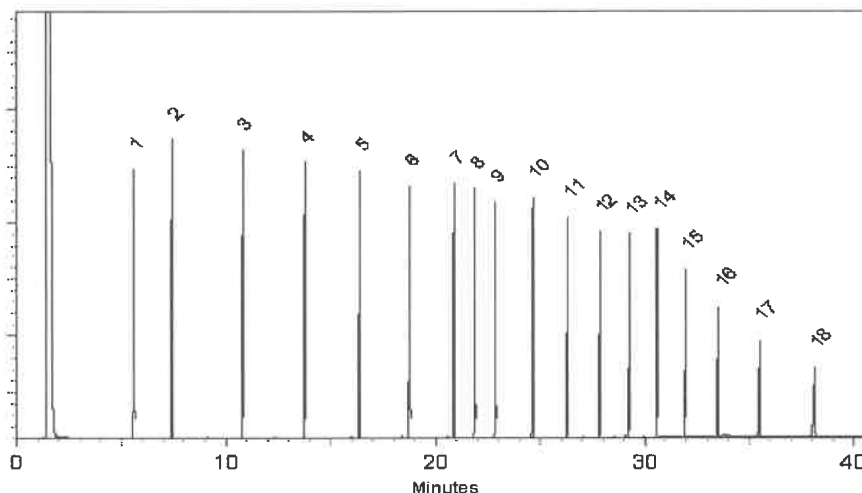
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

[Signature]
Laith Clemente - Operations Technician I

Date Mixed: 07-May-2024 **Balance Serial #** 1128360905

[Signature]
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 09-May-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30542 **Lot No.:** A0211112

Description : NJEPH Aliphatics Matrix Spike Mix
NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2031 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

P13430 } Y-8.
↓
P13436 } 67116124

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.9 µg/mL	+/- 5.1891
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	200.7 µg/mL	+/- 5.1857
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.4 µg/mL	+/- 5.1771
4	n-Tetradecane (C14)	629-59-4	STBK5437	99%	200.7 µg/mL	+/- 5.1839
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.6 µg/mL	+/- 5.1822
6	n-Octadecane (C18)	593-45-3	UE5NG	98%	200.4 µg/mL	+/- 5.1782
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.4 µg/mL	+/- 5.1771
8	n-Heneicosane (C21)	629-94-7	MKCL3226	99%	200.5 µg/mL	+/- 5.1796
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.6 µg/mL	+/- 5.1814
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.5 µg/mL	+/- 5.1805
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCG0084	99%	200.5 µg/mL	+/- 5.1796
13	n-Triacontane (C30)	638-68-6	MKCQ9436	97%	200.4 µg/mL	+/- 5.1763
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.4 µg/mL	+/- 5.1779
15	n-Tetratriacontane (C34)	14167-59-0	D3MZN	99%	200.5 µg/mL	+/- 5.1805
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	200.5 µg/mL	+/- 5.1808

18	n-Tetracontane (C40)	4181-95-7	OKEGA	99%	200.5 µg/mL	+/- 5.1805
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* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane
CAS # 109-66-0
Purity 99%

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

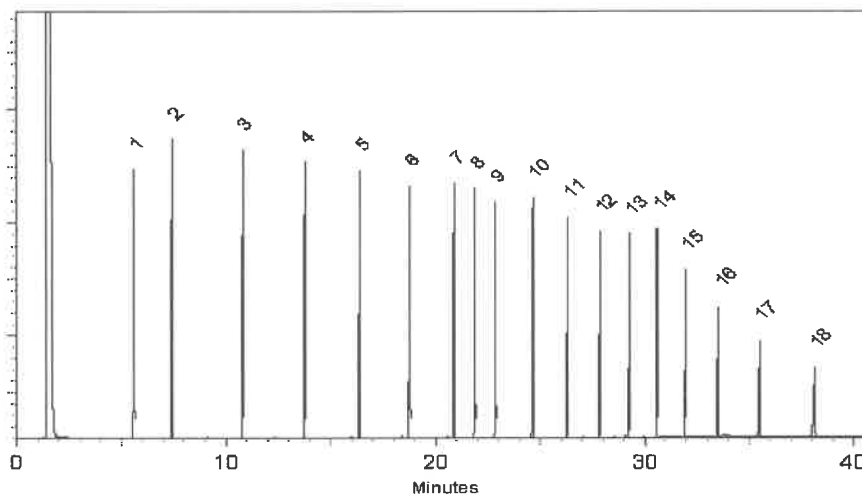
Inj. Temp:
250°C

Det. Temp:
330°C

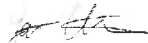
Det. Type:
FID

Split Vent:
2 ml/min.

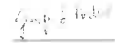
Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Laith Clemente - Operations Technician I

Date Mixed: 07-May-2024 **Balance Serial #** 1128360905


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 09-May-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30542 **Lot No.:** A0211112

Description : NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2031 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

P13430 } Y-8.
↓
P13436 } 67116124

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.9 µg/mL	+/- 5.1891
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	200.7 µg/mL	+/- 5.1857
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.4 µg/mL	+/- 5.1771
4	n-Tetradecane (C14)	629-59-4	STBK5437	99%	200.7 µg/mL	+/- 5.1839
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.6 µg/mL	+/- 5.1822
6	n-Octadecane (C18)	593-45-3	UE5NG	98%	200.4 µg/mL	+/- 5.1782
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.4 µg/mL	+/- 5.1771
8	n-Heneicosane (C21)	629-94-7	MKCL3226	99%	200.5 µg/mL	+/- 5.1796
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.6 µg/mL	+/- 5.1814
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.5 µg/mL	+/- 5.1805
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCG0084	99%	200.5 µg/mL	+/- 5.1796
13	n-Triacontane (C30)	638-68-6	MKCQ9436	97%	200.4 µg/mL	+/- 5.1763
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.4 µg/mL	+/- 5.1779
15	n-Tetratriacontane (C34)	14167-59-0	D3MZN	99%	200.5 µg/mL	+/- 5.1805
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	200.5 µg/mL	+/- 5.1808

18	n-Tetracontane (C40)	4181-95-7	OKEGA	99%	200.5 µg/mL	+/- 5.1805
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* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane
CAS # 109-66-0
Purity 99%

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

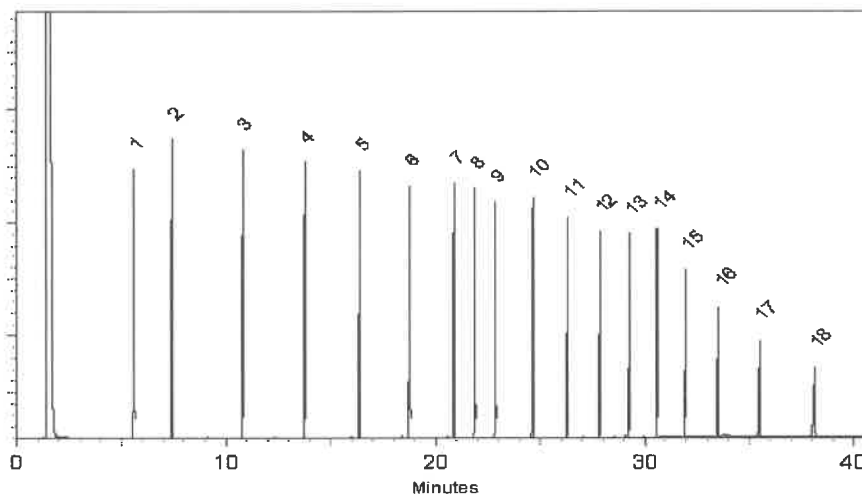
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

[Signature]
Laith Clemente - Operations Technician I

Date Mixed: 07-May-2024 **Balance Serial #** 1128360905

[Signature]
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 09-May-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

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Handling Notes:

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30542 **Lot No.:** A0211112

Description : NJEPH Aliphatics Matrix Spike Mix
NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2031 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

PIB430 } Y-8.
↓
PIB436 } 67116124

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.9 µg/mL	+/- 5.1891
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	200.7 µg/mL	+/- 5.1857
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.4 µg/mL	+/- 5.1771
4	n-Tetradecane (C14)	629-59-4	STBK5437	99%	200.7 µg/mL	+/- 5.1839
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.6 µg/mL	+/- 5.1822
6	n-Octadecane (C18)	593-45-3	UE5NG	98%	200.4 µg/mL	+/- 5.1782
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.4 µg/mL	+/- 5.1771
8	n-Heneicosane (C21)	629-94-7	MKCL3226	99%	200.5 µg/mL	+/- 5.1796
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.6 µg/mL	+/- 5.1814
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.5 µg/mL	+/- 5.1805
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCG0084	99%	200.5 µg/mL	+/- 5.1796
13	n-Triacontane (C30)	638-68-6	MKCQ9436	97%	200.4 µg/mL	+/- 5.1763
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.4 µg/mL	+/- 5.1779
15	n-Tetratriacontane (C34)	14167-59-0	D3MZN	99%	200.5 µg/mL	+/- 5.1805
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	200.5 µg/mL	+/- 5.1808

18	n-Tetracontane (C40)	4181-95-7	OKEGA	99%	200.5 µg/mL	+/- 5.1805
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* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane
CAS # 109-66-0
Purity 99%

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

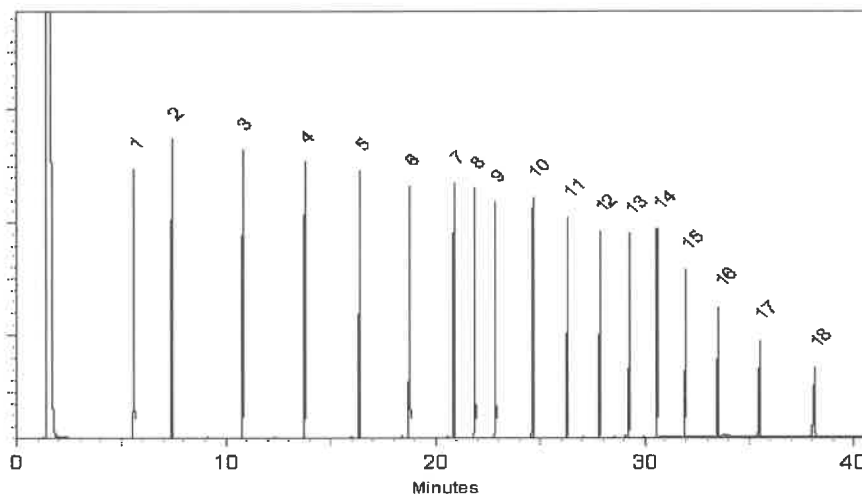
Inj. Temp:
250°C

Det. Temp:
330°C

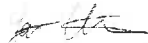
Det. Type:
FID

Split Vent:
2 ml/min.

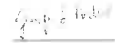
Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Laith Clemente - Operations Technician I

Date Mixed: 07-May-2024 **Balance Serial #** 1128360905


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 09-May-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30542 **Lot No.:** A0211112

Description : NJEPH Aliphatics Matrix Spike Mix
NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : June 30, 2031 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

PIB430 } Y-8.
↓
PIB436 } 67116124

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.9 µg/mL	+/- 5.1891
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	200.7 µg/mL	+/- 5.1857
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.4 µg/mL	+/- 5.1771
4	n-Tetradecane (C14)	629-59-4	STBK5437	99%	200.7 µg/mL	+/- 5.1839
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.6 µg/mL	+/- 5.1822
6	n-Octadecane (C18)	593-45-3	UE5NG	98%	200.4 µg/mL	+/- 5.1782
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.4 µg/mL	+/- 5.1771
8	n-Heneicosane (C21)	629-94-7	MKCL3226	99%	200.5 µg/mL	+/- 5.1796
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.6 µg/mL	+/- 5.1814
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.5 µg/mL	+/- 5.1805
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCG0084	99%	200.5 µg/mL	+/- 5.1796
13	n-Triacontane (C30)	638-68-6	MKCQ9436	97%	200.4 µg/mL	+/- 5.1763
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.4 µg/mL	+/- 5.1779
15	n-Tetratriacontane (C34)	14167-59-0	D3MZN	99%	200.5 µg/mL	+/- 5.1805
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	200.5 µg/mL	+/- 5.1808

18	n-Tetracontane (C40)	4181-95-7	OKEGA	99%	200.5 µg/mL	+/- 5.1805
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* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane
CAS # 109-66-0
Purity 99%

Quality Confirmation Test

Column:
30m x 0.25mm x 0.25µm
Rtx-S (cat.#10223)
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

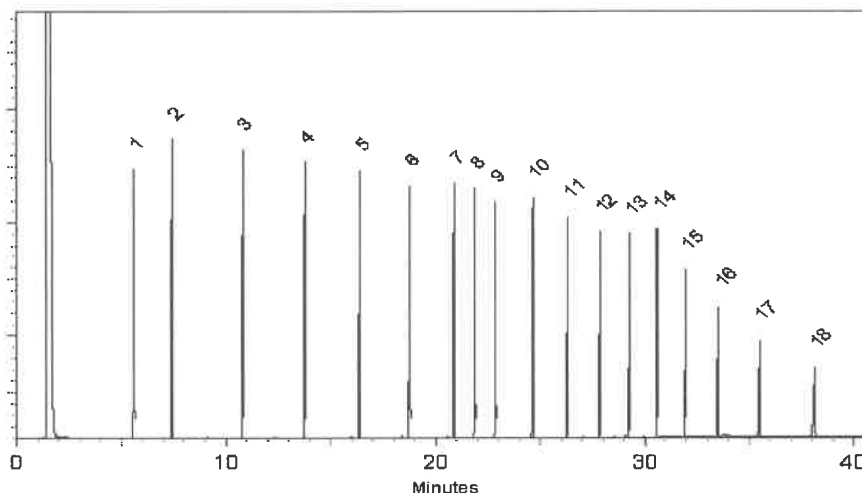
Inj. Temp:
250°C

Det. Temp:
330°C

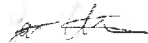
Det. Type:
FID

Split Vent:
2 ml/min.

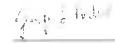
Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Laith Clemente - Operations Technician I

Date Mixed: 07-May-2024 **Balance Serial #** 1128360905


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 09-May-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

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Catalog No. : 30543 **Lot No.:** A0211254

Description : NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2030 **Storage:** 10°C or colder

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

P13437
↓
P13452 } 7-P.
07/16/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-38	99%	200.0 µg/mL	+/- 9.0114
2	Naphthalene	91-20-3	STBL1057	99%	200.8 µg/mL	+/- 9.0474
3	2-Methylnaphthalene	91-57-6	STBK0259	96%	200.4 µg/mL	+/- 9.0316
4	Acenaphthylene	208-96-8	214935L31M	98%	200.3 µg/mL	+/- 9.0255
5	Acenaphthene	83-32-9	MKCR7169	99%	202.0 µg/mL	+/- 9.1015
6	Fluorene	86-73-7	10241100	99%	201.2 µg/mL	+/- 9.0655
7	Phenanthrene	85-01-8	MKCS5188	99%	200.4 µg/mL	+/- 9.0294
8	Anthracene	120-12-7	MKCR0570	99%	200.4 µg/mL	+/- 9.0294
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.8 µg/mL	+/- 9.0474
10	Pyrene	129-00-0	BCCK2592	99%	201.2 µg/mL	+/- 9.0655
11	Benz(a)anthracene	56-55-3	I30012022BAA	99%	200.8 µg/mL	+/- 9.0474
12	Chrysene	218-01-9	RP231206RSR	99%	200.4 µg/mL	+/- 9.0294
13	Benzo(b)fluoranthene	205-99-2	012013B	99%	200.4 µg/mL	+/- 9.0294
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	200.0 µg/mL	+/- 9.0114
15	Benzo(a)pyrene	50-32-8	O45GL	98%	200.7 µg/mL	+/- 9.0431
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	199.8 µg/mL	+/- 9.0033

17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	200.0 µg/mL	+/- 9.0114
18	Benzo(g,h,i)perylene	191-24-2	RP240105ECS	99%	200.8 µg/mL	+/- 9.0474

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Acetone/Toluene (50:50)
CAS # 67-64-1/108-88-3
Purity 99%

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

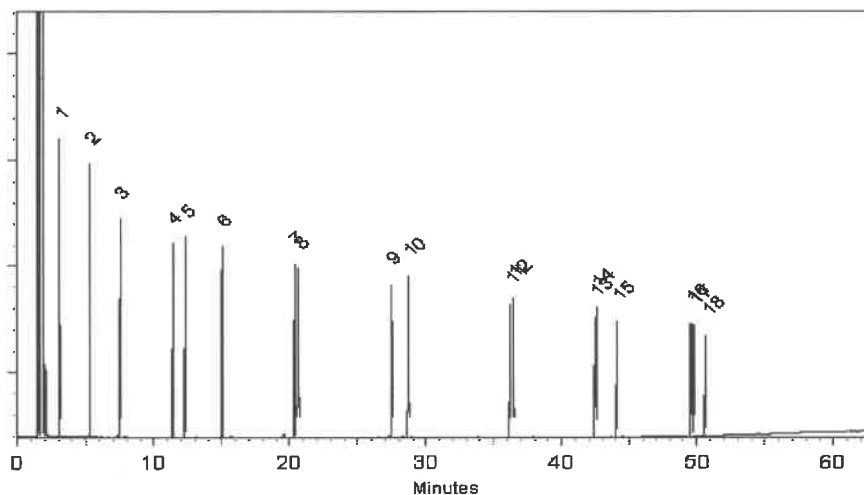
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael Maye
Michael Maye - Operations Tech I

Date Mixed: 09-May-2024 **Balance Serial #** 1128353505

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 13-May-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30543 **Lot No.:** A0211254

Description : NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2030 **Storage:** 10°C or colder

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

P13437
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P13452 } Y-P.
07/16/24.

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-38	99%	200.0 µg/mL	+/- 9.0114
2	Naphthalene	91-20-3	STBL1057	99%	200.8 µg/mL	+/- 9.0474
3	2-Methylnaphthalene	91-57-6	STBK0259	96%	200.4 µg/mL	+/- 9.0316
4	Acenaphthylene	208-96-8	214935L31M	98%	200.3 µg/mL	+/- 9.0255
5	Acenaphthene	83-32-9	MKCR7169	99%	202.0 µg/mL	+/- 9.1015
6	Fluorene	86-73-7	10241100	99%	201.2 µg/mL	+/- 9.0655
7	Phenanthrene	85-01-8	MKCS5188	99%	200.4 µg/mL	+/- 9.0294
8	Anthracene	120-12-7	MKCR0570	99%	200.4 µg/mL	+/- 9.0294
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.8 µg/mL	+/- 9.0474
10	Pyrene	129-00-0	BCCK2592	99%	201.2 µg/mL	+/- 9.0655
11	Benz(a)anthracene	56-55-3	I30012022BAA	99%	200.8 µg/mL	+/- 9.0474
12	Chrysene	218-01-9	RP231206RSR	99%	200.4 µg/mL	+/- 9.0294
13	Benzo(b)fluoranthene	205-99-2	012013B	99%	200.4 µg/mL	+/- 9.0294
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	200.0 µg/mL	+/- 9.0114
15	Benzo(a)pyrene	50-32-8	O45GL	98%	200.7 µg/mL	+/- 9.0431
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	199.8 µg/mL	+/- 9.0033

17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	200.0 µg/mL	+/- 9.0114
18	Benzo(g,h,i)perylene	191-24-2	RP240105ECS	99%	200.8 µg/mL	+/- 9.0474

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Acetone/Toluene (50:50)
CAS # 67-64-1/108-88-3
Purity 99%

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

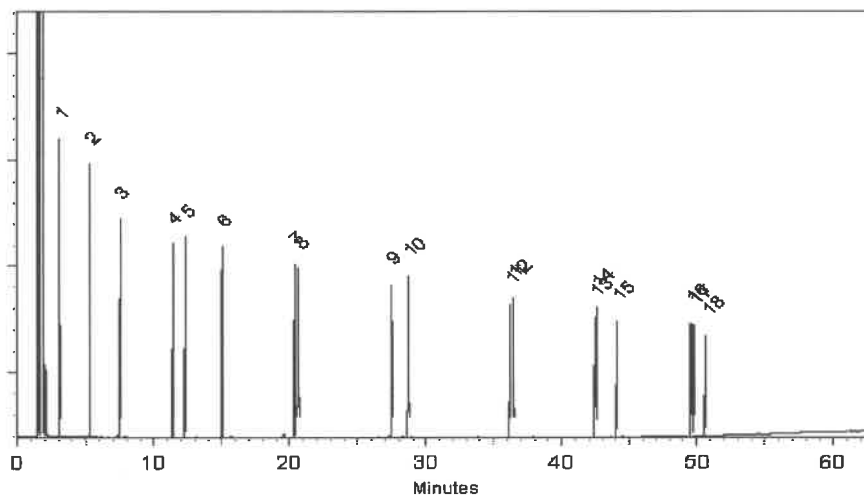
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael Maye
Michael Maye - Operations Tech I

Date Mixed: 09-May-2024 **Balance Serial #** 1128353505

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 13-May-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30543 **Lot No.:** A0211254

Description : NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2030 **Storage:** 10°C or colder

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

P13437
↓
P13452 } 7-P.
07/16/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-38	99%	200.0 µg/mL	+/- 9.0114
2	Naphthalene	91-20-3	STBL1057	99%	200.8 µg/mL	+/- 9.0474
3	2-Methylnaphthalene	91-57-6	STBK0259	96%	200.4 µg/mL	+/- 9.0316
4	Acenaphthylene	208-96-8	214935L31M	98%	200.3 µg/mL	+/- 9.0255
5	Acenaphthene	83-32-9	MKCR7169	99%	202.0 µg/mL	+/- 9.1015
6	Fluorene	86-73-7	10241100	99%	201.2 µg/mL	+/- 9.0655
7	Phenanthrene	85-01-8	MKCS5188	99%	200.4 µg/mL	+/- 9.0294
8	Anthracene	120-12-7	MKCR0570	99%	200.4 µg/mL	+/- 9.0294
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.8 µg/mL	+/- 9.0474
10	Pyrene	129-00-0	BCCK2592	99%	201.2 µg/mL	+/- 9.0655
11	Benz(a)anthracene	56-55-3	I30012022BAA	99%	200.8 µg/mL	+/- 9.0474
12	Chrysene	218-01-9	RP231206RSR	99%	200.4 µg/mL	+/- 9.0294
13	Benzo(b)fluoranthene	205-99-2	012013B	99%	200.4 µg/mL	+/- 9.0294
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	200.0 µg/mL	+/- 9.0114
15	Benzo(a)pyrene	50-32-8	O45GL	98%	200.7 µg/mL	+/- 9.0431
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	199.8 µg/mL	+/- 9.0033

17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	200.0 µg/mL	+/- 9.0114
18	Benzo(g,h,i)perylene	191-24-2	RP240105ECS	99%	200.8 µg/mL	+/- 9.0474

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Acetone/Toluene (50:50)
CAS # 67-64-1/108-88-3
Purity 99%

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

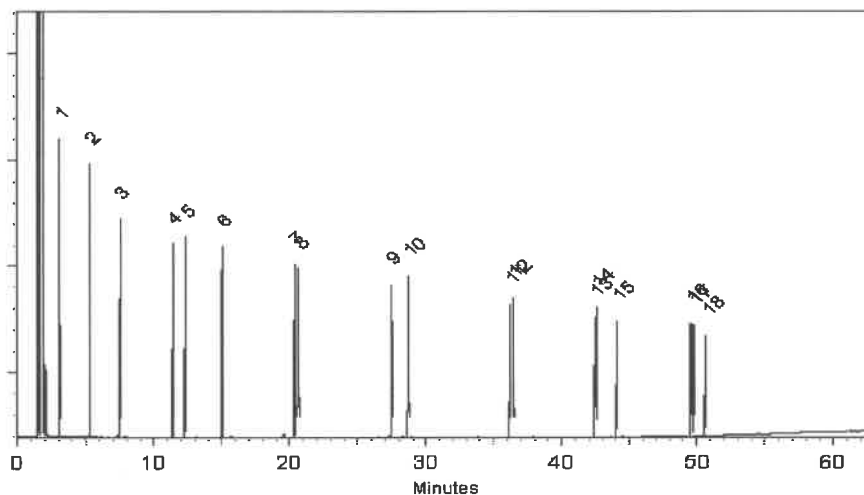
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael Maye
Michael Maye - Operations Tech I

Date Mixed: 09-May-2024 **Balance Serial #** 1128353505

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 13-May-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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CERTIFIED REFERENCE MATERIAL

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30543 **Lot No.:** A0211254

Description : NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2030 **Storage:** 10°C or colder

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

P13437
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P13452 } 7-P.
07/16/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-38	99%	200.0 µg/mL	+/- 9.0114
2	Naphthalene	91-20-3	STBL1057	99%	200.8 µg/mL	+/- 9.0474
3	2-Methylnaphthalene	91-57-6	STBK0259	96%	200.4 µg/mL	+/- 9.0316
4	Acenaphthylene	208-96-8	214935L31M	98%	200.3 µg/mL	+/- 9.0255
5	Acenaphthene	83-32-9	MKCR7169	99%	202.0 µg/mL	+/- 9.1015
6	Fluorene	86-73-7	10241100	99%	201.2 µg/mL	+/- 9.0655
7	Phenanthrene	85-01-8	MKCS5188	99%	200.4 µg/mL	+/- 9.0294
8	Anthracene	120-12-7	MKCR0570	99%	200.4 µg/mL	+/- 9.0294
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.8 µg/mL	+/- 9.0474
10	Pyrene	129-00-0	BCCK2592	99%	201.2 µg/mL	+/- 9.0655
11	Benz(a)anthracene	56-55-3	I30012022BAA	99%	200.8 µg/mL	+/- 9.0474
12	Chrysene	218-01-9	RP231206RSR	99%	200.4 µg/mL	+/- 9.0294
13	Benzo(b)fluoranthene	205-99-2	012013B	99%	200.4 µg/mL	+/- 9.0294
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	200.0 µg/mL	+/- 9.0114
15	Benzo(a)pyrene	50-32-8	O45GL	98%	200.7 µg/mL	+/- 9.0431
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	199.8 µg/mL	+/- 9.0033

17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	200.0 µg/mL	+/- 9.0114
18	Benzo(g,h,i)perylene	191-24-2	RP240105ECS	99%	200.8 µg/mL	+/- 9.0474

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Acetone/Toluene (50:50)
CAS # 67-64-1/108-88-3
Purity 99%

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

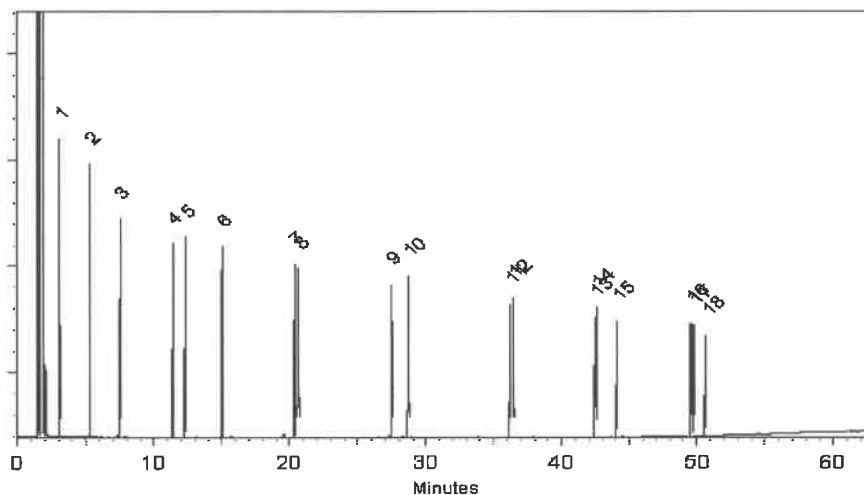
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael Maye
Michael Maye - Operations Tech I

Date Mixed: 09-May-2024 **Balance Serial #** 1128353505

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 13-May-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30543 **Lot No.:** A0211254

Description : NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2030 **Storage:** 10°C or colder

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

P13437
↓
P13452 } Y-P.
07/16/24.

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-38	99%	200.0 µg/mL	+/- 9.0114
2	Naphthalene	91-20-3	STBL1057	99%	200.8 µg/mL	+/- 9.0474
3	2-Methylnaphthalene	91-57-6	STBK0259	96%	200.4 µg/mL	+/- 9.0316
4	Acenaphthylene	208-96-8	214935L31M	98%	200.3 µg/mL	+/- 9.0255
5	Acenaphthene	83-32-9	MKCR7169	99%	202.0 µg/mL	+/- 9.1015
6	Fluorene	86-73-7	10241100	99%	201.2 µg/mL	+/- 9.0655
7	Phenanthrene	85-01-8	MKCS5188	99%	200.4 µg/mL	+/- 9.0294
8	Anthracene	120-12-7	MKCR0570	99%	200.4 µg/mL	+/- 9.0294
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.8 µg/mL	+/- 9.0474
10	Pyrene	129-00-0	BCCK2592	99%	201.2 µg/mL	+/- 9.0655
11	Benz(a)anthracene	56-55-3	I30012022BAA	99%	200.8 µg/mL	+/- 9.0474
12	Chrysene	218-01-9	RP231206RSR	99%	200.4 µg/mL	+/- 9.0294
13	Benzo(b)fluoranthene	205-99-2	012013B	99%	200.4 µg/mL	+/- 9.0294
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	200.0 µg/mL	+/- 9.0114
15	Benzo(a)pyrene	50-32-8	O45GL	98%	200.7 µg/mL	+/- 9.0431
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	199.8 µg/mL	+/- 9.0033

17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	200.0 µg/mL	+/- 9.0114
18	Benzo(g,h,i)perylene	191-24-2	RP240105ECS	99%	200.8 µg/mL	+/- 9.0474

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Acetone/Toluene (50:50)
CAS # 67-64-1/108-88-3
Purity 99%

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

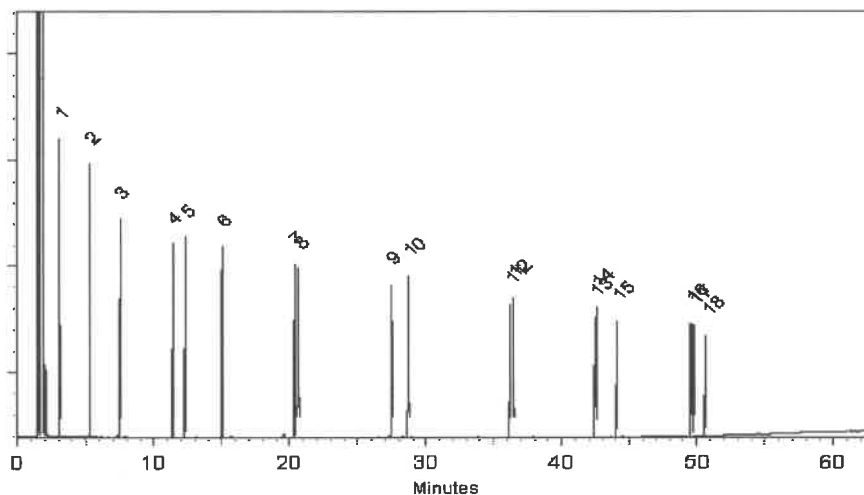
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael Maye
Michael Maye - Operations Tech I

Date Mixed: 09-May-2024 **Balance Serial #** 1128353505

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 13-May-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30543 **Lot No.:** A0211254

Description : NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : April 30, 2030 **Storage:** 10°C or colder

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

P13437
↓
P13452 } 7-P.
07/16/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-38	99%	200.0 µg/mL	+/- 9.0114
2	Naphthalene	91-20-3	STBL1057	99%	200.8 µg/mL	+/- 9.0474
3	2-Methylnaphthalene	91-57-6	STBK0259	96%	200.4 µg/mL	+/- 9.0316
4	Acenaphthylene	208-96-8	214935L31M	98%	200.3 µg/mL	+/- 9.0255
5	Acenaphthene	83-32-9	MKCR7169	99%	202.0 µg/mL	+/- 9.1015
6	Fluorene	86-73-7	10241100	99%	201.2 µg/mL	+/- 9.0655
7	Phenanthrene	85-01-8	MKCS5188	99%	200.4 µg/mL	+/- 9.0294
8	Anthracene	120-12-7	MKCR0570	99%	200.4 µg/mL	+/- 9.0294
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.8 µg/mL	+/- 9.0474
10	Pyrene	129-00-0	BCCK2592	99%	201.2 µg/mL	+/- 9.0655
11	Benz(a)anthracene	56-55-3	I30012022BAA	99%	200.8 µg/mL	+/- 9.0474
12	Chrysene	218-01-9	RP231206RSR	99%	200.4 µg/mL	+/- 9.0294
13	Benzo(b)fluoranthene	205-99-2	012013B	99%	200.4 µg/mL	+/- 9.0294
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	200.0 µg/mL	+/- 9.0114
15	Benzo(a)pyrene	50-32-8	O45GL	98%	200.7 µg/mL	+/- 9.0431
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	199.8 µg/mL	+/- 9.0033

17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	200.0 µg/mL	+/- 9.0114
18	Benzo(g,h,i)perylene	191-24-2	RP240105ECS	99%	200.8 µg/mL	+/- 9.0474

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Acetone/Toluene (50:50)
CAS # 67-64-1/108-88-3
Purity 99%

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

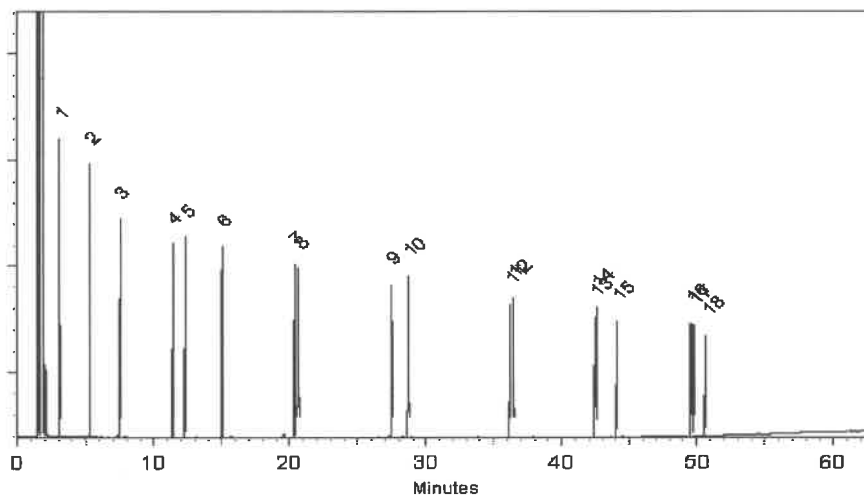
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael Maye
Michael Maye - Operations Tech I

Date Mixed: 09-May-2024 **Balance Serial #** 1128353505

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 13-May-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30543 **Lot No.:** A0207019

Description : NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2029 **Storage:** 10°C or colder

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

P13h53
↓
P13h56 } 7-P.
07/16/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-38	99%	200.6 µg/mL	+/- 9.0384
2	Naphthalene	91-20-3	STBL1057	99%	200.6 µg/mL	+/- 9.0384
3	2-Methylnaphthalene	91-57-6	STBK0259	96%	200.4 µg/mL	+/- 9.0299
4	Acenaphthylene	208-96-8	L10L	95%	200.7 µg/mL	+/- 9.0437
5	Acenaphthene	83-32-9	MKCR7169	99%	200.0 µg/mL	+/- 9.0114
6	Fluorene	86-73-7	10241100	99%	200.4 µg/mL	+/- 9.0294
7	Phenanthrene	85-01-8	MKQCQ2033	99%	200.5 µg/mL	+/- 9.0330
8	Anthracene	120-12-7	MKCR0570	99%	200.7 µg/mL	+/- 9.0438
9	Fluoranthene	206-44-0	MKQCQ4728	99%	200.6 µg/mL	+/- 9.0366
10	Pyrene	129-00-0	BCCG8479	98%	200.7 µg/mL	+/- 9.0449
11	Benz(a)anthracene	56-55-3	I20012022BAA	99%	200.8 µg/mL	+/- 9.0474
12	Chrysene	218-01-9	RP230601	99%	200.5 µg/mL	+/- 9.0330
13	Benzo(b)fluoranthene	205-99-2	022013B	99%	200.6 µg/mL	+/- 9.0384
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	200.8 µg/mL	+/- 9.0456
15	Benzo(a)pyrene	50-32-8	O45GL	98%	200.6 µg/mL	+/- 9.0378
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	200.6 µg/mL	+/- 9.0400

17	Dibenz(a,h)anthracene	53-70-3	ER032211-01	99%	200.4 µg/mL	+/- 9.0276
18	Benzo(g,h,i)perylene	191-24-2	RP231003RSR	99%	200.5 µg/mL	+/- 9.0330

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Acetone/Toluene (50:50)
CAS # 67-64-1/108-88-3
Purity 99%

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

100°C (hold 1 min.) to 330°C
 @ 4°C/min. (hold 5 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

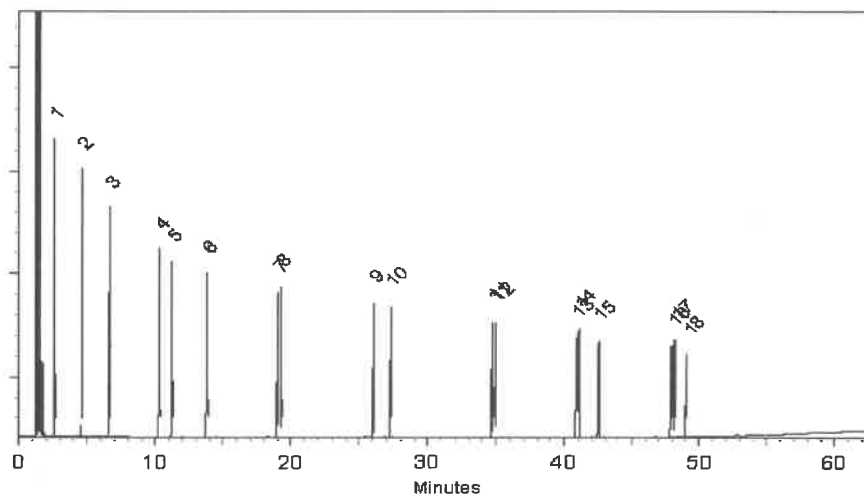
FID

Split Vent:

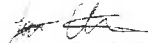
20 ml/min.

Inj. Vol

1µl

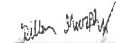


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


 Laith Clemente - Operations Technician I

Date Mixed: 25-Jan-2024

Balance Serial # 1128360905


 Dillan Murphy - Operations Technician I

Date Passed: 29-Jan-2024

Manufactured under Restek's ISO 9001:2015
 Registered Quality System
 Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30543 **Lot No.:** A0207019

Description : NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2029 **Storage:** 10°C or colder

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

P13h53
↓
P13h56 } 7-P.
07/16/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-38	99%	200.6 µg/mL	+/- 9.0384
2	Naphthalene	91-20-3	STBL1057	99%	200.6 µg/mL	+/- 9.0384
3	2-Methylnaphthalene	91-57-6	STBK0259	96%	200.4 µg/mL	+/- 9.0299
4	Acenaphthylene	208-96-8	L10L	95%	200.7 µg/mL	+/- 9.0437
5	Acenaphthene	83-32-9	MKCR7169	99%	200.0 µg/mL	+/- 9.0114
6	Fluorene	86-73-7	10241100	99%	200.4 µg/mL	+/- 9.0294
7	Phenanthrene	85-01-8	MKCQ2033	99%	200.5 µg/mL	+/- 9.0330
8	Anthracene	120-12-7	MKCR0570	99%	200.7 µg/mL	+/- 9.0438
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.6 µg/mL	+/- 9.0366
10	Pyrene	129-00-0	BCCG8479	98%	200.7 µg/mL	+/- 9.0449
11	Benz(a)anthracene	56-55-3	I20012022BAA	99%	200.8 µg/mL	+/- 9.0474
12	Chrysene	218-01-9	RP230601	99%	200.5 µg/mL	+/- 9.0330
13	Benzo(b)fluoranthene	205-99-2	022013B	99%	200.6 µg/mL	+/- 9.0384
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	200.8 µg/mL	+/- 9.0456
15	Benzo(a)pyrene	50-32-8	O45GL	98%	200.6 µg/mL	+/- 9.0378
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	200.6 µg/mL	+/- 9.0400

17	Dibenz(a,h)anthracene	53-70-3	ER032211-01	99%	200.4 µg/mL	+/- 9.0276
18	Benzo(g,h,i)perylene	191-24-2	RP231003RSR	99%	200.5 µg/mL	+/- 9.0330

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Acetone/Toluene (50:50)
CAS # 67-64-1/108-88-3
Purity 99%

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

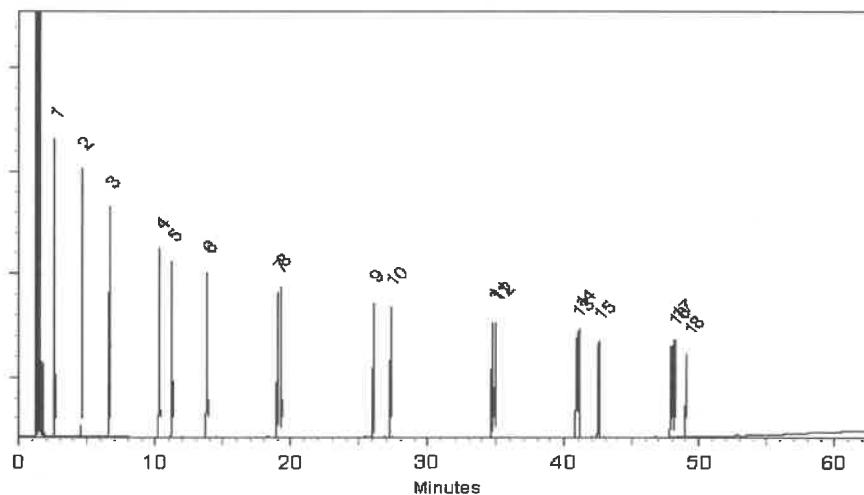
FID

Split Vent:

20 ml/min.

Inj. Vol

1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

[Signature]
Laith Clemente - Operations Technician I

Date Mixed: 25-Jan-2024

Balance Serial # 1128360905

[Signature]
Dillan Murphy - Operations Technician I

Date Passed: 29-Jan-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30543 **Lot No.:** A0207019

Description : NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2029 **Storage:** 10°C or colder

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

P13h53
↓
P13h56 } 7-P.
07/16/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-38	99%	200.6 µg/mL	+/- 9.0384
2	Naphthalene	91-20-3	STBL1057	99%	200.6 µg/mL	+/- 9.0384
3	2-Methylnaphthalene	91-57-6	STBK0259	96%	200.4 µg/mL	+/- 9.0299
4	Acenaphthylene	208-96-8	L10L	95%	200.7 µg/mL	+/- 9.0437
5	Acenaphthene	83-32-9	MKCR7169	99%	200.0 µg/mL	+/- 9.0114
6	Fluorene	86-73-7	10241100	99%	200.4 µg/mL	+/- 9.0294
7	Phenanthrene	85-01-8	MKQCQ2033	99%	200.5 µg/mL	+/- 9.0330
8	Anthracene	120-12-7	MKCR0570	99%	200.7 µg/mL	+/- 9.0438
9	Fluoranthene	206-44-0	MKQCQ4728	99%	200.6 µg/mL	+/- 9.0366
10	Pyrene	129-00-0	BCCG8479	98%	200.7 µg/mL	+/- 9.0449
11	Benz(a)anthracene	56-55-3	I20012022BAA	99%	200.8 µg/mL	+/- 9.0474
12	Chrysene	218-01-9	RP230601	99%	200.5 µg/mL	+/- 9.0330
13	Benzo(b)fluoranthene	205-99-2	022013B	99%	200.6 µg/mL	+/- 9.0384
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	200.8 µg/mL	+/- 9.0456
15	Benzo(a)pyrene	50-32-8	O45GL	98%	200.6 µg/mL	+/- 9.0378
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	200.6 µg/mL	+/- 9.0400

17	Dibenz(a,h)anthracene	53-70-3	ER032211-01	99%	200.4 µg/mL	+/- 9.0276
18	Benzo(g,h,i)perylene	191-24-2	RP231003RSR	99%	200.5 µg/mL	+/- 9.0330

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Acetone/Toluene (50:50)
CAS # 67-64-1/108-88-3
Purity 99%

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

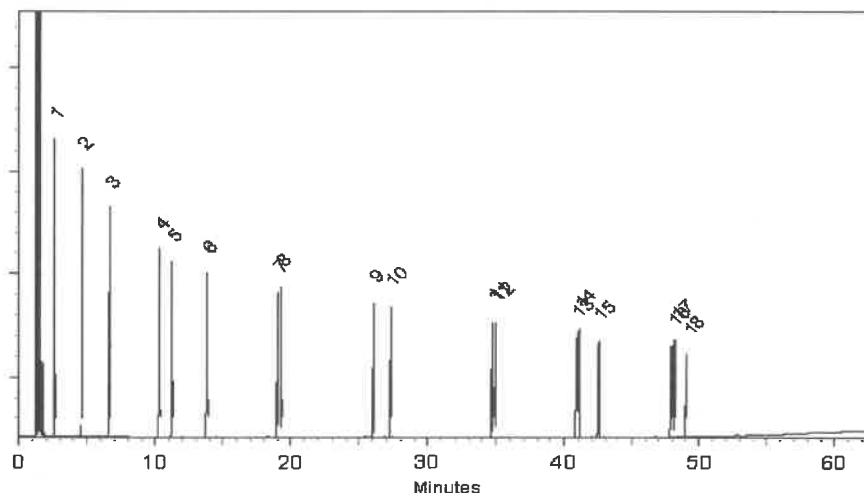
FID

Split Vent:

20 ml/min.

Inj. Vol

1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

[Signature]
Laith Clemente - Operations Technician I

Date Mixed: 25-Jan-2024

Balance Serial # 1128360905

[Signature]
Dillon Murphy - Operations Technician I

Date Passed: 29-Jan-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30543 **Lot No.:** A0207019

Description : NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : December 31, 2029 **Storage:** 10°C or colder

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

P13h53
↓
P13h56 } 7-P.
07/16/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-38	99%	200.6 µg/mL	+/- 9.0384
2	Naphthalene	91-20-3	STBL1057	99%	200.6 µg/mL	+/- 9.0384
3	2-Methylnaphthalene	91-57-6	STBK0259	96%	200.4 µg/mL	+/- 9.0299
4	Acenaphthylene	208-96-8	L10L	95%	200.7 µg/mL	+/- 9.0437
5	Acenaphthene	83-32-9	MKCR7169	99%	200.0 µg/mL	+/- 9.0114
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7	Phenanthrene	85-01-8	MKQCQ2033	99%	200.5 µg/mL	+/- 9.0330
8	Anthracene	120-12-7	MKCR0570	99%	200.7 µg/mL	+/- 9.0438
9	Fluoranthene	206-44-0	MKQCQ4728	99%	200.6 µg/mL	+/- 9.0366
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11	Benz(a)anthracene	56-55-3	I20012022BAA	99%	200.8 µg/mL	+/- 9.0474
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14	Benzo(k)fluoranthene	207-08-9	012022K	99%	200.8 µg/mL	+/- 9.0456
15	Benzo(a)pyrene	50-32-8	O45GL	98%	200.6 µg/mL	+/- 9.0378
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	200.6 µg/mL	+/- 9.0400

17	Dibenz(a,h)anthracene	53-70-3	ER032211-01	99%	200.4 µg/mL	+/- 9.0276
18	Benzo(g,h,i)perylene	191-24-2	RP231003RSR	99%	200.5 µg/mL	+/- 9.0330

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: Acetone/Toluene (50:50)
CAS # 67-64-1/108-88-3
Purity 99%

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

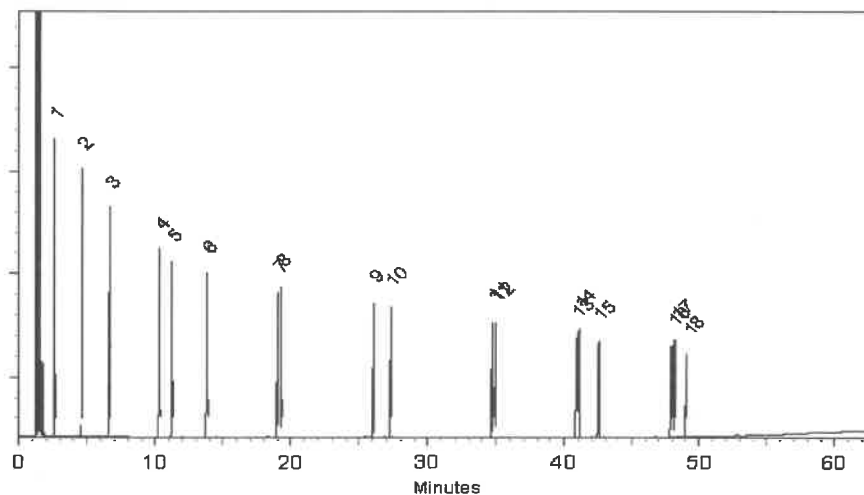
FID

Split Vent:

20 ml/min.

Inj. Vol

1µl



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

[Signature]
Laith Clemente - Operations Technician I

Date Mixed: 25-Jan-2024

Balance Serial # 1128360905

[Signature]
Dillon Murphy - Operations Technician I

Date Passed: 29-Jan-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

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- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



SHIPPING DOCUMENTS

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. P4258/P4261
QUOTE NO.
COC Number 2041986

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Roman E&G
ADDRESS: 14 Ogden St
CITY: Newark STATE: NJ ZIP: 07104
ATTENTION: Sonny Puzzo
PHONE: 973-482-1123 FAX: 973-482-7154

CLIENT PROJECT INFORMATION

PROJECT NAME: Perth Amboy Undermain
PROJECT NO.: 24-651 LOCATION: Perth Amboy
PROJECT MANAGER: Mark Mathicis
e-mail: engineer@romaneq.com
PHONE: 973-482-1123 FAX: 973-482-7154

CLIENT BILLING INFORMATION

BILL TO: Roman E&G PO#: 24-651
ADDRESS: 14 Ogden St
CITY: Newark STATE: NJ ZIP: 07104
ATTENTION: Frank PHONE: 973-482-1123

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) 6 10/17 DAYS*
HARDCOPY (DATA PACKAGE): 6 10/17 DAYS*
EDD: 6 10/17 DAYS*

*TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B
+ Raw Data ☐ Other
☐ EDD FORMAT NJ-DEP-SRS

PRESERVATIVES

COMMENTS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES										← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	Chamberlin Ave ↓	S		X	10/1	11:45	1										
2.		S		X	10/1	11:45	1										
3.		S		X	10/1	11:45	1										
4.		S		X	10/1	11:45	1										
5.		S		X	10/1	11:45	1										
6.		S		X	10/1	11:45	1										
7.		S		X	10/1	11:45	1										
8.		S		X	10/1	11:45	1										
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. <u>Sonny Puzzo</u>	DATE/TIME: <u>10/1 12:54</u>	RECEIVED BY: <u>[Signature]</u>	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP <u>22.1 °C</u>
RELINQUISHED BY SAMPLER: 2.	DATE/TIME:	RECEIVED BY:	Comments: <u>If Air # 1</u>
RELINQUISHED BY SAMPLER: 3.	DATE/TIME:	RECEIVED BY:	

Page ____ of ____

CLIENT: ☐ Hand Delivered ☐ Other
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete
☐ YES ☐ NO

Test Group	Analyses	Matrix	Method
METALS-TAL	Mercury	Water	7470A
	TAL ICP Metals	Water	6010D
RCRA CHARACTERIS	Flash Point	Water	1010B
	pH	Water	9040C
	Reactive Cyanide	Water	9012B
	Reactive Sulfide	Water	9034
TCLP METALS	TCLP Extraction	Water	1311
	TCLP ICP Metals	Water	6010D
	TCLP Mercury	Water	7470A
GROWS Concrete	Ammonia	Solid	SM4500-NH3
	Chemical Oxygen Demar	Solid	SM5220 D
	Oil & Grease	Solid	1664A
	Paint Filter Test	Solid	9095B
	PCBs	Solid	8082A
	Percent Solids	Solid	Chemtech -SOP
	pH	Solid	9045D
	Total Solids	Solid	SM2540 B
	Total Volatile Solids	Solid	160.4
GROWS Concrete AS	ASTM Leachate/ Ammon	Solid	SM4500-NH3
	ASTM Leachate/COD	Solid	SM5220 D
	ASTM Leachate Extracti	Solid	ASTM
	ASTM Leachate/Oil & Gr	Solid	1664A
	ASTM Leachate/Total Sol	Solid	SM2540 B
GROWS Concrete-Wa	Corrosivity	Solid	9045D
	Ignitability	Solid	1030
	Reactive Cyanide	Solid	9012B
	Reactive Sulfide	Solid	9034
	TCLP Semivolatiles	Solid	8270E
	TCLP Extraction	Solid	1311
	TCLP Herbicides	Solid	8151A
	TCLP Mercury	Solid	7470A
	TCLP Metals + Cu+Ni+Zr	Solid	6010D
	TCLP Pesticides	Solid	8081B
	TCLP Volatiles	Solid	8260C
	TCLP ZHE Extraction	Solid	1311 ZHE
GROWS Soil	PCBs	Solid	8082A
	Percent Solids	Solid	Chemtech -SOP
	pH	Solid	9045D
	TCL Volatiles+10	Solid	8260D
GROWS Soil-Waste C	Corrosivity	Solid	9045D
	Ignitability	Solid	1030
	Reactive Cyanide	Solid	9012B
	Reactive Sulfide	Solid	9034
	TCLP Semivolatiles	Solid	8270E
	TCLP Extraction	Solid	1311
	TCLP Herbicides	Solid	8151A
	TCLP Mercury	Solid	7470A
	TCLP Metals + Cu+Ni+Zr	Solid	6010D
	TCLP Pesticides	Solid	8081B
	TCLP Volatiles	Solid	8260D
	TCLP ZHE Extraction	Solid	1311 ZHE

Grows Concrete

Grows Concrete ASTM

Grows Soil

Grows Soil-Waste Class

Seperate

Seperate

From: Kiran Saleem <Kiran.Saleem@alliancetg.com>
Sent: Wednesday, October 2, 2024 11:07 AM
Subject: Re: Project: Perth Amboy Query

Good Morning Sonny,

I am reaching out to inform you that samples received for project were out of temperature range of -6.

It's a standard procedure to inform client, for documentation purposes.

Regards,



Kiran Saleem
Project Manager
An Alliance Technical Group Company
Main: 908-789-8900
Direct: 908-728-3148
Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092
www.alliancetg.com

From: Sonny Puzzo <spuzzo@romaneg.com>
Sent: Tuesday, October 1, 2024 3:16 PM
To: Kiran Saleem <Kiran.Saleem@alliancetg.com>
Subject: Re: Project: Perth Amboy Query

EXTERNAL EMAIL - This email was sent by a person from outside your organization. Exercise caution when clicking links, opening attachments or taking further action, before validating its authenticity.

Secured by Check Point

Kiran,

Should be 24-651.

Thank you.

All the Best,

Sonny Puzzo
Project Coordinator

14 Ogden Street
Newark, NJ 07104
Office: (973) 482-1123 Ext:21
Fax: (973) 482-7154
Cell: (973) 803-6113

From: Kiran Saleem <Kiran.Saleem@alliancetg.com>
Sent: Tuesday, October 1, 2024 3:15 PM
To: Sonny Puzzo <spuzzo@romaneg.com>
Subject: Re: Project: Perth Amboy Query

Also, can you please clarify the PO# under 'Client Billing Information', I can't make out what the first digit is.

Regards,



Kiran Saleem
Project Manager
An Alliance Technical Group Company
Main: 908-789-8900
Direct: 908-728-3148
Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092
www.alliancetg.com

From: Kiran Saleem <Kiran.Saleem@alliancetg.com>
Sent: Tuesday, October 1, 2024 2:35 PM
To: Sonny Puzzo <spuzzo@romaneg.com>
Subject: Re: Project: Perth Amboy Query

Thank you Sonny.

Regards,



Kiran Saleem
Project Manager
An Alliance Technical Group Company
Main: 908-789-8900
Direct: 908-728-3148
Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092
www.alliancetg.com

From: Sonny Puzzo <spuzzo@romaneg.com>
Sent: Tuesday, October 1, 2024 2:26 PM
To: Kiran Saleem <Kiran.Saleem@alliancetg.com>
Cc: Jordan Hedvat <Jordan.Hedvat@alliancetg.com>
Subject: Re: Project: Perth Amboy Query

EXTERNAL EMAIL - This email was sent by a person from outside your organization. Exercise caution when clicking links, opening attachments or taking further action, before validating its authenticity.

Secured by Check Point

Good Afternoon Kiran,

Roman would like the results of the test back by 10/7.

Sorry for the confusion... Thank you!

All the Best,

Sonny Puzzo

Project Coordinator

14 Ogden Street
Newark, NJ 07104
Office: (973) 482-1123 Ext:21
Fax: (973) 482-7154
Cell: (973) 803-6113
Veteran-Owned Business (NJ)

From: Kiran Saleem <Kiran.Saleem@alliancetg.com>

Sent: Tuesday, October 1, 2024 2:19 PM

To: Sonny Puzzo <spuzzo@romaneg.com>

Cc: Jordan Hedvat <Jordan.Hedvat@alliancetg.com>

Subject: Project: Perth Amboy Query

Hi Sonny,

I am reaching out to regarding the Turn around time (TAT) of the results, the fax required says 6 days and then 10/7 which is confusing.

If results are required on 10/7, then TAT would be 4 days. If results are required in 6 days, then you will have results on 10/9.

Please confirm ASAP. Attached COC for your review.

Thanks.

NOTE: Chemtech is now an Alliance Technical Group company. Please add [AllianceTG.com](https://www.alliancetg.com) to your safe senders list to ensure receipt of important emails.

Regards,



Kiran Saleem

Project Manager

An Alliance Technical Group Company

Main: 908-789-8900

Direct: 908-728-3148

Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092

www.alliancetg.com



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (L-A-B)	L2219
Maine	2024021
Maryland	296
New Hampshire	255423
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

LOGIN REPORT/SAMPLE TRANSFER

18,A,001
Q1218,024
Q863
IN
SS
D15
JE
R25,0
F100
GW0,0,102,121

Order ID : P4258 ROMA02
Client Name : Roman E&G Corp
Client Contact : Mark Mattheiss
Invoice Name : Roman E&G Corp
Invoice Contact : Mark Mattheiss

Order Date : 10/1/2024 1:21:00 PM
Project Name : Perth Amboy
Receive DateTime : 10/1/2024 12:54:00 PM
Purchase Order :

Project Mgr : Kiran
Report Type : Level 2 NJ Reduced
EDD Type : Excel NJ HAZ/Excel
Hard Copy Date :
Date Signoff : 10/1/2024 3:13:24 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
P4258-03	Chamberlain Ave	Solid	10/01/2024	11:45	VOC-TCLVOA-10	GROWS Soil	8260D		4 Bus. Days
P4258-04	Chamberlain Ave	Solid	10/01/2024	11:45	TCLP VOA	GROWS Soil-Waste Cla	8260C		4 Bus. Days

Relinquished By :

Date / Time : 10-2-24 8:03

Received By :

Date / Time :

Storage Area : VOA Refridgerator Room